

FLAME CHARACTERIZATION UNDER MICROGRAVITY CONDITIONS

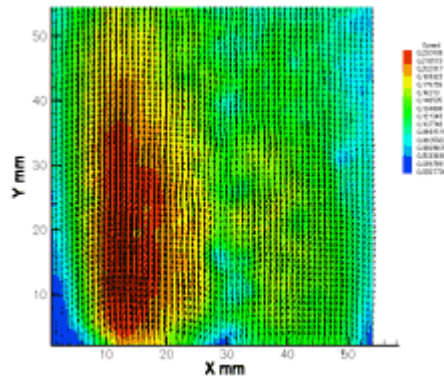
APPLICATION NOTE PIV-001

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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TSI Incorporated – Visit our website www.tsi.com for more information.

USA	Tel: +1 800 874 2811	India	Tel: +91 80 67877200
UK	Tel: +44 149 4 459200	China	Tel: +86 10 8251 6588
France	Tel: +33 4 91 11 87 64	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		