

Stratospheric OClO in the antarctic region

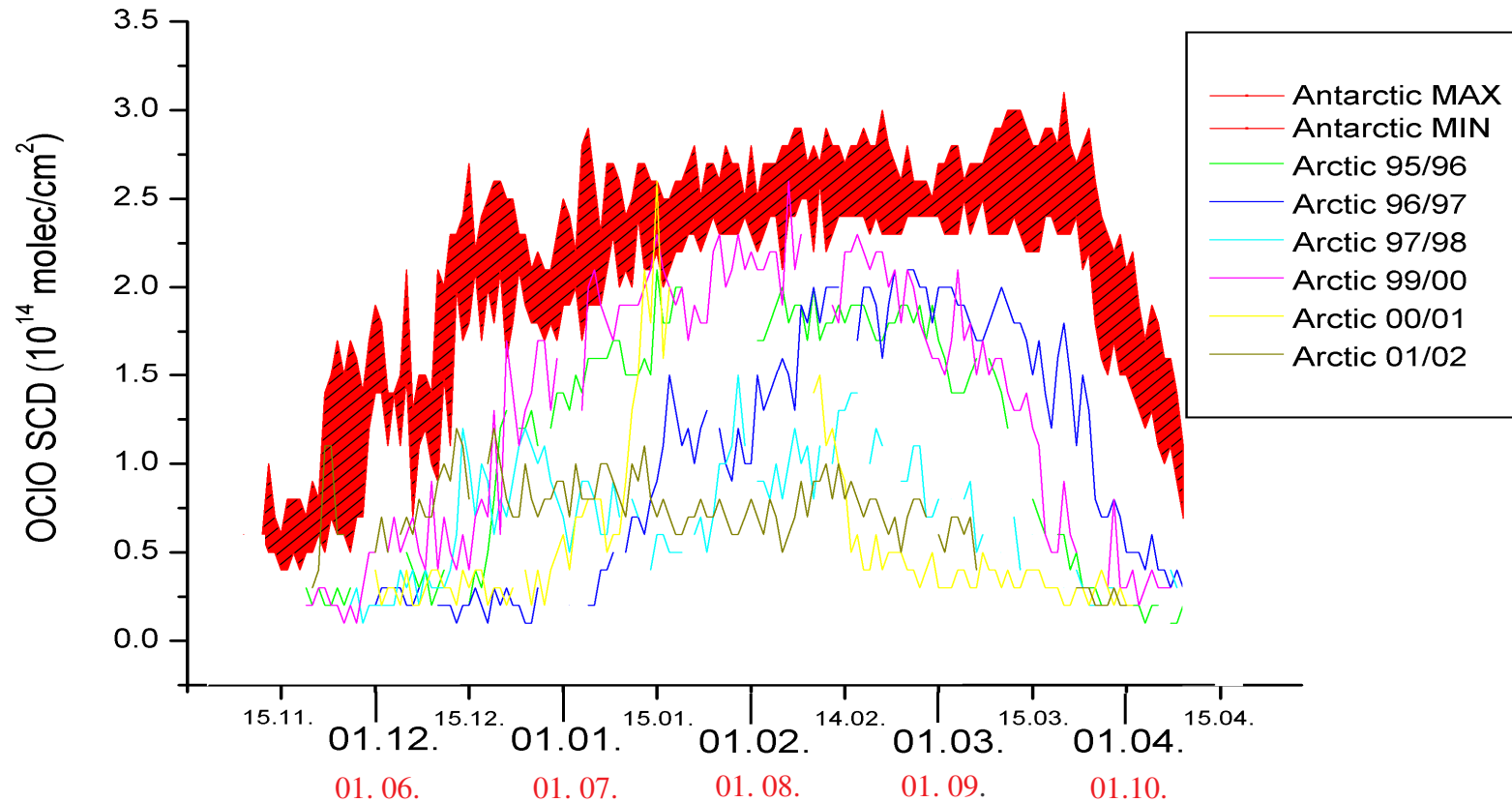


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Motivation

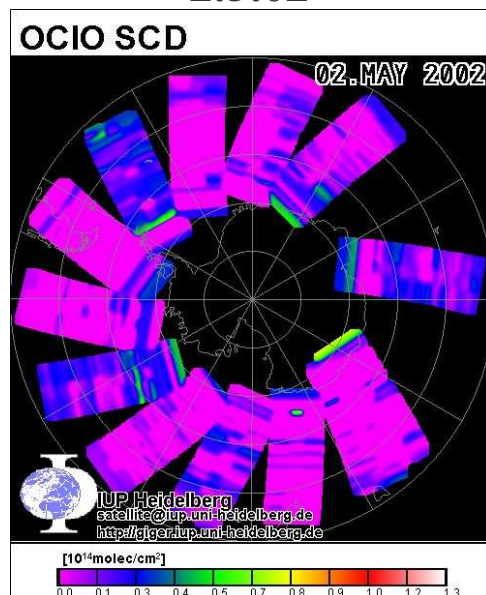
- q OClO is an indicator for stratospheric chlorine activation
- q so far monitoring of the *arctic* chlorine activation from 1995-2002
- q **aim:** research also on the *antarctic* chlorine activation
 - ∅ monitoring of OClO: get a temporal and spacial overview of the long term evolution of the chlorine activation
 - ∅ research on the relationship between meteorological/dynamical conditions and chlorine activation in the antarctic polar vortex
 - ∅ studies of local effects (e.g. mountain waves)
 - ∅ comparison with data measured by other satellites (ODIN)

