アップルトン賞の詳細

The Appleton Prize is awarded for outstanding contributions to studies in ionospheric physics. The award is for career achievements of the candidate with evidence of significant contributions within the most recent six-year period. The Appleton Prize was supported by the Royal Society from its inception in 1969 until 2008 and is now supported by the UK URSI Panel.

Edward Appleton was President of URSI from 1934 to 1952, and Honorary President from 1952 until his death in 1965. He graduated in Physics in 1914 from St. John's College, Cambridge and, in 1919, became an assistant demonstrator in experimental physics under Lord Rutherford. He conducted research on thermionic valves, atmospherics and the fading of wireless signals which were just coming into use for broadcasting.

In 1925 Appleton and Barnett in the United Kingdom, and Breit and Tuve in the United States showed for the first time that radio waves could be reflected from the ionized portion of the atmosphere. This was the beginning of an intensive worldwide study of the ionosphere. Which continues to this day. As Chair of the Commission on Atmospheric Disturbances (1928-1946), the Commission on Radio Wave Propagation (1946-1948) and the Commission on Ionospheric Radio (1948-1954), Edward Appleton led the promotion and development of URSI's international work in these fields.

Edward Appleton was very active in encouraging the long-term study of ionospheric conditions and their dependence on the eleven-year solar cycle. In his role as Chair of the URSI Committee for the International Geophysical Year 1957-1958, he was instrumental in sponsoring international scientific collaboration. This period proved to be of great significance in the history of ionospheric radio wave propagation, since the prevailing solar activity was the highest recorded during the previous 200 years of systematic observations.

For his public services, Edward Appleton was honoured with a knighthood in 1941 and appointed a Knight Grand Commander of the Order of the British Empire in 1946. World recognition of his scientific work was given to him by the award in 1947 of the Nobel Prize for Physics. In 1949 he was appointed Principal and Vice-Chancellor of Edinburgh University, a post he held until his death.

過去の受賞者リスト

2017: Prof. Y. OMURA, JAPAN
Citation: "For significant contributions to nonlinear wave-particle interaction theory, simulations of chorus and ion cyclotron emissions and the associated acceleration and precipitation of relativistic electrons in the radiation belts."

2014: Dr. R.F. BENSON, USA
Citation: "For fundamental contributions to knowledge of the interactions of space borne radio sounders with the Earth's plasma environment and to the use of sounders as diagnostic probes of that environment"

2011: Prof. B. REINISCH, USA
Citation: "For revolutionizing radio sounding from ground and space with development of the Digisonde and the IMAGE/RPI satellite instrument, both essential data providers for space weather monitoring and ionospheric modeling"

2008: Prof. U. INAN, USA
Citation: "For fundamental contributions to understanding of whistler-mode wave-particle interaction in near-Earth space and the electrodynamic coupling between lightning discharges and the upper atmosphere"

2005: Dr. D. MASSONNET, France
Citation: "For his outstanding work on radar imaging and satellite radar interferometry, a technique combining high frequencies, propagation and digital signal processing"

2002: Dr. R.A. GREENWALD, USA
Citation: "For conceiving, designing, developing and deploying two ground-breaking measurement techniques that have provided unparalleled spatial and temporal measurements of the ionosphere, and for inspirational international leadership"

1999: Dr. R.F. WOODMAN, Peru
Citation: "For major contributions and leadership in radar studies of the ionosphere and neutral atmosphere"

1996: Dr. D.T. FARLEY, USA
Citation: "For contributions to the development of the incoherent scatter radar technique

and to radar studies of ionospheric instabilities"

1993: Prof. T.B. JONES, UK
Citation: "For major contributions, individually and in scientific leadership, to the study of ionospheric physics, using radio and radar techniques"

1990: Dr. A.V. GUREVICH, Russia
Citation: "contributions to the understanding of the non-linear properties of the ionosphere, particularly with respect to the interaction with high-power radiowaves"

1987: Dr. S. KATO, Japan
Citation: "contributions to the study of the ionosphere and the middle atmosphere, and in particular for the development of a highly sophisticated radar to observe the atmosphere"

1984: Prof. K.D. COLE, Australia
Citation: "Contributions to the understanding of the basic processes taking place in the magnetosphere and the ionosphere"

1981: Dr. H. RISHBETH, UK
Citation: "Contributions to studies of the dynamics and structure of the ionosphere F region"

1978: Prof. P.M. BANKS, USA
Citation: "Theoretical and observational studies of the plasma flow between the ionosphere and the magnetosphere"

1975: Dr. J.V. EVANS, USA
Citation: "Ionospheric physics, including application of the incoherent scatter technique"

1972: Prof. R.A. HELLIWELL, USA
Citation: "Radio wave propagation in the magnetosphere"

1969: Prof. W.I. AXFORD, N.Z.
Citation: "Ionospheric and magnetospheric physics"

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