Dame Jocelyn Bell Burnell

(1943 - Present)

Little Green Man 1

Main image: Dame Jocelyn Bell Burnell and Professor Jim Al-Khalili at Whitla Hall, Queens University. [CC BY-NC-ND 2.0.]
Background: Parkes Radio Telescope with moon in the background [CSIRO, CC BY 3.0]

Irish astrophysicist Dame Jocelyn Bell Burnell was a postgraduate student in 1967 when she discovered radio pulsars. These are rotating neutron stars that appear to 'pulse' because the light they emit can only be observed when they face the earth. The discovery is considered one of the greatest astronomical achievements of the twentieth century.

Burnell attended the University of Glasgow, studying a Bachelor of Science in Natural Philosophy (Physics). She then obtained a PhD from the University of Cambridge in 1969. While at Cambridge under the supervision of Antony Hewish, she detected a "bit of a scruff" on her chart recorder. Temporarily dubbed "Little Green Man 1", the source was identified after several years as a rapidly rotating neutron star.

Since 1967, Burnell has worked at the University of Southampton, University College London, the Royal Observatory in Edinburgh, and the Open University. She was President of the Royal Astronomical Society from 2002-2004, and is currently a Visiting Professor of Astrophysics at the University of Oxford. In 1999 she was appointed Commander of the Order of the British Empire for services to Astronomy, and promoted to Dame Commander in 2007.

In 1974 the Nobel Prize in Physics for the discovery of radio pulsars was awarded to her thesis supervisor Hewish and astronomer Martin Ryle, despite Burnell having been the first to observe and analyse the phenomenon. The failure to include Burnell in the award has been strongly criticised by many prominent astronomers.