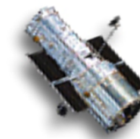




Goddard Space Flight Center

Hubble Space Telescope Program



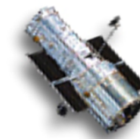
HST/GSFC Project Scientists' Report – Part 1

Presentation to: **STUC**

Jennifer Wiseman
Senior Project Scientist

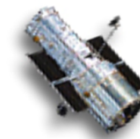
6 April 2011



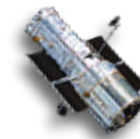


Topics

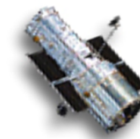
- **Science Highlights and Outlook (Wiseman)**
- **Hubble Legacy Archive (HLA) Status & Plans (Carpenter)**
- **Summary of Final Report from COS FUV Sensitivity Decrease Anomaly Resolution Board (ARB) (Carpenter)**



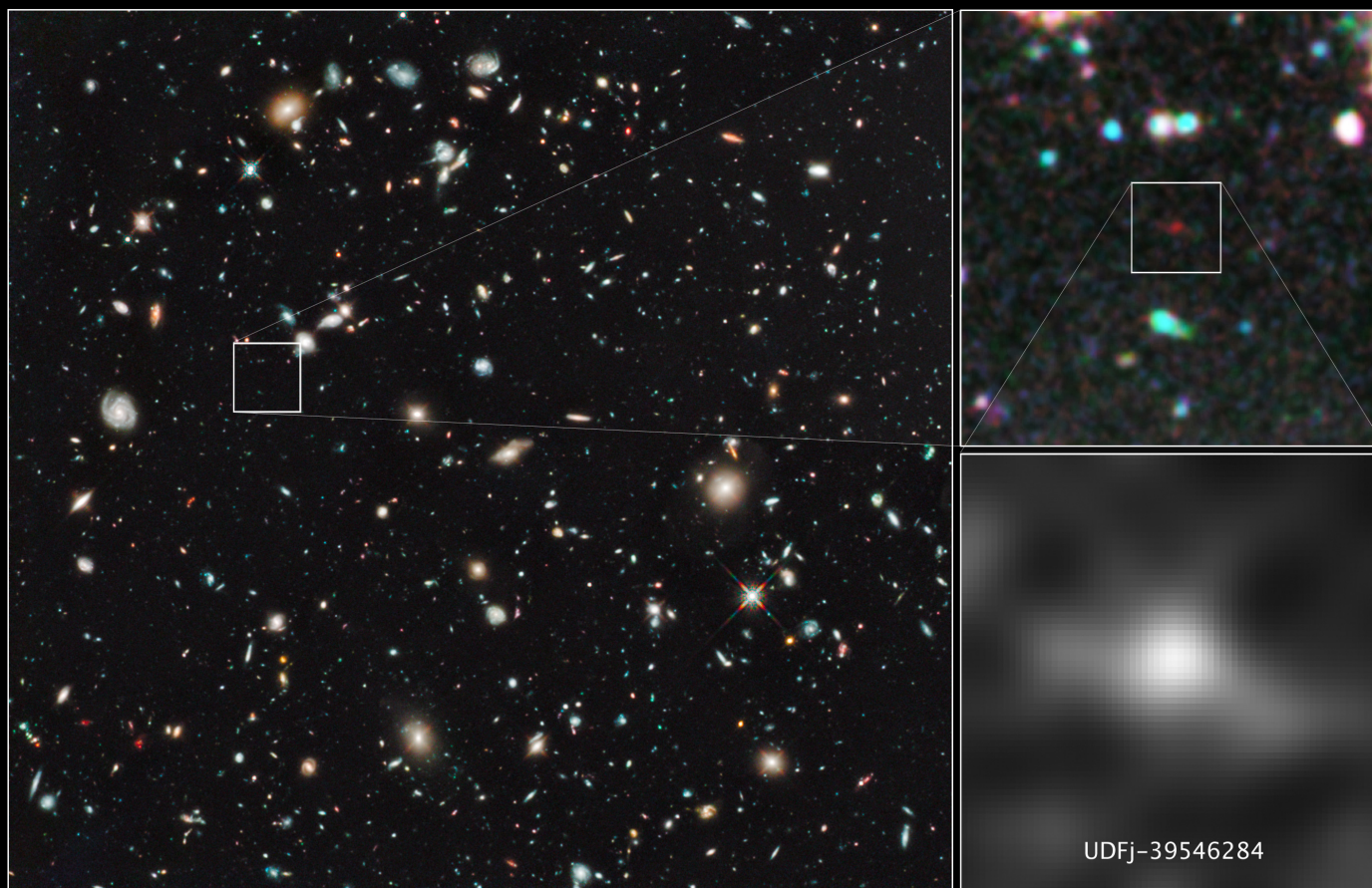
Science Highlights



Ultra-High Redshift Galaxies



Hubble Finds Redshift ~ 10 (Proto-)Galaxy



Hubble Ultra Deep Field 2009–2010
Hubble Space Telescope • WFC3/IR

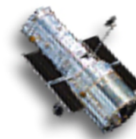
NASA, ESA, G. Illingworth (University of California, Santa Cruz),
R. Bouwens (University of California, Santa Cruz, and Leiden University), and the HUDF09 Team

STScI-PRC11-05



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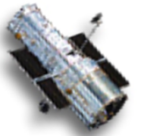
Ultra-High Redshift Galaxy Candidates (Green Circles: $Z \sim 8$; Red Circles: $Z > 8$)
Credit: NASA, ESA, S. Wyithe (University of Melbourne), H. Yan (Ohio State University), R. Windhorst (Arizona State University), and S. Mao (Jodrell Bank Center for Astrophysics, and National Astronomical Observatories of China)



