8th Business Meeting of IASPEI/IAGA/IAVCEI Inter-Association Working Group on Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV)

November 4 , 2005, Puerto Vallarta, Mexico

Meeting started at 14:30

Participants:

Enrique Cabral (*ecabral@geofisica.unam.mx*)
James Cutler (Quakefinder, *jcutler@quakefinder.com*)
M. A. Dunajecka (UNAM, *monic15@wp.pl*)
Clark Dunson (*cdunson@quakefinder.com*)
Ivan Hrvoic (GEM Advanced Magnetometers, *info@gemsys.ca*)
Jun Izutsu (Tokai Univ., *izutsu@scc.u-tokai.ac.jp*)
Menas Kafatos (CEOSR, George Mason Univ., *mkafatos@gmu.edu*)
Anatoly Kotsarenko (UNAM, *kostarenko@geociencias.unam.mx*)
Toshiyasu Nagao (EMSEV Secretary, Tokai U, *nagao@scc.u-tokai.ac.jp*)
Dimitar Ouzounov (NASA GSFC/SSAI, *ouzounov@core2.gsfc.nasa.gov*)
Michel Parrot (LPCE/CNRS, *mparrot@cnrs-orleans.fr*)
Sergey Pulinets (UNAM, *pulse@geofisica.unam.mx*),
Nuria Segovia
Dumitru Stanica (Inst. Geodynamics, *dstanica@deodyn.ro*)
Seiya Uyeda (EMSEV Chair, Tokai Univ., *suyeda@st.rim.or.jp*),
Nick Varley (Univ. de Colima, *nick@col.mx*)

The IUGG Inter Association Working Group on Electromagnetic Studies of Earthquakes and Volcanoes (EMSEV) 2005 workshop entitled "Frontiers of Seismo-Volcano Electromagnetics" was held in Puerto Vallarta (Mexico) November 3-4 of 2005. Sergey Pulinets was Chair of the Local Organizing Committee.

The two day workshop was a part of the Annual Meeting of the Mexican Geophysical Union (UGM), Latinoamerican Society of Specialists in Remote Sensing and Space Analysis (SELPER-MEXICO) and Mexican Geothermal Association (AGM). The Workshop sessions included 30-science presentations and stimulating discussion. The Workshop was organized in four sessions:
EM theory, Processing and methodology I&II
EM Monitoring I&II,
EM Satellite and remote sensing I&II
Posters

The papers were presented by scientists from 10 countries – Mexico, Russia, USA, Canada, France, Japan, Romania, India, Philippines and Poland.

The Workshop provided an excellent opportunity to establish close contacts with Mexican colleagues

Business meeting was held on Nov 4, 2005 after science presentations. Seiya Uyeda (Chair of EMSEV) opened the meeting with thanks to the efforts of LOC for the very successful Workshop.

Toshiyasu Nagao (secretary of EMSEV) delivered the information on the new EMSEV URL site. Up to now current EMSEV domain was "http://yochi.iord.u-tokai.ac.jp/emsev" , but the newly introduced one is "http://www.emsev-iugg.org/emsev/". For some period of several months both domains will be active after which the new one only will remain.

Near future EMSEV related meetings and the contact persons are:

AGU Fall Meeting, December 8-9, 2005, **San Francisco.**
Progress in Understanding Electromagnetic Phenomena Related to Earthquakes (Dr. D. Ouzounov)

iSTEP (integrated Search for Taiwan Earthquake Precursors), March 6-9, 2006, Taipei, Taiwan. (Prof. J-Y Liu)

DEMETER First Science Meeting, June 14-16, 2006, Toulouse, France. (Dr. Michel Parrot)

EMSEV 2006 Workshop and Business Meeting, Nov. 20-22, 2006, Agra, India. "International Workshop on Electromagnetic Studies related to Earthquakes and Volcanoes". (Dr. Birbal Singh)

2007, IUGG General Assembly, Perugia, Italy.
Proposed EMSEV Symposia "PROGRESS IN ELECTROMAGNETIC STUDIES ON EARTHQUAKES AND VOLCANOES" consists of four sessions as follows: (Prof. Seiya Uyeda)

