

KIC 002574201

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})
002574201-01	OBS	1025.01	37.478612	157.314284	1225.8	5.639	17.8	16.2	0.44	3687	2.98	1.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002574201-01	OBS	FP	0.00	0	1	1	0	DEEP_V_SHAPED—CENT_KIC_POS—HALO_GHOST

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

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

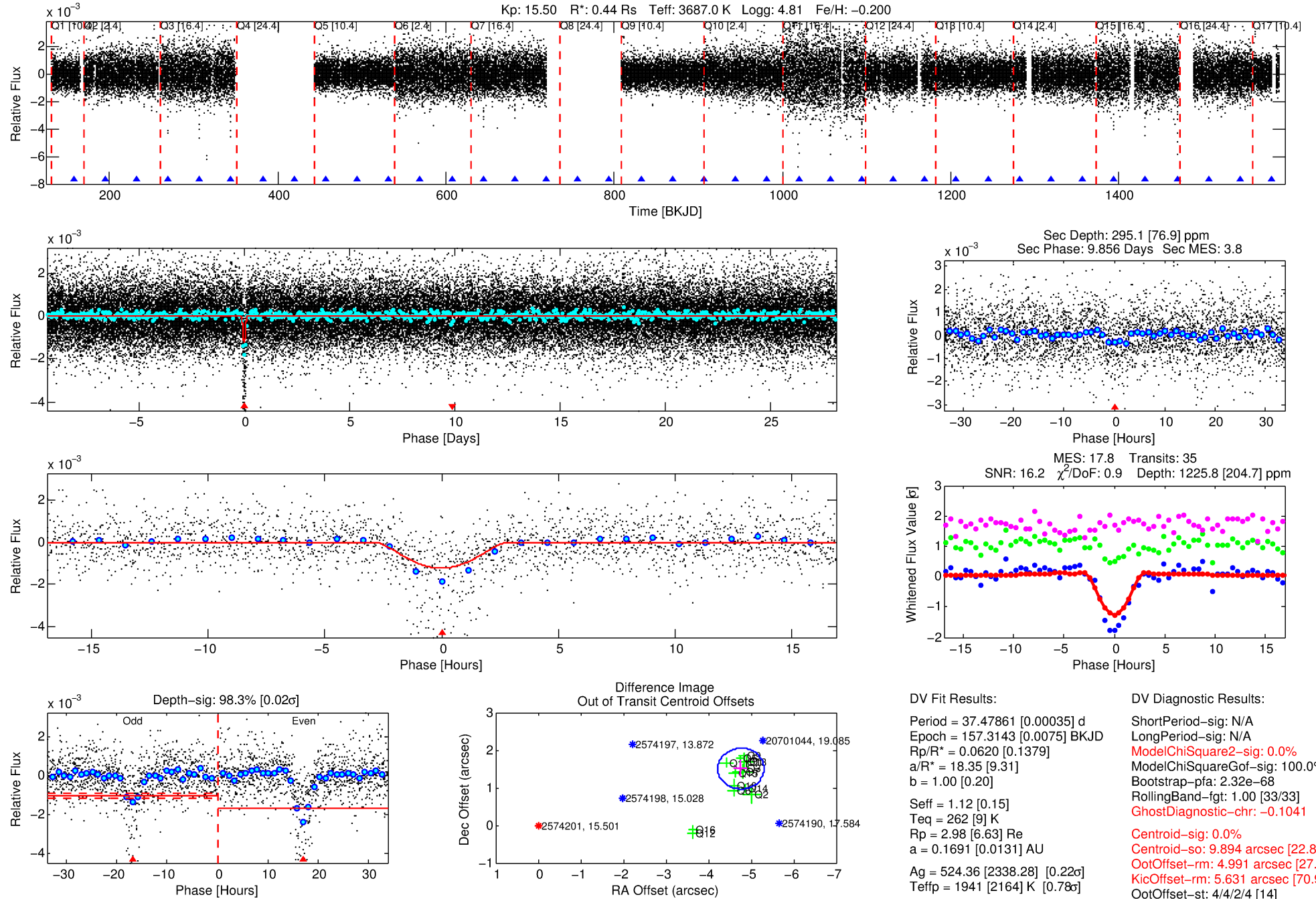
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002574201-01

No Significant Match Found

DV One-Page Summary

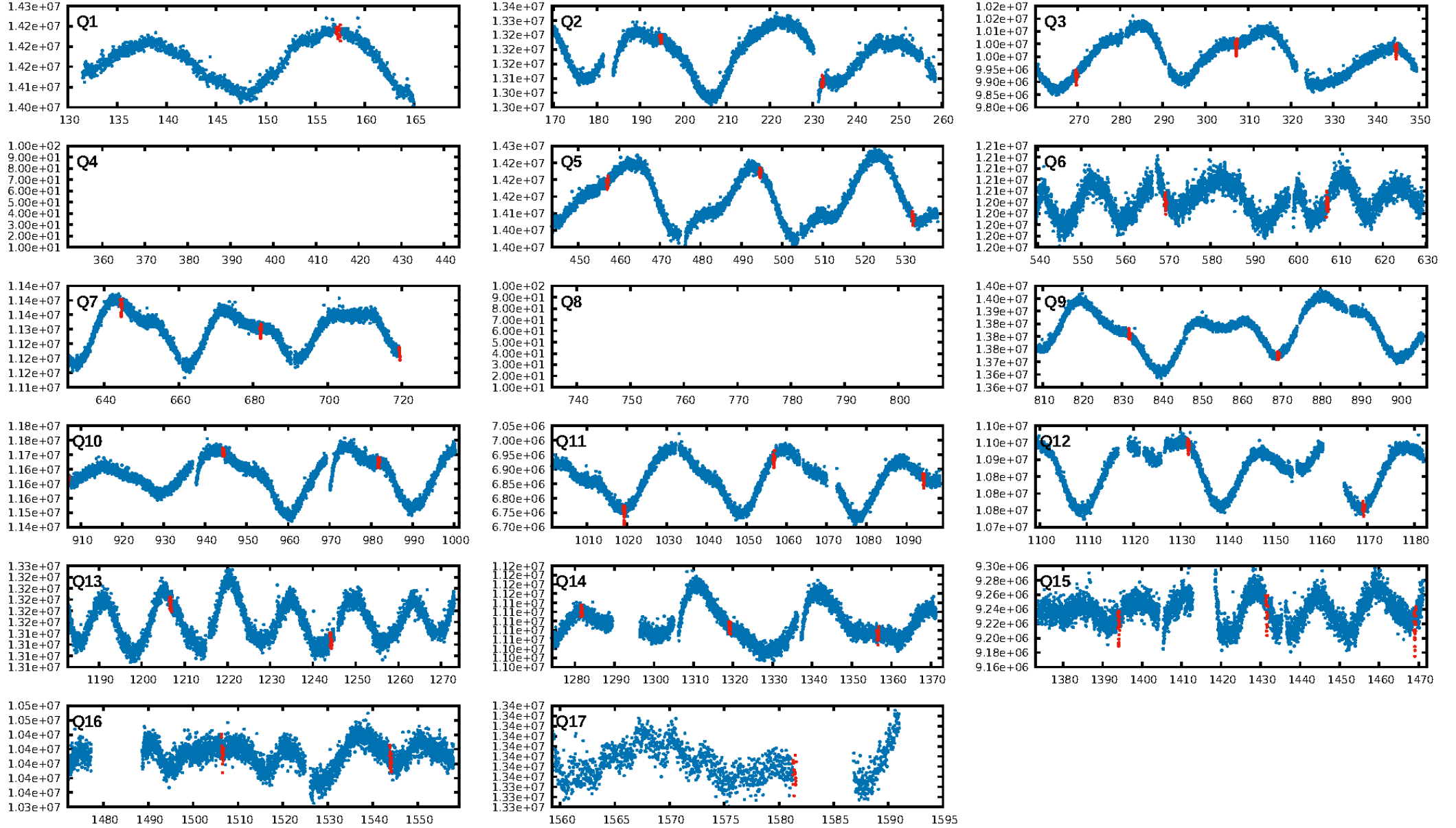
KIC: 2574201 Candidate: 1 of 1 Period: 37.479 d
KOI: K01025.01 Corr: 0.941



