

KIC 006206470

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 _⊕)
006206470-01	OBS	5252.01	1.804527	132.429206	29.6	2.624	11.7	10.0	1.02	6006	0.66	1463.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206470-01	OBS	FP	0.00	0	0	0	1	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.

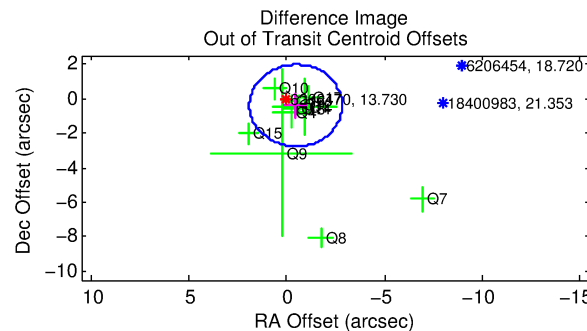
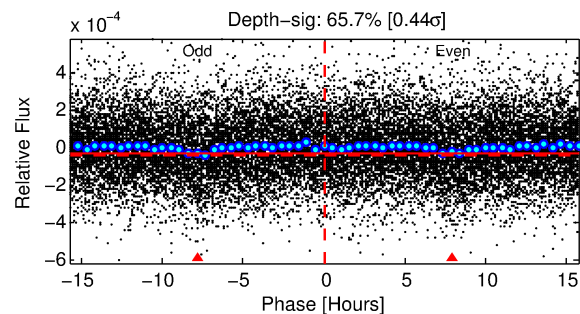
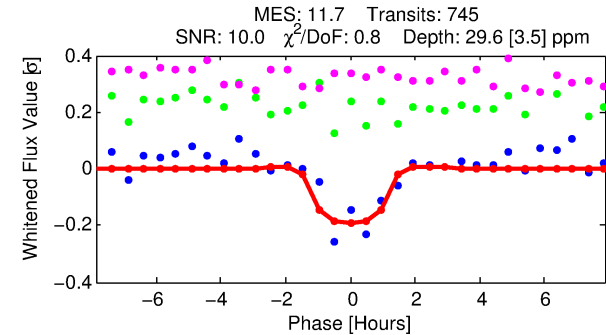
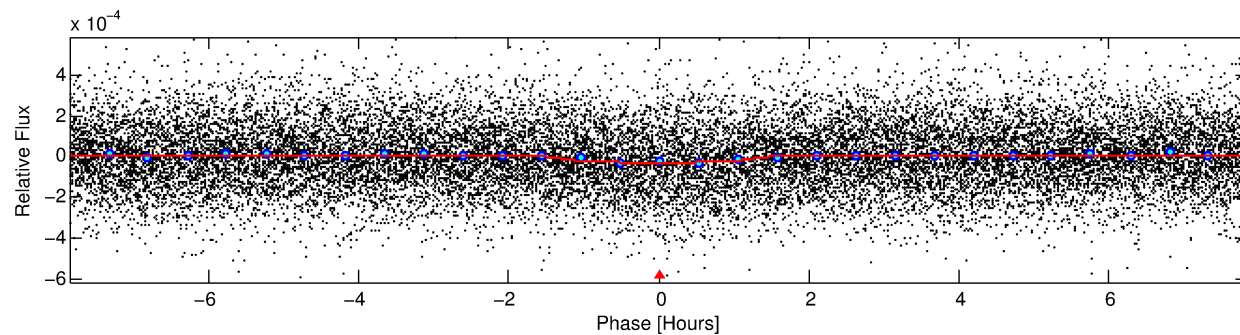
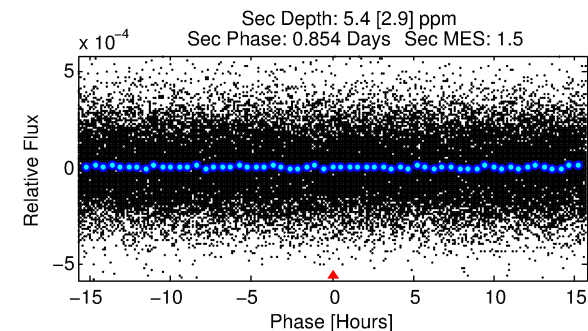
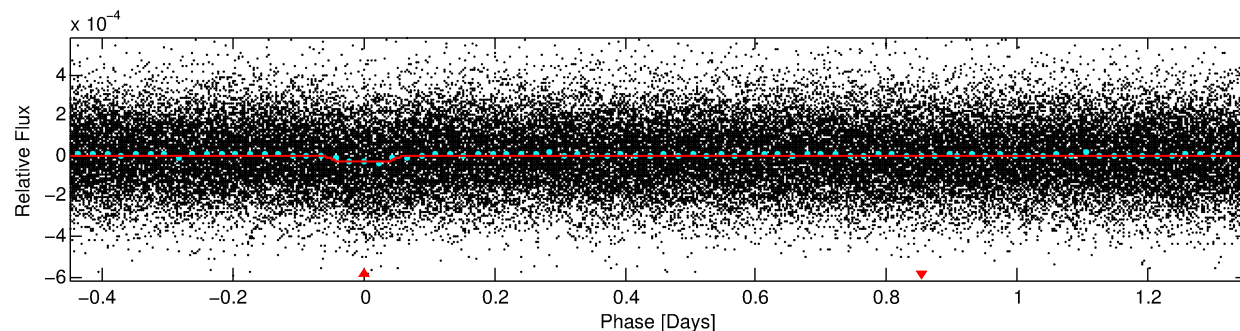
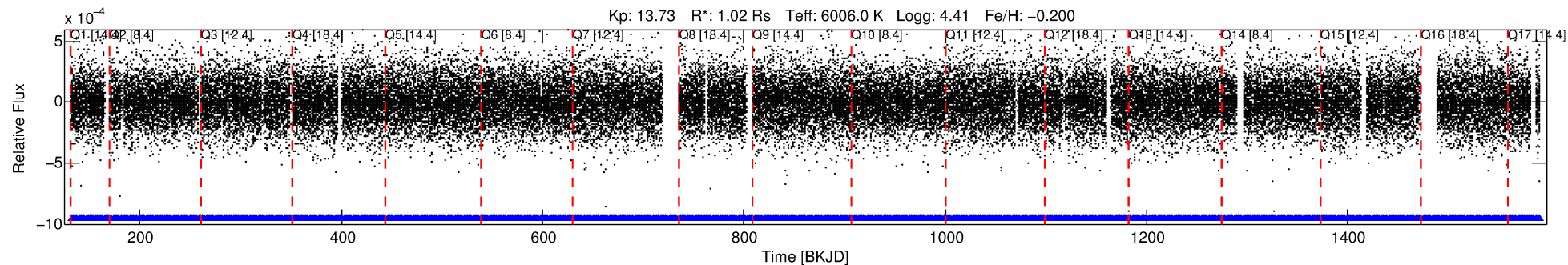
Ephemeris Match Information For 006206470-01

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
006206470-01	6206470	6640.01	5962716	1:1	1510.3	380	0	13.88	13.73	4610.70	Col-Anomaly	0	2.67	1.93

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: 6206470 Candidate: 1 of 1 Period: 1.805 d
KOI: K05252.01 Corr: 0.923



DV Fit Results:

Period = 1.80453 [0.00001] d
Epoch = 132.4292 [0.0039] BKJD
Rp/R* = 0.0059 [0.0023]
a/R* = 2.49 [4.35]
b = 0.90 [0.42]
Seff = 1463.98 [558.18]
Teff = 1577 [150] K
Rp = 0.66 [0.33] Re
a = 0.0288 [0.0073] AU
Ag = 5.72 [5.84] [0.81σ]
Teffp = 3771 [907] K [2.39σ]

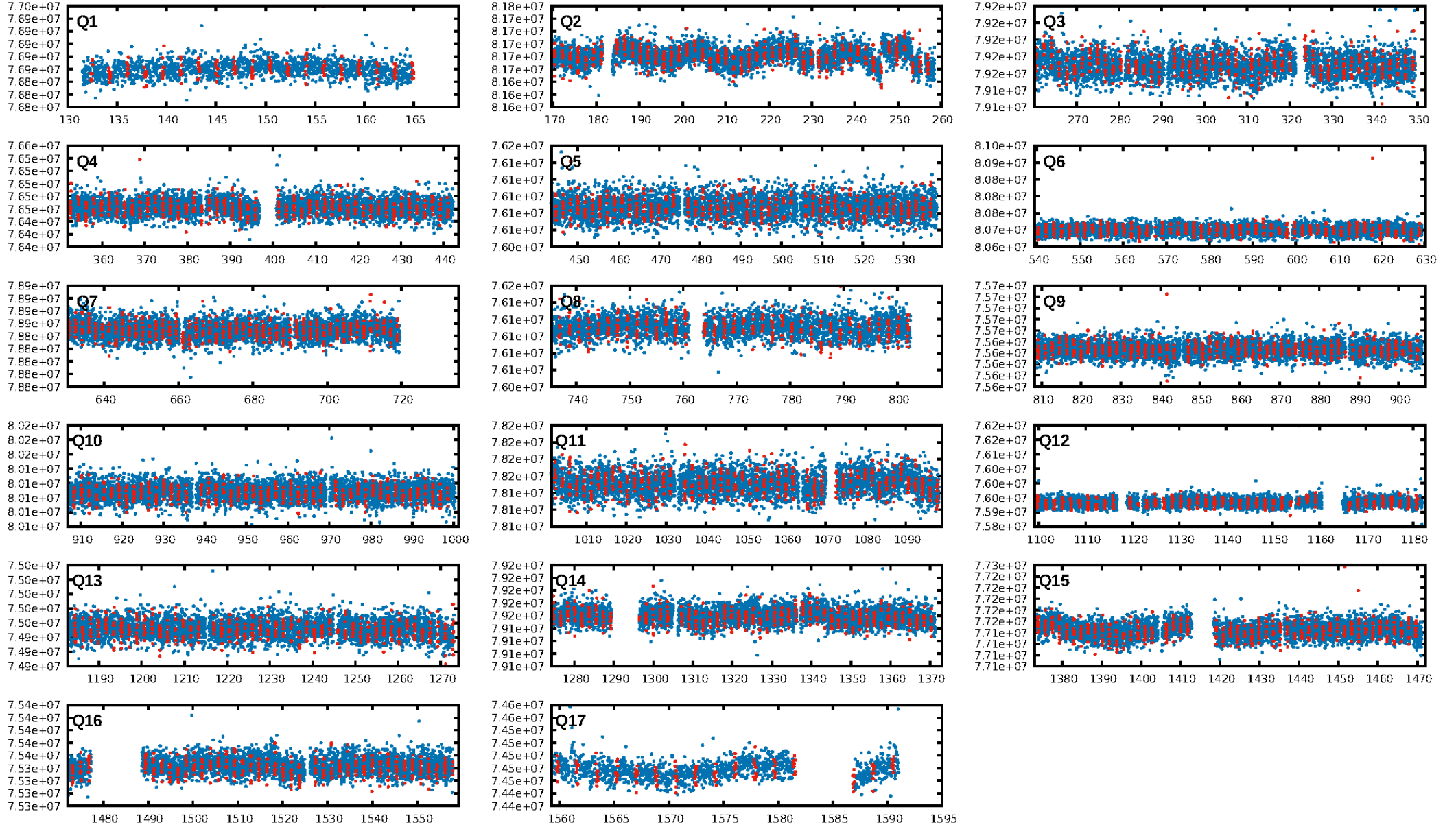
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.04e-31
RollingBand-fgt: 1.00 [710/710]
GhostDiagnostic-chr: 13.76
Centroid-sig: 22.4%
Centroid-so: 1.634 arcsec [1.17σ]
OotOffset-rm: 0.612 arcsec [0.78σ]
KicOffset-rm: 0.712 arcsec [1.02σ]
OotOffset-st: 2/2/4/4 [12]
KicOffset-st: 2/2/4/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

