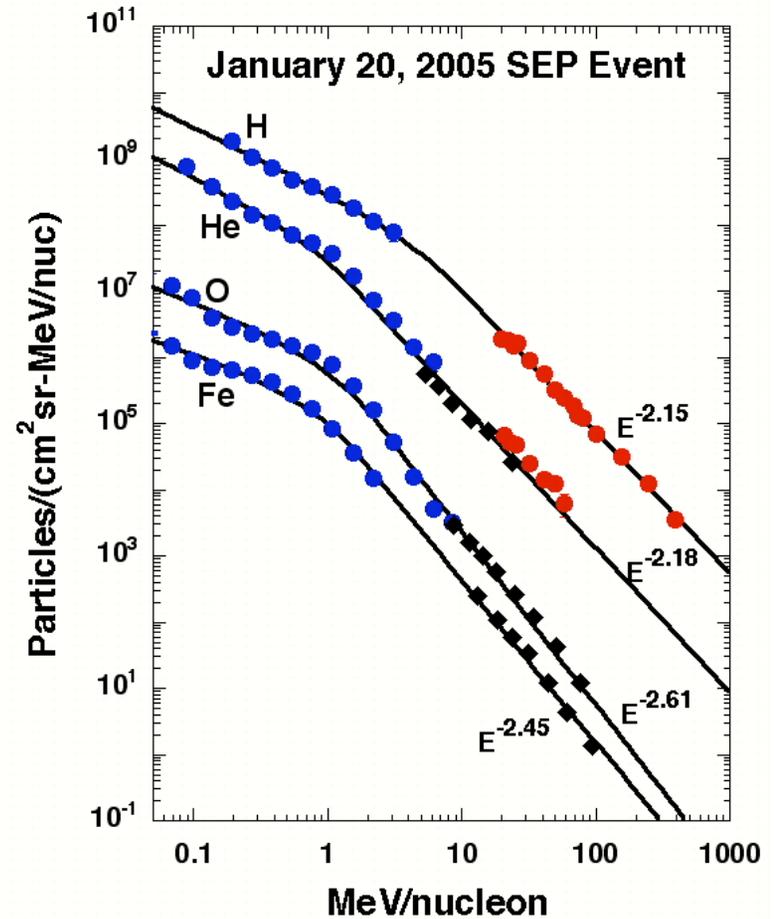
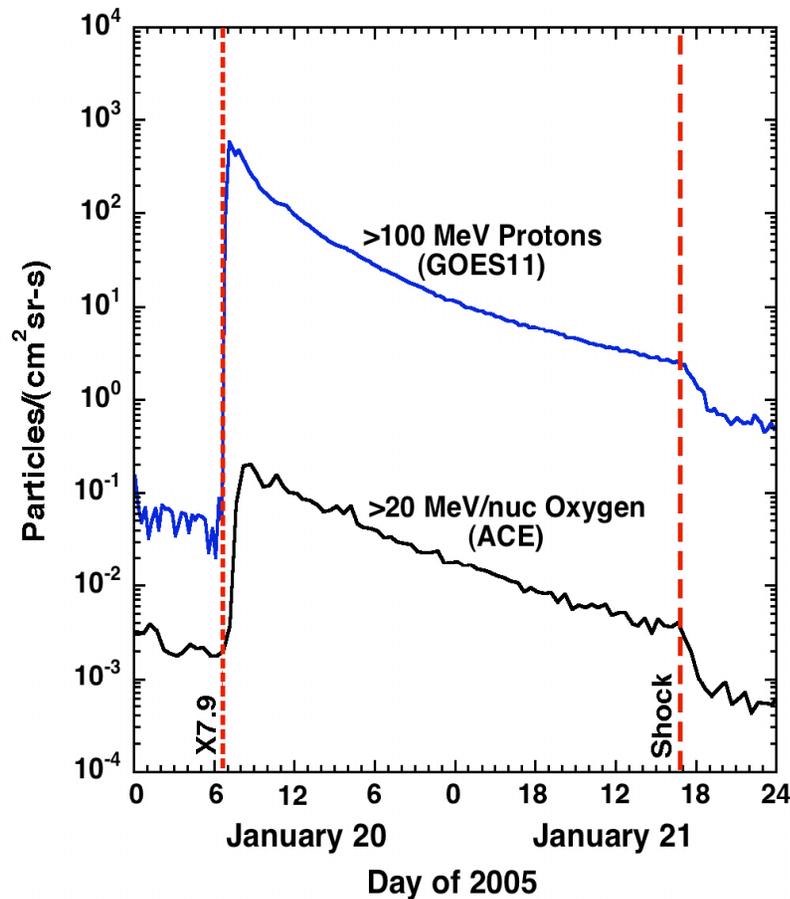
