

Questions asked by student in the second seminar
Physics 8.224. Black Holes and Astrophysics
Massachusetts Institute of Technology
Spring 2003

1. Can matter escape a black hole?
2. Tell us more about Hawking radiation.
3. What produces gravitational radiation?
4. How do we detect gravitational radiation now, and how will we detect it in the future?
5. What's "super" about a supermassive black hole?
6. How fast does gravitational interaction propagate?
7. Why is the black hole in our galaxy not so luminous as expected?
8. What is inside a black hole? What do we know about spacetime there?
9. Do all galaxies have black holes?
10. Are there any non-spinning black holes? Why?
11. What evidence do we have for black holes?
12. How do black holes form?
13. Frame dragging?
14. Primordial black holes: Do they exist? How do we know?
15. What is the connection between black holes and the Big Bang?
16. What are the causes of gamma ray bursters?
17. What does quantum mechanics have to say about black holes?
18. What is the entropy-information paradox?
19. Black hole travel to other universes?
20. What was before the big bang?
21. Does the universe wrap back on itself?
22. Can we see the big bang? Where?
23. Explain dark matter.
24. What was spacetime like before atoms?
25. Can a black hole pinch off and form another universe?
26. What happens when black holes collide?
27. Can you make a black hole in the lab? What to store it in?
28. Is there a center to our universe?
29. Will the universe stop expanding?
30. What's the shape of the universe?
31. What do we learn from strange geometries?
32. Cosmic background radiation?
33. What is the universe expanding into?