

KIC 006665860

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})
006665860-01	OBS	4840.01	10.471611	136.287176	115.2	4.572	9.4	10.2	1.57	5812	1.88	271.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006665860-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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.

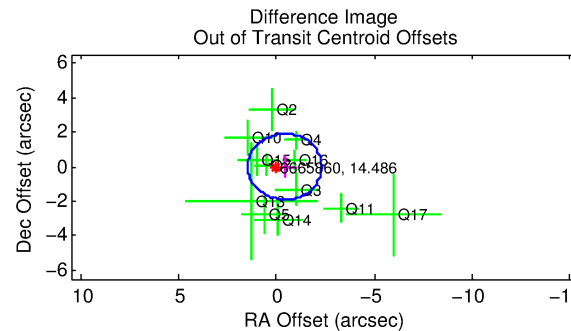
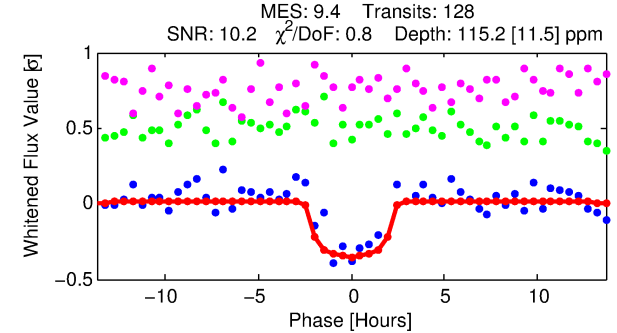
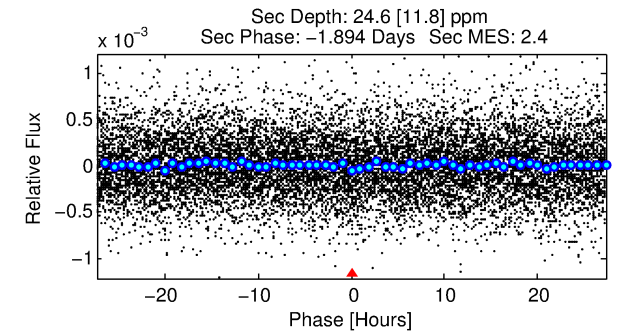
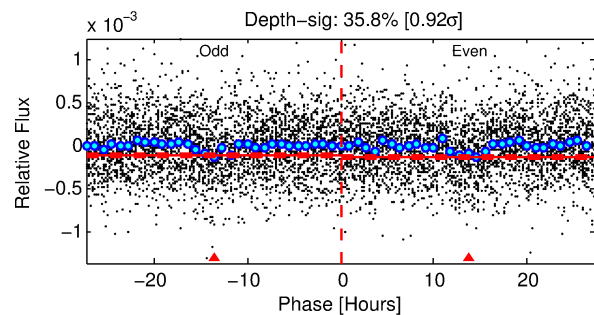
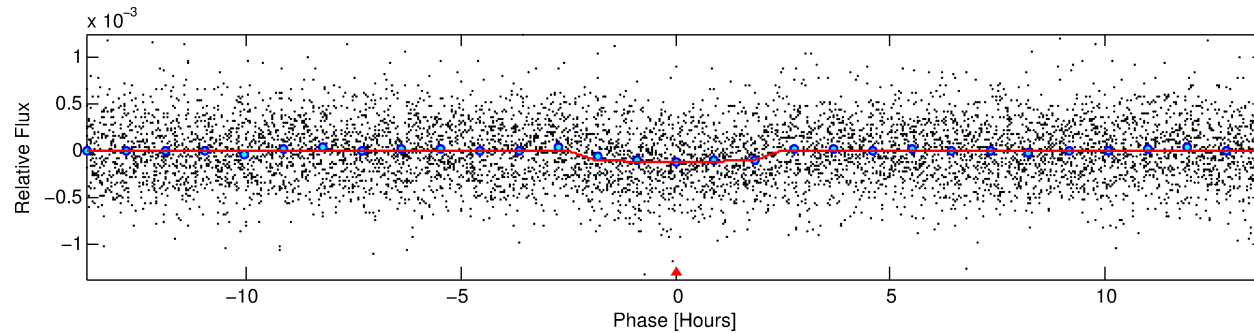
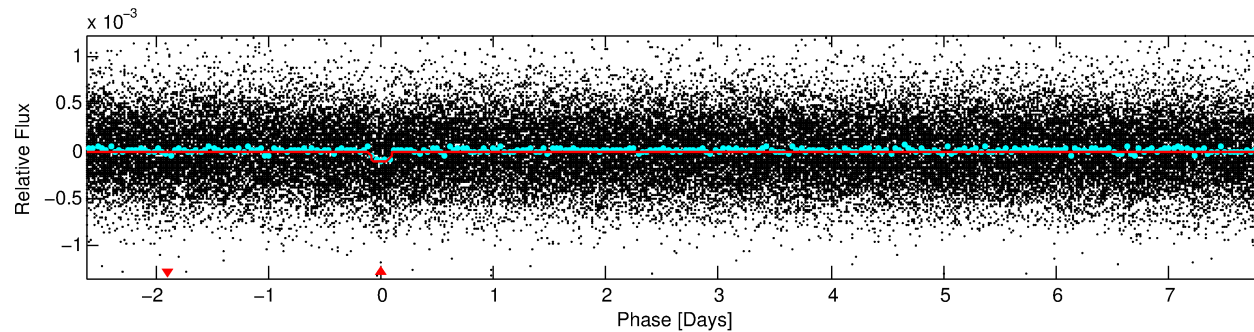
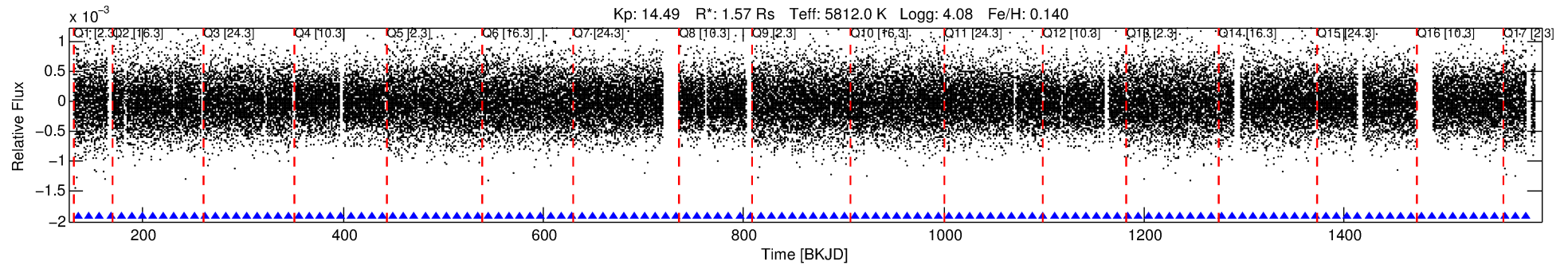
Ephemeris Match Information For 006665860-01

No Significant Match Found

DV One-Page Summary

KIC: 6665860 Candidate: 1 of 1 Period: 10.472 d

KOI: K04840.01 Corr: 0.959



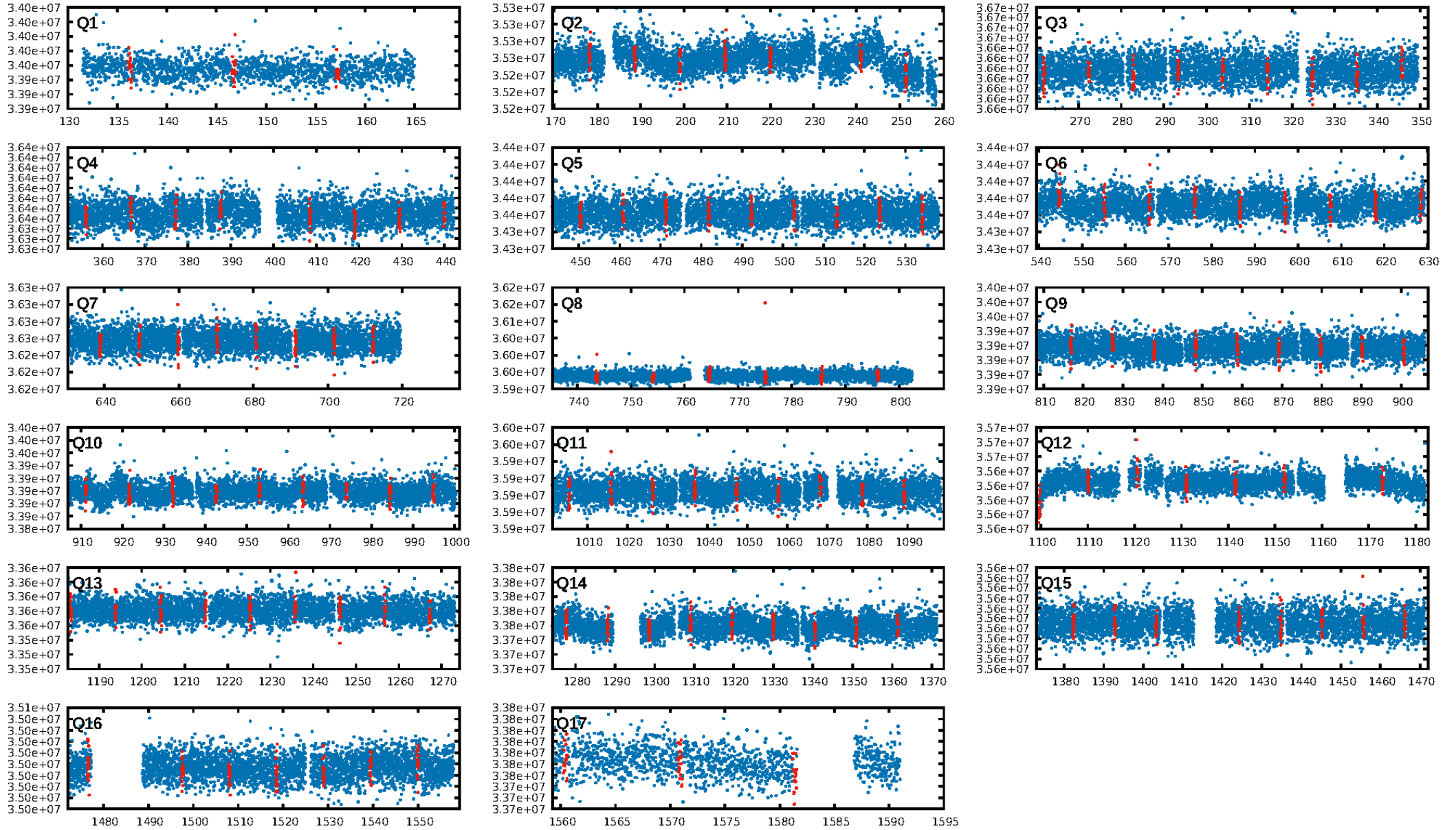
DV Fit Results:

