

KIC 007543167

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})
007543167-01	OBS	No	9.542562	131.693078	53.4	29.727	8.4	8.8	1.33	6370	1.23	379.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007543167-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

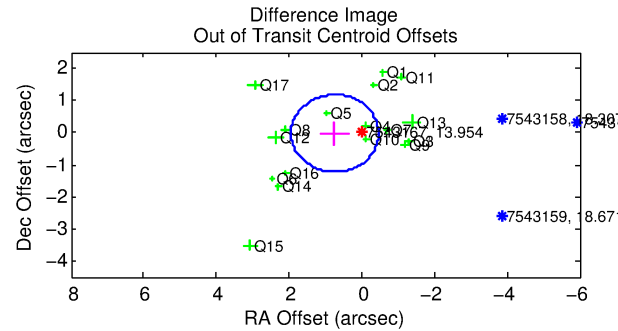
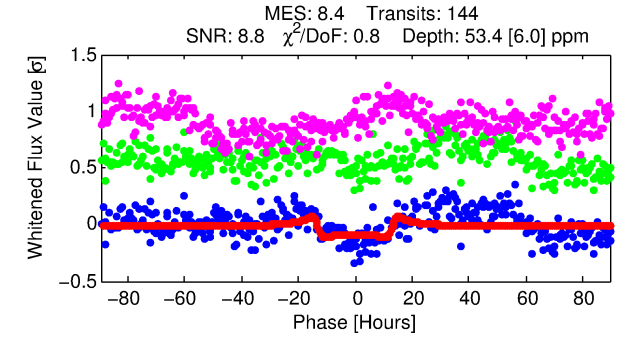
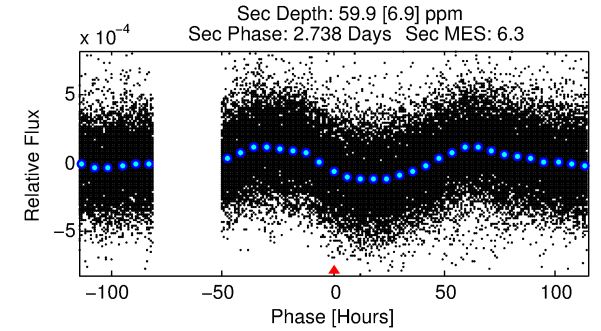
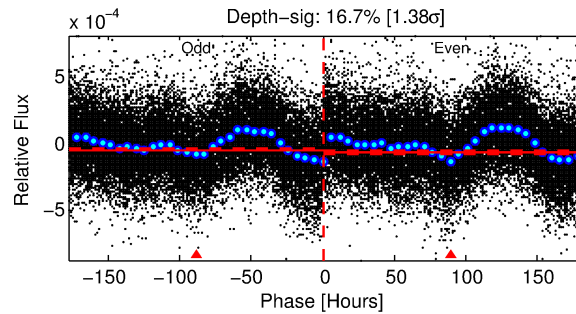
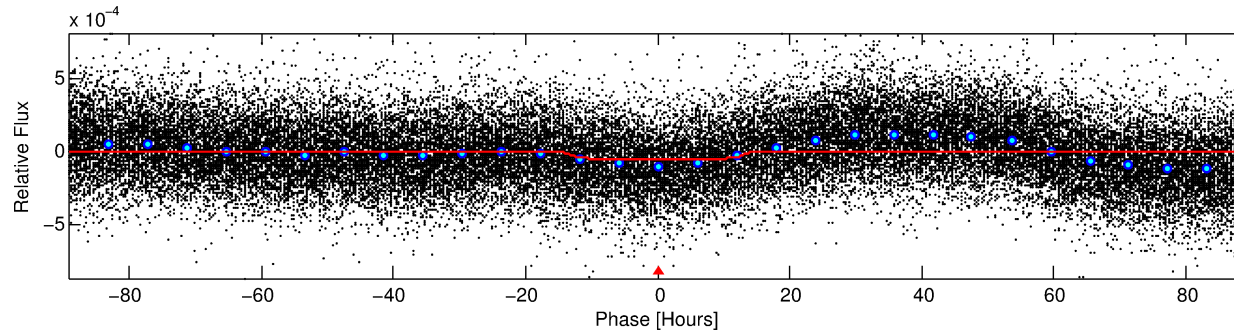
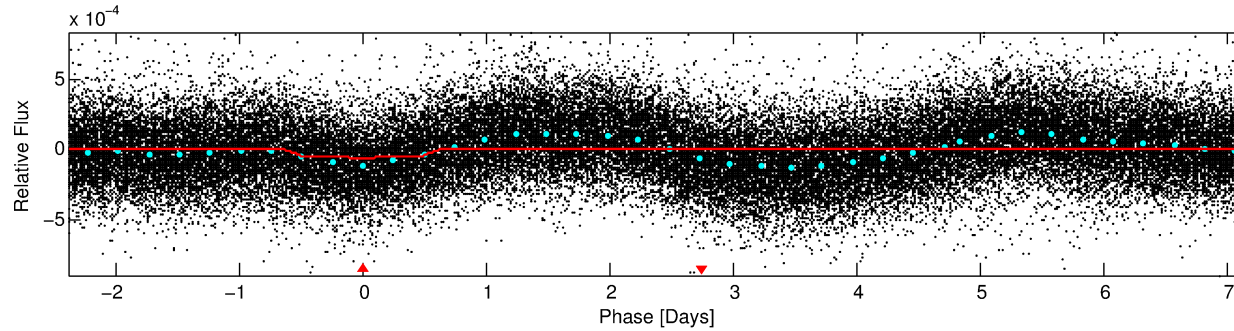
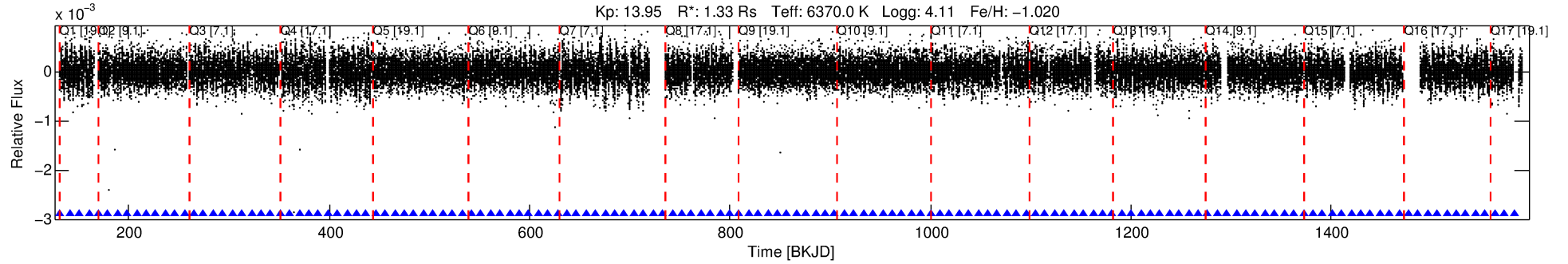
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007543167-01

No Significant Match Found

DV One-Page Summary

KIC: 7543167 Candidate: 1 of 1 Period: 9.543 d



DV Fit Results:

Period = 9.54256 [0.00038] d
Epoch = 131.6931 [0.0337] BKJD
Rp/R* = 0.0085 [0.0006]
a/R* = 1.21 [0.08]
b = 0.97 [0.02]
Seff = 379.81 [227.44]
Teq = 1126 [169] K
Rp = 1.23 [0.43] Re
a = 0.0830 [0.0291] AU
Ag = 149.42 [91.34] [1.62 σ]
Teffp = 6085 [341] K [13.04 σ]

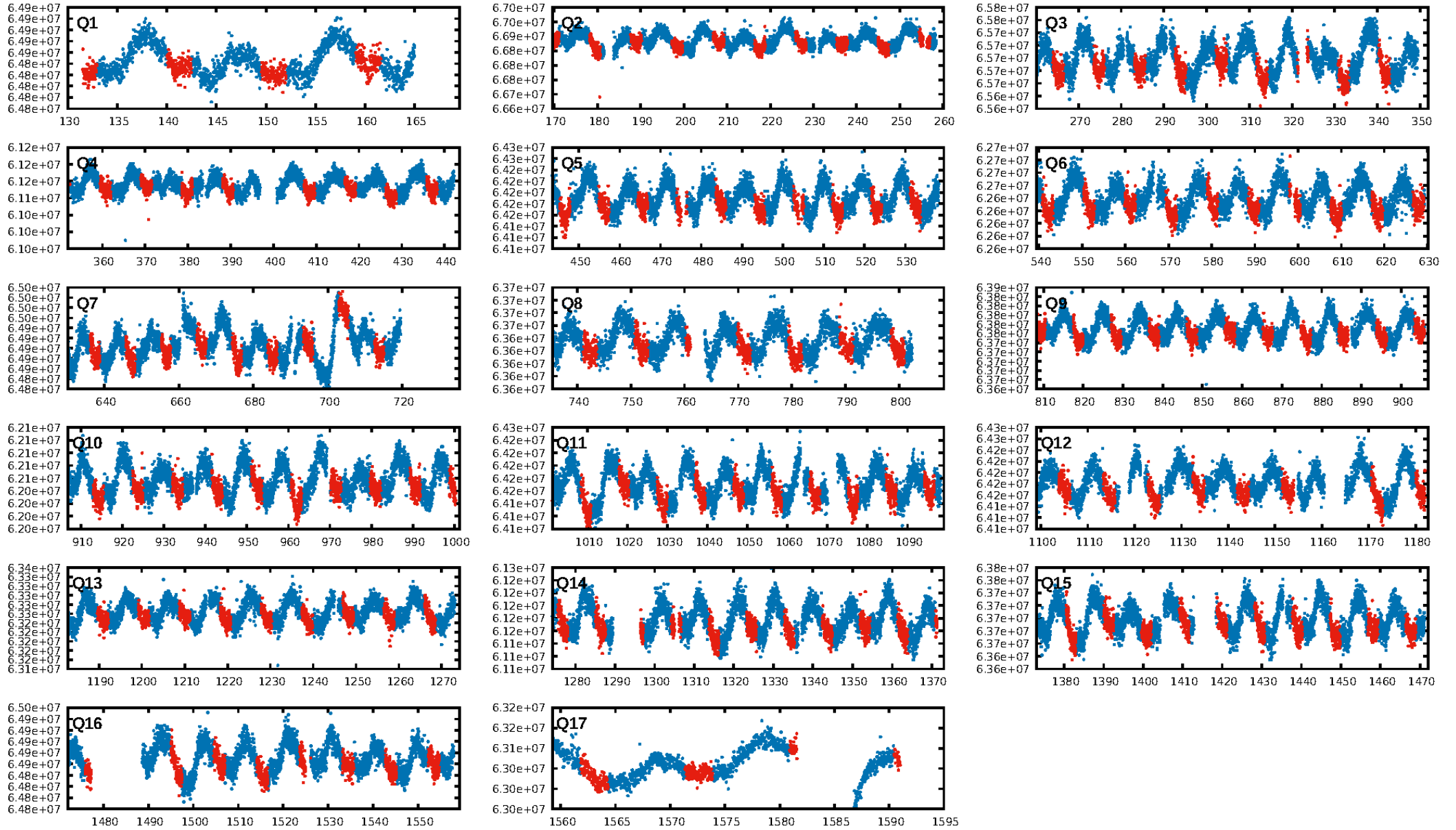
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.92e-18
RollingBand-fgt: 1.00 [137/137]
GhostDiagnostic-chr: 0.4322
Centroid-sig: 11.8%
Centroid-so: 0.378 arcsec [0.65 σ]
OotOffset-rm: 0.749 arcsec [1.86 σ]
KicOffset-rm: 0.714 arcsec [1.80 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

