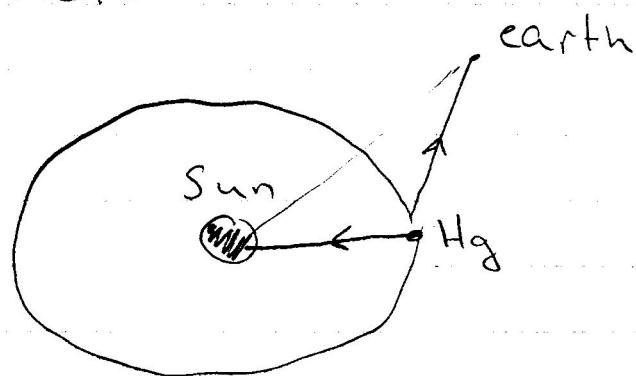


Examples of Corrections - Precession of Perihelion

- The effects of the other planets of Mercury



→ This causes the planets to precess. (see slides)

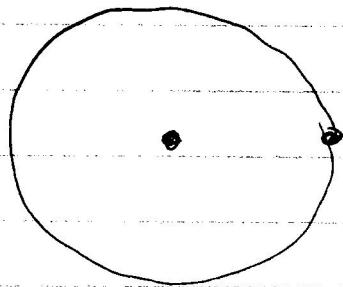
- the precession is a slow process
 $0.001 \text{ degree/year} = 10' / \text{century}$

→ Le Verrier (discoverer of neptune) analyzed the transits of mercury. found that the precession could not be explained.

$532''/\text{century}$ was explained

$4''/\text{century}$ was not explained

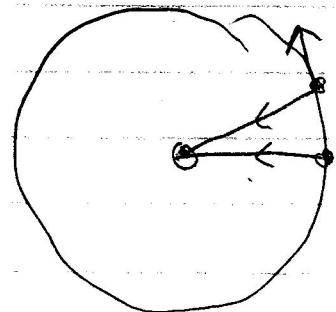
- Eventually Einstein worked out a relativistic correction to the orbits of $43''/\text{arc}$



→ In the Newtonian theory the force between two objects is instantly given by the Separation

→ action at a distance

→ In the Einstein theory the gravitational waves travel no faster than light



The force here reflects where you were a while ago, here!