

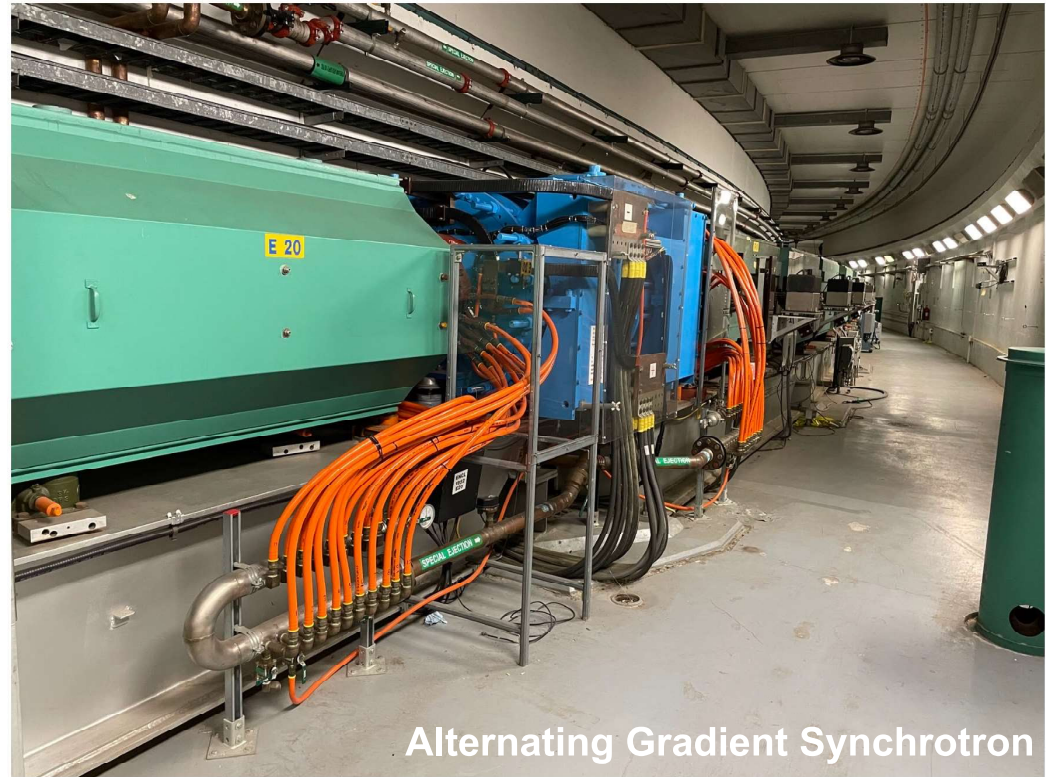


Message from the Director: I will be open, honest, and transparent with the community

JoAnne Hewett, Laboratory Director
September 12, 2024

    @BrookhavenLab

Accelerator Magnets Typically Cooled by Water System



System Monitoring is Intense

Active monitoring system is in place for status of a variety of system parameters

- Controls page where real-time data for each system across the collider complex is monitored



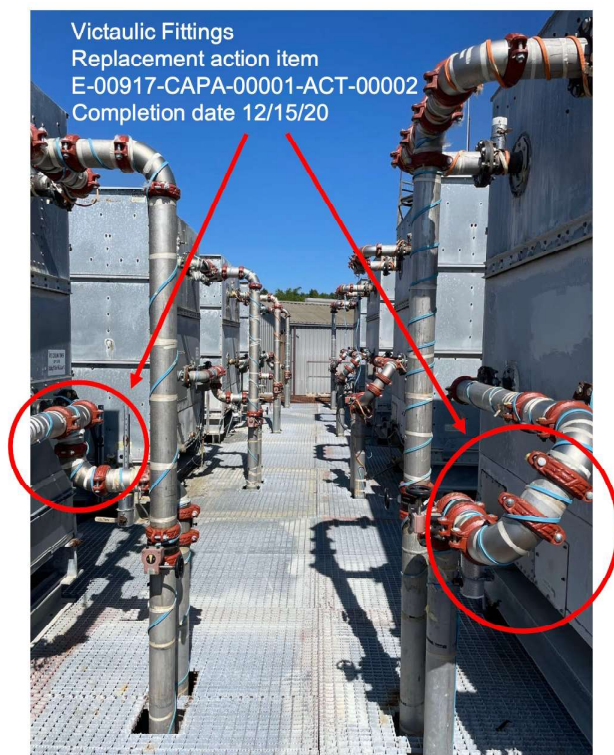
Tritiated Water Systems Event: Event posed no environmental or health risk

E-01774 (1/2/2024)

- 75 gallons of tritiated water leaked from the Alternating Gradient Synchrotron (AGS) cooling system onto the roof of building 911
- Slow leak, occurred over the course of 3 weeks
- Dilution from heavy rainfall those 3 weeks
- Water sample from leak site measured slightly above drinking water standard
- Water sample at outfall had no detectable tritium
- Faulty system component immediately repaired
- External casual analysis team investigation commissioned and completed
- Roughly same size as leaks reported to CAC in 2020/2021
- Event only recently came to light to lab management



AGS Magnet Cooling System is Aging



Event E-00917, 7/28/20 & 9/10/20



Event E-01177, 10/29/21



Event E-01774, 1/2/24

3-Step Plan to Prevent Future Events

1. Twice-daily visual inspections until end of 2024 collider run on October 21, 2024
2. Flush the full system at end of 2024 collider operations during winter 2024/25
 - Ensures that circulated cooling water has low-level to no tritium for 2025 collider run (which is the final run for RHIC) [Note that water becomes tritiated gradually during accelerator operations.]
3. Replacement of cooling system during EIC construction period