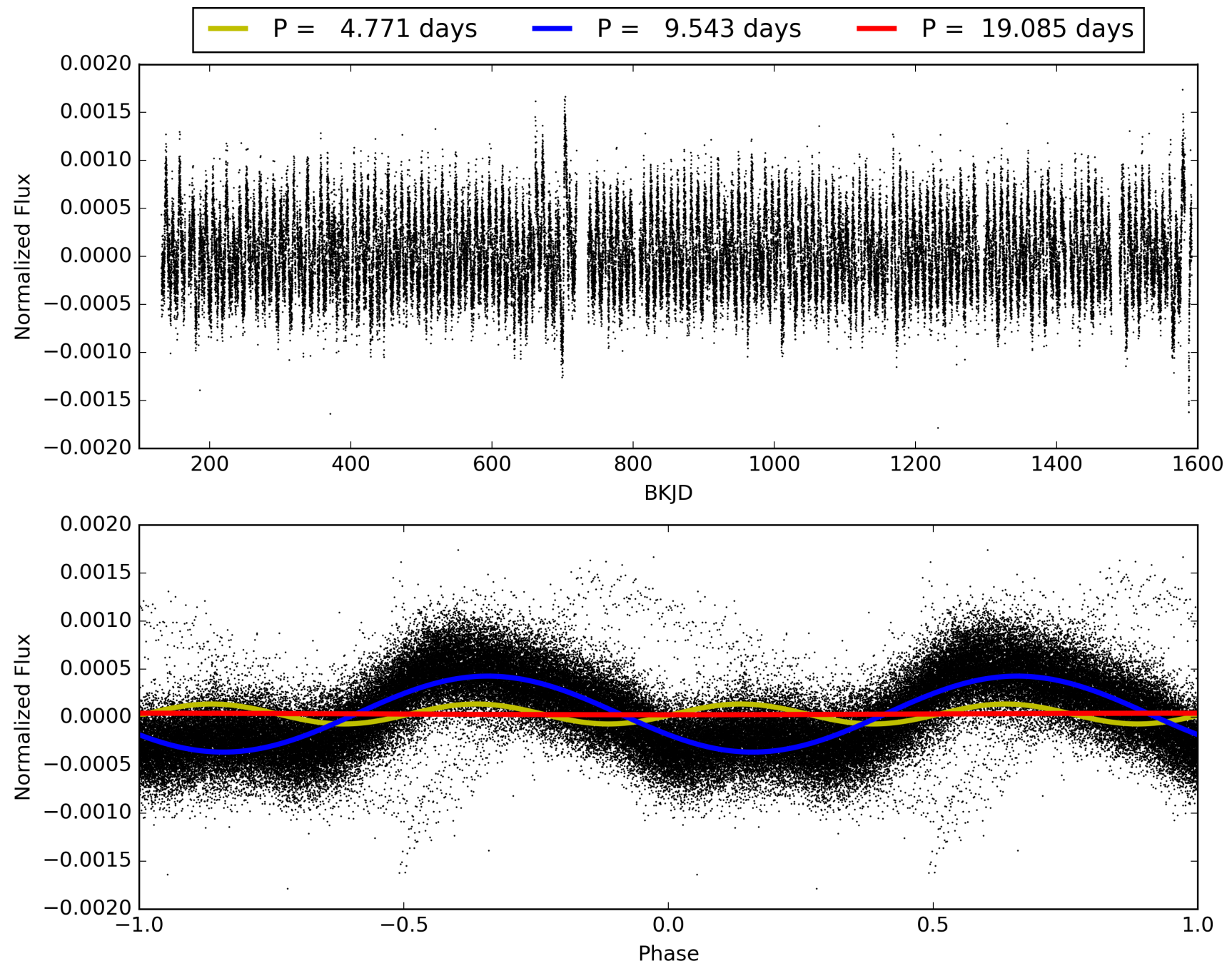
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:45:56 Z

