

KIC 012834874

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})
012834874-01	OBS	0487.01	7.658787	134.747091	657.3	3.332	48.2	52.6	0.85	5657	2.63	128.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012834874-01	OBS	PC	1.00	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.

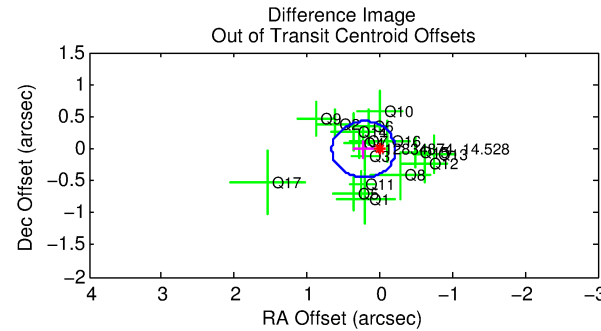
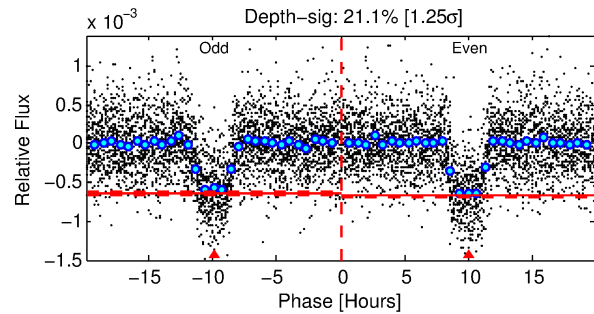
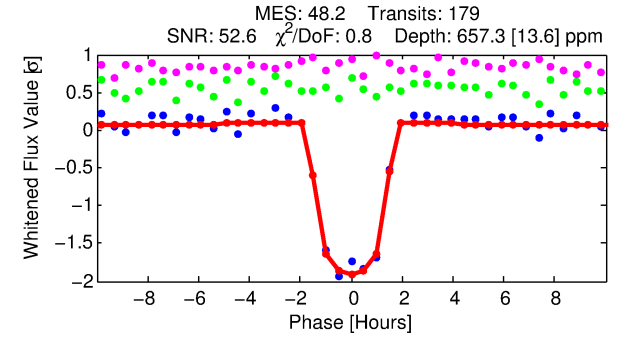
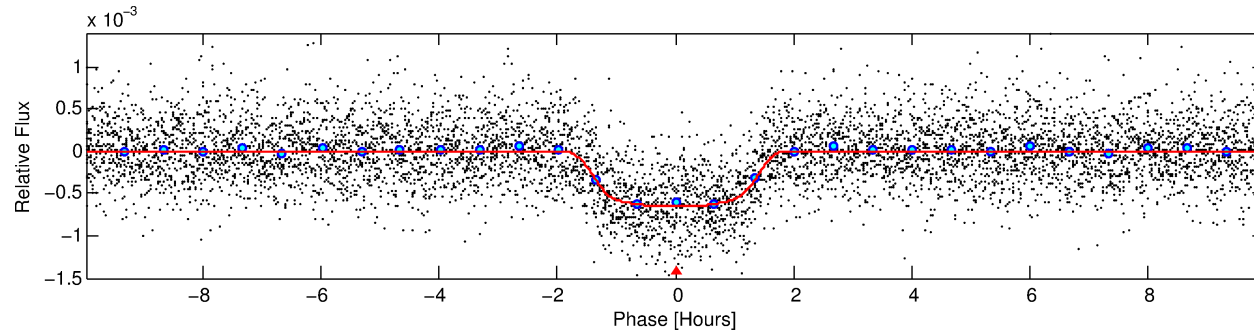
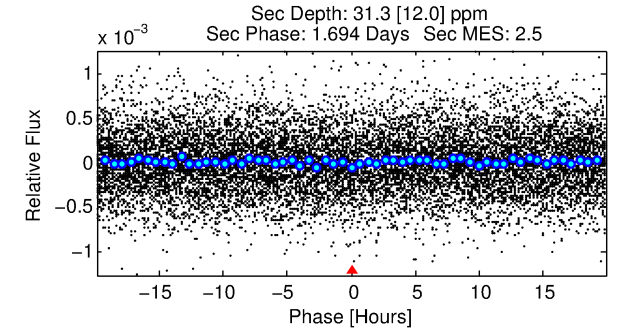
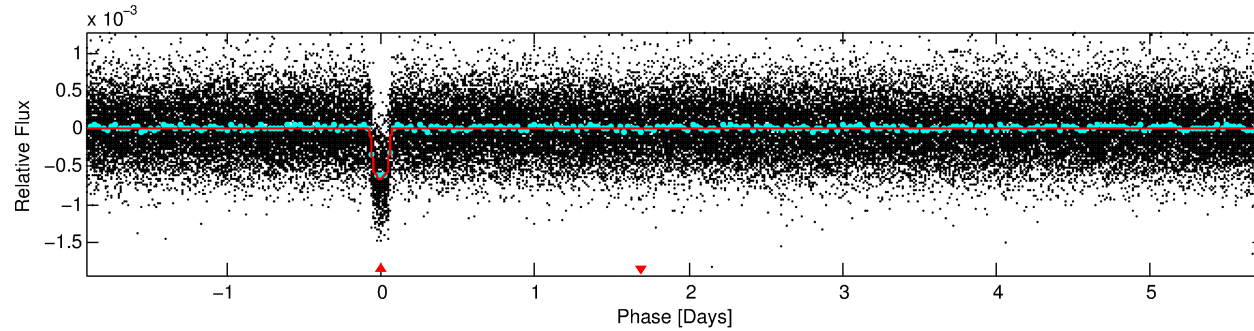
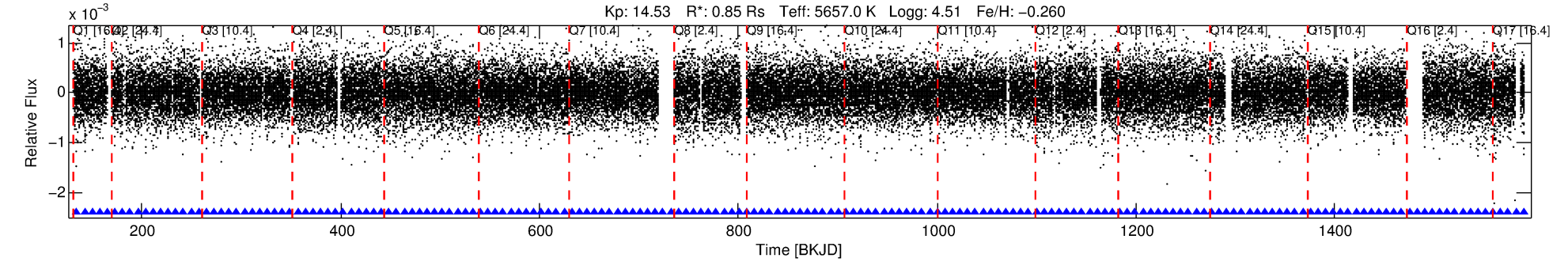
Ephemeris Match Information For 012834874-01

No Significant Match Found

DV One-Page Summary

KIC: 12834874 Candidate: 1 of 1 Period: 7.659 d

KOI: K00487.01 Corr: 0.958



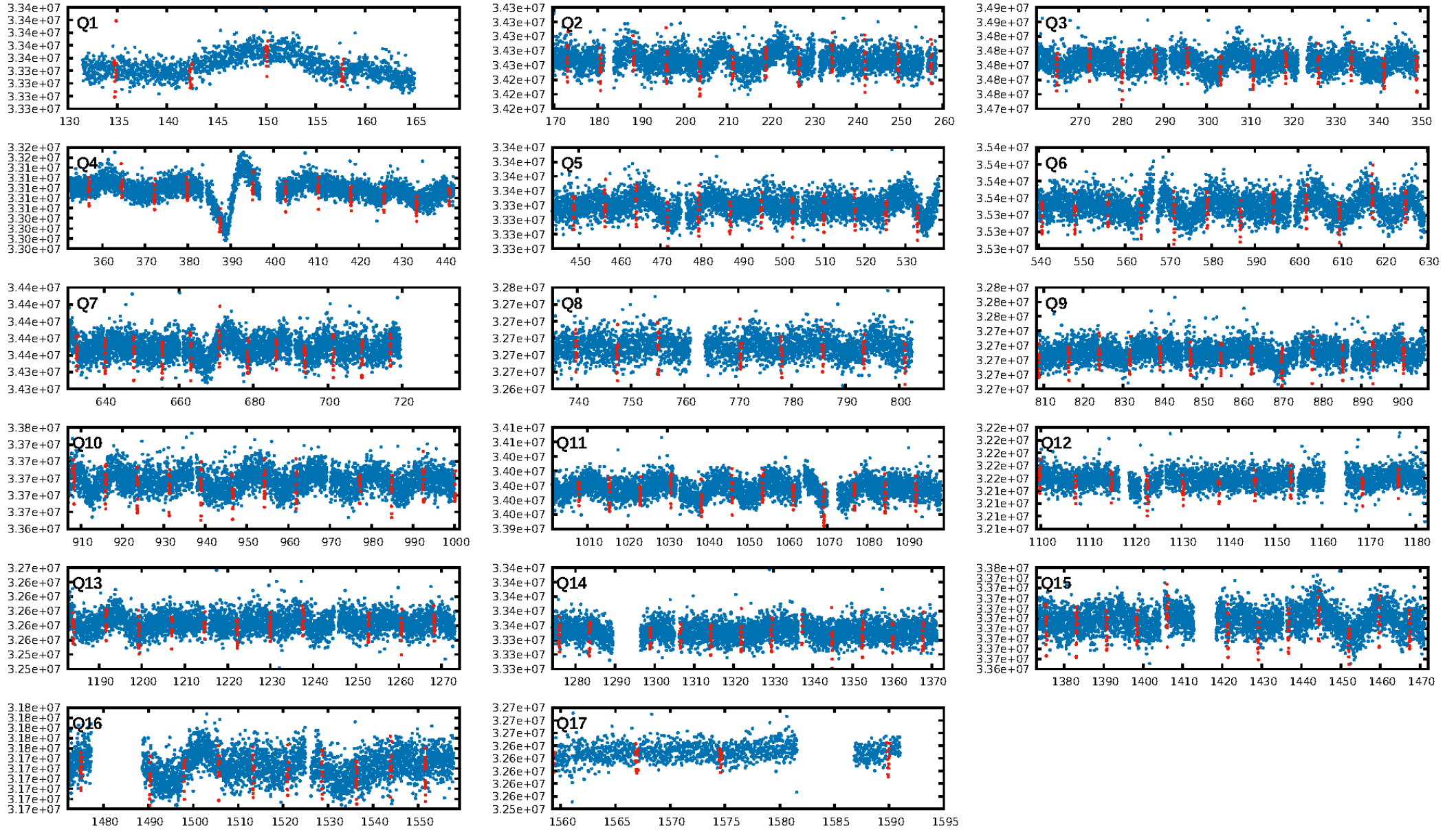
DV Fit Results:

