

# SEP Science

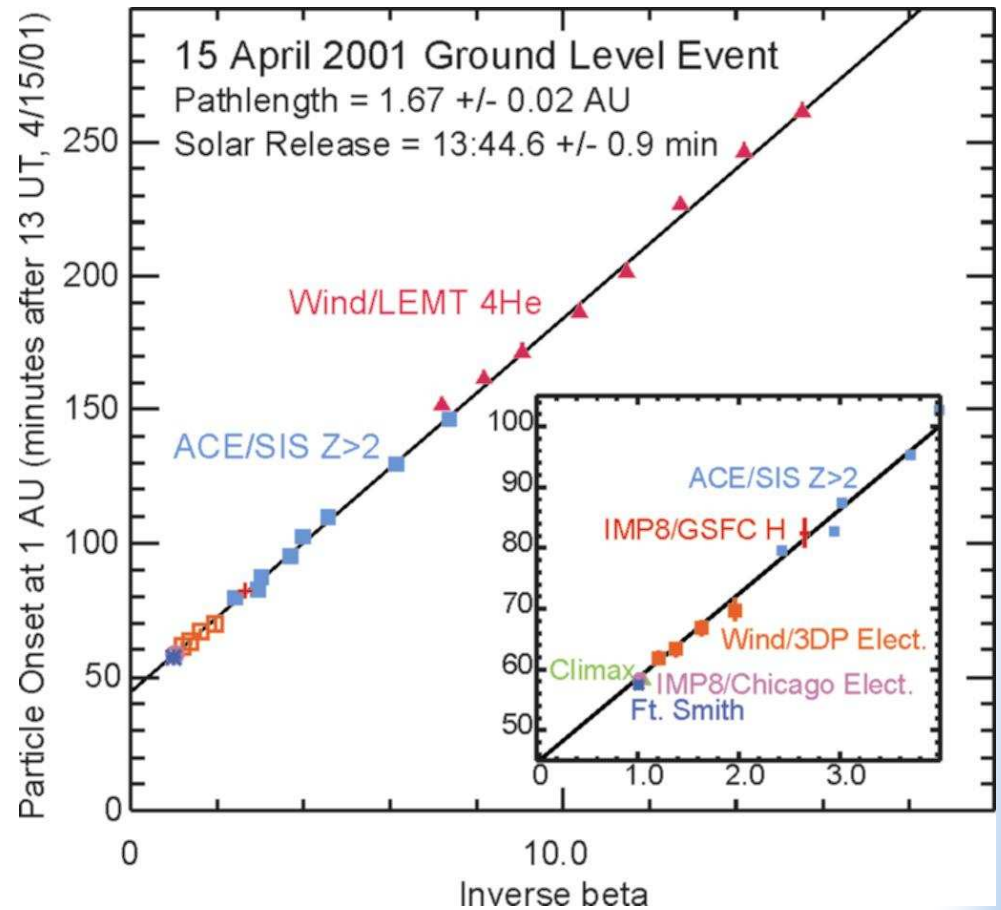
C.M.S. Cohen  
for R.A. Mewaldt  
*Caltech*

# Science Questions

- When/where are ions accelerated?
- What is being accelerated?
- How do we explain 'hybrid' SEP events?

