

RR LYRAE AND CEPHEIDS IV

LA PALMA, SEPT 26-30, 2022

**Large-scale surveys as bridges between
spectroscopy and photometry**

PROGRAMME

Invited reviews	- 25+5 min
Invited talks	- 20+5 min
Contributed talks	- 15+5 min

Tuesday Sept. 27th

08:15

Registration opens

Session 1a: Stellar models and HRD I

Chair: *G. Bono*

09:00-09:10 **Welcome**

09:10-09:40 M. Marconi Stellar pulsation models

09:40-10:00 G. De Somma An updated theoretical scenario for Classical Cepheids in the Gaia era: exploring the metallicity dependence

10:00-10:20 O. Ziołkowska Quantifying the uncertainties of MESA evolutionary tracks for medium mass stars till end of core helium burning

10:20-10:30 J. Lub RR Lyrae Magnitude Calibrations in the light of GAIA (E)DR3

10:50-11:30 Coffee Break

Session 2: Spectroscopic Surveys

Chair: *A. Kunder/B. Lemasle*

11:30-12:00 C. Chiappini Large scale spectroscopic surveys

12:20-12:20 G. Viviani VELOCE DR1: A new reference for VELOcities of Cepheids

12:20-12:40 E. Trentin C-MetaLL project: UVES@VLT Chemical abundances for 65 metal-poor Galactic Cepheids and a new multi-band Period-Luminosity-Metallicity calibration

12:40-13:00 V. Hociđ Empirical relation for metallicity determination of classical Cepheids

13:00-14:45 Lunch Break

14:45-15:10 G. Battaglia The WEAVE surveys

15:10-15:30 N. Britavskiy Automatic analysis of RR Lyrae variables within large spectroscopic surveys

15:30-15:50 J. Olivares Kinematics of APOGEE and VVV RR Lyrae stars in the Milky Way bulge region

15:50-16:10 V. Ripepi First High-Resolution Spectroscopic analysis of Galactic Anomalous Cepheids

16:10-16:45 Coffee Break

Session 1b: Stellar models and HRD I

Chair: *M. Marconi*

16:45-17:15 J. Montalbán Ensemble asteroseismology in surveys

17:15-17:35 M. Matteuzzi Red horizontal branch stars with little envelope left: an asteroseismic perspective of the RR Lyrae instability strip edge

17:35-17:55 A. Benhida Behavior of the hydrogen lines emission in the spectra of RR Lyr star

Wednesday Sept. 28th

Session 3: Rotation, Binarity, Dynamical and Blazhko Chair: *E. Poretti*

09:00-09:30	N. Nardetto	Classical Pulsators as distance ladders
09:30-09:50	G. Hajdu	RR Lyrae variables in binary systems: results and surprises
09:50-10:10	B. Pilecki	Towards a ten-fold increase in dynamical mass measurements and astrophysical explanation of classical Cepheids
10:10-10:30	R. Salinas	Finding the elusive RR Lyrae companions
10:30-10:50	S. Shetye	A systematic search for spectroscopic binary cepheids
<i>10:50-11:30</i>	<i>Coffee Break</i>	
11:30-11:50	J. Benkő	Additional modes, phase variations and more on TESS RRc stars
11:50-12:20	H. Netzel	Blazhko effect and Petersen diagrams
12:20-12:40	A. Bódi	Blazhko modulated RR Lyrae stars in the K2 observation fields
12:40-13:00	G. Kovacs	Debiasing Observed Blazhko Occurrence Rates
<i>13:00-14:45</i>	<i>Lunch Break</i>	

Session 4: Photometric Surveys

Chair: *A. Walker/K. Kolenberg*

14:45-15:15	M. Catelan	Photometric ground-based surveys
15:15-15:35	K. Baeza-Villagra	Multi-Band Study of Galactic Cepheid and RR Lyrae Stars: The DECAT Perspective
15:35-15:55	J. Mullen	RR Lyrae Photometric Metallicity at Optical and Infrared Bands
15:55-16:15	P. Pietrukowicz	On the large variety of delta Scuti stars from the OGLE survey
<i>16:15-16:45</i>	<i>Coffee Break</i>	
16:45-17:15	E. Plachy	Photometric space-based surveys
17:15-17:35	C. Kalup	Pulsational properties of RR Lyrae stars in globular clusters through the eyes of the K2 mission
17:35-17:55	L. Molnar	RR Lyrae stars with TESS and Gaia: connections between mode content, colors and distances
17:55-18:15	W. Narloch	A synoptic view of pulsating stars in the Sloan bands
19:30-23:00		<i>Conference Dinner</i>

