

KIC 007662502

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})
007662502-01	OBS	5410.01	24.152366	146.413707	86.4	2.724	8.1	7.5	1.09	6223	1.22	57.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007662502-01	OBS	PC	0.49	0	0	0	0	NO_COMMENT

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

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

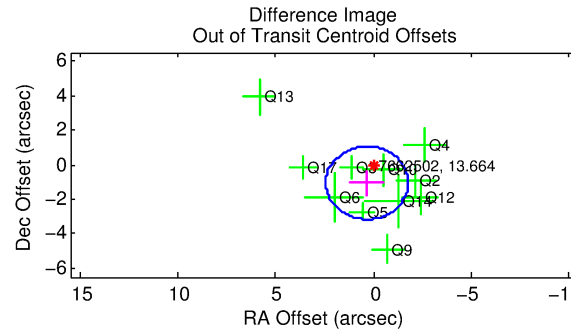
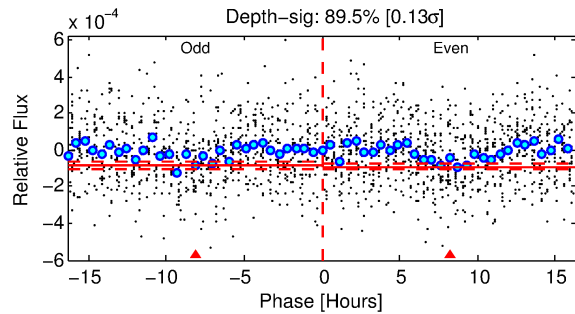
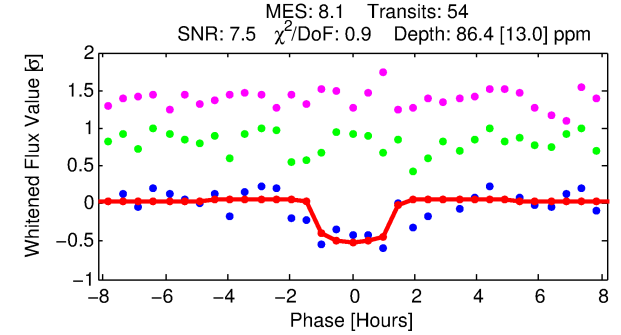
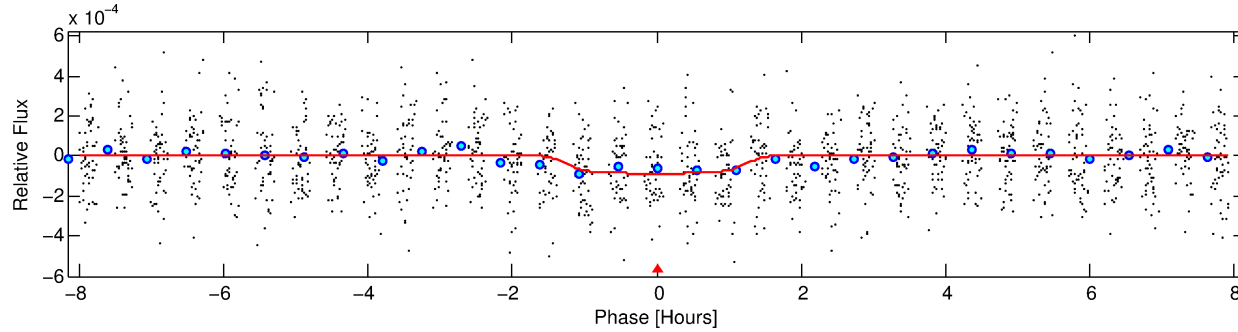
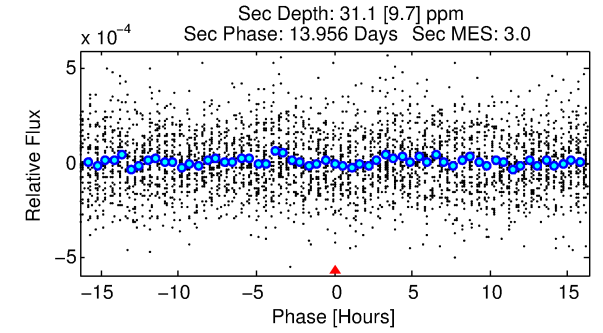
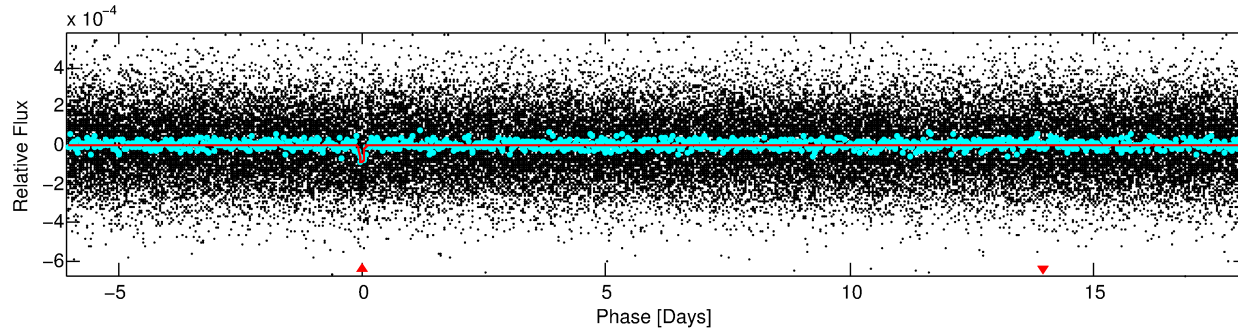
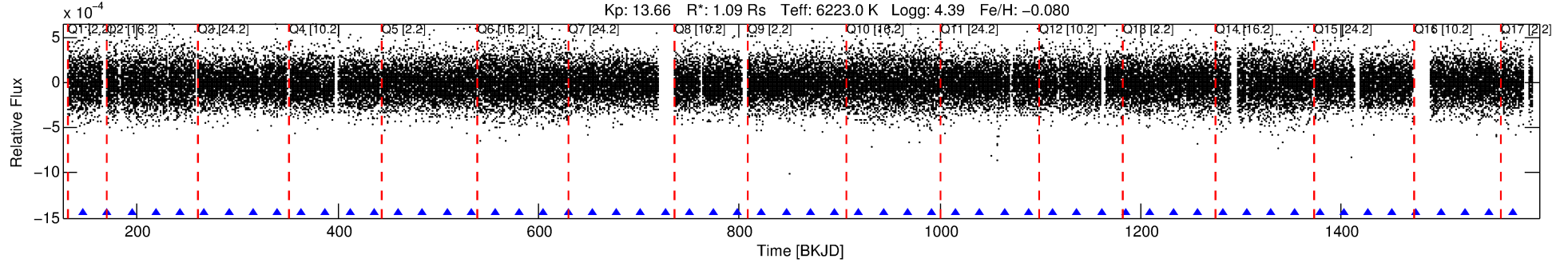
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007662502-01

No Significant Match Found

DV One-Page Summary

KIC: 7662502 Candidate: 1 of 1 Period: 24.152 d
KOI: K05410.01 Corr: 0.782



DV Fit Results:

Period = 24.15237 [0.00027] d
Epoch = 146.4137 [0.0087] BKJD
Rp/R* = 0.0102 [0.0064]
a/R* = 28.79 [98.54]
b = 0.92 [0.61]
Seff = 57.27 [23.77]
Teq = 701 [73] K
Rp = 1.21 [0.86] Re
a = 0.1677 [0.0449] AU
Ag = 326.11 [441.61] [0.74σ]
Teffp = 4609 [1510] K [2.59σ]

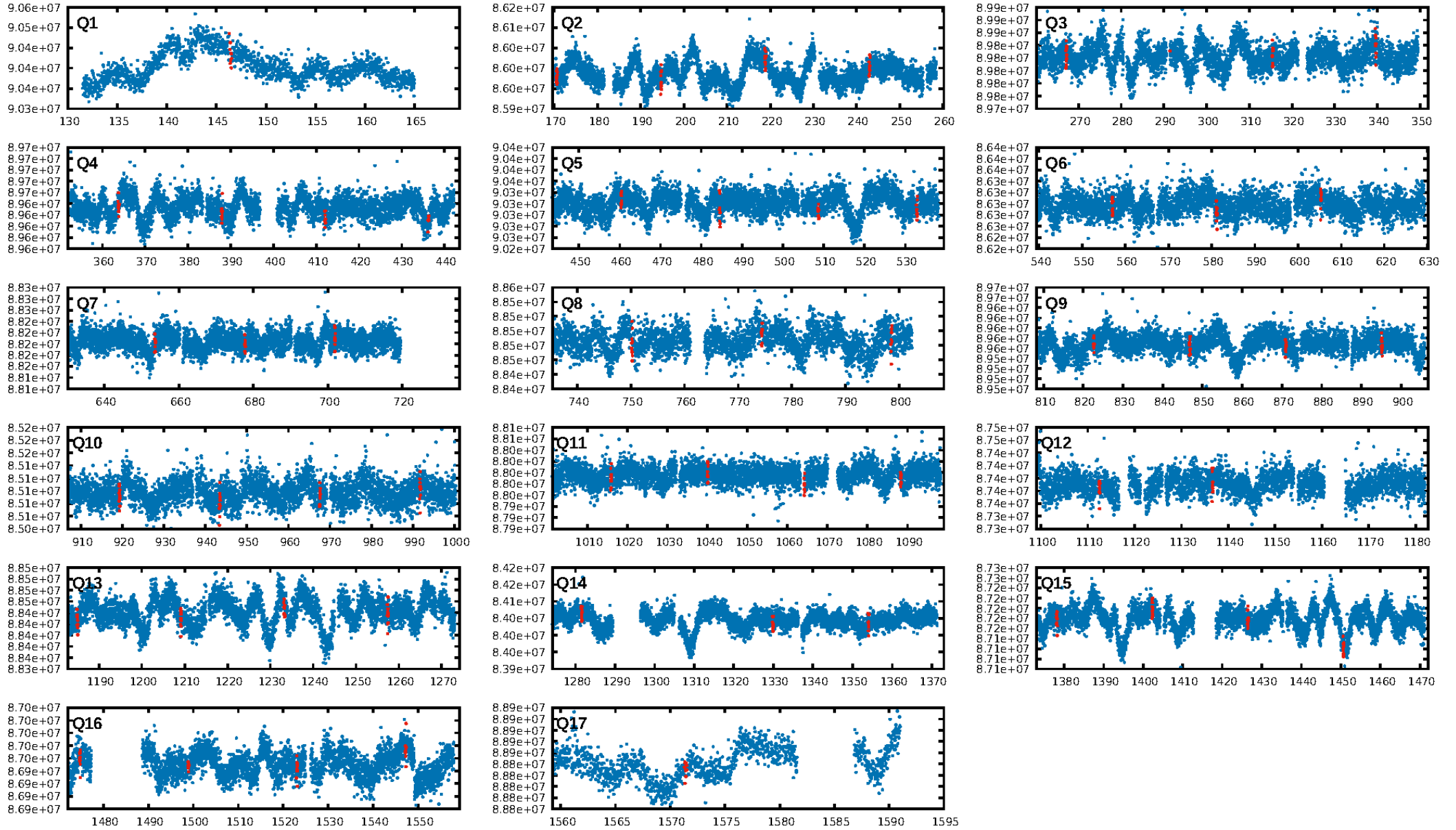
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.11e-16
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: -4.146
Centroid-sig: 61.0%
Centroid-so: 1.319 arcsec [0.73σ]
OotOffset-rm: 1.114 arcsec [1.59σ]
OotOffset-st: 4/1/2/4 [11]
KicOffset-rm: 1.095 arcsec [1.52σ]
KicOffset-st: 4/1/2/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [17/17]