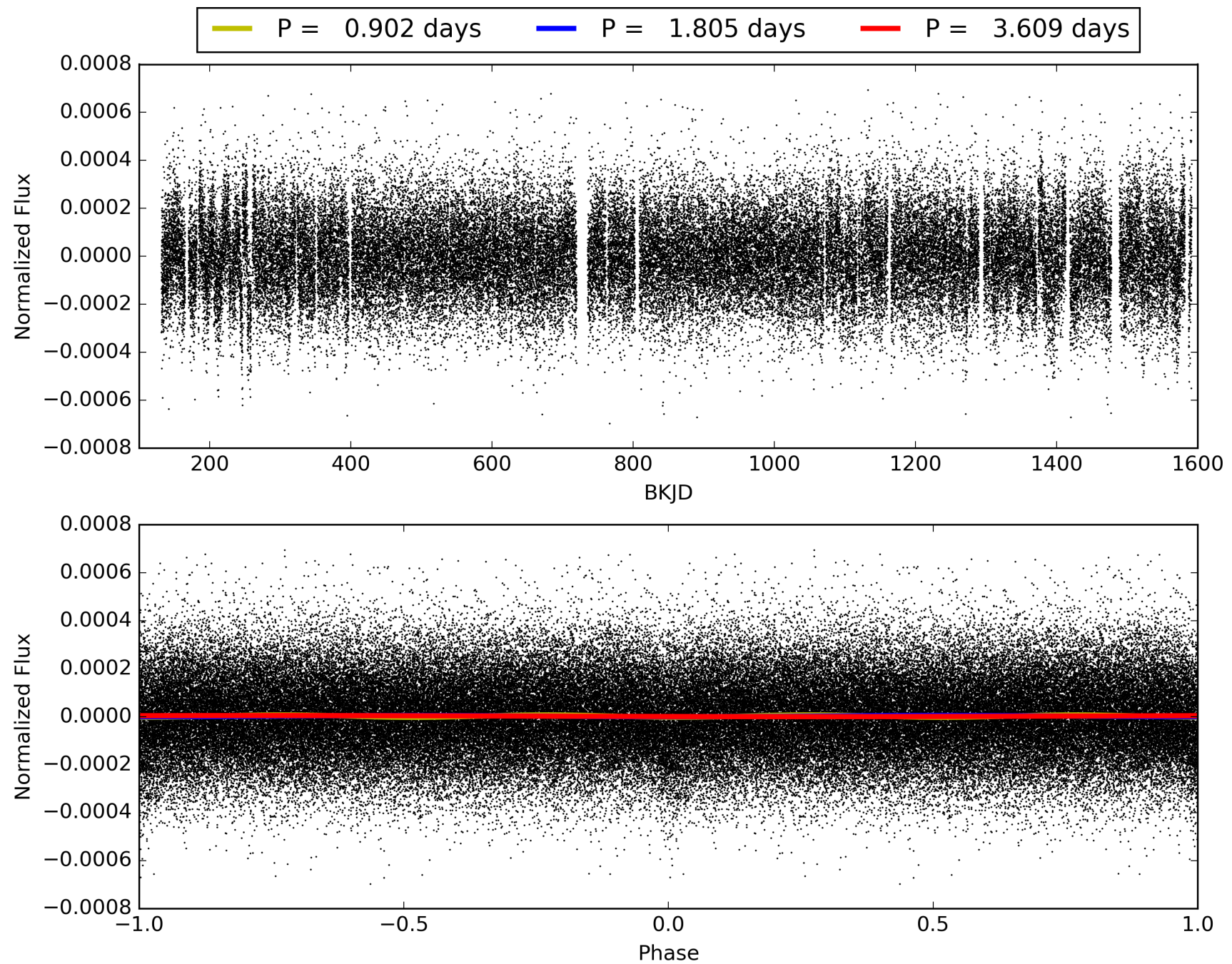
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:46:12 Z

