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TSUNAMI ALERT AND DETECTION

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Abstract - Tsunami early warning systems have provided to be the extreme importance after the tsunami that hit Japan in March 2011. This research article presents a case study based on the tsunami detection using Bottom Pressure Rate (BPR) measurement and the post the analysis using the SAR datasets. A final decision based system using BPR has been studied to carry out the measurements of tsunami wave parameters. SAR based study has also been carried out for the post tsunami studies. Wiener filters are utilized to remove the speckle noise presents in imagery. Future scope of this work has also been proposed. The early detection and warning systems have shown and proven an ultimate importance, especially after the destructive tsunami that hit Japan in March 2011. The purpose of this research is to notify and enhance the existing tsunami results for the detection and early warning prediction with the suitable accuracy .Most of the current tsunami under water seismological algorithms has been developed since the 1960s when the giant Chilean earthquake generated in Pacific Ocean.. The coastal based radar monitoring systems are implemented in various countries to detect the tsunami wave's arrival near to the coast and to analyze and present the report to the disaster management team for the quick and sudden action to save various lives.The main components for an end-to-end system of tsunami are to yield real-time surveying, seismic and tsunami activities alert, punctual decision production and advisories, and dissemination of warnings and information.

Keywords- Remote sensing; Tsunami damage detection; Epicenter; BPR.