

KIC 005953297

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})
005953297-01	OBS	2733.01	5.620120	132.948131	185.6	2.521	20.8	22.0	0.75	4868	1.25	84.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005953297-01	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.

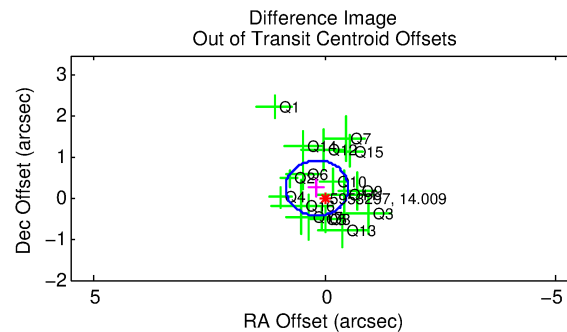
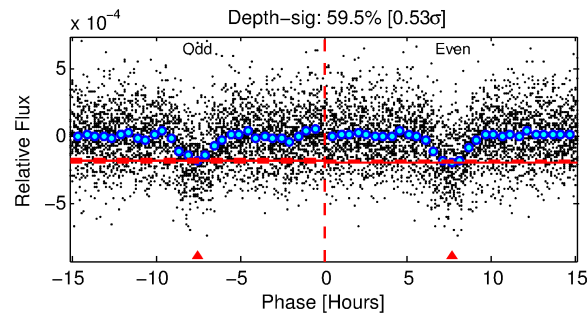
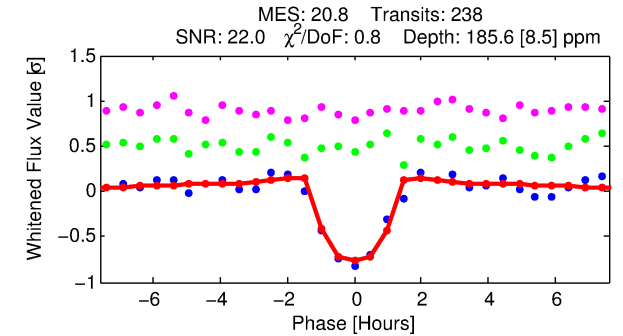
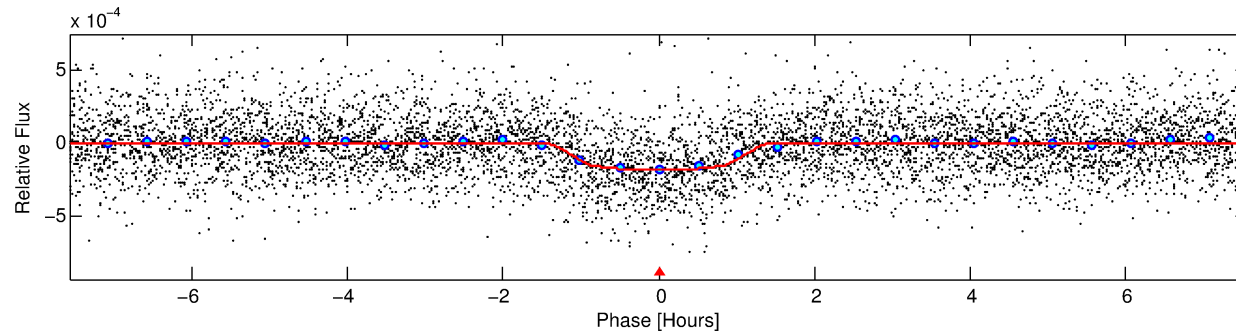
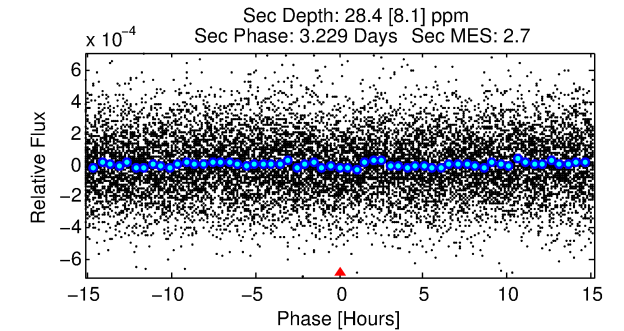
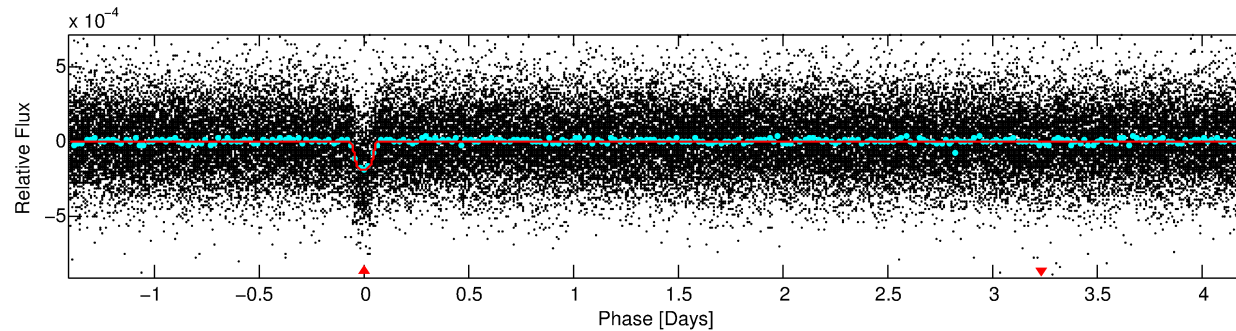
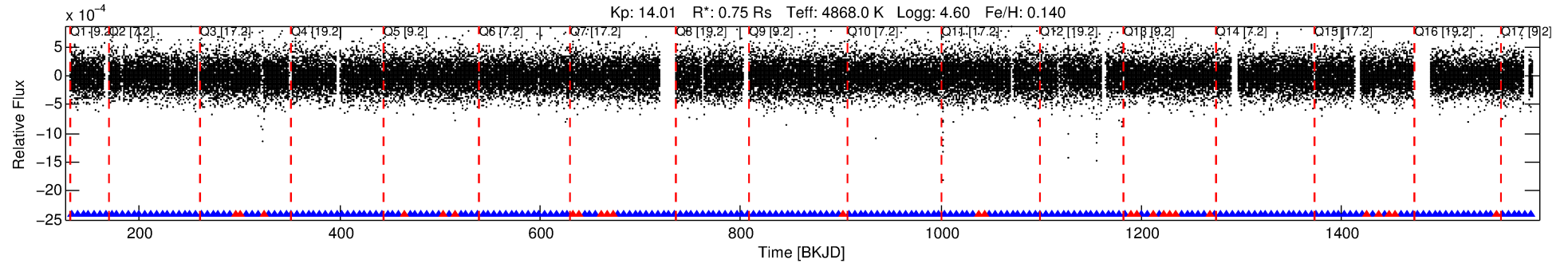
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005953297-01

No Significant Match Found

DV One-Page Summary

KIC: 5953297 Candidate: 1 of 1 Period: 5.620 d
KOI: K02733.01 Corr: 0.956



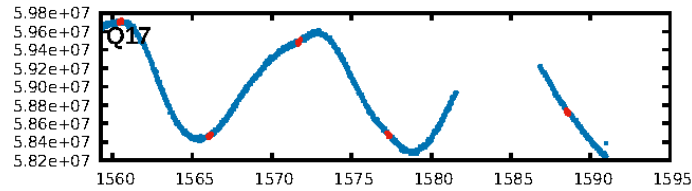
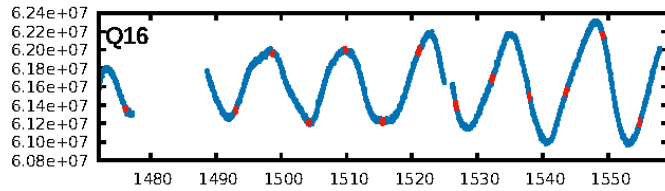
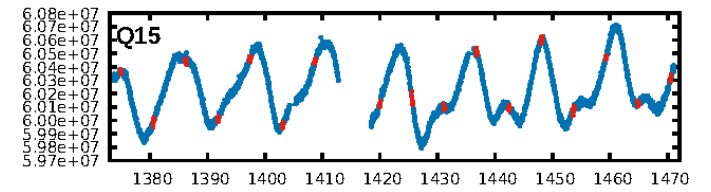
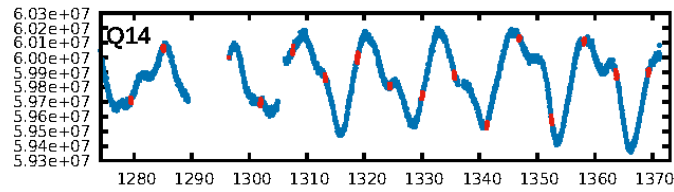
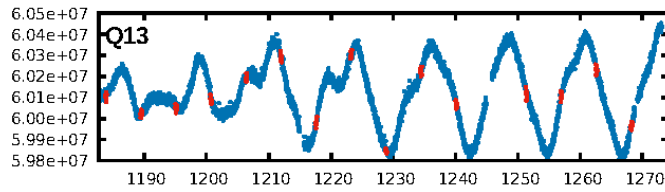
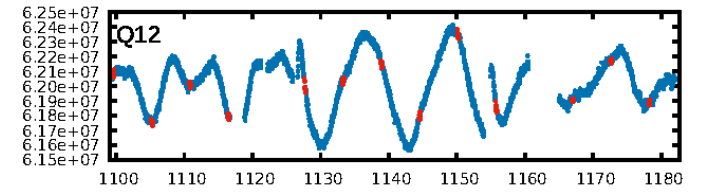
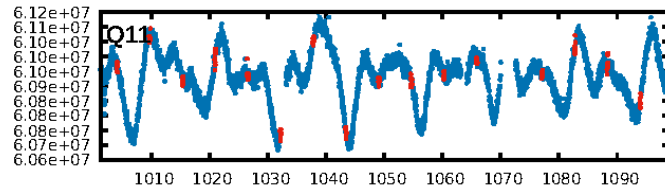
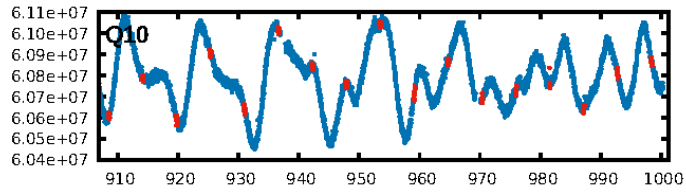
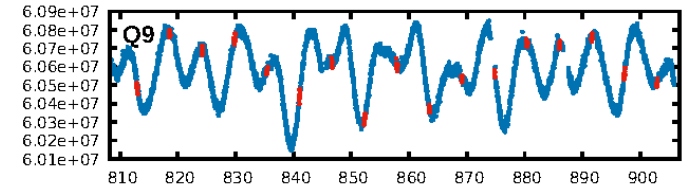
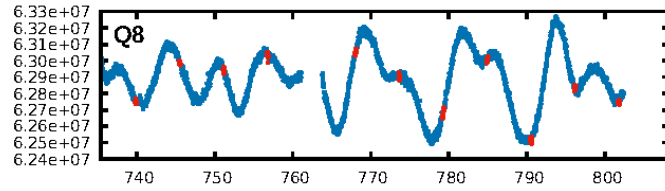
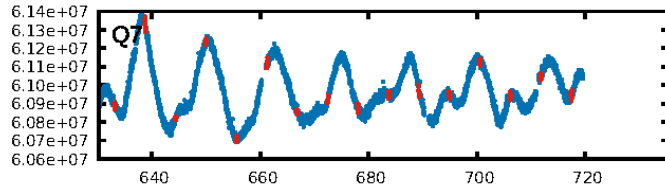
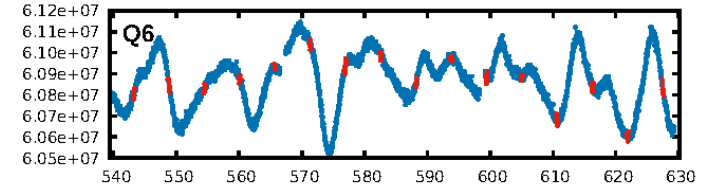
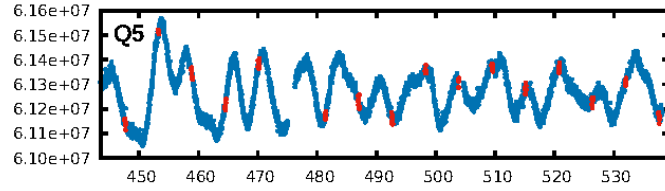
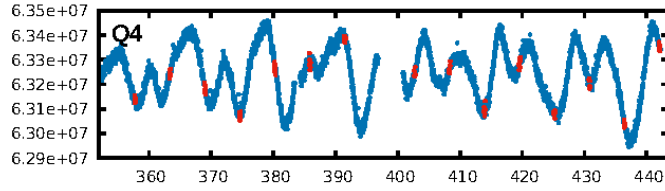
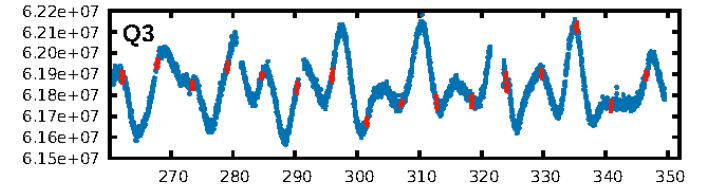
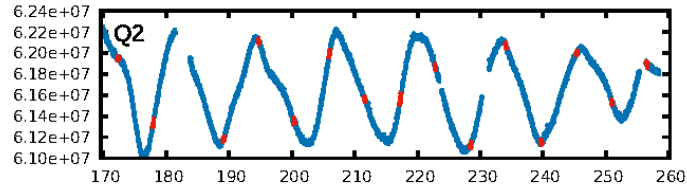
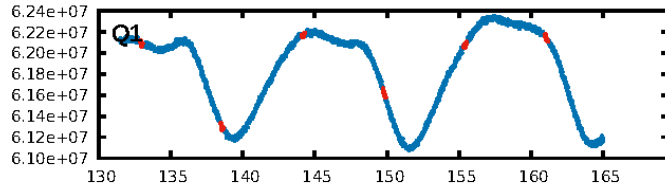
DV Fit Results:

