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The Dynamic Universe: Observations and Models



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Prof. Tabei Li is a full Professor of Physics at Tsinghua University and IHEP. He graduated from the Department of Engineering Physics, Tsinghua University in 1963. He has working experience and made important achievements in high energy physics and high energy astrophysics as well as their overlapping parts, including experiment, observation, data analysis and theoretical modeling. He was elected member of the Chinese Academy of Sciences in 1997.

ABSTRACT

After a critical review of the standard cosmological model, the speaker induces new dynamic equations to describe the evolution of a gravity-dark energy coupled universe. The solutions of these dynamic equations provide a specific picture of cosmic evolution, which is essentially different to the standard model and is compatible with observed evolution history of both Hubble parameter and equation of state parameter of dark energy. In our picture, the already observed universe has undergone through three epochs -- the epoch of equilibrium between gravity and dark energy at redshifts $z > 1$, the phase transition epoch at z between about 0.5 and 1, and the present acceleration epoch starting from $z \sim 0.5$. It is expected that future observations can judge cosmic dynamic models, and, possibly, result in changing fundamental physics.

All are welcome! Tea, coffee, biscuits will be served at 2:15 P.M.

You are welcome to nominate speakers to Weimin Yuan (wmy@nao.cas.cn), Mei Zhang (zhangmei@bao.ac.cn), Licai Deng (licai@bao.ac.cn), Xuelei Chen (xuelei@cosmology.bao.ac.cn), Shude Mao (smao@nao.cas.cn)