

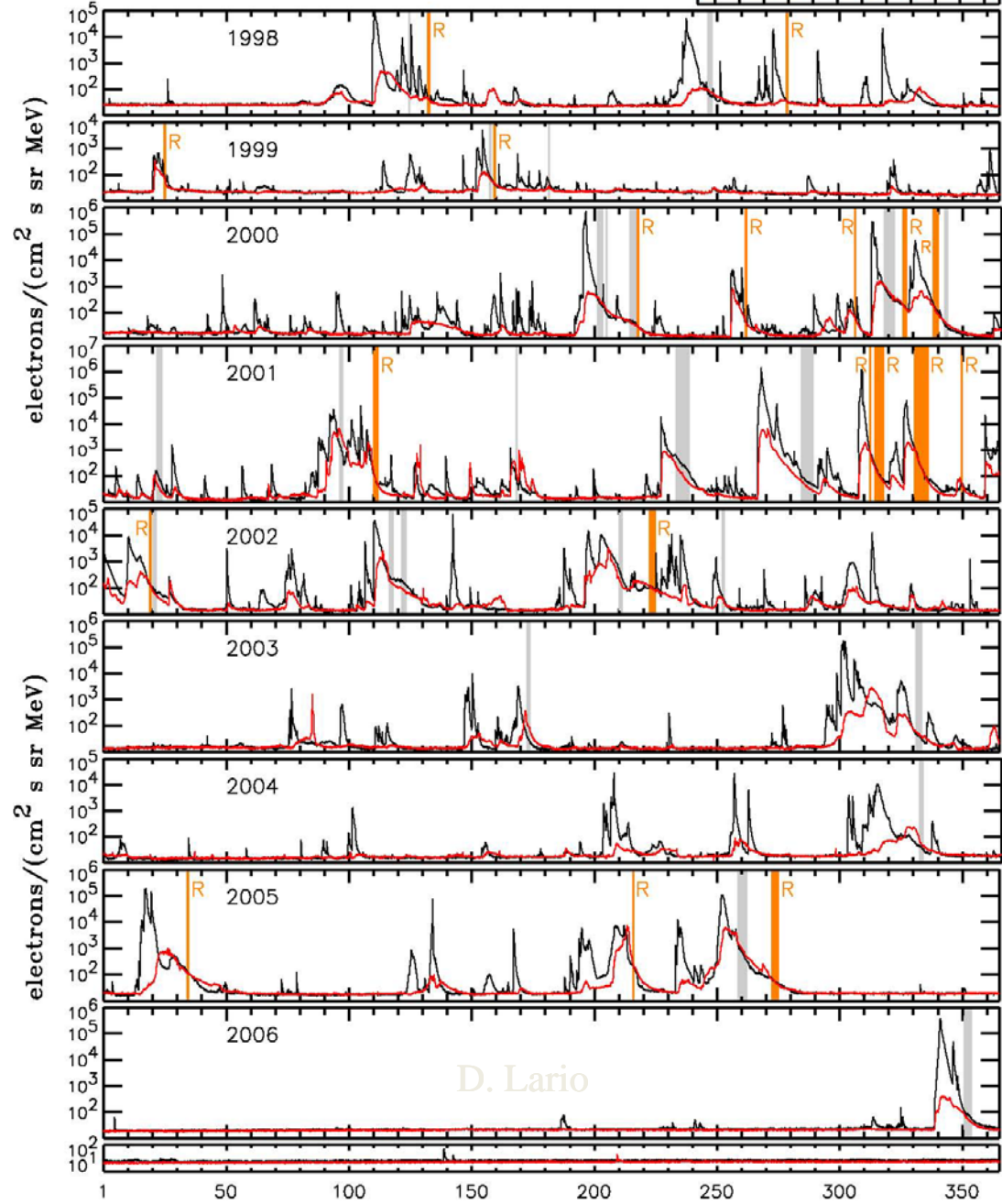
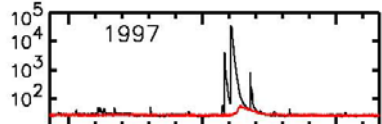
Heliospheric Energetic Particle Reservoirs: Ulysses and ACE 175-315 keV Electron Observations

