

Abstract Submitted  
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**A Broad-Band Photometric Survey of the Open Cluster NGC 7789**<sup>1</sup> SAMANTHA BRUNKER, BARBARA ANTHONY -TWAROG, The University of Kansas, CON DELIYANNIS, Indiana University, BRUCE TWAROG, The University of Kansas — We have used approximately 200 frames of the open cluster NGC 7789 on the UBVRI system taken with the 0.9m WIYN telescope over four years to survey the cluster and to define its fundamental properties, in conjunction with a complementary study based on extended Stromgren, intermediate-band CCD data. Removing probable radial-velocity and proper-motion non-members, the color-magnitude diagram (CMD) for the cluster core is extremely well matched by Yale-Yonsei isochrones with an age of  $1.5 \pm 0.1$  Gyr for a derived solar  $[\text{Fe}/\text{H}]$  and  $E(\text{B}-\text{V}) = 0.26 \pm 0.02$ , as well as an apparent distance modulus of  $(m-M) = 12.2 \pm 0.1$ . The lower reddening and slightly younger age compared to previous work can be attributed to spatially dependent offsets in the published VI photometry of the cluster. The main sequence approximately one magnitude below the turnoff appears to exhibit a narrow break aligned with the predicted location of the blue edge of the Li-dip among main sequence stars.

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Samantha Brunker  
The University of Kansas

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