# Schedule of Lectures
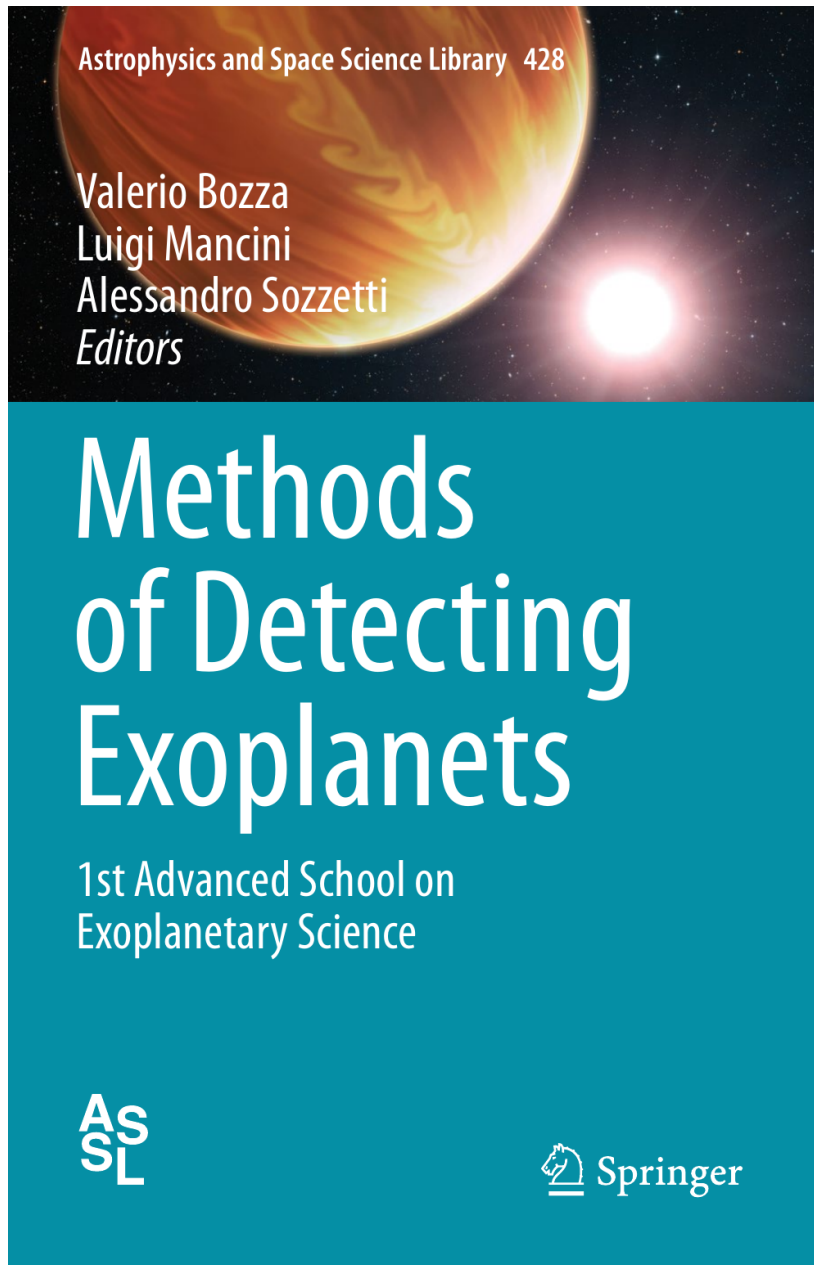
04. April: Introduction and Solar System

11. April: The Radial Velocity Method: Instruments and Techniques

18. April: The Radial Velocity Method/ Transit Method

25. April   The Transit Method and Ground-based results

02. May: The Transit Method: Space-based results (CoRoT, Kepler, K2, TESS)

09. May: **holiday**

16. May: The Astrometric Detection of Exoplanets

23. May: Direct Imaging