Period = 10.47161 [0.00012] d
Epoch = 136.2872 [0.0091] BKJD
Rp/R* = 0.0109 [0.0089]
a/R* = 10.76 [39.72]
b = 0.80 [1.66]
Seff = 271.76 [86.19]
Teff = 1035 [82] K
Rp = 1.88 [1.59] Re
a = 0.0965 [0.0191] AU
Ag = 35.68 [61.78] [0.56 σ]
Teffp = 3912 [1666] K [1.72 σ]

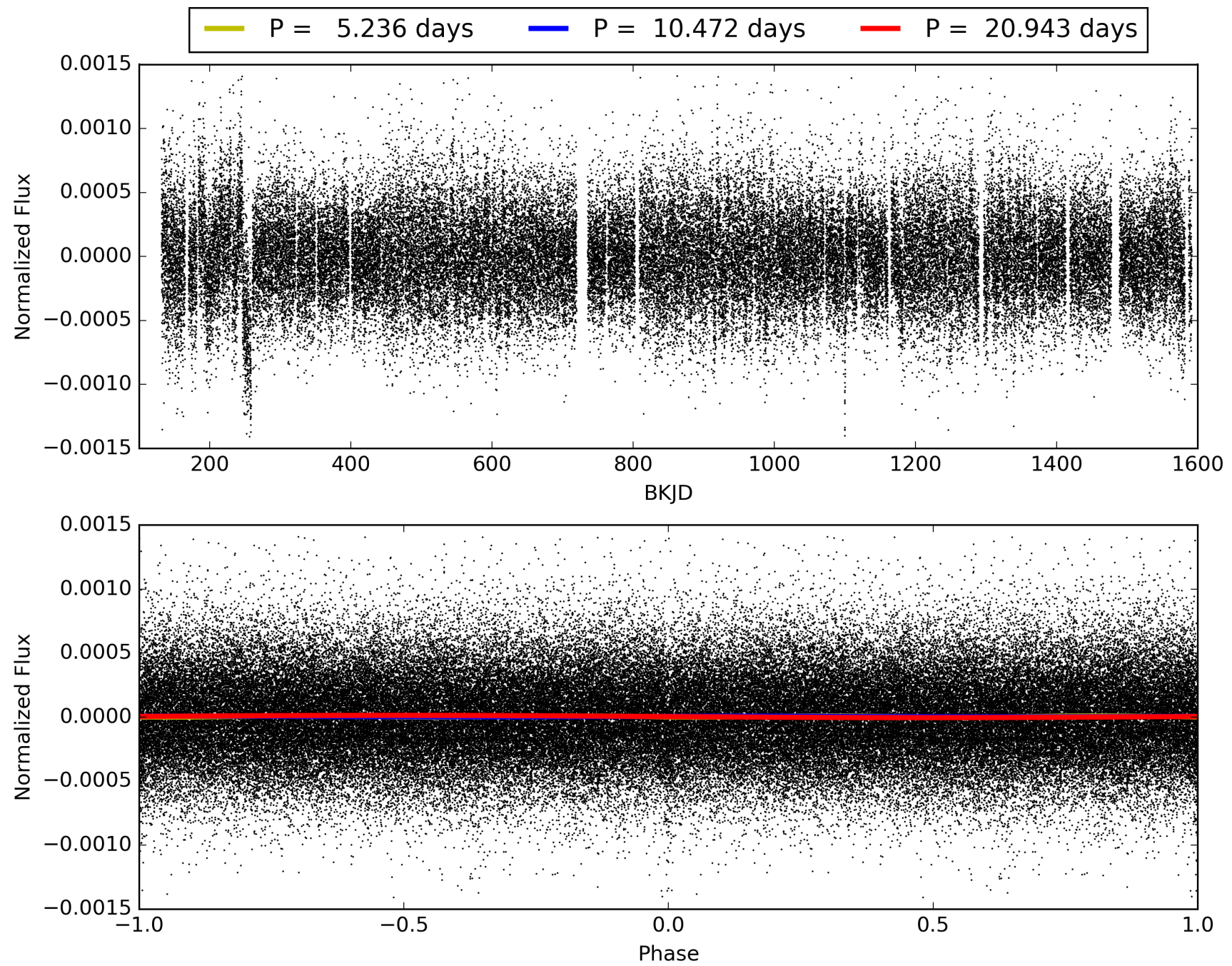
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.30e-21
RollingBand-fgt: 1.00 [122/122]
GhostDiagnostic-chr: 0.4638
Centroid-sig: 13.8%
Centroid-so: 2.379 arcsec [1.56 σ]
OotOffset-rm: 0.413 arcsec [0.65 σ]
KicOffset-rm: 0.480 arcsec [0.81 σ]
OotOffset-st: 3/4/2/3 [12]
KicOffset-st: 3/4/2/3 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006665860-01, PDC Light Curves

