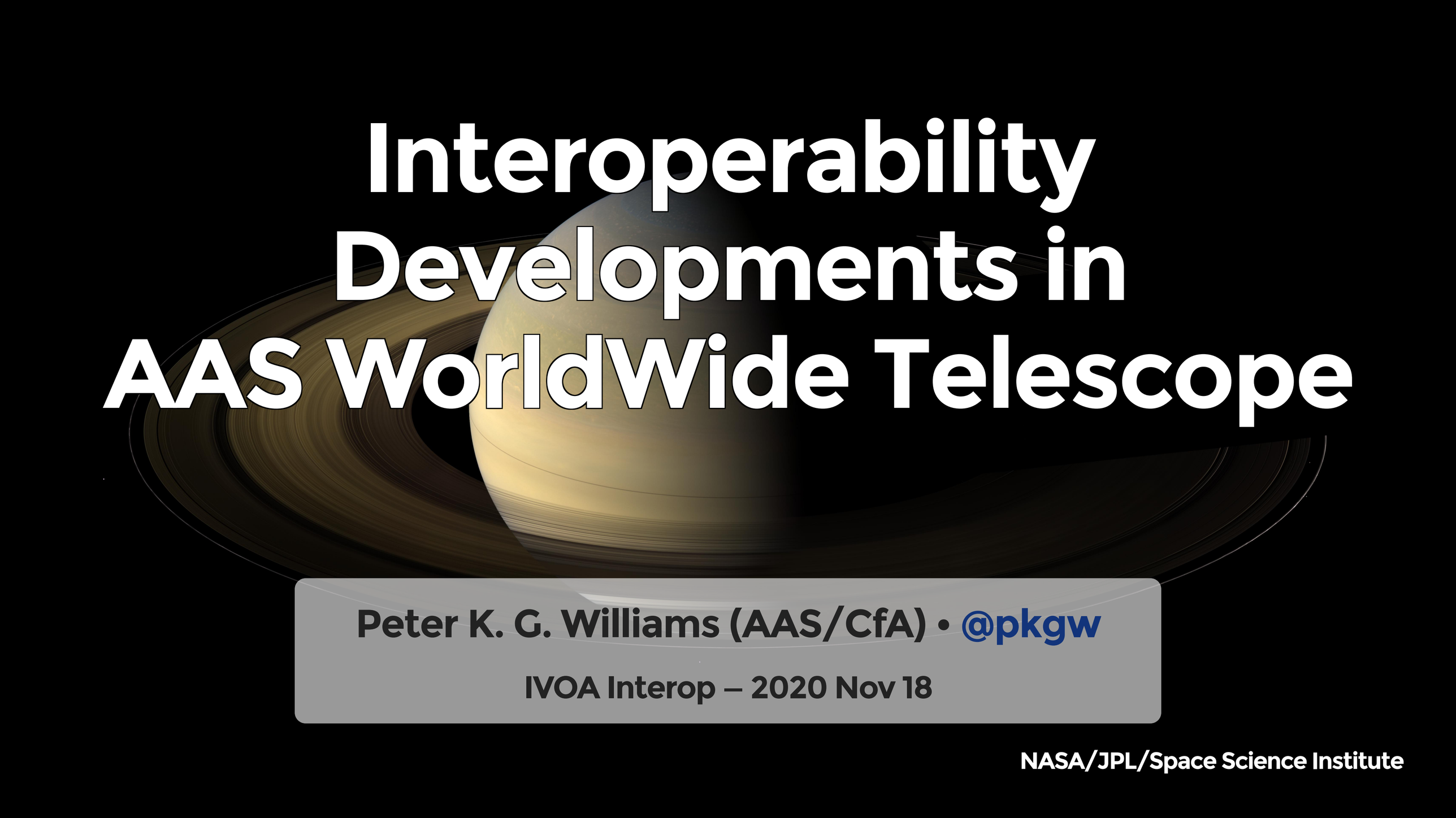


Interoperability Developments in AAS WorldWide Telescope

Peter K. G. Williams (AAS/CfA) • @pkgw

IVOA Interop — 2020 Nov 18

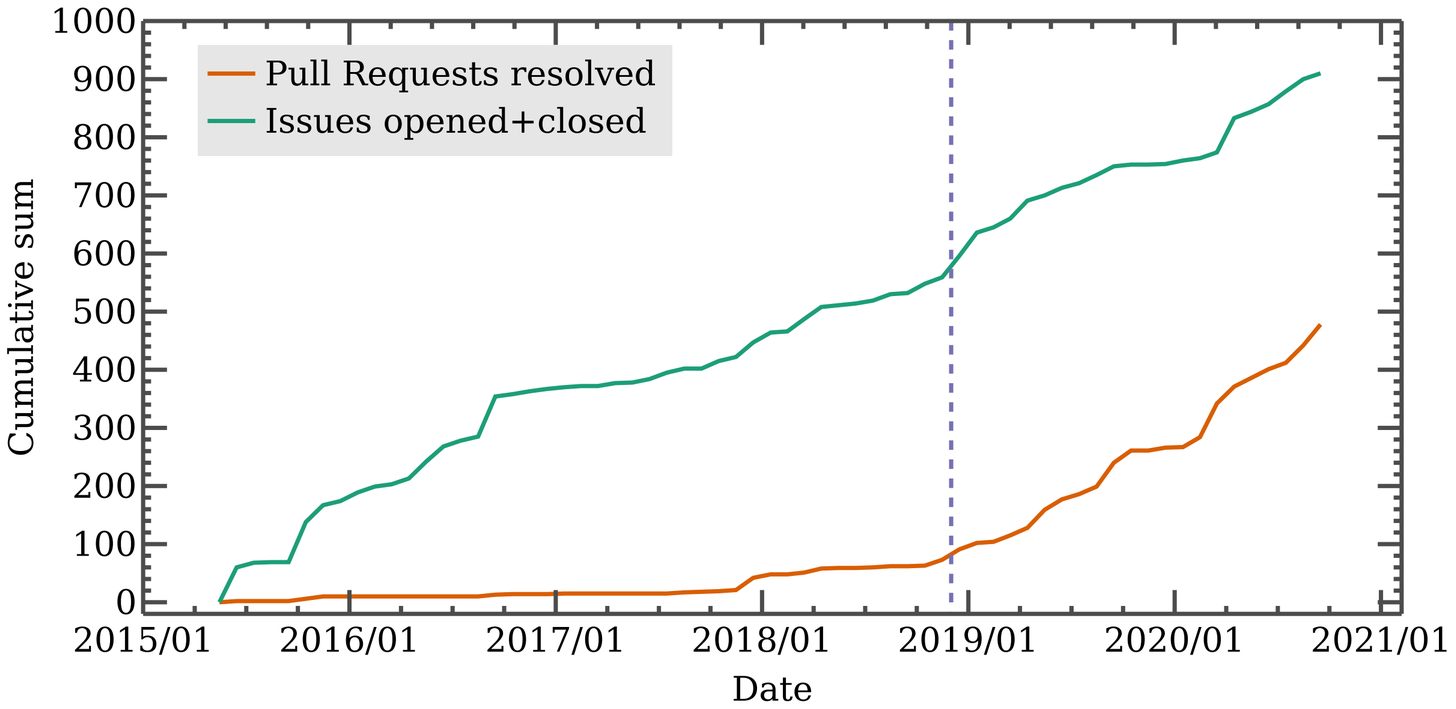
NASA/JPL/Space Science Institute

