

KIC 011856178

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})
011856178-01	OBS	6246.01	9.133155	139.983360	237.6	2.325	26.0	29.7	0.96	6122	1.76	155.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011856178-01	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.

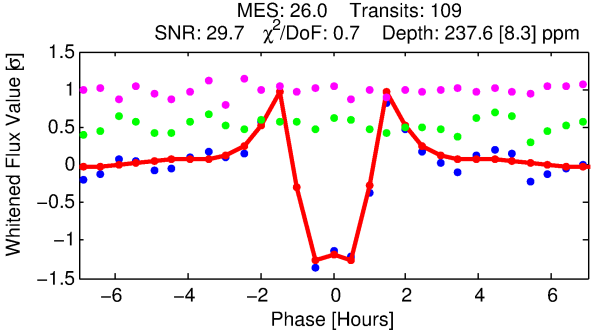
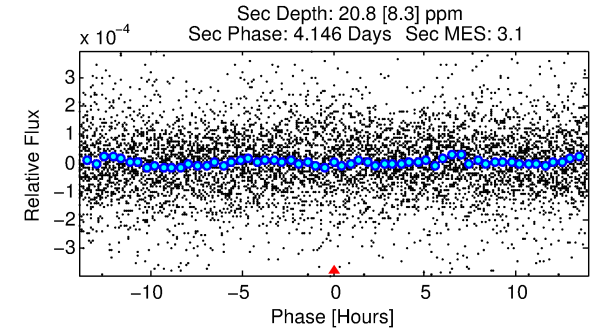
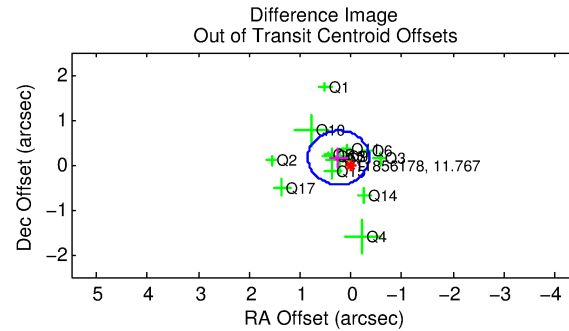
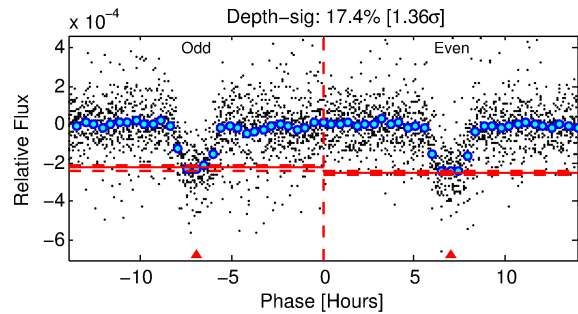
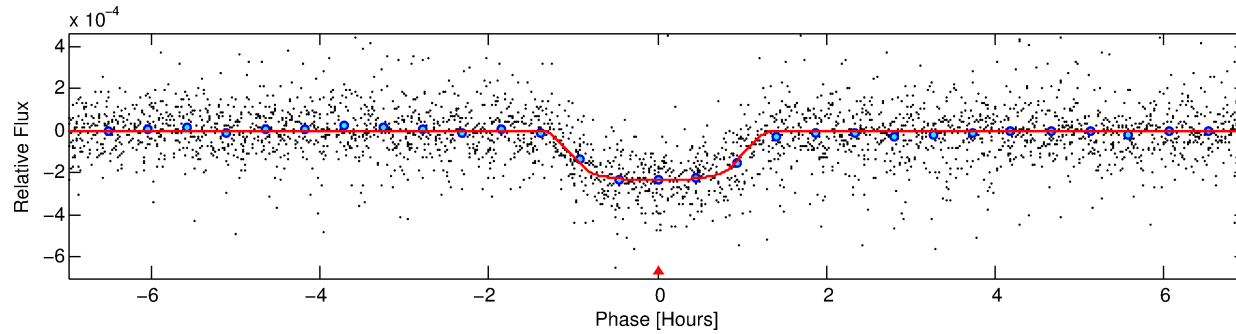
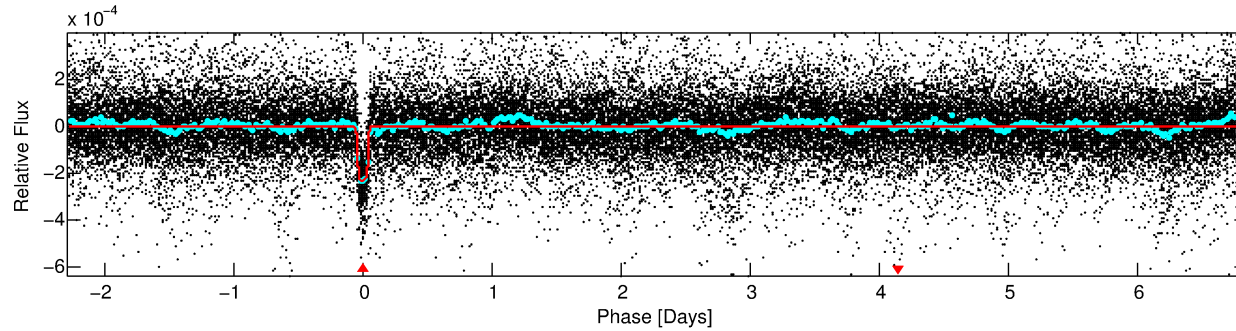
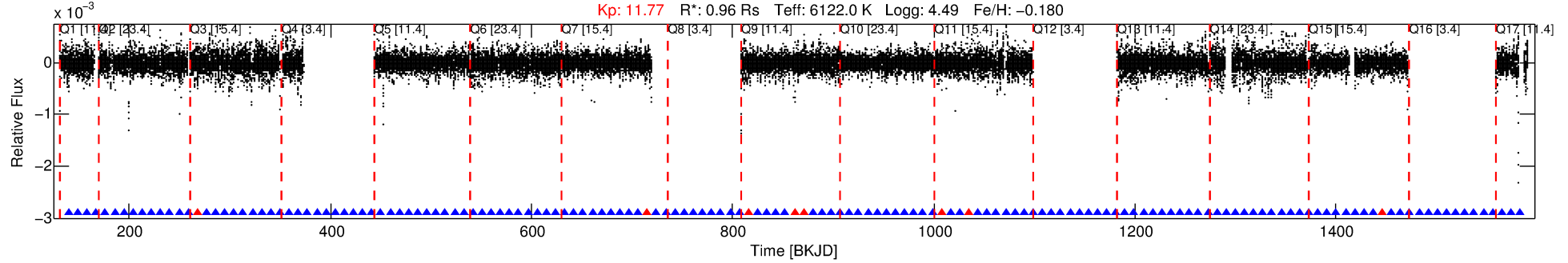
Ephemeris Match Information For 011856178-01

No Significant Match Found

DV One-Page Summary

KIC: 11856178 Candidate: 1 of 1 Period: 9.133 d
KOI: K06246.01 Corr: 0.964

Kp: 11.77 R*: 0.96 Rs Teff: 6122.0 K Logg: 4.49 Fe/H: -0.180



DV Fit Results:

Period = 9.13316 [0.00001] d
Epoch = 139.9834 [0.0010] BKJD
Rp/R* = 0.0168 [0.0014]
a/R* = 13.77 [5.80]
b = 0.91 [0.08]
Seff = 155.72 [64.90]
Teq = 901 [94] K
Rp = 1.76 [0.61] Re
a = 0.0867 [0.0241] AU
Ag = 27.69 [16.27] [1.64σ]
Teffp = 3195 [357] K [6.21σ]

