
Changes in total ozone over Reykjavík during the late winter polar vortex seasons 1952 - 2018

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NMM31 2018 Reykjavík

Topic

The late winter minimum ozone in Reykjavik

Bypassing possible errors in the calibration of the Dobsons by subtracting summer averages from late winter monthly averages

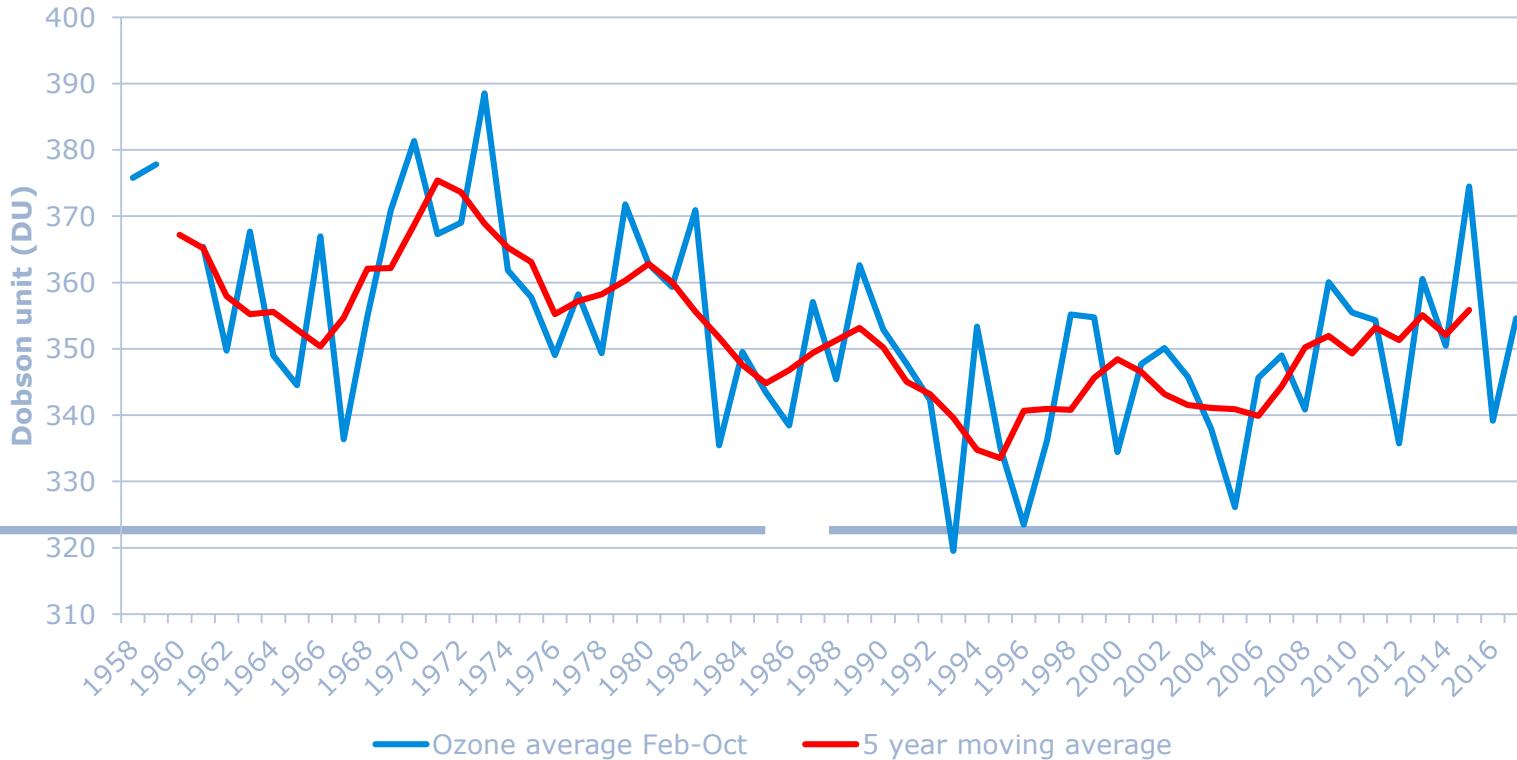
Looking at variability in the winter polar vortex seasons February to April compared to the more stable summer averages.

