

KIC 006435936

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})
006435936-01	OBS	0854.01	56.056321	145.107958	1667.7	4.807	19.3	23.7	0.49	3593	2.22	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006435936-01	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.

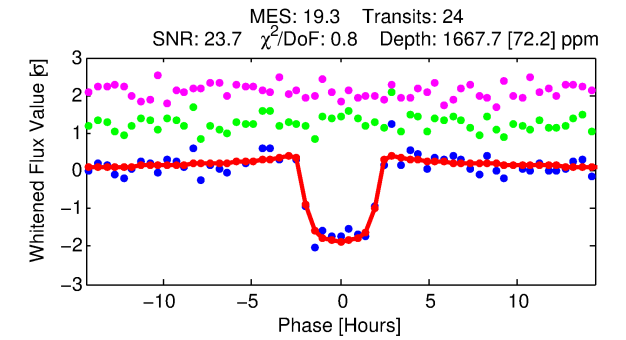
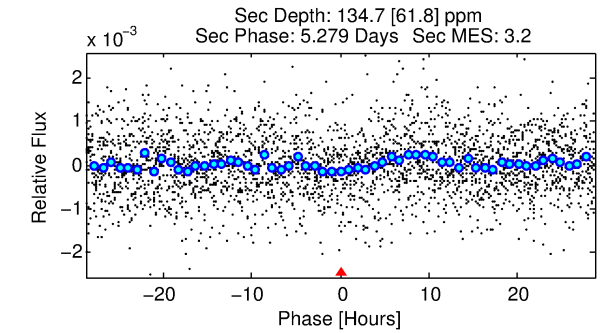
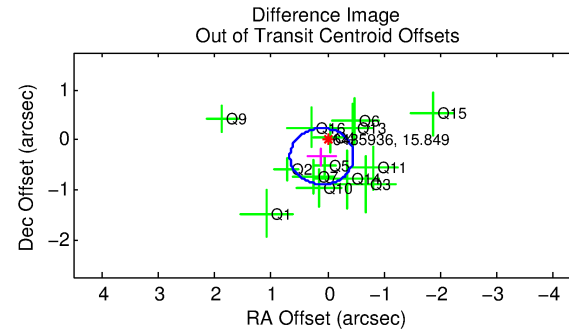
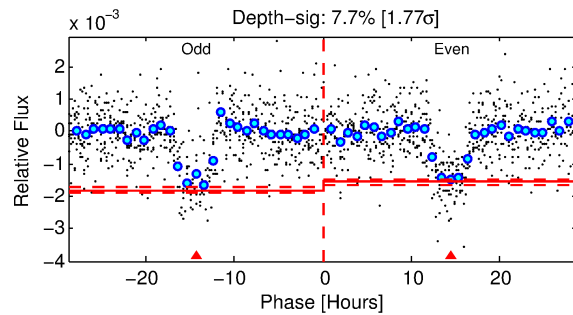
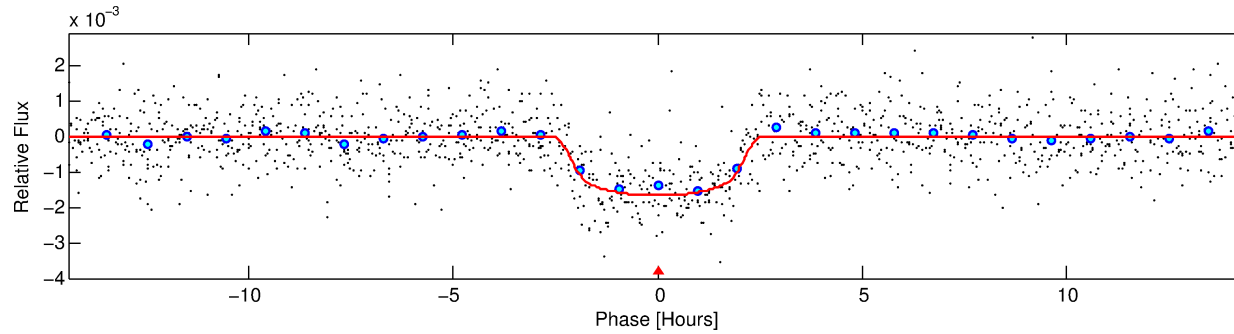
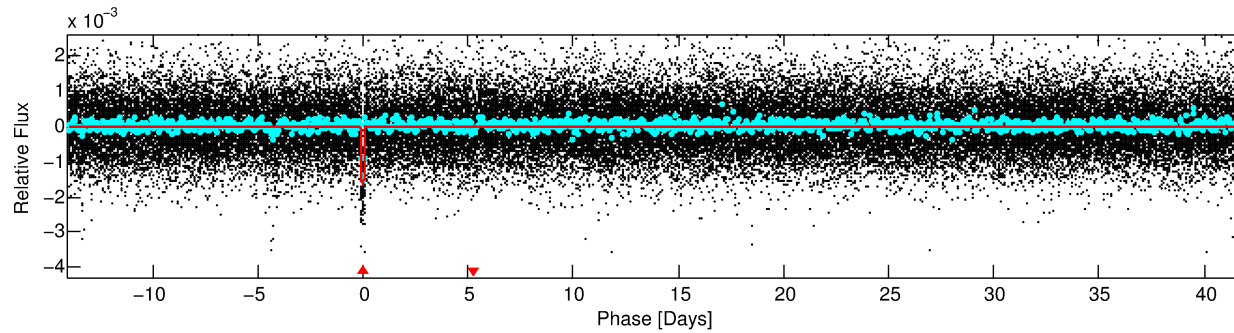
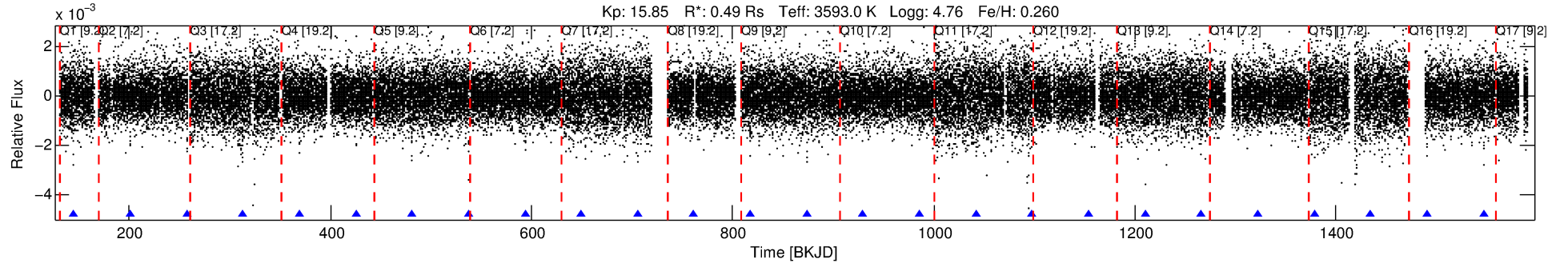
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006435936-01

No Significant Match Found

DV One-Page Summary

KIC: 6435936 Candidate: 1 of 1 Period: 56.056 d
KOI: K00854.01 Corr: 0.978



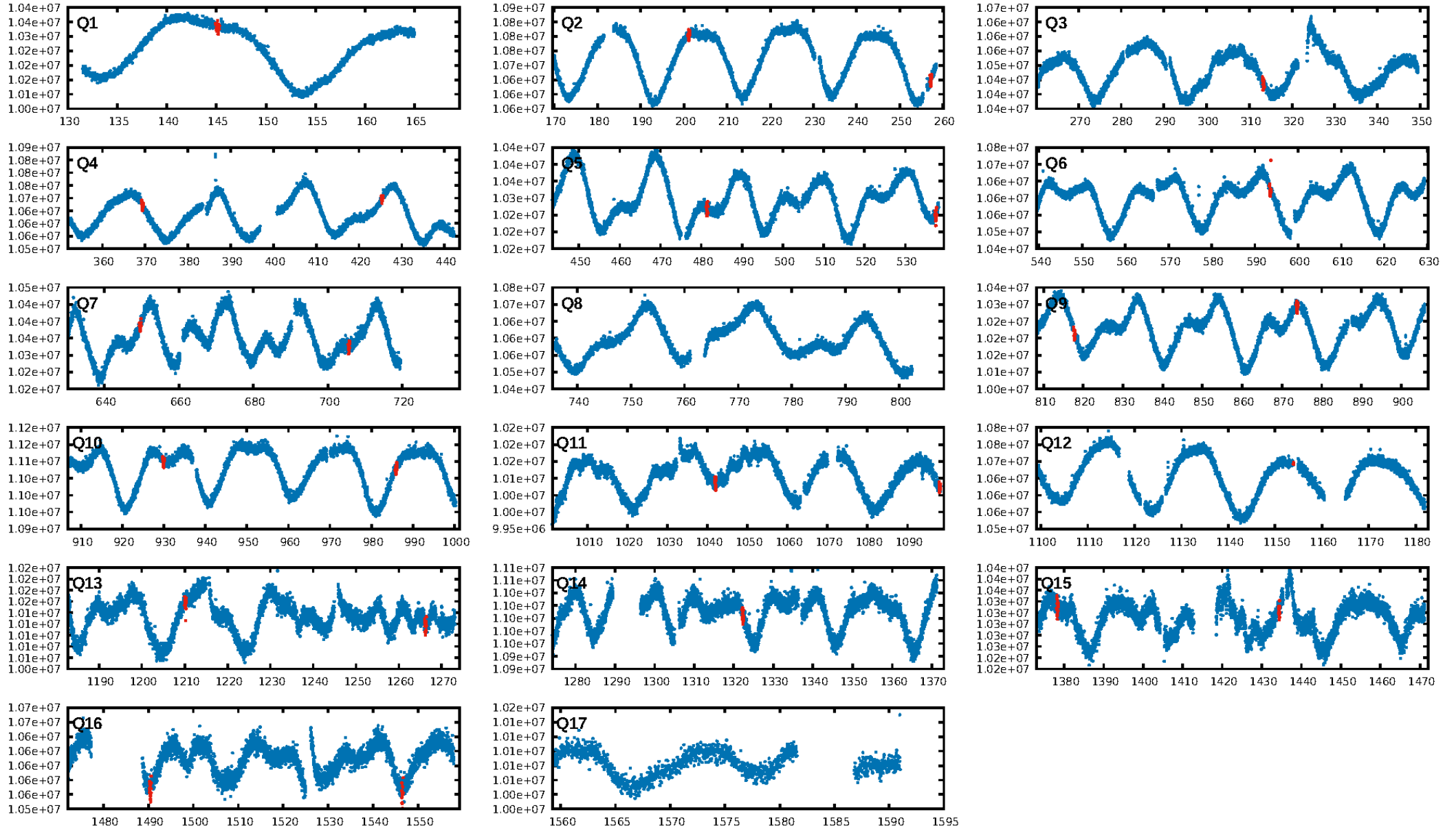
DV Fit Results:

