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Three super-Earths orbiting HD7924

We report the discovery of two super-Earth mass planets orbiting the nearby star HD 7924 which was previously known to host one small planet. We perform a joint analysis of high-precision radial velocity data from both Keck/HIRES and the new Automated Planet Finder Telescope (APF) at Lick Observatory to robustly detect the three total planets in the system. We detect a long-period signal in the Keck data that we interpret as the stellar magnetic activity cycle since it is strongly correlated with the Ca II H & K activity index. We also detect two additional short-period signals that we attribute to rotationally-modulated surface features on the star. These planets join many other compact systems of multiple super-Earth planets around low-mass stars as we create a census of planets in the local solar neighborhood.