

First Announcement

High-precision studies of RR Lyrae stars: from dynamical phenomena to mapping the Galactic structure

conference, 19 – 22 October 2015

Venue: Hotel Visegrád, Visegrád, Hungary

Scientific rationale:

The field of RR Lyrae studies is vigorous and has recently gained new momentum. These pulsating variable stars are part of the space photometric revolution: continuous, high-precision observations shed new light on the still mysterious Blazhko-modulation, unexpected dynamical phenomena have been discovered, novel ideas and hypotheses have emerged. On the theoretical front multidimensional hydrocodes are about to mature, allowing for an improved description of the interaction between convection and pulsation, and the exploration of nonradial motions. Ongoing and future sky surveys, like OGLE, VVV, and LSST will provide an overwhelming amount of data enabling to address a multitude of astrophysical questions where RR Lyrae stars play a significant role. Long-awaited astrometric data from the GAIA satellite will give a boost to the study and application of these galactic and extragalactic standard candles. The aim of this conference is to bring together theorists and observational astronomers working on distant areas to share their latest results and vision about the future of RR Lyrae research, while putting these fascinating objects into a wide astrophysical context from pulsation theory to near-field cosmology.

Topics of the conference:

- Space photometry revolution and RR Lyrae stars
- Dynamical phenomena – Blazhko effect
- Advances in numerical modeling
- Pulsation and evolution
- RR Lyrae stars as galactic structure tracers
- Gaia and the RR Lyrae stars
- Large sky surveys (OGLE, VVV, Catalina Sky Survey, Pan-STARRS, DES, LSST, etc)
- RR Lyrae and Cepheids: similarities and differences

Scientific Organizing Committee:

Željko Ivezić	University of Washington
Johanna Jurcsik	MTA CSFK, Konkoly Observatory
Katrien Kolenberg	Harvard-Smithsonian Center for Astrophysics, USA, KU Leuven, Belgium
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Marek Skarka	Masaryk University, Brno, Czech Republic
Radosław Smolec	Copernicus Astronomical Center, Warsaw, Poland
Róbert Szabó , chair	MTA CSFK, Konkoly Observatory

We invite everyone to join us and discuss recent developments and future RR Lyrae plans in Visegrad.

Kind regards,

Robert Szabo (rszabo@konkoly.hu)
SOC chair