

KIC 010253638

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})
010253638-01	OBS	7608.01	7.454032	137.235541	31.6	21.642	12.4	11.8	2.66	6600	1.64	1611.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010253638-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

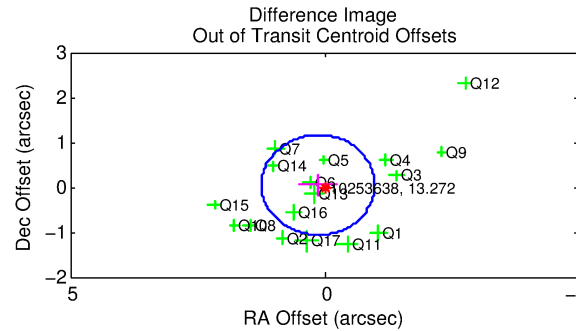
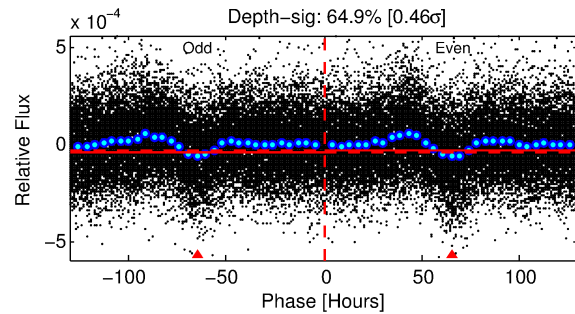
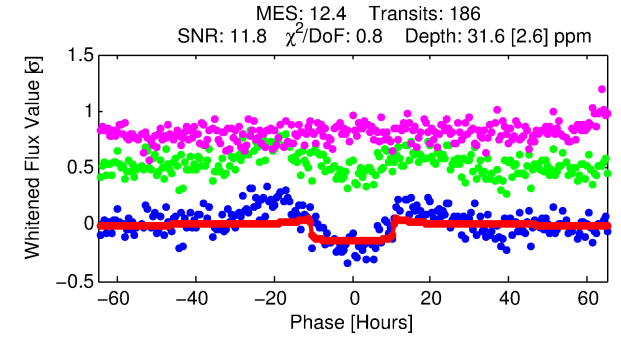
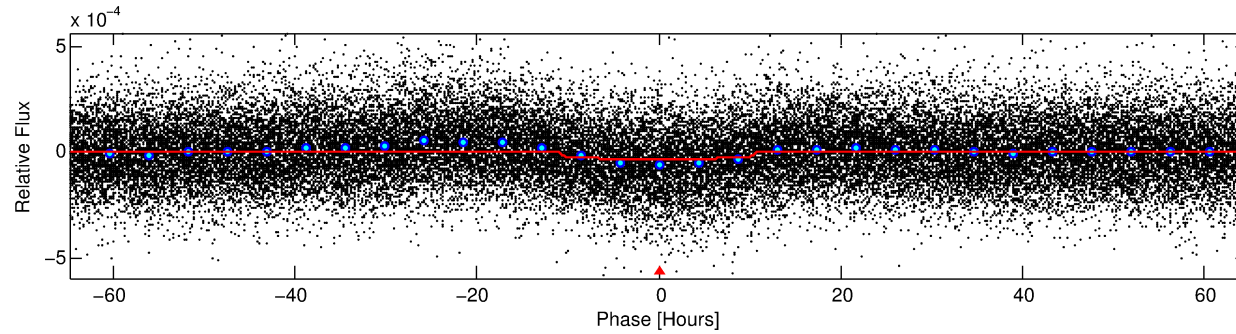
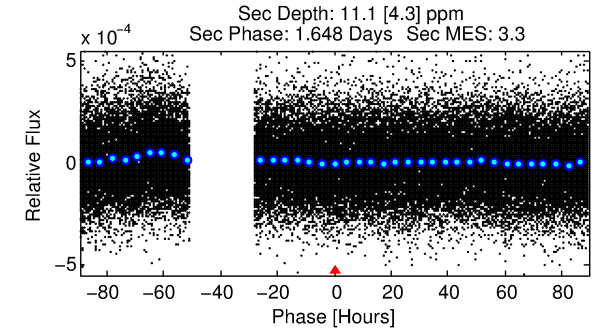
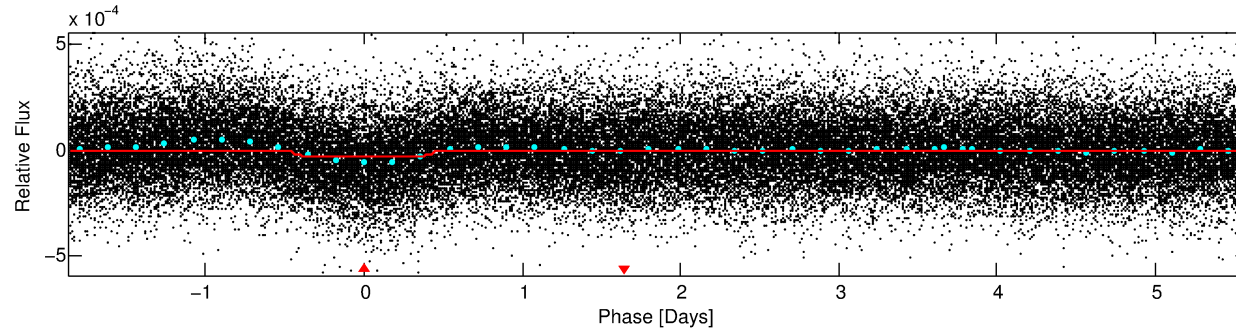
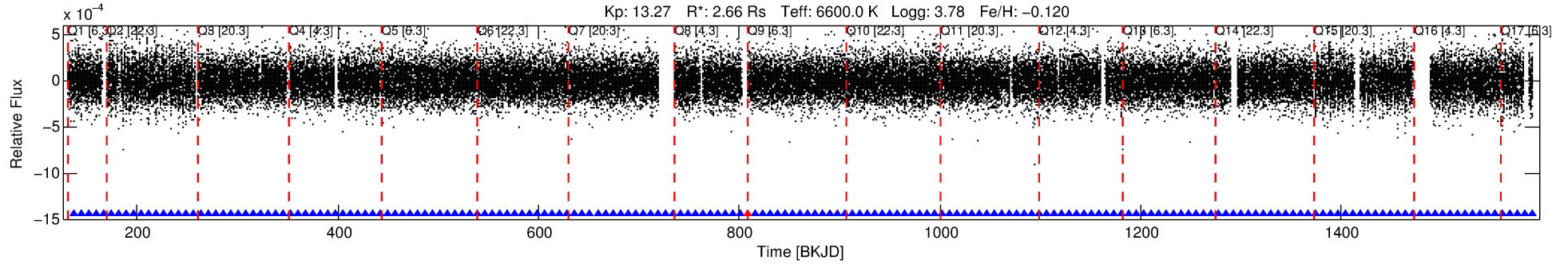
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010253638-01

No Significant Match Found

DV One-Page Summary

KIC: 10253638 Candidate: 1 of 1 Period: 7.454 d
KOI: K07608 Corr: No Ephemeris Match



DV Fit Results:

Period = 7.45403 [0.00014] d
Epoch = 137.2355 [0.0145] BKJD
Rp/R* = 0.0056 [0.0009]
a/R* = 1.89 [1.17]
b = 0.78 [0.44]
Seff = 1611.55 [821.69]
Teq = 1616 [206] K
Rp = 1.64 [0.63] Re
a = 0.0864 [0.0276] AU
Ag = 16.96 [11.91] [1.34σ]
Teffp = 5069 [648] K [5.08σ]

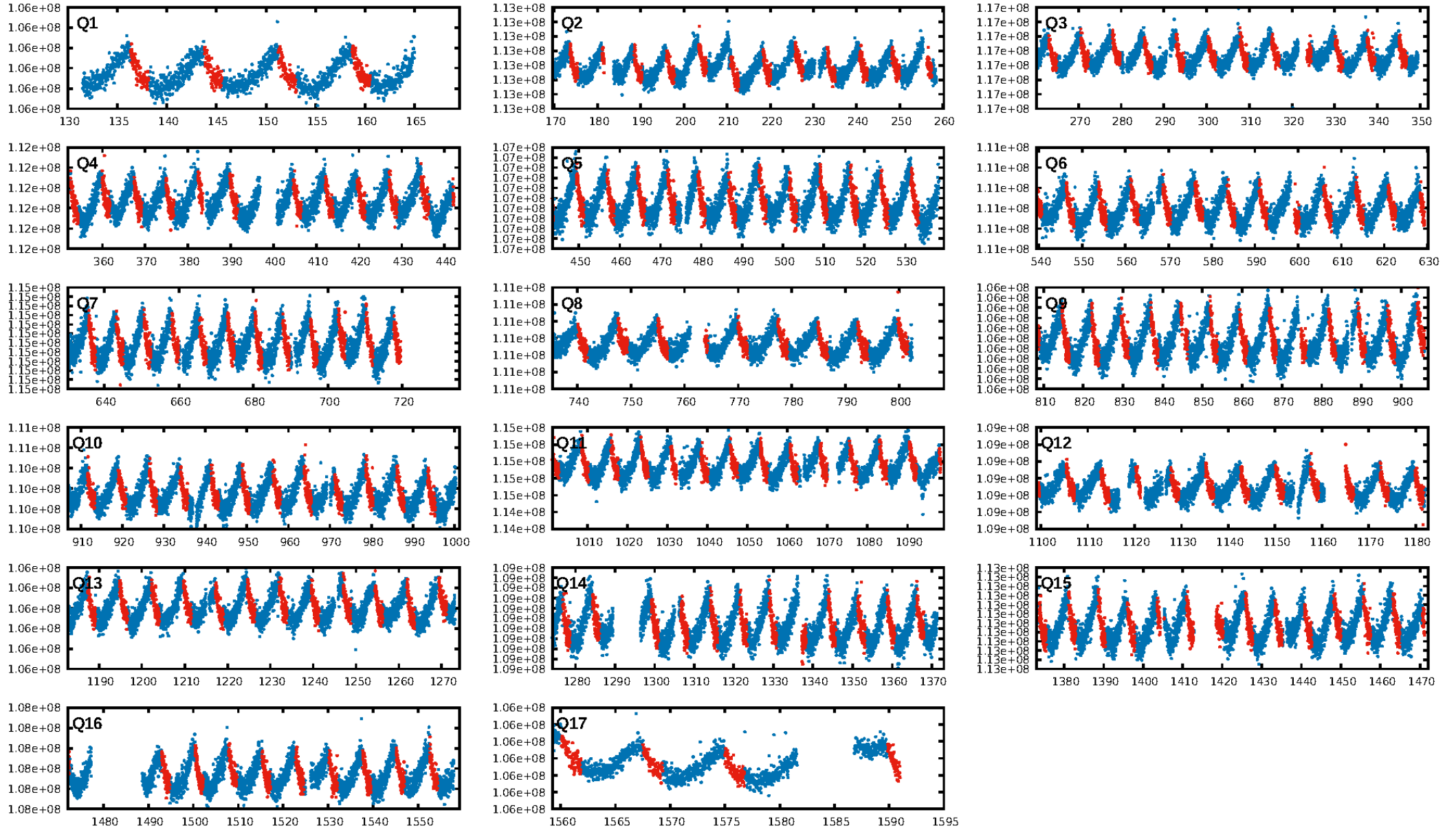
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.98e-36
RollingBand-fgt: 0.99 [177/178]
GhostDiagnostic-chr: 2.228
Centroid-sig: 23.3%
Centroid-so: 1.334 arcsec [1.11σ]
OotOffset-rm: 0.138 arcsec [0.37σ]
KicOffset-rm: 0.174 arcsec [0.45σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

