

IIFS WG Report from ITSC-20

Stephen English, Jerome Lafeuille, Dieter Klaes, Rob Roebeling, Sid Boukabara, Peng Zhang, Nancy Baker, Rich Kelley, Mitch Goldberg, Alexander Uspensky, Allen Huang, Wei Han, Louis Garand.

Rec IIFS.1: Emphasize latency requirement in the HLPP Action 2.3 to increase the use of research and pre-operational satellites. (**Action: Mitch Goldberg to propose to CGMS**).

Rec IIFS.2: When an agency has two or more satellites in the same nominal orbit (e.g. 2pm) that they be staggered by phase (as Metop). With multiple satellites from different agencies it is recommended to stagger them in ECT. (**Action: Mitch Goldberg to present to CGMS**).

Rec IIFS.3: IIFS members to investigate optimal staggering to test working assumption that dual Metop configuration separated by about 180° is best option for future missions. (**Action: IIFS members to provide evidence to IIFS co-chairs of advantages of orbit staggering**).

Rec IIFS.4: Provision of high temporal frequency MW humidity sounding radiances (alongside cloud and precipitation sensitive observations). (**Action: Jerome Lafeuille to present to WMO Vision 2040**).

Rec IIFS.5: Provision of low-inclination MW humidity sounding to monitor diurnal cycle. (**Action: Jerome Lafeuille to present to WMO Vision 2040**).

Rec IIFS.6: Achieve SI traceability of operational hyperspectral IR sounders, recognising growing need for assessment of calibration uncertainties. (**Action: Mitch Goldberg and Peng Zhang to present to GSICS**).

Rec IIFS.7: Provide more GRUAN and tropical ARM sites, given the need for ground-based reference measurements. (**Action: Mitch Goldberg and Peng Zhang to present to GSICS**).

Rec IIFS.8: Develop best practices in pre-flight characterisation of MW sensors (**Action: Mitch Goldberg and Peng Zhang to present to GSICS**).

Rec IIFS.9: Noting the progress made in characterising observation uncertainty for hyperspectral sounders encourage further characterisation of LBL model error and errors arising from cloud screening, with a view to considering hyperspectral sounders as an absolute reference. (**Action: Mitch Goldberg to ensure this is delivered to IRC and RTWG.**)

Rec IIFS.10: Clarify reporting procedure for notifying ITU of detected RFI. **(Action: Rich Kelley to circulate proposed procedure and ITWG members to follow).**

Rec IIFS.11: WRC outcomes to be provided to ITWG. **(Action: Rich Kelley to email summary to ITWG mailing list).**

Rec IIFS.12: IIFS and other ITWG members to provide information on current usage of protected bands to Rich Kelley. **(Action: Stephen English to provide copy of recent ECMWF submission to OFCOM, and to request Met Office to provide copy of their submission as well as encourage other NMSs to provide similar information where it exists).**

Rec IIFS.13: To make MW SRFs available to facilitate RFI investigations when needed. **(Action: Stephen English to ask co-chairs to combine with Recs from other WGs and communicate to CGMS).**

Rec IIFS.14: Update Steve English's study from 2005 on the value of individual MW protected bands. **(Action: Sid Boukabara to ask Thomas Auligne to consider making this part of the FSOI intercomparison study and presenting to the WMO impacts workshop in Shanghai in 2016).**

Rec IIFS.15: NMSs to attempt to provide an assessment of the economic value of bands based on the impact assessment, as was done by the Met Office in 2005. (**Action: IIFS members to investigate in their countries**).

Rec IIFS.16: WMO and CGMS satellite operators to further maintain OSCAR and SATURN, noting the strong positive feedback from ITWG Members. (**Action: IIFS members to review SATURN and provide comments to Stephan Bojinski sbojinski@wmo.int**)

Rec IIFS.17: Provide information on best practice for the design phase of new programmes. (**Action: Dieter Klaes to circulate his paper from the ECMWF satellite seminar, and IIFS members to provide similar information to IIFS co-chairs for their agencies if possible.**)

Rec IIFS.18: The NWP community to continue to produce and make available Nature Runs to support preparations for, and fair evaluation of, potential future observations. (**Action: IIFS co-chairs to bring recommendation to attention of WMO, ECMWF and GMAO.**)

Rec IIFS.19: Noting the excellent news of the move of FY-3E to the E-AM orbit to consider how to ensure continuity of E-AM post FY-3E and DMSP. (**Action: Nancy Baker and Peng Zhang to pass Rec to DoD and CMA.**)

Rec IIFS.20: Continue the SSMIS 60 GHz UAS capability, noting the trend for NWP models to extend higher in the stratosphere and lower mesosphere and the development of Space Weather Modelling. (**Action: Nancy Baker to report to DoD and Jerome Lafeuille to raise at WMO Vision 2040.**)

Rec IIFS.21: WMO to promote standards to foster interoperability and usability of possible missions from commercial providers. (**Action: Jerome Lafeuille to provide information when the need arises**)

Rec IIFS.22: Secure full government control for observations classed as essential under WMO Res 40. (**Action: Mitch Goldberg to Report to CGMS**)

Rec IIFS.23: Noting the strong overlap of interest among the CGMS international science groups for some subjects (e.g. ITWG, IWWG and ICWG about MTG-IRS) co-chairs to ensure coordination where appropriate of communications to CGMS. (**Action: Mitch Goldberg to Report to CGMS**)