

KIC 005474733

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})
005474733-01	OBS	1610.01	0.883766	131.844866	98.6	1.752	23.8	26.6	0.95	5975	1.11	3316.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005474733-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

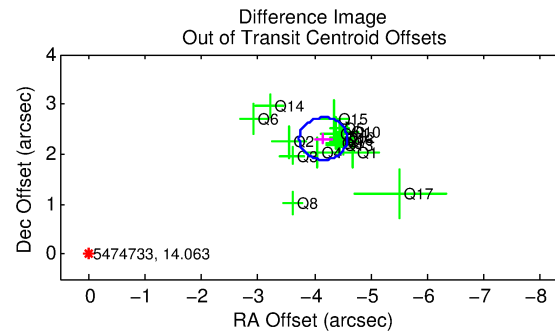
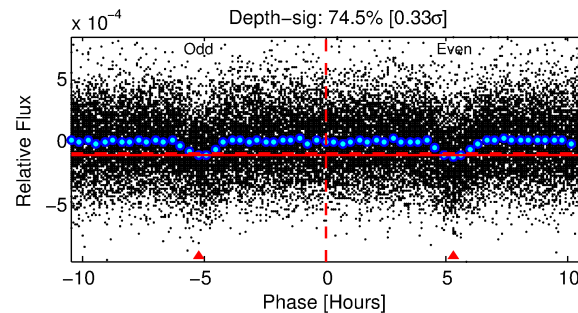
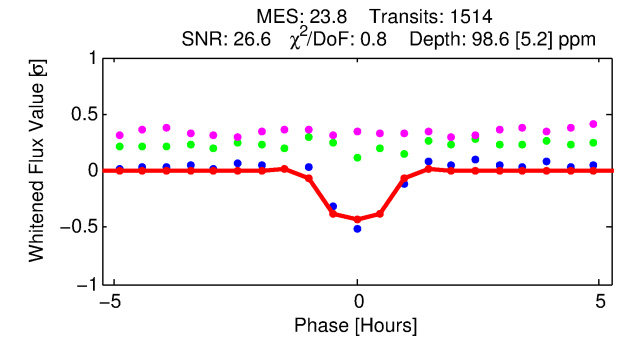
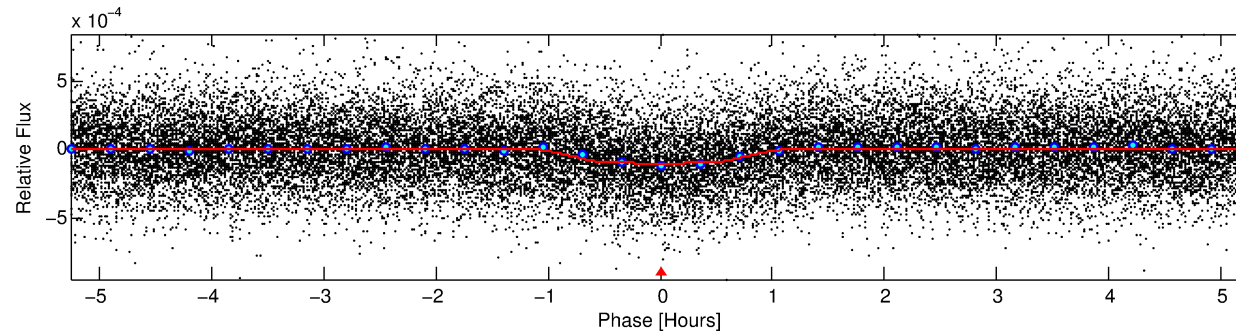
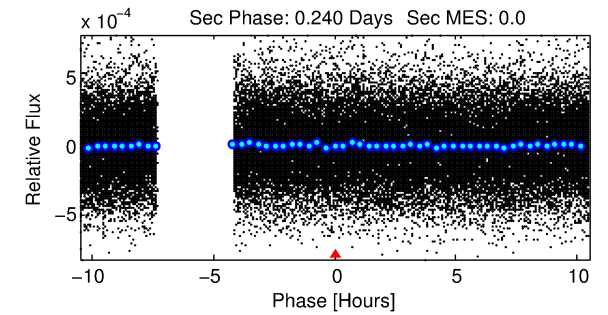
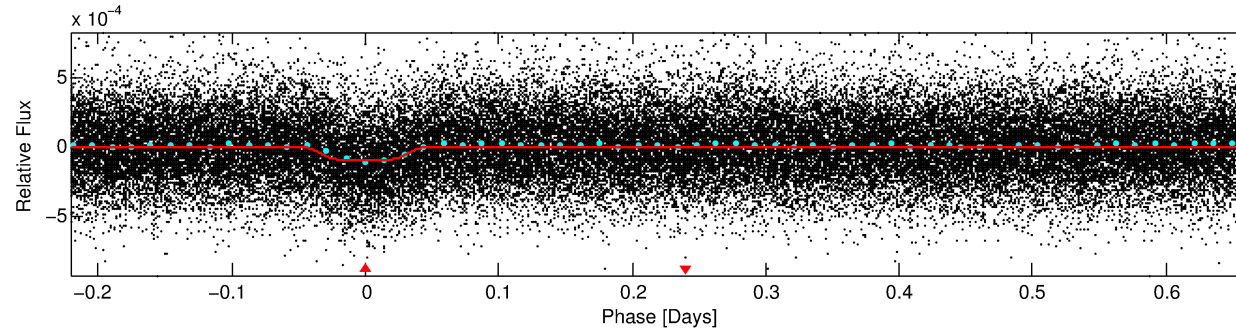
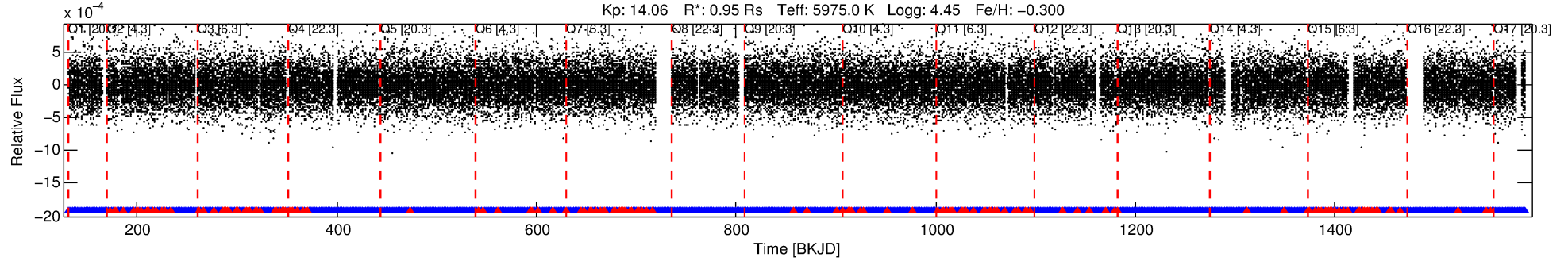
Ephemeris Match Information For 005474733-01

No Significant Match Found

DV One-Page Summary

KIC: 5474733 Candidate: 1 of 1 Period: 0.884 d
KOI: K01610.01 Corr: 0.909

Kp: 14.06 R*: 0.95 Rs Teff: 5975.0 K Logg: 4.45 Fe/H: -0.300



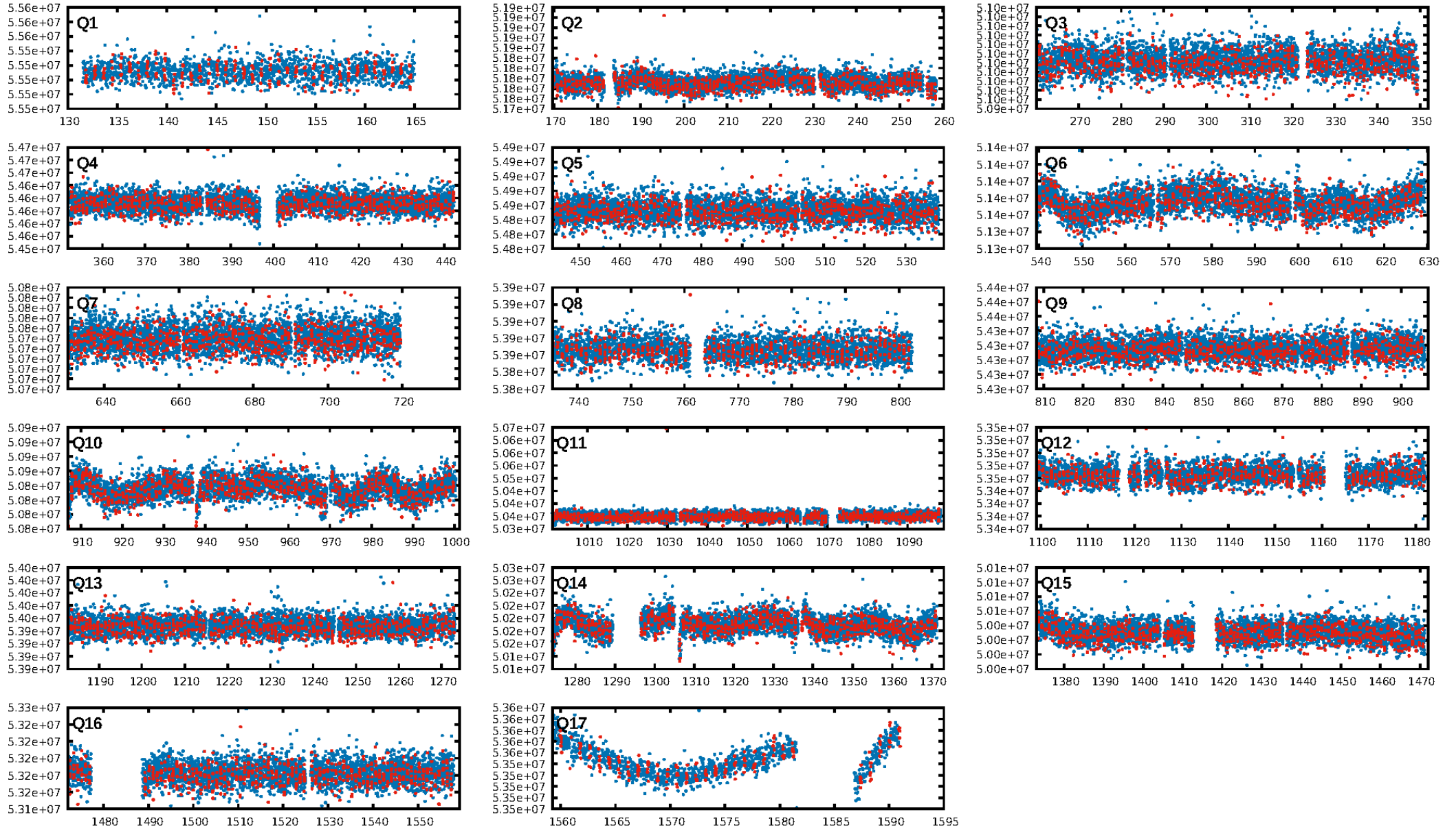
DV Fit Results:

