

Professor Yvonne Elsworth: 2020 Gold Medal in Geophysics

Professor Yvonne Elsworth is a pioneer in solar physics, with her outstanding achievements in helioseismology revealing fundamental insights into the structure and dynamics of the solar interior. Her technical expertise, dedication and exceptional leadership over many years have been instrumental in the success of the Birmingham Solar-Oscillations Network (BiSON) and in realizing the full potential of helioseismology. Using BiSON's unprecedented forty-year record of the Sun, Professor Elsworth has established the properties of the deep solar interior and core, providing fundamental information to theorists about the solar activity cycle and dynamo, and the angular momentum evolution of stars, as well as pointing the way to a solution of the solar neutrino problem. Her work has had a long-lasting impact, not only on our understanding of the Sun, but also beyond, thanks to the recent extension of helioseismic techniques to other stars.

Throughout her distinguished career, Professor Elsworth has played a prominent role in shaping policy and management of astronomy, both in the UK and internationally. She was elected a Fellow of the Royal Society in 2015. Professor Elsworth was the first woman appointed to the prestigious Poynting Chair at Birmingham. The lasting influence of her work is the improved gender balance in astronomy and in the personal advancement of female scientists whom she has so actively supported.

For these reasons, Professor Yvonne Elsworth is awarded the Royal Astronomical Society's Gold Medal.

Shorter version:

Professor Yvonne Elsworth is a pioneer in solar physics, with her outstanding achievements in helioseismology revealing fundamental insights into the structure and dynamics of the solar interior and core. Her technical expertise, dedication and exceptional leadership over many years have been instrumental in the success of the Birmingham Solar-Oscillations Network (BiSON) and in realizing the full potential of helioseismology. Throughout her distinguished career, Professor Elsworth has played a prominent role in shaping policy and one lasting influence of her work is the improved gender balance in astronomy.