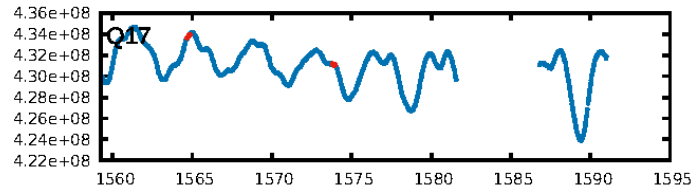
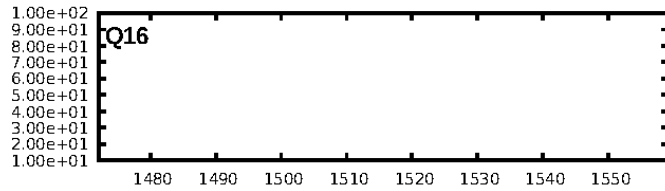
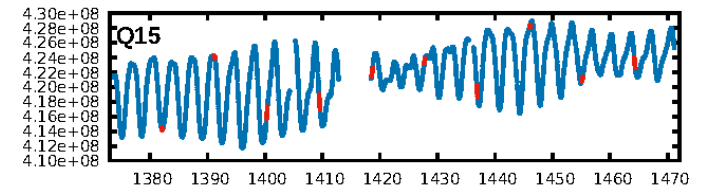
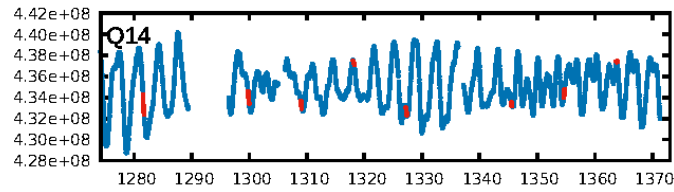
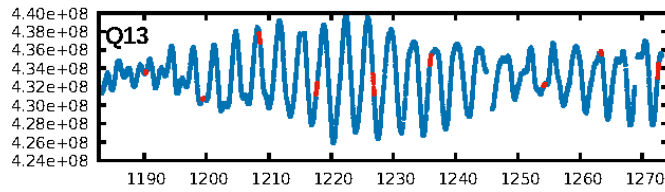
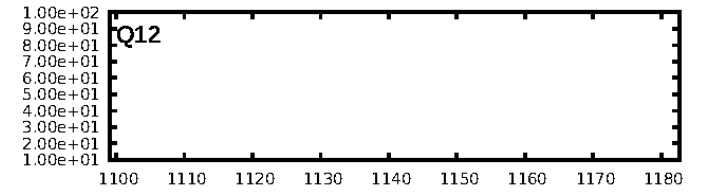
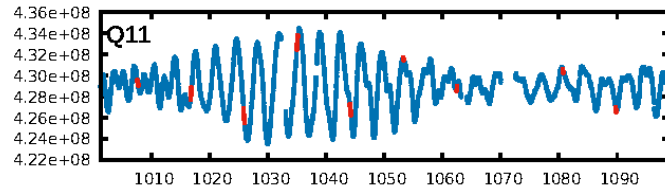
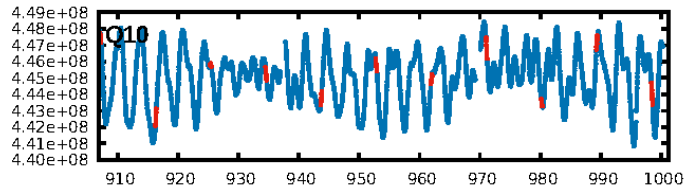
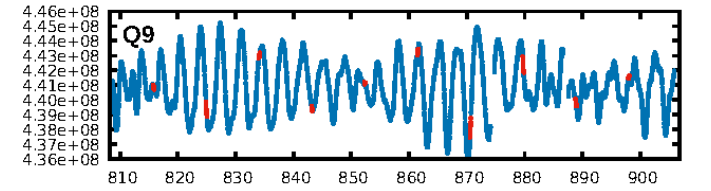
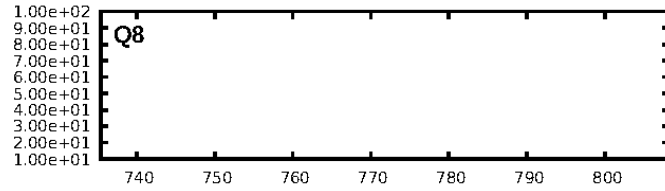
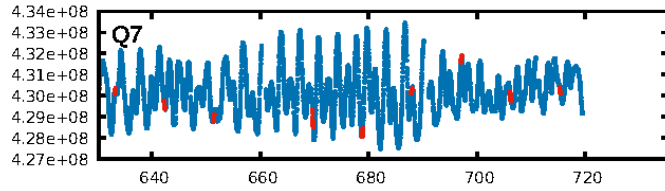
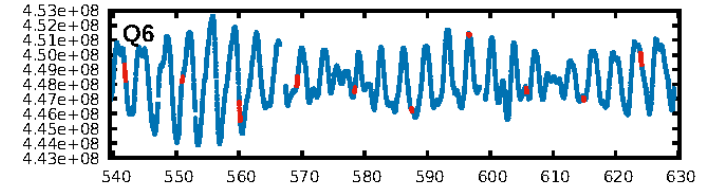
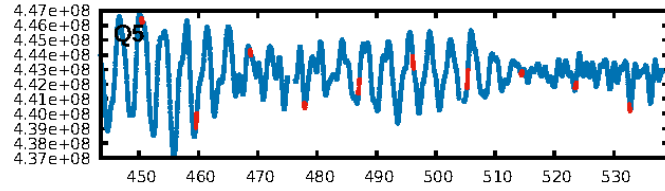
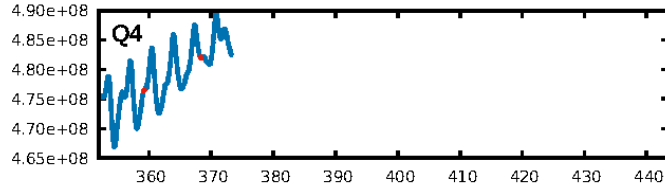
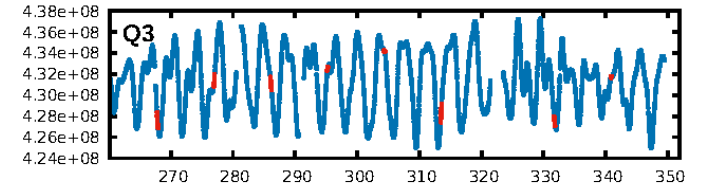
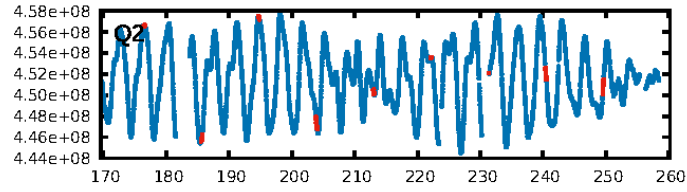
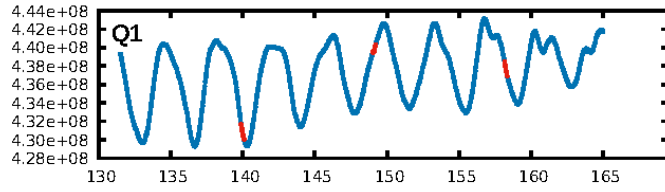
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.45e-130
RollingBand-fgt: 0.92 [94/102]
GhostDiagnostic-chr: 3.74
Centroid-sig: 3.7%
Centroid-so: 0.346 arcsec [1.66σ]
OotOffset-rm: 0.291 arcsec [1.45σ]
KicOffset-rm: 0.144 arcsec [0.76σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

