

# Status on Public Alerts

LIGO-Virgo Low-latency Analysis Group  
June 20, 2019

# GraceDB – Gravitational Wave Candidate Event Database

HOME	SEARCH	LATEST	DOCUMENTATION	LOGIN
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## Latest – as of 18 June 2019 19:37:07 UTC

Test and MDC events and superevents are not included in the search results by default; see the [query help](#) for information on how to search for events and superevents in those categories.

Query:

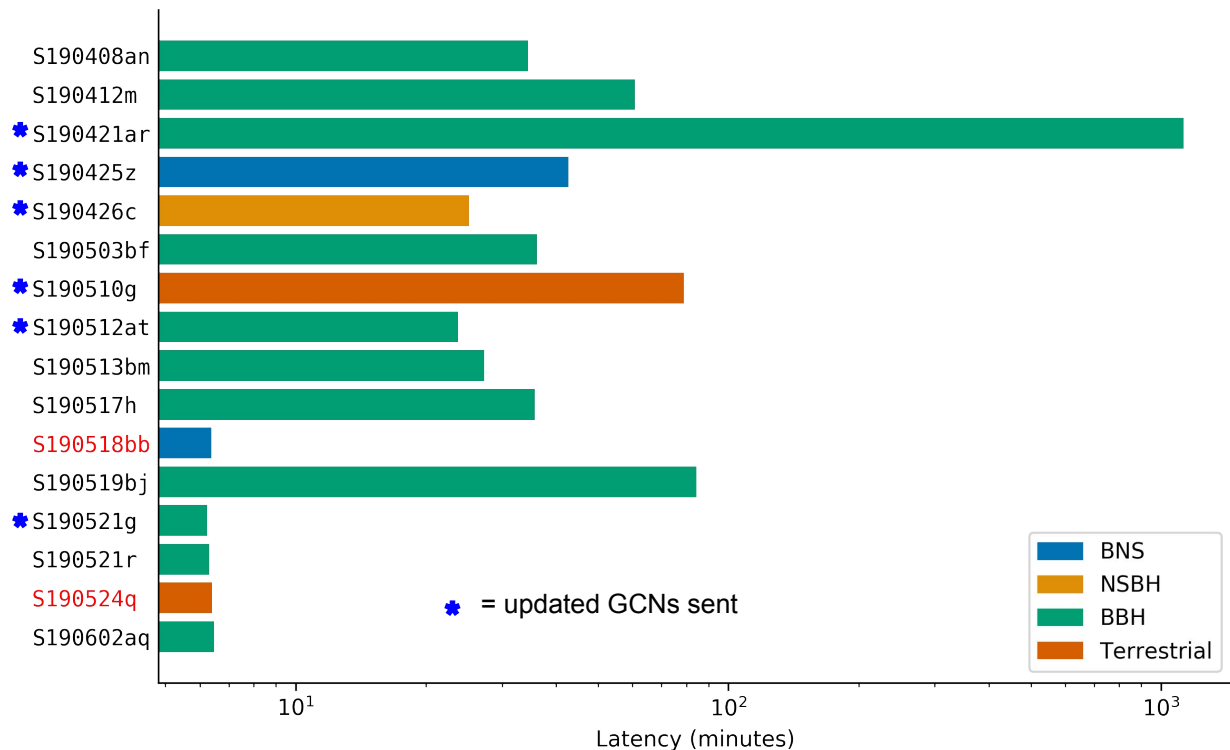
Search for:

Search

UID	Labels	t_start	t_0	t_end	FAR (Hz)	Created
<a href="#">S190602aq</a>	PE_READY ADVOK SKYMAP_READY EMBRIGHT_READY PASTRO_READY DQOK GCN_PRELIM_SENT	1243533584.081266	1243533585.089355	1243533586.346191	1.901e-09	2019-06-02 17:59:51 UTC
<a href="#">S190524q</a>	ADVNO SKYMAP_READY EMBRIGHT_READY PASTRO_READY DQOK GCN_PRELIM_SENT	1242708743.678669	1242708744.678669	1242708746.133301	6.971e-09	2019-05-24 04:52:30 UTC

- Compact binary and unmodeled burst pipelines are running
  - a. Background estimation is reasonably stable.
  - b. Robust identification of candidates according to false-alarm-rate criteria.
- <https://gracedb.ligo.org/latest/>
  - a. This has been a quieter month.
  - b. Only two interesting candidates. One of them, S190524q was retracted.

