

KIC 002720514

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})
002720514-01	OBS	2979.01	1.371281	131.940214	55.1	1.310	12.1	14.5	1.11	6220	1.00	2697.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002720514-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

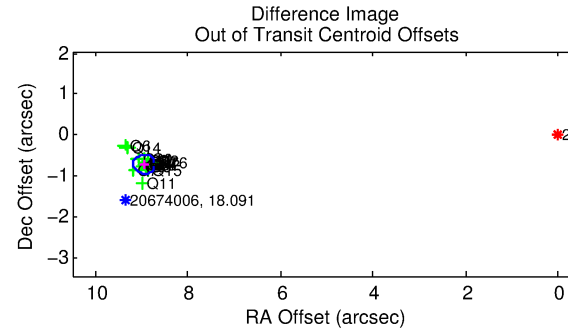
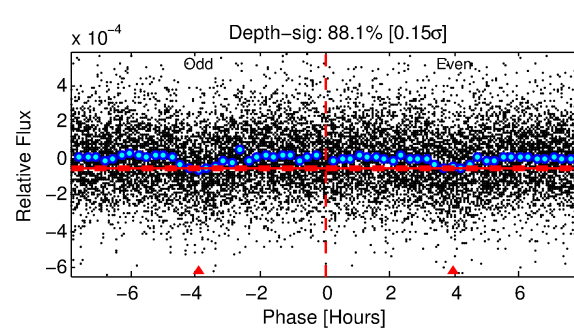
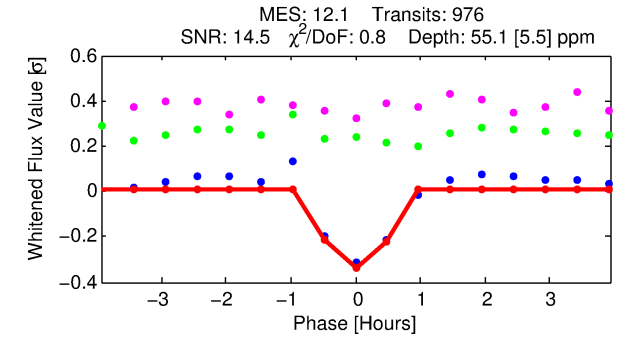
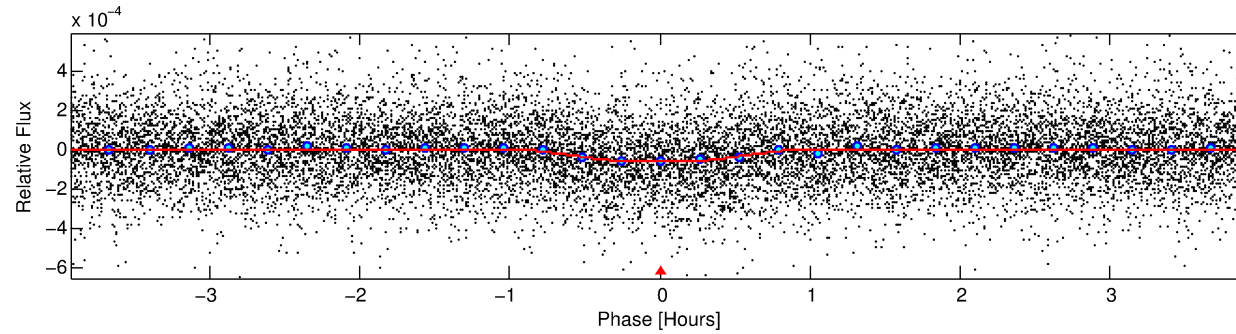
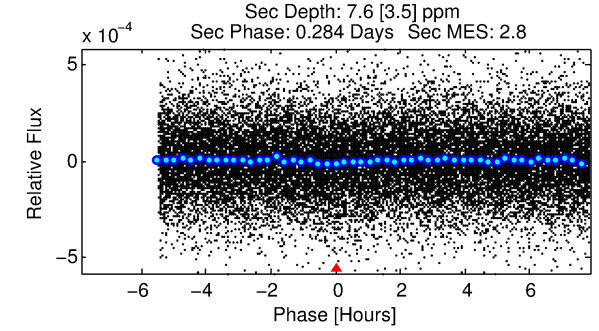
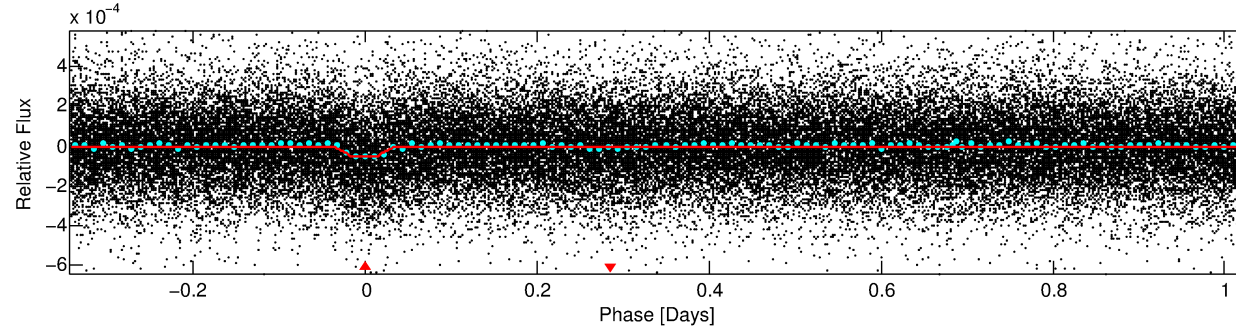
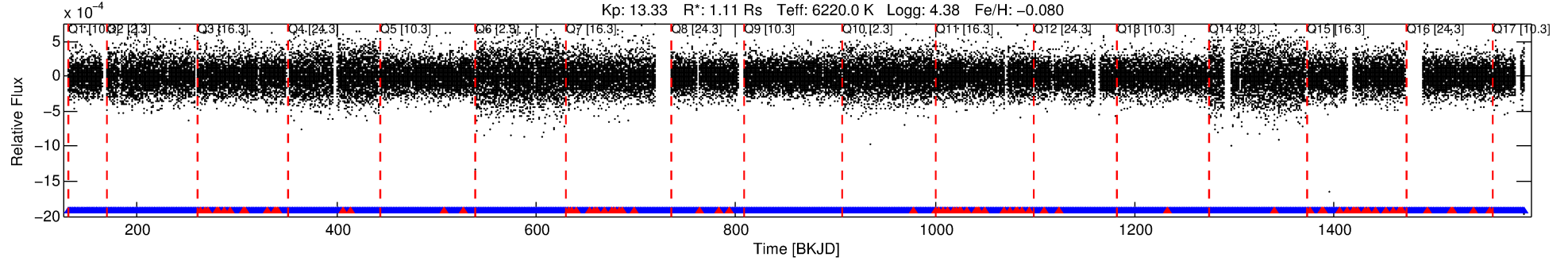
Ephemeris Match Information For 002720514-01

No Significant Match Found

DV One-Page Summary

KIC: 2720514 Candidate: 1 of 1 Period: 1.371 d
KOI: K02979.01 Corr: 0.915

Kp: 13.33 R*: 1.11 Rs Teff: 6220.0 K Logg: 4.38 Fe/H: -0.080



DV Fit Results:

Period = 1.37128 [0.00001] d
Epoch = 131.9402 [0.0015] BKJD
Rp/R* = 0.0083 [0.0033]
a/R* = 3.29 [6.70]
b = 0.93 [0.34]
Seff = 2697.20 [1075.74]
Teq = 1838 [183] K
Rp = 1.00 [0.52] Re
a = 0.0247 [0.0066] AU
Ag = 2.55 [2.56] [0.61σ]
Teff = 3592 [842] K [2.04σ]

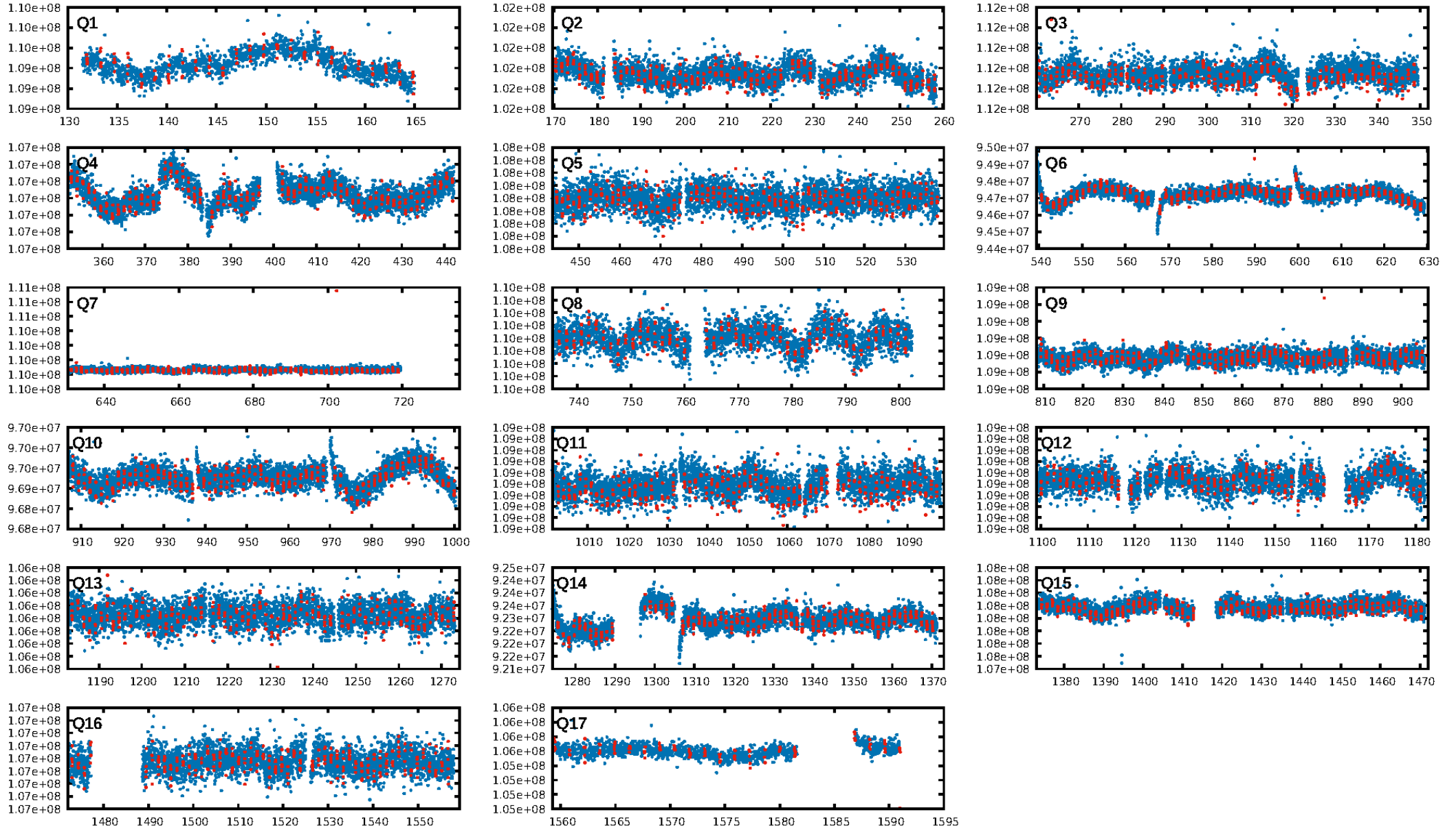
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.50e-32
RollingBand-fgt: 0.92 [853/930]
GhostDiagnostic-chr: -0.3808
Centroid-sig: 0.0%
Centroid-so: 14.122 arcsec [16.58σ]
OotOffset-rm: 8.975 arcsec [115.01σ]
KicOffset-rm: 8.844 arcsec [110.68σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