Period = 0.88377 [0.00000] d
Epoch = 131.8449 [0.0010] BKJD
Rp/R* = 0.0107 [0.0030]
a/R* = 2.00 [2.16]
b = 0.90 [0.31]
Seff = 3316.20 [1224.74]
Teq = 1935 [179] K
Rp = 1.11 [0.45] Re
a = 0.0176 [0.0043] AU
Ag = N/A
Teffp = N/A

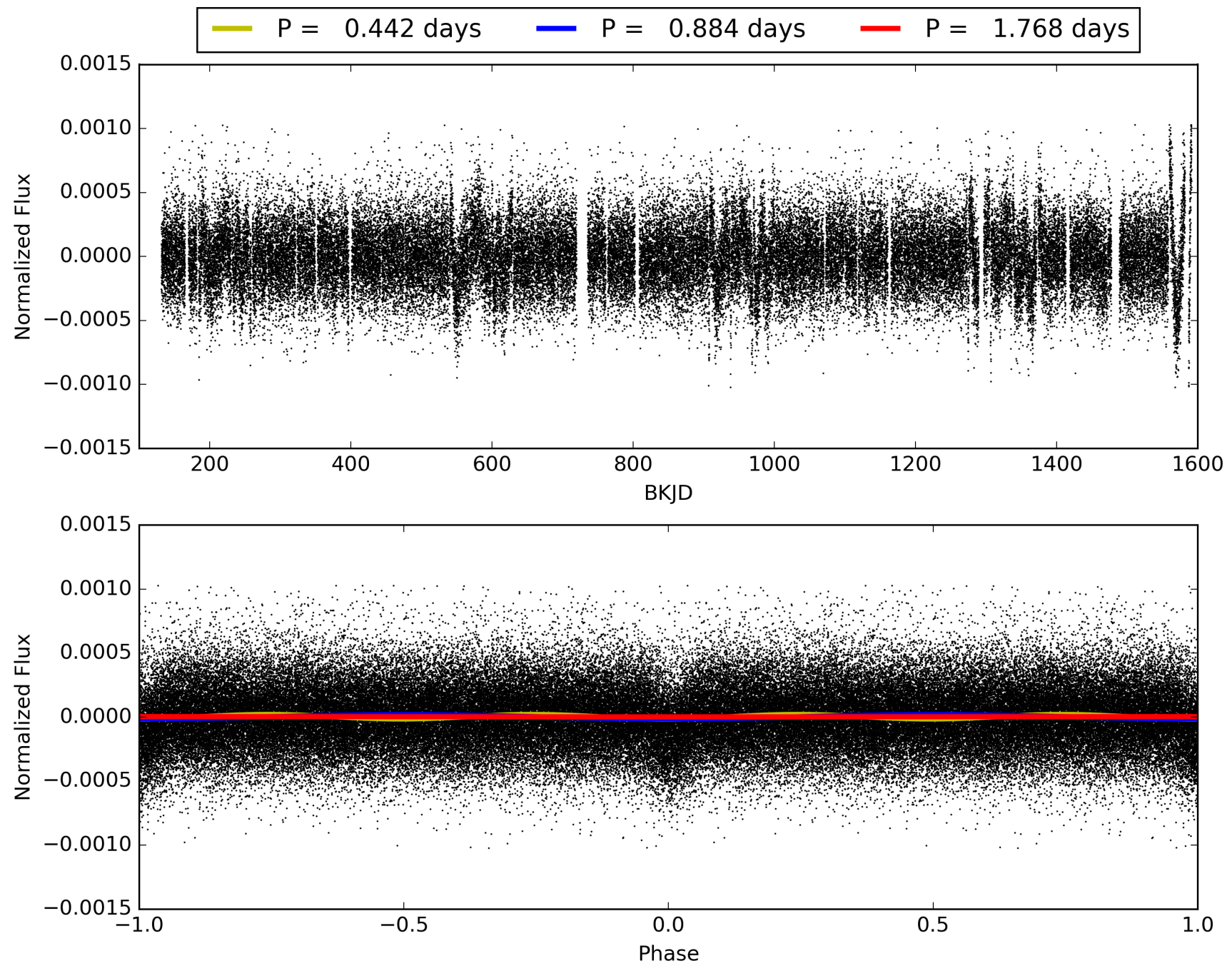
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.19e-117
RollingBand-fgt: 0.89 [1284/1447]
GhostDiagnostic-chr: 1.37
Centroid-sig: 0.0%
Centroid-so: 5.608 arcsec [11.19σ]
OotOffset-rm: 4.755 arcsec [33.79σ]
KicOffset-rm: 4.757 arcsec [33.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005474733-01, PDC Light Curves