The influence of temperature in the troposphere on total ozone

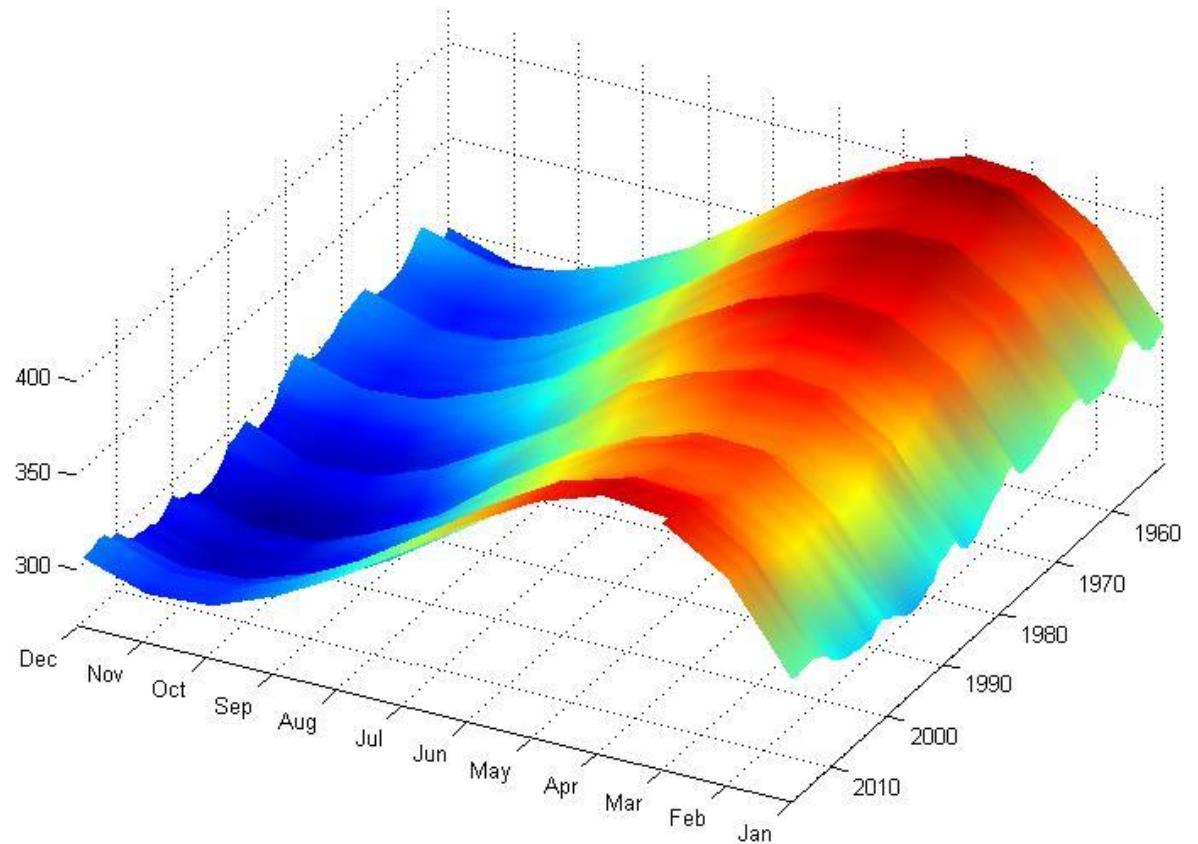
Sunspot activity and total ozone



The Dobson 50 dataset

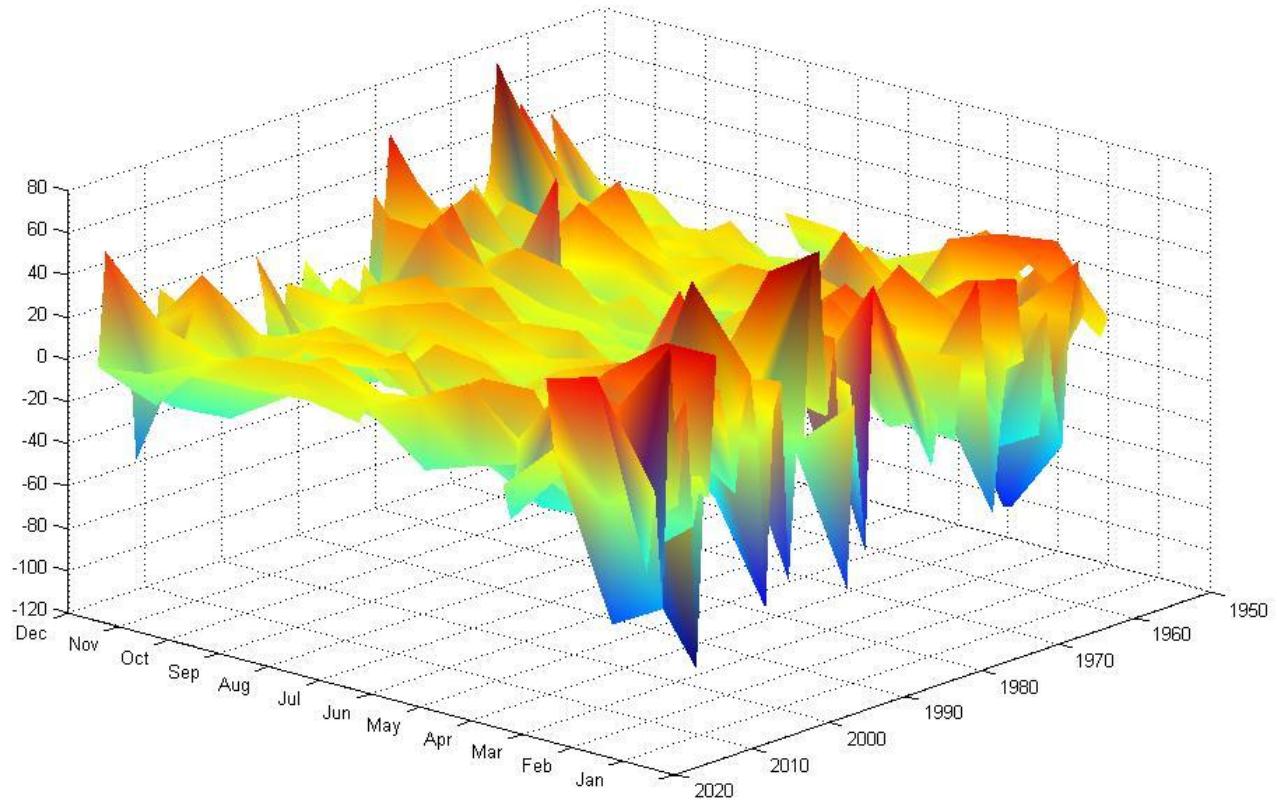


