The Schenberg spherical gravitational wave detector: results from its first commisioning run

César A. Costa, Odylio D. Aguiar, Nei F. Oliveira Jr

Xavier Gratens and Sergio T. de Souza

In this work we present what we have been doing on data acquisition and data analysis for the Brazilian spherical gravitational wave detector Mario Schenberg.

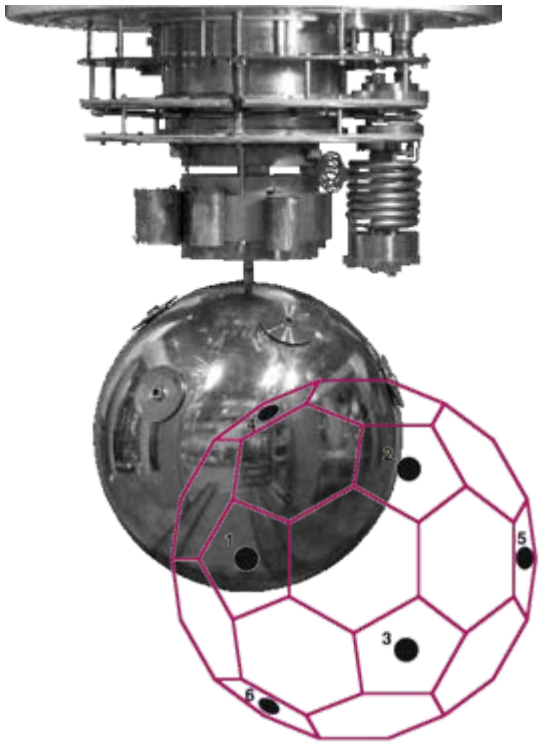
We show the status of the detector and some results from its first commisioning runs, the difficulties found and how we solved it.

Also, we present the features of our data acquisition system and estimate a sensitivity curve for the detector.

University of Sao Paulo – USP

National Institute for Space Research – INPE

What can we do with a spherical gravitational wave detector ?



“Data analysis pipeline for the spherical gravitational wave detector MiniGRA

GWDAW12, C. F. Da Silva Costa, University of Geneva (Switzerland)

- **The kind of signal**
  - Spherical modes h_m
- **Events searching**
  - Wavelets analysis
  - Linear wiener filter
- **Trigger validation**
  - Directional analysis

Noise studies during the first VIRGO Science Run and after

Irene Fiori (EGO) for the LSC-VIRGO collaboration
irene.fiori@ego-gw.it

We describe some noise investigations perfomed during the VSR1 and right afterwards. These studies permitted to improve significantly the detector sensitivity during VSR1, or to identify noise sources limiting the VIRGO sensitivity and to plan actions for mitigation. We show how data monitoring tools were used in these studies and provided useful information.

The noise studies are:

- Noise from PZT drivers on the suspended injection bench
- Environmental noise from the air conditioner devices
- Identification of mirror modes.

Current status of Japanese detectors

National astronomical observatory of Japan
Daisuke Tatsumi

As presented by Prof. Kanda, there are many activities in Japan.
In my poster, I focus on current status of ground-based detectors.

The first generation detector in Japan

TAMA

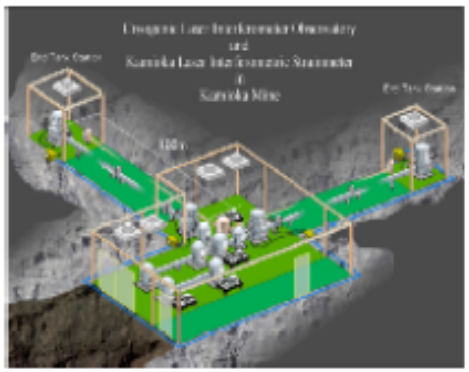
300 m long
Power-recycled FPMI

upgraded to
Broadband RSE

The first cryogenic interferometric GW detector in the world

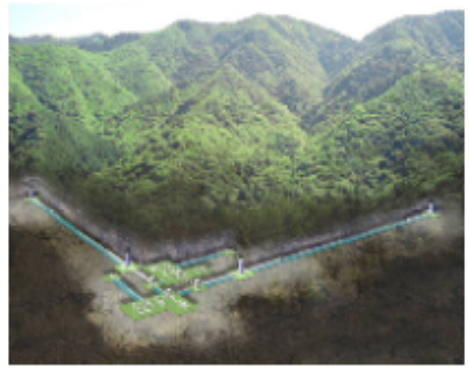
CLIO

Kamioka mine
100 m long
Cryogenic sapphire mirror



Future Plan

LCGT



Kamioka mine (underground site)
3 km long
Cryogenic sapphire mirror
Broadband RSE