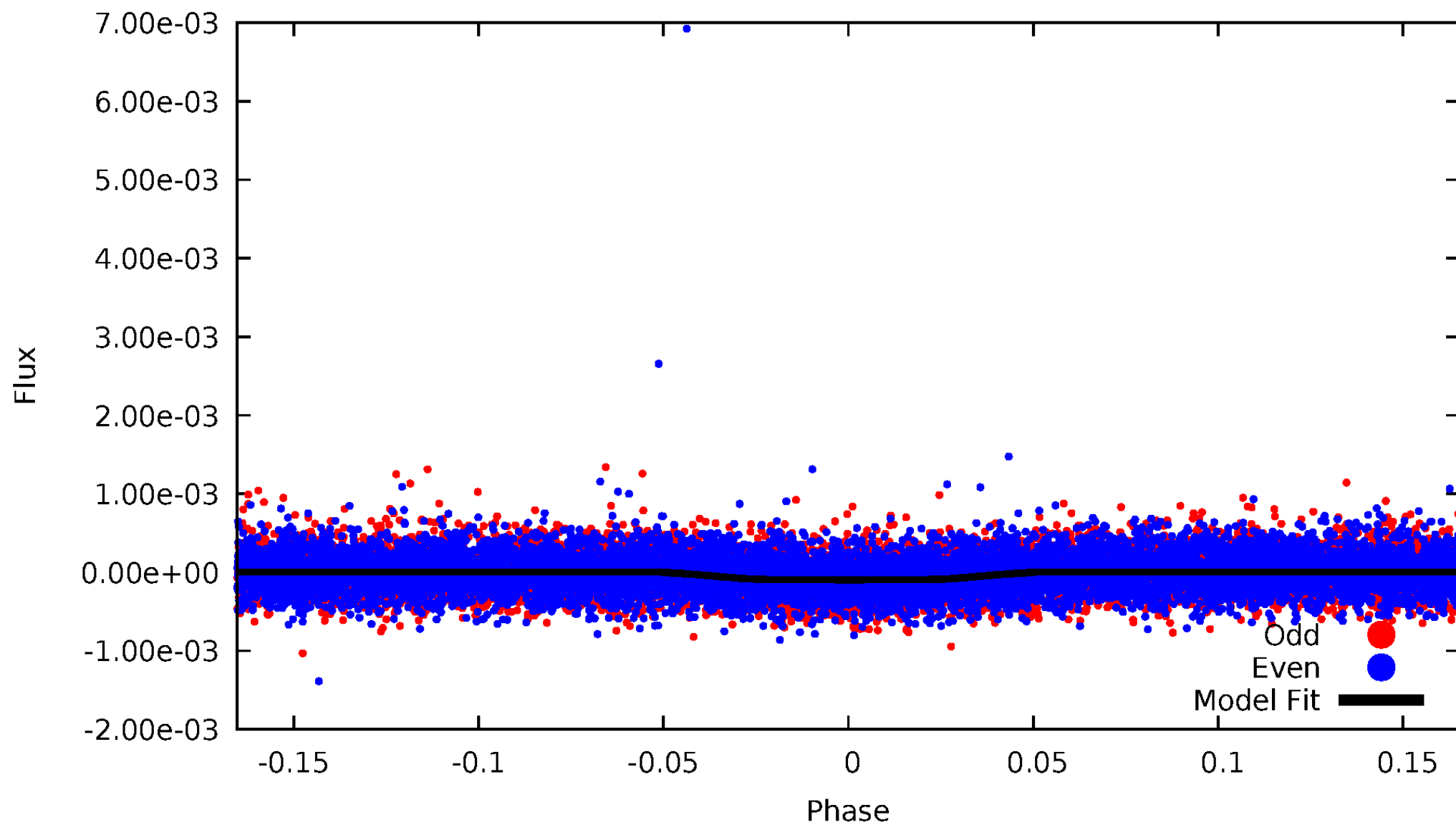


TCE 005474733-01



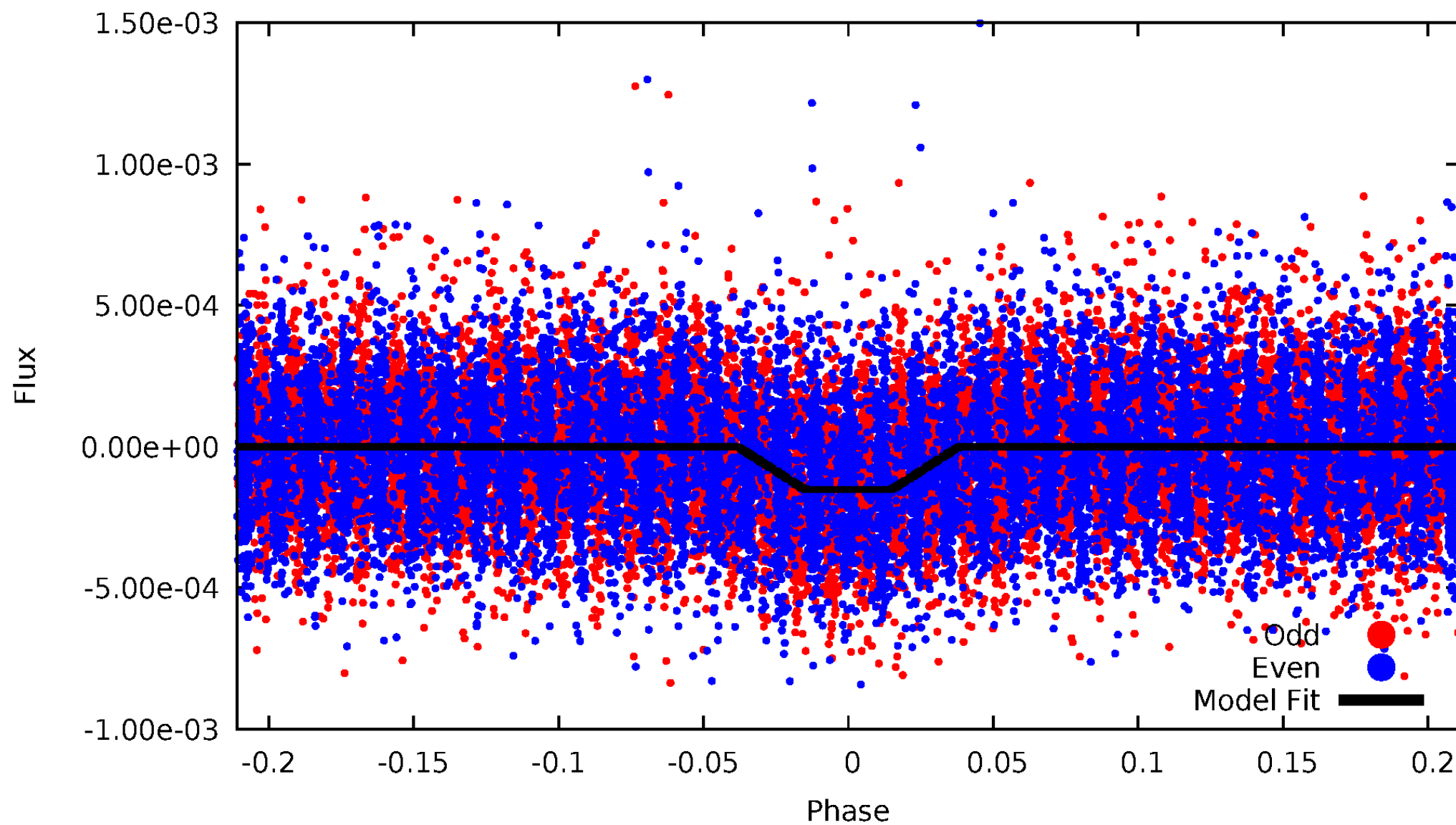
DV Odd/Even

TCE 005474733-01

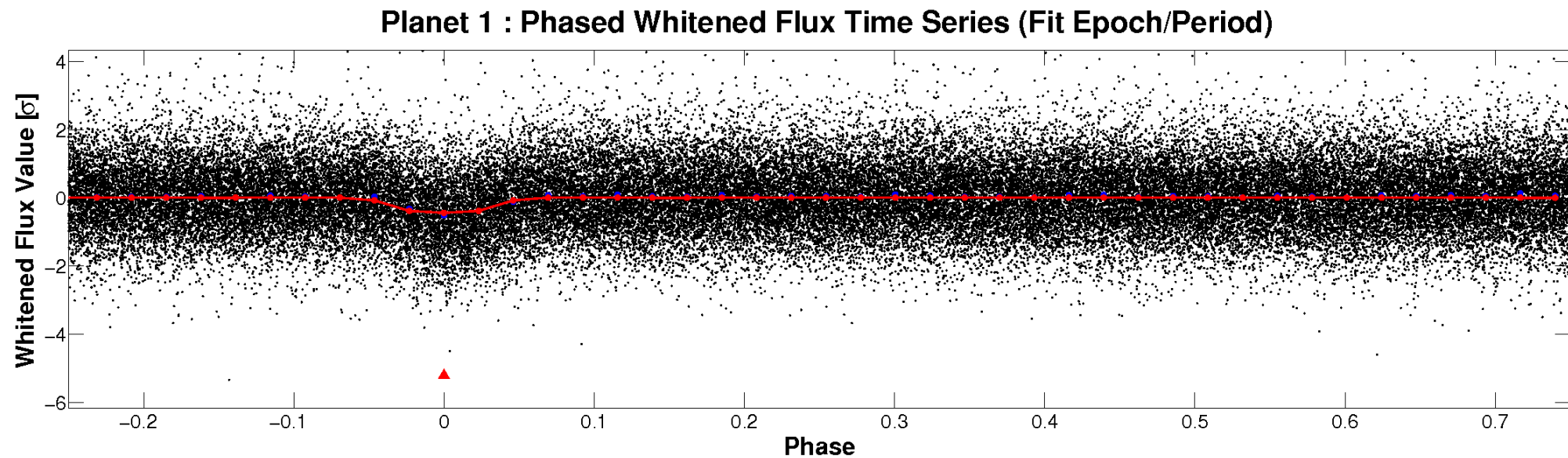
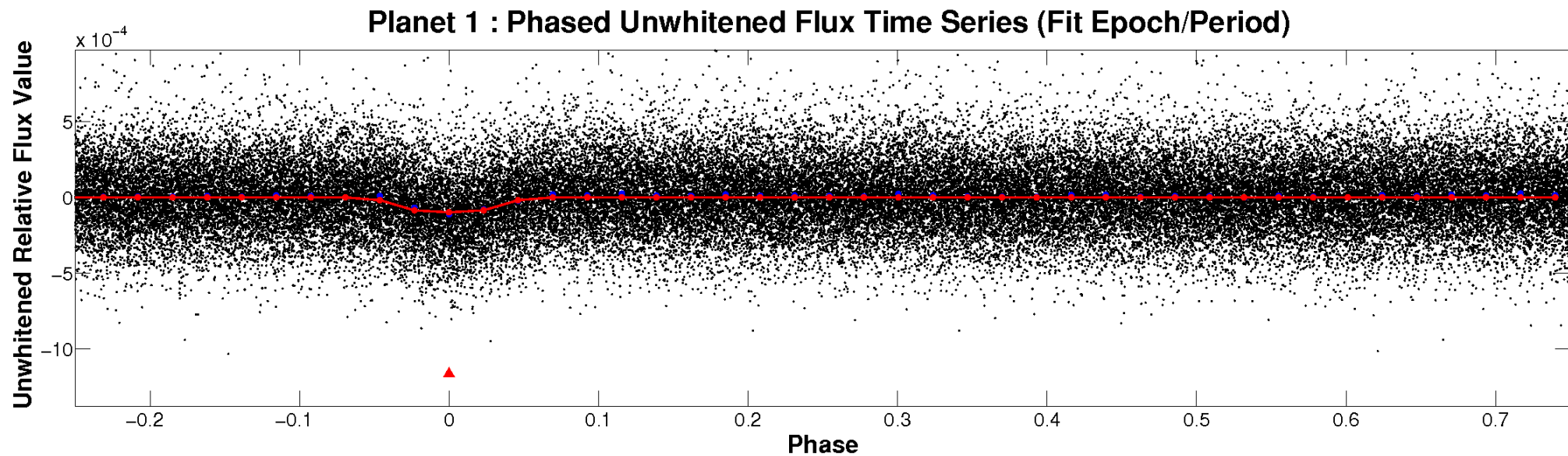


