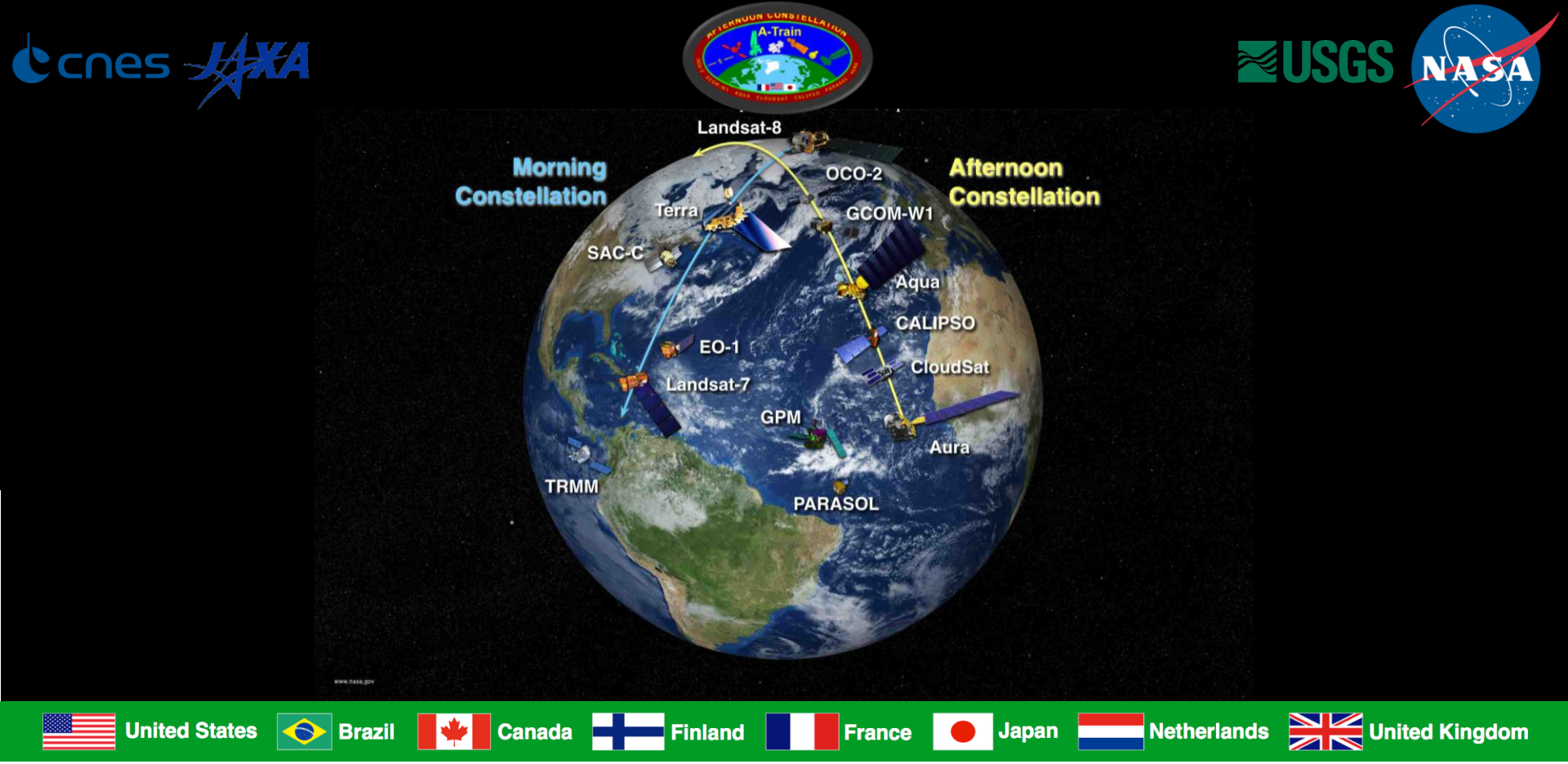

International Earth Science Constellation Mission Operations Working Group

Dec 03 - 05, 2019

Constellation Coordination System (CCS) Status

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Nathaniel Johnson, Author, Software Engineer, a.i. solutions, Inc., NASA GSFC Code 595

Agenda

- CCS Purpose and Goals
- CCS 2019.2
- CCS Demo
- Questions

CCS Purpose and Goals

- CCS is a system for coordinating and monitoring constellation safety of the Earth Sciences Constellation (ESC) missions and is a central source of data sharing and operational planning.
  - Monitors the Constellation's configuration and status.
  - Supports information exchange between partner ESC missions.
  - Transfers critical data between the Mission Operation Centers (MOCs), Conjunction Assessment Risk Analysis (CARA), and other authorized mission users.
  - Provides automated health and safety monitoring and analysis tools.
    - Automated constellation safety warning notifications.
    - Graphical visualization of orbital data.
- The latest release, CCS 2019.2, was deployed to operations on 10/15/2019.

