

KIC 010619142

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})
010619142-01	OBS	3082.01	2.045190	132.355203	147.9	3.838	15.1	15.3	2.16	9206	3.01	17814.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010619142-01	OBS	FP	0.00	0	0	1	1	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.

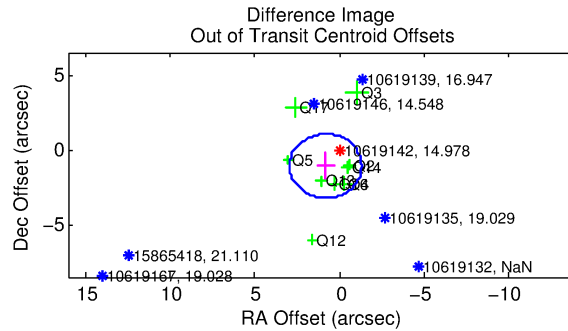
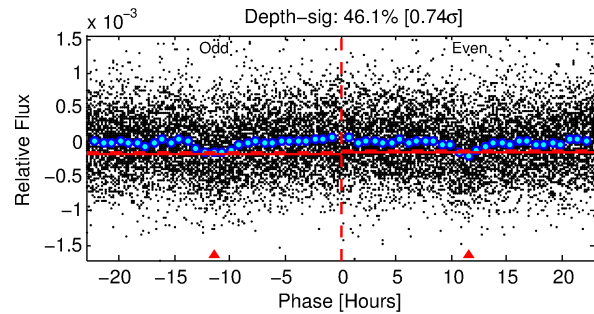
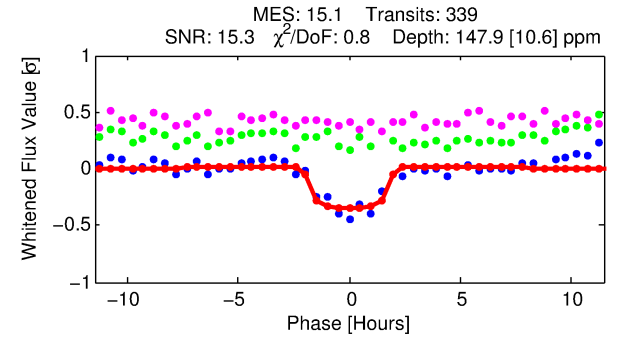
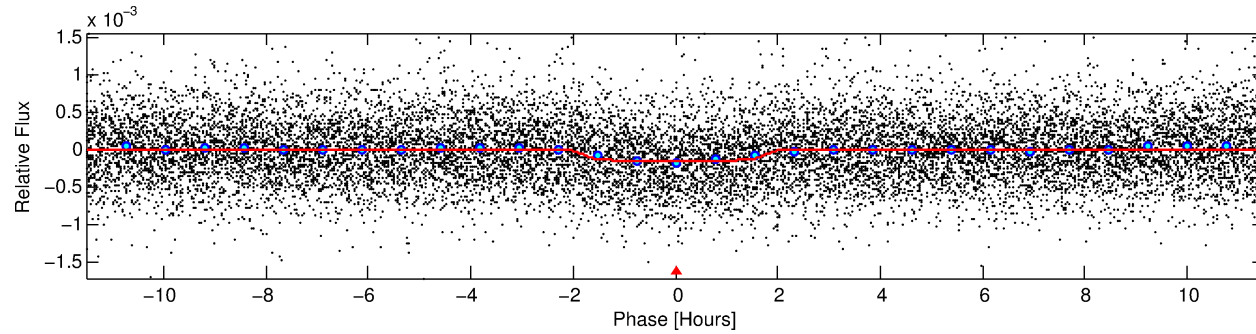
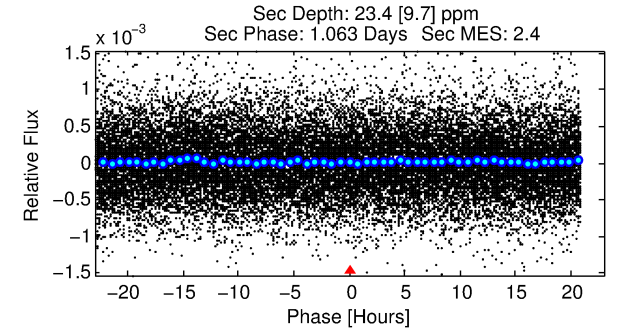
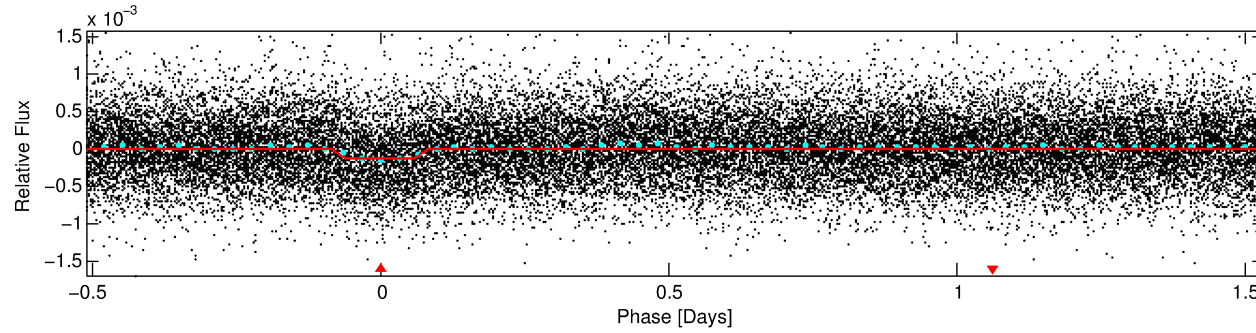
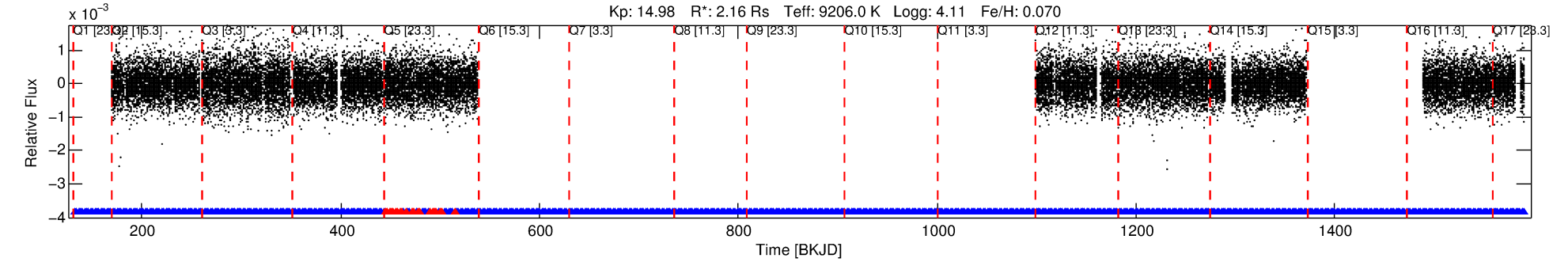
Ephemeris Match Information For 010619142-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010619142-01	10619142	010619109-pri	10619109	1:1	83.0	-14	-16	11.70	14.97	1816.20	Direct-PRF	0	0.25	0.42

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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 $\sigma_P < 5.0$ and $\sigma_T < 5.0$. 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: 10619142 Candidate: 1 of 1 Period: 2.045 d
KOI: K03082.01 Corr: 0.955



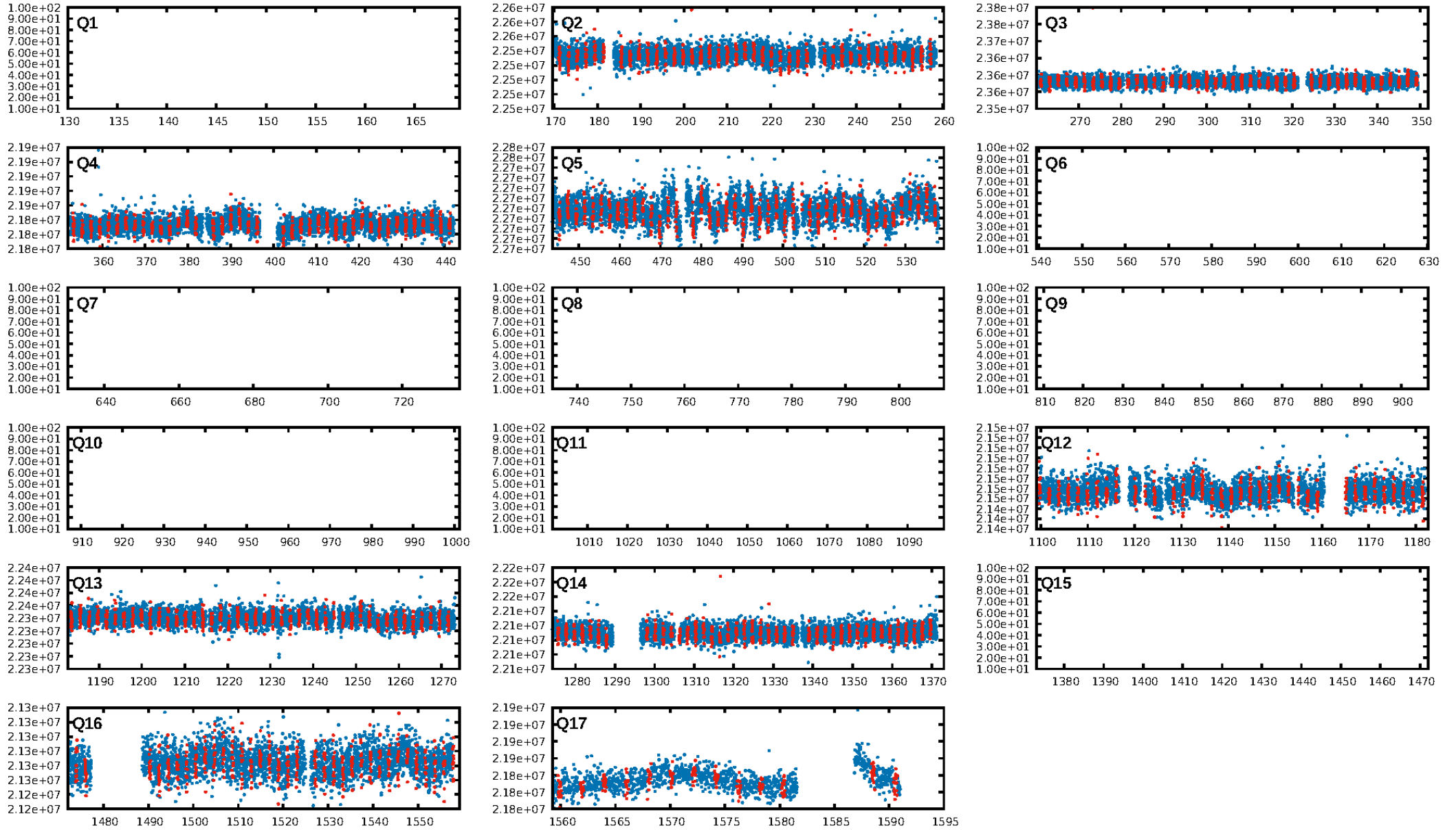
DV Fit Results:

