The Abdus Salam
International Centre for Theoretical Physics

United Nations
Educational, Scientific and
Cultural Organization

IAEA
International Atomic Energy Agency

2025-20

Satellite Navigation Science and Technology for Africa

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Why the International community cares about Scintillation

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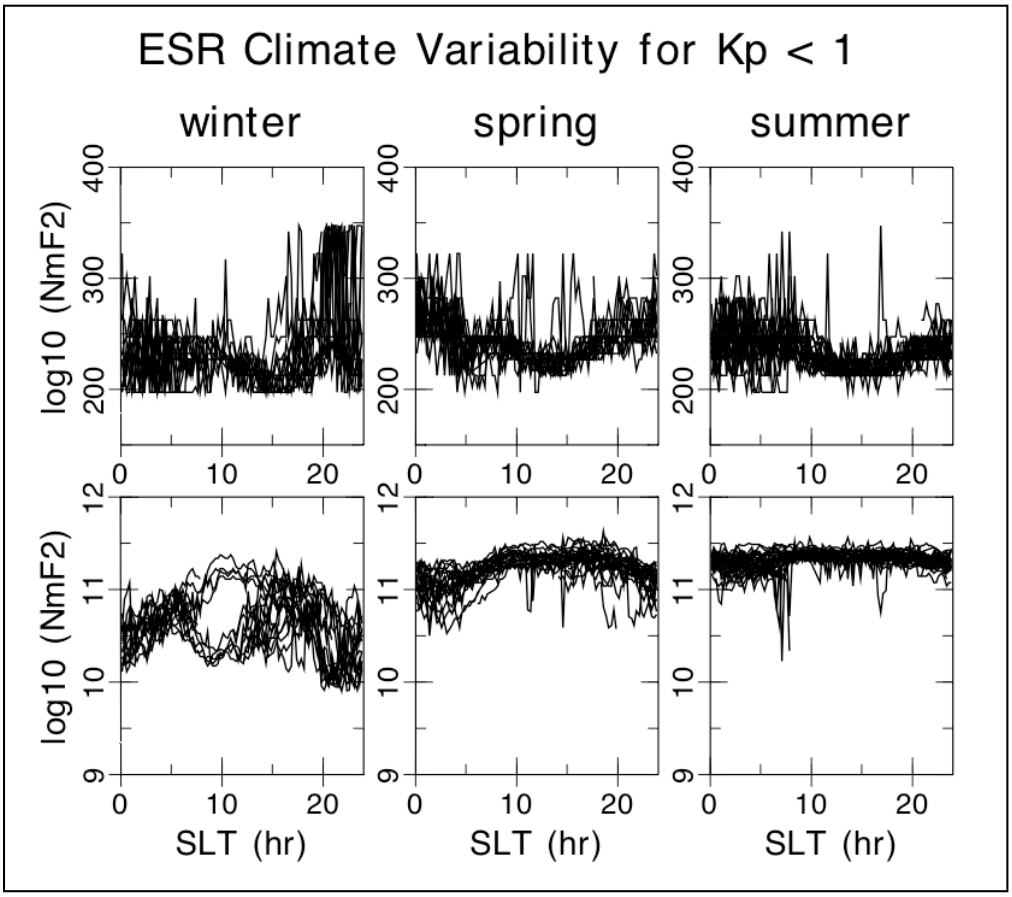

Figure 1. ESR NmF2 (lower panels) and hmF2 (upper panels) for three seasons (winter, equinox, and summer) for Kp < 1 conditions. Each panel contains a superposition of all days that met the Kp and seasonal selection criteria.