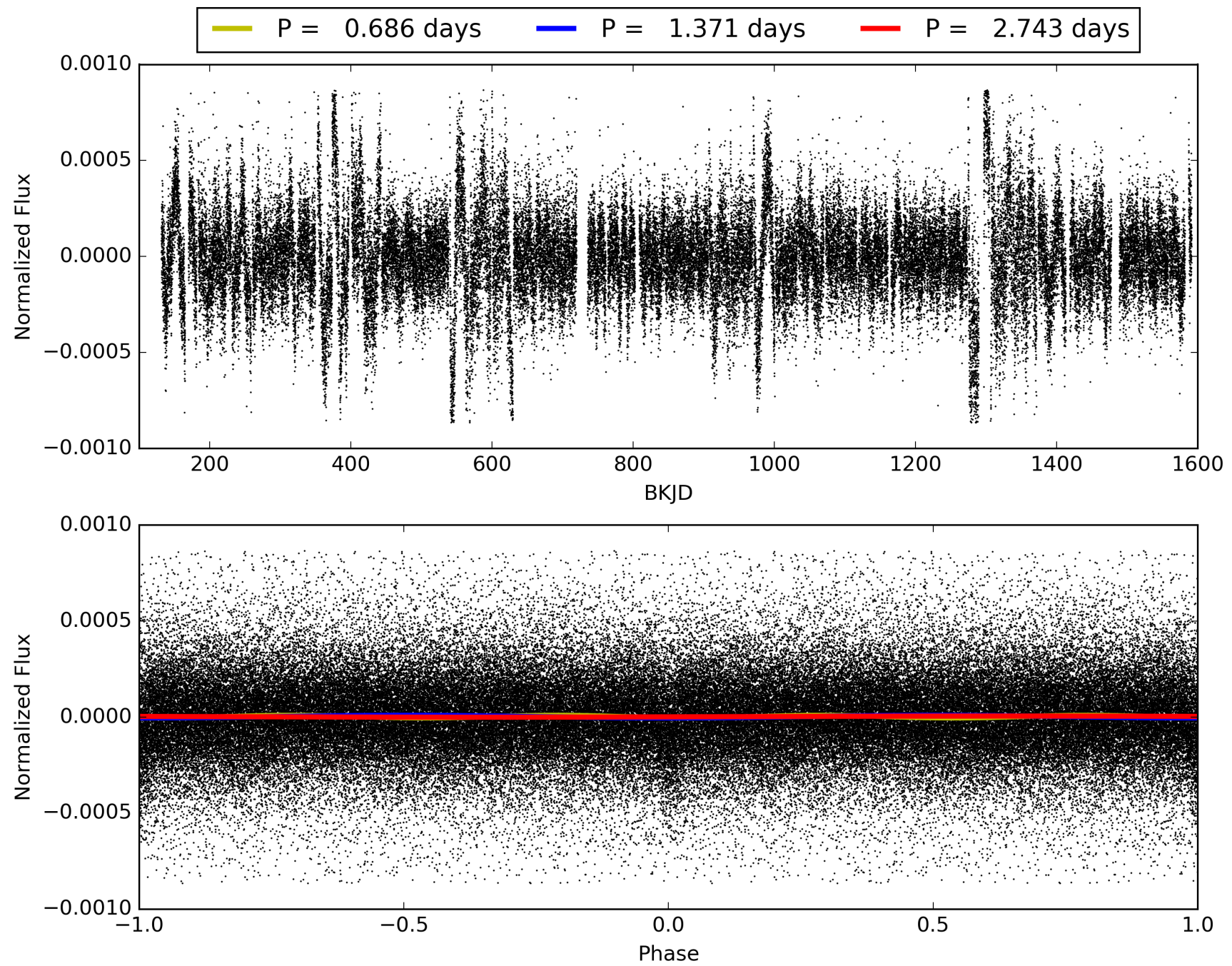
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:05:29 Z

