

KIC 003345675

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})
003345675-01	OBS	1772.01	120.003140	250.136571	38977.7	3.542	315.4	175.4	0.67	4315	22.22	0.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003345675-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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 003345675-01

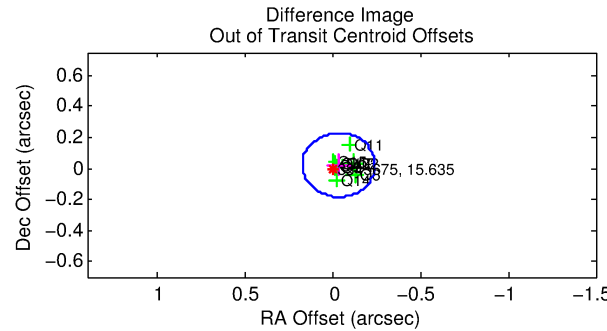
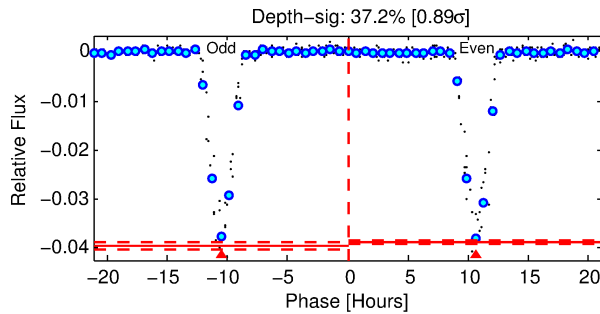
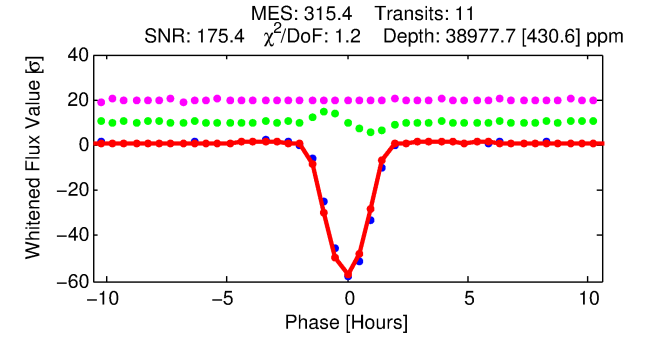
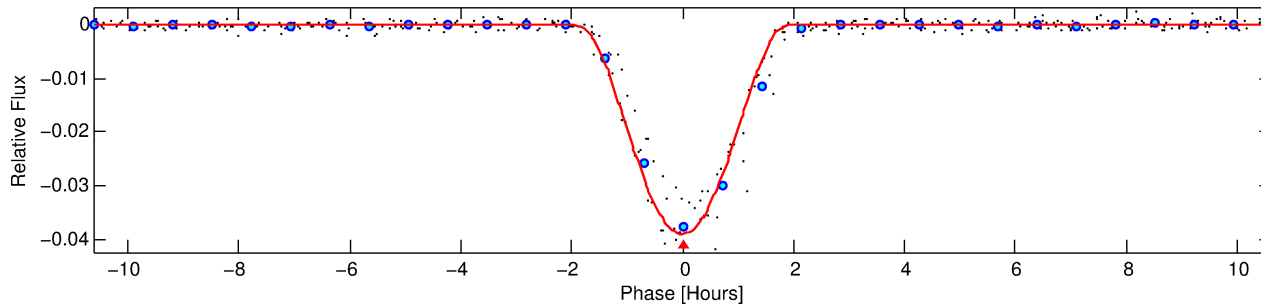
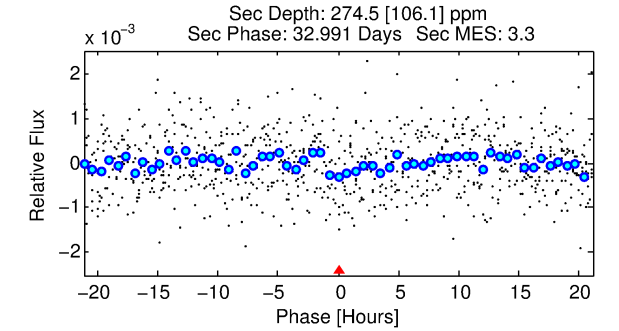
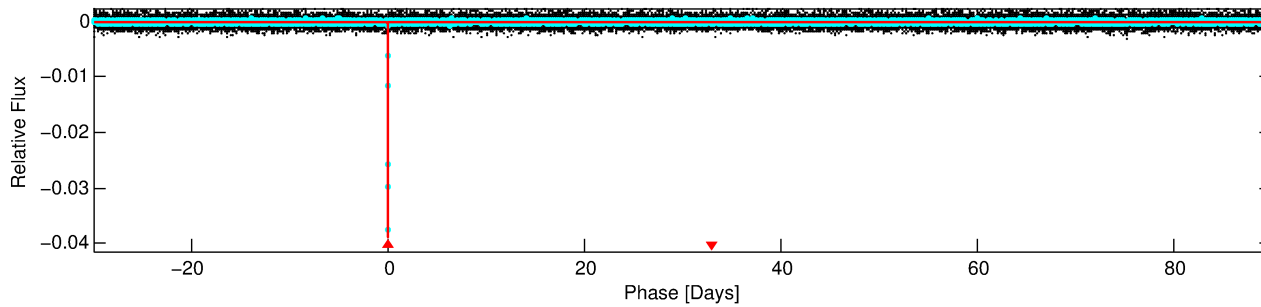
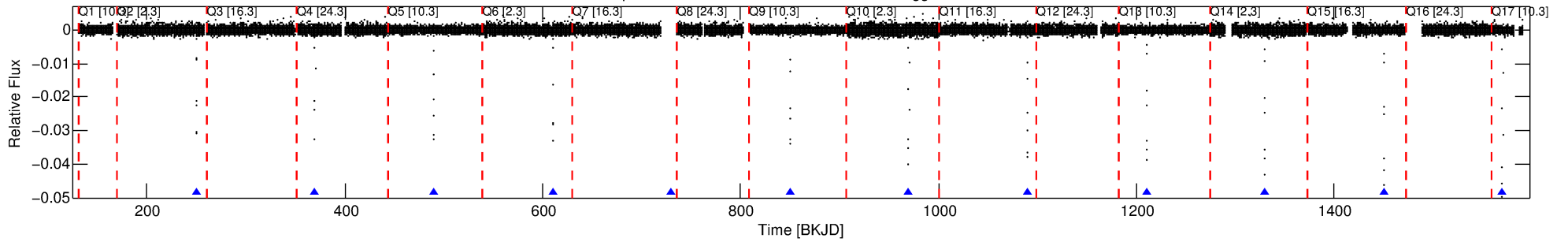
No Significant Match Found

DV One-Page Summary

KIC: 3345675 Candidate: 1 of 1 Period: 120.003 d

KOI: K01772.01 Corr: 0.978

Kp: 15.64 R*: 0.67 Rs Teff: 4315.0 K Logg: 4.63 Fe/H: 0.140



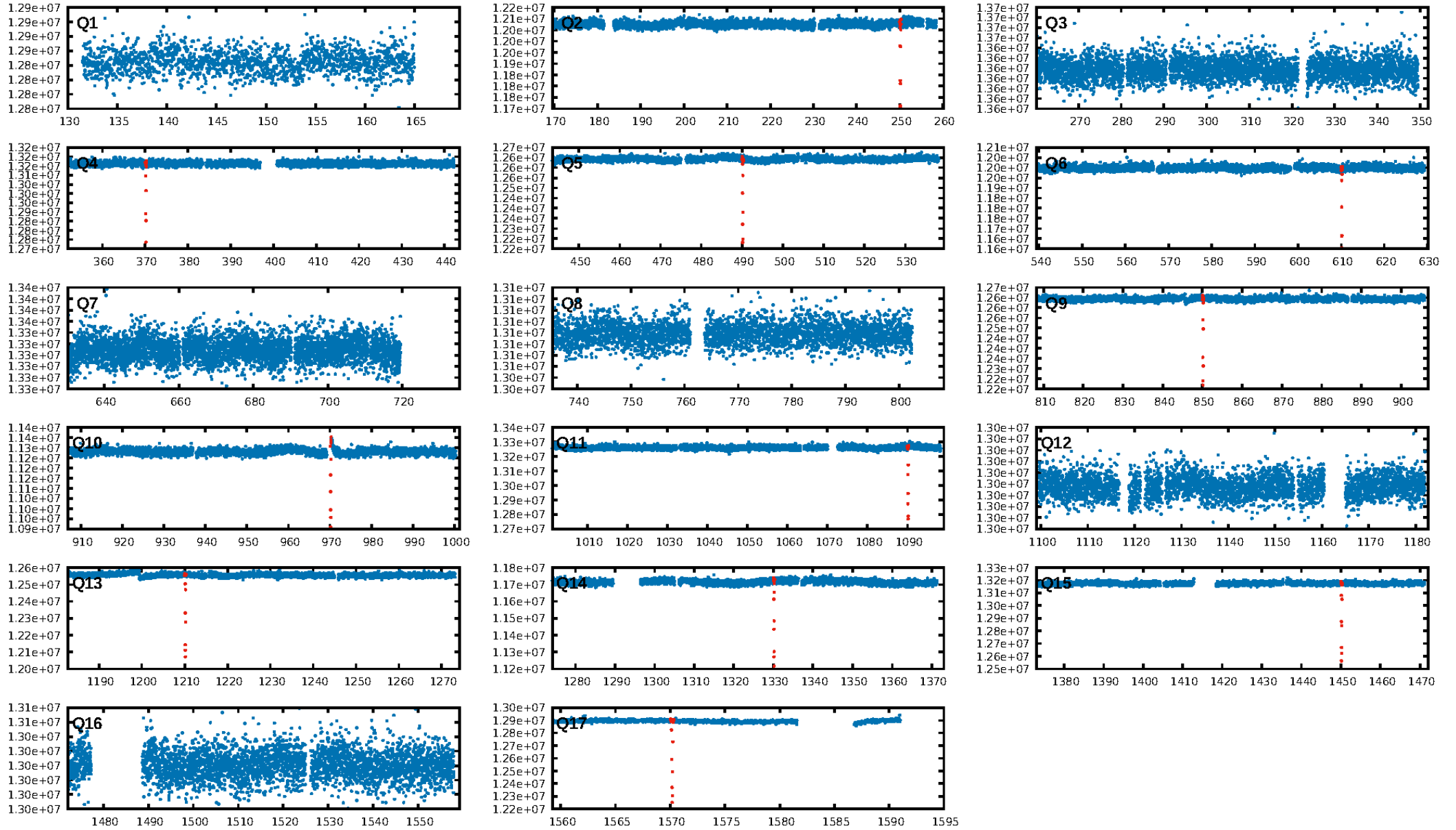
DV Fit Results:

Period = 120.00314 [0.00005] d
Epoch = 250.1366 [0.0004] BKJD
Rp/R* = 0.3049 [0.1379]
a/R* = 224.95 [4.09]
b = 0.97 [0.19]
Seff = 0.78 [0.13]
Teq = 240 [10] K
Rp = 22.22 [10.20] Re
a = 0.4207 [0.0246] AU
Ag = 54.13 [53.39] [0.99σ]
Teffp = 1006 [250] K [3.06σ]

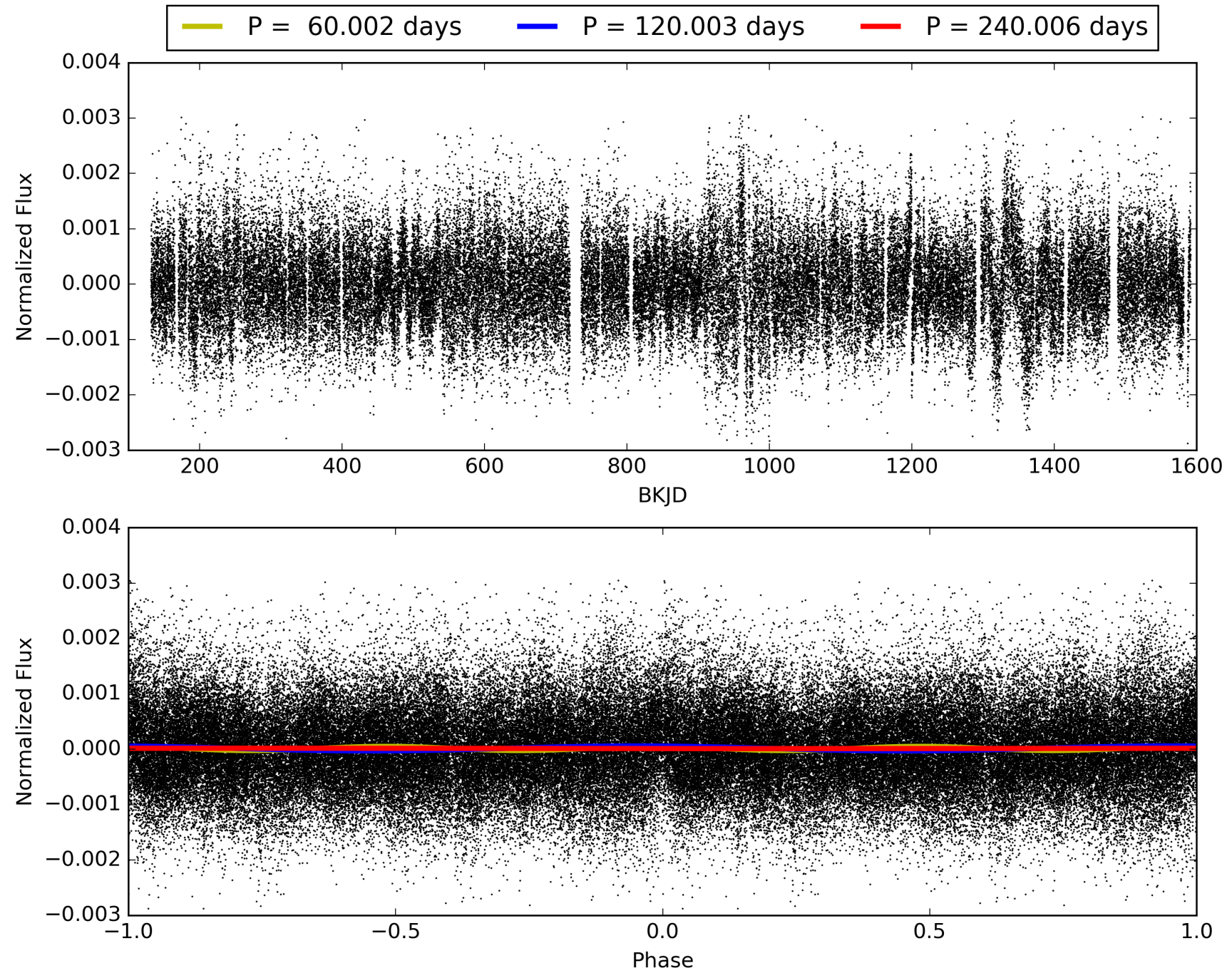
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 2.681
Centroid-sig: 56.9%
Centroid-so: 0.746 arcsec [21.17σ]
OotOffset-rm: 0.040 arcsec [0.59σ]
KicOffset-rm: 0.209 arcsec [2.82σ]
OotOffset-st: 3/2/1/4 [10]
KicOffset-st: 3/2/1/4 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 003345675-01, PDC Light Curves