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

TCE 007543167-01, PDC Light Curves

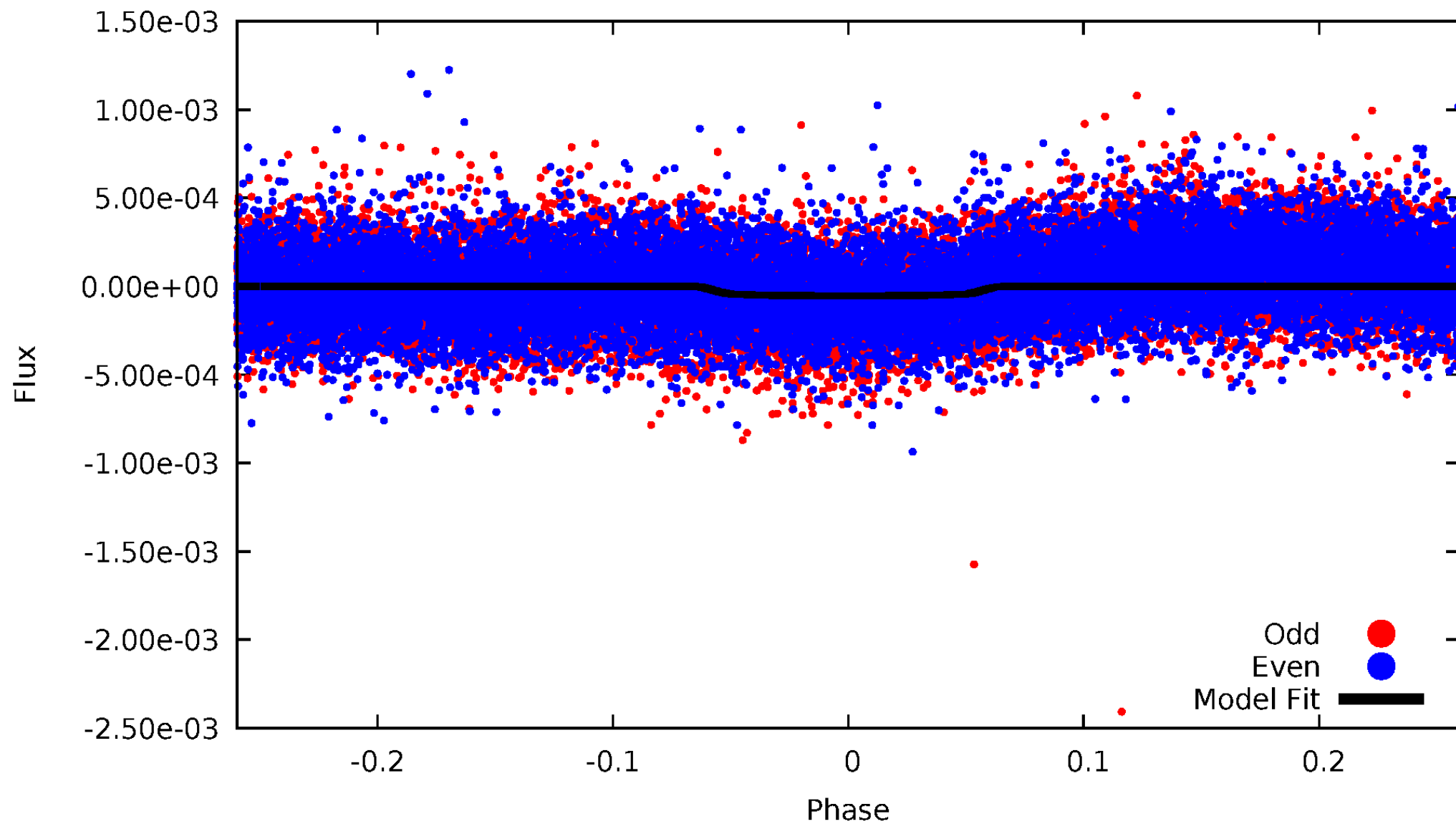


TCE 007543167-01



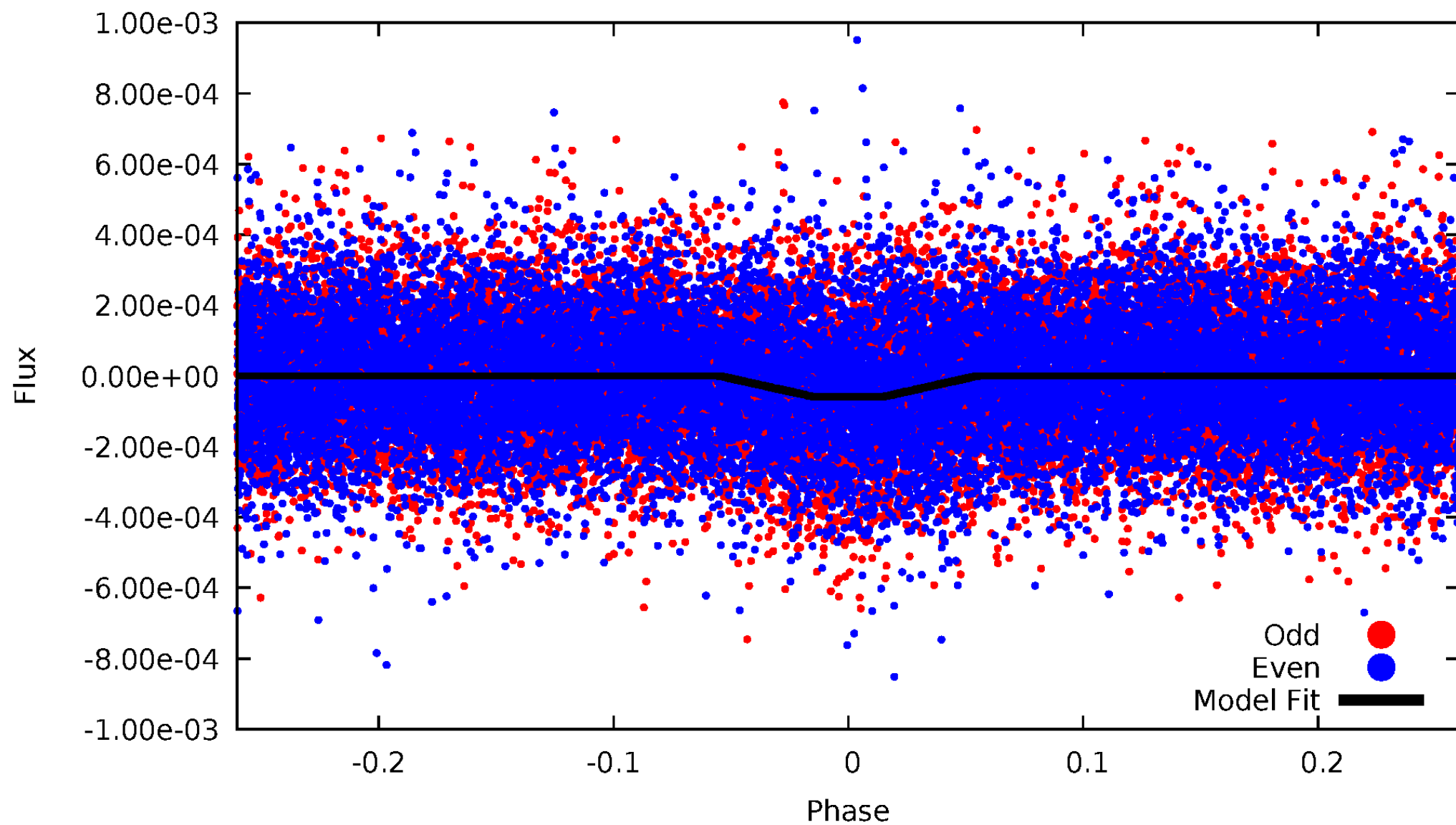
DV Odd/Even

TCE 007543167-01



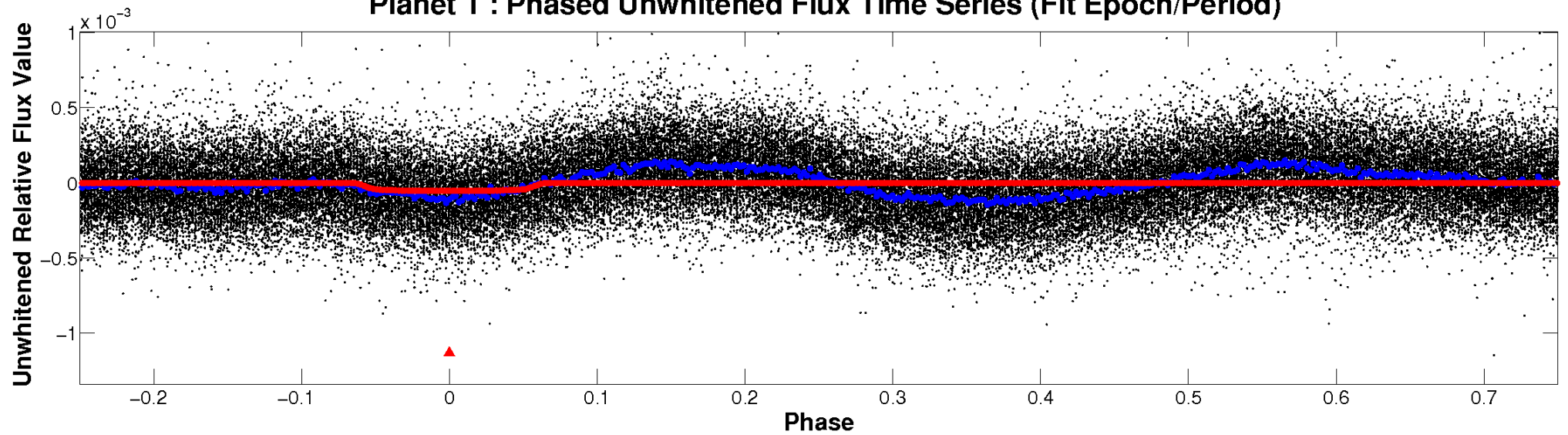
ALT Odd/Even

TCE 007543167-01

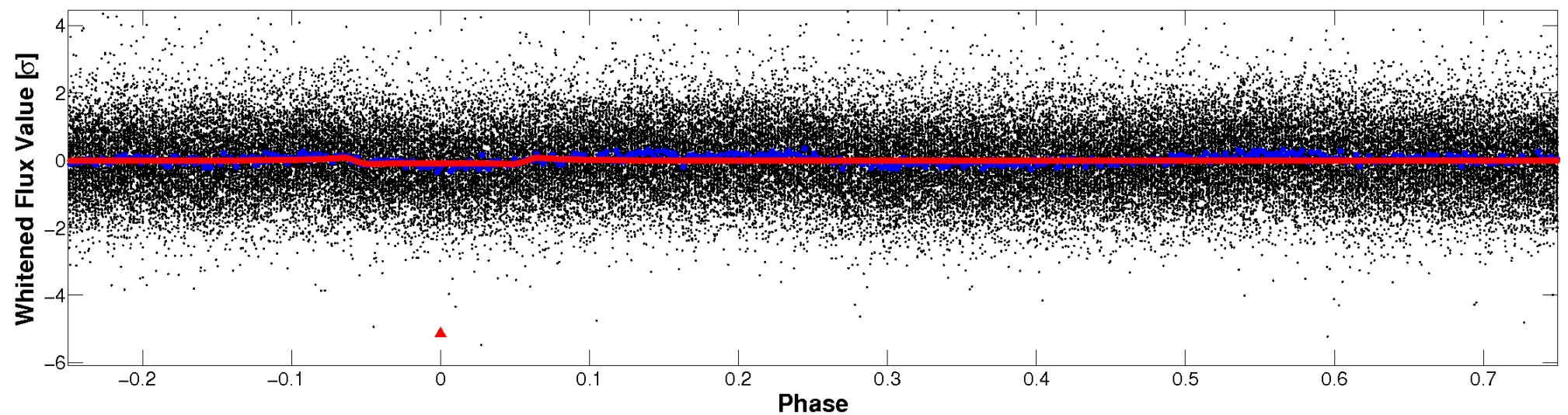


Non-Whitened Vs. Whitened Light Curve

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

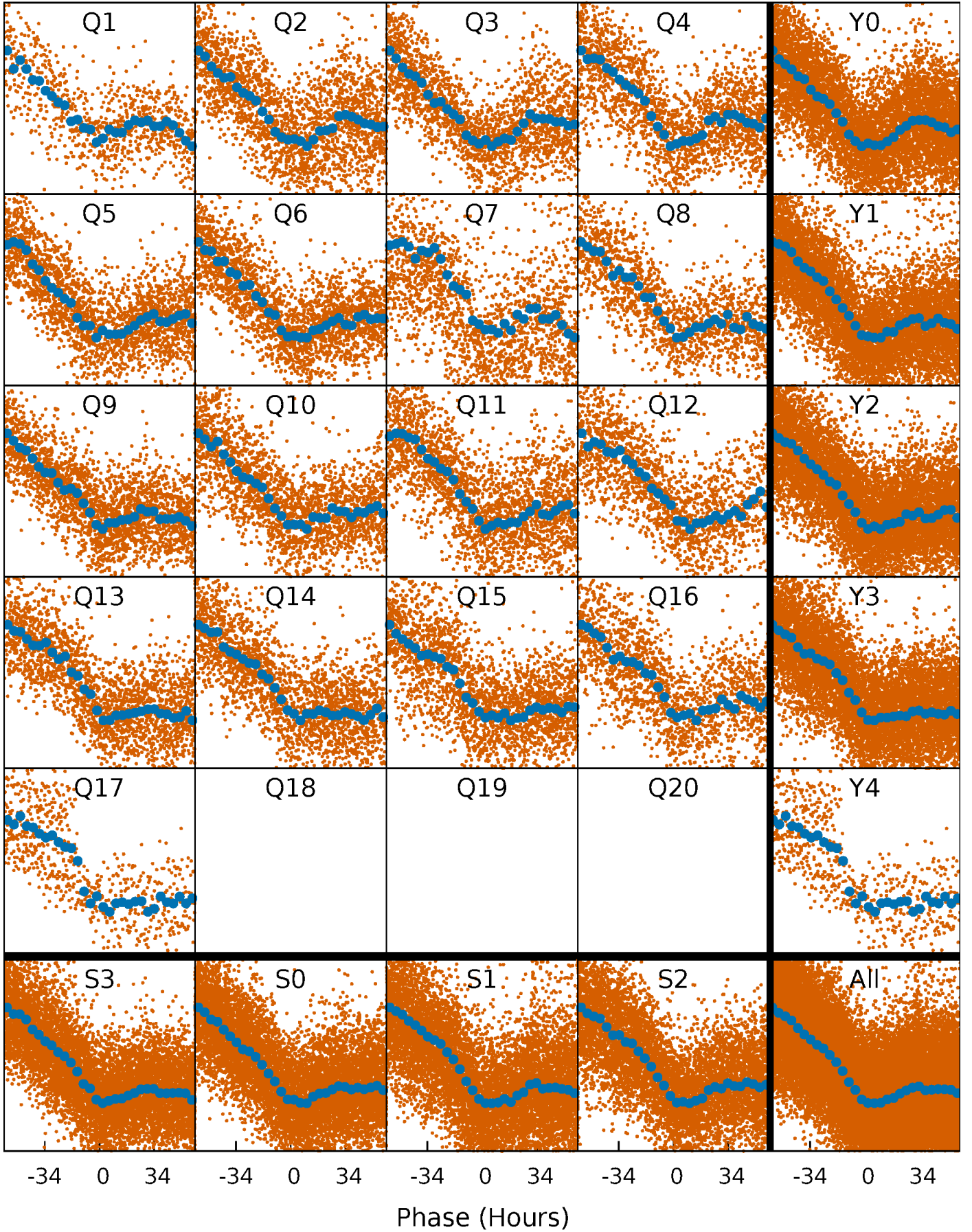