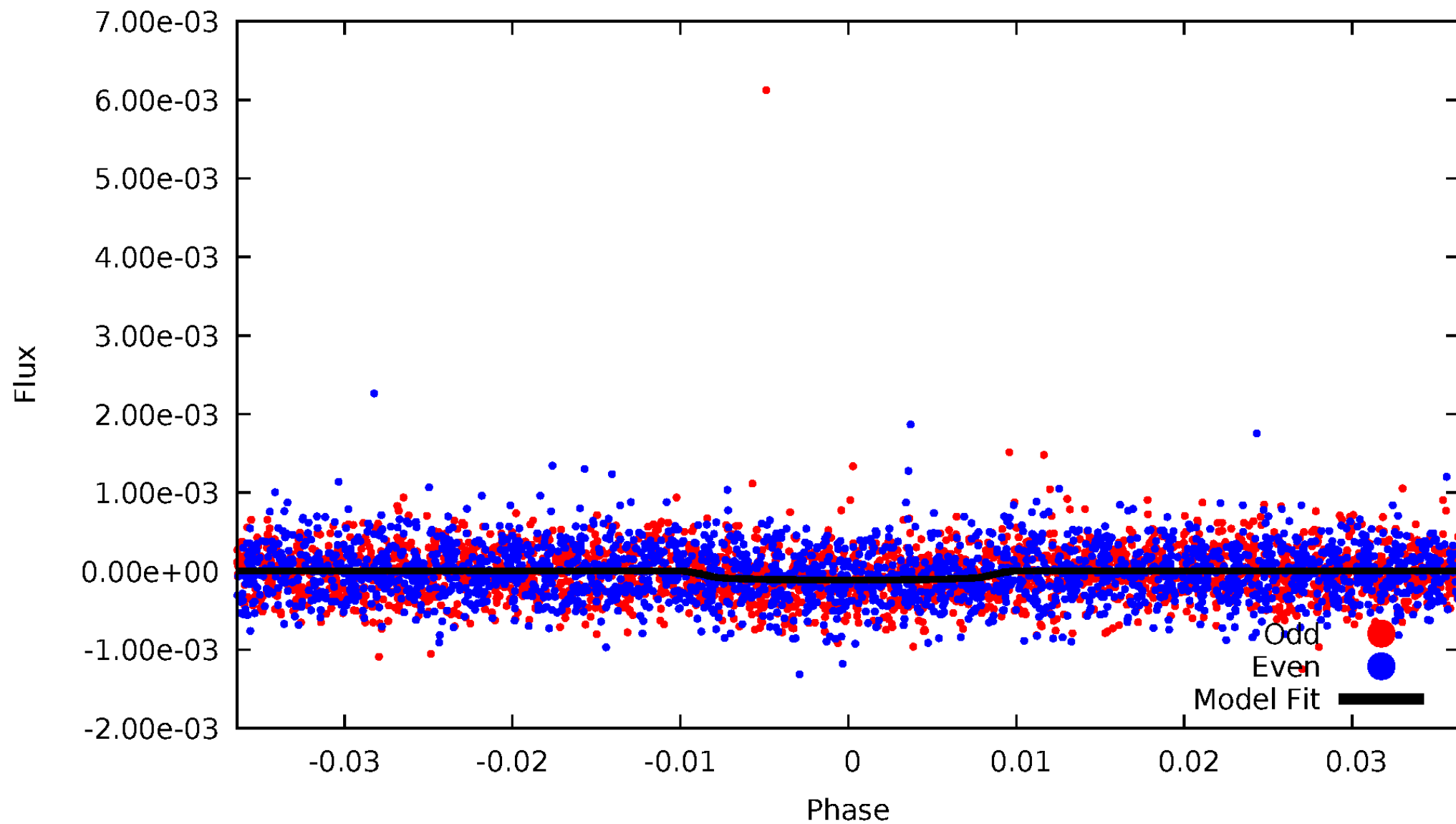


TCE 006665860-01



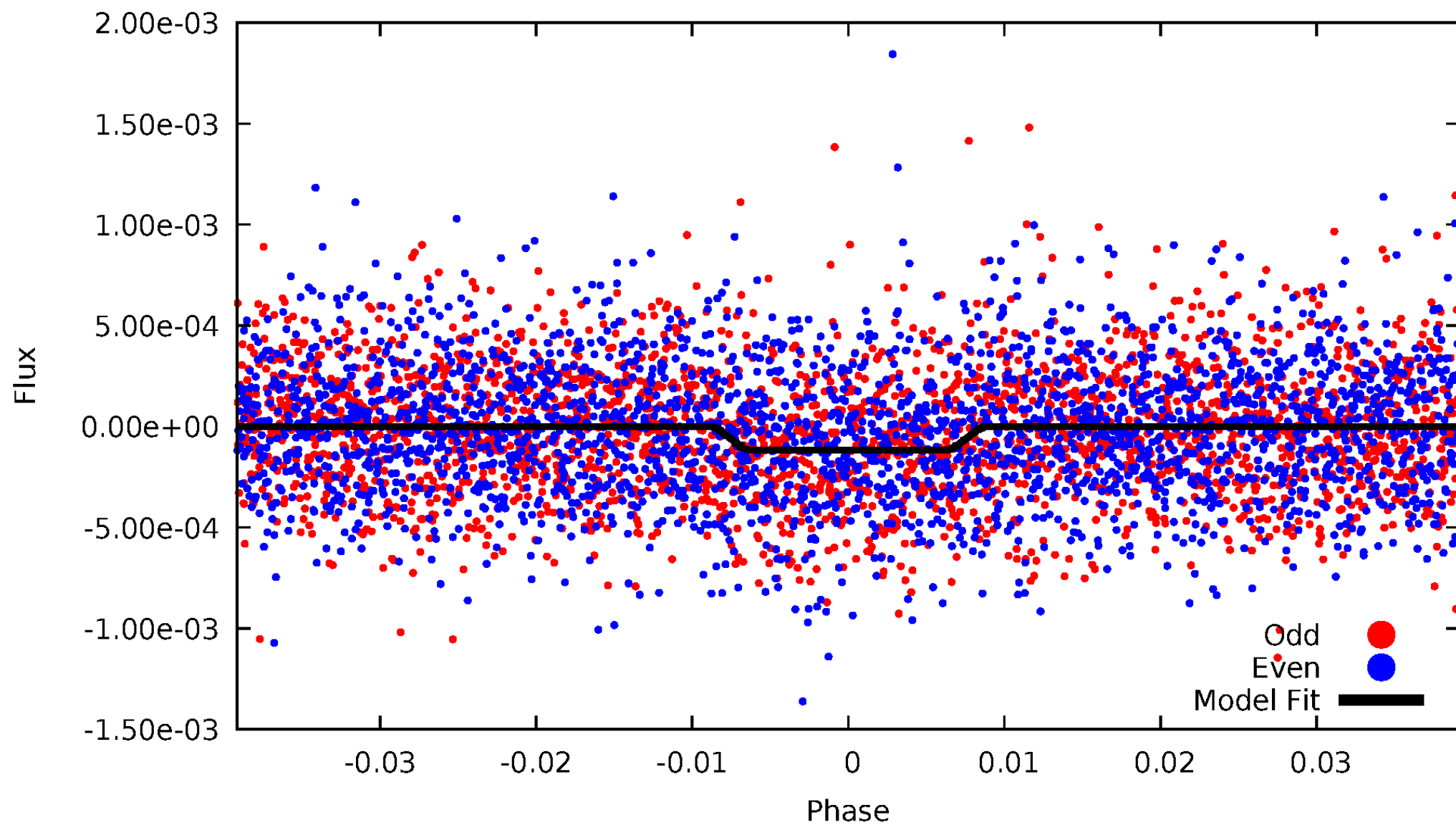
DV Odd/Even

TCE 006665860-01



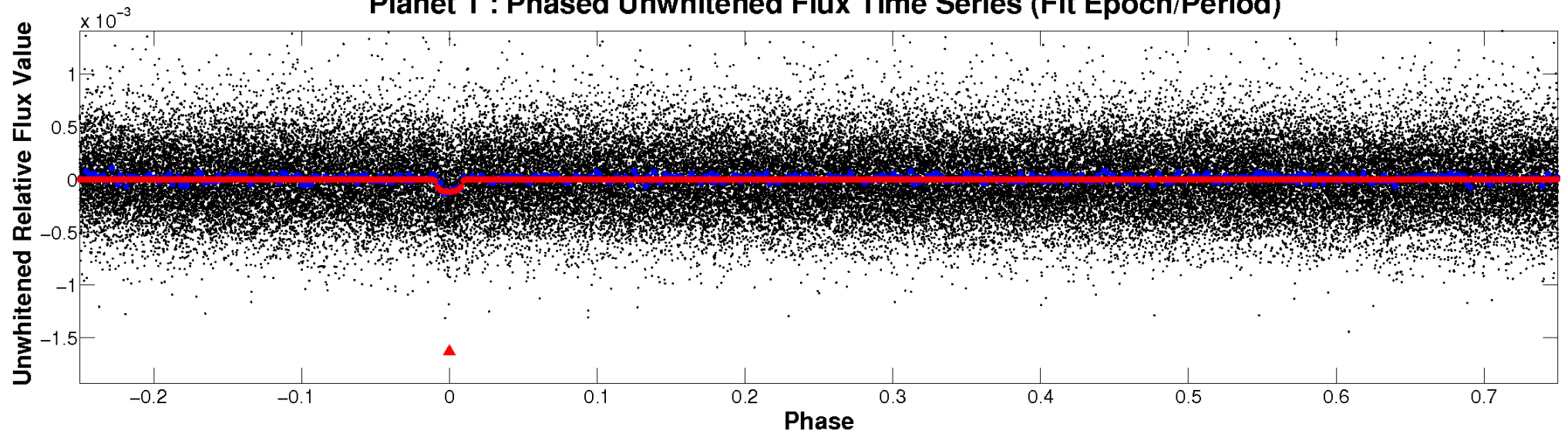
ALT Odd/Even

TCE 006665860-01

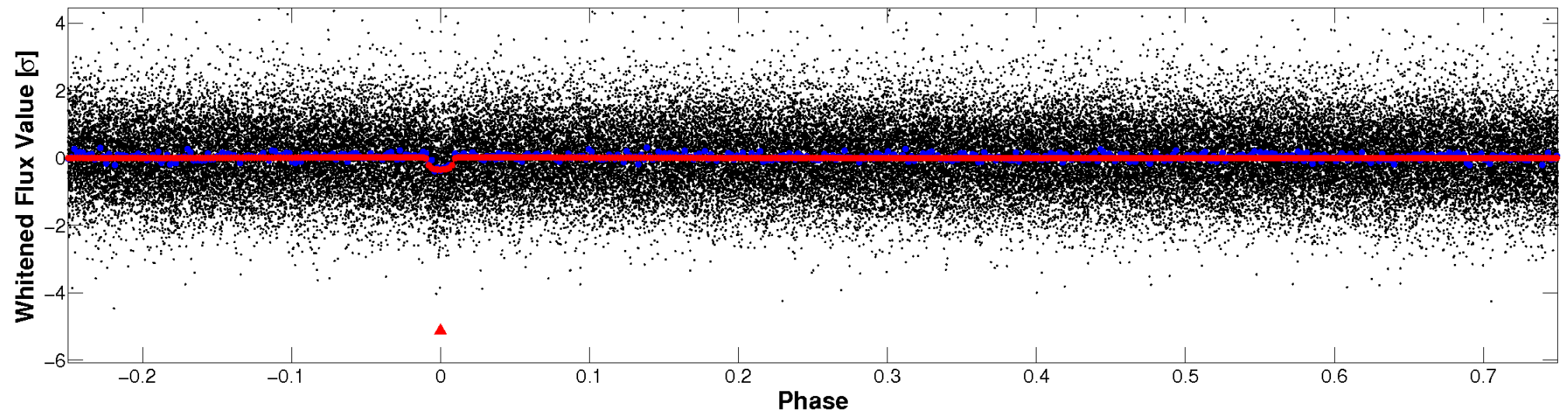


Non-Whitened Vs. Whitened Light Curve

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

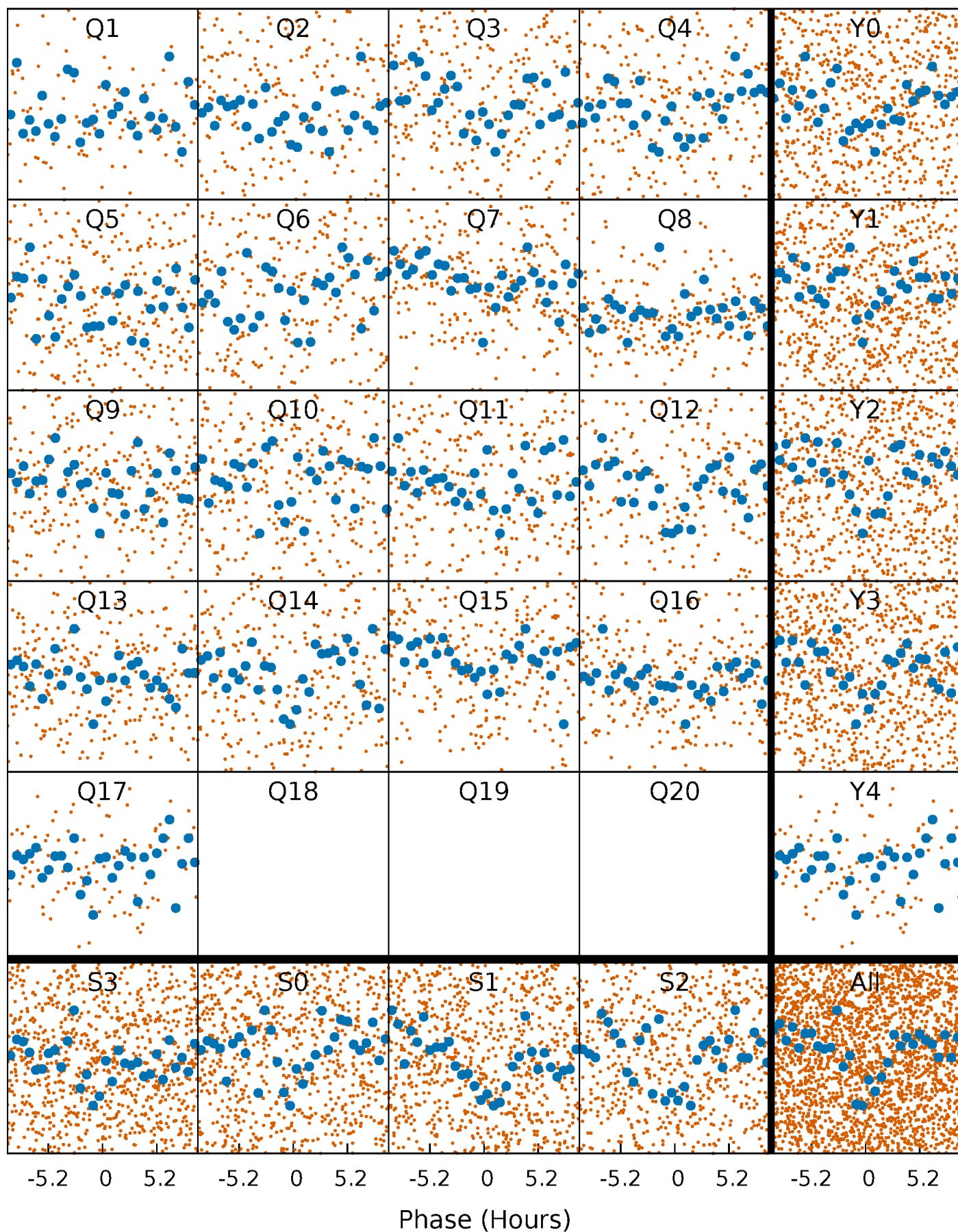


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



