

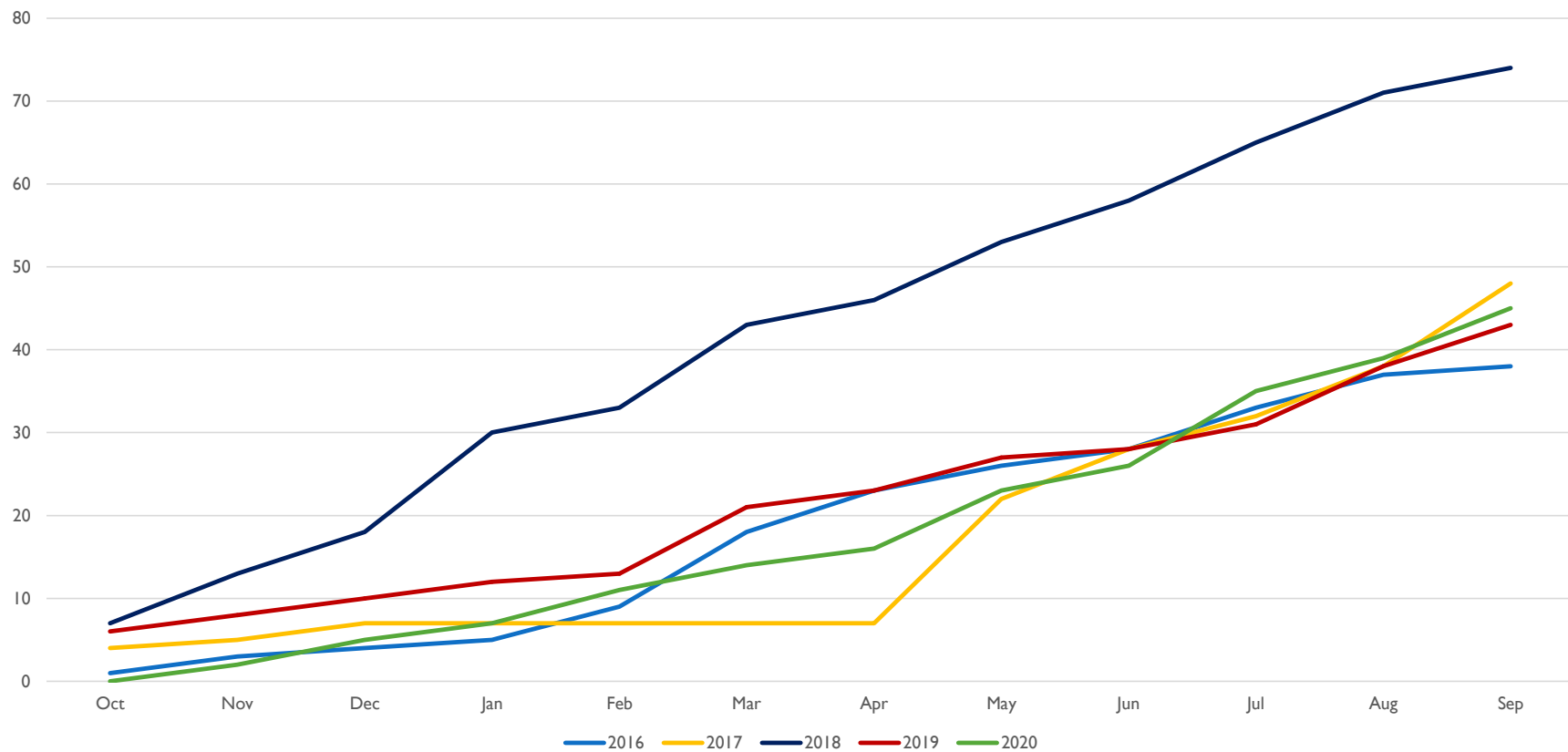
GHRC Data Management

Leigh Sinclair - *Data Management Team Lead*



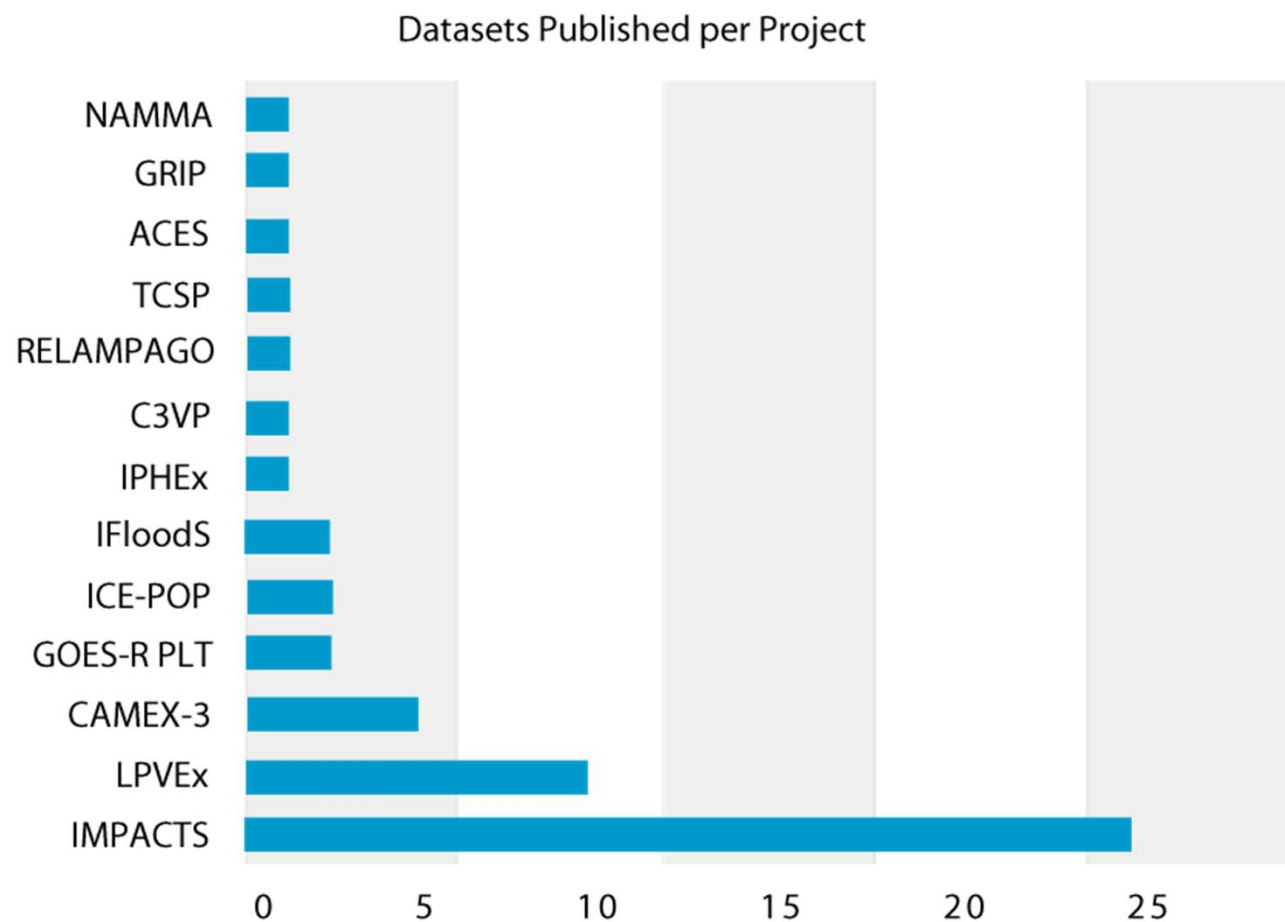
2020 Data Publications

Cumulative Number of Publications



Dataset Types Published in FY20

- 45 Datasets Published
- Averaged ~4 datasets per month
- Dual-published data both on-premise and on cloud



New Data Approved for Publication

- Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Snowstorms (IMPACTS)
- January-March 2020
 - Will continue January-March 2021-2022
- Mid-Atlantic and New England states
- Remote sensing of Electrification, Lightning, And Mesoscale/microscale Processes with Adaptive Ground Observations (RELAMPAGO)
- November 2018-April 2019
- Argentina



New Data Approved for Publication

- **SEA FLUX**
 - Variety of ocean surface variables
 - 31-year period record of the data from January 1988-December 2018
- **GLM Cluster Integrity, Exception Resolution, and Reclustering Algorithm (GLM CIERRA)**
 - On going dataset
 - January 1, 2018 - ongoing
- **Geostationary Lightning Mapper (GLM)**
 - Includes global GLM Level 2 products, early beta GLM data from GOES-R PLT, and science-level reprocessing of GLM Level 2
 - On going dataset
- **Additional GPM Ground Validation datasets**
 - LPVEx
 - ICE POP
 - C3VP

