

KIC 006664842

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})
006664842-01	OBS	6750.01	5.213923	135.716783	88.9	4.458	8.1	9.2	1.41	5529	1.90	493.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006664842-01	OBS	PC	0.79	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.

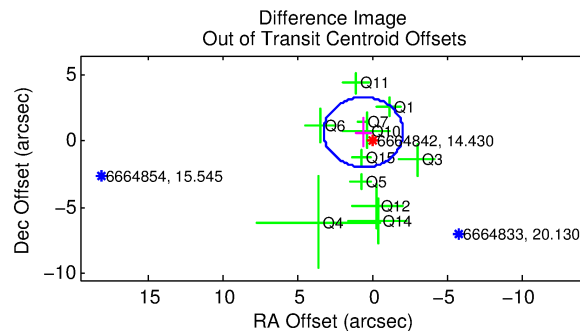
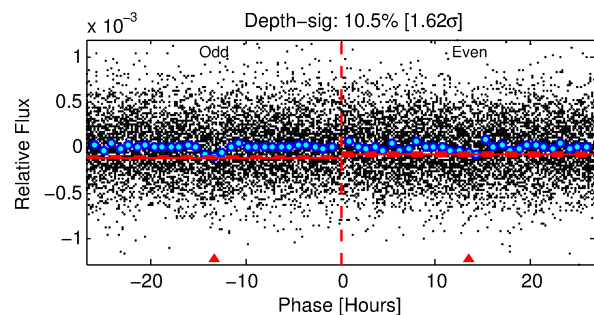
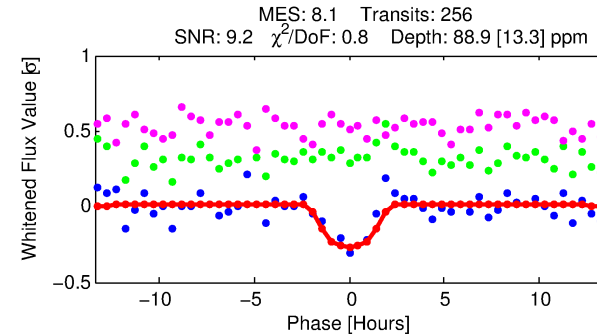
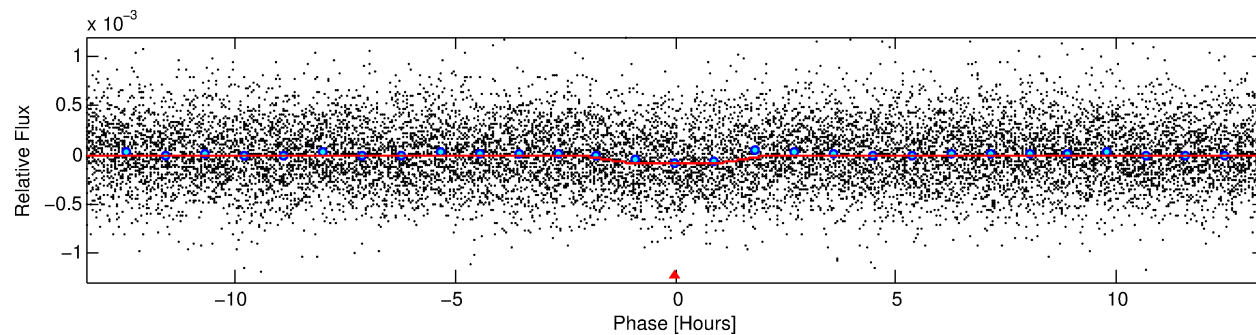
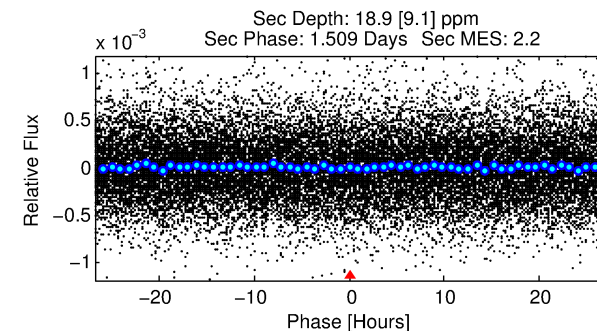
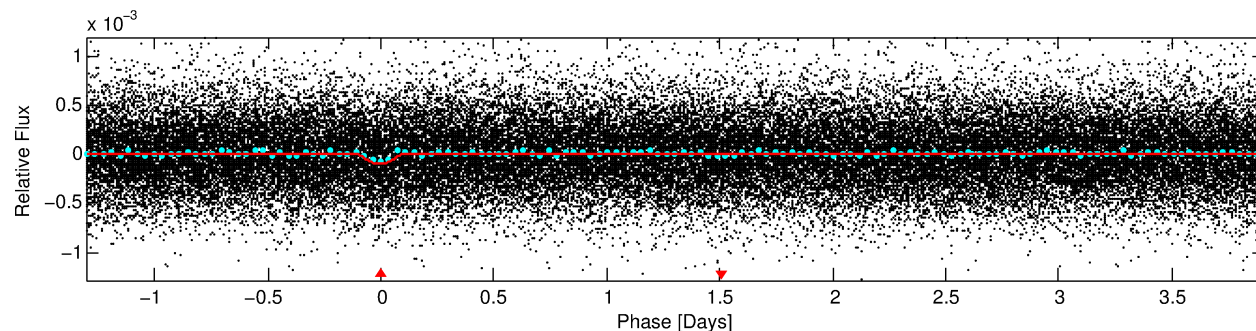
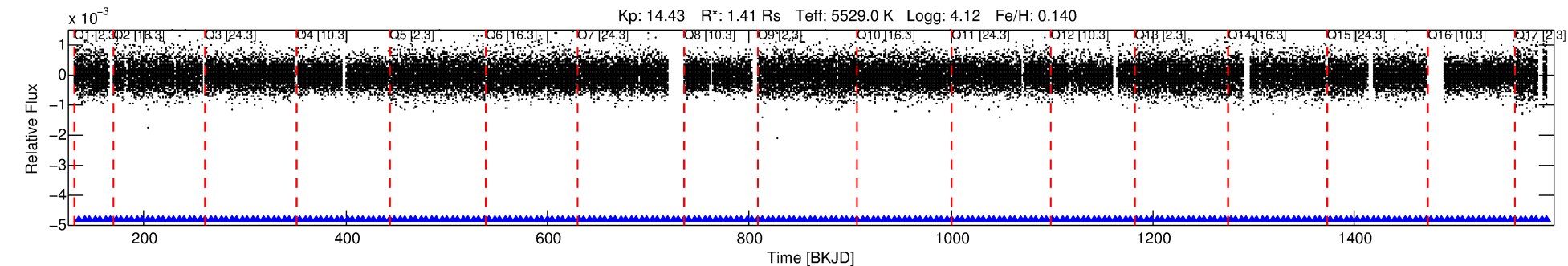
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006664842-01

No Significant Match Found

DV One-Page Summary

KIC: 6664842 Candidate: 1 of 1 Period: 5.214 d
KOI: K06750.01 Corr: 0.821



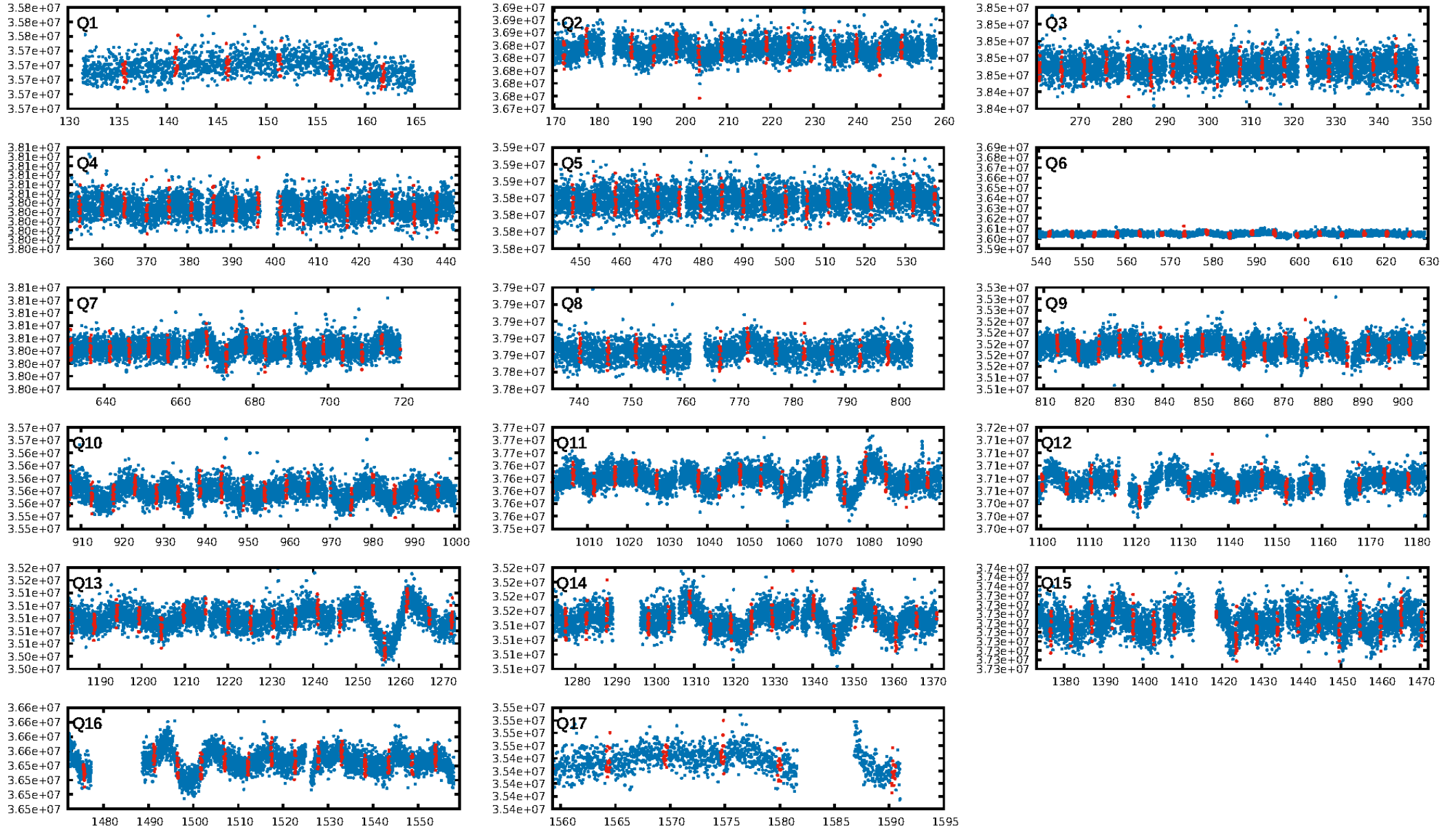
DV Fit Results:

Period = 5.21392 [0.00007] d
Epoch = 135.7168 [0.0105] BKJD
Rp/R* = 0.0124 [0.0014]
a/R* = 2.33 [0.53]
b = 0.98 [0.01]
Seff = 493.35 [181.60]
Teff = 1202 [111] K
Rp = 1.90 [0.46] Re
a = 0.0582 [0.0128] AU
Ag = 9.71 [6.22] [1.40σ]
Teffp = 3280 [436] K [4.62σ]

