

KIC 010867062

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})
010867062-01	OBS	1303.01	34.296885	143.660409	636.8	19.400	38.7	47.4	1.17	5490	3.08	27.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010867062-01	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.

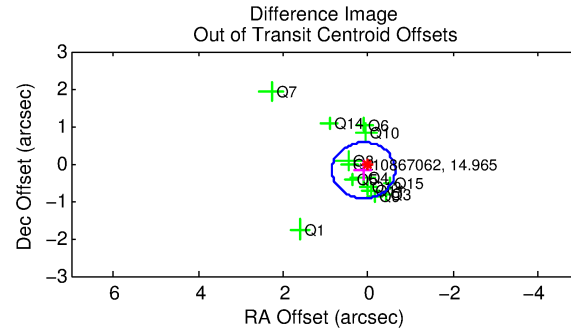
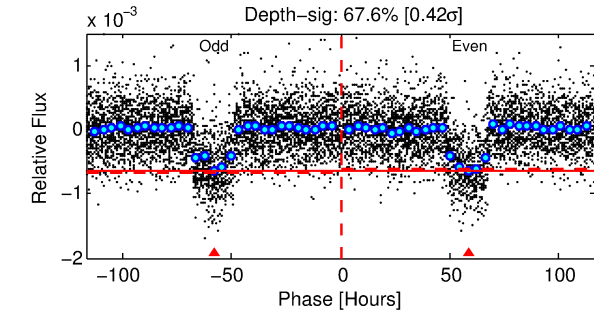
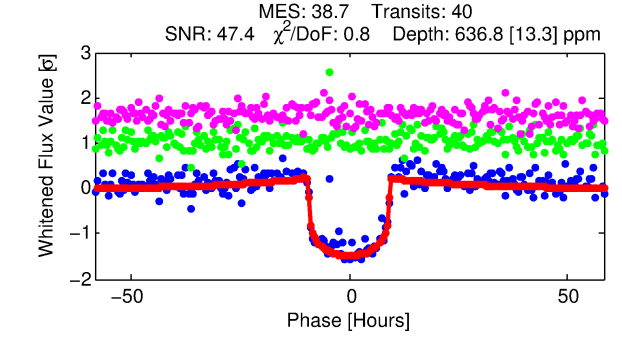
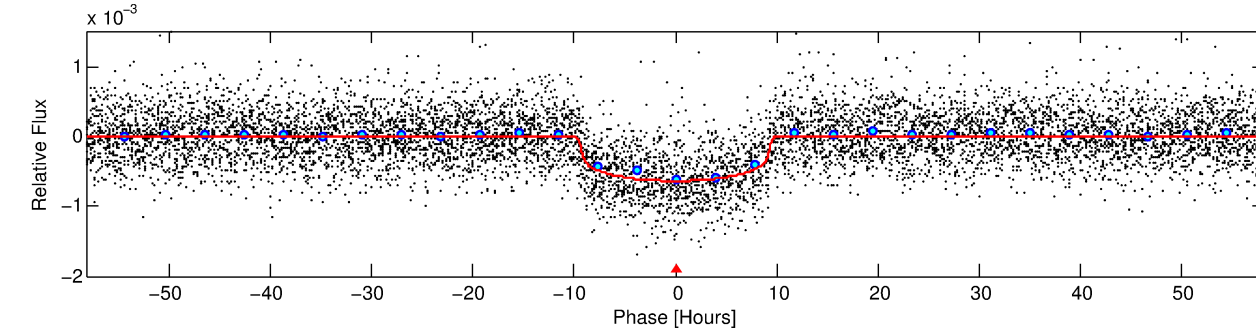
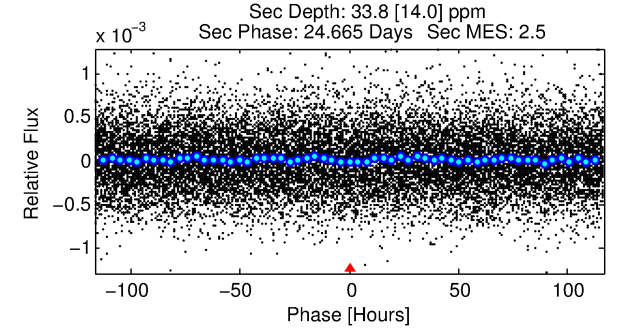
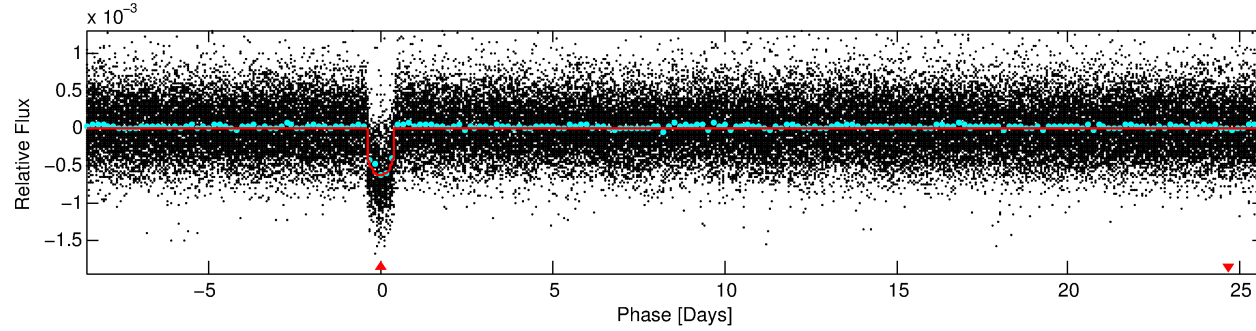
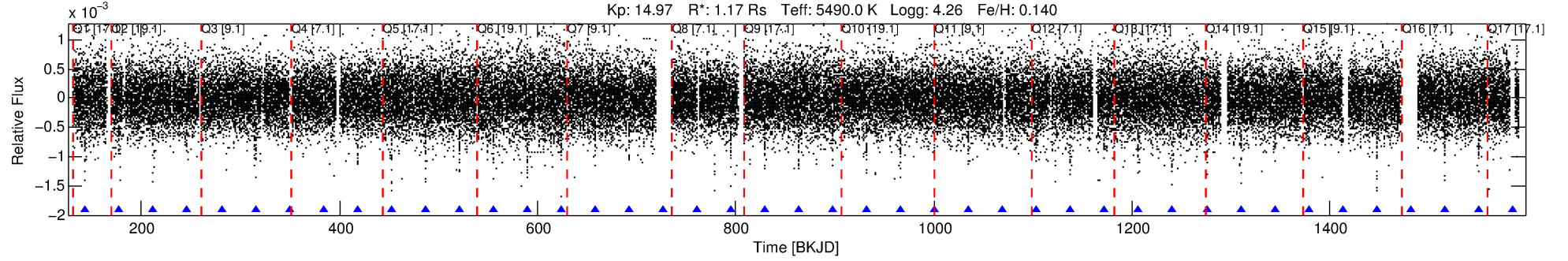
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010867062-01

No Significant Match Found

DV One-Page Summary

KIC: 10867062 Candidate: 1 of 1 Period: 34.297 d
KOI: K01303.01 Corr: 0.980



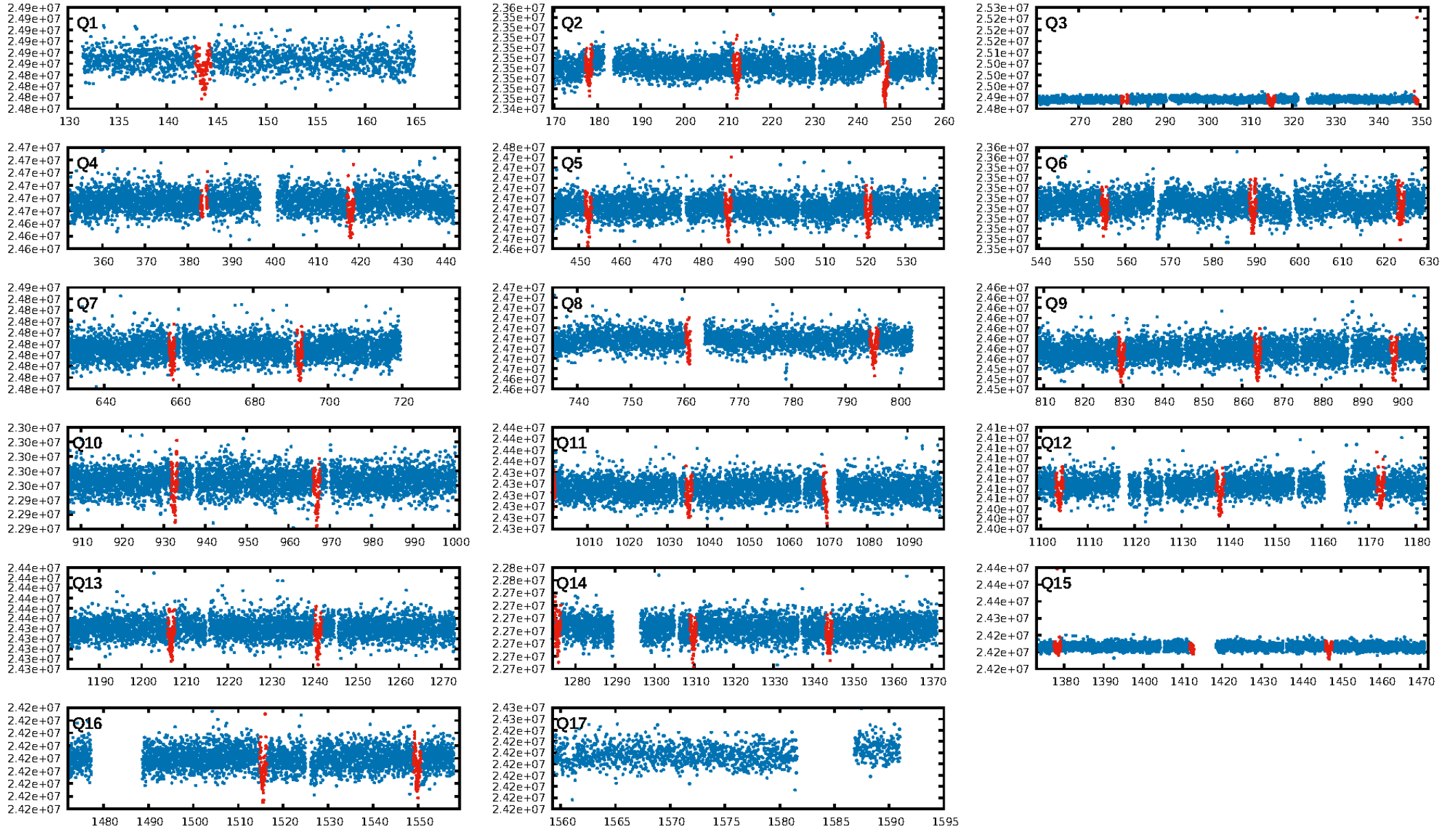
DV Fit Results:

Period = 34.29689 [0.00024] d
Epoch = 143.6604 [0.0057] BKJD
Rp/R* = 0.0242 [0.0016]
a/R* = 10.83 [2.79]
b = 0.64 [0.24]
Seff = 27.64 [8.21]
Teff = 585 [43] K
Rp = 3.08 [0.57] Re
a = 0.2003 [0.0353] AU
Ag = 78.47 [41.05] [1.89 σ]
Teffp = 2691 [295] K [7.06 σ]

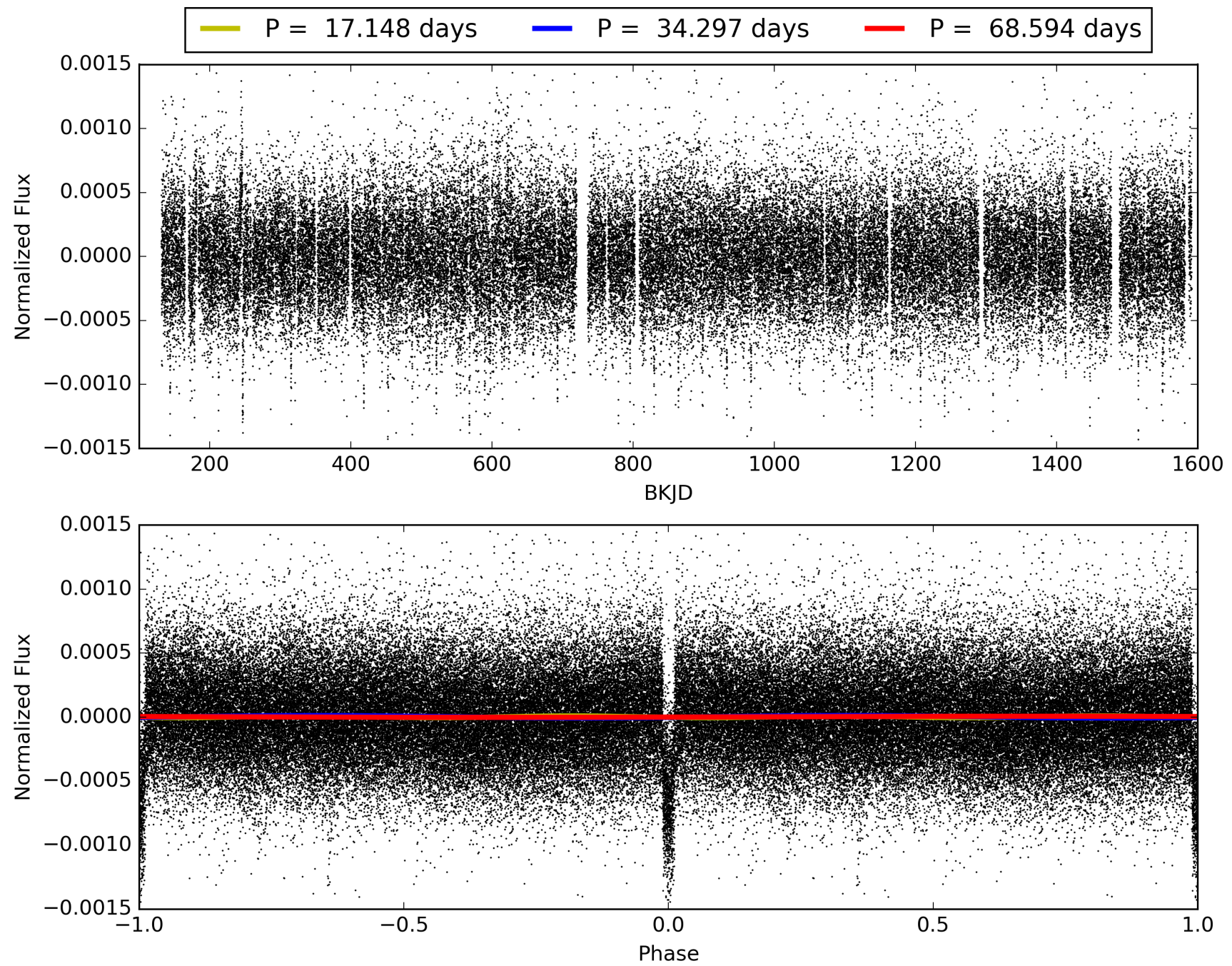
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.82e-295
RollingBand-fgt: 1.00 [39/39]
GhostDiagnostic-chr: 5.406
Centroid-sig: 0.2%
Centroid-so: 0.353 arcsec [1.66 σ]
OotOffset-rm: 0.209 arcsec [0.84 σ]
KicOffset-rm: 0.255 arcsec [0.94 σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010867062-01, PDC Light Curves

