

KIC 005467124

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005467124-01	OBS	2161.01	2.845771	134.273604	85.9	5.926	27.0	30.3	2.37	5557	2.59	2650.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005467124-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH

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 005467124-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
005467124-01	5467124	3825.01	5467113	1:1	14.6	-2	3	15.83	13.59	7158.50	Direct-PRF	0	0.49	0.13

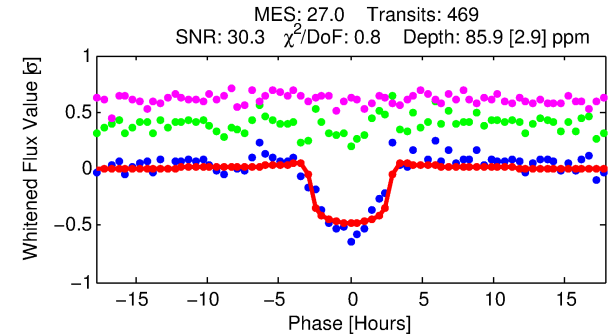
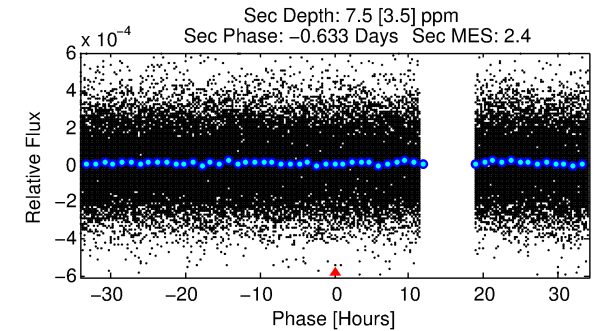
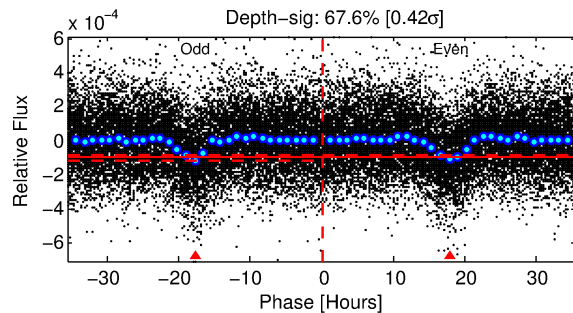
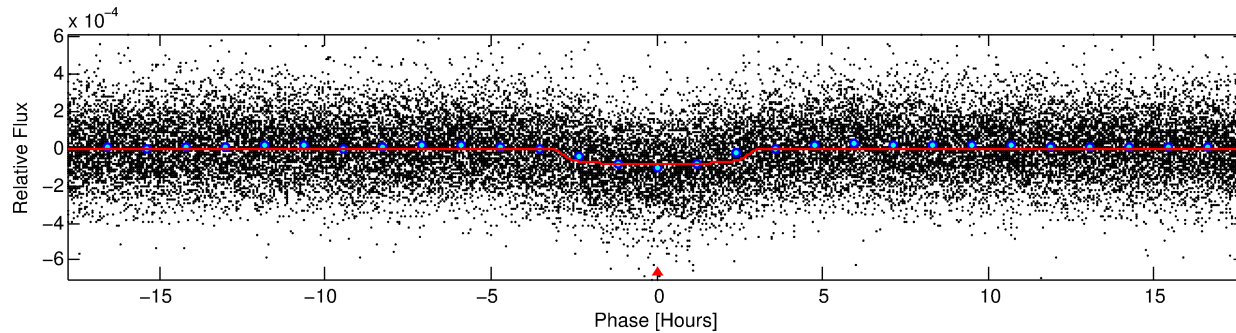
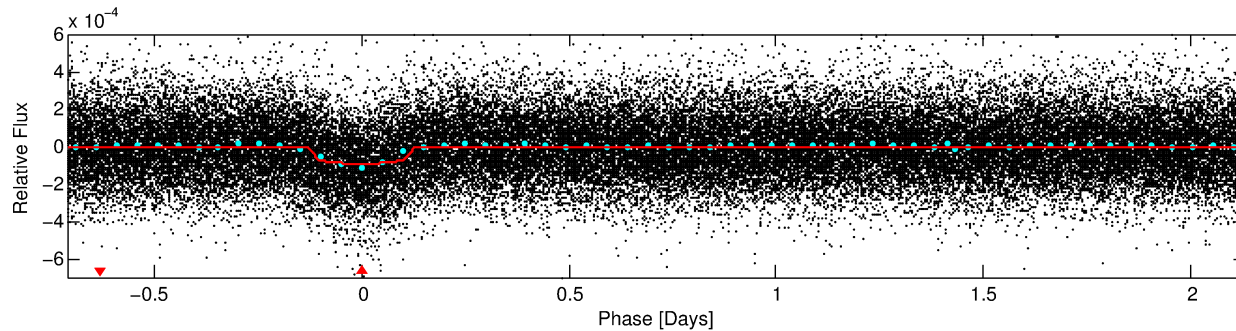
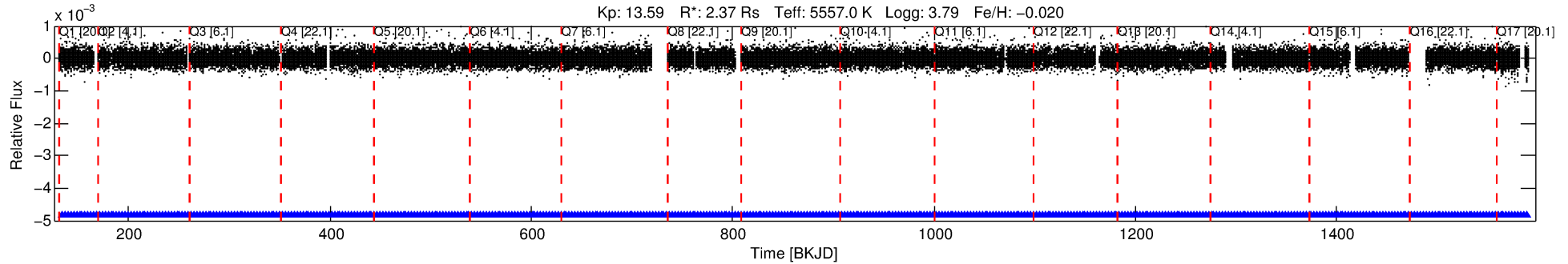
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5467124 Candidate: 1 of 1 Period: 2.846 d

KOI: K02161.01 Corr: 0.766

Kp: 13.59 R*: 2.37 Rs Teff: 5557.0 K Logg: 3.79 Fe/H: -0.020



DV Fit Results:

Period = 2.84577 [0.00001] d
Epoch = 134.2736 [0.0023] BKJD
Rp/R* = 0.0100 [0.0015]
a/R* = 2.01 [1.06]
b = 0.89 [0.17]
Seff = 2650.94 [1044.14]
Teq = 1830 [180] K
Rp = 2.59 [0.88] Re
a = 0.0426 [0.0111] AU
Ag = 1.11 [0.76] [0.15σ]
Teffp = 2906 [408] K [2.41σ]

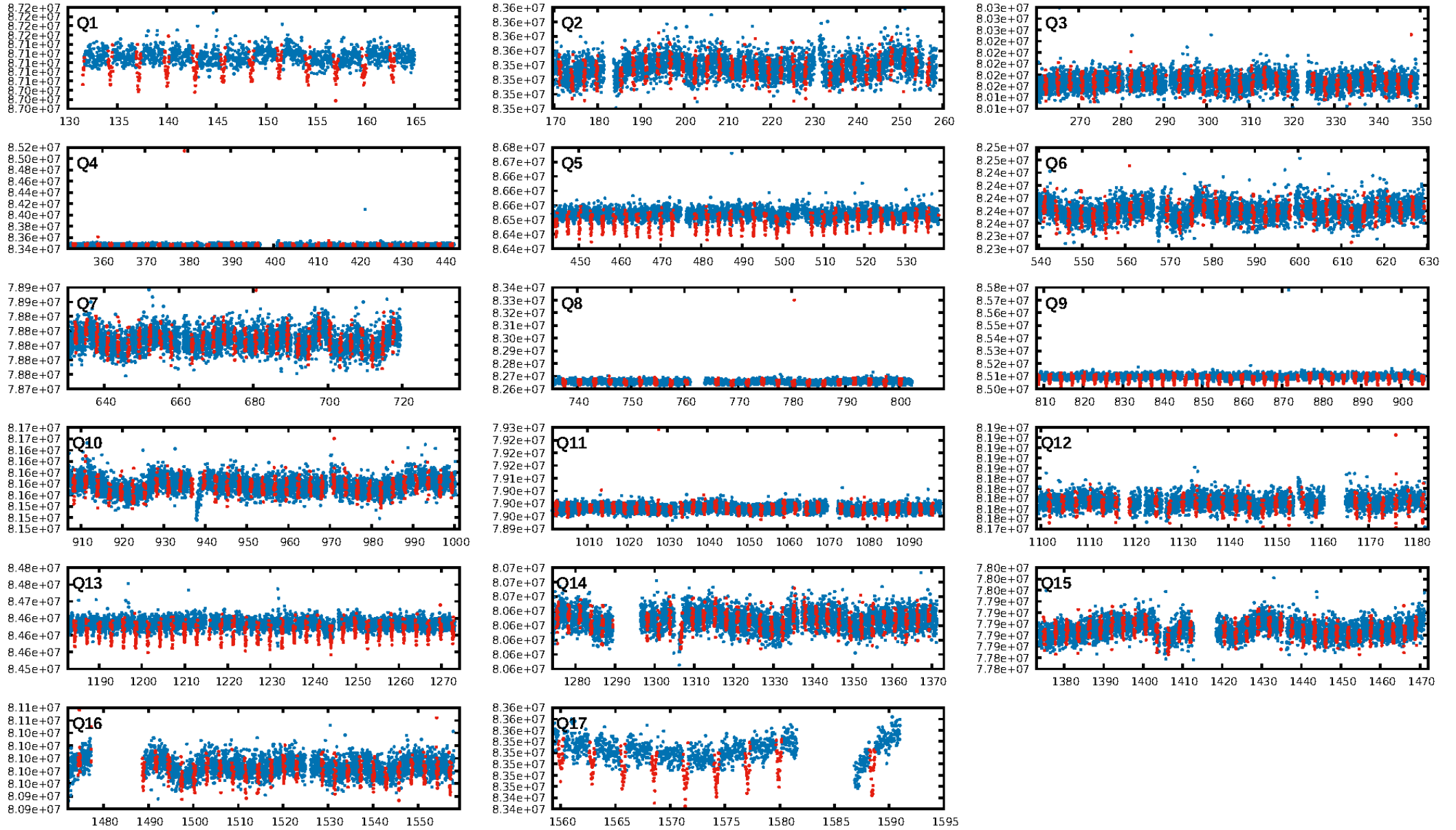
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.99e-156
RollingBand-fgt: 1.00 [448/448]
GhostDiagnostic-chr: -0.4921
Centroid-sig: N/A
Centroid-so: 212.731 arcsec [308.56σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

