

Draft minutes prepared by Stefan Buehler
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COST 723 Data Exploitation and Modeling
for the Upper Troposphere
and Lower Stratosphere



Opening Workshop Minutes WG1 Session

Venue: ESTEC, Noordwijk, The
Netherlands
Date : March 12, 2004
Time: 11:00-15:30



1 Mission / Goals

General discussion concerning our role in the COST action and our goals:

- O3 rather well covered by existing databases (NDSC, GAW, WOUDC)
- Inconsistency of humidity data sets most prominent issue on global scale, hence focus on this
- Requires simultaneous temperature for conversion of absolute / relative humidity

2 Review of Action Items from last Meeting

Key	Who	What	Status
Bern-01	Pavol Nejedlik	Keep MC informed when new information concerning reimbursements for opening workshop becomes available.	Closed
Bern-02	Esko Kyro	Keep WG1 updated about planning for radiosonde intercomparison campaign and results.	Closed
Bern-03	Ulrich Leiterer	Suggest Vaisala representative for WG1.	Closed
Bern-04	Stefan Buehler	Contact Vaisala representative for WG1.	Closed
Bern-05	Ulrich Leiterer	Coordinate the discussion about a reference radiosonde humidity data set.	Ongoing
Bern-06	Frederico Fierli	Investigate if we can use the NDSC lidar H ₂ O database and report back to the WG, act as a COST723 representative in lidar related NDSC meetings.	Closed
Bern-07	Herman Smit	Coordinate data inventory and present first results at the opening workshop.	Cancelled
Bern-08	Valentin Simeonov	Report to the WG about available EARLINET data, act as COST 723 contact point in EARLINET.	Closed
Bern-09	Stefan Buehler	Work on AMSU based radiosonde station survey for UTH.	Ongoing
Bern-10	Mathias Milz	Provide MIPAS LS humidity data for the radiosonde intercomparison campaign period and area.	Open
Bern-11	Joerg Langen	Send Envisat data application form to Stefan Buehler.	Closed
Bern-12	Stefan Buehler	Submit a category 1 proposal for using Envisat data for the Action.	Closed
Bern-13	Kai-Uwe Eichmann	Prepare MIPAS/SCIAMACHY H ₂ O intercomparison talk for opening workshop.	Open
Bern-14	Stefan Buehler	Add publication list to COST 723 website.	Closed

3 Data Access / Exchange / Sharing

AI Marion Mueller: Take the lead in compiling a data leaflet for the actions internal use.

- What data is there
- Contact person

Limited scope, focus on practical information, not in-depth description.

4 Quality Control

- Assess data quality by intercomparison studies

- a) In situ / 1-on-1
- b) Satellite as transfer standard
- Work out accuracy and relative / mutual bias.
- Summarize / document by ACP(?) special issue in 2 years.

5 Summary of Planned Activities

- Radiosonde (operational / research)
- Lidar
- Operational met. Satellites
- Envisat (MIPAS / SCIA)
- Champ
- In-service aircraft (MOZAIC)
- Microwave (uplooking / limb-looking)

6 Radiosonde Activities

- 1-on-1 intercomparison: LAUTLOS (Esko Kyro)
- Satellite-based RS station survey (Stefan Buehler / Viju Oommen)
- **AI Ulrich Leiterer:** Coordinate the collection of a quality controlled high resolution radiosonde data set. (Together with Swiss and Polish stations.)
In an ongoing process is including and the Sofia station (Bulgaria). It is clarified the approach in homogenization of the time series data derived from different type radiosonds(it has in mind russian and Vaissala ones). About this matter a special workshop in Bulgaria will be organized, proposed by Staytcho Kolev. The details will be given in the next months.
- Better correction algorithms for standard radiosondes

7 Lidar Activities

- NDSC (Philippe Keckhut) /
- EARLINET (Valentin Simeonov)
 - Calibration standards
 - **AI Philippe Keckhut:** Give NDSC Lidar overview presentation at next workshop.