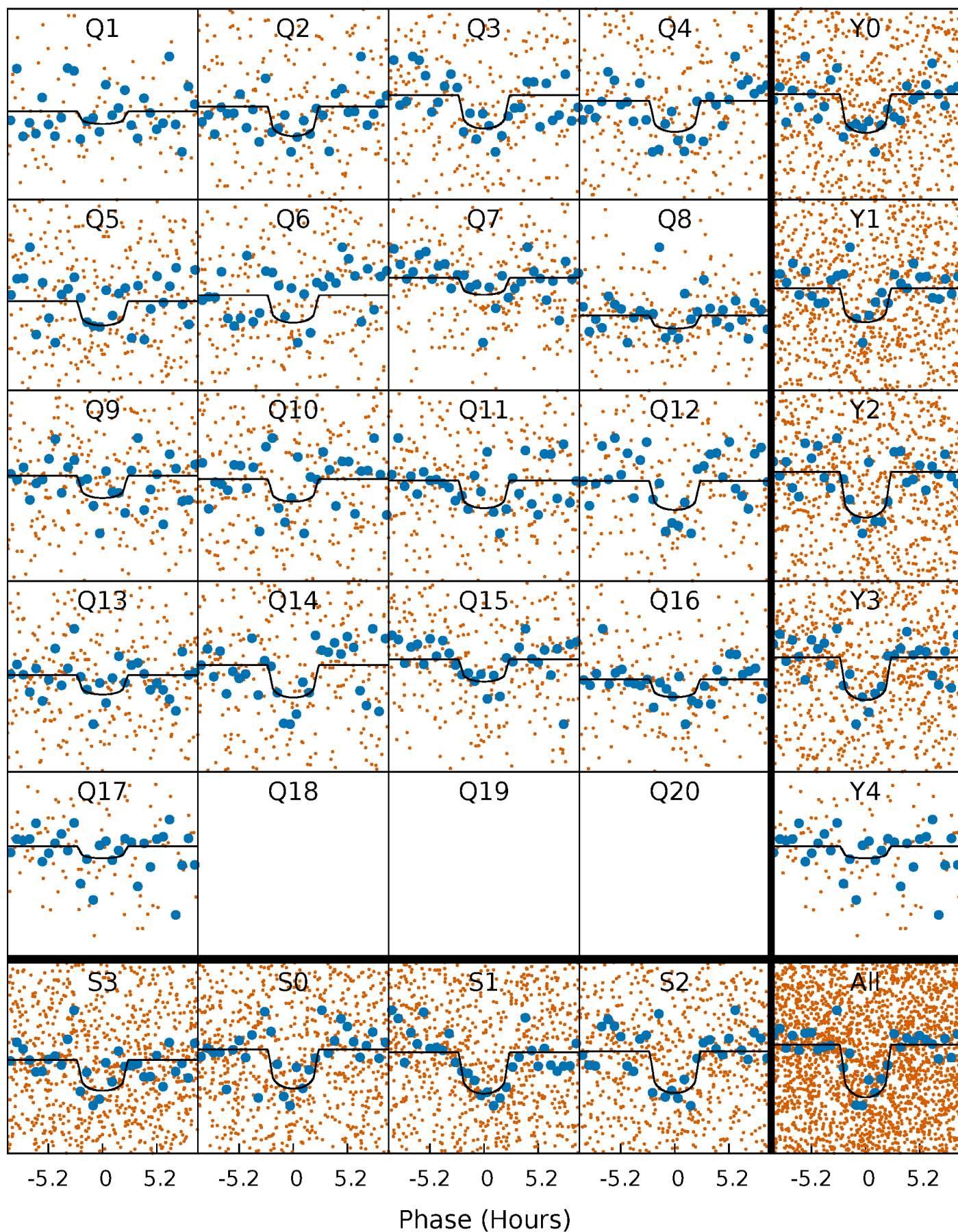
PDC Quarter-Phased Transit Curves

TCE 006665860-01 P= 10.471611 Days $T_0=136.287176$ (BKJD)



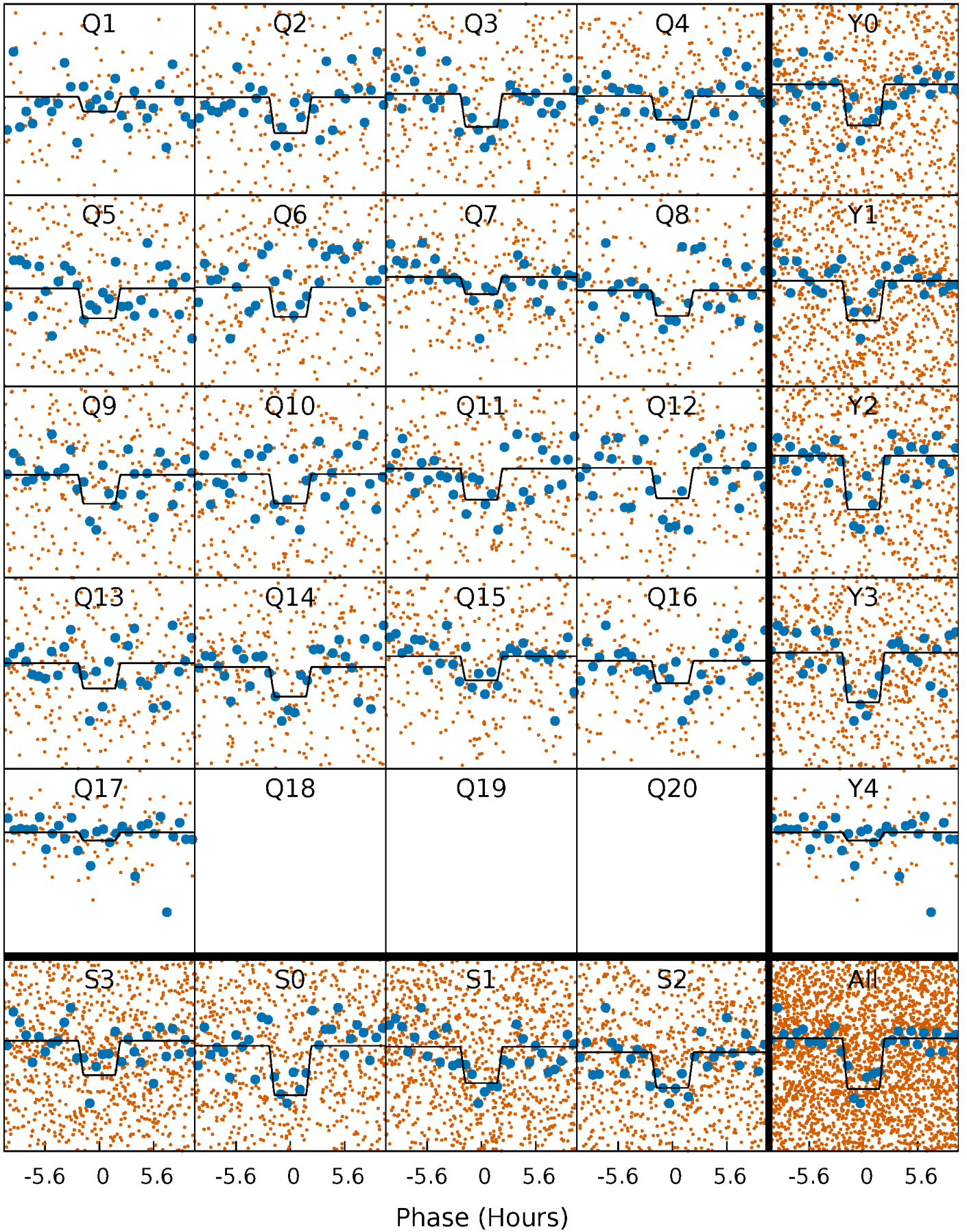
DV Quarter-Phased Transit Curves

TCE 006665860-01 P= 10.471611 Days $T_0=136.287176$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

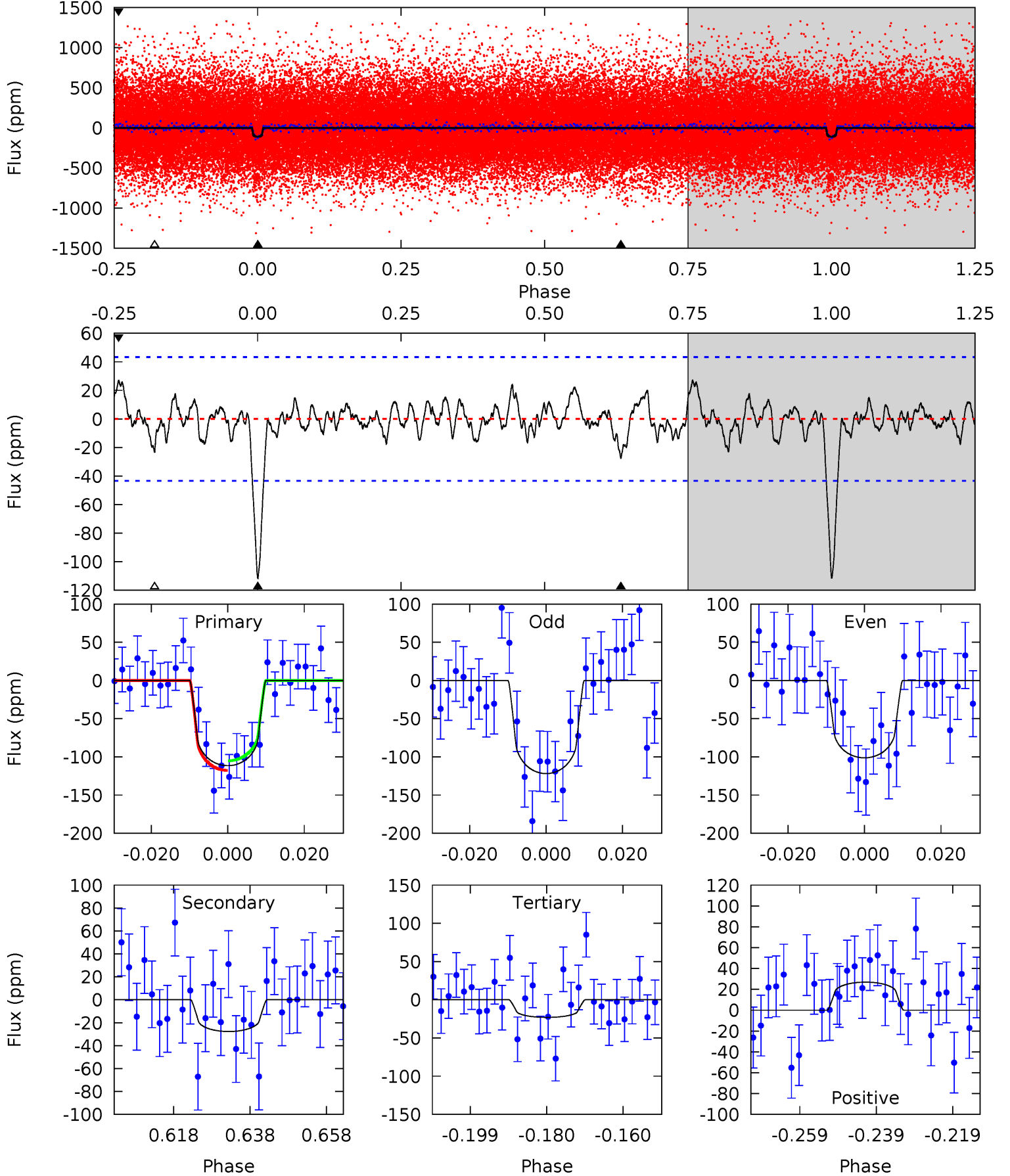
TCE 006665860-01 P= 10.471428 Days $T_0=136.306816$ (BKJD)