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

TCE 002720514-01, PDC Light Curves

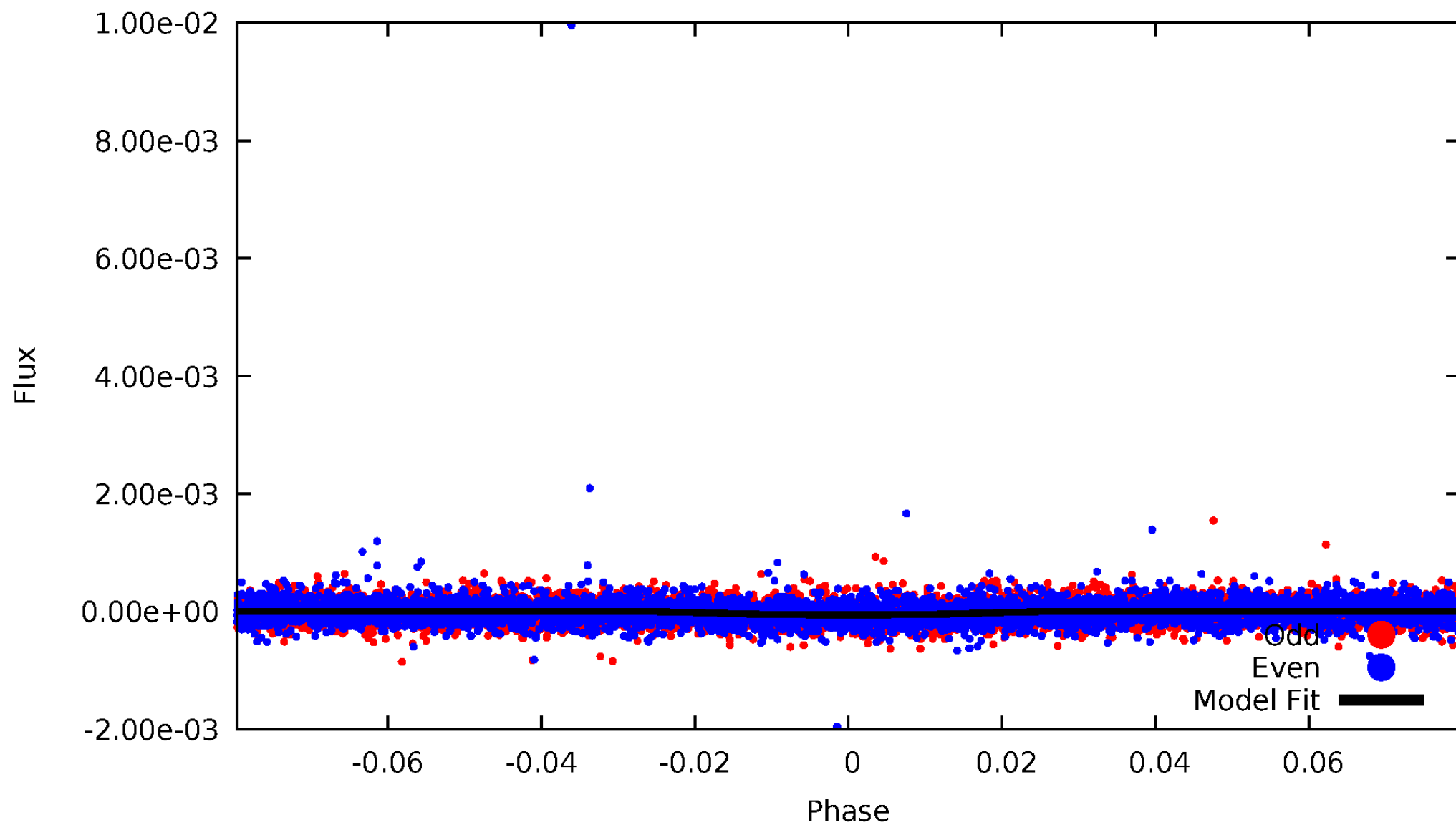


TCE 002720514-01



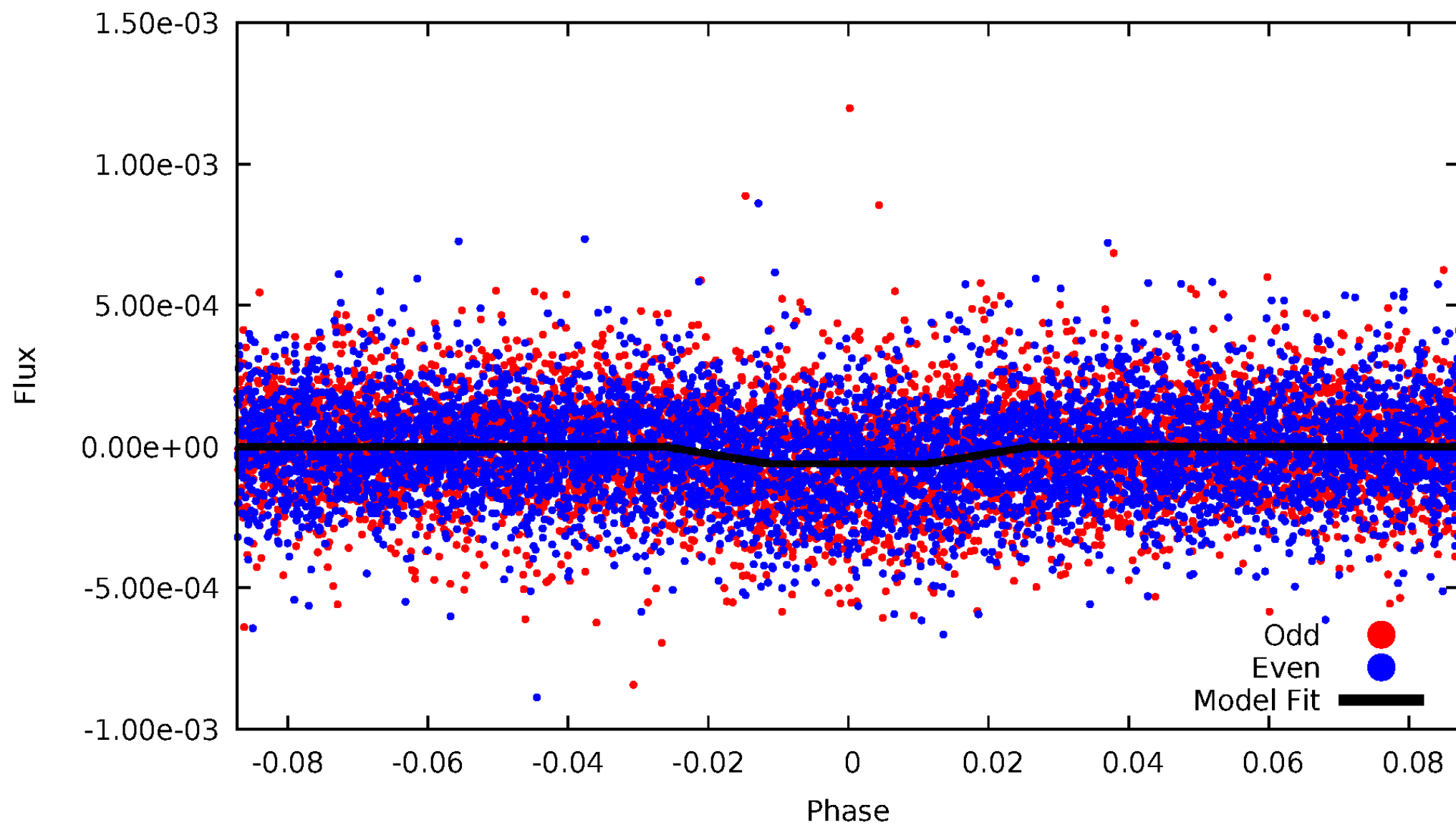
DV Odd/Even

TCE 002720514-01



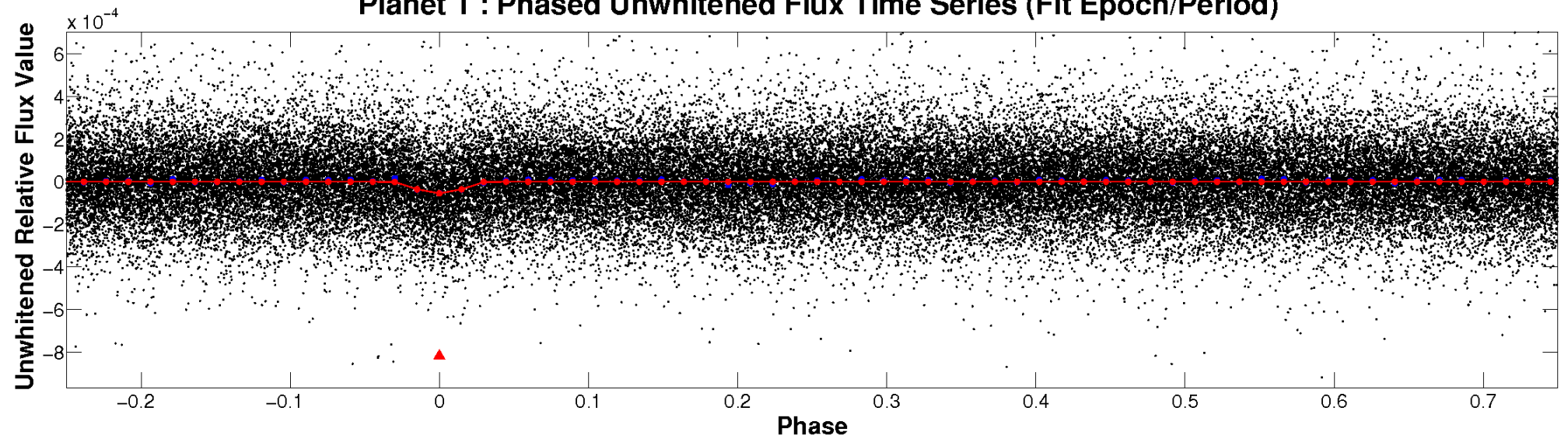
ALT Odd/Even

TCE 002720514-01

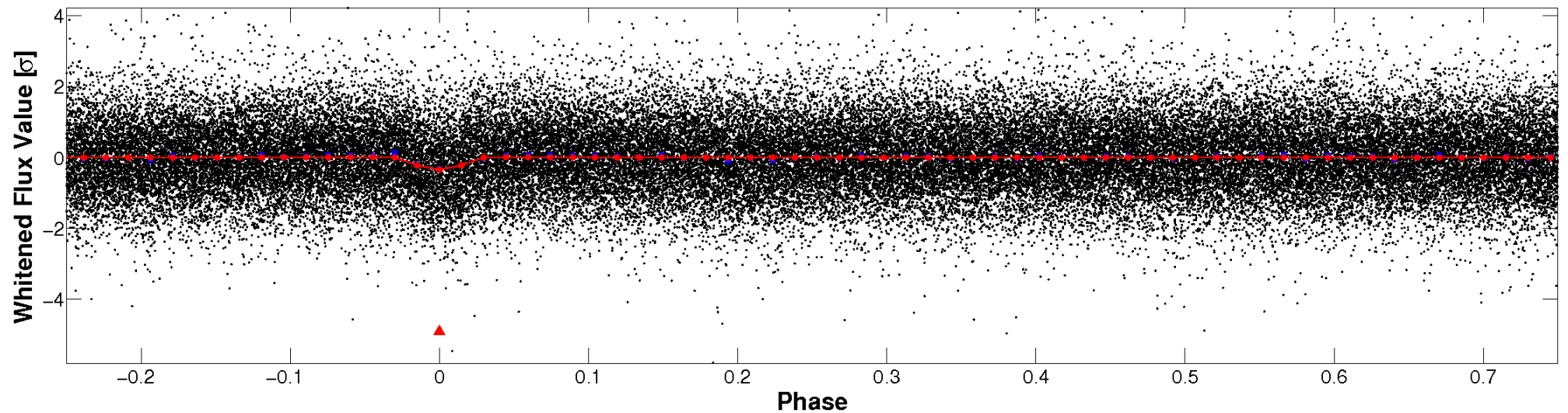


Non-Whitened Vs. Whitened Light Curve

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

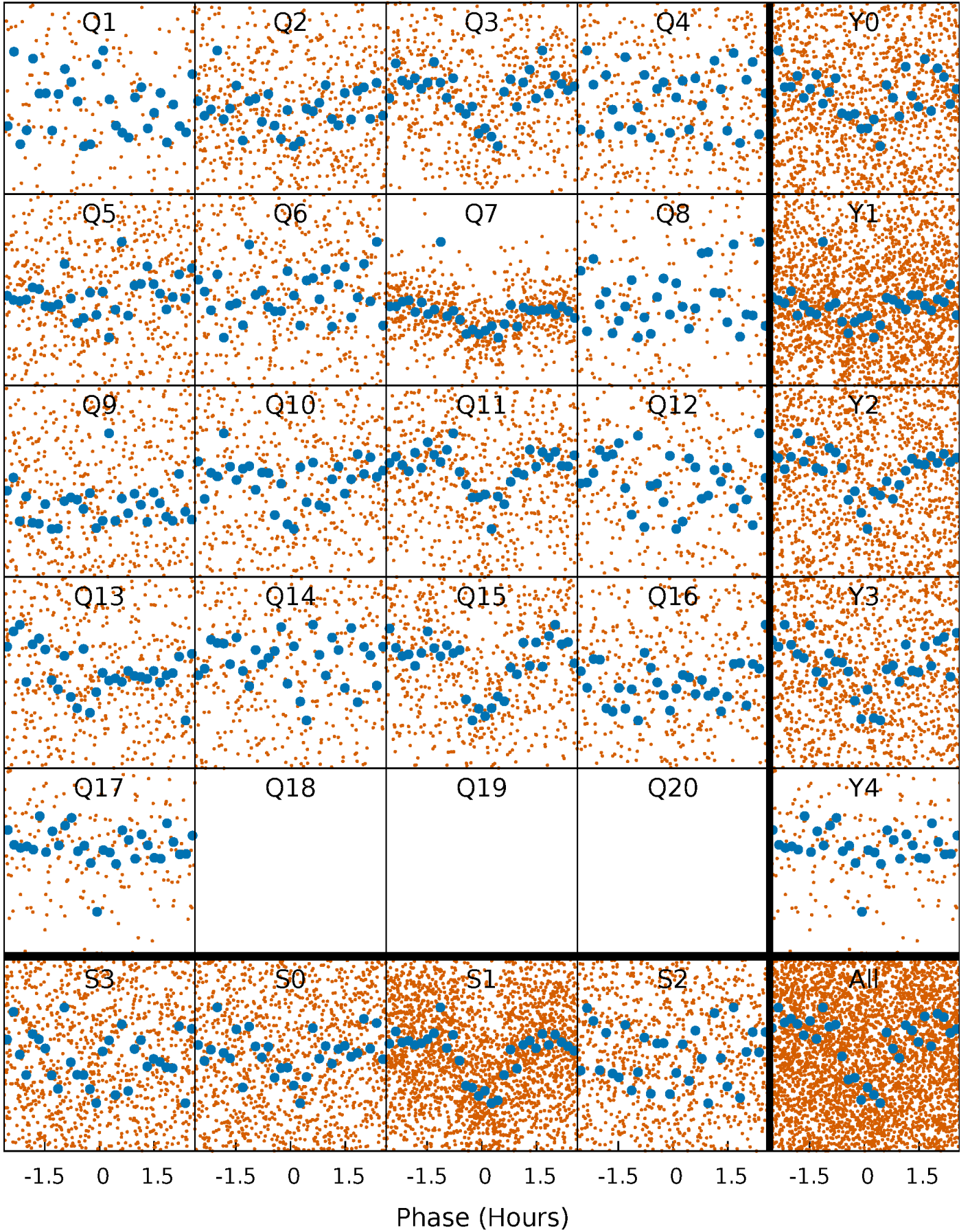


