

KIC 008374394

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
008374394-01	OBS	7883.01	185.107561	296.744044	599.6	4.778	7.2	7.4	6.23	4992	18.36	47.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008374394-01	OBS	FP	0.23	1	0	0	0	MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

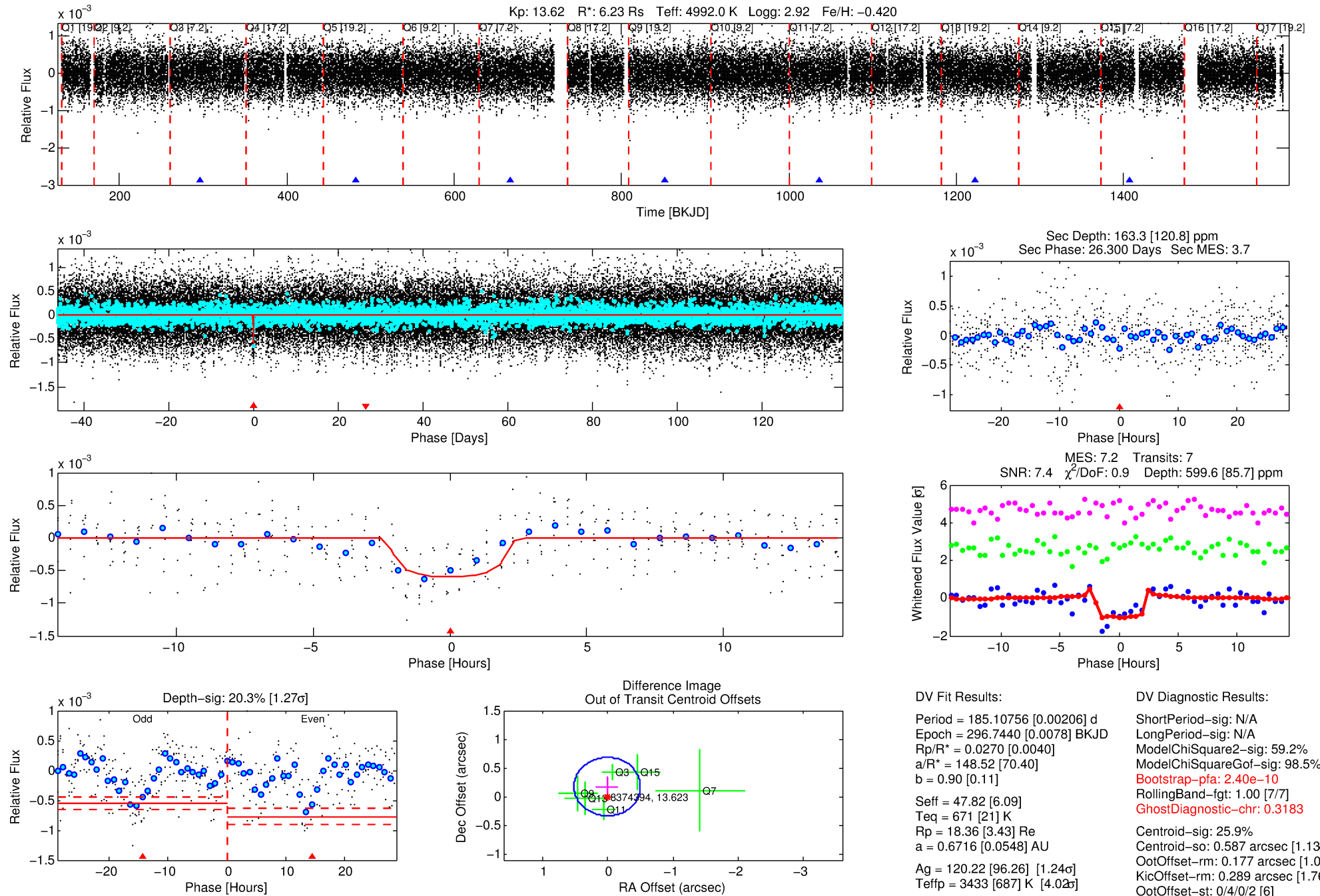
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008374394-01

No Significant Match Found

DV One-Page Summary

KIC: 8374394 Candidate: 1 of 1 Period: 185.108 d



DV Fit Results:

Period = 185.10756 [0.00206] d
Epoch = 296.7440 [0.0078] BKJD
Rp/R* = 0.0270 [0.0040]
a/R* = 148.52 [70.40]
b = 0.90 [0.11]
Seff = 47.82 [6.09]
Teff = 671 [21] K
Rp = 18.36 [3.43] Re
a = 0.6716 [0.0548] AU
Ag = 120.22 [96.26] [1.24 σ]
Teffp = 3433 [687] K [4.02 σ]

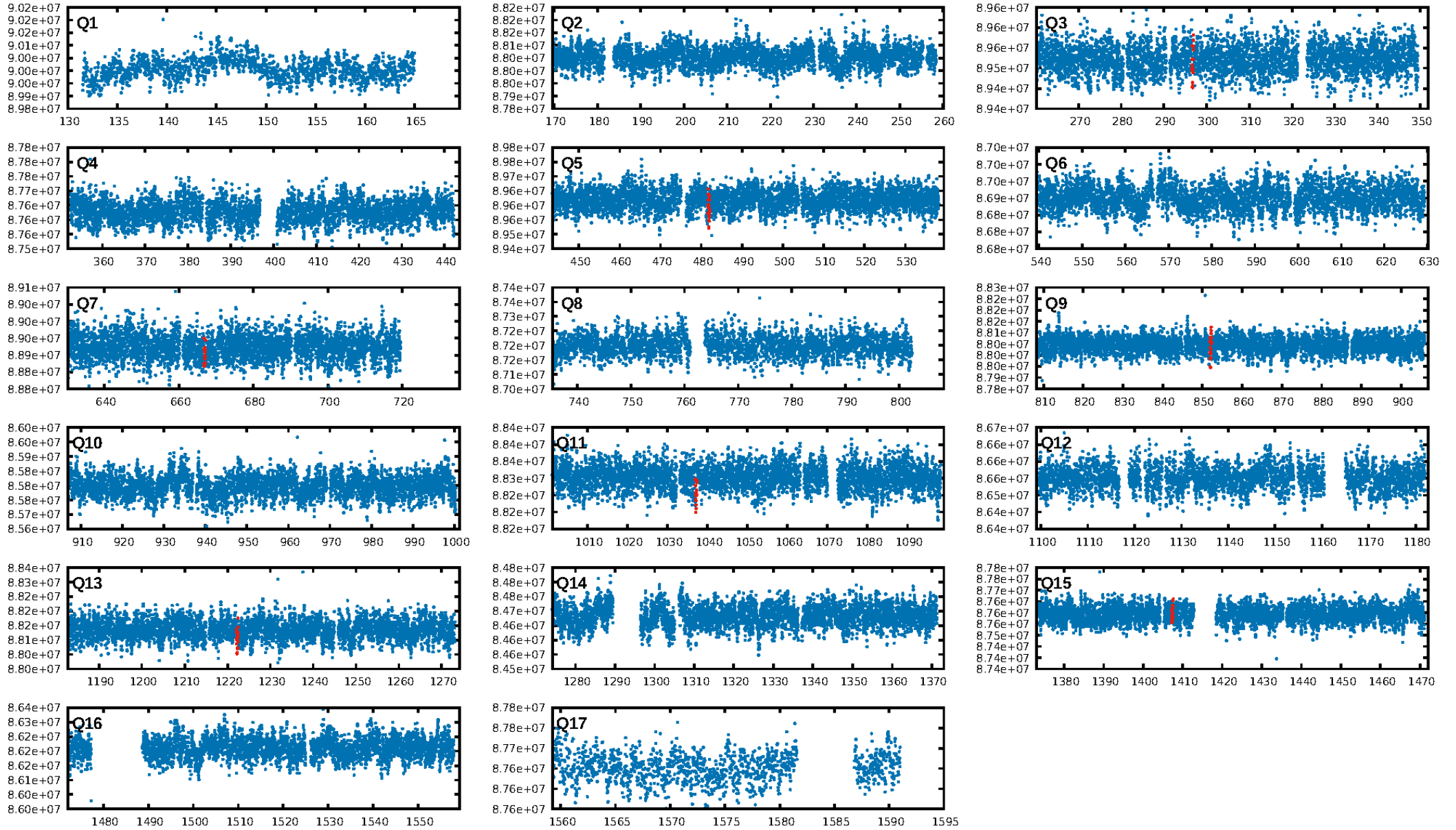
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 59.2%
ModelChiSquareGof-sig: 98.5%
Bootstrap-pfa: 2.40e-10
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.3183
Centroid-sig: 25.9%
Centroid-so: 0.587 arcsec [1.13 σ]
OotOffset-rm: 0.177 arcsec [1.04 σ]
KicOffset-rm: 0.289 arcsec [1.76 σ]
OotOffset-st: 0/4/0/2 [6]
KicOffset-st: 0/4/0/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [7/7]

