Contribution ID: **800** Type: **Poster**

# PD/P8-16: Observation of a New Energy Channel from Energetic Particles to Bulk Ions through Geodesic Acoustic Mode

*Friday, 12 October 2012 14:00 (4h 45m)*

The measurement of electrostatic potential fluctuations and density fluctuations using a heavy ion beam probe(HIBP) and magnetic field fluctuations using Mirnov coils clarified that the energetic-particle (EP)-driven geodesic acoustic mode (GAM) was excited in the central region of LHD plasmas. In addition, it was observed that the ion temperature measured using a neutral particle analyzer (NPA) increased during the GAM excitation. The ion-heating power through the collisionless damping of the GAM[1] can quantitatively explain the observed rate of the ion-temperature change. Thus, a new energy channel from the EPs to bulk ions through the GAM has been demonstrated for the first time.

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**Session Classification:** Poster: P8

**Track Classification:** PD - Post Deadline