DV Model-Shift Uniqueness Test

006665860-01, $P = 10.471611$ Days, $E = 125.815565$ Days

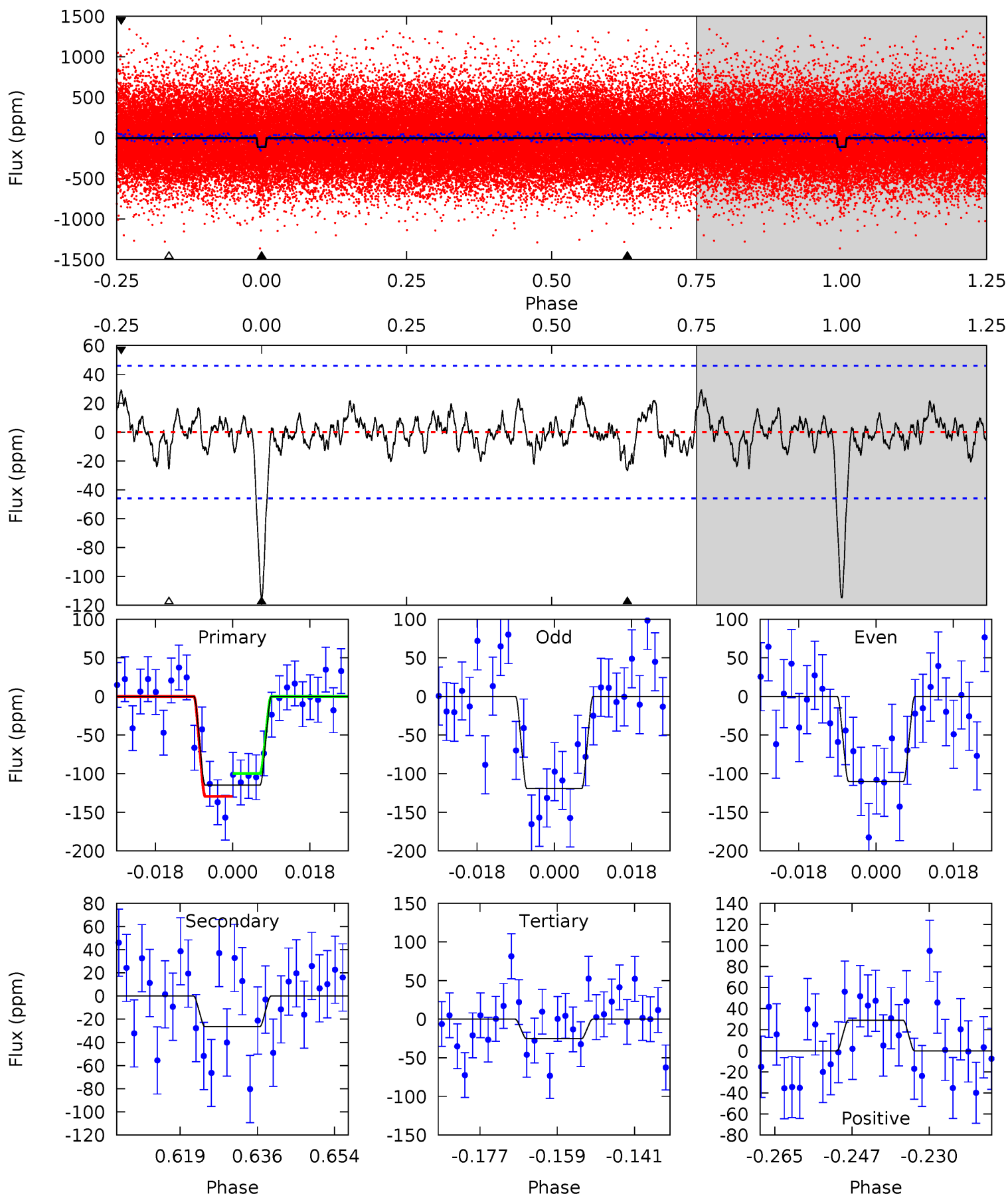
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.13	2.61	3.04	4.89	2.33	0.99	9.98	9.55	0.52	0.09	1.17	0.93	0.19	0.72



Alt Model-Shift Uniqueness Test

006665860-01, $P = 10.471428$ Days, $E = 125.835388$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	2.83	2.71	3.09	4.92	2.37	1.00	9.56	9.18	0.12	-0.27	0.50	0.99	0.20	1.58



Stellar Parameters For KIC 006665860

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5812^{+78}_{-78}	$4.083^{+0.182}_{-0.084}$	$0.140^{+0.150}_{-0.150}$	$1.574^{+0.240}_{-0.331}$	$1.095^{+0.115}_{-0.094}$	$0.396^{+0.377}_{-0.121}$
	+1%/-1%	+4%/-2%	+107%/-107%	+15%/-21%	+11%/-9%	+95%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006665860-01 / KOI 4840.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 9	$2.00^{+1.45}_{-1.26}$	1435^{+62}_{-77}	4073^{+2124}_{-690}	34^{+208}_{-23}
Alt.	-26 ± 9	$1.97^{+1.46}_{-1.15}$	1434^{+59}_{-79}	4095^{+1792}_{-738}	35^{+159}_{-25}

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

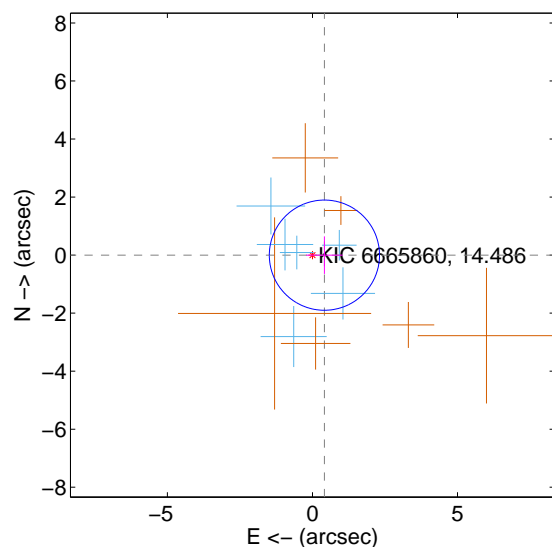
Supplemental centroid analysis for 006665860-01. Kepler magnitude: 14.49. Transit SNR 10.23

There are 6 quarters with good PRF difference image offsets

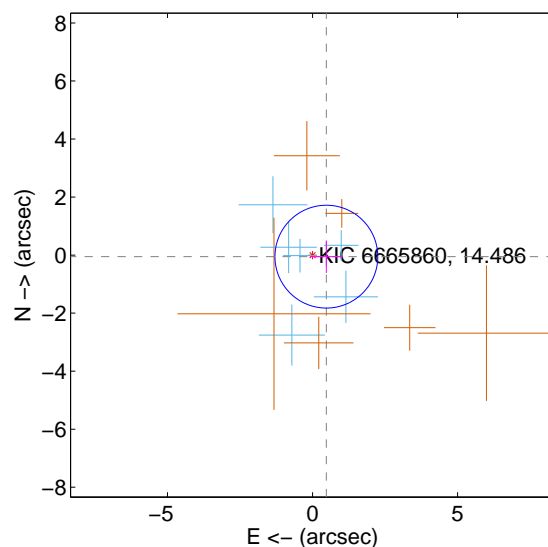
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.413 ± 0.633	0.65	-0.413 ± 0.632	-0.002 ± 0.646
PRF-fit source offset from KIC position	0.480 ± 0.591	0.81	-0.477 ± 0.566	-0.054 ± 0.559
photometric centroid source offset	2.38 ± 1.52	1.56	-1.66 ± 1.49	-1.71 ± 1.55

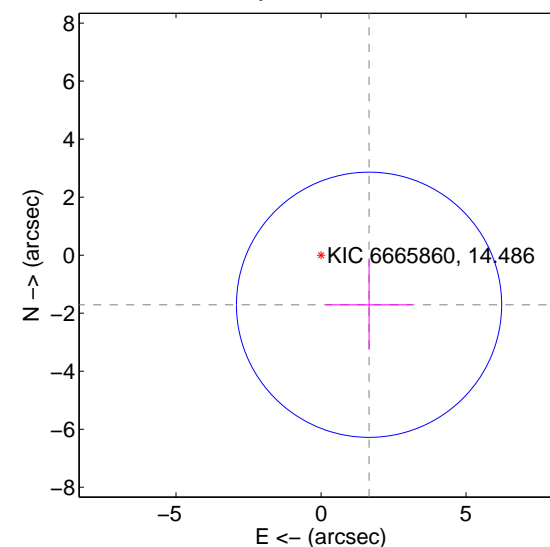
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