# Current status of low-latency analysis system



Preliminary alerts have been consistently sent with **latencies <7 minutes** for the past month.

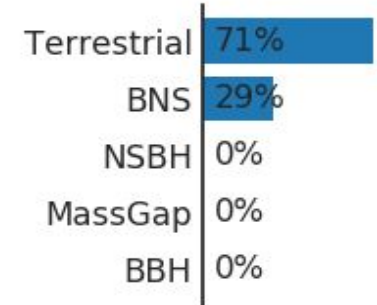
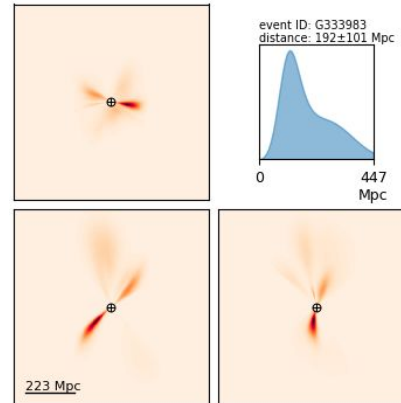
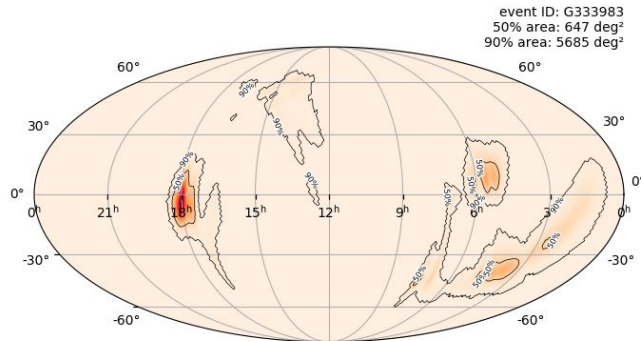
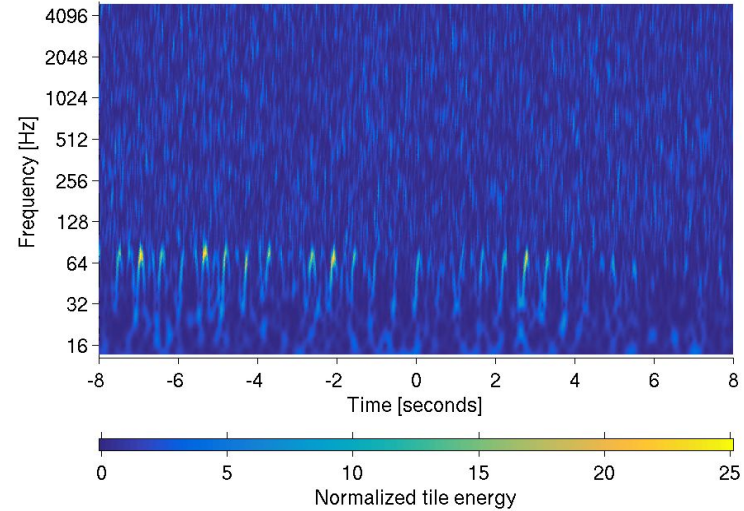
The June 25 code rollout will **decrease latency to <3 minutes**.

Latency is **dominated by selection of the preferred event**.