Period = 5.62012 [0.00001] d
Epoch = 132.9481 [0.0019] BKJD
Rp/R* = 0.0154 [0.0047]
a/R* = 7.92 [9.40]
b = 0.90 [0.25]
Seff = 84.29 [8.99]
Teq = 773 [21] K
Rp = 1.25 [0.39] Re
a = 0.0576 [0.0032] AU
Ag = 33.08 [22.67] [1.41σ]
Teffp = 2865 [489] K [4.27σ]

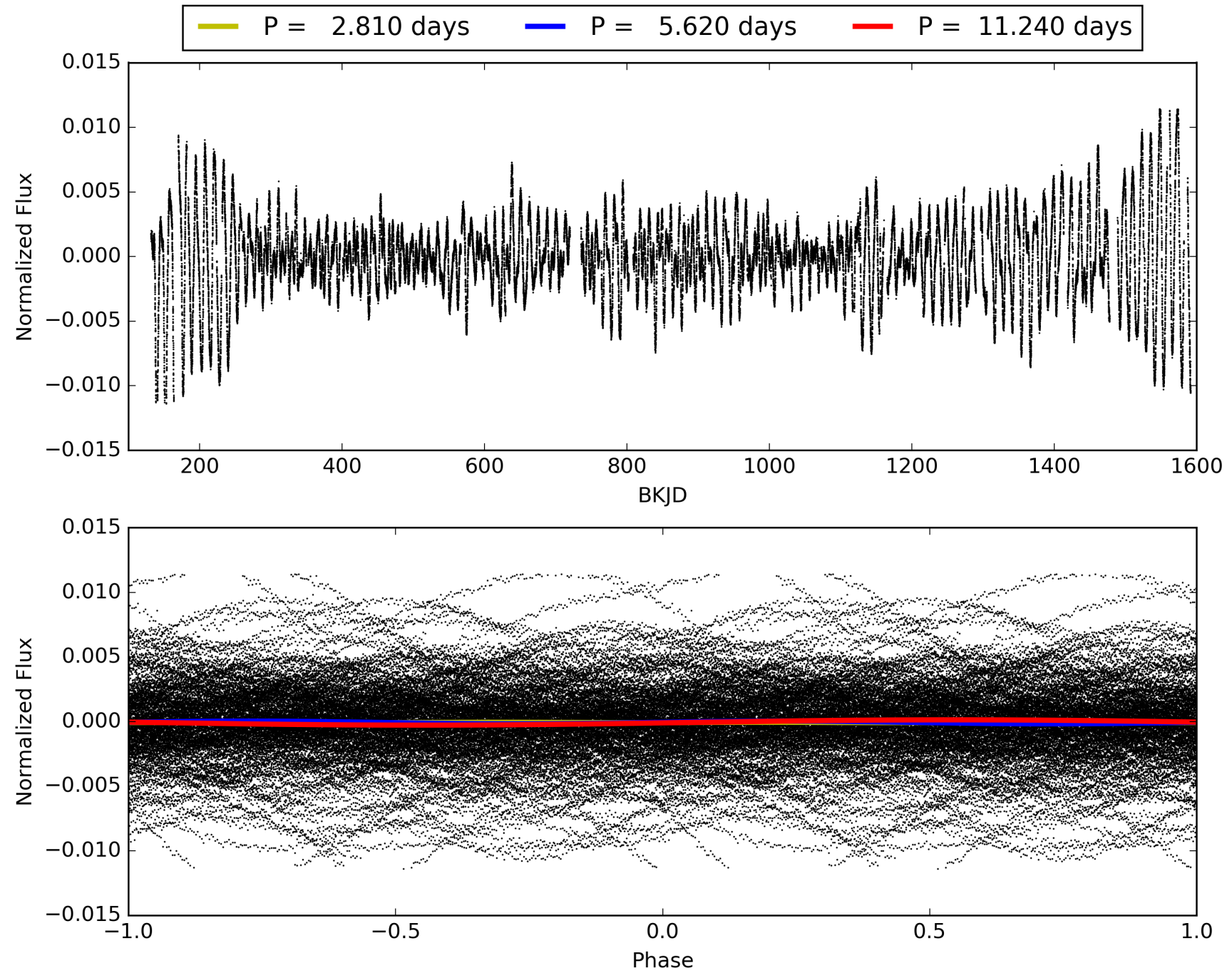
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-92
RollingBand-fgt: 0.89 [201/227]
GhostDiagnostic-chr: 107.7
Centroid-sig: 27.5%
Centroid-so: 0.642 arcsec [1.40σ]
OotOffset-rm: 0.302 arcsec [1.34σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.266 arcsec [1.26σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005953297-01, PDC Light Curves

