Cosmic Filament

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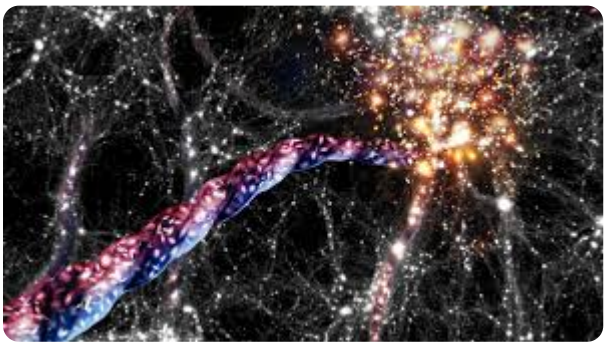
Recently, the University of Oxford researchers reported a roughly 50-million-lightyear-long cosmic Filament traced by at least 14 galaxies



About Cosmic Filament

Cosmic or galaxy filaments are the largest ‘threads’ in the universe’s cosmic web.

Size: A single cosmic filament is a structure spanning hundreds of millions of lightyears.

These filaments are the largest known structures in the Universe which are vast, thread-like formations of galaxies and dark matter that form a cosmic scaffolding

These cosmic web filaments serve as the nurseries where galaxies grow by accreting pristine gas that fuels their star formation.

Formation

It is formed as a result of gravity pulling in gas, dark matter, and galaxies into long, thin strands that link giant clusters of galaxies.

These filaments also surround large, empty regions of space called voids.

A filament forms where sheets of matter intersect and collapse; they’re also highways along which gas and smaller galaxies ‘flow’ towards big clusters.

Significance: These filaments help decide where galaxies form, how fast they grow, and how much fresh gas they receive over billions of years