

## Polar Ozone: The story of the ozone hole and its recovery

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Ozone is present throughout several layers of the atmosphere and affects life on Earth in different ways, through climate, health and air quality impacts. Stratospheric ozone shields the Earth's surface from harmful UV radiation, and it got in the spotlight of the international research community in the 1980s with the discovery of a massive ozone depletion over the Antarctic, the so-called "ozone hole". This resulted in successful enactment of the Montreal Protocol and its amendments implementing a total emissions ban of chlorofluorocarbons (CFCs), human-made substances mainly responsible for the observed rapid ozone depletion. While the same ozone-destroying chemical reactions are effective in the Arctic and Antarctic, the extent of ozone depletion is clearly different for both regions, because of different dynamical features, and ultimately because of differences in stratospheric temperatures. Since the late 1990s/early 2000s the CFC concentration has reached its peak, and stratospheric ozone concentration is expected to increase again. Identifying the regions and times when a statistically significant ozone recovery signal can be detected is a major focus of the research community at the moment.