

# The NPDGamma experiment at the SNS ready for data collection

- All components installed:
  - Neutron beamline, polarizer, RF spin-rotator, magnetic coils, detector, data acquisition system, liquid hydrogen target.
- Chlorine target commissioning runs complete.
- Initial target cooldown successful; instrument readiness review complete.
- The NPDGamma experiment is poised to collect world-class data on parity violation in the production of gamma rays following neutron capture by hydrogen
- These data will elucidate the weak interaction in the hadronic sector.

*Photographs show (left) the inside of the NPDGamma hydrogen target and (right) the NPDGamma detector inside the Fundamental Neutron Physics Beamline experimental area at the SNS. The plot shows the measured asymmetry in a Chlorine target, demonstrating successful operation of the detector.*

**Contact:** David Bowman, 865-574-4496, [bowmanjd@ornl.gov](mailto:bowmanjd@ornl.gov)  
**Funding sources:** DOE Office of Science, Office of Nuclear Physics  
**Resources:** Spallation Neutron Source, ORNL



Chlorine Target - 10.5 hours of data

