

JIGSAW PUZZLES OF HYPERSONIC RESEARCH

G. Jagadeesh
Professor
Department of Aerospace Engineering
Indian Institute of Science
CV Raman Road
Bangalore-560 012, Karnataka, India
Email : jaggie@iisc.ac.in

Abstract

Hypersonics is considered as the final frontier of Aeronautics and Astronautics. To address some of the key technological gaps and carry out focused collaborative research in this field, Centre of Excellence in Hypersonics (CEH) has been established at Indian Institute of Science (IISc) on November 2011. Some of the broad research areas include Hypersonic Aerothermodynamics, Supersonic Combustion, Thermal management of hot structures, High speed terminal guidance, etc. Despite meticulous efforts, some of unique fundamental physics associated with hypersonics are yet to be completely understood for furthering the design of hypersonic vehicle. Viewing hypersonic flight experiments as a mechanism to understand and provide design data is the way forward.

Keywords: Hypersonics, Technological Challenges, Flying Laboratory