

KIC 004174234

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})
004174234-01	OBS	No	1.009954	132.392791	37.5	7.680	7.8	2.3	0.54	4571	0.32	449.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004174234-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS

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

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

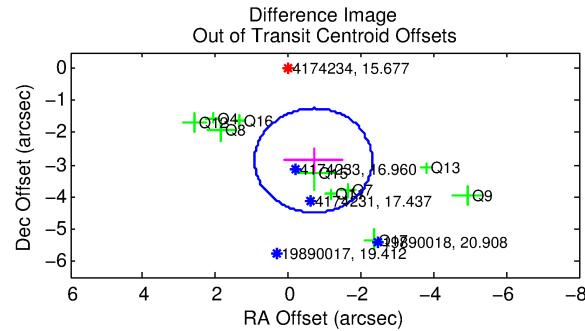
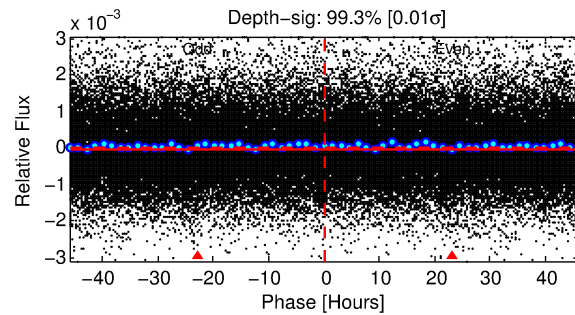
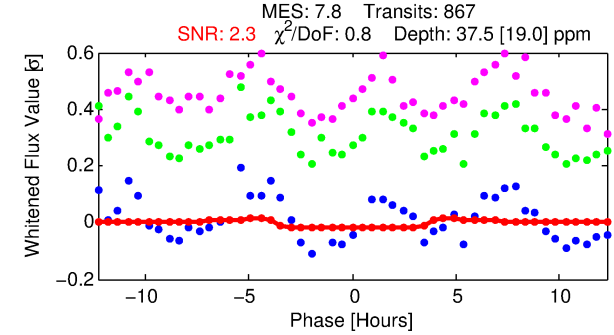
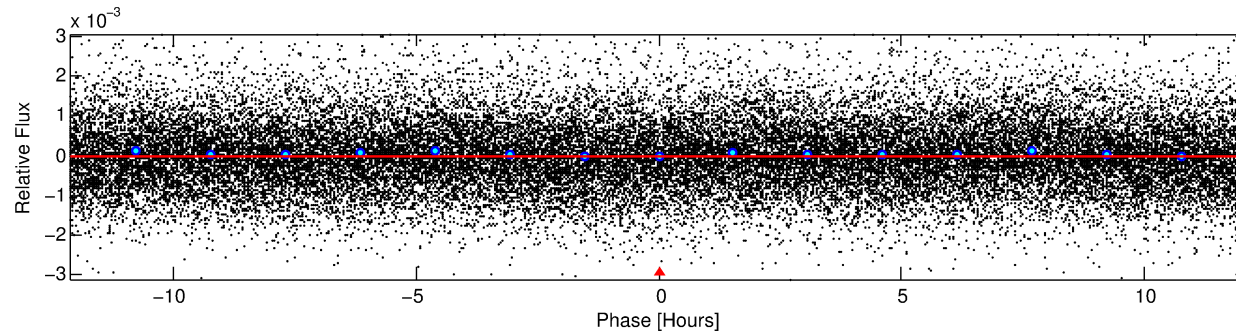
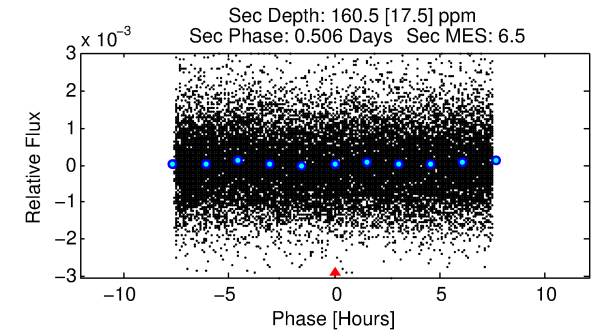
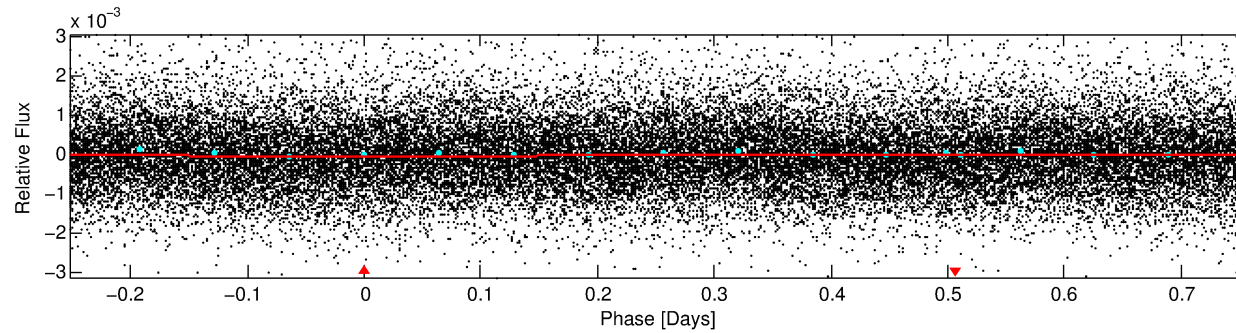
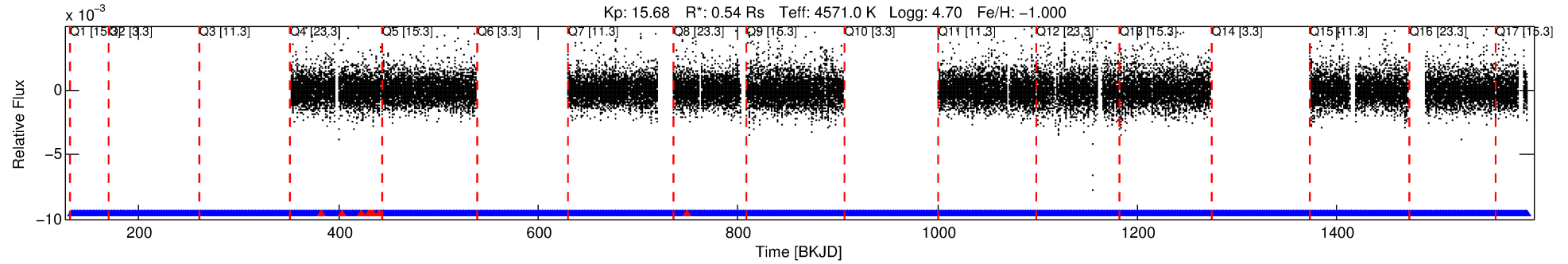
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004174234-01

No Significant Match Found

DV One-Page Summary

KIC: 4174234 Candidate: 1 of 1 Period: 1.010 d



DV Fit Results:

Period = 1.00995 [0.00005] d
Epoch = 132.3928 [0.0196] BKJD
Rp/R* = 0.0055 [0.0180]
a/R* = 1.20 [4.22]
b = 0.09 [137.91]
Seff = 449.02 [75.54]
Teq = 1174 [49] K
Rp = 0.32 [1.07] Re
a = 0.0161 [0.0010] AU
Ag = 217.31 [1437.97] [0.15σ]
Teffp = 6968 [11529] K [0.50σ]

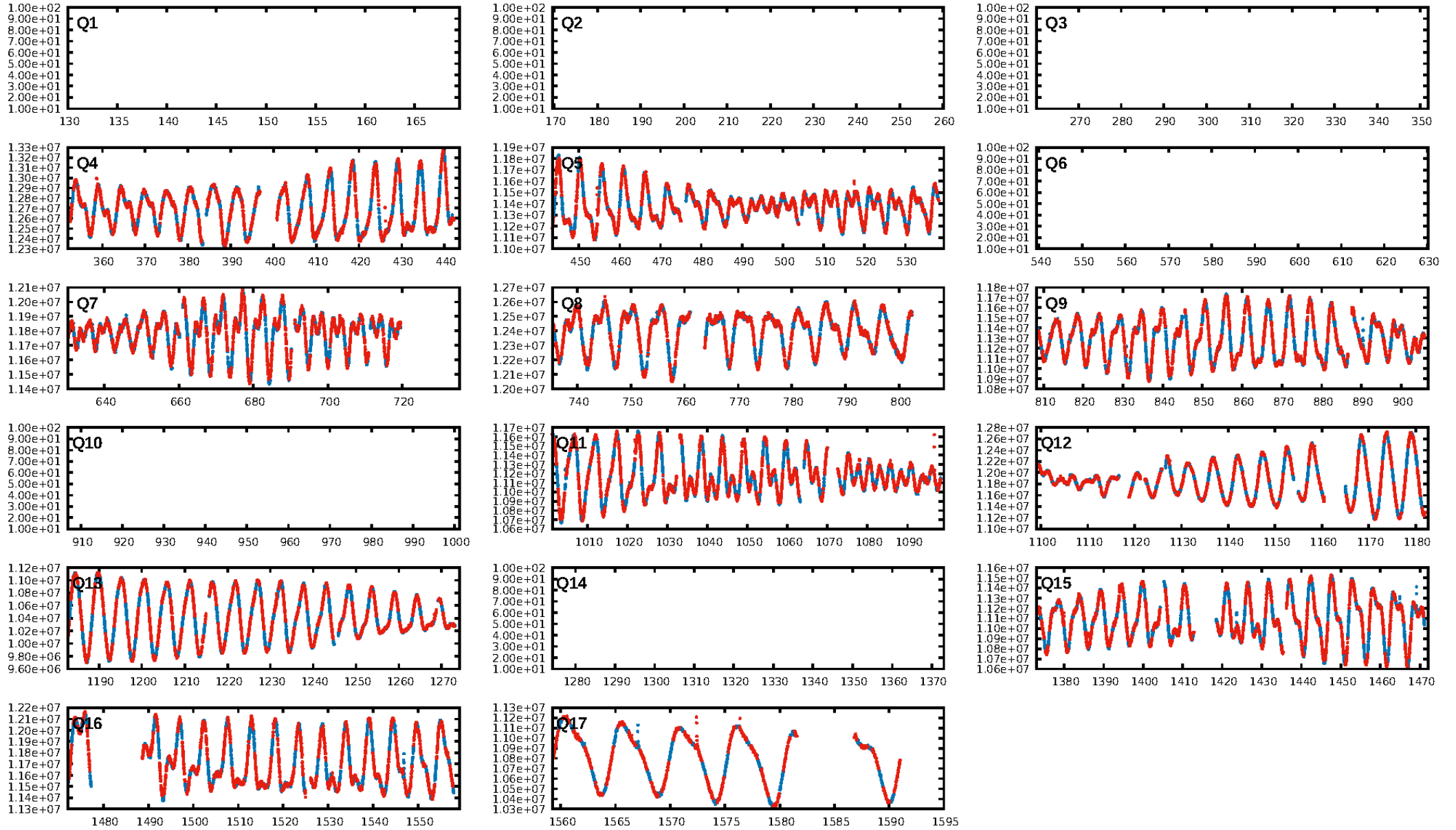
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.68e-48
RollingBand-fgt: 0.99 [829/839]
GhostDiagnostic-chr: 1.601
Centroid-sig: 0.0%
Centroid-so: 12.364 arcsec [2.88σ]
OotOffset-rm: 2.951 arcsec [5.47σ]
KicOffset-rm: 0.802 arcsec [1.63σ]
OotOffset-st: 0/3/4/3 [10]
KicOffset-st: 0/3/4/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [11/11]