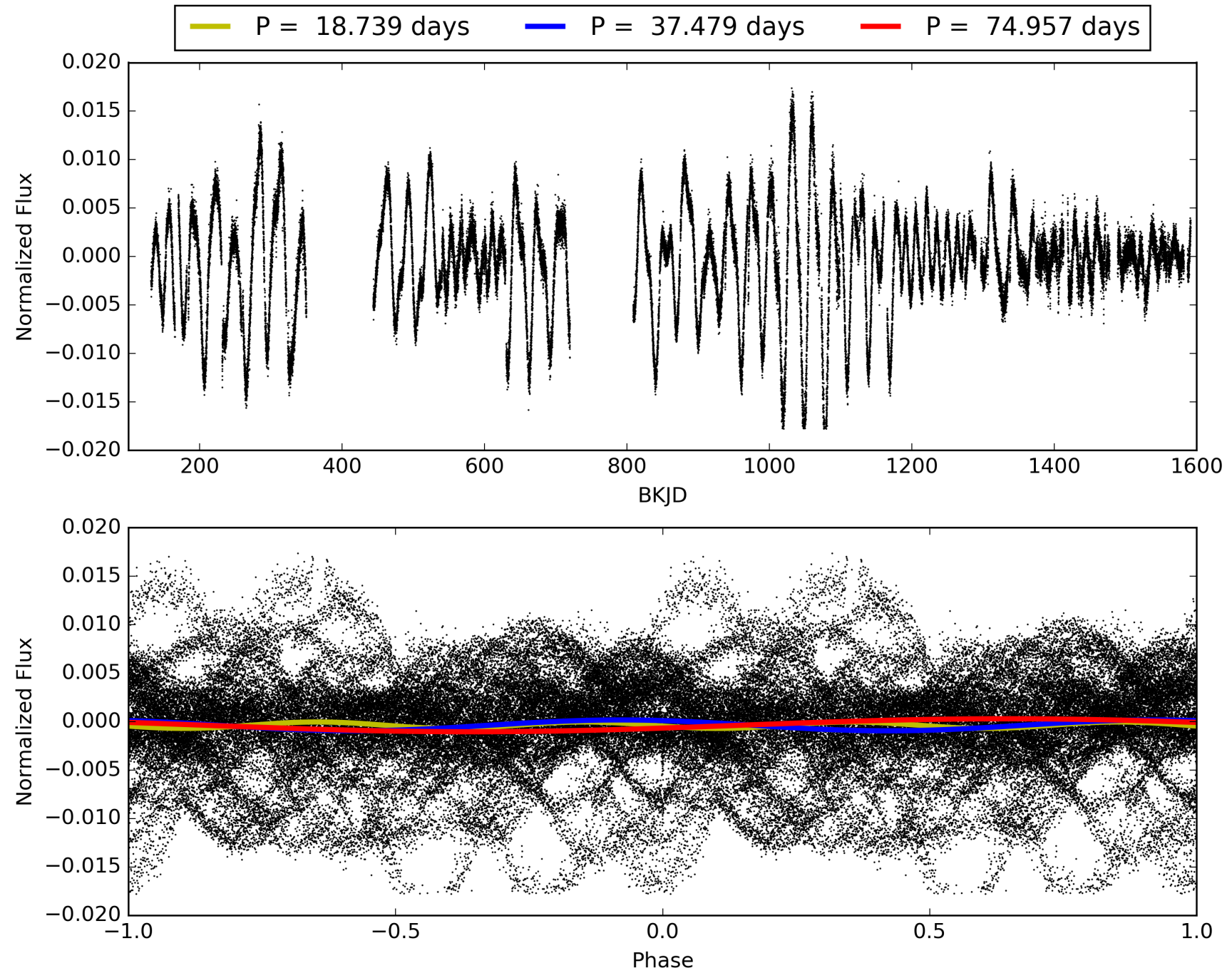
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:30:20 Z

