

KIC 005952448

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 _⊕)
005952448-01	OBS	7753.01	0.905665	132.202897	54.2	1.413	7.7	7.0	0.90	5730	0.78	2376.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005952448-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—HALO_GHOST—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.

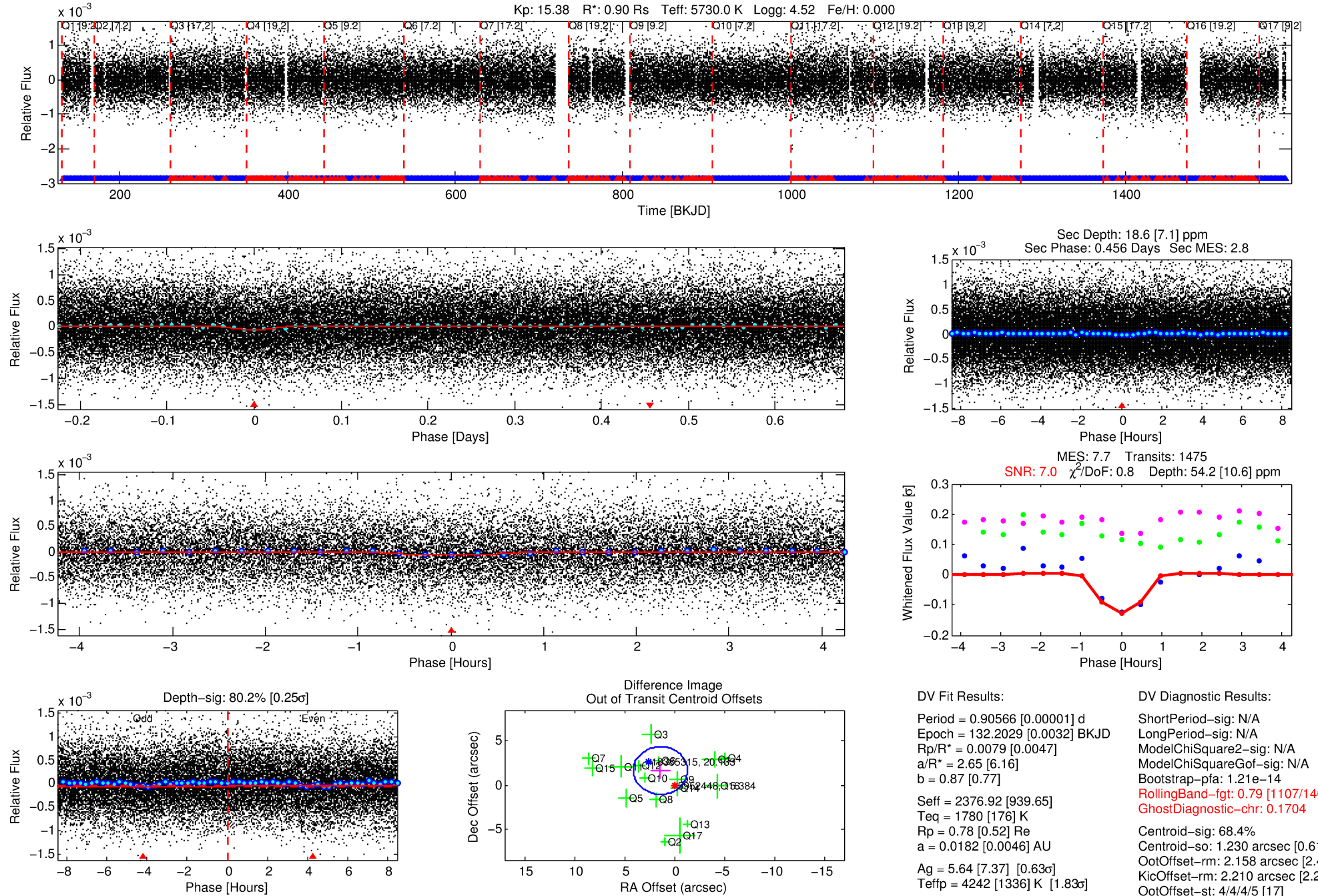
Ephemeris Match Information For 005952448-01

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
005952448-01	5952448	6139.01	5952403	1:1	78.8	-12	-15	6.97	15.39	61.31	Direct-PRF	0	1.43	0.36

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: 5952448 Candidate: 1 of 1 Period: 0.906 d



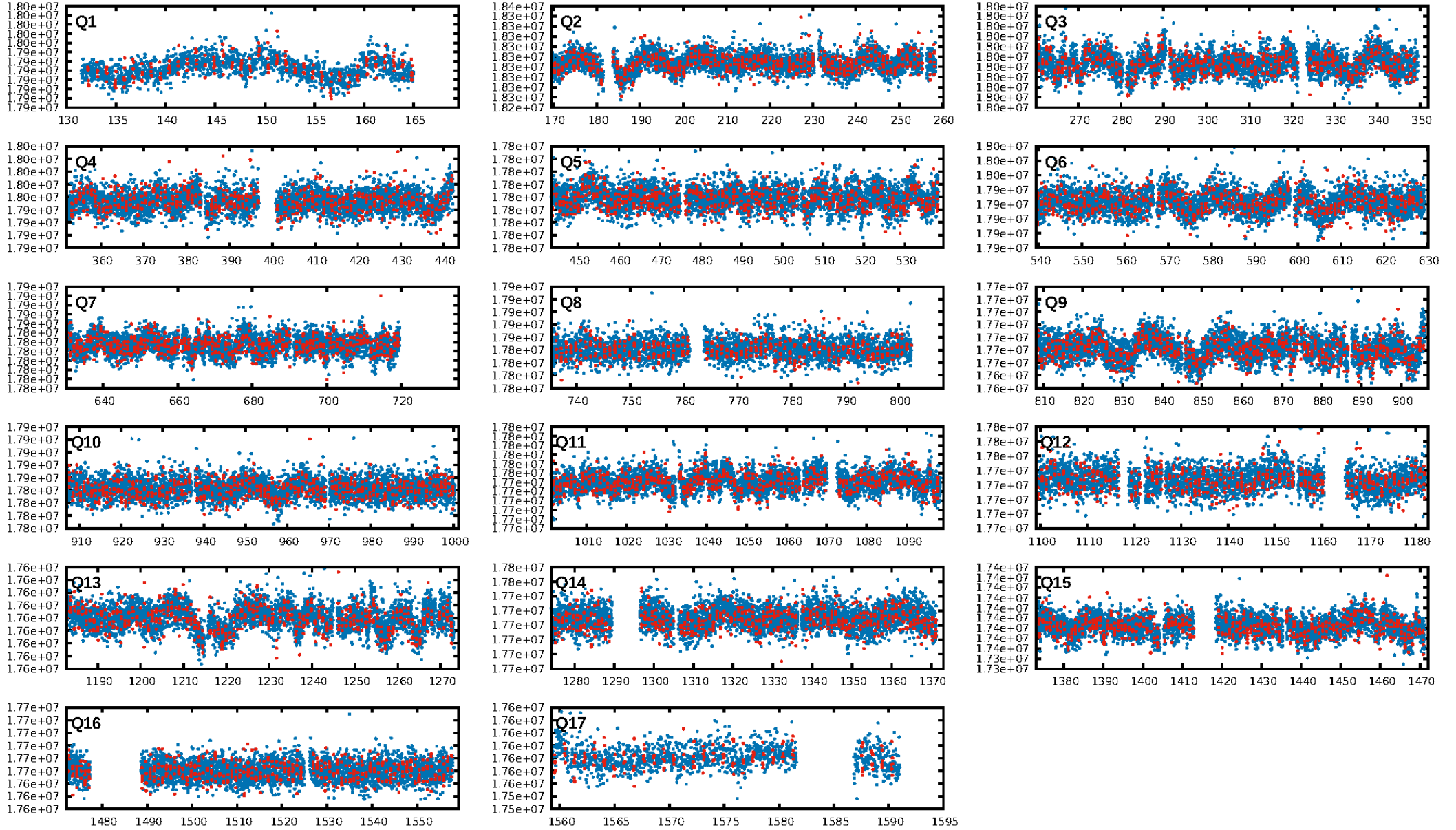
DV Fit Results:

Period = 0.90566 [0.00001] d
Epoch = 132.2029 [0.0032] BKJD
Rp/R* = 0.0079 [0.0047]
a/R* = 2.65 [6.16]
b = 0.87 [0.77]
Seff = 2376.92 [939.65]
Teff = 1780 [176] K
Rp = 0.78 [0.52] Re
a = 0.0182 [0.0046] AU
Ag = 5.64 [7.37] [0.63 σ]
Teffp = 4242 [1336] K [1.83 σ]

