Constraining the source of volatiles in Earth's interior is critical as it places important constraints on planet formation models including accretion timescales, thermal evolution, volatile compositions, and planetary redox states. However, the source of volatiles in Earth mantle remains controversial. The ratio of the two primordial neon isotopes, 20Ne/22Ne, is significantly different for the three potential sources for volatiles in Earth's mantle: nebular gas, solar wind irradiated material, and CI chondrites. Therefore, the 20Ne/22Ne ratio provides a powerful tool to assess the source of volatiles in Earth's interior. In this presentation, I will show new neon isotopic measurements from deep mantle plumes that reach values up to 13.03±0.04 (2□). These measured 20Ne/22Ne ratios are demonstrably higher than solar wind irradiated material and CI chondrites, requiring the presence of nebular neon in the deep mantle. Furthermore, these new measurements allow me to determine a primordial mantle plume source 20Ne/22Ne ratio of 13.23±0.22 (2□), which is indistinguishable from the nebular ratio, providing robust evidence for a reservoir of nebular gas preserved in Earth's deep mantle today. The acquisition of nebular gases requires planetary embryos to grow to sufficiently large mass prior to the dissipation of the protoplanetary disk. Astronomical observations indicate that nebular gas typically disperses within an e-folding timescale of 2.5 million years. Thus, the presence of nebular neon requires proto-Earth to have reached a sufficient mass within a few million years in order to capture nebular volatiles and dissolve them into a magma ocean. In addition, planet formation at ~1 AU in a gas-rich, nebular environment has been directly observed using the Atacama Large Millimeter Array. Therefore, the capture of nebular gases could be a common feature associated with the embryo stage of terrestrial planet formation.