

CHAPTER 24: FUNDAMENTAL CONCEPTS OF GENERAL RELATIVITY

Reading:

Chapter 24 of Blandford & Thorne.

TA:

This problem set will be graded by Xinkai Wu.

Problems

Work four of the following seven problems. Pick problems that are appropriate for *you*—not too easy; not too hard.

Exercise 24.4 Constant of geodesic motion in a spacetime with symmetry

Exercise 24.5 Action principle for geodesic motion

Exercise 24.7 Orders of magnitude of the radius of curvature

Exercise 24.9 Curvature of the surface of a sphere

Exercise 24.10 Geodesic deviation on a sphere

Exercise 24.12 Newtonian limit of general relativity

Exercise 24.13 Gauge transformations in linearized theory