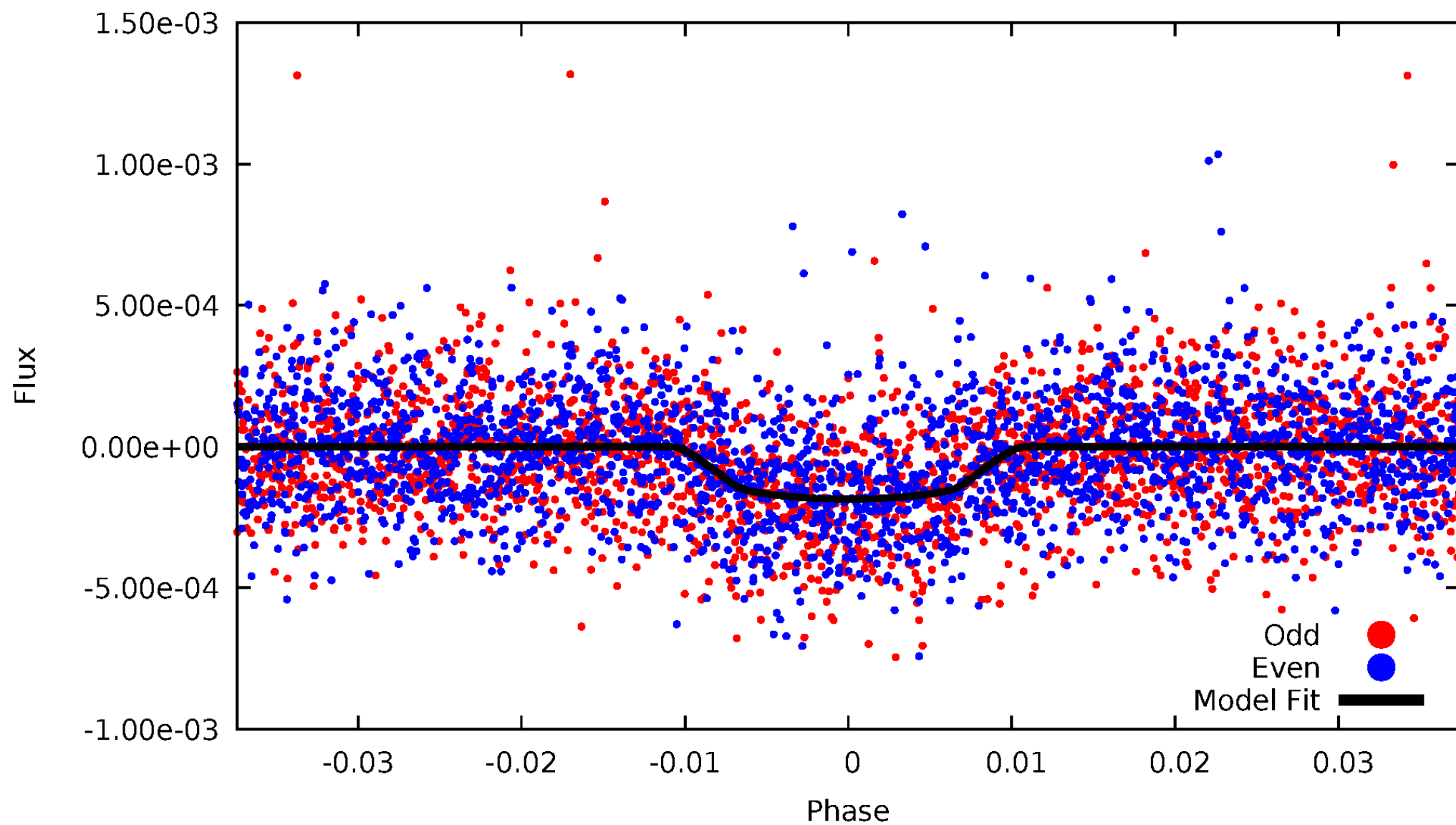


TCE 005953297-01



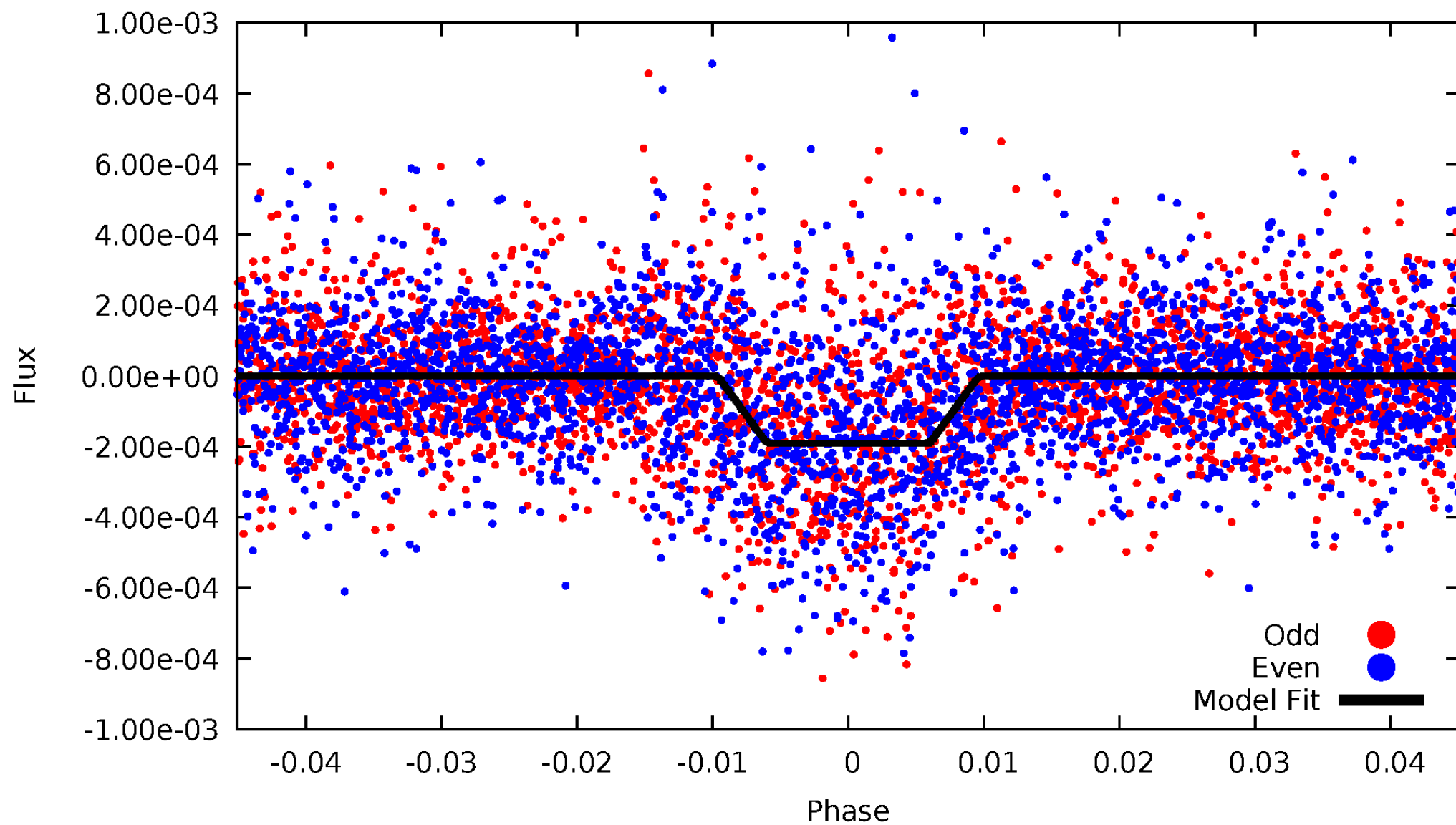
DV Odd/Even

TCE 005953297-01



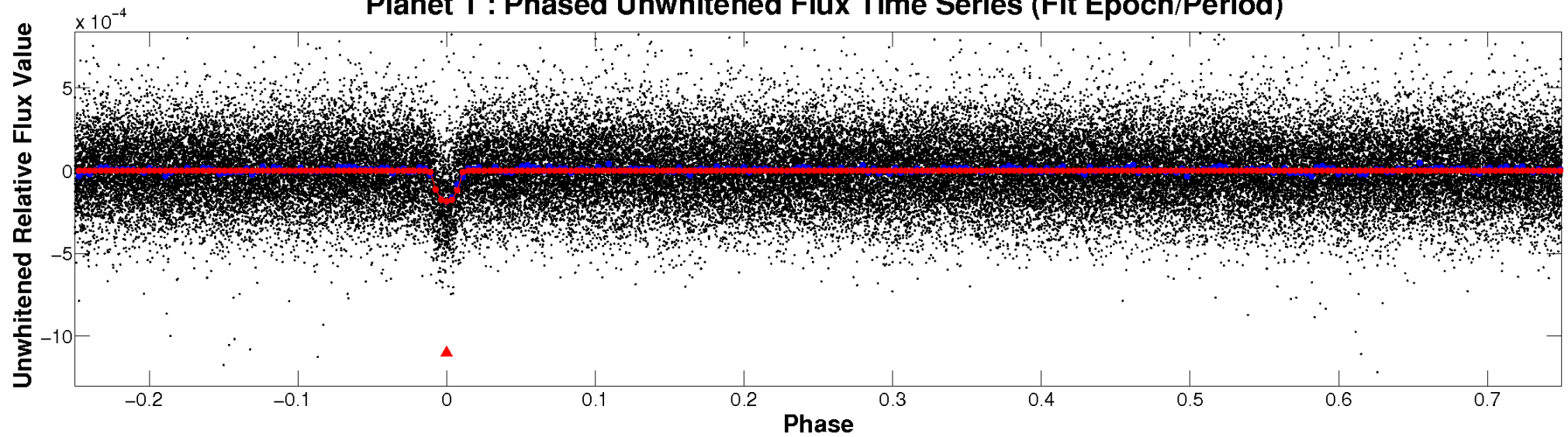
ALT Odd/Even

TCE 005953297-01

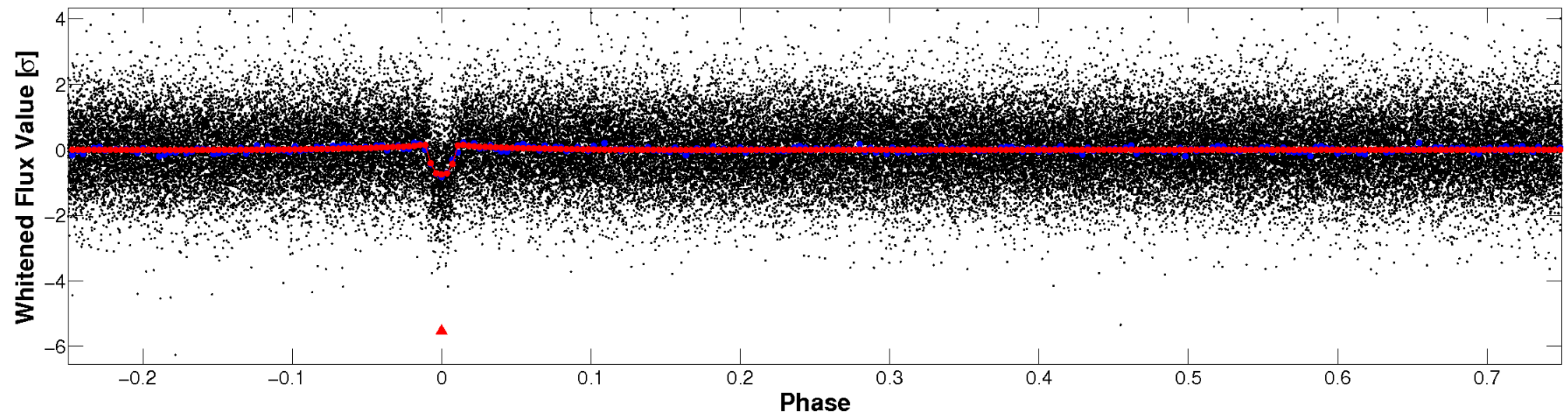


Non-Whitened Vs. Whitened Light Curve

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

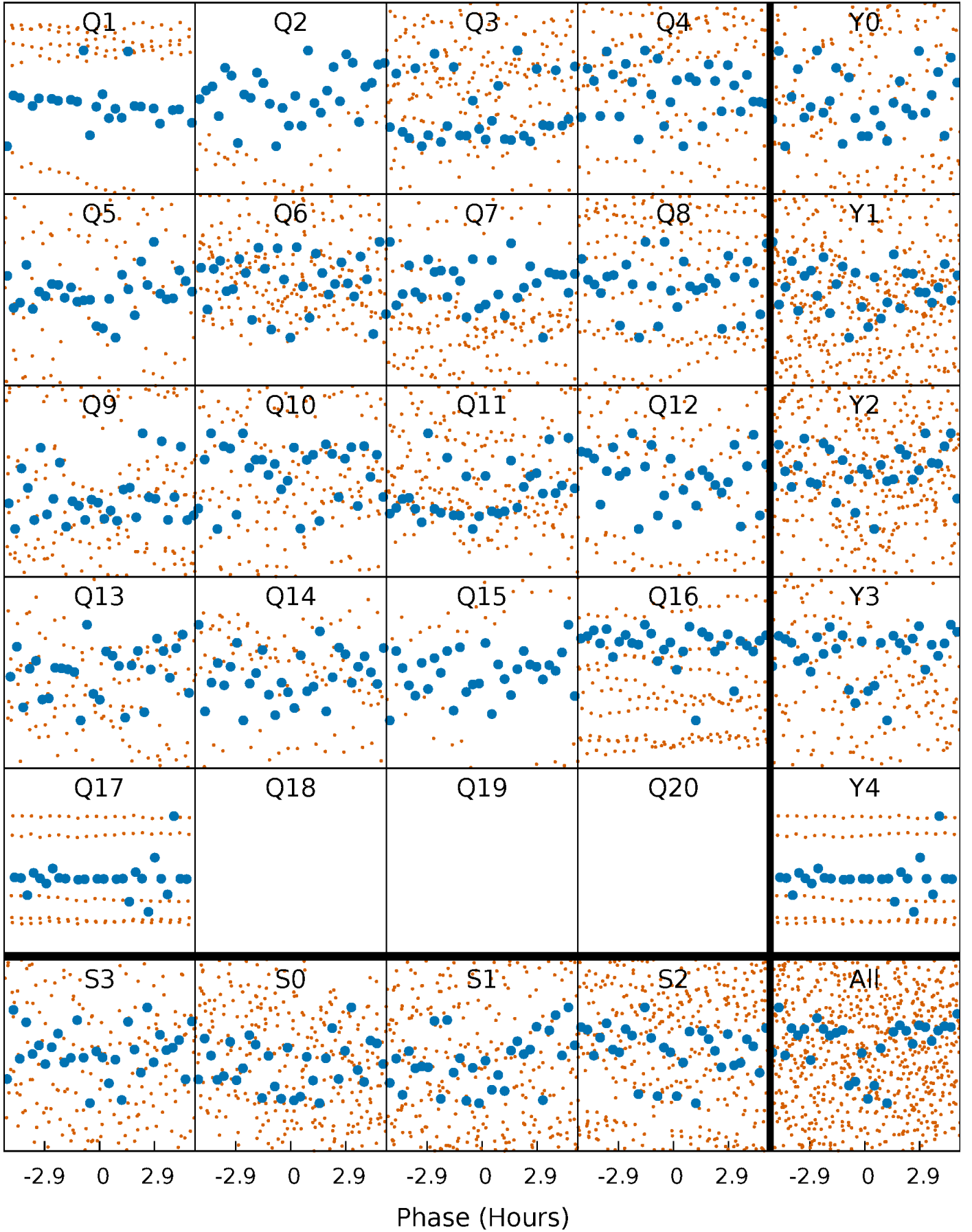


