

## Factors for variations in bombcyclones

\*Minori Iida<sup>1</sup>

1. Tokyo Metropolitan Toyama High School

In this study, I researched about the case that some bomb cyclones show really strong development to know what the factor that makes bomb cyclones' development stronger is, because I was interested in the fact that there are some kinds of bomb cyclones; firstly, which shows really strong development, secondary, which shows just a standard of development rate to say to be a bomb cyclones, and the middle of them. To know how some bomb cyclones develop so strong, and what makes the bomb cyclones' development stronger, I started this research.

Firstly, following the result of study by JMASTEC which shows that Kuroshio current helps the develop of bomb cyclones, I checked that the temperature difference between the warmth brought by Kuroshio current and cold air came from north makes bomb cyclones' development stronger, and in the El Nino phenomenon, the tend of the bomb cyclones' development becomes weak because the sea surface temperature rises in winter in El Nino phenomenon.

Secondary, remarking the data which shows the amount of energy which is conducted to atmosphere from sea surface named sea surface flux, that bomb cyclones makes the sea surface flux bigger with the high wind speed of own and to use the energy, bomb cyclones develop more and more became clear.

Keywords: Kuroshio current, temperature difference, sea surface flux