

研究论文

厦门—泉州近岸海域海表温、盐度密集走航观测

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摘要:

根据2007年7月23~28日厦门—泉州近岸海域表层温、盐度31个密集断面走航观测结果,结合同期卫星遥感海表温度(SST)数据和潮汐资料,分析该海域表层温、盐度的分布,并采用非等间隔数据的谱分析方法研究温、盐度的变化特征。结果表明:①九龙江冲淡水的影响可延伸到围头、深沪近岸海域,表现为明显的表层盐度锋存在;但晋江冲淡水对调查海域的影响较弱。②在该调查海域,潮汐对表层温、盐度的分布和变化有一定的影响,靠近厦门湾口一端的围头、深沪附近海域尤为突出。谱分析结果显示,该段的盐度变化与潮汐涨落在周期上比较一致。③调查期间,表层温度变化呈逐渐升高的趋势,而且具有明显的周日变化特征。④围头近岸表层存在一个低温高盐水区域,且位置随潮汐有所变动。

关键词: 表层温、盐度;密集走航观测;厦门—泉州近岸海域;非等间隔谱分析

Densely Underway Measurement of Surface Temperature and Salinity in Xiamen-Quanzhou Near-shore Area

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Abstract:

The distributions of surface temperature and salinity have been analyzed according to the sea surface temperature and salinity underway measurements along 31 transects in Xiamen Quanzhou near shore area in late July of 2007, combined with the remote sensing sea surface temperature data and tide data. The variational characteristics of temperature and salinity were analyzed through spectral analysis of unevenly sample data. The results show that: ①The influence area of the diluted water from the Jiulongjiang river can extend to near shore area of Weitou and Shenhu. There exist strong temperature and salinity fronts. But the influence of the diluted water from the Jinjiang river is weak. ②In the research area, tide has some effects on the distribution and variation of sea surface temperature and salinity, especially near Xiamen bay and in near shore area of Weitou and Shenhu. The spectral analysis result also shows that the variation of salinity coincides with that of tide. ③During the investigational period, sea surface temperature had an increasing trend accompanied with diurnal variation. ④There exists a low temperature and high salinity water near Weitou, and its location changes with tide.

Keywords: Surface temperature and salinity Densely underway measurement Xiamen Quanzhou near shore area Spectral analysis of uneven data.

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