



# 2018 Outreach and User Services

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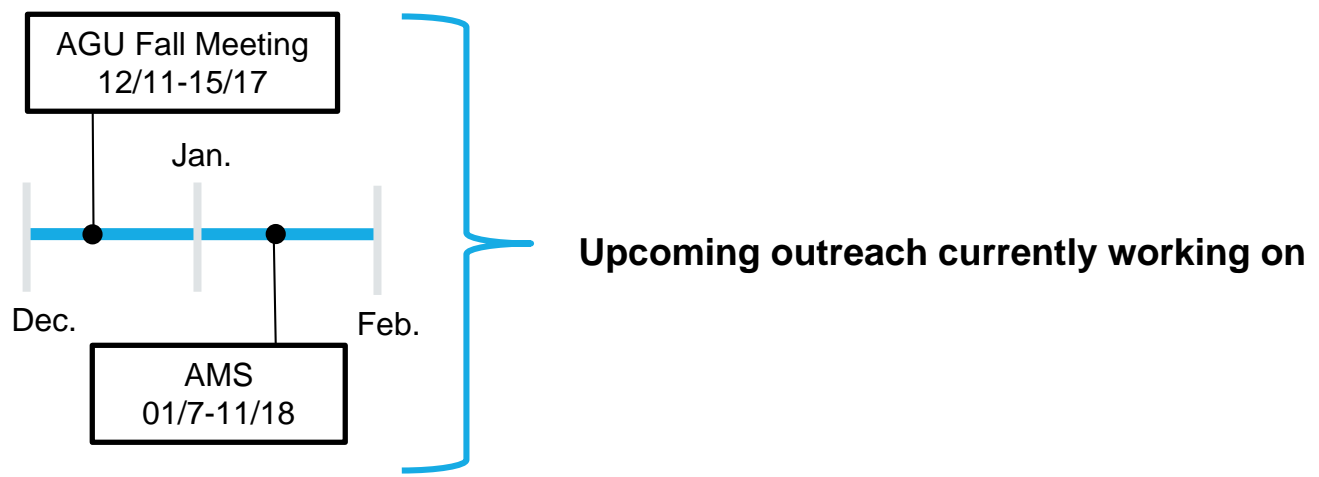
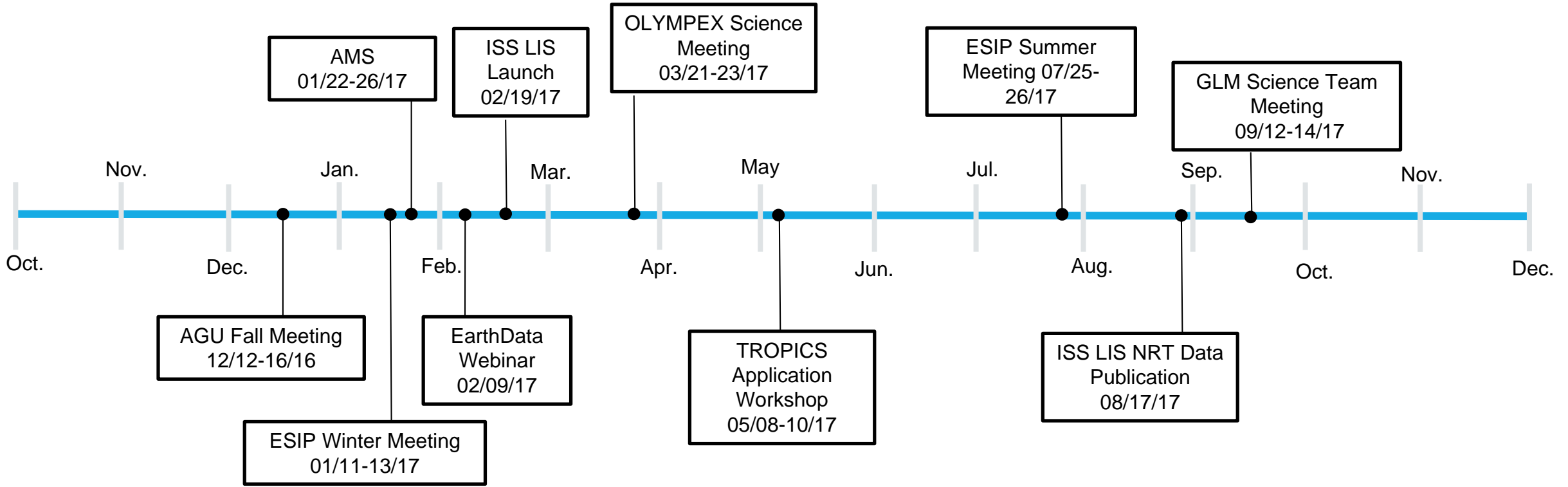
**2017 GHRC User Working Group Meeting**  
Sept 26-27, 2017