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



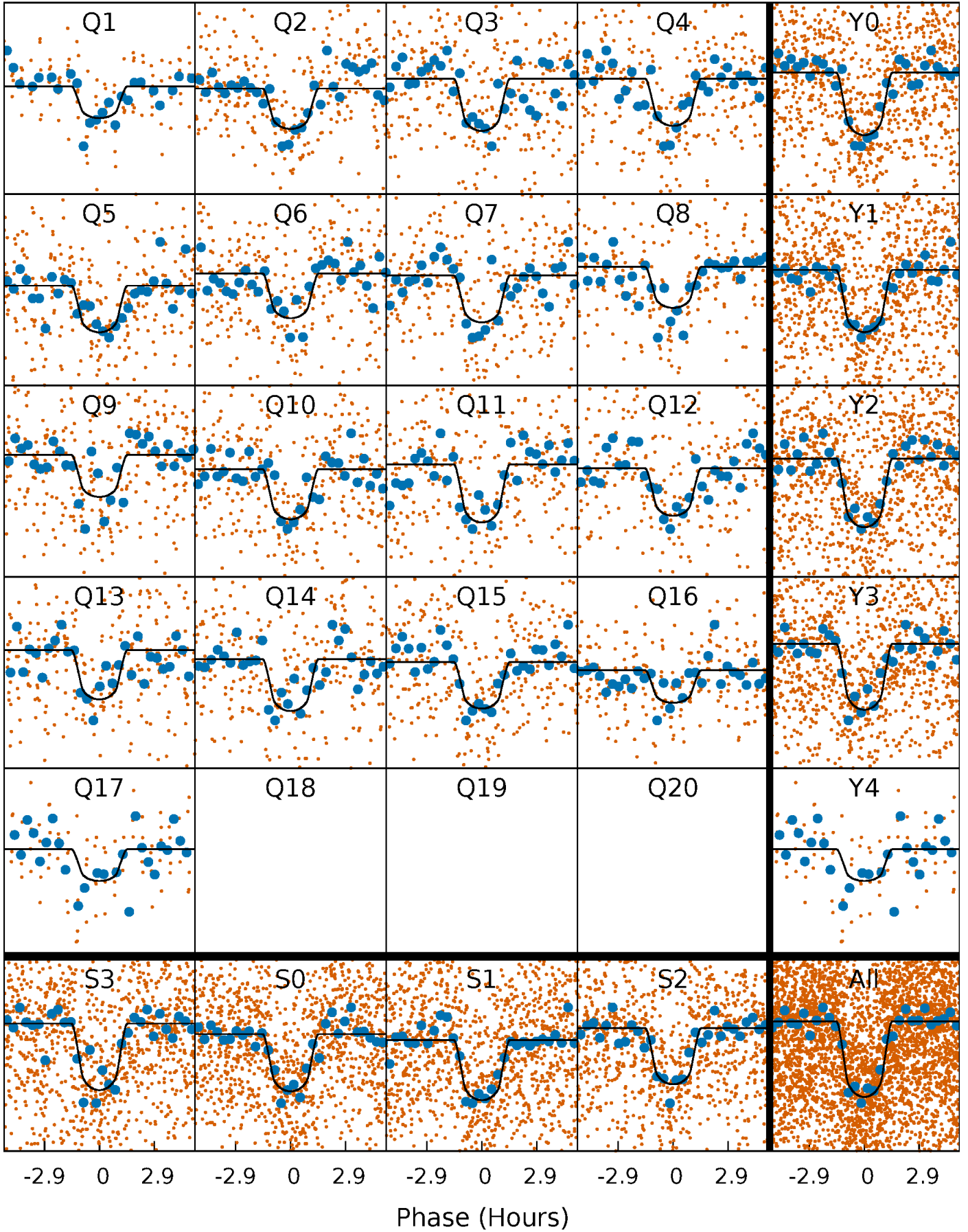
PDC Quarter-Phased Transit Curves

TCE 005953297-01 P= 5.620120 Days $T_0=132.948131$ (BKJD)



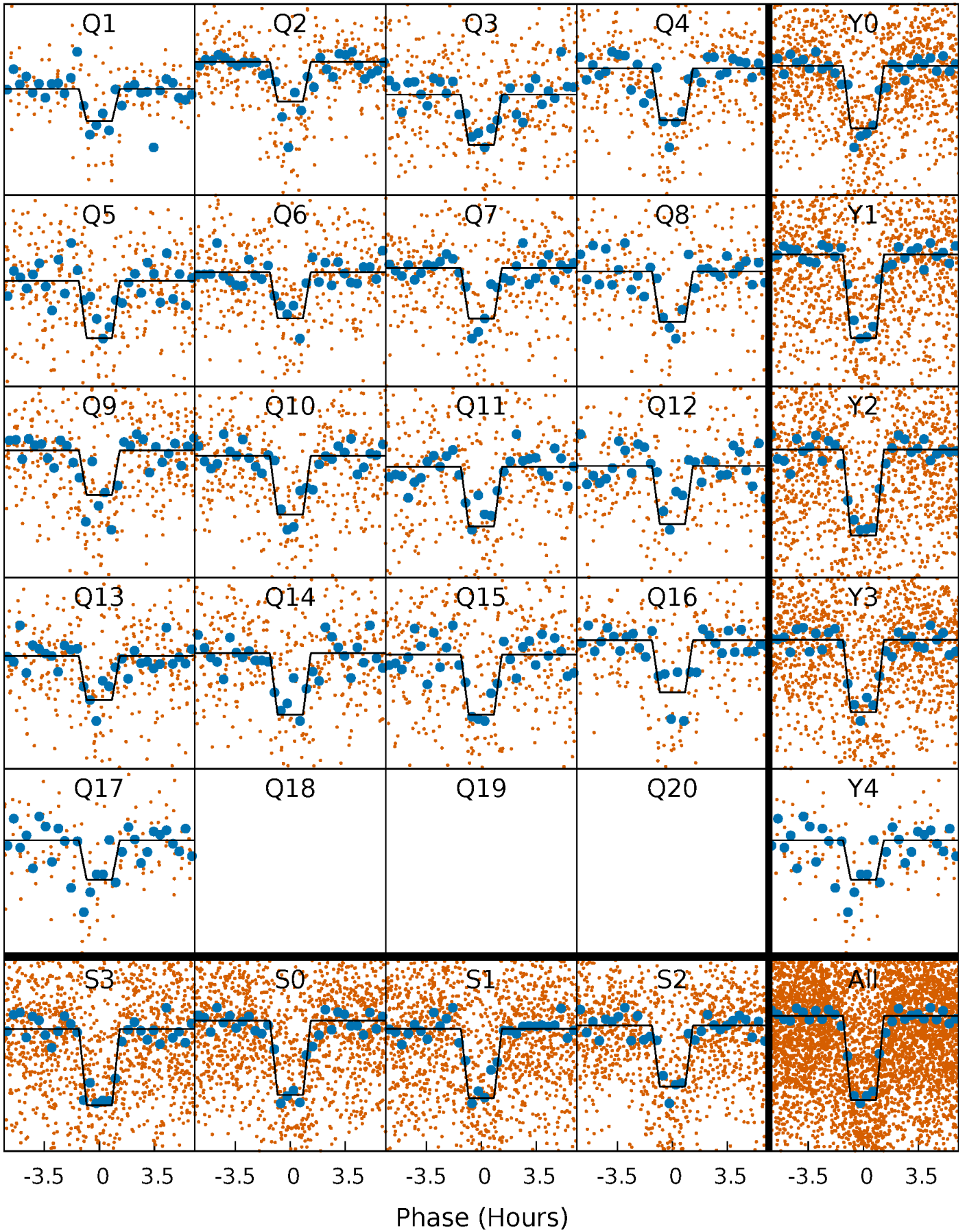
DV Quarter-Phased Transit Curves

TCE 005953297-01 P= 5.620120 Days $T_0=132.948131$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

