

KIC 005357545

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})
005357545-01	OBS	2219.01	3.757298	133.959280	277.9	0.909	19.0	24.9	0.72	4901	1.51	140.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005357545-01	OBS	PC	0.99	0	0	0	0	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.

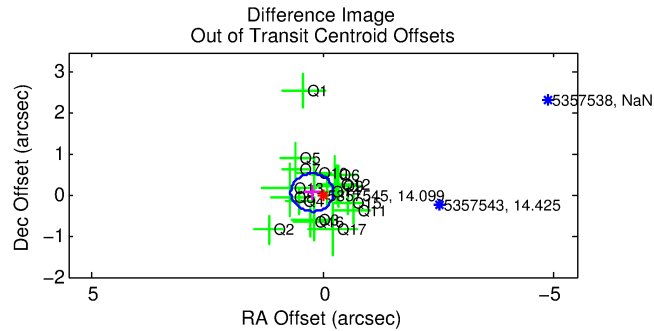
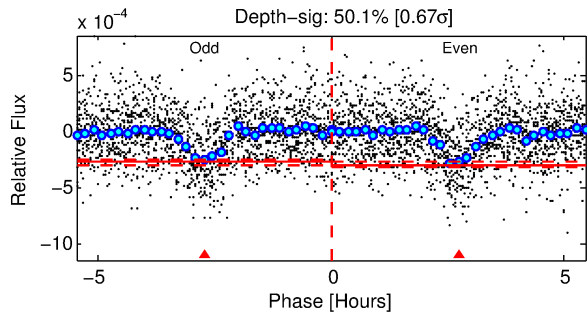
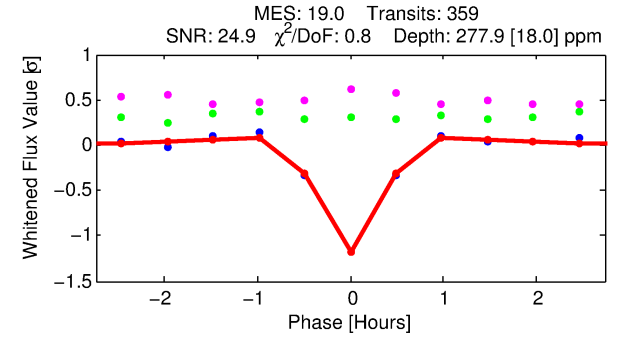
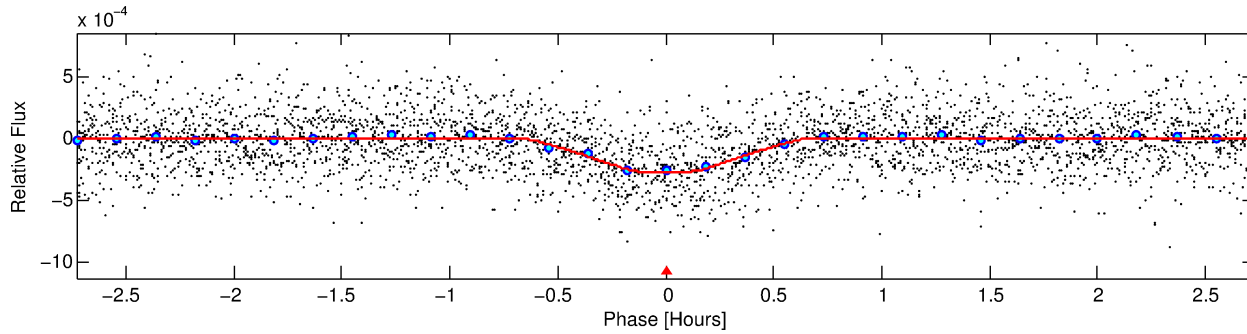
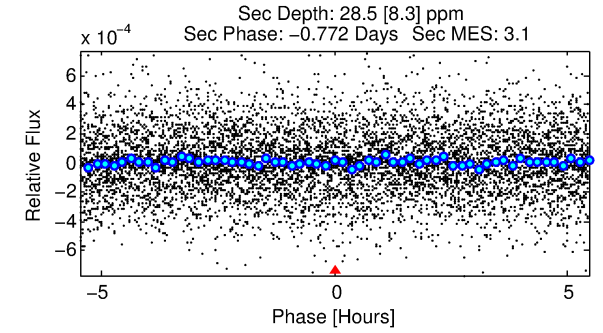
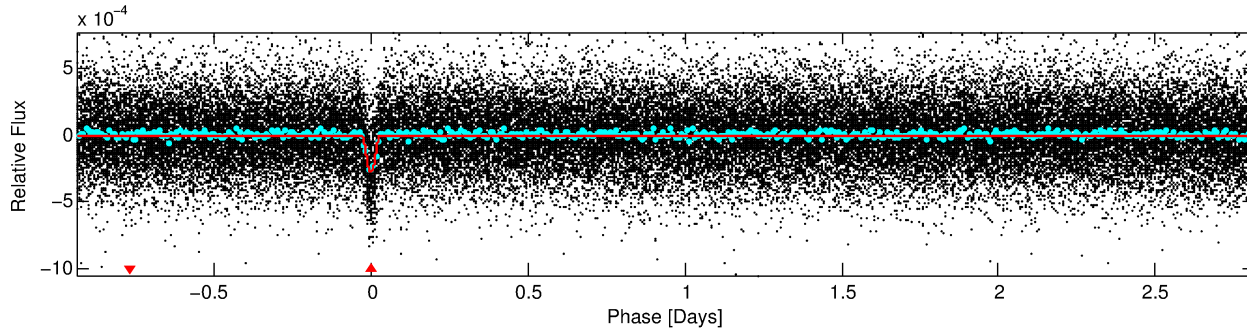
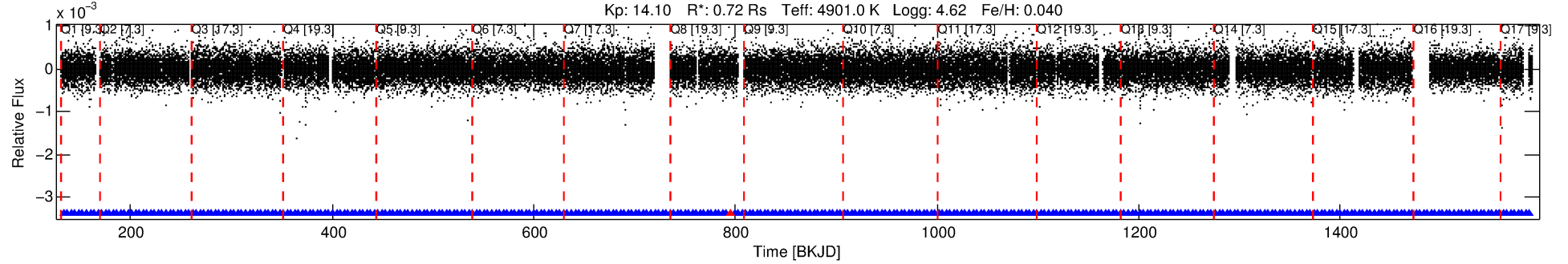
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005357545-01

No Significant Match Found

DV One-Page Summary

KIC: 5357545 Candidate: 1 of 1 Period: 3.757 d
KOI: K02219.01 Corr: 0.982



DV Fit Results:

Period = 3.75730 [0.00001] d
Epoch = 133.9593 [0.0007] BKJD
Rp/R* = 0.0194 [0.0066]
a/R* = 14.12 [18.74]
b = 0.92 [0.24]
Seff = 140.22 [16.26]
Teq = 877 [25] K
Rp = 1.51 [0.52] Re
a = 0.0435 [0.0028] AU
Ag = 12.96 [9.62] [1.24σ]
Teffp = 2574 [476] K [3.56σ]

