

KIC 010873260

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})
010873260-01	OBS	0535.01	5.852963	136.064357	1140.6	4.754	137.6	148.2	1.01	6050	3.70	294.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010873260-01	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.

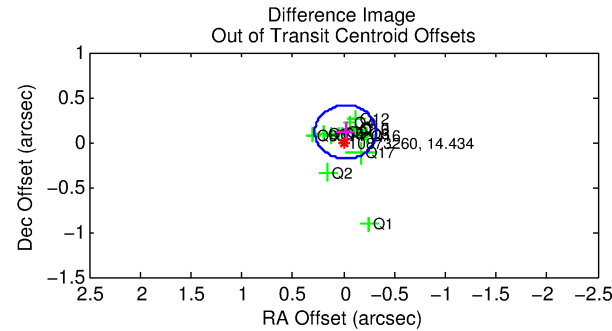
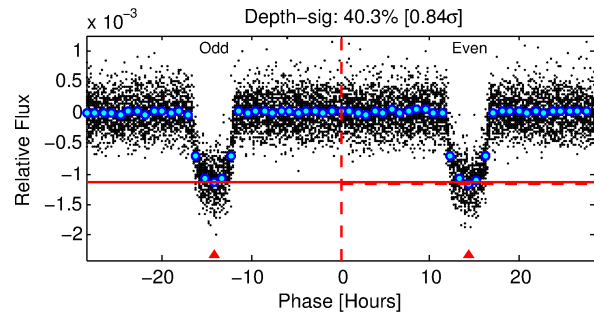
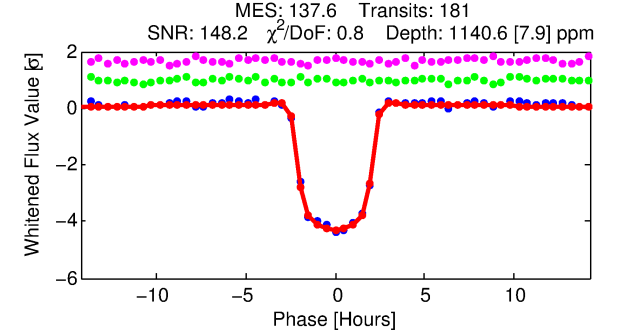
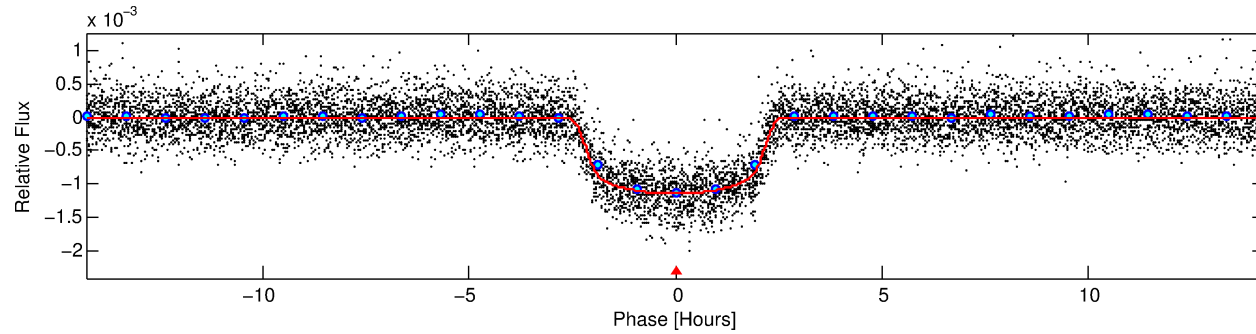
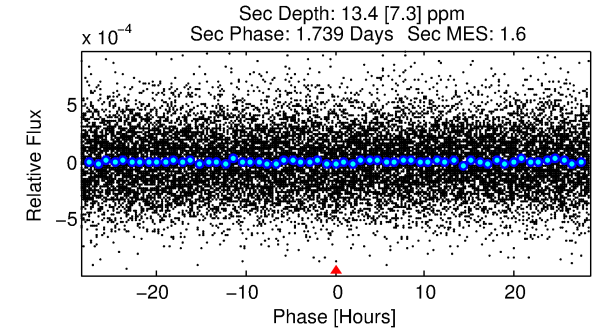
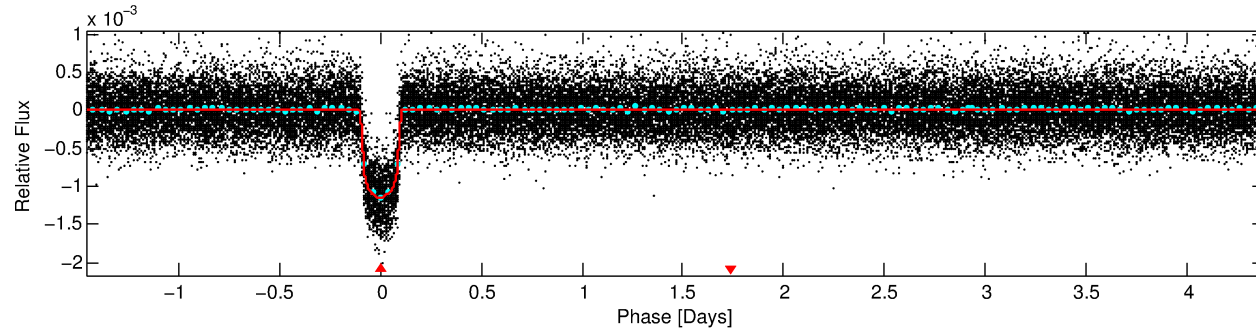
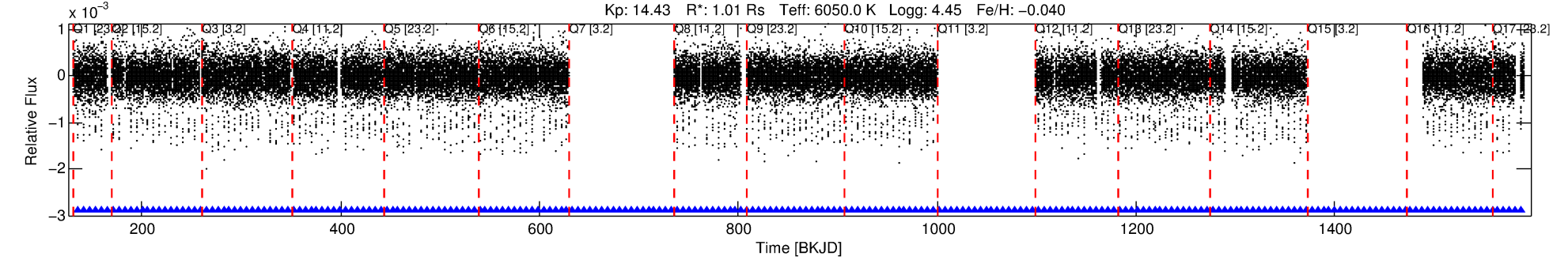
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010873260-01

No Significant Match Found

DV One-Page Summary

KIC: 10873260 Candidate: 1 of 1 Period: 5.853 d
KOI: K00535.01 Corr: 0.983



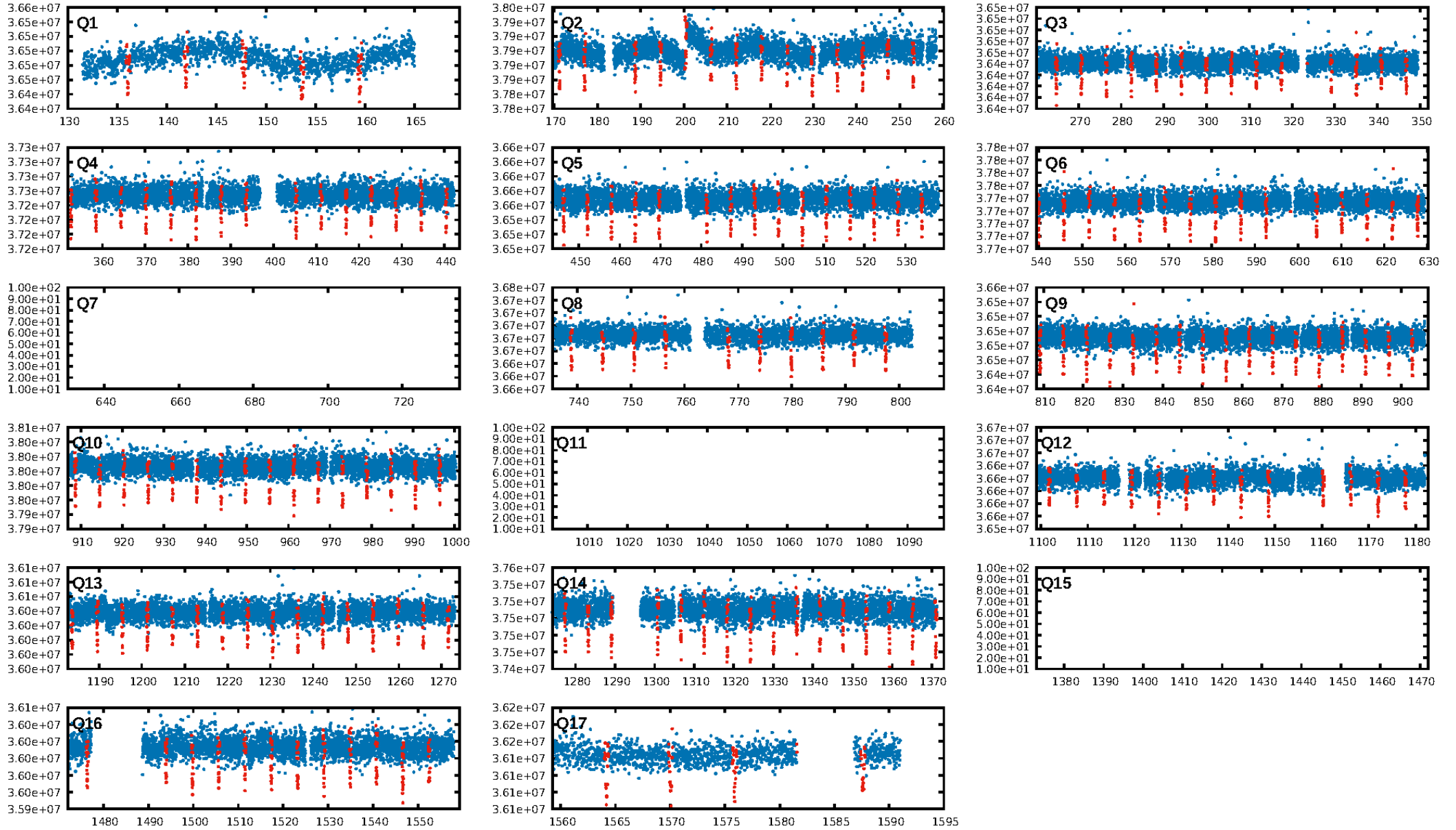
DV Fit Results:

Period = 5.85296 [0.00000] d
Epoch = 136.0644 [0.0006] BKJD
Rp/R* = 0.0335 [0.0012]
a/R* = 6.83 [1.10]
b = 0.74 [0.10]
Seff = 294.10 [120.99]
Teff = 1056 [109] K
Rp = 3.70 [1.22] Re
a = 0.0647 [0.0176] AU
Ag = 2.25 [1.52] [0.82 σ]
Teffp = 1999 [283] K [3.11 σ]

