

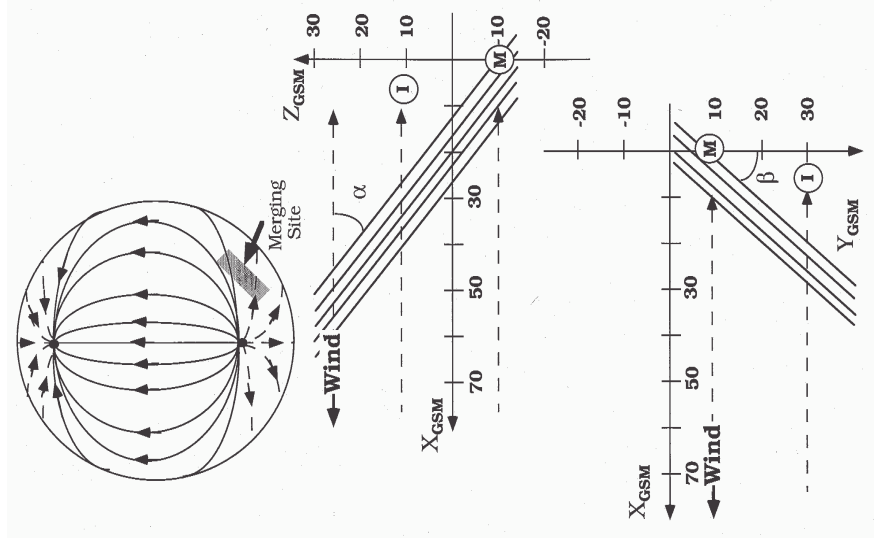


Figure 1. Schematic representation of the merging site and depiction of the phase plane from Maynard *et al.* [2000a].

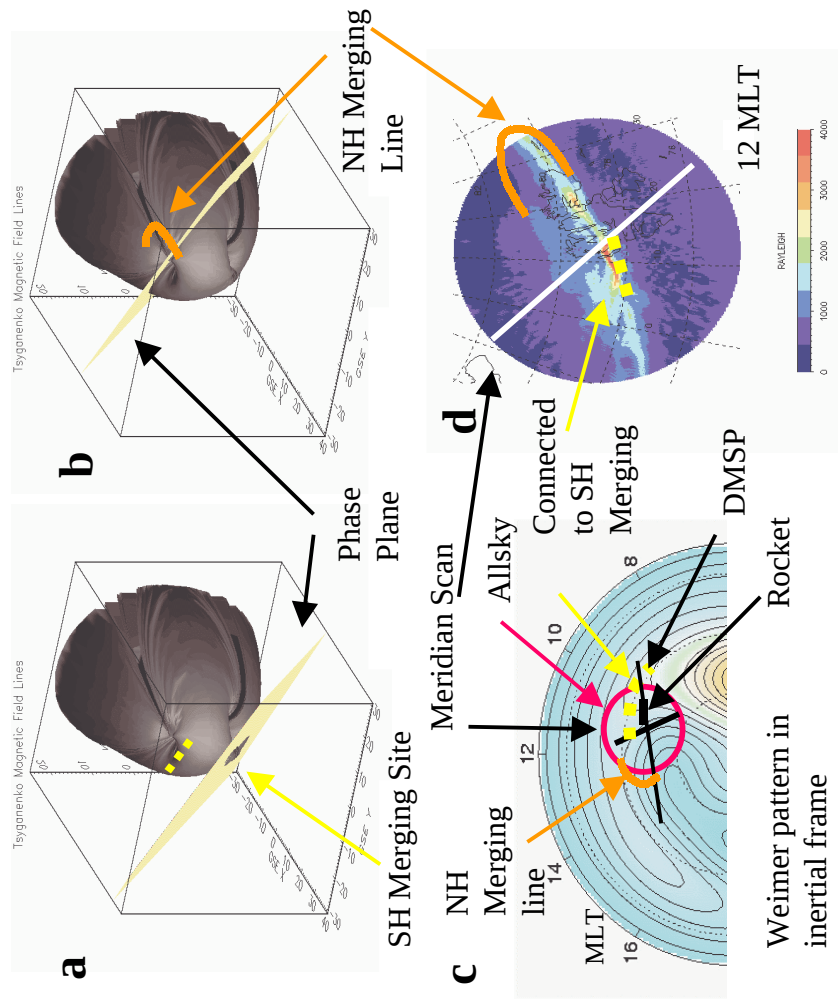


Plate 1. Cartoon illustrating the various merging sites in the magnetosphere and ionosphere and their relationship to the aurora from Maynard *et al.* [2000b]. The top two panels shows a 3-D representation of the magnetopause. The yellow phase plane is shown abutting the Southern-Hemisphere-merging site in the left panel and encountering the northern-hemisphere cusp region in the right panel. Newly opened field lines in the Southern Hemisphere would pass by the dotted yellow region in the Northern Hemisphere in the top left. The orange line in the top right schematically delineates possible Northern Hemisphere merging sites, applying the antiparallel criterion. The bottom two panels translate the merging sites to the ionospheric configuration of convection and aurora.