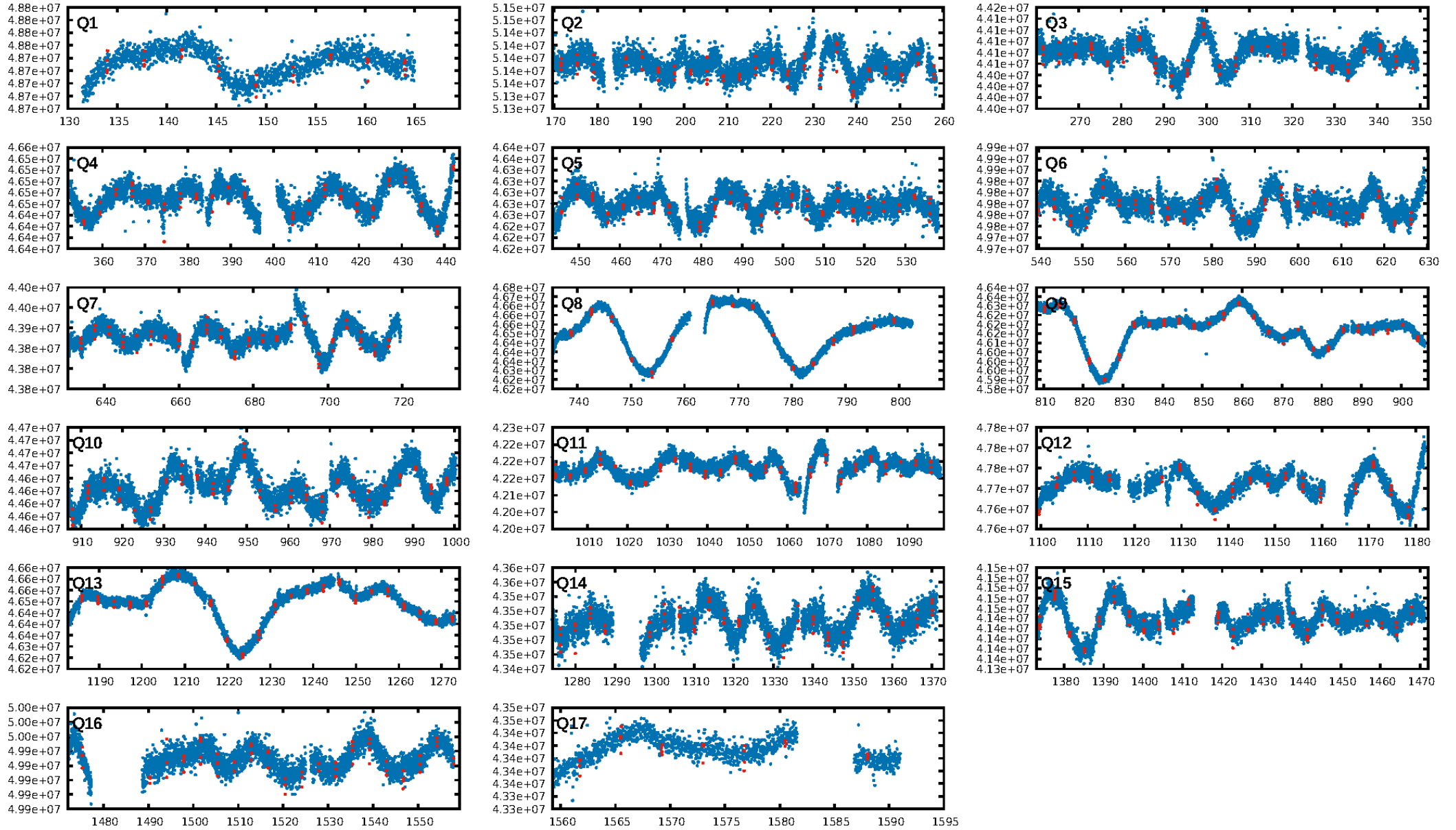
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.88e-76
RollingBand-fgt: 1.00 [342/343]
GhostDiagnostic-chr: -11.89
Centroid-sig: 89.1%
Centroid-so: 0.638 arcsec [1.71σ]
OotOffset-rm: 0.237 arcsec [1.53σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.461 arcsec [2.39σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

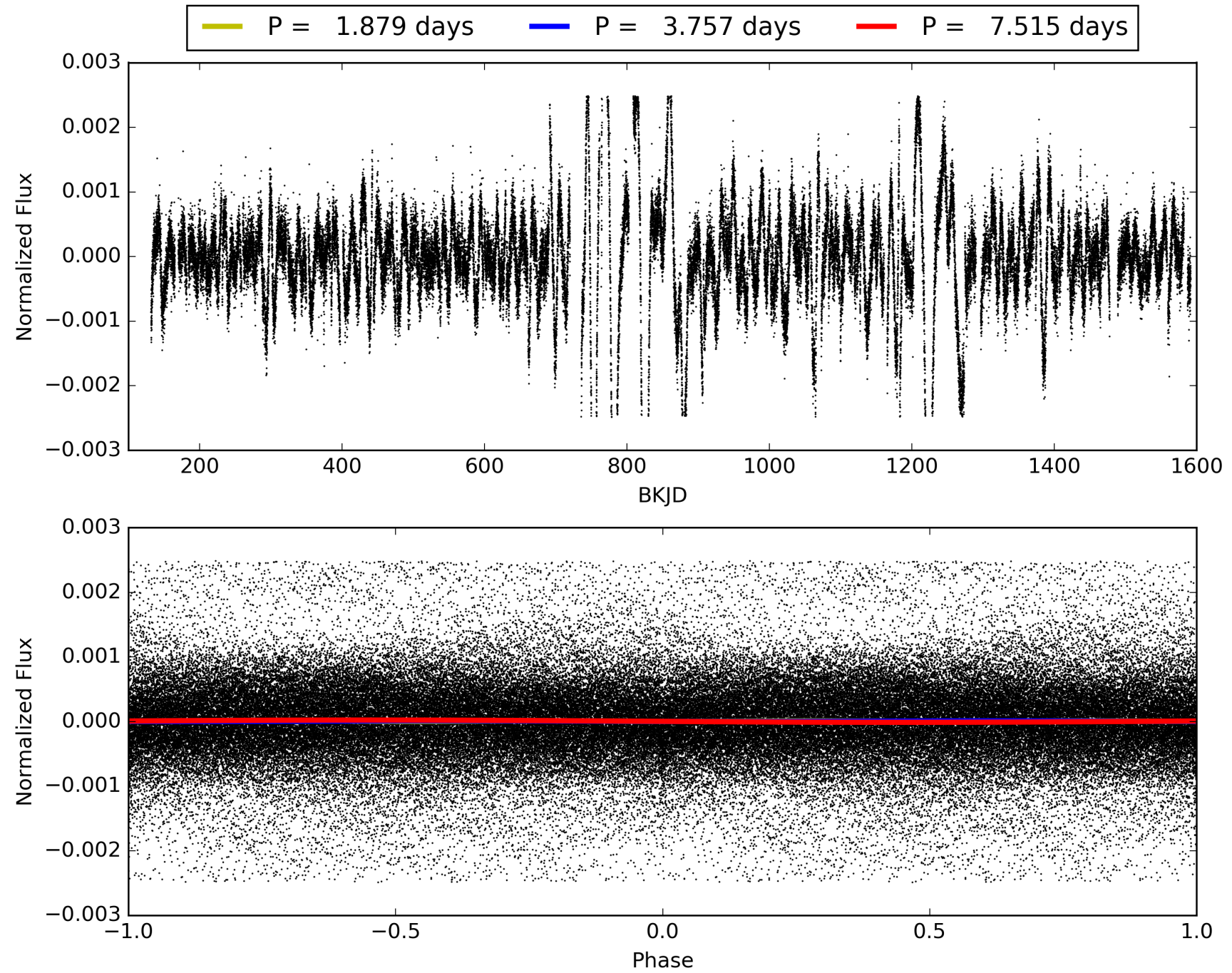
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:07:28 Z

