Further analysis of the MTR-1 and MTR-2a data

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The MATROSHKA experiment consists of exposures at the ISS of an anthropomorphic Rando phantom equipped with radiation detectors. The main part of the experiment was dose distribution measurement performed with thermoluminescent detectors within a 2.5 cm grid inside of the phantom torso. Institute of Nuclear Physics (IFJ) provided TL detectors for nearly half of measuring locations inside the phantom (785 of 1631 locations in total). Two phases of this experiment: MTR-1 (exposure outside ISS) and MTR-2a (exposure inside ISS) are already finished and point dose results were presented at the previous workshops.
Within current presentation the further analysis of these data will be described. This includes: interpolation of the point doses into a continuous distribution within the phantom volume, creating a 3D voxel model of the Rando phantom (based on the CT scans) and finally calculation of organ doses.