



Data Policy for the Afternoon Constellation



Afternoon Constellation Mission Scientists Working Group



Introduction to A-Train Science Data Policy

- **Background:** The A-Train satellites are coordinated in a tight configuration in order to take advantage of synergies of nearly coincident measurements of the Earth system from space.
- **Effort/Risk/Benefit:** The scientific value of coordinated A-Train satellite observations outweigh the costs and risks inherent in flying satellites in the A-Train constellation.
- **Scientific Motivation:** Maximize the scientific utility of the A-Train's nearly coincident observations of the earth system.
- **Policy Motivation:** A-train scientists and affiliated research groups currently participate in the full and open sharing of all data for synergistic research. If the current practice is formalized through a written policy, then,
 - as A-Train members come and go, the expectations of members will be well-understood and
 - the documents created for the A-Train operations may also serve as Best Practice documents for future satellite constellations.



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Limitations and Caveats to A-Train Science Data Policy

- **Legal limitations to Data Policy:** Where conflict exists, the A-Train data policy is superseded by international law and the laws of the countries of the participating A-Train agencies.
- **Science/Operational Use limitation of Data Policy:** The A-Train data policy applies only to scientific and not-for-profit operational utilization (i.e., non-commercial) of A-Train data. This policy statement does not apply to commercial utilization of A-Train data. A-Train member agencies are free to distribute data from their sensors as they see fit for commercial purposes.

Composite Data Working
Group Image Plan Board



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Proposed A-Train Data Policy (1 of 2)

A-Train mission members agree to abide by a common set of data exchange and access principles in support of science and not-for-profit operational environmental use for public benefit. In particular, mission member agencies endorse the following data provision principles for Level 0, 1, 2, 3 and 4 (where applicable) data products and agree to work toward implementing them to the fullest extent possible within available resources:

- A-Train member agencies will plan and follow data acquisition policies that ensure the collection of long-term data sets needed to satisfy Earth system science research requirements and secondarily for non-commercial operational use.
- A-Train member agencies agree to the full and open sharing of Earth science data obtained from all A-Train participating Earth observing satellites, and any ancillary sub-orbital platforms and field campaigns, with non-commercial scientific and operational users as soon as such data become available.
- Users must appropriately acknowledge the source of data upon publication and offer co-authorship where appropriate.
- To help ensure correct usage of the data by the broad user community, A-Train member agencies will provide easily accessible information about the data and related mission parameters, including user guides, quality assessments, and other supporting information.



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Proposed A-Train Data Policy (2 of 2)

- To enable data verification, inter-instrument data comparisons and algorithm synergy, A-Train member agencies will make available the equivalent of Algorithm Theoretical Basis Documents (ATBD) for calibration and higher level data products and, upon request, other necessary algorithm information (e.g., look-up tables, other radiative calculations, etc.) and/or identification and direction to ancillary data sets as well as the details of product comparison/validation efforts to the non-commercial scientific community.
- A-Train member agencies will establish appropriate mechanisms for providing data and documents, including guidance and aids for locating and obtaining the data.
- In order to realize maximum benefit, data will be made available as soon as the initial calibration and validation has been completed; the goal will be to release data in a preliminary form within six months of acquisition after the start of routine data acquisition.
- To enable operational use, real-time, near real-time and archived data will be made available on time scales compatible with user requirements within the A-Train member agency capabilities.
- A-Train member agencies may require registration of data users.
- Redistribution of A-Train data by users may be limited by member agencies; redistribution of “value-added” data sets (original data cannot be extracted) is permitted