Japan Geoscience Union Meeting 2014
(28 April - 02 May 2014 at Pacifico YOKOHAMA, Kanagawa, Japan)

HGM22-P08 Room:Poster Time:April 30 18:15-19:30

Field measurements on the reduction of wave height on a fringing reef: A study from the Miibaru coast, Okinawa Island

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To investigate the relationship between reduction of wave height on a fringing reef and the water depth at the reef edge, field measurements were carried out on Miibaru coast with a fringing reef in Okinawa Island, Japan. The ratio of the shore break height (the height of final breaking waves near the shoreline) to the wave height at the reef edge, H_b/H', which denotes the degree of the reduction of wave height on a reef, was found to decrease with decreasing water depth at the reef edge. This result indicates that the reduction of wave height on a reef is greatly controlled by water depth on a fringing reef.

Keywords: Reduction of wave height, Coral reef, Fringing reef, Water depth, Okinawa Island