Period = 7.65879 [0.00001] d
Epoch = 134.7471 [0.0013] BKJD
Rp/R* = 0.0282 [0.0012]
a/R* = 8.52 [1.60]
b = 0.91 [0.04]
Seff = 128.33 [40.73]
Teq = 858 [68] K
Rp = 2.63 [0.67] Re
a = 0.0723 [0.0151] AU
Ag = 12.99 [6.42] [1.87σ]
Teffp = 2519 [257] K [6.24σ]

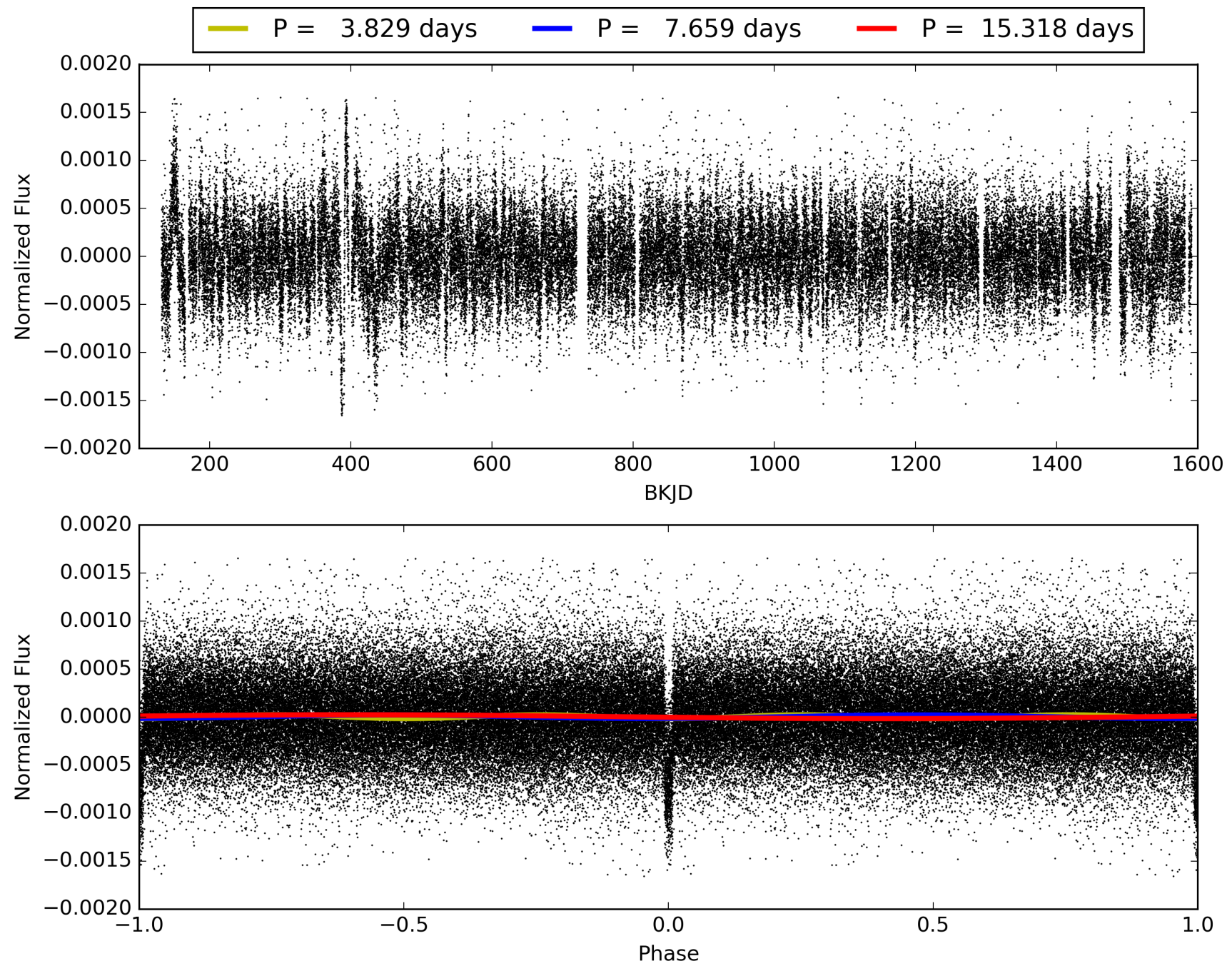
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [171/171]
GhostDiagnostic-chr: 6.01
Centroid-sig: 3.9%
Centroid-so: 1.198 arcsec [5.11σ]
OotOffset-rm: 0.221 arcsec [1.52σ]
KicOffset-rm: 0.166 arcsec [1.06σ]
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 012834874-01, PDC Light Curves

