

Technology Days in the Government 2006

Monday September 18

Time	Title	Presenter	Company
700	BREAKFAST		
730	Welcome & Introduction	Stahl	NASA
735	Welcome Remarks	TBD	Albuquerque
	Overviews		
740	Space Optical Systems: technology, development and implementation	Breckinridge	JPL
800	SBIR Program Overview	Schober	JPL
	Systems/Projects		
820	JWST Mirror Status	Gallagher	Ball
840	Kepler PMA - Metrology and FEA Analysis of Zero-Gravity Figure	Jones	L3 Brashear
900	Kepler PMA - FEA Prediction and Measured Cryo Figure	Zinn	L3 Brashear
920	SiC New Horizons Long Range Reconnaissance Imager (LORRI) telescope	Robichaud	L3-SSG
940	COFFEE		
	X-Ray		
1010	Fabrication of extremely lightweight aspheric mirrors	Zhang	GSFC
1030	Status of MSFC X-ray shell optics fabrication capability	Stahl	MSFC
	Materials & Material Characterization		
1050	Space qualification of SiC for mirror applications: progress and future objectives	Palusinski	Aerospace
1110	Screening of NDE Techniques for SiC	Matson	MLLN
1130	Materials Characterization Status	Stahl	MSFC
1140	Database on SuperSiC for Optics	Swernofsky	POCO
	Fracture and Fatigue testing of SiC for optics	Swernofsky	POCO
	Design guide for SiC optics	Swernofsky	POCO
1200	LUNCH		
	Optical Fabrication		
100	Rapid Fabrication of SiC Optics using Reactive Atom Plasma (RAP) Processing	Fiske	RAPT
	Optical Technologies for Cryogenic Sensors	Fiske	RAPT
	Lightweight SiC Optics Design and Fabrication	Fiske	RAPT
130	Laser Micromachining of Optical Structure and Surfaces	Jacobsen	Mound
	Laser Micromachining Process for the Fabrication of SiC Mirrors	Jacobsen	Mound
200	Fabrication of Large Optics using Magnetorheological Finishing (MRF [®])	Jones	QED
	Deterministic Finishing for Astronomical Optics	Tricard	QED
230	Ductile Mode Machining of SiC Optics	Grevstad	Third Wave
250	COFFEE		
320	Approach to Finishing Edges Using Zeeko Polishing Technology	Kelchner	Zeeko
340	Electro-Chemically Enhanced Mechanical Polishing of Nickel Mandrels	Stahl	NASA
	Optical Testing		
400	IR Scanning Shack-Hartmann Sensor for JWST metrology during rough grind	Kiikka	Tinsley
420	Integrated Full-Spectrum Metrology & Polishing for Rapid Asphere Production	Glenn	Bauer
440	SHARPI/PICTURE Sounding Rocket Telescope	Content	GSFC
500	Low Coherence Vibration Insensitive Fizeau Interferometer	Martinek	4D
520	Subaperture stitching for large aspheric surfaces	Tricard	QED
540	PROPRIETARY SESSION		
540	GOVERNMENT DISCUSSION		
600	END OF DAY		
	RECEPTION with Heavy Appetizers and Cash Bar Featured Speaker: Dr. Doug Beason, Assoc. Director of Los Alamos National Lab.		

