

KIC 008174625

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})
008174625-01	OBS	1017.01	17.444899	141.676895	816.6	4.450	39.7	41.3	0.97	5568	3.21	50.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008174625-01	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.

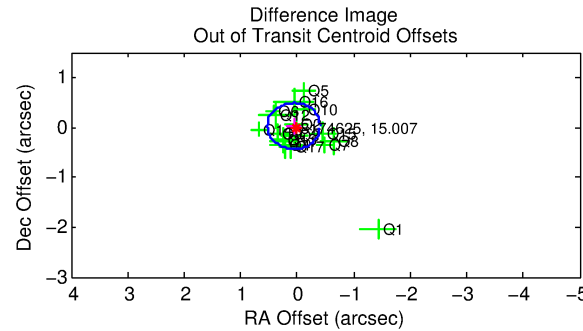
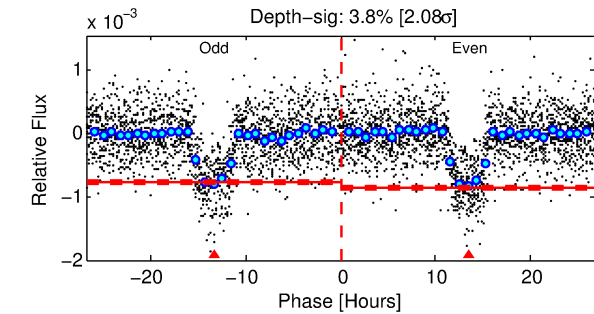
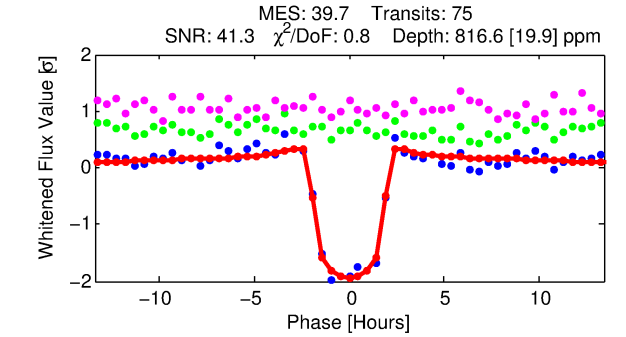
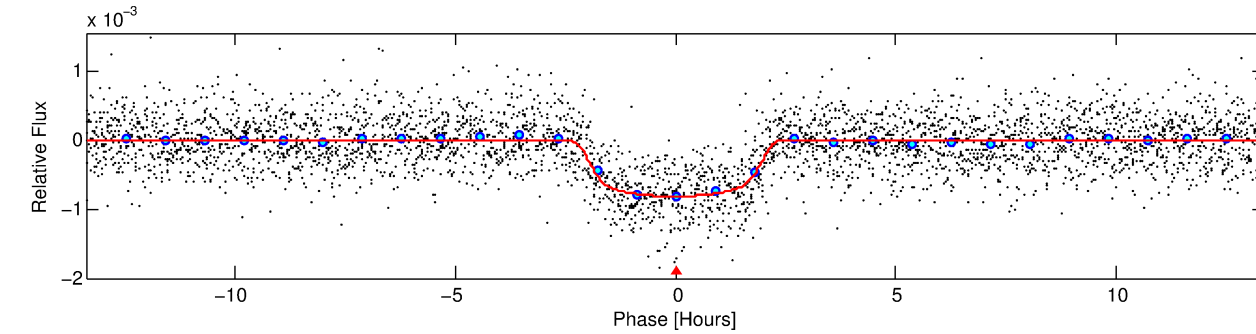
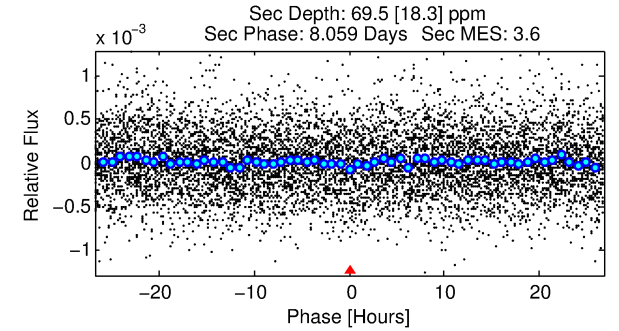
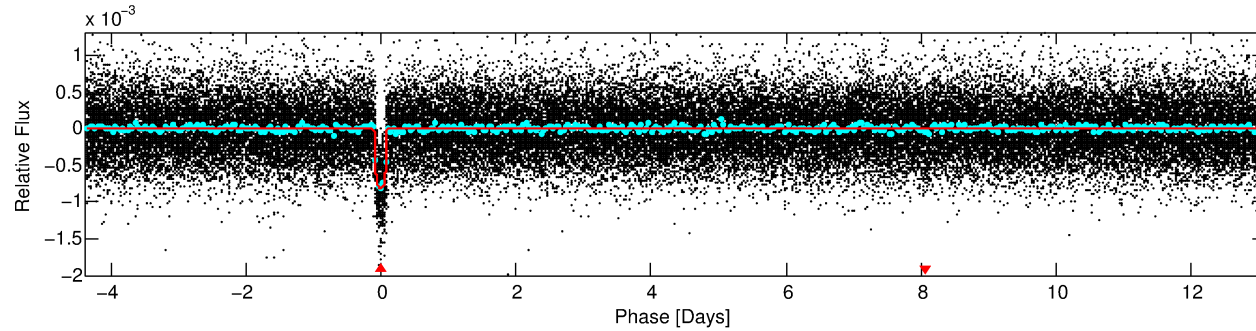
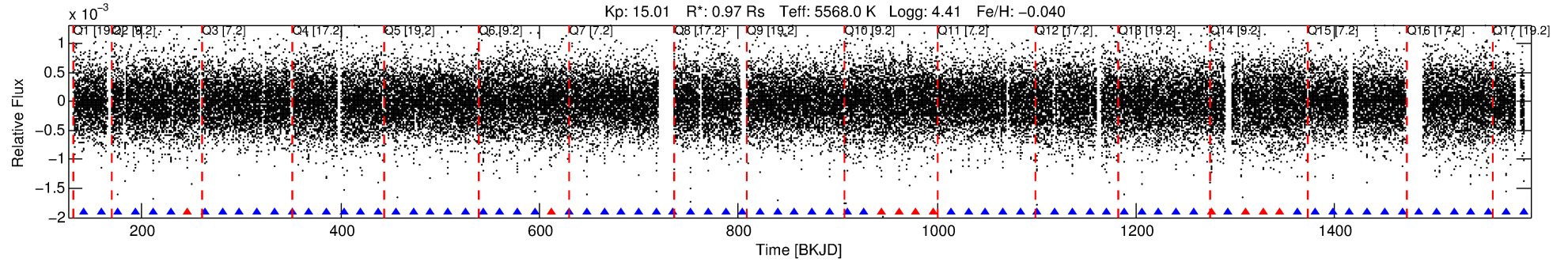
Ephemeris Match Information For 008174625-01

No Significant Match Found

DV One-Page Summary

KIC: 8174625 Candidate: 1 of 1 Period: 17.445 d

KOI: K01017.01 Corr: 0.958



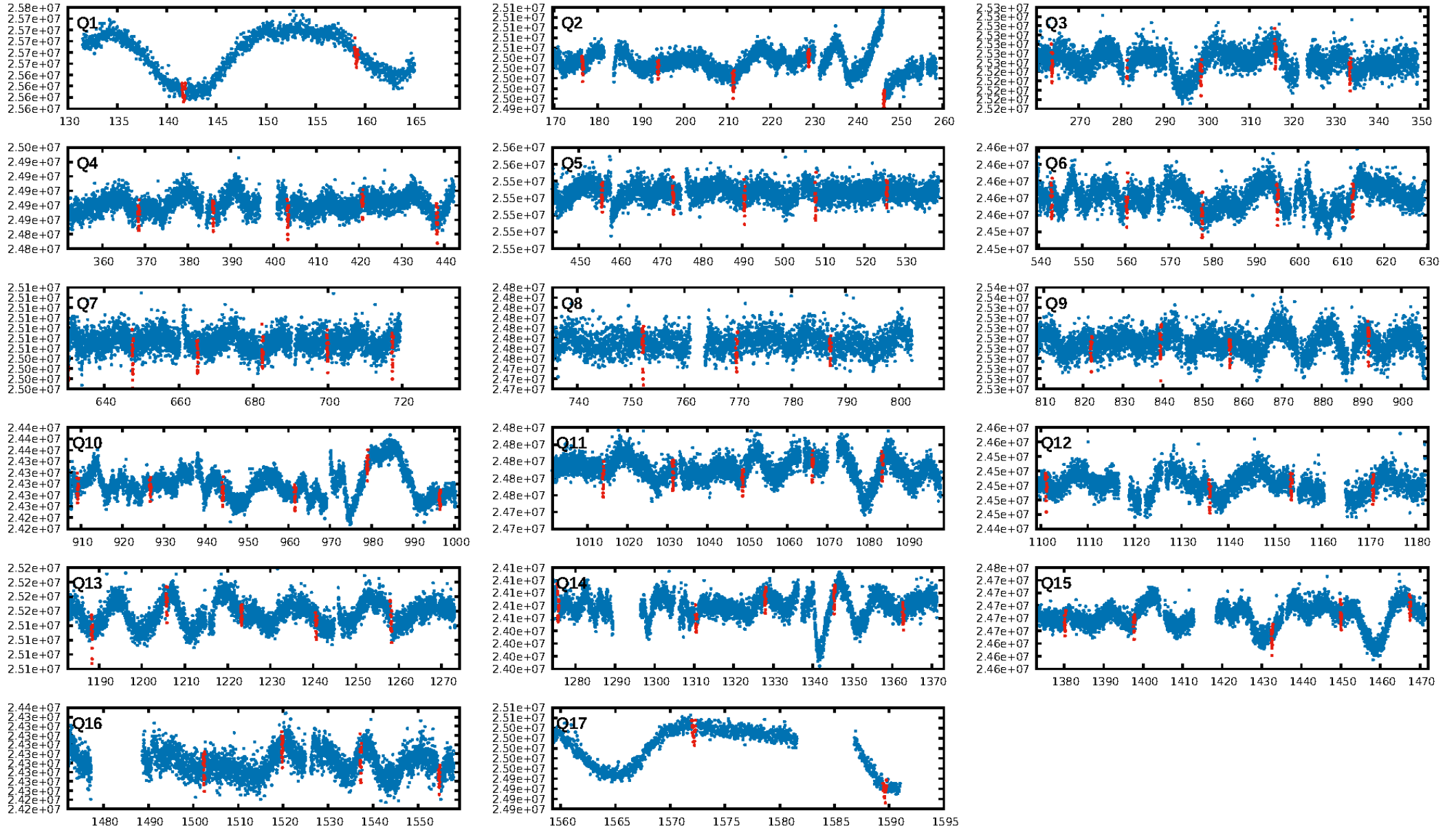
DV Fit Results:

Period = 17.44490 [0.00004] d
Epoch = 141.6769 [0.0020] BKJD
Rp/R* = 0.0305 [0.0017]
a/R* = 16.54 [3.77]
b = 0.87 [0.06]
Seff = 50.44 [17.69]
Teff = 680 [60] K
Rp = 3.21 [0.89] Re
a = 0.1262 [0.0287] AU
Ag = 58.91 [25.71] [2.25σ]
Teffp = 2911 [225] K [9.58σ]

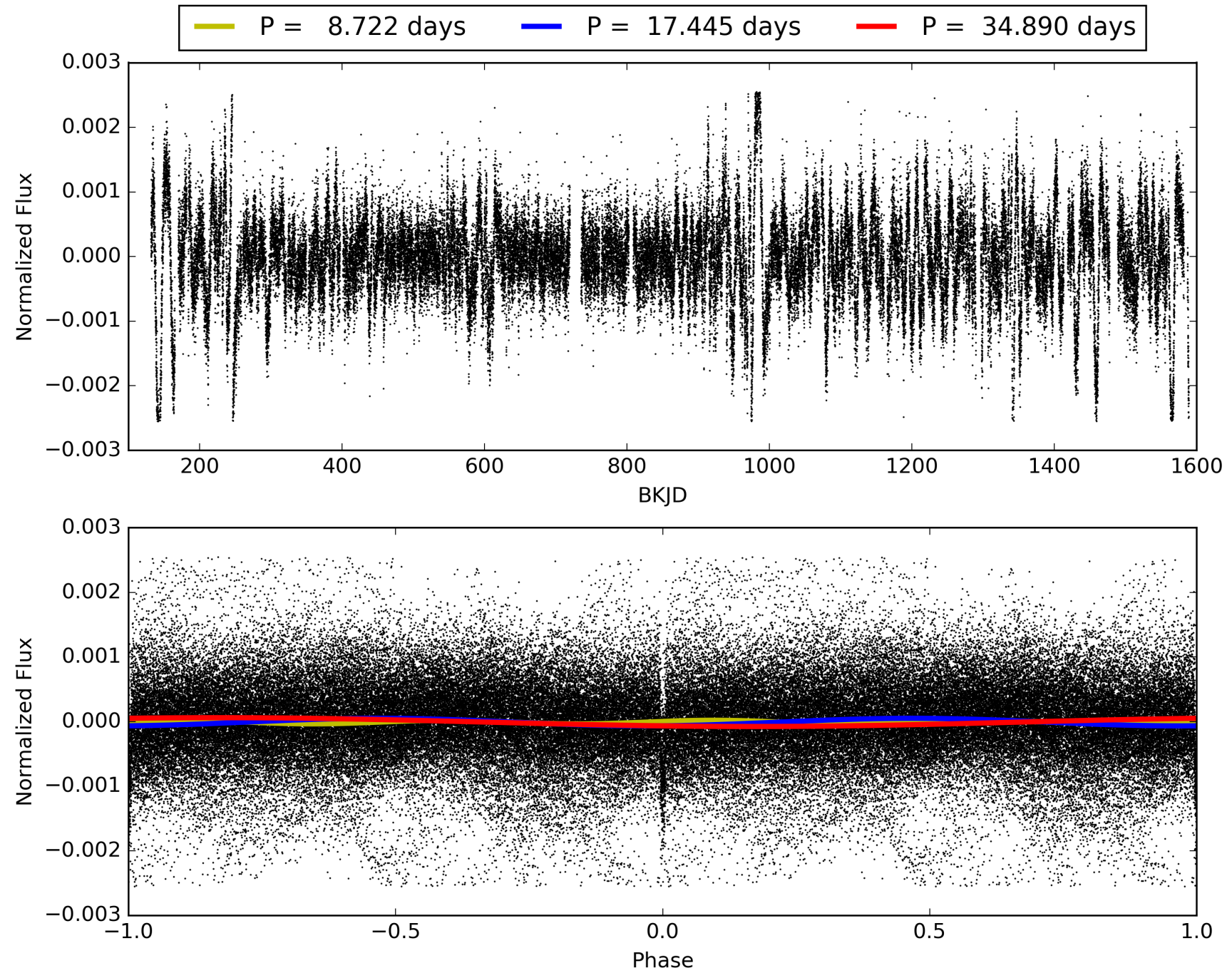
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.86e-307
RollingBand-fgt: 0.86 [61/71]
GhostDiagnostic-chr: 5.965
Centroid-sig: 6.2%
Centroid-so: 0.566 arcsec [1.59σ]
OotOffset-rm: 0.066 arcsec [0.42σ]
KicOffset-rm: 0.100 arcsec [0.55σ]
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 008174625-01, PDC Light Curves