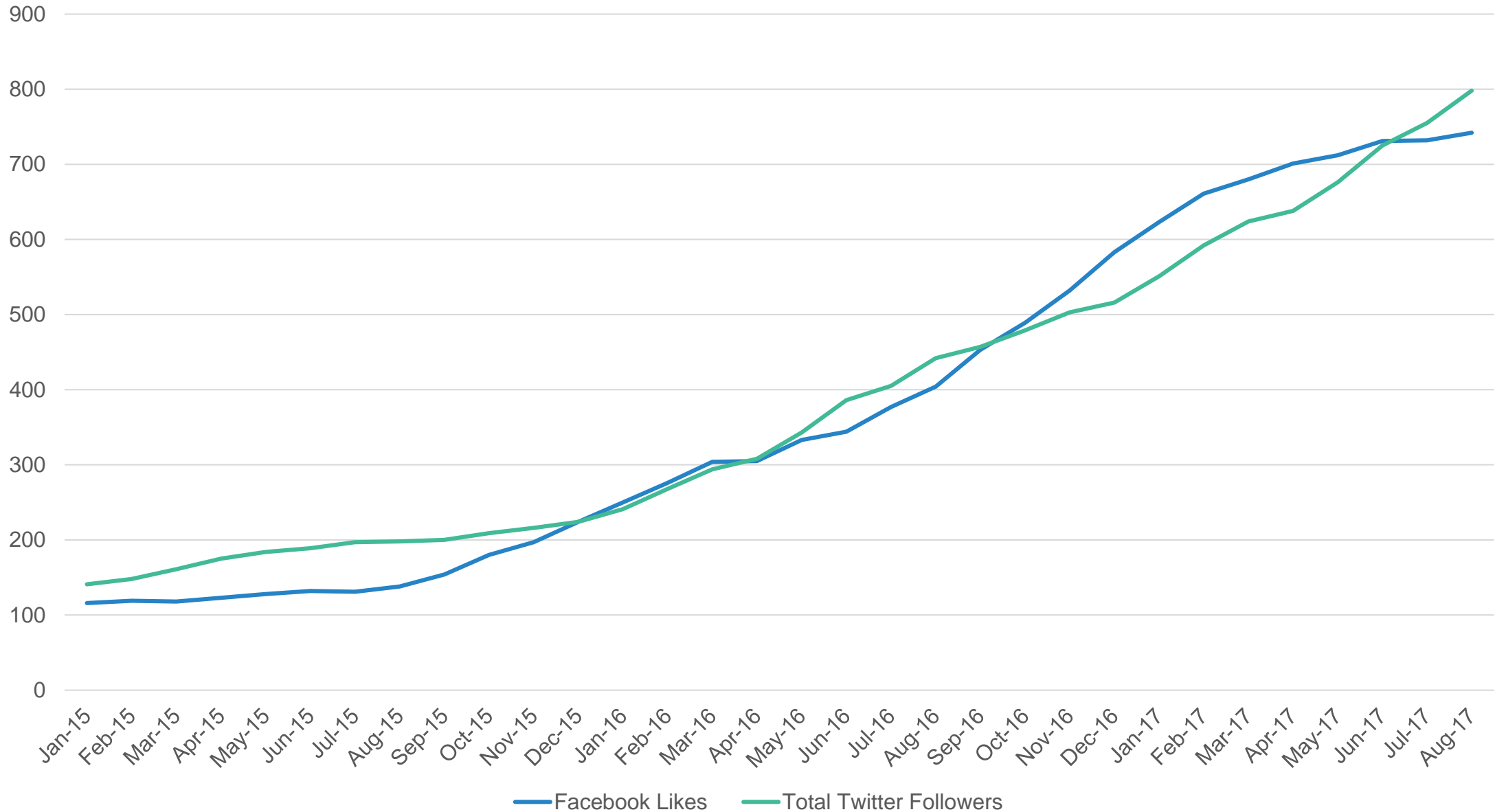
- Taking action to improve GHRC data use
  - **Demonstrating the use of data products** to enhance understanding
    - NASA Webinar
    - Flash Talk at AGU hyperwall
    - Generate EarthData/GHRC mastheads
    - Continue generating Data Recipes and Virtual Collections
  - **Educating users** about data products
    - Improve understanding of how data can be used to study a phenomenon
    - Connect users to data products used and provide examples of past use
    - Improve and increase web content and information more digestible by broad knowledge levels
    - Present to general audiences using approachable means
      - Research as Art
- Attracting data providers
  - **Attend meetings and conferences and develop relationships with scientists** in key areas pertaining to GHRC's Mission and encourage GHRC interaction and product archival
    - Attend AMS Hurricane meeting, AGU, AMS, and ESIP
    - Attend mission-oriented NASA science team meetings
    - Participate in planning meetings for planned instruments and programs
    - Participate in other outreach events
    - Continue collaboration with other organizations/individuals

