

||||| 特集：燃焼～単純化して探る複雑現象 |||||
(解説)

TEXUS ロケット利用日欧共同燃焼実験

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Japan-Europe Cooperative Microgravity Combustion Experiment by using the TEXUS Sounding Rocket

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Abstract

Preparation for Japan-Europe cooperative microgravity combustion experiment by using TEXUS sounding rocket, which would be launched in the spring of 2009, is on-going in JAXA. The TEXUS experiment is established based on cooperation between Japanese droplet combustion research working group and European CPS (Combustion Properties of Partially Premixed Spray Systems) research team. In this cooperative project, JAXA prepares experimental plan of the flight experiment and develops experimental apparatus while ESA provides flight opportunity of the TEXUS rocket. In the flight experiment, flame spread and combustion behaviors of partially pre-vaporized n-decane droplet array would be observed 4 times with different degree of pre-vaporization during 6 minutes microgravity duration. Also, combustion gas samples of the array would be collected for subsequent gas composition analysis on the ground.