

# Bethe Colloquium

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## How to detect Cosmic Neutrinos?

The cosmic neutrino background is a firm prediction of the Big Bang theory. Similar to the way the cosmic microwave background formed when the early Universe became transparent for light 400000 years after the big bang, the cosmic neutrino background formed when neutrinos could travel unimpeded through the cosmos just 1 second after the big bang. We discovered the cosmic microwave background 60 years ago and measured it to high precision since -most of our knowledge about the early Universe derives from it. In contrast, nobody has ever observed a cosmic neutrino, but a discovery of the cosmic neutrino background would provide a unique window into the very early Universe. In this talk I will give an overview of what we know about cosmic neutrinos and what prospects exist to detect cosmic neutrinos in the future.

**BCTP, Room W 2.019 - Wegelerstr. 10 - 53115 Bonn**

**Thursday, November 16, 2023, at 4:15 p.m.**

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