Remaining Datasets to Publish

- ~26 datasets remaining **in-house**
 - Includes IMPACTS, GPM GV, and SEA FLUX
 - Does not include NALMA, GLM data, ISS LIS
- Currently publishing data in both the cloud and on-premise



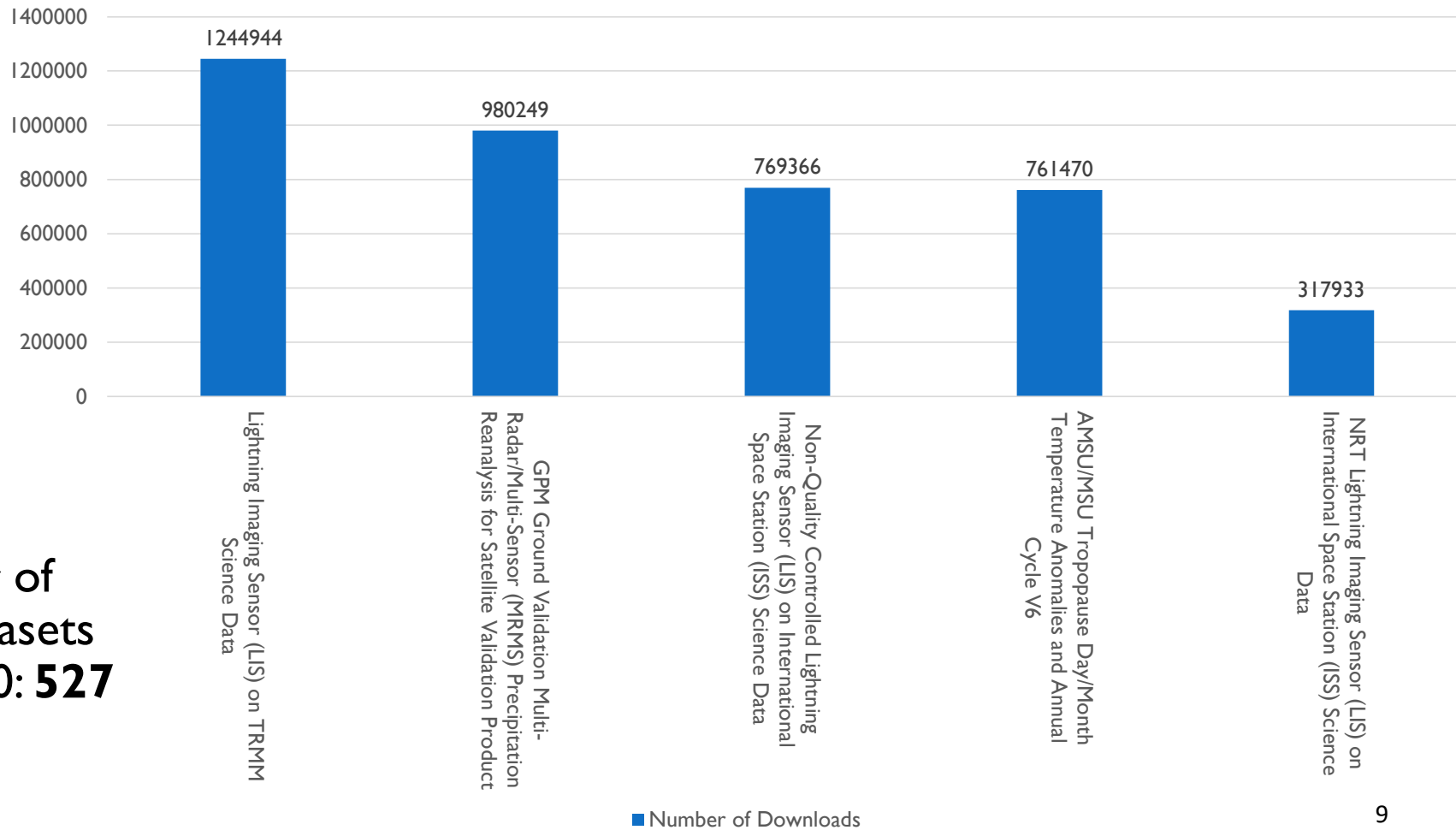
- Data that continue to be collected and made public on GHRC servers
 - ISS LIS data (2), NRT LIS data on LANCE
 - DISCOVER MEaSUREs SSMIS ocean products from F16 and F17 (8)
 - DISCOVER MEaSUREs TPW and Wind Speed climatology (2)
 - AMSU/MSU V6 Temperature Anomalies and Annual Cycle products (4)
- AMSU/MSU Atmospheric Temperatures
- New Ongoing Datasets
 - North Alabama Lightning Mapping Array (NALMA)
 - GLM L2 datasets
 - GLM CIERRA