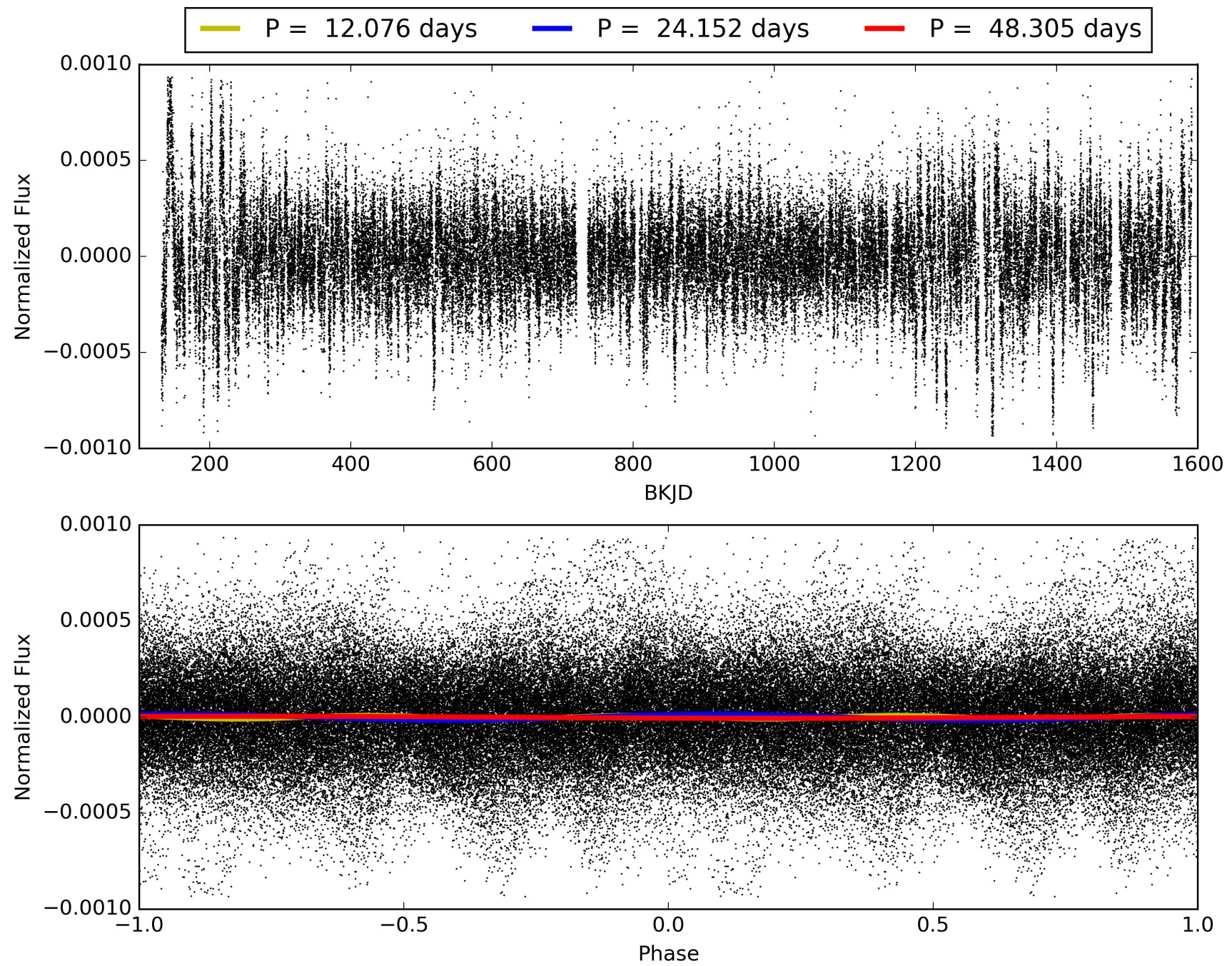
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:32:13 Z

