STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

TIKE: Doing TESS Science in the Cloud

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Presentation Topics

TESS Topics

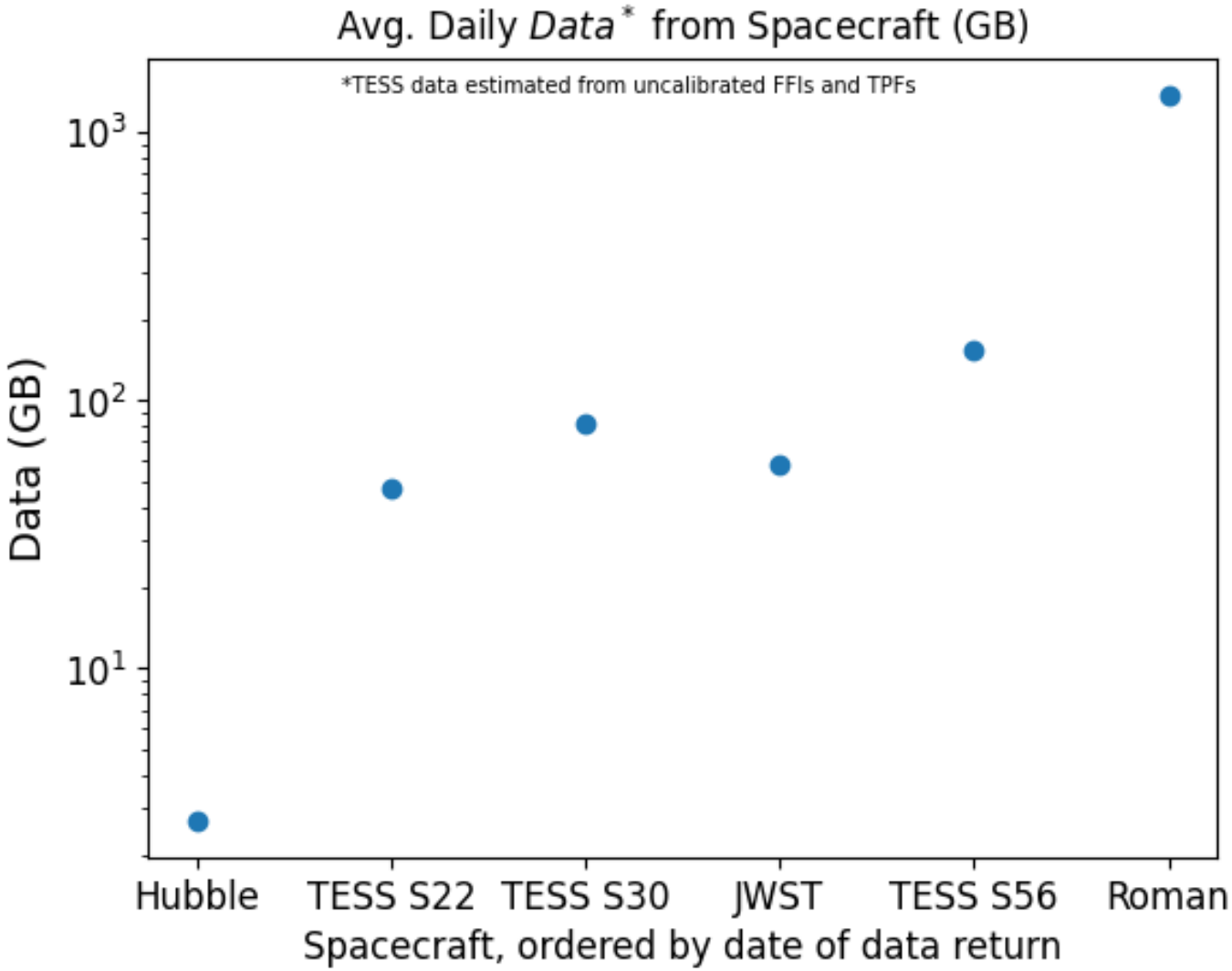
I. What is TIKE?

II. Why should I use it?

What is TIKE?

Why is TIKE?