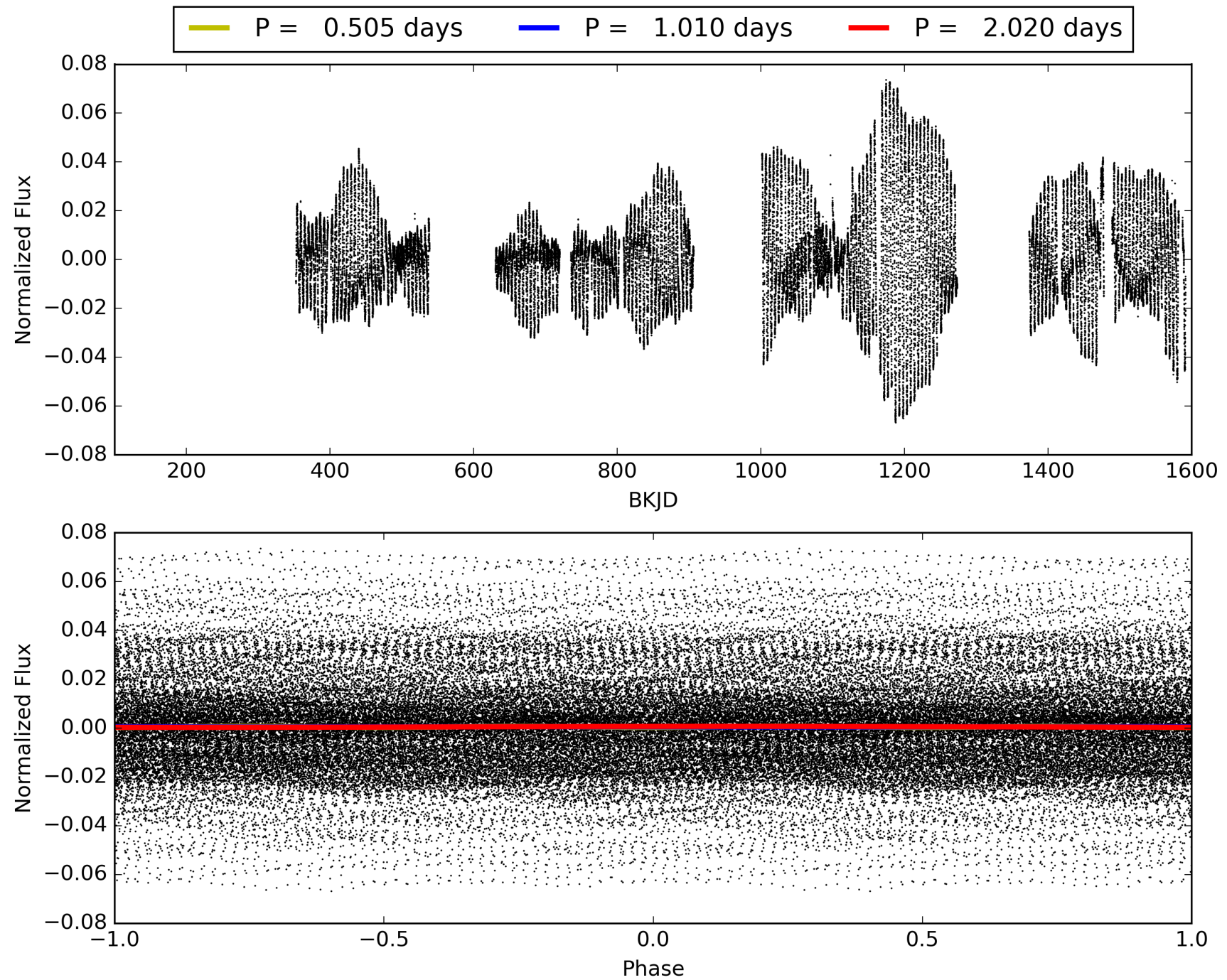
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:41:23 Z

