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遥感应用

用FY-3A MERSI进行青岛海域浒苔监测

摘要：

在2008奥运会举办前期（2008年6月25日~7月15日），基于NDVI植被指数方法对青岛及其临近海域发生的超大规模浒苔灾害，利用FY 3A MERSI 250m数据进行了监测跟踪与分析，结果显示：监测初期，浒苔在大范围海域广泛分布（面积约为527.68km2），特别是奥帆赛区附近有大密集度浒苔聚集；监测末期，奥帆赛区和其他近岸水域基本没有发现浒苔，表明近岸浒苔得到有效控制。卫星数据回溯表明，此次浒苔灾害最早于5月初在黄海中部少量出现，5月底在黄海中部形成大面积覆盖，受风力和海流影响，逐步向青岛飘移并堆积。浒苔极强的环境适应力和繁殖力，以及由于海温升高和近海“春季环流”形成的适宜条件，是浒苔大面积发生的重要原因；南方强降雨可能造成了广泛分布于江苏、浙江、福建等海域的浒苔的异地漂移，成为如此大规模浒苔的来源之一。

关键词： FY-3A MERSI NDVI 黄海 青岛奥帆赛区

Enteromorpha Prolifera Monitoring with FY-3A MERSI around the Sea Area of Qingdao

Abstract:

Just before the coming of the 2008 Olympic Games(June 25th,2008 ~July 15th),the extreme large scale Enteromorpha prolifera hazard around Qingdao and its adjacent sea area had been tracked and analyzed using FY 3A MERSI 250m data with a NDVI method,which delivered the promise of FY 3A as “Olympics satellite” even in its on orbit testing phase.The monitoring results showed that at the beginning Enteromorpha prolifera were widely distributed in an extensive sea area (~527.68km2),especially around the Qingdao Olympic Regatta with high density,while at the end Enteromorpha prolifera were rarely found around the Qingdao Olympic Regatta and other coastal area,which was reflecting the effectiveness of algae control.The satellite data retrospect showed that this Enteromorpha prolifera firstly appeared with a small amount in the central part of the Yellow Sea at the beginning of May,covered a large area at the end of May,and gradually floated to Qingdao and accumulated as the result of wind and currents.The excellent environmental adaptability and reproduction ability of Enteromorpha prolifera and suitable condition brought by the increased sea temperature and coastal “spring circumfluence” are important reasons of this massive break out.

Keywords: FY-3A MERSI NDVI Yellow Sea Qingdao Olympic Regatta

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本刊中的类似文章

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