

## RBSP Data Products Mapping

The following set of tables is designed to provide a direct mapping from the high level RBSP data product definitions to specific data products. For each instrument suite the table lists the high level data product name, the expected data level (L1-L4), the parameters included in that product and a mapping to a specific data product (either a definition or a filetype). The final column contains notes on the actual contents of the file (Energy ranges, pitch angle bins etc). By completing this sequence of tables we will be able to produce meta-data that allows specific data products to be identified by researchers who may not necessarily be familiar with the RBSP mission

### Magnetic Field Data (EMFISIS)

Data Product	Data Level	Parameter(s)	Mapping	Notes
Magnetic Field Components	L1B	Cartesian XYZ B Vector Cartesian UFW B Vector Cartesian GSE B Vector Cartesian GSM B Vector Spherical XYZ B Vector Spherical UFW B Vector Spherical GSE B Vector Spherical GSM B Vector	rbsp-X-emfisis-290_L1b-xyz rbsp-X-emfisis-290_L1b-ufw ???	
Spectral Components	L2	Cartesian XYZ B Spectra Cartesian UFW B Spectra Cartesian GSE B Spectra Cartesian GSM B Spectra	Rbsp-X_30ms-spectral- martix_emfisis	


### Electric Field Data Products (EFW)

Data Product	Data Level	Parameter(s)	Mapping	Notes
Spacecraft Potential and N	L1	Potential Scalar		
Electric Field Components	L1/L2	Cartesian XYZ E Vector Cartesian UFW Vector Cartesian GSE Vector Cartesian GSM Vector		
Electric Field Components with third component E.B=0	L2/L3	Cartesian XYZ Vector Cartesian UFW Vector Cartesian GSE Vector Cartesian GSM Vector		

Spectral Components	L2	Cartesian XYZ B Spectra Cartesian UFW B Spectra Cartesian GSE B Spectra Cartesian GSM B Spectra		

## Particle Data Products (ECT)

### MagEIS

Data Product	Data Level	Parameter(s)	Mapping	Notes
Electron Intensity versus Energy and Time	L2	Intensity Energy Range		MagEIS LOW/MED/HIGH (45-200Kev/200-1000Kev,1-4MeV – 9/9/8 channels)

Electron Intensity versus Pitch Angle and Time	L3	Intensity Pitch Angle		MagEIS LOW/MED/HIGH 45-200Kev/200-1000Kev,1-4MeV – 9/9/8 channels) 0-180 degrees, 20 degree bins
Proton Intensity versus Energy and Time	L2	Intensity Pitch Angle		MagEIS HIGH (0.1-10MeV – 11 channels)
Proton Intensity versus Pitch Angle and Time	L3	Intensity Pitch Angle		MagEIS/HIGH (0.1-10MeV – 11 channels) 0-180 degrees, 20 degree bins

## HOPE

Data Product	Data Level	Parameter(s)	Mapping	Notes
Electron, Proton, Ion Intensity versus Energy and Time	L2	Intensity Energy Range		1eV-50-Kev 36 channels 0-180 degrees, 20 degree bins
Electron, Proton, Ion, Intensity versus Pitch Angle and Time	L3	Intensity Pitch Angle		1eV-50-Kev 36 channels 0-180 degrees, 20 degree bins
Electron N,I,P, IE moments	L3			

Proton, Ion, N I P, IE moments	L3			
HOPE Distribution functions	L3			

## REPT

Data Product	Data Level	Parameter(s)	Mapping	Notes
Electron Intensity versus Energy and Time	L2	Intensity Energy Range		1- 18.9Mev (12 Channels)
Electron Intensity versus Pitch Angle and Time	L3	Intensity Pitch Angle		1-18.9+Mev (12 Channels) 0-180 degrees, 20 degree bins

Proton Intensity versus Energy and Time	L2	Intensity Pitch Angle		18.5-116+Mev (8 Channels)
Proton Intensity versus Pitch Angle and Time	L3	Intensity Pitch Angle		18.5-116+Mev (8 Channels) 0-180 degrees, 20 degree bins

## All

Data Product	Data Level	Parameter(s)	Mapping	Notes
Electron, Proton, Ion Phase space density versus energy	L4			
Electron, Proton, Ion Phase space density versus momentum	L4			
Electron, Proton, Ion Phase space density versus	L4			

adiabatic invariants				
Proton Intensity versus Pitch Angle and Time	L3			

### Particle Data Products (RBSPICE)

### Particle Data Products (PSBR)