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Program & Abstracts

Long-term trends in the upper atmosphere

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About a solar cycle and a half ago it was suggested that while changes of the chemical composition of the lower atmosphere will lead to "global warming" in the troposphere, they will be accompanied by "global cooling" in the mesosphere and lower thermosphere. Since the 1930s, and most comprehensively since the IGY in 1957, the ionosphere has been monitored regularly by vertical ionospheric sounders (ionosondes). These radars make rather straightforward measurements of ionospheric properties and the results are readily available in electronic form.

Here we summarise some of the research on long-term trends in the ionosphere and we outline some of the difficulties in determining trends from historic geophysical long-term data sets.