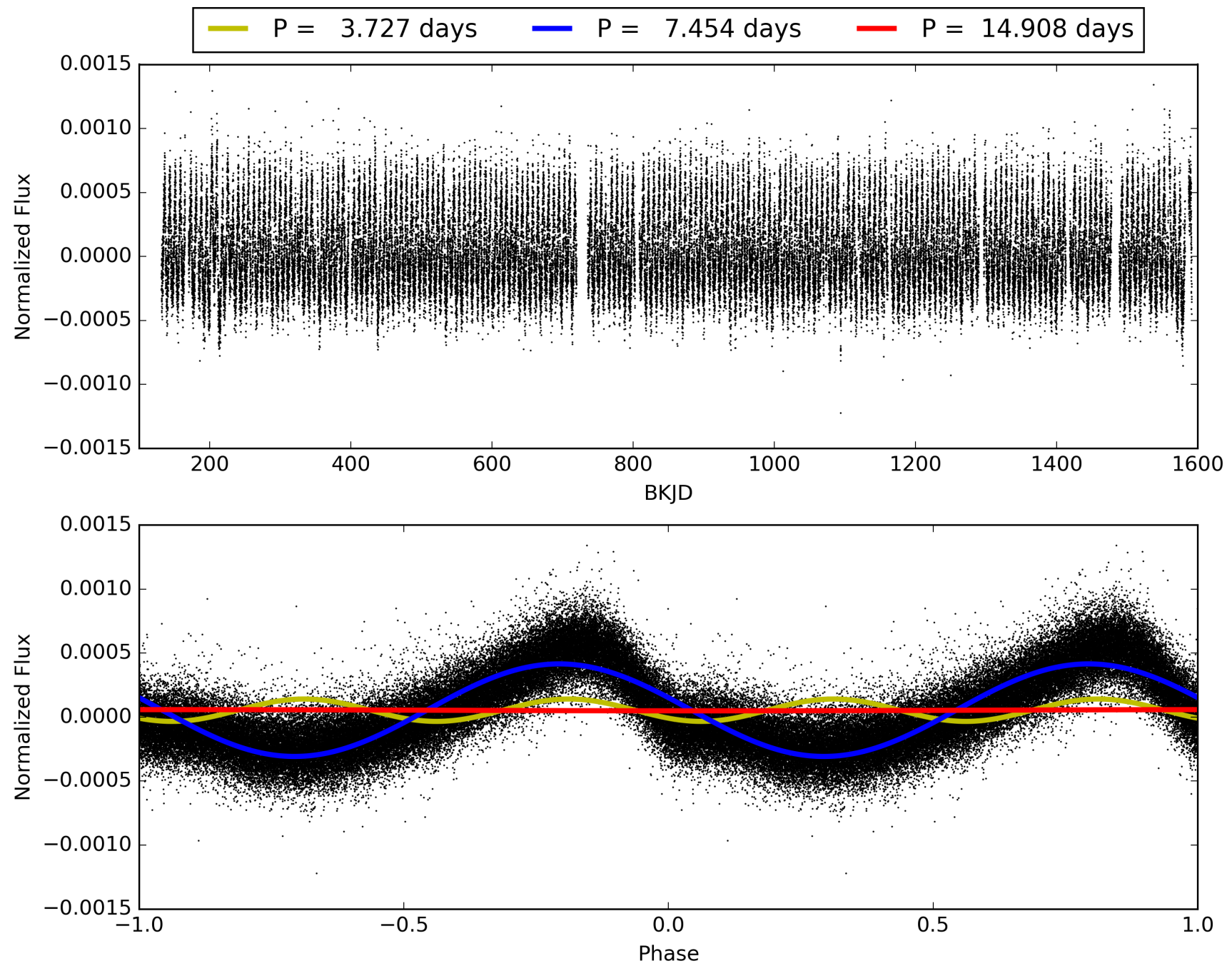
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:21:48 Z

