Progress on Old and New Themes in cosmology (PONT) 2023



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A cosmological model where the expansion is blind to the spatial curvature

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I will present a new cosmological model in which the expansion is no longer affected by spatial curvature (i.e. $\Omega = 1$, $\forall \Omega_k$), while the measure of distances still requires this curvature. The model originates from a modification of Einstein's equation in a which a term related to the topology of the Universe is added. First, I will present the main motivation for this modification, which is related to the existence of the non-relativistic limit for any topology. Then, I will present the model and discuss its consequences on the value of the spatial curvature inferred from observations, in particular with respect to the recent "curvature tension".

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