

Slow build-up of turbidity currents triggered by a moderate earthquake in the Sea of Marmara

Pierre Henry¹, M Sinan Özeren², Nurettin Yakupoğlu³, Ziyadin Çakir³, Emmanuel de Saint-Léger⁴, Olivier Desprez de Gésincourt⁴, Anders Tengberg⁵, Cristele Chevalier⁶, Christos Papoutsellis¹, Nazmi Postacıoğlu⁷, Uğur Dogan⁸, Hayrullah Karabulut⁹, Gülsen Uçarkuş³, M Namık Çağatay³

¹Aix Marseille Univ, CNRS, IRD, INRAE, Coll France, CEREGE, Aix-en-Provence, France, ²Istanbul Technical University, Eurasia Institute of Earth Sciences, Maslak, Istanbul, Turkey, ³Istanbul Technical University, Geological Engineering Dept., Maslak, Istanbul, Turkey, ⁴CNRS, DT INSU, Parc national d'instrumentation océanographique, Plouzané, France, ⁵Aanderaa Data Instruments AS, Bergen, Norway, ⁶Aix Marseille Univ, CNRS, IRD, MIO, Aix-en-Provence, France, ⁷Istanbul Technical University, Physics Dept., Maslak, Istanbul, Turkey, ⁸Yıldız Technical University, Geomatic Engineering Dept., Istanbul, Turkey, ⁹Bogazici University, KOERI, Istanbul, Turkey

Supplementary Material

The purpose of the supplementary material is to provide an assessment of the response of the Seaguard RCM tiltmeter and compass to tilting beyond usual conditions of operations.



Figure S1. Photos of system used showing the position of the device for an applied X-tilt of -90° (X-axis vertical up)