ALT Odd/Even

TCE 005474733-01

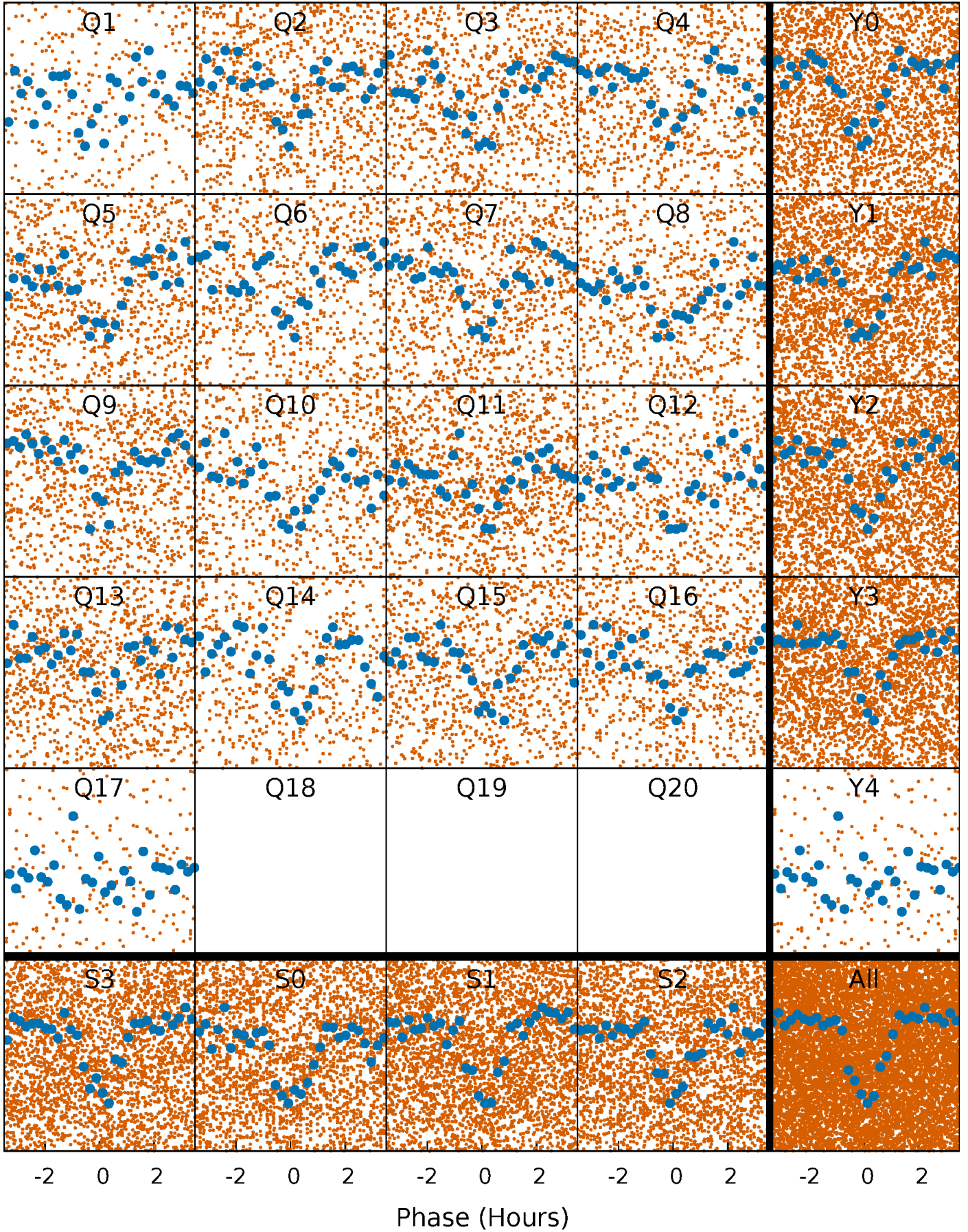


Non-Whitened Vs. Whitened Light Curve



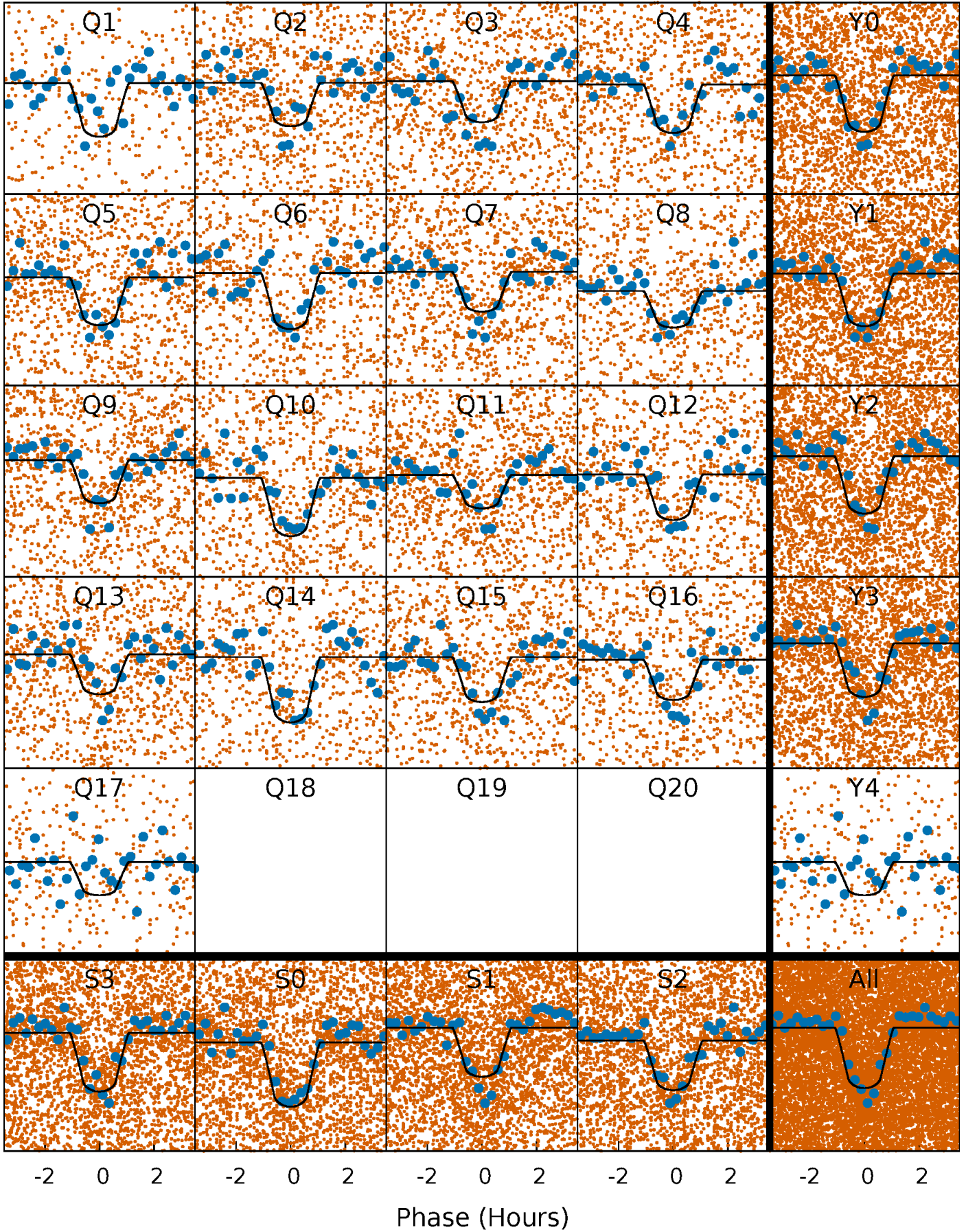
PDC Quarter-Phased Transit Curves

TCE 005474733-01 P= 0.883766 Days $T_0=131.844866$ (BKJD)



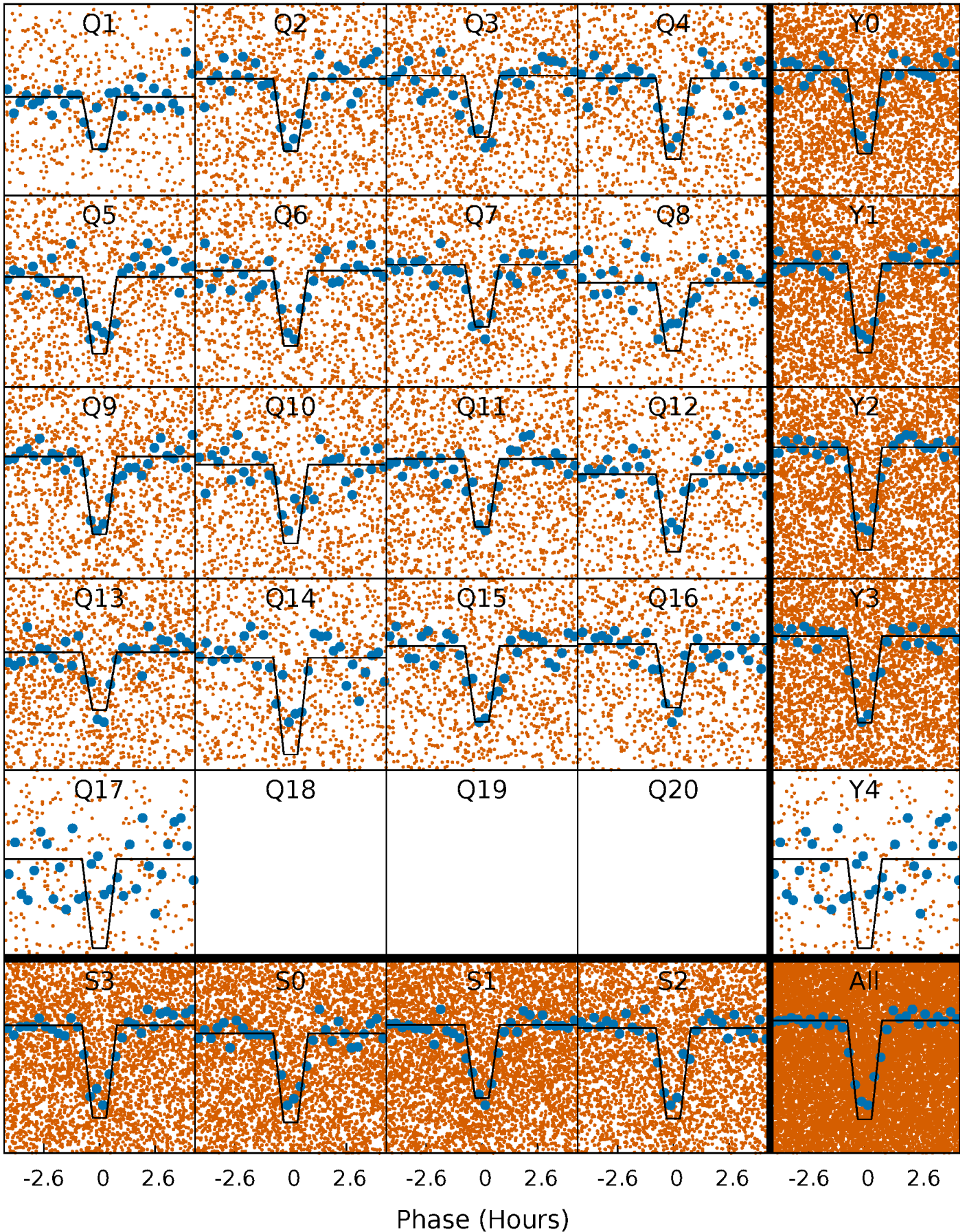
DV Quarter-Phased Transit Curves

TCE 005474733-01 P= 0.883766 Days $T_0=131.844866$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

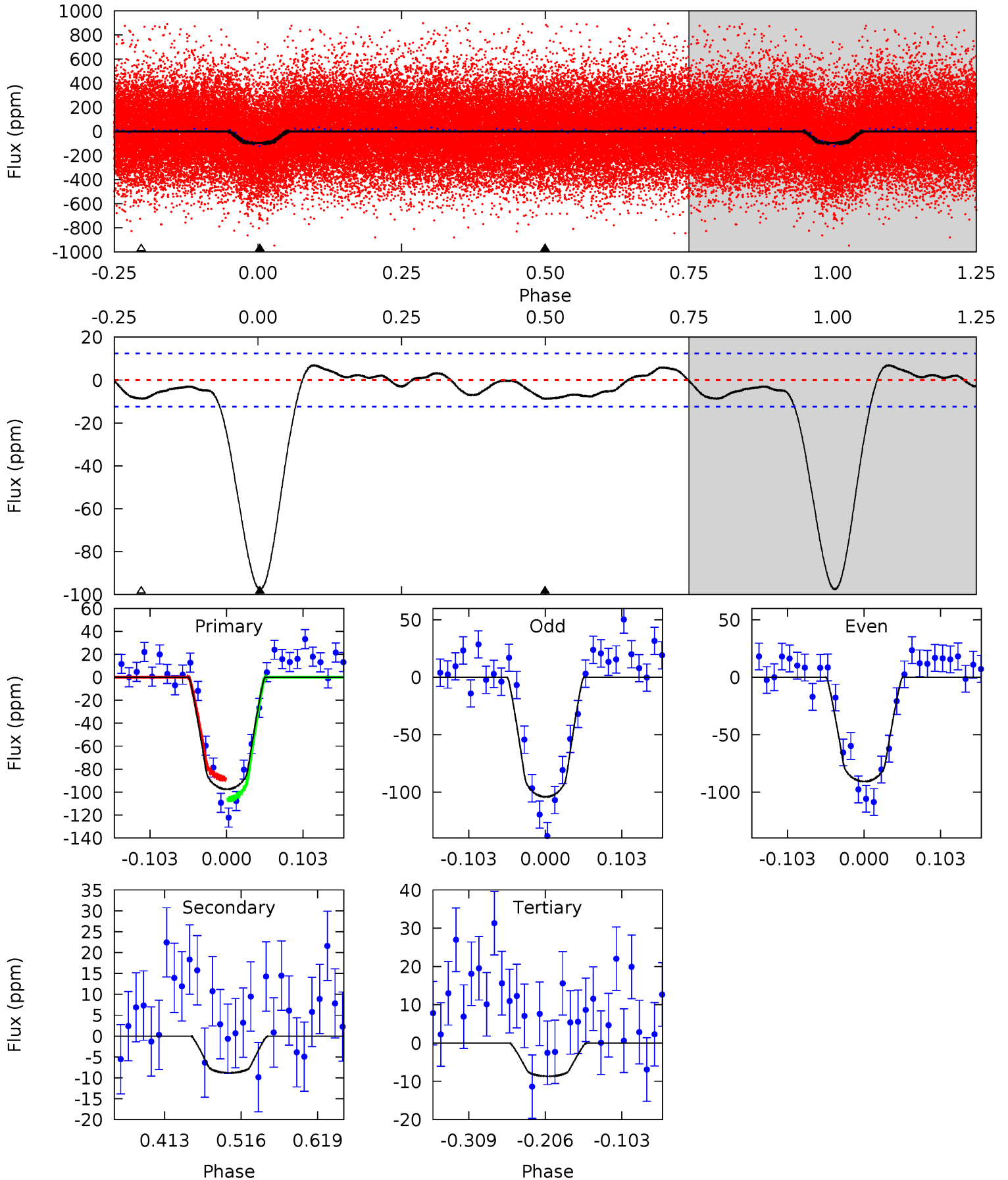
TCE 005474733-01 P= 0.883775 Days $T_0=131.840531$ (BKJD)