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



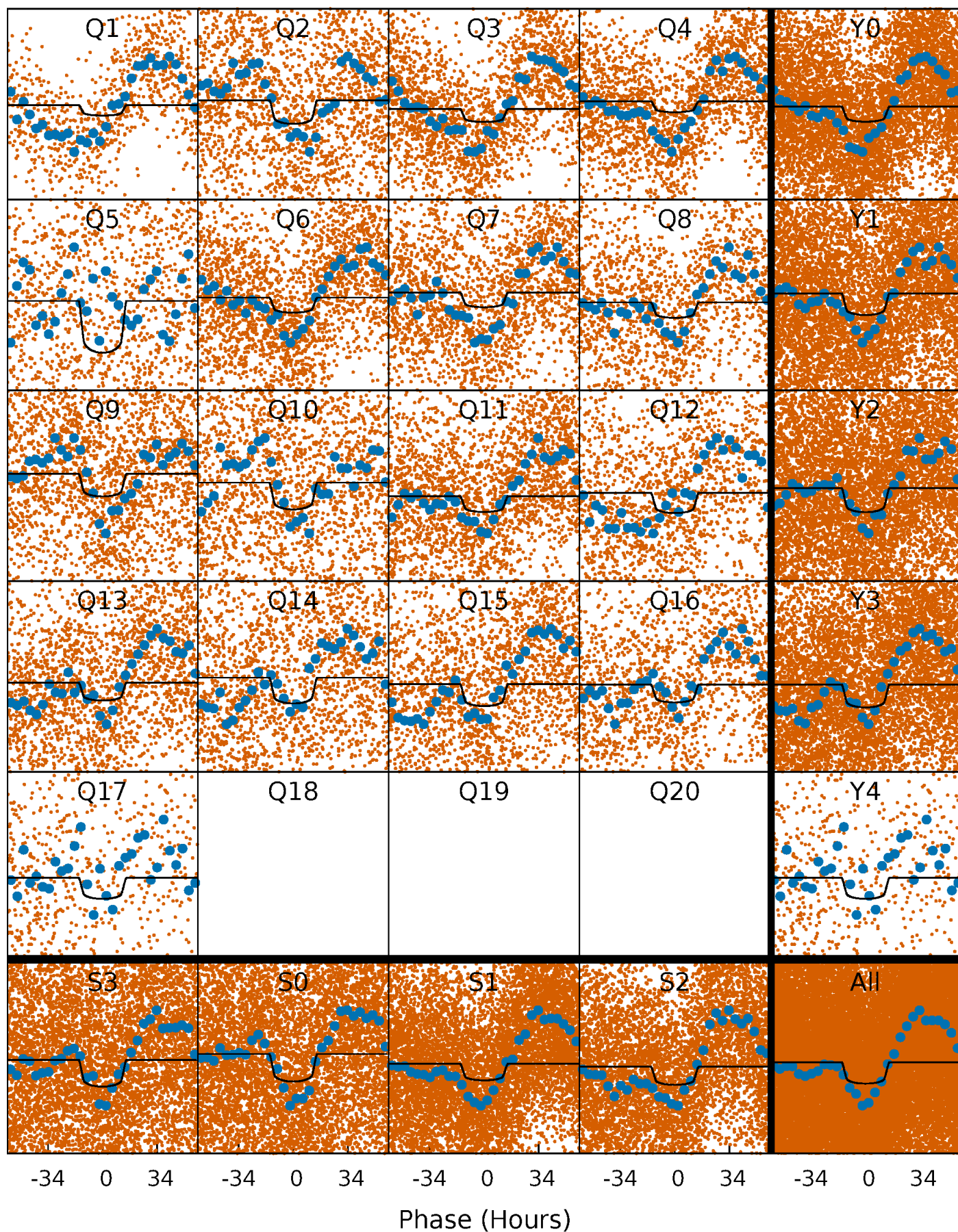
PDC Quarter-Phased Transit Curves

TCE 007543167-01 P= 9.542562 Days $T_0=131.693078$ (BKJD)



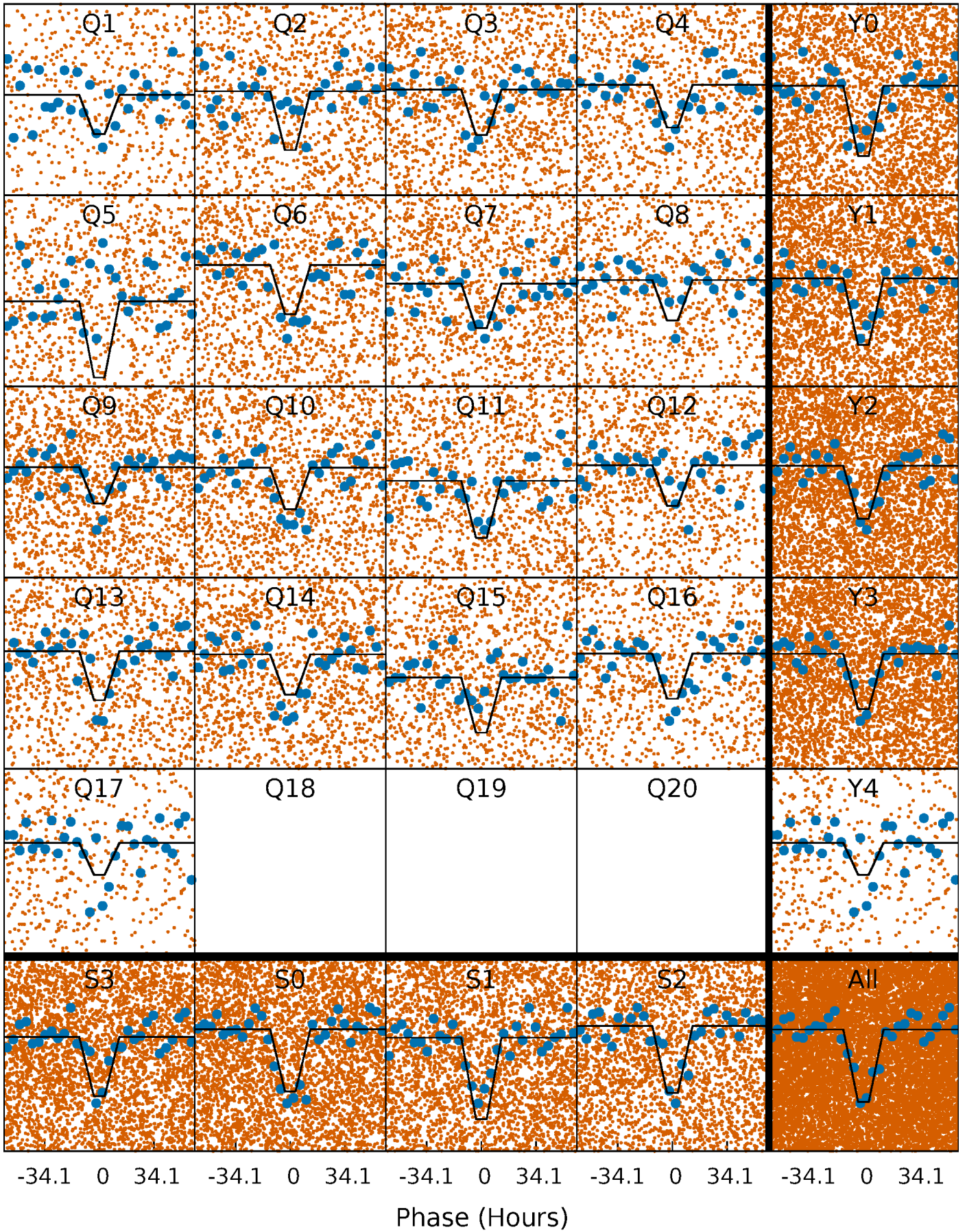
DV Quarter-Phased Transit Curves

TCE 007543167-01 P= 9.542562 Days $T_0=131.693078$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

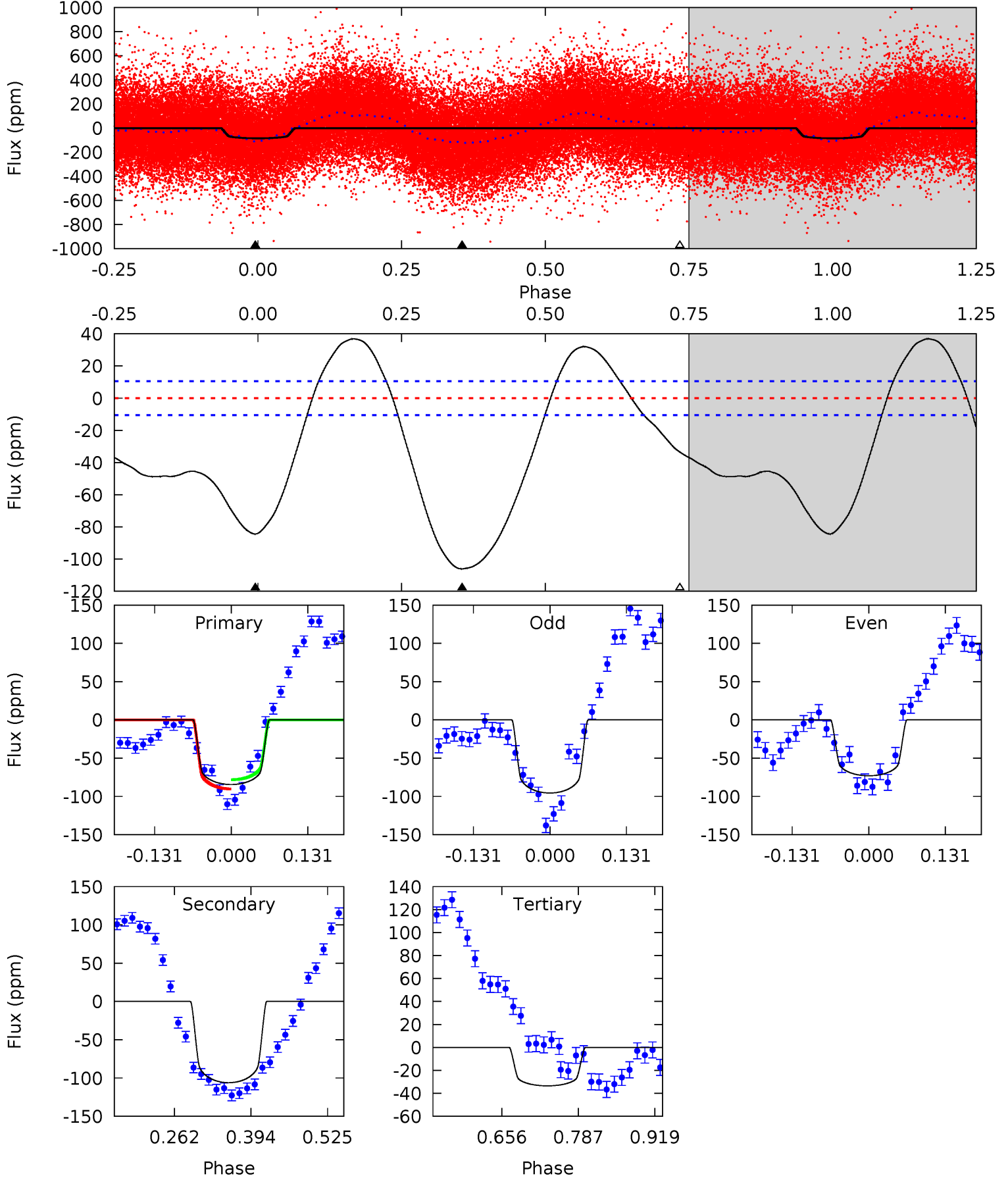
TCE 007543167-01 P= 9.543472 Days $T_0=131.659235$ (BKJD)



