IDIOMA: INGLÊS

Área 2

* Indica uma pergunta obrigatória

1. E-mail *

2. ÁREA *

Marcar apenas uma oval.

- 2 - CIÊNCIAS EXATAS E DA TERRA, ENGENHARIAS

3. NOME DO CANDIDATO *

4. NÚMERO DA INSCRIÇÃO *

5. NÚMERO DO CPF *

Leia o texto e responda as questões a seguir em Português. Todas as questões dever ser respondidas de acordo com o texto. As respostas digitadas neste formulário eletrônico constituirão o ÚNICO documento válido para correção da prova.

Ozone hole over Antarctica becomes one of the largest, 3 times the size of Brazil

Edited by Anjali Thakur

European Space Agency (ESA) said that the size of the ozone hole has ballooned to near-record size. The space agency said that the ozone-depleting area reached a size of 26 million sq km on 16 September 2023. "This is roughly three times the size of Brazil," ESA said.

The space agency said that the ozone hole fluctuates on a regular basis. From August to October, the ozone layer increases in size- reaching a maximum depletion between mid-September and mid-October.

This year, the ozone hole has grown "rapidly" since mid-August, "making it one of the biggest ozone holes on record," Copernicus Atmosphere Monitoring Service senior scientist Antje Inness said in a statement.

The scientist added, "It reached a size of over 26 million sq km on 16 September. Tropomi ozone data are an important dataset for our ozone analysis."

Explaining why is the ozone hole so big, ESA said that the variability of the size of the ozone hole is largely determined by the strength of a strong wind band that flows around the Antarctic area. This strong wind band is a direct consequence of Earth's rotation and the strong temperature differences between polar and moderate latitudes.

The agency added, "If the band of wind is strong, it acts like a barrier: air masses between polar and temperate latitudes can no longer be exchanged. The air masses then remain isolated over the polar latitudes and cool down during the winter."

However, the exact reason behind the current ozone concentrations remains unclear.

The ozone levels return to normal by the end of December.

Antje explains that the eruption of the Hunga Tonga volcano in January 2022 injected a lot of water vapour into the stratosphere which only reached the south polar regions after the end of the 2022 ozone hole.

He added, "The water vapour could have led to the heightened formation of polar stratospheric clouds, where chlorofluorocarbons (CFCs) can react and accelerate ozone depletion. The presence of water vapour may also contribute to the cooling of the Antarctic stratosphere, further enhancing the formation of these polar stratospheric clouds and resulting in a more robust polar vortex."

However, it's important to note that the exact impact of the Hunga Tonga eruption on the Southern Hemisphere ozone hole is still a subject of ongoing research, ESA said.

Adaptado de: https://www.ndtv.com/science/ozone-hole-over-antarctica-becomes-one-of-the-largest-3-times-the-size-of-brazil-4452505

Published on October 5, 2023

6. **QUESTÃO 1: Cite o fato anunciado pela Agência Espacial Europeia, mencionando a relação feita com o Brasil.** *

7. **QUESTÃO 2: Como a Agência Espacial Europeia justificou o fato de o buraco na camada de ozônio estar tão grande?** *

8. **QUESTÃO 3: O que o cientista Antje Inness mencionou sobre a erupção do Hunga Tonga e seu impacto no buraco da camada de ozônio?** *

9. **QUESTÃO 4: O que a agência disse sobre a regularidade da flutuação do buraco de ozônio e sobre o que foi observado neste ano?** *

10. **QUESTÃO 5: Qual é o impacto das massas de ar dos ventos fortes?** *