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

TCE 005357545-01, PDC Light Curves

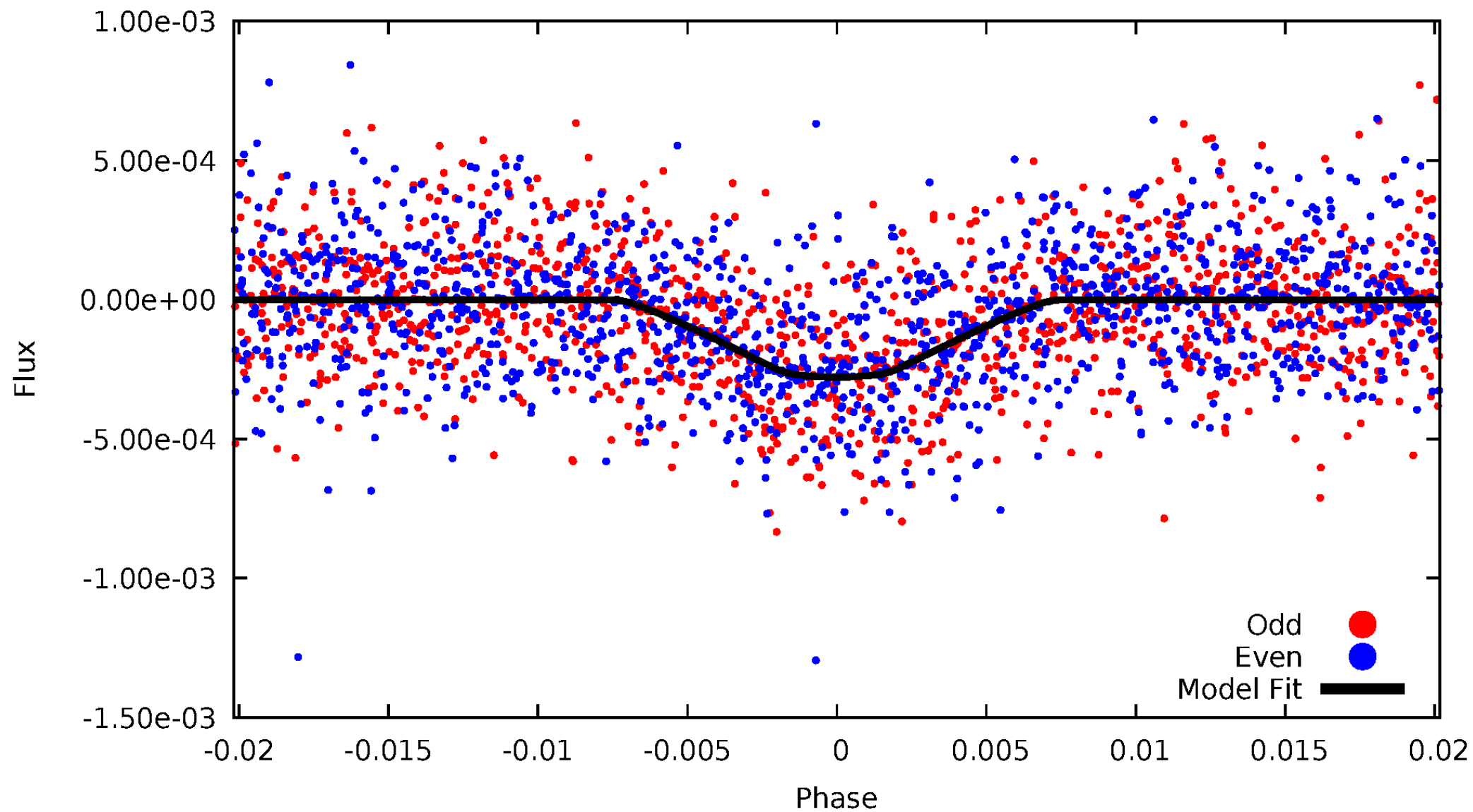


TCE 005357545-01



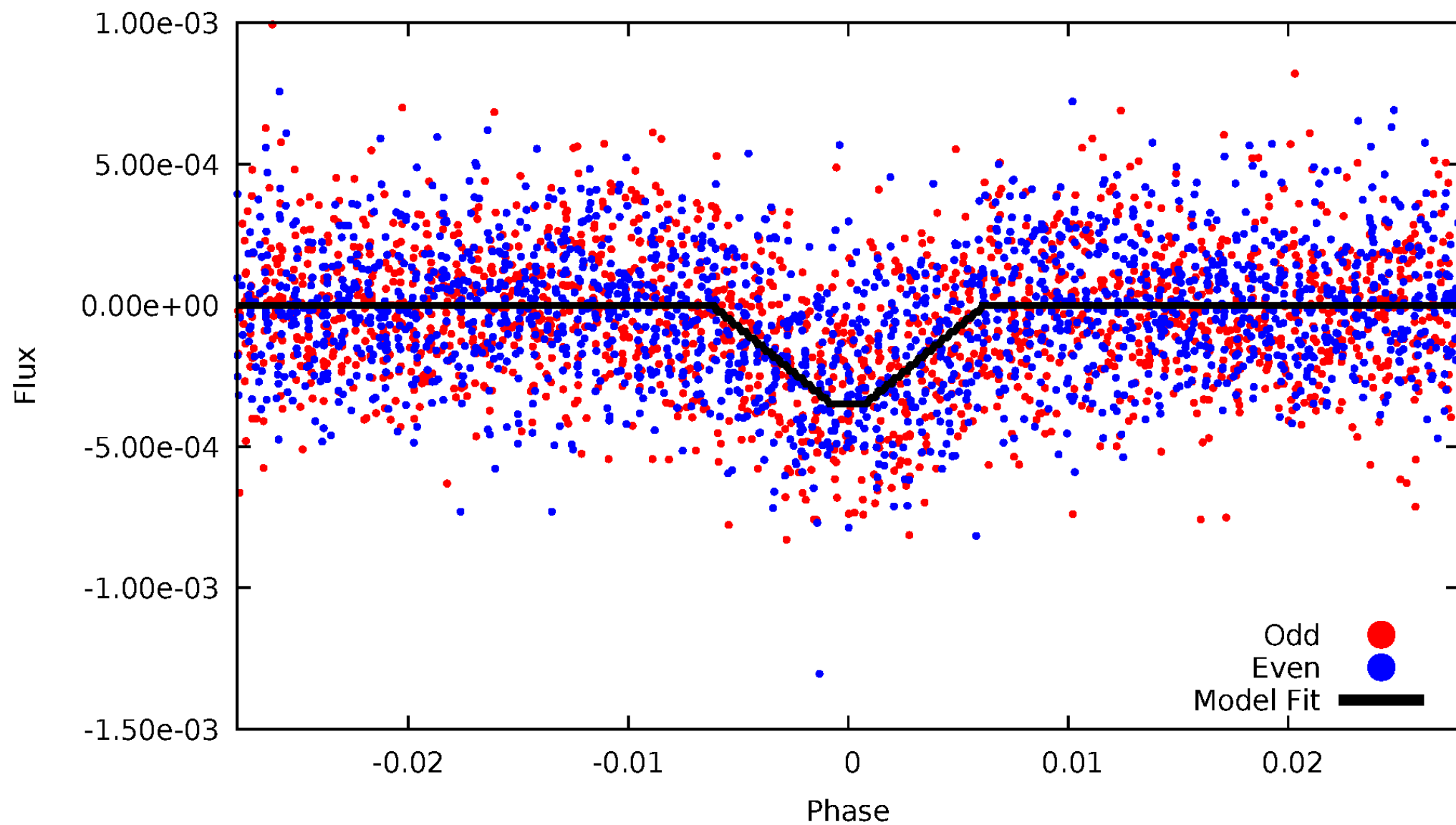
DV Odd/Even

TCE 005357545-01

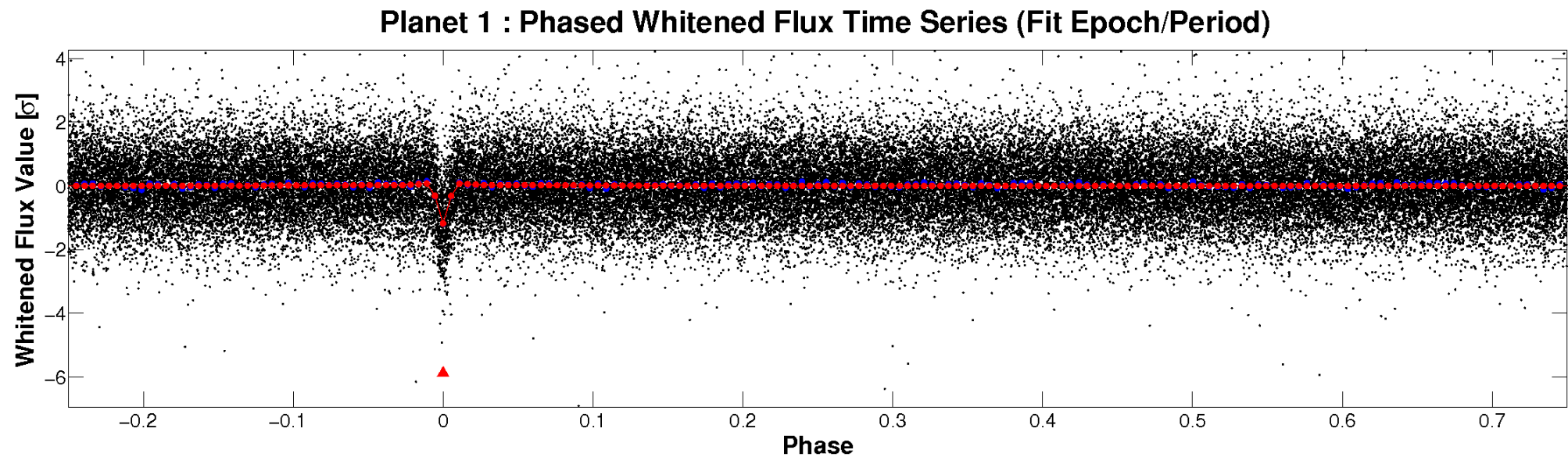
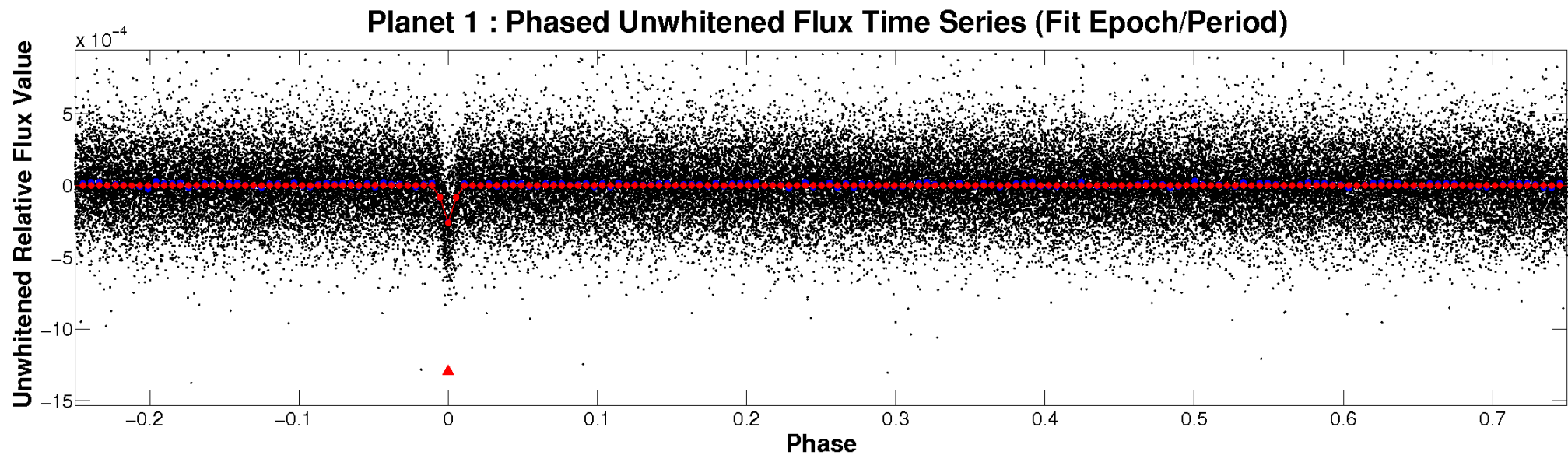