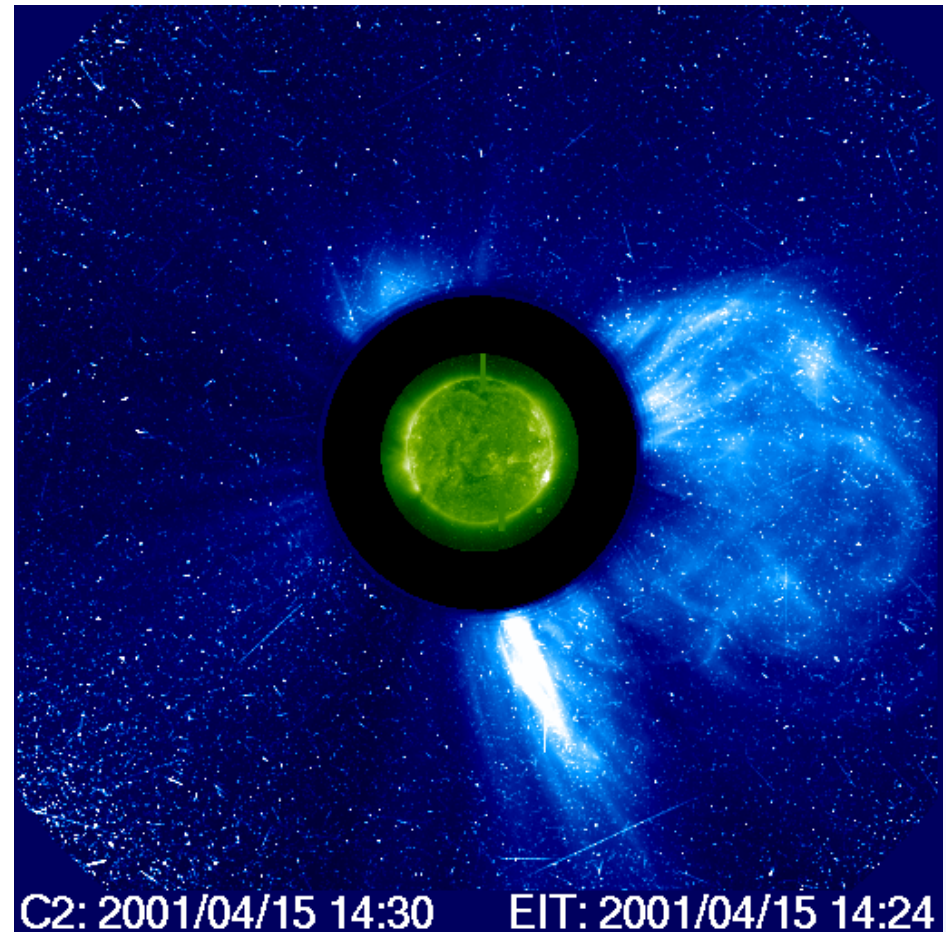
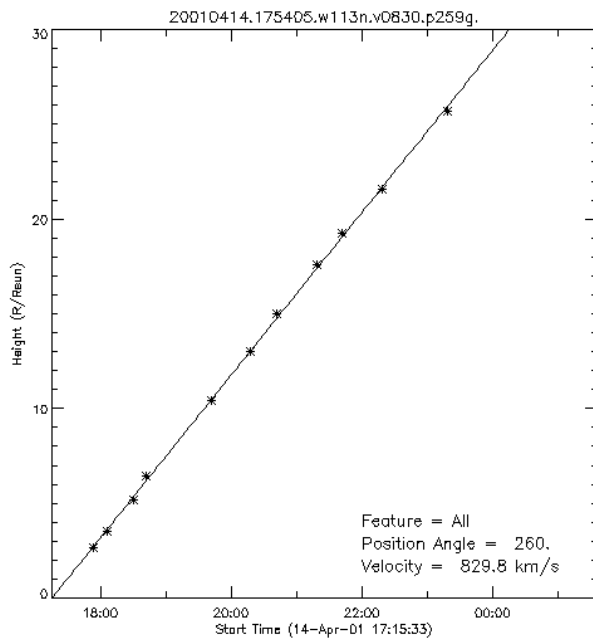
# When/Where is the Acceleration?