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

TCE 002574201-01, PDC Light Curves

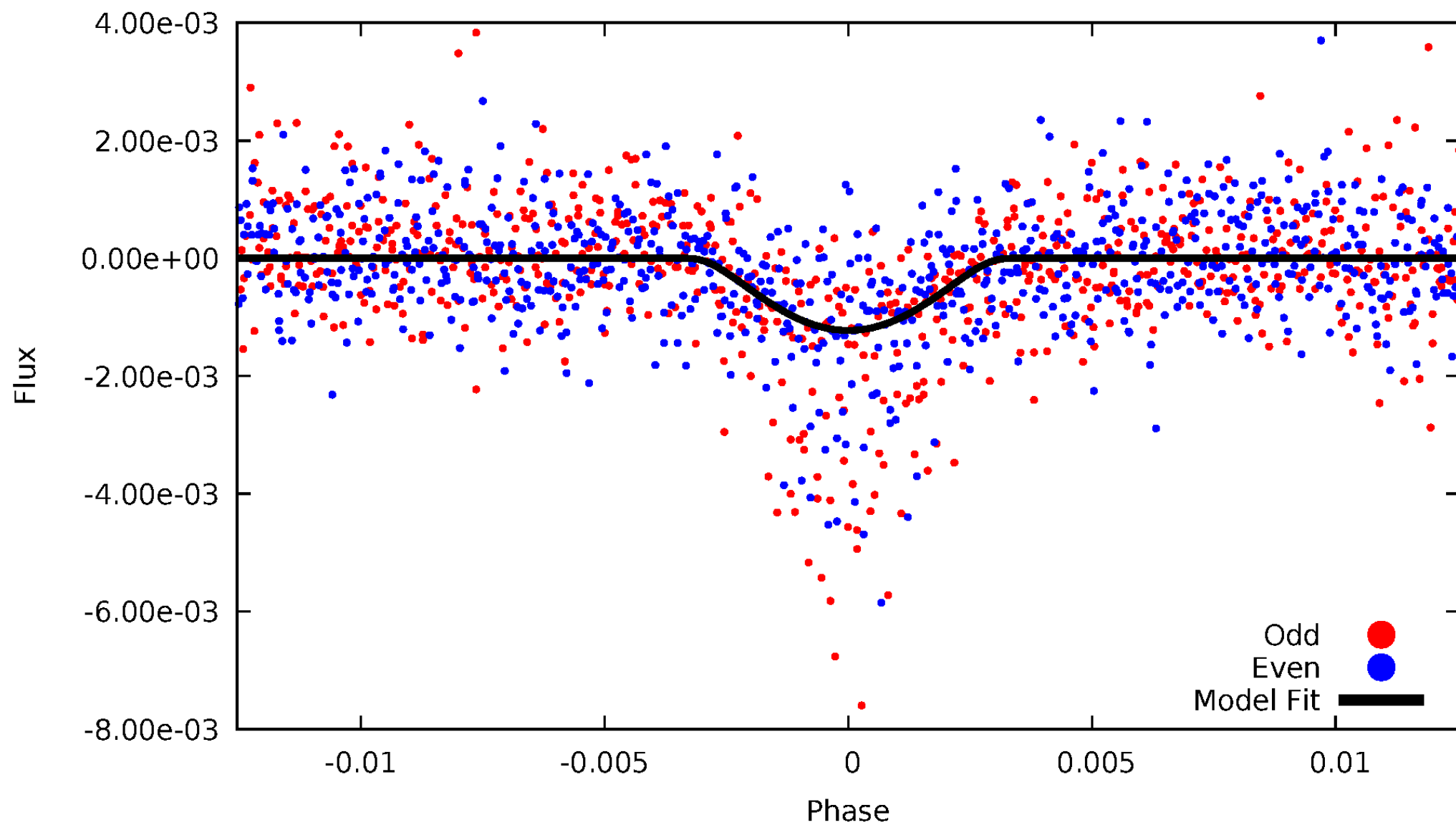


TCE 002574201-01



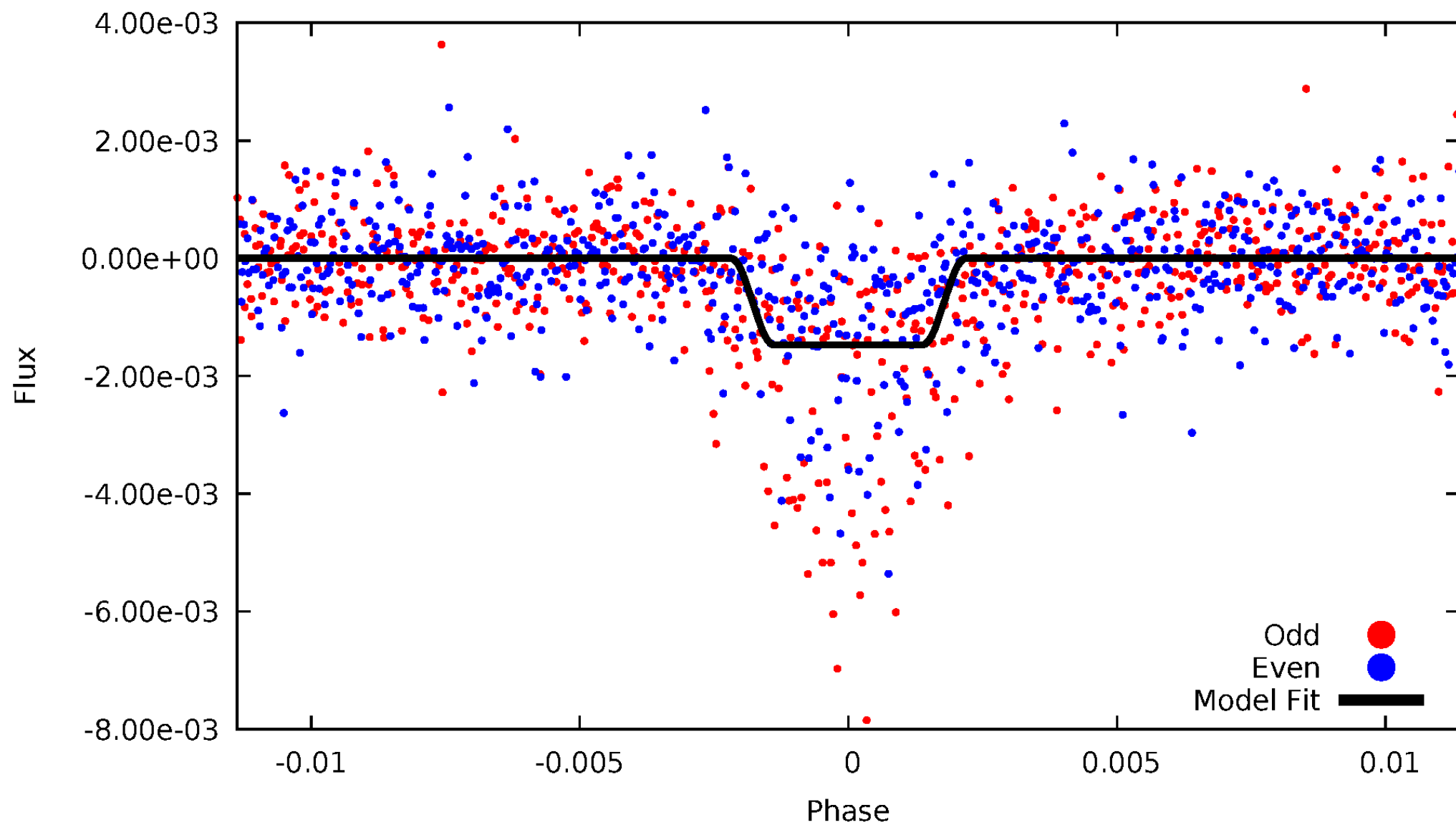
DV Odd/Even

TCE 002574201-01



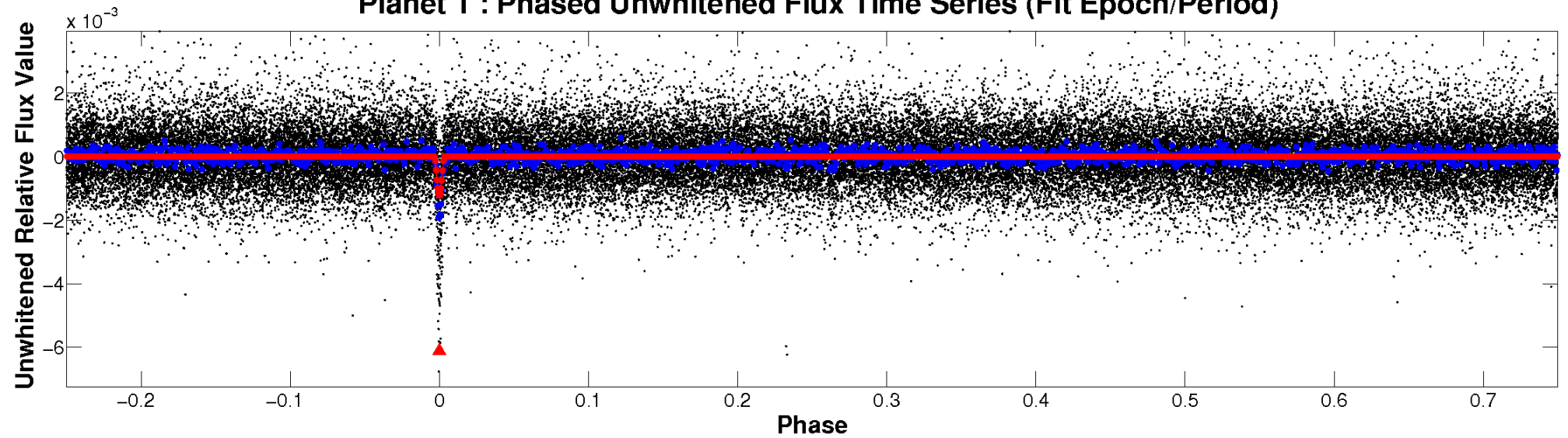
ALT Odd/Even

TCE 002574201-01

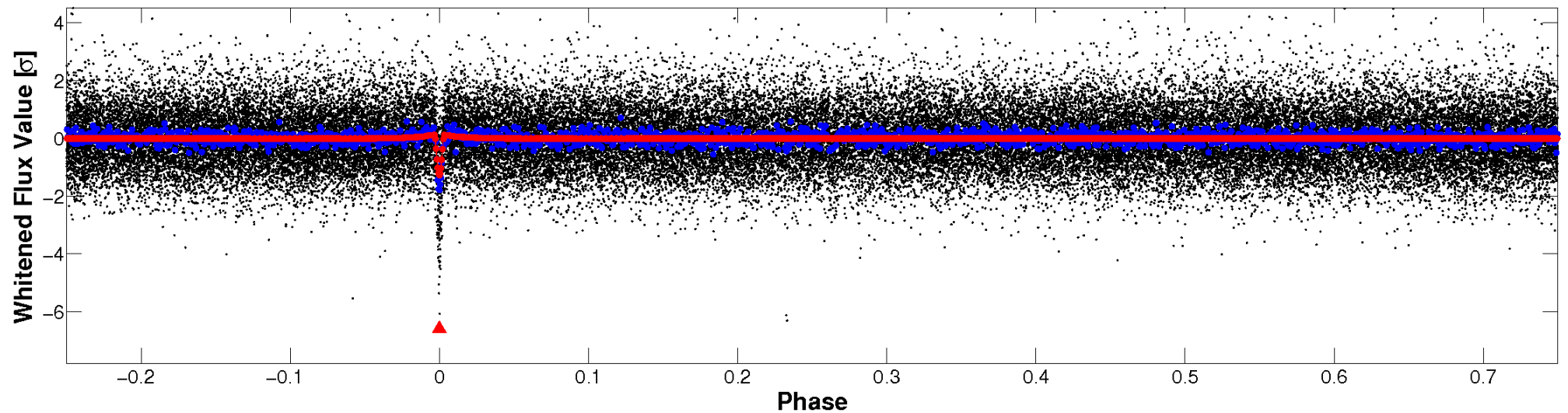


Non-Whitened Vs. Whitened Light Curve

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

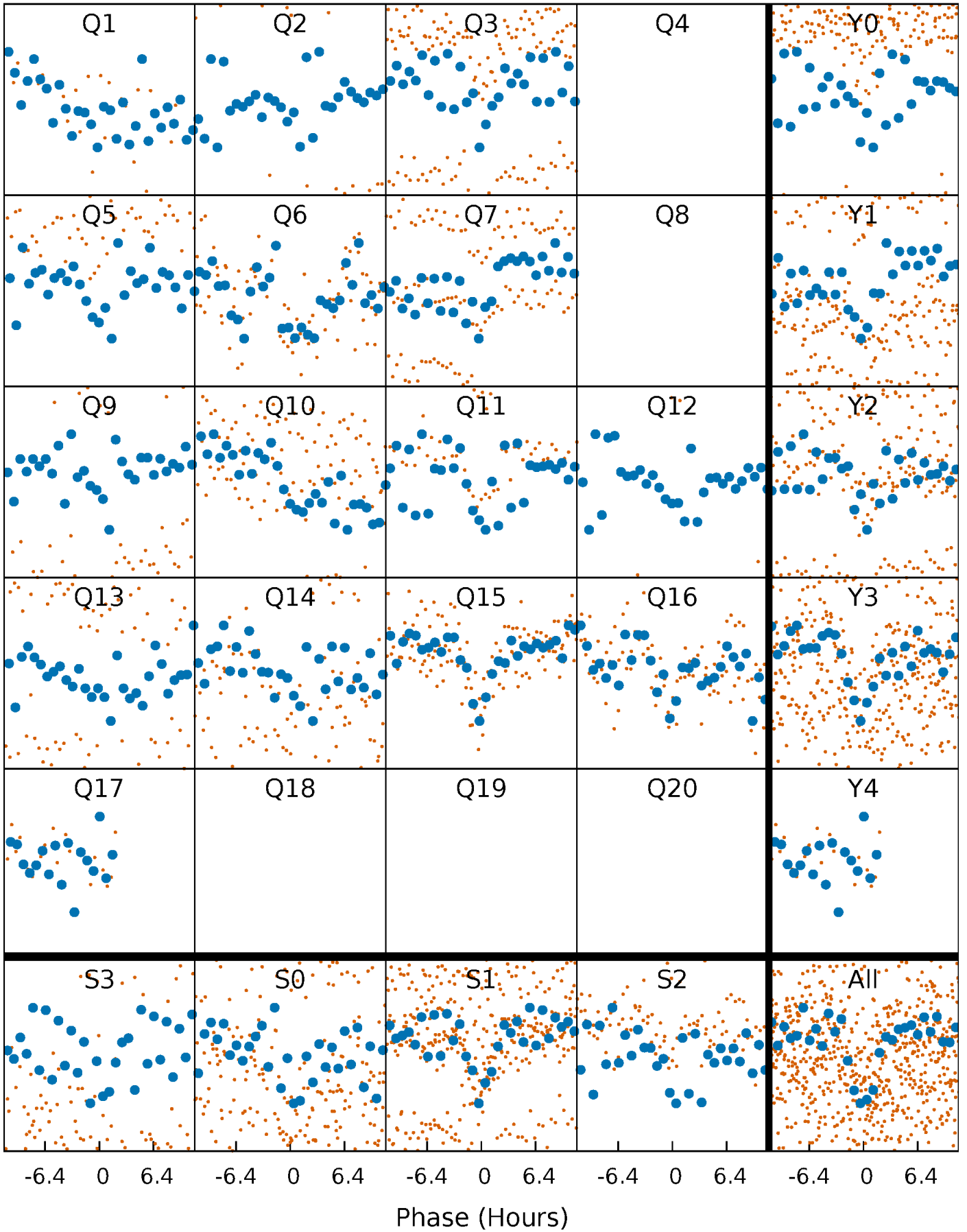