WWT: an old dog with some new tricks.

Historically, emphasis has been on standalone apps for Windows and web.

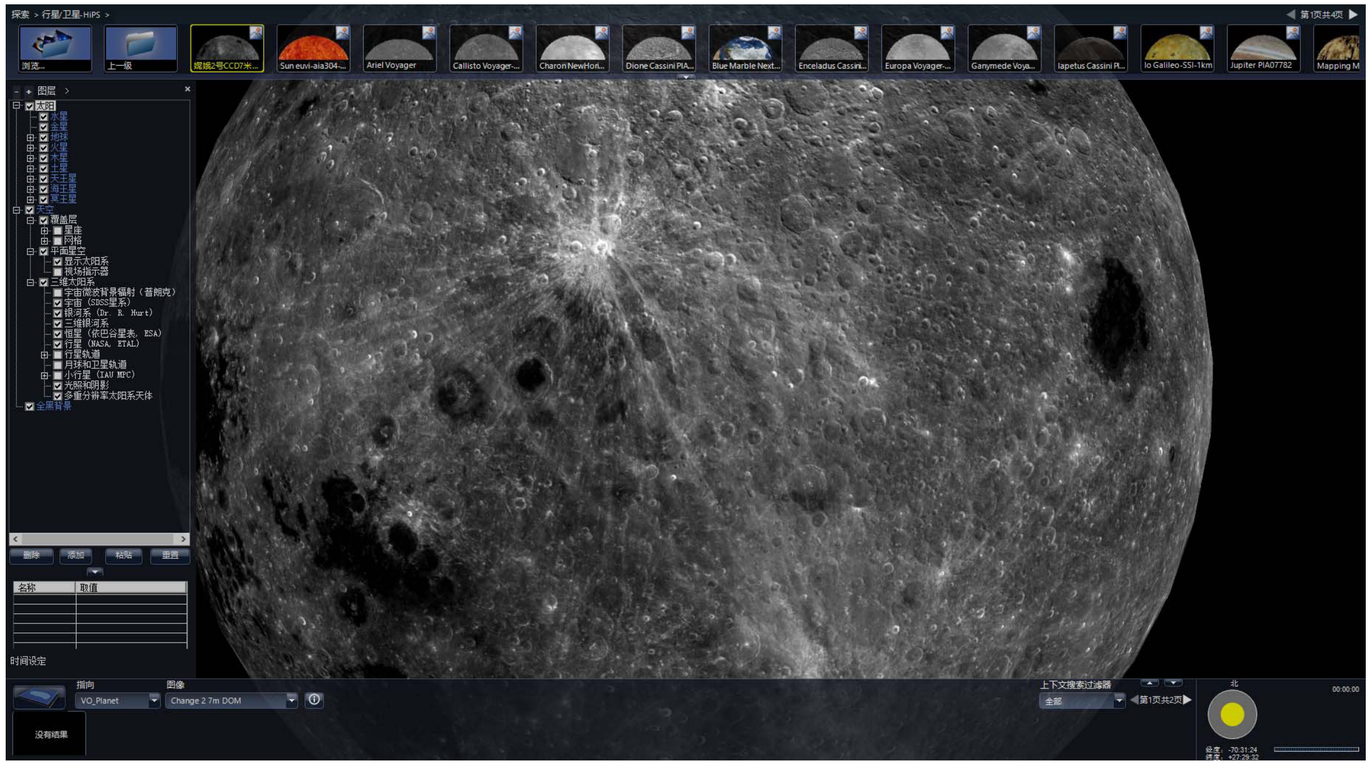
Lots of work at AAS recently to make the underlying “web engine” more reusable.