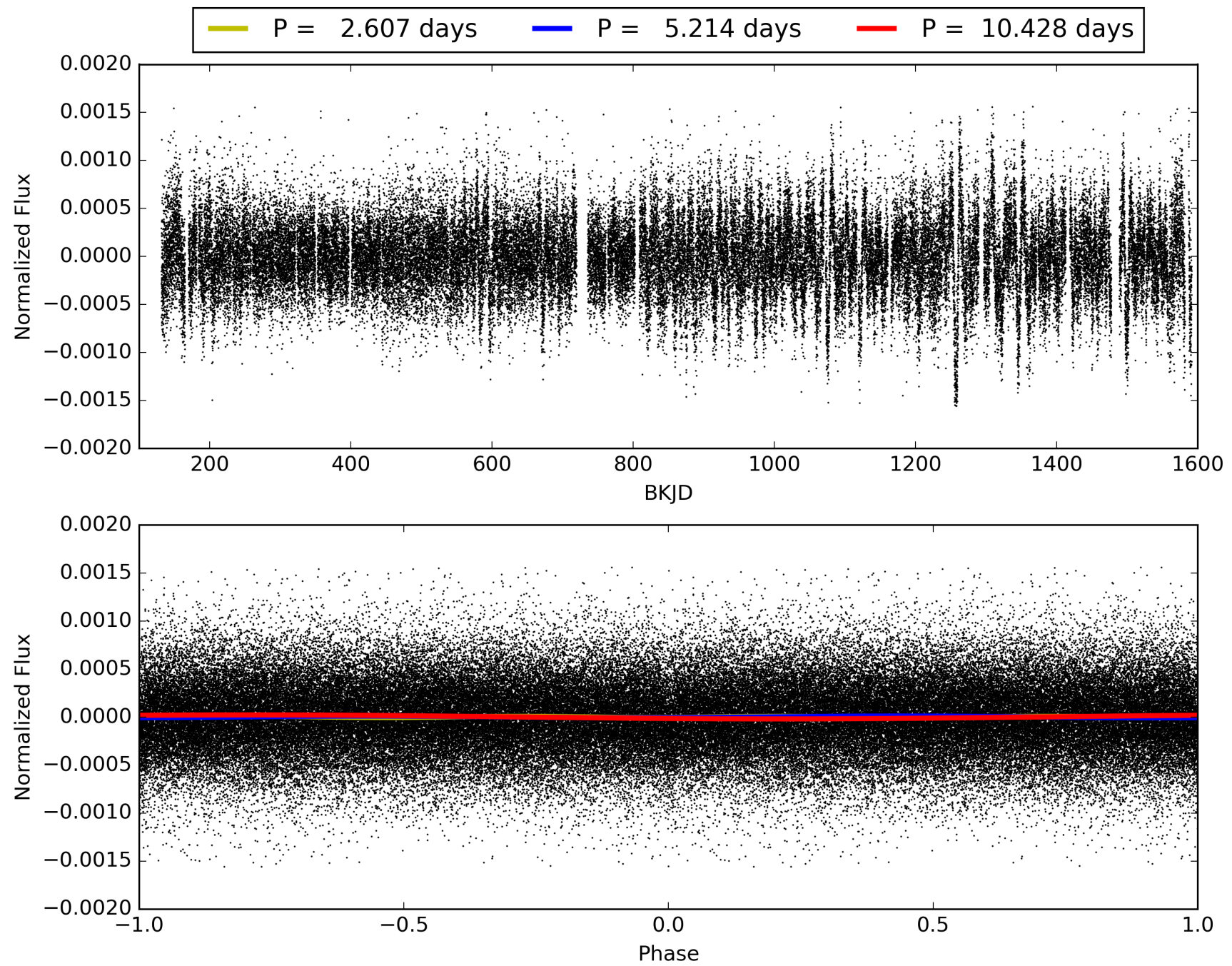
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.72e-16
RollingBand-fgt: 1.00 [245/245]
GhostDiagnostic-chr: 4.405
Centroid-sig: 91.3%
Centroid-so: 0.456 arcsec [0.30σ]
OotOffset-rm: 0.888 arcsec [1.01σ]
KicOffset-rm: 0.833 arcsec [1.01σ]
OotOffset-st: 3/4/2/2 [11]
KicOffset-st: 3/4/2/2 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006664842-01, PDC Light Curves

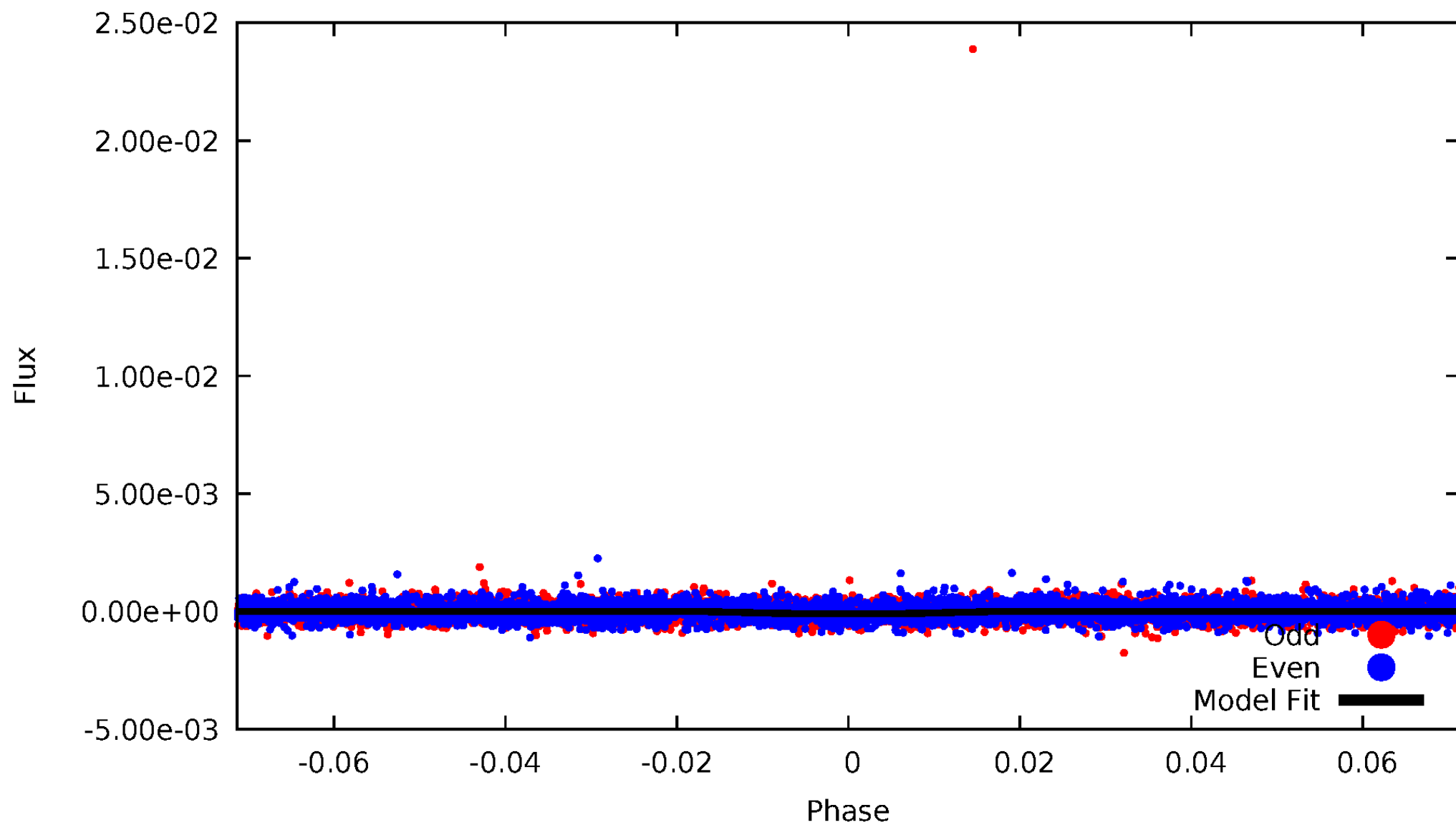


TCE 006664842-01



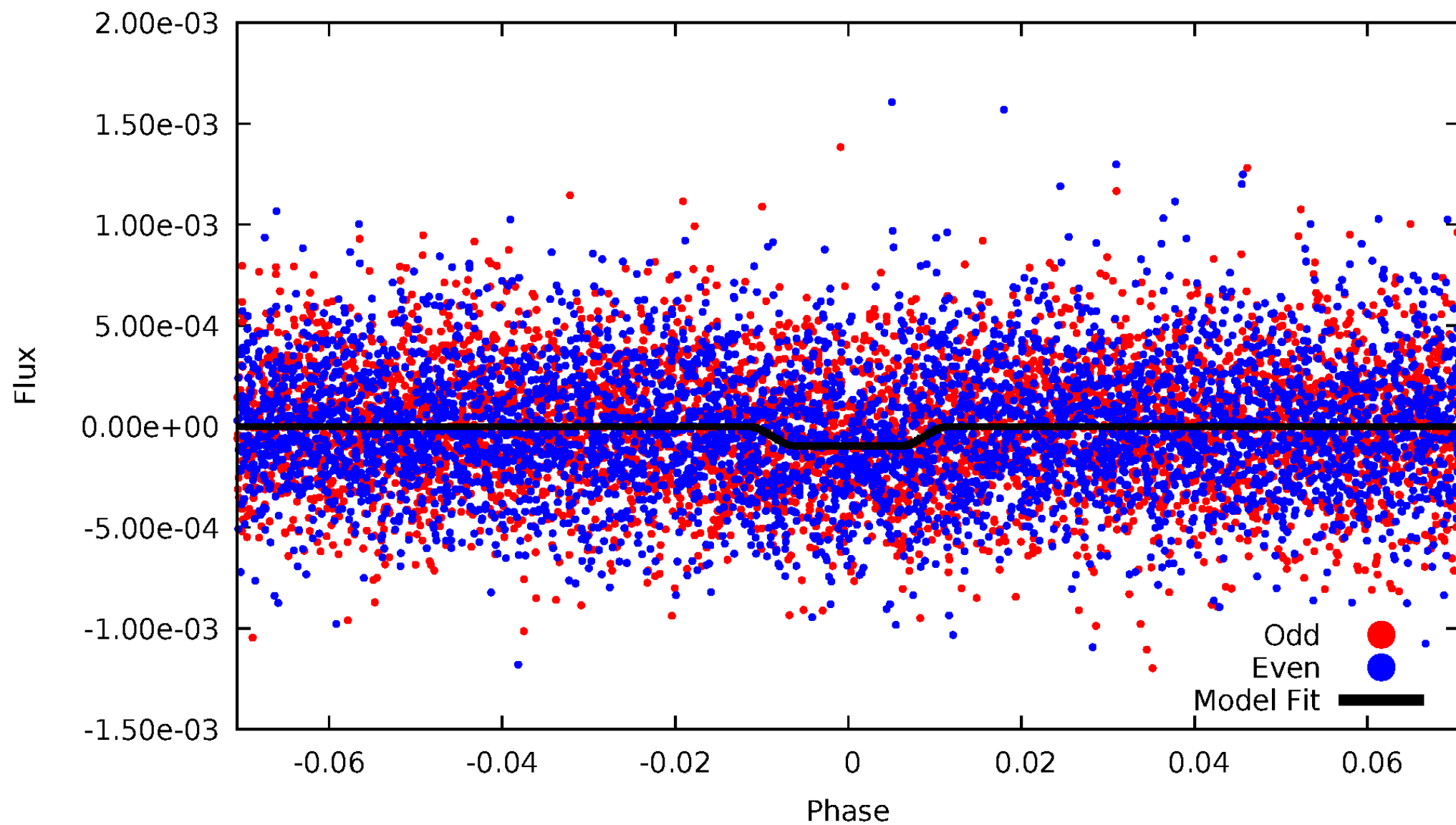
DV Odd/Even

TCE 006664842-01



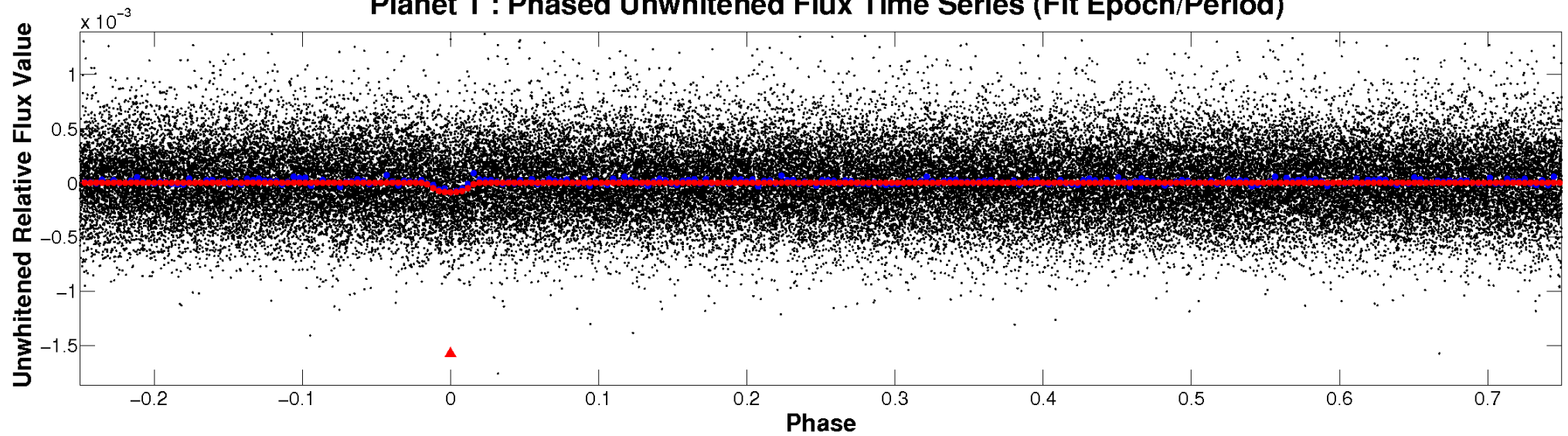
ALT Odd/Even

TCE 006664842-01

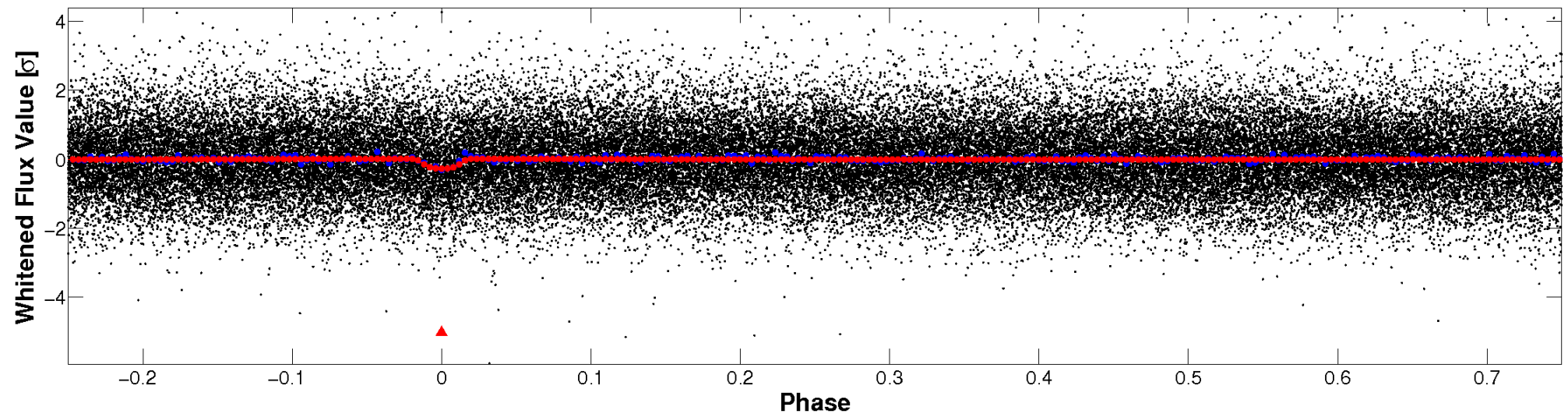


Non-Whitened Vs. Whitened Light Curve

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

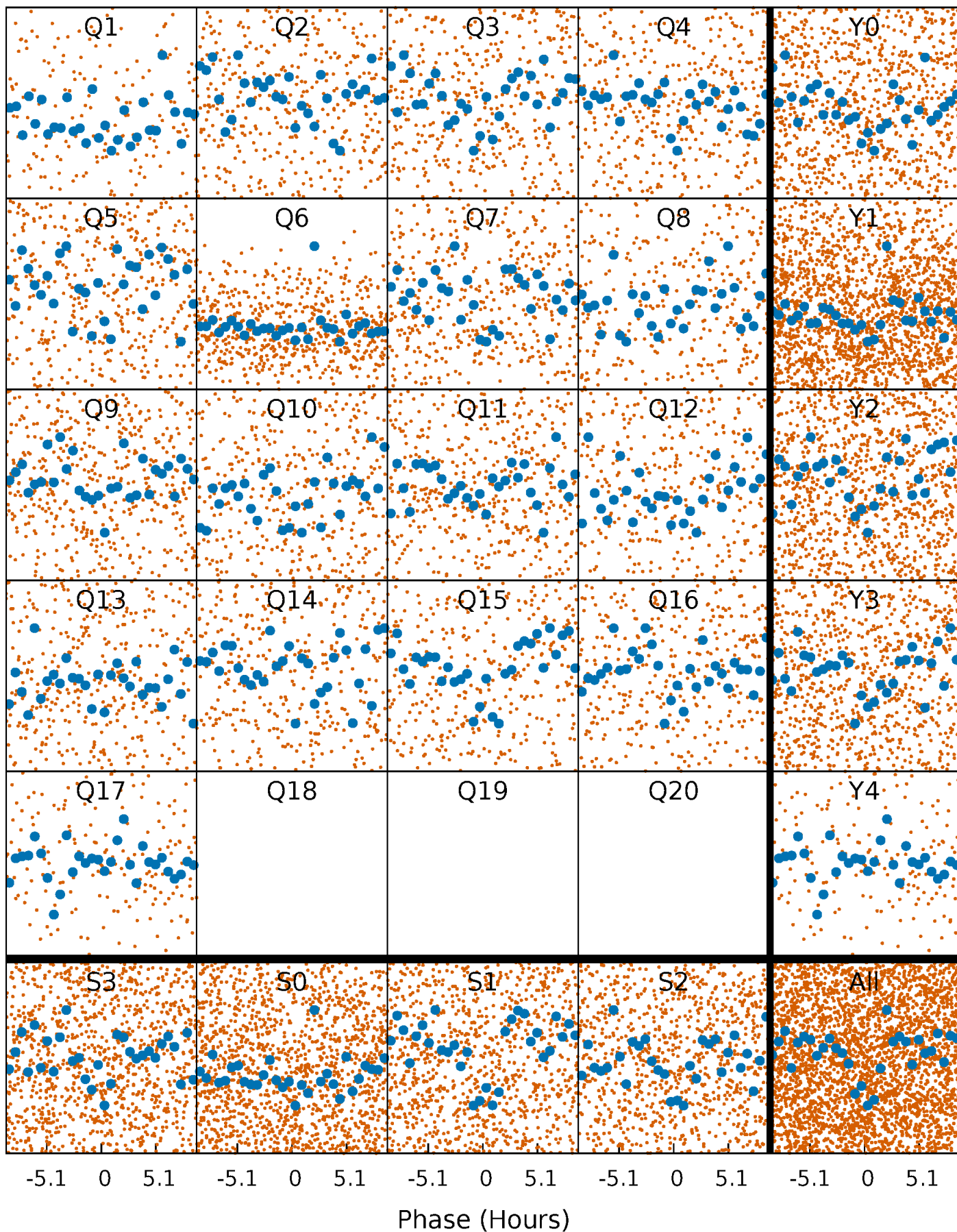


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



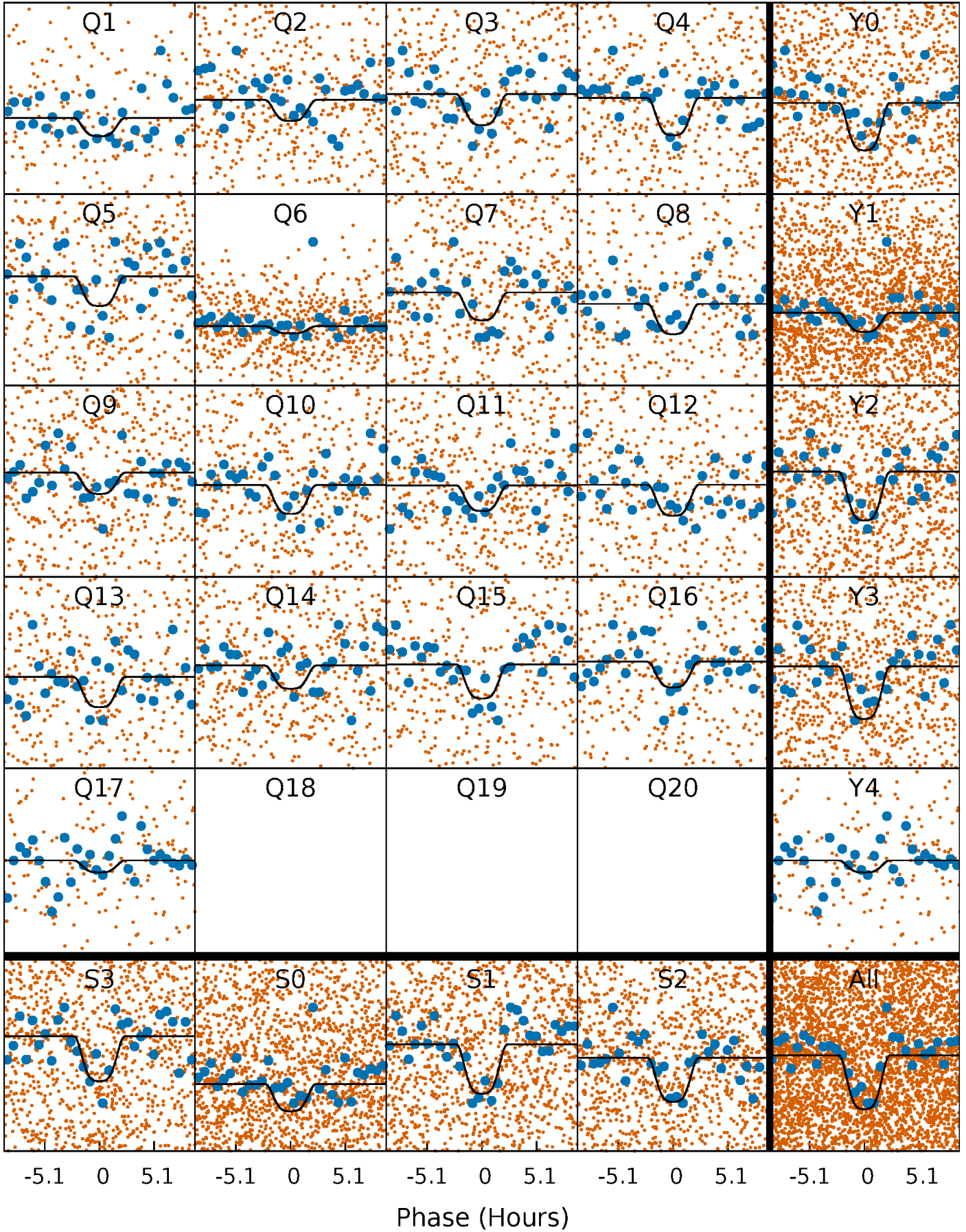
PDC Quarter-Phased Transit Curves

TCE 006664842-01 P= 5.213923 Days $T_0=135.716783$ (BKJD)



