

Black Holes

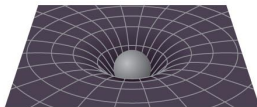
ASTR 1220, Summer 2010

21 July 2010

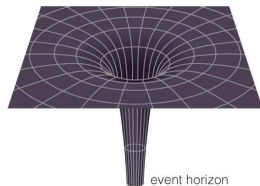
Spacetime



a A two-dimensional representation of “flat” spacetime. Each pair of circles is separated by the same radial distance.

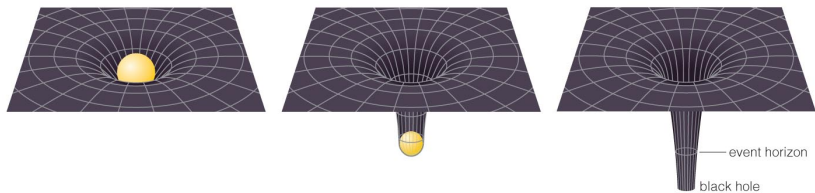


b A mass affects the rubber sheet similarly to the way gravity curves spacetime. The circles become more widely separated — indicating greater curvature — as we move closer to the mass.



c The curvature of spacetime becomes greater and greater as we approach a black hole, and a black hole itself is a bottomless pit in spacetime.

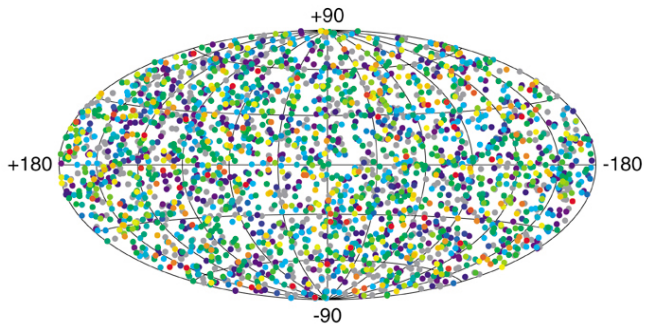
If the Sun collapsed



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Gamma Ray Bursts - Location

2704 BATSE Gamma-Ray Bursts



Gamma Ray Bursts - Model