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



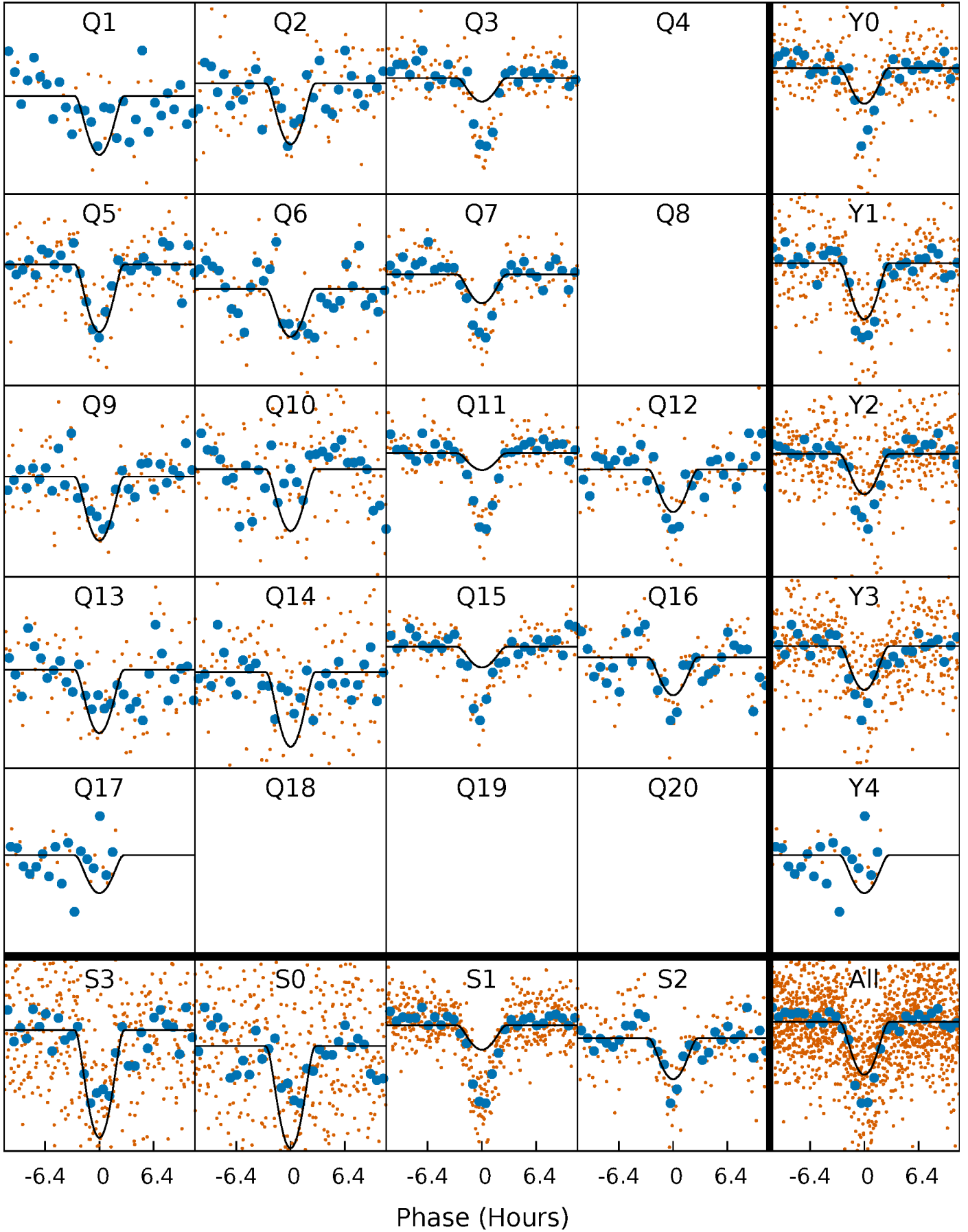
PDC Quarter-Phased Transit Curves

TCE 002574201-01 P= 37.478612 Days $T_0=157.314284$ (BKJD)



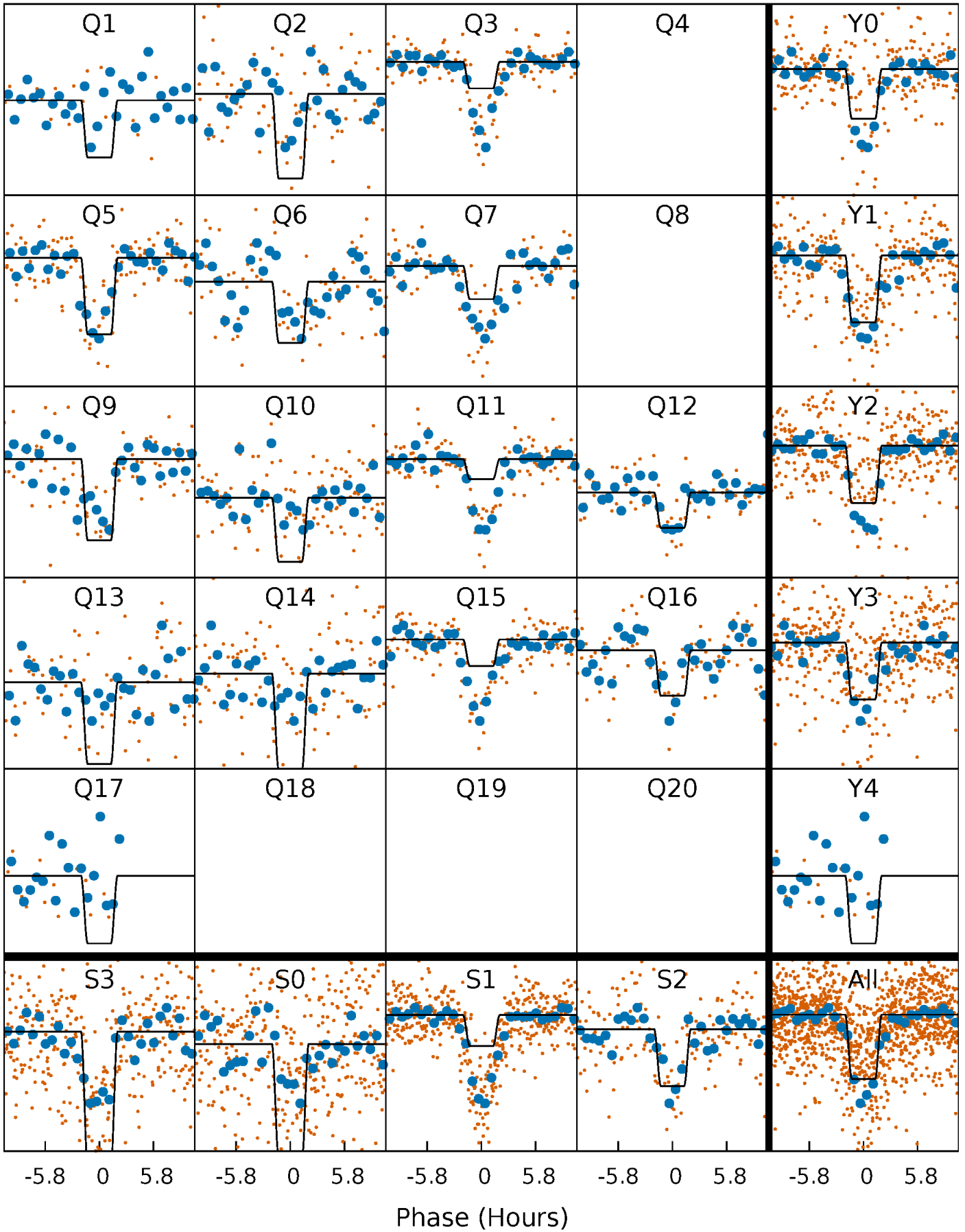
DV Quarter-Phased Transit Curves

TCE 002574201-01 P= 37.478612 Days $T_0=157.314284$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

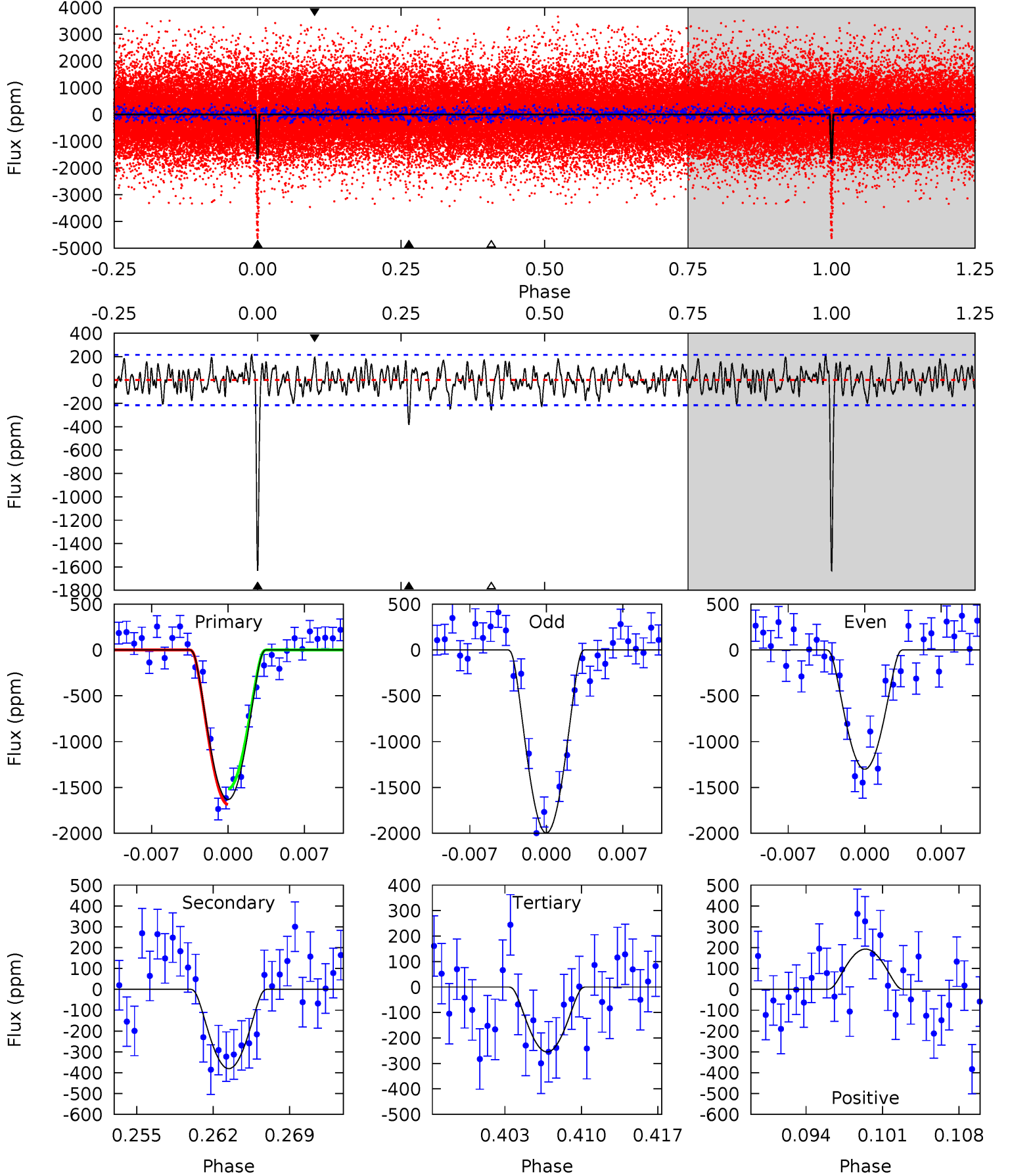
TCE 002574201-01 P= 37.478560 Days $T_0=157.312943$ (BKJD)