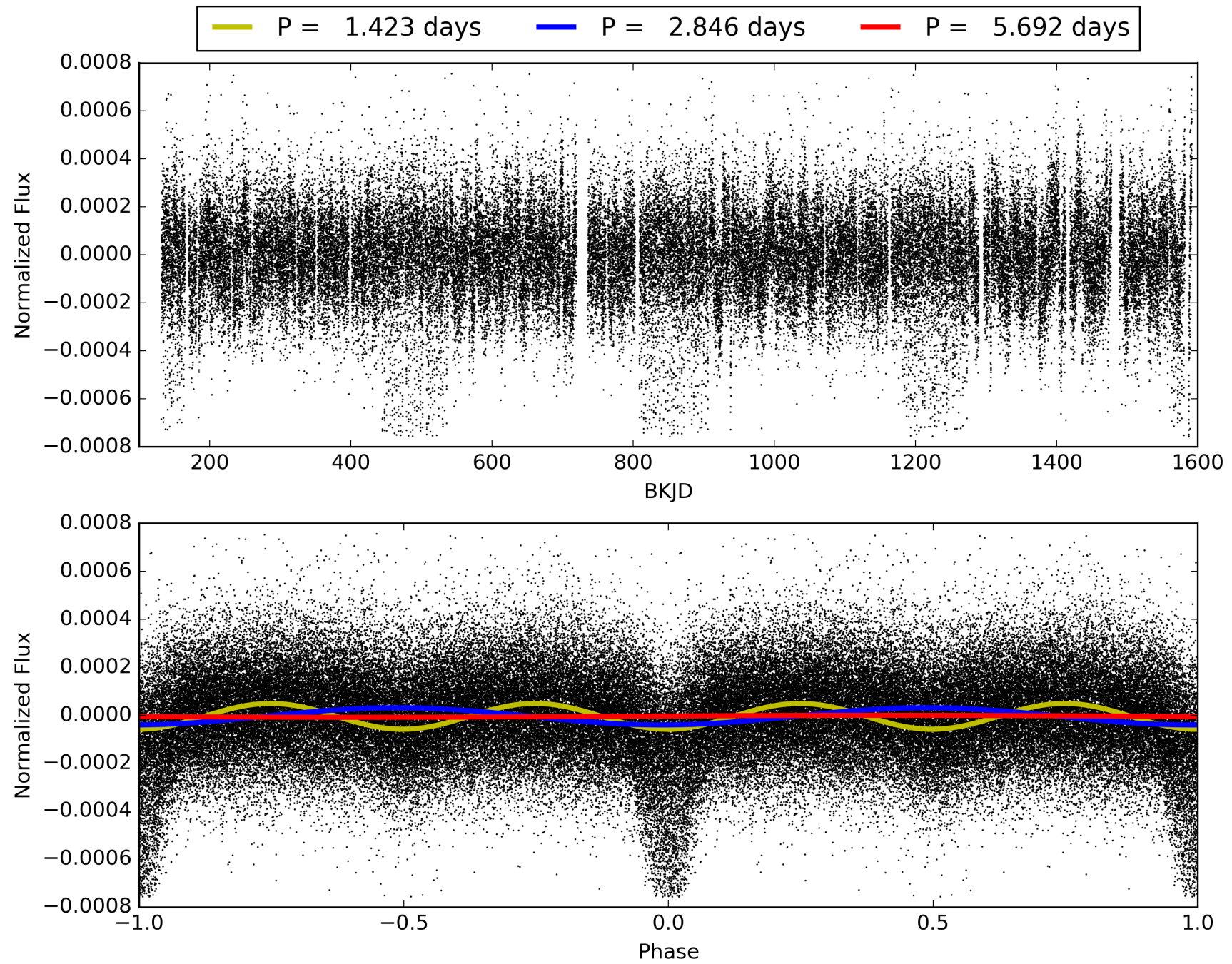
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:50:06 Z