Total Ozone Reykjavík Model 1952-2018



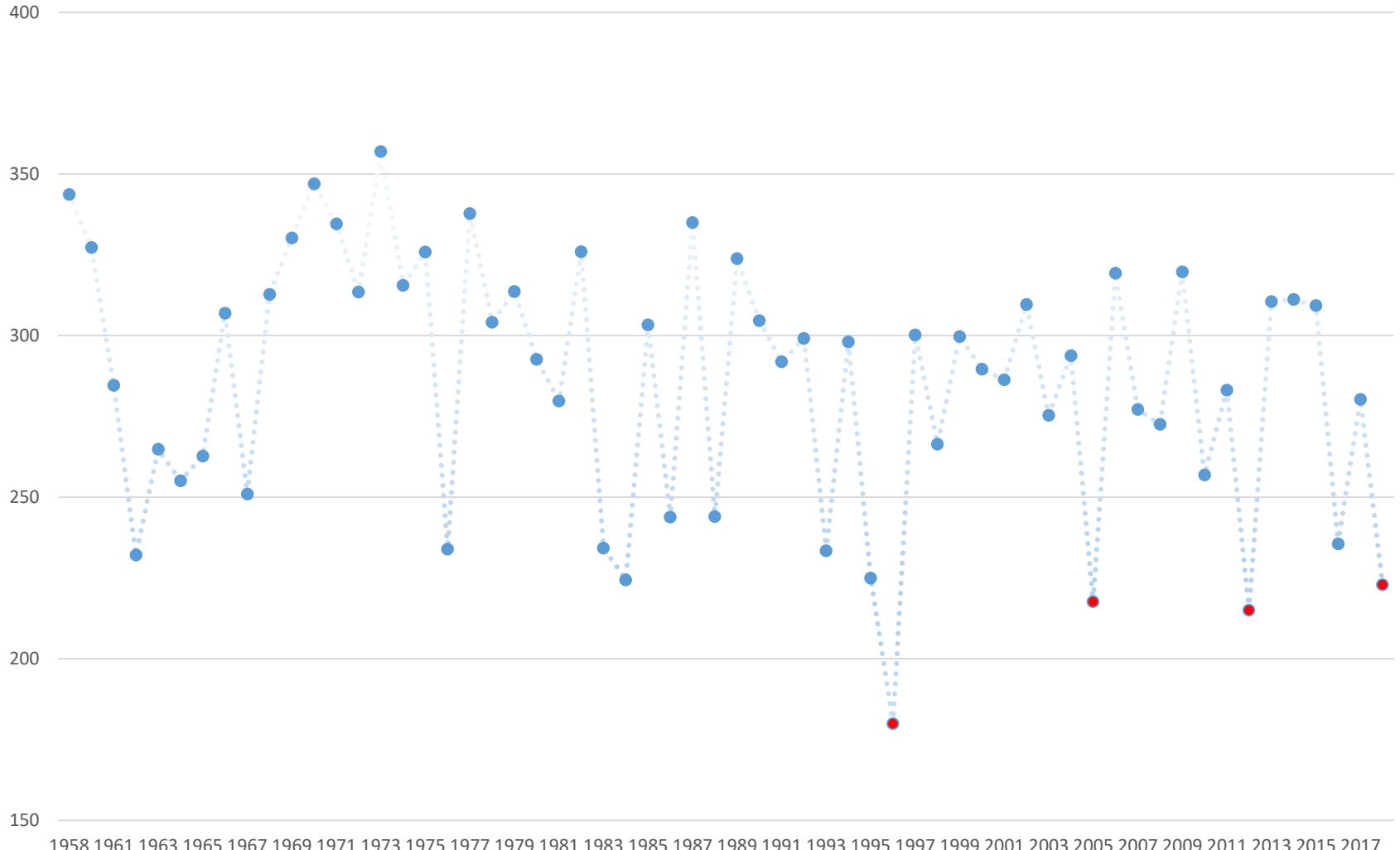
Total ozone variability

Monthly averages - model

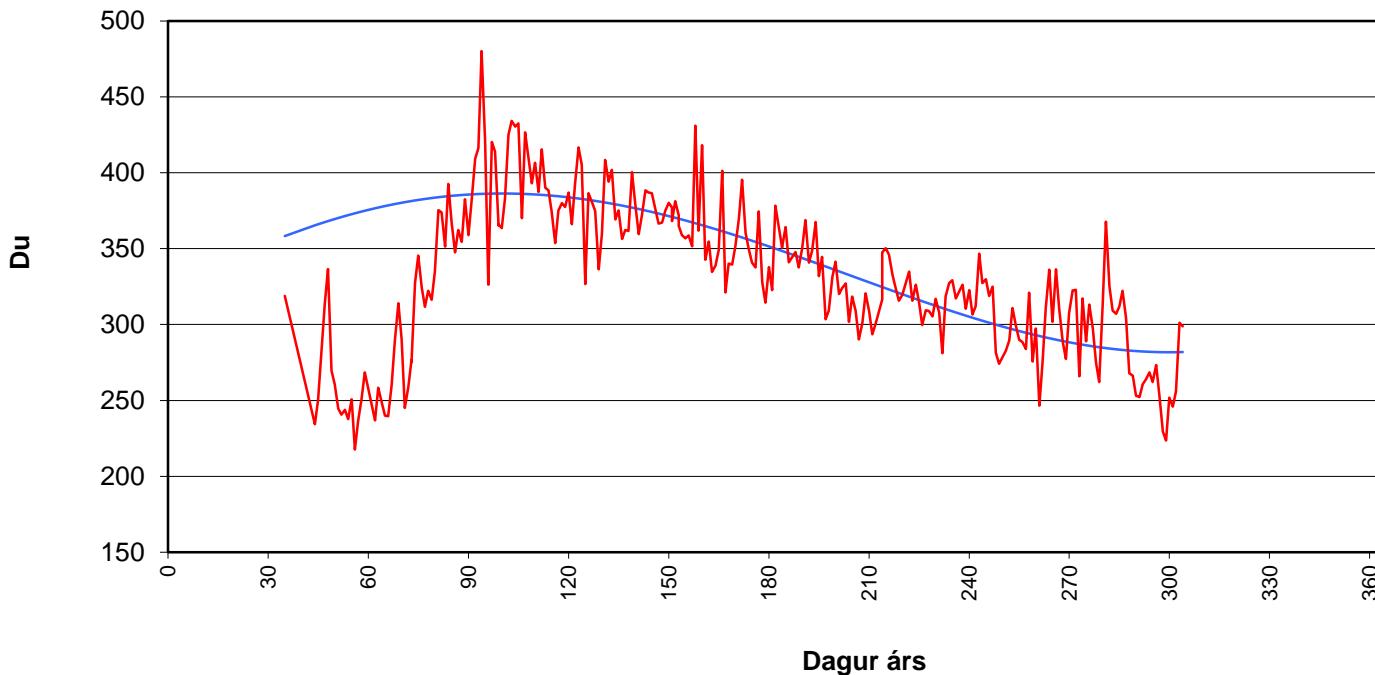




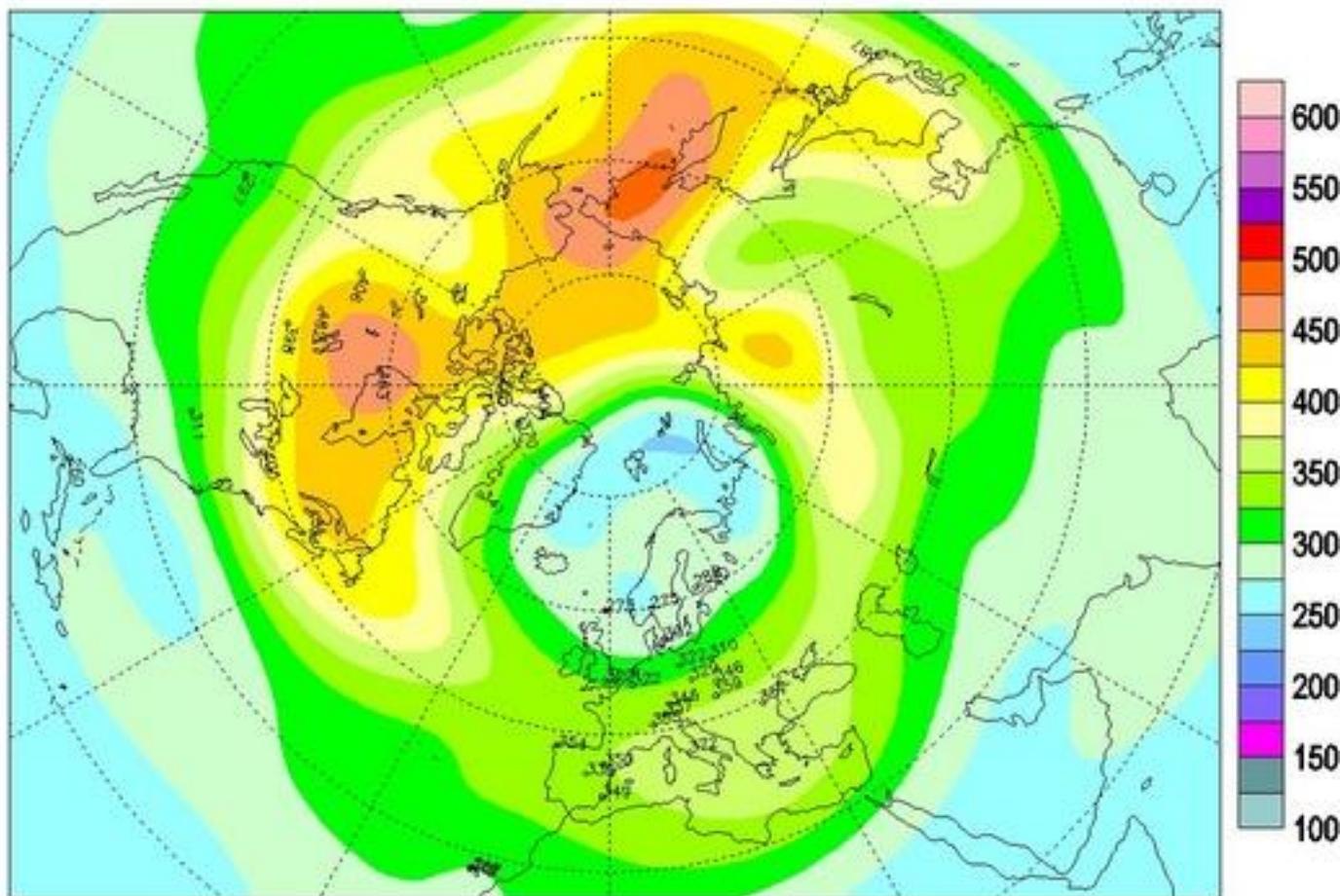