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

TCE 006206470-01, PDC Light Curves

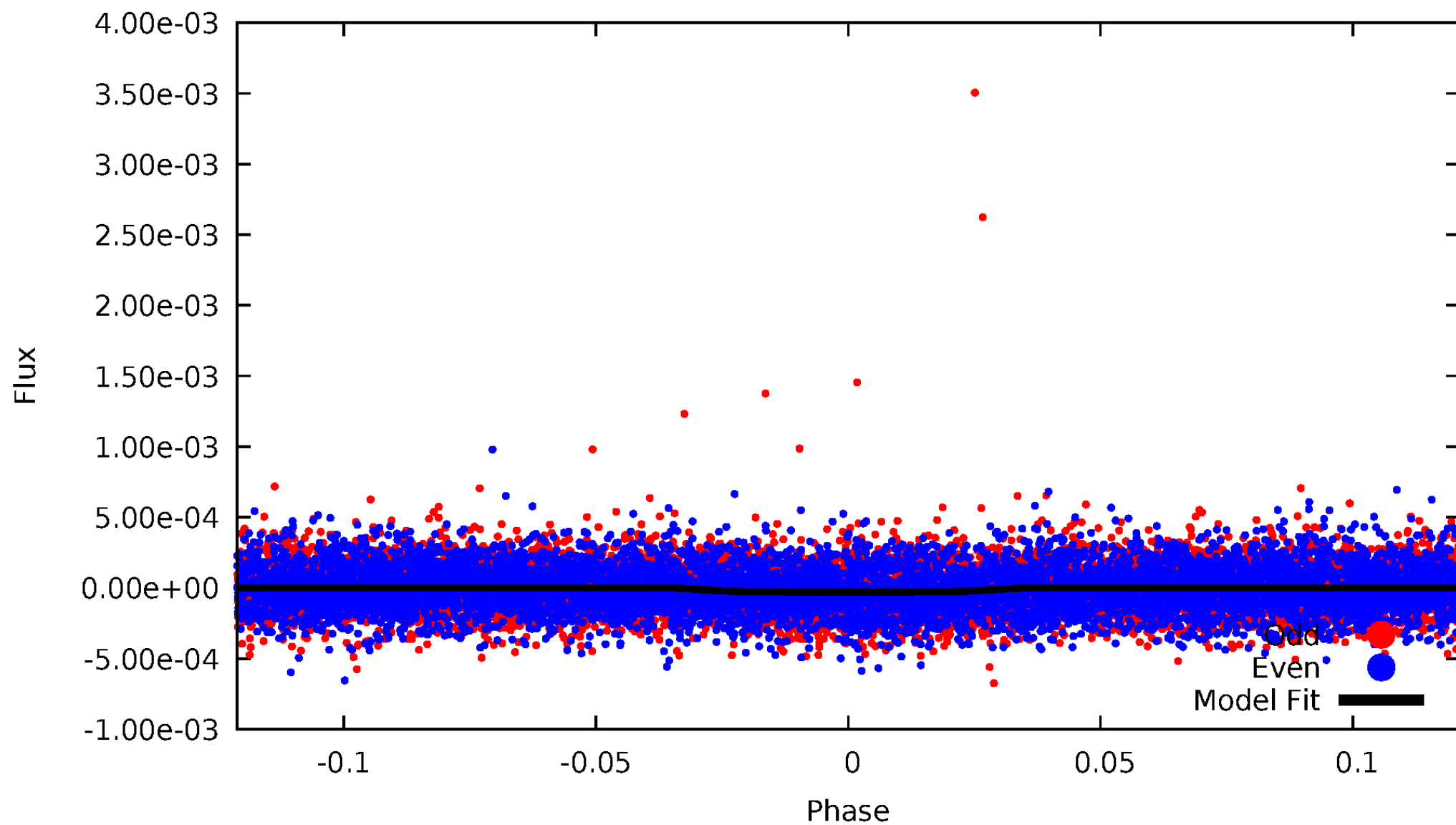


TCE 006206470-01



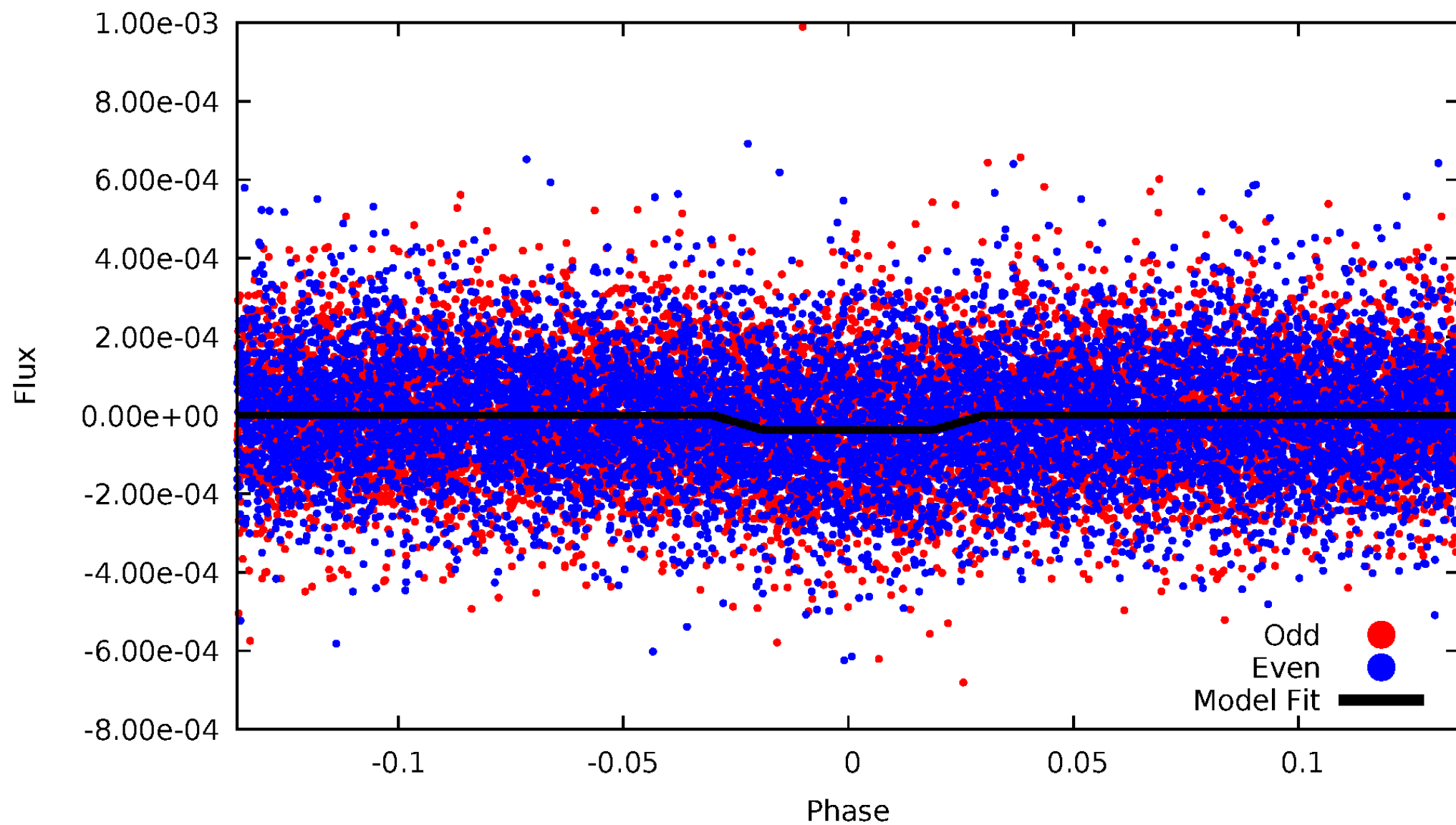
DV Odd/Even

TCE 006206470-01



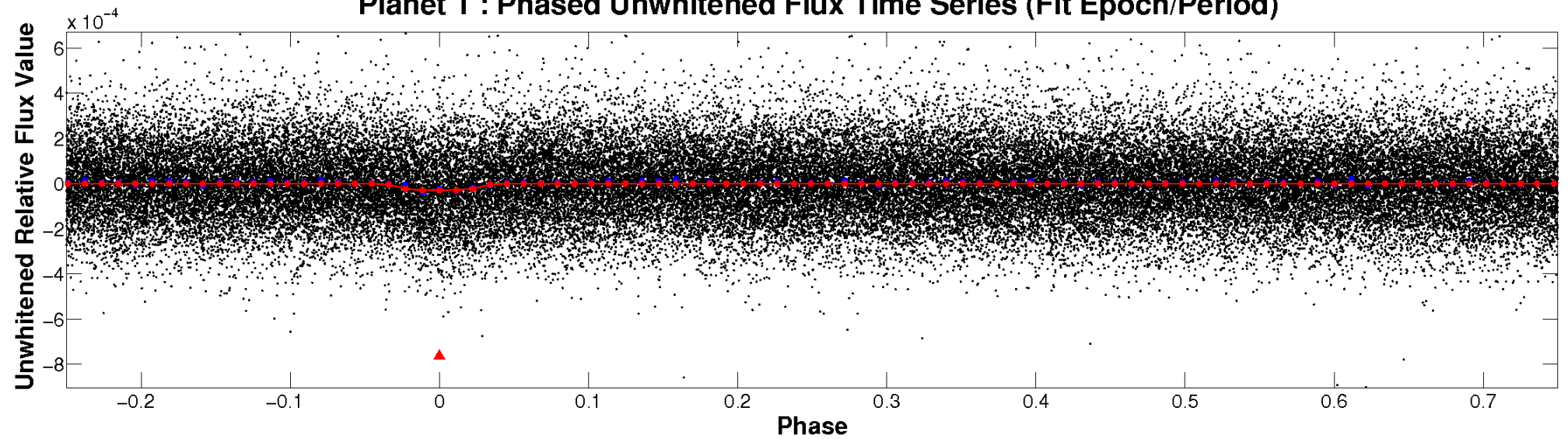
ALT Odd/Even

TCE 006206470-01

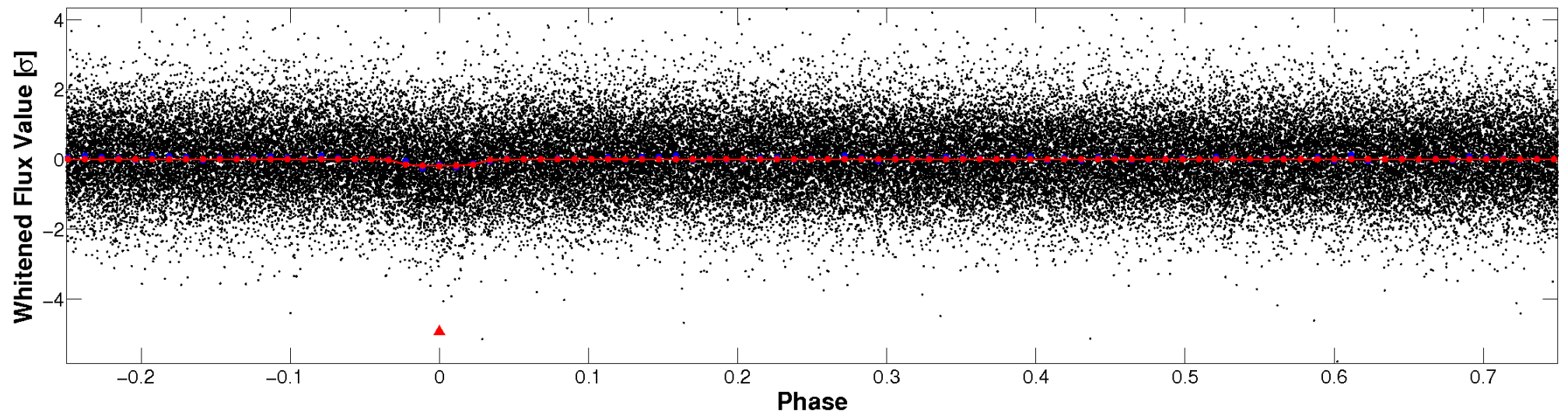


Non-Whitened Vs. Whitened Light Curve

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

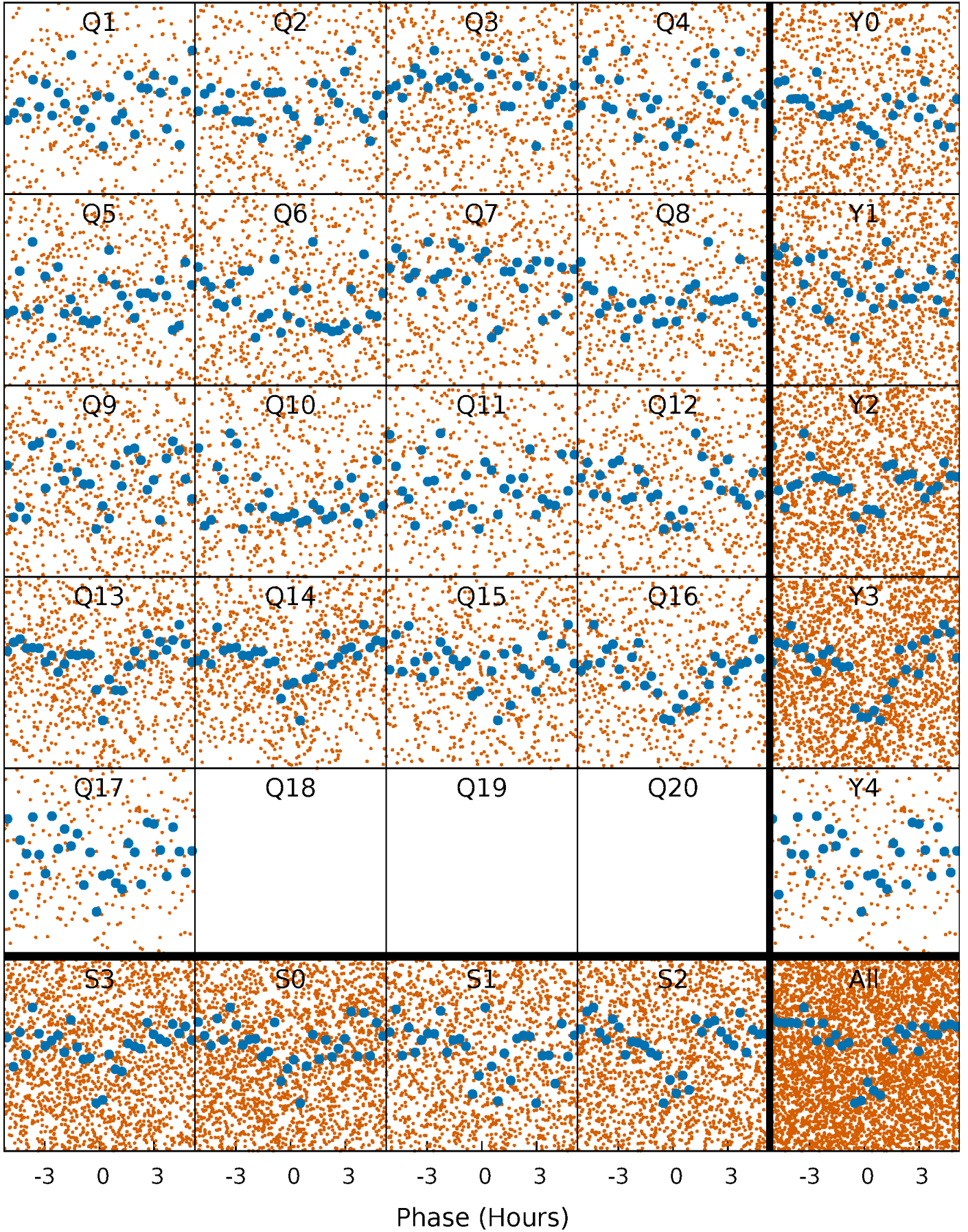


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



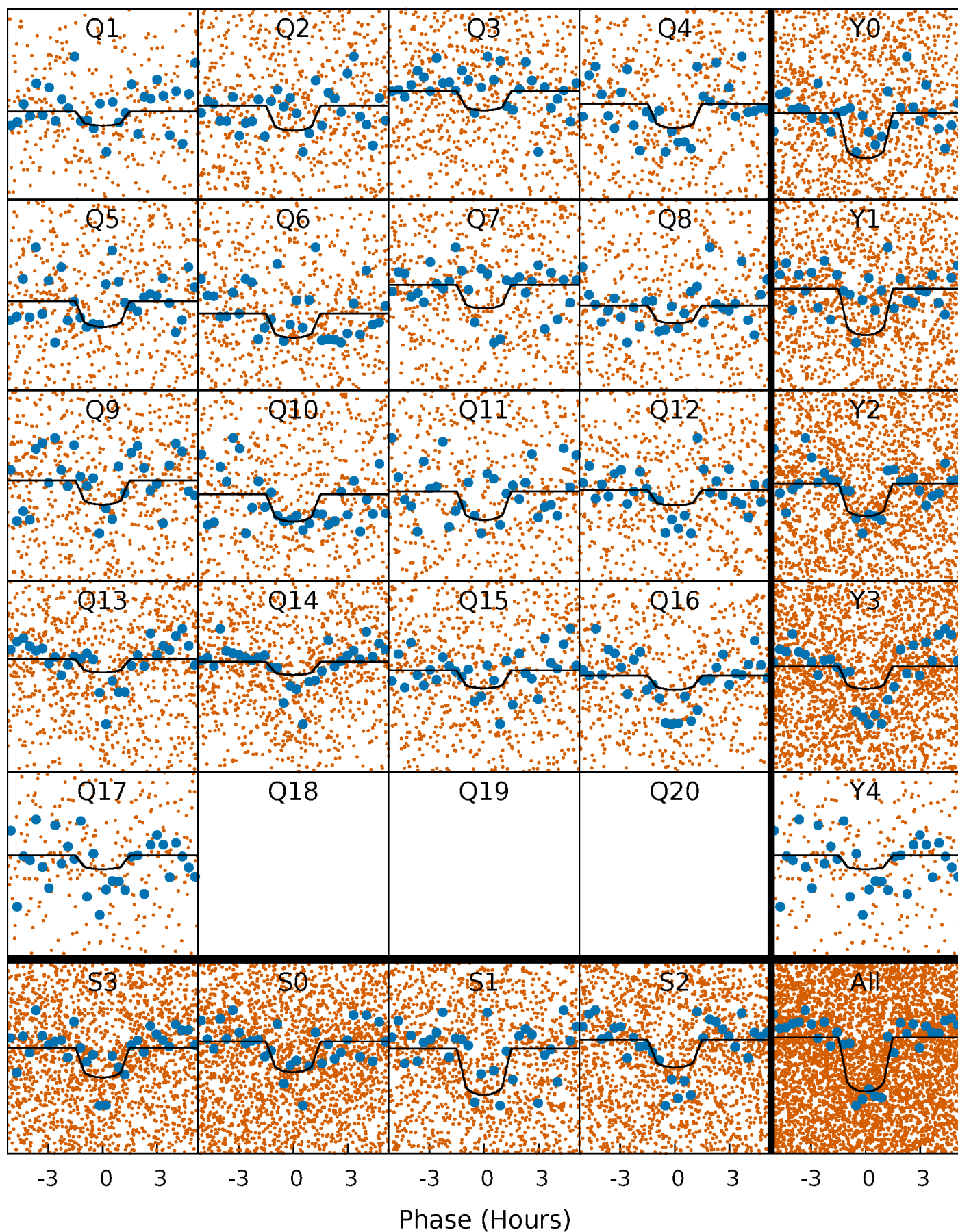
PDC Quarter-Phased Transit Curves

TCE 006206470-01 P= 1.804527 Days $T_0=132.429206$ (BKJD)



