

KIC 004574142

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})
004574142-01	OBS	No	1.461027	132.819632	53.6	13.527	11.8	18.4	2.24	8554	1.66	23431.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004574142-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

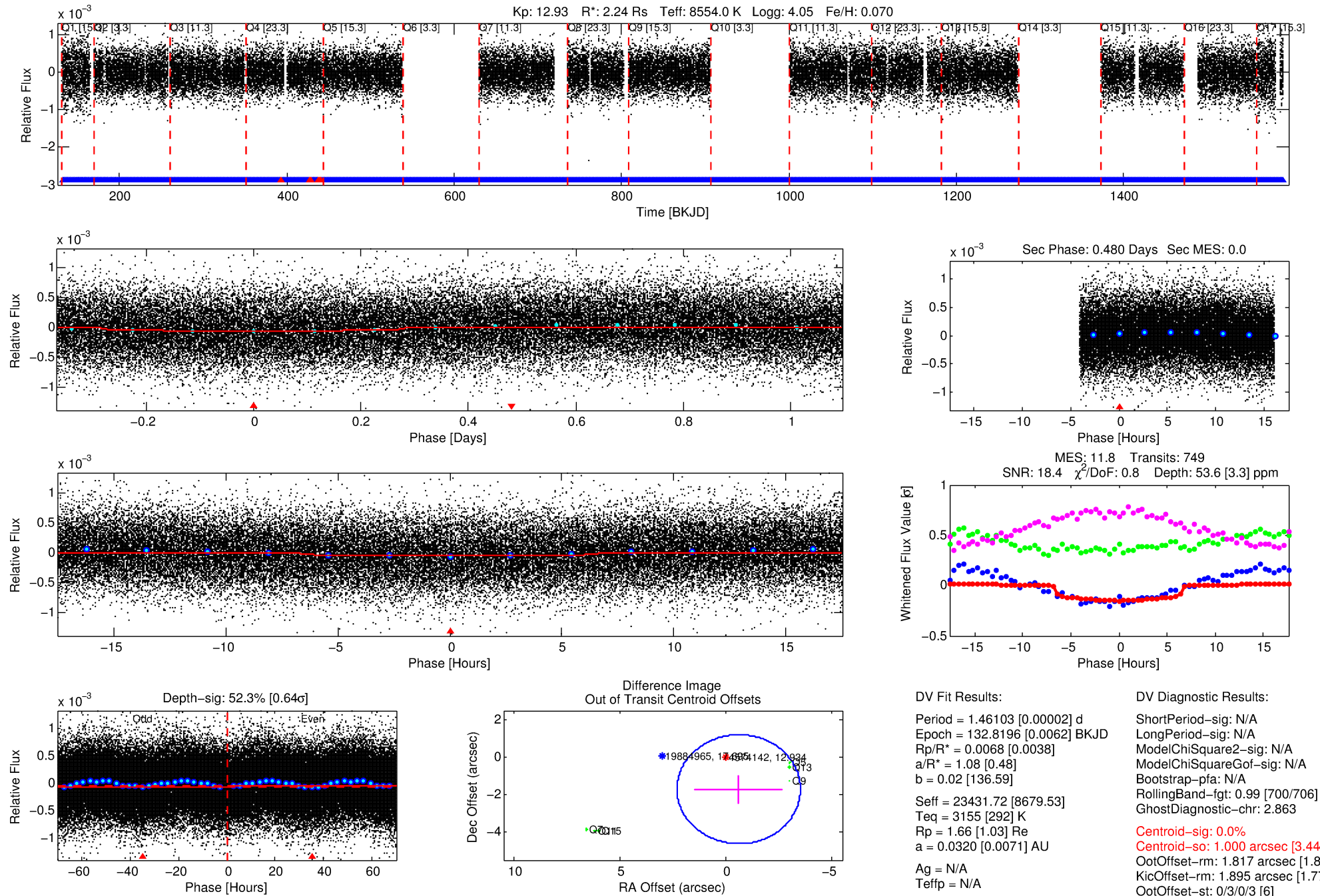
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004574142-01

No Significant Match Found

DV One-Page Summary

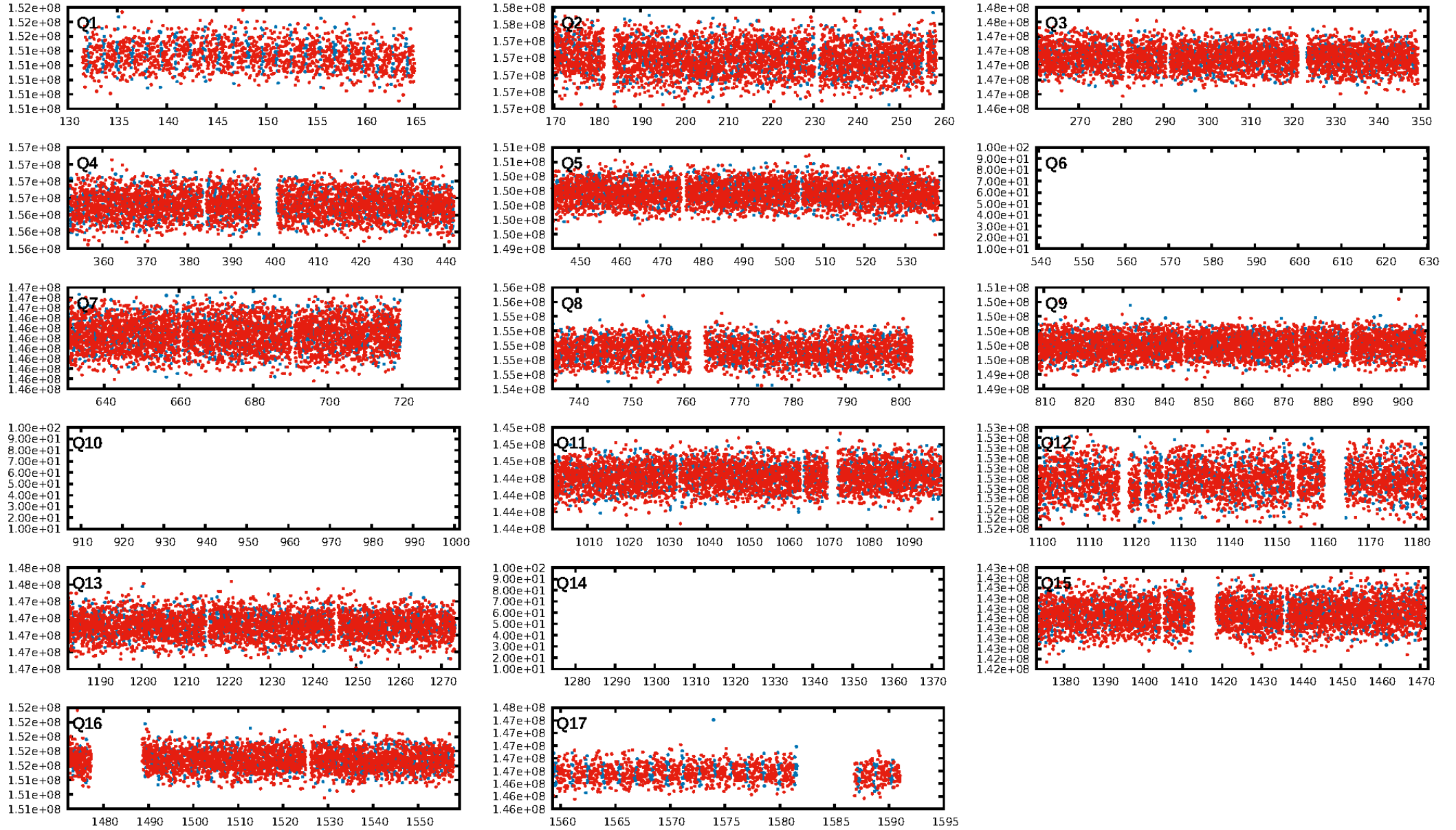
KIC: 4574142 Candidate: 1 of 1 Period: 1.461 d



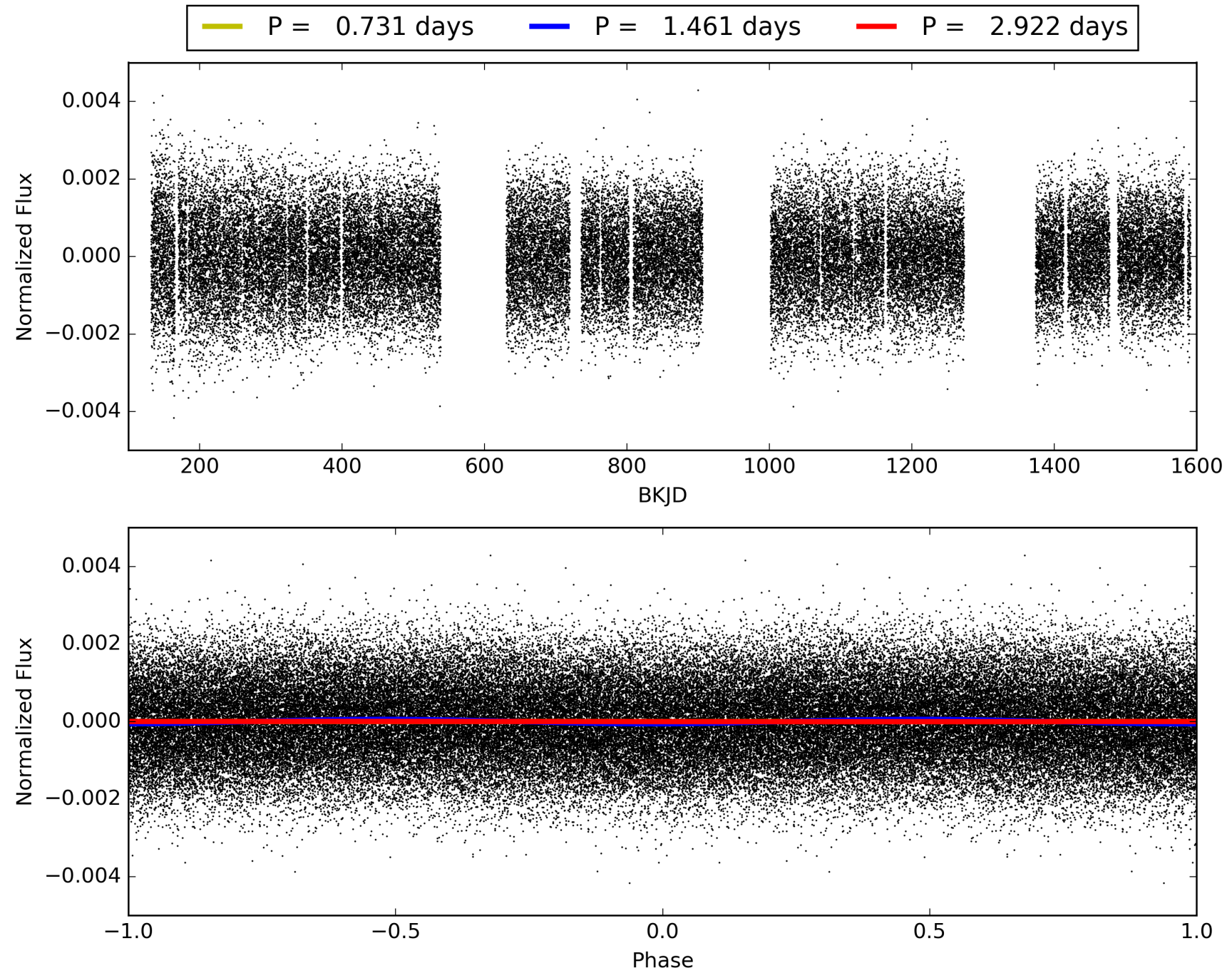
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:58:23 Z

