GWIC
Gravitational Wave International Committee

Date: December 11, 2016

Ms. Yayoi Komatsu
Director-General, Research Promotion Bureau, MEXT
Mr. Norifumi Ushio
Director, Scientific Research Institutes Division, Research Promotion Bureau, MEXT

Dear Ms. Komatsu and Mr Ushio:

On behalf of the Gravitational Wave International Committee (GWIC)[*], I am writing to express our strong support for the Japanese KAGRA project, currently in an advanced state of commissioning at the Kamioka site.

The recent detection of gravitational waves from the collision of two black holes by LIGO made world-wide headlines both in scientific circles and in the popular press. Future gravitational wave observations hold the potential to revolutionize our understanding of the universe. In addition to black hole collisions, other energetic cosmic phenomena – e.g., the violent formation of a black hole which may drive a gamma-ray burst, or the collapse and bounce of a stellar core leading to a supernova explosion – are difficult or impossible to observe electromagnetically, but emit gravitational waves which will permit us to study and understand these phenomena.

There is an urgent scientific need for another detector of comparable sensitivity located in the other longitudinal hemisphere to come into operation simultaneously as soon as possible. Although LIGO alone was able to securely confirm that a burst of gravitational waves had struck the earth, it was severely limited in what it could measure about its sources. Early next year Virgo in Italy will begin observations with LIGO allowing fuller exploitation of *some* events, but many parts of the sky will still be poorly covered. Full exploitation of the gravitational waves requires a fourth detector operating in coincidence with LIGO and Virgo.

KAGRA is the only detector that can fill this role within this decade. The Japanese team have overcome all manner of difficult challenges to bring KAGRA to its current state and they have the talent and enthusiasm to complete this task. However this is only possible if they have sufficient funding to continue preparations and operations at their planned level. GWIC strongly recommends that they be given the necessary resources to complete the commissioning of this ground-breaking detector.

Sincerely,

Sheila Rowan
GWIC Chair

[*] GWIC was formed in 1997 to facilitate international collaboration and cooperation in the construction, operation and use of the major gravitational-wave detection facilities world-wide. It is affiliated with the International Union of Pure and Applied Physics as Working Group 11.

The **Gravitational Wave International Committee** (GWIC: http://gwic.gravity.psu.edu) is composed of the leaders from the large gravitational wave detector worldwide.

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- Massimo Cerdonio, University of Padua and INFN

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- Michele Punturo, INFN-Perugia

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