

"The Orbital Age"

**Adolf Adam**

**Working title: "Johannes Kepler and the movements of the planets."**

Ceremonial address. 20 minutes. Short summary.

The first astronomical revolution (Nicolaus COPERNICUS) was initiated by Johannes KRAFFT of Gmunden (1380/85–1442), the founder of the First Mathematical School of Vienna. With his *Instrumentum solemne* (1429) he inaugurated instrumental data processing. The Viennese School was for a short time continued by the astronomical school of Cracow (Albert BLAR VON BRUDZEWO), which produced a Nicolaus COPERNICUS. COPERNICUS and his epigone GALILEI wanted to prove the classical dogma regarding the uniform and circular movements of the planets and perceived a better model to support this dogma in the heliocentric theory of ARISTARCH OF SAMOS. Johannes KEPLER, who lived and worked in Linz from 1612 to 1626 and here crowned the SECOND and REAL astronomical revolution with his third planetary law, corrected the errors of COPERNICUS and GALILEI with the empirical methods of research of NIKOLAUS VON KLIES (1450). The third planetary law combines the invariants of space and time and in its substance can be compared with the theory of relativity by Albert EINSTEIN. Isaac NEWTON made use of the entire system of axioms of planetary movement by KEPLER and created his famous planetary dynamics of the new physical conception of the world. Moreover, Kepler played an important part in designing the first digital calculating machine on the basis of a gear mechanism (1623). A reconstruction of this calculating machine will soon be put on view at the Kremsmünsterer Stiftshaus. His Rudolphine tables are the first important achievement of model supported data processing. By the way, this set of tables played an important role in the Christianization of China and in a way was the "Bible" of the imperial calendar and rites office at Peking. His *World Harmony* completed at Linz (1619) is a baroque contribution to depth psychology and the study of archetypes, and the "planetary music" he conceived there could be seen as a prophecy of "Ars Electronica". As the forefather of Christian ecumene the integral humanist Johannes KEPLER tried to reconstitute the unity of Christianity. His posthumously published "Dream of the Moon" contains interesting thoughts on our present astronautics. Johannes KEPLER was one of the rare people still able to see and to master art and science as a unity and to develop from this point of view a kind of creativity which today is almost unimaginable.

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