Period = 56.05632 [0.00025] d
Epoch = 145.1080 [0.0035] BKJD
Rp/R* = 0.0414 [0.0049]
a/R* = 60.81 [26.93]
b = 0.79 [0.22]
Seff = 0.69 [0.10]
Teq = 233 [9] K
Rp = 2.22 [0.36] Re
a = 0.2279 [0.0195] AU
Ag = 782.74 [413.75] [1.89 σ]
Teffp = 1902 [250] K [6.68 σ]

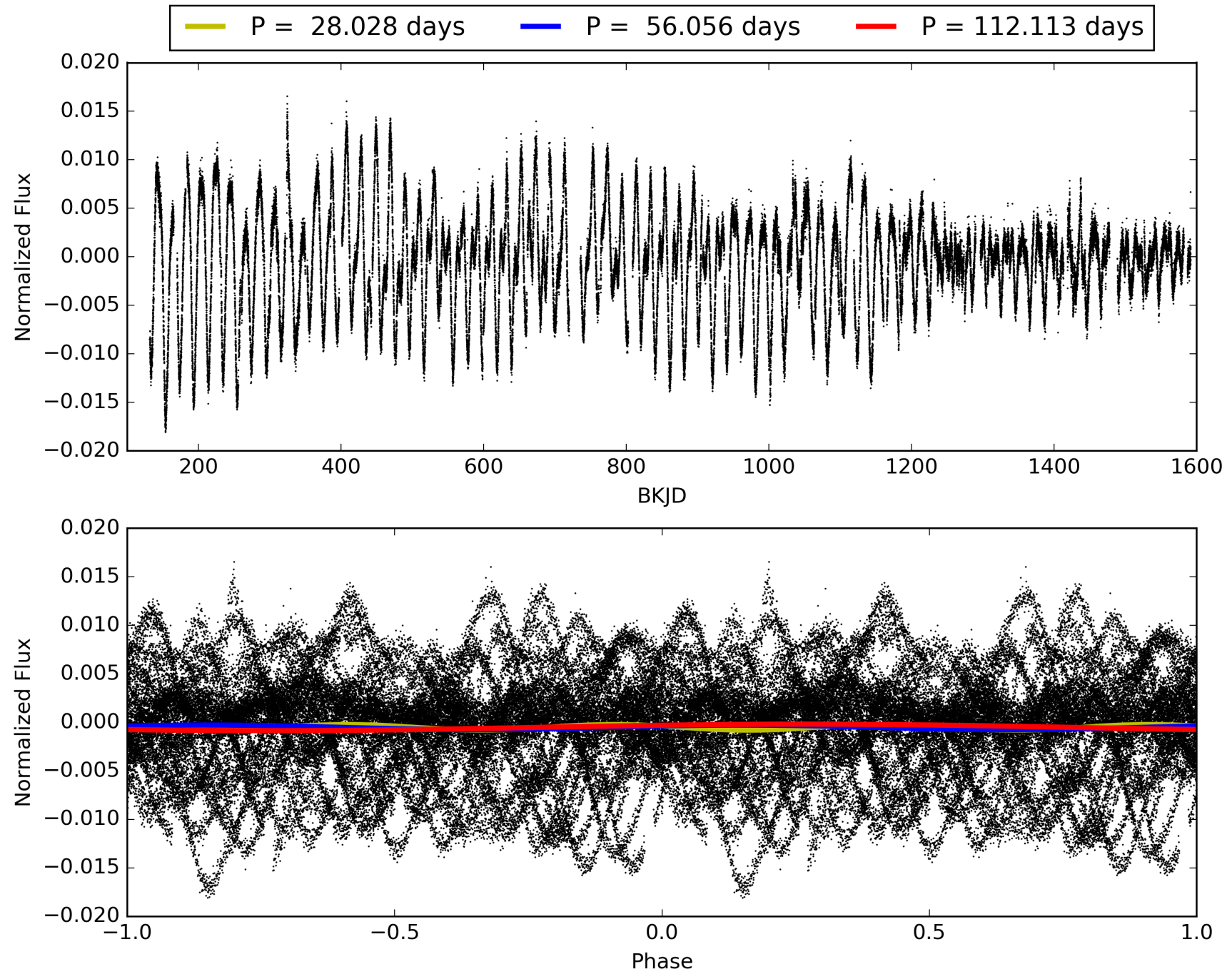
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.11e-82
RollingBand-fgt: 1.00 [23/23]
GhostDiagnostic-chr: 2.763
Centroid-sig: 4.8%
Centroid-so: 0.429 arcsec [0.88 σ]
OotOffset-rm: 0.350 arcsec [1.86 σ]
KicOffset-rm: 0.601 arcsec [2.86 σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 006435936-01, PDC Light Curves