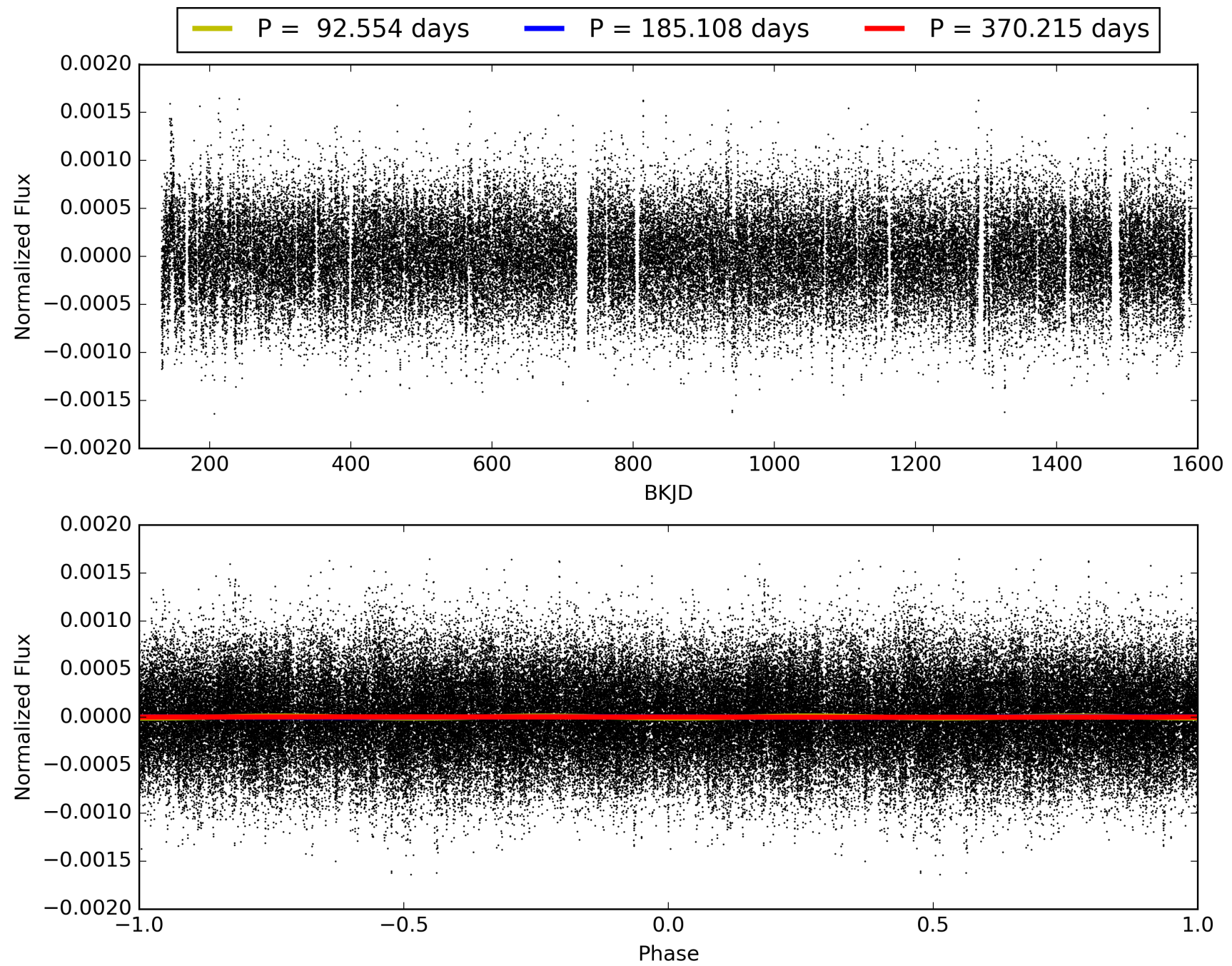
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:10:42 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008374394-01, PDC Light Curves