Ozone minimum over Reykjavik Feb-Apr



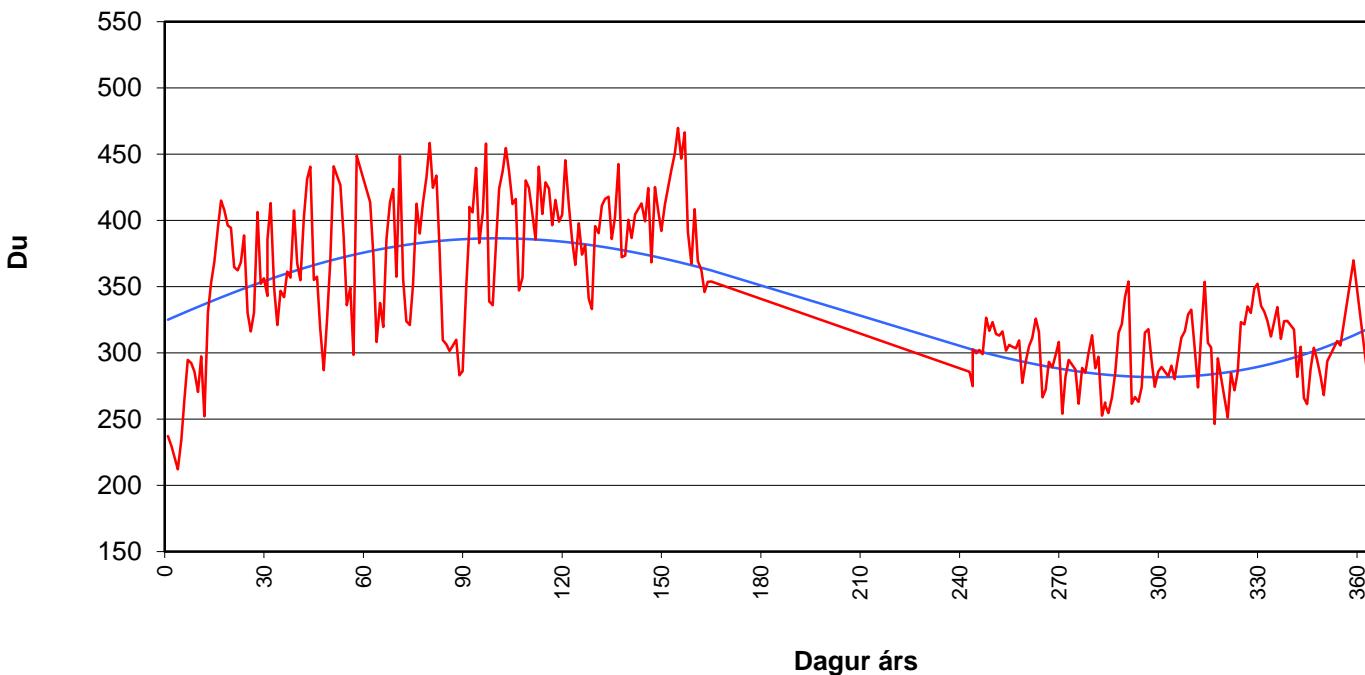
Óson í Reykjavík 2005



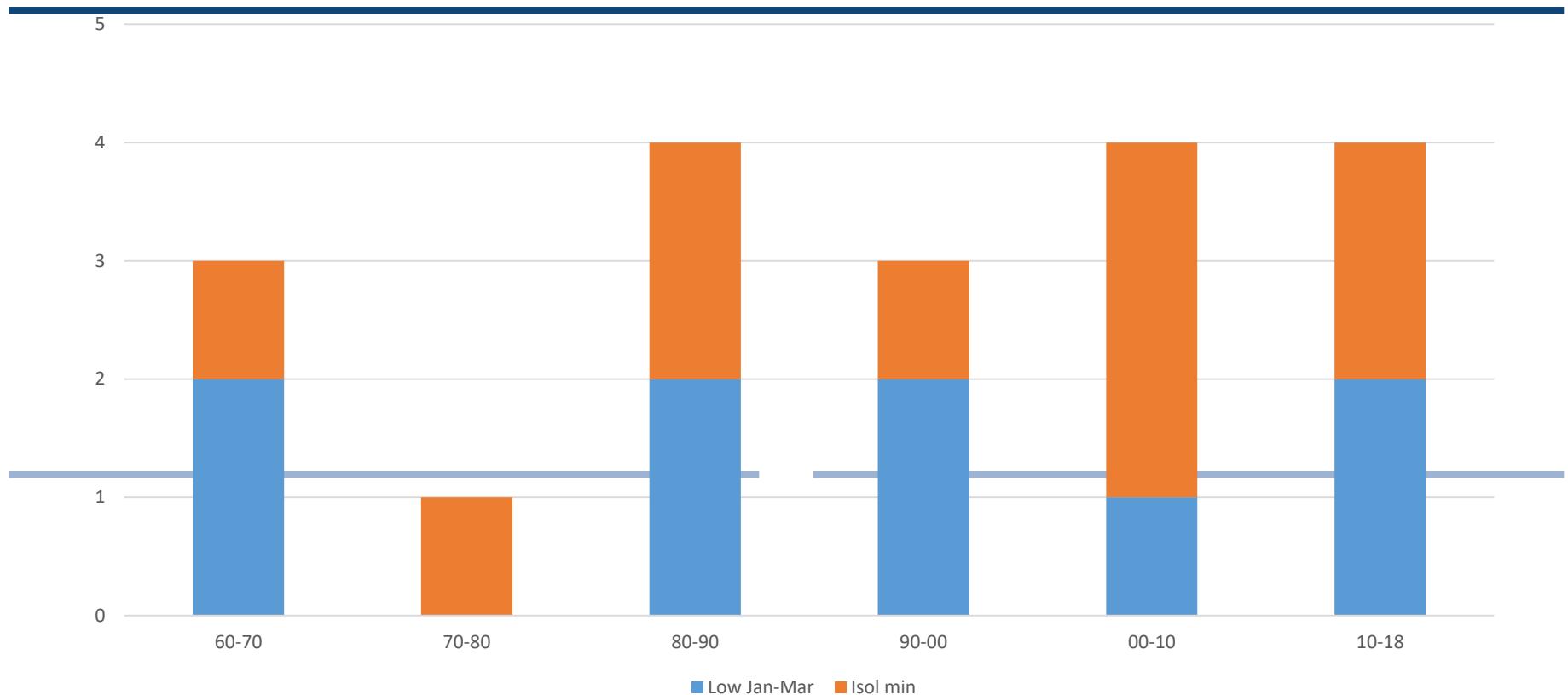
Total ozone (DU) / Ozone total (UD), 2011/03/28



