

Flow Visualization in the OSU

Cold Flow Through Clear OSU

Presented to: Materials Working Group

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Date: October 31, 2017



Federal Aviation
Administration



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Introduction

- **PIV system used to understand flow of air through an OSU rate of heat release apparatus**
- **PIV is a non-intrusive, whole flow field velocity measurement technique**
- **Goal: Is the direction of airflow the reason for different thermocouple readings in the output of the OSU?**



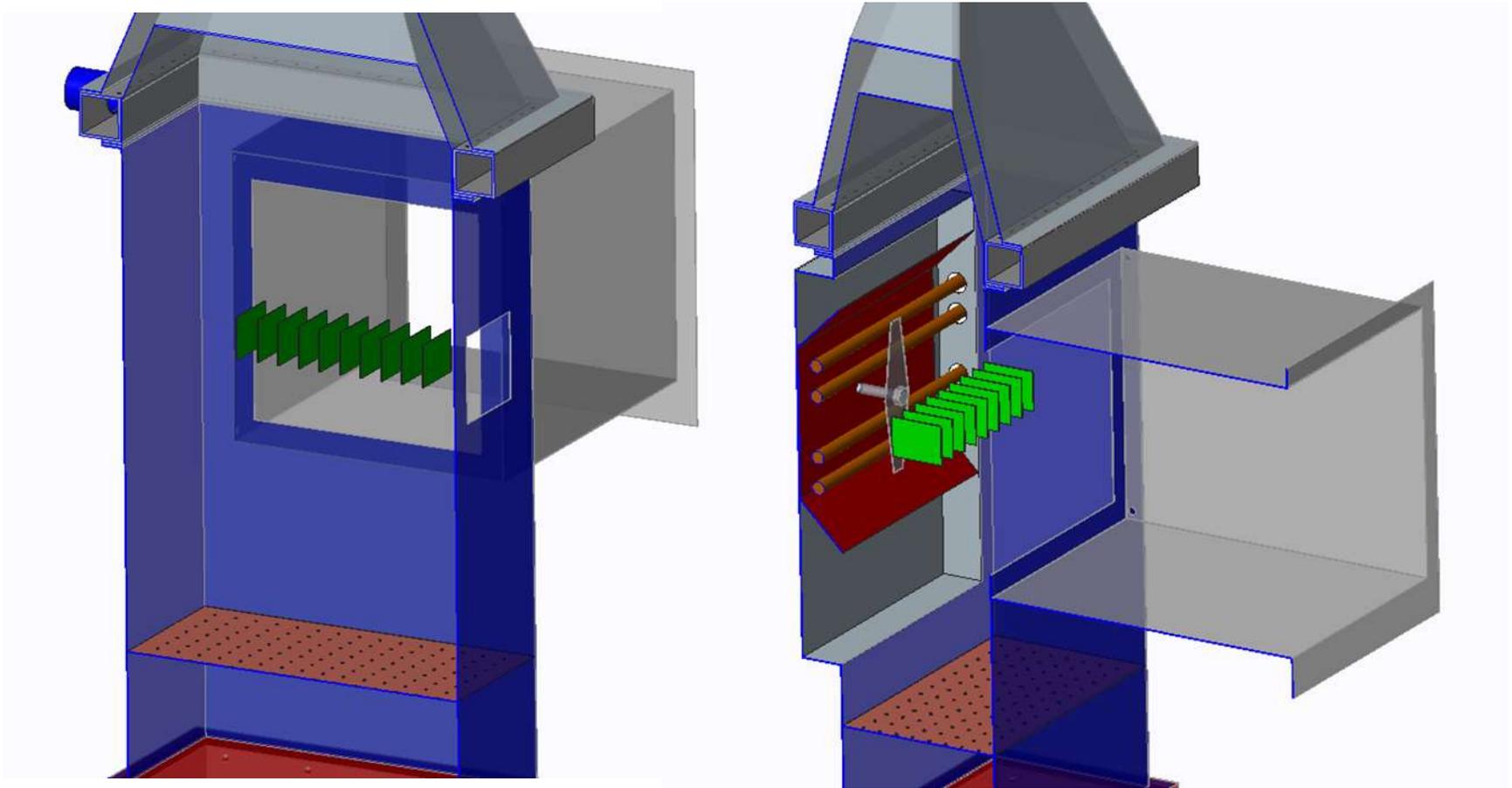
Previous OSU and PIV Setup



- **PIV Setup in available windows of OSU to understand airflow for both hot and cold conditions**