30. May: Microlensing and Pulsar Planets

06. June: Properties of Exoplanets

13. June: Atmospheres and Interiors

20. June: Host Stars

27. June: The Search for Habitable Planets

04. July: Excursion to Observatory in Tautenburg?
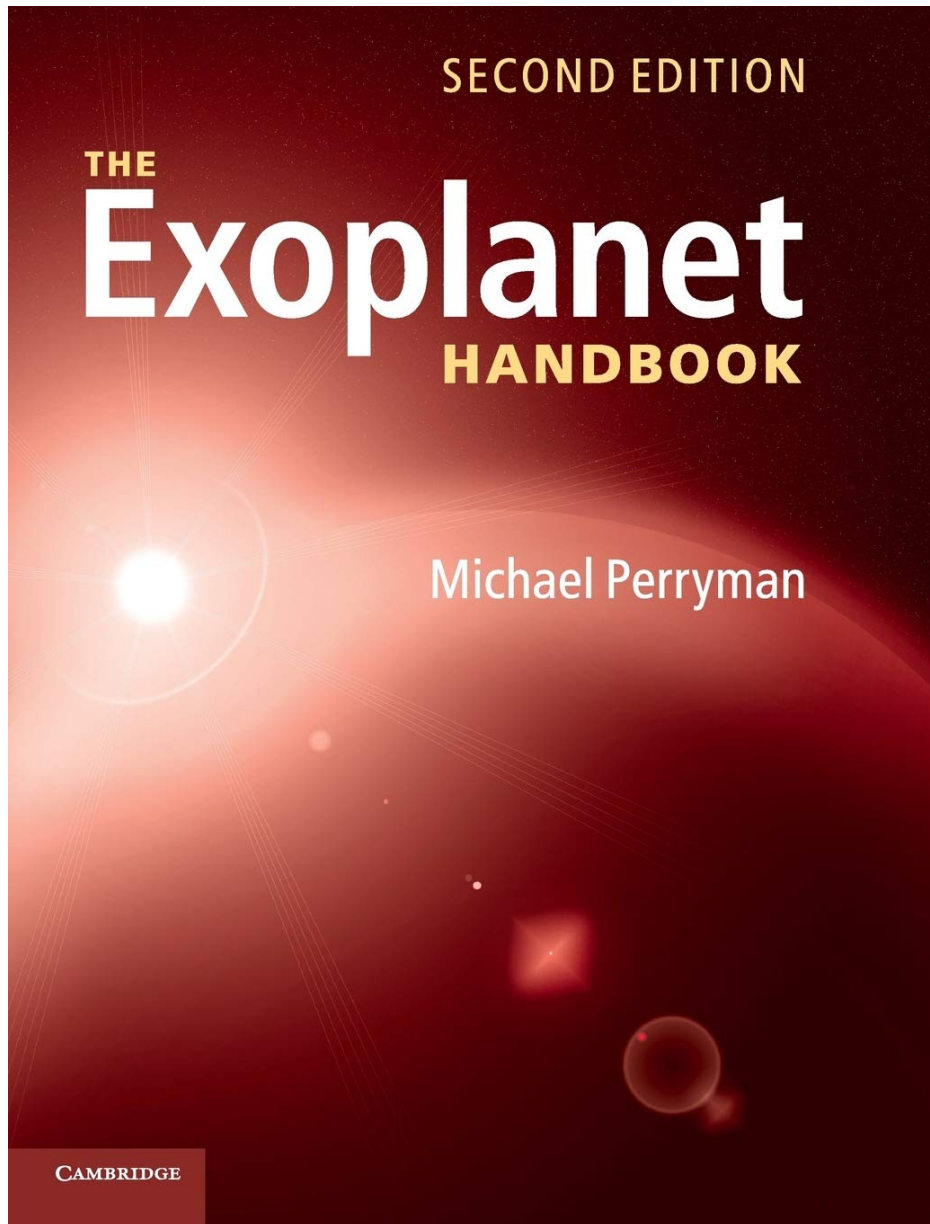
Contents:
- Radial Velocities
- Astrometry
- Microlensing
- Transits
- Imaging
- Host Stars
- Brown Dwarfs and Free floating Planets
- Formation and Evolution
- Interiors and Atmospheres
- The Solar System

