

Abstract Submitted
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Examination of wave band pattern feature observed in northwestern Monterey Bay airborne imagery during the 2009 SARP project¹ IVA GERASIMENKO, Randolph-Macon Woman's College, KAMIL ARMAIZ-NOLLA, Metropolitan University, Puerto Rico, MICHAEL GLOTTER, University of Michigan — On July 22, 2009, MASTER data was obtained from the DC-8 flying laboratory over the Monterey Bay region, and an unusual banded wave structure was observed in the northwest corner of the bay, approximately half a kilometer off-shore. This structure consisted of alternating dark and light bands, each 350 meters wide and 1500 meters long. Three possible explanations for the nature of the phenomenon were proposed: Langmuir cells, internal waves, or the small scale atmospheric-ocean interaction in the form of wind jets and supercritical airflow. ENVI, Excel, MATLAB and Google Earth programs were used to analyze the data. Results of this analysis were then examined in light of each of the three theories, in order to determine which explanation is more or less likely. The effect of the feature on the biological and chemical make-up of the immediately adjacent area was also studied through the in-situ data of the ocean surface layer collected by boat in Monterey Bay. If the bands observed alter physical conditions in some way that could affect the biology of the area, it is important to understand the nature of those bands and to see whether or not their presence introduces any significant change.

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Peter Sheldon
Randolph College

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