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

TCE 007662502-01, PDC Light Curves

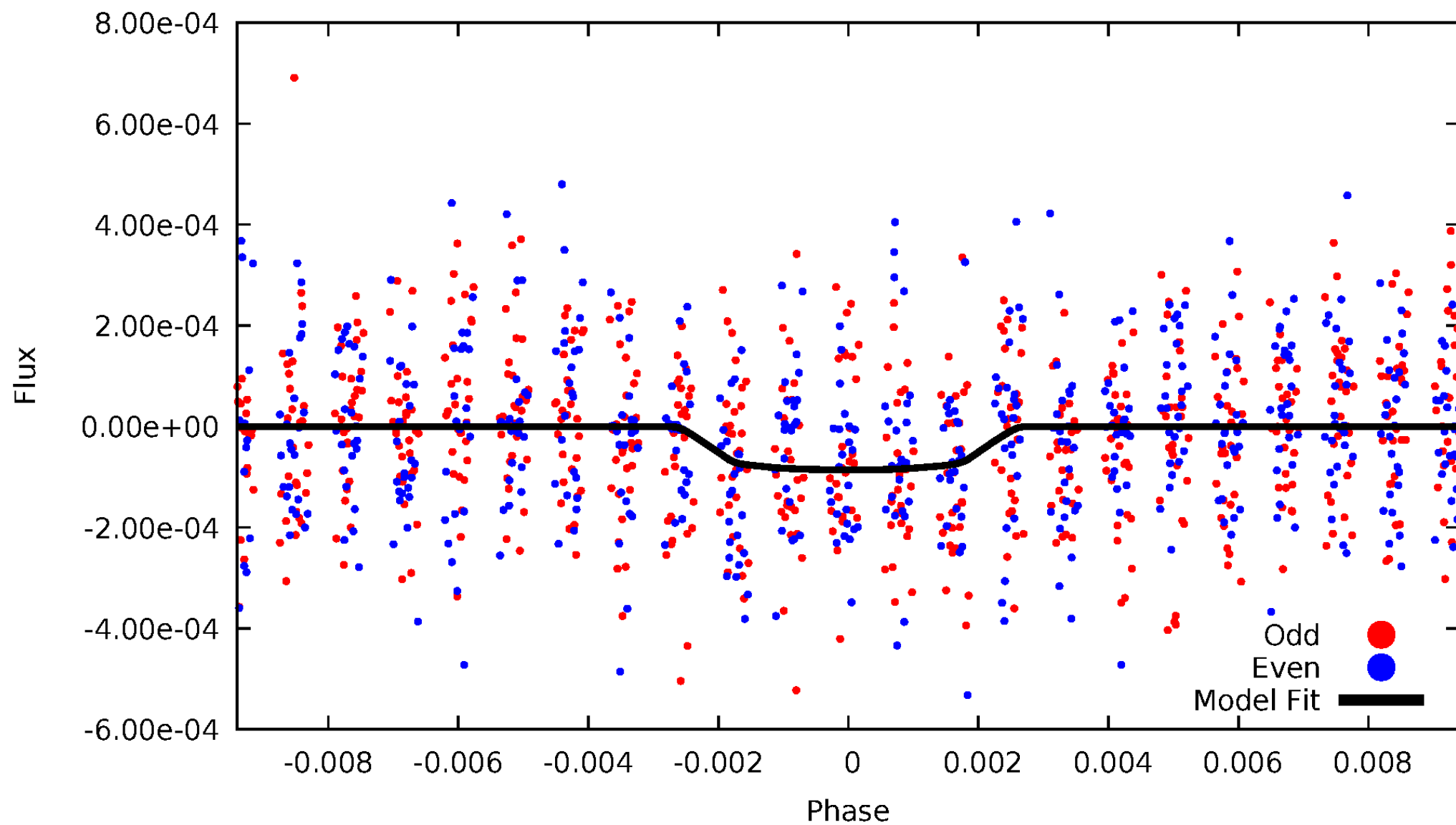


TCE 007662502-01



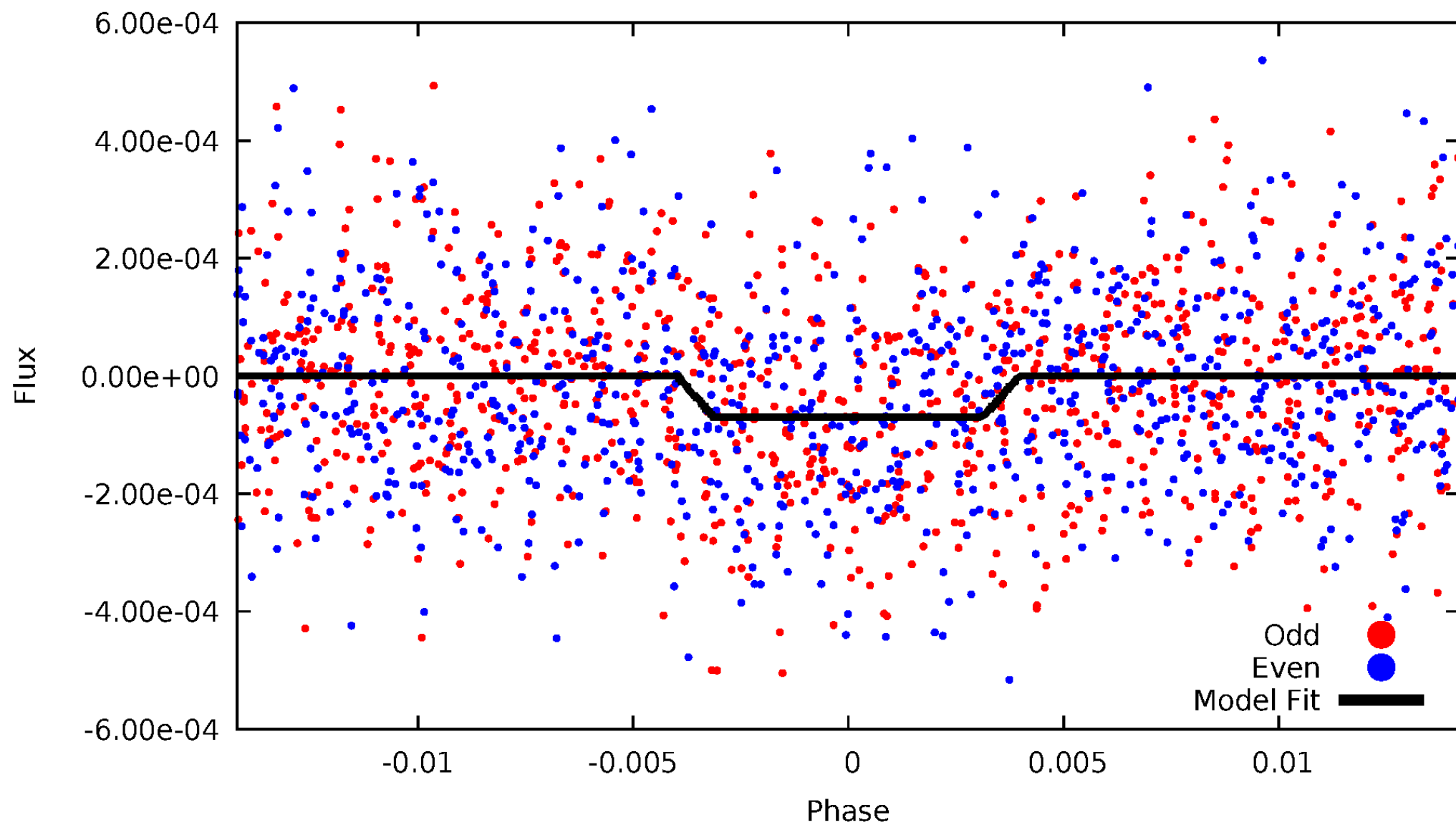
DV Odd/Even

TCE 007662502-01



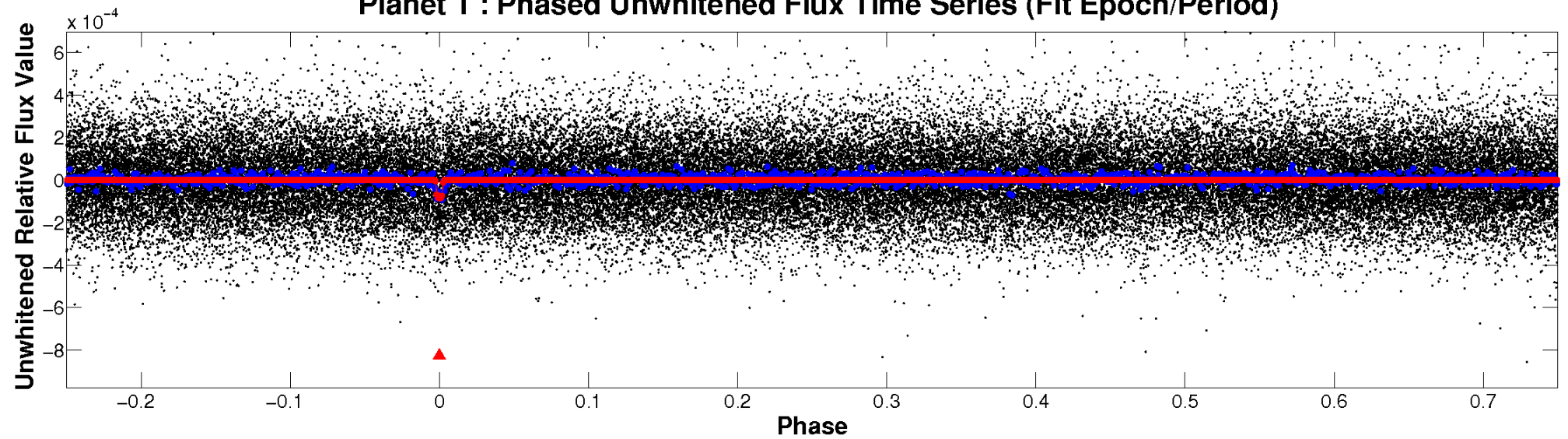
ALT Odd/Even

TCE 007662502-01

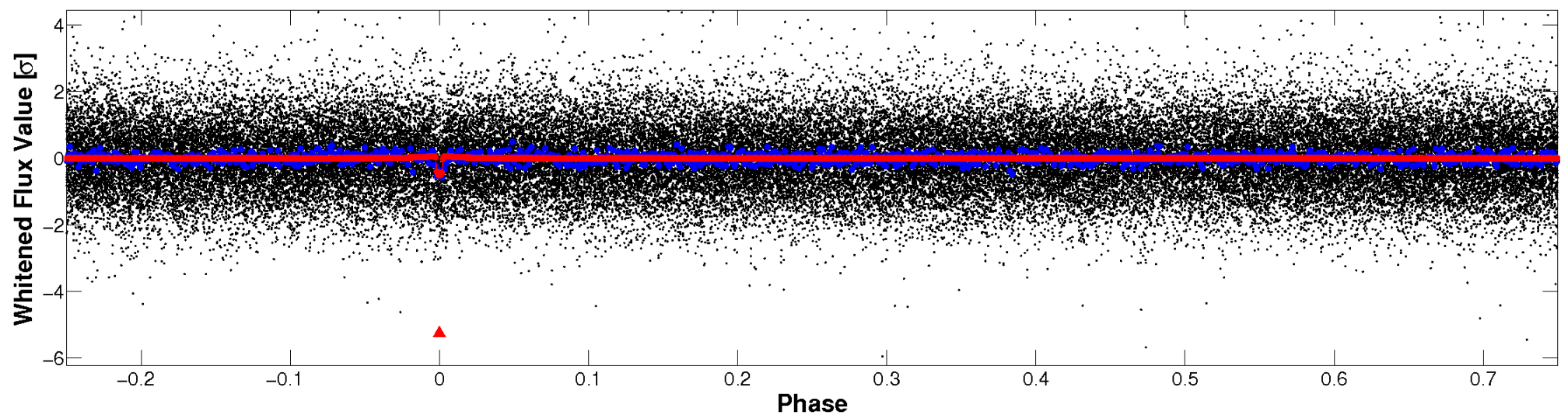


Non-Whitened Vs. Whitened Light Curve

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