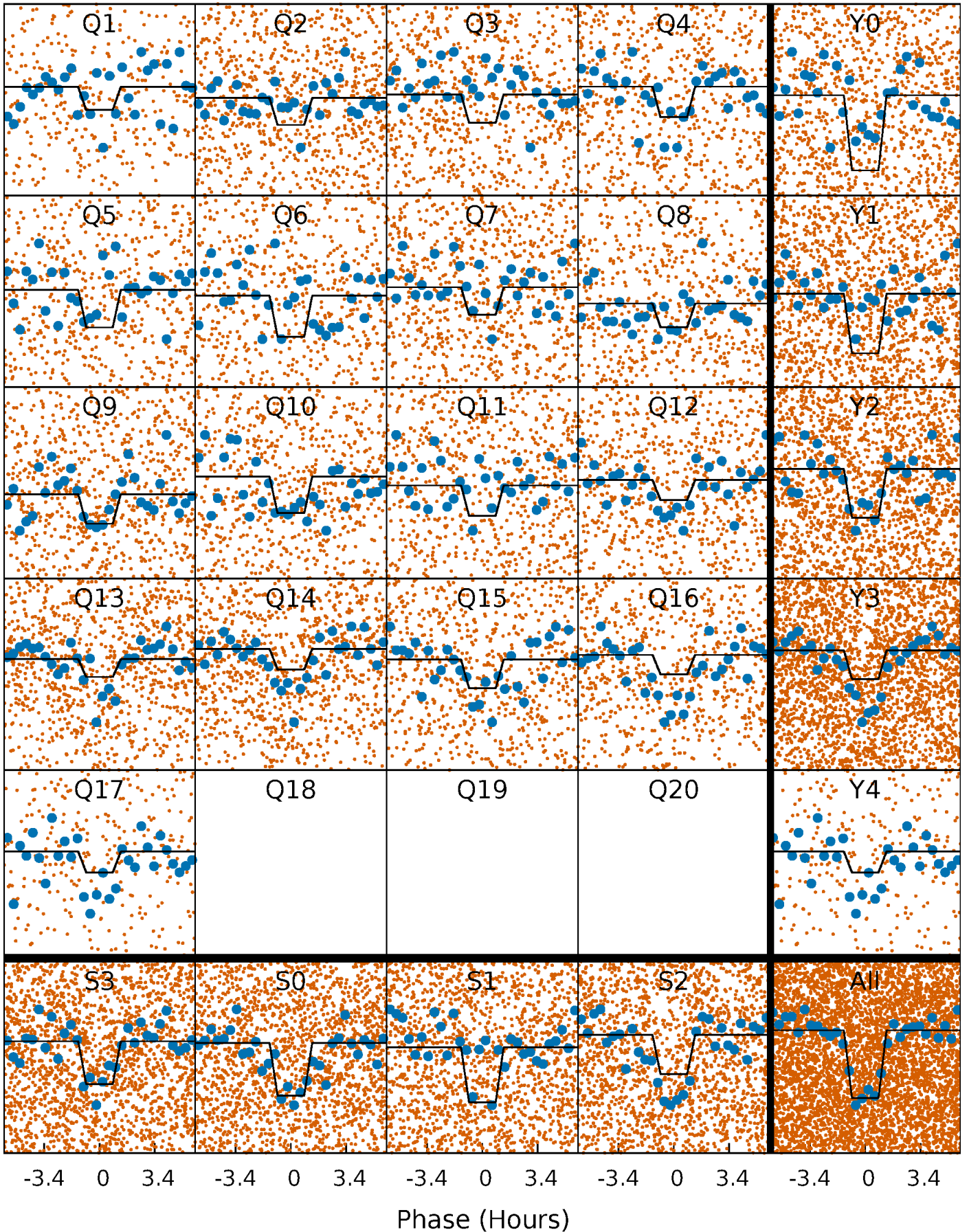
DV Quarter-Phased Transit Curves

TCE 006206470-01 P= 1.804527 Days $T_0=132.429206$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

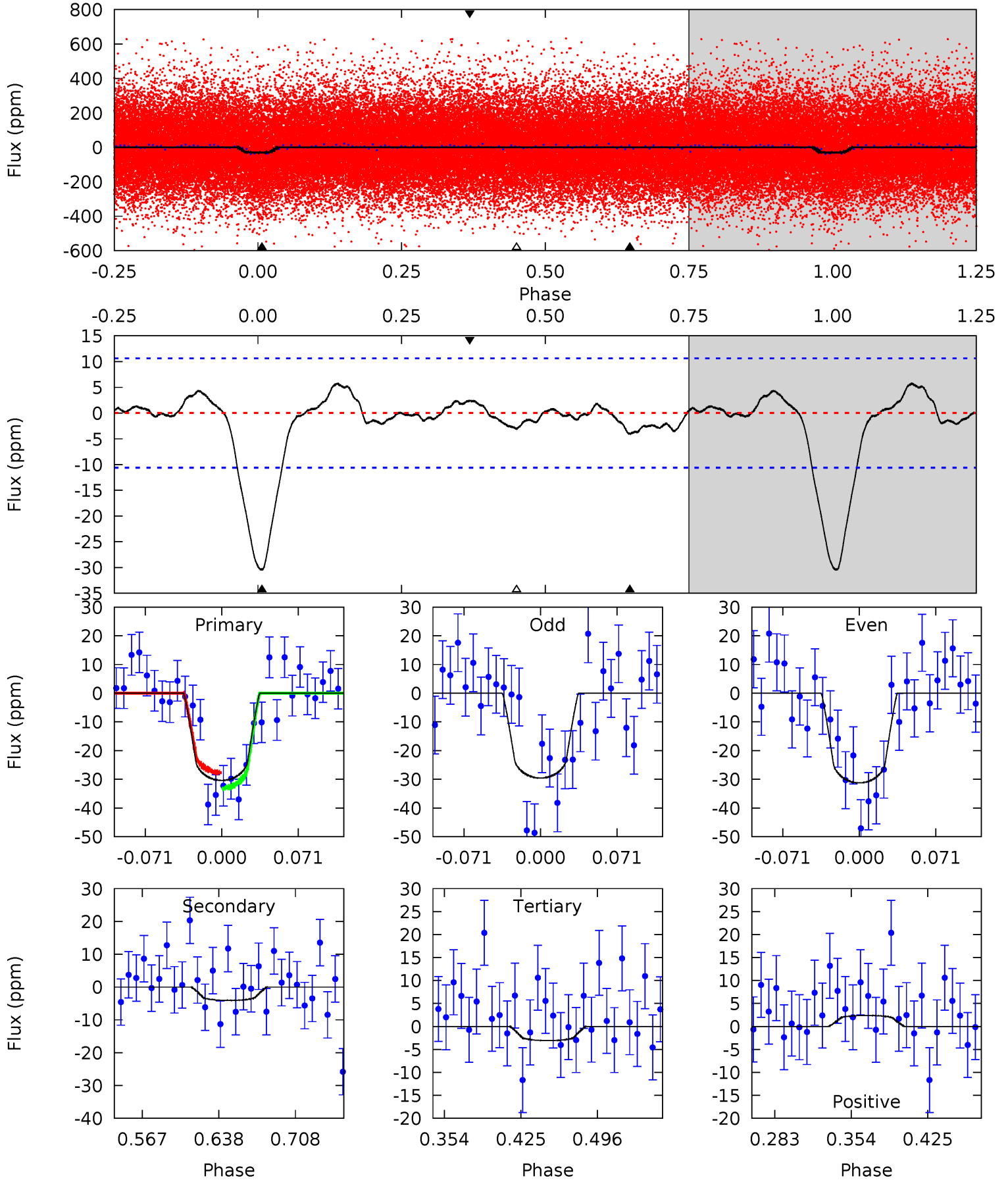
TCE 006206470-01 P= 1.804546 Days $T_0=132.427506$ (BKJD)



DV Model-Shift Uniqueness Test

006206470-01, P = 1.804527 Days, E = 130.624679 Days

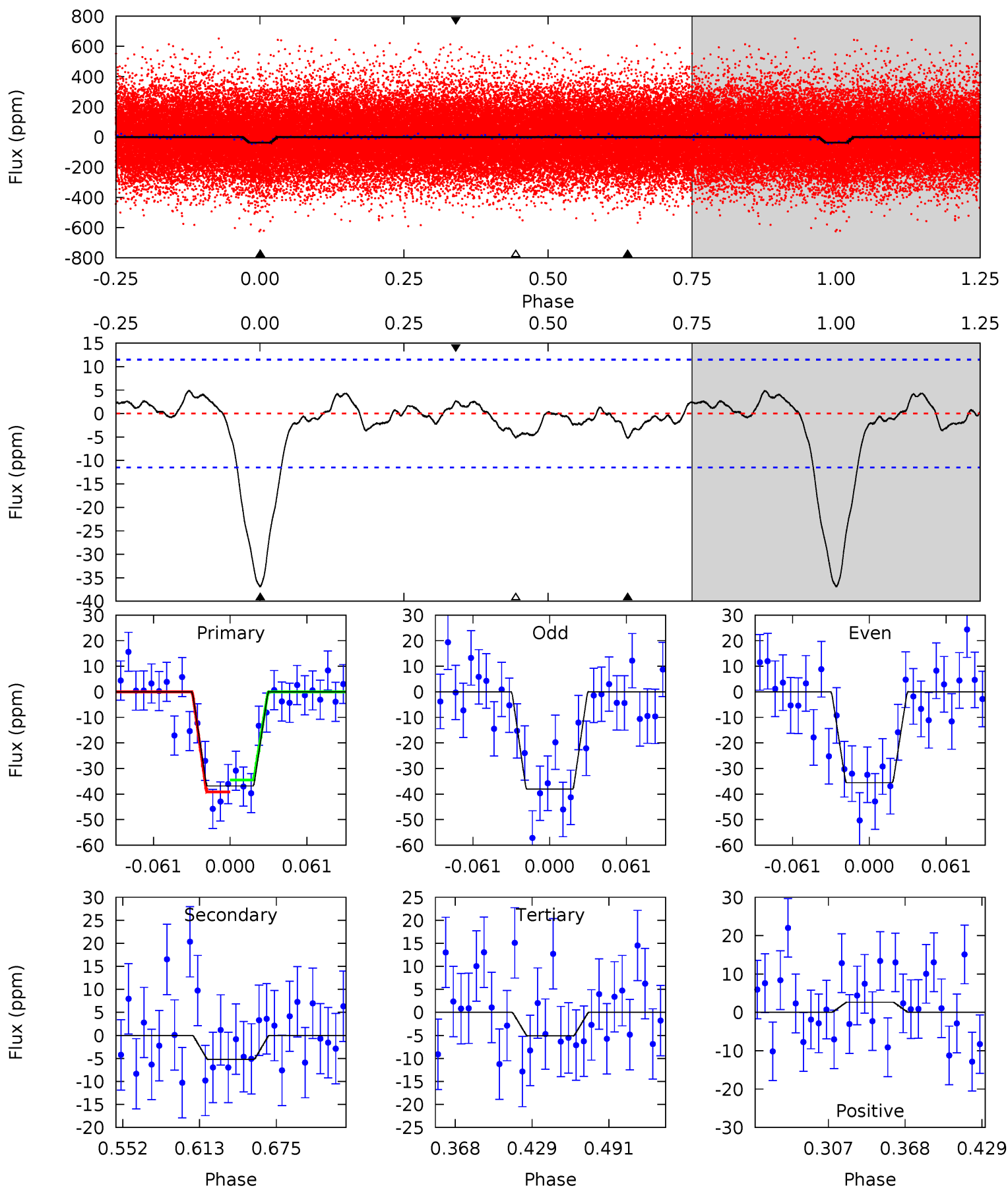
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	1.78	1.35	1.04	4.64	1.81	0.86	11.9	12.2	0.44	0.74	0.37	0.99	0.16	1.18