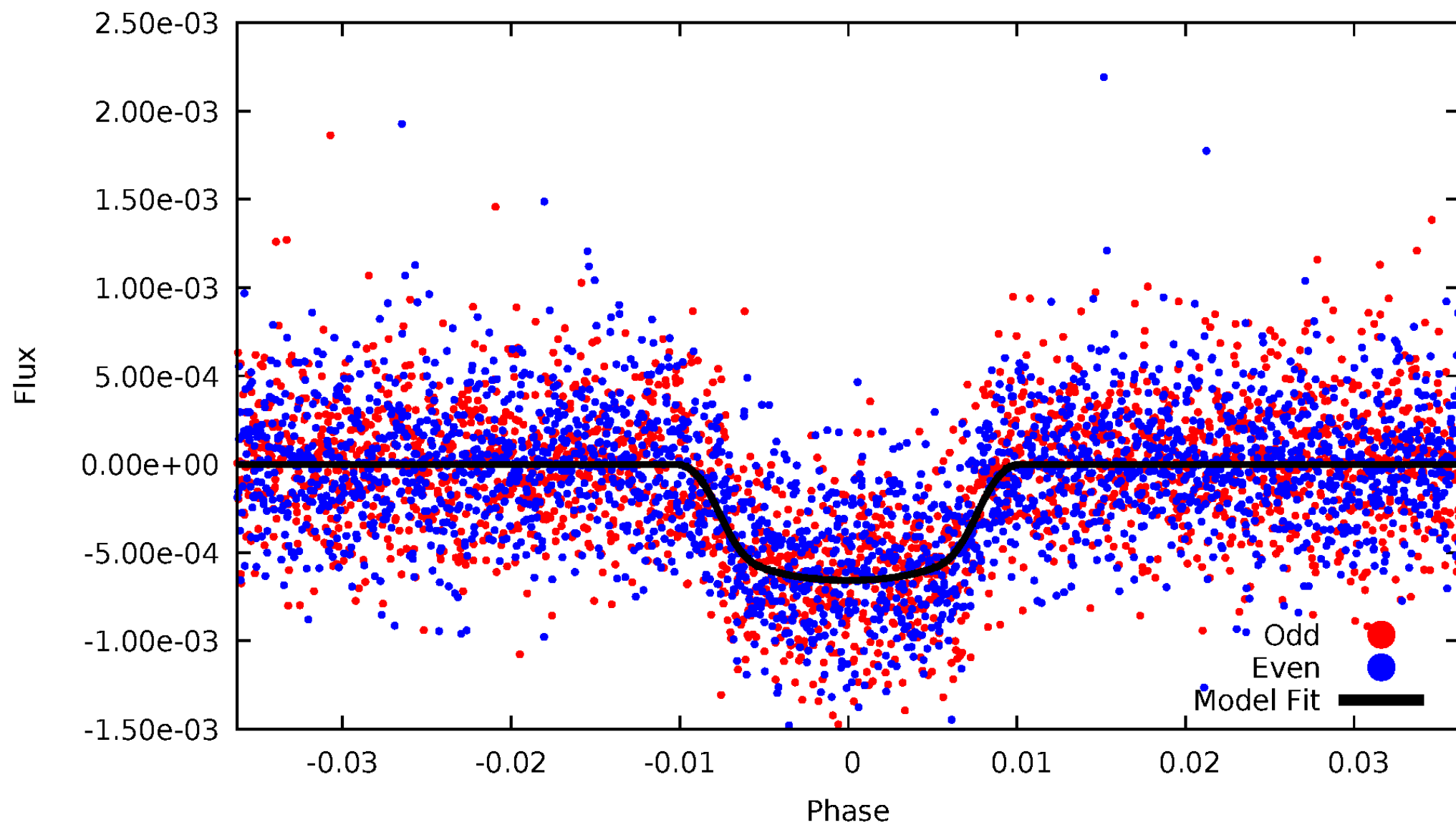


TCE 012834874-01



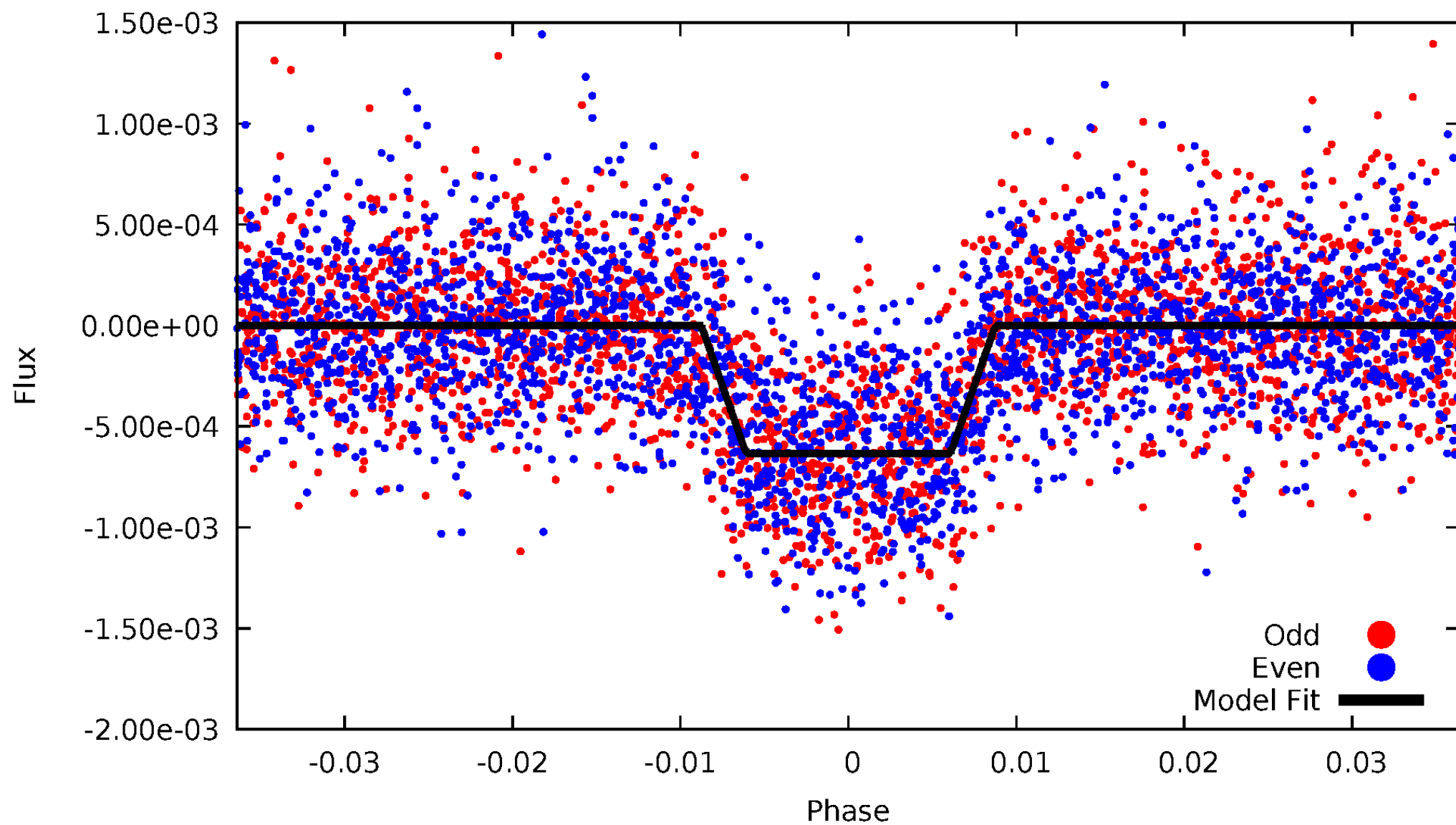
DV Odd/Even

TCE 012834874-01

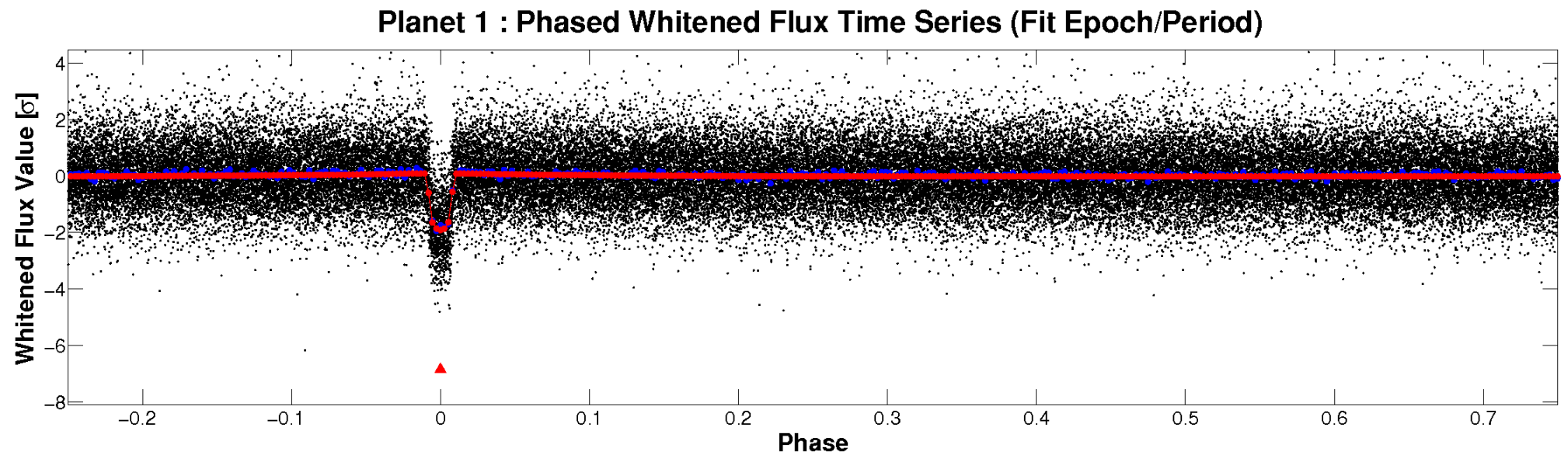
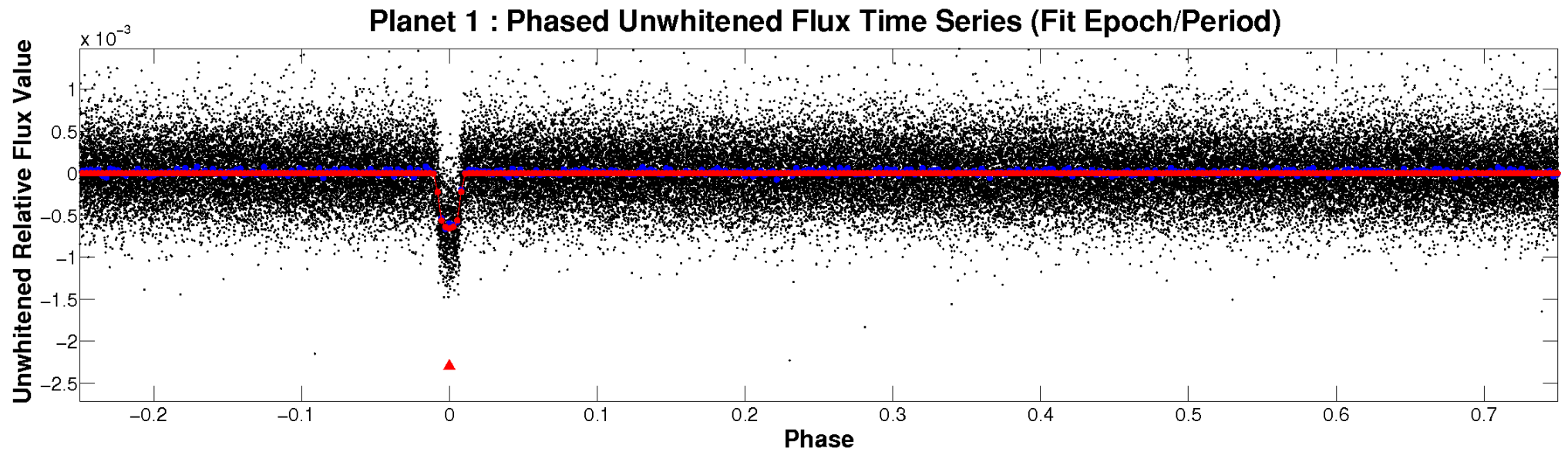