DV Model-Shift Uniqueness Test

007543167-01, P = 9.542562 Days, E = 122.150516 Days

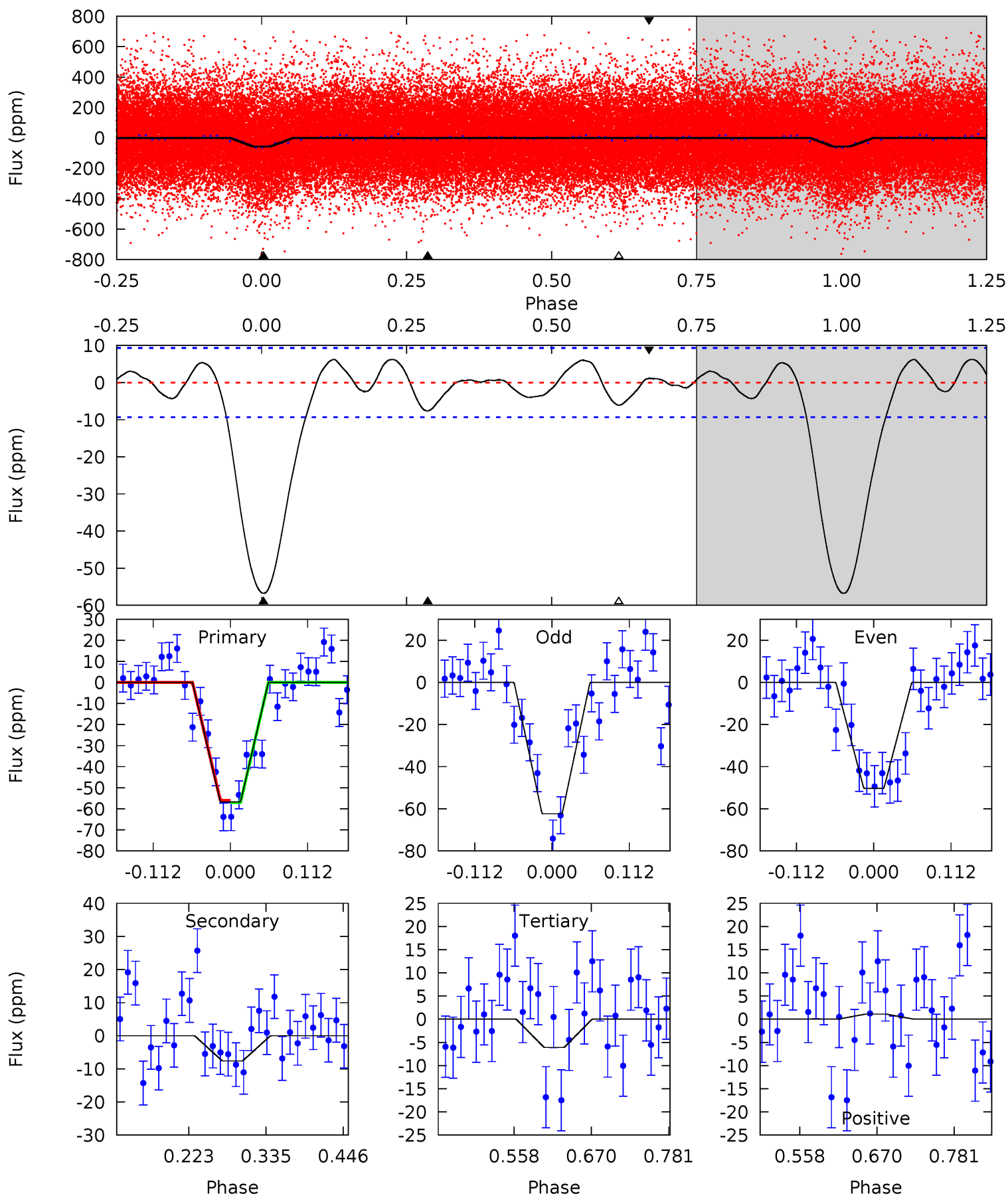
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.1	45.3	14.3	0	4.51	1.51	13.3	21.8	36.1	31.0	45.3	4.82	0.94	0.26	2.62



Alt Model-Shift Uniqueness Test

007543167-01, P = 9.543472 Days, E = 122.115763 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	3.72	2.97	0.54	4.54	1.59	1.52	24.7	27.1	0.75	3.18	2.95	0.64	0.10	0.28



Stellar Parameters For KIC 007543167

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6370^{+192}_{-211}	$4.112^{+0.351}_{-0.162}$	$-1.020^{+0.300}_{-0.250}$	$1.332^{+0.368}_{-0.450}$	$0.838^{+0.095}_{-0.060}$	$0.499^{+1.248}_{-0.250}$
	+3%/-3%	+9%/-4%	+29%/-25%	+28%/-34%	+11%/-7%	+250%/-50%
Source	PHO1	KIC0	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 007543167-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-106 ± 2	$1.20^{+0.23}_{-0.22}$	1548^{+124}_{-148}	7077^{+387}_{-369}	283^{+143}_{-81}
Alt.	-8 ± 2	$1.09^{+0.19}_{-0.22}$	1553^{+122}_{-156}	4083^{+234}_{-273}	24^{+16}_{-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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

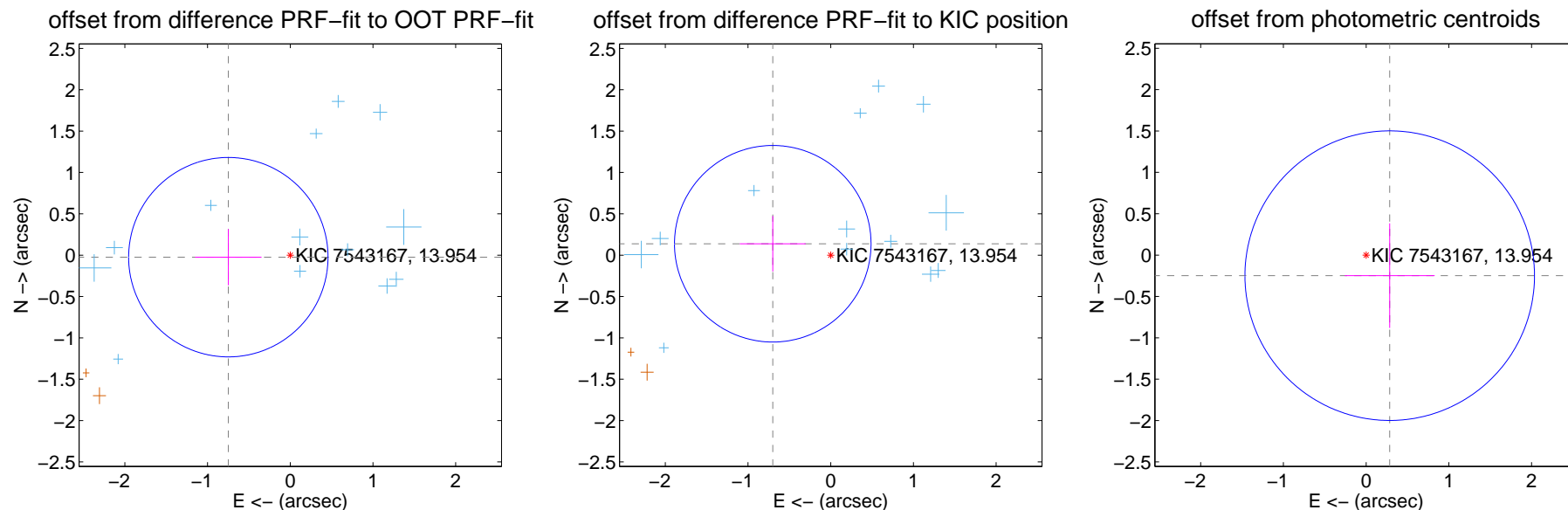
DV Centroid Data

Supplemental centroid analysis for 007543167-01. Kepler magnitude: 13.95. Transit SNR 8.77