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

TCE 005467124-01, PDC Light Curves

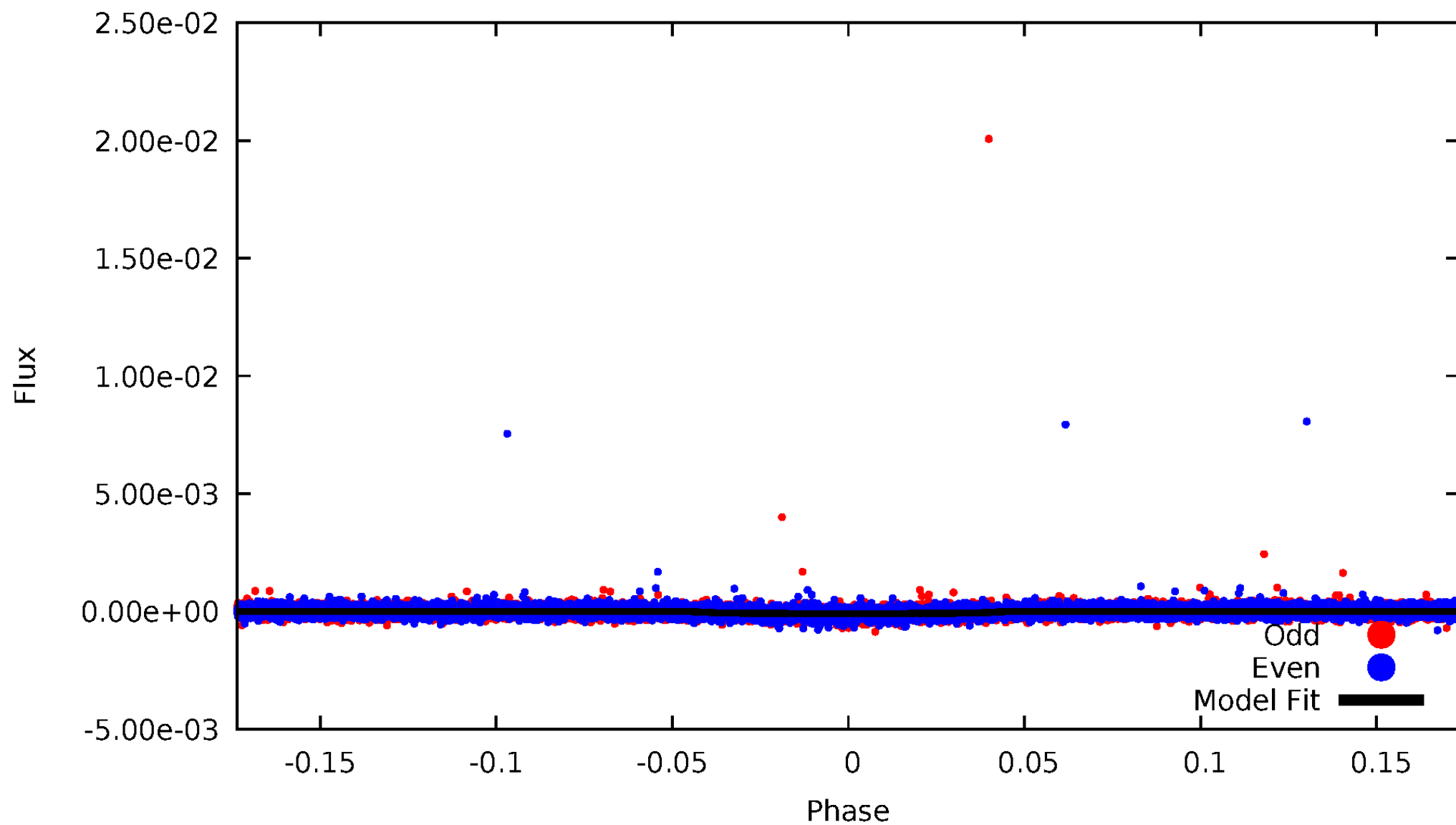


TCE 005467124-01



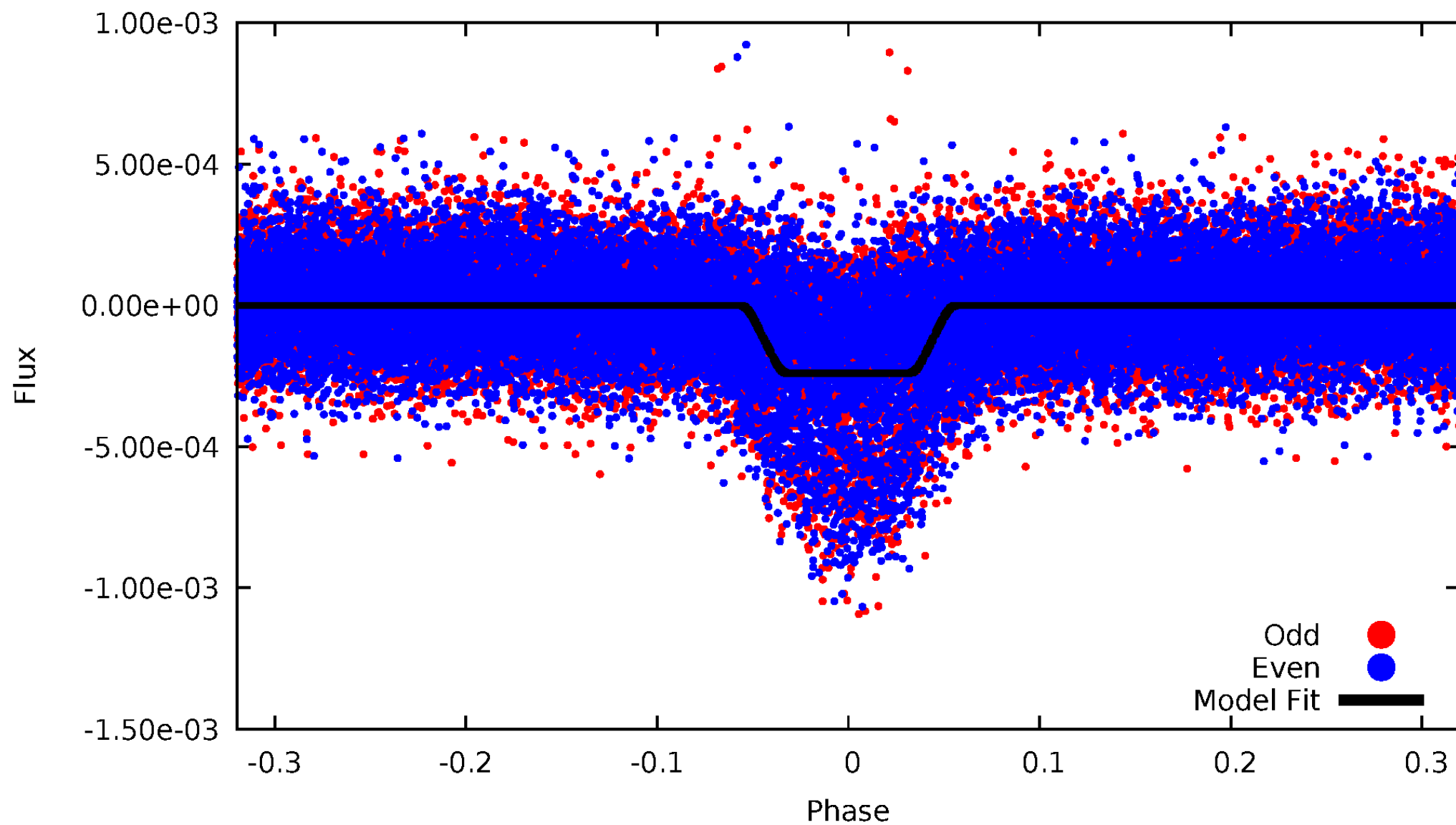
DV Odd/Even

TCE 005467124-01



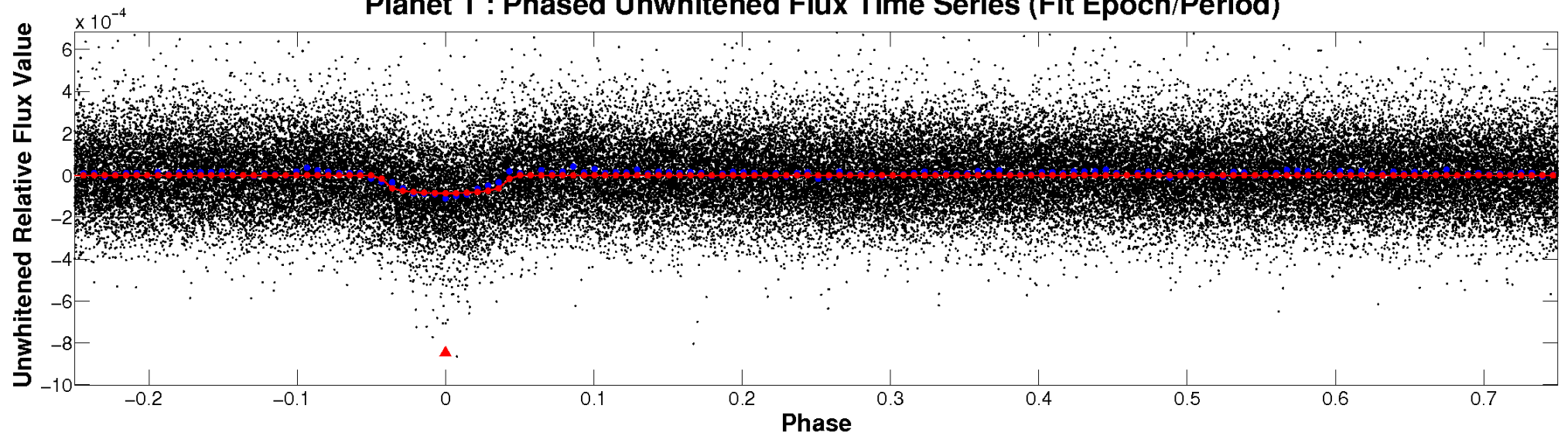
ALT Odd/Even

TCE 005467124-01

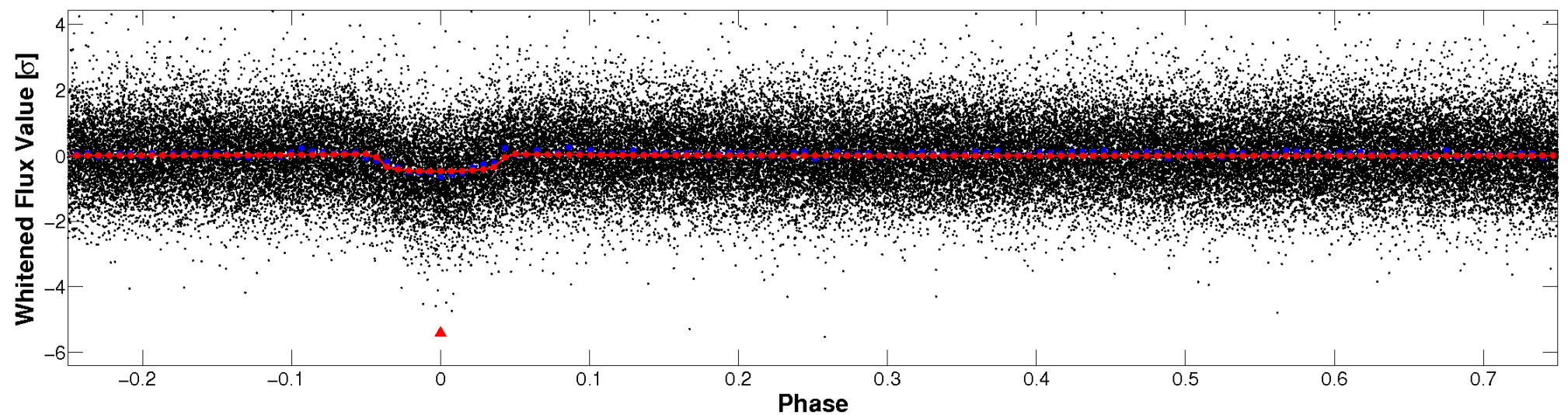


Non-Whitened Vs. Whitened Light Curve

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

