

Radio Astronomy

Wednesday 8 May 2024 14:00 (30 minutes)

A beginner's guide to Radio Telescopes and Interferometers.

In this talk I will be giving an overview of how radio telescopes operate and why we use them. I will start by giving a basic overview of single-dish telescopes and interferometers as well as their applications in radio astronomy. I will continue by introducing Very Long Baseline Interferometry (VLBI), the most extreme form of interferometry and will discuss current limitations of this technique. To wrap up I will talk about the Balloon-borne VLBI Experiment (BVEX) a 22 GHz balloon-borne VLBI station that will launch from Timmins, Ontario in the Summer of 2025, as well as technical challenges that arise when doing VLBI from the stratosphere. Finally, I will discuss how experiments like this can address current limitations of ground-based VLBI such as atmospheric noise, resolution and uv-coverage.

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Session Classification: Astronomy