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# An Oceanic Wake in the Equatorial Undercurrent Downstream from the Galapagos Archipelago

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### ABSTRACT

In the Pacific Equatorial Undercurrent downstream (east) from the Galapagos archipelago, an unusual meander pattern was observed in the spring of 1967. Two separate hypotheses present themselves as explanations for the observed wake phenomenon. The wake may have been a variation of the familiar von Kármán wake, or it may have been a form of the Rossby wake, only recently discussed by White. Through a scale analysis, both hypotheses are found to be reasonable, and both give characteristic length scales (500 km) that agree well with the observed wavelengths. A fundamental difference between the two hypotheses is that the Rossby wake is stationary, while the von Kármán wake is time-dependent. However, the time scale for eddy shedding in a von Kármán wake is found to be on the same scale (2 months) as the length of the cruise that observed the wake phenomenon. Therefore, it appears that the observed oceanic wake may have had characteristics of both the von Kármán and Rossby wakes.

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