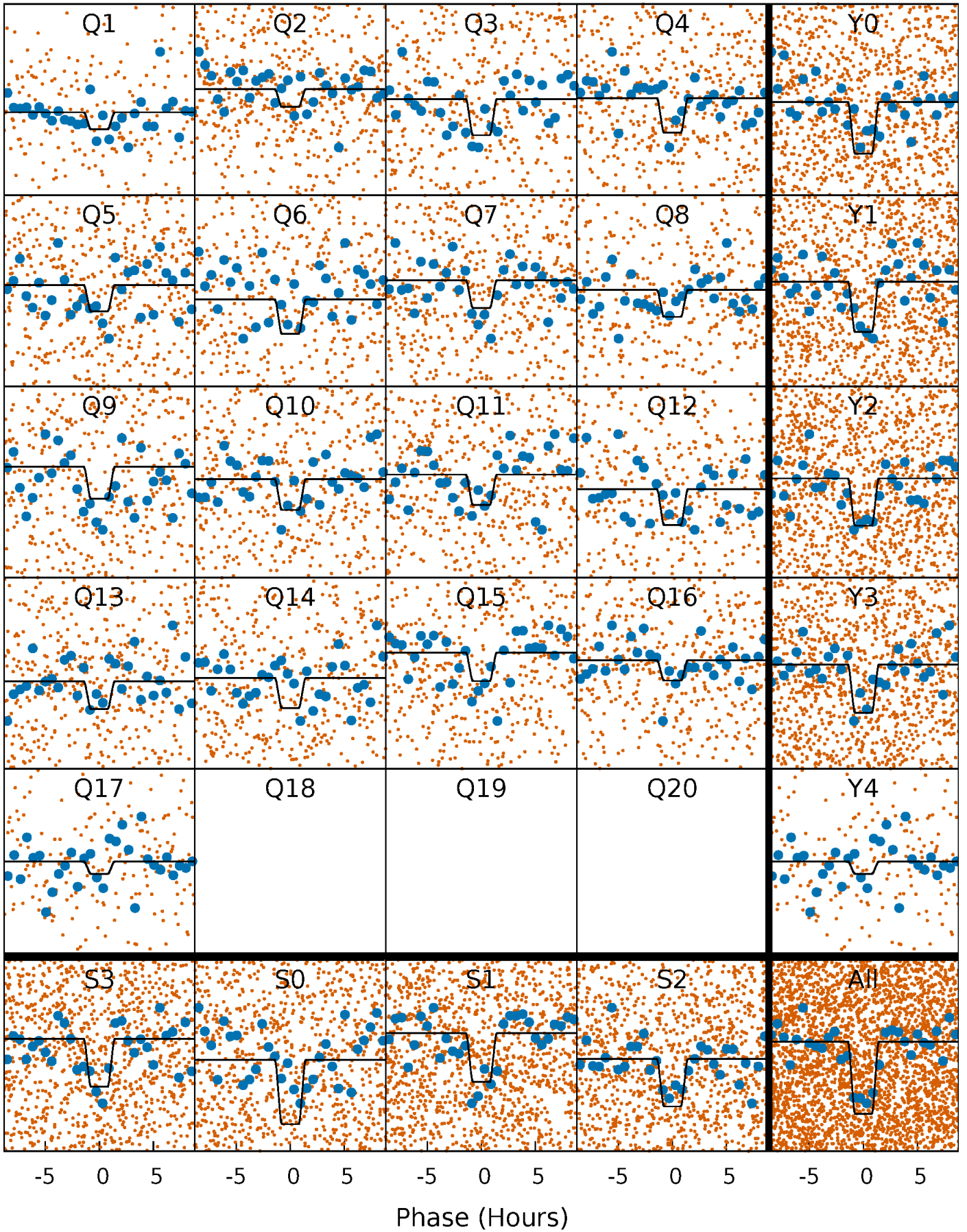
DV Quarter-Phased Transit Curves

TCE 006664842-01 P= 5.213923 Days $T_0=135.716783$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

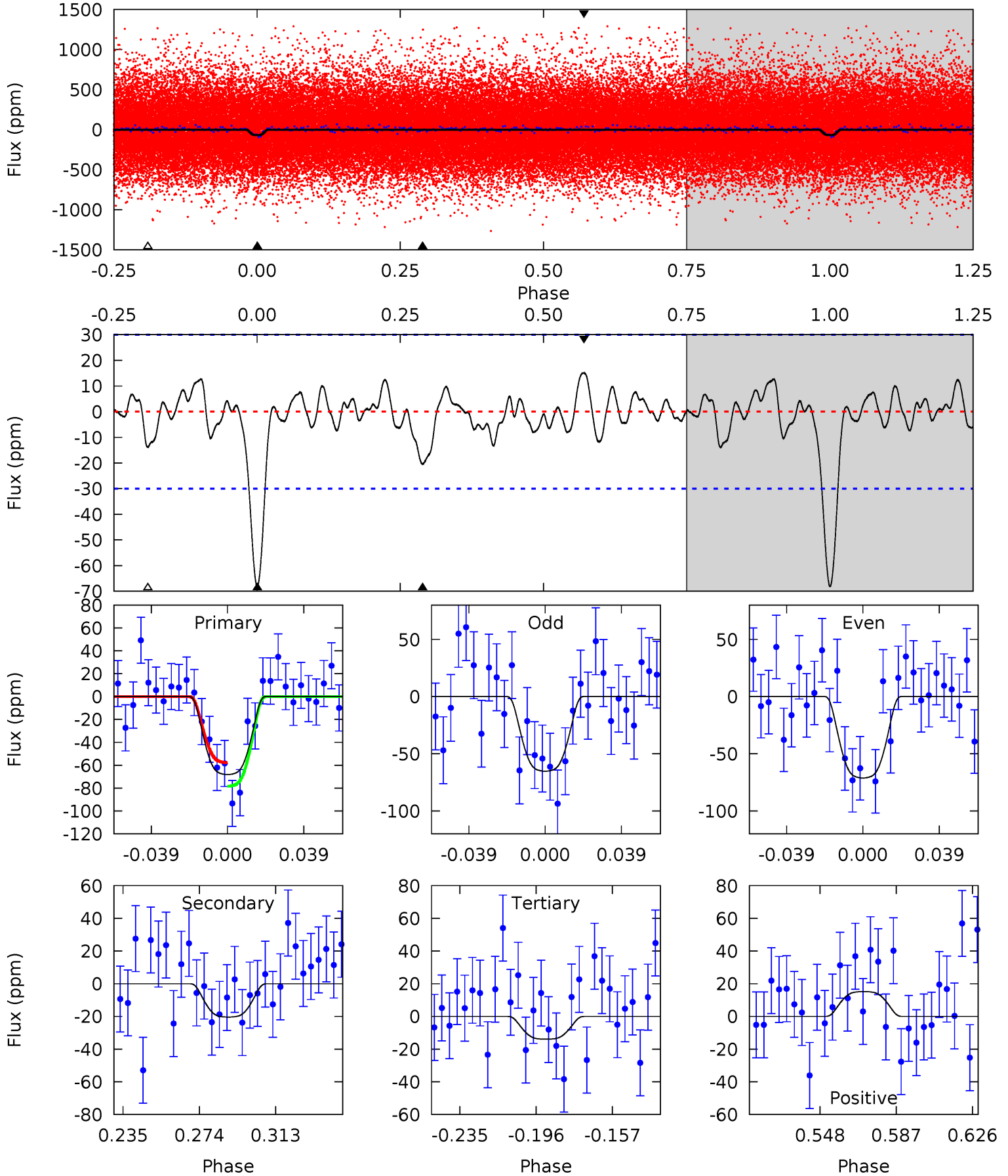
TCE 006664842-01 P= 5.213927 Days $T_0=135.721334$ (BKJD)



DV Model-Shift Uniqueness Test

006664842-01, P = 5.213923 Days, E = 130.502860 Days

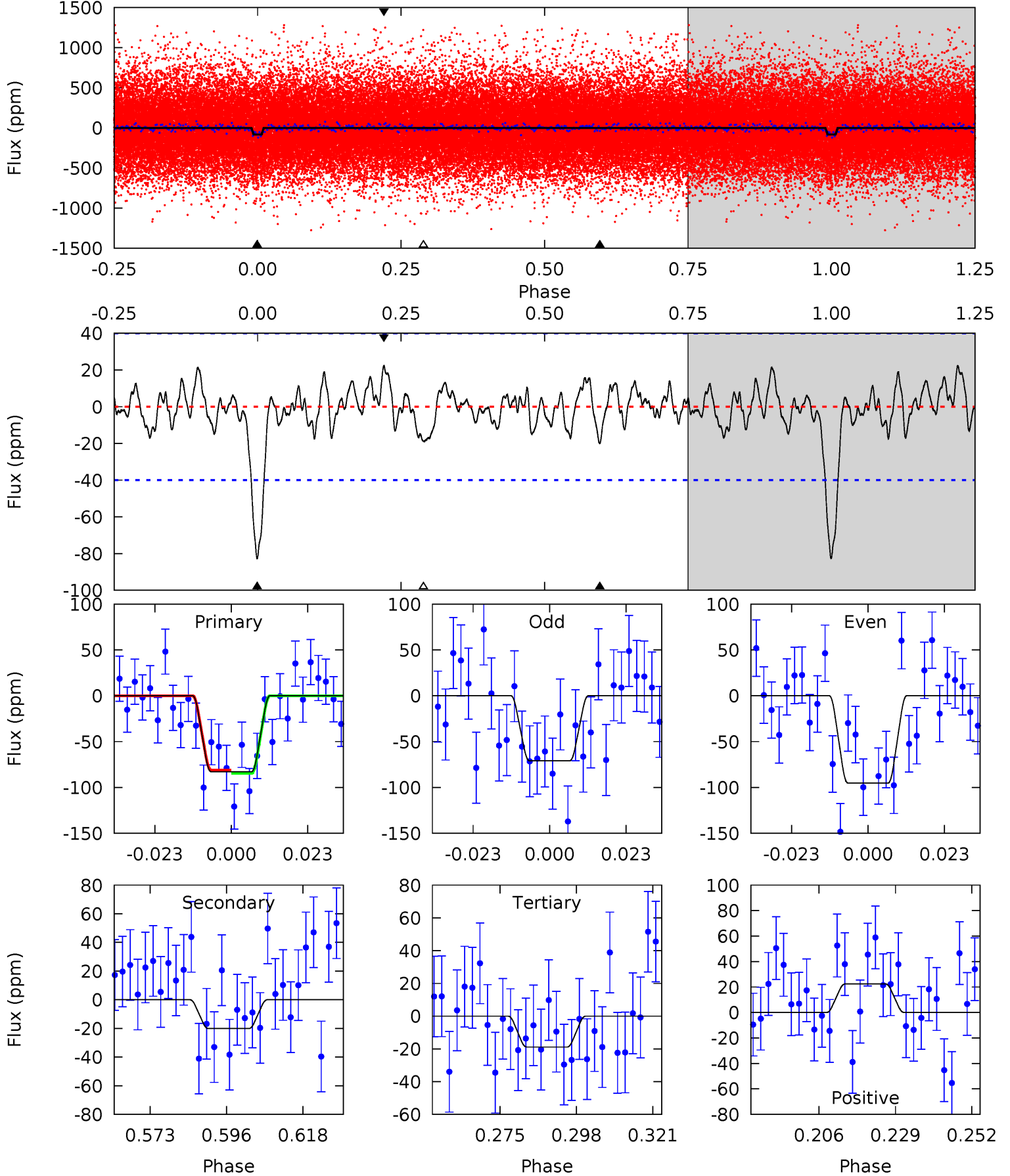
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	3.24	2.21	2.41	4.76	2.06	0.93	8.61	8.41	1.03	0.83	0.47	0.84	0.18	1.64



