

Does Our Universe Bear the Scars of a Collision with Another Universe?

[Annalee Newitz](#) | [Io9](#)

Though many physicists believe it's possible that our universe is one of many in a multiverse, they struggle to find concrete evidence to back up that hypothesis. But now, we may find that evidence – if we look for the wreckage left behind by a collision of cosmic proportions.



Illustration by Olena Shmahalo

Over at *Quanta*, Jennifer Oullette explores one experiment that could provide evidence for the multiverse. It assumes that our universe was born during a collision with another universe – and that this dramatic event may have left a cosmic imprint behind that we can measure.

Writes Oullette:

Like many of her colleagues, [Hiranya Peiris](#), a cosmologist at University College London, once largely dismissed the notion that our universe might be only one of many in [a vast multiverse](#). It was scientifically intriguing, she thought, but also fundamentally untestable. She preferred to focus her research on more concrete questions, like how galaxies evolve.

Then one summer at the Aspen Center for Physics, Peiris found herself chatting with the Perimeter Institute's [Matt Johnson](#), who mentioned his interest in developing tools to study the idea. He suggested that they collaborate.

At first, Peiris was skeptical. "I think as an observer that any theory, however interesting and elegant, is seriously lacking if it doesn't have testable consequences," she said. But Johnson convinced her that there might be a way to test the concept. If the universe that we inhabit had long ago collided with another universe, the crash would have left an [imprint on the cosmic microwave background](#) (CMB), the faint afterglow from the Big Bang. And if physicists could detect such a signature, it would provide a window into the multiverse.

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