



Royal
Astronomical
Society

Dr Nigel Meredith - Chapman Medal (G)

Dr Nigel Meredith is awarded the Chapman Medal for his world leading and transformative research on plasma waves in magnetospheric physics. In particular, many of his studies have focused on the interaction of these waves with high energy electrons trapped in Earth's radiation belts. Among his key results, Dr Meredith showed that geomagnetic substorms temporarily increase the power of whistler-mode chorus waves by orders of magnitude, thereby contributing to electron acceleration and loss from the radiation belts. His comprehensive surveys of these and other wave modes now inform many of the field's leading radiation belt models, including those used in operational space weather forecasting. Furthermore, his seminal work in analysing spacecraft risk during extreme space weather events has had major impact, being used as a benchmark and reference for US and UK space weather preparedness strategies.

Alongside his achievements in research, Dr Meredith has also demonstrated his dedication to public outreach through his innovative "Sounds of Space" programme. Dr Meredith has co-led this collaboration between the arts and sciences to open up this important science to an impressively wide audience.