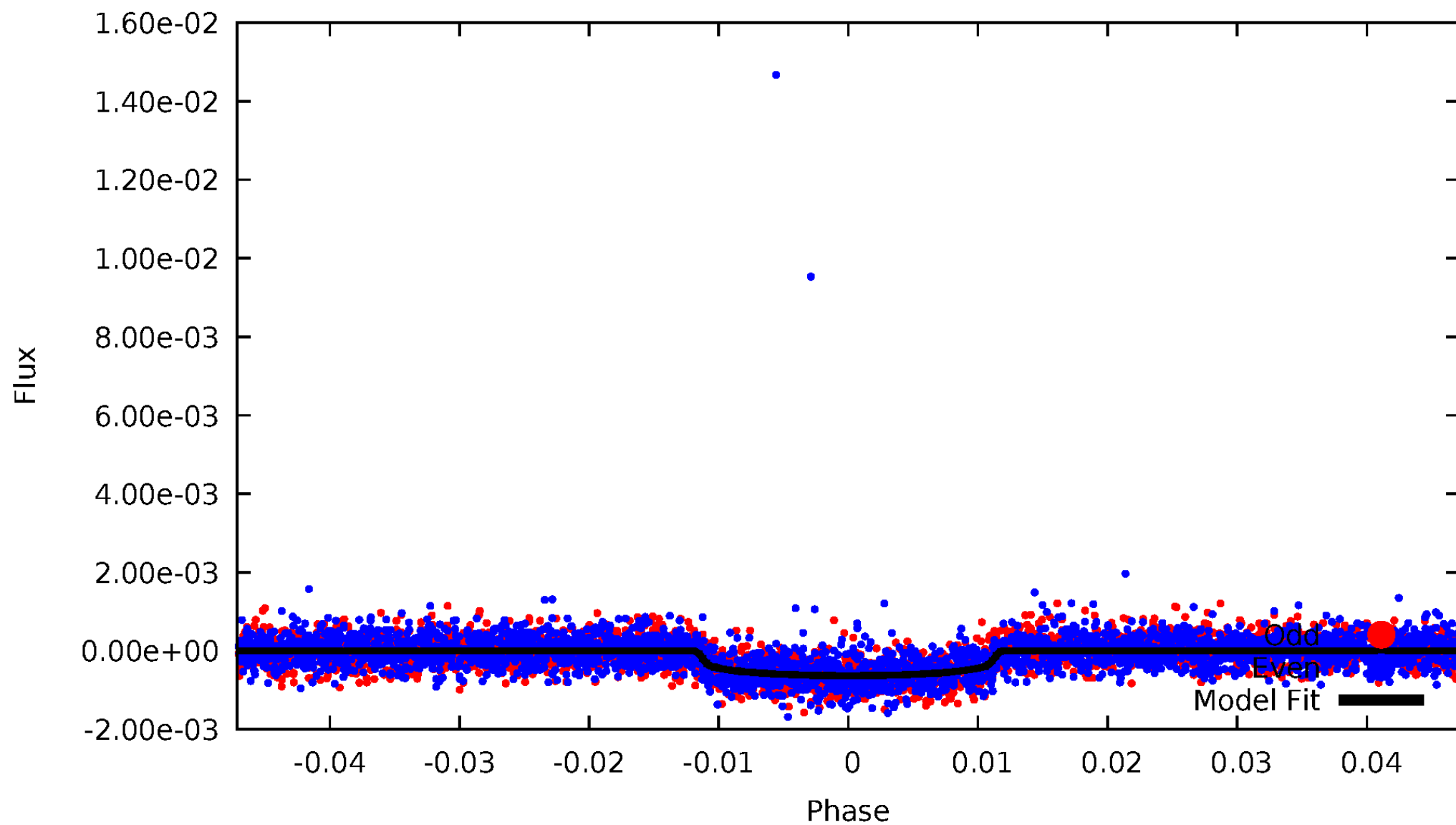


TCE 010867062-01



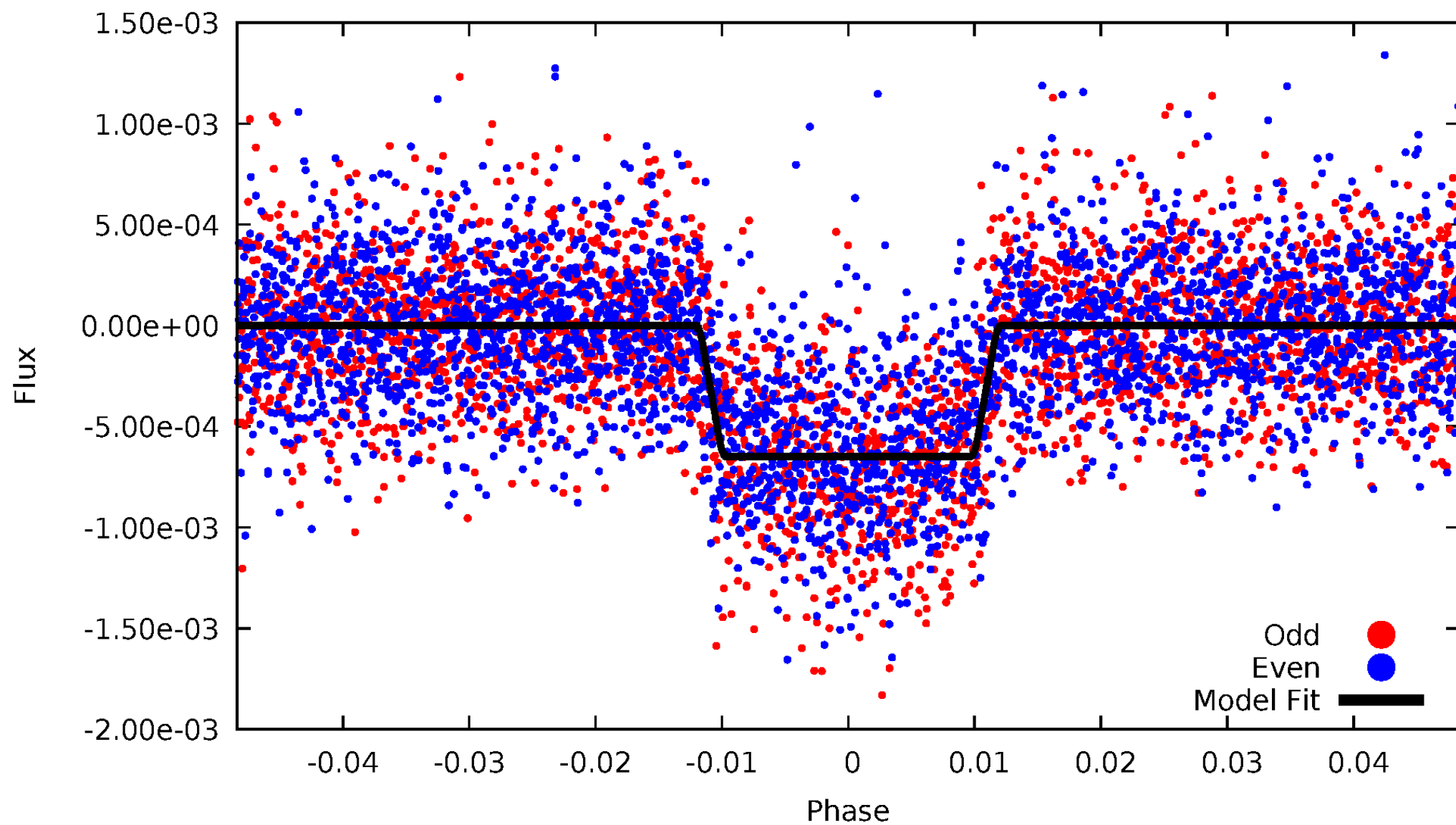
DV Odd/Even

TCE 010867062-01

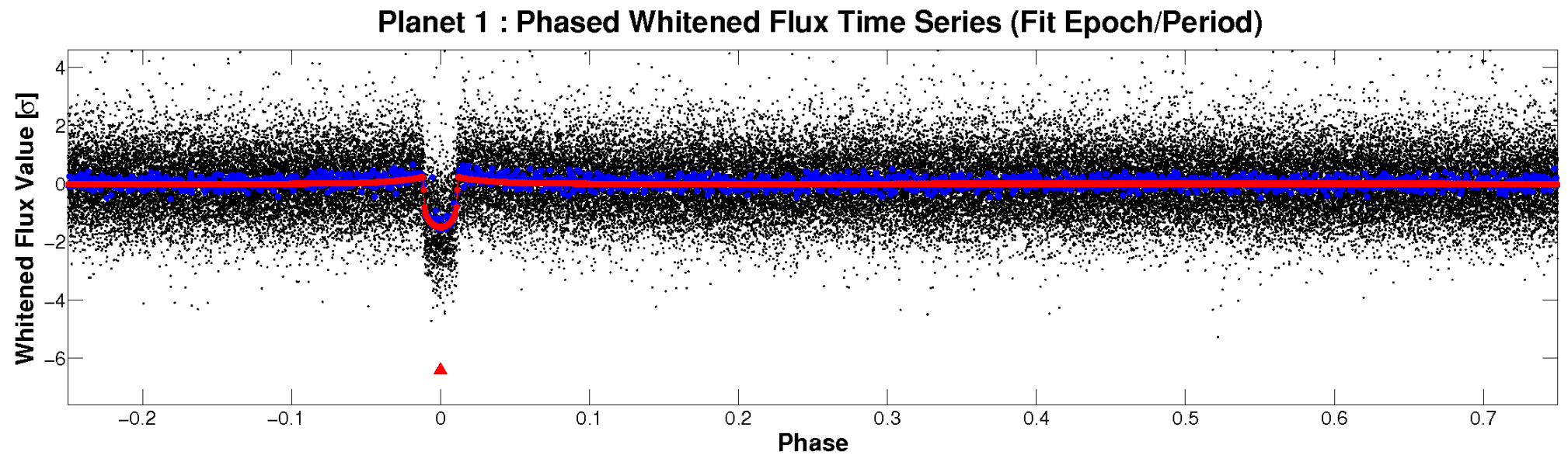
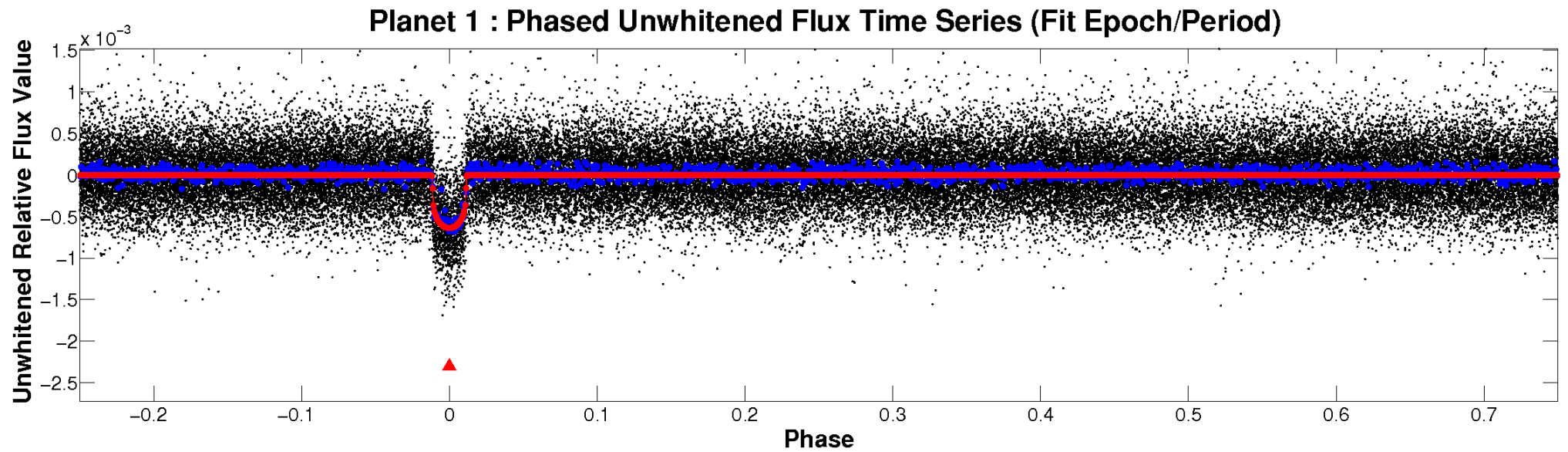