There are 14 quarters with good PRF difference image offsets

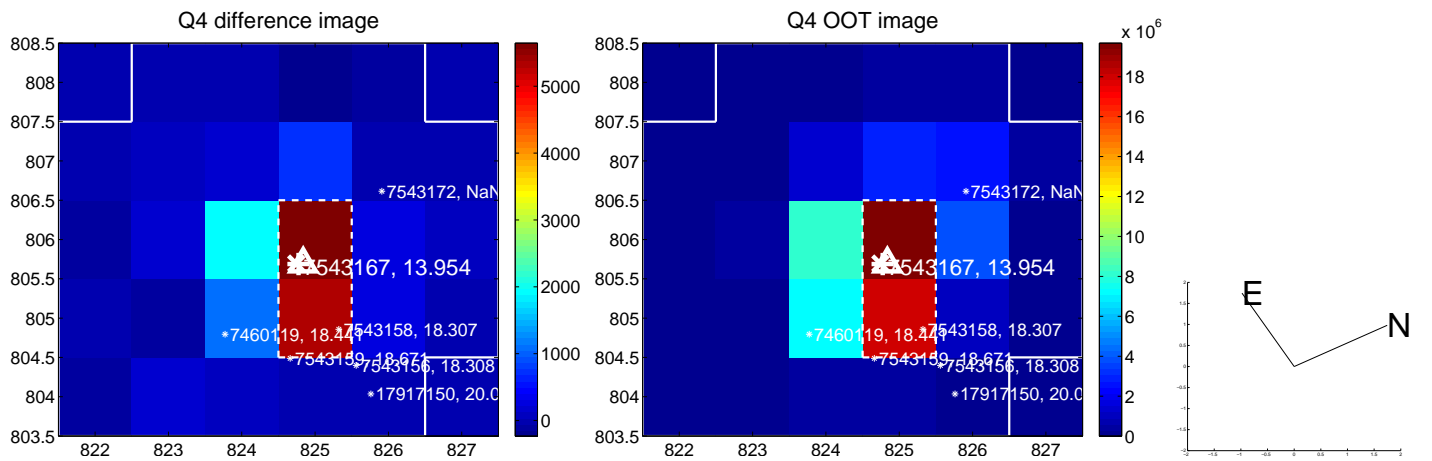
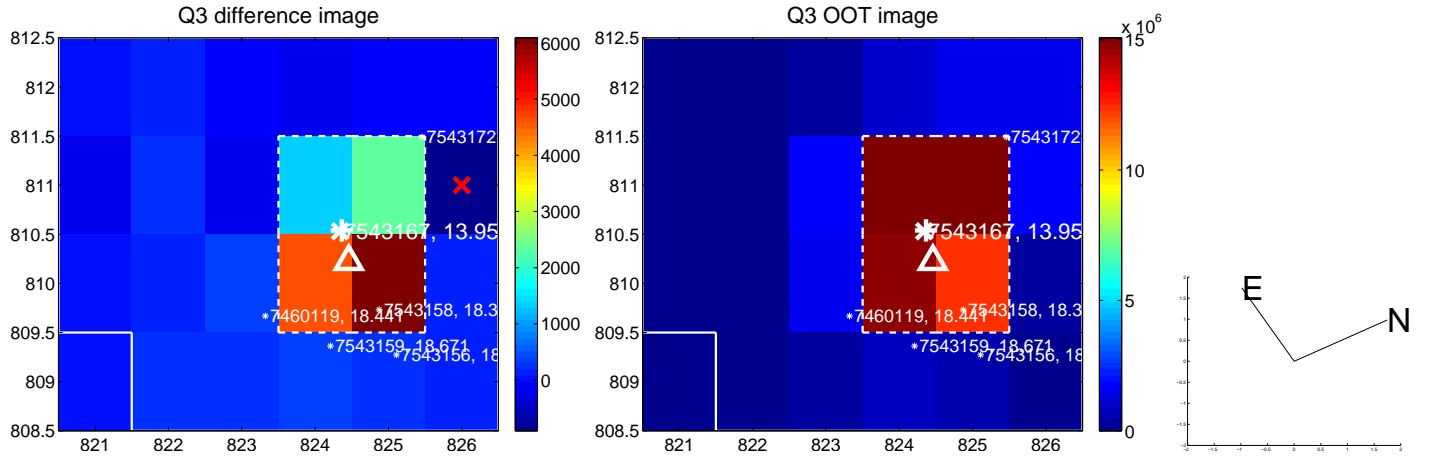
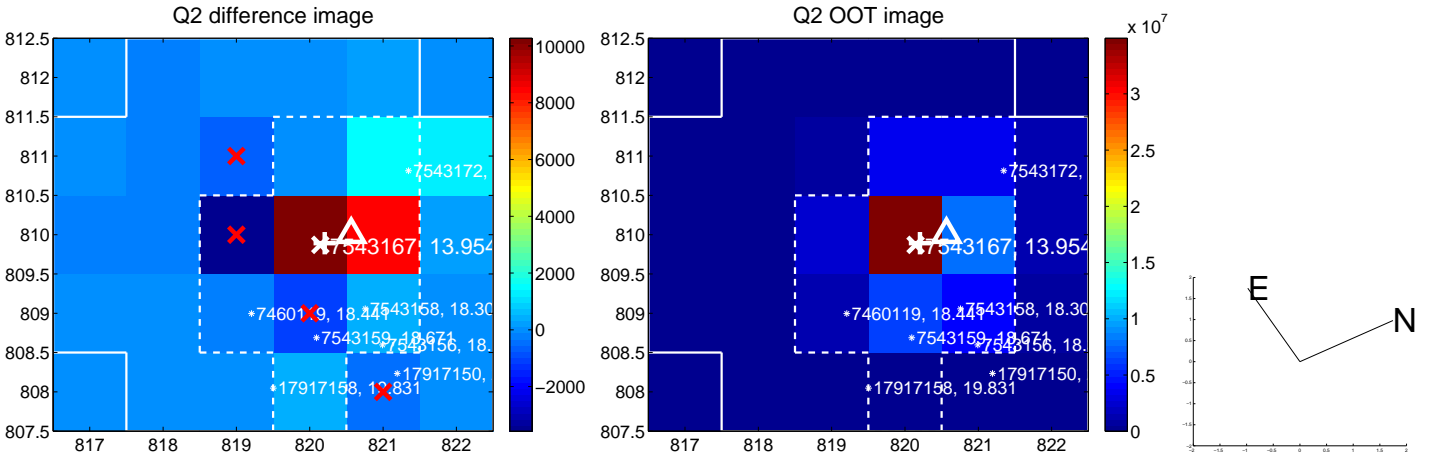
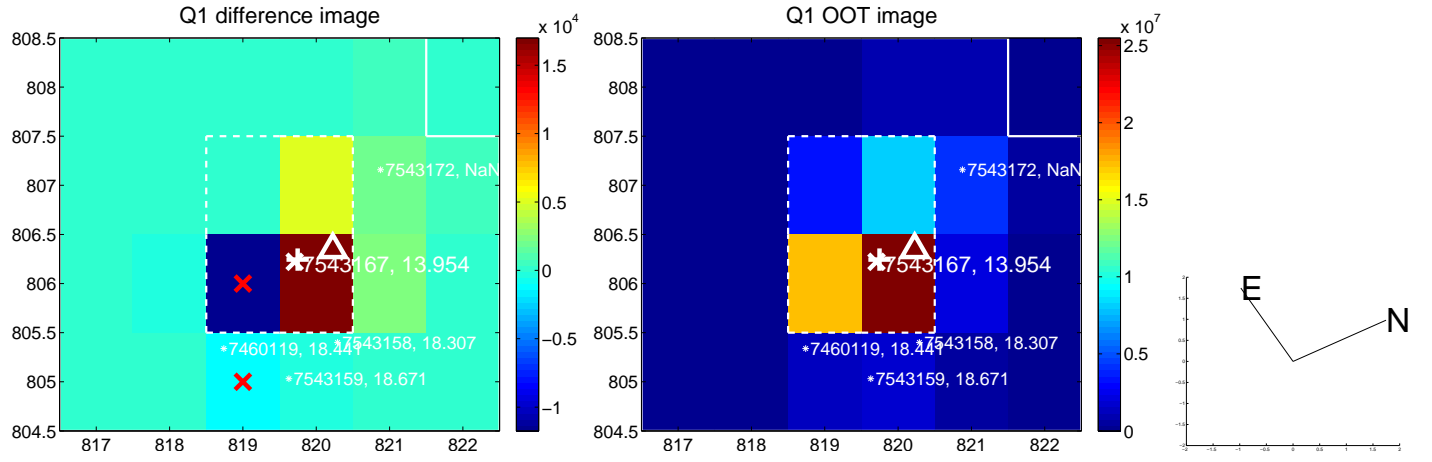
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.749 ± 0.402	1.86	0.749 ± 0.402	-0.024 ± 0.340
PRF-fit source offset from KIC position	0.714 ± 0.396	1.80	0.701 ± 0.398	0.138 ± 0.336
photometric centroid source offset	0.38 ± 0.58	0.65	-0.29 ± 0.54	-0.25 ± 0.63

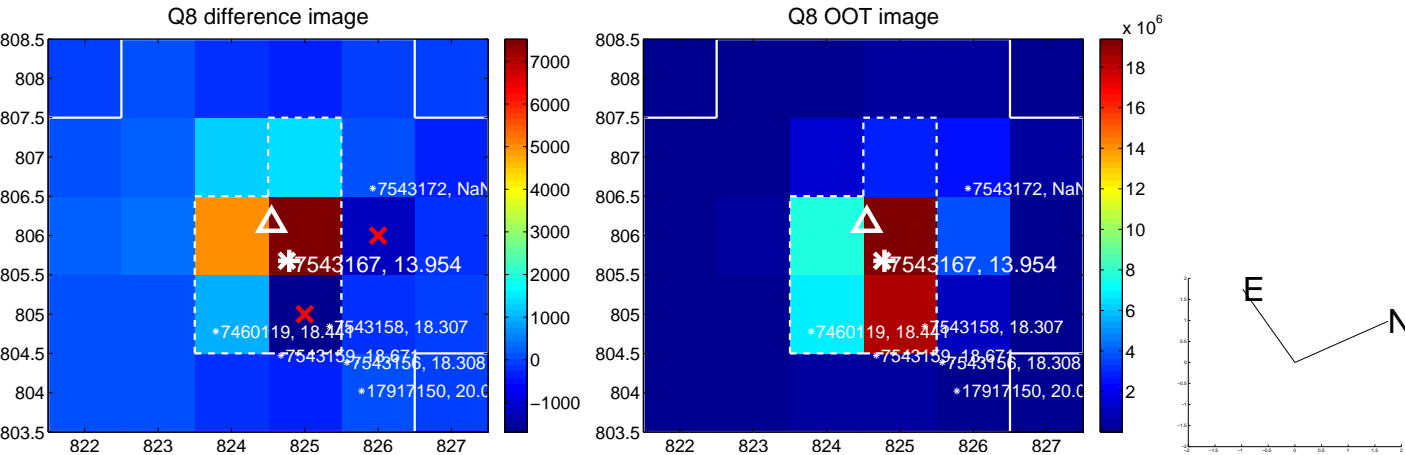
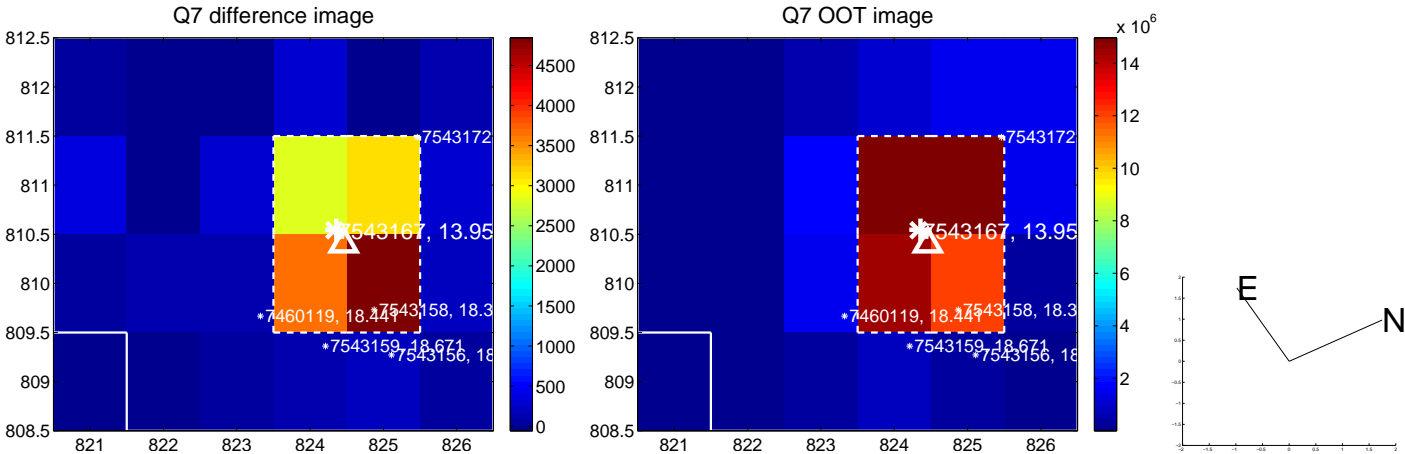
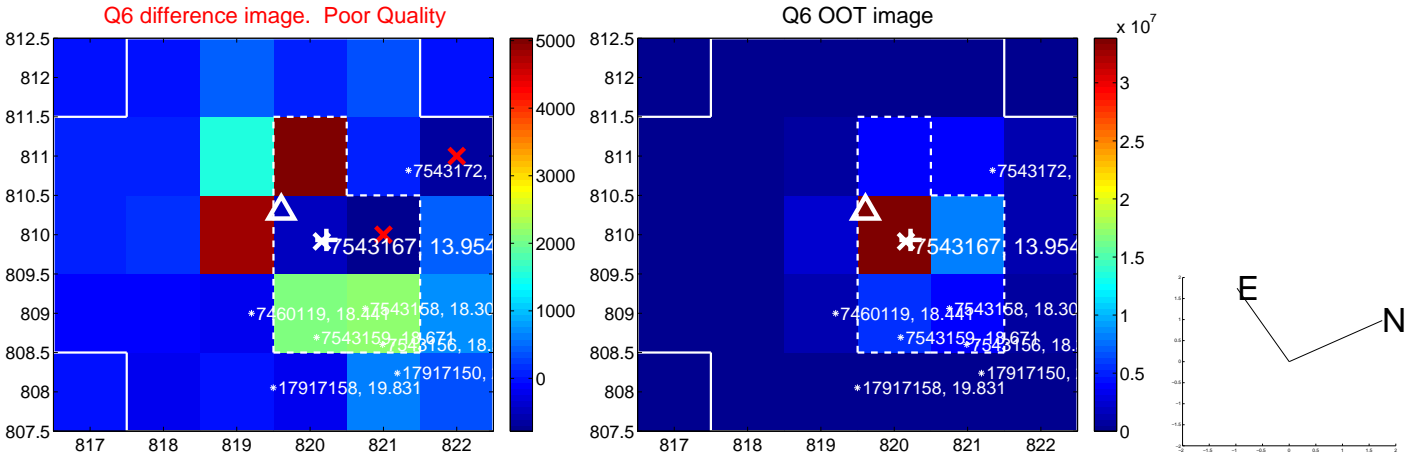
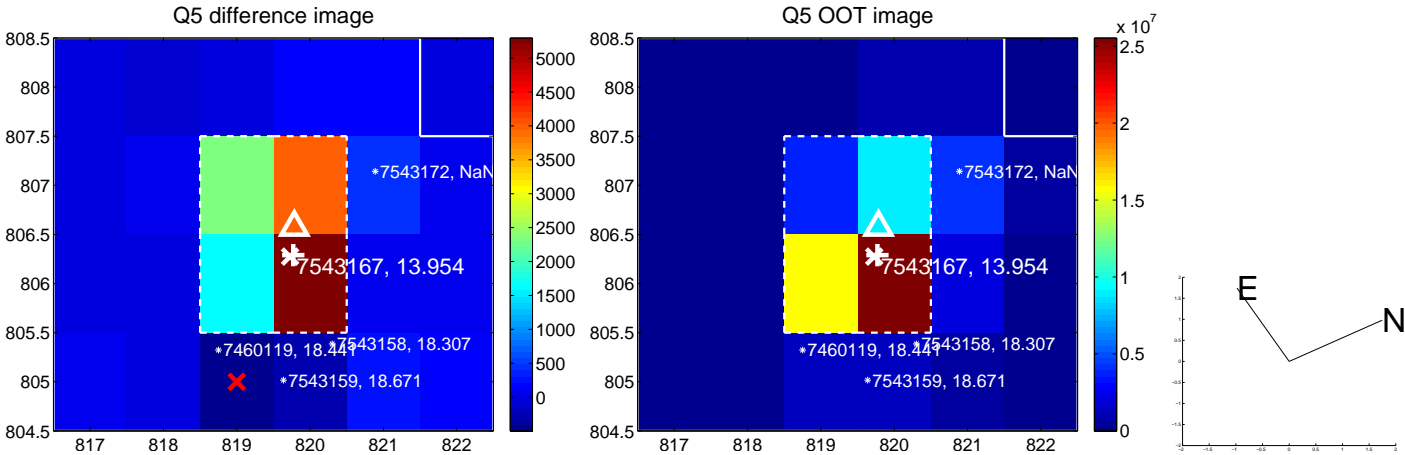


