

Proposal for Forming an IAA Study Group S 4.9

Title of Study:

INTERNATIONAL AEROSPACE SYSTEM FOR MONITORING OF GLOBAL GEOPHYSICAL PHENOMENA AND FORECASTING OF NATURAL AND MANCAUSED DISASTERS

Proposer(s): Sergey PUSHKARSKIY

**Primary IAA Commission Preference:
Commission 4 "Space System Operation & Utilization"**

**Secondary IAA Commission Interests:
Commission 6 "Space & Society"**

Members of Study Team

Chairs:

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Branch of Khrunichev Space Center / Director
K.R. Sridhara MURTHI, Antrix Corporation Ltd. / Managing Director**

Secretary:

**Sergey LYSYV, Maksimov Space Systems Research Institute - Branch of Khrunichev
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Other Members:

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**Efim MALITIKOV, Interstate Committee of Commonwealth of Independent States on
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Electrodynamics (RIAME) / Director
Rainer SANDAU, German Aerospace Center DLR / Chief Scientist
Victor SAVINYKH, Moscow State University for Geodesy and Cartography / President
Carlo ULIVIERY, Sapienza, University of Rome / Head of Department of Aerospace and
Astronautics Engineering
Sergey ZOLOTROY, Geoinformational Systems / Director

Short Description of Scope of Study

Research of possibilities to decrease the dangerous and negative consequences of global geophysical phenomena, natural and man-caused disasters with use of up-to-date and advanced aerospace facilities and technologies of monitoring.

Overall Goal:

To give proposals concerning creation of the International Global Monitoring Aerospace System (IGMASS) for monitoring of global geophysical phenomena and forecasting of natural and man-caused disasters on the base of efficient development and sharing use of aerospace capability, advanced technologies in the field of the Earth lithosphere, atmosphere and ionosphere monitoring, data processing methods and instruments to provide global operative and short-term forecast of natural and man-caused disasters in the interesting of decreasing of the dangerous and negative consequences of global geophysical phenomena, natural and man-caused disasters.

Intermediate Goals:

To determine aim and tasks of IGMASS creation, principles of its structure.
To compare existing international space systems for disaster monitoring, to reveal their features, advantages and disadvantages.
To determine preliminary structure of IGMASS.
To analyze technical and technological possibilities of IGMASS creation.
To research signs of disasters and possibilities of up-to-date equipment to register these signs.

Methodology:

Workshops, round table, presentations and discussions at 1M conferences and meeting, IAC and other scientific and technical forums, e-mail work, on-line activity.

Time Line:

2008 - 2009. Development of proposals to create IGMASS.
March 2009. Submit of proposals at 1M meeting in Paris and their discussion.
Determination of directions for further studies.
October 2009. Submit to 1M the report with the interim results of studies and draft of address on behalf of 1M to UN (UNEP - United Nations Environment Programme) with request to support project to create IGMASS and to begin its realization (IAC-2009).
November 2009. Discussion of studies results and draft of address to UN at the International Specialized Forum "Space & Global Safety of Humanity" (Cyprus).
2009 _ 2010. Research, preproject and project works to provide creation of IGMASS's elements.
Fall 2010. Submit final report to 1M

Final Product (Report, Publication, etc.):

Report with results of research concerning creation of the IGMASS.
Draft of address on behalf of 1M to UN (UNEP - United Nations Environment Programme) with proposals on project of creation of IGMAS and starting of its realization.

Target Community:

UN, governments of interested countries, national space agencies, IAF

Support Needed:

Reservation of rooms for meetings during 1M conferences and meetings, IACs. Publications in Acta Astronautica

Potential Sponsors:

UN, governments of interested countries, national space agencies, enterprises of space industry, IAF

To be returned to the IAA Secretary General Paris

by fax: 33 1 47 23 82 16 or

by email: sgeneral@iaaemail.org

Date: January 08, 2010

(No Signature required if document authenticated).

Follow-up Section for IAA use only

Initial Phase

Application received:

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: