Potensi kejadian badai guntur berdasarkan parameter kelembapan, labilitas udara, dan mekanisme pengangkatan : studi kasus di Bandar Udara Frans Kaisiepo Biak

---

Abstrak

Thunderstorms is a weather condition that is harmful to the flight activities. The potential thunderstorms (especially thermal thunderstorms) assesment for Indonesia in particular Biak area needs to be done to reduce the risk of bad thunderstorms to flight activity at airports Frans Kaisiepo Biak. The thunderstorms is affected by the existence of water vapor in the atmosphere. The content of water vapor in the atmosphere can be estimated from the value of precipitable water, while atmospheric instability conditions can be identified from the Convective Available Potential Energy (CAPE), assuming an air parcel at the surface is heated until it reaches the temperature of the convective (TC) so that air parcels can be lifted up to convective condensation level (CCL) and it condensate. Logistic regression is one of mathematical models approach that can be used to describe the relationship between the independent variables with response variables that are bound dikotomik (event and non-event). By using observation data of surface and upper air in 2006-2009 analysis of air instability and its relation to the probability of thunderstorm occurrence is carried out. Results show that precipitable water between surface and 300 hPa height has correlation and directly proportional to the probability of thunderstorm occurrence, and convective temperature (TC) has correlation and inversely proportional to the probability of thunderstorm occurrence. While CAPE at CCL to 300 hPa height has not correlation to the probability occurrence of thunderstorms. Thunderstorm probability model has 58.8% of accuracy.