

## Structure and Variability of the North Equatorial Current/Undercurrent from Mooring Measurements in the Western Pacific

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The mean structure and variability of the North Equatorial Current/Undercurrent (NEC/NEUC) are investigated with 1-year Acoustic Doppler Current Profilers measurements from 4 subsurface moorings deployed at 10.5°N, 13°N, 15.5°N, and 18°N along 130°E in the western Pacific. The strong westward flowing NEC ranges from the sea surface down to 400 m, and the mean zonal velocity of the NEC at 10.5°N is around -30 cm/s at the depth of 60 m. Eastward flowing NEUC jets are detected below the NEC at 10.5°N and 13°N, and the depth of the NEUC could reach at least 900 m. The mean velocity of the NEUC is around 4.2 cm/s at 800 m. No eastward undercurrents are observed at 15°N and 18°N. The mooring measurements also reveal a strong intraseasonal variability of the currents at all 4 mooring sites, and the period is around 70-120 days. The vertical structure of this intraseasonal variability varies at different latitudes. The variability of the NEUC jets at 10.5°N and 13°N appears to be dominated by subthermocline signals, while the variability of the currents at 15.5°N and 18°N is dominated by surface-intensified signals.