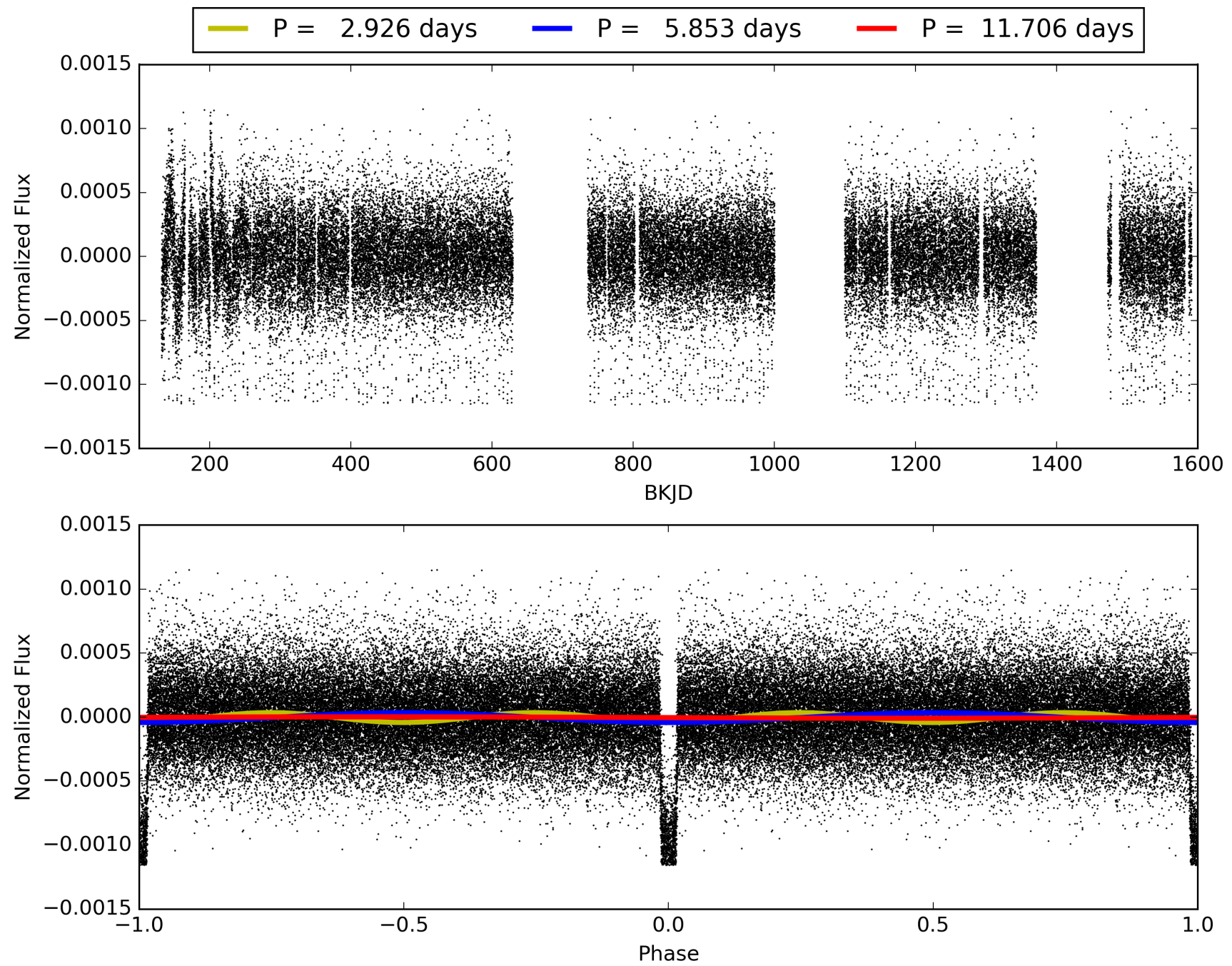
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [172/172]
GhostDiagnostic-chr: 4.597
Centroid-sig: 0.0%
Centroid-so: 0.107 arcsec [1.27 σ]
OotOffset-rm: 0.116 arcsec [1.16 σ]
KicOffset-rm: 0.088 arcsec [0.89 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010873260-01, PDC Light Curves