- Timing studies



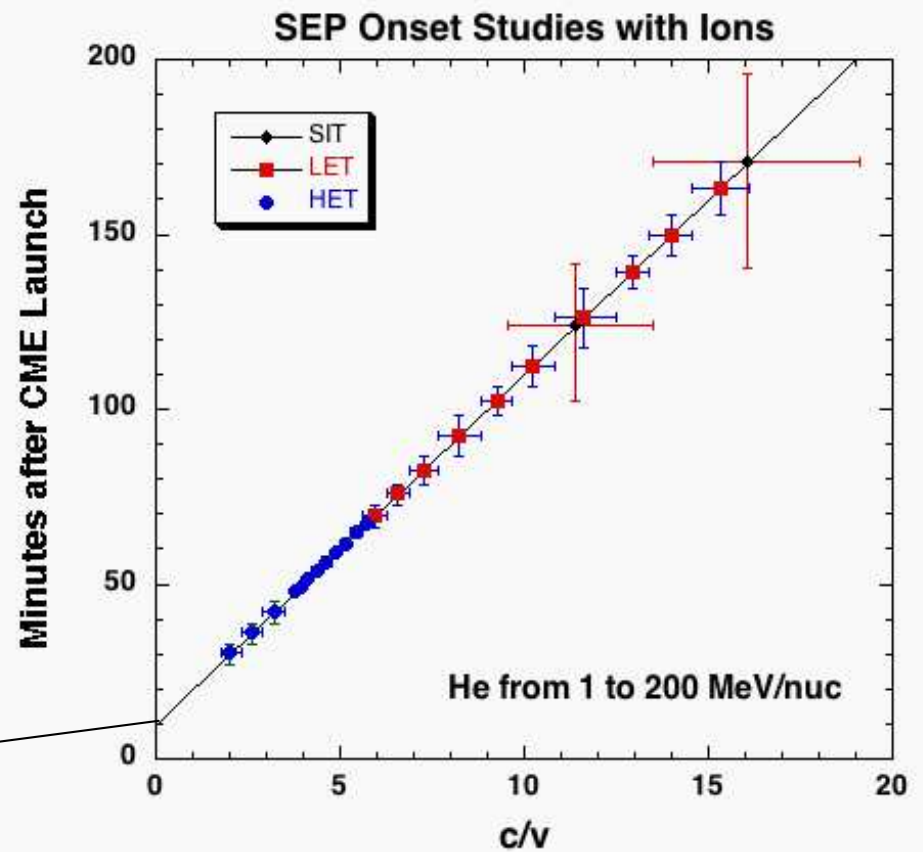
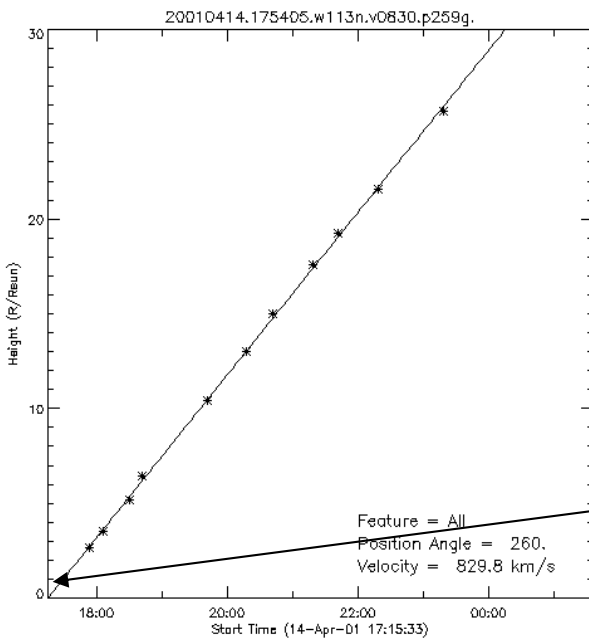
# When/Where is the Acceleration?