- Responding to user questions and needs
  - **Thoroughly answer each Kayako question** to enhance understanding
    - FAQs
  - **Provide tutorials** on how to use or plot data products
    - Data Recipes
- Providing clear, concise, and easy-to-locate information
  - **Improve content and linkages** on the GHRC and associated webpages
    - Add content when user questions suggest insufficient information exists
    - Keep up with NASA UI/UX suggestions and improvements
    - Develop innovative ways to interconnect structured content on webpage
    - Improve menus and information organization on webpage
- Address determined needed changes from ACSI Survey results
  - Improve bulk data downloading
  - Continue making documentation clear and easy to find
  - Continue responding to Kayako tickets in a timely and professional manner, making sure each question leads to a content change, improvement, FAQ, or wish list item
  - Continue providing tutorials/Data Recipes

# Outreach Timeline 2016-2018



# Social Media Outreach



- **Developed relationships with scientists** in key areas pertaining to GHRC Mission and encourage GHRC interaction and product archival
  - *Met with SPoRT / SERVIR*
  - *Attended TROPICS, OLYMPEX, AMS, AGU*
- **Produced more micro articles and data recipes**, focusing on users of many learning levels
  - *7 new micro articles*
  - *5 new data recipes*
- **Learned more about existing data users**
  - *Analyzed ACSI results*
  - *Keep Kayako summaries*
- **Demonstrated use of data products** to enhance understanding
  - *NASA webinar*
  - *Flash Talk at AGU NASA Hyperwall*
- **Improved data publication process**
  - *Implemented DAPPeR and new Postgres database*
  - *Implemented Hydro, the GHRC online search tool*

- We believe the approach used in 2017 has helped increase both
  - awareness of GHRC data and services
  - GHRC data use
- We will continue to apply the same approach in 2018
  - Produce more data recipes and micro articles
  - Produce more tweets/posts/articles
  - Attend and participate in conferences and scientific meetings
  - Strengthen connections with other groups and organizations
  - Find more ways to demonstrate use of GHRC data products
  - Continue to learn more about GHRC data users







# GHRC Data and Tool Assessment

Deborah Smith

**2017 GHRC User Working Group Meeting**  
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- We continue to assess what data we have and what data to consider adding to GHRC
- This August, DAPPeR Archival Interest Form was opened to users for submitting their dataset - So far, no entries
- We already have data such as