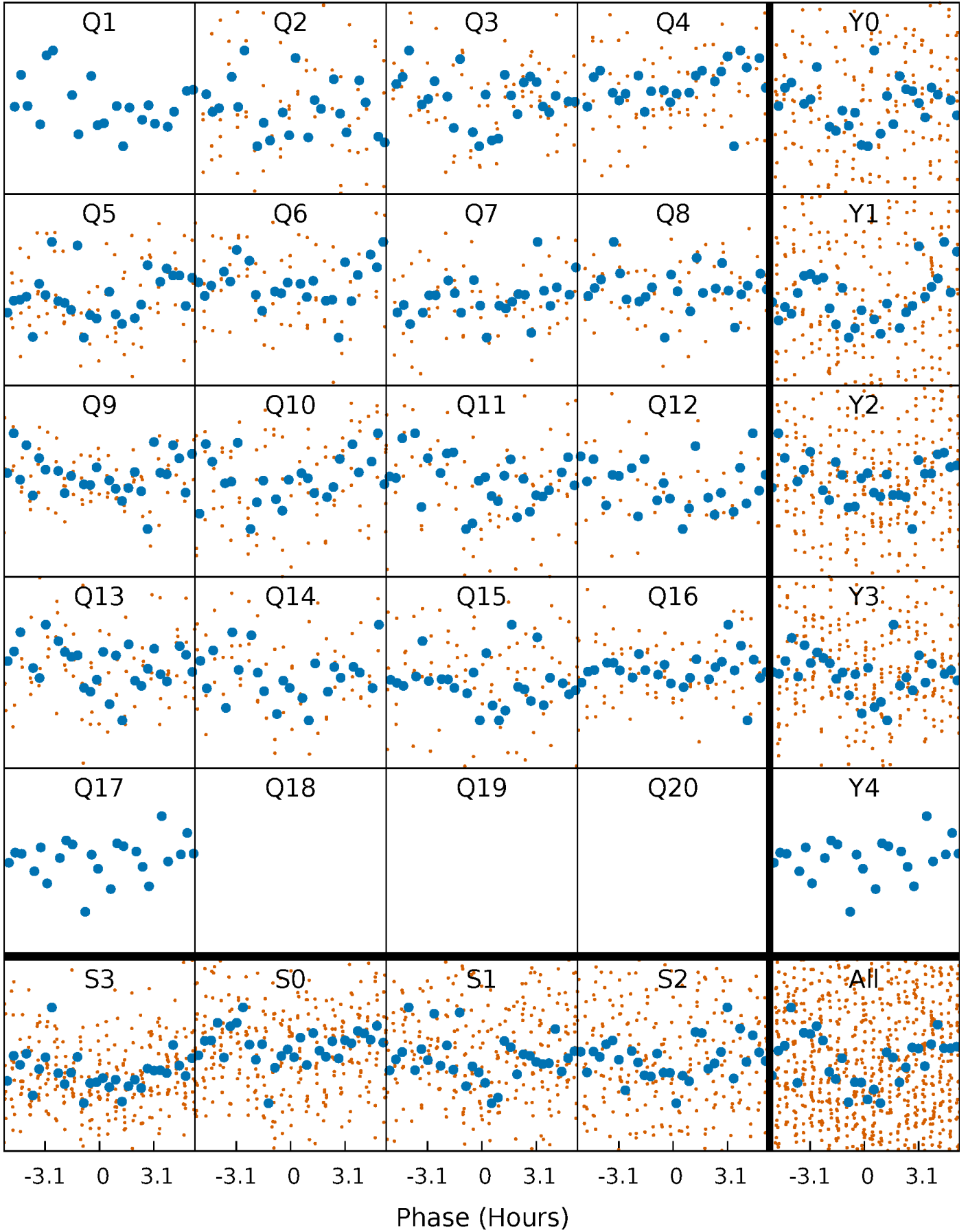


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



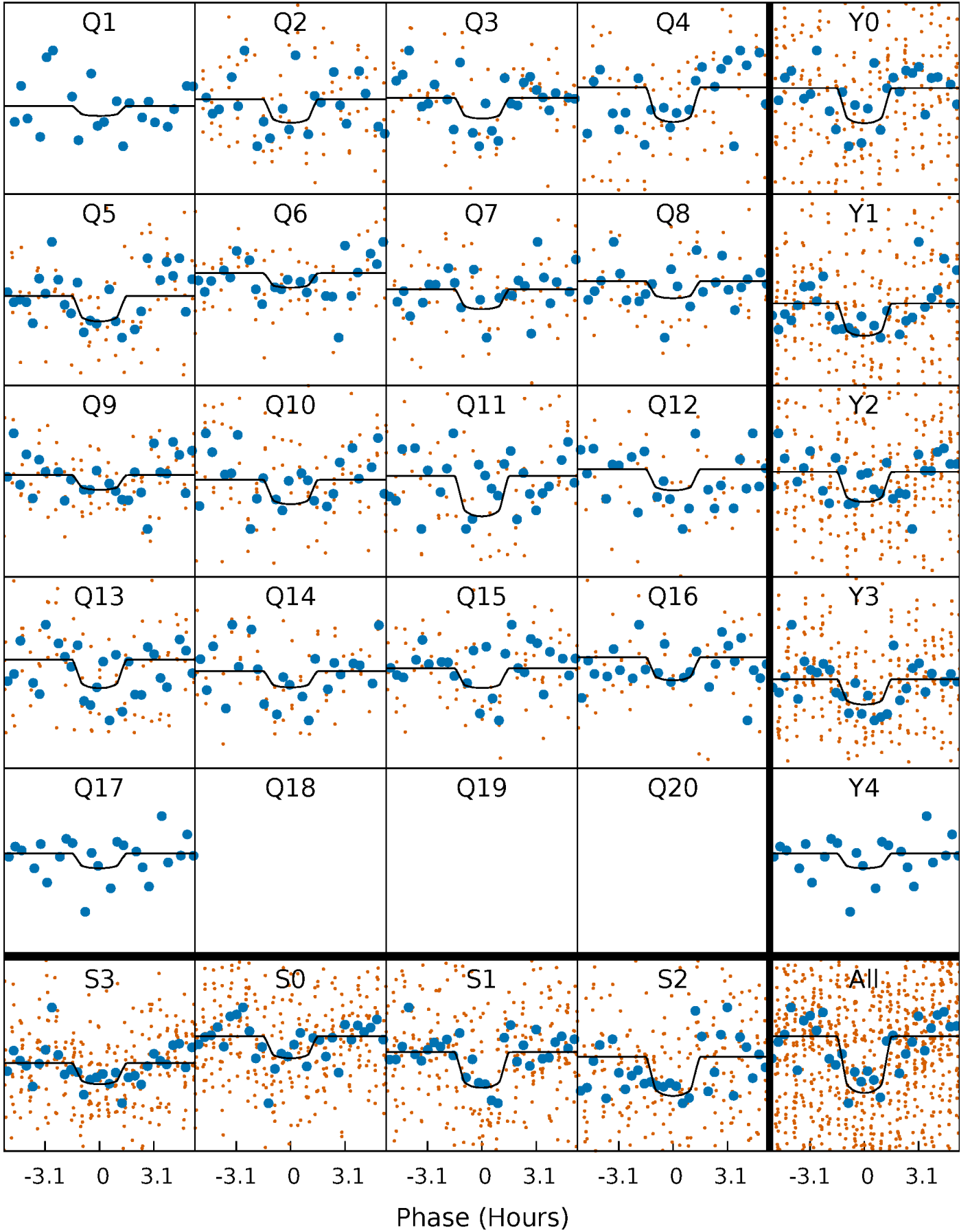
PDC Quarter-Phased Transit Curves

TCE 007662502-01 P= 24.152366 Days $T_0=146.413707$ (BKJD)



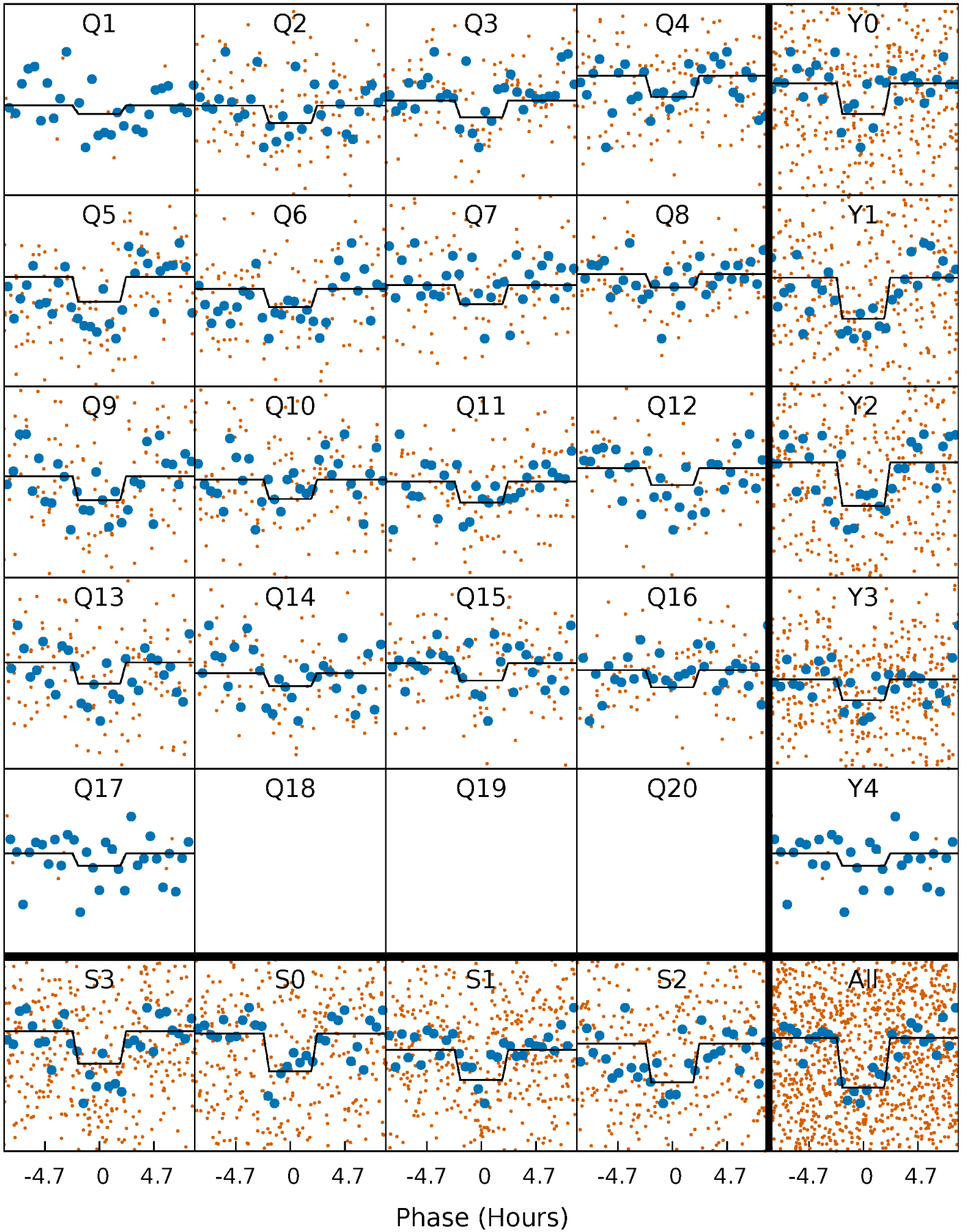
DV Quarter-Phased Transit Curves

TCE 007662502-01 P= 24.152366 Days $T_0=146.413707$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