Session 1: "VOLCANIC STRUCTURE AND ACTIVITIES"
Convenor: Viacheslav V. Spichak;
Co-convenors: Jacques Zlotnicki, Yoichi. Sasai, Domenico Patella and Ciro Del Negro
Session 2: "ELECTORMAGNETIC FIELDS ASSOCIATED WITH EARTHQUAKES AND ACTIVE FAULTING"
Convenor: Malcolm Johnston;
Co-convenors: Naoto Oshiman, and Antonio.Meloni
Session 3: "CRUSTAL INSTABILITIES AND EARTHQUAKE PRECURSORS"
Convenor: Pier Francesco Biagi;
Co-convenors: Masashi Hayakawa, Jann-Yenq Liu, Toshiyasu. Nagao

Session 4: "SEISMO- ELECTROMAGNETIC STUDIES USING SPACE TECHNOLOGY"
Convenor: Ramesh Singh;
Co-convenors: Sergey Pulinets, Michael Parrot, Dimitar Ouzounov, and Valerio Tramutoli

Free Discussion:

Uyeda pointed out that we should make more efforts to write our papers more readable and understandable for wider audience who are unfamiliar to EM aspects. Uyeda proposed posting interesting EM papers (irrespective of published or rejected) on the EMSEV Web site for informing the community about the most recent progress made in seismo-volcano EM topics. To maintain high quality science in the posted material, a rotational editorial board was proposed from the floor. For the first 6 months period, the appointment of Sergey Pulinets and Dimitar Ouzounov was proposed and agreed. Toshiyasu Nagao further proposed that the EMSEV site should also be used as repository of information related to EM studies of earthquakes and volcanoes. The EMSEV members could contribute these materials as maps, samples of observations, data and etc.

Seiya Uyeda noted that, in his role as a foreign associate of the US National Academy of Science, he would encourage considering PNAS for publication. PNAS is one of the highest impact journals in the science community. Sergey Pulinets also mentioned that he is an editor of Geomagnetism and Aeronomy. This journal is looking for good EM papers.

Sergey Pulinets took up the issue of future applications under the EMSEV framework. He described our current knowledge about EM changes prior to major EQ's and the latest progress in theoretical modeling. Use of these models should help the design of pre-seismic EM monitoring experiments.

Clark Dunson (Quake finder) proposed the idea of code sharing between members of EMSEV. The current URL is possibly the best place to post this. A variety of free code for EM ground and satellite processing could be distributed between us. James Cutler (Quake finder) also added that sharing the free code between us will help to establish the quality control and would help in comparison of different processing results as well.

Menas Kafatos (George Mason U) brought up the issue that, from practical consideration, it would be useful to all EMSEV members to have access to the most recent models for generating EM signals prior to EQ.

Sergey Pulinets continued on the same topic and mentioned that the main criticisms of EM studies and earthquake derive from the fact that there is no comprehensive model connecting all existing phenomena. However, the most

recent publications and papers presented on this Workshop demonstrate that such models are emerging and further steps should be taken to provide more data for validation and improvements of these models.

Dimitar Ouzounov (NASA/GMU) made a comment that probably in the near future we could be able to describe quantitatively all processes in terms of the Lithosphere/Atmosphere/Ionosphere (LAI) coupling process.

Ivan Hrvoic (GEM Advanced Magnetometers) mentioned that the very important part of our work is missing – public relations. There is no active approach in presenting our methodology and successes to the scientific community. Therefore, EMSEV is an International organization which has little visibility on regional and national levels.

Seiya Uyeda agreed, but what really could be done to improve the image?

Dimitar Ouzounov proposed two opportunities, which could help to enhance the visibility of EMSEV and their members. First, short report from this EMSEV meeting could be prepared in December and sent for publishing to EOS. Second, EMSEV need to prepare a White paper document – which will contain the basic goals of the EMSEV, area of expertise, topics of new science development, opportunity for practical application and introduce EMSEV to other International organizations and societies.

The meeting agreed that this activity would help, as the first step to promote good visibility of EMSEV and also introduce EM topics widely among the science community.

Seiya Uyeda closed the business EMSEV meeting with the unanimous appreciation to Sergey Pulinets, LOC chair for the excellent organization of the EMSEV Workshop in Puerto Vallarta, Mexico.