Scientific Collaboration
Across the Americas
**Special Events**

**Monday, 13 May**

**Icebreaker Reception**
This event provides an opportunity to meet and interact with your colleagues before the sessions begin!
Cancun Center, Akumal Terrace, Level 2
5:30 PM-7:00 PM

**Wednesday, 15 May**

**AGU Sections and Focus Group Receptions**
Join your colleagues for the section and focus group reception hosted by Biogeosciences, Hydrology, Global Environmental Change, Ocean Sciences, and Volcanology, Geochemistry, and Petrology.
Fiesta Americana Grand Coral Beach, Sunset Terrace
6:30 PM-8:00 PM

**Thank You to Our Partners!**

- Asociación Argentina de Geofísicos y Geodestas
- Asociación LatinoAmericana de Geofísica Espacial
- Asociación LatinoAmericana de Paleomagnetismo Y Geomagnetismo
- Asociación Mexicana de Geofísicos de Exploración
- Centro Regional de Sismología para América del Sur
- Geochemical Society
- Mineralogical Society of America
- Sociedad Geológica Mexicana
- Sociedade Brasileira de Geofísica
- Sociedad Geológica de Chile
- Society of Exploration Geophysicists
- Unión Geofísica Mexicana
- Unión Mexicana para Estudios del Cuaternario
General Information

This program book contains general meeting information, a meeting summary chart, and a presenting author index.

The Program Content provides a listing of abstracts by session (pages 48-103).

The Meeting Summary Chart provides a list of sessions by day, time, and discipline. Information includes the session number, title, start time, meeting room, type of session, and session cosponsors (pages 27-46).

The Presenting Author Index contains presenters’ names followed by the paper number which they are presenting (pages 104-108).

Emergency Contact: We recommend that you create emergency contact information in your cell phone listed as ICE (In Case of Emergency) for emergency purposes, if necessary. Content in this program book is current as of 10 April 2013.

Online Resources

The Itinerary Planner allows attendees to view abstracts at: agu-moa13.abstractcentral.com/planner.jsp

e-Posters offer the opportunity to upload electronic files of poster presentations. To view e-Posters that have been submitted, visit moa.agu.org

A Mobile App for Meeting of the Americas is available! iPhone and Android users can download the app by visiting the App Store or Market on their device and search for AGU or Meeting of the Americas. For all devices, including the iPhone, BlackBerry, Android, and other web browser-enabled phones, simply point your mobile browser to: http://app.core-apps.com/agu_moa13. From there you will be directed to the proper app version download for your particular device, or on some phones, you can bookmark that page for future reference. The mobile app will allow you to view the Exhibit Hall, floor plans, and search for sessions, activities, and events, and more!

Note: Phone charges may apply; please check with your telephone carrier for details.

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Welcome to the 2013 Meeting of the Americas

Changing the World Through Science

As president of the American Geophysical Union (AGU), it is my pleasure to welcome you to the 2013 Meeting of the Americas!

AGU’s mission is “to promote discovery in Earth and space science for the benefit of humanity.” Our research helps save lives, promote economic development, and support environmental health, and during this meeting you will present and learn about the latest geophysical breakthroughs that are making all of those things possible.

We are also continuing our efforts to promote interdisciplinary collaboration by offering two SWIRL sessions: Anthropogenic Influences on the Natural Environment and Extreme Events. These sessions are designed to give attendees a path on which to take an interdisciplinary “walk through the week,” and they are a key contribution to AGU’s strategic goal of improving scientific leadership and collaboration.

I would like to thank our partners, the Asociación Argentina de Geofísicos y Geodesistas, the Asociación Latinoamericana de Geofísica Espacial, the Asociación Latinoamericana de Paleomagnetismo y Geomagnetismo, the Chilean Geological Society, El Centro Regional de Sismología para América del Sur, the Geochemical Society, the Mexican Association of Exploration Geophysicists, the Mexican Geological Society, the Mexican Union for Quaternary Studies, the Mineralogical Society, the Sociedade Brasileira de Geofísica, the Society of Exploration Geophysicists, and the Unión Geofísica Mexicana. Without their contributions, this important meeting would not be possible.

Finally, I want to thank you, the attendees, for your participation and for your dedication to scientific excellence—both of which are key contributors to the collective success of Earth and space science research and its ability to change the world.

Enjoy the meeting!

Sincerely,

Carol Finn
President, American Geophysical Union

Welcome to the 2013 Meeting of the Americas!

AGU’s mission is to “promote discovery in Earth and space science for the benefit of humanity.” And, along with our meeting partners, we recognize that sharing knowledge and best practices enables scientists to advance their research and break new ground.

That’s why events like the Meeting of the Americas are so important, and so special. It’s also why AGU is constantly striving to provide you with the best experience possible.

The program for this meeting includes numerous informative and inspirational lectures and posters presented by world-renowned scientists as well as up-and-coming visionaries. These events—and innovative features like our mobile app, ePoster program, and interactive Meeting Central community—are designed to provide an environment that stimulates discussion and learning and meets the diverse needs of our attendees.

I encourage you to participate in as many sessions as possible and to take full advantage of the meeting’s exhibit hall and networking and social opportunities. And please share your experiences with the AGU leadership and staff. AGU is known around the world for the quality of our meetings, which would not be possible without your feedback and participation.

Have a great meeting!

Sincerely,

Christine W. McEntee
Executive Director/CEO, American Geophysical Union
Union Activities

All Union activities are being held at the Cancun Center.

Monday, 13 May

Icebreaker Reception
Akumal Terrace, Level 2
5:30 PM - 7:00 PM

Tuesday, 14 May

Hydrology Plenary Session: Impact of Hydrologic Variability on Ecosystem Dynamics and the Sustainable Use of Soil and Water
Gran Cancun 1, Level 3
6:15 PM - 7:15 PM
Presented by Amilcare Porporato
Professor, Duke University,
Durham, North Carolina USA

Wednesday, 15 May

Near Surface Geophysics Plenary Session: Geophysics of Volcanic Landslide Hazards: The Inside Story
Gran Cancun 1, Level 3
12:30 PM - 1:30 PM
Presented by Carol Finn
USGS Research Geophysicist and AGU President,
Denver, Colorado USA

Thursday, 16 May

Atmospheric Sciences Plenary Session: Extreme Events: Dynamics, Statistics and Prediction
Gran Cancun 1, Level 3
6:15 PM - 7:15 PM
Presented by Michael Ghil
Distinguished Research Professor of Atmospheric and Oceanic Sciences,
University of California, Los Angeles USA

Download the Mobile App!

- Receive meeting-related alerts.
- Access meeting maps.
- View exhibitor listings.

The knowledge you need to succeed in the global geosciences arena

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Faculty of Natural Sciences

AGU MEETING OF THE AMERICAS
Cancun, Mexico | 14–17 May 2013

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Union Sessions

Union sessions are for the benefit of attendees who have broad interests outside of their own disciplines. Check the meeting schedule for session times and presentations.

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<tr>
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<tbody>
<tr>
<td><strong>U21A.</strong> Interhemispheric Connections of the American Paleoclimate Record I Posters</td>
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<tr>
<td><strong>U23A.</strong> Interhemispheric Connections of the American Paleoclimate Record II</td>
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<tr>
<td><strong>U24A.</strong> Tropical Storm Development and Impacts in the Atlantic, Gulf of Mexico, and Caribbean Basins</td>
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<tr>
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<tr>
<td><strong>U31A.</strong> Impact Craters in the Solar System: Recent Studies, New Developments and Perspectives I Posters</td>
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<tr>
<td><strong>U33A.</strong> Observations, Modeling, and Economics of Extreme Events</td>
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<tr>
<td><strong>U34A.</strong> Bilateral Network Collaboration: Unifying Climate and Carbon Science Goals Between Mexico and the United States</td>
</tr>
<tr>
<td><strong>U34B.</strong> Impact Craters in the Solar System: Recent Studies, New Developments, and Perspectives II</td>
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<tr>
<th>Thursday, 16 May</th>
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<tbody>
<tr>
<td><strong>U41A.</strong> International Collaboration in Earth and Space Sciences I Posters</td>
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<tr>
<td><strong>U44A.</strong> International Collaboration in Earth and Space Sciences II</td>
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<tr>
<th>Friday, 17 May</th>
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<tbody>
<tr>
<td><strong>U51A.</strong> Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts I Posters</td>
</tr>
<tr>
<td><strong>U51B.</strong> Building Geophysics Capacity in Emerging Regions</td>
</tr>
<tr>
<td><strong>U52A.</strong> Weather, Climate, and Food Security: American and Global Perspectives</td>
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<tr>
<td><strong>U53A.</strong> Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts II</td>
</tr>
<tr>
<td><strong>U54A.</strong> Toward Ecohydrological Synthesis for the Americas</td>
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</table>
Anthropogenic Influences on the Natural Environment

There can be little doubt of the influence of humans upon the natural environment. This SWIRL traces such influence through a range of impacts, including changes in the composition of the atmosphere, climate variability, alterations in the hydrologic cycle, changes in vegetation type and biomass, expanding urbanization, and induced seismicity.
**2013 Meeting of the Americas**

**Thursday, 16 May**

**A33B** Biomass Burning in Latin America: Emissions, Transport, and Effects Posters  
1:40 PM, Gran Cancun Poster Hall

**A33C** Megacities, Megachallenges III Posters  
1:40 PM, Gran Cancun Poster Hall

**A33D** Intraseasonal to Decadal Variability of the Tropical Americas II  
1:40 PM, Gran Cancun 5

**A41C** Urban Air Pollution in Latin America II  
8:00 AM, Gran Cancun 5

**B41A** Inferring Environmental Condition From Geochemical Data I  
8:00 AM, Salon Cozumel 2

**GC41B** Imbalance of Nature III Posters  
8:00 AM, Gran Cancun Poster Hall

**H41A** Climate, Water, and Society I  
8:00 AM, Gran Cancun 1

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**AFTERNOON**

**GC33A** Imbalance of Nature I  
1:40 PM, Salon Cozumel 1

**PP33A** Perspectives in Paleoceanography and Paleoclimatology III Posters  
1:40 PM, Gran Cancun Poster Hall

**U33A** Observations, Modeling, and Economics of Extreme Events  
1:40 PM, Gran Cancun 1

**GC34A** Imbalance of Nature II  
4:00 PM, Salon Cozumel 1

**U34A** Bilateral Network Collaboration: Unifying Climate and Carbon Science Goals Between Mexico and the United States  
4:00 PM, Isla Mujeres Salons

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**MORNING**

**OS41A** Physical Processes in Tropical and Subtropical Coastal Systems II  
8:00 AM, Salon Cozumel 1

**PP41B** Reconstructing Monsoonal Precipitation From Geological Records I Posters  
8:00 AM, Gran Cancun Poster Hall

**A42A** Urban Air Pollution in Latin America III  
10:20 AM, Gran Cancun 5

**B42A** Inferring Environmental Condition From Geochemical Data II  
10:20 AM, Salon Cozumel 2

**H42A** Climate, Water, and Society II  
10:20 AM, Gran Cancun 1

**OS42A** Physical Processes in Tropical and Subtropical Coastal Systems III  
10:20 AM, Salon Cozumel 1

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**AGU MEETING OF THE AMERICAS**

Cancun, Mexico | 14–17 May 2013

**Remember To Upload Your ePoster!**

by Friday, 17 May

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2013 Meeting of the Americas 7
Thursday, 16 May

**AFTERNOON**

- **B43B** Greenhouse Gas Fluxes From Natural and Man-Made Freshwater Bodies III Posters
  - 1:40 PM, Gran Cancun Poster Hall
- **GC43A** Global Environmental Change General Contributions I Posters
  - 1:40 PM, Gran Cancun Poster Hall
- **GC43B** Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin I Posters
  - 1:40 PM, Gran Cancun Poster Hall
- **GC43C** Measuring the Carbon Emissions of Megacities
  - 1:40 PM, Salon Cozumel 1
- **H43A** Subsurface Structure and Transport With Applications in Mining I Posters
  - 1:40 PM, Gran Cancun Poster Hall
- **NH43A** Wildfires on Landscapes: Theory, Models, and Management
  - 1:40 PM, Salon Cozumel 4
- **OS43A** Ocean Sciences General Contributions IV
  - 1:40 PM, Salon Cozumel 3
- **OS44A** Ocean Sciences General Contributions V
  - 4:00 PM, Salon Cozumel 3

**Friday, 17 May

**MORNING**

- **A51A** Impact of Tropospheric Aerosols on Global and Regional Climate
  - 8:00 AM, Gran Cancun 5
- **B51B** Inferring Environmental Condition From Geochemical Data III Posters
  - 8:00 AM, Gran Cancun Poster Hall
- **GC51A** Global Environmental Change General Contributions II
  - 8:00 AM, Salon Cozumel 1
- **OS51A** Physical Processes in Tropical and Subtropical Coastal Systems IV
  - 8:00 AM, Salon Cozumel 3
- **PP51A** Paleoceanography and Paleoclimatology General Contributions I Posters
  - 8:00 AM, Gran Cancun Poster Hall
- **US1A** Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts I Posters
  - 8:00 AM, Gran Cancun Poster Hall
- **US2A** Weather, Climate, and Food Security: American and Global Perspectives
  - 10:20 AM, Gran Cancun 1

**AFTERNOON**

- **GC53A** Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin II
  - 1:40 PM, Salon Cozumel 1
- **H53A** Subsurface Structure and Transport With Applications in Mining II
  - 1:40 PM, Gran Cancun 1
- **U53A** Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts II
  - 1:40 PM, Gran Cancun 5
- **GC54A** Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin III
  - 4:00 PM, Salon Cozumel 1
- **H54A** Subsurface Structure and Transport with Applications in Mining III
  - 4:00 PM, Gran Cancun 1
- **PP54A** Paleoceanography and Paleoclimatology General Contributions II
  - 4:00 PM, Salon Cozumel 2
- **US4A** Toward Ecohydrological Synthesis for the Americas
  - 4:00 PM, Gran Cancun 5
# Extreme Events

Although various definitions exist for an extreme event, most agree that the event lies outside the normal occurrence or statistical reference, that is, it is unique or rare and is significant in terms of effects. This SWIRL will highlight research on extreme events that affect the Americas as well as global societies, extreme or severe solar transient events, tsunamis, hurricanes, earthquakes, wildfires, floods, and heat waves. Presentations will focus on better understanding of causes, processes, and patterns as well as risk to, and impact on, human populations and/or ecosystems.

## Tuesday, 14 May

### MORNING

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>C21B</td>
<td>Cryosphere in a Warming Climate: Changes, Impacts, and Adaptation I</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>GC21A</td>
<td>Climate Change in the Americas: Observations and Global and Regional</td>
<td>8:00 AM</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>GC22A</td>
<td>Climate Change in the Americas: Observations and Global and Regional</td>
<td>10:20 AM</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>GC23A</td>
<td>Climate Change in the Americas: Observations and Global and Regional</td>
<td>1:40 PM</td>
<td>Salon Cozumel 2</td>
</tr>
<tr>
<td>T21A</td>
<td>Top to Bottom View of the Dynamics of Northern South America</td>
<td>8:00 AM</td>
<td>Tulum</td>
</tr>
<tr>
<td>U21A</td>
<td>Interhemispheric Connections of the American Paleoclimate Record I</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>P22A</td>
<td>Chicxulub Impact Crater and the Cretaceous-Paleogene Boundary I</td>
<td>10:20 AM</td>
<td>Salon Cozumel 3</td>
</tr>
<tr>
<td>T22A</td>
<td>Tectonics and Structure of the Northern Andes I</td>
<td>10:20 AM</td>
<td>Tulum</td>
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### AFTERNOON

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<tr>
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<tbody>
<tr>
<td>C23A</td>
<td>Cryosphere in a Warming Climate: Changes, Impacts, and Adaptation II</td>
<td>1:40 PM</td>
<td>Salon Cozumel 2</td>
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<tr>
<td>GC23A</td>
<td>Climate Change in the Americas: Observations and Global and Regional</td>
<td>1:40 PM</td>
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<td>OS23A</td>
<td>Ocean Sciences General Contributions I</td>
<td>1:40 PM</td>
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<td>P23A</td>
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<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>S23C</td>
<td>Upper Mantle Structure and Geodynamics of South America</td>
<td>1:40 PM</td>
<td>Salon Cozumel 5</td>
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<tr>
<td>T23A</td>
<td>Dynamics of South America Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>T23B</td>
<td>Tectonics and Structure of the Northern Andes II Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>U23A</td>
<td>Interhemispheric Connections of the American Paleoclimate Record II</td>
<td>1:40 PM</td>
<td>Gran Cancun 1</td>
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<tr>
<td>OS24A</td>
<td>Ocean Sciences General Contributions II</td>
<td>4:00 PM</td>
<td>Salon Cozumel 3</td>
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<tr>
<td>U24A</td>
<td>Tropical Storm Development and Impacts in the Atlantic, Gulf of Mexico</td>
<td>4:00 PM</td>
<td>Gran Cancun 1</td>
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## Wednesday, 15 May

### MORNING

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<tbody>
<tr>
<td>OS31A</td>
<td>Ocean Sciences General Contributions III Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>OS31B</td>
<td>Physical Processes in Tropical and Subtropical Coastal Systems I</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>PP31A</td>
<td>Perspectives in Paleoclimatology I</td>
<td>8:00 AM</td>
<td>Salon Cozumel 2</td>
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<tr>
<td>T31A</td>
<td>Gulf of Mexico: Tectonics, Paleogeography, Oil Exploration, and Chicxulub Impact I</td>
<td>8:00 AM</td>
<td>Tulum</td>
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<tr>
<td>U31A</td>
<td>Impact Craters in the Solar System: Recent Studies, New Developments and Perspectives I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>PP32A</td>
<td>Perspectives in Paleoclimatology and Paleoclimatology II</td>
<td>10:20 AM</td>
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**AFTERNOON**

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<td>GC33A</td>
<td>Imbalance of Nature I</td>
<td>1:40 PM</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>NH33A</td>
<td>Interdisciplinary Approaches to Natural Hazards I</td>
<td>1:40 PM</td>
<td>Salon Cozumel 4</td>
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<tr>
<td>PP33A</td>
<td>Perspectives in Paleoceanography and Paleoclimatology III Posters</td>
<td>1:40 PM</td>
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<td>Observations, Modeling, and Economics of Extreme Events</td>
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<tr>
<td>GC34A</td>
<td>Imbalance of Nature II</td>
<td>4:00 PM</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>NH34A</td>
<td>Extreme Hazards and Disaster Risks in the Americas I</td>
<td>4:00 PM</td>
<td>Salon Cozumel 4</td>
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<tr>
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### Thursday, 16 May

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<tr>
<td>GC41A</td>
<td>Andes Mountains: The Stunning and Dynamic Region of South America I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>GC41B</td>
<td>Imbalance of Nature III Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>NH41A</td>
<td>Earthquakes and Tsunamis: Historical and Geological Records and Modeling I</td>
<td>8:00 AM</td>
<td>Salon Cozumel 4</td>
</tr>
<tr>
<td>OS41A</td>
<td>Physical Processes in Tropical and Subtropical Coastal Systems II</td>
<td>8:00 AM</td>
<td>Salon Cozumel 1</td>
</tr>
<tr>
<td>PP41A</td>
<td>Late Mesozoic–Early Cenozoic Biostratigraphy and Paleoclimates I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>PP41B</td>
<td>Reconstructing Monsoonal Precipitation From Geological Records I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>PP41C</td>
<td>Spatial and Temporal Variations of Corg-rich Deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>PP41D</td>
<td>Spatial and Temporal Variations of Corg-rich Deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm I Posters</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>S41A</td>
<td>Earthquake Early Warning in the Americas and Beyond I</td>
<td>8:00 AM</td>
<td>Salon Cozumel 5</td>
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</tbody>
</table>

**AFTERNOON**

<table>
<thead>
<tr>
<th>Session</th>
<th>Title</th>
<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>GC43B</td>
<td>Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin I Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>OS43A</td>
<td>Ocean Sciences General Contributions IV</td>
<td>1:40 PM</td>
<td>Salon Cozumel 3</td>
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<tr>
<td>PP43A</td>
<td>Reconstructing Monsoonal Precipitation From Geological Records II</td>
<td>1:40 PM</td>
<td>Salon Cozumel 2</td>
</tr>
<tr>
<td>S43A</td>
<td>Earthquake Early Warning in the Americas and Beyond III Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>S43B</td>
<td>Regional and National Seismic Hazard Models: Challenges in Latin America I Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>SH43B</td>
<td>Improving Space Weather Forecast and Services II</td>
<td>1:40 PM</td>
<td>Xcaret</td>
</tr>
<tr>
<td>T43B</td>
<td>Subhorizontal Slab Subduction II Posters</td>
<td>1:40 PM</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>GC44A</td>
<td>Andes Mountains: The Stunning and Dynamic Region of South America II</td>
<td>4:00 PM</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>OS44A</td>
<td>Ocean Sciences General Contributions V</td>
<td>4:00 PM</td>
<td>Salon Cozumel 3</td>
</tr>
<tr>
<td>PP44A</td>
<td>Spatial and Temporal Variations of Corg-rich deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm II</td>
<td>4:00 PM</td>
<td>Salon Cozumel 2</td>
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<tr>
<td>SH44A</td>
<td>Improving Space Weather Forecast and Services III</td>
<td>4:00 PM</td>
<td>Xcaret</td>
</tr>
</tbody>
</table>
Friday, 17 May

MORNING

NH51A Earthquakes and Tsunamis: Historical and Geological Records and Modeling II Posters
8:00 AM, Gran Cancun Poster Hall

NH51B Extreme Hazards and Disaster Risks in the Americas II Posters
8:00 AM, Gran Cancun Poster Hall

NH51C Interdisciplinary Approaches to Natural Hazards II Posters
8:00 AM, Gran Cancun Poster Hall

NH51D Natural Hazards General Contributions Posters
8:00 AM, Gran Cancun Poster Hall

NH51F Risk Management in Urban Sites Posters
8:00 AM, Gran Cancun Poster Hall

OS51A Physical Processes in Tropical and Subtropical Coastal Systems IV
8:00 AM, Salon Cozumel 3

PP51B Paleoceanography and Paleoclimatology General Contributions I Posters
8:00 AM, Gran Cancun Poster Hall

SS51A Regional and National Seismic Hazard Models: Challenges in Latin America II
8:00 AM, Salon Cozumel 5

US51A Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts I Posters
8:00 AM, Gran Cancun Poster Hall

V51A Subduction Dynamics From Surface to Deep Mantle: Controls on the Physical, Petrological, and Geochemical Parameters on Active and Epithermal Analogs
8:00 AM, Isla Mujeres Salons

SS52A Regional and National Seismic Hazard Models: Challenges in Latin America III
10:20 AM, Salon Cozumel 5

U52A Weather, Climate, and Food Security: American and Global Perspectives
10:20 AM, Gran Cancun 1

AFTERNOON

GC53A Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin II
1:40 PM, Salon Cozumel 1

PP53A Late Mesozoic–Early Cenozoic Biostratigraphy And Paleoclimates II
1:40 PM, Salon Cozumel 2

SS53A Regional and National Seismic Hazard Models: Challenges in Latin America IV
1:40 PM, Salon Cozumel 5

US53A Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts II
1:40 PM, Gran Cancun 5

GC54A Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin III
4:00 PM, Salon Cozumel 1

PP54A Paleoceanography and Paleoclimatology General Contributions II
4:00 PM, Salon Cozumel 2
Provide Students with Valuable Feedback!

Sign up as an OSPA Judge.

The Outstanding Student Paper Awards (OSPAs) are awarded to promote, recognize and reward undergraduate, Master’s and PhD students for quality research in the geophysical sciences. It is a great honor for young scientists at the beginning of their careers and the process relies entirely on volunteer judges.

moa.agu.org/2013/ospa/judges

The OSPA Resource Center is located in the Gran Cancún Exhibit and Poster Hall, in booth #26.
Town Hall Meetings

Town Hall Meetings offer an opportunity for government agencies, academic programs, special projects and other focused interest groups to gather input from the broad AGU Community. They are open to all meeting participants.

Tuesday, 14 May
12:30 PM-1:30 PM
Gran Cancun 5

Towards a Strategy for GEO Water Activities
A strategy for Group on Earth Observations (GEO) water activities over the next decade is currently under development. This Town Hall will inform scientists about this strategy, review the priority issues, and solicit feedback on the proposed approach. Scientists from Latin and Caribbean America will have an opportunity to provide their comments on the strategy and information on potential contributions from regional scientific organizations.

Thursday, 16 May
12:30 PM-1:30 PM
Gran Cancun 5

European Research Council (ERC) – Funding Opportunities for Researchers from Anywhere in the World
The ERC is supporting investigator-driven frontier research across all fields of science. ERC calls are open to researchers from around the world. The ERC offers grants worth up to €3.5 million for scientists regardless of their nationality, for projects carried out at a host institution in Europe. In this Town Hall, we will present ERC funding opportunities and details of the application procedure.

Please... No Recording
Audiotaping, videotaping, or photographing of oral sessions and posters are not allowed at AGU Meetings.
Plenary Speakers

An Inside Look

Join your colleagues this week at the plenary sessions. Details about days, times, and room locations are on page 3.

Amilcare M. Porporato
H25A. Hydrology Plenary Session
Impact of Hydrologic Variability on Ecosystem Dynamics and the Sustainable Use of Soil and Water Resources

Amilcare Porporato earned a M.S. (cum laude) and Ph.D. from the Polytechnic of Turin and is currently Professor in the Department of Civil and Environmental Engineering of Duke University. Porporato received the Arturo Parisatti International Prize, the Professor Senol Utku’ Award, and the Earl Brown II Outstanding Civil Engineering Faculty Award. He was the first Landolt & Cie Visiting Chair at The École Polytechnique Fédérale de Lausanne and he received a Lagrange fellowship from Turin ISI. In 2012, he was elected an AGU fellow.

Porporato has been editor of Water Resources Research, and he is editor for Hydrological Processes. He serves on the editorial board of Advances in Water Resources and the Hydrologic Science Journal. His main research interests consist of nonlinear and stochastic dynamical systems, hydrometeorology and soil-atmosphere interaction, soil moisture and plant dynamics, soil biogeochemistry, and ecohydrology.

Porporato is author of more than 140 peer-reviewed papers. He is also co-author of the book "Ecohydrology of water controlled ecosystems" (Cambridge University Press, 2004) and the editor of the book "Dryland Ecohydrology" (Springer, 2005).

Carol Finn
NS32B. Near Surface Geophysics Plenary Session
Geophysics of Volcanic Landslide Hazards: The Inside Story

Carol Finn has been a member of AGU since 1980. She has been involved in AGU leadership positions for 13 years, currently serving as AGU President. She continues to play an instrumental role in advancing AGU and its mission. Carol serves as a Senior Research Geophysicist with the U.S. Geological Survey, and her major research interests include geological interpretation of potential field data, volcano hazards, and tectonics. Finn received her B.A. in Geology from Wellesley College, her M.S. in Geophysics from the University of Colorado, and her Ph.D. in Geophysics from the University of Colorado. She is a fellow of the Geological Society of America, and has written 86 referred publications—21 in AGU journals.
Plenary Speakers

An Inside Look

Michael Ghil
A45A. Atmospheric Sciences Plenary Session: Extreme Events Dynamics, Statistics and Prediction

Michael Ghil is a Distinguished Professor of Geosciences at the Ecole Normale Supérieure, Paris, and founder of its Environmental Research and Teaching Institute. He is also a Distinguished Research Professor at the University of California, Los Angeles, where he was Chair of the Department of Atmospheric Sciences (1988–1992) and Director of the Institute of Geophysics and Planetary Physics (1992–2003).

Ghil is a world leader in theoretical climate dynamics. He has applied systematically ideas and methods from nonlinear dynamics to planetary-scale flows, atmospheric and oceanic. He has used these methods to proceed from simple flows with high temporal regularity and spatial symmetry to the observed flows, with their complex behavior in space and time. His studies of climate variability on many time scales have used a full hierarchy of models, from the simplest “toy” models all the way to atmospheric, oceanic, and coupled general circulation models.

Ghil has worked on climate dynamics, dynamical and complex systems, extreme events, numerical and statistical methods, and most recently mathematical economics. He is the author or editor of a dozen books and author or co-author of nearly 300 research and review articles. His honors and awards include the Lorenz Lecture of the AGU (2005), the Alfred Wegener Medal of the European Geosciences Union (2012), and membership in the Academia Europaea (1998).

Safety First!

To ensure the safety of others:

• Please move to the center of the oral session rooms
• Remember to not sit in the aisles
• Per the Fire Marshall, over-crowding is not allowed and may result in the closing of your session

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Atmospheric Science
Detlev Helmig, University of Colorado Boulder

Ocean Science
Jody W. Deming, University of Washington

Earth and Environmental Science
Joel D. Blum, University of Michigan

Sustainable Engineering
Michael E. Chang, Georgia Institute of Technology

Ecology
Donald R. Zak, University of Michigan

Sustainability Transitions
Anne Kapuscinski and David R. Peart, Dartmouth

Accepting submissions in Spring, 2013
elementascience.org
# 2013 Meeting of the Americas

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- **Terri S. Hogue**  
  Colorado School of Mines

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  Karlsruhe Institute of Technology  
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  The University of Findlay

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  Université Paul Sabatier

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  Universidade de Sao Paulo  
- **Federico Graef Ziehl**  
  CICESE

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  Universidade de Sao Paulo

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  Universidade de Sao Paulo

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  Universidad Nacional Autonoma de Mexico

### SPA-Heliospheric Physics

- **Teresa Nieves-Chinchilla**  
  NASA Goddard Space Flight Center

### SPA-Magnetospheric Physics

- **Xochitl Blanco-Cano**  
  Universidad Nacional Autonoma de Mexico

### Tectonophysics

- **Joann Stock**  
  California Institute of Technology

### Volcanology, Geochemistry, and Petrology

- **Gerardo Carrasco**  
  Universidad Nacional Autonoma de Mexico
Meeting Services

AGU ACTIVITIES AND EVENTS

AGU Booth
Booths 23-24
Gran Cancun 3, Level 3
Tuesday–Friday, 10:00 AM-6:00 PM
Renew your membership, update your membership profile, or join!

AGU Donor Lounge
Bacalar Room, Level 1
Tuesday-Friday, 7:00 AM-6:00 PM
(By invitation only) The Lounge welcomes members and benefactors of the American Geophysical Union who contributed $120 or more in 2013 in addition to their dues. Their financial support helps Union activities and initiatives every day. Visit www.agu.org/givingtoagu to make a donation to AGU.

Exhibits
Gran Cancun 2, Level 3
Tuesday–Thursday
10:00 AM-6:00 PM
See pages 23-25 for a complete list of exhibitors.
Note: The AGU and Wiley booths will remain open on Friday, 17 May.

GENERAL SERVICES

Baggage Check
Gran Cancun A, Level 3
Monday, 1:00 PM-7:00 PM
Tuesday-Wednesday, 7:00 AM-6:00 PM
Thursday-Friday, 7:30 AM-6:00 PM

First Aid
Ground Floor
Tuesday-Friday, 8:00 AM-7:00 PM
Medical staff will be on call during regular meeting hours to provide basic first-aid services.

Internet Stations
Lobby, Level 3
To search and view the online program, or create your personal meeting itinerary, internet stations are conveniently located in Gran Cancun on Level 3 for your use. Please consider the environment before printing unnecessary pages.

Lost and Found
A Lost and Found will be located at the Meeting Services Booth during session hours. Detailed information on hours and location can be found under “Meeting Services Booth” on page 19.

Refreshments
Gran Cancun Poster Hall
10:00 AM-10:30 AM: Coffee and Soft Drinks
3:30 PM-4:00 PM: Coffee, Soft Drinks, and Beer

Special Needs
AGU staff will work with its vendors to provide reasonable support to anyone with special needs. If you require special assistance during the meeting, contact staff at the Meeting Services Booth, located in Registration, Gran Cancun A, Level 3

Wireless Internet
Wireless Internet access is available throughout all areas of the Cancun Center. The network you will access is AGU 2013.

PRESENTER SERVICES

Outstanding Student Paper Awards (OSPA)
Resource Center
Gran Cancun, Booth #26
Gran Cancun 3, Level 3
Tuesday-Friday, 8:00 AM-3:00 PM
Section and focus group OSPA coordinators and judges may visit the booth for assistance and relevant materials.

Poster Help
Gran Cancun Poster Hall, Gran Cancun A, Level 3
Tuesday-Friday: 7:30 AM-6:00 PM
Staff will be available to assist you with your poster location and other on-site needs. Push pins, tape, and scissors will be available for your use. If you have special needs for your poster

Make the Most With Meeting Central!

• Upload and manage your ePoster
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• Find and connect with colleagues through private messages
• Network with other attendees through message boards tailored to specific scientific interests
• Stay in touch with colleagues after the meeting ends

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presentation, we suggest you bring those supplies with you to the
meeting. Presenters will also be able to place on-site orders for
audio-visual equipment here.

Speaker Ready Room
Coba Lounge, Level 2
Monday, 1:00 PM-7:00 PM
Tuesday-Thursday, 7:00 AM-6:00 PM
Friday, 7:00 AM-3:00 PM
ALL speakers are required to check into the Speaker Ready Room
at least 24 hours before their presentation. Those presenting on
Tuesday, 14 May, must check in on Monday, 13 May.

REGISTRATION SERVICES

Guests
Registered attendees may also register a guest or spouse at a
charge of $50 USD on site. A guest is a spouse, friend, or adult
child (18 years old and older) who is not working in a geophysical
science related occupation or field. A colleague or associate
working in a related geophysical sciences field or studying
geophysics in school may not register as a guest. Registered
guests may not attend the scientific sessions; however, they may
go to the Exhibit Hall and attend and purchase tickets to social
events at the advertised rates.

Housing
Hotel Lobbies
Sunday, 12 May-Friday 17 May
8:30 AM-2:00 PM and 3:30 PM-6:00 PM
Sunday, 18 May
9:00 AM-1:30 PM
The official housing agent, INTERMeeting, will have a hospitality
desk set up at each of the hotels during peak hours. The official
hotels include the Fiesta America Grand Coral Beach Resort and
Spa, Hyatt Regency and Krystal Cancun.

Meeting Services Booth
Gran Cancun A, Level 3
Monday, 1:00 PM-7:00 PM
Tuesday-Friday, 7:00 AM-6:00 PM
Staff will be available to answer questions regarding the
registration process, maintain lost and found items, and provide
ribbons.

Registration
Gran Cancun A, Level 3
All attendees must register and wear their conference badge
while attending all Meeting of the Americas functions.
(See inside front cover for hours of operation).
Note: Numbers refer to booths. See pages 23–25 to view Exhibitor Directory

American Geophysical Union ...................................................... #23-24
Ampere ......................................................................................... #8
Asociación Latinoamericana de Geofísica Espacial (ALAGE) #9
Asociación LatinoAmericana de Paleomagnetismo
  Y’Geomagnetismo ........................................................................ #4
Beta Analytic .................................................................................. #2
Cambridge University Press ......................................................... #1
Centro de Investigacion Cientifica de Yucatan (CICY) ........... #5
Commission for the Geological Map of the World (CGMW) .... #16
Global Earthquake Model / GEM Foundation ....................... #3
GeoSIG Ltd ..................................................................................... #13
GNS Science / Rafter Radiocarbon ............................................. #22
Harte Research Institute for Gulf of Mexico Studies ............... #21
Kinematics Inc. ............................................................................. #15
Nanometrics Inc. ......................................................................... #7
Scintrex Limited ............................................................................ #14
Sociedade Brasileira de Geofísica ................................................. #6
Sociedad Geológica en México (SGM) .......................................... #10
Trimble Navigation Limited.......................................................... #19-20
Unión Geofísica Mexicana (UGM) ................................................. #11
Unión Mexicana para Estudios del Cuaternario (UMEC) ........... #12
Wiley .............................................................................................. #25
<table>
<thead>
<tr>
<th>Exhibitor Directory</th>
</tr>
</thead>
</table>
| **American Geophysical Union**  
**Booths 23-24**  
Category: Professional Society/Association  
2000 Florida Avenue, NW  
Washington, DC 20009 USA  
Phone: +1 202-462-6900  
Fax: +1 202-777-7393  
E-mail: service@agu.org  
Website: www.agu.org  
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| **Ampere**  
**Booth 8**  
Category: Geophysical Equipment/Instrumentation  
Angel Urraza 1838 Col. Independencia  
Del. Benito Juarez  
DF 03630 Mexico  
Phone: +52 (55) 5672 1500  
E-Mail: amendez@ampere.com.mx  
Website: www.ampere.com.mx  
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**Booth 2**  
Category: Geophysical Services  
4985 SW 74th Court  
Miami, FL 33155 USA  
Phone: +1 315-515-8066  
Fax: +1 315-663-0964  
E-mail: mtesini@betalabservices.com  
Website: www.radiocarbon.com  
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ISO 17025-accredited Beta Analytic is a dedicated radiocarbon dating laboratory with standard turnaround time of 14 business days or less for its AMS Dating service. Expedited services are available (2-6 business days). All analyses are performed in-house by dedicated professional scientists. Multiple laboratories in Miami, Florida, ensure redundancy and dependable delivery. Respected worldwide for accuracy, quality, and customer care. Results are accessible 24/7 via web access. |
| **Cambridge University Press**  
**Booth 1**  
Category: Publisher  
32 Avenue of the Americas  
New York, NY 10013 USA  
Phone: +1 212-924-3900  
Fax: +1 212-691-3239  
E-mail: jmurphy@cambridge.org  
Website: www.cambridge.org  
---  
| **Commission for the Geological Map of the World (CGMW)**  
**Booth 16**  
Category: Non-Profit  
77 rue Claude-Bernard  
Paris 75005 France  
Phone: +33 1 47 07 22 84  
Fax: +33 43 36 95 18  
E-Mail: ccgm@club-internet.fr  
Website: www.ccgm.org  
---  
CGMW will be displaying Earth Science maps at small scale (1:25 M, 1:50 M, 1:5 M) of the World, the continents (South America, Africa, Antarctica, Europe) and educational publications. Geophysical maps of the World will be also available. |
| **Global Earthquake Model / GEM Foundation**  
**Booth 3**  
Category: Global Partnership  
Via Ferrata 1  
Pavia 27100 Italy  
Phone: +39-0382-5169875  
Fax: +39-0382-529131  
E-mail: info@globalquakemodel.org  
Website: www.globalquakemodel.org  
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GEM is a global collaboration to develop (scientific) tools and resources for transparent assessment of earthquake risk worldwide. In Latin America we work together with local experts and institutions on seismic hazard and risk assessment in many different ways. Come to our booth for more information. |
| **GeoSIG Ltd**  
**Booth 13**  
Category: Geophysical Equipment/Instrumentation  
Ahornweg 5A  
Othmarsingen AG 5504 Switzerland  
Phone: +41 44 810 21 50  
Fax: +41 44 810 23 50  
E-mail: fggeiger@geosig.com  
Website: www.geosig.com  
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GeoSIG provides earthquake, seismic, structural, dynamic and static monitoring and measuring solutions. |
GNS Science / Rafter Radiocarbon
Booth 22
Category: Geophysical Services
30 Gracefield Road
Lower Hutt 5010 New Zealand
Phone: +64 4 570 4123
E-Mail: M.Sim@gns.cri.nz
Website: www.gns.cri.nz/nic

Rafter Radiocarbon (www.rafterradiocarbon.co.nz) is the world’s oldest continuously operating radiocarbon lab and a department within New Zealand’s earth sciences research Institute, GNS Science (www.gns.cri.nz) where we focus on geological research, isotope biogeosciences, and natural hazards. Rafter Radiocarbon together with our Cosmogenic and Stable Isotope Labs have been utilizing our scientists and technicians to provide commercial dating and isotope analysis services for clients worldwide for over 50 years. Come by to discuss how we might assist your research.

Harte Research Institute for Gulf of Mexico Studies
Booth 21
Category: Academic University/Institution
6300 Ocean Drive
Corpus Christi, TX 78412-5869 USA
Phone: +1 361-825-2000
Fax: +1 361-825-2050
E-Mail: carlota.santos@tamucc.edu
Website: www.harteresearchinstitute.org

“Gulf 360: State of the Gulf of Mexico” is a publication that focuses on the socio-economic state and trends of the Gulf of Mexico (Cuba, Mexico, U.S.) by incorporating socioeconomic data from the three countries and acting as a benchmark for future analysis. It was produced by the Harte Research Institute (Texas A&M University-Corpus Christi) in partnership with CEGAM (Mexico), NOAA (U.S.), INEGI (Mexico), and funded by Shell Exploration and Production Company.

Kinemetrics Inc.
Booth 15
Category: Geophysical Equipment/Instrumentation
222 Vista Avenue
Pasadena, CA 91107 USA
Phone: +1 626-795-2220
Fax: +1 626-795-0868
E-Mail: ens@kmi.com
Website: www.kinemetrics.com

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Nanometrics Inc.
Booth 7
Category: Geophysical Equipment/Instrumentation
250 Herzberg Road
Kanata, ON K2K2A Canada
Phone: +1 613-592-6776
Fax: +1 613-592-5929
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Booth 9

**Asociación LatinoAmericana de Paleomagnetismo Y Geomagnetismo (LatinMag)**
Booth 4

**Centro de Investigacion Cientifica de Yucatan (CICY)**
Booth 5

**Sociedade Brasileira de Geofísica (SBGf)**
Booth 6

**Sociedad Geológica en México (SGM)**
Booth 10

**Unión Geofísica Mexicana (UGM)**
Booth 11

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Registration and Housing Deadline: Friday, 31 May 2013

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### Meeting Summary Chart Example

#### Discipline Session Start Time

**Tuesday A.M.**

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Start Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>U21A</td>
<td>U21A Interhemispheric Connections of the American Paleoclimate Record</td>
<td>8:00 AM</td>
<td>Gran Cancun Poster Hall</td>
</tr>
<tr>
<td>A21A</td>
<td>A21A Regional Climate Modeling Over the Tropics and Subtropics</td>
<td>8:00 AM</td>
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<tr>
<td>A21B</td>
<td>A21B Intraseasonal to Decadal Variability of the Tropical Americas</td>
<td>8:00 AM</td>
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<tr>
<td>A21C</td>
<td>A21C Seasonal Hydroclimatological Extremes in the Amazon Basin</td>
<td>8:00 AM</td>
<td>Gran Cancun 5</td>
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**Session Number**

A session number designates the section, or other sponsoring group, and chronology of the presentation.

- **Example:** A21C = Atmospheric Sciences, Tuesday, A.M., concurrent session C

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**Location**

- Gran Cancun Poster Hall
- Gran Cancun 5

**Poster Session**

- Session U21A
- Session A21A
- Session A21B
- Session A21C

**Oral Session**

- Session A21A
- Session A21B
- Session A21C

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**Discipline**

- U Union
- A Atmospheric Sciences
- AE Atmospheric and Space Electricity
- B Biogeochemistry
- C Cryosphere
- ED Education and Human Resources
- EP EarthandPlanetary Surface Processes
- G Geodesy
- GC Global Environmental Change
- GP Geomagnetism and Paleomagnetism
- H Hydrology
- IN Earthand Space Science Informatics
- NG Nonlinear Geophysics
- NH Natural Hazards
- NS Near-Surface Geophysics
- OS Ocean Sciences
- P Planetary Sciences
- PA Public Affairs
- PP Paleoceanography and Paleoceanology
- SI Societal Impacts and Policy Sciences
- SA SPA-Aeronomy
- SH SPA-Magnetospheric Physics
- SM SPA-Solar and Heliospheric Physics
- DI Study of the Earth’s Deep Interior
- MR Mineral and Rock Physics
- S Seismology
- T Tectonophysics
- V Volcanology, Geochemistry, and Petrology

**Swirl Session**

- Session U21A
- Session A21A
- Session A21B
- Session A21C

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**Location**

- Gran Cancun Poster Hall
- Gran Cancun 5
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<td>Regional Climate Modeling Over the Tropics and Subtropics I Posters</td>
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<td>Intraseasonal to Decadal Variability of the Tropical Americas I Posters</td>
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<td>A21C</td>
<td>Seasonal Hydroclimatological Extremes in the Amazon Basin I</td>
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<td>C21A</td>
<td>Cryosphere General Contributions I Posters</td>
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<td>Cryosphere in a Warming Climate: Changes, Impacts, and Adaptation I Posters</td>
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<td>GC21A</td>
<td>Climate Change in the Americas: Observations and Global and Regional Models I</td>
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<td>Paleosecular Variation, Excursions, and Reversals of the Earth’s Magnetic Field I Posters</td>
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<td>Archeomagnetic and Archeomagnetic Applications, Recent Geomagnetic Field Observations, and Paleosecular Variation During the Last Millennia I</td>
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<td>H21A</td>
<td>Wetland Dynamics and Ecohydrology I</td>
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<td>Earth and Space Science Informatics General Contributions I</td>
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<td>Methods for Integrating Climate Information Into Marine Resource Management</td>
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<td>NS21A</td>
<td>Geophysical Imaging of Increasingly Complex Geologic Media: Recent Advances I Posters</td>
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<td>Application of Remote Sensing to Coastal Regions of the Americas</td>
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<td>Our Evolving Understanding of the Heliosheath I Posters</td>
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<td>Space Plasmas and High-Energy Particles in the Heliosphere I Posters</td>
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<td>The Coupled Inner Magnetosphere I Posters</td>
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<td>Toward a New Era in Radiation Belt Research I Posters</td>
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<td>Top to Bottom View of the Dynamics of Northern South America</td>
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<td>Cosmic Dust</td>
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<td>A22A</td>
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<td>GP22A</td>
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<td><strong>Planetary Sciences</strong></td>
<td>Chicxulub Impact Crater and the Cretaceous-Paleogene Boundary I</td>
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<td><strong>Seismology</strong></td>
<td>Tectonic Tremor and Slow-Slip Events I</td>
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<tr>
<td><strong>Tectonophysics</strong></td>
<td>Tectonics and Structure of the Northern Andes I</td>
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<td><strong>Global Environmental Change</strong></td>
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<td>H23B</td>
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<td>OS23A</td>
<td>Ocean Sciences General Contributions I</td>
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<td>Chicxulub Impact Crater and the Cretaceous-Paleogene Boundary II Posters</td>
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<tr>
<td>P23C</td>
<td>Waves and Instabilities in Surface and Internal Planetary Fluid Flows I Posters</td>
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#### SPA-Magnetospheric Physics

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<td>SM23A</td>
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- B: NO, NS, P, PP
- C: ED, EP
- D: IN, NG, NH, NS
- E: OS
- F: GS, GP, H

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**Session Sponsors & Cosponsors**

- A: Atmospheric Sciences
- AE: Atmospheric and Space Electricity
- B: Biogeo sciences
- C: Cryosphere
- ED: Education and Human Resources
- G: Geodesy
- GC: Global Environmental Change
- GP: Geomagnetism and Paleomagnetism
- H: Hydrology
- IN: Earth and Space Science Informatics
- NG: Nonlinear Geophysics
- NH: Natural Hazards
- NS: Near-Surface Geophysics
- OS: Ocean Sciences
- P: Planetary Sciences
- PP: Paleoclimatology and Palaeoclimatology
- SA: SPA-Aeronomy
- SM: SPA-Magnetospheric Physics
- MR: Mineral and Rock Physics
- S: Seismology
- T: Tectonophysics
- V: Volcanology, Geochemistry, and Petrology

**Wednesday A.M.**

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#### Geomagnetism and Paleomagnetism

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<tbody>
<tr>
<td><strong>SPA-Solar and Heliospheric Physics</strong></td>
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<tr>
<td>8:00 AM</td>
<td>Exploring Solar Energetic Particle Origins With Solar Orbiter and Solar Probe Plus</td>
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<tr>
<td><strong>SPA-Magnetospheric Physics</strong></td>
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<tr>
<td>8:00 AM</td>
<td>Dayside Interactions I Posters</td>
<td>Gran Cancun</td>
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<tr>
<td>8:00 AM</td>
<td>Physics of Collisionless Shocks and Foreshocks: Recent Advances I Posters</td>
<td>Gran Cancun</td>
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<tr>
<td><strong>Seismology</strong></td>
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<tr>
<td>8:00 AM</td>
<td>Earthquake Early Warning in the Americas and Beyond</td>
<td>Salon Cozumel</td>
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<td><strong>Tectonophysics</strong></td>
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<tr>
<td>8:00 AM</td>
<td>Subhorizontal Slab Subduction</td>
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<td><strong>Volcanology, Geochemistry and Petrology</strong></td>
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<td>8:00 AM</td>
<td>Recent Activity and Tephra Fallout Hazards at Volcanoes of the Americas I Posters</td>
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<tr>
<td>8:00 AM</td>
<td>Volcanology I Posters</td>
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<td><strong>Geomagnetism and Paleomagnetism</strong></td>
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<tr>
<td>9:00 AM</td>
<td>Absolute and Relative Paleointensity Determinations: New Results and Methods I</td>
<td>Isla Mujeres Salons</td>
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<tr>
<td><strong>Atmospheric Sciences</strong></td>
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<tr>
<td>10:20 AM</td>
<td>Urban Air Pollution in Latin America III</td>
<td>Gran Cancun 5</td>
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<td><strong>Biogeosciences</strong></td>
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<td>Inferring Environmental Condition From Geochemical Data II</td>
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<td>Transnational Gravity Field and Regional Height Systems II</td>
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<td><strong>Geomagnetism and Paleomagnetism</strong></td>
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<td>Paleomagnetic Studies for the Reconstruction of Tectonic Processes I</td>
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<tr>
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<td>Climate, Water, and Society II</td>
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<td><strong>Natural Hazards</strong></td>
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<tr>
<td>10:20 AM</td>
<td>Multiparameter and Multisensors Observation of Precursory Patterns in Seismically Active Areas I</td>
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<tr>
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<td>10:20 AM</td>
<td>Physical Processes in Tropical and Subtropical Coastal Systems III</td>
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### Thursday A.M.

#### SPA-Solar and Heliospheric Physics

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<th>Session</th>
<th>Title</th>
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<tbody>
<tr>
<td>SH42A</td>
<td>The Response of Solar Jets in the Corona and Heliosphere</td>
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#### Seismology

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<td>S42A</td>
<td>Earthquake Early Warning in the Americas and Beyond II</td>
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<tr>
<td>T42A</td>
<td>Geological and Geophysical Constraints on the Plate Boundaries Along the Western Mexican Pacific Margin I</td>
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#### SPA-Solar and Heliospheric Physics

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<td>SH42B</td>
<td>Improving Space Weather Forecast and Services I</td>
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### Thursday P.M.

#### Atmospheric Sciences

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<td>A43A</td>
<td>Aerosols, Clouds, Radiation, Precipitation, and Their Feedbacks II</td>
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<td>B43B</td>
<td>Greenhouse Gas Fluxes From Natural and Man-Made Freshwater Bodies III Posters</td>
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#### Education

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<td>GC43A</td>
<td>Global Environmental Change General Contributions I Posters</td>
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<td>GC43B</td>
<td>Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin I Posters</td>
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<td>GC43C</td>
<td>Measuring the Carbon Emissions of Megacities</td>
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#### Geomagnetism and Paleomagnetism

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<td>GM43A</td>
<td>Absolute and Relative Paleointensity Determinations: New Results and Methods II Posters</td>
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<td>GM43B</td>
<td>Paleomagnetic Studies for the Reconstruction of Tectonic Processes II Posters</td>
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<tr>
<td>1:40 PM</td>
<td><strong>Hydrology</strong>&lt;br&gt;<strong>GP43C</strong> Precambrian Geomagnetic Field I Posters</td>
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<td><strong>NH43A</strong> Wildfires on Landscapes: Theory, Models, and Management</td>
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<td><strong>Hydrology</strong>&lt;br&gt;<strong>H43A</strong> Subsurface Structure and Transport With Applications in Mining I Posters</td>
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<td><strong>Hydrology</strong>&lt;br&gt;<strong>H43B</strong> Advances in Satellite Precipitation and Hydrologic Applications II</td>
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<td><strong>Natural Hazards</strong>&lt;br&gt;<strong>NH43A</strong> Wildfires on Landscapes: Theory, Models, and Management</td>
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<td><strong>Paleoceanography and Paleoclimatology</strong>&lt;br&gt;<strong>PP43A</strong> Reconstructing Monsoonal Precipitation From Geological Records II</td>
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<td><strong>SPA-Magnetospheric Physics</strong>&lt;br&gt;<strong>SM43A</strong> The Coupled Inner Magnetosphere II</td>
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<td><strong>Seismology</strong>&lt;br&gt;<strong>S43A</strong> Earthquake Early Warning in the Americas and Beyond III Posters</td>
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<td><strong>Seismology</strong>&lt;br&gt;<strong>S43B</strong> Regional and National Seismic Hazard Models: Challenges in Latin America I Posters</td>
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<td><strong>Seismology</strong>&lt;br&gt;<strong>S43D</strong> The 2012 M7.6 Nicoya, Costa Rica, Earthquake: Seismogenic Zone Science at the Bull's-Eye of an NSF MARGINS SEIZE Focus Site I</td>
<td>Salon Cozumel 5</td>
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<td><strong>Tectonophysics</strong>&lt;br&gt;<strong>T43A</strong> Geological and Geophysical Constraints on the Plate Boundaries Along the Western Mexican Pacific Margin II Posters</td>
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<td><strong>Tectonophysics</strong>&lt;br&gt;<strong>T43B</strong> Subhorizontal Slab Subduction II Posters</td>
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<td><strong>Volcanology, Geochemistry and Petrology</strong>&lt;br&gt;<strong>V43A</strong> Volcanology II</td>
<td>Isla Mujeres Salons</td>
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<td><strong>Union</strong>&lt;br&gt;<strong>U44A</strong> International Collaboration in Earth and Space Sciences II</td>
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## Thursday P.M.

### Atmospheric Sciences
- **A44A** Aerosols, Clouds, Radiation, Precipitation, and Their Feedbacks  
  4:00 PM Gran Cancun 5

### Global Environmental Change
- **GC44A** Andes Mountains: The Stunning and Dynamic Region of South America II  
  4:00 PM Salon Cozumel 1

### Hydrology
- **H44A** Advances in Satellite Precipitation and Hydrologic Applications III  
  4:00 PM Gran Cancun 1

### Ocean Sciences
- **OS44A** Ocean Sciences General Contributions V  
  4:00 PM Salon Cozumel 3

### Paleoseoceanography and Paleoclimatology
- **PP44A** Spatial and Temporal Variations of Corg-rich deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm II  
  4:00 PM Salon Cozumel 2

### SPA-Solar and Heliospheric Physics
- **SH44A** Improving Space Weather Forecast and Services III  
  4:00 PM Xcaret

### SPA-Magnetospheric Physics
- **SM44A** Physical Processes in the Magnetospheres of Giant Planets  
  4:00 PM Tulum

### Seismology
- **S44A** The 2012 M7.6 Nicoya, Costa Rica, Earthquake: Seismogenic Zone Science at the Bull’s Eye of an NSF MARGINS SEIZE Focus Site II  
  4:00 PM Salon Cozumel 5

### Volcanology, Geochemistry and Petrology
- **V44A** Recent Activity and Tephra Fallout Hazards at Volcanoes of the Americas II  
  4:00 PM Isla Mujeres Salons

### Atmospheric Sciences
- **A45A** Atmospheric Sciences Plenary Session: Extreme Events: Dynamics, Statistics and Prediction  
  6:15 PM Gran Cancun

### Friday A.M.

### Union
- **UST1A** Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts I Posters  
  8:00 AM Gran Cancun Poster Hall
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<tr>
<th>Time</th>
<th>Session Title</th>
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<tr>
<td>8:00 AM</td>
<td>Building Geophysics Capacity in Emerging Regions</td>
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<tr>
<td>8:00 AM</td>
<td>Impact of Tropospheric Aerosols on Global and Regional Climate</td>
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<tr>
<td>8:00 AM</td>
<td>Agroecosystems in Terrestrial Hydrological and Biogeochemical Cycles Posters</td>
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<tr>
<td>8:00 AM</td>
<td>Inferring Environmental Condition From Geochemical Data III Posters</td>
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<tr>
<td>8:00 AM</td>
<td>Enhancing Diversity in Geoscience: Successful Models, Benefits, Outcomes, and Next Steps</td>
<td>Salon Cozumel 2</td>
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<tr>
<td>8:00 AM</td>
<td>Global Environmental Change General Contributions II</td>
<td>Salon Cozumel 1</td>
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<tr>
<td>8:00 AM</td>
<td>New Insights and Challenges in Environmental Magnetism I Posters</td>
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<tr>
<td>8:00 AM</td>
<td>Paleomagnetism, Tectonics, and Magnetostratigraphy in Latin America I Posters</td>
<td>Gran Cancun Poster Hall</td>
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<tr>
<td>8:00 AM</td>
<td>Earthquakes and Tsunamis: Historical and Geological Records and Modelling II Posters</td>
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<td>8:00 AM</td>
<td>Extreme Hazards and Disaster Risks in the Americas II Posters</td>
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<td>8:00 AM</td>
<td>Interdisciplinary Approaches to Natural Hazards II Posters</td>
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<td>Natural Hazards General Contributions Posters</td>
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<td>8:00 AM</td>
<td>Nature’s Airborne Particles: Sources and Consequences Posters</td>
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<td>8:00 AM</td>
<td>Risk Management in Urban Sites Posters</td>
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<td>8:00 AM</td>
<td>Physical Processes in Tropical and Subtropical Coastal Systems IV</td>
<td>Salon Cozumel 3</td>
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<td>8:00 AM</td>
<td>Paleoceanography and Paleoclimatology General Contributions I Posters</td>
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<tr>
<td>8:00 AM</td>
<td>Studies of the Low-Latitude Thermosphere/Ionosphere in the American Sector Posters</td>
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**Meeting Summary Chart**

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2013 Meeting of the Americas

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### Friday A.M.

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<tr>
<th>Session</th>
<th>SP-A Solar and Heliospheric Physics</th>
<th>SPA-M Magnetospheric Physics</th>
<th>Mineral and Rock Physics</th>
<th>Seismology</th>
<th>Tectonophysics</th>
<th>Volcanology, Geochemistry and Petrology</th>
<th>Union</th>
<th>Atmospheric Sciences</th>
<th>Geomagnetism and Paleomagnetism</th>
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<td>Heliospheric Physics General Contributions I Posters 8:00 AM Gran Cancun Poster Hall</td>
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<td>SH51C</td>
<td>Solar Energetic Particle (SEP) Acceleration and Transport I 8:00 AM Xcaret</td>
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<td>SH51D</td>
<td>The Heliosphere: Global ENA Imaging and 3-D Models I Posters 8:00 AM Gran Cancun Poster Hall</td>
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<td>SM51A</td>
<td>Day-side Interactions II 8:00 AM Tulum</td>
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<td>Mineral and Rock Physics General Contributions Posters 8:00 AM Gran Cancun Poster Hall</td>
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<td>SS1A</td>
<td>Regional and National Seismic Hazard Models: Challenges in Latin America II 8:00 AM Salon Cozumel 5</td>
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<td>TS1A</td>
<td>Solid Earth and Atmospheric Processes in the Caribbean in the Context of the Continuously Operating Caribbean GPS Observational Network (COCONet) II Posters 8:00 AM Gran Cancun Poster Hall</td>
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<td>VS1A</td>
<td>Subduction Dynamics From Surface to Deep Mantle: Controls on the Physical, Petrological, and Geochemical Parameters on Active and Epithermal Analogues 8:00 AM Isla Mujeres Salons</td>
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<td>Weather, Climate, and Food Security: American and Global Perspectives 10:20 AM Gran Cancun 1</td>
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<td>Intercomparison and Evaluation of Climate and Earth System Models II 10:20 AM Gran Cancun 5</td>
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<td>Precambrian Geomagnetic Field II 10:20 AM Isla Mujeres Salons</td>
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<td>Addressing Water Security Through Large-Scale Hydroclimatology Studies 10:20 AM Salon Cozumel 1</td>
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<td>Regional and National Seismic Hazard Models: Challenges in Latin America IV</td>
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<td>Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin III</td>
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<td>Subsurface Structure and Transport with Applications in Mining III</td>
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<td>Studies of the Low-Latitude Thermosphere/Ionosphere in the American Sector Ill</td>
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<td>The Heliosphere: Global ENA Imaging and 3-D Models II</td>
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<td>Advanced Techniques on High-Pressure Mineral Physics Research</td>
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Which Chapman Conference will you be attending?

Seasonal to Interannual Hydroclimate Forecasts and Water Management
Portland, Oregon, USA
28 - 31 July 2013

Synthesizing Empirical Results to Improve Predictions of Post-wildfire Runoff and Erosion Response
Estes Park, Colorado, USA
25 - 30 August 2013

Soil-mediated Drivers of Coupled Biogeochemical and Hydrological Processes Across Scales
Tucson, Arizona, USA
21 - 24 October 2013

Magnetosphere-Ionosphere Coupling in the Solar System
Yosemite National Park, California, USA
9 – 14 February 2014

Low-Frequency Waves in Space Plasmas
Jeju Island, Republic of Korea
September 2014

chapman.agu.org
### Program Content

**Session Number.** A session number designates the section, or other sponsoring group, and chronology of the presentation.

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Example: A21C = Atmospheric Sciences, Tuesday, A.M., concurrent session C

**Day:** 1 = Monday, 2 = Tuesday, 3 = Wednesday, 4 = Thursday, 5 = Friday  
**Time:** 1 = AM, 2 = AM, 3 = PM, 4 = PM, 5 = Evening  
**Concurrent Session:** A, B, C, D

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#### Tuesday A.M.

**U21A** Gran Cancun Poster Hall  
**Tuesday 0800h**  
**Interhemispheric Connections of the American Paleoclimate Record I Posters**

*Presiding:* M Rebolledo-Vieyra, CICY; J Herguera, CICESE; S E Metcalfe, University of Nottingham; L L Perez-Cruz, Instituto de Geofisica, UNAM

- **0800h** **U21A-01 POSTER** Micropaleontological and geochemical evidence of the last two centuries - Climatic history in the southern Gulf of California: L Barbara, A Escalante, O Hernández, I González-Munguía, L A Vera-Ortega, S Schmidt, L L Perez-Cruz
- **0800h** **U21A-02 POSTER** Seasonality and depth habitats from oxygen isotopic composition in planktic foraminifera in high to ultra high-resolution cores from the NE Pacific: J Herguera, D Rabiela

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#### Atmospheric Sciences

**A21A** Gran Cancun Poster Hall  
**Tuesday 0800h**  
**Regional Climate Modeling Over the Tropics and Subtropics I Posters (joint with IN, GC)**

*Presiding:* D Sein, Max Planck Institute; W Cabos, Universidad de Alcala; B Martinez Lopez, Universidad Nacional Autónoma de México; A Quintanar Isaias

- **0800h** **A21A-01 POSTER** Assessment of RegCM4 simulated tropical cyclones and daily scale statistics of temperature and precipitation over Mexico over the CORDEX Mexico and Central America domain: R Fuentes-Franco, E Coppola, F Giorgi, F Graef, E G Pavia, G T Diro
- **0800h** **A21A-02 POSTER** Parametrization of orographic effect on the deep convection triggering in Global Model: Y Jingmei, G Jean-Yves, L Alain
- **0800h** **A21A-03 POSTER** Evolution in intensity and frequency of extreme events of precipitation in Northeastern United States and Brazilian Amazon in XXI Century: P M Fonseca, J A Veiga, F S Correia, A L Brito
- **0800h** **A21A-04 POSTER** Surface temperature-modulating factors in the Sonoran Desert, Mexico: I Tereshchenko, A Zolotokryin, T Titkova, L Brito-Castillo, C Monzon
- **0800h** **A21A-05 POSTER** A new approach to the convective parameterization of the regional atmospheric model BRAMS: A F Dos Santos, S R Freitas, H F de Campos Velho, E F Luz, M A Gan, J Z de Mattos, G A Grell

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**0800h** **A21A-06 POSTER** Assessing Climate Change Impacts for Military Installations in the Southwest United States During the Warm Season: C Castro

**0800h** **A21A-07 POSTER** EFFECTS OF LAND USE CHANGES ON THE WATER AND ENERGY BALANCE OVER SOUTH AMERICA: M Nascimento, D L Herdies, C Angelis

**0800h** **A21A-08 POSTER** The Mid Summer Drought in Middle and Central Americas as simulated by a regional atmosphere-ocean model. Regional extent and the ocean remote and local influences: B Martinez Lopez, W Cabos, A Quintanar Isaias

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**A21B** Gran Cancun Poster Hall  
**Tuesday 0800h**  
**Intraseasonal to Decadal Variability of the Tropical Americas I Posters**

*Presiding:* Y Serra, University of Arizona; D K Adams, Universidad Nacional Autonoma de Mexico

- **0800h** **A21B-01 POSTER** Differences between local and remote interannual climate forcings acting on the Brazilian Large Marine Ecosystems: H C Soares, D F Gherardi, L P Pezzi, M T Kayano
- **0800h** **A21B-02 POSTER** The role of the Caribbean Low Level Jet in the modulations of the regional moisture transport: A Durán-Quesada, J Amador, L Gimeno
- **0800h** **A21B-03 POSTER** Connections between the Intertropical Convergence Zone and the Caribbean Low Level Jet in Central America: H G Hidalgo, A Durán-Quesada, J Amador, E J Alfaro
- **0800h** **A21B-04 POSTER** The role of transients in the Mid Summer Drought over the Tropical Americas: E Herrera, V Magaña Rueda, E Caetano
- **0800h** **A21B-05 POSTER** Characteristics of the Mid Summer Drought in the Central Valley of Costa Rica, Central America: E Alfaro
- **0800h** **A21B-06 POSTER** Diurnal cycle on the Caribbean slope of Costa Rica: An observational study: J A Amador, F Saenz
- **0800h** **A21B-07 POSTER** Intraseasonal Oscillation and Easterly Waves interaction: A Case study: C P de Oliveira, T Ambrizzi, Title of Team: Grupo de Estudos Climáticos - GREC
- **0800h** **A21B-08 POSTER** Statistical predictability of the MJO within the Caribbean Sea using a Linear Inverse Model: T L Allen, B E Mapes
- **0800h** **A21B-09 POSTER** The Climatology of Tropical East Pacific Synoptic Disturbances in Select IPCC AR5 Models: Historical and Future CMIP5 Projections: Y Serra
- **0800h** **A21B-10 POSTER** Precipitation and atmospheric features over the Intra – Americas seas simulated by CPTEC/INPE AGCM: V P Silveira, I F Cavalcanti, P Kubota, P Bonatti
- **0800h** **A21B-11 POSTER** TROPOSPHERIC DELAY PREDICTION IN SOUTH AMERICA AND ITS POSITIONING IMPACT CONSIDERING THE CONTINENTALITY AND SEASONALITY: T F Gouveia, L F Sapucci, J G Monico, D B Alves
- **0800h** **A21B-12 POSTER** GNSS Observations of Deep Convective Timescales in the Amazon: D K Adams, S I Gutman
- **0800h** **A21B-13 POSTER** Studying Convective Events Over Southern Arizona by Using Ground GPS Receivers and Cloud to Ground Lightning: A M Orduño, C M Sosa, R A Jacobo
Program Content

**Global Environmental Change**

**GC21A Room Salon Cozumel 1** Tuesday 0800h

**Climate Change in the Americas: Observations and Global and Regional Models (joint with A)**

*Presiding:* L V Carvalho, Univ California Santa Barbara; C Jones, Univ California Santa Barbara

0800h **GC21A-01** An increase of dry season length over southern Amazonia, its causes and implication to climate projection: R Fu, L Yin

0815h **GC21A-02** WITHDRAWN

0830h **GC21A-03** Modulation of Interannual Variability and Trend by the Decadal Oscillations in the South American Region: V Krishnamurthy

0845h **GC21A-04** Observed Trends in Northeast Brazil Seasonal and Extreme Precipitation: B Liebmann, I Bladé, D Allured, C Valadão

0900h **GC21A-05** Synergistic impacts of deforestation, climate change and fire on the future biomes distribution in Amazonia: G Sampaio, M F Cardoso, C A Nobre, I F Salazar

0915h **GC21A-06** Climate change in the South American Monsoon System: present climate and CMIP5 projections: C Jones, L V Carvalho

0930h **GC21A-07** Air quality scenarios for the Metropolitan Area of Sao Paulo: C R Mazzoli, M Andrade, E D Freitas

0945h **GC21A-08** How do GCMs represent daily maximum and minimum temperatures in La Plata Basin?: M I Bettolli, O C Penalba, P A Krieger

**Geomagnetism and Paleomagnetism**

**GP21A Gran Cancun Poster Hall** Tuesday 0800h

**Paleosecular Variation, Excursions, and Reversals of the Earth’s Magnetic Field I Posters**

*Presiding:* A M Sinito, Universidad Nacional del Centro; M L Osete, Universidad Complutense de Madrid; J E Channell, University of Florida; N Thouveny, Marseille Université

0800h **GP21A-01** Tsallis statistic applied to geomagnetic field reversals: C Barbosa, A R Papa

0800h **GP21A-02** Preliminary paleomagnetic and rock-magnetic results from Lago Azul (Azores archipelago, Portugal): M Gomez-Paccard, M Rubio, G Sanchez, J Larrasoña, A Saez, S Giralt

0800h **GP21A-03** CONTRIBUTION OF PALEOMAGNETIC AND COSMOGENIC NUCLIDE PRODUCTION RECORDS TO SOLVE THE QUESTION OF ORBITAL CONSTRAINT ON THE GEODYNAMO: N Thouveny, L Ménabréaz, D L Bourles, F Demory, V Guillou, M Arnold, Title of Team: MAGORB team

0800h **GP21A-04** Paleosecular Variation Study on a Pliocene Lava Flow Sequence in the Lesser Caucasus: A Caccavari, M Calvo-Rathert, A Gogichaishvili, H Huaiyu, G Vashakidze, N Vegas, B Aguilier

0800h **GP21A-05** SPELEOTHEMS RECORDING GEOMAGNETIC EXCURSIONS: A CASE STUDY FROM COBRE CAVE IN NORTHERN SPAIN: F Pavon-Carrasco, M L Osete, J Martin-chivelet, R Egli, C Rossi, B Muñoz-Garcia, F Heller

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**Cryosphere**

**C21A Gran Cancun Poster Hall** Tuesday 0800h

**Cryosphere General Contributions I Posters**

*Presiding:* J U Fucugauchi, UNAM; P K Swart, Univ Miami

0800h **C21A-01** WITHDRAWN

**C21B Gran Cancun Poster Hall** Tuesday 0800h

**Cryosphere in a Warming Climate: Changes, Impacts, and Adaptation I Posters (joint with A, GC, H)**

*Presiding:* N Wang, Chinese Academy of Sciences; M C Serreze, NSIDC

0800h **C21B-01** POSTER Glacier response to climate trend and climate variability in Mt. Everest region (Nepal): S Thakuri, F Salerno, N Guyennon, G Viviano, C Smiraglia, C D’Agata, G Tartari

0800h **C21B-02** POSTER Modeling long-term Joint Impact of Two Shallow Thaw Lakes on Thermal Regime of Surrounding Permafrost on the Alaskan Arctic Coastal Plain: F Ling, Y Lu

0800h **C21B-03** POSTER Glacier Shrinkage In The East Pamir Plateau In China During The Last 50 Years As Revealed By Two Times’ Inventories: N Wang, S Liu, J Xu, W Guo

0800h **C21B-04** POSTER Ongoing calving-frontal dynamics of glaciers in the Northern Patagonia Icefield, Chile: F Bown, A Rivera, F Burger, D Carrión, S Cisternas, G Gacitúa, M Pena, J Oberreuter, R Silva, J A Uribe, A Wendt, R Zamora

0800h **C21B-05** POSTER Simulating the Hydrological Response of Rock Glaciers to Climate Change with GEOtop: J Apaloo, A Brenning, S Gruber

0800h **C21B-06** POSTER Permafrost Degradation and its Potential Carbon Feedbacks: T Zhang, O W Frauenfeld, K Wang

GP21B Room Isla Mujeres Salons  Tuesday  0800h  Archeometric and Archeomagnetic Applications, Recent Geomagnetic Field Observations, and Paleosecular Variation During the Last Millenium I

Presiding: A M Soler-Arechalde, Instituto de Geofisica UNAM; G A Hartmann, Universidade de Sao Paulo; ANGEL Carrancho Alonso, Burgos University; E Tena, Universidade di Torino
0800h  GP21B-01 Magnetic inclination from Brazilian bricks and application to Archeomagnetic dating: G S Begnini, G A Hartmann, R I Trindade
0820h  GP21B-02 Teothuacan and its influence in Mesoamerica. Archaeomagnetic studies: A Teran, A M Soler-Arechalde
0840h  GP21B-03 Magnetometry and archaeological prospect in Mexico: L Barba Pingarron, Title of Team: Laboratorio de Prospeccion Arqueologica
0900h  GP21B-04 Evidence for abrupt geomagnetic field intensity changes in Europe between 200 and 1400 AD: M Gomez-Paccard, A Chauvin, P Lanos
0920h  GP21B-05 Identifying and directly dating Plio-Pleistocene geomagnetic reversals and events from speleothems at South African archaeological and fossil bearing palaeoecaves: implications for extending archaeomagnetic records: A I Herries, R Pickering, P Kappen
0940h  GP21B-06 WITHDRAWN

Hydrology

H21A Room Gran Cancun 1  Tuesday  0800h  Wetland Dynamics and Ecohydrology I (joint with B)

Presiding: M D Wilson, University of the West Indies; J Herrera Silveira, CINVESTAV-IPN, Unidad Merida; H Lee, University of Houston; R M Price, Florida International Univ
0800h  H21A-01 Climate change influence on organic carbon remobilization, transport and burial in mangrove forests of Everglades National Park, USA: J M Smoak, J Breithaupt, T J Smith, C J Sanders
0815h  H21A-02 REMOTE SENSING PRODUCTION OF TIDE PROPAGATION THROUGH COASTAL WETLANDS: S Wlodinski, S Hong, A Mulcan, B Brisco
0830h  H21A-03 Groundwater-ocean interaction and its effects on coastal ecological processes – are there groundwater-dependant ecosystems in the coastal zone?: T C Stiegitz
0900h  H21A-05 Carbon content on perturbed wetlands of Yucatan: S M Morales Ojeda, R Orellana, J Herrera Silveira
0915h  H21A-06 Echohydrology of the coastal wetlands of Yucatan Peninsula are related with the submarine groundwater discharges?: J A Herrera Silveira, S M Morales-Ojeda, I Medina Gomez, C Kantun Manzano, J Caamil Sosa, I Marino-Tapia, F Adame, C Teutli Hernandez
0930h  H21A-07 Tracing coastal and estuarine groundwater discharge sources in a complex faulted and fractured karst aquifer system: D Lagomasino, R M Price
0945h  H21A-08 Groundwater-surface water interactions and their effects on ecosystem metabolism in a coastal wetland: example from the Florida Everglades: R M Price, X Zapata, G R Koch

Earth and Space Science Informatics

IN21A Room Salon Cozumel 3  Tuesday  0800h  Earth and Space Science Informatics General Contributions I

Presiding: J U Fucugauchi, UNAM; P K Swart, Univ Miami
0800h  IN21A-01 DESIGNING A METHOD FOR AN AUTOMATIC EARTHQUAKE INTENSITIES CALCULATION SYSTEM BASED ON DATA MINING AND ON-LINE POLLS: A K Liendo Sanchez, R Rojas
0820h  IN21A-02 WITHDRAWN

IN21B Room Salon Cozumel 4  Tuesday  0800h  Methods for Integrating Climate Information Into Marine Resource Management (joint with ED, GC, OS)

Presiding: K A Shein, NOAA NCDC; P Fletcher, NOAA AOML
0810h  IN21B-01 GENIES/SimCLIM Tools to Support Climate Change Information and Marine Resource Management: Y Li, P Urch, C Yin, P Kouwenhoven, Title of Team: and CLIMsystems team
0830h  IN21B-02 Considering Species Tolerance to Climate Change in Conservation Management at Little Cayman’s Coral Reefs: E Camp, C Manfrino, D Smith, D Suggett
0850h  IN21B-03 Integrating Climate and Ocean Change Vulnerability into Conservation Planning: E Mcleod, A Green, E Game, K Anthony, J Ginner, S F Heron, J A Kleypas, C Lovelock, J Pandolfi, B Pressey, R Salm, D Schill, C D Woodroffe
0910h  IN21B-04 Tool kit development to refine and visualize essential climate data and information for marine protected areas: L Cecil, J Stachniewicz, K A Shein, S Ansari

Near Surface Geophysics

NS21A Gran Cancun Poster Hall  Tuesday  0800h  Geophysical Imaging of Increasingly Complex Geologic Media: Recent Advances I Posters (joint with NS)

Presiding: R Martin, CNRS; J Ortiz Aleman

NS21B Gran Cancun Poster Hall  Tuesday  0800h  Mining Geophysics in the Americas: New Developments and Perspectives I Posters (joint with T, V)

Presiding: J U Fucugauchi, UNAM; I Hernandez-Perez, Servicio Geologico Mexicano
0800h  NS21B-02 POSTER Cenozoic geologic evolution of the northernmost Chile and implications on the exploration of Paleogene porphyry-copper deposits: M Garcia
0800h  NS21B-03 POSTER Multifractal Analysis in Mining Microseismicity and its Application to Seismic Hazard Analysis in Mines: D Pasten, D Comte, J Vallesios

Program Content
NS21C Gran Cancun Poster Hall  Tuesday  0800h Near-Surface Geophysics General Contributions I Posters

Presiding: R Martin, CNRS; J Ortiz Aleman

0800h  NS21C-01 POSTER Specific features of electric field in the atmosphere and Radon emanations in Tunkin Basin of Baikal rift zone: S Soloviev, D Loktev
0800h  NS21C-02 POSTER Modeling of shaft tombs in western Mexico by means of resistive tomography: M A Alatorre-Zamora, Q J Gutierrez-Peña, G Gomez-Gomez, J Rosas-Elguera
0800h  NS21C-03 POSTER EXPERIMENTS TO DETECT CLANDESTINE GRAVES FROM INTERPRETED HIGH RESOLUTION GEOPHYSICAL ANOMALIES: C M Molina, O Hernandez, J Pringle
0800h  NS21C-04 POSTER COHERENT WAVES IN SEISMIC RESEARCHES: A Emanov, V S Sleznev
0800h  NS21C-05 POSTER Determination of regional stress fields based on the perturbation of surface electromagnetic waves: Numerical experiment: J M Salazar, C A Vargas, Title of Team: GRADUATE PROGRAM GEOPHYSICS
0800h  NS21C-06 POSTER FOCUSING SOURCES ON INDUCED POLARIZATION AND ELECTRICAL RESISTIVITY METHOD APPLIED TO SOIL POLLUTION PROBLEMS: A Tejero, A Lopez, Title of Team: Induced Polarization Team
0800h  NS21C-07 POSTER Electromagnetic Induction Survey at an Archaeological Site in Chapingo (Central Mexico): J L Salas, C Arango, E Cabral-Cano, A Arciniega-Ceballos, F Vergara, X Novo
0800h  NS21C-08 POSTER ERT APPLIED TO THE CHARACTERIZATION OF SUBSIDIENCE IN MEXICO CITY: ANCIENT STRUCTURES AFFECTING URBAN UTILITIES: C Arango, R E Chavez, G Cifuentes-Nava, E Hernandez-Quintero
0800h  NS21C-09 POSTER Microgravimetric and magnetometric three-dimensional analysis in the 2nd section of the Bosque de Chapullepec: D Escobedo-Zenil, J Sanchez-Gonzalez, A Garcia-Serrano
0800h  NS21C-10 POSTER Magnetometric and gravimetric surveys in fault detection over Acambay System: A Garcia-Serrano, J Sanchez-Gonzalez, G Cifuentes-Nava

Ocean Sciences

OS21A Room Salon Cozumel 2  Tuesday  0800h Application of Remote Sensing to Coastal Regions of the Americas (joint with EP GC)

Presiding: J Vazquez, JPL; S Purca, Instituto del Mar del Peru

0800h  OS21A-01 Salinity signal of the Magdalena River in the Caribbean Sea, Colombian basin revealed by AQUARIUS mission supported by high resolution SST and Color data: M A Maza Chamorro, J Vazquez, A Palacio Pinedo
0820h  OS21A-02 Field Spectroscopy And Spectral Analysis Of Caribbean Scleractinian Reef Corals And Related Benthic Biota: J L Torres-Perez, L S Guild, R Armstrong, J E Corredor, R Polanco, A B Zuluaga-Montero
0835h  OS21A-03 Madden Julian and EL Niño Southern oscillations signals observed in satellite and in situ sea level data in the Caribbean Sea, Colombian basin: M A Maza Chamorro, J Vazquez, H Hernandez, J C Ortiz, L Otero Diaz, J C Restrepo

0850h  OS21A-04 Application of Coastal Remote Sensing to Rhincodon Typus Habitat Monitoring Northeast of the Yucatan Peninsula: R R Leben, M R Shannon
0910h  OS21A-05 CLIMATOLOGICAL ANALYSIS OF THE EXCLUSIVE ECONOMIC ZONE OF MEXICO BASED ON 10 YEARS OF SATELLITE IMAGERY: E Gonzalez Rodriguez, A Trasviña-Castro, F Aguirre Bahena
0925h  OS21A-06 An Analysis of SST Gradients off the Peruvian Coast: The impact of going to higher resolution: J Vazquez, B Dewitte, T M Chin, E M Armstrong, S Purca, E Alburquerque

SPA-Aeronomy

SA21A Room Xcaret  Tuesday  0800h Understanding the Middle- and Low-Latitude Ionosphere I (joint with A)

Presiding: E S Miller, JHU/APL; L J Paxton, The Johns Hopkins University

0800h  SA21A-01 A New Paradigm for Thermosphere Ionosphere Modeling: T J Fuller-Rowell
0820h  SA21A-02 The Ionospheric Response to the Variability in Solar EUV: P C Anderson
0840h  SA21A-03 CHANGES OF LINEARITY IN MF2 INDEX WITH R12 AND SOLAR ACTIVITY MAXIMUM: L Villanueva
0900h  SA21A-04 Observing the mid- and low-latitude ionosphere - global UV remote sensing: L J Paxton, H Kil, E S Miller, J Comberiate, R K Schaefer, Y Zhang, Title of Team: GUVI Team
0920h  SA21A-05 The Next Generation Special Sensor Ultraviolet Limb Imager (SSULI+) for Operational Defense Space Weather Monitoring and Forecasting: A C Nicholas, S A Budzien, K Dymond, C Coker, D H Chua, P W Walker
0940h  SA21A-06 Ultraviolet Observations of the Equatorial Ionosphere at the Terminator: E S Miller, J Comberiate, L J Paxton

SPA-Solar and Heliospheric Physics

SH21A Gran Cancun Poster Hall  Tuesday  0800h Our Evolving Understanding of the Heliosheath I Posters (joint with SM)

Presiding: S A Fuselier, Southwest Research Institute; J D Richardson, Massachusetts Institute of Technology; M Opher, Boston University

0800h  SH21A-01 POSTER Plasma observations and magnetic flux conservation in the heliosheath: J D Richardson
0800h  SH21A-02 POSTER Time-dependent solar wind flows in the heliosheath: E Provnorikova, M Opher, V Izmodenov, G Toth
0800h  SH21A-03 POSTER ENERGETIC PARTICLES ENTER THE MAGNETIC HIGHWAY: V A Florinski

SH21B Gran Cancun Poster Hall  Tuesday  0800h Solar Eruptions From the Photosphere to the Heliosphere I Posters (joint with SM)

Presiding: N Lugaz, University of New Hampshire; N P Savani, NASA GSFC; S Dasso, IAFE (UBA-CONICET)

0800h  SH21B-01 POSTER Tracking the momentum flux of a CME and quantifying its influence on geomagnetically induced currents at Earth: N P Savani, A Vourlidas, A Pulkkinen, T Nieves-Chinchilla, B Lavraud, M J Owens
2013 Meeting of the Americas

0800h SH21B-02 POSTER Influence of CME initial Speed on CME-CME interaction Processes: Initial Results: N Lugaz, C J Farrugia, I I Roussev, W B Manchester, N A Schwadron

SH21C Gran Cancun Poster Hall Tuesday 0800h Space Plasmas and High-Energy Particles in the Heliosphere I Posters

**Presiding:** J A Perez-Peraza, UNAM; M D Rodriguez-Frias, Universidad de Alcala de Henares

0800h SH21C-01 POSTER METHOD FOR THE PROGNOSIS OF THE OCCURRENCE DATE OF GLEs: A Juarez-Zuniga, J Zapotitla-Roman, M Alvarez-Madrigal

0800h SH21C-02 POSTER ON THE PREDICTION OF NORTH ATLANTIC CATEGORY-5 HURRICANS: J Zapotitla_Rpman, A Juarez-Zuniga, J A Perez-Peraza

0800h SH21C-03 POSTER A NEW FIT FOR THE TOTAL CROSS SECTION PROTON-PROTON: A Sanchez-Hertz, J A Perez-Peraza

0800h SH21C-04 POSTER Cosmic ray fluctuations: I Libin

SPA-Magnetospheric Physics

SM21A Gran Cancun Poster Hall Tuesday 0800h The Coupled Inner Magnetosphere I Posters (joint with SA)

**Presiding:** M W Liemohn, University of Michigan; A M Keesee, West Virginia University; R Ilie, Los Alamos National Laboratory

0800h SM21A-01 POSTER The effect of ionospheric outflow and magnetospheric composition on the formation and evolution geospace currents: R Ilie, R M Skoug, H O Funsten

0800h SM21A-02 POSTER Superposed epoch analysis of ion temperatures during CIR/HSS-driven storms: A M Keesee, E E Scime

0800h SM21A-03 POSTER Superposed Epoch Analysis of Current Systems During Intense Magnetic Storms: M W Liemohn, R M Katus

SM21B Gran Cancun Poster Hall Tuesday 0800h Toward a New Era in Radiation Belt Research I Posters

**Presiding:** S G Kanekal, NASA GSFC; S R Elkinpton, University of Colorado; W Tu, LANL

0800h SM21B-01 POSTER Rapid enhanced precipitation of radiation belt electrons during geomagnetic storms: I W Blum, X Li

0800h SM21B-02 POSTER Estimating magnetic field power spectrum using CRRES magnetometer data: A Ali, S R Elkinpton

0800h SM21B-03 POSTER Statistical study of global modes outside the Plasmasphere: M Hartinger, V Angelopoulos, M Moldwin, K Takahashi, L Clausen

0800h SM21B-04 POSTER THEMIS observations of compositional pulsations including the specific category of doubled frequency pulsations in the dawn magnetosphere: G I Korotova, D G Sibeck

0800h SM21B-05 POSTER Scattering rates of inner belt protons by EMIC waves: comparison between test particle and diffusion approaches: M de Soria-Santacruz Pich, K Orlova, M Martinez-Sanchez, Y Shprits

0800h SM21B-06 POSTER Implementation of Ensemble Data Assimilation for a Three-Dimensional Radiation Belt Model: H C Godinez, Y Chen, Y Shprits, A C Kellerman, D Subbotin

Tectonophysics

T21A Room Tulum Tuesday 0800h Top to Bottom View of the Dynamics of Northern South America (joint with G, S, DT, T, V)

**Presiding:** T W Becker, USG; G Monsalve, Universidad Nacional de Colombia Sede Medellin; A F Sheehan, University of Colorado, Boulder; M H Taylor, University of Kansas

0800h T21A-01 POTENTIAL FOR GREAT THRUST EARTHQUAKES IN NE COLOMBIA & NW VENEZUELA: R G Bilham, D Mencin

0815h T21A-02 Slab Geometry And Crustal Deformation In The Northern Colombian Andes: G Veloza-fajardo, M H Taylor, A Mora, T W Becker

0830h T21A-03 Oroclinal bending and orogenic asymmetry? A case study from the apex of the Northern Andean orocline: A Mora, M Parra-Amezquita, G Rodriguez

0845h T21A-04 Influence of Peruvian flat-subduction dynamics on the evolution of the Amazon Basin: C M Eakin, C R Lithgow-Bertelloni, F M Davila

0900h T21A-05 New tomographic images of Vp, Vs and Vp/Vs of the Colombian territory: C A Vargas-Jimenez, P Mann, I Koulakov, R Bernal

0915h T21A-06 Timing and tectonic processes associated to the Late Cretaceous to Paleogene transition from collision to subduction in the Northern margin of Colombia: A Cardona, C Montes, G Bayona, S Jaramillo, M Lopez-Martinez, J Silva, V Valencia, J Vanegas, S Zapata

0930h T21A-07 WITHDRAWN

0945h T21A-08 Subduction and Plate Edge Tectonics in the Southern Caribbean: A Levander, M Schmitz, F Niu, M J Bezada, M S Miller, J Masy, H G Ave Lallemant, J L Pindell, Title of Team: BOLIVAR Working Group

Planetary Sciences

P21A Room Salon Cozumel 3 Tuesday 0900h Cosmic Dust

**Presiding:** D Maravilla, UNAM; E Gruen, Max Planck Institut; H Kimura, Center for Planetary Science; J Leal-Herrera, UNAM, Instituto de Geofisica

0900h P21A-01 Dust in the planetary system: what can we learn from space measurements?: I Mann, N Meyer-Vernet, A CZECHOWSKI

0915h P21A-02 Radio antennas as in-situ dust detectors : from Voyager to Solar Probe Plus: A Zaslavsky

0930h P21A-03 A WISE View of Saturn’s Phoebe Ring: D P Hamilton, M F Skrutskie, A J Verbiscer

0945h P21A-04 The Modelling of Cometary Dust Tail Striae: G H Jones, K Birkett, Y Ramanjooloo, J S Morrill, K Battams

Atmospheric Sciences

A22A Room Gran Cancun 5 Tuesday 1020h Atmospheric Sciences General Contributions I

**Presiding:** V Lucarini, University of Hamburg; J A Marengo, INPE

1020h A22A-01 On thermally forced circulations over heated terrain: D J Kirshbaum