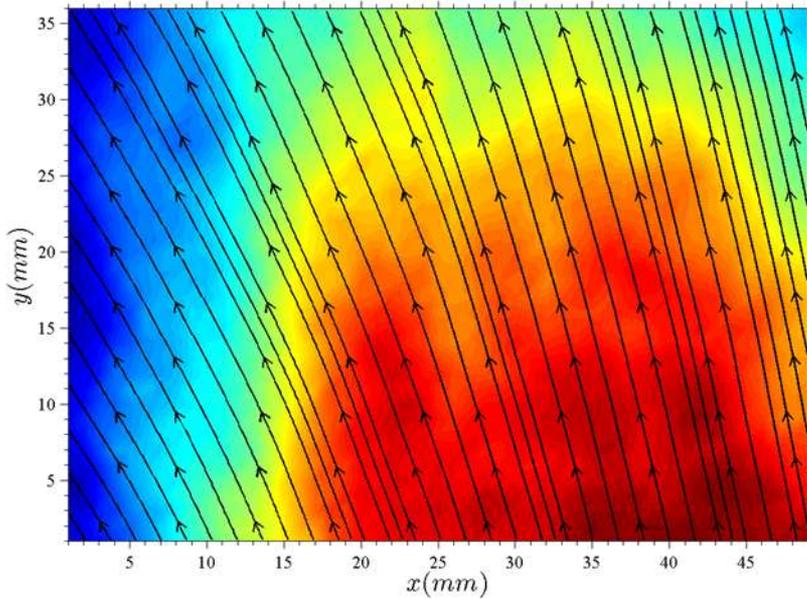
Data Set Locations



Comparison of Cold OSU Data for Near Wall and Near Center

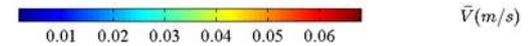
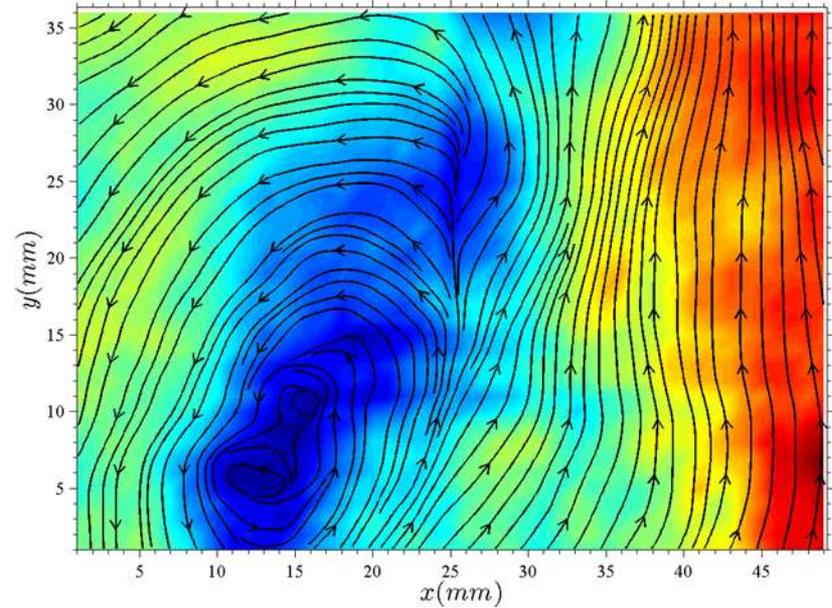
7/8" from left wall

