

KIC 007457278

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})
007457278-01	OBS	3188.01	12.610226	136.652084	39.9	20.575	10.4	10.8	1.00	6047	0.65	101.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007457278-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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 007457278-01

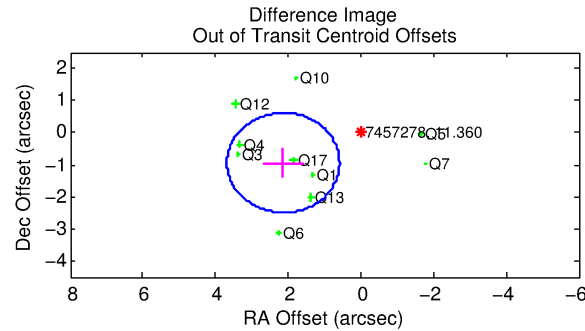
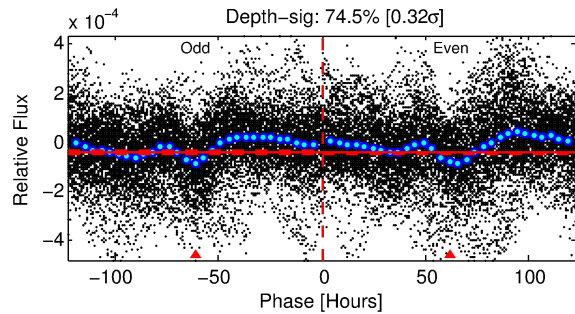
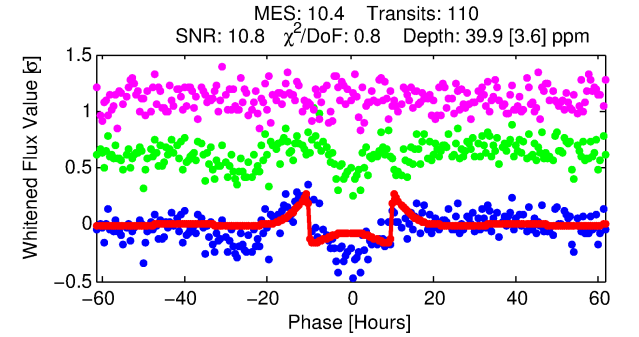
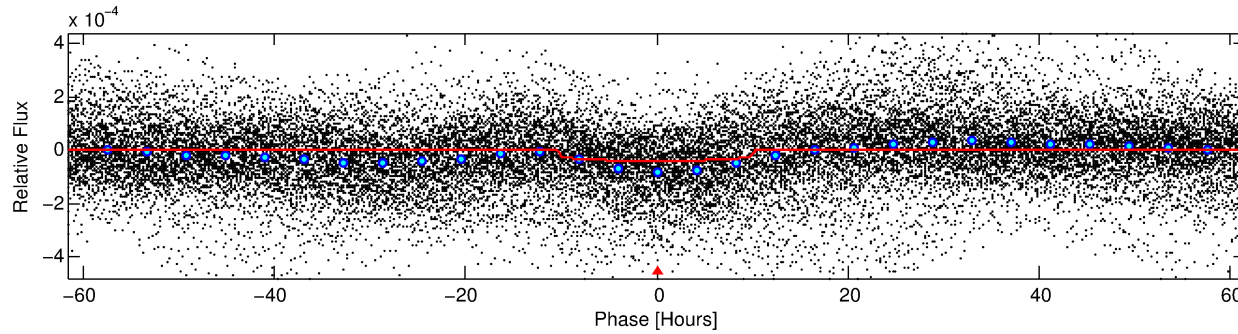
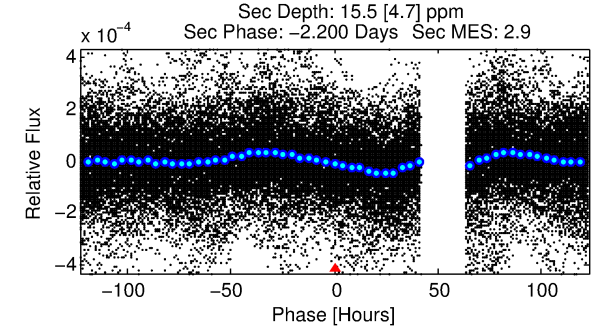
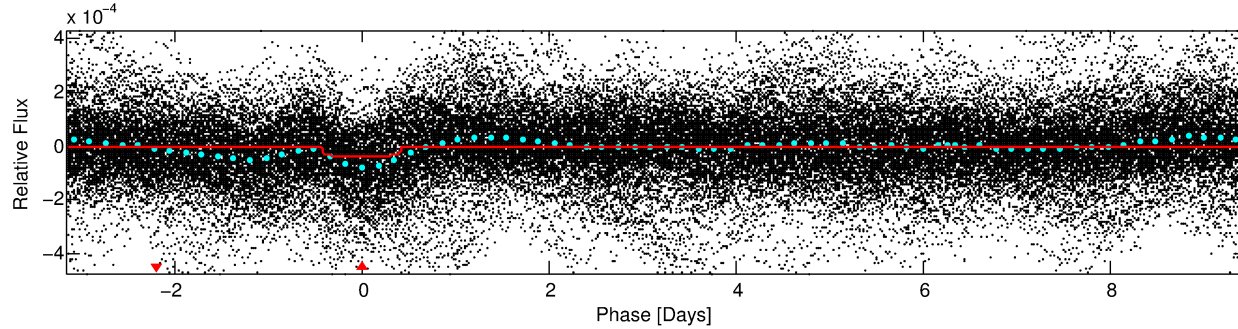
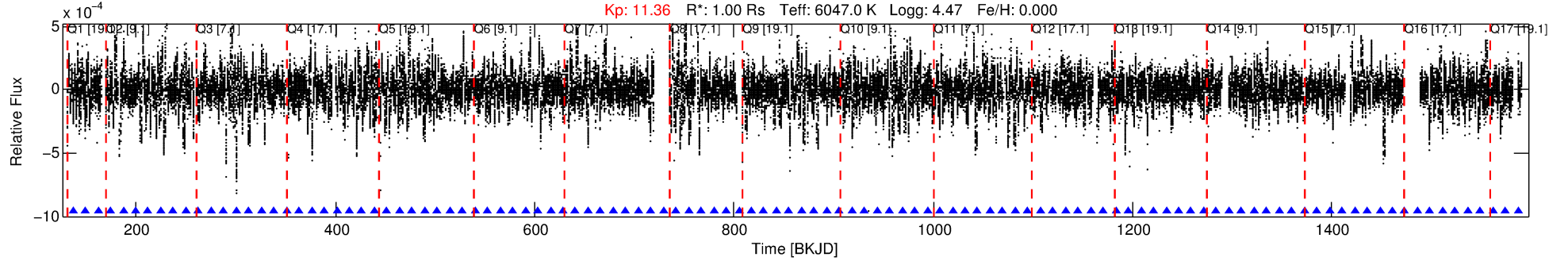
No Significant Match Found

DV One-Page Summary

KIC: 7457278 Candidate: 1 of 1 Period: 12.610 d

KOI: K03188 Corr: No Ephemeris Match

Kp: 11.36 R*: 1.00 Rs Teff: 6047.0 K Logg: 4.47 Fe/H: 0.000



DV Fit Results:

Period = 12.61023 [0.00010] d
Epoch = 136.6521 [0.0065] BKJD
Rp/R* = 0.0060 [0.0008]
a/R* = 4.03 [2.14]
b = 0.54 [0.73]
Seff = 101.55 [29.80]
Teff = 809 [59] K
Rp = 0.65 [0.16] Re
a = 0.1088 [0.0195] AU
Ag = 236.02 [113.21] [2.08σ]
Teffp = 4905 [509] K [7.99σ]