Alt Model-Shift Uniqueness Test

006664842-01, P = 5.213927 Days, E = 130.507407 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	2.45	2.30	2.73	4.86	2.27	1.01	7.80	7.37	0.15	-0.28	1.48	0.92	0.21	0.20



Stellar Parameters For KIC 006664842

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5529^{+82}_{-71}	$4.123^{+0.217}_{-0.108}$	$0.140^{+0.150}_{-0.100}$	$1.412^{+0.223}_{-0.307}$	$0.965^{+0.075}_{-0.050}$	$0.483^{+0.566}_{-0.153}$
	+1%/-1%	+5%/-3%	+107%/-71%	+16%/-22%	+8%/-5%	+117%/-32%
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 006664842-01 / KOI 6750.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 6	$1.87^{+0.32}_{-0.30}$	1670^{+83}_{-111}	3713^{+237}_{-247}	11^{+6}_{-4}
Alt.	-20 ± 8	$1.48^{+0.28}_{-0.26}$	1672^{+81}_{-100}	4037^{+346}_{-373}	17^{+11}_{-8}

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 $A_{obs} \gg 1.0$

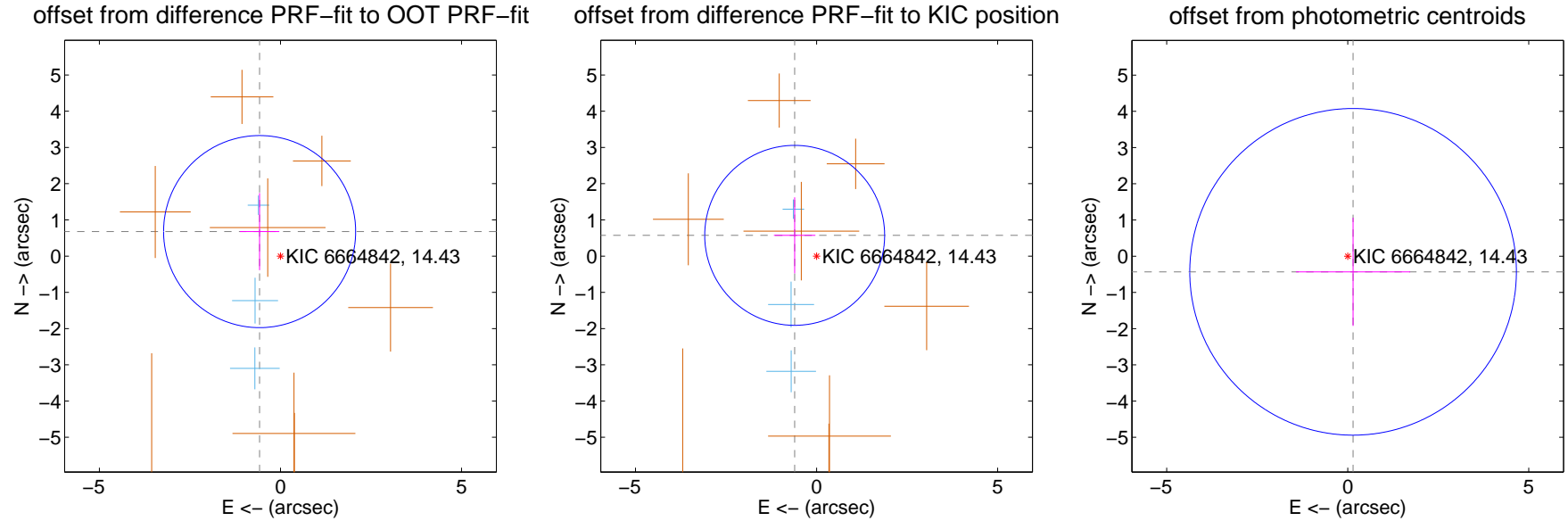
DV Centroid Data

Supplemental centroid analysis for 006664842-01. Kepler magnitude: 14.43. Transit SNR 9.24

There are 3 quarters with good PRF difference image offsets

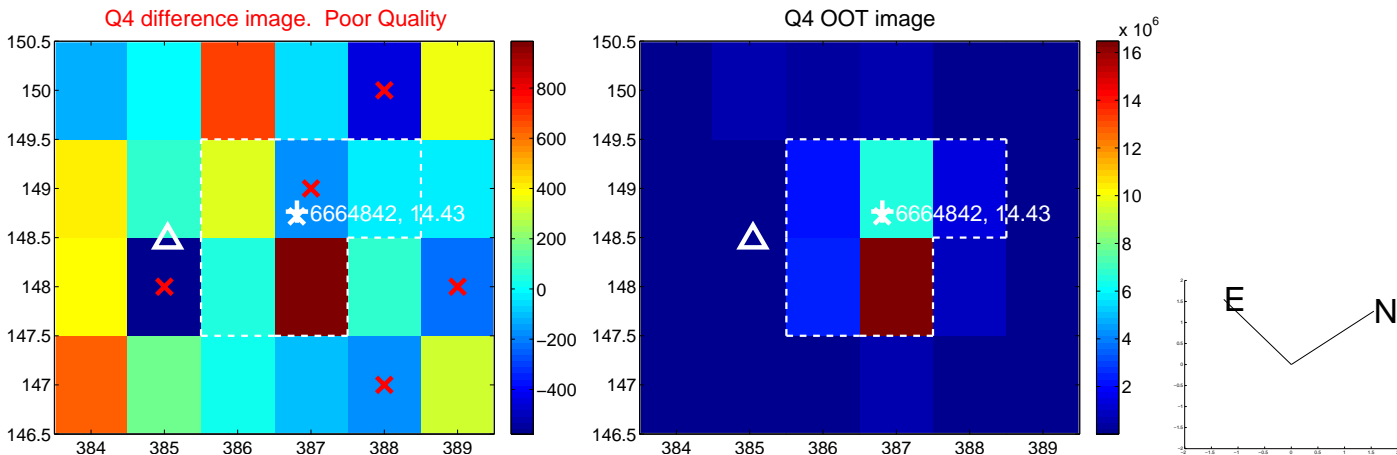
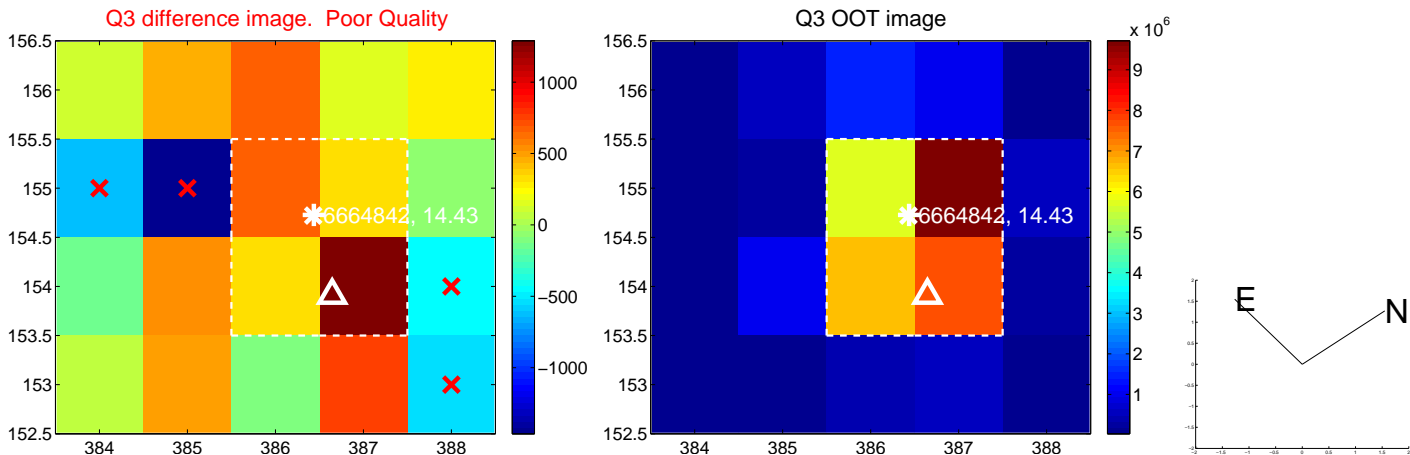
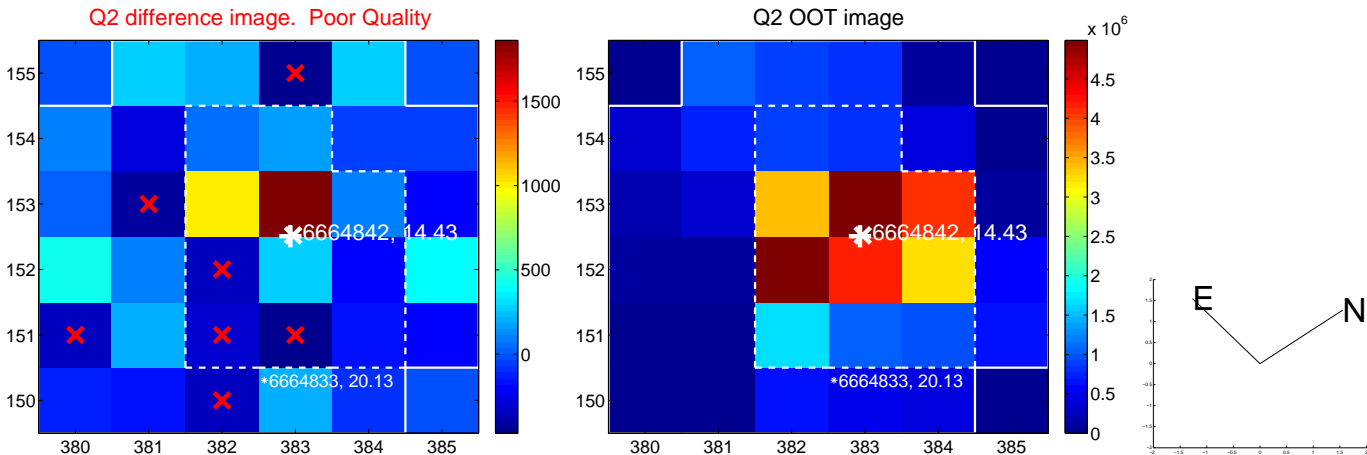
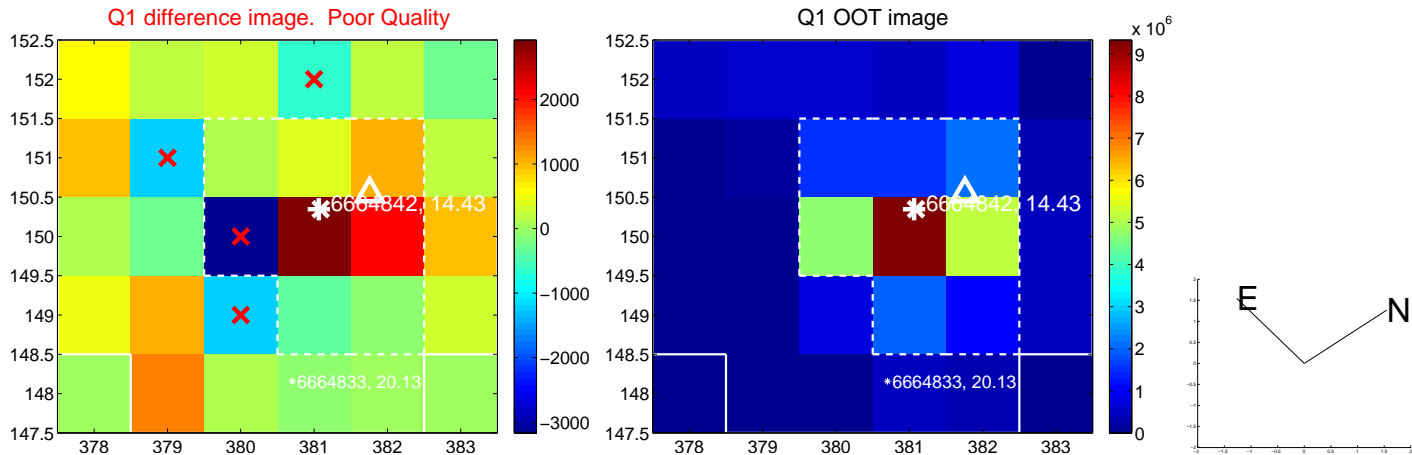
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.888 ± 0.884	1.01	0.575 ± 0.544	0.677 ± 1.064
PRF-fit source offset from KIC position	0.833 ± 0.828	1.01	0.605 ± 0.573	0.573 ± 1.050
photometric centroid source offset	0.46 ± 1.50	0.30	-0.15 ± 1.58	-0.43 ± 1.49

