

# AGENDA: WaveFront Sensing in the VLT/ELT era II Workshop

## Monday, October 2<sup>nd</sup>

13.50 - 14.00	Welcome	
14.00 - 15.40	<b>WFSs for tomorrow - Next Generation WFSs Design</b>	Chair: Thierry Fusco
14.00 - 14.20	Wavefront sensing for METIS	Thomas Bertram
14.20 - 14.40	Opto-mechanical design of the NGS WFS of MAORY	Marco Bonaglia
14.40 - 15.00	Wave-front sensor trade-off for HARMONI SCAO system	Jean-Francois Sauvage
15.20 - 15.40	Detailed Design of the NFIRAOS Pyramid WFS module	Jean-Pierre Véran
15.40 - 16.10	<i>Coffee Break</i>	
16.10 - 17.50	<b>Hands on WFSs WFSs - Experiments, Prototyping &amp; Commissioning</b>	Chair: Valentina Viotto
16.10 - 16.30	Pyramid Prototyping for the GMT	Enrico Pinna
16.30 - 16.50	Mach-Zehnder WFS in Extreme Adaptive Optics for high contrast applications	Magali Loupias
16.50 - 17.10	Visible adaptive optics challenges and R&D prospects for the new THEMIS solar facility	Maud Langlois
17.10 - 17.30	ELT elongated Sodium LGS experiment at WHT: a progress report	Gerard Rousset
17.30 - 17.50	LINC-NIRVANA: 4 multi-pyramid WFSs for MFoV MCAO commissioning	Maria Bergomi
17.50 - 18.30	<b>Discussion</b>	TBD

## Tuesday, October 3<sup>rd</sup>

09.30 - 10.50	<b>Pyramids &amp; Pupils... - Variations on P-WFSs schemes</b>	Chair: Charlotte Bond
09.30 - 09.50	Spatial Filtering with a Pyramid Wavefront Sensor on the High Order Testbench	Banas Tyler
09.50 - 10.10	Optimizing the performance of a Pyramid WFS: tracking the optical gain	Charlotte Bond
10.10 - 10.30	Multiple spatial frequency wavefront sensing with a pyramid	Davide Greggio
10.30 - 10.50	Overview on pyramid wavefront sensor: forward models, reconstruction algorithms, practical issues	Iuliia Shatkhina
10.50 - 11.20	<i>Coffee Break kindly provided by First-Light Imaging</i>	
11.20 - 13.00	Pyramid Demonstrator benches	L. Busoni & B. Tofani Laurent Jolissaint
13.00 - 14.00	<i>Lunch (catering on site)</i>	
14.00 - 15.40	<b>WFSs of tomorrow - New WFSs and/or new frameworks</b>	Chair: Marco Bonaglia
14.00 - 14.20	8-m class telescope MCAO system for visible wavelengths science	Guido Agapito
14.20 - 14.40	Generalized optical differentiation with patterned liquid-crystals	Sebastian Haffert
14.40 - 15.00	Natural Guide Star WFS, to complement LGS for ELTs	Benoit Neichel
15.20 - 15.40	New fashion for old paradigm: efficient, no moving part, ingot-like WFSs for LGS	Roberto Ragazzoni
15.40 - 16.10	<i>Coffee Break</i>	
16.10 - 17.50	<b>Bytes, bits and WFSs - WFSensing Simulations</b>	Chair: Maud Langlois
16.10 - 16.30	Simulations of MAORY low-order sensors and first estimate of	Cedric Plantet

	sky coverage	
16.30 – 16.50	GIUSTO: GMCAO IDL Unreleased Simulation TOol	Valentina Viotto
16.50 – 17.10	Validating the phase diversity approach for sensing NCPA in SHARK-NIR with end-to-end simulations	Daniele Vassallo
17.10 – 17.30	Analytic modelling of Shack-Hartmann and Pyramid WFSs under predictive closed-loop control	Carlos Correia
18.00 – 19.00	<i>Green WFSs - Visit to the Botanical Garden</i>	
19.30	<i>Social Dinner</i>	

### Wednesday, October 4<sup>th</sup>

09.30 – 10.50	<b>Screwdriver &amp; WFSs - WFSs-related technical issues</b>	Chair: Roberto Ragazzoni
09.30 – 09.50	Low-wind effect – Origin and mitigation	Markus Kasper
09.50 – 10.10	Rolling shutter: the good, the bad and the ugly	Francois Rigaut
10.10 – 10.30	Overview of the AO calibration strategies for the ELT context	Cedric Taïssir Heritier
10.30 – 10.50	A testing facility for AO on-sky demonstrations at the Copernico's Telescope	Simonetta Chinellato
10.50 – 11.20	<i>Coffee Break</i>	
11.20 – 13.00	<b>Keyboards &amp; WFSs - Controls &amp; Algorithms</b>	Chair: Enrico Pinna
11.20 – 11.40	Wavefront Reconstruction for Imperfect Pyramid Wavefront Sensor Assemblies: Generalizing the Controller Slope Space	Vincent Deo
11.40 – 12.00	LGS spot elongation mitigation for the LTAO mode of HARMONI	Leonardo Blanco
12.00 – 12.20	Direct piston reconstruction approaches to control segmented ELT-mirrors	Victoria Hutterer
12.20 – 12.40	Partial Illumination and Wind Predictive Control	Kalyan Radhakrishnan
12.40 – 13.00	Keep it simple - Poke Matrix Inversion for a (stable) piston segment reconstruction	Andreas Obereder
13.00 – 13.10	Wrap-up and greetings	Roberto Ragazzoni

From 9.00 to 18.00 entrance/exit from Via Orto Botanico, 15.

After 18.00 exit from Prato della Valle.

SOCIAL DINNER: The social dinner will take place at “Rifugio Monta Rua” in the Colli Euganei, nearby Padova. The cost of the dinner will be 35€. To reach the location a private bus is provided. It will leave from “Prato della Valle”, near the Zairo restaurant: meeting at 19.20, departure at 19.30 sharp. Return to Prato della Valle is scheduled around 23:30.