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

TCE 010253638-01, PDC Light Curves

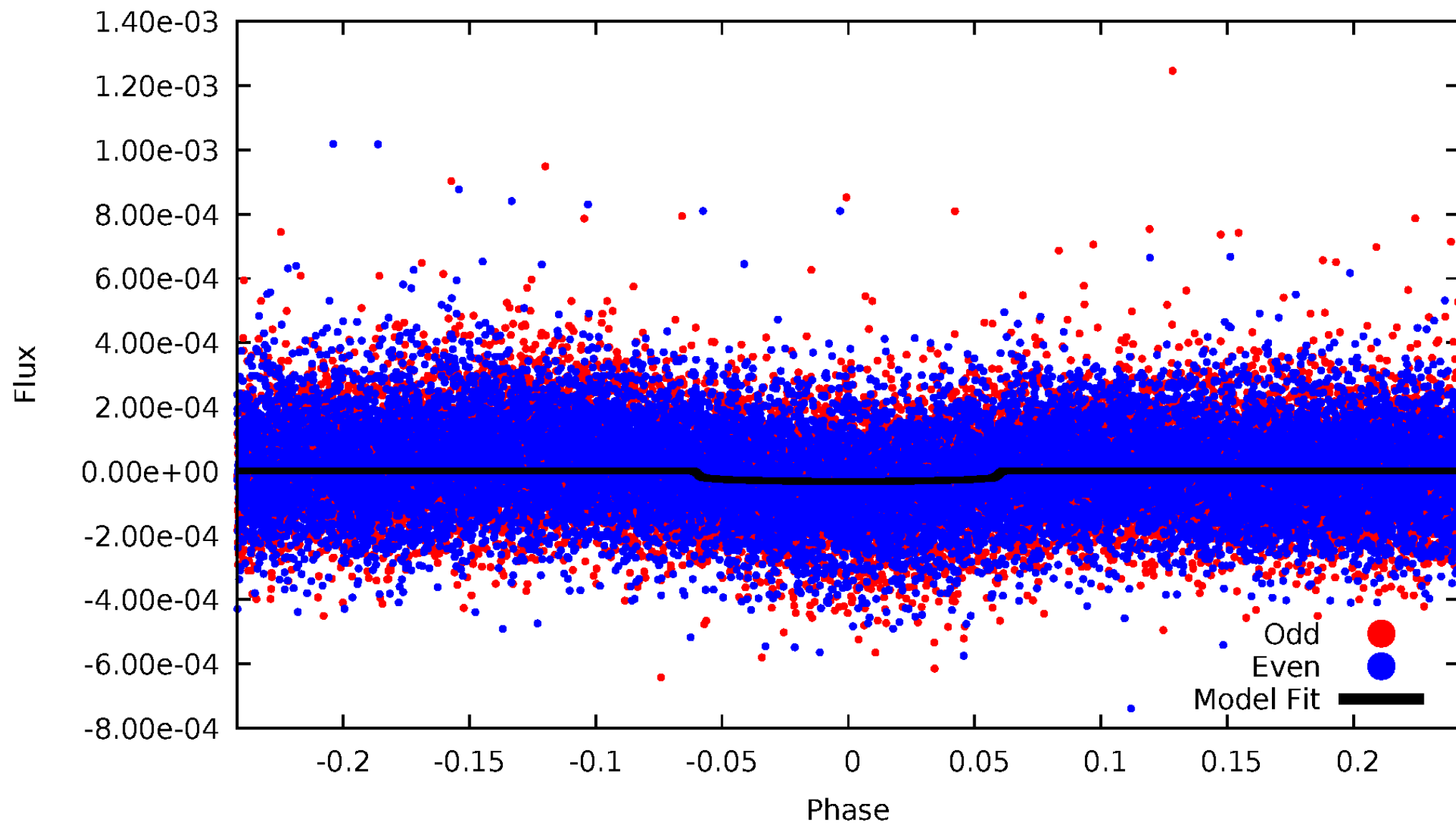


TCE 010253638-01



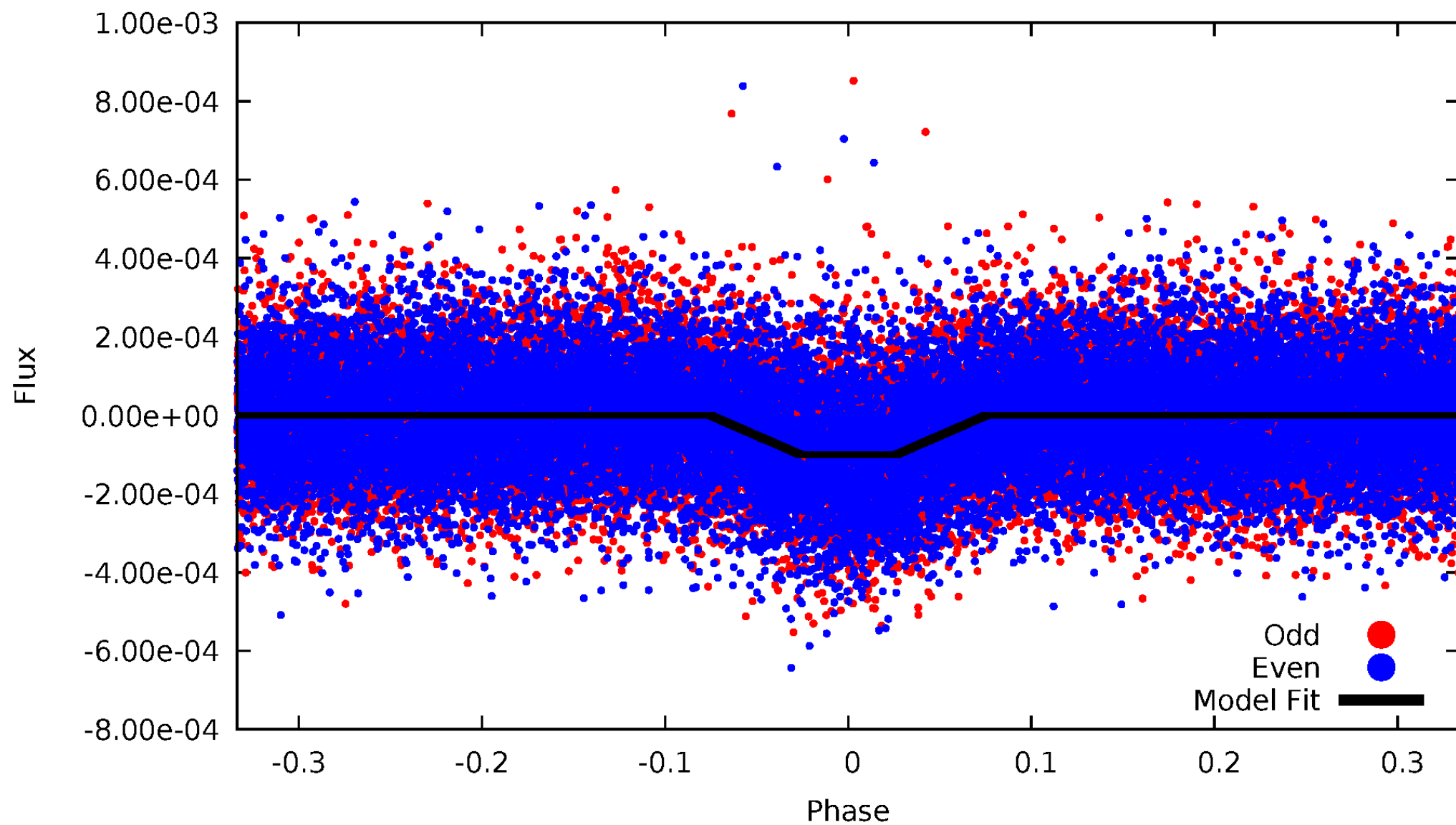
DV Odd/Even

TCE 010253638-01



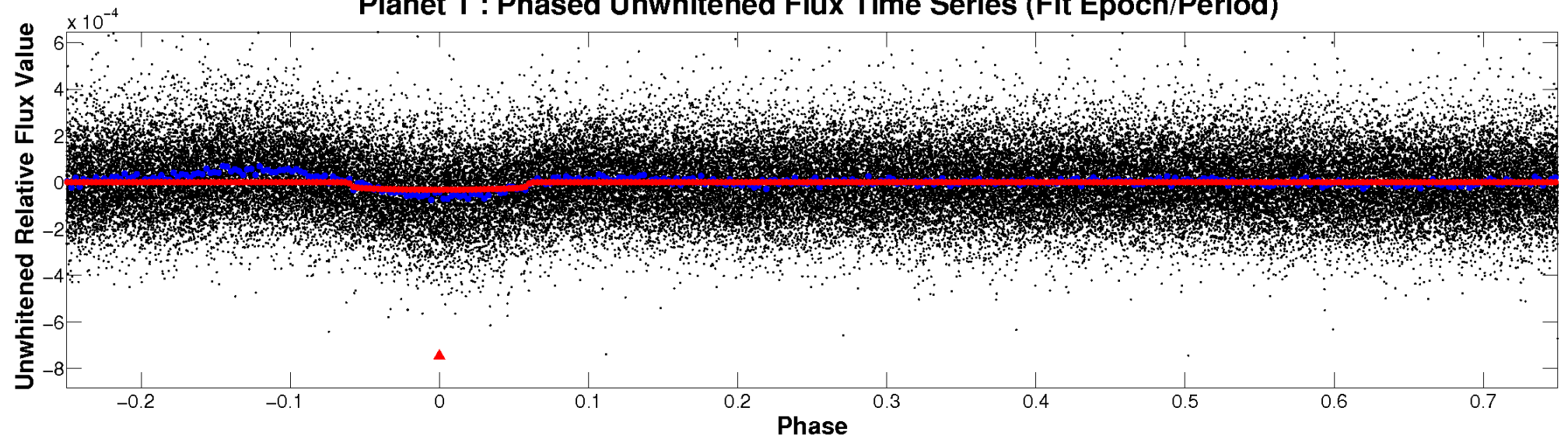
ALT Odd/Even

TCE 010253638-01

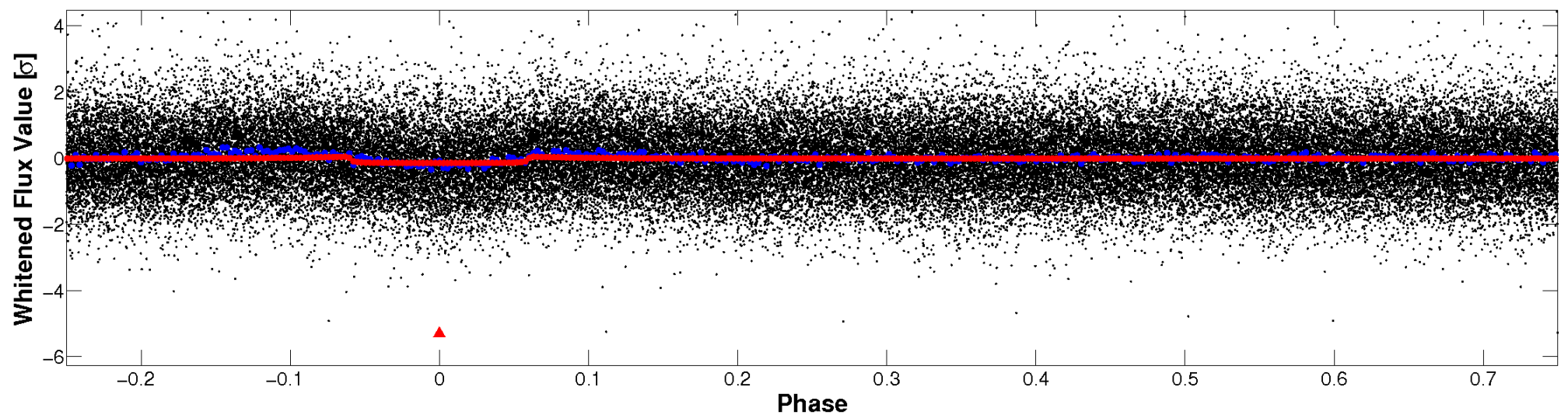


Non-Whitened Vs. Whitened Light Curve

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