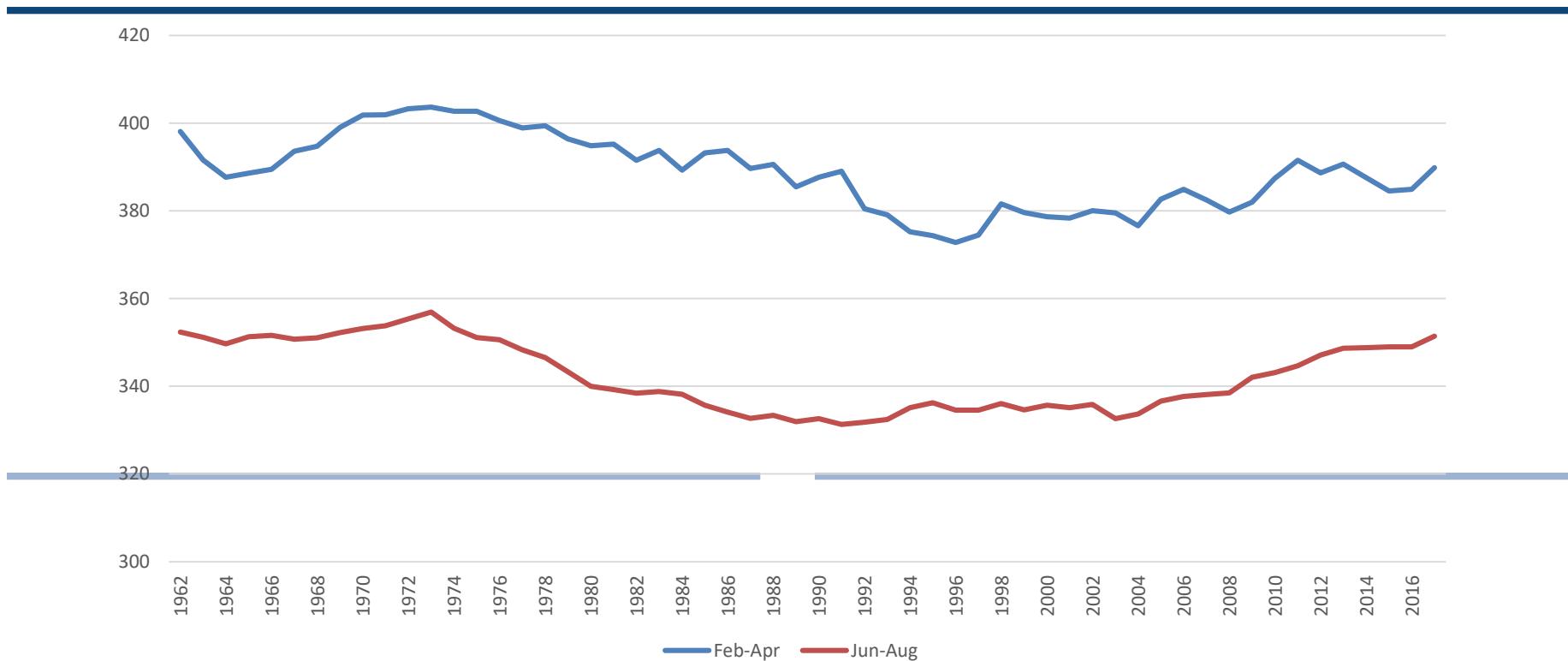
Óson í Reykjavík 2011



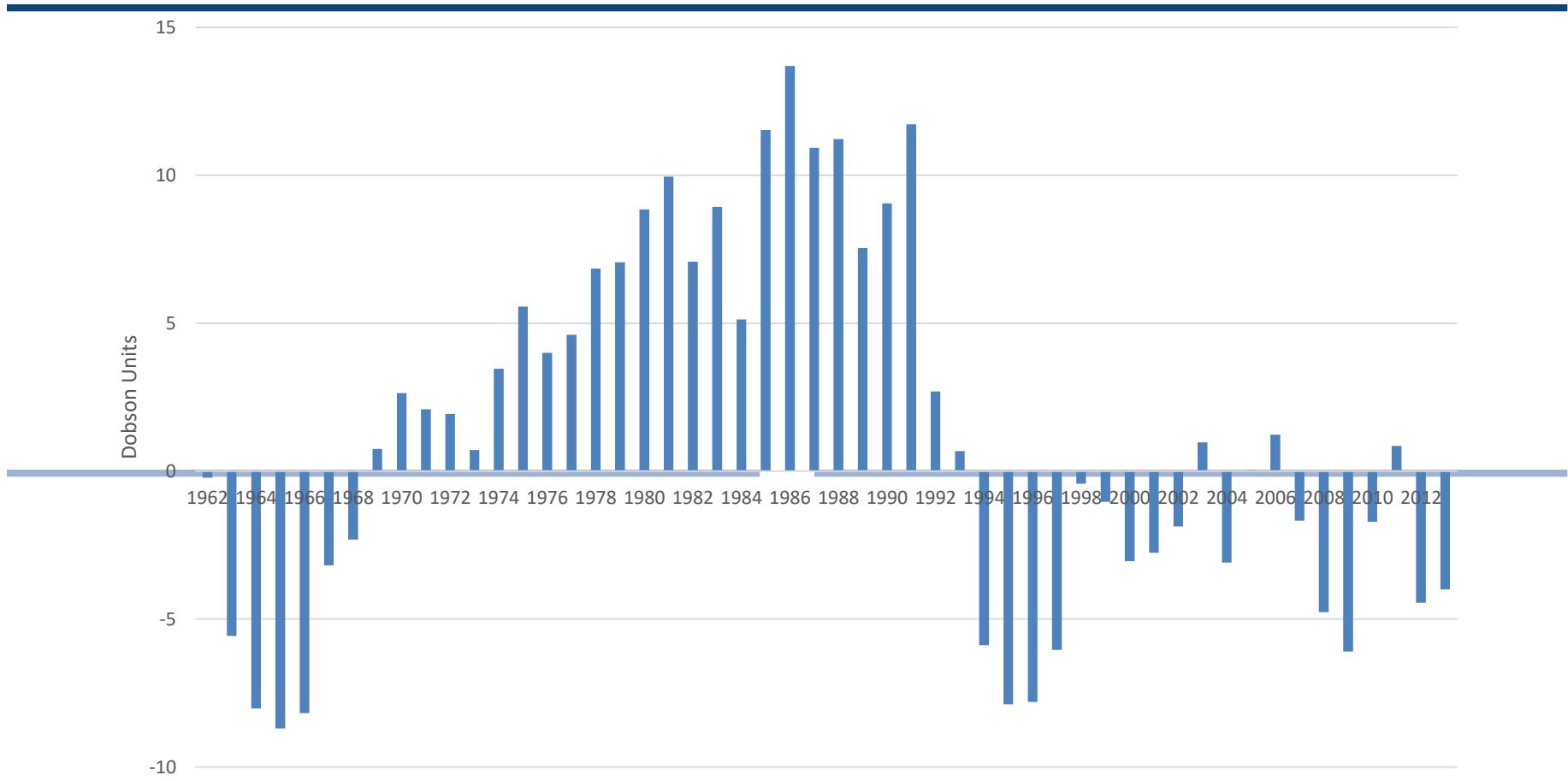
Number of low ozone min years per decade (<280 DU, Feb-Apr)



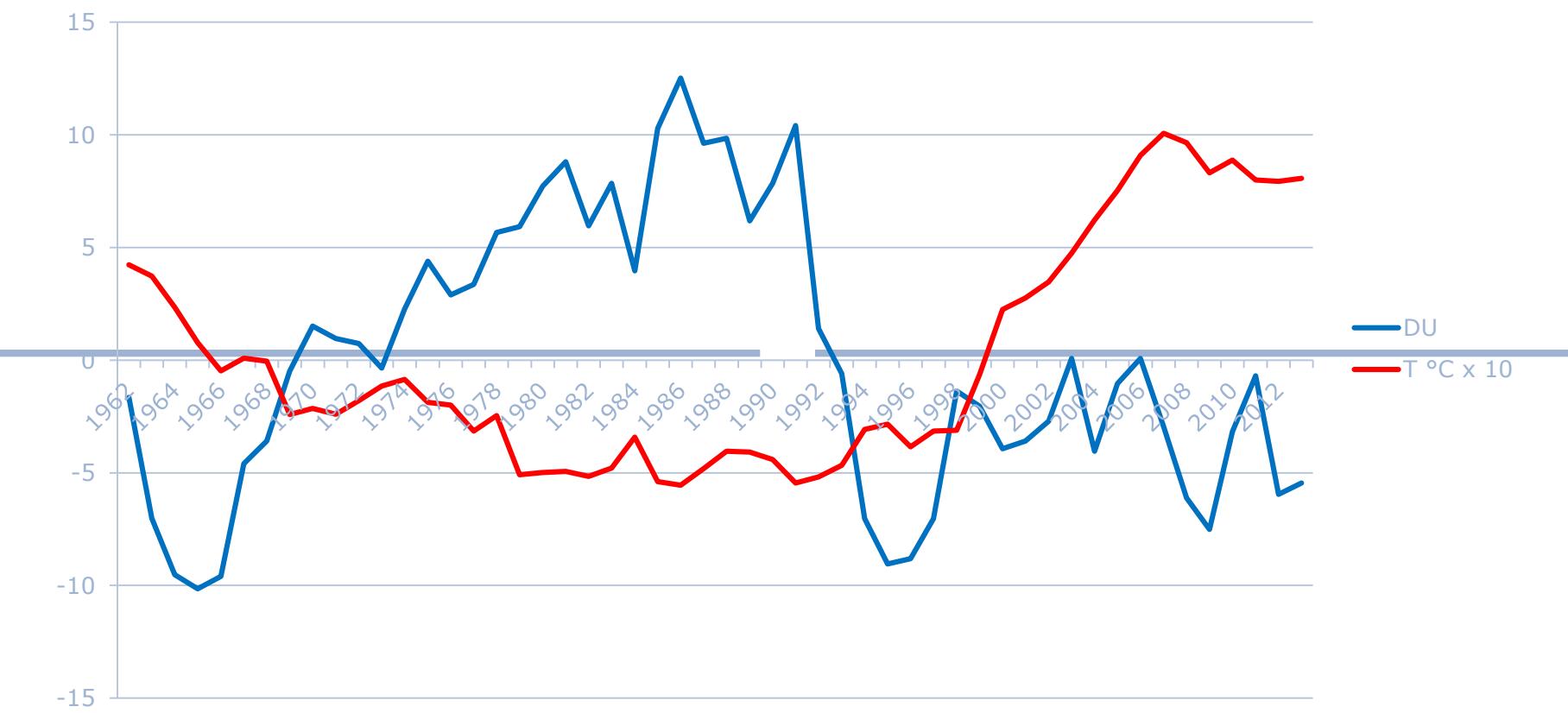
Reykjavík total ozone, 9 years running averages