ALT Odd/Even

TCE 012834874-01

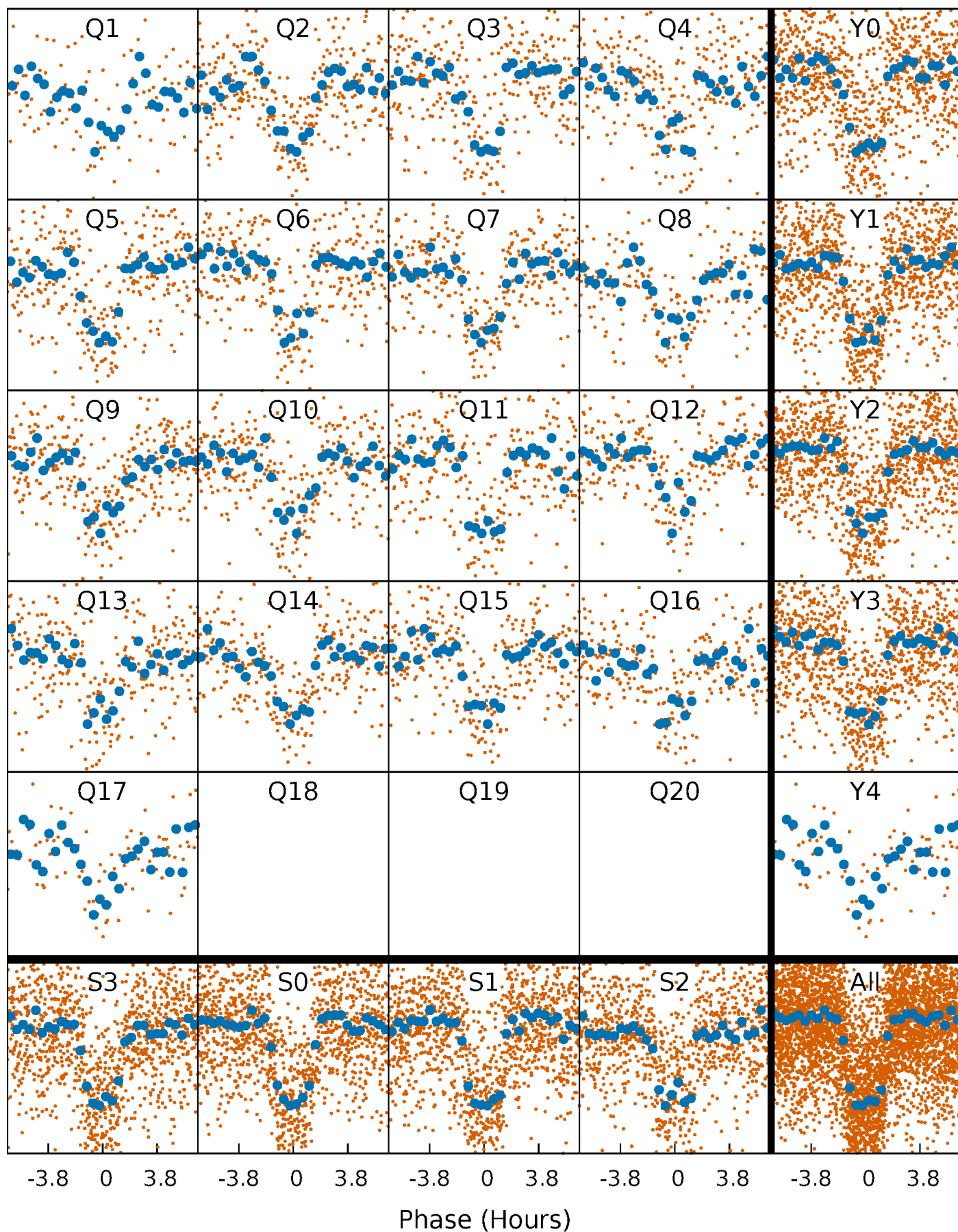


Non-Whitened Vs. Whitened Light Curve



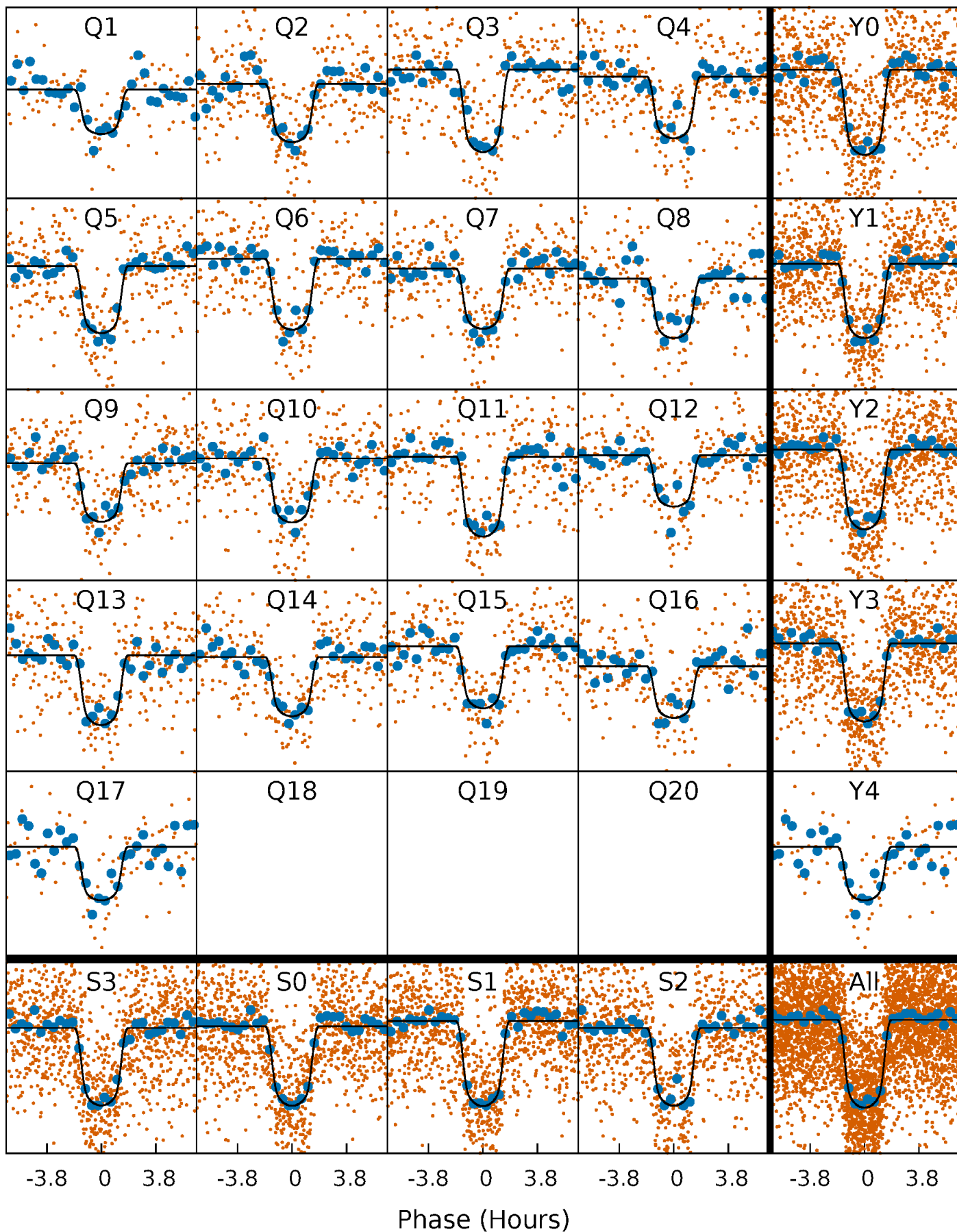
PDC Quarter-Phased Transit Curves

TCE 012834874-01 P= 7.658787 Days $T_0=134.747091$ (BKJD)



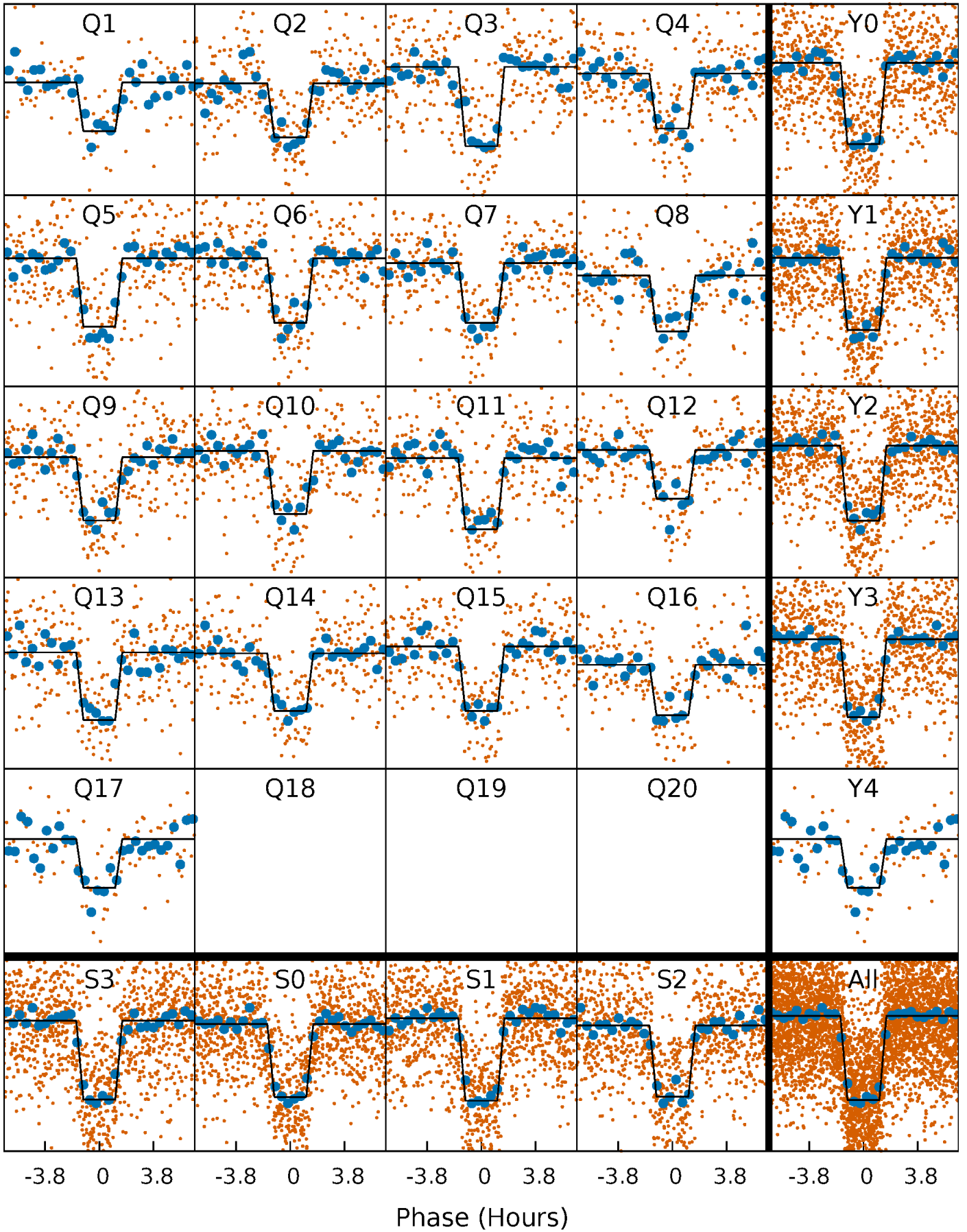
DV Quarter-Phased Transit Curves

TCE 012834874-01 P= 7.658787 Days $T_0=134.747091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