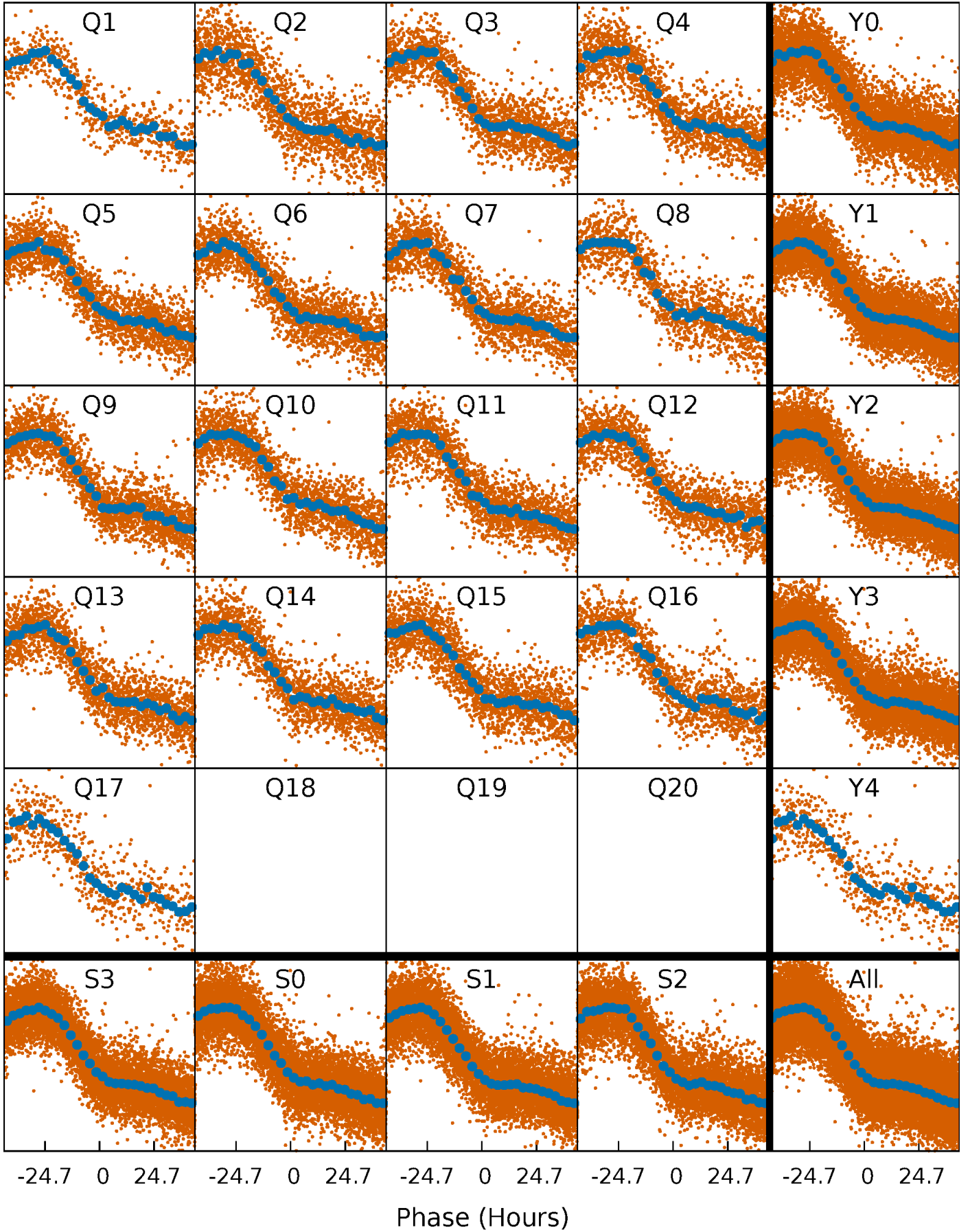


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



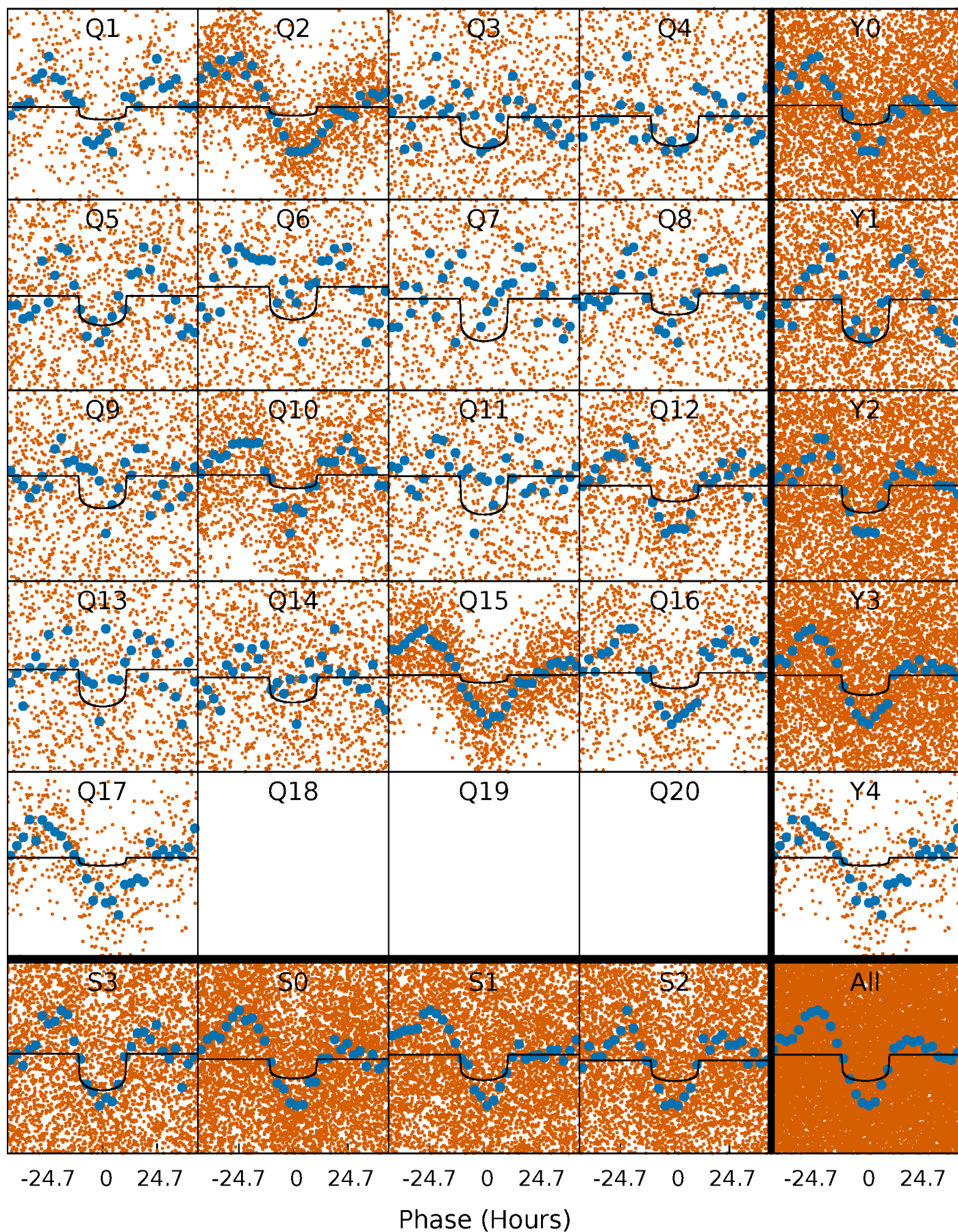
PDC Quarter-Phased Transit Curves

TCE 010253638-01 P= 7.454032 Days $T_0=137.235541$ (BKJD)



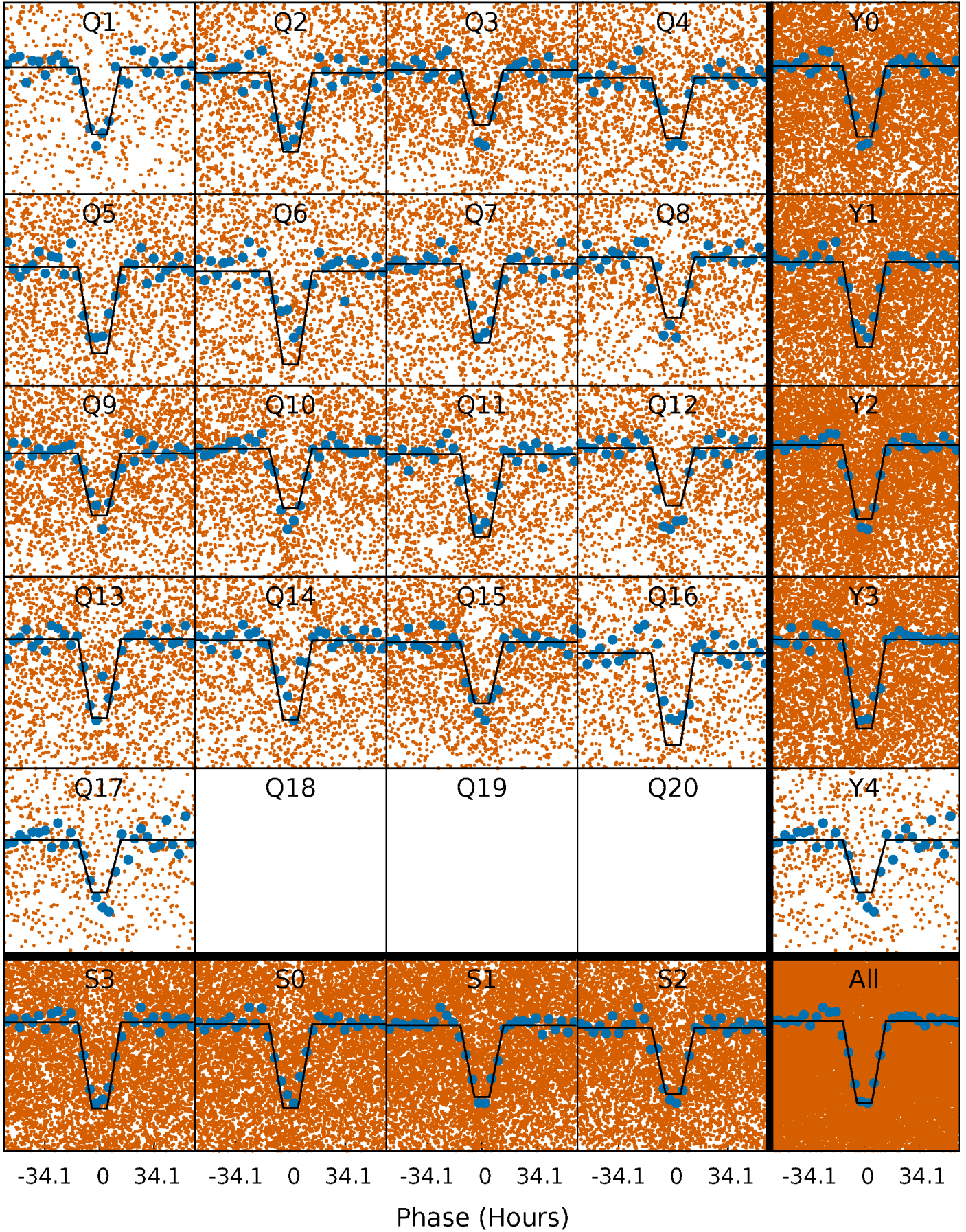
DV Quarter-Phased Transit Curves

TCE 010253638-01 P= 7.454032 Days $T_0=137.235541$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