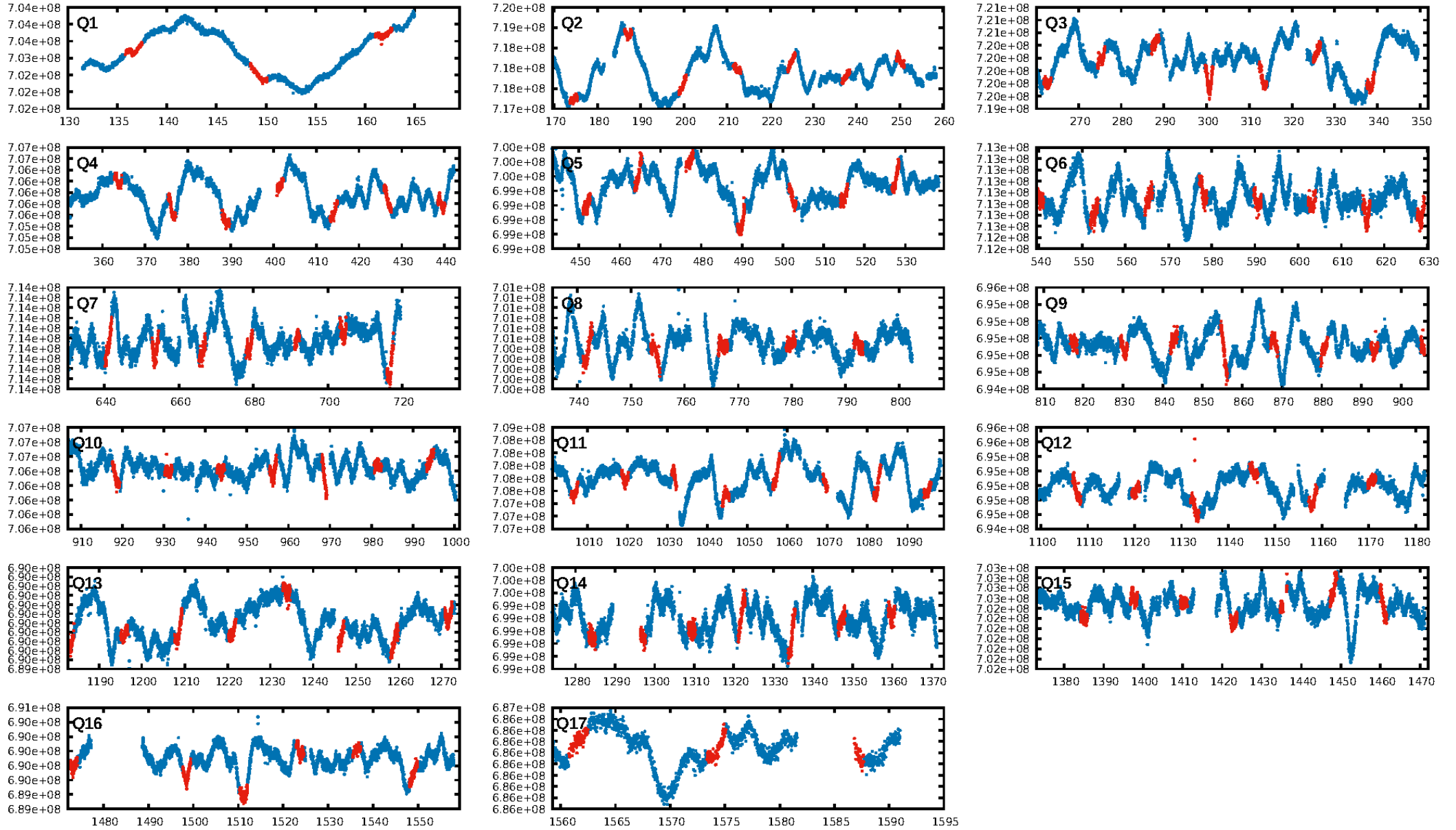
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 81.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.18e-26
RollingBand-fgt: 1.00 [104/104]
GhostDiagnostic-chr: 2.63
Centroid-sig: 2.3%
Centroid-so: 1.511 arcsec [1.90σ]
OotOffset-rm: 2.336 arcsec [4.51σ]
KicOffset-rm: 2.280 arcsec [4.39σ]
OotOffset-st: 2/2/2/4 [10]
KicOffset-st: 2/2/2/4 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [17/17]

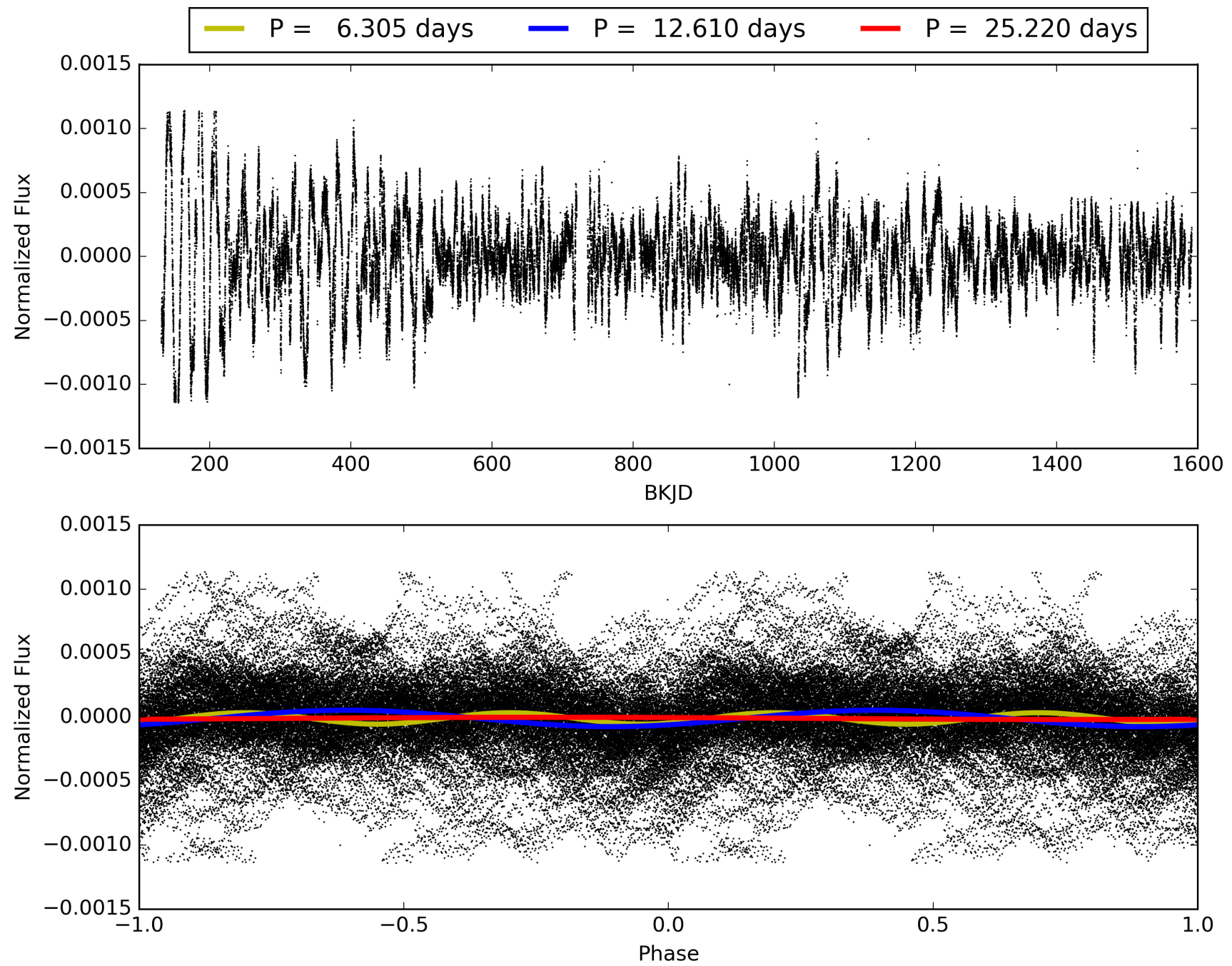
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:26:25 Z

