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EFFECTS OF OZONE DEPLETION ON NATURAL COMMUNITIES OF ANTARCTIC MARINE PROTISTS

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We determined the effects of UVR (280 – 400 nm) on Antarctic marine protists over the summer of 2001/02 in incubation experiments with light exposures of PAR, PAR+UVAR and PAR+UVAR+UVBR. We found few harmful effects of UVBR exposure in November and December when ozone concentrations ranged from 352 - 315 DU. However, UVBR significantly reduced chl *a*, POC and protist concentrations in January when the ozone fell below <300 DU. Concentrations of ozone around the Antarctic coastline are commonly <300 DU between January and April, coinciding with high protist biomass. Thus, ozone depletion in mid to late summer may significantly affect Antarctic marine productivity.