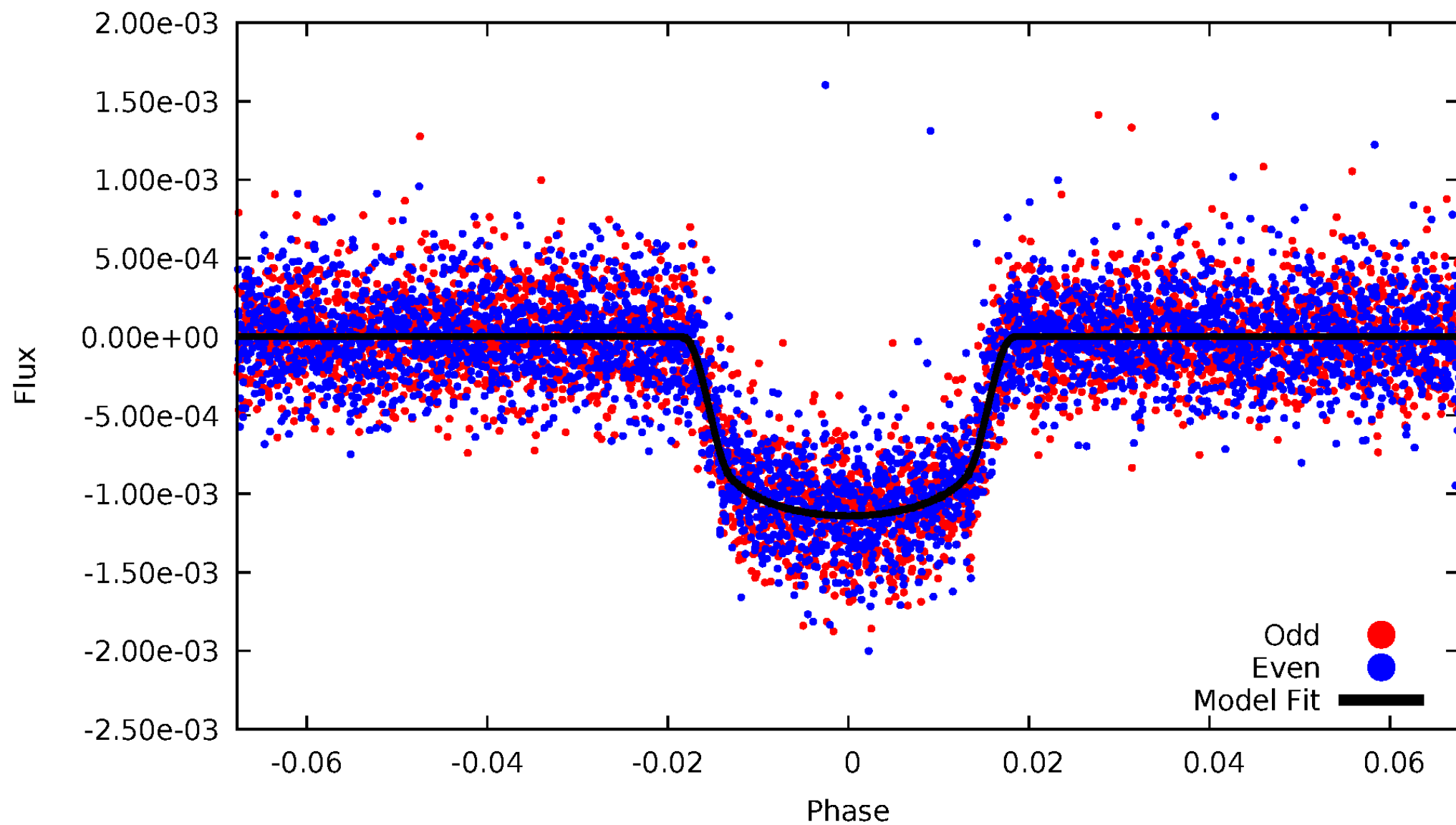


TCE 010873260-01



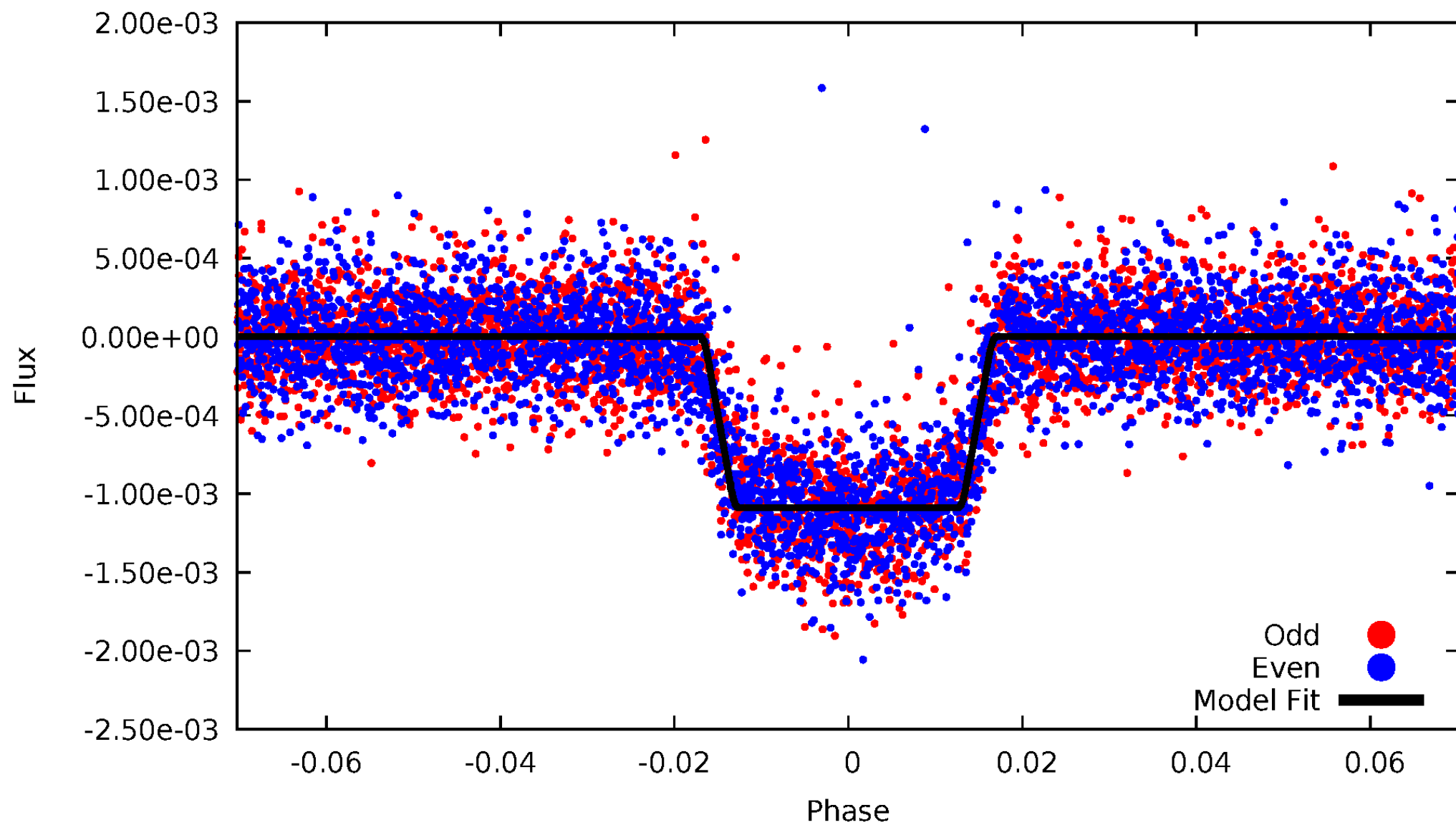
DV Odd/Even

TCE 010873260-01



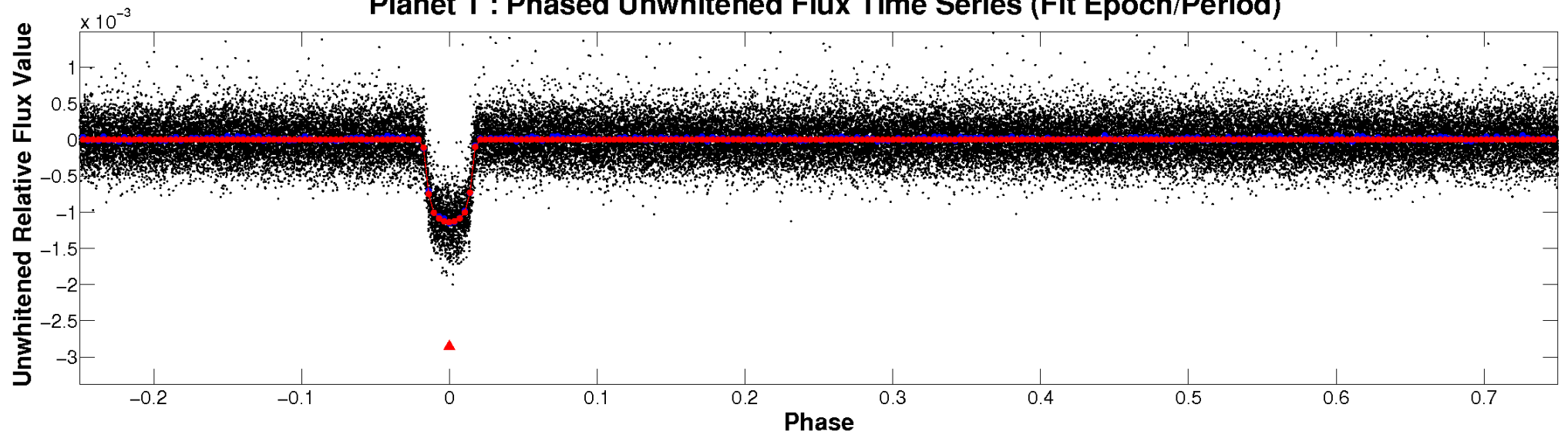
ALT Odd/Even

TCE 010873260-01

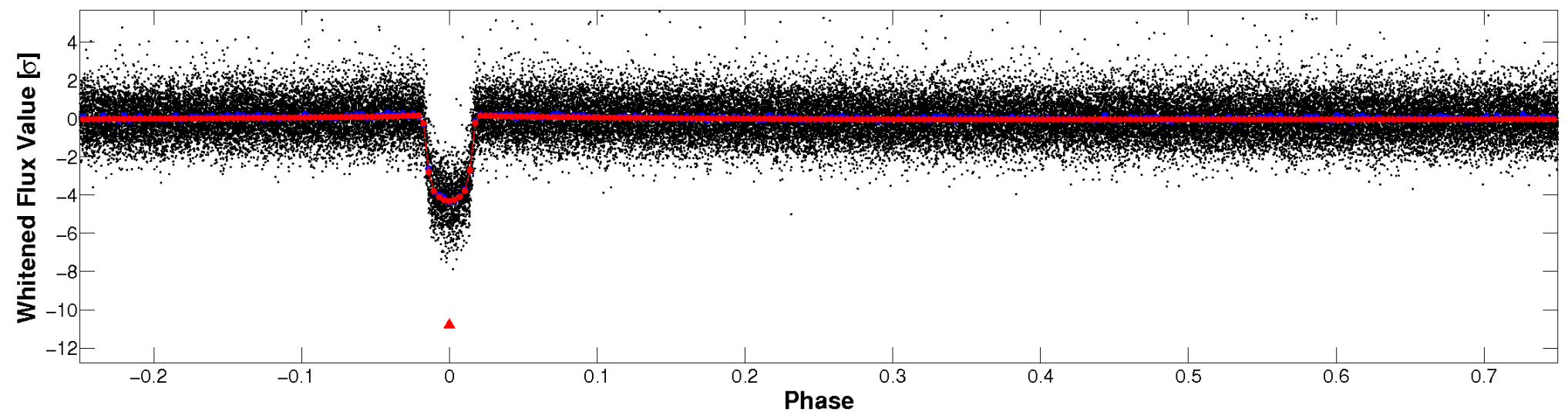


Non-Whitened Vs. Whitened Light Curve

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

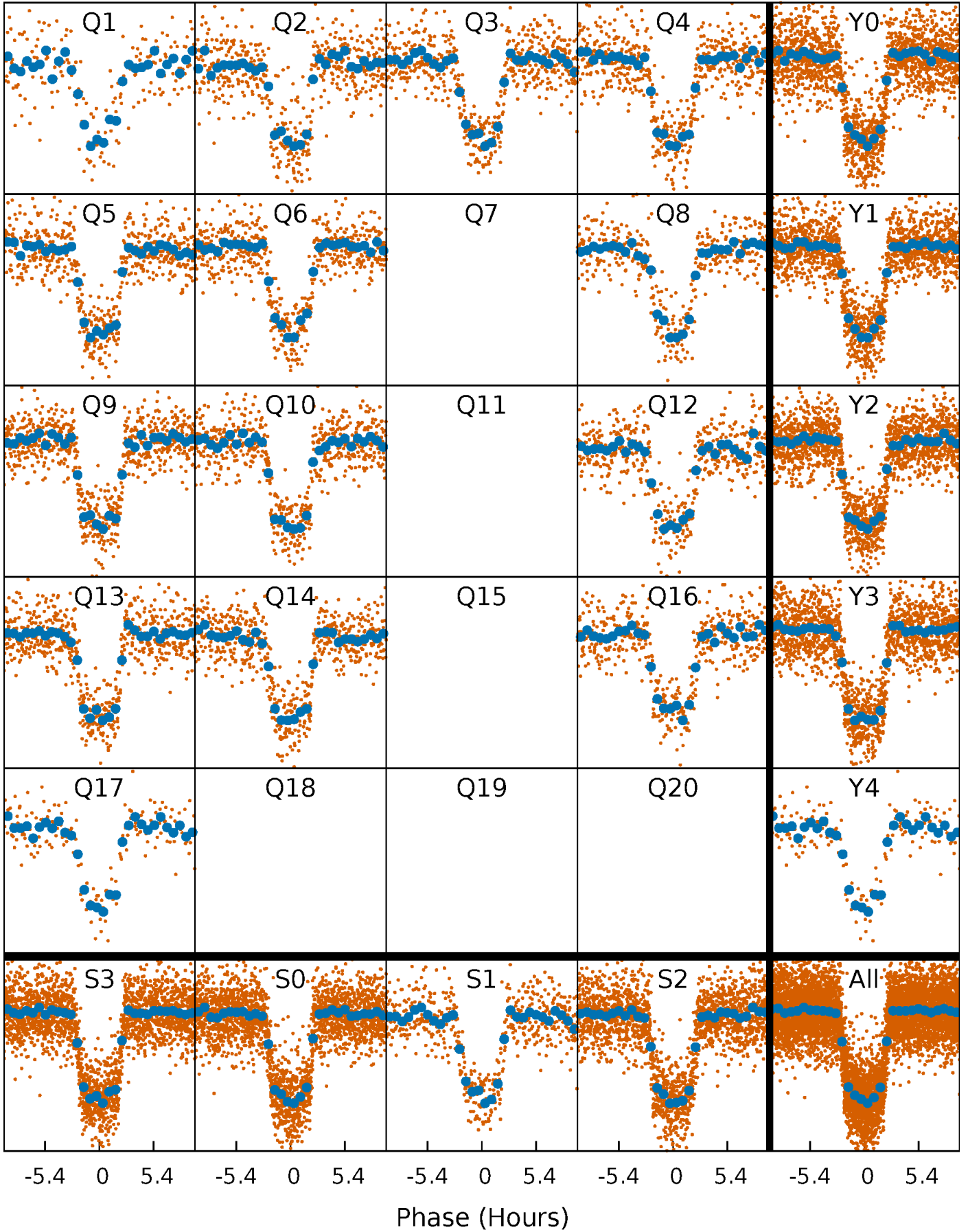


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



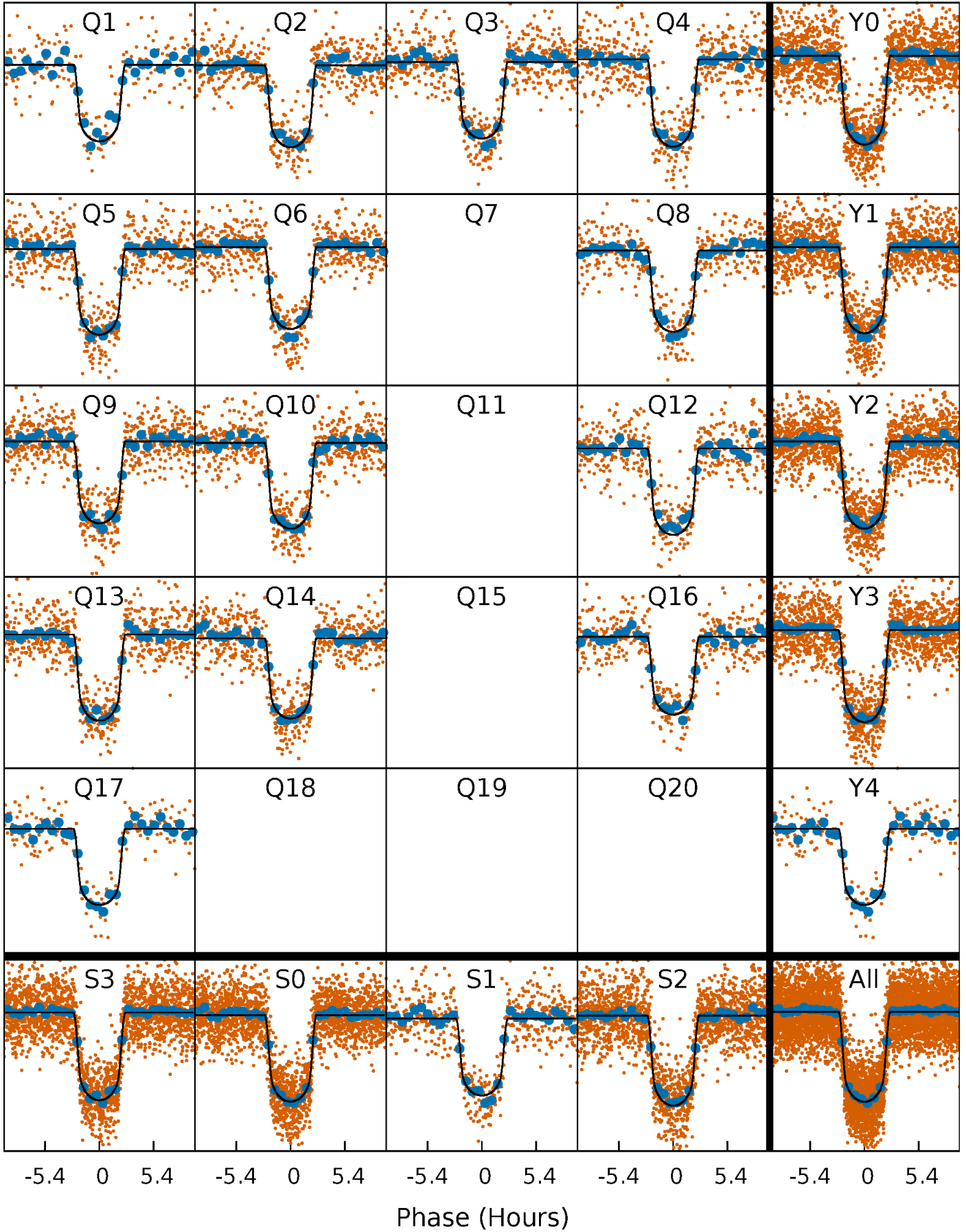
PDC Quarter-Phased Transit Curves

TCE 010873260-01 P= 5.852963 Days $T_0=136.064357$ (BKJD)