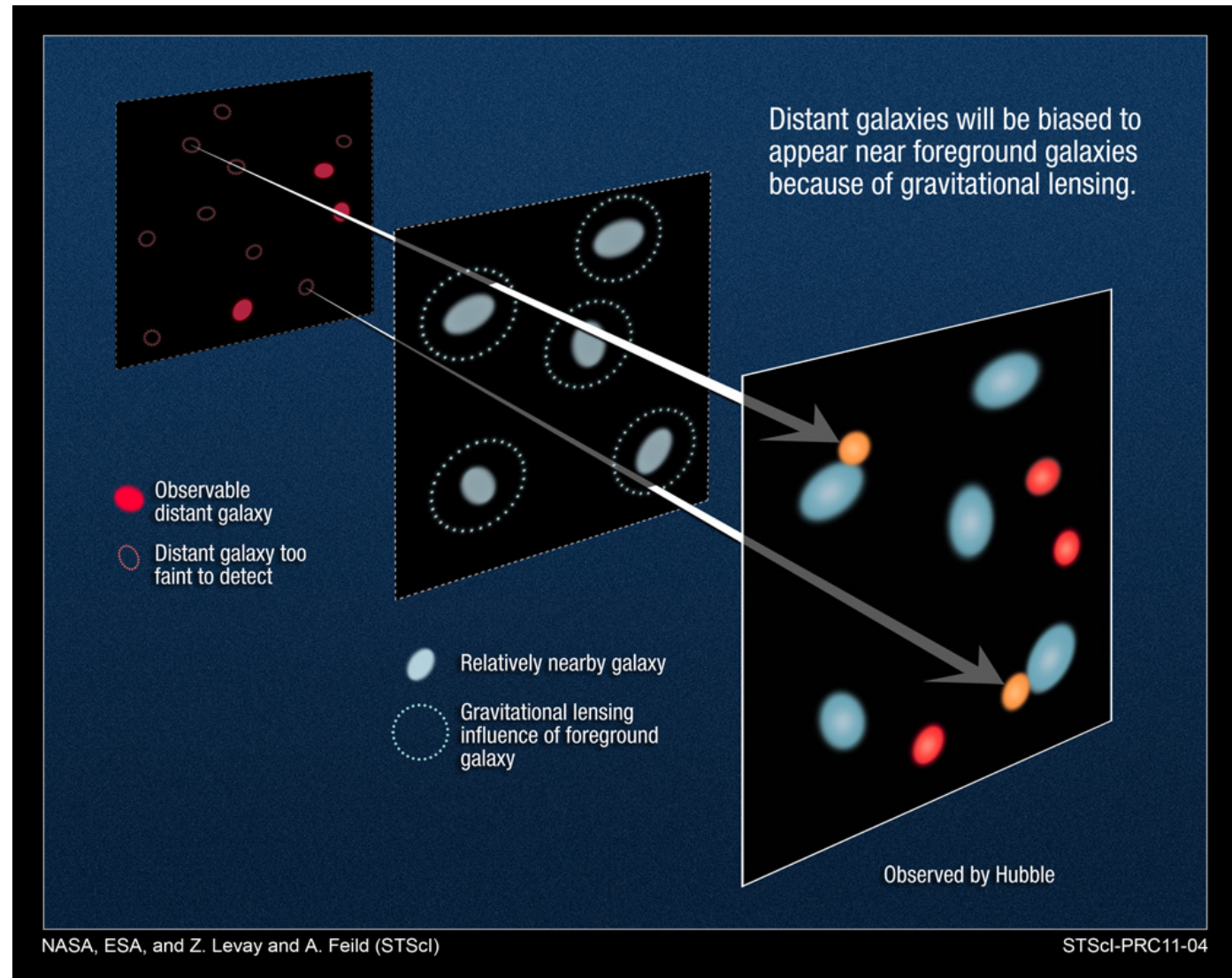


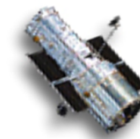
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Hubble Space Telescope Program

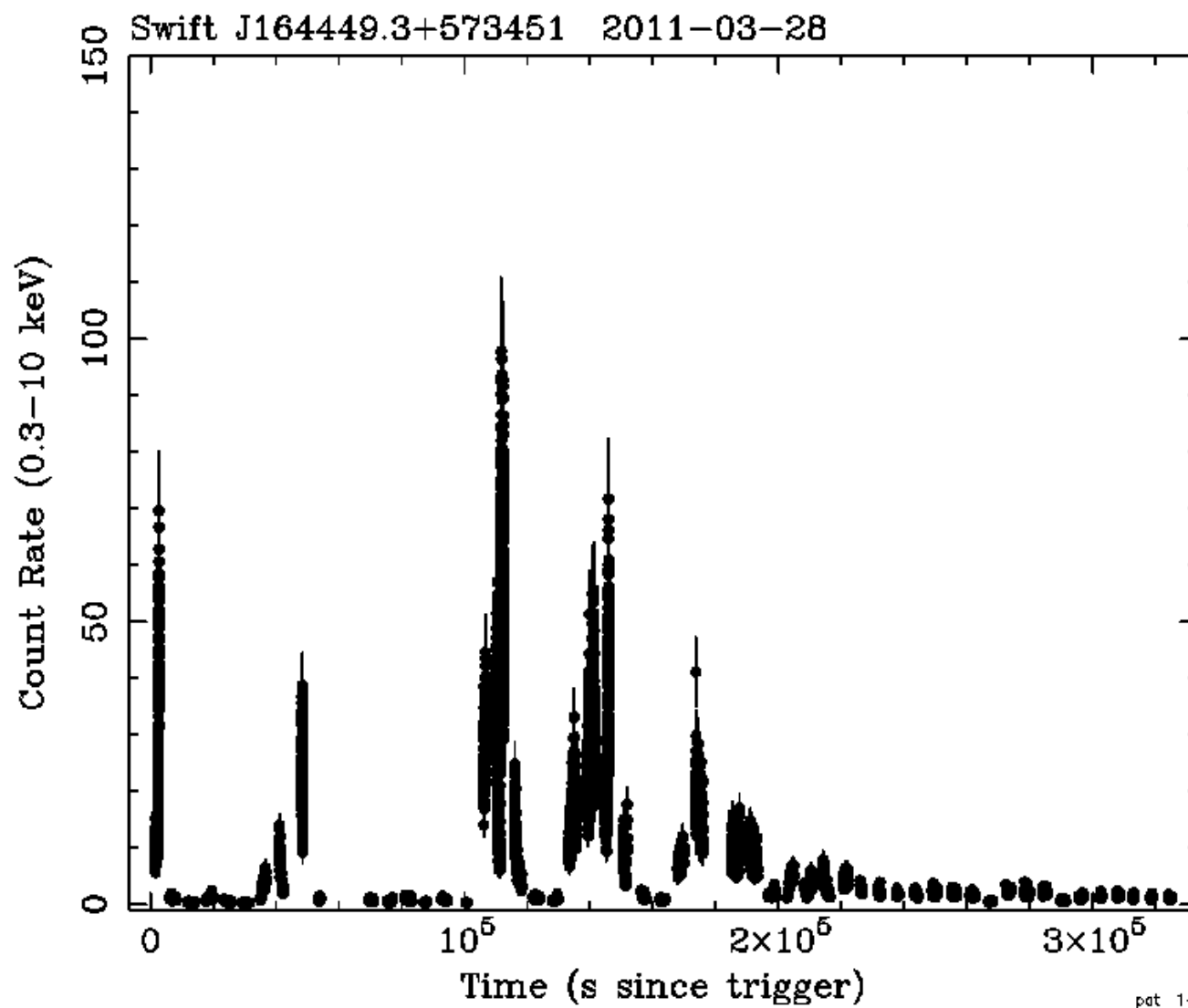
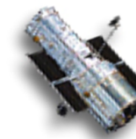


On Wednesday, January 12, astronomers discussed a theoretical paper on distant galaxies in the HUDF field in a press release entitled “In Deep Galaxy Surveys, Astronomers Get a Boost – from Gravity” (STScI-PR11-04). The PI is Stuart Wyithe of the University of Melbourne. The press release was reported in 25 media outlets.

