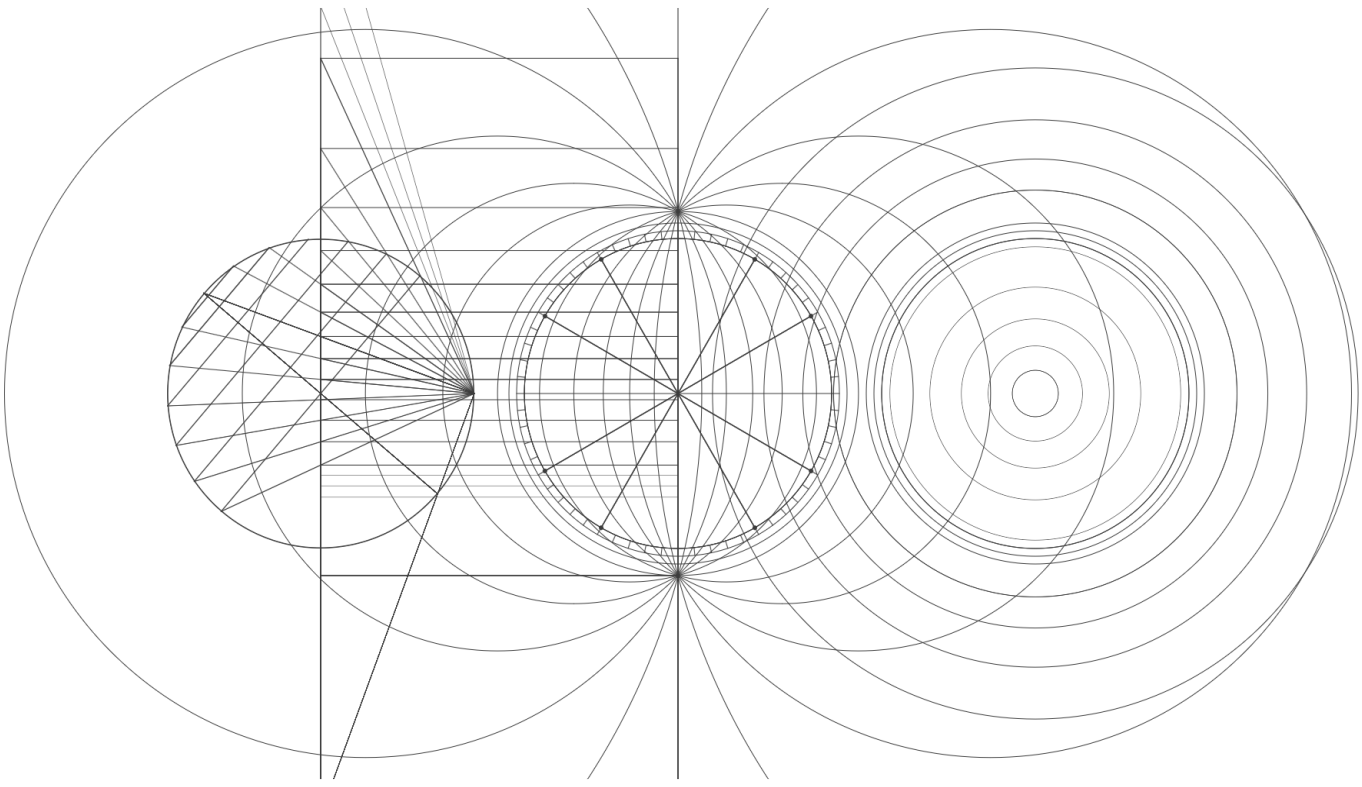

Heavenly Lines

Astrolabes for future use on Mercury, Venus, Mars, Jupiter … and even Pluto

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An astrolabe (Arabic: أَلأَسْطُبالر) is an intricate inclinometer employed by ancient astronomers and navigators to measure the altitude of a celestial body above the Earth's horizon. The first universal astrolabe was invented by the Islamic scholar Abu Ishaq Ibrahim al-Zarqali (b. 1029). Unlike its predecessors, his 'Tablet of al-Zarqali' projected both the equatorial and ecliptic coordinate systems on a vertical plane that cut the celestial sphere at the solstices, permitting its use at any latitude on Earth.

Inspired by al-Zarqali, I sketched construction lines to create astrolabes for use on each of the eight planets plus Pluto, appending his trigonometry calculations with contemporary NASA data and JavaScript. Variation between the digital drawings results from each planet's unique obliquity to orbit in addition to their distinct rotational and orbital periods.