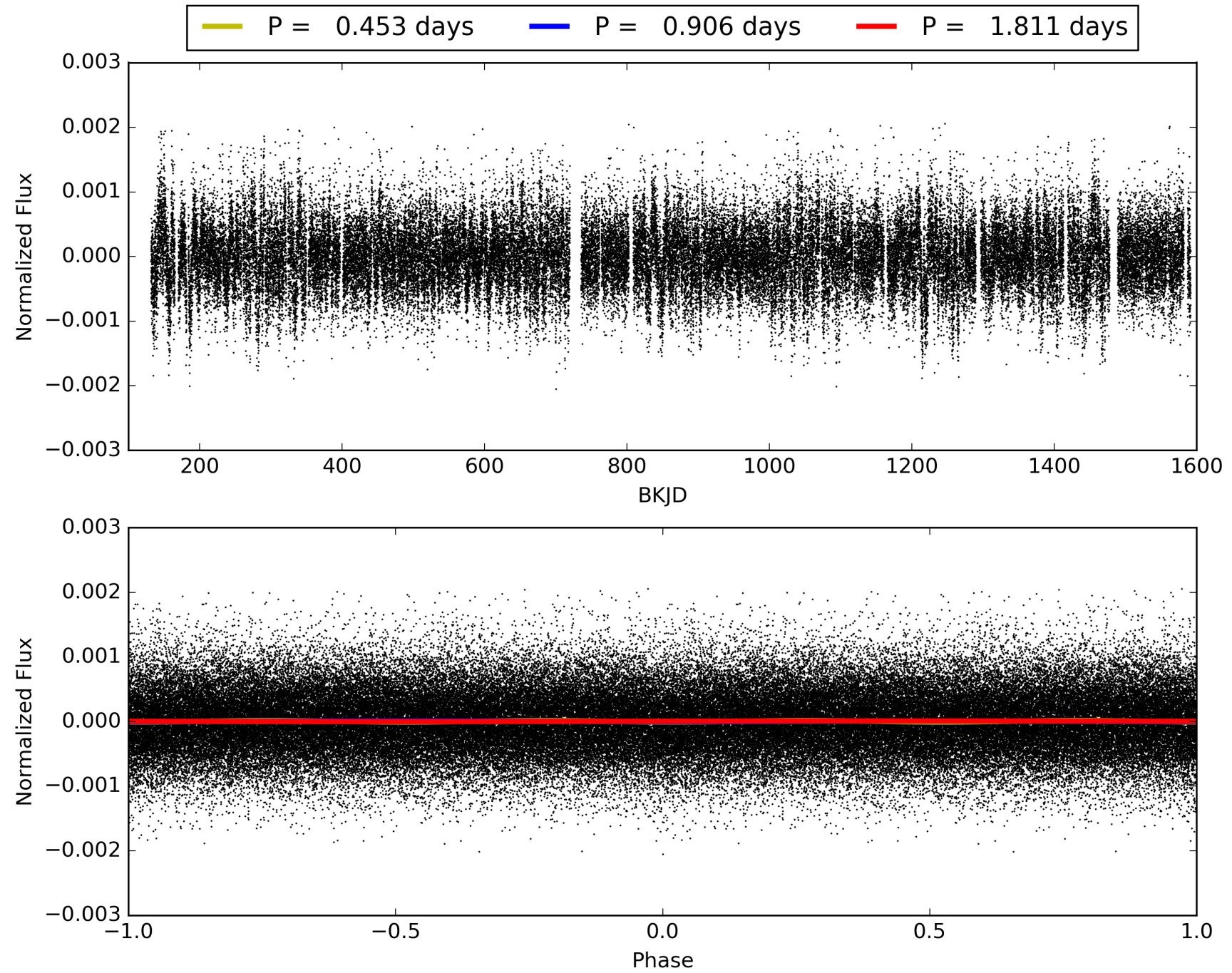
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-14
RollingBand-fgt: 0.79 [1107/1409]
GhostDiagnostic-chr: 0.1704
Centroid-sig: 68.4%
Centroid-so: 1.230 arcsec [0.61 σ]
OotOffset-rm: 2.158 arcsec [2.40 σ]
KicOffset-rm: 2.210 arcsec [2.26 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005952448-01, PDC Light Curves