Astrophysics and Space Science Library   428

Valerio Bozza
Luigi Mancini
Alessandro Sozzetti

Editors

Methods of Detecting Exoplanets

1st Advanced School on
Exoplanetary Science

AS SL

Springer
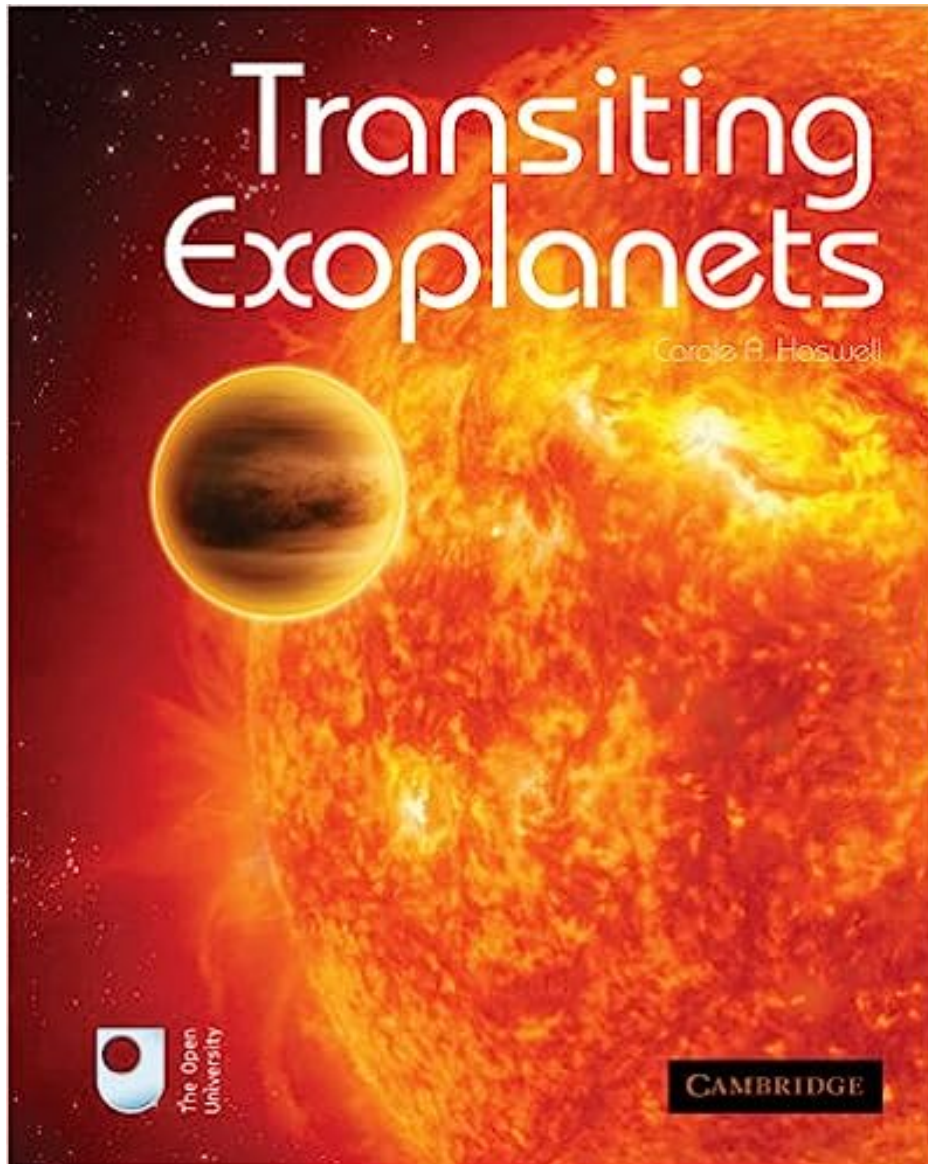
by Carole Haswell

Contents:
- Our Solar System from Afar (overview of detection methods)
- Exoplanet discoveries by the transit method
- What the transit light curve tells us
- The Exoplanet population
- Transmission spectroscopy and the Rossiter-McLaughlin effect
- Host Stars
- Secondary Eclipses and phase variations
- Transit timing variations and orbital dynamics
- Brave new worlds

Exoplanet data bases:

The first: Exoplanet Encyclopaedia
`www.exoplanet.eu` (Jean Schneider)

The best: NASA Exoplanet Archive:
`https://exoplanetarchive.ipac.caltech.edu/`
- Interactive catalog (radial velocity, transits, etc)
- On line histograms and correlation plots
- Download data