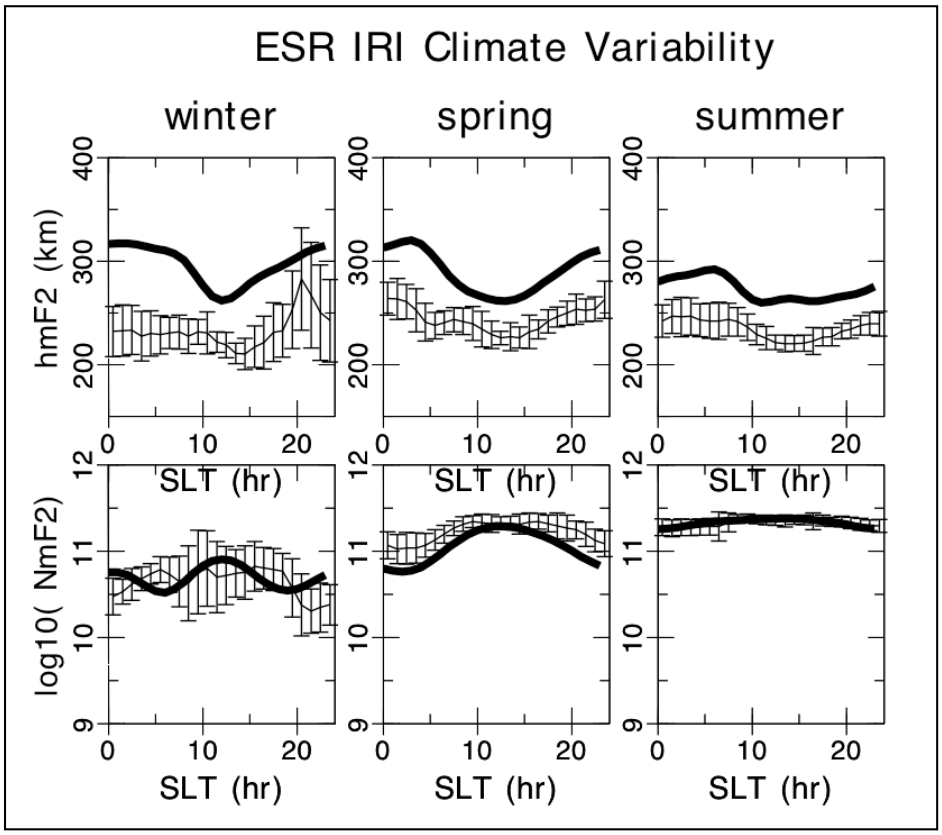

Figure 2. Comparison of IRI's NmF2 (lower panels) and hmF2 (upper panels) with the hourly averaged, Kp < 1, ESR IPY observations for the three seasons. Seasons are ordered from left to right in each row, winter, equinox, and summer.

