

Data protocol

of the HALO mission “Wave-driven Isentropic Exchange (WISE)”

Preamble

The HALO mission WISE took place from August 2017 to October 2017.

The participants of the campaign agree on this data protocol.

The aims of this data protocol are:

1. to encourage the rapid exchange of data within the consortium and the dissemination of the scientific results of the mission to the broader scientific community,
2. to uphold the rights of the individual scientists,
3. to have all involved researchers treated equitably,
4. to ensure the visibility and the integrity of the mission,
5. to produce a central repository of the data to be released to the public.

This data protocol formulates the common scientific practice as established in the field of atmospheric science for many decades.

§ 0 Definitions

In this document the term *principal investigator of the mission* – also called *Mission PI* or *PI of the mission* – refers to a person that is the scientific head of the mission. The term *coordinator of the mission* refers to a person responsible for logistical, technical, and administrative tasks during the mission. A *principal investigator of an instrument* – also called *Instrument PI* or *PI of an Instrument* – is a person in charge of a scientific instrument. A *principal investigator of a model* is a person in charge of a scientific model, with the same rights and obligations as an instrument PI. The term *participant of the mission* refers to a person that subscribed this document and was granted membership to the mission by the PI of the mission. The term *quicklook* refers to a visualization of preliminary data that is produced shortly after the respective data set was created. The term *consortium* refers to the whole community of all participants of the mission.

§ 1 Data management

(1) Data quality: The analysis of the scientific data has to be made following the *rules of good scientific practice*¹ defined by the Deutsche Forschungsgemeinschaft (DFG). This includes in particular that the analysis procedures have to be transparently documented and the scientific data and the documentation necessary to understand the data has to be stored for at least 10 years. A long-term preservation of the data beyond 10 years is encouraged.

(2) Data licensing and sharing: Within the first one year after the end of the mission the data is only available to the participants of the mission, with the only exception defined in § 4. It is prohibited to pass the data from other groups to non-participants during this period. After this period the PI of an instrument has to decide if the data set he/she is responsible for shall be released to individual persons or to the public by one of the following options:

closed: A potential data user can request data sets of individual instruments by contacting the respective Instrument PI. The data can be made available to that person under the conditions defined in the agreement in Appendix A of this data protocol. This agreement has to be signed by the applicant and returned to the respective Instrument PI. The final decision to share or not to share the data with that person remains with the respective Instrument PI.

open: The data set is made publicly available under a suitable open license such as one of the Creative Commons licenses² as recommended by the *Allianz der deutschen Wissenschaftsorganisationen*.

In either case the receivers of the data set are requested to accept the following common practice: *If a data set of the mission is used for a publication, co-authorship has to be offered to the respective instrument PI.*

(3) Data repository: The repository for the data set of the mission is the HALO-databases operated by the *Institute of Atmospheric Physics* of the DLR.

(4) Citation of data: Reference to a persistent identifier such as a digital object identifier (DOI) shall be applied to the data set and/or parts of it.

(5) Provision of data: Each group will provide *quicklooks* of their data to the participants shortly after each flight. The data of the individual scientific instruments along with the corresponding documentation to understand the data shall be made available to all participants as soon as possible. Six months after the observations were made the data and the documentation must be made available to all participants. The data should contain qualifiers of the status of the analysis (preliminary, final, etc.). Corrections and amendments to preliminary data must be made available to all participants as soon as possible.

(6) Data format: The participants must provide the data in standard scientific data formats such as the NASA-Ames format or the NetCDF format. The usage of standard names for the observed entities according to the CF convention is encouraged.

§ 2 Publications and Conference Contributions

(1) Authorship: If a data set from the mission is used in scientific articles or conference contributions the lead author must inform the instrument PI in due time and offer co-authorship to the scientists, who created the dataset.

(2) Right to refuse: The principal investigator of the instrument that created the data set has the right to refuse the usage of the data set in publications prior to her/his publication of that work.

(3) Co-authors: The manuscript for any publication must be sent to the co-authors in due time before submission with a copy to the principle investigator of the mission.

(4) Agreement on usage: It is the responsibility of the lead author on all publications to have the explicit agreement of all co-authors and other data contributors prior to submission.

(5) Recent version of data: The PI of an instrument must ensure that the data of this instrument used in the scientific articles or conference contributions is the best available at that time.

(6) Acknowledgement: The mission must be acknowledged in a suitable way in all publications that use data of the mission.

(7) Overview articles: Publications where the mission itself is the main subject – so called overview articles – must be approved by all PIs of the mission and all PIs of the instruments before submission.

§ 3 Public/Press

Presentations in public meetings and press releases may be made subject to approval by the mission PI and the co-authors involved. Any press release related to the mission must be approved by the PI of the mission.

§ 4 Associated scientists and collaborations

(1) An individual scientist wishing to collaborate can apply to get access to the data of interest. The scientist must provide a short written description of her/his aims to the mission PI. This will be considered by the mission PI and data access will be granted after approval by the respective instrument PI.

(2) Effective and productive collaborations between the participants of the mission and other projects are encouraged.

§ 5 Settlements/Avoidance of disputes

Any disputes about the use of the data in particular with respect to publications will be resolved by a committee of scientists suggested by the principle investigator of the mission and approved by the instrument PIs affected.

Signature of participant:

Date, place:

Name:

Position (PI, post-doc, student, etc.):

Address:

Email: