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HOTLINE

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NSTX Achieves First Plasma

Photo by Patti Wieser

PPPL staff see the first plasma on a monitor in the Control Room. From left are Tom Egebo, Raffi Nazikian, Ken Young, Ron Strykowsky, Steve Sabbagh (seated), Charles Gentile, Eric Fredrickson, PPPL Director Rob Goldston (seated at front wearing suspenders), Martha Redi, Hutch Neilson, and NSTX Program Director Martin Peng (far right at front).

Amid the cheers and jubilation of PPPL staff, the National Spherical Torus Experiment (NSTX) achieved first plasma on Friday, February 12, at 6:06 p.m. Its flash across the monitors in the Control Room signaled the successful construction of the Laboratory's new experimental fusion device, heralding the start of an exciting research adventure at PPPL.

"We've created a star again in the Laboratory," noted PPPL scientist Henry Kugel.

Throughout the afternoon, technicians, physicists, engineers, and interested staffers began filling up the NSTX Control Room to wait for first plasma. The researchers conducted a series of tests on the magnetic coils and diagnostics for the machine before attempting to produce a plasma. At 3:20 p.m., some members of the NSTX Program Advisory Committee (PAC) filed in to

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Plasma

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catch a glimpse of the first NSTX plasma. The group had been at the Laboratory for a two-day meeting that concluded the afternoon of February 12.

As the clock ticked down, people gathered around the monitors to wait for the bright appearance of a plasma. Shortly after 6 p.m., the wait paid off. Following the count down, a flash beamed across the screens.

New Adventure

"This is a tremendous accomplishment by the whole NSTX Team. The combination of energetic enthusiasm and care for all of the critical details is wonderful to see. It makes me very proud of all of us. This first result from NSTX reflects well not only on PPPL, but on the whole U.S. and world fusion program. We are started off on a new adventure. I believe that it will be an exciting one!" said PPPL Director Rob Goldston.

Added NSTX Project Director Masa Ono, "I'm very excited about actually getting first plasma. This is due to the great teamwork we have and to the dedication, capabilities, and experience of everyone involved. Everything came together in the critical moment."

"First plasma" marks the beginning of NSTX experimental operations, following a national design and construction effort completed 10 weeks ahead of schedule and right on budget. On Monday, testing continued until the machine produced a plasma current of 50 kiloamps.

Said NSTX Program Director Martin Peng, "The NSTX Team achieved its milestone of 50 kiloamps in induced plasma current during the second run day of the first plasma test, ten weeks ahead of the schedule. This accomplishment attests to the super dedication and expertise of the entire NSTX Team, and the great support of the host and participating institutions. We look forward to working with the national research team and beginning the scientific investigations of the exciting spherical torus fusion plasmas enabled by the upcoming NSTX facility."●

Above, gathered around the monitor displaying the first NSTX plasma, are (from left) Henry Kugel, Masa Ono, Rob Goldston, John DeLooper, and Rich Hawryluk. At right are (from left) Tim Stevenson, Masa Ono, Rob Goldston, Mike Williams, Jon Menard, Rich Hawryluk, Dennis Mueller, and Bill Tang.

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