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

TCE 004174234-01, PDC Light Curves

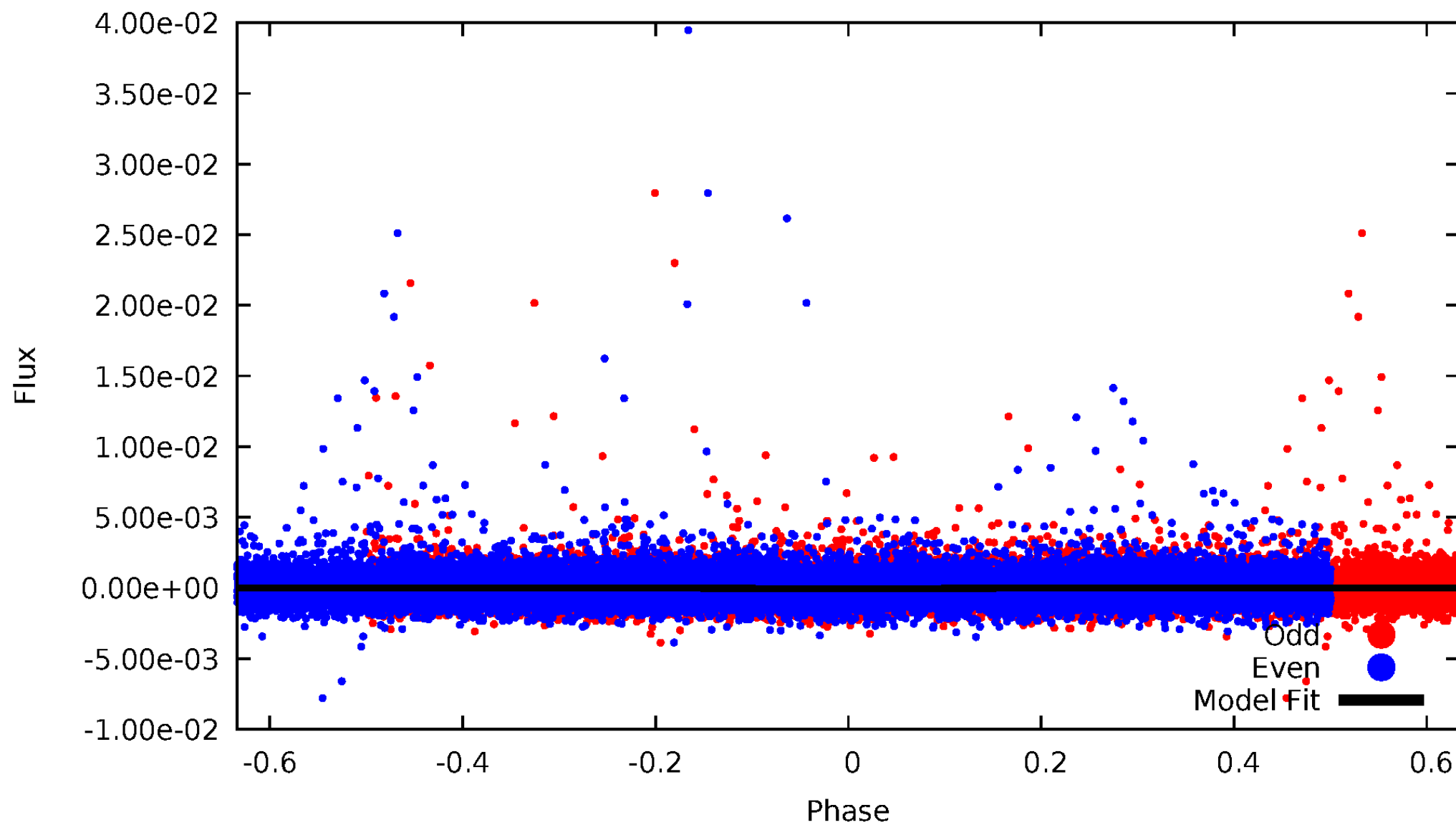


TCE 004174234-01



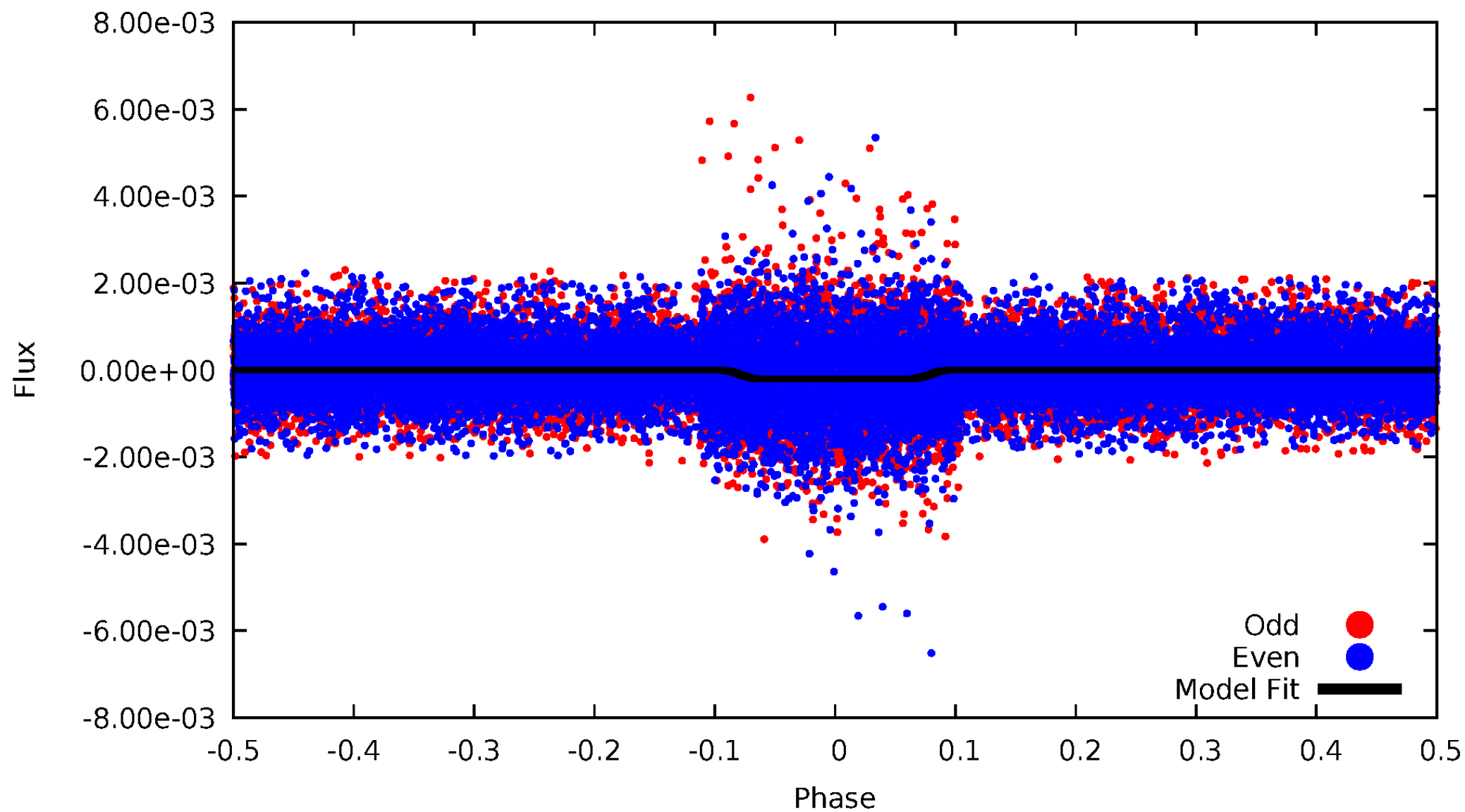
DV Odd/Even

TCE 004174234-01



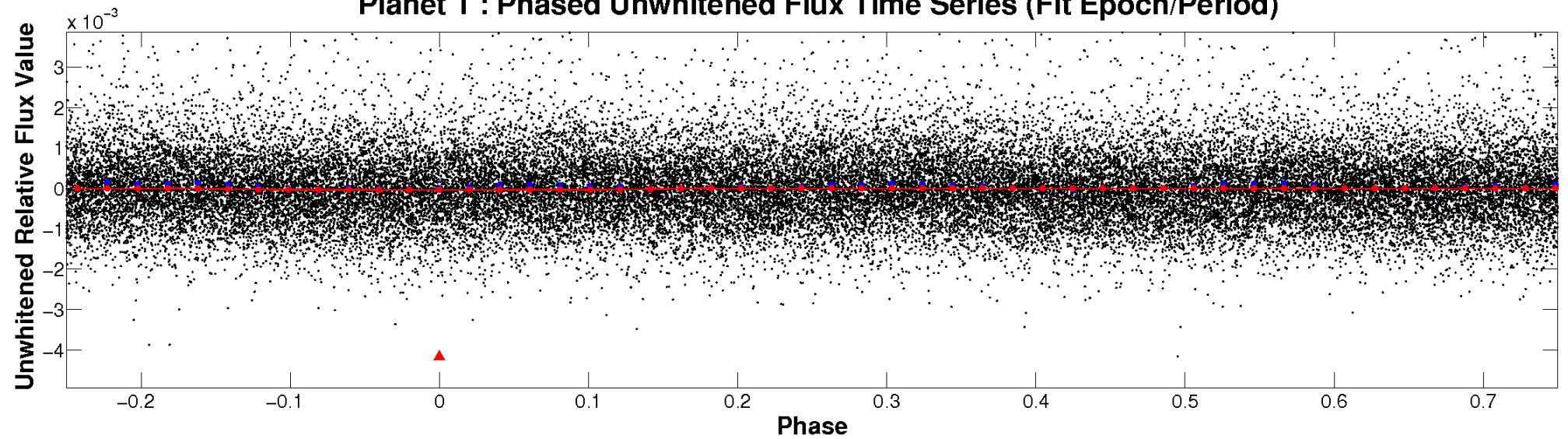
ALT Odd/Even

TCE 004174234-01

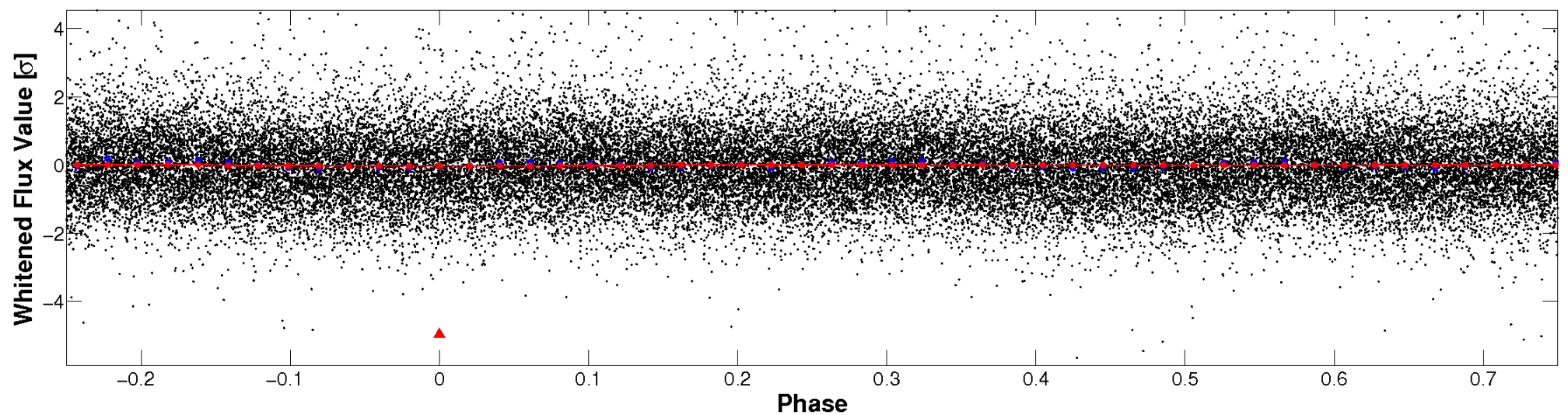


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

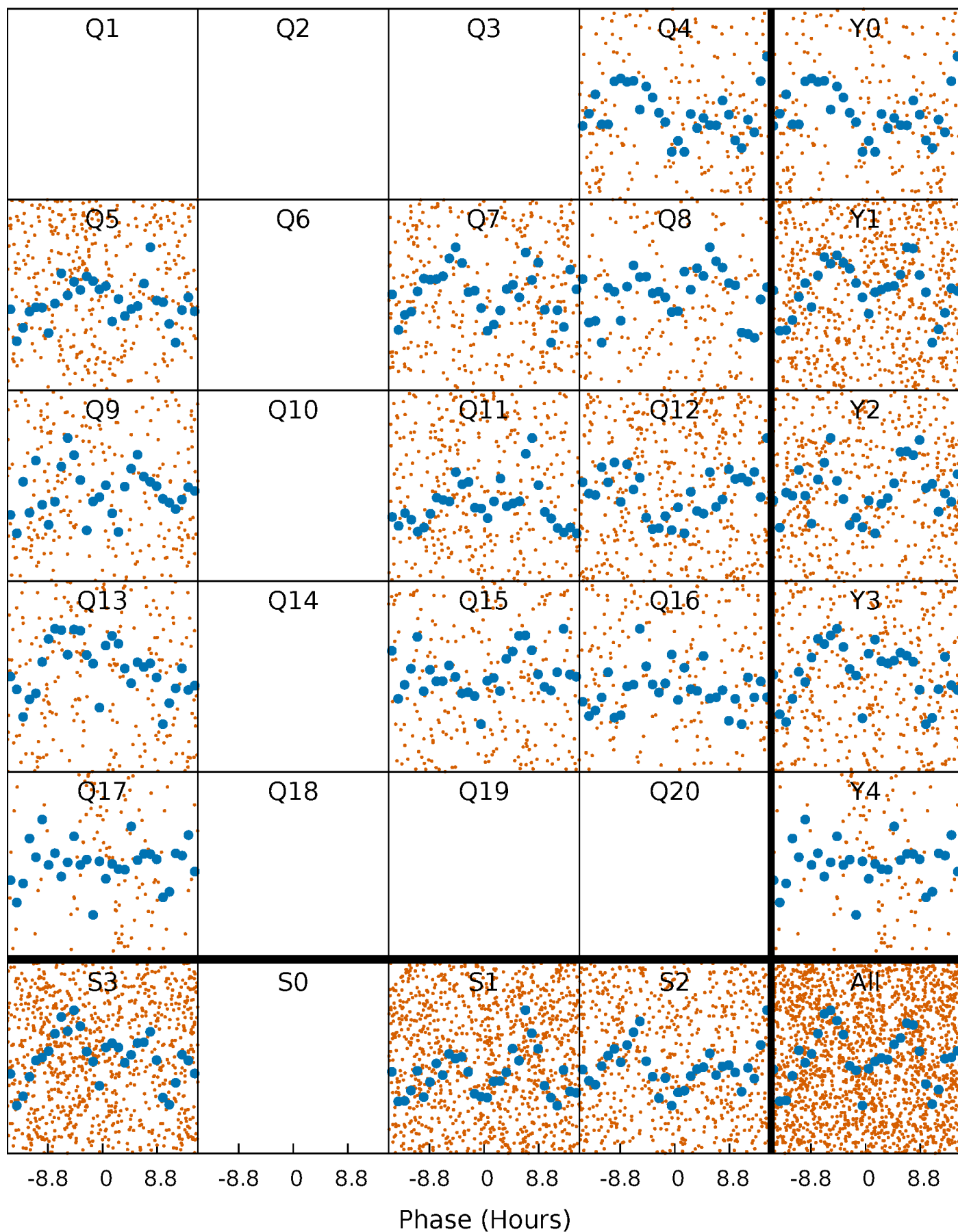