Alt Model-Shift Uniqueness Test

006206470-01, P = 1.804546 Days, E = 130.622960 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	2.12	2.08	1.07	4.67	1.87	0.91	12.9	13.9	0.04	1.04	0.52	0.97	0.12	0.94



Stellar Parameters For KIC 006206470

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6006^{+162}_{-180}	$4.410^{+0.090}_{-0.195}$	$-0.200^{+0.300}_{-0.300}$	$1.019^{+0.311}_{-0.133}$	$0.975^{+0.145}_{-0.109}$	$1.299^{+0.598}_{-0.656}$
	+3%/-3%	+2%/-4%	+150%/-150%	+31%/-13%	+15%/-11%	+46%/-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 006206470-01 / KOI 5252.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 2	$0.69^{+0.29}_{-0.29}$	2229^{+168}_{-109}	3780^{+962}_{-661}	$3.814^{+8.155}_{-2.512}$
Alt.	-5 ± 2	$0.69^{+0.33}_{-0.26}$	2231^{+153}_{-118}	3903^{+833}_{-613}	$4.287^{+8.006}_{-2.518}$

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

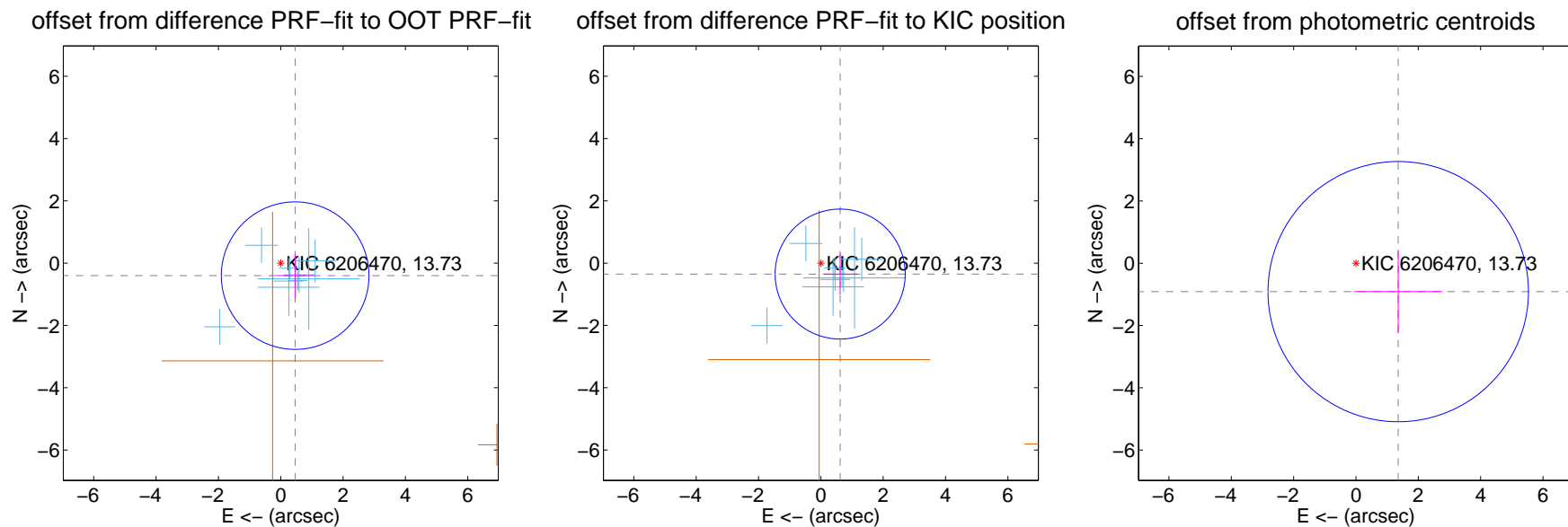
DV Centroid Data

Supplemental centroid analysis for 006206470-01. Kepler magnitude: 13.73. Transit SNR 10.03

There are 9 quarters with good PRF difference image offsets

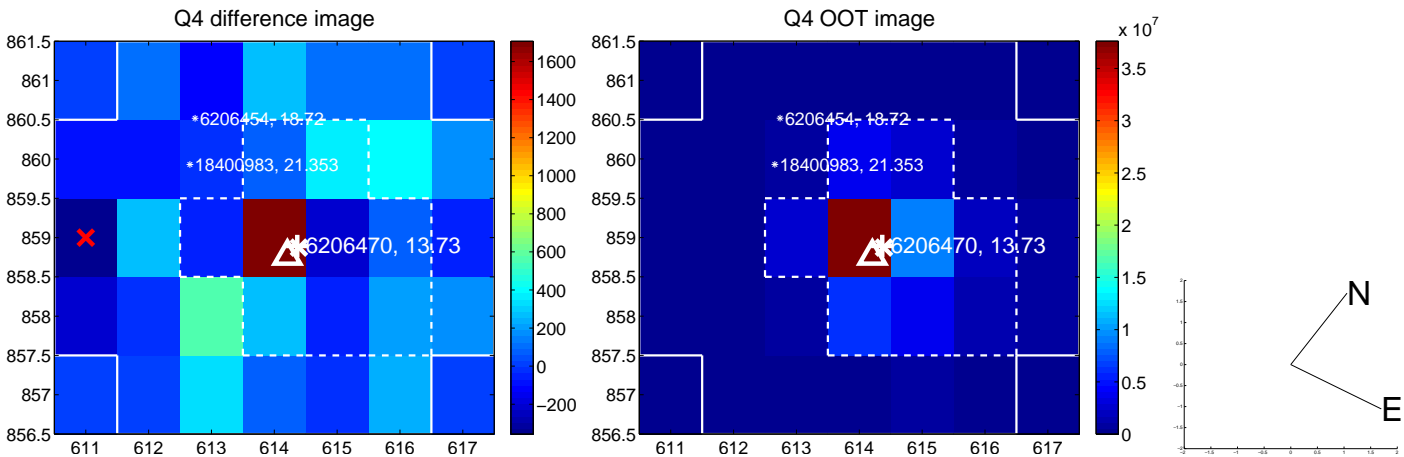
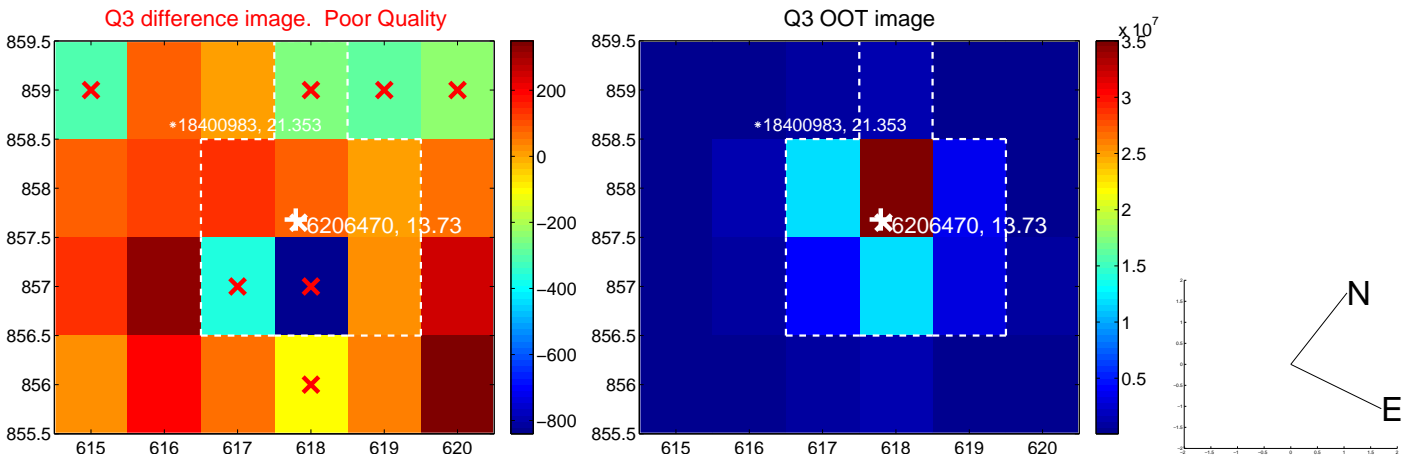
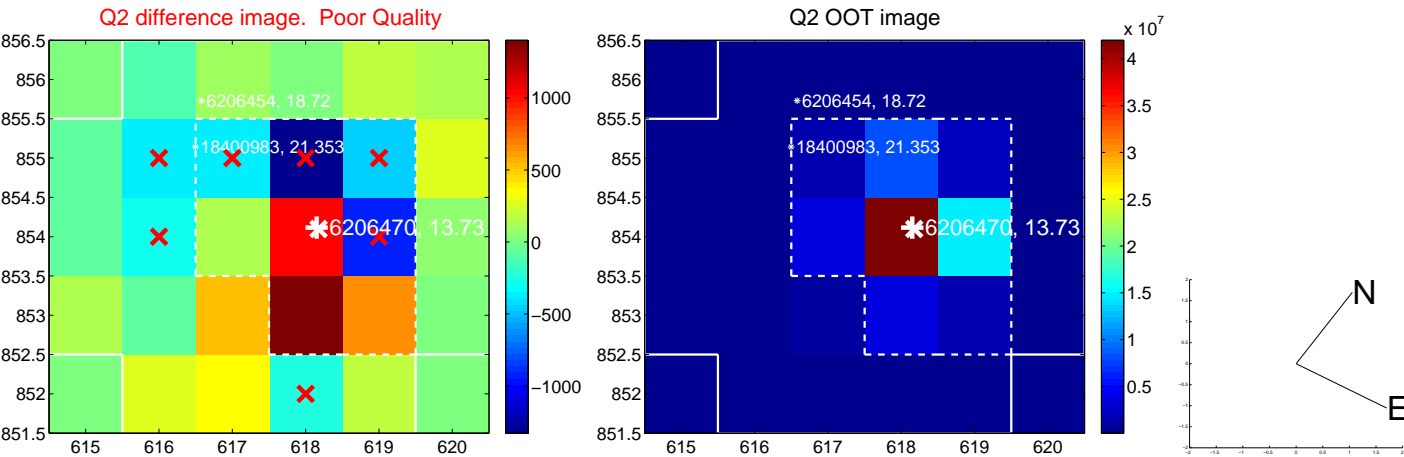
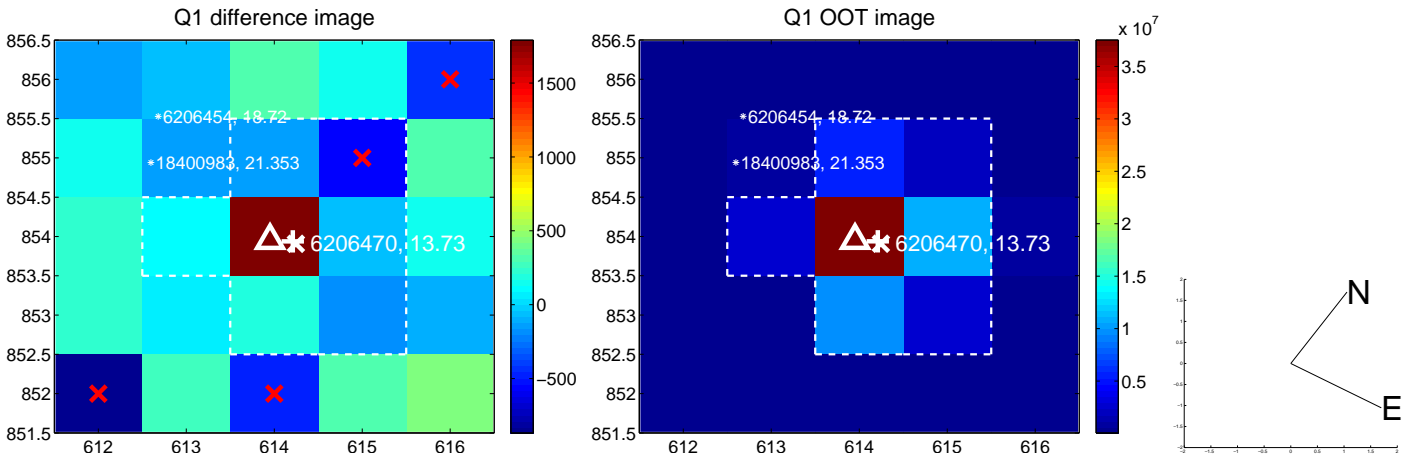
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.612 ± 0.789	0.78	-0.462 ± 0.603	-0.401 ± 0.701
PRF-fit source offset from KIC position	0.712 ± 0.695	1.02	-0.619 ± 0.548	-0.351 ± 0.665
photometric centroid source offset	1.63 ± 1.39	1.17	-1.36 ± 1.42	-0.91 ± 1.34