ARC Metadata Repairs

- What is ARC?
 - ARC = Analysis and Review of CMR (Common Metadata Repository)
 - ARC project consists of a team of metadata checkers confirming quality of metadata for DAAC published data
 - ARC report is sent to DAACs with problems/issues to be fixed and recommendations of changes to make
- Completed all ARC recommendations this FY
- Completed all ARC re-check recommendations this FY

Data Access Metrics

Top 5 Downloaded Dataset for FY20

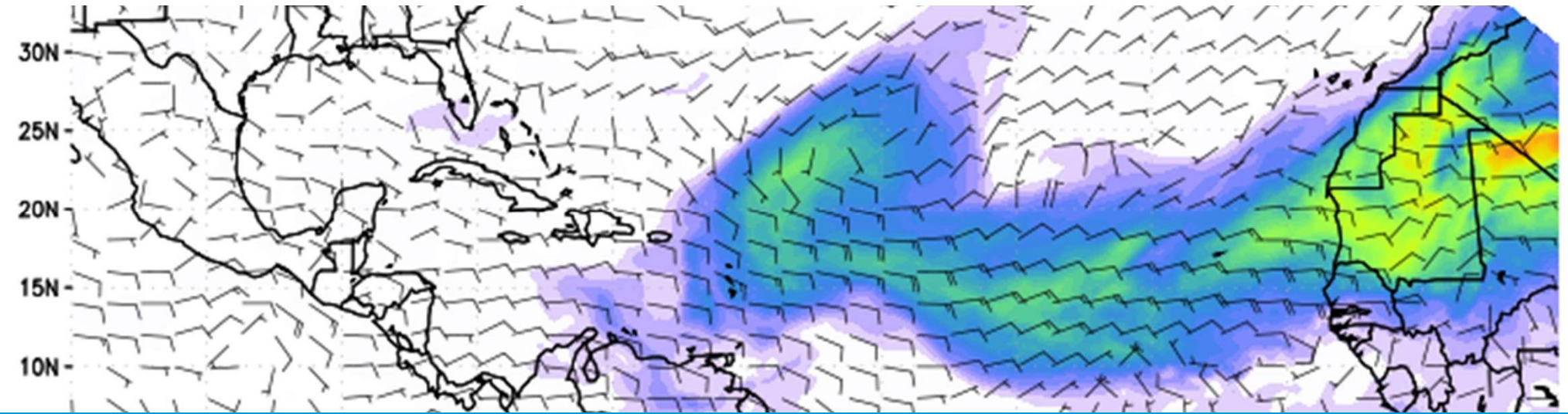


Total Number of Published Datasets at end of FY20: **527**

2021 Publication Plans

- Year 2 IMPACTS Data
- Additional GPM GV Data
- Publishing new, ongoing datasets in the Cloud
- Publishing in the Cloud
 - Dual-publishing until later this FY
 - Earthdata Pub
- We want your ideas on what GHRC can do to obtain more data relevant to our mission