Comparison: Arctic -Antarctic

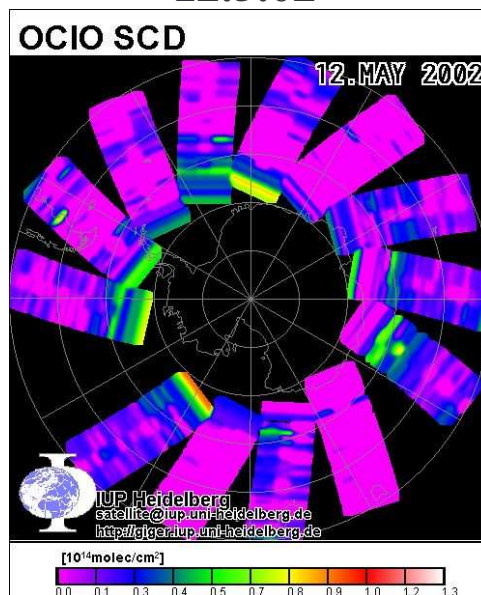


Comparison of the maximum daily *OCIO*-SCD ($SZA=90^\circ$) measured over the Arctic and the Antarctic in all consecutive winters from 1995 to 2002. The Antarctic values are represented by an envelope of all winters; for comparison with the measurements over the Arctic they are shifted by six months.

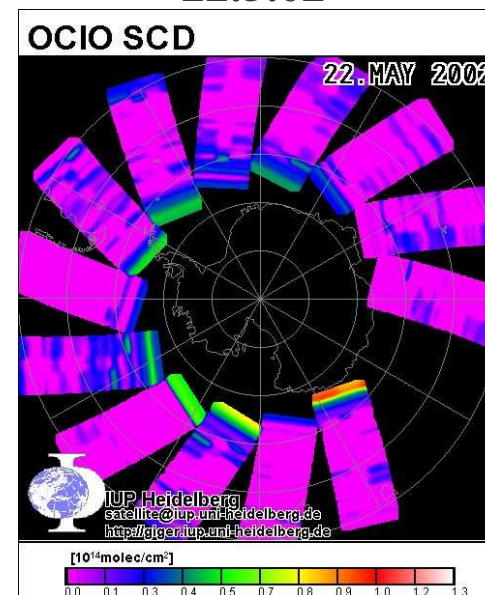
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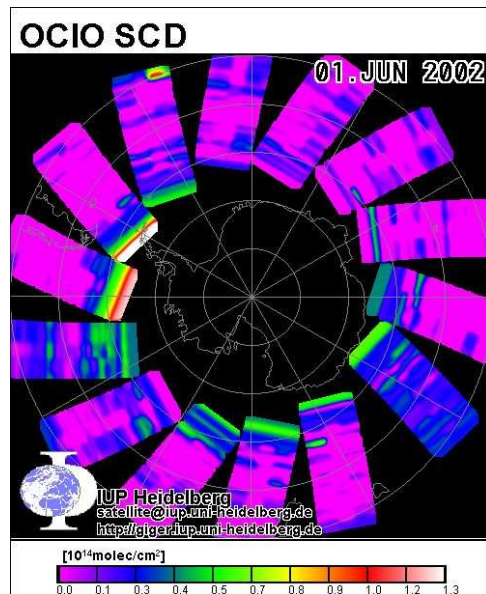
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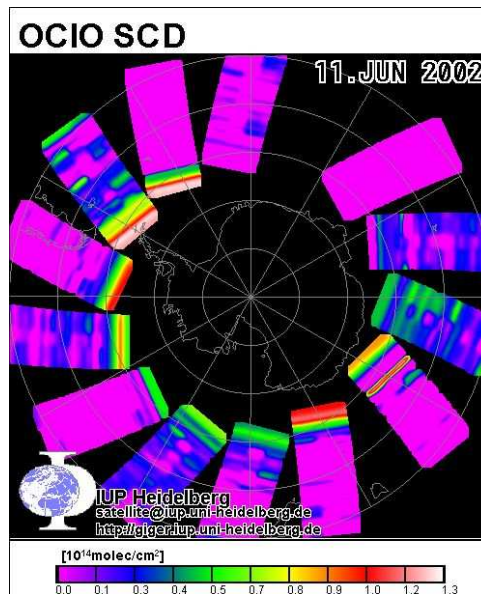
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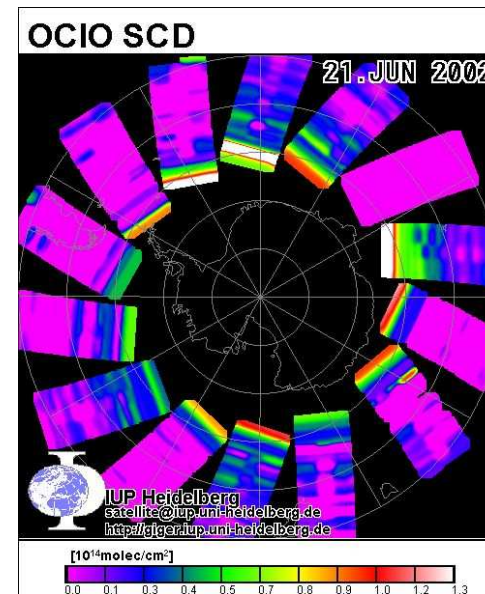
1.6.02



