

Project Details

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Program Element: Independent Investigation: LWS

Project Title:

Data Environment Proposal for Archiving Cluster Wideband Plasma Wave Data for the International Living With a Star Program

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Summary:

The key objective of this data environment proposal is to archive high resolution spectrograms of all Cluster Wideband plasma wave data obtained to date. We propose to provide these data, along with useful documentation, to the Cluster Active Archive. The Cluster Active Archive is the repository for the high resolution data obtained from all of the Cluster instruments for the life of the mission. This repository is being constructed by the European Space Agency and will be part of that agency's contribution to the International Living With a Star programme. The Wideband data will be delivered to the Cluster Active Archive via either electronic link or on DVDs. A part of the proposed effort also involves the preparation of formal interface documents between the Cluster Active Archive and the WBD instrument Principal Investigator as to delivery products and schedules. The WBD data, in conjunction with the data from all of the other Cluster instruments, can then be obtained through the Cluster Active Archive to perform scientific research relevant to the Living With a Star program. We briefly describe some of the studies that can be carried out using these data, including (but not limited to) studies of the motion of the bow shock, reconnection at the magnetopause, the role of auroral kilometric radiation in substorms, and the significance of the intense storm-time chorus waves.

Publication References:

Summary: "

Reference: Donald Gurnett / The University of Iowa - Data Environment Proposal for Archiving Cluster Wideband Plasma Wave Data for the International Living With a Star Program

Summary: no summary

Reference: Sigsbee, K.; Kletzing, C.; Gurnett, D.; Pickett, J.; Balogh, A.; Lucek, E.; (2004), Statistical behavior of foreshock Langmuir waves observed by the Cluster wideband data plasma wave receiver, Annales Geophysicae, vol. 22, Issue 7, pp.2337-2344, doi: 10.5194/angeo-22-2337-2004