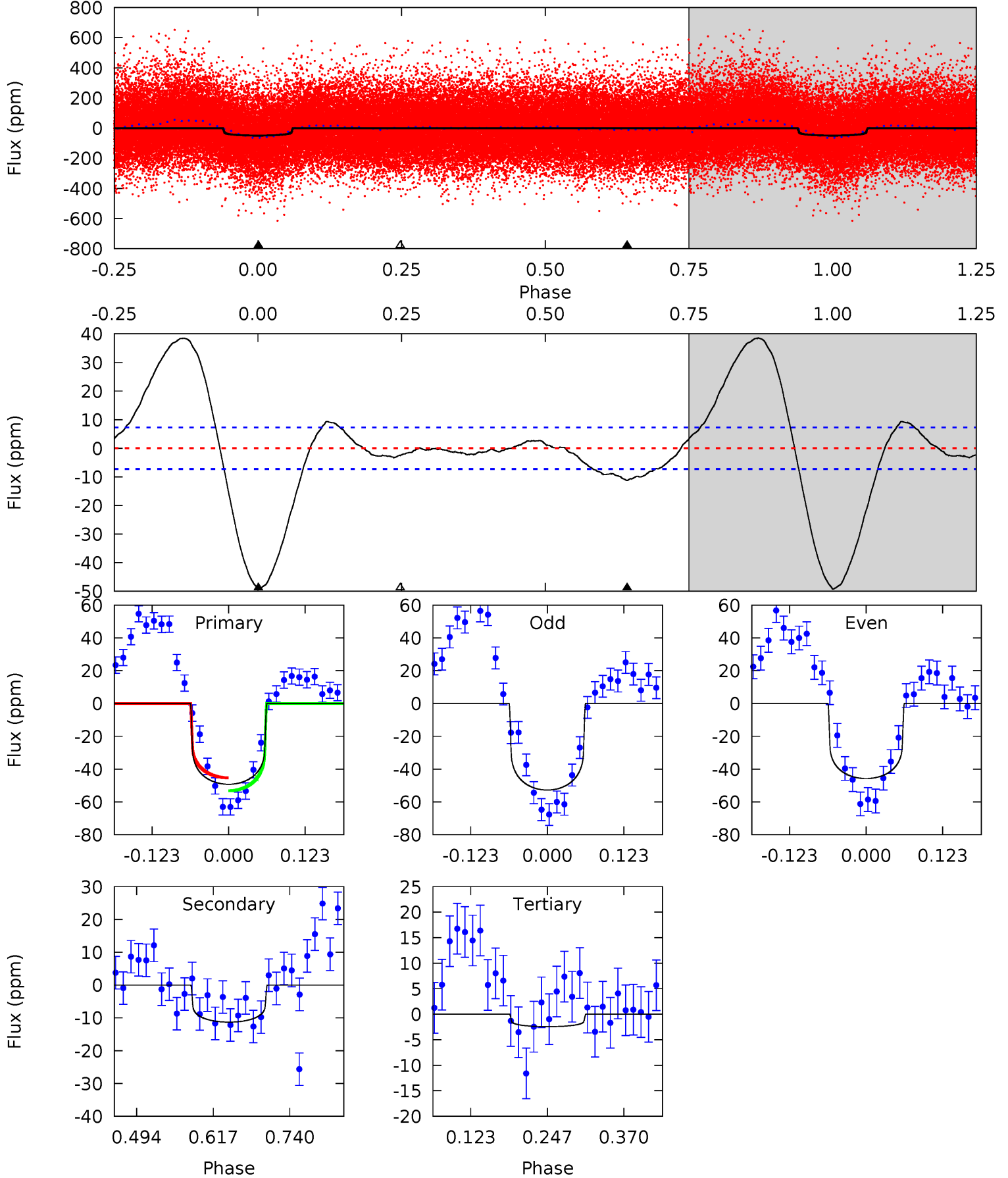
TCE 010253638-01 P= 7.453832 Days $T_0=137.241462$ (BKJD)



DV Model-Shift Uniqueness Test

010253638-01, P = 7.454032 Days, E = 129.781509 Days

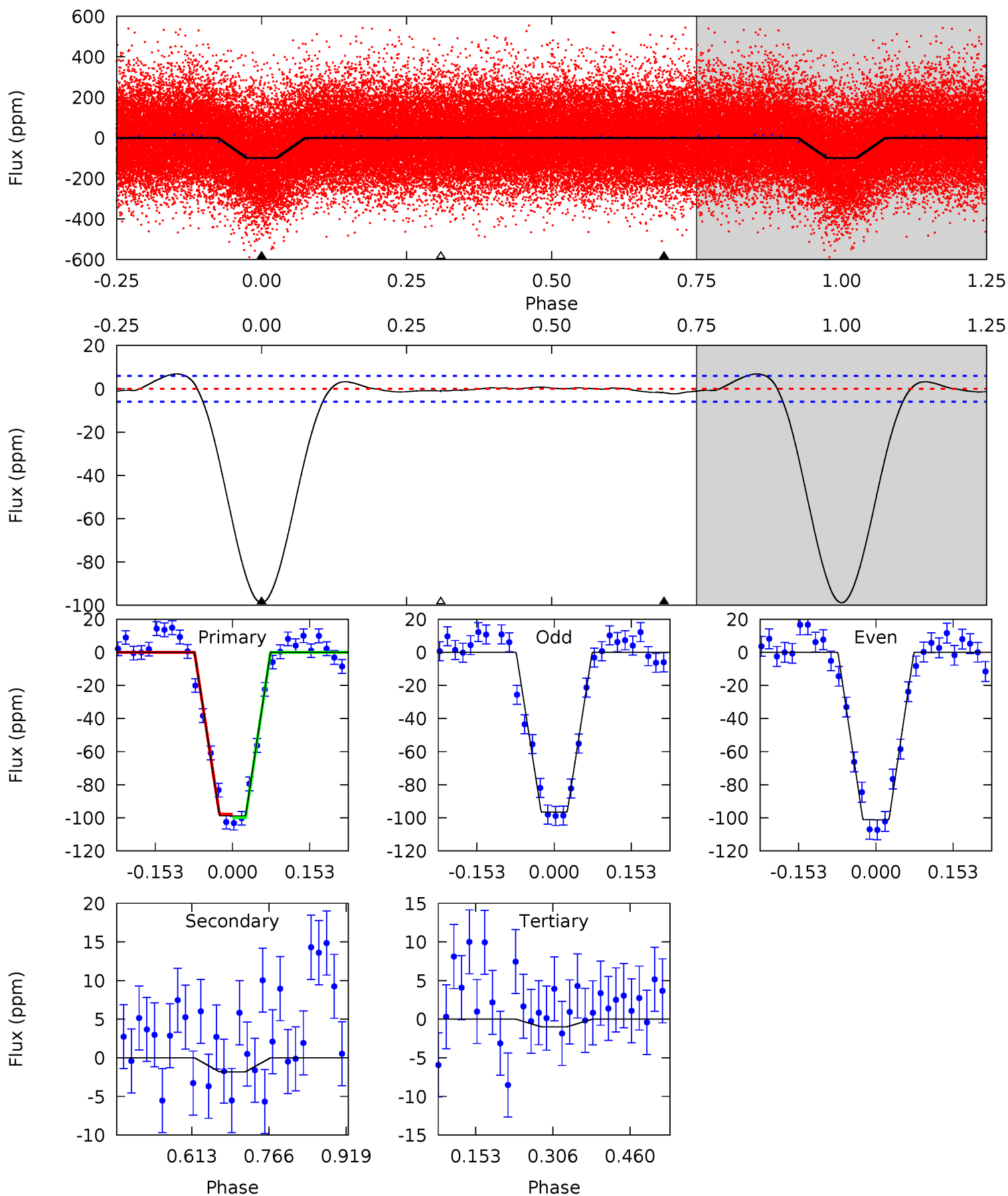
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.7	7.04	1.52	0	4.52	1.54	7.36	29.2	30.7	5.52	7.04	2.19	1.33	0.44	2.45



Alt Model-Shift Uniqueness Test

010253638-01, P = 7.453832 Days, E = 129.787630 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.0	1.35	0.74	0	4.47	1.43	0.65	73.2	74.0	0.62	1.35	1.76	1.06	0.07	0.81



Stellar Parameters For KIC 010253638

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6600^{+158}_{-198}	$3.778^{+0.285}_{-0.095}$	$-0.120^{+0.300}_{-0.250}$	$2.661^{+0.500}_{-0.929}$	$1.547^{+0.214}_{-0.294}$	$0.116^{+0.233}_{-0.035}$
	+2%/-3%	+8%/-3%	+250%/-208%	+19%/-35%	+14%/-19%	+201%/-31%
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 010253638-01 / KOI 7608.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 2	$1.56^{+0.32}_{-0.35}$	2207^{+129}_{-194}	5115^{+462}_{-370}	19^{+12}_{-7}
Alt.	-2 ± 1	$2.80^{+0.50}_{-0.50}$	2218^{+132}_{-182}	2914^{+325}_{-5250}	$0.959^{+0.875}_{-0.772}$