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



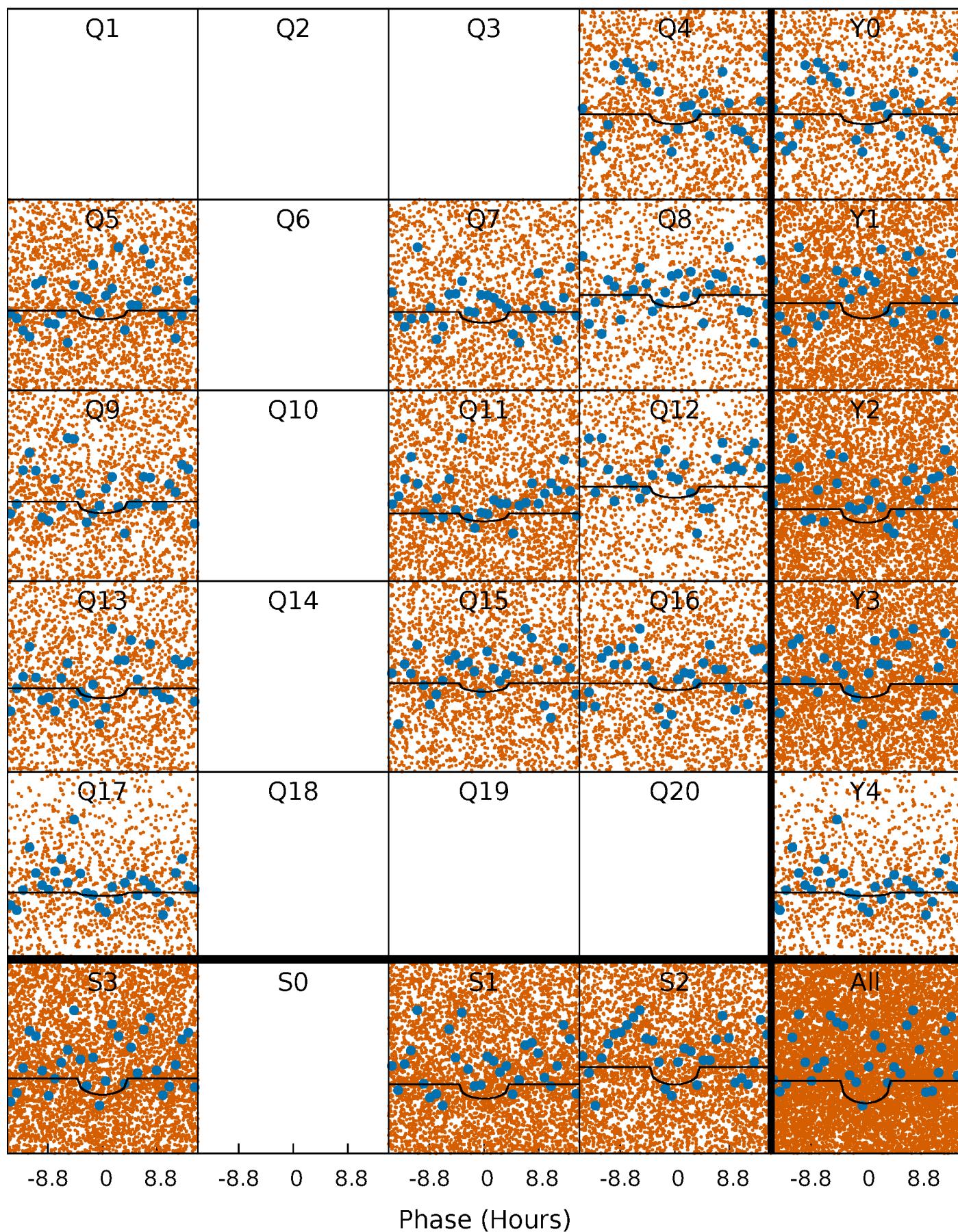
PDC Quarter-Phased Transit Curves

TCE 004174234-01 P= 1.009954 Days $T_0=132.392791$ (BKJD)



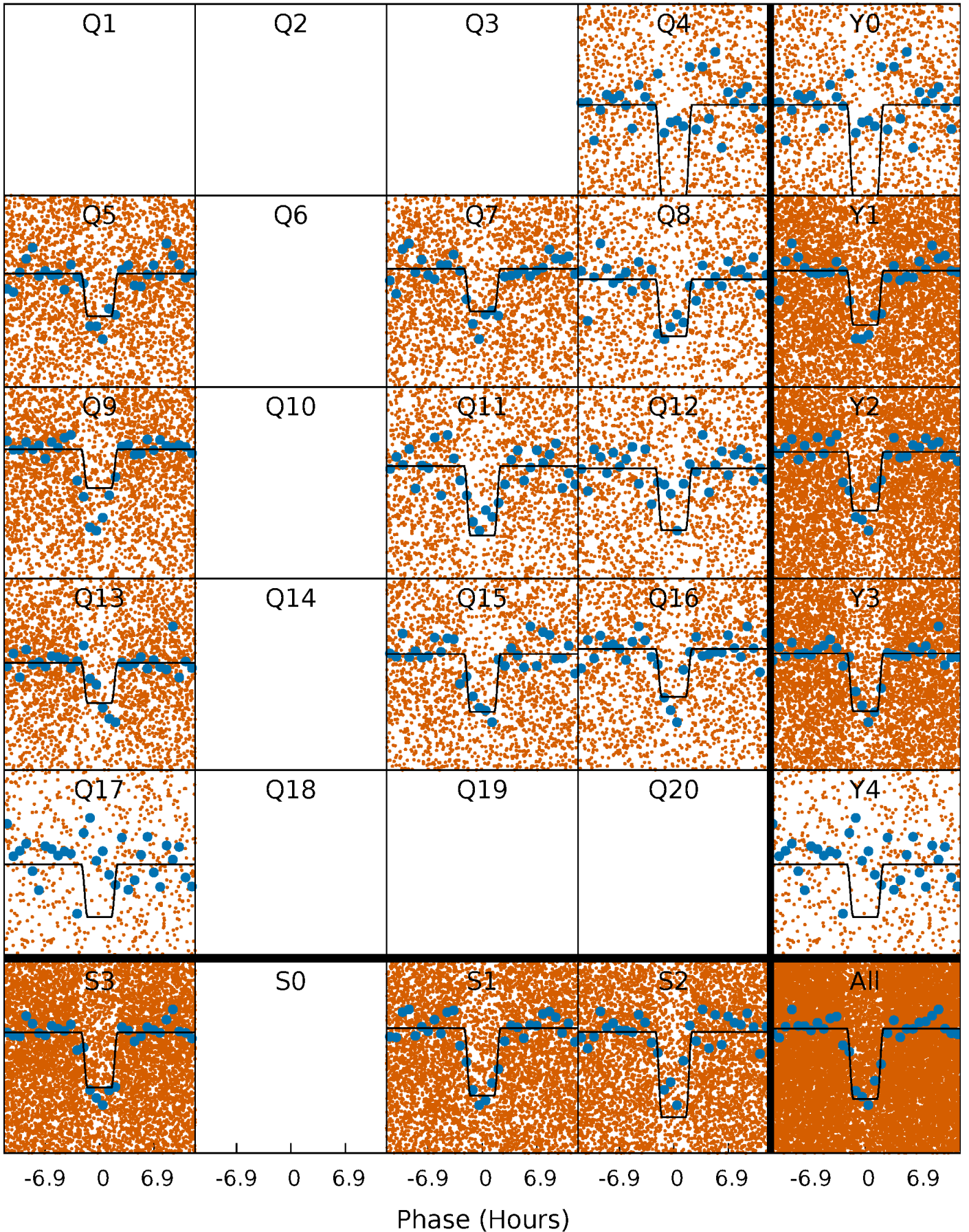
DV Quarter-Phased Transit Curves

TCE 004174234-01 P= 1.009954 Days $T_0=132.392791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

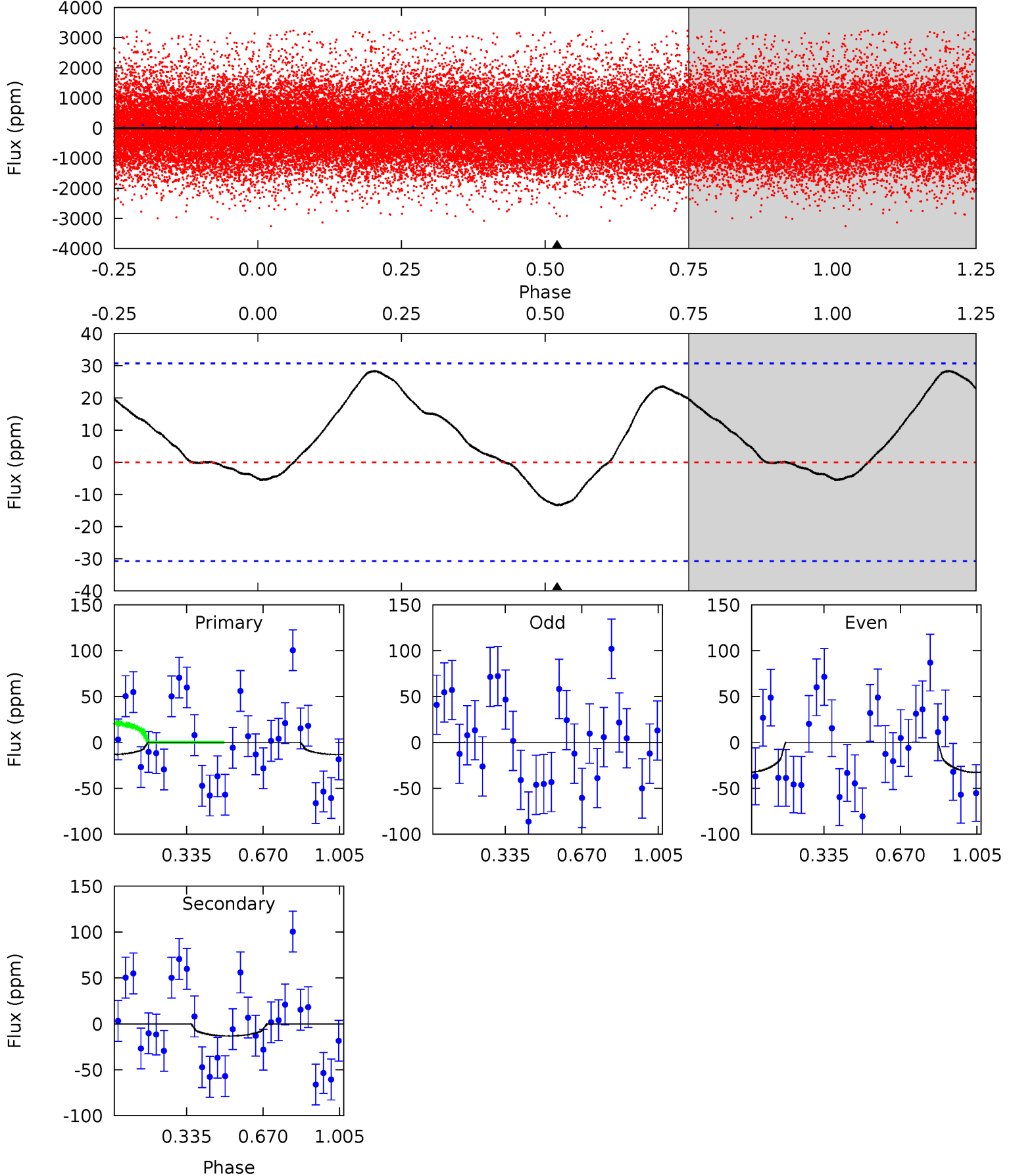
TCE 004174234-01 P= 1.009942 Days $T_0=132.353777$ (BKJD)