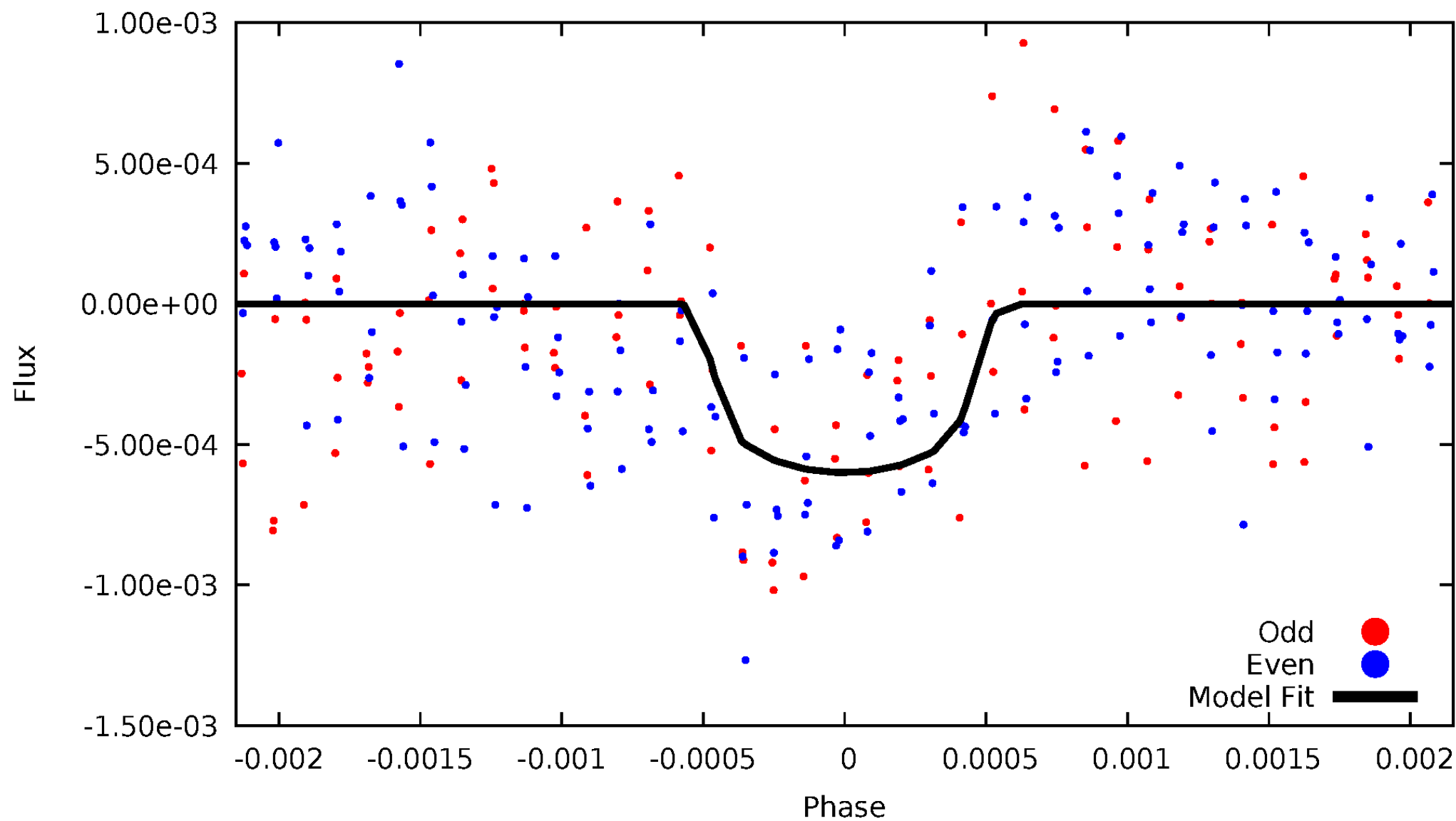


TCE 008374394-01



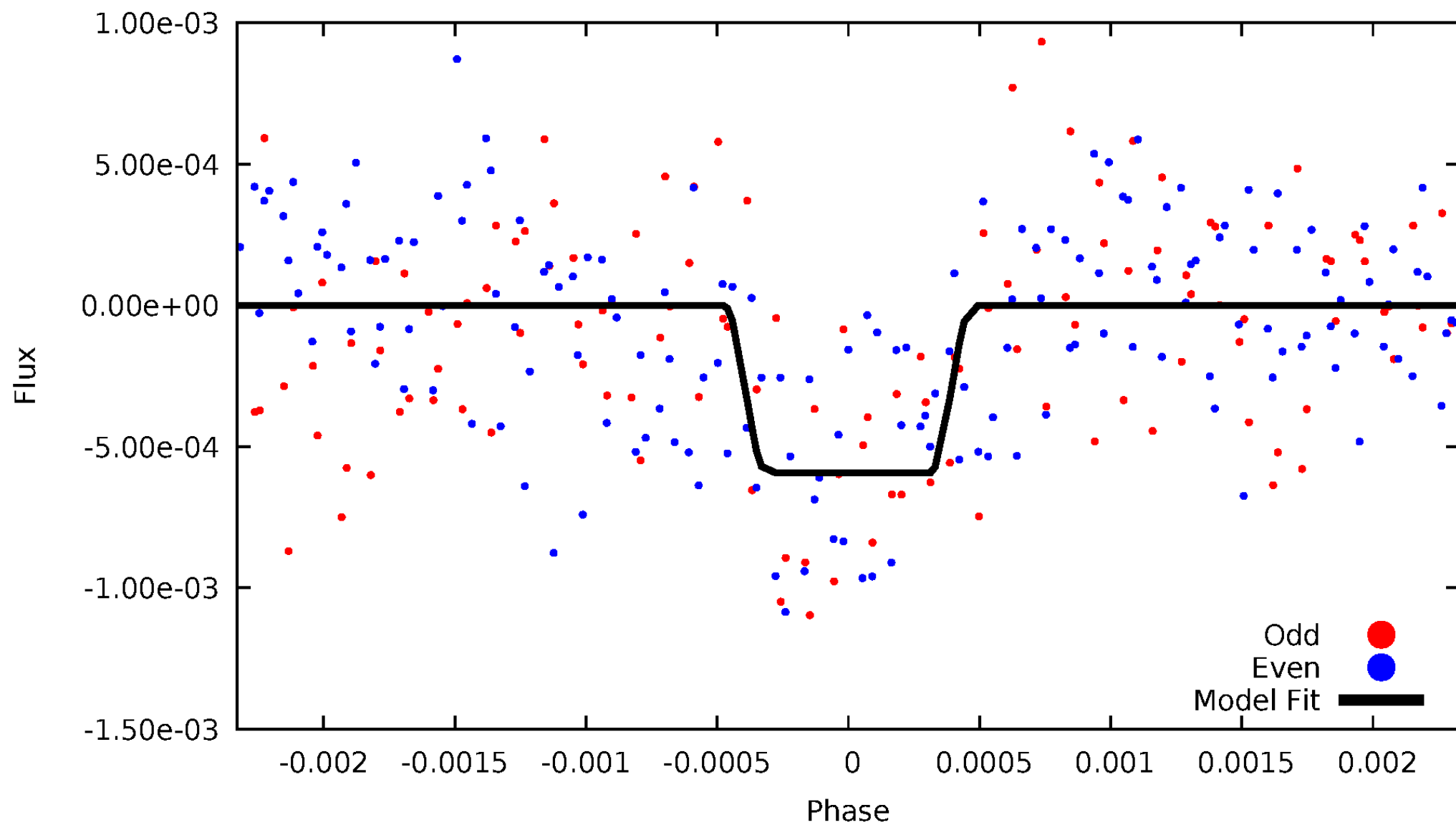
DV Odd/Even

TCE 008374394-01

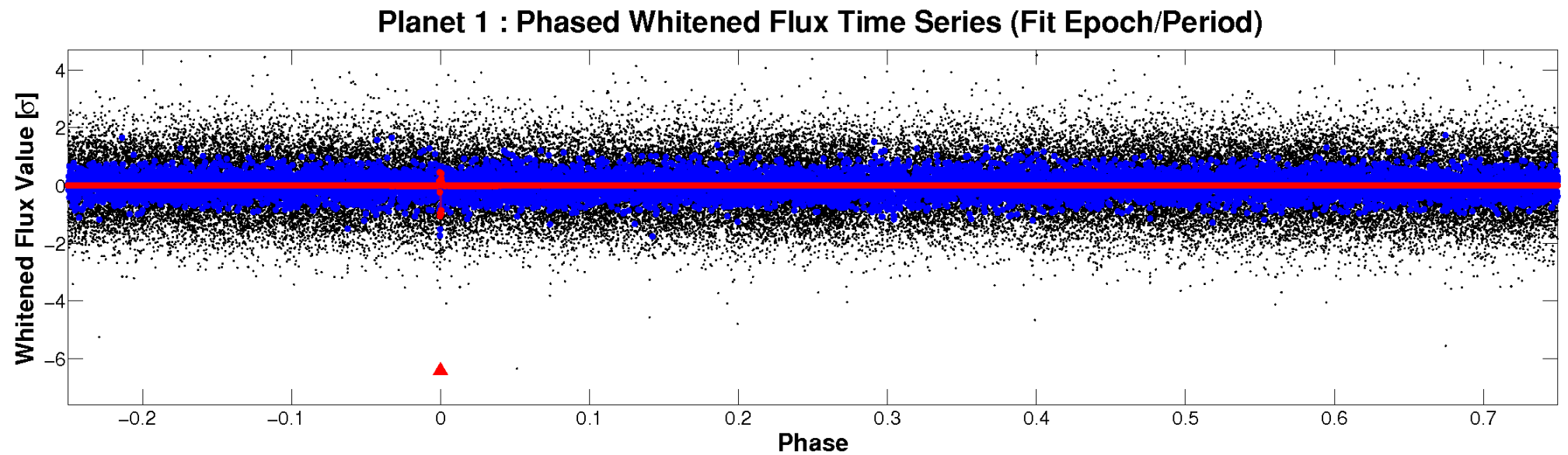
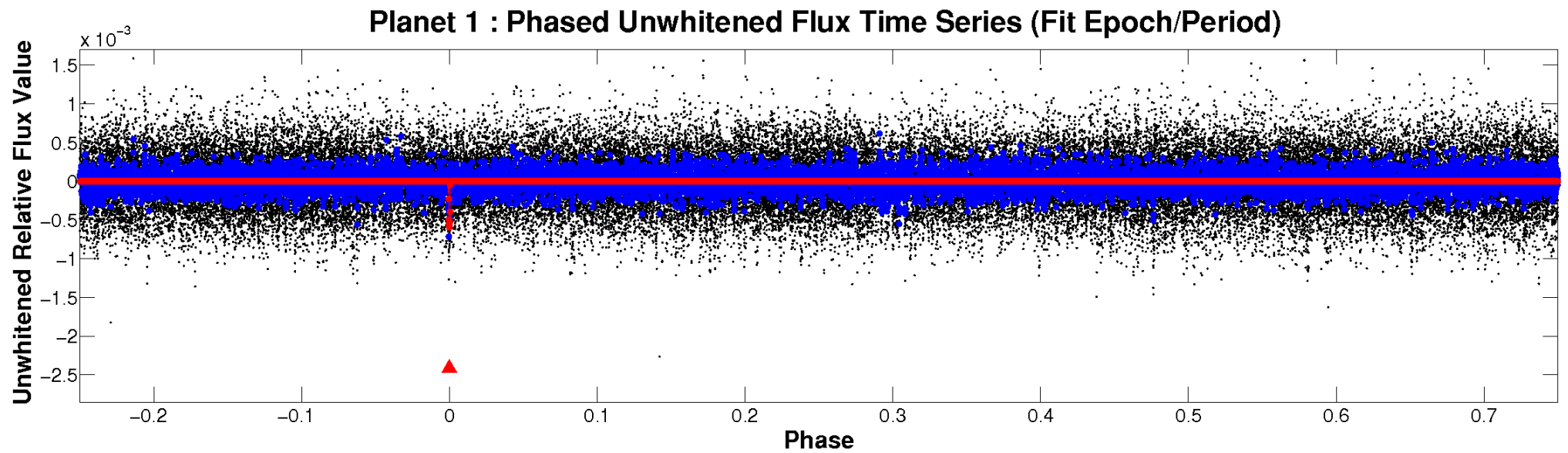