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

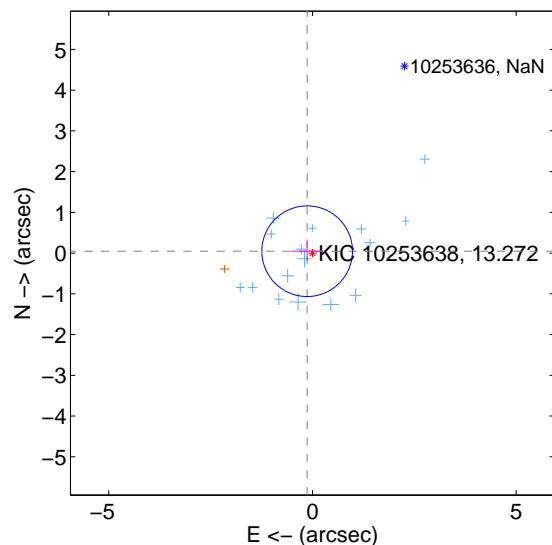
Supplemental centroid analysis for 010253638-01. Kepler magnitude: 13.27. Transit SNR 11.82

There are 16 quarters with good PRF difference image offsets

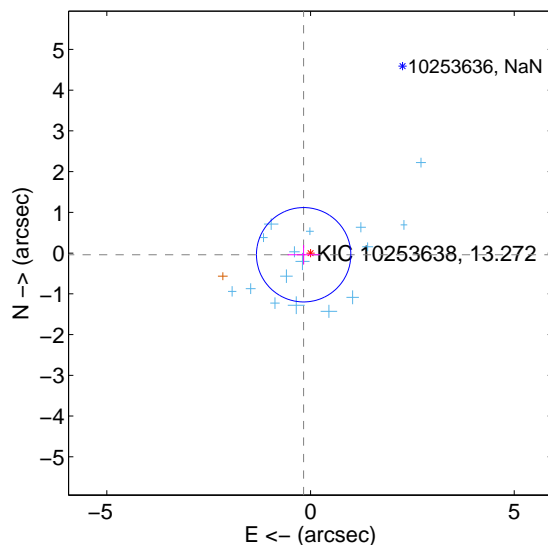
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.138 ± 0.371	0.37	0.130 ± 0.385	0.047 ± 0.235
PRF-fit source offset from KIC position	0.174 ± 0.386	0.45	0.169 ± 0.393	-0.040 ± 0.238
photometric centroid source offset	1.33 ± 1.21	1.11	1.27 ± 1.22	-0.41 ± 1.05

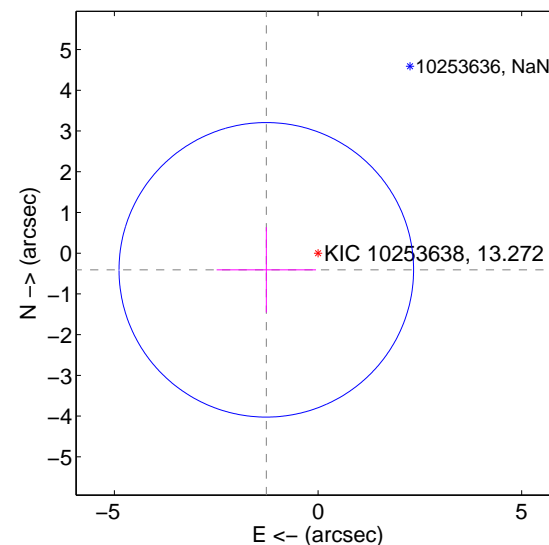
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