LSC Glitch Hunters : Monitoring Noise Transients During S5

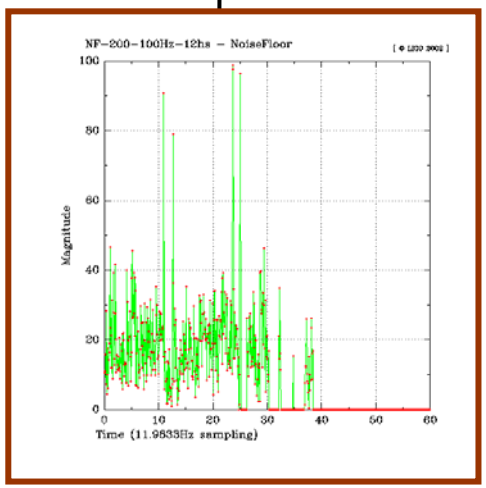
Authors : L. Blackburn et al

Abstract : *Here we describe the functioning of the ``glitches'' working group within the LIGO Scientific collaboration during S5.*

Main emphasis of the glitch working group is to monitor noise transients.

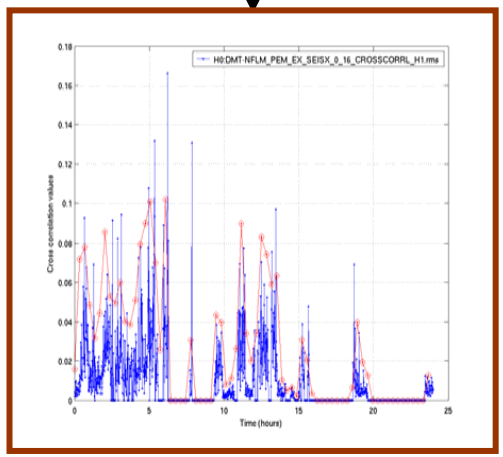
This poster describes the functioning of the glitch group within S5, the methods used, and the impact of our work.

NoiseFloorMon- tracking nonstationarity at LIGO

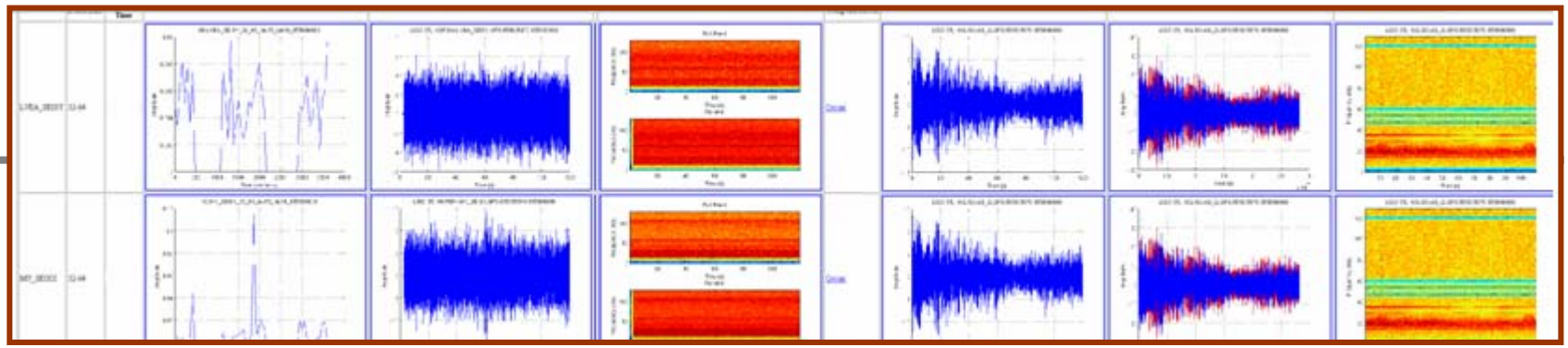


Online

Monitor checks environmental couplings with the gravitational wave channel at each site. Offline analysis consists of implementing running median in the time domain, setting a threshold, and identifying threshold crossings.



Offline



Detailed analysis is conducted around threshold crossings. Long-range trends are being analyzed to develop a seismic data quality flag.