

**NASA Electronic Parts and Packaging Program (NEPP)**  
**Electronics Technology Workshop 2010**

<b>Tuesday, June 22nd</b>					
<b>Start</b>	<b>Finish</b>	<b>Session</b>	<b>Topic</b>	<b>Presenter(s)</b>	<b>Organization</b>
8:15 AM	9:00 AM	Overview	NEPP and the Goals of the Workshop, Logistics	Kenneth LaBel Michael Sampson	NASA / GSFC
9:00 AM	9:45 AM	Invited	NESC Report on FPGA Assurance and Activities	George Jackson	NASA / GSFC
9:45 AM	10:15 AM	System Issues - Complex Electronics	The View from 10,000 ft - what is happening and what it means for flight electronics	Kenneth LaBel	NASA / GSFC
10:15 AM	10:30 AM	<b>Break</b>			
10:30 AM	11:15 AM	System Issues - Complex Electronics	Dealing with a new generation of device complexity	Douglas Sheldon	JPL
11:15 AM	12:00 PM	System Issues - Complex Electronics	Packaging and embedded electronics for the next generation	Michael Sampson	NASA / GSFC
12:00 PM	1:30 PM	<b>Lunch</b>			
1:30 PM	2:15 PM	System Issues - Complex Electronics	Power Electronics for the Next Generation	Jack Shue	NASA/GSFC
2:15 PM	3:00 PM	Invited	Workmanship Issues for Modern Packaged Electronics	Jeannette Plante	NASA/GSFC
3:00 PM	3:30 PM	<b>Break</b>			
3:30 PM	4:00 PM	Invited	Counterfeit Electronics - All the World's a Fake	Brian Hughitt	NASA/HQ
4:00 PM	4:30 PM	System Issues - Complex Electronics	Lead-free Electronics - Impact for Space Electronics	Michael Sampson	NASA/GSFC
4:30 PM	5:00 PM	System Issues - Complex Electronics	Working With Consortia - Advanced Packaging Reliability	Jim Blanche	NASA/MSFC
5:00 PM		<b>Discussion</b>			

<b>Wednesday, June 23rd</b>					
<b>Start</b>	<b>Finish</b>	<b>Session</b>	<b>Topic</b>	<b>Presenter(s)</b>	<b>Organization</b>
9:00 AM	9:30 AM	Invited	Overview of NASA's Office of Chief Technologist's Proposed Space Technology Programs	Peter Hughes	NASA/GSFC
9:30 AM	9:45 AM	Systems on a Chip	Overview	Kenneth LaBel	NASA/GSFC
9:45 AM	10:15 AM	Systems on a Chip	SOC Processors - Radiation and Developments	Steve Guertin	JPL
10:15 AM	10:30 AM	<b>Break</b>			
10:30 AM	11:30 AM	Systems on a Chip	FPGAs - Overview	Douglas Sheldon	JPL
11:30 AM	12:00 PM	Systems on a Chip	On-Going Radiation Effects on FPGAs - Lessons Learned and Plans	Melanie Berg	MEI Technologies
12:00 PM	1:30 PM	<b>Lunch</b>			

**Wednesday, June 23rd (continued)**

Start	Finish	Session	Topic	Presenter(s)	Organization
1:30 PM	2:00 PM	Systems on a Chip	FPGAs - Working with a Commercial Consortium: Tales of Xilinx Virtex-IV and SIRF Radiation Testing	Greg Allen	JPL
2:00 PM	2:30 PM	Memories	Memory Overview - Technologies and Needs	Kenneth LaBel	NASA/GSFC
2:30 PM	3:00 PM	Memories	Flash Memory Reliability	Jason Heidecker	JPL
3:00 PM	3:30 PM	<b>Break</b>			
3:30 PM	4:00 PM	Memories	NVM Radiation Testing and Guidance	Tim Oldham	Dell
4:00 PM	4:30 PM	Building Blocks	Capacitor Test, Evaluation, and Modeling within NEPP	Alexander Teverovsky	Dell
4:30 PM		<b>Discussion</b>			

**Thursday, June 24th**

Start	Finish	Session	Topic	Presenter(s)	Organization
8:30 AM	9:00 AM	Advanced Electronics	CMOS Reliability Challenges - The Future of Commercial Digital Electronics and NASA	Steve Guertin	JPL
9:00 AM	9:30 AM	Extreme Environment	Advanced Mixed Signal Technology	Richard Patterson	NASA/GRC
9:30 AM	10:00 AM	Radiation Effects	Predicting SEU Rates for Advanced CMOS Electronics	Robert Reed	Vanderbilt University
10:00 AM	10:15 AM	NEPP Website Overview	NEPP on the Web	Carl Szabo	Dell
10:15 AM	10:30 AM	<b>Break</b>			
10:30 AM	11:00 AM	Radiation Effects	Ultra-Scaled CMOS Radiation Performance	Jonathan Pellish	NASA/GSFC
11:00 AM	11:30 AM	Radiation Effects	Power Device Qualification Methods	Leif Scheick	JPL
11:30 AM	12:00 PM	Radiation Effects	Using SiGe Technology in Extreme Environments	John Cressler	Georgia Tech
12:00 PM	1:30 PM	<b>Lunch</b>			
1:30 PM	4:00 PM	Roundtable Breakouts	Talk to the NEPP experts - Q&A, next generation needs		
4:00 PM	5:00 PM	<b>Roundtable Reports</b>			

**Posters**

Session	Topic	Author(s)	Organization
Fiber Optics	Fiber Optic Qualification Standard: Status	Charles Barnes Melanie Ott	JPL NASA/GSFC
Radiation Effects	Hydrogen and Enhanced Low Dose Rate Sensitivity (ELDRS): Status	Philippe Adell	JPL
Radiation Effects	Ultra-ELDRS Status	Dakai Chen	MEI
Packaging	Micro-coil Columns for Space Electronic Packages: Tech Transfer and NEPP	Mark Strickland	NASA/MSFC
Radiation Effects	Radiation Effects on IR and Visible Sensors: Update	Heidi Becker Cheryl Marshall	JPL NASA/GSFC
Packaging	NASA Packaging Roadmap	Phil Zulueta	JPL