ALT Odd/Even

TCE 010867062-01

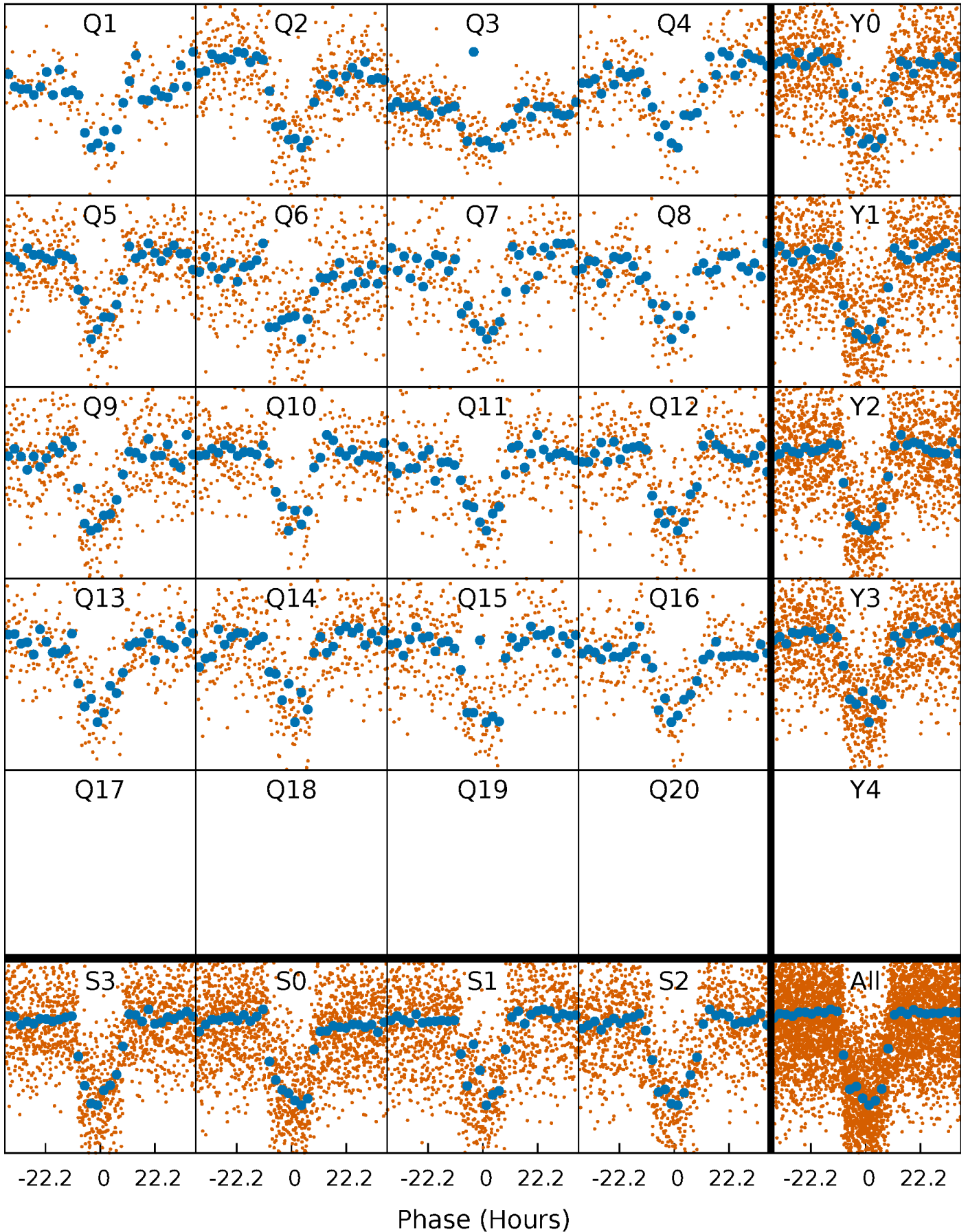


Non-Whitened Vs. Whitened Light Curve



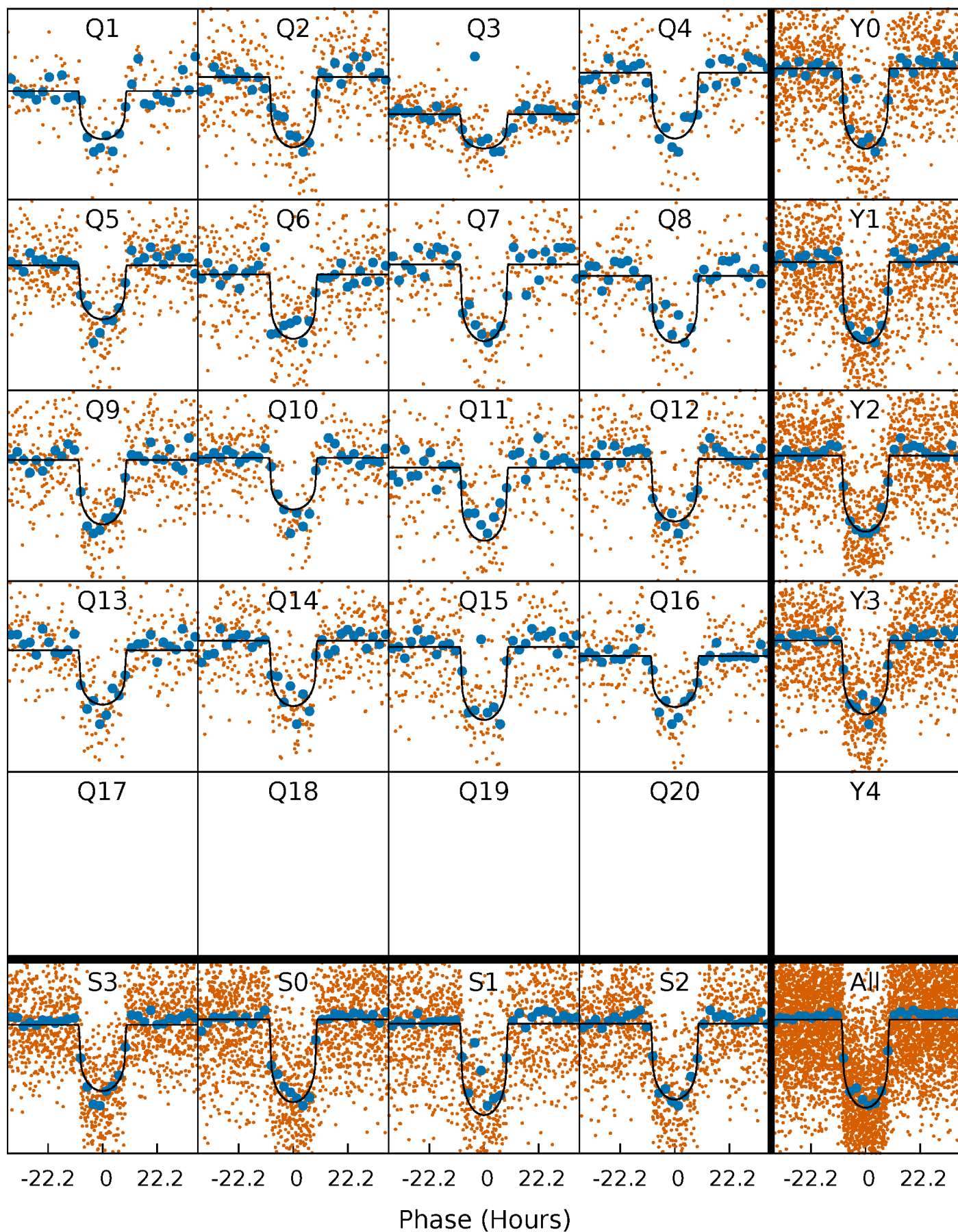
PDC Quarter-Phased Transit Curves

TCE 010867062-01 P= 34.296885 Days $T_0=143.660409$ (BKJD)



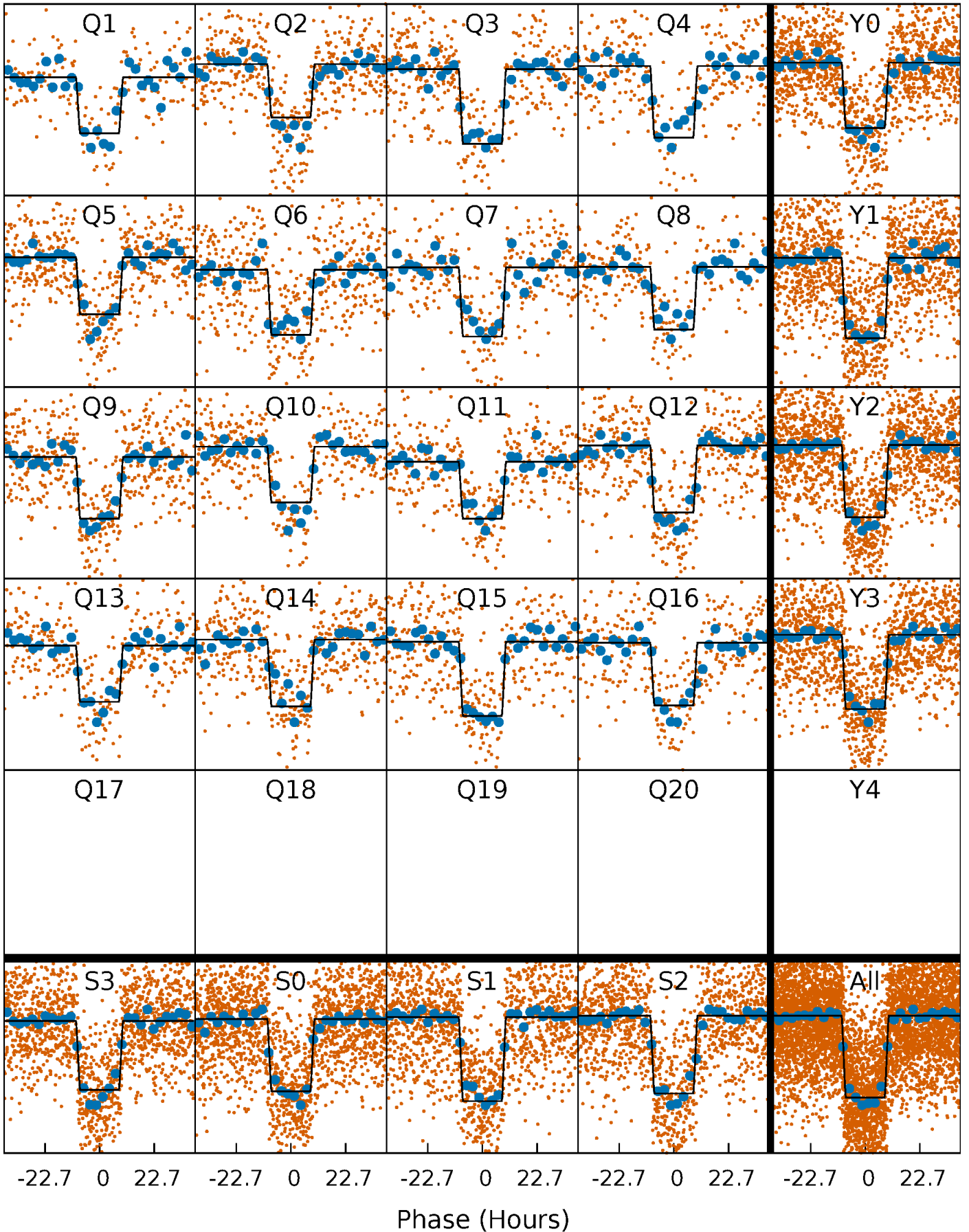
DV Quarter-Phased Transit Curves

TCE 010867062-01 P= 34.296885 Days $T_0=143.660409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

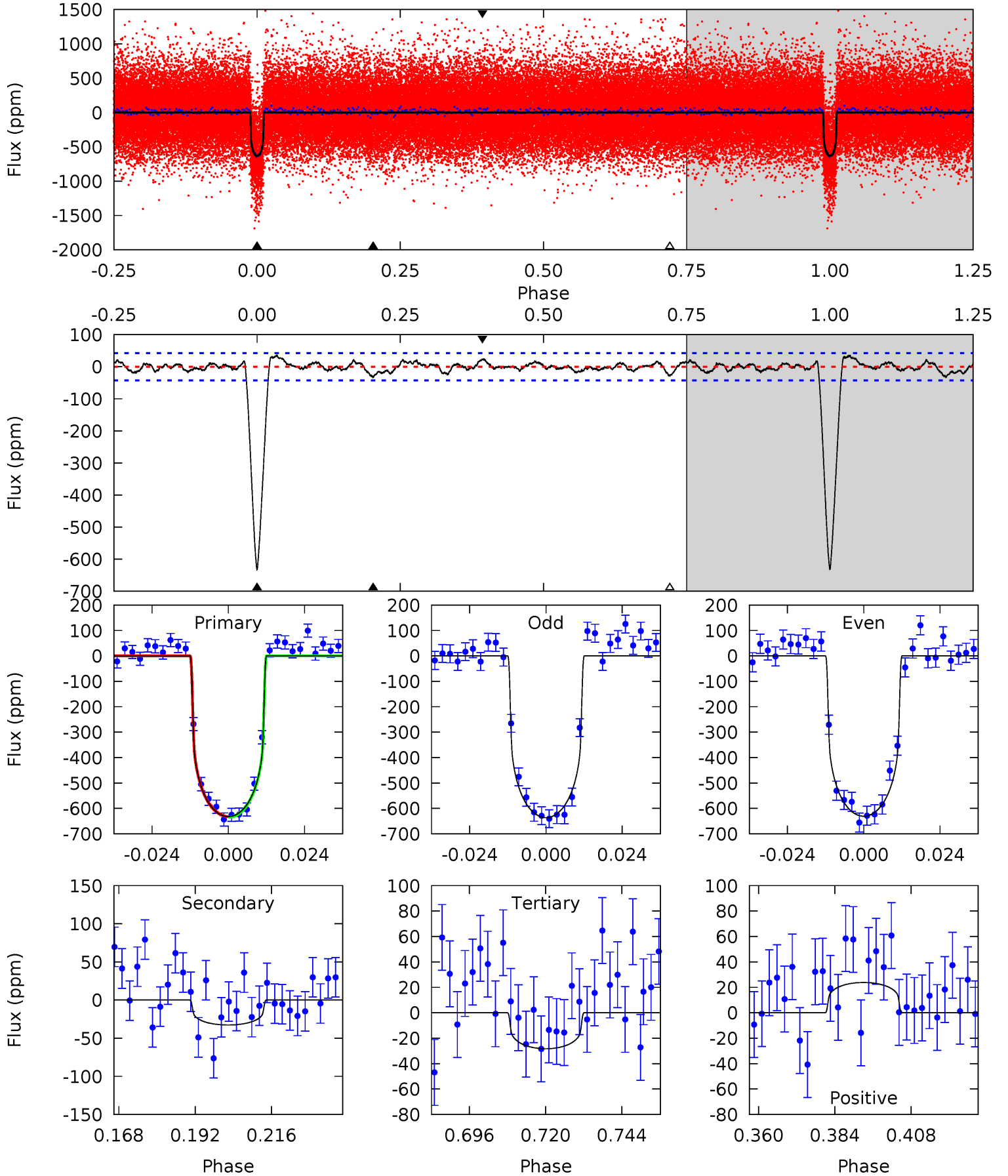
TCE 010867062-01 P= 34.296065 Days $T_0=143.677417$ (BKJD)