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

TCE 004574142-01, PDC Light Curves

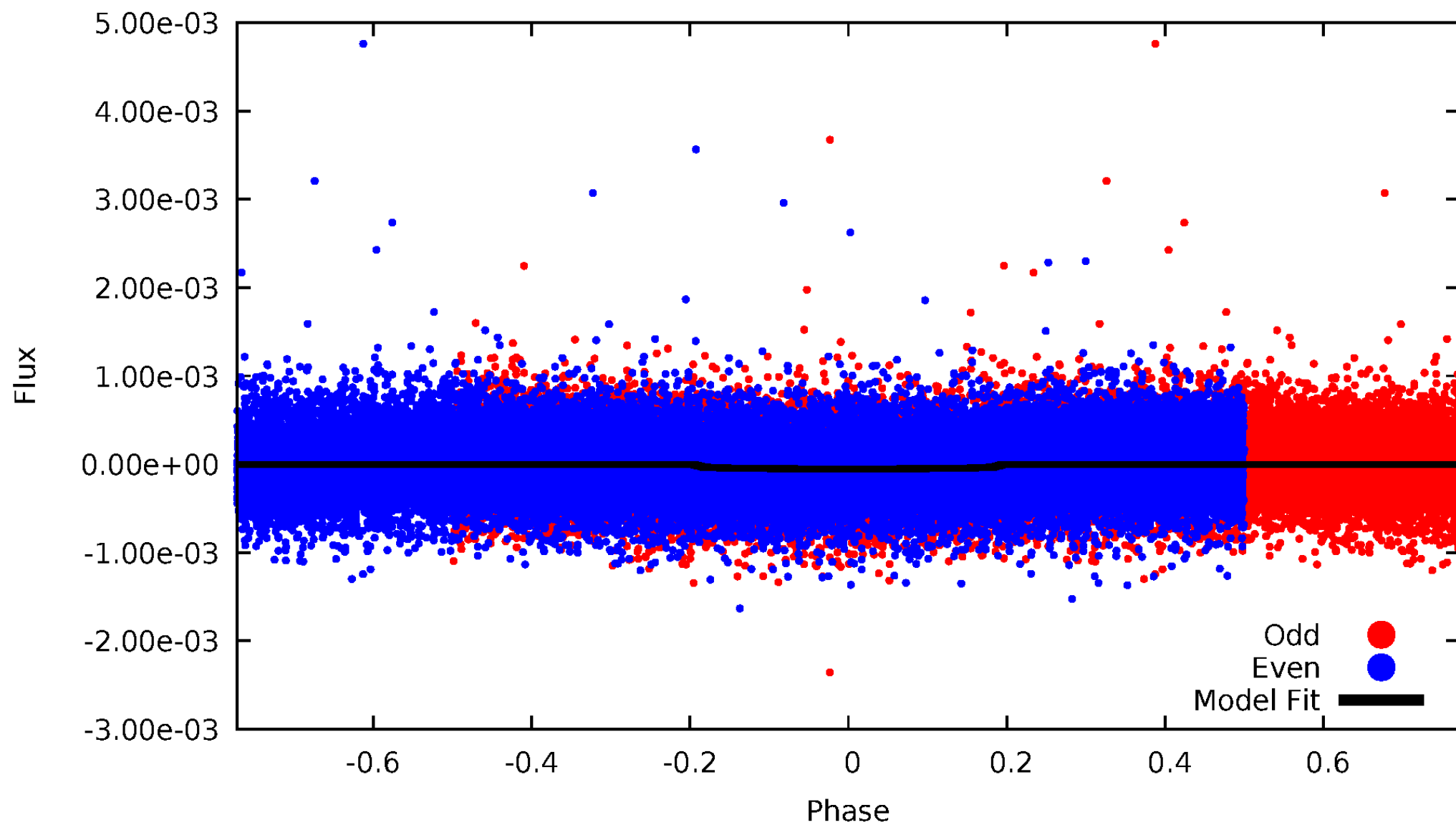


TCE 004574142-01



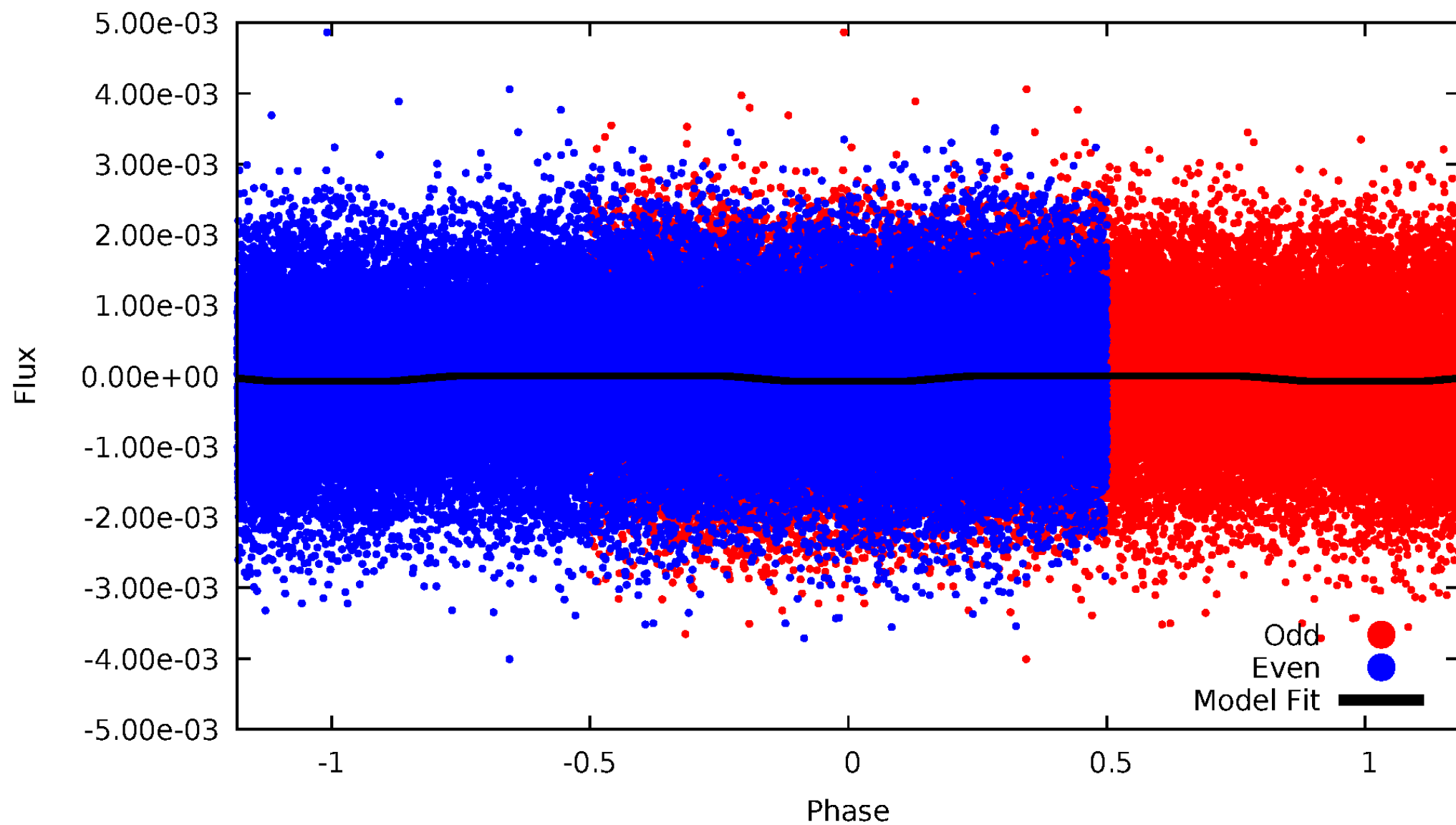
DV Odd/Even

TCE 004574142-01

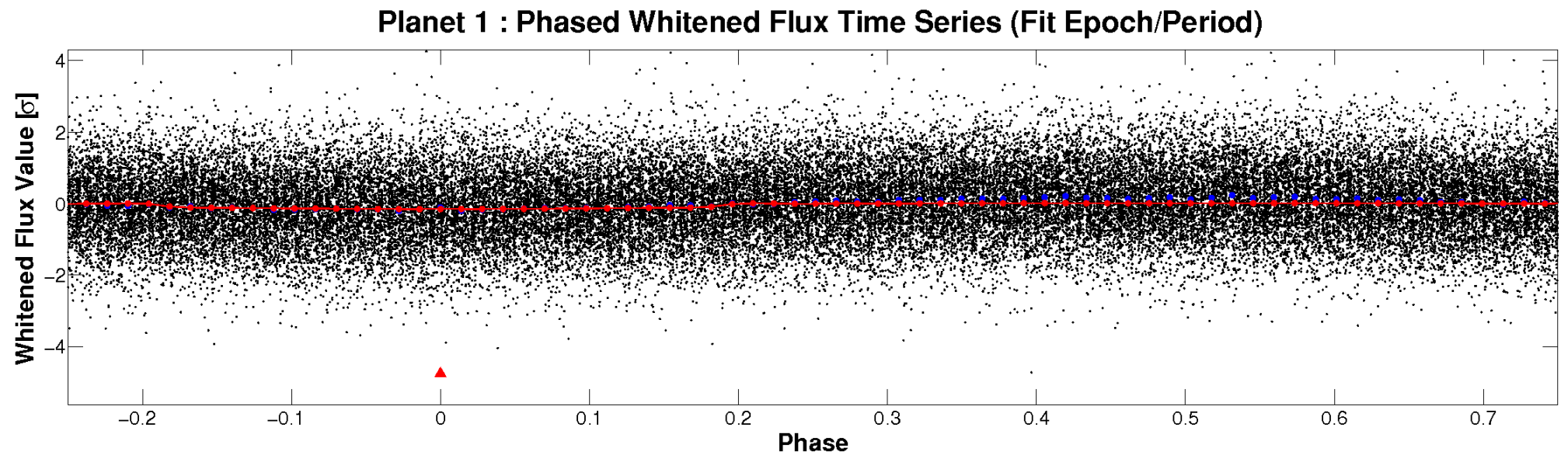
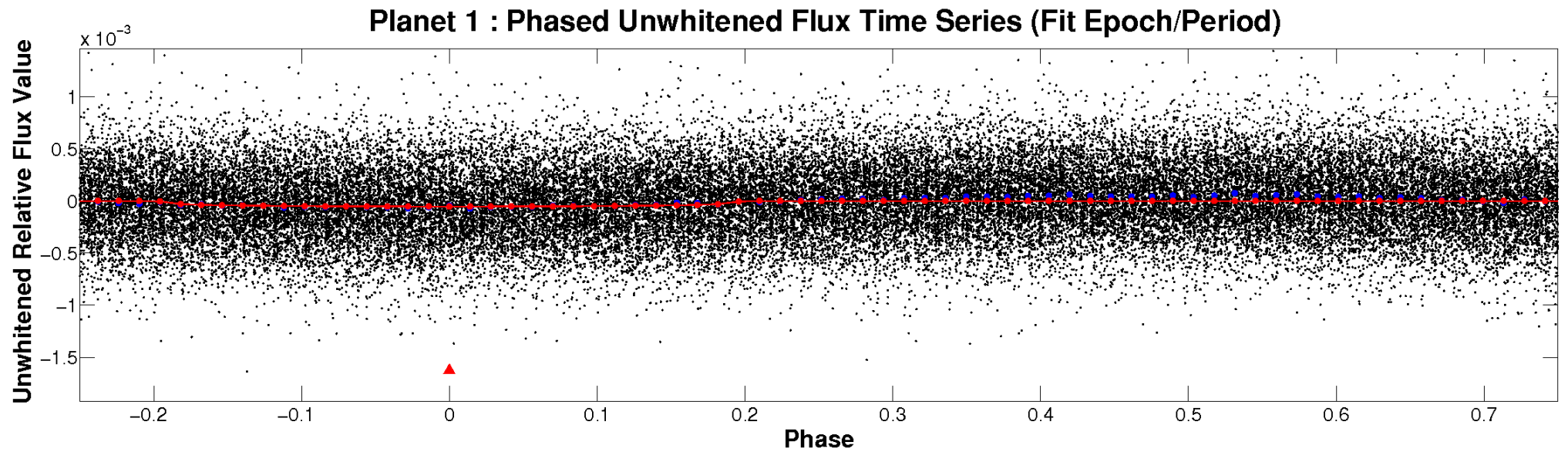