Period = 2.04519 [0.00001] d
Epoch = 132.3552 [0.0031] BKJD
Rp/R* = 0.0128 [0.0026]
a/R* = 2.14 [2.44]
b = 0.90 [0.32]
Seff = 17814.22 [6797.97]
Teq = 2946 [281] K
Rp = 3.01 [1.13] Re
a = 0.0410 [0.0100] AU
Ag = 2.38 [1.58] [0.88σ]
Teffp = 5658 [865] K [2.98σ]

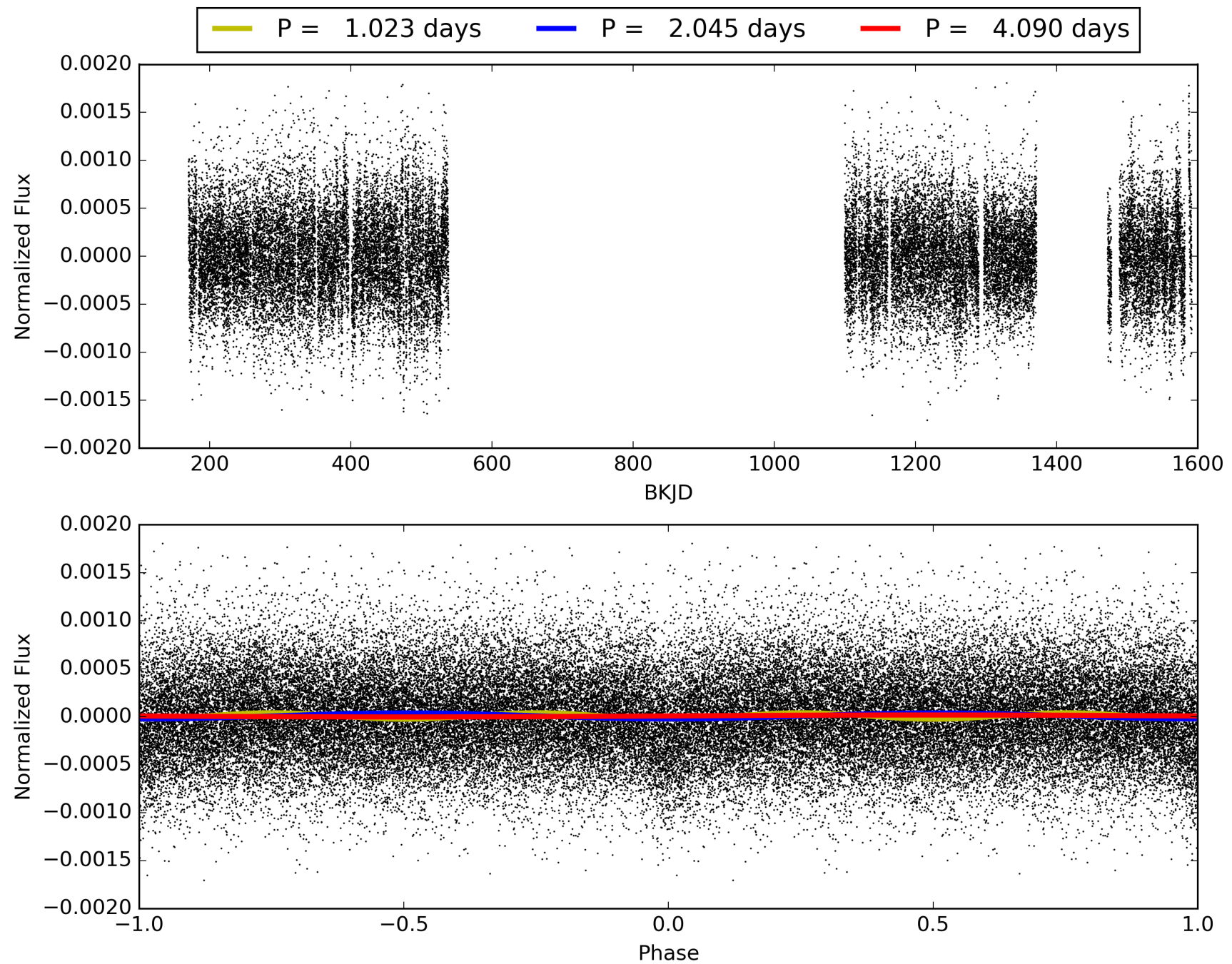
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-48
RollingBand-fgt: 0.94 [305/326]
GhostDiagnostic-chr: 0.2037
Centroid-sig: 0.0%
Centroid-so: 2.112 arcsec [2.54σ]
OotOffset-rm: 1.367 arcsec [1.92σ]
KicOffset-rm: 0.989 arcsec [1.21σ]
OotOffset-st: 2/1/3/3 [9]
KicOffset-st: 2/1/3/3 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 010619142-01, PDC Light Curves

