

Prompt HE emission break-out session

Marcos Santander on behalf of Ik Siong Heng, Aaron Tohuvavohu, Monica Seglar Arroyo, Zsuzsa Marka, Hugo Ayala, Andrew J Smith, Adam Goldstein, Maxim Barkov, Brian O'Reilly, Jasmin Gill, Tjonnie Li

- X-rays and MeV-GeV photons (Swift, Fermi)
- VHE gamma rays (HAWC, HESS, VERITAS)
- Neutrinos (IceCube)
- Theory
- LIGO
- AMON

Identifying additional counterparts

- Instrument capabilities
- Latency of different alert systems
- Signatures for “GW1708017” events
- Sub-threshold correlated searches (AMON and others)
- Sub-threshold events for Swift and IceCube

Instrument capabilities

- **Trigger observatories** (Swift BAT, Fermi, HAWC, IceCube)
 - High duty cycle
 - Large field of view.
- **Follow-up observatories** (Swift XRT, HESS, VERITAS)
 - Higher sensitivity
 - Smaller field of view (require better localization)
 - Require localization

Sub-threshold coincidences (AMON)

- AMON would like sub-threshold alerts (MoUs).
- Could start with public alerts to search for coincidences with other streams (gamma, neutrinos) and make those public.
- Archival search, move to realtime alerts.
- Searches require good understanding of instruments (detector and astrophysical backgrounds).
- AMON would introduce a few more minutes of latency.
- They can provide better localizations for follow-ups (eg. HAWC for HESS/VERITAS)

Sub-threshold events

- Swift event-by-event data can provide \sim deg -scale localization.
- Swift keeps a 30 minute buffer that needs to be pulled if there's anything interesting to look at later.
- Can be done very often, realistically twice a week.
- Latency between seconds and \sim 25 mins.
- IceCube can also store lower-level data on demand.

Should we look for more “170817s”?

- Short, hard peaked GRBs with soft, long tails could be identified in archival data.
- Use 170817 as a template. Was it unique beyond being one?