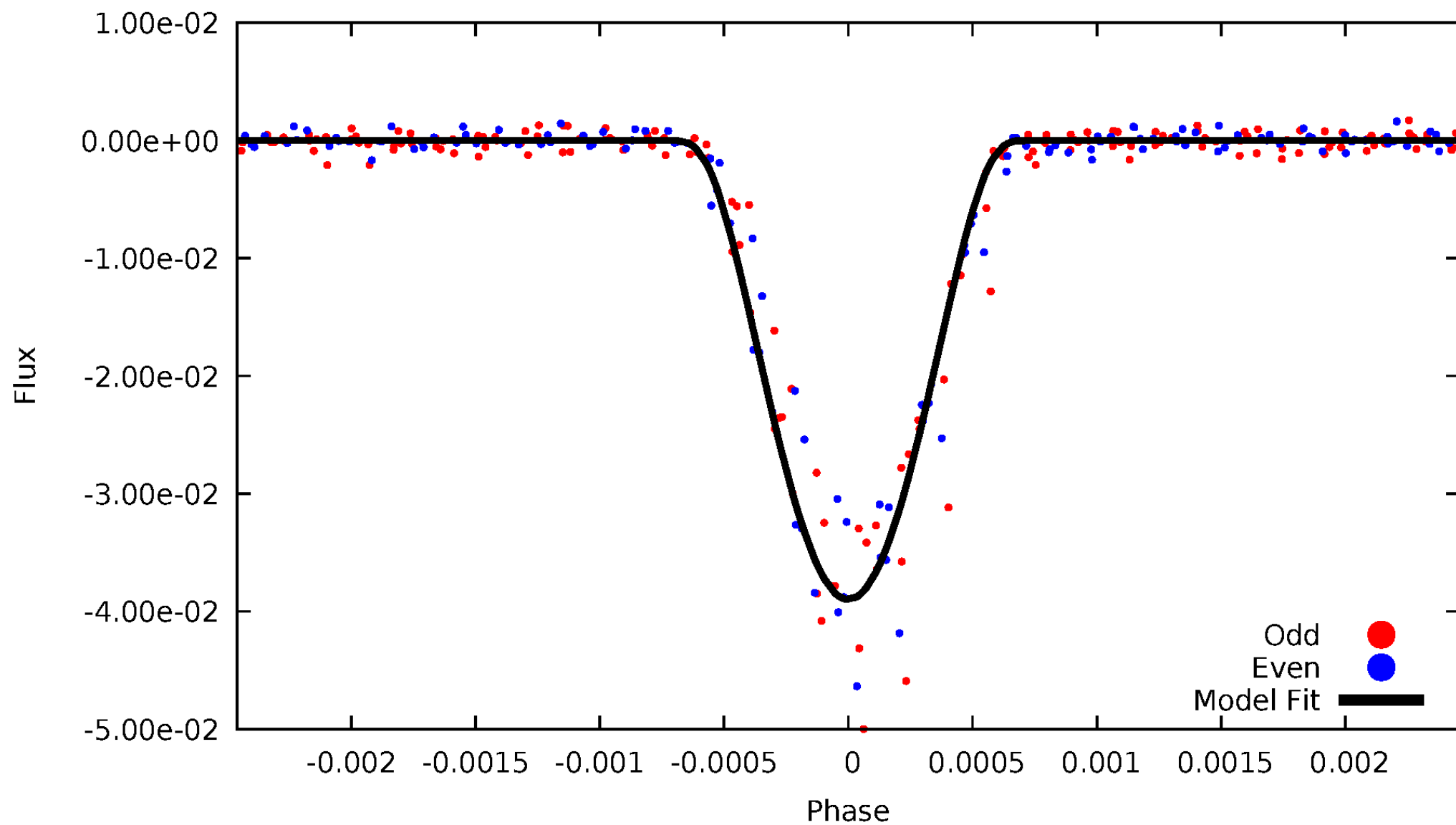


TCE 003345675-01



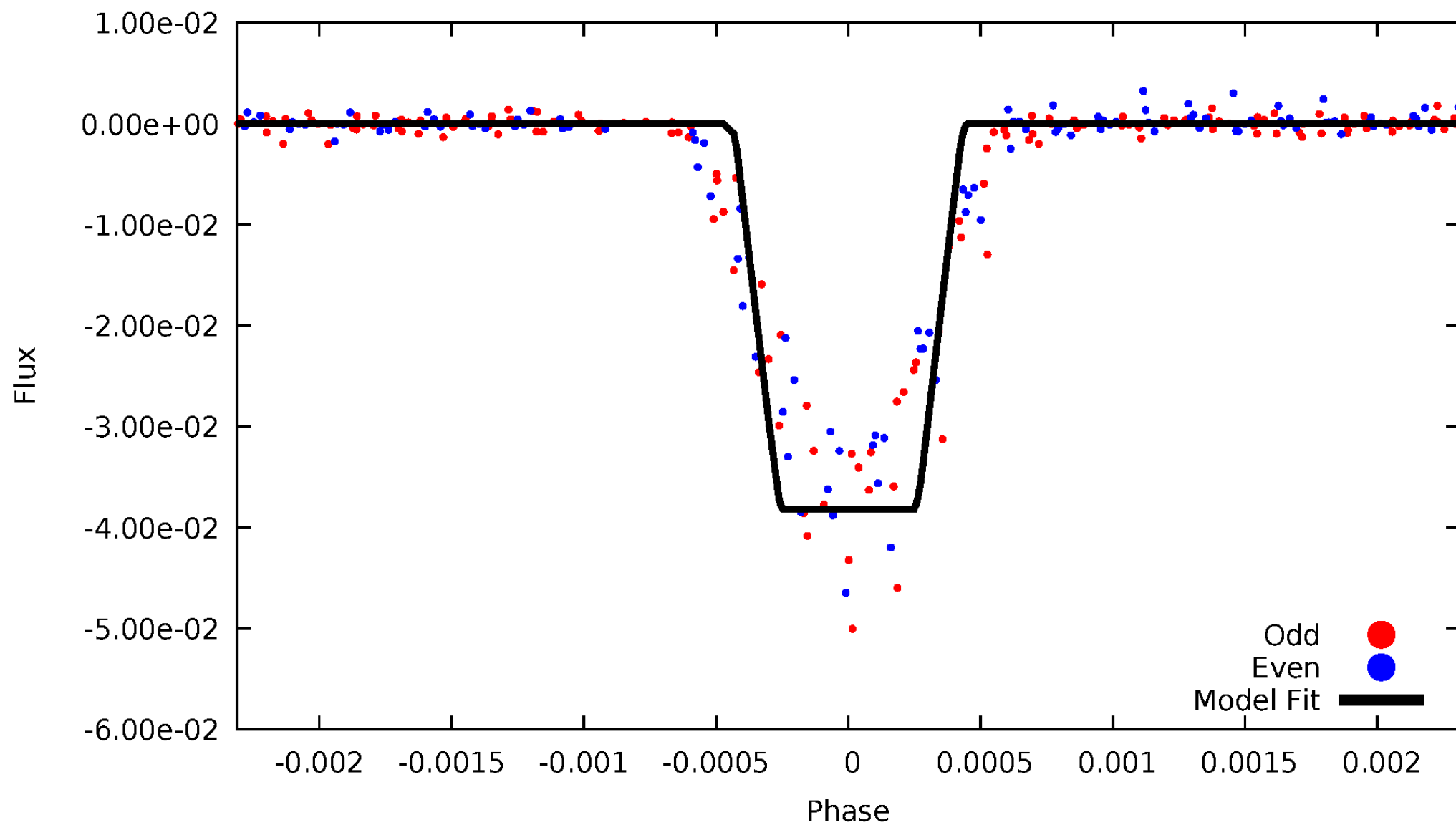
DV Odd/Even

TCE 003345675-01



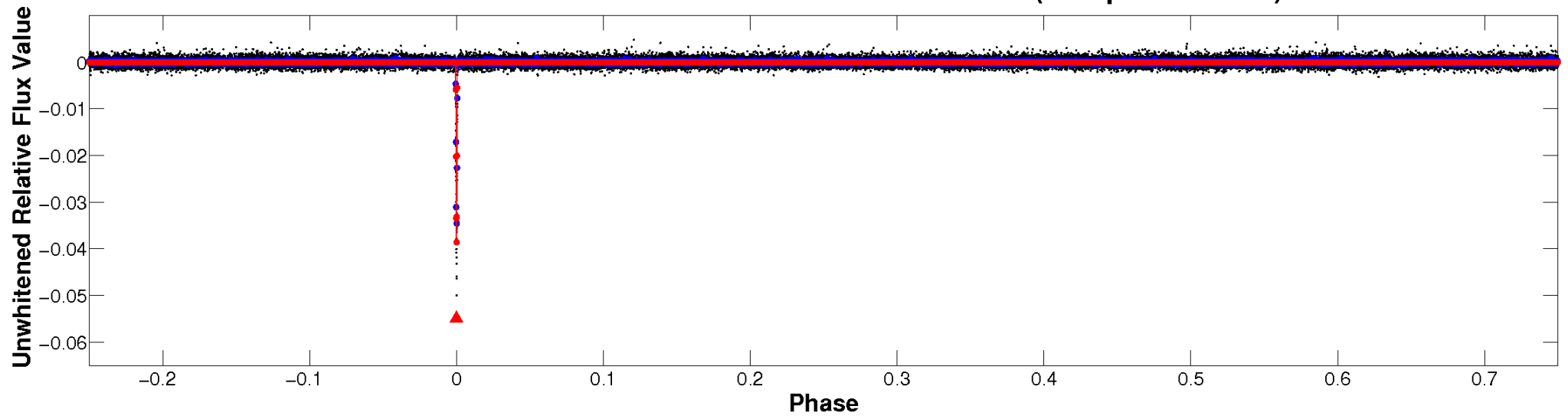
ALT Odd/Even

TCE 003345675-01

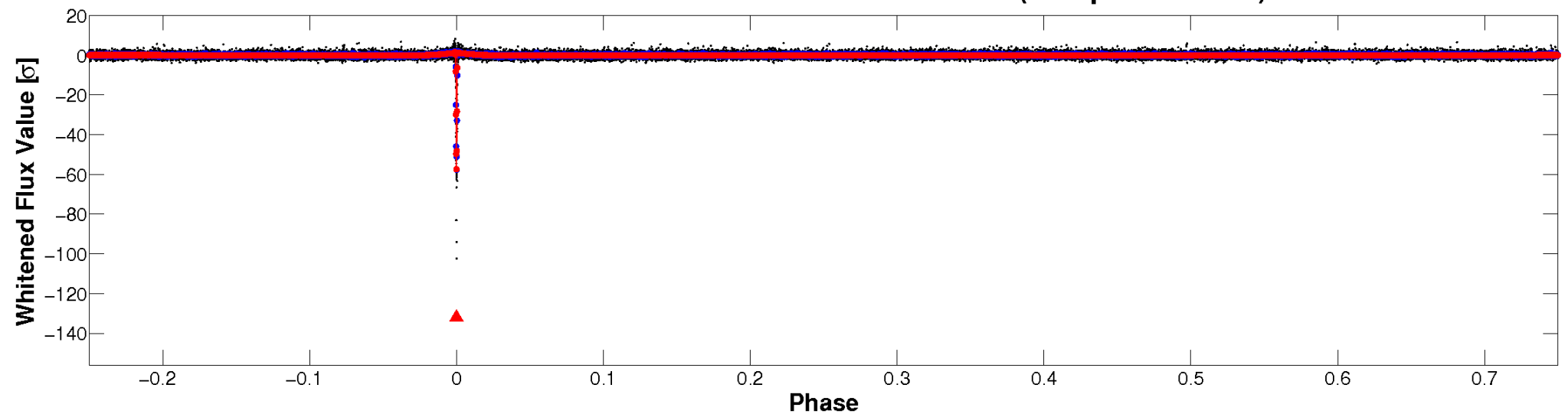


Non-Whitened Vs. Whitened Light Curve

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

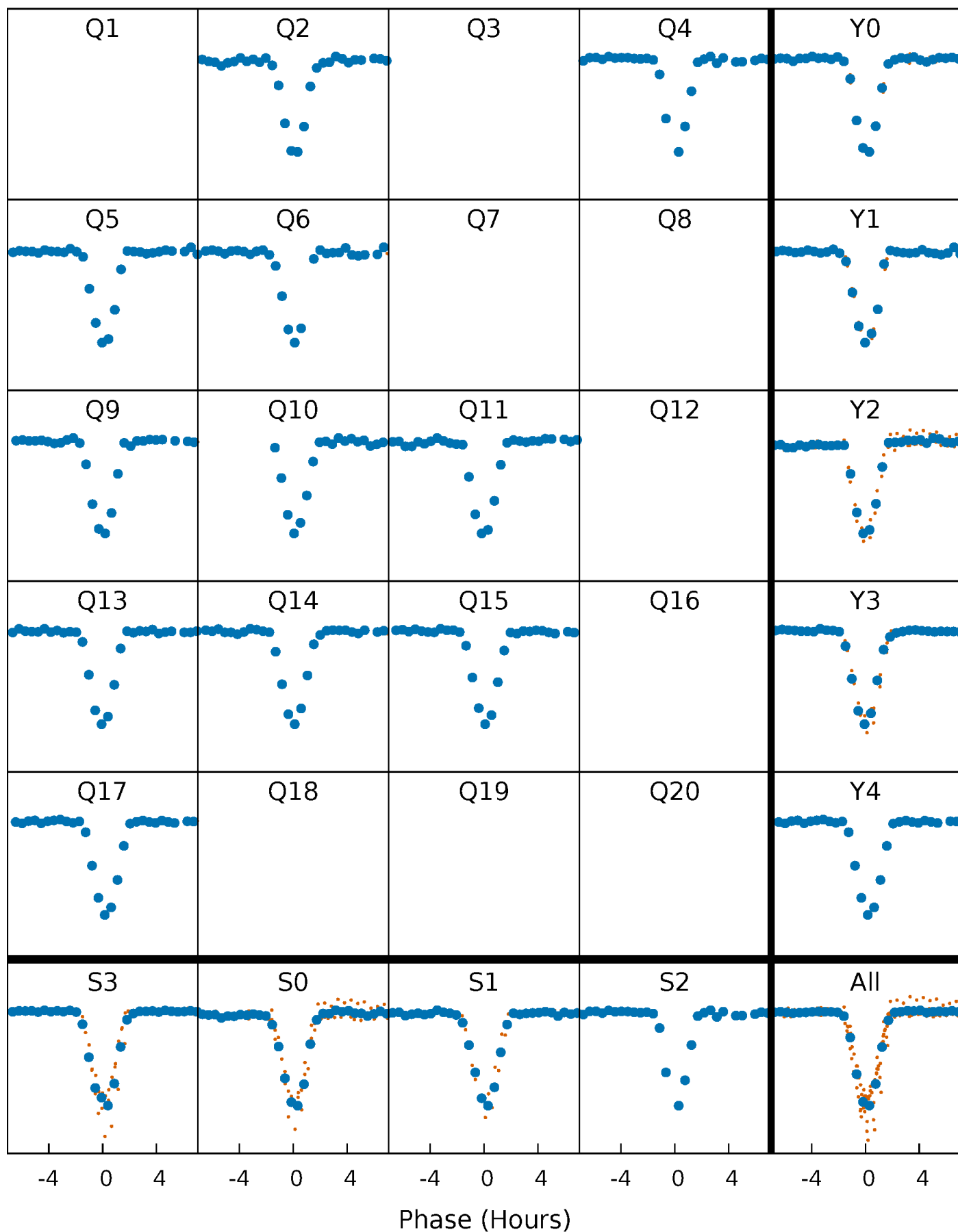


