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POPULATION OF NEAs AND SURVEY COMPLETION

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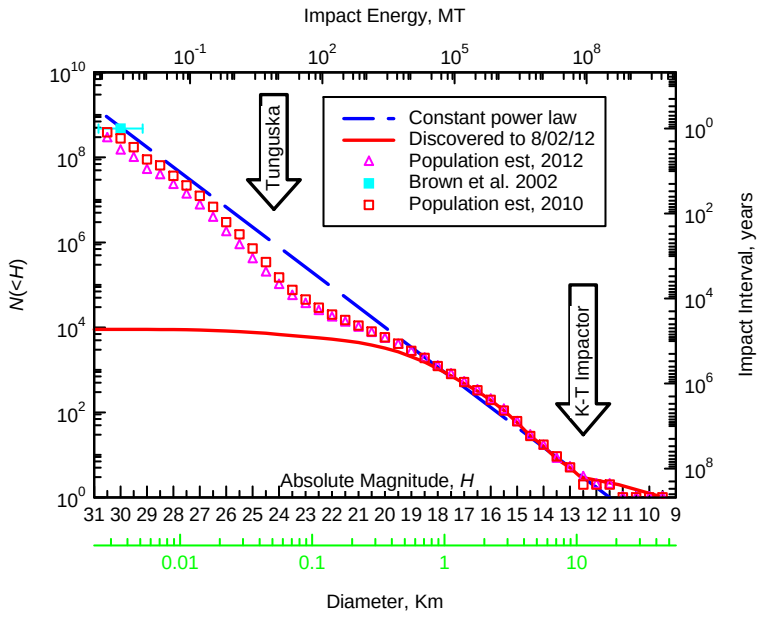
ABSTRACT

I have updated my biennial estimate of NEA population and survey completion up to August, 2012. The estimate of number of NEAs of H < 17.75 (diameter > 1 km) remains remarkably constant over the last four updates (2006, 2008, 2010, 2012), most recently N(H<17.75) = 976. Perhaps the most important improvement in the past two years is the confirmation by WISE that our estimated distribution of NEA albedos has been about right, thus the equivalence of N(H<17.75) with N(D>1 km) is about right, and our latest population estimate is in excellent agreement with the WISE result (Mainzer et al. 2011, Astrophys. J. 743, 156) of N(D>1 km) = 981 ±19.



In spite of the current surveys having "retired" more than 90% of the impact risk, a substantial fraction of the remaining risk lies in the fractional probability that even one very large NEA remains undiscovered. I will address this in more detail and make an updated estimate of that probability and associated risk.