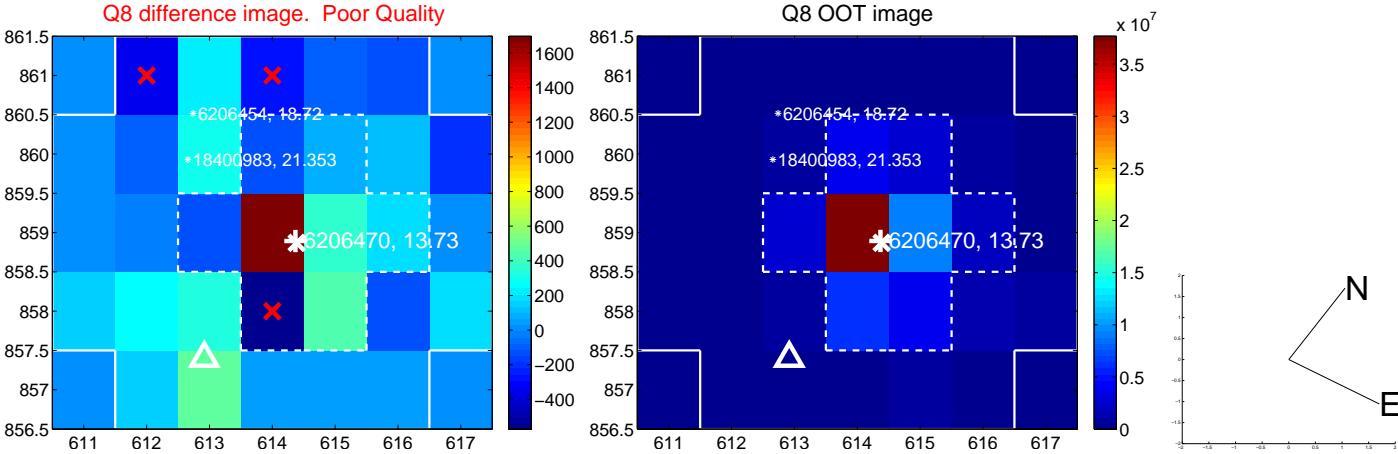
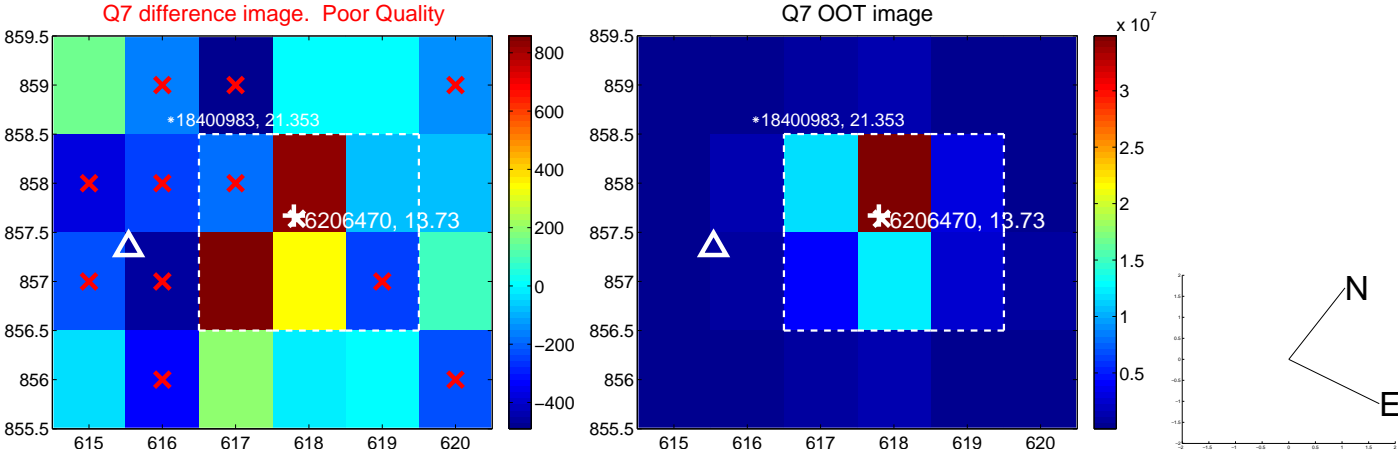
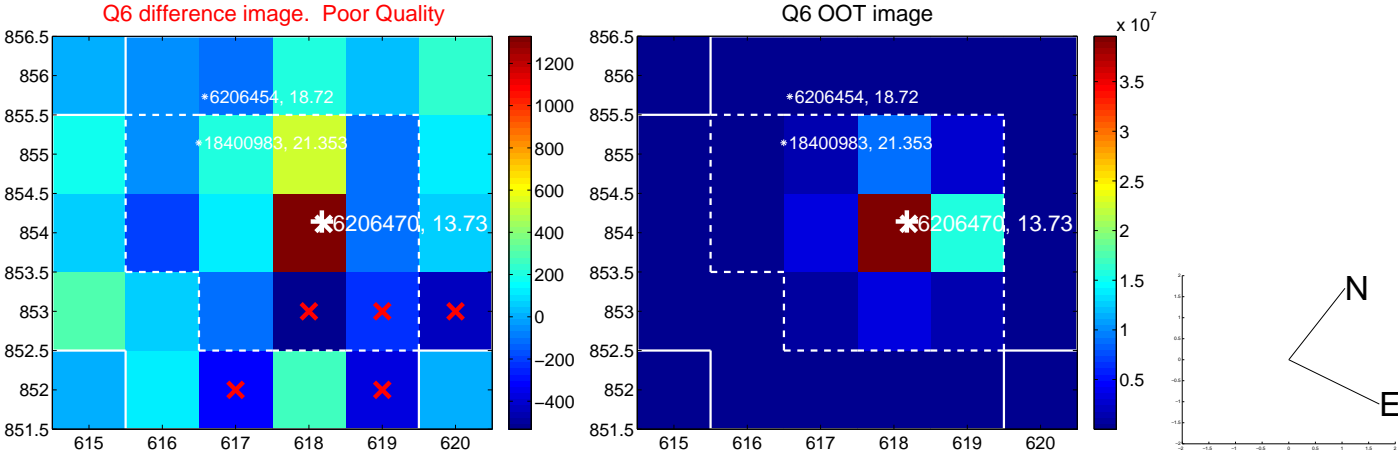
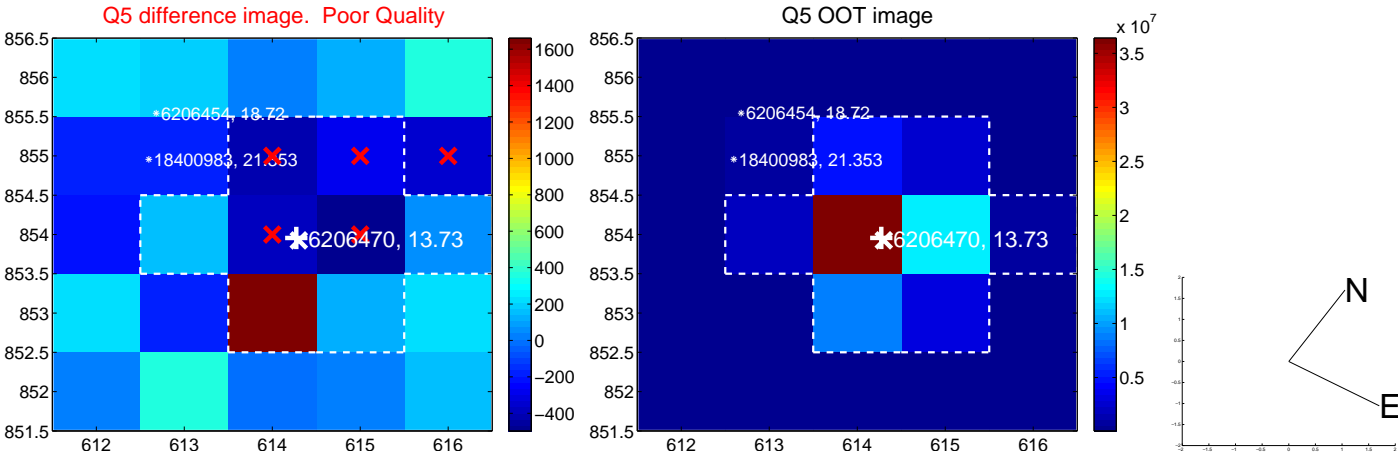