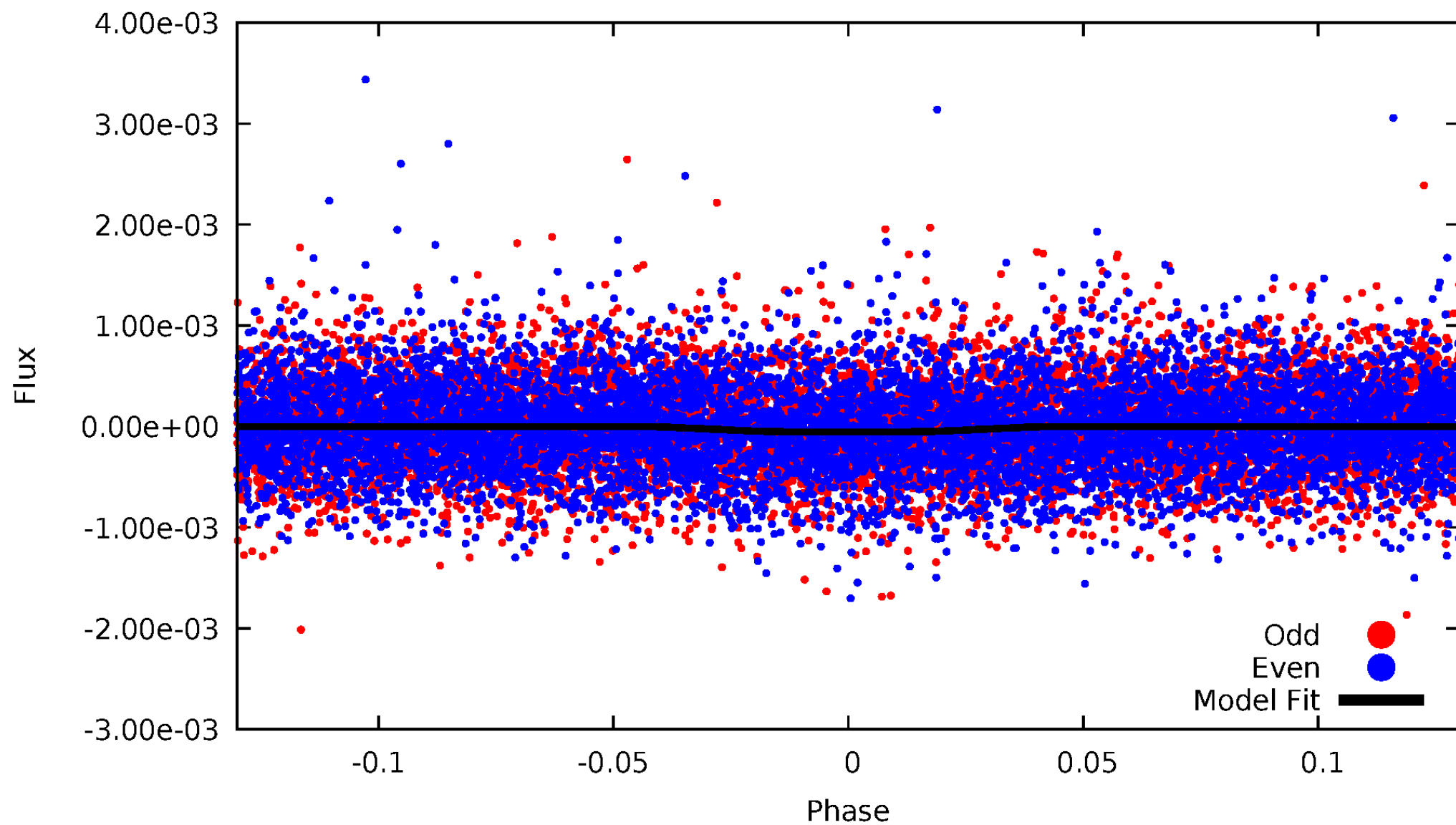


TCE 005952448-01



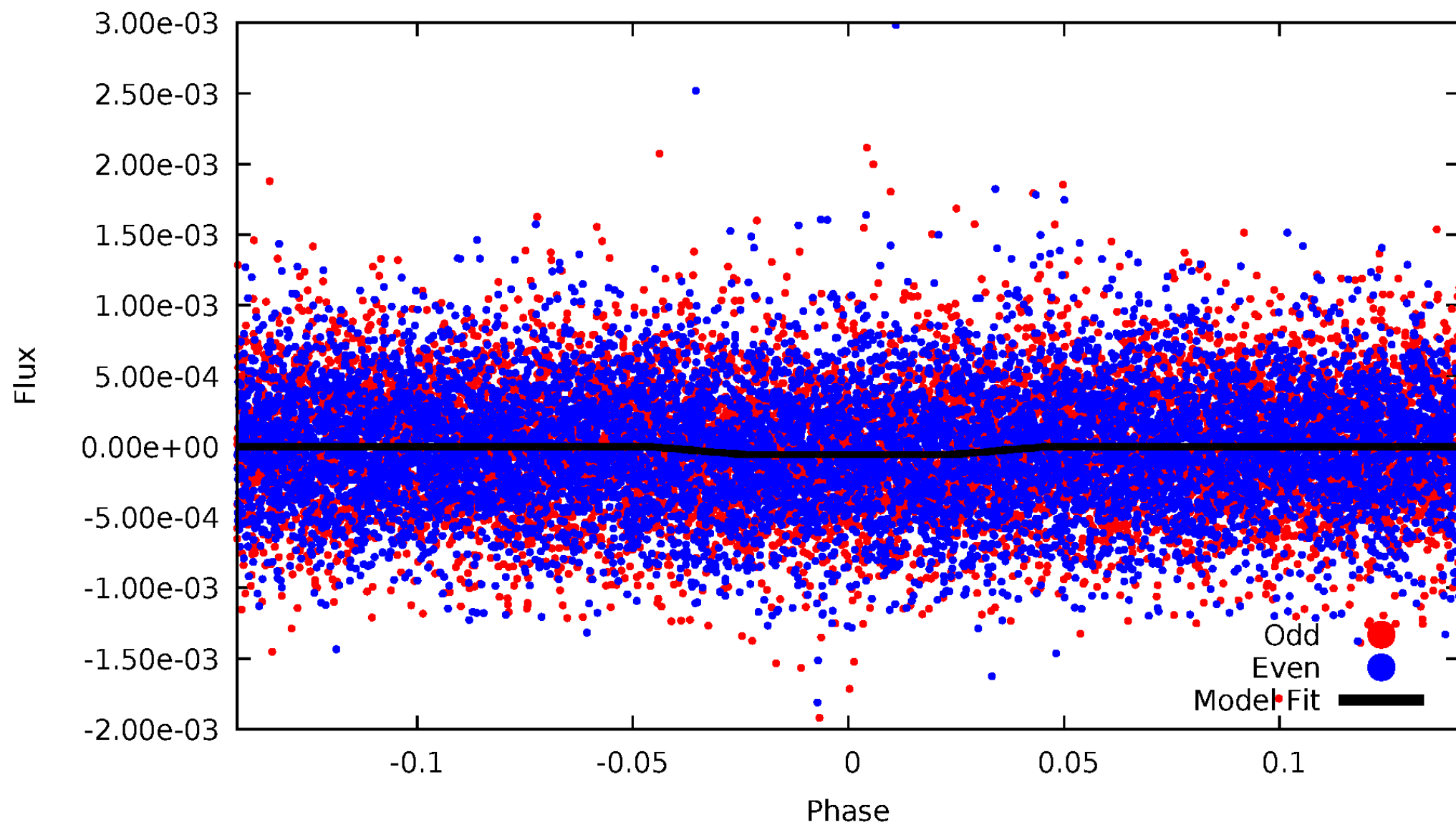
DV Odd/Even

TCE 005952448-01

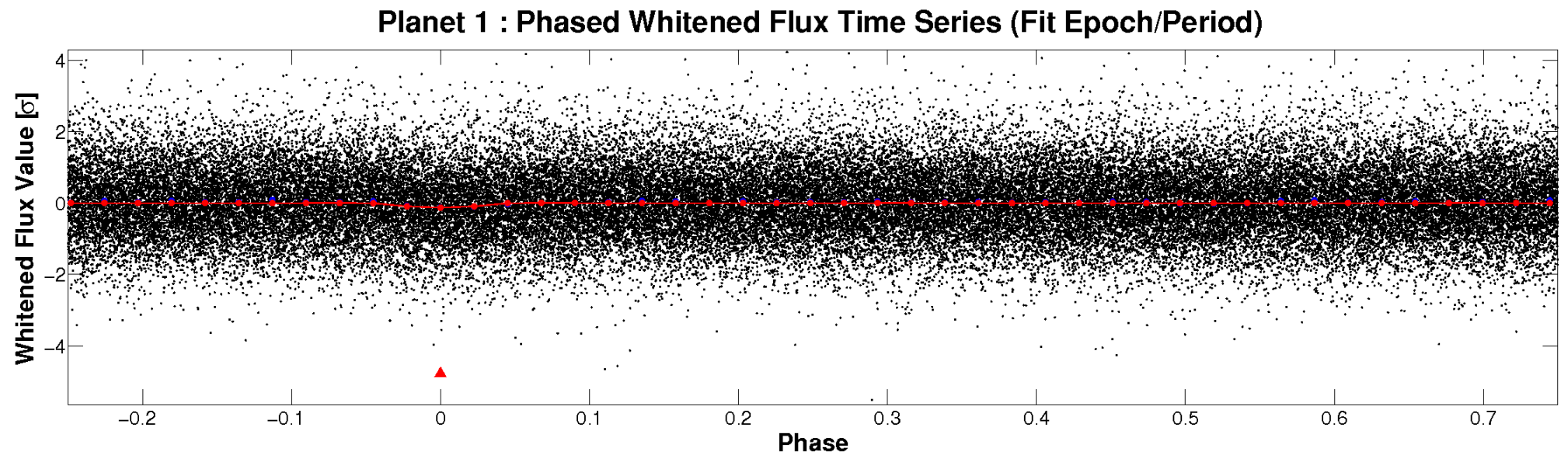
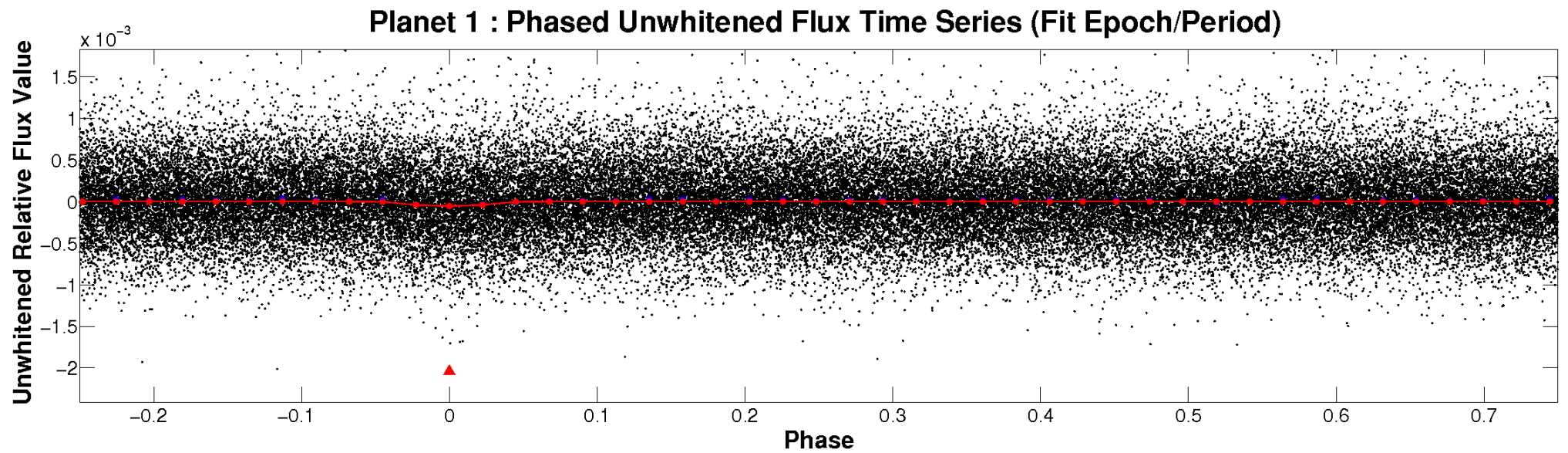


ALT Odd/Even

TCE 005952448-01

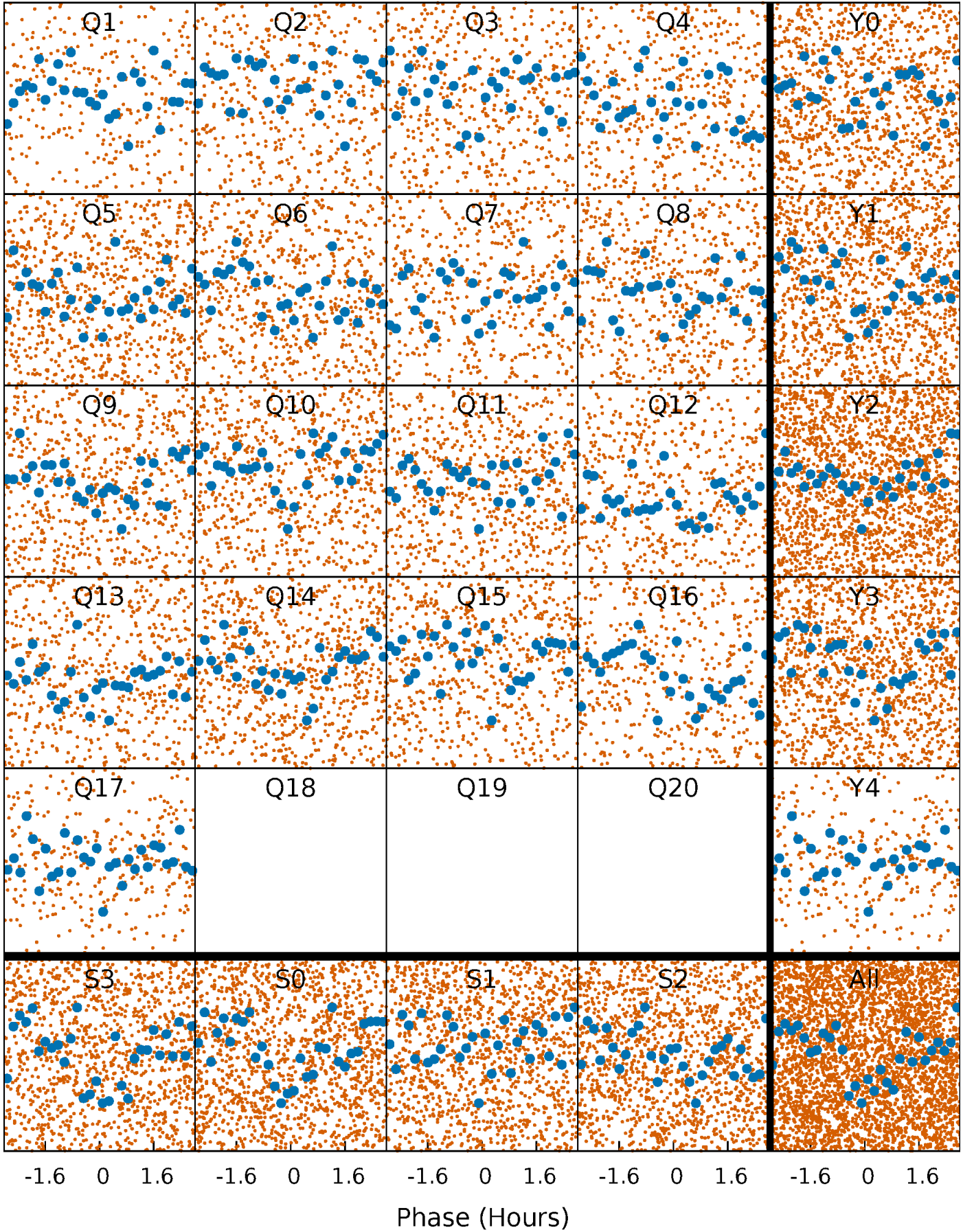


Non-Whitened Vs. Whitened Light Curve



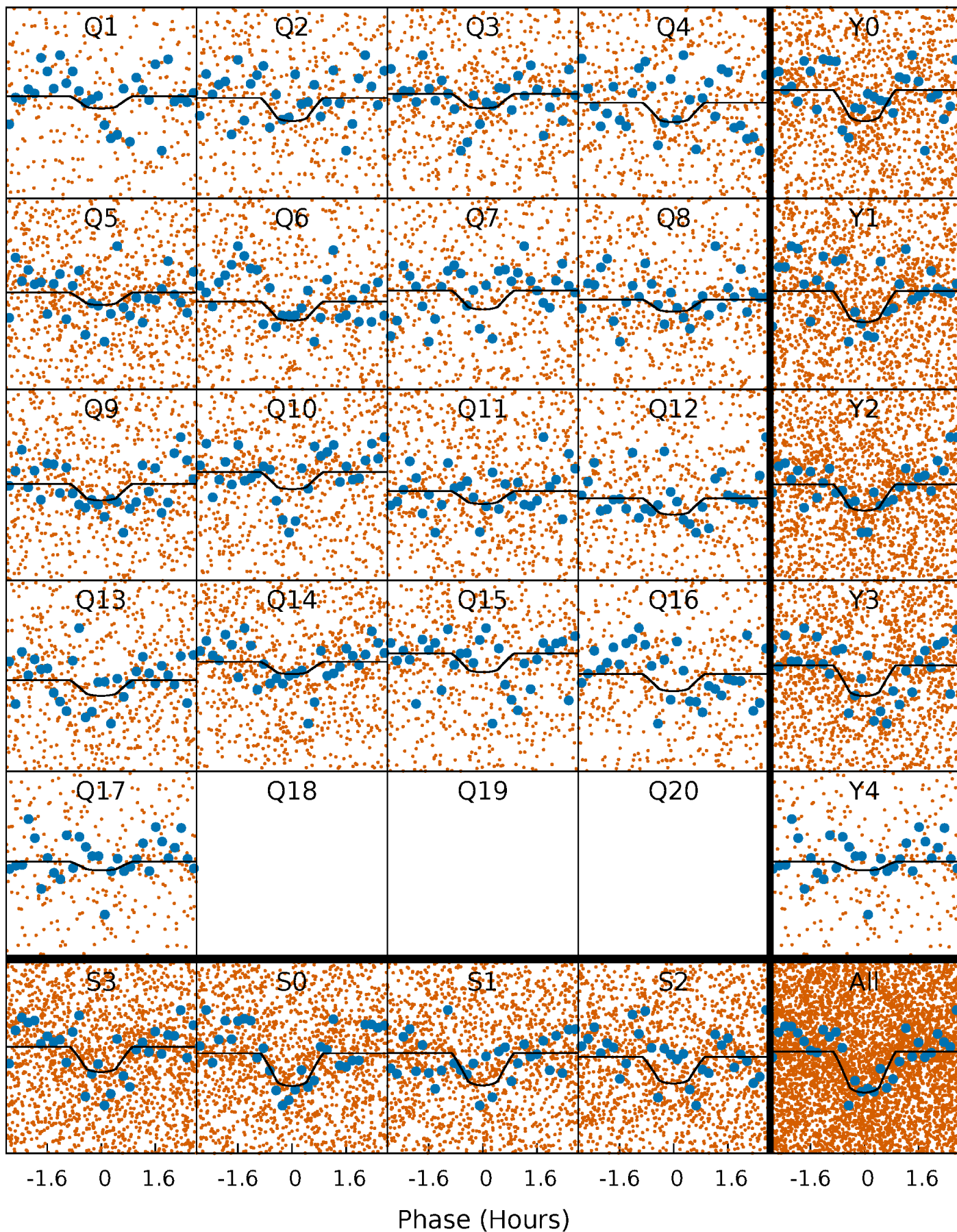
PDC Quarter-Phased Transit Curves

TCE 005952448-01 P= 0.905665 Days $T_0=132.202897$ (BKJD)