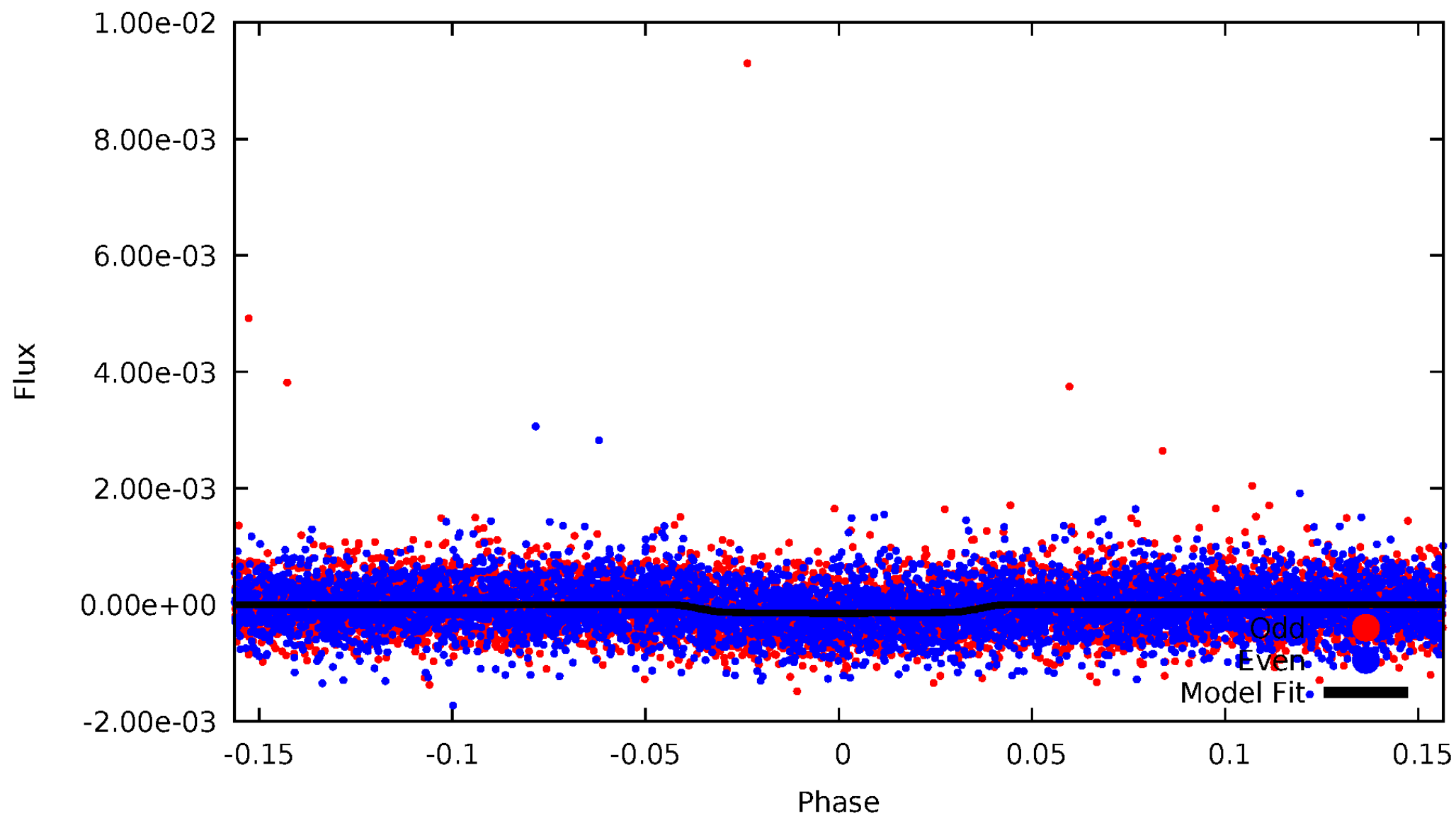


TCE 010619142-01



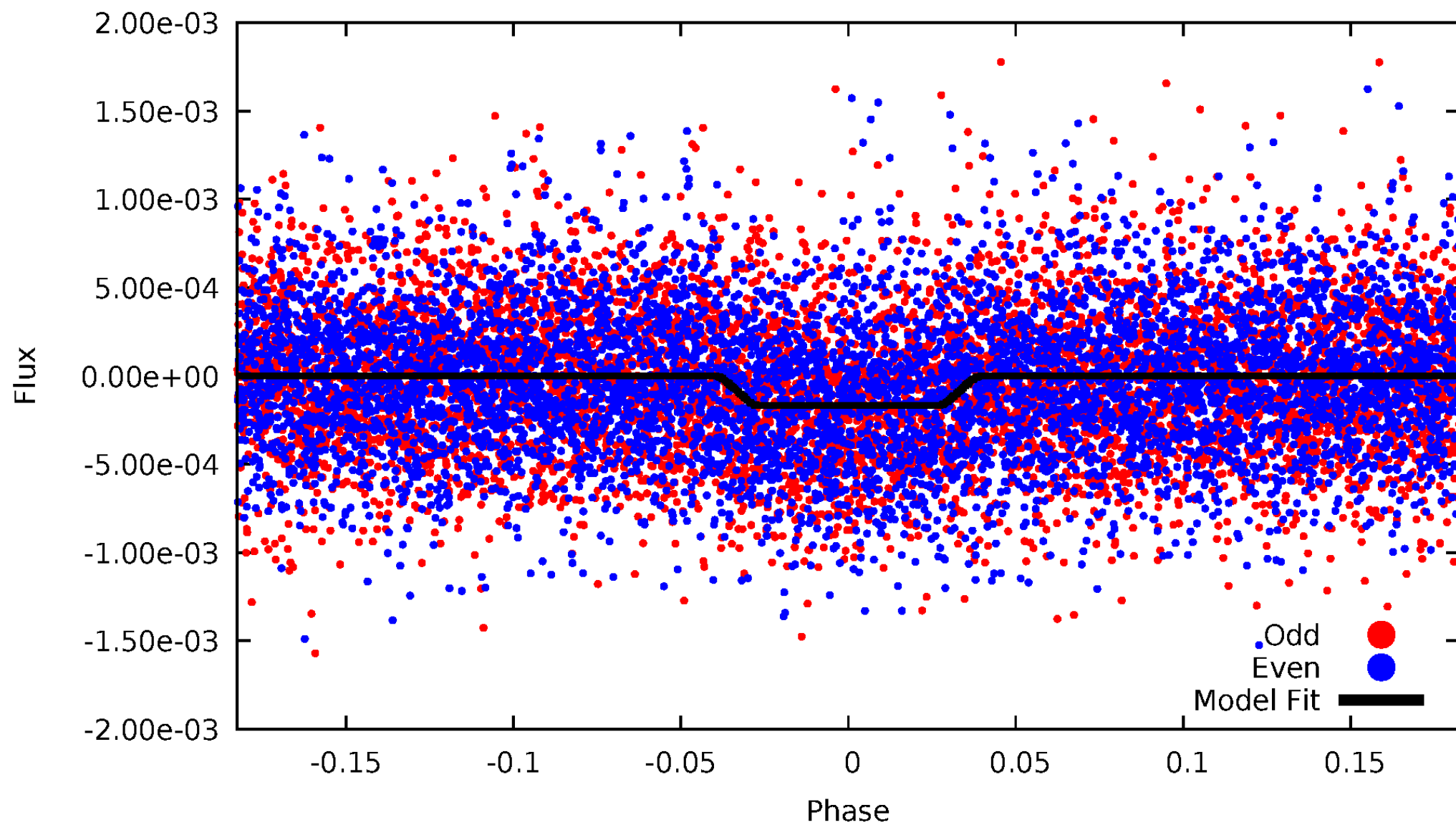
DV Odd/Even

TCE 010619142-01



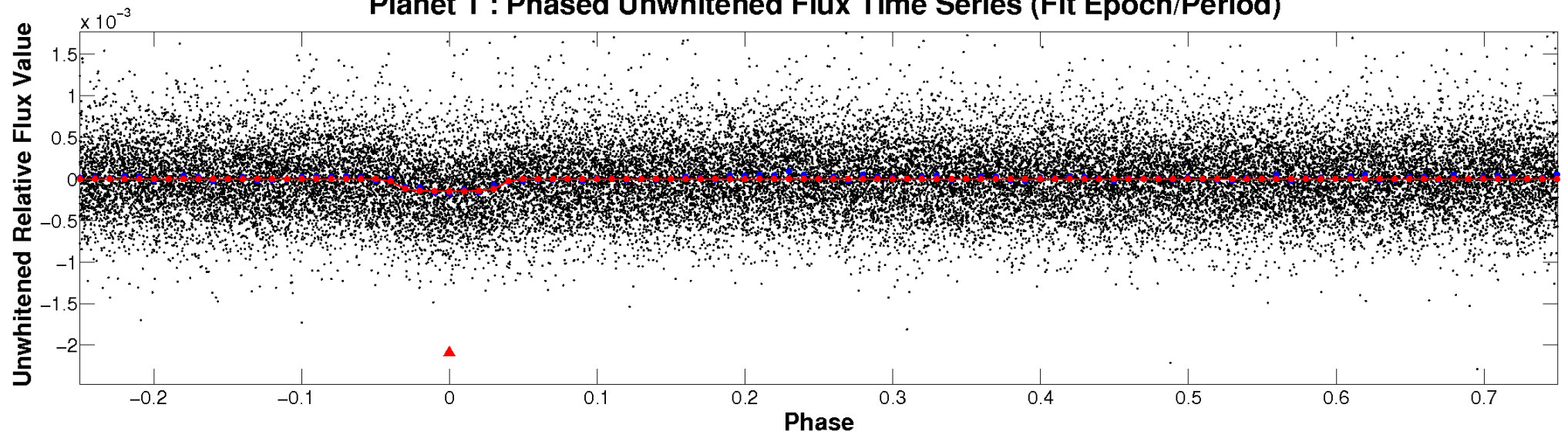
ALT Odd/Even

TCE 010619142-01

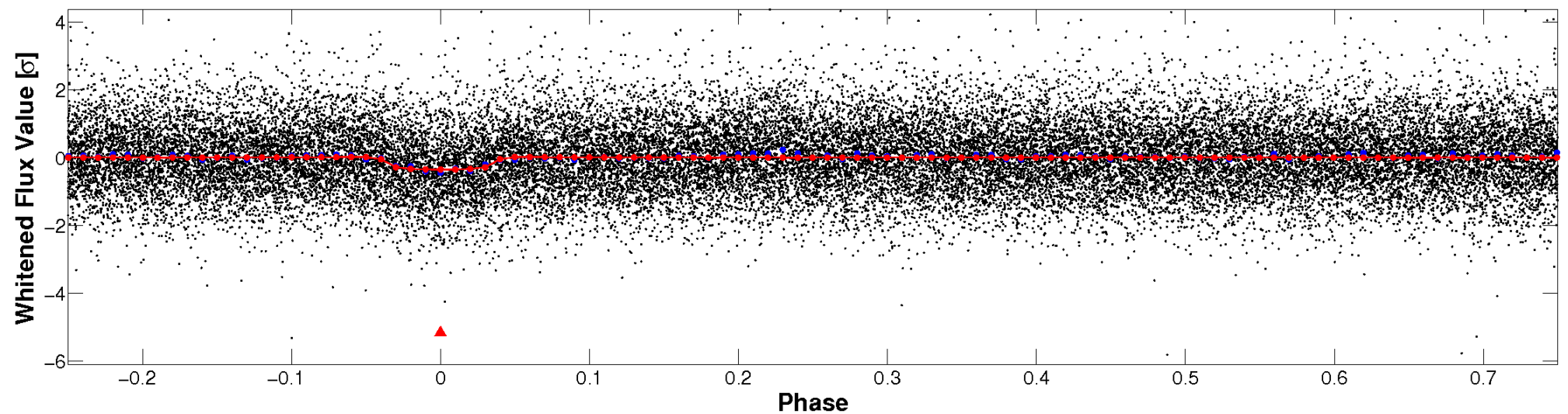


Non-Whitened Vs. Whitened Light Curve

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

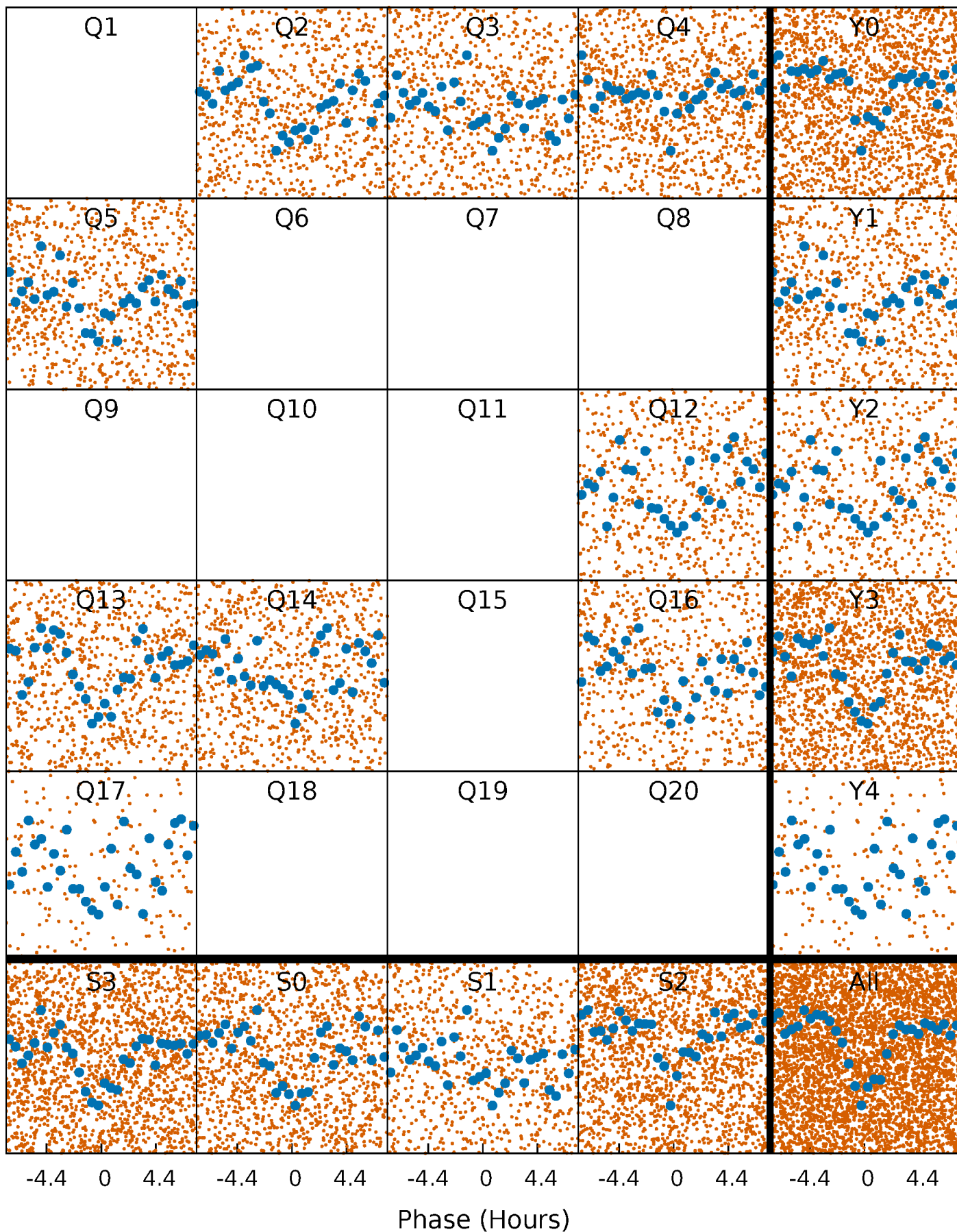