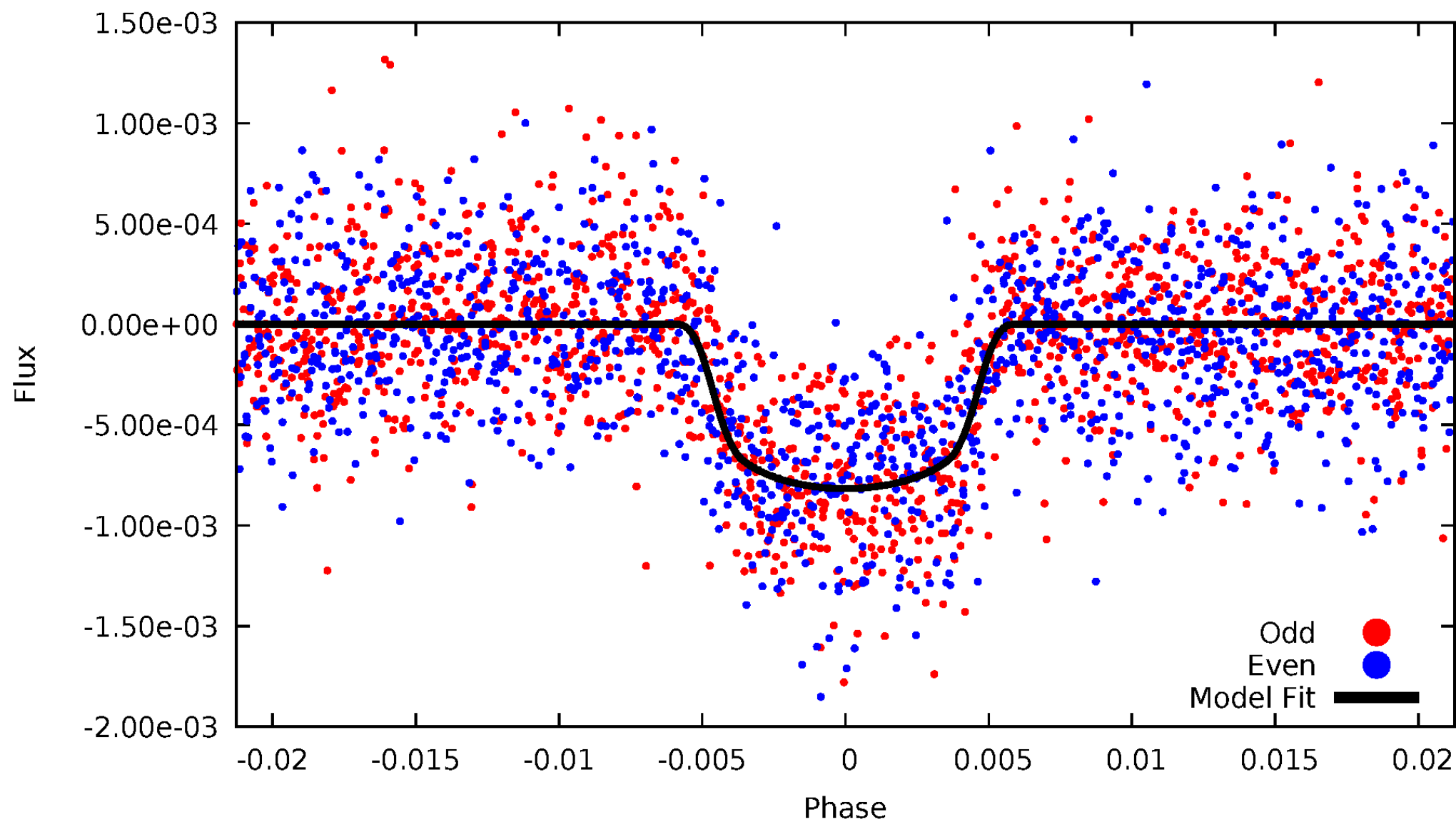


TCE 008174625-01



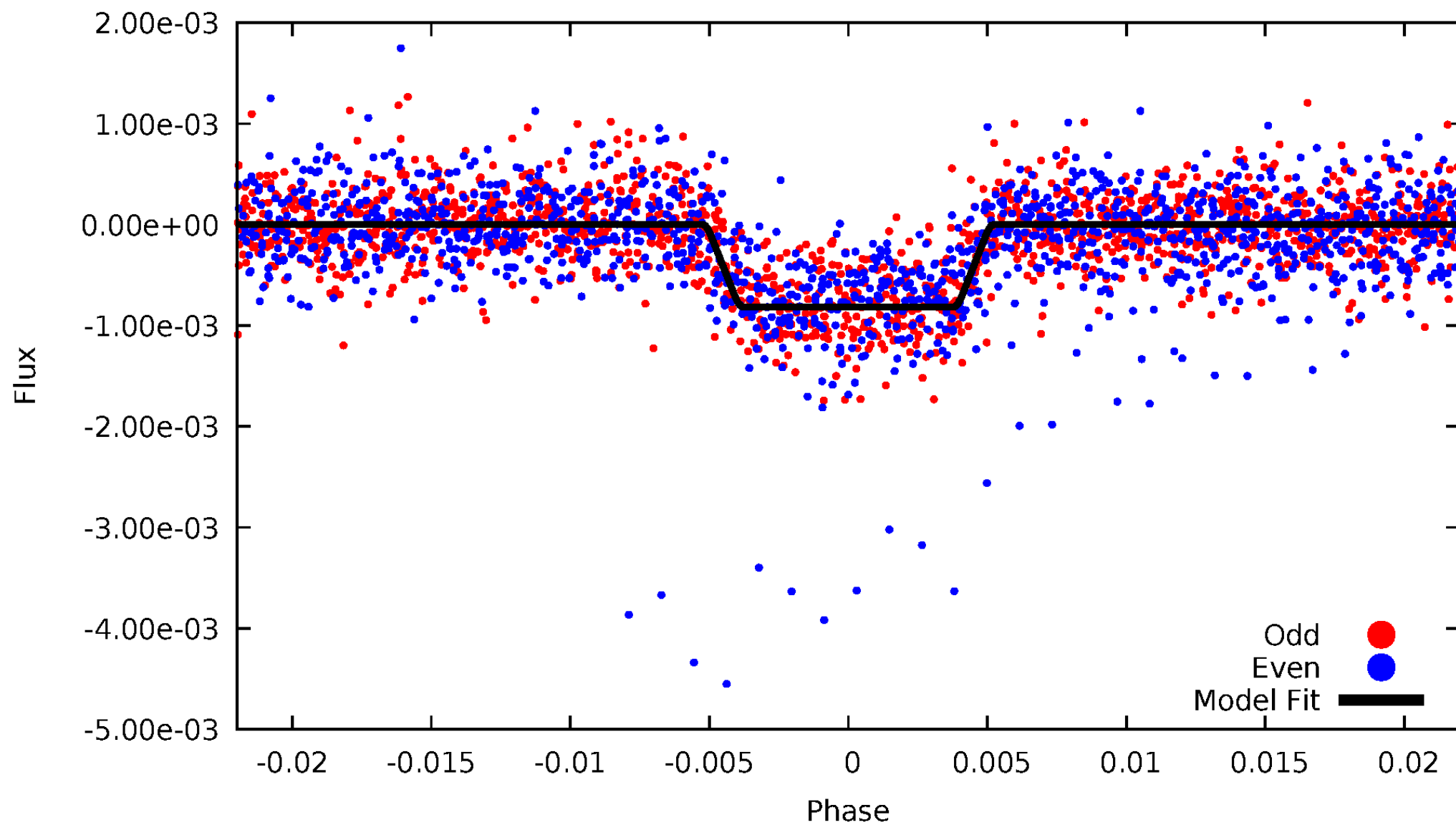
DV Odd/Even

TCE 008174625-01

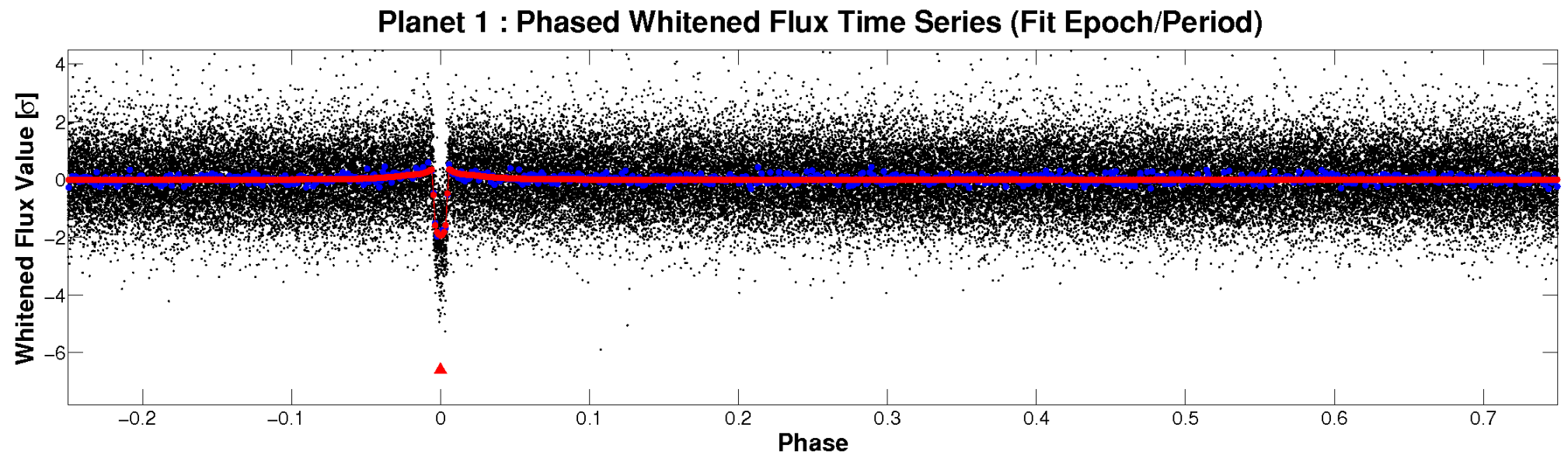
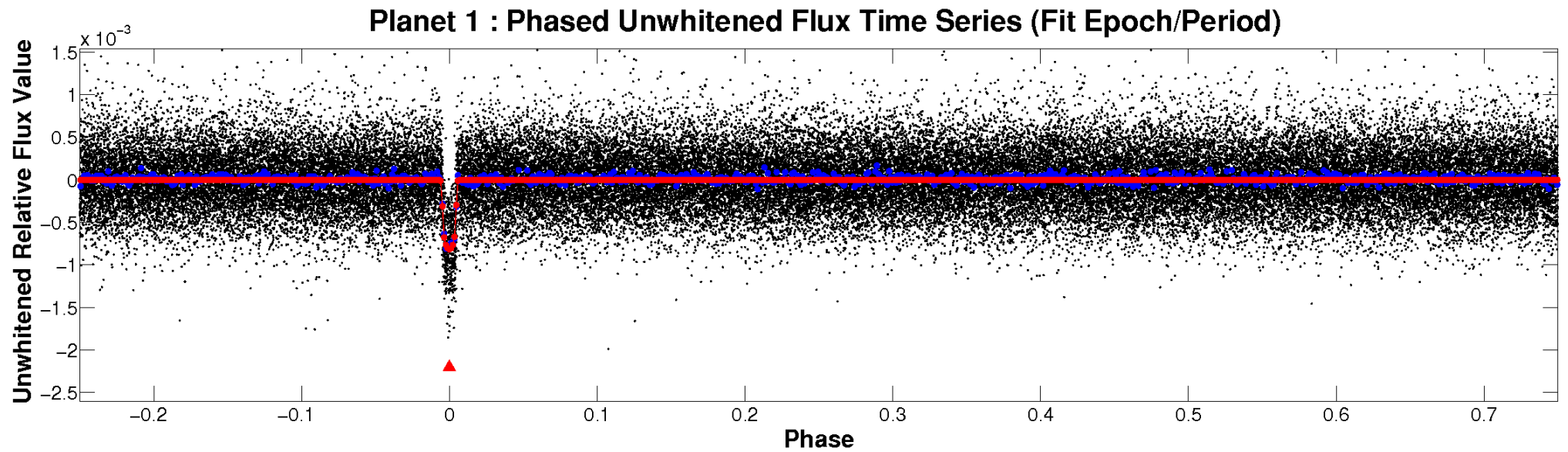