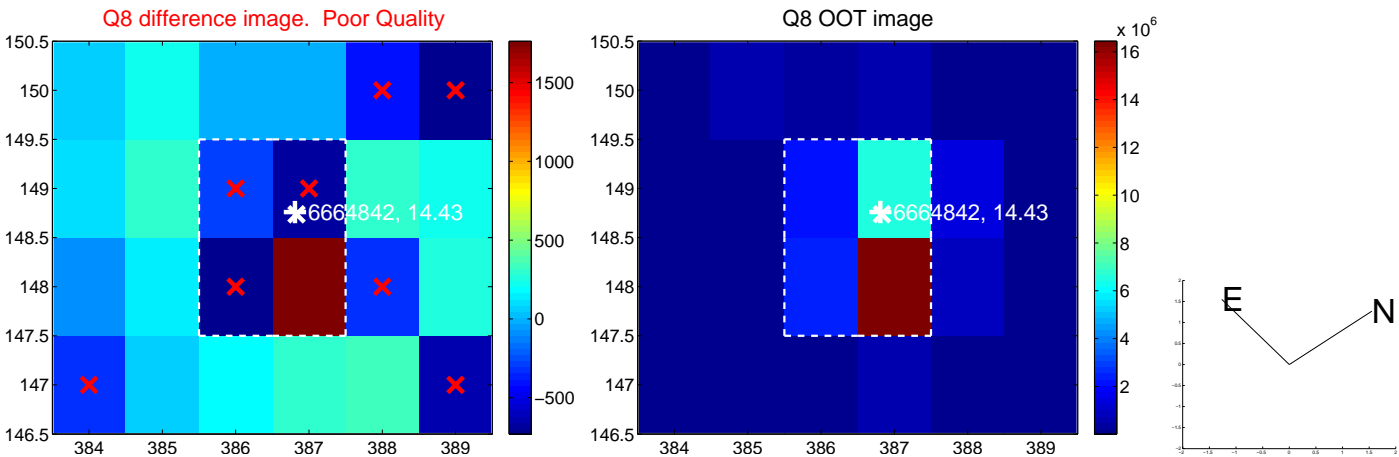
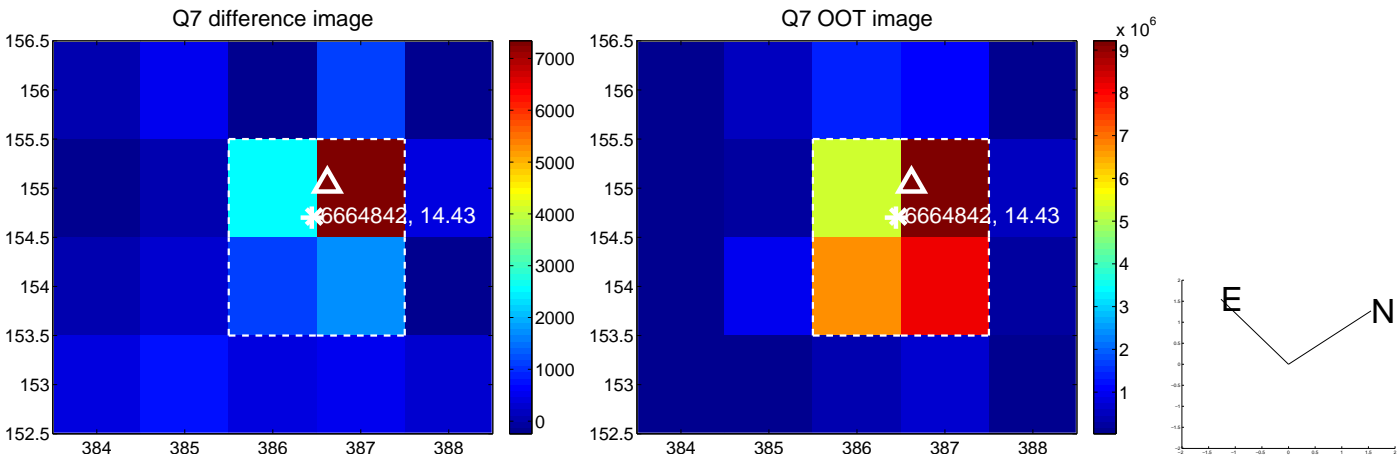
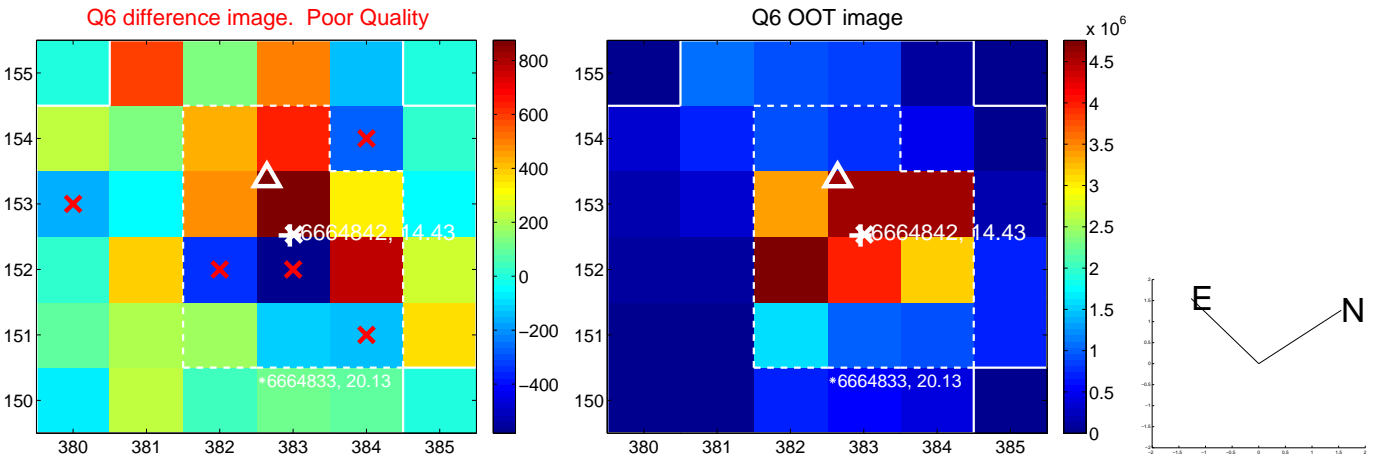
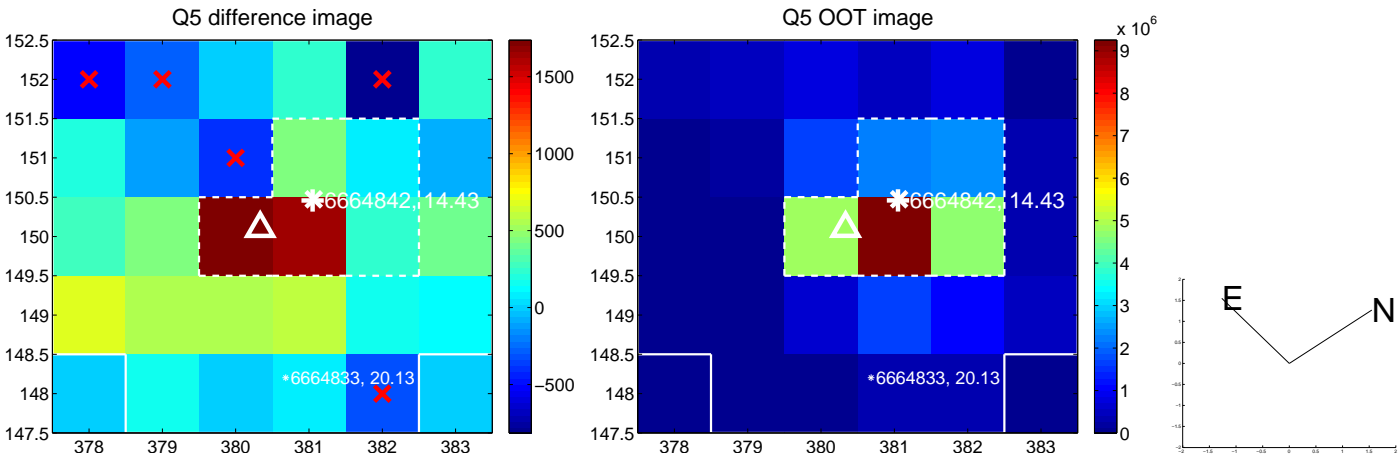