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



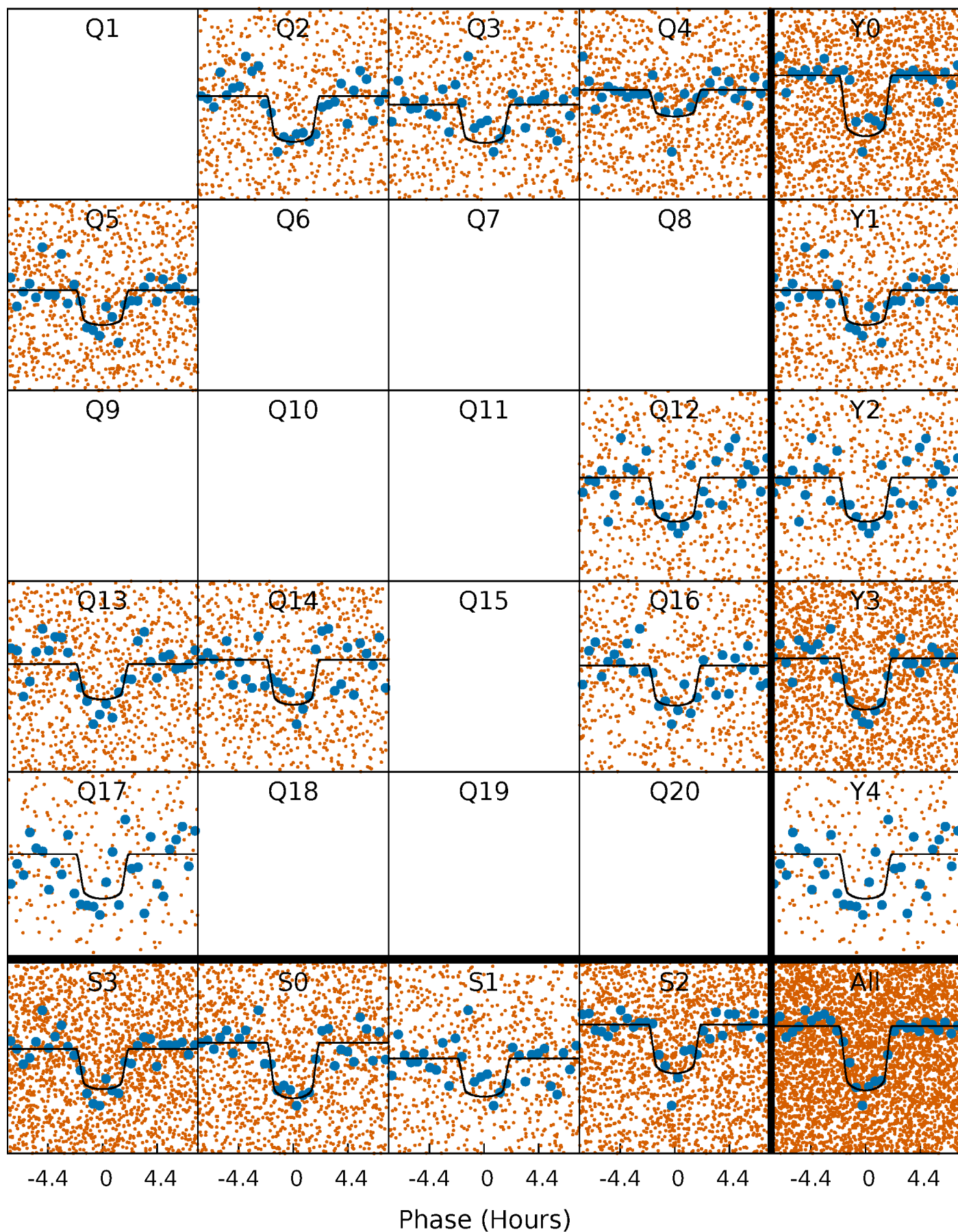
PDC Quarter-Phased Transit Curves

TCE 010619142-01 P= 2.045190 Days $T_0=132.355203$ (BKJD)



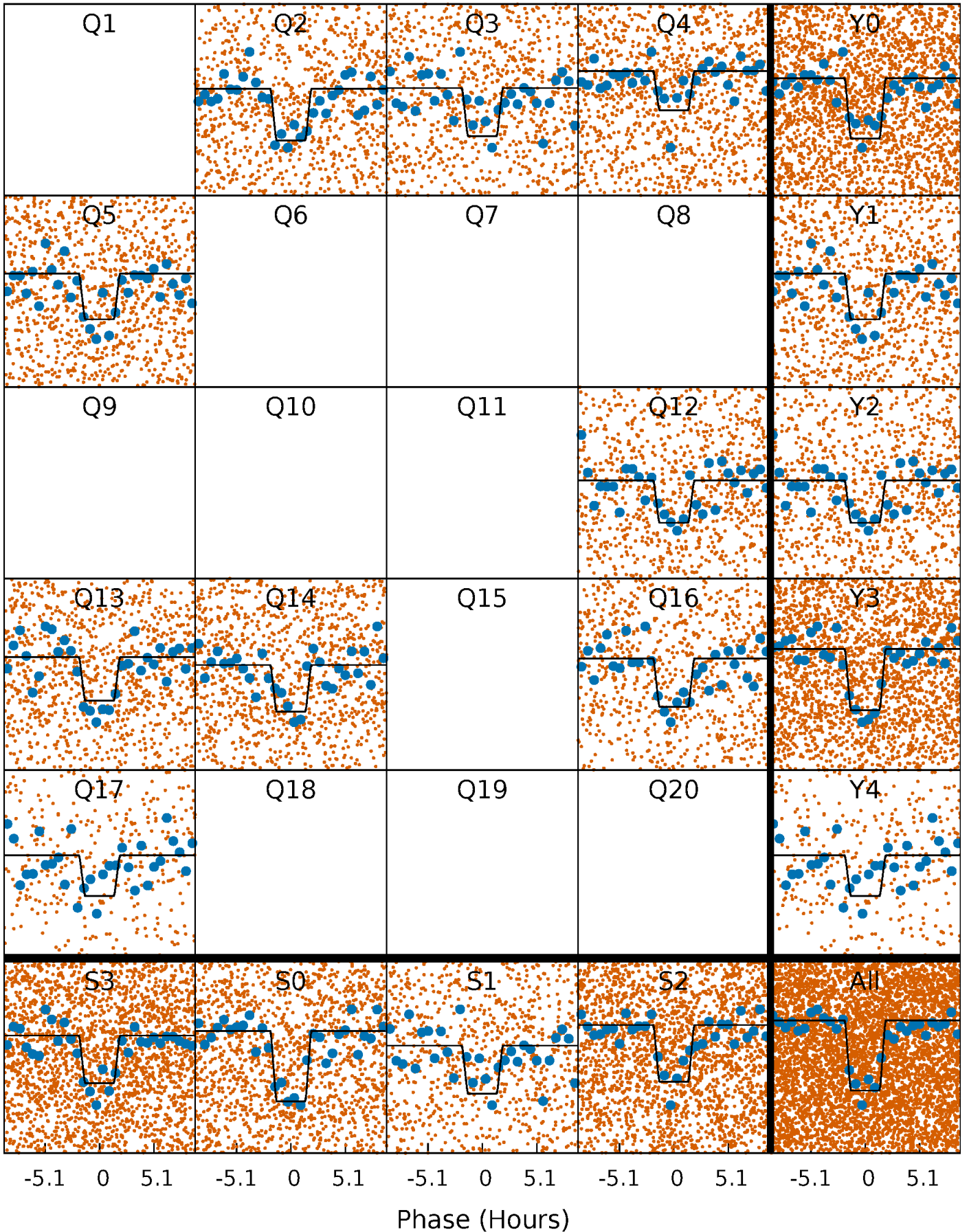
DV Quarter-Phased Transit Curves

TCE 010619142-01 P= 2.045190 Days $T_0=132.355203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