ALT Odd/Even

TCE 008174625-01

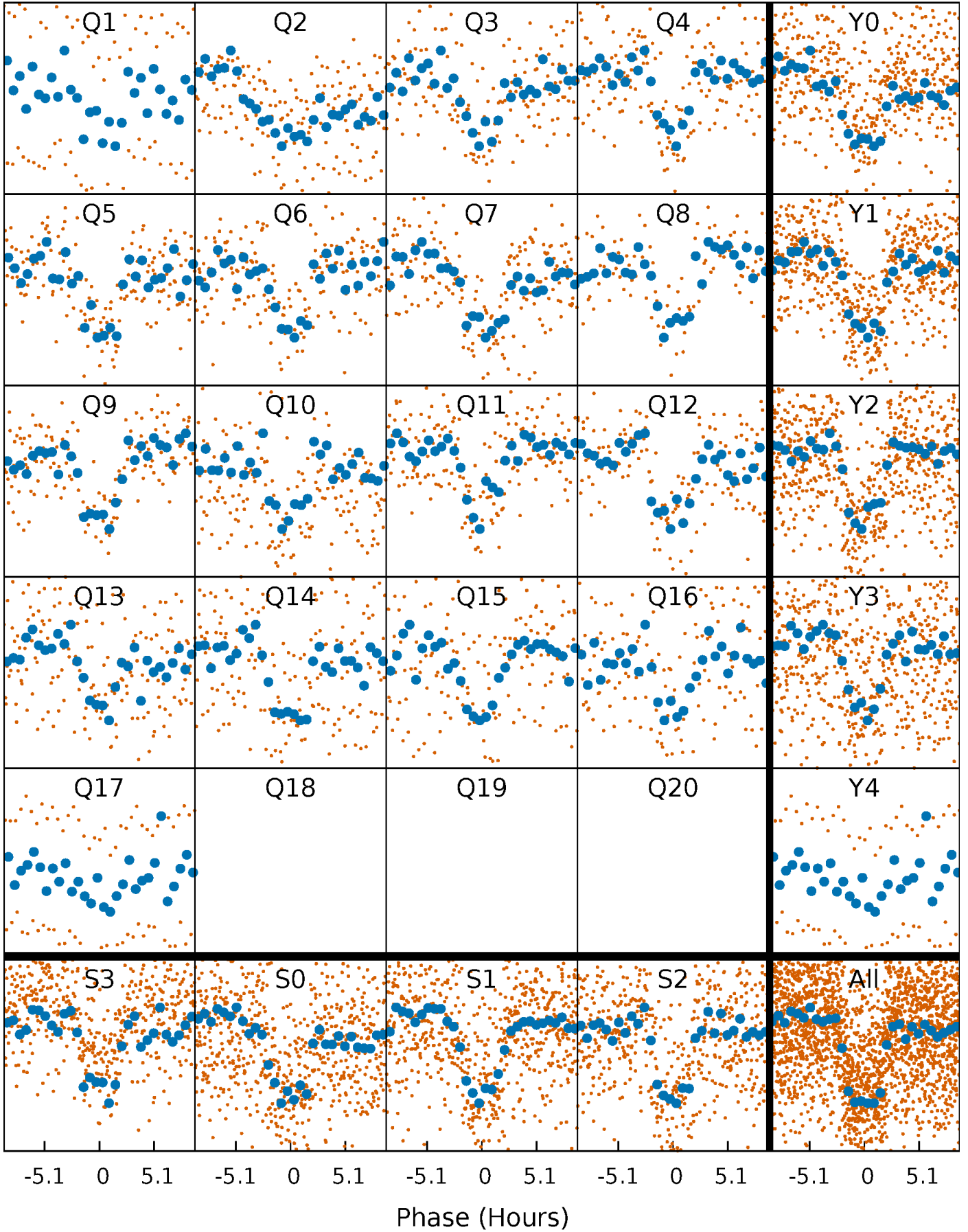


Non-Whitened Vs. Whitened Light Curve



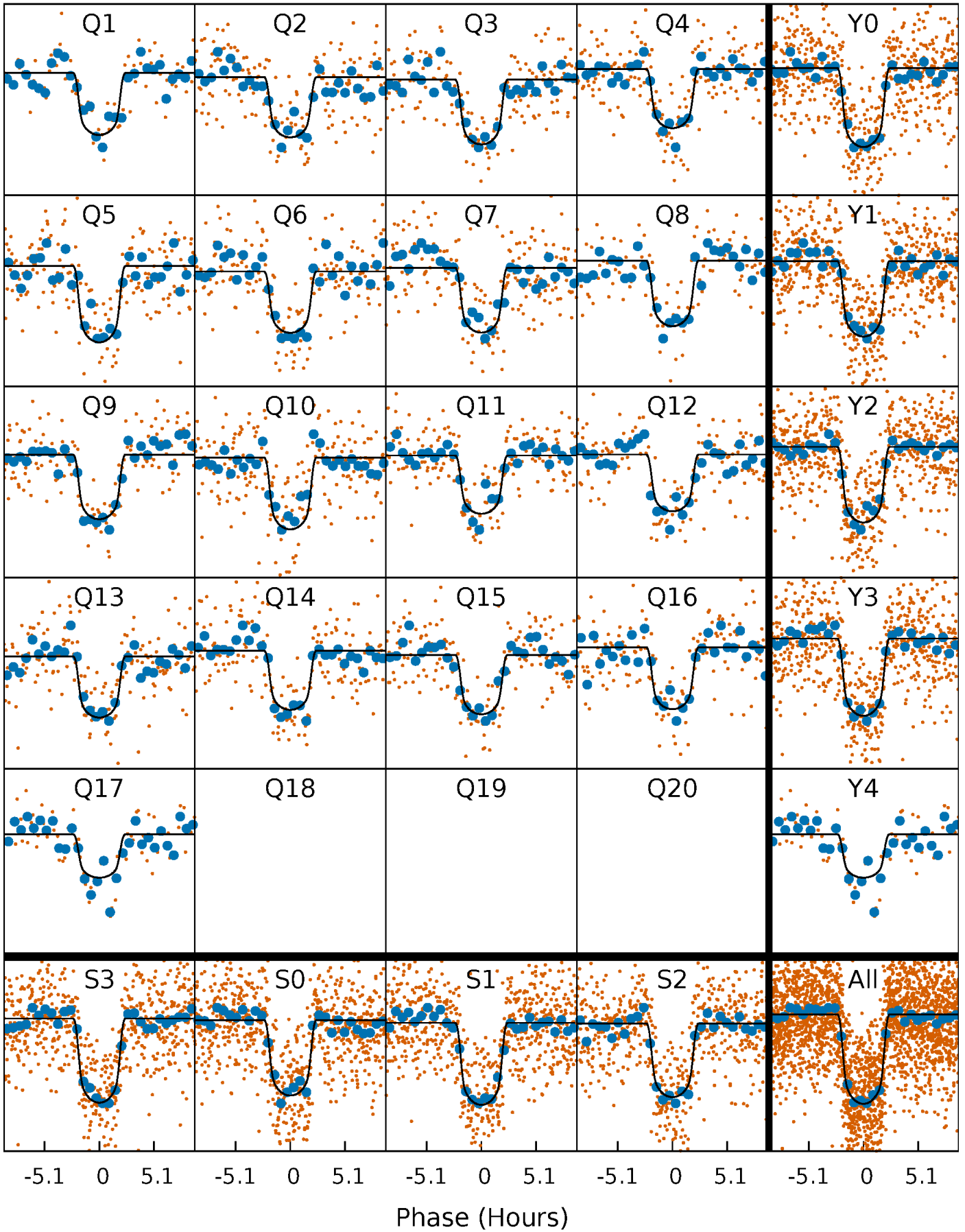
PDC Quarter-Phased Transit Curves

TCE 008174625-01 P= 17.444899 Days $T_0=141.676895$ (BKJD)



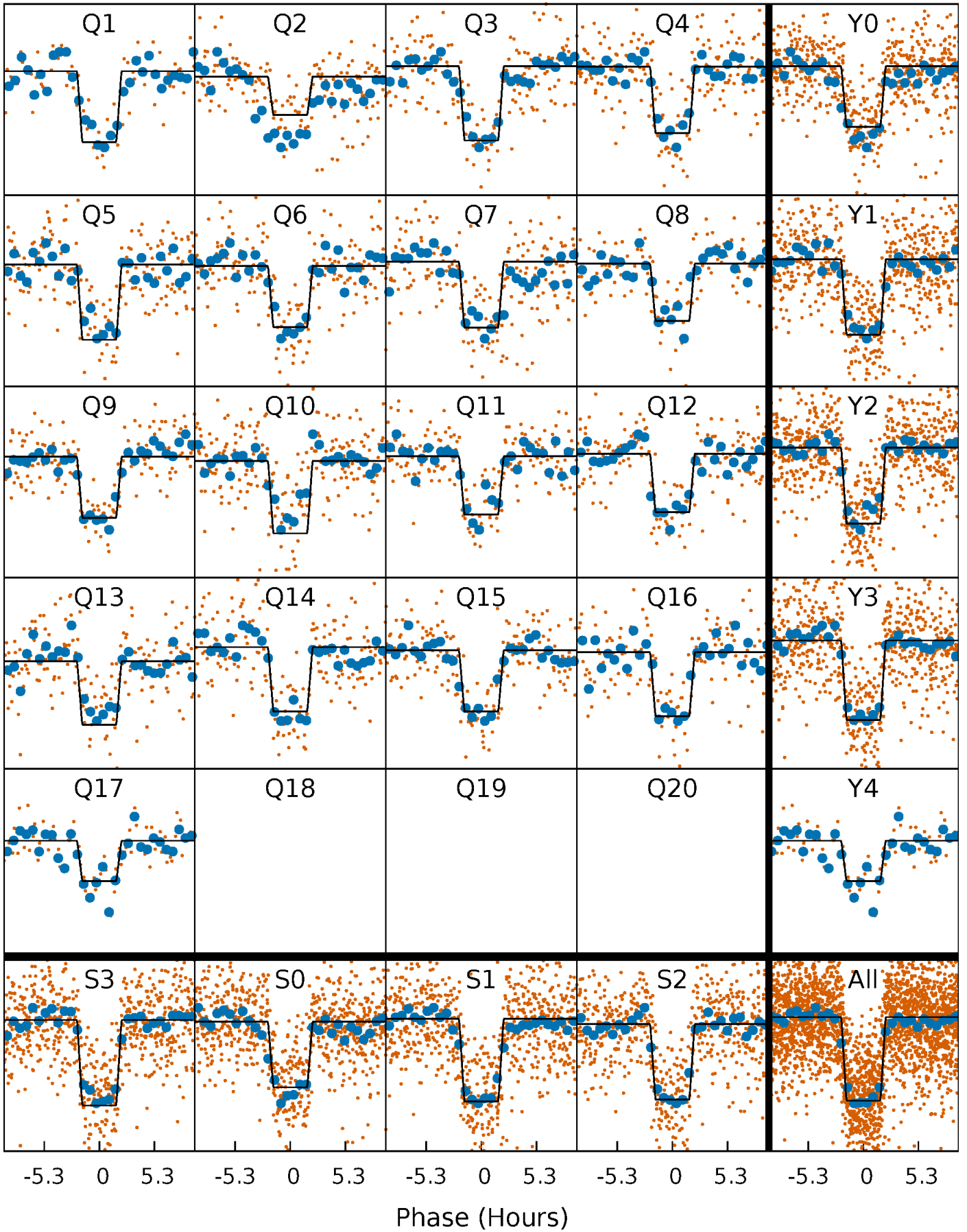
DV Quarter-Phased Transit Curves

TCE 008174625-01 P= 17.444899 Days $T_0=141.676895$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

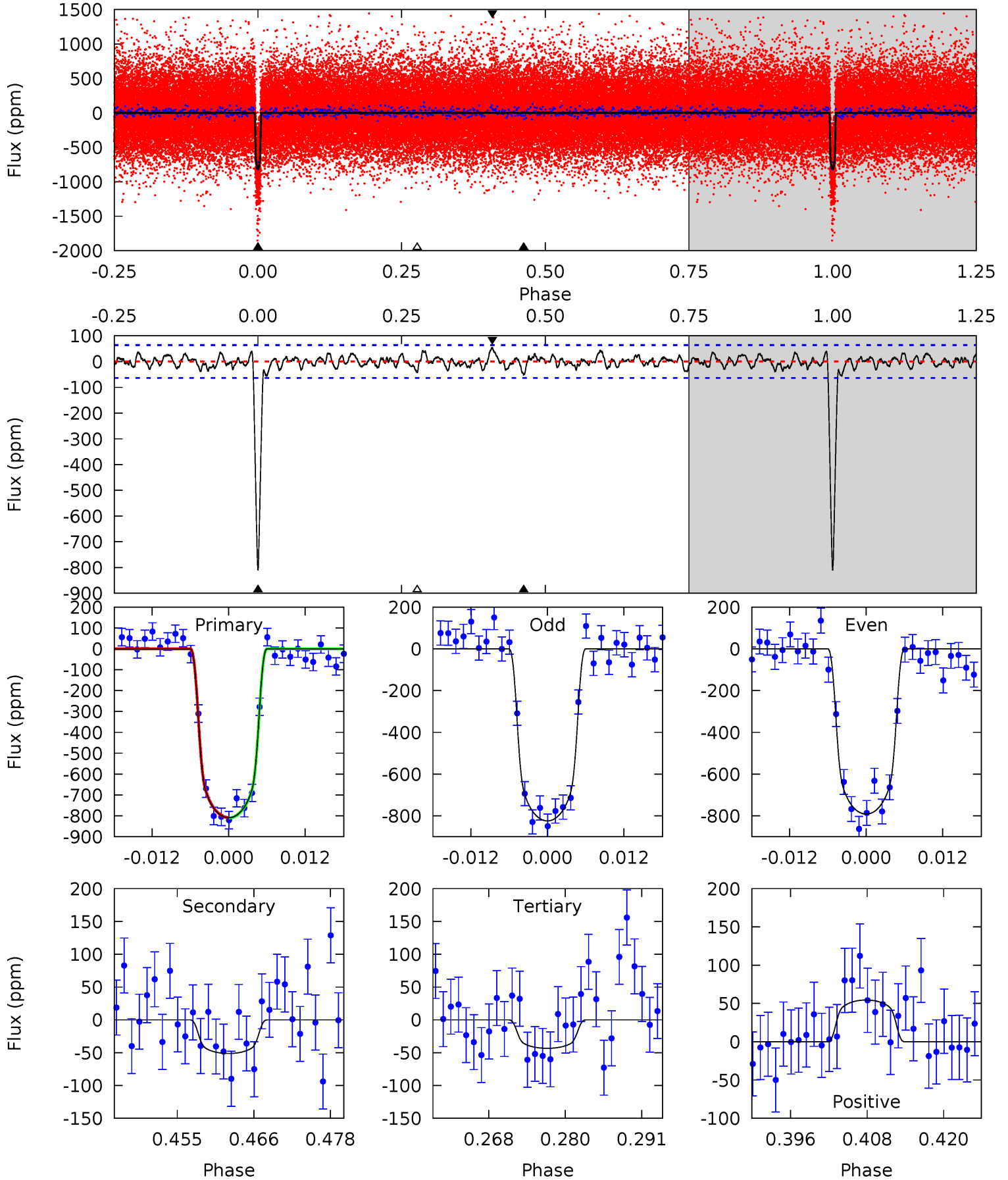
TCE 008174625-01 P= 17.444937 Days $T_0=141.676049$ (BKJD)