ALT Odd/Even

TCE 005357545-01

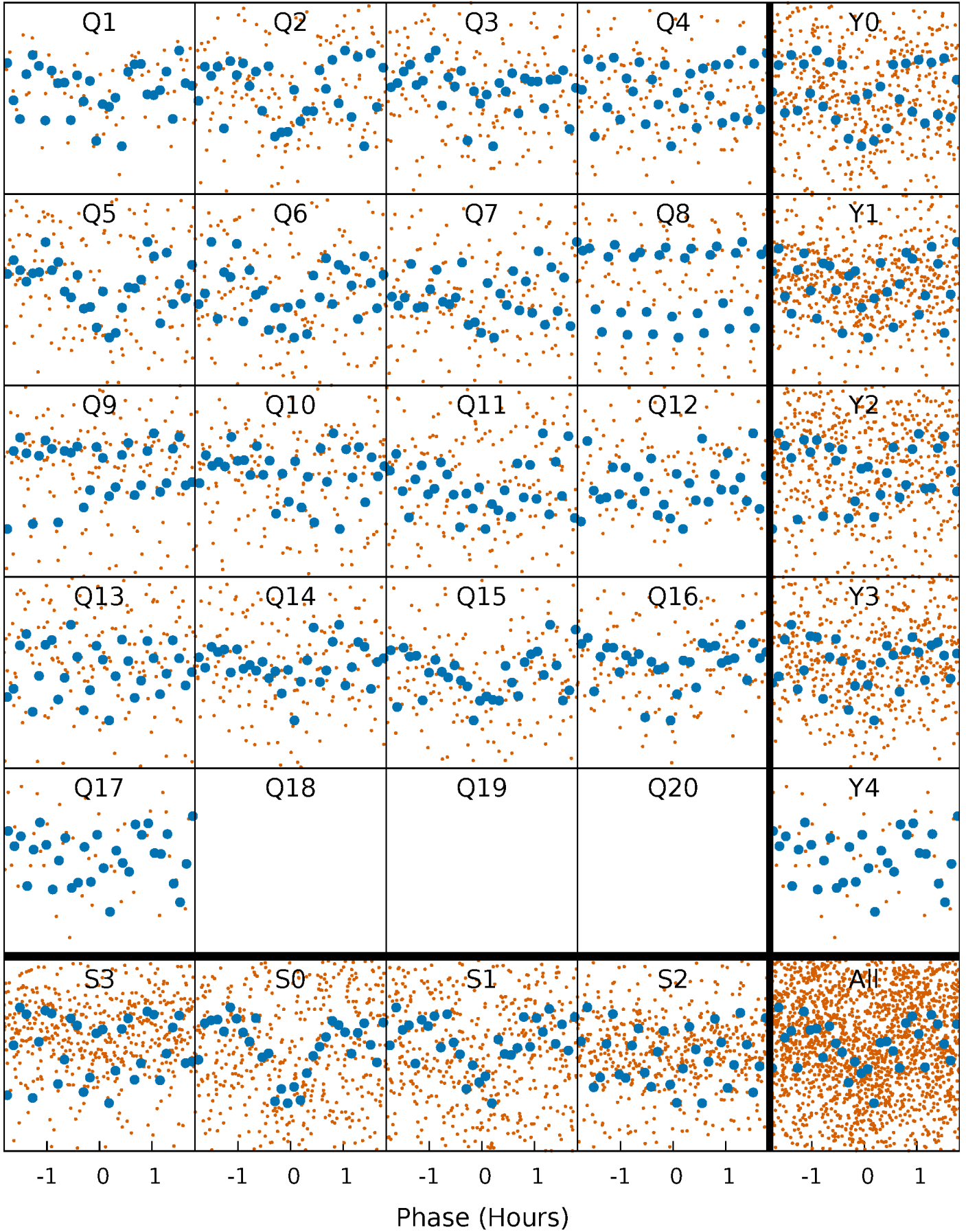


Non-Whitened Vs. Whitened Light Curve



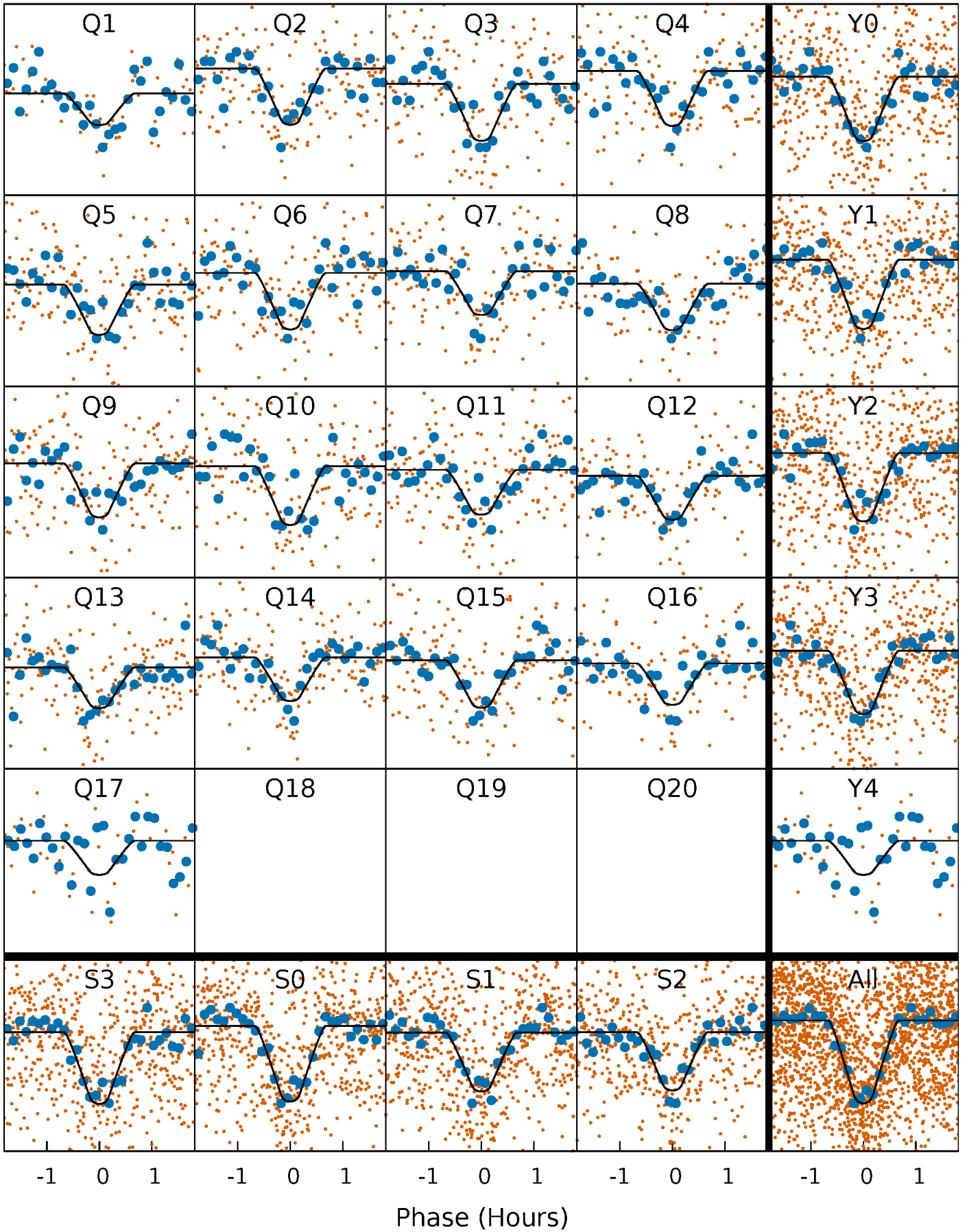
PDC Quarter-Phased Transit Curves

TCE 005357545-01 P= 3.757298 Days $T_0=133.959280$ (BKJD)