## **Satellite Data**

Lightning instruments: ISS and TRMM LIS, OTD

Microwave radiometers: DISCOVER ocean products

Microwave sounders: atmospheric temperatures

## **Field Campaign Data**

GPM precipitation validation

Hurricane sciences

Lightning study

## **Other Data**

Support data for field campaigns such as model data or GOES imagery

Data Collection	Description
Lightning Observations from Space	Daytime and nighttime observations of cloud-to-ground and intra-cloud lightning from NASA's Lightning Imaging Sensor (on TRMM and ISS) and Optical Transient Detector (on Orbview-1)
DISCOVER MEaSUREs	Atmospheric and ocean products derived from satellite microwave radiometer measurements and delivered as a package of inter-related geophysical parameters, including: <ul style="list-style-type: none"> <li>● sea surface wind speeds</li> <li>● atmospheric water vapor</li> <li>● cloud liquid water</li> <li>● rain rates</li> </ul>
Hurricane Science and Field Campaigns	Airborne and ground-based observations of tropical cyclones and cyclogenesis collected during a series of campaigns from 1998 to the present
GPM Ground Validation Field Campaigns	Precipitation datasets from ground and airborne instruments supporting physical validation of satellite-based precipitation retrieval algorithms, from targeted field observations in different precipitation regimes (2010-2016)

# GHRC Data as Related to Mission Components

Mission Component	Collection	Program Type	Examples
Lightning	Lightning Products	Satellite sensors Ground measurements Airborne measurements	TRMM and ISS LIS OTD, LDAR, OLS, ACES, Field Mills
Precipitation Events	GPM Ground Validation Products	Airborne measurements Ground measurements	OLYMPEX, IFLOODS, IPHEX, GCPEX, MC3E, LPVEx
Hurricane/ Tropical Cyclone	Hurricane Sciences	Field campaigns	HS3, GRIP, CAMEX-3/4, NAMMA
		Satellite rain products	TRMM TCPF
Ocean Parameters, Atmospheric Temperatures	Microwave Remote Sensing Products	Satellite radiometer ocean products	SSM/I and SSMIS Ocean Products, RASI
		Satellite sounders	MSU, AMSU
Near Real-time Events	Operational/ Applications	LANCE	AMSR2 ISS LIS

# Report of Proposed FY 2017 Datasets

Dataset	Category	2017?	Status/Reason
RSS SMAP Ocean Winds	Hurricane Science	No	delayed
RSS TMI V7 Ocean Products	Microwave Radiometer	No	still working with PI
TCIS Cyclone Information System Archive and Tools	Hurricane Science	No	PI still interested in working with GHRC, haven't had resources
Radiometer Brightness Temperatures	Microwave Radiometer and Hurricane Research	No	PI does not have funding

# Working Toward and Courting Future Datasets

We are looking farther in the future and hoping to obtain data from new and relevant instruments and programs

Instrument/ Program	Data Types	Mission Relevance	Availability Date
SWOT	airborne validation campaign data application flood/soil moisture products	floods	2019?
TROPICS	hurricane winds, water vapor, temperature profiles	hurricanes	early 2020s
EVS-3	airborne instrument data		

## Atmospheric-related Hazards (A) and Hydrology (H) Dataset Category List

- ✓ Lightning (A)
- ✓ Tropical cyclones / Hurricanes (A and H)
- ✓ Extreme rain events / Atmospheric rivers / Monsoons (A and H)
  - Floods (H)
  - Tornadoes (A)
  - Severe storms / Hail (A and H)
  - Polar lows / Blizzards / Extreme cold (A and H)
  - Heat waves (A)
  - Wind events (gap winds / downdrafts / mountain winds) (A)
  - Drought / Soil moisture (H)
  - Dust storms (A)

The question was posed:

## What weather events/phenomena are important to you?

floods	30	groundwater issues	4
heavy rains	22	earthquakes	4
climate patterns	18	sea level rise	3
extreme temperatures	12	natural disaster alerts	3
hurricanes	11	volcanic eruption	3
thunderstorms/lightning	11	wildfire	3
drought	7	sunshine amount	3
tsunamis	6	soil moisture	2
evaporation / evapotranspir.	5	tornados	2
snowfall / hail	5	storm surge	2
monsoons	4	co2 emissions	1

- These responses show that users are looking for flood, heavy rain, and extreme temperature data
- Should we focus on attracting these type of datasets?
- Should we improve support for Applications Science?