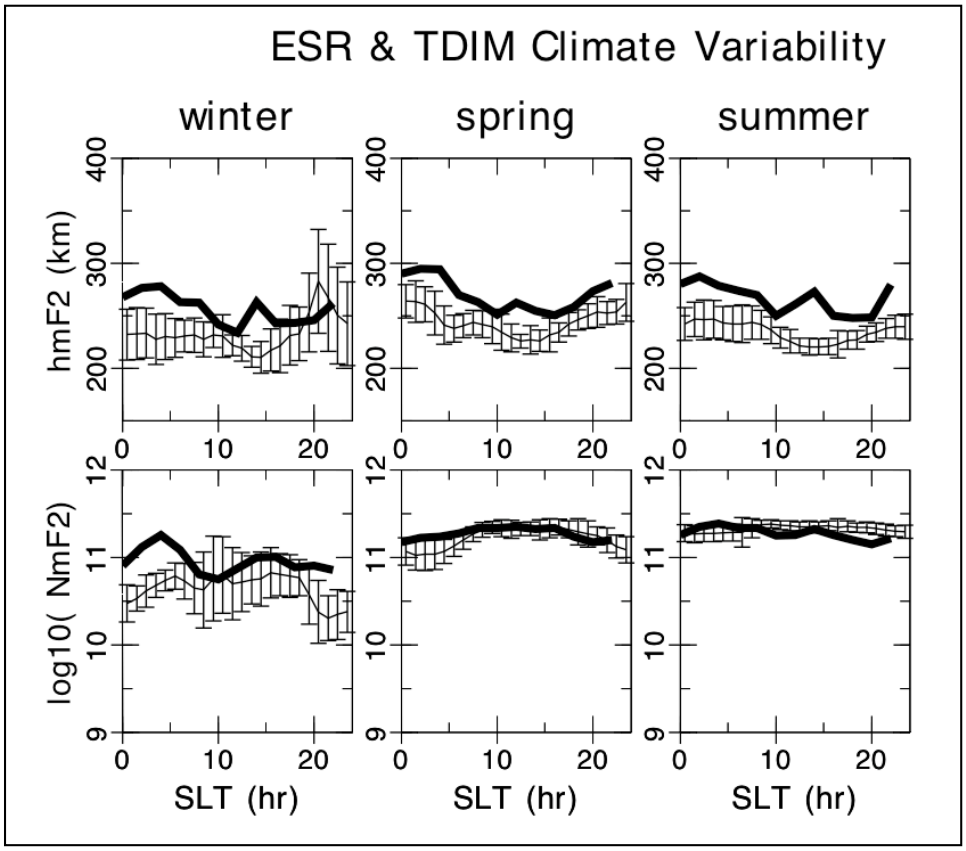

Figure 3. Comparison of TDIM (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.

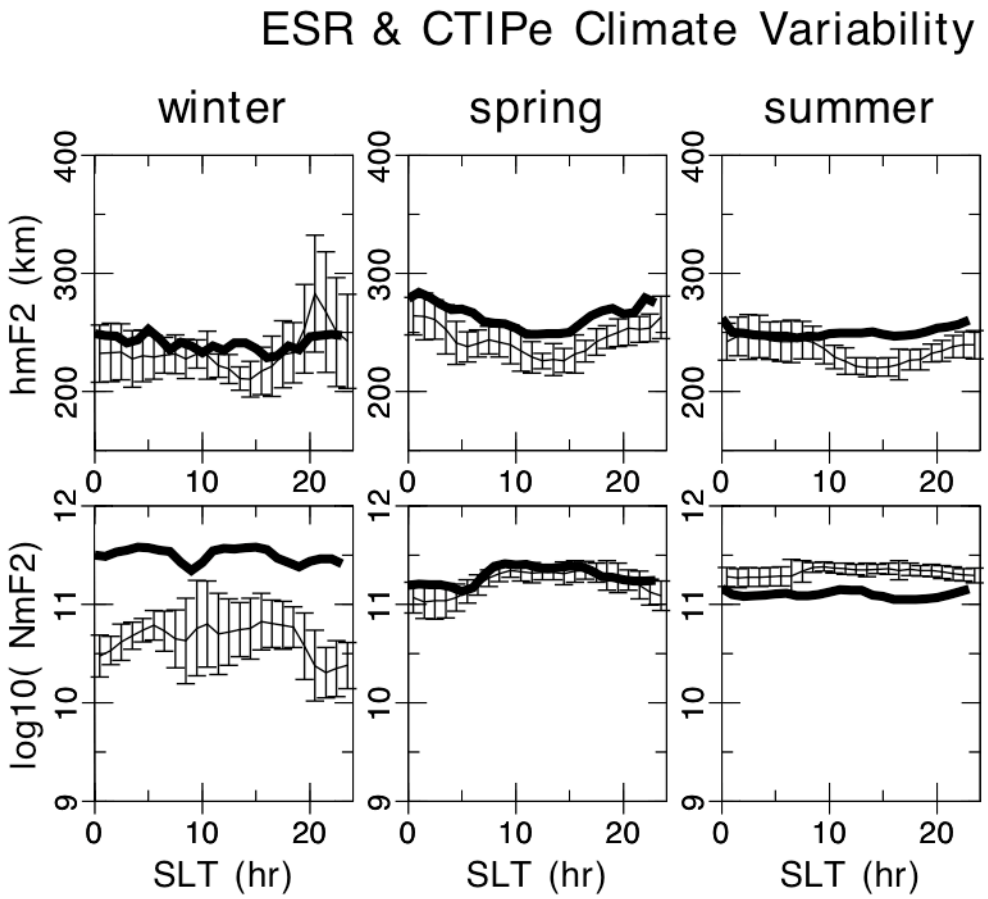

Figure 4. Comparison of CTIPe (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.

