

Proposal for Forming an IAA Study Group SG 3.30

Title of Study:

Space and its Utility in Forecasting Climate change

Proposer(s):

Roger X. Lenard (IAA academician, independent consultant)

Primary IAA Commission Preference: COMMISSION 3

Members of Study Team

Chair(s): Roger X. Lenard (USA)

Co-Chair(s): TBD

Secretary: Emeline DeAntonio

Other Members: TBD

Short Description of Scope of Study

Global Climate Change is an issue which impacts everyone on the planet. The ability to accurately forecast future conditions depends upon the accuracy and validity of data and the veracity of models which employ those data to predict future climate patterns. The objective of this study is to evaluate the ability of the models to predict future climate change given current data, and the information required to undergird these models using primarily space sensors. The SG will draw from an international set of experts in relevant fields with a thorough peer review of all data. The objective will be to identify what future space system could and should incorporate in order to provide the best possible data inputs for climate models.

Overall Goal:

By analyzing space systems data and climate models which utilize these data, the IAA can shed some needed perspective on how well we can predict future climate conditions and how space can play a pivotal role in verifying our current predictive capabilities.

Intermediate Goals: The intermediate goals include:

- Data gathering
- Data review and assessments
- Model review and understanding
- Sensor data, validity and needs for the future
- Long term predictive needs

Methodology:

Identify and select study participants

Generate Study report outline

Set up meetings for data input

Set up teams to review data and models

Draft study group chapters

Review inputs and submit to Commission III for review
Complete Academy Review
Submit for publication

Timeline:

November 2017 – July 2018 Identify SG participants
July 2018 – March 2019: Begin data gathering
Paris Spring Meeting 2019: Establish outline and send out
June 2019: IAA conference
IAC 2019: Draft chapter inputs
October 2018-March 2019 Continue Data gathering and model understanding
December 2019: Review study inputs at IAA Spring Meeting
February 2020: Finalize chapter reports
March 2020: Draft report to Commission III for review
June 2020: Complete Commission review and incorporate comments
July 2020: Submit to SAC for Review
September 2020 Submit for publication
November 2020 publication available for distribution

Final Product (Report, Publication, etc.):

Publication

Target Community:

International space community, Space Agencies, Industry, Universities, Interested individuals

Support Needed:

Meetings with UN IPCC
Meetings with appropriate government and non-government agencies

Potential Sponsors:

Universities, Space Agencies, Not for Profit Organizations