

2011 SCEC Annual Meeting: El Mayor-Cucapah Science and Earthquake Response Workshop

Conveners: Mike Oskin, Sinan Akciz, and Ramon Arrowsmith

Date: Sunday, September 11, 2011 (08:00 - 12:00)

Location: Hilton Palm Springs Resort

During the 2011 SCEC Annual meeting, our present understanding of the 4 April 2010 El Mayor-Cucapah earthquake was discussed among 184 registered participants. Many of the talks presented the results of ongoing collaborations between numerous academic and non-academic institutions from the U.S. and CICESE from Mexico. Among 14 talks total, four were given by CICESE colleagues. Numerous Masters and Ph.D. dissertations will likely be devoted to the investigation of this earthquake. Five invited graduate students (L. Meng from Caltech, O. Teran from CICESE, A. Gonzales from CICESE, J. Spinler from UA and P. Gold from UC Davis) presented their initial results. During the discussion period, participants reflected their views on opportunities for new discoveries in earthquake science and on future earthquake response activities. Workshop agenda and list of participants are attached below.

El Mayor-Cucapah Science and Earthquake Response Workshop Agenda

INTRODUCTION

08:05 The 4 April 2010 El Mayor-Cucapah earthquake source, from initial glimpse to synoptic overview (by *K. Hudnut, USGS*)

SEISMOLOGY

08:20 The 4 April 2010 El Mayor - Seismological evidence and dynamic model of reverse rupture propagation during the 2010 M7.2 El Mayor Cucapah earthquake (by *L. Meng, Caltech*)

08:35 Seismic field response to the El Mayor - Cucapah earthquake (by *E. Cochran, USGS*)

08:50 Spatial distribution of the 4 April, 2010 (Mw7.2) El Mayor-Cucapah seismic sequence using a local network (by *R. Castro, CICESE*)

GPS/InSAR GEODESY

09:05 Postseismic deformation following the El Mayor-Cucapah earthquake from GPS and InSAR

(by *A. Gonzalez, CICESE*)

09:20 Crustal deformation associated with the Mw7.2 2010 El Mayor-Cucapah earthquake from GPS geodesy (by *J. Spinler, UA*)

09:35 Satellite SAR geodetic imaging response and joint geodetic-teleseismic inversion for fault slip evolution models of the El Mayor-Cucapah earthquake (by *E. Fielding, JPL*)

09:50 *Break*

LiDAR AND UAVSAR

10:00 Airborne lidar of the El Mayor-Cucapah surface rupture: Rapid fault mapping and discovery of hidden structures and distributed deformation (by *M. Oskin, UC Davis*)

10:15 Horizontal and vertical deformation induced by the 2010 El-Mayor-Cucapah earthquake, as observed from SPOT and LiDAR imagery using COSI-Corr (by *S. Leprince, Caltech*)

10:30 Assessment of coseismic slip variation from terrestrial LiDAR scans of the El Mayor-Cucapah surface rupture (by *P. Gold, UC Davis*)

10:45 UAVSAR Observations of the 2010 M 7.2 El Mayor-Cucapah Earthquake (by *A. Donnellan, JPL*)

SURFACE RUPTURE MAPPING

11:00 UAVSAR as an Aid to Fault Rupture Mapping in the Yuha Desert (by *J. Treiman, CGS*)

11:15 Structural Controls on the Surface Rupture Associated with the Mw7.2 El Mayor-Cucapah Earthquake of 4 April 2010: A Comparative Analysis of Scarp Array Kinematics, Orientation, Lithology and Width (by *O. Teran, CICESE*)

11:30 Rupture Pattern of the 1892 Laguna Salada Earthquake: A precursor to 2010 El Mayor-Cucapah (by *K. Mueller, U Colorado*)

11:45 Discussion

12:00 *Adjourn*

List of 184 participants.

Name	Org.
Akciz, Sinan	UCI
Alaniz, Emigdio	ELAC
Allen, Sean	UNR
Arrowsmith, J Ramon	ASU
Banesh, Divya	UC Davis
Barba, Magali	UC Berkeley
Barbot, Sylvain	Caltech
Barbour, Andrew	UCSD
Ben-Zion, Yehuda	USC
Beroza, Gregory	Stanford
Biasi, Glenn	UNR
Bielak, Jacobo	CMU
Blanpied, Michael	USGS
Borsa, Adrian	UNAVCO
Boss, Stephanie	LMU
Brune, James	UNR
Buga, Michael	SDSU
Bull, William	Univ of Arizona
Butcher, Amber	Cal Poly Pomona
Bykovtsev, Alexander	Regional Acad of Natural Sciences
Cadena, Ana	CWU
Castro, Raúl	CICESE
Cato, Kerry	Cato Geoscience
Chen, Raymond	UCLA
Chen, Xiaowei	UCSD
Chen, Tao	China Earthquake Administration/USGS
Chiou, Ray	NAVFAC
Cochran, Elizabeth	USGS
Compton, Tracy	UC Davis
Cooke, Michele	UMass
Cowgill, Eric	UC Davis
Cox, Paul	UCLA
Crempien, Jorge	UCSB
Crosby, Christopher	SDSC/UCSD

Crowell, Brendan	UCSD
Davidge, Lindsey	USC
Dawson, Timothy	CGS
De Cristofaro, Jason	USGS
de Groot, Robert	SCEC/USC
Determan, Daniel	USGS
Dolan, James	USC
Donnellan, Andrea	NASA JPL
Donovan, Jessica	USC
Driscoll, Neal	SIO
Elliott, Austin	UC Davis
Evans, Eileen	Harvard
Farhat, Tarana	Hampton
Fialko, Yuri	UCSD
Field, Edward	USGS
Filson, John	USGS-Retired
Fletcher, John	CICESE
Floyd, Michael	MIT
Freeman, Stephen	GeoPentech
Fuis, Gary	USGS
Funning, Gareth	UC Riverside
Galetzka, John	Caltech
Gavillot, Yann	Oregon State University
Glowacka, Ewa	CICESE
Gold, Peter	UC Davis
Goltz, James	CalEMA
Gonzalez-Ortega, Alejandro	CICESE
Gooding, Margaret	LSA Associates
Greenwood, Rebecca	Cal Poly Pomona
Haddad, David	ASU
Hakamata, Tomohiro	UCSB
Haller, Kathleen	USGS
Hanks, Audra	Cal Poly Pomona
Hauksson, Egill	Caltech
Helmberger, Donald	Caltech
Henry, Pamela	Fault Line
Herbert, Justin	UMass
Hinojosa-Corona, Alejandro	CICESE
Hirakawa, Evan	SDSU

Huang, Yihe	Caltech
Hudnut, Kenneth	USGS
Huynh, Tran	SCEC/USC
Jackson, David	UCLA
Janecke, Susanne	Utah State
Ji, Chen	UCSB
Jiang, Junle	Caltech
Jones, Andrea	USC
Jordan, Thomas	SCEC/USC
Jordan, Jr., Frank	John R Byerly, Inc
Kang, Jingqian	Texas A&M
Kendrick, Katherine	USGS
Kim, Hyun-Tae	ASU
King, Nancy	USGS
Knudsen, Keith	USGS
Krishnan, Swaminathan	Caltech
Kroll, Kayla	UC Riverside
Lemnitzer, Anne	UC Irvine
Leprince, Sebastien	Caltech
Li, Xiangyu	UCSB
Lim, Amy	PCC
Lin, Fan-Chi	Caltech
Lindsey, Eric	SIO/IGPP
Lindvall, Scott	Fugro Consultants
Lipovsky, Brad	Stanford
Lippoldt, Rachel	Oregon
Lohman, Rowena	Cornell
Long, Kate	California Emergency Management Agency
Lui, Ka Yan Semechah	Caltech
Lynch, David	USGS
Lynett, Patrick	USC
Ma, Shuo	SDSU
Mak, Chi Ming	PCC
Manjarrez, Uriel	CICESE
Marliyani, Gayatri	ASU
Mason, Robert	PCC
Mazzoni, Silvia	Degenkolb
McBurnett, Paul	CSUN
McGill, Sally	CSU San Bernardino

McRaney, John	SCEC/USC
Meade, Brendan	Harvard
Meltzner, Aron	Nanyang Tech Univ
Mendes, Laura	ASU/UFR Rio de Janeiro
Meng, Lingsen	Caltech
Meng, Xiaofeng	Georgia Tech
Menges, Christopher	USGS
Minster, Jean	UCSD
Mitchell, Erica	UCSD
Morelan, Alexander	UNR
Mueller, Karl	Univ of Colorado
Muhammad, Kaliymah	CSU San Bernardino
Nissen, Edwin	ASU
Nyst, Marleen	RMS
Oglesby, David	UC Riverside
Oskin, Michael	UC Davis
Pace, Alan	Petra Geotechnical
Papikyan, Tatev	UCLA
Parker, Jay	NASA JPL
Paseda, Sulaimon	Howard
Patton, Patrick	Colorado
Perry, Suzanne	USGS
Ponce-Zepeda, Moises	ELAC
Ramzan, Shahid	CSUN
Rockwell, Thomas	SDSU
Rodriguez-Castro, David	Puerto Rico at Mayaguez
Rosove, Sari	UBC
Ross, Zachary	USC
Rousseau, Nick	SCEC/USC
Rousset, Baptiste	Caltech
Sahakian, Valerie	UCSD
Salisbury, James	ASU
Sanchez, Dominga	UCSD
Sandwell, David	UCSD
Sato, Tsurue	ASU
Scharer, Katherine	USGS
Severson, Chad	UC Riverside
Shao, Guangfu	UCSB
Shearer, Peter	UCSD

Sleep, Norman	Stanford
Smith, Deborah	CIW
Spelz, Ronald	UABC
Spinler, Joshua	Univ of Arizona
Steidl, Jamison	UCSB
Stock, Joann	Caltech
Streig, Ashley	Oregon
Sumy, Danielle	USGS
Tahtinen, Hillary	UCSD
Taylor, Michael	Univ of Kansas
Teran, Orlando	CICESE
Toke, Nathan	Utah Valley University
Torrens-Bonano, Angel	Puerto Rico at Mayaguez
Treiman, Jerome	CGS
Trudeau, Joseph	UCSB
Turkle, Katharine	USGS
Uchide, Takahiko	UCSD
van der Elst, Nicholas	UC Santa Cruz
Vanegas, Michelle	PCC
Wagner, Kelsey	USC
Walker, Brendon	SDSU
Walls, Christian	UNAVCO
Wei, Meng	WHOI
Wei, Shengji	Caltech
Weiser, Deborah	UCLA and USGS
Weldon, Ray	Oregon
Wesnousky, Steven	UNR
Williams, Patrick	SDSU
Wills, Chris	CGS
Withers, Kyle	SDSU
Wong-Ortega, Victor Manuel	CICESE
Yano, Tomoko	UCSB
Yong, Alan	USGS