

The Sequence of Increasingly Implausible Claims Comprising Newtonian Universal Gravity

- 1. Orbiting bodies are retained in orbit, rather than moving forward uniformly in a straight line, by forces directed toward central bodies.**
- 2. These forces, and hence the resulting “centripetal” accelerations, vary inversely with the square of the distance from the central body.**
- 3. These forces act not only on the principal bodies orbiting the central bodies, but on other bodies as well.**
- 4. In the case of the Moon, the force in question is simply terrestrial gravity.**
- 5. In all celestial cases, the force in question is one in kind with terrestrial gravity.**
- 6. There is a force of this same kind on the central body directed toward each body orbiting it, so that the central and orbiting bodies – e.g. the Sun and Jupiter – interact.**
- 7. There are mutual forces of this kind between all celestial bodies – e.g. between Jupiter and Saturn – as well as between each of these and the Sun.**
- 8. The forces in question vary in accord with the law of gravity – i.e. the “motive” force on a body directed toward another body is proportional to the product of the masses of the two bodies and inversely proportional to the square of the distance between them.**
- 9. The gravitational forces between bodies are composed out of inverse-square gravitational forces between each pair of individual particles of matter respectively comprising the two bodies.**
- 10. The force of gravity is universal – i.e. the law of gravity holds not merely between bodies, but between all particles of matter in the universe.**
- 11. The force of gravity is one of the fundamental forces of nature – i.e. it is not composed out of forces of other (known) kinds.**