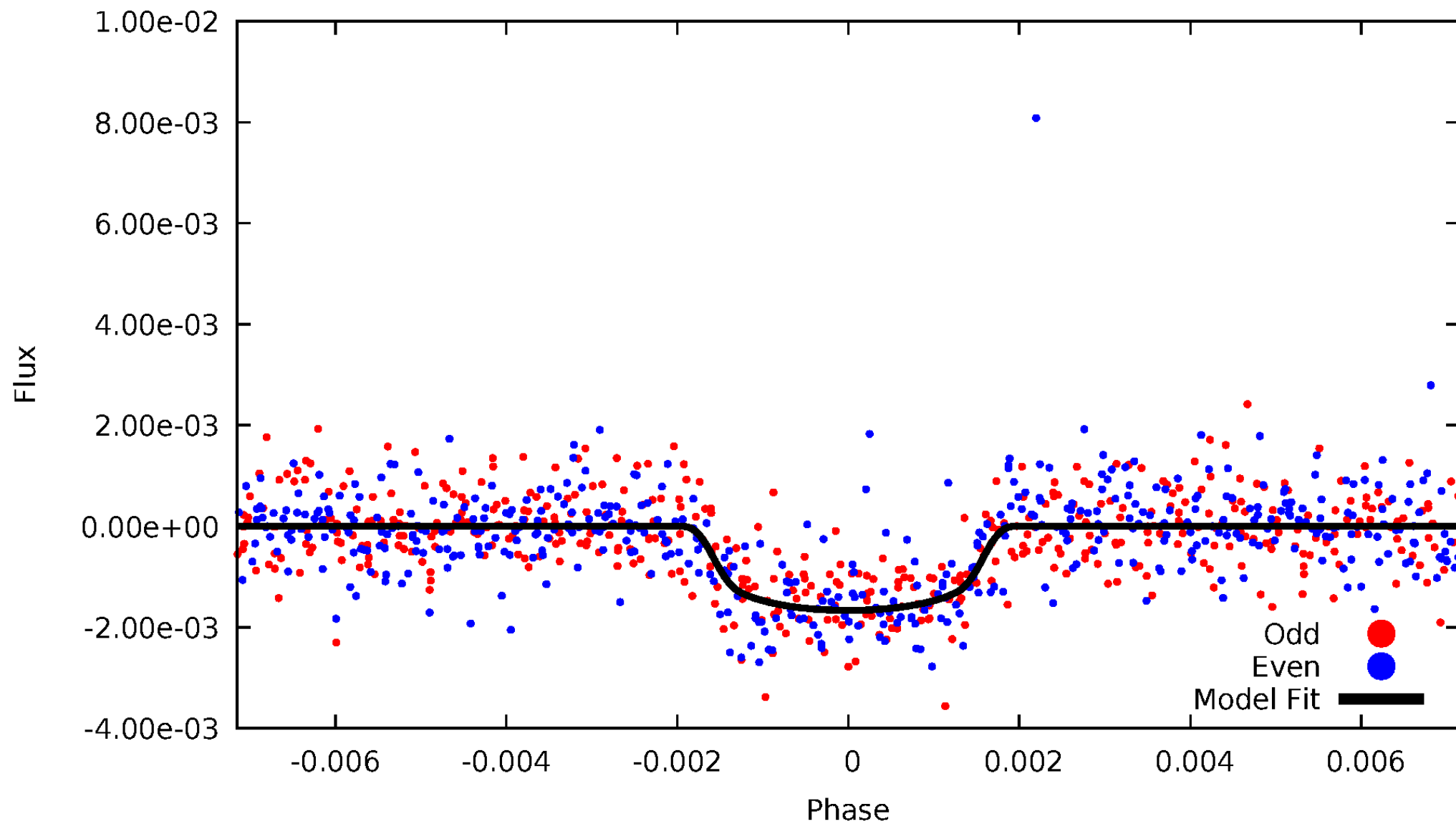


TCE 006435936-01



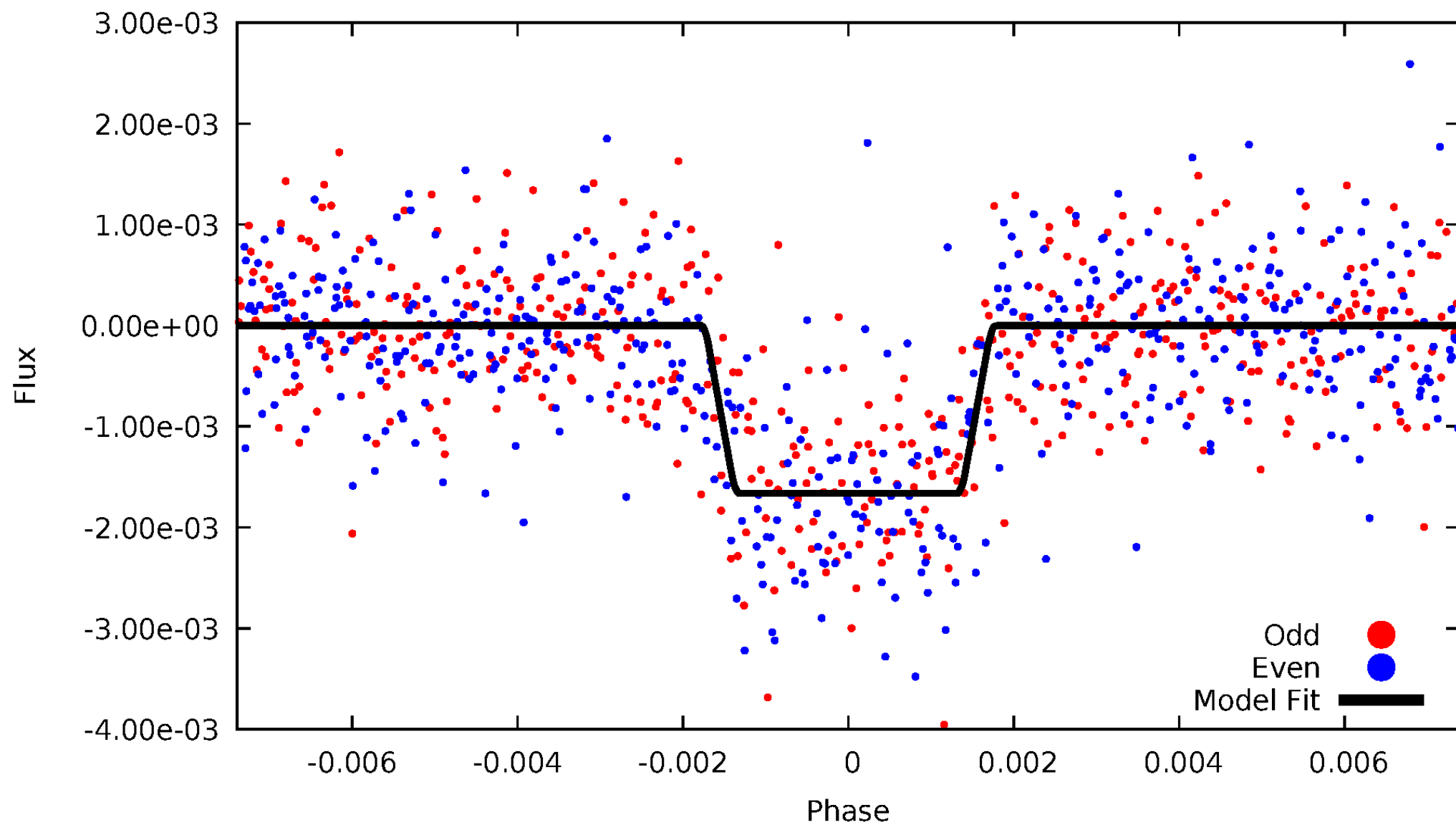
DV Odd/Even

TCE 006435936-01



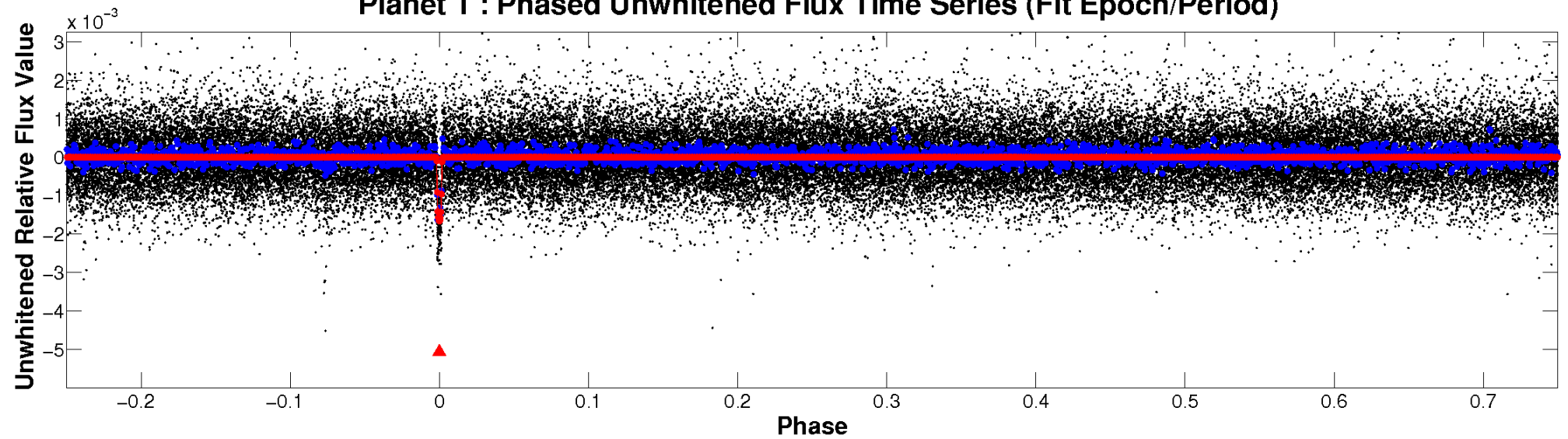
ALT Odd/Even

TCE 006435936-01

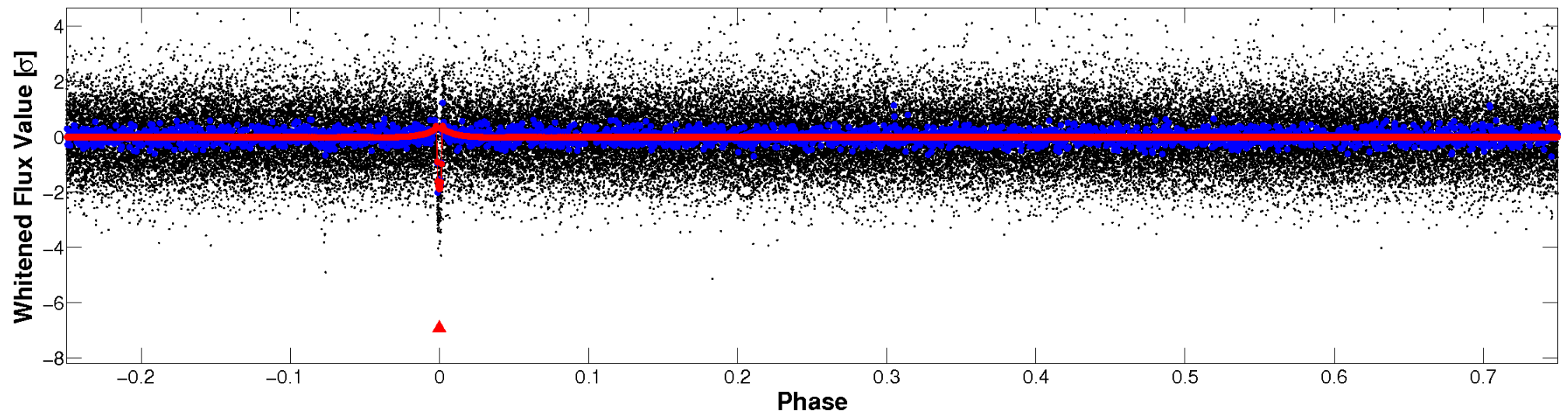


Non-Whitened Vs. Whitened Light Curve

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

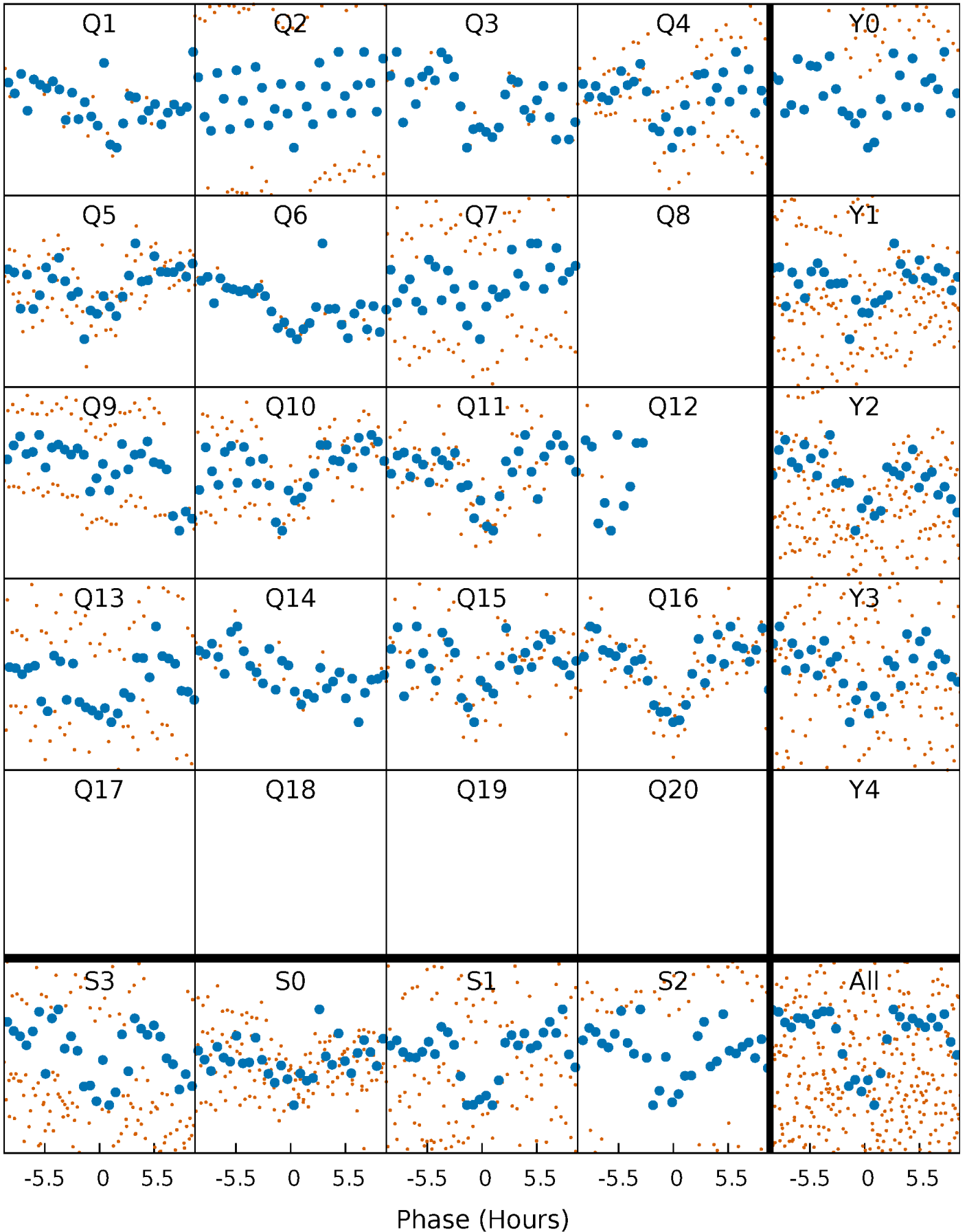


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



