



FIGURE S2. (a) Increase in depth in meters (red) and decrease in temperature in (°C) recorded by the RBR™ pressure sensor during the descent of the mooring at Challenger Deep. Maximum hydrostatic pressure recorded was 11,161.4 decibars, corresponding to a maximum depth of 10,829.7 m (the pressure sensor was 25 m above the seafloor). Temperature ranged from a maximum of 28.4°C at the sea surface to a minimum of 2.45°C at the seafloor. (b) Pressure record (depth) time series (with mean removed) from the RBR™ instrument during the two months of the total deployment. Tidal cycles are clearly visible, as is a gradual decrease over the first ~40 days of the deployment. (c) Power spectral density estimate of pressure record showing energy peaks associated with tidal fluctuations. The peak at left representing the neap cycle, and the semidiurnal peaks at 24 and 12 hours were recorded at 10,829.7 m ocean depth.