

KIC 008376848

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})
008376848-01	OBS	4007.01	11.493074	133.288428	232.7	7.183	16.9	17.7	1.00	6198	1.82	128.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008376848-01	OBS	PC	0.96	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.

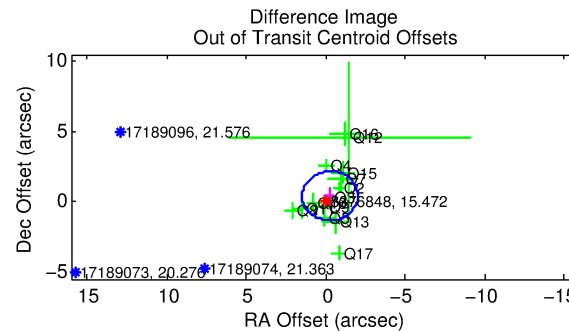
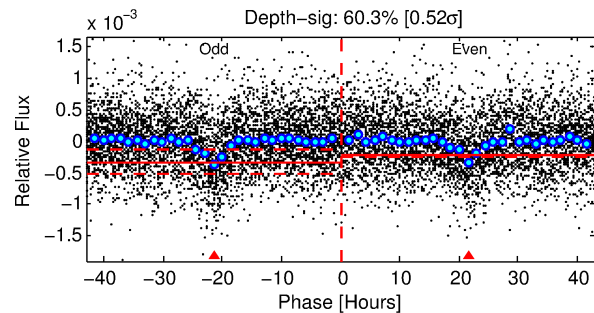
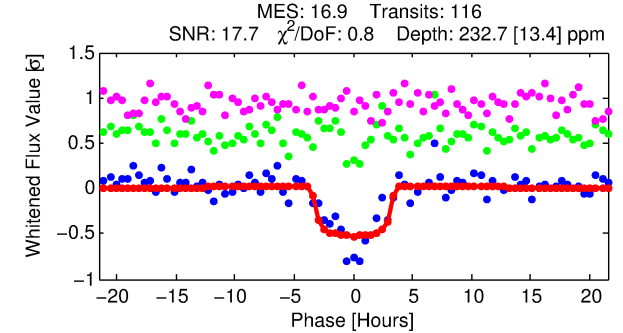
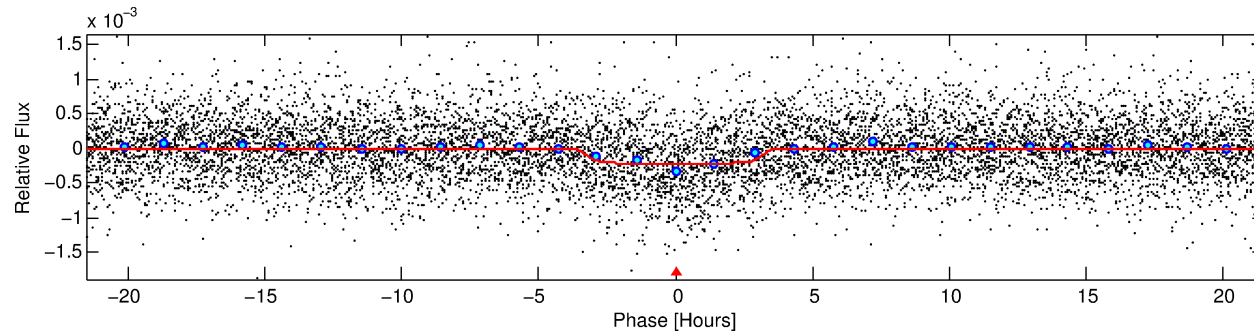
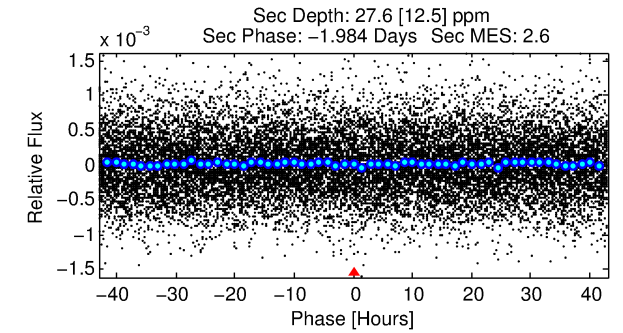
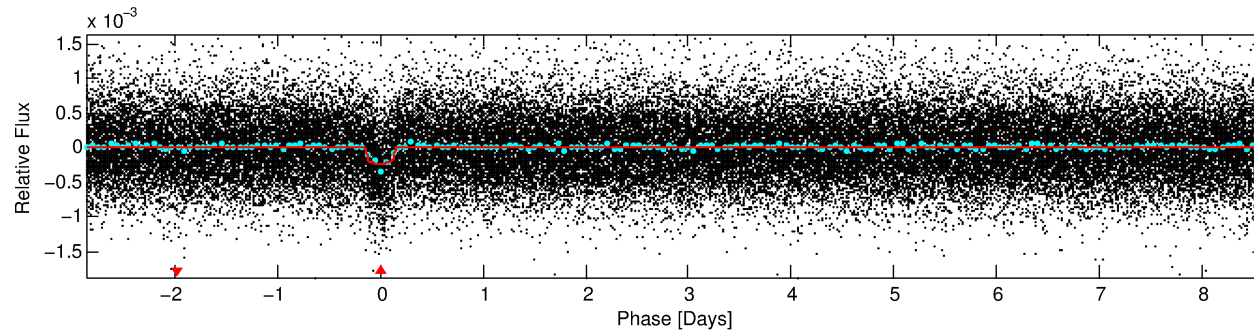
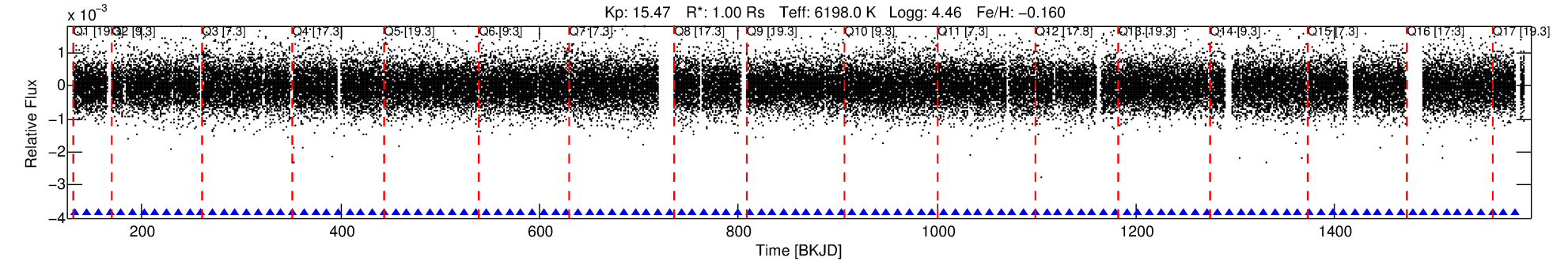
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008376848-01

No Significant Match Found

DV One-Page Summary

KIC: 8376848 Candidate: 1 of 1 Period: 11.493 d
KOI: K04007.01 Corr: 0.953



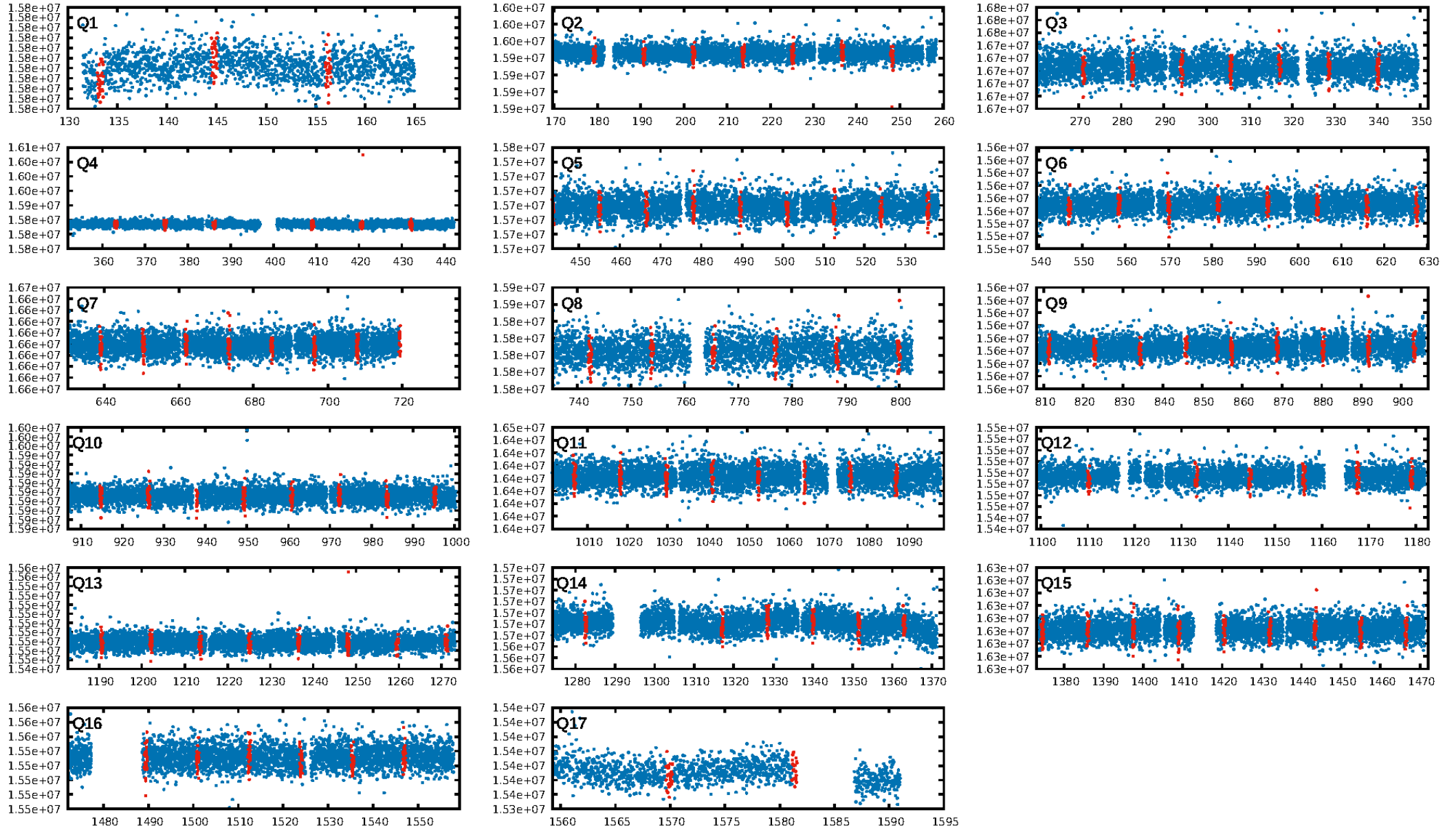
DV Fit Results:

