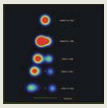
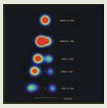


Compact Objects: Syllabus



Lectures: Tuesday, Thursday, 10.50pm-12.05pm, Room ???, Herman Brown Hall

Office Hours: Tuesday, Wednesday, 1.30pm-3.00pm, and by appointment.

Required Text: *Black Holes, White Dwarfs and Neutron Stars*, by Stuart Shapiro and Saul Teukolsky (1983; John Wiley & Sons, New York)

TOPIC	S & T CHAPTER	APPROX NUMBER OF LECTURES	APPROX DATES
Preliminaries			1/14
Compact Object Overview	1	1	1/14
Condensed Matter States	2	2.5	1/16, 1/21, 1/23
White Dwarf Structure	3	2.0	1/23, 1/28, 1/30
White Dwarf Cooling	4	1.5	1/30, 2/4
General Relativity	5	2	2/6, 2/7
Stellar Stability	6	1	2/11
Rotation and Magnetic Fields	7	2	2/13, 2/25
"In-Class" Closed-Book Exam, February 27th			
Spring Break, March 3-7			
Neutron Star Structure	8	2	3/11, 3/13
Neutron Star Masses and Radii	9	1	3/4
Pulsars and Magnetars	10	3	3/18, 3/20, 3/25
Neutron Star Cooling	11	1	3/37
Black Holes and Relativity	12	2	4/1, 4/8
Mid-Term Recess, April 3-4			
Research Project Presentations: Monday, April 7 or Wednesday, April 9			
Gravity Waves + Binary Pulsars	16	1.5	4/10, 4/15
Accretion onto Black Holes	14	1.5	4/15, 4/17
Gamma-Ray Bursts	--	1	4/22
Supermassive Black Holes + Microquasars	--	1	4/24
Take-Home Final Exam, due May 7, 5pm.			

Special Needs? Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with Dr. Baring during the first two weeks of class. All discussions will remain confidential. Students with disabilities should also contact Disability Support Services in the Allen Center.

Other texts:

- *Compact Stars*, by Norman Glendenning (2000; Springer, New York)
- *Compact Objects in Astrophysics*, by Max Camenzind (2007; Springer, Berlin)
- *High-Energy Astrophysics*, by Fulvio Melia (2009; Princeton Univ. Press)