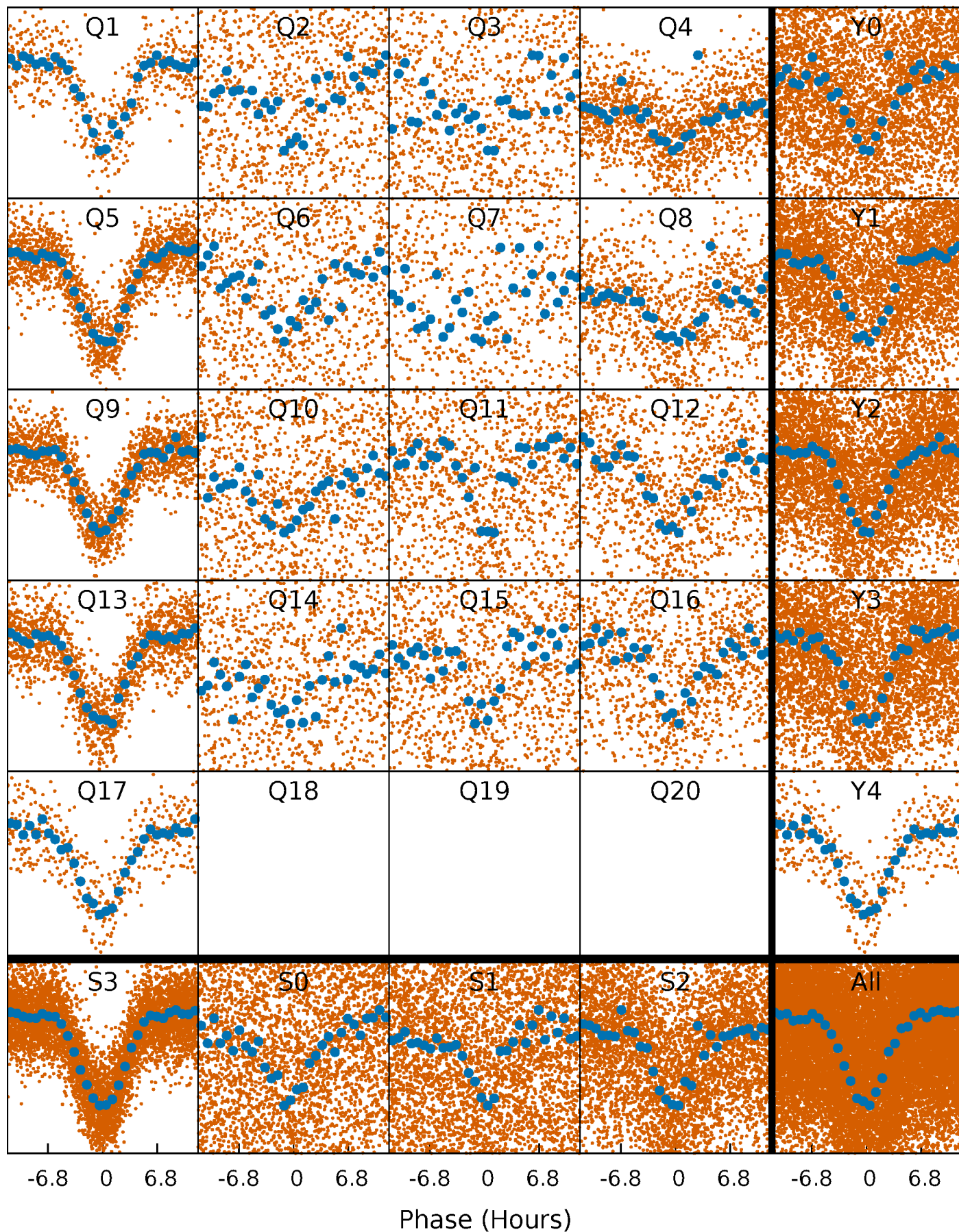


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



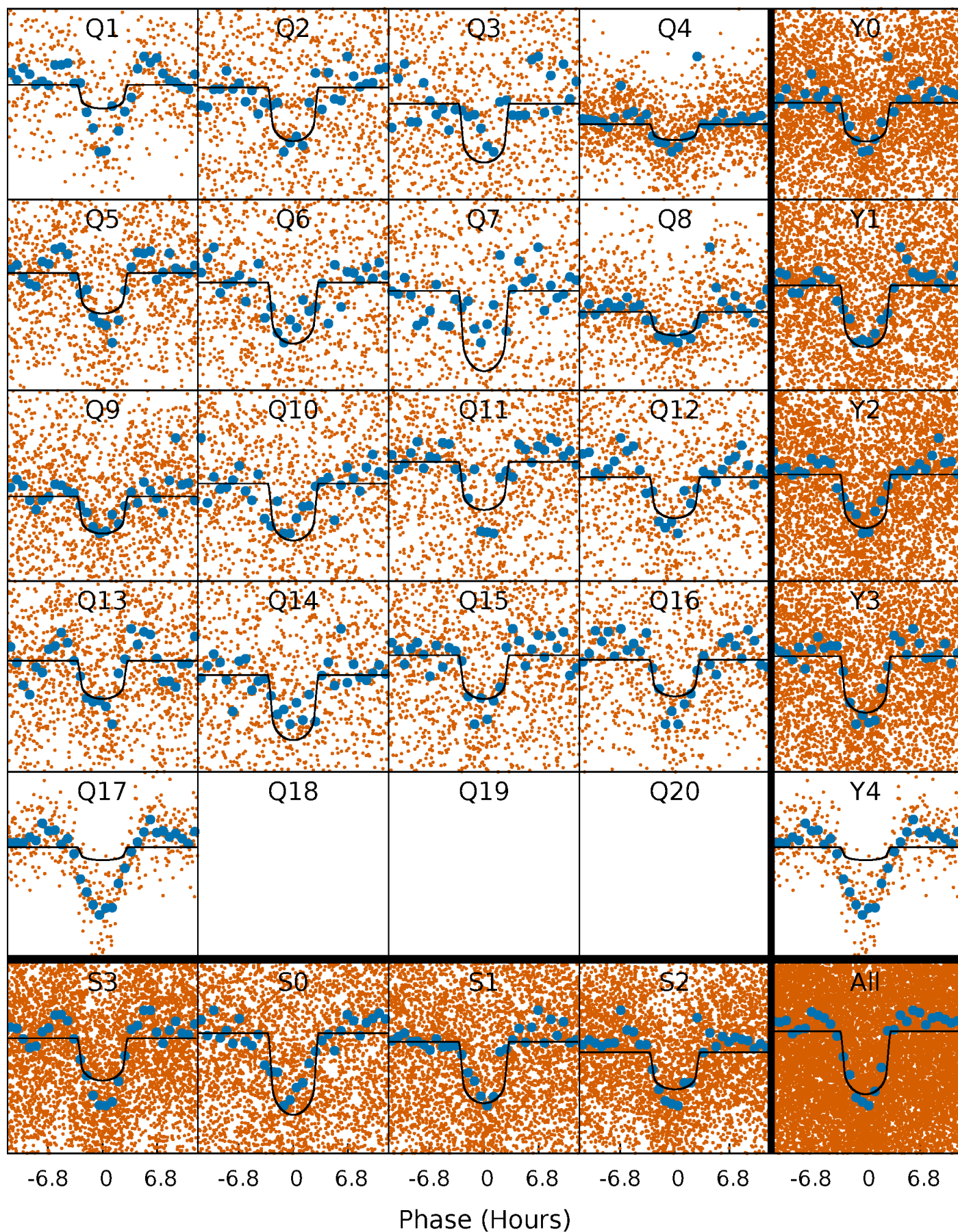
PDC Quarter-Phased Transit Curves

TCE 005467124-01 P= 2.845771 Days $T_0=134.273604$ (BKJD)



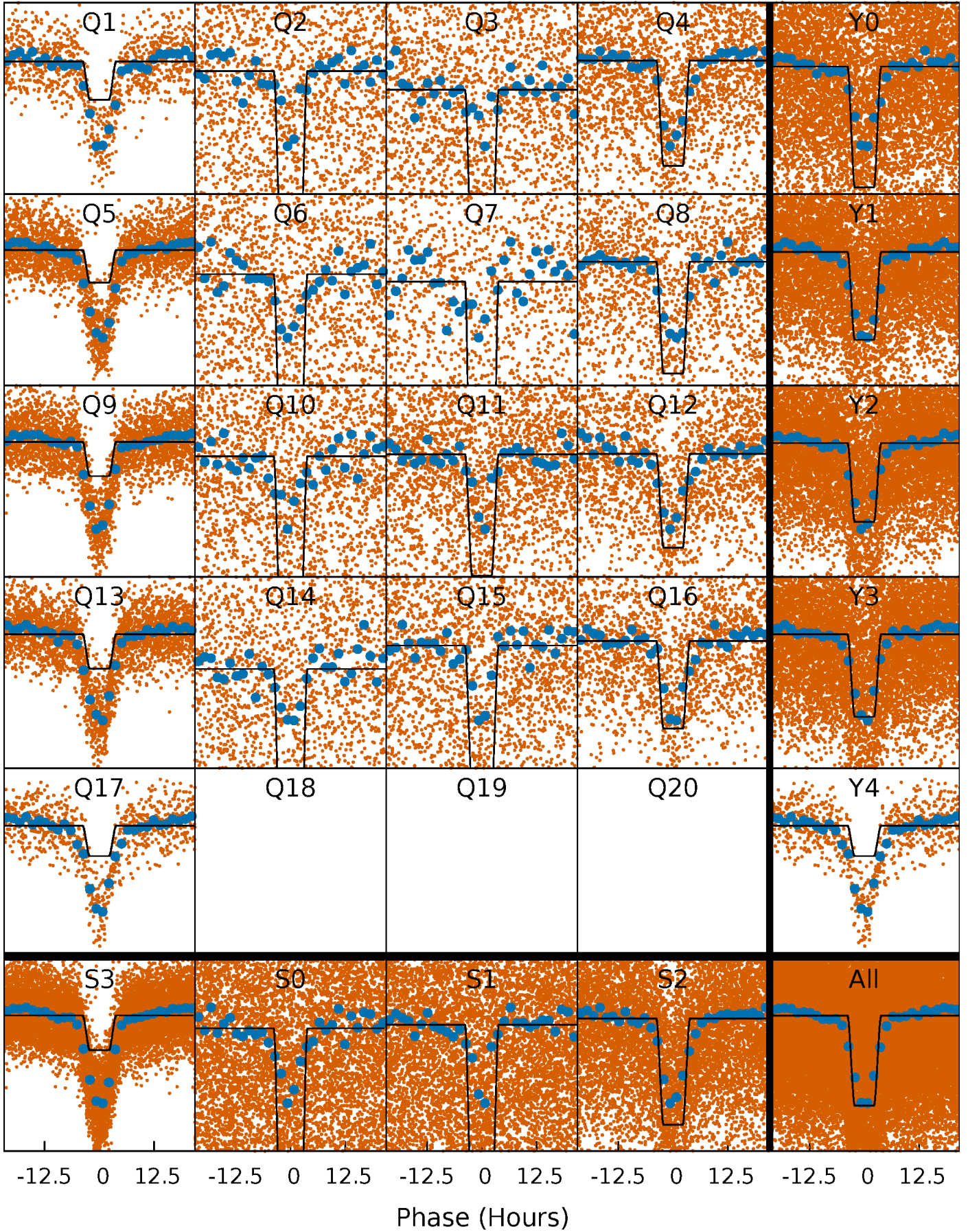
DV Quarter-Phased Transit Curves

TCE 005467124-01 P= 2.845771 Days $T_0=134.273604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

