

CONTENTS

Preface to Second Edition	1
Preface to First Edition	3
Introduction	7
1 Could I Do That?	10
2 Observatory Tour	17
3 Exoplanet Projects	23
4 BTE List	28
5 Planning the Night	33
6 Atmosphere Tutorial	40
7 Filter Choice	48
8 Flat Fields	56
9 Dark Frames	64
10 Exposure Times and Defocusing	65
11 Focus Drift	71
12 Autoguiding	76
13 Photometry Aperture Size	78
14 Photometry Pitfalls	83
15 Image Processing	86
16 Three Photometry Methods Previewed	91
17 Spreadsheet Processing - Comp/Chk and Ensemble	96
18 Spreadsheet Processing - Artificial Star	106
19 Star Colors	117
20 Stochastic SE Budget	126
21 Exoplanet Stars are Not Variable Stars	137
22 Archiving Amateur Data and Searching for Anomalies	144
23 The Optimum Observatory	149

24 The Joy of Exoplanet Observing	152
Appendix A – Flat Field Evaluation	155
Appendix B – Selecting Target from Candidate List	163
Appendix C – Air Mass from JD	166
Appendix D - Planet Size Model	167
Appendix E – Measuring CCD Linearity	188
Appendix F – Measuring CCD Gain	198
Appendix G – Plotting Light Curve Data	200
Appendix H – Comparing Filters	202
Appendix I – Transit Model and Fitting Procedure	213
Appendix J – Amateur Spectroscopy	220
Glossary	221
Astronomy Hardware Company Contact Info	230
Acknowledgements	233
References	234
Index	236