

## Extreme weather monitoring in Indonesia using TIS camera onboard on LAPAN A4

\*Purwadi Purwadi<sup>1</sup>, Yukihiro Takahashi<sup>2</sup>, Findy Renggono<sup>1</sup>, Halda Aditya Belgaman<sup>1</sup>, Arif Saefudin<sup>3</sup>

1. Agency for Assessment and Application for Technology, Jakarta 10340, Indonesia, 2. Faculty of Science, Hokkaido University, Sapporo 0600810, Japan, 3. National Institute of Aeronautics and Space of Indonesia, Jakarta 13220, Indonesia

Indonesia is a country that is often struck by floods and forest fires. The El-Nino and La Nina phenomena are natural factors that cause Indonesia to experience two different disasters. During El Nino, most parts of Indonesia experience minimum rainfall, resulting in drought which triggers forest and land fires. Conversely, when La Nina hit, Indonesia experienced quite extreme rainfall which causing floods. LAPAN A4 is prepared to be a part of a microsatellite consortium in Asia that will carry a thermal infrared sensor (TIS) camera designed by Hokkaido University. This TIS camera has a spec measurement range of 100 °C to -60 °C. So, it can be used to detect hotspots during the dry season or cloud growth during the rainy season. TIS cameras have independently conducted several tests to test the resistance of TIS cameras to the environment when stored, launched, and operated. Temperature calibration has also been carried out to get a digital value function as a temperature value. The current status of LAPAN-A4 development is being assembled and tested.

Keywords: hotspot, severe weather, LAPAN A4, TIS Camera