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



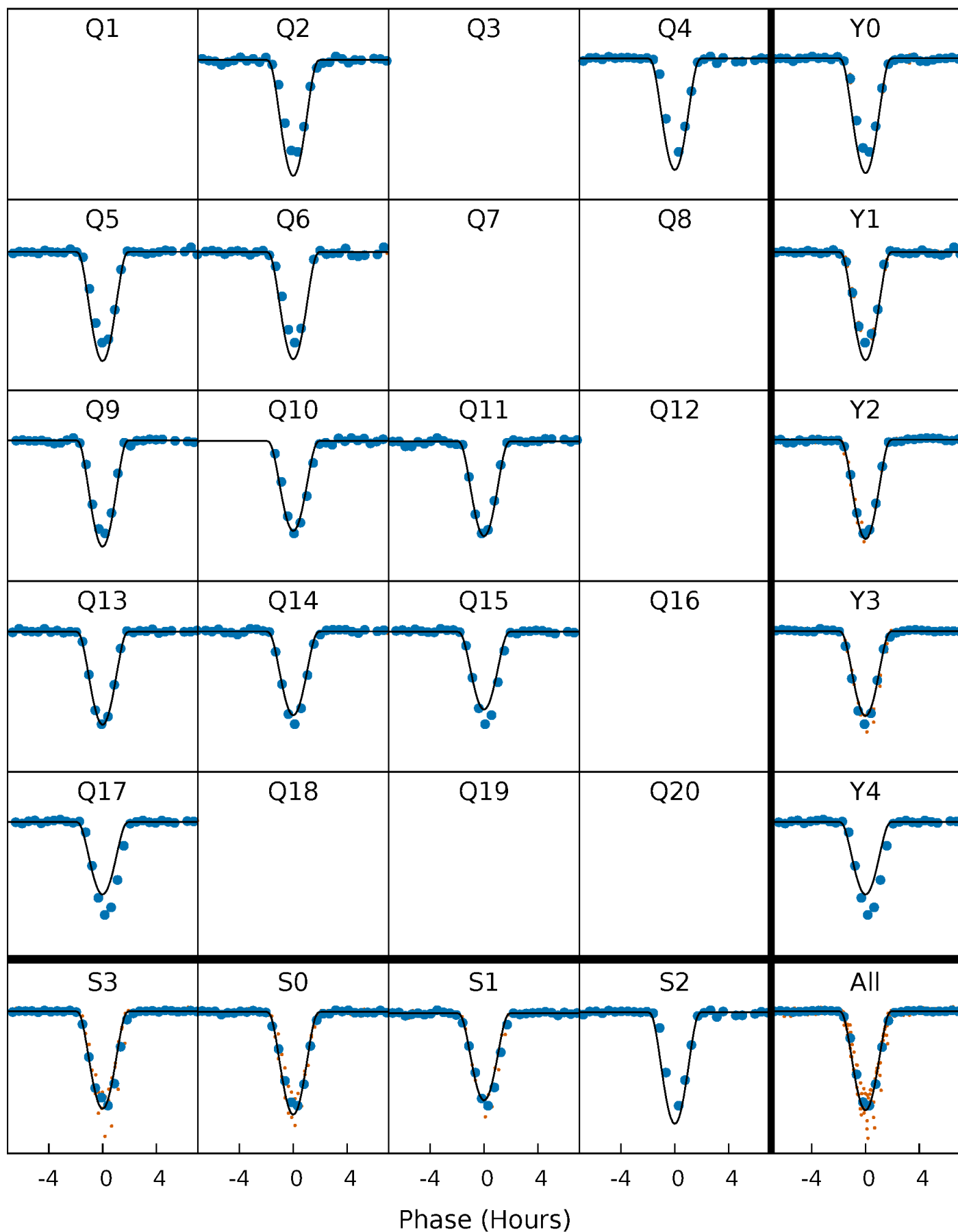
PDC Quarter-Phased Transit Curves

TCE 003345675-01 P=120.003140 Days $T_0=250.136571$ (BKJD)



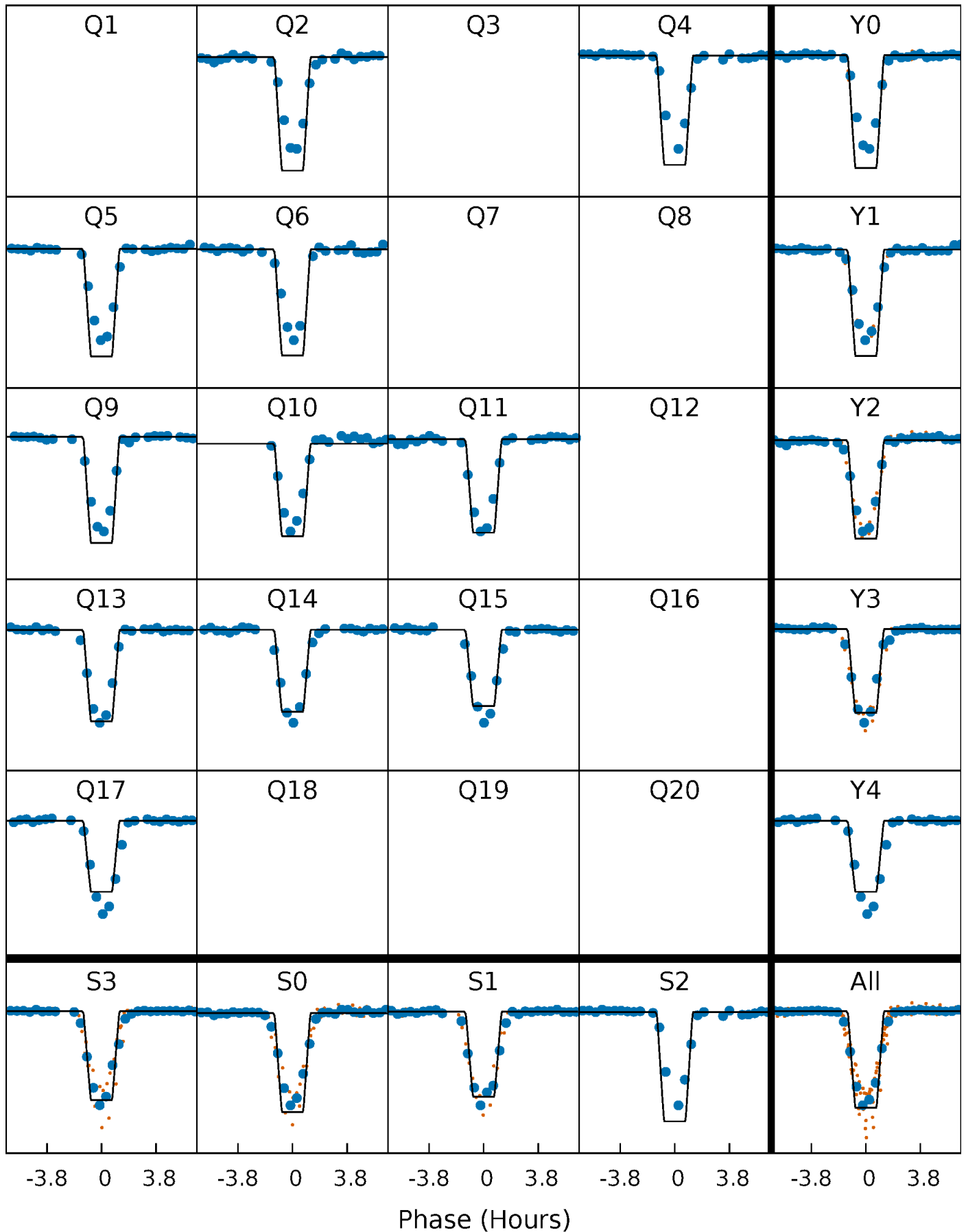
DV Quarter-Phased Transit Curves

TCE 003345675-01 P=120.003140 Days $T_0=250.136571$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

