

Proposal for Forming an IAA Study Group SG 1.8

Title of Study:

Global Satellite System for monitoring and forecasting of the Earth seismic activity

Proposer(s):

Degtyarev Olexandr V.

Primary IAA Commission Preference: Commission 1

Secondary IAA Commission Interests: Commissions 3, 4, 5, 6

Members of Study Team**Chair(s):**

Co-Chair: Degtyarev Olexandr V.

Secretary: TBD**Other Members:**

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Short Description of Scope of Study**Overall Goal:**

Identification of characteristics of the observed from space phenomena occurring on the surface, in the atmosphere and ionosphere of the Earth, which would allow with sufficient degree of authenticity to find responses to the following key questions: where, when and how strong the earthquake will be.

Establishment of designing and engineering principles of the global satellite system for monitoring those characteristics, determination of the system architecture and necessary composition of

scientific instrumentation, development of approaches to conducting measurements and processing of the acquired data .

Intermediate Goals:

1. Searching and identification of seismic activity precursors including ionospheric disturbances.
2. Studying physical mechanisms of interaction within the system «lithosphere-atmosphere-ionosphere-magnetosphere».
3. Development of principles of seismic activity satellite monitoring for earthquakes forecasting.
4. Establishment of composition of satellite instrumentation.
5. Selection of satellites orbit, cluster configuration, architecture of the satellite constellation and ground segment of the System.

Methodology:

Forming an international study group, draft a detailed schedule of the study.

Coordination of a study report outline.

Assigning individual responsibility for sections of the study report.

Assigning an editor to coordinate individual sections and preparing an integral and coherent final study report.

Works to be conducted through on-line collaboration of the study group members as well as study group meetings to be held in the course of annual Congresses and IAA conferences.

Time Line:

2 to 3 Years

Final Product (Report, Publication, etc.):

Report

Target Community:

Scientists, engineers, Governments at large, local authorities, Space Agencies, UN, European Commission

Support Needed:

TBD

Potential Sponsors:

National Academy of Sciences of Ukraine
State Space Agency of Ukraine (SSAU)
CNES
ASI
UN COPUOS
European Commission

To be returned to the IAA Secretary General Paris

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Date: 21.02.2013

Olexandr Degtyarev

Follow-up Section for IAA use only

Initial Phase

Application received:

22 February 2013

Commission Approved:

SAC Approved:

Web Site Section opened:

Members Formally Appointed by IAA:

Final Phase

Peer Review by Commission Completed:

Recommended by the Commission:

Final Report Received:

SAC Approved:

BOT Accepted:

Publisher Selected:

Study Published: