



Collaboration With Virgo

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Background

- Virgo has not joined the LSC
- Several Virgo-LIGO collaborative peer-to-peer efforts have taken place
 - » Optics, beam tube technology, ...
- Virgo has viewed itself as an “experiment”
- More recently, Virgo has considered an R&D program for the future and has pushed for a second interferometer in Europe
- Virgo has needed a device to help it operate as an “independent” laboratory
 - » A “consortium”



The “EGO” Consortium

- Background

- » CNRS and INFN are the French and Italian funding agencies
- » Giazotto and Brillet are the Virgo project leaders
- » Member institutions receive their funding directly from CNRS and INFN

- Issues

- » How do you hire scientists and engineers to work at Cascina for a long term?
- » How do you place big contracts without satisfying two national bureaucracies?
- » How do you fund a coordinated R&D program?

Form a private entity – The EGO consortium



EGO

- EGO formed by CNRS and INFN
- Each agency provides a funding line to EGO
- These funds can be administered as if they were funds in a private organization
- EGO has a Director (Angelo Scribano, INFN Deputy Director and Professor, Siena) responsible for:
 - » Hiring at Cascina
 - » Contracts
 - » R&D funding
- Virgo leaders responsible for Virgo science



Advanced LIGO Optics Coatings

- Traditional LIGO sources (REO,...) are **distracted**
- We need developmental coatings leading in a continuous way to → production coatings for Advanced LIGO
- LIGO made inquiries to ~ 8 sources
 - » SMA/Lyon, REO, MLD, CSIRO, GO, Zeiss, ...
 - » Expressions of Interest received and visits made to several sources
- Virgo/EGO/CNRS/INFN proposed to LIGO that coatings be part of a Virgo-LIGO collaborative effort
 - » R&D phase cost-shared
 - » Production phase might be done in another mode

January 8-9, Lyon



One Phased Array

January 8-9, Lyon

- Virgo has proposed to LIGO that both groups should develop the ability to run our detectors as a coordinated phased array with joint publication of results. Ultimately, we should:
 - » “run both as a single machine” – Giazotto
 - » publish together even if one group’s detectors are down for maintenance or upgrades
- We proposed to immediately build upon networked data analysis working group (GWIC sponsored) by beginning joint engineering runs as soon as possible
 - » even if only with environmental monitor data