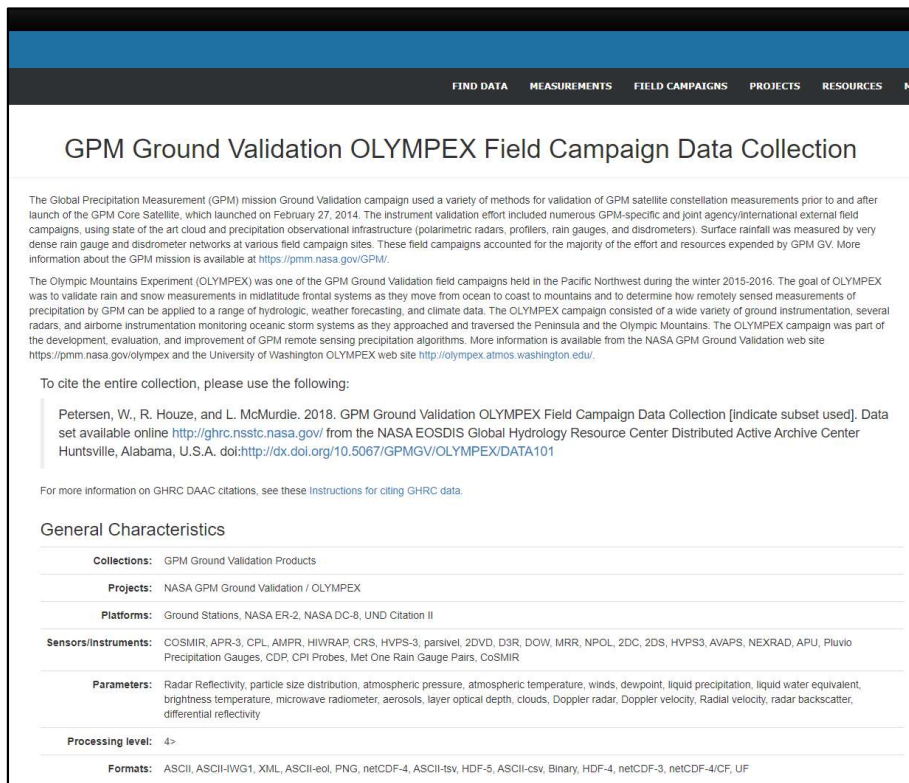




GHRC Outreach

Geoffrey Stano





The screenshot shows the landing page for the GPM Ground Validation OLYMPEX Field Campaign Data Collection. The page has a blue header with navigation links: FIND DATA, MEASUREMENTS, FIELD CAMPAIGNS, PROJECTS, RESOURCES, and MORE. The main heading is "GPM Ground Validation OLYMPEX Field Campaign Data Collection". Below the heading, there are two paragraphs of text describing the campaign and the OLYMPEX experiment. A citation for the data collection is provided, followed by instructions on how to cite the data. A section titled "General Characteristics" lists various metadata fields such as Collections, Projects, Platforms, Sensors/instruments, Parameters, Processing level, and Formats.

OLYMPEX Field Campaign landing page

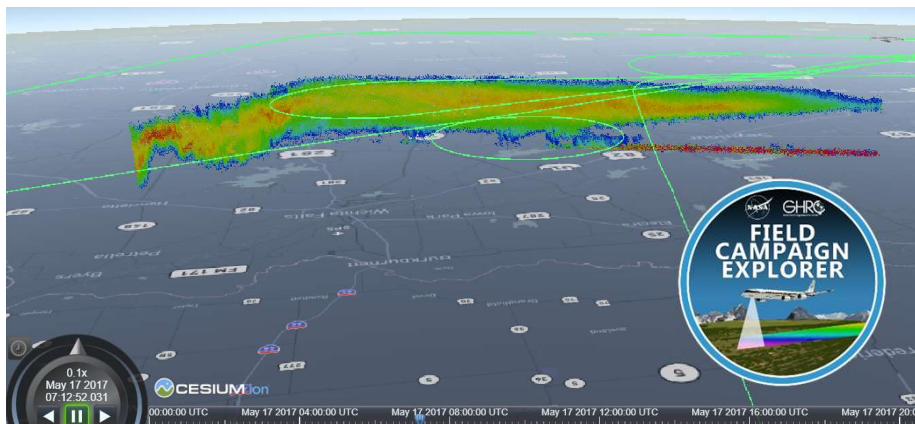
- Continued engagement with community
 - Traditional: AGU and AMS annual meetings
 - International Geoscience and Remote Sensing Symposium (IGARSS)
 - Participation with NASA Earthdata and World Data System
 - Science Team meetings
 - Geostationary Lightning Mapper (GLM)
 - New: IPACTS field campaign
 - New: Space Test Program (STPSat-6)
- Continued traditional metrics
 - Micro articles
 - Data recipes
 - Publications
- Web page update
 - New landing pages for field campaigns at request of the Airborne Data Management Group