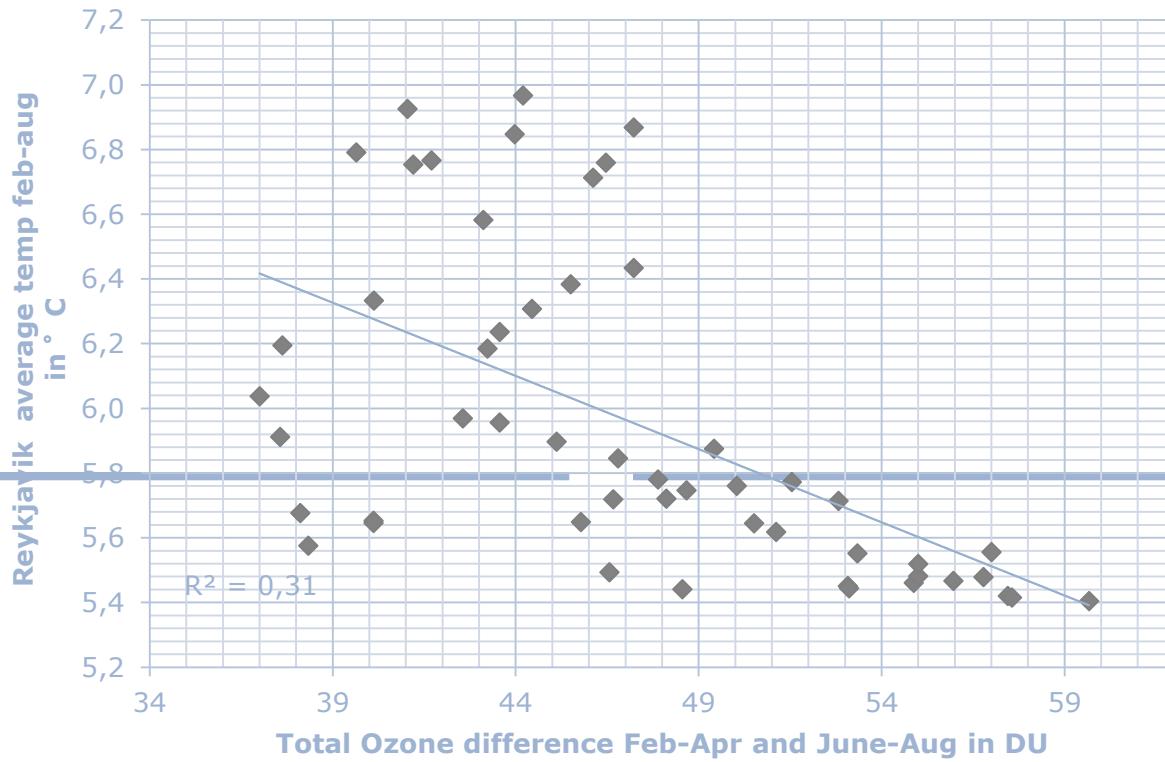
Feb-Apr and Jun-Aug differences, 9 year running averages

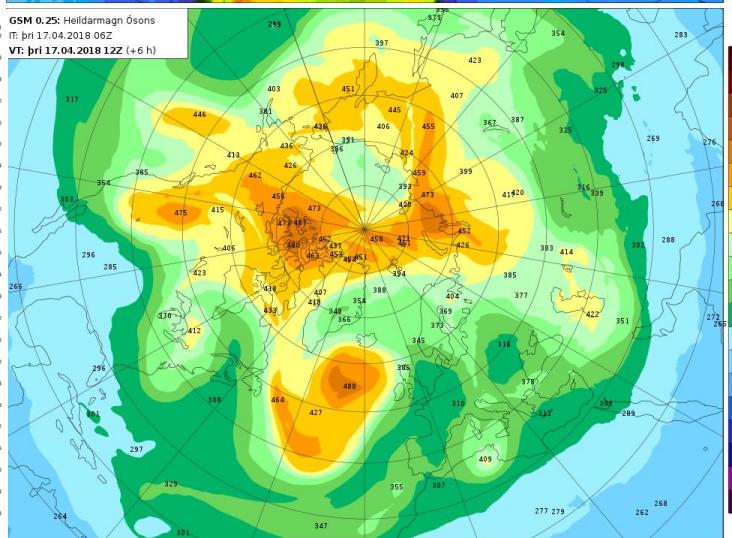
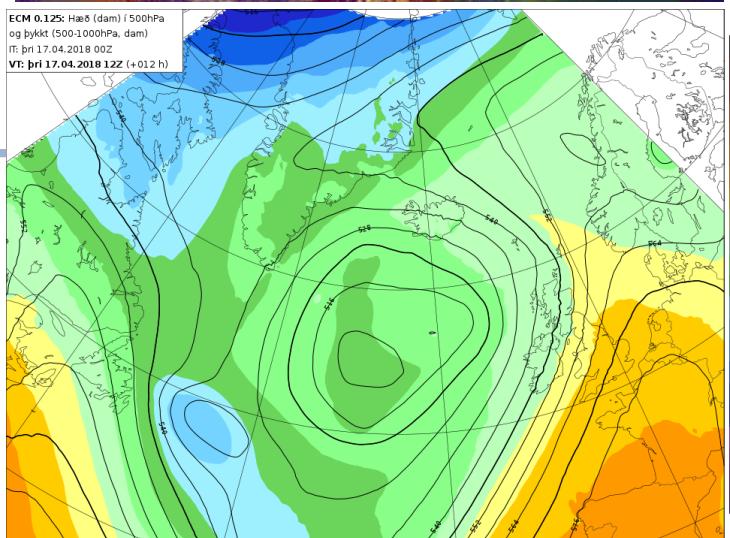
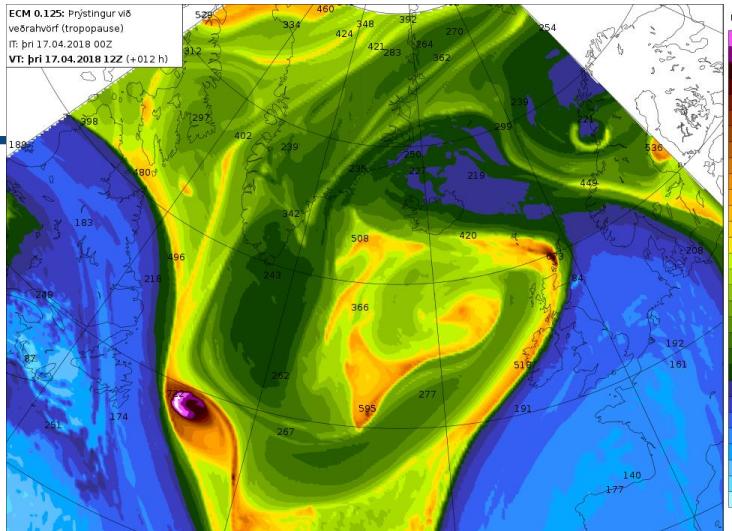
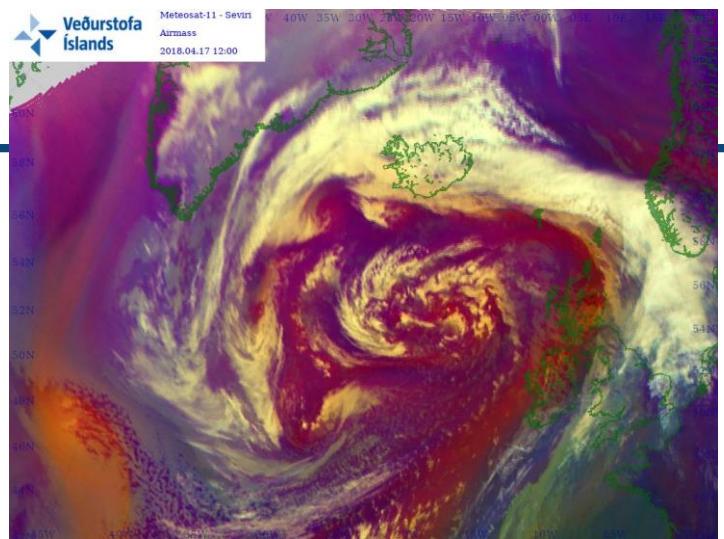