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

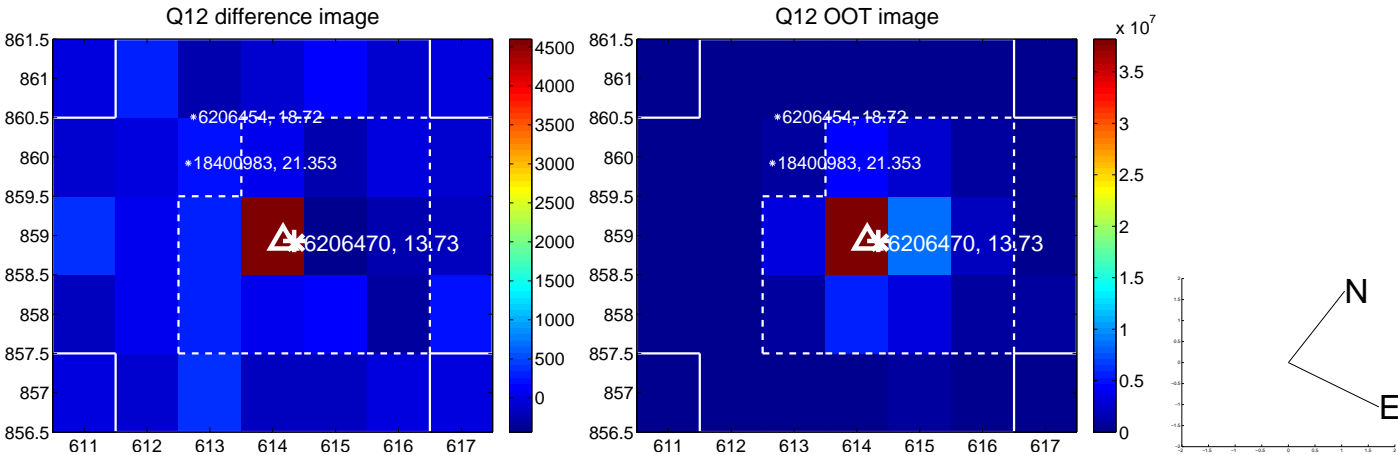
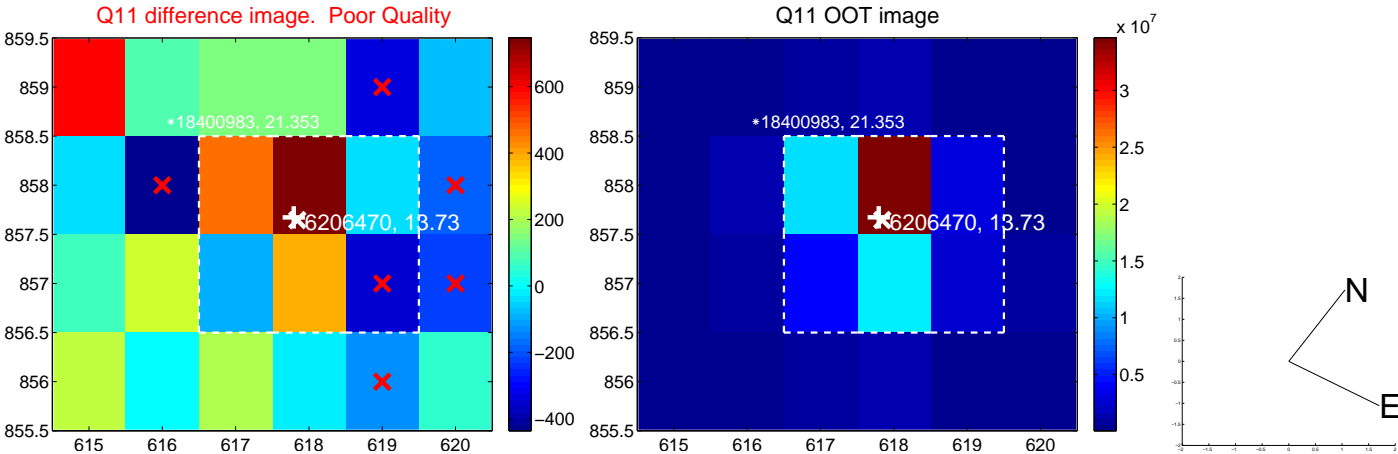
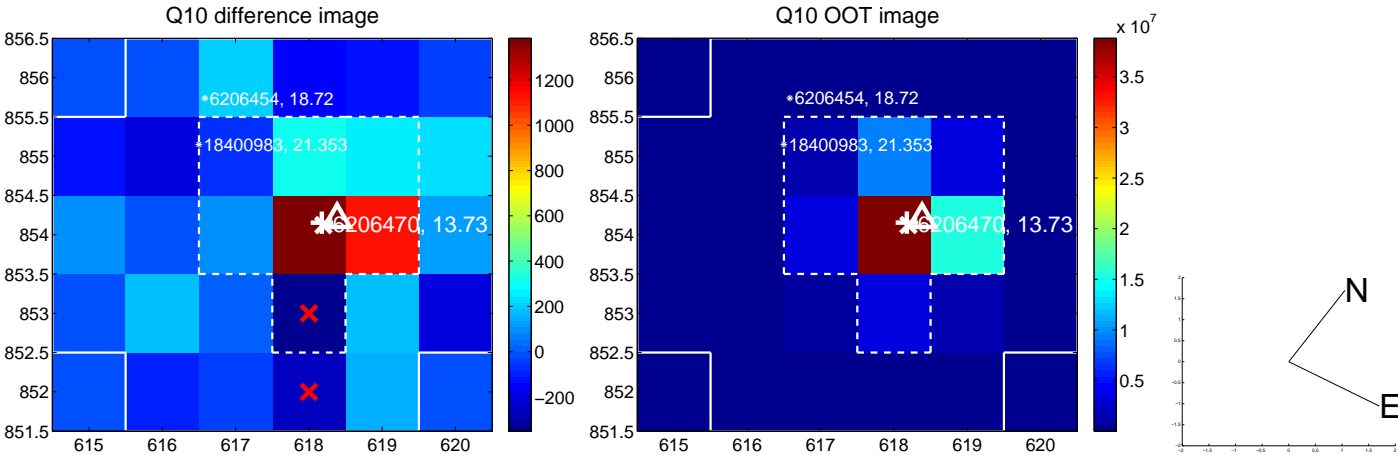
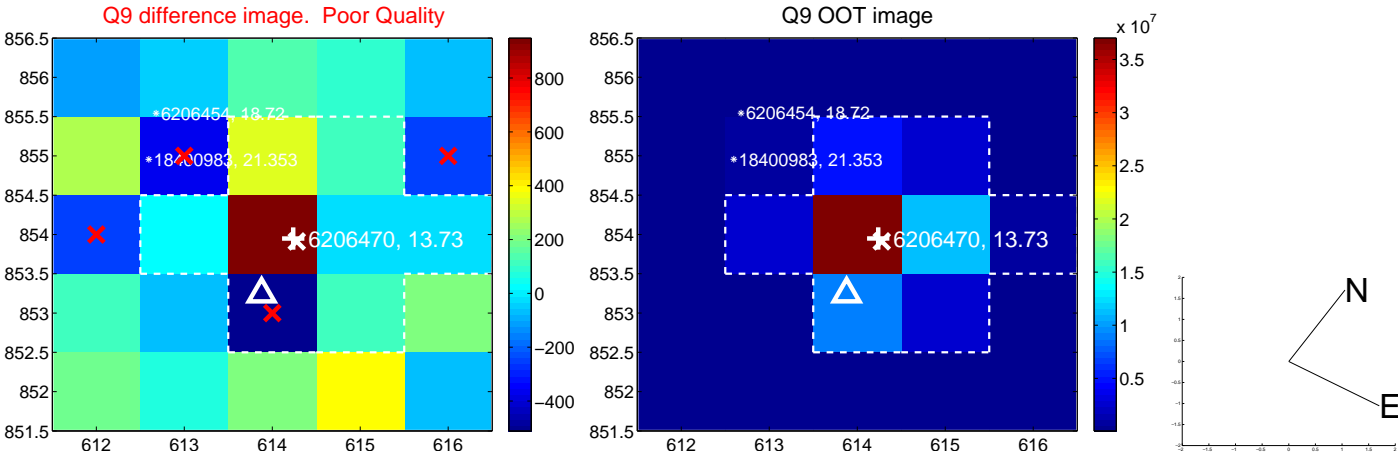
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