Thursday Sept. 29th

Session 5: Milky Way

Chair: *C. Gallart/K. Vivas*

09:00-09:30	E. Grebel	Milky Way structure
09:30-09:50	A. Bobrick	Young, (Metal) rich and not alone: the peculiar “case” of thin-disc RR Lyrae stars
09:50-10:10	B. Lemasle	Distribution of chemical abundances in the Galactic thin disk from classical Cepheids in the perspective of large spectroscopic surveys
10:10-10:30	K. Vivas	Using the color of RR Lyrae Stars to map the interstellar reddening of the Bulge
10:30-10:50	A. Kunder	The BRAVA-RR Lyrae stars: New metallicities and kinematics of the old spheroidal bulge stars

10:50-11:30 Coffee Break

11:30-11:55	V. Braga	Pulsating variable stars in the Galactic Bulge
11:55-12:15	Z. Prudil	The Orphan stellar stream in 7D using RR Lyrae stars
12:15-12:35	H. Lala	Milky Way Archaeology using Cepheids, RR Lyrae, and Gaia: Creating a 7-D catalog and first results
12:35-12:55	G. Medina	Probing the Galactic outer halo using kinematics and stellar abundances of distant RR Lyrae

12:55-14:45 Lunch Break

Session 6: The Local Group

Chair: *M. Monelli*

14:45-15:15	C. Martínez-Vázquez	Pulsating stars in LG galaxies
15:15-15:35	M. Tantalo	Variable stars in NGC6822
15:35-15:55	M. Marengo	VV124: A Rosetta Stone Dwarf Galaxy for the Distance Scale
15:55-16:20	D. Skowron	Pulsating stars in Magellanic Clouds

16:20-16:45 Coffee Break

Session 7: Science with Gaia DR3

Chair: *M. Groenewegen*

16:45-17:15	G. Clementini	Pulsators in Gaia DR3
17:15-17:35	S. Das	BL Her stars in the Gaia DR3 Era: Models vs Observations
17:35-17:55	E. Garro	RR Lyrae as tracers of Galactic Globular Clusters
17:55-18:15	G. B. Kovacs	Comparative analyses and calibration of the Budapest-Florida and MESA-RSP radial stellar pulsation codes
18:15-18:35	E. Ebenbichler	Non-LTE analysis of WINERED Cepheid spectra

Friday Sept. 30th

Session 8: Distance Scale

Chair: *V. Ripepi/G. Fiorentino*

09:00-09:30	R. Anderson	Distance scale: young stellar indicators
09:30-09:50	I. Musella	Are the ULP cosmological standard candles?
09:50-10:10	P. Karczmarek	The impact of binary Cepheids on the extragalactic distance scale
10:10-10:30	L. Breuval	The Cepheid distance scale and its metallicity dependence
10:30-10:50	P. Wielgórski	Type II Cepheids in the solar neighborhood in the Gaia era

10:50-11:30 Coffee Break

11:30-12:00	B. Madore	Distance scale: old stellar indicators
12:00-12:20	A. Bhardwaj	RR Lyrae variables in globular clusters: NIR Period-Luminosity-Metallicity relations
12:20-12:40	B. Zgirski	Near-infrared period-luminosity-metallicity relations for RR Lyrae based on GAIA EDR3 parallaxes and photometry from the Cerro Armazones Observatory
12:40-13:00	Z. Spetsieri	First direct measurement of the stellar association bias in the SNeIa host anchor M101

13:00-14:45 Lunch Break

Session 9: Future facilities

Chair: *R. Szabo*

14:45-15:15	Z. Ivezić	Rubin Observatory as a survey facility
15:15-15:35	G. Bono	Pulsation and evolutionary diagnostics for variable stars in the Rubin-LSST era
15:35-15:55	M. Dall'Ora	Waiting for the Legacy: a pilot project on the Globular Cluster NGC 6569
15:55-16:15		<i>Candidacies for the next edition</i>
16:15-16:45		Summary and Open Discussion

16:45-18:00 Farewell Cocktail

19:30-21:00 A. Oscoz Abad Public conference: Los Observatorios de Canarias: la puerta al universo