Iron-based superconductors are a large class of exotic materials that present a new way to study the physics of superconducting compounds. The nature of the magnetic ground state in iron-based superconductors is believed to be the key to the eventual understanding of their high-temperature superconducting mechanism, yet many aspects of the magnetic phase have remained contested. One way that this controversy is manifested originates from whether one assumes that the magnetic moments are quasi-local or not, but neither axiom could be ruled out. We approached this dilemma by determining the atomic and magnetic structure of the ground states of the iron-based superconductors \( \text{Sr}_{1-x}\text{Na}_x\text{Fe}_2\text{As}_2 \) using a combination of powder x-ray and neutron diffractions, Mössbauer spectroscopy, and magnetic susceptibility. Together these data proved that the magnetic state emerges from mostly itinerant wave functions that superpose to produce nodes upon half of the magnetic sites. The highlighted work shows the importance of fine-grained knowledge of the atomic, magnetic, and electronic structure as part of our study of unusual electronic ground states in extended solids.