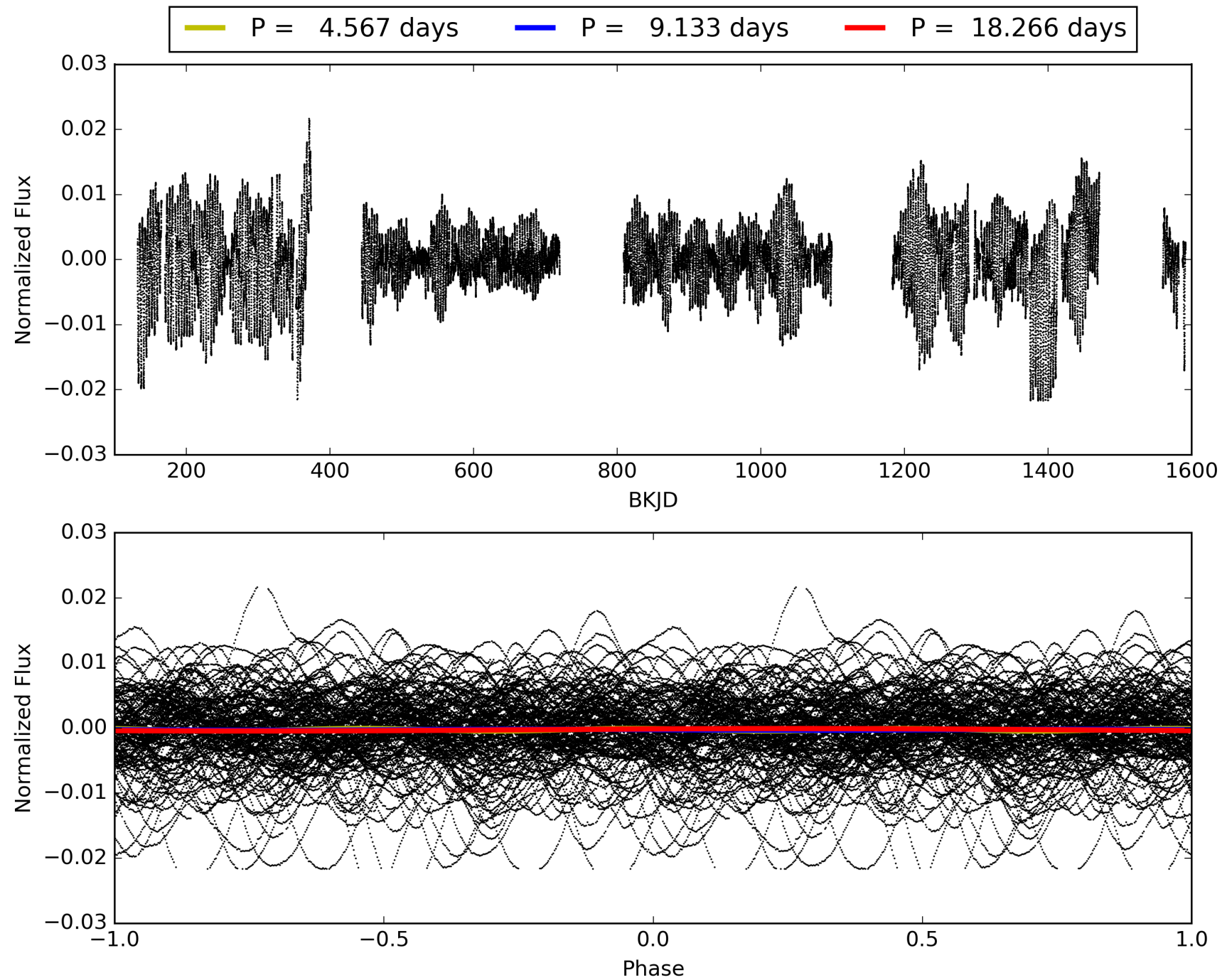
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 02:06:53 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011856178-01, PDC Light Curves

