

## Strateole 2 Data Policy and Management

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Strateole 2 is an international project that aims at a better understanding of dynamical, transport, and microphysical processes in the Tropical Tropopause Layer. Strateole 2 goals also include an improvement of numerical weather prediction systems in the tropics, and a contribution to satellite calibration and validation. Strateole 2 activities are organized around long-duration balloon campaigns, during which data will be collected by balloon-borne instruments as well as from additional sources (e.g., ground-based facilities, satellite instruments, etc.) The data gathered within Strateole 2 are intended for use in scientific studies or in activities related to weather forecasts only. In this context, the present data policy aims at developing data exchange and at fostering collaborations between Strateole 2 investigators and with the broader scientific community.

The Strateole 2 data policy is in compliance with the World Meteorological Organization (WMO) Resolution 40 (WMO Cg-XII) on the policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities:

*"As a fundamental principle of the World Meteorological Organization (WMO), and in consonance with the expanding requirements for its scientific and technical expertise, the WMO commits itself to broadening and enhancing the free and unrestricted international exchange of meteorological and related data and products."*

Additional Strateole 2 data policy requires:

A Strateole 2 Data Archive Center (S2DAC) will be established for the balloon campaigns and maintained afterwards. S2DAC will collect the balloon observations and associated ground-based or satellite data, reanalyses, and model outputs. The S2DAC include a primary, full repository in France, and a secondary, mirror site at Laboratory for Atmospheric and Space Physics (LASP) in Boulder, CO, USA. The LASP site will archive, as a minimum, the balloon trajectories and the following instrument datasets: FLOATS, RACHuTS, LPC, TSEN, Pico-SDLA, ROC, BeCOOL Both repositories will implement the data policy described in this document, notably rules associated with data availability and distribution. In addition, during the balloon campaigns, a subset of the whole Strateole 2 dataset will be disseminated on the Global Telecommunication System (GTS), so as to be assimilated by operational Numerical Weather Prediction systems. This dataset will be used and accessed according to the rule of the GTS.

Within the first six months following the end of the balloon campaign, all data shall be promptly provided by Strateole 2 investigators responsible for data acquisition to other Strateole 2 investigators upon request and notification of the intent of data use. After this initial period, i.e. no later than six months following the end of the balloon campaign, all Strateole 2 investigators participating in the field campaign are required to submit their data, free of charge, to the primary S2DAC repository.

During the first 12 months following the end of the balloon campaign, all Strateole 2 data will be accessible only to Strateole 2 investigators to facilitate inter-comparison, quality control checks and inter-calibrations, as well as an integrated interpretation of the combined data set.

Unless specifically agreed, no public release of the data (sharing with non-Strateole 2 colleagues, conference presentations, publications, commercial and media use, etc.) is allowed without the permission of the Strateole 2 PIs who are responsible for collecting the data.

Quality control procedures should be carried out by Strateole 2 investigators within 12 months following the end of the field campaign, unless unforeseeable issues emerge. Any remaining data quality issues should be made clear in the data documentation files. Improving Strateole 2 data quality will be a continuous effort. The suitability of the released data for scientific investigations and publications should be decided at the discretion of the Strateole 2 investigators responsible for data collection and quality control. When a dataset has reached QC standards or at the latest by the end of the 12 month period, it will be registered with a Digital Object Identifier (DOI) code to reference the dataset.

After the initial 12-month period following the balloon campaign, the Strateole 2 dataset will be freely available to the scientific community through the S2DAC website. The use of Strateole 2 data by the broader scientific community is allowed for the sole purpose of scientific studies. Commercial use and exploitation of Strateole 2 data by non-Strateole 2 participants are prohibited, unless specific permission has been obtained from the data provider. Besides S2DAC, only Strateole 2 PIs are allowed to transfer their dataset to third parties.

To encourage access to the data by a broad research community beyond the Strateole-2 PIs, the website will have browse data (specifically flight trajectory graphics) immediately available. On selecting data to download, the visitor will go once through a simple registration step to enter Name, Institution, email address. The email address validity will be automatically verified and the user will automatically be granted access to data download. The User information and email address will be used to collect statistics on the use of the data and to inform users of updates to datasets, tools or other information of scientific interest to the broader community. There will be a common registration process for the S2DAC and LASP web site to manage a single user file.

The authorship decision for publications resulting from using Strateole 2 data should follow the ethical rules of the journals and professional organizations (e.g., AMS, AGU, EGU). Strateole 2 investigators responsible for data collection are encouraged to make contributions to data analysis and writing of manuscripts, in addition to providing the data, to be co-authors of publications using Strateole 2 data. For articles making extensive use of Strateole 2 dataset, the rule should be to offer co-authorship to the data principal investigators. In any case, the data user is expected to contact the investigator to agree on either co-authorship or acknowledgement.

As of June 16, 2016, the following acknowledgements are suggested to be included in all publications using Strateole 2 data: “The xxxx data were collected as part of Strateole 2, which was sponsored by CNES, CNRS/INSU, and NSF. [The acquisition of the xxx data was carried out by YYYY under the support by www (if YYYY is not a co-author)]. The data are archived at the Strateole 2 Data Archive Center at <https://xxxxxx.fr> and at LASP <https://xxx.lasp.colorado.edu>.” If applicable, DOIs of used Strateole 2 datasets will be furthermore referenced in publications. The up-to-date acknowledgement formulation will be displayed on the S2DAC.

Publications making use of Strateole 2 dataset should be sent to the Strateole 2 project management as soon as they are submitted to a journal, conference or other organization, and registered in the Strateole 2 bibliographic database once published.



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