Period = 11.49307 [0.00011] d
Epoch = 133.2884 [0.0078] BKJD
Rp/R* = 0.0166 [0.0017]
a/R* = 5.60 [2.76]
b = 0.91 [0.10]
Seff = 128.26 [53.48]
Teq = 858 [89] K
Rp = 1.82 [0.59] Re
a = 0.1020 [0.0271] AU
Ag = 47.79 [30.17] [1.55 σ]
Teffp = 3488 [450] K [5.73 σ]

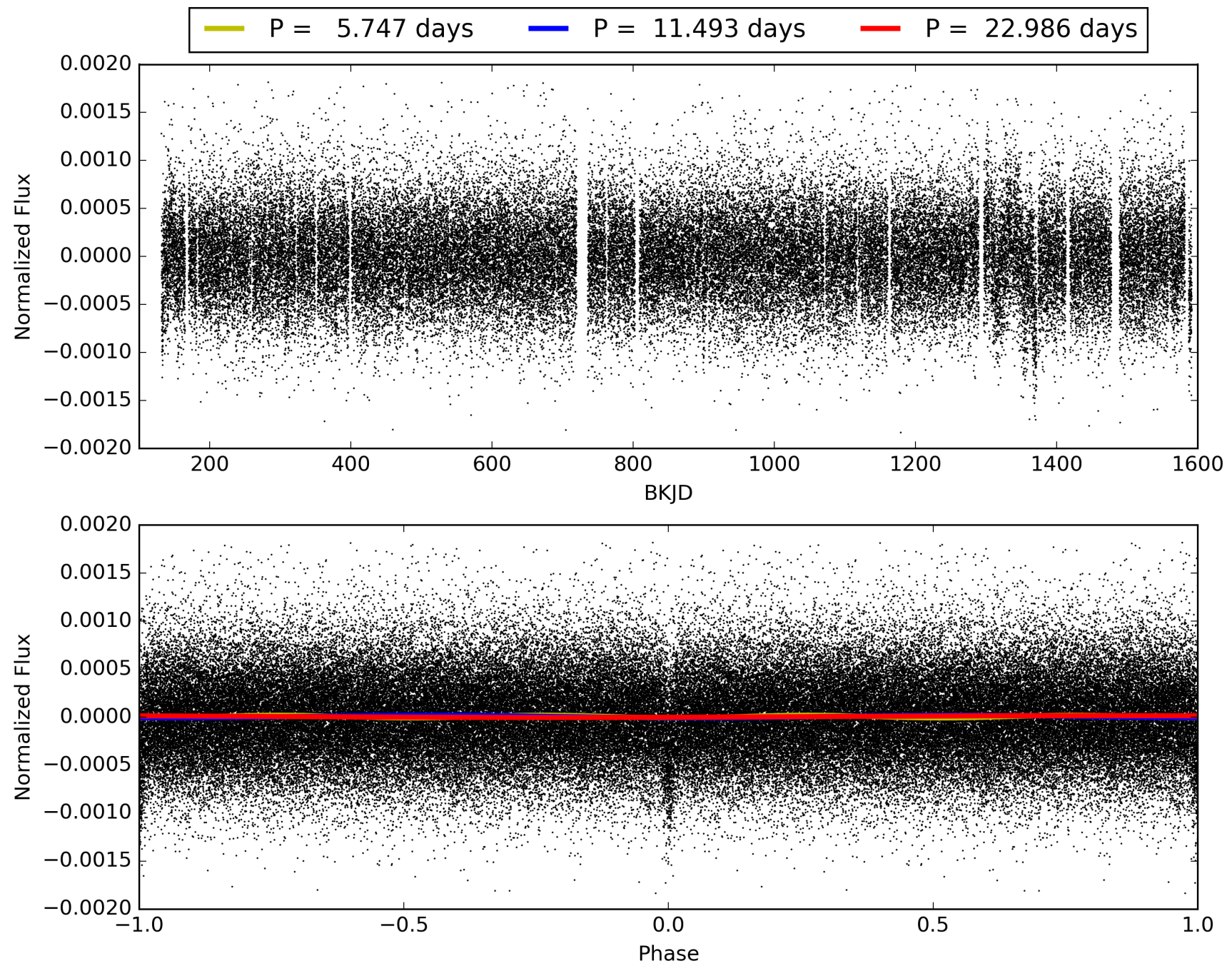
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.16e-65
RollingBand-fgt: 1.00 [111/111]
GhostDiagnostic-chr: 40.3
Centroid-sig: 0.1%
Centroid-so: 1.836 arcsec [2.25 σ]
OotOffset-rm: 0.494 arcsec [0.84 σ]
KicOffset-rm: 0.425 arcsec [0.83 σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008376848-01, PDC Light Curves

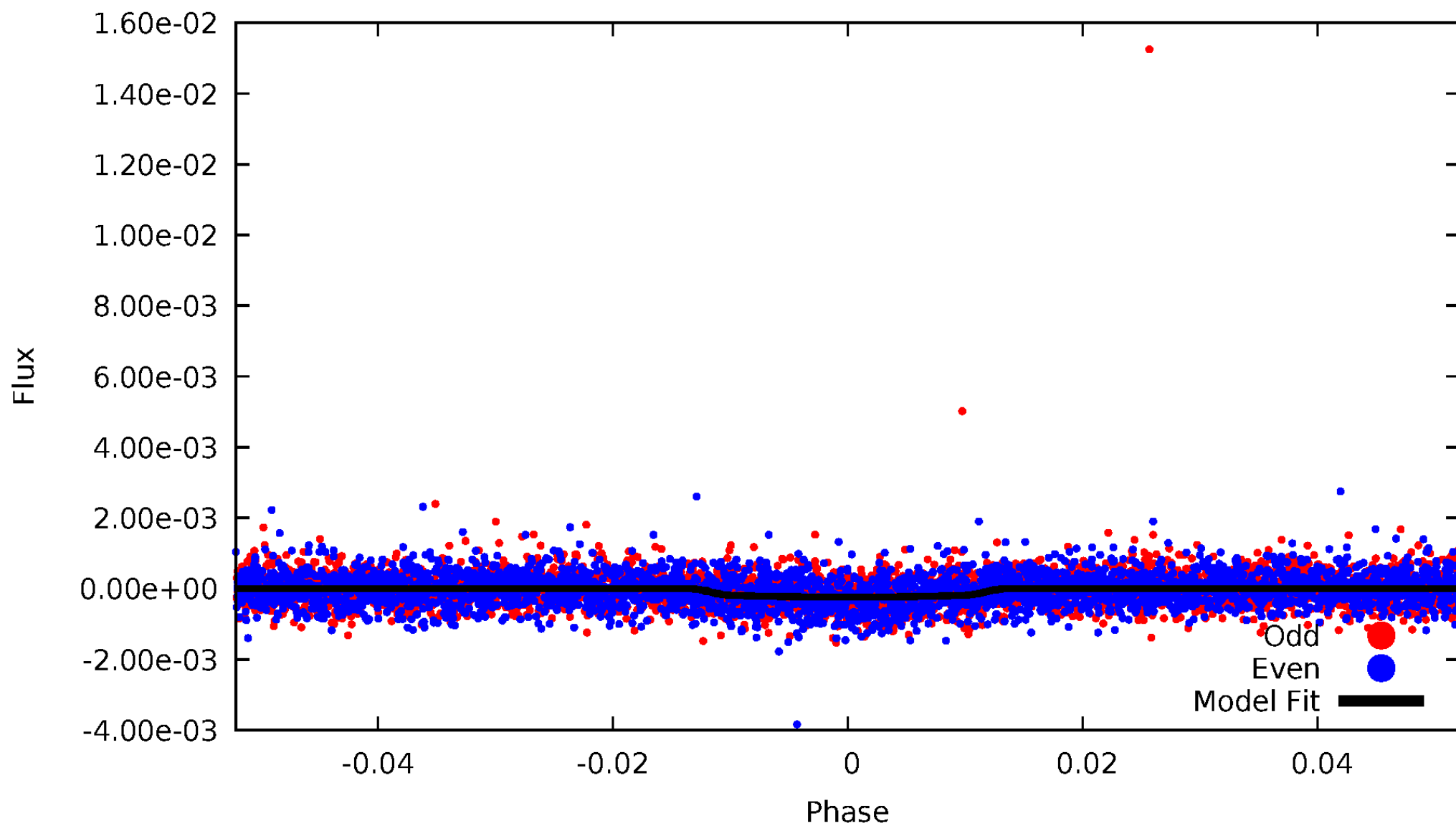


TCE 008376848-01



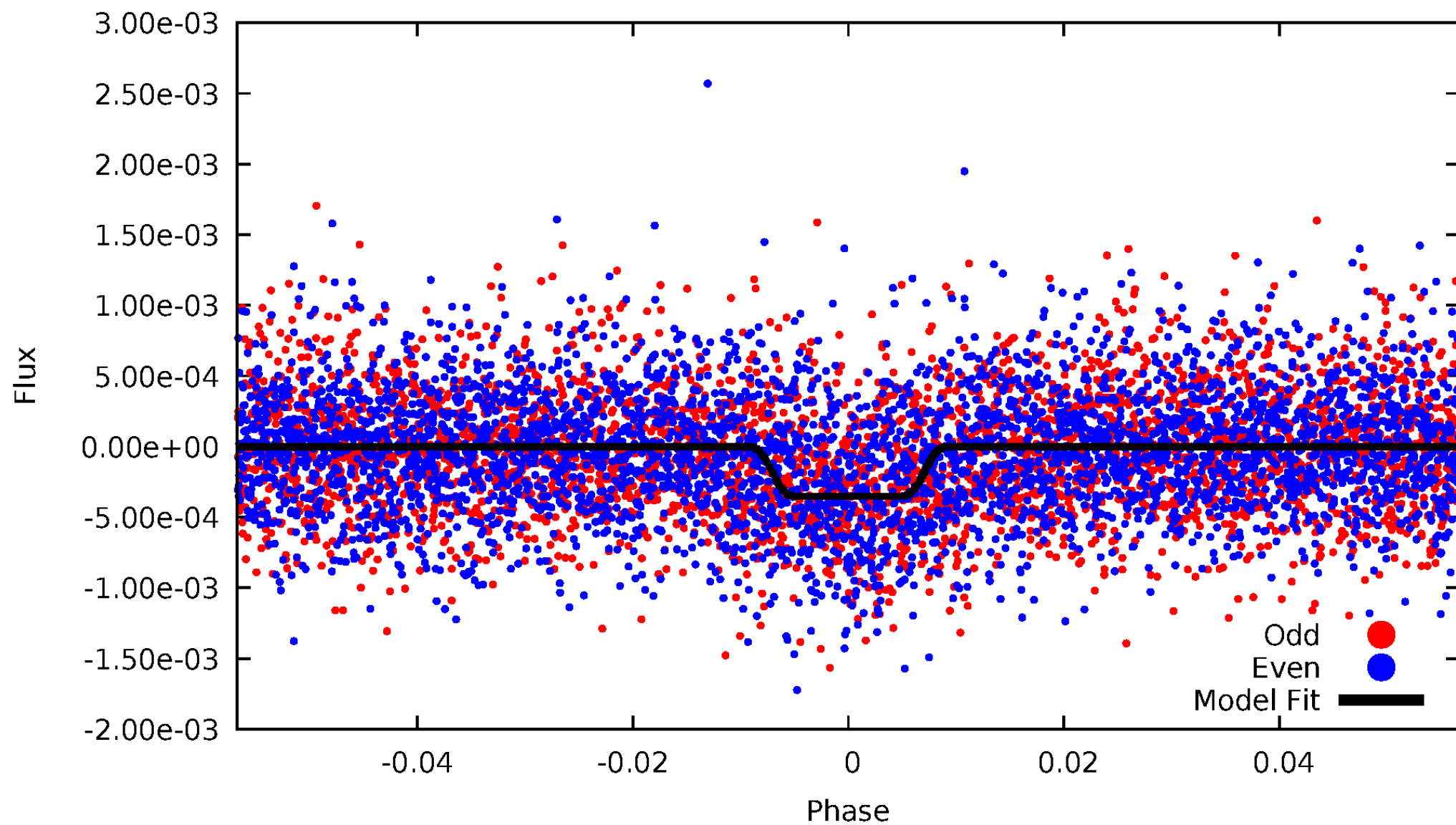
DV Odd/Even

TCE 008376848-01

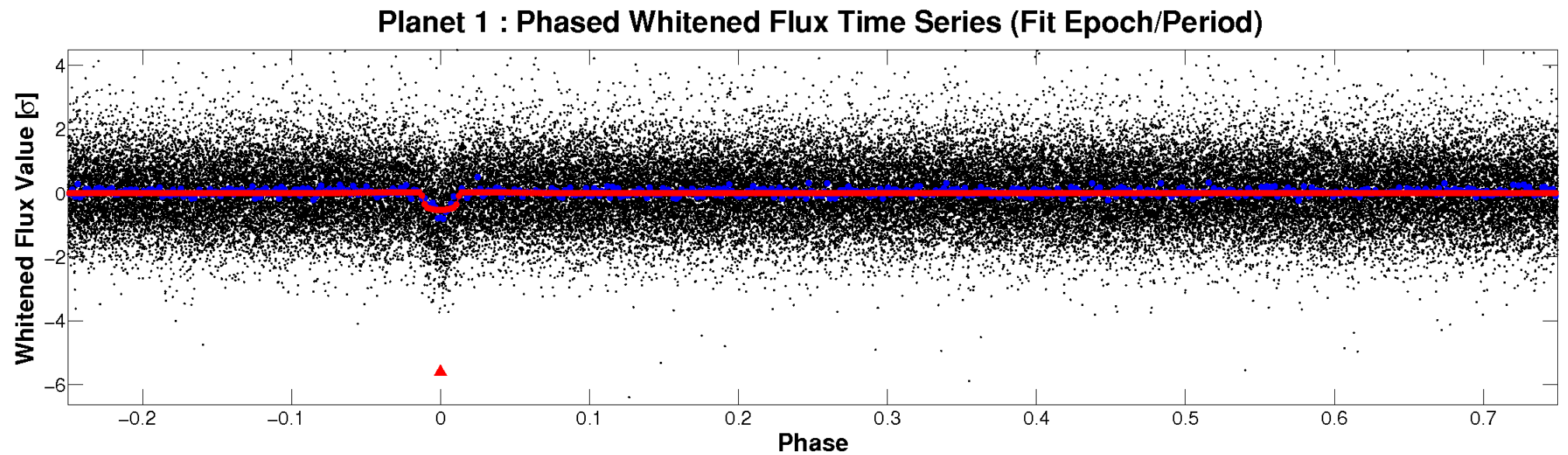
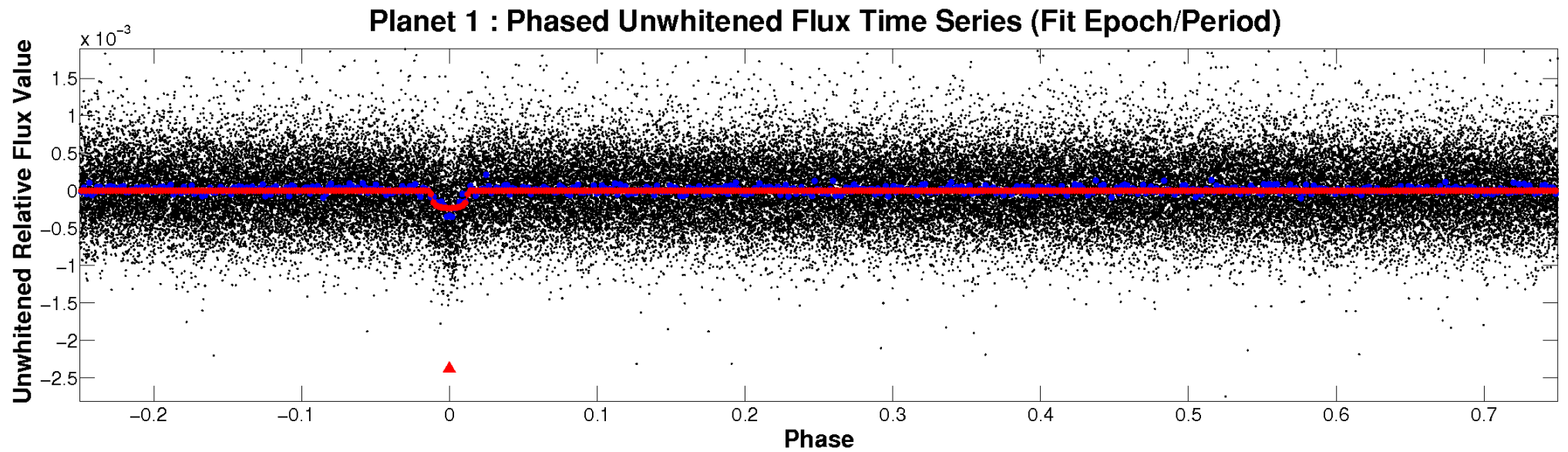


