Status on Public Alerts

LIGO-Virgo Low-latency Analysis Group
July 18, 2019
● Modelled (Compact binary) and unmodeled (burst) pipelines are running in low-latency.
● Identification of candidates according to false-alarm-rate (FAR) criterion.
● https://gracedb.ligo.org/latest/
  a. Four BBH observations.
  b. One single IFO detection
Event summary: S190630ag

- [https://gracedb.ligo.org/superevents/S190630ag/](https://gracedb.ligo.org/superevents/S190630ag/)
- [https://gcn.gsfc.nasa.gov/notices_l/S190630ag.lvc](https://gcn.gsfc.nasa.gov/notices_l/S190630ag.lvc)
- Detected in Livingston, SNR at Virgo was subthreshold, Hanford was not running
Event summary: S190701ah

- Initial circular, Update circular
- [https://gcn.gsfc.nasa.gov/notices_l/S190701ah.lvc](https://gcn.gsfc.nasa.gov/notices_l/S190701ah.lvc)
- Well localized (90% CI = 67 sq. deg). PE further improved it (49 sq. deg)
- BBH, distance: ~1850 Mpc
Event summary: S190706ai

- [https://gracedb.ligo.org/superevents/S190706ai/](https://gracedb.ligo.org/superevents/S190706ai/)
- Initial circular, Update circular
- [https://gcn.gsfc.nasa.gov/notices_l/S190706ai.lvc](https://gcn.gsfc.nasa.gov/notices_l/S190706ai.lvc)
- BBH. This is the farthest source LVC has observed (>5 Gpc).
Event summary: S190707q

- [https://gracedb.ligo.org/superevents/S190707q/](https://gracedb.ligo.org/superevents/S190707q/)
- Initial circular, Update circular
- [https://gcn.gsfc.nasa.gov/notices_l/S190707q.lvc](https://gcn.gsfc.nasa.gov/notices_l/S190707q.lvc)
- Virgo was not in science mode
Outlook

- While sending update for sky-map, the name in the GCN notice (email and socket format) was truncated. This is being fixed.
- For S190701ah, uploaded LALInference sky-map had to be made public manually. This is being automated right now.
- Sky-map updates are provided more regularly now. In only one case (S190630ag) we have failed to provide the sky-map. We will send an update on that shortly. Trying settle to a pattern of sending regular updates.
- A new LVC public alert page is now online
- LIGO-Virgo Public Alerts User Guide & Support
  - Feedback or requests for information to: emfollow-userguide@support.ligo.org
- Mailing list
  - Please sign up to the public OpenLVEM mailing list; anyone can subscribe
  - Instructions at https://wiki.gw-astronomy.org/OpenLVEM