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



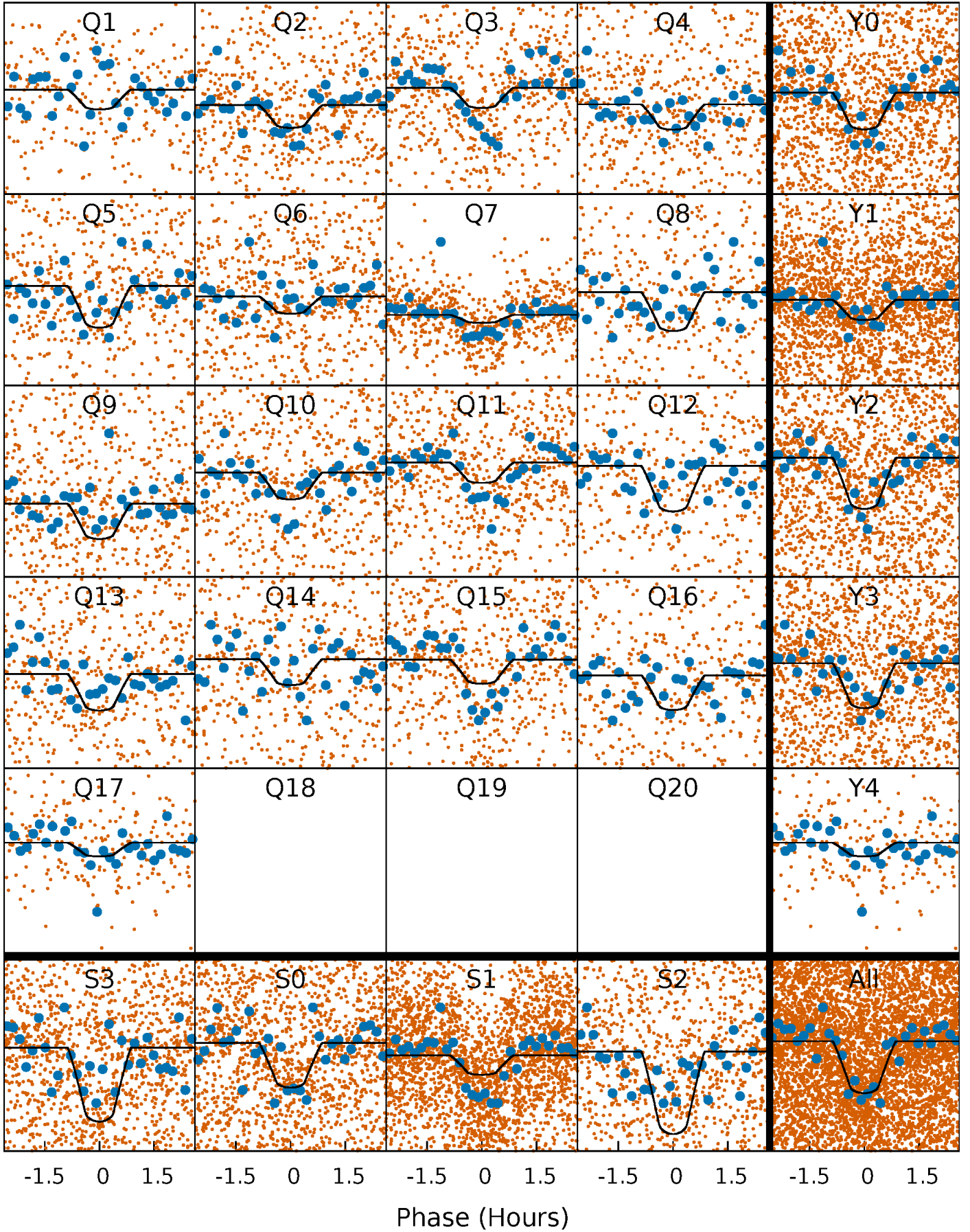
PDC Quarter-Phased Transit Curves

TCE 002720514-01 P= 1.371281 Days $T_0=131.940214$ (BKJD)



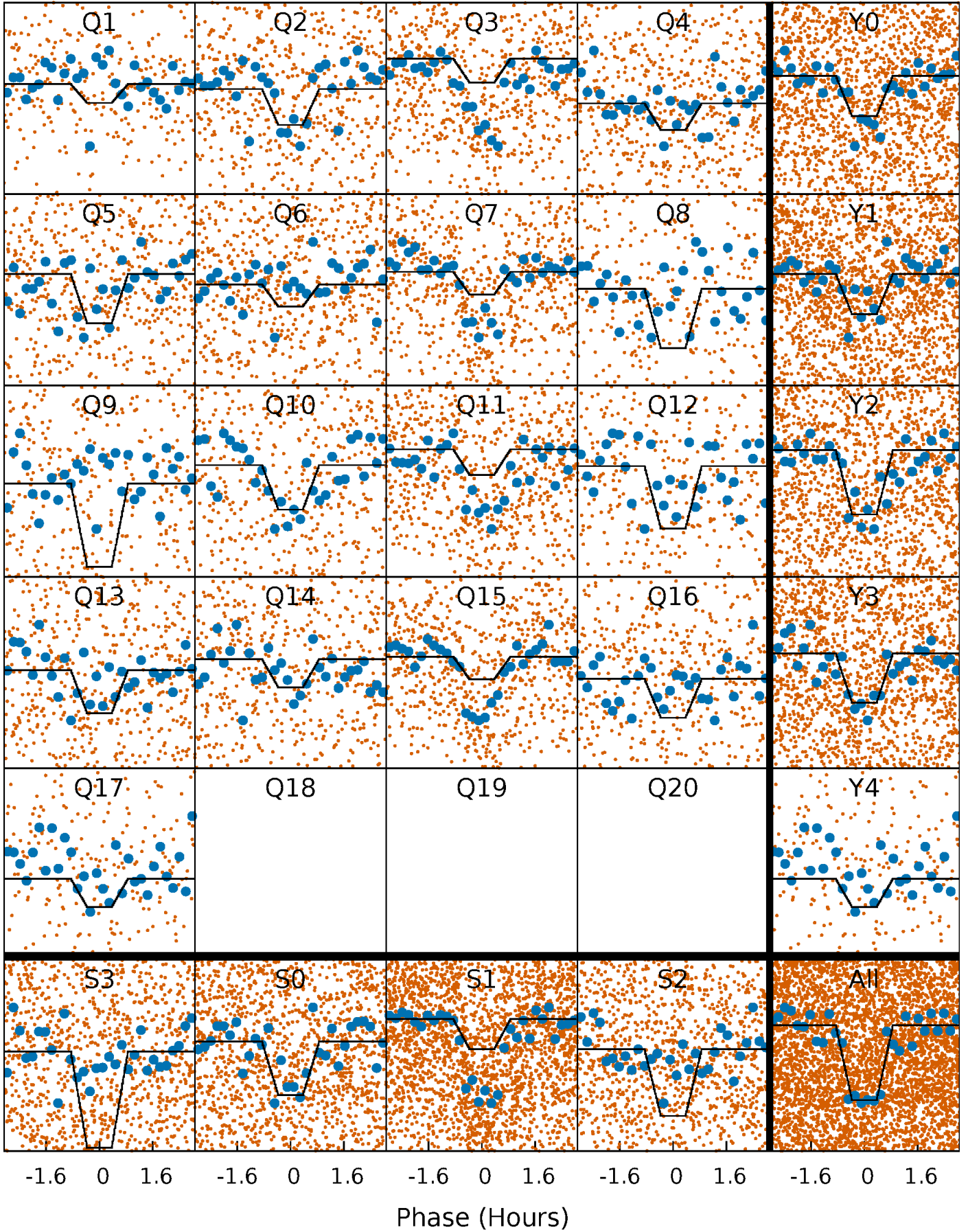
DV Quarter-Phased Transit Curves

TCE 002720514-01 P= 1.371281 Days $T_0=131.940214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

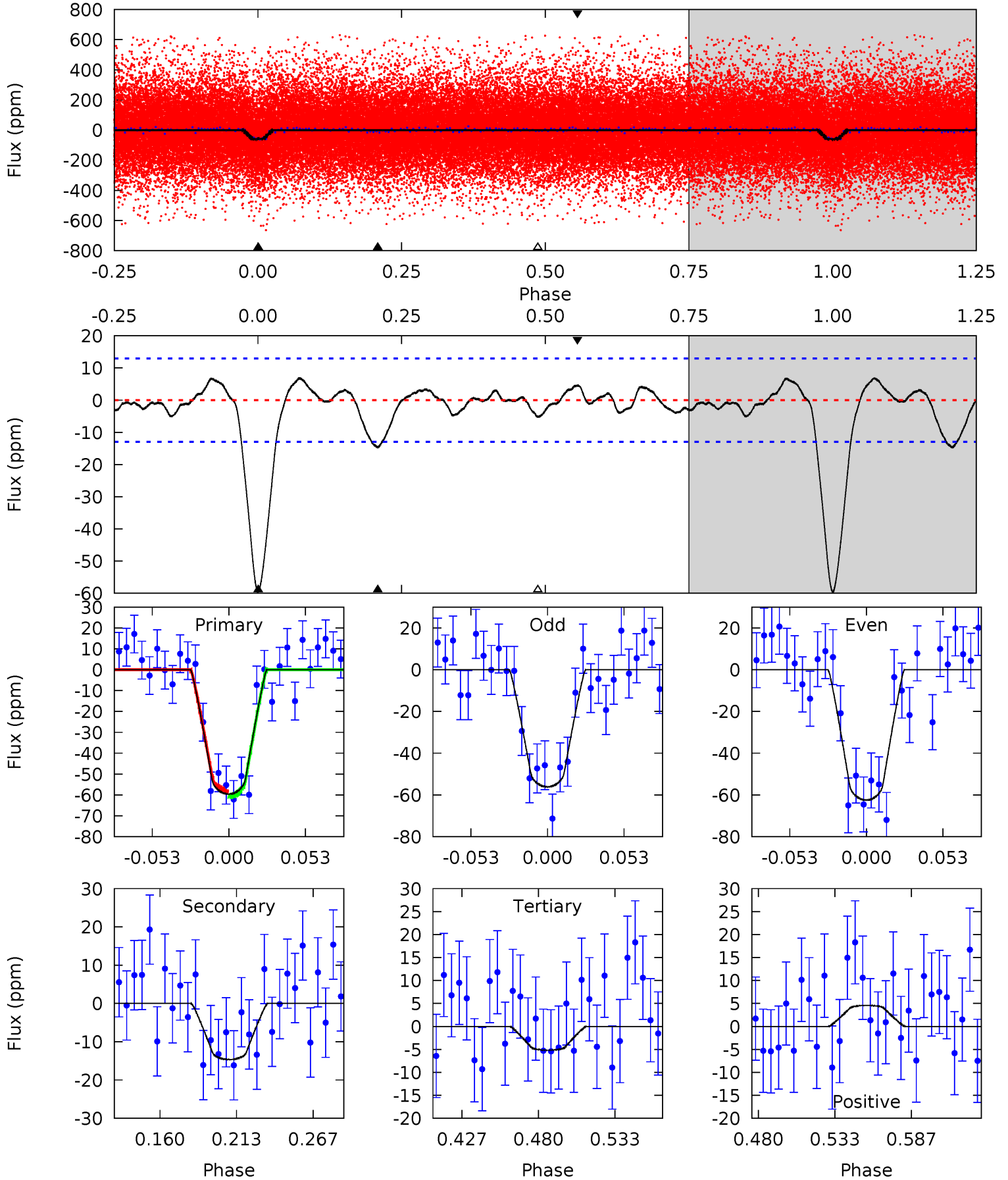
TCE 002720514-01 P= 1.371290 Days $T_0=131.937244$ (BKJD)