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

TCE 007457278-01, PDC Light Curves

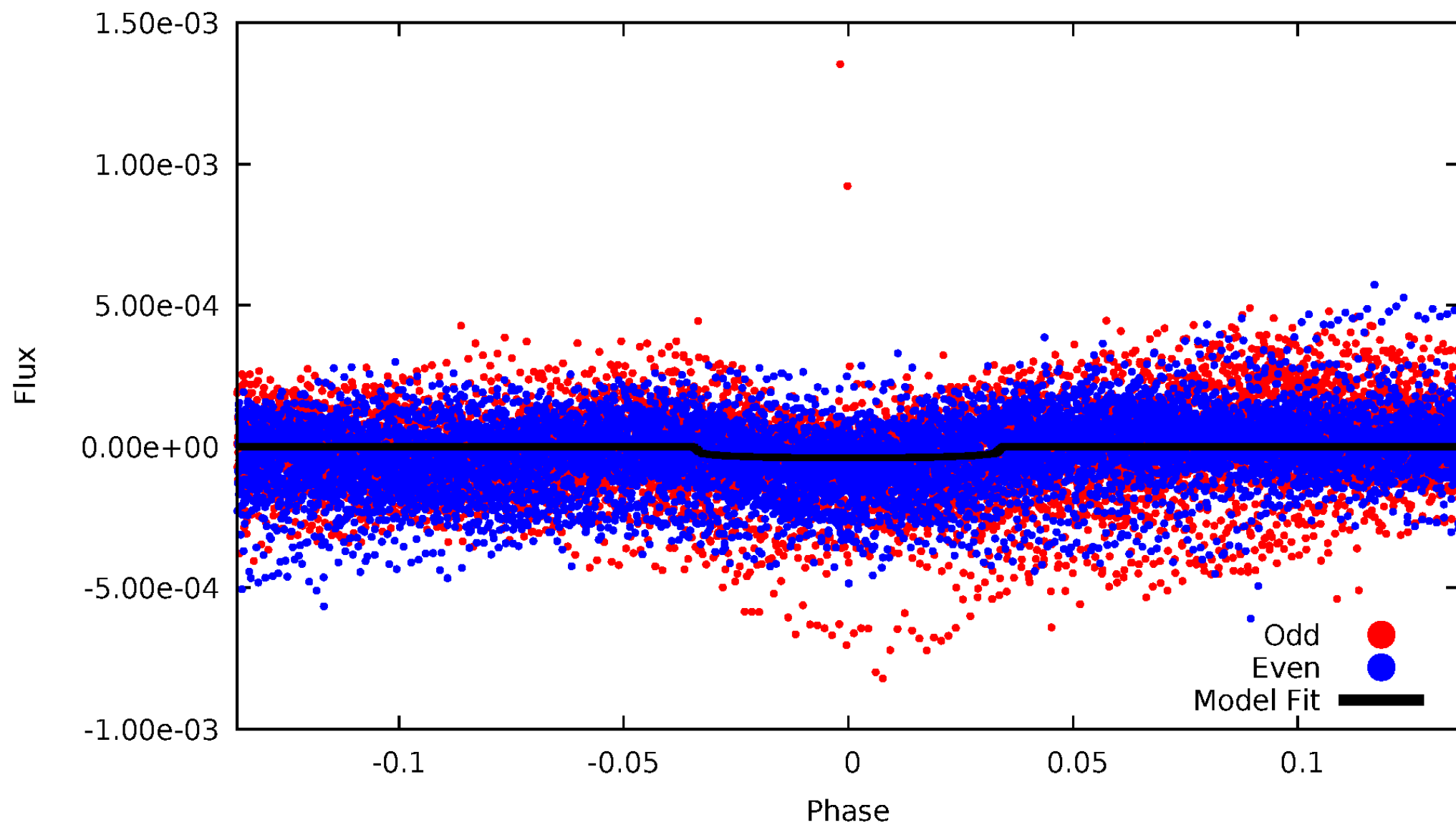


TCE 007457278-01



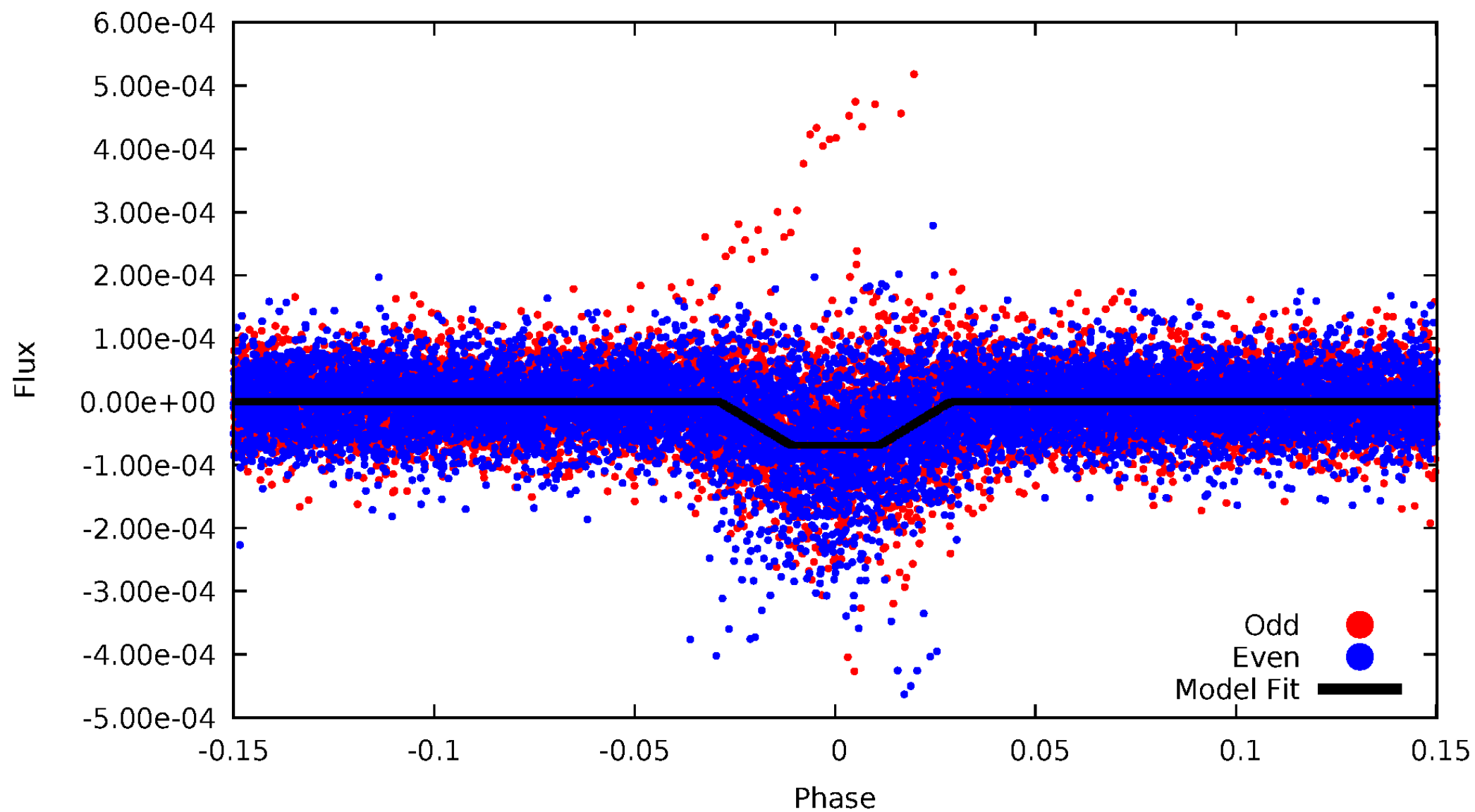
DV Odd/Even

TCE 007457278-01



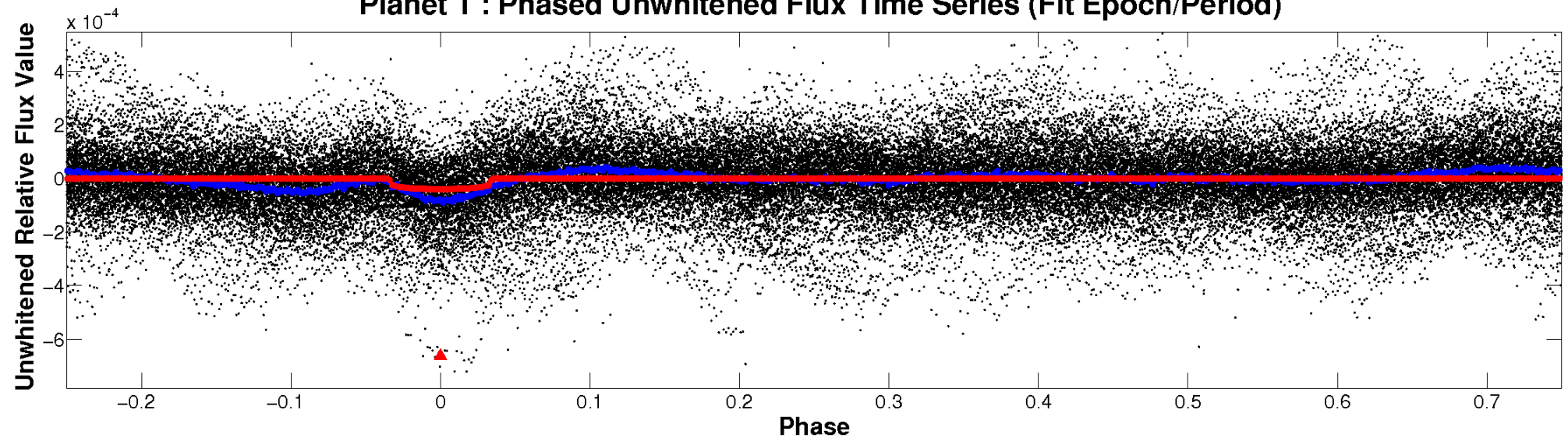
ALT Odd/Even

TCE 007457278-01

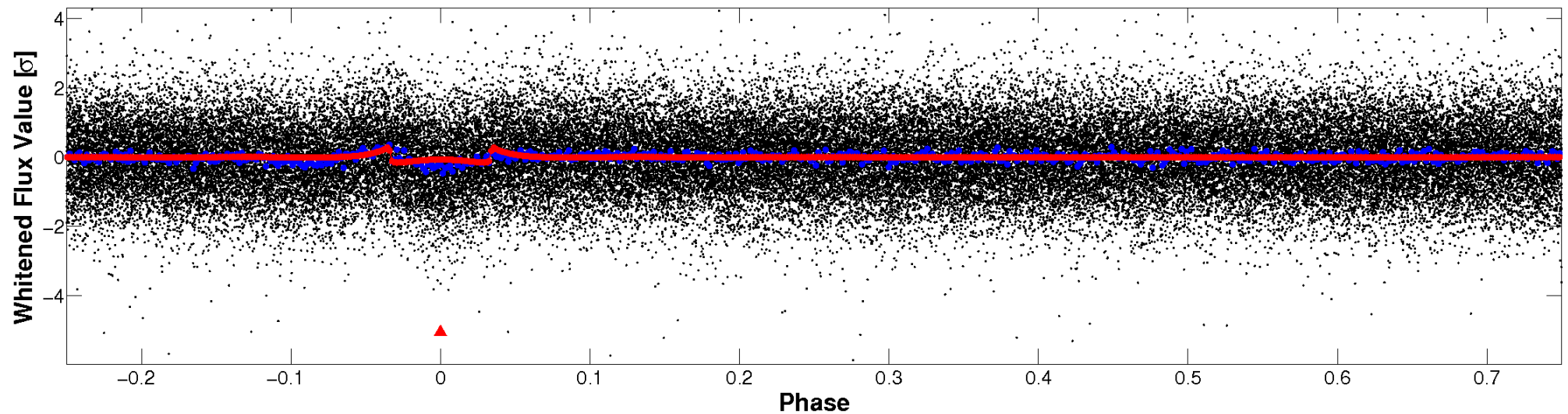


Non-Whitened Vs. Whitened Light Curve

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