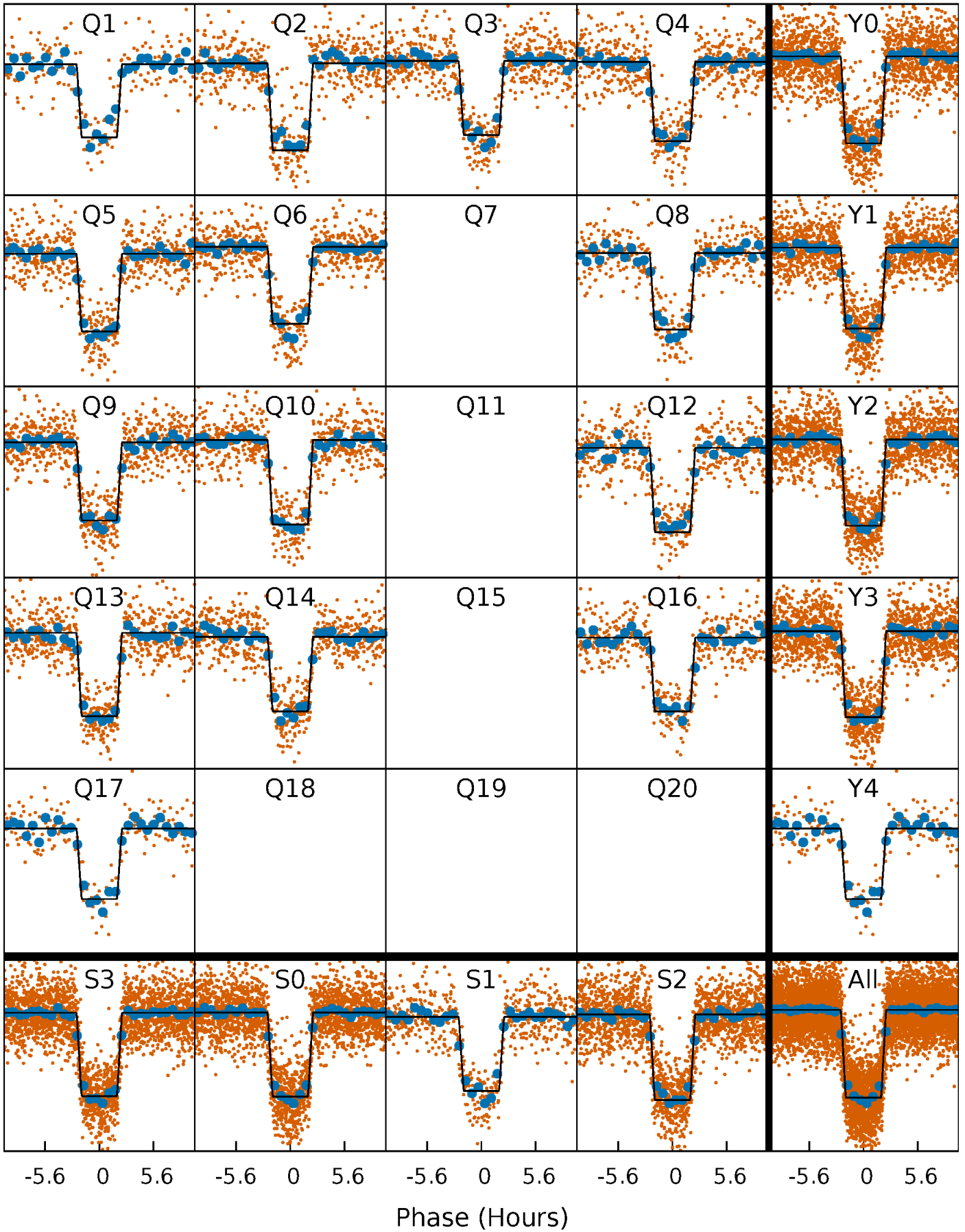
DV Quarter-Phased Transit Curves

TCE 010873260-01 P= 5.852963 Days $T_0=136.064357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

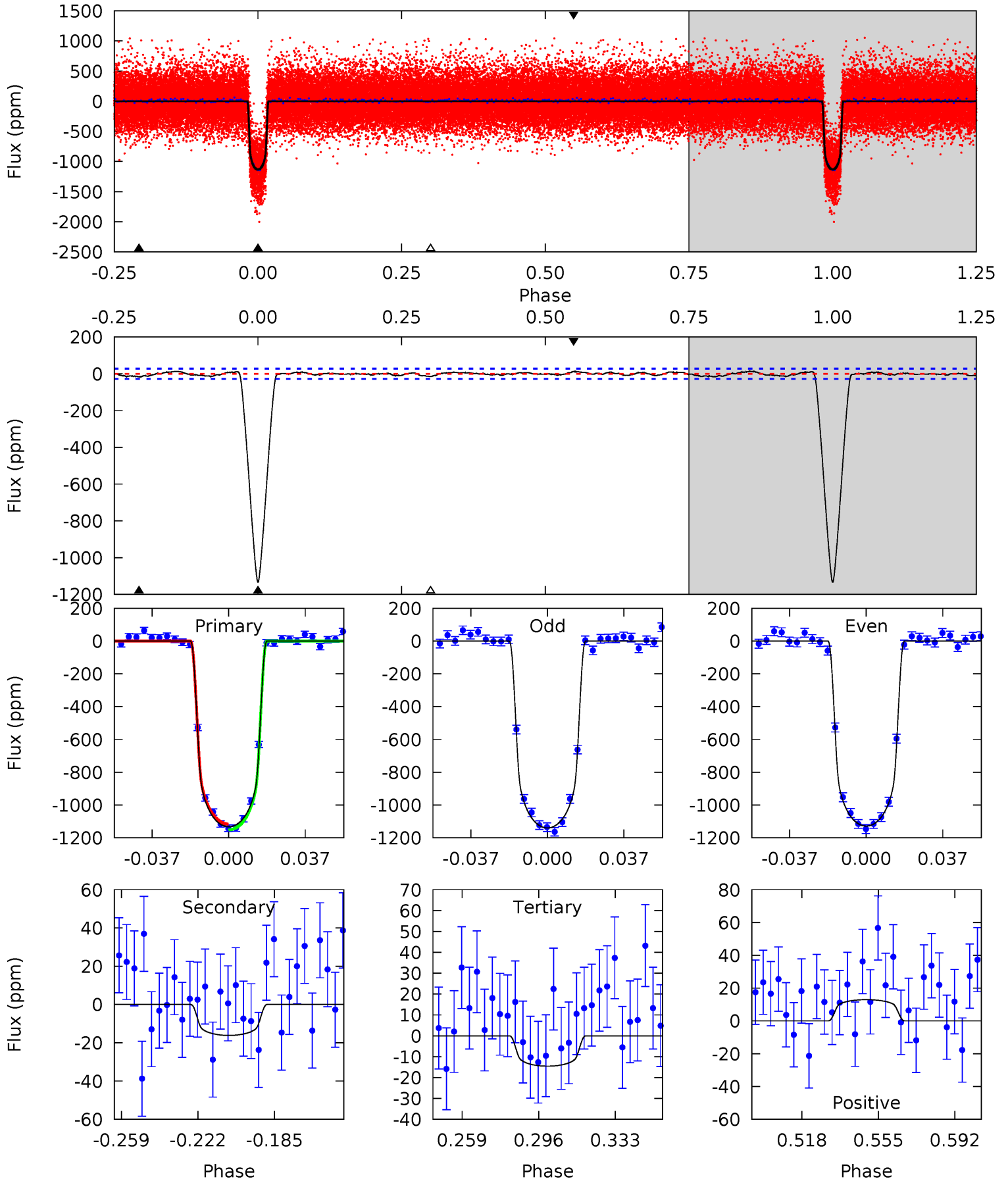
TCE 010873260-01 P= 5.852931 Days $T_0=136.068350$ (BKJD)



DV Model-Shift Uniqueness Test

010873260-01, P = 5.852963 Days, E = 130.211394 Days

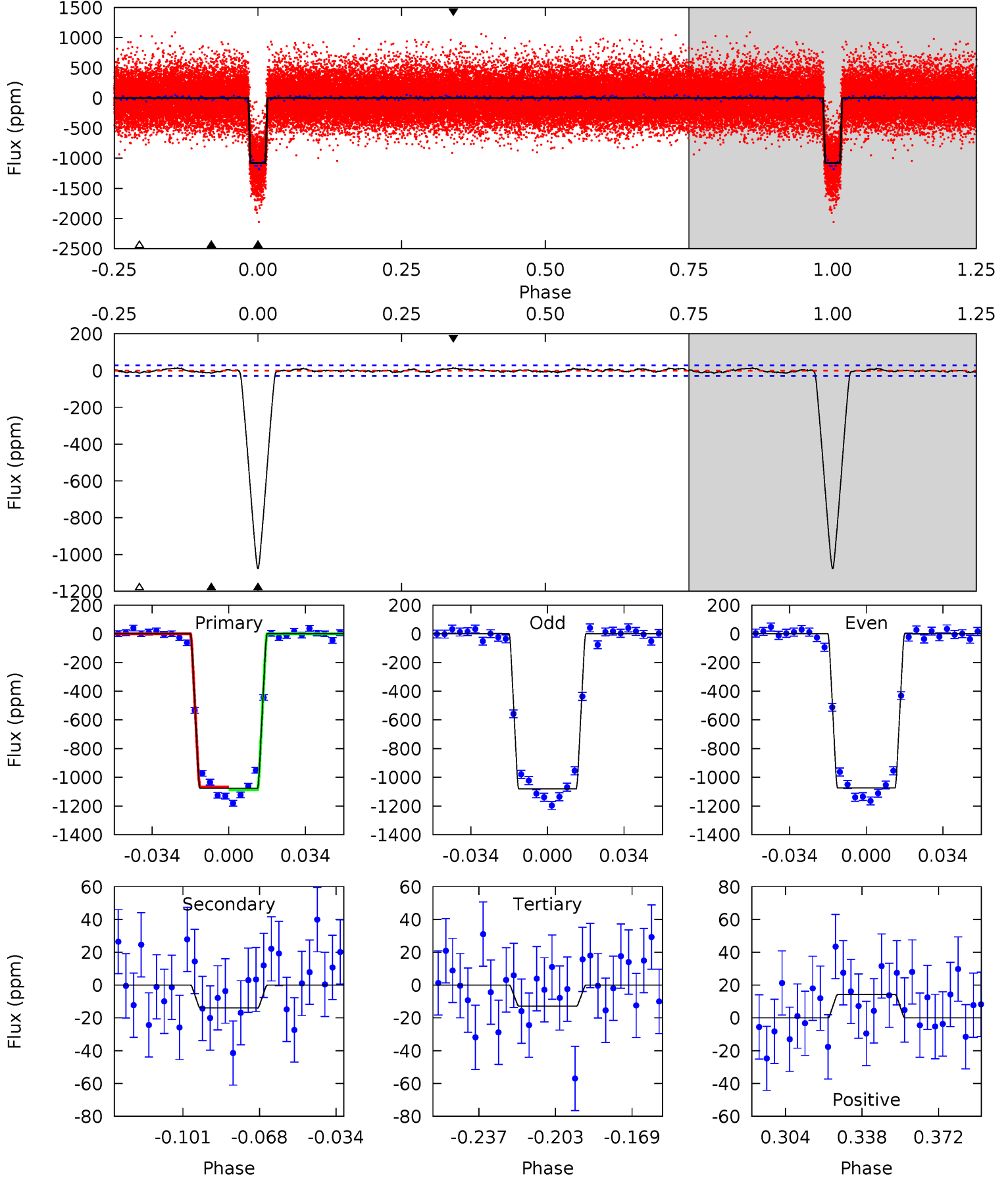
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
192.6	2.75	2.47	2.20	4.77	2.09	1.03	190.1	190.4	0.27	0.54	0.98	0.99	0.01	2.92



