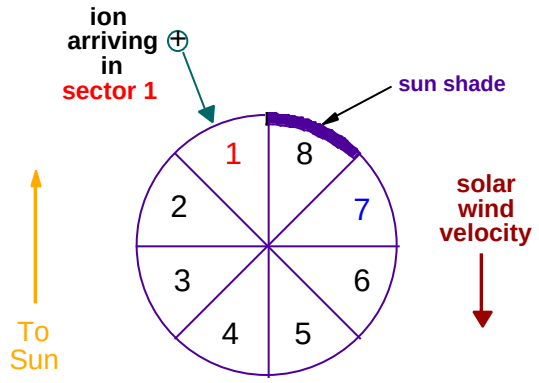
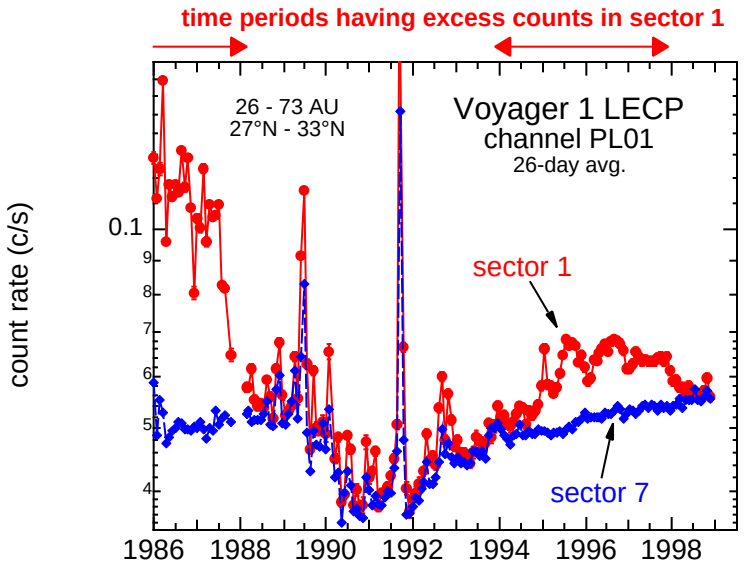
Interstellar Oxygen Ions Boosted into Voyager 1 and 2 LECP Detectors



LECP scan plane
and sector definitions



- **Oxygen atoms from the interstellar medium enter our solar system at speeds of ~20 km/s, are ionized and "picked up" by the solar wind**
- **These "pickup oxygen" (PUO) ions are then forced to move with the solar wind at speeds of 400-700 km/s, eventually reaching the heliospheric Termination Shock and becoming Anomalous Cosmic Rays.**
- **The Low Energy Charged Particle (LECP) instruments on Voyagers 1 and 2 can detect ions that arrive in 8, 45º sectors (upper left fig.)**
- **Sector 1 of LECP channel 'PL01' (lower left fig., red trace) looks mainly towards the Sun and sees the outward moving PUO ions that are "boosted" in energy into the channel. Sector 7 (blue trace), as well as sectors 2-6, looks away from the Sun and so does not see the PUO ions.**
- **Sector 1 sees the PUO ions during solar inactive periods (1986-87, 1995-97) when the solar wind speed at Voyager 1 (~30°N) is high.**

Submitted by LECP Team -

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