Total Ozone differences Feb-Apr and Jun-Aug from average and
Reykjavik Feb to Aug average temperature from average. 9 year
running averages

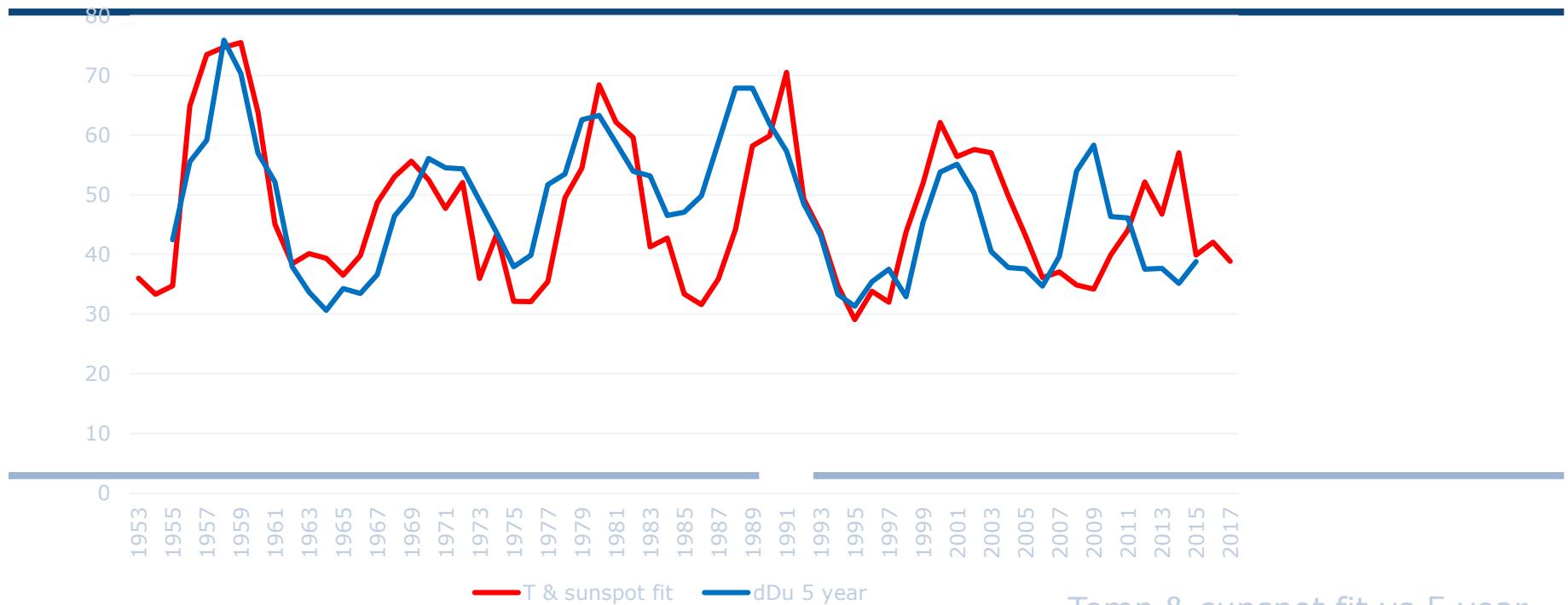


Temperature and ozone difference, 9 year running averages 1958 - 2017

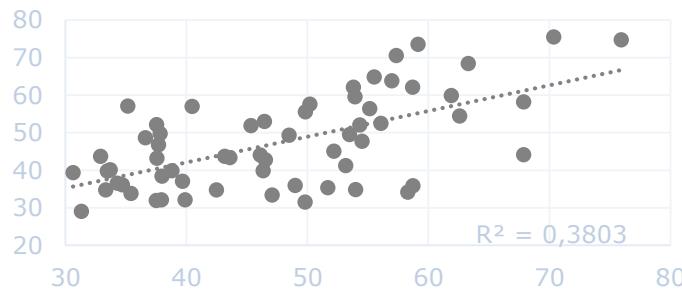


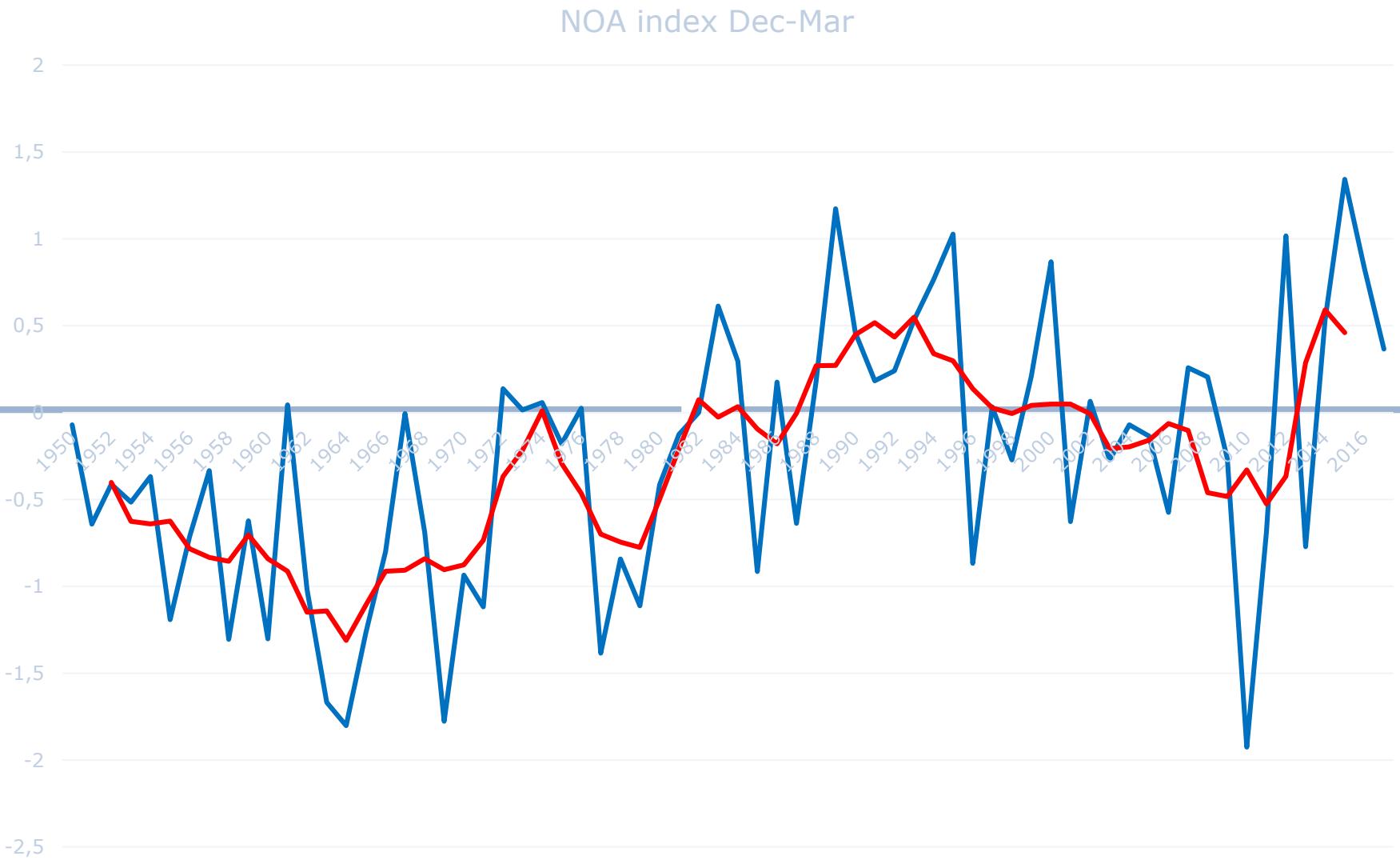


Temperature and sunspot fit

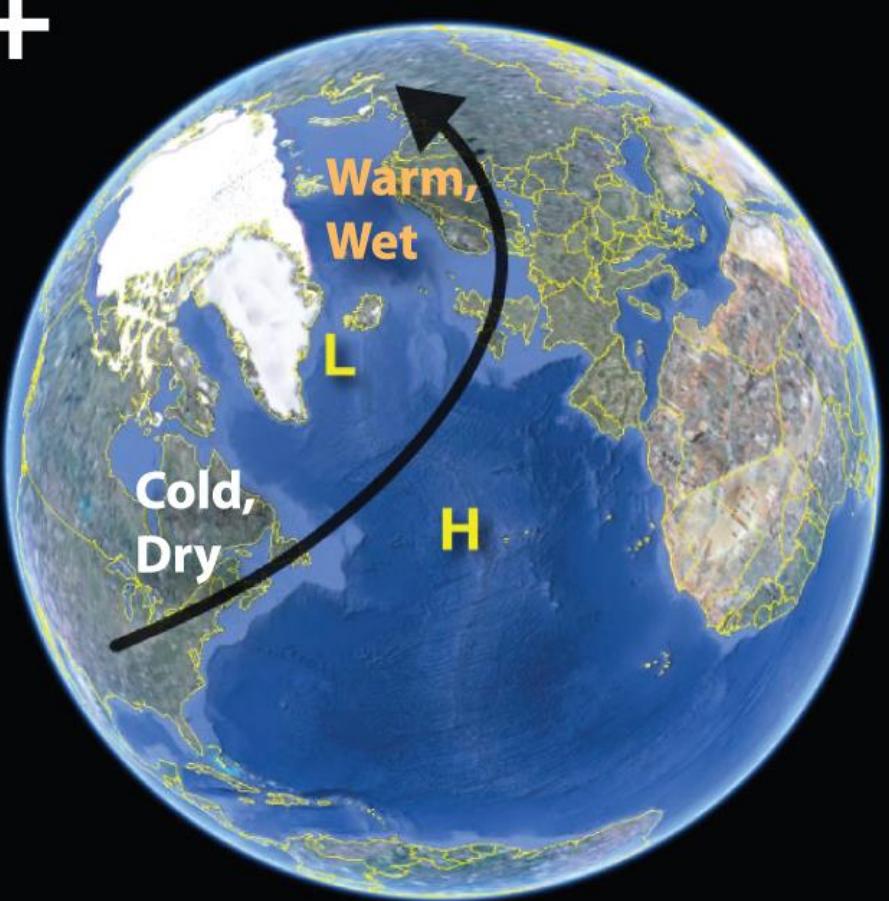


Temp & sunspot fit vs 5 year ozone diff. averages

