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Dusk side Pc5 waves observed by THEMIS

D. Constantinescu (1,2), F. Plaschke (1), K.-H. Glassmeier (1), U. Auster (1), V. Angelopoulos (3), W. Baumjohann (4), K.-H. Fornacon (1), E. Georgescu (5), R. Nakamura (4), and Y. Narita (1)

(1) Institut fuer Geophysik und Extraterrestrische Physik, Braunschweig, Germany (d.constantinescu@tu-bs.de, 49 531391 5220), (2) Institute for Space Sciences, Romania, (3) Space Sciences Laboratory, University of California, USA, (4) Space Research Institute, Austrian Academy of Sciences, Austria, (5) Max Planck Institute for Extraterrestrial Physics, Germany

We present a statistical study of THEMIS observations of compressional ULF waves in the outer equatorial dusk side magnetosphere.
Using a timing technique combined with minimum variance analysis we determine the propagation direction and speed of the waves with respect to the spacecraft formation. We then apply a Doppler correction and find that the waves are propagating orthogonal to the ambient magnetic field, in the Sunward direction, with low (up to 30 km/s) phase speeds in the plasma frame.
Variance analysis reveals that the maximum variance direction is closely aligned with the mean magnetic field which, together with their low propagation speed and orthogonal propagation, is consistent with the drift mirror mode.