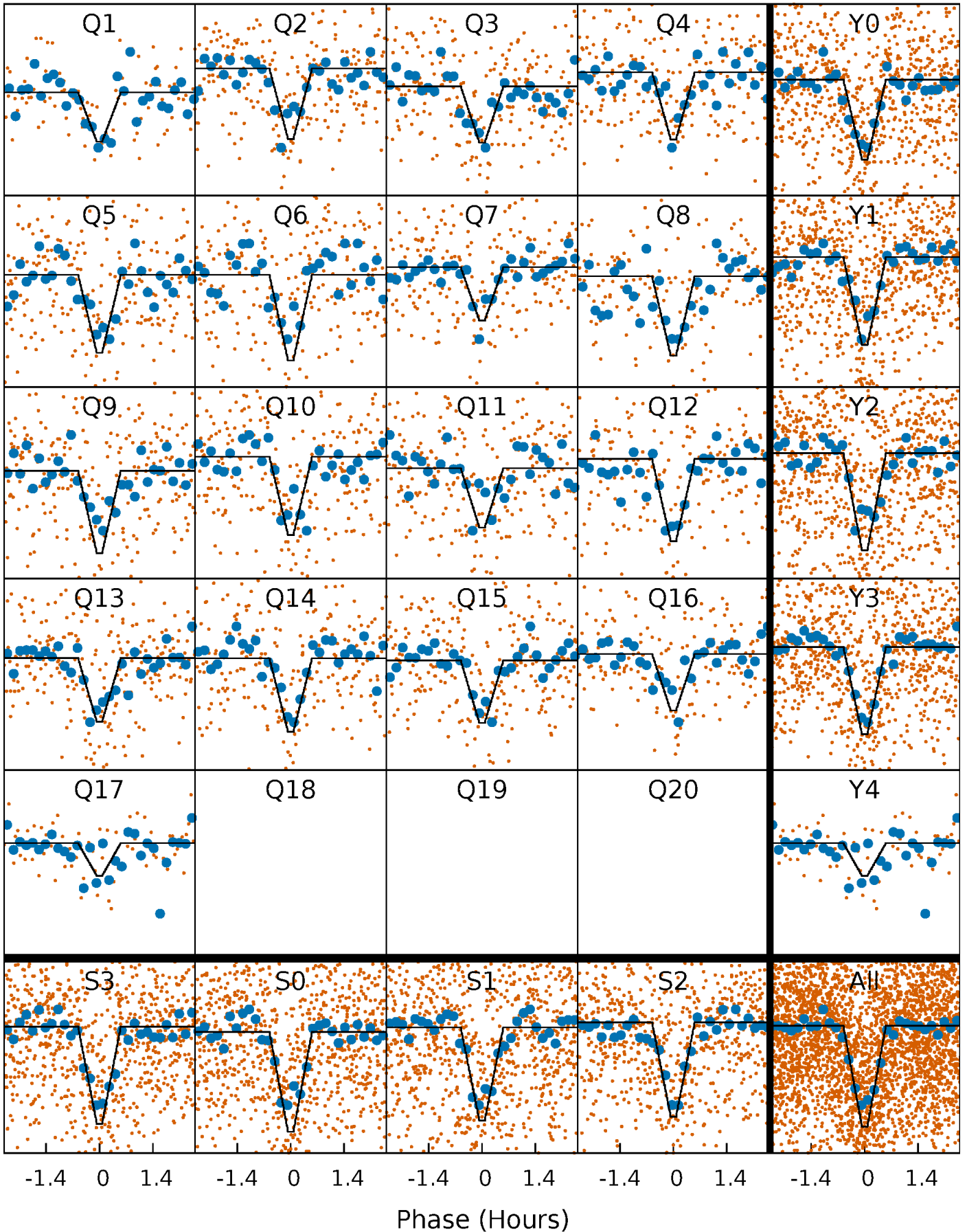
DV Quarter-Phased Transit Curves

TCE 005357545-01 P= 3.757298 Days $T_0=133.959280$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

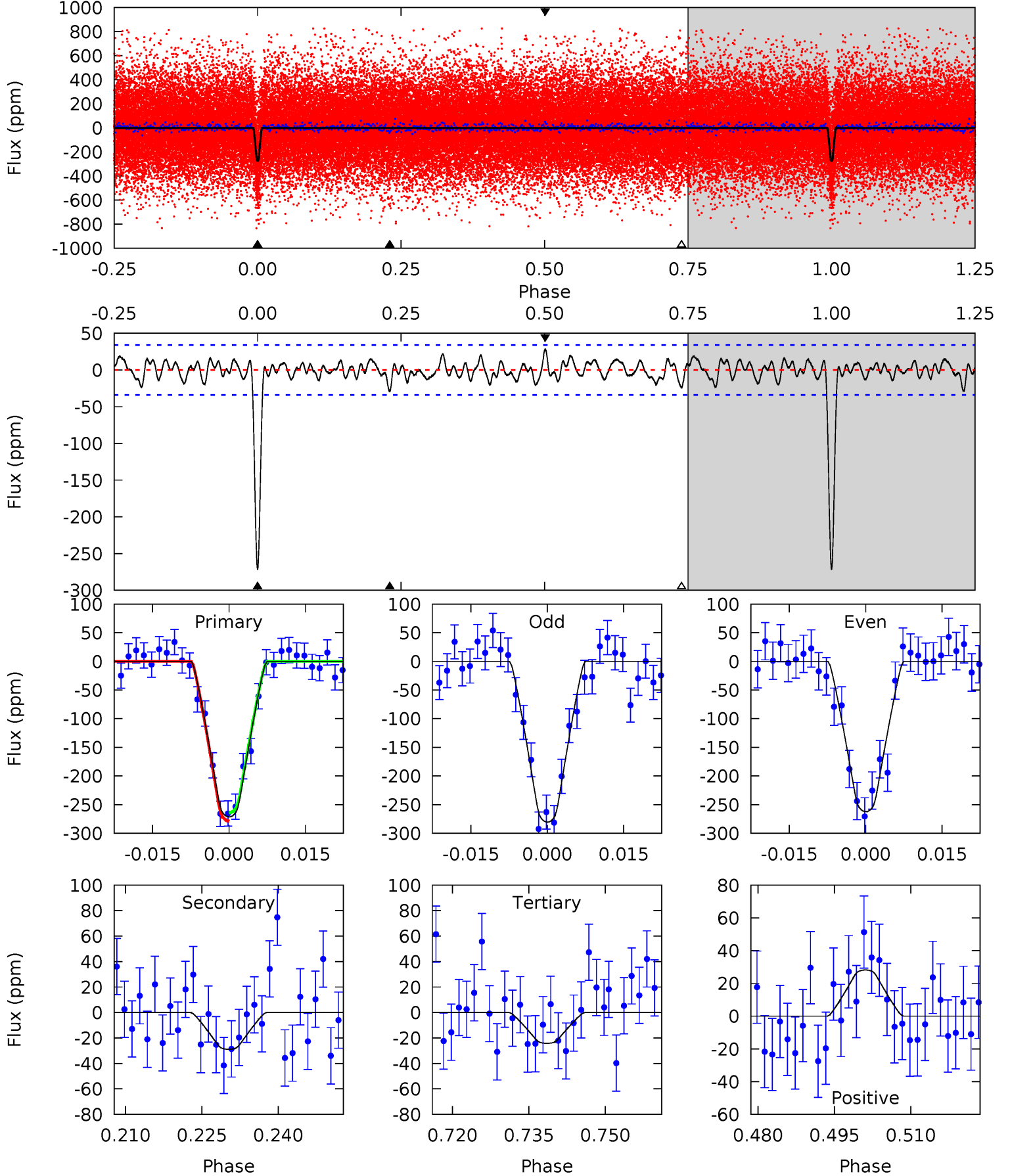
TCE 005357545-01 P= 3.757279 Days $T_0=133.962781$ (BKJD)



DV Model-Shift Uniqueness Test

005357545-01, P = 3.757298 Days, E = 130.201982 Days

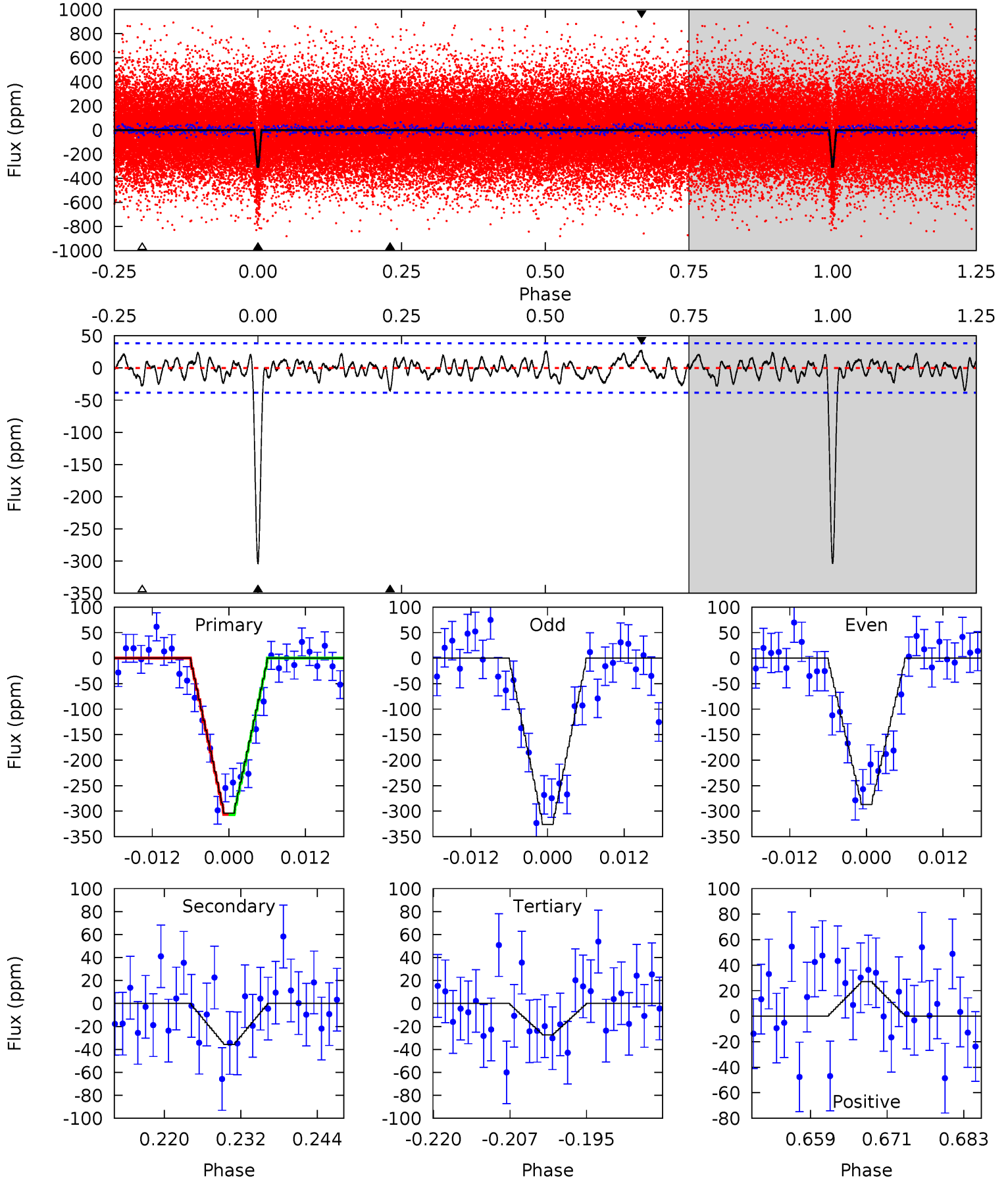
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.6	4.21	3.53	4.11	4.95	2.43	1.38	36.0	35.4	0.68	0.11	1.33	0.99	0.09	1.06



