環境・食品・産業衛生学第2回「大気・温熱・気圧」 ミニレポート用紙 (2018年4月16日)

【解答例】

1. 熱放射を測定するために使用される機器は何か

黒球温度計

2. 高地適応とはどういう環境への適応と考えればよいか

低酸素分圧環境

3. 化学的大気環境のうち、少なくともこの 50 年ほど、季節変動しながらもずっと増加傾向な成分は何か

二酸化炭素(CO2)

(補足)WMO (World Meteorological Organization)によれば、https://ane4bf-datap1.s3-eu-west-1.amazonaws.com/wmocms/s3fs-public/ckeditor/files/pr_2.jpg (下図)のようにメタンは 1999 年~2006 年停滞し、N₂O は季節変動が不明瞭です

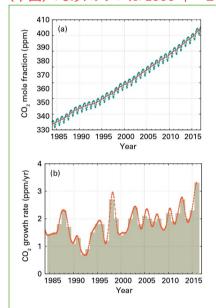


Figure 3. Globally averaged CO₂ mole fraction (a) and its growth rate (b) from 1984 to 2016. Increases in successive annual means are shown as the shaded columns in (b). The red line in (a) is the monthly mean mole fraction with the seasonal variations removed; the blue dots and line depict the monthly averages. Observations from 123 stations have been used for this analysis.

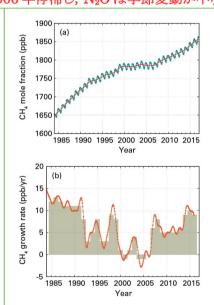


Figure 4. Globally averaged CH₄ mole fraction (a) and its growth rate (b) from 1984 to 2016. Increases in successive annual means are shown as the shaded columns in (b). The red line in (a) is the monthly mean mole fraction with the seasonal variations removed; the blue dots and line depict the monthly averages. Observations from 125 stations have been used for this analysis.

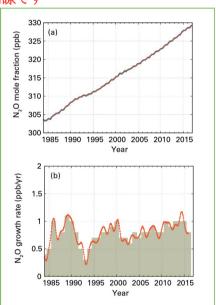


Figure 5. Globally averaged $\rm N_2O$ mole fraction (a) and its growth rate (b) from 1984 to 2016. Increases in successive annual means are shown as the shaded columns in (b). The red line in (a) is the monthly mean mole fraction with the seasonal variations removed; in this plot, it overlaps with the blue dots and line that depict the monthly averages. Observations from 33 stations have been used for this analysis.

*人類の生存に適した物理化学的大気環境を保つために、人類は何に気をつけるべきか

(決まった正解はありません)