Characteristics of the *N* - component of the heliospheric magnetic field observed by IMP and ACE over 46 years

- We calculate yearly averages of turbulence spectra and correlation lengths for almost 50 years of data.

- The results will serve as input for *ab initio* cosmic-ray modulation models.

- We use a novel Incremental-variances technique to calculate turbulence spectra and a standard 2nd order structure function to calculate correlation lengths.

- During 2020, both the magnetic field magnitude and the variance of the *N* component reach lowest values recorded since spacecraft measurement at 1 au began.

- Magnetic field magnitude, variance, and spectral levels decrease during cycles 23 and 24 compared with the previous two, while the correlation length increases.

- All characteristics of the spectra, except the inertial range spectra index, show a solar-cycle dependence.