



4th Meeting of the Italian community dedicated to Ariel's scientific preparation

Palermo 20-21-22 May 2024

Scientific Programme, V.2

20 Maggio

(Chair: G. Scandariato)

14:30	14:40	Giusi Micela	Introduction	00:10
14:40	15:10	Emanuele Pace	The Ariel Payload and the Italian contribution	00:30
15:10	15:35	Giovanni Bruno	GranCHAI: Characterising granulation in the Ariel Reference Sample	00:25
15:35	16:05	Isabella Pagano	Synergy Ariel - PLATO	00:30
16:05	16:35	Break		00:30
16:35	16:55	Alfredo Biagini	Revisiting the HST observation of LHS1140b	00:20
16:55	17:25	Cesare Cecchi Pestellini	Is the Ariel dry run running dry?	00:30
17:25	17:45	Angela Ciaravella	The LIFE+ (Light Irradiation Facility for Exochemistry: PLanetary Atmosphere System) @ OAPA	00:20
17:45	18:05	Antonio Jimenez	Electron processing in exoplanetary CO ₂ -rich atmospheres	00:20

21 Maggio

(Chair: E. Tommasi)

09:00	09:35	Giovanna Tinetti	Ariel Science case	00:35
09:35	09:45	Laura Magrini	The stars of the dry-run	00:10
09:45	10:00	Camilla Danielski	The homogeneous characterisation of Ariel stars	00:15
10:00	10:15	Maria Tsantaki	Spectroscopic analysis of the Ariel stellar sample so far	00:15
10:15	10:30	Diego Bossini	Stellar Ages, Masses and Radii in the Ariel Mission Reference Sample: An Hare&Hounds Exercise for FGK Planet-Host Stars with and without asteroseismology	00:15
10:30	10:50	Jesus Maldonado	The characterisation of dM stars	00:20
10:50	11:20	Break		00:30
11:20	11:40	Laura Affer	Planetary parameters	00:20
11:40	11:55	Gloria Guilluy	Atmospheric properties of the targets of the dry run	00:15
11:55	12:25	Antonino Petralia	Surface Modeling in the context of Exo-CASH	00:30
12:25	12:35	Gabriele Galletta	Flare analysis of the targets of the dry-run	00:10
12:35	13:00	Antonio Maggio	High energy emission	00:25
13:00	15:00	Lunch		02:00

(Chair: M. D'Arpa)

15:00	15:15	Eugenio Schisano	What was the composition of the primordial planetary formation zone around planet hosting stars	00:15
15:15	15:30	Diego Turrini	From planet formation to the diversity of exoplanetary atmospheres	00:15
15:30	15:45	Elenia Pacetti	The time-evolving chemistry of discs and its signatures on giant planets	00:15
15:45	16:00	Danai Polychroni	Exploring the formation of multiplanet systems and the implications for planetary atmospheres	00:15
16:00	16:15	Sergio Fonte	The impact of chemically-diverse disks on the atmospheric oxygen deficit	00:15
16:15	16:30	Paolo Simonetti	Oxygen sequestration by refractories in atmospheres with vertical transport	00:15

16:30 17:00 Break 00:30

17:00	17:20	Claudia Di Maio	Impact of the planetary mass uncertainty on the atmospheric retrieval of a sub-sample of the Ariel MCS and its implications for the STILES project	00:20
17:20	17:40	Valerio Fardella	Minerva: A tool for estimating time telescope for mass determination	00:20
17:40	18:00	Serena Benatti	The Ariel Masses Survey Program at the TNG	00:20

22 Maggio

(Chair: E. Guerriero)

09:00	09:20	Daniele Locci	Studying the effects of XUV radiation on planetary chemistry and transmission spectra: a study of five case scenarios (Powered by STILES)	00:20
09:20	09:40	Riccardo Spinelli	Photoevaporation of the dry-run planets with ATES in the context of Exo-CASH	00:20
09:40	10:00	Stavro Ivanovski	Parametric study of star-planet interaction in case of HD209458b	00:20
10:00	10:10	Daniele Locci	History of hydrogen losses with STILES: the case of HD209458b	00:10
10:10	10:20	Paolo Simonetti	The impact of star-driven hydrogen loss on the chemical makeup of the upper atmosphere of HD 209458b	00:10

10:20 10:50 Break 00:30

10:50	11:20	Andrea Lorenzani/ Bocchieri	Updates on Ariel simulations and detrending	00:30
11:20	11:35	Paolo Simonetti	In search for habitability: a planetary parameter space exploration of three Super-Earths in the Ariel target list	00:15
11:35	11:55	Luca Borsato	Transit Time Variation in the Ariel context: planetary masses and high cadence photometry	00:20
11:55	13:05	Tutti	Discussione e piano di lavoro	01:10