D. Lario

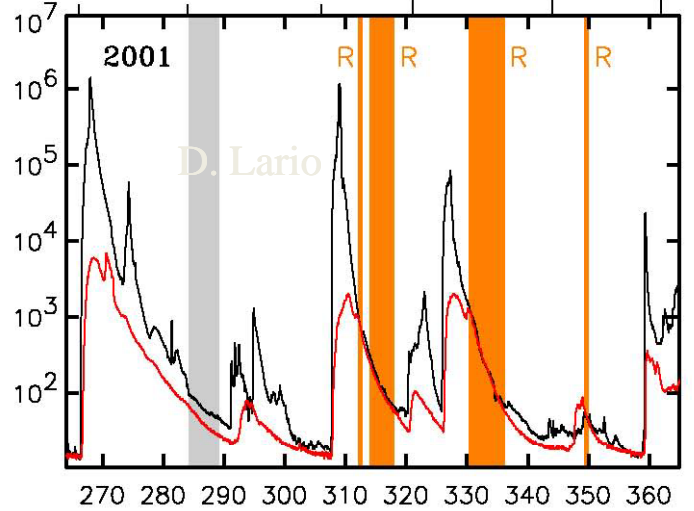
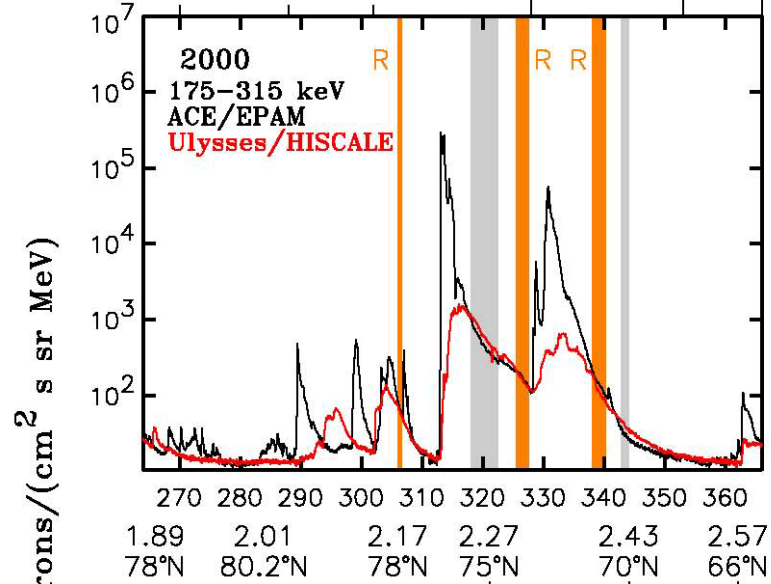
The Johns Hopkins University. Applied Physics Laboratory

Proc. 12th Solar Wind Conf., AIP CP 1216, pp. 625-628 (2010)

