High Contrast Imaging on Segmented Apertures Workshop

May 5 & 6, JPL

Day 1 (Thu May 5) - JPL, Building 180 Room 101.		
9:00-9:30	Scientific context: science and missions (invited)	Karl Stapelfeldt
Experience from WFIRST as a "segmented" aperture (chair: Guyon)		
9:30-10:00	Coronagraph design for segmented/centrally obscured apertures: WFIRST experience (invited)	Jeremy Kasdin
10:00-10:30	Evaluating coronagraph design performance with end-to-end modeling: WFIRST and beyond (invited)	John Krist
10:30:10:50	WFIRST LOWFS/C design and testbed results	Fang Shi
10:50-11:10	Coffee break	
Future segmented large space telescopes: overview and science yield (chair: Guyon)		
11:00-11:30	ATLAST and JWST Segmented Telescope Design Considerations	Lee Feinberg
11:30-12:00	HabEX & LUVOIR technology challenges	Nick Siegler
12:00-12:20	Maximized Yields for Coronagraphs and Starshades	Chris Stark
12:20:12:40	Yield modeling with EXOSIMS for decadal concept studies	Rhonda Morgan
12:40-13:30	lunch	
Session 1: Coronagraph Designs for Segmented Apertures (chair: Shaklan)		
13:30-13:50	SCDA Overview and Apertures	Stuart Shaklan
SCDA study updates		
13:50-14:20	APLC for Segmented Apertures	Neil Zimmerman
14:20-14:50	Vortex Coronagraphs for Segmented Apertures	Garreth Ruane
14:50-15:20	PIAA Coronagraphs for Segmented Apertures	Olivier Guyon
15:20-15:50	Linear Lyot Coronagraph Theory	J. Codona
15:50-16:00	Break	
16:00-17:30	Lab Tours	

Day 2 (Fri May 6) - JPL Building 180 Room 101.		
New coronagraph concepts for segmented apertures (chair: Soummer)		
8:30-8:50	Theoretical performance trades between IWA, Contrast, and jitter sensitivity on segmented apertures	Rus Belikov
8:50-9:10	play-doh coronagraph	Marc Kuchner
Session 2: Sensing and controlling co-phasing errors for high contrast imaging Telescope design, laser metrology, starlight sensing, optimized control, postprocessing		
Telescope design, hardware (chair: Traub)		
9:10-9:40	TMT design and cophasing (invited)	Mitch Troy
9:40:10:10	GMT design and cophasing (invited)	Antonin Bouchez
10:10-10:30	JWST performance & trades relevant to aperture & stability	Paul A. Lightsey
10:30-10:50	Sensitivity Analysis: Segment Rigid Body Motion vs Contrast Leakage	Phil Stahl
10:50-11:10	Coffee break	
11:10-11:30	Caltech High Contrast Spectroscopy for Segmented Telescopes Testbed	Dimitri Mawet
11:30-11:50	Large Active Silicon Carbide Mirrors	David Redding
11:50-12:10	Notional Telescope Design for 10 Meter LUVOIR Mission	Scott Knight
12:10-12:40	Segment manufacturing: edge figure, support (invited)	Gary Matthews
12:40-13:30	Lunch	
13:30-14:00	Polarization effects on large segmented apertures (invited)	Stuart Shaklan
14:00-14:30	Discussion: telescope design considerations for HCI	
Measuring and calibrating cophasing errors (chair: Soummer)		
14:30-14:50	Segment phasing with a Zernike WFS	Kent Wallace & Kathryn Jackson
14:50-15:10	Linear Dark Field Control for segmented apertures	Olivier Guyon & Kelsey Miller
15:00-15:20	Coffee break	
15:20-15:40	Aperture masking and kernel phases: extracting cophasing errors from science data	Mike Ireland
16:00-17:00	Discussion	