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Influnce of solar wind on stratospheric ozone

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Using the aa index as a measure of solar wind intensity, correlation with the amount of stratospheric ozone was examined. The northern temperate and polar regions showed relatively large positive correlation between December aa index and January ozone amount. The southern temperate region showed weak anticorreltion, and the equatorial region showed virtually no correlation. Solar wind particles may decompose ozone molecules through NOx production, but the positive correlation observed may show the redistribution of ozone due to the influence of the solar wind.

Keywords: solar wind, stratospheric ozone, correlation