## Introduce Yourself

- I am Timothy Lang, a research scientist at NASA MSFC
- I have been involved in field campaigns (NASA or otherwise) that have used aircraft since the mid-1990s.

## Which airborne datasets have you used?

- My students, close colleagues, and I have used a lot of different airborne datasets, but the main recent instrument datasets are:
  - Advanced Microwave Precipitation Radiometer (AMPR)
  - Lightning Instrument Package (LIP)
  - 3rd Generation Advanced Precipitation Radar (APR-3)
  - Conically Scanning Millimeter-wave Imaging Radiometer (CoSMIR)
  - High Altitude Imaging Wind and Rain Airborne Profiler (HIWRAP)
  - ER-2 X-Band Doppler Radar (EXRAD)
  - Cloud Radar System (CRS)
  - Airborne Vertical Atmospheric Profiling System (AVAPS)

- The datasets primarily came from these airborne campaigns:
  - Integrated Precipitation and Hydrology Experiment (IPHEx)
  - Olympic Mountains Experiment (OLYMPEX)
  - Cloud, Aerosol and Monsoon Processes Philippines Experiment ($CAMP^2EX$)
  - Investigation of Microphysics and Precipitation for Atlantic Coast-Threatening Snowstorms (IMPACTS)

- Note that I am also a data provider for AMPR, and I am ultimately responsible for the LIP datasets as well.

## How do you access the data?

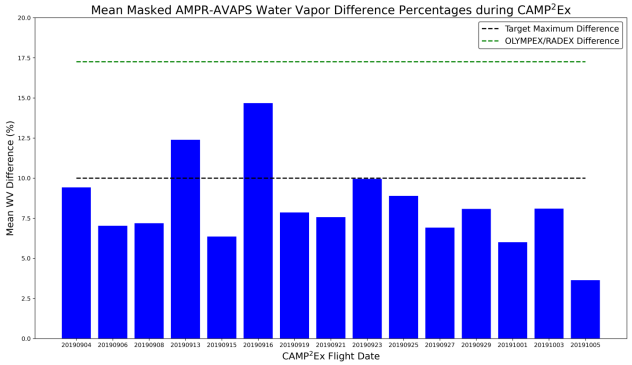
- As a data provider for some of the instruments (e.g., AMPR and LIP), I can get those data from my own stash.

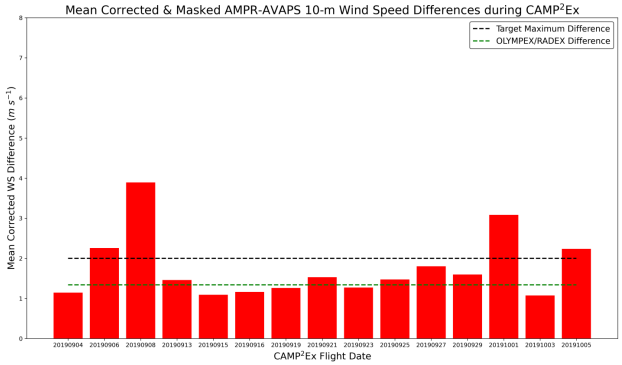
- For other instruments, in the recent past we've used:
  - Global Hydrometeorology Resource Center (GHRC)
  - NASA LaRC's Airborne Science Data for Atmospheric Composition (i.e., CAMP$^2$Ex archive)

GHRC
Global Hydrometeorology Resource Center

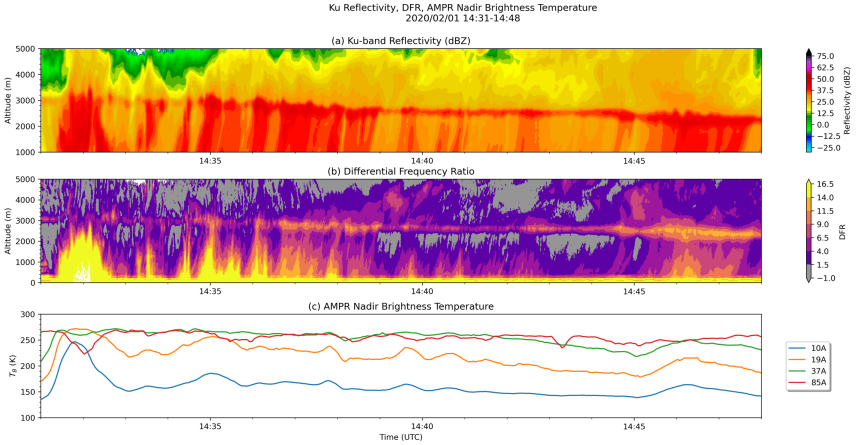
# How are you using these data?

## Statistical Validation

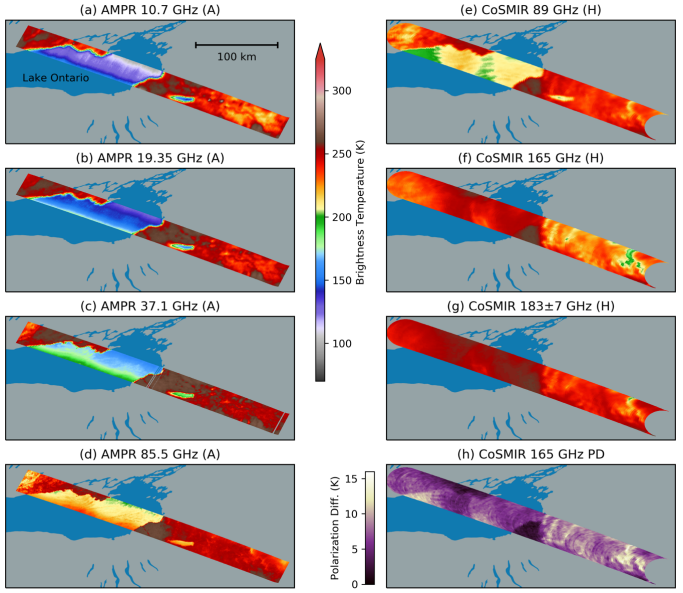



## Precipitation and Microphysics Analysis




## Case Studies



**What works well for you?**

- Documentation of these datasets in general is very good.
- Access/search via the GHRC is pretty simple.

**What pain points do you find with data access or data use?**

- The LaRC archive is cumbersome to use and does not act like a true DAAC.

- As a data provider, I feel like increasingly more requirements are being levied on my teams without any additional support.

**What do you wish you could do but can’t?**

- I wish I could access data from the LaRC archive via NASA Earthdata registration, search, and related tools.

- As a data provider, I wish I could just post reasonably named data and let the archives figure out official naming conventions themselves.

**Do you have any suggestions for improvement?**

- Turn the LaRC archive (and similar archives) into a true DAAC (or integrate them within existing DAACs).

- Simplify and unify bulk download (and hit users over the head with instructions on how to do it). I feel I need to have a different download script for each DAAC and/or dataset

**Have you tried to use data in the cloud?**

- Not for airborne datasets, which are typically pretty small.
- For satellite datasets, yes. Usually this is via on-demand download within a processing script, or OPeNDAP

**What support do you need from ADMG?**

- No direct support needed.

- Reviewing ADMG's mission/goals, it seems like most of those are worthy and should be pursued, so indirect support of data users via accomplishment of those goals is welcome.

- That being said, from the data provider perspective ADMG should be circumspect about new requirements being levied on instrument/data teams. DAAC/IMPACT budgets >> individual airborne instrument team budgets