1050h A22A-02 An improved system for estimating precipitation over the Central Andes: L A Blacutt, D L Herdies, L Goncalves, J Z de Mattos, M F Andrade
Global Environmental Change

**GC22A Room Salon Cozumel 1**
**Tuesday 1020h**

**Climate Change in the Americas: Observations and Global and Regional Models II (joint with A)**

**Presiding:** L V Carvalho, Univ California Santa Barbara; C Jones, Univ California Santa Barbara

1020h **GC22A-01** Seasonal changes of extreme climate indices in Mexico and Central America during the 21st century using CMIP5: T Cazavos, P de Grau, J A Salinas, G Colorado


1050h **GC22A-03** How well the Reliable Ensemble Averaging Method (REA) for 15 CMIP5 GCMs simulations works for Mexico?: G Colorado, J A Salinas, T Cazavos, P de Grau

1105h **GC22A-04** Record of El Niño in planktonic foraminiferal assemblages from the Gulf of Tehuantepec, Mexico (Eastern Tropical Pacific): M I Machain-Castillo, X A Nava-Fernandez, R Thunell, E Tappa

1120h **GC22A-05** CMIP3 and CMIP5 bias teleconnections over the Americas: J F Mejia

1135h **GC22A-06** Statistical analysis of climate change in Mexico: M I Esquivel Longoria

1150h **GC22A-07** Changes in climate extremes indices over Mexico: B S Teufel, J Mora Rodriguez, L F Pineda-Martinez

1205h **GC22A-08** Maximum And Minimum Temperature Trends In Mexico For The Last 31 Years: R Romero-Centeno, J Zavala-Hidalgo, M E Allende Arandia, N Carrasco-Mijarez, O Calderon-Bustamante

Geomagnetism and Paleomagnetism

**GP22A Room Isla Mujeres Salons**
**Tuesday 1020h**

**Magnetic Methods I**

**Presiding:** C Preazzi, Univ Buenos Aires; D Ravat, University of Kentucky; V C Barbosa, National Observatory

1020h **GP22A-01** 3D magnetic inversion by planting anomalous densities: L Uieda, V C Barbosa

1040h **GP22A-02** Methods used to identify seafloor spreading magnetic anomalies and to establish their relationship with the top of the basement topography in the Argentine continental margin between 35° S and 48° S: D A Abraham, M E Ghidella, A Tassone, M Paterlini, M Ancarola

1100h **GP22A-03** Horizontal radial magnetic inversion for retrieving 3D geologic bodies: V C Oliveira Jr, V C Barbosa

1120h **GP22A-04** Indirect estimation of the tectonic evolution of magnetic structures along the Indiavaí-Lucilva Shear Zone, Mato Grosso, Brazil: V H Louro, V B Ribeiro, M S Mantovani, Title of Team: GEOLIT Team


Hydrology

**H22A Room Gran Cancun 1**
**Tuesday 1020h**

**Wetland Dynamics and Ecohydrology II (joint with B)**

**Presiding:** M D Wilson, University of the West Indies; J Herrera Silveira, CINVESTAV-IPN, Unidad Mérida; R M Price, Florida International Univ; H Lee, University of Houston

1020h **H22A-01** Surface water dynamics in Amazon, Congo, and Lake Chad Wetlands from remote sensing and modeling: H Jung, A Getirana, M F Jasinski

1035h **H22A-02** Observations of Amazon floodplain channel dynamics using Landsat images and ICESat elevations: M A Trigg, G J Schumam, M B Singer, A C Hall, P D Bates

1050h **H22A-03** Flooding dynamics on the lower Amazon floodplain: C Rudorff, J M Melack, P D Bates

1105h **H22A-04** Hydrological Controls on Macrophyte Productivity in the Amazon Floodplain Wetlands: T S Silva, E M Novo, J M Melack

1120h **H22A-05** SATELLITE ALTIMETRY FOR RIVERS: REVIEW AND PERSPECTIVES: S Calmant

1135h **H22A-06** Drivers and feedbacks in spatial and temporal patterning of hydrology and vegetation in the Everglades wetlands: F Miralles-Wilhelm, R Foti, A Rinaldo, I Rodriguez-Iturbe, M Del Jesus

1150h **H22A-07** The Effect of Manning’s Roughness Calibration on Flow and Sediment transport in Wetlands: Vegetation Drain Approach: M Mahmoudi, M Nalessou, R F Garcia, F Miralles-Wilhelm

1205h **H22A-08** WITHDRAWN

Earth and Space Science Informatics

**IN22A Room Salon Cozumel 4**
**Tuesday 1020h**

**Mathematical and Computational Modeling in Geophysics I**

**Presiding:** G S Herrera, National University of Mexico; G Hernández, Universidad Nacional Autonoma de Mexico

1020h **IN22A-01** High Performance Computing: a viable solution to boost research for Earth Sciences: V M Manea, M Manea, M Pomeron, L Besuitu, L Zlaganean

1035h **IN22A-02** A NON-OVERLAPPING DISCRETIZATION METHOD FOR PARTIAL DIFFERENTIAL EQUATIONS: A Rosas-Medina, I Herrera

1050h **IN22A-03** Parallel Algorithms for Computational Models of Geophysical Systems: A Carrillo Ledeemas, I Herrera, L M de la Cruz, G Hernández, Title of Team: Grupo de Modelacion Matematica y Computacional

1105h **IN22A-04** WITHDRAWN

1120h **IN22A-05** Ensemble Smoother implemented in parallel for groundwater problems applications: E Leyva, G S Herrera, L M de la Cruz
## Ocean Sciences

**OS22A Room Salon Cozumel 2**  
**Tuesday 1020h Progress in Turbidity Current Research (joint with NH, PP)**

**Presiding:** E H Meiburg, Univ California Santa Barbara; M Moraes, Petrobras Research Center; A Coutinho, Federal University of Rio de Janeiro; B C Kneller, University of Aberdeen

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<th>Time</th>
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<tbody>
<tr>
<td>1020h</td>
<td>OS22A-01</td>
<td>Finite Element RBVMS and Bed Morphodynamic Interactions Applied to Sediment Transport Problem:</td>
<td>A L Coutinho, R N Elias, G Guerra, F A Rochinha, S Zio, P Paraizo</td>
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<tr>
<td>1032h</td>
<td>OS22A-02</td>
<td>Turbulent Suspension Mechanics in Sediment-Laden Boundary Layers: K Riger</td>
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<tr>
<td>1044h</td>
<td>OS22A-03</td>
<td>Turbulence Investigations With High-Resolution Simulation of Dilute Suspension Particle-Laden Gravity Currents: L Espath, L Pinto, S Laizet, J Silvestrini, Title of Team: Scientific Team of DNS on Gravity Currents</td>
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<td>1056h</td>
<td>OS22A-04</td>
<td>On turbulence modulation due to the presence of sediment in the bottom boundary layer – a numerical investigation: T Hsu, L Espath, X Yu, C E Ozdemir, S Balachandar</td>
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<td>1114h</td>
<td>OS22A-05</td>
<td>High-Resolution Simulations of Turbulent Plumes in a Channel Flow with a Ramp Bottom Configuration: L Pinto, L Espath, S Laizet, J Silvestrini, Title of Team: Scientific Team of DNS on Gravity Currents</td>
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<td>1126h</td>
<td>OS22A-06</td>
<td>Simulation of near-bed turbulence and bed entrainment of suspended sediment in turbidity currents: M W Schmeeckle</td>
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<td>1156h</td>
<td>OS22A-08</td>
<td>Global sensitivity analysis of a flocculation model for turbidity currents f: F A Rochinha, A L Coutinho, R Cotteroe</td>
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<td>1208h</td>
<td>OS22A-09</td>
<td>Circulation-based Modeling of Gravity Currents: E H Meiburg, Z Borden</td>
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## Planetary Sciences

**P22A Room Salon Cozumel 3**  
**Tuesday 1020h Chickxulub Impac Crater and the Cretaceous-Paleogene Boundary I (joint with NS)**

**Presiding:** J U Fucugauchi, UNAM; S P Gulick, University of Texas at Austin; J V Morgan, Imperial College London

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<th>Time</th>
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<tr>
<td>1020h</td>
<td>P22A-01</td>
<td>Climate changes following impacts of 1 and 10 km diameter asteroids: O B Toon, C Bardeen, R R Garcia</td>
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<tr>
<td>1055h</td>
<td>P22A-03</td>
<td>In the aftermath of the Chicxulub impact - Contrasting effects at proximal and distal localities: V Vajda, A Ocampo, J Gómez Tapias</td>
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<td>1110h</td>
<td>P22A-04</td>
<td>The Brazos River (Texas) Sequence Shows Significant Cooling in the Waning Stages of the Tsunami Surges Caused by the Chicxulub Impact: J Smit, J Vellekoop</td>
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<td>1130h</td>
<td>P22A-05</td>
<td>Re-Visiting Wildfires at the K-Pg Boundary: J V Morgan, N Artemieva, C Belcher, T Goldin</td>
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## Seismology

**S22A Room Salon Cozumel 5**  
**Tuesday 1020h Tectonic Tielor and Slow-Slip Events I (joint with T)**

**Presiding:** H Gonzalez-Huizaz, University of Texas at El Paso; A A Velasco, University of Texas at El Paso; C Aiken, Georgia Institute of Technology; J J Walter, Georgia Institute of Technology

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<tr>
<td>1035h</td>
<td>S22A-02</td>
<td>Global Search of Triggered Tectonic Tielor: Z Peng, C Aiken, K Chao, H Gonzalez-Huizaz, B Wang, L Ojha, H Yang</td>
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<td>1050h</td>
<td>S22A-03</td>
<td>Tielor and the Depth Extent of Slip in Large Earthquakes: G C Beroza, J R Brown, S Ide</td>
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<td>1105h</td>
<td>S22A-04</td>
<td>Slow Slip Events and Nonvolcanoic Tielor in Guerrero, Mexico: V Kostoglodov, Title of Team: G-GAP project team: A L. Husker, J S. Payero, J, Real, V. Cruz-Atienza, N M Shapiro, W. Frank, M. Campillo, N. Cotte, A. Walpersdorf</td>
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Tectonophysics

\[ T22A \quad \text{Room Tulum} \quad \text{Tuesday} \quad 1020h \]

**Tectonics and Structure of the Northern Andes I** (joint with S)

*Presiding:* F A Audemard, Fundacion Venezolana de Investigaciones Sismologicas; M Schmitt, Fund Venezolana Inv Sismologicas; C A Vargas-Jimenez, Universidad Nacional Colombia; E Gil, PDVSA

1020h  **T22A-01** Interseismic deformations along Ecuador active fault systems: Contribution of space-borne SAR Interferometry: J Champenois, L Audin, S Baize, J Nocquet, A Alvarado

1035h  **T22A-02** From Pangaea to the present: geochronology, thermochronology and isotopic tracking of tectonic processes along the Northern Andes: R Spikings, R Cochrane, R Van der Lelij, D Villagomez

1050h  **T22A-03** Active tectonics evidences and seismicity registry of Servitá Fault, Colombia: G Chicangana, C A Vargas-Jimenez, P Pedraza, A Kammer, L H Ochoa Gutierrez, Title of Team: Proyecto codigo I24552128627 UNIMETA - UNCB - UAN - COLCIENCIAS

1105h  **T22A-04** Relationship between subduction inter-plate structures and inter-seismic coupling spatial variations at the Central Ecuador convergent margin: E Sanclemente, J Collot, A Ribodetti

1120h  **T22A-05** Seismological observations at the Northern Andean region of Colombia: Evidence for a shallowly subducting Caribbean slab and an extensional regime in the upper plate: G Monsalve, A Cardona, J Yarce, D Alvira, E Poveda

1135h  **T22A-06** The PANAMA NORTH ANDES PLATE BOUNDARY ZONE FROM INTERPRETED RADAR IMAGES, GEOLOGIC MAPPING AND GEOPHYSICAL ANOMALIES: O Hernandez, G C Alexander, F Garzon

1150h  **T22A-07** Lithospheric Expressions of the Precambrian Shield, Mesozoic Rifting, and Cenozoic Subduction and Mountain Building in Venezuela: A LeVander, J Masy, F Niu

1205h  **T22A-08** Unraveling The Complex Interaction Between The Southern Caribbean, Northwest South America And The Pacific Plates During The Cenozoic: D Villagomez, R Spikings

Program Content

**Tuesday P.M.**

**Union**

**U23A  Room Gran Cancun 1  Tuesday 1340h**

**Interhemispheric Connections of the American Paleoclimate Record II**

*Presiding:* J Herguera, CICESE; S E Metcalfe, University of Nottingham; L L Perez-Cruz, Instituto de Geofisica, UNAM; J U Fucugachi, UNAM

1340h  **U23A-01** Orbital and millennial-scale variability in the southernmost reaches of the South American summer monsoon during the last 50 ka BP: C M Chiessi, A Govín, S Mulitza, M D Campos

1400h  **U23A-02** A review of South American monsoon variability over the past 2 millennia based on stable isotopic proxies and model simulations: M Vuille, F W Cruz, M Abbott, B W Bird, S J Burns, H Cheng, C M Colose, L C Kanner, A N LeGrande, V Novello

1420h  **U23A-03** Classic Maya civilization collapse related to modest reduction in precipitation: M Medina-Elizalde, E J Rohling

1440h  **U23A-04** ice Core Evidence to support a Paleoglobal Monsoon: T A Sowers

1455h  **U23A-05** Past variability of the Mexican Monsoon from ultrahigh resolution records in the Gulf of California for the last 6 Ka: J Herguera, C Nava, A Hangsterfer

**Atmospheric Sciences**

**A23A  Room Gran Cancun 5  Tuesday 1340h**

**Atmospheric Sciences General Contributions II**

*Presiding:* J A Marengo, INPE; V Lucarini, University of Hamburg

1340h  **A23A-01** The role of biogenic, biomass burning and urban pollution aerosol particles in controlling key atmospheric processes in Amazonia: P Artaxo, J Ferreira De Brito, H M Barbosa, L V Rizzo, E T Sena, G Cirino, A Arana, A M Vanez-Serrano

1400h  **A23A-02** Comparison and evaluation of five global land cover datasets for Mexico: E D Lopez-Espinosa, J Zavala-Hidalgo, O Gómez-Ramos, M E Osorio-Tai, R ROMERO-CENTENO

1425h  **A23A-03** South America Land-Airmosphere Coupling Strength: J Z de Mattos, L Goncalves, D L Herdies

1440h  **A23A-04** Uncertainty Analysis And Synergy Of Aerosol Products From Multiple Satellite Sensors For Advanced Atmospheric Research: C M Ichoku, M Petrenko

1455h  **A23A-05** Formaldehyde OMI operational retrieval upgrades: G Gonzalez Abad, K Chance, X Liu

1510h  **A23A-06** Sea spray aerosol and climate assessments: Model results and remotely sensed data: N Meskhidze, K W Dawson

**Cryosphere**

**C23A  Room Salon Cozumel 2  Tuesday 1340h**

**Cryosphere in a Warming Climate: Changes, Impacts, and Adaptation II (joint with A, GC, H)**

*Presiding:* T Zhang, University of Colorado; Y Ding

1340h  **C23A-01** Environmental Impacts of the Arctic’s Shrinking Sea Ice Cover: M Serreze
Global Environmental Change

**GC23A Gran Cancun Poster Hall** Tuesday 1340h

**Climate Change in the Americas: Observations and Global and Regional Models IV Posters (joint with A)**

*Presiding:* L V Carvalho, Univ California Santa Barbara; C Jones, Univ California Santa Barbara

1340h **GC23A-01 POSTER** Helioclimatolology of the Americas: B S Nurtayev, M Yakubov, E Shermatov

1340h **GC23A-02 POSTER** CMIP5 CLIMATE MODELS FOR PROJECTING EXTREME EVENTS IN THE FUTURE OVER AMAZON BASIN: L M Alves, J A Marengo, M Bernasconi

1340h **GC23A-03 POSTER** ANALYSIS OF RAINFALL VARIABILITY OVER SUBTROPICAL SOUTH AMERICA CONSIDERING A COMPLEX NETWORK PERSPECTIVE: V Martin, M Barreiro

1340h **GC23A-04 POSTER** Atmospheric energy cycle: a regional indicator of the climate vulnerability: L A Da Silva, J A Marengo, L A Vieira, C S Chan, A Lyra

1340h **GC23A-05 POSTER** About climate variability leading the hydric condition of the soil in the rainfed region of Argentina: V C Pinto, O C Penalba

1340h **GC23A-06 WITHDRAWN**

**GC23B Room Salon Cozumel 1** Tuesday 1340h

**Climate Change in the Americas: Observations and Global and Regional Models III (joint with A)**

*Presiding:* L V Carvalho, Univ California Santa Barbara; C Jones, Univ California Santa Barbara

1340h **GC23B-01** The impact of anthropogenic climate change on North Atlantic tropical cyclone tracks: B J Soden, A J Colbert


1410h **GC23B-03** Climate change in tropical Americas: temperature, moisture and precipitation in the CMIP5 simulations: L V Carvalho, C Jones

1425h **GC23B-04** The Role of Atmospheric Rivers in Linking Weather Extremes: East Asian Cold Surges and High Impact Precipitation over the West Coast U.S: T Jiang, K J Evans, Y Deng

1440h **GC23B-05** Interdecadal changes in atmospheric connectivity using complex networks: F Arizmendi, M Barreiro, A Marti

1455h **GC23B-06** Impact of climatic changes on water resources in the North American Southwest: I T Stewart, D L Ficklin, E P Maurer

**Geomagnetism and Paleomagnetism**

**GP23A Gran Cancun Poster Hall** Tuesday 1340h

**Archeometric and Archeomagnetic Applications, Recent Geomagnetic Field Observations, and Paleosecular Variation During the Last Millennia II Posters**

*Presiding:* A M Soler-Arechalde, Instituto de Geofisica UNAM; G A Hartmann, Universidade de Sao Paulo; ANGEL Carranco Alonso, Burgos University; E Tema, Universita di Torino

1340h **GP23A-01 POSTER** THE EARTH’S MAGNETIC FIELD BEHAVIOR DURING THE HOLOCENE: F Pavon-Carrasco, M L Osote, J M Torta, A De Santis

1340h **GP23A-02 POSTER** How does the external magnetic field influence the geomagnetic jerk detection?: D Peña

1340h **GP23A-03 POSTER** Evolution of non-dipole features of the geomagnetic field from Archeomagnetic models: F Terra-Nova, G A Hartmann, R I Trindade

**GP23B Gran Cancun Poster Hall** Tuesday 1340h

**Magnetic Methods II Posters**

*Presiding:* C Prezzi, Univ Buenos Aires; D Ravat, University of Kentucky; V C Barbosa, National Observatory

1340h **GP23B-01 POSTER** Magnetotelluric characterization of a tectonic boundary in the Chaco-Pampean Plain (27°S), Argentina: V G Peri, C Pomposiello, A Favetto, H Barcelona, E Rossello

1430h **GP23B-02 WITHDRAWN**

**GP23C Room Isla Mujeres Salons** Tuesday 1340h

**Paleosecular Variation, Excursions, and Reversals of the Earth’s Magnetic Field II**

*Presiding:* J E Channell, University of Florida; N Thouveny, Marseille Universite

1340h **GP23C-01** Secular variation curves of Mexico, progress, problems and needs: A M Soler-Arechalde

1400h **GP23C-02** New Evidence for Rotational Instability in Earth’s Core: K D Aldridge, D McMillan

1420h **GP23C-03** A polarity transition and vertical-axis rotations recorded on neogene lava flow sequences from the island of la Gomera (Canary Islands): A Caccuriali, M Calvo-Rathert, A Gogichaishvili, V Soler, H Huiayu, N Vegas, B Aguilar

1440h **GP23C-04** Geomagnetic secular variations at the Mesozoic-Cenozoic boundary: V Pavlov, R V Veselovskiy, F Fleteau, A Latsyhev, A Fetisova

1500h **GP23C-05** High-resolution paleomagnetic records of the Laschamp geomagnetic excursion from the Blake Ridge: C Mac Niocaill, M D Bourne, A L Thomas, G M Henderson

1520h **GP23C-06** Geomagnetic Secular Variation record from a mid-latitude Brazilian speleothem: Preliminary results: P Jaqueto, R I Trindade, G A Hartmann, V Novello, F W Cruz, J M Feinberg
### Hydrology

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<tr>
<td>H23A</td>
<td>Advances in Satellite Precipitation and Hydrologic Applications I Posters (joint with A, GC, H, NH, NG)</td>
<td>Presiding: S Anwar, Missouri University of Science &amp; Technology; S Sorooshian, University of California Irvine; J A Cunningham, University of South Florida; J Sheffield, Princeton University</td>
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<tr>
<td>1340h</td>
<td>H23A-03 POSTER SIMULATION OF PEAK FLOWS USING REMOTE SENSING SYSTEMS: F Magaña Hernández, K M Ba, V Guerra-Cobián</td>
<td>1340h H23A-04 POSTER Investigating error metrics of a multi-dimensional satellite rainfall error model for hydrological applications: A S Falck, D A Vila, J Tomasella</td>
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<td>1340h</td>
<td>H23B-05 Investigating the relationship between deforestation and changes in hydrology across the island of Hispaniola: R Hakimdavar</td>
<td>1435h H23B-03 POSTER Hydrologic signals and patterns in coastal mangrove communities using space-borne remote sensing: D Lagomasino, R M Price</td>
</tr>
<tr>
<td>1450h</td>
<td>OS23A-04 POSTER Spatial Optimization of Cropping Patterns and Water Harvesting in roofs in the Amazonian region: J Leonardi, A Curi</td>
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### Ocean Sciences

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<th>Time</th>
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<tr>
<td>OS23A</td>
<td>Ocean Sciences General Contributions I</td>
<td>Presiding: C M Chiessi, University of São Paulo; F Graef Ziehl, CICESE</td>
</tr>
<tr>
<td>1340h</td>
<td>OS23A-01 Recent results from numerical models of the Caribbean Sea and Gulf of Mexico: Do they all agree?: J Sheinbaum</td>
<td>1400h OS23A-02 Synthetic Seismograms Derived from Oceanographic Data in the Campeche Canyon, Deepwater Gulf of Mexico: A Gonzalez-Orduno, J U Fucugauchi, M Monreal, G Perez-Cruz, D A Salas de Leon</td>
</tr>
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<td>1435h</td>
<td>OS23A-04 Inter-annual variability in the Yucatan Channel flow: G Athié, J Sheinbaum, J L Ochoa-de-La-Torre, A Romero-Artega, J Candela</td>
<td>1450h OS23A-05 Magnetic Properties of the Chicxulub Impact Crater and the Cretaceous-Paleogene Boundary I Posters (joint with NS)</td>
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### Planetary Sciences

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<tr>
<td>P23A</td>
<td>Chicxulub Impact Crater and the Cretaceous-Paleogene Boundary II Posters (joint with NS)</td>
<td>Presiding: J U Fucugauchi, UNAM; S P Gulick, University of Texas at Austin; J V Morgan, Imperial College London</td>
</tr>
<tr>
<td>1340h</td>
<td>P23A-01 POSTER The Chicxulub Impactor, energy and size: H J Durand-Manterola, G Cordero-Tercero</td>
<td>1340h P23A-02 POSTER Microtektite spherules from proximal K-Pg sections: alteration patterns and clues to precursor melt lithologies: J Belza, S Goderis, J Smit, F F Vanhaecke, K Baert, H Terryn, P F Claesys</td>
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<td>1340h</td>
<td>P23B-01 POSTER EXCEED (SORA) mission overview: I Yoshikawa</td>
<td>1340h P23B-02 POSTER Nine Billion Years: Past and Future of the Solar System: I H Leubner</td>
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<td>1340h</td>
<td>P23B-03 POSTER Outward Migration of Giant Planets in Orbital Resonance: G D’Angelo, F Marzari</td>
<td>1340h P23B-04 POSTER Microtektite spherules from proximal K-Pg sections: alteration patterns and clues to precursor melt lithologies: J Belza, S Goderis, J Smit, F F Vanhaecke, K Baert, H Terryn, P F Claesys</td>
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SPA-Solar and Heliospheric Physics

SH23A Gran Cancun Poster Hall Tuesday 1340h Solar Wind Structure and Its Coronal Origins I Posters

Presiding: J G Luhmann, University of California; S E Gibson, NCAR

1340h SI23A-01 POSTER Association of Solar Wind Proton Flux Extremes with Pseudostreamers: L Zhao, S E Gibson, L A Fisk

1340h SI23A-02 POSTER OBSERVATIONAL STUDY OF THE TRIDIMENSIONAL TRAJECTORY OF SMALL WHITE-LIGHT TRANSIENTS IN THE INNER SOLAR CORONA: C Lopez-Por- tela, X Blanco-Cano, G Stenborg, A Vourlidas

SH23B Room Xcaret Tuesday 1340h Solar Eruptions From the Photosphere to the Heliosphere II (joint with SM)

Presiding: N Lugaz, University of New Hampshire; N P Savani, NASA GSFC; S Dasso, IAFE (UBA-CONICET)

1340h SI23B-01 The Role of Flux Rope Formation and Dynamics in Solar Eruptions: M Linton

1402h SI23B-02 Update from the BU-CME Group: Accurate Prediction of CME Deflection and Magnetic reconnection in the interior of interplanetary CMEs: M Opfer, C Kay, R L Fermo, J F Drake, R M Evans

1424h SI23B-03 From the low corona and beyond: multi-spacecraft investigation of CMEs born in the SDO era: H Cremades

1446h SI23B-04 Magnetic structure and flows in coronal prominence cavities: S E Gibson, U Bak-Steslicka, B Forland, D J Schmit

1502h SI23B-05 CME – Solar Wind interaction using remote and in-situ observations: T Nieves-Chinchilla, G Stenborg, A Vourlidas, N P Savani, M A Hidalgo, L Vena, A Szabo, R C Colaninno

1524h SI23B-06 An analytic model of the ICME-ICME interaction: T Niembro, A Lara

SH23C Room Tulum Tuesday 1340h Space Plasmas and High-Energy Particles in the Heliosphere II

Presiding: J A Perez-Peraza, UNAM; M D Rodriguez-Frias, Universidad de Alcala de Henares

1340h SI23C-01 DETECTION AND ANALYSIS OF NEUTRON EMISSIONS FROM SOLAR FLARES: J F Valdes-Galicia

1355h SI23C-02 ON QUASI-PERIODIC VARIATIONS OF COSMIC RAYS OBSERVED AT EARTH: DIRECT MEASUREMENTS: K Kudela

1410h SI23C-03 Charge State Model of Solar Energetic Particles: L Del Peral, J A Pérez-Peraza, M D Rodriguez Frias

1425h SI23C-04 Energetic particles in the inner heliosphere: a multi-point view by STEREO: R Gómez-Herrero, A Klassen, N Dresing, B Heber, J J Blanco, J Rodríguez-Pacheco

1440h SI23C-05 Galactic Cosmic Ray flux measurements with the Pierre Auger Observatory: X Bertou, Title of Team: Pierre Auger Observatory

1455h SI23C-06 Fast diffusion in the heliosphere due to particle and magnetic decrease noresonant interactions: E D Costa Junior, B Tsurutani, M V Alves, E Echer, G S Lakhina

1510h SI23C-07 The galactic and anomalous cosmic-ray intensity during the extended 2009 solar minimum: H Moraal

1525h SI23C-08 Implications of the pion-decay gamma emission and neutron observations with CORONAS-F/SONG: V Kurt, B Yushkov, K Kudela

SPA-Magnetospheric Physics

SM23A Gran Cancun Poster Hall Tuesday 1340h Ionosphere Response to Upper and Lower Transients I Posters (joint with SA)

Presiding: J Raulin, Presbyterian Mackenzie University; A Bor- gazzi, A Lara, Universidad Nacional Autonoma de Mexico; R Perez-Enriquez, UNAM

1340h SM23A-01 POSTER The Ionosphere and the Latin America Very Low Frequency Network Mexico (LAVNet-Mex): A Borgazzi, A Lara, A Santiago

1340h SM23A-02 POSTER Some characteristics of the nighttime subionospheric propagation of VLF waves: J Saman, J Raulin, W R Guevara Day

1340h SM23A-03 POSTER Planetary Waves Seasonality from Meteor Wind Measurements at 7.4°S and 23°S: L R Araujo, L M Lima, H Takahashi, P P Batista, B R Clesmesa

1340h SM23A-04 WITHDRAWN

1340h SM23A-05 WITHDRAWN

1340h SM23A-06 POSTER Subionospheric VLF Propagation Modelling During a solar flares: A F Akel

SM24A Room Xcaret Tuesday 1600h Ionosphere Response to Upper and Lower Transients II (joint with SA)

Presiding: J Raulin, Presbyterian Mackenzie University; A Bor- gazzi, A Lara, Universidad Nacional Autonoma de Mexico; R Perez-Enriquez, UNAM

1600h SM24A-01 Very Low Frequency Remote Sensing of the Ionosphere and Magnetosphere: M Cohen


1645h SM24A-03 ELF and VLF observations of ionospheric disturbances caused by extra-terrestrial origin: Y Tanaka, M Hayakawa, Y Hobarra, J Raulin, Y Takahashi, M Sato, T Terasa


1730h SM24A-05 Attenuation of VLF electromagnetic waves in the ionosphere as a result of pre-seismic activity observed by the DEMETER spacecraft: D Pisa, F Nemec, M Parrot, O Santolik
Seismology

S23A  Gran Cancun Poster Hall  Tuesday  1340h
Induced and Triggered Seismicity Posters (joint with T)

Presiding: G Suarez, UNAM

1340h  S23A-01 POSTER Remotely Triggered Earthquakes Recorded by EarthScope’s Transportable Array and Regional Seismic Networks: A Case Study Of Four Large Earthquakes: A A Velasco, I Cerda, I Linville, D L Kilb, K L Pankow
1340h  S23A-02 POSTER INDUCED SEISMICITY OF KUZNETSK BASIN: A Emanov, A Emanov, E Leskova, A Fateev

S23B  Gran Cancun Poster Hall  Tuesday  1340h
Tectonic Tremor and Slow-Slip Events II Posters (joint with T)

Presiding: H Gonzalez-Huiziar, University of Texas at El Paso; A A Velasco, University of Texas at El Paso; C Aiken, Georgia Institute of Technology; J J Walter, Georgia Institute of Technology

1340h  S23B-01 POSTER Automatic detection of low-frequency earthquakes in the Mexican subduction zone: W Frank, N M Shapiro, V Kostoglodov, A L Husker, M Campillo, J S Payero, G A Prieto
1340h  S23B-02 POSTER BOOSTING OF NONVOLCANIC TREMOR BY REGIONAL EARTHQUAKES 2011-2012 IN GUERRERO, MEXICO: J A Real, V Kostoglodov, A L Husker, J S Payero, Title of Team: G-GAP Research Team
1340h  S23B-03 POSTER Preliminary Analysis of Remote Triggered Seismicity in Northern Baja California Generated by the 2011, Tohoku-Oki, Japan Earthquake: R Wong-Ortega, R R Castro, H Gonzalez-Huiziar, A A Velasco
1340h  S23B-04 POSTER Earthquake swarm activity in the Oaxaca segment of Middle American Subduction Zone: M R Brudzinski, E Cabral, A Arciniega-Ceballos

S23C  Room Salon Cozumel 5  Tuesday  1340h
Upper Mantle Structure and Geodynamics of South America (joint with G, T)

Presiding: R M Russo, University of Florida; J Julia, Univ. Fed. Rio Grande do Norte; M Assumpcao, University of Sao Paulo

1340h  S23C-01 Evolution of the subduction-driven, long-wave-length topography of South America since the Jurassic: N Flament, M Gurnis, S Williams, M Seton, R Muller
1410h  S23C-02 South American Lithosphere Thicknesses from Surface-wave Tomography and Implications for the Lithosphere Evolution: M An, M Assumpcao, M Feng
1425h  S23C-03 Imaging Subsurface Velocity Structure Under the Borborema Province, NE Brazil, With Passive-Source Seismology: From Crust to Lithosphere and Beyond: J Julia, R Nascimento, I D Bastos, R C Dias, A G Pinheiro, A Farias do Nascimento, J M Ferreira, R A Fucks
1440h  S23C-04 Crustal Structure in the Chile Ridge Subduction Region, Northern Patagonia: Results from Receiver Function Analysis: R M Russo, D Comte, V I Mocanu, A Gallego, R E Murdie, J C VanDecar
1510h  S23C-05 Seismic Attenuation in the Rupture Zone of the 2010 Maule, Chile, Earthquake: Two Spectral Ratio Methods: M Torpey, R M Russo, S L Beck, A Meltzer, S W Roeker
1510h  S23C-06 Aftershocks and Images of South Central Chile: Results from the Analysis of the IMAD Data Set: S W Roeker, S L Beck, M Morell, K M Ward, G Zandt, A Meltzer, J C Stachnik, R M Russo, M Torpey, H Benz

Tectonophysics

T23A  Gran Cancun Poster Hall  Tuesday  1340h
Dynamics of South America Posters (joint with G, S, DI, T, V)

Presiding: T W Becker, USC; G Monsalve, Universidad Nacional de Colombia Sede Medell; A F Sheehan, University of Colorado, Boulder; M H Taylor, University of Kansas

1340h  T23A-01 POSTER Seismic anisotropy along the northern margin of the South American plate: T W Becker, M S Miller
1340h  T23A-02 POSTER RECEIVER FUNCTION STUDY OF THE CRUSTAL STRUCTURE BENEATH THE NORTHERN ANDES (COLOMBIA): E Poveda, G Monsalve, C A Vargas-Jimenez
1340h  T23A-03 WITHDRAWN
1340h  T23A-04 POSTER Bathymetric Expression of the Antarctica-South America-Scotia Triple Junction in the Southern Chile Trench: J M Stock

T23B  Gran Cancun Poster Hall  Tuesday  1340h
Tectonics and Structure of the Northern Andes II Posters (joint with S)

Presiding: F A Audemard, Fundacion Venezolana de Investigaciones Sismologicas; M Schmitz, Fund Venezolana Inv Sismologicas; C A Vargas-Jimenez, Universidad Nacional Colombia; E Gil, PDVSA

1340h  T23B-01 POSTER WITHDRAWN
1340h  T23B-02 POSTER Flexural Thickness Variations of the Maracaibo Block: M S Arnaiz-Rodriguez, F A Audemard
1340h  T23B-03 POSTER Evolution of the stress and strain fields in the Eastern Cordillera, Colombia: J N Kellogg, O K Egbue, H Aguirre, C Torres
1340h  T23B-04 POSTER Active tectonics in Quito assessing combined geomorphology studies, GPS data and crustal seismicity, Ecuador: A Alvarado, I Audin, J Nocquet, MSegovia, Y Font, G Lamarque, H Yepes, P A Mothes
1340h  T23B-06 POSTER Sediments distribution and tectonic faults (Ecuadorian shelf): preliminary results of the ATACAMES Cruise (2012): F Michaud, J Proust, J Collot
1340h  T23B-07 POSTER An Integrated approach for in situ stress prediction - Fault Block Scale Case Study for the northern Central Cordillera of Colombia: C S Whitehill, D Cobos, C A Vargas, M Martinez
1340h  T23B-08 POSTER Lithospheric scale model of Merida Andes, Venezuela (GIAME Project): M Schmitz, N D Orhiuela, S Klarica, E Gil, A Levander, F A Audemard, F Mazuera, J Avila

Union

U24A  Room Gran Cancun 1  Tuesday  1600h
Tropical Storm Development and Impacts in the Atlantic, Gulf of Mexico, and Caribbean Basins

Presiding: S L Morey, The Florida State University; D Dukhovskoy, The Florida State University; L K Shay, University of Miami

1600h  U24A-01 In-Situ Observations in Tropical Cyclones from Ocean Drifters: J Morzel, L R Centurioni

1615h  U24A-02 Ocean Response to Tropical Storms as Observed by a Moored Ocean Observing System in the Deep Gulf of Mexico: F Oropeza, S Jaramillo, S Fan


1642h  U24A-04 Deep Ocean Response to Tropical Cyclone Forcing: S L Morey, D Dukhovskoy

1654h  U24A-05 Topographic Rossby Waves Generated by Tropical Cyclones: D S Dukhovskoy, S L Morey

1706h  U24A-06 Enthalpy and Momentum Fluxes During Hurricane Earl over the North Atlantic Western Boundary Current System: L K Shay, B Jaimes, E Ulithorn

1718h  U24A-07 Idealized Study of the Ocean Impact on Coupled Tropical Cyclone Intensity Forecasts: G R Halliwell, S Gopalakrishnan, F Marks

1730h  U24A-08 The Impact of the AMO on North Atlantic Tropical Cyclone Activity in the 21st Century: T LaRow, L B Stefanova

1745h  U24A-09 The rarity of the 1938 New England Hurricane as a case of extratropical transition and comparisons to Hurricane Sandy: R E Hart

**Atmospheric Sciences**

**A24A  Room Gran Cancun 5  Tuesday  1600h Atmospheric Sciences General Contributions III**

*Presiding: J A Marengo, INPE; V Lucarini, University of Hamburg*

1600h  A24A-01 Displacement Data Assimilation: J M Restrepo, S Rosenthal, S Venkataramani


1645h  A24A-03 Study of the variability of Atlantic Intertropical Convergence Zone using multivariate indices: A Nobile Tomaziello, A Gandu, L V Carvalho

1700h  A24A-04 Study of the wind intensification along the Veracruz coast using numerical modeling: M E Osorio-Tai, R Romero-Centeno, J Zavala-Hidalgo


1730h  A24A-06 Temperature and precipitation climate extreme indices for México: L F Pineda-Martinez, B Stephan, J Mora-Rodriguez

1745h  A24A-07 WITHDRAWN

**Cryosphere**

**C24A  Room Salon Cozumel 2  Tuesday  1600h Cryosphere General Contributions II**

*Presiding: J U Fucugauchi, UNAM; P K Swart, Univ Miami*

1600h  C24A-01 SEA ICE FORMATION RATE AND TEMPORAL VARIATION OF TEMPERATURE AND SALINITY AT THE VICINITY OF WILKINS ICE SHELF FROM DATA COLLECTED BY SOUTHERN ELEPHANT SEALS IN 2008: M F Santini, R Souza, I Wainer, M Muelbert, M Hindell

1615h  C24A-02 Triggering of glacier seismicity (icequakes) by distant earthquakes: J I Walter, Z Peng, M S Tulaczyk, S Oneel

**Global Environmental Change**

**GC24A Room Salon Cozumel 1  Tuesday  1600h Networks for Sustainable Monitoring of Global Environmental Change**

*Presiding: B De Bievre, Mountain Research Initiative; M Vuille, University at Albany*

1605h  GC24A-01 The Red de Monitoreo de BosquesAndinos: A communication platform for science and policy in the Andean countries: S Baez, F X Cuesta, A Malizia, J Carilla, M Bustamante, A Yepes

1625h  GC24A-02 Long term monitoring system integrated in an elevational gradient in NW Argentina: J Carilla, A Malizia, O Osinaga, C Blundo, R Grau, L Malizia, E Aräoz

1645h  GC24A-03 Accessible hydrological monitoring for better decision making and modelling: a regional initiative in the Andes: B De Bievre, R Celleri, P Crespo, B Ochoa, W Buytaert, C Tobón, M Villacin, M F Villazon, C Llerena, M Rodriguez, P Viñas


1725h  GC24A-05 Importance of hydro-meteorological monitoring networks in highland watersheds and ecosystems (Bolivia): M F Villazon, E L Montenegro, C Devenish

**Geomagnetism and Paleomagnetism**

**GP24A Room Isla Mujeres Salons  Tuesday  1600h Planetary and Meteorite Magnetism (joint with P)**

*Presiding: G Kletetschka, Charles University in Prague; T Kohout, Czech Academy of Science of the Czech Republic, v.v.i.; P Schnabl, Institute of Geology Academy of Sciences of the Czech Republic; C R Suavet, MIT*

1600h  GP24A-01 Planetary Dynamos: C T Russell, H Cao

1620h  GP24A-02 Dynamo bistability: from planets to stars: J Morin, U R Christensen, X Delfosse, J Donati, E Dormy, L Duarte, T Forveille, T Gastine, M Jardine, P Petit, A Reiners, M Schirner, J Wicht

1640h  GP24A-03 The Chixculub impact structure: What does the Yaxcopoil-1 drill core reveal?: T Elbra

1700h  GP24A-04 The effect of irradiation on the magnetic properties of rock and synthetic samples with implications to irradiation of extraterrestrial materials in space: N S Bezaea, J Gattaccea, P Rochette, J Duprat, G Rizza, P Vernazza, V I Trukhin

1715h  GP24A-05 Lunar Paleomagnetism: M Fuller, B P Weiss


**Near Surface Geophysics**

**NS24A Room Salon Cozumel 4  Tuesday  1600h Near-Surface Geophysics General Contributions II**

*Presiding: R Martin, CNRS; J Ortiz Alenam*

1600h  NS24A-01 Data Processing in Microgravity Surveys: V Blecha

1615h  NS24A-02 Coupled structural joint inversion and Euler deconvolution of isolated gravity and magnetic anomalies: E Fregoso, L A Gallardo, J Garcia-Abdeslem
Ocean Sciences

S24A Room Salon Cozumel 3 Tuesday 1600h Ocean Sciences General Contributions II

Presiding: C M Chiessi, University of São Paulo; F Graef Ziehl, ICES

1600h OS24A-01 SEASONAL VARIABILITY OF SOUTH ATLANTIC CENTRAL WATER: E Nobrega Passos, I de Freitas Assad, L Landau

1615h OS24A-02 Ocean-Atmosphere coupling and CO2 exchanges in the Southern South Atlantic Ocean: L P Pezzi, R Carmargo, O C Acevedo


1645h OS24A-04 Chlorophyll-a and sea surface observations along the Brazilian Coastal Current front: F G Dias, R Souza, R G Araujo, F Rossato, L P Pezzi

1700h OS24A-05 Brazil current eddy activity near cape São Tomé based on direct ADCP data measurements from 2006 to 2012: N D Lima, M Gabioux, L D Guerra, A M Paiva

1715h OS24A-06 MOCHA: A three dimensional climatology of salinity and temperature of the Middle Atlantic Bight: N E Flem ing, J L Wilkin


1745h OS24A-08 Analysis of Linear and Nonlinear Sea Level Trends in the North Atlantic: Y Jo, X Yan

Seismology

S24A Room Salon Cozumel 5 Tuesday 1600h Using the Ambient Seismic Field for Earth Imaging and Dynamics I

Presiding: M P Moschetti, US Geological Survey; F J Sanchez-Sesma, UNAM; M Assumpcao, University of Sao Paulo

1600h S24A-01 Ambient Noise Tomography in the Eastern Caribbean: M S Arnaiz-Rodriguez, F Niu, M Schmitz

1615h S24A-02 Beneath Bass Strait: Linking Tasmania and Mainland Australia using Ambient Seismic Noise: S Pilia, N Rawlinson, N G Direen, A M Reading

1630h S24A-03 Shear Wave Seismic Interferometry for Lithospheric Imaging: J Frank, E Ruirogck, C Wapenaar


1700h S24A-05 The seismic ambient noise spectral ratio H/V under de diffuse field approach for simple layered models: Asymptotic behavior for low and high frequencies: F Luzom, A Garcia-Jerez, F J Sanchez-Sesma, E Luneided, D Albarrello, M A SantoY, J Almendros

1715h S24A-06 Seismic Monitoring studies at Popocatepetl volcano, Mexico: T A Reyes Pimentel, M Cárdenas-Soto

1730h S24A-07 Predominant Periods and Shear Wave Velocity an indicator for Sediment Thickness, Caracas, Venezuela: V Rocabado, M Schmitz

1745h S24A-08 Ground Motion Prediction for M7+ scenarios on the San Andreas Fault using the Virtual Earthquake Approach: M Denolle, E M Dunham, G Prieto, G C Beroza

Hydrology

H25A Room Gran Cancun 1 Tuesday 1815h Hydrology Plenary Session

1815h H25A-01 Impact of Hydrologic Variability on Ecosystem Dynamics and the Sustainable Use of Soil and Water Resources: A M Porporato
Wednesday A.M.