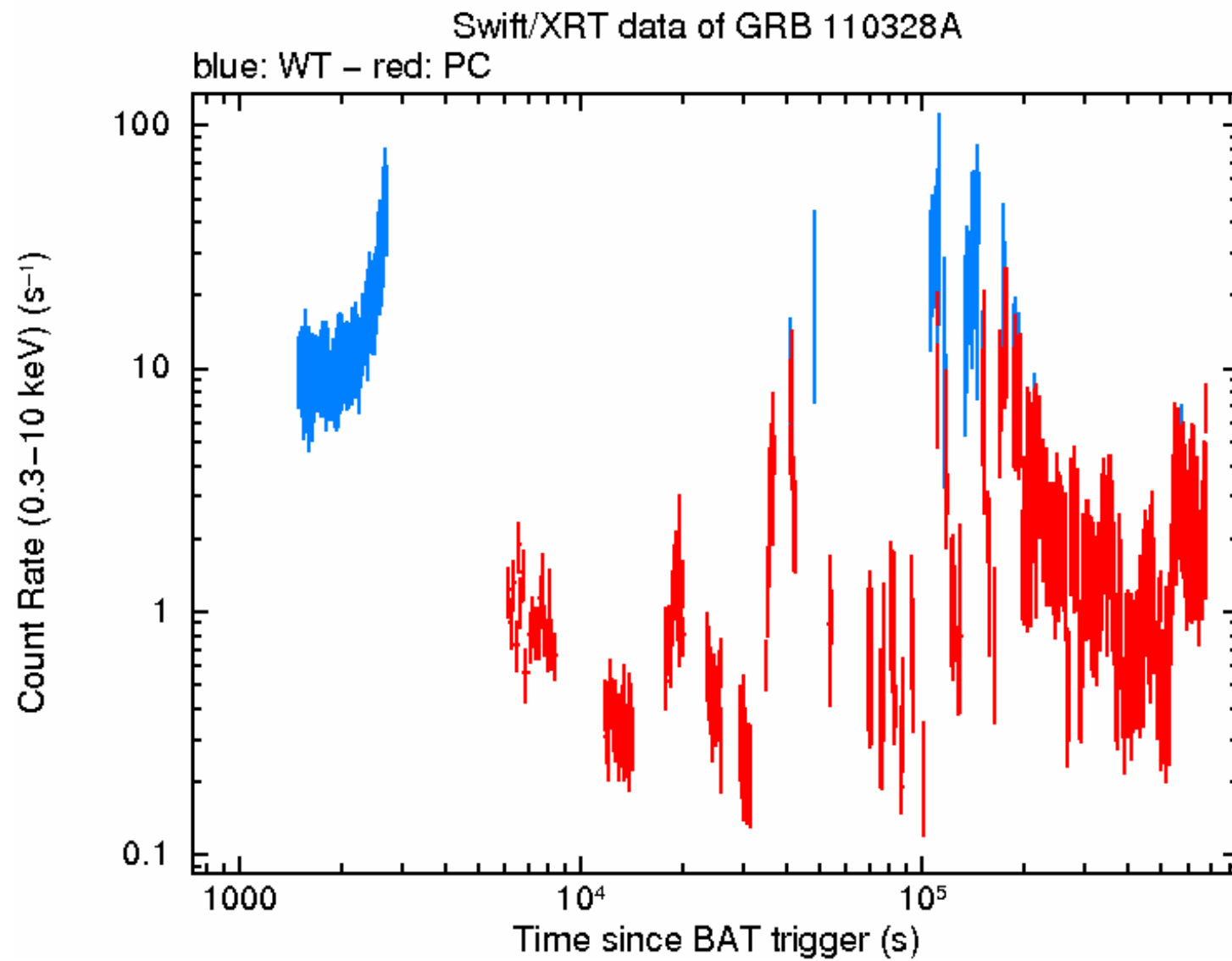
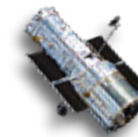