CCS 2019.2 New Features

Released: 15th of October 2019

- User Interface Updates – Site updated visually and functionally
  - CCS now looks and acts like most modern websites.
  - The site runs more smoothly on mac and a variety of browsers.
- New Homepage Plot – Spacecraft Position Map
  - Shows all spacecraft projected onto a natural earth projection.
- Tool Updates – Updates to the tools page and tools themselves
  - The tool pages have been unified into a single page for easier transitioning between tools.
  - Some tools now allow you to run the same analyses on different spacecraft at the same time.
  - Removed repetitive violation emails.
- Various Other "Quality of Life" Improvements

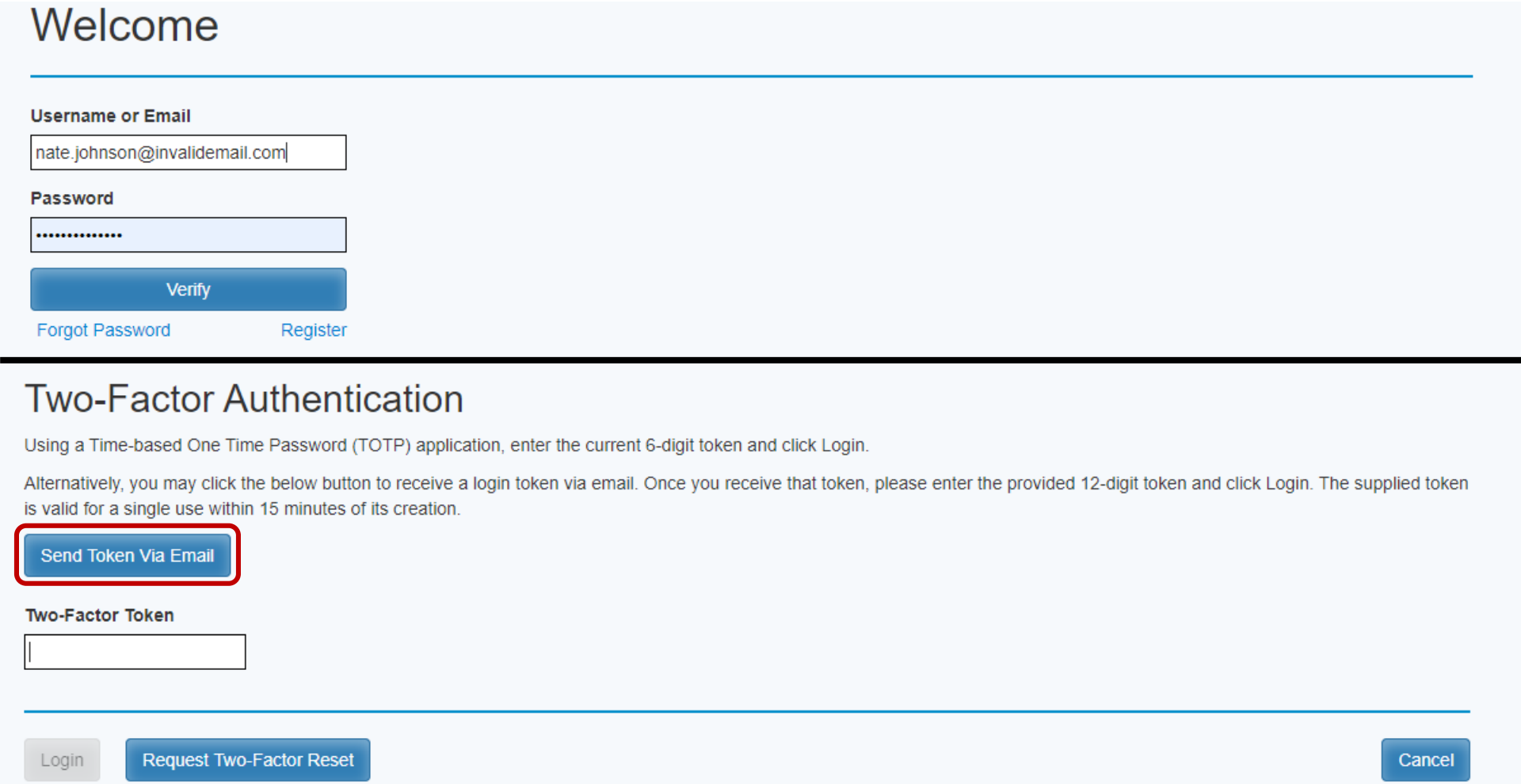
CCS 2019.2

Released: 15th of October 2019

Homepage with the new banner and navigation tabs

CCS 2019.2

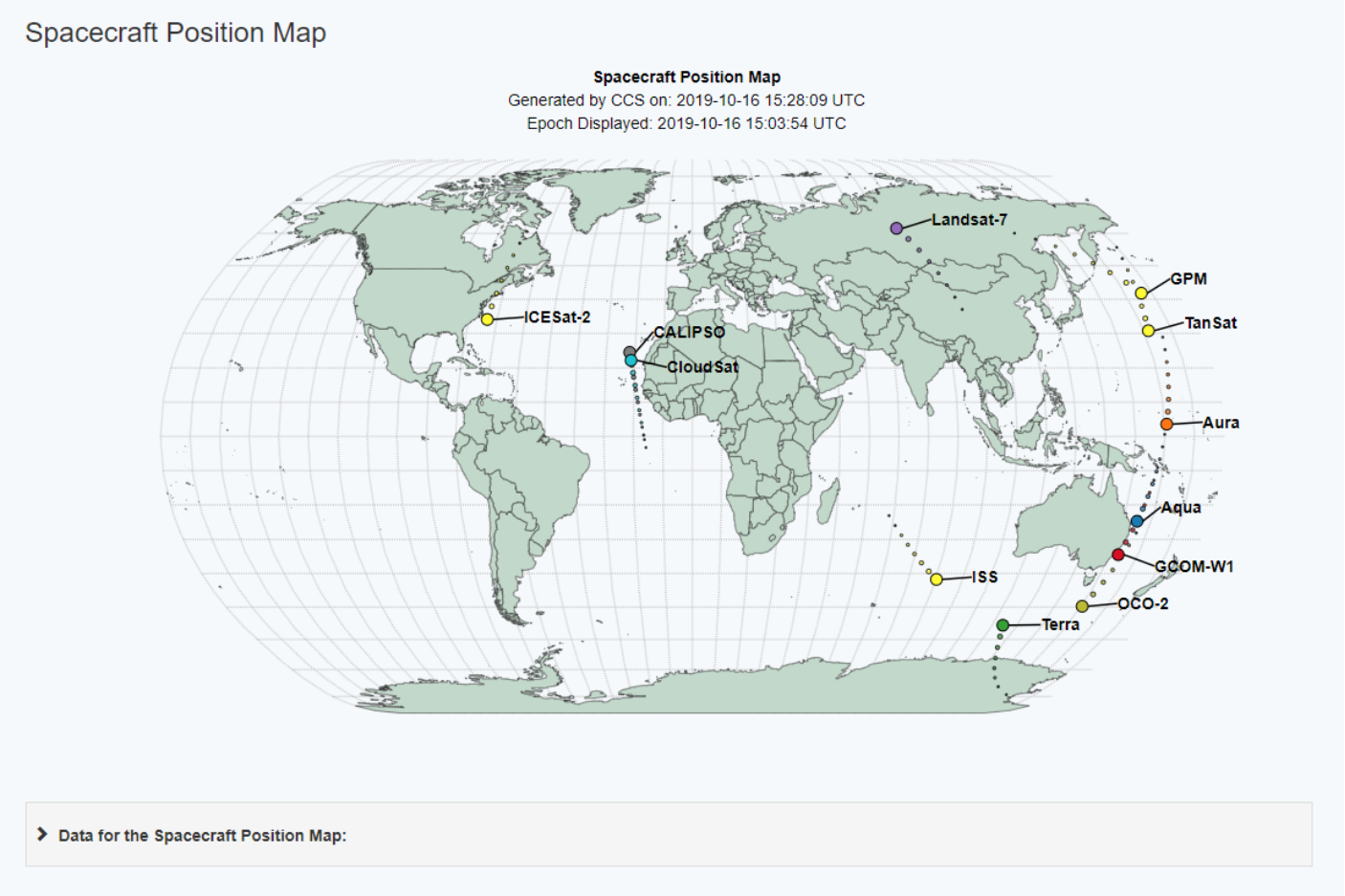
Released: 15th of October 2019



New Login Options - Login with your email, and get two factor codes sent to your email

