

First Results of DOSTEL as active part of the MATROSHKA Facility

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As one of the active instruments taking part in the MATROSHKA facility the DOSimetry TELEscope (DOSTEL) measures the dose and LET spectra at the head of the phantom. The MATROSHKA DOSTEL consists of a Telescope of two Canberra PIPS (Passivated Implanted Planar Silicon) detectors and two additional Hamamatsu PIN diodes. The PIN diodes are arranged perpendicular to the telescope. The detector signals are amplified by separate logarithmic amplifiers to achieve a broader dynamic Range. The data of the DOSTEL (dose rate and LET Spectra) are sent to the Russian Station Onboard Computer (PLSU) and partially downlinked to earth. The complete data sets are stored on PCMCIA cards and carried to earth via Sojuz.

A more detailed description of the MATROSHKA DOSTEL design and first results as LET spectra, dose rates and dose equivalent will be presented.