

Voiding the Cosmic Void: We're not at Center of the Universe After All

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Models of the universe that place us near the center of a large, sparse region don't jibe with astronomical observations. Cosmologists at the University of British Columbia reached the conclusion through a new analysis that reaffirms the presence of a perplexing dark energy.

In recent years many studies have indicated that the expansion of the universe is accelerating, which may be due to a mysterious form of dark energy that makes up most of the contents of the universe.

Alternative interpretations have suggested that the accelerated expansion may be merely an illusion, if we happened to live near the center of an enormous cosmic void, empty of most matter.

The researchers examined the latest data, in particular subtle features in the cosmic microwave background radiation (the afterglow of the Big Bang) and ripples in the large-scale distribution of matter. They found that void models, unlike standard dark energy models, do a very poor job of explaining all of the latest data, taken together.

The new study helps to solidify our place in the Universe as a completely typical and unremarkable one. It also reaffirms that most of the stuff in the universe is far from ordinary: the dark energy remains as enigmatic as ever.

Article: J. P. Zibin, Adam Moss, and Douglas Scott, *Physical Review Letters*(forthcoming)

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