

Paths to discovery in Radio Astronomy

By Ron Ekers, Australia Telescope National Facility, CSIRO

One of the most important events in twentieth century astronomy was the birth of radio astronomy. For the first time ever astronomers were able to view the Universe in a region of the electromagnetic spectrum outside the narrow optical window. These early discoveries were completely unexpected and were made by individual scientists from other disciplines who built very unconventional "telescopes". These early pioneers discovered a plethora of cosmic phenomena that revolutionized our knowledge of the Universe.

Modern observations of some of these discoveries, such as the relic radiation from the big bang, are still the most exciting research areas in modern astronomy.

What can we learn from this about the future of the new class of radio telescopes, such as the SKA, which are planned for the twenty first century?