

## IberiCOS 2022



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# Coupled Quintessence in a Closed Universe

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Understanding what drives the accelerated expansion of the Universe is one of the most important open questions in Cosmology. This phenomenon is generally attributed to “dark energy”, a matter/energy source whose nature is still not well understood and that, in the simplest  $\Lambda$ CDM scenario, is characterised by an energy density that remains constant with the expansion. While it provides for an impressive fit to a wide range of astrophysical data, significant statistical discrepancies between observations seem to indicate unreconcilable cracks in the standard theory, when faced with increasingly precise experiments. In this talk we will show how relaxing the usual flat geometry condition, and generalising dark energy to quintessence - a dynamical scalar field - may help understand and possibly address the observational tensions.

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