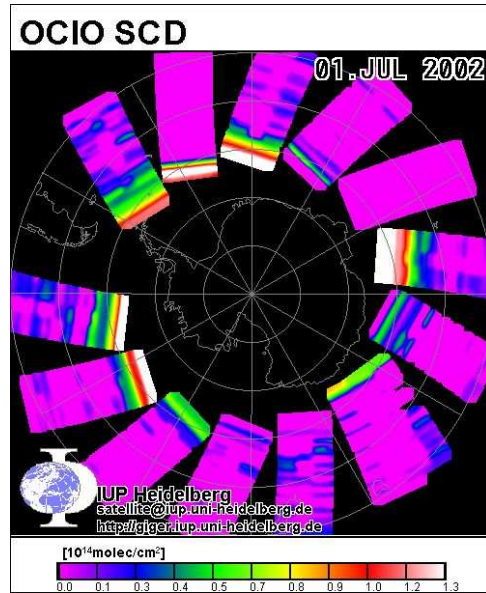
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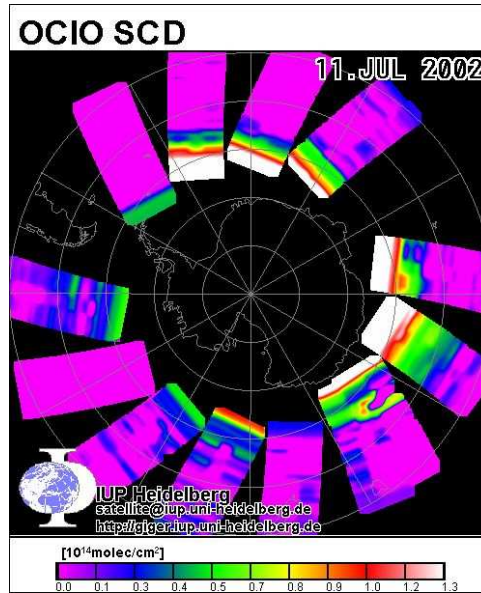
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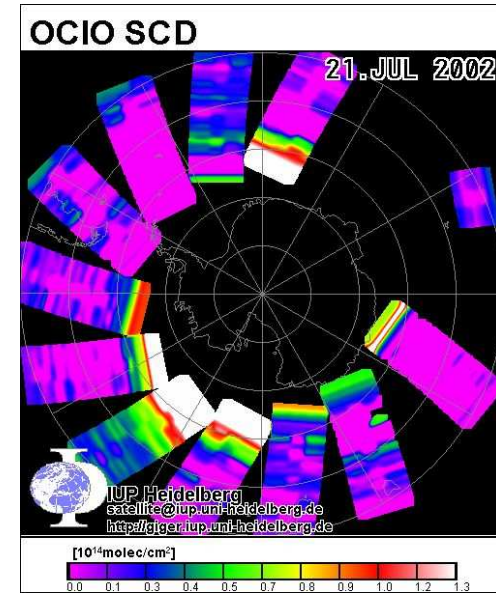
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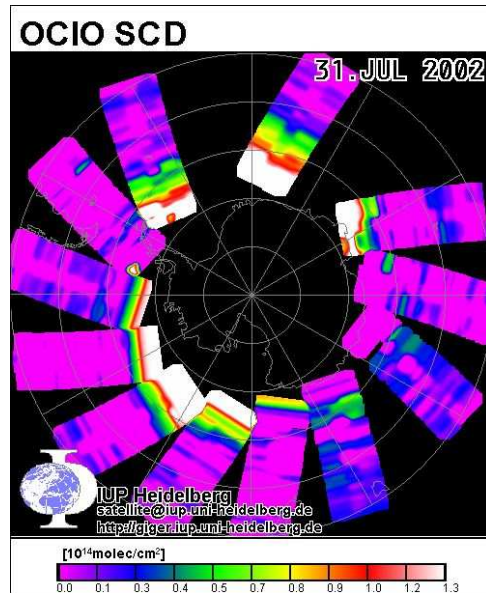
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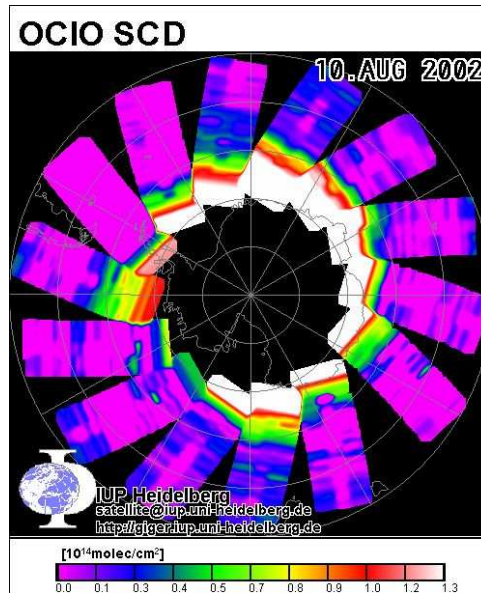
