

Quasi-simultaneous observation of currents, salinity and nutrients in the Changjiang plume on the tidal timescale

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During both the spring- and the neap-tide periods of November 2005, quasi-simultaneous observations were carried out by six boats over 26 h at 12 stations in the Changjiang plume. The simultaneous observations provided the actual distribution isopleths of salinity and nutrients that displayed considerable intra-tidal variations at surface, especially in the southeastern section of the study area (Figure 1). The lack of synopticity in sampling might lead to large discrepancies of the interpolated contours of salinity from the actual distribution isopleths. No clear flood-ebb asymmetry of salinity stratification was observed; whereas at inner stations, surface-to-bottom bulk velocity difference always tended to be greater during the ebb fraction of a semidiurnal cycle. At a given station, the weaker neap tides commonly induced stronger salinity stratification, less intra-tidal variability of salinity and nutrients, and less intrusion of bottom saltwater. Nutrients showed more nonconservative behaviors during the neap tides, presumably as a result of the prolonged residence time of seawater and decreased suspended particulate matter levels than during the spring tides.

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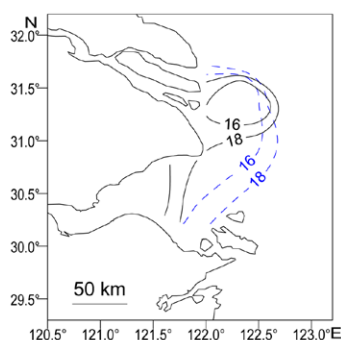


Figure 1: Comparison between the snapshot distribution isopleths of salinity at surface on the two occasions of 12:00 (solid black lines) and 18:00 on November 2 (dashed blue lines) during the spring-tide survey. The two occasions are roughly regarded as the peak high- and peak low-tide phases for the entire survey region.

Study on endocrine disrupting chemicals removal features in pingshantou waterplant of Huainan City, China

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Using a method for solid-phase extraction concentrated and high performance liquid chromatography analysis, detected the EDC_s content of different water treatment process in pingshantou waterplant of Huainan city, researched the distribution characteristics and removal efficiency of EDC_s in different water treatment process. The research results are as follows: DMP and DEP could be removed by rate of 100%, but BBPDBP, EE₂, E₁, BPA and NP were detected in different water treatment process, the detection rate was 100%. While the content of DMP, BBP, DBP, BPA increased in water treatment process. The content of BBP, DBP, EE₂, BPA increased after pipe delivering. Conclusions: Conventional drinking water treatment process of EDC_s removal is very limited; There are no rule to follow with EDC_s in coagulation-sedimentation and chlorination process, the reasons may be: degradation products and secondary pollution were produced in processing process, which caused the content of BBP, DBP elevated in coagulation-sedimentation and chlorination process; And several byproducts of BPA and NP were found in chlorination. In addition, the impact of pollution substances exudated from conveying water pipe on EDC_s should not be ignored.