What is a bomb cyclone?

February 1, 2022 <u>In news</u>— Recently, Bomb cyclone hit Eastern USA and triggered transport chaos, outages. What is a bomb cyclone ?

- A bomb cyclone is a large, intense midlatitude storm that has low pressure at its center, weather fronts and an array of associated weather, from blizzards to severe thunderstorms to heavy precipitation.
- It becomes a bomb when its central pressure decreases very quickly—by at least 24 millibars in 24 hours.
- It typically develops in the wintertime, over the ocean or off a coast (in temperate latitudes).
- Two famed meteorologists, Fred Sanders and John Gyakum, gave this pattern its name in a 1980 study.
- Bomb cyclones form through a process called "bombogenesis", that occurs when a cold air mass collides with warm waters.
- As this happens, the pressure drops significantly and a cyclone forms and intensifies.
- When a cyclone "bombs," or undergoes bombogenesis, this tells us that it has access to the optimal ingredients for strengthening, such as high amounts of heat, moisture and rising air.