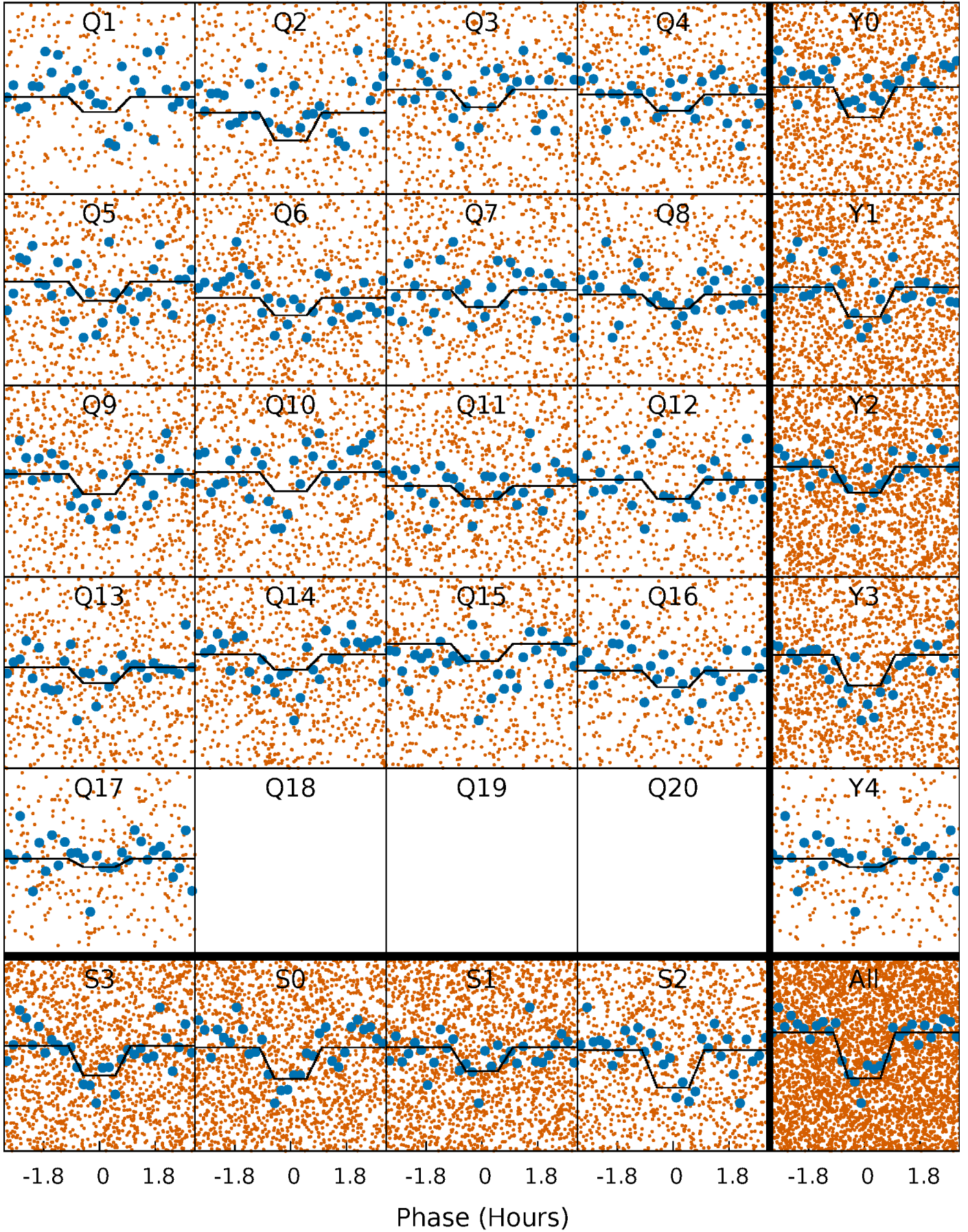
DV Quarter-Phased Transit Curves

TCE 005952448-01 P= 0.905665 Days $T_0=132.202897$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

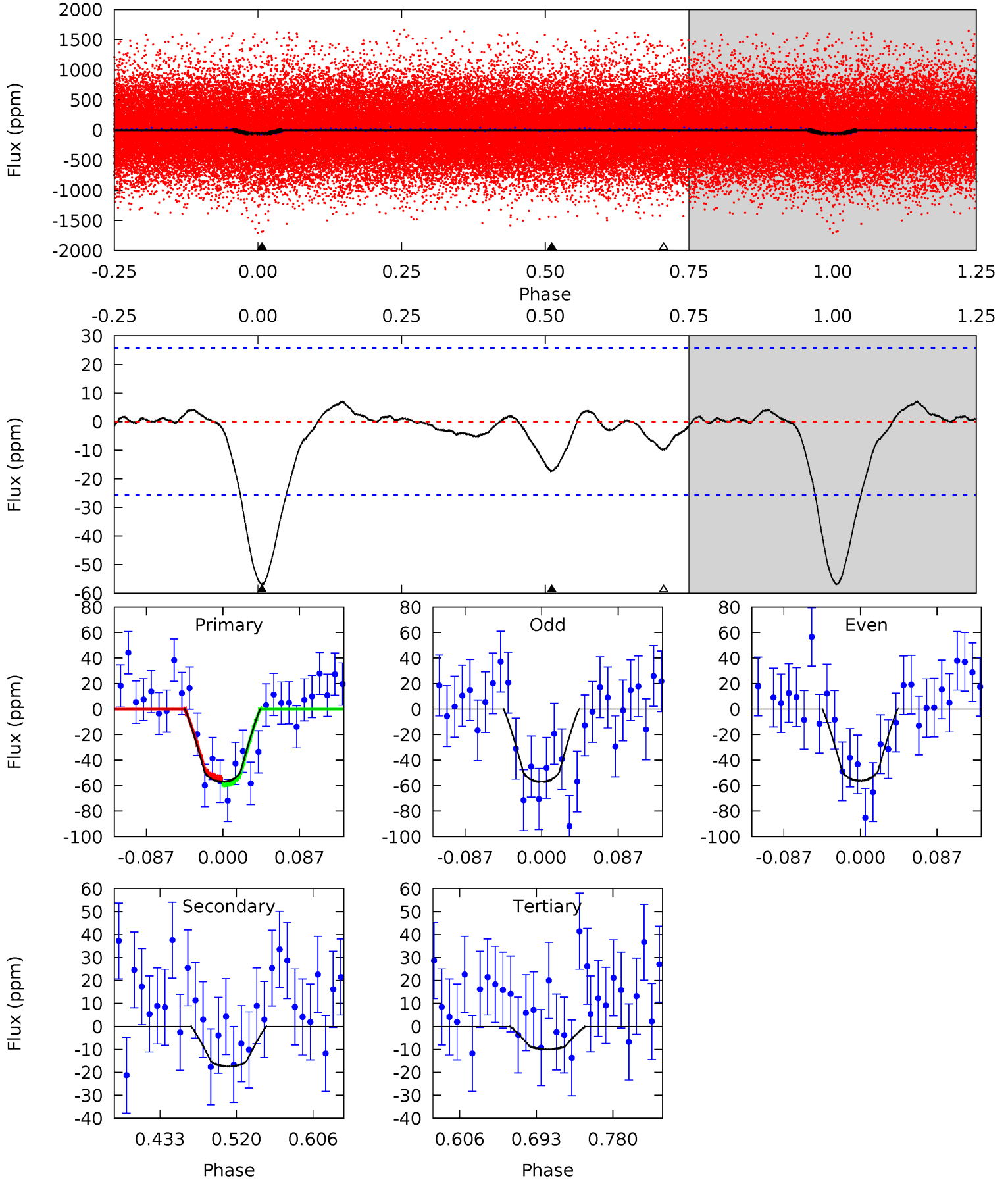
TCE 005952448-01 P= 0.905677 Days $T_0=132.202161$ (BKJD)