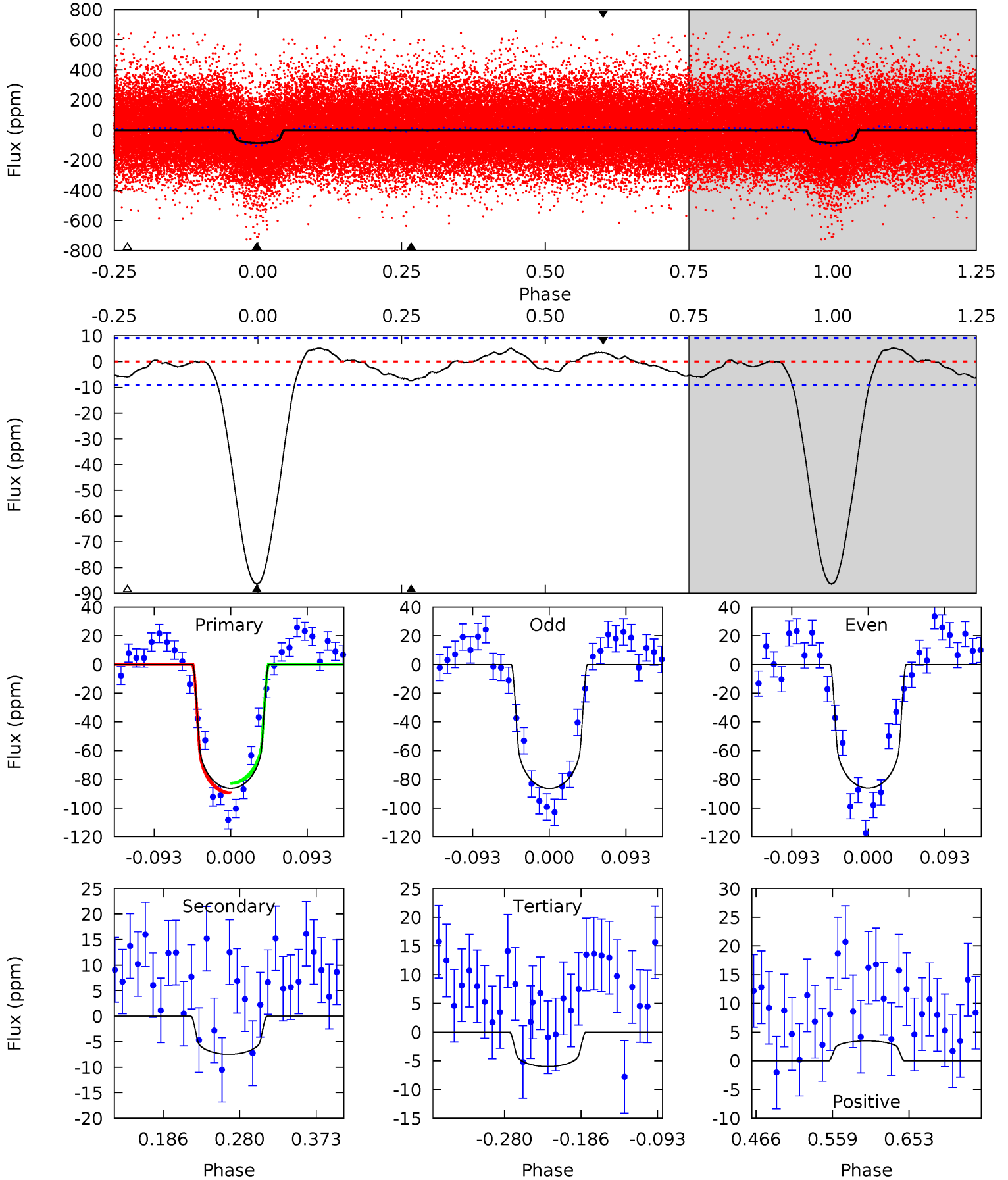
TCE 005467124-01 P= 2.845771 Days $T_0=134.270180$ (BKJD)



DV Model-Shift Uniqueness Test

005467124-01, P = 2.845771 Days, E = 131.427833 Days

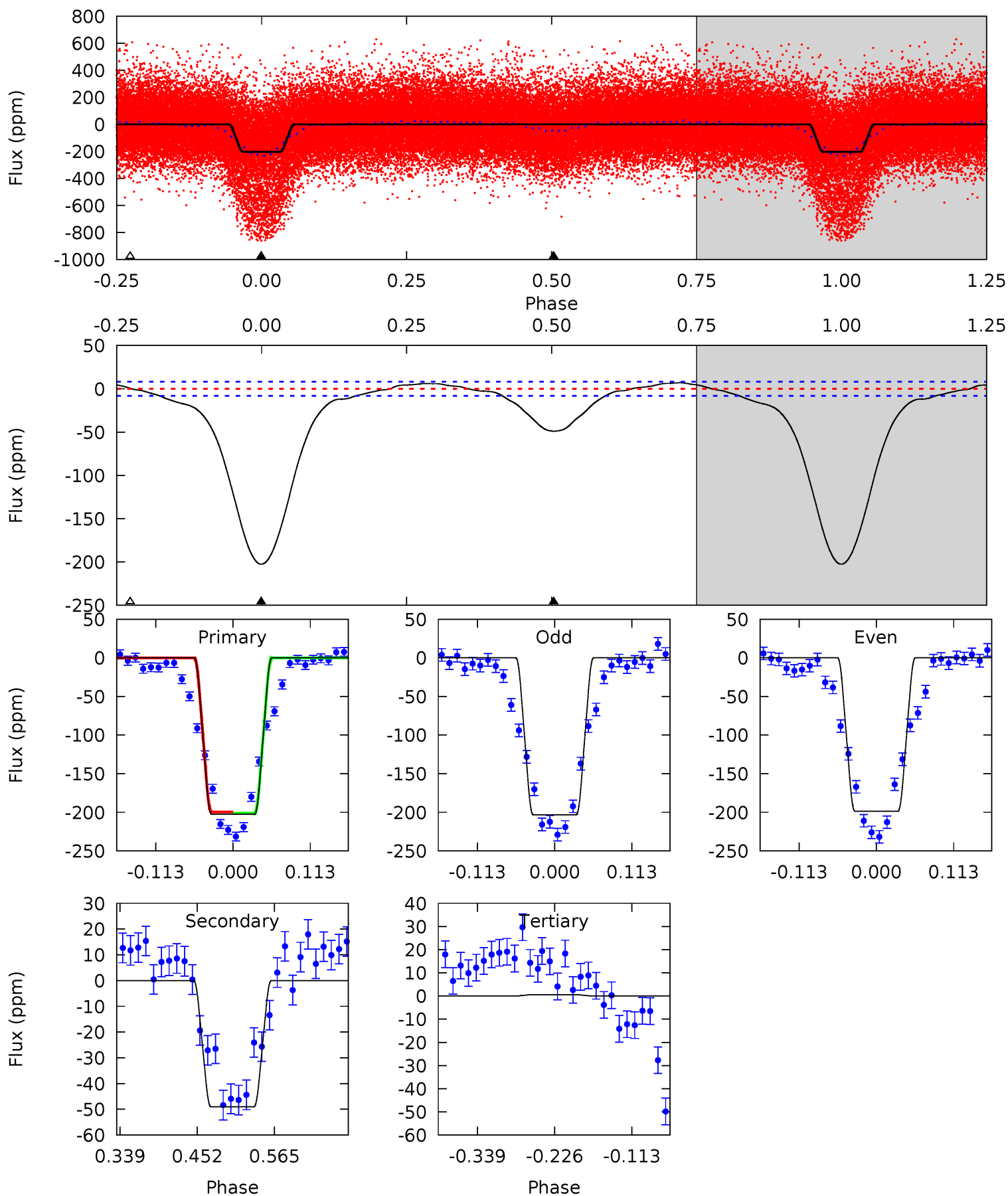
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	3.74	3.00	1.74	4.58	1.68	1.44	40.2	41.5	0.74	2.00	0.08	1.02	0.06	1.69



Alt Model-Shift Uniqueness Test

005467124-01, P = 2.845771 Days, E = 131.424409 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
112.0	27.1	-0.32	0	4.54	1.59	4.08	112.3	112.0	27.4	27.1	1.29	1.75	0.03	0.43



Stellar Parameters For KIC 005467124

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5557^{+83}_{-83}	$3.792^{+0.217}_{-0.087}$	$-0.020^{+0.150}_{-0.150}$	$2.372^{+0.331}_{-0.717}$	$1.271^{+0.118}_{-0.276}$	$0.134^{+0.185}_{-0.039}$
	+1%/-1%	+6%/-2%	+750%/-750%	+14%/-30%	+9%/-22%	+138%/-29%
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 005467124-01 / KOI 2161.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 2	$2.44^{+0.52}_{-0.48}$	2533^{+111}_{-179}	3282^{+239}_{-282}	$1.249^{+0.698}_{-0.488}$
Alt.	-49 ± 2	$3.86^{+0.64}_{-0.65}$	2541^{+114}_{-178}	3972^{+178}_{-158}	$3.247^{+1.308}_{-0.788}$