**Union**

**U31A Gran Cancun Poster Hall Wednesday 0800h**

Impact Craters in the Solar System: Recent Studies, New Developments and Perspectives I Posters

*Presiding: J U Fucugauchi, UNAM; R I Trindade, Universidade de Sao Paulo; K Wuenemann, Museum für Naturkunde Berlin; S A Gilder, Ludwig-Maximilians-Universitaet*

0800h **U31A-01 POSTER** Hydrothermal alteration features in the Vargéao basaltic impact structure (South Brazil): Implications about the presence of liquid water in Mars: E Yokoyama, A Nédélec, D Baratoux, G Berger, R I Trindade

Atmospheric Sciences

**A31A Gran Cancun Poster Hall Wednesday 0800h**

Atmospheric Sciences General Contributions IV Posters

*Presiding: J A Marengo, INPE; V Lucarini, University of Hamburg*

0800h **A31A-01 POSTER** ASSESSMENT OF CHANGES IN BLOCKING ACTIVITY OVER SOUTHEASTERN BRAZIL UNDER CLIMATE CHANGE SCENARIOS: S E Ferraz, D Pedroso, E D Nascimento, R Da Rocha, T Ambrizzi

0800h **A31A-02 POSTER** Variability of the Atuel River streamflow annual cycle and its relationship with the tropospheric circulation: D C Aranco, E A Agosta

0800h **A31A-03 POSTER** THE LUNAR NODAL CYCLE AND THE BIDECADAL CLIMATE VARIABILITY IN PRECIPITATION AND TROPOSPHERIC CIRCULATION OVER SOUTHERN SOUTH AMERICA: E Agosta

0800h **A31A-04 POSTER** Monitoring of atmospheric gamma radiation and radon observations of rainfall events in southeast of Brazil: I M Martin, M A Alves, M P Gomes

0800h **A31A-05 POSTER** OBSERVED TRENDS IN INDICES OF DAILY PRECIPITATION AND TEMPERATURE EXTREMES IN RIO DE JANEIRO STATE (BRAZIL): W L Silva, C P Derezynski, I F Cavalcanti

0800h **A31A-06 POSTER** Stability and turbulence structure under the influence of Nocturnal Low Level Jets in the southwest Amazon: R A Santana, J Tota, R M Santos, Title of Team: Micro-meteorology Group

0800h **A31A-07 POSTER** An analysis of the Lorenz energy cycle for conditions of low, middle and high CO2 concentrations based on the RCP2.6, RCP4.5 and RCP8.5: J A Veiga, T Ambrizzi

0800h **A31A-08 POSTER** THE LARGE-SCALE OSCILLATIONS INFLUENCE OVER THE INTERDEcadAL CLIMATE VARIABILITY IN MEXICO’S CENTRAL REGION: R Jofre, L Brito-Castillo, I Tereshchenko, Title of Team: Atmospheric Sciences Climatology Climate Variability

0800h **A31A-09 POSTER** Estimating the background covariance error for the Global Data Assimilation System of CPTEC/INPE: C F Bastarz, L Gonalves

0800h **A31A-10 POSTER** Southern Hemisphere Extratropical Cyclones and their Relationship with ENSO in springtime: M S Reboita, T Ambrizzi, R Da Rocha

0800h **A31A-11 WITHDRAWN**

0800h **A31A-12 POSTER** Study of weather and thermal comfort influence on sport performance: prognostic analysis applied to Rio de Janeiro’s city marathon: M Pallotta, D L Herdies, L G Gonçalves

0800h **A31A-13 WITHDRAWN**

0800h **A31A-14 POSTER** Overview of satellite data in CPTEC/INPE G3DVar system: B B Silveira, L Gonalves

0800h **A31A-15 POSTER** Ocean-atmosphere coupling at the Brazil-Malvinas Confluence region based on in situ, satellite and numerical model data: F Casagrande, R Souza, L Pezzi

0800h **A31A-16 POSTER** Evaluation of Arctic and Antarctic Sea Ice Extent between 1981 and 2012 using Satellite-derived data: F Casagrande, P Nobre, R Souza

0800h **A31A-17 POSTER** Improving the Gap between Model Predictions and Observations of Formaldehyde over the Remote Marine Regions: J Trueblood, N Meshkhdiz

0800h **A31A-18 POSTER** A study on spectral energy for the end of the twentieth century the basis of the NCEP reanalysis-II: A F Arana, J A Veiga, M C Yoshida

0800h **A31A-19 POSTER** The 3DVAR Gridpoint Statistical Interpolation Impacts in the CPTEC/INPE Global Operational System: L de Goncalves

0800h **A31A-20 POSTER** Amazon And Negro River Breeze And Manaus Urban Area Influence In Surface Wind And Water Vapor Daily Cycles: M dos Santos, M F da Silva Dias, E D Freitas, Title of Team: Meteorologia Aplicada a Sistemas de Tempo Regionais - MASTER

0800h **A31A-21 POSTER** Temporal variability of Polycyclic Aromatic Hydrocarbons (PAHs) in a receptor site of the Puebla-Tlaxcala Valley: Z V Padilla, R Torres, L Ruiz Suarez, L T Molina

0800h **A31A-22 POSTER** OMI Ozone Profile and Tropospheric Ozone and Cross Evaluations with Chemical Transport Models: X Liu, J Liu, B N Duncan, K Yang, S E Strahan, K Chance, P K Bharatia

0800h **A31A-23 POSTER** Diagnosis of sea breeze cases over the Metropolitan Area of Sao Paulo with the WRF model: C Homann, E D Freitas

0800h **A31A-24 POSTER** Comparison between the Spectra of Gamma Radiation for Climate Dry Periods and Rainy in the Southeast of Brazil: M P Gomes, I M Martin

0800h **A31A-25 POSTER** Estimating the short-range forecast impact of observations in the CPTEC/INPE LETKF during an extratropical cyclone: F L Diniz, D L Herdies, R Todling, L Goncalves

0800h **A31A-26 POSTER** The two-fold sea surface temperature change associated with interannual cyclone activities in the Western North Pacific: C Chang

**A31B Gran Cancun Poster Hall Wednesday 0800h**

Seasonal Hydroclimatological Extremes in the Amazon Basin II Posters (joint with H)

*Presiding: J A Marengo, INPE; J C Espinoza; N Zeng; L S Borma, INPE*

0800h **A31B-01 POSTER** The role of Amazon Basin on the atmospheric branch of the hydrological cycle: R O Nieto, A Drumond, L Gimeno

0800h **A31B-02 POSTER** LONG-TERM DROUGHTS IN AMAZONIA: REGIONAL CHARACTERISTICS: G O Obregón, J A Marengo

**A31C Gran Cancun Poster Hall Wednesday 0800h**

Urban Air Pollution in Latin America I Posters

*Presiding: P Artaxo, University of Sao Paulo; L T Molina, Molina Center for Energy & Env; P Oyola, Centro Mario Molina Chile*

0800h **A31C-01 POSTER** PM trend study for the 1998 - 2012 period: Impact of Transport and Petroleum-based Fuels in Santiago Chile: M A Castillo, I Jhun, F Moreno, P Oyola, P Koutrakis
0800h  A31C-02 POSTER Influence of public transport in black carbon: Y Vasquez, P Oyola, E V Gramsch, F Moreno, M Rubio
0800h  A31C-04 POSTER Effect of urban parks on CO2 concentrations in Toluca, Mexico: J A Vieyra Gómez, E González Sosa, C A Mastachi-Loza, M Cervantes, H Martínez Valdés
0800h  A31C-05 POSTER Ozone concentrations at a selected high-elevation forest site downwind Mexico City: R Torres-Jardon
0800h  A31C-06 WITHDRAWN

A31D  Room Gran Cancun 5  Wednesday  0800h Megacities, Megachallenges I

Presiding: L T Molina, Molina Center for Energy & Env; M Mena, Universidad Andrés Bello

0805h  A31D-01 Overview of Megacity Air Pollutant Emissions and Impacts: C E Kolb
0830h  A31D-02 Urban, Regional and Global Impacts of Biomass Burning Emissions: P Artaxo, J Ferreira De Brito, H M Barbosa, L V Rizzo, A Setzer, G Cirino
0855h  A31D-03 Challenges and Opportunities of Air Quality Management in Mexico City: V Paramo
0920h  A31D-04 Going beyond city boarders: the case of Central Chile: L Gallardo

Biogeosciences

B31A  Room Salon Cozumel 1  Wednesday  0800h Greenhouse Gas Fluxes From Natural and Man-Made Freshwater Bodies I (joint with A)

Presiding: M A Dos Santos, UFRJ; J M Damázio, Electric Energy Research Center CEPEL

0800h  B31A-01 Atmospheric Methane Contributions From Fractured Bedrock Aquifers: D L Marrin
0824h  B31A-02 Spatial Organization of Lake Size-Distributions and Biogeochemical Patterns: D A Seckell, M L Pace, C Gudasz, S Sobek, L Tranvik, C Verpoorter
0848h  B31A-03 A REVIEW OF HYDROPOWER RESERVOIR AND GREENHOUSE GAS EMISSIONS: L P Rosa, M A Dos Santos
0912h  B31A-04 FACTORS INFLUENCING GREENHOUSE GAS EMISSIONS FROM THREE GORGES RESERVOIR OF CHINA: Y Zhao, X Zhao, B Wu, Y Zeng
0936h  B31A-05 Characterizing methane ebullition (bubbling) dynamics from aquatic sediments: T Del Sontro, I Ostrovsky, D F McGinnis, W Eugster, A Maech, A Lorke, B Wehrli

Earth and Planetary Surface Processes

EP31A  Gran Cancun Poster Hall  Wednesday  0800h Earth and Planetary Surface Processes General Contributions I Posters

Presiding: J U Fucugauchi, UNAM; P K Swart, Univ Miami

0800h  EP31A-01 POSTER Interactions Between Large Clasts and Wood in Log Steps in High Gradient Streams: D Scott, D R Montgomery

0800h  EP31A-02 POSTER DYNAMICS OF SOIL HEAT FLUX IN LOWLAND AREA: ESTIMATING THE SOIL THERMAL CONDUCTIVITY: T Zimmer, M V Silveira, D R Roberti
0800h  EP31A-03 POSTER Geothermic Potential Assessment of hydrothermal vents of Township Barranca De Upia - Meta - Colombia: J Chica, G Chicagana, Title of Team: Eco Energy Research Group
0800h  EP31A-04 WITHDRAWN

Geodesy

G31A  Room Salon Cozumel 3  Wednesday  0800h Geodetic Imaging Using Light Detection and Ranging (Lidar) (joint with GC, NH, NS)

Presiding: W E Carter, University of Houston; J C Fernandez-Diaz, NCALM/ University of Houston; R L Shrestha, University of Houston

0800h  G31A-01 Processing of UAV imagery and TLS data for 3-D building modeling: J J Cáceres, H Porras
0815h  G31A-02 LiDAR, a great tool for archaeologists, but how do you interpret it?: S Leisz, C Fisher
0830h  G31A-03 B4 2 After, 3D Deformation Field From Matching Pre- To Post-Event Aerial LiDAR Point Clouds, The 2010 El Mayor-Cucapah M7.2 Earthquake Case: A Hinojos-Corona, E Nissen, J F Limon-Tirado, R Arrowsmith, A Krishnan, S Saripalli, M E Oskin, C L Glennie, S M Arregui, J M Fletcher, O J Teran
0900h  G31A-05 Delineating and Defining the Boundaries of an Active Landslide in the Rainforest of Puerto Rico Using a Combination of Airborne and Terrestrial LiDAR Data: G Wang, J Joyce, D A Phillips, R L Shrestha, W E Carter

Geomagnetism and Paleomagnetism

GP31A  Room Isla Mujeres Salons  Wednesday  0800h Magnetic Fabric: From Grain Scale to Tectonic Context I (joint with T, V)

Presiding: F Martin Hernandez, Universidad Complutense; M B Raposo, Instituto de Geociencias Universidade de Sao Paulo; C I Caballero, CU-UNAM; M Chadima, AGICO

0800h  GP31A-01 Magnetic fabric as a tool to decipher the kinematics of inverted basins; examples from the western Tethys: B Oliva-Urcia, A M Casas, T Román-Berdiel, R Soto, C García-Lasanta, E Izquierdo-Llavall, B Moussaid, H El’Ouardi, J Villalain, S Torres
0820h  GP31A-02 Tectonic vs. anomalous magnetic fabrics in sedimentary rocks: a case study from Barrandian, Czech Republic: J Cerny, R Melichar
0840h  GP31A-03 The Anisotropy of Magnetic Susceptibility of Igneous Rocks: Lessons From Obsidians and Pyroclastic Deposits: E Canon-Tapia
0900h  GP31A-04 The Emplacement of the Newry Igneous Complex, Northern Ireland, from magnetic fabrics and strain: C Stevenson, P Anderson, M Cooper, R M Ellam, J Reavy, D J Condon, Q Crowley
Hydrology

H31A Room Gran Cancun 1 Wednesday 0800h
Hydrology General Contributions I

Presiding: T S Hogue, Colorado School of Mines; A M Kinoshita, Colorado School of Mines

0800h H31A-01 Inference of Step-Pool Hydraulics from Grain Size Distributions: D Scott, D R Montgomery
0815h H31A-02 Flood Water Model Logan K. kuiper: L K Kuiper
0830h H31A-03 Agriculture and Extreme Events: Modeling the Conjunctive Use of Groundwater and Surface Water: F Munoz-Arriola, R T Hanson, M D Dettinger, D R Cayan
0845h H31A-04 WITHDRAWN

0900h H31A-05 Quality assessment of Digital Elevation Model (DEM) in view of the Altiplano hydrological modeling: F Satgé, A Arsen, M Bonnet, F Timouk, S Calmant, R Pilco, J Molina, W Lavado, J Crétaux, Title of Team: HASM
0915h H31A-06 Ensemble Data Assimilation with HSPF for Improved Real-Time Water Quality Forecasting: S Kim, H Riazi, A rafieei nasab, C Shin, D Seo
0930h H31A-07 Short-range ensemble streamflow forecasting of the Upper Trinity River – Evaluation via hindcasting experiments: M Sahara, D Seo, R Corby, K He
0945h H31A-08 Uncertainty analysis of neural network based flood forecasting models: An ensemble based approach for constructing prediction interval: K Kasiviswanathan, K Sudheer

Near Surface Geophysics

NS31A Room Salon Cozumel 4 Wednesday 0800h
Geophysical Imaging of Increasingly Complex Geologic Media: Recent Advances II (joint with NS)

Presiding: R Martin, CNRS; J Ortiz Aleman

0800h NS31A-01 Seismic and electrical work at rivers and lakes of Siberia: V S Seleznev, V M Soloviev, A V Liseikin, P Siganin
0815h NS31A-02 Improved monitoring of subsurface CO2 storage using novel electrical and seismic measurements: scaled laboratory studies: R Ghose, A Kirichek, D Draganov, K Heller
0830h NS31A-03 Geothermal Prospecting with Remote Sensing and Geographical Information System Technologies in Xingilong Volcanic Field in the Eastern Inner Mongolia, NE China: F Peng, S Huang, Y Xiong, Y Zhao, Y Cheng
0845h NS31A-04 Laboratory Hydraulic Fracture Characterization Using Acoustic Emission: M Gutierrez

Ocean Sciences

OS31A Gran Cancun Poster Hall Wednesday 0800h
Ocean Sciences General Contributions II Posters

Presiding: C M Chiessi, University of São Paulo; F Graef Ziehl, CICESE

0800h OS31A-01 POSTER Detection of Mediterranean lenses in the Atlantic Ocean by Argo project buoys: A Demidov, M Markina, B Filyushkin
0800h OS31A-02 POSTER Vessel-Mounted ADCP Data Calibration and Correction: A F de Andrade, L M Barreira, N Violante-Carvalho
0800h OS31A-03 POSTER Temporal and spatial changes of the upper ocean heat content and vertical heat flux in the Arctic Ocean: M Jin, Y Liu
0800h OS31A-04 POSTER GEOGRAPHICAL INFORMATION SYSTEM BASED EVALUATION OF BENTHIC MACRO FAUNA IN THONDII COASTAL ENVIRONMENT, SOUTH EAST COAST OF INDIA RETHNA PRIYA, E, ANBUCHEZHIAN, R AND RAVICHANDRAN, S. CENTRE OF ADVANCED STUDY IN MARINE BIOLOGY, ANNAMALAI UNIVERSITY, PORTONVO, INDIA: R Priya, A Ramasamy, R Ravichandran, Title of Team: Rethna Priya,E, Anbuzhezhian,R, Ravichandran,S
0800h OS31A-05 POSTER Composition of organic matter in sediments of the oxygen minimum zone of the Northeastern Mexican Pacific: M Juarez, A Sanchez, S Aguñiga-Garcia, A Lara-Mendoza
0800h OS31A-06 POSTER Effect of atmospheric organics on iron bioavailability: D Hurley, N Meskhidze, M D Petters
0800h OS31A-07 POSTER Numerical study of the ocean response to normal shore wind stress: A Ortiz Bañuelos, F Velazquez, Title of Team: Modelación numerica
0800h OS31A-08 POSTER Levels of metals and semimetals in sedimentary cores in Bertiga Channel, Brazil: J R Sartoretto, A Salaroli, R C Figueira
0800h OS31A-09 POSTER Environmental impact of bleufin tuna aquaculture on benthic assemblages in the western coast of Baja California, Mexico: V Diaz-Castaneda
0800h OS31A-10 POSTER Circulation and transport processes in the southern Gulf of Mexico: C Enriquez, I Marino-Tapia
0800h OS31A-11 POSTER On the relation between winds, current velocities and transports in the Yucatan Channel: A M Romero Arteaga, J Sheinbaum, G Athié, J L Ochoa-de-La-Torre, J Candela
0800h OS31A-12 POSTER Sunglint effects on the characterization of optically active substances in high spatial resolution airborne hyperspectral images: A S Strecher, C Clemente Faria Barbosa, L Soares Galvão, J A. Goodman, T S Silva
0800h OS31B Gran Cancun Poster Hall Wednesday 0800h
Physical Processes in Tropical and Subtropical Coastal Systems I Posters (joint with A, EP, GC, NH)

Presiding: J Gomez-Valdes, CICESE; C Enriquez, Universidad Nacional Autonoma de Mexico; A Valle-Levinson, University of Florida; L Carrillo, EL COLEGIO DE LA FRONTERA SUR

0800h OS31B-01 POSTER Seasonal variation in a tropical lagoon with submarine groundwater discharges: L Tenorio, J Gómez-Valdés, C Enriquez, C Treviño, I Marino-Tapia, K López-Aguirar
0800h OS31B-02 POSTER Influence of ENSO events on the freshwater discharge pattern at Patos Lagoon, Rio Grande do Sul, Brazil: G P Barros, W C Marques
0800h OS31B-03 POSTER Evaluating the effects of climate changes on Patos Lagoon’s hydrodynamics using numerical modeling techniques, Brazil: G P Barros, W C Marques
0800h OS31B-04 POSTER Observations of a coastal current in the continental shelf of Yucatan: E Ruiz-Castillo, J Gomez-Valdes, R Rioja-Nieto
0800h OS31B-05 POSTER Modelling physical-biological interactions in the Southeast Brazil Bight: transport patterns of Brazilian Sardine larvae: D Faggiani Dias, D F Gherardi, L P Pezzi
0800h OS31B-06 POSTER Numerical simulation of the generation, evolution and dissipation of internal waves in the Gulf of California: J Rodriguez Solis, F Velazquez, A Filonov, Title of Team: Numerical modeling
0800h OS31B-07 POSTER Beach Cusps: Spatial distribution and time evolution at Massaguacu beach (SP), Brazil: H H dos Santos, E Siegle, P H Sousa
0800h OS31B-08 POSTER Hydrodynamics of the Veracruz Reef System: M Marin Hernandez
0800h  **OS31B-09 POSTER** Internal Nonlinear Tidal Waves on the Mexican Pacific Shelf: A Filonov, I Tereshchenko, A Anis, Title of Team: Internal Nonlinear Tidal Waves

0800h  **OS31B-10 POSTER** Morphodynamic monitoring of beach cusps at Massaguará Beach (SP), Brazil: P H Sousa, E Siegel

0800h  **OS31B-11 POSTER** Influence of the road-bridge blockade on the tidal cycles of the Chelem lagoon in Yucatan peninsula: C Treviño

0800h  **OS31B-12 POSTER** Seasonal variation of the upwelling trap in the Todos Santos Bay, Baja California: M A Calva, P Perez-Brunius, M Lopez, J Candela, E García

0800h  **OS31B-13 POSTER** Hydrodynamic response of Papaloapan estuary to potential future sea-level rise: E R Olvera-Prado, J Zavala-Hidalgo

0800h  **OS41A-06 POSTER** Assessing channel migration on decadal scales at Una inlet (Peruibe, Brazil): F M Chagas, J Ribeiro, D M Italiani, E Siegel, Title of Team: Coastal Dynamics Laboratory

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**Planetary Sciences**

**P31A** Gran Cancun Poster Hall  Wednesday 0800h Solar Wind Interaction With Planetary Ionospheres Posters (joint with SH)

**Presiding:** H A Perez De Tejada, UNAM; R N Lundin, Kiruna

0800h  **P31A-01 POSTER** Magnetic energy density and plasma energy density in the Venus wake: H A Perez De Tejada, H J Durand-Manterola, R Lundin, S Barabash, T Zhang, M Reyes-Ruiz, J Sauvad

0800h  **P31A-02 POSTER** Study on the Boundary between the Ionosphere and the Magnetosheath from the Disappearance and Reappearance of Electron Plasma Oscillations: F Duru

0800h  **P31A-03 POSTER** IMF influence on simulated multispecies pick-up ions at Mars: S Curry, M W Liemohn, C Dong, X Fang, S W Bougher

0800h  **P31A-04 POSTER** Solar wind interactions with Venus and Mars: a comparative study: H Wei, C T Russell, T Zhang

0800h  **P31A-05 POSTER** Formation of plasma vortices in the interaction of the Solar Wind with the ionosphere of Venus: M Reyes-Ruiz, H A Perez De Tejada, H Aceves

**P31B** Gran Cancun Poster Hall  Wednesday 0800h Venus: A World of Water and Life Posters

**Presiding:** J F Ditkof, UW Madison

0800h  **P31B-01 POSTER** Venus: Water and Life: J F Ditkof

0800h  **P31B-02 POSTER** Venus Express Measurement of ULF and ELF Signals in the Venus Ionosphere: Evidence for Extensive Electrical Activity in the Venus Atmosphere: R Hart, C T Russell, H Leinweber, T Zhang

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**Paleoceanography and Paleoclimatology**

**PP31A** Room Salon Cozumel 2  Wednesday 0800h Perspectives in Paleoceanography and Paleoclimatology I (joint with B, GC, PP)

**Presiding:** D H Urrego, Universite Bordeaux; B Turcq, LOCEAN-IRD; F Sanchez-Beristain, UNAM - Facultad de Ciencias; J Espinosa, Instituto Geofisico del Perz

0800h  **PP31A-01** Vegetation and climate variability in tropical and subtropical South America during the late Quaternary: H Behling

0820h  **PP31A-02** Abrupt climate changes in northwestern Colombia during the Lateglacial and Holocene transition: C Velasquez Ruiz

0840h  **PP31A-03** Last interglacial semi-desert expansions in southern Africa: D H Urrego, M Sanchez Goni, S Lechevrel, A Daniau

0900h  **PP31A-04** QUANTITATIVE ESTIMATION OF TERRIGENOUS SUPPLY IN THE GULF OF MEXICO DURING THE MELTWATER PULSE 1A: V Bout-Roumazeilles, T Sionneau, G Meunier, J Montero Serrano

0920h  **PP31A-05** Decreasing Wave Setup During Reef-Flat Progradation Explains Mid-Holocene Highstand: P Blanchon

0940h  **PP31A-06** The Contribution of Dust to the Surface Sediments of the Bahamas and its Geochemical Signature: P K Swart, A M Oehlert, G J Mackenzie, J Reijmer

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**SPA-Solar and Heliospheric Physics**

**SH31A** Gran Cancun Poster Hall  Wednesday 0800h GLE Physics With New Ground Instrumentation I Posters

**Presiding:** A Lara, Universidad Nacional Autonoma de Mexico; R A Caballero-Lopez, UNAM

0800h  **SH31A-01 POSTER** Detection of solar cosmic rays with the Mexico City neutron monitor: B Vargas-Cardenas, J F Valdes-Galicia

0800h  **SH31A-02 POSTER** Cosmic Ray Telescope to Monitor Solar Activity: L J Otiniano, E Tueros, C Soncco, W R Guevara Day, Title of Team: for the LAGO Collaboration

0800h  **SH31A-03 POSTER** Creating Maps of Forbush Decreases: A Santiago, A Lara, T Niembro

0800h  **SH31A-04 POSTER** Solar cosmic-ray spectrum from the analysis of the Ground Level Enhancement 42 on September 29, 1989: R Caballero-Lopez, H Moraal

0800h  **SH31A-05 POSTER** Ground Level Enhancements with New Perspectives from Ground and Space: G A de Nolfo, J M Ryan

0800h  **SH31A-06 POSTER** Maximal Energy of Solar Accelerators: evidence from space born and Earth’s surface measurements: A Chilingarian, N Bostanjyan, H Rostomyan

**SH31B** Room Xcaret  Wednesday 0800h Solar Wind Structure and Its Coronal Origins II

**Presiding:** J G Luhmann, University of California; S E Gibson, NCAR

0800h  **SH31B-01 WITHDRAWN**

0818h  **SH31B-02 WITHDRAWN**
**Program Content**

**Seismology**

**S31A** Gran Cancun Poster Hall Wednesday 0800h

Using the Ambient Seismic Field for Earth Imaging and Dynamics II Posters

*Presiding: M P Moschetti, US Geological Survey; F J Sanchez-Sesma, UNAM; M Assumpcao, University of Sao Paulo*

0800h **S31A-01 POSTER** Crustal Structure of the Paraná Basin from Ambient Noise Tomography: B Collaco, M Rosa, G Sanchez, M Assumpcao

0800h **S31A-02 POSTER** PASSIVE TOMOGRAPHY OF THE CARIBBEAN USING SURFACE WAVES EXTRACTED FROM AMBIENT NOISE: F J Hernandez, A M Lopez, E Asencio

0800h **S31A-03 POSTER** Preliminary Ambient Noise Surface Wave Tomography of The Colima Volcanic Complex: C R Escudero, H P Paceco


0800h **S31A-05 POSTER** Estimates of geodynamic state and structure of the local crust on the base of microseismic noise analysis: D Lokoie, A Spivak

0800h **S31A-06 POSTER** Analysis of Green’s functions obtained by cross-correlations for MASE stations: G B Vera-Padilla, A Iglesias, D Legrand

0800h **S31A-07 POSTER** Autocorrelations at RCLB Station, SE Brazil, Reveal Deep Moho Reflections and Shallow Surface-Wave Reflections: J C Durado, M Schimmel, M Assumpcao

0800h **S31A-08 POSTER** Use of active source geophones for passive source imaging: Examples from Bighorn Arch Seismic Experiment (BASE), USA: A Sheehan, C T O’orourke, S S Haines, Z Yang, L L Worthington, K C Miller

0800h **S31A-09 POSTER** GENERALIZED DIFFUSE FIELD WITHIN A 2D ALLUVIAL BASIN: A NUMERICAL EXAMPLE: J Molina Villegas, M Baena, J Piña, M Perton, M Suarez, F J Sanchez-Sesma

**Tectonophysics**

**T31A** Room Tulum Wednesday 0800h

Gulf of Mexico: Tectonics, Paleogeography, Oil Exploration, and Chicxulub Impact I (joint with NS, NG, PP, V)

*Presiding: J U Fucuguchi, UNAM; J Escobar, Univ Natl Autonomo Mexico; L L Villanueva-Gonzalez, Pemex Exploracion Produccion*

0800h **T31A-01** Mesozoic Continental Sediment-dispersal Systems of Mexico Linked to Development of the Gulf of Mexico: T F Lawton, R S Molina-Garza, R Barboza-Gudino, R D Rogers

0800h **T31A-02** Consequences of Chicxulub Impact for the Tectonic and Geodynamic Evolution of the Gulf of Mexico North Caribean Region: C Rangin, A Crespy, J martinez-Reyes

0840h **T31A-03** Rifting and Subsidence in the Gulf of Mexico: Implications for Syn-rift, Sag, and Salt Sections, and Subsequent Paleogeography: J L Pindell, R Graham, B Horn

0900h **T31A-04** The K/T-boundary carbonate breccia succession at the Cantarell Field, Campeche Bay area: a representative example of the influence of the Chicxulub meteorite-impact event on the formation of extraordinaire petroleum reservoirs: G Murillo-Muñeton, J M Grajales-Nishimura, L G Velasquillo-Martinez, J Garcia-Hernández

**Atmospheric Sciences**

**A32A** Room Gran Cancun 5 Wednesday 1020h

Megacities, Megachallenges II

*Presiding: L T Molina, Molina Center for Energy & Env; L G Ruiz-Suarez*

1020h **A32A-01** Challenges for Reducing Emissions of Black Carbon from the Transport Sector in Urban Areas: M A Zavala, L T Molina

1035h **A32A-02** An operational air quality objective analysis of surface pollutants: R Menard, A Robichaud

1050h **A32A-03** INORGANIC ANALYSES OF PM2.5 IN TWO MCMA CAMPAIGNS COLLECTED IN WINTER 2011 AND SPRING 2012: V Barrera, S Blanco, T Ortuño, A Mizohata, B Cardenas

1105h **A32A-04** Air Quality Modeling of Ozone Radical Precursors in Houston: B Rappenglueck, B Czader, X Li

1135h  **A32A-06** Source apportionment studies on particulate matter in Beijing/China: P Suppan, R Shen, L Shao, S Schrader, K Schäfer, S Norra, B Vogel, K Cen, Y Wang

1150h  **A32A-07 WITHDRAWN**

1205h  **A32A-08** Raman Microscopic Studies of the Physical and Chemical Properties of Particulate Matter in one of the World’s Most Polluted Cities: M Tolbert, C A Hasenkopf, G Schill

**Biogeosciences**

**B32A** Room Salon Cozumel 1  Wednesday  **1020h** Greenhouse Gas Fluxes From Natural and Man-Made Freshwater Bodies I (joint with A)

**Presiding:** M A Dos Santos, UFRJ; J M Damádio, Electric Energy Research Center CEPEL

1020h  **B32A-01** Methane and carbon dioxide concentrations in sediments and diffusive fluxes at the sediment-water interface from three tropical systems in Brazil during the pre-impoundment phase: D S Abe, C Sidagis-Galli, D E Grimbek, F D Blanco, J L Rodrigues-Filho, J G Tundisi, T Matsumura-Tundisi, J E Tundisi, A C Cimberlis, J M Damádio, Title of Team: Project BALKACAR

1044h  **B32A-02** Comparison of Gross Greenhouse Gas Fluxes from Hydroelectric Reservoirs in Brazil with Thermopower Generation: J P Rogerio, M A Dos Santos, B Matvienko, E dos Santos, C H Rocha, E Sikar, A M Junior

1108h  **B32A-03** Short-term eddy-covariance measurements of CO2 fluxes at Itaipu Lake, Brazil: N L Dias, B L Crivellaro, F S Armani, T L Chor, M F Gobbi, A L Santos, Title of Team: Lemma/UFPR Scientific Team

1132h  **B32A-04** Spatial variation of CO2 and CH4 in sediments and diffusive fluxes at the sediment-water interface in four tropical reservoirs in Brazil: D S Abe, C Sidagis-Galli, D E Grimbek, F D Blanco, J L Rodrigues-Filho, J G Tundisi, T Matsumura-Tundisi, J E Tundisi, A C Cimberlis, J M Damádio, Title of Team: Project BALKACAR

1156h  **B32A-05 WITHDRAWN**

**Geodesy**

**G32A** Room Salon Cozumel 3  Wednesday  **1020h** Geodesy Horizons

**Presiding:** L E Lenzaor Andia, IANIGLA; E O Norabuena, Instituto Geofisico Del Peru

1020h  **G32A-01** Advances and Challenges in Combining Multiple Geodetic Data Types for Global Climate Studies: J L Davis

1050h  **G32A-02** InSAR Monitoring of Surface Deformation in Alberta’s Oil Sands: J Pearse, V Singhroy, J Li, S V Samsonov, T Shipman, C R Froese

1105h  **G32A-03** The Lima-Peru seismic gap: a study of inter-seismic strain accumulation from a decade of GPS measurements: E O Norabuena, F P Politiz, T H Dixon

1120h  **G32A-04** Large residuals on geoidal heights determined on the Fagnano Lake, Tierra del Fuego-Argentina: M E Gomez, D Del Cogliano, R Perdomo

**Geomagnetism and Paleomagnetism**

**GP32A** Room Isla Mujeres Salons  Wednesday  **1020h** Paleomagnetism and Rock Magnetism From Scientific Drilling (joint with GP)

**Presiding:** A P Roberts, Australian National University; X Fang, Inst. of Tibetan Plateau Res.

1020h  **GP32A-01** Magnetic properties of pelagic marine carbonates: A P Roberts, F Florindo, L Chang, L Jovane, D Heslop, J Larrasoana

1040h  **GP32A-02** Paleomagnetic and Magnetostatigraphic Studies in Drilling Projects of Impact Craters – Recent Studies, Challenges and Perspectives: J U Fucugauchi, M Velasco-Villarreal, L L Perez-Cruz

1100h  **GP32A-03** High-resolution magneto-biostratigraphy of the early Eocene to early Oligocene from Indian Ocean Hole 711A and Italian Monte Cagno section: J F Savian, L Jovane, R Cocioni, F Frontalini, S Bohaty, P Wilson, A P Roberts, F Florindo, R Trindade

1120h  **GP32A-04** MAGNETOSTRATIGRAPHY AND SUSCEPTIBILITY OF DEEP DRILLING CORE SG-1 IN THE WESTERN QADAM BASIN (NE TIBETAN PLATEAU) AND THEIR TECTONIC AND CLIMATIC IMPLICATIONS: X Fang, W Zhang, E Appel, C Song

1140h  **GP32A-05** Preliminary magnetostratigraphy of cores collected during IODP Expedition 344 (CRISP-A2) offshore Costa Rica: L Jovane, X Zhao, Y Li, Title of Team: Expedition 344 Shipboard Science Party

1200h  **GP32A-06 WITHDRAWN**

**Hydrology**

**H32A** Room Gran Cancun 1  Wednesday  **1020h** Groundwater System, Tracers, and Surface-Groundwater Interactions I (joint with B)

**Presiding:** M Schubert, Helmholtz Centre for Environmental Research - UFZ; K Knoeller, Helmholtz Centre for Environmental Research - UFZ

1020h  **H32A-01** Composition and fluxes of submarine groundwater discharge along the Yucatan Peninsula coast: A Paytan, K A Null, K L Knee, E D Crook, N R de Sieyes, M Rebollo-Vieyra, L M Hernandez-Terrones

1035h  **H32A-02** Submarine groundwater discharge and associated nutrient fluxes to Discovery Bay, Jamaica: D Gordon-Smith

1050h  **H32A-03** Radon and thoron as natural tracers: The mechanics of their measurement: D Lane-Smith, W Burnett

1105h  **H32A-04** Light Stable Isotopes in Aquifers Affected by Mining Activities in a Brazilian Mining Province: R M Moreira, J B de Carvalho

1120h  **H32A-05** Chemical and biological tracers to determine groundwater flow in karstic aquifer, Yucatan Peninsula: M Lenczewski, R M Leal-Bautista, J E McLain

1135h  **H32A-06** Can antibiotic resistance analysis be a useful tool for tracking population sources of contamination in Yucatan groundwater?: J E McLain, M Lenczewski, R M Leal-Bautista

1150h  **H32A-07** Challenge of urban sewage disposal in a karst region: Mérida, Yucátan, Mexico: E C Perry, M Villasuso

1205h  **H32A-08** Numerical solute transport modeling for groundwater age determination – An unconventional tracer and its application for aquifer vulnerability assessment: R Stollberg, C H Kiang, H Weiss
Near Surface Geophysics

N32A Room Salon Cozumel 4  Wednesday  1020h
Mining Geophysics in the Americas: New Developments and Perspectives II (joint with T, V)

Presiding: J U Fucugauchi, UNAM; I Hernandez-Perez, Servicio Geologico Mexicano

1020h  N32A-01 Central Andean Giant Ore Deposits: Links to Forearc Subduction Erosion, Shallowing Subduction and Thickening Crust: S M Kay, C Mpodozis
1040h  N32A-02 Identification of new magnetic exploration targets in the southwest portion of Parecis Basin, Mato Grosso, Brazil: V B Ribeiro, V H Louro, M S Mantovani, Title of Team: GEOLIT Team
1100h  N32A-03 Evolution of Northeastern Mexico during the early Mesozoic: potential areas for research and exploration José Rafael Barboza-Gudiño: R Barboza-Gudiño

Paleoceanography and Paleoclimatology

PP32A Room Salon Cozumel 2  Wednesday  1020h
Perspectives in Paleoceanography and Paleoclimatology II (joint with B, GC, PP)

Presiding: D H Urrega, Universite Bordeaux; B Turcq, LOCEAN-IRD; C M Chiessi, University of São Paulo; F Sanchez-Beristain, UNAM - Facultad de Ciencias

1020h  PP32A-01 Re-evaluating alkenone based CO2 estimates: M Pagani
1040h  PP32A-02 A warm pool in the western European margin during the North Atlantic cold events of the MIS5a/4 transition: M Sanchez Goni, A Landais, L Rossignol
1100h  PP32A-03 Pleistocene climate and biome evolution modulated at orbital, millennial, and centennial time scales: H Hooghiemstra
1140h  PP32A-05 Relationship between sea ice variability and atmospheric circulation during the last millennium in Antarctic Peninsula: L Barbara, X Crosta, S Schmidt, G Massé

SPA-Solar and Heliospheric Physics

SH32A Room Xcaret  Wednesday  1020h
Multipoint Measurements in the Solar Wind I (joint with SH)

Presiding: P Kajdic, Instituto de Investigación en Astrofísica y Planetología, Université de Toulouse (UPS); B Lavraud, Institut de Recherche en Astrophysique et Planetologie, Université de Toulouse (UPS); A Flandes, Instituto de Geofísica, Universidad Nacional Autónoma de México

1020h  SH32A-01 STEREO Observations of Interplanetary Shocks: X Blanco-Cano
1045h  SH32A-02 Electron observations and wave activity at shocks in the solar wind: M Pulupa, S D Bale, A Opitz, A Fedorov, J Sauvad, L B Wilson
1110h  SH32A-03 What can we learn about CME evolution from multi-point observations?: T Nieves-Chinchilla
1200h  SH32A-05 Hydrodynamic Modeling of ICMEs’ Speeds from the Sun to the Orbit of Jupiter: A Flandes, A Lara, A Borgazzi

Seismology

S32A Room Salon Cozumel 5  Wednesday  1020h
Moho (joint with T)

Presiding: H Thybo, Univ Copenhagen; B L Kennett, The Australian National University; I M Artemieva, Univ Copenhagen

1020h  S32A-01 Models of Crustal Thickness for South America from Seismic Refraction, Receiver Functions and Surface Wave Tomography: M Assumpcao, M Feng, A Tassara, J Julia
1035h  S32A-02 A Geodynamical Perspective on the Subduction of Cocos and Rivera plates beneath Mexico and Central America: V Manca, M Manea, L Ferrari
1050h  S32A-03 Crustal Structure in Central-Eastern Greenland: TOPOGREENLAND Refraction Profile: A A Shulgin, H Thybo
1105h  S32A-04 Moho topology and crustal heterogeneity in Europe, the Arctic shelf, and the North Atlantic Ocean: I M Artemieva, H Thybo
1120h  S32A-05 Moho and magmatic underplating in continental lithosphere: H Thybo, I M Artemieva
1135h  S32A-06 The Mohorovicic Discontinuity Beneath the Continental Crust: An Overview of the Seismic Constraints: R Carbonell, A Levander, R Kind
1150h  S32A-07 Moho topography and crustal heterogeneity in Siberia: Y V Cherepanova, I M Artemieva, H Thybo

Tectonophysics

T32A Room Tulum  Wednesday  1020h
Tectonophysics General Contributions (joint with T)

Presiding: A Motoki, Rio de Janeiro State University; J M Stock, Caltech

1020h  T32A-01 Does partial melting explain geophysical anomalies?: S Karato
1040h  T32A-02 North-south compression, active uplift, and abyssal mantle exhumation of the Saint Peter and Saint Paul Rock, Equatorial Atlantic Ocean: A Motoki, S E Sichel, T F Campos, K F Motoki, P Szatmari, Title of Team: Poseidon - Colmeia
1100h  T32A-03 Effects of ridge migration on the distribution of oceanic core complexes along the Mid-Atlantic Ridge: M Cormier, H Sloan
1120h  T32A-04 The influence of climate and tectonics on topography in the Hayes Range, Alaska: G Vance, W K Wallace

Wednesday P.M.