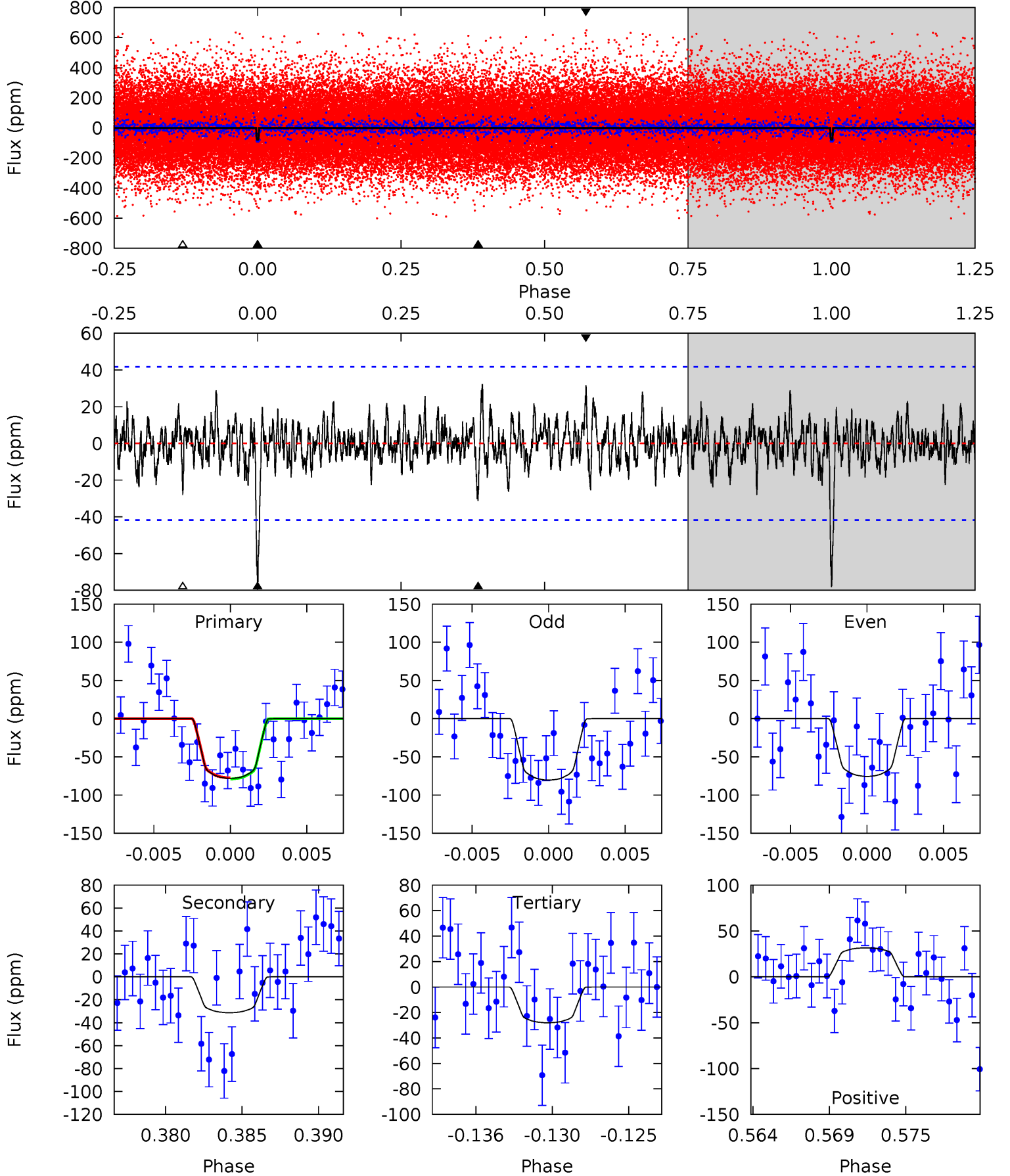
TCE 007662502-01 P= 24.152750 Days $T_0=146.417782$ (BKJD)



DV Model-Shift Uniqueness Test

007662502-01, P = 24.152366 Days, E = 122.261341 Days

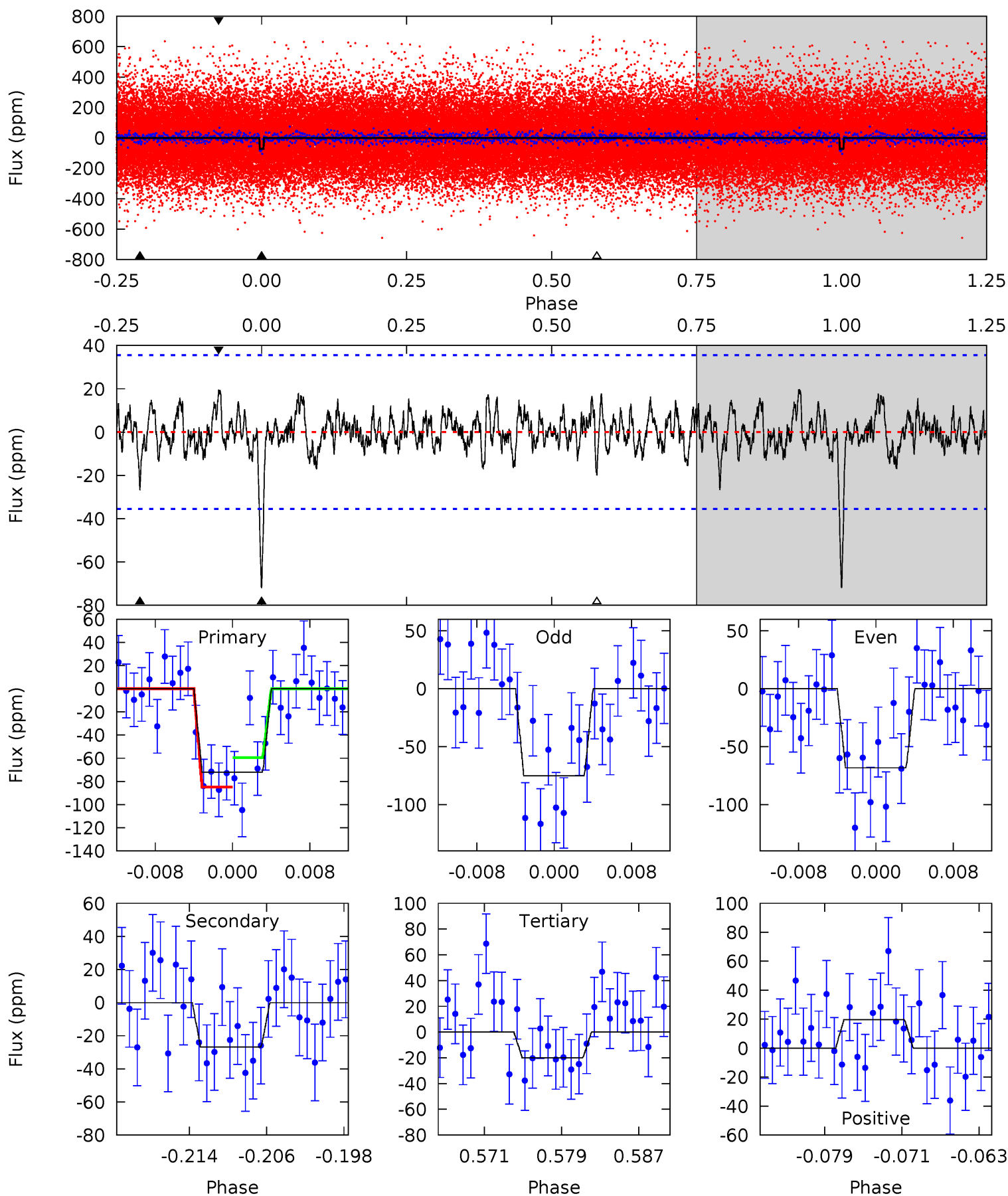
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.62	3.85	3.46	3.89	5.14	2.78	1.10	6.17	5.73	0.40	-0.04	0.30	1.03	0.29	0.08



Alt Model-Shift Uniqueness Test

007662502-01, P = 24.152750 Days, E = 122.265032 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.81	2.85	2.80	5.07	2.66	0.98	7.42	7.47	0.96	1.01	0.50	1.04	0.21	1.80



Stellar Parameters For KIC 007662502

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6223^{+194}_{-259}	$4.392^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.095^{+0.358}_{-0.154}$	$1.073^{+0.164}_{-0.131}$	$1.152^{+0.459}_{-0.629}$
	+3%/-4%	+2%/-5%	+312%/-375%	+33%/-14%	+15%/-12%	+40%/-55%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007662502-01 / KOI 5410.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-31 ± 8	$1.33^{+0.78}_{-0.74}$	993^{+74}_{-56}	4640^{+2058}_{-750}	281^{+1185}_{-178}
Alt.	-27 ± 7	$1.16^{+0.81}_{-0.68}$	992^{+74}_{-59}	4727^{+2457}_{-859}	312^{+1494}_{-208}

