

# **Spallation Neutron Source Beam Current Monitor Electronics**

Martin Kesselman, Craig Dawson  
Brookhaven National Laboratory, Upton, New York 11973

## **Abstract**

This paper will discuss the present electronics design for the beam current monitor system to be used throughout the Spallation Neutron Source (SNS) under construction at Oak Ridge National Laboratory. The beam is composed of a micro-pulse structure due to the 402.5MHz RF, and is chopped into mini-pulses of 645ns duration with a 300ns gap, providing a macro-pulse of 1060 mini-pulses repeating at a 60Hz rate. Ring beam current will vary from about 15ma peak during studies, to about 50Ampspeak (design to 100 amps). A digital approach to droop compensation has been implemented and initial test results presented.