- Timing studies
- SECCHI CME observations



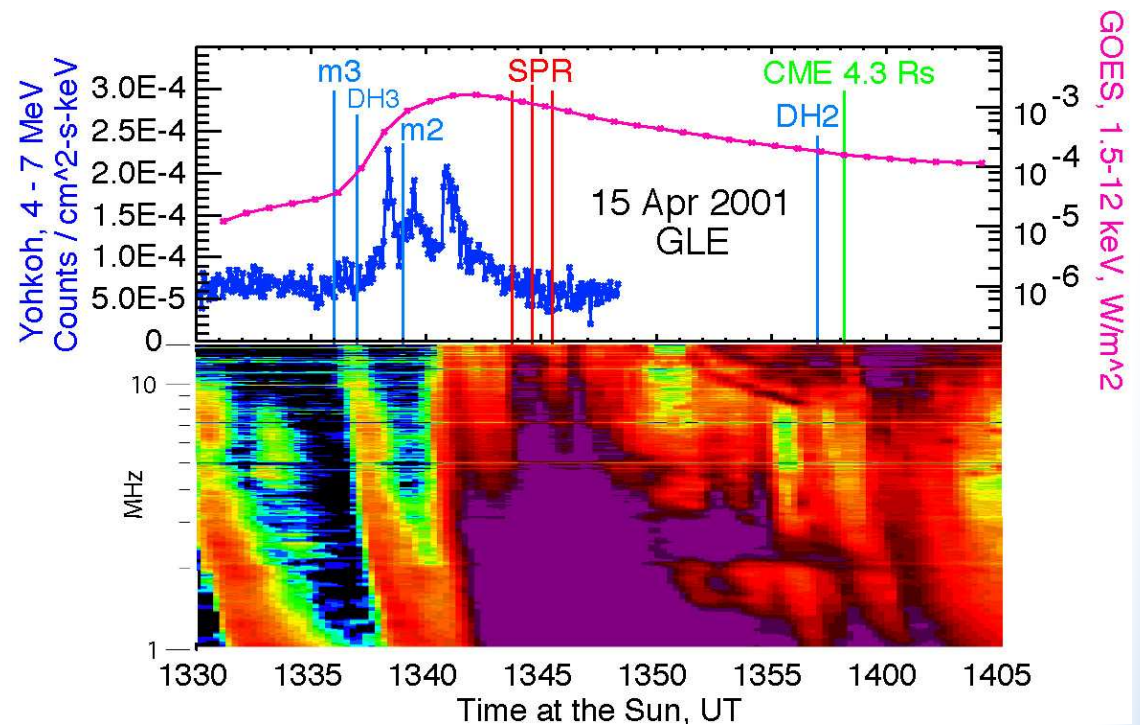
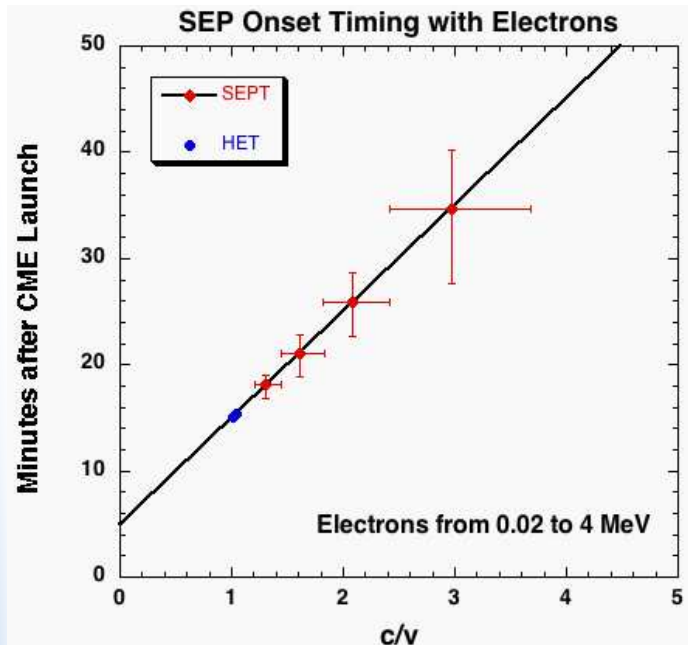
# When/Where is the Acceleration?

- Timing studies
- SECCHI CME observations



# When/Where is the Acceleration?

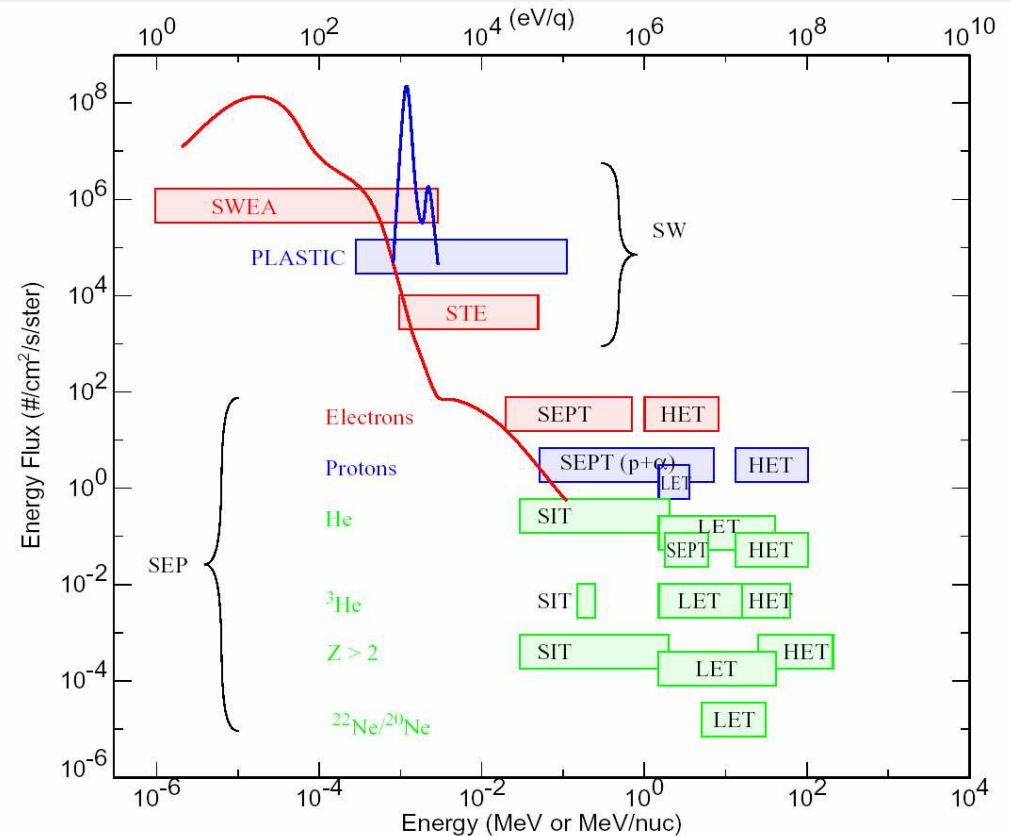
- Timing studies
- SECCHI CME observations
- SWAVES