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 $A_{obs} \gg 1.0$

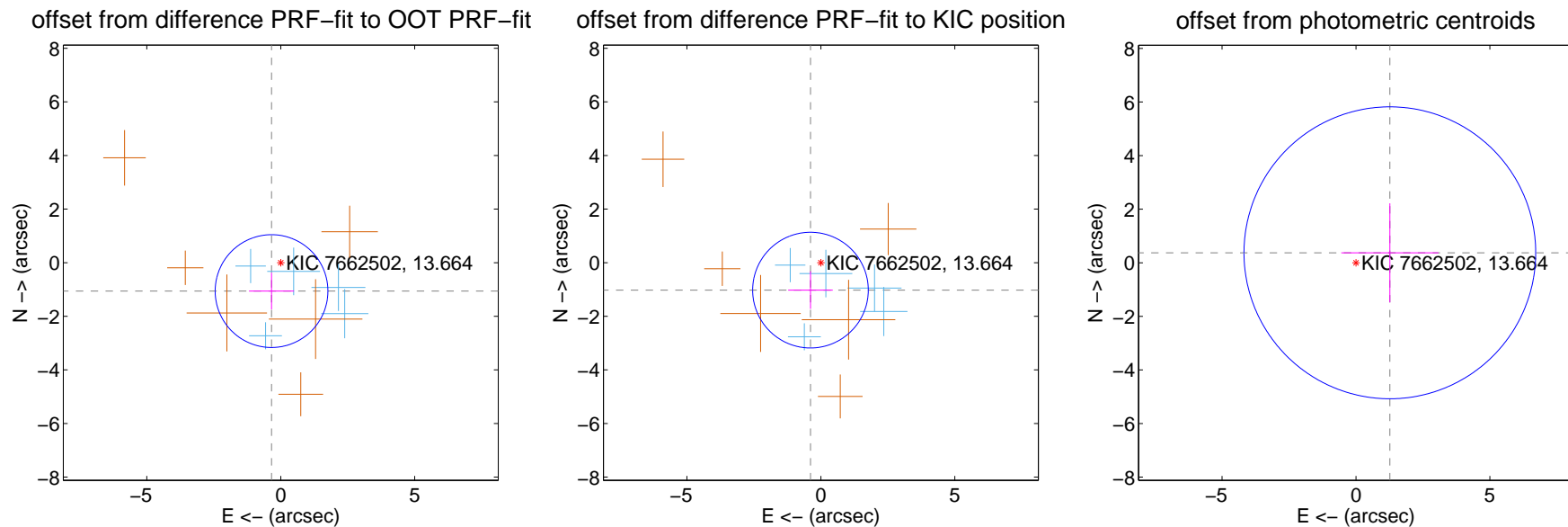
DV Centroid Data

Supplemental centroid analysis for 007662502-01. Kepler magnitude: 13.66. Transit SNR 7.50

There are 5 quarters with good PRF difference image offsets

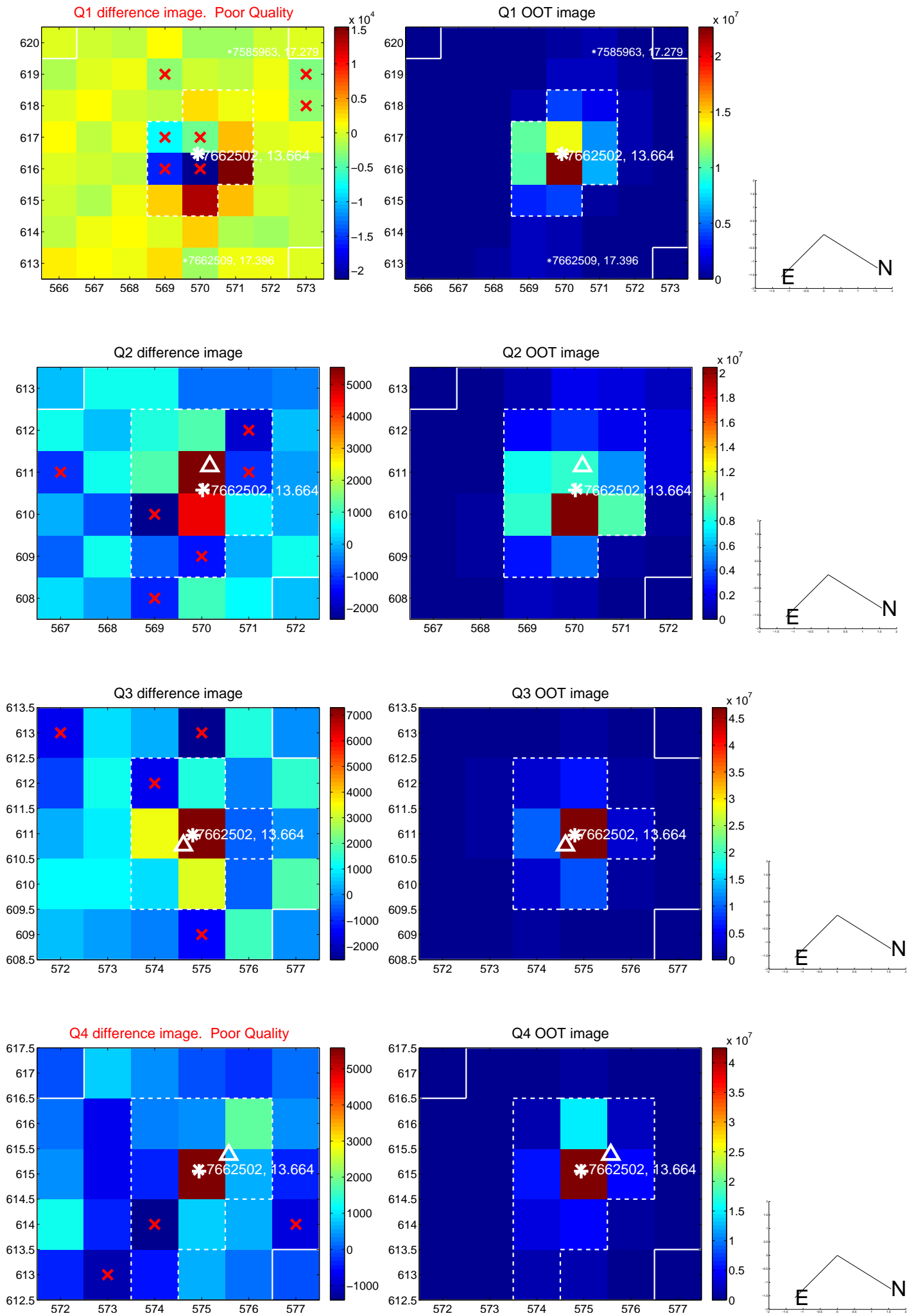
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.114 ± 0.702	1.59	0.344 ± 0.840	-1.059 ± 0.685
PRF-fit source offset from KIC position	1.095 ± 0.719	1.52	0.388 ± 0.833	-1.023 ± 0.702
photometric centroid source offset	1.32 ± 1.82	0.73	-1.27 ± 1.81	0.37 ± 1.85

