

Abstract Submitted
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**Radiation Damage From Mono-energetic Electrons Up to 200 keV
On Biological Systems** YURIY PRILEPSKIY, Hampton University, FOR CAMI
COLLABORATION — The electron gun of the CEBAF machine at Jefferson lab
(Newport News, VA) is capable of delivering electrons with energies up to 200 keV
with a resolution of about 10^{-5} . This 1.5 GHz beam permits to generate cellular
radiation damage within minutes. We have performed irradiation of cancer cells with
different energies and different currents to investigate their biological responses. This
study will permit to address the physical processes involved in the RBE and LET at
a level that supersedes current data listed in the literature by orders of magnitude.
We will discuss the experimental setup and results of the first stage of data collected
with this novel system. This research is part of a global program to provide detailed
information for the understanding of radiation based cancer treatments.

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