DV Model-Shift Uniqueness Test

005952448-01, P = 0.905665 Days, E = 131.297232 Days

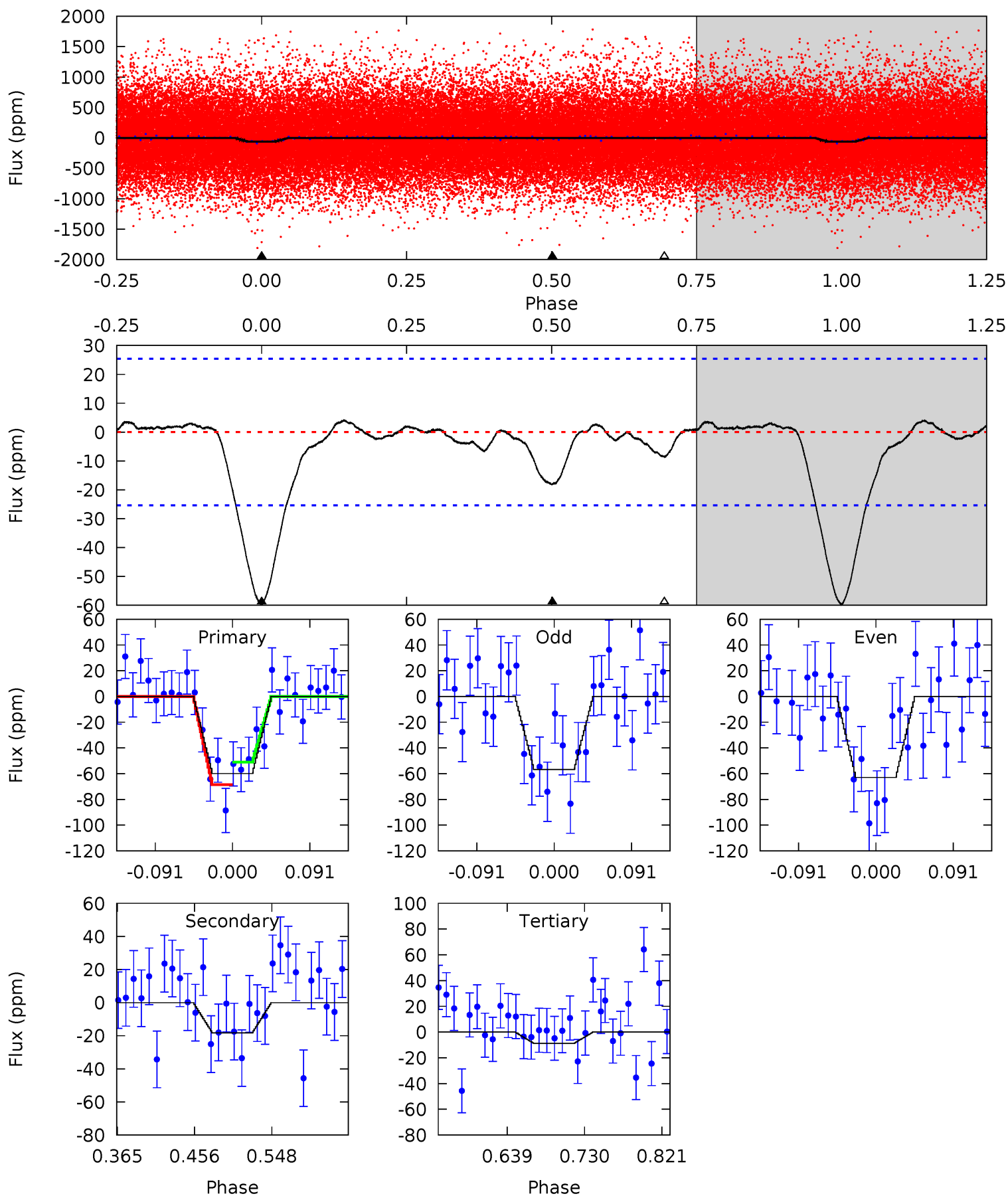
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.12	1.77	0	4.59	1.71	0.60	8.44	10.2	1.34	3.12	0.09	1.02	0.11	0.43



Alt Model-Shift Uniqueness Test

005952448-01, P = 0.905677 Days, E = 131.296484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	3.30	1.60	0	4.58	1.69	0.52	9.23	10.8	1.70	3.30	0.55	0.81	0.06	1.57



Stellar Parameters For KIC 005952448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5730^{+173}_{-190}	$4.518^{+0.048}_{-0.204}$	$0.000^{+0.250}_{-0.300}$	$0.903^{+0.273}_{-0.091}$	$0.981^{+0.114}_{-0.114}$	$1.875^{+0.387}_{-0.997}$
	+3%/-3%	+1%/-5%	+inf%/-inf%	+30%/-10%	+12%/-12%	+21%/-53%
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 005952448-01 / KOI 7753.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 6	$0.87^{+0.49}_{-0.45}$	2542^{+175}_{-120}	4142^{+1594}_{-689}	$3.730^{+12.948}_{-2.249}$
Alt.	-18 ± 6	$0.84^{+0.50}_{-0.46}$	2536^{+197}_{-122}	4290^{+1812}_{-740}	$4.471^{+19.586}_{-2.765}$

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

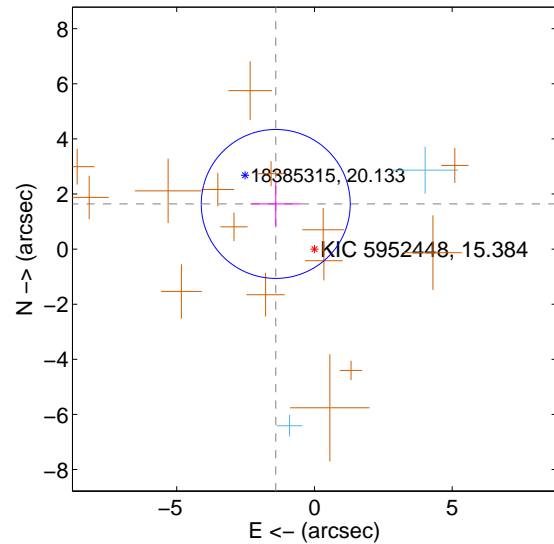
Supplemental centroid analysis for 005952448-01. Kepler magnitude: 15.38. Transit SNR 6.99

There are 2 quarters with good PRF difference image offsets

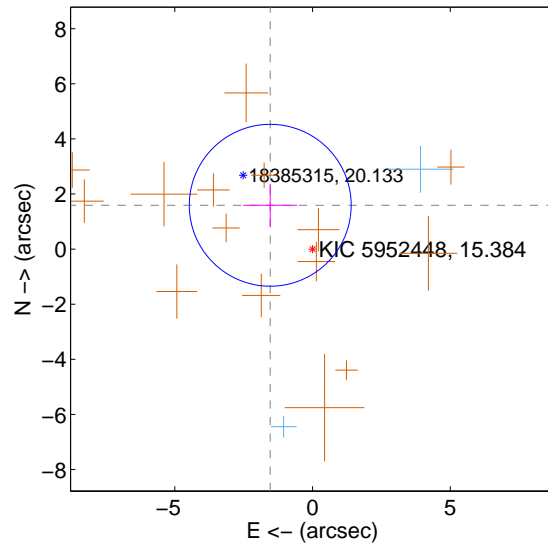
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.158 ± 0.901	2.40	1.404 ± 0.911	1.638 ± 0.808
PRF-fit source offset from KIC position	2.210 ± 0.979	2.26	1.535 ± 0.976	1.590 ± 0.777
photometric centroid source offset	1.23 ± 2.03	0.61	0.72 ± 2.13	-1.00 ± 1.98

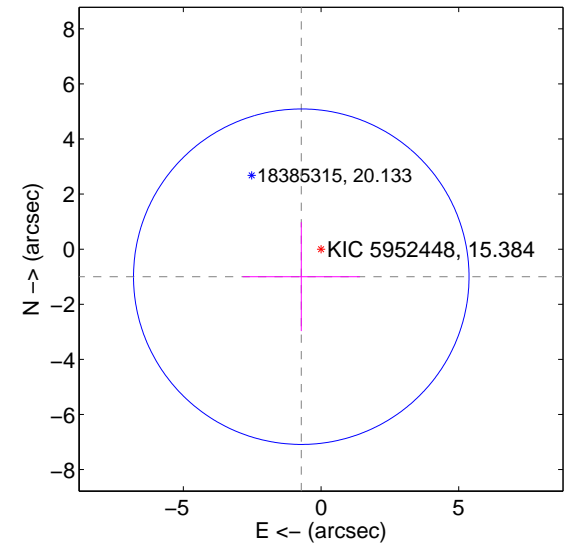
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