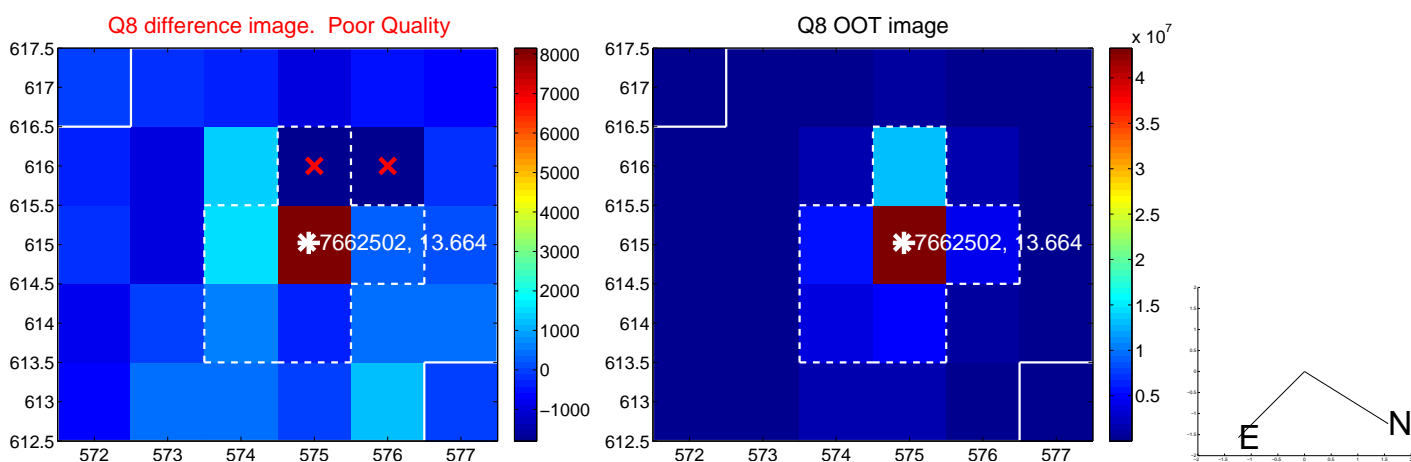
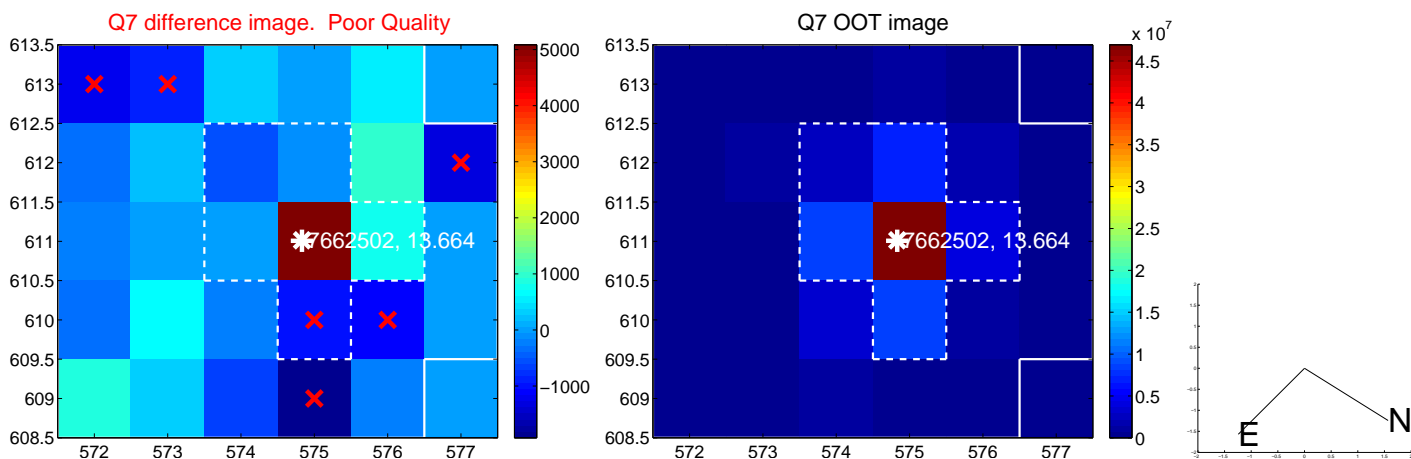
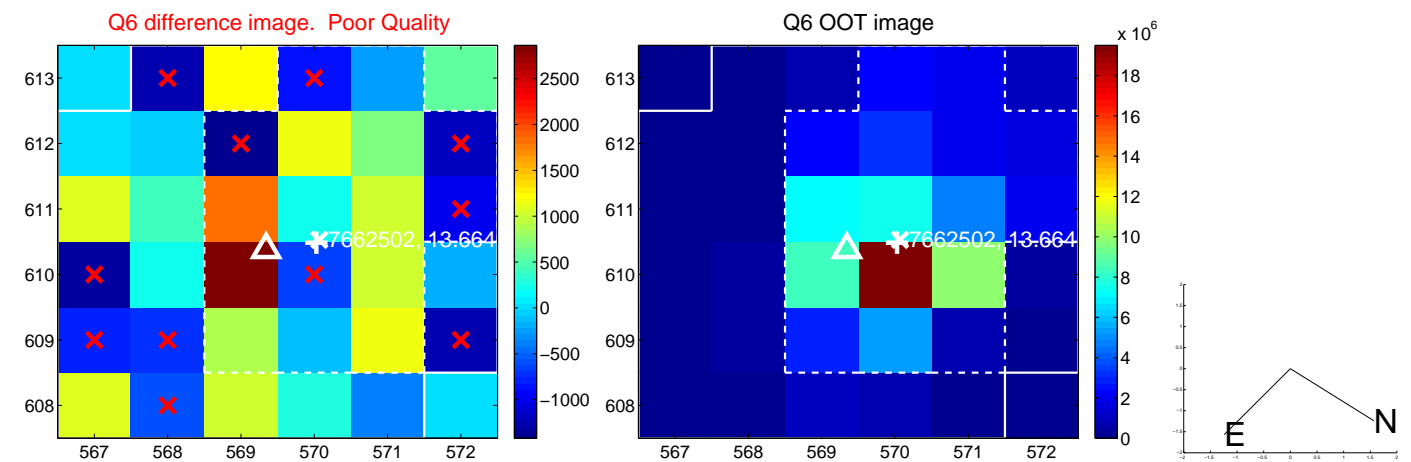
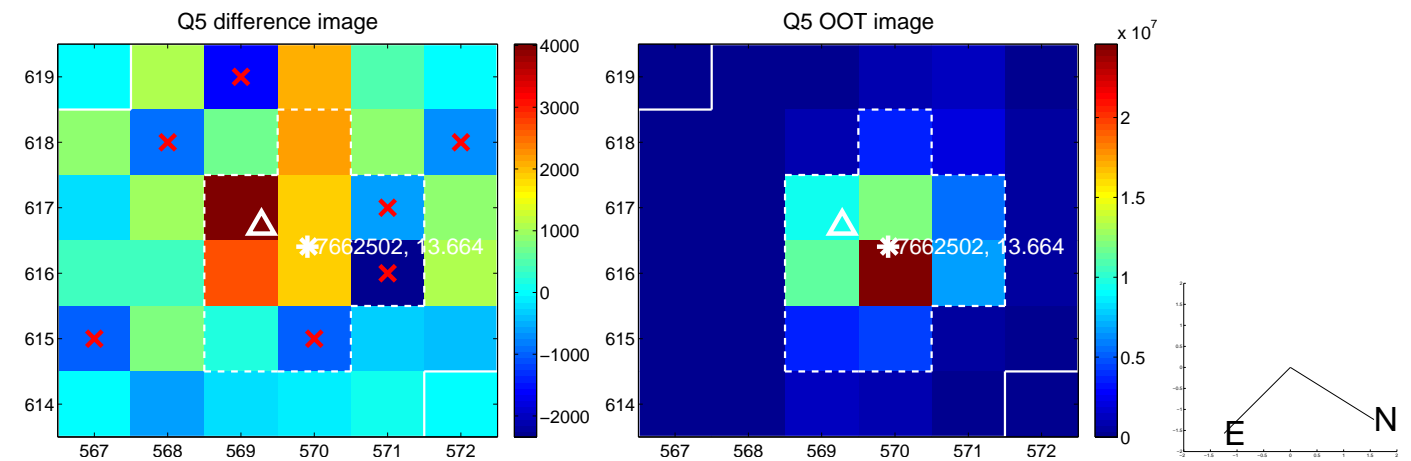


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

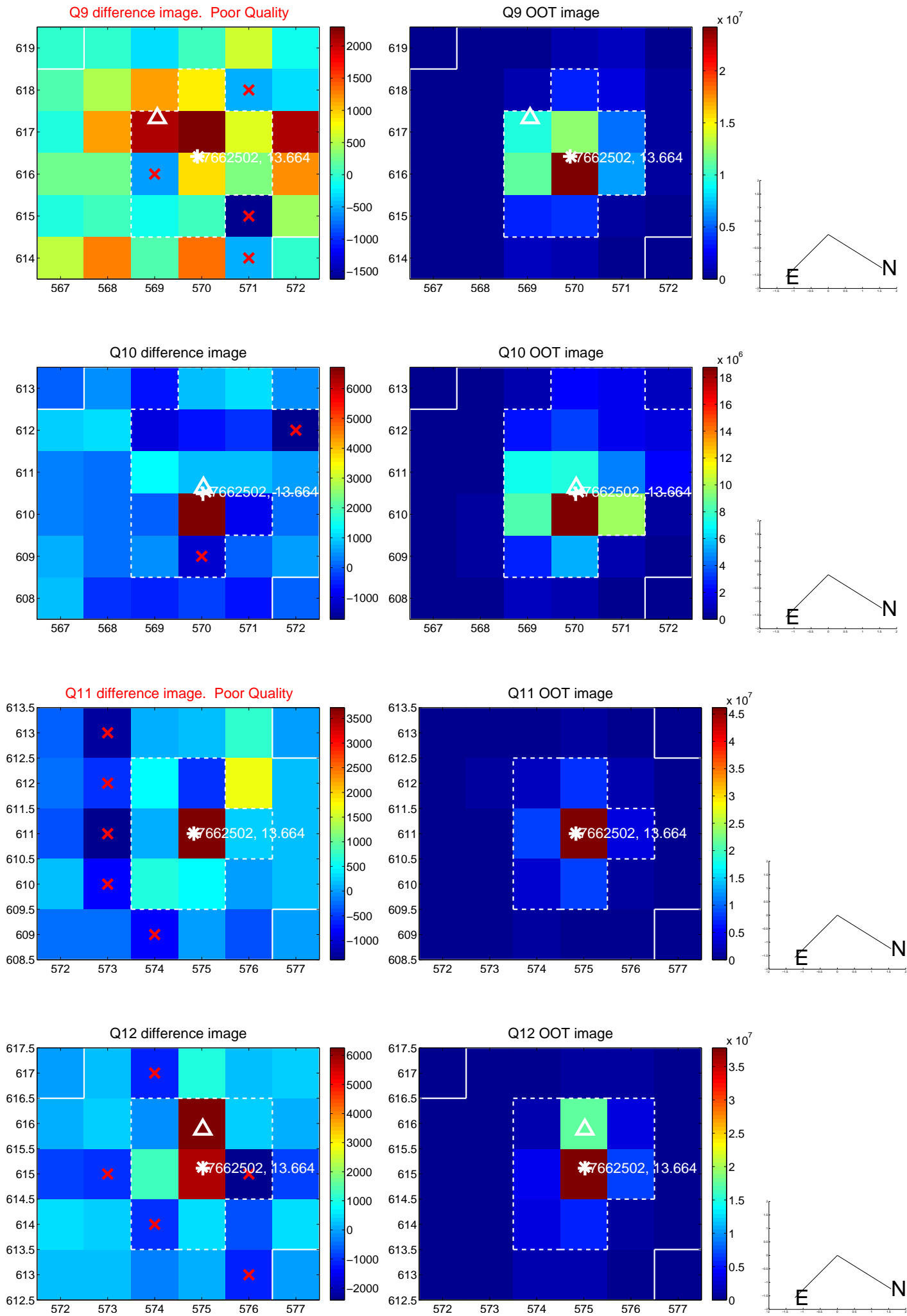
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