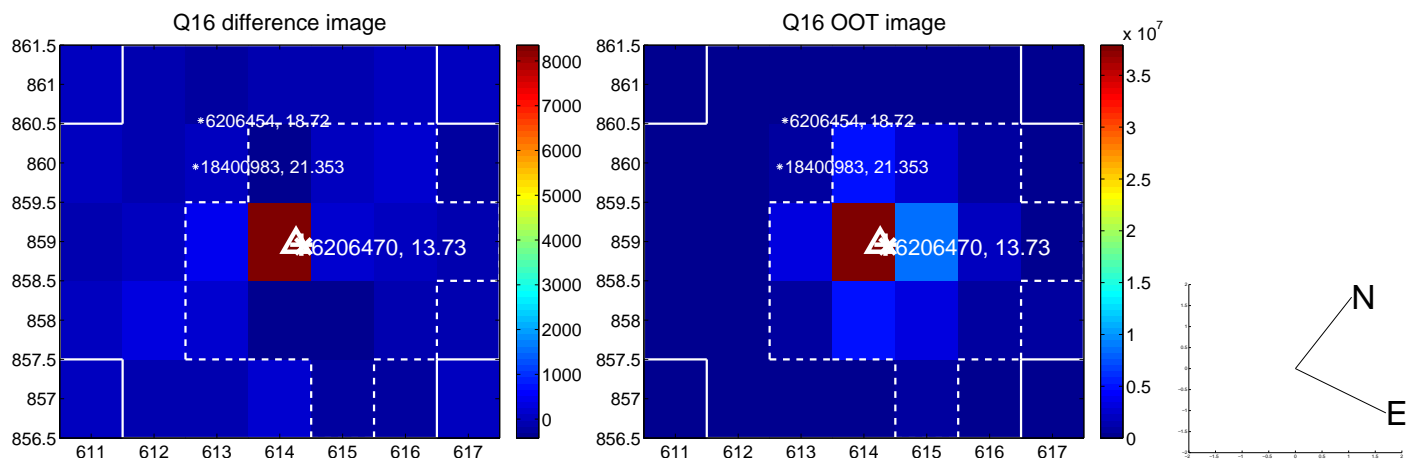
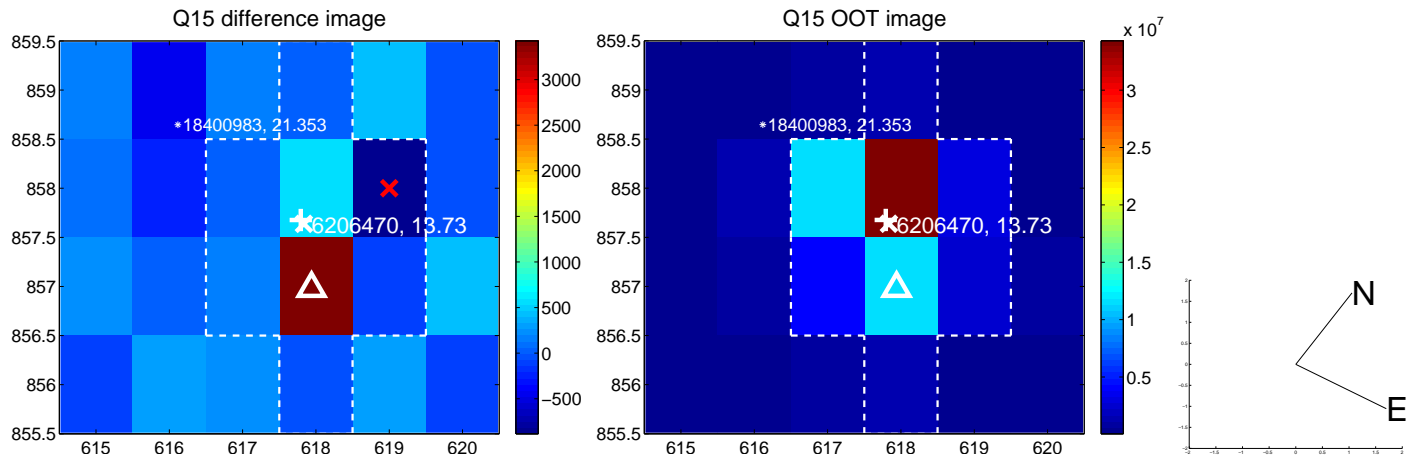
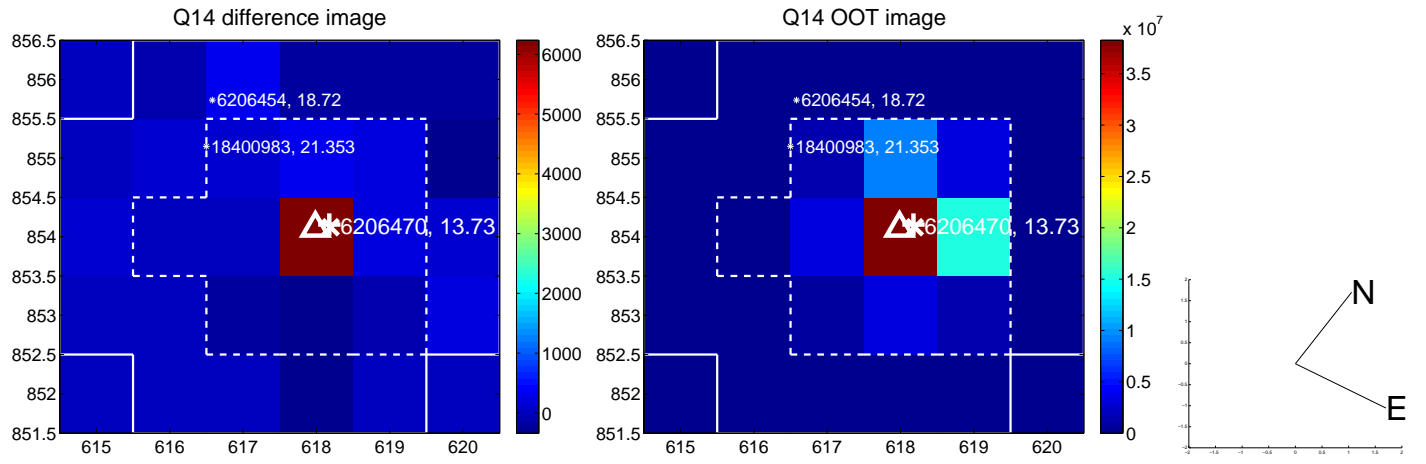
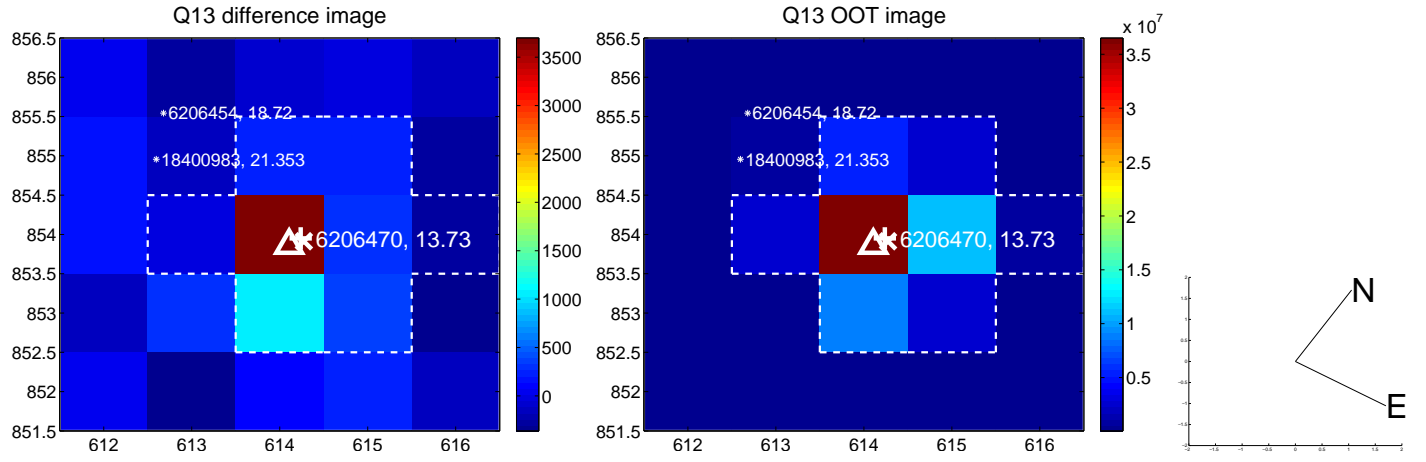
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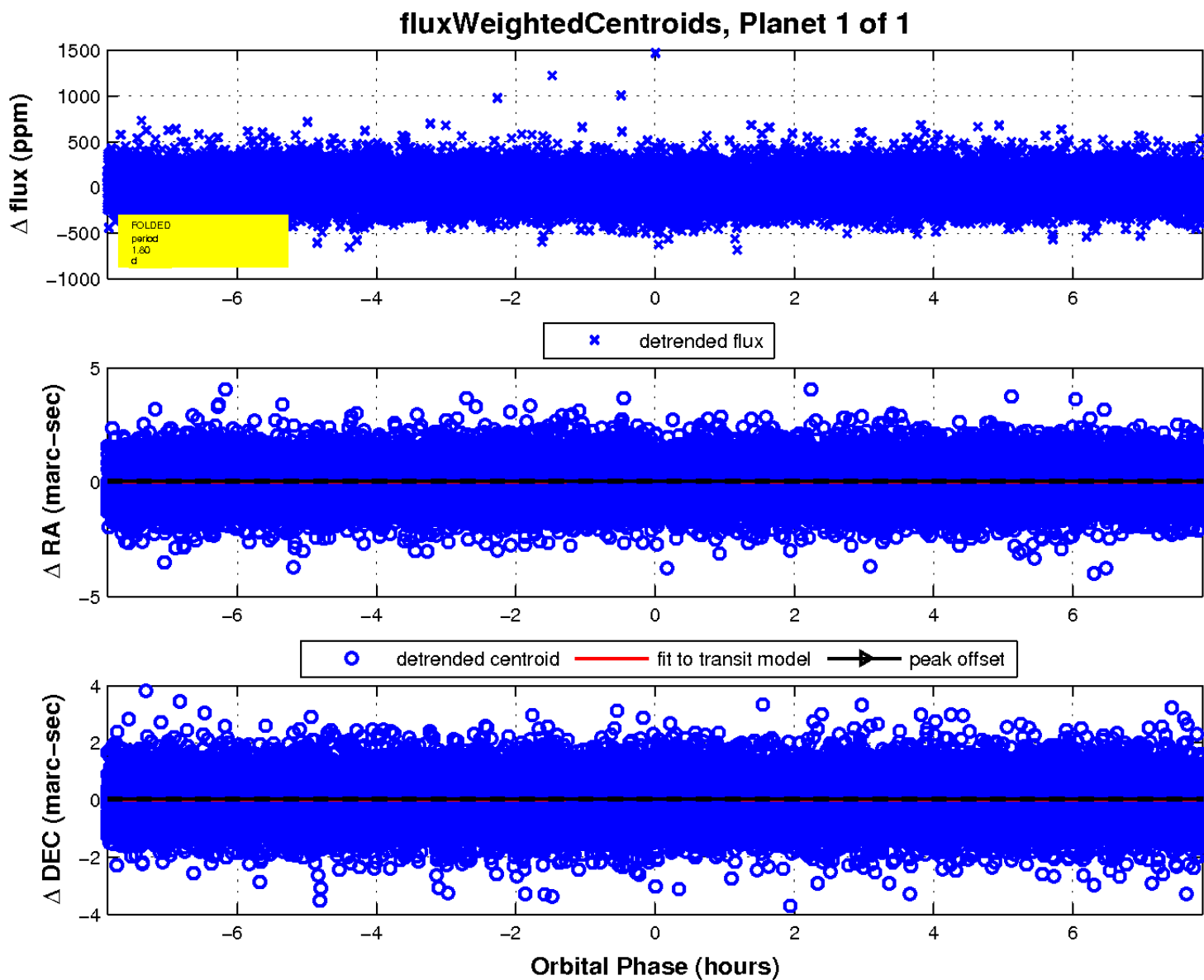
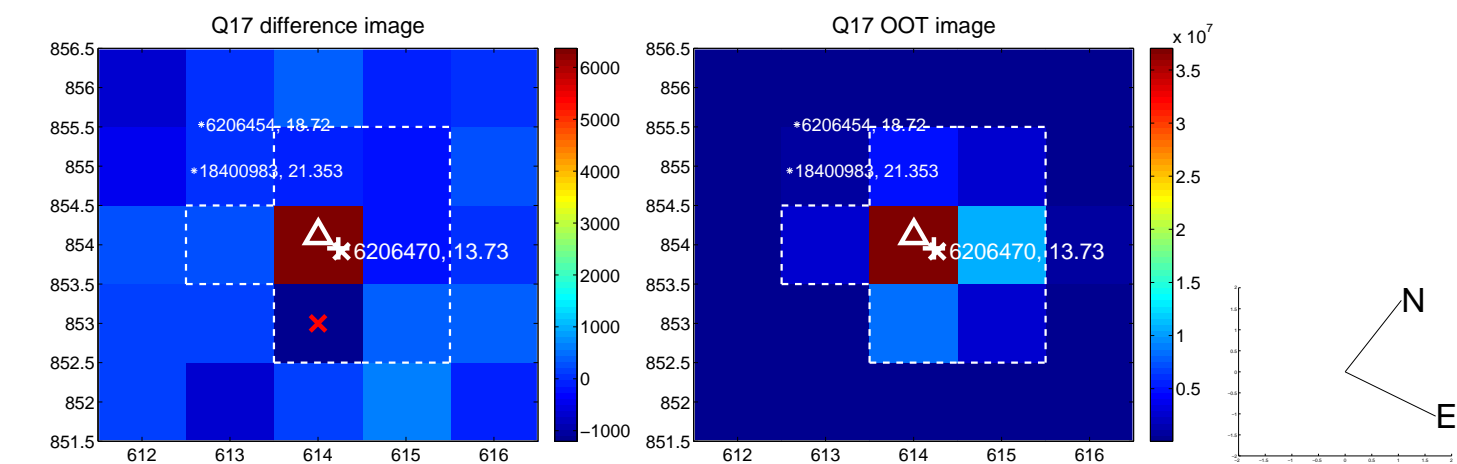
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UKIRT Image

Declination