Near Surface Geophysics

NS32B Room Gran Cancun 1  Wednesday  1230h
Near Surface Geophysics Plenary Session

1230h  NS32B-01 Geophysics of Volcanic Landslide Hazards: The Inside Story: C Finn, M Desczcz-Pan, P A Bedrosian
Program Content

Union

U33A  Room Gran Cancun 1  Wednesday  1340h
Observations, Modeling, and Economics of Extreme Events

Presiding: M Chavez, UNAM; J U Fucugauchi, UNAM; M Ghil, ENS

1340h  U33A-01 Towards a General Theory of Extremes for Observables of Chaotic Dynamical Systems: V Lucarini

1400h  U33A-02 EXTREME CLIMATIC EVENTS MODELLING AND ECONOMIC IMPACTS UNDER DIFFERENT CLIMATE CHANGE SCENARIOS: A RISK MANAGEMENT APPLICATION TO THE RURAL SECTOR IN CHINA: E Chavez, M Ghil

1420h  U33A-03 Recent Mega-Thrust Tsunamigenic Earthquakes and PTHA: S Lorito

1440h  U33A-04 Really big earthquakes: forecasting and testing their locations and rates: D D Jackson, X Xu, Y Y Kagan

1500h  U33A-05 Hybrid Modelling of the Economic Consequences of Extreme Magnitude Earthquakes: M Chavez, E Cabrera, M Ashworth, S Garcia, D Emerson, N Perea, A Salazar, C Mouliniec

Atmospheric Sciences

A33A  Gran Cancun Poster Hall  Wednesday  1340h
Aerosols, Clouds, Radiation, Precipitation, and Their Feedbacks I Posters (joint with IT)

Presiding: J Luo, CUNY; X Dong, University of North Dakota

1340h  A33A-01 POSTER Marine and Continental Low-level Cloud Processes and Properties: X Dong, B Xi

1340h  A33A-02 POSTER Deposition Ice Nuclei Concentration at Different Temperatures and Supersaturations: M I López, E Avila

1340h  A33A-03 POSTER Chemical Composition of Rainwater in Córdoba City, Argentina: M I López, M L Asar, S Geppi, R E Burgess, E Avila


1340h  A33A-05 POSTER Suppression of Light Precipitation by Air Pollution in Northern China: Observation Analysis and Modeling: J Guo, Z Dai, Z Li, Q Chen, J Fan, P Zhai

1340h  A33A-06 POSTER South American Monsoon precipitation trends from 1948-2006: L R Araujo, J Z De Mattos, L Gonalves

1340h  A33A-07 POSTER Investigations of TOA radiation anomalies with climate state variables over the tropics: B Lin, T Fan

1340h  A33A-08 POSTER Spatio-temporal distribution of global solar radiation for Mexico using GOES data: R Bonifaz, M Cuahuze, M Valdes, D Riveros

1340h  A33A-09 POSTER Anthropogenic contribution to cloud condensation nuclei and the first aerosol indirect climate effect modelled by GEOS-Chem/APM: F Yu

A33B  Gran Cancun Poster Hall  Wednesday  1340h
Biomass Burning in Latin America: Emissions, Transport, and Effects Posters (joint with GC)

Presiding: P Artaxo, University of Sao Paulo; K M Longo, Instituto Nacional de Pesquisas Espaciais; A Setzer

1340h  A33B-01 POSTER The Use of Combined MODIS and MISR AOD to Constrain Biomass Burning Aerosol Emissions in the GOCART Model: M Pettrenko, R A Kahn, M Chin

1340h  A33B-02 POSTER Top-Down Smoke Aerosol Emission Estimation Using Satellite Fire Radiative Power Measurements: C M Ichoku, L Ellison

1340h  A33B-03 WITHDRAWN

A33C  Gran Cancun Poster Hall  Wednesday  1340h
Megacities, Megachallenges III Posters

Presiding: L G Ruiz-Suarez, M Mena, Universidad Andres Bello

1340h  A33C-01 POSTER Climate Regulation by Urban Parks (Mexico): E Bobadilla Lagunas, C A Mastachi-Loza, R Arévalo Mejia, D Magaña-Lona, T Romero Contreras

1340h  A33C-02 POSTER Dynamics of thermal inversions on Metropolitan Area of Guadalajara, Jalisco Mexico: R Valencia, I Tereshchenko, D A Perez, S J Lizarraga, Title of Team: Thermal Inversions, Metropolitan Area of Guadalajara

1340h  A33C-03 POSTER Challenges in modeling the impact of biomass burning on air quality in megacities: W Lei, G Li, L T Molina

1340h  A33C-04 POSTER Air pollution critical levels in central México protected natural areas: E Ruiz Suarez, G Andrac Ayala, B Mar Morales, J Garcia-reynoso, R Torres-Jardon

1340h  A33C-05 WITHDRAWN

1340h  A33C-06 POSTER Relationship between natural gas consumption and the climate in Rio de Janeiro: C G Ramos, S I Saad, P T Matsuo, G Palma, A A Pessoa, B Lobo, M A Cecchini, J Mota

1340h  A33C-07 POSTER Parameterization of HONO sources in Mega-Cities: G Li, R Zhang, X Tie, L T Molina

1340h  A33C-08 WITHDRAWN

1340h  A33C-09 POSTER Tropospheric Emissions: Monitoring of Pollution (TEMPO): K Chance, X Liu, R M Suleiman, D E Flittner, J A Al-Saadi, S J Janz, Title of Team: TEMPO Science Team

1340h  A33C-10 POSTER Uncertainties in SOA simulations due to meteorological uncertainties in Mexico City during MILAGRO-2006 field campaign: N Bei, G Li, L T Molina

A33D  Room Gran Cancun 5  Wednesday  1340h
Intrasessional to Decadal Variability of the Tropical Americas II

Presiding: Y Serra, University of Arizona; D K Adams, Universidad Nacional Autonoma de Mexico

1340h  A33D-01 La canícula (midsummer drought): Underlying mechanisms, interannual variability, and forced response: K B Karnaukas, R Seager, A Giannini, A J Busalacchi

1355h  A33D-02 The Moistening and Drying Effect of Tropical Cyclones in Mexico Climate: C Dominguez Sarmiento, V Magaña Rueda

1410h  A33D-03 Influence of the warm pool and cold tongue El Niños on the following Caribbean rainy season: I Gourrand, V Moron, Z Hu, B Jha

1425h  A33D-04 Lagrangian analysis of moisture sources associated with precipitation in Central America: A Durán-Quesada, L Gimeno, J Amador

1440h  A33D-05 Impacts of Climate Changes on the Caribbean Low Level Jet and the Mid-Summer Drought: E D Glenn, J Gonzalez, D Comarazamy
1455h  A33D-06 Changes in the circulation of the North American monsoon using the CMIP5 scenarios: T Cavazos, A Torres
1510h  A33D-07 Trends and variability of daily and extreme temperature and precipitation in the Caribbean region, 1961-2010: T L Allen, T S Stephenson, L Vincent, C Van Meerbeek, N McLean
1525h  A33D-08 Observing Climate with GNSS Radio Occultation: Characterization and Mitigation of Systematic Errors: U Foelsche, B Scherllin-Pirscher, J Danzer, F Ladstätter, J Schwarz, A K Steiner, G Kirchengast

Biogeosciences

B33A  Room Salon Cozumel 2  Wednesday  1340h Emerging Methods for Measuring the Structure and Spatial Distribution of Plant Roots (joint with GC)

Presiding: K K Caylor, Princeton University; F C O’Donnell, Princeton University

1340h  B33A-01 Coarse root distribution of a semi-arid oak savanna estimated with ground penetrating radar: N Raz-Yaseef, L E Koteen, D D Baldocchi
1404h  B33A-02 WITHDRAWN
1428h  B33A-03 Roots Revealed – Neutron imaging insight of spatial distribution, morphology, growth and function: J Warren, H Bilheux, M Kang, S Voisin, C Cheng, J Horita, E Perfect
1452h  B33A-04 Comparative daily dynamics of mycorrhizal fungal hyphae across differing ecosystems using an automated minirhizotron and sensor network: M F Allen
1516h  B33A-05 Species-level diversity of belowground structure in savanna woody plants: F C O’Donnell, K K Caylor, A Bhat-tchan, K Dintwe, P D’Odorico, G S Okin

Geodesy

G33A  Gran Cancun Poster Hall  Wednesday  1340h Geodesy General Contributions Posters

Presiding: L E Lenzano Andia, IANIGLA; J G Monico, FCT/UNESP

1340h  G33A-01 POSTER Determination of Geometrical Loci of the Earth’s Center of Mass and its Cycles Based on the “Pulsating Mantle Hypothesis”: H Gholibeigian, A AmirShakarami
1340h  G33A-02 POSTER 3D Modeling and Optimization of the Location Monitoring Antennas for Picosatellites and Small Satellites: J Nieves-chinchilla, M Farjas, R Martinez
1340h  G33A-03 POSTER WEGENER: World Earthquake Geodesy Network for Environmental Hazard Research: H Ozener, S Zerbini, M L Bastos, M H Becker, M Meghraoui, R E Reilinger
1340h  G33A-04 POSTER Reconstruction of the past flow channels in the early Holocene at Lake Tonle Sap, Cambodia: T Haraguchii, H Yonenobu, T Tokunaga, I Shimoda
1340h  G33A-05 POSTER Strain Rate into South American Plate by SIRGAS-CON Geodetic Observations: G S Marotta, G S Franca, J G Monico, R A Fuck
1340h  G33A-06 POSTER Apoyo a Estudios Geodinamicos con GPS en Guatemala: V R Robles

G33B  Gran Cancun Poster Hall  Wednesday  1340h Geodetic Infrastructure for the Americas I Posters

Presiding: R S Gross, Jet Propulsion Laboratory, California Institute of Technology; L Sanchez, DGFI; M R Pearlman, Harvard-Smithsonian Center for Astrophysics

1340h  G33B-01 POSTER FROM CIGALA TO CALIBRA: AN INFRASTRUCTURE FOR IONOSPHERIC SCINTILLATION MONITORING IN BRAZIL: J G Monico, P D Camargo, D B Alves, M Aquino, V S Pereira, B Vani
1340h  G33B-02 POSTER Analysis of crustal movement in the Central Andes Aconcagua area: D A Piñón, S R Cimbaro, L Lenzano, R Smalley, A Raffo
1340h  G33B-03 POSTER INEGI’s Network of GPS permanent stations in Mexico: G A Gonzalez Franco
1340h  G33B-04 POSTER Effects of tectonic plate deformation on the geodetic reference frame of Mexico: G A Gonzalez Franco, D Avalos, R Esquivel

G33C  Gran Cancun Poster Hall  Wednesday  1340h Transnational Gravity Field and Regional Height Systems I Posters

Presiding: D Avalos, INEGI; D A Smith, NOAA Natl Geodetic Survey

1340h  G33C-01 POSTER LATEST ADJUSTMENT OF THE ARGENTINE HEIGHT SYSTEM: D A Piñón, S R Cimbaro, R E Sanchez
1340h  G33C-02 POSTER TOWARDS THE SOLUTION FOR THE ALTIMETRIC PROBLEM IN ARGENTINA: E Lauria, M C Pacino, S A Miranda, C N Tocho
1340h  G33C-03 POSTER GRAV-D for Puerto Rico and the U.S. Virgin Islands: D R Roman, X Li, D A Smith, Title of Team: Geoid and GRAV-D Teams
1340h  G33C-04 POSTER Monitoring the performance of relative gravimeters for quality control in Mexico’s gravity data: D Avalos

Global Environmental Change

GC33A  Room Salon Cozumel 1  Wednesday  1340h Imbalance of Nature I (joint with H)

Presiding: V A Kontar, Federal GEOS Funding; C Torrecillas Nunez, Autonomous University of Sinaloa; L M Shlafman, Federal GEOS Funding; D E Berner, Ben C. Gerwick, Inc.

1345h  GC33A-01 Water Awareness Strategy for Sinaloa State, Mexico, as a Tool to Mitigate the Imbalance of Nature: C Torrecillas Nunez, A Miguel-rodriquez
1400h  GC33A-02 Algorithm integration using ADL (Algorithm Development Library) for improving CrIMSS EDR science product quality: B Das, M Wilson, M G Divakarla, W Chen, C Barnet, W Wolf
1415h  GC33A-03 WITHDRAWN
1430h  GC33A-04 Water Reserves Program. An adaptation strategy to balance water in nature: M Lopez Perez, E Barrios, S Salinas-Rodriguez, B Wickel, R A Villon
1445h  GC33A-05 Impacts of Stratospheric Ozone Change on Tropospheric Chemistry and Air Quality: S Wu, H Zhang
1500h  GC33A-06 Changes in land surface albedo in response of climate change and human activities: S Liang
1515h  GC33A-07 WITHDRAWN
Geomagnetism and Paleomagnetism

GP33A Gran Cancun Poster Hall  Wednesday  1340h

Geomagnetism and Paleomagnetism General Contributions Posters (joint with GP)

Presiding: A Goguitchaichirli, UNAM; B O Aguilar Reyes

1340h  GP33A-01 POSTER Induced magnetic fields on the Z component by tsunami wave propagation: a case study based on the Chilean tsunami: V Klausner, P B Lima, M O Dominguez, O Mendes, A R Pata, R Tyler

1340h  GP33A-02 POSTER Paleomagnetism of Cascade Range Pleiocene-Pleistocene lava flows near McKenzie Bridge, Oregon: C Jaeger, M J Valentin

1340h  GP33A-03 POSTER Paleomagnetic results from Cenozoic volcanics of Lusatia, NW Bohemian Massif: P Schnabl, V Cazj, O Tietz, J Buchner, P Suhr, Z Pecskay, K Cizkova

1340h  GP33A-04 POSTER New Geophysical Observatory in Uruguay: L Sanchez Bettucci, P Nuñez, R R Caraballo, R Ogando

1340h  GP33A-05 POSTER A new Magnetic Observatory in Pantanal – Brazil: P Siqueira, K Pinheiro, H Linthe

1340h  GP33A-06 POSTER MAGNETIC STUDY ON ENVIRONMENTAL SAMPLES FROM GUADALAJARA MEXICO FOR MONITORING OF ATMOSPHERIC POLLUTION: B Aguilar, R Cejudo, M F Bogalo, J Rosas-Elguera, P Quintana, F Bautista, A Gogichaeliiveli, J Morales

1340h  GP33A-07 POSTER Fulgurites: a rock magnetic study of mineralogical changes caused by lightning: G S Begnini, E Tohver, M Schmieder

1340h  H33A-03 POSTER Atmospheric deposition of trace elements in Santiago de Queretaro city: J G Camacho Diaz, E Gonzalez Sosa, R Garcia Martinez, V Mondragon Olguin, G Miranda Castaneda

Hydrology

H33A Gran Cancun Poster Hall  Wednesday  1340h

Hydrology General Contributions II Posters

Presiding: T S Hogue, Colorado School of Mines; A M Kinoshita, Colorado School of Mines

1340h  H33B-01 POSTER Spacial and temporal evolution of the water levels along the Paraguai River by satellite altimetry and climate relationships: R A Oliveira, J SANTOS DA SILVA, A R Paz, S Calmant, F Seyler, Title of Team: Research Team of RHASA

1340h  H33B-02 POSTER Daily water level by ENVISAT altimetry of the Amazon River: A C Sousa, P Pereira, J S Silva, S Calmant, F Seyler

1340h  H33B-03 POSTER ENVISAT altimetry over narrow reaches of the Amazon basin contributors: J S Silva, S Calmant, F Seyler, Title of Team: Research Team of RHASA

1340h  H33B-04 POSTER Satellite altimetry based rating curves throughout the entire Amazon basin: A Paris, S Calmant, R C Paiva, W Collischonn, J S Silva, M Bonnet, F Seyler

1340h  H33B-05 POSTER BANKFULL DISCHARGE USING SATELLITE ALTIMETRY: J O Leao, J S Silva, Title of Team: Research Team of RHASA

1340h  H33B-06 POSTER Improvement of modelled discharge by iterative refinement constrained using satellite altimetry: S Calmant, A Paris, R C Paiva, W Collischonn, J SANTOS DA SILVA, M Bonnet

1340h  H33B-07 POSTER Hydrologic Monitoring of a Wet Prairie Restoration in the Oak Openings Region, Ohio, USA: E Gomez-delcampo, K Coode

1340h  H33B-08 POSTER Streamflow forecast in the Alto do Rio Doce watershed in Brazil, using hydrological and atmospheric model: J M Silva, S I Saad, G Palma, H Rocha, R M Palmeira, B L Silva, A A Pessoa, C G Ramos, M A Cecchini

1340h  H33B-09 POSTER computational intelligence for modeling rainfall-runoff process: M Zemzami, L Benaabidate

1340h  H33B-10 WITHDRAWN

1340h  H33B-11 POSTER Stability of Stochastic Estimation of Spatial Parameters in Extreme Value Distribution: R J Damalie, J Yoon

1340h  H33B-12 POSTER Propagating of uncertainties due to human-induced surface-heterogeneities in regional estimation of energy and mass exchange from flux aggregation: M B Siqueira

1340h  H33B-13 POSTER Trends in Extremes Rainfall over the Sao Francisco River Basin: M C Valverde, J A Marengo

1340h  H33B-14 POSTER A kinematic model to estimate effective dose of radioactive substances in a human body: S Sasaki, T Yamada, T Yamada


1340h  H33B-16 POSTER OPTIMAL OBSERVATION STRATEGY: AN APPLICATION TO CONTAMINANT SOURCE IDENTIFICATION: M F Snodgrass

1340h  H33B-17 POSTER Integrated Surface and Groundwater modeling of a tank cascaded sub basin using physically based model in a semi-arid region: I Hlampoooronan, K Muthiah, R Athikesavan

1340h  H33B-18 WITHDRAWN
1340h **H33B-19 POSTER** Interactions between soil moisture and Atmospheric Boundary Layer at the Brazilian savana-type vegetation Cerrado: L R Pinheiro, M B Siqueira

1340h **H33B-20 POSTER** Satellite Remote Sensing Analysis to Monitor Desertification Processes in Central Plateau of Mexico: R Becerril, E González Sosa, C Diaz-Delgado, C A Mastachi-Loza, M Hernández-Tellez

1340h **H33B-21 POSTER** Reevaluation of future water stress due to socio-economic and climate factors under a warming climate: M Kiguchi, Y Shen, S Kanae, T Oki

1340h **H33B-22 POSTER** Evaluation method to floodwater amount of difficult control and utilization in flood season for hyperconcentration rivers and its application: X Li

Earth and Space Science Informatics

**IN33A Gran Cancun Poster Hall Wednesday 1340h**

**Data Management Strategies, Opportunities, Challenges, and Best Practices Posters (joint with A, IN, G, GC, OS, P, S)**

*Presiding: M Pirchner, IAG-USP; M Bianchi, GeoForschungsZentrum; M K Ramamurthy, Unidata; R Sleeman, KNMI*

1340h **IN33A-01 WITHDRAWN**

1340h **IN33A-02 POSTER** That Sounds Easy Enough: An Exploration of Data Management Challenges: A Rosati, Title of Team: Advanced Cooperative Arctic Data and Information Service (ACADIS)

1340h **IN33A-03 POSTER** Supporting Coral Reef Ecosystem Management Decisions Appropriate to Climate Change: J C Henrique, P Fletcher, K A Shein

**IN33B Gran Cancun Poster Hall Wednesday 1340h**

**Earth and Space Science Informatics General Contributions II Posters**

*Presiding: J U Fucugauchi, UNAM; P K Swart, Univ Miami*

1340h **IN33B-01 POSTER** Visualization of 3D Geological Models on Google Earth: Y Choi, J Um, M Park

1340h **IN33B-02 POSTER** DETECTING LAND COVER CHANGE BY TREND AND SEASONALITY OF REMOTE SENSING TIME SERIES: J C Oliveira, J N Epiphaniou, M P Mello

1340h **IN33B-03 POSTER** Could the STARS detect deforestation in the Brazilian Amazon?: M P Mello, K Trabaquini, B F Rudorff, J C Oliveira

1340h **IN33B-04 WITHDRAWN**

1340h **IN33B-05 WITHDRAWN**

Natural Hazards

**NH33A Room Salon Cozumel 4 Wednesday 1340h**

**Interdisciplinary Approaches to Natural Hazards I (joint with A, GC, OS, S, T, V)**

*Presiding: Y A Kontar, The University of Findlay; V K Gusiakov, Siberian Division of Russian Academy of Sciences*

1340h **NH33A-01** The 2011 Tohoku-oki earthquake: a hint for structural control on the rupture process?: R Fabrizio, E Trasatti, S Lorioto, C Pironello, Y Ito, A Piatanesi, D Zhao, P Lanucara, K Hirata, M Cocco

1352h **NH33A-02** Implications of Inundation by the 2011 Tohoku-oki Tsunami for Coastal Agriculture on the Sendai Plain: C Chague-Goff, J R Goff, H K Wong, D Sugawara, W SzczuciEski

1340h **NH33A-03** Long-term socioeconomic impacts of flooding in Bangladesh: A Jina

1416h **NH33A-04** ROLE OF ICSU ROLAC ON DISASTER RISK MANAGEMENT LINK TO FOOD PRODUCTION Prof. Manuel Limonta Director of ICSU ROLAC: M D Limonta

1428h **NH33A-05** InSAR deformation monitoring of high risk landslides: V Singhroy, J Li

1440h **NH33A-06 WITHDRAWN**

1452h **NH33A-07** A Chlorophyll a bloom in the subsurface water induced by Typhoon in the South China Sea: D Teng, H Ye, Y Sui, Y Afansyev

1504h **NH33A-08** Coastal Hazard due to Tropical Cyclones in Mexico: R Silva-Casarín, E Mendoza-Baldwin, I Marino-Tapia, C Enriquez, G Ruíz, E Escalante-MAncera, F Ruíz-Rentería

1516h **NH33A-09** What are people thinking about floods? A study in two Mediterranean areas: Costa Brava, Spain and Talaehuano City, Chile: A Lara, A Ribas, L A Cifuentes

1528h **NH33A-10** Medium Range Ensembles Flood Forecasts for Community Level Applications: S Fakhruddin, A Kawasaki, M S Babel, Title of Team: AIT

Ocean Sciences

**OS33A Room Isla Mujeres Salons Wednesday 1340h**

**The Global Ocean Overturning Circulation and Its Link With the South Atlantic II (joint with A, GC, NG, PP)**

*Presiding: S Speich, Laboratoire de Physique des Océans UMR 6523 CNRS-Ifermer-IRD-UBO/IUEM; E J Campos, University of Sao Paulo; S L Garzoli, NOAA-AOML; A R Piola, Hydrographic Institute*

1340h **OS33A-01** Intercomparison of simulated South Equatorial Current Bifurcation: N T Signorelli, A M Treguier, I Wainer, J Deshayes

1355h **OS33A-02** Outflow of the Antarctic Bottom Water from the Deep of the Vema Channel: R Y Tarakanov, E Morozov

1410h **OS33A-03** THE ROBUSTNESS OF THE HEAT FLUX FROM THE ATLANTIC MERIDIONAL OVERTURNING CELL (AMOC) TO THE ATMOSPHERE: D Nof, Title of Team: N/A

1425h **OS33A-04** Preliminary MOC time series measurements at 34.5°S in the South Atlantic: C S Meinen, S Speich, A R Piola, R C Perez, S Dong, S L Garzoli, M O Baringer, E J Campos

Planetary Sciences

**P33A Room Salon Cozumel 3 Wednesday 1340h**

**Waves and Instabilities in Surface and Internal Planetary Fluid Flows II (joint with A, NG, OS, DI)**

*Presiding: M Le Bars, CNRS; D Cebrón, ETH Zurich*

1340h **P33A-01** Waves and the role of helicity in rotating and stratified turbulence: P Mininni

1410h **P33A-02** Excitation of Internal Gravity Waves by Turbulent Stellar Convection: D Lecoanet, E Quataert

1425h **P33A-03** Anelastic Models for Rotationally Constrained Convection: M A Calkins, P Marti, J M Aurnou, K Julien

1440h **P33A-04** Linear and non-linear numerical simulations of poloidal Alfvén waves: A Ribeiro

1455h **P33A-05** Effects of magnetospheric feedback on dynamo action: N Gomez Perez

1510h **P33A-06** Layering of sustained vortices in rotating stratified fluids: O Aubert, M Le Bars, P Le Gal

1525h **P33A-07** Libration driven elliptical instability: D Cebrón, M Le Bars, J Noir, J M Aurnou
Paleoceanography and Paleoclimatology

PP33A  Gran Cancun Poster Hall  Wednesday  1340h
Perspectives in Paleoceanography and Paleoclimatology III
Posters  (joint with B, GC, PP)

Presiding: D H Urrego, Universite Bordeaux; B Turcq, LOCEAN-IRD; I. Barbara, Universidad Nacional Autonoma de Mexico; C M Chiesi, University of Sao Paulo; J Espinoza, Instituto Geofisico del Peru; F Sanchez-Beristain, UNAM - Facultad de Ciencias; F W Cruz, University of Sao Paulo; A Sfieddine, LOCEAN-IRD-UFF; L L Perez-Cruz, Instituto de Geofisica, UNAM; F Vimeux, IRD; P Garcia-Barrera, UNAM - Facultad de Ciencias; K Simon, GZG, Universitat Göttingen

1340h  PP33A-01 WITHDRAWN
1340h  PP33A-02 POSTER Benthic foraminifera records in marine sediments during the Holocene from Pescadero basin, Gulf of California, Mexico: M Valdez, L L Perez-Cruz, P Roy, M Monreal, R Fenero

SPA-Solar and Heliospheric Physics

SH33A  Gran Cancun Poster Hall  Wednesday  1340h
Multipoint Measurements in the Solar Wind II Posters
(joint with SH)

Presiding: P Kajdic, Institut de Recherche en Astrophysique et Planetologie, Université de Toulouse (UPS); B Lavraud, Institut de Recherche en Astrophysique et Planetologie, Université de Toulouse (UPS); A Flandes, Instituto de Geofisica, Universidad Nacional Autonoma de Mexico

1340h  SH33A-01 POSTER WAVES WITHIN MAGNETIC CLOUDS: A I Stu Tapia, X Blanco-Cano, P Kajdic, E Aguilar-Rodriguez, C T Russell, L K Jian, J G Luhmann
1340h  SH33A-02 POSTER STEREO OBSERVATIONS OF ION CYCLOTRON WAVES AND MIRROR MODE WAVES INSIDE ICMES SHEATHS: O Enriquez-Rivera, X Blanco-Cano, C T Russell, L K Jian, J G Luhmann, K Simunac, A B Galvin
1340h  SH33A-03 POSTER Statistical analysis of magnetic cloud erosion by magnetic reconnection: A Ruffenach, B Lavraud, C J Farrugia, P Demoulin, S Dasso, J Sauvaud, P Kajdic, A P Rouillard, A Lynnyk, C Foullon, M J Owens, N P Savani, J G Luhmann

SH33B  Room Tulum  Wednesday  1340h
GLE Physics With New Ground Instrumentation II

Presiding: A Lara, Universidad Nacional Autonoma de Mexico; R A Caballero-Lopez, UNAM

1340h  SH33B-01 Ion Acceleration in Solar Flares Determined by Solar Neutron Observations: K Watanabe, Title of Team: Solar Neutron Observation Group
1400h  SH33B-02 Particle Acceleration in a “twin-CME” scenario for Ground Level Events: G Li
1420h  SH33B-03 Test Particle Simulations of GLE Transport in Interplanetary Space: S Dalla, M Marsh, T L Laitinen
1432h  SH33B-04 Coronal Mass Ejections and Ground Level Enhancement Events: N Gopalaswamy
1452h  SH33B-05 Ground Level Enhancements with New Perspectives from Ground and Space: J M Ryan


1524h  SH33B-07 Ground Level Enhancement of May 17, 2012 Observed at South Pole: P A Evenson, J W Bieber, J M Clem, R Pyle, Title of Team: IceCube Collaboration

SPA-Magnetospheric Physics

SM33A  Room Xcaret  Wednesday  1340h
SPA-Magnetospheric Physics General Contributions

Presiding: X Blanco-Cano, UNAM; T Nieves-Chinchilla, IACS/CUA-GSFC/NASA

1340h  SM33A-01 WITHDRAWN
1402h  SM33A-02 The Ionospheric Convection and Birkeland Current Response to an Impulse in the Interplanetary Magnetic Field By Component: F D Wilder, S Eriksson, H Korth, J B Baker, M R Hairston, C J Heinselman, B J Anderson
1417h  SM33A-03 ULF Narrowband Emissions Analysis in the Terrestrial Polar Cusps: B Grison, D Pisa
1432h  SM33A-04 Role of Magnetosphere-Ionosphere Coupling in Destabilisation of the Earth’s Magnetotail: I R Mann, K R Murphy, J Rae, B J Anderson, C L Waters, D K Milling, H Korth
1454h  SM33A-05 Ion dynamics in the magnetotail during the 8 - 9 March 2008 CIR/HSS Storm: V Peroomian, S Garg, M El-Alaoui
1509h  SM33A-06 Evaluating the Accuracy of Plasmaphere Data Assimilation from Ground-Based Observations: A M Jorgensen, J Lichtenberger, R H Friedel, M Clilverd, B Heilig, M Vellante, T Raita, C J Rodger, J Reda, A Collier, R H Holsworth, D M Ober, A Boudouridis, E Zesta, P J Chi

1524h  SM33A-07 INTERPLANETARY MAGNETIC FIELD AND PLASMA VALUES RELATED TO HILDCAAS EVENTS: A Prestes, S L Serra, I A Vieira

Seismology

S33A  Gran Cancun Poster Hall  Wednesday  1340h
Moho and Lithospheric Structure Posters (joint with T)

Presiding: H Thybo, Univ Copenhagen; B L Kennett, The Australian National University; I M Artemieva, Univ Copenhagen

1340h  S33A-01 POSTER The Earth’s crust deep structure of eastern Eurasia on evidence derived from deep seismic investigation: A Salnikov, A Efimov, V M Soloviev
1340h  S33A-02 POSTER Crustal Structure Within the South-eastern Carpathian Arc, Transylvanian Basin, Romania from Teleseismic Receiver Functions: A C Stanciu, R M Russo, V I Mocanu, L Munteanu
1340h  S33A-03 POSTER Crustal thickness beneath the Chaco-Parana basin, NE Argentina, from surface waves and ambient noise tomography: M Rosa, B Collaco, G Sanchez, M Assumpcao, N Sabbione
1340h  S33A-04 POSTER WITHDRAWN
1340h  S33A-05 POSTER Velocity structure of the oceanic lithosphere in the western Pacific obtained from Rayleigh waves: T A Sotirov, D S Weeraratne, D W Forsyth, C Ramirez, A Takeo
1340h  S33A-06 POSTER Seismic velocities, anisotropy and shear-wave splitting of antigorite serpentinites and tectonic implications for subduction zones: S Ji, A Li, Q Wang, K Michibayashi, C Long, H Wang, D Marcotte, M Salisbury
1340h  **T33A-03 POSTER** EVOLUTION OF THE SEDIMENTARY BASIN WITHIN THE EASTERN EEZ POLYGON AT THE GULF OF MEXICO: S Valle, C A Mortera-Gutierrez, W L Bandy, E G Escobar-Briones, D A Perez

1340h  **T33A-04 POSTER** SEISMIC ACTIVITY IN THE GULF OF MEXICO: A PRELIMINARY ANALYSIS: S I Franco, C Canet, A Iglesias, C M Valdes-Gonzales

1340h  **T33A-05 POSTER** Study of the Paleogene carbonate sequence in Campeche and Yucatan, southern Mexico: A Garcia Avendaño, J U Fucugauchi

### Union

**U34A** Room Isla Mujeres Salons  Wednesday  1600h  Bilateral Network Collaboration: Unifying Climate and Carbon Science Goals Between Mexico and the United States

*Presiding:* J R Taylor, NEON; R Lara Lara, Centro de Investigación Científica y de Educación Superior de Ensenada; R Vargas, University of Delaware; B Wei, National Ecological Observatory Network

1600h  **U34A-01** The U.S. Carbon Cycle Science Program: Overview, Developments and Priorities: G Shrestha, J Kuperberg, N Cavallaro, Title of Team: Carbon Cycle Interagency Working Group

1620h  **U34A-02** Monitoring and Modeling Carbon Dynamics at a Network of Intensive Sites in the USA and Mexico: R Birdsey, C Wayson, K D Johnson, Y Pan, G Angeles, B H De Jong, J L Andrade, Z Dai

1640h  **U34A-03** The International Soil Carbon Network: data synthesis and community development: C Swanston, L E Nave, Title of Team: ISCN Scientific Steering Group

1700h  **U34A-04** CarboNA - A trilateral effort for collaboration on carbon cycle science: N Cavallaro, C Ste-Marie, J Martinez

1720h  **U34A-05** A Conceptual Framework to Enhance the Interoperability of Observatories among Countries, Continents and the World: H Loescher, Title of Team: Fundamental Instrument Unit

**U34B** Room Gran Cancun 1  Wednesday  1600h  Impact Craters in the Solar System: Recent Studies, New Developments, and Perspectives II

*Presiding:* J U Fucugauchi, UNAM; R I Trindade, Universidade de Sao Paulo; K Wuenne mann, Museum für Naturkunde Berlin; S A Gilder, Ludwig-Maximilians-Universitaet

1600h  **U34B-01** WITHDRAWN

1620h  **U34B-02** Imaging Extraterrestrial Rocks with Scanning Magnetic Microscopy: E Andrade Lima, B P Weiss, J Gattacceca

1640h  **U34B-03** Shock-induced modifications of magnetic minerals from impact structures: A M Kontny

1700h  **U34B-04** Synchrony between the Chicxulub impact and the Cretaceous-Paleogene boundary extinctions: What does it mean?: P R Renne
Atmospheric Sciences

A34A Room Gran Cancun 5 Wednesday 1600h Regional Climate Modeling Over the Tropics and Subtropics II (joint with IN, GC)

Presiding: D Sein, Max Planck Institute; W Cabos, Universidad de Alcala; B Martinez Lopez, Universidad Nacional Autonoma de Mexico; A Quintanar Isaias

1600h A34A-01 The impact of resolution and atmospheric model domain on the simulation of the Tropical Atlantic annual cycle in a regionally coupled Climate Model: W Cabos, D Sein, U Mikolajewicz, K I Hodges, D Jacob

1615h A34A-02 Regional Climate Modeling in tropical and subtropical regions within the CORDEX-framework using REMO: C Teichmann, D Jacob, A Haensler, P Kumar, A C Remedio, F Saeed

1630h A34A-03 The Impact of the El Niño-Southern Oscillation and Atlantic Meridional Mode on Seasonal Atlantic Tropical Cyclone Activity: P Chang, C M Patricola, R Saravanan

1645h A34A-04 21st century projections of summer precipitation over Mexico and Central America from the Phase I CORDEX RegCM hyper-Matrix simulations: R Fuentes-Franco, F Giorgi, E Coppola, E G Pavia, G T Diro, F Graef

1700h A34A-05 Daily precipitation analysis using the CLARIS-LPB models over hydrobasins and climate regions within the CORDEX South America domain: A C Remedio, A F Carril, D Jacob, C Menendez, S Pfeifer, I F Cavallanti, S Solman, R Da Rocha, C F Mourao, P Samuelsson, E Sanchez, J Lli, E Berbery, J Marengo

1715h A34A-06 Seasonal forecasting and climate change projection of the North American monsoon using a regional atmospheric model: C Castro, H Chang

1730h A34A-07 Assessment of projected climate change signals over central Africa based on a multitude of global and regional climate projections: A Haensler, F Saeed, D Jacob

1745h A34A-08 Sensitivity of a 30 year model climatology of Middle and Central America to resolution and atmosphere-ocean coupling: A I Quintanar, D Sein, B Martinez Lopez

Biogeosciences

B34A Room Salon Cozumel 2 Wednesday 1600h Health Hazard Minerals: Asbestos and Erionite (joint with A)

Presiding: A Dogan, King Fahd University of Petroleum and Minerals; M Dogan, Hacetette University

1600h B34A-01 HEALTH IMPLICATIONS OF ERIONITE EXPOSURE NEAR SAN MIGUEL DE ALLENDE, MEXICO: PRELIMINARY FINDINGS: A Ortega, G Carrasco

1620h B34A-02 Environmental exposure to mineral fibers in New Caledonia: an ecological study: F Baumann, J Ambrosi

1640h B34A-03 Descriptive Features of Mesothelioma Cases Diagnosed in a Special Hospital in Ankara and Assessment of Domestic Environmental Exposure to Asbestos and Erionite: Preliminary Results: E Demirkaya, A Özden, K Aydogdu, A Polit, G Findik, Y Agackiran, S Ozaydin, M Ozturk, C Acikel

1700h B34A-04 A call to expand regulation to all carcinogenic fibrous minerals: F Baumann, I Steele, J Ambrosi, M Carbone

1720h B34A-05 Quantitative Characterization Guidelines of Erionite Series Minerals for Regulatory Agencies: A Dogan, M Dogan

1740h B34A-06 Re-evaluation of Non-regulatory Asbestos Group Minerals for Regulatory Agencies: M Dogan, A Dogan

Earth and Planetary Surface Processes

EP34A Room Tulum Wednesday 1600h Earth and Planetary Surface Processes General Contributions II

Presiding: J U Fucugauchi, UNAM; P K Swart, Univ Miami

1600h EP34A-01 Determination of the framework of homogeneous magnetic sources through regularized Genetic Algorithm: R Bijani, C F Ponte-Neto

1624h EP34A-02 Towards a trawling-affected sediment budget on the Galician shelf (NW Spain): F J Oberle, T J Hanebuth

1648h EP34A-03 Textural analysis of Point Calimere beach sand: K A Jeyapal

1712h EP34A-04 WITHDRAWN

1736h EP34A-05 WITHDRAWN

Global Environmental Change

GC34A Room Salon Cozumel 1 Wednesday 1600h Imbalance of Nature II (joint with H)

Presiding: V A Kontar, Federal GEOS Funding; C Torreillas Nunez, Autonomous University of Sinaloa; L M Shafman, Federal GEOS Funding; D E Berner, Ben C. Gerwick, Inc.

1605h GC34A-01 Imbalance of Nature due to Anthropogenic Activities in the Bay of Bacorehuis, Sinaloa, Mexico: C Torreillas Nunez, H Cárdenas Cota

1620h GC34A-02 Imbalance of Nature due to Contaminant Loads in the Culiacan River Watershed, Sinaloa, Mexico: F Garcia Páez, E Ley-Aispuro

1635h GC34A-03 Imbalance of Nature due to Greenhouse Gases from Land-Use Change and Forestry in the State of Sinaloa, Mexico: T D Guzman Galindo, W D Plata Rocha, J M Aguilar-Villegas

1650h GC34A-04 The Earth System’s Missing Energy and Land Warming: S Huang, H Wang, W Duan

1705h GC34A-05 Sensitivity of the East Asian Summer Monsoon Circulation and Precipitation to Large-Scale Urban Expansion: J Song, H Shao

1720h GC34A-06 CITIES, ROADS, LAND USE AND THE DEVELOPMENT OF HIGH-RESOLUTION EMISSION INVENTORIES FOR SOUTH AMERICA: J A Martins, L D Martins, R Y Ynoue, C Mazzoli, M Andrade

1735h GC34A-07 Influence of the intensification of the major oceanic moisture sources on continental precipitation: L Gimeno, R O Nieto, A Drumond, R Castillo, R Trigo

Natural Hazards

NH34A Room Salon Cozumel 4 Wednesday 1600h Extreme Hazards and Disaster Risks in the Americas I (joint with A, G, GP, H, NS, NG, OS, S, T, V)

Presiding: A Ismail-Zadeh, Karlsruhe Inst of Technology; J U Fucugauchi, UNAM

1610h NH34A-01 Megaquakes, prograde surface waves and urban evolution: C Lomnitz, H Castaños

1630h NH34A-02 Megathrust earthquakes in Central Chile: What is next after the Maule 2010 earthquake?: R Madariaga

1650h NH34A-03 Multi-Index Drought Monitoring: A Prototype Global Drought GeoServe: A Aghakouchak, Z Hao, N Nakhjiri

1710h NH34A-04 IMPACT OF THE 2010-2011 LA NIÑA PHENOMENON IN COLOMBIA: N Hoyos, J Escobar, J C Restrepo, J C Ortiz
1725h  NH34A-05 Flooding experience at Veracruz: not only a natural disaster: C. M. Welsh-Rodriguez, M. Nava Bringas, C. Ochoa Martinez, Title of Team: Local and regional impacts of global change

Planetary Sciences

P34A  Room Salon Cozumel 3  Wednesday  1600h Habitability in the Solar System and Extrasolar Planets (joint with A)

Presiding: S. I. Ramirez, Universidad Autónoma del Estado de Morelos; L. Norman, UCL; P. J. Coll, LISA

1600h  P34A-01 Results from the Curiosity Rover’s SAM Investigation at Gale Crater and links to Habitability of Mars: P. J. Coll, P. R. Mahaffy, C. R. Webster, M. Cabane, S. K. Atreya, P. G. Conrad, R. Navarro-gonzalez, Title of Team: The SAM and MSL Science Teams

1620h  P34A-02 Oxidation of formic acid by oxyanions of chlorine and its implications to the Viking Labeled Release experiment: P. Martinez, R. Navarro-gonzalez

1635h  P34A-03 Deliquescence of calcium perchlorate: A route to liquid water on Mars and other possibly habitable planets: M. Tolbert, D. Nuding, R. V. Gough

1650h  P34A-04 WITHDRAWN

1710h  P34A-05 Magnetic constraints on the habitability of exoearths and exomoons: J. I. Zuluaga

1730h  P34A-06 WITHDRAWN

1745h  P34A-07 Halotolerant and halophilic bacteria in the oceans of the icy satellites: S. I. Ramirez, L. Montoya, R. Avendaño

SPA-Magnetospheric Physics

SM34A Room Xcaret  Wednesday  1600h Toward a New Era in Radiation Belt Research II

Presiding: S. G. Kanekal, NASA GSFC; W. Tu, LANL; S. G. Claudepierre, The Aerospace Corporation; S. R. Elkington, University of Colorado

1600h  SM34A-01 Initial Results from the Magnetic Electron Ion Spectrometer (MagEIS) Instruments Aboard the Van Allen Probes Spacecraft: S. G. Claudepierre, J. B. Blake, J. F. Fennell, J. H. Clemmons, J. L. Roeder, H. E. Spence, G. D. Reeves, Title of Team: The Van Allen Probes ECT Team

1615h  SM34A-02 WITHDRAWN

1630h  SM34A-03 WITHDRAWN

1645h  SM34A-04 New results from the Colorado CubeSat and comparison with Van Allen Probes data: X. Li

1700h  SM34A-05 Simultaneous Van Allen Probes, TWINS, and IBEX observations of the 14 November 2012 storm: P. W. Valek, M. A. Dayeh, J. Goldstein, J. Jahn, D. J. McComas


Thursday A.M.

Union

U41A  Gran Cancun Poster Hall  Thursday  0800h International Collaboration in Earth and Space Sciences I Posters

Presiding: J. U. Fucugacci, UNAM; A. Ismail-Zadeh, Karlsruhe Inst of Technology

0800h  U41A-01 WITHDRAWN

Atmospheric Sciences

A41A  Gran Cancun Poster Hall  Thursday  0800h Multiscale Variability and Trends in the Southern Hemisphere UTLS Region: Climate and Climate Processes I Posters

Presiding: A. E. Yuchecchen, CONICET; E. A. Agosta, UCA / CONICET; P. O. Canziani, Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)

0800h  A41A-01 WITHDRAWN

0800h  A41A-02 POSTER ENSO Influence of Tropical Convection on the SH Stratosphere and Troposphere During the Winter to Spring Transition: M. H. Hitchman, M. J. Rogal

0800h  A41A-03 WITHDRAWN

Seismology

S34A  Room Salon Cozumel 5  Wednesday  1600h Development of Three-Dimensional Earth Models for Routine Use in Seismology II

Presiding: S. C. Myers, Lawrence Livermore Natl Lab; D. A. Storck, International Seismological Centre; I. Bondar, International Seismological Centre; J. W. Given, CICTBO

1600h  S34A-01 Global 3D mantle transition zone topography using finite frequency inversion of SS precursor travel time: M. J. Kim, J. F. Lawrence

1615h  S34A-02 The New Seismic Network and GP05 Events in continental Ecuador: M. C. Ruiz, H. Yepes, M. Segovia, A. E. Cordova

1630h  S34A-03 WITHDRAWN


1700h  S34A-05 Evidence of Active Rifts in The Southwest United States Using Geophysical Inversion of Seismic Data: S. H. Celis, A. A. Velasco, H. Gonzalez-Huizar, A. Sosa

1715h  S34A-06 SALSA3D – A Global 3D P-Velocity Model of the Earth’s Crust and Mantle for Improved Seismic Event Location: M. L. Begnud, S. Ballard, C. J. Young, J. R. Hipp, A. Encarnacao, W. S. Phillips

1730h  S34A-07 LLNL-G3Dv3: global P-wave tomography model for improved regional and teleseismic travel time prediction: N. A. Simmons, S. C. Myers, G. Johannesson, E. Matzel
**Program Content**

### A41B  Gran Cancun Poster Hall  Thursday  0800h

**Intercomparison and Evaluation of Climate and Earth System Models I Posters (joint with IN, GC, H, NG, OS)**

*Presiding: V Lucarini,* University of Hamburg; *P Artaxo,* University of Sao Paulo

0800h  **A41B-01 POSTER** Intercomparison of planetary boundary layer parameterizations in the WRF Model for a case study in Houston/Texas: **G C Cuchiara,** B Rappenglück

0800h  **A41B-02 POSTER** Tracking South Asian Monsoon in the 21st Century: **D Rastogi,** R Mei, K I Hodges, M Ashfaq

0800h  **A41B-03 POSTER** Simulating drought impacts on energy and water balance in an Amazonian rainforest: **H A Imbuzeiro,** M H Costa, D Galbraith, B J Christoffersen, T Powell, A B Harper, N M Levine, L Rowland, P R Moorcroft, P Meir, A L da Costa, P M Brando, J Wang, R L Bras, Y Malhi, S R Saleska, M D Williams, Title of Team: Interactions Between Climate, Forests, and Land Use in the Amazon Basin Modeling and Mitigating Large Scale Savannization

0800h  **A41B-04 POSTER** RESPONSE OF AMAZON RAINFOREST ECOSYSTEMS TO FUTURE PATTERNS OF SEA SURFACE TEMPERATURE: **M P Pereira,** M H Costa, F Justino

0800h  **A41B-05 POSTER** Improvement of 1-month lead predictability of the boreal winter Arctic Oscillation using a realistic initial solar constant for a CGCM: **J Ahn,** H Kim

0800h  **A41B-06 POSTER** 21st Century Precipitation Changes Across Varying Temporal Scales: **D E Touma,** J Ashraf, M Ashfaq

### A41C  Room Gran Cancun 5  Thursday  0800h

**Urban Air Pollution in Latin America II**

*Presiding: P Artaxo,* University of Sao Paulo; *L T Molina,* Molina Center for Energy &amp; Env; *P Oyola,* Centro Mario Molina Chile

0800h  **A41C-01** Preliminary results from two intensive campaigns characterizing urban aerosols at two high altitude cities in the Tropical Andes: **M F Andrade,** A Wiedensohler, F Velarde, I Moreno, K Weinhold, F Avila


0830h  **A41C-03** Land use changes and its impacts on air quality and atmospheric patterns: **E D Freitas,** C R Mazzoli, L D Martins, J A Martins, V Carvalho, M Andrade

0845h  **A41C-04** Mexico City remote sensing results from ground and space in the last 5 years: **M Grutter,** W Stremme, E F Plaza-Medina, A Bezanilla, C Rivera, J Arellano, T Blumenstock, M Gisi, F Hase

0900h  **A41C-05** **WITHDRAWN**

0915h  **A41C-06** Measurements of high surface ozone concentrations at Desirade Island: long-range transport of polluted air from North America to Caribe region: **J Molinie,** T Plocoste, S Jacoby-Koaly, M Gobinddass, R Petit

### Biogeosciences

**B41A  Room Salon Cozumel 2  Thursday  0800h**

**Inferring Environmental Condition From Geochemical Data I (joint with A, GC, H)**

*Presiding: J MP,* Instituto Politécnicos Nacional (IPN); *P Roy,* Universidad Nacional Autonoma de Mexico (UNAM); *R Nagarajan,* Curtin University

0800h  **B41A-01** Sedimentary Biogeochemical Indicators for Assessing the Impacts of the Deepwater Horizon Blowout on Coastal Wetlands: **K S McNeal,** C L Guthrie, D Mishra

0820h  **B41A-02** Rare Earth elements as sediment tracers in Mangrove ecosystems: **A L Ramanathan,** S Swathi

0840h  **B41A-03** ISOTOPE RECORD OF ANTHROPOGENIC LEAD POLLUTION IN LAKE SEDIMENTS OF FLORIDA, USA: **J Escobar,** T Whitmore, G D Kamenov, M Riedinger-Whitmore

0900h  **B41A-04** CLIMATIC IMPACT ON MAJOR AND TRACE ELEMENTS IN DELTAIC CORE SEDIMENTS: EVIDENCE FROM MUTHUPET LAGOON, SOUTH EAST COAST OF INDIA: **M Jayaprakash,** P M Velmurugan, L Giridharan, B Urban

0920h  **B41A-05** Detecting background values of potentially toxic metals by integrated sedimentological and geochemical studies: an example from the Cecina River basin (Tuscany, Italy): **A Amorosi,** I Sammartino, G Sarti, P Zannetti

0940h  **B41A-06** **WITHDRAWN**

### Geodesy

**B41A  Room Salon Cozumel 3  Thursday  0800h**

**Geodetic Infrastructure for the Americas II (joint with NH)**

*Presiding: R S Gross,* Jet Propulsion Laboratory, California Institute of Technology; *L Sanchez,* DGFI; *M R Pearlman,* Harvard-Smithsonian Center for Astrophysics

0800h  **B41A-01** The Global Space Geodesy Network and the Essential Role of Latin America Sites: **M R Pearlman,** C Ma, R Neill, C E Noll, E C Pavlis, S Wetzel

0815h  **B41A-02** NASA's Space Geodesy Project: **S M Merkowitz,** S D Desai, R S Gross, L M Hilliard, F G Lemoine, J L Long, C Ma, J Mccarthy, D W Murphy, C E Noll, E C Pavlis, M R Pearlman, D A Stowers, F Webb

0830h  **B41A-03** SIRGAS: the core geodetic infrastructure in Latin America and the Caribbean: **L Sanchez,** C Brunini, H Drewes, V Mackern, A da Silva

0845h  **B41A-04** The UNAVCO role in planning, building, and maintaining geodetic infrastructure across the Americas: update on PBO, COCONet, and TLAOCNet: **G S Mattioli,** J J Braun, E Cabral, E Calais, C DeMets, K Feaux, D Mccin, M M Miller, J Normandeau, Y Serra, G Wang

0900h  **B41A-05** An update on UNAVCO/COCONet High Frequency Real-Time Products: Towards a next generation multi-hazard network: **D Mccin,** G S Mattioli, K Feaux, S Looney, C Sievers, C M Meeriens

0915h  **B41A-06** REAL TIME GNSS-SP NETWORK: A MULTIPURPOSE INFRASTRUCTURE: **J G Monico,** P D Camargo, D B Alves, L F Sapucci, Title of Team: Grupo de Estudos em Geodésia Espacial

0930h  **B41A-07** Experiences with the Transportable Integrated Geodetic Observatory (TIGO) in Chile: **H Hase**

0945h  **B41A-08** LISN: A distributed observatory to image and study ionospheric irregularities: **R Sheehan,** C E Valladares
Global Environmental Change

GC41A Gran Cancun Poster Hall Thursday 0800h
Andes Mountains: The Stunning and Dynamic Region of South America I Posters (joint with C, G, H, NH, S, T)

Presiding: L E Lenzano Andia, IANIGLA; R Smalley, Univ Memphis; S Moreiras, National University of Cuyo; S Miranda, National University of San Juan

0800h GC41A-01 POSTER Fluctuations in runoff from rivers in the Andes between 22° and 50° LS: analysis of trend and abrupt changes: V Alberto Ismael Juan, L Carolina, B Federico

0800h GC41A-02 POSTER Withdrawn

GC41B Gran Cancun Poster Hall Thursday 0800h
Imbalance of Nature III Posters (joint with H)

Presiding: V A Kontar, Federal GEOS Funding; C Torrecillas Nunez, Autonomous University of Sinaloa; L M Shlafman, Federal GEOS Funding; D E Berner, Ben C. Gerwick, Inc.

