 **Key points:** This paper presents occurrence rates for rocky planets in the habitable zones (HZs) of main-sequence dwarf stars based on Kepler data and Gaia-based stellar properties. It introduces the first analysis in terms of star-dependent instellation flux, allowing for the tracking of HZ planets.

 **Important formulas or discoveries:** The paper defines η⊕ as the HZ occurrence of planets with radii between **0.5 and 1.5 R⊕** orbiting stars with effective temperatures between **4800 and 6300 K**. It finds that **η⊕ for the conservative HZ** is between **0.21+0.37−0.21** and **0.51+0.88−0.33 planets per star**, while the optimistic HZ occurrence is between **0.33+0.58−0.33 and 0.73+0.88−0.51 planets per star**.

 **Limitations:** The study acknowledges the large uncertainties in the occurrence rates due to the small number of detected small HZ planets and the need for extrapolation of completeness beyond observed orbital periods.

 **Summary:** The paper concludes that the occurrence rates are dependent on stellar effective temperature and presents occurrence rates for various stellar populations and planet size ranges. It also estimates that the nearest HZ planet around G and K dwarfs is about 6 pc away and that there are about 4 HZ rocky planets around G and K dwarfs within 10 pc of the Sun.