DV Model-Shift Uniqueness Test

005474733-01, P = 0.883766 Days, E = 130.961100 Days

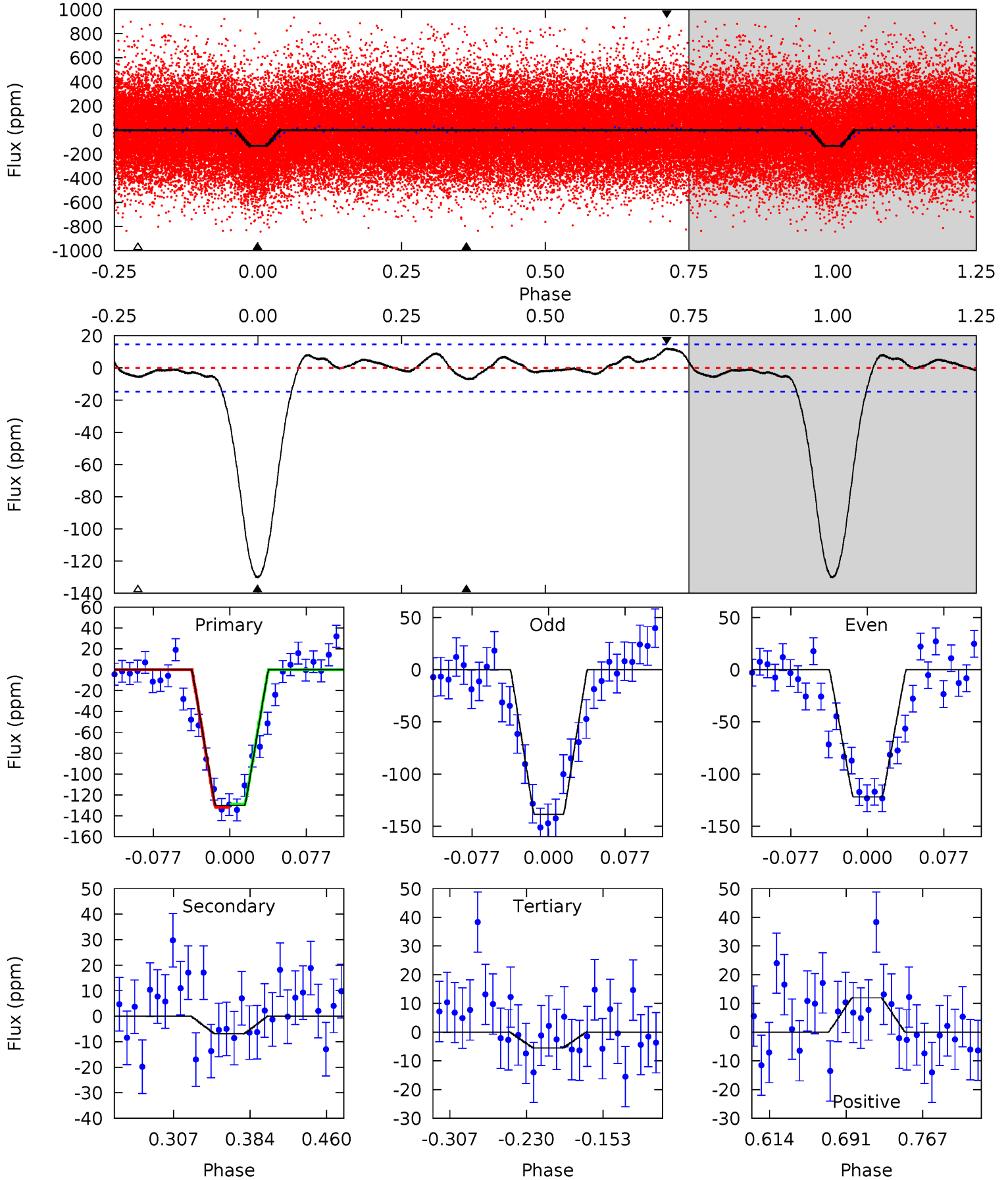
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.8	3.24	3.19	0	4.56	1.63	1.49	32.7	35.8	0.05	3.24	2.47	0.94	0.07	3.29



Alt Model-Shift Uniqueness Test

005474733-01, P = 0.883775 Days, E = 130.956756 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.8	2.16	1.73	3.75	4.62	1.77	1.33	39.1	37.1	0.42	-1.60	2.64	0.97	0.08	0.47



Stellar Parameters For KIC 005474733

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5975^{+161}_{-179}	$4.453^{+0.081}_{-0.189}$	$-0.300^{+0.300}_{-0.300}$	$0.949^{+0.277}_{-0.119}$	$0.935^{+0.119}_{-0.108}$	$1.539^{+0.549}_{-0.785}$
	+3%/-3%	+2%/-4%	+100%/-100%	+29%/-13%	+13%/-12%	+36%/-51%
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 005474733-01 / KOI 1610.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 3	$1.13^{+0.37}_{-0.31}$	2740^{+197}_{-130}	3397^{+496}_{-466}	$1.095^{+1.077}_{-0.521}$
Alt.	-7 ± 3	$1.32^{+0.37}_{-0.33}$	2731^{+204}_{-126}	2978^{+529}_{-4942}	$0.635^{+0.645}_{-0.343}$

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 $A_{obs} \gg 1.0$

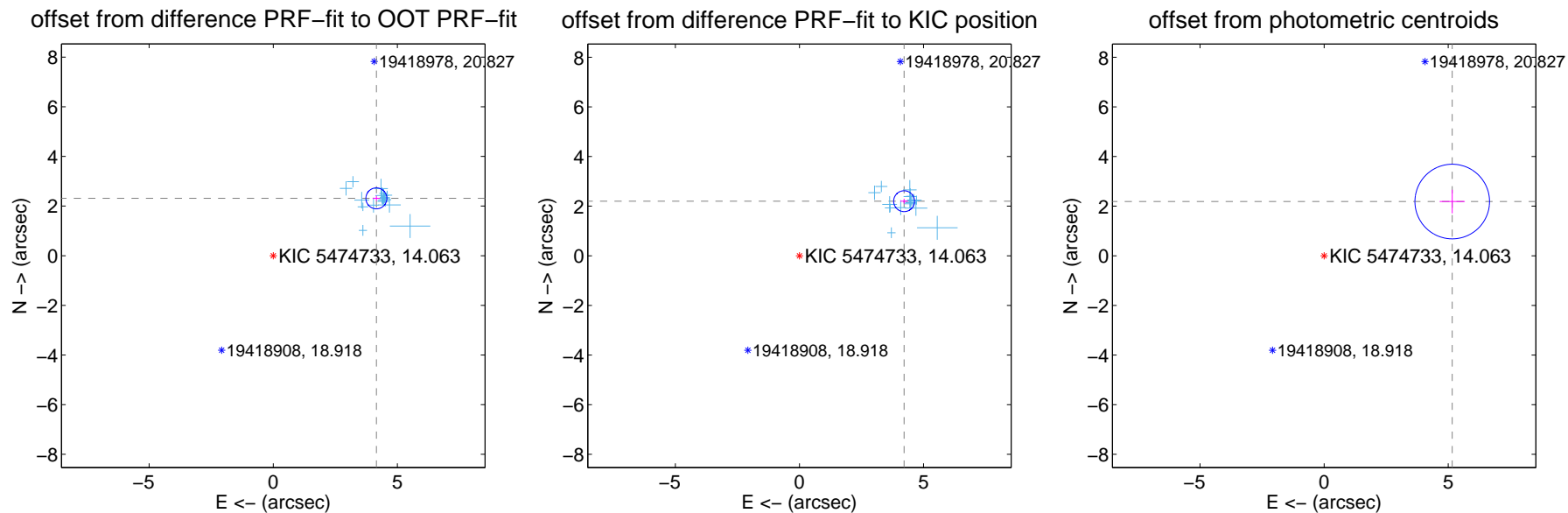
DV Centroid Data

Supplemental centroid analysis for 005474733-01. Kepler magnitude: 14.06. Transit SNR 26.56

