AGENDA

14 May

9:00 AM **Greg**: Summary of proposal and reminder of goals, approach, and schedule.

Group: Discussion of plans overall and specifics for this meeting.

9:30 AM **Greg**: Update on US (NASA and NOAA) TSI missions. Updates on TSI Radiometer Facility tests planned.

9:45 AM **Wolfgang**: Update on European TSI missions. Updates on DARA, CSAR, and CLARA instruments.

10:00 AM **Claus**: What is the absolute value and uncertainty of VIRGO, particularly for the specified 2008 solar minimum period? How are other instruments (ACRIM, TIM) used in the VIRGO data production? Have the SoHO Keyhole corrections been applied to the VIRGO data yet, or should we de-weight those periods in our analyses?

10:45 AM **Wolfgang**: Given the latest calibrations of the difference between the SI and the WRR scales, what correction and associated uncertainty would you apply to the VIRGO data to put it on the SI-scale? Is this consistent with the TRF results obtained on the VIRGO-2?

11:15 AM **Sabri (Steven, Els)**: What is the best SARR and SOVAP absolute value of TSI and with what quantified uncertainties is it tied to SI? Your group has had several different instruments over the years with very different TSI values, the latest of which are much lower than your prior ones: What causes the large variations between instruments, and why might we best trust which values? Why would the large spread in the measurements not be indicative of high absolute uncertainties? What are plans for continued PICARD/SOVAP operations?

12:00 PM Lunch

1:30 PM **Dick (Greg will discuss in Dick's absence):** Should we currently treat ACRIM1 and ACRIM2 as highly uncertain since you have not yet applied scatter corrections to them, so that we can freely move them on an absolute scale? Or should we apply the same scatter factor to them that you have to ACRIM3 (albeit with greater uncertainties) since that correction is probably better than none given that they are currently lacking any diagnostic lab measurements? Could you provide an ACRIM3 TSI absolute value and associated uncertainty for the specified solar minimum period? This would include the ACRIM3's inherent uncertainties plus an estimate of additional uncertainties from applying the ground-ACRIM3 scatter measurements to the flight unit.

2:15 PM **Greg**: What is the TIM TSI absolute value and associated uncertainty during the solar minimum period? What are the time-dependent

uncertainties on the TIM data? Is the current operational power-cycling mode affecting performance?

3:00 PM **Wolfgang (Werner, André)**: What is the PREMOS TSI absolute value and associated uncertainty during the solar minimum period? What are the time-dependent uncertainties on the instrument's stability? How large is the instrument's current degradation correction?

~~3:45 PM **Pia**: Can you please identify which specific data and time periods should be viewed as being questionable due to inconsistencies with other instruments or solar proxies?~~

4:15 PM **Group**: Discussion of absolute value during the solar minimum period to which composite will be tied, including estimated uncertainty in this value.

15 May

9:00 PM **Will**: What are the latest SATIRE model results with daily TSI values covering the S/C record (Nov. 1978 to present)? Using this SATIRE time series as a check for consistency when doing comparisons with individual TSI instrument time series, can you identify temporal regions in which the instrument data may be suspect, and attach any estimates of uncertainties based on the deviations?

9:45 AM **Group**: Continued discussion of absolute value during the solar minimum period to which composite will be tied. Agreement on value and uncertainty.

10:30 AM **Thierry**: Could you give an overview of your SVD method for evaluating TSI time series? Please lead us through a hands-on example of making a composite from the ACRIM3, VIRGO, and TIM data records to get us started using this method.

Group: Be familiar with Thierry's 2011 A&A paper that we discussed at the first meeting, and be prepared with your computer to experiment with methods of producing composites, whether via the SVD or your own suggested method.

Lunch

Afternoon **Group:** Discussion of Thierry's SVD analysis and selection of method for creating a composite

- How do we attribute uncertainties? Do residuals between instruments and the common-mode based composite indicate uncertainties in the composite, or can we isolate and attribute them to an individual instrument?
- How well does SVD (or any other proposed) method work with only two instrument data records? Do we rely on a proxy model (i.e. SATIRE) as a

third time series when lacking three or more simultaneous instrument records?
- How do we account for long-term and time-dependent drifts between records?

Hands-On Working Meeting
- Experiment with creating composites using time-dependent weightings of instrument data records (as opposed to binary selection of instrument records)
- Estimate time-dependent uncertainties in individual records via comparisons with other records or models from chosen method of creating composite. Summarize time periods identified as having high uncertainties due to suspected instrument artifacts, either from *a priori* knowledge or via residuals from composite.
- Start creation of new composite from individual records. Use the ACRIM3, TIM, and VIRGO data for initial examples and demonstration of methods.

16 May

9:00 AM **Group Discussion and Working Meeting**
- Discuss results and questions we have combining data after experimenting with applying methods
- Further identification of suspect time ranges identified by continued experimentation with method
- Agreement on overall method of creating composite

Lunch

Afternoon **Group Discussion**
- Plans for extension of method to all instrument data sets
- Plans and scheduling for completion of composite and continued communications after meeting
- Planning and schedule for resulting publication
- Schedule and planning for final meeting for Spring 2014

2:00 PM Adjourn