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Date: March 16, 2009  
Refer to: LIGO-L0900048-v1

Monsieur le Directeur Général du CNRS  
Prof. Arnold Migus  
Centre National Recherche Scientifique  
3, rue Michel-Ange  
75794 Paris cedex 16  
France

To the President of the INFN  
Prof. Roberto Petronzio  
Presidenza dell'INFN  
Piazza dei Caprettari, 70  
I-00186 ROMA

Dear Profs. Migus and Petronzio,

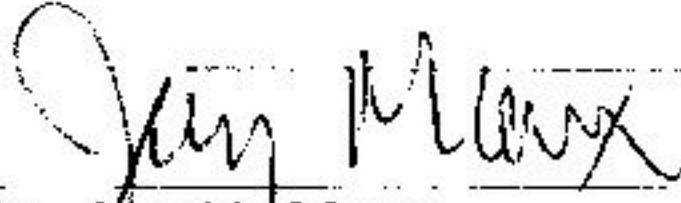
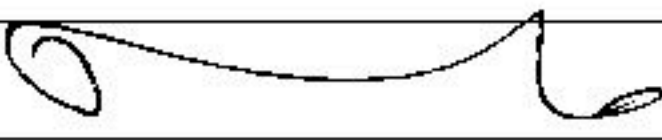
Beginning in May 2007, the LIGO Laboratory and the LIGO Scientific Collaboration established an agreement with the Virgo Collaboration to share all the data collected by the interferometers and to jointly analyze these data, thereby creating a single, unique world wide instrument. This joint operation gives very important benefits, as the use of three interferometers enables localization of a signal to a precise direction in the sky in near real time. Indeed during the next data collection period, it is foreseen that the LIGO-Virgo interferometer network will pass coordinates of candidate gravitational wave events to astronomical observatories. In this way it will be possible to identify an electromagnetic counterpart and thus lay the foundation for multi-messenger astronomy of violent events in the Universe.

The LIGO Laboratory and the LIGO Scientific Collaboration are now constructing Advanced LIGO, which is an upgrade of the three interferometers in the United States, providing a gain in amplitude sensitivity of an order of magnitude. The full

exploitation of our joint interferometer network requires instruments of the same class of sensitivity, and indeed our Virgo colleagues are working towards an Advanced Virgo upgrade for their detector in a way similar to ours.

We would like to take this opportunity to express the strong support of the LIGO Laboratory and the LIGO Scientific Collaboration for the Virgo plan to implement Advanced Virgo with a sensitivity comparable to Advanced LIGO at a time consistent with early operations of Advanced LIGO. A timely implementation of the Advanced Virgo upgrade brings many essential scientific advantages to our joint network operation: improved detection confidence, source localization, better source parameterization that comes from greater SNR, and full coverage through enhanced duty factor coming from additional operational instruments. Advanced Virgo will be a key element of the coming global network of highly sensitive gravitational wave detectors and network observations with all interferometers operating in coincidence at the highest level of sensitivity will certainly provide invaluable returns to the scientific community at large.

Sincerely,

	
Dr. Jay N. Marx Executive Director, LIGO Laboratory California Institute of Technology	Prof. David H. Reitze Spokesman for the LIGO Scientific Collaboration University of Florida

CC: LSC Executive Committee  
LIGO Document Control Center  
Francesco Fidecaro, Virgo Spokesman