ALT Odd/Even

TCE 004574142-01

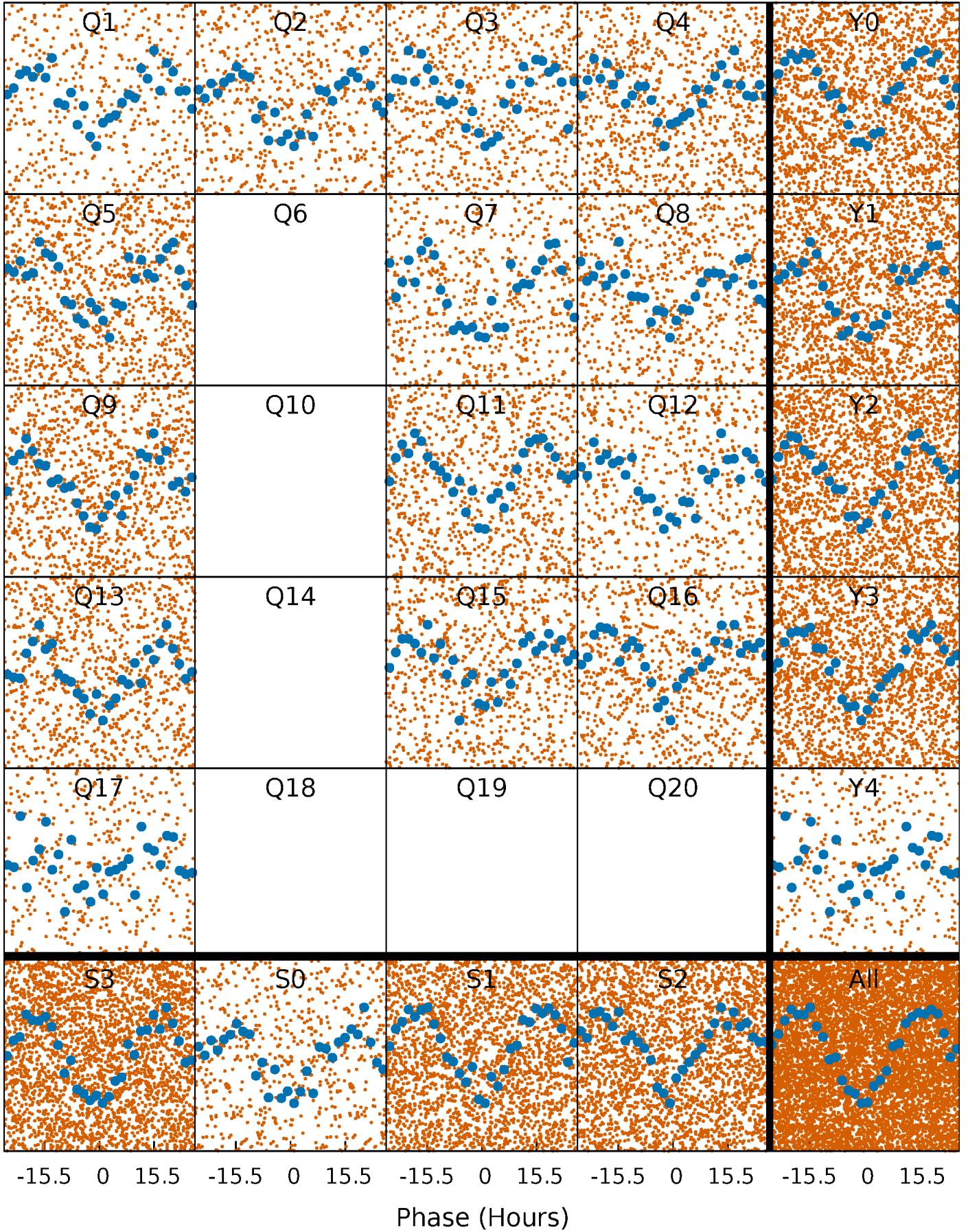


Non-Whitened Vs. Whitened Light Curve



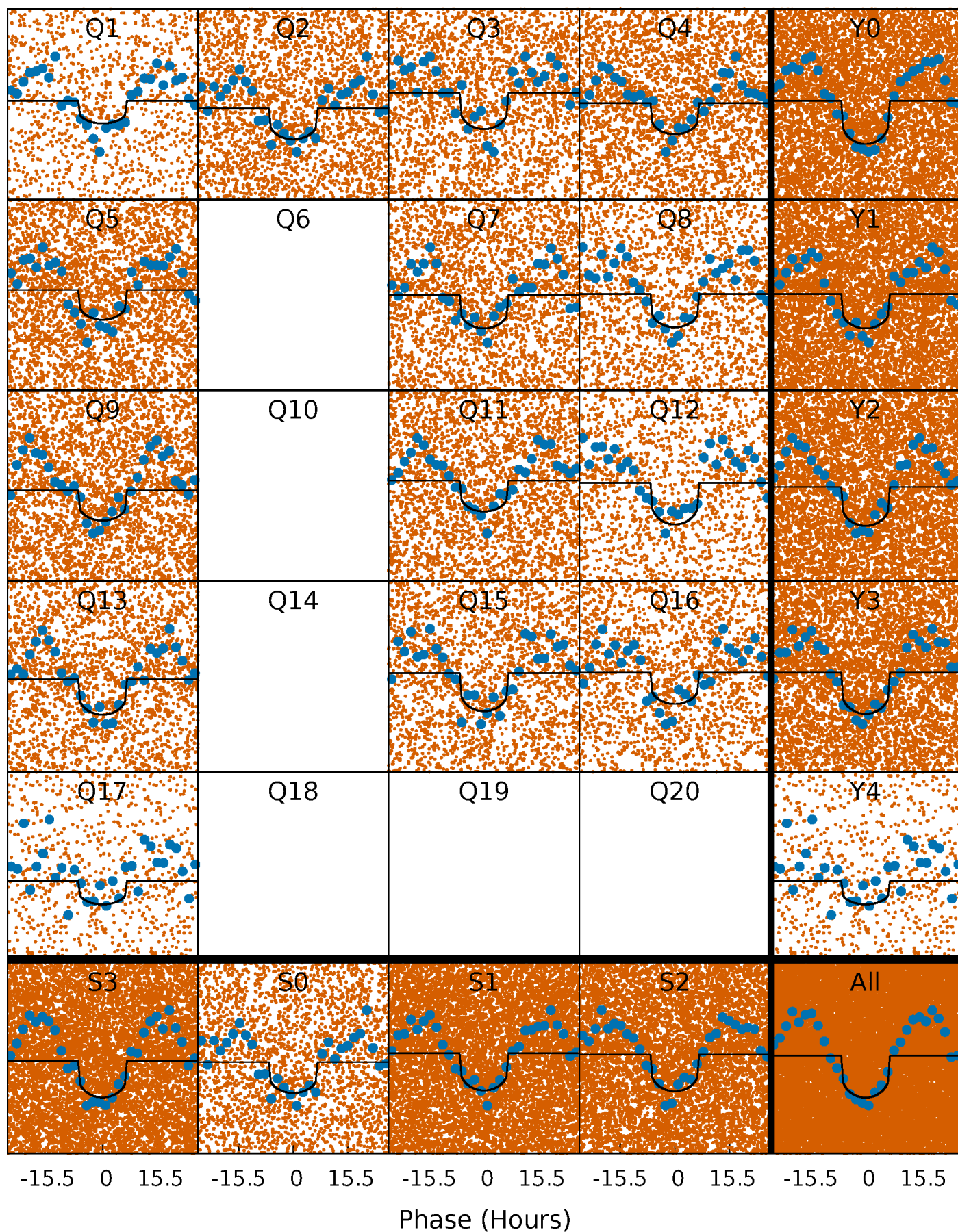
PDC Quarter-Phased Transit Curves

TCE 004574142-01 P= 1.461027 Days $T_0=132.819632$ (BKJD)