Cold OSU

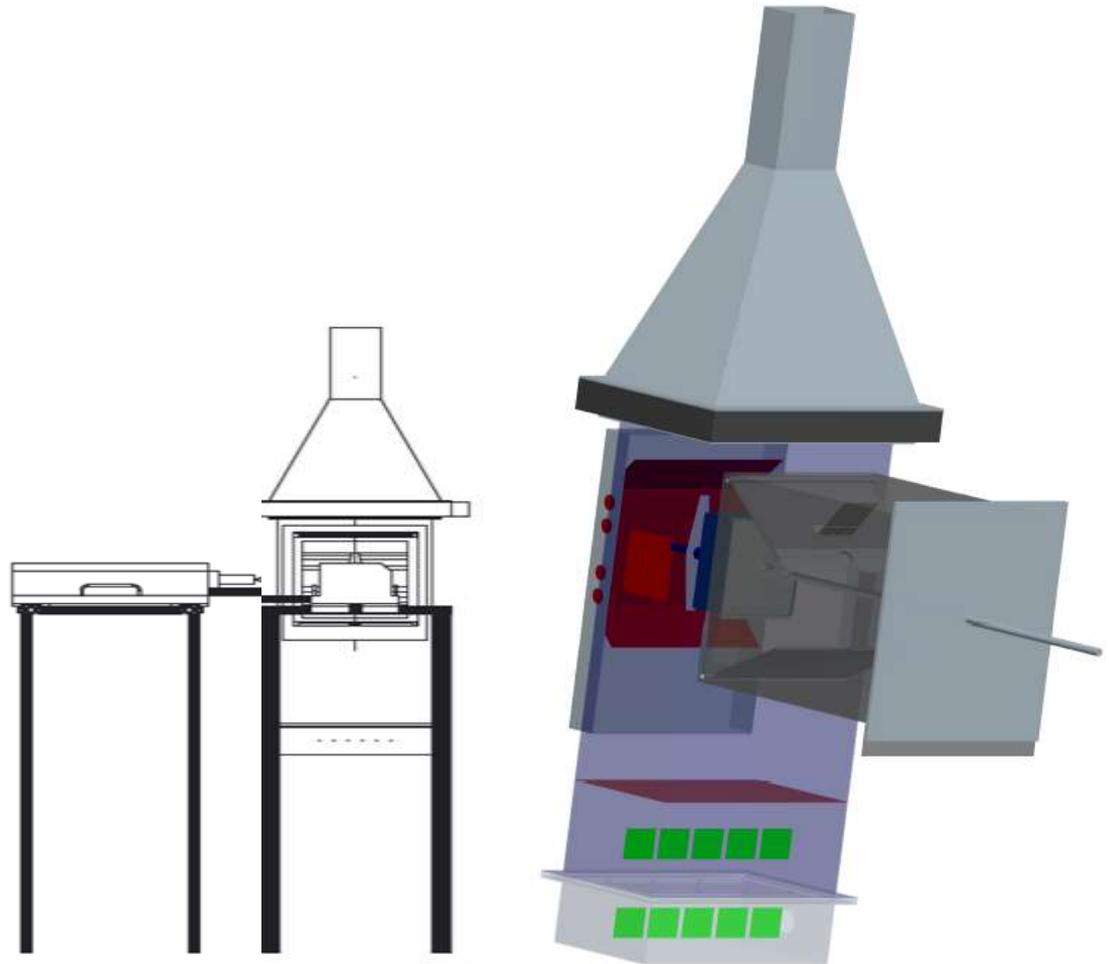
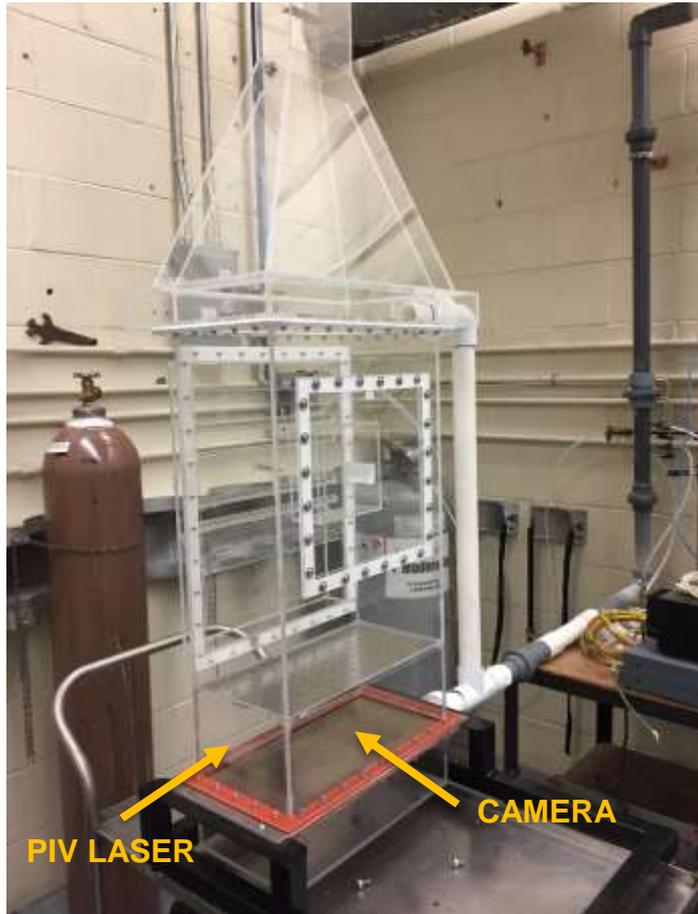


9 7/8" from left wall

Cold OSU



Clear OSU Measurement Plan



Questions or Comments?

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