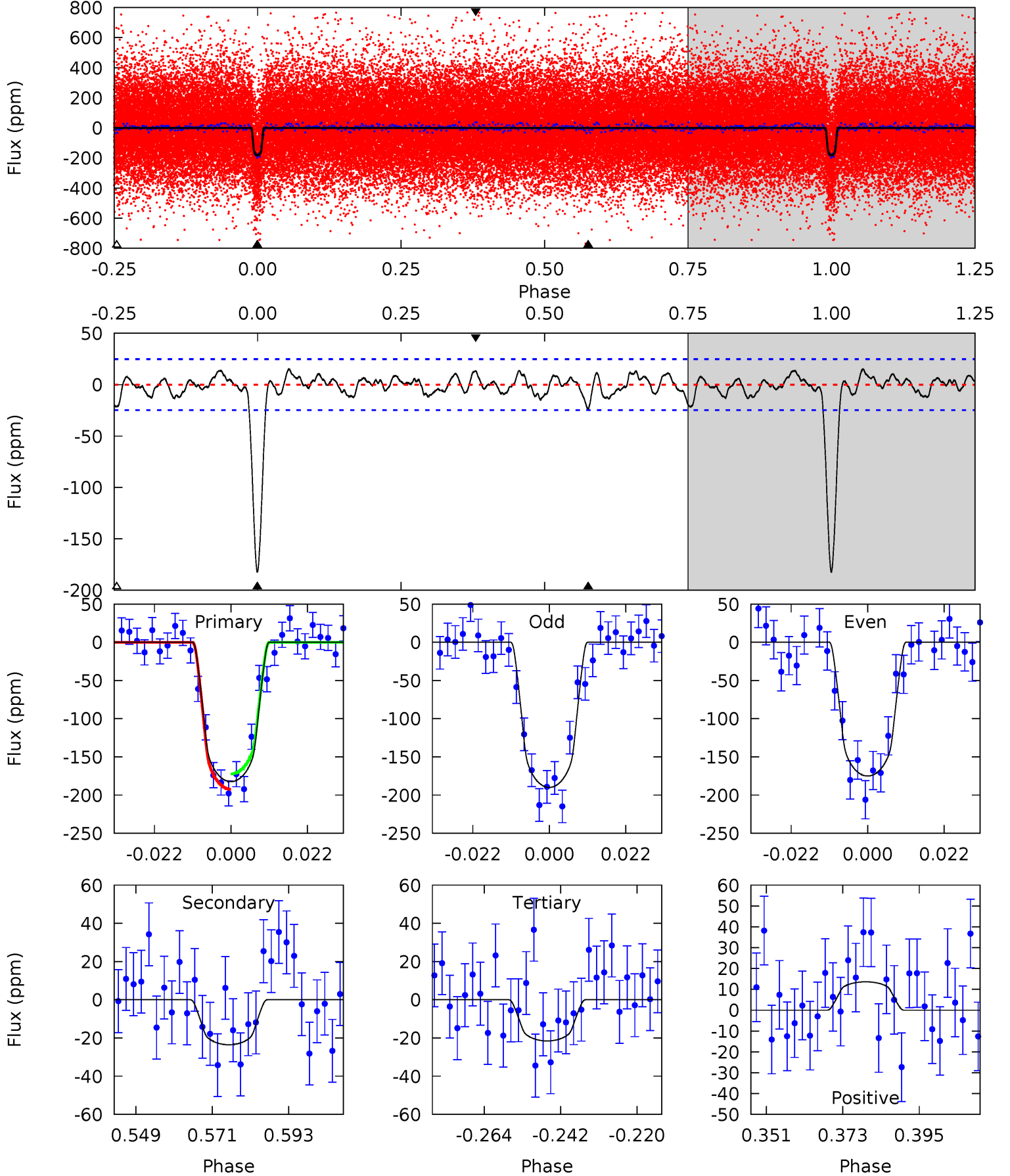
TCE 005953297-01 P= 5.620102 Days $T_0=132.950047$ (BKJD)



DV Model-Shift Uniqueness Test

005953297-01, P = 5.620120 Days, E = 127.328011 Days

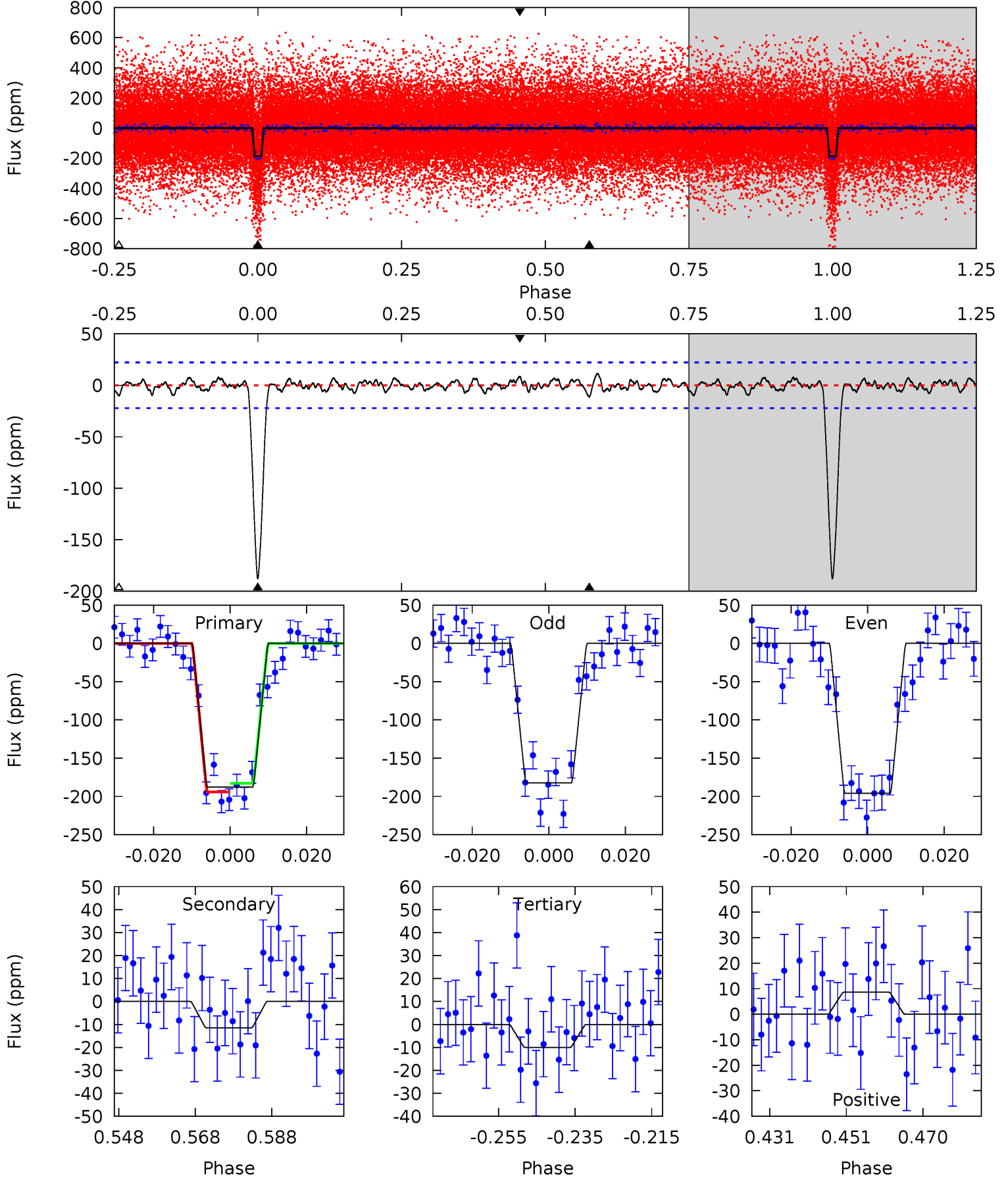
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	4.63	4.24	2.68	4.87	2.29	1.40	31.6	33.2	0.39	1.96	1.47	0.97	0.08	1.98



Alt Model-Shift Uniqueness Test

005953297-01, P = 5.620102 Days, E = 127.329945 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.5	2.53	2.22	1.91	4.90	2.33	0.81	39.3	39.6	0.32	0.62	1.51	0.99	0.06	1.26



Stellar Parameters For KIC 005953297

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4868^{+78}_{-78}	$4.600^{+0.014}_{-0.049}$	$0.140^{+0.150}_{-0.150}$	$0.746^{+0.045}_{-0.030}$	$0.814^{+0.029}_{-0.050}$	$2.762^{+0.255}_{-0.418}$
	+2%/-2%	+0%/-1%	+107%/-107%	+6%/-4%	+4%/-6%	+9%/-15%
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 005953297-01 / KOI 2733.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 5	$1.27^{+0.43}_{-0.40}$	1089^{+22}_{-20}	3244^{+426}_{-291}	27^{+32}_{-13}
Alt.	-11 ± 5	$1.12^{+0.40}_{-0.37}$	1089^{+23}_{-21}	3004^{+461}_{-307}	16^{+24}_{-9}

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 $A_{obs} \gg 1.0$

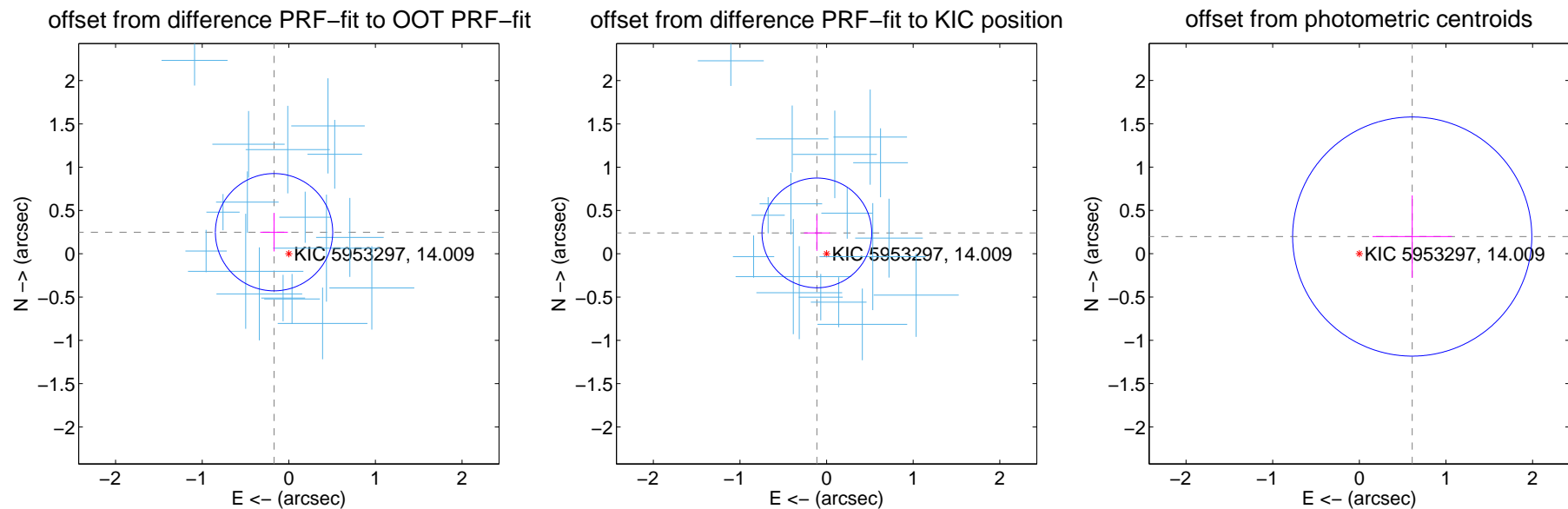
DV Centroid Data

Supplemental centroid analysis for 005953297-01. Kepler magnitude: 14.01. Transit SNR 21.97

