



The ozone hole and climate change



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Départements de Mécanique

Unlike well-mixed greenhouse gases, the radiative forcing of climate due to observed stratospheric ozone loss in the second half of the 20th Century is very small. In spite of this, much new evidence has emerged in the last decade showing that the formation of the ozone hole has caused profound changes in the entire Southern Hemisphere climate system, starting from the observed poleward shift of the midlatitude jet in the summertime: this has been linked to changes in tropospheric and surface temperatures, clouds and cloud radiative effects, precipitation at both middle and low latitudes, as well as temperature and circulation changes in the ocean, and possibly the cryosphere. Similarly, the projected closing of the ozone hole will figure prominently in future climate change, with its impacts expected to largely cancel the impacts of increasing GHGs during the next half-century.



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