DV Model-Shift Uniqueness Test

002720514-01, P = 1.371281 Days, E = 130.568933 Days

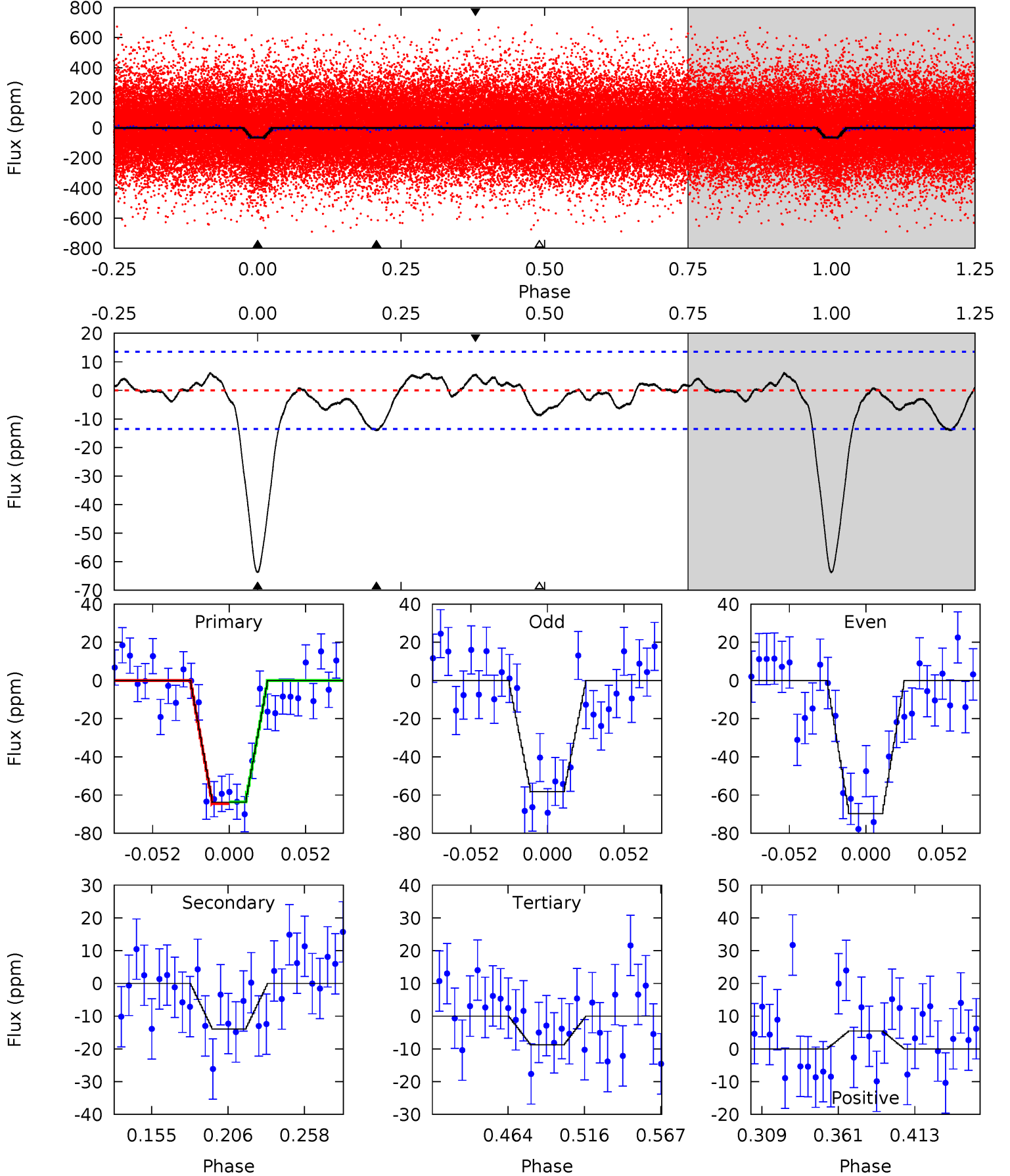
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	5.31	1.88	1.66	4.69	1.93	1.01	19.7	19.9	3.43	3.65	1.16	0.95	0.10	0.46



Alt Model-Shift Uniqueness Test

002720514-01, P = 1.371290 Days, E = 130.565954 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	4.85	3.04	1.91	4.70	1.95	1.20	19.1	20.2	1.81	2.94	1.99	0.97	0.09	0.14



Stellar Parameters For KIC 002720514

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6220^{+172}_{-194}	$4.378^{+0.087}_{-0.203}$	$-0.080^{+0.250}_{-0.300}$	$1.108^{+0.358}_{-0.154}$	$1.066^{+0.168}_{-0.122}$	$1.104^{+0.422}_{-0.579}$
	+3%/-3%	+2%/-5%	+312%/-375%	+32%/-14%	+16%/-11%	+38%/-52%
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 002720514-01 / KOI 2979.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 3	$1.07^{+0.45}_{-0.43}$	2615^{+173}_{-133}	4312^{+1147}_{-554}	$4.216^{+7.915}_{-2.176}$
Alt.	-14 ± 3	$1.01^{+0.45}_{-0.42}$	2610^{+193}_{-136}	4412^{+1026}_{-633}	$4.546^{+8.095}_{-2.493}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

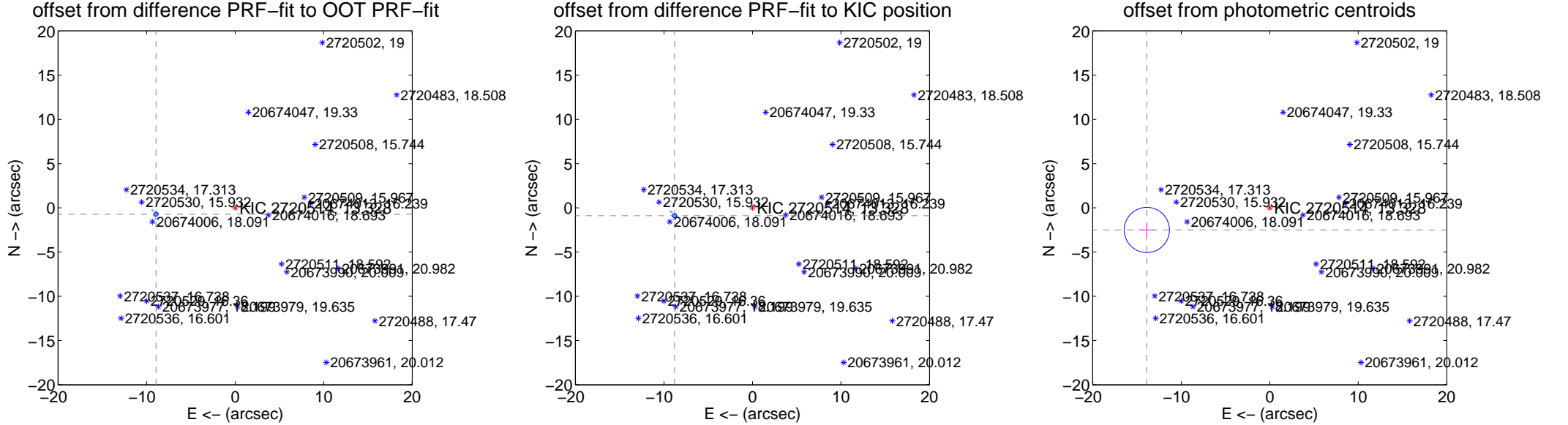
A_{obs} = Observed Albedo (Assuming $T=0$)