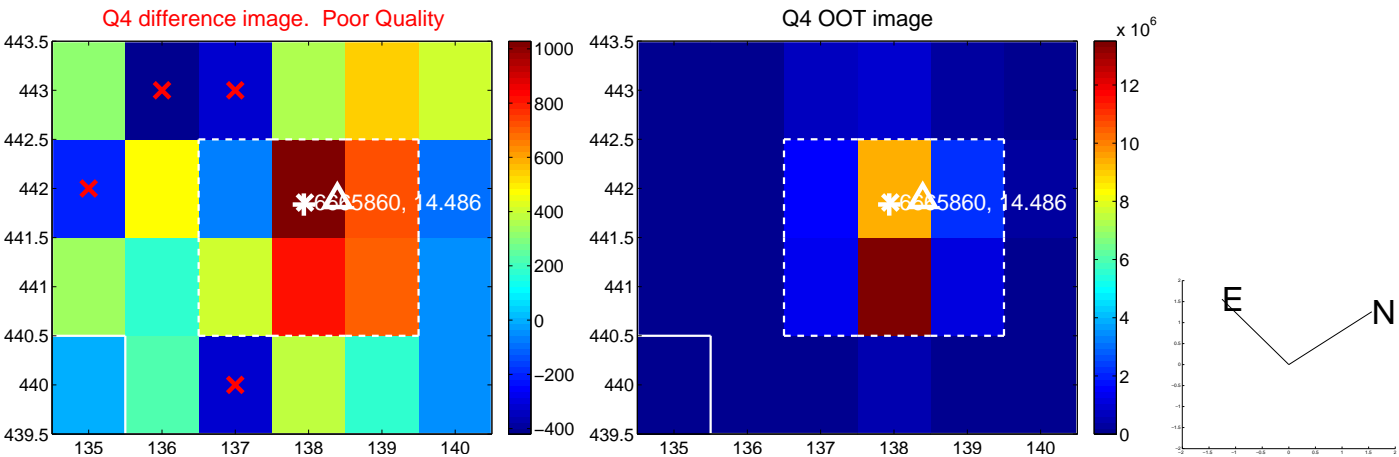
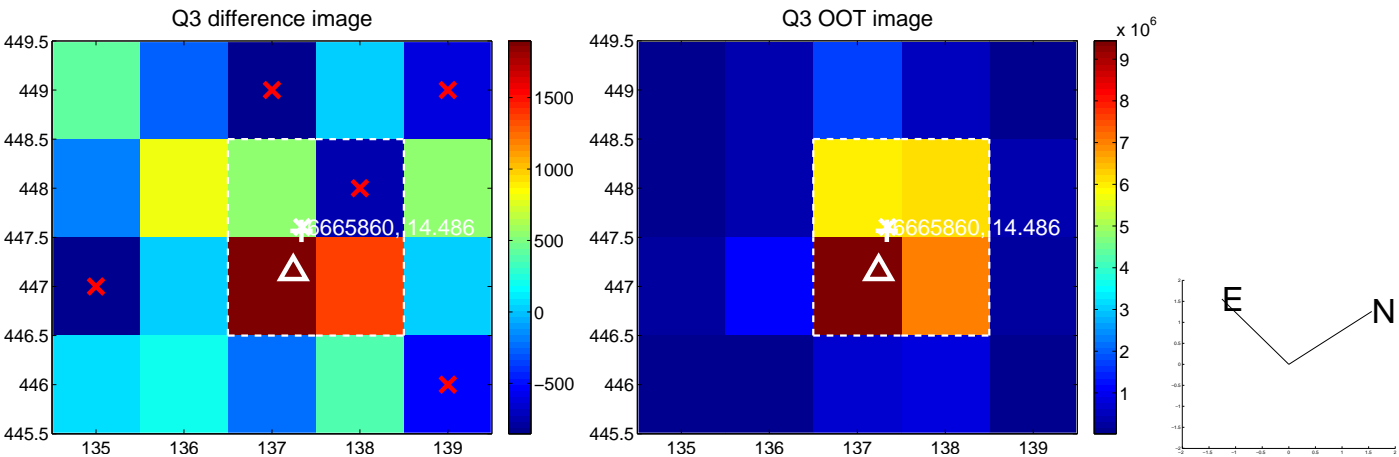
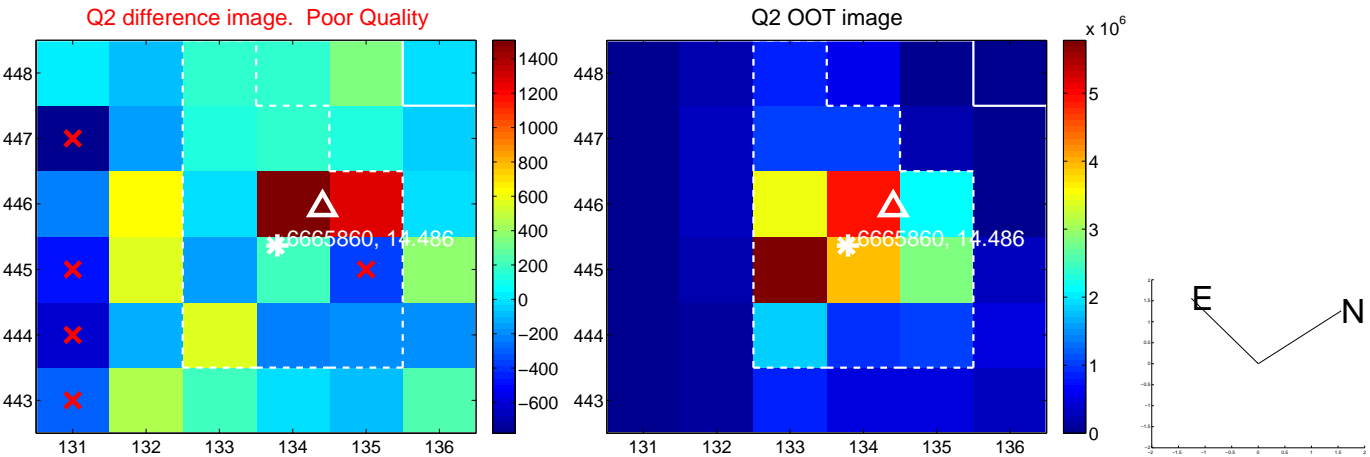
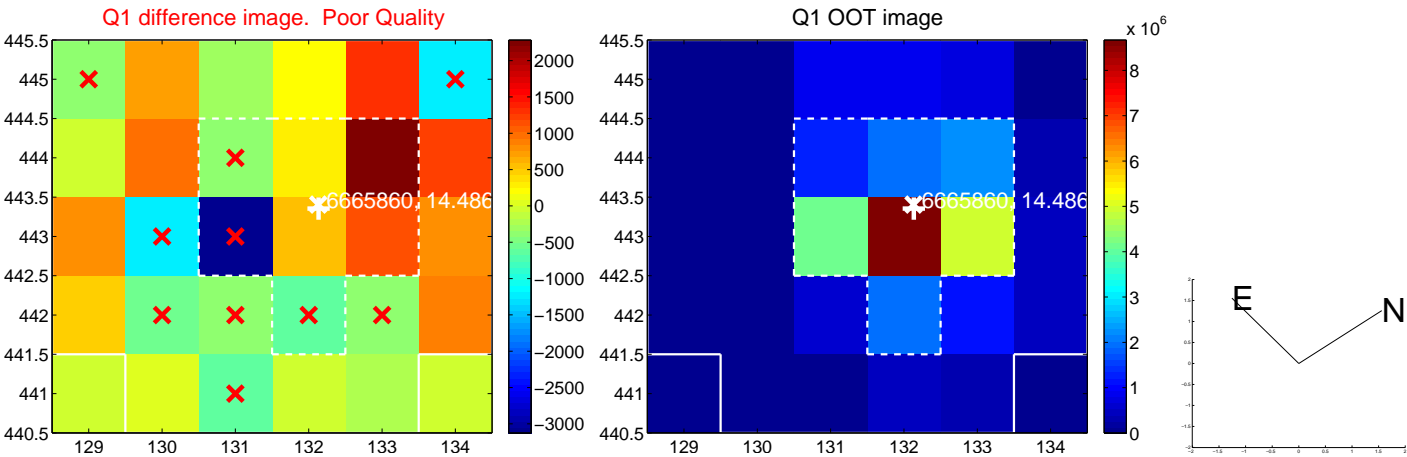


