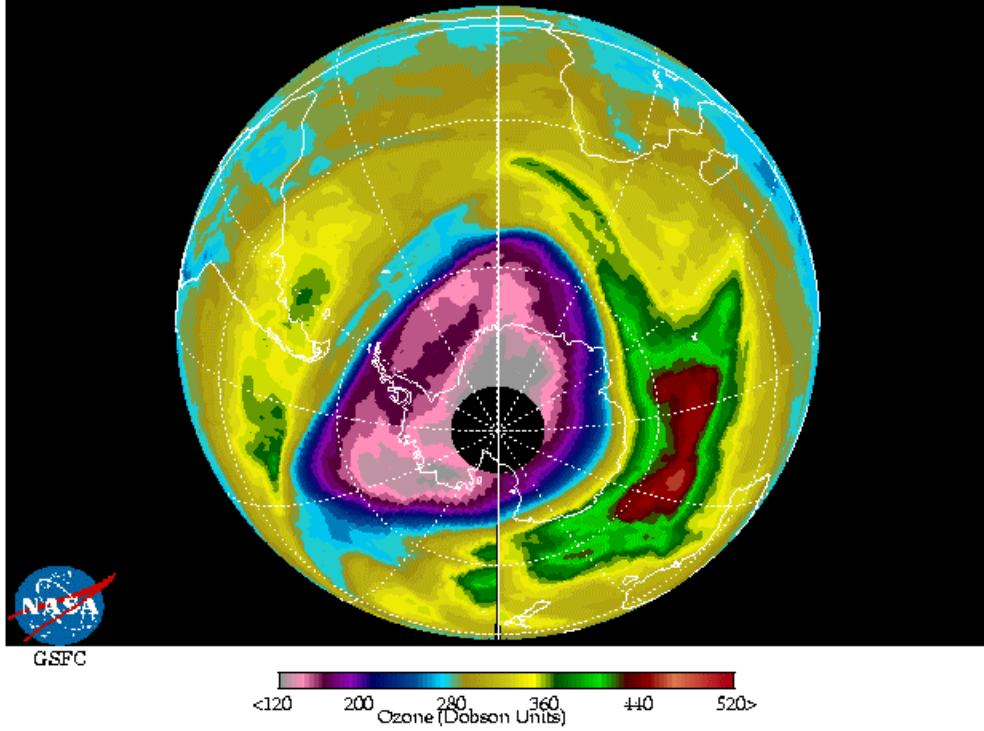
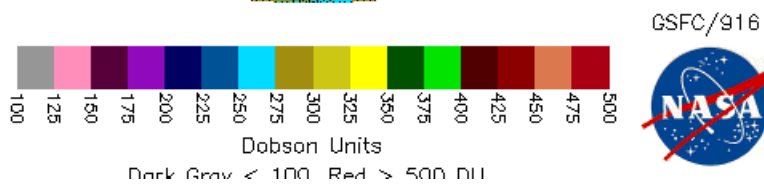
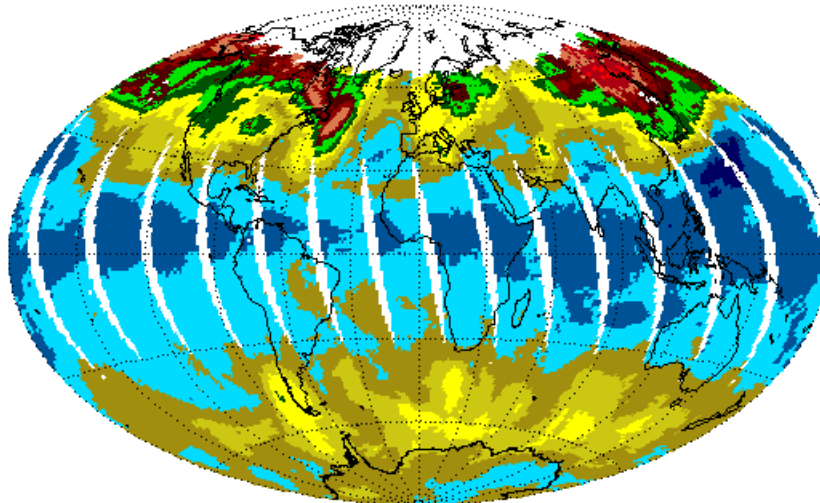