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 $A_{\text{obs}} \gg 1.0$

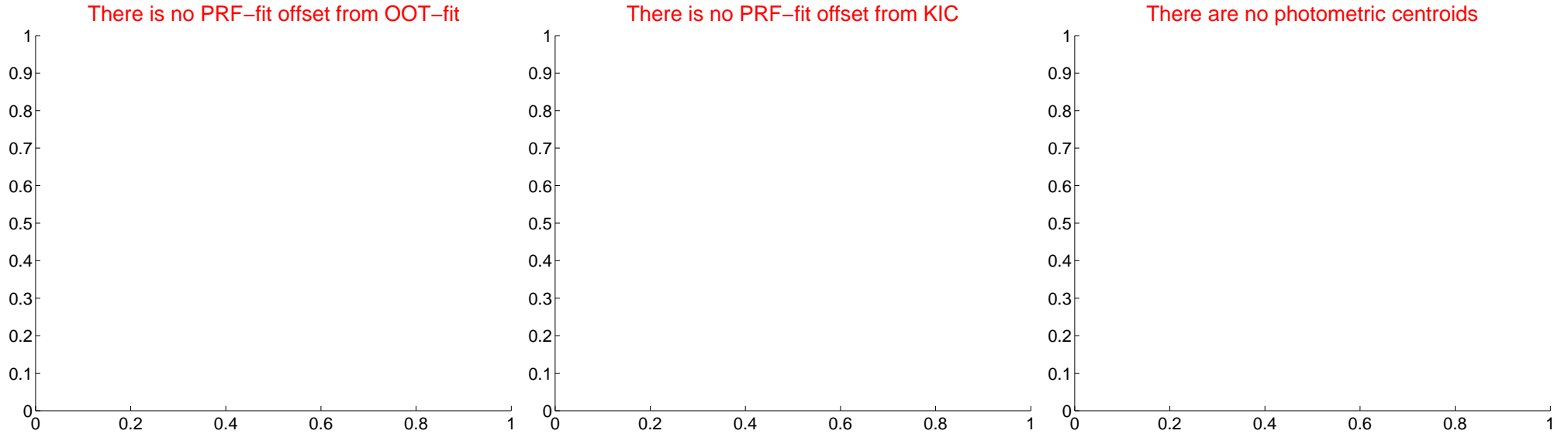
DV Centroid Data

Supplemental centroid analysis for 005467124-01. Kepler magnitude: 13.59. Transit SNR 30.35

There are 0 quarters with good PRF difference image offsets

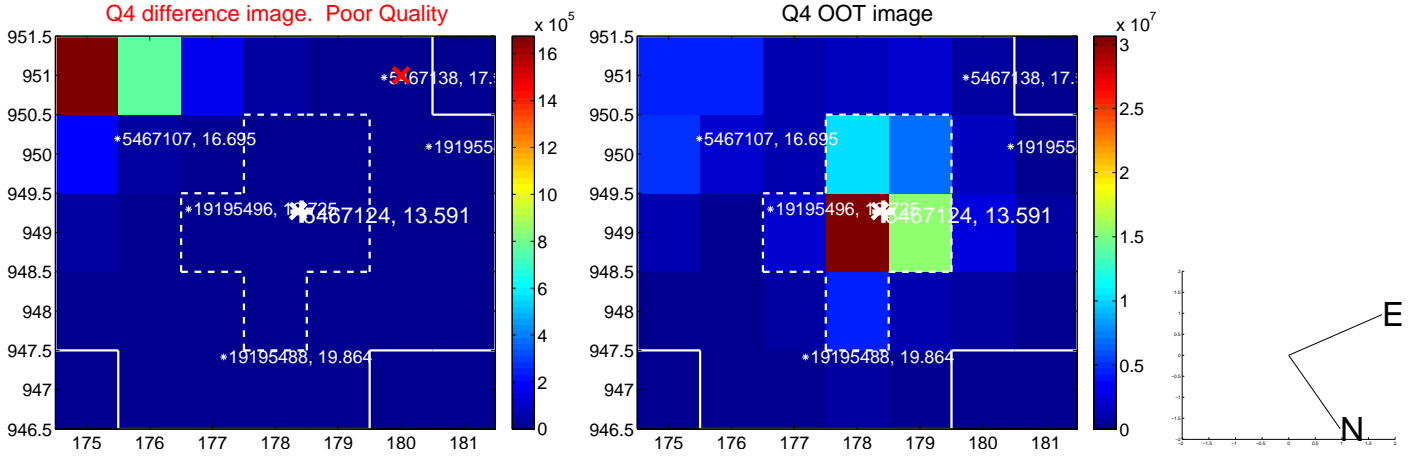
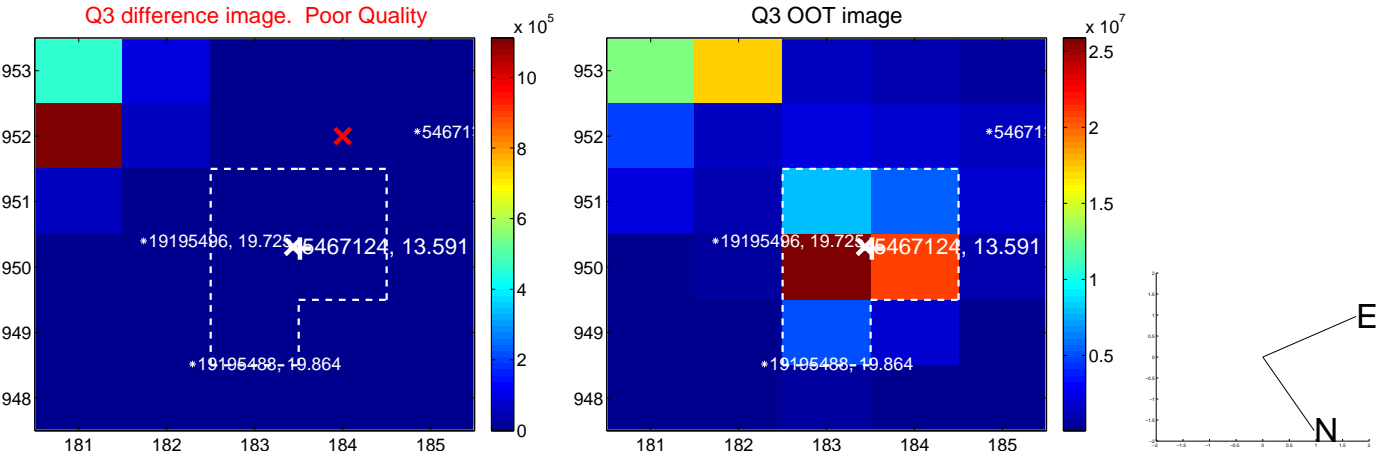
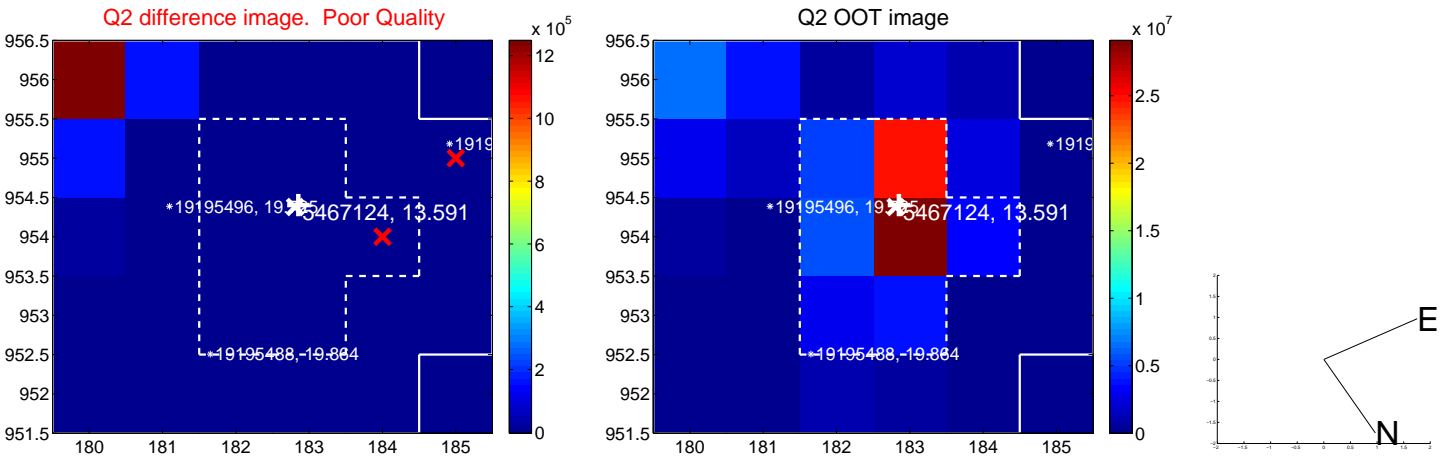
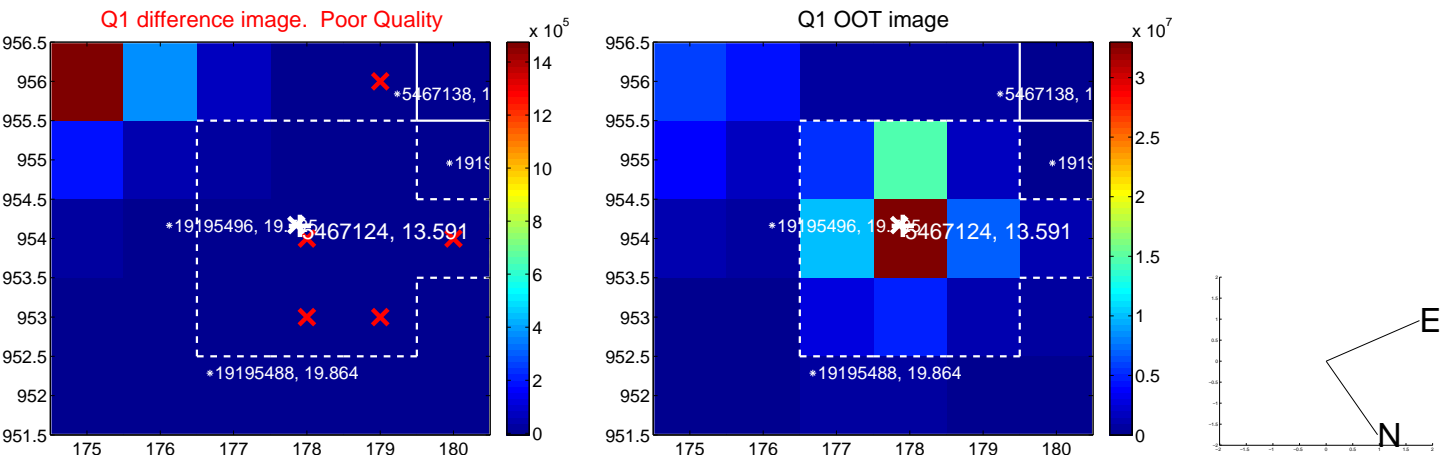
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