offset from photometric centroids

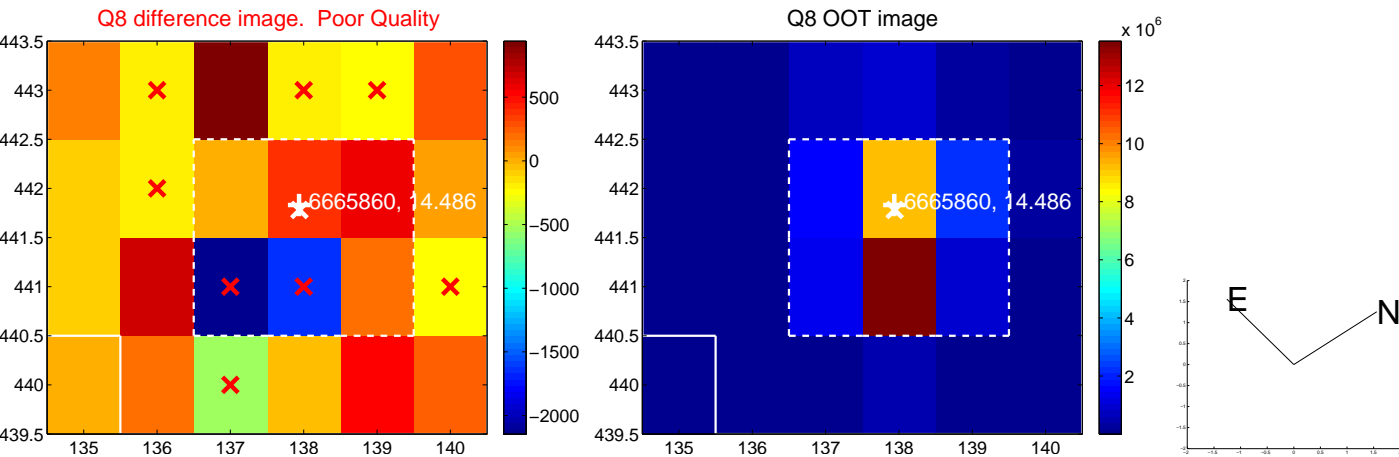
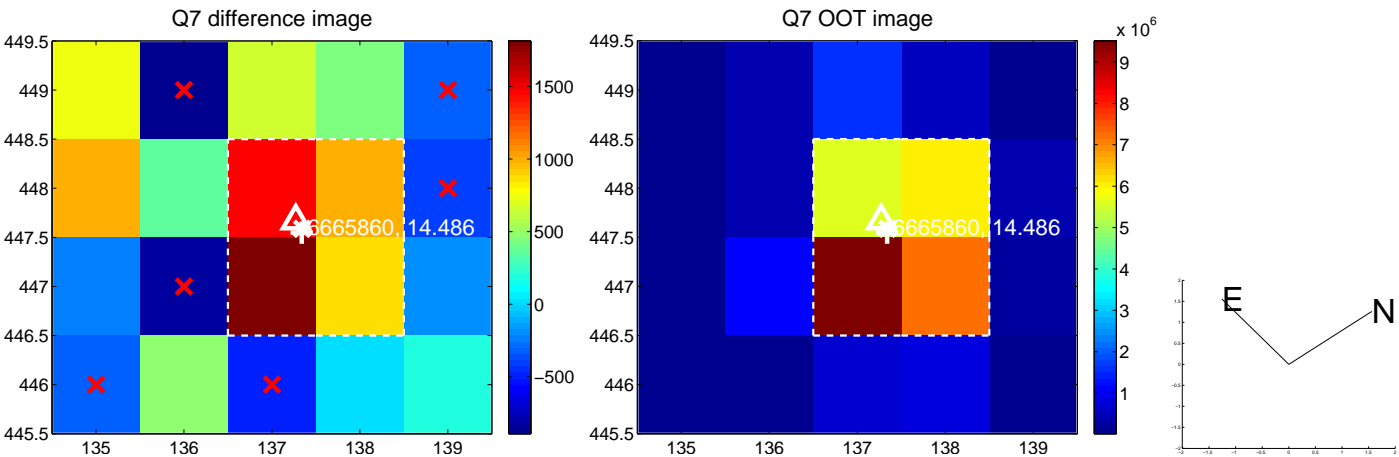
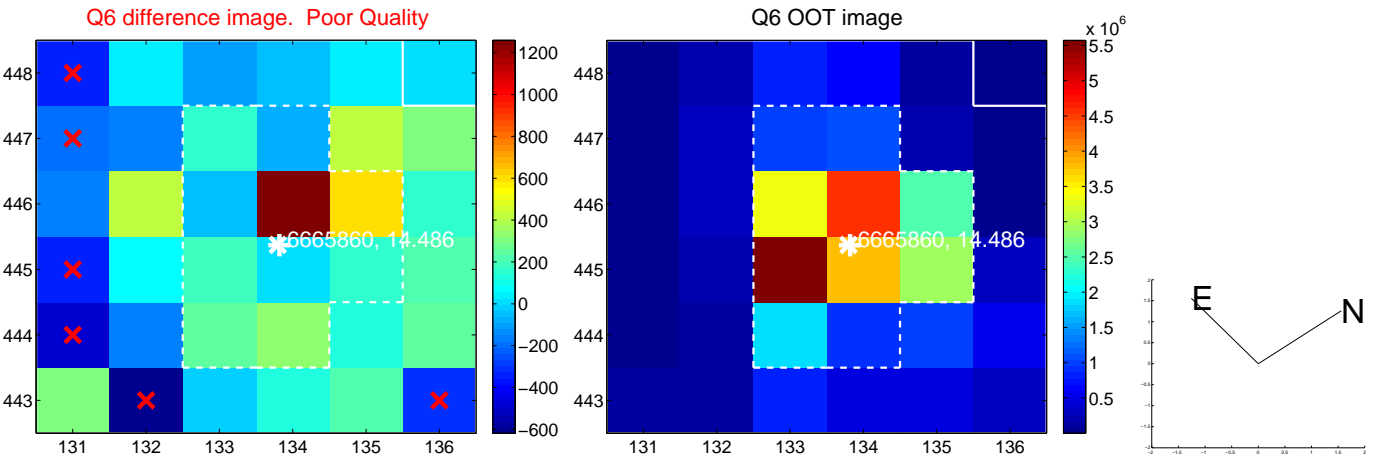
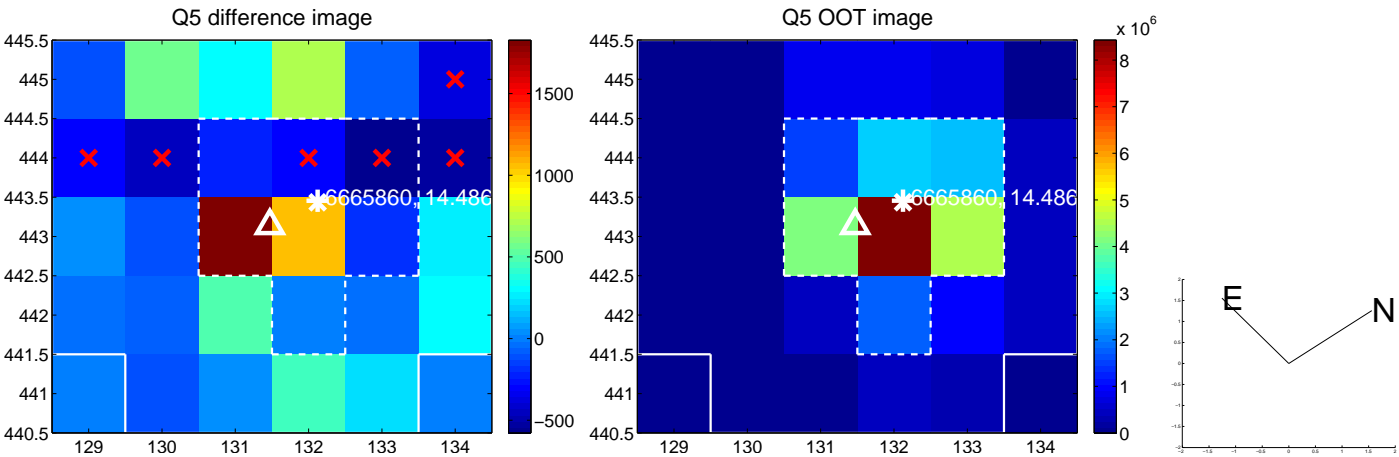


