

APR18-2018-000671

Abstract for an Invited Paper
for the APR18 Meeting of
the American Physical Society

Searches for baryon number violation in proton decays and neutron-antineutron oscillations.¹

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The status of the conservation law for baryon number (B) is of fundamental significance for particle physics and cosmology. Although no laboratory experiment has observed a process which violates baryon number, both the Standard Model and many other theories beyond the Standard Model predict B violation, and Big Bang cosmology plus inflation implies that one should interpret the baryon asymmetry observed today as evidence for B violation in the early universe. In this talk we briefly review the status of present limits on B violating processes from laboratory experiments and discuss the prospects and possibilities for improved searches using large underground detectors and intense free neutron beams.

¹we acknowledge support from NSF PHY-1614545