DV Model-Shift Uniqueness Test

008174625-01, P = 17.444899 Days, E = 124.231996 Days

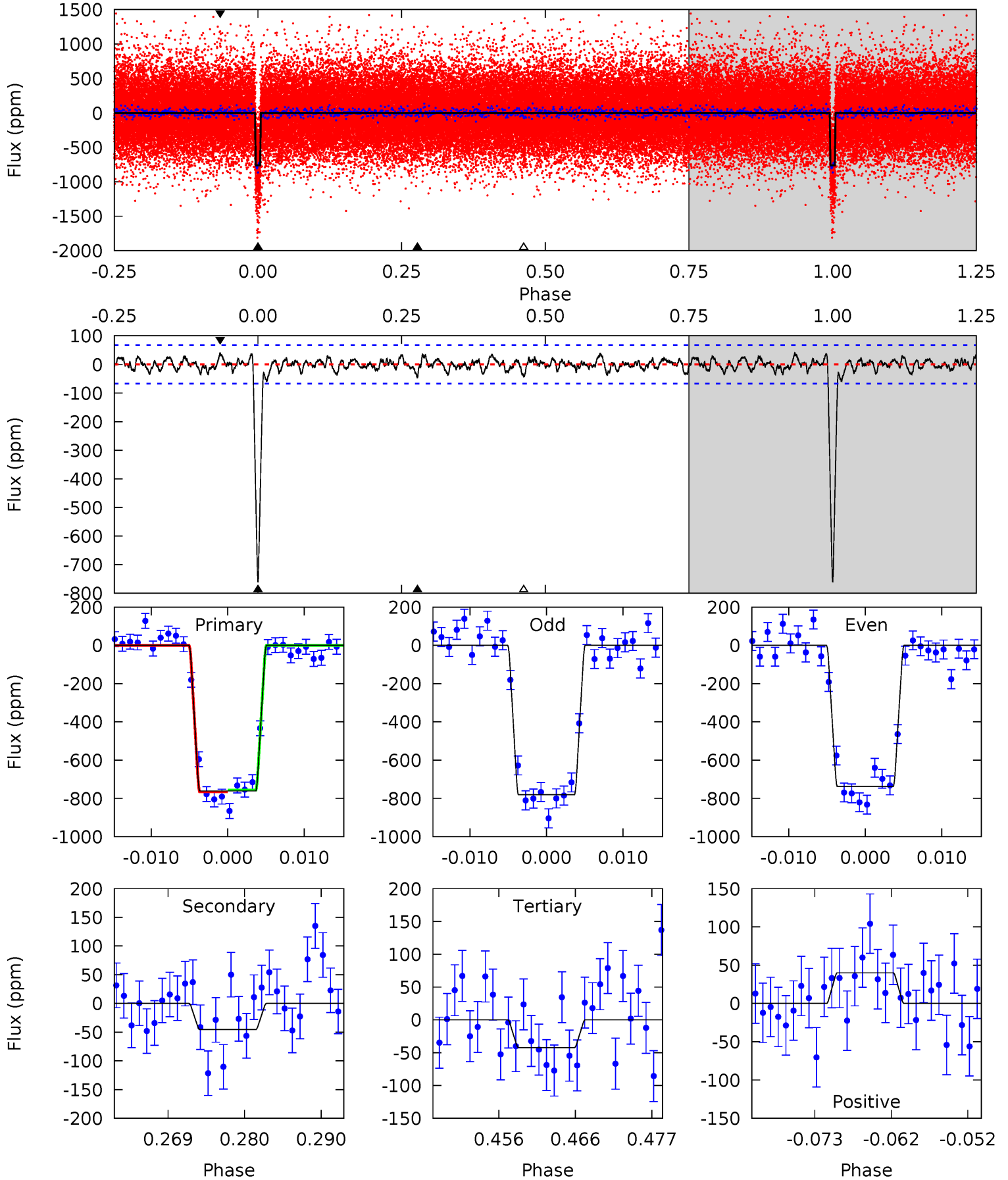
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	4.02	3.40	4.27	5.00	2.52	1.35	60.0	59.1	0.62	-0.25	1.28	0.99	0.06	0.09



Alt Model-Shift Uniqueness Test

008174625-01, $P = 17.444937$ Days, $E = 124.231112$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.9	3.40	3.16	2.99	5.02	2.56	1.15	53.7	53.9	0.25	0.42	1.63	1.04	0.05	0.34



Stellar Parameters For KIC 008174625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5568^{+166}_{-166}	$4.413^{+0.120}_{-0.180}$	$-0.040^{+0.300}_{-0.300}$	$0.966^{+0.261}_{-0.141}$	$0.882^{+0.111}_{-0.074}$	$1.377^{+0.736}_{-0.649}$
	+3%/-3%	+3%/-4%	+750%/-750%	+27%/-15%	+13%/-8%	+53%/-47%
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 008174625-01 / KOI 1017.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51 ± 13	$3.25^{+0.49}_{-0.34}$	956^{+73}_{-52}	3250^{+148}_{-153}	41^{+16}_{-13}
Alt.	-46 ± 13	$3.10^{+0.45}_{-0.36}$	958^{+65}_{-57}	3256^{+158}_{-200}	41^{+19}_{-15}

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

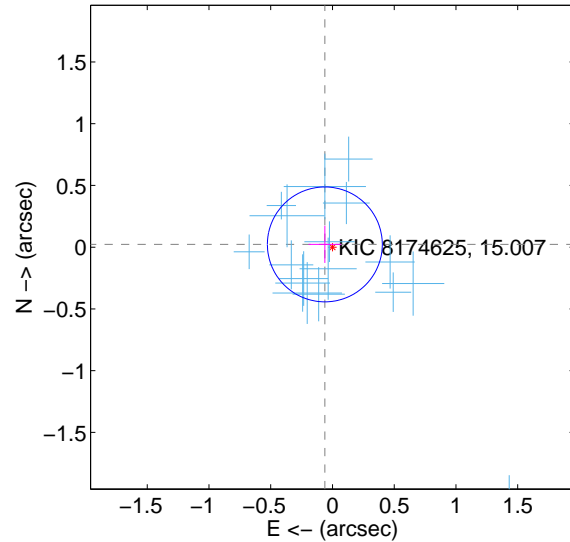
Supplemental centroid analysis for 008174625-01. Kepler magnitude: 15.01. Transit SNR 41.27

There are 17 quarters with good PRF difference image offsets

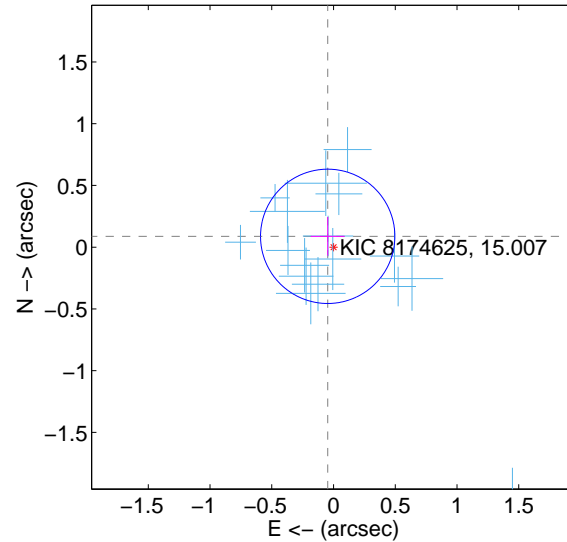
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.155	0.42	0.062 ± 0.131	0.022 ± 0.150
PRF-fit source offset from KIC position	0.100 ± 0.181	0.55	0.047 ± 0.137	0.088 ± 0.157
photometric centroid source offset	0.57 ± 0.36	1.59	0.12 ± 0.35	0.55 ± 0.36

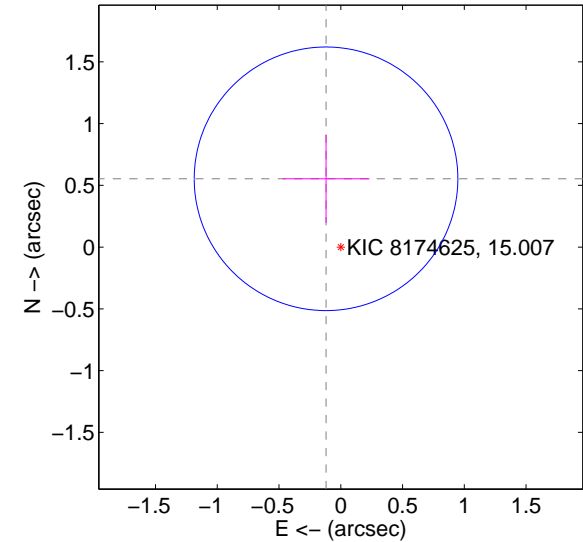
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