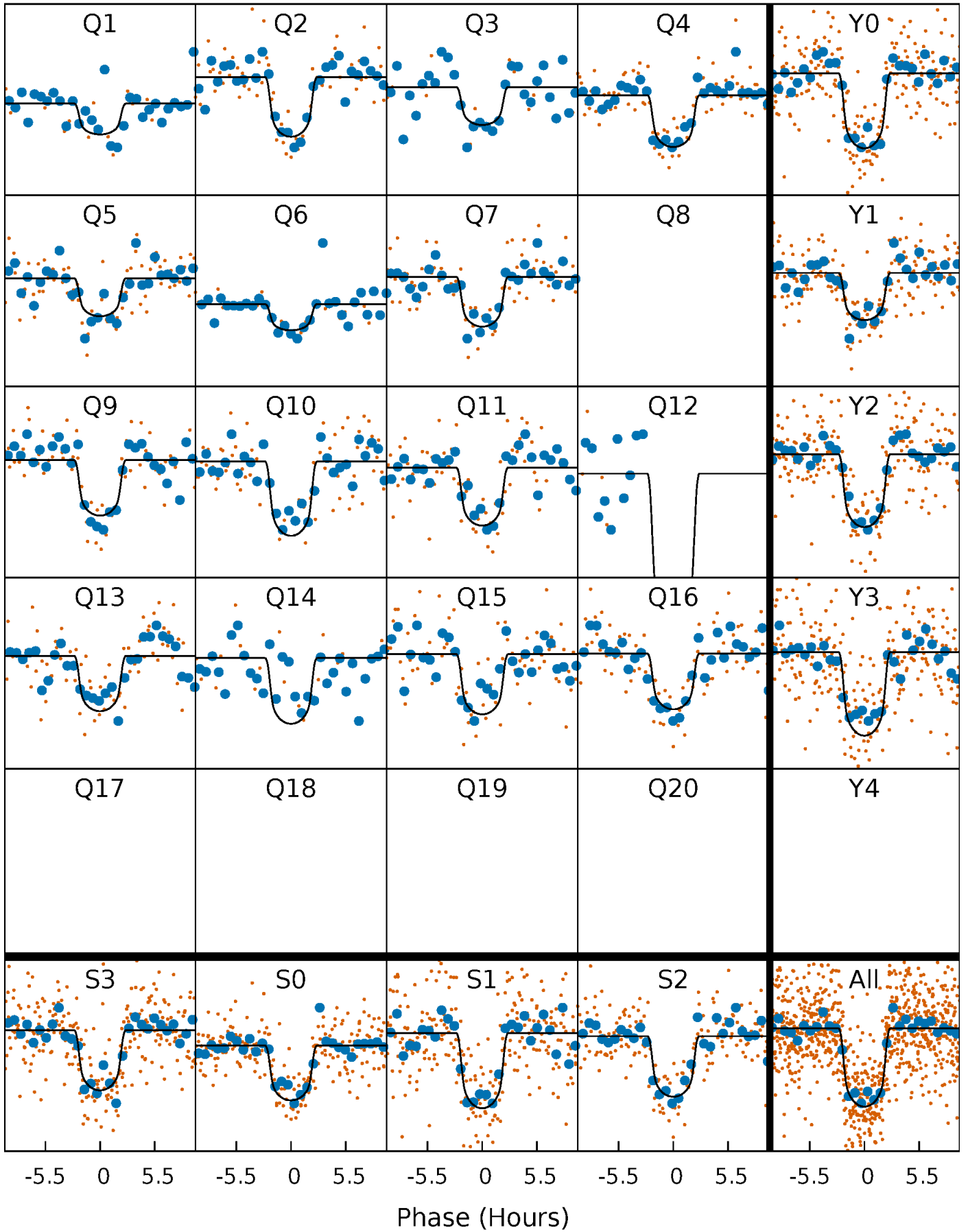
PDC Quarter-Phased Transit Curves

TCE 006435936-01 P= 56.056321 Days $T_0=145.107958$ (BKJD)



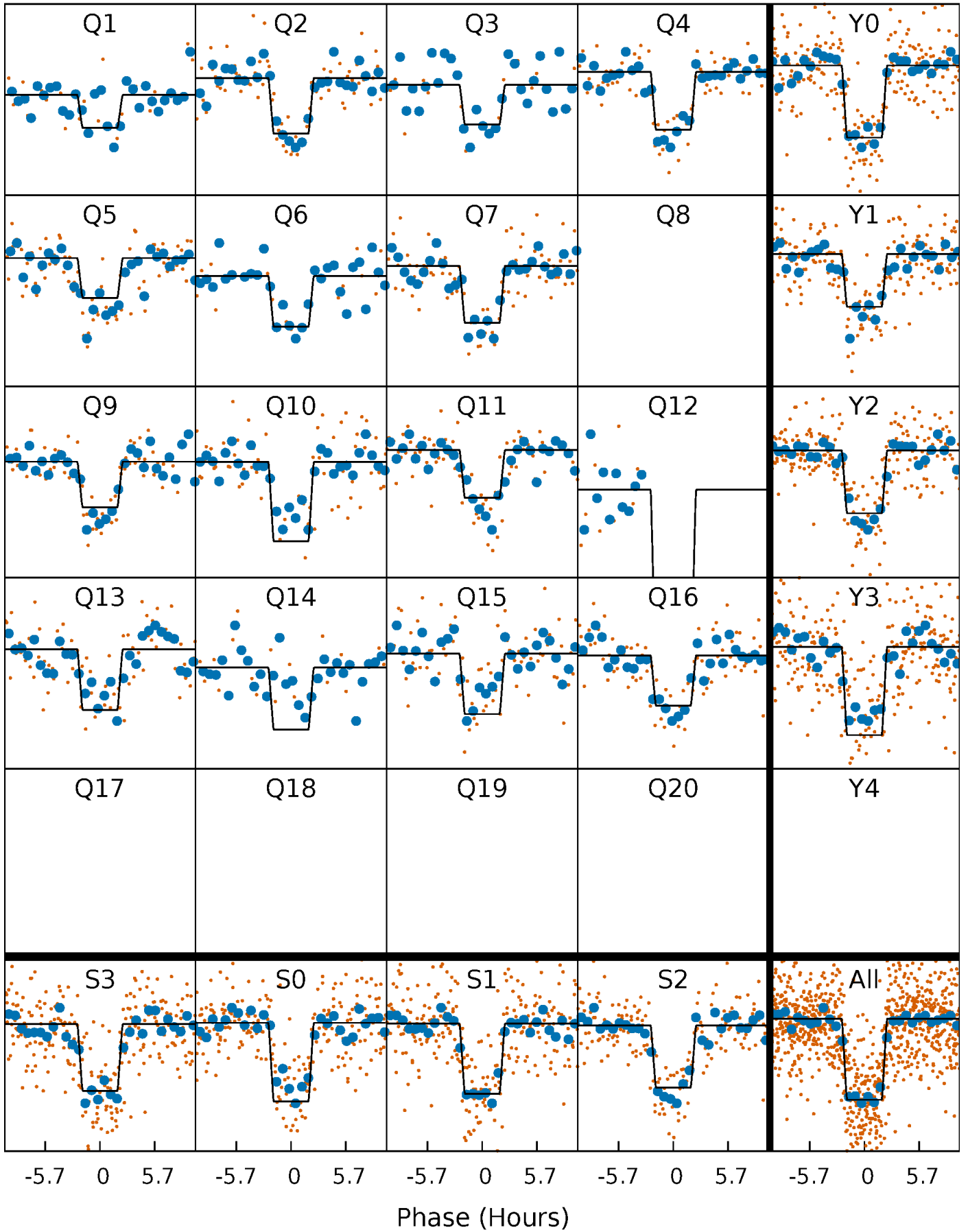
DV Quarter-Phased Transit Curves

TCE 006435936-01 P= 56.056321 Days $T_0=145.107958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

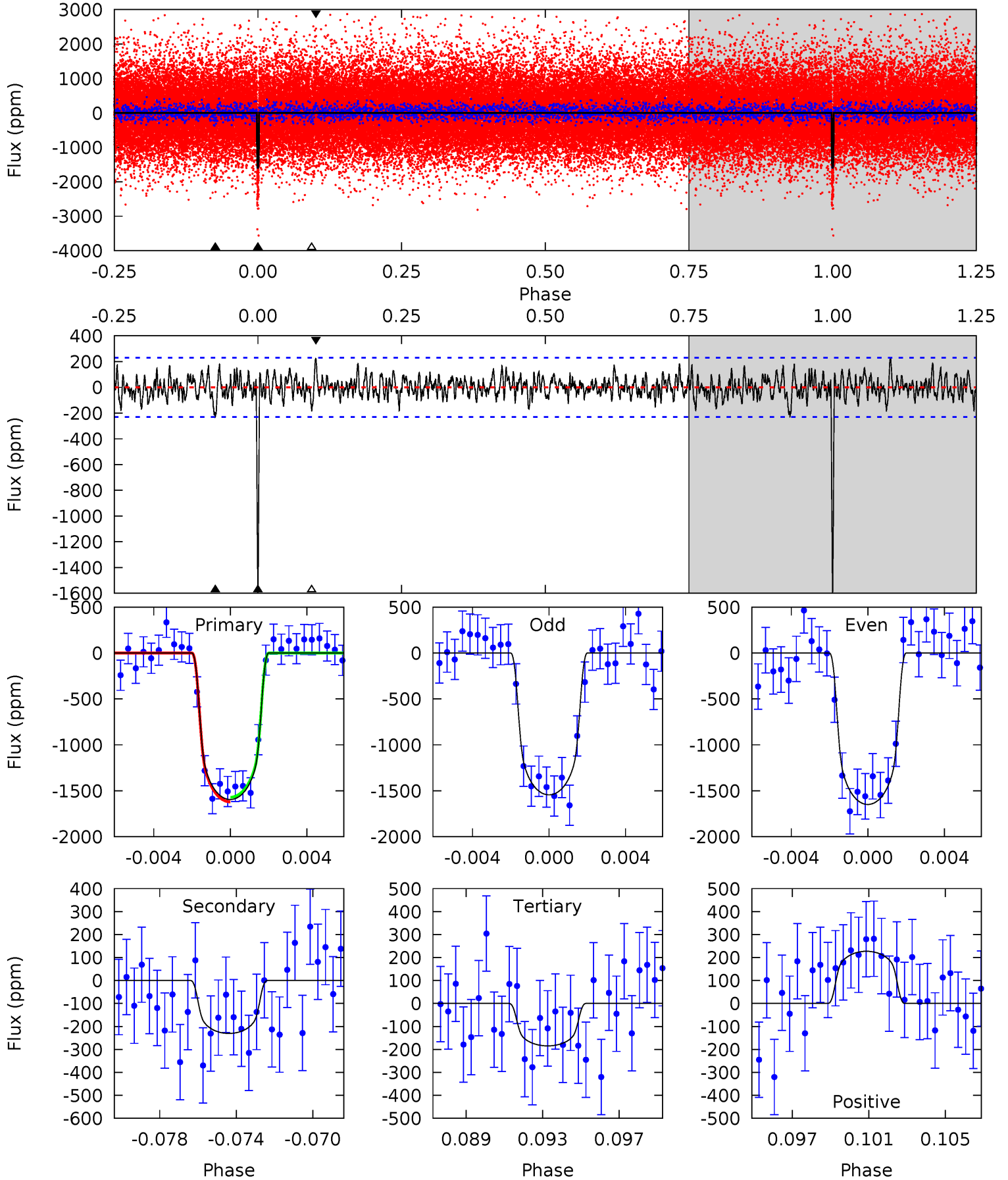
TCE 006435936-01 P= 56.056195 Days $T_0=145.108916$ (BKJD)