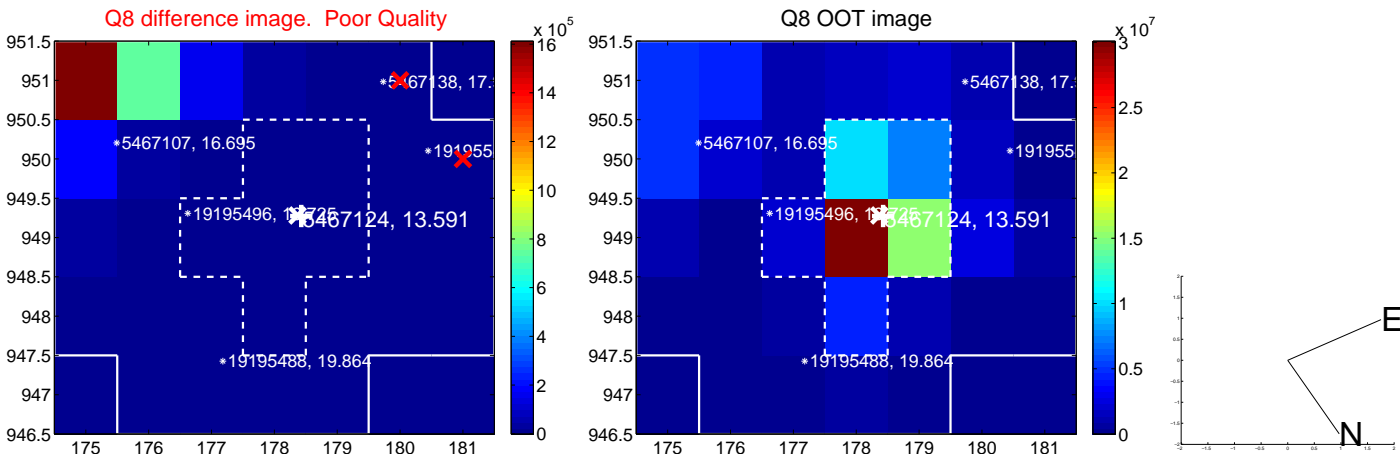
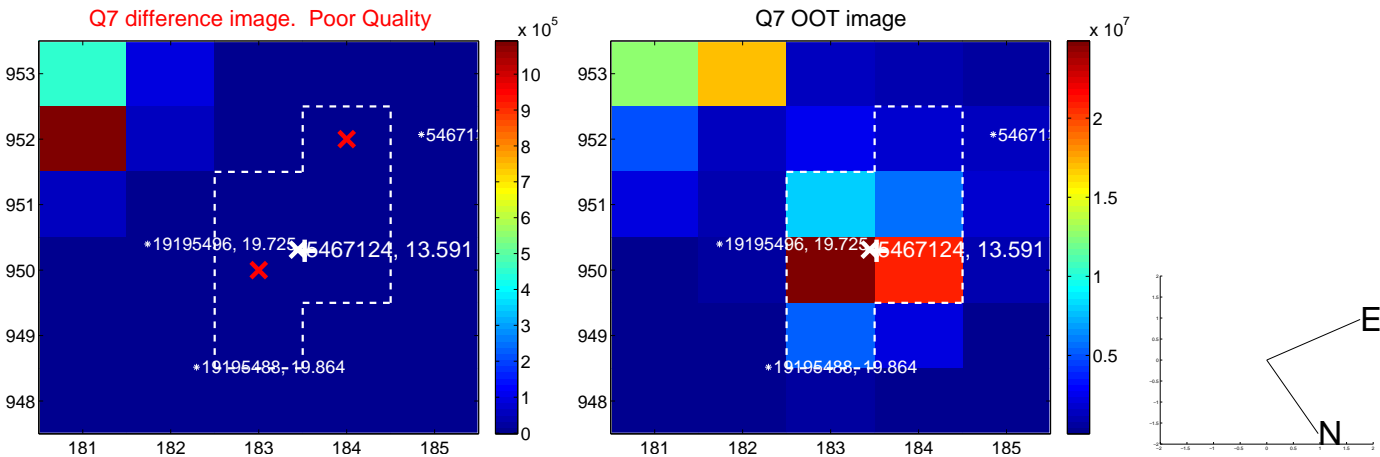
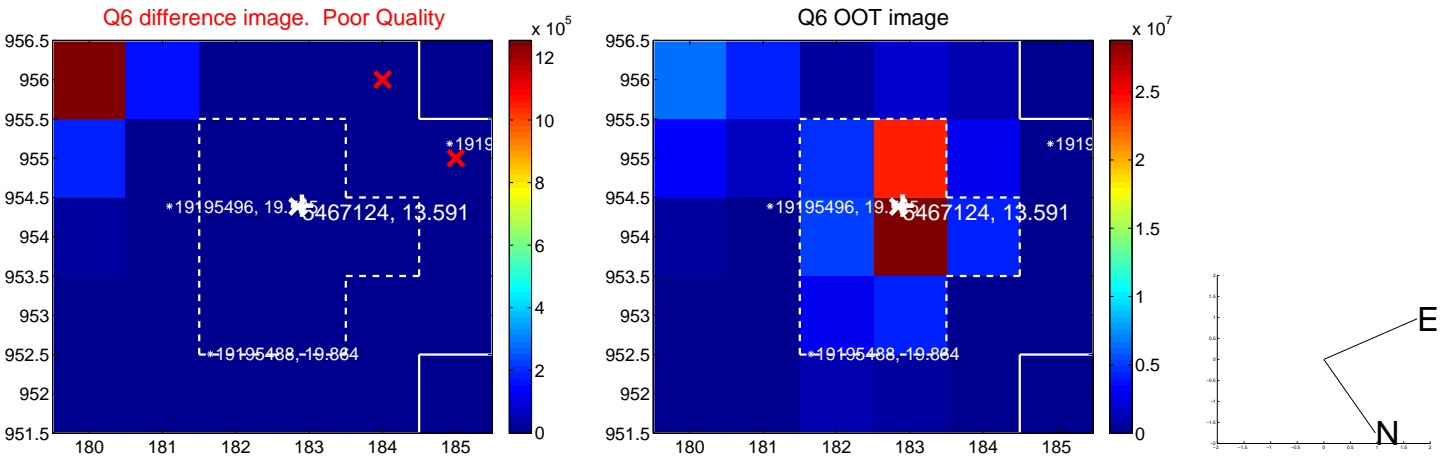
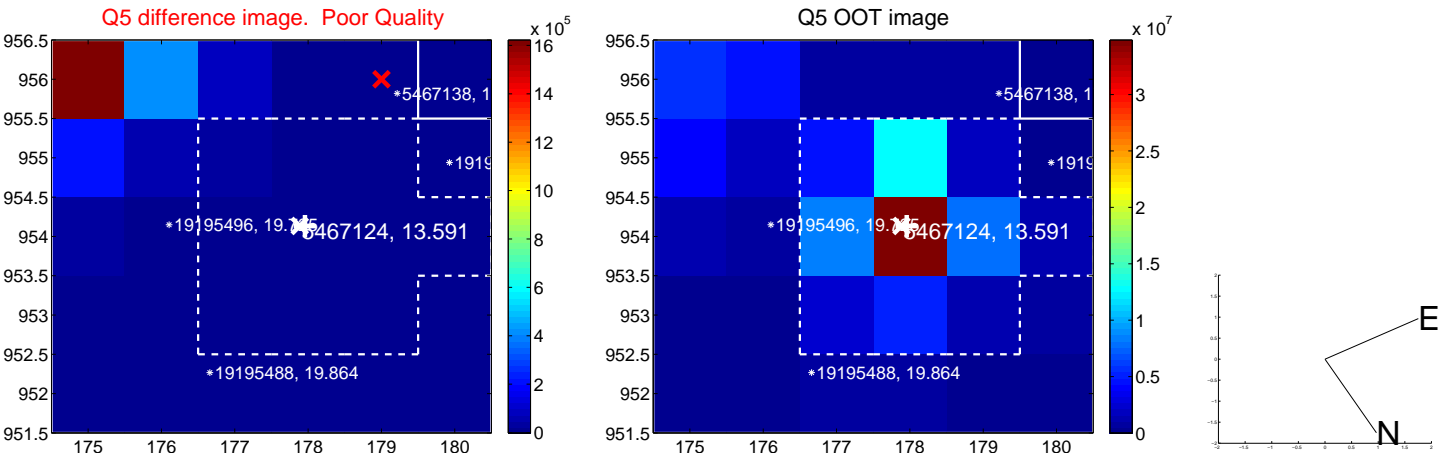