There are 17 quarters with good PRF difference image offsets

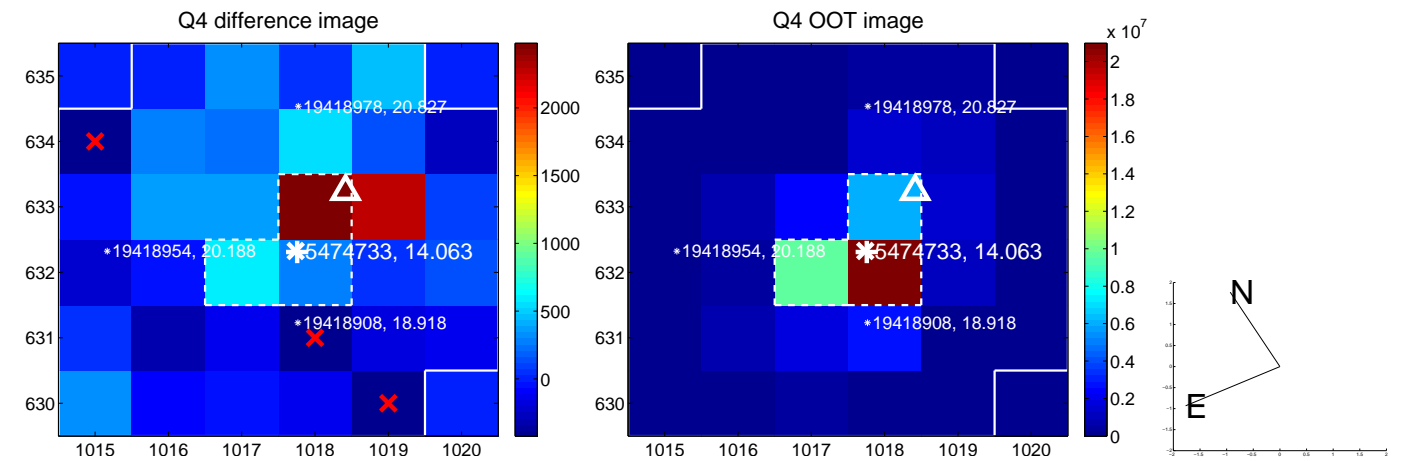
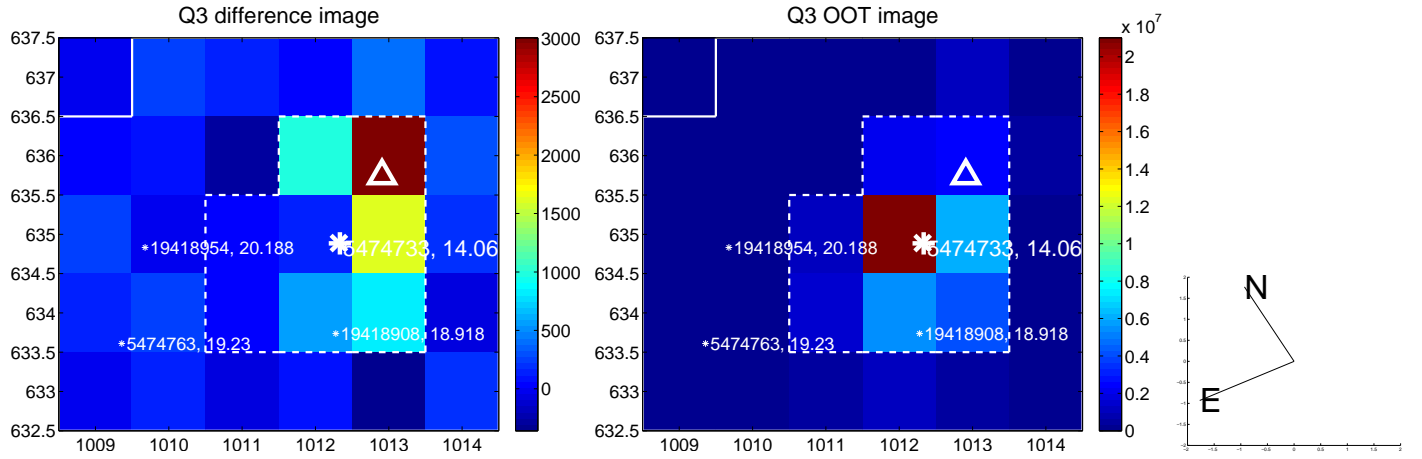
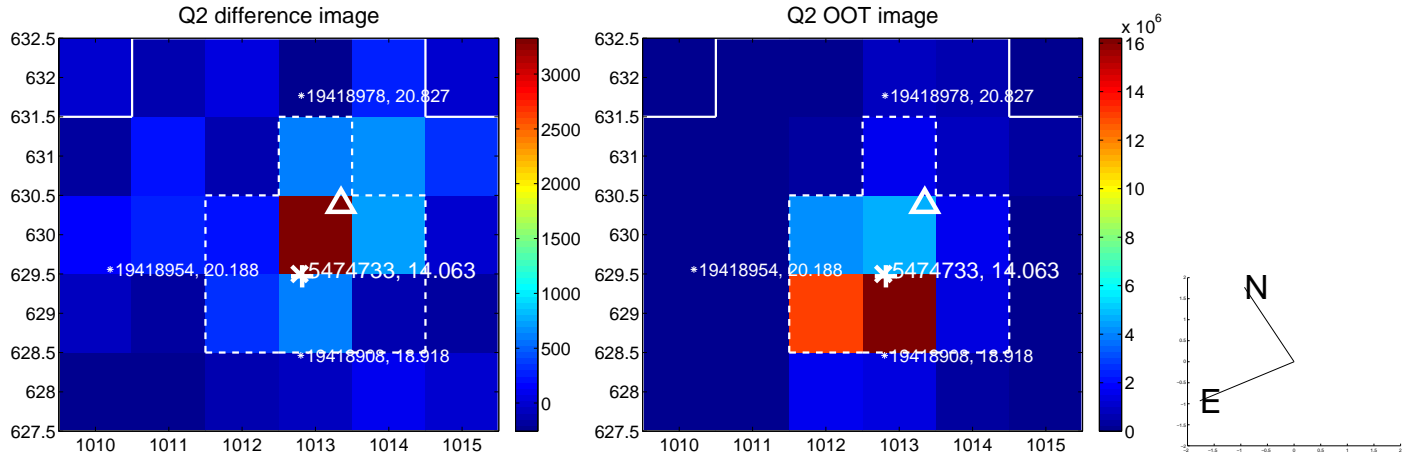
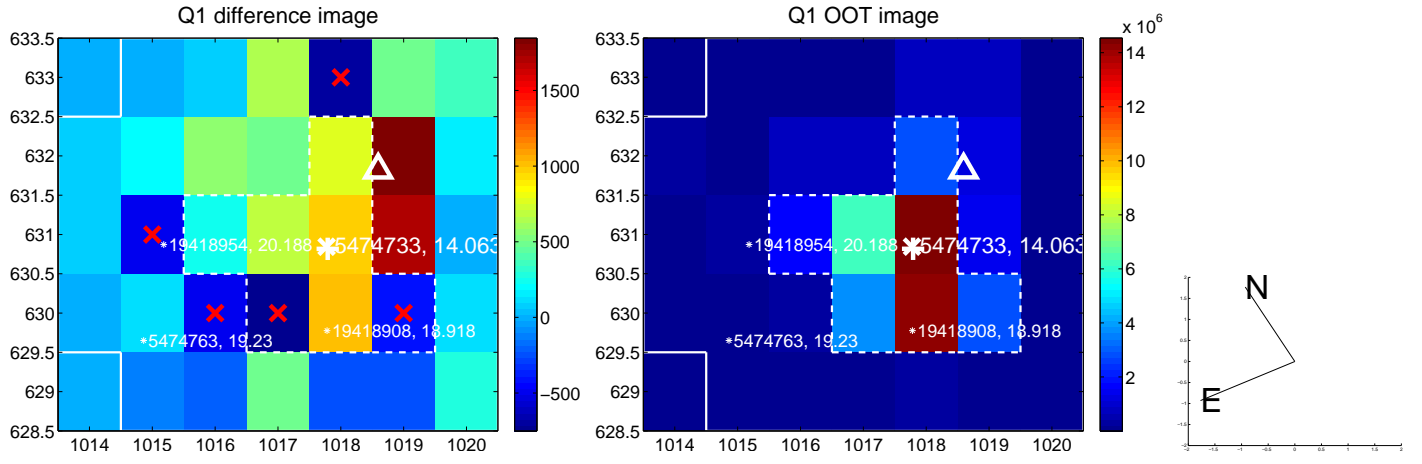
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.755 ± 0.141	33.79	-4.156 ± 0.151	2.310 ± 0.102
PRF-fit source offset from KIC position	4.757 ± 0.140	33.94	-4.218 ± 0.150	2.199 ± 0.098
photometric centroid source offset	5.61 ± 0.50	11.19	-5.16 ± 0.51	2.19 ± 0.47