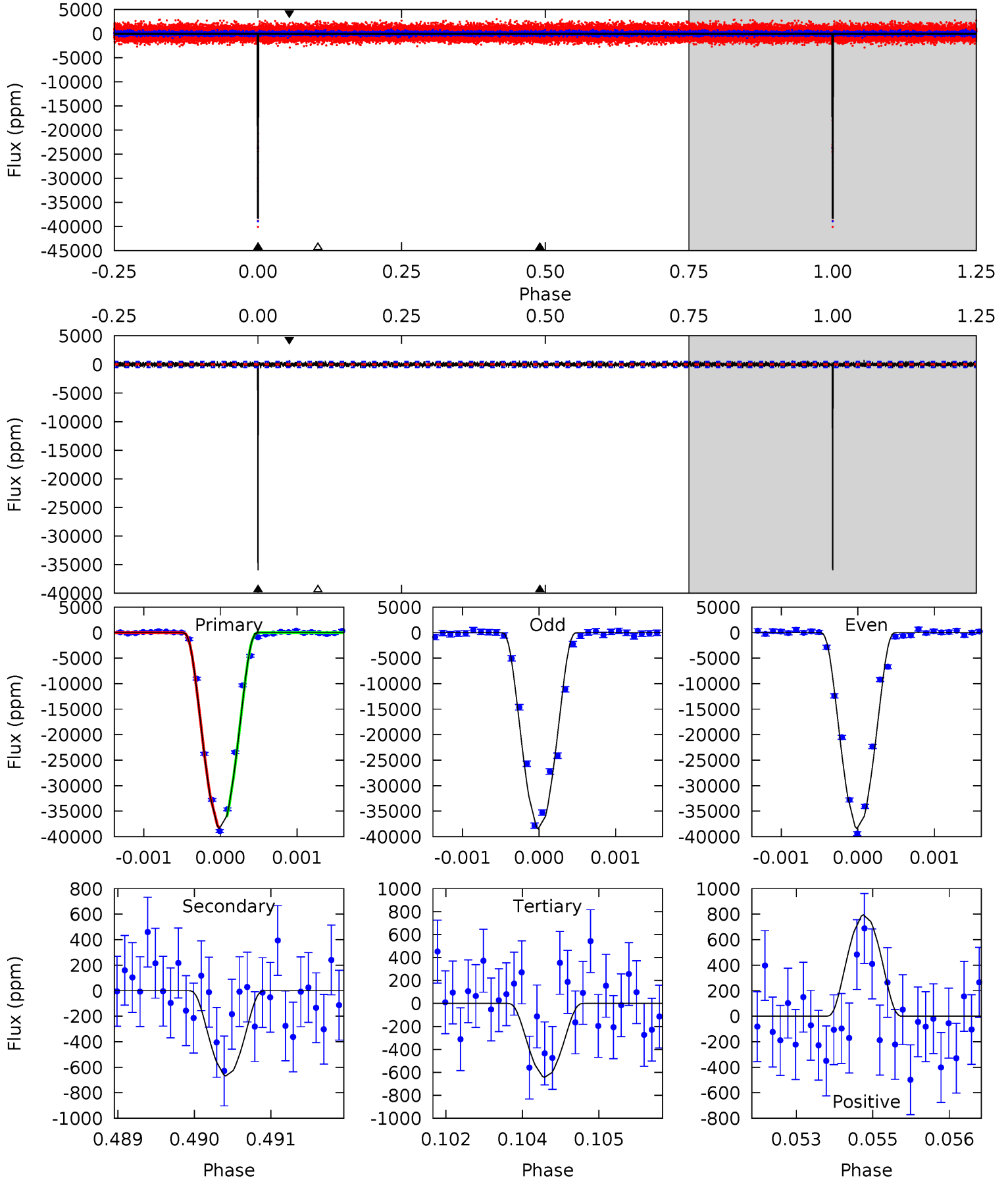
TCE 003345675-01 P=120.003397 Days $T_0=250.139370$ (BKJD)



DV Model-Shift Uniqueness Test

003345675-01, P = 120.003140 Days, E = 130.133431 Days

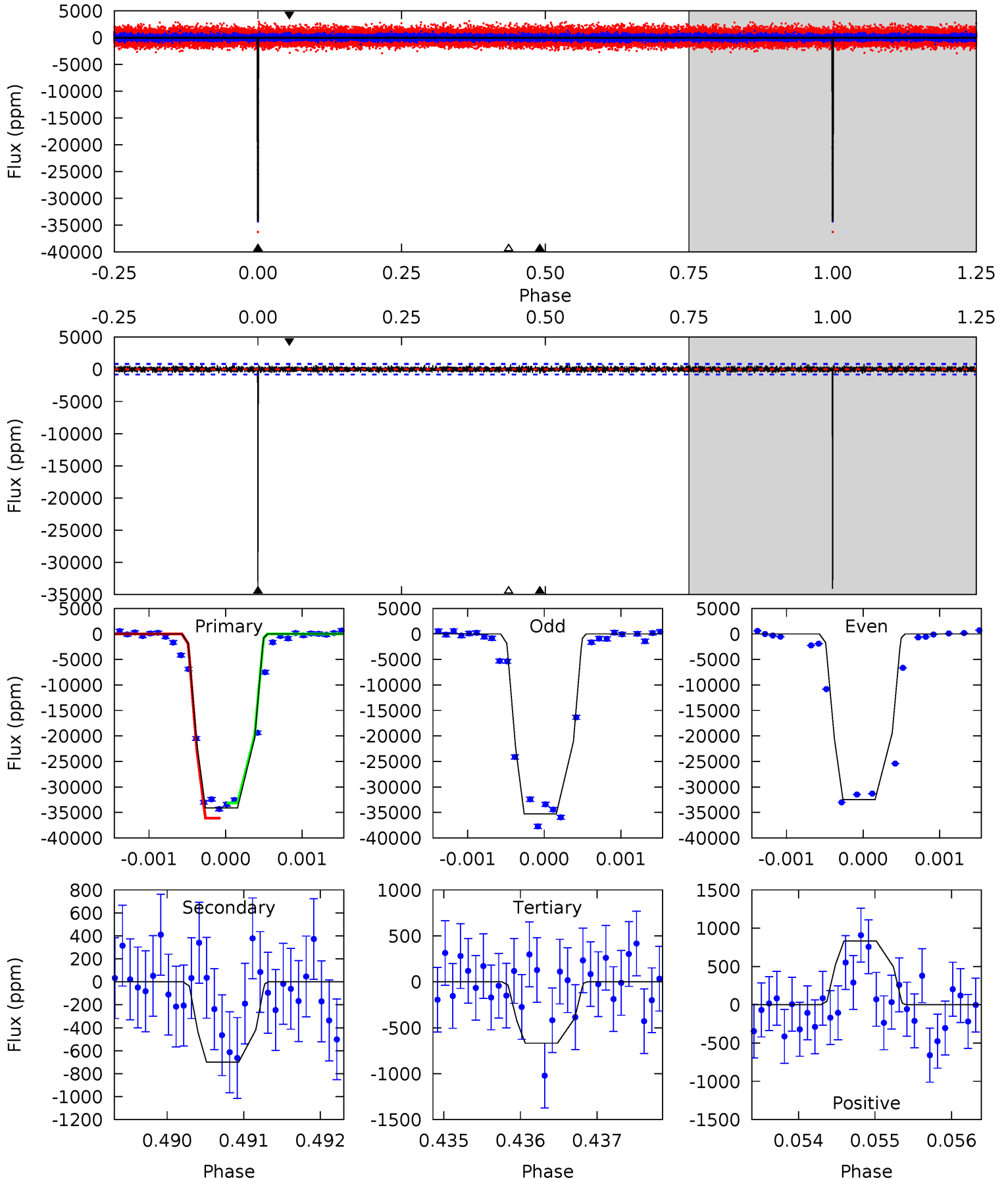
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
389.5	6.78	6.53	8.06	5.39	3.19	1.86	382.9	381.4	0.25	-1.28	0.15	0.99	0.02	0



Alt Model-Shift Uniqueness Test

003345675-01, P = 120.003397 Days, E = 130.135973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
226.7	4.65	4.45	5.56	5.48	3.33	1.26	222.3	221.2	0.20	-0.91	9.58	1.07	0.02	0



Stellar Parameters For KIC 003345675

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4315^{+142}_{-155}	$4.627^{+0.035}_{-0.028}$	$0.140^{+0.250}_{-0.300}$	$0.668^{+0.038}_{-0.052}$	$0.688^{+0.042}_{-0.062}$	$3.257^{+0.537}_{-0.343}$
	+3%/-4%	+1%/-1%	+179%/-214%	+6%/-8%	+6%/-9%	+16%/-11%
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 003345675-01 / KOI 1772.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-626 ± 92	$23.03^{+10.07}_{-10.20}$	334^{+13}_{-12}	2126^{+302}_{-165}	114^{+237}_{-60}
Alt.	-699 ± 150	$15.38^{+9.42}_{-8.68}$	335^{+13}_{-13}	2349^{+539}_{-249}	280^{+1179}_{-172}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

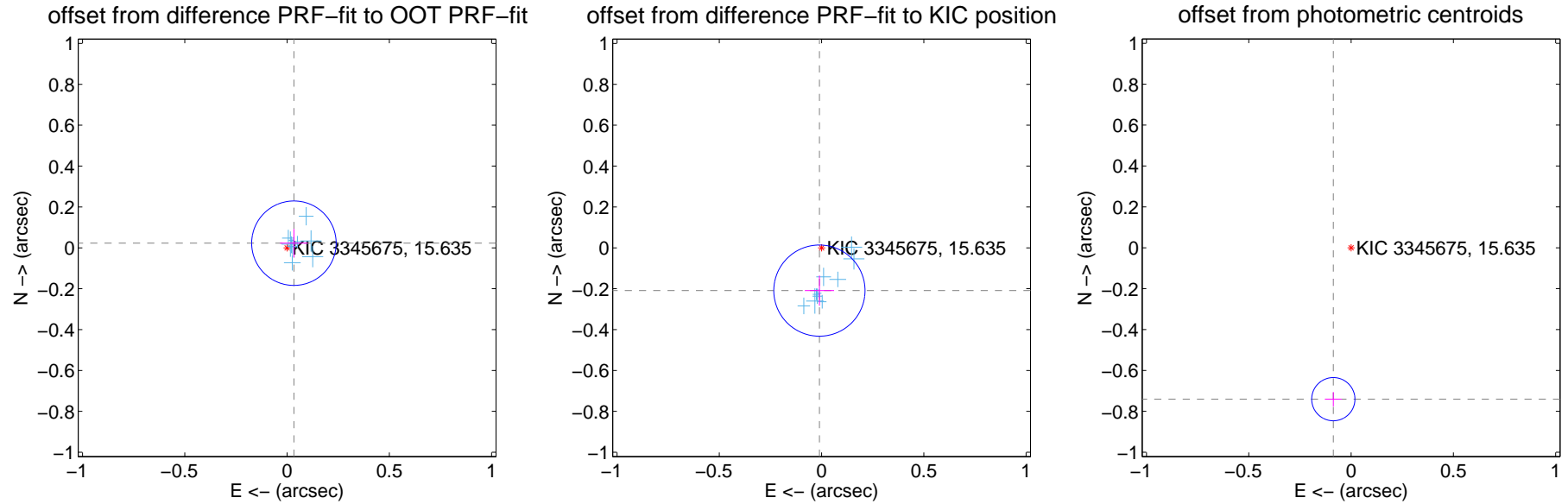
DV Centroid Data

Supplemental centroid analysis for 003345675-01. Kepler magnitude: 15.63. Transit SNR 175.39