Wind/WAVES

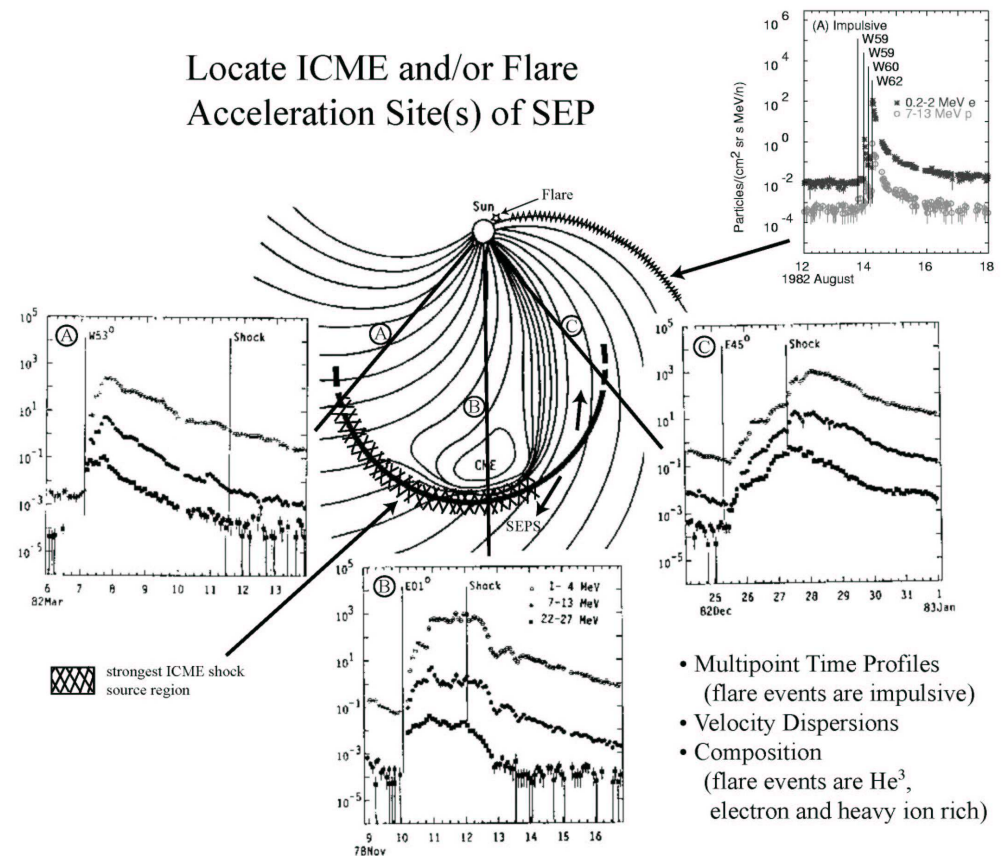
# What is Being Accelerated?

