Tritium Analysis Organization

An overview of tools used

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What tools will this cover?

- GitHub
  - Code organization and backup
  - Ease of collaboration
- Batch jobs
  - Replay many files at once
  - Consistency of work from official replays

What is GitHub?

- GitHub is a code repository and version control system based on git
- All the benefits of git, plus a web interface and cloud storage
- Accounts are free with unlimited public repositories. Go sign up!

GitHub

How are we using GitHub?

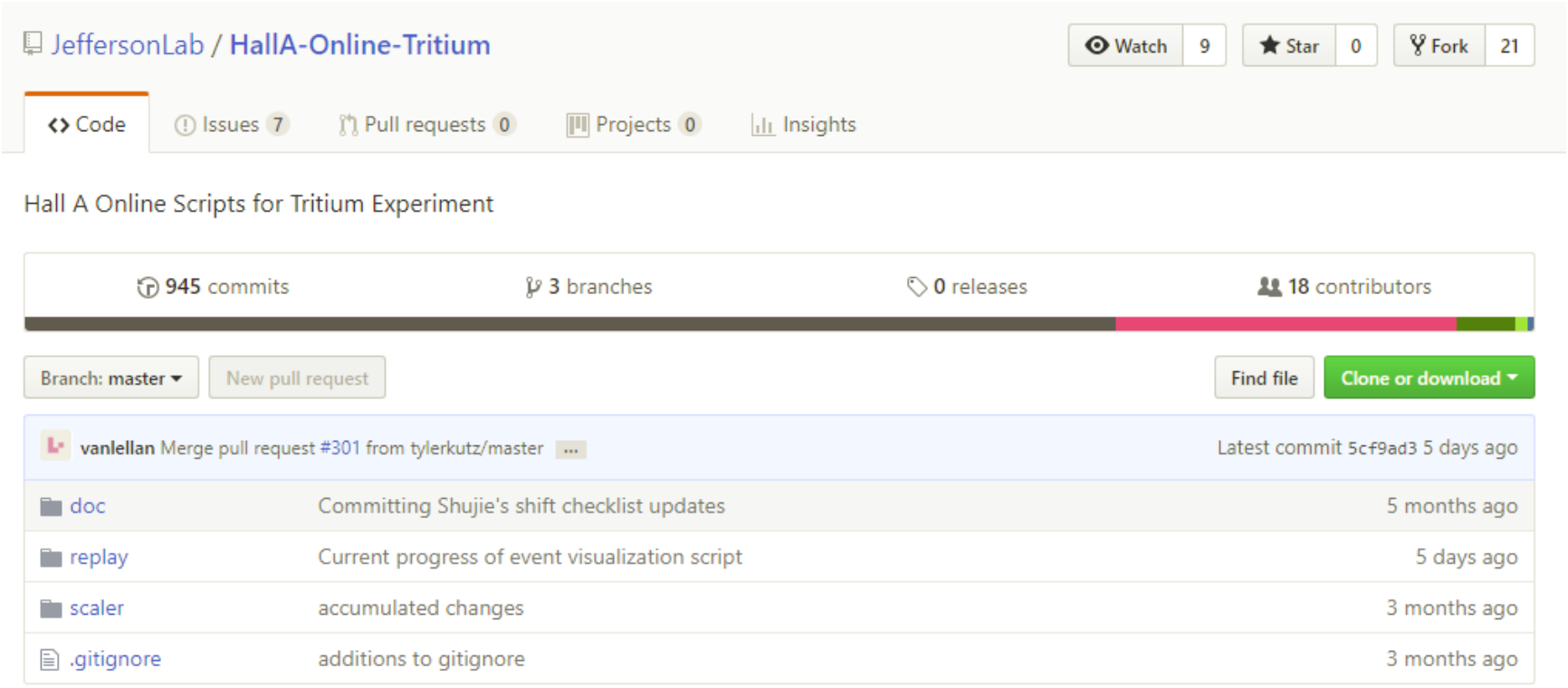
- Version Control
  - Replay Code
  - Calibration Database
  - Scripts
- Backups
- Snapshots in time
- Collaboration Streamlining

Our Repository

Our repository is located at:

https://github.com/JeffersonLab/HallA-Online-Tritium/

Please feel free to go over there and poke around!



