



## Program

**MP3 (Manufacturing Problem Prevention Program) Meeting  
06/03/03 - 06/04/03, at Hitco Carbon Composites, Inc.**

### Tuesday, June 3, 2003

- 9:00 am**                      **Registration Opens**  
**10:00 am – 1:00 pm**        **Exhibits and Tours**  
**11:30 am – 1:00 pm**        **Lunch (Hosted by Hitco Carbon Composites)**  
**1:00 – 4:30 pm**              **Afternoon Session**

#### **Introduction and Welcome**

David Davis (Chief Engineer's Office, Air Force Space and Missile Systems Center)

Paul Pendorf (President, Hitco Carbon Composites)

Col. Ivette Falto-Heck (Chief Engineer, Air Force Space and Missile Systems Center)

#### **Session 1: Thick Composite Structures**

##### **Session Chair**

Howard Katzman (The Aerospace Corporation)

RSRM Nozzle Thick Tape Wrapped Components,  
Lessons Learned

Bill Prescott (ATK Thiokol)

An Ultrasonic Method for Determining Ply Angles  
and Stiffness Constants in Tape-Wrapped  
Nozzle Liners

Eric Johnson (The Aerospace Corporation)

Vacuum-Only Cure of Thick Graphite-Epoxy Parts

Bill Webb (Cytac Engineered Materials)

Why The Tail Fell Off AA Flight 587

Mike Dornheim (Aviation Week and Space  
Technology)

Combined Bypass and Bearing Load Capability, and  
NDE of Thick Carbon-Epoxy Composites

John Klug and Yong Kim (The Aerospace  
Corporation)

Application of Thermographic Reconstruction to  
Composite Inspection

Steven Shepard (Thermal Wave Imaging)

**4:30 pm – 5:30 pm**        **Exhibits and Tours**

**Wednesday, June 4, 2003**

**7:30 am Registration Opens**

**8:00 am – 11:00 am Morning Session**

**Session 2: Deployable Shape Memory Composites**

**Session Chair**

Wayne Stuckey (The Aerospace Corporation)

Application of Advanced Deployable/Rigidizable Structural Composite Materials to Space-based Antennas

Richard Helms (NASA/JPL)

Elastic Memory Composites for Large Deployable Spacecraft Structures

Koorosh Guidanean (L'Garde)

Analysis of Rigidizable Composite Materials for Light Weight Deployable Structures

Gary Steckel and Wayne Stuckey (The Aerospace Corporation)

Elastic Memory Composites for Large Deployable Spacecraft Structures

Michael Tupper, Mark Lake, and Naseem Munshi (Composite Technology Development, Inc.)

Thin Film Shape Memory Effect Coatings for Conformal Solid State Actuator Applications

Peter Jardine (Shape Change Technologies) and Greg Carman (UCLA)

**11:00 am – 1:00 pm Exhibits, Tours, and Lunch (Hosted by Hitco Carbon Composites)**

**1:30 pm – 4:30 pm Afternoon Session**

**Session 3: Nanocomposites**

**Session Chair**

Doug Chism (The Aerospace Corporation)

Overview of AF Activities on Nanocomposites

Shawn Phillips (AFRL)

POSS-based Nanomaterials and Nanocomposites

Joe Lichtenhan (Hybrid Plastics)

Nanofibrils and Yarns Reinforced by Carbon Nanotube and Graphite Nanoplatelets

Frank Ko (Drexel University)

Vapor Grown Carbon Nanofibers for Aerospace Applications

Max Lake and Thomas Hughes (Applied Sciences)

Nanophase Metallic Alloys and Composites Synthesized by Cryogenic Milling

Cliff Bampton (Boeing)