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## Total ozone loss during the 2021/22 Arctic winter and comparison to previous years

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The amplitude and rate of ozone depletion in the Arctic is monitored every year since 1994 by comparison between SAOZ UV-Vis ground-based network from NDACC and Multi-Sensor Reanalysis 2 (MSR-2) total ozone measurements over 8 stations in the Arctic and 3-D chemical transport model simulations in which ozone is considered as a passive tracer. The passive ozone method allows determining the cumulative loss at the end of the winter. The amplitude of the destruction varies between 0-10% in relatively warm and short vortex duration years to 25-38% in colder and longer ones, which the record winters estimated in 2010/2011 and 2019/2020.

In this study, the interannual variability of 10-days average rate of 2021/2022 winter will be analyzed and compared to previous years. In addition, SAOZ NO<sub>2</sub> data will be used to evaluate renoxification in the Arctic. The long-term ozone loss series estimated from measurements will be compared to REPROBUS and SLIMCAT CTM simulations. Relationship with illuminated Polar Stratospheric Clouds will be also presented.