ALT Odd/Even

TCE 008376848-01

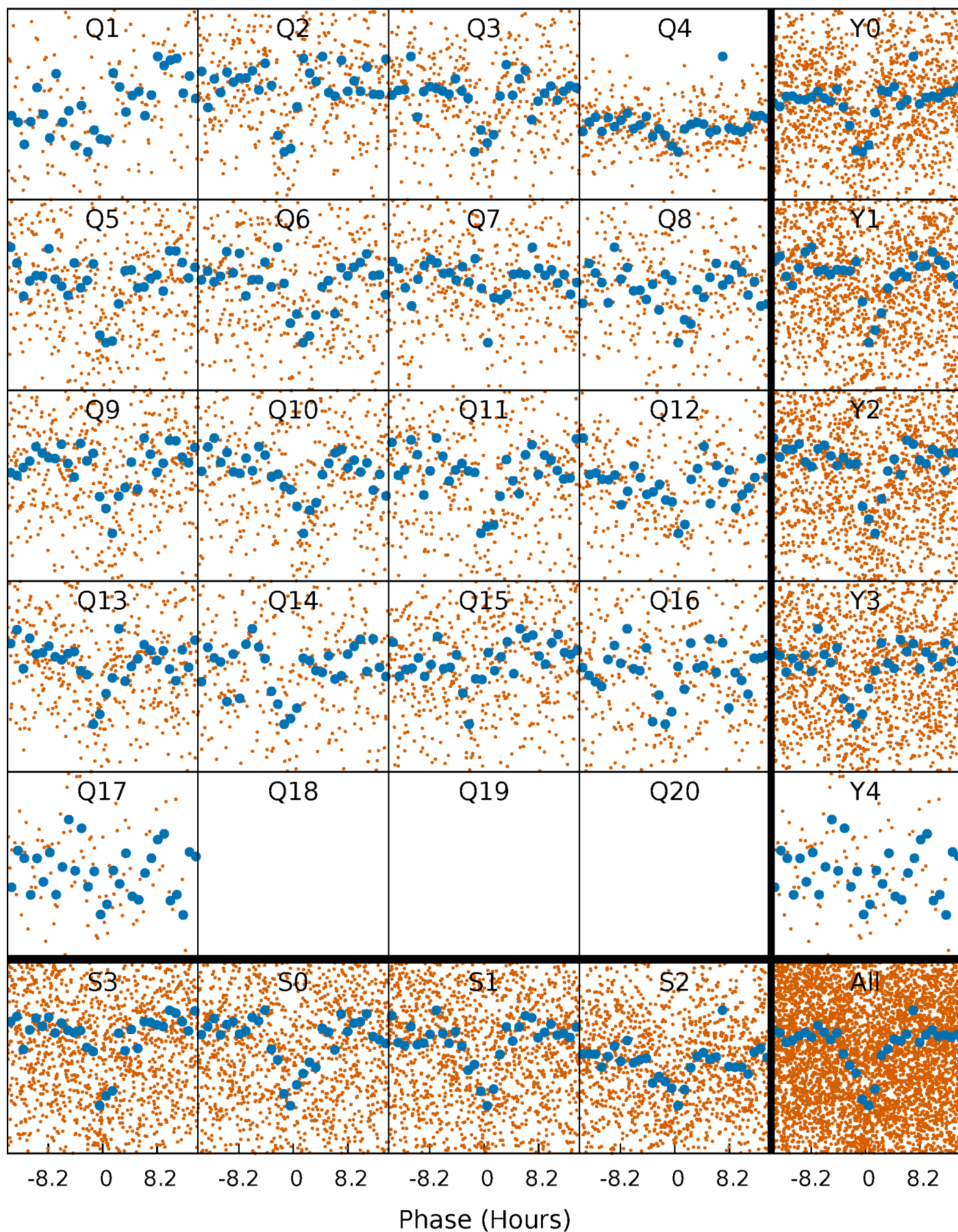


Non-Whitened Vs. Whitened Light Curve



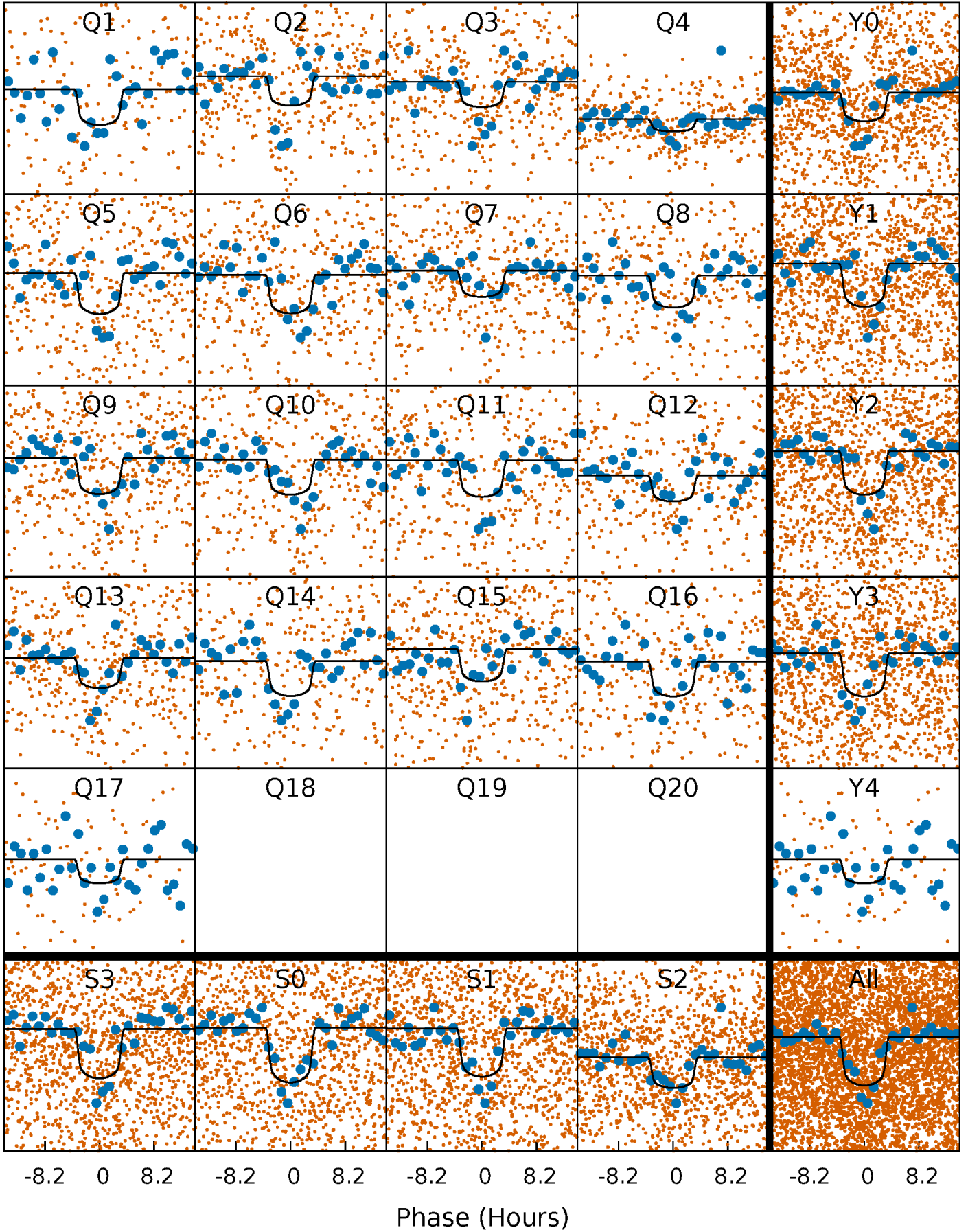
PDC Quarter-Phased Transit Curves

TCE 008376848-01 P= 11.493074 Days $T_0=133.288428$ (BKJD)



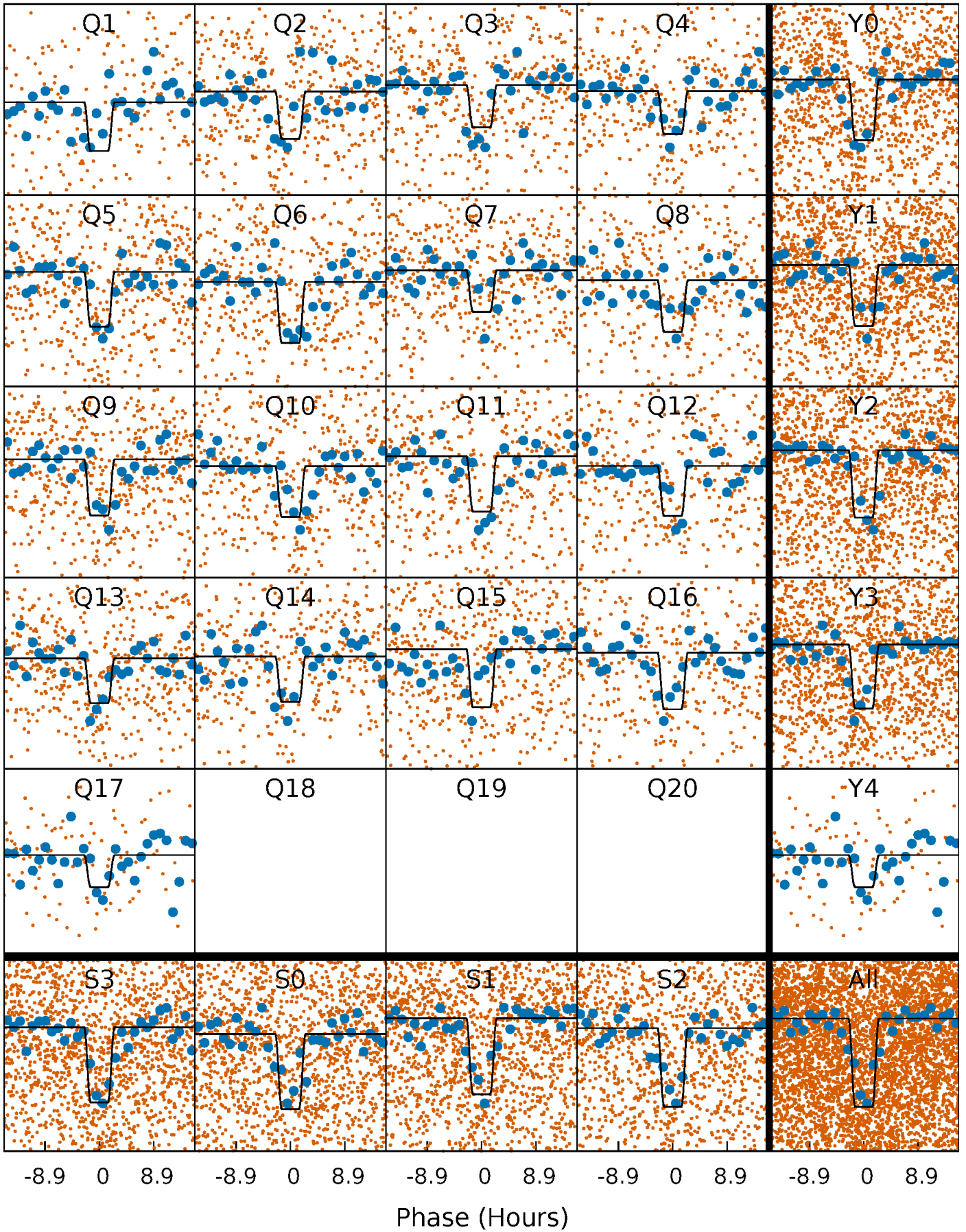
DV Quarter-Phased Transit Curves

TCE 008376848-01 P= 11.493074 Days $T_0=133.288428$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