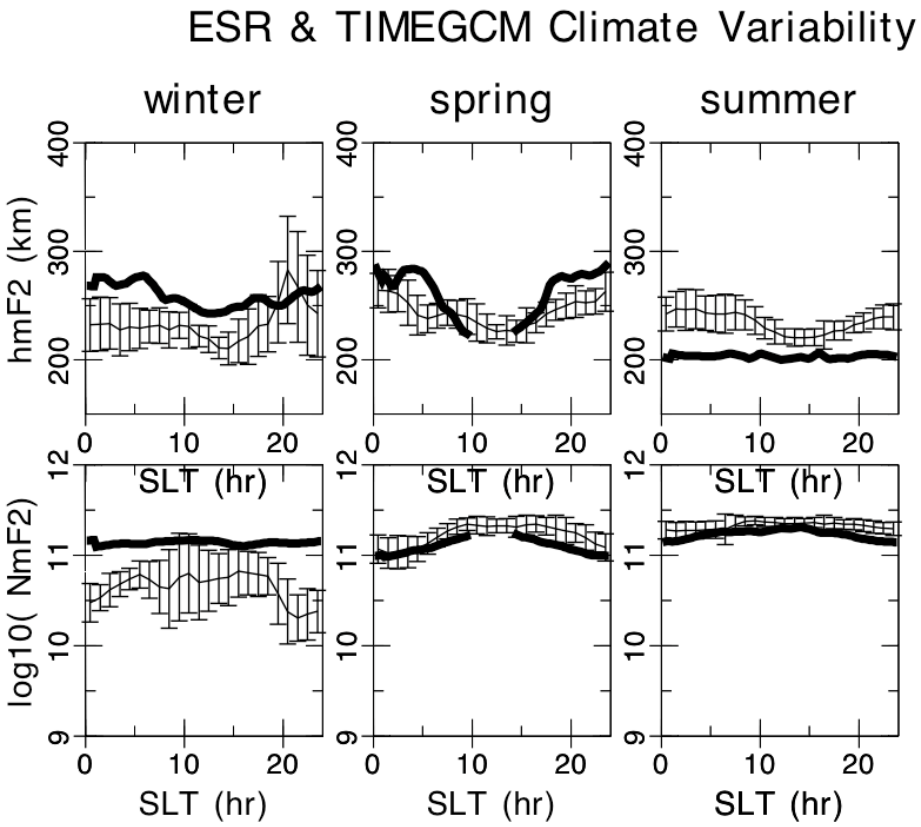

Figure 5. Comparison of TIMEGCM (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.

