

Electromagnetic Follow-up in O2+

Neil Gehrels
NASA-GSFC

DAWN Workshop
July 7, 2016

Swift Satellite Example

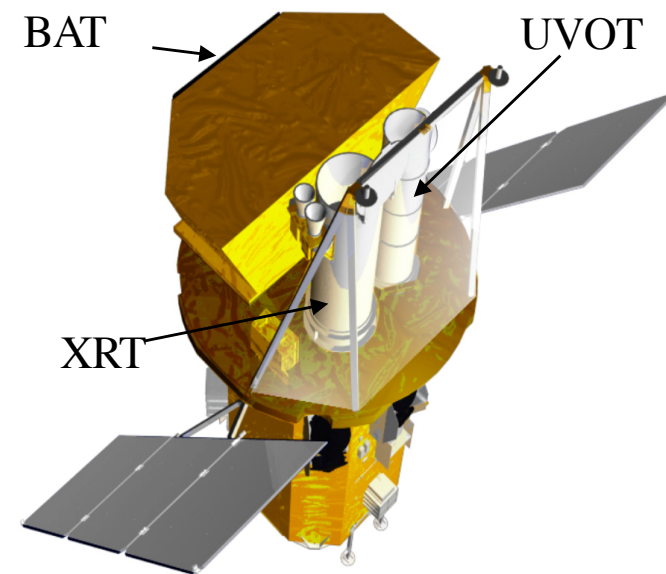
Partner with LIGO since S6 run
(*Evans+ 2012, 2015, 2016*)

Swift highlighted GW follow-up in
2016 Senior Review. Ranked #1

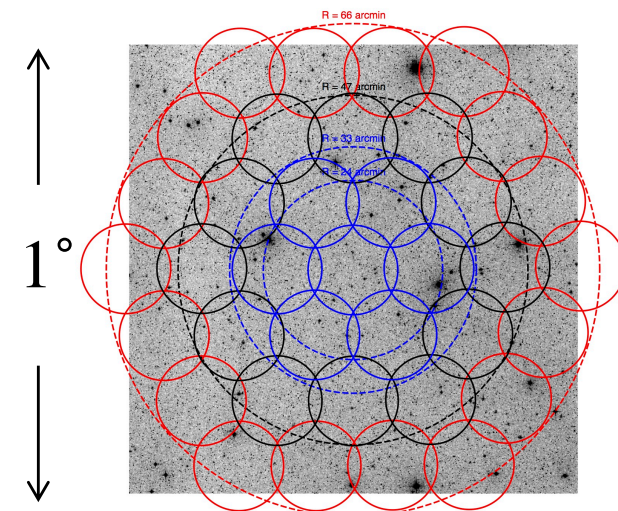
- GW & EM, The Next Great Frontier
- Leading the Time Domain Revolution
- Probing the Epoch of Reionization

Observing modes

- BAT prompt trigger
- XRT & UVOT tiling (*Evans+ 2015*)
- XRT & UVOT galaxy strategy
(*Gehrels+ 2016, Evans+ 2016*)



Large-scale Tiling



Looking to O2 and Beyond

The EM follow-up MOU program is working well.

The Swift team is interested in continued collaboration, even after alerts are public.

The focus of Swift will be on NS-NS mergers, but will follow-up all GW triggers in O2.

As LIGO-Virgo becomes more sensitive and BH-BH mergers are detected at high rates, Swift team will bias toward NS-NS's

Important to have accurate, prompt IDs of BH-BH, BH-NS and NS-NS triggers

Public release of all triggers and LIGO-Virgo data will greatly expand GW science

