Documentation for the file “RBSP\_2012-2014\_Strongest\_EMIC\_Events\_01\_21\_2020.xlsx” :

This Excel document contains information about the 211 strongest EMIC wave events observed by the two Van Allen Probes (Radiation Belt Storm Probes, RBSP) during their first full revolution in magnetic local time, covering the time period from October 1, 2012 through June 7, 2014.

These events are the observational basis for the manuscript “EMIC waves in the Earth’s Inner Magnetosphere as a Function of Solar Wind Structures During Solar Maximum,” by K. V. Gamayunov, M. J. Engebretson , and.S. R. Elkington, to be submitted to the *Journal of Geophysical Research – Space Physics.*

In addition to characterizing each event by date; spacecraft; start and end time in Universal Time (in hours and minutes); values of the magnetic indices Dst, SYM/H, Kp, and AE; frequency range (in Hz) and frequency band (He or H); starting and ending values of magnetic local time, L shell, and magnetic latitude, it contains peak spectral power values (in units of nT2/Hz) in local field-aligned coordinates in the Bx (radial), By (azimuthal), B$⊥$ (transverse), and B$∥$ (field aligned) components. Each event is also classified as occurring during one of three categories of solar wind activity: high speed stream (HSS), coronal mass ejection (CME), or quiet solar wind (QSW), according to definitions presented in this manuscript. All events included in this data set had a peak transverse spectral power > 0.1 nT2/Hz.