



Abstract View

[Volume 14, Issue 4 \(April 1984\)](#)

Journal of Physical Oceanography

Article: pp. 656–665 | [Abstract](#) | [PDF \(658K\)](#)

Nonisostatic Response of Sea Level to Atmospheric Pressure in the Eastern Mediterranean

Christopher Garrett and Fouad Majaess

Department of Oceanography, Dalhousie University, Halifax, NS, Canada B3H 4J1

(Manuscript received September 30, 1983, in final form January 11, 1984)

DOI: 10.1175/1520-0485(1984)014<0656:NROSLT>2.0.CO;2

ABSTRACT

We analyze 5 months of sea-level data from Katakolon, Greece, in terms of local atmospheric pressure and the two components of geostrophic wind. The response to pressure is isostatic at low and high frequencies, but significantly nonisostatic for intermediate frequencies centered on about 0.01 cycles per hour. The response is consistent with a simple theory in which the fluctuating barotropic flow through the Straits of Gibraltar and Sicily is geostrophically controlled at low frequency. The local geostrophic wind contributes very little to the sea level variance; the response coefficients, while not well determined, are qualitatively as expected and quantitatively correspond to a very narrow near-shore region of shallow water.

Options:

- [Create Reference](#)
- [Email this Article](#)
- [Add to MyArchive](#)
- [Search AMS Glossary](#)

Search CrossRef for:

- [Articles Citing This Article](#)

Search Google Scholar for:

- [Christopher Garrett](#)
- [Fouad Majaess](#)

top ▲



