Analysis of Ocean Waves Using JERS-1/SAR Data Around Japan

ChaoFang Zhao*, *

Masatoshi Akiyama**   Mingxia He*   Yasuhiro Sugimori**

Abstract

In this study, JERS-1 synthetic aperture radar (SAR) images of the ocean surface are processed and compared with data from the Ocean Data Buoy Stations operated by the Japan Meteorological Agency (JMA). In spite of the low signal-to-noise ratio of JERS-1/SAR data due to the low transmission power, the present results indicate it is possible to detect ocean waves in high sea state (Hs > 2m). The relationship between the wave length derived from JERS-1/SAR data and the significant wave period from the ocean data buoy stations is consistent with the linear dispersion relation in deep water.