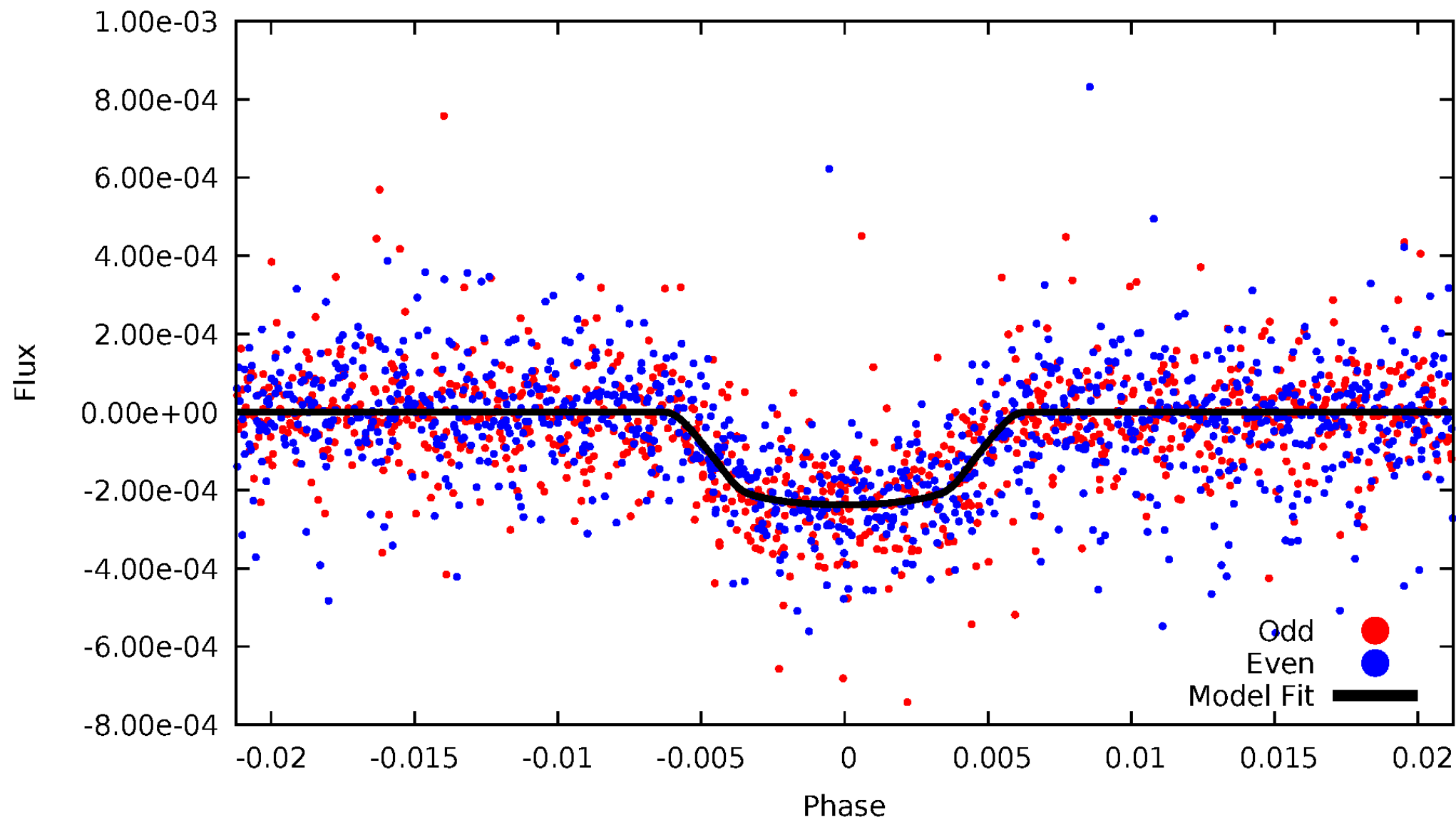


TCE 011856178-01



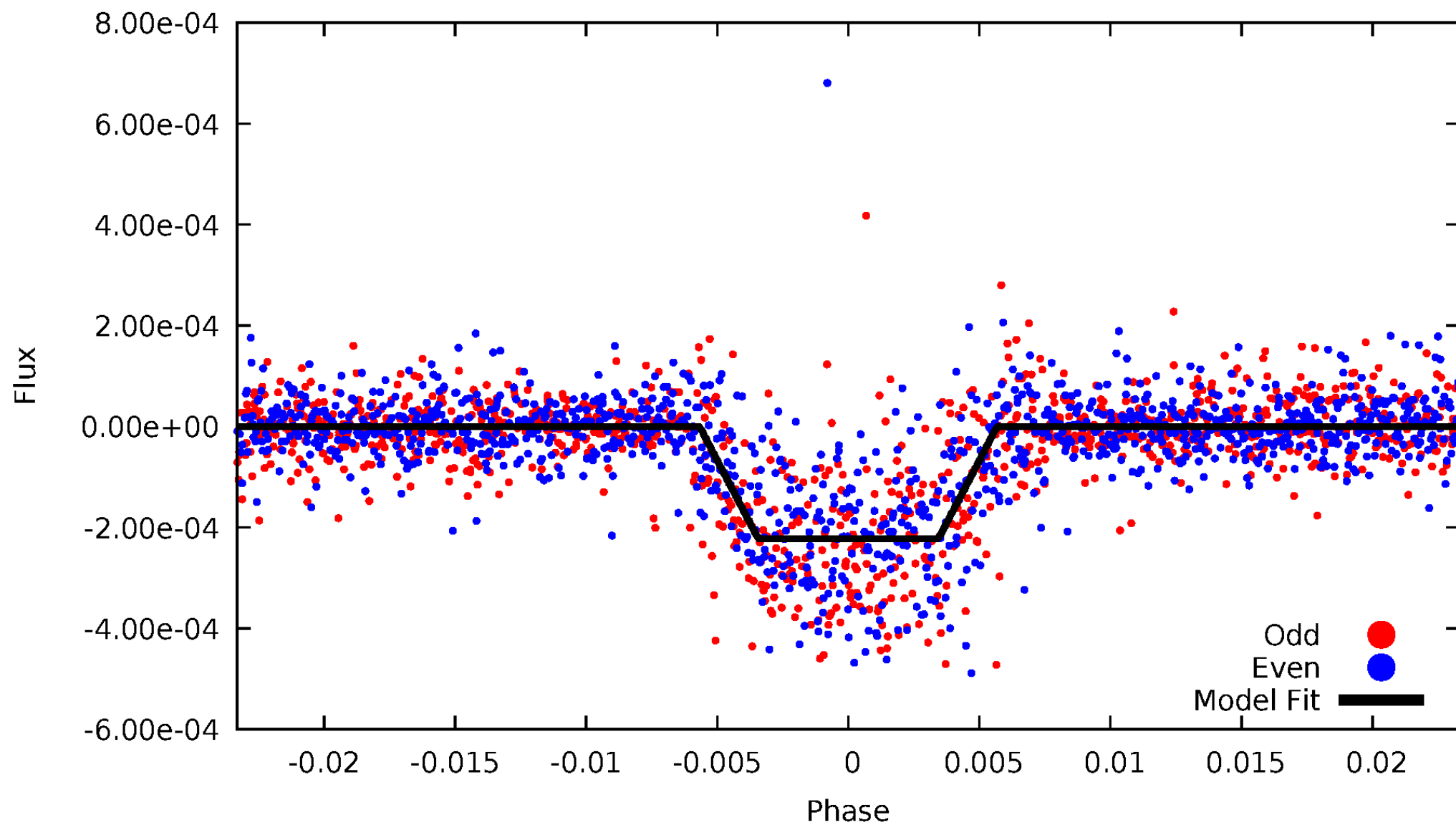
DV Odd/Even

TCE 011856178-01



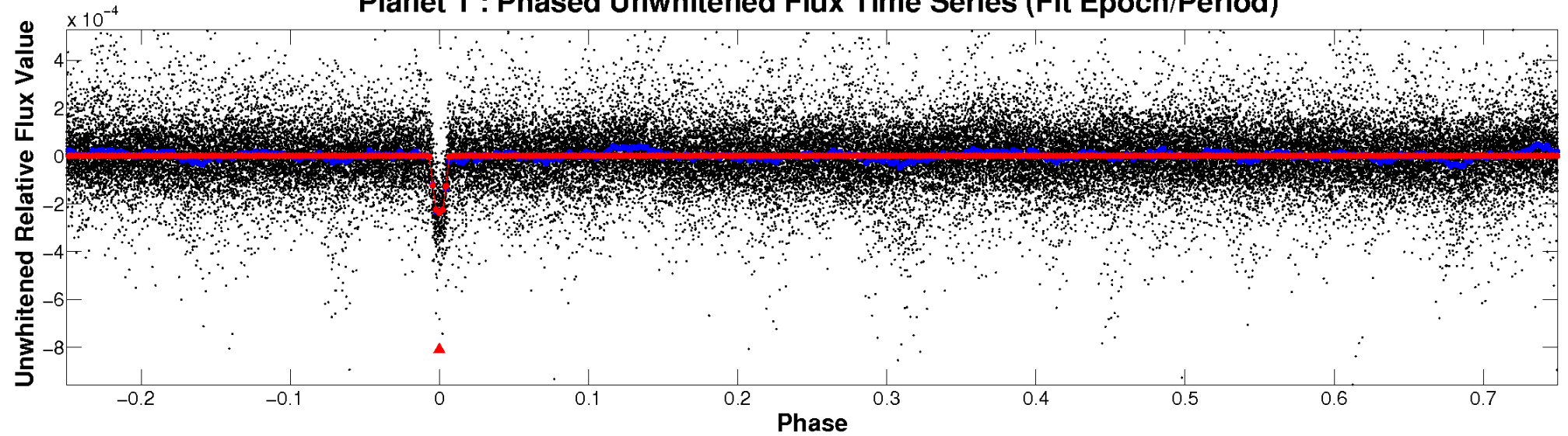
ALT Odd/Even

TCE 011856178-01

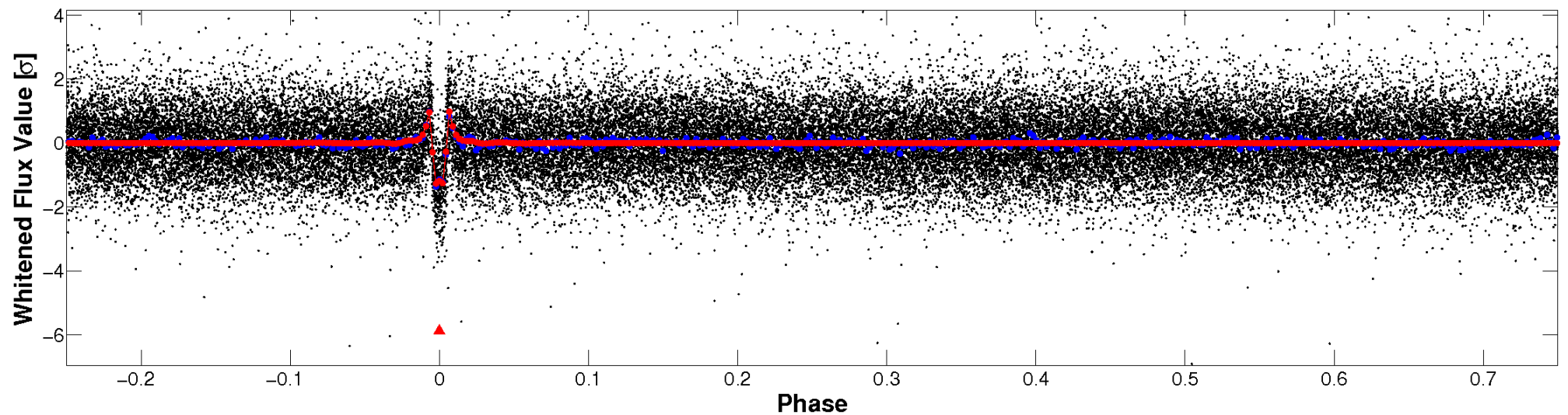


Non-Whitened Vs. Whitened Light Curve