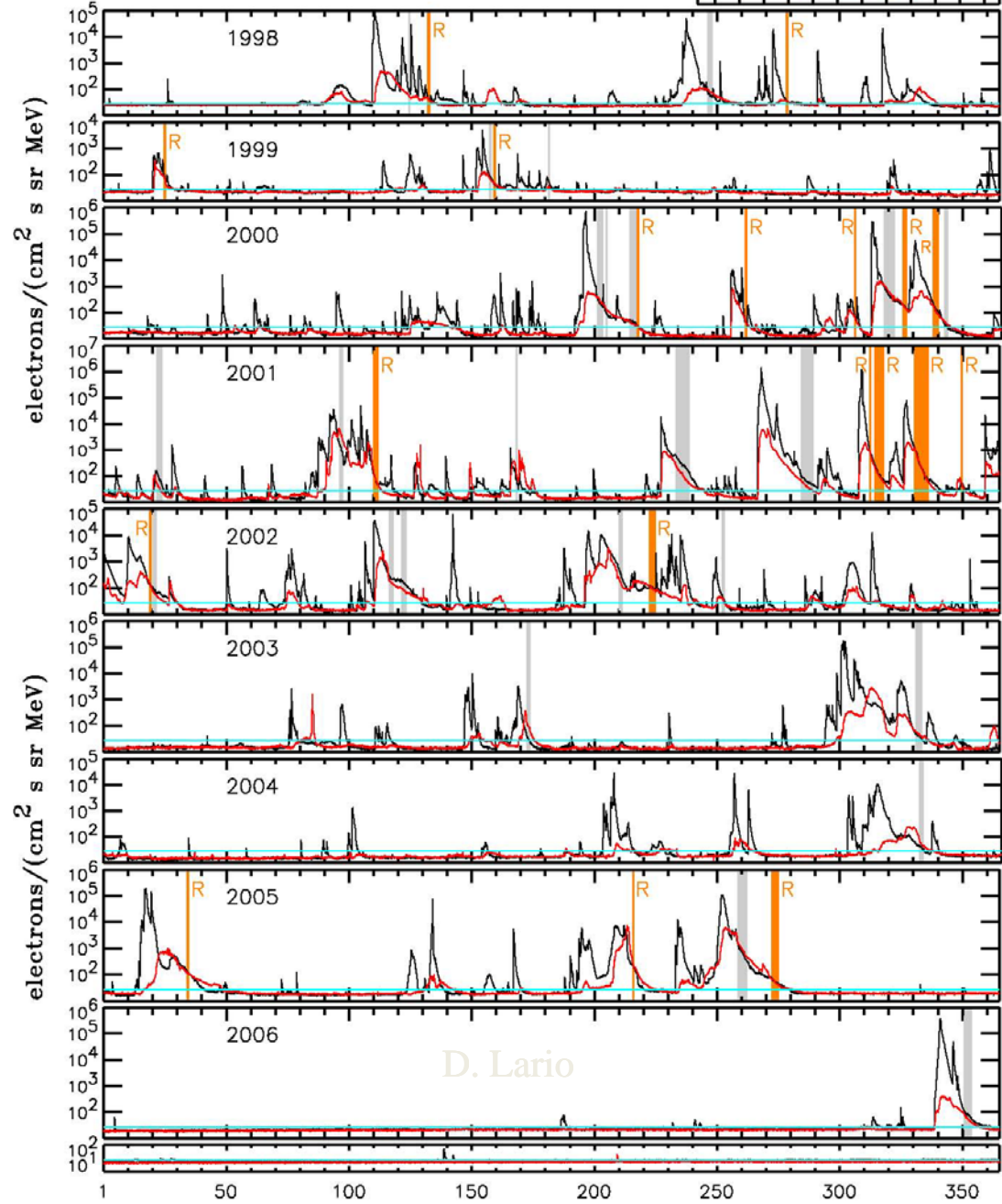
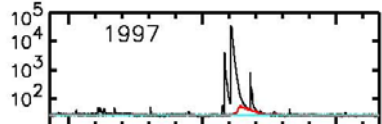
electrons 175–315 keV
ACE/EPAM/DE
Ulysses/HI-SCALE/DE (-8.)