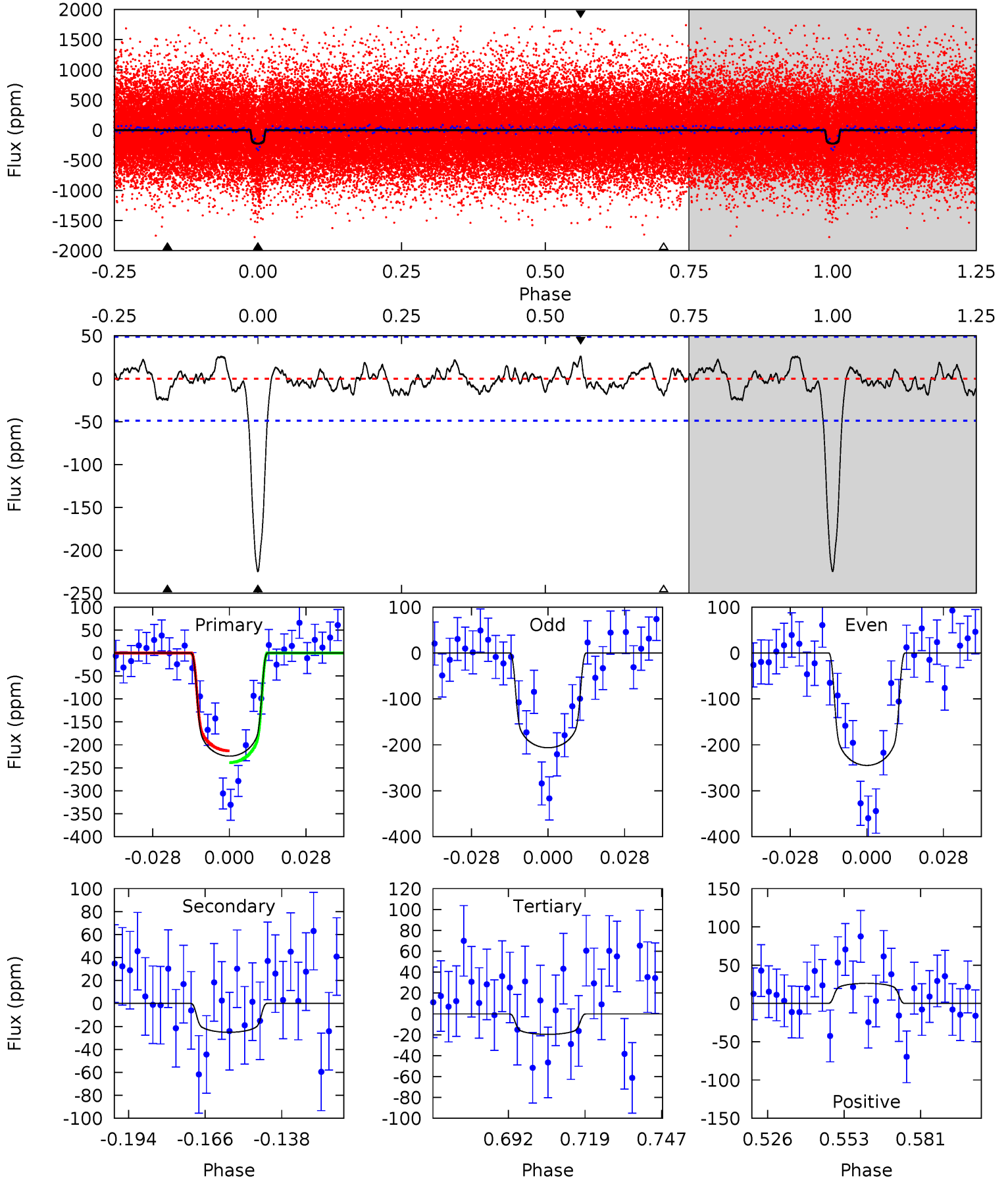
TCE 008376848-01 P= 11.492792 Days $T_0=133.309291$ (BKJD)



DV Model-Shift Uniqueness Test

008376848-01, P = 11.493074 Days, E = 121.795354 Days

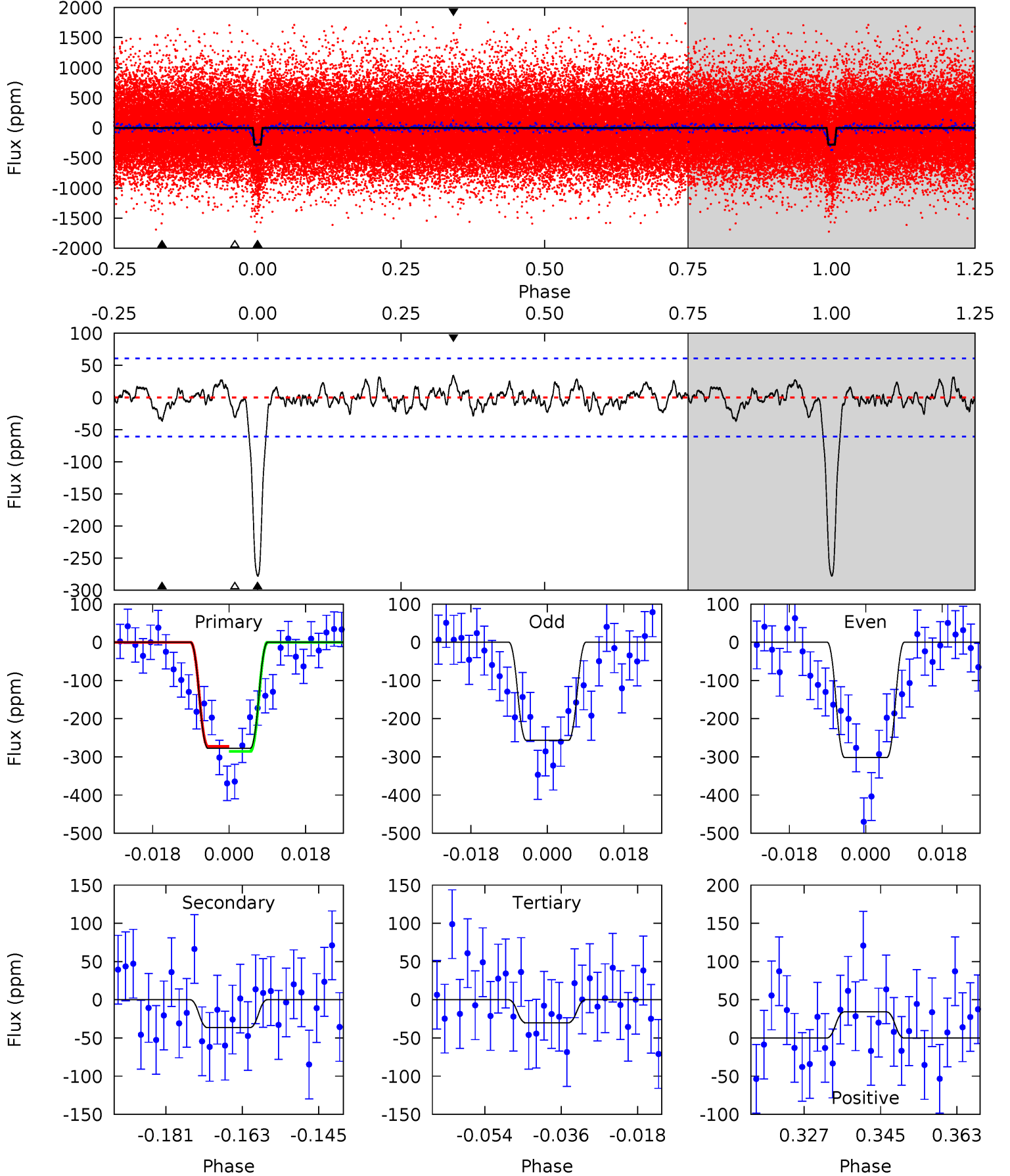
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	2.47	1.93	2.59	4.83	2.20	0.97	20.2	19.5	0.54	-0.12	1.89	1.01	0.10	1.27



Alt Model-Shift Uniqueness Test

008376848-01, $P = 11.492792$ Days, $E = 121.816499$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	2.95	2.44	2.75	4.91	2.36	0.97	20.0	19.6	0.51	0.19	1.81	0.98	0.11	0.53



Stellar Parameters For KIC 008376848

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6198^{+188}_{-225}	$4.464^{+0.054}_{-0.216}$	$-0.160^{+0.250}_{-0.300}$	$1.005^{+0.312}_{-0.112}$	$1.072^{+0.144}_{-0.144}$	$1.489^{+0.429}_{-0.792}$
	+3%/-4%	+1%/-5%	+156%/-188%	+31%/-11%	+13%/-13%	+29%/-53%
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 008376848-01 / KOI 4007.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 10	$1.91^{+0.33}_{-0.27}$	1228^{+84}_{-63}	3782^{+274}_{-325}	38^{+23}_{-16}
Alt.	-36 ± 12	$2.12^{+0.41}_{-0.26}$	1225^{+98}_{-61}	3856^{+273}_{-292}	43^{+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