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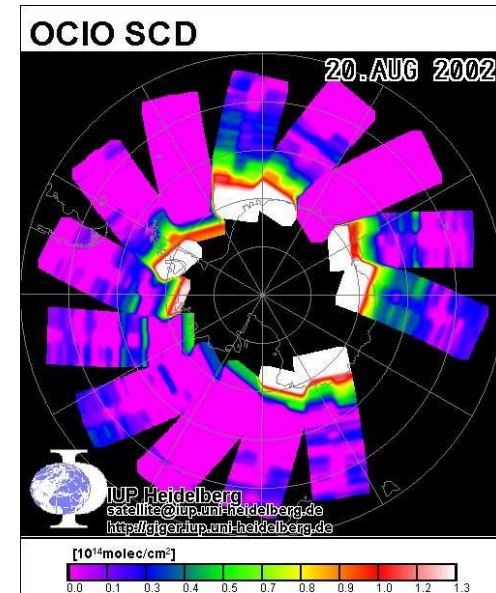
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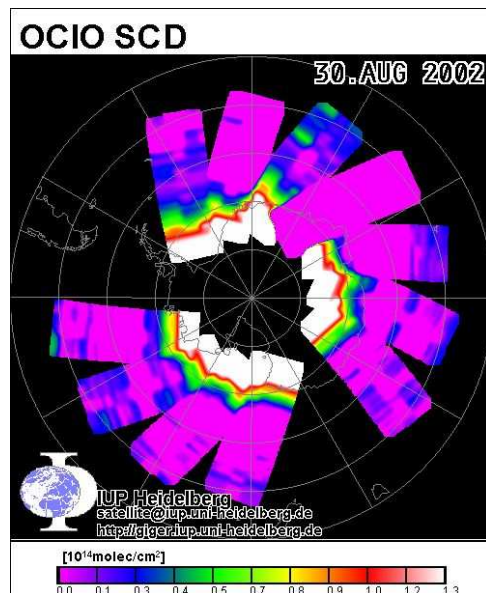
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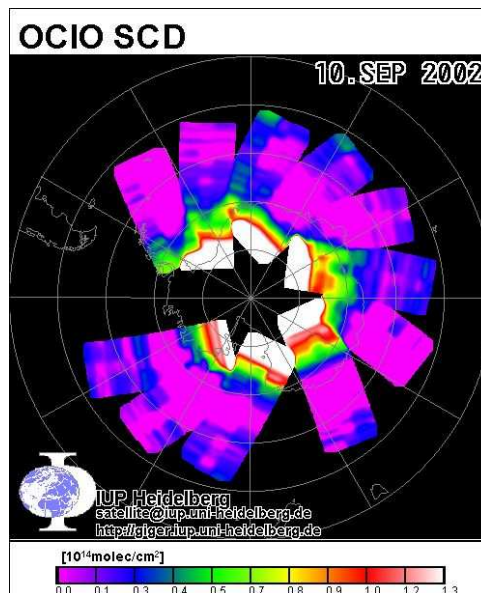
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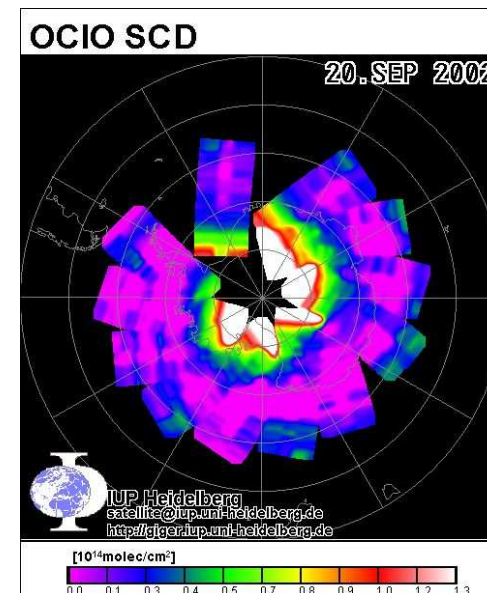
