1127-55-18   **Xing Gu*** (`xgu21@uic.edu`), University of Illinois at Chicago, Mathematics & Comp Sci MC 249, 851 S. Morgan St., Chicago, IL 60607-7045. *On the Cohomology of the Classifying Space of PU_n.*

I will introduce a Leray-Serre spectral sequence converging to the integral cohomology ring $H^*(\mathbf{B}PU_n; \mathbb{Z})$ for any $n > 1$, where $\mathbf{B}PU_n$ is the classifying space of the projective unitary group of order n. I will show how to use this spectral sequence to determine the ring structure of $H^*(\mathbf{B}PU_n; \mathbb{Z})$ up to degree 10, for any $n > 1$, and obtain some of its p-local information, for any prime p. (Received December 04, 2016)