Tropospheric propagation Lecture-26

TDC PART -1

PAPER 1(GROUP B)

Chapter -6

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The troposphere

- The troposphere is defined as the lower part of the atmosphere,
- The temperature decreases with altitude.
- It is limited at its upper boundary by the tropopause, a zone where the temperature remains more or less constant.
- The thickness of the troposphere is of the order of I 0 km.near unity and its conductivity is practically zero.

- It is the least sophisticated of the propagation media.
- Its dielectric constant is very near unity and its conductivity is practically zero.

Tropospheric propagation

- Tropospheric propagation describes electromagnetic propagation in relation to the troposphere. The service area from a VHF or UHF radio transmitter extends to just beyond the optical horizon, at which point signals start to rapidly reduce in strength.

Tropospheric scatter propagation

- Tropospheric scatter (also known as troposcatter) is a method of communicating with microwave radio signals over considerable distances – often up to 300 kilometres (190 mi), and further depending on terrain and climate factors. ... Troposcatter allows microwave communication beyond the horizon.