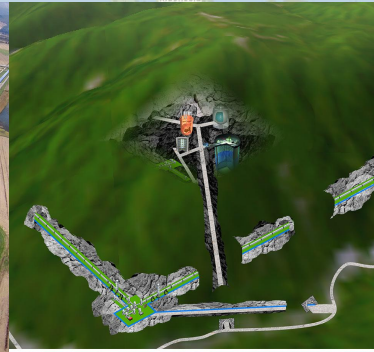
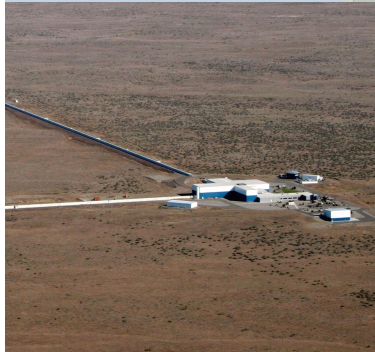


International Gravitational-Wave Observatory Network (IGWN)





IGWN: A **single organization** to coordinate the development, commissioning and operations of the international network of ground-based, gravitational-wave detectors and to carry out the scientific mission of the global ground-based gravitational-wave network.

Why: The establishment of the International Gravitational Wave Network (IGWN) would launch a single, global collaboration, with uniform expectations on all groups to contribute to IGWN. This will enable the community to streamline leadership and management, ***eliminating multiplication*** of current collaboration organizational structures and to adopt ***common contribution, service, and authorship requirements***. Importantly, it will also enable ***closer coordination*** of commissioning and engineering/observing runs, with key decisions taken jointly and enhanced coordination of person-power commitments to service tasks. These improvements directly address issues that have been identified by the MoA committee through conversations with LVK members and responses to a poll of the LVK <https://dcc.ligo.org/LIGO-G2400264>.

The formation of IGWN will provide the gravitational-wave community with an international structure that will enable us to deliver the best gravitational wave science in the coming years and decades.



Membership by **groups**. There will be special laboratory groups that will be responsible for IGWN detectors reporting and responding to their funding agencies as required. Laboratory groups must have the resources needed to deliver sensitive detectors in time to participate in observing runs.

Why: establishes clear expectations, responsibility, and accountability.



IGWN member groups will contribute equitably to the infrastructure and operations required to carry out the scientific mission of IGWN. Member groups will contribute to common funds to support long-term visits by fellows to the detector sites, to pay for services, and to provide personnel to support common activities that support IGWN. The past contributions and future plans of each member group will be reviewed regularly according to uniform criteria.

Why: addresses imbalances in the current structure.

Why: addresses the need to support common activities, such as cyberinfrastructure operations, which has not been possible with the current structures. Creates a common pool of commissioning/engineering talent that can be made available to all IGWN detectors as needed.

Why: addresses imbalances in the current structure establishing uniform expectations on all groups in return for early access to the data.



Groups may **affiliate** with IGWN without becoming full members. Affiliate groups will not have proprietary data access or authorship rights on scientific publications from proprietary data. Affiliate groups will be required to contribute to common funds at the level needed to support their membership, but not at the same level as full member groups.

Why: provides a pathway for collaboration on long-term research related to gravitational waves which is not part of the IGWN program.



A single governance structure. A representative IGWN Council will decide on policy matters for IGWN. An elected Spokesperson will lead and represent IGWN. Regional deputy spokespersons will work closely with the Spokesperson to carry out the duties. An IGWN Board, consisting of the Laboratory Directors, the IGWN Spokesperson, and the IGWN Deputy Spokespersons to which IGWN reports and that ensures the alignment of the laboratory operations in consultation with funding agency representatives.

Why: removes delays arising from multiple venues where decisions, that may not be fully aligned, are made.
Improves the agility of the organization.

Why: a single, elected spokesperson can lead more effectively.

Why: as a global endeavor, it is important to have representation and input from every time-zone that has member groups.