0800h GC41B-01 POSTER Individualization of the anisotropic phenomena of the imbalanced Nature: L M Shlafman, V A Kontar

0800h GC41B-02 POSTER Environmental Perceptions of Surface Water Quality and Management: a tool to strengthen public participation in the search for solutions to the imbalance of water in nature. A study applied in Chiapas’s Rio Fogoţico Microbasin: M C Benec, E F Kauffer Michel

0800h GC41B-03 POSTER Implementation of a Time Series Analysis for the Assessment of the Role of Climate Variability in a Post-Disturbance Savanna System: C Gibbes, J Southworth, P R Waylen

0800h GC41B-04 POSTER PATTERNS OF ATMOSPHERIC CIRCULATION ASSOCIATED WITH COLD OUTBREAKS IN SOUTHERN AMAZONIA: D L Herdies, R R Ricarte

0800h GC41B-05 POSTER The Standard Time of Nature (STON) as the base for classification of the anisotropy phenomena of the Imbalance of Nature: V A Kontar, L M Shlafman

Geomagnetism and Paleomagnetism

GP41A Gran Cancun Poster Hall Thursday 0800h
Recent Advances in Rock and Mineral Magnetism: Synthetic and Natural Fine Particles at the Forefront I Posters

Presiding: L M Alva-Valdivia, UNAM; A M Kontny, KIT; Q Liu

0800h GP41A-01 POSTER Magnetite mineral nanoparticles synthesized naturally in an iron ore deposit: M L Rivas-Sanchez, L M Alva-Valdivia

0800h GP41A-02 POSTER Magnetic characterization of Al-heamatite with particle size near the threshold of Superparamagnetic (SP)/single domain state (SD): Z Jiang, Q Liu, J Torrent, V Barrón, C Colombo

0800h GP41A-03 POSTER Origin of two Verwey transitions in different generations of magnetite from the Chesapeake Bay impact structure, USA: A M Kontny, C Mang

GP41B Room Isla Mujeres Salons Thursday 0900h
Absolute and Relative Paleointensity Determinations: New Results and Methods I

Presiding: M Calvo-Rathert, Universidad de Burgos; A V Smirnov, Michigan Technological University

0900h GP41B-01 POSTER Cation reordering in natural titanomagnetites and implications for paleointensity studies: J A Bowles, M J Jackson, J S Gee

Hydrology

H41A Room Gran Cancun 1 Thursday 0800h
Climate, Water, and Society I (joint with A, B, GC, H, NH)

Presiding: T Murtha, Penn State University; V J Alarcon, Mississippi State University; P R Houser, George Mason University; A S Mayer, Michigan Technological Univ; A Robles-Morua, Arizona State University; R G Lawford, Morgan State University; P V Romagnoli, Universidad Nacional de Salta; K D French, The Pennsylvania State University; E Vivoni, Arizona State University; C Duffy, Penn State University; H S Wheater, University of Saskatchewan

0803h H41A-01 Exploring interactions between payment for hydrologic service policies, landowner decisions, and ecohydrology in a Mexican cloud forest watershed: Is there a disconnect between the policy and the resource?: H Asbjornsen, D Geissert, A Gomez-Tagle, F Holwerda, R Manson, O Perez-Maqueo, L Munoz-Villers, J Scullion

0823h H41A-02 The Effect of Human Borders on Water Dynamics in an Arid Region: A Regional Research Overview of the Middle Rio Grande/Rio Bravo Basin: J Heyman

0835h H41A-03 The HC-LAC: a Platform for Modeling Hydrology and Climate Change in Latin America and the Caribbean: F Moreda, A Wyatt, M Bruhn, W Wheaton, F Miralles-Wilhelm, R Munoz -Castillo, J Rineer

0847h H41A-04 Unsustainability of water resources in the Upper Laja River Basin, Mexico: Social-hydrology interactions in a regional overexploited aquifer with increasing concentrations of fluoride, arsenic and sodium: A Ortega

0904h H41A-05 Proyecto Costa Escondida: Interdisciplinary Research at the Ancient Maya Port Site of Vista Alegre, Quintana Roo, Mexico: J Glover, D Rissolo, P A Beddows, B Goodman, D Smith

0924h H41A-06 Sustainable Water Resources for Communities under Climate Change: Can State-of-the-Art Forecasting Inform Decision-Making in Data Sparse Regions?: A Mayer, E Vivoni, K Halvorsen, A Robles-Morua, K Dana, D Che, A Mirchi, D Kosack, M Casteneda

0936h H41A-07 Magnitude and extent of land subsidence in central Mexico revealed by regional InSAR ALOS time-series survey: E Chaussard, S Wdowinski, F Amelung, E Cabral-Cano

Nonlinear Geophysics

NG41A Gran Cancun Poster Hall Thursday 0800h
Nonlinear Geophysics: General and Prospects I Posters

Presiding: D J Schertzer, U. Paris-Est; A Donnellan, Jet Propulsion Laboratory

0800h NG41A-01 POSTER Complex Networks Analysis using Geophysical Time Series: A J Palacios, A Lefebre, M L Saiz, M Vizan, L E Cozzens, A M Conte
Natural Hazards

NH41A Room Salon Cozumel 4 Thursday 0800h Earthquakes and Tsunamis: Historical and Geological Records and Modeling I

Presiding: M Ramirez-Herrera, UNAM; J R Goff, Australia-Pacific Tsunami Research Centre, University of New South Wales

0800h NH41A-01 Chronology of historical tsunamis in Mexico and its relation to large earthquakes along the subduction zone: G Suarez, C Morrota

0813h NH41A-02 COMPLEXITY IN SIZE, RECURRENCE AND SOURCE OF HISTORICAL EARTHQUAKES AND TSUNAMIS IN CENTRAL CHILE: M Cisternas

0826h NH41A-03 The Great 1787 Corralero, Oaxaca, Tsunami Uncovered: M Ramirez-Herrera, M Lagos, A Goguitchaichirili, B Aguilar, M L Machain-Castillo, M Caballero, A C Ruiz-Fernández, G Suarez, M Ortuño

0839h NH41A-04 Subduction-related large tsunamis in the Mediterranean Sea: a review: G Papadopoulos

0852h NH41A-05 Assessing Hazardous Contamination Incoming with Submarine Groundwater Discharge in Tsunami Affected Coastal Areas: Y A Kontar, K A Korotenko

0905h NH41A-06 Geochemical Indicators and Diatoms Identify the Inundation Limit of the 2010 Maule Tsunami: C Chague-Goff, J R Goff, H K Wong, M Cisternas

0918h NH41A-07 The 339 Years of Living Dangerously in Indonesia: Earthquakes and Tsunamis in the Indonesian Region from 1538 to 1877: R A Harris, J Major

0931h NH41A-08 The Geological Trace Of The 1932 Tsunamis In The Tropical Jalisco-Colima Coast, Mexico: M Ramirez-Herrera, L Blecher, J R Goff, N Corona, C Chague-Goff, M Lagos, I Hutchinson, B Aguilar, A Goguitchaichirili, M L Machain-Castillo, V Rangel, A Zawadzki, G Jacobsen

0944h NH41A-09 Revisiting Parts of the Makran Subduction Zone in Search of its Paleoeartquakes: C Rajendran

Ocean Sciences

OS41A Room Salon Cozumel 1 Thursday 0800h Physical Processes in Tropical and Subtropical Coastal Systems I (joint with A, EP, GC, NH)

Presiding: J Gomez-Valdes, CICSE; C Enriquez, Universidad Nacional Autonoma de Mexico; A Valle-Levinson, University of Florida; I Carrillo, EL COLEGIO DE LA FRONTERA SUR

0800h OS41A-01 Response of a Sub-Tropical Salt-Wedge Estuary to River Pulses: A Valle-Levinson, C F Schettini, E C Truccolo

0815h OS41A-02 Saltwater intrusion at a buoyant jet discharge in a fringing reef lagoon: S M Parra, I Marino-Tapia, C Enriquez, A Valle-Levinson

0830h OS41A-03 Hydrodynamics of a shallow coastal lagoon with submarine groundwater discharge: a numerical modeling exercise: R Casares, I Marino-Tapia

0845h OS41A-04 Wind and Tidal Mixing Controls on Stratification and Dense Water Outflows in a Hypersaline Bay: Y Hetzel, C B Pattiaratchi, R Lowe, R Hofmeister

0900h OS41A-05 Wind-induced circulation in a large tropical lagoon: Chetumal Bay: E Palacios, L Carrillo

Paleoceanography and Paleoclimatology

PP41A Gran Cancun Poster Hall Thursday 0800h Late Mesozoic–Early Cenozoic Biostratigraphy and Paleoclimates I Posters (joint with GC, PP)

Presiding: P L Perez-Cruz, Instituto de Geofisica, UNAM; P Roy, Universidad Nacional Autonoma de Mexico

0800h PP41B-01 POSTER Geochemical analysis in a marine sequence of Pescadero Basin, Gulf of California, Mexico, during the last 1600 years: A Tenorio-Peña, L L Perez-Cruz, P Roy, A Rodriguez, D A Salas de Leon

0800h PP41B-02 POSTER Paleoclimatic record of the last 18 ka cal BP in marine sediments from Pescadero Basin, southern Gulf of California: M Escorza-Reyes, L L Perez-Cruz, J U Fucugauchi

0800h PP41B-03 POSTER Oceanographic and climatic record of the last 47 ka B.P in marine sediments from the Gulf of Tehuantepec: J A Pavon-Moreno, L L Perez-Cruz, J U Fucugauchi

PP41C Gran Cancun Poster Hall Thursday 0800h Spatial and Temporal Variations of Corg-rich Deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm I Posters (joint with GC)

Presiding: F J Maurrasse, FL Intl Univ-Earth Sciences; R Barragan-Manzo, Instituto de Geologia, UNAM

0800h PP41C-01 POSTER Cretaceous anoxic to oxic changes in Alpine Tethys (Eastern Carpathians, Romania): R Roban, M C Melinte Dobrinescu


0800h PP41C-03 POSTER Aptian Carbon Isotope Stratigraphy in Sierra del Rosario, Northeastern Mexico: R Barragan-Manzo, J Moreno-Bedmar, F Nuñez, M Company
SPASolar and Heliospheric Physics

SH41A Room Xcaret Thursday 0800h
Exploring Solar Energetic Particle Origins With Solar Orbiter and Solar Probe Plus I

Presiding: J Rodriguez-Pacheco, Univ Alcala; R Gomez-Herrero, Universidad de Alcala; R A Mewaldt, California Institute of Technology; J Giacalone, University of Arizona

0800h SH41A-01 Solar Orbiter and Solar Probe Plus: science goals and mission synergies: M M Velli
0823h SH41A-02 Revealing the Acceleration and Propagation of SEPs with the Unprecedented and Coordinated Near-Sun Observations from Solar Probe and Solar Orbiter: N A Schwadron, E R Christian, M J Golub, D J McComas
0845h SH41A-03 Extracting the Injection History of Solar Energetic Particles on Solar Probe Plus: E C Roelof, M E Hill
0900h SH41A-04 SEPs Dropout Events Associated with Advected Interplanetary Magnetic Structures: R Bruno, I Trenchi, D Telton, R DAmicis, F Marcucci, T Zurbuchen, M J Weberg
0915h SH41A-05 WITHDRAWN
0945h SH41A-07 WITHDRAWN

SPAMagnetoospheric Physics

SM41A Gran Cancun Poster Hall Thursday 0800h
Dayside Interactions I Posters (joint with P, SH)

Presiding: D G Sibeck, NASA/GSFC; K J Trattner, Lockheed-Martin

0800h SM41A-01 WITHDRAWN
0800h SM41A-02 POSTER Investigating the IMF Cone Angle Control of Pc3-4 Pulses Observed on the Ground: 2: Confirmation of Anomalies and Further Analysis: E Bier, M J Engebretson, J L Posch, M Lessard
0845h SM41A-03 POSTER Investigating the IMF Cone Angle Control of Pc 3-4 Pulses Observed on the Ground, 1: Initial Results: N Owusu, M J Engebretson, J L Posch, M Lessard

SM41B Gran Cancun Poster Hall Thursday 0800h
Physics of Collisionless Shocks and Foreshocks: Recent Advances I Posters (joint with SH)

Presiding: C X Mazelle, IRAP / CNRS Univ Paul Sabatier; H Kucharek, Univ New Hampshire; C Bertucci, IAFE

0800h SM41B-01 POSTER FORESHOCK COMPRESSIVE BOUNDARY: THEMIS OBSERVATIONS: D I Rojas Castillo, X Blanco-Can, N Omidi, P Kajdic
0845h SM41B-02 POSTER Influence of the nonstationary dynamics of quasi-perpendicular shock front on particle reflection and acceleration: C X Mazelle, B Lemebe, K Meziane
0800h SM41B-03 POSTER Properties of Saturn’s ULF Wave Foreshock: Observations by Cassini: N Andres, D O Gomez, C Bertucci, C X Mazelle, M K Dougherty
0845h SM41B-04 POSTER Anomalous Foreshock Beams: K Meziane, A Hamza, M Wilber, C X Mazelle
0800h SM41B-05 POSTER Motion of the Earth’s Bow shock from Cluster data: T Y Alrefay, K Meziane, A Hamza
0800h SM41B-06 POSTER Nonlinear dynamics of the electron cyclotron drift turbulence within the foot of a supercritical quasiperpendicular shock: B Lemebe, I. Muschietti

Seismology

S41A Room Salon Cozumel 5 Thursday 0800h
Earthquake Early Warning in the Americas and Beyond I (joint with G, NH)

Presiding: M Hellweg, University of California, Berk; M Hoshiba, Meteorological Research Institute

0800h S41A-01 The Seismic Alert System of Mexico (SASMEX): Performance and Evolution: J Espinosa Aranda
0830h S41A-02 Mexican Seismic Alert System’s SAS-I algorithm review considering strong earthquakes felt in Mexico City since 1985: A Cuellar Martinez, J Espinosa Aranda, G Suarez, G Ibarrola Alvarez, S Ramos Perez, L Camarril Barranco
0845h S41A-03 Seismological results from the records obtained by the Seismic Alert System of Mexico (SASMEX). The analysis of the earthquake of March 20, 2012 and other examples: S Ramos Perez, M Rodriguez Gonzalez, A Uribe Carvajal, J Espinosa Aranda, A Cuellar Martinez
0900h S41A-04 WITHDRAWN
0915h S41A-05 Detection Algorithms of the Seismic Alert System of Mexico (SASMEX): A Cuellar Martinez, J Espinosa Aranda, S Ramos Perez, G Ibarrola Alvarez, M Zavala Guerrero, Title of Team: SASMEX
0930h S41A-06 The Contributions of Seismogeodesy to Earthquake and Tsunami Early Warning: D Melgar, B W Crowell, J Geng, Y Bock, J S Haase

Tectonophysics

T41A Room Tulum Thursday 0800h
Subhorizontal Slab Subduction I (joint with S, V)

Presiding: A L Husker, UNAM; X Perez-Campos, UNAM; V Manea, UNAM; L Ferrari, UNAM

0800h T41A-01 The origin of the flat subduction under Colombia: G Chicangana, C A Vargas-Jimenez, Title of Team: Geophysics Group, Geosciences Department, Universidad Nacional de Colombia
0815h T41A-02 The onset and evolution of slab flattening in the central Trans-Mexican volcanic belt: T Orozco-Esquibel, L Ferrari, V Manea, M Manea
0830h T41A-03 A Comparison of Flat Subduction in Central Mexico and Southern Peru: R W Clayton, Y Kim, K E Phillips, S L Dougherty, X Perez-Campos, T Chen
0845h T41A-04 Generation of Talc from the Mantle Wedge and its Role on the Subduction Dynamics in Central Mexico: Y Kim, R W Clayton, P D Asimow, J M Jackson
0900h T41A-05 Complex anisotropy beneath the Peruvian flat-slab from frequency-dependent, multiple-phase shear wave splitting analysis: C M Eakin, M D Long
0915h T41A-06 New Seismic and Magnetic Constraints on the Geometry and Timing of Shallowing of the Central Andean Chilean-Pampean Flatslab Segment: S M Kay, P Mulcahy, C Chen, J D Vervoort
Volcanology, Geochemistry and Petrology

V41A Gran Cancun Poster Hall Thursday 0800h Recent Activity and Tephra Fallout Hazards at Volcanoes of the Americas I Posters

Presiding: N R Varley, Univ Colima; R Bonasia, UNAM

0800h V41A-01 POSTER Early Detection of Volcanic Eruptions Using Lightning Activity in South America: M G Nicora, R E Bürger, E J Quel, E Avila

0800h V41A-02 POSTER 40Ar/39Ar dating of the Quaternary Chichinautzin Volcanic Field, south of Mexico City: Importations for timing, effusion rate, and distribution of the volcanism: J L Arce, P W Layer, J C Lasister, J Benowitz, J Ramirez, J L Macias


0800h V41A-04 POSTER The activity of the Colima volcano and morphological changes in the summit between 2004 and 2013: J Cuenca

0800h V41A-05 POSTER Spatial analysis of the Signals Associated with Increased Activity in Popocatepetl Volcano April 2012: J Cuenca

0800h V41A-06 WITHDRAWN

0800h V41A-07 POSTER Spatial analysis of the Los Tuxtlas Volcanic Field (LTVF) and hazard implications: K Sieron, D Alvarez

0800h V41A-08 POSTER Hazards Associated With Recent Popocatepetl Ash Emissions: A Nieto, A Martin, R Espinasa-Pereña, D Ferres

0800h V41A-09 POSTER Sr-Nd isotopic variations in the 4,965 yr BP “Ochre Pumice” plinian fallout of Popocatépetl: Preliminary results and interpretation: G Orsi, L Arana-Salinas, L Civetta, C Siebe

V41B Gran Cancun Poster Hall Thursday 0800h Volcanology I Posters

Presiding: J V Rowland, Univ Auckland

0800h V41B-01 POSTER THERMAL WATERS IN MAGUAUCHI, CHIHUAHUA, MEXICO: INFLUENCE ON VOLCANIC ROCKS ALTERATION: C R Mascote, V V Espejal-Garcia, A Villalobos-Aragon

0800h V41B-02 POSTER How changes in pore pressure affect fluid circulation in volcanoes: three examples from Volcano Island, Mt. Etna and Mt Vesuvius (Italy): C Federico, P Madonia, G Capasso, W D'Alessandro, S Bellomo, L Brusca, P Cusano, M Longo, A Paonita, S Petrosino

0800h V41B-03 POSTER A review of recent glaciological studies at the dormant Citallépetl Volcano (Mexico): J Cortes Ramos, G Ontiveros-Gonzalez, H Delgado Granados

0800h V41B-04 POSTER Evolution of Popocatépetl volcano’s glaciers in Mexico with and without volcanic activity: diagnosis from a minimal mass balance model: G Ontiveros-Gonzalez, J Cortes Ramos, H Delgado Granados

0800h V41B-05 POSTER Climatic fluctuations as a significant contributing factor for volcanic collapses. Evidence from Mexico during the Late Pleistocene: L Capra, J P Bernal-Uruchurtu, G Carrasco

0800h V41B-06 POSTER Tectonic localization of multi-plume hydrothermal fluid flow in a segmented rift system, Taupo Volcanic Zone, New Zealand: J V Rowland, D T Downs, C Scholz, M de P S Zuquim

Atmospheric Sciences

A42A Room Gran Cancun 5 Thursday 1020h Urban Air Pollution in Latin America III

Presiding: P Artaxo, University of Sao Paulo; L T Molina, Molina Center for Energy & Env; P Oyola, Centro Mario Molina Chile


1040h A42A-02 Research on Volatile Organic Compounds in the Mexico City Metropolitan Area (CMCA) in two campaigns collected in the Winter-2011 and Spring-2012: M Maagana, S Gonzalez-Vargas, S Blanco, T Watanabe, T Maeda, B Cardenas

1055h A42A-03 Photochemical Pollution Modeling of Ozone at Metropolitan Area of Porto Alegre – RS/Brazil using WRF/Chem: G C Cuchiara, J Carvalho

1110h A42A-04 Wintertime Correlation Between Black Carbon and Particle Size in a Street and Rural Site in Santiago de Chile: E V Gramsch, F Reyes, P Oyola


1140h A42A-06 Chemical composition of the major components of PM in different sites at the Metropolitan Region of Chile: F Reyes, M A Castillo, M Rubio, E Gramsch, Y Vasquez, P Oyola

Biogeosciences

B42A Room Salon Cozumel 2 Thursday 1020h Inferring Environmental Condition From Geochemical Data II (joint with A, GC)

Presiding: J MP, Instituto Politécnico Nacional (IPN); P Roy, Universidad Nacional Autónoma de México; R Nagarajan, Curtin University

1020h B42A-01 Geochemistry of Neogene sedimentary rocks from Borneo Basin, Malaysia: implications on paleo-weathering, provenance and tectonic setting: N Ramasay, P Roy, J MP, L Rufino, K Franz L., P M. Viswanathan

1040h B42A-02 Spatial variability of primary organic sources regulates ichthyofauna distribution despite seasonal influence in Terminos lagoon and continental shelf of Campeche, Mexico: J A Romo Rios, S Aguifiga-Garcia, A Sanchez, M Zetina-Rejon, F Arreguin-Sanchez, A Tripp-Valdez, A Galeana-Cortazar

1100h B42A-03 MULTI PROXY APPROACH TO DISCRIMINATE GROUNDWATER VULNERABILITY TO CONTAMINATION: THIRUMANIMUTTAR SUB BASIN, SOUTH INDIA: K Srinivasasoumyth, V Murugesan, S Gopinath, Title of Team: Hydrogeochemistry group

1120h B42A-04 LANDSLIDE SUSCEPTIBILITY MAPPING USING GEOSPATIAL TECHNOLOGY IN SOUTH EASTERN PART OF NILGIRI DISTRICT, TAMILNADU, INDIA: N Thangasamy, R Varathan
1140h  **B42A-05** DISTRIBUTION OF RECENT BENTHIC FORAMINIFERA AND ITS ENVIRONMENTAL CONDITIONS OF KARAikal, CENTRAL COAST OF TAMIL NADU: R Murugan, S Gandhi

1200h  **B42A-06** A BASELINE STUDY OF PHYSICO-CHEMICAL PARAMETERS AND TRACE METALS IN WATERS OF MANAKUDY, SOUTH-WEST COAST OF INDIA: M Subramanian, J Muthumanikkam

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### Geodesy

**G42A Room Salon Cozumel 3 Thursday 1020h Transnational Gravity Field and Regional Height Systems II**

**Presiding:** D Avalos, INEGI; M C Pacino, Universidad Nacional de Rosario; D A Smith, NOAA Natl Geodetic Survey

1020h  **G42A-01** Geoid modeling over Alaska, USA and northwestern Canada: X Li, J Huang, D R Roman, Y Wang, D A Smith, M Véronneau

1035h  **G42A-02** Progress in regional cooperation for gravity field determination in Central America and the Caribbean: D Avalos, C Figueroa, V Robles, O Meza, W Medrano, A Alvarez, C Ballesteros, L Taveras

1050h  **G42A-03** Proposal for a comprehensive vertical datum for North America, Central America and the Caribbean: D A Smith, D R Roman, V A Childers, M C Eckl, M Youngman

1105h  **G42A-04** Gravity surveys and geoid models in South America – Present status: D Blitzkow, A O Oliveire Cancoro de Matos, G Guimaraes, M C Pacino, R Barzaghi

1120h  **G42A-05** REMEASURING, CALCULATION, COMPENSATION AND ADJUSTMENT OF THE NATIONAL GRAVITY NETWORK IN ARGENTINA: E Lauria, S A Miranda, M C Pacino

1135h  **G42A-06** Investigating systematic errors in gravity field data using wavelet decomposition: D Bolkas, G Fotopoulos, A Braun

1150h  **G42A-07** Contributions of GOCE and Terrestrial and Oceanographic Data to Height System Unification: M G Sideris, R F Rummel, P L Woodworth

1205h  **G42A-08** Vertical datum standardisation: a fundamental step towards a global vertical reference system: I Sanchez

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### Geomagnetism and Paleomagnetism

**GP42A Room Isla Mujeres Salons Thursday 1020h Paleomagnetic Studies for the Reconstruction of Tectonic Processes I**

**Presiding:** F Cifelli, Università degli Studi di Roma TRE; B Oliva-Urca, University of Zaragoza; V Bachtadse, LMU; J VILLALAIN, Universidad de Burgos

1020h  **GP42A-01** COMMON STRUCTURAL ERRORS IN PALEOMAGNETIC ANALYSIS OF FOLD-AND-THRUST BELTS: E Pueyo

1035h  **GP42A-02** Kinematics of an oblique deformation front using paleomagnetic data; the Altomira-Loranca structures (Iberian Chain, Central Spain): M Valcarcel

1050h  **GP42A-03** Oroclinal bending, distributed deformation, and Arabia–Eurasia convergence in NE Iran: C Mac Niocail, H Alimohammadian, R T Walker, J Hollandsworth

1105h  **GP42A-04** The Bolivian and Maipo Oroclines: Two first scale structural features of the Central Andes: C A Arriagada

1120h  **GP42A-05** New Paleomagnetic Constraints on the Proterozoic Supercontinent Evolution: A view from the South: R I Trindade

1135h  **GP42A-06** Tectonic reconstruction of the Panama arc using paleomagnetic, geochronology and thermochronologic data: C Montes, G Bayona, A Cardona, A Pardo, G Nova, P Montano

1150h  **GP42A-07** Patterns of active faulting and paleomagnetic data suggest recent (last 5 m.y.) onset of deformation in the eastern Mongolian Altay: C Mac Niocail, L C Gregory, G Bayasgalan, A Bayasgalan, R T Walker

1205h  **GP42A-08** The Corsica-Sardinia Block Rotation in the Tectonic Evolution of Northern Apennines (Italy): New Paleomagnetic Evidence: C Caricchi, F Cifelli, M Mattei, L Sagnotti, F Sani, F Speranza

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### Hydrology

**H42A Room Gran Cancun 1 Thursday 1020h Climate, Water, and Society II (joint with A, B, GC, H, NH)**

**Presiding:** T Murtha, Penn State University; V J Alarcon, Mississippi State University; P R Houser, George Mason University; A S Mayer, Michigan Technological Univ; A Robles-Morua, Arizona State University; R G Lawford, Morgan State University; P V Romagnoli, Universidad Nacional de Salta; K D French, The Pennsylvania State University; E Vivoni, Arizona State University; C Duffy, Penn State University; H S Wheeler, University of Saskatchewan

1023h  **H42A-01** NASA’s Contribution to Water Research, Applications and Capacity Building in the America’s: D L Toll, N D Searby, B Doorn, R G Lawford, J K Entin, K I Mohr, C Lee, Title of Team: NASA International Water Team

1035h  **H42A-02** WITHDRAWN

1047h  **H42A-03** Assessing the Effects of Irrigation on Land Surface Processes Utilizing CLM.PF in Los Angeles, California: B Reyes, P Vahmani, T S Hogue, R M Maxwell

1059h  **H42A-04** Non-stationary flows analyses in southeastern Brazil: C B Silva, S L Anjos, C R Lima

1111h  **H42A-05** Physically Based Mountain Hydrological Modeling using Reanalysis Data in Patagonia: S Krogh, J W Pomeroy, J P McPhee

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### Natural Hazards

**NH42A Room Salon Cozumel 4 Thursday 1020h Multiparameter and Multisensors Observation of Precursory Patterns in Seismically Active Areas I (joint with A, GP, SM, S, T)**

**Presiding:** D P Ouzounov, Chapman University; S A Pulinets, Space Research Institute, Russian Academy of Sciences; F Cervantes, UAM-AZCAPOTZALCO

1020h  **NH42A-01** Short-term precursory foreshock activity: observations and spring-block modeling: G Papadopoulos, M Alovonitis, G Minadakis

1035h  **NH42A-02** WITHDRAWN

1050h  **NH42A-03** MULTIFRACTAL DETRENDED FLUCTUATION ANALYSIS OF SELF-POTENTIAL FIELD PRIOR TO THE M 6.5, OCTOBER 24, 1993 EARTHQUAKE IN MÉXICO: F Cervantes, J I Gonzalez-Trejo, C A Real-Ramirez, L F Hoyos-Reyes, Title of Team: Area de Sistemas Computacionales

Ocean Sciences

OS42A Room Salon Cozumel 1 Thursday 1020h Physical Processes in Tropical and Subtropical Coastal Systems III (joint with A, EP, GC, NH)

Presiding: J Gomez-Valdes, CICSE; C Enriquez, Universidad Nacional Autonoma de Mexico; A Valle-Levinson, University of Florida; L Carrillo, EL COLEGIO DE LA FRONTERA SUR

1020h OS42A-01 Transport processes in a Mediterranean lagoon: A J Souza

1040h OS42A-02 Dispersion of Outflow from Small Rivers and Coastal Lagoons: J L Largier, N B Basdurak

1100h OS42A-03 Coastal dynamics off Cabo Pulmo, Baja California Sur, Mexico: A Trasviña-Castro, E Gonzalez-Rodriguez, O V Zaitsev

1115h OS42A-04 Morphodynamic modeling of low energy beaches under waves, tides and currents: G Ruiz, I Marino-Tapia

1130h OS42A-05 Wave-driven Hydrodynamics for Different Reef Geometries and Roughness Scenarios: G L Franklin, I Marino-Tapia, A Torres-Freyermuth

1145h OS42A-06 Resilience of a High Latitude Red Sea Fringing Corals Exposed to Extreme Temperatures: M Moustafa, M S Moustafa, Z D Moustafa, Z Moustafa

1200h OS42A-07 Semi-diurnal perturbations to the surge of Hurricane Irene: J M Branyon, M Olabarrieta, A Valle-Levinson

SPA-Solar and Heliospheric Physics

SH42A Room Xcaret Thursday 1020h The Response of Solar Jets in the Corona and Heliosphere

Presiding: B V Jackson, University California San Diego; J W Curtin, Marshall Space Flight Center; A Gonzalez-Esparza, UNAM


1020h SH42A-01 WITHDRAWN

1035h SH42A-02 Solar Jets as Sources of Outflows, Heating and Waves: N Nishizuka

1050h SH42A-03 Jets in the Solar Atmosphere and their Effects in the Heliosphere: A S Savcheva, Title of Team: LWS Jet Focused Science Team

1105h SH42A-04 The acceleration of the jet response observed in AIA observations: N Raouafi, G Stenborg, T Stekel

SH42B Room Xcaret Thursday 1120h Improving Space Weather Forecast and Services I (joint with SA, SM)

Presiding: Y Zheng, NASA/GSFC; A Pulkkinen, CUA/GSFC; W D Gonzalez, INPE

1120h SH42B-01 Exploring Polarized Heliospheric Imaging: T A Howard, C DeForest, S J Tappin, D Odstrcil

1135h SH42B-02 Heliospheric Solar Wind Parameter Forecasting Using Interplanetary Scintillation (IPS) Observations: B V Jackson, P Hick, A Buffington, H Yu, J C Mejia-Ambriz, N Luckett, M M Bisi

1150h SH42B-03 WITHDRAWN


Seismology

S42A Room Salon Cozumel 5 Thursday 1020h Earthquake Early Warning in the Americas and Beyond II (joint with G, NH)

Presiding: A Uribe Carvajal, Centro de Instrumentacion y Registro Sismico; A Cuellar Martinez, CIRES, A. C.

1020h S42A-01 The Earthquake Early Warning of Japan Meteorological Agency: M Nakamura, K Hirano, Y Yamada, H Kikuta, M Hoshiba

1050h S42A-02 Real-time prediction of seismic ground motion (I): real-time estimation of seismic wavefield using data assimilation technique and time evolitional prediction using Kirchhoff integral: M Hoshiba

1105h S42A-03 Real-time prediction of seismic ground motion (II): real-time correction of frequency-dependent site amplification factors: M Hoshiba

1120h S42A-04 The pathway to earthquake early warning in the US: R M Allen, D D Given, T H Heaton, J E Vidale, Title of Team: The West Coast Earthquake Early Warning Development Team

1150h S42A-05 WITHDRAWN

Tectonophysics

T42A Room Tulum Thursday 1020h Geological and Geophysical Constraints on the Plate Boundaries Along the Western Mexican Pacific Margin I (joint with G, OS, S, T, V)

Presiding: C A Mortera-Gutierrez, Instituto de Geofisica, UNAM; W L Bandy, Universidad Nacional Autonoma de Mexico

1020h T42A-01 OVERVIEW ON THE PLATE BOUNDARIES ALONG THE WESTERN MEXICAN PACIFIC MARGIN: C A Mortera-Gutierrez, W L Bandy, F Michaud, J Ortega Ramirez


Thursday P.M.

**Atmospheric Sciences**

**A43A  Room Gran Cancun 5 Thursday 1340h**
Aerosols, Clouds, Radiation, Precipitation, and Their Feedbacks II (joint with H)

*Presiding:* J Luo, CUNY; X Dong, University of North Dakota

1340h **A43A-01** Variable influences of aerosols on cloud, precipitation and radiation budgets for different types of clouds under different meteorological conditions: Z Li

1355h **A43A-02** Cloud drop effective radius as observed from aircraft, MODIS and MISR: L DiGirolamo, L Liang, C Haney

1400h **A43A-03** Validiation of satellite-retrieved MBL cloud properties using DOE ARM AMF measurements at the Azores: B Xi, X Dong, P Minnis, S Sun-Mack

1425h **A43A-04** Interrelationships among deep convective cloud systems size, atmospheric thermodynamics, aerosols, and cloud radiative forcing: E M Wilcoxon, D J Posselt, T Yuan

1440h **A43A-05** A vision for an ultra-high resolution integrated water cycle observation and prediction system: P R Houser

1455h **A43A-06** Aerosol Effects on Convection in the NCAR CAM5: G J Zhang, X Song

1510h **A43A-07** WITHDRAWN

1525h **A43A-08** Examine Urban Extreme Rainfall Event: A Case Study for Beijing 7/13.2012 Event: M Jin, Y Li, M Shepherd, D Su

**Biogeosciences**

**B43A  Gran Cancun Poster Hall Thursday 1340h**
Biogeosciences General Contributions Posters (joint with A, GC)

*Presiding:* A Sifeddine, LOCEAN-IRD-UFF

1340h **B43A-01 POSTER** Deep soil carbon: A dynamic, unmeasured pool in terrestrial ecosystems: R B Harrison, J James

1340h **B43A-02 POSTER** Landscape structure in the expansion area of deforestation of the Brazilian Cerrado in Minas Gerais: A D Brito, A S Streher

1340h **B43A-03 POSTER** Seasonal variation of carbon uptake in a primary forest ecosystem in southwestern Amazon: S Garcia, J F Gonçalves, G G Cirino, P Artaxo

1340h **B43A-04 POSTER** Seasonal isoprene emission from a primary forest in central Amazon: E G Alves, K Jardine, A M Yanez-Serrano, J Tota

1340h **B43A-05 WITHDRAWN**

1340h **B43A-06 POSTER** Identification of sensitive parameters of a tropical forest in Southern Mexico to improve the understanding of C-band radar images: A Monsivais-Huertero, J C Jimenez-Escalona, J Ramos, E Zempoaltecatl-Ramirez

1340h **B43A-07 POSTER** Ground penetrating radar measurements show a spatial relationship between coarse root biomass and soil carbon abundance: F C O’Donnell, K K Taylor, C GERLEIN, A Bhattachan

1340h **B43A-08 POSTER** Evaluation of water quality in the Rimac River Basin of Peru: Huaycoloro urban subbasin: W Baldecón Quispe, R Vela Cardich, F Huamán Paredes

1340h **B43A-09 POSTER** Nitrifier distribution in across channel transects of the Cape Fear Estuary: R Reichert, S Lax, B Song, G D O’Mullan

1340h **B43A-10 POSTER** Influence of chemical reactivities of lipids bound in different pools on their isotopic compositions during degradation in marine sediments: M Sun, H Pan, R Culp

1340h **B43A-11 POSTER** Stable isotopes of nitrogen in plants of contaminated soils and sediments by an abandoned gold mine: O F Becerra, A Sanchez, A J Marmolejo, V R Magallanes

1340h **B43A-12 POSTER** Geochemistry of C, N, S, Fe, and Mo in the 3.2 and 2.7 Ga sulfide-rich carbonaceous shales from Pilbara Craton, Western Australia: K E Yamaguchi

1340h **B43A-13 WITHDRAWN**

**Education**

**ED43A  Gran Cancun Poster Hall Thursday 1340h**
Education General Contributions Posters (joint with IN, OS)

*Presiding:* K Frink, Virginia Union University; T D Sauney, Society of Physics Students - American Institute of Physics; C O’Riordan; T S Hogue, Colorado School of Mines

1340h **ED43A-01 POSTER** Mapa de Vulnerabilidad en Honduras: A A Sánchez

1340h **ED43A-02 POSTER** The 3D S-wave velocity structure beneath the Caidam Basin from ambient noise tomography: L Wang, X Bao, X Song, M Xu

1340h **ED43A-03 WITHDRAWN**

1340h **ED43A-04 POSTER** MICRO – WATERSHED DEVELOPMENT PLANS USING REMOTE SENSING & GIS TECHNIQUES PANOLI VILLAGE, AHMEDNAGAR, MAHARASHTRA,INDIA: S Purushothuman

1340h **ED43A-05 POSTER** Evaluating Earth and Space Sciences STEM Research Communication in 7th-12th Grade Rural Missouri Classrooms and Resulting Student Attitudinal Impacts: S Radcenc, K S McNeal

1340h **ED43A-06 WITHDRAWN**

1340h **ED43A-07 POSTER** Using Primary Literature for Teaching Undergraduate Planetary Sciences: J Levine

1340h **ED43A-08 WITHDRAWN**
Global Environmental Change

**GC43A Gran Cancun Poster Hall**

**Thursday 1340h**

Global Environmental Change General Contributions I Posters

*Presiding: F A Degroof, CCSI; J. I. Perez-Cruz, Instituto de Geofisica, UNAM*

1340h **GC43A-01 POSTER** Projections of extreme weather events in the Lake Victoria basin under climate change: F Mutua, T Koike

1340h **GC43A-02 POSTER** VARIABILITY OF BRAZIL CURRENT SYSTEM IN RELATION TO THE A1FI AND B1 CLIMATE CHANGE SCENARISOS: C Stefoni Böck, L de Freitas, L Landau

1340h **GC43A-03 POSTER** Arid Lands Biofuel: B P Neupane

**GC43B Gran Cancun Poster Hall**

**Thursday 1340h**

Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin I Posters (joint with PP)

*Presiding: B Ortega, Instituto de Geofisica - UNAM; S Lozano, Institute of Geology; A Correa-Metrio, UNAM; M Caballero, Universidad Nacional Autonoma de Mexico*

1340h **GC43B-01 POSTER** Relationships among charcoal particles from modern lacustrine sediments and remotely sensed fire events: M López-Pérez, A Correa-Metrio

1340h **GC43B-02 POSTER** Lacustrine sedimentation and facies model for the last 45,000 yr in Chalco basin. Central Mexico: B Ortega, S Lozano, M Caballero, D Herrera

1340h **GC43B-03 POSTER** Geochemical proxies and millennial-scale climate variability during MIS 3 at Lake Chalco, central Mexico: E Torres, S Lozano, P Roy, B Ortega, M Caballero

1340h **GC43B-04 POSTER** A geochemical high-resolution record of late Holocene droughts from western-central Mexico: S Sosa, S Lozano-Garcia, P Roy, M Caballero

1340h **GC43B-05 POSTER** IDENTIFICATION OF A MID-HOLOCENE TIPPING POINT IN A MID-ALTITUDE, TROPICAL LAKE: M Caballero, S Lozano-Garcia, E Zawisz, M Rieradevall, Y Sánchez Dzib, B Ortega

1340h **GC43B-06 POSTER** A high-resolution geochemical record of Late Quaternary paleohydrological conditions from Chihuahuan Desert, Mexico: J Quiroz-Jimenez, P Roy

1340h **GC43B-07 POSTER** Precipitation variability in tropical forests of southeastern Mexico: 9,500 years at Selva Lacandona: J F Franco Gaviria, A Correa-Metrio, F Romero

1340h **GC43B-08 POSTER** Modern analogs for Pleistocene vegetation of the Yucatan Peninsula: J Beltrán, A Correa-Metrio, S Lozano, M B Bush

1340h **GC43B-09 POSTER** Vegetation dynamics of the Guatemalan lowlands from MIS7 to MIS5: Evidence from Lake Petén-Itzá: E Cruz-Silva, A Correa-Metrio, M B Bush

Geomagnetism and Paleomagnetism

**GP43A Gran Cancun Poster Hall**

**Thursday 1340h**

Absolute and Relative Paleointensity Determinations: New Results and Methods II Posters

*Presiding: M Calvo-Rathert, Universidad de Burgos; J Valet, Institute de Physique du Globe de Paris; A V Smirnov, Michigan Technological University; I Tauxe, Scripps Institution of Oceanography*

1340h **GP43A-01 POSTER** A Paleointensity Study on Pliocene Lava Flows from Southern Georgia: M Calvo-Rathert, M F Bogalo, A Gogichaishvili, V Vashakidze, J Sologashvili

1340h **GP43A-02 POSTER** A comparison between double-heating and microwave paleointensity estimates in Archeological material: W Poletti, G A Hartmann, M J Hill, A J Biggin, R Trindade

**GP43B Gran Cancun Poster Hall**

**Thursday 1340h**

Paleomagnetic Studies for the Reconstruction of Tectonic Processes II Posters

*Presiding: F Cifelli, Università degli Studi di Roma TRE; B Oliva-Urcia, University of Zaragoza; V Bachtadse, LMU; J VILLALAIN, Universidad de Burgos*

1340h **GP43B-01 POSTER** Similarities between Silurian and Cenozoic basalts in rock-magnetic properties and its implication for Silurian paleogeography: P Schnabl, P Pruner, V Cajz, Z Tasaryova, K Cizkova, G Kletetschka

1340h **GP43B-02 POSTER** The Pangea conundrum: Implications of new Paleomagnetic data from Permo-Triassic Araguainha Impact Crater (Central Brazil): D Brandt, E Yokoyama, R I Trindade, E Tobner

1340h **GP43B-03 POSTER** APW path traced for the Guiana Shield (2070-1960 Ma) and Paleogeographic Implications: Paleomagnetic data from the 1.98-1.96 Ga Surumu Group (Northern Amazonian Craton): F Bispo-Santos, M S Dagrella Filho, N J Reis, R I Trindade
Hydrology

