Progress on the ECR4 ion source and the ECR1 replacement hexapole

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Construction on the new 6.4 GHz ECR4 ion source is continuing. The axial-field coils have been wound (Fig. 1), and the potting of the coils has started. The twelve permanent-magnet bars for both the

FIG. 1. Axial-field before potting.

ECR4 hexapole and the replacement ECR1 hexapole have been delivered (Fig. 2). Measurements on the bars show that their magnetic fields are much more uniform than the fields of the original ECR1 bars.

FIG. 2. One of the twelve assembled NdFeB hexapole bars.

The two new aluminum plasma chambers have been constructed (Fig. 3), and the steel yoke and injection-end plug are now being fabricated. The permanent-magnet bars will be inserted in the plasma chambers either by the magnet vendor or in-house using the mechanism used for the insertion of the bars for ECR2.

Two used 6.4 GHz transmitters have been purchased. Next stands will be fabricated, and pumps will be ordered.

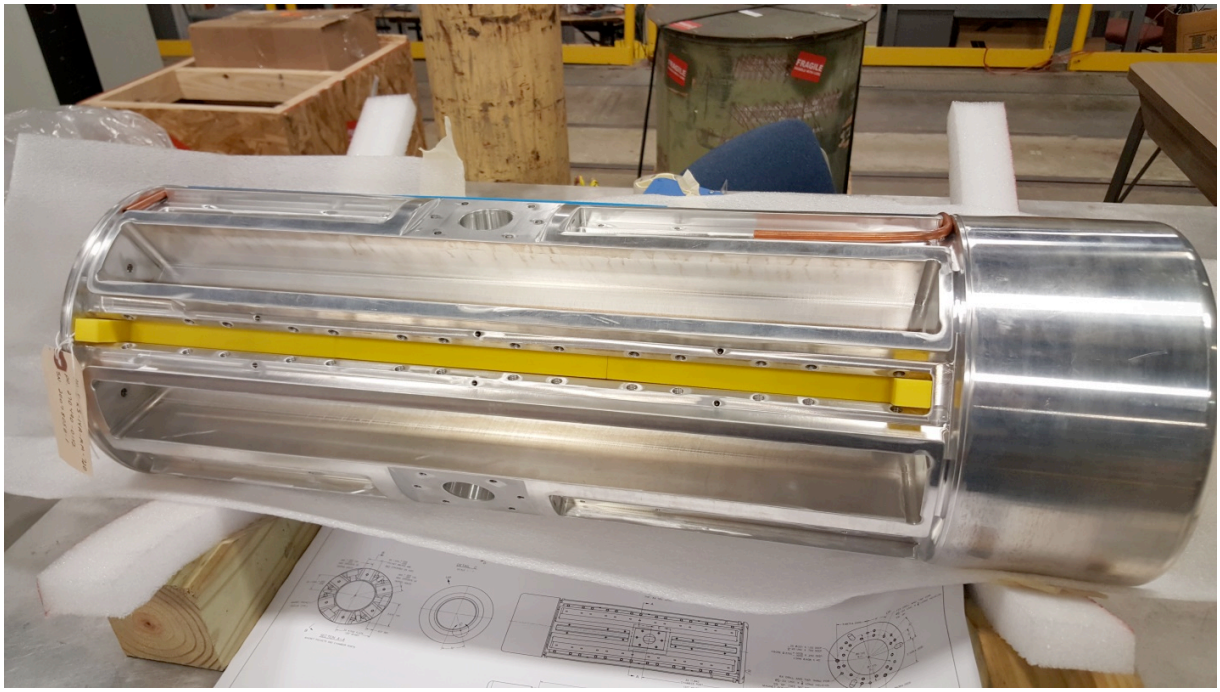

FIG. 3. One of two aluminum plasma chambers.