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Cooking DNA with muons MICHAEL MURRAY, University of Kansas, ADRIAN MELOTT, Univsity of Kansas, CHISTOPHER FISHER, University of Kansas — Given the rate of nearby supernovae, the Earth must have been repeatedly bombarded with intense cosmic ray showers. There are major gaps in understanding the radiation impact of such an event, particularly the effect of several orders of magnitude increase in the muon flux on the ground. As muons are not an important part of the impact of conventional terrestrial radiation sources, almost no work has been done on their effects on biological molecules. This will be remedied by experimental studies of muon flux at accelerators on DNA.

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