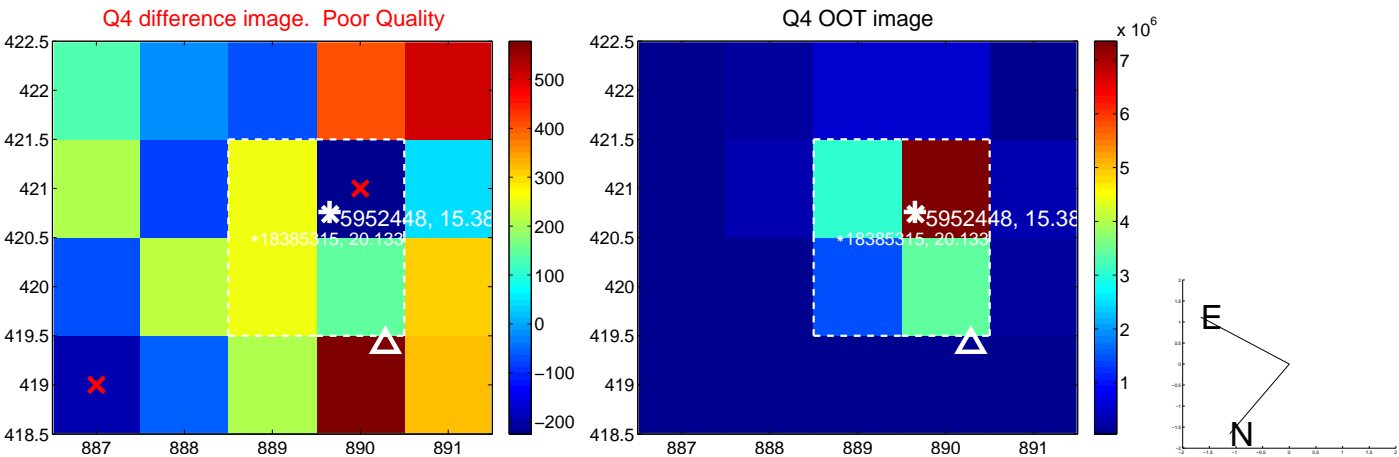
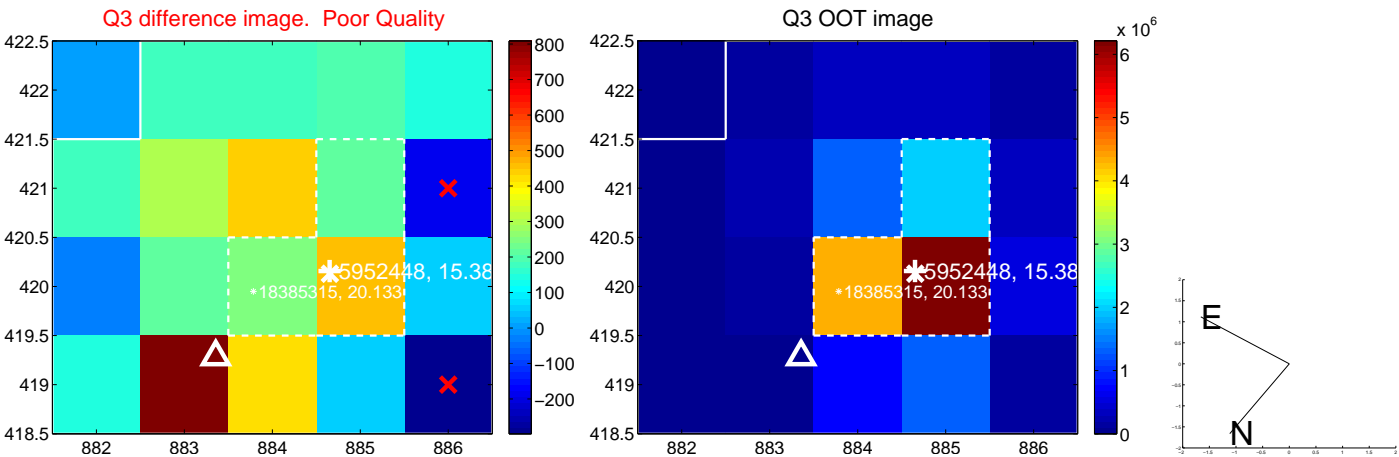
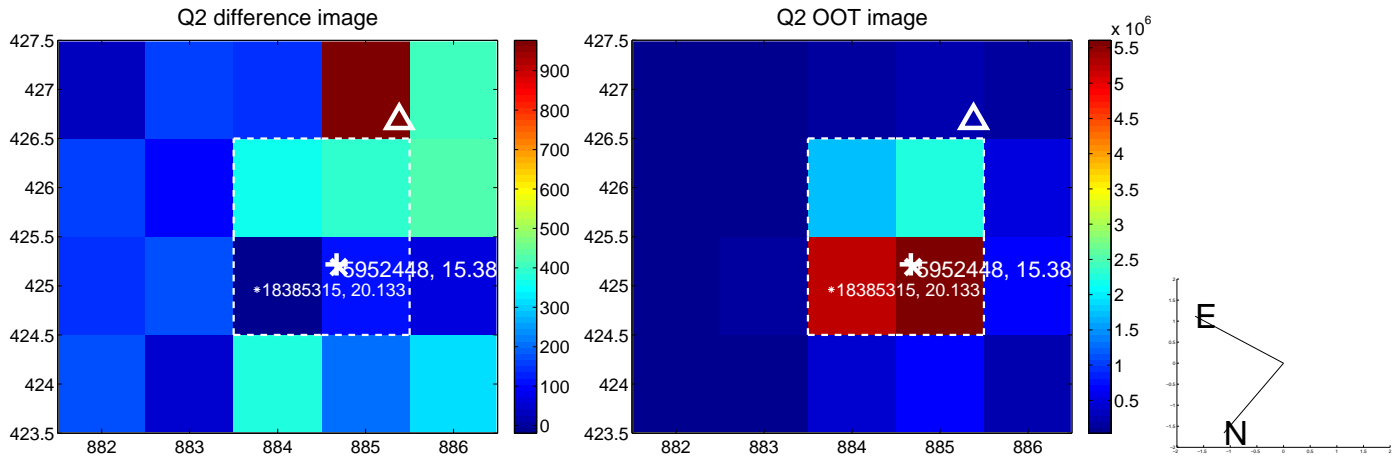
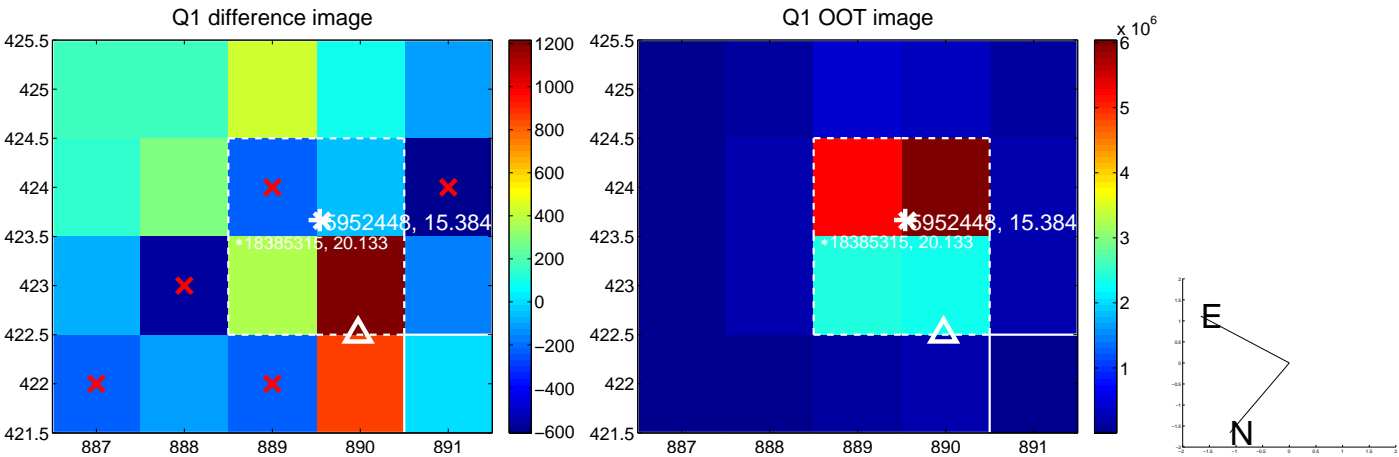


offset from photometric centroids

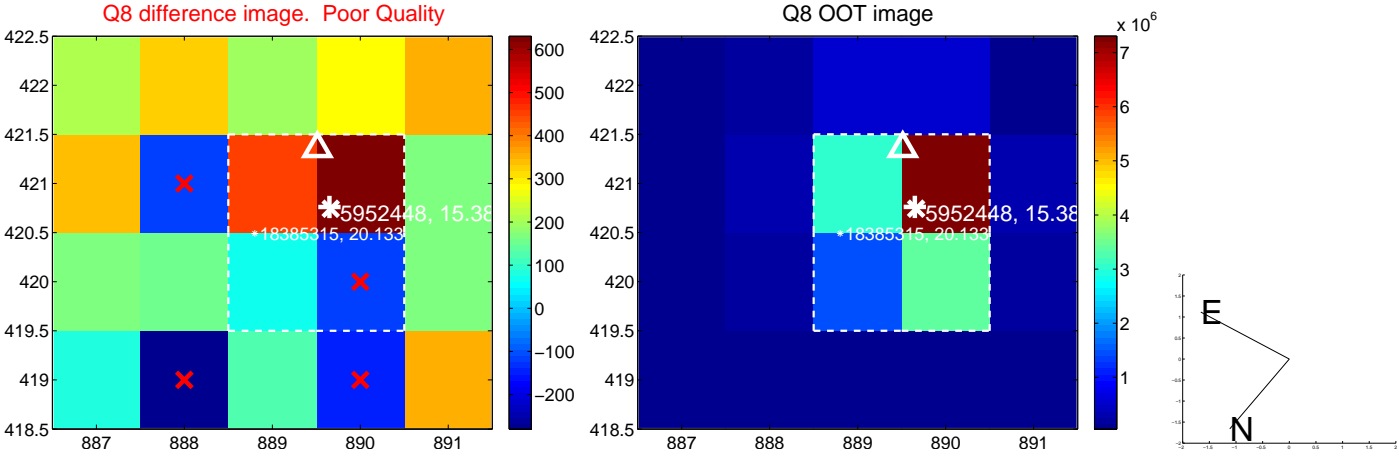
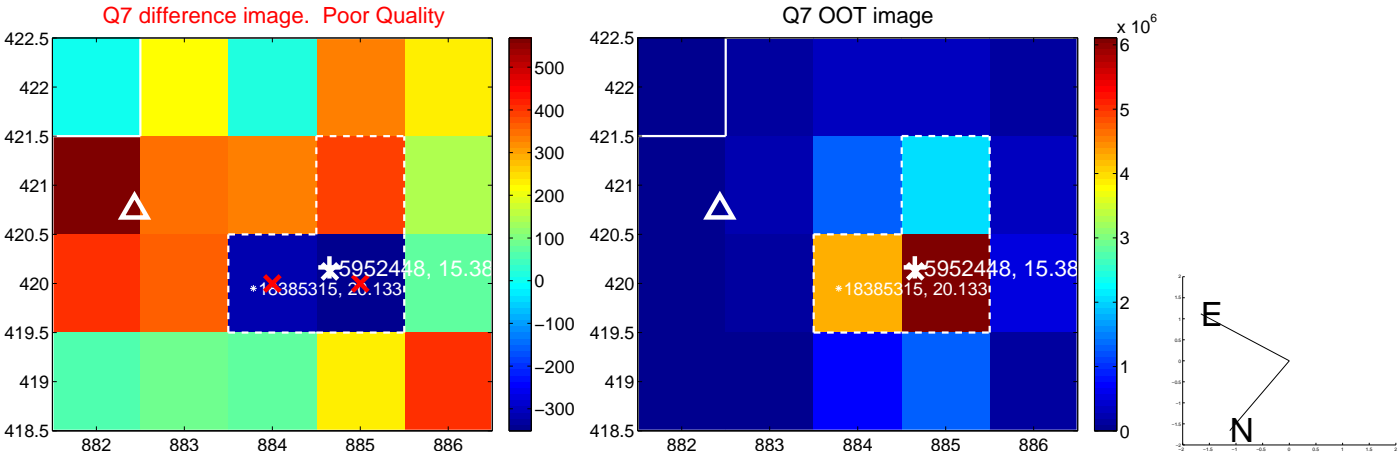
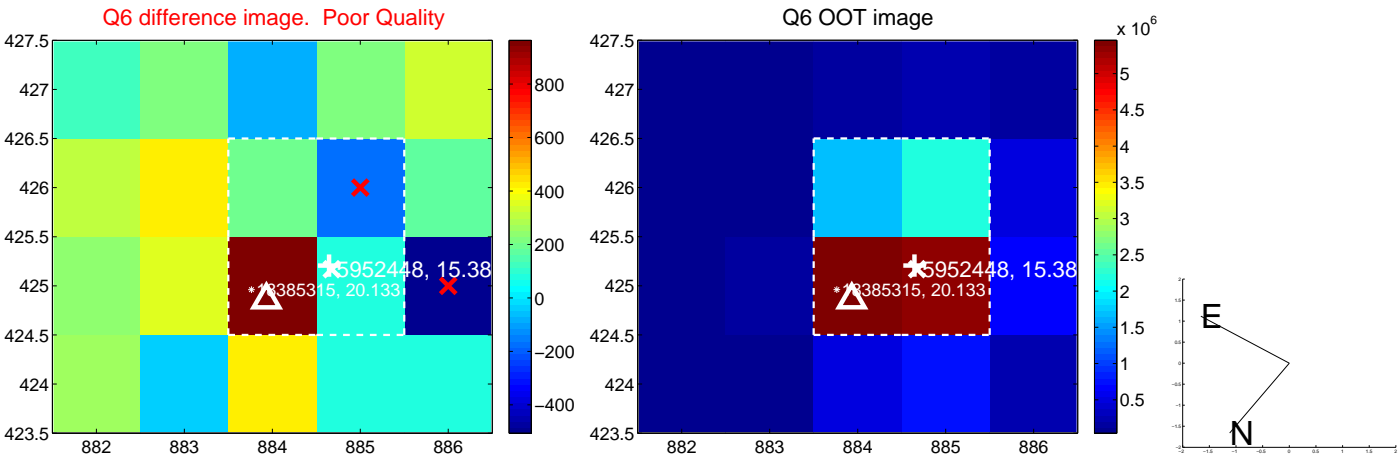
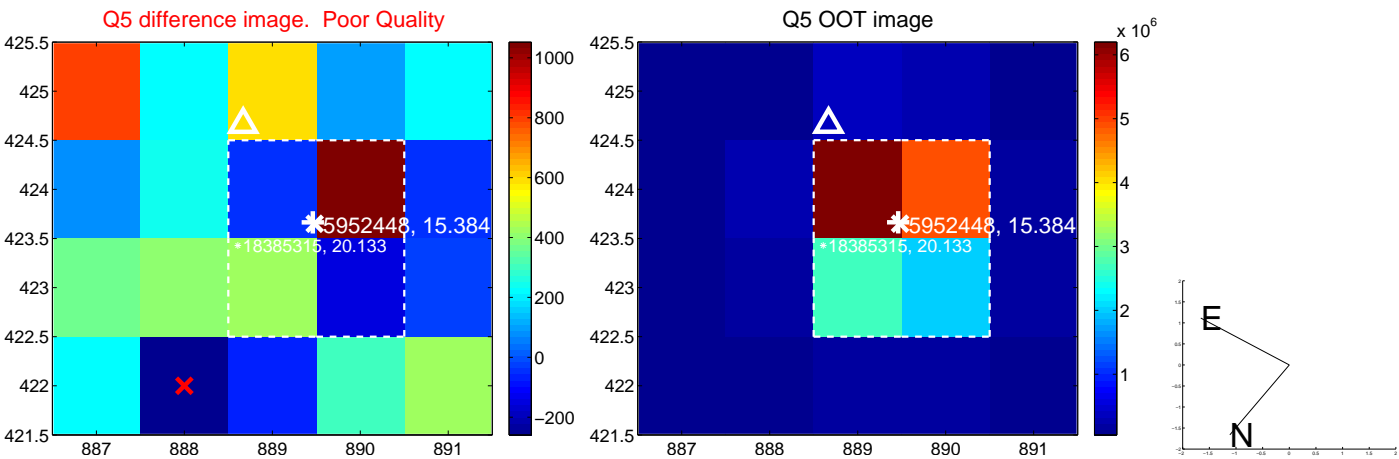