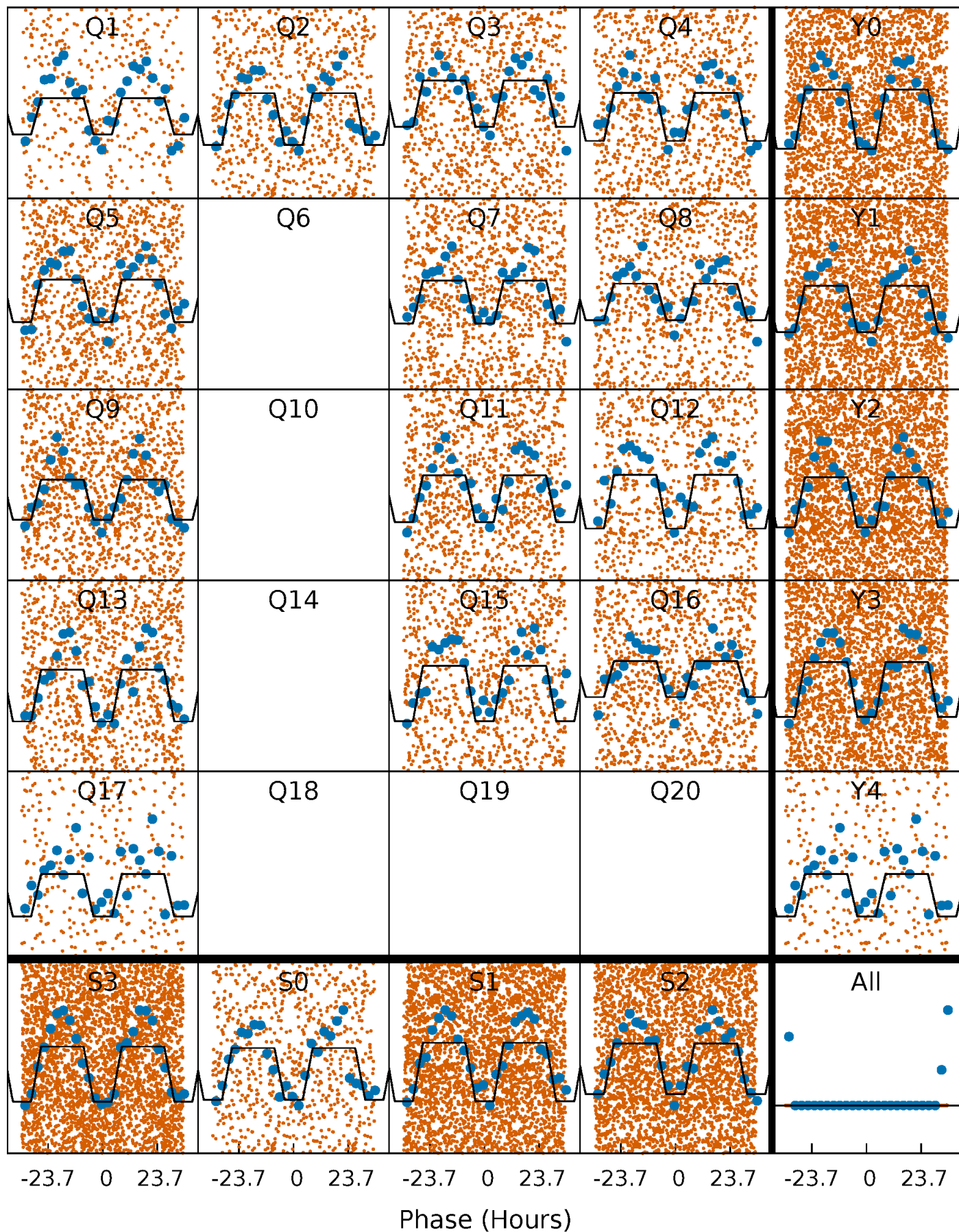
DV Quarter-Phased Transit Curves

TCE 004574142-01 P= 1.461027 Days $T_0=132.819632$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

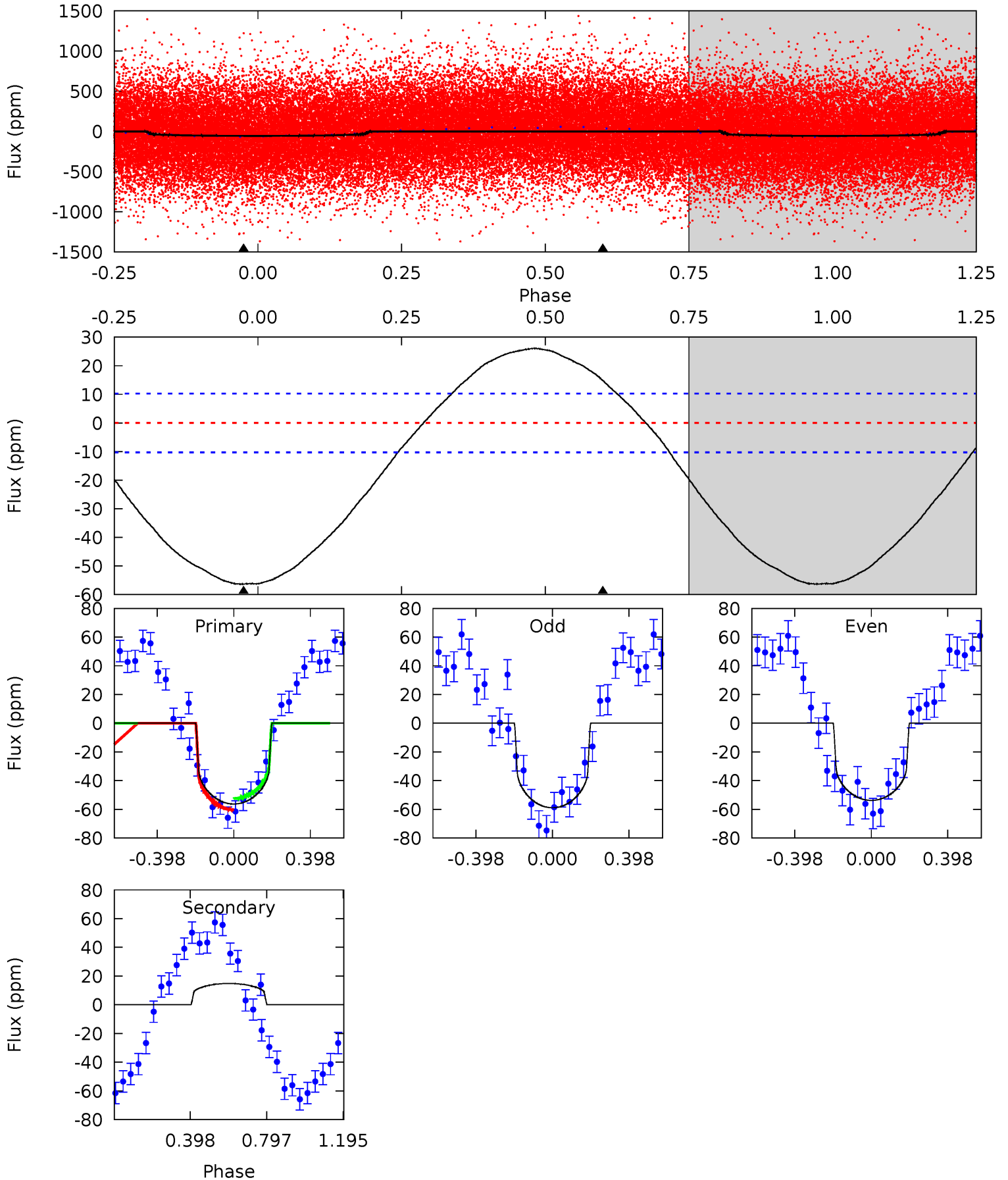
TCE 004574142-01 $P = 1.460889$ Days $T_0 = 132.856952$ (BKJD)