Alt Model-Shift Uniqueness Test

010873260-01, P = 5.852931 Days, E = 130.215419 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
176.4	2.29	2.11	2.33	4.79	2.12	0.98	174.3	174.1	0.18	-0.04	0.59	0.99	0.01	1.62



Stellar Parameters For KIC 010873260

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6050^{+181}_{-199}	$4.450^{+0.070}_{-0.210}$	$-0.040^{+0.250}_{-0.300}$	$1.013^{+0.333}_{-0.111}$	$1.050^{+0.145}_{-0.130}$	$1.424^{+0.436}_{-0.789}$
	+3%/-3%	+2%/-5%	+625%/-750%	+33%/-11%	+14%/-12%	+31%/-55%
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 010873260-01 / KOI 0535.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 6	$3.79^{+0.62}_{-0.35}$	1497^{+118}_{-78}	2778^{+144}_{-192}	$2.475^{+1.107}_{-1.065}$
Alt.	-14 ± 6	$3.75^{+0.69}_{-0.35}$	1505^{+113}_{-79}	2729^{+170}_{-236}	$2.097^{+1.203}_{-0.937}$

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 $A_{\text{obs}} \gg 1.0$

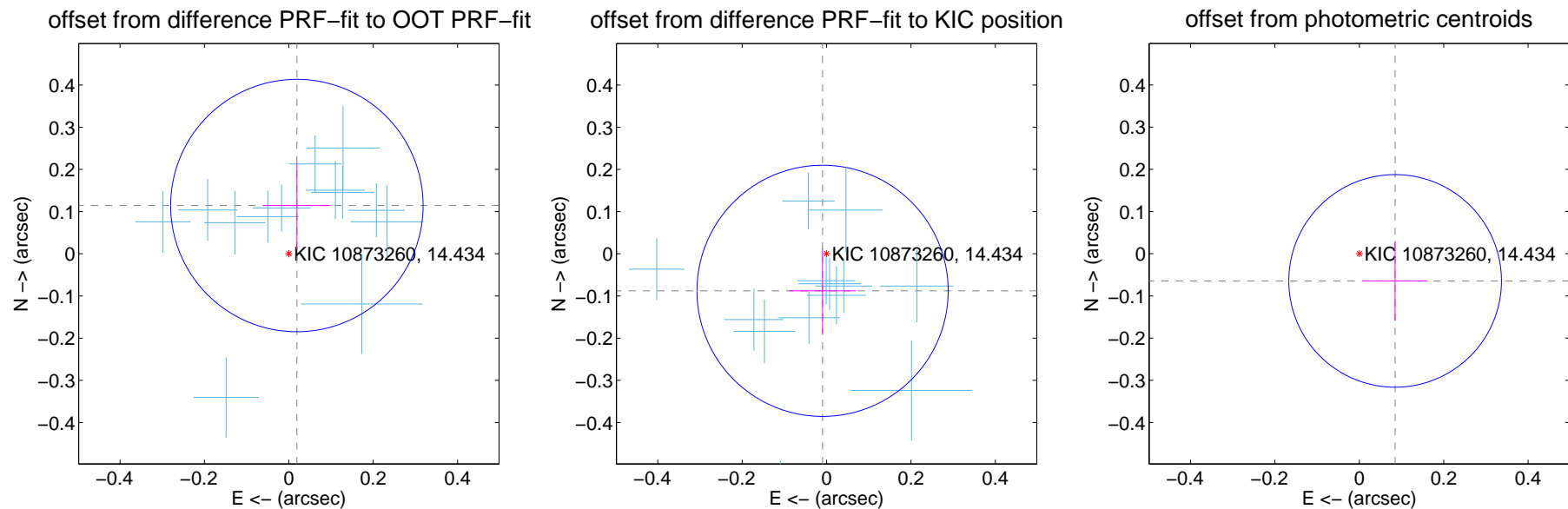
DV Centroid Data

Supplemental centroid analysis for 010873260-01. Kepler magnitude: 14.43. Transit SNR 148.15

There are 14 quarters with good PRF difference image offsets

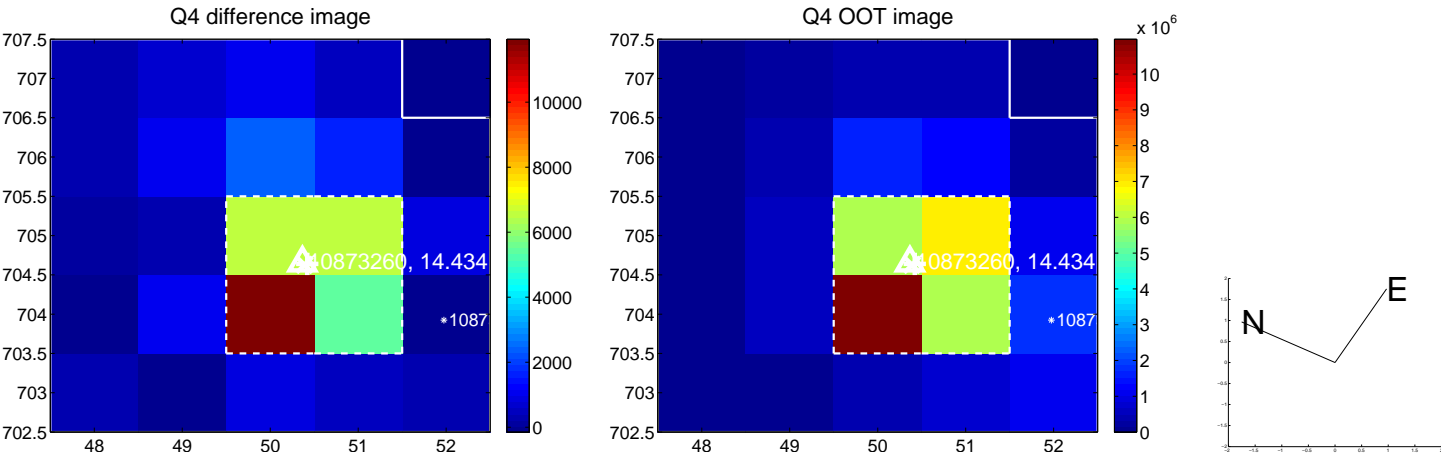
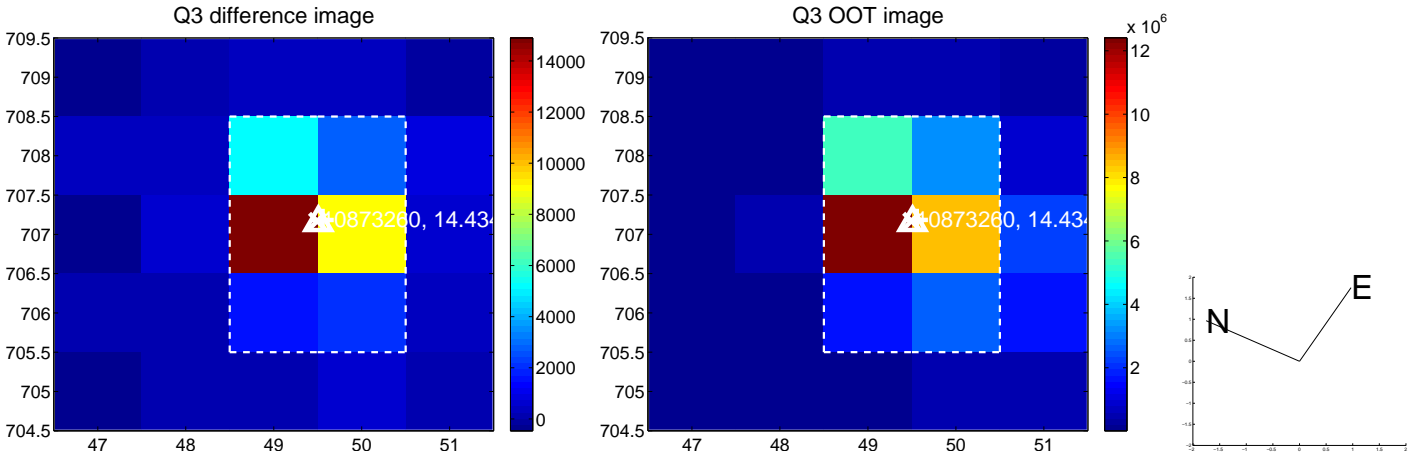
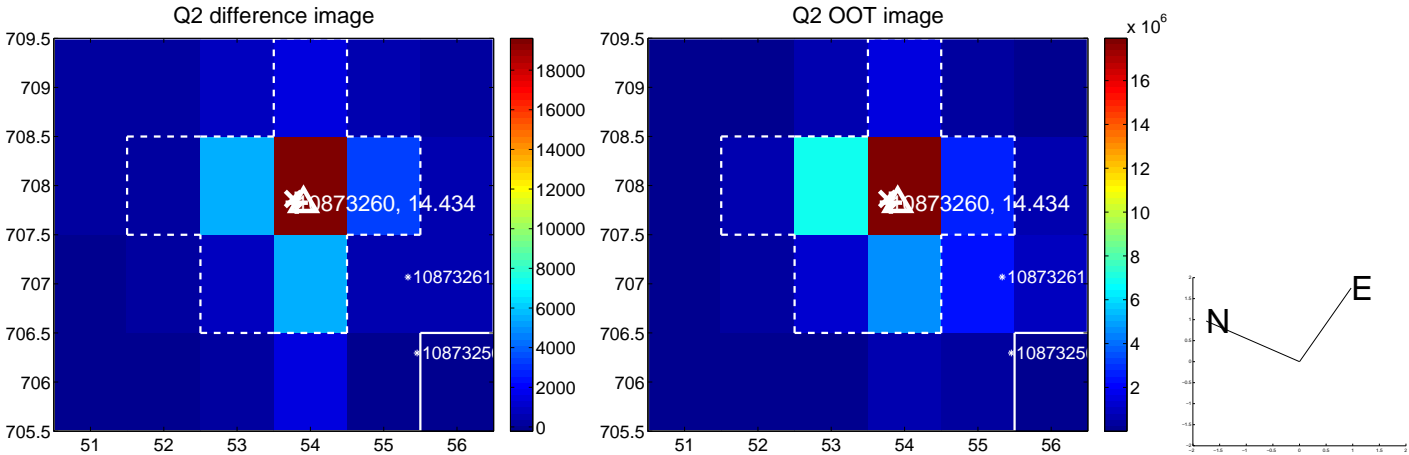
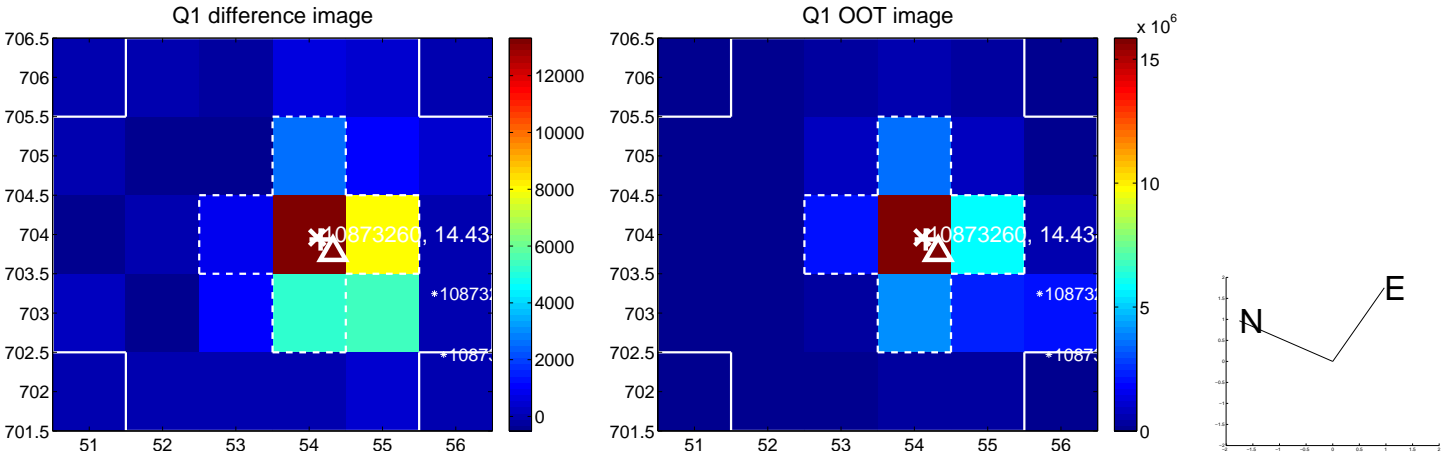
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.116 ± 0.100	1.16	-0.019 ± 0.080	0.114 ± 0.101
PRF-fit source offset from KIC position	0.088 ± 0.099	0.89	0.009 ± 0.079	-0.088 ± 0.101
photometric centroid source offset	0.11 ± 0.08	1.27	-0.08 ± 0.08	-0.06 ± 0.09

