

2021 Mirror Technology Days – DRAFT Agenda			
Time	Presenter	Tuesday Nov 2	
NASA SBIR Technology Needs			
800	Stahl	NASA	Welcome
810	Perez	NASA	NASA's Response Plan to Astrophysics Decadal Report
830	TBD	Aerospace	Independent Review of NASA Astrophysics Technology Development Portfolio
850	Stahl	NASA	SBIR 2022
910	Shiri	NASA	SBIR 2022
930	COFFEE		
LISA			
1000	Livas	NASA	LISA Telescope Design
1020	Fici	L3Harris	LISA Engineering Development Unit Telescope Program Status
Telescopes for Missions			
1050	Sims	Quadrus Adv Manufacturing	P1: Affordable Maneuvering CubeSAT Telescope
1110	Halterman	Quartus Engineering	P2: Custom Optical Space Telescopes - STOP Analysis Correlation Testing
1130	Arenberg	Northrop Grumman	NIAC: OASIS (Inflatable MIDex concept)
1150	GROUP PHOTO		
1200	LUNCH		
Structures			
1300	Monroe	Thermal Expansion Solutions	P1: Novel CTE Tuning of Ultra-Stable ALVAR Silloy Struts for 10m to 20m Telescopes
		Thermal Expansion Solutions	P2: Ultra-Stable ALLVAR Alloy Strut Development for Space Telescopes
Free Form Optics			
1330	Coniglio	Optimax	Robotic smoothing of freeforms to reduce mid-spatial frequency errors
1350	Liu	Univ or Rochester	Freeform Reflective Hyperspectral Imager Design in CubeSat Format
1410	Goeckeritz	Momentum Optics	P1: Laser Fabrication and Integrated Metrology for Low-Cost Free-Form Optics
Mirror Technology – UV/Far-IR			
1430	Bai	Polaronyx	P2: Precision Femtosecond Laser Additive Manufacturing and Athermal Welding
1450	Casstevens	Dallas Optical Systems	P1: Additively Manufactured Very Light-Weight Diamond Turned Aspheric Mirror
1510	Eng	NASA	Cryogenic Optical Performance of Aluminum Mirrors
		NASA	Cryogenic Optical Performance of Cordierite Mirror
1530	COFFEE		
1600	Goodman	Goodman Tech	P2: Ultra-Lightweight, Ultra-Stable RoboSiC Additively Manufactured Lasercom Telescope
1620	Cho	NOIRLab	Nanometric control of TIF on SiC during polishing
1640	El-Ghannam	UNCC	DoD: Strengthening mechanism and thermomechanical behavior of surface activated SiC composites
TBD	RECEPTION		

Time	Presenter	Wednesday Nov 3	
Metrology Technology			
800	Lis	Hedgefog Research	P1: Thermal Expansion Mapper
820	Shane	Boulder Nonlinear Systems	P2: Programmable Phasing Interferometer
840	Markov	Adv Sys Tech Inc	P2: Reconfigurable Optoelectronic Mirror Evaluation (ROME) System
900	Munehika	HighRI Optics	Beyond Resolution Reconstruction of Surface Metrology Data
920	Mohring	OptiPro Systems	P2: Advanced Nanometer Coordinate Measuring Machine
940	Munro	OptiPro Systems	P2: Chromatic Interferometric Probe
1000	COFFEE		
X-Ray Mirror Technology			
1040	Zhang	NASA	Next Generation Astronomical X-ray Optics: High Resolution, Light Weight, & Low Cost
1100	Bongiorno	NASA	MSFC Advanced X-Ray Optics – Formulation to Flight
1120	Wolfs	OptiPro Systems	P1: Polishing X-Ray Optics
1140	Thomas	NASA	MSFC 100-m X-Ray Beamline
1200	LUNCH		
Coronagraphy			
1300	Tabiryan	BEAM	P2: Broadband Vector Vortices for High Contrast Coronagraphy
Thermal Control			
1320	Stahl	MSFC	SAT: Precision Thermal Control
Coating Technology			
1340	Hennessy	JPL	SAT: Progress in the development of atomic layer deposition for UV mirror coatings
1400	Quijada	GSFC	APRA: Advances in developing mirror coating technologies for enhancing the FUV reflectance of protected aluminum coatings
1420	Boris	NRL	SAT: Enhancing FUV Optical Properties of Aluminum with Single Step Approach to Oxide Removal & Fluorine Passivation
1440	Ignatiev	Lunar Resources	DoD: ATDoMS: A 2024 Space Deposition Coating Demonstration Mission
1500	COFFEE		
1530	Sheikh	ZeCoat	APRA: Precision Optical Coatings for Large Space Telescope Mirrors
		ZeCoat	P2: Dark coatings with tailorable BRDF and thermal-emissivity for light-blocking starshade membranes
1600	Wang	Faraday Technology	P2: Robust FARADAYIC CNT Based Coating for Scattered Light Suppression
Deformable Mirror Technology			
1620	Bierden	Boston Micromachines	P2: Eliminating High-Spatial-Frequency Topography due to Print-Through in MEMS Deformable Mirrors
			P2: Segmented Micro-Mirrors for Picometer-Scale Wavefront Compensation in Space-Based Observatories

Time	Presenter	Thursday Nov 4	
CLOSED SESSIONS			
Roman Space Telescope			
800	Bolcar	NASA	Roman Space Telescope Optical System Overview
820	Johnson	L3Harris	Roman Space Telescope Primary Mirror Testing for Zero G Cold Performance
840	Merle	L3Harris	Rotostitch Test for 2.7m Roman Space Telescope Autocollimating Flat
900	Dominquez	NASA	Evolution and status update of the Roman Space Telescope Flight Grism Component
920	Marx	NASA	Status of Roman WFI Filters
940	Zhao	JPL	High Contrast Imaging Technology Demonstration with Roman Coronagraph – Capabilities and Status
1000	COFEE		
Advanced Technologies			
1030	Borrelli	L3Harris	Advanced Technologies Supporting Next Generation Telescopes
1050	Schwartz	L3Harris	SSG SiC Space Telescopes: Current State and Future Development Objectives
1110	Norman	L3Harris	Freeform Optical Design for Sub-meter Space Telescopes
1130	Ou	Sunlite Sci & Tech	P2: 32x32 HV amplifier Array for Driving MEMS
1150	Harmon	Nano-Voxtel	P2: AM Compact High-degree-of-freedom Freeform Beam-expander Optics
1210	LUNCH		
Segmented Mirror Telescope Project (SMTP) Phase 2			
1300	Coyle	BATC	ULTRA Overview
1320	Knight	BATC	Technology maturation of components to enable ultra-stable active optical systems
1340	Cromey	BATC	Edge Sensors for Future Ultra-stable Segmented Mirror Telescopes
1400	Hicks	BATC	Picometer-scale measurements of flight-like ultrafine stage mirror actuators
1420	Arenberg	Northrop Grumman	Measurement of strain dependent damping
1440	Park	SAO	Thermal Modeling
1500	COFEE		
1530	Nordt	LMCO	TechMAST Overview
1550	Shaw-Lecerf	LMCO	Disturbance Free Payload Demonstration
1610	Dewell	LMCO	Integrated Modeling
1630	Horowitz	LMCO	Picometer Metrology
1650	East	L3Harris	Capture Range Replication progress and accomplishments