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

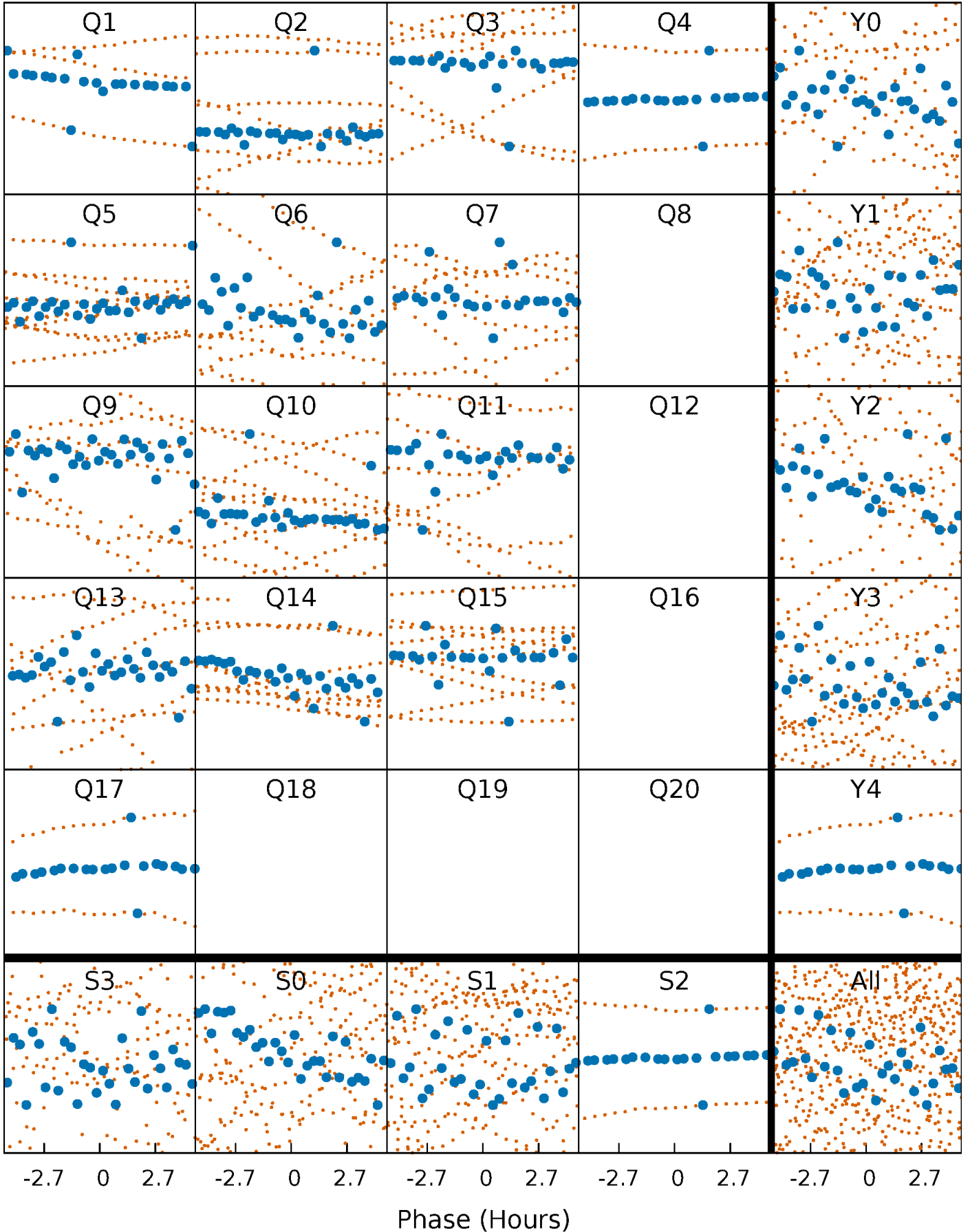


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



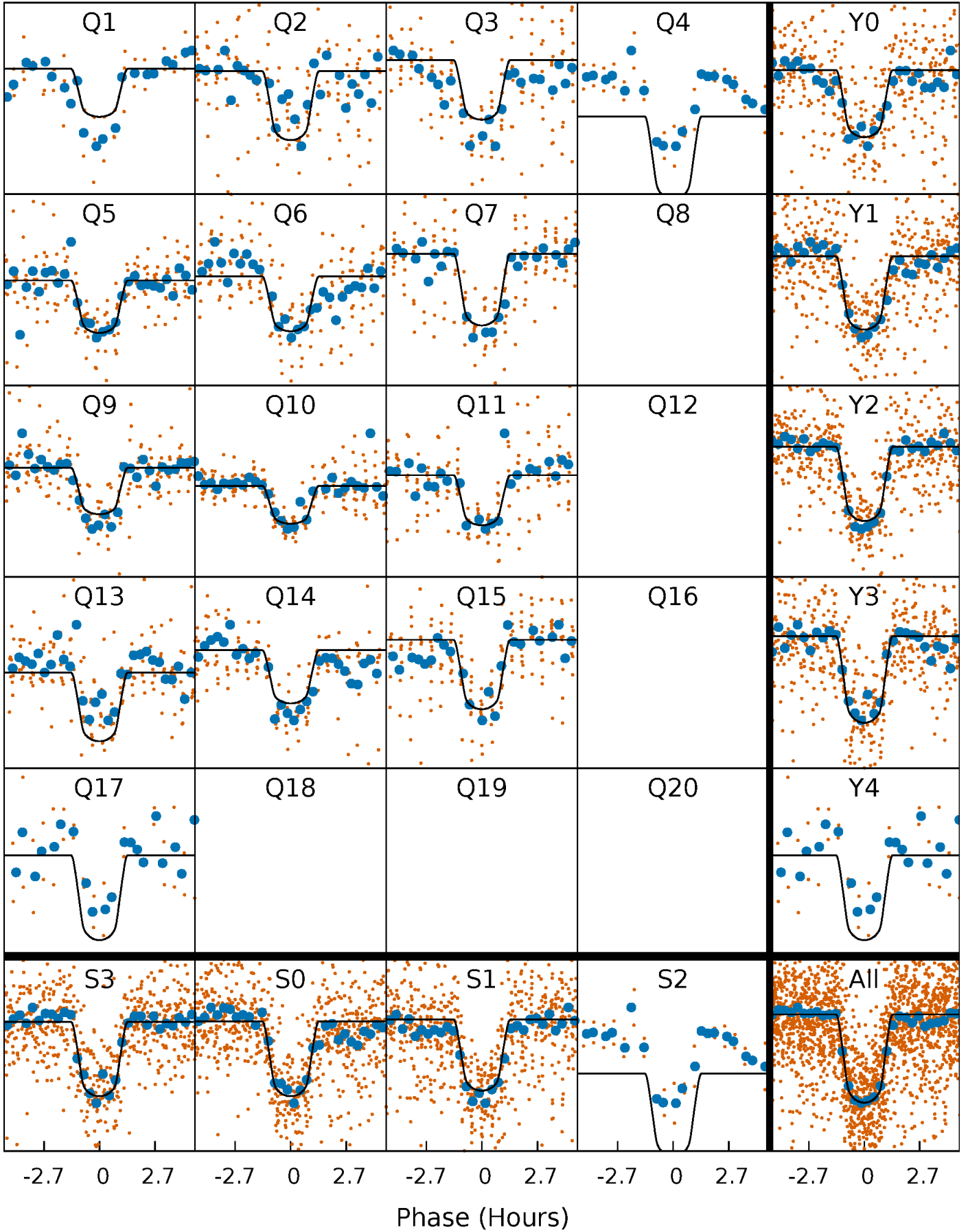
PDC Quarter-Phased Transit Curves

TCE 011856178-01 P= 9.133155 Days $T_0=139.983360$ (BKJD)