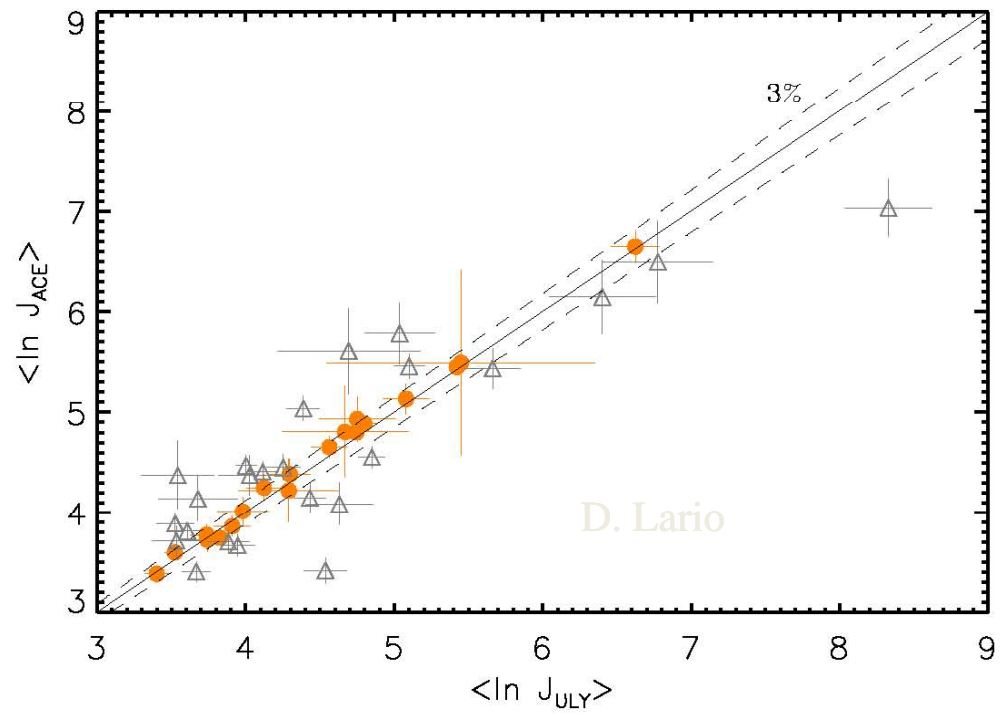
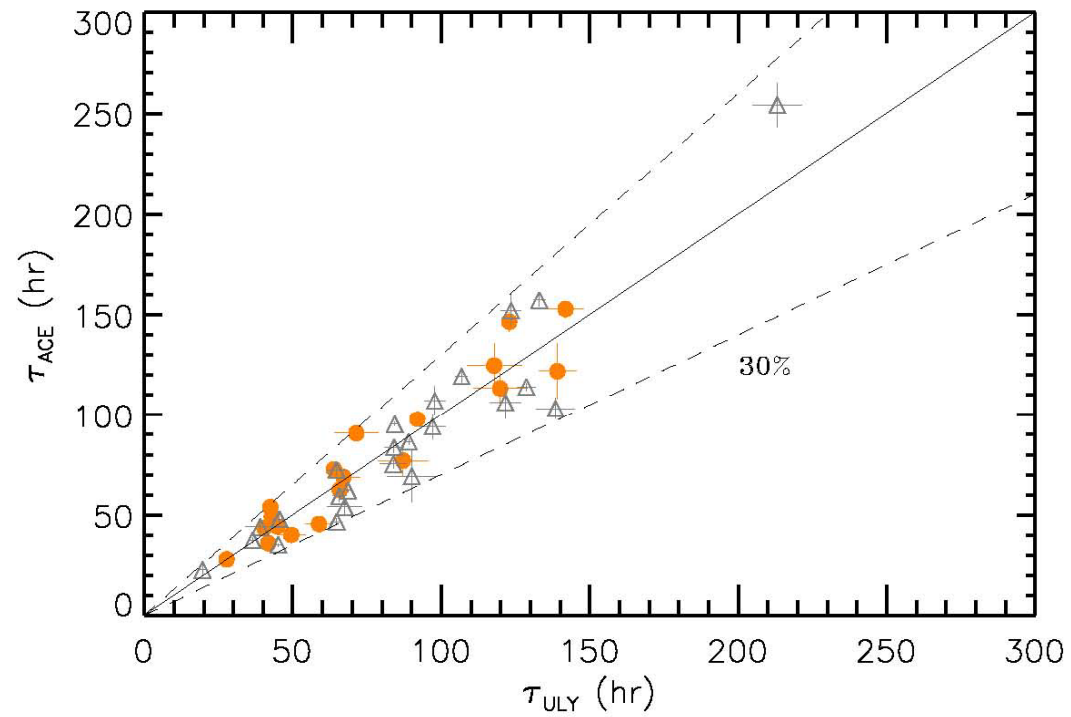
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 73°S 76°S 78°S 80.2°S 78°S 75°S

