SciNeGHE 2016 High-energy gamma-ray experiments at the dawn of gravitational wave astronomy

18-21 October 2016 *Università di Pisa Polo Didattico Fibonacci*

11th Workshop on Science with the New Generation of High Energy Gamma-ray Experiments

Pisa (Italy), 18-21 October, 2016

Second Circular

The 2016 edition of the SciNeGHE workshops will focus on the study of high-energy gamma-ray sources from a multiwavelength and multimessenger perspective. Cosmic messengers, such as photons, neutrinos and cosmic rays, are the key to understand the physics of estreme astrophysical sources, including blazars, pulsars, supernova remnants, and mergers of neutron stars and/or black holes. The first direct detection of gravitational waves from the merger of two massive black holes has inaugurated the era of gravitational wave astronomy and opened a new chapter in the multimessenger study of the Universe.

Space missions like Fermi, Swift, INTEGRAL and AGILE, and ground-based instruments like H.E.S.S., MAGIC, VERITAS and HAWC are changing our view of the gamma-ray sky. They have discovered new populations of gamma-ray emitters and contributed to probe the high-energy acceleration and emission mechanisms at play in these sources. Furthermore, the second generation of ground-based interferometers like Advanced LIGO and Advanced Virgo, will add complementary informations to fully decipher the laws governing these intriguing and powerful cosmic sources.

This edition will be focused on the study of gamma-ray sources, including Gamma Ray Bursts, pulsars, supernova remnants, AGNs, in a multiwavelength and multimessenger context. Particular attention will be given to the connections with gravitational waves, both from the observational and theoretical point of view.

Following the tradition of the SciNeGHE workshops, there will be updates on current and planned space-borne and ground-based gamma-ray experiments, and reviews on the status and results of cosmic ray, neutrino and gravitational wave detectors.

The workshop will be organized in plenary sessions of review and contributed talks and poster presentations.

During the workshop, there will be the opportunity to visit the Virgo interferometer at the European Gravitational Observatory (EGO) in Cascina, near Pisa.

Scientific topics:

- Results and status from space-borne and ground-based gamma-ray experiments
- Gamma-ray sources: blazars, pulsars, solar flares, GRBs, supernova remnants, pulsar wind nebulae, novae, gamma-ray binaries, perspectives on searches for dark matter and new physics
- Gamma-ray sources and connection with gravitational waves and other multimessenger emissions
- Gravitational waves and other messengers
- Results and status from cosmic ray and neutrino experiments
- Development of new detectors and new analysis techniques

Website: https://agenda.infn.it/event/scineghe2016

Registration

The registration fee is 300 Euros until July 15th, and 350 Euros after. The fee includes lunches, coffee breaks, social dinner, transportation to EGO, social program and book of the proceedings. The abstracts can be submitted up to September 30th. A preliminary program will be posted soon on the website.

Hotel Accommodation

Information can be found in the website of the workshop

Proceedings

Proceedings will be published. Details will be communicated later on the website of the workshop.

Young Scientist Awards

Special attention will be given to contributions from Ph.D. students and young postdocs. In particular, two SciNeGHE awards will be assigned to the best poster and to the best oral presentation presented by talented young scientists (Ph.D. students or postdoctoral researchers within their fifth year of postdoc)

Any questions should be addressed to: scineghe2016@pi.infn.it