Project: **1403**

Project title: **Benchmark Dataset for Constraining Trade-Cumuli Feedback with Process Understanding**

Principal investigator: **Geet George**

Report period: **2023-11-01 to 2024-10-31**

Maximum of 2 pages including figures. 9 pt minimum font size.

The benchmarking dataset project is ongoing. Since January 2024, there have been some developments for the benchmark datasets and I report on them briefly here. Our team has continued with virtual meetings to discuss the progress in sub-projects under our project.

Most of the progress here has been in terms of satellite measurements, both geostationary (e.g. GOES) and polar (e.g. Metop) satellites. In terms of the timeline, the researchers concluded after some efforts that producing the individual components of the dataset (i.e. data for different mesoscale processes) will require a few more months than was anticipated. The plan is that individual researchers will prepare their process data with the own resources and only the synergy and collation part of the data will be performed with the allocated DKRZ resources. Because the individual parts will take almost till the end of the year, we haven't utilized the DKRZ resources to their fullest extent, but foreseee that they will be used up by late summer of next year, which is when we plan to get our first draft version of the dataset out.

As part of the team's activities, there is also a one-week workshop planned in May, 2025 at the International Space Science Institute in Bern, Switzerland. Here the participants will reassess the progress in collation of data and will set final timelines for the data product.

As of the current state of this Project 1403, please note that not all potential members have been added to the project because of the aforementioned reason of them working first on individual parts. We plan to add 10-15 more members to the project in the coming 12 months.