



# INTEGRAL



**INTE**rnational  
**G**amma-**R**ay  
**A**strophysics  
**L**aboratory:

**INTEGRAL**

2.7 days  
orbit

Gamma ray  
imager  
20x20 deg  
FOV, 20 keV -  
1 MeV (IBIS)

Optical  
monitor  
(OMC)

X-ray monitor  
(JEM-X)

Gamma-ray  
spectrometer  
30x30 deg (SPI)

Anti-coincidence Shield,  
all-sky 75 keV - 1 MeV  
(ACS)



All-sky 90% Duty cycle  
from 75 keV to 2 MeV





## Fermi

Reported 16 seconds  
after detection



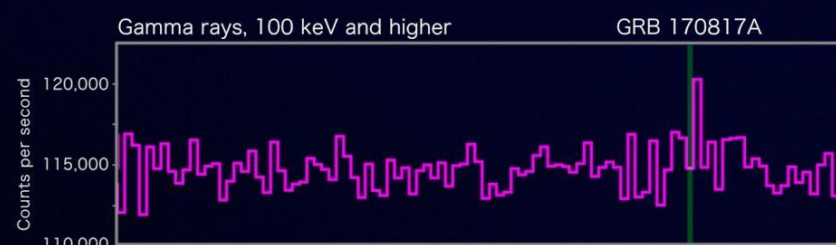
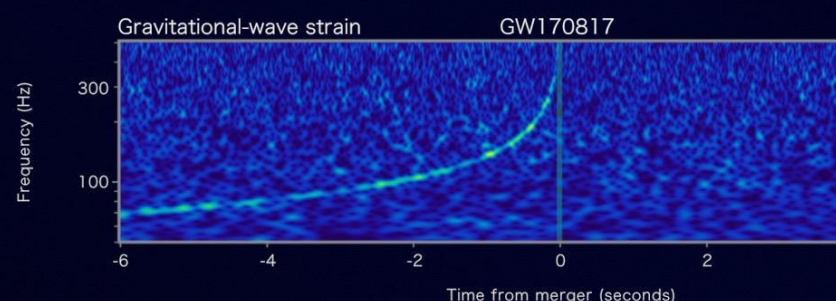
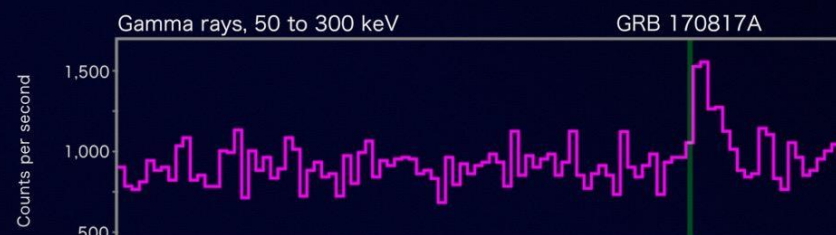
## LIGO-Virgo

Reported 27 minutes after detection



## INTEGRAL

Reported 66 minutes  
after detection



- Independent detection of GRB170817 associated to GW17817
- Upper limits on prompt emission from all BH mergers but one (duty cycle)
- Upper limits on delayed emission from a selection of events

- A strong team has defined a strategy to exploit serendipitous data, ask for follow-up observations, operate the satellite to repoint it quickly in case of GW, neutrino, or FRB triggers
- Calibration and rapid exchange of data with GBM and other missions to improve localization and avoid controversies
- We are interested in following up subthreshold external triggers (e.g. by LVC)
- INTEGRAL pre-approved until end 2020, reenter 2029