DV Model-Shift Uniqueness Test

004174234-01, P = 1.009954 Days, E = 132.392791 Days

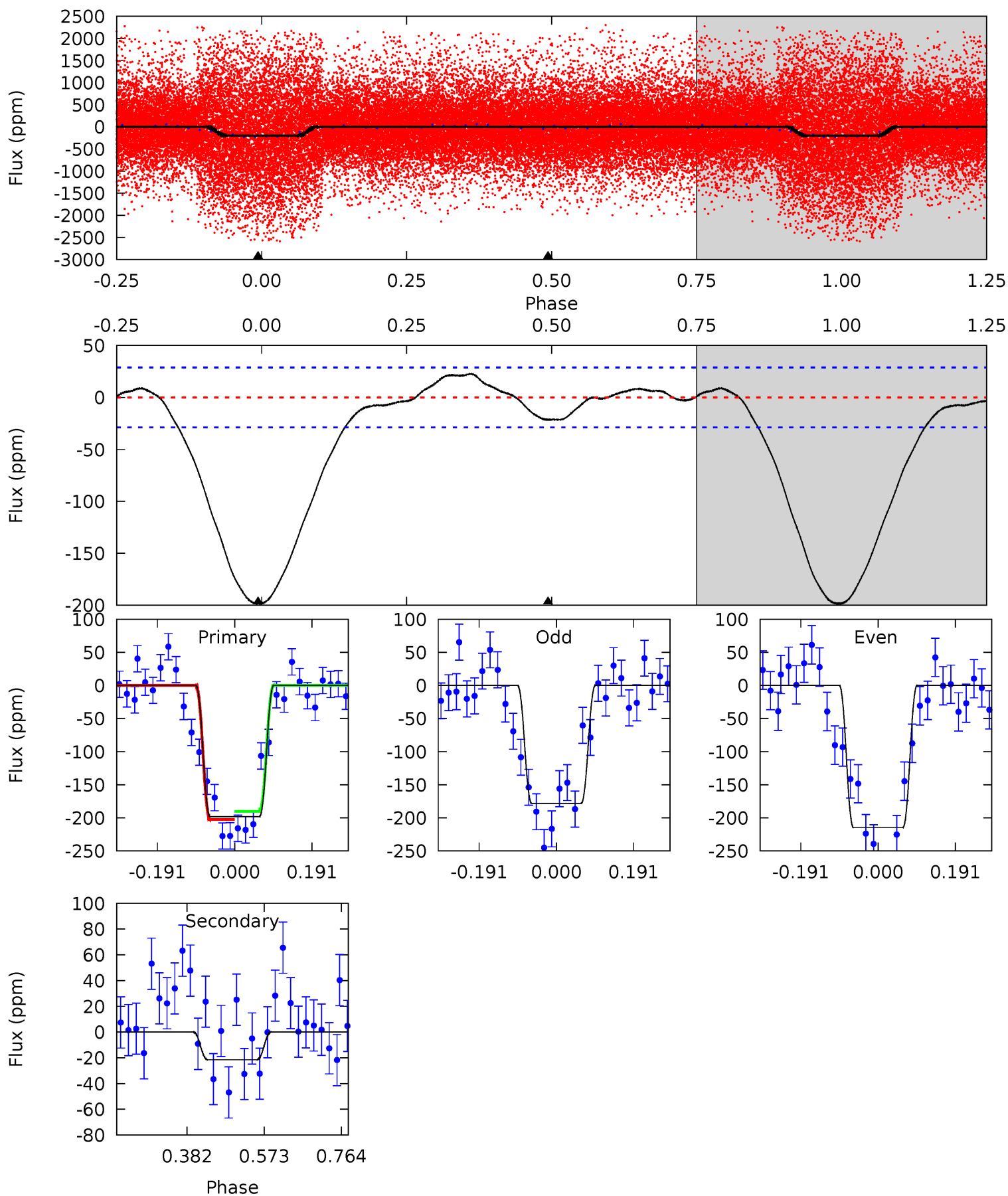
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.86	1.86	0	0	4.30	0.96	1.22	1.86	1.86	1.86	1.86	2.29	-10.7	0.68	2.26



Alt Model-Shift Uniqueness Test

004174234-01, P = 1.009942 Days, E = 132.353777 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	3.30	0	0	4.43	1.31	0.93	30.5	30.5	3.30	3.30	2.78	1.18	0.10	0.96



Stellar Parameters For KIC 004174234

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4571^{+162}_{-162}	$4.700^{+0.048}_{-0.032}$	$-1.000^{+0.300}_{-0.300}$	$0.544^{+0.043}_{-0.043}$	$0.542^{+0.047}_{-0.028}$	$4.732^{+1.004}_{-0.635}$
	+4%/-4%	+1%/-1%	+30%/-30%	+8%/-8%	+9%/-5%	+21%/-13%
Source	KIC0	KIC0	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 004174234-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 7	$0.85^{+0.86}_{-0.58}$	1633^{+65}_{-63}	2799^{+1304}_{-781}	$2.210^{+21.429}_{-1.782}$
Alt.	-21 ± 6	$1.08^{+0.94}_{-0.72}$	1632^{+62}_{-64}	2855^{+1268}_{-559}	$2.530^{+21.613}_{-1.834}$

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 $A_{\text{obs}} \gg 1.0$

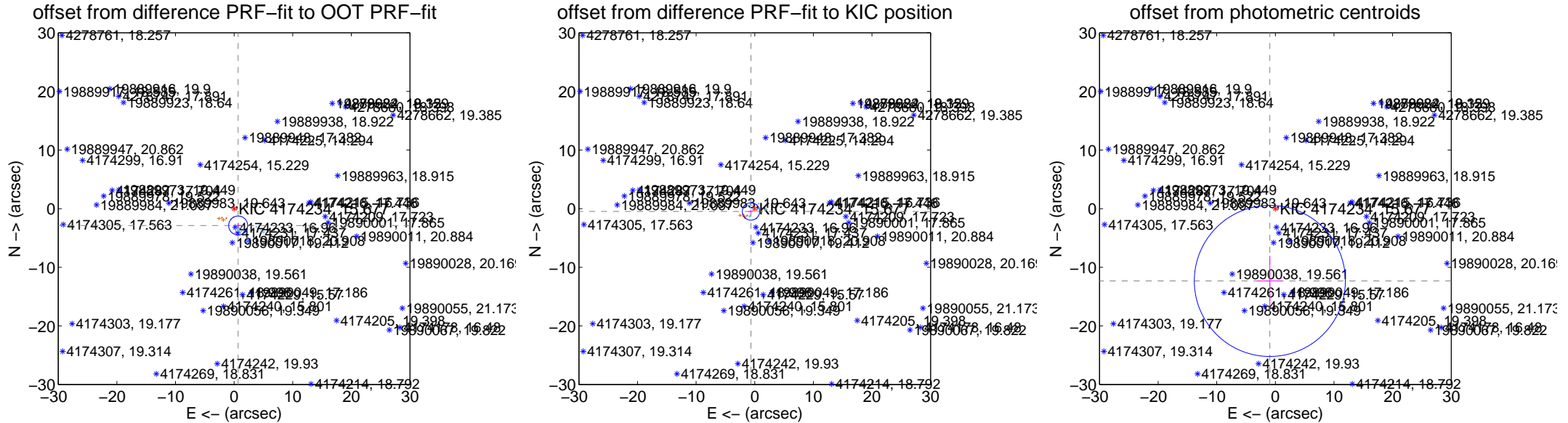
DV Centroid Data

Supplemental centroid analysis for 004174234-01. Kepler magnitude: 15.68. Transit SNR 2.28