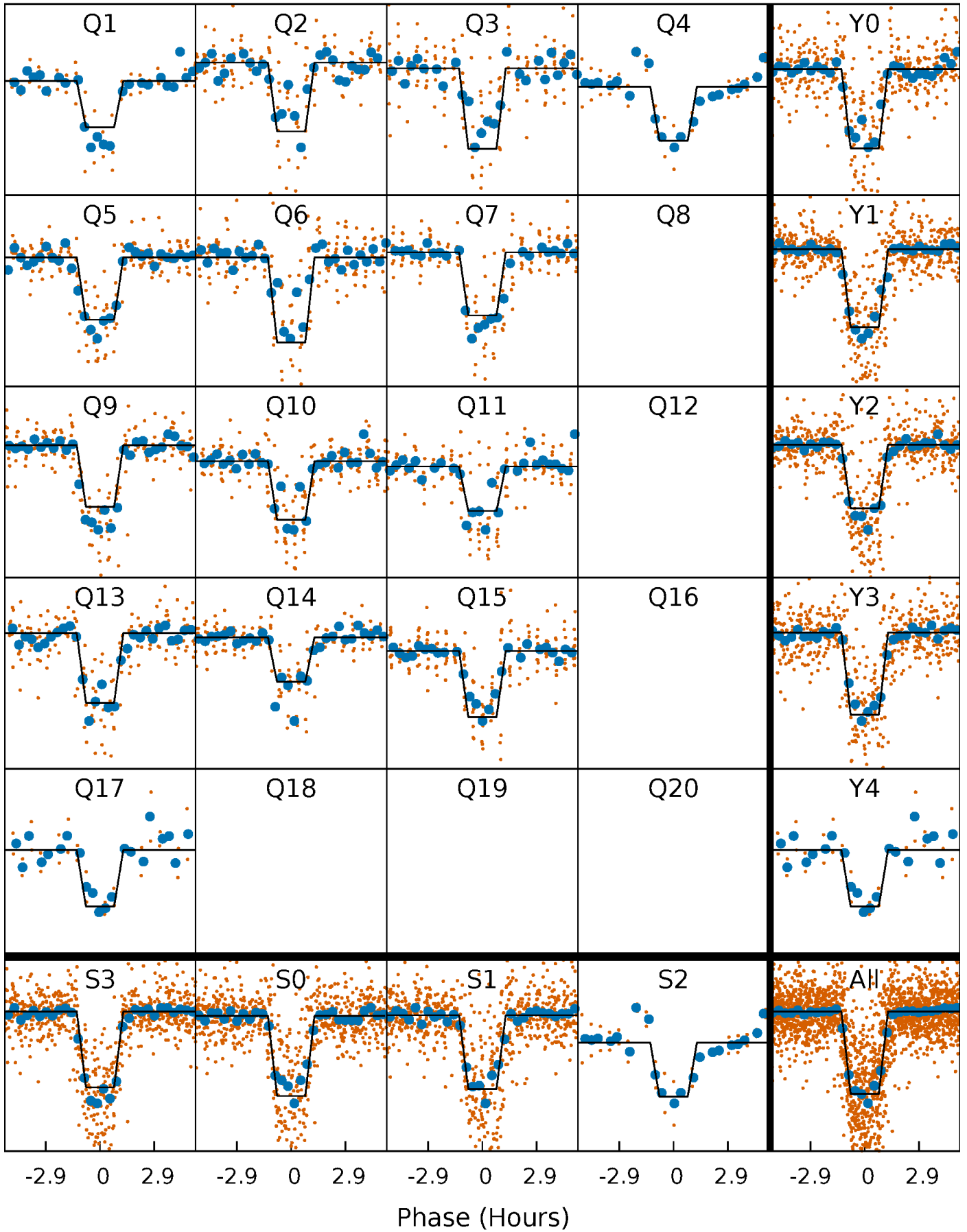
DV Quarter-Phased Transit Curves

TCE 011856178-01 P= 9.133155 Days $T_0=139.983360$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

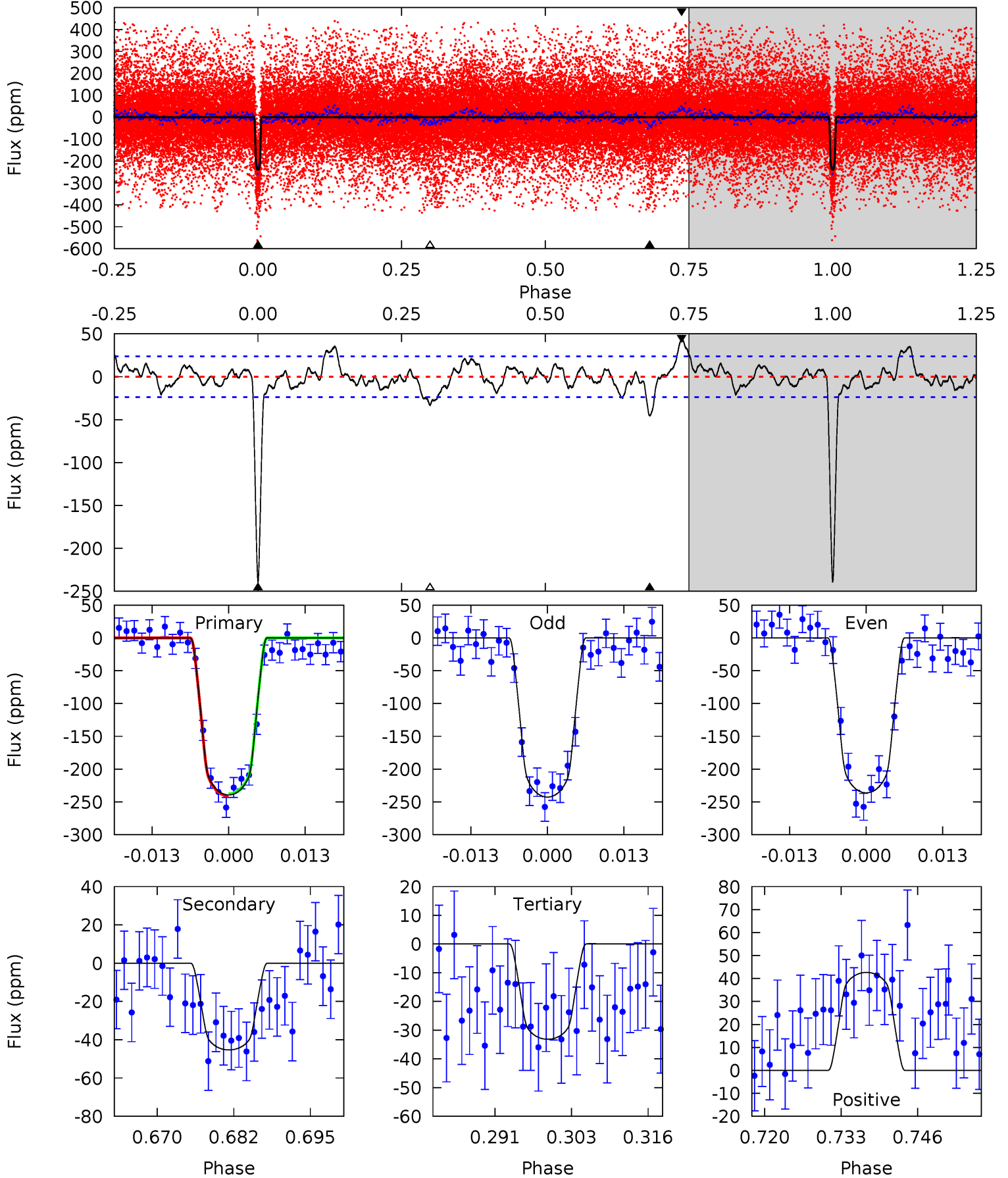
TCE 011856178-01 P= 9.133127 Days $T_0=139.986039$ (BKJD)