ALT Odd/Even

TCE 008374394-01

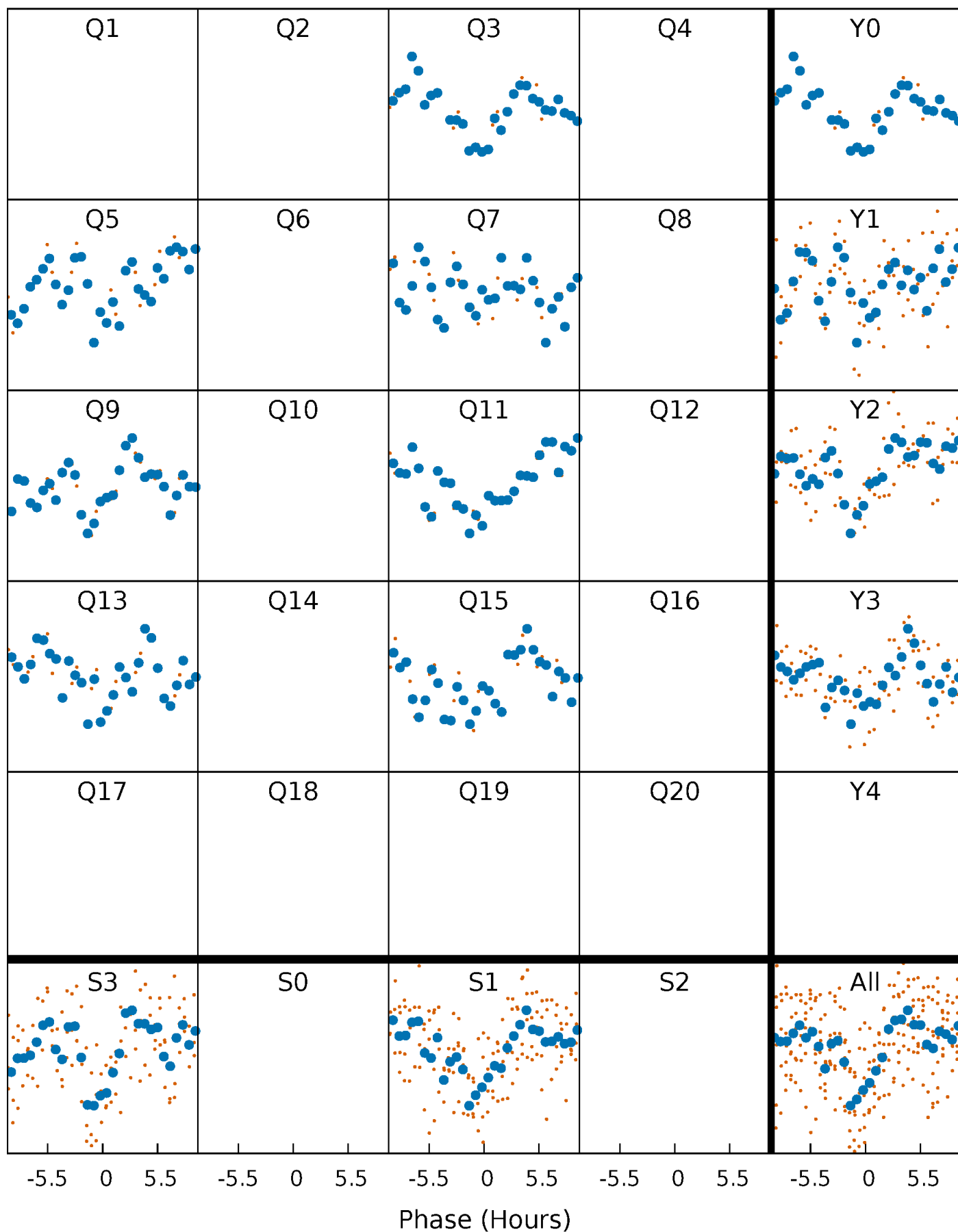


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008374394-01 P=185.107561 Days $T_0=296.744044$ (BKJD)



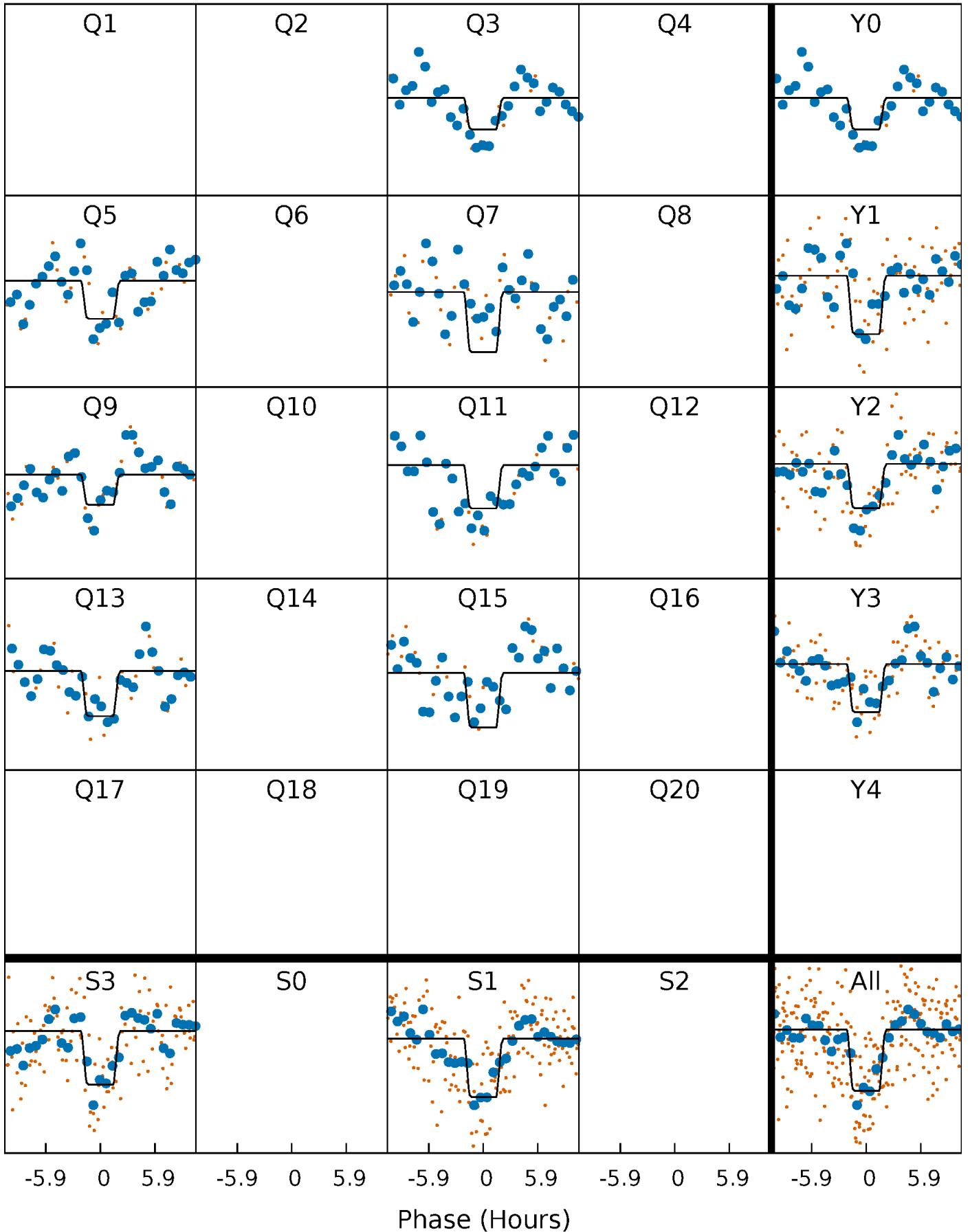
DV Quarter-Phased Transit Curves

TCE 008374394-01 P=185.107561 Days $T_0=296.744044$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

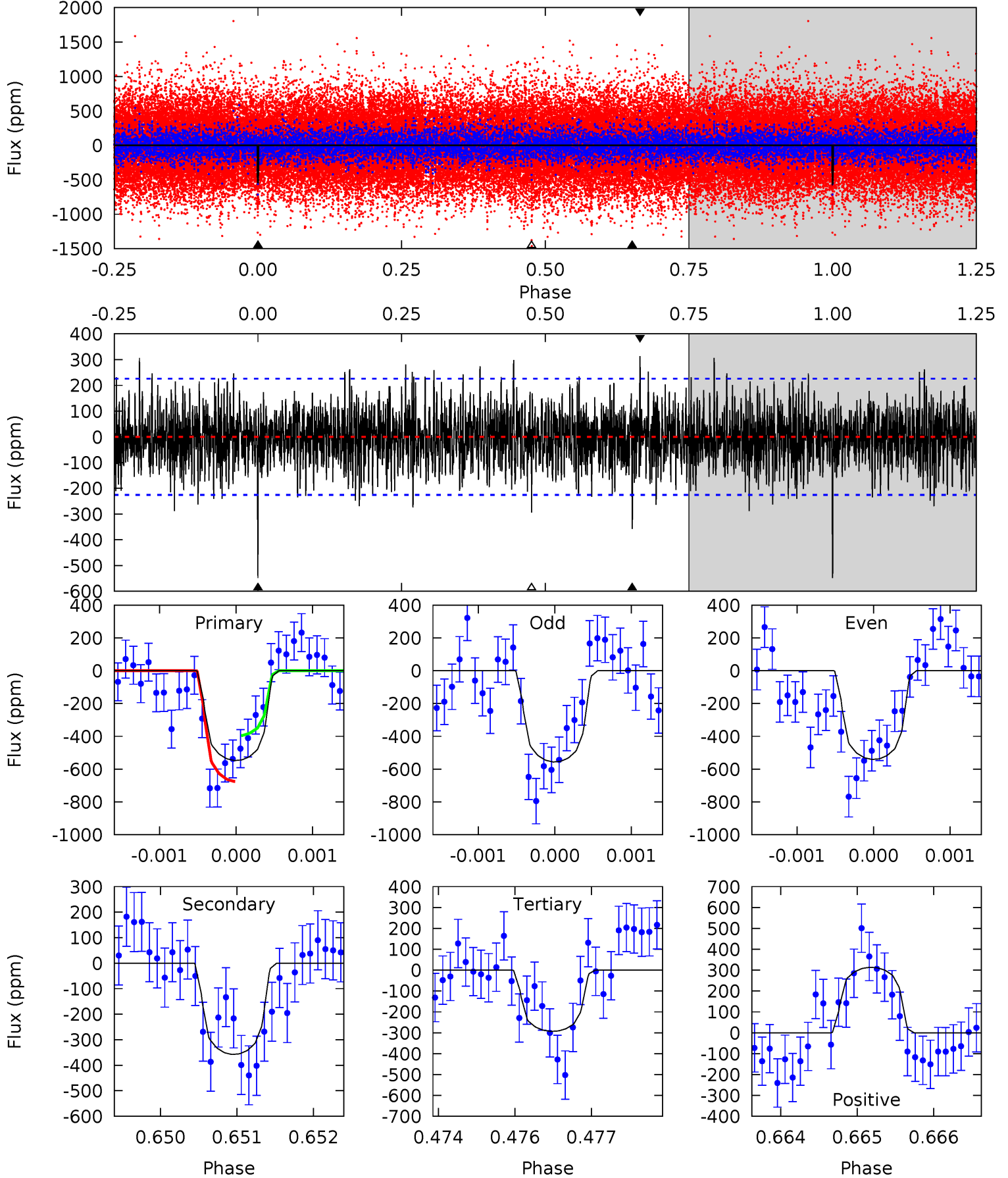
TCE 008374394-01 P=185.106269 Days $T_0=296.728597$ (BKJD)