8 Met. Satellite Activities

- 3 year AMSU UTH climatology (Stefan Buehler)
- Intercomparison activities with RS, etc. (Stefan Buehler)

9 MIPAS Activities

- Select LAUTLOS matches and compare to in-situ sensors (Mathias Milz)

10 CHAMP Activities

- Compare LS temperatures to ECMWF (Torsten Schmidt)

11 Microwave Activities

- Bern aircraft radiometer @ LAUTLOS (Dietrich Feist / Niklaus Kaempfer)
- **AI Victoria Jay:** Report on MARSCHALS data after first test flight

12 Time Schedule

- Until mid-term workshop intercomparison activities
- After mid-term workshop documentation / publication
- Goal: Special Issue at the end of the action

13 New UTLS Satellite Missions

- We hope that in Frascati one of the missions with UTLS focus is selected.
- If yes, invite that mission to the next workshop.

14 Meetings

A meeting to work on the results of the LAUTLOS campaign is planned to be held in Lindenberg August 23-26, 2004. (The MC has decided later that day that the meeting will be supported by COST 723.)

AI Ulrich Leiterer: Send August LAUTLOS meeting information to Stefan Buehler, so that it can be put on the COST 723 Website.

15 Consolidated Workplan

The consolidated workplan can be found in Annex 1.

Annex 1: Consolidated WG1 Workplan

Working Group 1 (WG1): Data and Measurement Techniques

1 Work Programme (WP)

1.1 Data Focus

Gather data of the key parameters and make it available to the Action. The primary focus is on humidity, since this is the parameter with largest discrepancies in the available data sets. This implies temperature and pressure information as well. Anticipated data sources:

Humidity:

- Radiosondes (standard plus research type)
- Meteorological satellites
- Radio occultation satellites
- In-service aircraft (MOZAIC)
- Microwave instruments (uplooking (Bern), limb looking (MARSCHALS))
- Ground bases Raman lidar
- Envisat

Temperature:

- Radiosondes
- Meteorological satellites
- Radio occultation (CHAMP)
- In-service aircraft (MOZAIC)

Pressure:

- Radiosondes
- Radio occultation satellites

1.2 Data Access

Document data access where data is already obtainable online. Make data available to COST Action participants.

1.3 Validation

Cross-validation of the various data sources by intercomparison studies. Anticipated activities:

- Comparison of satellite radiances (MSG and AMSU) to modelled radiances based on radiosondes
- Direct comparison of different in situ and remote sensors from dedicated ground stations
- Campaigns, e.g., coordinated radiosonde flights
- Comparison of different Envisat instruments
- Comparison of radio-occultation data to data from other sensors

1.4 Development

Studies to improve the accuracy of existing sensors and to develop new sensors. Anticipated activities:

- Improved humidity radiosonde calibration
- Instrument studies for new satellite sensors (ACE+, MASTER)

2 Requirements from/to other WGs

Data Requirements from WG2 and WG3.

3 Gaps/extensions relative to MoU

Focus on reference data sets and cal./val. activities, not operational data handling. Focus on the parameter with the largest problems on global scale: Humidity (implying also temperature).

More specialized (e.g., cirrus) or more long-term datasets for WG3 may be added.

4 Deliverables

These deliverables will be produced within the framework of a number of national and European projects.

- Action internal documentation for data access and data usage
- Data products or data collections not otherwise available (quality controlled radiosonde humidity data, new satellite products)
- Publications about data quality, validation, and intercomparison results. Goal: Journal special issue about the WGs work at the end of the action.

5 Schedule

- Until mid-term workshop: Cross-validation activities
- After mid-term workshop: Documentation/publication

Annex 2: List of Action Items

Key	Who	What	Status
Noordwijk 1	Marion Mueller	Take the lead in compiling a data leaflet for the actions internal use.	Open
Noordwijk 2	Ulrich Leiterer	Coordinate the collection of a quality controlled high resolution radiosonde data set.	Open
Noordwijk 3	Philippe Keckhut	Give NDSC Lidar overview presentation at next workshop.	Open
Noordwijk 4	Victoria Jay:	Report on MARSCHALS data after first test flight.	Open
Noordwijk 5	Ulrich Leiterer	Send August LAUTLOS meeting information to Stefan Buehler, so that it can be put on the COST 723 Website.	Open