

### 3.1.2.3 Flare seed particles

For SEP events in general, the intensity of the photon emission appears poorly correlated with the particle intensities observed in interplanetary space, so it is not clear whether many of these particles escape. Particles accelerated by flares of all sizes down to microflares, however, may provide the seed particles that are preferentially accelerated by interplanetary processes, thus inseparably linking the two acceleration sites and processes. It has been proposed that SEP events with large initial Fe/O ratios are a signature of "flare particles" followed by more typical Fe/O ratios from subsequent interplanetary acceleration. Solar Orbiter observations can test these differing models since its proximity to the flare site removes most of the uncertainty in magnetic connection, and the timing differences between the flare acceleration and the interplanetary acceleration phase would be much clearer than at 1 AU.