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- Planetary Defense – Recent Progress & Plans
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**A CONCEPT OF COST-SAVING SPACE SYSTEM DESIGNED FOR THE
DETECTION OF NEO'S**

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ABSTRACT

Several concepts of space systems aimed to detection of NEO's do exist over the world. We pay most attention to the moderate-cost space system. The concept was first presented in Bucharest at PDC-2011. Now it is modified and can be considered as preface-A study proved.

The concept is based on major requirements that are input ones for the design of a (space) system for massive detection of the dangerous bodies are:

- the minimal size D of the body to detect;
- warning time t_w ;
- maximal time interval Δt required for orbit determination and classification the body as dangerous one.

The system should be able to detect bodies not fainter than a given value m_{lim} at time not later that $t_{detection} = t_w + \Delta t$. For concrete concept we use: $D = 140$ m (50 m is taken for estimates), $t_w = 30$ days, and we argue that for all types of orbits $\Delta t = 5$ days is sufficient for qualifying the orbit at least as NEO or PHO types. Since m_{lim} is a function of ($D, t_{detection}$) we can estimate its value as $V=23^m$. This is an estimate made for asteroidal type orbits. In general cometary orbits are less favorable for detection and m_{lim} could be one or two magnitude fainter. This as well as a requirement to observe whole accessible sky at least 4 times for 5 days implies the parameters of the telescope and the whole system.

The described system includes 75 cm wide-field telescope (ground-based version