Alt Model-Shift Uniqueness Test

005357545-01, P = 3.757279 Days, E = 130.205502 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.5	4.63	3.56	3.51	4.99	2.51	1.39	35.9	35.9	1.07	1.12	2.55	1.00	0.08	0.02



Stellar Parameters For KIC 005357545

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4901^{+78}_{-78}	$4.618^{+0.012}_{-0.054}$	$0.040^{+0.150}_{-0.150}$	$0.716^{+0.054}_{-0.021}$	$0.807^{+0.028}_{-0.056}$	$3.102^{+0.176}_{-0.615}$
	+2%/-2%	+0%/-1%	+375%/-375%	+8%/-3%	+3%/-7%	+6%/-20%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005357545-01 / KOI 2219.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-29 ± 7	$1.56^{+0.56}_{-0.48}$	1237^{+27}_{-25}	3099^{+450}_{-275}	12^{+16}_{-6}
Alt.	-36 ± 8	$1.47^{+0.53}_{-0.53}$	1239^{+26}_{-23}	3286^{+502}_{-325}	17^{+23}_{-9}

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 $A_{obs} \gg 1.0$

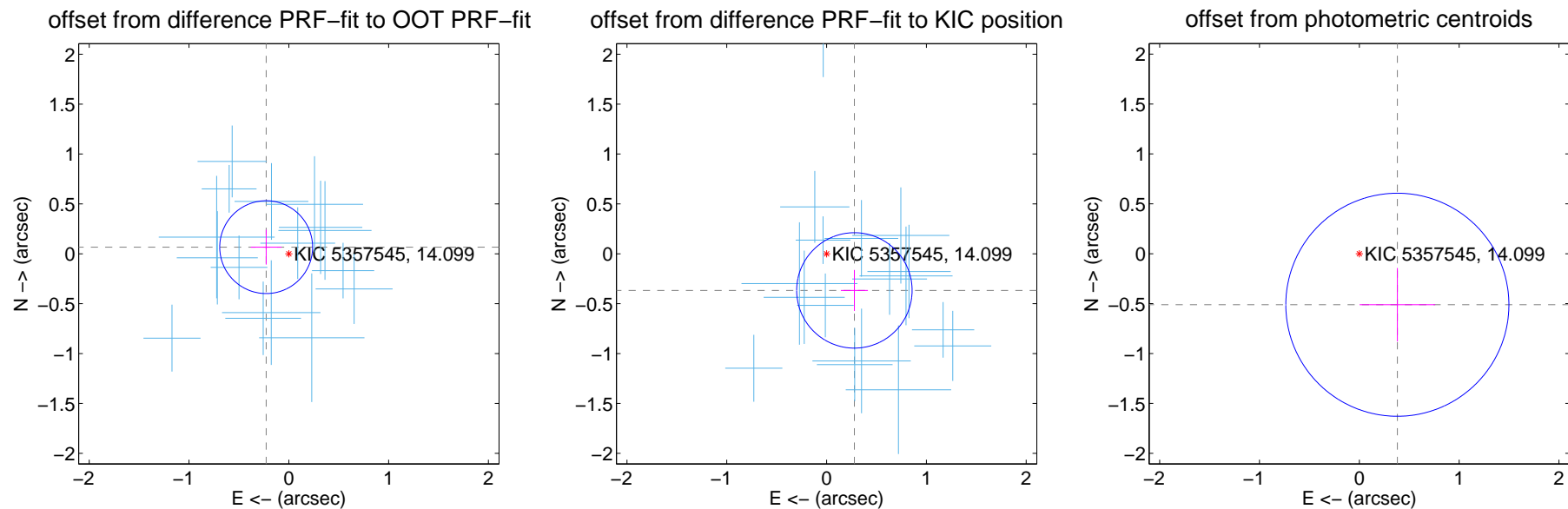
DV Centroid Data

Supplemental centroid analysis for 005357545-01. Kepler magnitude: 14.10. Transit SNR 24.90

There are 17 quarters with good PRF difference image offsets

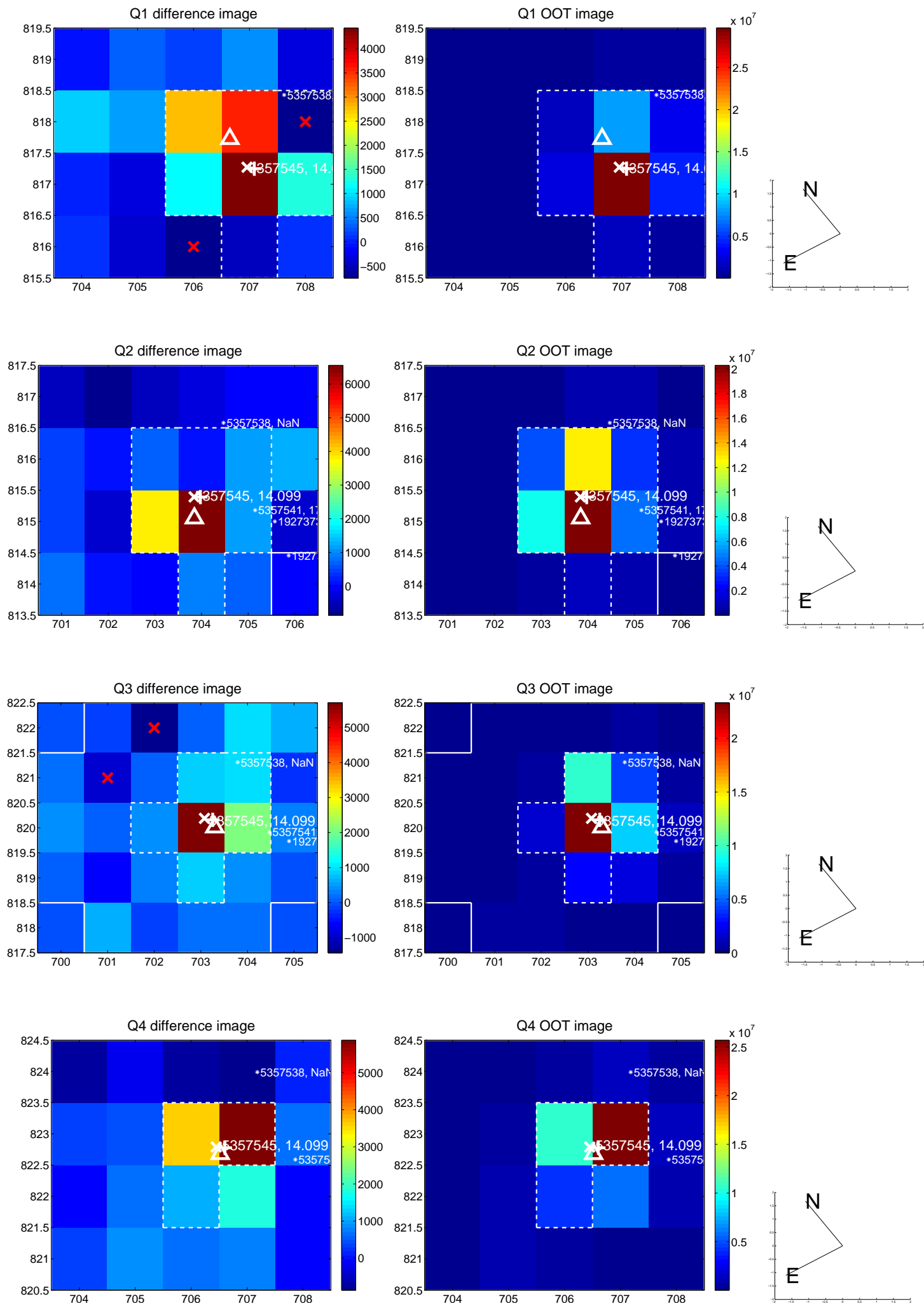
The direct PRF centroid is offset from the target star catalog position by about 0.72 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.237 ± 0.155	1.53	0.227 ± 0.153	0.067 ± 0.175
PRF-fit source offset from KIC position	0.461 ± 0.193	2.39	-0.279 ± 0.135	-0.367 ± 0.205
photometric centroid source offset	0.64 ± 0.37	1.71	-0.38 ± 0.38	-0.51 ± 0.37

