

EXOPLANETS (AST SPECIAL TOPICS, ASTP-789)

SYLLABUS (v1): Spring 2015

INSTRUCTORS: MICHAEL RICHMOND & JOEL KASTNER

Course text & resources:

- *Exoplanets* (S. Seager, editor)
- NASA Exoplanet Archive (<http://exoplanetarchive.ipac.caltech.edu/>)

Provisional Schedule

Week	Dates	Topic(s)	<i>Exoplanets</i> reading (starting page)	Lead instructor(s)
1	Jan 27, 29	Introduction to exoplanets; databases	3	Joel/Michael
2	Feb 3, 5	Census(es), properties	15	Joel/Michael
3	Feb 10, 12	Protoplanetary disks: origins, structure	269	Joel
4	Feb 17, 19	Disks: evolution, planet-disk interactions, migration	347	Joel
5	Feb 24, 26	Giant planet formation	319	Joel
6	Mar 3, 5	Terrestrial planet formation	297	Joel
7	Mar 10*, 12	Detection/characterization: RV tech.	27	Michael
8	Mar 17, 19	“ “ : occultation, transit timing	55	Michael
9	Mar 31, Apr 2	“ “: astrometry, microlensing	157, 79	Michael
10	Apr 7, 9	Spec. characterization of atmospheres; R-L effect	419, 441	Michael
11	Apr 14, 16	Direct imaging & spectroscopy	111	Joel/Michael
12	Apr 21, 23	past, present, future surveys		Joel/Michael
13	Apr 28, 30	Exotica (pulsar planets, etc.)	175	Joel/Michael
14	May 5, 7	Project presentations		students
15	May 12*	<i>Off day! (May 14: reading day)</i>		
finals		<i>Project posters due</i>		

* Joel away

** Michael away

Grading:

50% quasi-biweekly HW assignments and data analysis/modeling exercises, weeks 1-10

50% project: discussions, presentation & poster, weeks 11-16