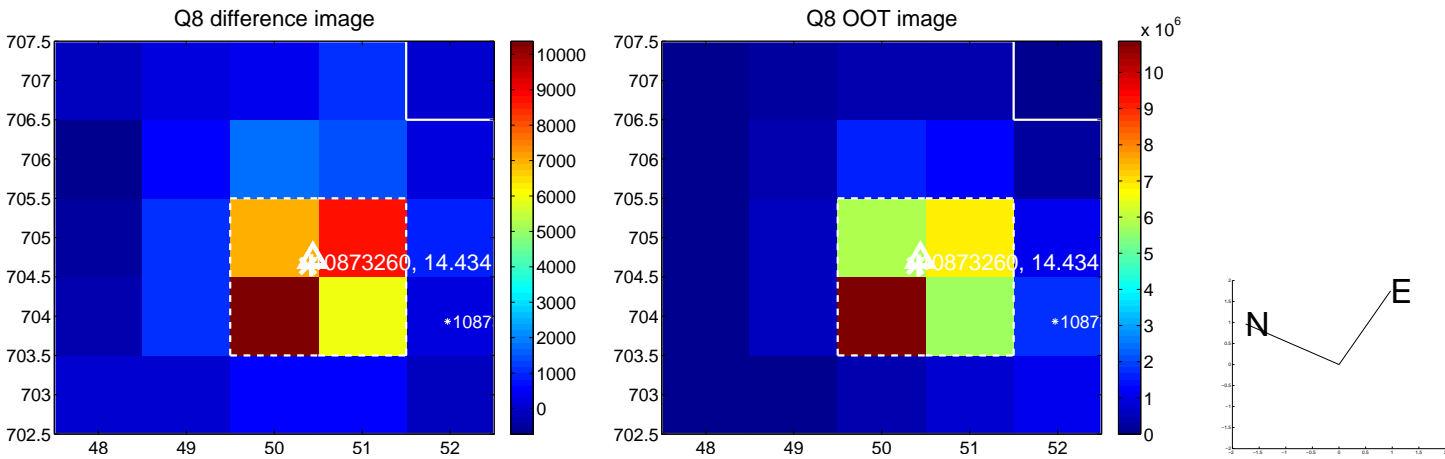
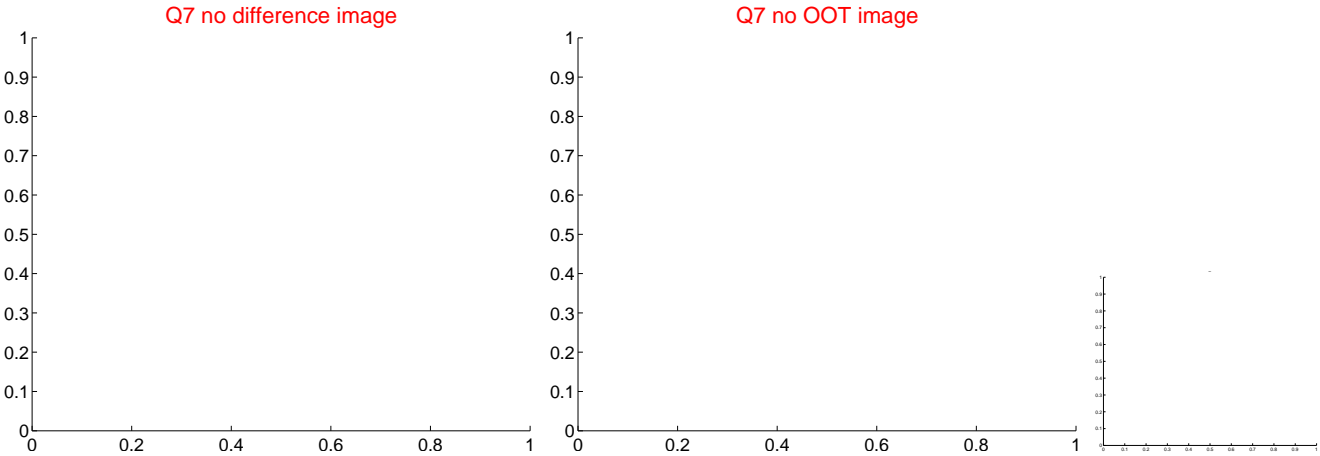
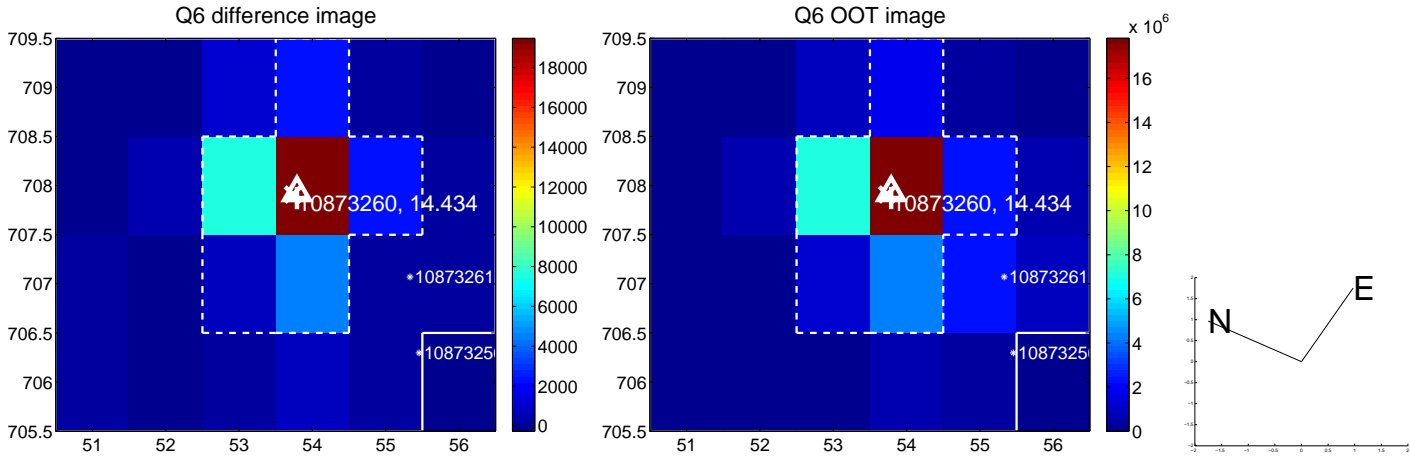
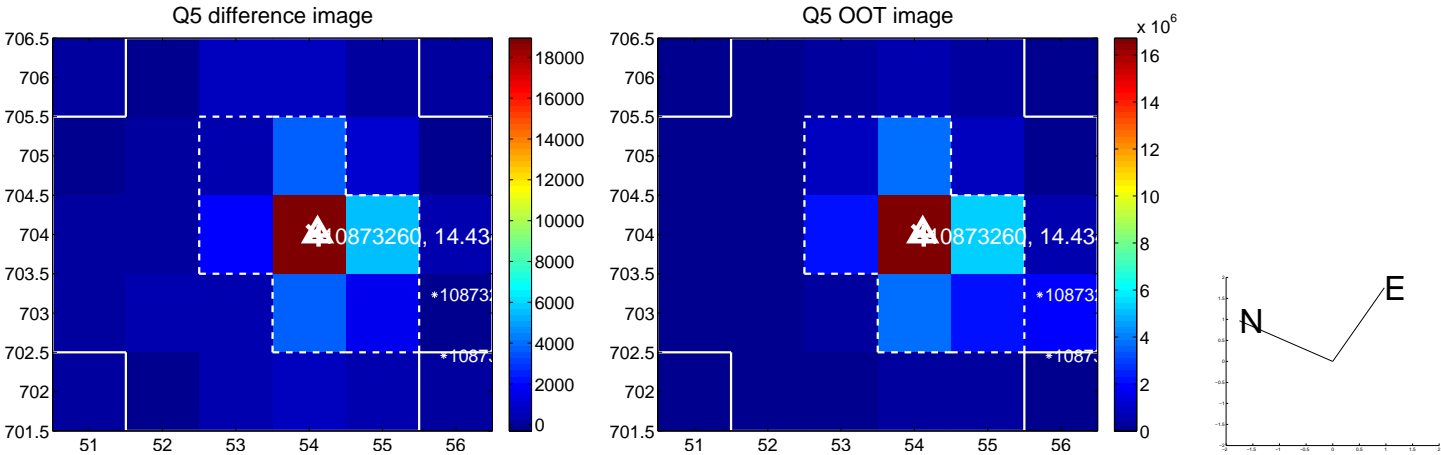