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

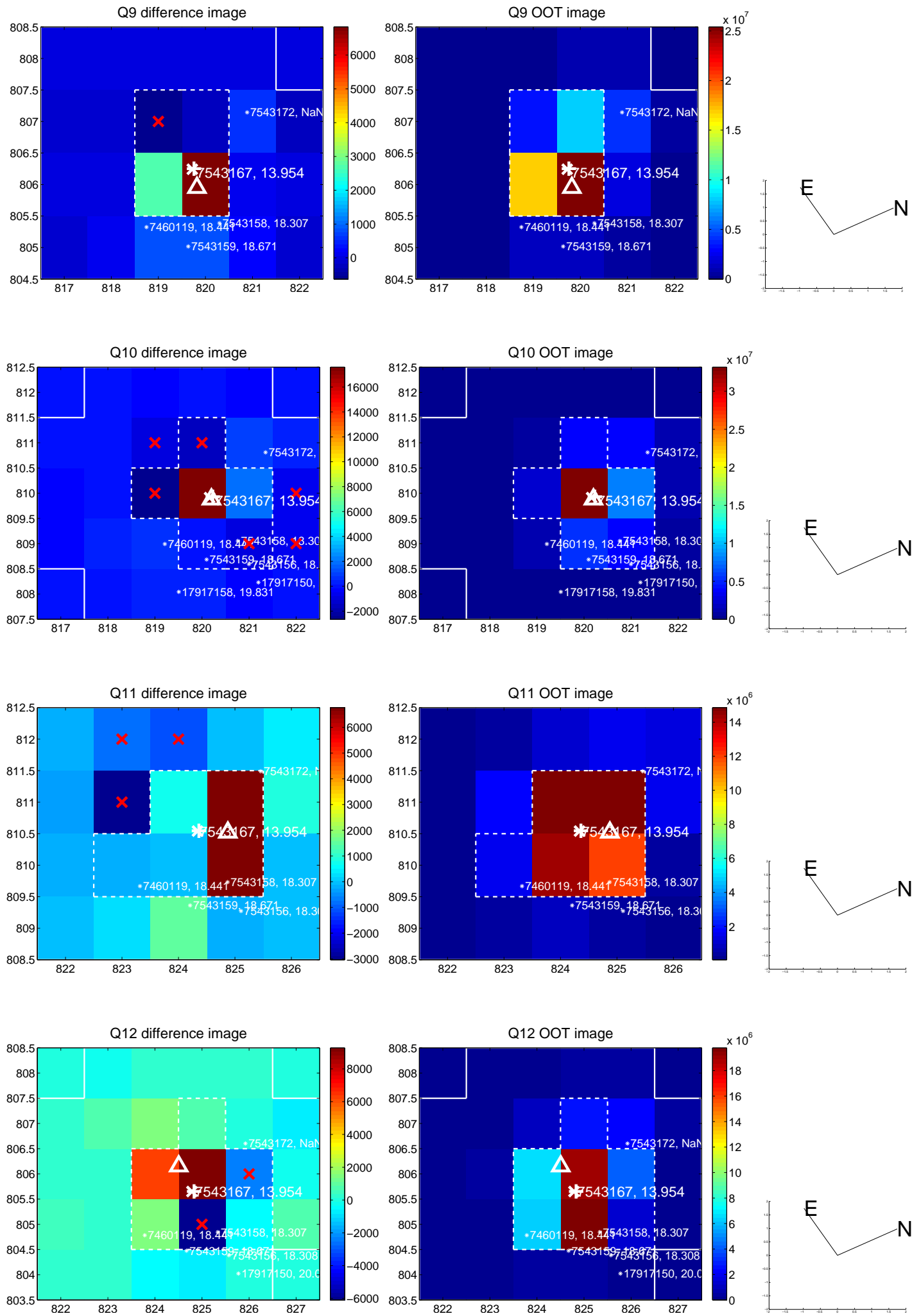
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