DV Model-Shift Uniqueness Test

004574142-01, P = 1.461027 Days, E = 131.358605 Days

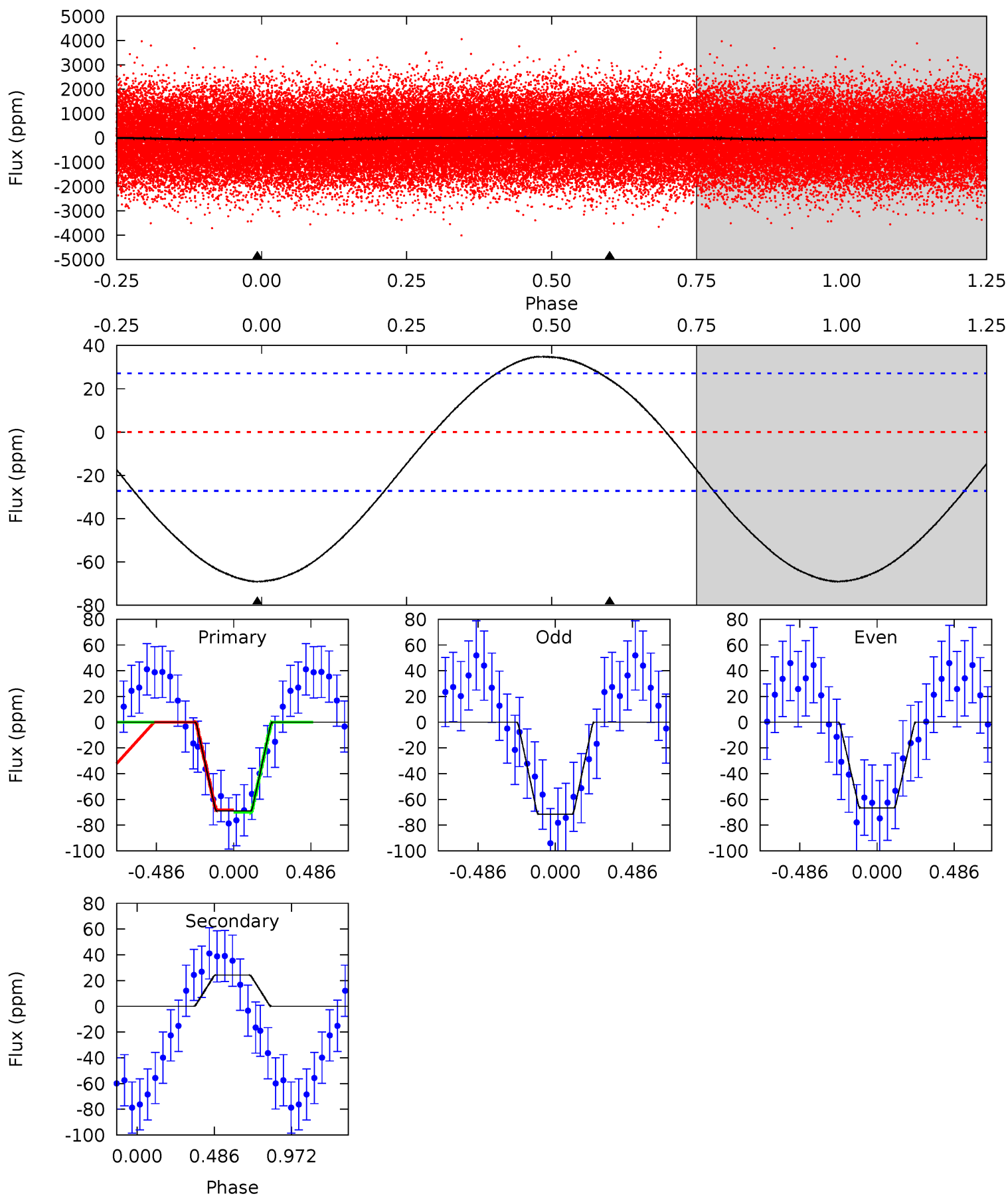
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	-6.18	0	0	4.27	0.84	2.74	23.4	23.4	-6.18	-6.18	1.08	1.00	0.32	1.63



Alt Model-Shift Uniqueness Test

004574142-01, P = 1.460889 Days, E = 131.396063 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	-3.77	0	0	4.22	0.70	1.38	10.7	10.7	-3.77	-3.77	0.38	1.00	0.34	0.15



Stellar Parameters For KIC 004574142

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8554^{+235}_{-404}	$4.050^{+0.171}_{-0.140}$	$0.070^{+0.250}_{-0.550}$	$2.237^{+0.496}_{-0.606}$	$2.049^{+0.317}_{-0.476}$	$0.258^{+0.271}_{-0.097}$
	+3%/-5%	+4%/-3%	+357%/-786%	+22%/-27%	+15%/-23%	+105%/-38%
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 004574142-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	15 ± 2	$1.65^{+1.03}_{-0.83}$	4374^{+307}_{-304}	-6278^{+1069}_{-2916}	$-2.971^{+1.784}_{-9.810}$
Alt.	24 ± 6	$2.11^{+0.98}_{-0.92}$	4365^{+304}_{-304}	-6233^{+969}_{-2197}	$-2.920^{+1.549}_{-6.223}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

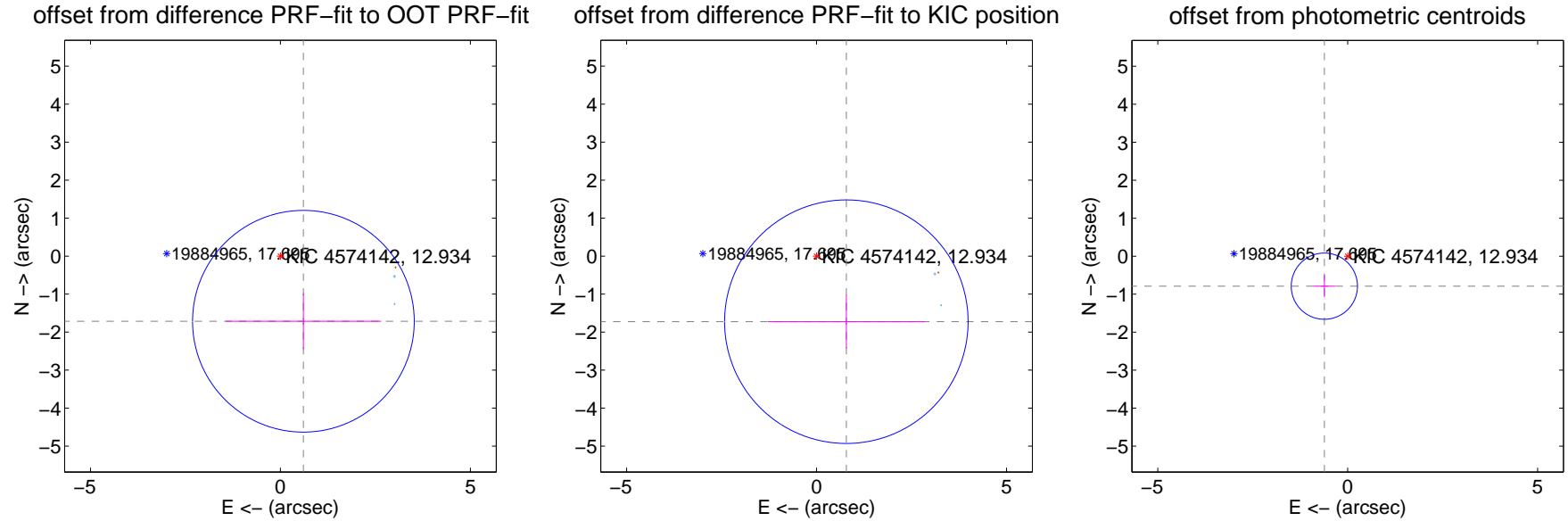
DV Centroid Data

Supplemental centroid analysis for 004574142-01. Kepler magnitude: 12.93. Transit SNR 18.38

There are 2 quarters with good PRF difference image offsets

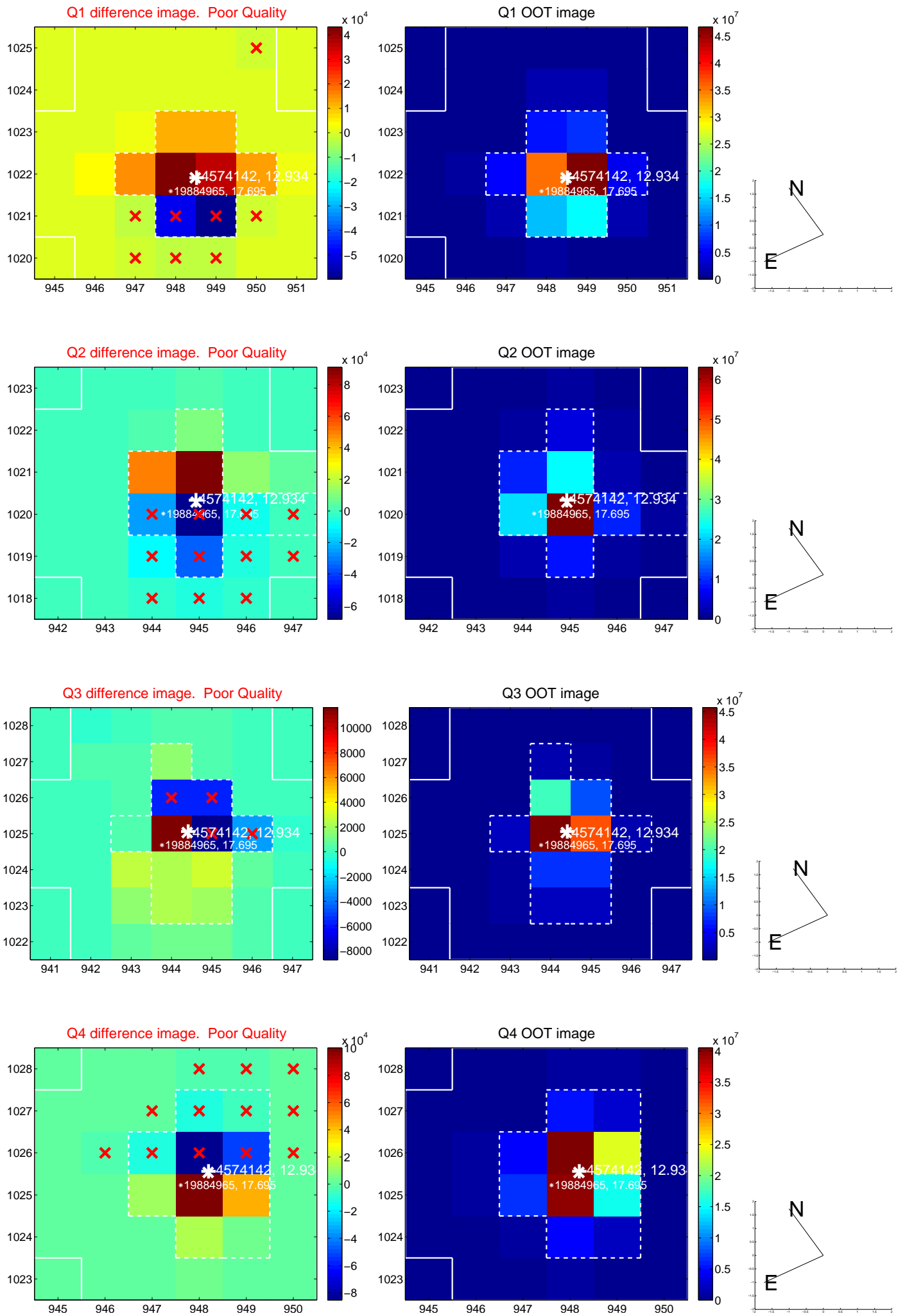
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.817 ± 0.972	1.87	-0.604 ± 2.046	-1.714 ± 0.737
PRF-fit source offset from KIC position	1.895 ± 1.068	1.77	-0.783 ± 2.064	-1.725 ± 0.705
photometric centroid source offset	1.00 ± 0.29	3.44	0.62 ± 0.29	-0.79 ± 0.29