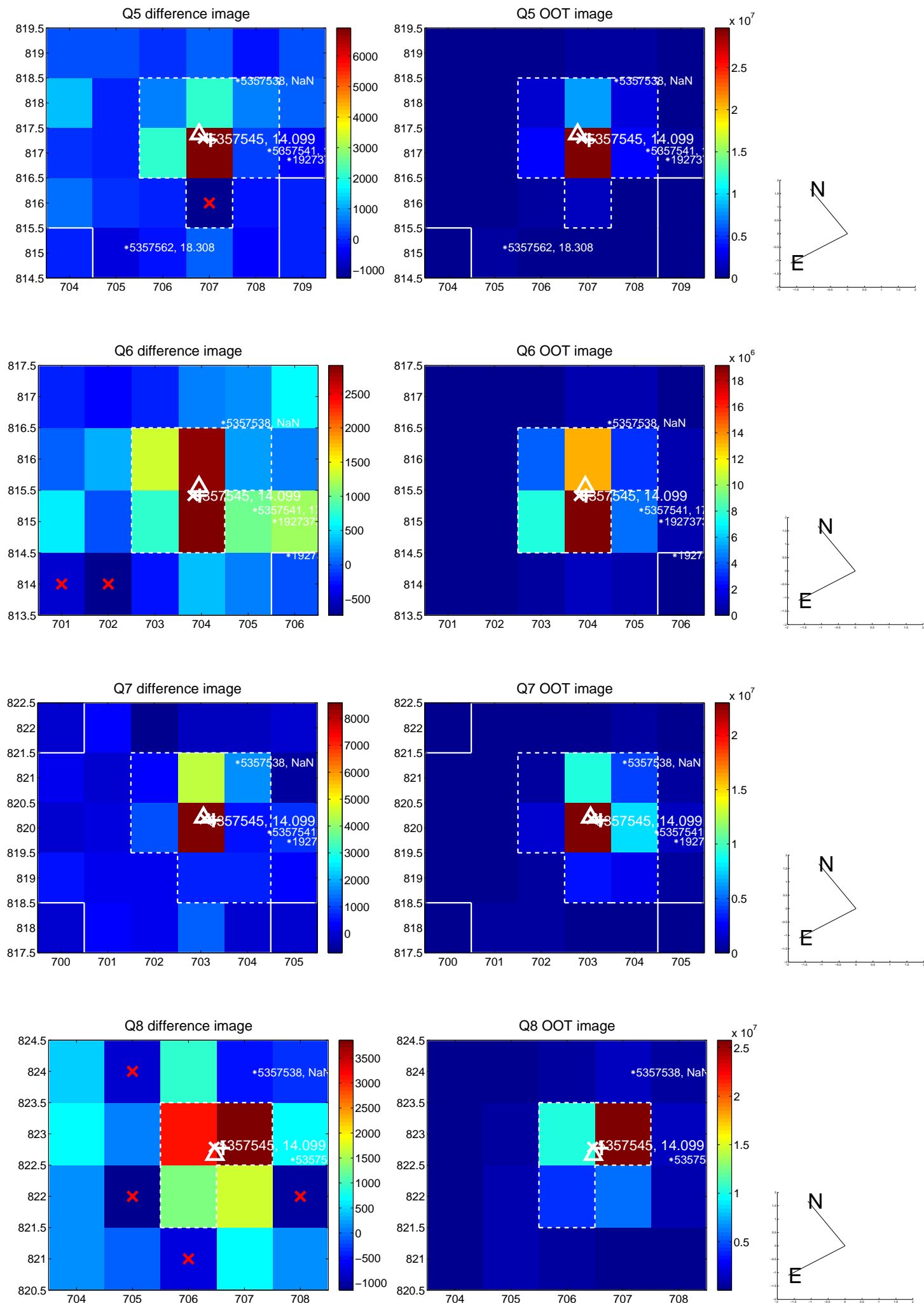


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

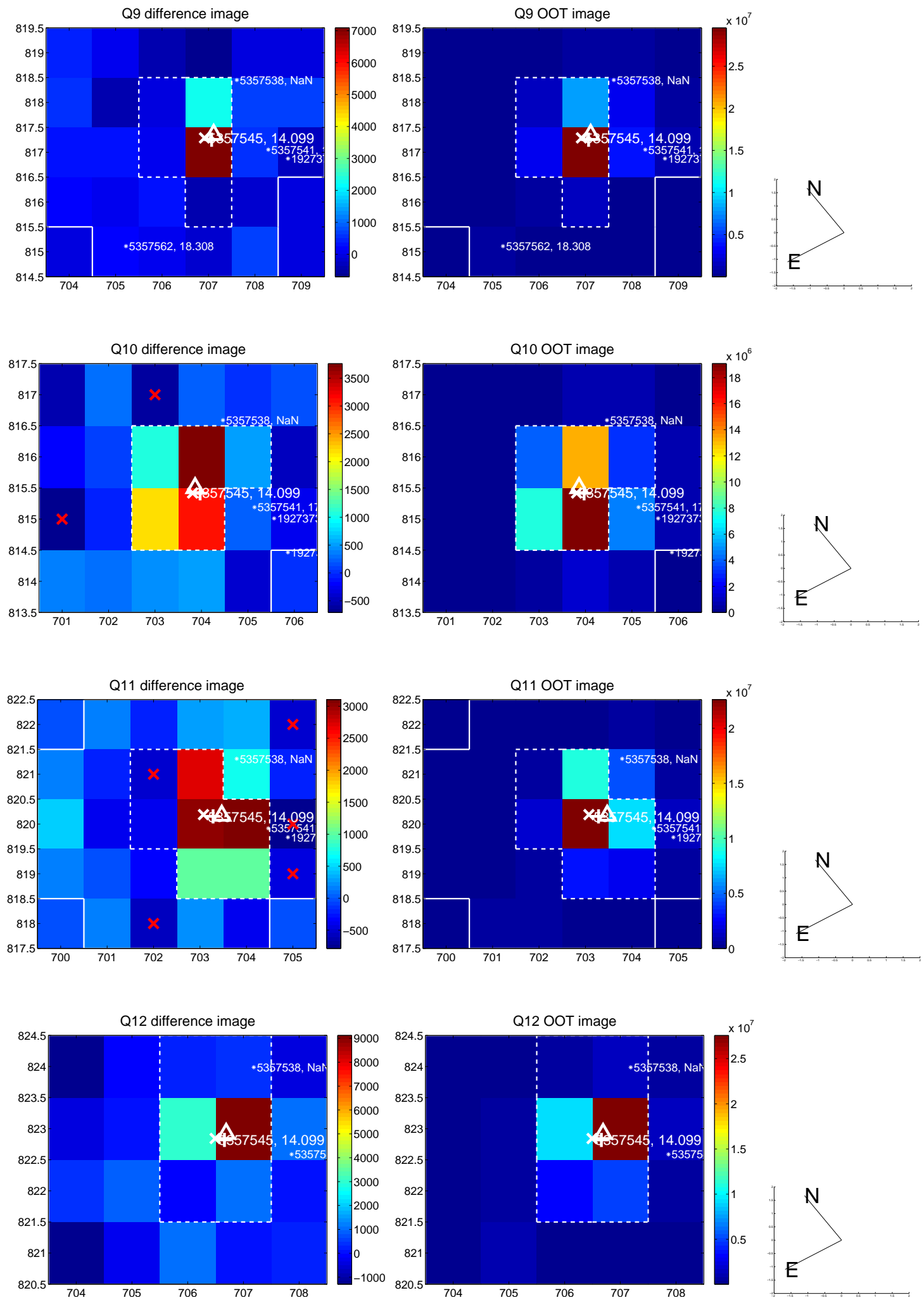
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



