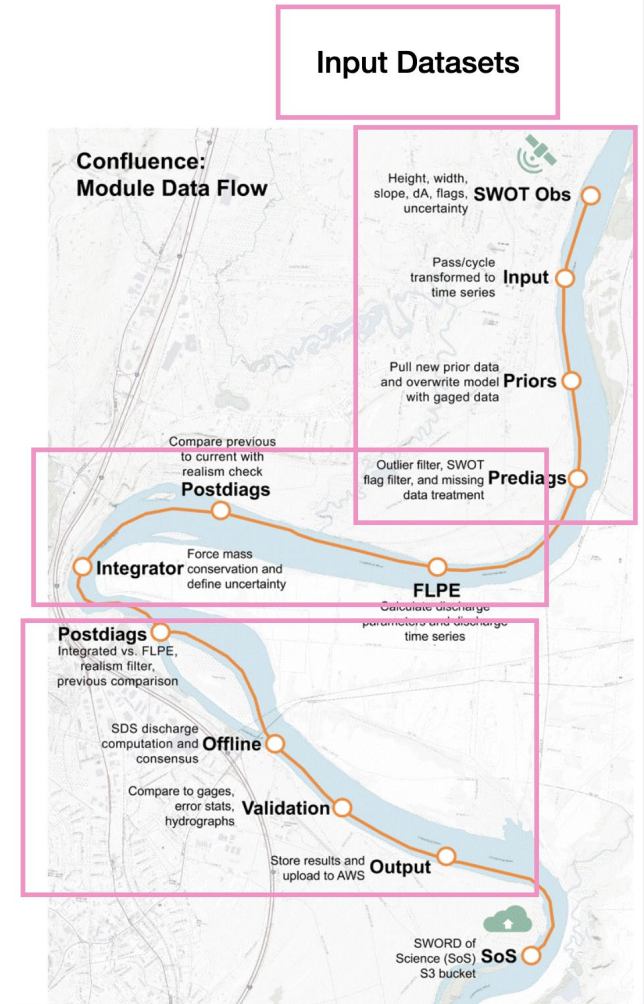


Datasets: Inputs to Confluence

Steve Coss, Pierre Olivier Malaterre, Kevin Larnier, Mike
Durand, Colin Gleason, Hind Oubanas

The first notebook covers the key input datasets to Confluence.

These include: SWOT observations, the SWOT a priori river database (SWORD), and the SWORD of Science (SoS)



SWOT shapefiles

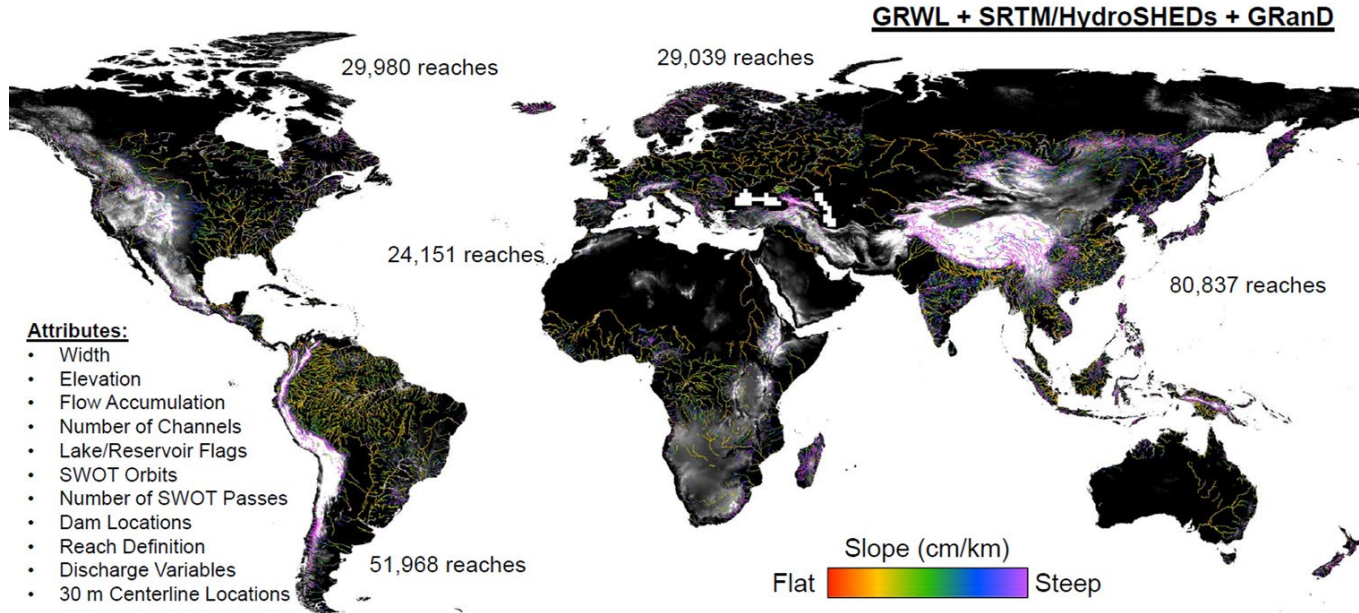
- SWOT data to be hosted as single cycle/pass shapefiles with 54 fields outlined in PDD
- 1 reach file and one node file per cycle and pass
- Confluence handles this for the discharge algorithms, but it will be something users will need to manage if using the data directly

•SWOT_L2_HR_RiverSP_Reach_001_037_NA_20210612T072103_20210612T075103_PGA2_03.shp

•SWOT_L2_HR_RiverSP_<FileIdentifier>_<CycleID>_<PassID>_<ContinentID>_<RangeBeginningDateTime>_<RangeEndingDateTime>_<CRID>_<ProductCounter>.<extension>

Important things to know about SWORD

SWORD is static - it is not changed in Confluence. SWORD will be updated throughout the course of the mission. It's currently on v12. We'll be using v11 today.