There are 10 quarters with good PRF difference image offsets

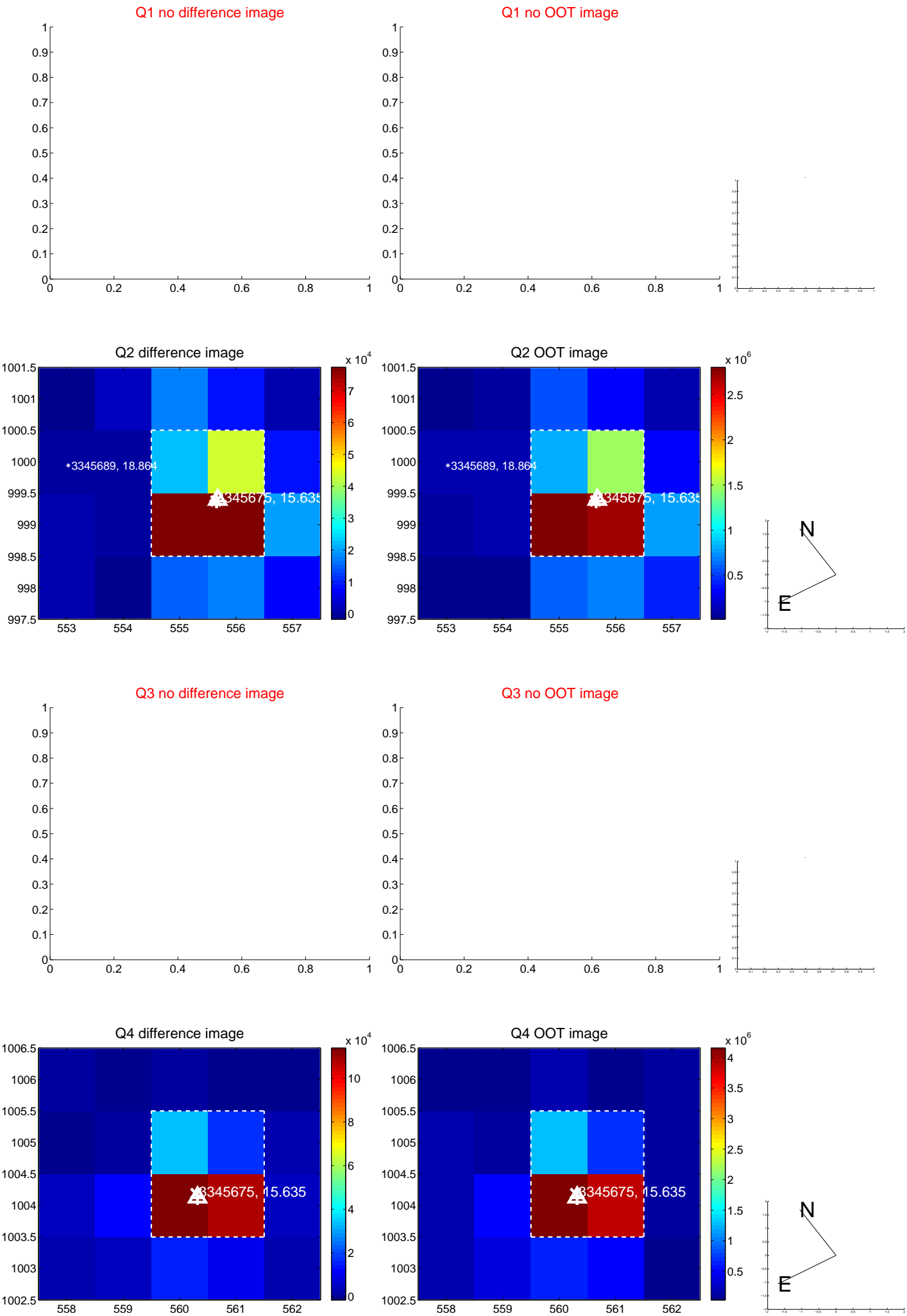
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.040 ± 0.069	0.59	-0.033 ± 0.068	0.023 ± 0.070
PRF-fit source offset from KIC position	0.209 ± 0.074	2.82	0.011 ± 0.072	-0.209 ± 0.074
photometric centroid source offset	0.75 ± 0.04	21.17	0.09 ± 0.04	-0.74 ± 0.04

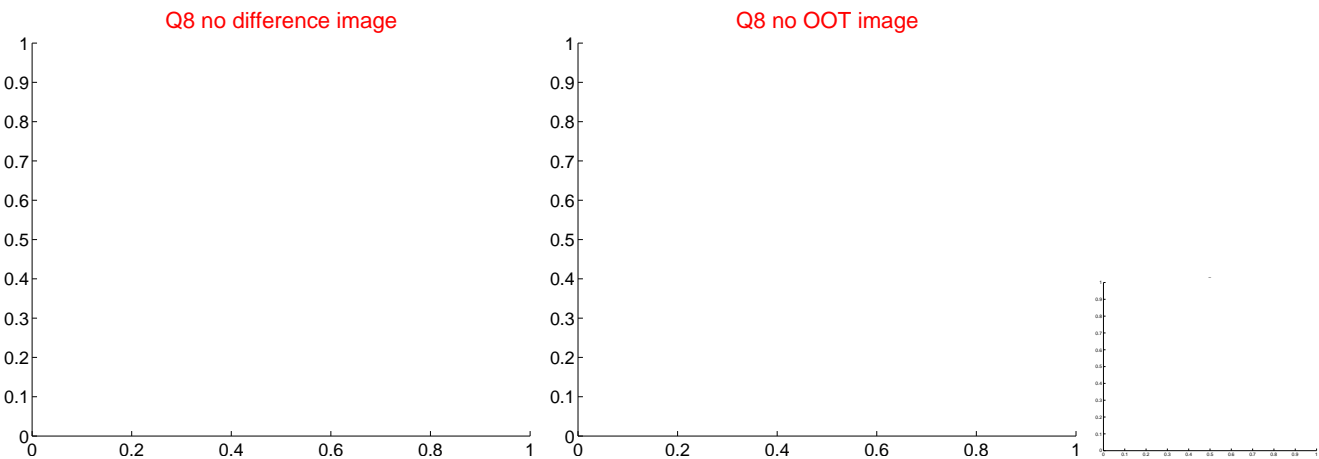
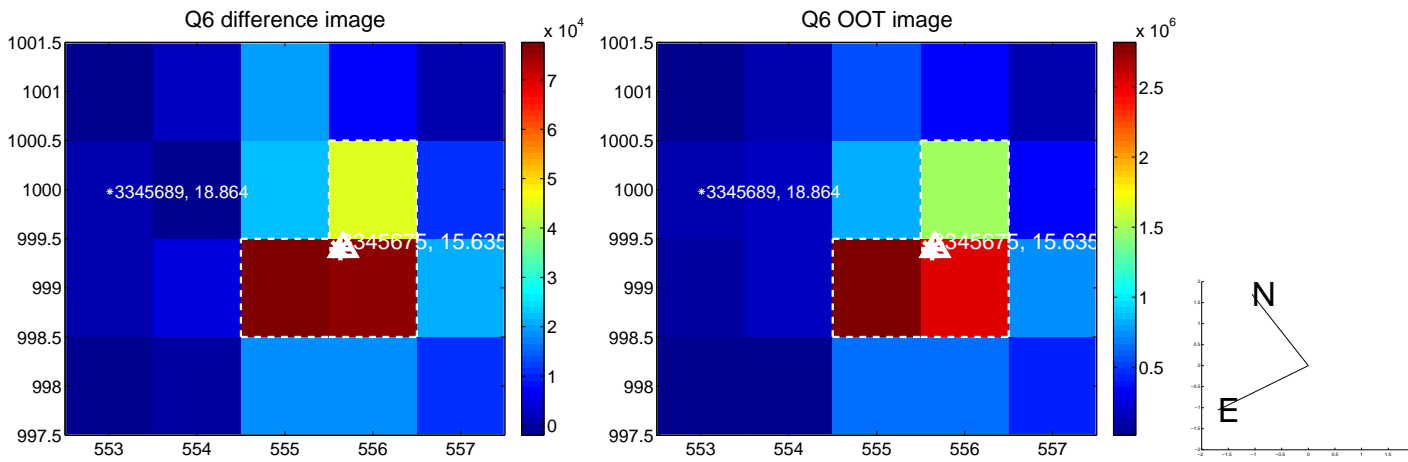
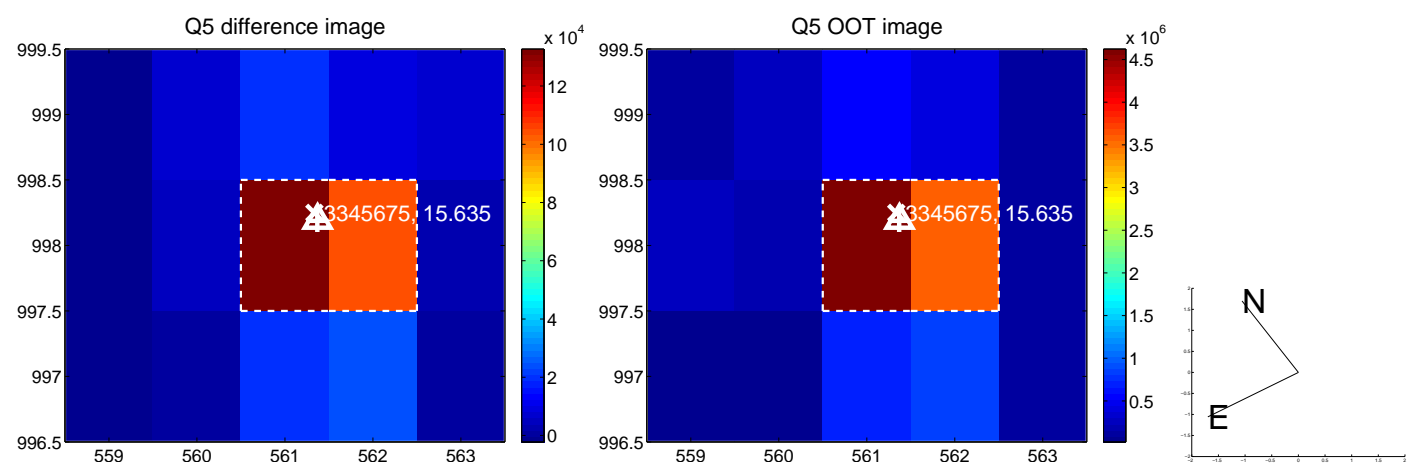