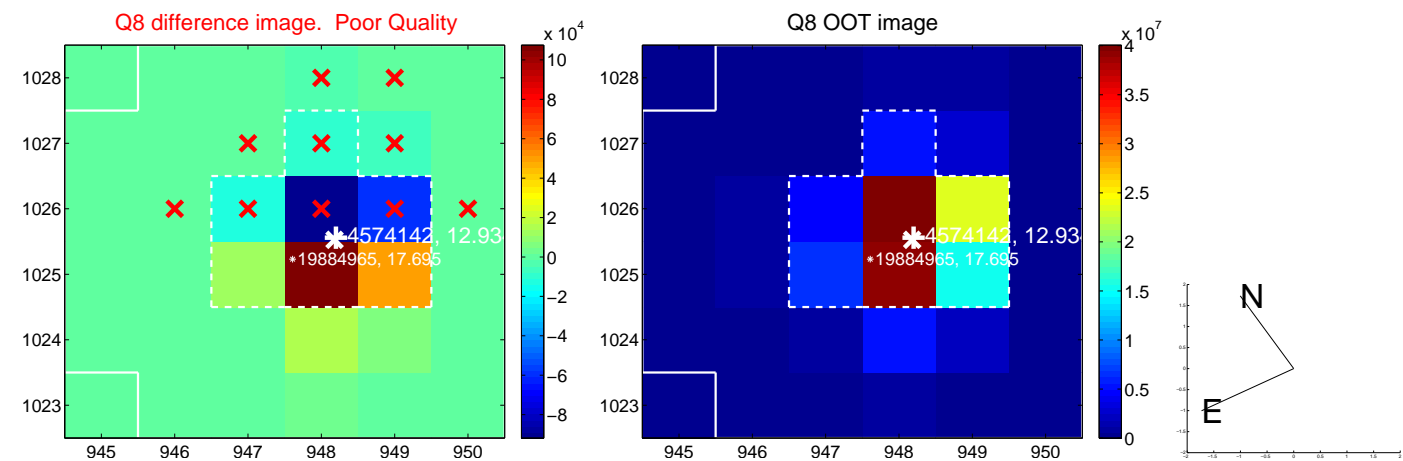
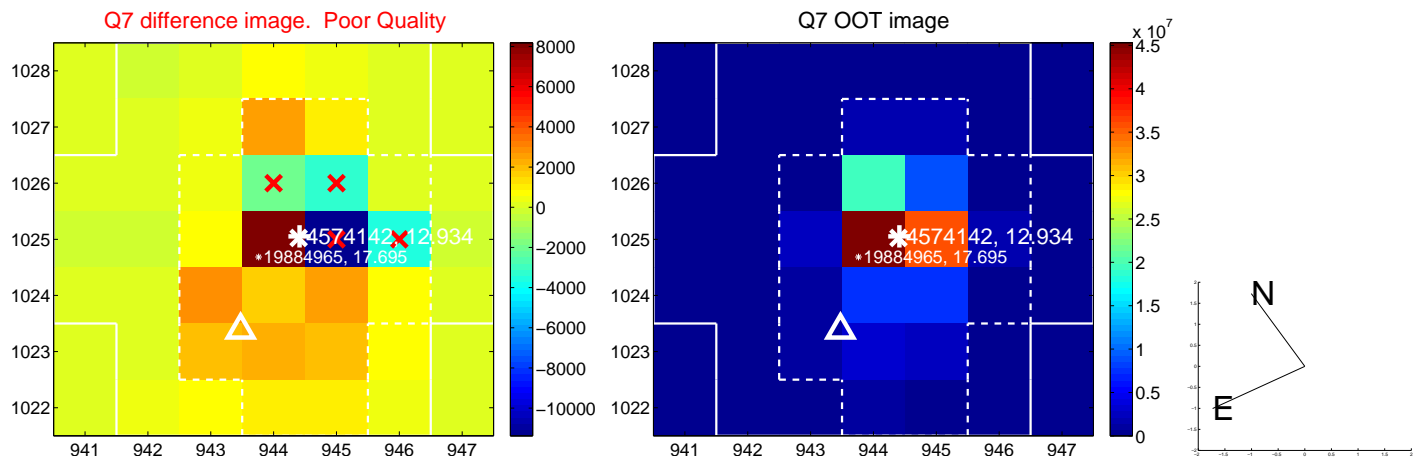
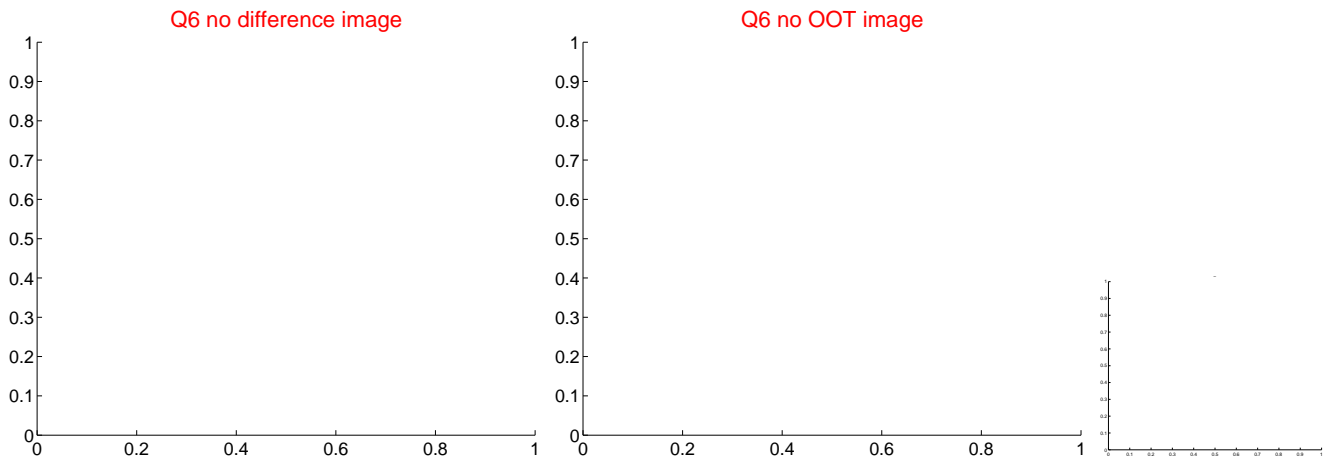
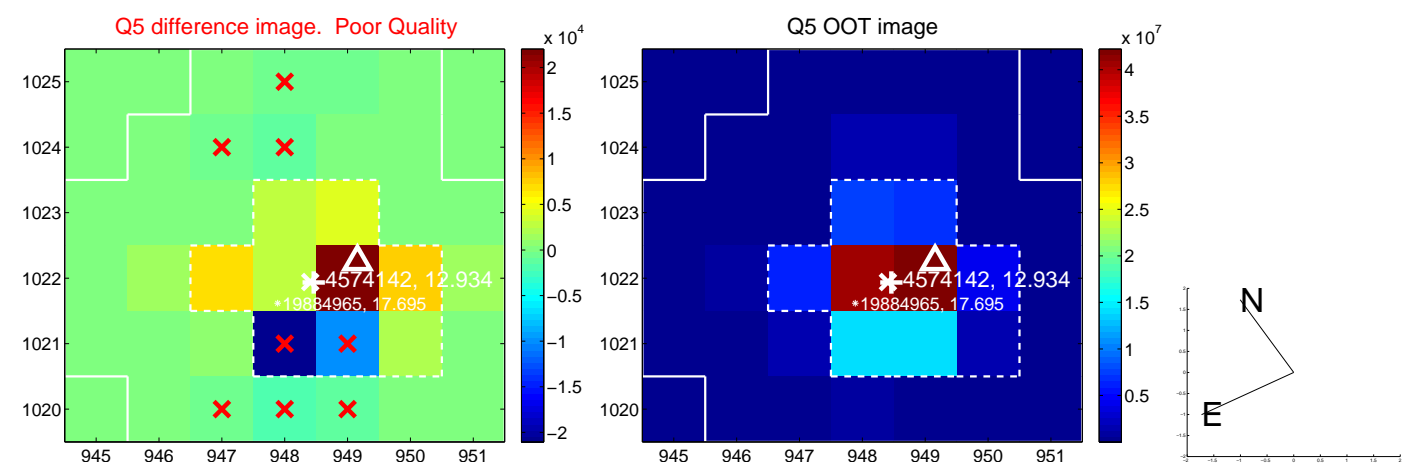


