



FINDING EARTH TWINS WITHIN 10PC

A conference devoted to developing the Italian involvement
in TOLIMAN

PROGRAMME | MONDAY 19 NOVEMBER 2018

- 09:00** Registration
- 09:45** Welcome
- 10:00** **SESSION 1** (chair: R. Ragazzoni)
- 10:00 **The Breakthrough Initiatives — The Search for Life in the Universe**
Pete WORDEN (Breakthrough Foundation)
- 10:30 **The TOLIMAN space telescope**
Peter TUTHILL (University of Sidney)
- 11:00 **Possible mission design**
Peter KLUPAR (Breakthrough Foundation)
- 11:30** Coffee Break
- 11:50** **SESSION 2** (chair: A. Sozzetti)
- 11:50 **Precision astrometry mission for exoplanet detection around binary stars**
Eduardo BENDEK (NASA Ames)
- 12:20 **A panoramic view of concepts under discussion for future space astrometry**
Alberto KRONE-MARTINS (Universidade de Lisboa - Portugal)
- 12:45 **NEAT/THEIA/STARE**
Celine BOEHM (Durham University)
- 13:10 **Gaia-inspired suggestions to TOLIMAN**
Mario GAI (INAF - Astrophysical Observatory of Turin)
- 13:25** Lunch
- 14:25** **SESSION 3** (chair: I. Pagano)
- 14:25 **Stellar magnetic activity and how it can limit astrometry**
Antonino F. LANZA (INAF - Astrophysical Observatory of Catania)
- 14:50 **Detection and characterization of giant planets combining astrometry, radial velocities and transits: the GAIA potential**
Paolo GIACOBBE (INAF - Astrophysical Observatory of Turin)
- 15:15 **Proxima re-loaded: updates about our closest stellar neighbour from the analysis of an enlarged radial velocity dataset**
Mario DAMASSO (INAF - Astrophysical Observatory of Turin)
- 15:30 **Climate and radiative properties of a tidally-locked planet around Proxima Centauri**
Luca GIOVANNELLI (University of Rome "Tor Vergata")
- 15:45 **The Breakthrough Watch Initiative: Identifying and Characterizing nearby Habitable Exoplanets**
Olivier GUYON (University of Arizona)
- 16:10** Coffee Break
- 16:30** **SESSION 4** (chair: G. Piotto)
- 16:30 **Push Technological Development for Exoplanet Search in Italy**
Roberto RAGAZZONI (INAF - Astronomical Observatory of Padua)
- 16:55 **Exoplanets in Italy**
Isabella PAGANO (INAF - Astrophysical Observatory of Catania)
- 17:20 **Lessons from the Sun for precision Alpha Centauri astrometry experiments**
Jeff KUHN (Institute for Astronomy)
- 17:45 **Leonardo electro-optical capabilities for astronomical and exploration missions**
Marco MOLINA (Leonardo Company)
- 18:05** End of the working day
- 20:00** Social Dinner



FINDING EARTH TWINS WITHIN 10PC

A conference devoted to developing the Italian involvement
in TOLIMAN

PROGRAMME | TUESDAY 20 NOVEMBER 2018

09:20 **SESSION 5** (chair: *A. Balbi*)

- 09:20 **Astrometry in Italy**
Alessandro SOZZETTI (INAF - Astrophysical Observatory of Turin)
- 09:45 **Recent history and thoughts on Narrow angle astrometry Error sources at the uas level.**
Michael SHAO (JPL - NASA)
- 10:10 **Spacecraft Capability for Astrometry Mission**
Giuseppe SISINNI (EnduroSat)
- 10:30 **Astrometric Gravitation Probe**
Alberto RIVA (INAF - Astrophysical Observatory of Turin)
- 10:45 **Hunting Earth-like planets: a long roadmap supported by ThalesAlenia Space**
Andrea MARTELLI (Thales Alenia Space Italia)

11:05 **Coffee Break**

11:35 **SESSION 6** (chair: *E. Tommasi*)

- 11:35 **Kayser Italia potential contribution to Toliman**
Alessandro DONATI (Kayser Italia)
- 11:55 **Italian space optics manufacturing, an industrial perspective**
Giovanni BIANUCCI (Media Lario)
- 12:15 **OHB Italia capabilities for TOLIMAN mission**
Paolo SARRA (OHB Italia SpA)
- 12:45 **Launch Opportunities with VEGA and advanced space propulsion concepts**
Rocco PELLEGRINI (ASI Italian Space Agency)
- 12:55 **EDEN: The Search for Nearby Transiting Earths**
Luigi MANCINI (University of Rome "Tor Vergata")
- 13:10 **Technosignatures**
Amedeo BALBI (Dep. of Physics - University of Rome "Tor Vergata")

13:35 **Lunch**

14:35 **SESSION 7** (chair: *G. Micela*)

- 14:35 **Exoplanet occurrences statistics**
Ruslan BELIKOV (NASA Ames Research Center) - (remote)
- 15:00 **Monitoring stellar optical centroid variations due to magnetic activity for astrometric detection of exoplanets: Lessons from the Gravity Probe B mission**
Svetlana BERDYUGINA (Leibniz Institut fuer Sonennphysik - KIS, Freiburg, Germany)
- 15:15 **SHARK-VIS at LBT: pushing the limits of visible AO-assisted imaging for exoplanets**
Fernando PEDICHINI (INAF - Astronomical Observatory of Rome)
- 15:30 **Recurrence Quantification Analysis as a Post-processing technique in Adaptive Optics High Contrast Imaging**
Marco STANGALINI (INAF - Astronomical Observatory of Rome)
- 15:45 **Fast-cadence high-contrast imaging: the Speckle-Free ADI (SFADI) method**
Gianluca LI CAUSI (INAF - IAPS)
- 16:00 **The ASI SSDC infrastructure and expertise for exoplanetary sciences**
Angelo ZINZI (SSDC - ASI)

16:15 **Conclusions**

16:30 **End**