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

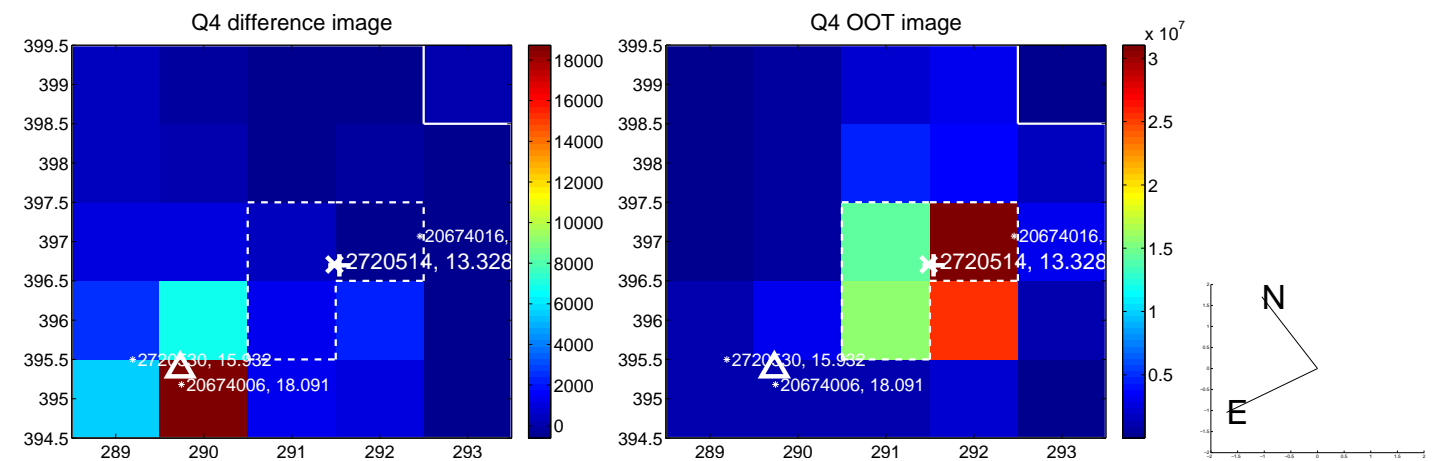
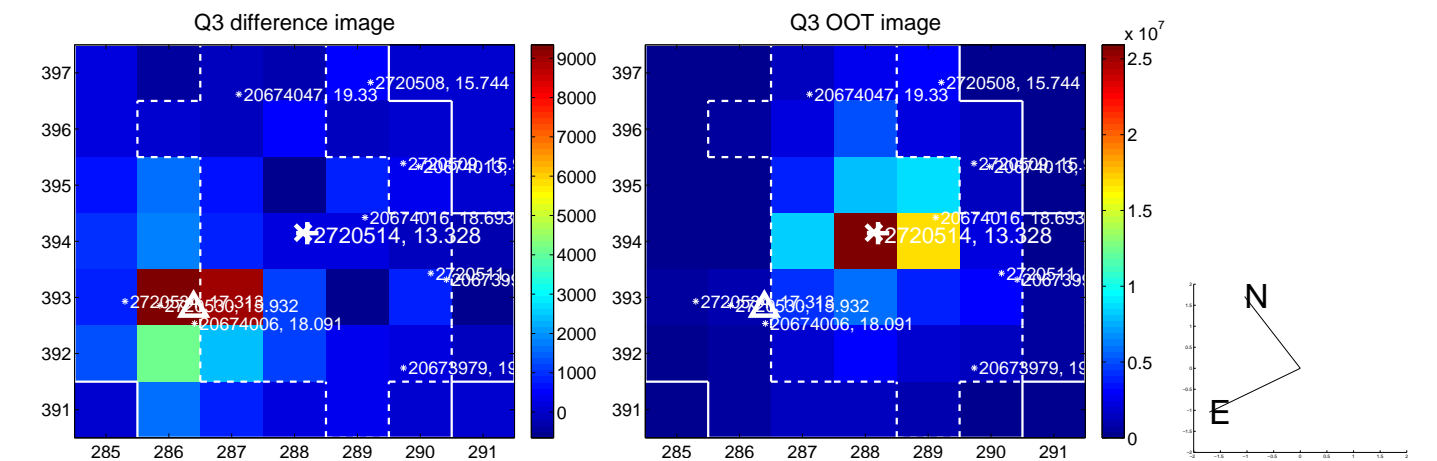
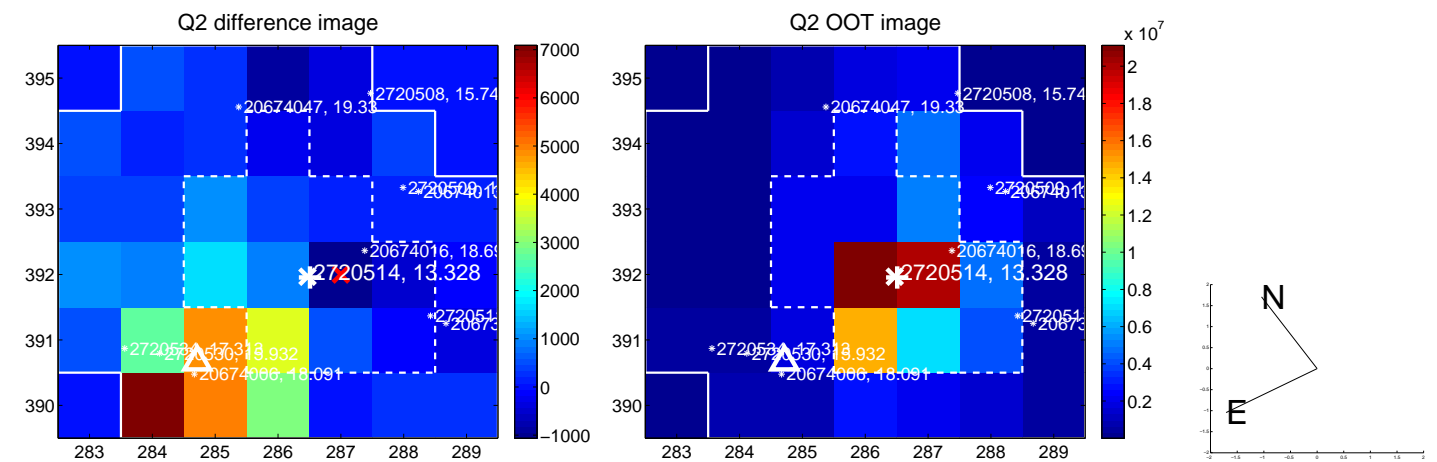
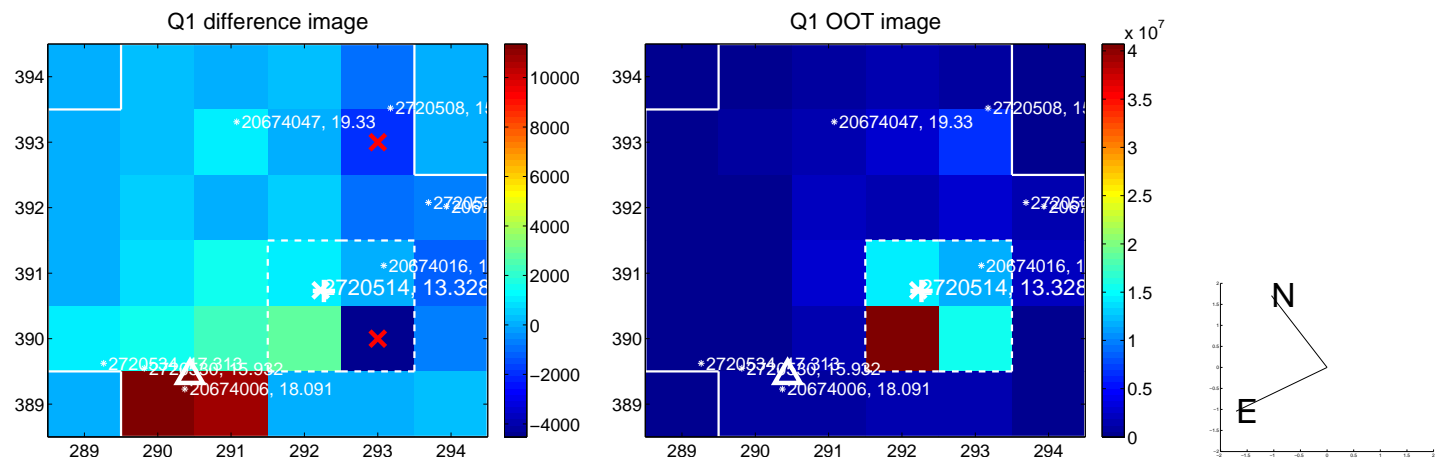
Supplemental centroid analysis for 002720514-01. Kepler magnitude: 13.33. Transit SNR 14.50
 There are 17 quarters with good PRF difference image offsets
 The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.975 ± 0.078	115.01	8.947 ± 0.079	-0.714 ± 0.085
PRF-fit source offset from KIC position	8.844 ± 0.080	110.68	8.799 ± 0.081	-0.886 ± 0.083
photometric centroid source offset	14.12 ± 0.85	16.58	13.90 ± 0.85	-2.50 ± 0.82