There are 6 quarters with good PRF difference image offsets

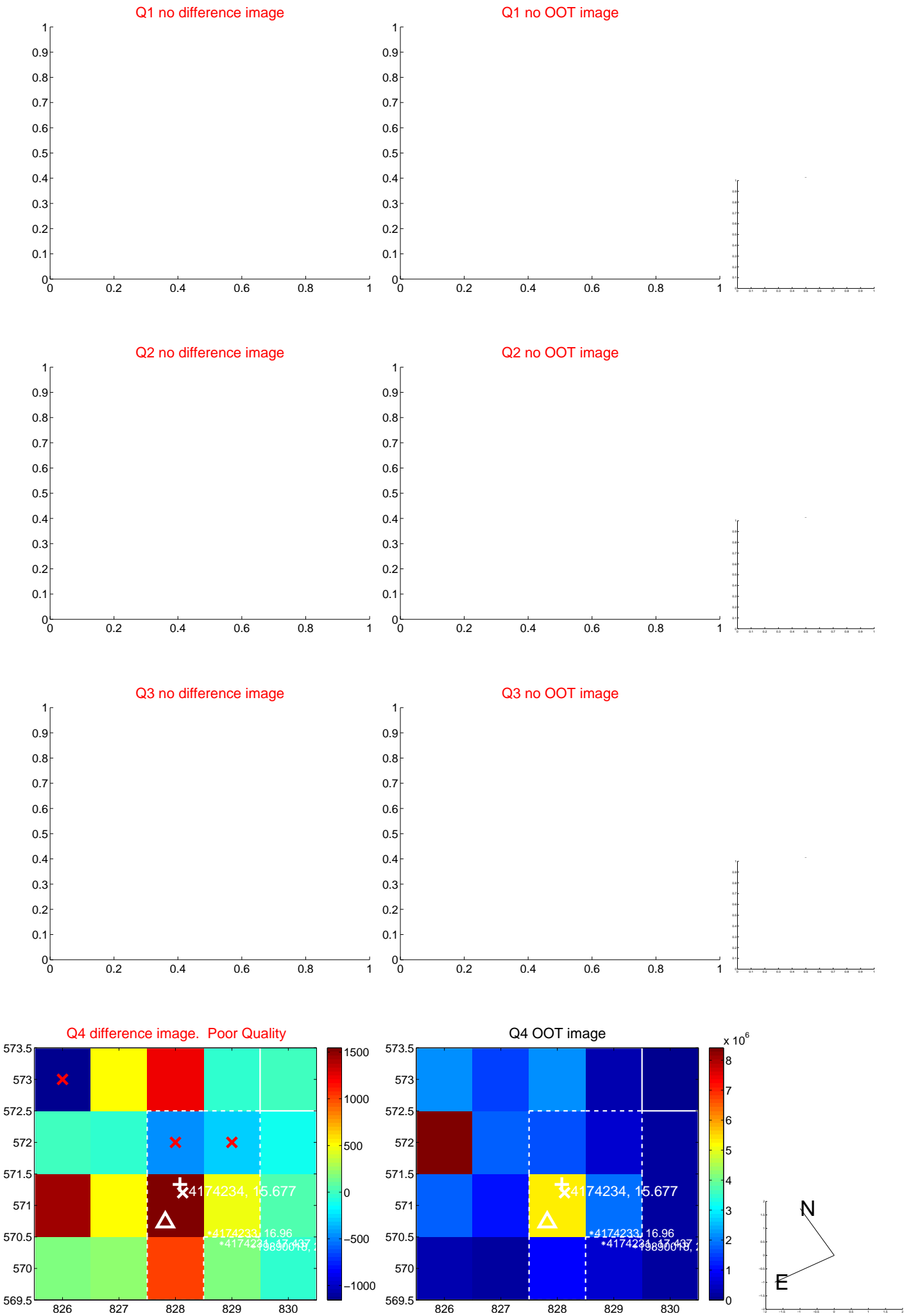
The OOT PRF centroid is offset from the target star catalog position by about 5.15 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.951 \pm 0.540	5.47	-0.691 \pm 0.801	-2.869 \pm 0.390
PRF-fit source offset from KIC position	0.802 \pm 0.492	1.63	0.642 \pm 0.448	-0.481 \pm 0.269
photometric centroid source offset	12.36 \pm 4.29	2.88	0.94 \pm 2.17	-12.33 \pm 4.30

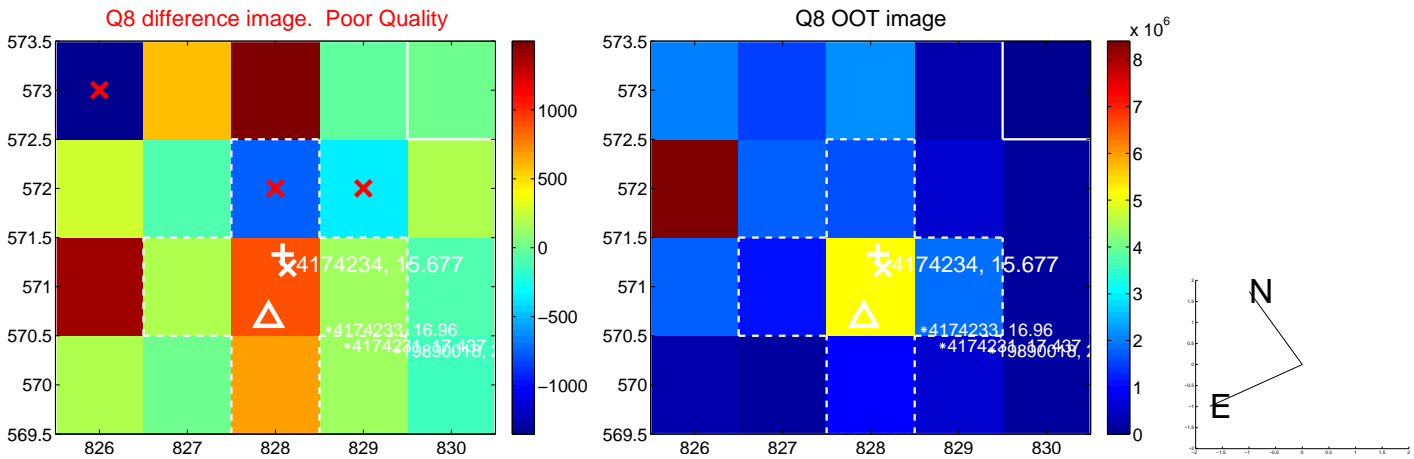
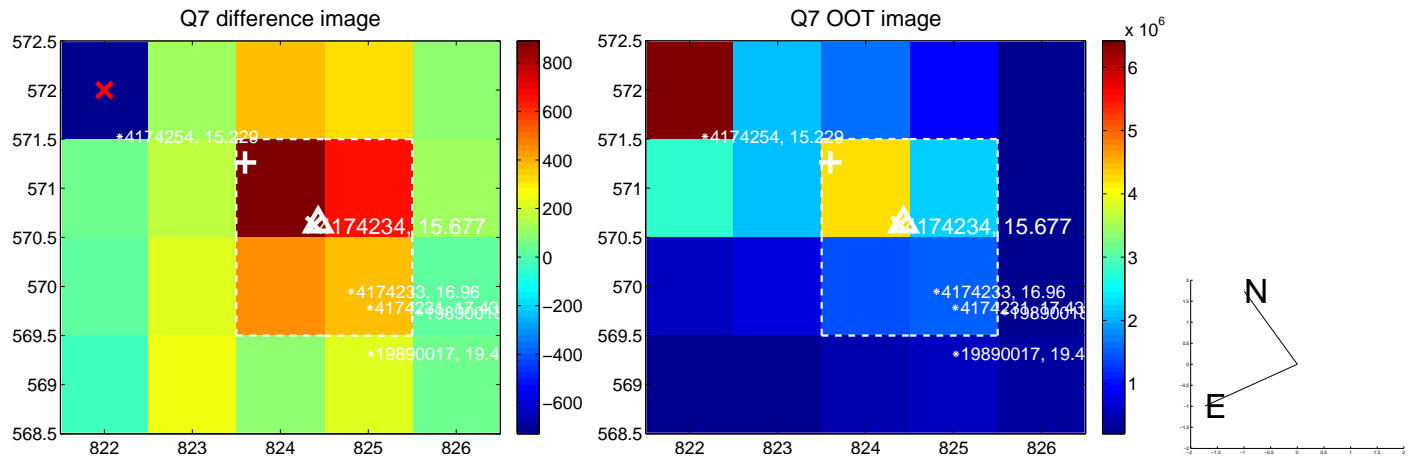
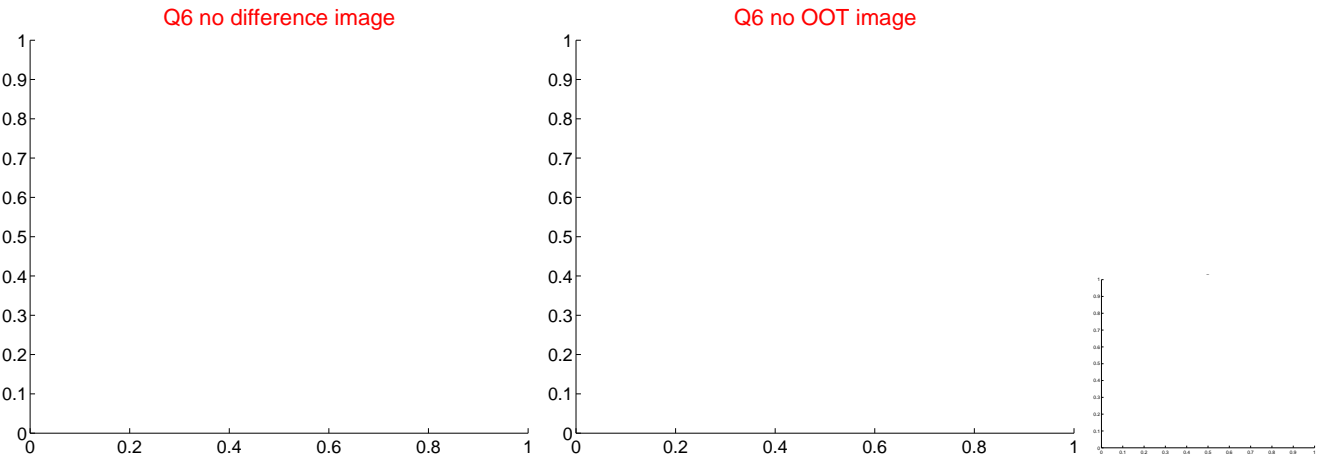
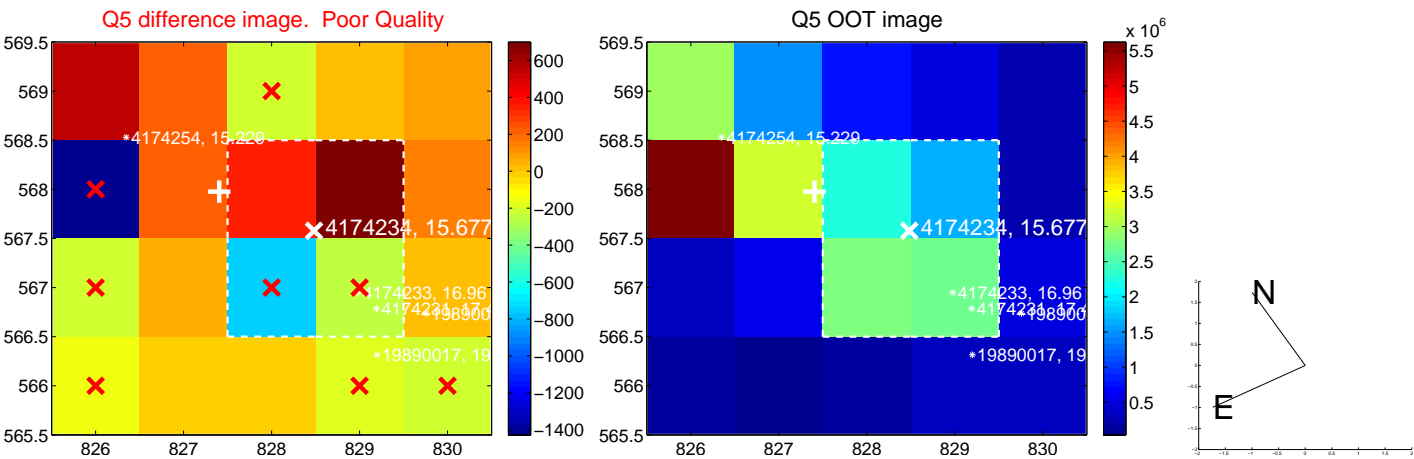