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

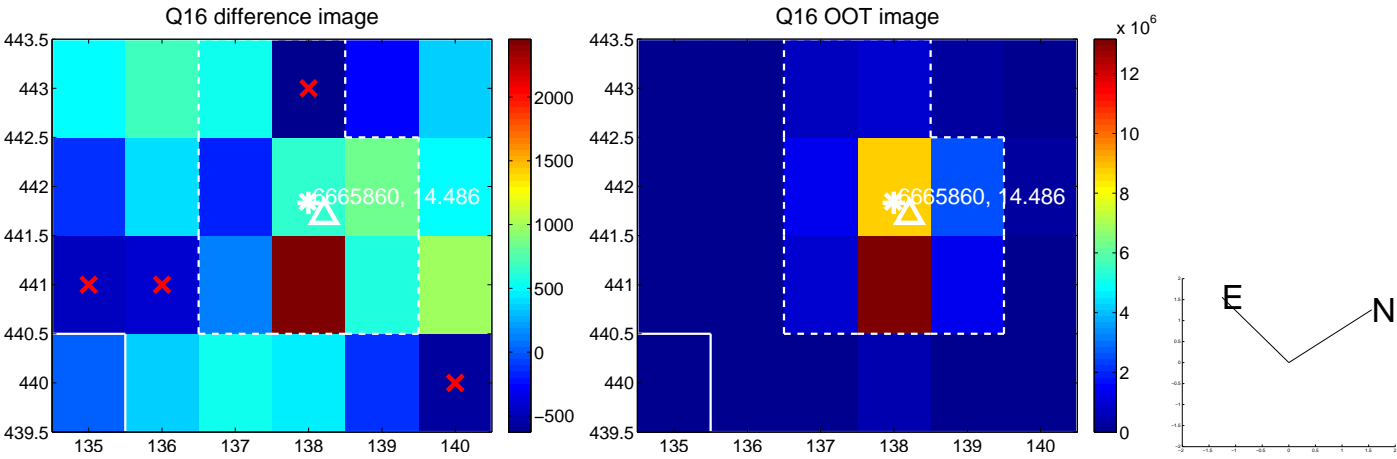
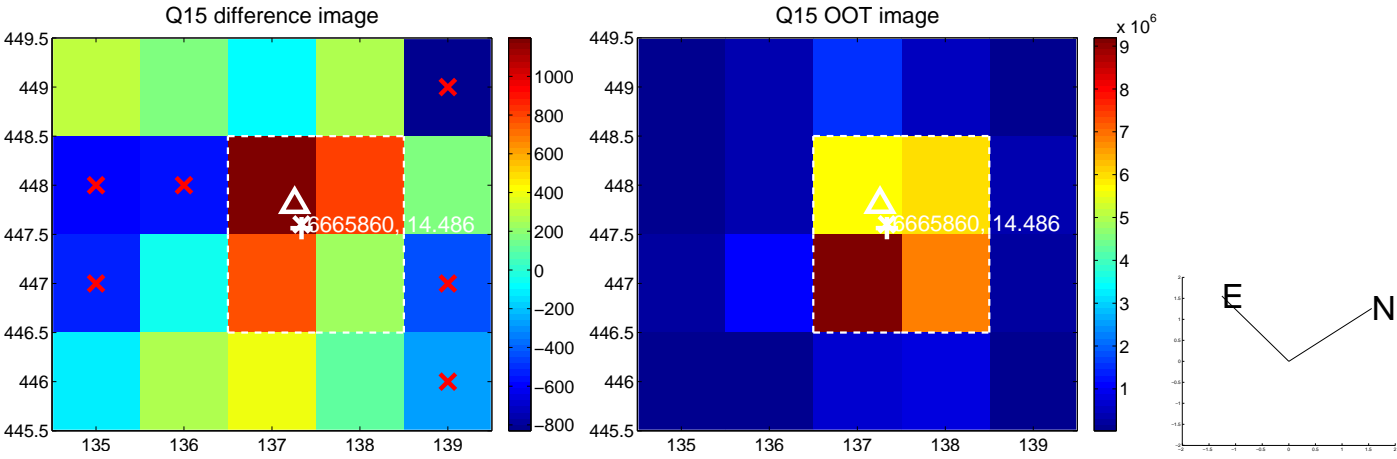
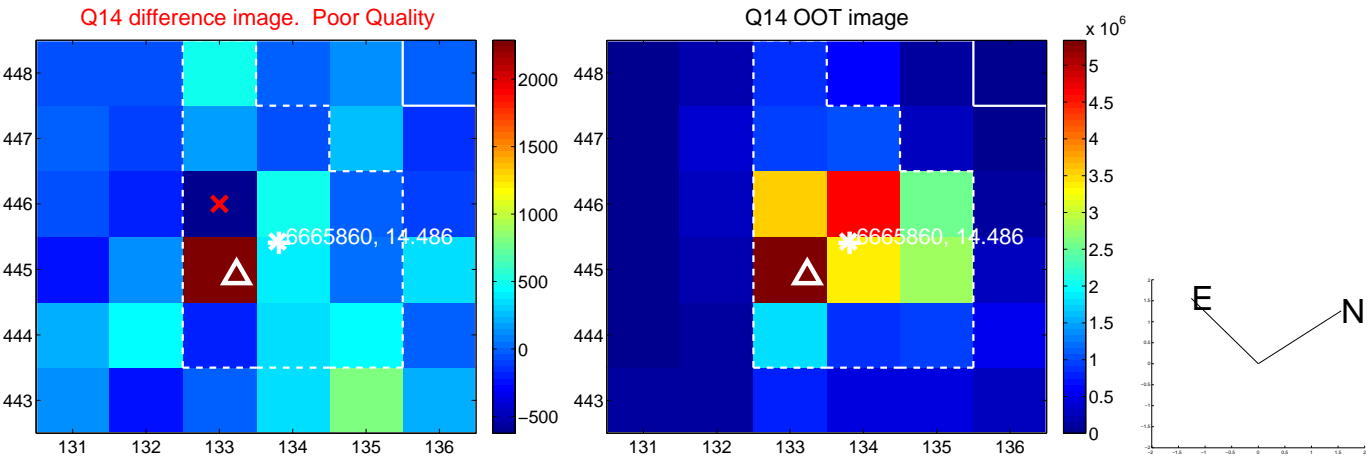
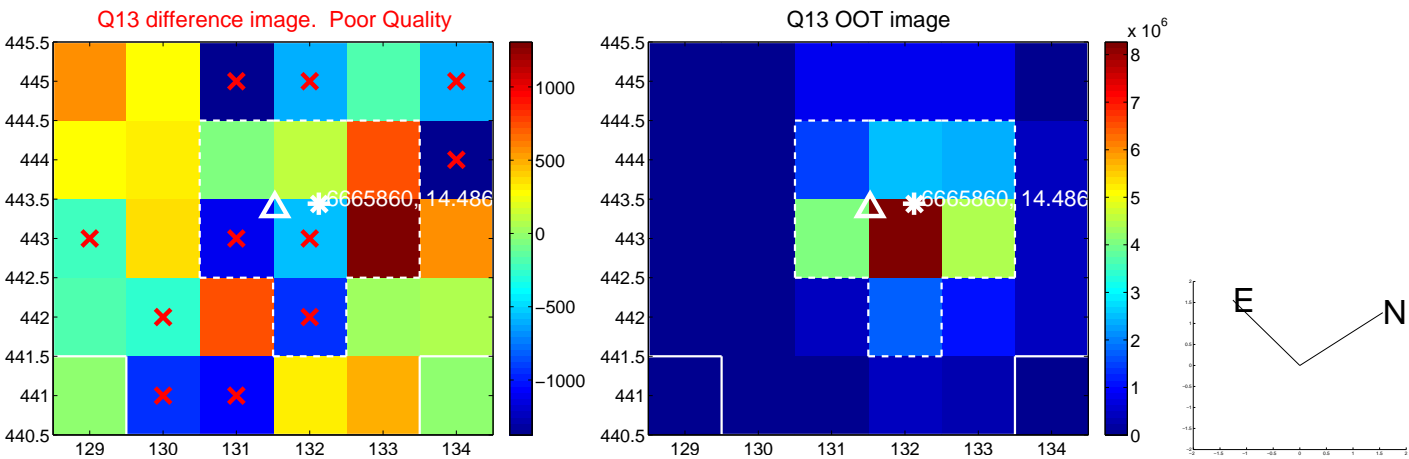
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



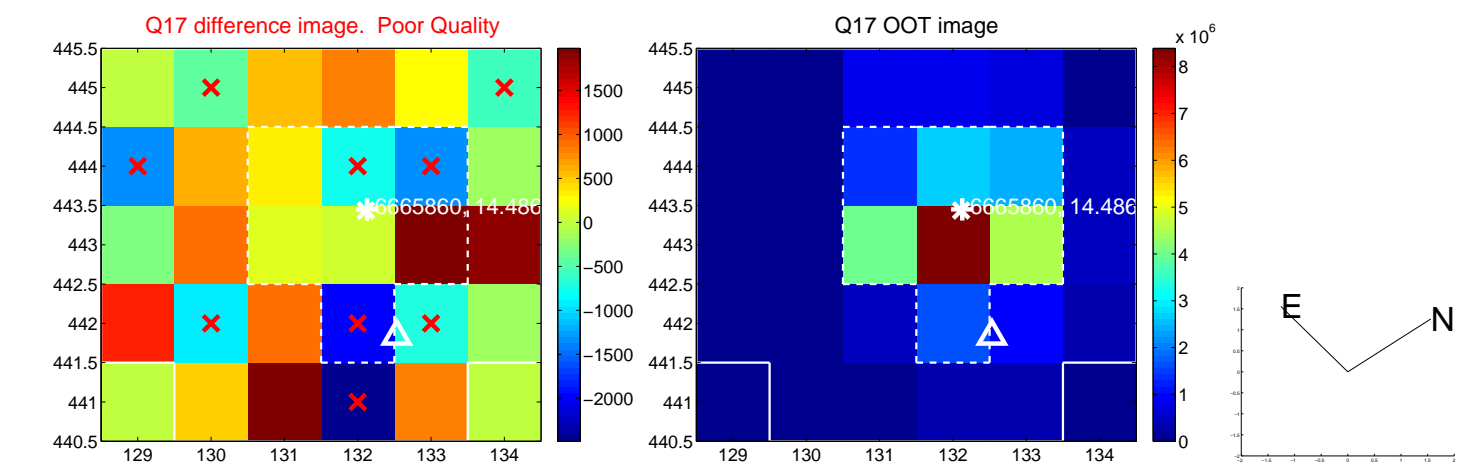
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



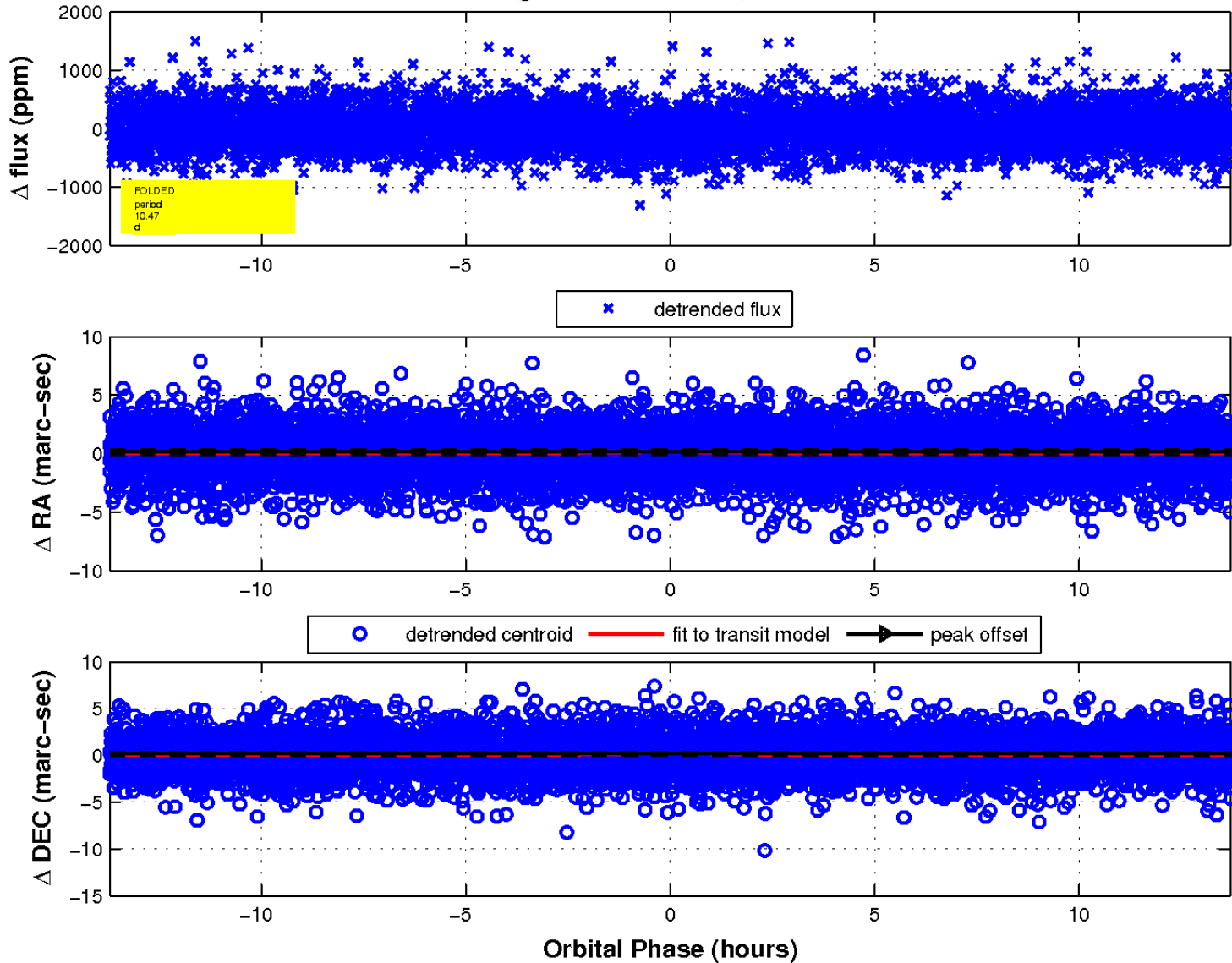
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