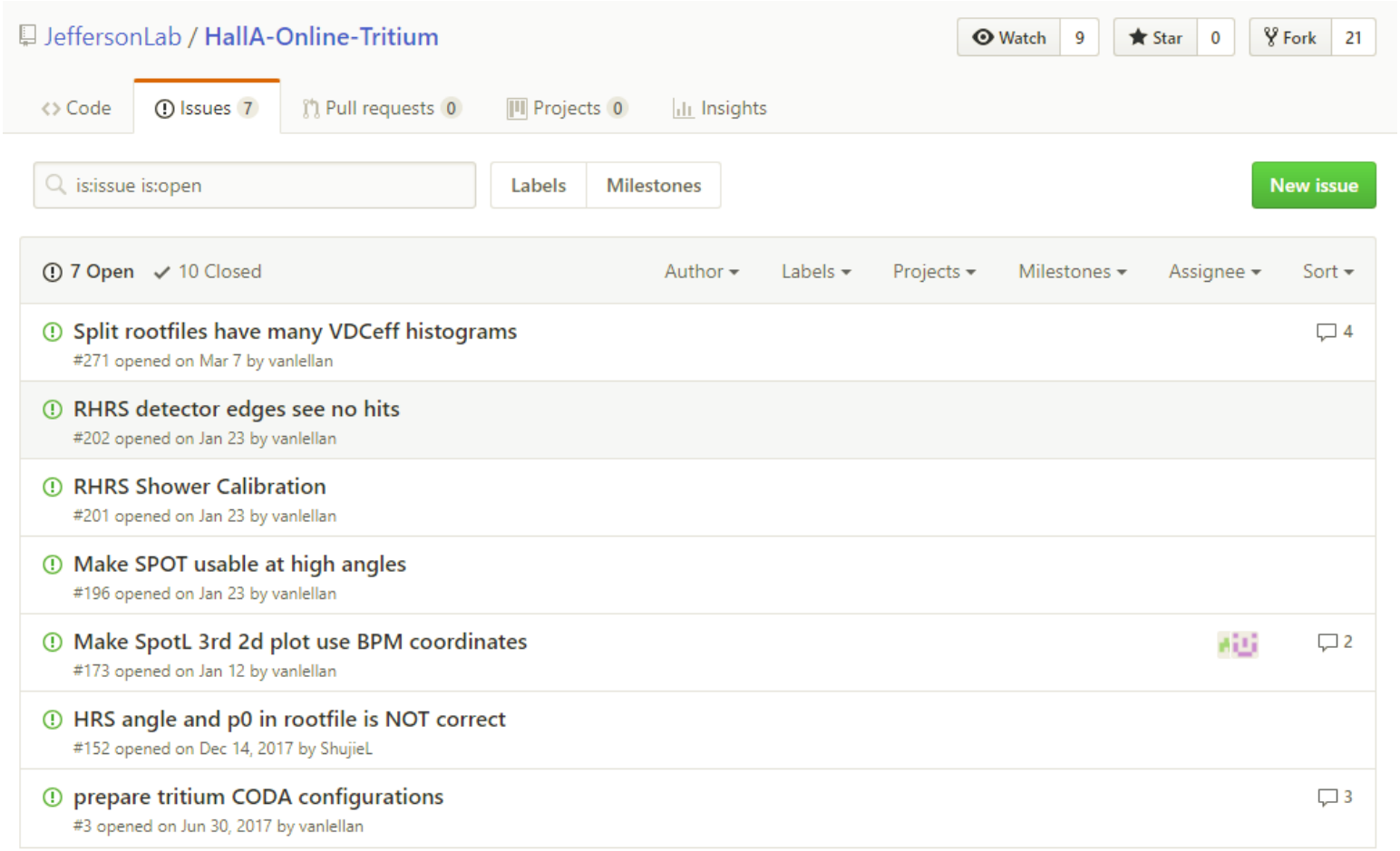
Branches

- Provide a separate work area, parallel to the main (“master”) branch
- Allows for invasive projects to be worked on without disturbing others work
  - The project doesn’t have to be rolled out until it is in a working state
- Allows frozen in time snapshots of your repository

Forks

- A Fork creates a copy of the code that is owned by you
- This is your own workspace separate from everyone else
- Your fork can include all branches from the primary repository

Task List/Issue Tracker



Part 2: Batch Jobs

Why Use Batch Jobs?

- Batch jobs allow you to automate large or redundant processes
- By running many jobs at once, your work is complete faster
- The ifarm is not intended for running code. By using the batch farm, we avoid slowdowns from using up the ifarm's resources

Scientific Workflow Indefatigable Factotum

- (or just swif)
- Swif is the system used to submit and control jobs sent to the batch farm
- Learning to use swif will make batch jobs a breeze
- https://scicomp.jlab.org/docs/swif

How to submit a job

- First, you need a script that runs everything the job will do
- Next, you need a jscript file that tells the batch system about your job
- Submit the job with:

  `swif add-jsub -workflow [workflow_name]

  -create -script [path_to_jscript]`

What are we doing with batch jobs?

- Raw data replays
- Pedestal scan
- More to come

THANK YOU