

# PRINCIPLES FOR SETTING UP COLLABORATIONS BETWEEN LSC-V AND OTHER EXTERNAL GROUPS

As the L-V data analyses touch upon more astrophysically significant ground the need for closer interactions with other communities, external to the L-V Collaborations, emerges. Various partnerships can be imagined, involving the sharing of LSC and Virgo GW strain data, proprietary information from non-L-V scientists, and/or specialized expertise for a joint project under the aegis of a LSC-Virgo working group. Such a partnership may lead to a publication with the full LSC+Virgo author list plus the "external" scientist(s) involved in the work. We have already published a few such papers with radio and gamma-ray astronomers who provided observational data for our analyses.

This document proposes a few fundamental principles to guide our interactions with other communities. It should clarify the responsibilities of LSC and Virgo members when seeking to arrange partnerships, and also guide the policies of the LSC and Virgo Collaborations as a whole. The principles are:

1. Any partnership involving LSC and/or Virgo GW strain data must be part of the approved scientific program of the Collaborations i.e. not just a personal project.
2. As such, the decision to enter into a partnership (or not) should be based on scientific merit, LSC+Virgo priorities, and practical considerations and must be made after a transparent and open evaluation process.
3. The collaborative work should be a specific, well-defined project. The project and its duration must be governed by written and clear understanding among the involved parties, which should be in place before committing the Collaborations to the project and before any proprietary data can be shared or exchanged.
4. The Collaborations will not enter into "exclusive" agreements. For example, a partnership with one particular astronomy team does not prevent the Collaborations from forming a partnership with another astronomy team doing similar work, if scientific merit and the other principles above call for it.

The "approved scientific program" principle means that the Collaborations must discuss the proposed partnerships at a very early stage and a case must be made for the scientific and practical merit of the proposal. Ultimately, the LSC Council for the LSC and VSC for Virgo must approve the agreements which authorize partnerships.

## ATTACHMENT TO THE "PRINCIPLES" DOCUMENT (ABOVE): THE PROCEDURE TO FOLLOW TO SET-UP A COLLABORATION WITH A GROUP EXTERNAL TO THE LSC-V COLLABORATIONS.

In order to maintain an open, innovative and effective program of GW data analysis that integrates information or data from other (non GW) observatories, we establish the following proposal-driven procedure that realizes the principles described above. The process has three steps:

### I. Proposal:

Any member (or group of members) of the Collaboration may submit a proposal. It is understood that, before submitting the proposal, the proposed partnership should be presented and discussed to encourage participation and comments of people with a range of expertise. The proposal will be communicated to the Spokespersons and endorsed by the appropriate data analysis search groups, copying the DAC.

The proposal will address the following:

- The scientific problem to be addressed
  - Preferably include references to publications in peer-reviewed journals
  - Describe the proposed analysis, including a brief outline of the algorithm
  - State, as clearly as possible, the result that is anticipated from the analysis.
- A list of the publication(s) that are expected to arise from the analysis and associated authorship.
- The logistics to carry out the analysis:
  - The parties involved in the collaboration
  - An estimate of the resources required (computational, manpower, hardware, funding)
  - The division of responsibility among the proposers and between the external Collaborators and the proposers
  - Students assigned to the effort
  - An estimated schedule for completion
  - What formal agreement will govern the proposed partnership (e.g. an MOU between LV and another group of scientists; a LV proposal to an external agency or project...). We note here that the Leadership of LV will

sign and/or be the PIs on such agreements and/or proposals, on behalf of LSC and Virgo.

- Description of actions and timelines necessary to set up the proposed collaboration.

The proposal will be circulated to the Collaborations. The proposal should be presented and discussed at a general Collaboration meeting or, if impossible, in a L-V wide telecon.

## II. Review of the proposal (timescale: up to 1 month):

The Spokespersons will gather a committee (of order 3-5 people) to:

- Evaluate the proposal based "on scientific merit, LSC+Virgo priorities, and practical considerations".
- Recommend that the Collaborations follow the proposed line of action or indicate why the proposal as written should not be pursued at the present time.

The review committee will make its written recommendation within 2 weeks of being charged. The recommendation will be circulated to the Collaboration.

## III. Decision on if and how to proceed (timescale: up to 1 month. If a +rapid response workshop is required, up to 3 months)

The Spokespersons, having considered the recommendation of the review committee and the opinion of the DAC, puts forward a plan detailing if and how to proceed to develop the external collaboration. In some cases, the Spokespersons may decide that the Collaborations will make an open call for a rapid-response workshop to figure out the best way forward on the science. In any case, the plan will be circulated to the Collaborations for a two week comment period.

After the comment period, the Spokespersons will insure that any comments have been addressed and then ask the appropriate governing bodies (i.e. the LSC Council for the LSC and VSC for Virgo) to approve the plan.

The appropriate agreements will be negotiated with the external entity by the Spokespersons or their designees and representatives of the proposers. The appropriate governing bodies (i.e. the LSC Council for the LSC and VSC for Virgo) must approve these agreements, before they take effect.

Once accepted, minor changes to a project, or to the nature of an external collaboration, if consistent to the scope of the original proposal, may be accommodated without the full review described here at the discretion of the Spokespersons.