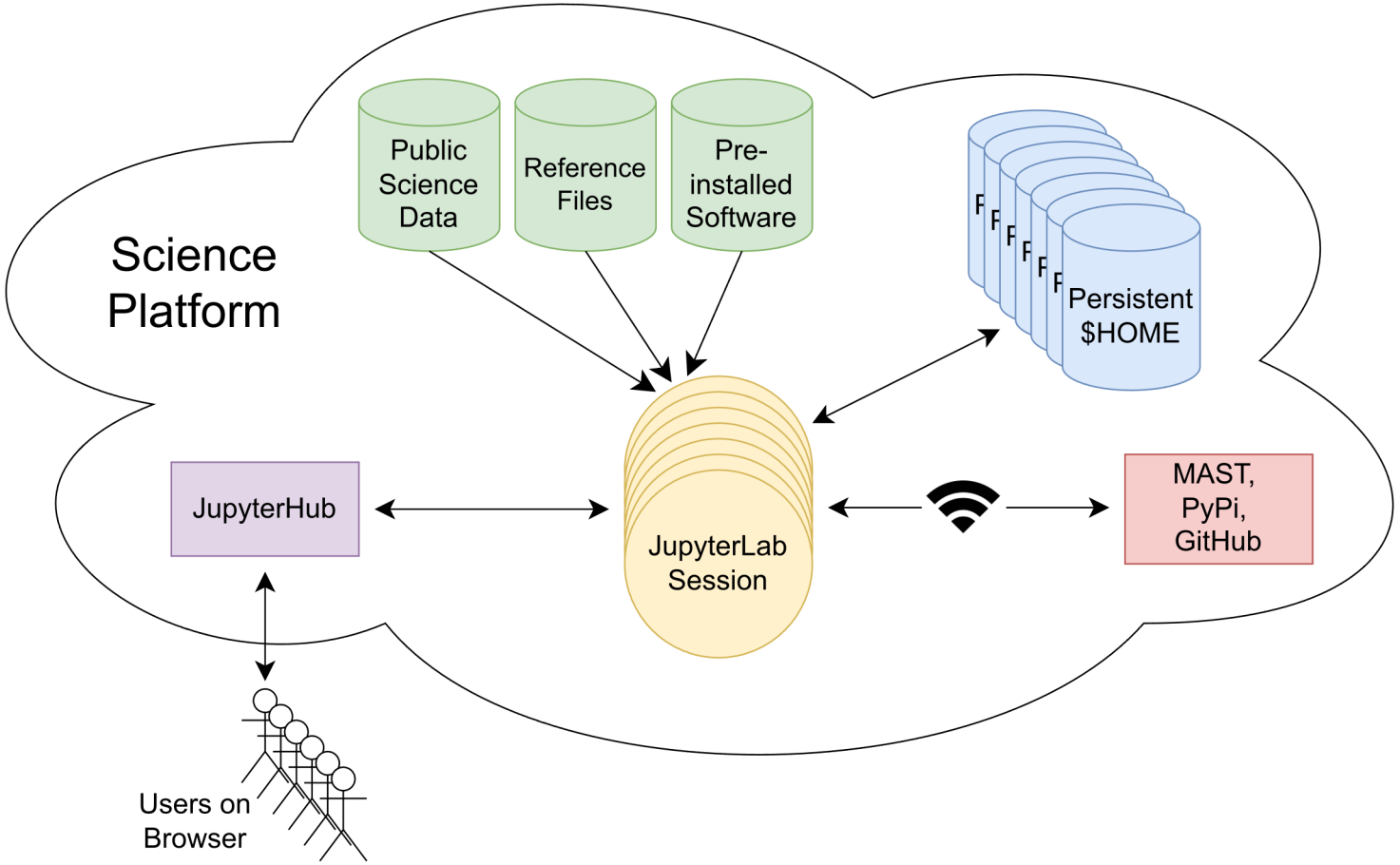
- Data from multiple missions are reaching the point of being "non-distributable"
- Problem made worse upon decompression: TESS Sector 56 produced 6.7TB (!) of calibrated FFIs.
- Still waiting on my ISP to upgrade me to 1Tbps…



Solution: TIKE

TIKE: The Timeseries Integrated Knowledge Engine

- From the user perspective, it's like logging into a JupyterLab session (actually a JupyterLab environments run on Amazon Web Services)
- Direct access to public data in the MAST S3 bucket
- Optimized for working with TESS and Kepler/K2 data
- Relevant software pre-installed
- Persistent storage
- Internet access

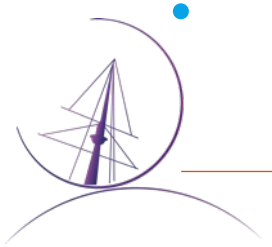


Why should I use TIKE?

Features

- Advantages
  - Primary advantage: speed. Read data from the public bucket as though it were locally available (no need to wait for downloads to complete)
  - Processing Power: Comparable to the average modern laptop
  - Price: Free!

- Limitations to be aware of:
  - Requires a MyST account
  - Maximum storage: ~25GB per user
  - Data is saved on Amazon. We (STScI) only perform backups every two weeks.



timeseries.science.stsci.edu

Notebook Demo