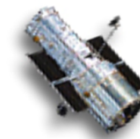


A Very Unusual Gamma-Ray Burst!



pat 1-Apr-2011 14:30





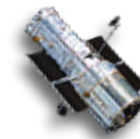
GRB 110328A

Hubble Space Telescope • WFC3/UVIS

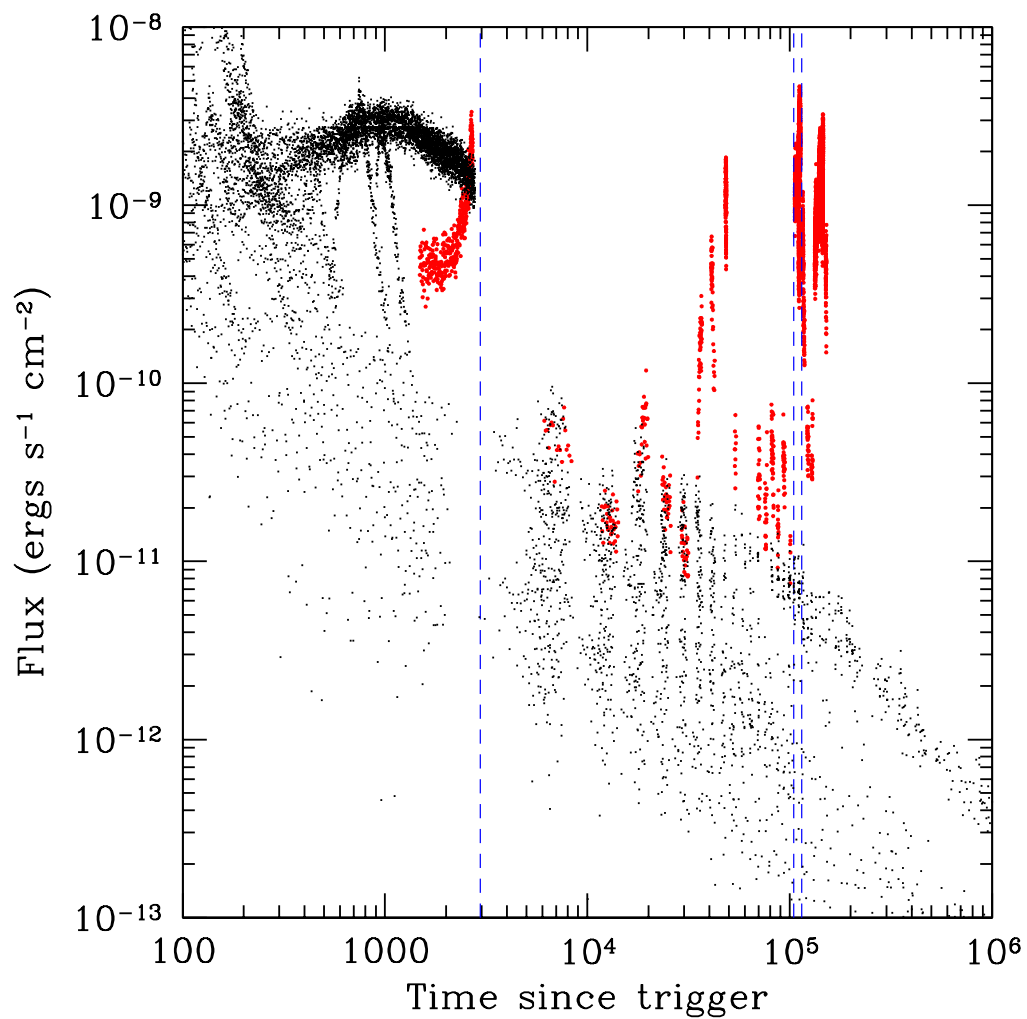


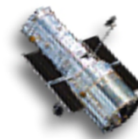
NASA, ESA, and A. Fruchter (STScI)

STScI-PRC11-10



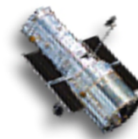
Comparing flux to other GRB's





What is it?

- **Repeating burst**
- **Emanates from the center of an external galaxy (HST)**
- **Star being torn apart and swallowed by a black hole?
Viewing down the AGN jet axis?**
- **Observations continue (VLBI, Chandra, Spitzer, etc...)**



Looking to the future...

- **Wisest use of science time in years left**
- **Senior Review for HST**
- **Impact of potential JWST launch date slip – keeping Hubble (and science community) in best use**
- **Goal of maintaining vigorous science community support and engagement; healthy budget; healthy data archive**