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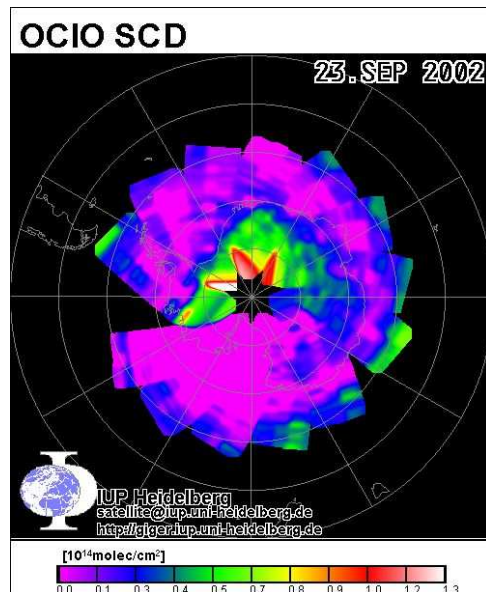
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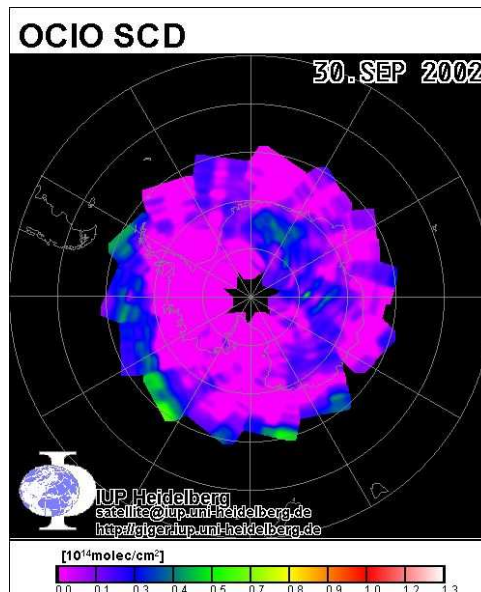
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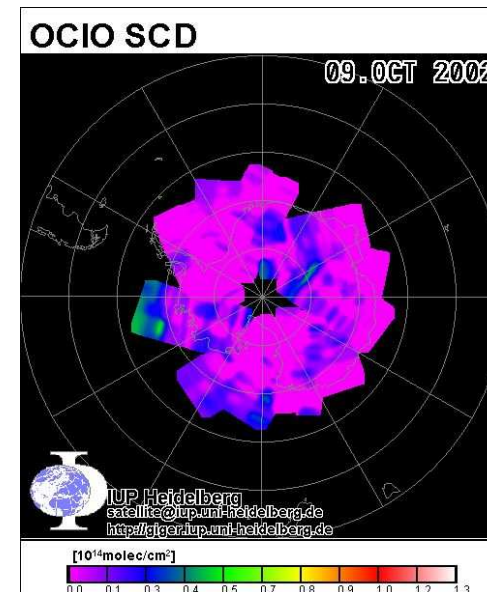
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30.9.02



