Timing of the VLF October effect in relation to mesospheric wind dynamics

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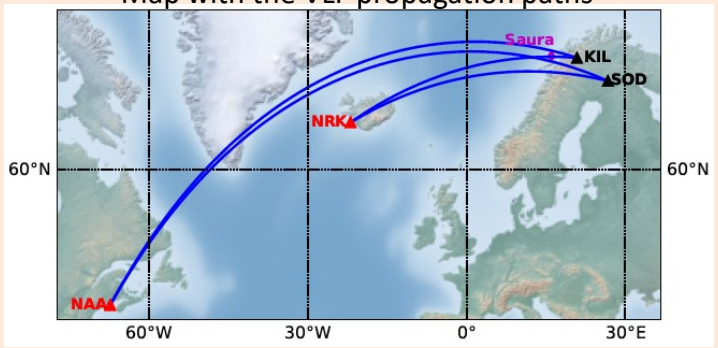
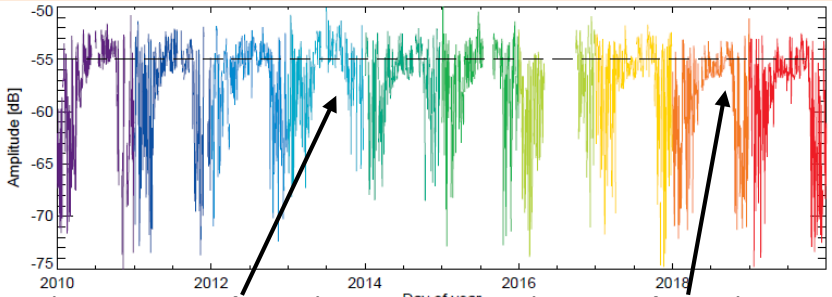
Map with the VLF propagation paths



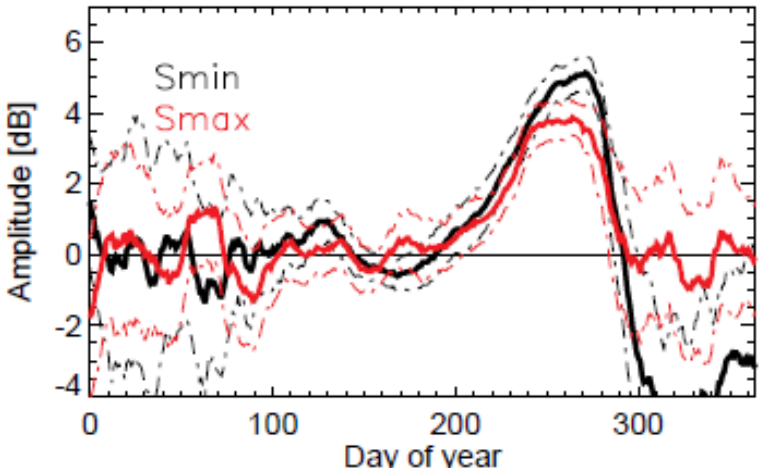
NRK-KIL



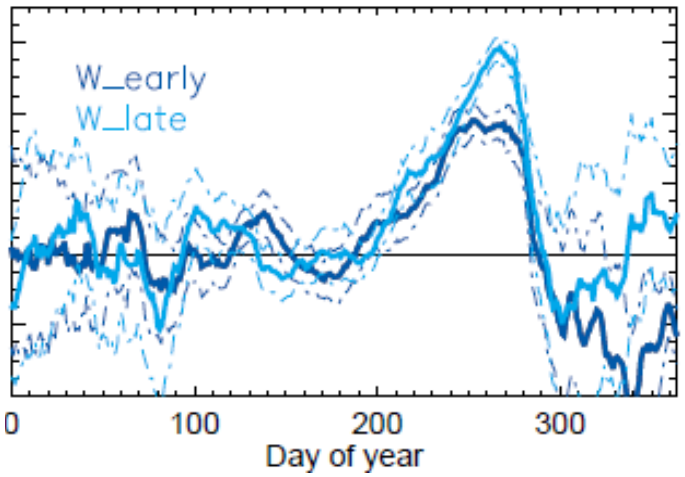
Solar max: **Not sharp** change

Solar min: **Sharp** change

solar cycle dependence



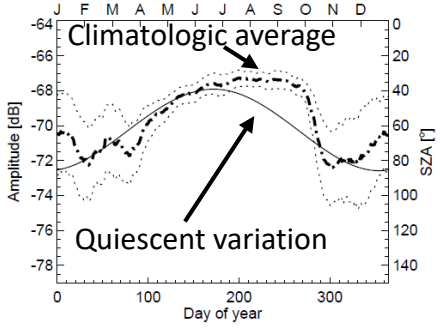
early and late wind reversal dependence

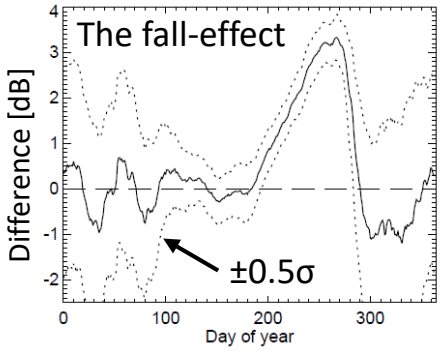


thin-dashed lines = ±0.5σ

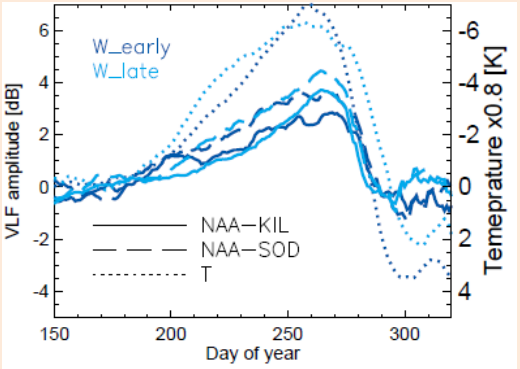
- Higher fall-effect size during solar min than during solar max
- Higher fall-effect size during late wind reversals than during early ones at high latitudes

Spring-fall asymmetry

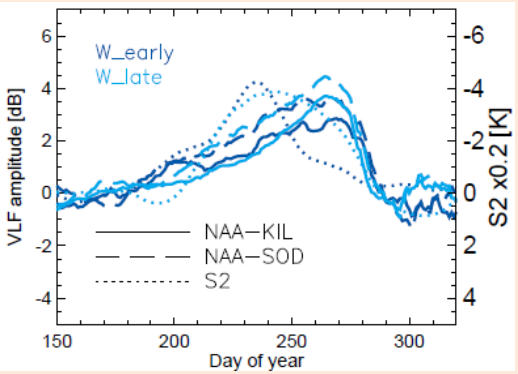




Temperature vs fall-effect



S2 vs fall-effect



The fall-effect time-profile matches better with temperature time-profile than with the one for S2

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References

Pedatella et al. (2021). Migrating semidiurnal tide during the September equinox transition in the Northern Hemisphere. JGR.