

## Physics 130 - General Relativity Seminar - 2013

### Last Three Weeks: Hartle Standard Stuff + Alternative Gravity

#### Week 12

- (1) Hartle - Gravitational Waves - Assignment #12
- (2) Moffat - Reinventing Gravity - Chapters 8-10 (EVERYONE)
- (3) Moffat Papers (read and discuss with seminar - believe algebra in paper)
  - (a) Moffat 0 Nonsymmetric Gravitational Theory
  - (b) Moffat 1 Modified Gravitational Theory (Dark Energy/Matter)

#### Week 13

- (1) Hartle - Cosmology: Part 1 - Assignment #13
- (2) Moffat - Reinventing Gravity - Chapters 11-13 (EVERYONE)
- (3) Moffat Papers (read/discuss with seminar - believe algebra)
  - (a) Moffat 2 - Modified Gravity and Galaxy Rotation Curves
  - (b) Moffat 3 Modified Gravity-consequences for all sorts of stuff

#### Week 14

- (1) Hartle - Cosmology: Part 2 - Assignment #14
- (2) Moffat - Reinventing Gravity - Chapters 14-16 (EVERYONE)
- (3)  $f(R)$  Gravity Papers (read/discuss with seminar - believe algebra)
  - (a)  $f(R)$  Gravity 0 - Wikipedia
  - (b)  $f(R)$  Gravity 1 - A brief introduction to  $f(R)$  gravity
  - (c)  $f(R)$  Gravity 2 -  $f(R)$  gravity: successes and challenges
  - (d)  $f(R)$  Gravity 3 - Quintessence without scalar fields