CCS 2019.2

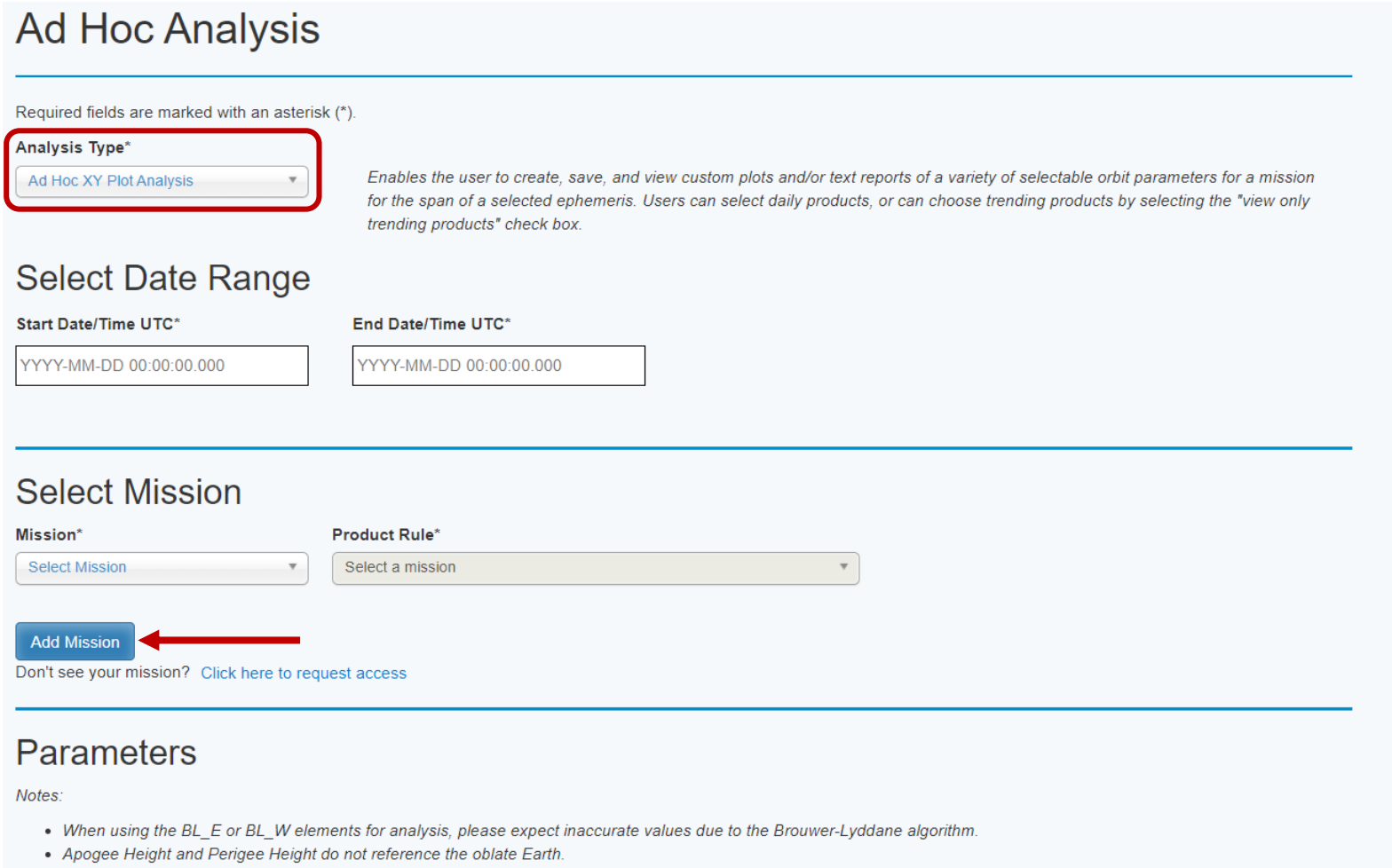
Released: 15th of October 2019



New homepage plot – Spacecraft Position Map

CCS 2019.2

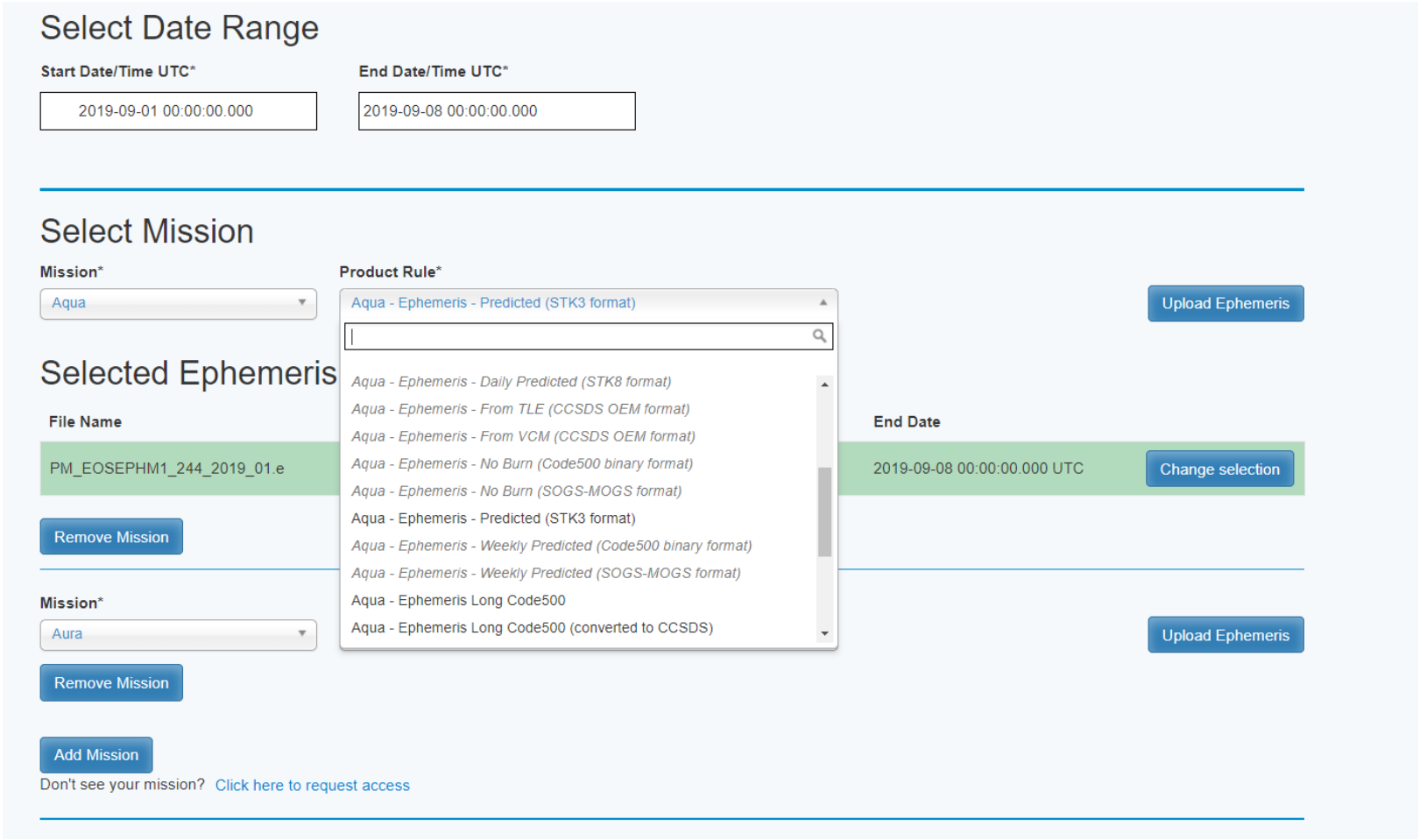
Released: 15th of October 2019



New Tools Updates – Cycle through all tools on unified tools page, see tool descriptions, and add more missions to AdHoc, Phase Margin, and Altitude vs Latitude

