

EXOPLANETS

RESEARCH ON EXOPLANETS @ FIRENZE

Dipartimento di Fisica e Astronomia, Arcetri, Aula A

15 September 2021

The workshop aims to gather the Florentine scientific community that carries out research on exoplanets, their atmospheres and related topics and to create an opportunity for meetings and discussions between researchers. Great instruments are coming soon, such as the Ariel space mission and the HiRes spectrometer at the E-ELT, offering an important opportunity for scientific growth to the Università di Firenze and INAF – Osservatorio Astrofisico di Arcetri, both involved in this field of research which is increasingly establishing itself worldwide. The Ariel mission has got a broad participation of researchers who carry out their coordinated activities in Working Groups on topics ranging from planetary formation, to the evolution of planetary atmospheres and environments, from the composition of atmospheres to the star-planet interaction, to the characterization of host stars; this offers a useful starting point for organizing and coordinating Florentine activities. The topic “exoplanets” is not only related to atmospheres, but to the more general study of exoplanets, through the PLATO mission and observations with ground-based telescopes. The study of exoplanetary atmospheres is also based on the results of similar research conducted on planetary atmospheres. Therefore, synergies with the study of the Earth's atmosphere and the planets of the Solar System, observation techniques, and other instruments from the ground and from space are very important. The synergies with studies on astro-chemistry and proto-stellar discs are another relevant pillar of the exoplanetary exploration. Therefore, all researchers who carry out research on exoplanetary atmospheres and more generally on exoplanets, on the characterization of host stars, on the Earth's atmosphere and planetary atmospheres, on astro-chemistry and on proto-stellar disks are invited to attend this two-days workshop and contribute by presenting their research activity in Firenze with the aim of creating new synergies and research opportunities. Students are warmly invited to attend and are welcome.

Organisers Emanuele Pace, Sofia Randich, Alessandro Marconi

Topics

1. Search and characterisation of exoplanets
2. Formation and evolution of planetary systems
3. Chemistry of the planetary and exoplanetary atmospheres
4. Characterisation of proto-planetary disks
5. Characterisation of host stars in planetary systems
6. Interaction star/planet
7. Synergies with astro-chemistry e proto-planetary disks
8. Ground- and space-based instruments to study exoplanets
(Ariel, HiRes, PLATO, Giano, Harps-N, LOCNES, ESPRESSO@VLT, OPC)
9. National and International networks to study exoplanets (GAPS, ExoClock, TFOP)

Information emanuele.pace@unifi.it

PROGRAM

09:30	Arrivals and Green Pass control	
10:00	HiRes at E-ELT	– Alessandro Marconi (invited)
10:30	Ariel M4 ESA mission	– Emanuele Pace (invited)
11:00	PLATO M4 ESA mission	– Mauro Focardi (invited)
11:30	Exoplanetary atmospheres: recent highlights and prospects.	– Lorenzo Pino (invited)
12:00	Astrochemistry in protoplanetary discs	– Linda Podio (invited)
12:30	The characterisation of the planet host stars	– Laura Magrini (invited)
13:00	Lunch break	
14:30	TESS: Spacecraft mission and follow-up opportunities for ground-based telescopes	– Lorenzo Betti (invited)
15:00	LOCNES's view of the Sun as a star	– Monica Rainer (invited)
15:30	Population Studies of exoplanets in the era of JWST: Building on the legacy of HST	– Angelos Tsias
15:50	Coffee Break	
16:10	Where and when planets form: Ariel and ERIS meet ALMA and SPHERE	– Antonio Garufi
16:30	Understanding the properties and the origin of young exoplanet hosts with the 4MOST Survey of Young Stars	– Giuseppe Germano Sacco
16:50	Search for Exoplanets orbiting YSO	– Alfredo Biagini
17:10	Round Table: synergies and collaborations	
18:00	End of the workshop	

A WEBEX link is available for those wishing to attend the meeting remotely:

<https://www.google.com/url?q=https://unifirenze.webex.com/unifirenze/j.php?MTID=m4d1ba671d91306047602d5a62c6e3503&sa=D&source=calendar&ust=1631969385188547&usg=AOvVaw0jc4qFz27uGerOJgG2iySz>

Please, pay attention: the Green Pass is strictly required to access the building.