

The 5th Kagra International Workshop / The 1st Kagra-Virgo-3G Detectors Workshop

Thursday, February 14, 2019 - Saturday, February 16, 2019

Perugia - Italy

Scientific Program

5th KAGRA International Workshop - February 14-15, 2019

•Opening and Introduction

- * Helios Vocca (University of Perugia and INFN): Opening
- * Maurizio Busso (INFN Perugia Director): Welcome talk
- * Massimiliano Rinaldo Barchi (Physics and Geology Dpt Director): Welcome talk

•Kagra present status

Chair: Masaki Ando

- * Keiko Kokeyama (ICRR): The Status of Kagra
- * Kiwamu Izumi (ISAS/JAXA): Commissioning status of Kagra

•Ligo/Virgo status

Chair: Helios Vocca

- * Jo Van Den Brand (NIKHEF): The Status of Virgo
- * Laura Cadonati (Georgia Tech.): The Status of Ligo
- * Nicolas Arnaud (CNRS-LAL/EGO): LIGO-Virgo Detector Characterization (DetChar)

•Instrumentation

Chair: Takayuki Tomaru

- * Takafumi Ushiba (ICRR): CRY
- * Tomohiro Yamada (ICRR): CRY HL-VIS
- * Masashi Fukunaga (ICRR): Development and application of cryogenic displacement sensors towards the damping control of KAGRA cryogenic payloads
- * Hiroyuki Tahara (U. Tokyo): Development of an auto-alignment system by machine learning
- * Mark Barton (NAOJ) & Enzo Tapia (NAOJ): Status of Type B optic suspensions for KAGRA
- * Enzo Tapia (NAOJ): VIS
- * Yoshinori Fuji (NAOJ): VIS Type-A
- * Ryohei Kozu (ICRR): Implementing the state space approach for controlling a suspension system in KAGRA
- * Keiko Kokeyama (ICRR): Status and prospects of the KAGRA detector characterization
- * Takaaki Yokozawa (ICRR): Status of KAGRA physical environmental monitors installation
- * Takahiro Yamamoto (ICRR): The progress of the calibration and the reconstruction for joining the O3 observation
- * Nakano Masayuki (ICRR): Status of the input optics for the o3

•Data analysis

Chair: Sadakazu Haino

- * Young-Min Kim (UNIST): Detector Characterisation
- * Hideyuki Tagoshi (ICRR): KAGRA DA
- * Magdalena Sieniawska (NCAC): Searching for continuous gravitational waves: data analysis strategies in LIGO/Virgo collaboration
- * Hirotaka Yuzurihara (ICRR): Estimation of background distribution in gravitational wave search

•Computing

Chair: Zong Hong

- * Sangwook Bae (KISTI): KISTI cluster
- * Zhoujian Cao (Beijing Normal University): Deep learning networks and gravitational wave signal recognition

•Science

Chair: Hisaaki Shinkai

- * Lijing Shao (Peking University): Tests of gravity with GWs
- * Kyohei Kawaguchi (ICRR): NS related
- * Xilong Fan (Hubei Univ.): The strong lensed GW-EM system as an astrophysical probe

•Multi-messenger

Chair: Hyung Mok Lee

- * Mahito Sasada (HASC): Optical and NIR observations for gravitational-wave counterpart by J-GEM collaboration
- * Hyung Mok Lee (KASI): EM Korean activities
- * Z. Lucas Uhm (Goddard/KASI): Physics of relativistic jets from an NS merger
- * Haoyu Wang (Beijing Normal University): Near-unstable cavities for future gravitational wave detectors

1st KAGRA Virgo & 3G Detectors Workshop - February 16, 2019

•Opening

Chair: Laura Cadonati

- * Helios Vocca (University of Perugia and INFN): Welcome and motivations
- * Enrico Traversa (Italian Embassy scientific attaché): EU/Italian-Japan collaboration
- * Yuta Michimura OR Sadakazu Haino: 2.5+G and KAGRA: bridging between 2G and 3G
- * Michele Punturo (INFN): 3G and Einstein Telescope: status
- * Salvatore Vitale (MIT): 3G Science Case

•Infrastructures

Chair: Michele Punturo

- * Miyoki Shinji: Infrastructures: the KAGRA experience
- * Jan Harms: ET site qualification: Introduction to seismic and Newtonian noise qualification
- * Peter Couvares: 3G computing and e-infrastructures
- * Stefan Hild: ET Pathfinder

•R&D and new technologies

Chair: Yuta Michimura

- * Fulvio Ricci: Report on the vacuum 3G workshop at LIGO
- * Garrett Cole: Recent advancements in substrate-transferred crystalline coatings
- * Stuart Reid: Fabrication of amorphous and crystalline mirror coatings for reaching the thermal noise requirements for 3G detectors
- * Eleonora Capocasa: Status of the frequency dependent squeezing experiment at TAMA
- * Mateusz Bawaj: Development of audio-band frequency-dependent vacuum squeezer for Advanced Virgo gravitational wave detector
- * Ray-Kuang Lee: Preparation of vacuum noise squeezing injection for KAGRA
- * Joris van Heijningen: Geometric contoured Euler springs for vertical vibration isolation in future gravitational wave detectors
- * Saturo Takano: Newtonian noise measurement by Torsion-Bar Antenna
- * Giacomo Ciani: The Cryomirror project for fast payload cooldown