DV Model-Shift Uniqueness Test

011856178-01, P = 9.133155 Days, E = 130.850205 Days

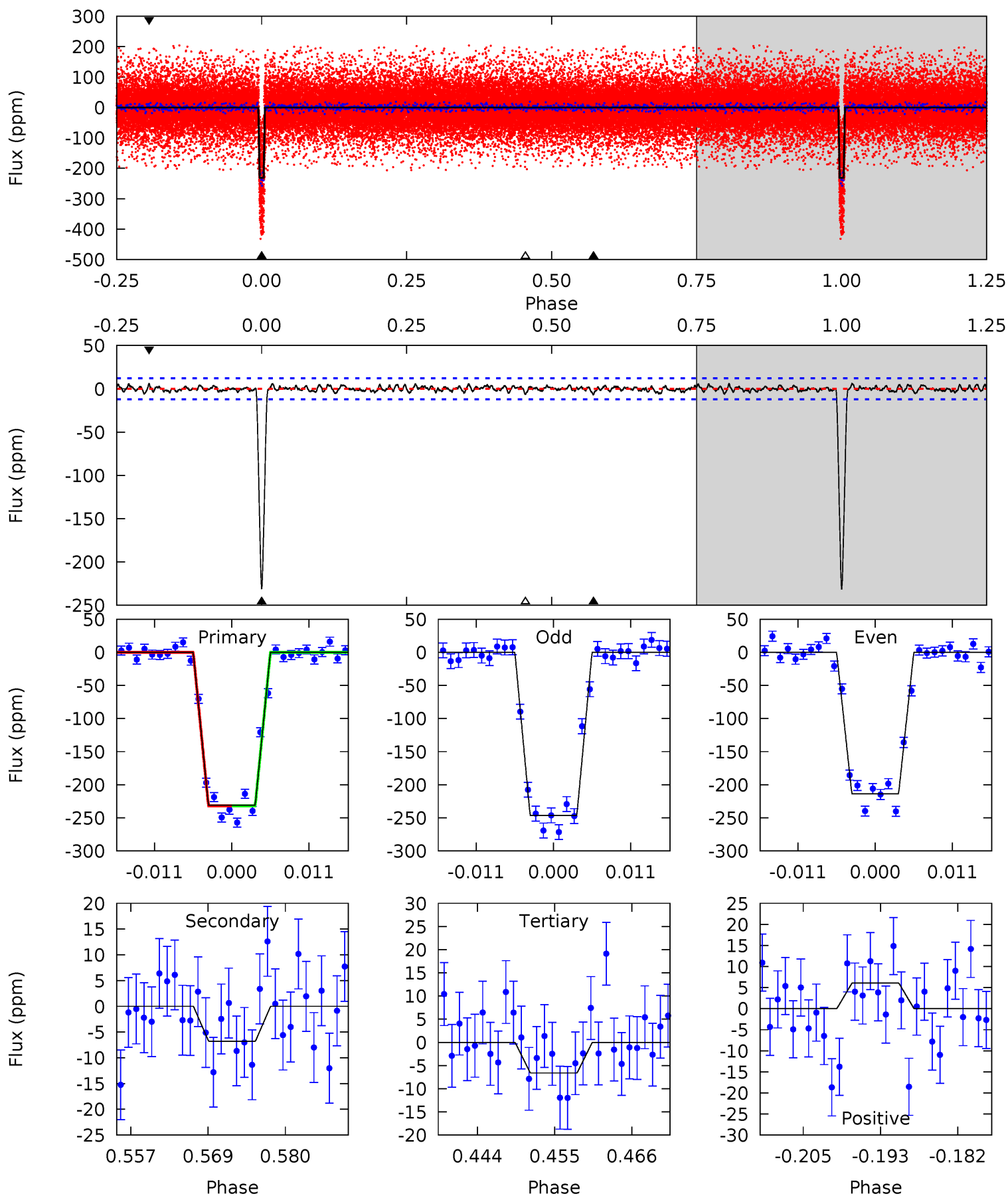
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	9.52	6.97	8.96	4.98	2.49	2.59	43.3	41.3	2.55	0.56	0.68	1.05	0.15	0.30



Alt Model-Shift Uniqueness Test

011856178-01, P = 9.133127 Days, E = 130.852912 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
95.4	2.80	2.72	2.51	5.00	2.53	0.92	92.6	92.9	0.08	0.29	6.69	1.00	0.03	0.01



Stellar Parameters For KIC 011856178

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6122^{+151}_{-182}	$4.487^{+0.054}_{-0.216}$	$-0.180^{+0.300}_{-0.300}$	$0.964^{+0.322}_{-0.101}$	$1.041^{+0.139}_{-0.125}$	$1.635^{+0.366}_{-0.915}$
	+2%/-3%	+1%/-5%	+167%/-167%	+33%/-10%	+13%/-12%	+22%/-56%
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 011856178-01 / KOI 6246.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-45 ± 5	$1.83^{+0.34}_{-0.23}$	1280^{+95}_{-60}	4137^{+175}_{-162}	55^{+17}_{-15}
Alt.	-7 ± 2	$1.65^{+0.27}_{-0.22}$	1282^{+92}_{-58}	3134^{+203}_{-222}	$9.818^{+5.633}_{-4.075}$

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

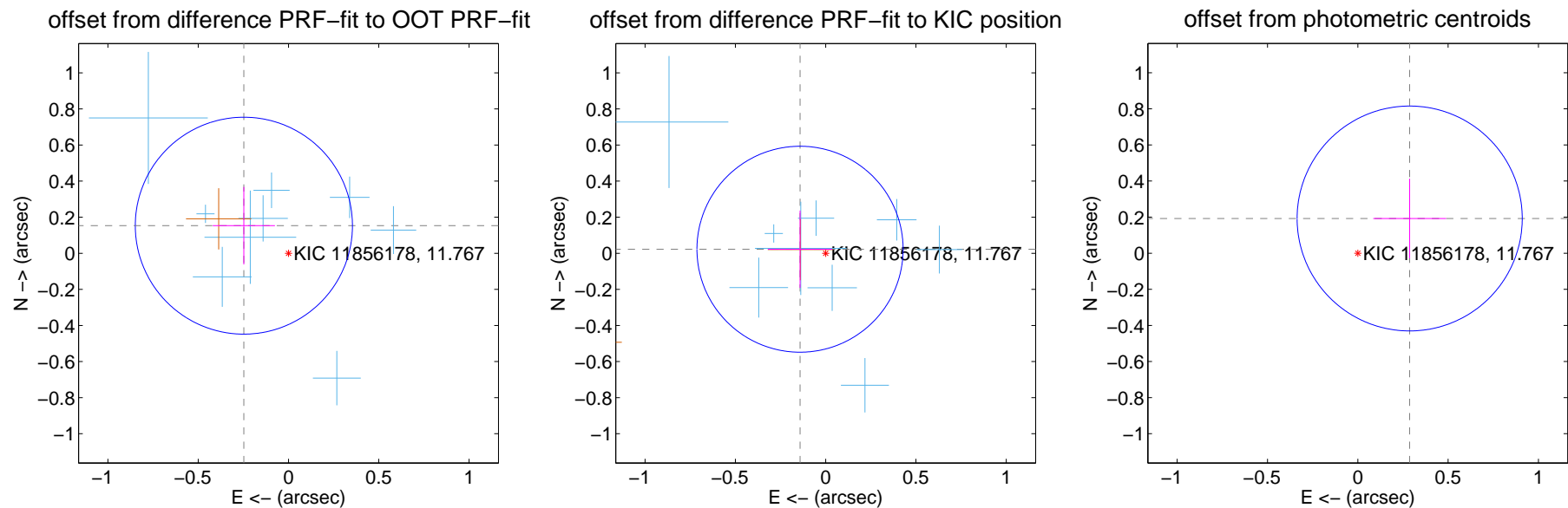
DV Centroid Data

Supplemental centroid analysis for 011856178-01. **Kepler magnitude: 11.77.** Transit SNR 29.74

There are 12 quarters with good PRF difference image offsets

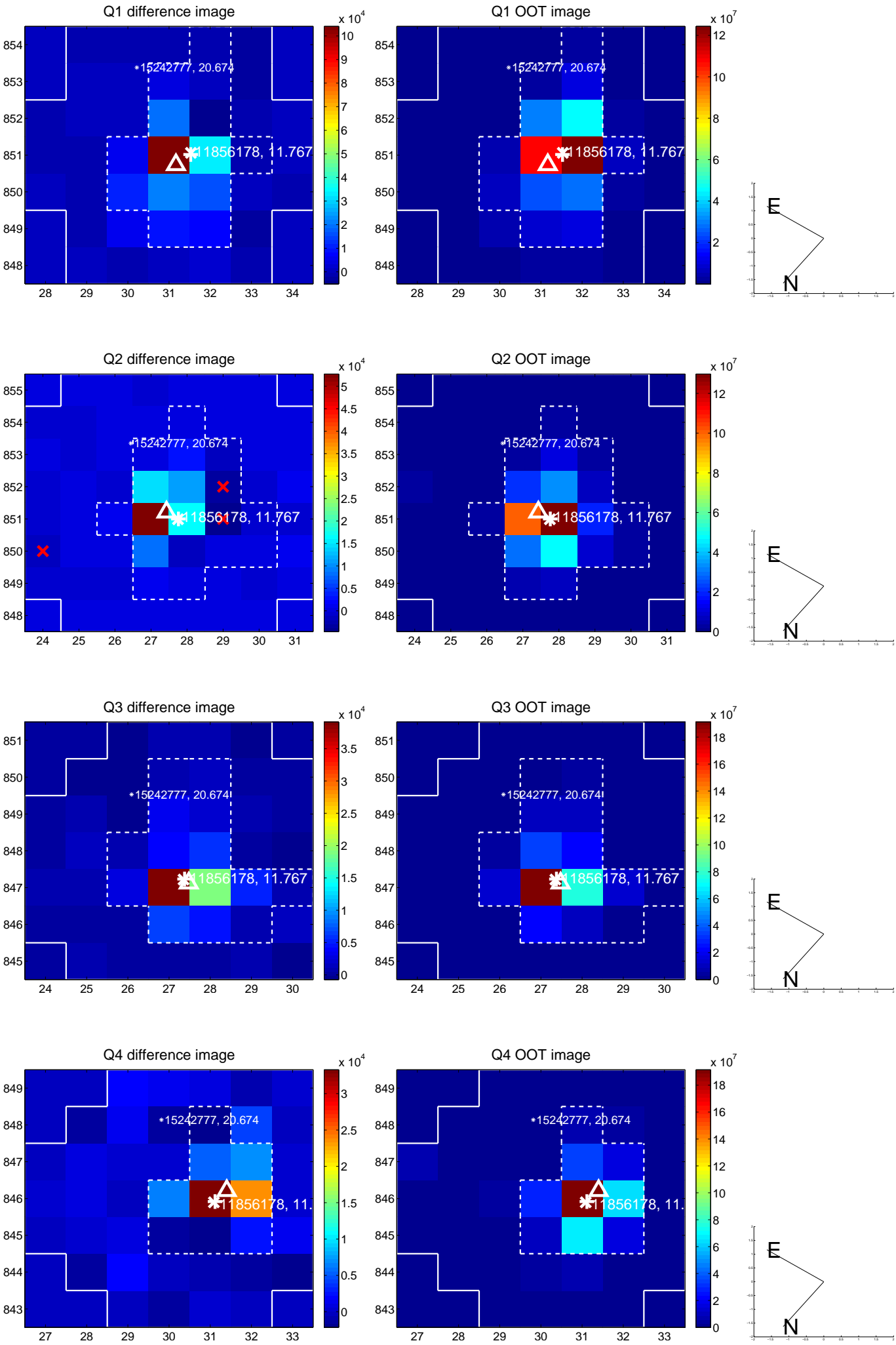
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.291 ± 0.200	1.45	0.247 ± 0.172	0.153 ± 0.215
PRF-fit source offset from KIC position	0.144 ± 0.190	0.76	0.142 ± 0.178	0.023 ± 0.214
photometric centroid source offset	0.35 ± 0.21	1.66	-0.29 ± 0.20	0.19 ± 0.22