DV Model-Shift Uniqueness Test

010867062-01, $P = 34.296885$ Days, $E = 109.363524$ Days

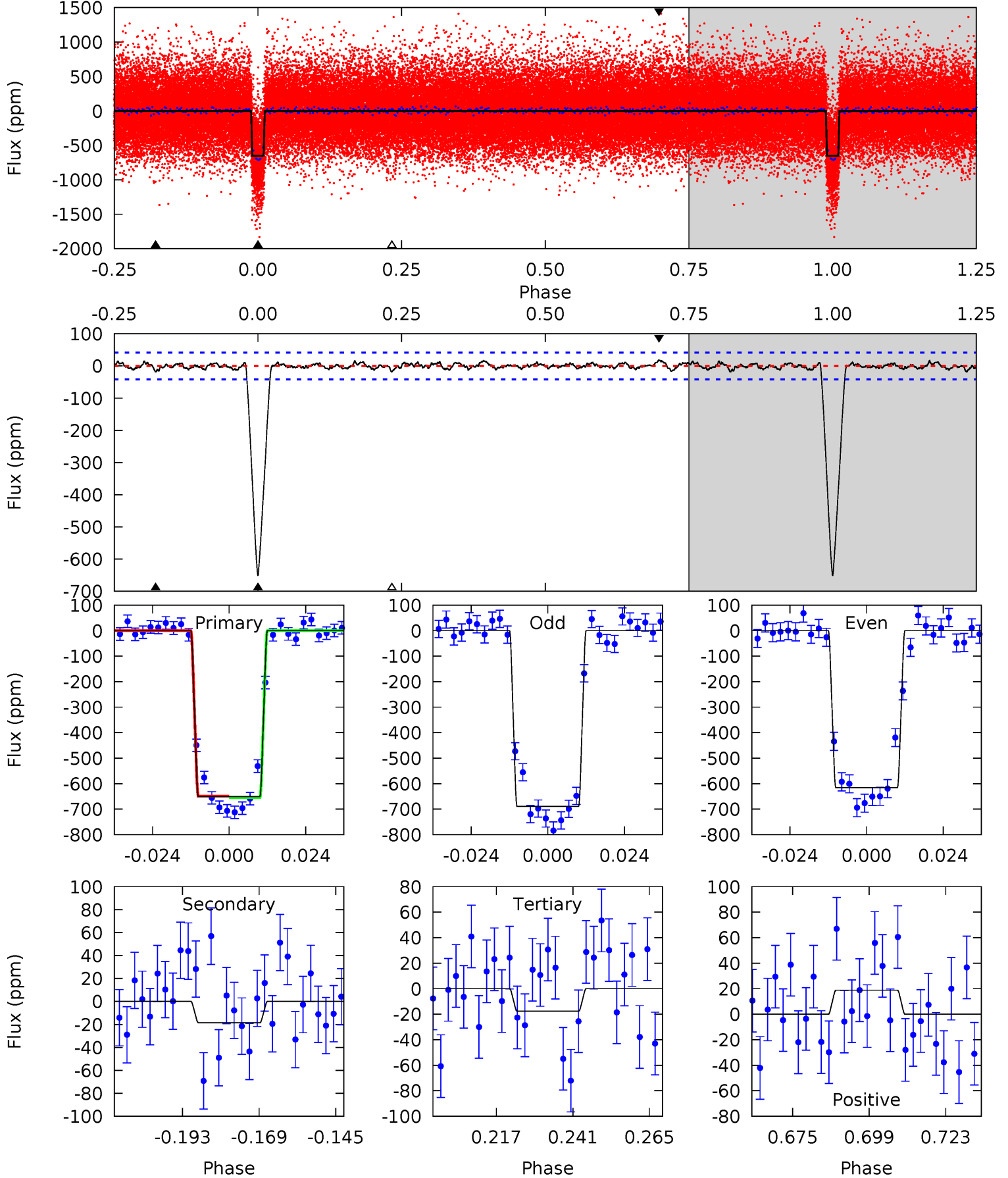
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
72.3	3.74	3.23	2.72	4.86	2.26	1.20	69.0	69.6	0.51	1.02	0.32	0.88	0.05	0.15



Alt Model-Shift Uniqueness Test

010867062-01, $P = 34.296065$ Days, $E = 109.381352$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.8	2.16	2.05	2.19	4.85	2.26	0.75	73.7	73.6	0.10	-0.04	4.27	1.00	0.03	0.36



Stellar Parameters For KIC 010867062

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5490^{+82}_{-74}	$4.263^{+0.174}_{-0.116}$	$0.140^{+0.150}_{-0.100}$	$1.167^{+0.182}_{-0.202}$	$0.911^{+0.065}_{-0.038}$	$0.807^{+0.680}_{-0.268}$
	+1%/-1%	+4%/-3%	+107%/-71%	+16%/-17%	+7%/-4%	+84%/-33%
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 010867062-01 / KOI 1303.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-33 ± 9	$3.06^{+0.38}_{-0.38}$	815^{+38}_{-45}	3233^{+146}_{-150}	77^{+30}_{-25}
Alt.	-19 ± 9	$3.24^{+0.38}_{-0.40}$	816^{+38}_{-45}	2935^{+178}_{-242}	40^{+21}_{-19}

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 $A_{obs} \gg 1.0$

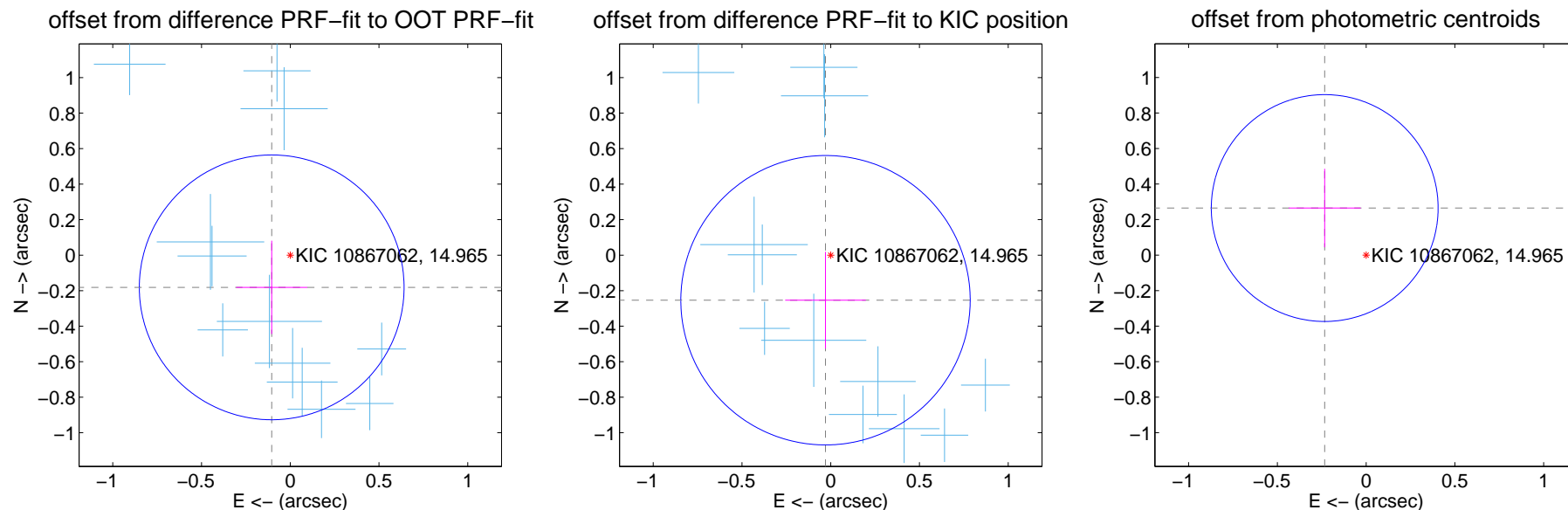
DV Centroid Data

Supplemental centroid analysis for 010867062-01. Kepler magnitude: 14.96. Transit SNR 47.36