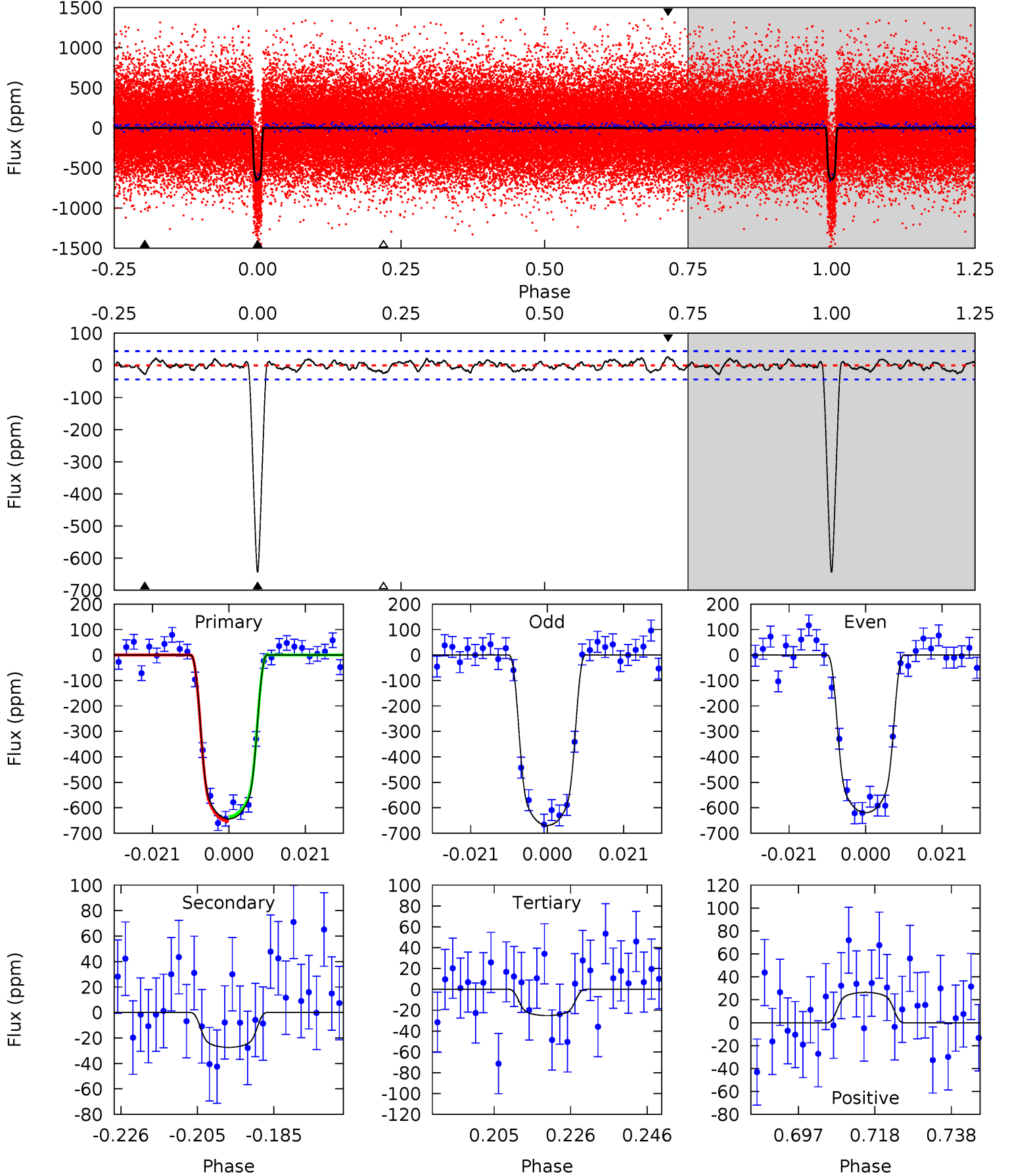
TCE 012834874-01 P= 7.658770 Days $T_0=134.748735$ (BKJD)



DV Model-Shift Uniqueness Test

012834874-01, P = 7.658787 Days, E = 127.088304 Days

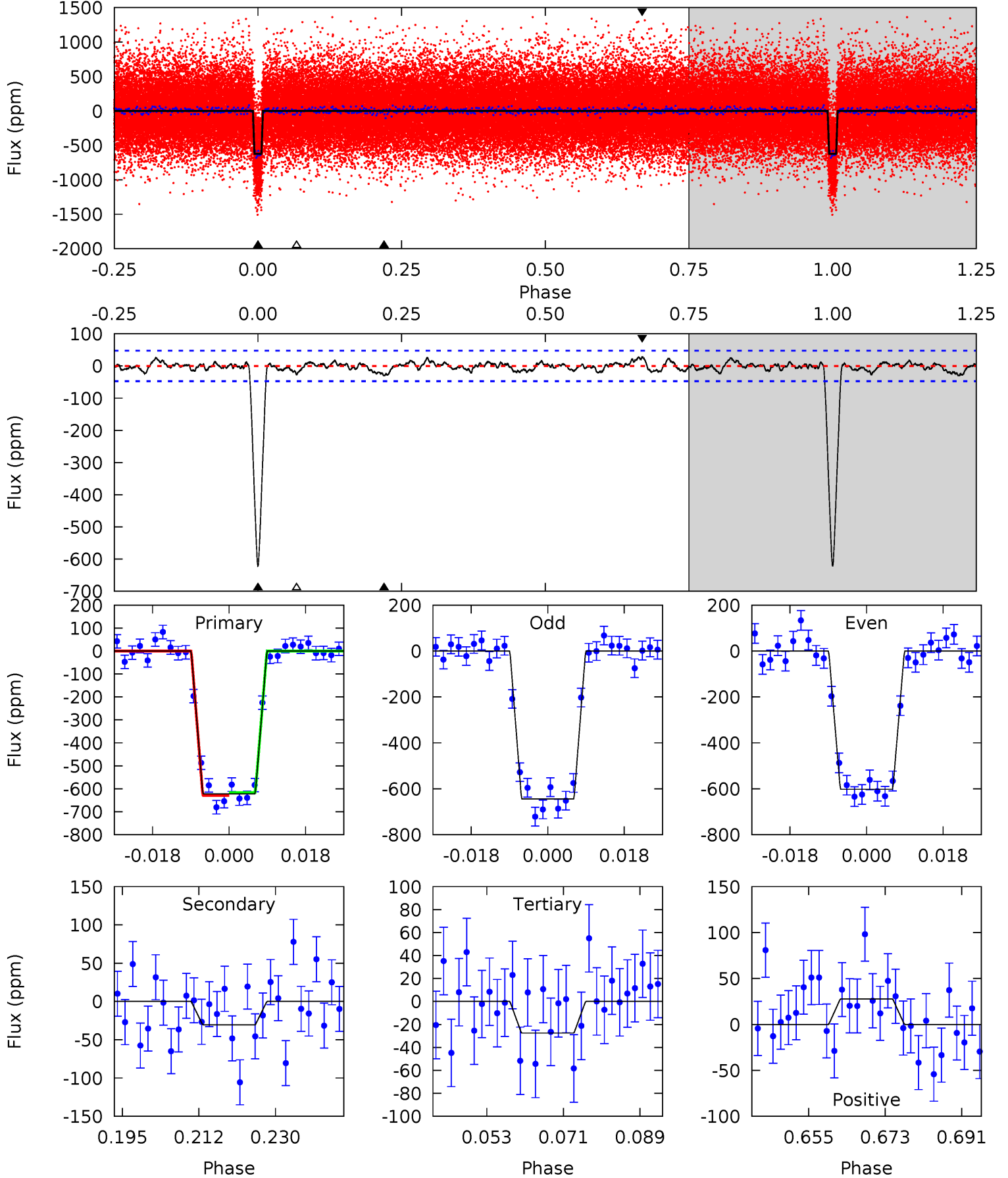
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.2	3.03	2.78	2.93	4.89	2.32	1.16	68.5	68.3	0.25	0.10	2.79	0.99	0.04	1.02



Alt Model-Shift Uniqueness Test

012834874-01, P = 7.658770 Days, E = 127.089965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.2	3.17	2.84	2.85	4.92	2.37	1.04	61.4	61.4	0.32	0.32	2.18	0.99	0.04	0.70



Stellar Parameters For KIC 012834874

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5657^{+152}_{-152}	$4.508^{+0.069}_{-0.161}$	$-0.260^{+0.300}_{-0.300}$	$0.855^{+0.215}_{-0.092}$	$0.858^{+0.106}_{-0.080}$	$1.933^{+0.571}_{-0.871}$
	+3%/-3%	+2%/-4%	+115%/-115%	+25%/-11%	+12%/-9%	+30%/-45%
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 012834874-01 / KOI 0487.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-27 ± 9	$2.70^{+0.36}_{-0.24}$	1217^{+75}_{-57}	3051^{+151}_{-169}	10^{+4}_{-4}
Alt.	-31 ± 10	$2.39^{+0.30}_{-0.21}$	1212^{+76}_{-55}	3218^{+164}_{-205}	15^{+7}_{-5}

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 $A_{obs} \gg 1.0$

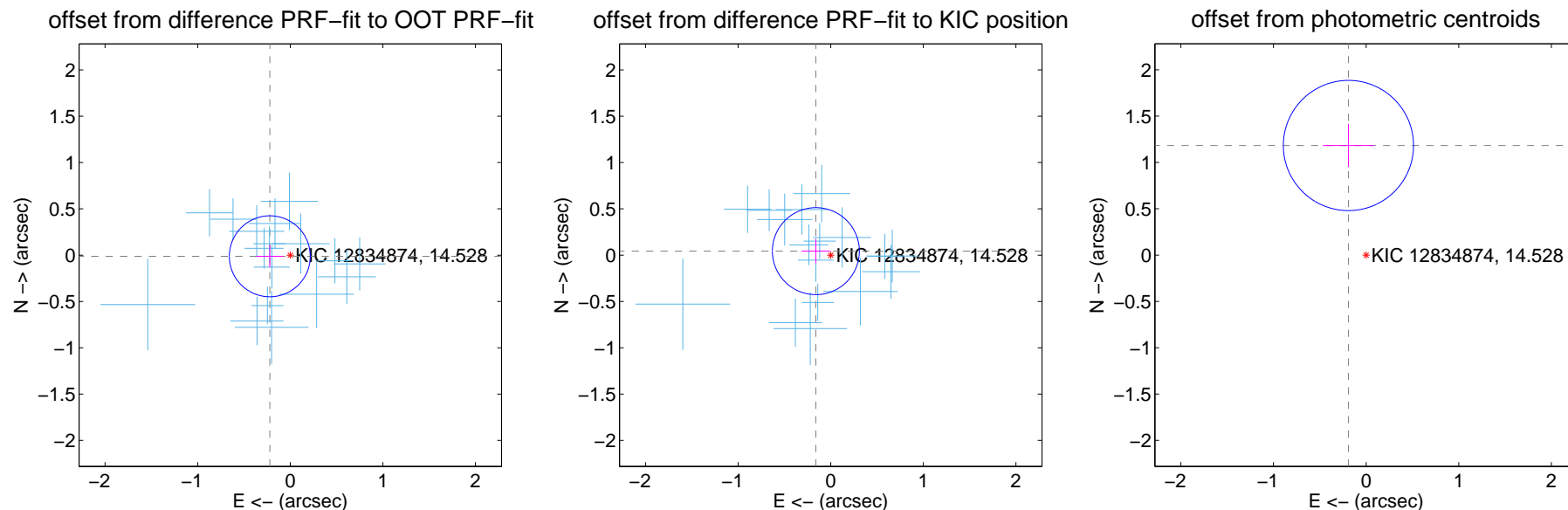
DV Centroid Data

Supplemental centroid analysis for 012834874-01. Kepler magnitude: 14.53. Transit SNR 52.59