DV Model-Shift Uniqueness Test

008374394-01, $P = 185.107561$ Days, $E = 111.636483$ Days

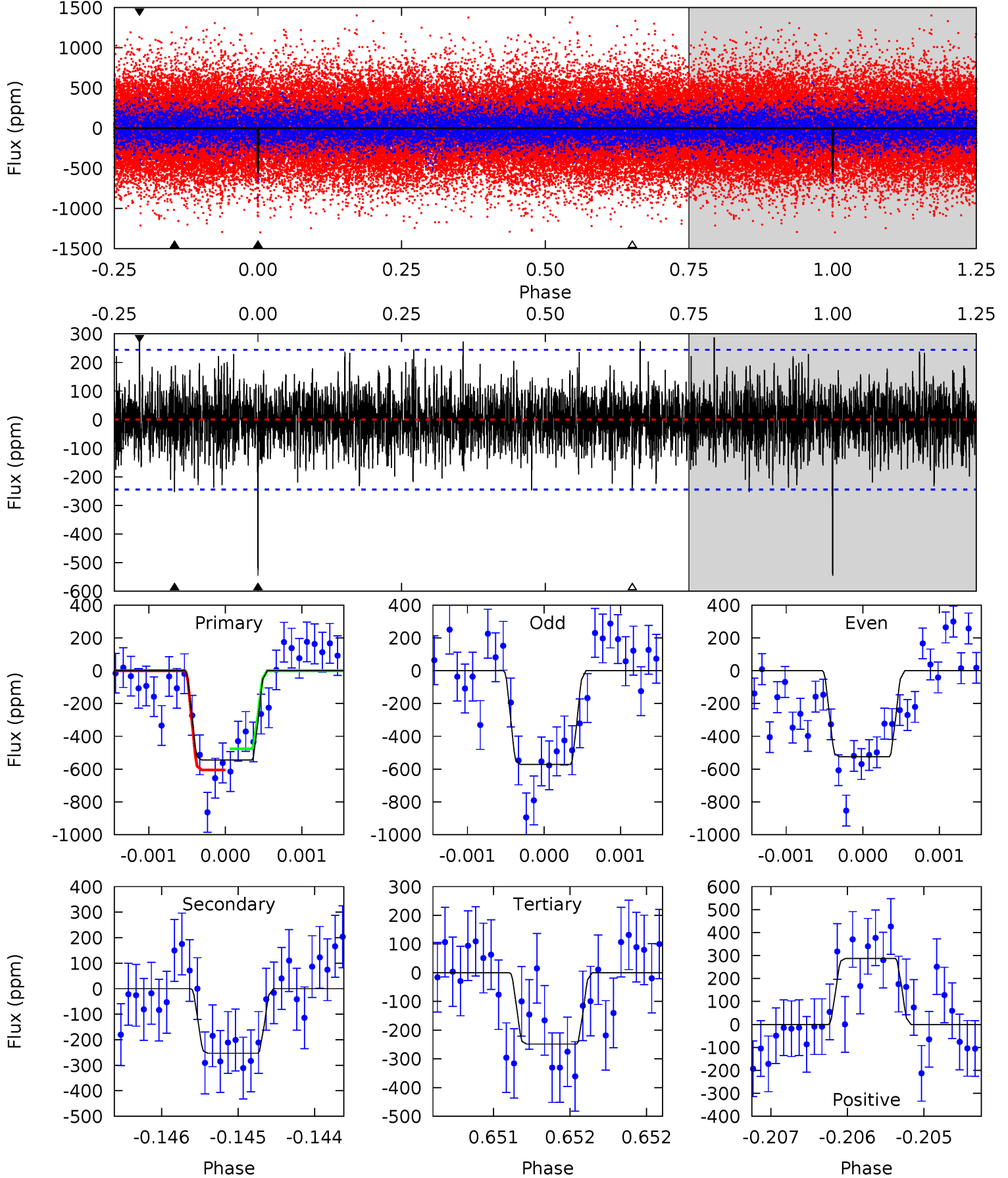
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	8.61	7.06	7.55	5.43	3.26	2.07	6.12	5.63	1.55	1.06	0.19	1.00	0.36	3.36



Alt Model-Shift Uniqueness Test

008374394-01, P = 185.106269 Days, E = 111.622328 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	5.67	5.56	6.43	5.47	3.32	1.61	6.64	5.77	0.11	-0.76	0.53	0.98	0.35	1.43



Stellar Parameters For KIC 008374394

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4992^{+109}_{-109}	$2.921^{+0.033}_{-0.027}$	$-0.420^{+0.200}_{-0.250}$	$6.226^{+0.724}_{-0.724}$	$1.179^{+0.287}_{-0.235}$	$0.007^{+0.001}_{-0.001}$
	+2%/-2%	+1%/-1%	+48%/-60%	+12%/-12%	+24%/-20%	+16%/-14%
Source	PHO1	AST9	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008374394-01 / KOI 7883.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-358 ± 42	$18.39^{+3.46}_{-3.15}$	936^{+28}_{-27}	4328^{+291}_{-256}	263^{+118}_{-71}
Alt.	-253 ± 45	$16.67^{+2.95}_{-2.88}$	937^{+27}_{-26}	4218^{+343}_{-283}	231^{+105}_{-72}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

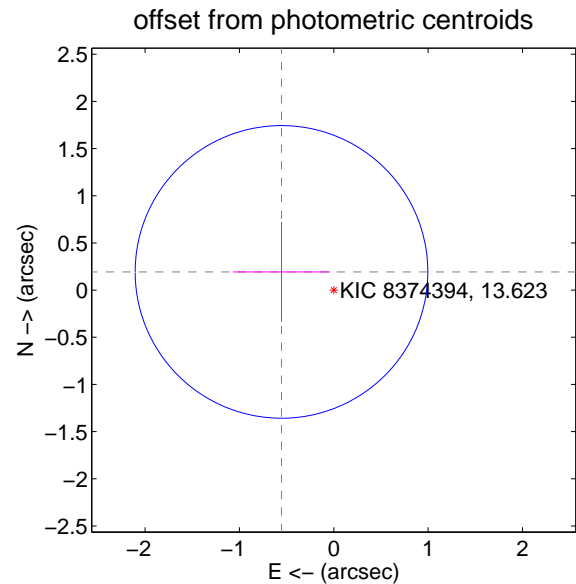
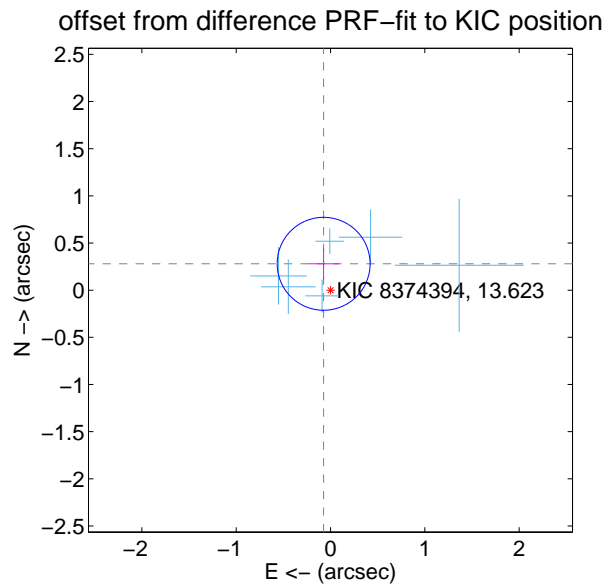
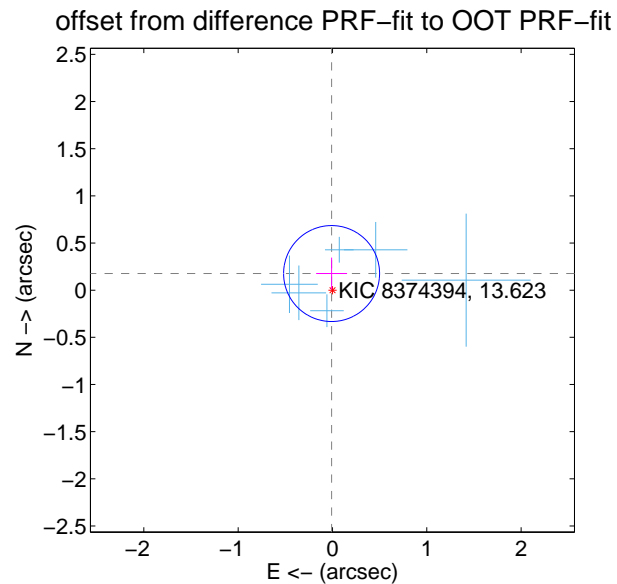
DV Centroid Data

