








PLATO

Terrestrial Planet Hunter

PLANetary Transits and Oscillations of stars *in numbers*

- 
Launch Mass
 ~ **26 baby elephants**
 (ca. 2 600 kg)
- 
Size
 ~ **150 washing machines**
 (ca. 3.5 × 3.6 × 3.7 m³)
- 
Solar Panels Size
 ~ **0.8 box rings**
 (ca. 30 m²)
- 
Cameras
24 + 2
 (81.4 / 40 MP)
- 
Targets
 ~ **min. 300 000 stars**
 (bright stars)



What questions are we addressing?

- 
Planetary system formation:
 How do planetary systems form and evolve?
- 
Interactions between exoplanets and stars:
 How do planetary properties depend on those of the host star?
- 
Stellar interiors:
 What is the internal structure of stars and how does it evolve?
- 
Searching for the second Earth:
 Are there potentially habitable, Earth-like exoplanets?

IWF Contribution



Router and Data Compression Unit (RDCU)
 All data from the processing, power, and housekeeping units are fed via the router unit to the instrument controller.

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IWF Scientists:
 Contributions to several work packages (ca. 10 people)
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IWF Engineers:
 Development, manufacturing, and assembling of RDCU (ca. 10 people)

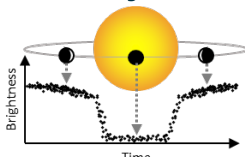
Mission Details

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 Position in orbit: L2
 ~ **4x distance Earth-Moon**
 (ca. 1.5 mio. km)
- 
 Launch
Beginning of 2027
 (from French Guiana)


 Planned Duration
4 (+4) years

Scientific Methods

Planetary Transit






The diagram shows a yellow star with a planet orbiting it. A black dot representing the planet is shown passing between the star and the observer. Below the diagram is a graph of 'Brightness' vs 'Time' showing a periodic dip in brightness during each transit.

PLATO measures the periodic dimming of light caused by a planet passing in front of the star.

Asteroseismology
 Determine the stellar properties with high accuracy

Planet Hunter

- 
 PLATO will detect several thousand exoplanets, thereof...
- 
 ... minimum of 100 Earth-size (< 2 R_{Earth}) planets,
- 
 ... dozens within habitable zone around Sun-like stars.


Event Alert
PLATO Launch Event @ IWF (Q1/27)

