



Ozone Depletion

Find the words below in the puzzle. Starting with the top row and working from left to right, place any unused letters in the blanks below to reveal the phrase below.

<p>N M S O Z O N E P A R O T T O E C T O O T S U S F N R O M E H Z A R M F B N R U L T U L T L R A O V B I O L R T A A E T R O A D I N R A T I G O A R T X N I K G Y R E C G V A T Y T C E O V T V R Q W S L O S E I I A D O A S Y C S E O O J T I O C I N E R R L P F R V F N Y W W A C I F T J P U P H I S U D Y S I S V D L P U H V L R E N Q E Q F W U E U J I Z T Y Z F O R A V M F E L O H E N O Z O F S O T E A W R E R C P P D A J Z B B J R O E B E N Z M A K J N P O R P X R O C E O J G W G K H M D H X D V S O L O N U N W J V K V F M E N H Y W F H L Z V H Z A Z M U P J Z N F O T I C</p>	
ANTARTICA BREWER CHLOROFLUOROCARBON DOBSON FREON GAS	MONTREALPROTOCOL OZONEHOLE OZONESONDE STRATOSPHERE ULTRAVIOLET UVINDEX

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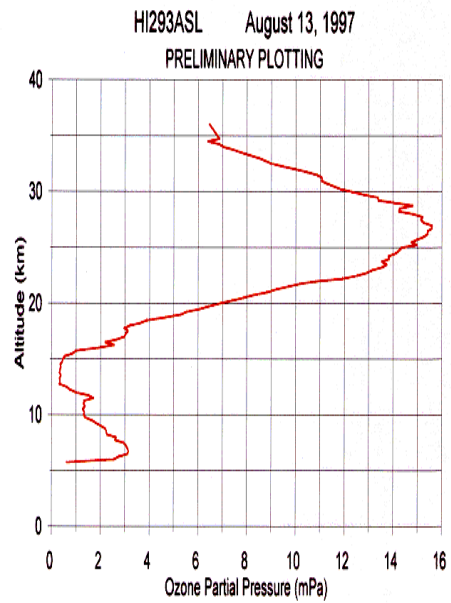
Ozone is a gas which resides in the stratosphere which has its maximum concentration at about 19-30 km above sea level.

At Mauna Loa Observatory, and many other climate observatories around the world, ozone is measured by instruments called a "Dobson" or a "Brewer". These instruments measure the "total" amount of ozone from the inlet of the instrument to the top of the atmosphere. This measurement is called a "Dobson" unit. In Hawaii the average ozone value is about 260 Dobson units. If the ozone was a pure layer at sea level, it would only be 2.6mm thick! A profile of the ozone is taken by an instrument called an ozonesonde. This instrument is attached to a balloon, and is done once a week at MLO.

With the appearance of the ozone hole in Antarctica, a ban of the use of chemicals which destroys the ozone was initiated. One example is the chlorofluorocarbons (CFCs) such as Freon. This treaty between nations is called the "Montreal Protocol" which was signed in 1987. Around the world there are UV indexes established to help people determine how much UV radiation is reaching the surface.



Ozonesonde is attached to a balloon.



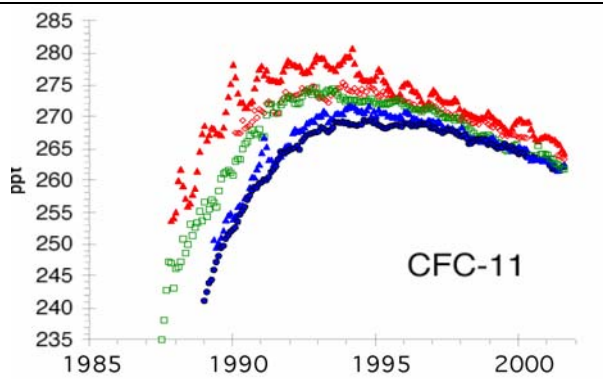
Ozone profile from ozonesonde



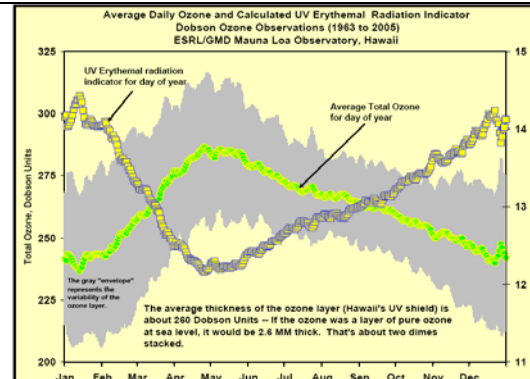
Dobson instrument which measures "Total Ozone"



Brewer instrument which measures "Total Ozone"



The CFC's are going down since the "Montreal Protocol was place in effect.



When ozone levels decrease, UV levels increase!