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

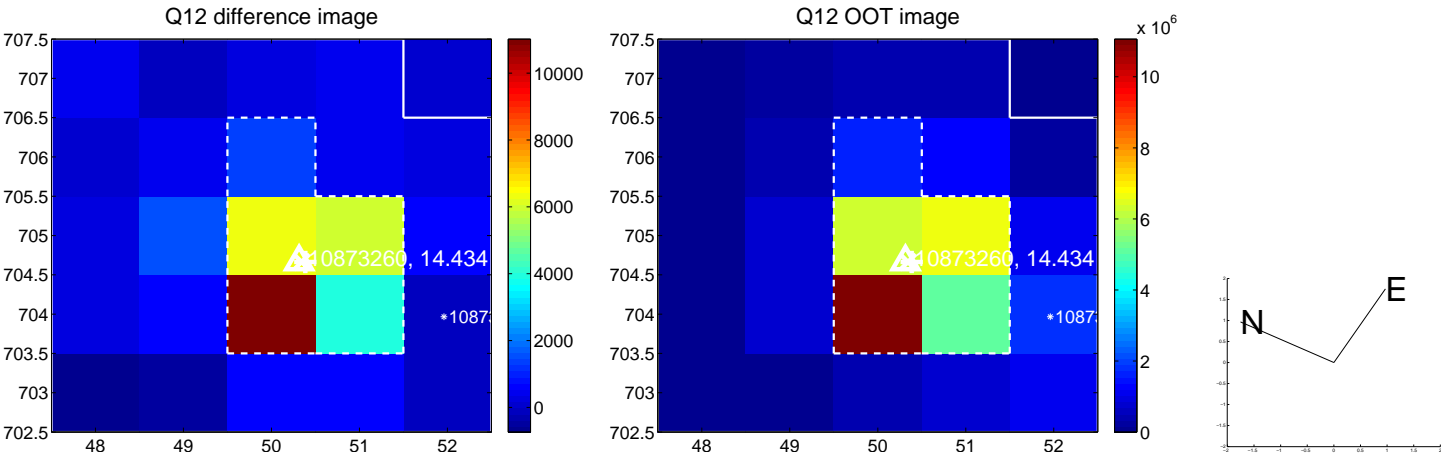
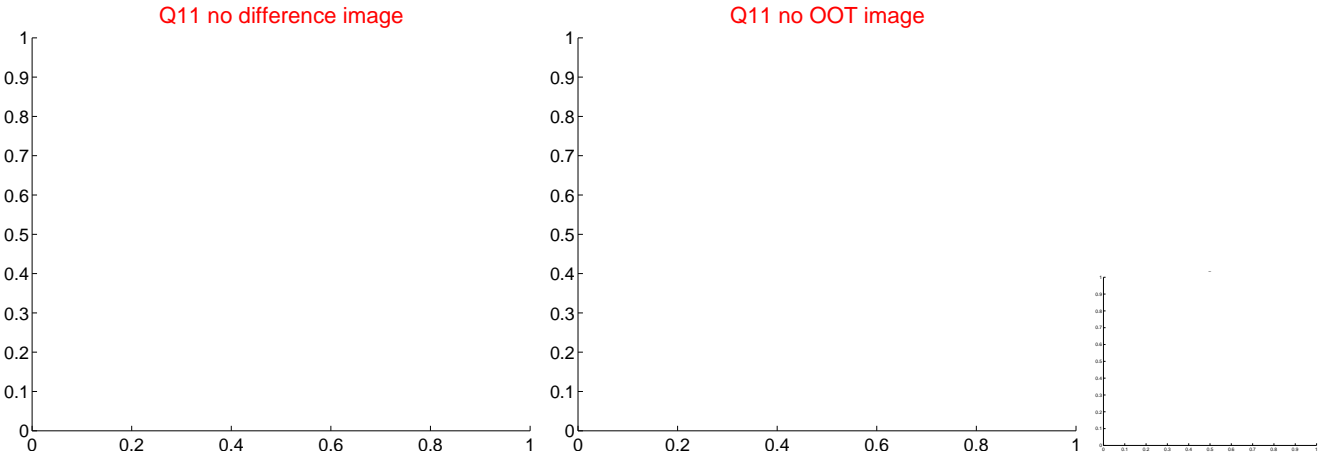
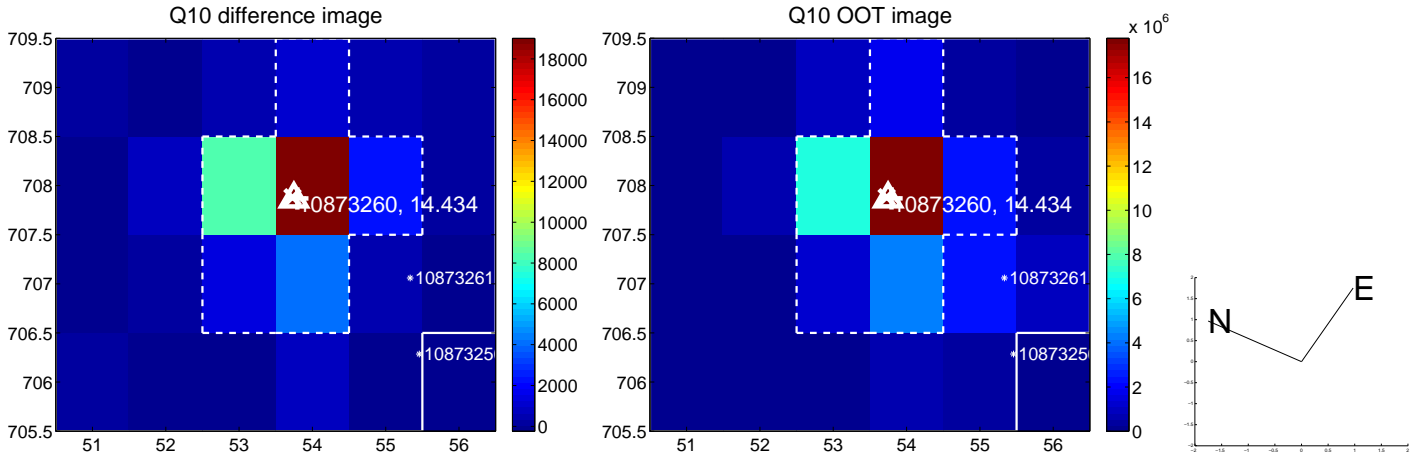
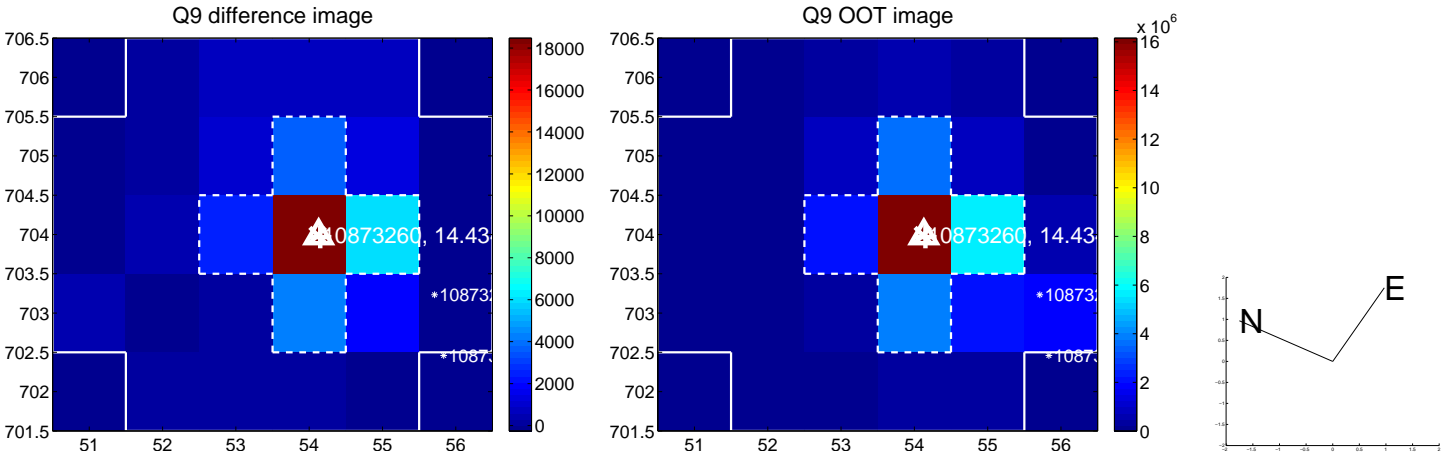
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