DV Model-Shift Uniqueness Test

002574201-01, P = 37.478612 Days, E = 119.835672 Days

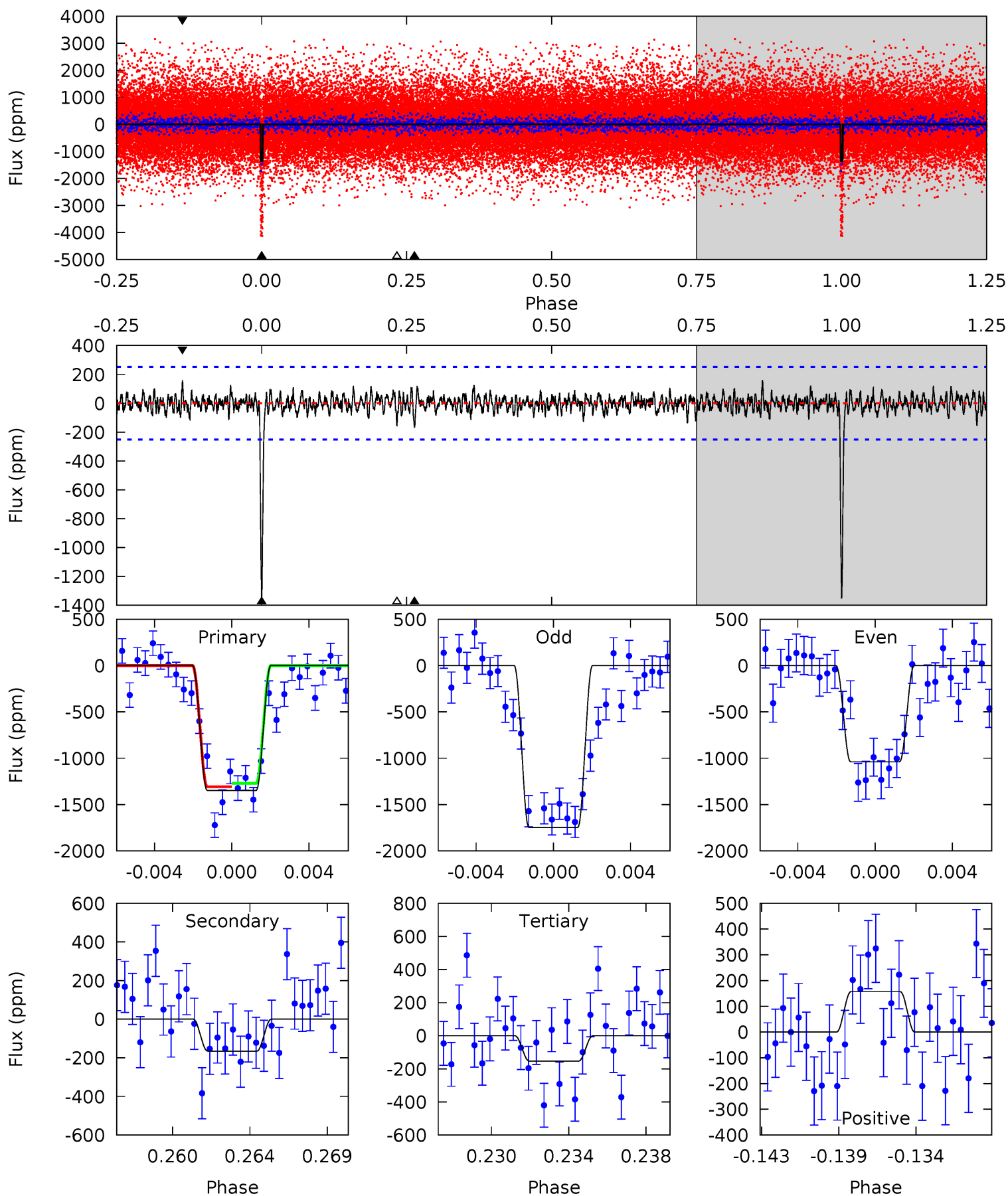
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.6	8.99	6.02	4.56	5.10	2.71	1.88	32.6	34.0	2.97	4.43	8.21	1.69	0.12	2.00



Alt Model-Shift Uniqueness Test

002574201-01, $P = 37.478560$ Days, $E = 119.834383$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	3.41	3.17	3.24	5.18	2.85	0.87	24.6	24.5	0.24	0.17	7.32	1.64	0.10	0.40



Stellar Parameters For KIC 002574201

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3687^{+65}_{-80}	$4.813^{+0.048}_{-0.036}$	$-0.200^{+0.100}_{-0.100}$	$0.440^{+0.034}_{-0.045}$	$0.459^{+0.032}_{-0.044}$	$7.596^{+1.842}_{-1.111}$
	+2%/-2%	+1%/-1%	+50%/-50%	+8%/-10%	+7%/-10%	+24%/-15%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 002574201-01 / KOI 1025.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-380 ± 42	$5.74^{+5.38}_{-3.56}$	366^{+9}_{-10}	2239^{+637}_{-287}	175^{+1109}_{-128}
Alt.	-166 ± 48	$5.01^{+5.64}_{-3.22}$	365^{+10}_{-10}	2114^{+534}_{-309}	102^{+645}_{-80}

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 $A_{obs} \gg 1.0$

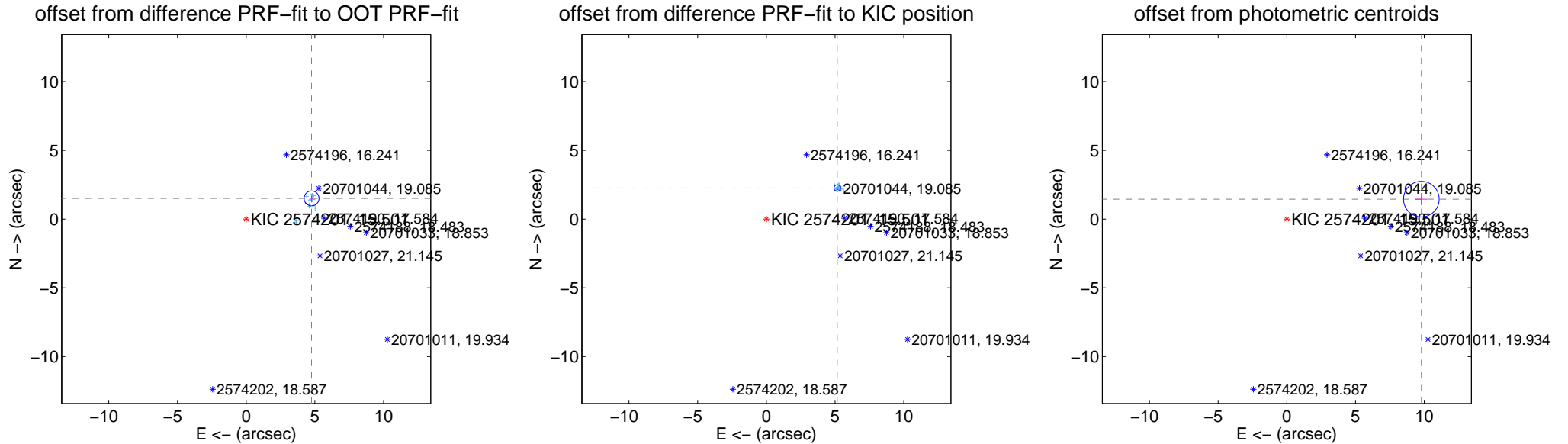
DV Centroid Data

Supplemental centroid analysis for 002574201-01. Kepler magnitude: 15.50. Transit SNR 16.15