# 南極オゾン層最新データ (<http://jwocky.gsfc.nasa.gov/>)

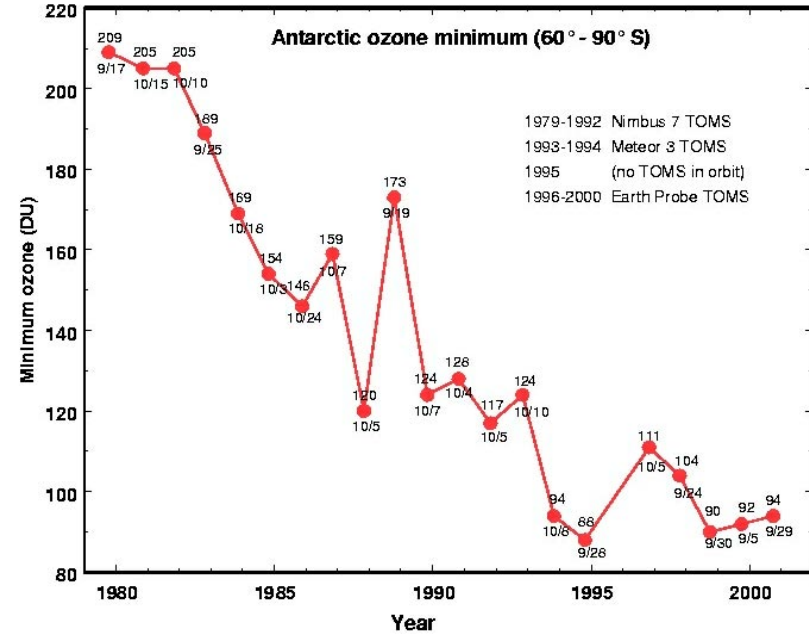
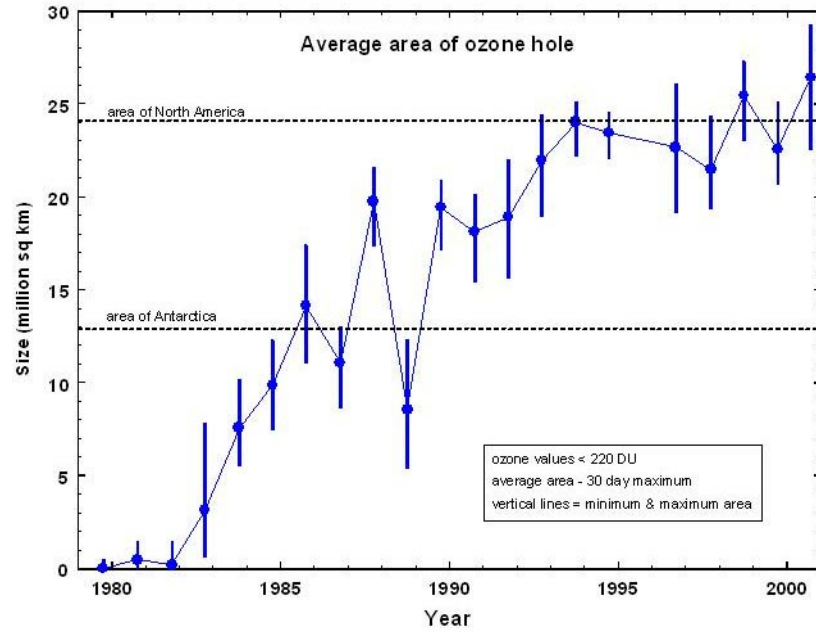
Earth Probe TOMS Total Ozone September 16, 2000




EP/TOMS Total Ozone Jan 30, 2001



## 南極オゾンホールサイズと最小オゾン濃度の変遷



## 成層圏オゾン破壊の生体への影響



**Ozone Hole  
Blamed for  
Frog Decline**



By MARLA CONE  
TIMES ENVIRONMENT WRITER

In research that for the first time suggests that the thinning of the Earth's ozone layer directly harms wild animals, scientists reported Monday that frog eggs are being killed by ultraviolet radiation in the Pacific Northwest.