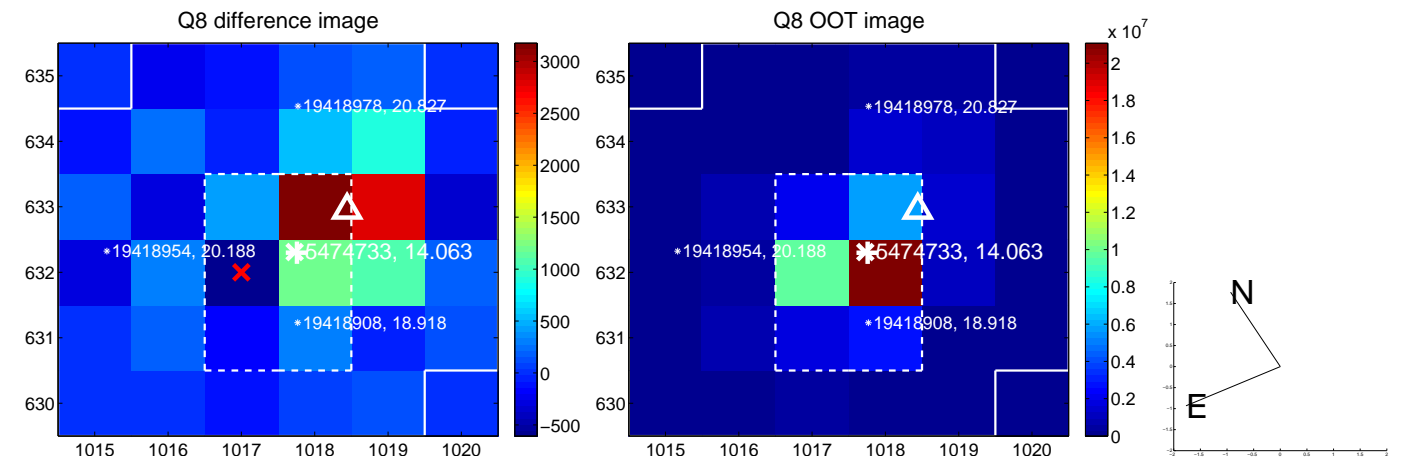
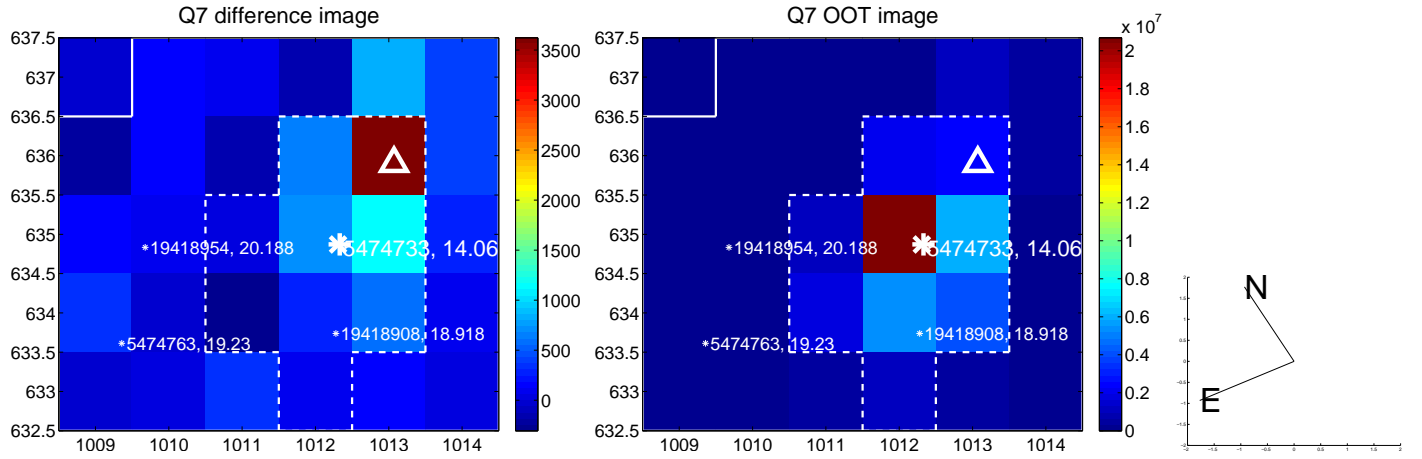
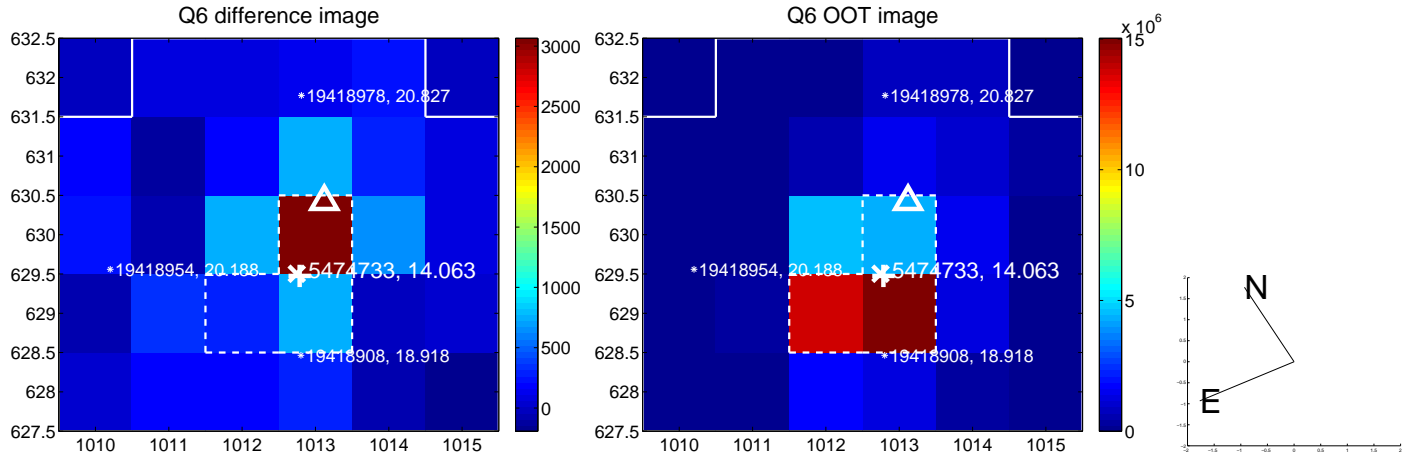
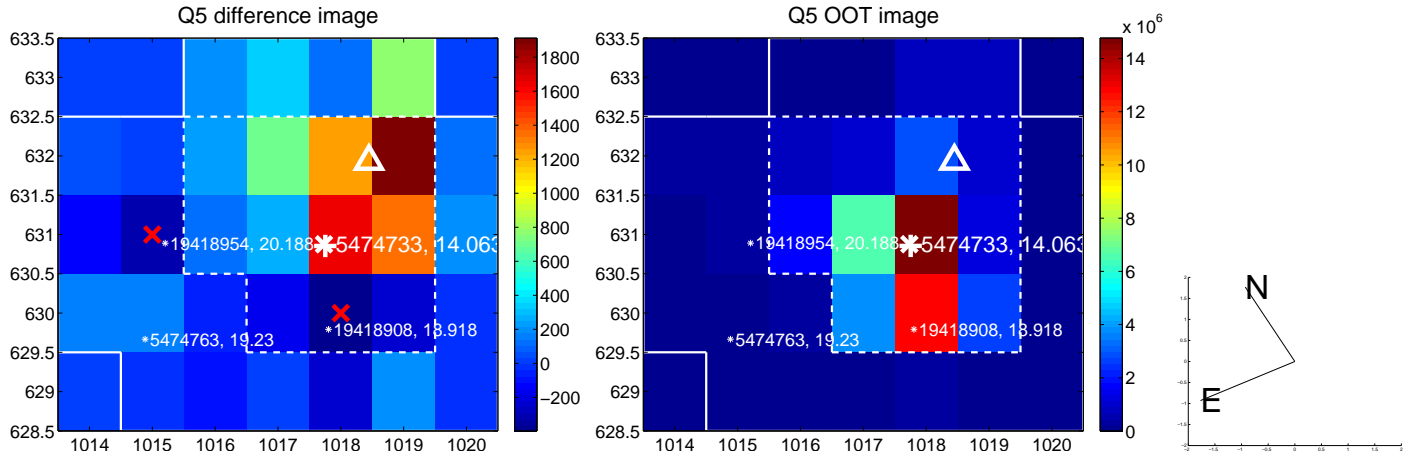


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

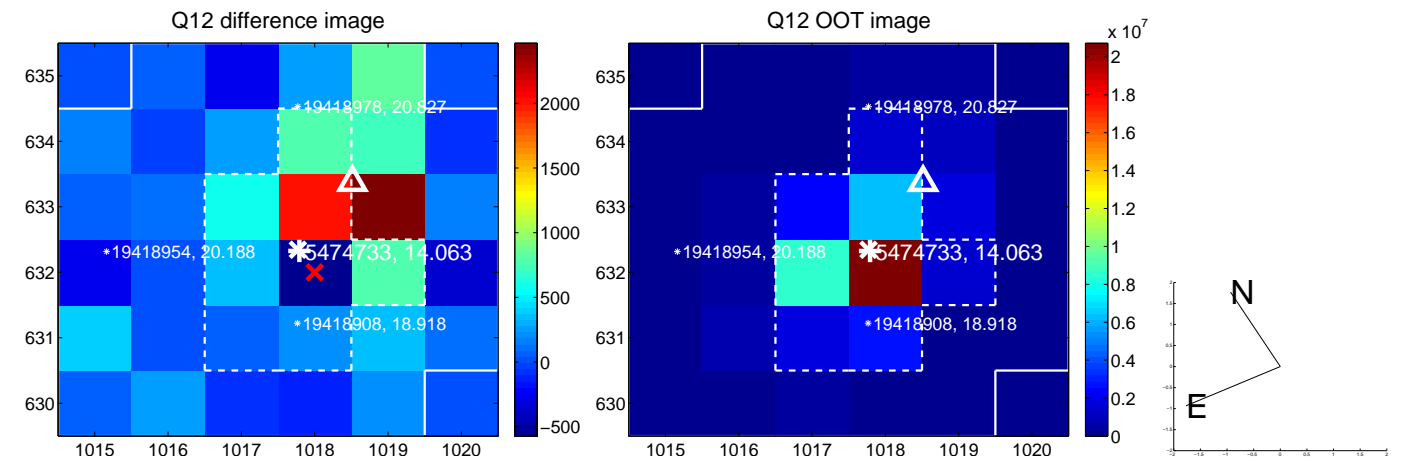
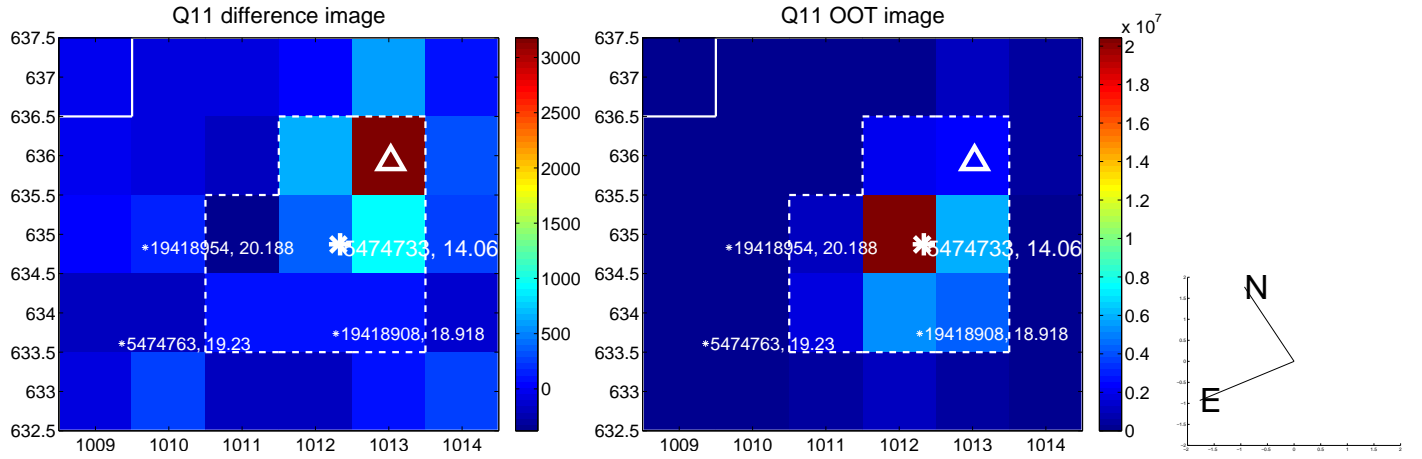
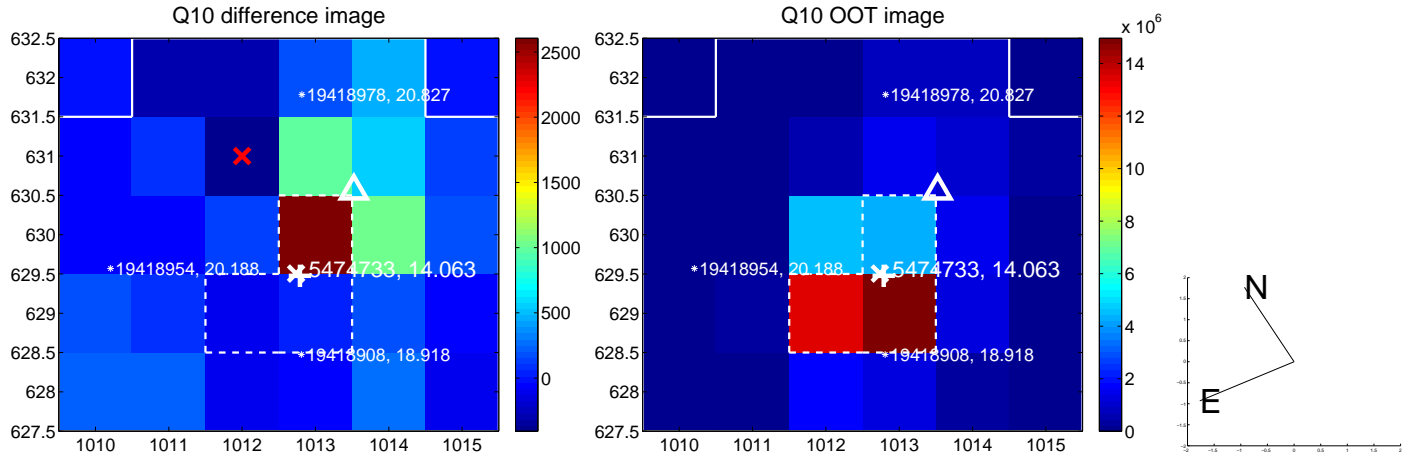
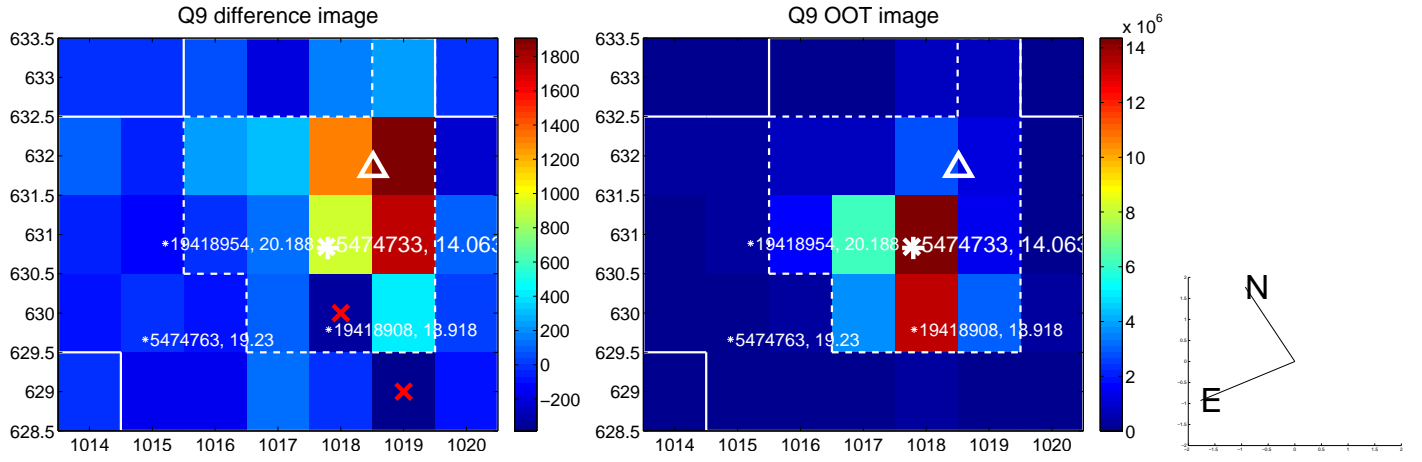
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



