

3.1.1.7 Are there favourable environments for particle acceleration?

Statistical studies suggest that CMEs that erupt soon after a previous CME are more efficient in accelerating particles than those erupting into a pristine environment (Gopalswamy et al. 2004). Model calculations (Li and Zank, 2005) suggest that particles can be accelerated to energies ~30 times higher at a second shock following a previous shock. This more efficient acceleration may be due to a stronger turbulence level and a larger population of the seed particles at the second shock, but there are also other suggested explanations for the observations (see Gopalswamy et al. 2004).