# 2025 Workshop: Joint RB-SoS / CP session

Long title
Coupling between the radiation belts and the plasmasphere
GEM-only session
Conveners
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Description

Cold plasma in the Earth’s plasmasphere plays a key controlling role of radiation belt dynamics. Different plasma waves arise inside and outside the plasmasphere, which interact in different ways with radiation belt particles of varying energies. The distribution of cold plasma can alter both the efficiency of wave-particle interactions and the spatial extent of the region where the interaction takes place, impacting the radiation belt particle dynamics. Understanding the coupling between the radiation belts and the cold plasma environment is therefore key to understanding the radiation belt environment.

Justification

A session that addresses the cold plasma environment and the radiation belts is relevant to a broad range of the GEM community. Understanding the coupling between these two plasma populations is critical to the GEM goal of the construction of a global Geospace General Circulation Model.

Related to CEDAR Science Thrusts:
Encourage and undertake a systems perspective of geospace
Workshop format

Short Presentations

List GEM Focus Groups (if any) you wish to avoid being in concurrent sessions with (due to overlapping research interests)

SCIMM, MESO, MPEC

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