9.10.02

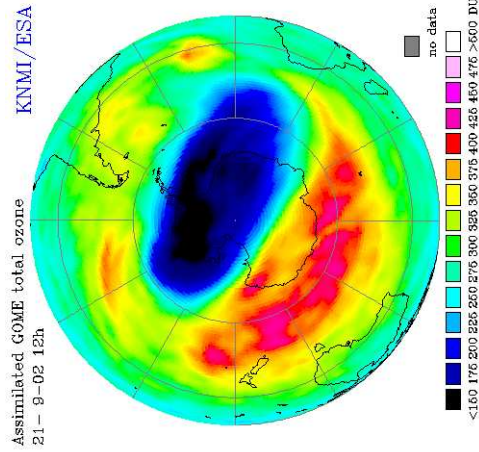


Examples

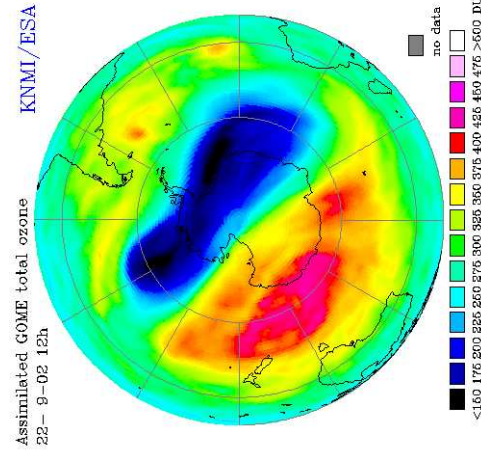
1) dynamical changes of the polar vortex

∅ *breakup of the polar vortex in the antarctic winter 2002*

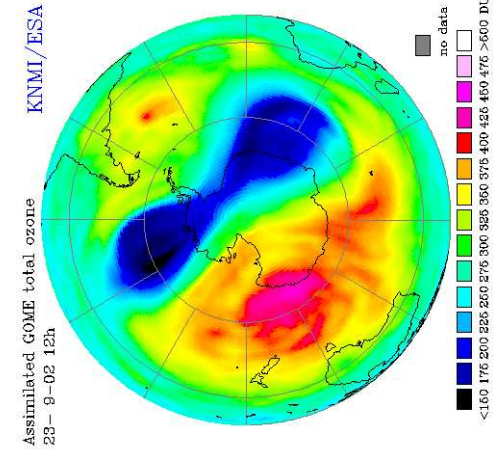
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22.9.02