There are 17 quarters with good PRF difference image offsets

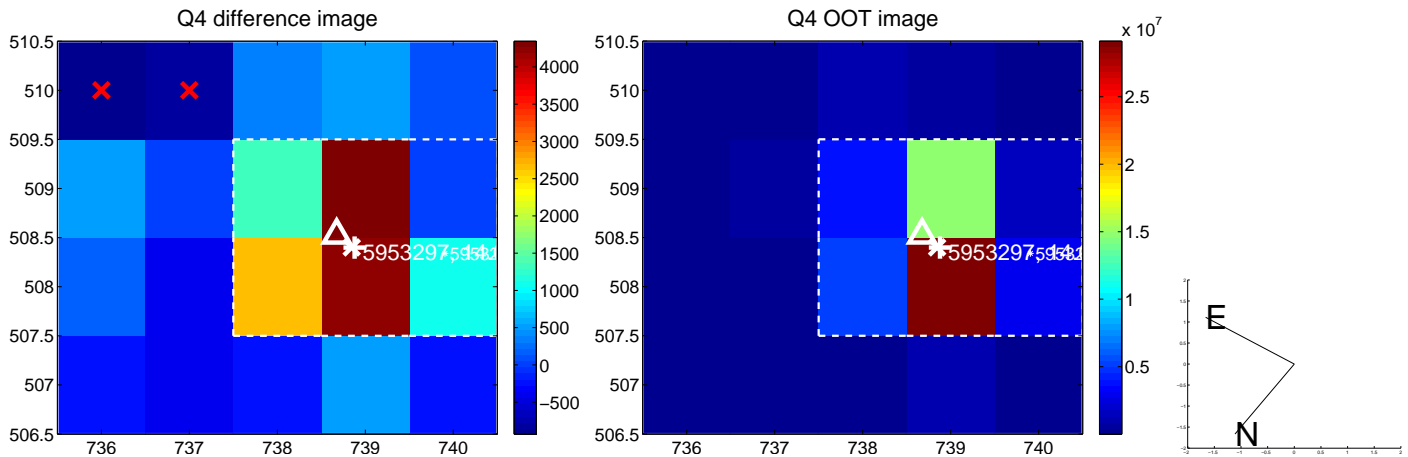
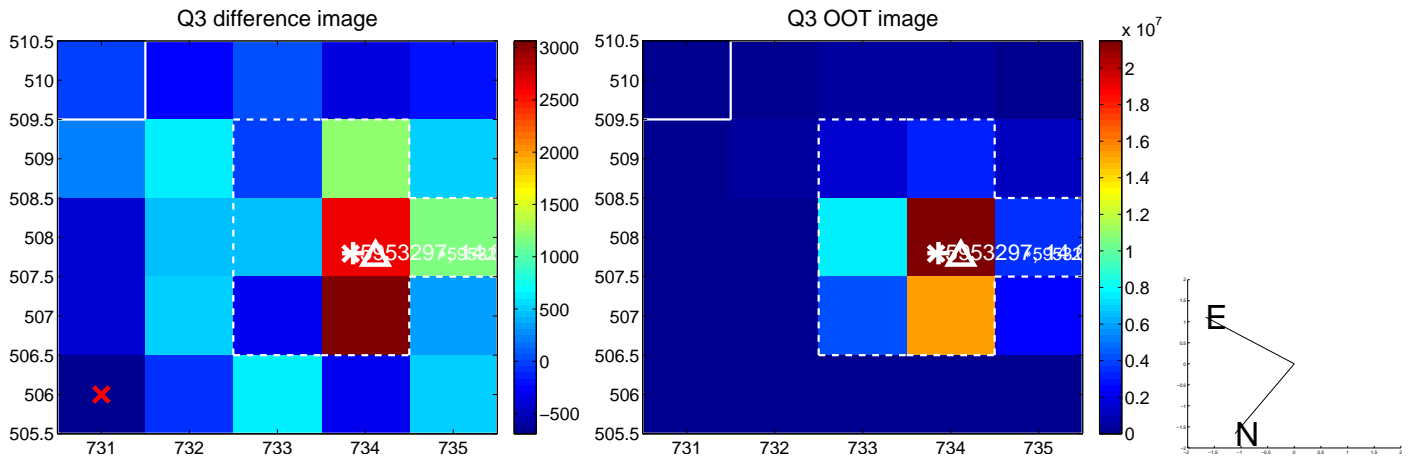
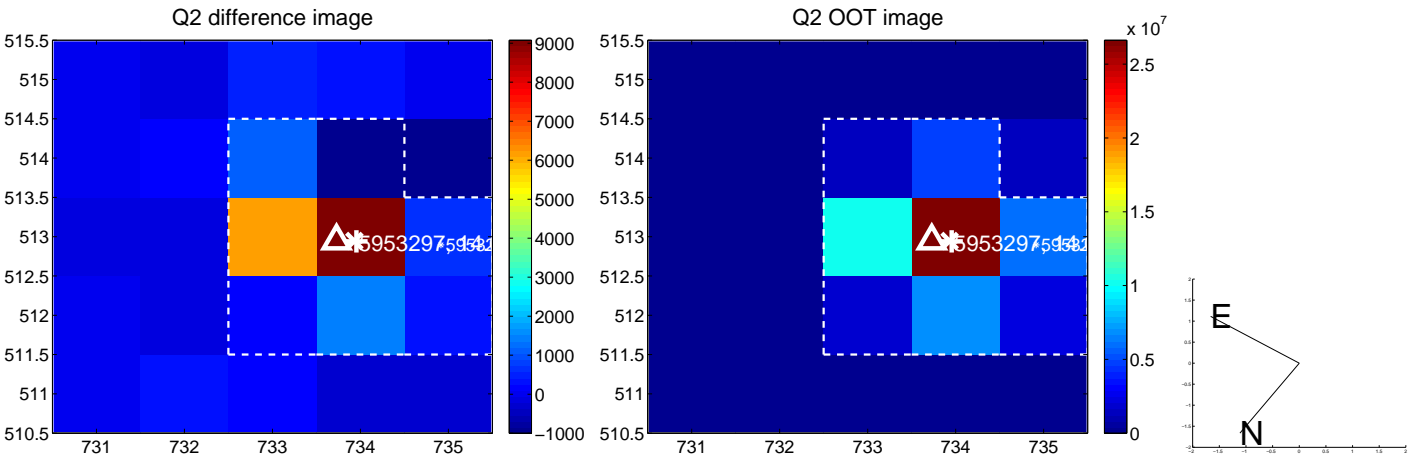
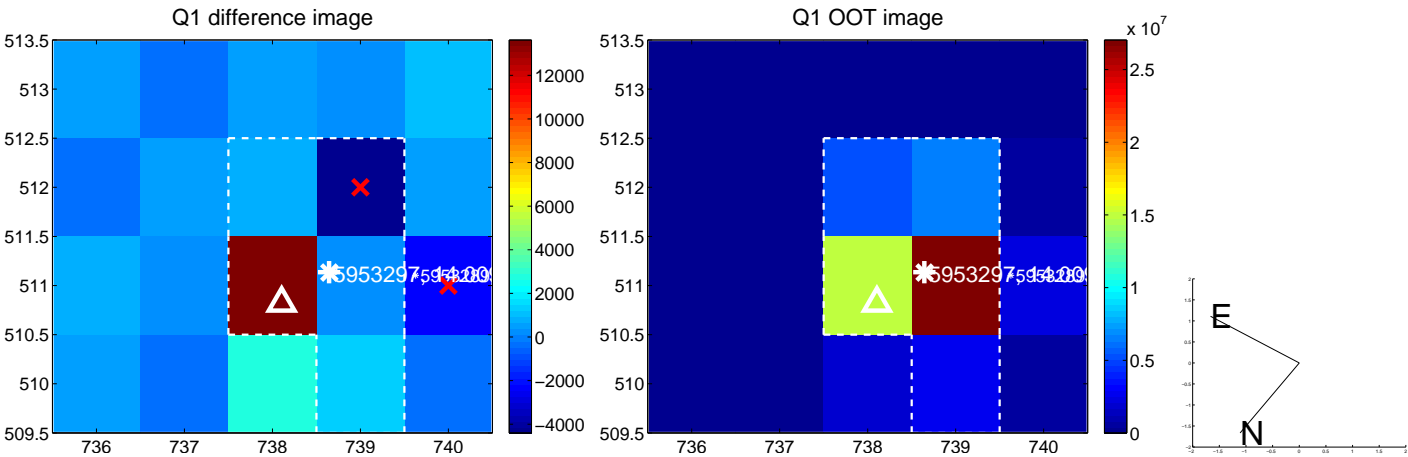
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.302 ± 0.226	1.34	0.171 ± 0.159	0.249 ± 0.222
PRF-fit source offset from KIC position	0.266 ± 0.211	1.26	0.112 ± 0.149	0.241 ± 0.207
photometric centroid source offset	0.64 ± 0.46	1.40	-0.61 ± 0.46	0.20 ± 0.48