Why: the leaders of the Laboratory groups and the organization as a whole need to remain closely coordinated on detector planning, funding requests, reviews, and make the case for the international network to the funding agencies.



Organogram

International Gravitational-Wave Network

Council

IGWN Board

EGO Director

LIGO Director

KAGRA Director

Spokesperson
Deputy Spokespersons

Program Committee

Resource Allocation
Committee

Finance Committee

Executive Committee

Observational Science

Instrument Science

Operations

Communications

Standards & Services

Virgo Laboratory Group

LIGO Laboratory Group

KAGRA Laboratory Group

Other Groups



An **executive committee** will be responsible for day-to-day operational management. A **program committee** will formulate the scientific program of IGWN. A **finance committee** will track the use of common funds, establish the cost of items to be supported by those funds, and recommend changes to the Council. A **resource allocation committee** will recommend adjustments to how resources should be allocated.

Why: removes delays, confusion, and miscommunications arising when there are independent executives associated with different detectors. Reduces overhead of the organization. Increases agility of the organization.

Why: There are never enough resources to do everything at once. A single program committee can identify and recommend a core scientific program and required infrastructure and operations contributions to the organization.

Why: There will be substantial common funds (or in-kind personnel) contributions that need to be tracked. The finance committee will significantly improve visibility into how costs are shared and how funds are used.

Why: Addresses the need to identify work that needs more (or less) effort and to identify changes in allocation personnel, funding, computing power, etc that would allow us to achieve our scientific goals more efficiently.



Rights and responsibilities of members of full IGWN groups: Authorship on IGWN publications is earned: *automatically*, by making contributions above a specified level to operations and infrastructure activities over the 12 months prior to the date of author list construction; or *opt-in* by making contributions to a specific paper allows a person to opt-in to authorship of that paper; opt-in authors will be reviewed and approved by the executive committee. All members will agree to follow the **code of conduct**. Policies and procedures will be established to address issues of conduct in a timely way to avoid ongoing negative impact on the organization.

Why: Automatic authorship is earned for work that contributes to the success of the organization and not individuals.

