Purpose and 2nd Draft Agenda of the First ISSI TUNER Meeting in Berne, ISSI, 4 December 10:00 -8 December 12:00

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Purpose and Rationale

The purpose of this meeting is to discuss and write a paper containing recommendations regarding unified reporting of retrieval errors. With this, the following dilemma was identified.

1st horn: If we hold off on the publication of this paper until the end of the project, none of the papers published in the AMT TUNER special issue will follow the TUNER recommendations, because these will not yet be available when the specific papers are written. Each author will use different terminology and concepts, and what we accomplish will be the opposite of unification.

2nd horn: If we publish the recommendations too soon, a lot of specific studies which are necessary to develop the recommendations will not be available yet. Further, the early overarching publication will "stealing the thunder" from the publications dealing with specific aspects.

Solution: We intend to start writing the paper right now. All issues which can already be dealt with (terminology, theoretical issues which can already be inferred deductively, pre-existing knowledge, reviewing of existing work) shall be included as soon as possible. The paper draft will be made available to the TUNER team to help unification in terms of terminology etc., but the paper will not be published immediately. Instead it will serve as a "living document", and new TUNER results will be included step by step, when they become available. At the end of the project, this paper shall be published.

It is not clear, however, if it is indeed necessary to defer the submission of this paper by the end of the project. This issue will be discussed during the meeting.

Actions Associated with Meeting Preparation

- 1. The responses to the questionnaires have not been made available because of limited feedback by the team members.
- 2. A skeleton of the paper will be distributed, which will already include some theses and/or recommendations. Some of these might be controversial and thus need discussion in Berne.

3. The participants will have the opportunity to report on their TUNER-related activities. Please notify TvC about planned presentations to allow to update the agenda.

Draft Agenda

International Team Meeting, ISSI Berne, 4 December 2017, 10:00 –recent MLS error analysis work and the implications for TUNER 8 December 2017, 12:00

Monday 4 Dec

- Welcome by ISSI official;
- Logistics (and admin stuff if needed);
- Find a volunteer to take notes;
- Re-iteration of the TUNER goals;
- Presentation and discussion of the agenda, discussion of the workshop goals;
- Short presentations on specific studies related to TUNER.

Alexei Rozanov: Overview on data and methods used in Bremen.

Amy Braverman: Uncertainty quantification for remote sensing retrievals.

Patrick Sheese: ACE-FTS O3 drift and natural variability.

Viktoria Sofieva: On validation of random uncertainty estimates and probing atmospheric small-scale fluctuations

Thomas von Clarmann: Quantification of natural variability and some other issues.

USask team: OSIRIS and OMPS-LP error analysis

Nathaniel Livesey: recent MLS error analysis work and the implications for TUNER

• (Nathaniel, Doug and Thomas only) adjust the agenda for the next day.

Tuesday 5 Dec

- Continue with presentations if necessary;
- Plenary discussion of points where disagreement has been discovered; topics may included, e.g.:

Desiderata and Conditions of Adequacy;

Error vs. Uncertainty;

- breakout sessions for writing of the paper in subgroups on points where agreement has been found.
- review of the newly written parts and clean-up of the document.
- (Nathaniel, Doug and Thomas only) adjust the agenda for the next day.

Wednesday 6 Dec

• Plenary discussion of points where disagreement has been discovered; topics may included, e.g.:

The nature of the parameter error;

Which issues go into this paper, which deed a dedicated paper?

Is the user helped with generalized correlation patterns?

- breakout sessions for writing of the paper in subgroups on points where agreement has been found.
- review of the newly written parts and clean-up of the document.
- (Nathaniel, Doug and Thomas only) adjust the agenda for the next day.

Thursday 7 Dec

• Plenary discussion of points where disagreement has been discovered; topics may included, e.g.:

Smoothing error pitfalls;

Onion peeling emulations;

Early or late publication of this paper?

- breakout sessions for writing of the paper in subgroups on points where agreement has been found.
- review of the newly written parts and clean-up of the document.
- (Nathaniel, Doug and Thomas only) adjust the agenda for the next day.

Friday 8 Dec

- Wrap up of results;
- Discussion of the next steps;
 - how to proceed with the paper
 - place and date of the next meeting
 - Reimbursement issues
 - minutes
- · End of meeting.

Coffee and lunch breaks to be inserted as needed

Follow Up Work

- 1. distribution of minutes to the (entire, not only ISSI-TUNER) team
- 2. editorial smoothing of the parts of the paper already written;
- 3. distribution of the draft paper among the (entire, not only ISSI-TUNER) team
- 4. maintainance of the paper draft as a "living document"

5. further homework, as defined during the meeting

Comments are welcome!