There are 14 quarters with good PRF difference image offsets

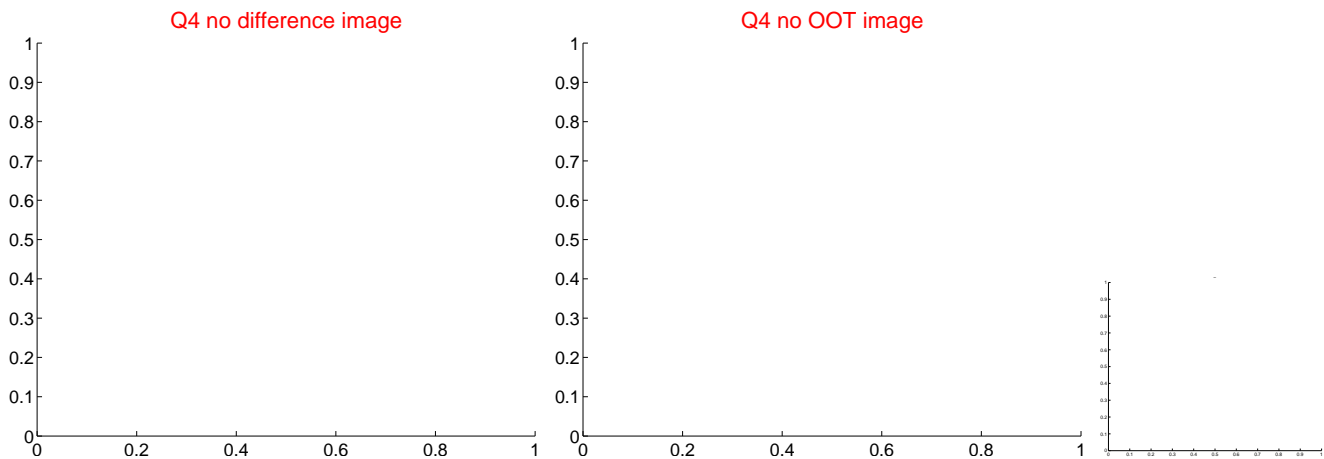
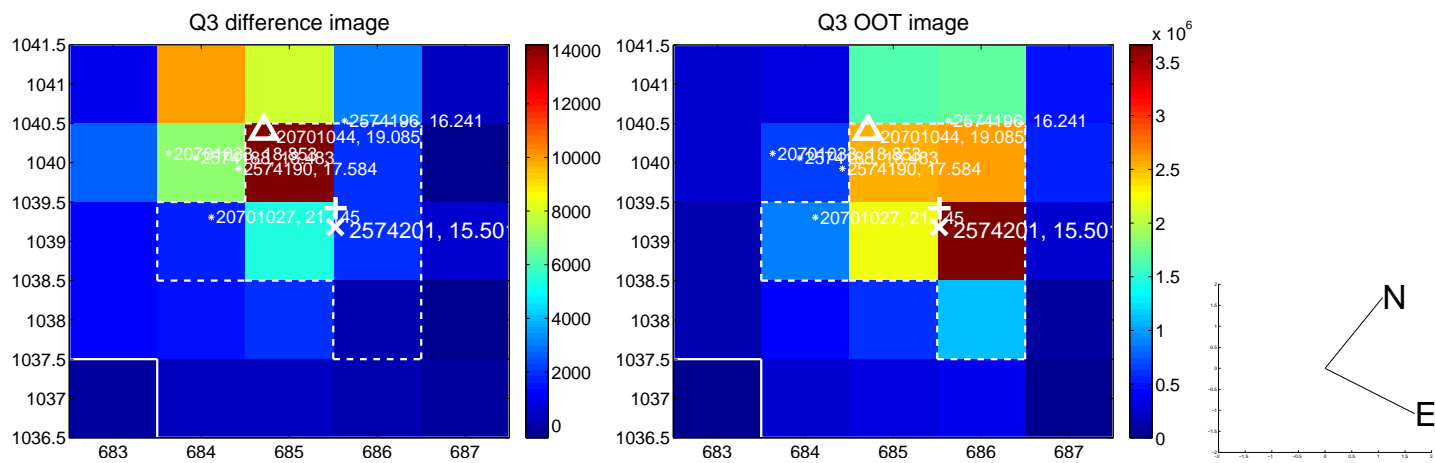
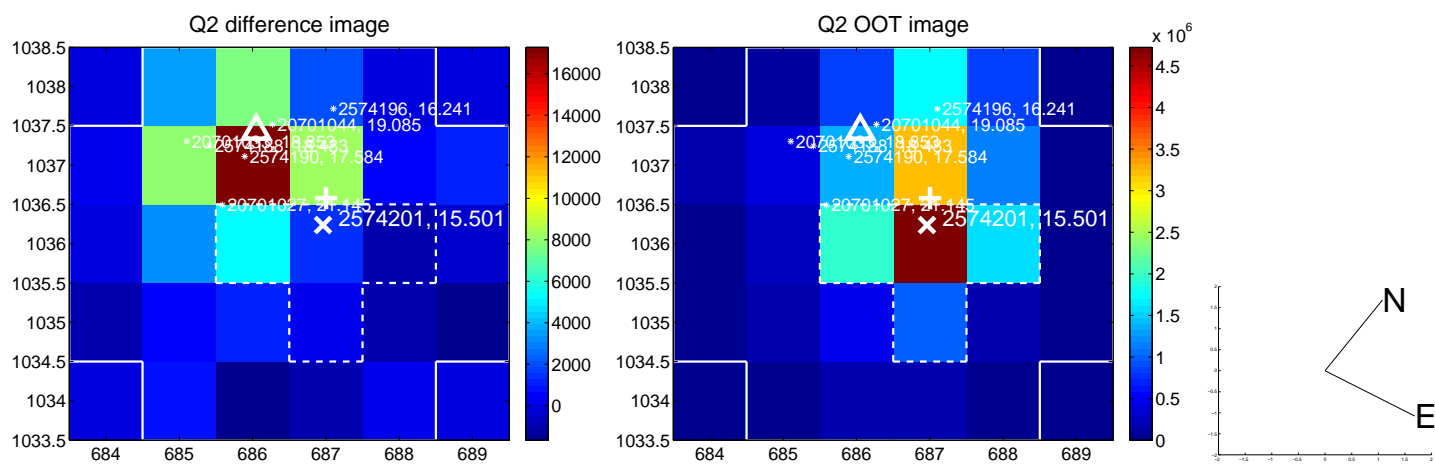
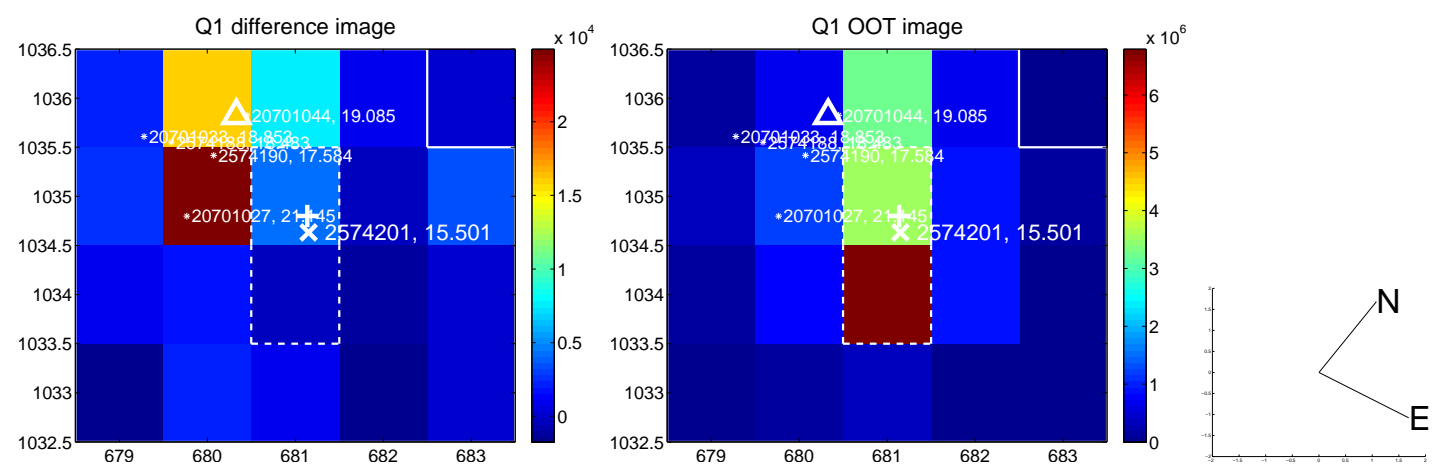
The OOT PRF centroid is offset from the target star catalog position by about 2.90 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.991 ± 0.181	27.57	-4.759 ± 0.142	1.505 ± 0.196
PRF-fit source offset from KIC position	5.631 ± 0.079	70.91	-5.159 ± 0.080	2.256 ± 0.076
photometric centroid source offset	9.89 ± 0.43	22.89	-9.79 ± 0.43	1.45 ± 0.44