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

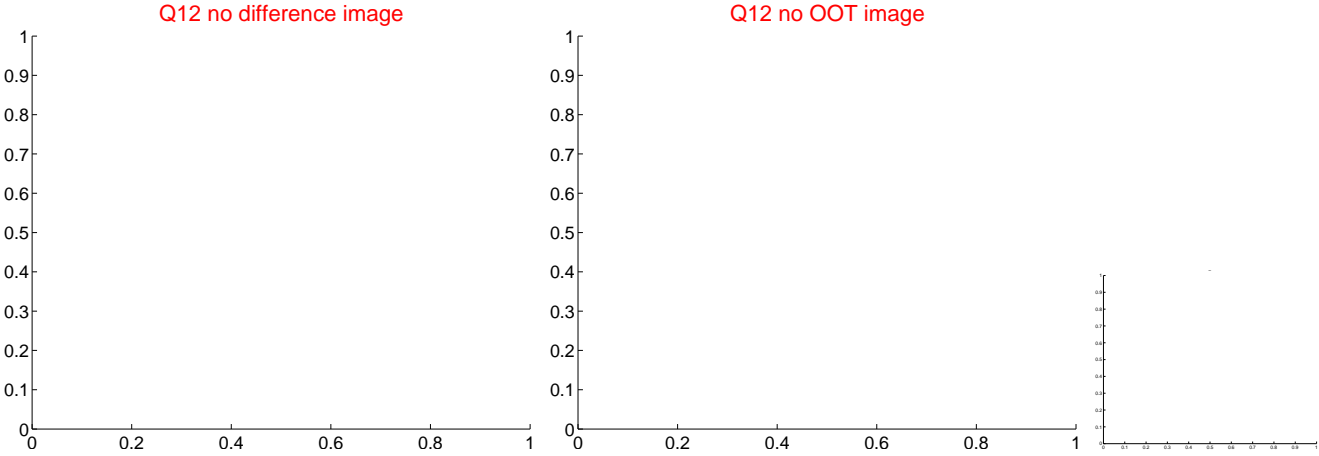
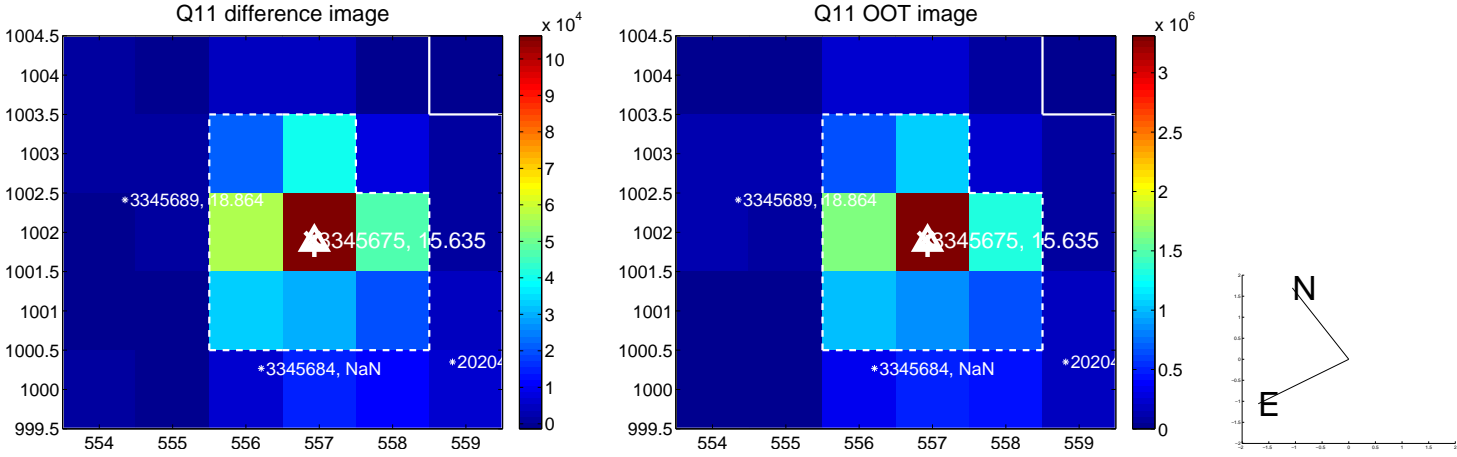
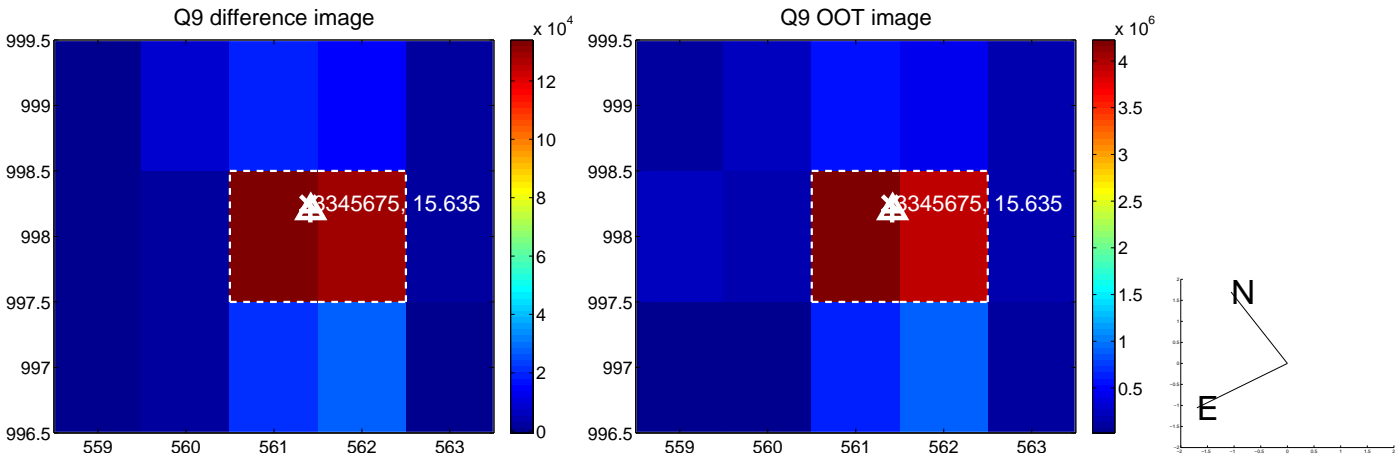
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