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

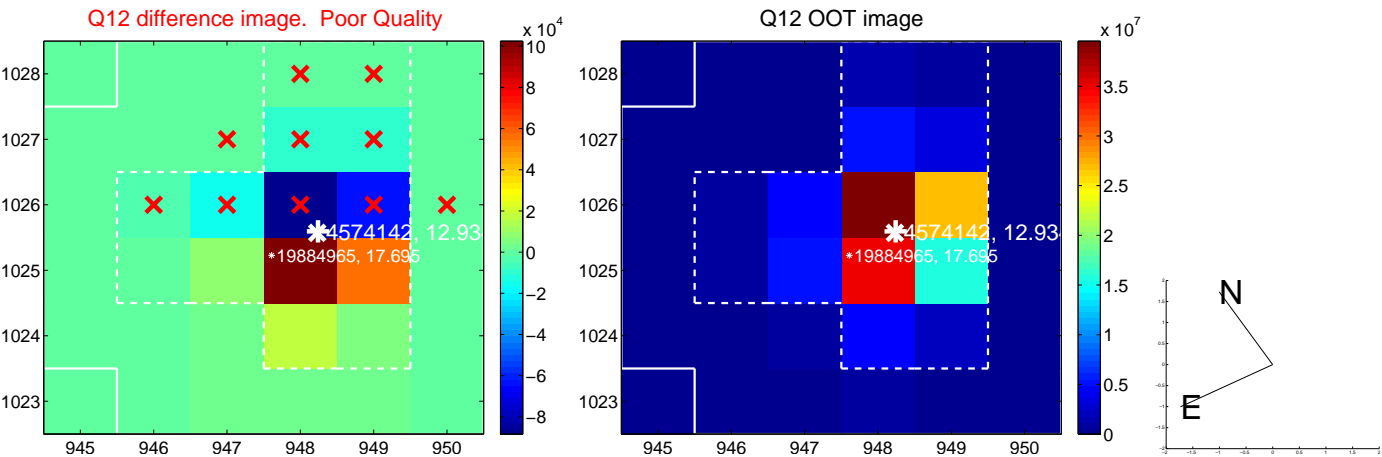
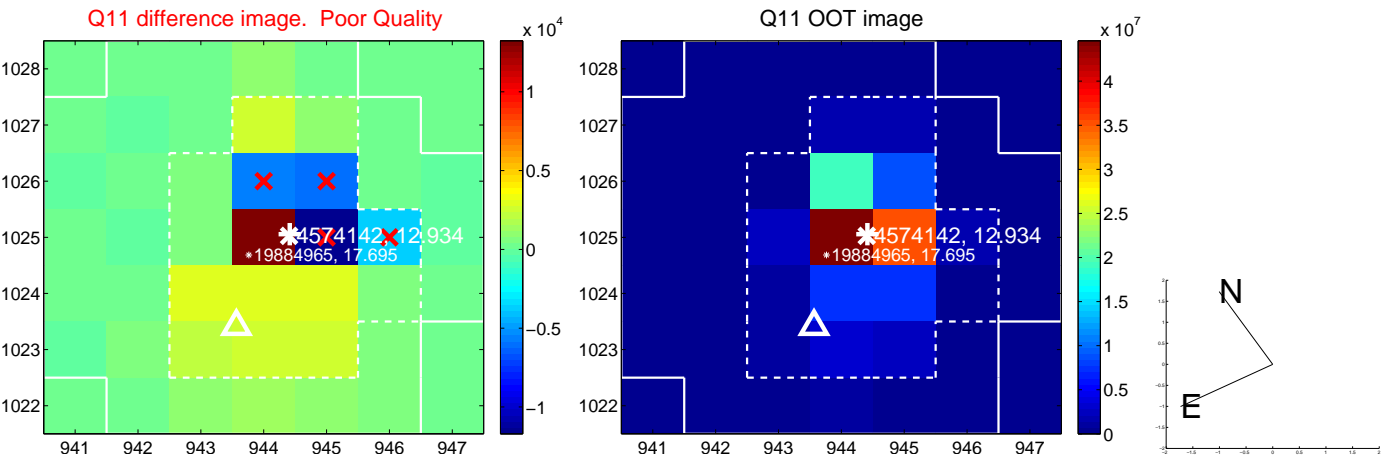
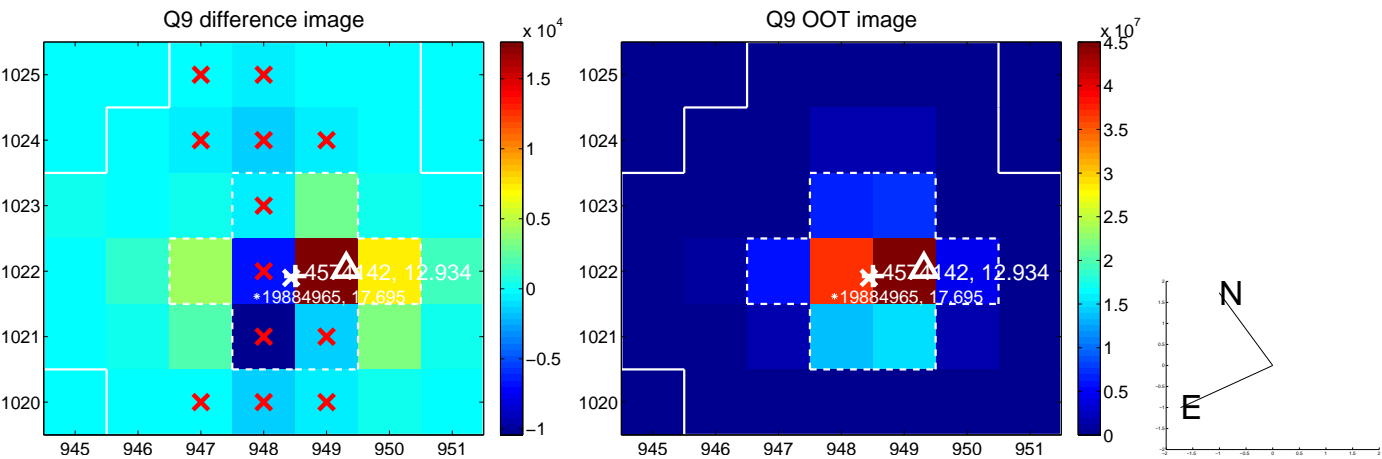
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



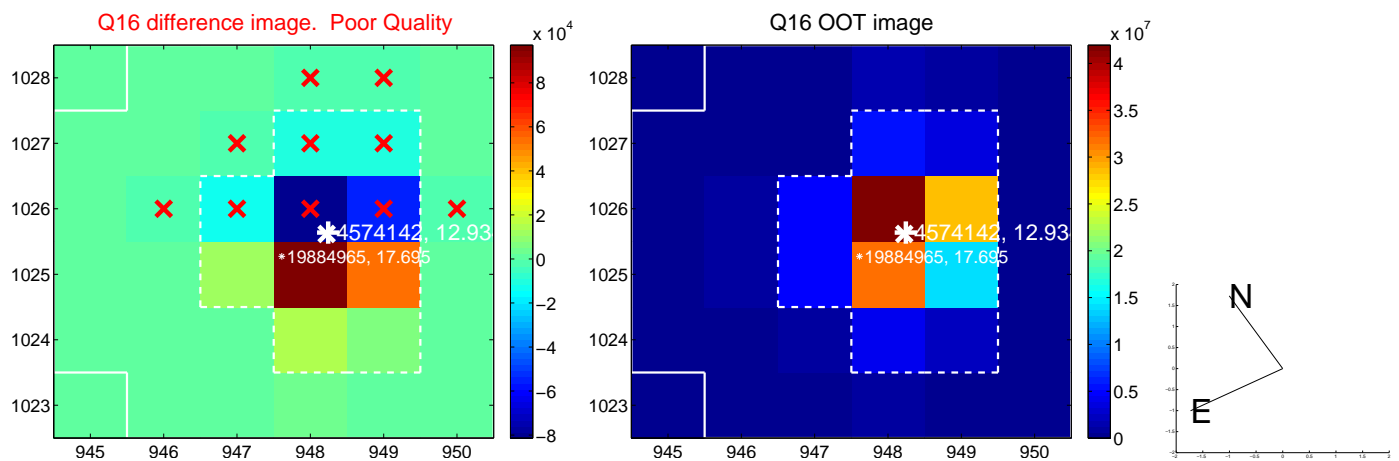
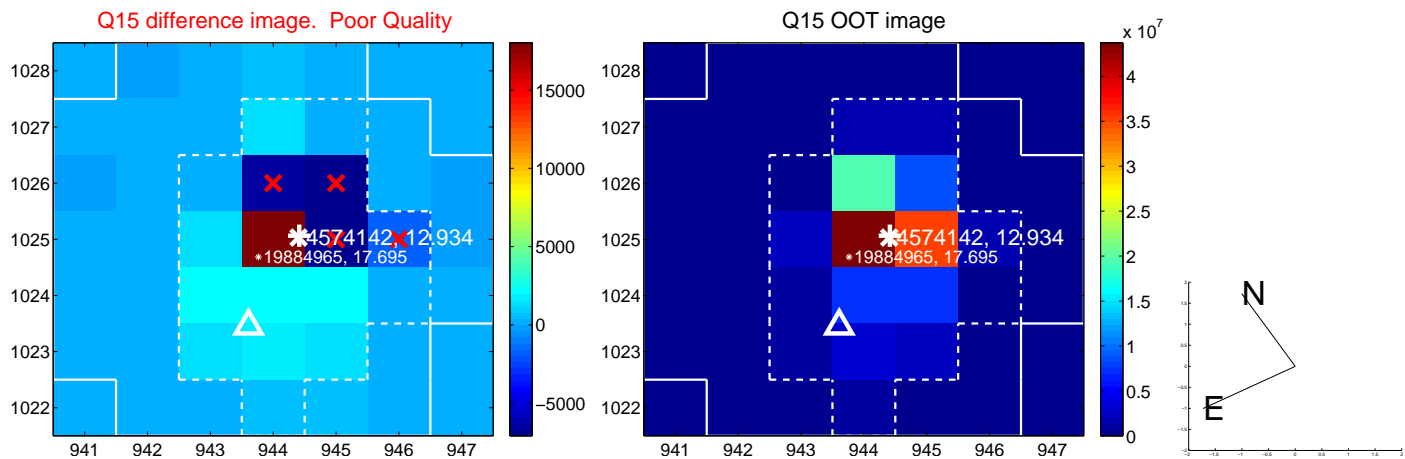
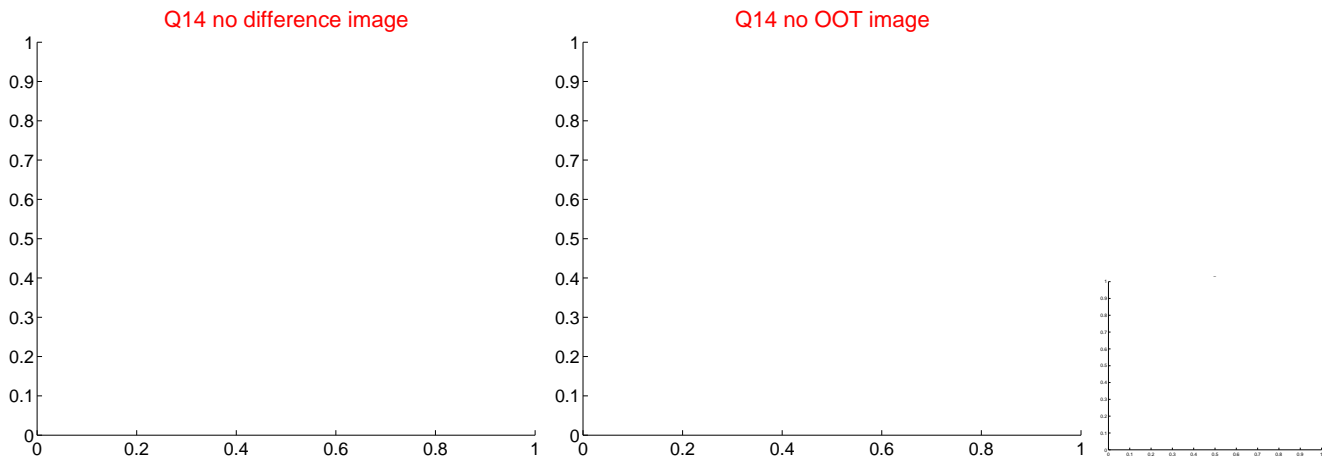
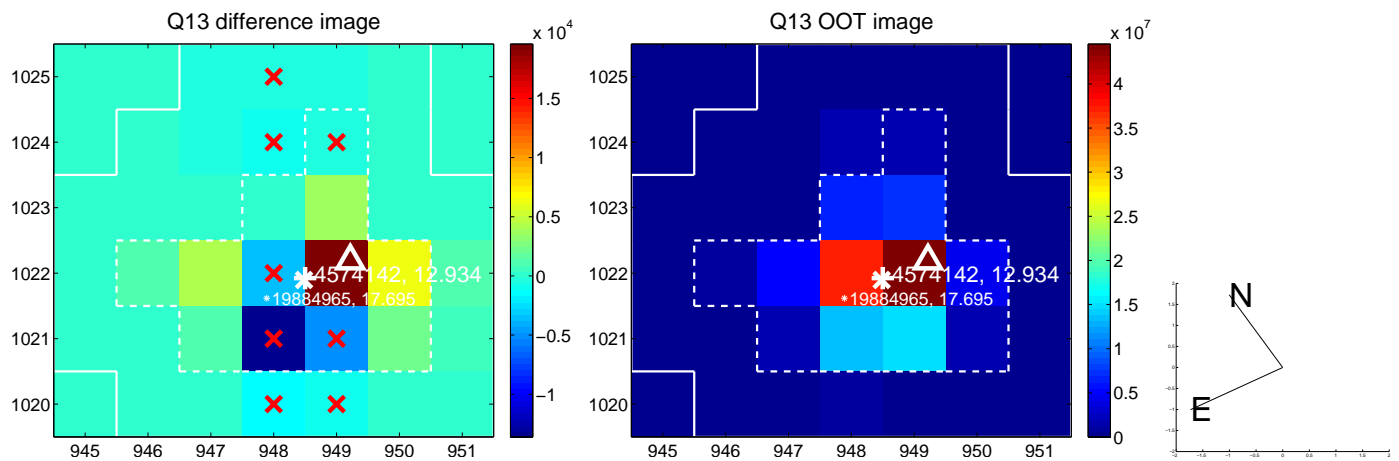
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