There are 13 quarters with good PRF difference image offsets

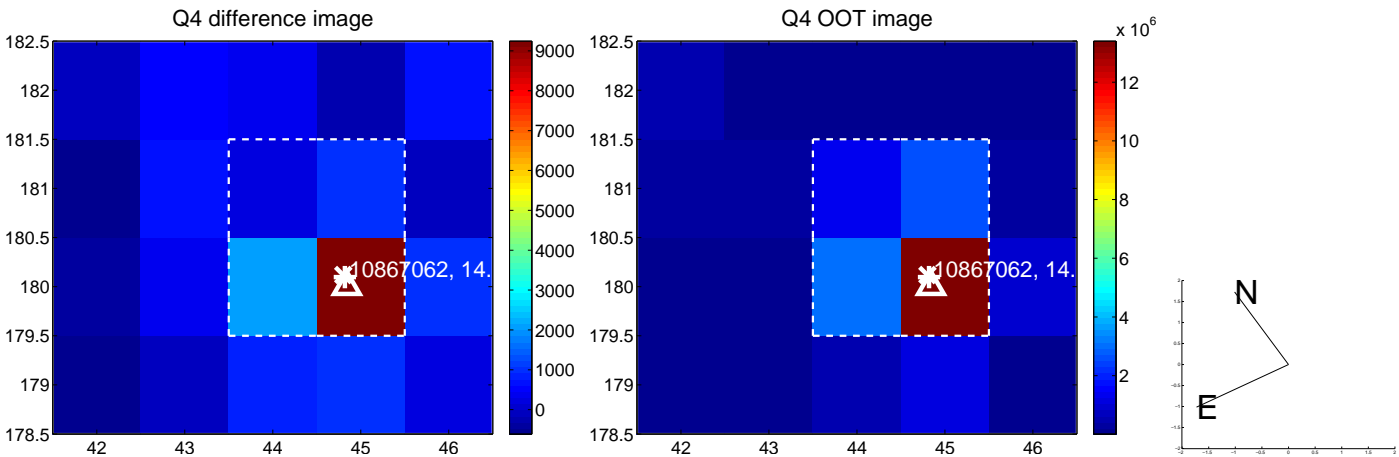
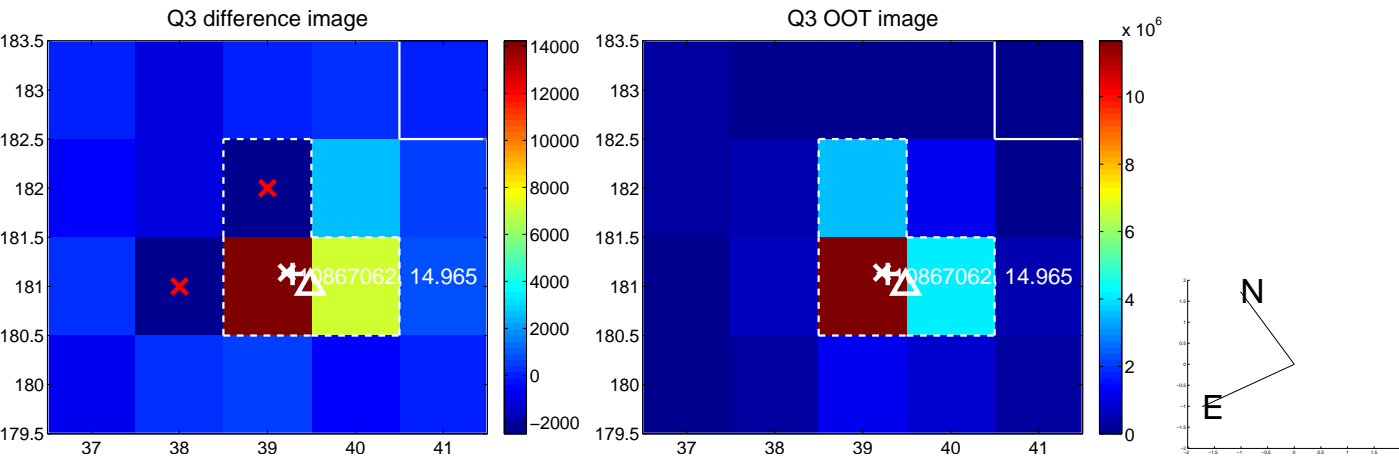
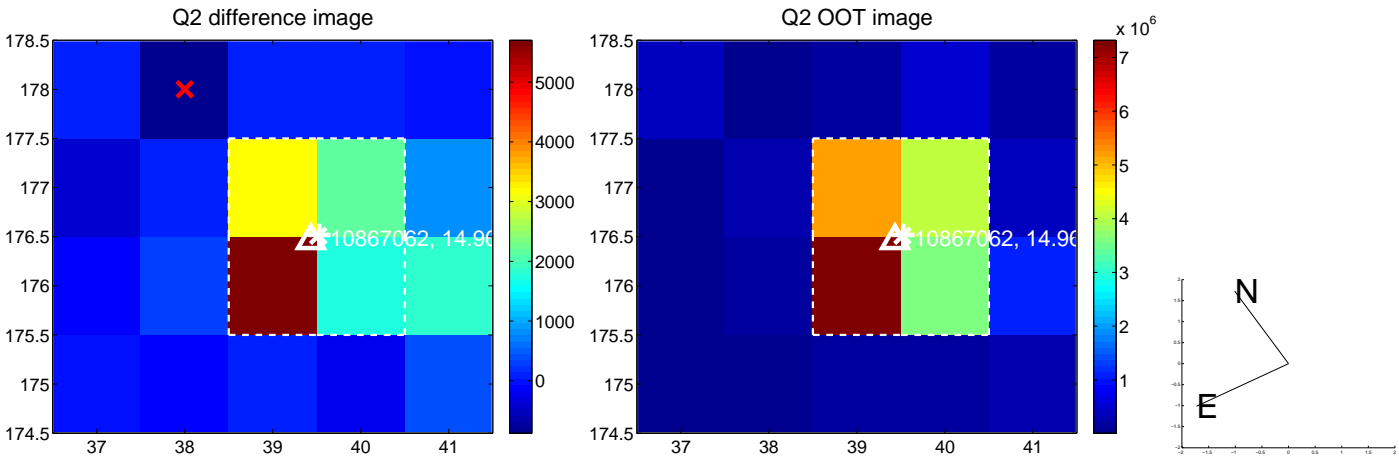
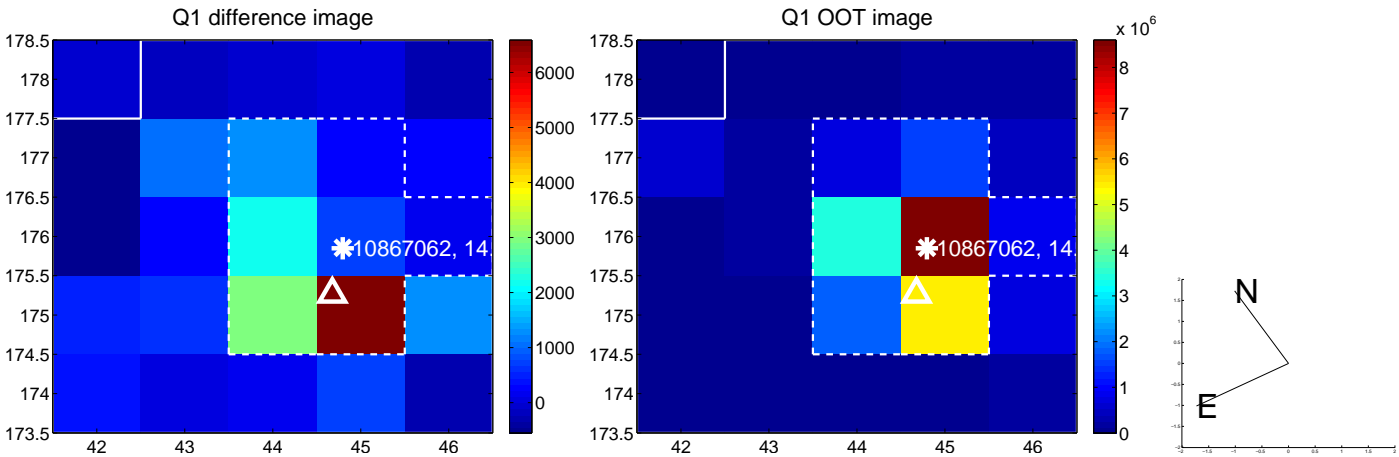
The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.209 ± 0.249	0.84	0.105 ± 0.200	-0.181 ± 0.263
PRF-fit source offset from KIC position	0.255 ± 0.272	0.94	0.029 ± 0.227	-0.254 ± 0.272
photometric centroid source offset	0.35 ± 0.21	1.66	0.23 ± 0.20	0.26 ± 0.22

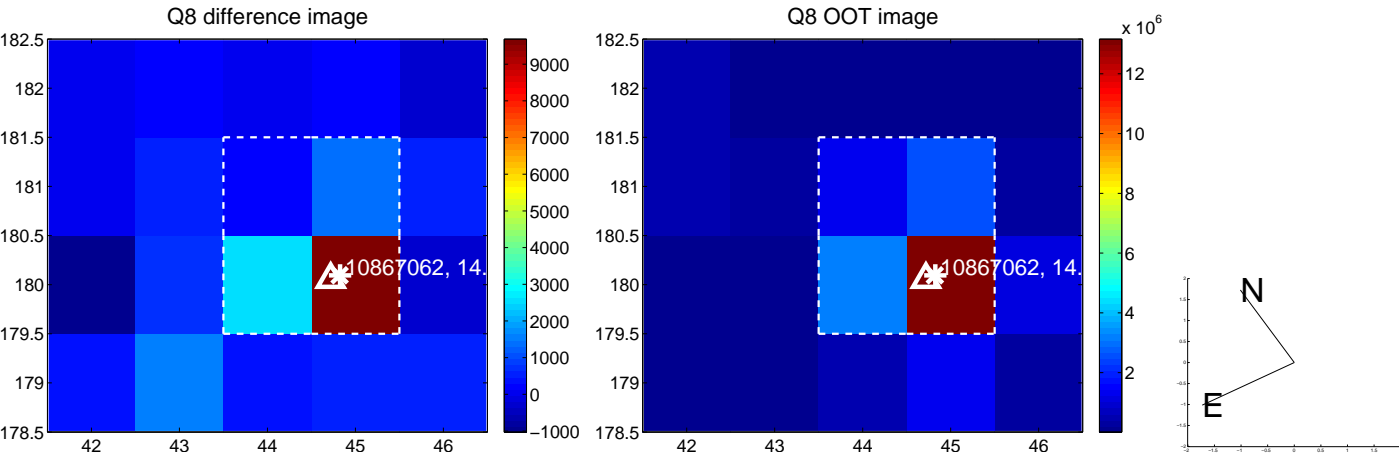
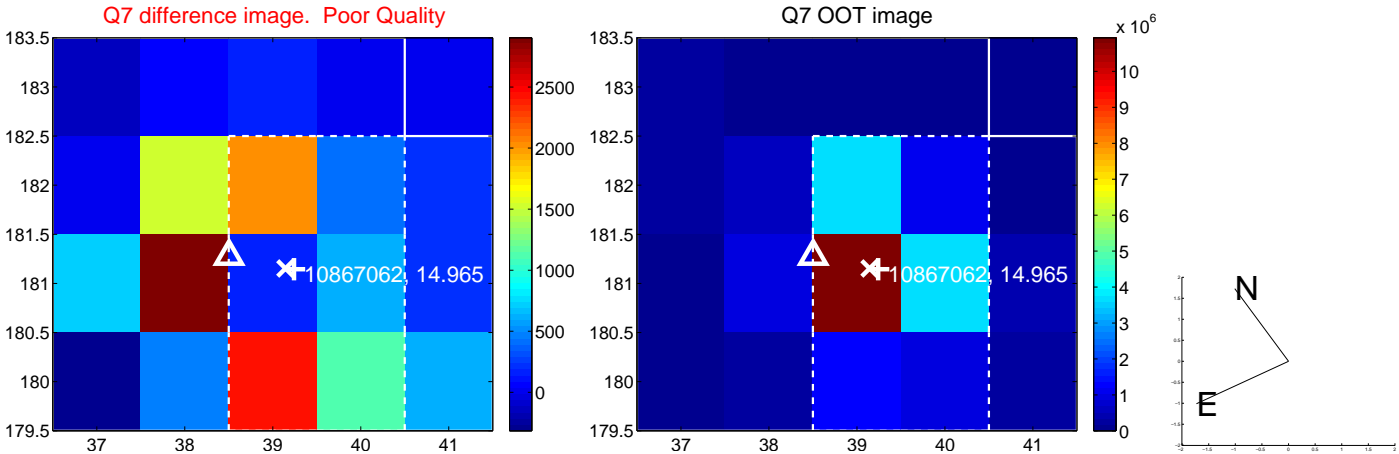
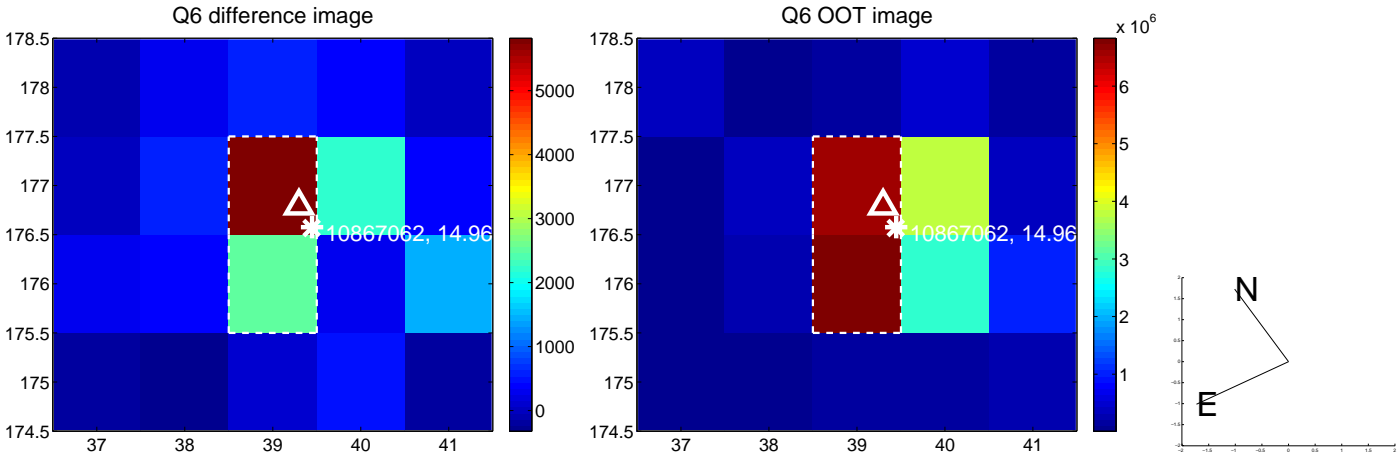
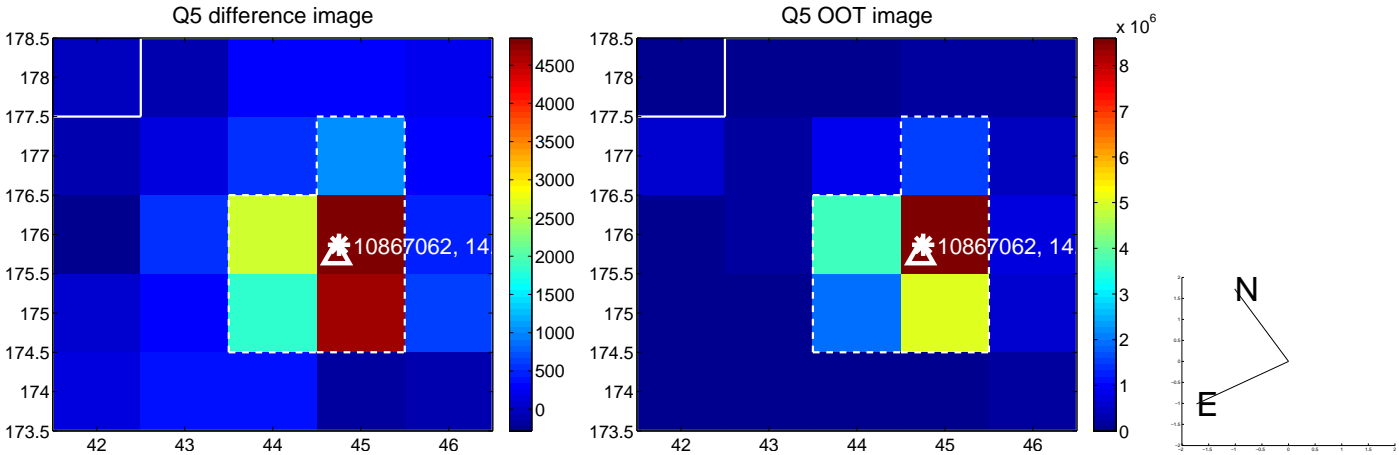


