



# Introduction



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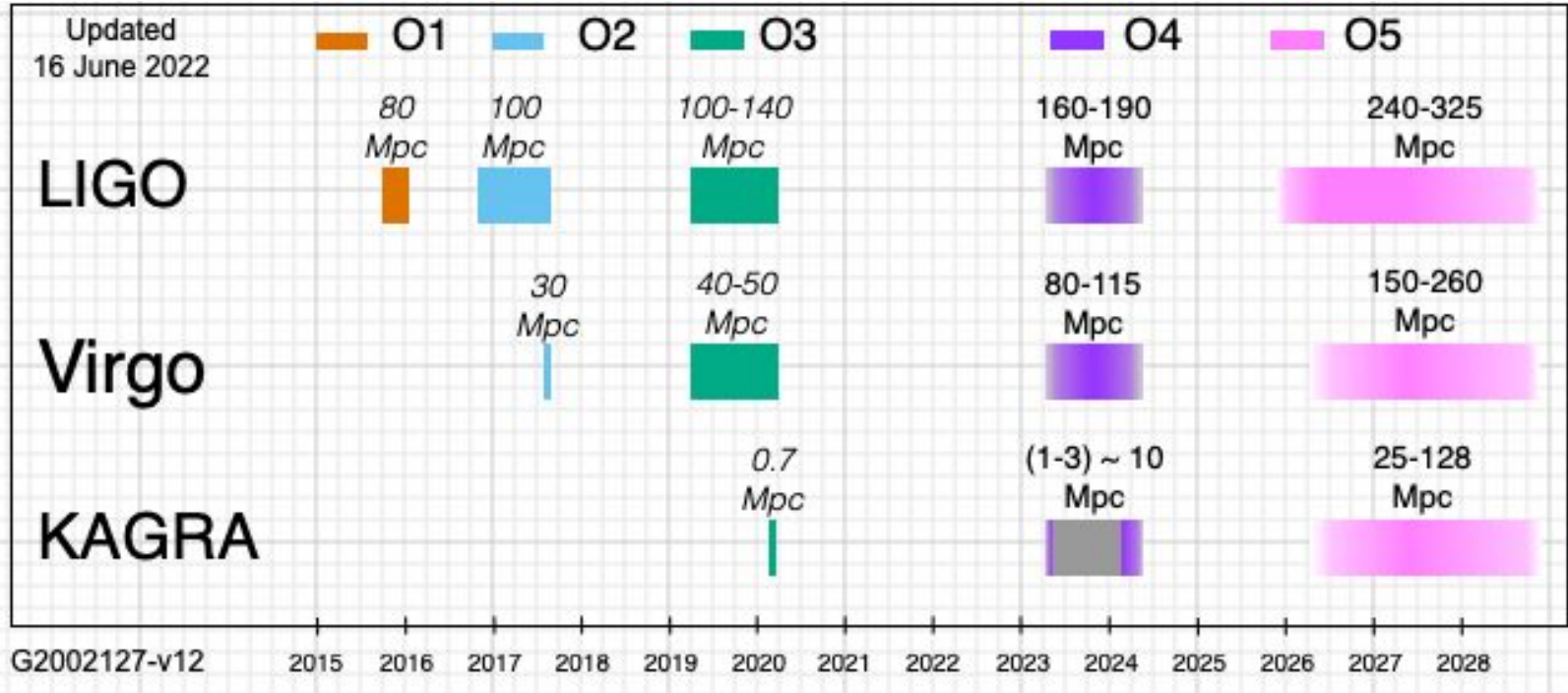


<https://dcc.ligo.org/G2200793>

# General information

- OpenLVEM Wiki
  - <https://wiki.gw-astronomy.org/OpenLVEM/>
  - Gateway to more information
- 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
  - <https://wiki.gw-astronomy.org/OpenLVEM/Telecon20220721>
- Framework for communications
  - We will arrange online meetings every 4 to 6 weeks to share updates and to hear from others about plans and ideas for using alerts.
  - During O4, we will arrange regular online meetings to provide updates on detector operations, data quality, interpretation of alerts and to discuss any changes in plans. Initially, once a week, settling to once per month or so.

# Observing plans



Observing plans are now being maintained at <https://observing.docs.ligo.org/plan/>



For question time

## Run planning approach

- We understand the interest in having more robust long-range run planning and are continuing to try to improve on this.
  - a. Interferometric detectors are complex instruments
  - b. Require ongoing care and attention to maintain observational sensitivity.
  - c. Instrumental upgrades need time for installation/commissioning to realize increased detection rates, improve parameter estimation and open new discovery space.
  - d. A+/AdV+ upgrades are funded and tie LIGO-Virgo into a schedule to deliver them (getting to O5)
- Approach to observing runs and future upgrade plans
  - a. Observatory projects (e.g. LIGO Lab): Establish robust plan and realistic schedule for funded upgrades, e.g. A+.
  - b. Interleave observation runs that deliver substantial sensitivity improvements.
  - c. Carry out R&D and manufacturing of new instrumentation in parallel.
  - d. LVK leadership (spokespeople and Lab directors) exchange information on instrument status weekly to help LVK align upgrade work to allow observation runs as a network.
  - e. LVK members participate in workshops and discussions about gravitational-wave and multi-messenger astronomy to understand community perspectives.
  - f. Joint run planning committee: digests information from LVK, keeping in mind community input, on ~quarterly basis and documents observing run plans.

## Looking forward

- We want to adopt a strategic approach to long-term planning by:
  - a. Current plans do not reach the facility limits and the facilities could operate into the next decade with careful maintenance, especially of the vacuum systems.
  - b. Have the community agree on a common, web-accessible database of active and proposed multi-messenger observatories and missions. A community hub. Out of LVK scope, however.
  - c. Adopt or establish a workshop related to coordination of active and proposed multi-messenger observatories and missions **and** post-O5 plans. Preference is to engage with a community workshop that is held regularly (GWPAW) augmented with focused additional workshops if needed.
  - d. Receive feedback from the scientific community on plans for gravitational-wave detector upgrades, observing runs, and possible trade-offs during meetings and workshops related to gravitational-wave and multi-messenger science.