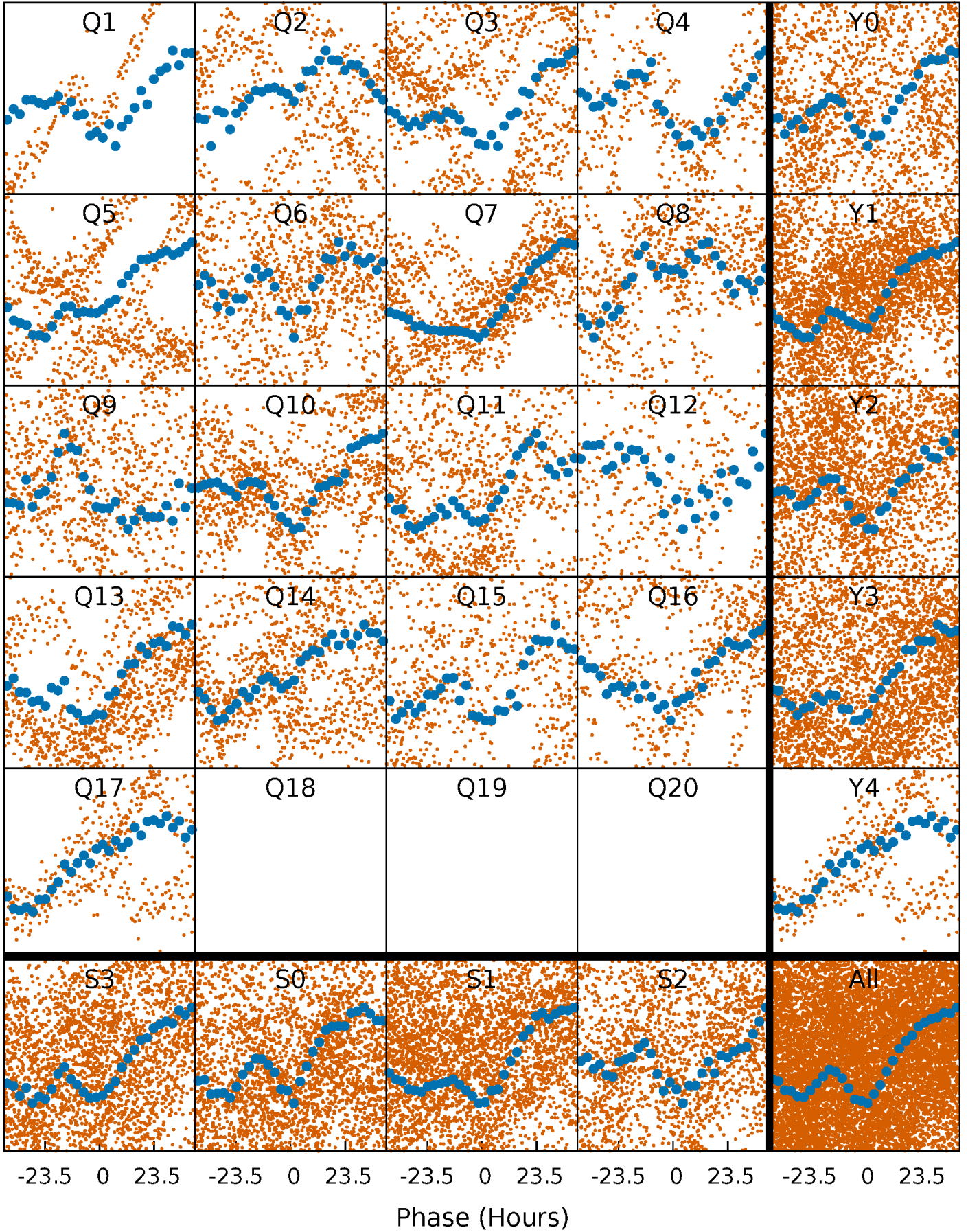


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



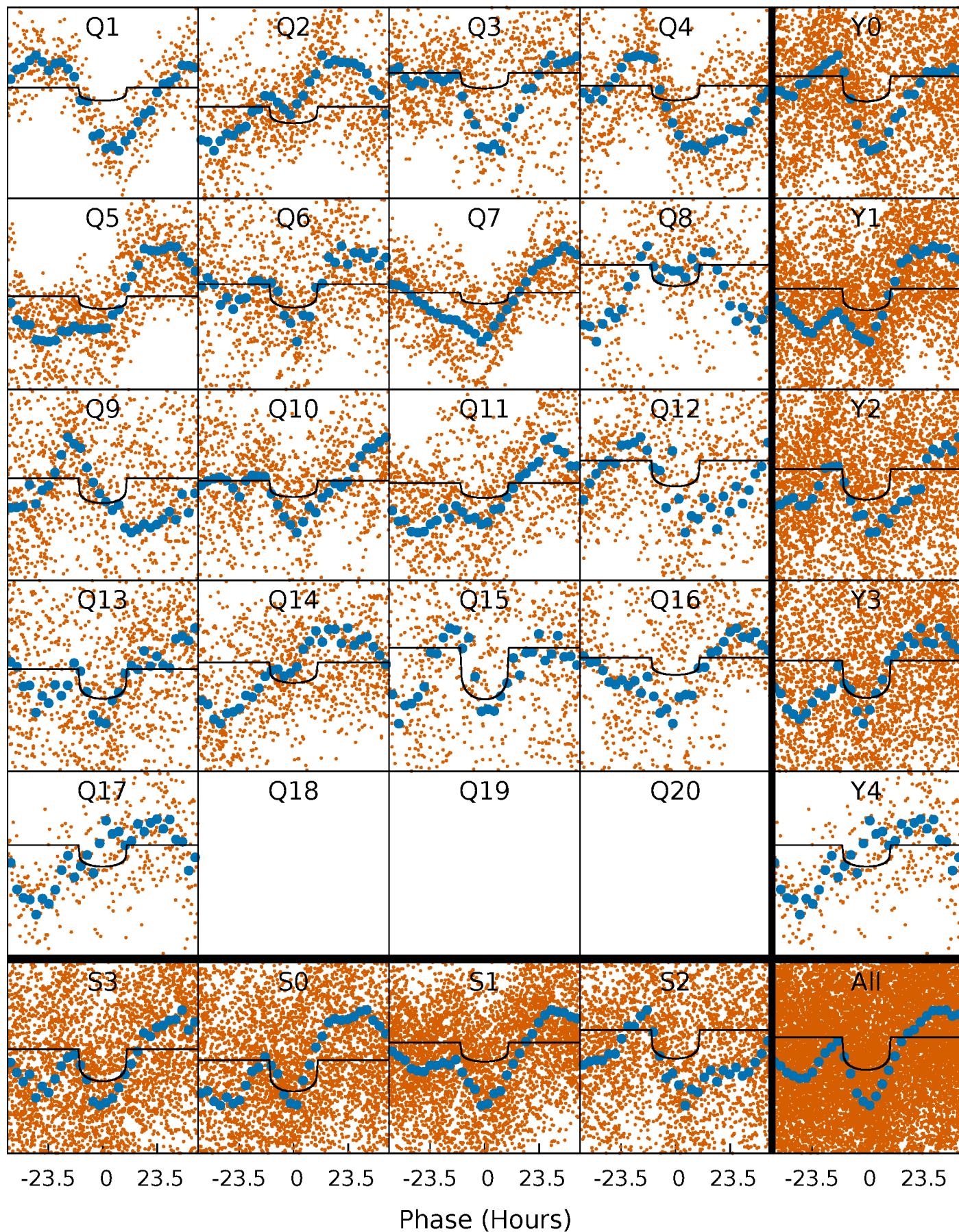
PDC Quarter-Phased Transit Curves

TCE 007457278-01 P= 12.610226 Days $T_0=136.652084$ (BKJD)



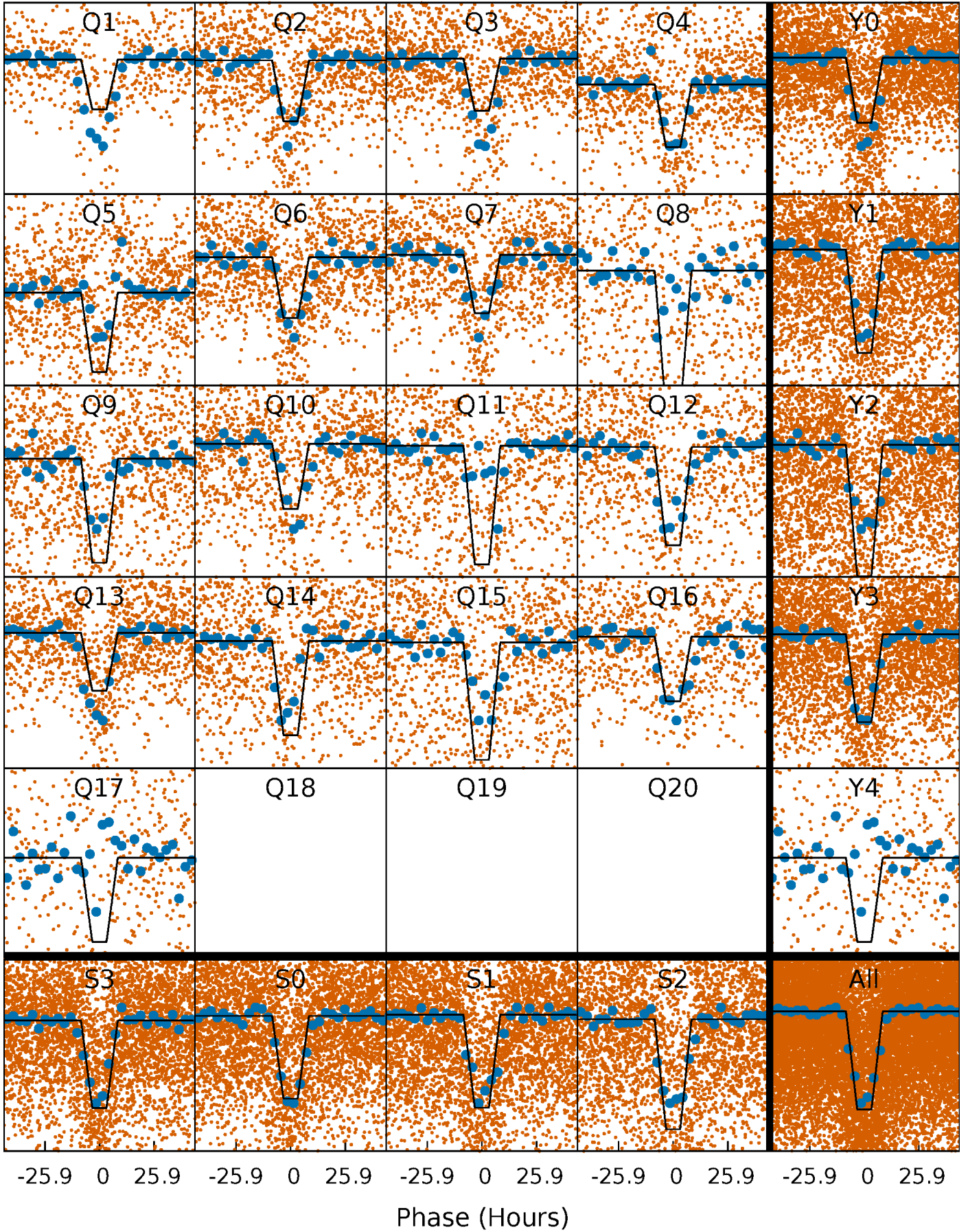
DV Quarter-Phased Transit Curves

TCE 007457278-01 P= 12.610226 Days $T_0=136.652084$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