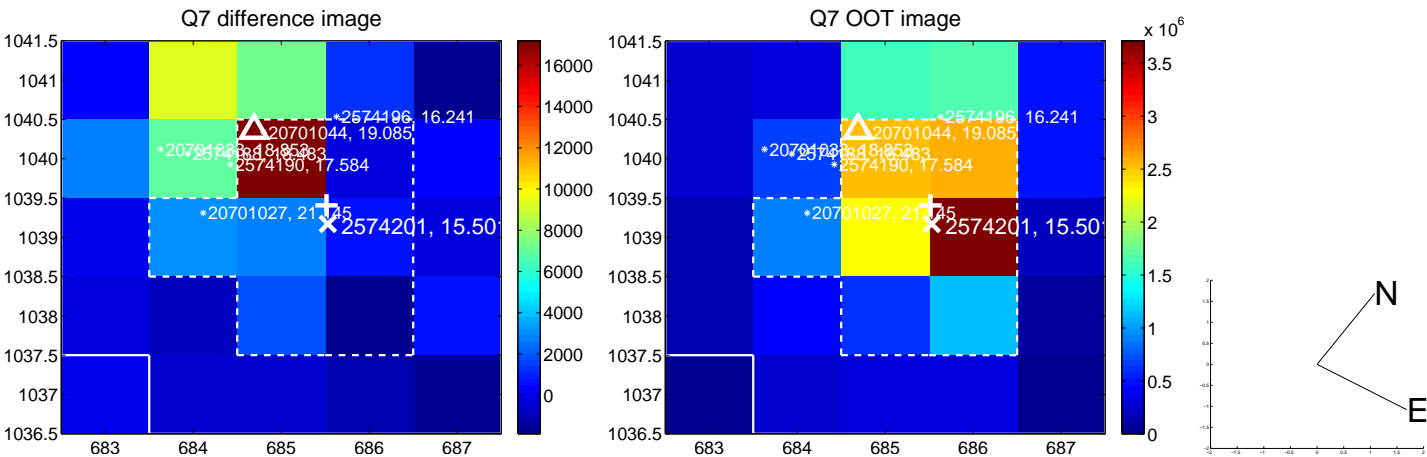
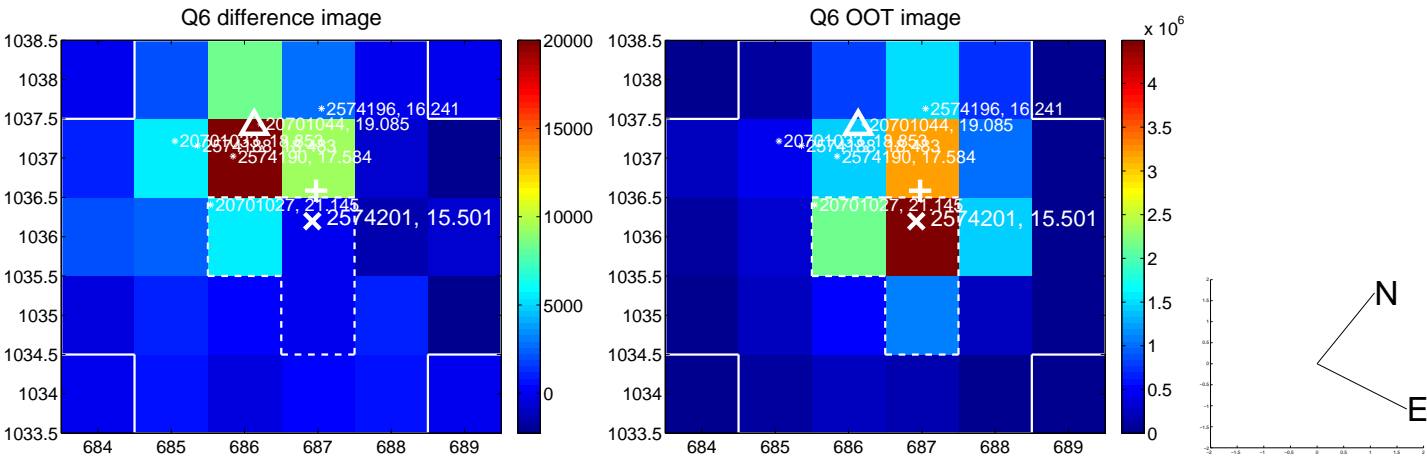
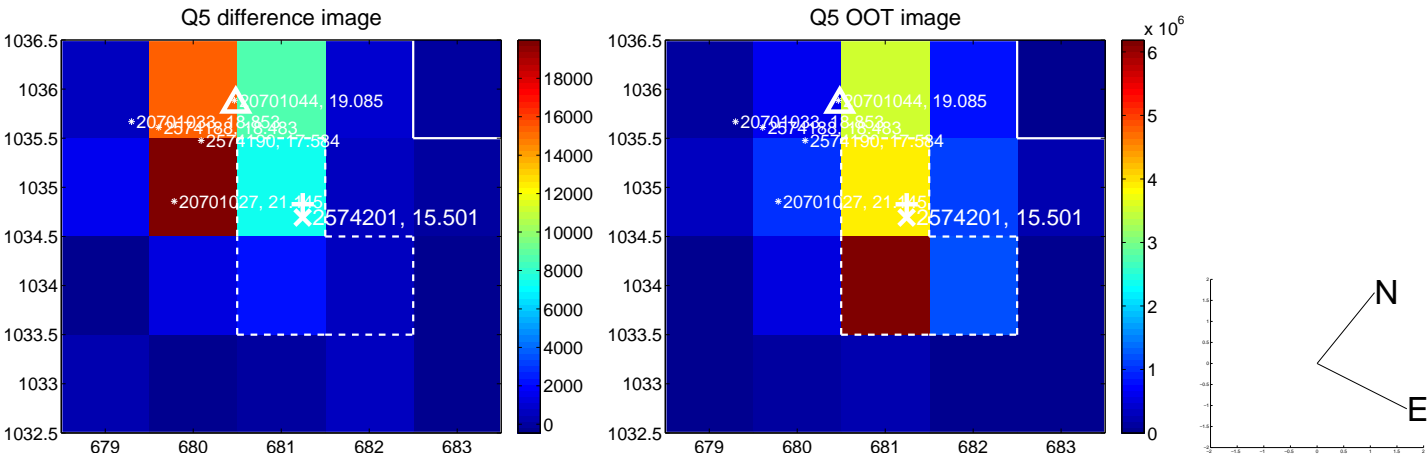


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

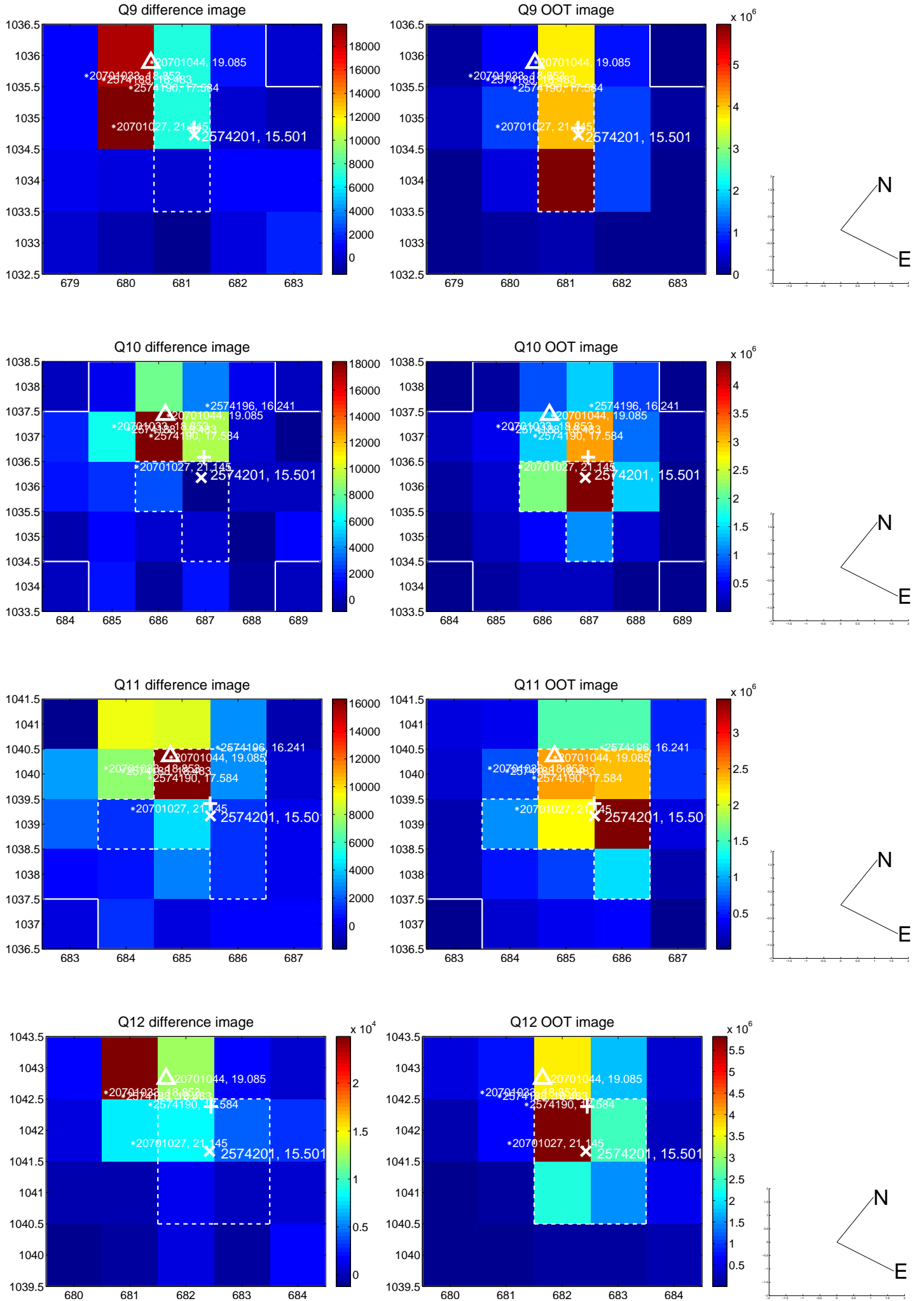
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



