



## **LOI: FEEDBACK RECEIVED**

Gianluca Gemme

Implementation committee, May 26 2025

## GENERAL INFO

### ➤ 22 Lols received:

- APC-LAUM, BelGrav, CIEMAT, EGO, Firenze-Urbino, Fresnel, Genova, IFAE, IJCLab, KU Leuven, LMA-IP2I, LUTh-CAEN, Milano-Bicocca, Napoli, Padova-Trento, Perugia, Pisa, POLGRAW, Sannio-Salerno, Roma Sapienza, Roma Tor Vergata, UC Louvain
- France: 5 – Italy: 10 – Belgium: 3 – Poland: 1 – Spain: 2 – EGO: 1
- Many other groups (>10) need some more time
- Two groups have expressed their intention **not** to submit the Lol: ARTEMIS and LAPP
  - In the former case, there is a willingness to collaborate with VirgoLab as an external laboratory
  - In the latter case, submission of the Lol is conditional on the opening of the call for the direction of EGO and on the call being concluded in a convincing way

### ➤ Lols are collected in a folder shared in Indico

### ➤ [Summary file](#)

## KEY EXPERTISE & RESOURCE CONTRIBUTIONS

- Groups offer expertise across a wide range of areas
  - **Optical Coatings & Optics:** R&D, characterization, production, component design, adaptive optics, TCS
  - **Mechanical Systems & Vacuum:** Design, construction, maintenance of structures, seismic isolation, suspensions, UHV techniques
  - **Sensing, Actuation, & Control:** Control strategy design, ISC, sensor/actuator development
  - **Quantum Noise Reduction:** Squeezing techniques, component development, diagnostic tool
  - **Environmental & Technical Noise:** Study, mitigation, modeling of various noise sources (seismic, acoustic, magnetic, scattered light), glitch analysis, noise hunting

## KEY EXPERTISE & RESOURCE CONTRIBUTIONS

- Groups offer expertise across a wide range of areas
  - **Data Analysis & Computing:** Algorithm development, detector characterization, computing infrastructure provision/support
  - **Simulations:** Modeling for optics, mechanics, noise, controls, materials
  - **Operations & Commissioning:** Direct support for operations, commissioning training, noise hunting, rapid response
  - **Metrology & Fabrication:** Advanced metrology, local workshops, thin film deposition, cleanroom operations
  - **Infrastructure:** Support for EGO site buildings, survey, cabling

## **SPECIFIC FACILITIES/RESOURCES AVAILABLE FROM LABS**

- Clean rooms and workshops
- Optical laboratories and metrology tools
- Coating characterization and deposition facilities
- Computing clusters and data access infrastructure
- Test facilities (e.g., CALVA, FDS test benches)
- Local mechanical workshops
- Simulation tools and software packages
- Specialized sensor development and monitoring equipment

# COMMON MEMBERSHIP EXPECTATIONS & REQUIREMENTS

- Groups understand the need for **effective communication channels** within VirgoLab
- They seek **opportunities for active participation** in relevant projects and technical teams
- A key requirement is **recognition for their contributions**
- Many groups acknowledge that tasks, especially the O5 upgrade, will require a **strong and continual presence at the EGO site**
- There is a general understanding that **Member Labs are responsible for maintaining and operating the equipment they provide**
  - Some groups are ready to discuss providing specific equipment

# COMMON MEMBERSHIP EXPECTATIONS & REQUIREMENTS



- Several groups anticipate needing **support for travel expenses** to EGO
- Groups expect **access to EGO infrastructure and data**, including labs, clean rooms, computing facilities, and data
- Groups plan **to explore funding opportunities** through their institutions and national agencies to support their involvement
- All groups **are prepared to work towards establishing a Memorandum of Agreement (MoA)** with EGO
- All interested groups have stated their readiness for further discussion

# PROPOSED PERSONNEL AND FTE CONTRIBUTIONS

- APC: ~15 persons, FTE TBD.
- LAUM: 2 FTE (detailed breakdown by role provided).
- BelGrav: 11 researchers, 4 engineers, ~4.1 FTE.
- CIEMAT: ~3 FTE (researchers/engineers), plus additional personnel as needed.
- EGO: 25 researchers/engineers (~19.44 SVAC), 19 technicians.
- Firenze/Urbino: ~9 FTEs.
- Institut Fresnel: 6 named individuals, FTE not specified.
- IFAE: ~20 persons (10 scientists+10 tech staff); ~10FTE
- INFN Genoa: ~4.0 FTE (includes temporary contracts).
- IJCLab: ~3 FTE, plus systematic PhD/post-doc participation.
- KU Leuven: ~5 FTE among 13 members.
- LMA-IP2I: ~7 FTE.
- LUTh-Caen: 2 researchers, 1 engineer, ~2.3 FTE (specific FTE breakdown provided).
- Milano-Bicocca: 1 FTE.
- Napoli: 17 persons, , ~7 FTE
- POLGRAW: 8 people (3 engineers, 5 scientists), ~2.2 FTE (breakdown by sub-group provided).
- Padova/Trento/Trieste: 45 members, 23 FTE.
- Virgo Perugia: 7 researchers, 2 engineers, ~5 FTE.
- Virgo Pisa: 13 staff members (researchers/engineers/technicians), ~6 FTEs from staff, others possible.
- Sapienza-Roma: 10 researchers, ~4.8 FTE
- Roma Tor Vergata: 17 researchers, ~8.5 FTE.
- UniSannio/UniSalerno: 9 named individuals, FTE not specified.
- UCLouvain: Includes existing personnel, new postdoc/PhD, IT/workshop staff, specific total people/FTE not provided.