# **Abstract Details**

# <u>AOGS 1st Annual Meeting</u> > <u>Ocean and Atmospheres</u> > Deformation of solitary internal wa observed near the mid-east coast of Korea >

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  - **Title:** Deformation of solitary internal waves observed near the mid-east control Korea

#### Abstract:

Nonlinear solitary internal waves (SIWs) are frequently observed in coastal ocean and their propagation to the coast plays an important r variability of physical and biogeochemical properties there. Theoretica numerical studies, and laboratory experiments suggest that the SIWs experience deformations such as shoaling, fission, refraction and brea while propagating to the shallow regime. However, those deformation SIWs were rarely reported from earlier in-situ measurements. In this we investigate the deformation properties of the SIWs based on the c records from moored arrays of ADCP, thermistor, and CTD near the m coast of Korea in June 2001 and May 2003. Retardation in propagatin speed, refraction, fission and shoaling of the SIWs are verified, which caused by the change in bottom topography and stratification, as the approach to the coast. The refraction model (Small, 2001), fission lav (Zheung, 2001) and breaking criteria (Vlasenko and Hutter, 2002) for SIWs developed recently are applied and compared with observations the moderate amplitude (~5 m) SIWs, the observed deformation regi the SIWs near the mid-east coast of Korea can be classified into three (propagation and refraction zone, strong shoaling zone and breaking depending on the stratification.

## **Presentation Mode:**

Keywords: solitary internal waves, refraction, fission, shoaling, breaking

#### Status: Reviewed.

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