



LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

*LIGO Laboratory / LIGO Scientific Collaboration*

LIGO-M1400339-v1

*LIGO*

23 Oct 2014

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## Vacuum Review Board (VRB) Charter

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LIGO Scientific Collaboration

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of the LIGO Laboratory.

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## 1 Introduction

This charter captures the scope and responsibilities of the LIGO Laboratory's Vacuum Review Board (VRB), which has been operating for some years now within the LIGO Laboratory.

## 2 Purpose

The purpose of the VRB is to:

- make technical evaluations and recommendations regarding proposed changes or issues that arise regarding to the LIGO Laboratory's vacuum systems,
- define or approve the standards and practices for the vacuum systems at the LIGO sites,
- review and approve all major changes or any non-standard activities affecting the vacuum system,
- provide technical expertise on vacuum safety concerns to the Lab's safety officer.

## 3 Scope

The VRB is responsible for oversight of all of the LIGO Laboratories' vacuum systems, most notably the observatory vacuum systems, but also the two smaller developmental vacuum systems: Caltech's 40m Lab and MIT's LASTI facility.

## 4 Engineering group and Detector Operations group support role

LIGO Engineering supports the VRB by:

- maintains documentation that defines the allowed materials (e.g. [E960050](#), [E1000193](#)), preparation, cleaning and qualification processes for materials and parts ([E1000088](#), [E960022](#)),
- ensures that installation and operational activities do not violate the VRB approved policies and practices.
- maintains configuration control over the detector and the vacuum system as a whole, using the established Engineering Change Request (ECR) process ([E1300189](#)), including involving the VRB in resolutions on ECRs involving the vacuum system.

## 5 Membership and Structure

The members do not serve any particular fixed term, and the VRB often enlists the advice or participation by outside experts in particular cases. The VRB normally conducts its business via email or teleconferencing. At least one member from the vacuum engineering group at each LIGO site should serve on the VRB.

One member is designated as the chairperson and is responsible for organizing meetings and written responses to issues which are brought to the VRB for deliberation and recommendation.

The VRB reports to (provides recommendations to) the LIGO Laboratory's Chief Engineer.

## **6 Current Membership**

At the present time, the VRB membership is as follows:

[John Worden](#) [chairman, LHO]

[Rainer Weiss](#) [MIT]

[Mike Zucker](#) [MIT]

[Fred Raab](#) [LHO]

[Scott McCormick](#) [LLO]