

2.7: Claudius Ptolemy

Another ancient Greek astronomer and philosopher, Claudius Ptolemy (100-170 AD), developed a Geocentric Solar System which placed the “stellar” universe on a crystal sphere. Earth stood still (didn’t rotate) and the Sun orbited Earth, producing our day and night cycles. To account for the retrograde of the planets, Ptolemy used looping small circles called epicycles on the orbits. It was an ingenious system accepted, as Law... except a Geocentric Universe was wrong! Even though Ptolemy was Greek, he was born in Egypt. All of his observations and work was done from Alexandria, Egypt. He was also a geographer and mathematician, and Ptolemy’s “*Almagest*” (1515) is one of the most influential scientific texts of all times.

If Ptolemy’s Geocentric Universe is incorrect, why do we see Retrograde Motion? Each planet orbits the Sun at a different velocity; the closer the planet to the Sun, the faster it orbits. Earth catches up then passes planets further away from the Sun, giving the illusion that the planet is moving backwards for a while. The planet does retrograde, but due to the two bodies’ orbital motions.

The correct solution would ultimately come nearly 1,500 years later. However, the Geocentric Solar System was deemed Scientific Law – and in some cases Church Law; no one could challenge the Geocentric Solar System until overwhelming evidence made accepting it impossible.



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