Effective radiative forcings of aviation 150 All CO2 + non-CO2 Contrails & cirrus CO_2 Methane CH₄ Ozone O₃ short Ozone O₃ long 125 Black carbon Stratospheric water vapour H_2O Sulphate SO₄ 100 Effective radiative forcings $[mW/m^2]$ 75 50 25 0 -25 -50 1985 1995 2000 2005 2010 2015 1980 1990 year