

Low frequency observations of planetary radio waves at the moon

Hiroaki Misawa[1]; Fuminori Tsuchiya[2]; Akira Morioka[3]; Tetsuro Kondo[4]; Kawano Nobuyuki Lunar Low Frequency Astronomy Study Team[5]

[1] PPARC, Tohoku Univ.; [2] Planet. Plasma Atmos. Res. Cent., Tohoku Univ.; [3] Planet. Plasma and Atmos. Res. Cent., Tohoku Univ.; [4] KSRC, NICT; [5] -

Natural radio waves from space in the frequency range below several MHz cannot reach to earth's surface due to the shielding effect of the terrestrial ionosphere. A low frequency radio wave observation outside the earth is, therefore, a fascinating project for not only the radio astronomy but also the planetary physics. In particular, a low frequency observation at the far side of the moon has another important advantage; that can produce the data with excellent S/N because of escape from intense terrestrial natural radio waves (Auroral Kilometric Radiation, etc) in addition to man-made radio noises. We discuss the scientific importance of the low-frequency radio wave observation for the study of the electro-magnetic environment of planets in the solar system.