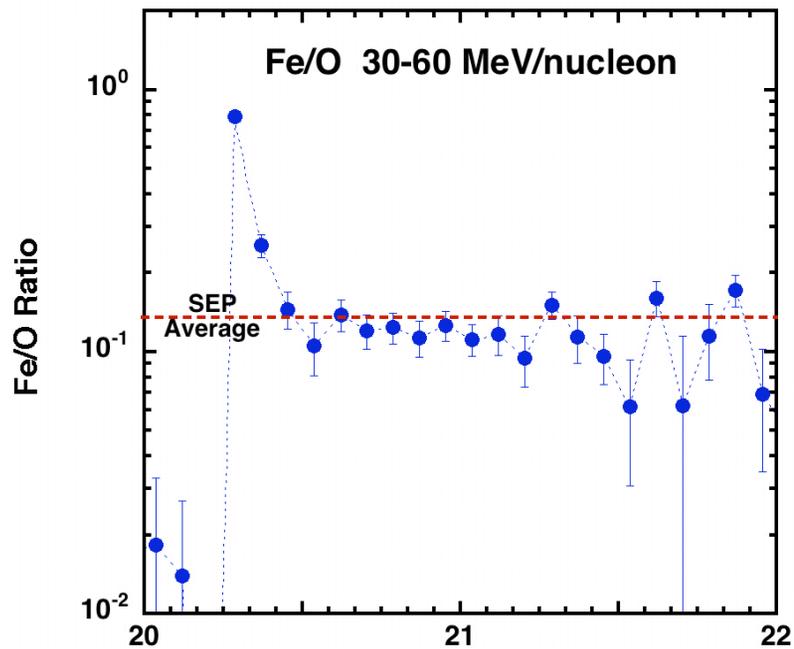