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

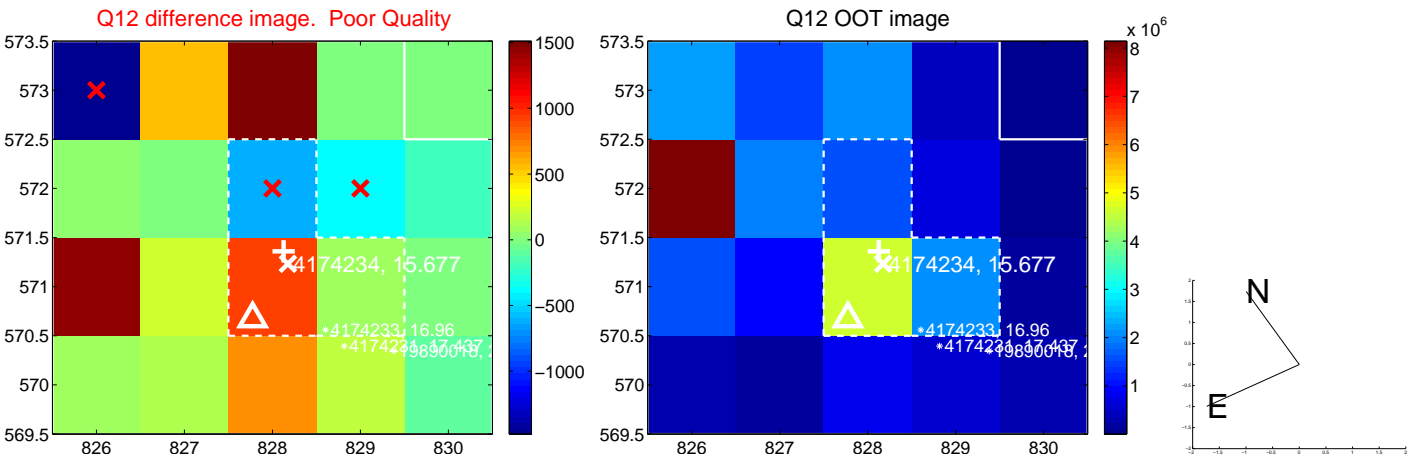
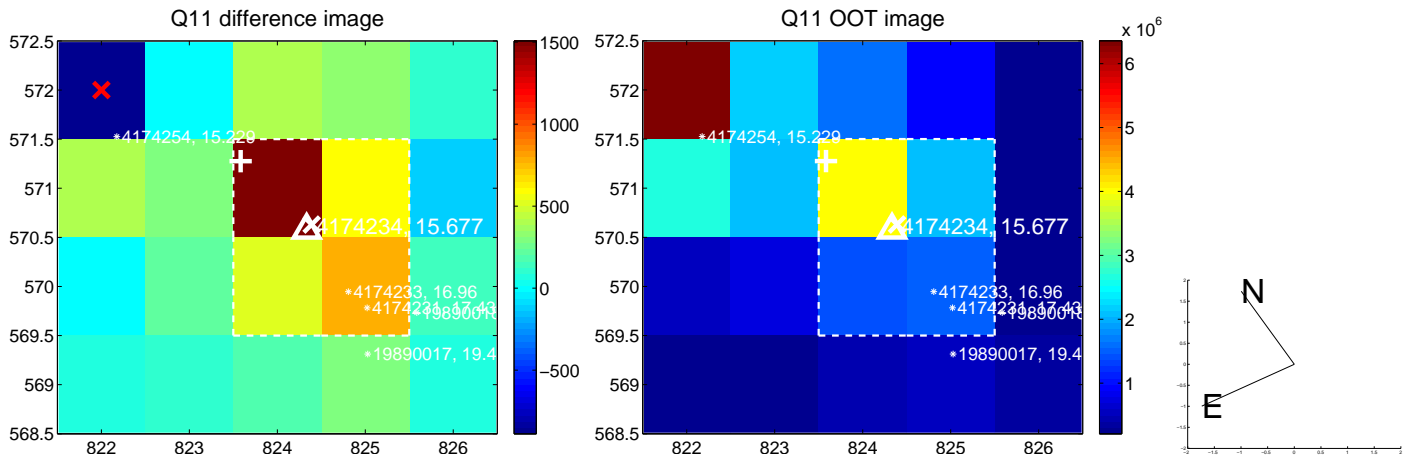
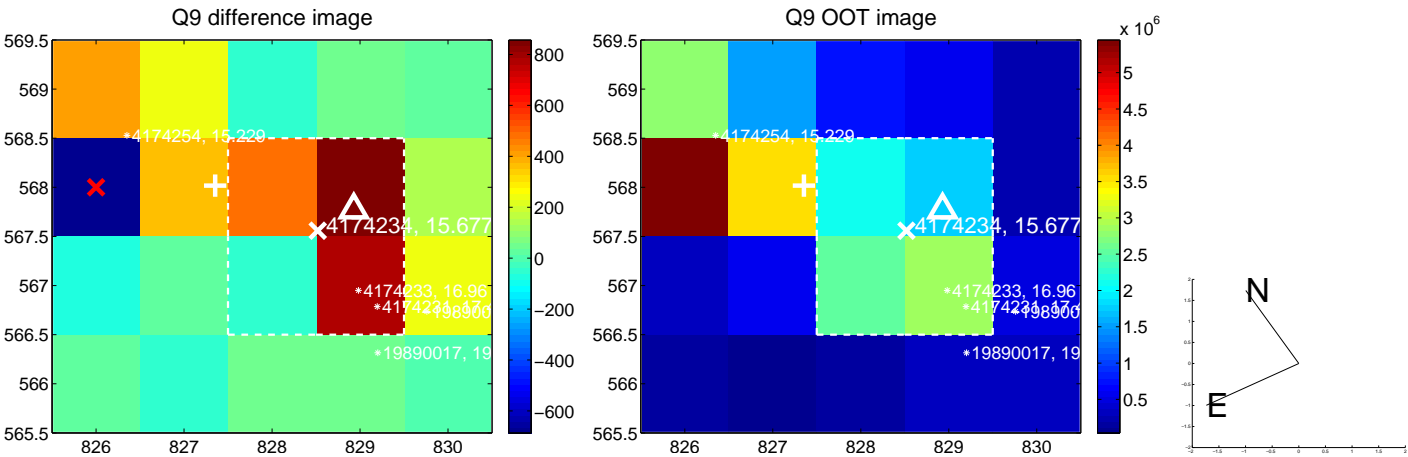
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



