

STELLAR ASTROPHYSICS

Physics 3021 -- Fall 2021

Day	Date	Topic	Problems	Due	Observatory
M	Aug 23	Introduction			
W	Aug 25	Light (wavelength, spectrum, speed); video			
F	Aug 27	Blackbody Radiation & Kirchoff Laws	Problem Set 1		
M	Aug 30	Quantum Mechanics; Bohr Atom			
W	Sep 1	Energy Levels; Quantum Numbers	Problem Set 2	1	
F	Sep 3	Boltzmann & Saha Equations	Problem Set 3	2	
M	Sep 6	HOLIDAY	-----		
W	Sep 8	Line profiles; curve of growth	Problem Set 4	3	
F	Sep 10	Telescopes (optical)	Problem Set 5	4	
M	Sep 13	TEST 1		5	Class Night
W	Sep 15	Stellar Characteristics: Parallax & Motion	Problem Set 6		
F	Sep 17	Stellar Characteristics: Spectroscopy			
M	Sep 20	Stellar Characteristics: Photometry	Problem Set 7	6	Class Night
W	Sep 22	Gravity			
F	Sep 24	Binary Stars	Problem Set 8	7	
M	Sep 27	HR Diagram; Celestial Census	Problem Set 9		Class Night
W	Sep 29	Solar Atmosphere & Layers		8	
F	Oct 1	Solar Activity	Problem Set 10	9	
M	Oct 4	Solar Activity			Class Night
W	Oct 6	<i>View the Sun with Telescopes</i>		10	
F	Oct 8	TEST 2			
M	Oct 11	MID-TERM RECESS	-----		
W	Oct 13	Protostars	Problem Set 11		
F	Oct 15	Introduction to Stellar Interiors			
M	Oct 18	Abundances and Equations of State		11	Class Night
W	Oct 20	<i>Stellar Astrophysics Paper</i>			
F	Oct 22	PP Chain	Problem Set 12		
M	Oct 25	CNO, Triple alpha; abundances up to iron			Class Night
W	Oct 27	Main Sequence & Star Clusters		12	
F	Oct 29	Red Giants			
M	Nov 1	Late-Stage Evolution	Problem Set 13		Class Night
W	Nov 3	Planetary Nebula & White Dwarfs			
F	Nov 5	TEST 3		13	
M	Nov 8	Supernova Explosions	Problem Set 14		Class Night
W	Nov 10	Supernova Remnants			
F	Nov 12	r and s process			
M	Nov 15	Neutron Stars		14	Class Night
W	Nov 17	Dr. Ignacio Taboada -- Neutrinos			
F	Nov 19	Superconductivity Demo			
M	Nov 22	<i>Papers Due</i>			
W	Nov 24	HOLIDAY	-----		
F	Nov 26	HOLIDAY	-----		
M	Nov 29	Black Holes and General Relativity	Problem Set 15		Class Night
W	Dec 1	Alasdair Gent -- The Crab Nebula			
F	Dec 3	Steven Hawking video		15	
M	Dec 6	<i>Homework Review</i>			
W	Dec 8				
F	Dec 10	<i>Final Exam (2:40 pm)</i>			