

[Home](#)

[Online Library](#)

- [Recent Papers](#)
- [Volumes and Issues](#)
- [Special Issues](#)
- [Library Search](#)
- [Title and Author Search](#)

[Alerts & RSS Feeds](#)

[General Information](#)

[Submission](#)

[Review](#)

[Production](#)

[Subscription](#)

[Book Reviews](#)

Journal Metrics



IF 1.357



5-year IF 1.781

SCOPUS[®] SNIP 0.616

SCOPUS[®] SJR 0.067

[Definitions](#)

[Volumes and Issues](#) [Contents of Issue 9](#) [Spec](#)

Nat. Hazards Earth Syst. Sci., 10, 1957-1964, 2010

www.nat-hazards-earth-syst-sci.net/10/1957/2010/

doi: 10.5194/nhess-10-1957-2010

© Author(s) 2010. This work is distributed under the Creative Commons Attribution 3.0 License.



Concept study of radar sensors for near-field tsunami early warning

T. Börner^{1,*}, M. Galletti^{1,**}, N. P. Marquart^{1,**}, and G. Krieger¹

¹Microwaves and Radar Institute, German Aerospace Center in the Helmholtz Alliance (DLR), Oberpfaffenhofen, Germany

* now at: NOAA, Norman, OK, USA

** now at: European Patent Office, Munich, Germany

Abstract. Off-shore detection of tsunami waves is a critical component of an effective tsunami early warning system (TEWS). Even more critical is the off-shore detection of local tsunamis, namely tsunamis that strike coastal areas within minutes after generation. In this paper we propose novel concepts for near-field tsunami early detection, based on innovative up-to-date microwave remote sensing techniques. We particularly introduce the NESTRAD (NEar-Space Tsunami RADar) concept, which consists of a real aperture radar accommodated inside a stationary stratospheric airship providing continuous monitoring of tsunami-generating oceanic trenches.

[Full Article](#) (PDF, 361 KB)

Citation: Börner, T., Galletti, M., Marquart, N. P., and Krieger, G.: Concept study of radar sensors for near-field tsunami early warning, Nat. Hazards Earth Syst. Sci., 10, 1957-1964, doi:10.5194/nhess-10-1957-2010, 2010. [Bibtex](#) [EndNote](#) [Reference Manager](#) [XML](#)