Solar Particle Energy Spectra and Composition in the January 20, 2005 Event

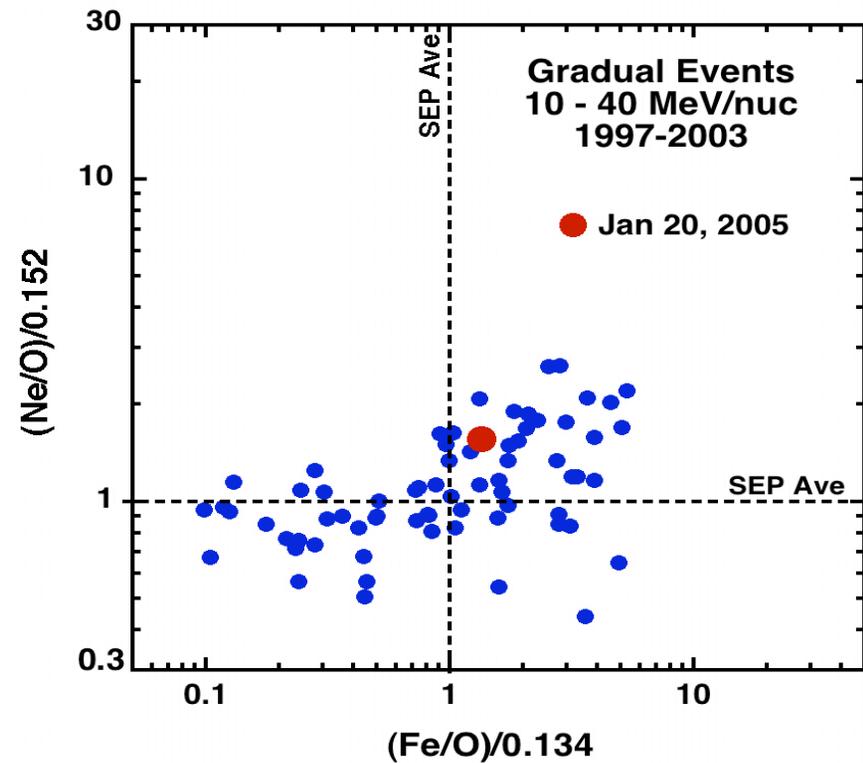
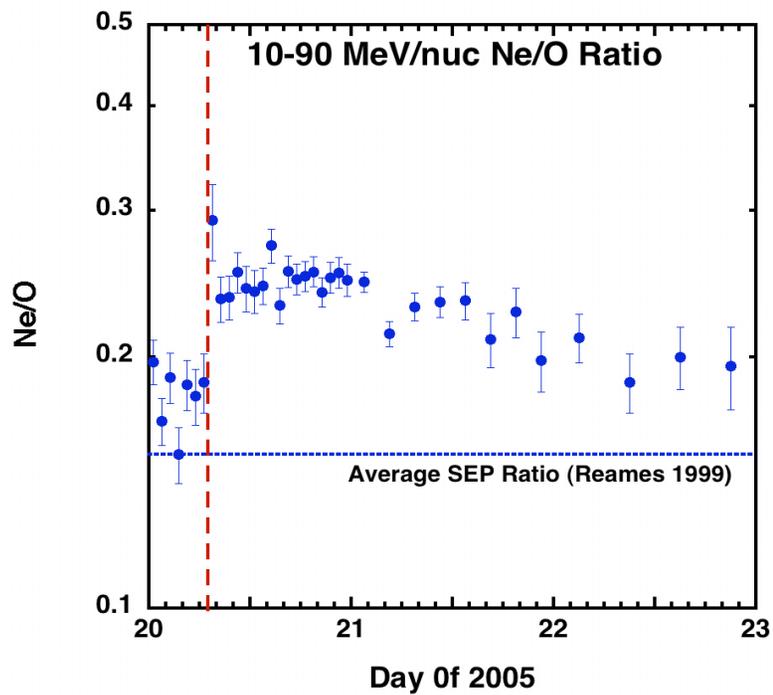
Mewaldt, Cohen, Labrador, Leske - Caltech
Mason, Haggerty - APL
Looper, Mazur, Selesnick - Aerospace
Desai - SWRI