There are 17 quarters with good PRF difference image offsets

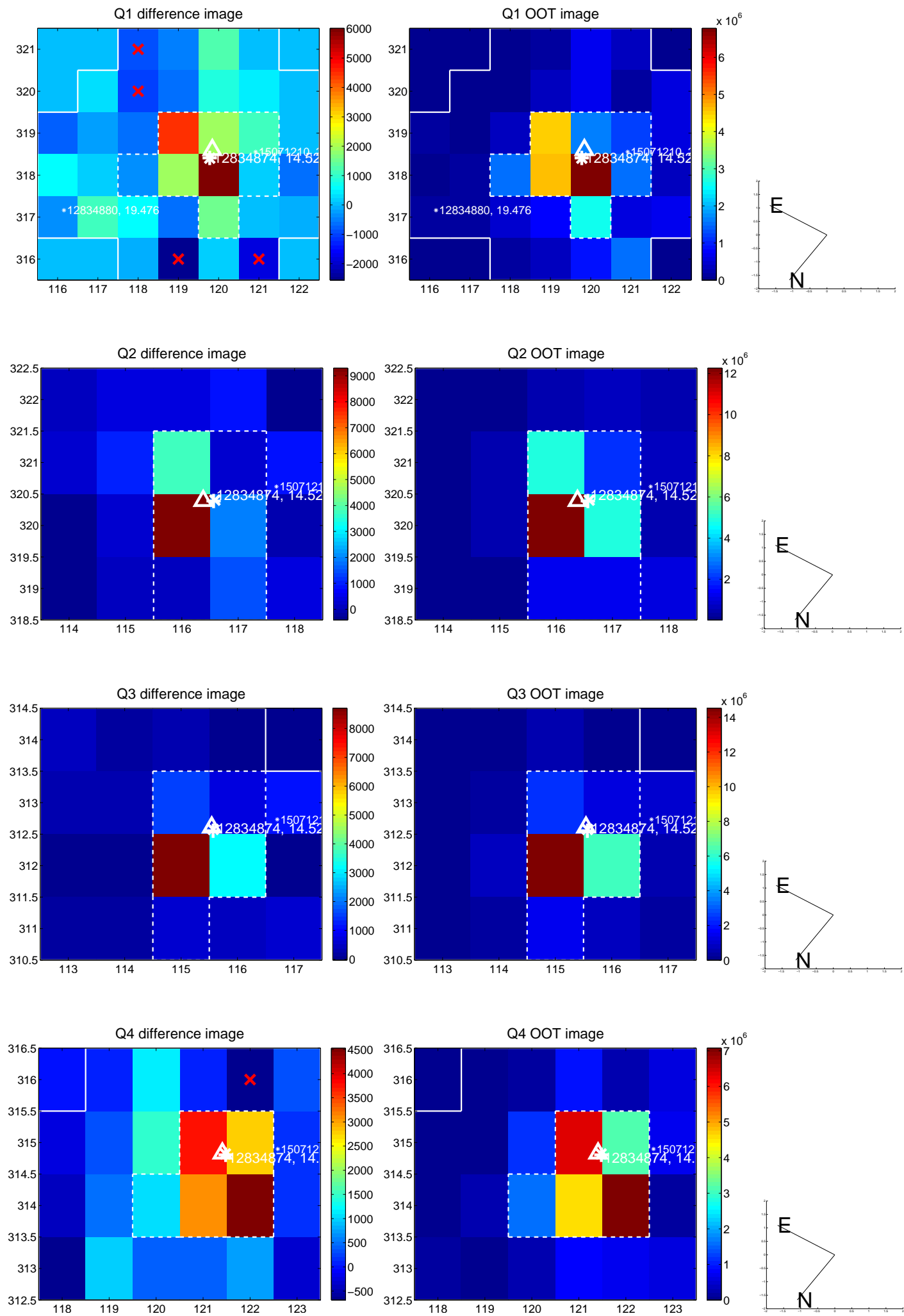
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.221 ± 0.146	1.52	0.221 ± 0.146	-0.012 ± 0.122
PRF-fit source offset from KIC position	0.166 ± 0.157	1.06	0.160 ± 0.154	0.043 ± 0.129
photometric centroid source offset	1.20 ± 0.23	5.11	0.19 ± 0.28	1.18 ± 0.23