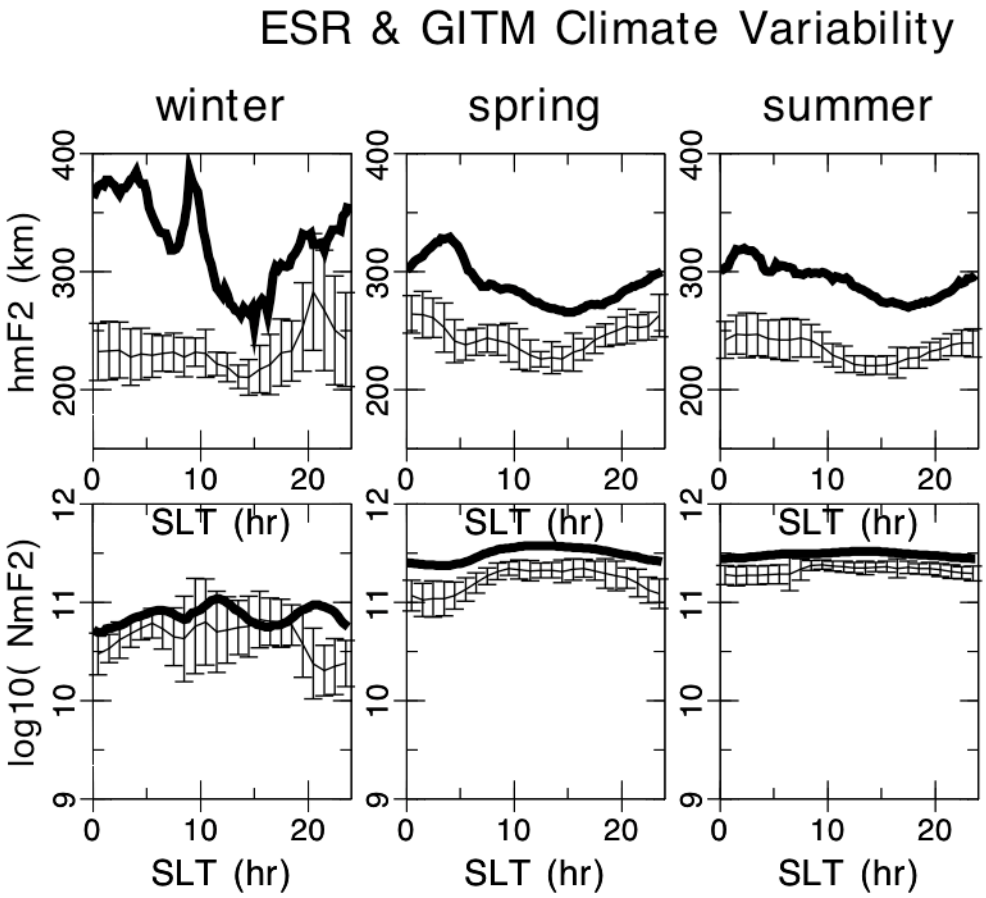

Figure 6. Comparison of GITM (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.