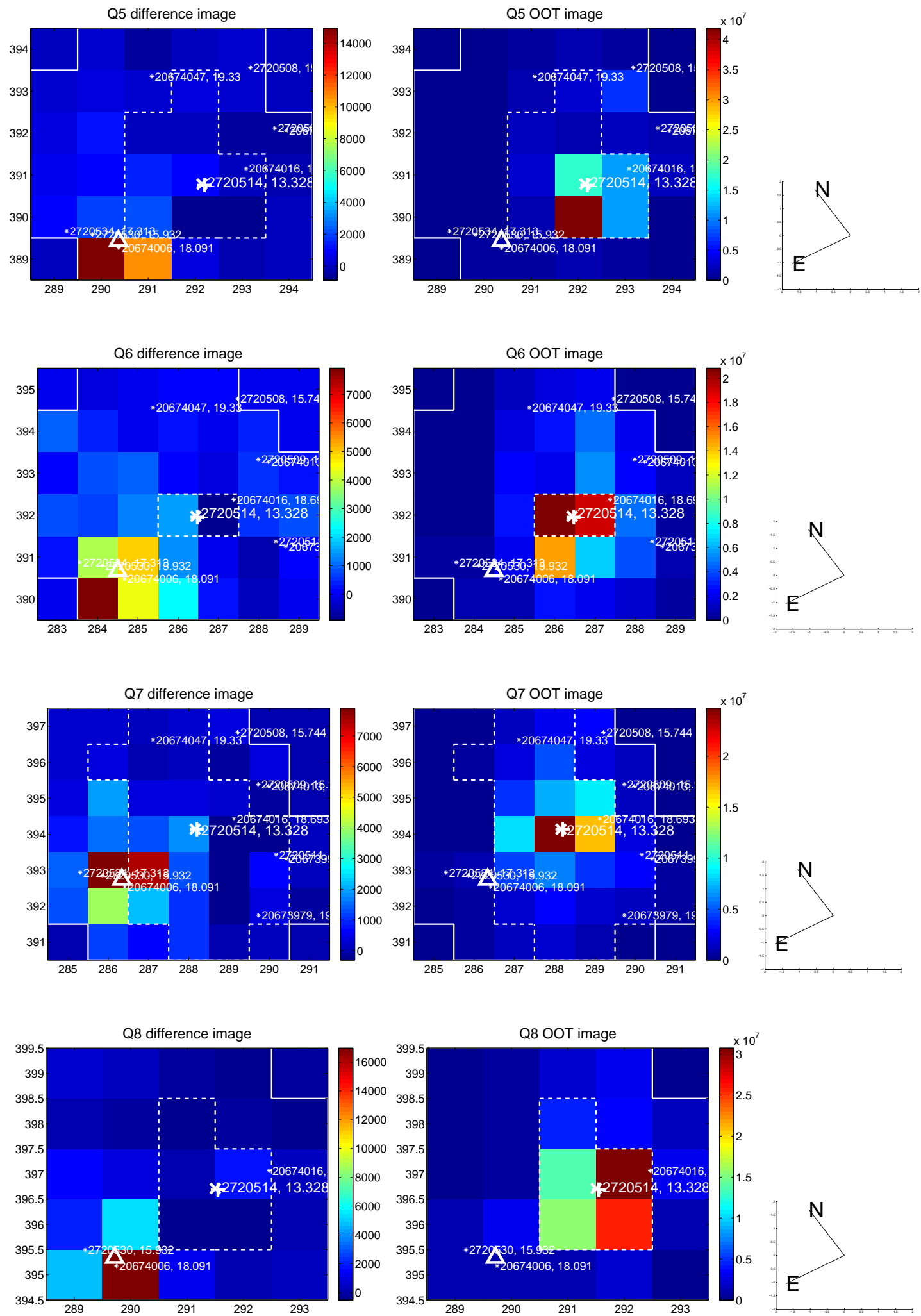


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

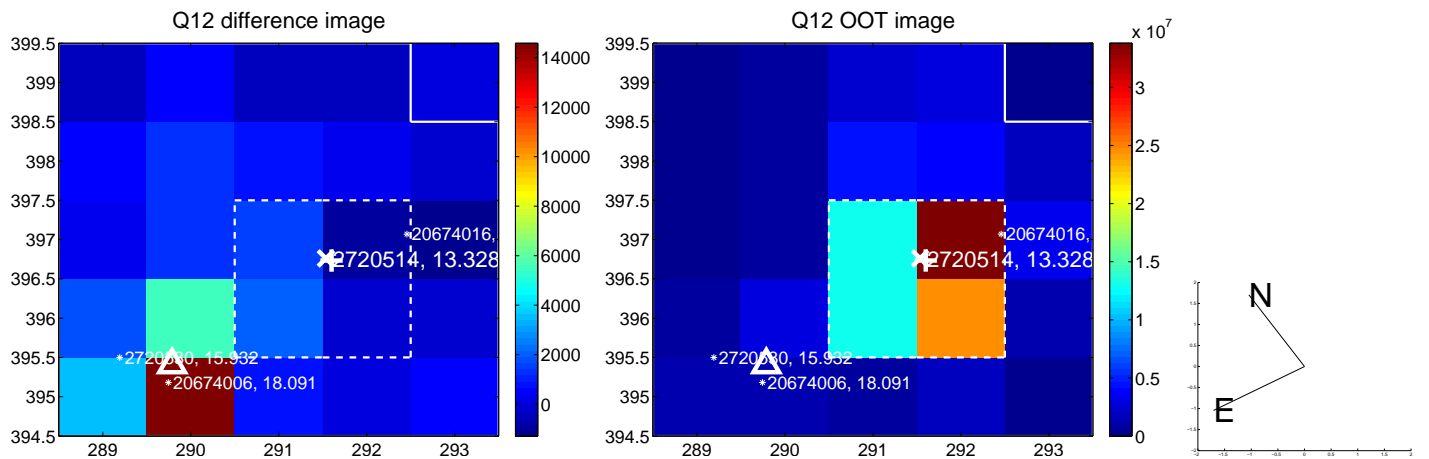
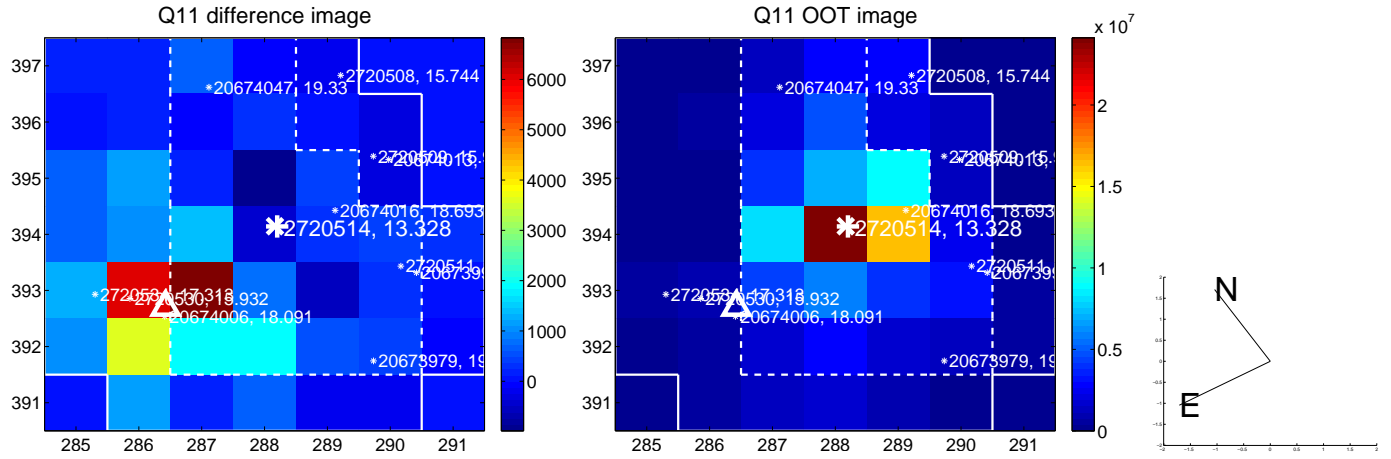
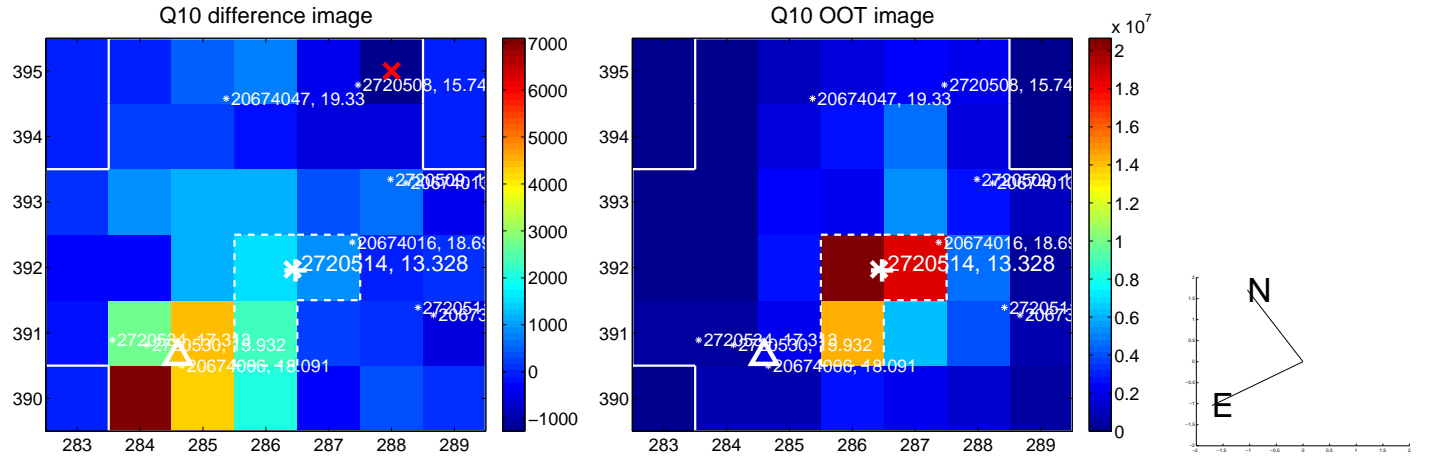
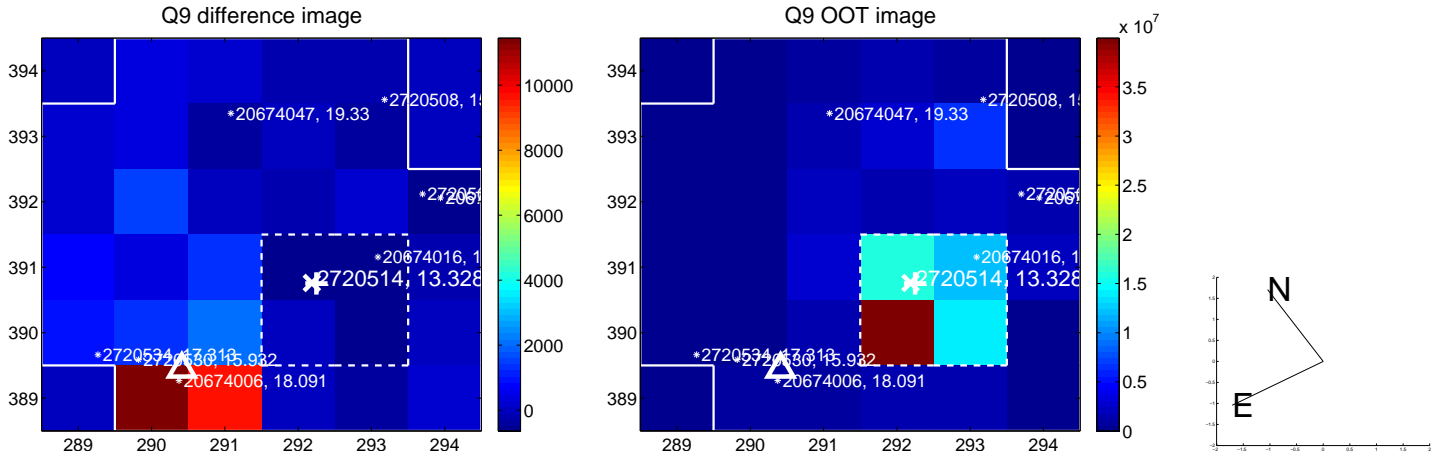
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



