

# Magnetic Field Vector Measurements Using Doppler-Free Saturation Spectroscopy

Partner	Company
Oak Ridge National Laboratory	Princeton Fusion Systems
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**Project Summary:**

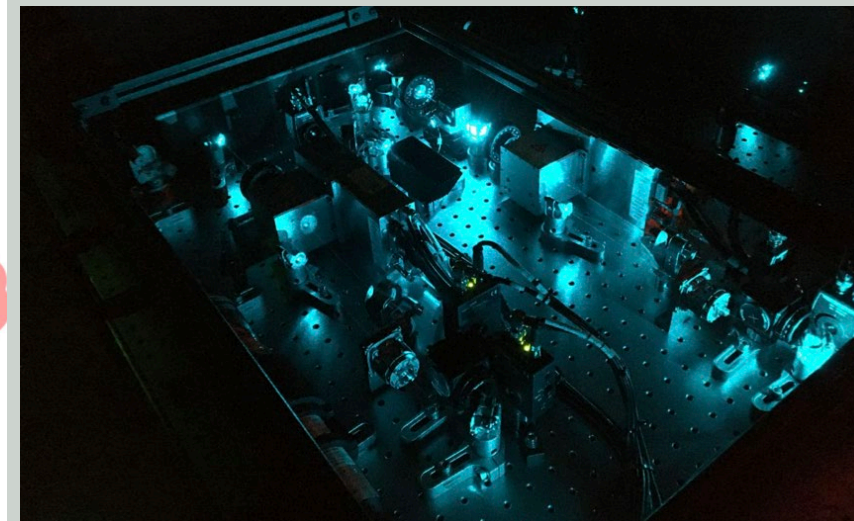
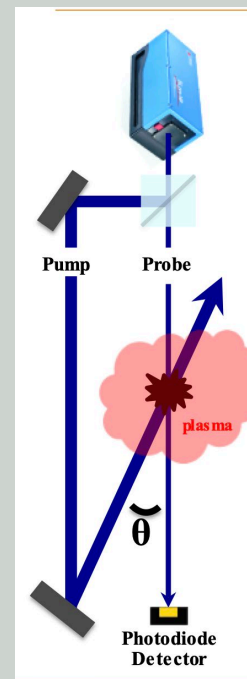
A non-perturbative diagnostic was deployed by the Contractor to measure the topology of the equilibrium magnetic field vector in the Princeton Field Reversed Configuration-2 (PFRC-2) device.

**Fusion Impact:**

This validated a diagnostic method that demonstrated key metrics for the PFRC. More generally, it improved the understanding of plasmas, which is vital to the rapid development of fusion energy.

**Business/Market Impact:**

This INFUSE project is for the testing of the diagnostic. This will aid in the commercialization of the device. The diagnostic helped determine if PFRC field lines are closed. This is a critical metric and will facilitate commercialization of PFRC.



Period of Performance:	Federal Share:	Cost Share:
9/1/2024-8/31/2025	\$93000	\$18900