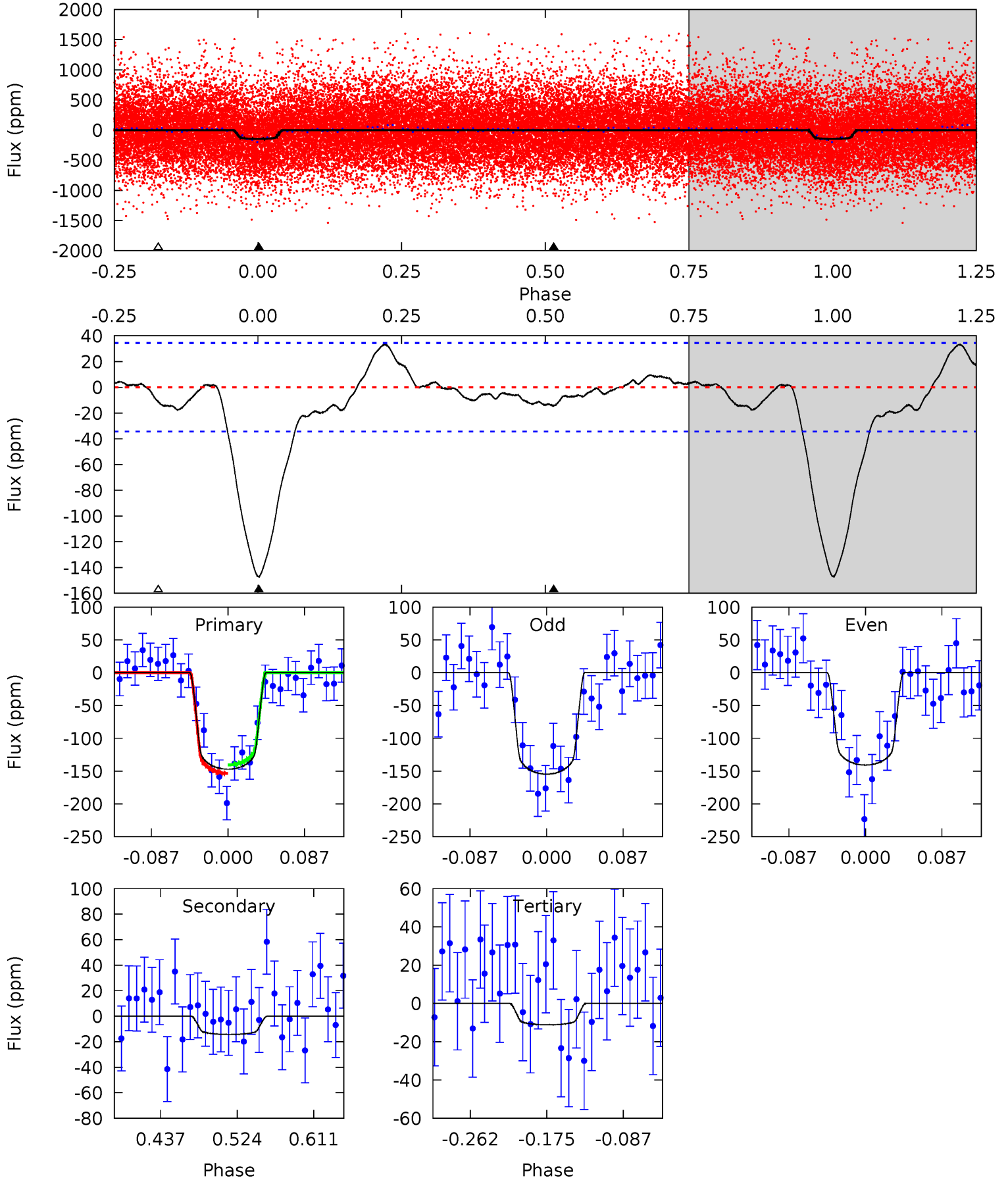
TCE 010619142-01 P= 2.045174 Days $T_0=132.361855$ (BKJD)



DV Model-Shift Uniqueness Test

010619142-01, P = 2.045190 Days, E = 132.355203 Days

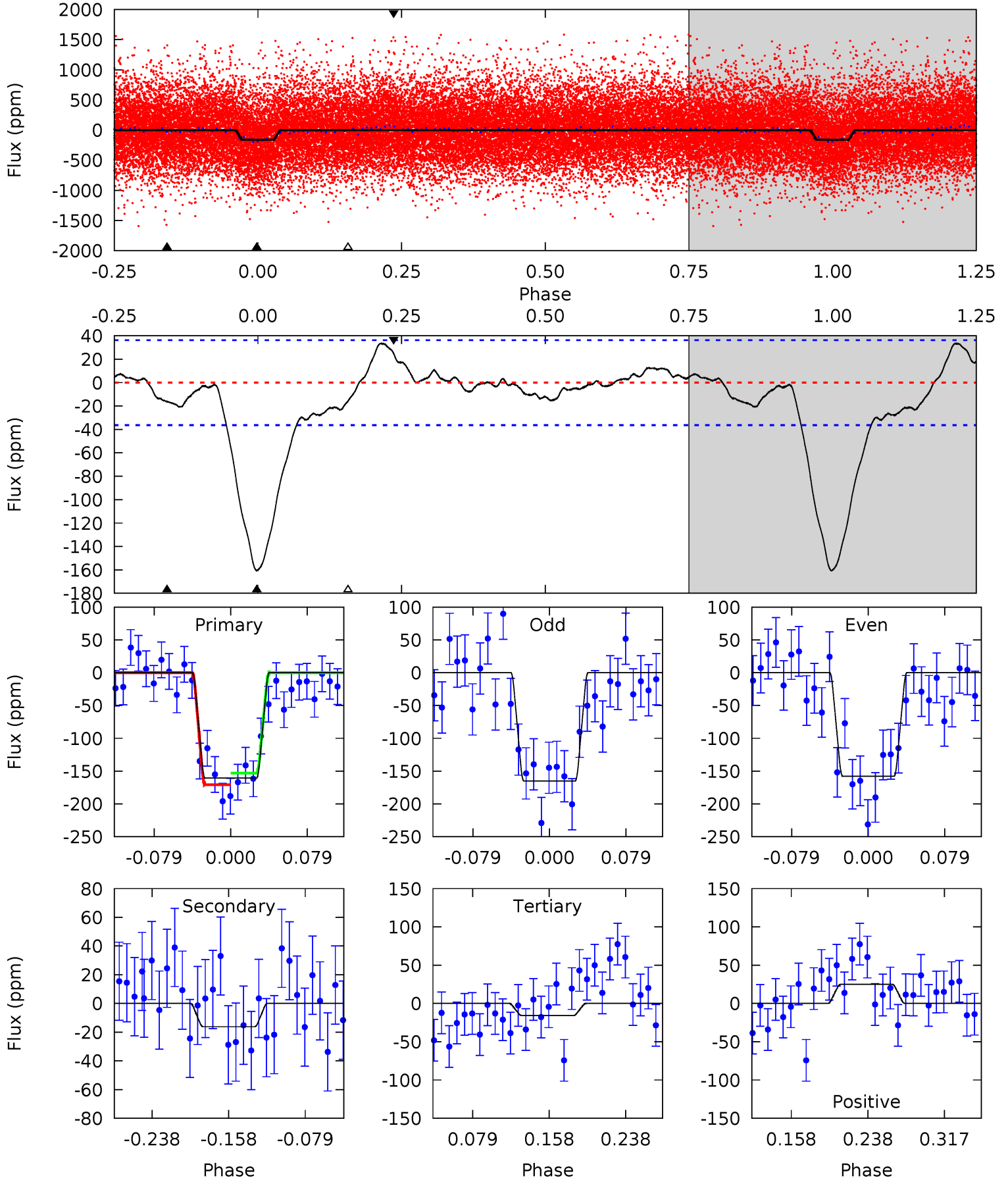
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	1.91	1.49	0	4.59	1.71	1.56	18.2	19.7	0.42	1.91	0.93	1.01	0.18	0.87



Alt Model-Shift Uniqueness Test

010619142-01, P = 2.045174 Days, E = 132.361855 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	2.06	2.01	3.17	4.61	1.76	1.67	18.4	17.3	0.05	-1.11	0.46	1.06	0.17	1.12



Stellar Parameters For KIC 010619142

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9206^{+251}_{-466}	$4.112^{+0.160}_{-0.160}$	$0.070^{+0.150}_{-0.700}$	$2.157^{+0.681}_{-0.619}$	$2.194^{+0.386}_{-0.578}$	$0.308^{+0.282}_{-0.148}$
	+3%/-5%	+4%/-4%	+214%/-1000%	+32%/-29%	+18%/-26%	+92%/-48%
Source	KIC0	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 010619142-01 / KOI 3082.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 7	$3.01^{+0.79}_{-0.72}$	4103^{+316}_{-300}	4617^{+701}_{-963}	$1.413^{+1.271}_{-0.825}$
Alt.	-16 ± 8	$3.03^{+0.87}_{-0.71}$	4093^{+309}_{-318}	4683^{+754}_{-851}	$1.571^{+1.516}_{-0.874}$

