



## **Investigation of internal wave mixing over the bottom topography of the deep Ionian sea**

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The abyssal Ionian Sea is a deep region of interest for the entire circulation of the Mediterranean since it takes an important role in the ventilation processes of the whole basin (Meccia et al., 2015). To better understand the distribution and transfer of water masses and heat throughout this deep portion of the Mediterranean Sea, we investigate spatial and temporal patterns of diapycnal mixing due to internal waves over the bottom of the Ionian basin. In particular, to identify regional features of the internal wave field in terms of vertical shears and strain, we investigate LADCP and CTD profiles measured across the basin in 2007 (cruise Km3Net), that cover various seafloor morphologies (shelf, shelf break, and abyssal plain). Then, to highlight the crucial role of deep layer mixing processes of the Ionian Sea in changing the baroclinic structure of the whole water column (Artale et al., 2018), we apply the parameterization of dissipation rate of kinetic turbulent energy described by Kunze et al. (2006), by using the largest dataset of deep CTD profiles available from 1977 to nowadays.

### References

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