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Effect of the Jupiter's Gravitational Waves on the Shape of the Heliosphere Based on the "Solar Cycle Hypothesis" HASSAN GHOLIBEIGIAN, Retired, KAZEM GHOLIBEIGIAN, student — Based on the solar cycle hypothesis [Kazem and Hassan Gholibeigian, EGU. 2016], the Jupiter with its 11,856 years orbit period can be the main cause of the 11-year solar cycles. When it is approaching to the Sun and getting away, gravitational field in perihelion becomes 2.71 times more. During this time which takes 2-3 years, and Earth passes 2-3 times through it, this dynamic system becomes more active inside the Sun, Jupiter and Earth. When they are in a line, the gravitational field in perihelion becomes more and the peak of solar cycles occurs. Therefore, the plasma density in heliosphere becomes maximum and pushes heliosphere and increases its volume. Interaction of this variable internal pressure and interstellar medium through which it is travelling, will controls the shape of the heliosphere. As an observable factor can be as follows: On September 12, 2013, NASA announced that Voyager 1 left the heliosphere on August 25, 2012 (in peak of the solar cycle 24), when it measured a sudden increase in plasma density of about forty times. Because the heliopause marks one boundary between the Sun's solar wind and the rest of the galaxy, a spacecraft such as Voyager 1 which has departed the heliosphere, can be said to have reached interstellar space.

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