



Relationship between the LSC and the LIGO Lab: Update

Peter Saulson and Stan Whitcomb



From Nov 2004: Since the August LSC meeting



The *ad hoc* committee added Barry, Stan, and Kip as members. It then worked on distilling a proposed consensus view. Its key features were:

- » Staying with Caltech/MIT as the hosts of LIGO
- » Working with the Caltech administration on
 - Expanding the membership of the LIGO Oversight Committee
 - Finding a mechanism to allow distribution of responsibility and authority to LSC members outside of the Lab
- » Adopting the “tighter integration” model.

Discussions with Caltech administration (Tombrello) and with existing Oversight Committee have been held. Results are very encouraging.

A subcommittee started work on revising the LSC Charter, starting with a new Preamble.

A draft of the new preamble was discussed at a telephone meeting of the LSC Council.

Revised versions of the Preamble and Barry’s management memo are the best summaries of where we have come to date.



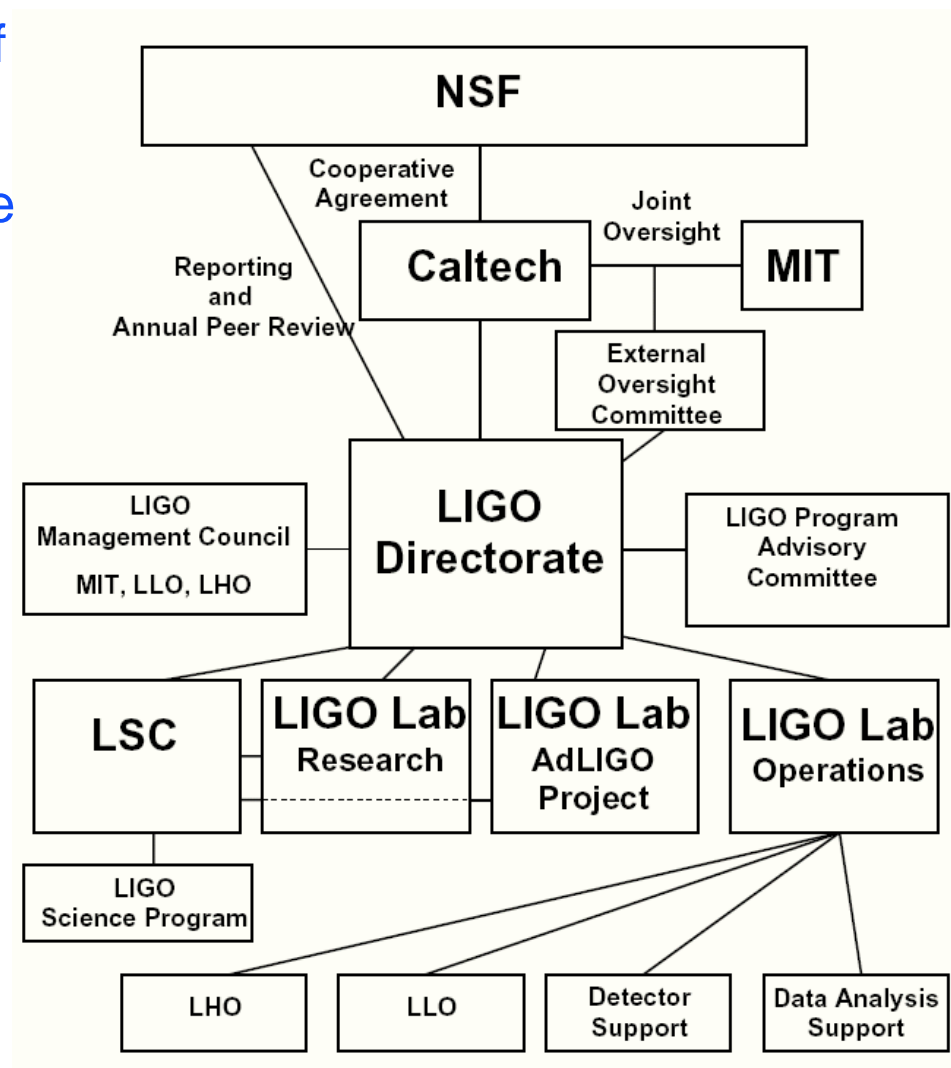
From Nov 2004: Proposed New LIGO Organization



This diagram summarizes most of the new features on the table.

