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Modulations in the Double-to-Single Photoionization Cross Section Ratio of Benzene[1] PAVLE JURANIĆ, RALF WEHLITZ, Synchrotron Radiation Center, University of Wisconsin-Madison, MAX YOUNG, University of Idaho-Moscow — In our previous experiments, we have observed the existence of modulations in the relative double-to-singlephotoionization cross section ratio of C_{60}. The de Broglie wavelengths of the excess(above double ionization threshold) energies of these modulations closely matched inter-atomic distances within the C_{60} molecule [2]. We have conducted further experiments with benzene, which has a much simpler structure than C_{60}, to find out whether these modulations exist and can be similarly linked to inter-atomic distances in other molecules. The results of the experiment indicate that there seems to be such modulations in benzene.

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[2]P. N. Juranić, D. Lukić, K. Barger, and R. Wehlitz, Phys. Rev. Lett. **96**, 023001 (2006)

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