Oregon State University's study of frogs in the Cascade Mountains could help solve the mystery of why many of the world's frogs and toads seem to be vanishing, especially at high altitudes.

The most alarming aspect of the research, some scientists say, is that it indicates UV radiation is damaging wildlife in heavy-

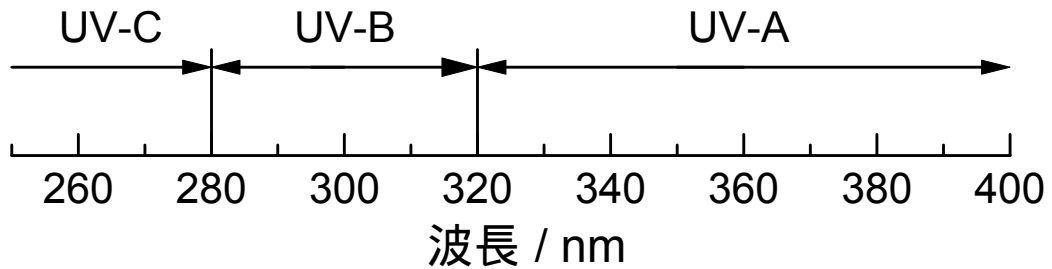
**Please see FROGS, A20**



人体への影響：紫外線強度増大で皮膚ガンの発生率が増加する。

## 紫外線の健康影響

### 紫外線(Ultra violet)の分類

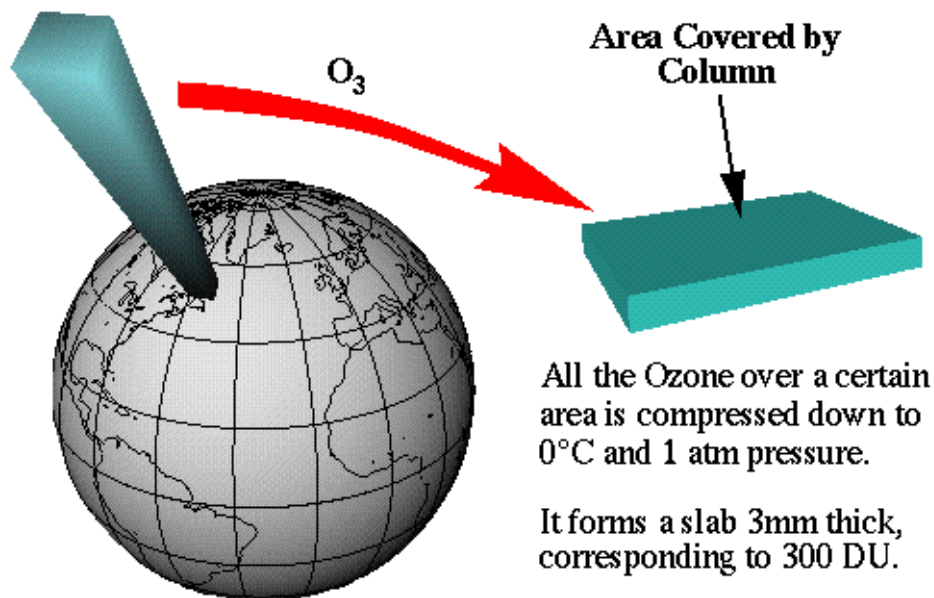


- 300 nm以下の波長の光はほとんど地上に到達していない。
- UV-Bは地上に到達する太陽光の0.5%。
- 日焼けやビタミンDの合成はUV-Aの効果。
- UV-Bは、白内障、皮膚免疫低下、皮膚ガンの原因となる。