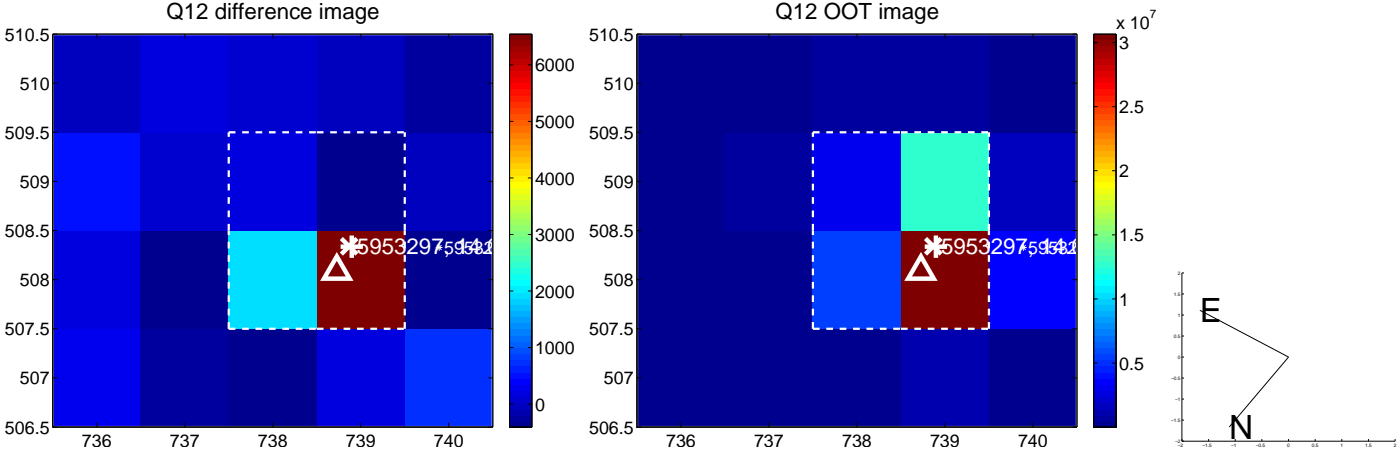
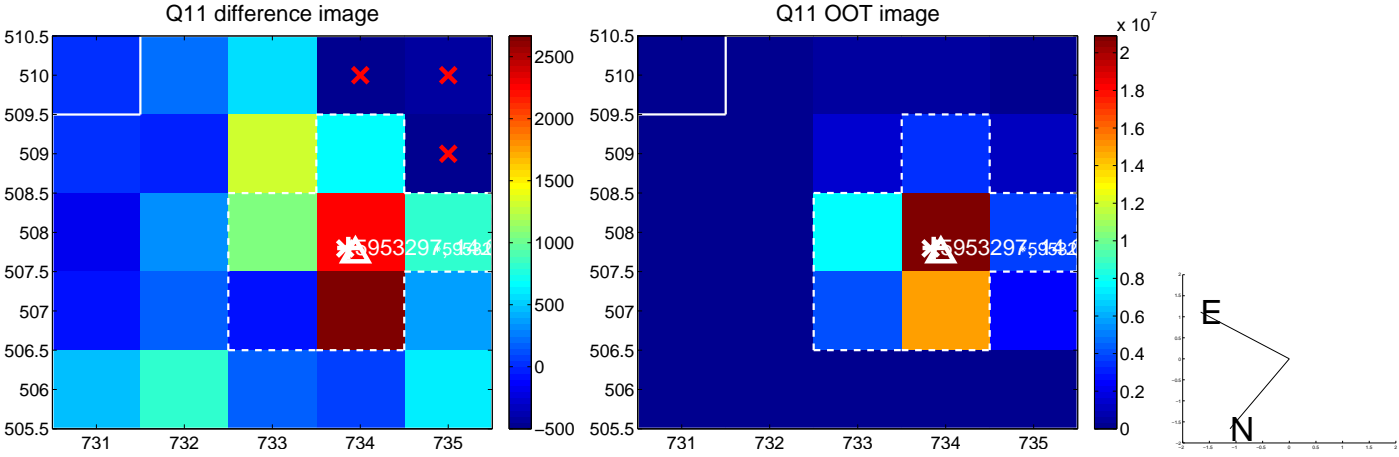
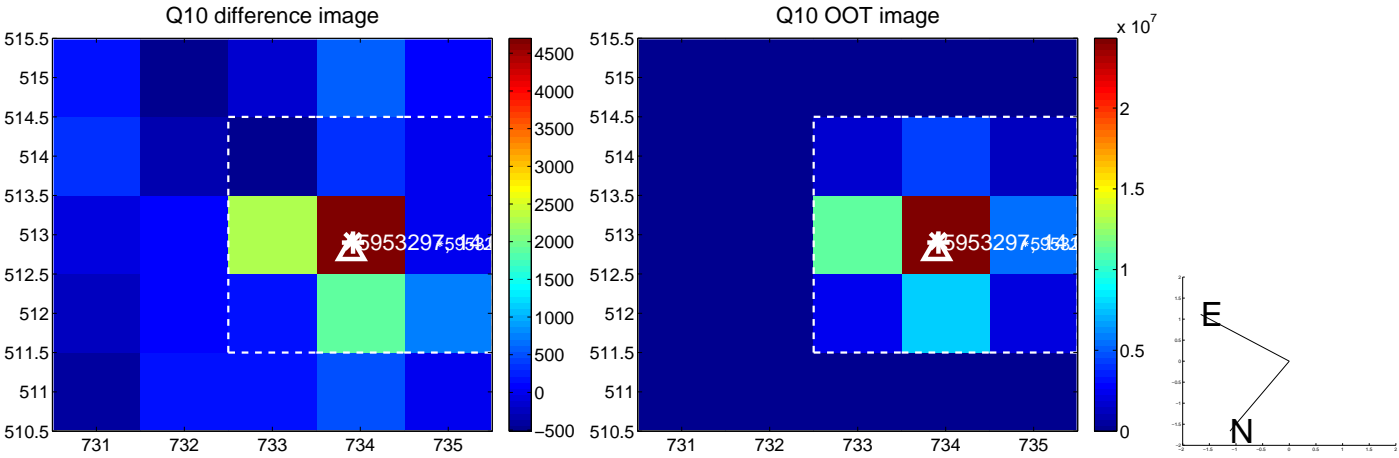
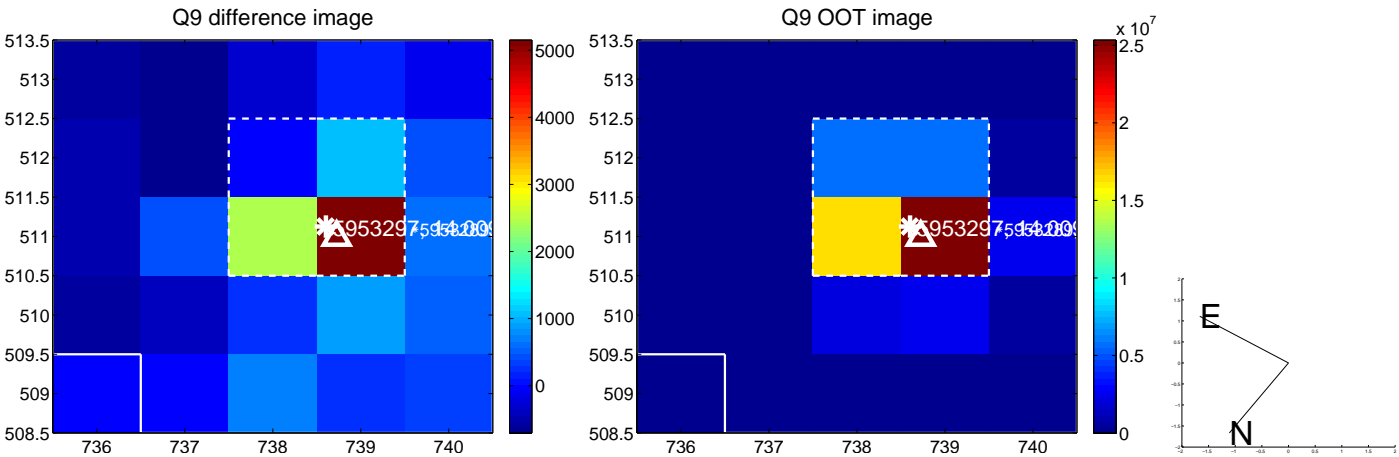