- Composition over wide energy range
- Statistically significant time profiles
- Spectra over wide energy range for 'signature' particles (e.g.,  $^3\text{He}$ )
- PLASTIC composition of suprathermal seed particles



# Understanding Hybrid Events

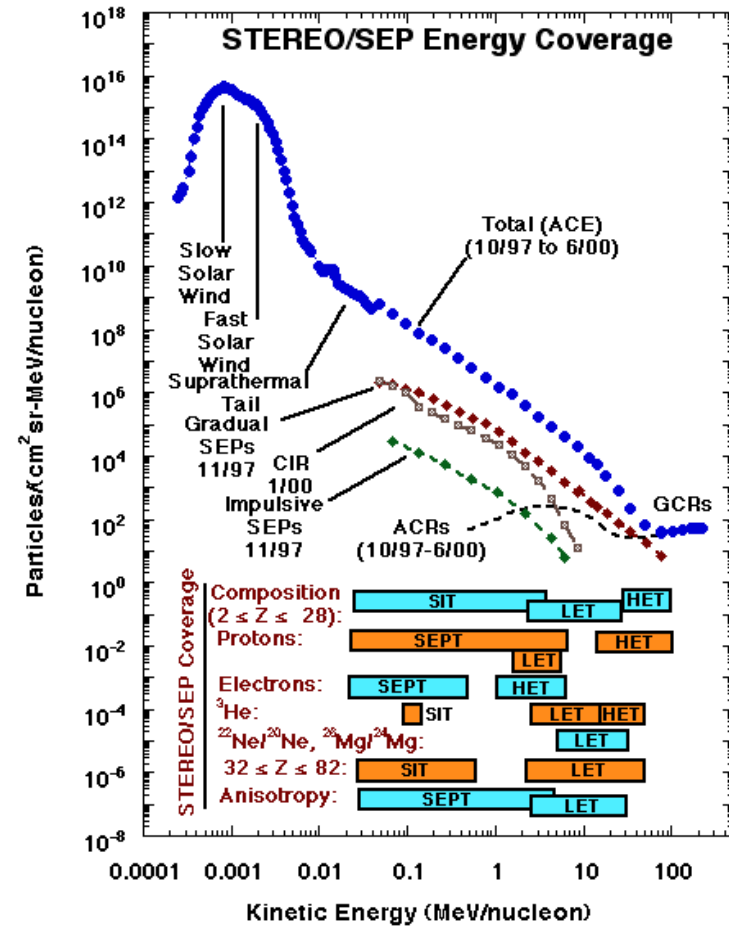
- Longitude dependence of composition





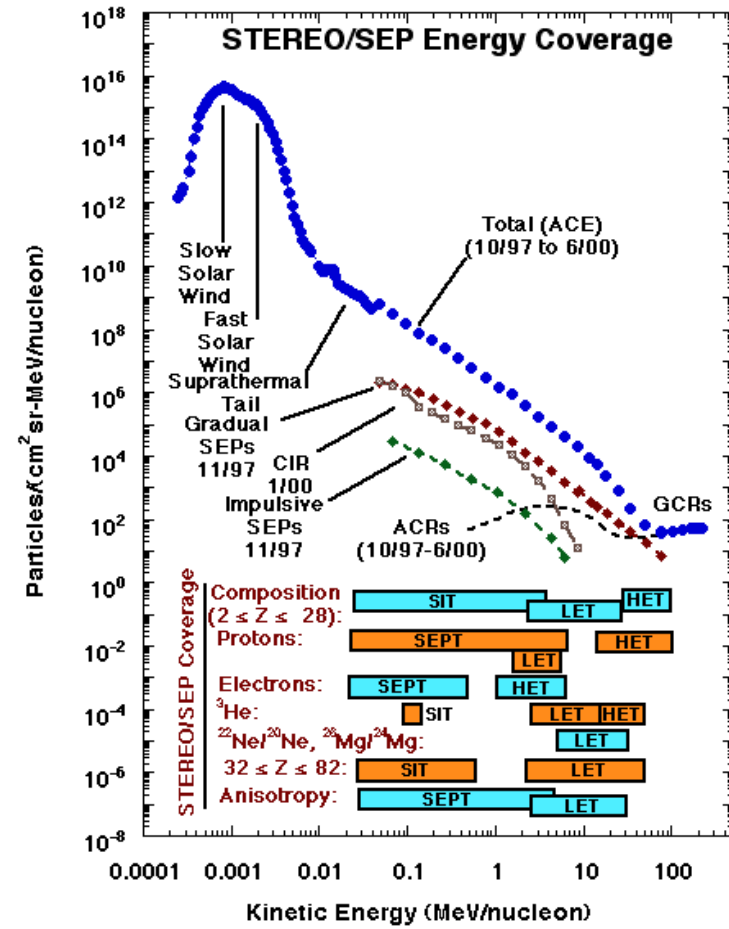
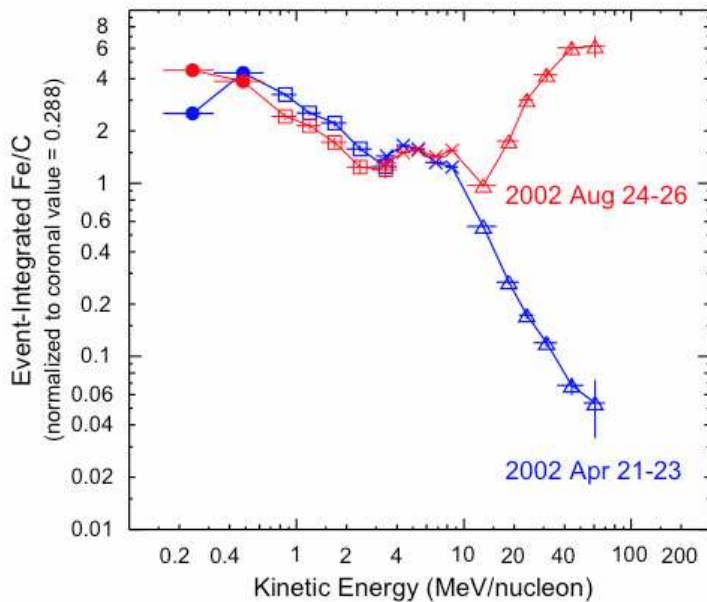
# Understanding Hybrid Events

