

## Curriculum Vitae

ESTER ANTONUCCI, born in Boves on 10 March 1945, earned her Laurea Degree in Physics in 1967 and graduated in Cosmic Physics in 1972 at the University of Turin (Italy).

*Early research* - Her early research was in the field of cosmic rays. One of the results achieved in these studies was that solar activity modulates not only the cosmic ray flux registered at ground-level but also higher energy particles such as those detected at the Mt. Cappuccini underground station (70 m.w.e.) in Turin.

*Solar physics research* - Her interest in solar physics began in the years 1972-1974, when she joined the newly formed Prof. J.M. Wilcox group at Stanford University. The major scientific result obtained at that time was the identification of rigidly rotating structures in the solar corona.

*Space activities and research* – Since 1980, she actively participated in three major solar space missions: SMM, SOHO and Solar Orbiter.

Solar Maximum Mission - During the first year of operations of the Solar Maximum Mission (NASA), launched in 1980, she acted as Deputy Principal Investigator of the Soft X-Ray Polychromator (XRP) at the Goddard Space Flight Center, NASA, as part of the Rutherford and Appleton Laboratory (UK) team guided by A.H. Gabriel. XRP observations enabled her to find the first evidence for chromospheric evaporation, source of the intense soft-X- ray emission during solar flares, and to observe the first FeXXVI spectrum.

Solar and Heliospheric Observatory - She participated in the definition of the mission profile of SOHO, the Solar and Heliospheric Observatory (ESA-NASA), launched in 1995, and played a key role in the proposal and development of the UltraViolet Coronagraph Spectrometer, UVCS (NASA-ASI). The UVCS results allowed a breakthrough in the understanding of solar wind acceleration in the corona of the Sun.

Solar Orbiter - Actively involved in the proposal and definition of the Solar Orbiter (ESA-NASA) mission, she was Principal Investigator of Metis, the Solar Orbiter coronagraph, from the proposal and definition studies to the development phase until instrument delivery to ESA in 2017. Solar Orbiter was launched in 2020. In addition, she was Principal Investigator of the SCORE coronagraph, the Metis prototype flown in 2009 within the NASA sub-orbital HERSCHEL program. SCORE obtained the first measurement of helium in the outer corona.

*Academic activity* –Professore Associato at the Physics Department of the University of Torino, she was then appointed Astronomo Ordinario and served as Director at the Astrophysical Observatory of Turin – Istituto Nazionale di Astrofisica (INAF). Since 2010, she is INAF Associate. At present, she is involved in the interpretation of the data obtained with Metis-Solar Orbiter, launched in 2020.

She chaired a few COSPAR sub-commissions and chairs the Awards committee. She was a member of the following space committees: Solar System Working Group, SSWG, and Space Science Advisory Committee, SSAC, of the European Space Agency, Scientific Committee of the International Space Science Institute, ISSI, in Bern, and, in the period 2013-2019, the European Space Science Committee of the European Science Foundation.

She is a member of the International Academy of Astronautics, since 1994, and of the European Academy of Sciences, since 2004.