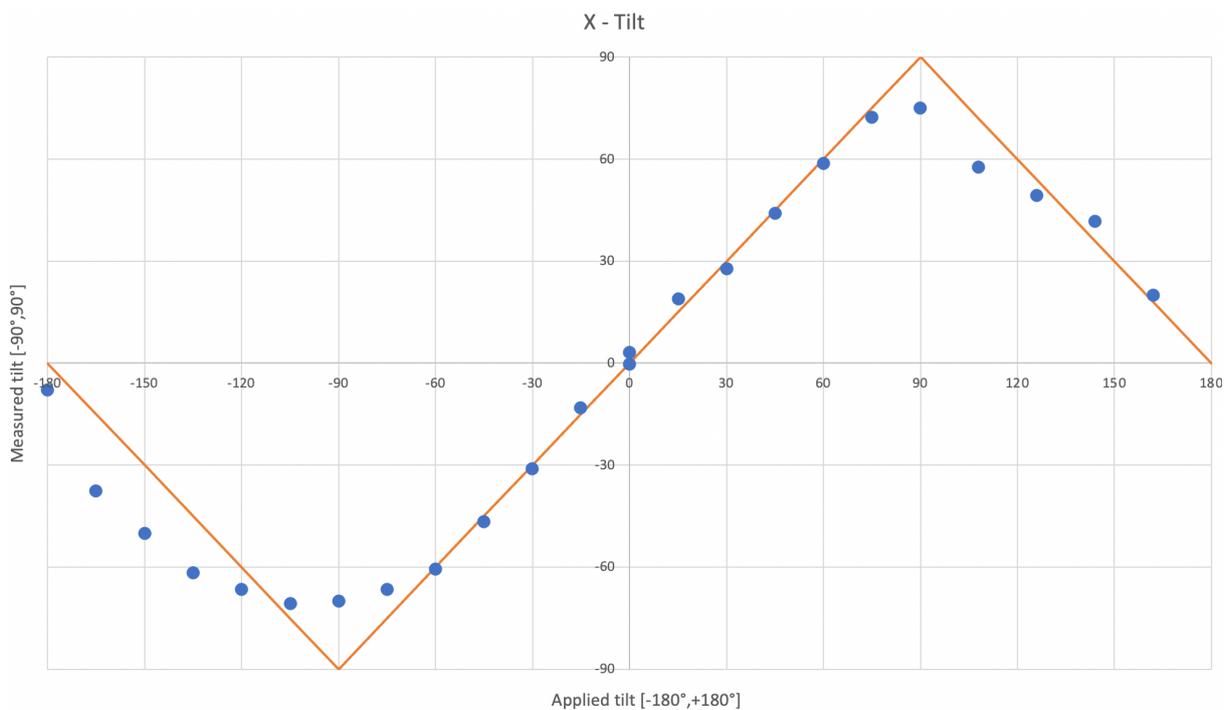


Figure S2. Response of the Seguard RCM tiltmeter to instrument tilting in the X direction. Accuracy is always better than 3° for an absolute tilt of less than 60° but measurements then saturate around 80° . Measurements also appear less accurate when the instrument is upside down (applied tilt less than -90° or more than 90°)

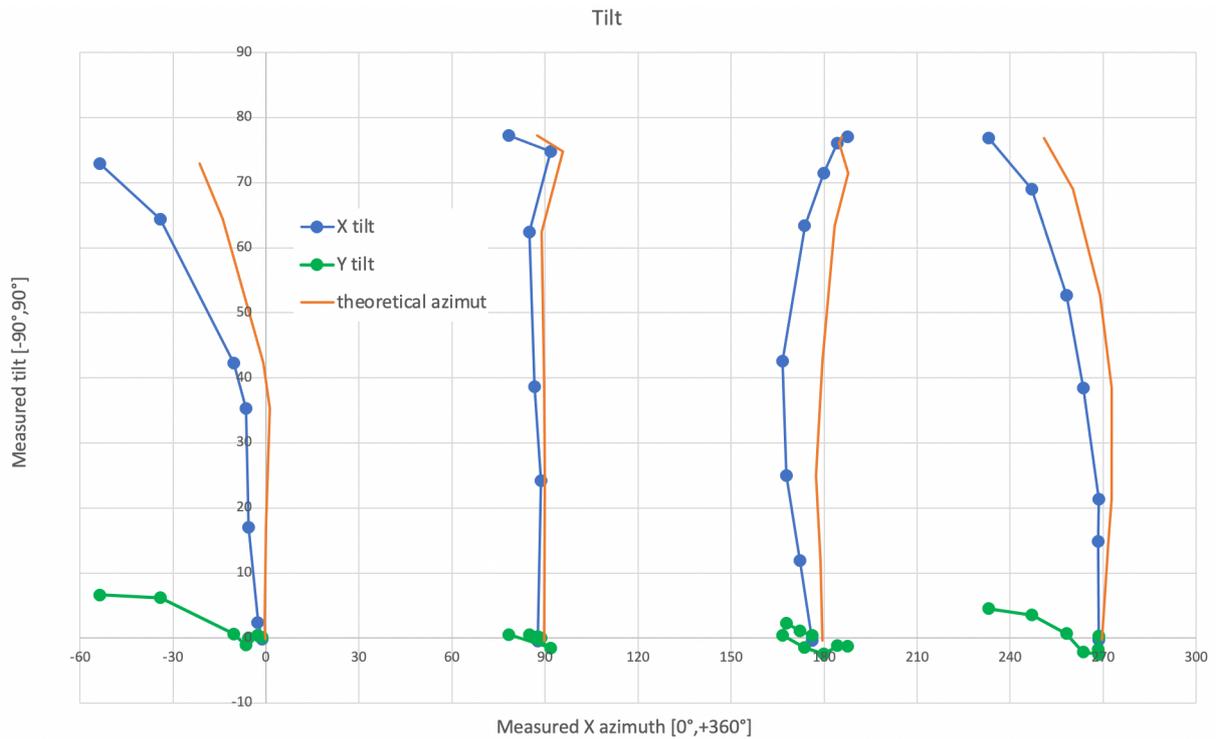


Figure S3. Response of the Seguard compass to instrument tilting in the X direction with X oriented N0°, N90°, N180° and N270°. The test was performed in Brest where magnetic inclination is 63°. The theoretical azimuth is calculated to take into account the effect of tilt measured in the Y-direction with the a approximate correction: $\text{atan}(\sin(\text{Y-tilt})/\cos(\text{X-tilt}))$.