# Event summary: S190524q

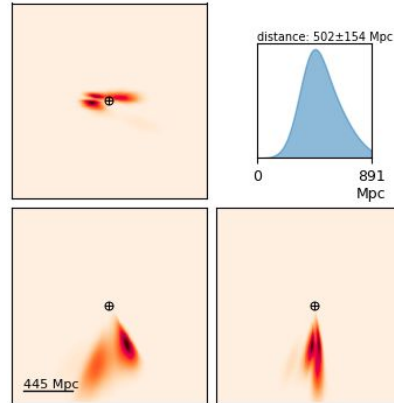
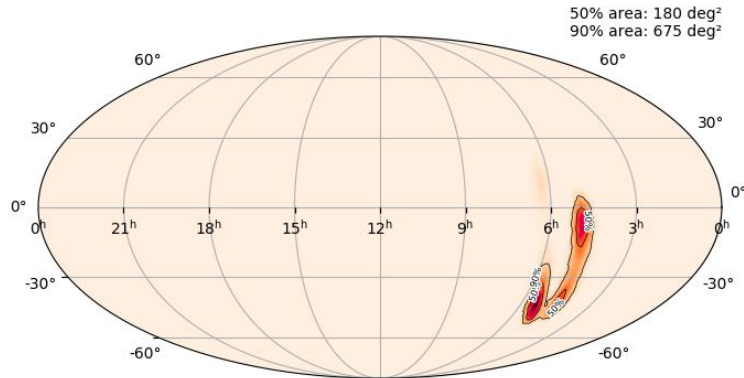
- <https://gracedb.ligo.org/superevents/S190524q/>
- **Retracted** due to identification of a glitch in L1.
- Notes:
  - An automated GCN Notice went out in 6 minutes and 3 seconds.
  - Event retracted within ~10 minutes of preliminary notice following manual inspection.

L1:GDS-CALIB\_STRAIN at 1242708744.679 with Q of 11.9



# Event summary: S190602aq

- <https://gracedb.ligo.org/superevents/S190602aq/>
- <https://gcn.gsfc.nasa.gov/gcn3/24717.gcn3>
- [https://gcn.gsfc.nasa.gov/notices\\_I/S190602aq.lvc](https://gcn.gsfc.nasa.gov/notices_I/S190602aq.lvc)
- P<sub>astro</sub> calculation indicates likely BBH candidate (99% BBH).



BBH	>99%
Terrestrial	<1%
NSBH	0%
MassGap	0%
BNS	0%

# Outlook

- Single interferometer triggers are now processed as viable GW events.
- Automated ingestion of external triggers (GRBs) is working and determination of coincidences with GW is working. More developments in coming weeks.
- LIGO-Virgo **Public Alerts User Guide & Support**
  - **New, shorter URL:** <https://emfollow.docs.ligo.org/>
  - Features new tutorial on **multiorder sky maps**:  
[https://emfollow.docs.ligo.org/userguide/tutorial/multiorder\\_skymaps.html](https://emfollow.docs.ligo.org/userguide/tutorial/multiorder_skymaps.html)
  - **Feedback or requests** for information to: [emfollow-userguide@support.ligo.org](mailto: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>
  - We will use it to announce changes of configuration, plans, etc

# Coming soon - Events summary page

HOME PUBLIC ALERTS SEARCH LATEST DOCUMENTATION

## GraceDB — Gravitation

HOME PUBLIC ALERTS SEARCH LATEST DOCUMENTATION

### GraceDB Overview

The gravitational-wave candidate event database (GraceDB) is a service operated by the [LIGO Scientific Collaboration](#). It provides a centralized location for aggregating and retrieving information about candidate gravitational-wave events. GraceDB provides an [API](#) for programmatic access, and a [client package](#) is available for interacting with the API.

### Useful information

**\*NEW\*** [O3 public alert summary page](#)

- [Information about GW alerts and real-time data products](#) is available in the [LIGO/Virgo Public Alert Guide](#).
- Found a bug? [LIGO/Virgo users can report issues on the GraceDB Github page](#).

Server code version: [2.5.1](#)

## LIGO/Virgo Public Alerts

Detection candidates: 14

SORT: EVENT ID (A-Z)

Event ID	Possible Source (Probability)	UTC	GCN	Location	FAR	Comments
<a href="#">S190602aq</a>	BBH (99%)	June 2, 2019 17:59:27 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 16.673 years	
<a href="#">S190524q</a>	Terrestrial (71%), BNS (29%)	May 24, 2019 04:52:06 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 4.5458 years	RETRACTED
<a href="#">S190521r</a>	BBH (>99%)	May 21, 2019 07:43:59 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 100.04 years	
<a href="#">S190521g</a>	BBH (97%), Terrestrial (3%)	May 21, 2019 03:02:29 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 8.3367 years	
<a href="#">S190519bj</a>	BBH (96%), Terrestrial (4%)	May 19, 2019 15:35:44 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 5.5578 years	
<a href="#">S190518bb</a>	BNS (75%), Terrestrial (25%)	May 18, 2019 19:19:19 UTC	<a href="#">GCN Circulars</a> <a href="#">Notices</a>   <a href="#">VOE</a>		1 per 3.1557 years	RETRACTED