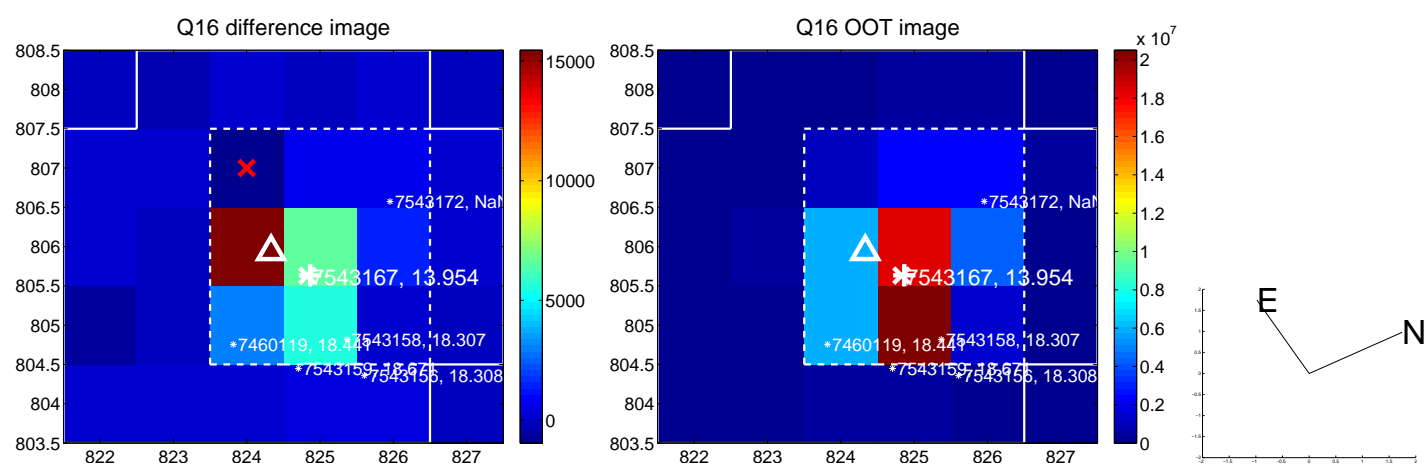
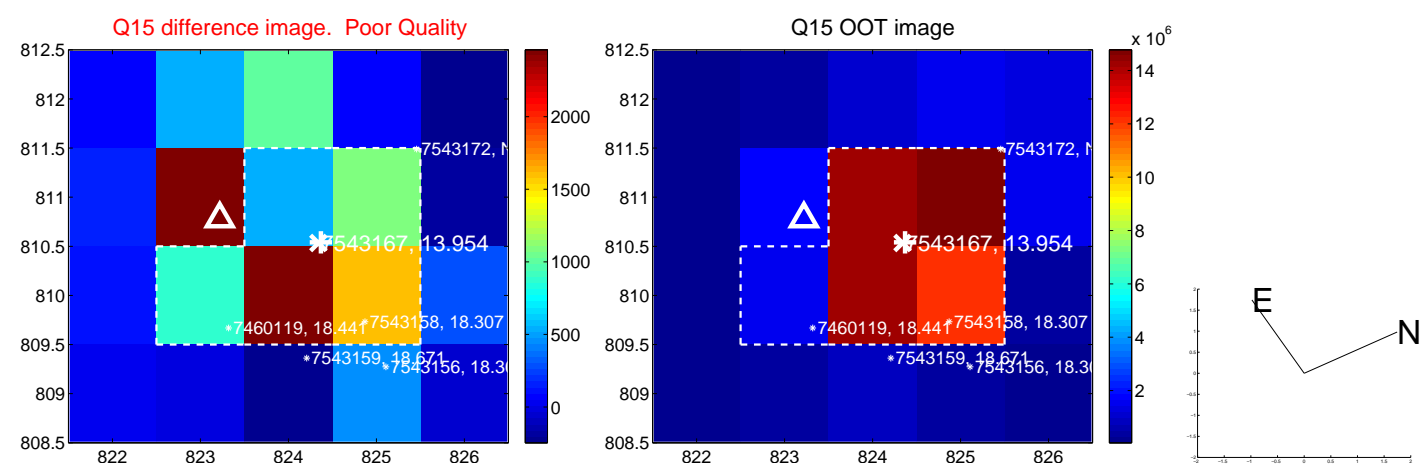
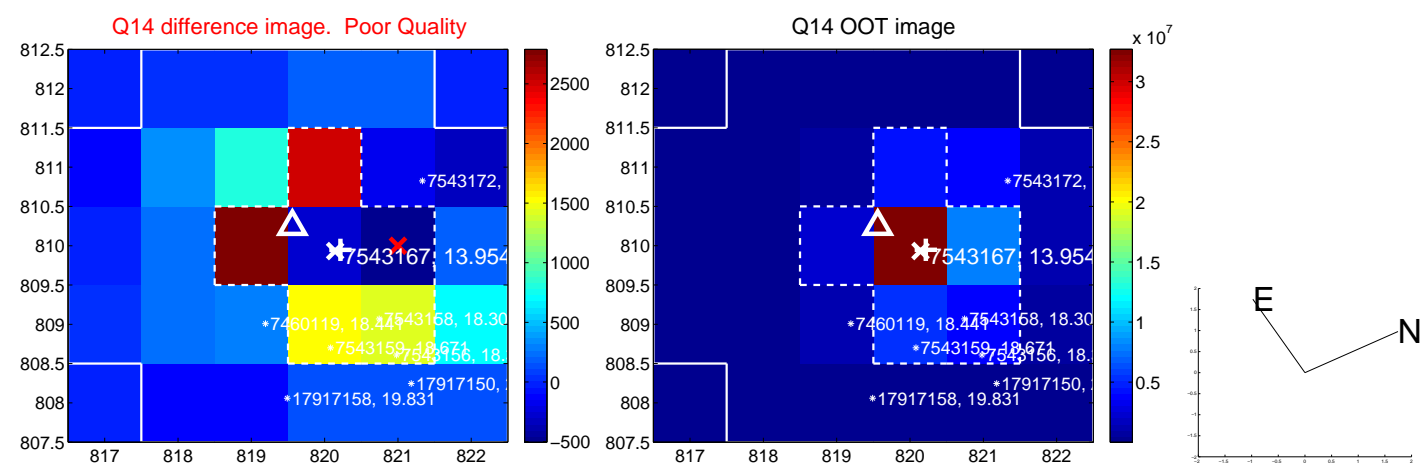
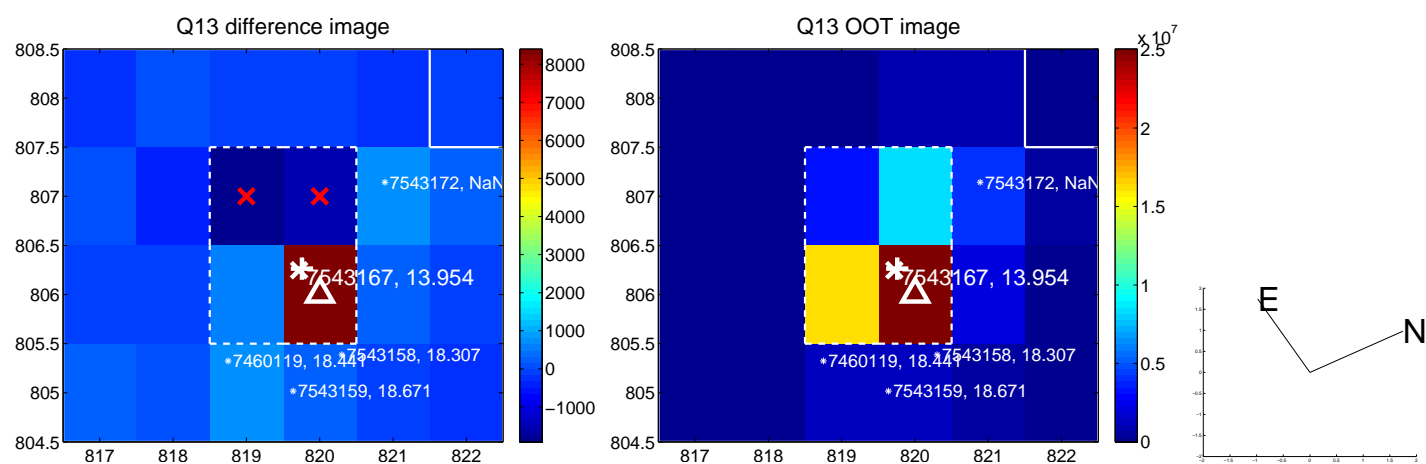
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



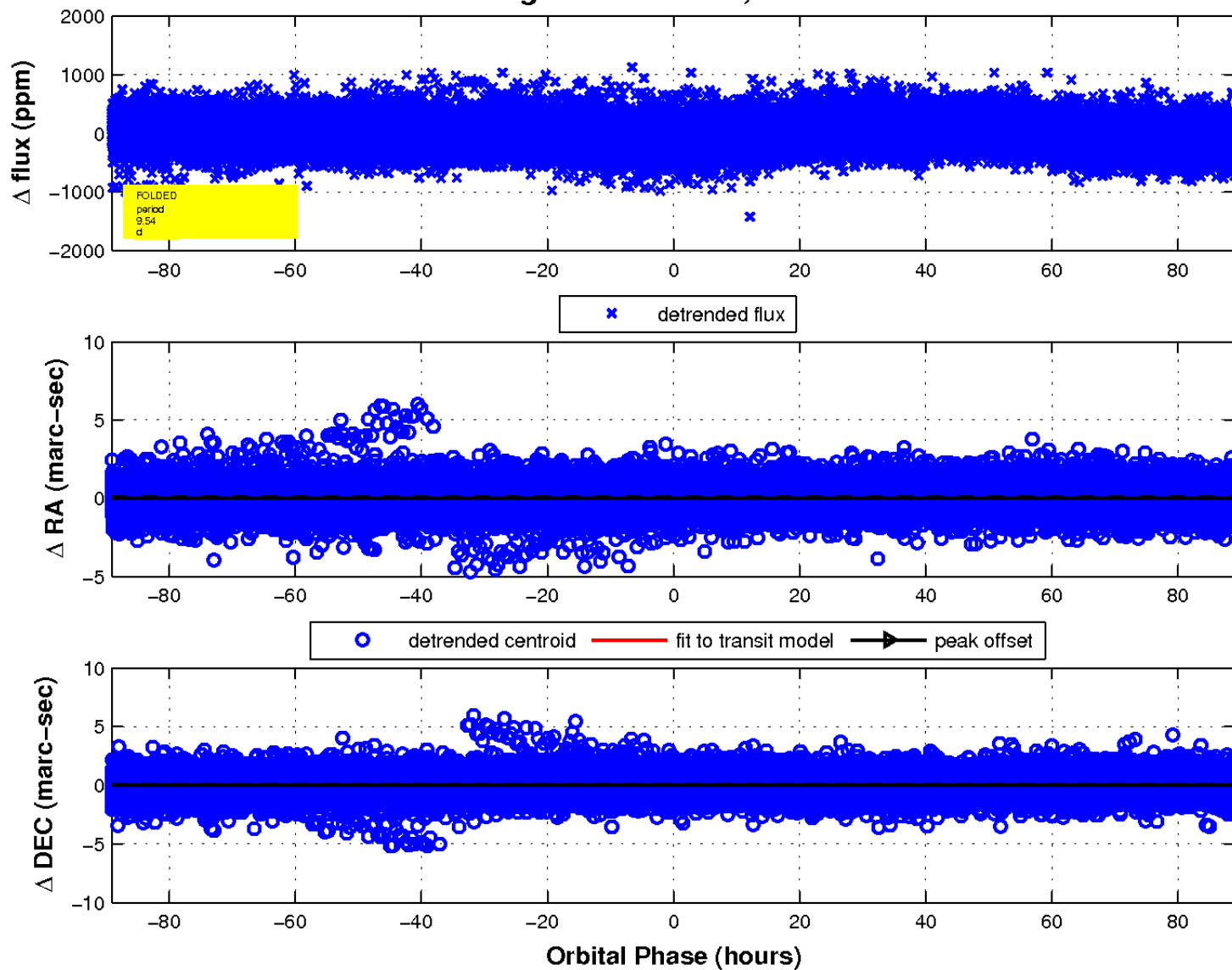
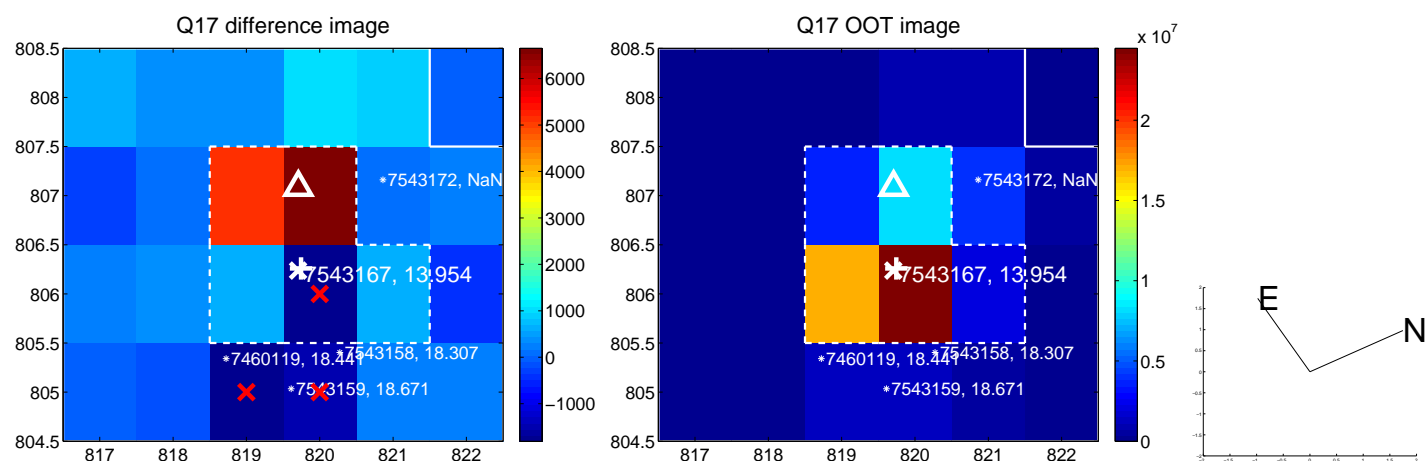
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