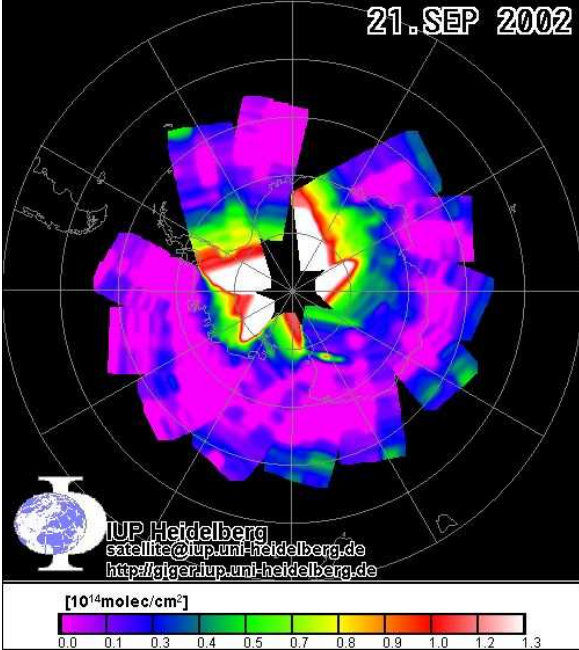


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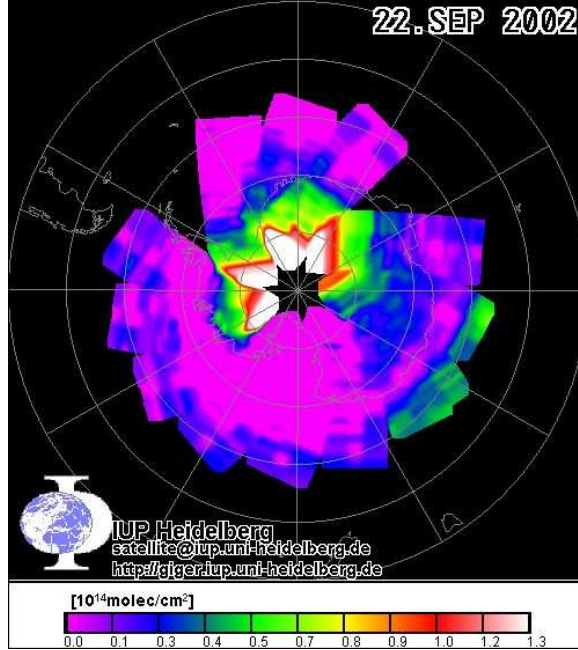
OCIO SCD

21.SEP 2002



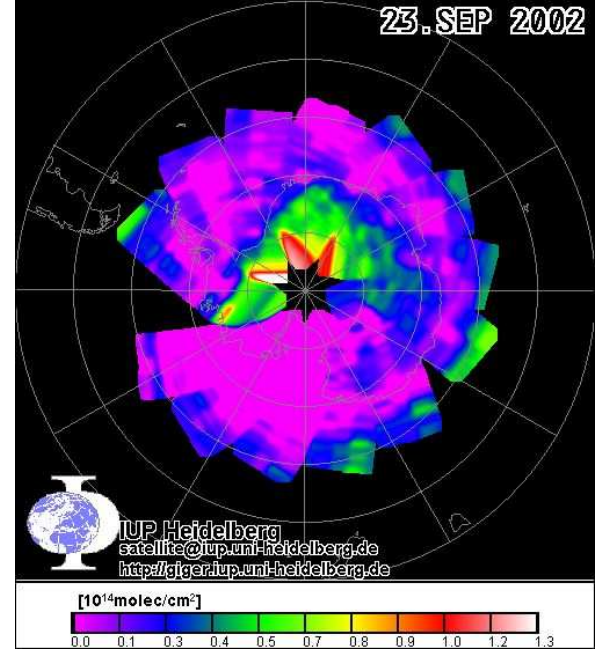
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22.SEP 2002

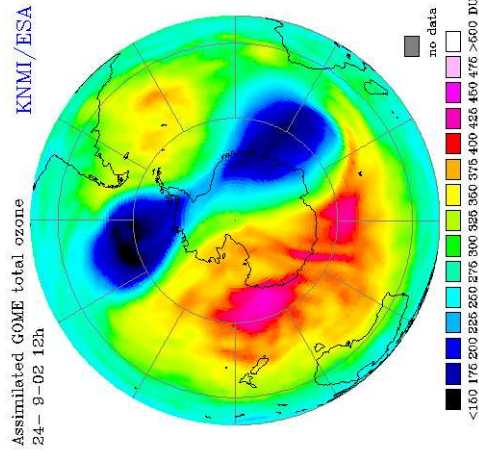


OCIO SCD

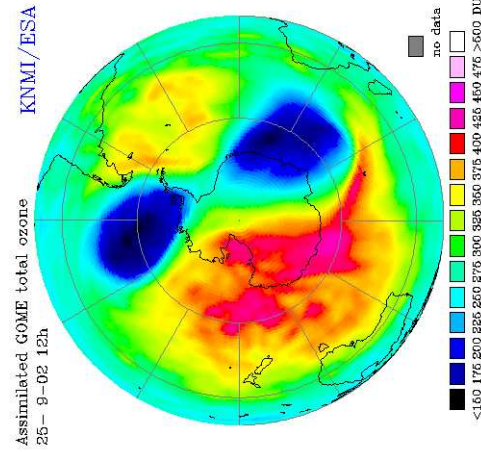
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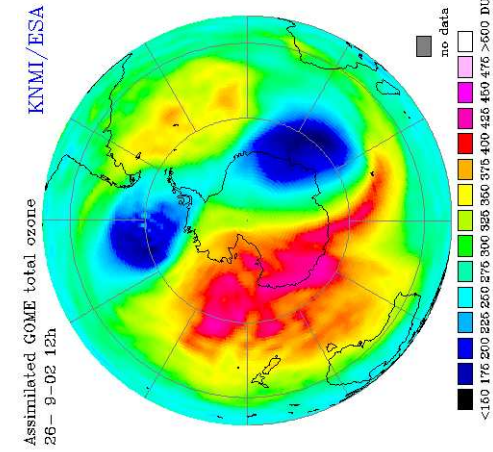
24.9.02