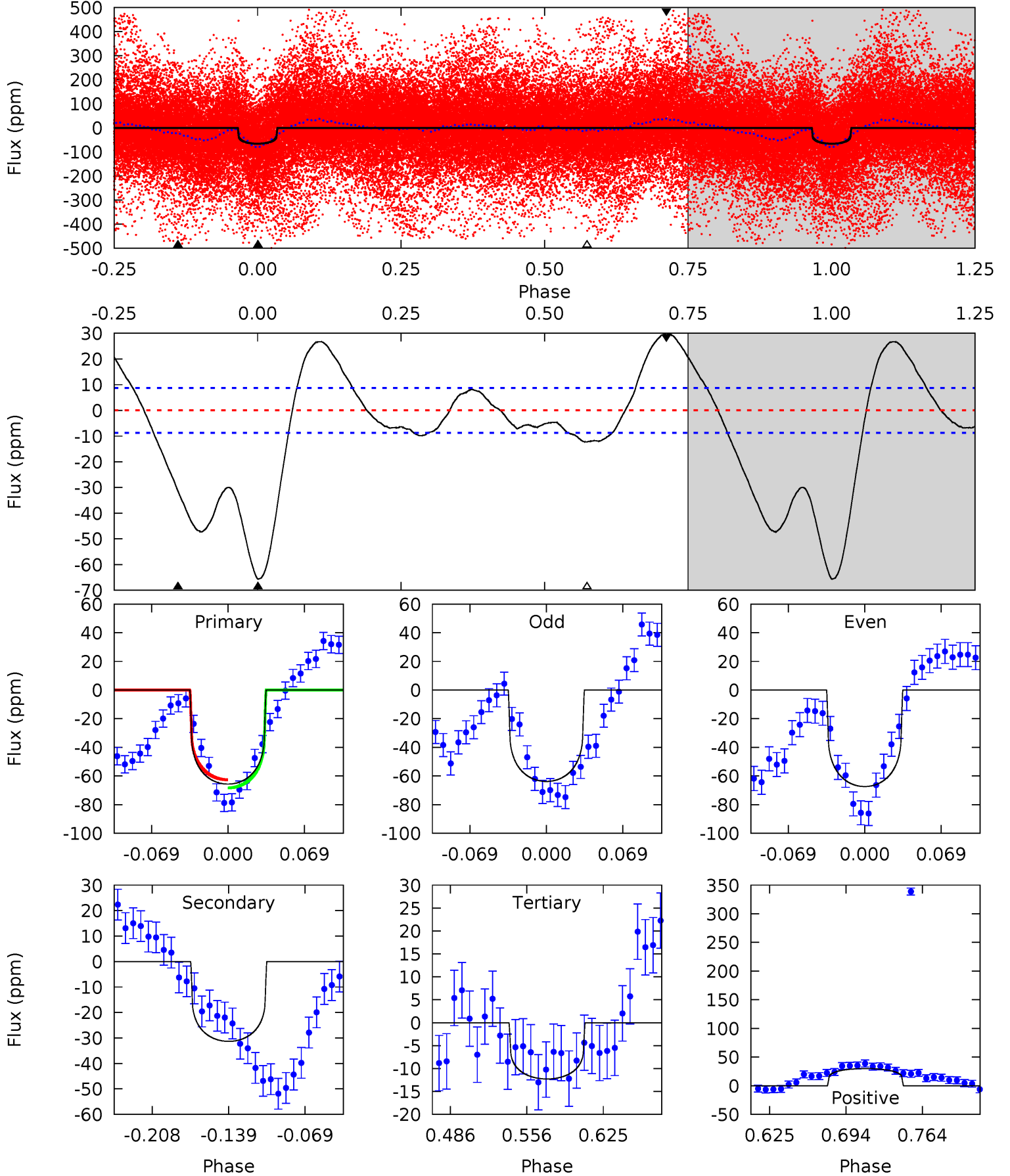
TCE 007457278-01 P= 12.609238 Days $T_0=136.701614$ (BKJD)



DV Model-Shift Uniqueness Test

007457278-01, P = 12.610226 Days, E = 124.041858 Days

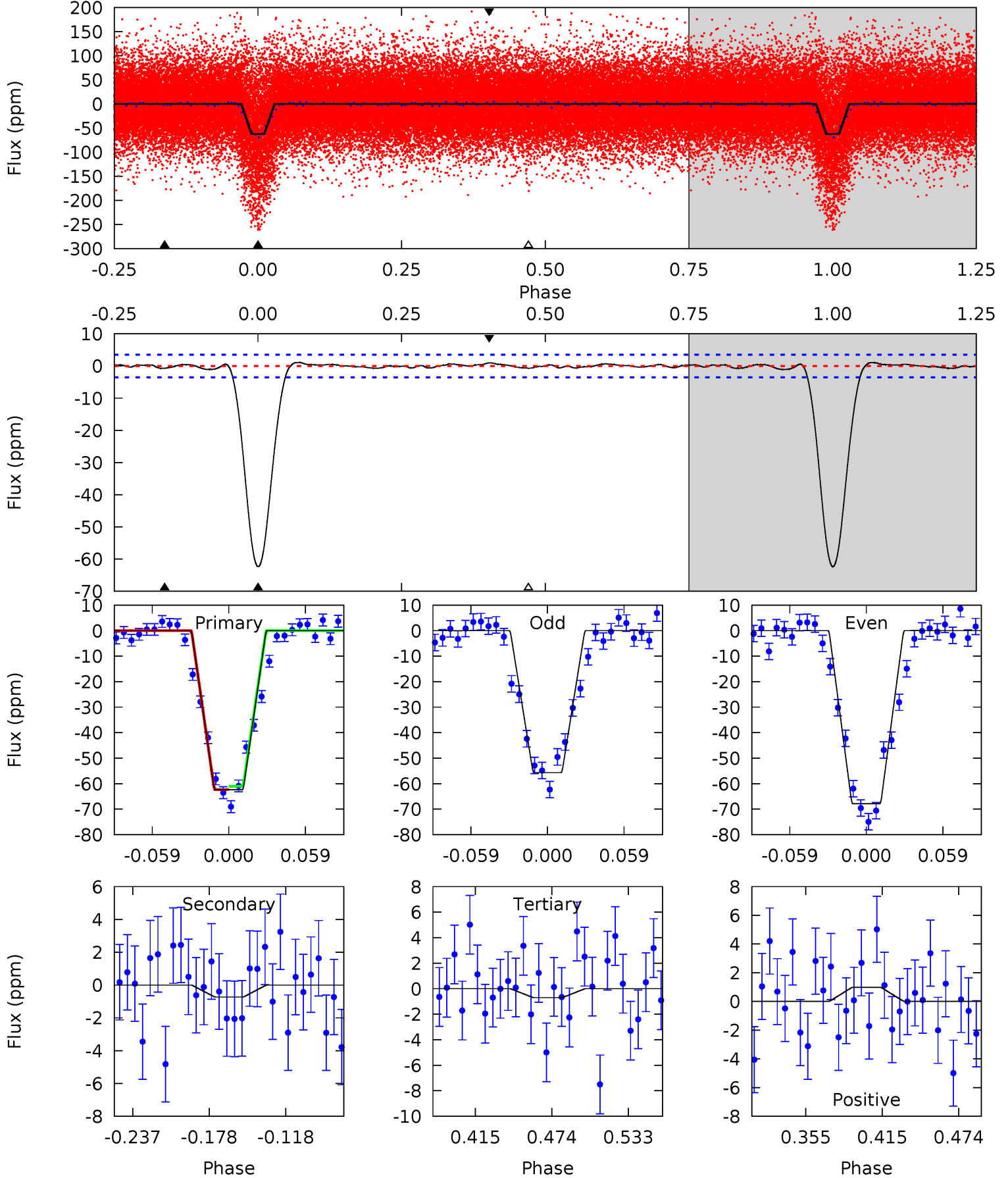
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.9	16.6	6.51	15.9	4.64	1.82	6.81	28.3	19.0	10.1	0.75	0.97	1.60	0.31	1.50



Alt Model-Shift Uniqueness Test

007457278-01, P = 12.609238 Days, E = 124.092376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.8	0.96	0.93	1.31	4.67	1.89	0.60	81.8	81.5	0.03	-0.34	8.07	1.08	0.02	0.87



Stellar Parameters For KIC 007457278

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6047^{+163}_{-181}	$4.470^{+0.050}_{-0.150}$	$0.000^{+0.250}_{-0.350}$	$1.002^{+0.206}_{-0.111}$	$1.081^{+0.110}_{-0.147}$	$1.512^{+0.381}_{-0.614}$
	+3%/-3%	+1%/-3%	+inf%/-inf%	+21%/-11%	+10%/-14%	+25%/-41%
Source	PHO1	FLK73	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 007457278-01 / KOI 3188.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-31 ± 2	$0.67^{+0.11}_{-0.10}$	1150^{+61}_{-52}	5838^{+447}_{-369}	441^{+166}_{-118}
Alt.	-1 ± 1	$0.92^{+0.14}_{-0.11}$	1149^{+63}_{-48}	2700^{+286}_{-4689}	$5.345^{+5.789}_{-5.383}$

