

Figure S1: Mosaic showing the analysis of the magnitude 6.4 mw earthquake that occurred on Wed Sep 4 11:52:25 2024. Upper panel: Global map station locations, ray path of the seismic phase, and focal mechanism (colors indicate event depth). Trajectories of the ocean glider and zoomed-in views at the moment of the record in latitude-longitude and depth-longitude plots. Lower panel: wide-window waveform filtered (black and grey lines are waveforms filtered below and above 3 Hz, respectively, and the amplitude is presented in digital units) and its spectrogram. Vertical dashed lines (red/white) and the letter indicate the theoretical arrival time estimated using the ak135f model. Spectral analysis using five frequency bands centered on the theoretical wave arrival (between -30 and 30 seconds), waveforms, and STA/LTA ratio curves for each band and the raw data. The red dot indicates the estimated phase arrival based on SNR > 1.5 and STA/LTA ratio > 3 in the last two frequency bands. The dashed oranges horizontal lines represent the preset lower (1.5) and upper (3) limits for the STA/LTA ratio trigger, and the orange dot is the maximum value. The following figure is a graphical explanation of each part of the following results.