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

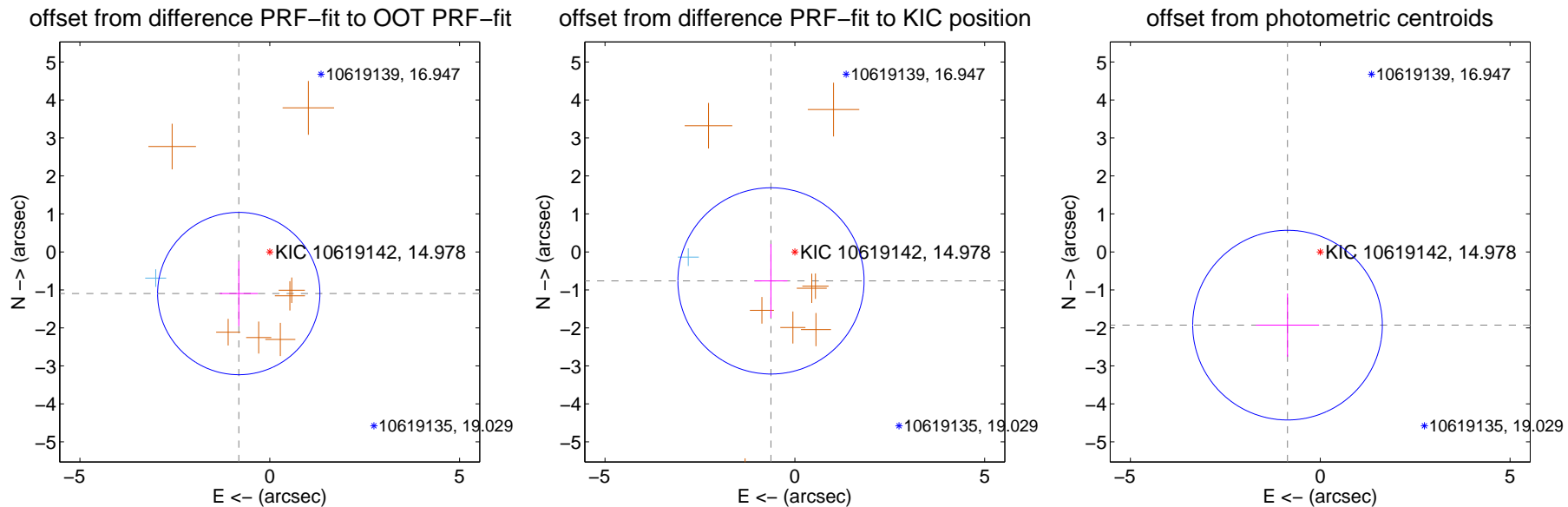
DV Centroid Data

Supplemental centroid analysis for 010619142-01. Kepler magnitude: 14.98. Transit SNR 15.25

There are 1 quarters with good PRF difference image offsets

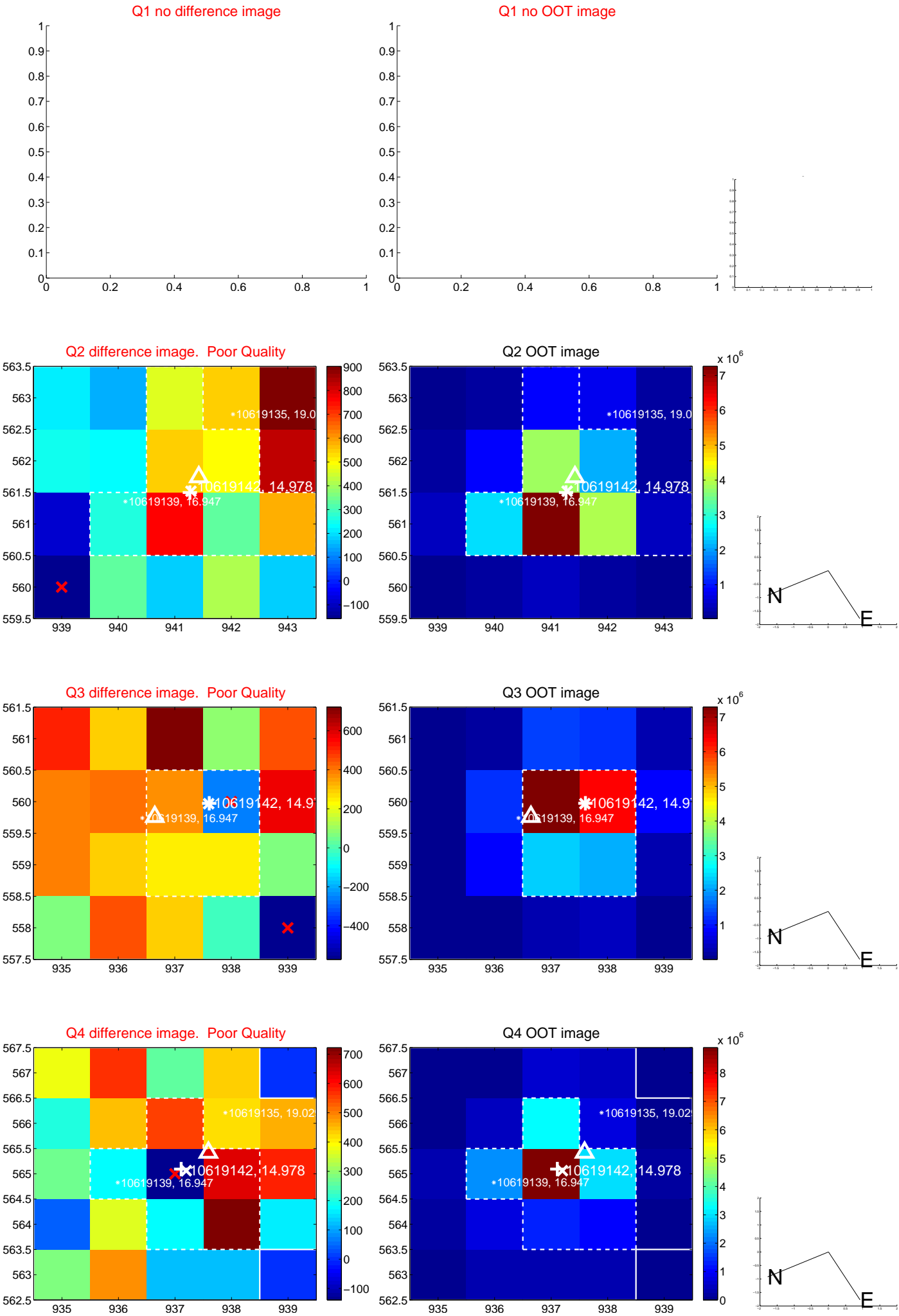
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.367 ± 0.713	1.92	0.816 ± 0.501	-1.096 ± 0.856
PRF-fit source offset from KIC position	0.989 ± 0.817	1.21	0.628 ± 0.433	-0.763 ± 0.971
photometric centroid source offset	2.11 ± 0.83	2.54	0.86 ± 0.83	-1.93 ± 0.83