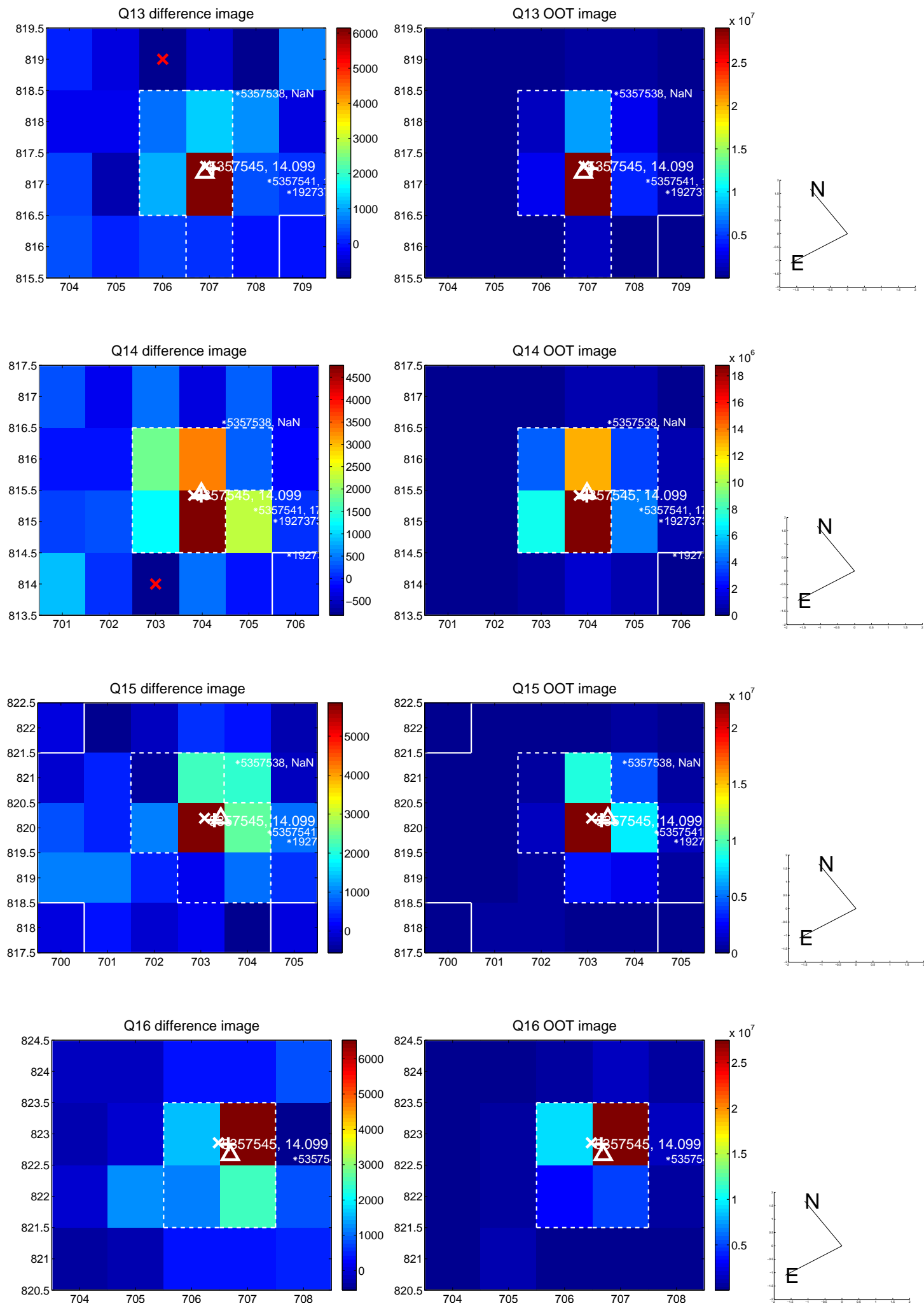
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



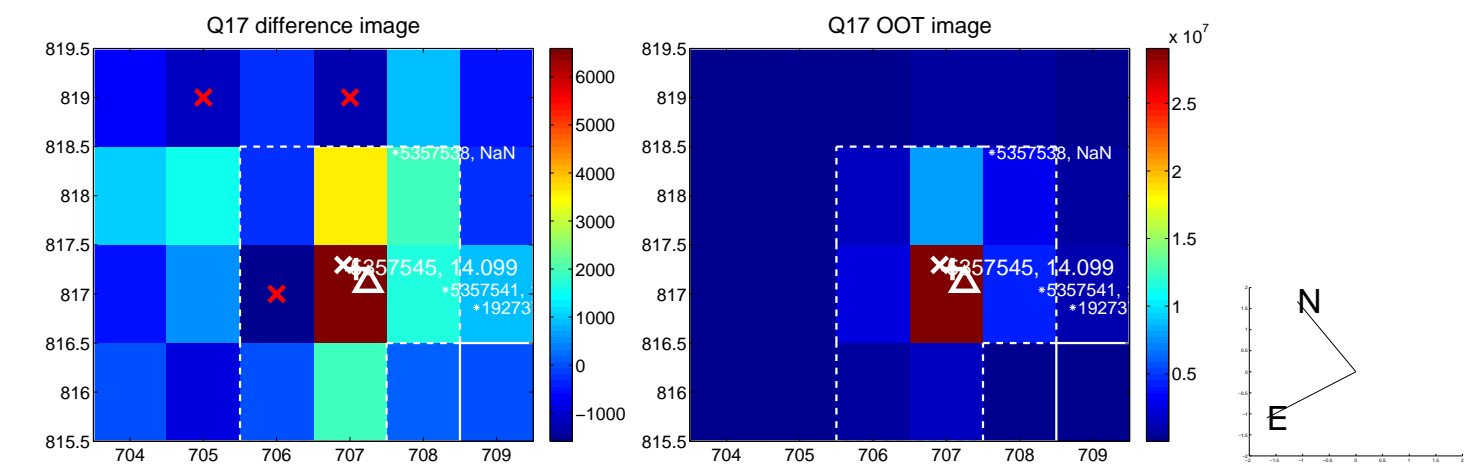
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



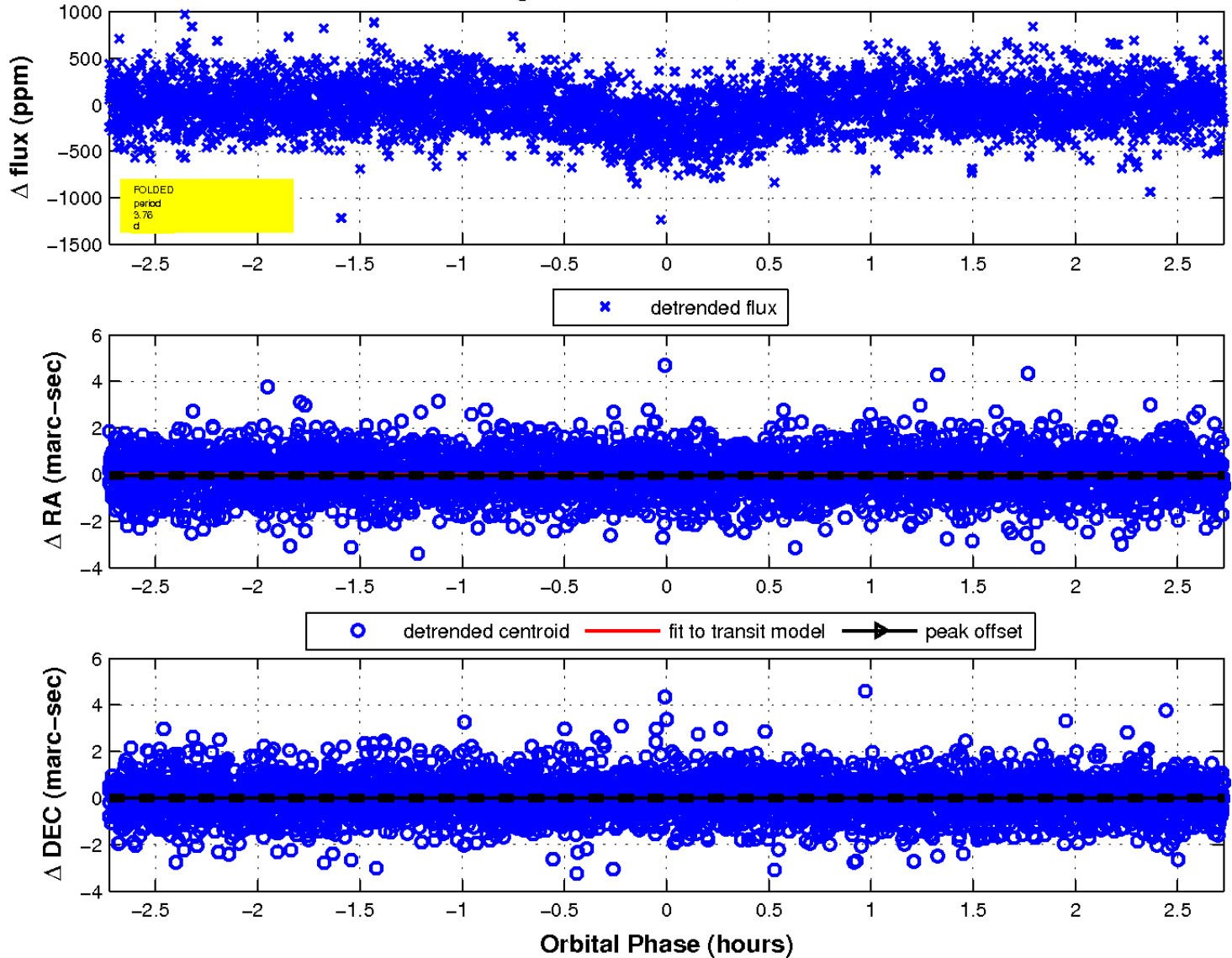
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

