



# ARIEL - 1° Workshop Nazionale

## Il contributo italiano alla missione ARIEL

**2-3 ottobre 2018**

INAF - Sede Centrale - Aula Cimino

Day #1

10:30 – 10:45	F. Zerbi (Direttore Scientifico – INAF)	Opening Address
10:45 – 11:00	B. Negri (Responsabile dell'Unità Esplorazione e Osservazione dell'Universo – ASI)	The point of view of ASI
<b><u>Session #1 – The ARIEL Mission</u></b>		
<b><u>Chair: P. Malaguti</u></b>		
11:00 – 11:45	G. Tinetti (UCL)	The science of ARIEL
11:45 – 12:15	E. Pace (UniFI)	The ARIEL Payload
12:15 – 12:45	G. Micela (INAF-OAPA)	The Italian contribution to ARIEL
12:45 – 13:15	E. Pascale (UniRoma1)	ARIEL performances
13:30 – 14:30: Lunch break		

<b><u>Session #2 – ARIEL Targets and host stars</u></b>		
<b><u>Chair: A. Maggio</u></b>		
14:30 – 14:50	I. Pillitteri (INAF-OAPA)	Optimizing the selection of ARIEL targets
14:50 – 15:10	A. Sozzetti (INAF-OATO)	Optimization and Prioritization of the ARIEL target sample
15:10 – 15:30	L. Magrini (INAF-OAFi)	Spectroscopic characterization of the host star
15:30 – 15:50	G. Sacco (INAF-OAFi)	The age of planet hosting stars
15:50 – 16:20: Coffee break		

<b><u>Session #3 – From the Solar System to exoplanets</u></b>		
<b><u>Chair: G. Piccioni</u></b>		
16:20 – 16:40	F. Oliva (INAF-IAPS)	Earth observed as an exoplanet: VIRTIS-M/Venus Express data analysis
16:40 – 17:00	A.F. Lanza (INAF-OACT)	Observing the Sun as a star to characterize the impact of stellar activity on ARIEL observations
<b><u>Session #4 – Planetary atmospheres</u></b>		
<b><u>Chair: G. Piccioni</u></b>		
17:00 – 17:20	D. Locci (INAF-OAPa)	X-ray photochemistry of planetary atmospheres
17:20 – 17:40	A. Sozzetti (INAF-OATo)	Exploring the potential for ARIEL measurements of atmospheric escape
17:40 – 18:00	M. Maris (INAF-OATs)	Arctec: the Trieste exoclimates Archive
18:00 – 18:20	F. Berrilli (UniRoma2)	Climate and radiative properties of a tidally-locked planet around Proxima Centauri

Day #2

<b><u>Session #5 – ARIEL Synergies with other Telescopes</u></b>		
<b><u>Chair: G. G. Sacco</u></b>		
9:10 – 9:30	N. Sanna (INAF-OAA)	<i>Synergy between ARIEL and HIRES</i>
9:30 – 9:50	I. Pagano (INAF-OACT)	<i>Synergy of ARIEL with CHEOPS and PLATO</i>
<b><u>Session #6 – Discs, planets formation and architecture</u></b>		
<b><u>Chair: G. G. Sacco</u></b>		
9:50 – 10:10	D. Turrini (INAF-IAPS)	ARIEL: investigating the signatures of planetary formation
10:10 – 10:30	S. Molinari (INAF-IAPS)	Hints to planet formation history from the chemistry of disks and natal clouds
10:30 – 10:50	L. Borsato (Univ. Padova)	ARIEL as a powerful machine for exomoon/ Trojan detection and TTVs
10:50 – 11:10	D. Fedele (INAF-OAA)	ALMA meets ARIEL: from protoplanetary disc chemistry to planetary atmospheres
<b>11:10 – 11:40: Coffee break</b>		
<b><u>Session #7 – Laboratory and data retrieval</u></b>		
<b><u>Chair: E. Tommasi</u></b>		
11:40 – 12:00	T. Zingales (UCL / INAF-OAPA)	Atmospheric retrieval using deep learning
12:00 – 12:20	G. Morello (CEA/INAF-OAPA)	Stellar and exoplanetary atmospheres bayesian analysis simultaneous spectroscopy
12:20 – 12:40	R. Claudi (INAF-OAPD)	Atmosphere in a test tube
12:40 – 13:00	S. Stefani (INAF-IAPS)	Experimental set up used to characterize the optical properties of gases at typical planetary conditions
13:00 – 13:20	G. Micela	Closing Remark
<b>13:20 – End of Workshop</b>		