

TO INFINITY AND BEYOND! ACCELERATING THE SEARCH FOR THE FIRST STARS AND GALAXIES.

Background

The Square Kilometre Array (SKA) project is one of the largest international scientific research projects in history - a multi-billion dollar effort to build the world's largest radio telescope.

ICRAR (International Centre for Radio Astronomy Research) researchers have been studying the early universe with the Murchison Widefield Array (MWA) telescope, a precursor to the SKA.

Challenges

The MWA telescope had amassed terabytes-worth of data backlog that was awaiting processing, which was impeding research efforts.

Solutions

In two weeks, our high-performance computing (HPC) experts onboarded and optimised ICRAR's code for processing the the MWA data.

Results

Our HPC experts achieved runtimes that were 125 times faster!

ICRAR were able to process their data backlog within three hours, using just a fifth of our compute resources in Perth - having previously managed to process only a sixth of its backlog over two years.

Using these results ICRAR published a new paper based on the findings of this research.

ICRAR credited our green HPC for lowering their carbon emissions.