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Tianyi Mao* (maotianyi1@gmail.com), 365 5th Ave, Department of Mathematics, New York, NY 10035. *The Distribution of Integers in a Totally Real Cubic Field.*

Hecke studies the distribution of fractional parts of quadratic irrationals with Fourier expansion of Dirichlet series. This method is generalized by Behnke and Ash-Friedberg, to study the distribution of the number of totally positive integers of given trace in a general totally real number field of any degree. When the field is cubic, we show that the asymptotic behavior of a weighted Diophantine sum is related to the structure of the unit group. The main term can be expressed in terms of Größencharacter L -functions. (Received August 26, 2016)