Abstract Submitted
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**Photofragmentation of Deuterated Benzene**[1] RALF WEHLITZ, PAVLE JURANIC[2], Synchrotron Radiation Center, Univ. of Wisconsin–Madison, MAX YOUNG[3], Univ. of Idaho, Moscow, BETHANY REILLY[4], Taylor Univ., Upland, Indiana — We have measured the probability for creating various fragments of deuterated benzene ($C_6H_3D_3$) in the photon energy range from 12 to 160 eV at the Synchrotron Radiation Center (SRC). The fragments were detected with an improved ion time-of-flight spectrometer providing a high enough resolving power to unambiguously detect all possible photofragments of deuterated benzene. The ion fragments $C_nH_mD_p$ (n=2–6; m,p=0–3; note that not all combinations exist) appear in groups characterized by the number of carbon atoms. We find evidence for the existance of carbon rings with only a single hydrogen atom attched ($C_6H$) . We will present appearance energies and photon energy dependences of all fragments.

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