**Current published datasets: 381 (363,096 granules)**

- Priority is to publish datasets already in the pipeline
- This includes datasets recently added to publication list in FY2017
  - Tropical Cyclone Intensity (TCI) Hurricane Imaging Radiometer (HIRAD)
  - NASA S-Band Dual Polarimetric (NPOL) Doppler Radar Wallops Flight Facility (WFF)
  - Autonomous Parsivel Unit (APU) Wallops Flight Facility (WFF)
  - Two-Dimensional Video Disdrometer (2DVD) Wallops Flight Facility (WFF)
  - GPM Validation Network database

**We are currently performing a tool assessment with the goals of:**

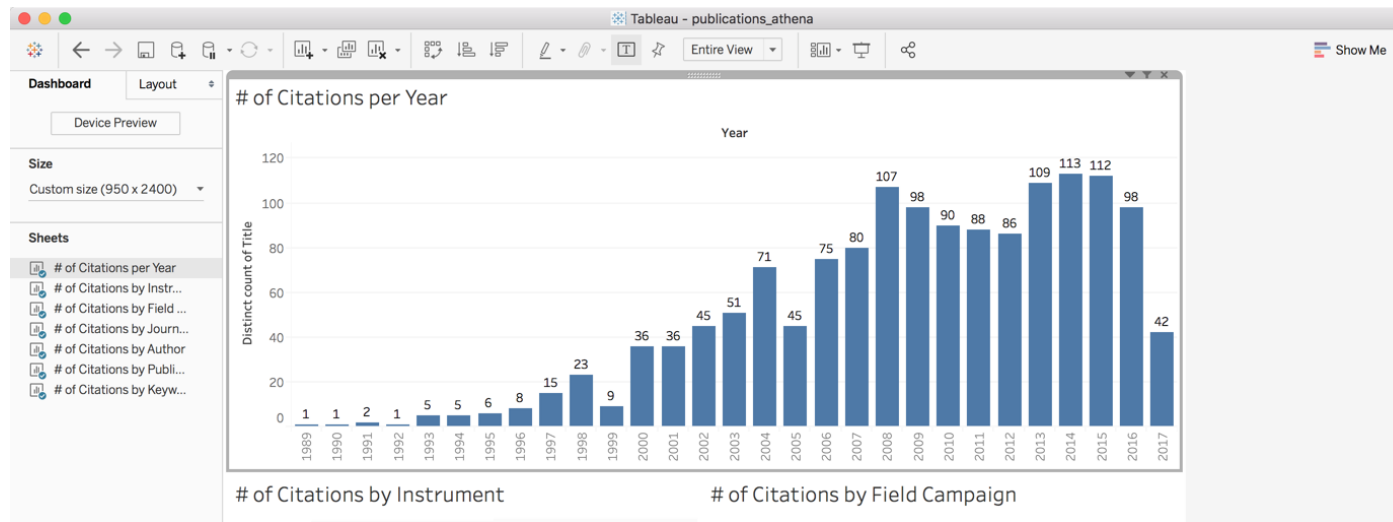
- Identifying which tools are most relevant to external data users or GHRC internal activities
- Determining which tools could use upgrading or improvement
- Identifying useful new tool capability that could be developed
- Setting priorities given limited funding and human resources

## 1) Metrics Tool

In 2017, GHRC checked out various metrics tools, selected Tableau for extracting metrics of data access logs, and spent time tailoring Tableau to GHRC needs

**2018 priorities** include:

- Tableau training for outreach and user services team to allow for specific metrics extraction as needed to improve user support
- Providing metrics information on web pages and dataset landing pages
- Producing routine reports for GHRC management to aid in decision making

