Autonomous Navigation during Deep Impact Encounter with Tempel 1

AutoNav

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Overview

• Fundamentals of Optical Navigation
  – Maneuver calculation
  – Accuracy of optical measurements
  – Autonomous optical navigation for DS1

• Deep Impact Mission Overview
  – Flight system description
  – Interplanetary trajectory
  – Mission objectives

• Encounter Operations
  – Encounter schematic
  – Why is Autonomous Navigation (AutoNav) necessary?
  – Key Science epochs
  – AutoNav expected performance

• Earth Flyby Testing Operations
  – Description of Earth Flyby geometry
  – Testing of AutoNav system at Earth Flyby
  – Testing opportunities and targets