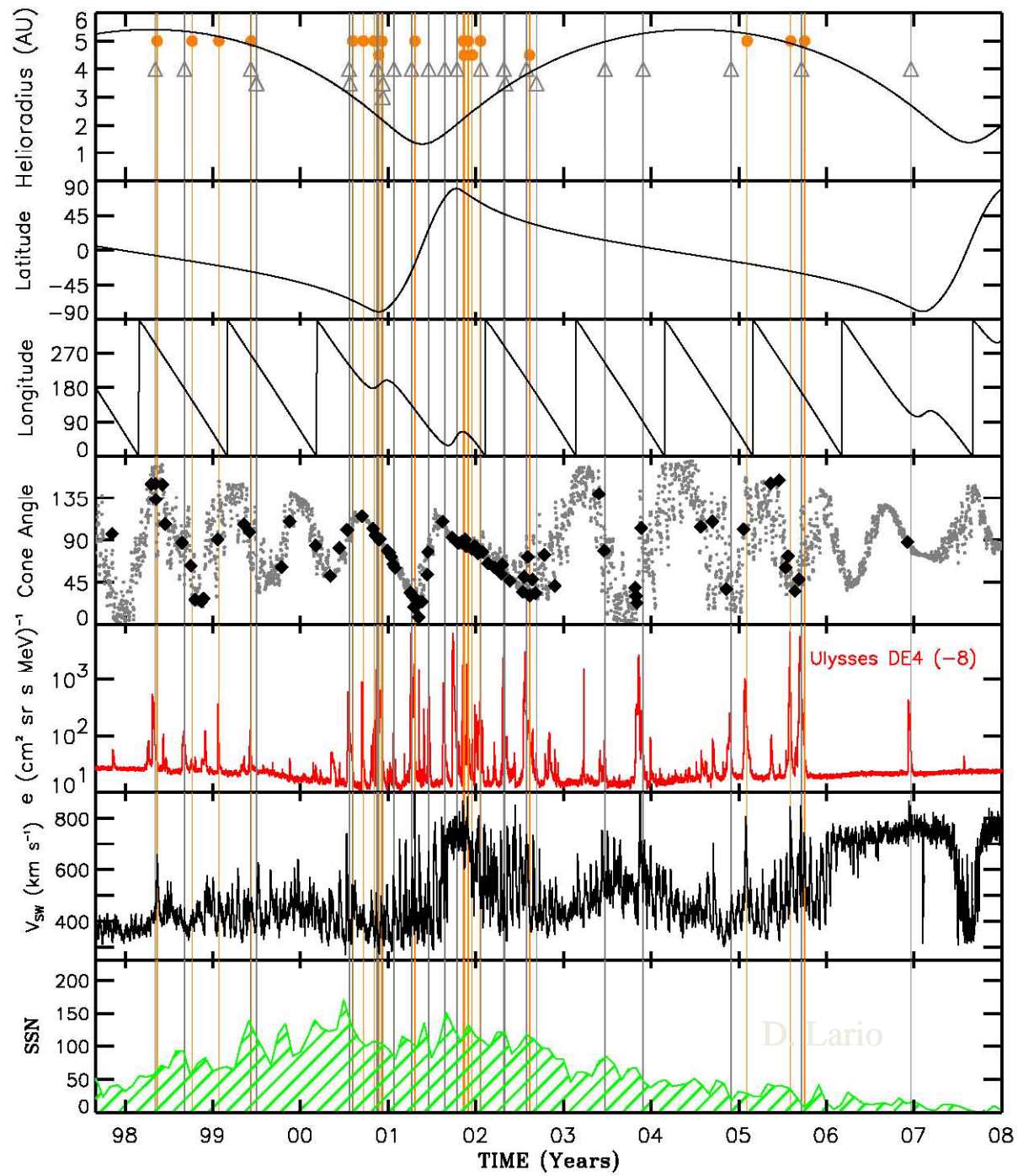


electrons 175–315 keV
ACE/EPAM/DE
Ulysses/HI-SCALE/DE (-8.)



D. Lario





- Heliospheric energetic particle reservoirs were observed:
 - mostly during periods of intense level of solar activity
 - when Ulysses was at low and high latitudes
 - when Ulysses was immersed in fast and slow solar wind
 - and regardless of the radial, longitudinal and latitudinal separation between ACE and Ulysses
 - However, they were more prominently observed during the intense active periods of November 2000 and November 2001 when Ulysses was at high (>70 deg) latitudes and single particle injections produce intense SEP events.
 - Reservoirs are observed with an average delay of ~8 days after the main peak at 1 AU and with averaged intensities a factor ~0.08 lower than the main peak intensity at 1 AU.
- “simultaneous” electron intensity increases at ACE and Ulysses occur even
 - when the longitudinal and latitudinal separation between Ulysses and ACE in space is large, and
 - when the angle between both IMF footpoints is large