Technology Days in the Government 2006
Tuesday September 19

700	BREAKFAST		
	Silicon Carbide, Silicon and Metals		
730	SLMS Beam Control Mirror for ATL	Goodman	Schafer
	SLMS for SHARPI	Jacoby	Schafer
	SLMS Actively Cooled Mirror	Jacoby	Schafer
800	Development of EUV Quality SiC Optics	Schwartz	L3-SSG
820	SiC optical bench for STSS	Duston	POCO
	5" SiC telescope for LCKV	Duston	POCO
	9" telescope for EKV	Duston	POCO
	30" SiC mirror for Artimus	Duston	POCO
850	Net Shape SiC Optics Structures Technology (Phase II)	deBlonk	for Surmet
910	JWST NIRSpec	Williams	CoorsTek
	Segmented (brazed) visible quality optic project	Williams	CoorsTek
930	Development of rigid mirror segments of silicon carbide, weighing 5 kg/m2	Connors	UAz
950	COFFEE BREAK		
1020	High Volume, Low Cost, Process for High Grade SiC Optics (Phase 2 STTR)	Tanaka	Trex
	Chemical Vapor Composite Silicon Carbide for Space Telescopes (Phase 2)	Tanaka	Trex
	CVC SiC: Low Cost Manufacturing for Lightweight Mirror Systems (Phase 2)	Tanaka	Trex
	CVC SiC Optical Mounting Structure for Space Applications (Phase 1)	Tanaka	Trex
	Silicon Carbide Mirrors	Tanaka	Trex
1050	Single Crystal Silicon – Beryllium Substitute Material (Phase II)	Paquin	McCarter
	Innovative Manufacturing Process Improvements: Methods of Attachment	Paquin	McCarter
1120	High Precision Instrument Mirrors from Single Crystal Silicon	Bly	NASA
1140	Advanced lightweight on-orbit Gimbal System using AlBe	Michel	BrushWellman
1200	LUNCH		
	Glass & Other Technologies		
100	Phosphate Athermal Glass	Goodman	Schafer
120	Corrugated mirrors for segmented astronomical telescopes	Strafford	ITT
140	CHIM Mirror Technology	Dobson	Foster-Miller
200	CRG Composite Mirror Technology	Hermiller	CRG
220	Ultra-lightweight, Low Scatter, Large Mirror Technology	Bennett	BOR
240	Low Cost Lightweight GrMg Alloys Mirrors	Cornie	MMCC
	GrMg Mirrors & Optical Support Structures for Be Replacement	Cornie	MMCC
	Low Expansion Nanolaminate Mirrors with GrMG CTE Matched Substrate	Cornie	MMCC
300	COFFEE BREAK		
	Shell & Membrane Technology		
330	Nanolaminate Deformable Mirror Technology Development	Papavasiliou	LLNL
350	Single Surface Membrane Optical Shell Technology Status	Flint	Mevicon
405	Shape Memory Composite Applications for Deployable Membrane Reflectors	Varlese	Ball
425	Stress Coatings for Large Scale Membrane Mirrors	Conk	for SRS
445	PROPRIETARY SESSION		
450	Corrugated mirrors for segmented astronomical telescopes	Strafford	ITT
455	CHIM Mirror Technology	Dobson	Foster-Miller
500	Single Crystal Silicon – A Beryllium Substitute Material for GMD Applications	Paquin	McCarter
505	Optical Telescope Attachment Methods	Paquin	McCarter
510	Low Cost Lightweight GrMg Alloys Mirrors	Cornie	MMCC
515	Single Surface Membrane Optical Shell Technology Status	Flint	Mevicon
	GOVERNMENT ONLY SESSION		
520	SiC Scalability Lessons Learned	Boehme	Navy
540	GOVERNMENT DISCUSSION		
600	END OF DAY		

Technology Days in the Government 2006
Wednesday September 20th

700	BREAKFAST		
	Opto-Mechanical Technology		
730	Novel Concept Deformable Membrane Mirror to correct Large Amplitude Aberrations	Moore	SRS
750	Flexensional Single Crystal Piezoelectric Actuators for Membrane Mirrors	Jiang	TRS
810	Large Stroke, Picometer Resolution Hexapod for Dynamic Mirror Positioning	Blaurock	Nightsky
830	SEO Precision FSM using a Schafer SLMS	Oehlke	SEO
850	Stabilized Operational-Sized Fast Steering Mirror	Morgan	Aptec
900	COFFEE BREAK		
	MEMS/Nano Technology		
930	Segmented MEMS Mirror Arrays (Phase II)	Tsao	Umachines
950	Performance Evaluation of the Iris AO Segmented MEMS Deformable Mirror	Helmbrecht	Iris AO
1010	Nanostructured Grating Imaging Mirrors fabricated by Deep UV lithography	Iazikov	LightSmyth
1030	MEMS-based SLM for Maskless Optical Lithography	Aksyuk	Lucent
	MEMS SLM for Communications, Imaging and Targeting	Aksyuk	Lucent
1100	Ultra Flat Tip-Tilt-Piston MEMS Deformable Mirror	Bierden	Boston MM
	High Resolution Silicon Deformable Mirrors (Phase II)	Bierden	Boston MM
	PROPRIETARY SESSION		
1130	Segmented MEMS Mirror Arrays (Phase II)	Tsao	Umachines
1135	MEMS-based SLM	Aksyuk	Lucent
1140	GOVERNMENT DISCUSSION		
1130	LUNCH		
1230	Depart for UNCLASSIFIED Tour of SOR		
1230	Depart for Tours Arranged by NMOIA		