GP43A Gran Cancun Poster Hall Thursday 1340h Subsurface Structure and Transport With Applications in Mining I Posters (joint with A, B, GC, H, NH, NG)

Presiding: S Anwar, Missouri University of Science & Technology; J A Cunningham, University of South Florida; I Mendoza-Sanchez, Instituto Politécnico Nacional; P A Herrera, Universidad de Chile

1340h H43A-01 POSTER Estimation of groundwater flow directions and the tensor of hydraulic conductivity in crystalline massif rocks using surface structural geology and mining exploration boreholes: C Flores, M A Romero, M I Ramirez, G Monsalve

1340h H43A-02 POSTER METHODOLOGY FOR THE IDENTIFICATION OF POTENTIAL RECHARGE ZONES BY USING GEOMORPHOLOGICAL MAPPING: M A Romero, J H Caballero, M I Ramirez, G Monsalve

1340h H43A-03 POSTER Numerical simulation of groundwater artificial recharge in a semiarid-climate basin of northwest Mexico, case study the Guadalupe Valley Aquifer, Baja California: J R Campos-Gaytan, C S Herrera-Oliva

1340h H43A-04 POSTER Increase in groundwater vulnerability due to land subsidence and earth fissures: J Paredes, J L Expósito, M V Esteller, M Cervantes, C A Mastachi-Loza

1340h H43A-05 POSTER Inverse modeling of pumping tests to parameterize three-dimensional hydrofacies models: P Medina-Ortega, E Morales-Casique, O Escolero-Fuentes, A Hernandez Espriu


1340h H43A-07 POSTER 3D Groundwater Flow Model in the Arid Region of Tafiálet Oasis System (South East of Morocco): I Bouaamlat, A Larabi, M Faouzi

Ocean Sciences

NH43A Room Salon Cozumel 4 Thursday 1340h Wildfires on Landscapes: Theory, Models, and Management (joint with B)

Presiding: D McKenzie, Pacific Wildland Fire Sciences; E Alvarado, University of Washington

1340h NH43A-01 Characterization of potential fire regimes: applying landscape ecology to fire management in Mexico: E Jardel, E Alvarado, D Perez-Salicrup, J Morfin-Rios

1357h NH43A-02 Quantifying spatial patterns in the Yakama Nation Tribal Forest and Okanogan-Wenatchee National Forest to assess forest health: T F Wilder

1414h NH43A-03 Improvements of land-surface models to account for fire-climate feedbacks in the Amazon region: M Cardoso, G Sampaio, M H Shimizu, M Sanches, C A Nobre

1431h NH43A-04 Prototype Global Burnt Area Algorithm Using a Multi-sensor Approach: G López Saldaña, J Pereira, F Aires

1448h NH43A-05 BURNT AREA MAPPING IN MEXICO: M Cruz Lopez, G López Saldaña

1505h NH43A-06 Merging satellite measurements of fire radiative energy and burned area products to estimate biomass burning: A European case study: I Bistinas, G L Saldaña, D Oom, A C Sá, J M Silva, J Pereira

1522h NH43A-07 Assessing increasing susceptibility to wildfire at the wildland-urban fringe in the western United States: A M Kinoshita, T S Hogue

Natural Hazards

OS43A Room Salon Cozumel 3 Thursday 1340h Ocean Sciences General Contributions IV

Presiding: C M Chiessi, University of São Paulo; F Graef Ziehl, CICESE

1340h OS43A-01 Temperature Structure Change for Kuroshio in East China Sea with Month: J Kang

1355h OS43A-02 Numerical study the Gulf California eddies: A Pares-Sierra, A Flores-Morales, F Gómez-Valdívia

1410h OS43A-03 Observations of a subsurface warm-eddy off northern Baja California, October 2009: J Gomez-Valdes, H S Torres, L Zavala

1425h OS43A-04 Significant biological implications of the internal tide in Mexican coastal waters: L Ladah, M F Lavin, J J Leichter, J A Zertuche, A Filonov

1440h OS43A-05 On the effects of the remote waves in the seasonal variability off Mexican west coast: A Flores-Morales, A Pares-Sierra, F Gómez-Valdívia

Paleoceanography and Paleoclimatology

PP43A Room Salon Cozumel 2 Thursday 1340h
Reconstructing Monsoonal Precipitation From Geological Records II (joint with GC, PP)

Presiding: L L Perez-Cruz, Instituto de Geofísica, UNAM; P Roy; Universidad Nacional Autónoma de México

1340h PP43A-01 WITHDRAWN
1400h PP43A-02 Late Quaternary change in the North American (Mexican) Monsoon: variability in terrestrial and marine records and possible mechanisms: S E Metcalfe, J A Barron, P Roy, S Davies
1420h PP43A-03 Millennial-scale records of North American Monsoon in time and space during the last glacial period: reconstructions from arid northern Mexico: P Roy, D Quiroz-Jiménez, M Charles-Polo, R Lozano-Santacruz
1435h PP43A-04 Reconstruction of precipitation and productivity during Holocene using geochemical proxies in the southern Gulf of California: L L Perez-Cruz
1450h PP43A-05 WITHDRAWN
1505h PP43A-06 Coupled Response of Rainfall and Denitrification to Solar Forcing during the Holocene in Alfonso Basin: C Ricaurte-villota, O Gonzalez-Yajimovich, A Sanchez

SPA-Solar and Heliospheric Physics

SH43A Gran Cancun Poster Hall Thursday 1340h
Combined Radio and White-Light Observations of Solar Wind Transients in the Inner Heliosphere I Posters

Presiding: E Aguilar-Rodriguez, UNAM-Instituto de Geofísica; V Ontiveros, ENES; S D Bale, Univ. of California, Berkeley; N Gopalaswamy, NASA/GSFC

1340h SH43A-01 POSTER White Light Characteristics of CMEs associated with Interplanetary Type II Radio Burst: V Ontiveros, E Aguilar-Rodriguez, T Manuel-Hernandez
1340h SH43A-03 POSTER Speed evolution of CME/shocks using white-light and type II radio bursts observations: E Aguilar-Rodriguez, V Ontiveros, T Manuel-Hernandez

SH43B Room Xcaret Thursday 1340h
Improving Space Weather Forecast and Services II (joint with SA, SM)

Presiding: Y Zheng, NASA/GSFC; A Pulkkinen, CUA/GSFC; W D Gonzalez, INPE

1340h SH43B-01 FORECAST OF GEOMAGNETIC STORM USING CORONAL MASS EJECTION AND SOLAR WIND CONDITION NEAR EARTH: R Kim, Y Park, Y Moon
1355h SH43B-02 Ensemble modeling of coronal mass ejections using WSA-ENLIL cone model: A Taktakishvili, A Pulkkinen, P J MacNeice, Y Zheng, M M Kuznetsova, M Hesse, D Odstrcil
1410h SH43B-03 Space weather at Low Latitudes: Considerations to improve its forecasting: J L Chau, L Goncharenko, C E Valdare, M A Milla
1440h SH43B-04 The South America VLF Network - SAVNET: Achievements, Latest Results and Future Directions: J Raulin

Seismology

S43A Gran Cancun Poster Hall Thursday 1340h
Earthquake Early Warning in the Americas and Beyond III Posters (joint with G, NH)

Presiding: M Hellweg, University of California, Berk; A Uribe Carvajal, Centro de Instrumentacion y Registro Sismico; A Cuellar Martinez, CIRES, A. C.; M Hoshiba, Meteorological Research Institute

1340h S43A-01 POSTER Acquisition Hardware and Communication Protocol for Rapid Seismic Event Notification System: L G Zimakov, P R Passmore, P Davidson, T Drake
1340h S43A-02 POSTER Feedback about Earthquake Early Warning: Questionnaire survey after the 2011 Tohoku Earthquake (Mw9.0): M Nakamura, M Hoshiba, M Matsui, N Hayashimoto, A Wakayama
1340h S43A-03 POSTER Real Time View of the Functions and Services of the Seismic Alert System of Mexico (SASMEX): J Espinosa Aranda, G Ibarrola Alvarez, A Cuellar Martinez, M Inostroza Puk

S43B Gran Cancun Poster Hall Thursday 1340h
Regional and National Seismic Hazard Models: Challenges in Latin America I Posters (joint with NH, V)

Presiding: H Rendon, FUNVISIS; M Pagani, GEM Foundation

1340h S43B-01 POSTER Recurrence Times for Earthquakes at the Coastal Region of Oaxaca – Guerrero, MEXICO (Zone 8): F J Nunez-Cornu

1455h SH43B-05 What would research-oriented ionosphere models require to get ready for transition to operation?: N Maruyama, P G Richards, Y Sun, L Mayer, T Fang, T J Fuller-Rowell, M Fedrizzi, M Codrescu, A D Richmond, A I Maute

1340h  **S43B-02 POSTER** New Seismic Hazard study in Spain

Aimed at the revision of the Spanish Building Code: A Rivas-Medina, B Benito, L Cabañas, J M Martínez-Solares, S Ruiz, J M Gaspar-Escibano, E Carreño, M Crespo, J García-Mayordomo

1340h  **S43B-03 POSTER** Calibration of strong motion models for Central America region and its use in seismic hazard assessment: A Climent, M B Benito, R Piedra, C Lindholm, J Gaspar-Escibano

1340h  **S43B-04 POSTER** Active crustal deformation of the El Salvador Fault Zone by integrating geodetic, seismological and geological data: application in seismic hazard assessment: A Staller, B Benito, J Martínez-Díaz, D Hernández, R Hernández-Rey

1340h  **S43B-05 POSTER** Has El Salvador Fault Zone produced M ≥ 7.0 earthquakes? The 1719 El Salvador earthquake: C Canora, J Martínez-Díaz, J Álvarez-Gómez, P Villamor, J Ínsua-Arévalo, J Alonso-Henar, R Capote

1340h  **S43B-06 POSTER** Seismic sources in El Salvador. A geological and geodetic contribution: J Alonso-Henar, J J Martínez-Díaz, B Benito, A Álvarez-Gomez, C Canora, R Capote, A Staller, Title of Team: Tectónica Activa, Paleosismicidad y Riesgos Asociados UCM-910368

1340h  **S43B-07 POSTER** Horizontal to vertical spectral ratio measurements in Port-au-Prince (Haiti) area damaged by the 2010 Haiti earthquake: M Navarro, T Enomoto, B Benito, D Belizaire, D Navarro, A García-Jerez, J Dorfoulle

1340h  **S43B-08 POSTER** GEOLOGICAL DEFORMATIONS AND POTENTIAL HAZARDS TRIGGERED BY THE 01-12-2010 HAITI EARTHQUAKE: INSIGHTS FROM GOOGLE EARTH IMAGERY: M Doblas, B Benito, Y Torres, D Belizaire, J Dorfoulle, A Aretxabalaba

1340h  **S43B-09 POSTER** USE OF DAMAGE DATA FOR CALIBRATION OF GMPE’S IN HAITI: Y Torres, S Molina, M Navarro, B Benito

1340h  **S43B-10 POSTER** Evaluation of site effects in Loja basin (southern Ecuador): J Guatán, M Navarro, J Soto

1340h  **S43B-11 POSTER** Changes of dominant periods of soils sites within Mexico City valley due to subsidence: J Lermo, J Martínez, F J Sanchez-Sesma

1340h  **S43B-12 POSTER** Assessing the spatio-temporal variations of the completeness magnitude for seismic events in Venezuela: R Vasquez, L Bravo

1340h  **S43B-13 POSTER** Swarms in Venezuela: characterization of the involved seismicity: R Vasquez, C Granado, N Borges

1340h  **S43B-14 POSTER** Determination of Source and Site Effects Using Records from the 20 May, 2012 Emilía Earthquake, Italy and the Main Aftershocks: R R Castro, F Pacor, R Puglia, G Ameri, J Letort, M Massa, L Luzi, P Augliera

1340h  **S43B-15 POSTER** Monitoring microseismicity at the Servita Fault System, Colombian Eastern Cordillera: P Pedraza, C Dimatteo

1340h  **S43B-16 POSTER** Accelerations from the September 5, 2012 (Mw=7.6) Nicoya, Costa Rica Earthquake: G W Simila, R Quintero, B Burgua, E Mohammedabraham, J Segura

1340h  **S43B-17 POSTER** A NEW CENTRAL AMERICAN SEISMIC ZONATION: E Camacho, W Rojas, G Alvarado-Induni, G Marroquin, E Molina, E Talavera, A Climent, B Benito

1340h  **S43B-18 POSTER** Probabilistic seismic hazard zonation for the Cuban building code update: J García, C Llanes-Buron

1340h  **S43C-02 POSTER** Incorporating the Uncertainties of Nodal-Plane Orientation in the Seismo-Lineament Analysis Method (SLAM): V Cronin, K A Sverdrup

1340h  **S43C-03 POSTER** THE MORELIA-ACAMBAY FAULT SYSTEM: M Velázquez Bucio, D Soria-Caballero, V Garduño-Monroy, L Mennella

1340h  **S43C-04 POSTER** Analysis of microseismicity (2004-2010) for the Lima-Peru region: W Quiroz, R Parillo, E O Norabuena

1340h  **S43C-05 WITHDRAWN**

1340h  **S43C-06 WITHDRAWN**

1340h  **S43C-07 POSTER** Recent Depth determination of Moderate Earthquakes in Brazil Using Teleseismic P-wave Modeling and pp and sp phases: F Dias, M Assumpcao

1340h  **S43C-08 POSTER** Teleseismic Events Analysis with AQDB and ITAB stations, Brazil: L D Felicio, E Vasconcello, M Assumpção, F Rodrigues, E Facinami, F Dias

1340h  **S43C-09 POSTER** Seismicity in the oceanic crust at South of Islas Marias in front of Bahía de Banderas: M Tinoco

1340h  **S43C-10 POSTER** SEISMIC ACTIVITY AT TRES VIRGENES VOLCANIC AND GEOTHERMAL FIELD: Y T Antayhua, J Lermo, L Quintanar, J O Campos-Enriquez

1340h  **S43C-11 POSTER** Multi-disciplinary search for seismogenic areas at the central part of Sierra Madre Oriental, Mexico: J M Gomez Gonzalez, R A Leon-Loya, E N López-Valdivia, V V Yusits, H López-Loera, ÁNGEL F Nieto-Samaniego

1340h  **S43C-12 POSTER** Earthquake Sequences Identification, from Analysis of Earthquake Occurrence Time Series Considering Multiple Semi-Periodic Sequences and Extraneous Events. Parkfield et al: F A Nava Pichardo, C B Quinteros, E Glowacka, J Frez

1340h  **S43C-13 POSTER** The Earthquake Clusters of the South Coast of Jalisco on April 2012: P RODRIGUEZ

1340h  **S43C-14 POSTER** STUDY OF THE SEISMIC SOURCE IN THE JALISCO BLOCK: Q J Gutierrez, C R Escudero, F J Nunez-Cornu, J Ochoa, L H Cruz

1340h  **S43C-15 POSTER** A new ISC service: the Event Bibliography (1900-2012): D A Storchak, D Di Giacomo, P Ozgo, R Verney, N Safronova, J Harris, I Bondar

1340h  **S43C-16 POSTER** Relocation of Earthquakes beneath the East Sea of Korea:Uncertainty of Hypocentral Parameters Caused by Refracted Waves: W Kim, Y Kang, T Kang

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**S43D**  **Room Salon Coszumel 5**  **Thursday 1340h**

The 2012 M7.6 Nicoya, Costa Rica, Earthquake: Seismogenic Zone Science at the Bull’s-Eye of an NSF MARGINS SEIZE Focus Site 1 (joint with g, T)

1340h  **Presiding:** S Y Schwartz, University of California, Santa Cruz; J Marshall, Cal Poly Pomona University

1340h  **S43D-01 POSTER** Seventeen Years of Geodynamic Monitoring of a Seismic Gap that was Partially Filled by the Nicoya, Costa Rica, Mw=7.6 Earthquake of September 5th, 2012: M Protti, V M Gonzalez, S Y Schwartz, T H Dixon, A V Newman, P Lundgren, Y Kaneda, T Kato


1420h  **S43D-03 POSTER** Static and Dynamic Rupture-History of the Nicoya (Mw=7.6) Earthquake, Costa Rica: An approach using high frequency rate GPS and seismological recordings in the near field: V Gonzales Salas, M Protti, E J Chaves Sibaja, F Vega, W Jimenez, Title of Team: OVSICORI-UNA
Tectonophysics

**T43A  Gran Cancun Poster Hall  Thursday 1340h**

**Geological and Geophysical Constraints on the Plate Boundaries Along the Western Mexican Pacific Margin II Posters (joint with G, OS, S, T, V)**

*Presiding: C A Mortera-Gutierrez, Instituto de Geofisica, UNAM; W L Bandy, Universidad Nacional Autonoma de Mexico*

- **1340h**  **T43A-01 POSTER** SUBDUCTION OF THE RIVERA PLATE BENEATH THE JALISCO BLOCK AS IMAGED BY MAGNETOTELLURIC DATA: R Alvarez, F Corbo, J Arzate
- **1340h**  **T43A-02 POSTER** SURVEY AND INTERPRETATION GEOPHYSICAL OF MAGNETIC ISOROCHONES 4n.2 A 2A.3 (7.9 3.6 Ma) IN THE CENTRAL PART OF THE RIVERA PLATE: D A Perez, C A Mortera-Gutierrez, W L Bandy, S Valle
- **1340h**  **T43A-03 POSTER** Rayleigh phase velocities in the upper mantle of the Pacific-North American plate boundary in southern California: L Escobar, D S Weeraratne, M D Kohler
- **1340h**  **T43A-04 POSTER** Lithospheric rupture variations along the Gulf of California: A Fernandez, X Perez-Campos

**T43B  Gran Cancun Poster Hall  Thursday 1340h**

**Subhorizontal Slab Subduction II Posters (joint with S, V)**

*Presiding: A I Husker, UNAM; X Perez-Campos, UNAM; V Manea, UNAM; I Ferrari, UNAM*

- **1340h**  **T43B-01 POSTER** Structure of the subducted Cocos Plate from locations of intermediate-depth earthquakes: C Lomnitz, L D Rodriguez-Padilla, H Castanos
- **1340h**  **T43B-02 POSTER** Geometry Transition in the Cocos Plate, from Flat-Step to Constant Dip: Smooth or Abrupt?: X Perez-Campos, R W Clayton, M R Brudzinski, C M Valdes-Gonzalez, E Cabral-Cano, A Arciniega-Ceballos, F Cordoba-Montiel
- **1340h**  **T43B-03 POSTER** Shape of Subducting Nazca Plate and Lithospheric Structure in the Pampas Flat Slab Region of Argentina: L Linkimer, S L Beck, G Zandt, P M Alvarado, M L Anderson, H J Gilbert, H Zhang
- **1340h**  **T43B-04 POSTER** Intermediate-Depth Intraplate Strike-Slip Earthquake Along the Subducted Nazca Plate: Stress Conditions Related to Flat-Slab Transition Zone?: D Carrizo, S Peyrat, D Comte, R Boroschek
- **1340h**  **T43B-05 POSTER** Seismic-Afterslip Of The 2010 Mw 8.8 Maule, Chile, Earthquake Based On Moment Tensor Inversion: H Agurto Detzel, A Rietbrock, J M Ryder, M Miller

**Volcanology, Geochemistry and Petrology**

**V43A  Room Isla Mujeres Salons  Thursday 1340h**

**Volcanology II (joint with C, GC, NH)**

*Presiding: G Sosa-Ceballos, UNAM; G Carrasco, Centro de Geociencias, UNAM*

- **1340h**  **V43A-01** Hydrovolcanic evolution of the Joya Prieta maar, San Luis Potosi, northeast Mexico: P Davila-Harris, J J Aranda-Gomez, G Carrasco
- **1355h**  **V43A-02** Evidence of post-eruptive subsidence in the Rincón de Parangueo maar, México: J J Aranda-Gomez
- **1410h**  **V43A-03** Eruptive and structural controls on the evolution of Mexican maar volcanoes: G Carrasco, M H Ort
- **1425h**  **V43A-04** The graben caldera of Guanajuato, Mexico: G J Aguirre-Diaz, M Tristán-González, G Labarthe-Hernández, J Marti
- **1440h**  **V43A-05** Using the New Two-Phase-Titan to Evaluate Potential Lahar Hazard at Villa la Angostura, Argentina: M F Sheridan, G A Cordoba, J G Viramonte, A FOLCH, G Villarosa, H Delgado
- **1455h**  **V43A-06** ASSESSING DEGREE OF SUSCEPTIBILITY TO LANDSLIDE HAZARD: M F Sheridan, G A Cordoba, H Delgado, R Stefanescu
- **1510h**  **V43A-07** An instrument for ground based imaging of volcanic plumes: R Wright, P G Lucey, K A Horton, S T Crites, H Garbeil, M Wood
- **1525h**  **V43A-08** Magnetic characteristics of fracture zones and constraints on the subsurface structure of the Colima Volcanic Complex, western Mexico: H Lopez-Loera, J U Fucugauchi, L M Alva-Valdivia

**Union**

**U44A  Room Cozumel 4  Thursday 1600h**

**International Collaboration in Earth and Space Sciences II**

*Presiding: J U Fucugauchi, UNAM; A Ismail-Zadeh, Karlsruhe Inst of Technology*

- **1600h**  **U44A-01** International Scientific Unions and Global Research: T Beer
- **1620h**  **U44A-02** Sustaining a Global Geoscience Workforce-The Case for International Collaboration: P P Leahy, C M Keane
- **1640h**  **U44A-03** MAKING A DIFFERENCE: A GLOBAL GEO-SCIENCE INITIATIVE: E Nickless
- **1700h**  **U44A-04** Strengthening and Fostering Science and Technology Programs in Latinamerica and the Caribbean: J U Fucugauchi

**Atmospheric Sciences**

**A44A  Room Gran Cancun 5  Thursday 1600h**

**Aerosols, Clouds, Radiation, Precipitation, and Their Feedbacks III (joint with H)**

*Presiding: J Luo, CUNY; X Dong, University of North Dakota*

- **1600h**  **A44A-01** Advances in Satellite Observations of Earth’s Radiation Budget: N G Loeb, S Kato, F G Rose, D A Rutan
- **1615h**  **A44A-02** Synergistic Use of Passive and Active Data for Cloud Process Studies: Examples from the A-Train Constellation: Z J Luo
Ocean Sciences

**OS44A Room Salon Cozumel 3 Thursday 1600h**

**Ocean Sciences General Contributions V**

*Presiding: C M Chiessi, University of São Paulo; F Graef Ziehl, CICESE*

1600h OS44A-01 Flow of grounded abyssal ocean currents along zonally-varying topography in spherical geometry: E G Swaters

1615h OS44A-02 The Taylor problem and morphodynamics: N Carbajal, J H Gaviño

1630h OS44A-03 Semiannual internal tides in a Patagonian fjord: L Ross, I Perez, A Valle-Levinson

1645h OS44A-04 Evidence of Multiple Physical Drivers on the Circulation and Thermal Regime in the Green Bay of Lake Michigan: H Bravo, S Hamidi, J V Klump

1700h OS44A-05 WITHDRAWN

1715h OS44A-06 Synthetic Eelgrass Oil Barrier: T G Curtis

Paleoceanography and Palaeoclimatology

**PP44A Room Salon Cozumel 2 Thursday 1600h**

**Spatial and Temporal Variations of Corg-rich deposits in Mid-Cretaceous (Barremian-Turonian) Tethyan Realm II (joint with GC)**

*Presiding: F J Maurrassle, FL Intnl Univ-Earth Sciences; R Barragan-Manzo, Instituto de Geologia, UNAM*

1605h PP44A-01 High-resolution dating of Early Aptian Oceanic Anoxic Events: J Moreno-Bedmar, T Bover-Arnal, R Barragan-Manzo, M Company, F Nuñez

1620h PP44A-02 Paleoenvironments of the Lower Aptian Paja Formation at the Curiti Quarry Section (Santander, Colombia), Evidence from Redox-Sensitive Trace Elements and Microfacies: T Gaona Narvaez, F J Maurrassle, Y Sanchez-hernandez

1635h PP44A-03 Episodic Enhanced Carbon Sequestration and Redox Conditions in a Late Barremian-Early Aptian Restricted Marine Basin: El Pui Section, Organyà Basin: Y Sanchez-hernandez, F J Maurrassle

1705h PP44A-04 Assessment of paleo-oxygenation conditions on the Agua Nueva Formation (Cenomanian-Turonian), Central Mexico: F Nuñez, C Canet, R Barragan-Manzo, P Alfonso


1735h PP44A-06 Geochemical Redox Indices and microfacies of the Cenomanian-Turonian Agua Nueva/Eagle Ford Fm, Mexico, Evidence for Anoxia Related to OAE2: F J Maurrassle, Y Sanchez-hernandez, A Blanco

Hydrology

**H44A Room Gran Cancun 1 Thursday 1600h**

**Advances in Satellite Precipitation and Hydrologic Applications III (joint with A, GC, H, NI, NG)**

*Presiding: A Serrat-Capdevila, University of Arizona; K M Ba, CIRA/UAEM; A Carsteuana, ESFM - IPN; R Deidda, University of Cagliari*

1600h H44A-01 Usefulness of rainfall estimated by satellite in a distributed hydrological model applied to an extratropical Mediterranean basin: L Ramos, F Frances

1615h H44A-02 Hydrologic simulations of three poorly gauged watersheds of the Senegal River using a lumped and a distributed model with different rainfall inputs: A Serrat-Capdevila, J B Valdes, K M Ba, M Durcik, M Merino, E M Demaria

1630h H44A-03 Impact of spatial resolution of the precipitation data on hydrological forecast: M Davis, A Bardossy, K Sudheer

1645h H44A-04 Using High Resolution Satellite Precipitation fields to Assess the Impacts of Climate Change on the Santa Cruz and San Pedro River Basins: A Robles-Morua, E Vivoni, E R Rivera-Fernandez, F Dominguez, T Meixner

1700h H44A-05 HydroXtreme-MaP: A Satellite-based Real-time Hydrological System for Flood and Drought Monitoring and Prediction: Y Hong

1730h H44A-06 Satellite Precipitation Data for Extreme Hydrologic Event Monitoring: K Hsu

Global Environmental Change

**GC44A Room Salon Cozumel 1 Thursday 1600h**

**Andes Mountains: The Stunning and Dynamic Region of South America II (joint with C, G, H, NH, S, T)**

*Presiding: I E Lenzano Andia, IANIGLA; R Smalley, Univ Memphis; S Moreiras, National University of Cuyo; S Miranda, National University of San Juan*

1600h GC44A-01 LANDSLIDES AS A DELAYED SIGNAL OF WARM PHASE OF ENSO IN THE ACONCAGUA PARK (32 SL): S Moreiras, M Lisboa

1620h GC44A-02 Outline of recent research on ice-volcano interactions in Southern Chile: A Rivera, F Bown, B W Brock, F Burger, D Carrión, S Cisternas, G Gaditúa, J Oberreuter, R Silva, J A Uribe, A Wendt, R Zamora

1640h GC44A-03 Using time-lapse photogrammetric method to study the terminal part of the Perito Moreno glacier: M G Lenzano, C Toth, L Lenzano, P Skvarca, R Smalley

SPX-Solar and Heliospheric Physics

**SH44A Room Xcaret Thursday 1600h**

**Improving Space Weather Forecast and Services III (joint with SA, SM)**

*Presiding: Y Zheng, NASA/GSFC; W D Gonzalez, INPE; A Pulkinen, CUA/GSFC*

1600h SH44A-01 Space Weather Measurements from the Surface of Mars with the RAD Instrument on the Mars Science Laboratory: D Hassler, C J Zeitlin, R Wimmer-Schweingruber, Title of Team: Mars Science Laboratory Science Team
1615h  **SH44A-02** Modeling SEP Events in a Forecasting System Context: J G Luhmann, D Odstrcil

1645h  **SH44A-03** HelioWeather: Development of the Integrated Real-Time Modeling System for Heliospheric Space Weather Forecasting: D Odstrcil, Title of Team: Helio Weather Team


1715h  **SH44A-05** 3D Data assimilation in the radiation belts: Y Shprits, A C Kellerman, D Subbotin, D A Kondrashov, M Daae, D L Turner

1745h  **SH44A-06** A Geosynchronous Radiation-belt Electron Empirical Prediction (GREEP) model: A C Kellerman, Y Shprits, D L Turner

### SPA-Magnetospheric Physics

**SM44A Room Tulum Thursday 1600h Physical Processes in the Magnetospheres of Giant Planets (joint with P)**

**Presiding:** A Flandes, Instituto de Geofísica, Universidad Nacional Autónoma de México; X Blanco-Cano, UNAM

1600h  **SM44A-01** The Transport of Plasma and Magnetic Flux in Giant Planet Magnetospheres: C T Russell

1620h  **SM44A-02** Numerical simulation of injection/dispersion events in Saturn’s inner magnetosphere: T W Hill, X Liu

1640h  **SM44A-03** Mirror Mode Waves observed in the Kronian Magnetosphere: M Rodriguez-Martinez, X Blanco-Cano, C T Russell, J S Leisner, R J Wilson, M K Dougherty, R Perez-Enriquez

1700h  **SM44A-04** Studying Io’s extended atmosphere with MHD, multi-species chemistry and hybrid model constrained by Galileo plasma and magnetic field measurements: V J Dols, P A Delamere, F Bagenal, R J Wilson, F J Crazy

1720h  **SM44A-05** Moon-magnetosphere interactions in the Jupiter and Saturn systems: G H Jones

1740h  **SM44A-06** WITHDRAWN

### Seismology

**S44A Room Salon Cozumel 5 Thursday 1600h The 2012 M7.6 Nicoya, Costa Rica, Earthquake: Seismogenic Zone Science at the Bull’s-Eye of an NSF MARGINS SEIZE Focus Site II (joint with G, T)**

**Presiding:** T H Dixon, University of South Florida; M Protti, Universidad Nacional Autónoma de México; X Blanco-Cano, UNAM

1600h  **S44A-01** Coseismic Coastal Uplift from the 2012 Mw7.6 Nicoya Earthquake, Costa Rica: Implications for Megathrust Rupture for Fore Arc Morphotectonics: J Marshall, S Morrish, A V Newman, M Protti

1615h  **S44A-02** Slow Slip Event and Interseismic Strain Accumulation in the Nicoya Peninsula, Costa Rica: Y Jiang, R McCaffrey, T H Dixon, S Wdowinski, M Protti, V M Gonzalez

1630h  **S44A-03** Detailed analysis of the spatial-temporal evolution of tremor, foreshock, and aftershock activities near the September 5, 2012 Nicoya Peninsula earthquake: J I Walter, Z Peng, S Y Schwartz, X Meng, A V Newman, M Protti

1645h  **S44A-04** Reduced Compressed Wave speeds and Poisson’s Ratios Along the Nicoya Peninsula Seismogenic Zone, Costa Rica: H R DeShon, M M Moore-Driskell

1700h  **S44A-05** Upper Plate Control on the Seismogenic Behavior beneath the Nicoya Peninsula, Costa Rica: S Y Schwartz, P Audet, J I Walter, T Lay, H Yue, M Protti

1715h  **S44A-06** Upper-Plate Earthquake Swarms Remotely Triggered by the 2012 Mw-7.6 Nicoya Earthquake, Costa Rica: J Linkemer, I G Arroyo, W K Montero Pohly, W Rojas

### Volcanology, Geochemistry and Petrology

**V44A Room Isla Mujeres Salons Thursday 1600h Recent Activity and Tephra Fallout Hazards at Volcanoes of the Americas II**

**Presiding:** N R Varley, Univ Colima; R Bonasia, UNAM; S De La Cruz-Reyna, UNAM; G Carrasco, Centro de Geociencias, UNAM

1600h  **V44A-01** Numerical modeling of tephra fallout from the 1913 eruption of Volcan de Colima (Mexico): insights into the limits of the geologic record: C Connor, L Connor

1615h  **V44A-02** Probabilistic hazard assessment of tephra dispersal from the Ochre Pumice Plinian eruption at Popocatepetl, Mexico and implications for civil aviation: C Scaini, R Bonasia, L Capra, M Nathenson, L Araña-Salinas, C Siebe, A FOLCH

1630h  **V44A-03** Ash dispersal dynamics: state of the art and perspectives: R Sulipzio

1645h  **V44A-04** Gas composition of the Popocatepetl volcanic emissions from recent infrared remote sensing measurements: M Grutter, W Stremme, E F Plaza-Medina, A Bezanilla, C Rivera, J Arellano, T Blumenstock, M Gisi, F Hase


1715h  **V44A-06** Volcanic gas plumes and volcanic ash: Detecting and Quantifying Critical Climatic Conditions for Cucucho Crater Lake, Ecuador: A G Ruiz, P Samaniego, C von Hillebrand-Andrade, M L Hall, M C Ruiz, P A Mothes, C A Macias

### Atmospheric Sciences

**A45A Room Gran Cancun 1 Thursday 1815h Atmospheric Sciences Plenary Session**

1815h  **A45A-01** Extreme Events: Dynamics, Statistics and Prediction: M Ghil

### Friday A.M.

**U51A Gran Cancun Poster Hall Friday 0800h Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts I Posters (joint with A, B, GC)**

**Presiding:** K A Shein, NOAA NCDC; J Hendec, NOAA/AOML

0800h  **U51A-01** POSTER Development of Tissue to Total Mass Correction Factor for Porites divaricata in Calcification Rate Studies: T C Cannone, S K Kelly, K Foster

**U51B Room Gran Cancun 1**  **Friday**  **0800h**

**Building Geophysics Capacity in Emerging Regions**

**Presiding:** P W Hammer, AIP; C O’Riordan; R Sears, Stanford University

0805h  **U51B-01** Experiences accessing public funds for hydrocarbons research and technological development in Mexico: V Surol-Perez

0830h  **U51B-02** Building Capacity for Disaster Risk Reduction: B G McAdoo, V Bryner

0855h  **U51B-03** Building technical capacity in formation evaluation, petrophysics, borehole geophysics, and reservoir geophysics: challenges and the road ahead: C Torres-Verdin

0920h  **U51B-04** Building Sustainable Capacity with University Partnerships: J M Harris

**Atmospheric Sciences**

**A51A Room Gran Cancun 5**  **Friday**  **0800h**

**Impact of Tropospheric Aerosols on Global and Regional Climate (joint with GC)**

**Presiding:** S Mahajan, Oak Ridge Nat’l Lab; D Ganguly, Pac NW Natl Lab-MSIN K9-24; R Gautam, NASA/GSFC

0800h  **A51A-01** Reconciling the observed surface temperature and precipitation trends in the satellite era: Y Ming, I Held

0815h  **A51A-02** Heterogeneous Warming Agents and Widening of the Tropical Belt: R J Allen, S C Sherwood, J R Norris, C S Zender

0830h  **A51A-03** Observations of aerosol semi-direct effects at multiple scales: E M Wilcox

0845h  **A51A-04** The impact of aerosols on the climate and its changes in China: Z Li

0900h  **A51A-05** Linearity of Climate Response to Increases in Black Carbon Aerosols: S Mahajan, K J Evans, J Hack, J E Truedale

0915h  **A51A-06** WITHDRAWN

0930h  **A51A-07** WITHDRAWN

0945h  **A51A-08** Atmospheric black carbon concentrations in North America, ~1100 to 2005. Lianquat Husain and Tanveer Ahmed Wadsworth Center, New York State Department of Health, Albany, NY 12201-0509, USA, and Department of Environmental Health Sciences, School of Public Health, State University of New York, Albany, NY, 12201-0509, USA: L Husain

**Biogeosciences**

**B51A Gran Cancun Poster Hall**  **Friday**  **0800h**

**Agroecosystems in Terrestrial Hydrological and Biogeochemical Cycles Posters (joint with A)**

**Presiding:** D T Drewny, Jet Propulsion Laboratory; F Munoz-Arriola, Scripps Institution of Oceanography

0800h  **B51A-01 POSTER** MODELING OF CARBON SEQUESTRATION ON EUCALYPTUS PLANTATION IN BRAZILIAN CERRADO REGION FOR BETTER CHARACTERIZATION OF NET PRIMARY PRODUCTIVITY: J D Echeverri, M B Siqueira

0800h  **B51A-02** WITHDRAWN

0800h  **B51A-03 POSTER** Impacts of Cover Crops on Water and Nutrient Dynamics in Agroecosystems: K Williard, S Swanberg, J Schoonover

0800h  **B51A-04 POSTER** Net global warming potential and greenhouse gas intensity under dryland cropping systems in the northern Great Plains, USA: U M Sainju, Title of Team: USDA-ARS-GRACEnet

**Education**

**ED51A Room Salon Cozumel 2**  **Friday**  **0800h**

**Enhancing Diversity in Geoscience: Successful Models, Benefits, Outcomes, and Next Steps**

**Presiding:** A Johnson, Institute for Broadening Participation; V William Whitney, Ohio Aerospace Institute; A Jearld, NEFSC/NOAA; W Ithier-Guzman, University of Puerto Rico, Rio Piedras

0800h  **ED51A-01** Diversity: The business case for and benefits of: M B Jones


0834h  **ED51A-03** MS PHD’S: A Synergistic Model for Diversifying the Earth Science Community: L Ricciardi, A Johnson, V William Whitney, W Ithier-Guzman, L Braxton, A Johnson


0908h  **ED51A-05** Information Management Strategies for Program Tracking and Formative Evaluation: D Siegfried, L Detrick, S Valaitis, A Johnson, S H Thomas, A Fauer

0925h  **ED51A-06** American Indian and Indigenous Geoscience Program: Ensuring the Evolution of Diverse STEM Scientists and Researchers in the 21st Century and Beyond: J R Bolman

0942h  **ED51A-07** Using Space Science to Excite Hispanic Students in STEM: P H Reiff, C Galindo, J Garcia, P A Morris, J S Allen

**Global Environmental Change**

**GC51A Room Salon Cozumel 1**  **Friday**  **0800h**

**Global Environmental Change General Contributions II**

**Presiding:** F A Degroff, CCSP; I L Perez-Cruz, Instituto de Geofisica, UNAM

0800h  **GC51A-01** WITHDRAWN

0815h  **GC51A-02** VOLUME TRANSPORT ANALYSIS IN THE SOUTH ATLANTIC BASIN ASSOCIATED WITH CLIMATE CHANGE SCENARIOS: L S Cabral, L de Freitas Assad, L Landau
0800h  **NH51A-03 POSTER** Distribution and characteristics of marine litter on the Marina beach, Chennai, India: R Dhanapal

0845h  **GC51A-04** Climate Literacy Partnership in the Southeast (CLiPSE): A Focus on Climate Change-related Dialogs with Faith-Based Groups as a form of Network Building in the Southeast United States – Lessons Learned: F J Carroll, K S McNeal, J Hammel-erman, J Christiansen

0900h  **GC51A-05** Carbon Management In the Post-Cap-and-Trade Carbon Economy: An Economic Model for Limiting Climate Change by Managing Anthropogenic Carbon Flux: F A DeGroof

0915h  GC51A-06 Winter Periphyton Blooms: Providing a New Perspective on the Balance of Seasonal Processes: C H Fritsen, C Davis

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**Geomagnetism and Paleomagnetism**

**GP51A Gran Cancun Poster Hall**  **Friday**  **0800h**

**New Insights and Challenges in Environmental Magnetism I Posters**

**Presiding:** M J Orgeira, UBA - CONICET; B Ortega, Instituto de Geofísica - UNAM; M F Bogalo, Univ Burgos; R Egli, Zentra-lanstalt für Meteorologie und Geodynamik

0800h  **GP51A-01 POSTER** Environmental magnetism in cultivated and native soil profiles from Córdoba province, Argentina: M J Orgeira, S Rouzaut, J Sanabria, O Bachmeier

0800h  **GP51A-02 POSTER** Rock magnetism for the last 45,000 yr in Chalco lacustrine sediments, central Mexico: B Ortega, A Soler, C I Caballero, J Gonzalez, S Lozano, M Caballero

0800h  **GP51A-03 POSTER** A preliminary combined geochemi-cal and rock-magnetic study of tailings of non-magnetic ores from Talpupahua-El Oro mining districts, Michoacán and Estado de México States: J Morales, M Hernández-Bernal, P Corona-Chávez

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**GP51B Gran Cancun Poster Hall**  **Friday**  **0800h**

**Paleomagnetism, Tectonics, and Magnetostратigraphy in Latin America I Posters**

**Presiding:** J Morales, Instituto de Geofísica, UNAM, Unidad Michoacán, Campus Morelia; M Aldana, Universidad Simón Bolívar; M A Iruzun, Instituto de Física Arroyo Seco; G L Mathias, Universidade de Sco Paulo

0800h  **GP51B-01 POSTER** Paleoproterozoic Paleomagnetic Data from South American and African Cratons: An Unorthodox Configuration of Atlantica: A E Rapalini, L Sanchez Bettucci, E Badgen, C A Vásquez

0800h  **GP51B-02 POSTER** A Study of the Magnetic Fingerprint of Tsunami Induced Deposits in the Ixtapa-Zihuatanejo Area (Western Mexico): A Goguitchaichirli, M Ramirez-Herrera, M Calvo-Rathert, B Aguilar, ANGEL Carrancho Alonso, J Mora-les, C I Caballero, F Bautista

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**Natural Hazards**

**NH51A Gran Cancun Poster Hall**  **Friday**  **0800h**

**Earthquakes and Tsunamis: Historical and Geological Records and Modeling II Posters**

**Presiding:** M Lagos, Laboratorio de Investigación de Tsunami Instituto de Geografía Pontificia Universidad Católica de Chile; C Chague-Goff, Australia &amp; Australian Nuclear Science and Technology Organisation

0800h  **NH51A-01 POSTER** In search of Eltanin: J R Goff, C Chague-Goff

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**NH51B Gran Cancun Poster Hall**  **Friday**  **0800h**

**Extreme Hazards and Disaster Risks in the Americas II Posters (joint with A, G, GP, H, NS, NG, OS, S, T, V)**

**Presiding:** A Ismail-Zadeh, Karlsruhe Inst of Technology; J U Fucuguchi, UNAM; I Zaliapin, University of Nevada

0800h  **NH51B-01 POSTER** Use of climate information for drought risk management in Mexico: C Neri, V Magaña Rueda

0800h  **NH51B-02 POSTER** Landslide susceptibility mapping in the coastal region in the State of São Paulo, Brazil: R C Alvala, P I Camarinha, V Canavesi

0800h  **NH51B-03 POSTER** A GIS-based volcanic hazard and risk assessment of eruptions sourced within Valles Caldera, New Mexico: R Alcorn, K S Panter, P Gorsevski, X Ye

0800h  **NH51B-04 POSTER** Tsunami numerical modeling along Nicoya peninsula, NW Costa Rica: N Zamora, A Babeyko, A Hoechner, L Feng

0800h  **NH51B-05 POSTER** KARSTIC PHENOMENA SUSCEPTIBILITY MAP OF MÉXICO: R Espinosa-Pereña

0800h  **NH51B-06 POSTER** METHODOLOGY FOR ELABORATING REGIONAL SUSCEPTIBILITY MAPS OF SLOPE INSTABILITY: THE STATE OF GUERRERO (MEXICO) CASE STUDY: A E Gonzalez Huesca, D Ferreás, L Domínguez-M

0800h  **NH51B-07 POSTER** APPLICATION OF THE EMPIRICAL THRESHOLDS OF PRECIPITATION TO THE DEBRIS FLOWS IN MEXICO: G Cardoso-Landa

0800h  **NH34A-06** Towards a National Hazard Map of Landslides: Juan de Grijalva, Chiapas, and Mitlatongo, Oaxaca, two catastrophic landslides on southeastern of Mexico: L Domínguez-M, A Castañeda, A Ramirez, A E Gonzalez

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**NH51C Gran Cancun Poster Hall**  **Friday**  **0800h**

**Interdisciplinary Approaches to Natural Hazards II Posters (joint with A, GC, OS, S, T, V)**

**Presiding:** Y A Kontar, The University of Findlay; V K Gusakov, Siberian Division of Russian Academy of Sciences; R P Singh, Chapman University

0800h  **NH51C-01 WITHDRAWN**

0800h  **NH51C-02 WITHDRAWN**

0800h  **NH51C-03 WITHDRAWN**

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**NH51D Gran Cancun Poster Hall**  **Friday**  **0800h**

**Natural Hazards General Contributions Posters (joint with GC)**

**Presiding:** Y A Kontar, The University of Findlay

0800h  **NH51D-01 POSTER** LEACHING BEHAVIOR OF SLAGS FROM AN OLD LEAD SMELTER IN CHIHUAHUA, MEXICO: METALS, CHLORIDES, NITRATES, SULFATES AND TDS ANALYSES: D Espejel-Garcia, G Wenglas-Lara, A Villalobos-Aragon, V V Espejel-Garcia

0800h  **NH51D-02 POSTER** Fault Length Vs Fault Displacement Evaluation In The Case Of Cerro Prieto Pull-Apart Basin (Baja California, Mexico) Subsidence: E Glowacka, O Sarychikhina, F A Nava Pichardo, F Farfan, M A Garcia Arthur, L Orozco, J Brassea
0800h NH51D-03 POSTER SEDIMENTATION DYNAMICS IN BAHIA DE BANDERAS Nayarit, FROM AMECA RIVER TO BUCERIAS: S Pedroza Ruciles, A Cupul Magaña, C Escudero Ayala