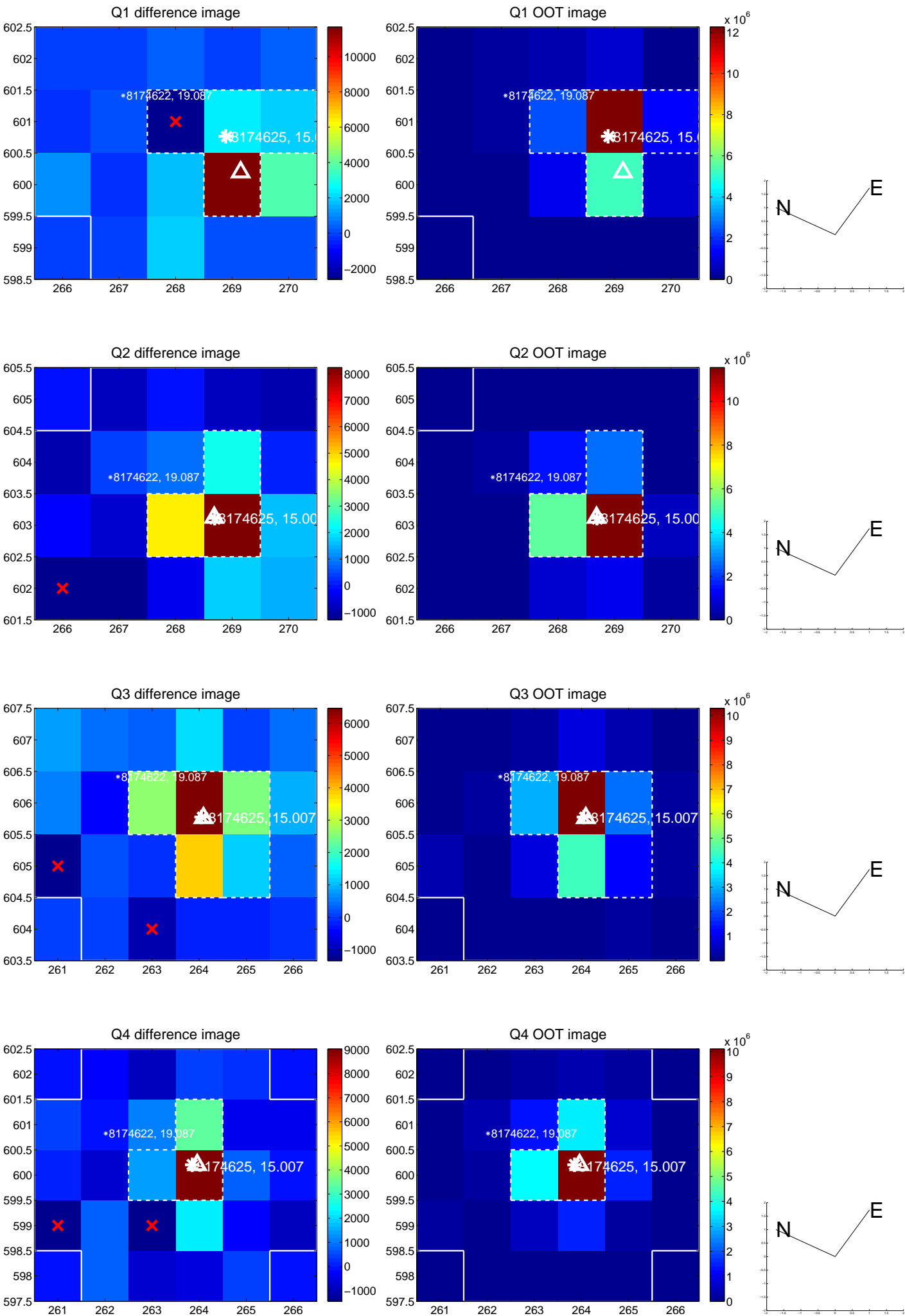


offset from photometric centroids

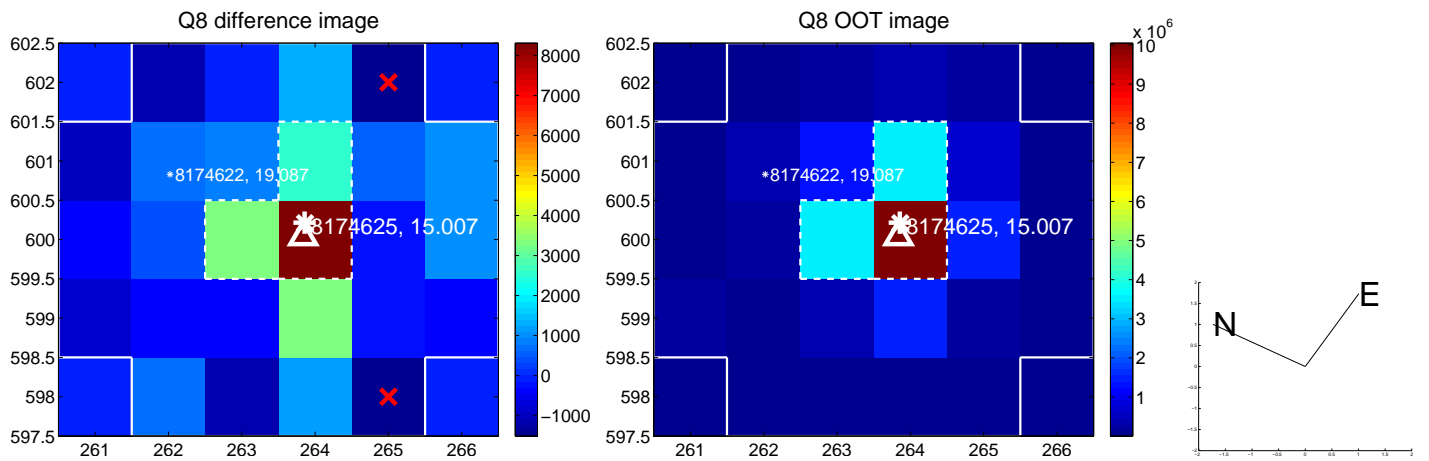
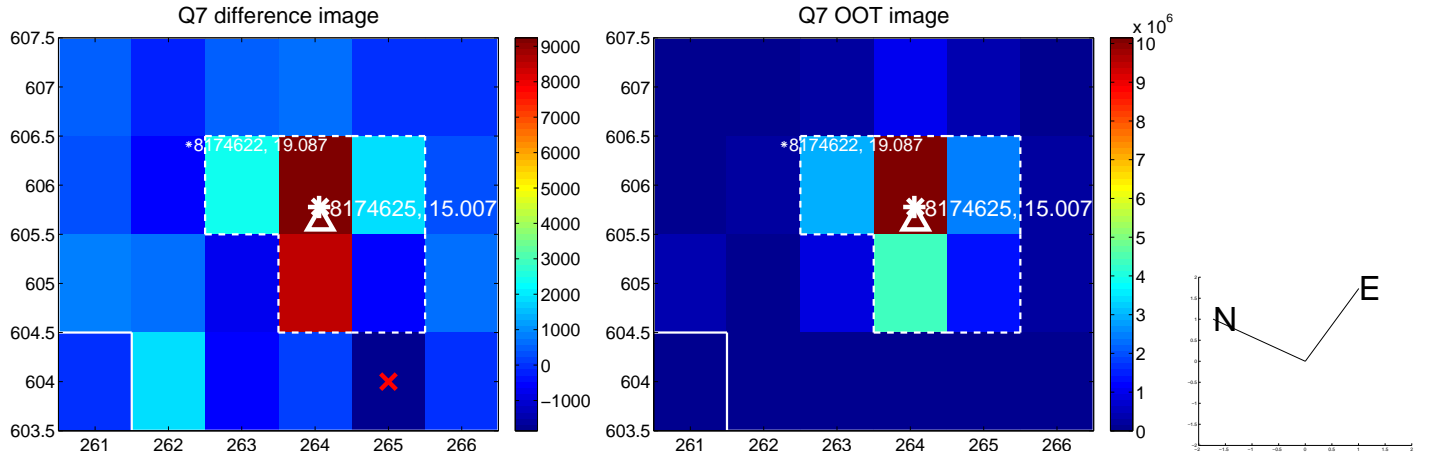
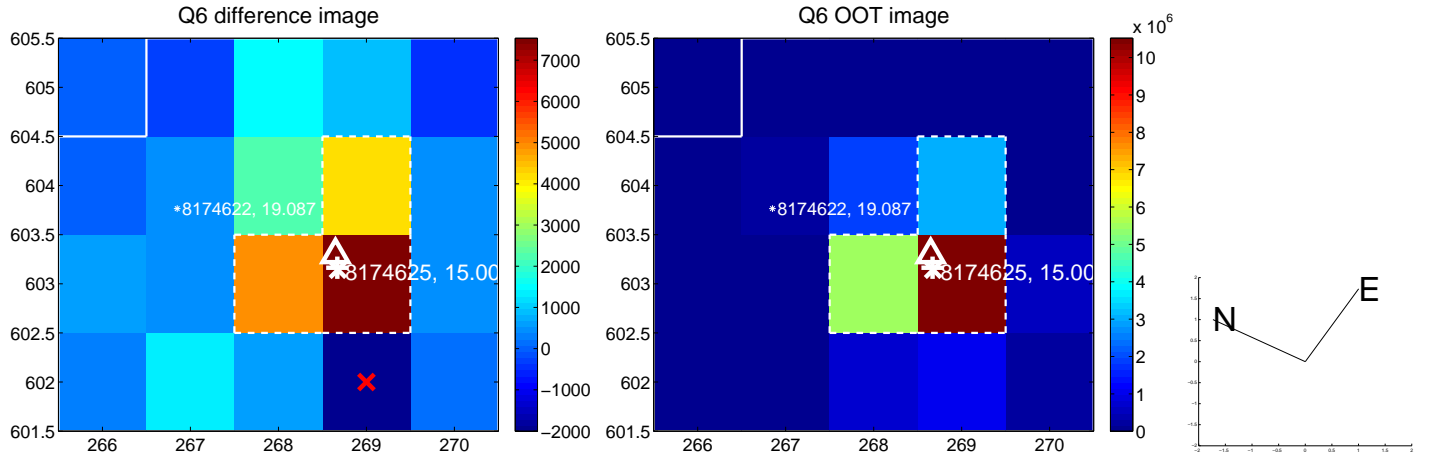
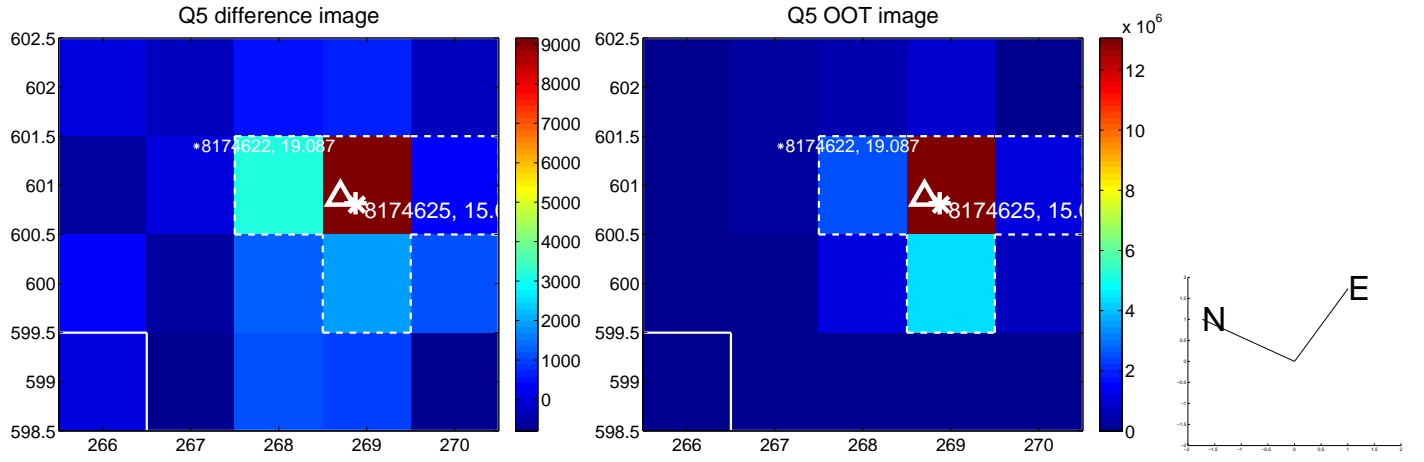


