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How Large is a Neutron?

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Chiral effective field theory is used to perform a high-accuracy calculation of the deuteron structure radius. The strength of the short-range two-body contribution to the charge density operator at fifth chiral order is adjusted to the experimental data on the deuteron charge form factor. Using the resulting value of the structure radius together with the accurate isotope shift data relating the proton and deuteron charge radii, the charge radius of the neutron is, for the first time, extracted from light nuclei.