オゾンの量表示 = Dobson(ドブソン)単位

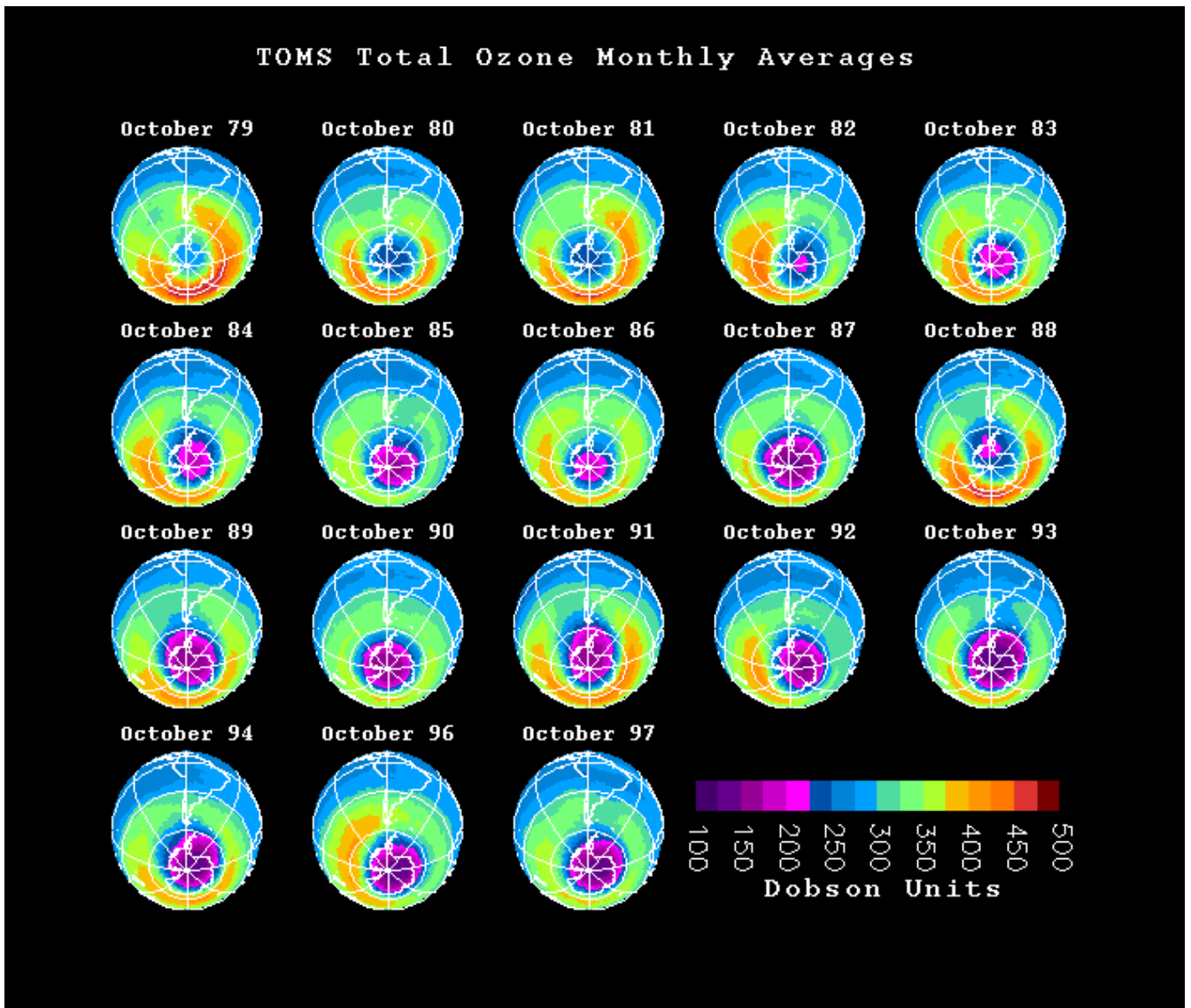
オゾンを0 , 1気圧で地表上に集めたときの厚み×100(mm)

例 : 200 DU(ドブソン単位) = 0 , 1気圧で2mm



1 atm-mm = 0 , 1気圧で1 mmの厚みをもつこと  
200 DU = 2 atm-mm

衛星による南極オゾンホール観測  
TOMS(Total Ozone Mapping System)



衛星による北極極オゾンホールの観測  
TOMS(Total Ozone Mapping System)