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

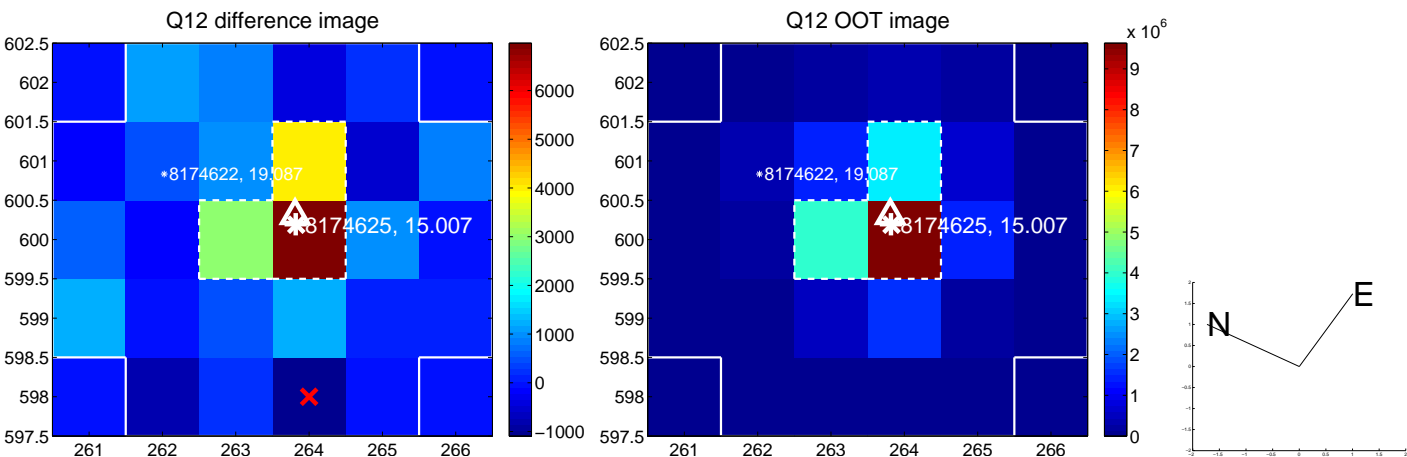
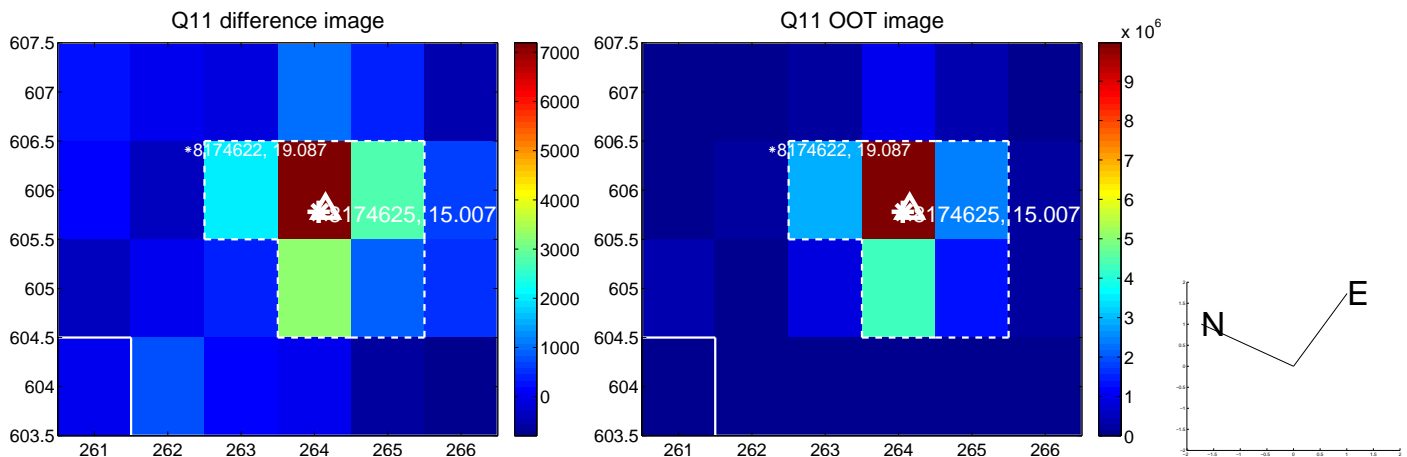
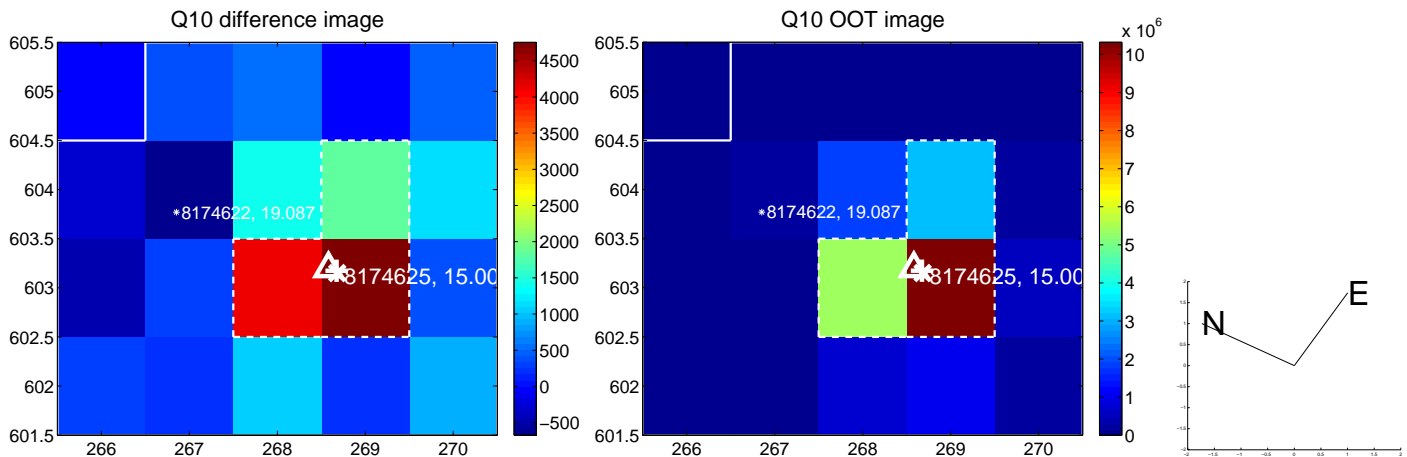
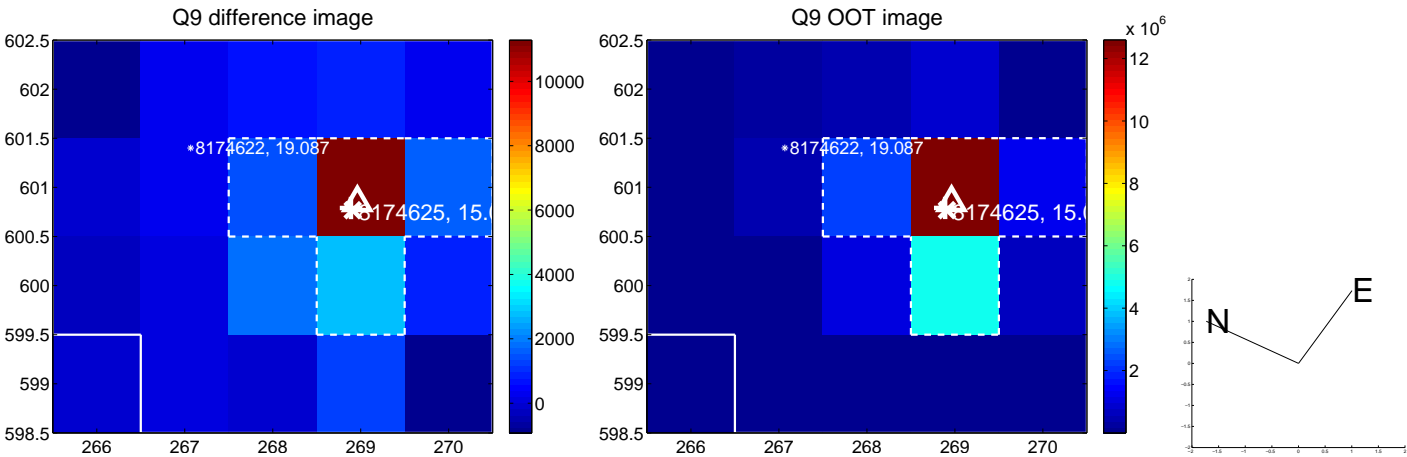
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