Massive improvements in infrastructure and (dev)ops.



Big investment in Jupyter(Lab)/pywwt (not shown today).

The big news: HiPS is coming to the WWT web engine!



China VO

Main development contributed by China-VO team — thank you!

Ported to AAS WWT Windows application by Jonathan Fay (Microsoft)

Windows ⇒ web adaptation underway by Henrik Norman (Winter Way)

https://github.com/WorldWideTelescope/wwt-webgl-engine/

(demo)

Other major push is towards viz of large FITS data.

“FastTract” project funded by US NSF (OAC-2004840).

WWT can do huge RGB images … and FITS … but not huge FITS.

We are looking at prior art (e.g. Bertin+ 2015) but there is not much flexibility in how we’ll have to implement tiled multi-rez FITS.

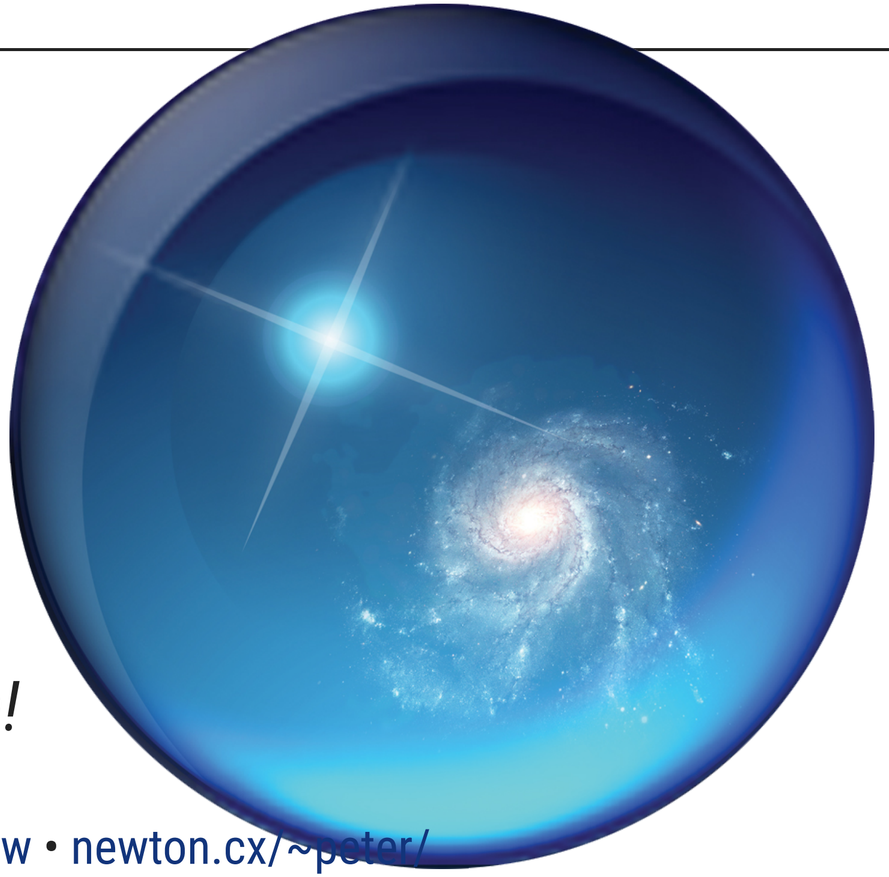
Data processing implemented in the revamped **toasty** package:

https://github.com/WorldWideTelescope/toasty/

(demo)

Here are some links for you.

- **WWT on GitHub:** github.com/WorldWideTelescope
- **Documentation:** docs.worldwidetelescope.org
- **Newsletter signup:** bit.ly/wwt-signup
- **WWT forum:** wwt-forum.org



Thanks for your attention!

Peter K. G. Williams • pwilliams@cfa.harvard.edu • @pkgw • newton.cx/~peter/

HTML talk info: https://tinyurl.com/htmltalk • *Design credits*: Hakim El Hattab (“white” theme), Julieta Ulanovsky (Montserrat font), Christian Robertson (Roboto fonts) • *Tech credits*: git, reveal.js, Firefox developer tools.