AOGS 2005

Draping of the Interstellar Magnetic Field onto the Heliopause

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In 1983-84, 1992-93 and 2003-04 high power radio emissions between 2 and 3 kHz originating on the outer heliosphere were observed by the Voyager spacecraft. Recent theories for the emission involve priming of the electron distribution in the emission region thought to be just beyond the heliopause nose, with a superthermal tail via lower-hybrid drive (LHD), along with acceleration of electrons via large shocks associated with global merged interaction regions (GMIRs). Priming via LHD will be effective only if a number of conditions are met: (i) Pick-up ions, generated by charge exchange between solar wind neutrals andVLISM protons, must be available, (ii) Lower-hybrid waves are not damped, i.e. background proton and pick-up ion thermal speeds are low, and (iii) the ring speed v_r (the pick-up ion velocity component perpendicular to **B**) and the Alfvén speed v_A satisfy $v_r/v_A \leq 5$. These constrains limit the location of the emission region to just beyond the heliopause nose. Here, we use simulations of the solar wind-VLISM interaction (both MHD and gas-dynamic), to determine **B** and v_r in order to determine where the constraint (iii) is met. We discuss the resulting effects on the predicted dynamic spectra. Comparisons of the source locations predicted using various interstellar magnetic field vectors with that observed may enable some VLISM parameters to be estimated.