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

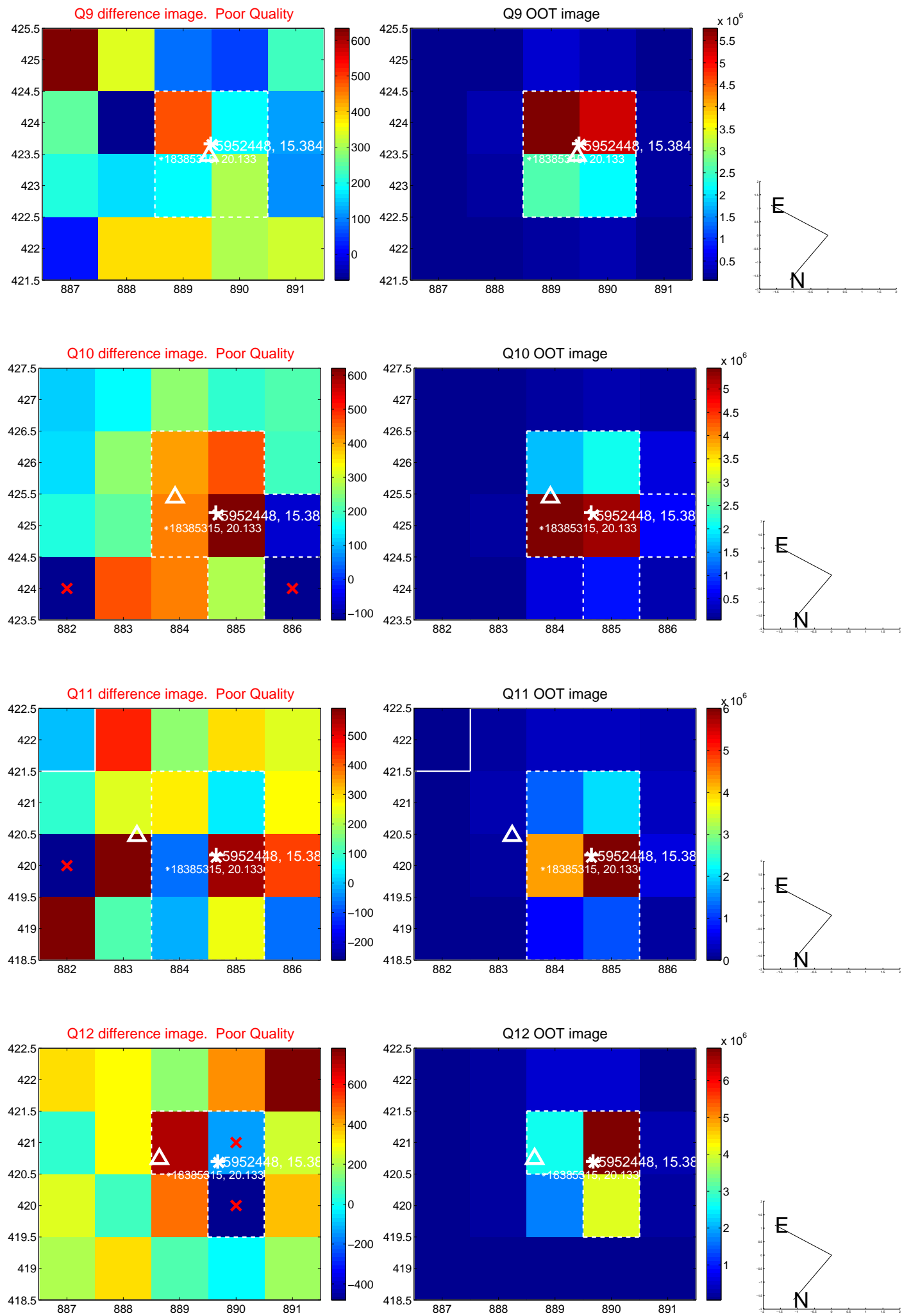
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