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 $A_{obs} \gg 1.0$

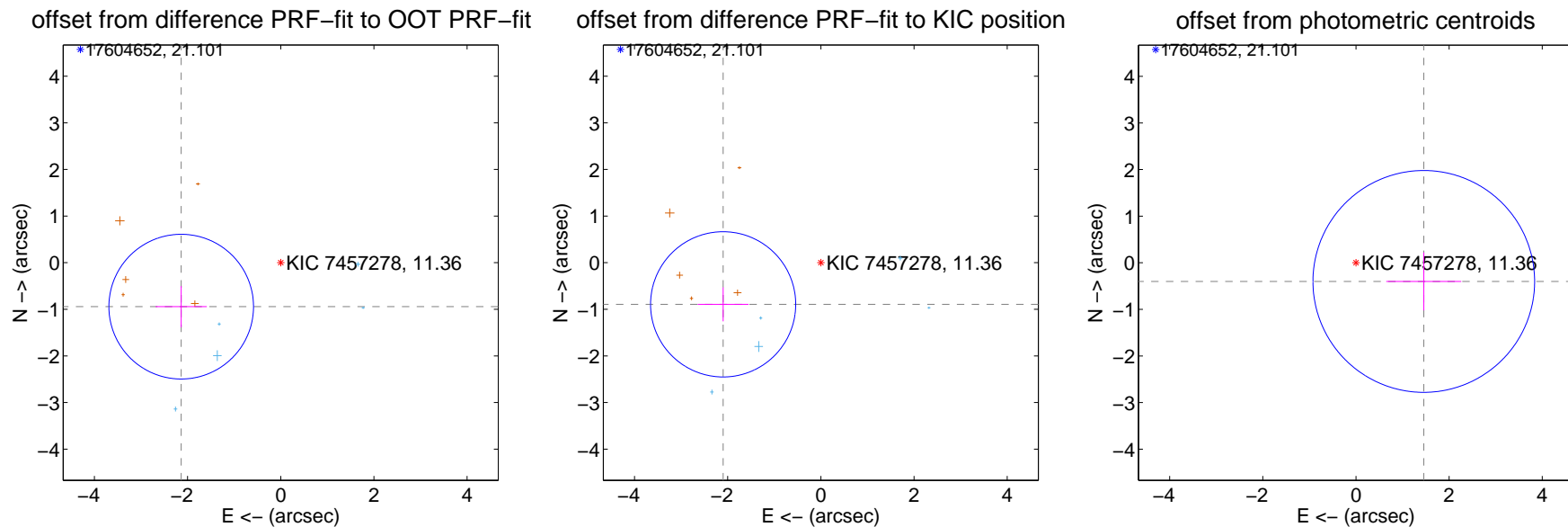
DV Centroid Data

Supplemental centroid analysis for 007457278-01. **Kepler magnitude: 11.36**. Transit SNR 10.82

There are 5 quarters with good PRF difference image offsets

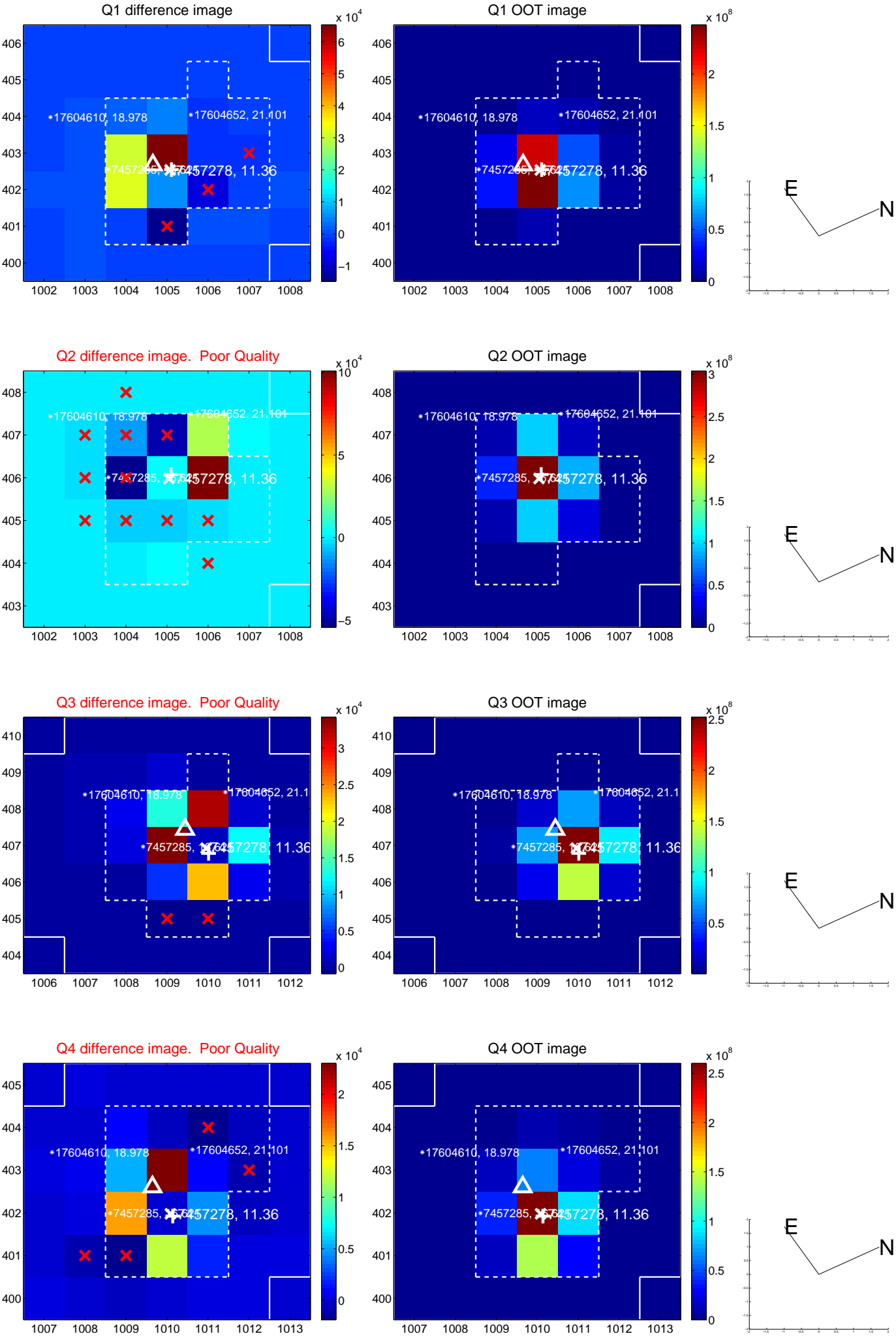
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.336 ± 0.517	4.51	2.137 ± 0.548	-0.943 ± 0.440
PRF-fit source offset from KIC position	2.280 ± 0.519	4.39	2.098 ± 0.547	-0.894 ± 0.364
photometric centroid source offset	1.51 ± 0.79	1.90	-1.46 ± 0.80	-0.40 ± 0.62

