

Geophysics 150: Home set due Nov. 01, 2002

2. Use cow and salt dome in question 1

a. Compute the gravitational potential and change in geoid height from the cow and from the salt dome. Make very simple assumptions. Can you ignore the cow? You can measure geoid height to a precision of 0.1 m. Are these objects detectable?

b. Return to gravity gradient problem. Tides are proportional to the gradient of gravity. Explain in words why lunar tides are higher than solar tides in the Earth's oceans.