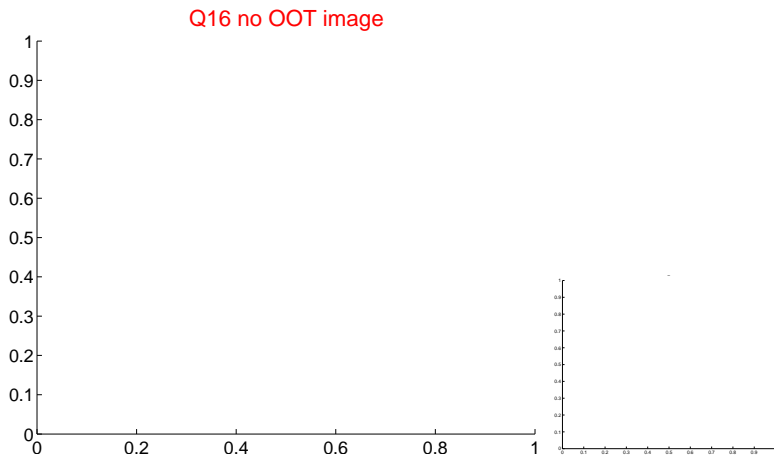
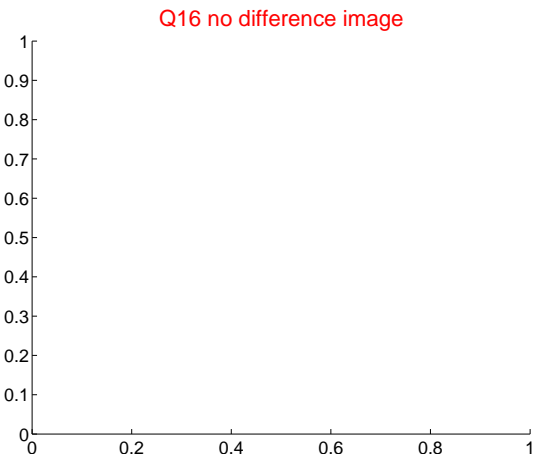
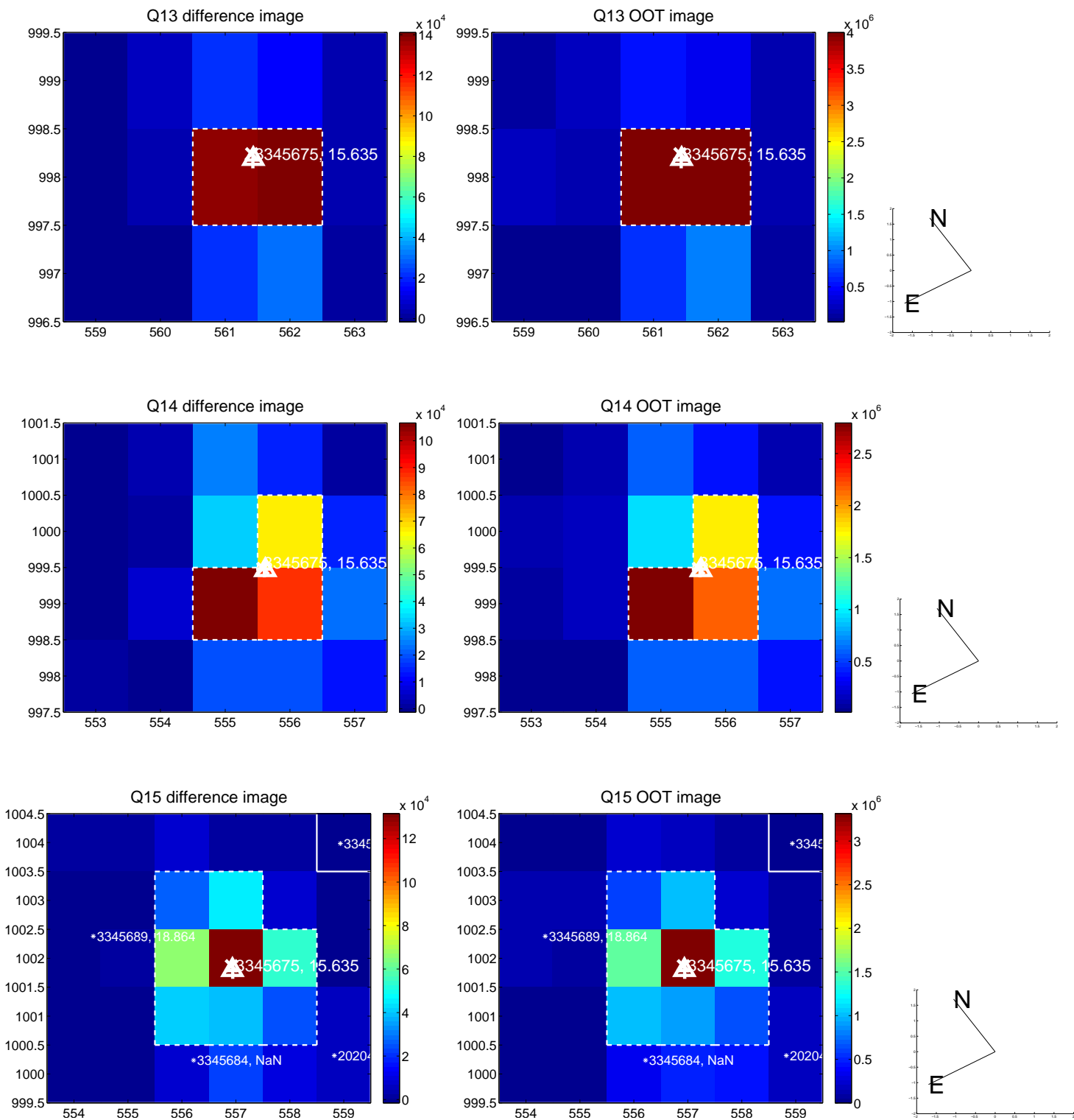
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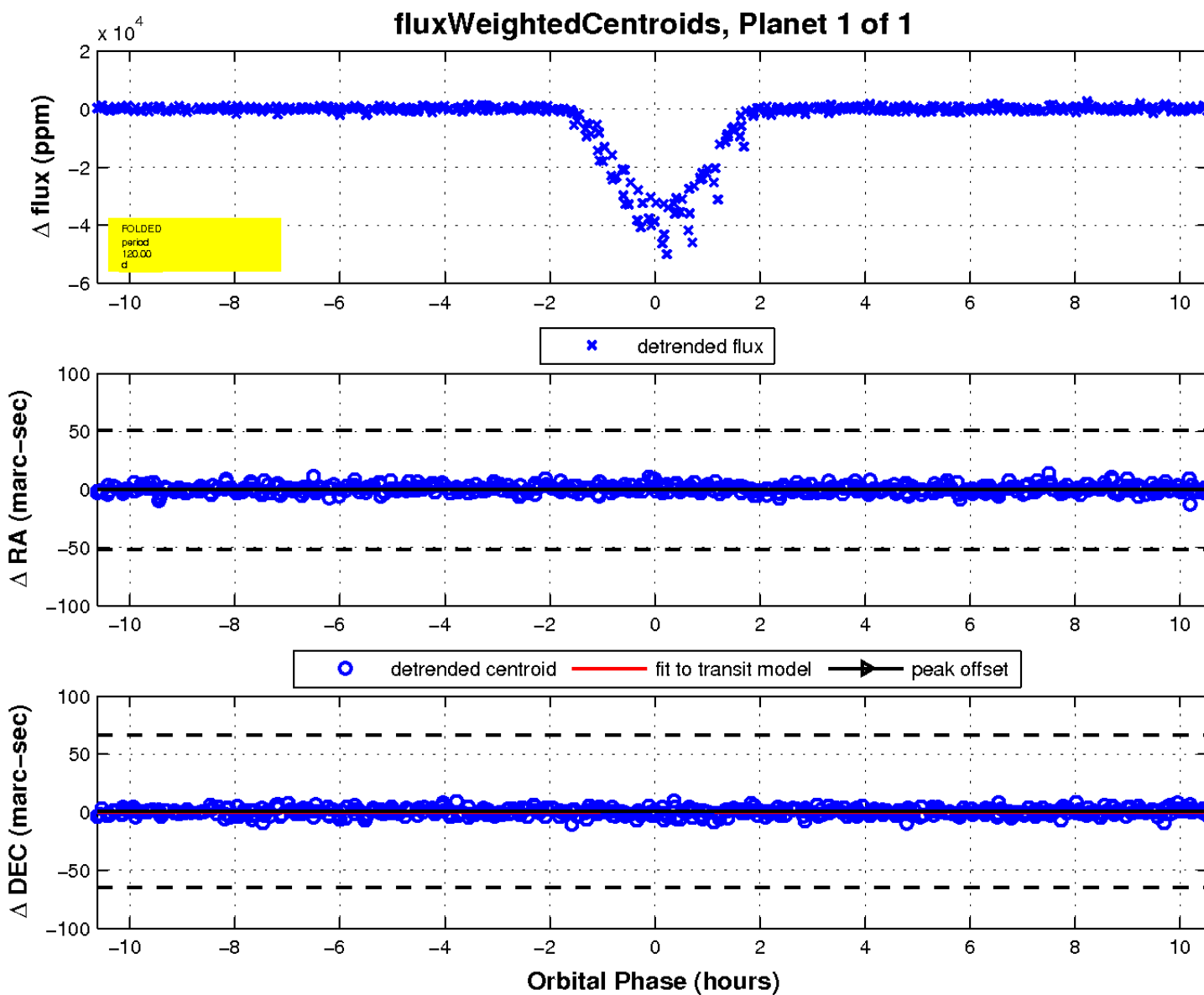
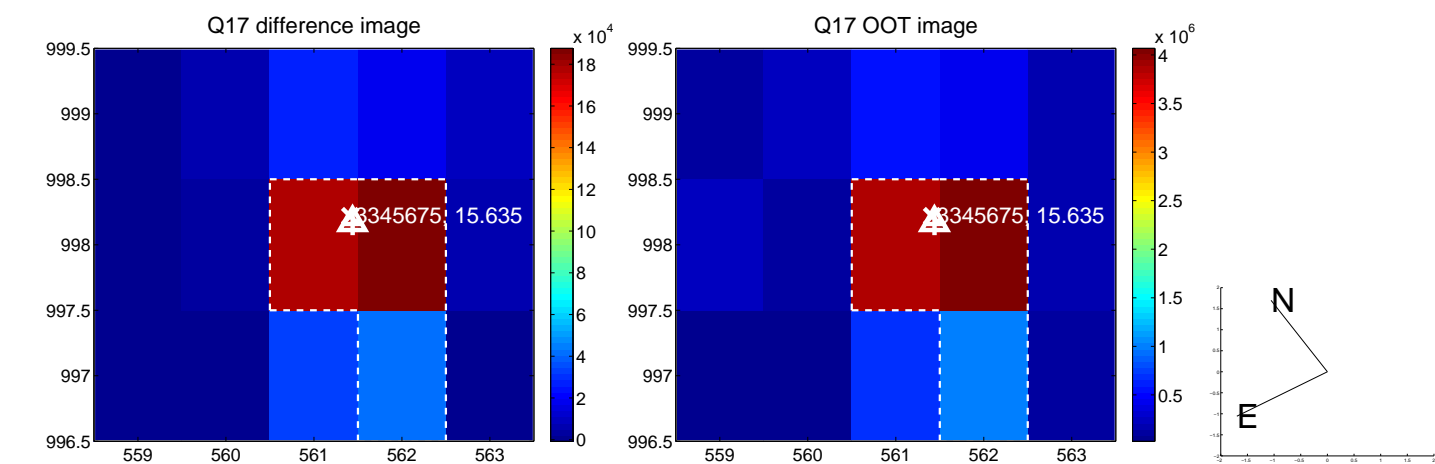
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UKIRT Image

