



Contribution ID: 42

Type: **not specified**

Can rotation solve the Hubble Puzzle?

Tuesday 24 June 2025 12:00 (30 minutes)

The discrepancy between low and high redshift Hubble constant H_0 measurements is the highest significance tension within the concordance Lambda cold dark matter paradigm. If not due to unknown systematics, the Hubble Puzzle suggests a lack of understanding of the universe's expansion history despite the otherwise spectacular success of the theory. We show that a Gödel inspired slowly rotating dark-fluid variant of the concordance model resolves this tension with an angular velocity today $\omega_0 \simeq 2 \times 10^{-3} \text{ Gyr}^{-1}$. Curiously, this is close to the maximal rotation, avoiding closed time-like loops with a tangential velocity less than the speed of light at the horizon.

Primary author: Dr BARNAFÖLDI, Gergely (HUN-REN Wigner Research)

Co-authors: SZIGETI, Balázs Endre; BARNA, Imre Ferenc; SZAPUDI, István

Presenter: Dr BARNAFÖLDI, Gergely (HUN-REN Wigner Research)