

Seismic Observations using Integrated Telecom Fibers

Daniele Caruana^{1,2}, Matthew Agius², André Xuereb¹, Cecilia Clivati³, Simone Donadello³

¹Department of Physics, University of Malta, Malta

²Department of Geosciences, University of Malta, Malta

³INRIM- Italian National Institute of Metrology, Italy

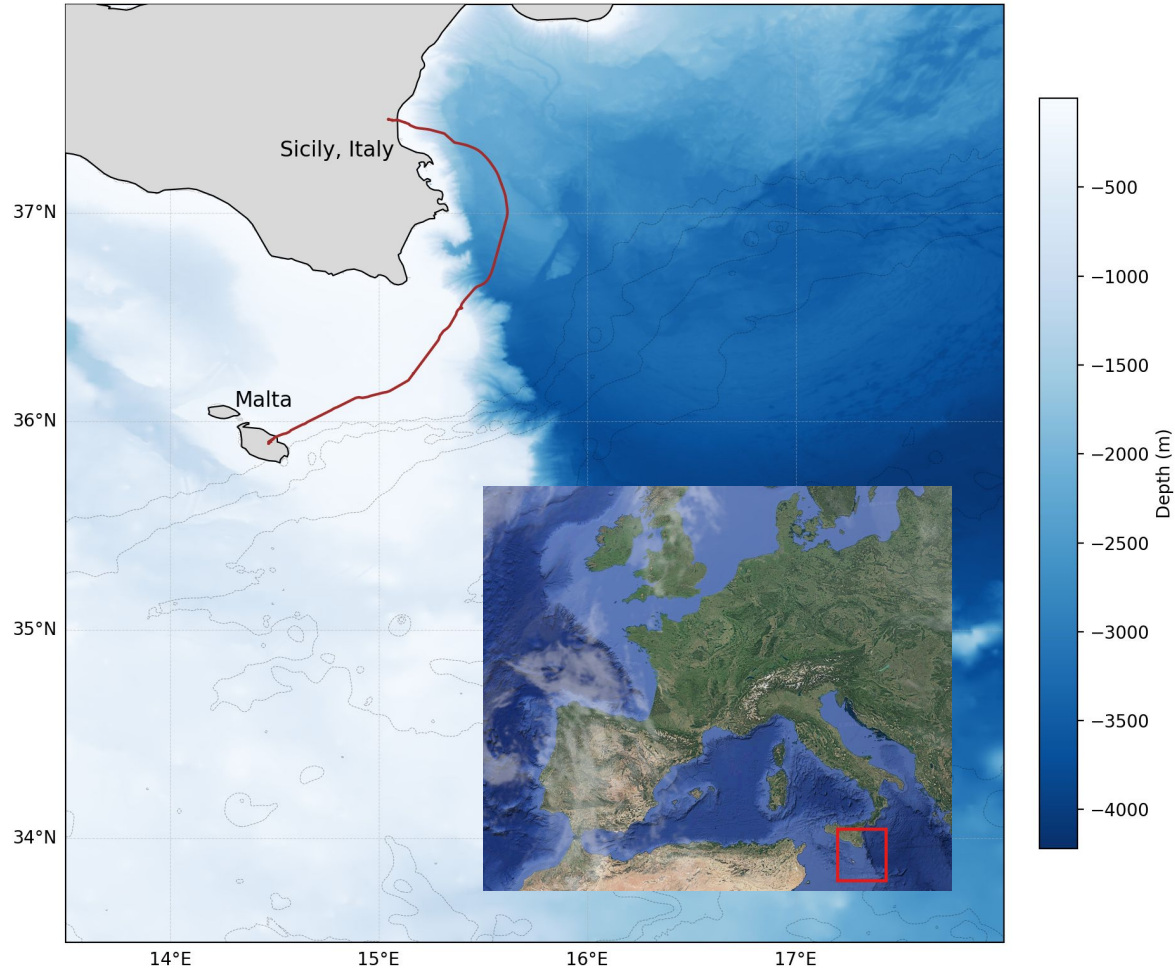


L-Università
ta' Malta



SENSEI
Smart European Networks for Sensing
the Environment and Internet quality

