Citation for the 2017 RAS 'G' Gold Medal
Professor Michele Dougherty

The 2017 Gold Medal in Geophysics is awarded to Professor Michele Dougherty.

Professor Dougherty has made significant and substantial contributions to the national and international space physics community during her career so far. She is the Principal Investigator for the magnetometer instrument on the Cassini mission to Saturn, and she has expertly led the team through a vast array of scientific discoveries at the Saturn system. Professor Dougherty’s work with magnetic field data led to one of the major discoveries of the entire mission – the presence of a dynamic atmosphere at the tiny moon Enceladus. Supporting imaging measurements revealed the geysers which are now synonymous with Enceladus, spewing water ice into the Saturn system and continuously replenishing the E-ring. The potential for habitability at this unsuspecting moon now makes it a major target for future exploration. Her prolific publication record and extensive citation rates are a testament to the high value placed on her research.

Whilst continuing to make major discoveries at Saturn with her magnetometer team, Professor Dougherty also became involved in the early proposals to the ESA Cosmic Vision programme for new missions to the outer Solar System. Her hard work, strong leadership and unrelenting determination contributed significantly to the successful selection of the JUICE mission in 2012. She went on to propose and be selected as the only UK Principal Investigator for the JUICE mission, for the magnetometer instrument (J-MAG), thus securing a strong place for UK science participation in this exciting new European mission.

For these reasons, Professor Michele Dougherty is awarded the Royal Astronomical Society’s Gold Medal.