DV Model-Shift Uniqueness Test

006435936-01, P = 56.056321 Days, E = 89.051637 Days

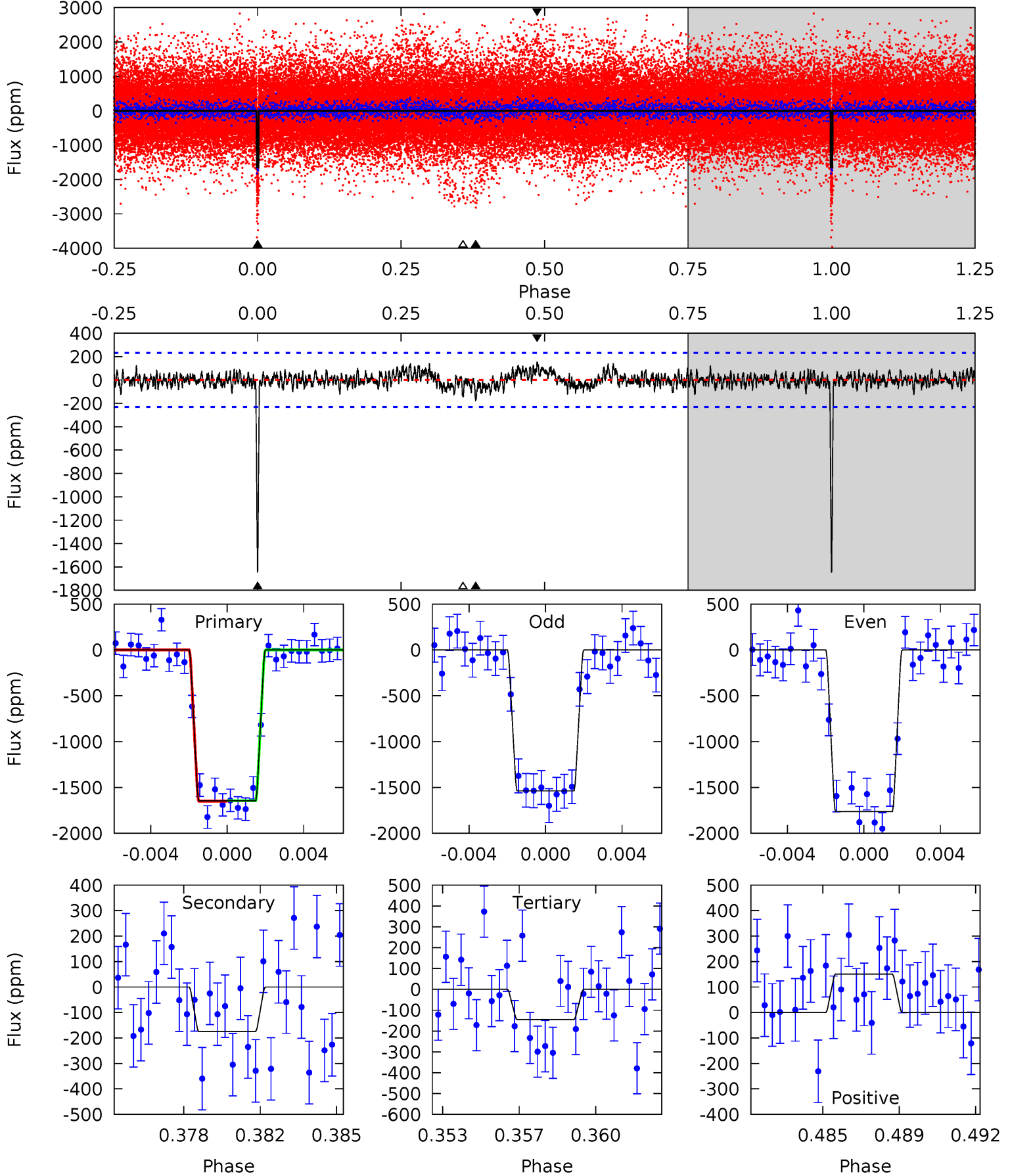
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.1	5.22	4.18	5.14	5.20	2.89	1.45	31.9	31.0	1.04	0.08	1.19	0.97	0.12	0.57



Alt Model-Shift Uniqueness Test

006435936-01, P = 56.056195 Days, E = 89.052721 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.1	3.93	3.27	3.40	5.22	2.91	1.09	33.9	33.7	0.65	0.53	2.55	1.02	0.08	0.06



Stellar Parameters For KIC 006435936

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3593^{+71}_{-86}	$4.757^{+0.054}_{-0.027}$	$0.260^{+0.150}_{-0.150}$	$0.491^{+0.030}_{-0.055}$	$0.503^{+0.036}_{-0.054}$	$5.985^{+1.747}_{-0.622}$
	+2%/-2%	+1%/-1%	+58%/-58%	+6%/-11%	+7%/-11%	+29%/-10%
Source	SPE70	SPE60	SPE70	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006435936-01 / KOI 0854.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-231 ± 44	$2.19^{+0.30}_{-0.26}$	323^{+8}_{-9}	2682^{+132}_{-112}	1346^{+571}_{-365}
Alt.	-174 ± 44	$2.16^{+0.29}_{-0.26}$	323^{+9}_{-9}	2602^{+118}_{-122}	1087^{+408}_{-352}

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 $A_{obs} \gg 1.0$

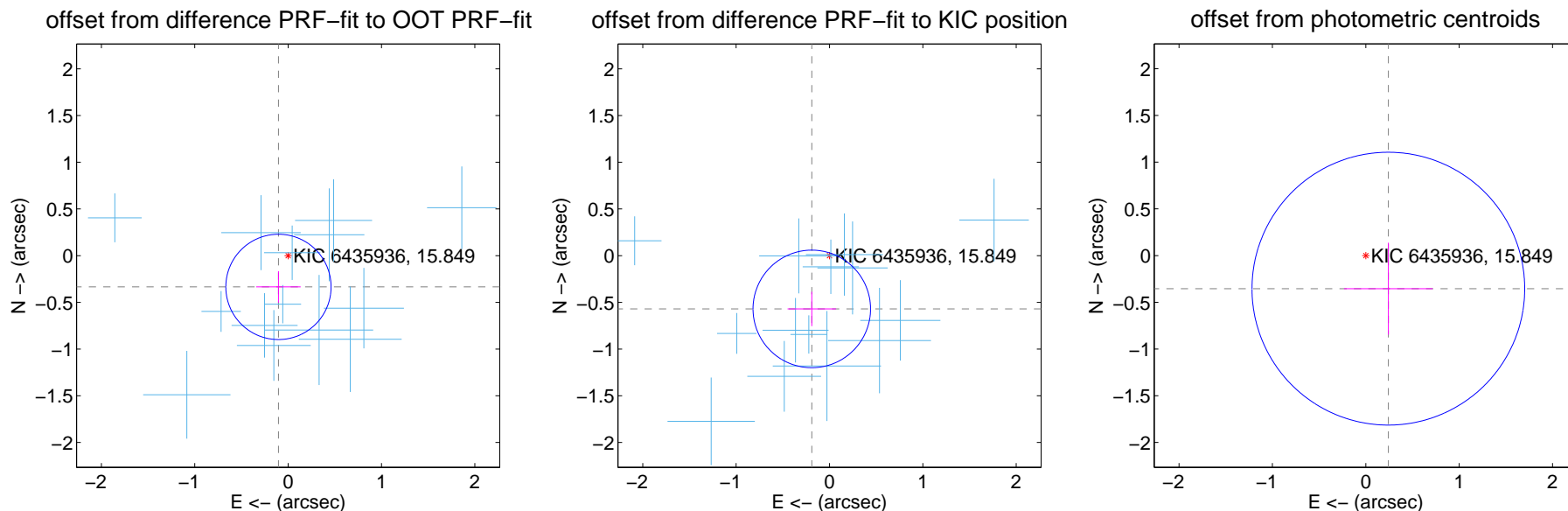
DV Centroid Data

Supplemental centroid analysis for 006435936-01. Kepler magnitude: 15.85. Transit SNR 23.69

