



Minutes of meeting Cologne November 2005

List of attendees:

S. Bourdarie (ONERA/DESP)
E. Daly (ESA/ESTEC)
M. Dingirard (ONERA/DESP)
T. Goka (JAXA)
M. Panasyuk (MSU)
K. Tobiska ()

Agenda:

Presentation of user's needs document
Presentation of the data analysis document
Open discussions



I. Presentation of the user's needs document

S. Bourdarie has presented the last version of the document. The goal was to get comments from all attendees to integrate them (according to their relevance) in the final document.

The various comments are listed below:

- in the cover page a list of authors should be provided (i.e. the PRBEM working group) – from E. Daly
- in the context section add Japan models to reflect JAXA activities – from T. Goka
- in the trapped electron model requirements the upper limit of the energy coverage should be lowered because to satisfy this requirement new monitors have to be developed and this would be very much expensive for probably very little use – from E. Daly – From everybody comments it turns out that setting 7 MeV as an upper limit would be fine and sufficient to address all expected damage effects on spacecraft and payloads.

II. Presentation of the data analysis document

S. Bourdarie has presented the last version of the document. The goal was to get comments from all attendees to integrate them (according to their relevance) in the final document.

The various comments are listed below:

- in the cover page a list of authors should be provided (i.e. the PRBEM working group) – from E. Daly
- in the intercalibration based on SEP (V-2) figure 15 has been discussed – E. Daly. – It was pointed out that the red line showing correlation was produced under the following constrain: the curve has to cross the origin and this is not the best to extract a cross-calibration factor (from the slope). It would be better to plot a curve with a slope equal to one and compute the average factor of data deviation from that curve.

III. Open discussions

How to propose new standard radiation belt models:

- E. Daly suggests that new models themselves have to be submitted to ISO WG4 to become an ISO standard.
- S. Bourdarie suggests that only procedures to apply to analyse data and to produce new models should be an ISO standard and not the models

These issues have been discussed a lot. Most attendees agreed with the idea of having ISO standard procedures rather than a model itself. The main advantage being to leave model development open according to new data acquisition, new ideas to produce a model as long as they are compliant with the standard procedures.

How to validate new models:

- E. Daly suggests that data used to produce a new model should be publicly available so that one can test again the data and the model to validate it.
- S. Bourdarie remarks that testing again the data makes no sense (it is time consuming and only consists in re-doing the work). S. Bourdarie suggests that an efficient way of testing new models is to use in-flight degradation (like solar array power degradation,

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dose effect on component ...). One future action of the COSPAR PRBEM panel will be to set up an international group of user's (from space agencies and industries) whose job will be to propose a set of guidelines to apply to benchmark any new models.