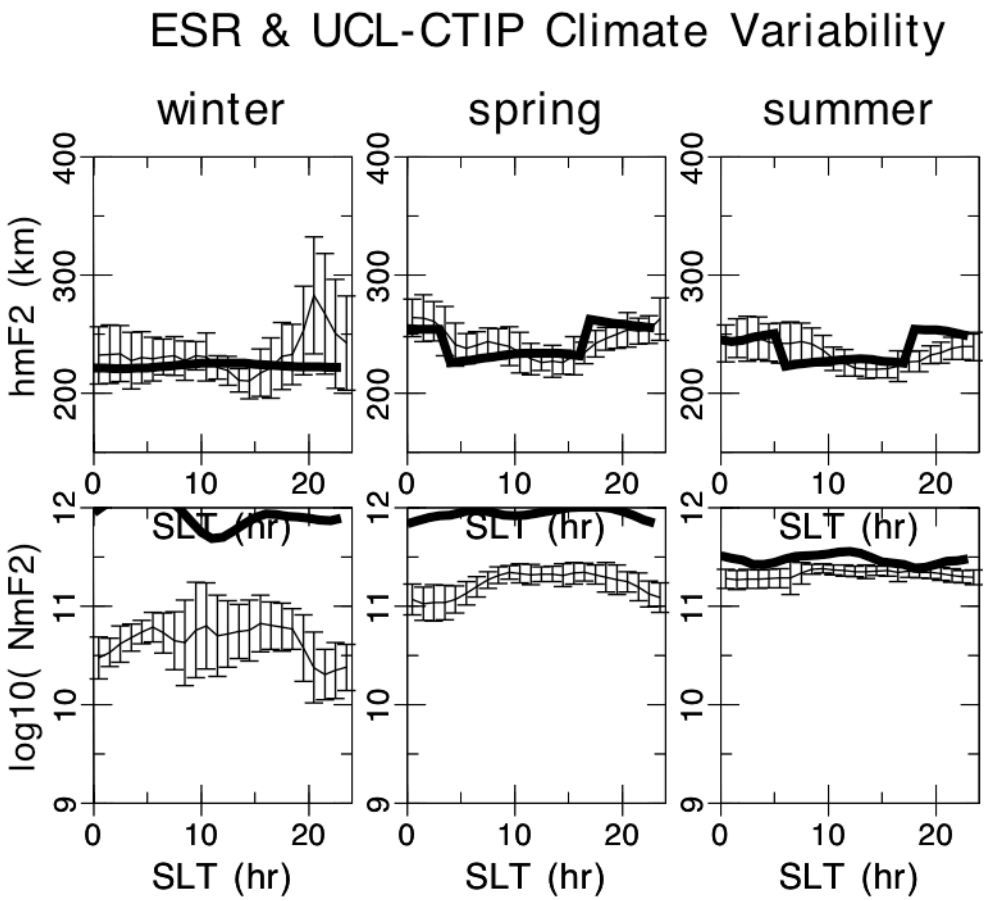

Figure 7. Comparison of UCL-CTIP (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.

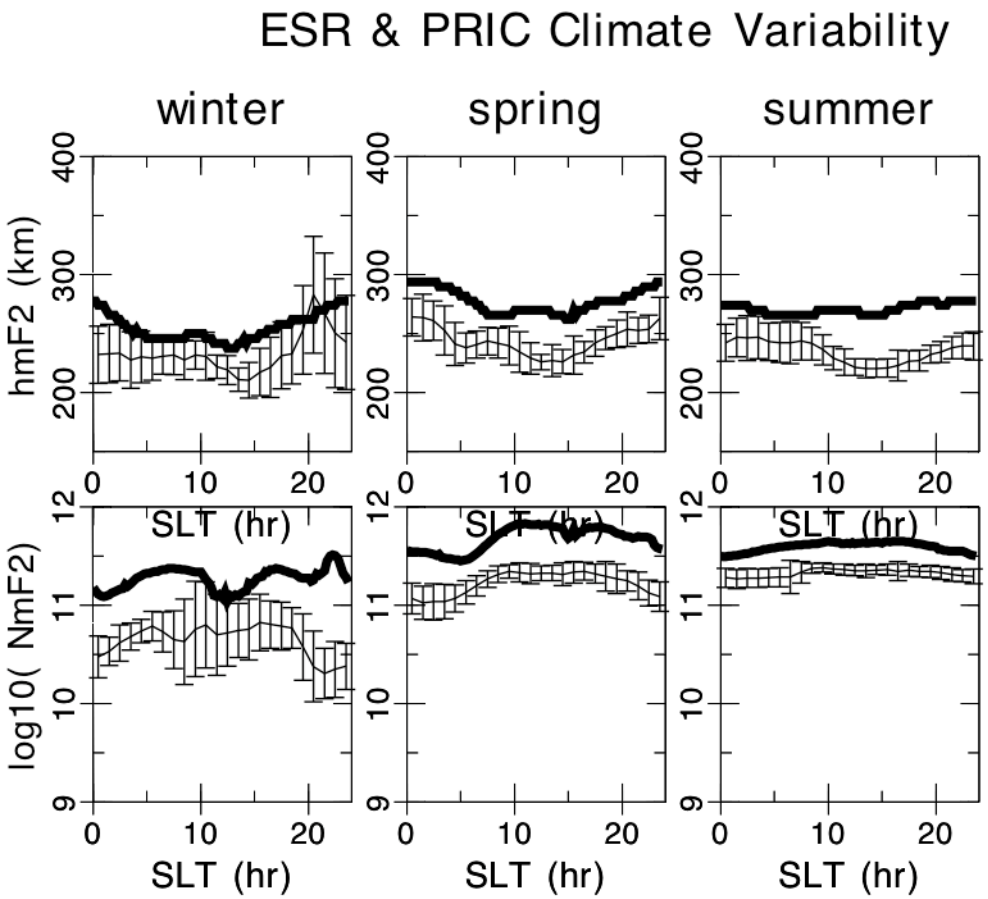

Figure 8. Comparison of PRIC (thick line), NmF2 (lower panels) and hmF2 (upper panels), with ESR (line with error bars) for three seasons.