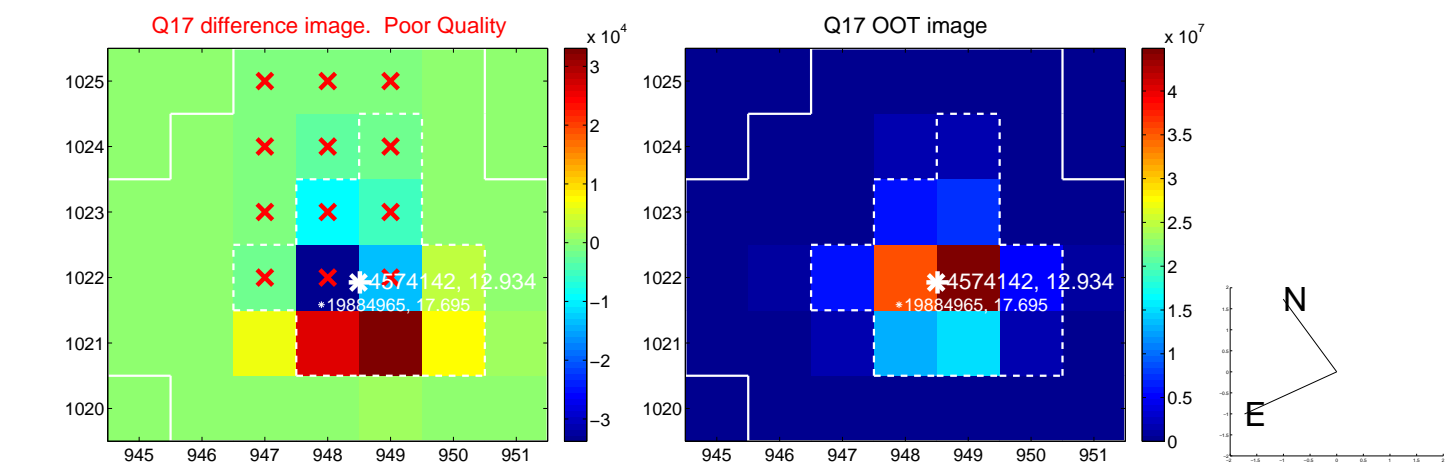
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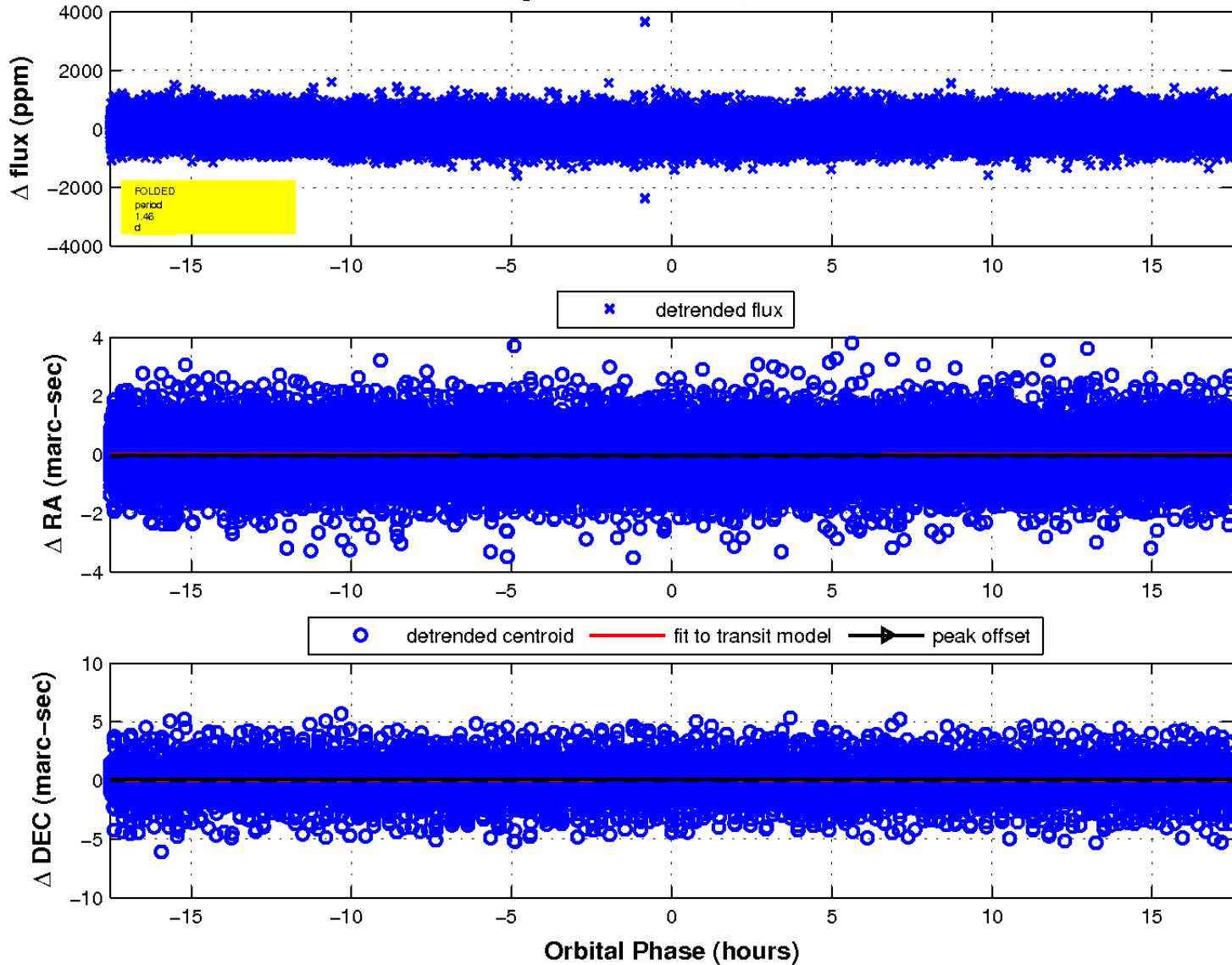
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