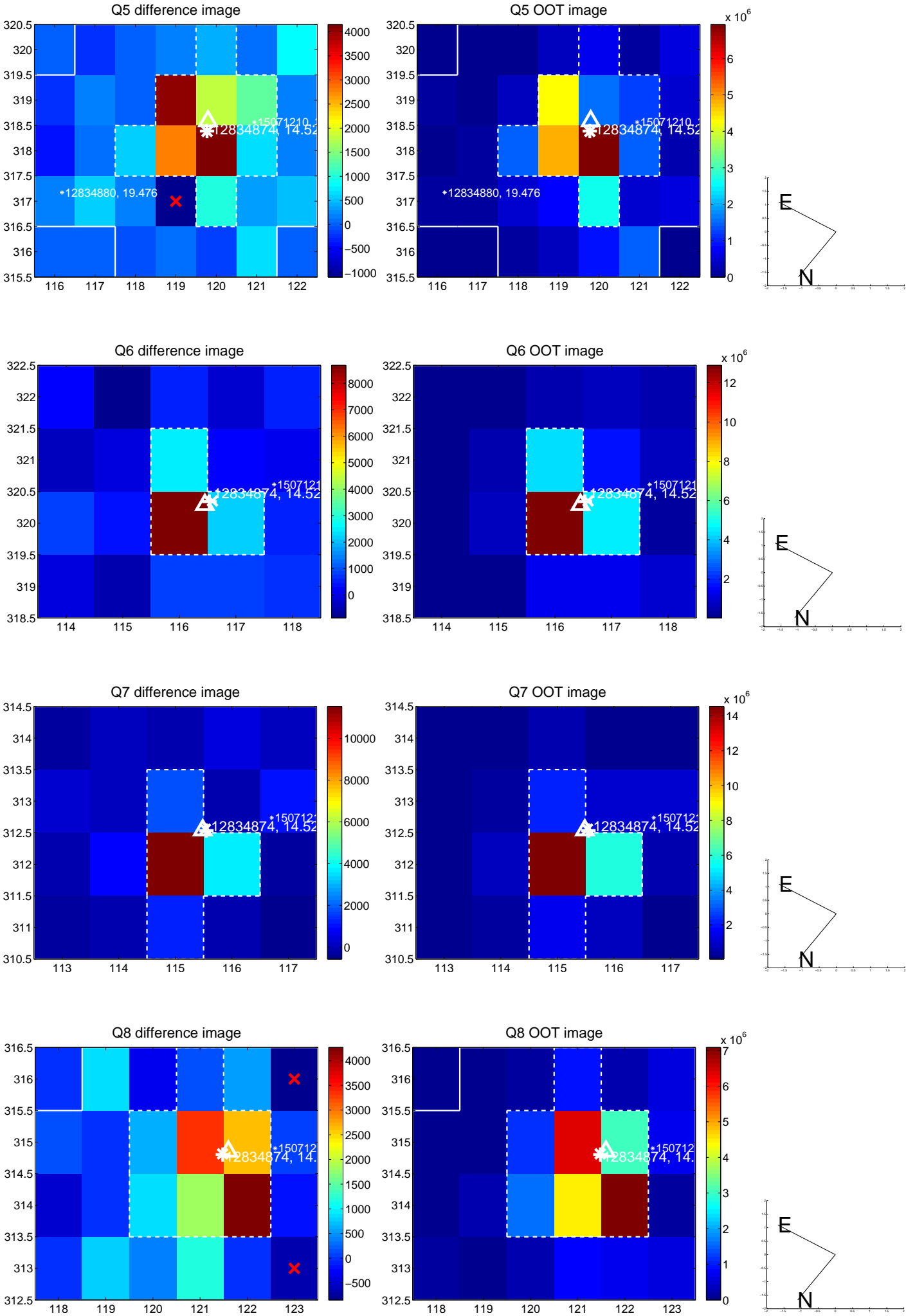


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

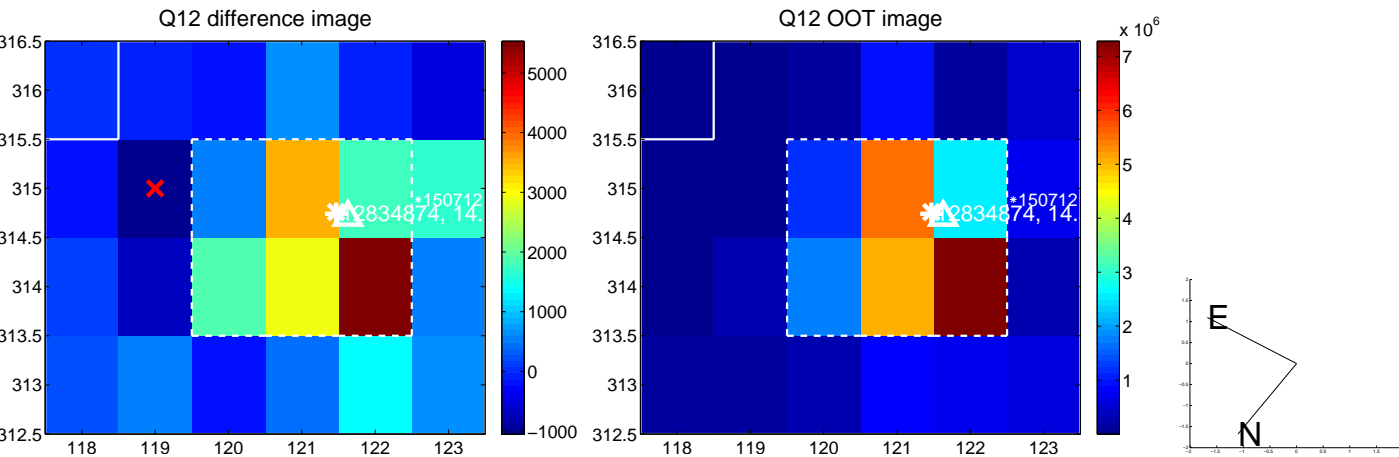
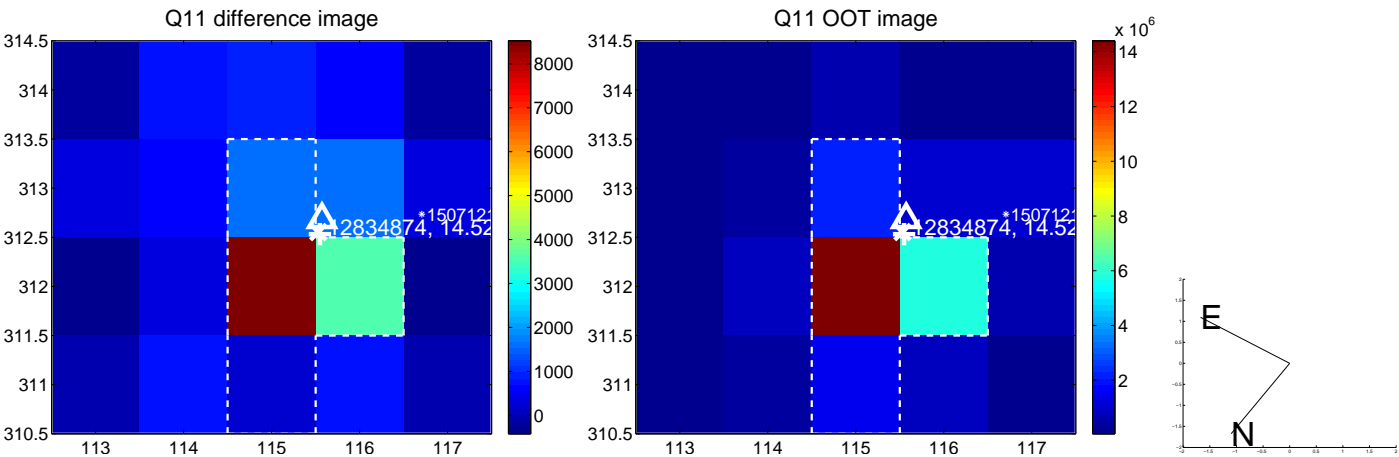
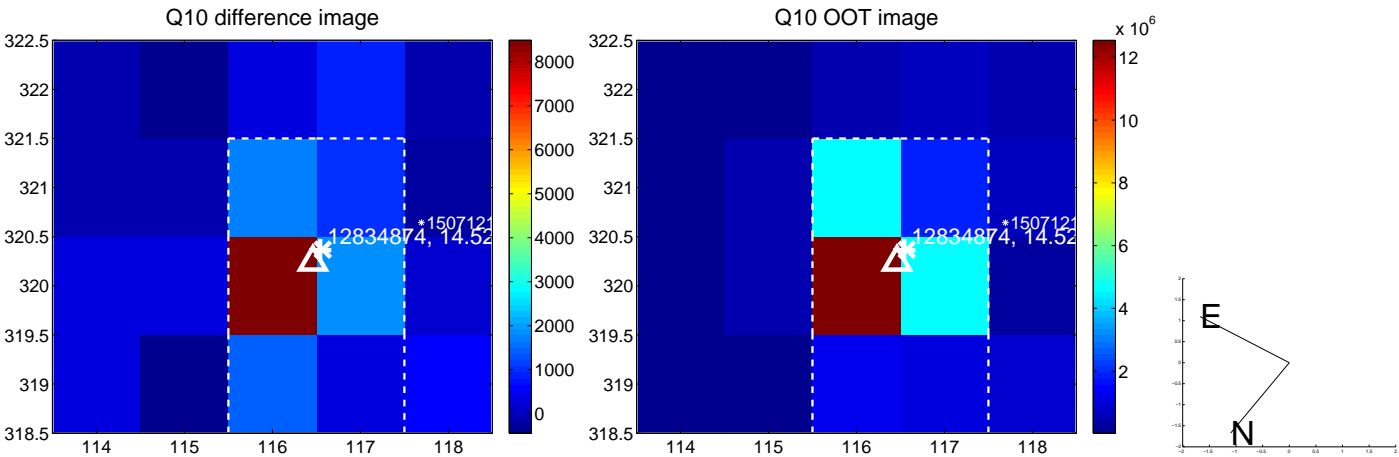
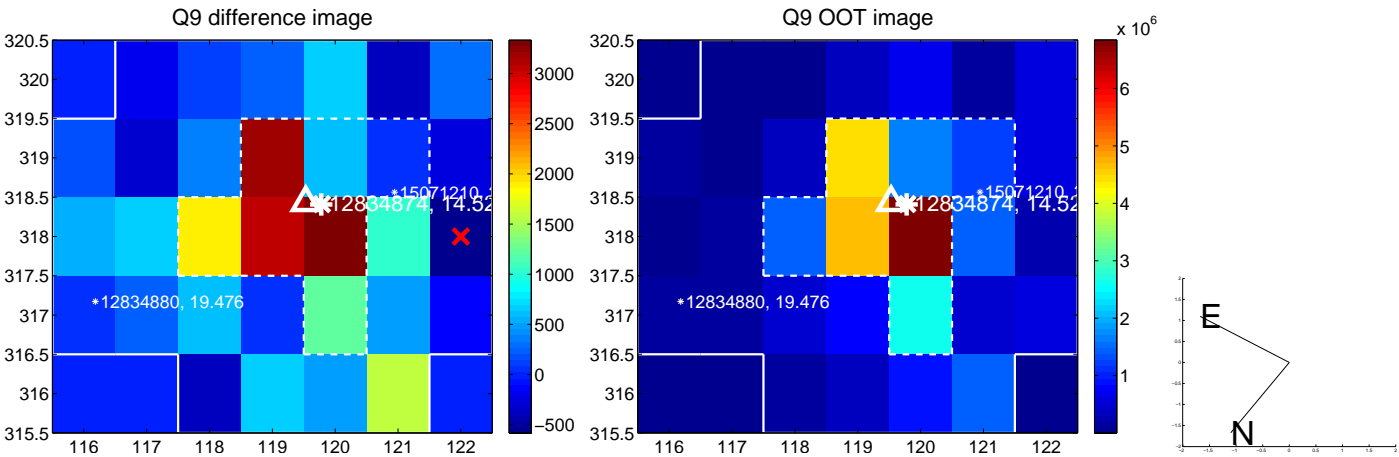
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



