

Hanging around before the big bang

Sir –

Concerning the recent letters on the big bang theory, Caomhin de Bhailis anticipates exciting times ahead, with contributions from theologians, philosophers and astronomers (Letters, April 5th). I am less optimistic, not least because all of the contributions so far have started from a false premise. It is worth pointing out that the big bang model (a famous misnomer) does not describe the origin of our universe, or even assert that there was an origin. Instead, the theory describes the evolution of our universe from a tiny, hot entity to today's gigantic ensemble of galaxies. Time and again, experiments have suggested that this model is accurate to an astonishing level of accuracy. (The recent announcement of the detection of primordial gravitational waves by the BICEP 2 telescope is a stunning example). However, the theory breaks down when one attempts to describe the universe when it was of smallest size. How the infant universe emerged, or whether it evolved from another entity is an open, if highly speculative, question.

It should thus be clear that the modern big bang model neither supports nor contradicts religious ideas concerning creation. There are of course many aspects of the model that are of great interest to philosophers, from the apparent fine-tuning of certain laws of physics to the nature of time. However, it is important that such considerations do not begin from a misunderstanding of the science...

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