There are 14 quarters with good PRF difference image offsets

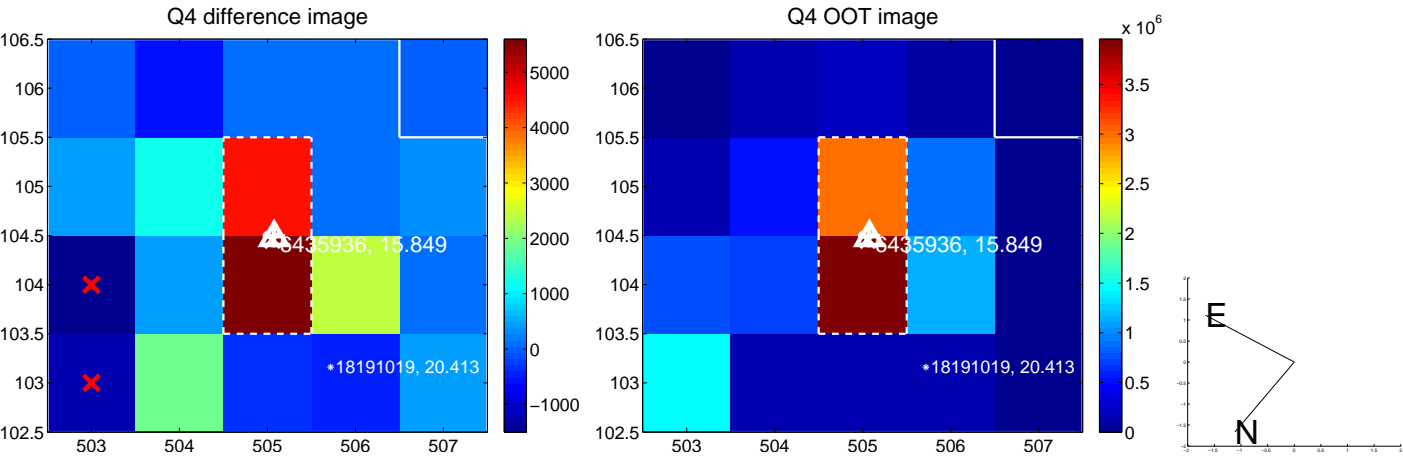
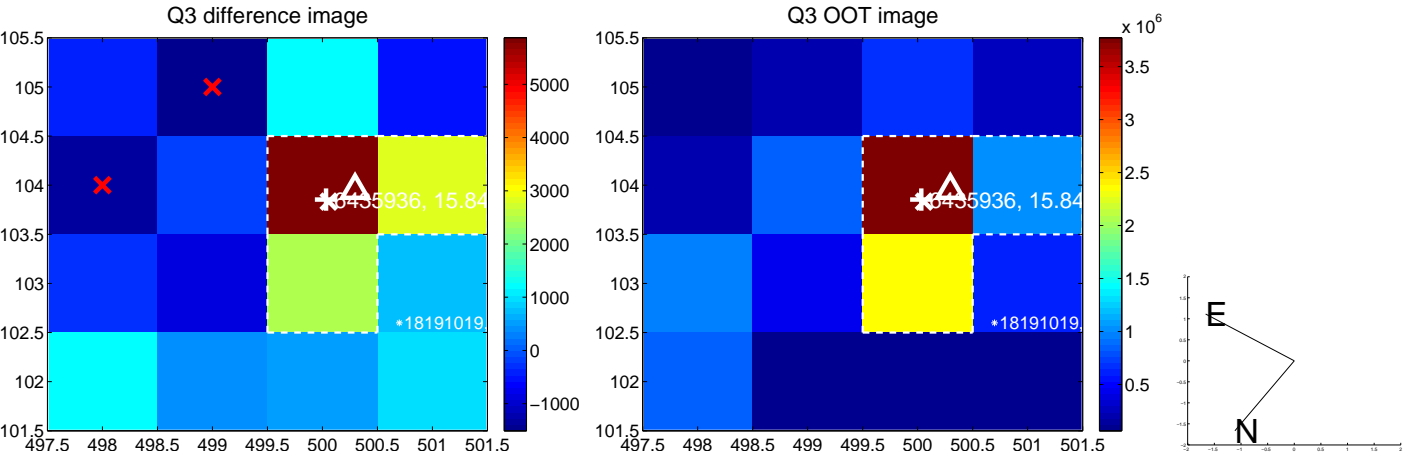
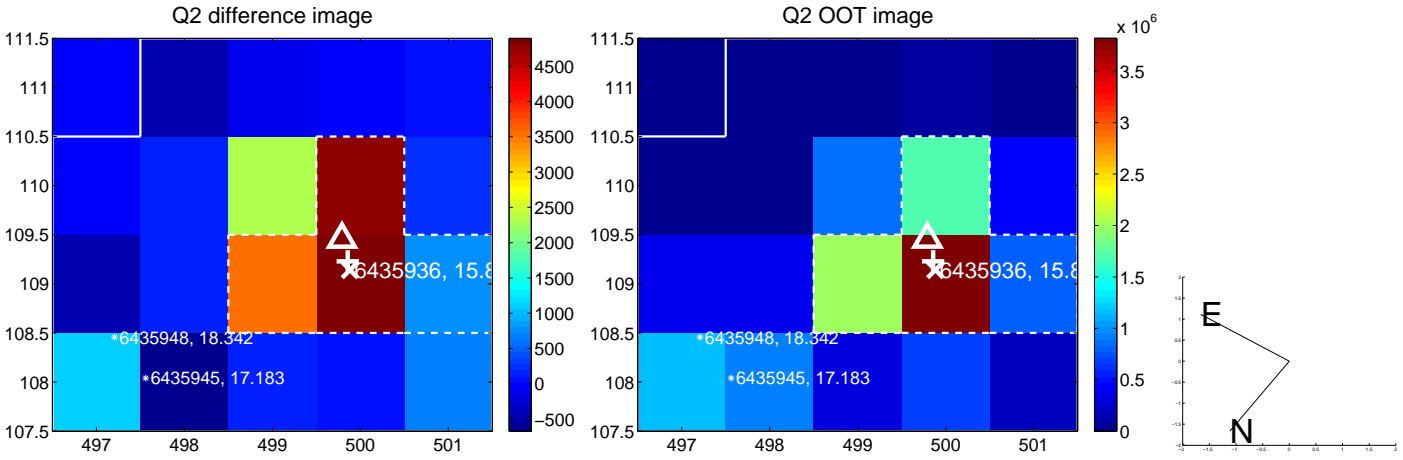
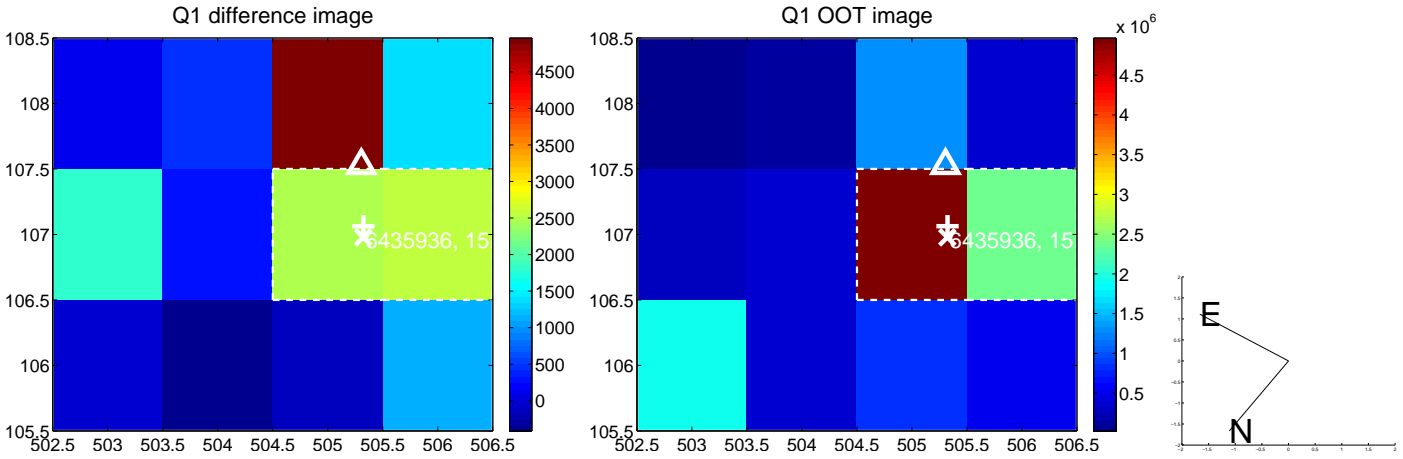
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.350 ± 0.188	1.86	0.104 ± 0.238	-0.334 ± 0.169
PRF-fit source offset from KIC position	0.601 ± 0.210	2.86	0.190 ± 0.260	-0.570 ± 0.184
photometric centroid source offset	0.43 ± 0.49	0.88	-0.24 ± 0.47	-0.35 ± 0.49

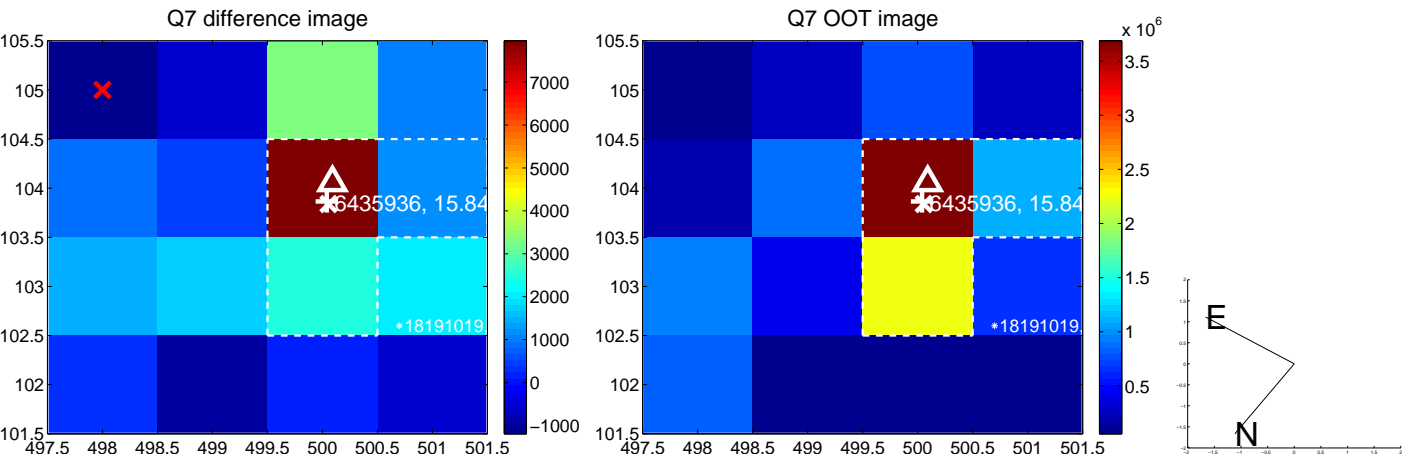
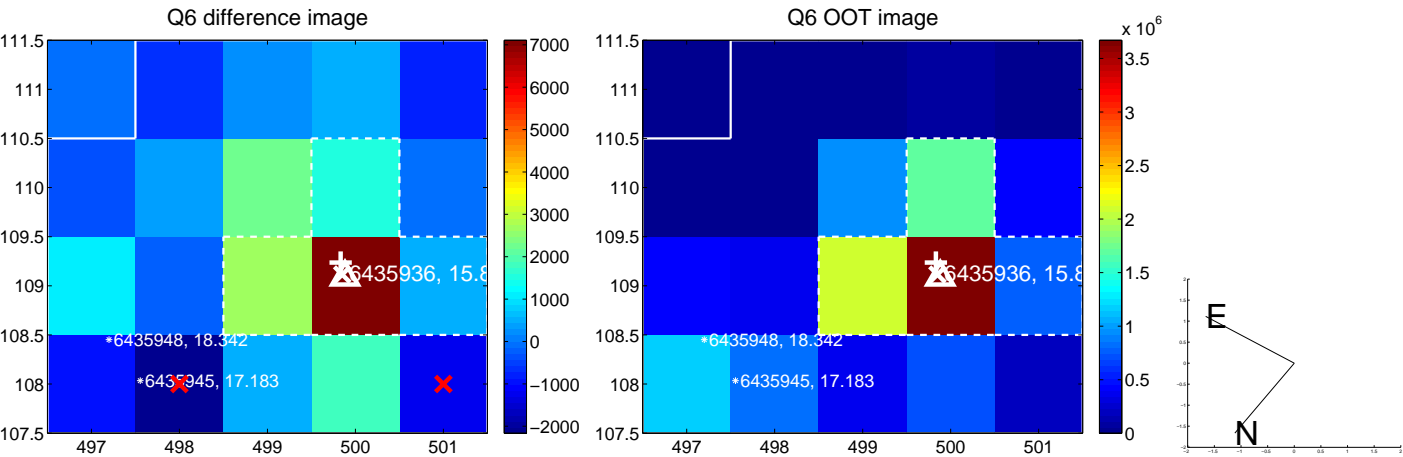
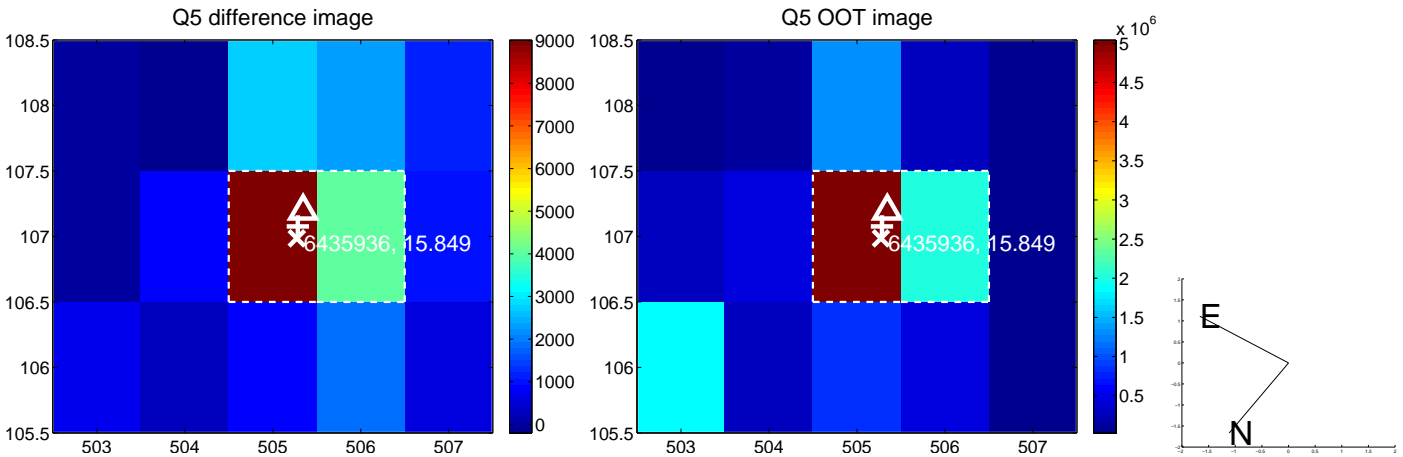