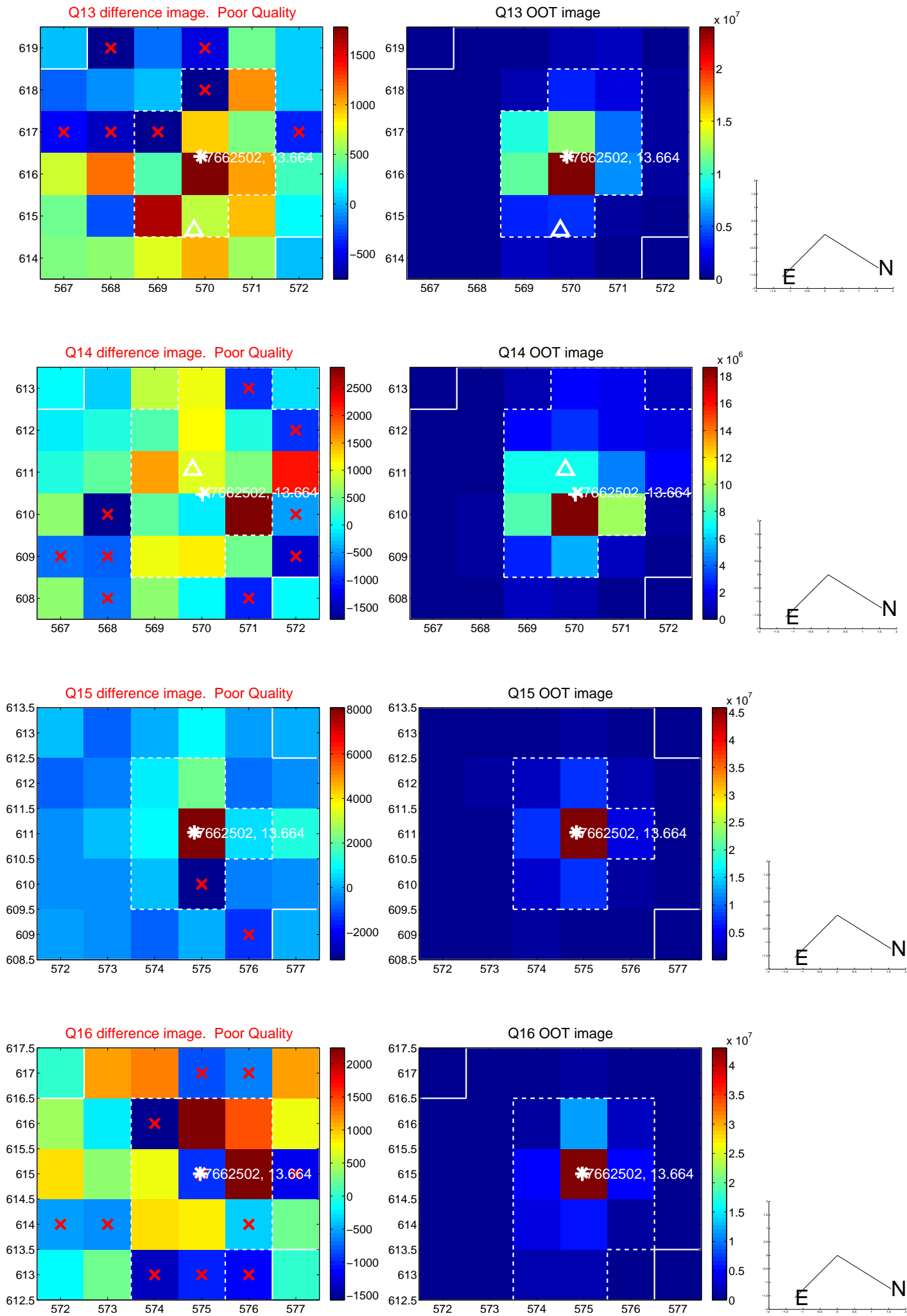
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



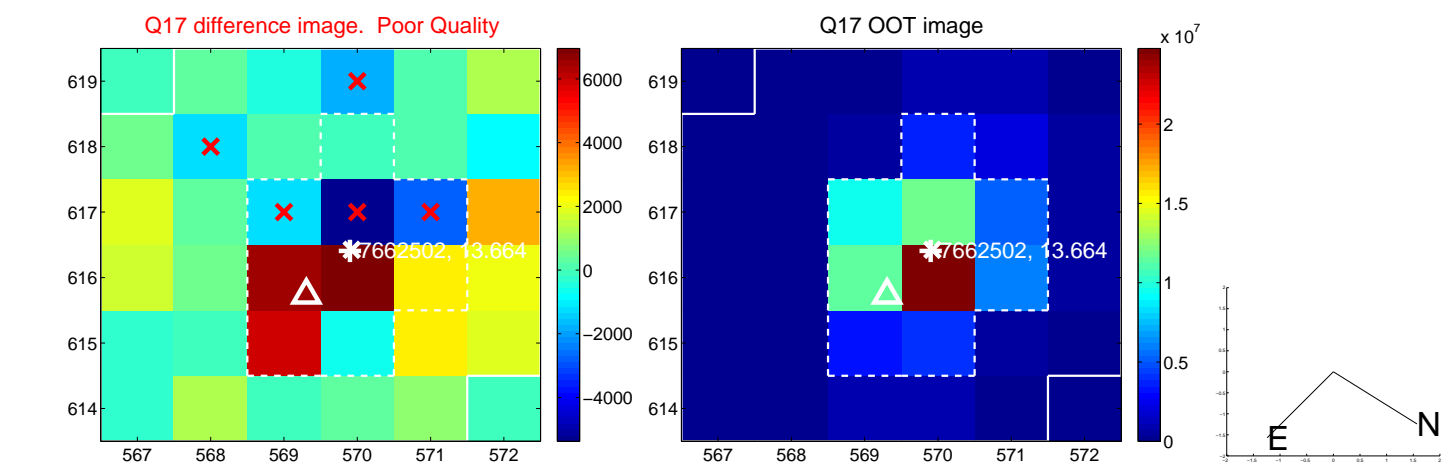
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



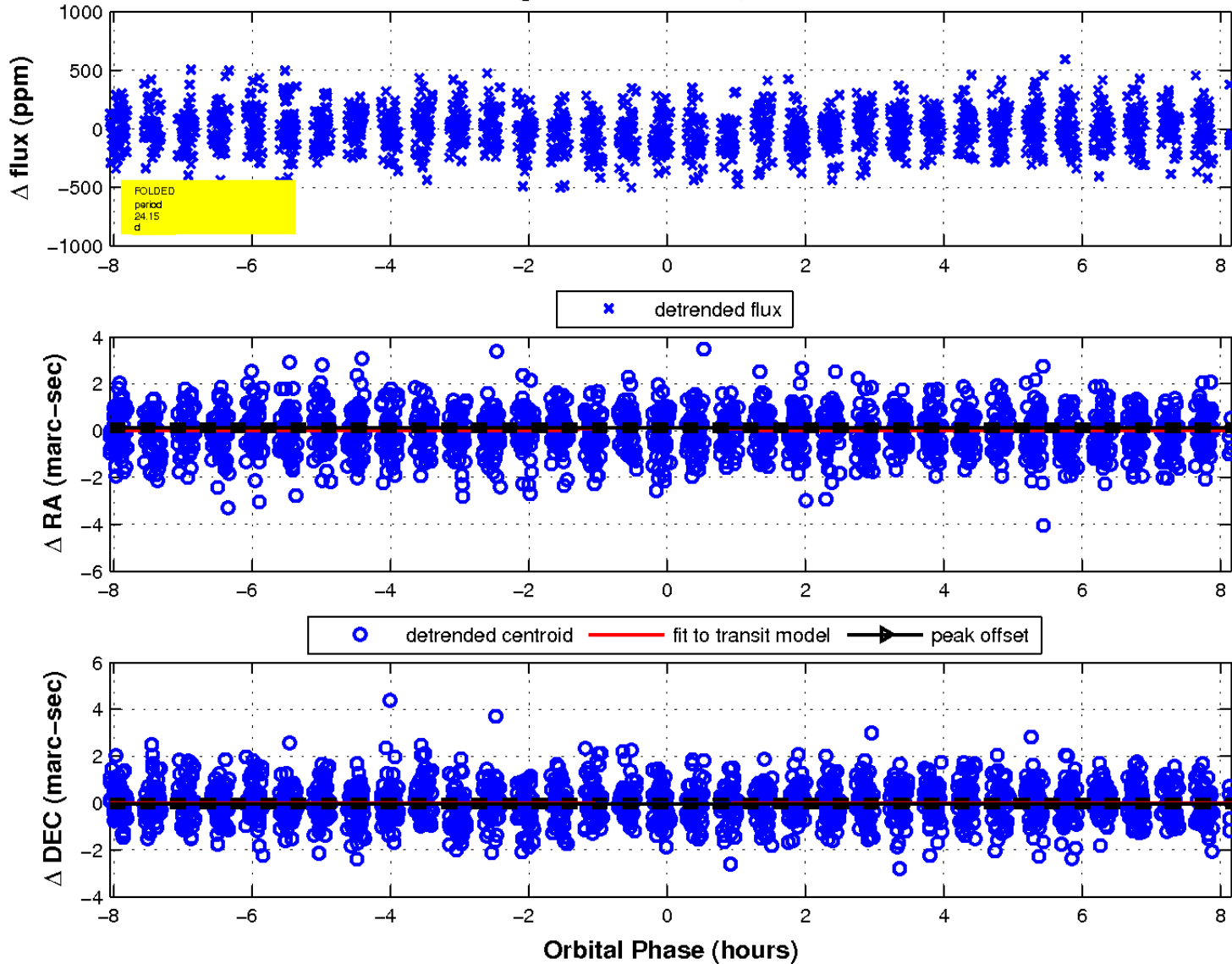
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