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

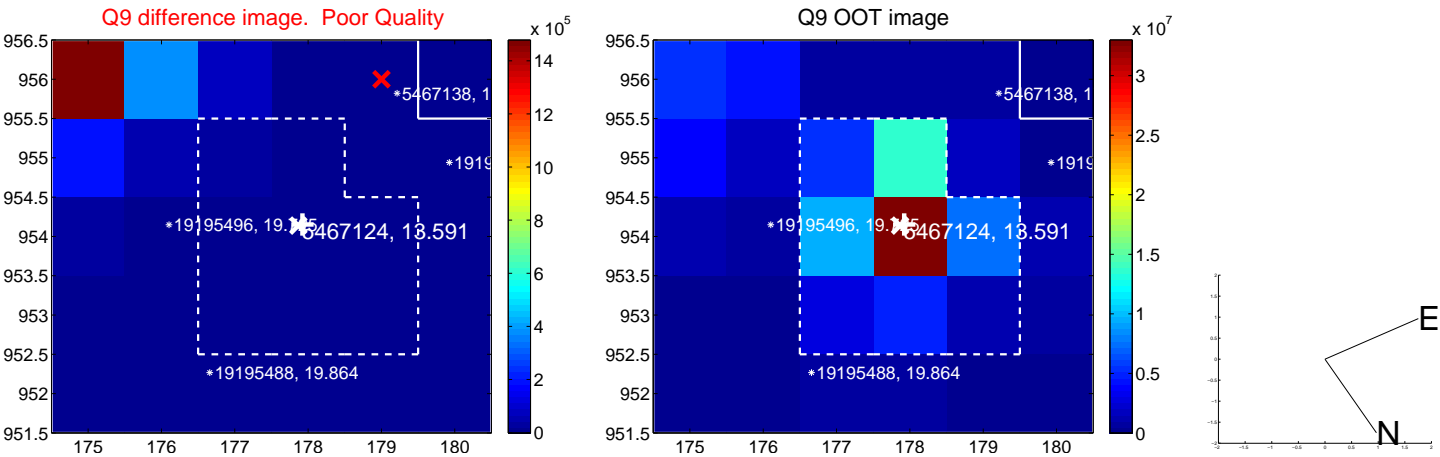
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



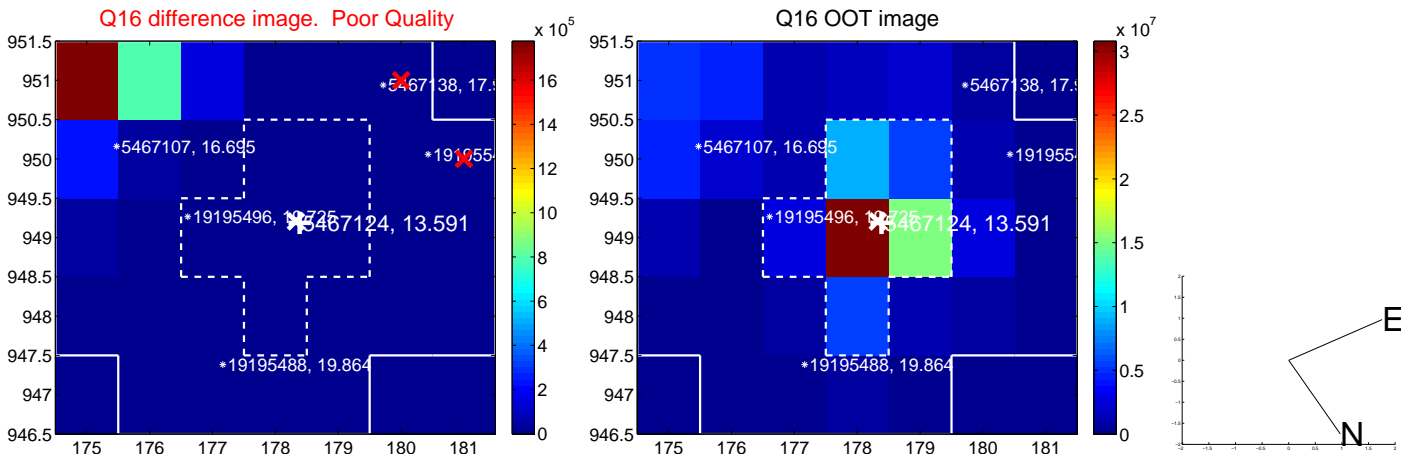
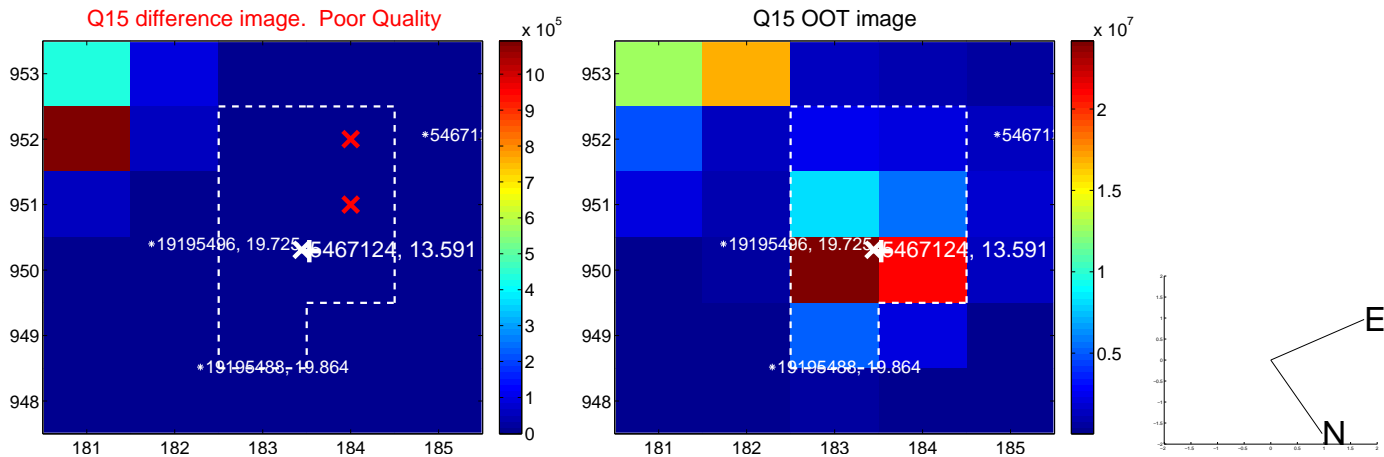
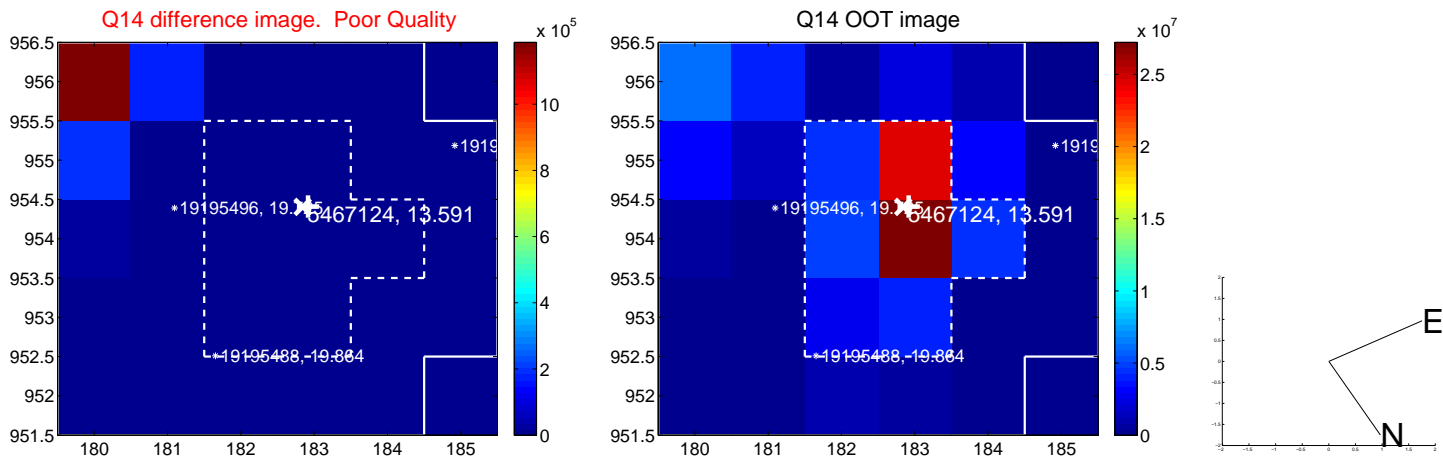
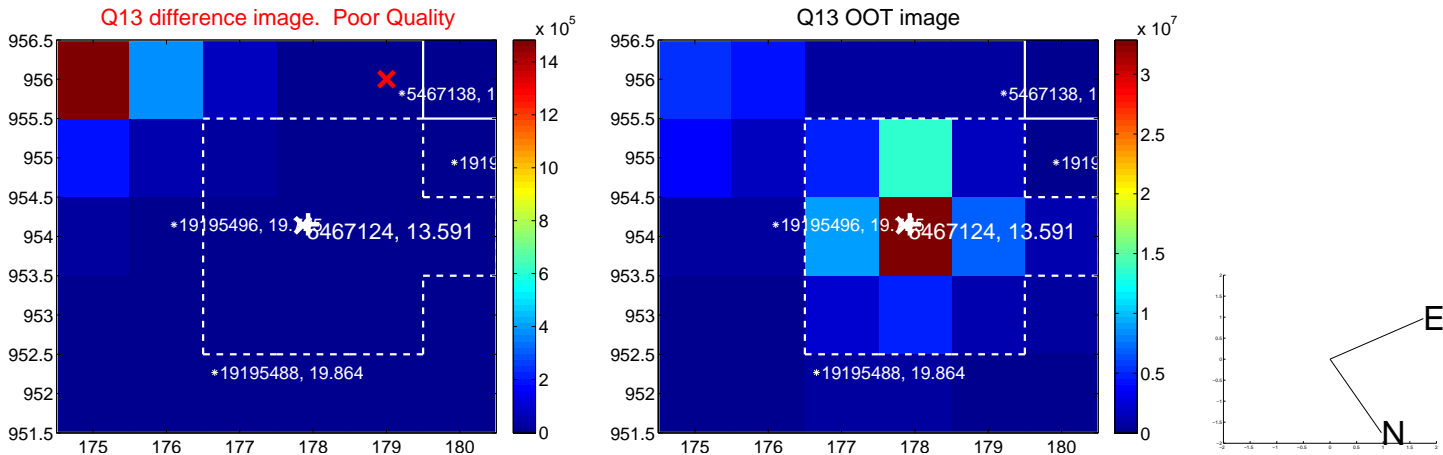
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

