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The Rossby whistle: A resonant basin mode in the Caribbean Sea.

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We present a a leaky, resonant Rossby basin mode in the Caribbean Sea, excited by instability of the Caribbean Current. The mode is seen at the surface as westward-propagating Rossby waves with period 120 days, but it is most distinctive in ocean bottom pressure where it is seen in both observations and in a wide variety of ocean models. This bottom pressure mode is a product of the leakiness of the basin, which allows for mass exchange with the surrounding ocean. The mode is found to dominate sea level variability on parts of the South American coast.