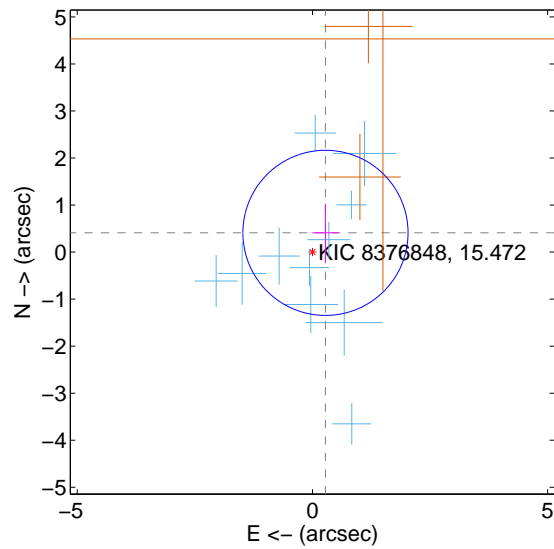
Supplemental centroid analysis for 008376848-01. Kepler magnitude: 15.47. Transit SNR 17.73

There are 11 quarters with good PRF difference image offsets

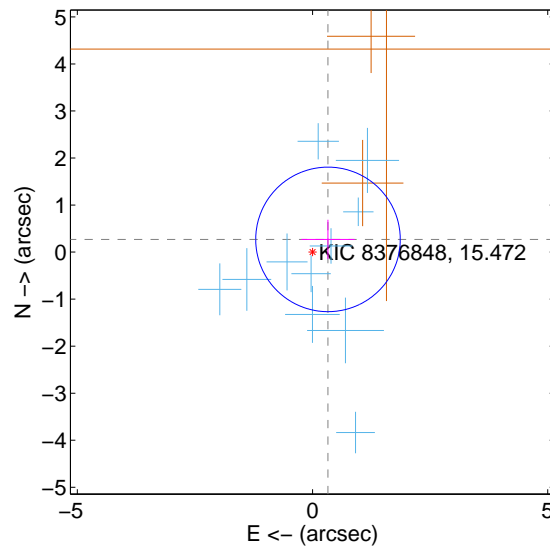
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.494 ± 0.585	0.84	-0.277 ± 0.281	0.409 ± 0.620
PRF-fit source offset from KIC position	0.425 ± 0.512	0.83	-0.329 ± 0.567	0.270 ± 0.418
photometric centroid source offset	1.84 ± 0.82	2.25	-1.61 ± 0.82	0.89 ± 0.82

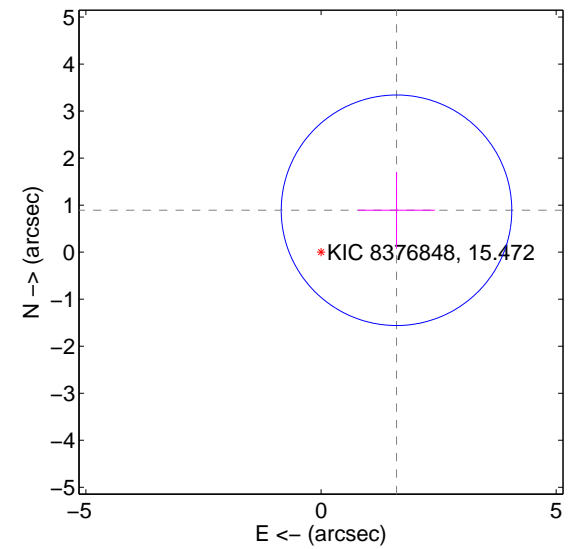
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