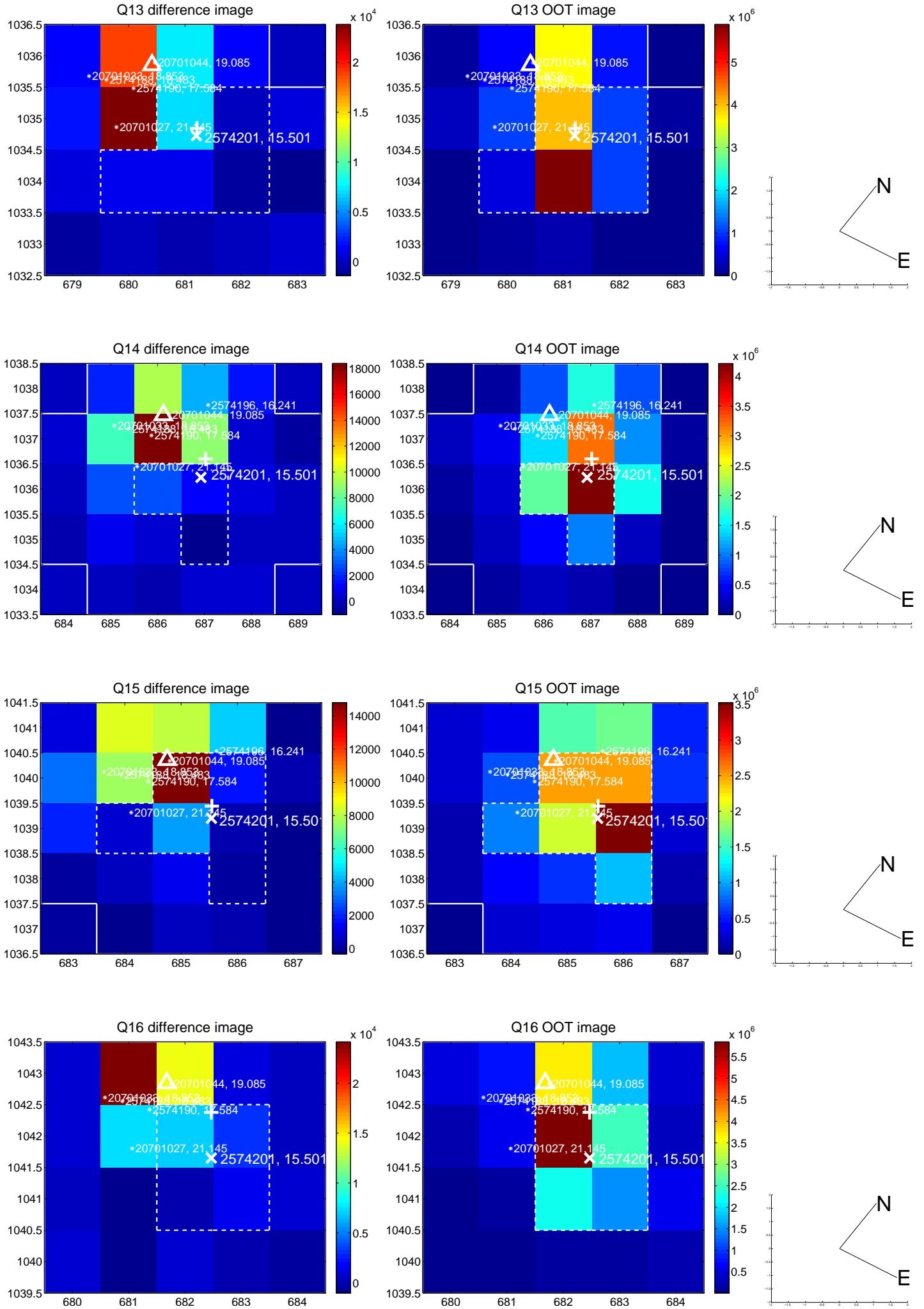
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



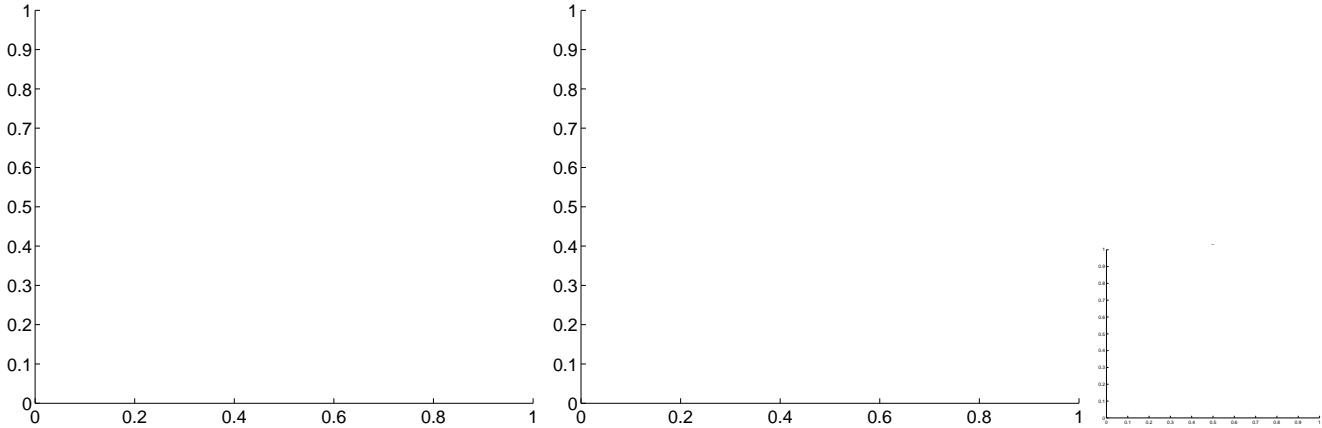
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



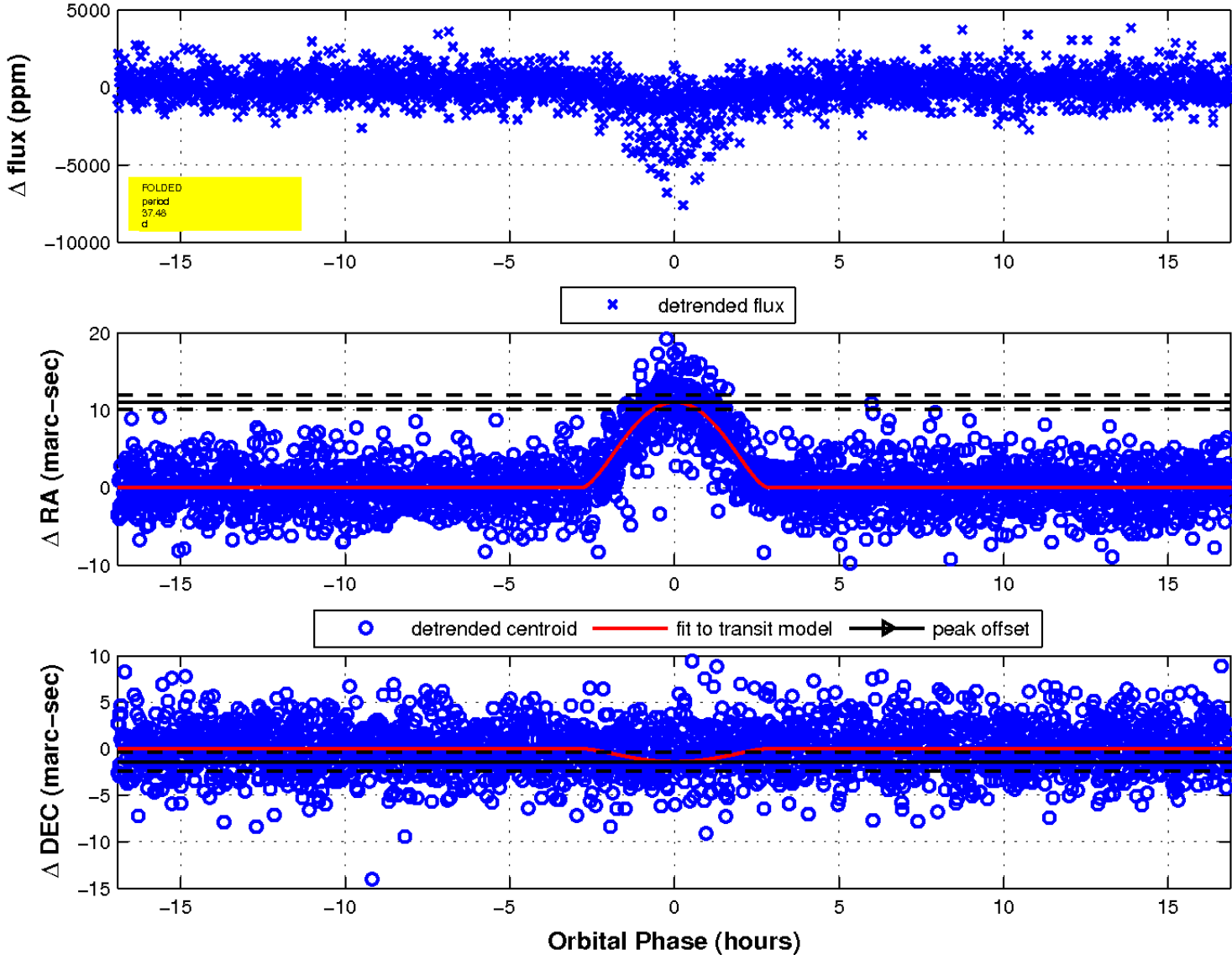
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