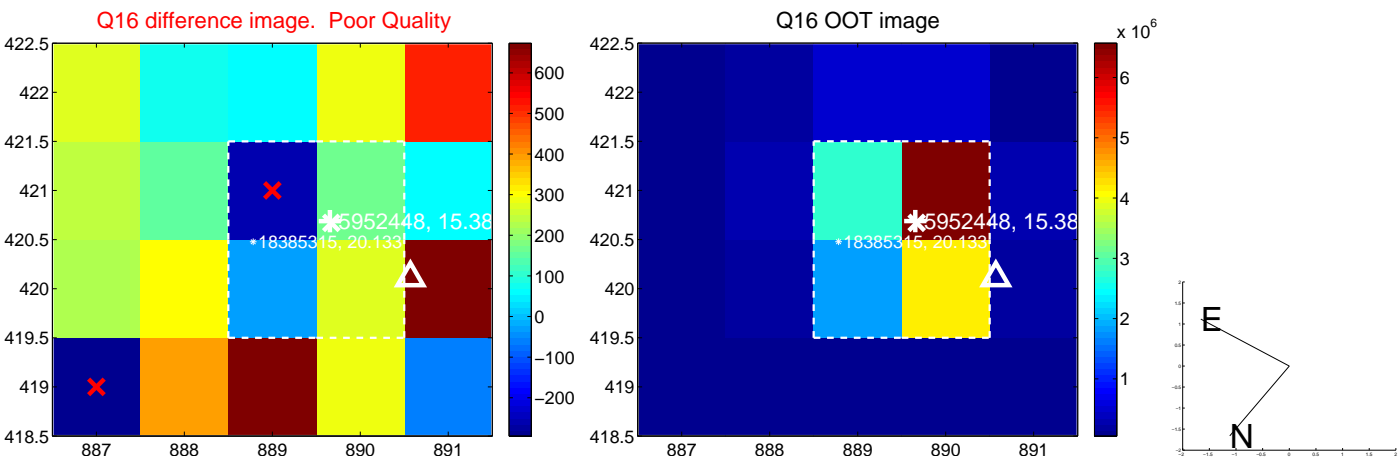
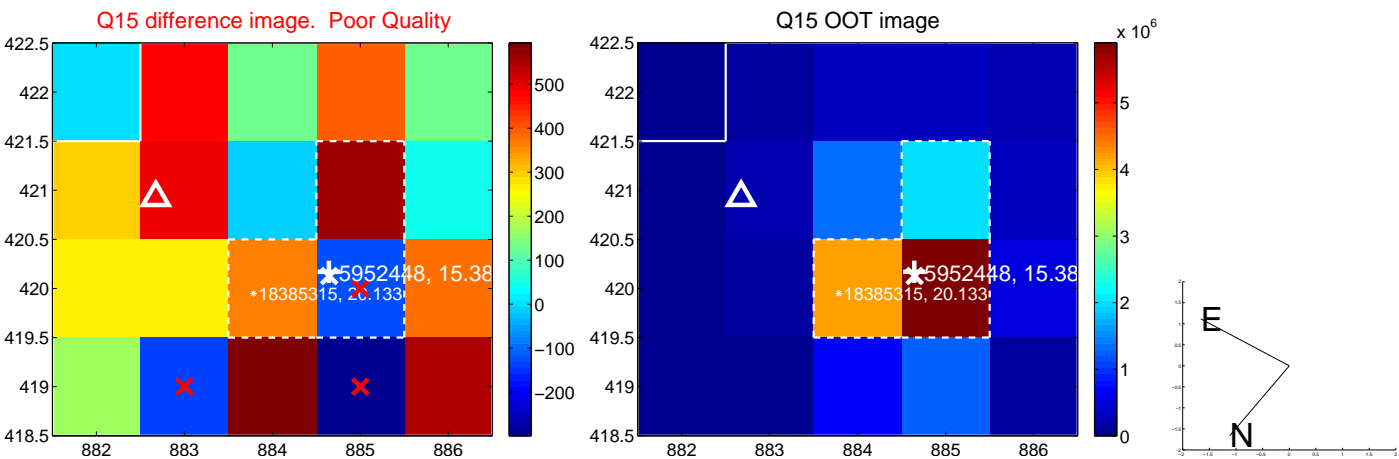
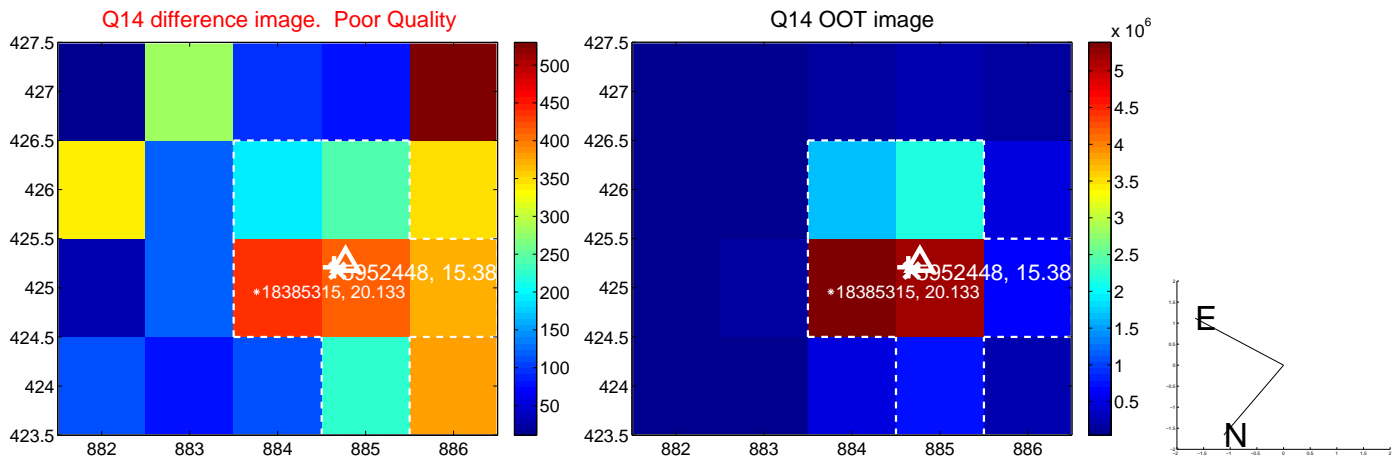
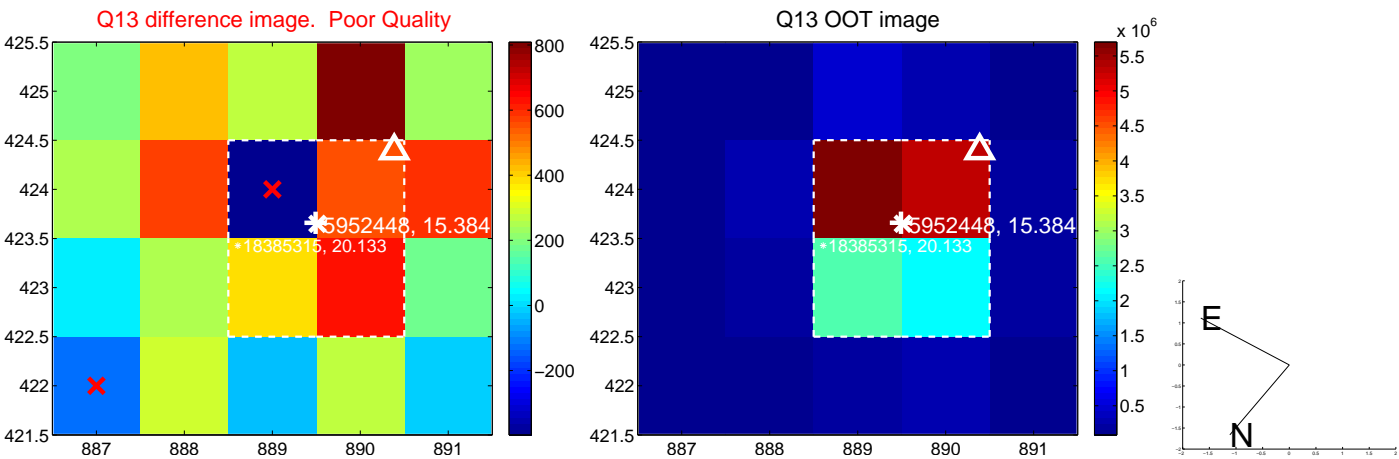
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



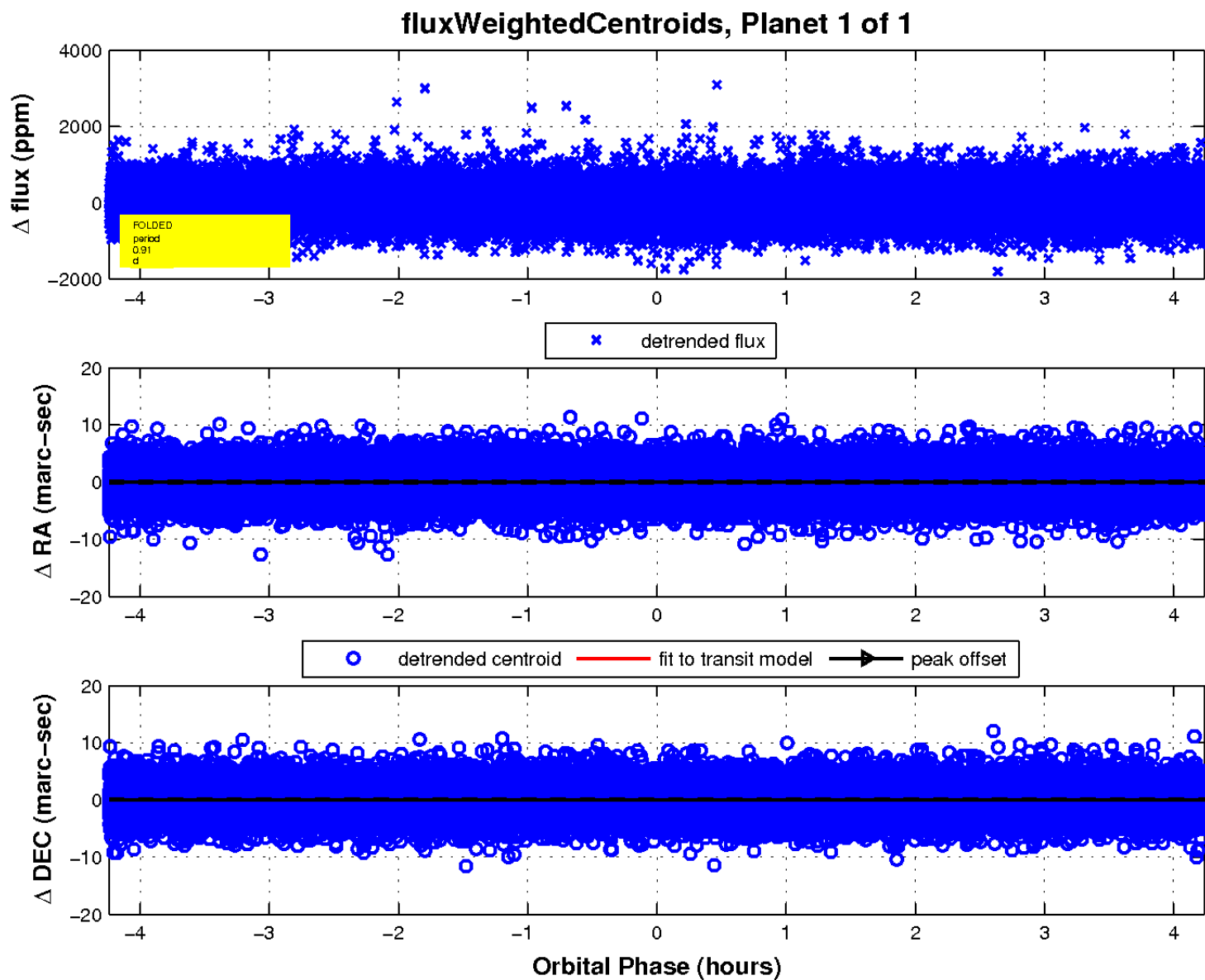
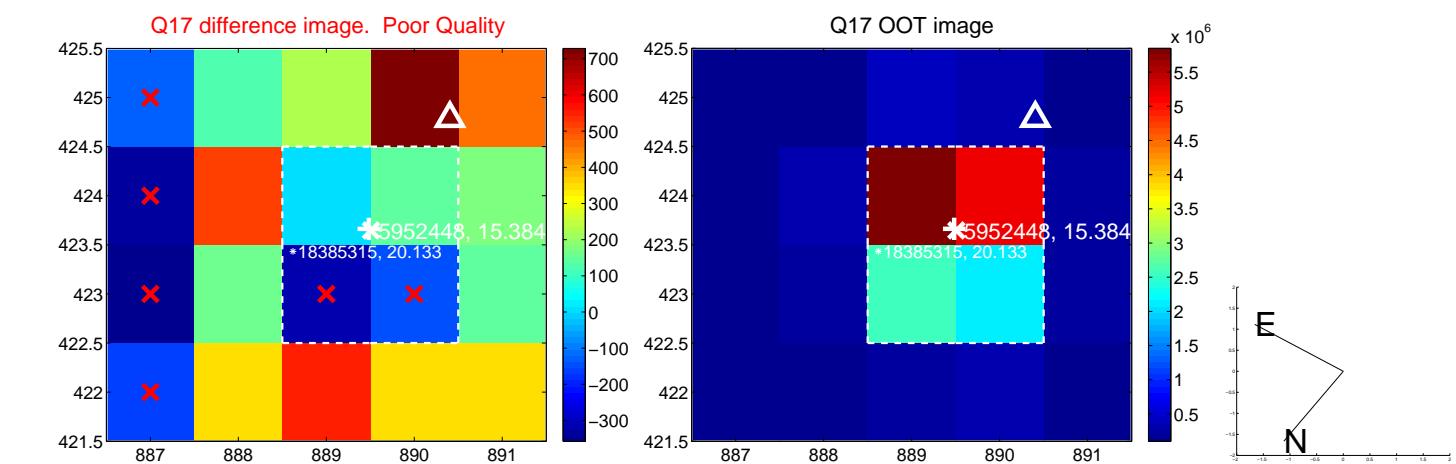
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