While not final, most aspects have been well discussed, and have garnered general assent.

We think it addresses the key problems of the previous arrangement, while keeping what has been working well.





LIGO

From Nov 2004: Integration of LIGO Lab and LSC



- LSC and LIGO Laboratory report to expanded Directorate
 - » LIGO Director, Deputy Director, LSC Spokesperson
 - » Share responsibility for annual NSF reporting, organizing reviews, PAC, agreements with other Labs, major technical decisions, ...
- LSC retains internal governance
 - » Elected Spokesperson, governing council
 - » Working groups, data analysis groups
- Integrated Advanced LIGO project management
 - » LSC members to take subsystem responsibility/authority within project organization
- Coordinate LSC and LIGO Lab research activities to ensure similar review processes and levels



Update: Directorate



-
- Stan and PRS meet weekly by phone.
 - PRS participates in weekly phone meeting with NSF.
 - PRS will participate in writing the next LIGO Annual Report to NSF.
 - PRS has control of a small account for LSC travel expenses (e.g., to Fall PAC meeting).
 - PRS has his own teleconferencing code (a very valuable commodity.)



Update: Charter



Drafting of new Charter has made good progress.

Committee: David Shoemaker, Norna Robertson, PRS,
with early help from Sam Finn.

Scheme: Charter proper has principles, will be followed
by By-Laws with details of procedures.

Charter was discussed at March LSC meeting;
members provided guidance.

Committee has revised Charter proper, will shortly
release to LSC for final reading before approval.

By-laws need more work.



From Nov 2004: Advanced LIGO Organization



- Advanced LIGO will have traditional project-type organizational structure
 - » WBS linked to schedule and deliverables
 - » Task leaders with defined work packages
 - » Hierarchical reporting
- Many task leaders already identified
 - » Will draw on LSC for some of these positions
 - » Integration enables LSC members to take responsibility/authority for project tasks
 - » Key non-lab members will have appointments at Caltech as Visiting Associates. (This gives them faculty status.)
- Will coexist with Laboratory operating structure
 - » Plan to have most individuals dedicated to one activity or another—not shared between Project and Operations organizations



Integrating the LSC into AdvLIGO: Visiting Associates in LIGO



- Promised by Caltech administration during discussions of restructuring discussions
- Effectively needed a new position within Caltech hierarchy
- Concerns from Caltech bureaucracy
 - » Liability for personnel actions
 - Formal supervision remains with Caltech supervisor
 - » Intellectual property rights (patent agreement)
 - Sharing of all patent rights, consistent with Bayh act
 - » Spending authority
 - Defined by memo from LIGO Director, defined spending limits
- Agreement by Caltech administration, and first three appointments in progress



LIGO

From Nov 2004: LSC MOU



Reform, Internal Program Review

In February, we will start a new method for reviewing LSC members' MOUs with LIGO.

All MOUs will be read together at an annual meeting of a committee of chairs of LSC working groups and data analysis groups, plus Lab representatives.

This will enable the LSC to look at the program as a whole, looking for duplication or gaps. It will also institutionalize the idea that the working leadership of the LSC should judge (and give feedback on) the work each group is doing, in comparison with its commitments. This will be a key part of enforcing planning and deadlines.

This process will lead to the production of an annual report and (the following year's) work plan.

Q: How would the PAC like to link to this process?



Update: MOU Review



MOU Review Panel met for the first time in early March.

Successes:

- » All MOUs were supplied by PIs before the meeting.
- » Panel was able to review all of the MOUs.
- » The right expertise was available for making insightful critiques of the groups' work.
- » The panel identified issues where we need to clarify standards for future rounds:
 - How to calculate and report FTEs
 - Which people should be listed
- » Panelists reported results to PIs.

Things to improve:

- » Spokesperson was bottleneck in approving Panel report, getting MOUs ready to sign.
- » Panel needs to have rotating membership.



