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Energy Dependence of Cancer Cell Irradiation RACHEL BLACK, Hampton University, FOR CAMI COLLABORATION — A proof-of-principle experiment was done to investigate the energy damage of beta particles on cancer cells. This study is the first of its kind that spans into the MeV range. This research seeks to provide information on the possibility of mono-energetic Brachytherapy sources, reaction mechanisms of cancer cell death and cancer genome identification. It is expected that different cancer types will respond to different energies. Protein expressions from the irradiation of breast cancer cells were identified via a 2D diagram (pH versus mass) showing a strong energy dependence. Preliminary results will be presented and discussed.

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