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A depleted ozone layer absorbs less UV-B, cooling the ozone layer, increasing the amount of UV-B observed to reach Earth, heating air by dissociating tropospheric and ground-level ozone, and heating oceans very efficiently by penetrating tens of meters into the mixed layer. UV-B is 48 times more energetic ("hotter") than IR absorbed by greenhouse gases

This new insight into the physics of radiation shows why changes in stratospheric ozone are observed to cause changes in global temperature. By 1970, manufactured CFC gases and ozone depletion began increasing. By 1993, increases in CFCs stopped as mandated by the Montreal Protocol. By 1995, increases in ozone depletion stopped. By 1998, increases in temperature stopped until 2014. Ozone is also depleted by halogen gases emitted from major basaltic lava flows, the largest of which, since 1783, occurred at Bardarbunga in Iceland in 2014, causing 2015 and 2016 to be the hottest years on record. Throughout Earth history, the largest basaltic lava flows were contemporaneous with periods of greatest warming and greatest levels of mass extinctions.

Planck's empirical law shows that temperature of matter results from oscillation of all the bonds holding matter together. The higher the temperature, the higher the frequencies and amplitudes of oscillation. Thus, radiation from a nearby hotter body will make the absorbing body hotter than radiation from a cooler body. According to the Planck-Einstein relation, thermal energy (E) in matter and in radiation equals frequency of oscillation (ν) times the Planck constant (h), $E=h\nu$—the energy of a frictionless atomic oscillator. Since frequency is observed to be a very broad continuum extending from radio signals through visible light to gamma rays, thermal energy ($E=h\nu$) must also be a very broad continuum. Thermal flux cannot be represented properly by a single number of watts per square meter, as commonly assumed throughout the physical sciences, because all frequencies coexist and the number of watts increases with frequency. Thus, UV-B solar radiation is 48 times more energetic than IR terrestrial radiation absorbed by greenhouse gases and can make the absorbing body 48 times hotter. UV-B causes sunburn; no amount of IR can cause sunburn. Furthermore, in a basic experiment, I show that air containing more than 23 times normal concentrations of CO_2, shows minimal warming compared to normal air when exposed to the same IR radiation.

Dobson (1929) reported the close correlation between regions of high and low ozone concentrations and weather. Variation in ozone levels are closely associated with changes in the Multivariate ENSO Index and other atmospheric and oceanic oscillations.

Details are explained in Ward, P. L., 2017, Ozone depletion explains global warming: Current Physical Chemistry, v. 6, no. 4, p. 275-296. Doi:10.2174/1877946806999160629080145.

Plain language summary [200 words]:
Impacts of stratospheric ozone on climate

Depletion of the stratospheric ozone layer is the primary cause of global warming observed recently and throughout Earth history. When ozone is depleted, more ultraviolet-B radiation than normal is observed reaching Earth, warming air in the lower atmosphere by splitting ozone pollution apart and warming oceans efficiently by penetrating tens of meters below the surface. Climate scientists currently dismiss ozone depletion as unimportant because they think there exists a greater amount of infrared energy absorbed by greenhouse gases than ultraviolet-B energy reaching Earth when ozone is depleted. Radiant energy, however, is not a function of amount; it is a function of frequency. Ultraviolet-B radiation possesses 48 times higher frequency than infrared radiation. Thus, ultraviolet-B radiation is 48 times more energetic, 48 times "hotter," able to warm the absorbing body to higher temperatures. Ultraviolet-B causes sunburn and skin cancer, while no amount of infrared radiation can do the same.
Ozone is depleted by manufactured chlorofluorocarbon gases (from 1970 to 1998) and by chlorine and bromine gases emitted from large basaltic lava flows. The largest basaltic flow since 1783 was erupted from Bárðarbunga in Iceland in 2014-2015, making 2015-2016 the hottest years on record. Earth continues to warm because ozone remains depleted.