

# Climbing the Distance Ladder to the Big Bang: How astronomers survey the Universe

Faculty: Dragan Huterer (DH), <a href="mailto:huterer@umich.edu">huterer@umich.edu</a>		Schedule						
Graduate student Instructor: Vivienne Baldassare (VB)								
Undergraduate Student Instructors: Brian Cook, Patrick Lawton								
WEEK ONE	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:30	1:30-2:30	2:30-3:30	3:30-4:30	Evening
7/4/2016	Orientation MMSS	LEC: Introduction and overview DH	Planetarium show (Angell H) Patrick	Lunch	EX: Programming DH	LEC: Observing the Universe DH		
7/5/2016	LAB: Parallax GSI/USIs	LEC: Gravity - board lecture DH	EX: Programming DH	Lunch	LEC: HR diagram VB	EX: Starry Night Brian	VISIT: CMB Detector Lab (McMahon) McMahon	
7/6/2016	LEC: Low mass stars VB	LAB: Cepheids VB/USIs		Lunch	LEC: High mass stars VB	VISIT: NH Museum planetarium 3:30-4:30 PM		
7/7/2016	LAB: Galactic star clusters Brian	LEC: Exoplanets VB	EX: Programming DH	Lunch	LEC: Galaxies VB	EX: Galaxy mergers VB/USIs	Quiz Bowl VB/USIs	Observing (Peach Mountain)
7/8/2016	Bagels and coffee 9:45 DH	EX: Programming DH		Lunch	LEC: Relativity DH	Research: Introduction VB/DH/USI	LAB: Small Radio Telescope P. Hughes	
WEEK TWO	9:00-10:00	10:00-11:00	11:00-12:00	12:00-1:30	1:30-2:30	2:30-3:30	3:30-4:30	
7/11/2016	EX: Sgr A black hole VB		LEC: Three pillars of cosmology DH	Lunch	LAB: Tully-Fisher (1:30-3:00) VB/USIs	RESEARCH: start on it		
7/12/2016	LEC: Dark matter DH		VISIT: Library Manuscripts	Lunch	Prepare scale model of Local Group			Rain date (Peach Mountain)
7/13/2016	Present Local Group model to passersby on Diag			Lunch: admissions presentation	RESEARCH:		LAB: Age of the universe Brian	Rain date (Angell Hall)
7/14/2016	LEC: Dark energy DH	RESEARCH: Complete research prepare presentations and handouts		Lunch	RESEARCH: Complete research DH	LEC: Big Bang DH	Quiz Bowl VB/USIs	
7/15/2016	RESEARCH: group final presentations		Lec: Distance ladder, recap, highlights	Lunch				