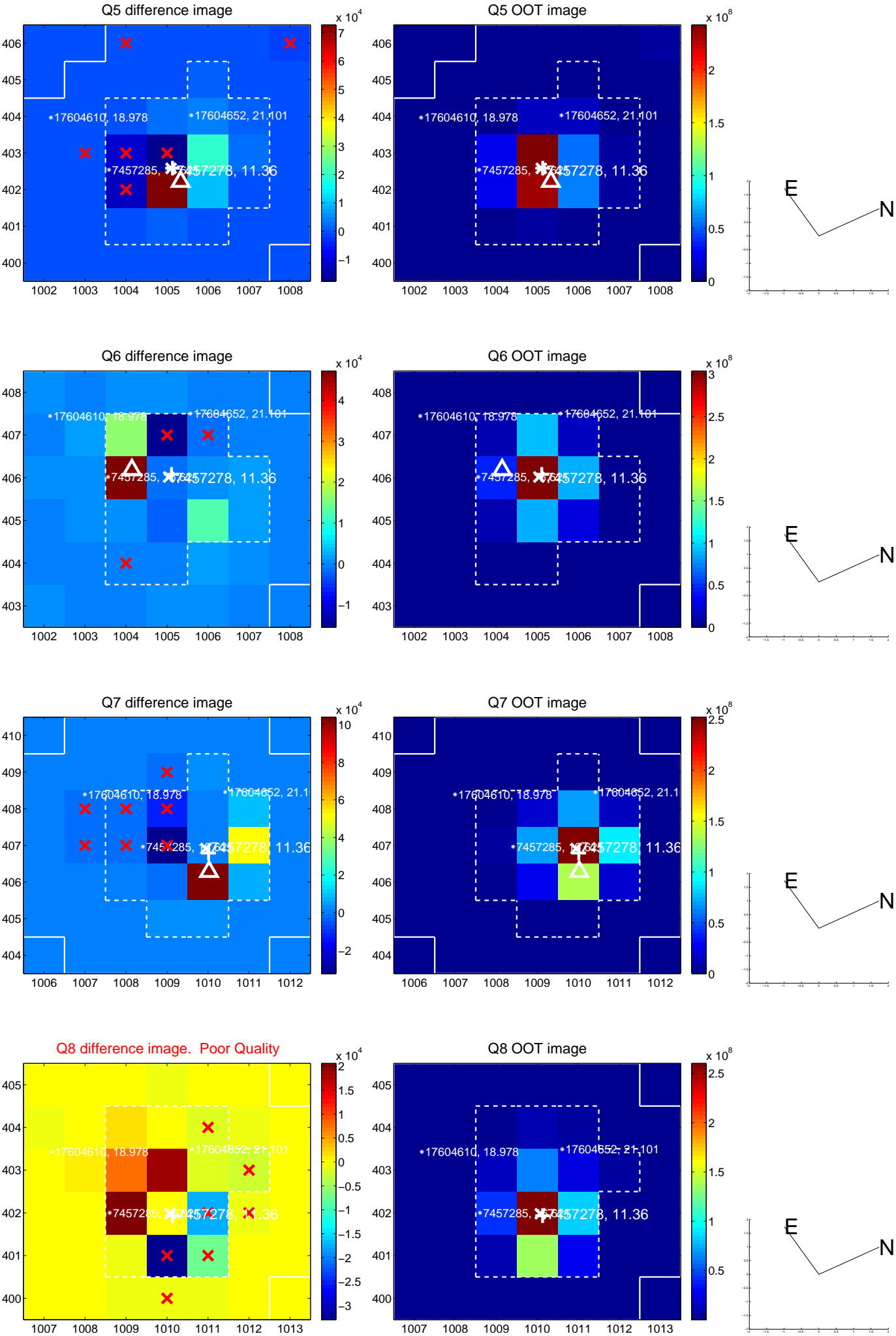


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

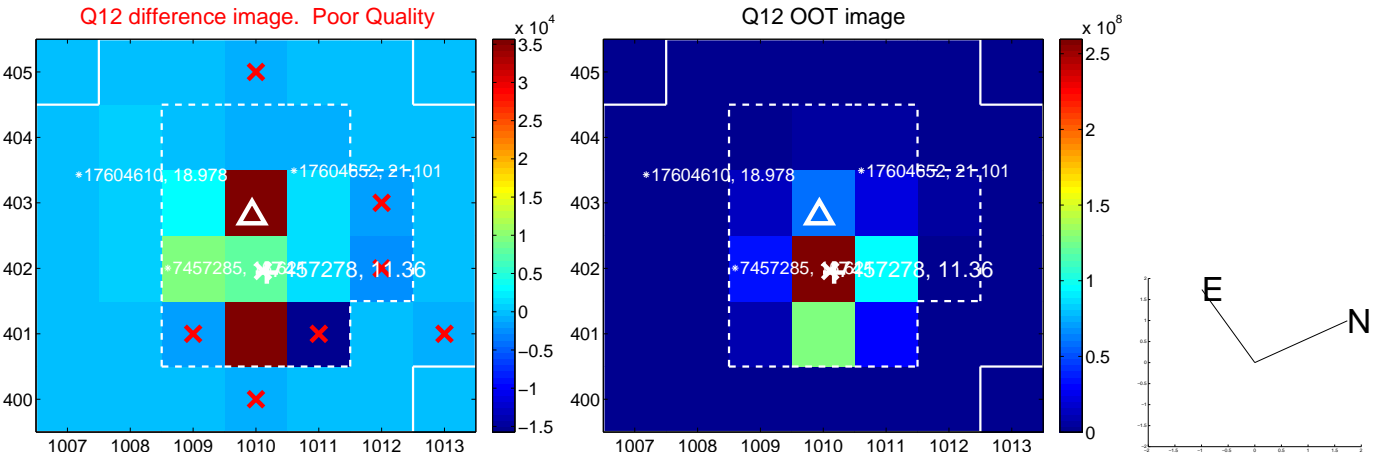
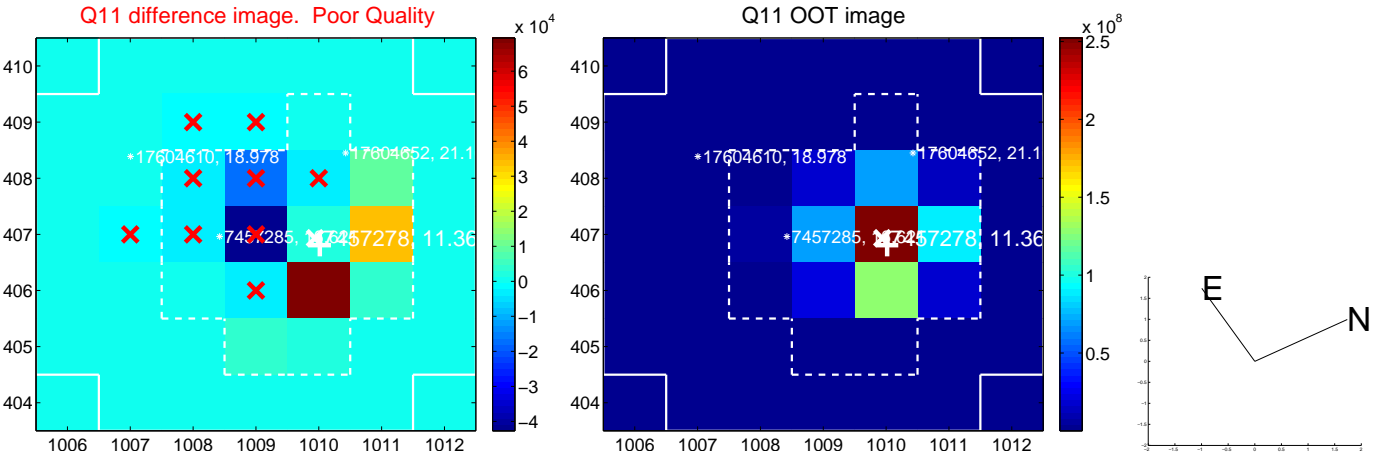
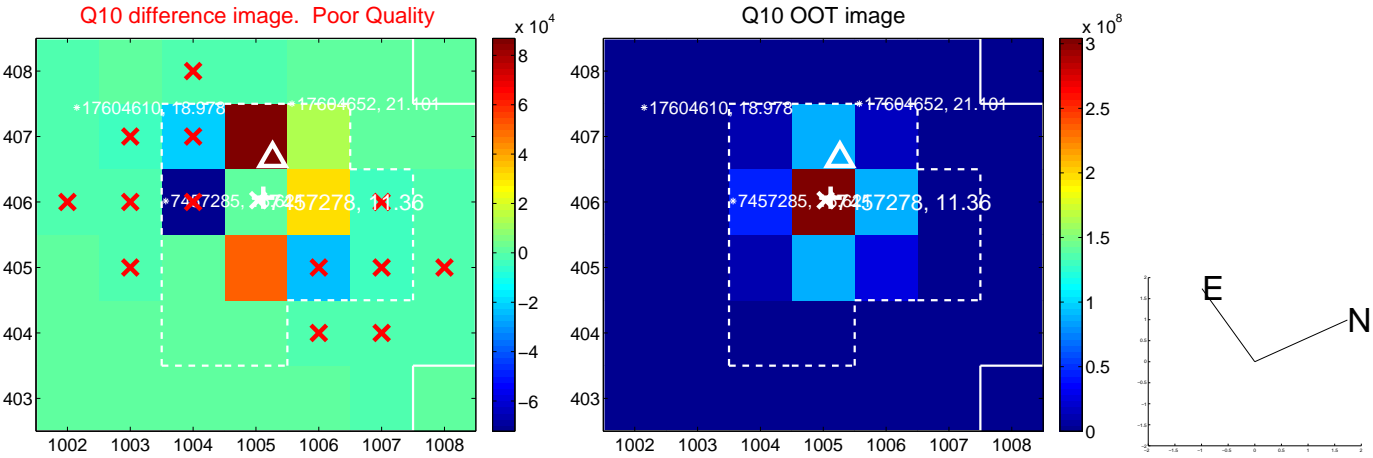
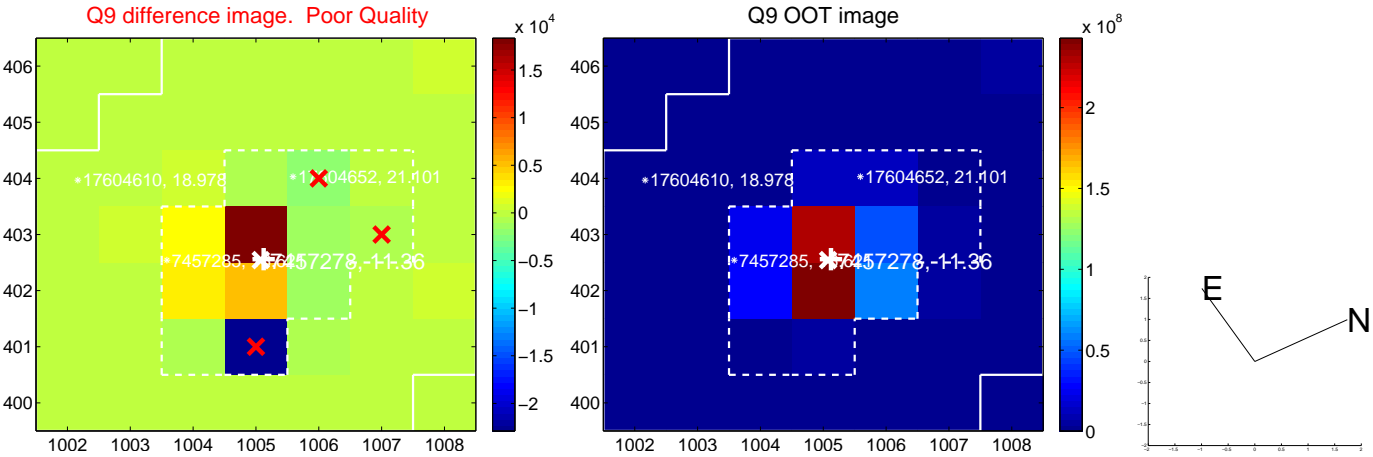
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