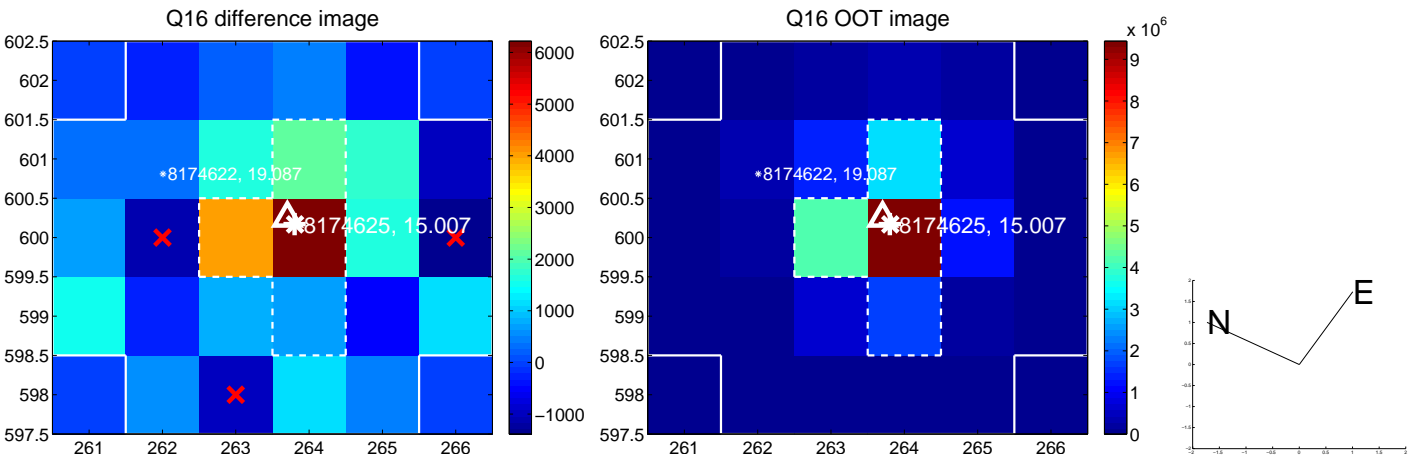
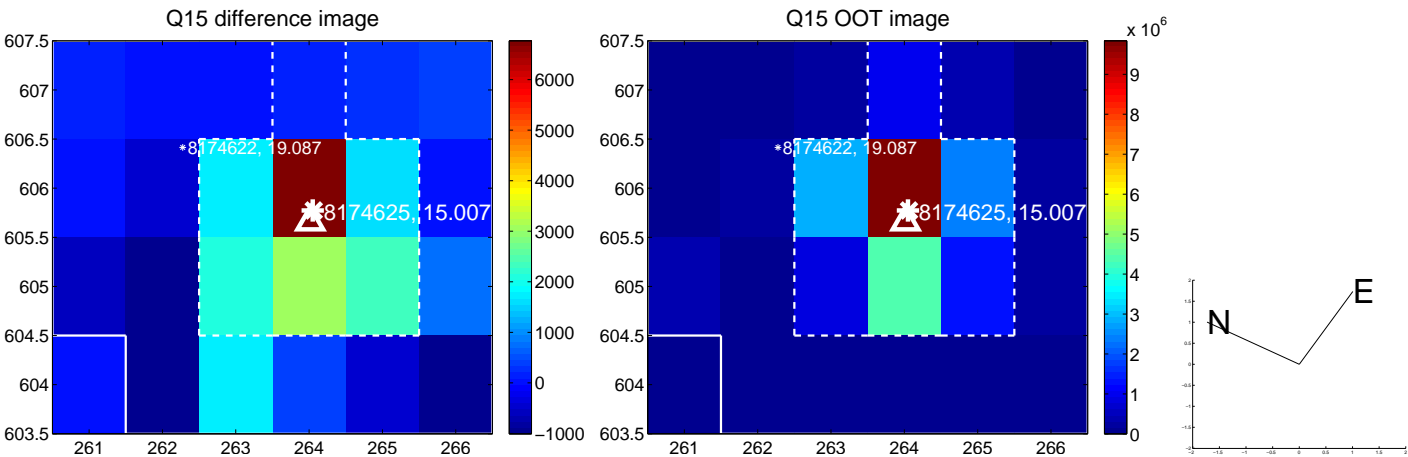
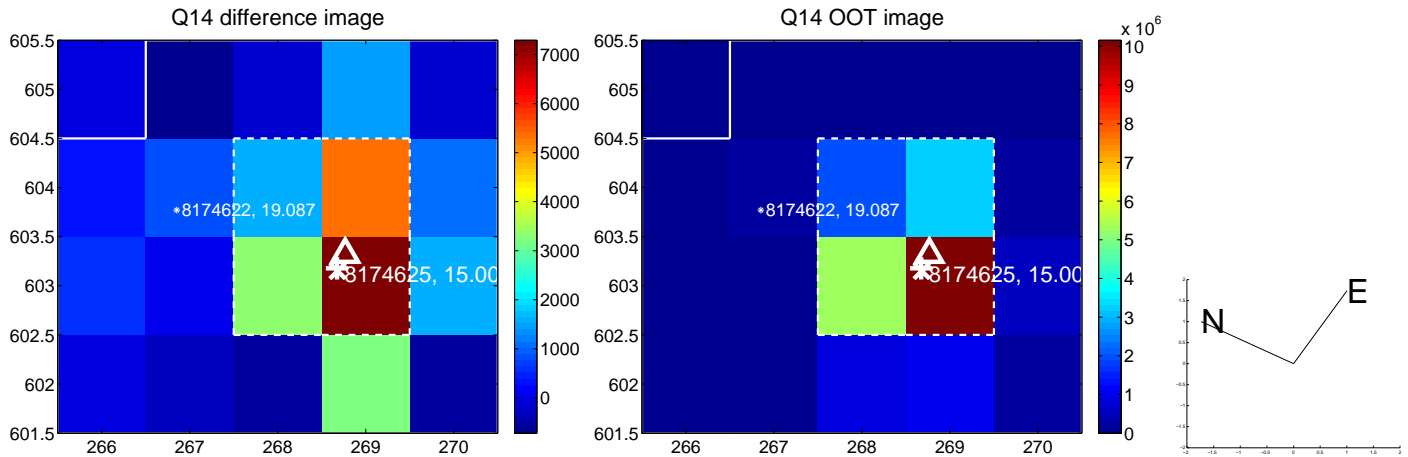
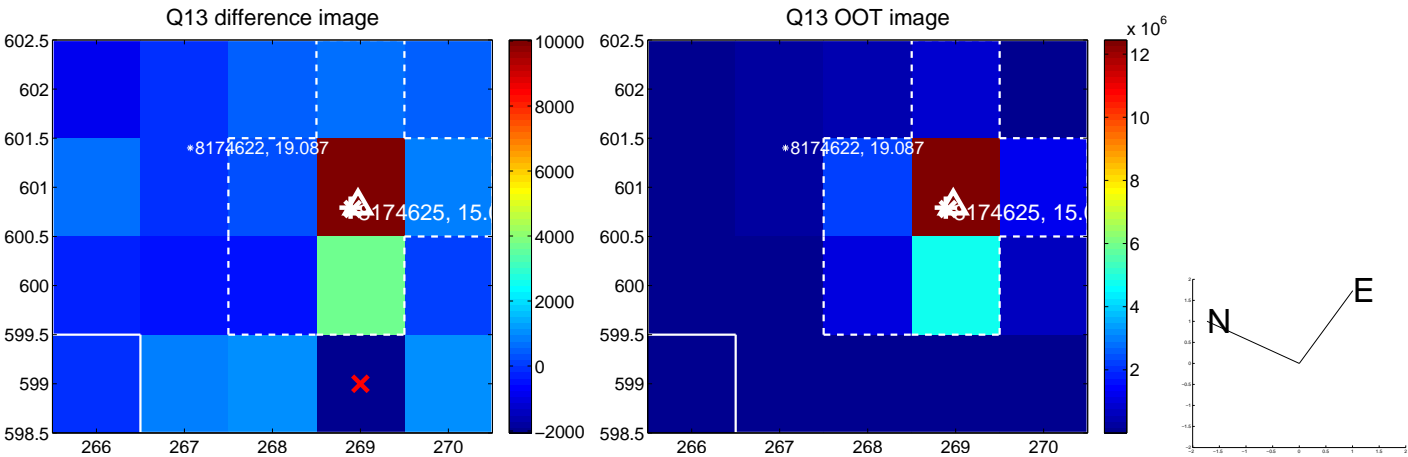
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



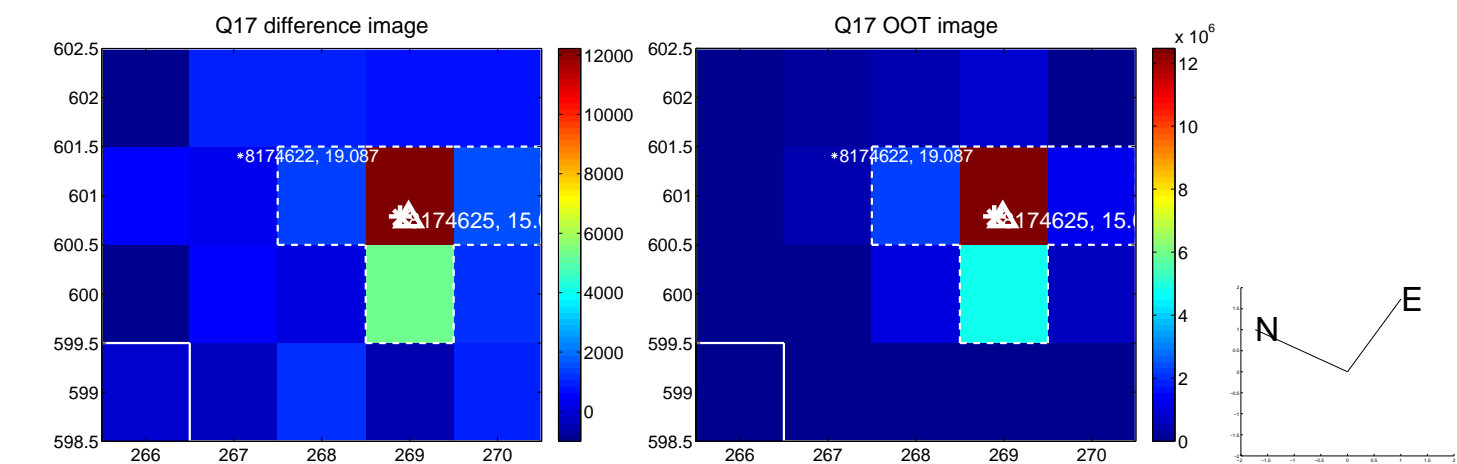
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



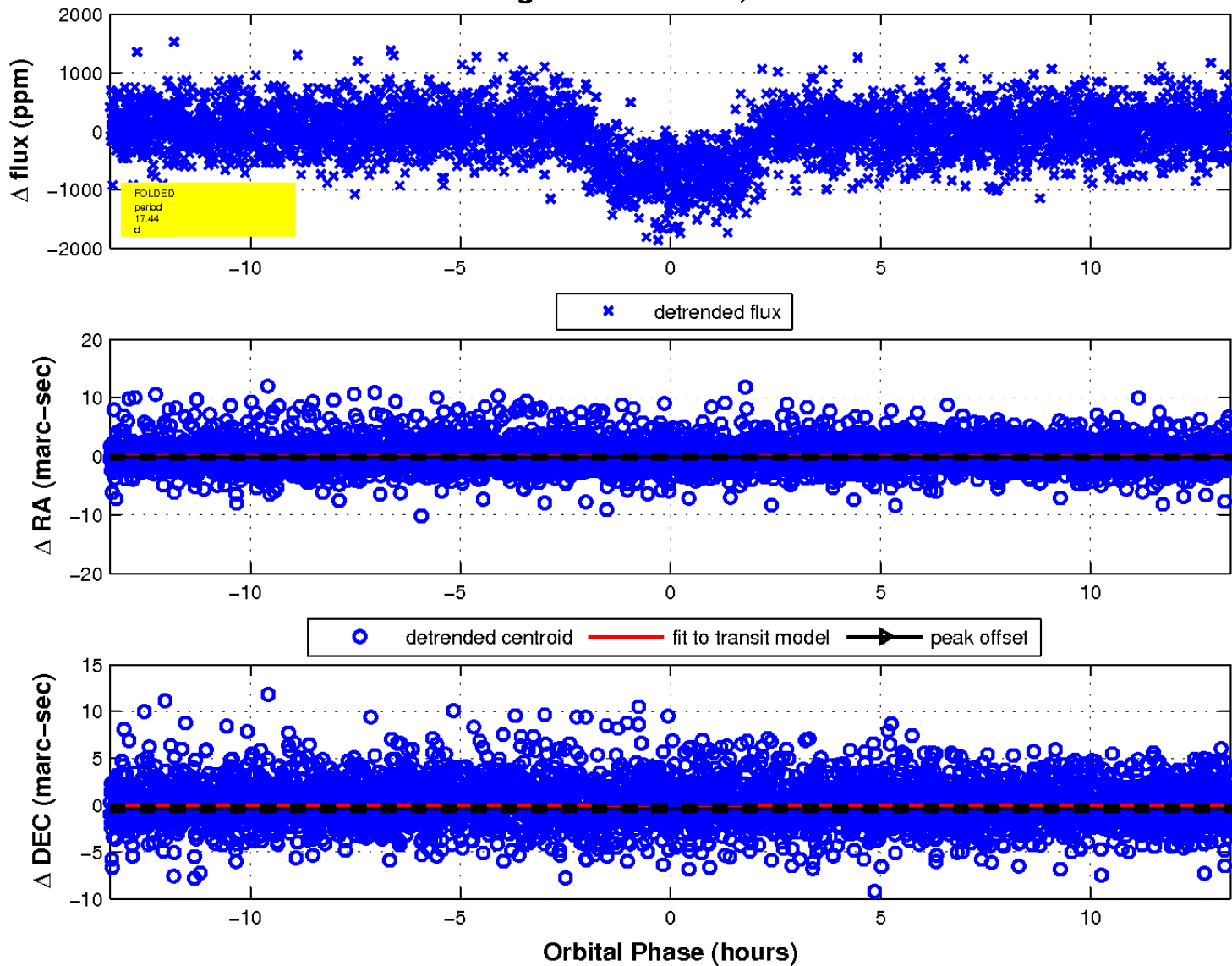
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

