

# ISSI-BJ Workshop on Astronomical Distance Determination in the Space Age

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23-27 May 2016

MONDAY 23 May, 2016

*Notice: All presentations (except for some of the young scientists' presentations) are 30 min slots including time for questions*

09:00-09:30	Registration in ISSI-BJ Office	Room 357, Building B NSSC Campus
09:30-09:40	Welcome and Introduction to ISSI-BJ	Maurizio Falanga
09:40-10:00	Introduction to the Workshop Topic	Richard de Grijs
<b>Session 1</b>	<b>Structure of the Milky Way and the Local Group</b>	<b>Chair: Giuseppe Bono</b>
10:00-10:30	<i>Gaia</i> and the Galactic Distance Scale	Frédéric Thévenin
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Galactic Structure Based on Cepheids	Noriyuki Matsunaga
11:30-12:00	The Galactic Bulge	Elena Valenti
12:00-12:30	Galactic Bulge Kinematics (RR Lyrae)	Andrea Kunder
12:30-14:00	<i>Lunch</i>	
		<b>Chair: Noriyuki Matsunaga</b>
14:00-14:30	The OGLE RR Lyrae Survey of the Galactic Bulge	Pawel Pietrukowicz
14:30-15:00	RR Lyrae, Cepheids and Red Clump Stars in the Magellanic Clouds	Smitha Subramanian
15:00-15:30	The Cepheid Period–Luminosity relation at different metallicities	Jesper Storm
15:30-16:00	<i>Group Photo &amp; Coffee break</i>	
16:00-16:30	Distances and Orbital Motions of X-ray and Gamma-ray Binaries from High-precision Astrometry	Masaki Yamaguchi
16:30-17:00	<i>Discussion Session 1 (discussion leader: Andrea Kunder)</i>	
17:00	<i>Welcome reception</i>	
19:30	“Understanding Science” (Science Café), the First Floor (5 <sup>th</sup> floor bar area), Sanlitun	Giuseppe Bono

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TUESDAY 24 May, 2016

Session 2	Pulsating Variables from Optical to Infrared Wavelengths	Chair: Richard de Grijs
09:00-09:30	The Theoretical Route to the Distance Scale	Giuliana Fiorentino
09:30-10:00	Cepheids as Galactic Yardsticks	Laura Inno
10:00-10:30	Mira Variables with the <i>VERA</i> Array	Akiharu Nakagawa
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Cepheids and RR Lyrae with <i>Spitzer</i>	Massimo Marengo
11:30-12:00	Cepheids and RR Lyrae in the <i>Gaia</i> era	Gisella Clementini
12:00-12:30	Space-based Distances to the Galaxies in and beyond the Local Group Using Variable Stars	Matteo Monelli
12:30-12:40	Workshop Book	Conveners
12:40-14:00	<i>Lunch</i>	
		Chair: Frédéric Thévenin
14:00-14:30	Eclipsing Binaries, the Gold Standard	Gregorz Pietrzyński
14:30-15:00	<i>Discussion Session 2 (discussion leader: Giuseppe Bono)</i>	
Session 3	Distance Benchmarks out to the Smooth <i>Hubble</i> Flow	
15:00-15:30	Distances in the Local Group	Richard de Grijs
15:30-16:00	<i>Coffee break</i>	
16:00-16:30	Masers and Megamasers: the Next Standard Candles?	Cheng-Yu Kuo
16:30-17:00	Distance Determination beyond the Nearest Galaxies	Masamune Oguri
17:00-17:30	Broad-line Regions, Reverberation Mapping, and Promises of AGN for Distance Determination	Bożena Czerny
18:30	<i>Workshop Dinner</i>	

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## WEDNESDAY 25 May, 2016

**Chair:** Massimo Marengo

09:00-09:30	Distance Constraints from Gravitational Lensing	Sherry Suyu
09:30-10:00	Strong Gravitational Lensing Placing Constraints on Distant Galaxies	Frédéric Courbin
10:00-10:30	Extragalactic distances based on AGN dust reverberation	Takeo Minezaki
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Interstellar Extinction Laws from Optical to Infrared Wavelengths in the Galaxy	Shogo Nishiyama
11:30-12:00	<i>Discussion Session 3 (discussion leader: Sherry Suyu)</i>	
<b>Session 4</b>	<b>Supernovae as Standard(izable) Candles</b>	
12:00-12:30	Type Ia Supernova Progenitors	Maurizio Salaris
12:30-14:00	<i>Lunch</i>	
14:00	Free Afternoon	
19:30	"Understanding Science", the Bridge Café, Wudaokou	Tilman Spohn

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## THURSDAY 26 May, 2016

**Chair:** Sherry Suyu

09:00-09:30	The Carnegie–Hubble Program: A Population II Distance Ladder	Rachael Beaton
09:30-10:00	TRGB distances to SN Ia host galaxies and the Hubble constant	In Sung Jang
10:00-10:30	Type II-P Supernovae Revisited	Massimo Dall’Ora
10:30-11:00	<i>Coffee break</i>	
11:00-11:30	Reddening Laws and their Importance for Correcting SNe Ia Light Curves	Saurabh Jha
11:30-12:00	AGN as Standard Candles	Jianmin Wang
12:00-12:30	<i>Discussion Session 4 (discussion leader: Rachel Beaton)</i>	
12:30-14:00	<i>Lunch</i>	
	Young Scientists Session	<b>Chair:</b> Jianmin Wang
14:00-14:30	RR Lyrae stars as distance indicators and stellar tracers	Vittorio Braga
14:30-15:00	Globular cluster distances using Spitzer observations of RR Lyrae stars	Jill Neeley
15:00-15:30	Variable Stars in the Local Group Using Ground-based and <i>HST</i> Data	Clara Martínez-Vázquez
15:30-16:00	<i>Coffee break</i>	
16:00-16:20	Cepheid variables in the LMC NIR synoptic survey	Anupam Bhardwaj
16:20-16:40	Contact binaries as distance tracers: A new JHKs Period–Luminosity relation based on open cluster distances	Xiaodian Chen
16:40-17:00	Chemical and kinematic studies of the Milky Way based on LSS–GAC red clump stars	Yang Huang

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FRIDAY 27 May, 2016

<b>Session 5</b>	<b>Cosmological Constraints</b>	<b>Chair: Bozena Czerny</b>
09:00-09:30	Absolute Ages of Globular Clusters	Giuseppe Bono
09:30-10:00	Cosmochronology	Chris Sneden
10:00-10:30	Baryon Acoustic Oscillations and the Structure of the Universe at the Highest Redshifts	Teppei Okumura
<i>10:30-11:00</i>	<i>Coffee break</i>	
11:00-11:30	21cm intensity mapping	Tzu-Ching Chang
11:30-12:00	<i>Discussion Session 5 (discussion leader: Chris Sneden)</i>	
12:00-12:30	Book: Chapter Assignments	Conveners
<i>12:30-14:00</i>	<i>Lunch</i>	
<i>End of Workshop</i>		