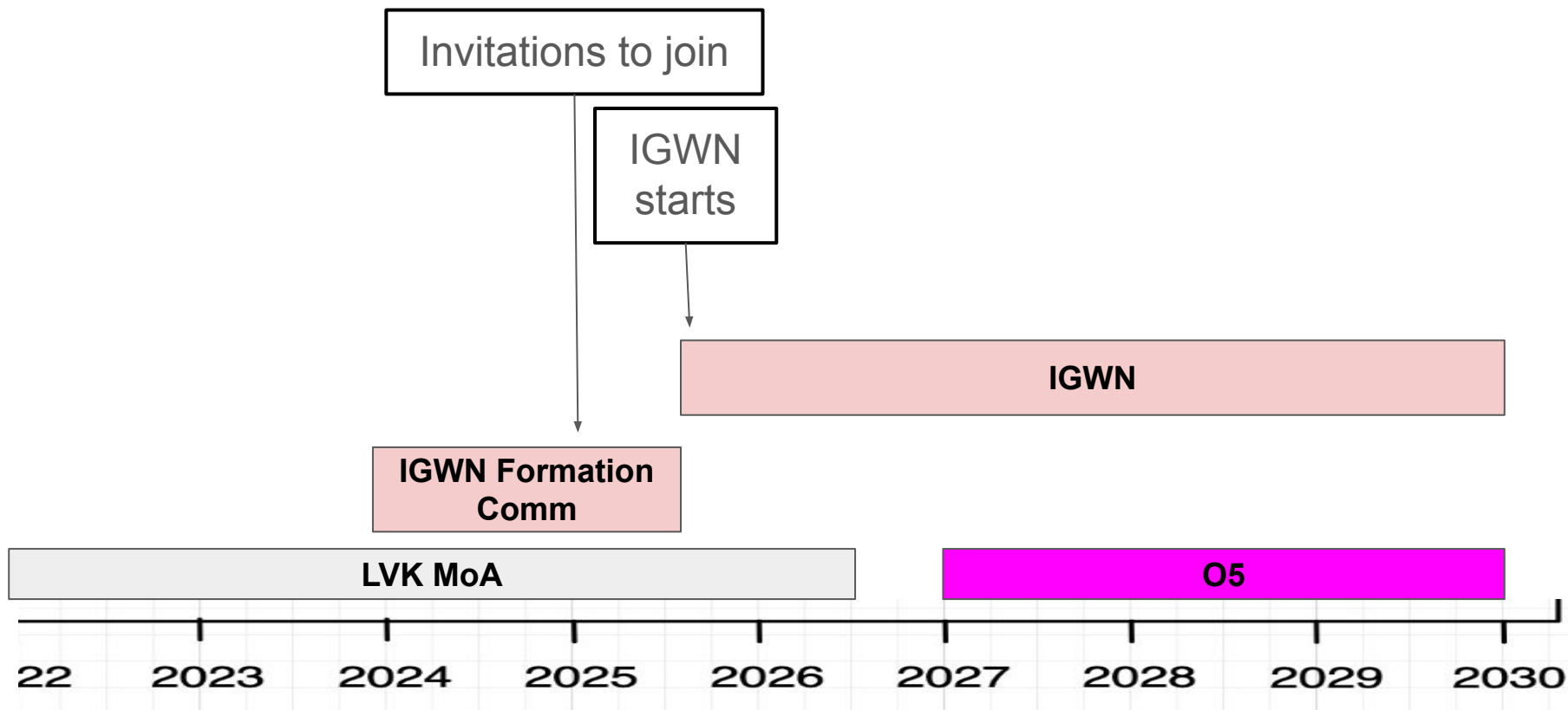
Why: Allows appropriate credit through authorship for those who contribute to specific papers.

Why: The scale and geographic diversity of the organization requires us to explicitly identify expectations on conduct and clear paths to address any issues.

Jump-starting IGWN

- The LVK MoA will be renewed until May 2026 when the O4 data is released publicly; this is expected to be the last LVK MoA.
- All current Groups of the LIGO Scientific Collaboration, Virgo Collaboration, and KAGRA Collaboration that are in good standing at the time of IGWN formation [eg Feb 2025] are invited to join IGWN and automatically become IGWN Groups if they accept.
- IGWN would engage the funding agencies in conversations.
- IGWN would have an Initial meeting after bullet 1 on [eg. April 2025] at which it would elect leadership and establish IGWN governance.

Timetable



Current committee members

- Chairs:
 - Gianluca Gemme, gianluca.gemme@ligo.org (co-chair)
 - Patrick Brady, patrick.brady@ligo.org (co-chair)
 - Masaki Ando, ando@phys.s.u-tokyo.ac.jp (co-chair)
- Virgo members:

Massimo Carpinelli, us.massimo.carpinelli@ligo.org
Franco Carbognani, franco.carbognani@ligo.org
Andreas Freise, andreas.freise@ligo.org
Mario Martinez, mario.martinez@ligo.org
- LSC members:

Dave Reitze, david.reitze@ligo.org
Albert Lazzarini, albert.lazzarini@ligo.org
Jess McIver, jess.mciver@ligo.org
Stephen Fairhurst, stephen.fairhurst@ligo.org
Stuart Anderson, stuart.anderson@ligo.org
Sheila Rowan, sheila.rowan@ligo.org
- KAGRA members:

Shinji, miyoki@icrr.u-tokyo.ac.jp
Nobuyuki Kanda, kanda@omu.ac.jp
Sungho Lee, leesh@kasi.re.kr
Masatake, ohashi@icrr.u-tokyo.ac.jp
Jun'ichi, yokoyama@resceu.s.u-tokyo.ac.jp
Masaki Ando, ando@phys.s.u-tokyo.ac.jp