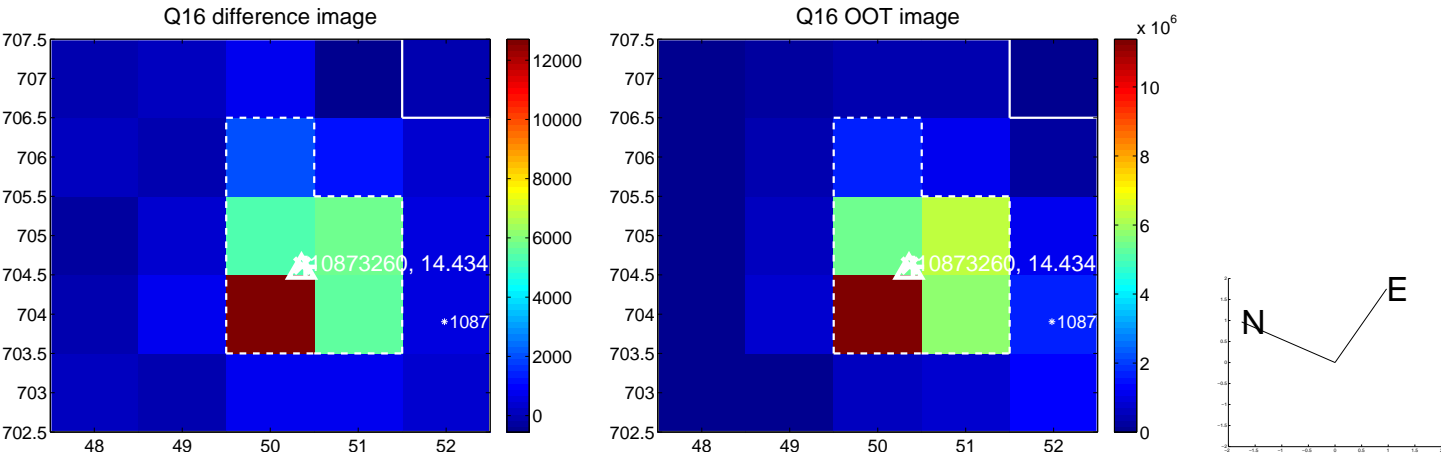
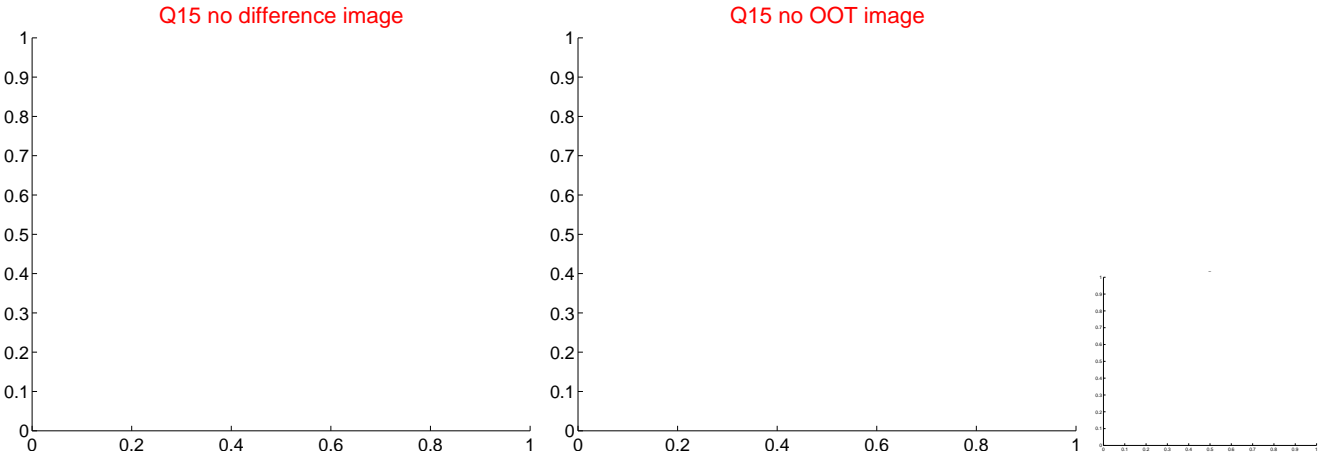
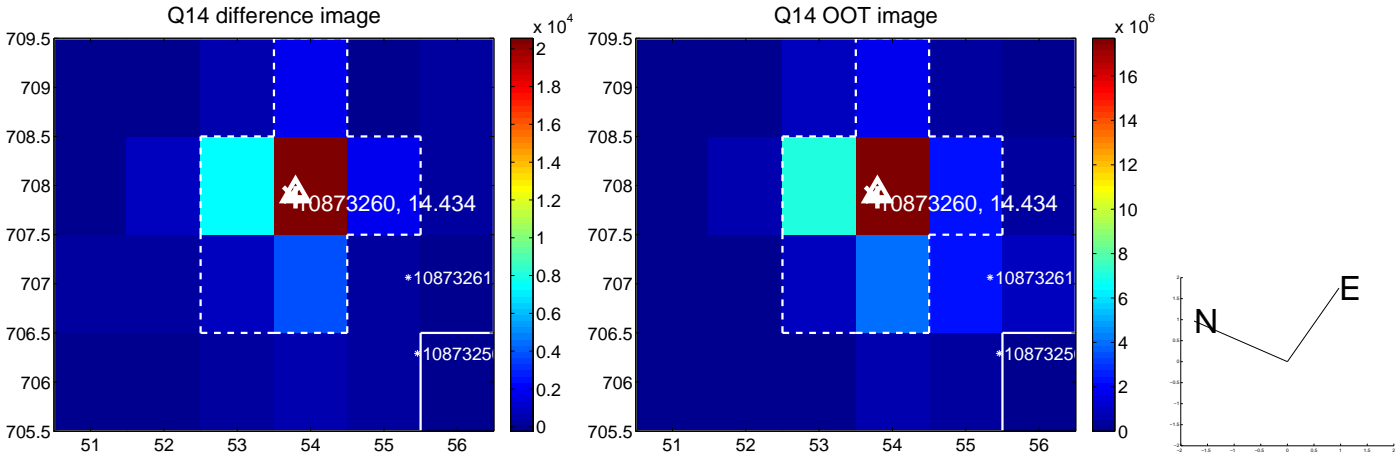
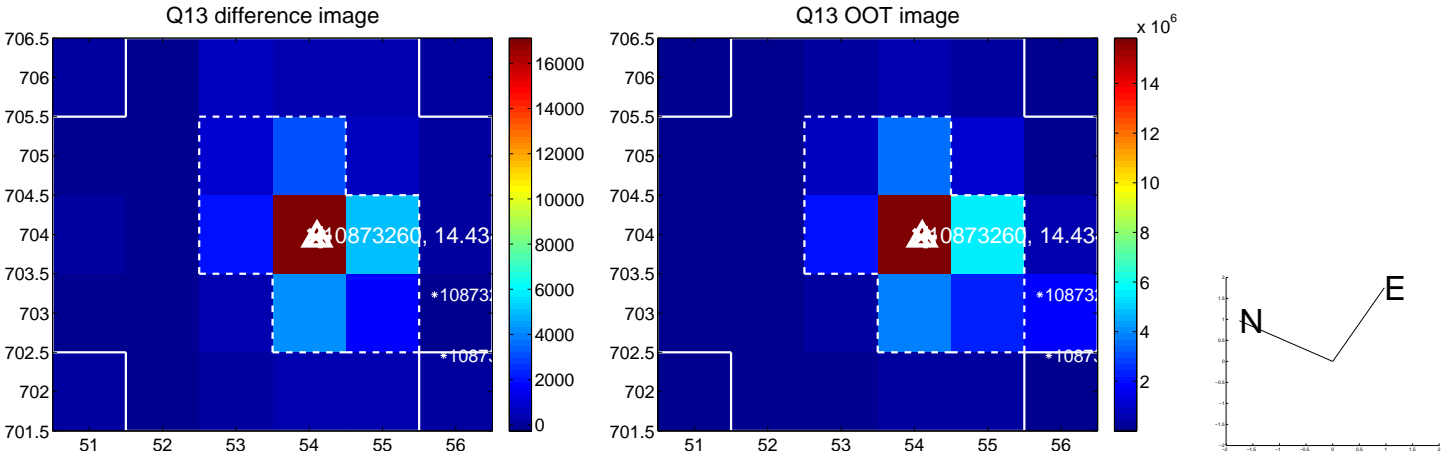
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



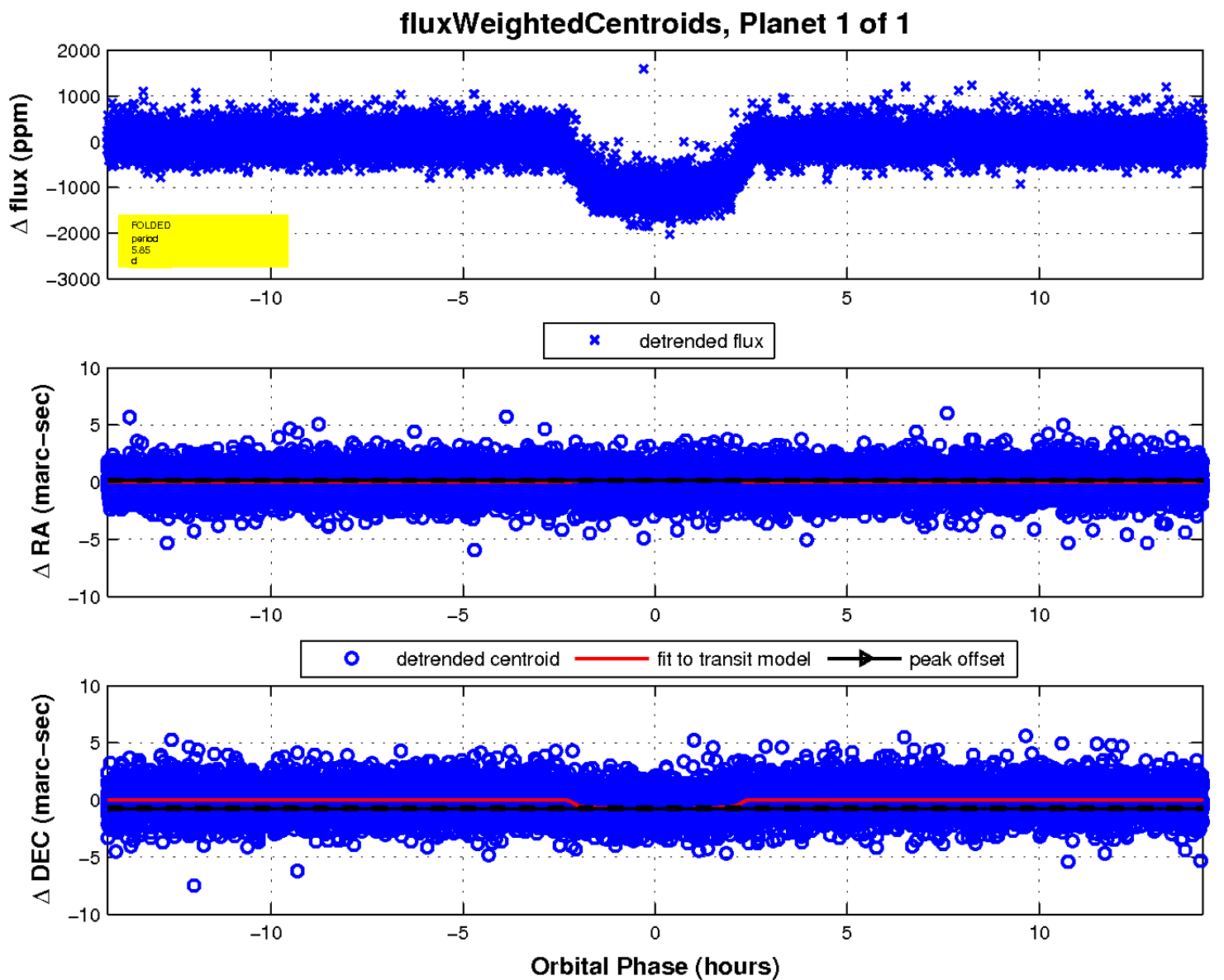
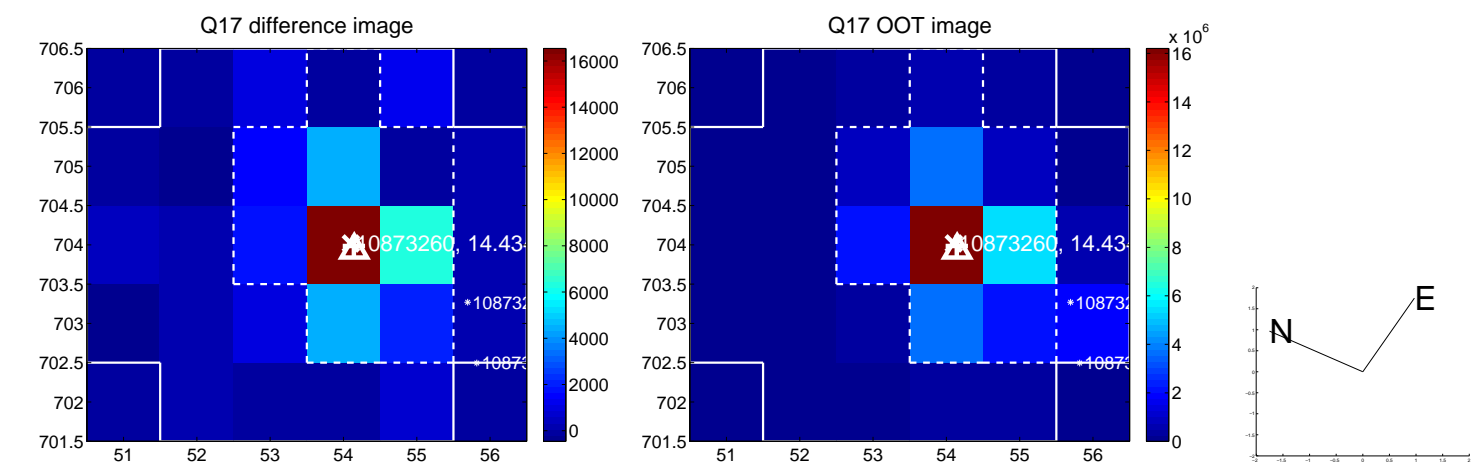
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