Update: LSC White Paper



MOU Review Panel members agreed that we should start work on a White Paper describing the LSC research program, to be updated annually.

Will be written by chairs of Working/Analysis Groups.

Goal: Have a draft for discussion in August.

Process needs to get started!



From Nov 2004: Expanded Oversight Committee



- Expanded membership
 - » Core membership appointed by Caltech and MIT administrations
 - » Representatives from “major stakeholders” from LSC
 - Example: foreign contributors to Advanced LIGO
 - » Technical advisors selected from the LSC and LIGO Lab
- Reports to Caltech, MIT administrations,
 - » Plus LSC major stakeholder institutions, where appropriate
- Main responsibilities
 - » Insure that management compatible with Caltech/MIT standards
 - » Monitor progress of the scientific, financial and scheduling aspects of all large-scale LIGO activities
 - » Recommendations to insure that the project has adequate institutional support
- Internal Caltech/MIT issues dealt with by subcommittee of Caltech/MIT appointees



Update: Changes to LIGO Oversight Committee



- Expanded LIGO Oversight Committee
 - » Expansion beyond existing CIT-MIT membership apparently accepted by Caltech/MIT
 - » 2 elected LSC representatives—“Technical Advisors”
 - » Major Stakeholders - non-LSC members representing institutions with major interests and investment in LIGO
- Election of LSC “Technical Advisors”
 - » Election held (15 nominated, 9 agreed to stand, run-off among top four)
 - » Initial terms to get rotation correct
 - Dave Reitze (University of Florida) two year term
 - Keith Riles (University of Michigan) one year term
 - » Names given to Emlyn Hughes (Oversight Committee Chair)
 - Must be appointed by Caltech/MIT presidents



LIGO O. C., cont.



- Major stakeholder selection in process
 - » “Applications” solicited from prospective major stakeholders
 - » Description of commitment and contribution to LIGO
 - » Maximum of 2 pages
- Five applications submitted
 - » GEO-UK (PPARC)
 - » GEO-Germany (Max Planck)
 - » University of Florida
 - » University of Wisconsin, Milwaukee
 - » Louisiana State University
- Applications passed to Oversight Committee for their action



From Nov 2004: Relationship with GEO



1. MOU revision regarding data analysis, to align it with our current practice. Guiding principles:
“Analysis of data from the LIGO and GEO interferometers will be coordinated by the LIGO Scientific Collaboration. GEO and LIGO should be considered to constitute a single network of three sites and four interferometers.”
2. Work of GEO member groups will be reviewed by the same MOU review process being invented for the rest of the LSC.
3. We still need to work some delicate issues about how to describe the close working relationship between GEO and LIGO, especially concerning the need for some independence of GEO from LIGO. (See present draft of LSC Charter Preamble.)
4. GEO is firmly committed to this, even while pressure for GEO to be oriented more toward Europe looms on the horizon.



Update: Relationship with GEO

- Basically, very smooth.
- Description of relationship in draft of new Charter:
The LSC can include gravitational wave detectors in addition to those in the LIGO Laboratory via appropriate MoUs with LIGO. Relationships with groups, or collaborations, around these additional detectors can be established to support the sharing of instrument science and astrophysical exploitation of the combined detector array. The anticipation is for full sharing of obligations and privileges among all LSC participants; more limited arrangements for cooperation with external detectors and collaborations are handled through MoUs with the LIGO Laboratory. Consistency with LSC rules is ensured by the LSC presence in the LIGO Directorate.

Through such a Memorandum of Understanding between GEO and LIGO, all members of GEO are members of the LSC and the GEO600 interferometer is operated as an LSC detector.



Update: Participation in search for new LIGO Director



LIGO Oversight Committee has asked the LSC to provide it with input on the best candidates for the new LIGO Director.

O.C. will make the recommendation of next Director to Caltech/MIT. Asking for a short list of candidates before the end of August.

The LSC Executive Committee has approved a search committee headed by Jim Hough.

Membership of the committee is now being finalized. Hope to kick off the search within about a week.