

IAA Study Group Status Report

Responsible Commission: Commission 1 - Space Physical Sciences

Study Number and Title: SG1.14 - Title: Integrated Precursor Distinguish in Multi-Geophysical Fields around Global Earthquake Events with Magnitude larger than 7 in Recent 10 Years

Short Study Description (repeat from Study Group Proposal):

Earthquake anomaly distinguishing and determination is one of the most difficulties in the area of natural sciences in the world. Space observation have been showing strong capability to monitoring global seismicity and acquires ten`s times of case study than ground-based observation.

This proposal mainly focus on the case study of global strong earthquake during last 10 years to draw out the statistical characteristics of space-based precursors, including Ionospheric disturbances, Geomagnetic and geo-electrical fields, gravity field, infrared, remote sensing as well as crustal deformation by GNSS and InSAR, making connections among them in temporal and spatial distribution to ensure the reliability of anomaly and improve the distinguishing probability related to earthquakes, and try to make a proposal on global virtual system on earthquake monitoring from space by integrate different satellite resources with multi geophysical and geochemical parameters.

Developing and exploring the new way for earthquake monitoring and prediction, as well as the reliability analysis on anomalies in multi geophysical and geochemical parameters around same earthquakes. Advancing the establishment of the global virtual satellite constellation on earthquake monitoring, including electromagnetic, meteorological, infrared RS and hyper spectral satellites etc.

Progress in past six months:

Under the support of China Aerospace Science & Industry Corp., the project secretary Prof. Xuemin Zhang kept contact with the IAA office and commission 1 secretary to confirm the appointment in this project, until now the project chair and co-chairs all send their approval letters to IAA office, and all of the members have sent back their appointment signature letter to IAA office. Prof. Zhang checked the website in August 2016 of SG1.14 group, and she found that there occurred some wrong person shown in the list. The membership list has been updated.

On Aug. 22, 2016, we held an international meeting of IAA SG1.14, more than ten scientists attended this meeting and gave their presentations, including Prof. Dimitar Ouzounov, Valireo tramutoli, Katsumi Hattori, Jann-Yeng Liu, Xuhui Shen, Lixin Wu, Xuemin Zhang, Jianping Huang, Xinyan Li and Dr. Ye Liu. After the presentation. The members discussed together the outlines of the final report of this proposal, and decided to push forward the report preparation work according the proposal progress plan.

On Sep. 25, Prof. Xuemin Zhang will attend the IAC 2016 meeting in Mexico, and also attend the IAA commission meeting just before the IAC 2016. She will present the new development about this project on the meeting.

Website Study Information update: (please give any update regarding Study Group Membership, documents, Study Plan and Schedule):
The membership list has been updated.

Issues requiring resolution? (recommend approach):
Nothing.

Product Deliveries on Schedule? (If modified explain rationale):
Yes. Our study group was approved by the IAA in June 2015. We will complete the task in 3 years.

Study Team Member Changes? (List any Study Team Members that you wish to discontinue, and provide names plus contact coordinates of any Members you wish to add on the second page of this Study Update form.) Note: Complete contact information including email, tel. and fax must be provided for all additions. Only Members with complete contact information will be listed and receive formal appointment letters from the IAA Secretariat.)

Yes.

All the members have sent back their signature to the IAA office.
Prof. Dimitar Ouzounov was added to the list on August 22, 2016.

Name of person providing Study Group Status (Study Group Chair or Co-Chair):

Dr. Weimin Bao (Study Group Chair)

Status Report Date: August 31, 2016

Study Team Membership Changes

Effectivity Date:

Add:

Name: Dimitar Ouzounov

Mailing address: Center of Excellence in Earth Systems

Modeling & Observations (CEESMO), Chapman University, One University Drive,
Orange, CA 92866, USA

Tel : +1-703-404-8858

Fax:+ 1-703-444-0850

E-mail: ouzounov@chapman.edu