

## **Observations of the Lifecycles and Information Worlds of Collaborative Scientific Teams at a National Science Lab**



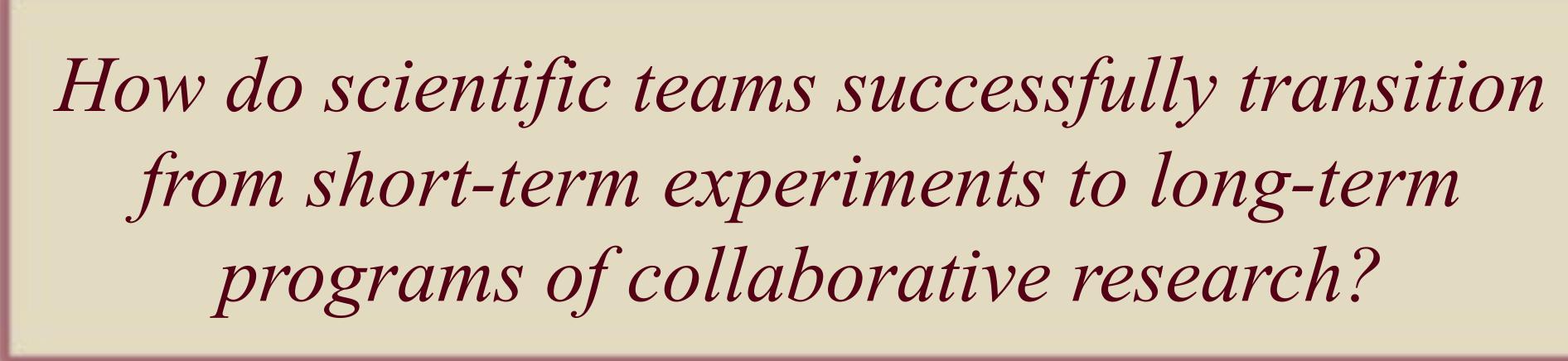
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## Introduction

Team-based scientific collaborations play a key role in the discovery and distribution of scientific knowledge. Scientific collaboration allows teams to pool their knowledge and expertise, increase productivity, and improve their chances of successful experiments, projects, and publications. It is important to examine the technical, organizational, and social factors that play a role in such collaborative work and its potential transition to a long-term, successful program of research.

To help solve this research problem, this study observed teams at the National High Magnetic Field Laboratory (NHMFL) in Tallahassee, FL, the largest and most powerful magnet laboratory in the world. Over 1,100 scientists collaborate with each other and with NHMFL scientists and technicians each year.





## Method

We observed teams conducting experiments at the NHMFL to see what they did while at the facility. Our quantitative and ethnographic findings were captured using data sheets. Qualitative data were coded and analyzed using concepts of lifecycles and scientific collaboration and the theory of information worlds.

High school (1) Undergrads (9)	
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## Key Findings



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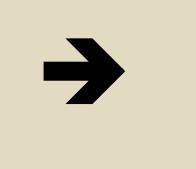




• Collaborations consist of multiple nested and overlapping lifecycles and information worlds of activity.

Teams may share similar social norms, social types, information values, and information behaviors, but many subtle differences indicate boundaries and barriers between worlds and lifecycles. Differences based in technology use, information and data practices, and other factors impact teams' ability to transition from short-term experiments to long-term programs of collaborative research.

The teams and individuals most successful at juggling, bridging, and adapting to the various overlapping and nested worlds and lifecycles are most likely to successfully make this transition.





VOSS Observation Data Sheet Observers: OBSI	ERVER 1 and 0
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Department: DC Field	Location: Cell
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About what level of activity did you observe? ] Above average [X] Average [ ] Below average About what level of engagement did you observe? [ ] Above average [X] Average [ ] Below average



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