

**Memorandum of Agreement  
between the Virgo collaboration  
and the LAL group  
for the participation to Virgo**

**April, 2015**

The purpose of this agreement is to describe the participation of the LAL-Orsay group to the Virgo collaboration. The period covered by this Memorandum is two years from the approval date of the VSC.

1. CNRS and INFN signed an agreement concerning the realization of an antenna, VIRGO, for the detection of gravitational waves on 27 June 1994 in Pisa. VIRGO consists of a three kilometer Fabry-Perot interferometric antenna aimed at the detection of gravitational waves in the frequency range 10-10000 Hz. The construction, exploitation and data analysis of the VIRGO antenna is under the responsibility of the Virgo collaboration, which has been defined in its present form in December 2001. The VIRGO collaboration is represented by its Spokesperson. The operation of the VIRGO antenna is supervised by the EGO Council.
  
2. The Past involvements of the LAL group are described in the previous MoAs.
  
3. The current LAL group responsibilities are related to  
The construction of the vacuum system control for Advanced Virgo
  
4. The individual contributions to Virgo working groups are the following:
  - Joint Run and Planning Committee co-coordinator: Nicolas Leroy.
  - GRB sub group co chair: Nicolas Leroy.
  - CBC review co-chair : Florent Robinet.
  - Detchar Chair : Florent Robinet
  - Joint Computing Committee : Florent Robinet
  - Virgo software and computing at CCIN2P3 (Lyon): M.-A. Bizouard.
  - Blind injection committee : Fabien Cavalier
  - Detection committee : Fabien Cavalier
  - Outreach Committee : Nicolas Arnaud
  - Virgo Editorial Board / Speakers Bureau: Patrice Hello.
  - Academic Credit Committee observer: Patrice Hello.
  - Analysis of gravitational wave burst signals: M.-A. Bizouard, F. Cavalier, P. Hello, N.Leroy, F.Robinet.
  - Data quality and detector characterization: M.-A. Bizouard, N.Leroy, F.Robinet.
  - *Reviews (DA et internal AdV): M.-A. Bizouard, V. Brisson, F. Cavalier, P. Hello, N.Leroy, F.Robinet.*
  
5. The LAL group contributions for Advanced Virgo are:

- Study of the lock acquisition strategy in Advanced Virgo: N. Arnaud, J.Casanueva, F.Cavalier, D. Huet,, N.Leroy, Vincent Loriette, Ivan Maksimovic.
- Vacuum system for Advanced Virgo: F.Cavalier

6. The LAL group composition is:

Name	FTE	Author	Student	Activity and thesis argument if any
Nicolas Arnaud	100%	Yes (sept.2014)	No	Adv lock acquisition startegy (AdV)
Marie-Anne Bizouard	70%	Yes	No	Burst searches, DQ & vetoes production, reviews (DA) (60%). VDASC (10%).
Violette Brisson (&)	40%	Yes	No	Consultant for baffles, cryotrap and vacuum for Advanced Virgo (AdV).
Julia Casanueva	100%	Yes	Yes	Adv lock acquisition startegy (AdV)IST, AdV Commissioning (AdV)
Fabien Cavalier	40%	Yes	No	Adv lock acquisition startegy 10% Vacuum for Advanced Virgo (AdV) 30% (LAL co-director 60%)
Michel Davier (&)	40%	Yes	No	Burst searches (DA).
Patrice Hello (U)	50%	Yes	No	Burst searches (DA) (30%) Group Leader (V) (10%) VEB (V) (10%)
Dominique Huet	100%	Yes (December 2014)	No	Adv lock acquisition startegy AdV)100%.
Nicolas Leroy	80%	Yes	No	Burst searches, DQ & vetoes production (DA) (30%) Adv lock acquisition startegy & Adv reviews (AdV) (40%) JRPC coordination (V) (10%) CNRS National Committee (20%)
Florent Robinet	100%	Yes	No	Burst searches, DQ & vetoes production, reviews (DA) (100%)
Vincent Loriette (**)	40%	Yes	No	Adv lock acquisition startegy (AdV)
Ivan Maksimovic (**)	50%	Yes	No	Adv lock acquisition startegy (AdV)
Michel Gaspard	100%	No	No	Vacuum Control-Command (AdV)
Eric Jules	50%	No	No	Vacuum Control-Command (AdV)
Patrick Cornebise	10%	No	No	Vacuum Control-Command (AdV)
Christophe Prevost	10%	No	No	Test vacuum joints.

\* joint PhD student with EGO.

\*\* ESPCI staff

& emeritus

Remarks:


- In the activity section, specify the leading activity in each of the five main categories: Advanced Virgo (AdV), Data Analysis (DA), long term activities (R&D). Indicate the FTE for each category. In case of an activity that cover several topics (like group leader), put it under Virgo operation
- For a person who just joined the collaboration, the date in the author column is the date when the person will be added in the author list. This date is one year after the joining of the collaboration (except for student where there is no delay)
- The label (U) means: teaching duties. In that case, the FTE is computed on the research time.

The LAL group leader will inform the collaboration of any change in the group composition and of any new thesis proposed.

Approved:

\_\_\_\_\_  
Virgo collaboration Spokesperson

01/04/2015  
Date

  
\_\_\_\_\_  
LAL group Leader

01/04/2015  
Date