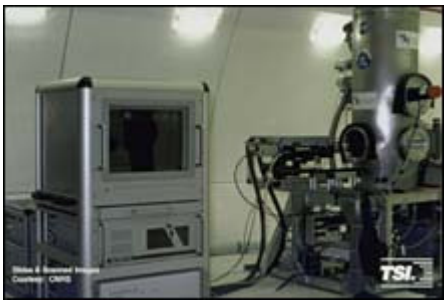
Flame Characterization Under Microgravity Conditions

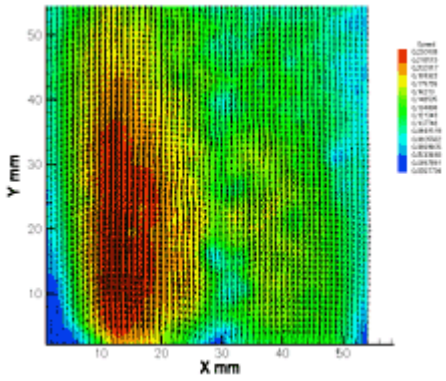
Application Note PIV-001

The behavior of a diffusion flame under reduced gravity conditions was studied using a PIV system. The reduced gravity conditions were created by having an AirBus A300 airplane fly through a parabolic arc. Velocity measurements were made when microgravity conditions were achieved during the flight trajectory.

A POWERVIEW PIV system installed inside the aircraft was used to make the measurements in the flame. A PIVCAM 10-30 camera was used to capture the images. INSIGHT Data analysis package was used to analyze the image fields. A typical velocity field obtained from these measurements is shown.

Courtesy: CNRS Orleans





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