Recommendation (1)

In order to establish reference datasets to support the understanding of climate change and quality assure operational services by E.O. satellites, data from different sensors and the resulting synergistic data products require a high level of accuracy which can only be obtained through continuous traceable calibration and validation activities.

In this context, IVOS recommends to initiate an activity to :

–document a reference methodology to predict TOA radiance for which currently flying and planned wide swath sensors can be inter-compared, i.e., define a standard for traceability.

– create and maintain a fully accessible web page containing, on an instrument basis, links to all instrument characteristics needed for inter-comparisons as specified above, ideally in a common format.

– create and maintain a database (e.g.: SADE) of instrument data for specific vicarious calibration sites in a common format delivered by agencies responsible for their instruments. This database should also include site characteristics.

This activity should be supported for an active (implementation) period of 2 years and a maintenance period over 2 subsequent years. An amount of 500 K-euro/$ is estimated to be required for this activity.

Agencies are asked to support this activity by providing appropriate information and data in a timely manner.

Future actions for IVOS related to recommendation (1)

- Create and distribute an orbit propagator tool for large scale optical sensors (ESA)
- Specify a data format to be used for a database for inter-comparison purposes such as SADE (ESA/CNES)
- Contact instrument teams to adhere to the previous recommendation, i.e., to provide instrument descriptions and inter-comparison data in a common format (IVOS to establish white paper containing rationale and defining benefit and intended use)
- Encourage the use of diagnostic sites as established by international cal/val teams (IVOS in coop. with WTF)

Future Action (2)

Planning of a potential field experiment for 2006/2007 based on a pilot experiment in March 2005 in Argentina (prior to next WGCV meeting) aiming at:

- –Bringing international teams together to develop best practice and agreed protocol for future vicarious calibration activities and evaluating the potential of this technique as a means of improving calibration and validation.
- –Comparing all field radiometers against the same source before the field experiment.
- –Comparing radiative transfer models in the context of the experiment.