MeerKLASS container validation

Cross-TA Meeting

Aditya Singh (LMU), Benoit Roland (KIT), Manuel Giffels (KIT) | 17. September 2025
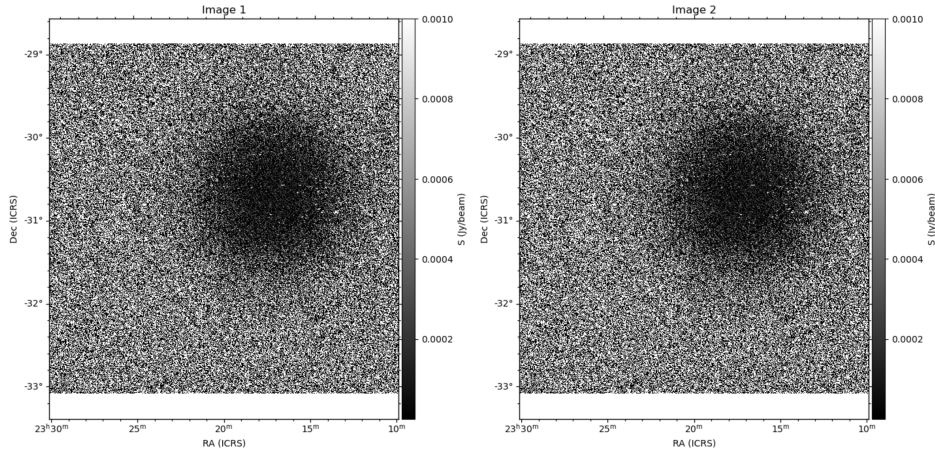
Global picture

- MeerKLASS calibration workflow: only SIF image available

- Produce Dockerfile to be able to reproduce this image

- Advantages:

  - Which software? Required software are listed

  - Where to find? Public GitHub repos are listed

  - Which version? Sofware versions are defined

  - Which environment? Environment properly defined

- Consequences:

  - Findable, Accessible, Interoperable and Reusable
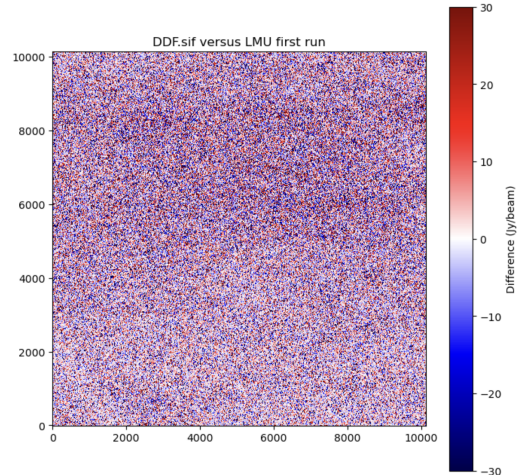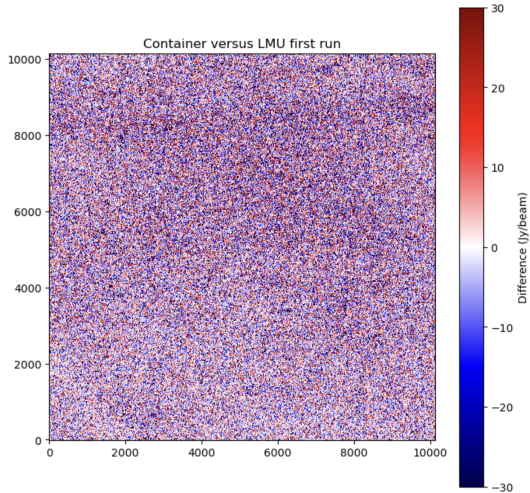
Validation

- Need to validate the Dockerfile against the original SIF image

- Process the same data set using the Docker container and the SIF image

- Comparison of the obtained results performed by Aditya:
  - Flux density detected per resolution element
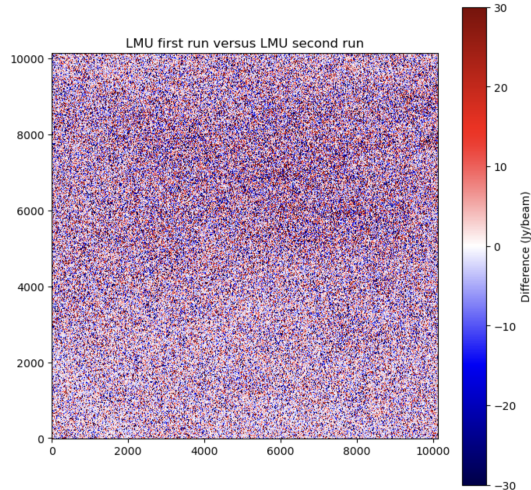 - Versus Right Ascension and DEClination

Image obtained

■ Flux density detected per resolution element versus (RA,DEC)

Relative difference in percent (I)

Relative difference in percent (II)

LMU first run versus LMU second run

Conclusion

- Validation ongoing thanks to the help of Aditya - Thanks a lot!

- Difference observed could be due to the sampling

- Investigation will continue with the help of Sarvesh