CCS 2019.2

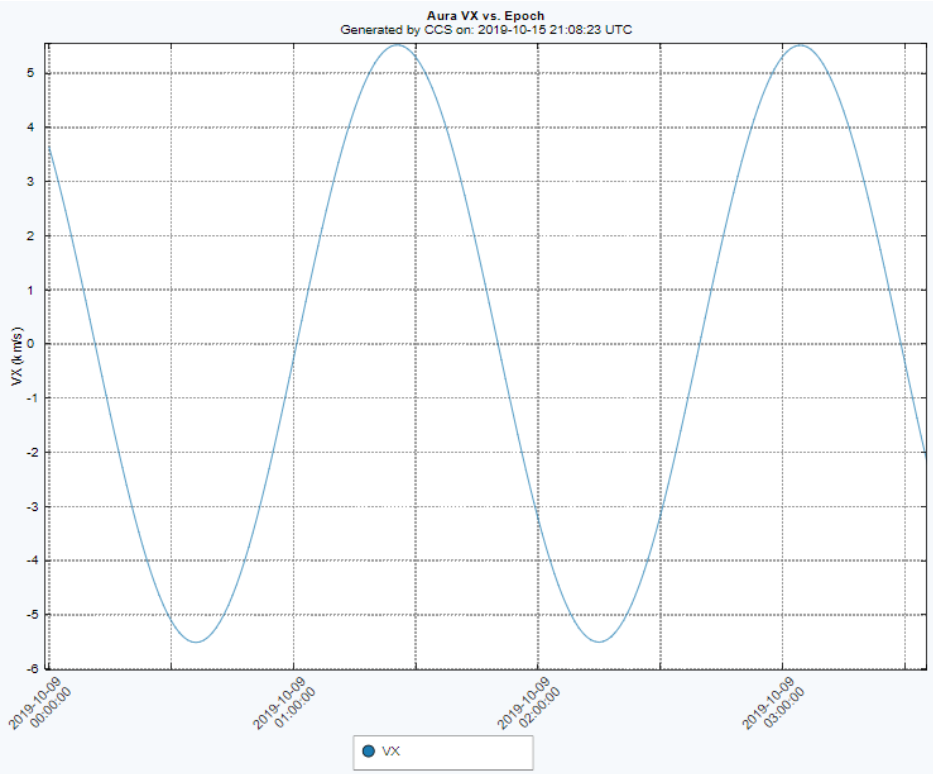
Released: 15th of October 2019

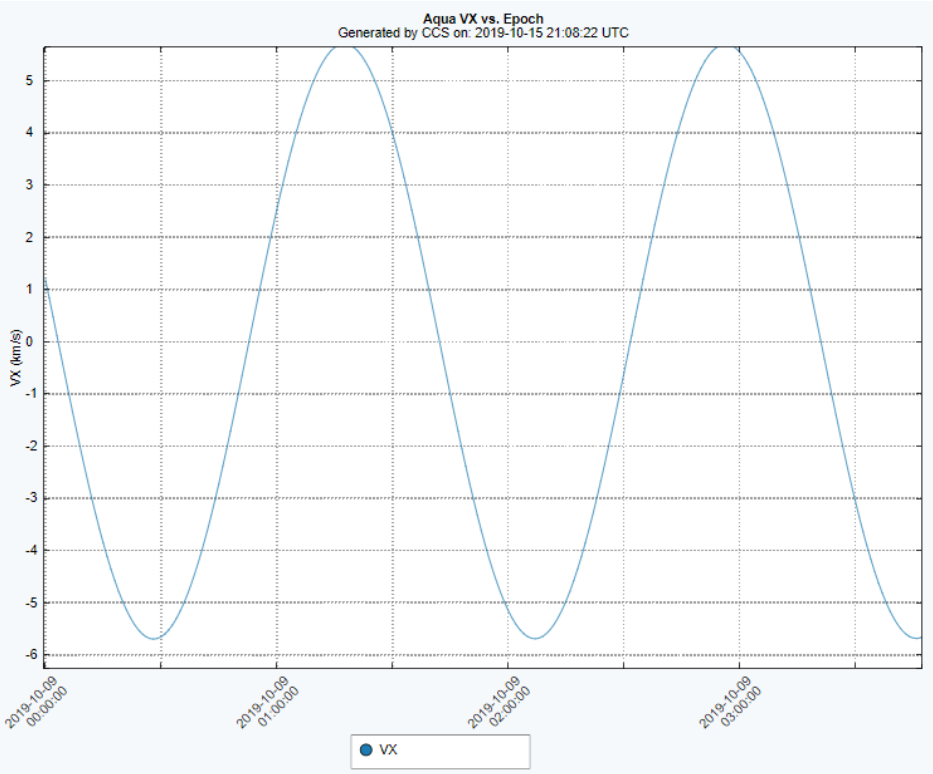


New Tools Updates – Product Rules and Missions that don't have available products are disabled

