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**Internal waves in the Petacalco canyon, Mexico** ANGEL RUIZ-ANGULO, JORGE ZAVALA-HIDALGO, Centro de Ciencias de la Atmosfera, UNAM — On the Mexican coastline, specifically on the Pacific side, there are many submarine canyons. One of the key rolls of coastal submarine canyons is that deep water from adjacent oceanic regions is brought up to the shelf with lots of nutrients enhancing primary production. The head of the Petacalco canyon is located in the Petacalco Bay, in the Pacific Ocean (ca. 17.5N and 102W). During, previous CTD surveys in the area, strong upwelling has been noticed, based on those observations a later survey was designed covering the Petacalco canyon with much larger spatial resolution. Along with those measurements, two thermistor arrays were deployed on the SW crest of the canyon at depths of approximately 60 [m]. The observations, from the thermistor arrays, show large temporal temperature variations with a semi-diurnal frequency. Those variations suggest the presence of internal waves traveling along the canyon axis, if the incidence angle of the internal wave matches the topographic slope results on breaking of internal waves enhancing mixing. This condition occurs at several locations along the canyon axis producing enough mixing of deep oceanic waters with continental waters, increasing the abundance of nutrients in the surrounding region.

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