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

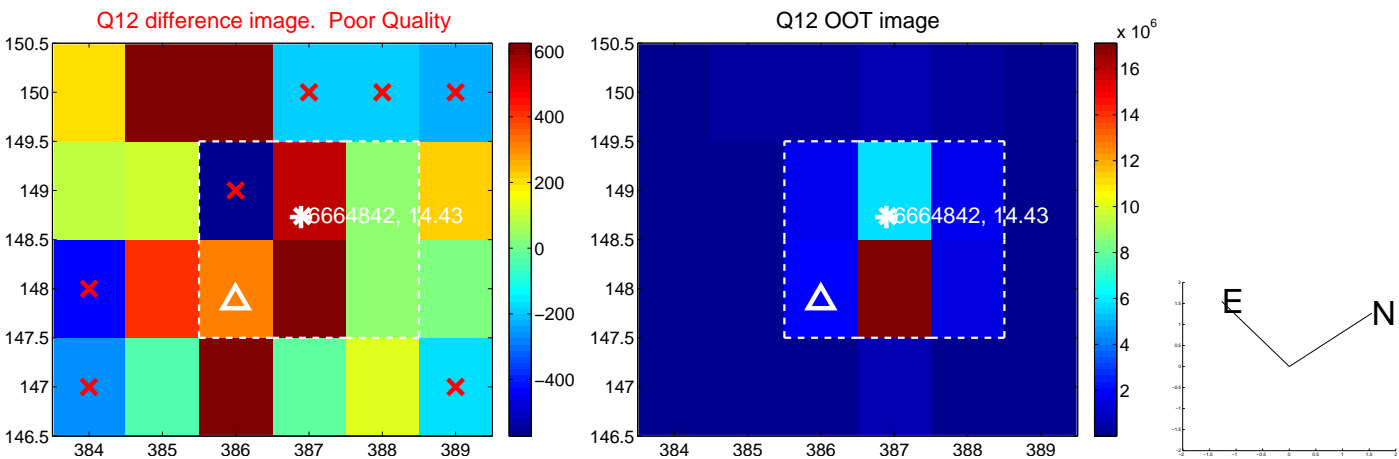
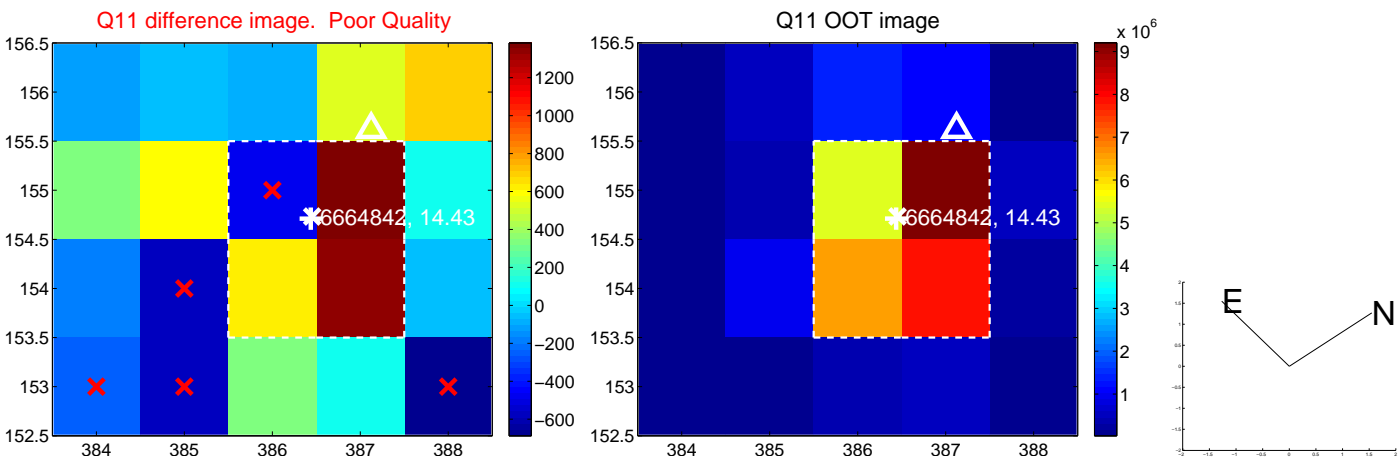
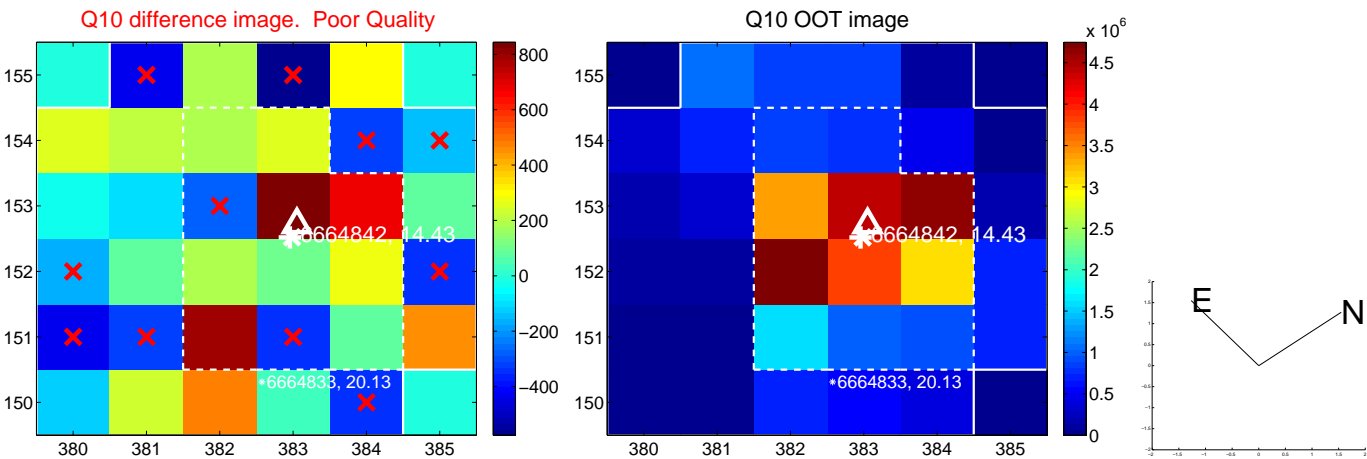
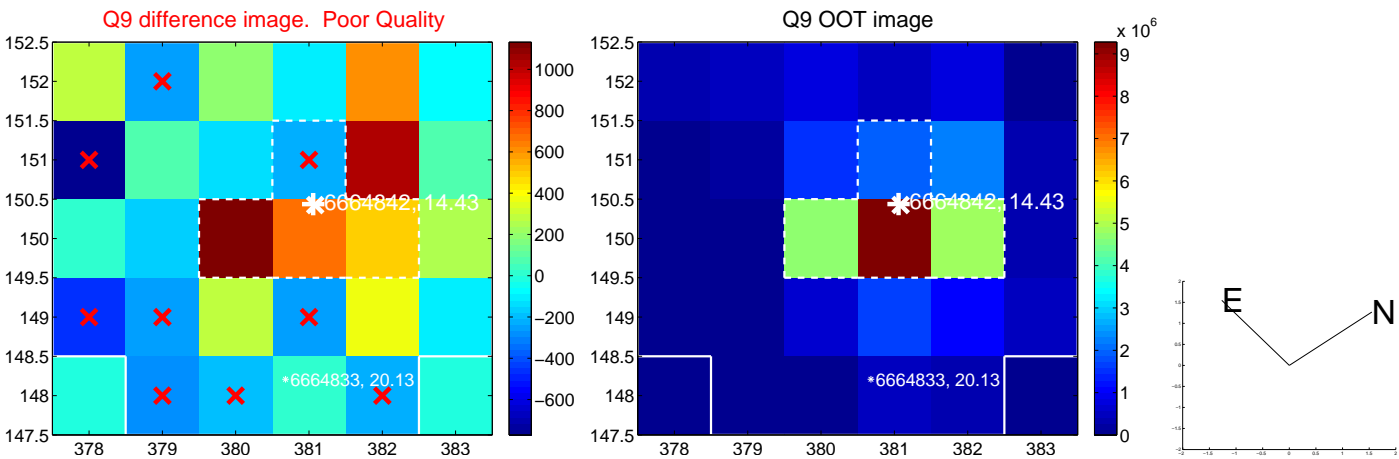
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