CCS 2019.2

Released: 15th of October 2019

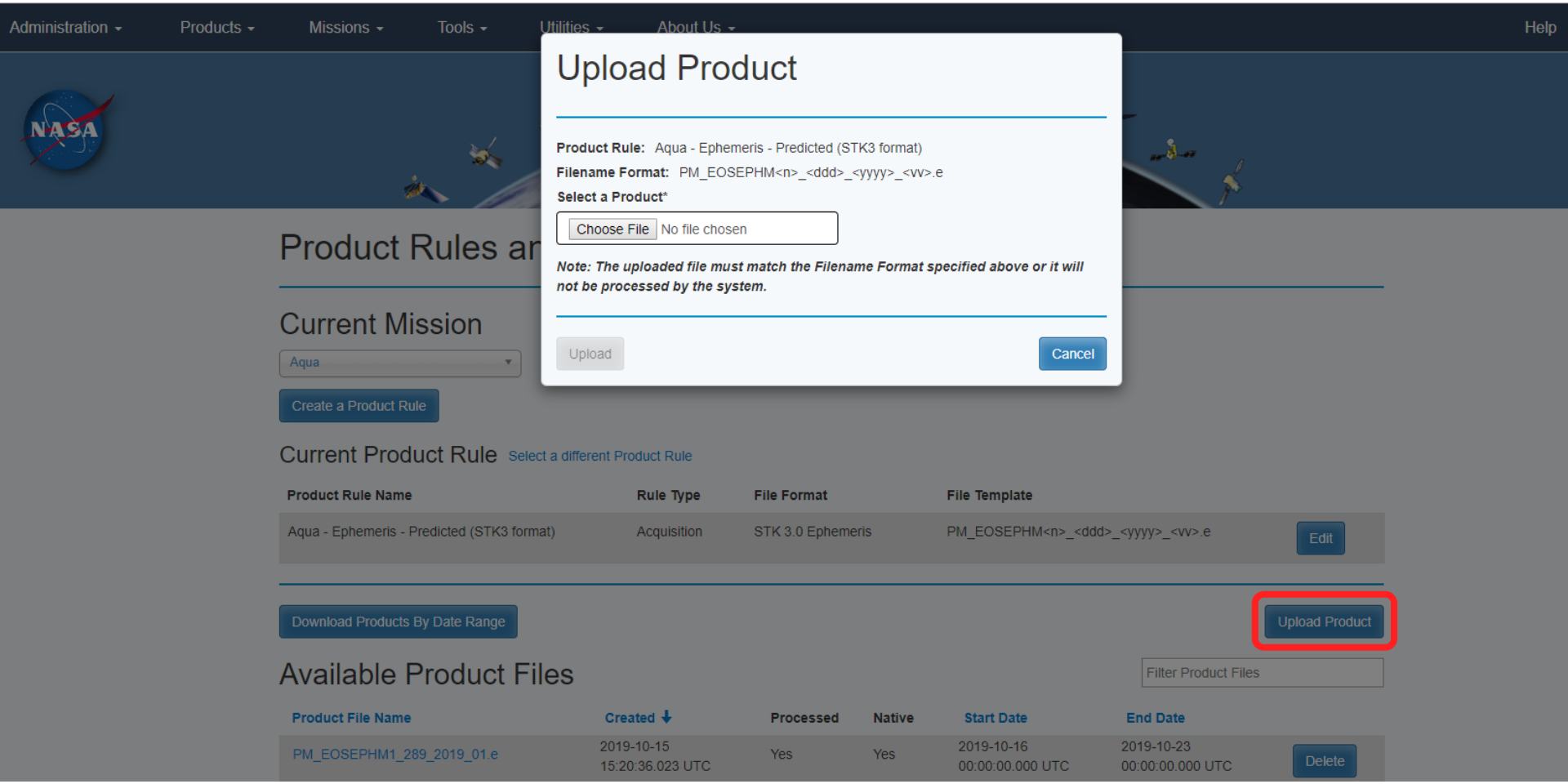




New Tools Updates – Multiple results on an AdHoc Analysis

CCS 2019.2

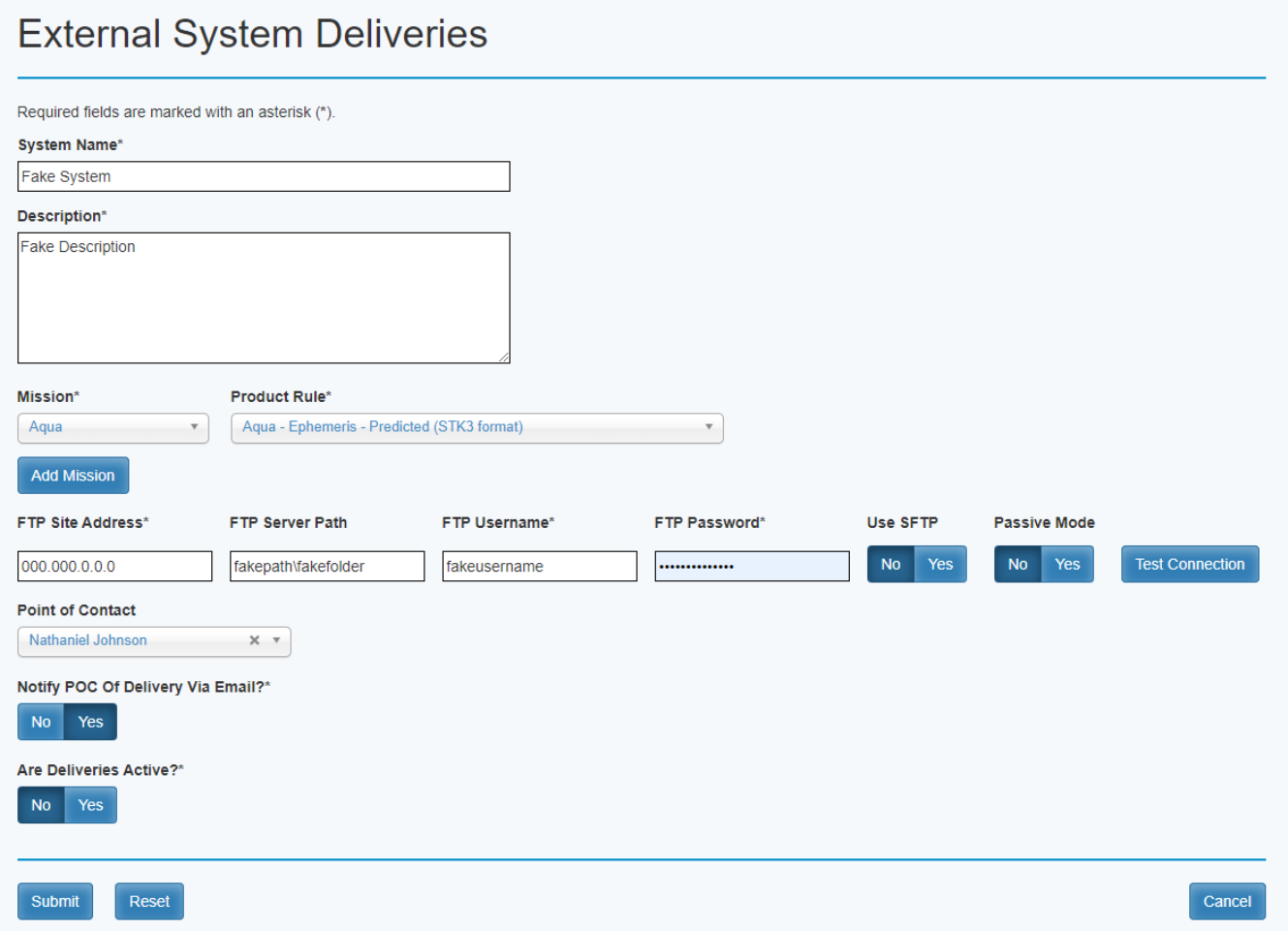
Released: 15th of October 2019



Ephemeris Upload – Manually place products onto the website

CCS 2019.2

Released: 15th of October 2019



External Deliveries – Have new products delivered directly via FTP

Questions

Questions?

Thank you

- Thank you for your continued support!

- For all CCS communications please contact:

ccs-support@lists.hq.nasa.gov