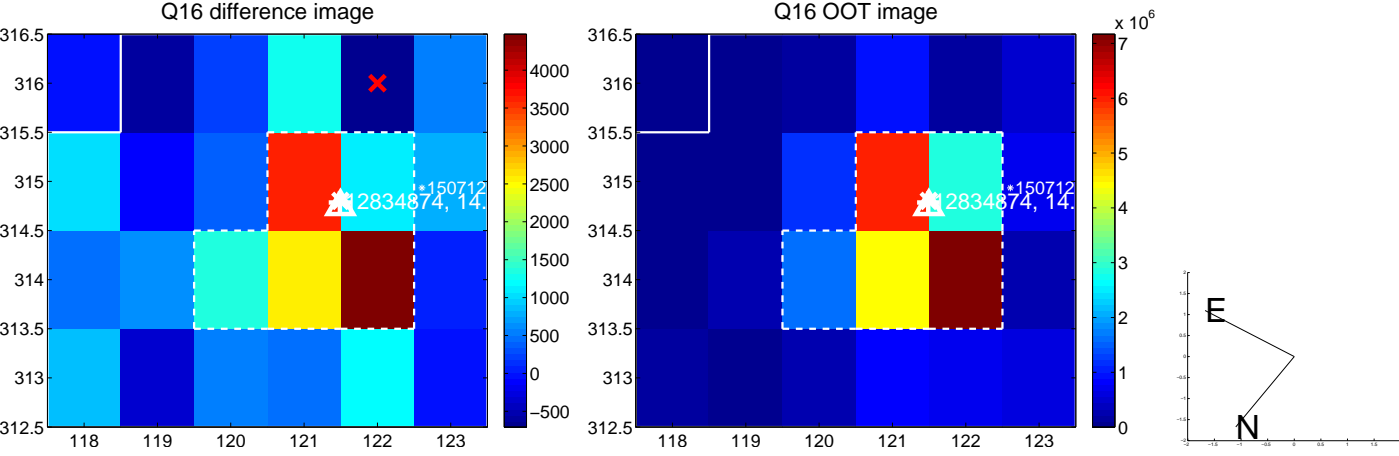
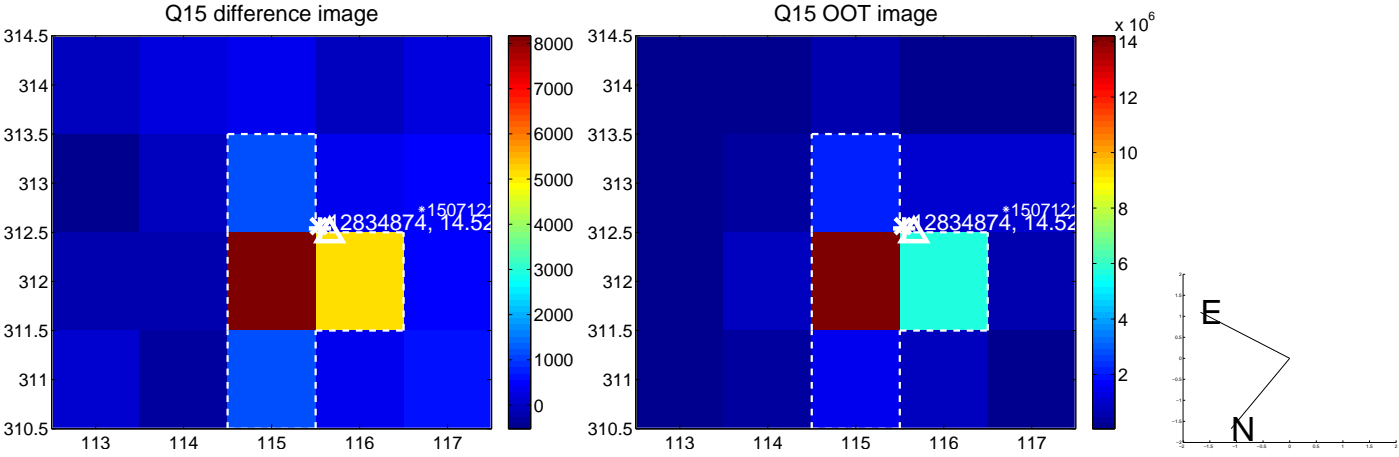
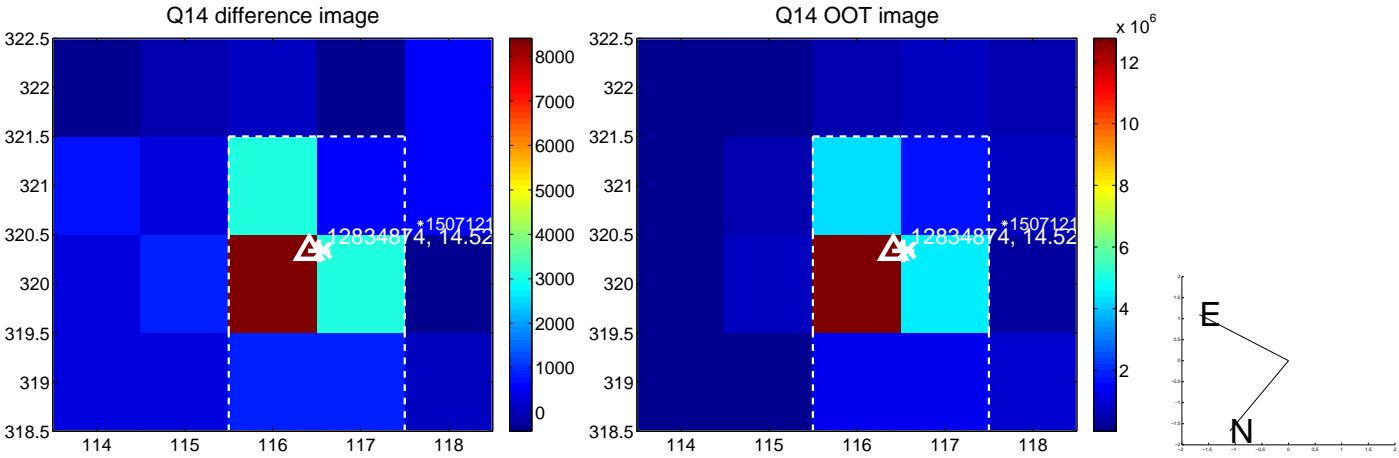
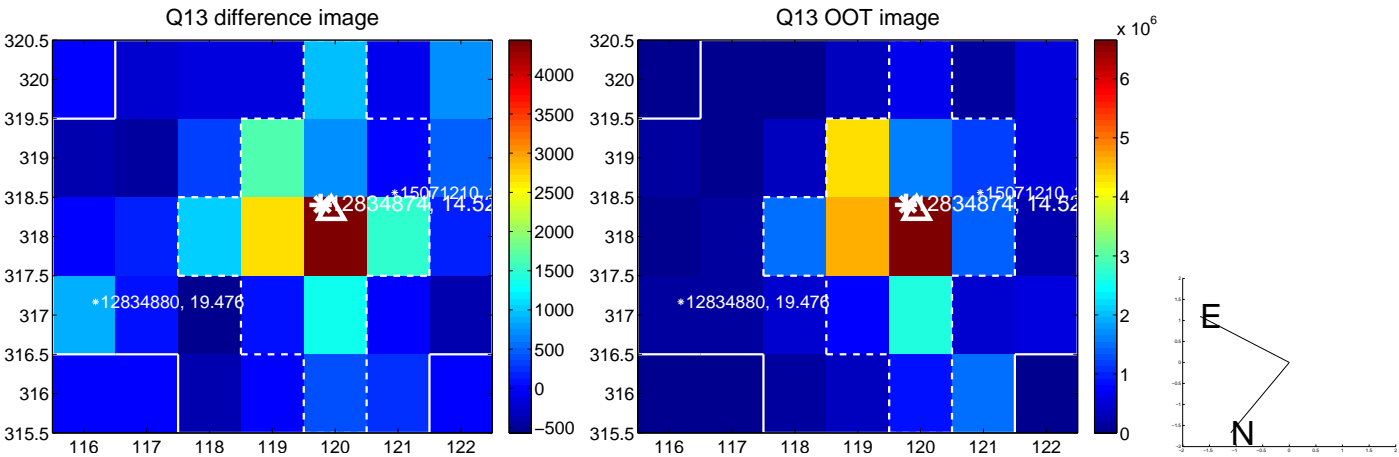
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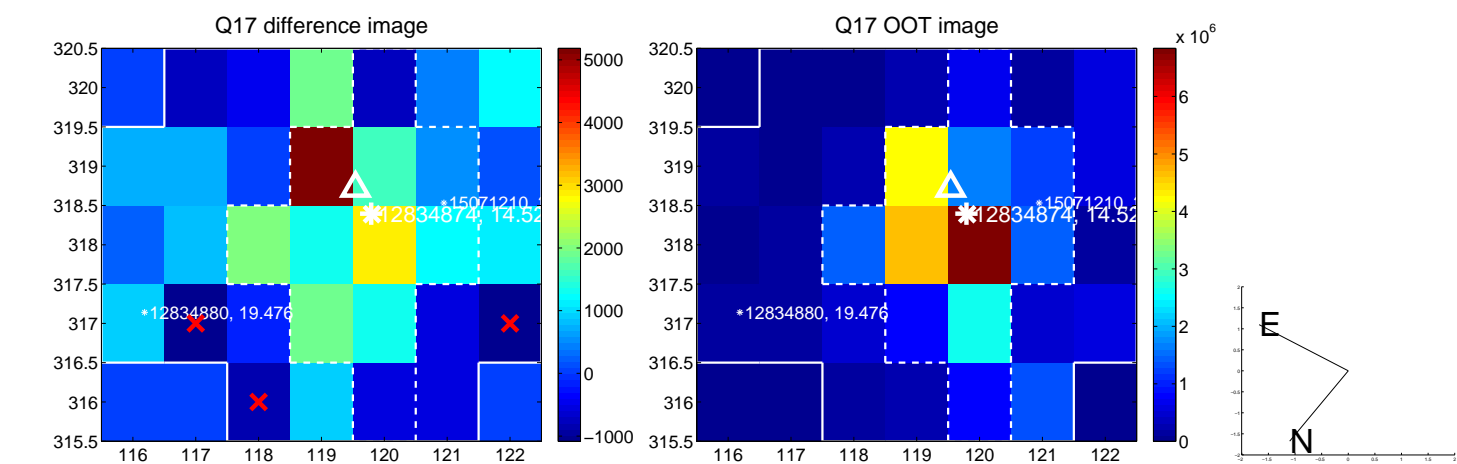
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



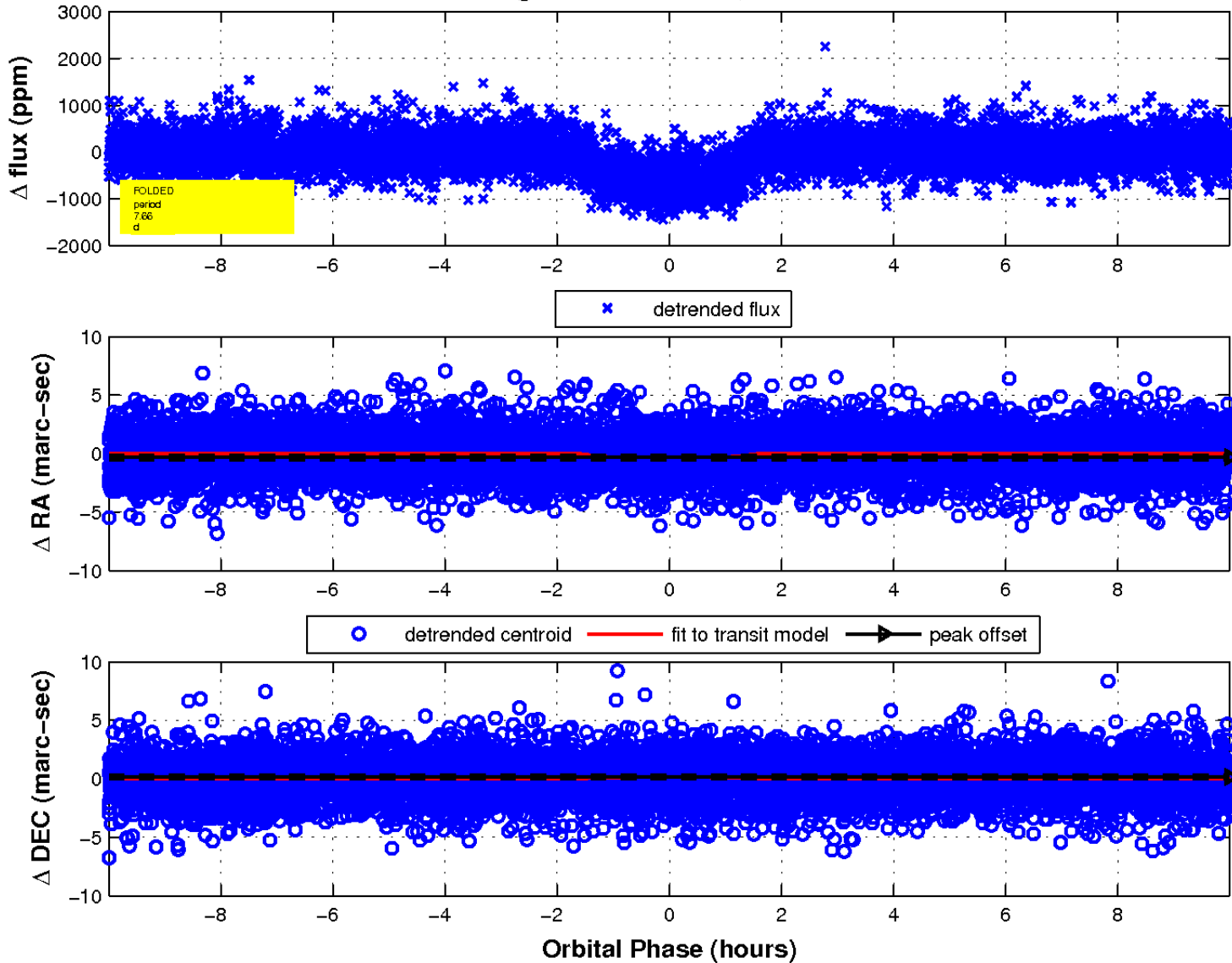
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