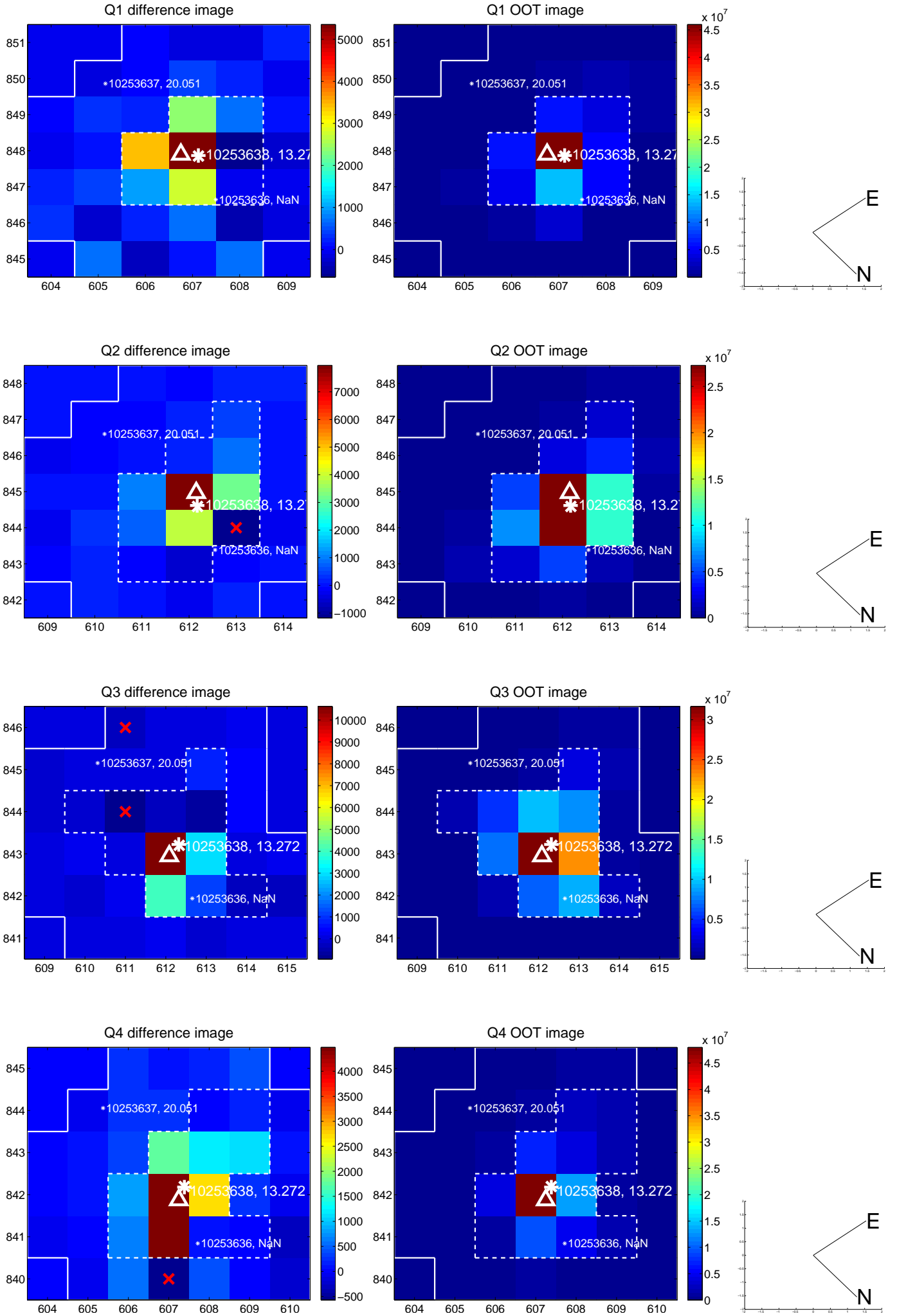


offset from photometric centroids

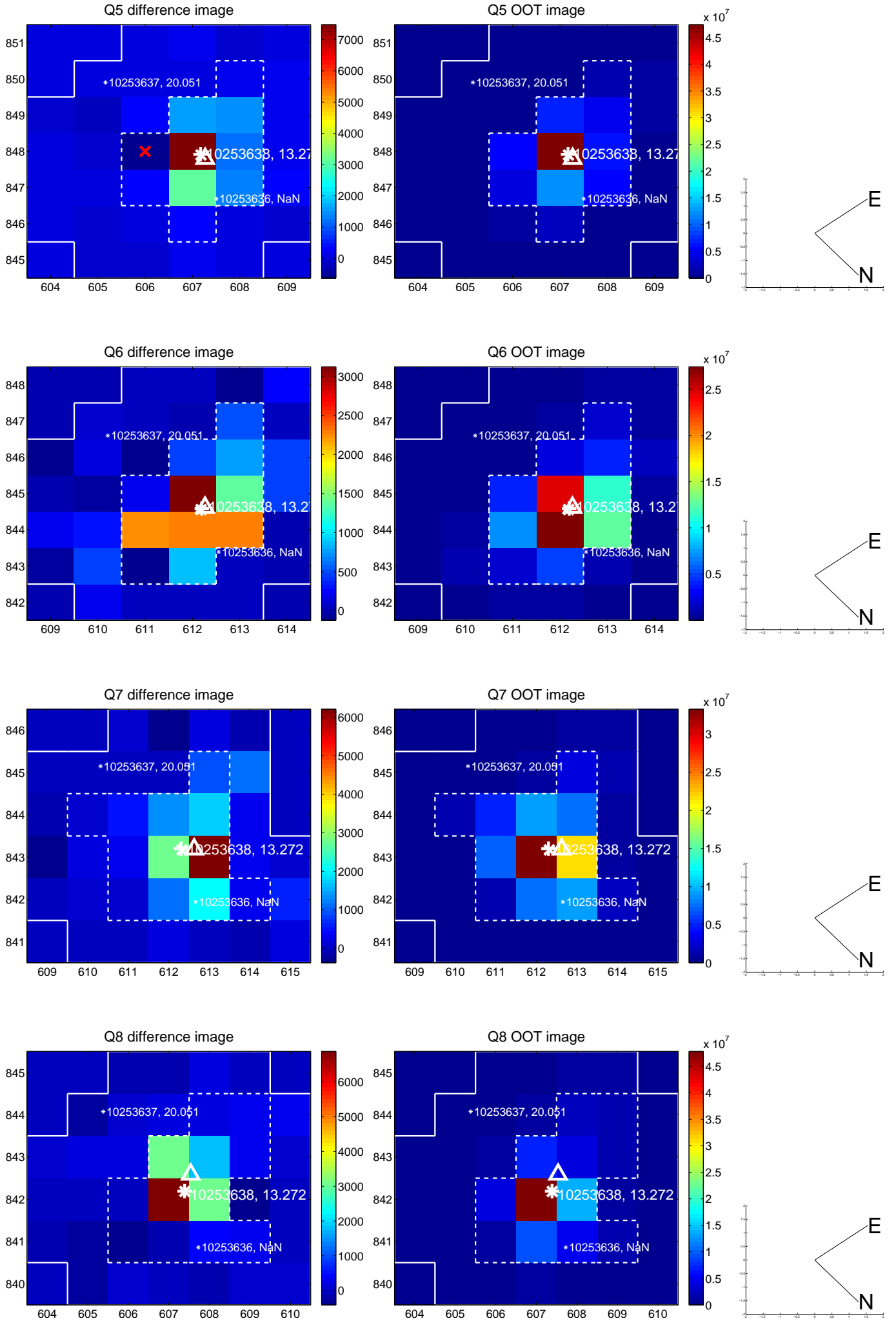


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

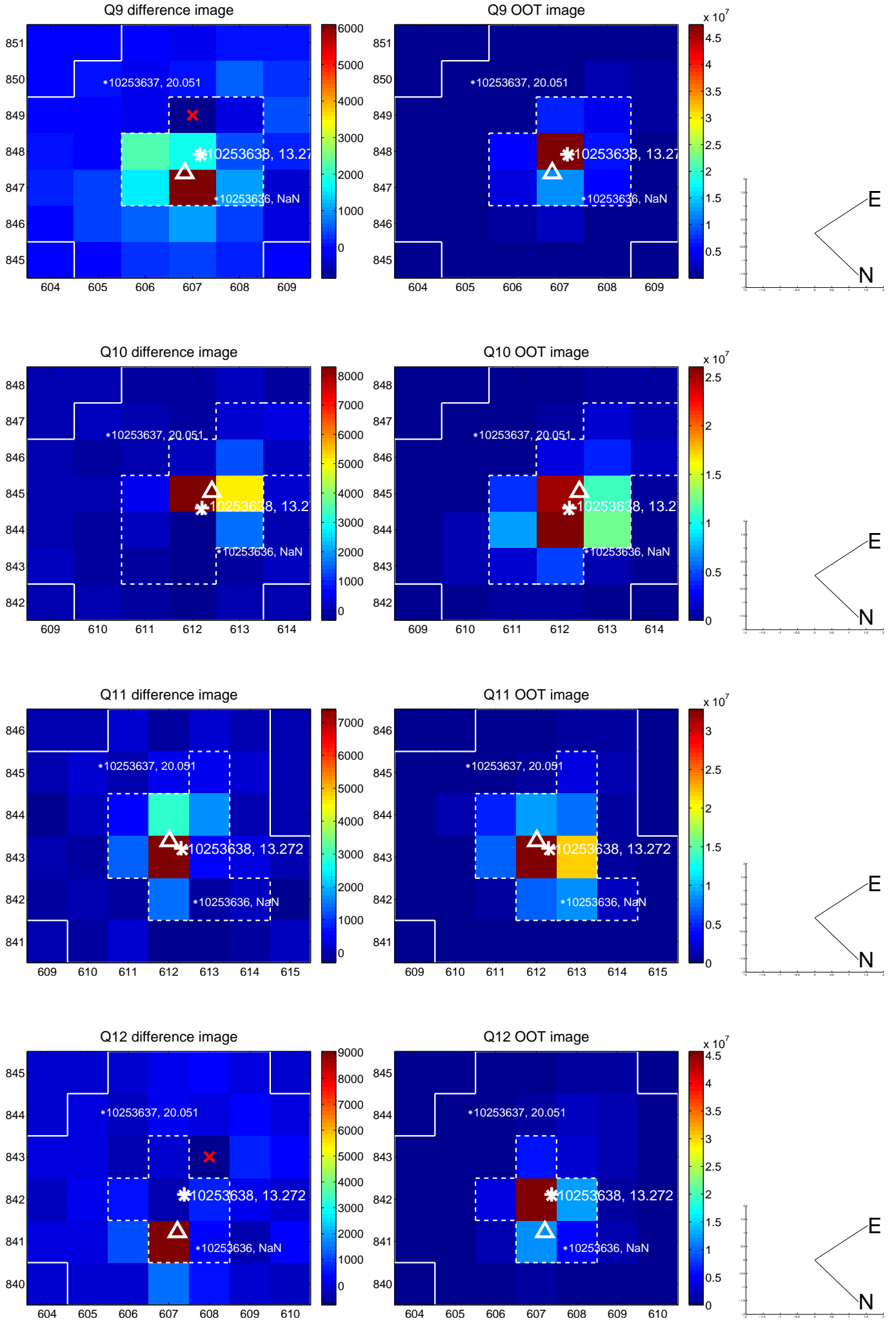
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



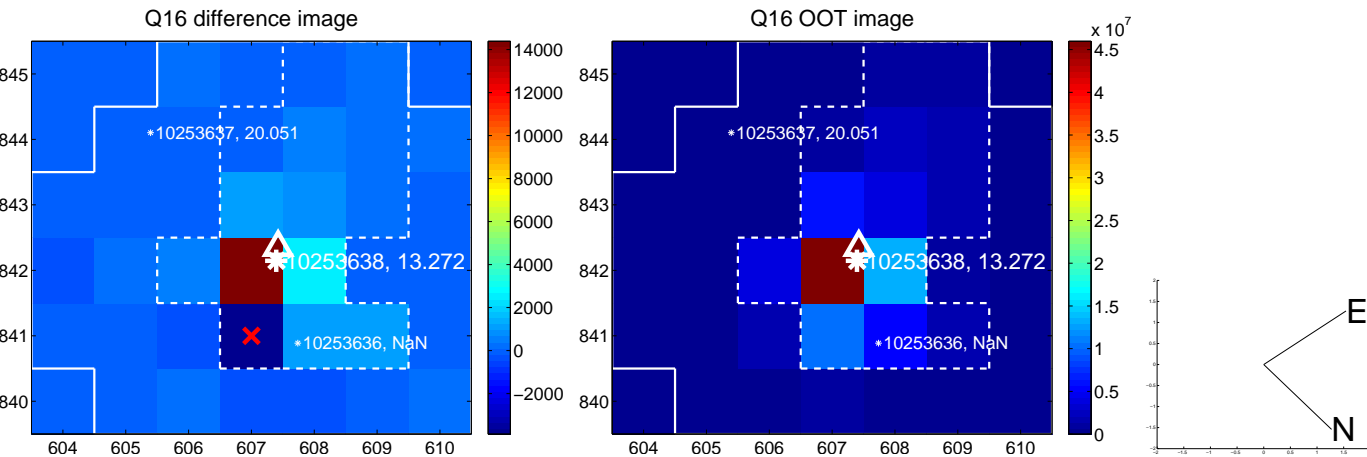
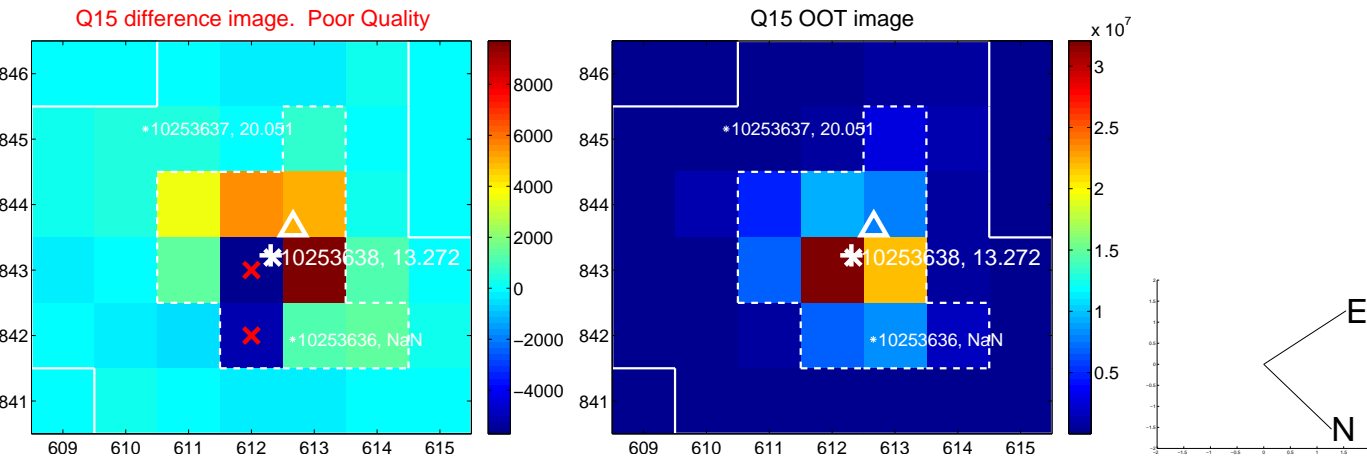
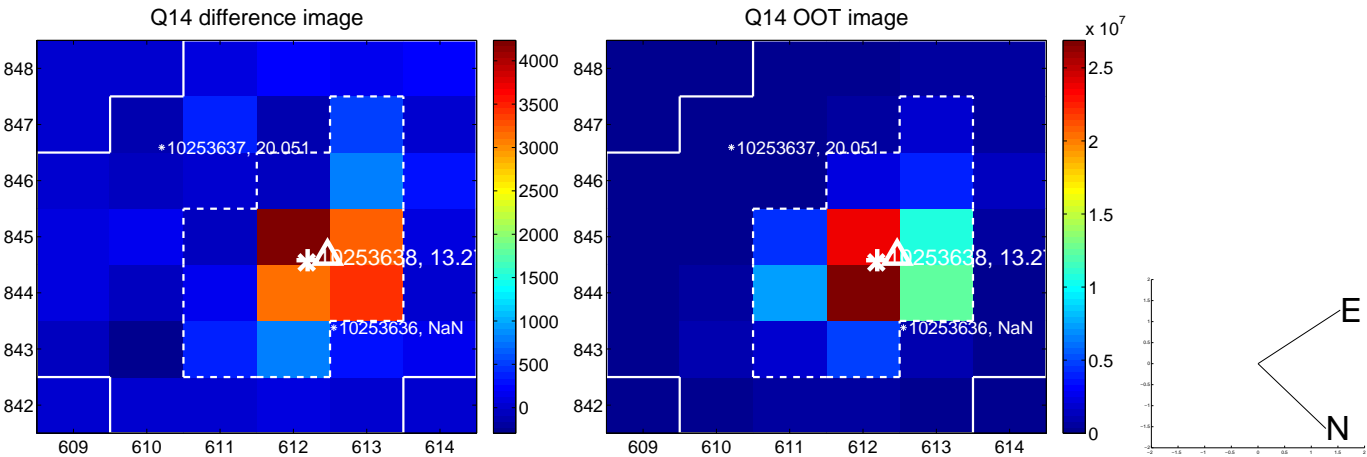
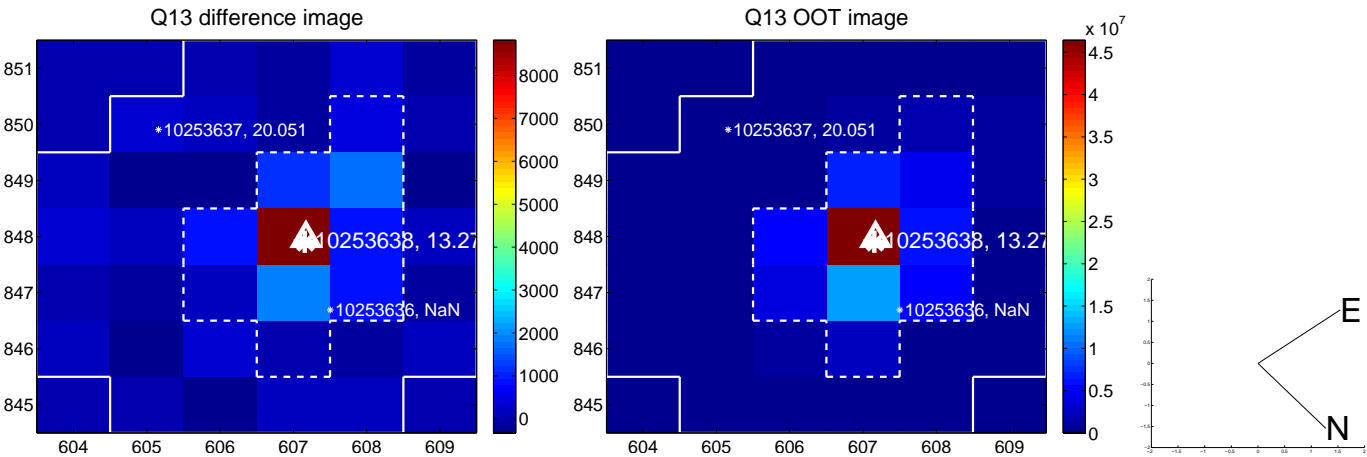
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