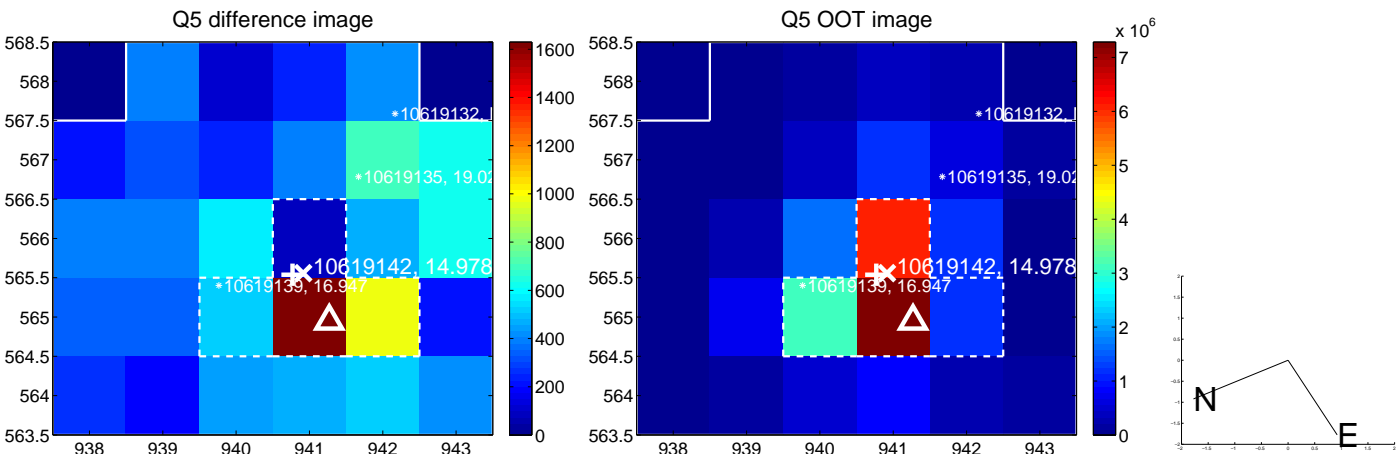


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

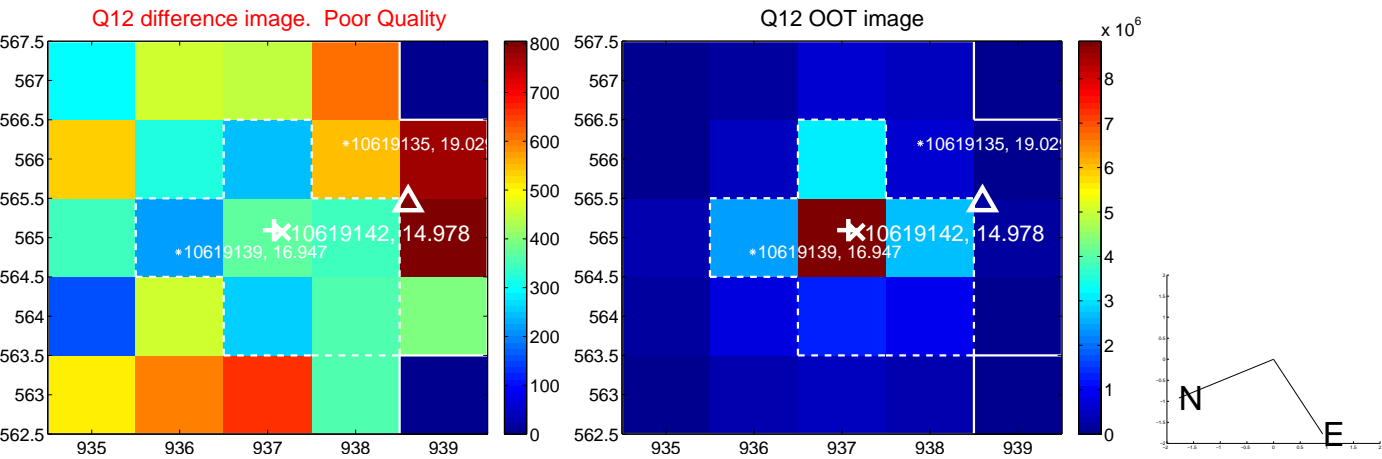
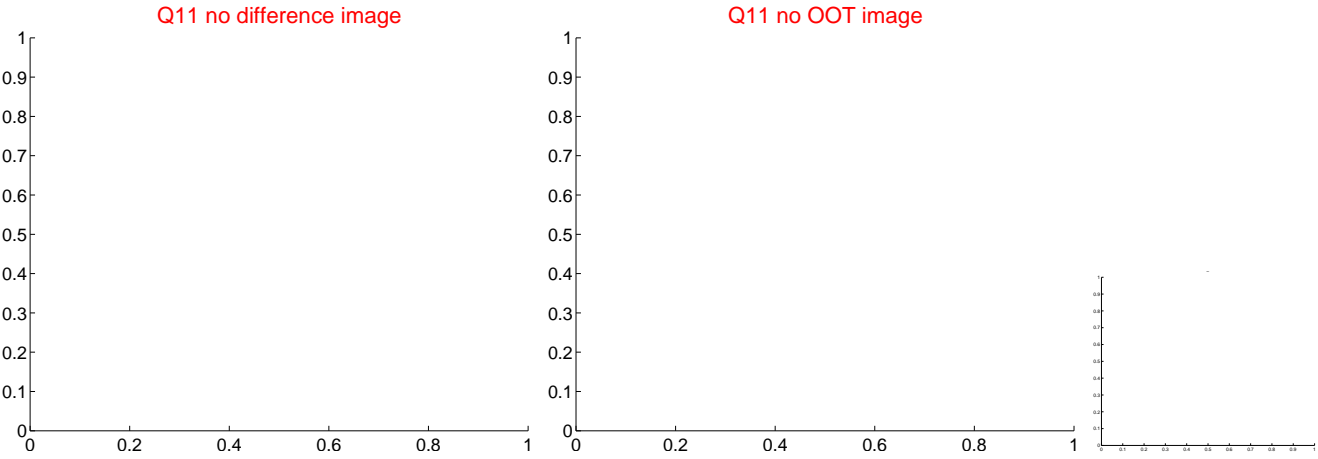
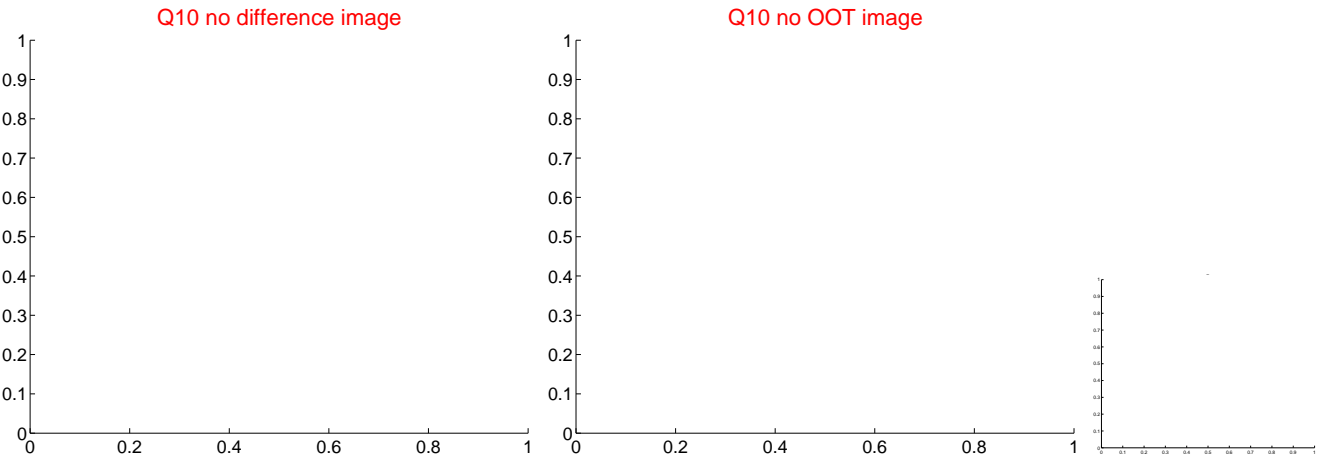
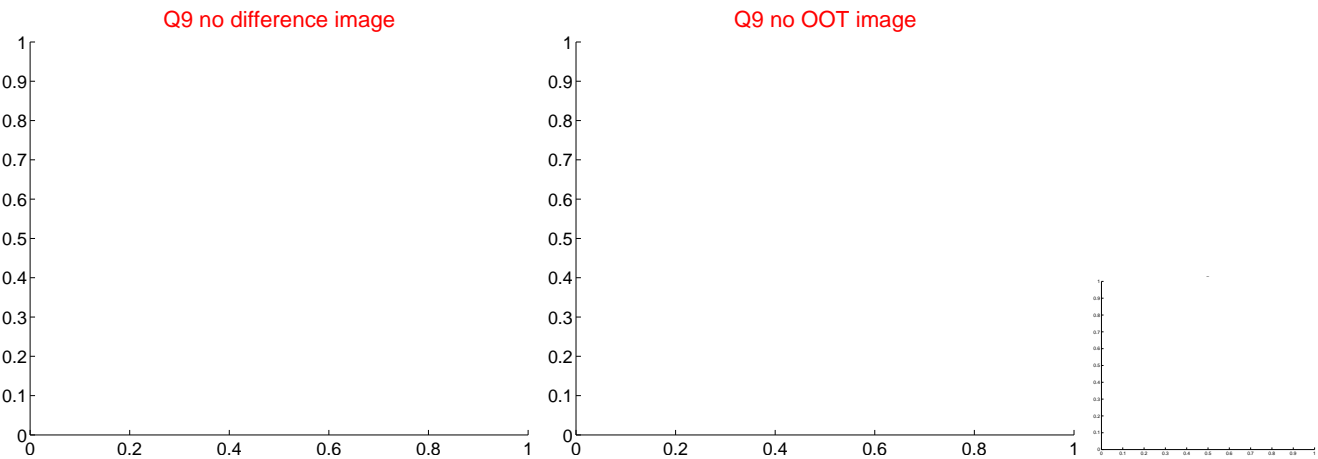
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



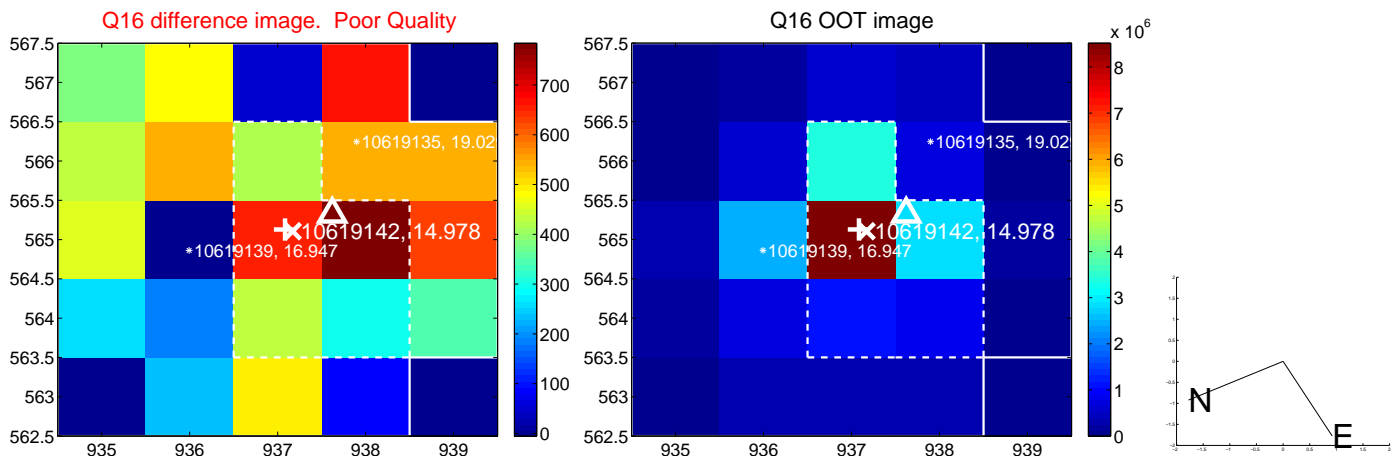
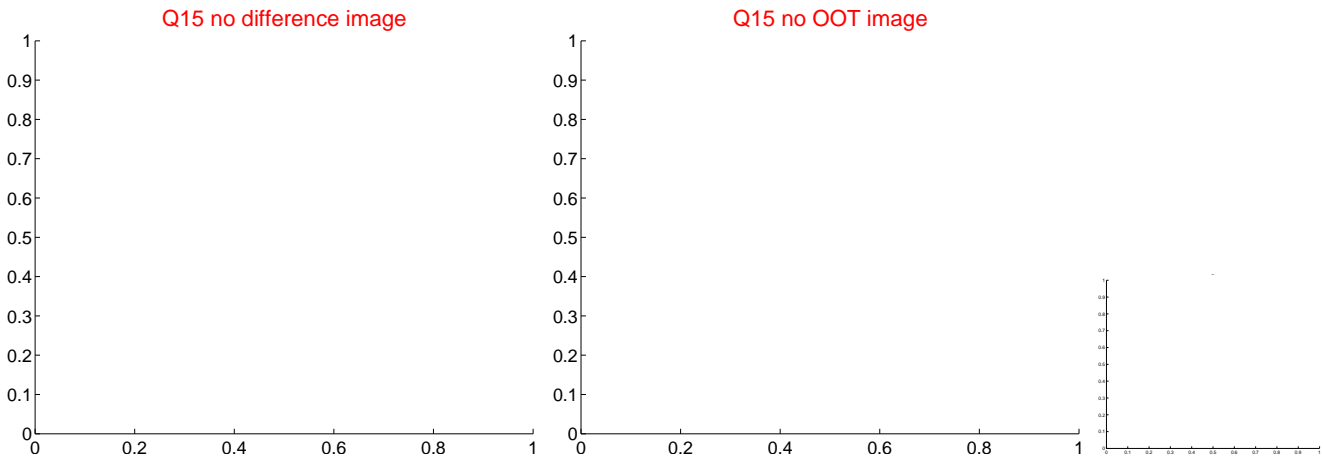
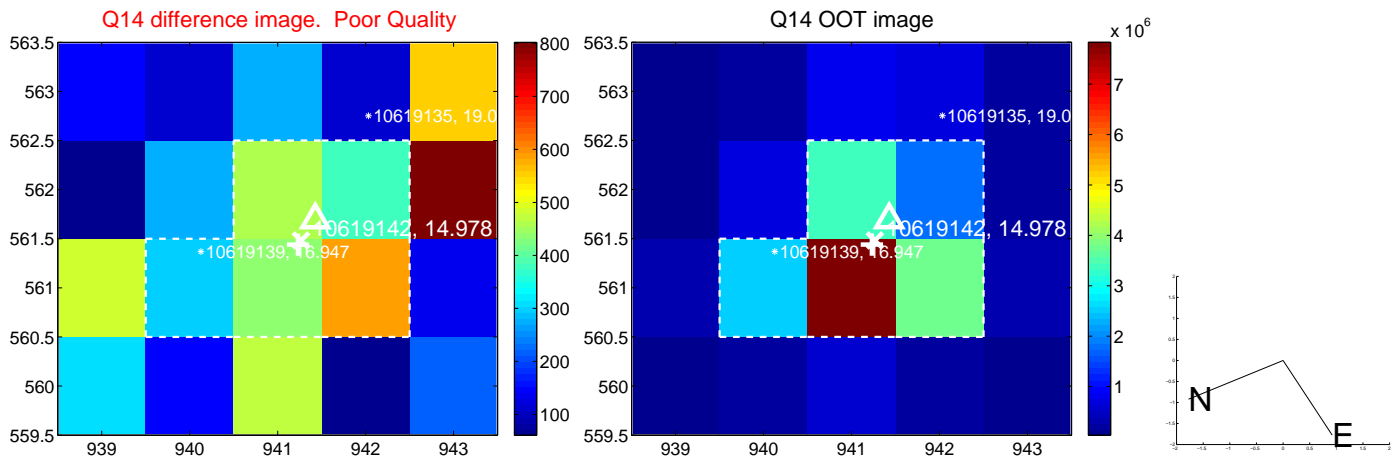
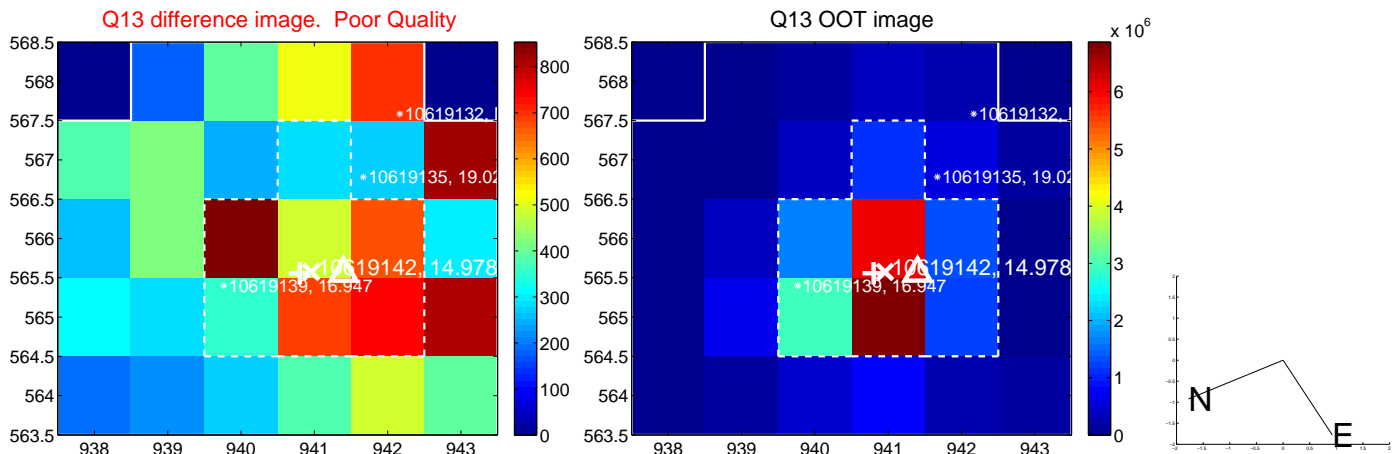
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