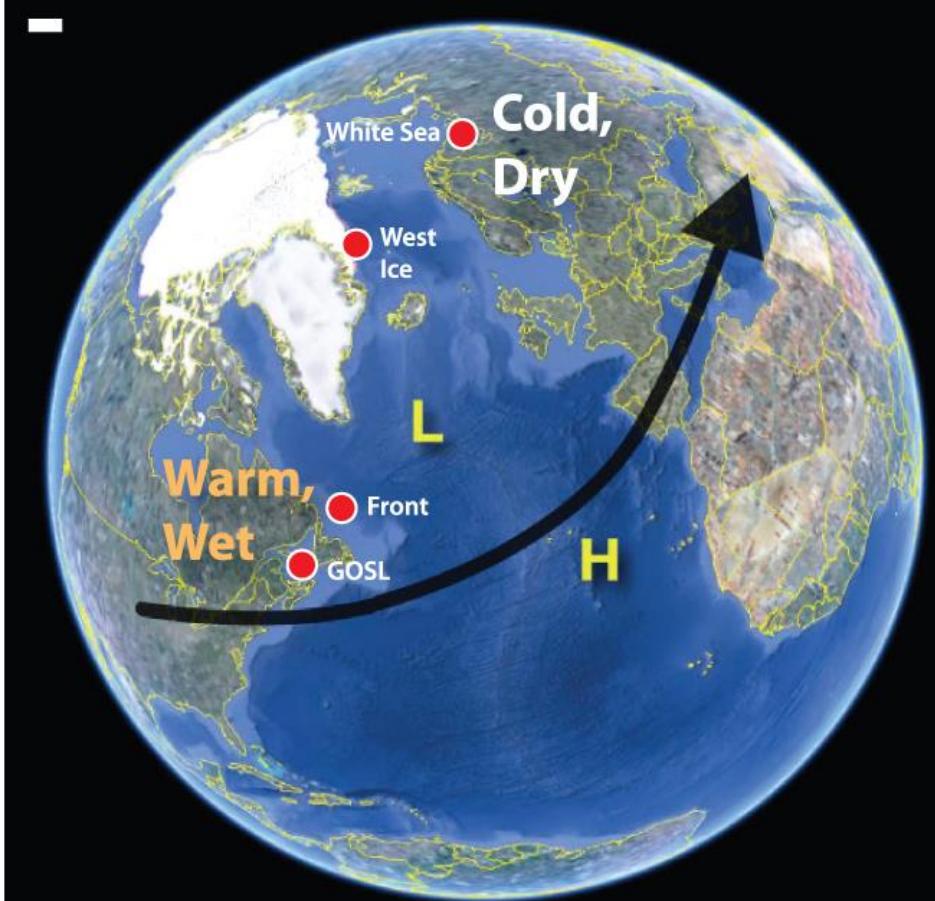




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summary

Averages indicate that the total ozone has been increasing over Reykjavik since 2000 but not the minimum values

Troposphere thickness and troposphere temperature go hand in hand. Long term changes in tempareture are reflected in longterm changes in total ozone

Sunspot numbers and sun activity can be seen in the late winther and summer differences.