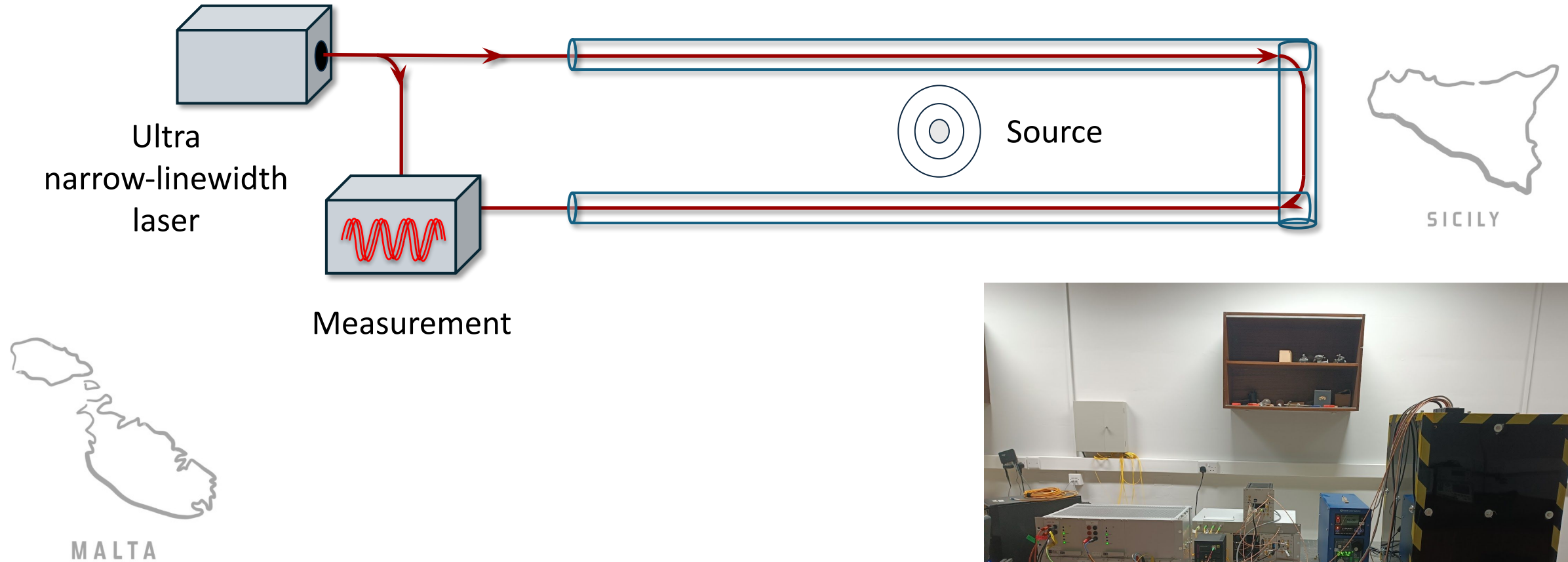
Our Testbed



The area:

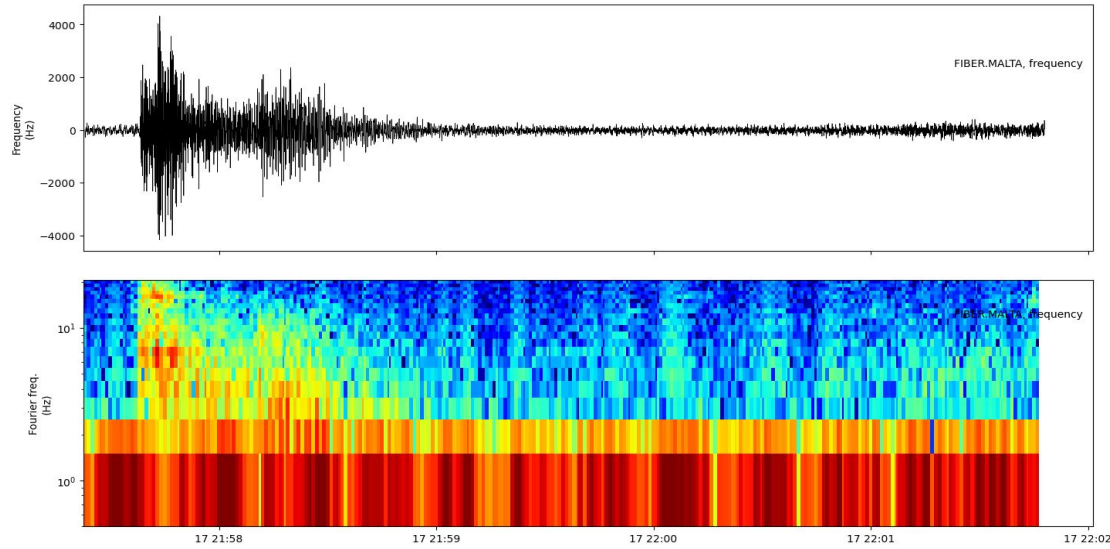
- Volcanically & seismically active
- Oceanographic interest
- Passes through an abyssal escarpment (water depth reaching ~4000 m)
- Well instrumented with other (onshore) sensing tools

Laser Interferometry



Our Data

- M5.3 Earthquake
- 120 km epicentral distance from fiber



Water shaking
submarine range

Anthropogenic noise