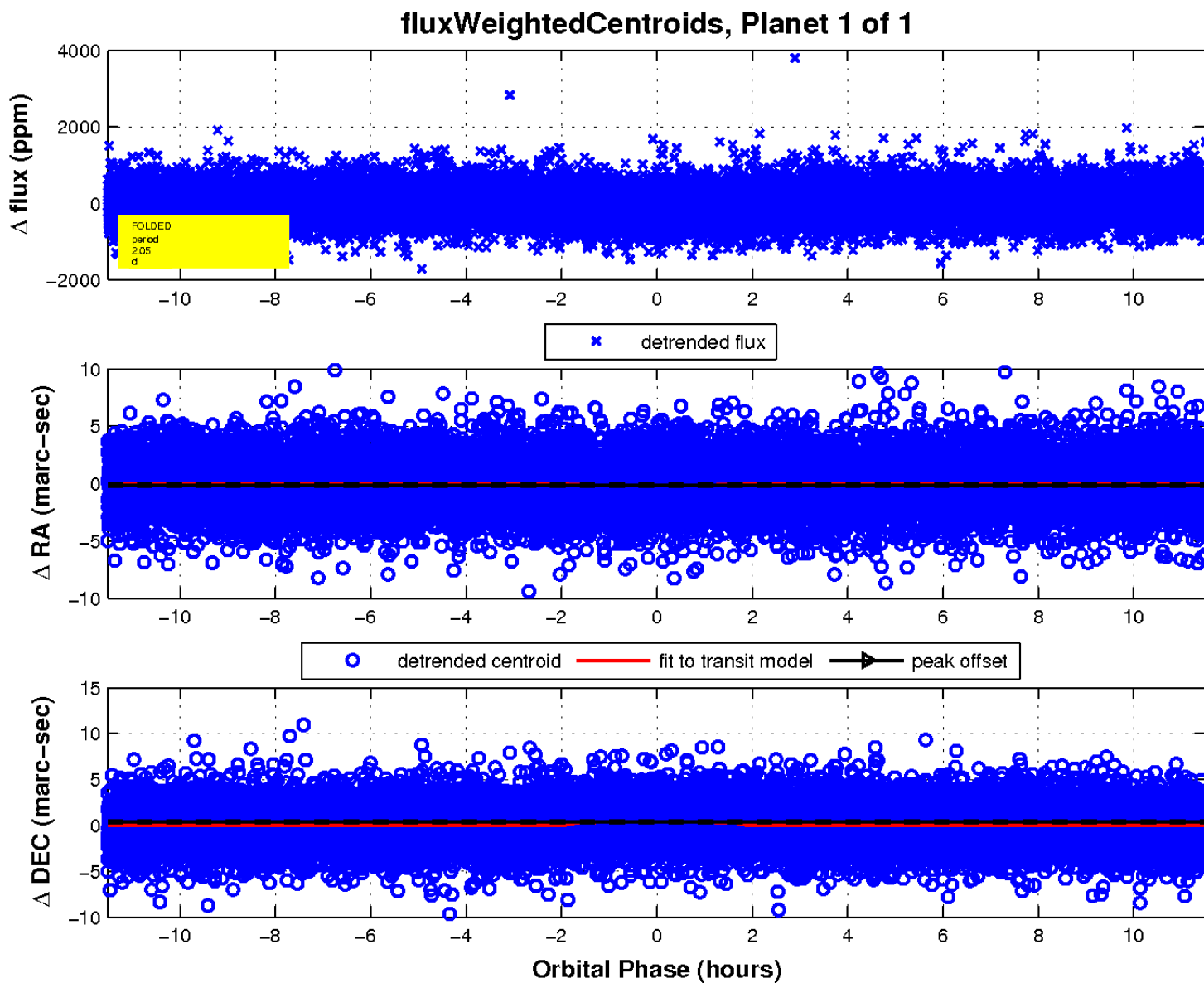
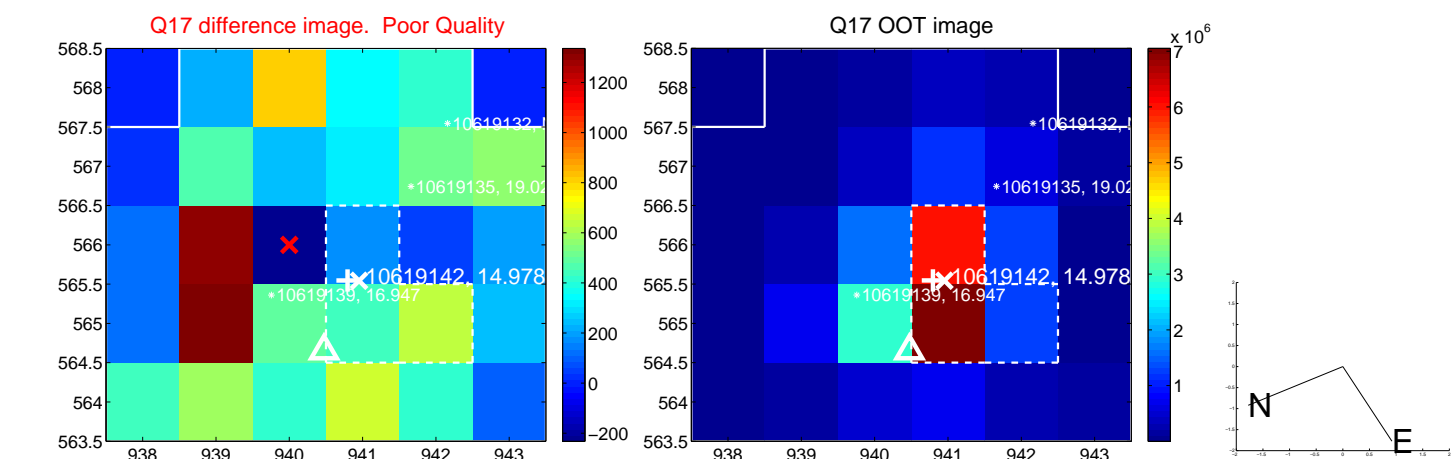
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