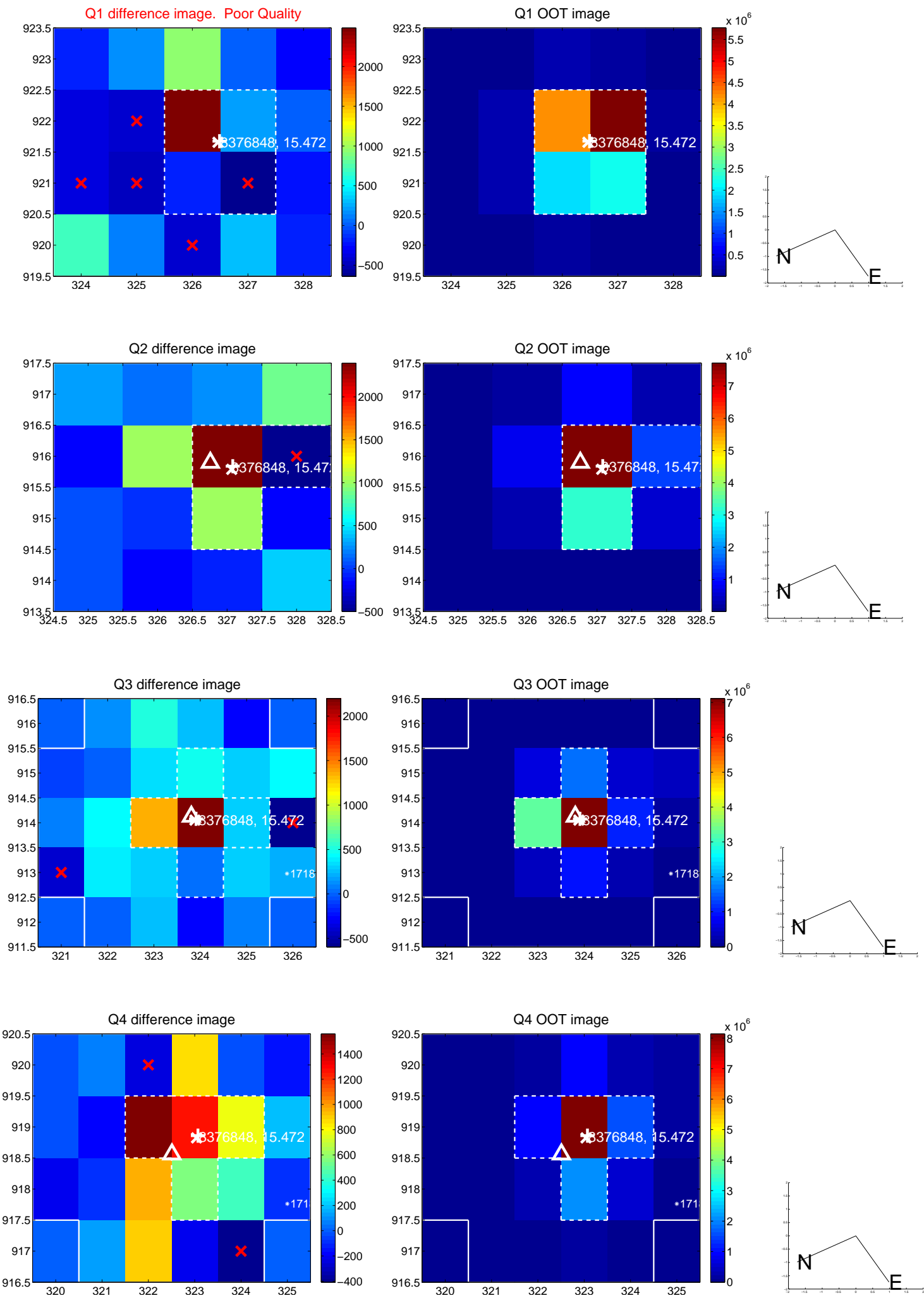


offset from photometric centroids

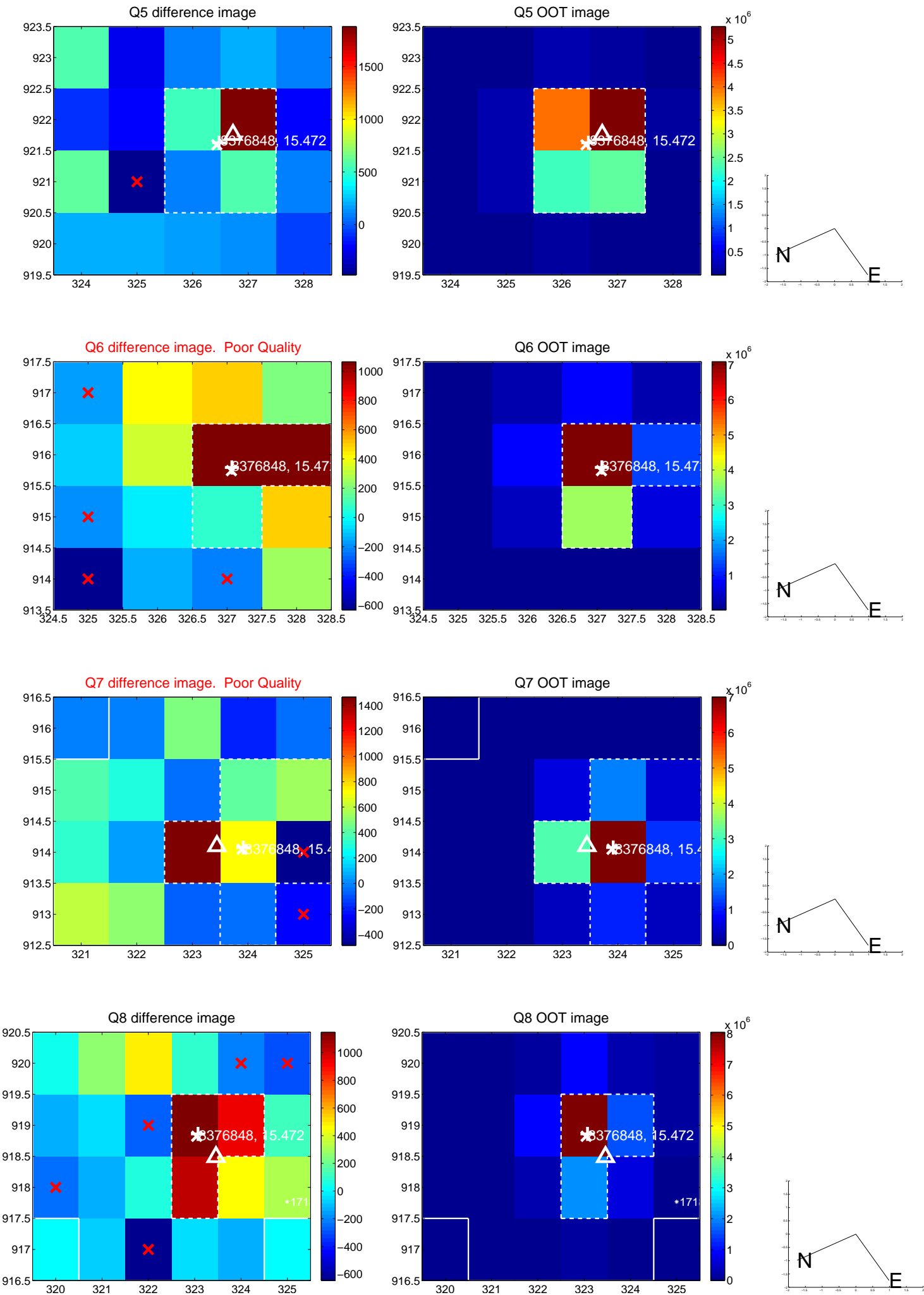


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

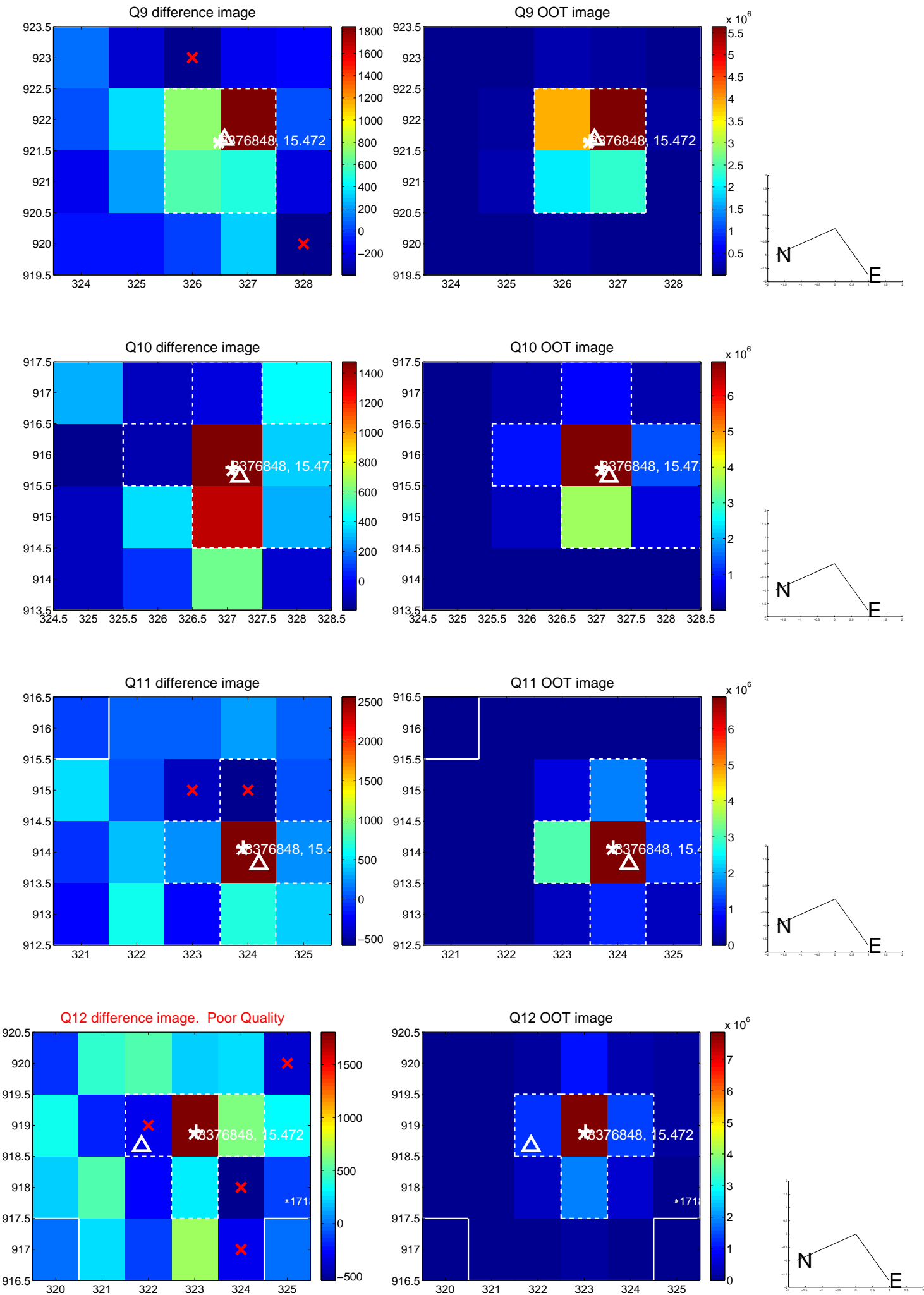
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



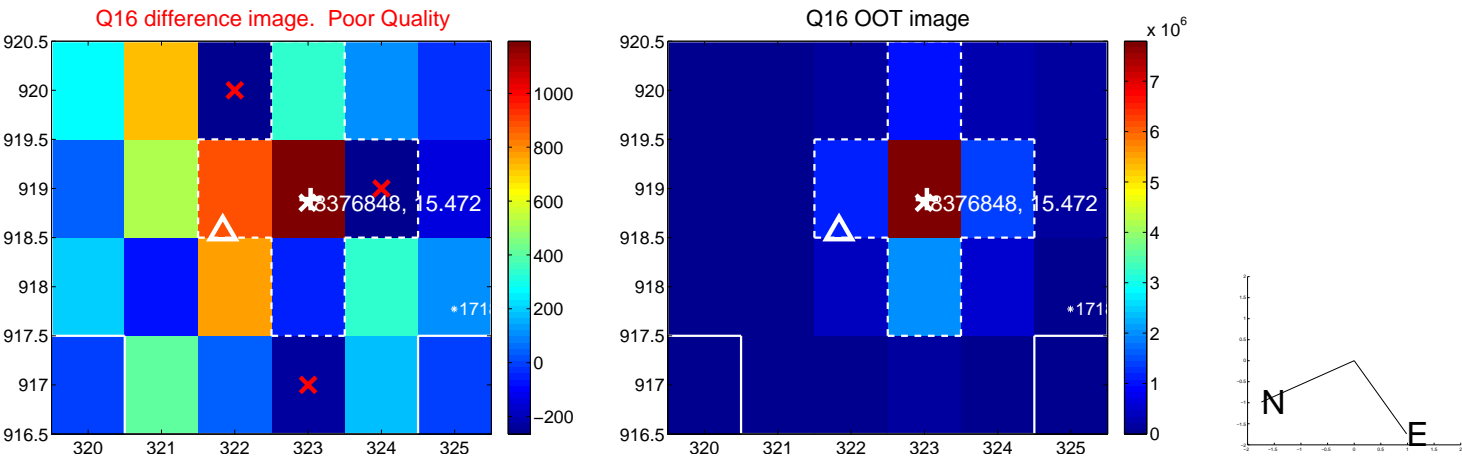
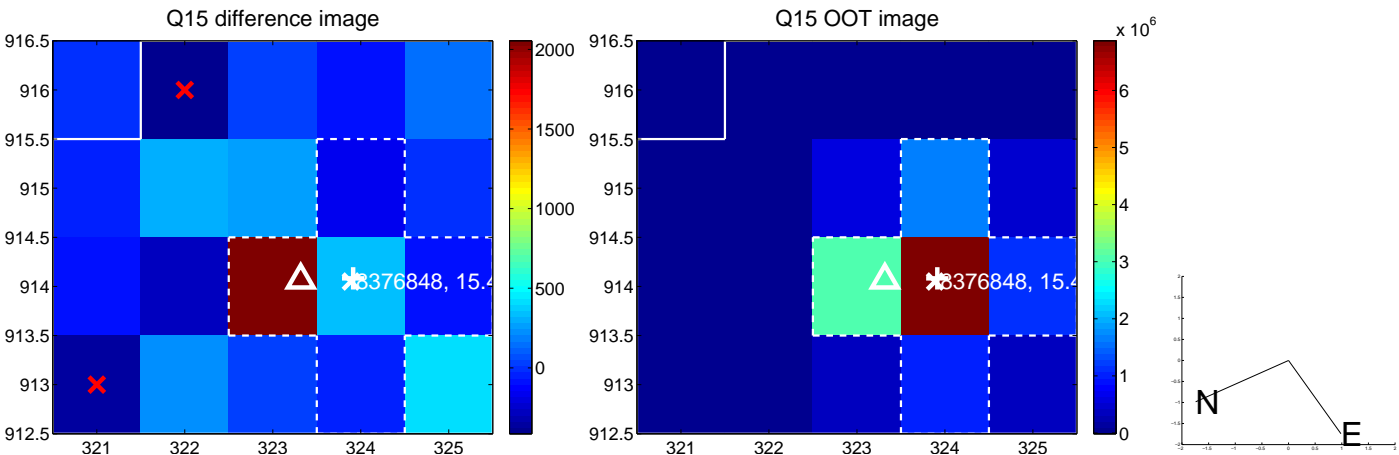
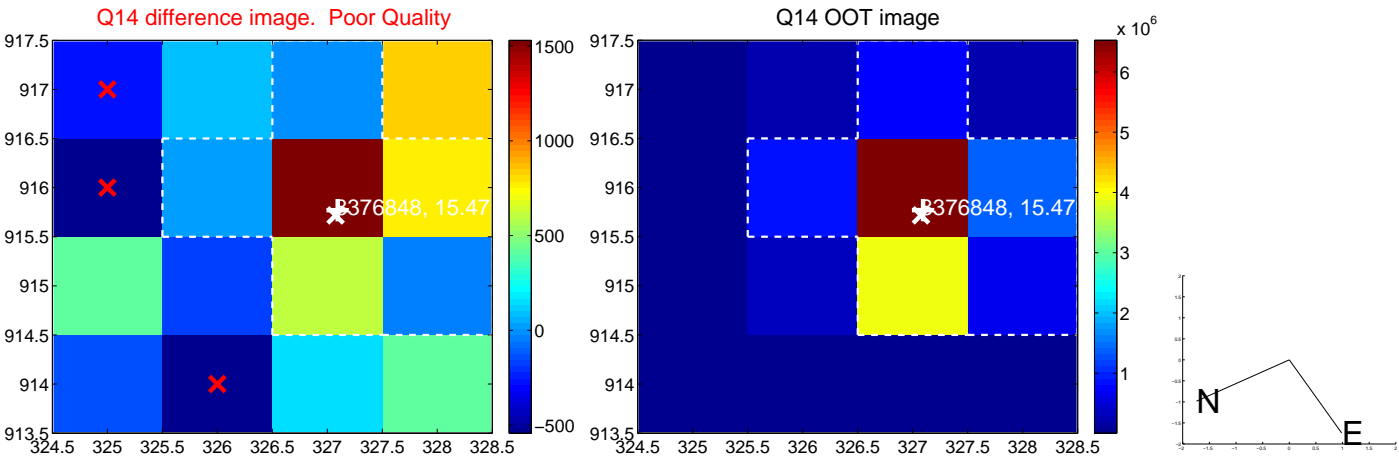
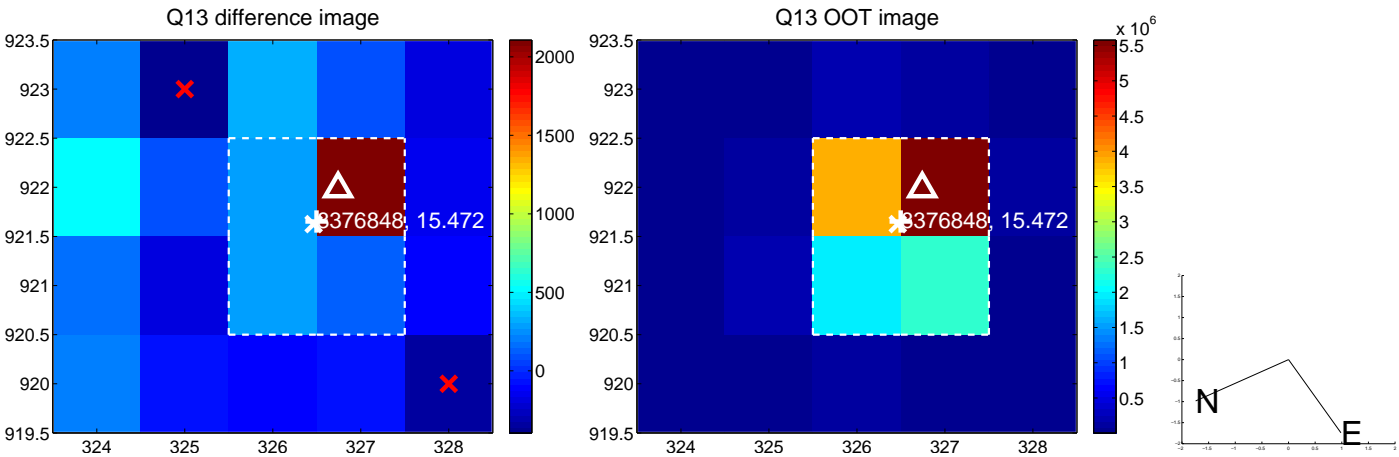
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



