Republic of Indonesia is a maritime country that has large bodies of water. Nowadays ocean currents commonly can be used for various matter that support human life, surface currents. By utilizing the calculation of satellite data, altimetry satellite Jason-2 offers data on wind direction, and speed which calculated by a method that resulted the data of surface ocean currents in Indonesian Waters.

This study based on GDR (Geophysical Data Record) data that are obtained from Jason-2 altimetry satellite that was designed specifically by NASA (National Aeronatics and Space Administration) and CNES (Centre National d'Etudes Spatiales) to study the dynamic aspects of the ocean. GDR contains 36 pass (orbital path) in one cycle, where a cycle can be reached in a period within ten days.

The results of this season which used Jason-2 from 2009 to 2012, the ocean current between December and February moved regularly from northwest toward southeast, in line with
West Monsoon. Similarly, the ocean current between June and August moved regularly from the northwest toward the southeast as well as the East Monsoon. In this period, ocean currents came from Australia to Asia. Meanwhile, the transition occurs when the wind movement occurs from March to May and September to November, with the ocean current movement tends to split into two directions, from Asia to Australia and from Australia to Asia, but the average speed of the ocean current is weak in almost all waters in Indonesia.

Keywords: Altimetry Satellite Jason-2, Ocean Surface current, GDR (Geophysical Data Record)