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Wet and Dry Deposition of Mercury in Bermuda

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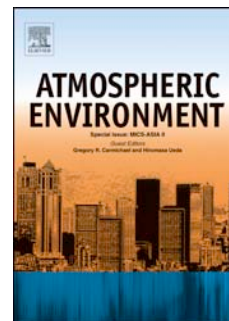
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1 **Wet and Dry Deposition of Mercury in Bermuda**

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8 **Abstract**

9 Elevated concentrations of mercury (Hg) in fish from around Bermuda and fish
10 consumers promoted a study of the atmospheric inputs of Hg to the ocean in the region.
11 The average concentrations of total mercury in rain (THg; volume weighted mean 4.7 ng
12 L⁻¹) and in aerosols (particulate Hg; HgP; 9.5 pg m⁻³) were found to be comparable to
13 other coastal locations removed from local sources at similar latitudes in North America.
14 The estimated wet and dry deposition fluxes of Hg suggest that Bermuda is impacted by
15 anthropogenic sources. A mass balance for Hg across the air-sea interface for the region
16 around Bermuda also suggests that atmospheric wet plus dry deposition is less than
17 estimated gas evasion of elemental Hg, indicating that the ocean is a net source in the
18 region. This likely reflects historic elevated deposition of Hg to the North Atlantic, as has
19 been suggested by historic water column data and from Hg biogeochemical modeling.

20
21 **Keywords:** mercury, wet deposition, dry deposition, aerosols, flux, elemental mercury,
22 air-sea exchange

23

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