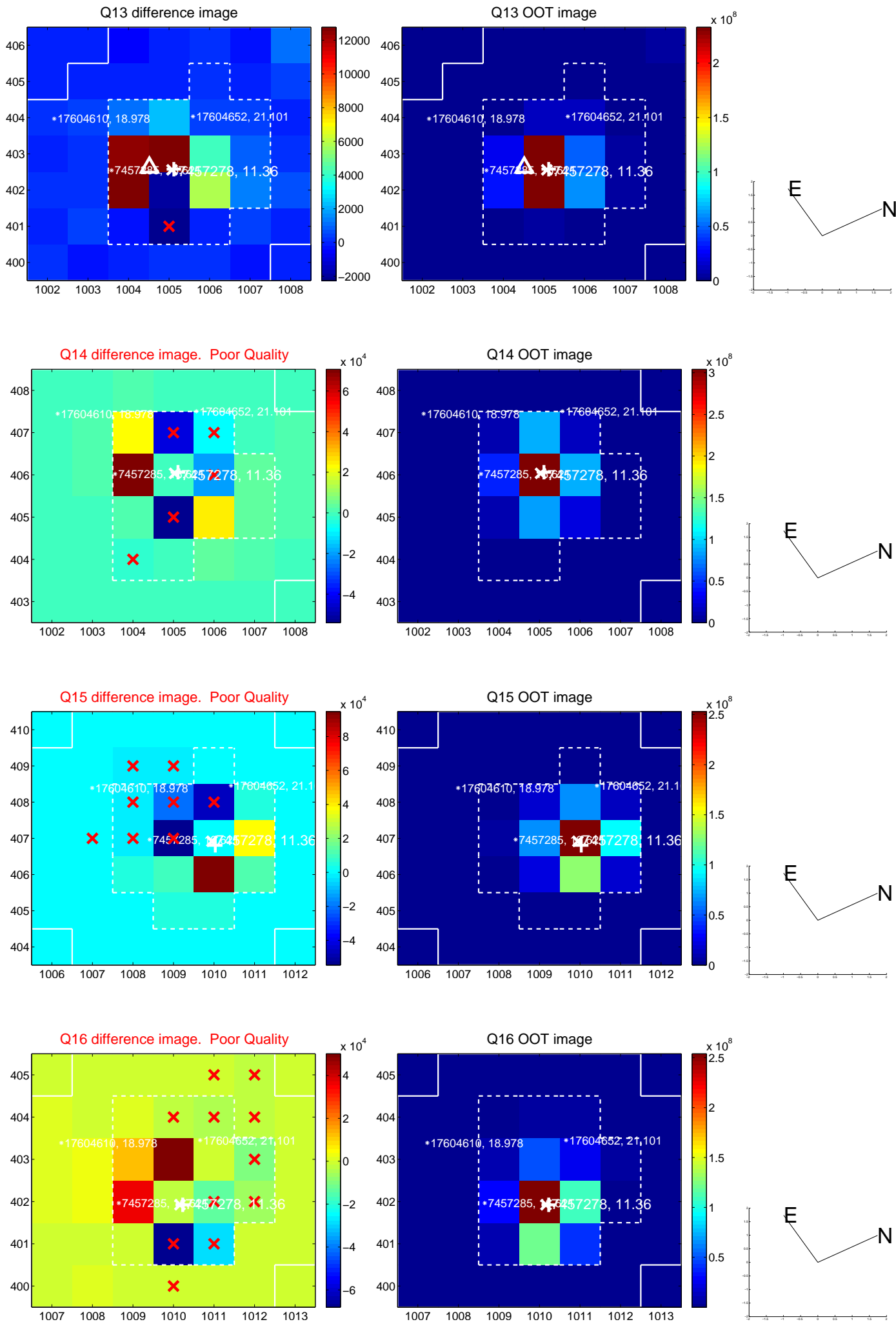
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



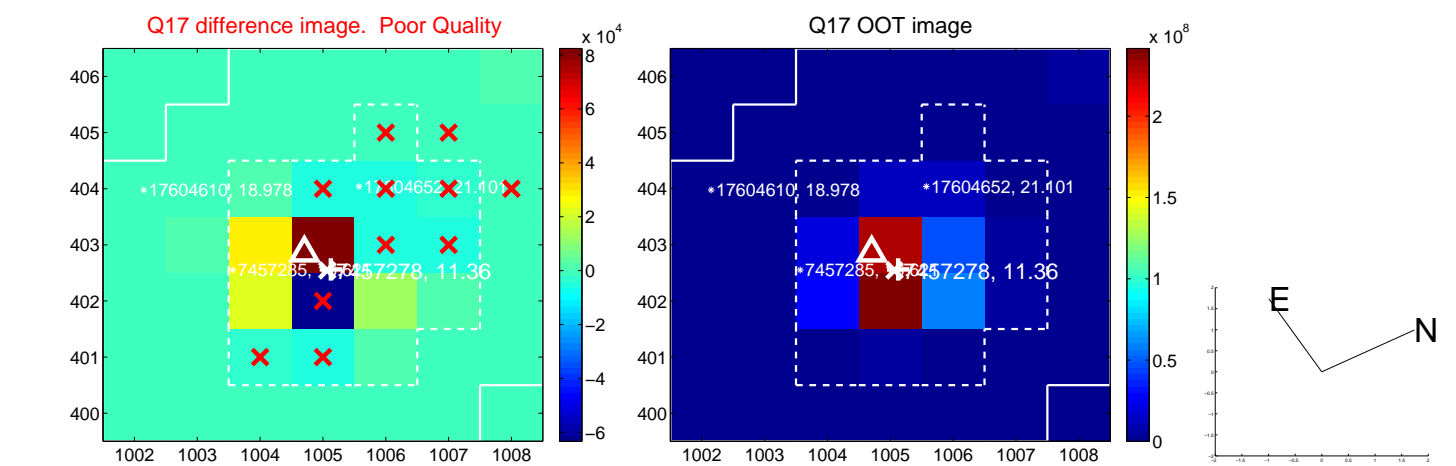
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



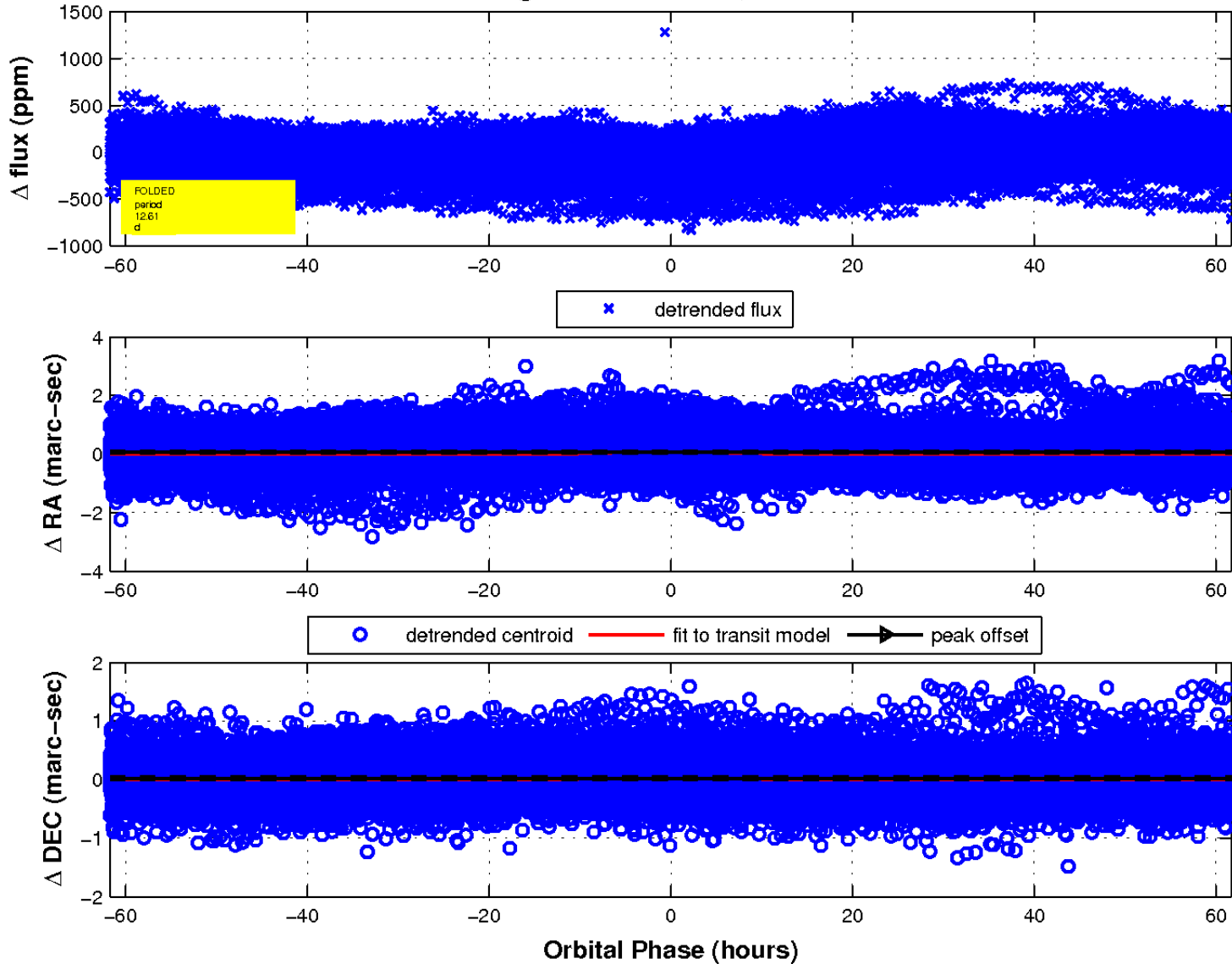
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