Shine 2007 - July 30, 2005

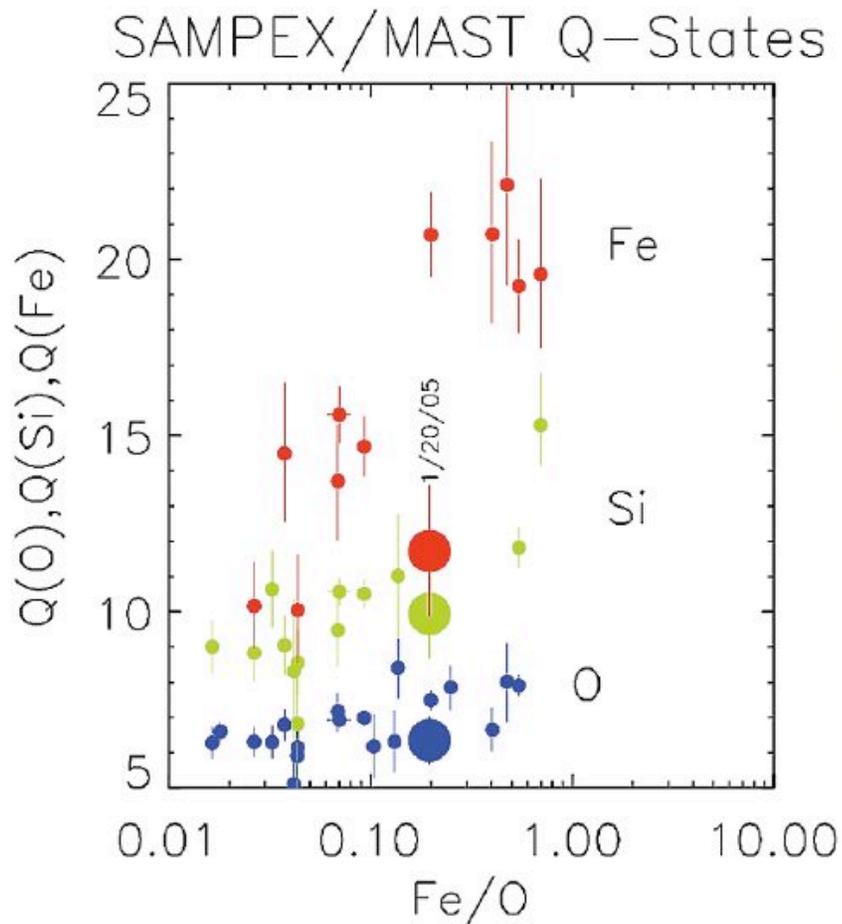




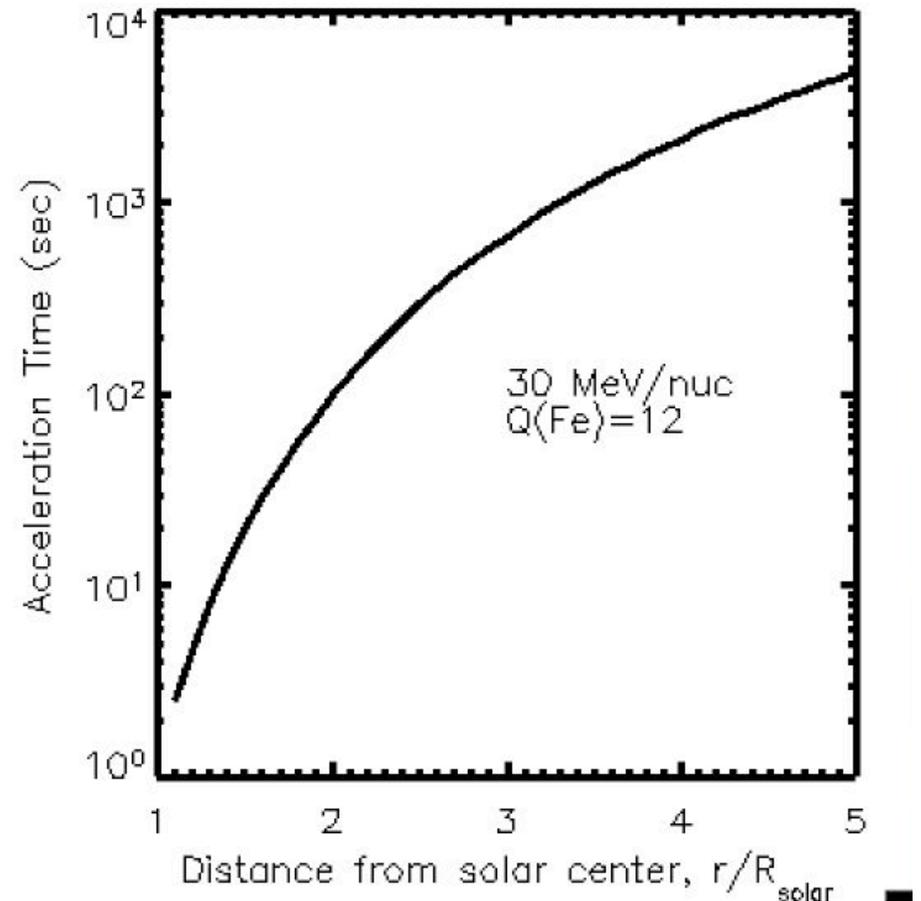
One focus of this poster is to compare data from this event with various signatures of impulsive and gradual events



The mean Fe charge state in the Jan 20 event was considerably lower than other events with similar Fe/O ratios (Labrador et al. 2005).



The mean Fe charge state of $Q_{Fe} = 12 \pm 2$ places limits on the material traversed during acceleration/escape and on the acceleration time at a given solar radius



Summary

- **The composition of this event is generally consistent with a moderately Fe-rich gradual event, but we cannot rule out a contribution from flare-accelerated particles early in the event is possible**
- **The charge-state data are consistent with current interpretations of the charge states in impulsive SEP events if the particles can be accelerated to ~50 MeV/nuc within seconds**
- **If most ≥ 30 MeV/nuc particles were shock accelerated low in the corona, the charge-state data imply that the CME-driven shock had to accelerate particles to GeV energies within a few minutes**