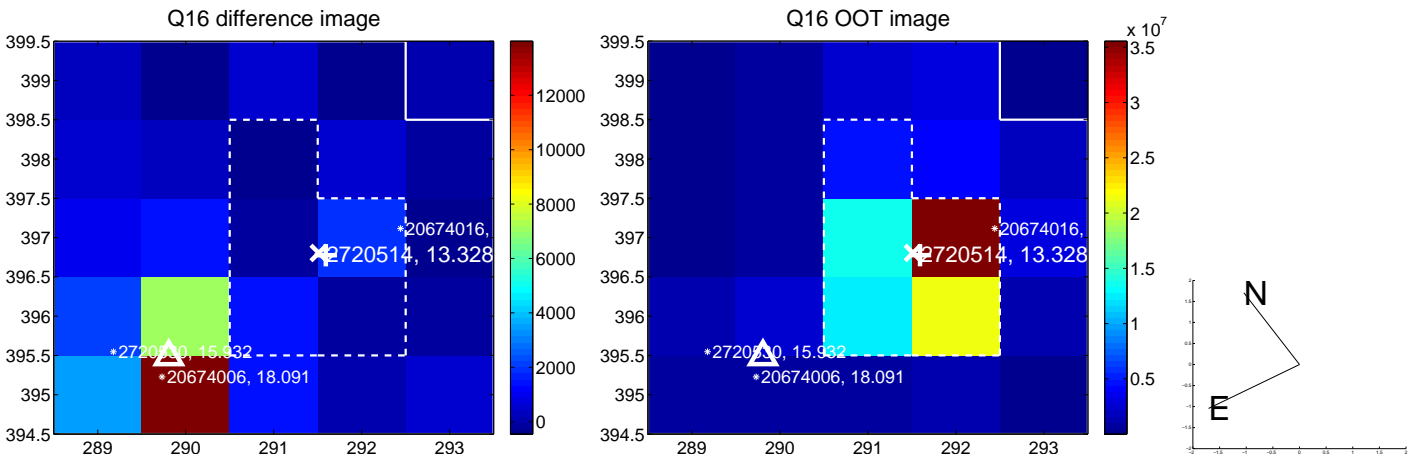
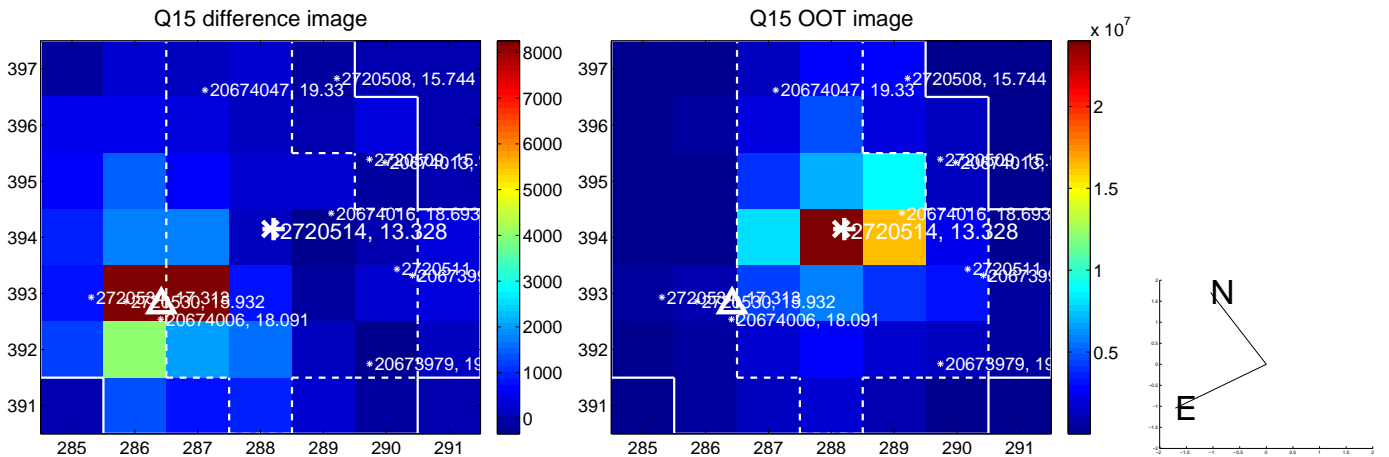
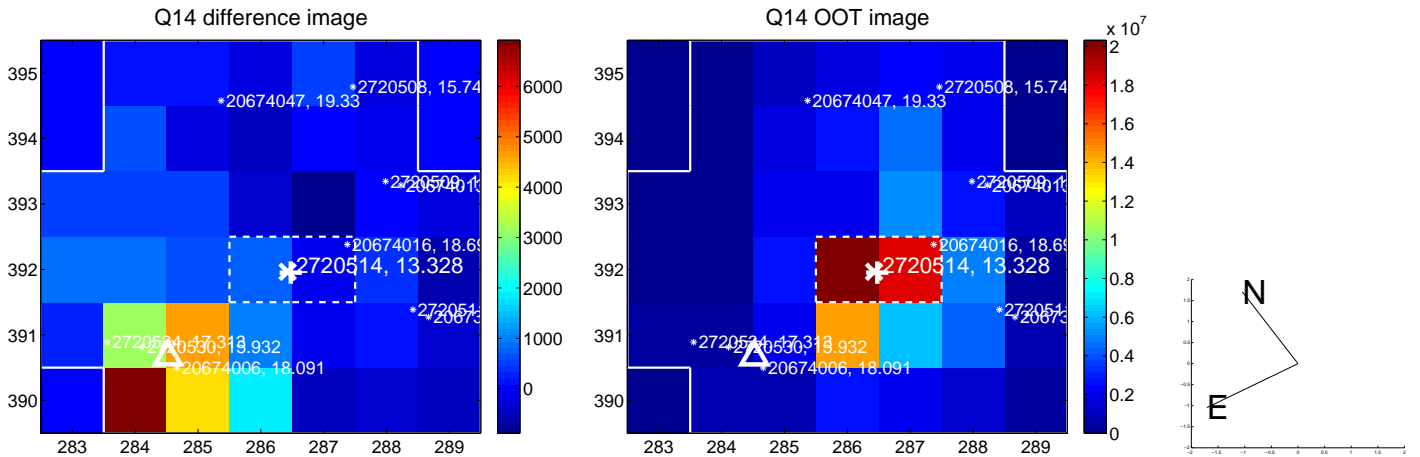
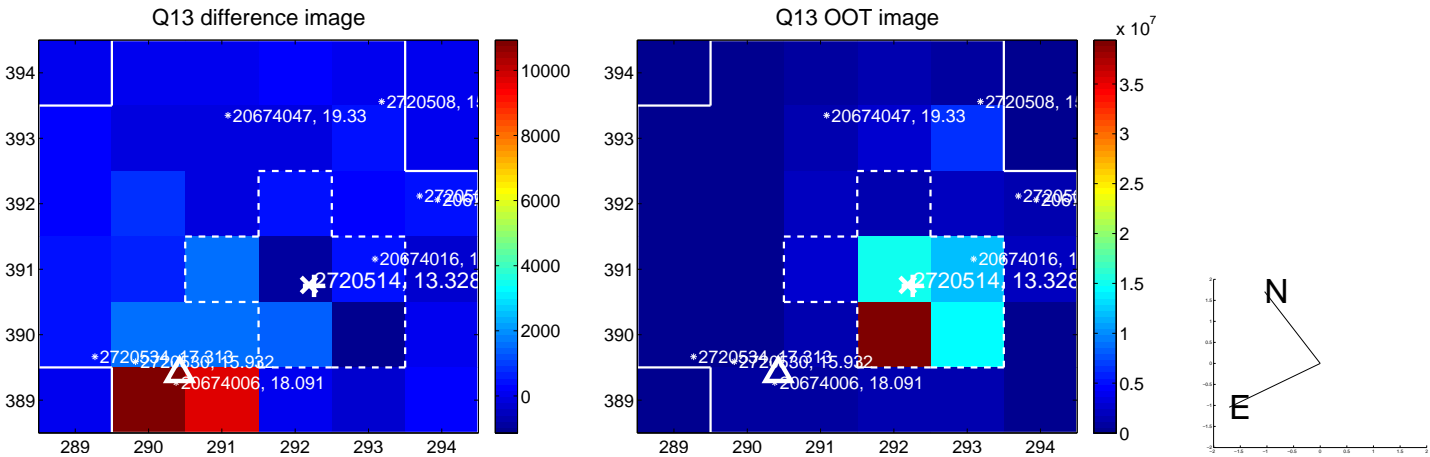
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



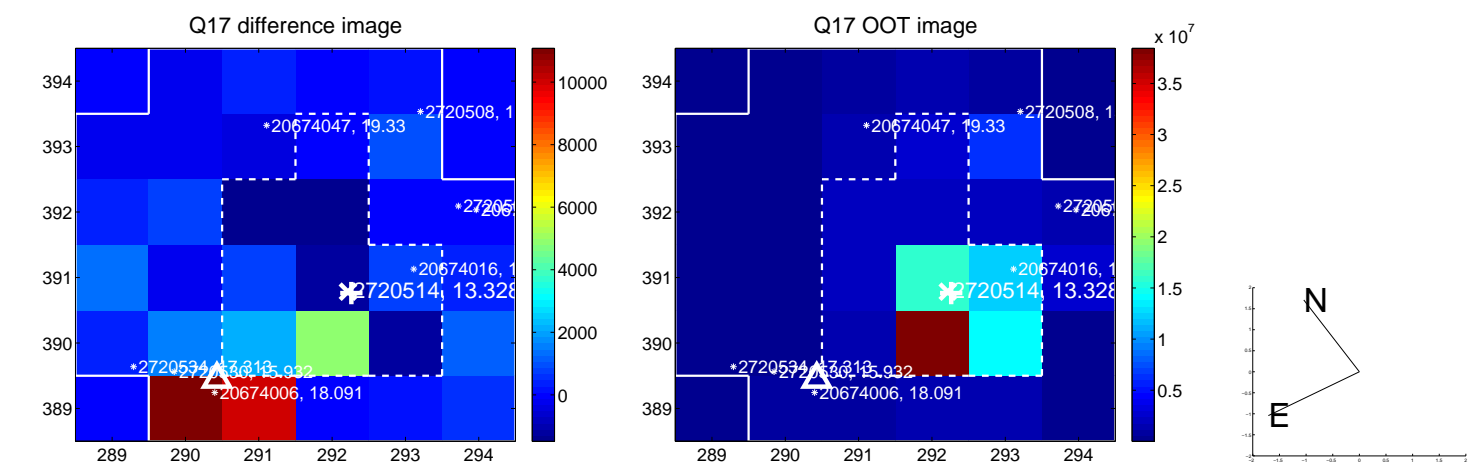
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



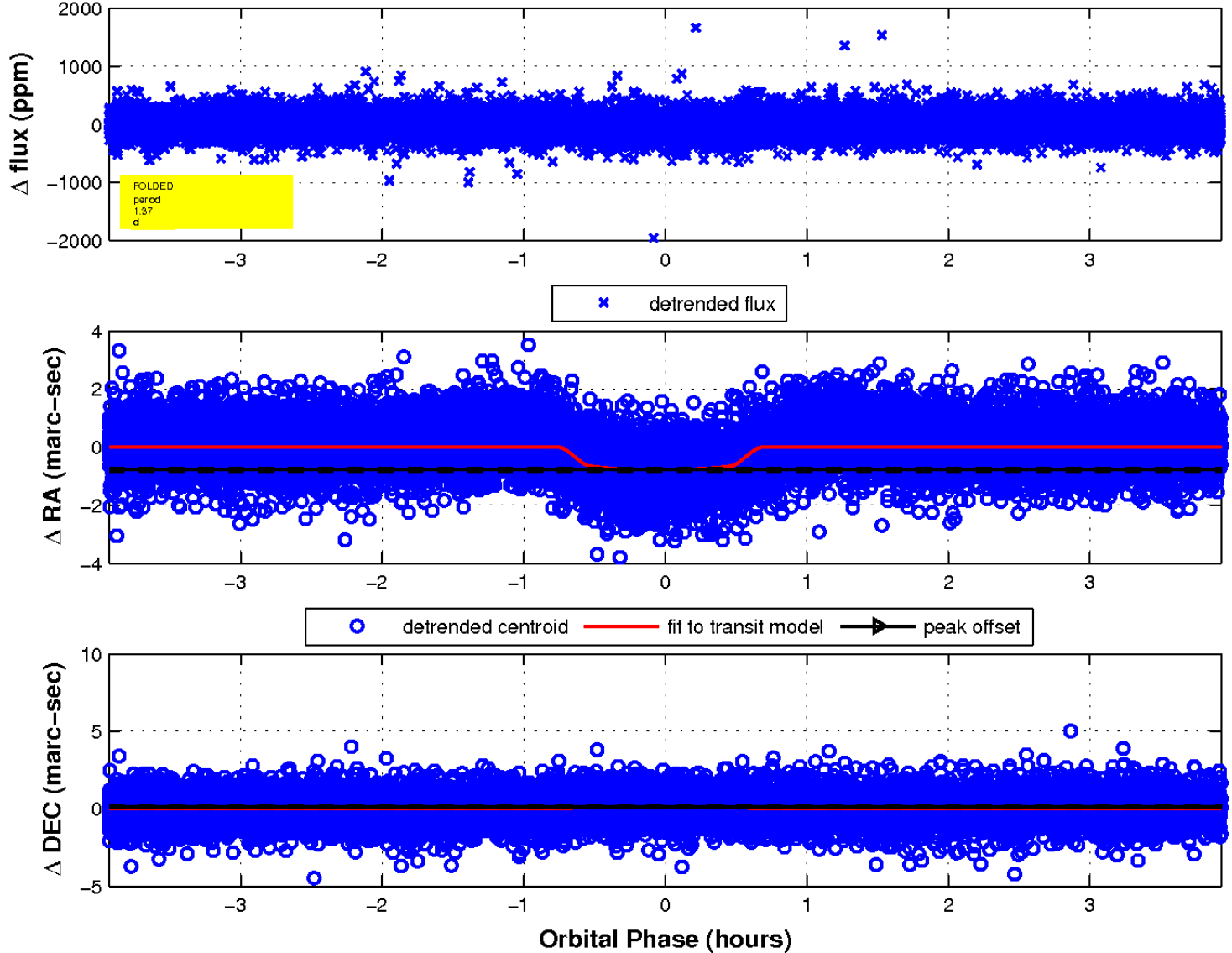
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