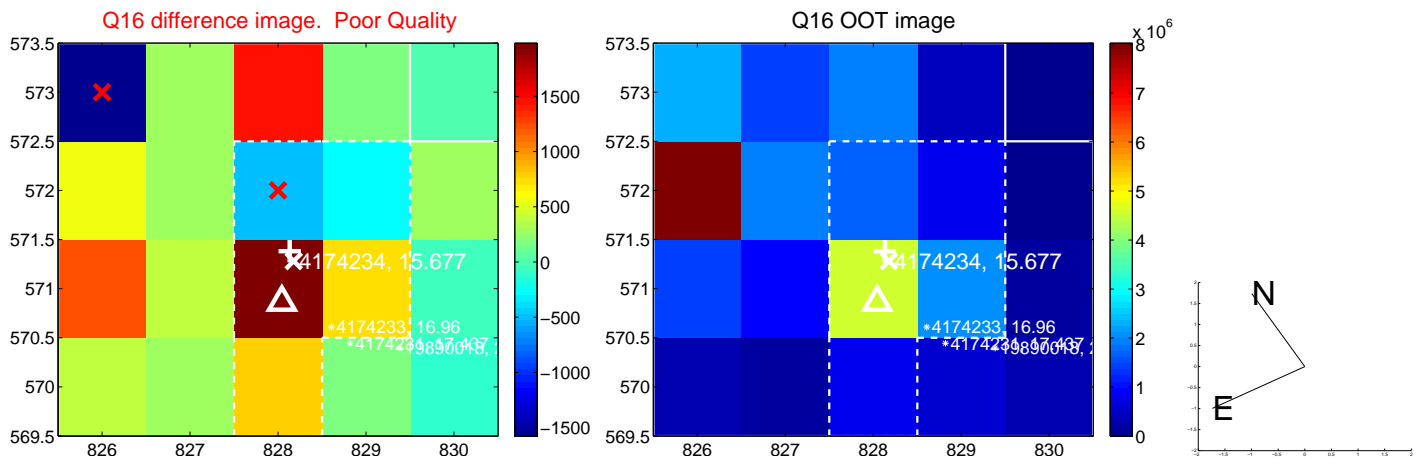
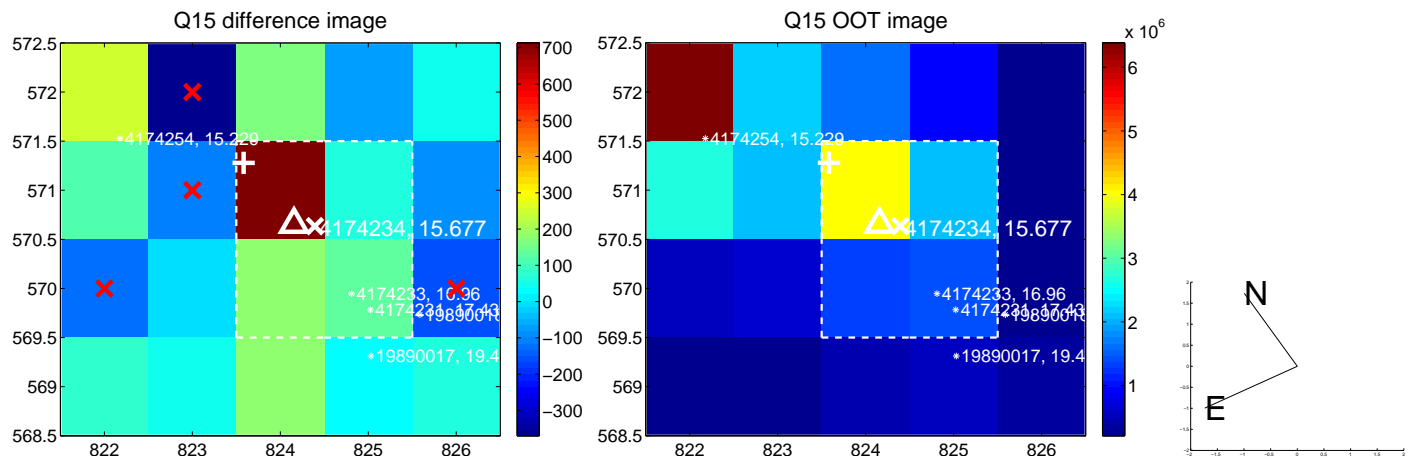
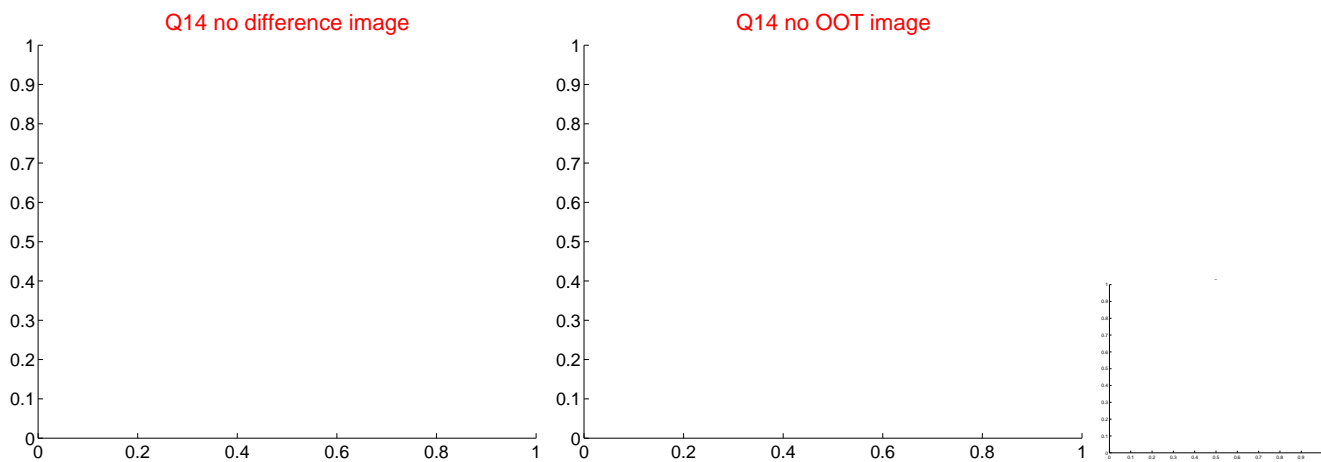
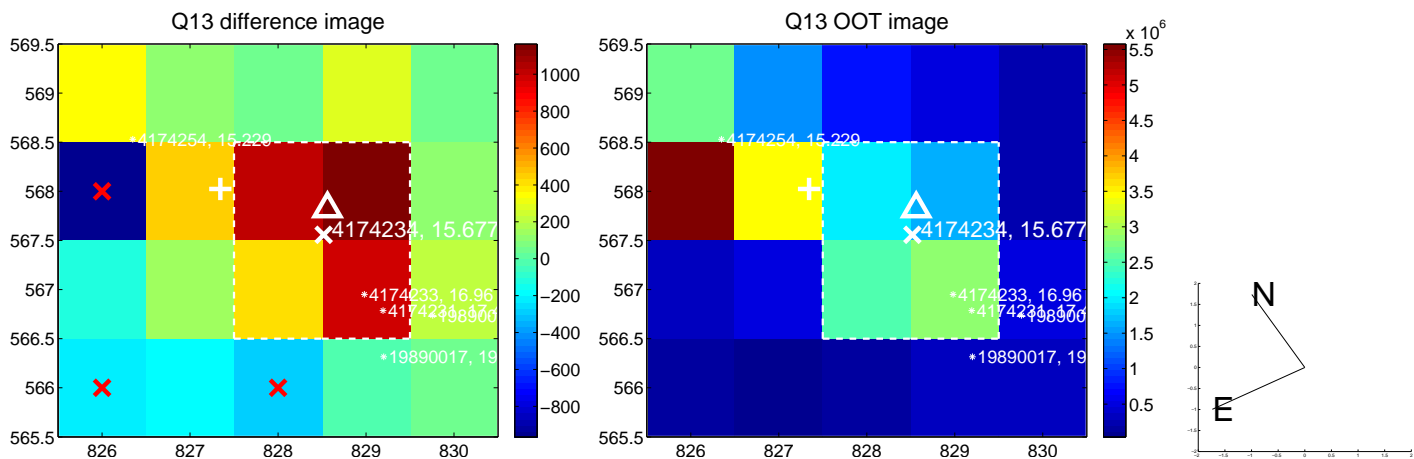
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



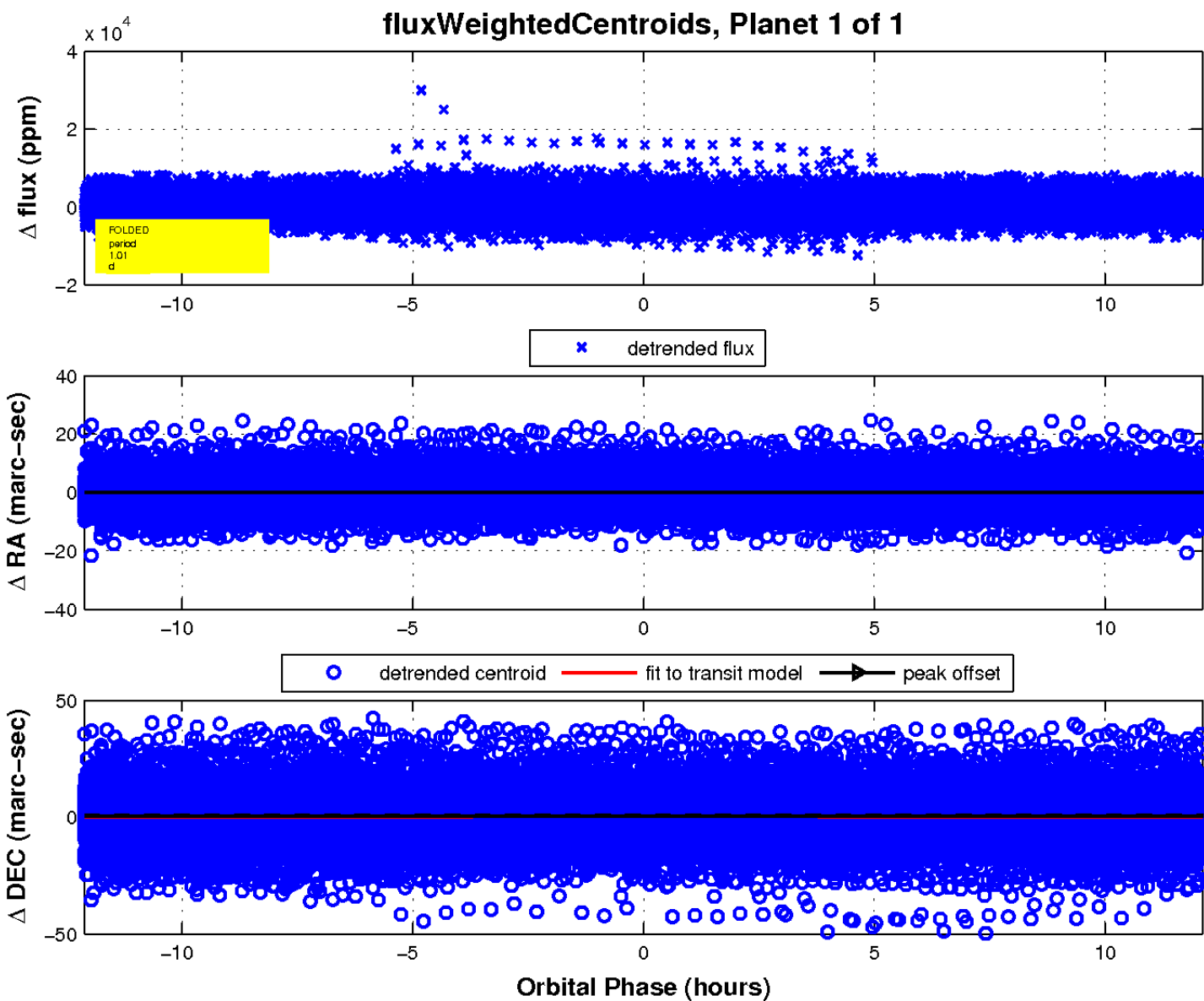
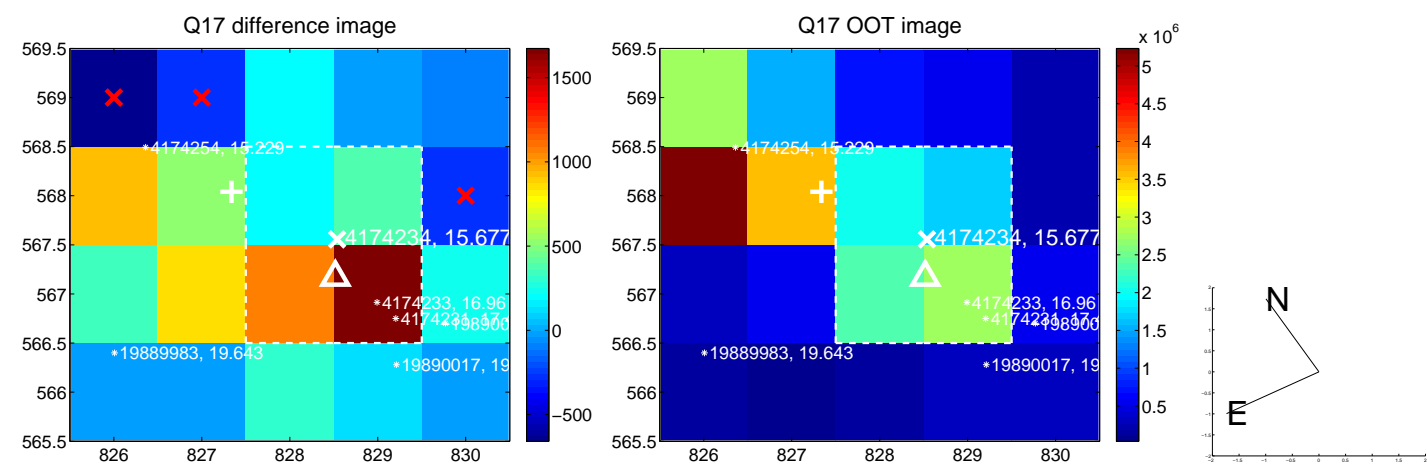
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UKIRT Image

Declination