Supplemental centroid analysis for 008374394-01. Kepler magnitude: 13.62. Transit SNR 7.42

There are 6 quarters with good PRF difference image offsets

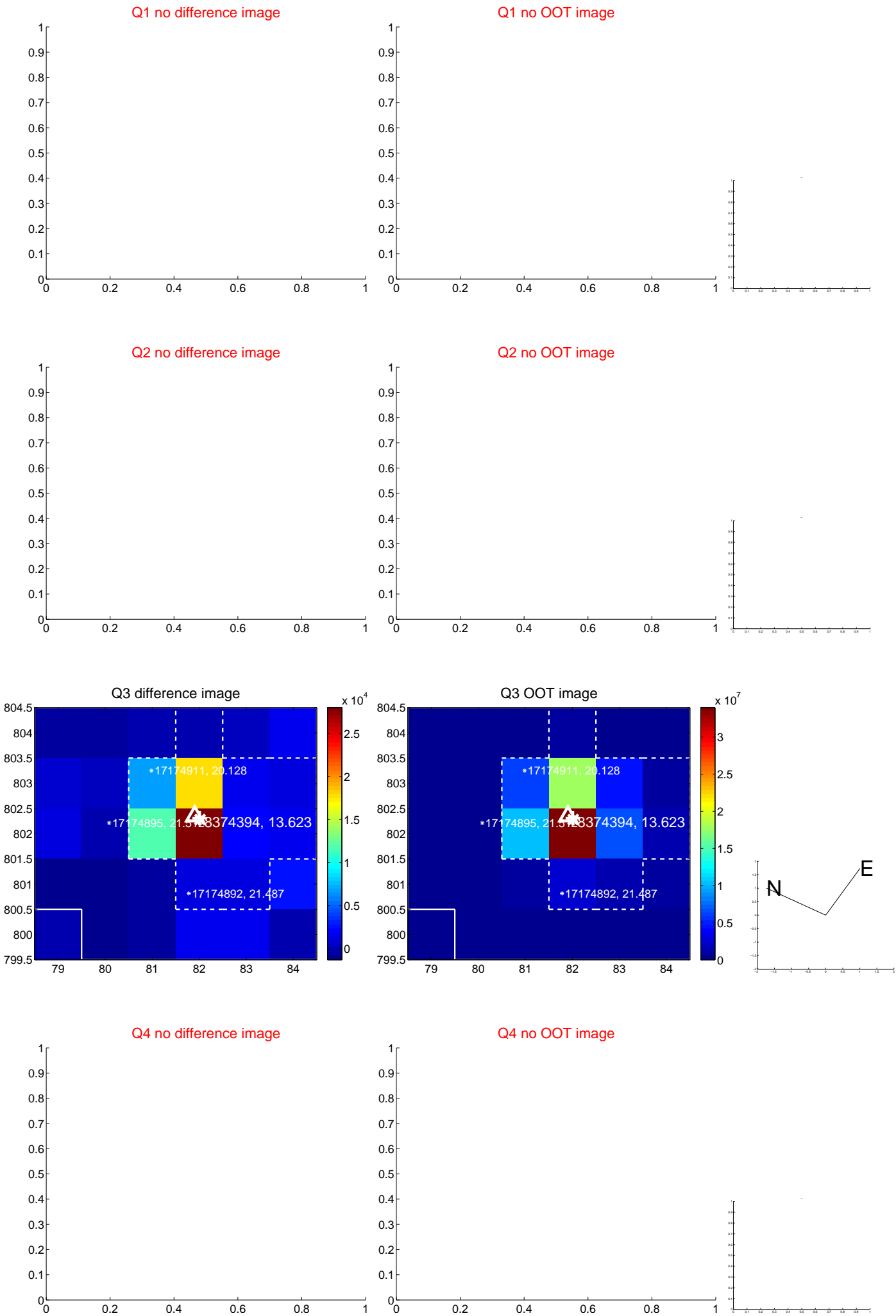
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.177 ± 0.170	1.04	0.009 ± 0.164	0.176 ± 0.170
PRF-fit source offset from KIC position	0.289 ± 0.164	1.76	0.073 ± 0.164	0.280 ± 0.164
photometric centroid source offset	0.59 ± 0.52	1.13	0.55 ± 0.52	0.19 ± 0.53

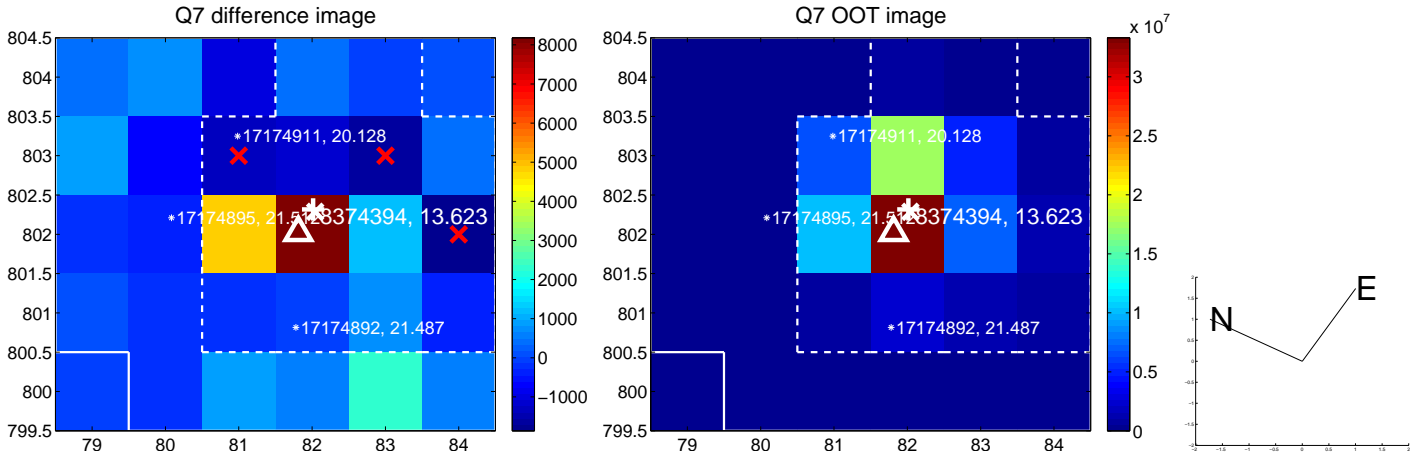
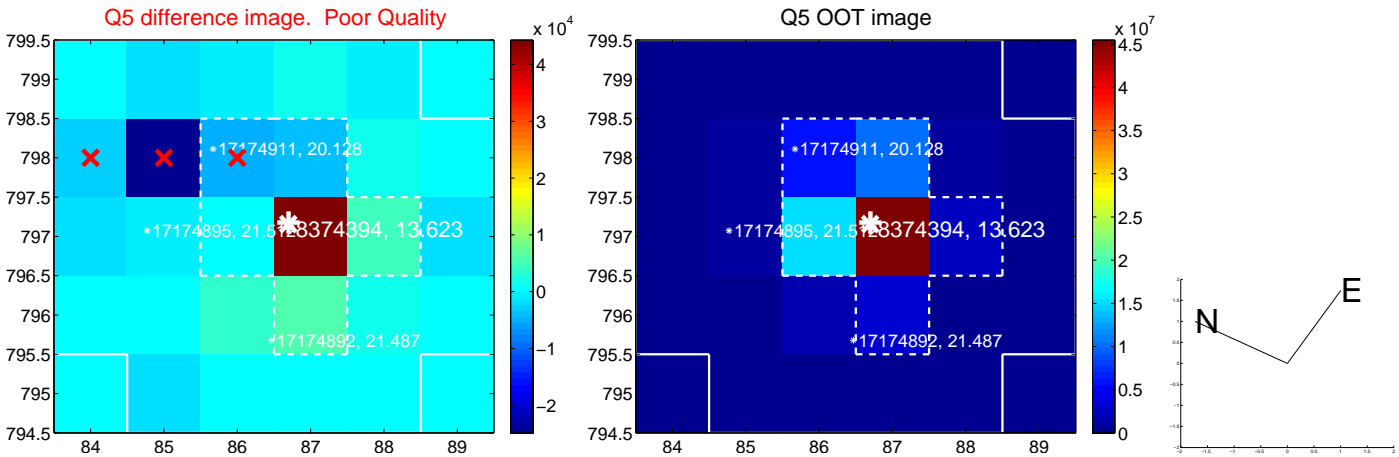