- Longitude dependence of composition
- Composition over large energy range



# Understanding Hybrid Events

- Longitude dependence of composition
- Composition over large energy range

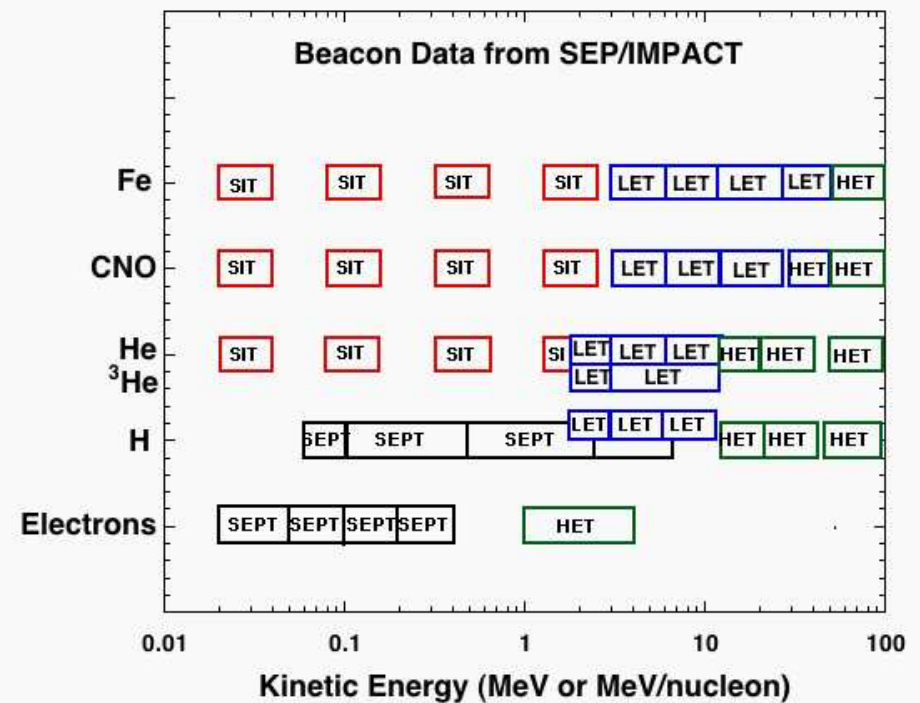




End

# Beacon Data

- Real time heavy ion composition - new



# Beacon Data

- Real time heavy ion composition - new
- H and e<sup>-</sup> complementary to ACE