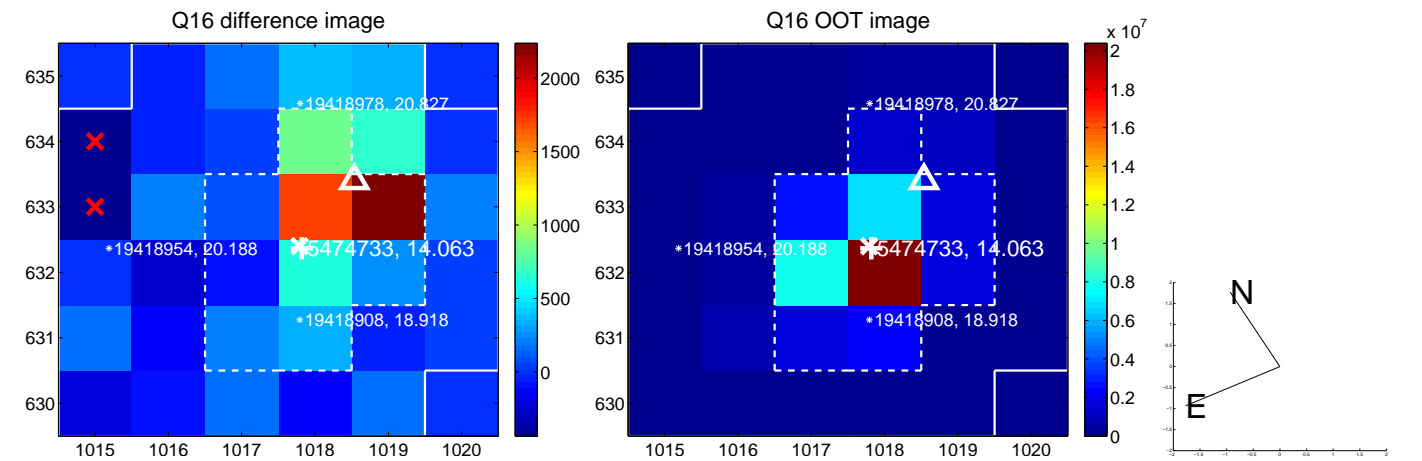
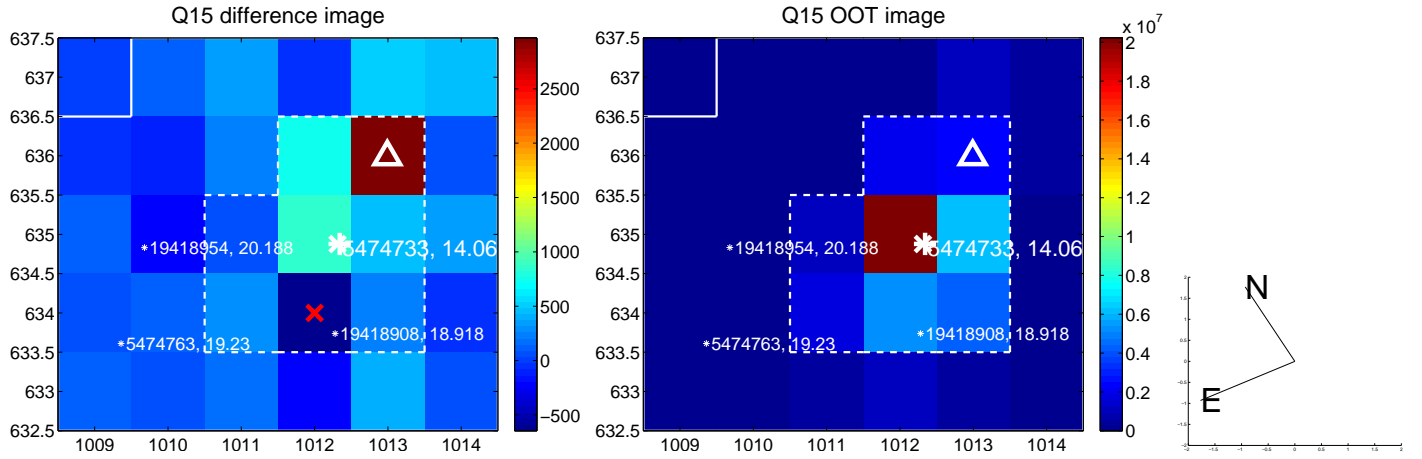
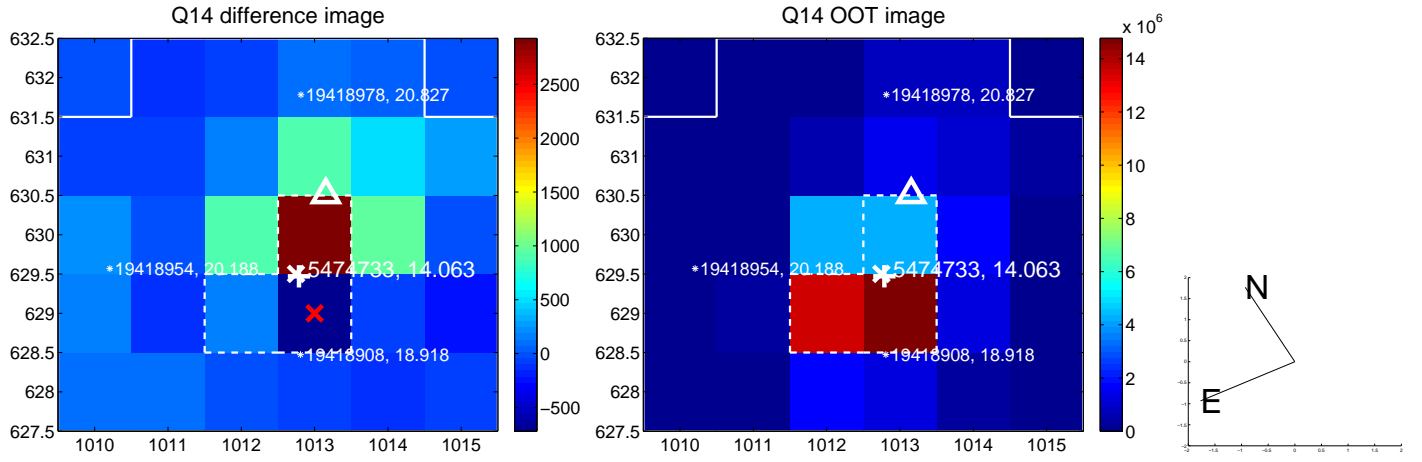
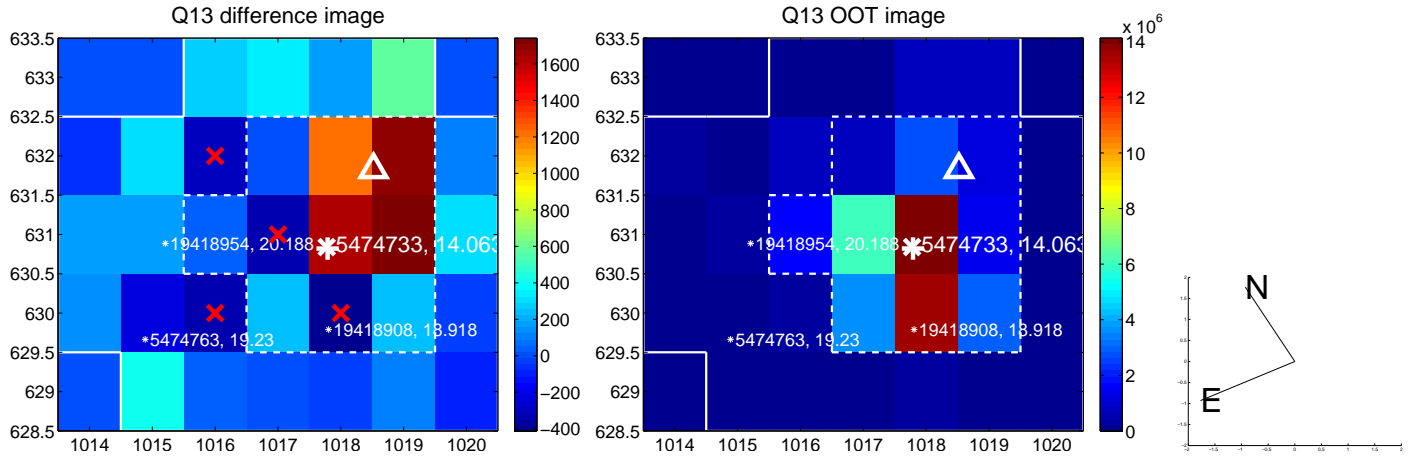
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

