Convection Working Group Splinter Meeting – Minutes of Meeting

Date: 01.10.2024
Location: Würzburg, Germany (EUMETSAT Conference), hybrid
Participants: see Appendix A

Welcome

The co-chairs welcomed all the participants at 14:10 UTC.

Recap and review of outstanding actions

9th CWG Action 1: Check on the NWCSAF Cloud Phase product tuning for FCI. [**NWCSAF**] - ongoing until operational FCI data will be available

9th CWG Action 2: Check with EUMETSAT on the possibility to have the same RGB names on EUMETView as it is at EUMeTrain (and other platforms). [**Co-Chairs**] - ongoing

9th CWG Action 3: Check with EUMETSAT and ESSL on the possibility (plans) on developing Minimum flash area product for LI. [**EUMETSAT**] - ongoing. If users need this product, EUMETSAT is not opposed to having the baseline changed in the future if this comes from the delegate bodies.

9th CWG Action 4: Make the current MTG Proc software visualization of RGBs in the EWC publicly available. [**Jan Kanak]** - It has been implemented. We can close this action.

9th CWG Action 5: Informing and making the RGB developers aware of 9th CWG Recommendation 9 and 10. **[Co-chairs]** - ongoing until the next RGB workshop 2025. Date still to be decided, but plan is to have it around April 2025, other suggestions welcome.

9th CWG Action 6: Checking and clarifying with EUMETSAT the displacement between FCI channels with different resolution. [**Co-Chairs**] - ongoing, Jan Kanak and Johan Strandgren are checking it.

9th CWG Action 10: CWG members are invited to share surface measurement data with Xavier Calbet on near stationary case study. **[ALL]** - ongoing, some members are in contact with Xavier.

9th CWG Action 11: Define the way forward for the Best Practice document, have a discussion at the next online meeting **[Co-Chairs]** – ongoing.

9th CWG Action 12: Best Practices document to be transferred to User Portal **[Co-Chairs]** – ongoing

9th CWG Action 13: To create a glossary on the satellite-observed features atop storms **[Co-Chairs]** - ongoing. Document will be shared with the group to add relevant definitions.

The latest updates on MTG-I1 commissioning

Johan Strandgren presented shortly where the commissioning are at the moment. Both FCI L1c and LI L2 data are pre-operational for all users. Several talks were presented during the

conference on MTG-I. Calibration of the IR channels are using IASI data (plenary talk, available online). Some known limitations of the FCI L1C data relevant to users include:

- FCI ESL correction currently not activated, analysis ongoing and decision will be taken on October 7 based on recommendation by FCI MAG. Will go users shortly afterwards.
- Striping in FCI IR12.3 channel since September 17 because of mis-behaving detector pixel. Upload of new pixel map should happen anytime soon.
- Channel-to-channel co-registration artefacts in the IR may be visible (striping, shadow effects), especially in RGBs.
- Residual non-linearity-like error observed for IR7.3 channel (but still within requirement). Analysis ongoing.

The full list of known limitations can be found here:

https://user.eumetsat.int/news-events/news/public-release-of-pre-operational-mtg-i1-fci-data

Joachim Saalmüller described the transitions of MTG-I towards operations. MTG-I1 is planned to be renamed Meteosat-12 end of November when LI L2 data become operational. FCI L1c data will become operational while FCI L2 is still pre-operational.

Update on Best Practices Document

The BP document was shared with the group. Some members have already updated some parts. John Mecikalski will review the document and mark the parts which are outdated and also identify the gaps (lightning) in the document. Steve Goodman has volunteered to write a section on the Minimum Flash Area product from GLM.

BP document will only be transferred to the User Portal after the first update has already been made. It is foreseen that the document will be more semi-live.

Updates from CWG members

Xavier Calbet gave an update on the new products which has been added to ADAGUC in the EWC. Details of the products is in his slides. Attention was drawn to one of the products developed by Caglar Kucuk, EUMETSAT fellow: the product may die after Caglar finishes his fellowship. The group discussed this possibility and NWCSAF will check with Caglar on his plans and possibilities to continue the development of the product.

Alois Holzer introduced the MTG-I product used in the ESSL displayer. New RGBs, such as Cloud Type and Cloud Phase have been implemented in the displayer together with different LI products. Forecasters were impressed with MTG-I data which they used real-time in the last testbed. They found the experimental LI geometry product very interesting (groups in each flash are connected and group density is overlaid on top of that). This highlights the most actives cores of the storm. Steve Goodman commented that from GLM 5 minute moving averages are used to better see the lightning intensification. SMT (Solar Moisture Transmission) is also available in the displayer. The group discussed whether the visualization of SMT with or without cloud masking would be better. And agreed that SMT provided for forecasters is advisable for forecasters because SMT above clouds also depends on cloud top microphysics and very hard to interpret. This is a very interesting research topic.

Gerrit Holl presented the survey results which was carried out on cloud top feature labelling. 8 member have filled out the survey, 5 of them are interested in collaborating and contributing to the labelling to some extent. Roope Tervo reported EUMETSAT's current plans in the frame of pattern recognition and stated that cooperation and coordination between EUMETSAT and members interested in the labelling are very welcomed. It was agreed that all interested in the topic will have a meeting in October time to see how this coordination and cooperation can be fostered in the future.

Dan Lindsey showed a case study using FCI data for moisture detection over Spain. The group discuss the interpretation of the data.

Jean-Babtiste Hernandez presented different FCI RGBs featuring convective storms. In the Cloud phase RGB near Sicily we could observed very nice cloud top features such as OTs, ship waves, etc. Meteo France has updated the colour palette for their sandwich product which can be shared if wished.

Ján Kaňák reported on MTGProc software updates in EWC. Now it is possible to use the software to create animations and process data from the LI – lightning detector. It also clarified the investigation of image artefact issues (problems with co-registration of multiple spectral channels) when combining high- and normal-resolution (FDHSI and HRFI) FCI data. The cause of these artefacts is still not clear, although the proposed method of correcting them works with good results in the resulting images, but these corrections are not stable over time. The reason may be the recent changes implemented during the introduction of the satellite into operations. It will be necessary to continue monitoring these changes and ensure that they are stabilized in the future.

Next CWG meeting

Online meeting is foreseen around November, latest early December.
Next splinter meeting will be at the ECSS Conference in 2025 Autumn in the Netherlands.

The co-chairs closed the meeting at 16:10 UTC.

APPENDIX A – Participants list

On site:	Online:
Alois Holzer	Blanka Piskala
Benjamin Rösner	Dorothee Coppens
Blaine Rivas	Humberto Barbosa
Cintia Carbajal Henken	Ivan Smiljanic
Dan Lindsey	Jean-Marc Moisselin
Estelle de Conig	Manzato Agostino
Gerrit Holl	Miguel Ángel Martínez Rubio
Jan El Kassar	Monika Pajek
Jan Kanak	Ralph Petersen
Jean-Baptiste Hernandez	Rory Gray
Joachim Saalmüller	Tadas Kantautas
Johan Strandgren	
John Mecikalski	
Jörg Schulz	
Natasa Strelec Mahovic	
Pao Wang	
Pilar Ripodas	
Roope Tervo	
Roxane Desire	
Sherie Moras	
Steven Goodman	
Sylvain Le Moal	
Ulrich Hamann	
Vesa Nietosvaara	
Zsofia Kocsis	