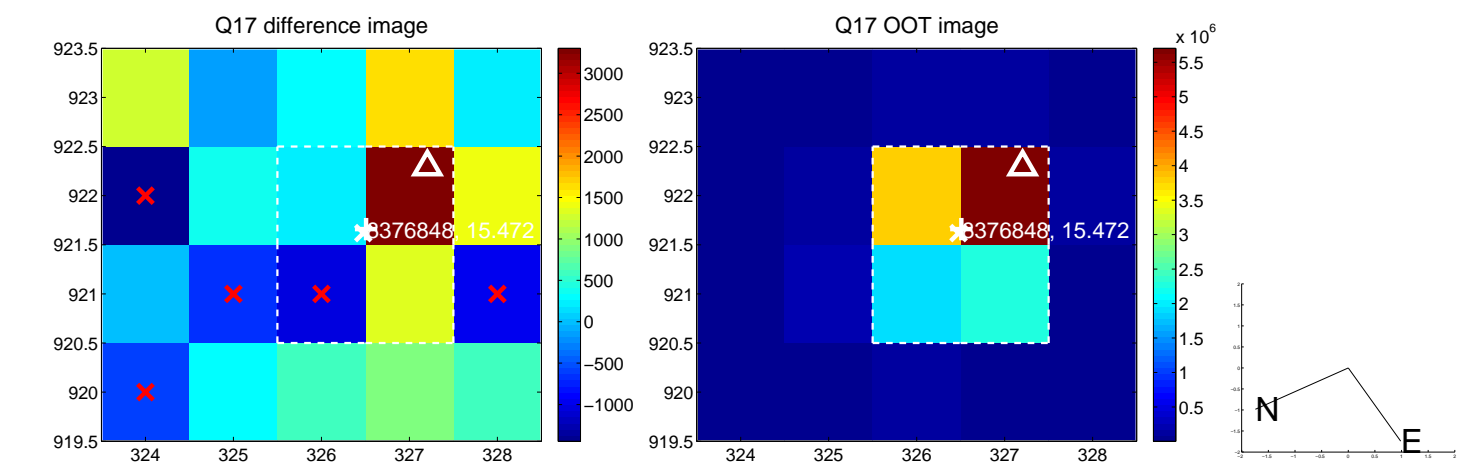
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



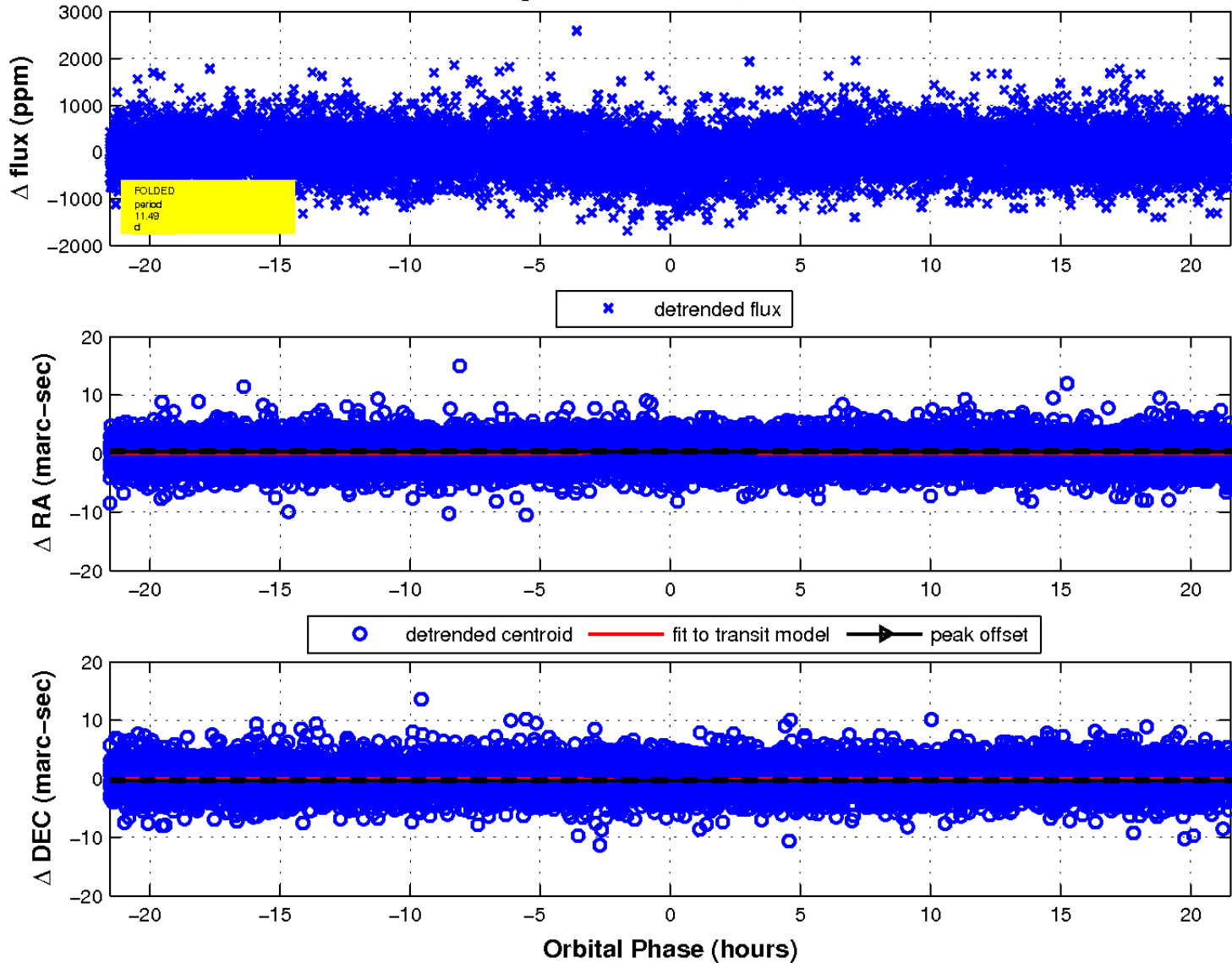
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