0800h NH51D-04 POSTER Hydrometeorological hazards basin “El Salado”, with detailed analysis of the micro “El Zarco” and “Tamarindos” in the municipality of Puerto Vallarta, Jalisco: M Núñez Gutiérrez

0800h NH51D-05 POSTER Preliminary Monitoring of Soil gas Radon in Potentially Active Faults, San Sai District, Chiang Mai Province, Thailand: P Pondthai, S Udpbhay

0800h NH51D-06 POSTER Comparative analysis between the floods and the rate of urbanization in the Ribeira Valley, São Paulo - Brazil: B C Ferreira, M C Valverde

0800h NH51D-07 POSTER Using Horizontal Cosmic Muons to Investigate the Density Distribution of the Popocatépetl Volcano Lava Dome: V Grabski, V Lemus, R Nuñez-Cadena, S Aguilar, A Menchaca-Rocha, J U Fucugauchi

0800h NH51D-08 POSTER The Pan-American Center for the WMO Sand and Dust Storm Warning Advisory and Assessment System: W A Sprigg

0800h NH51D-09 POSTER ASSESSMENT OF UNCERTAINTIES RELATED TO SEISMIC HAZARD USING FUZZY ANALYSIS: N Forjashvili, T Yoko, Z Javakhishvili

0800h NH51D-10 POSTER Forensic Fluid Dynamics and the Indian Spring (1991) cave collapse problem: D Nof

0800h NH51D-11 POSTER GEOMORPHOLOGIC FEATURES AND AGE ESTIMATION OF SUBMARINE LANDSLIDES IN THE SOUTHWESTERN COLOMBIAN CARIBBEAN: J Idarraga Garcia, C A Vargas-Jimenez

0800h NH51D-12 POSTER Microbial sewage contamination associated with Superstorm Sandy flooding in New York City: G O’Mullan, M Dueker, R Sahaipal, A J Ruhl


0800h NH51D-14 POSTER A RECONSTRUCTION OF THE 1793 ERUPTION OF SAN MARTIN TUXTLA VOLCANO, VERACRUZ, MEXICO: J Espindola, A Zamora-Camacho, L Godinez

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**Ocean Sciences**

**OS51A Room Salon Cozumel 3**

**0800h Physical Processes in Tropical and Subtropical Coastal Systems IV (joint with A)**

*Presiding:* J Gomez-Valdes, CICESE; C Enriquez, Universidad Nacional Autonoma de Mexico; A Valle-Levinson, University of Florida; L Carrillo, EL COLEGIO DE LA FRONTERA SUR

0800h OS51A-01 On the circulation and thermohaline variability in the western shelf of the Gulf of Mexico: J Zavala-Hidalgo, A Mateos-Jasso, M E Allende Arandia, R Romero-Centeno

0815h OS51A-02 Currents at the sills bounding Delfin Basin in the northern Gulf of California: M Lopez, J Candela

0830h OS51A-03 A physical view of La Guajira Upwelling System, Colombian Basin, Caribbean Sea: G Bernal, E Beier, E D Barton, M Ruiz-Ochoa, J G Correa

0845h OS51A-04 WITHDRAWN

0900h OS51A-05 A numerical study of the Yucatan upwelling processes: A Ramos-Musalem, J Zavala-Hidalgo, A Ruiz-Angulo
Paleoceanography and Paleoclimatology

PP51A Gran Cancun Poster Hall Friday 0800h Paleoceanography and Paleoclimatology General Contributions I Posters

Presiding: L L Perez-Cruz, Instituto de Geofísica, UNAM; A Sifeddine, LOCEAN-IRD-UFF

0800h PP51A-01 POSTER The isotopic record of the Bambui Group, Brazil: Sturtian, Marinoan, and/or Early Paleozoic?: M Babinski, G M Paula-Santos, M Kuchenbecker, S Caetano-Filho, R Trindade, A C Pedroso-Saores

0800h PP51A-02 POSTER Preliminary Sequence stratigraphy framework of the SW part of the Actopan Platform, Lower Cretaceous, Hidalgo, Mexico: G Abascal, G Murillo-Muñeton

0800h PP51A-03 POSTER Sedimentary denitrification in the eastern tropical North Pacific in the last 2000 years: M Juarez, A Sanchez, O Gonzalez-Yajmovich

0800h PP51A-04 POSTER Radiolarian polycystine in holocenic sediments from Carmen Basin, Gulf of California—their paleoenvironment significant: O Monzon, L L Perez-Cruz, L Barbara, S Schmidt

0800h PP51A-05 POSTER DISTRIBUTION OF FORAMINIFERA IN THE CORE SAMPLES OF KOLLIDAM AND MARAMAN MANGROVE LOCATIONS, TAMIL NADU, SOUTH-EAST COAST OF INDIA: M Nowshath

SPA-Aeronomy

SA51A Gran Cancun Poster Hall Friday 0800h Studies of the Low-Latitude Thermosphere/Ionosphere in the American Sector Posters I

Presiding: B Mendoza, UNAM

0800h SA51A-01 POSTER ANOMALOUS ELECTRON HEATING IN THE AURORAL E-REGION: R A Makarevich

0800h SA51A-02 POSTER The EISCAT_3D Science Case: T T Waldt, A C Cummings, A W Labrador, E C Stone, M E Wiedenbeck

0800h SA51A-03 POSTER STATISTICAL ANALYSIS FOR VHF RADAR PARAMETERS AT SÃO LUIS, JICAMARCA AND CHRISTMAS ISLAND EQUATORIAL STATIONS: R Y de la cruz cueva, E R Paula, E A Kherani

0800h SA51A-04 POSTER Study of nighttime Medium Scale Travelling Ionospheric Disturbances (MSTID's) in the ionospheric F-region using all-sky imager and digisonde data: M B Stefanello, C S Machado, A A Pimenta, N J Schuch

0800h SA51A-05 POSTER Background Thermospheric Densities from the Coupled Ion Neutral Dynamics Investigation on C/NOFS: R Davidson, G D Earle, R A Haaser, R A Heelis, W R Coley

0800h SA51A-06 POSTER Statistical study of the effects of meteoric dust particles on the lower E-region Currents and conductivities: P Muralikrishna, C Vineeth

0800h SA51A-07 WITHDRAWN

SPA-Solar and Heliospheric Physics

SH51A Gran Cancun Poster Hall Friday 0800h Heliospheric Physics General Contributions I Posters

Presiding: M Gedalin, Ben-Gurion University; X Blanco-Cano, UNAM; V Krasnoselskikh, LPC2E/CNRS; T Nieves-Chinchilla, IACS/CS-GSFC/NASA

0800h SH51A-02 POSTER FORWARD Codes: Now with Widgets!: B Forland, S E Gibson, T A Kucera

0800h SH51A-03 POSTER Electron Heating in Quasi-Perpendicular Shocks: D J Sundkvist, F Mozer

SH51C Room Xcaret Friday 0800h Solar Energetic Particle (SEP) Acceleration and Transport I

Presiding: E R Christian, NASA GSFC; G A de Nolfo, NASA Goddard Space Flight Ctr; R A Leske, Caltech

0800h SH51C-01 Role of Turbulence in the Acceleration and Transport of SEPs: V Petrov

0818h SH51C-02 WITHDRAWN

0836h SH51C-03 Transport of solar flare-accelerated energetic electron from the Sun to the Earth: E P Kontar, H Reid

0854h SH51C-04 Asymmetric Perpendicular Transport of Solar Energetic Particles: M Marsh, S Dalla, J Kelly, T L Laitinen

0906h SH51C-05 Study of transport of ICME shock accelerated SEPs in 3-d heliospheric magnetic fields: G Qin, Y Wang

0918h SH51C-06 New Views of Solar Energetic Particle Events from STEREO and LI: R A Mewaldt, C M Cohen, G M Mason, T T von Rosenvinge, M E Wiedenbeck


0948h SH51C-08 WITHDRAWN

SPA-Solar and Heliospheric Physics

SH51D Gran Cancun Poster Hall Friday 0800h The Heliosphere: Global ENA Imaging and 3-D Models Posters

Presiding: M A Dayeh, Southwest Research Institute; H O Funsten, Los Alamos National Laboratory; J Heerikhuisen, University of Alabama in Huntsville


0800h SH51D-02 POSTER Three-dimensional, numerical simulation of the heliotail using the kinetic model: S Borovikov, J Heerikhuisen, B E Wood, N V Foglorev

0800h SH51D-03 POSTER Spatial Uniformity of the Emission Region of the IBEX Energetic Neutral Atom Ribbon: H O Funsten, P C Frisch, P H Janzen, G Livadiotis, D J McComas, E Moebius, D B Reisenfeld, N A Schwadron

SPA-Solar and Heliospheric Physics

SH51E Gran Cancun Poster Hall Friday 0800h The Heliosphere: Solar Wind and Interplanetary Plasma Posters

Presiding: E R Christian, NASA GSFC; G A de Nolfo, NASA Goddard Space Flight Ctr; R A Leske, Caltech

0800h SH51E-01 POSTER Solar Wind and Interplanetary Plasma Posters: J A Newhall, T M Moebius, H E Evans, J E Binga, J A Decker

0800h SH51E-02 POSTER Solar Wind and Interplanetary Plasma Posters: J A Newhall, T M Moebius, H E Evans, J E Binga, J A Decker

0800h SH51E-03 POSTER Solar Wind and Interplanetary Plasma Posters: J A Newhall, T M Moebius, H E Evans, J E Binga, J A Decker

0800h SH51E-04 POSTER Solar Wind and Interplanetary Plasma Posters: J A Newhall, T M Moebius, H E Evans, J E Binga, J A Decker

0800h SH51E-05 POSTER Solar Wind and Interplanetary Plasma Posters: J A Newhall, T M Moebius, H E Evans, J E Binga, J A Decker
SPA-Magnetospheric Physics

**SM51A Room Tulum**  
**Friday**  
**0800h**  
**Dayside Interactions II (joint with P, SH)**

*Presiding:* D G Sibeck, NASA/GSFC; K J Trattner, Lockheed-Martin

0800h  **SM51A-01** Recent Development in Hot Flow Anomaly Studies: **H Zhang,** S Wang, Q Zong

0815h  **SM51A-02** Electron Bulk Heating Within Reconnection Exhausts at Earth’s Magnetopause: Dependence on the Alfvén Speed: **T Phan,** M A Shay, M Fujimoto, J T Gosling, G Paschmann, M Oieroset, J F Drake, V Angelopoulos

0830h  **SM51A-03** Recent Studies of the Role of the Magnetosheath Region and its Boundaries on Dayside Interactions: **S Petinec**

0845h  **SM51A-04** The role of transient ion foreshock phenomena in driving Pc5 ULF wave activity: **M Hartinger,** D L Turner, F Plaschke, V Angelopoulos, H J Singer

0900h  **SM51A-05 WITHDRAWN**

0915h  **SM51A-06 WITHDRAWN**

0930h  **SM51A-07** Analysis of Brazilian data for seismic hazard analysis: **S Drouet,** M Assumpção

0945h  **SM51A-08** Determining the Probability that a Small Event in Brazil (magnitude 3.5 to 4.5 mb) will be Followed by a Larger Event: **M Assumpção**

**Tectonophysics**

**T51A Gran Cancun Poster Hall**  
**Friday**  
**0800h**  
**Solid Earth and Atmospheric Processes in the Caribbean in the Context of the Continuously Operating Caribbean GPS Observational Network (COCONet) I Posters (joint with A, G, NH, S, V)**

*Presiding:* A M Lopez, University of Puerto Rico; D K Adams, Universidad Nacional Autonoma de Mexico; M Protti, Universidad Nacional; L A Brown, University of the West Indies

0800h  **T51A-01 POSTER** A model of short term surface deformation of Soufriere Hills Volcano, Montserrat, constrained by GPS geodesy: **E E McPherson,** G S Mattioli

0800h  **T51A-02 POSTER** Updated velocity field for the Caribbean plate from COCONet GPS observations: **J A Miller,** G S Mattioli, P E Jansma

0800h  **T51A-03 POSTER** Co-seismic deformation of the August 27, 2012 Mw 7.3 El Salvador and September 5, 2012 Mw 7.6 Costa Rica earthquakes: **H Geirsson,** P C La Fenima, C DeMets, G S Mattioli, D Hernández

0800h  **T51A-04 POSTER** A Stable Reference Frame for Landslides Study in the Puerto Rico and Virgin Islands Region: **G Wang**

**Mineral and Rock Physics**

**MR51A Gran Cancun Poster Hall**  
**Friday**  
**0800h**  
**Mineral and Rock Physics General Contributions Posters**

*Presiding:* J U Fucugauchi, UNAM; P K Swart, Univ Miami

0800h  **MR51A-01 POSTER** Elastic Properties of Fe, Na, Ca – Bearing Majoritic Garnet (Mg$_{0.87}$Ca$_{0.27}$Fe$_{0.37}$Na$_{0.5}$Al$_{0.5}$Si$_4$O$_{12}$) to 9.5 GPa and 1000 K: **R Triplette,** G D Gwanmesia, L Wang

0800h  **MR51A-02 POSTER** New 3000 Ton Multi-Anvil Press at the University of Western Ontario: **R Secco,** W Yong, T Officer

**Seismology**

**S51A Room Salou Cozumel 5**  
**Friday**  
**0800h**  
**Regional and National Seismic Hazard Models: Challenges in Latin America II (joint with NH, V)**

*Presiding:* A Gomez Capera, instituto nazionale di geofisica e vulcanologia; H Rendon, FUNVISIS; J Garcia, Ist. Naz. di Oceanografia e Geofisica Sperimentale

0800h  **S51A-01** Applications of the seismic hazard model of Italy: from a new building code to the L’Aquila trial against seismologists: **C Meletti**

0815h  **S51A-02** Contributions of the neotectonic and paleoseismic studies in the estimation of the seismogenic potential of active faults in Venezuela: **F A Amedard**

0830h  **S51A-03** Evaluation of the Seismic Hazard in Venezuela with a revised seismic catalog that seeks for harmonization along the country borders: **H Rendon,** L Alvarado, M Paolini, F Olbrich, J González, W Ascanio

0845h  **S51A-04** Updated Colombian Seismic Hazard Map: **J Eraso,** M Arcila, J Romero, C Dimate, M L Bermúdez, C Alvarado

0900h  **S51A-05** Influencing factors in the Earthquake Distribution in Ecuador: **H A Yepes,** C Beauval, A Alvarado, L Audin

0915h  **S51A-06** Probabilistic seismic hazard estimates for two cities in Ecuador: **C Beauval,** H Yepes, D Monelli, A Alvarado, L Audin

0930h  **S51A-07** Analysis of Brazilian data for seismic hazard analysis: **S Drouet,** M Assumpção

0945h  **S51A-08** Determining the Probability that a Small Event in Brazil (magnitude 3.5 to 4.5 mb) will be Followed by a Larger Event: **M Assumpção**

**Volcanology, Geochemistry and Petrology**

**V51A Room Isla Mujeres Salons**  
**Friday**  
**0800h**  
**Subduction Dynamics From Surface to Deep Mantle: Controls on the Physical, Petrological, and Geochemical Parameters on Active and Epithermal Analogs (joint with H)**

*Presiding:* M Reich, Universidad de Chile; R Buchwaldt, MIT; J V Rowland, Univ Auckland; T Toulkeridis, Escuela Politécnica del Ejército, Campus Sangolquí

0800h  **V51A-01** The interplay between tectonics and volcanism: a key to unravel the nature of Andean geothermal systems: **J M Cembrano**

0815h  **V51A-02** Physical setting and characteristics of high-sulfidation epithermal gold-silver deposits of the Andes and controls on mineralizing processes: **T Bissig**

0830h  **V51A-03 WITHDRAWN**

0845h  **V51A-04 WITHDRAWN**

0900h  **V51A-05** Tectonomagmatic evolution of the proto Andean Margin: Geochemical characterization and zircon U-Pb geochronologic constraints from the Ecuadorian Eastern Cordilleran granitoids: **R Buchwaldt,** T Toulkeridis

0915h  **V51A-06** Accretion of a Small Continental Fragment to a Larger Continental Plate: Mesozoic Ecuador as a Case-Study Area: **H Massonne**

0930h  **V51A-07** Analysis of Brazilian data for seismic hazard analysis: **S Drouet,** M Assumpção
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Program Content

U52A Room Gran Cancun 1  Friday  1020h
Weather, Climate, and Food Security: American and Global Perspectives

Presiding: F Kogan, NOAA; A M Powell, NOAA; T Beer, CSIRO; M Limonta

1020h  U52A-01 RISK MANAGEMENT IN AGRICULTURE FOR FOOD SECURITY IN LATIN AMERICA AND THE CARIBBEAN: A Martinez, Title of Team: National Research Council for Scientific and Technological Research (CONICET)

1050h  U52A-02 Climatic Consequences and Agricultural Impact of Regional Nuclear Conflict: O B Toon, A Robock, M J Mills, L Xia

1105h  U52A-03 Food Security: A Climatological Perspective: T Beer


1135h  U52A-05 Drought Impacts on Ancient Maya Maize Agriculture Inferred from Isotopic Analyses of Plant Biomarkers: P M Douglas, M Pagani, T I Eglinton, M Brenner, D A Hodell, J H Curtis

1150h  U52A-06 NEW TRENDS IN NATURAL HAZARDS AND GLOBAL ENVIRONMENTAL CHANGE SCIENCE COMMUNICATION AND ENGAGEMENT: Y Y Kontar

1205h  U52A-07 Geophysical Tools, Challenges and Perspectives Related to Natural Hazards, Climate Change and Food Security: J U Fucugauchi

Atmospheric Sciences

A52A Room Gran Cancun 5  Friday  1020h
Intercomparison and Evaluation of Climate and Earth System Models II (joint with IN, GC, H, NG, OS)

Presiding: V Lucarini, University of Hamburg

1020h  A52A-01 Systematic model errors in the simulation of the summer NAO teleconnection: implications for projected summer drying in the European/Mediterranean region: I Blade, B Liebmann, G van Oldenborgh, D Fortuny

1050h  A52A-02 WITHDRAWN

1120h  A52A-03 Hydrological Cycle over South and Southeast Asian River Basins as Simulated by PCMDI/CMIP3 Experiments: V Lucarini, S UI Hassan, S Pascale

1150h  A52A-04 Changes in seasonal extreme precipitations projected by CMIP5 models: A Toreti, P Naveau, M Zampieri, E Scoccimarro, A Schindler, J Luterbacher, S Gualdi, E Xoplaki

Geomagnetism and Paleomagnetism

GP52A Room Isla Mujeres Salons  Friday  1105h
Precambrian Geomagnetic Field II

Presiding: E Kulakov, Michigan Technological University; S Zhang

1020h  GP52A-01 Was the Geodynamo Active in Hadean Era?: J Arkani-Hamed

1035h  GP52A-02 Precambrian paleointensity as a proxy for the deep Earth’s processes: A V Smirnov

1050h  GP52A-03 New Precambrian paleomagnetic and geochronological results from the North China Craton and their implications for supercontinent Nuna reconstruction: S Zhang

1105h  GP52A-04 Absolute Geomagnetic Paleointensity as Recorded by ~1.09 Ga Lake Shore Traps (Keweenaw Peninsula, Michigan): E Kulakov, A V Smirnov

Hydrology

H52A Room Salon Cozumel 1  Friday  1020h
Addressing Water Security Through Large-Scale Hydroclimatology Studies (joint with A, B, GC, H)

Presiding: P R Houser, George Mason University; R G Lawford, Morgan State University; H S Wheater, University of Saskatchewan

1020h  H52A-01 A Brief Overview of GEWEX Regional Hydroclimate Projects: A Nunes, J P Evans, E H Berbery, S Benedict, P J van Oevelen

1040h  H52A-02 Changing Cold Regions: Addressing Atmospheric, Cryospheric, Ecological and Hydrological Change in the Saskatchewan and Mackenzie River Basins, Canada: J W PomEROY, H S Wheater, W L Quinton, R E Stewart

1100h  H52A-03 North American Water Program (NAWP): A Vision to Address North America’s Freshwater Sustainability Challenges: P R Houser

1115h  H52A-04 Large Scale Evapotranspiration Estimates: An Important Component in Regional Water Balances to Assess Water Availability: J GaratUcu-PAyAn, E A Yepez, C Watts, J C Rodriguez, L C Valdez-Torres, A Robles-Morua

1155h  H52A-05 Implications for the Americas of a new Water Strategy for the Group on Earth Observations (GEO): R G Lawford, T Koike, D Cripe, O Ochiai

1205h  H52A-06 Human and climate impact on global riverine water and sediment fluxes - a distributed analysis: S Cohen, A Kettner, J P Syvitski

Nonlinear Geophysics

NG52A Room Salon Cozumel 3  Friday  1020h
Nonlinear Geophysics: General and Prospects II

Presiding: D J Schertzer, U. Paris-Est; A Donnellan, Jet Propulsion Laboratory

1020h  NG52A-01 ASYMPTOTIC BEHAVIOR AND STABILITY OF SOLUTIONS OF BAROTROPIC VORTICITY EQUATION ON A SPHERE: Y N Skiba
1035h  NG52A-02 Hamiltonian wave turbulence theory on the genesis of eddies from waves in rotating flows: A Sen, K Julien
1050h  NG52A-03 Nonlinear Feedback in a Generalized Lorenz Model: B Shen
1105h  NG52A-04 Three-dimensional Quasigeostrophic Convection in an Annulus with Sloping Endwalls: P Marti, M A Calkins, K A Julien

SPA-Solar and Heliospheric Physics

Program Content

SH52A Room Xcaret  Friday  1020h
Combined Radio and White-Light Observations of Solar Wind Transients in the Inner Heliosphere II

Presiding: E Aguilar-Rodriguez, UNAM-Instituto de Geofisica; V Ontiveros, ENES; S D Bale, Univ. of California, Berkeley; N Gopalswamy, NASA/GSFC
1020h  SH52A-01 On the Relationship Between Metric and DH Type II Bursts: P Makela, N Gopalswamy, S Yashiro, S Akiyama, H Xie
1040h  SH52A-02 Dynamics of Interplanetary Coronal Mass Ejections and Type II Bursts: A Lara, P Subramanian, A Borgazzi, T Niembro
1100h  SH52A-03 Diagnosis of the Solar corona from Comparison Between Faraday Rotation Measurements and MHD Simulations: G LE CHAT, J C Kasper, O Cohen, S Spangler
1120h  SH52A-04 Comparing CME Kinematics from Radio Type II Emissions and STEREO Heliospheric Imaging: B E Wood, M J Reiner
1140h  SH52A-05 Radio direction-finding and its application to the study of Interplanetary CMEs: J Martinez Olivos, H M Bain, C L Raftery, Y Liu, S D Bale
1200h  SH52A-06 Remote Sensing of Solar Wind Velocities using Interplanetary Scintillation with MEXART and STELab Stations: J C Mejia-Ambriz, B V Jackson, A Gonzalez-Esparza, M Tokumaru, H Yu, A Buffington, P Hick

SPA-Magnetospheric Physics

Program Content

SM52A Room Tulum  Friday  1020h
Physics of Collisionless Shocks and Foreshocks: Recent Advances II (joint with SH)

Presiding: C X Mazelle, IRAP / CNRS Univ Paul Sabatier; H Kucharek, Univ. New Hampshire; C Bertucci, IAFE
1020h  SM52A-01 Recent advances on foreshocks ULF waves and transients: X Blanco-Cano
1035h  SM52A-02 Analysis of the terrestrial ion foreshock: 2D Full-Particle simulation of a curved supercritical shock: B Lembege, P Savoini, J Stienlet
1055h  SM52A-03 Boundaries in the Earth’s Foreshock: the present status: K Meziane, C X Mazelle, A Hamza
1115h  SM52A-04 Earth’s Collisionless Bow Shock and Entropy Generation: G K Parks, E Lee, S Fu, J Cao, M L Goldstein, I S Dandouras, H Reme
1135h  SM52A-05 ACCELERATION OF SOLAR WIND IONS TO 1 MEV BY ELECTROMAGNETIC MOGULS IN THE FORESHOCK: K Stasiwicz, M Strumik, S Markidis, B Eliasson, M Yamauchi
1150h  SM52A-06 Burst of reflected electrons in nonstationary quasi-perpendicular shocks: S Matsukiyo, M Scholer
1205h  SM52A-07 Statistical study of foreshock cavities: P Kajdic, X Blanco-Cano, N Omidi, K Meziane, C T Russell

Seismology

Program Content

S52A Room Salon Cozumel 5  Friday  1020h
Regional and National Seismic Hazard Models: Challenges in Latin America III (joint with NH, V)

Presiding: M Pagani, GEM Foundation; M B Benito; J M Gomez Gonzalez, Universidad Nacional Autonoma de Mexico
1020h  S52A-01 CRISIS2012: An Updated Tool to Compute Seismic Hazard: M Ordaz, F Martinelli, C Meletti, V D’Amico
1035h  S52A-02 STSHV a teleinformatic system for historic seismology in Venezuela: J E Choy, C Palme, R Altez, R Aranguren, C Guada, J Silva
1105h  S52A-03 Present Status of Historical Seismicity Studies in Colombia and Venezuela: A Sarabia, H Cifuentes, R Altez Ortega, C Palme, C Dimate
1130h  S52A-04 Intensity attenuation relationships for Colombia: C Dimate, M Bohorquez

Friday P.M.

Union

Program Content

U53A Room Gran Cancun 5  Friday  1340h
Identifying and Quantifying Critical Climatic Conditions for Coral Reef Ecosystem Impacts II

Presiding: K A Shein, NOAA NCDC; J Hendee, NOAA/AOML
1345h  U53A-01 Annual temperature anomaly trends correlate with coral reef trajectory across the Pacific: B M Riegl, E Wieters, A Bruckner, S Purkis
1400h  U53A-02 Monitoring the impacts of Ocean Acidification on coral reef bioerosion: challenges, methods, recommendations: I Enoch, D Manzello, R Carlson
1415h  U53A-03 Quantifying Ocean Acidification and its Impacts to Coral Reef Ecosystems: D Manzello, D K Gledhill, I Enoch, A J Andersson
1430h  U53A-04 Calcification rates of the Caribbean reef-building coral Siderastrea siderea adversely affected by both seawater warming and CO2-induced ocean acidification: K M Horvath, B D Connolly, I T Westfield, E Chow, K D Castillo, J B Ries
1445h  U53A-05 Production and carbonate dynamics of Halimeda incrassata (Ellis) Lamouroux altered by Thalassia testudinum Banks and Soland ex König: S Barry, T Frazer, C Jacoby
1500h  U53A-06 The Paradoxical Roles of Climate Stressors on Disturbance and Recovery of Coral Reef Ecosystems: C Manfrino, G Foster, E Camp
1355h  GP53A-02 Natural vs. Anthropogenic Contribution to Atmospheric Dust at Rural Site: Potential of Environmental Magnetism: E Petrovsky, A Kapicka, H Grison, B Kotlik, R Zboril, Z Korbelova

1410h  GP53A-03 Unmixing mineral magnetic assemblages to reconstruct environmental processes: D Heslop, A P Roberts

1425h  GP53A-04 A Kinetic Model To Quantify The Effect Of Total Organic Carbon Content On The Loss Of Magnetic Susceptibility Values In Surficial Sediments Of Coastal Environments: The Case Study Of The Ria De Muros, NW Spain: A Andrade, D Rey, K J Mohamed, B Rubio

GP53B Room Isla Mujeres Salons Friday 1440h Paleomagnetism, Tectonics, and Magnetostatigraphy in Latin America II

Presiding: J Morales, Instituto de Geofisica, UNAM, Unidad Michoacán, Campus Morelia; M Aldana, Universidad Simón Bolívar; M A Iruzun, Instituto de Física Arroyo Seco; G L Mathias, Universidad de Sao Paulo

1440h  GP53B-01 Paleomagnetic and Tectonic studies in Uruguay: a brief synthesis of the last decade: I Sanchez Bettucci

1500h  GP53B-02 Relative paleointensity of the geomagnetic field over the last 4,500 years BP from sediment cores of Laguna Chaltel (Patagonia, Argentina): C G Gogorza, M A Iruzun, A M Sinito, M Aldana, M Fey, C Ohlendorf, B Zolitschka

1520h  GP53B-03 Detrital and delayed CRM acquisition in red-beds: the Lower Cretaceous Zicapa Formation, southern Mexico: M I Sierra-Rojas, R S Molina-Garza

Hydrology

H53A Room Gran Cancun 1 Friday 1340h Subsurface Structure and Transport With Applications in Mining II (joint with A, B, GC, H, NH, NG)

Presiding: J A Cunningham, University of South Florida; P A Herrera, Universidad de Chile; S Anwar, Missouri University of Science & Technology; I Mendoza-Sanchez, Instituto Politécnico Nacional

1340h  H53A-01 Advances in Sensible Heat Balance Characterization of Soil Water Evaporation: J Heitman, X Xiao, P K Deol, R Horton, T Ren

1355h  H53A-02 Characterization of preferential and matrix flow through unsaturated waste rock piles with two tracers: S Blackmore, B Harrison, K U Mayer, L Smith, R D Beckie

1410h  H53A-03 Dynamics of Nutrients Transport in Onsite Wastewater Treatment Systems: G Toor, M De

1425h  H53A-04 Numerical simulation of in-situ chemical oxidation (ISCO) and biodegradation of petroleum hydrocarbons using a coupled model for bio-geochemical reactive transport: I S Marin, J W Molson


1455h  H53A-06 Groundwater flow evaluation through backfilling materials of a surface coal mining site of Northeast Mexico: C Gutierrez-Ojeda, M Martinez-Morales, G Ortiz-Flores

1510h  H53A-07 Comparison of groundwater flow model particle tracking results and isotopic data in the Leon valley, Mexico: G Hernandez-Garcia, A S Cortes, J Martinez-Reyes, J Perez-Quezadas, Title of Team: Grupo de Hidrologia Isotopica

1525h  H53A-08 Optimal Placement of Pressure Monitoring Wells for CO2 Leakage using Kalman filters and a Genetic Algorithm: J P Nogues, J M Nordbotten, M A Celia

2013 Meeting of the Americas 99
Paleoceanography and Paleoclimatology

**PPS3A Room Salon Cozumel 2**

### Friday 1340h
**Late Mesozoic–Early Cenozoic Biotratigraphy and Paleoclimates II (joint with GC)**

**Presiding:** R Fenero, UNAM; I L Perez-Cruz, Instituto de Geofisica, UNAM; M Pagani, Yale University

- 1340h **PPS3A-01** Orbital Forcing of Paleocene-Eocene Hyperthermal Events: S Galeotti
- 1400h **PPS3A-02** WITHDRAWN
- 1420h **PPS3A-03** Sedimentology, Petrography and Microfacies of the Paleogene Carbonate Sequence - Yucquopil I Borehole (Chicxulub, Yucatan): E Escobar-Sanchez, J U Fucugauchi

SPA-Aeronomy

**SA53A Room Salon Cozumel 4**

### Friday 1340h
**Studies of the Low-Latitude Thermosphere/Ionosphere in the American Sector II (joint with SM)**

**Presiding:** F S Rodrigues, UT Dallas; B Mendoza, UNAM; C Huang, Air Force Research Laboratory; M A Milia, Jicamarca Radio Observatory

- 1340h **SA53A-01** Dynamics of Low-latitude Thermosphere-Ionosphere from Coincident Observations of Zonal Neutral Winds and EPB Velocity from Brazil and Peru: N P Chapagain, J J Makela, J W Meriwether, D J Fisher, J L Chau, R Buriti
- 1357h **SA53A-02** Improved analysis of all-sky meteor radar measurements of Gravity Wave Variances and Momentum Fluxes: V F Andrioli, D C Fritts, B R Clemesha, P P Batista
- 1414h **SA53A-03** A multi-beam mode of ionospheric observation using the jicamarca incoherent scatter radar: M A Milia, J L Chau
- 1431h **SA53A-04** WITHDRAWN
- 1448h **SA53A-05** Hydromagnetic simulation of the ionospheric disturbances generated by the 2011 Tohoku-oki tsunami and associated acoustic-gravity waves: E A Kherani, P H Lognonne, E R Paula, L M Rolland
- 1505h **SA53A-06** Study of the generation mechanism for Sporadic Sodium Layers observed in the Brazilian low latitude sector: D C Amorin, B R Clemesha, M D Simonich, A A Pimenta, G Yang
- 1522h **SA53A-07** LISN: Measurements of TEC depletions, and L-band scintillations between 2008 and 2012: C E Valladares

SPA-Solar and Heliospheric Physics

**SHS5A Gran Cancun Poster Hall**

### Friday 1340h
**Exploring Solar Energetic Particle Origins With Solar Orbiter and Solar Probe Plus II Posters**

**Presiding:** J Rodriguez-Pacheco, Univ Alcalá; R Gómez-Herrero, Universidad de Alcalá; R A Mewaldt, California Institute of Technology; J Giacalone, University of Arizona

- 1340h **SHS5A-01** POSTER The Suprathermal Ion Spectrograph (SIS) for the Solar Orbiter spacecraft: J Koehler, R F Wimmer-Schweingruber, G M Mason, K Tyagi, H Seifert, G C Ho, J Pacheco
- 1340h **SHS5A-02** POSTER Instrument Control Unit for the EPD on board Solar Orbiter: S Sánchez Prieto, M Prieto Mateo, OŚCAR Rodriguez Polo, OŚCAR Gutiérrez Molina, P Parra Espada, A da Silva Fariña
- 1340h **SHS5A-03** POSTER VIRTUAL PLATFORM FOR SEE ROBUSTNESS VERIFICATION OF BOOTLOADER EMBEDDED SOFTWARE ON BOARD SOLAR ORBITER’S ENERGETIC PARTICLE DETECTOR: A Da Silva, S Sánchez Prieto, O Polo, P Parra Espada

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Seismology

**S53A Room Salon Cozumel 5**

### Friday 1340h
**Regional and National Seismic Hazard Models: Challenges in Latin America IV (joint with NIH, V)**

**Presiding:** A Gomez Capera, Istituto nazionale di geofisica e vulcanologia; J C Montalvo A, Universidad Autonoma de Nuevo León; H Rendon, FUNVISIS

- 1355h **S53A-02** Teamwork tools and activities within the hazard component of the Global Earthquake Model: M Pagani, G Weatherill, D Monelli, I Danciu
**Tectonophysics**

**T53A** Room Tulum  
**Friday**  
**1340h** Solid Earth and Atmospheric Processes in the Caribbean in the Context of the Continuously Operating Caribbean GPS Observational Network (COCONet) II (joint with A, G, NH, S, V)  
**Presiding:** A M Lopez, University of Puerto Rico; M Proti, Universidad Nacional  
1340h **T53A-01** COCONet (Continuously Operating Caribbean GPS Observational Network) - A multihazard GPS/Met observatory: Enhancing geodetic and scientific infrastructure and the community in the Caribbean: K Feaux, J J Braun, E Calais, G S Mattioli, M M Miller, J Normandeau, J Sandru, G Wang  
1355h **T53A-02** Early implications of the COCONet GPS velocity field for studies of plate and microplate motions in the Caribbean: C Demets  
1425h **T53A-03** On the motion of the Caribbean relative to South-America: New results from GPS geodesy 1999-2012: R De La Rosa, J Marquez, M Bravo, Y Madriz, D Mencin, S G Wesnosky, P H Molnar, R Bilham, O J Perez  
1450h **T53A-04** GPS-derived slip rates of active faults in eastern Venezuela, along the southeastern Caribbean PBZ: F A Audemard, C Beck, F Jouranne, C E Reinoza, Title of Team: EFGAG  
1515h **T53A-05** Asymmetrical and heterogeneous elasto-static deformation along the El Pilar Fault in Northeastern Venezuela: C Reinoza, F Jouranne, F A Audemard, C Beck  

**Volcanology, Geochemistry and Petrology**

**V53A** Gran Cancun Poster Hall  
**Friday**  
**1340h** Geochemistry and Petrology: General Contributions Posters  
**Presiding:** A Motoki, Rio de Janeiro State University  
1340h **V53A-01** Petrography and Geochemistry of the Zamora Batholith in the south of the sub-Andean zone (Ecuador): F M Villares  
1340h **V53A-02** Petrography and U-Pb Zircon Geochronology of Geological Units of the Mesa de Cocodite, Peninsula de Paraguana, Venezuela: D Mend, M L Baquero, E P Oliveira, F Urbani, J Pinto, S Grande, V Valencia  
1340h **V53A-03** Cenozoic basaltic volcanism in W Turkey: Implications for lithospheric thinning and extension: S Altunyaynak  

**Union**

**U54A** Room Gran Cancun S  
**Friday**  
**1600h** Toward Ecohydrological Synthesis for the Americas  
**Presiding:** E Vivoni, Arizona State University; E A Yepez, Instituto Tecnologico Sonora; D J Gochis, National Center for Atmospheric Research; M Maass, Universidad Nacional Autonoma de Mexico  
Global Environmental Change

**GC54A Room Salon Cozumel 1**

Friday 1600h

**Millennial- to Century-Scale Climate Change of the Northern Neotropics: 20 Years of Chalco Basin III** *(joint with PP)*

**Presiding:** B Ortega, Instituto de Geofisica - UNAM; G M Cardenes, Florida Institute of Technology

1600h **GC54A-01** The record of mountain glaciation in central Mexico: L Vazquez-Selem

1630h **GC54A-02** Vegetation and aquatic communities responses to late Quaternary climate change in central Mexico: S Lozano-Garcia, M Caballero, A Correa-Metrio

1645h **GC54A-03** Understanding the MIS 5e in Central America: the Chalco Lake perspective: G M Cardenes, S Lozano, A Correa-Metrio, M B Bush

1700h **GC54A-04** Response of Terrestrial Vegetation to Variations in Temperature and Aridity Since the Last Glacial Maximum in Lake Chalco, Mexico: J P Werne, J Halbur, M Rubesch, E T Brown, B Ortega, M Caballero, A Correa-Metrio, S Lozano

1715h **GC54A-05** Late Quaternary ostracode-based paleoenvironmental reconstructions from Lake Petén Itzá, Guatemala and Lake Chalco, central Mexico: L Perez, S Lozano, M Caballero, M Brenner, A Schwab

1730h **GC54A-06** Late Quaternary temperature change velocity in Mesoamerica: A Correa-Metrio, S Lozano, S Sosa-Nájera, M B Bush

1745h **GC54A-07** Atlantic Multidecadal Oscillation recorded in fossil corals during the last Interglacial: L Vásquez-Bedoya, A L Cohen, D Oppo, W G Thompson, P Blanchon

Hydrology

**H54A Room Gran Cancun 1**

Friday 1600h

**Subsurface Structure and Transport with Applications in Mining III** *(joint with A, B, GC, H, NH, NG)*

**Presiding:** S Anwar, Missouri University of Science &amp; Technology; J Mendoza-Sanchez, Instituto Politécnico Nacional; J A Cunningham, University of South Florida; P A Herrera, Universidad de Chile

1600h **H54A-01** Optimal design of hydraulic head monitoring networks using space-time geostatistics: G S Herrera, H E Júnez-Ferreira

1615h **H54A-02** On two mathematical models of nonequilibrium two-phase flow in a porous medium: A Tarakanov, A Konyukhov

1630h **H54A-03** Onset of Natural Convection in Saline Aquifers: A Riaz

1645h **H54A-04** Feasibility Analysis of Managed Artificial Aquifer Recharge and Hydrological Studies in the Walla Walla Basin to Improve River and Aquifer Conditions: A Petrides

Paleoceanography and Paleoclimatology

**PP54A Room Salon Cozumel 2**

Friday 1600h

**Paleoceanography and Paleoclimatology General Contributions II**

**Presiding:** L I Perez-Cruz, Instituto de Geofisica, UNAM; A Sifeddine, LOCAN-IRD-UFF

1600h **PP54A-01** BEDDED BARITE DEPOSITS FROM SONORA (NW MEXICO): A PALEOZOIC ANALOG FOR MODERN COLD SEEPS: C Canet, P Anadón, E González-Partida, P Alfonso, A Rajabi, E Pérez-Segovia, L A Alba-Alvare

1615h **PP54A-02** Accretion history and stratigraphy of mid-Holocene coral reefs from Southeast Florida, USA: A Stathakopoulos, B M Riegl, P K Swart

1630h **PP54A-03** THE CABO FRIO (RI) COASTAL UPWELLING DURING THE MID-HOLOCENE: J C Dragaud, L de Freitas Assad, L Landau

1645h **PP54A-04** Caribbean scleractinian corals reveal solar influence on mixed layer temperatures for the past 500 years: J Estrella, A Winter, C Sherman, A Mangini

1700h **PP54A-05** WITHDRAWN

1715h **PP54A-06** Evaluation of the TEX86 temperature proxy in the Yellow Sea and northern East China Sea: K Shin, S Yoon, M Yamamoto, H Yi

1730h **PP54A-07** The UNAM sets up the first Laboratory on Accelerator Mass Spectrometry (LEMA) in Mexico: C Solis, E Chávez, M E Ortiz, E Andrade

SPA-Aeronomy

**SA54A Room Salon Cozumel 4**

Friday 1600h

**Studies of the Low-Latitude Thermosphere/Ionosphere in the American Sector III** *(joint with SM)*

**Presiding:** F S Rodrigues, UT Dallas; E Yizengaw, Boston College; J L Chau, Radio Observatorio Jicamarca; C Huang, Air Force Research Laboratory; M A Milla, Jicamarca Radio Observatory; E R Paula, INPE

1600h **SA54A-01** The Argentine Ionospheric Radar Experiment Station (AIRES): Science, Plans, and Status: M J Nicolls, D Janches, C Brunini, E Gurlarte, D L Hysell, C R Martinis
1617h  **SA54A-02** Interferometric radar observations of F-region irregularities in Brazil: F S Rodrigues, E R Paula

1634h  **SA54A-03** Ionospheric scintillation in Brazil: Analyses and Effects on GNSS Positioning: D B Alves, J S Souza, H D Silva

1651h  **SA54A-04** LISR Observations of the low-latitude ionosphere over South America: C E Valladares

1708h  **SA54A-05** Height variation of electron temperature associated with equatorial plasma bubbles – some recent rocket observations: P Muralikrishna, J S Batista, S Domingos, M G Aquino

1725h  **SA54A-06** Onset conditions of the equatorial electron density irregularities during a solar cycle: H Kil, S Oh

1742h  **SA54A-07** Storm Time Response of Interhemispheric Transport in the Topside Ionosphere: A G Burrell, A J Ridley, M R Hairston, R Stoneback

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**Tectonophysics**

**T54A Room Tulum**  **Friday**  **1600h**

**Solid Earth and Atmospheric Processes in the Caribbean in the Context of the Continuously Operating Caribbean GPS Observational Network (COCONet) III (joint with EP, G, NH, S, SI, V)**

*Presiding:* A M Lopez, University of Puerto Rico; D K Adams; L A Brown, University of the West Indies

1600h  **T54A-01** Co- and Post-seismic deformation after the 2012 Mw 7.6 Costa Rica Earthquake from Continuous GPS observations: R Malservisi, T H Dixon, M Protti, V Gonzalez, S Y Schwartz, T Newman, S R McNutt

1630h  **T54A-02** Isla de Coco, on Cocos Plate, Converges with Isla de San Andrés, on the Caribbean Plate, at 78 mm/yr: M Protti, V M Gonzalez, J T Freymueller, S Doelder

1655h  **T54A-03** COCONet Atmospheric Data Products: An Initial Assessment: J J Braun, T M Van Hove, G S Mattioli, K Feaux, J Normandeau

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**Mineral and Rock Physics**

**MR54A Room Salon Cozumel 3**  **Friday**  **1600h**

**Advanced Techniques on High-Pressure Mineral Physics Research (joint with DI)**

*Presiding:* H Liu, Harbin Institute of Technology; J Chen, Florida International University; W Yang, Carnegie Institution

1600h  **MR54A-01** High Pressure Research in the Large-Volume Press at the Advanced Photon Source: Y Wang, G Shen

1620h  **MR54A-02** High-Pressure Neutron Diffraction Studies for Materials Sciences and Energy Sciences: Y Zhao, Title of Team: Los Alamos High Pressure Materials Research Team

1640h  **MR54A-03** Micro-seismicity at high pressure and temperature: Developing a system for generating and detecting deep earthquakes in the lab: T Officer, R Secco

1655h  **MR54A-04** Harbin Institute of Technology collaborative base project at APS of Argonne: H Liu, L L Liu
Meeting of the Americas Presenting Author Index

Authors’ names are followed by the paper numbers of all presentations in which they are an author or coauthor.

To find a paper in this meeting program:

• Locate the name of the author in the index.
• Refer to the paper numbers in parentheses following the author’s name.
• The paper number includes the session and paper information.
• The last two digits of a paper number provide the sequence within a session.
• After locating the session number, find the session in the Program Content section, pages 48-103.

All paper numbers are listed for presenters who have more than one presentation.

Example: Paper SM31B-02 is scheduled on Wednesday morning, concurrent session B, the second presentation.
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