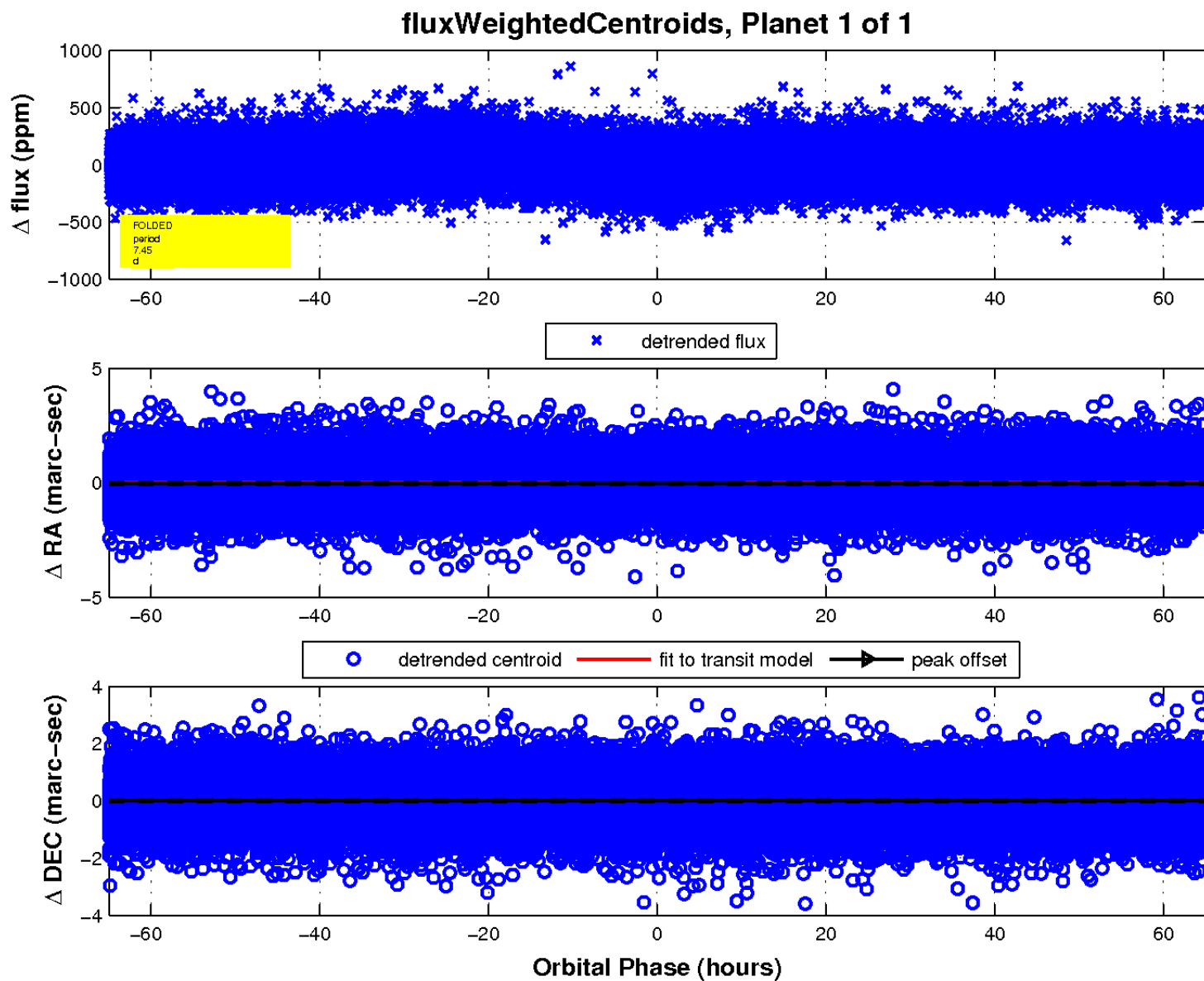
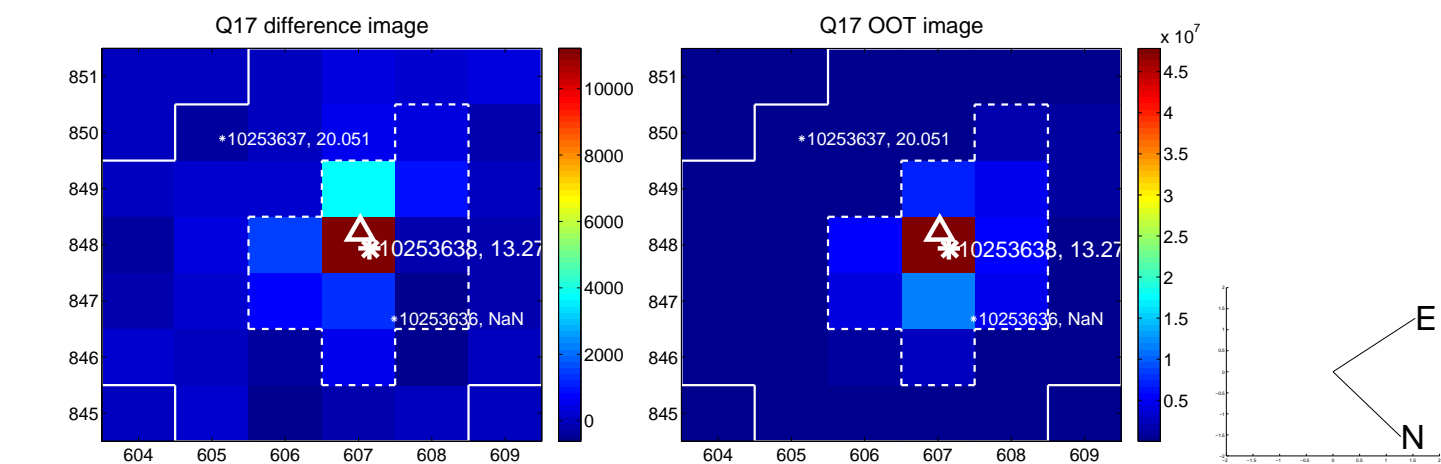
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

