

Measures and models of obliquity variations for Earth and Venus

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Abstract

The spin-orbital exchange of energy is possible when there are tides. The case of the Earth, thanks to the lunar action is linear and it has been studied and measured since before the telescope era.

The case of Venus is chaotic as recently evidenced by J. Laskar.

The presentation has been done in the Basilica of Santa Maria degli Angeli e dei Martiri, built by Michelangelo on the ancient vaulted aula of the Thermae of Diocletian, where Francesco Bianchini draft the 50 m meridian line with pinhole designed to measure the obliquity and the tropical year's duration from 1700 to 2500: the first big and long-term science project ever made.

Bianchini published in 1728 also the first accurate observation of Venus clouds, made in Rome's Palatine hill with a long focus and single-lens telescope. He used the largest telescopes ever built at his time, with focal lengths of 50 meters, which will be superated only by the E-ELT, European Extremely Large Telescope, of 39 meters of diameter in project in these years. Very reliably Bianchini used Santa Maria degli Angeli to test some of these instruments.

The conference held in Italian English and Portuguese during the European Congress of University Professors has been video recorded and published on youtube. The address is

<https://www.youtube.com/watch?v=u1Dc0g3APno>

References

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