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

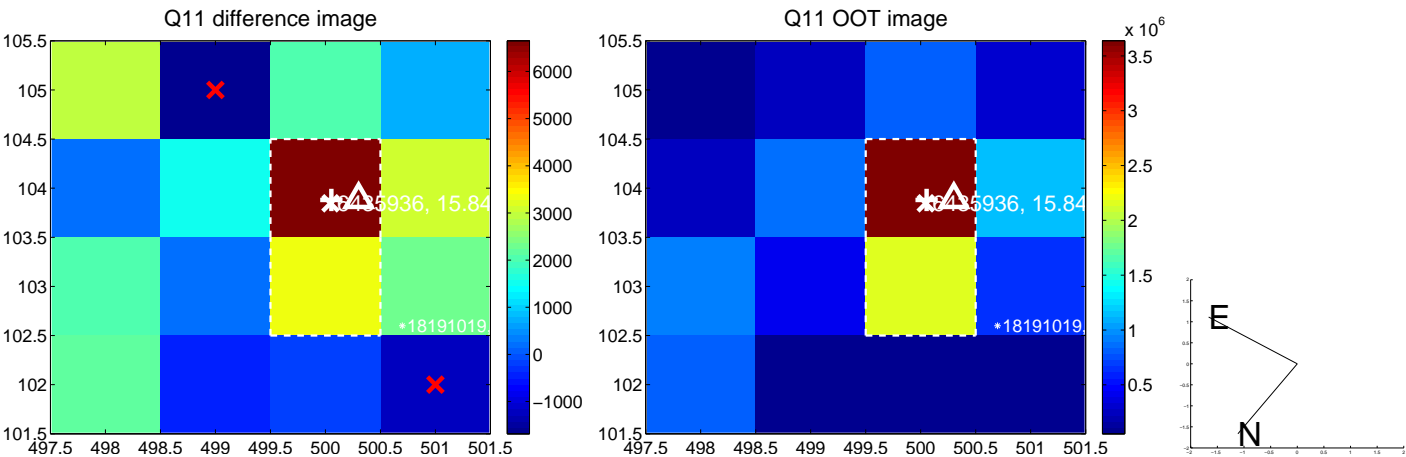
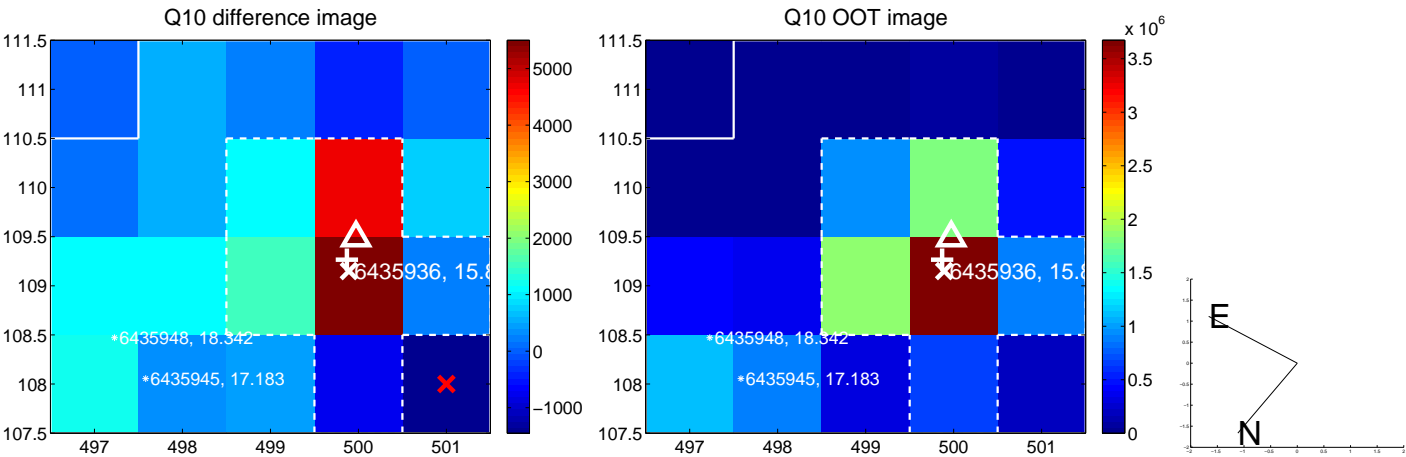
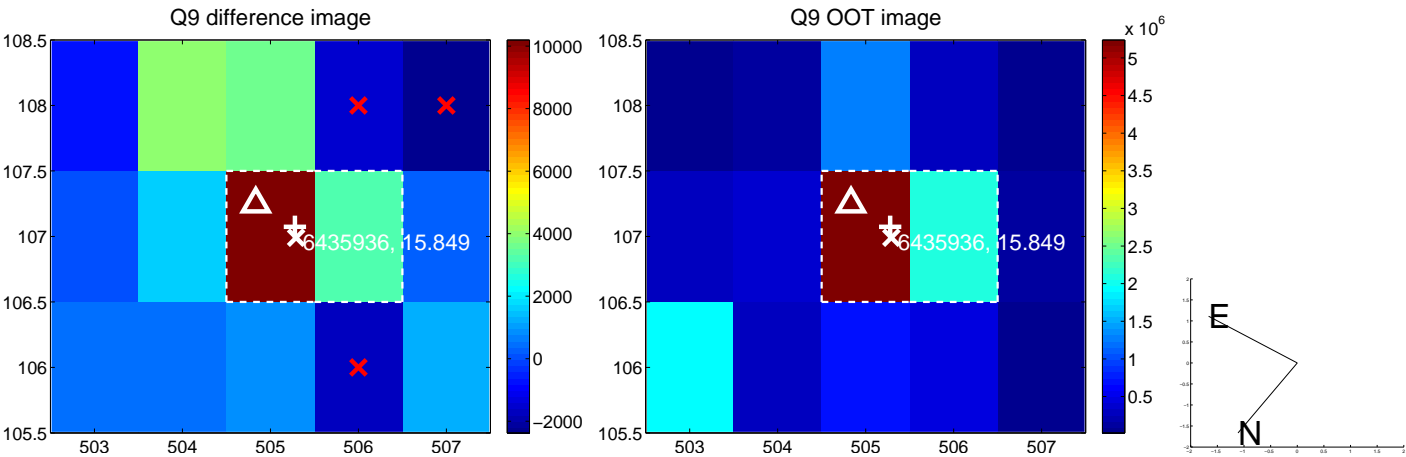
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



