AAS004-P04   Room: Convention Hall   Time: May 27 17:15-18:45

Climatological changes of extreme precipitation over the Korean Peninsula using GEV distribution

Yu-Kyung Hyun[1*], Won-Tae Kwon[1], Hee-Jeong Baek[1], Akio Kitoh[2]

[1]NIMR/KMA, [2]MRI/JMA

The aim of this study is for exploring the precipitation changes in the global warming. The possible changes of extreme precipitation over the Korean Peninsula are examined with observation and the high-resolution AGCM results. Using Generalized Extreme Value (GEV) distribution, annual maximum daily precipitation is analyzed by KMA (Korean Meteorological Administration) station and the APHRODITE gridded data. The future prospects of extreme events based on 27-km time-sliced results by National Institute of Meteorological Research (NIMR) in KMA, and the 20-km mesh AGCM by the Japan Meteorological Agency (JMA) and the Meteorological Research Institute (MRI) are also examined. . In the warming climate of A1B scenario simulation, the increasing trend of temperature is associated with an increasing trend of precipitation strength (90%, 95% of probability distribution), and this produces an increase in the number of the days of heavy precipitation as well as the corresponding amount.

Keywords: Climatological changes, extreme precipitation, GEV distribution, Korean Peninsula