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On the distribution of integer and prime solutions to diophantine equations

Let Q be a positive homogeneous integral polynomial. We study the equi-distribution of the solutions to the diophantine equation $Q(x)=l$, both with integer and prime variables. We prove some quantitative results in terms of the discrepancy with respect to caps, defined as intersections of the level surface $Q=l$ with half-spaces, assuming that the form Q has sufficiently high rank. In the simplest settings one obtains the equidistribution of lattice points on spherical caps in dimensions at least 4.