

Antarctica recorded the hottest temperature

August 21, 2020

Recently Antarctica recorded the highest temperature (18.3C) on record, this warm spell caused widespread melting on nearby glaciers. It surpassed Antarctica's previous record, set in 2015, by 0.8 degrees Celsius

Key highlights

- According to NASA, the warm temperatures of February 2020 were caused by a combination of meteorological elements.
- A ridge of high pressure was centered over Cape Horn at the beginning of the month, and it allowed warm temperatures to build.
- Typically, the peninsula is shielded from warm air masses by the Southern Hemisphere westerlies, a band of strong winds that circle the continent.
- However, the westerlies were in a weakened state, which allowed the extra-tropical warm air to cross the Southern Ocean and reach the ice sheet.
- Sea surface temperatures in the area were also higher than average by about 2-3°C.
- NASA also reasoned that dry, warm foehn winds also could have played a part.
- Foehn winds are strong, gusty winds that cause down slope windstorms on mountains, often bringing warm air with them.
- In February 2020, westerly winds ran into the Antarctic Peninsula Cordillera. As such winds travel up the mountains, the air typically cools and condenses to form rain or snow clouds. As that water vapor condenses into liquid water or ice, heat is released into the surrounding air.

- This warm, dry air travels downslope on the other side of the mountains, bringing blasts of heat to parts of the peninsula. The drier air means fewer low-lying clouds and potentially more direct sunlight east of the mountain range
- This February heatwave was the third major melt event of the 2019-2020 summer, following warm spells in November 2019 and January 2020