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

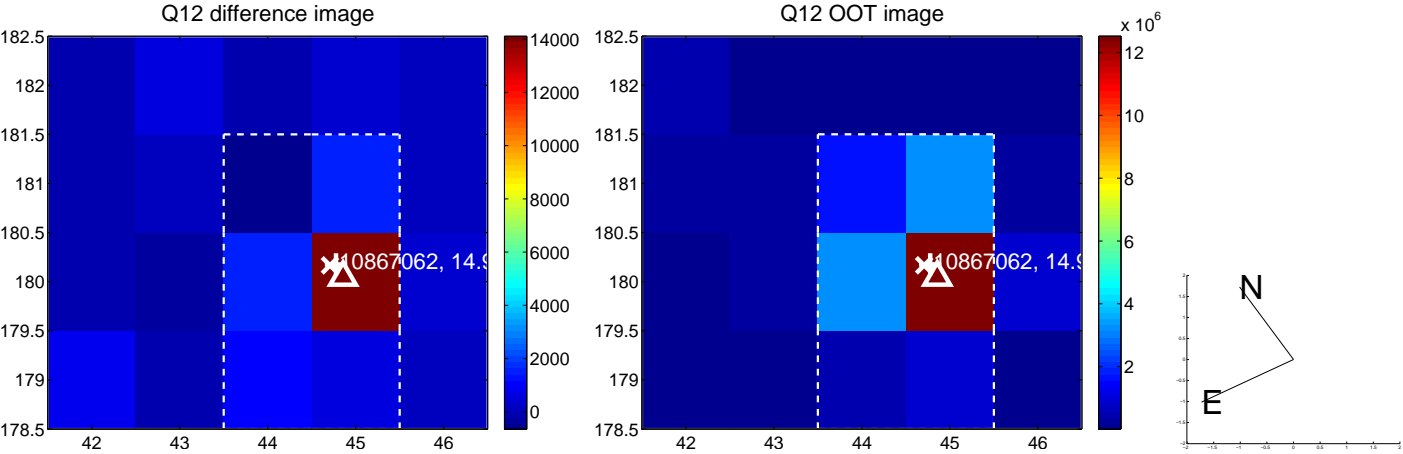
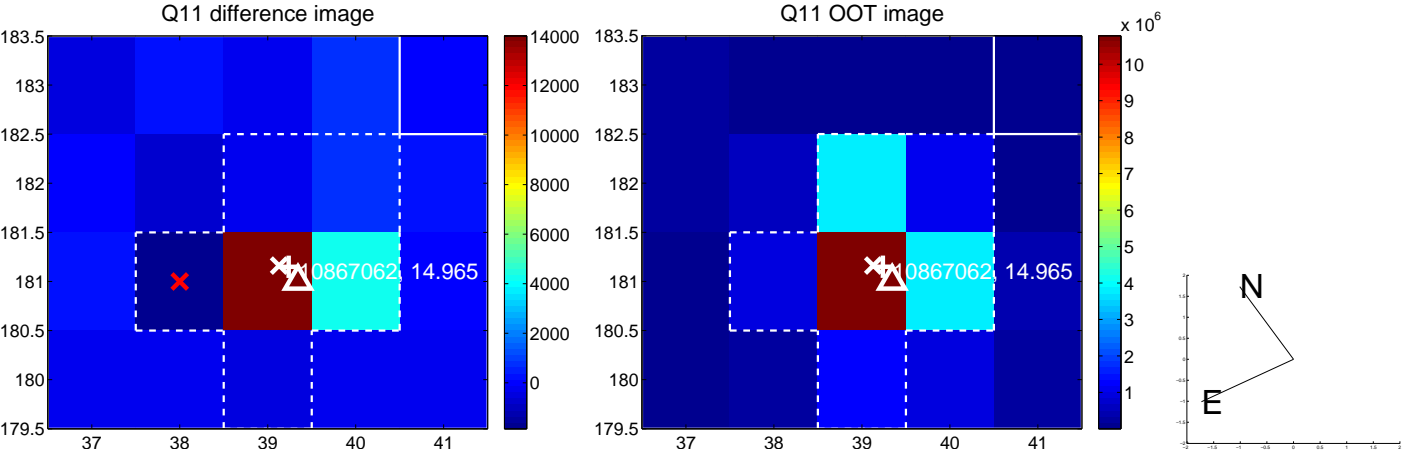
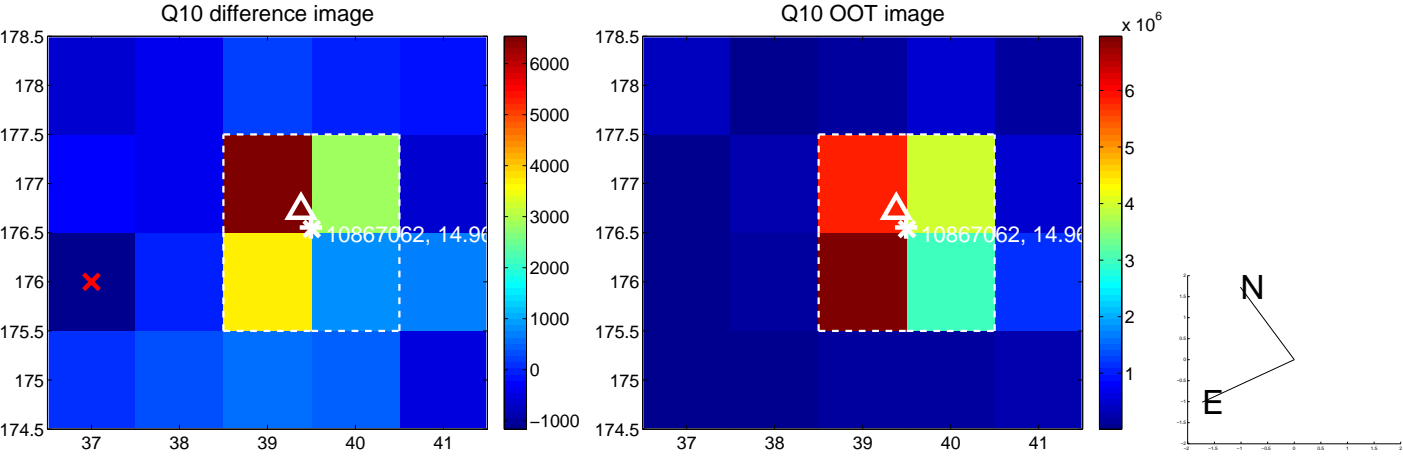
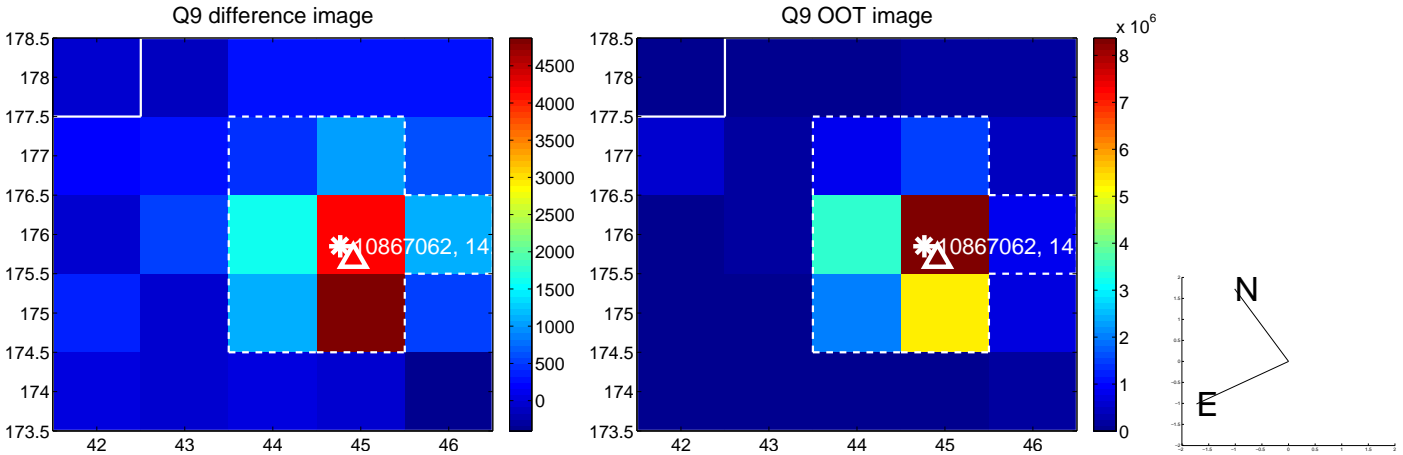
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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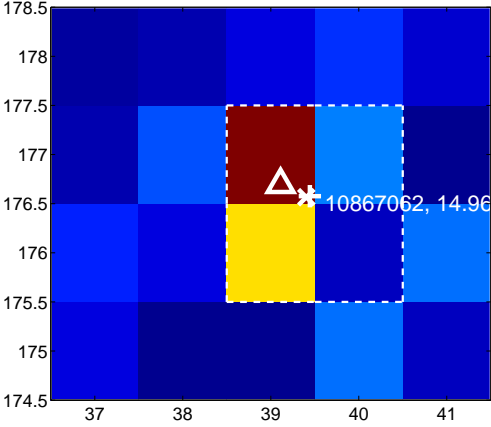
Q13 no difference image