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

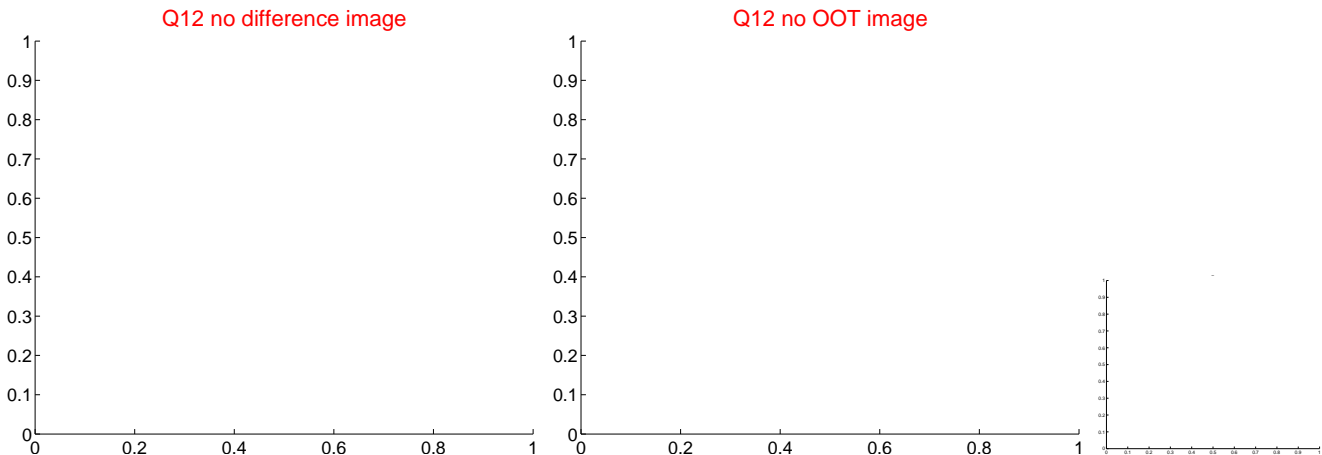
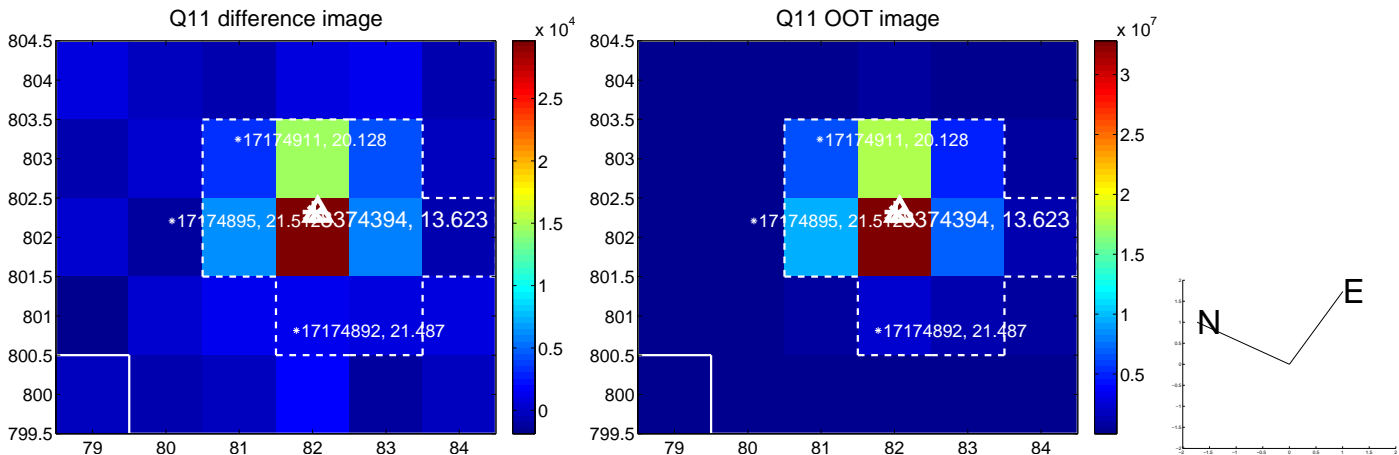
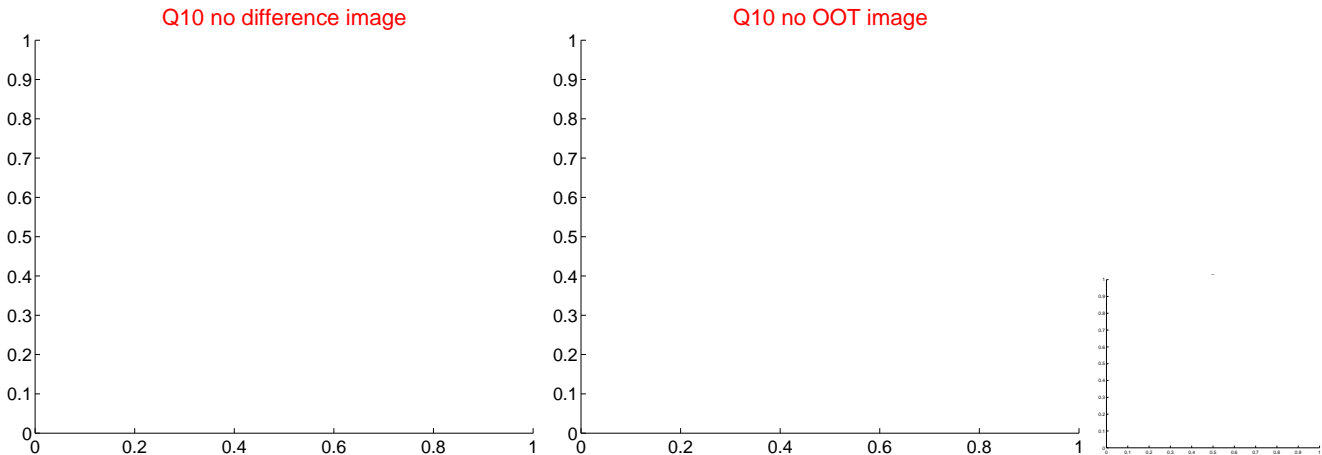
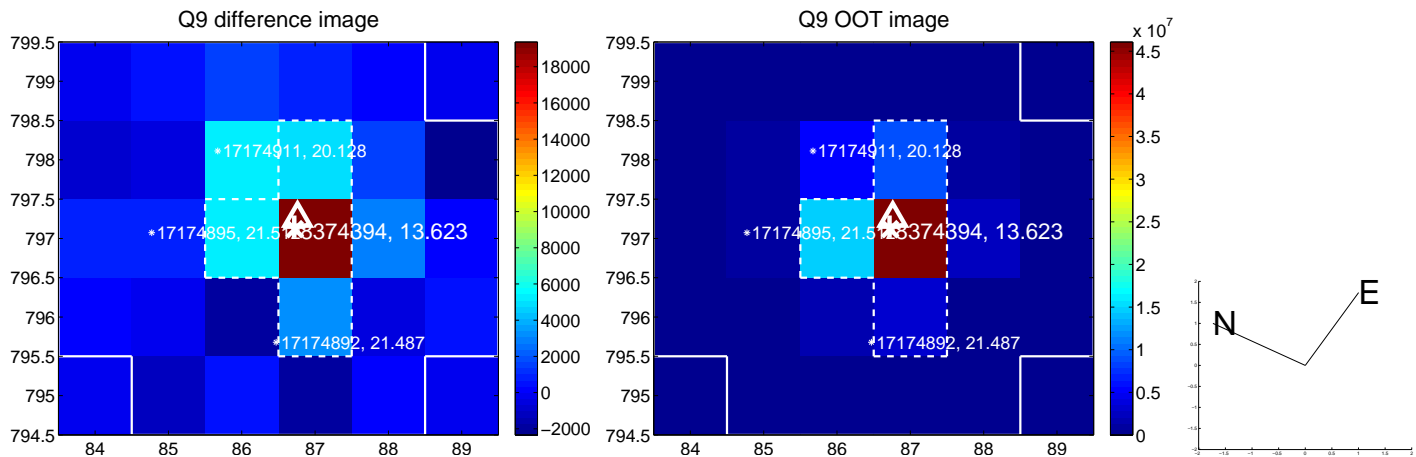
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



