

Current Science Questions

1. Are we measuring ozone with sufficient accuracy, geographical coverage and vertical resolution? (see also question 10)
2. Why does the seasonal cycle vary across the Arctic? What are the processes that affect seasonal cycle? Can we identify how it changed over time from long-term measurements?
3. What is the importance for classical NO_x, VOC chemistry compared to halogen chemistry?
4. Does ozone in the Arctic increase?
5. Can we link changes in Arctic ozone to climate change?
6. re Arctic ozone changes influenced by the tropical and middle latitude emissions of precursors? Can we identify the origins of these sources by using complimentary and collocated measurements of carbon isotopes in the Arctic?
7. Do forest fires impact surface ozone levels in the Arctic?
8. How and where geographically do long transports of air masses mix into the boundary layer? Are there deposition processes that impact ozone in air masses during transport?
9. How well can global transport and chemistry climate models simulate short-term and intra-annual variability in ozone within and above the boundary layer?
10. What is the vertical distribution of ozone concentrations up through the troposphere?
11. What do we need before we can formulate parameterization for ESM to catch the variability of ozone in Arctic?