

# Planets In Binary Star Systems

[DOWNLOAD HERE](#)

1;Preface ;5 2;Contents;7 3;1 Disks Around Young Binary Stars;9 3.1;1.1 Introduction;9 3.2;1.2 Inner Disks;13 3.3;1.3 Outer Disks;16 3.4;1.4 Orientation of Disks in Young Binaries;18 3.5;1.5 Debris Disks and Binaries;20 3.6;1.6 Future Tests and Observations;22 3.7;References;25 4;2 Probing the Impact of Stellar Duplicity on Planet Occurrence with Spectroscopic and Imaging Observations;27 4.1;2.1 Introduction;27 4.2;2.2 Results from Classical Doppler Planet Searches;30 4.2.1;2.2.1 Selection Effects Against Binaries in Doppler Planet Searches;31 4.2.2;2.2.2 The Sample of Planets in Binaries;32 4.2.3;2.2.3 Different Properties for Planets in Binaries?;33 4.3;2.3 Results from Imaging Surveys;35 4.3.1;2.3.1 Our VLT/NACO Search for Stellar Companions to 130 Nearby Stars with and Without Planets;35 4.3.1.1;2.3.1.1 Sample and Observing Strategy;35 4.3.1.2;2.3.1.2 Observational Results;37 4.3.2;2.3.2 The Impact of Stellar Duplicity on Planet Occurrence;39 4.3.2.1;2.3.2.1 Preliminary Statistical Analysis Based on the NACO Survey;39 4.3.2.2;2.3.2.2 Concluding Remarks on the Results from Imaging Surveys;41 4.4;2.4 Results from Doppler Planet Searches in Spectroscopic Binaries;41 4.4.1;2.4.1 Planet Searches in Single-Lined Spectroscopic Binaries;42 4.4.1.1;2.4.1.1 Sample and Observations;43 4.4.1.2;2.4.1.2 First Analysis Based on One-Dimensional Cross-Correlation;43 4.4.1.3;2.4.1.3 Identifying the Origin of Residual-Velocity Variations;46 4.4.1.4;2.4.1.4 Preliminary General Results on Planet Searches in SB1s;46 4.4.2;2.4.2 Planet Searches in Double-Lined Spectroscopic Binaries;49 4.4.2.1;2.4.2.1 The Example of HD188753;49 4.4.2.2;2.4.2.2 Concluding Remarks on Planet Searches in SB2s;51 4.5;2.5 Conclusion and Perspectives;51 4.6;References;53 5;3 The Detection of Extrasolar Planets Using Precise Stellar Radial Velocities;58 5.1;3.1 Introduction;58 5.2;3.2 Traditional Methods of Stellar RV Measurements ;59 5.3;3.3 The Telluric Technique;62 5.4;3.4 Absorption Cells;63 5.4.1;3.4.1 The Hydrogen-Fluoride Absorption Cell;64 5.4.2;3.4.2 Iodine Absorption Cells;65 5.4.2.1;3.4.2.1 Details on the Use of the Iodine Absorption Cell;67 5.5;3.5 Simultaneous Thorium-Argon Calibration;69 5.5.1;3.5.1 Iodine Cells Versus Simultaneous Th-Ar;72 5.5.1.1;3.5.1.1 Advantages of Th-Ar;72 5.5.1.2;3.5.1.2 Disadvantages of Th-Ar;73 5.5.2;3.5.2 Spectrograph Requirements for Precise RV Measurements;75 5.6;3.6 Extrasolar Planets in Binary Systems;76

5.6.1;3.6.1 16 Cyg B;77 5.6.2;3.6.2 Cep;79 5.7;References;82 6;4 Observational Techniques for Detecting Planets in Binary Systems;84 6.1;4.1 Why Focus Planet Searches on Binary Stars?;84 6.2;4.2 S-Type Planets;85 6.2.1;4.2.1 Wide Binaries;85 6.2.1.1;4.2.1.1 Dual-Star Astrometry;86 6.2.1.2;4.2.1.2 Radial Velocities;90 6.2.1.3;4.2.1.3 Observational Precisions;91 6.2.2;4.2.2 Close Binaries;92 6.2.2.1;4.2.2.1 PHASES Astrometry;93 6.2.2.2;4.2.2.2 Radial Velocities;95 6.2.2.3;4.2.2.3 Eclipse Timing;97 6.3;4.3 P-Type (Circumbinary) Planets;103 6.3.1;4.3.1 Radial Velocities;103 6.3.2;4.3.2 Eclipse Timing;105 6.4;References;107 7;5 The SARG Planet Search;111 7.1;5.1 Introduction;111 7.2;5.2 Properties of Planets in Binary Systems;112 7.3;5.3 Binary Systems as a Tool to Study the Ingestion of Planetary Material by the Central Star;118 7.4;5.4 The SARG Sample;119 7.5;5.5 Observations;120 7.6;5.6 Abundance Analysis;121 7.6.1;5.6.1 The Special Case of the Blue Straggler HD 113984;122 7.6.2;5.6.2 Abundance Difference Between Components of Binary Systems with Planetary Companions;124 7.7;5.7 Radial Velocities;125 7.7.1;5.7.1 Planet Candidates and Low Amplitude Variables;125 7.7.2;5.7.2 New Triple Systems and Stars with Long Term Trends;127 7.8;5.8 Line Bisectors: A Tool to Study Stellar Activity and Contamination;129 7.9;5.9 Upper Limits on Planetary Companions;132 7.10;5.10 On the Frequency of Planets in Binary Systems;132 7.11;References;138 8;6 Early Evolu EAN/ISBN : 9789048186877 Publisher(s): Springer Netherlands, Springer Science & Business Media Discussed keywords: Extrasolare Planeten Format: ePUB/PDF Author(s): Haghighipour, Nader

[DOWNLOAD HERE](#)

### Similar manuals:

[Planets In Binary Star Systems](#)