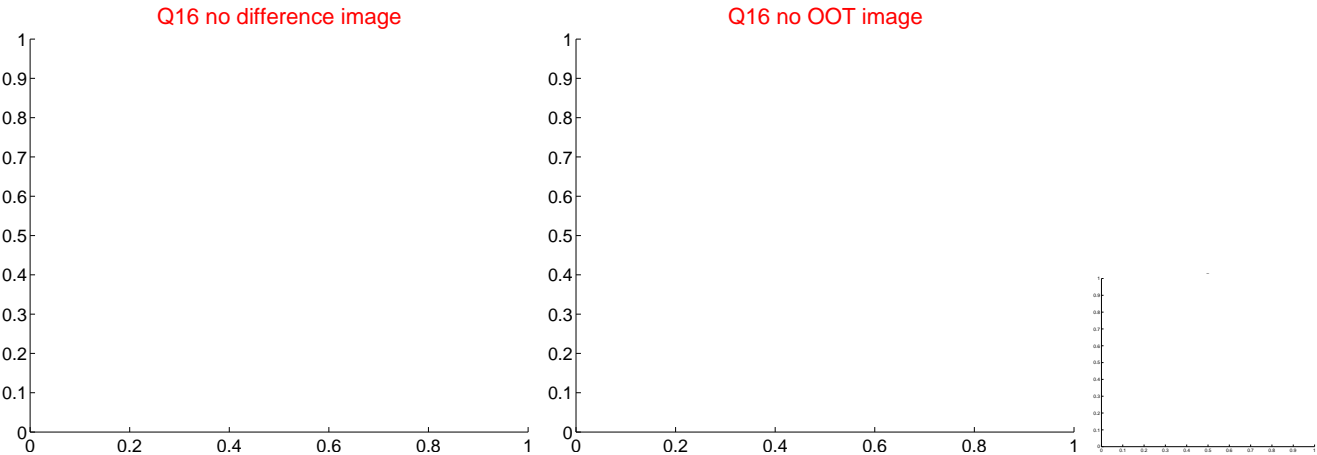
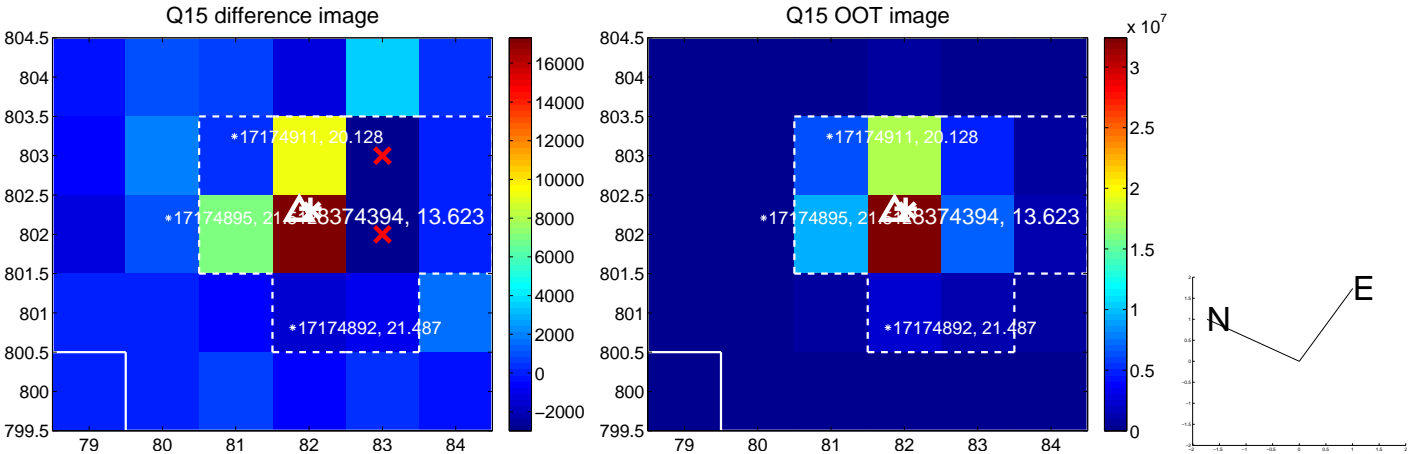
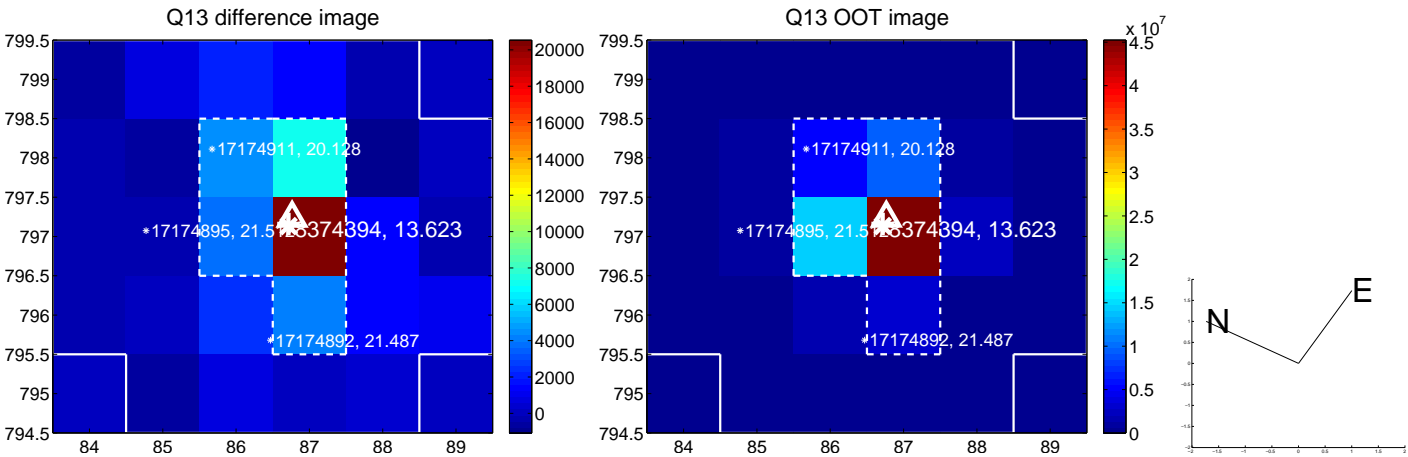
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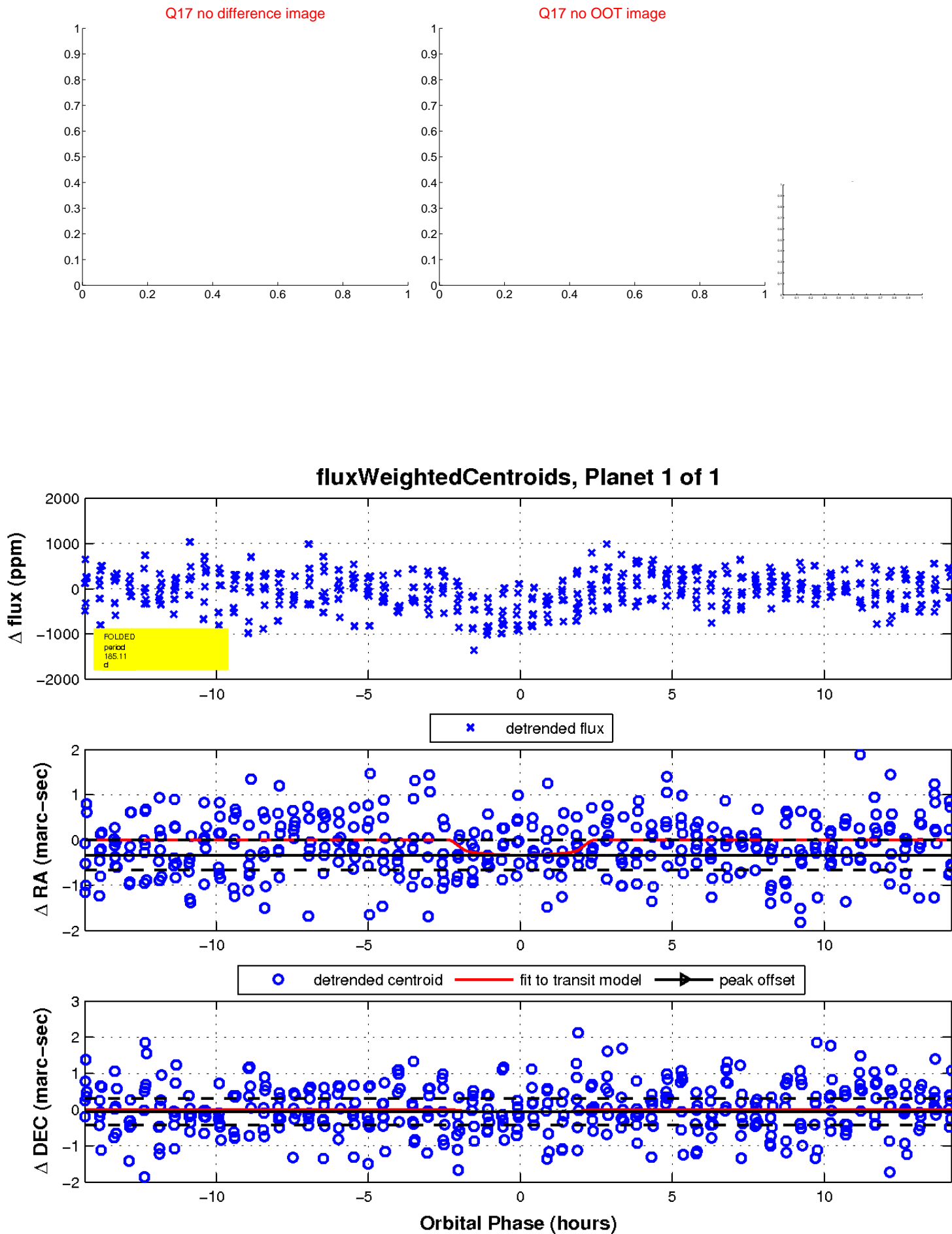
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UKIRT Image

Declination