25.9.02

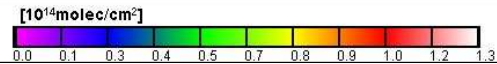
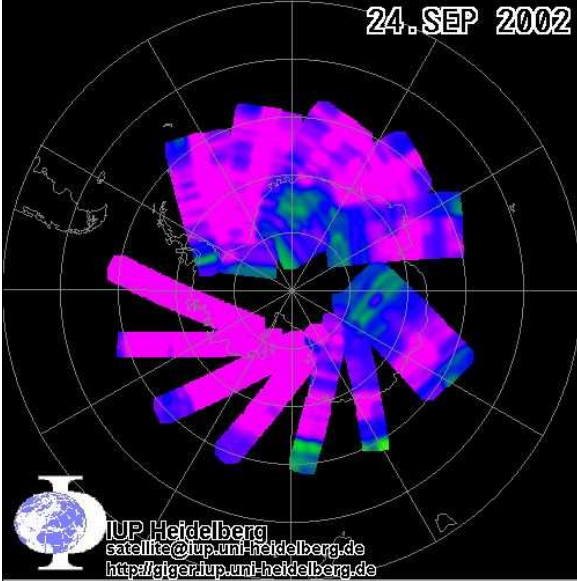


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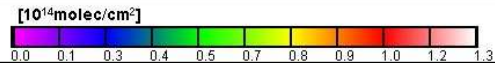
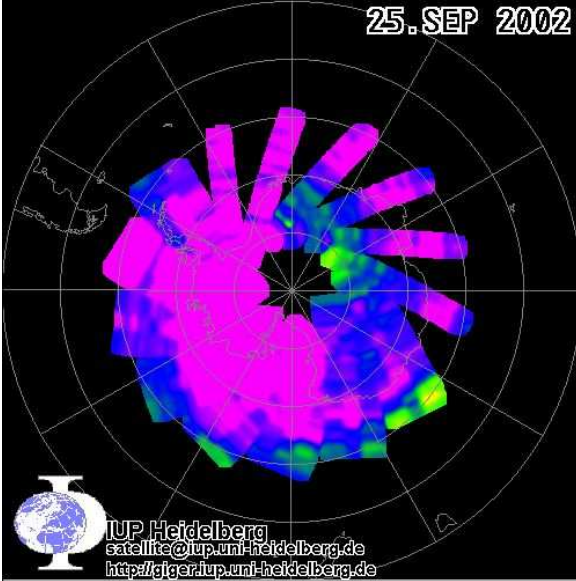
OCIO SCD

24.SEP 2002



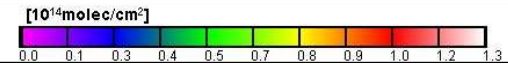
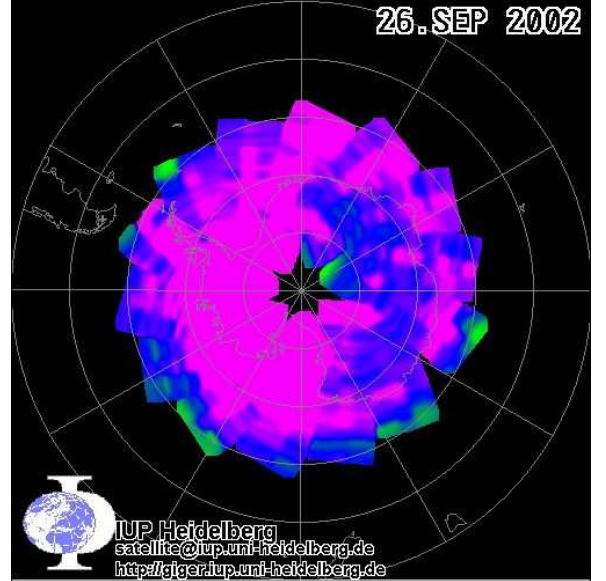
OCIO SCD

25.SEP 2002



OCIO SCD

26.SEP 2002



Examples

1) dynamical changes of the polar vortex

∅ *breakup of the polar vortex in the antarctic winter 2002*

2) influence of special local effects

∅ *mountain waves in the lee side of the Andes*

Possible Mountain Waves