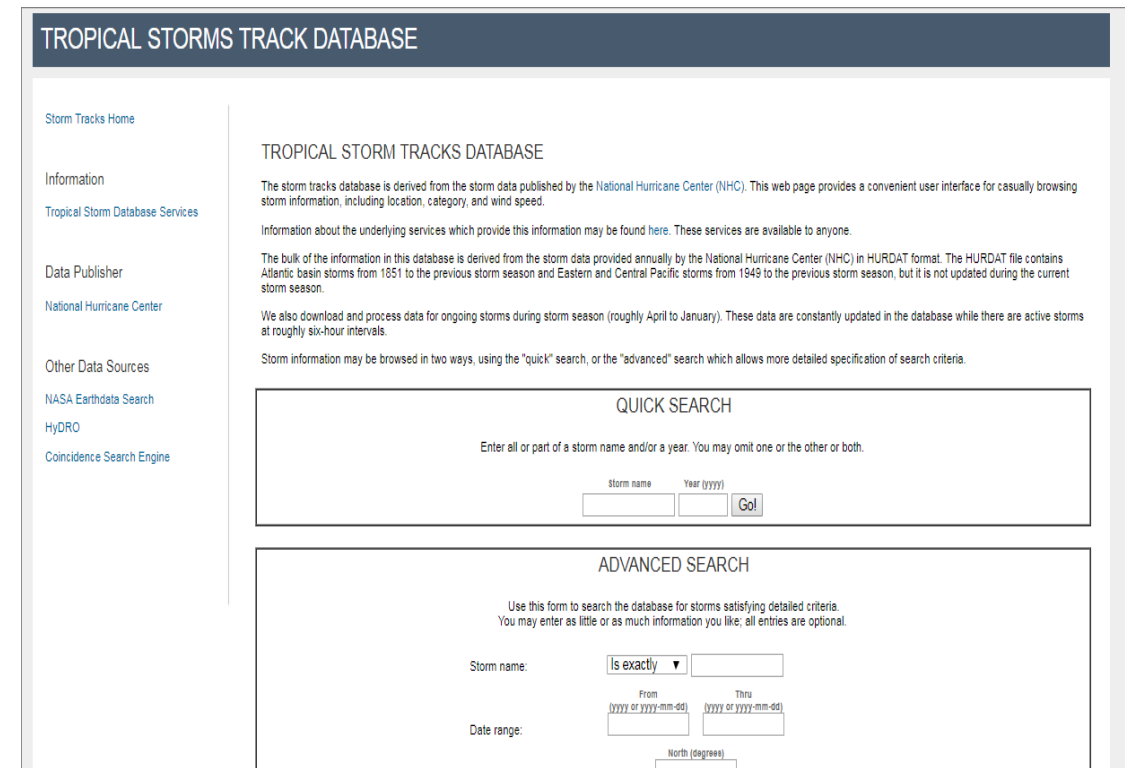


## 2) Oracle -dependent Tools

GHRC needs to retire the Oracle database

**2018 priorities** include:

- Assessing two external user tools, still operating, that depend on Oracle database content
- We will use access metrics to determine whether to update or retire these tools



The screenshot displays the 'TROPICAL STORMS TRACK DATABASE' website. It features a navigation menu on the left with links for 'Storm Tracks Home', 'Information', 'Tropical Storm Database Services', 'Data Publisher', 'National Hurricane Center', 'Other Data Sources', 'NASA Earthdata Search', 'HyDRO', and 'Coincidence Search Engine'. The main content area includes a 'TROPICAL STORM TRACKS DATABASE' header, introductory text about the data source (National Hurricane Center), and two search sections: 'QUICK SEARCH' and 'ADVANCED SEARCH'. The 'QUICK SEARCH' section has a text input field for 'storm name' and a dropdown for 'Year (yyyy)', with a 'Go!' button. The 'ADVANCED SEARCH' section includes a 'Storm name' dropdown set to 'Is exactly', a date range selector with 'From' and 'Thru' fields, and a 'Date range' field with a 'North (degrees)' dropdown.

## 3) Lightning Tool Improvements

There are 4 primary Lightning user tools that need upgrades and improvements

**2018 priorities** include:

- Prioritization of order of tool improvement
- Determination of how to best meet both general user and lightning scientist tool needs
- Generation of interesting and feasible new tool ideas and securing funding for such tool development

ISS LIS NQC Browse Image for 2017-09-01 (244)

Position your cursor over a flash of interest and click for a zoomed view.  
[Here is an explanation of the browse image.](#)