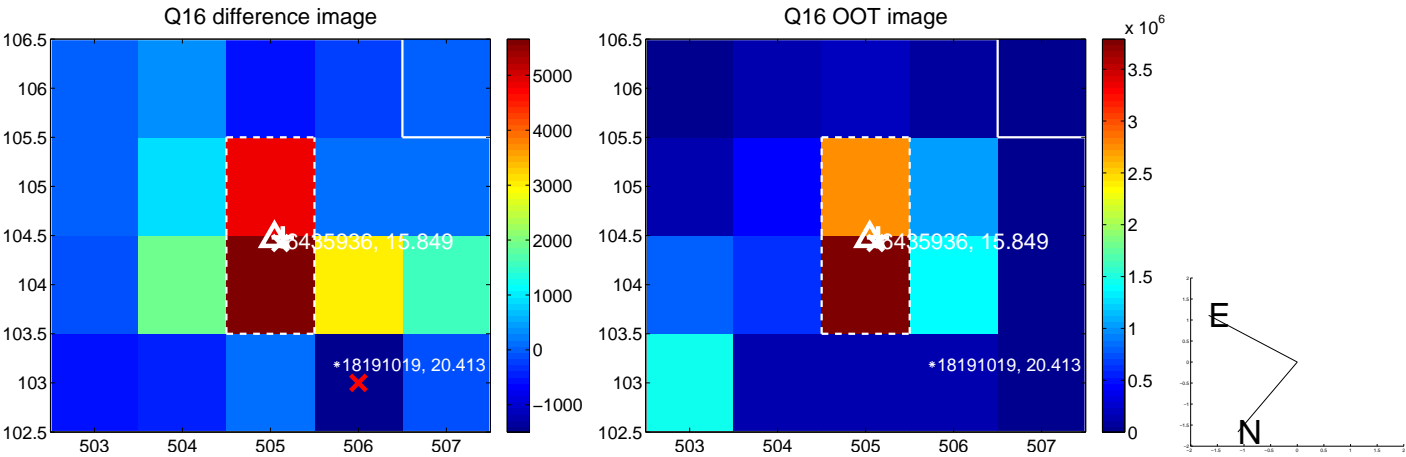
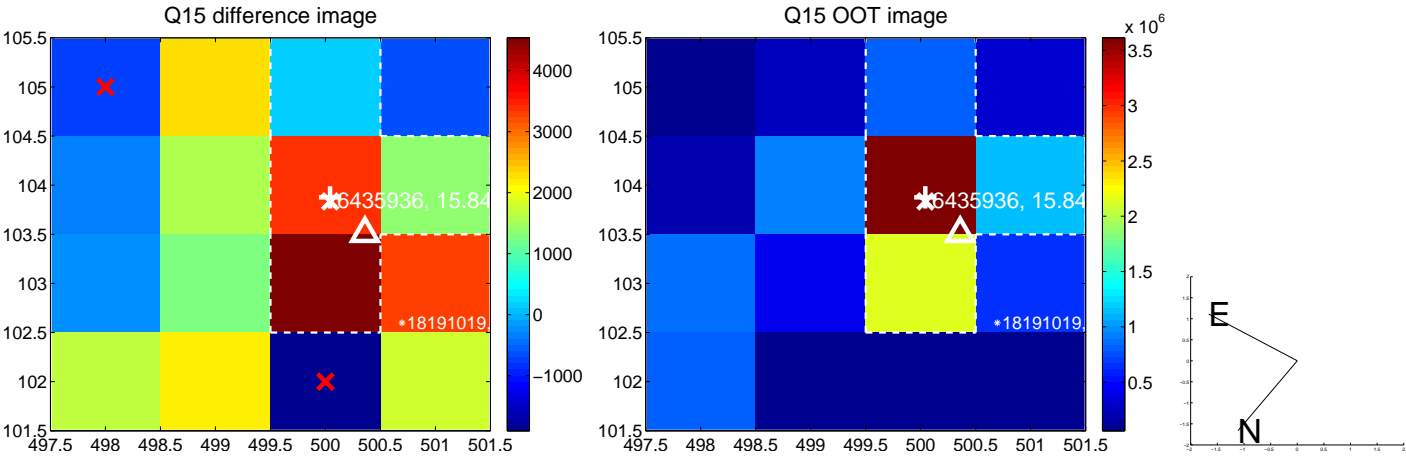
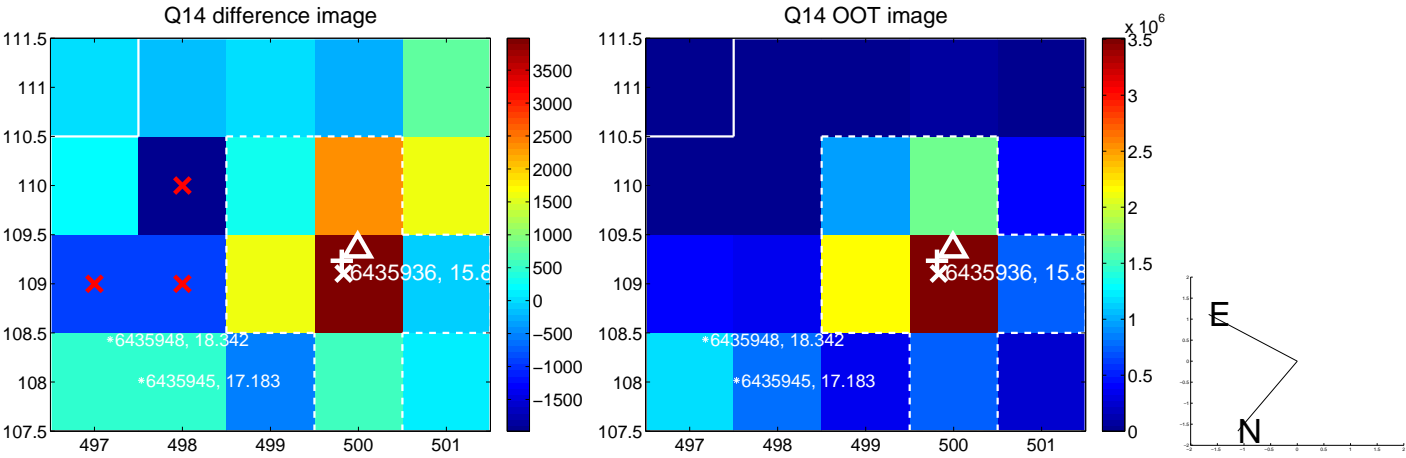
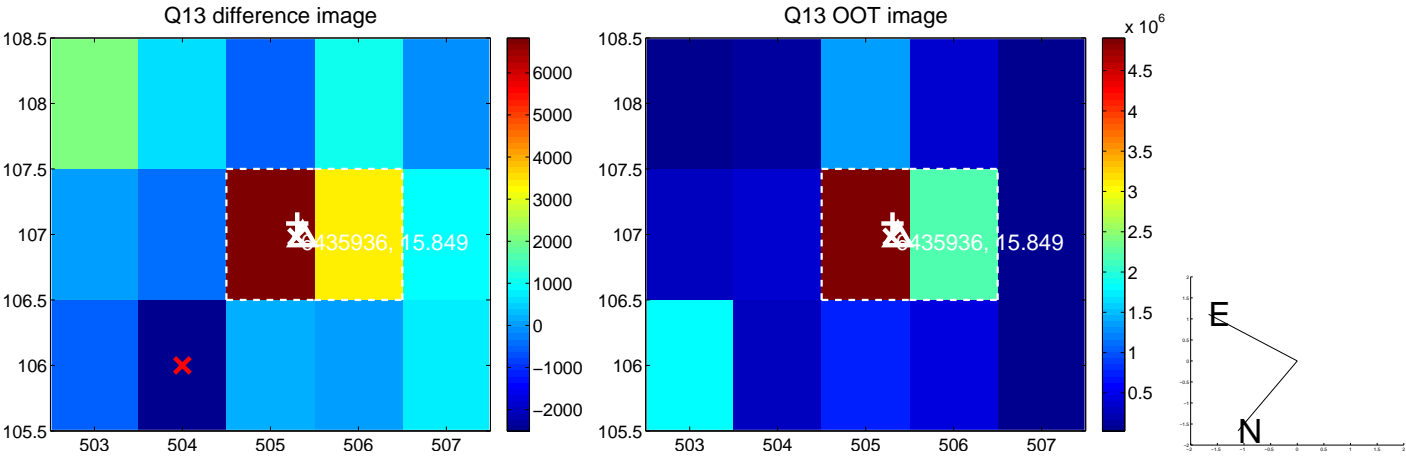
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



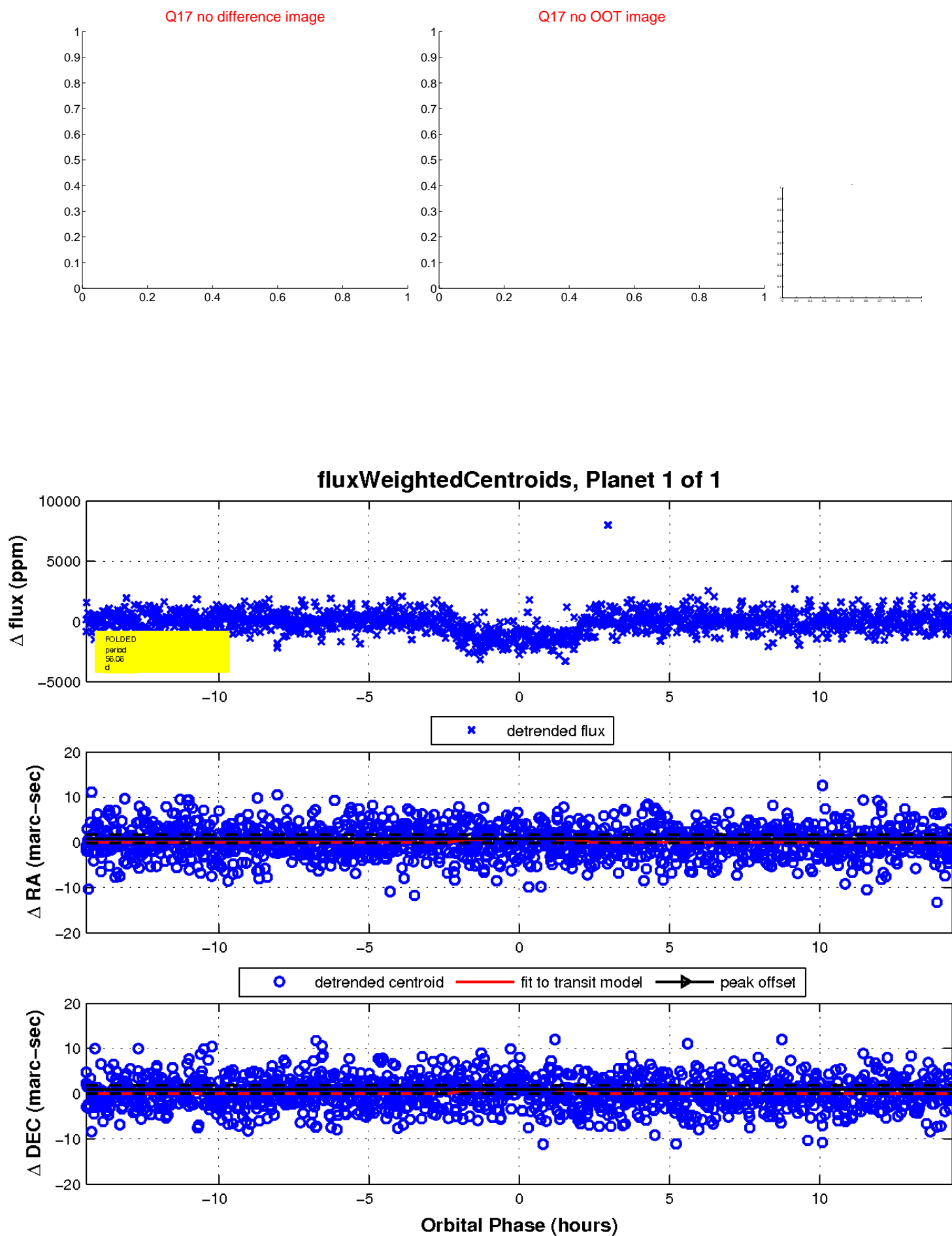
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