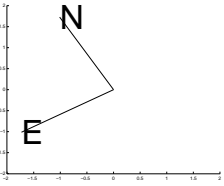
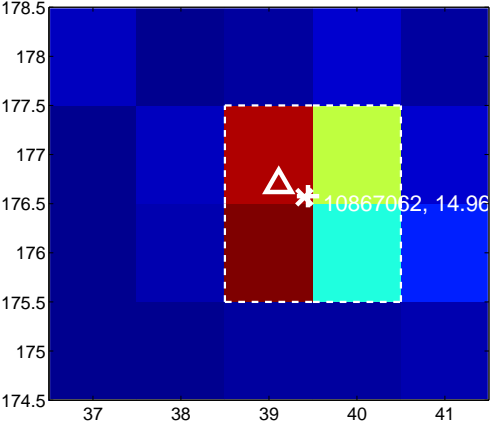
Q13 no OOT image



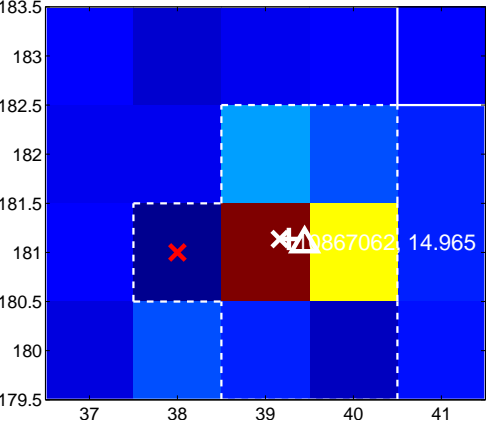
Q14 difference image



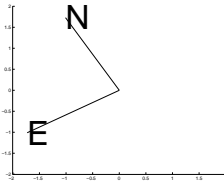
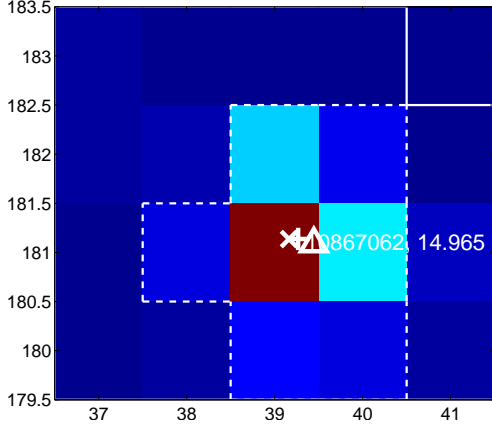
Q14 OOT image



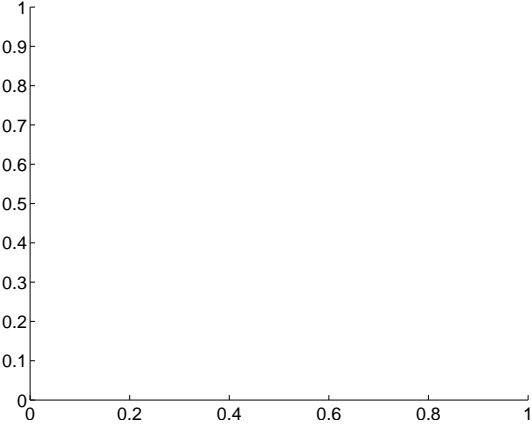
Q15 difference image



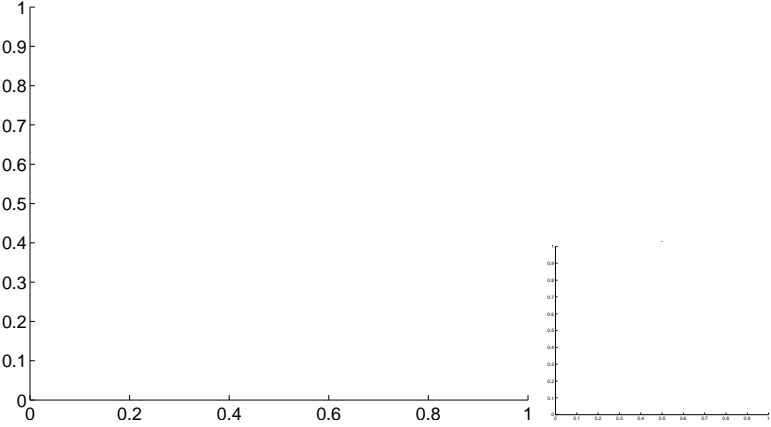
Q15 OOT image



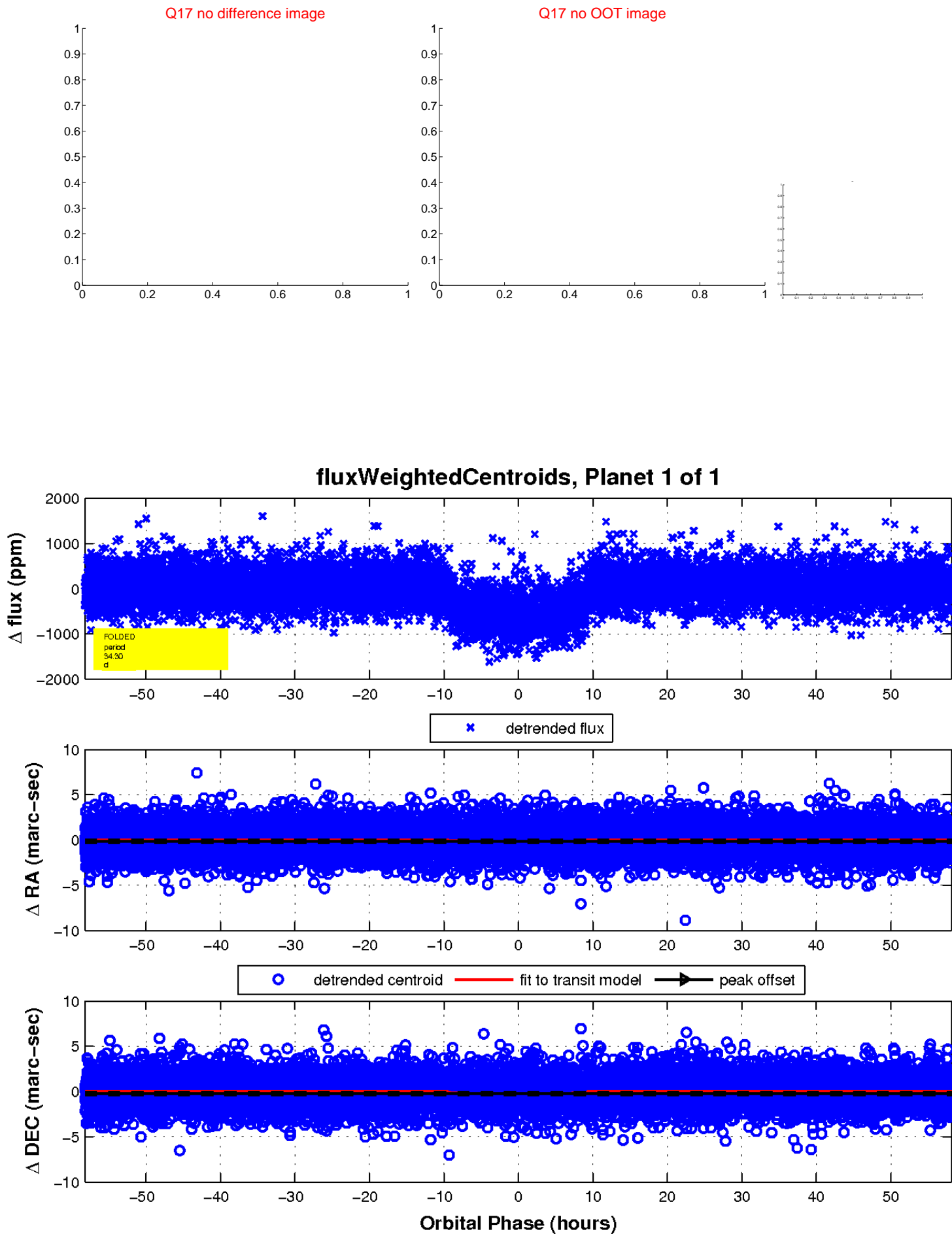
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