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

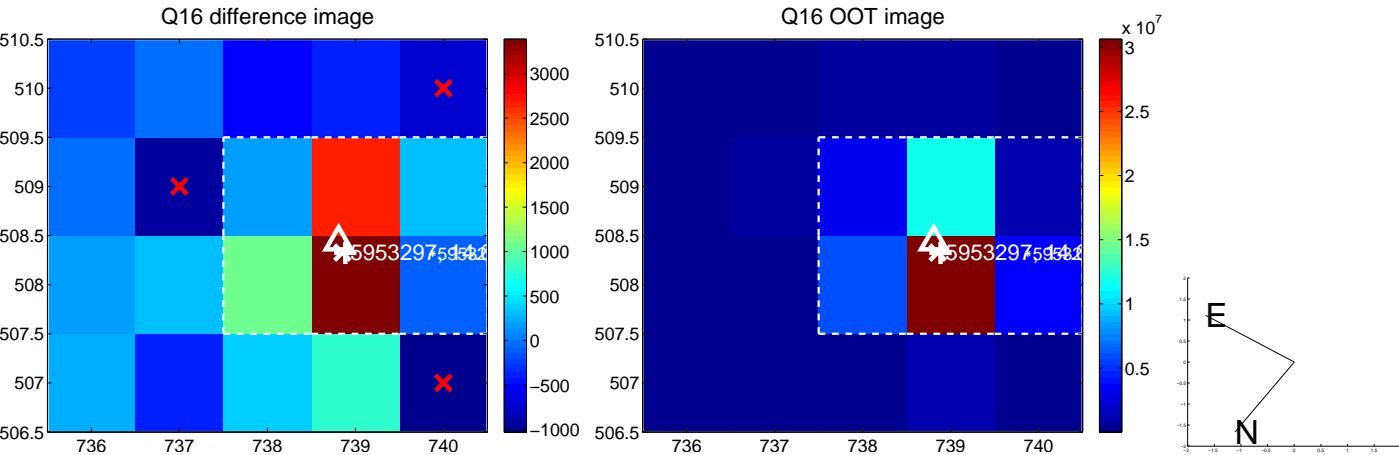
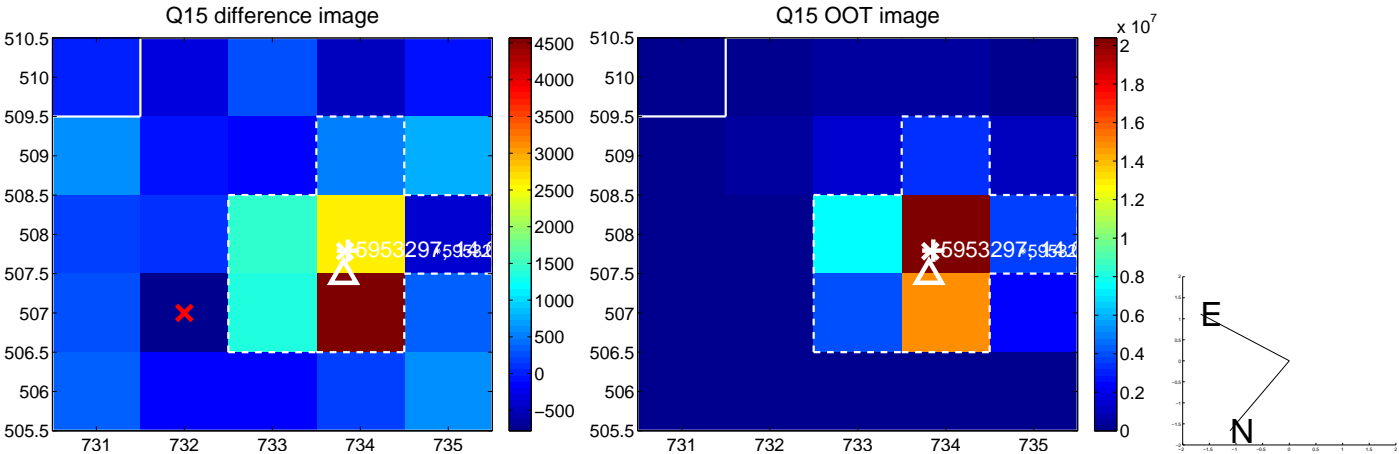
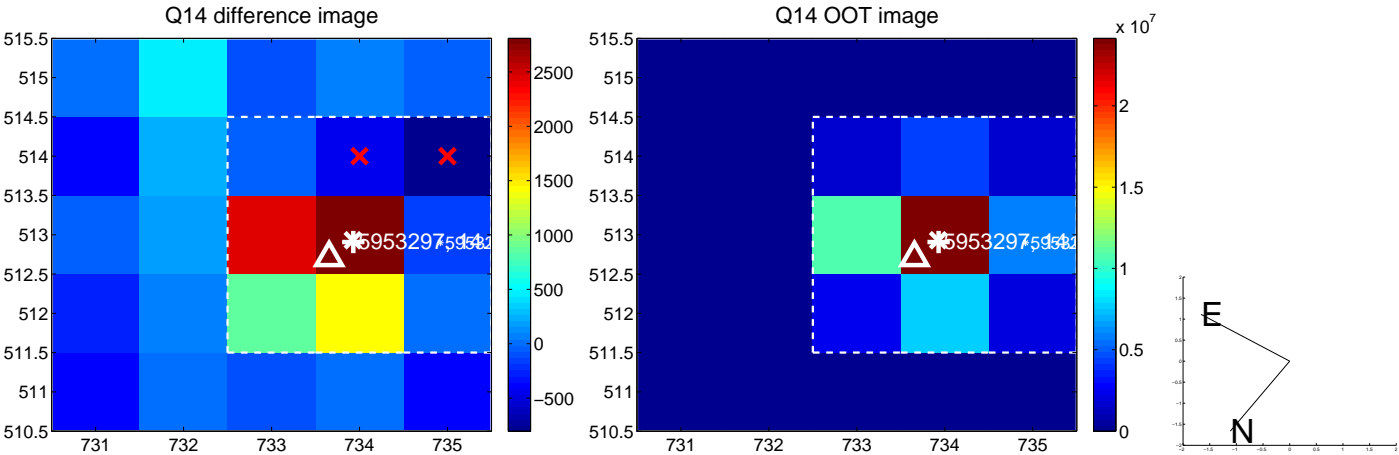
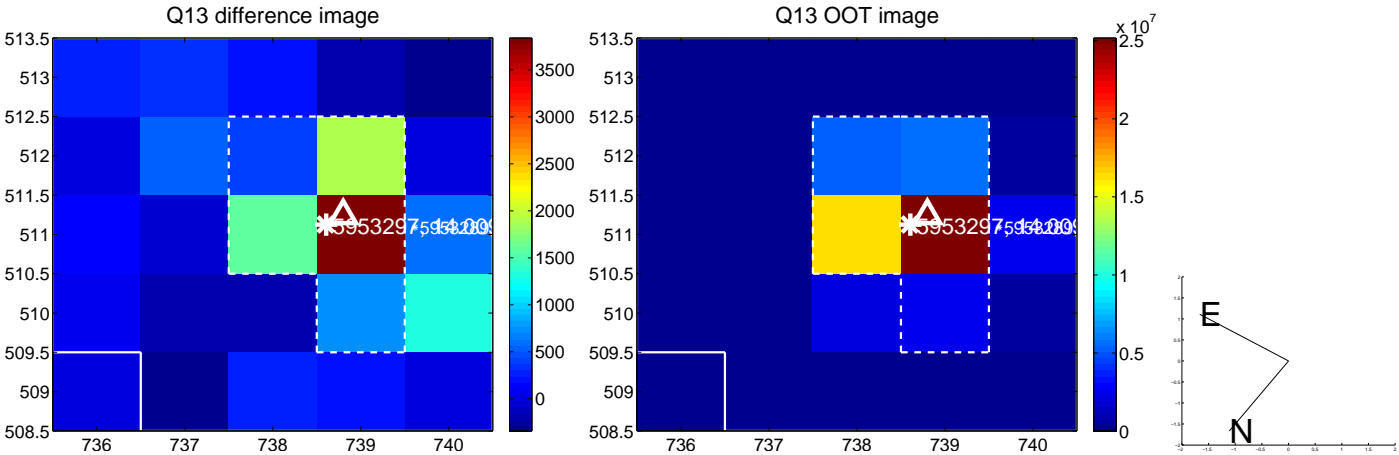
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



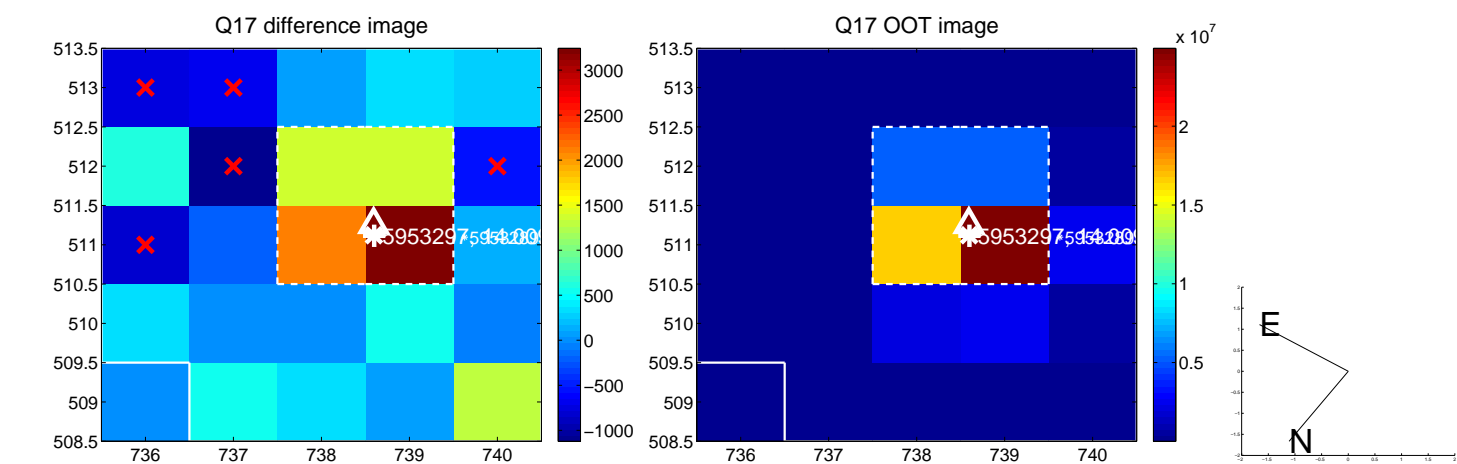
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



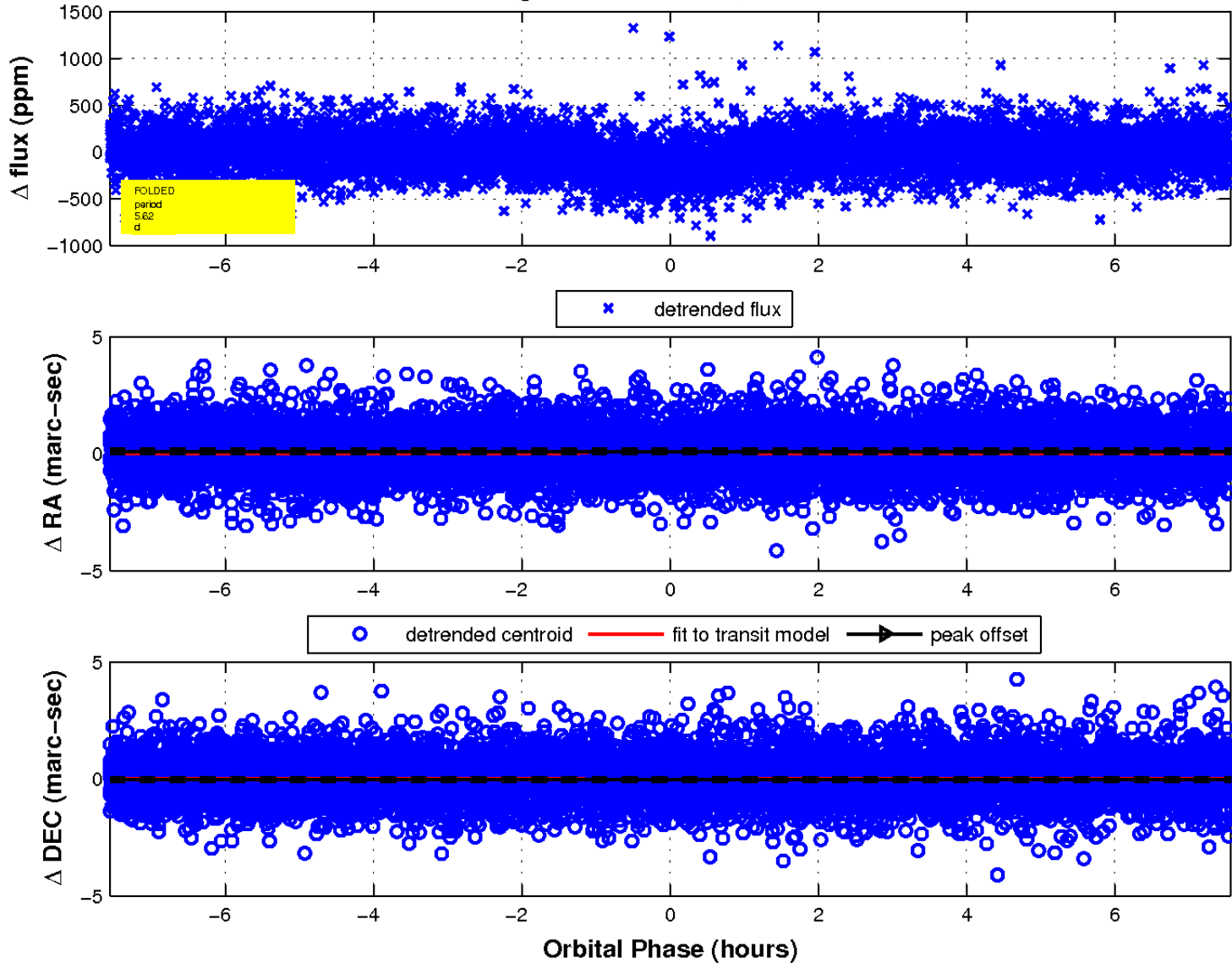
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