New SWOT DAWG SWORD Issue Reporting

Reaches (please use format shown below)	Issue	River Name (optional)	Reported by
['74267700231', '74267700221', '74267700211', '74267700251']	Reaches basically run backwards: p_dist increases as you move towards the river outlet	Kentucky	Mike Durand

<https://go.osu.edu/swot-dawg-issue-reporting>

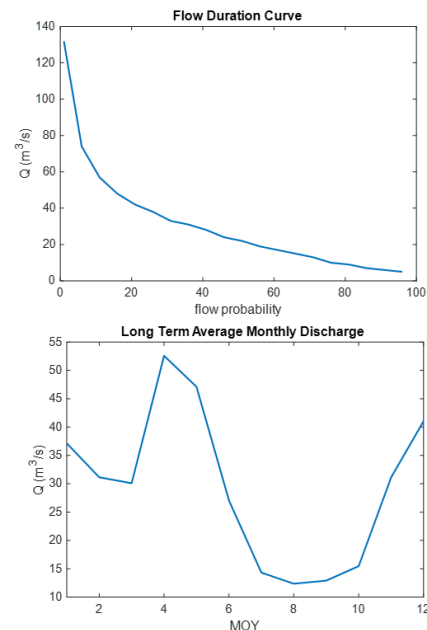
PLEASE REPORT ISSUES AS YOU FIND THEM!

SWORD of Science (SoS)

- GRADES,WBM,Gages

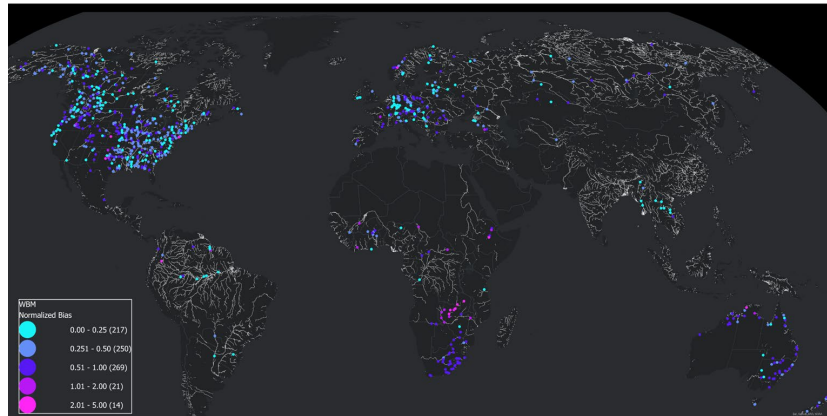
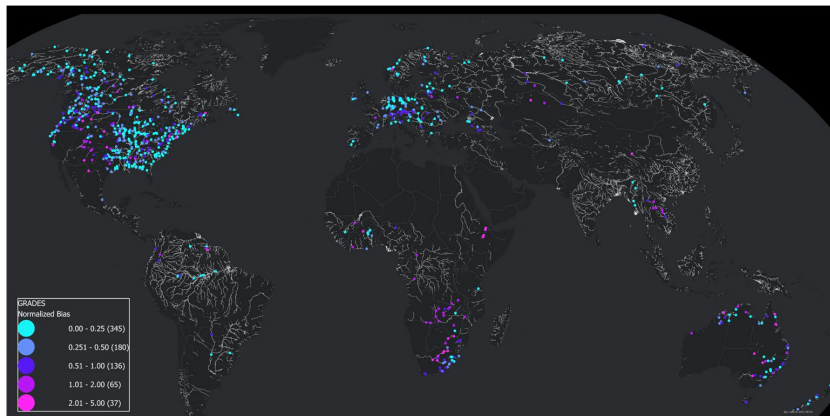
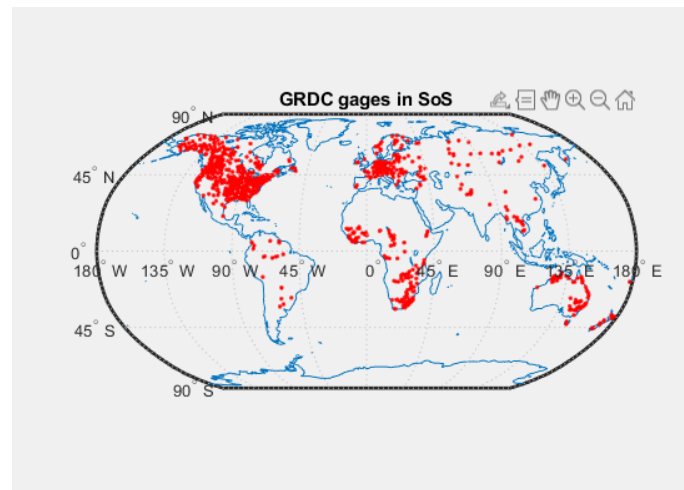
For each reach associated with a WBM cell,
GRADES cell or GRDC gage:

- Minimum/Maximum/Mean discharge
- Long term average monthly discharge
- Flow duration curve
- Monthly and FD discharge calculated with (~35/~30) years of model data (GRADES/WBM)
- full available timeframe for gage
- Two-year return period discharge
- >157k type 1 SWORD reaches linked with model data.
- Gages will be divided into calibration and validation: we will only ever use a particular gage for one use



Quasi-static prior data

- GRDC (requires manual retrieval)
- Model, long term averages
 - WBM
 - GRADES



Near Real Time Gages

- Hidroweb (Brazil)
- ABOM (Australia)
- WSC (Canada)
- DEFRA (United Kingdom)
- will be used and updated on each run
- Big thanks to Ryan Riggs