Focus on IMPACTS Field Campaign



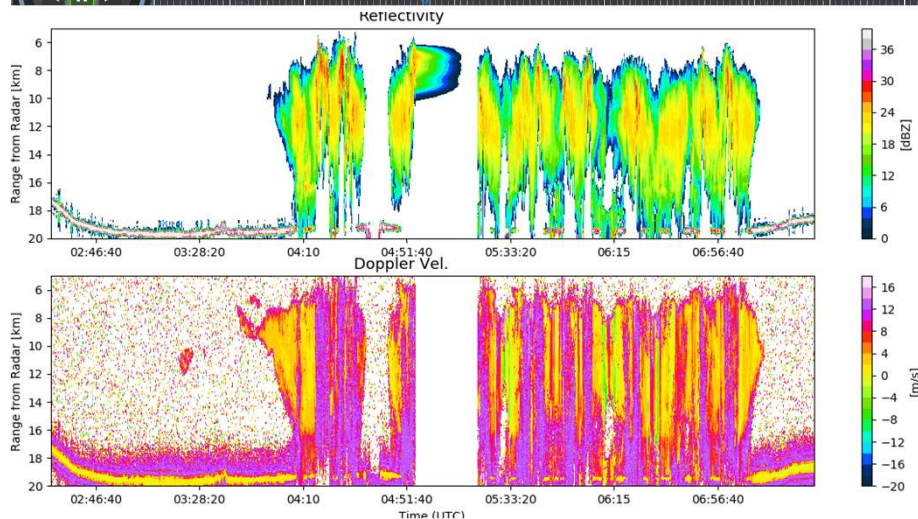
- Efforts started in 2018 have had direct results
 - GHRC backlog cleared
 - Enabled focus on new data
- FY2020 has focused on micro articles
 - Over a dozen created
 - Emphasis on data in IMPACTS and previous, GHRC archived campaigns
- Began addressing data recipes
 - New emphasis
 - Enable recipes to work on all data from an instrument
- Maintain close ties with science team

Utilizing the Field Campaign Explorer



Top: Cloud Radar System (CRS) in the Field Campaign Explorer (FCX)
Bottom: CRS 2D display in data recipe derived from FCX

- Data recipes offer another outreach opportunity
- Intended to show users how to:
 - Ingest data
 - Conduct basic manipulation
 - Visualize
- FCX is a visualization tool
 - Utilize work in FCX to create data recipes
 - Aim for more than one-off versions
 - Focus on recipes to visualize instruments from each deployment
 - Utilize as training for cloud analysis

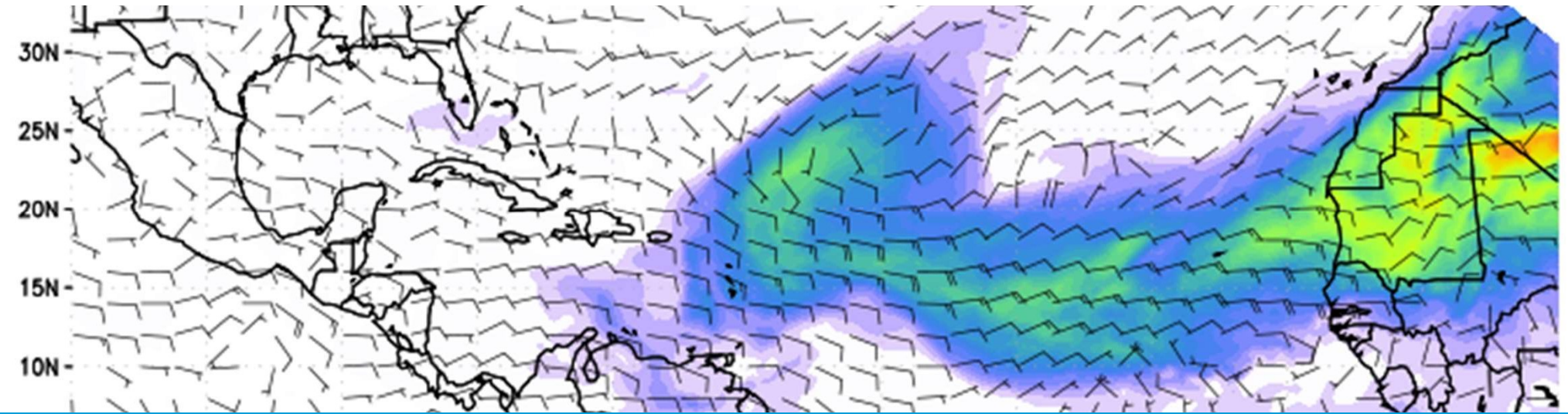


Community Impact

- Four graduate students supported
 - 2 directly with GHRC
 - 2 at NASA SPoRT (Short-term Prediction Research and Transition)
- One journal published
 - Editor's choice cover article for EOS in August
 - Second article in review
- ~11 journals using data that is or will be published at GHRC

Future Outreach Activities

- Further expand on UWG recommendations
- Coordinate outreach and cloud activities
 - How will this affect micro articles and data recipies
- Update methods to obtain metrics to capture “community impact”
- Identify activities to support diversity in science
 - Improvements GHRC can do locally
 - Activities outside GHRC – Likely collaborations with UAH



THANK YOU!

QUESTIONS?