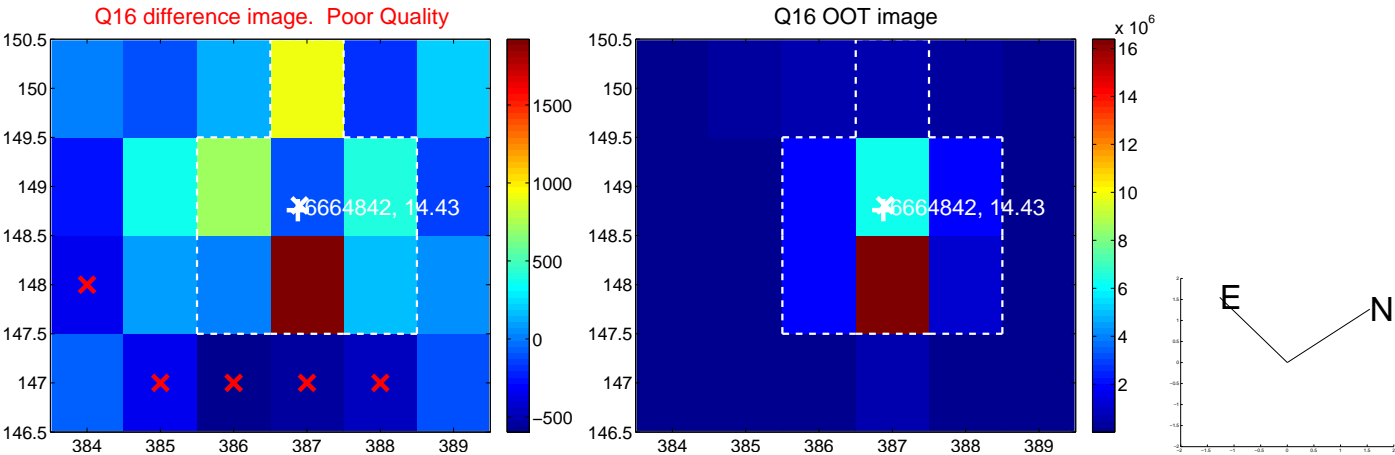
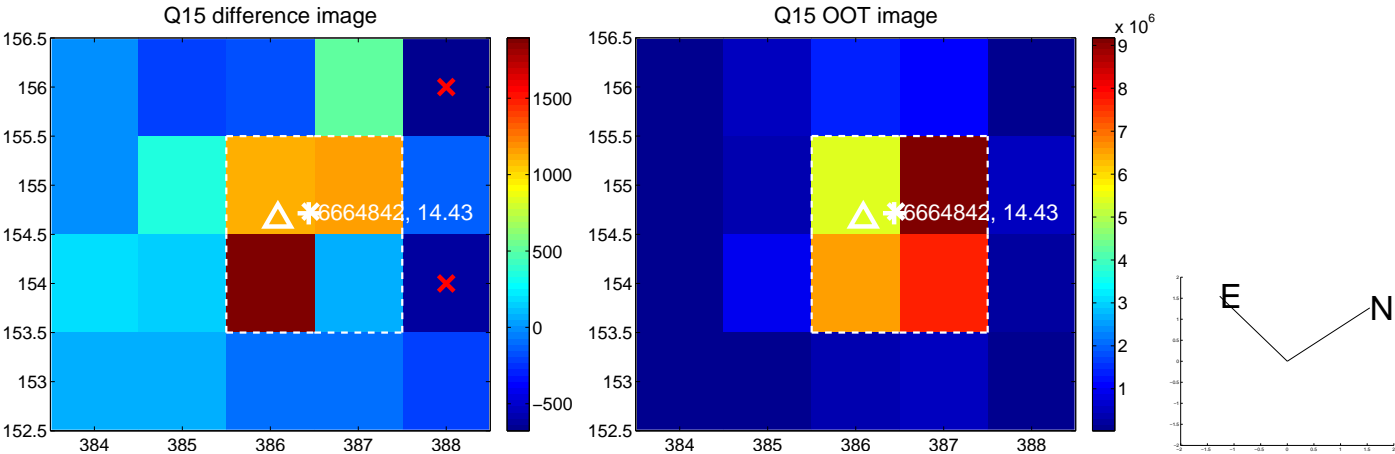
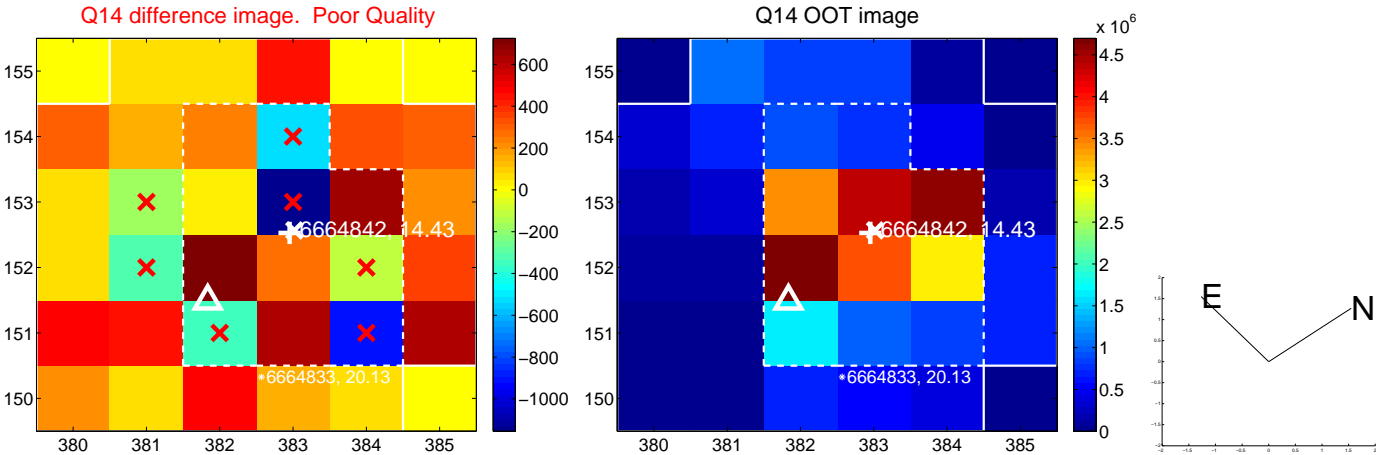
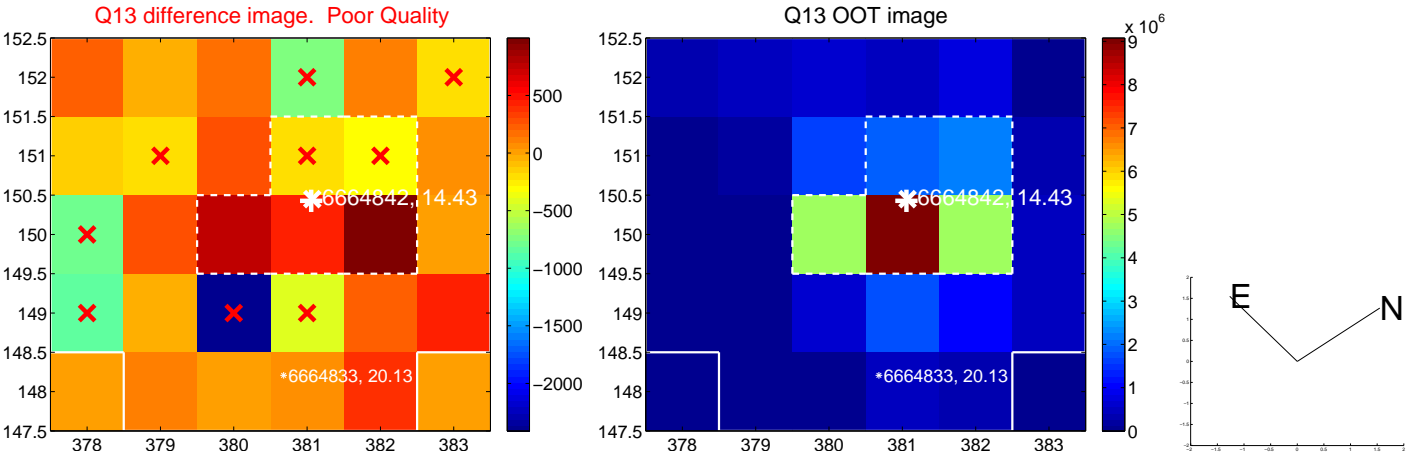
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



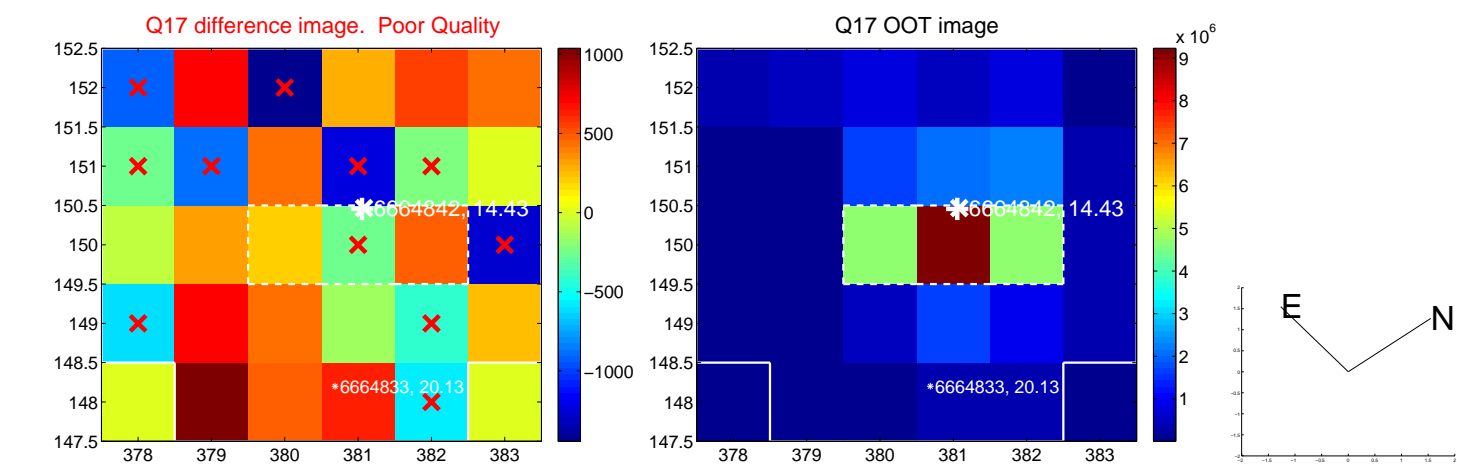
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



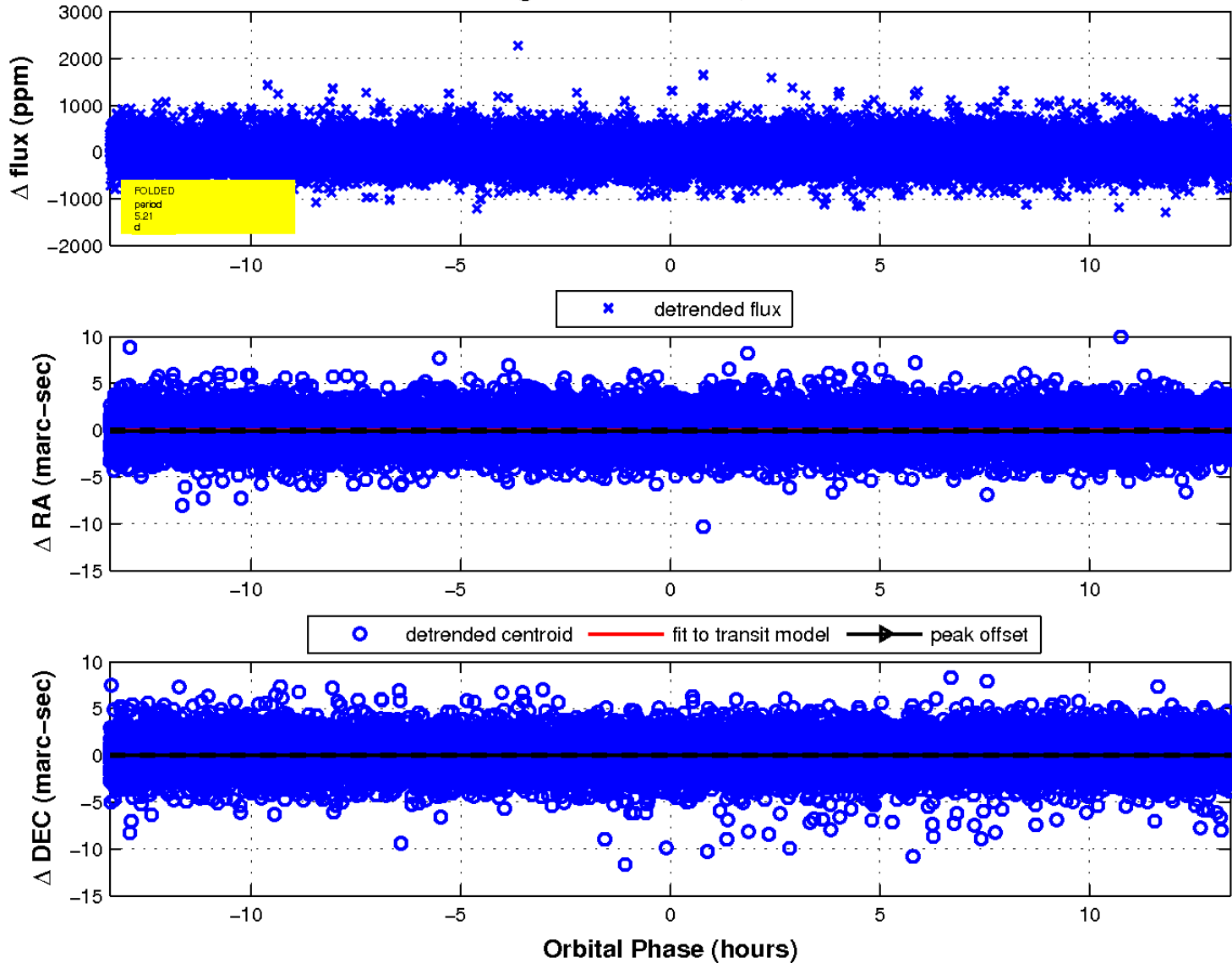
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

