Phased array type L-band Synthetic Aperture Radar (PALSAR) boarded on Advanced Land Observing Satellite (ALOS) has been launched and is operated by Japan Aerospace Exploration Agency (JAXA), which provides high resolution (about 10 m resolution) data even in the night and severe weather conditions.

Tropical cyclone Tasha caused heavy rains and flooding in central Queensland, Australia, during the Christmas holiday 2010. ALOS/PALSAR observation was conducted on 28th Dec. 2010, 2nd, 4th, 8th, 9th, 14th, 16th, 19th, 20th, and 21st Jan. 2011.

Comparison these PALSAR image with images that observed before flooding, brightness of images that observed after flooding is small due to small roughness by flooding. This research will present these observation results and discuss effective algorithm to identify flood-inundated area by using ALOS/PALSAR observation.