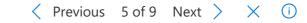
1/19/2021 NL1 - OneDrive







Abstract Details

<u>AOGS 1st Annual Meeting</u> > <u>Non-linear Geophysics</u> > Coherent large-amplitude waves in mean plasmas originated from oscillitons: Application to the foreshock of Earth and Mars >

Corresponding Author: Prof. Konrad Sauer (sauer@linmpi.mpg.de)

Organization: Max-Planck-Institut for Aeronomie

Category: Non-linear Geophysics

Paper ID: 57-ONL-A412

Title: Coherent large-amplitude waves in multi-ion plasmas originated fror

oscillitons: Application to the foreshock of Earth and Mars

Abstract:

In multi-ion plasmas a new class of stationary non-linear waves exis vicinity of the cross-over frequencies. These are soliton-like structure superimposed spatial oscillations which arise from the momentum co between both ion populations via the LF electromagnetic field. In the free energy in form of an ion beam the so-called oscillitons can be ex An example is the generation of large-amplitude LF waves by ions ref from the Earth's bow shock which get gyrophase-bunched within the linear structure. Similar effects appear at Mars where 'picked-up' exo protons moving relative to the main solar wind population are the sol oscillitons. Theory and observations by CLUSTER and MGS are discus

Presentation Mode: Oral

Keywords: Non-linear waves, solitons, oscillitons, ion beams, foreshock region

Status: Pending.

Co-Authors

No.	Title	First Name	Family Name	Organization
1	Prof.	Konrad	Sauer	Max-Planck-Institut f�r Aeronomie, Katlenburg-Lindau, Germany
2	Dr.	Christian	Mazelle	CESR-CNRS/UPS, Toulouse, France
3	Dr.	Eduard	Dubinin	Max-Planck-Institut f�r Aeronomie, Katlenburg-Lindau, Germany