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**Dissociative Excitation of Thymine by Electron Impact**[1] WILLIAM MCCONKEY, COLLIN TIESSEN, JEFFREY HEIN[2], JOSHUAH TROCCHI, WLADEK KEDZIERSKI, University of Windsor — A crossed electron-gas beam system coupled to a VUV spectrometer has been used to investigate the dissociation of thymine ($C_5H_6N_2O_2$) into excited atomic fragments in the electron-impact energy range from threshold to 375 eV. A special stainless steel oven is used to vaporize the thymine and form it into a beam where it is intersected by a magnetically collimated electron beam, typical current 50 $\mu$A. The main features in the spectrum are the H Lyman series lines. The probability of extracting excited C or N atoms from the ring is shown to be very small. In addition to spectral data, excitation probability curves as a function of electron energy will be presented for the main emission features. Possible dissociation channels and excitation mechanisms in the parent molecule will be discussed.

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