

Heraeus summer school: Astronomy from four perspectives Heidelberg 2017 – The Dark Universe

If not stated otherwise, all activities take place in the Haus der Astronomie.

Time	Sa, 26.08.	Su, 27.08.	Mo, 28.08.	Tu, 29.08.
9.00 - 10.30		Welcome by Jakob Staude and Organisation Lecture – 9.45 am: Planetarium	Lecture: Manfred Lindner – The dark side of the universe	Lecture: Klaus Meisenheimer – The Dark Matter Structure Underneath a Supercluster of Galaxies - revealed by Gravitational Lensing
11.00 - 12.30	Arrival	Presentation 11.45 am: Padova participants – The core/cusp problem	Lecture: Markus Pössel – Repetition of GR and FLRW-cosmologies	Lecture: Andreas Just – Cosmological distances and SN-cosmology
14.00 - 15.30	Arrival	Tutorial: Florence participants – SN distance-redshift relation and dark energy	Lecture: Oliver Schwarz – Dark matter in the solar neighborhood	In the classroom: Supernovae
16.00 - 17.30	Arrival	Tutorial: Florence participants – SN distance-redshift relation and dark energy	Tutorial – Heidelberg participants: Virial Theorem part 1	In the classroom: Virial Theorem
Evening	20.00: Welcome party in the Physikalisches Institut at Philosophenweg 12		18.00: Guided tour through Heidelberg (In case of rain, moved to Tuesday)	

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Time	We, 30.08.	Thu, 31.08.	Fr, 01.09.	Sa, 02.09.
9.00 - 10.30	Lecture at Philosophenweg 12: Jörg Hüfner and Rudolf Löhken – The rotation of the earth bothered physicists over 1500 years – Why?	Lecture: Cesare Chiosi – The Planck Spectrum in astrophysics	Lecture: Karlheinz Lotze – Why is the sky dark at night? – An old riddle and how it is solved by modern science	Tutorial – Heidelberg participants: Virial Theorem part 1
11.00 - 12.30	Bus transfer to the Technik Museum Speyer	Lecture: Matthias Bartelmann – The thermal history of the universe	Presentation: Padova participants – DM candidates: Primordial Black Holes Presentation: Michael Thiel, Manuel Brea – Simulating colliding galaxies from a pupils' perspective	In the classroom: Thermal radiation
14.00 - 15.30	Technik Museum Speyer	Tutorial: Padova participants – Planck spectrum and CMB	Tutorial: Jena participants – Rotation curves	In the classroom: Rotation curves
16.00 - 17.30	Technik Museum Speyer	Tutorial: Padova participants – Planck spectrum and CMB	Tutorial: Jena participants – Rotation curves	Teacher's forum and farewell
Evening	Bus Transfer back to Heidelberg		Barbecue at the Königsstuhl, night sky observations with the telescope of the Sternwarte. Bus transfer back at 10 pm.	