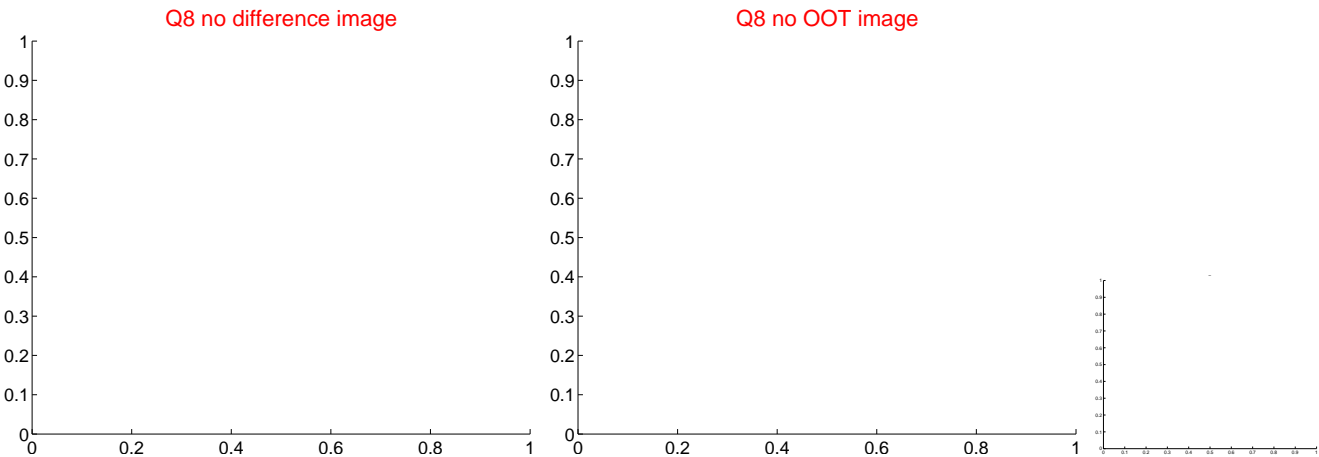
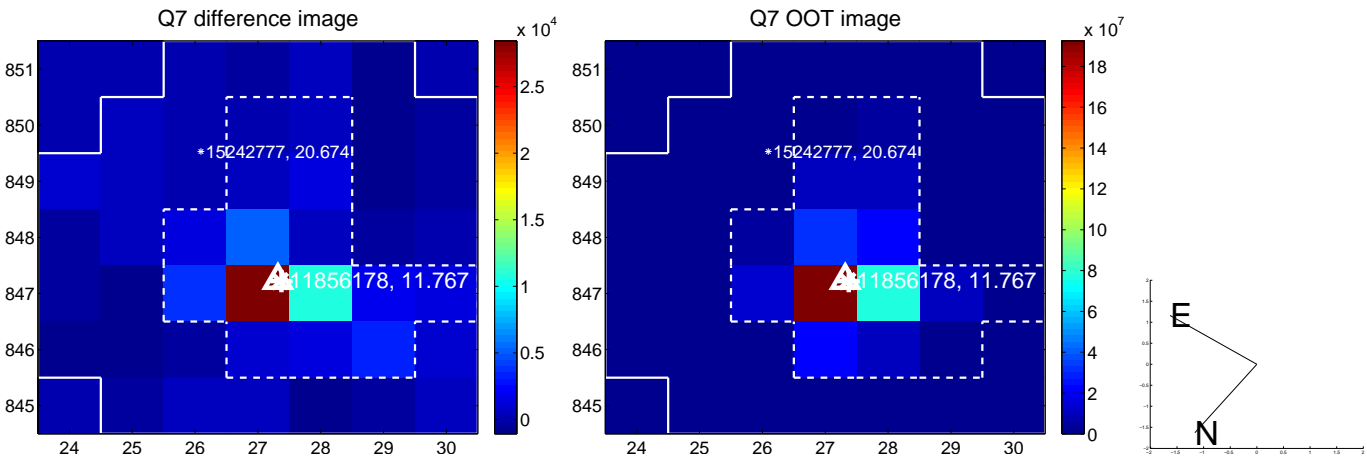
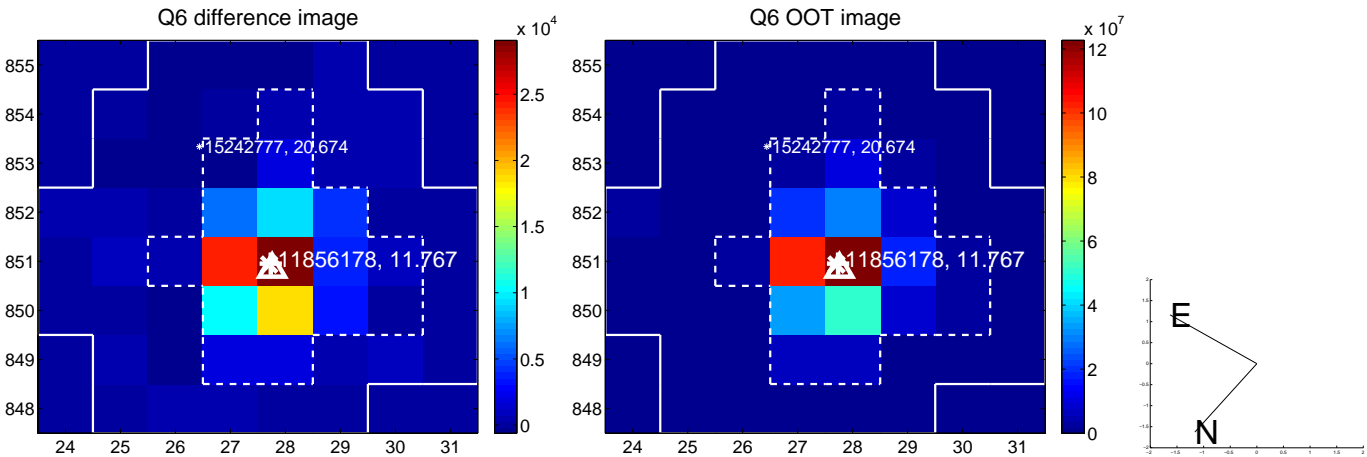
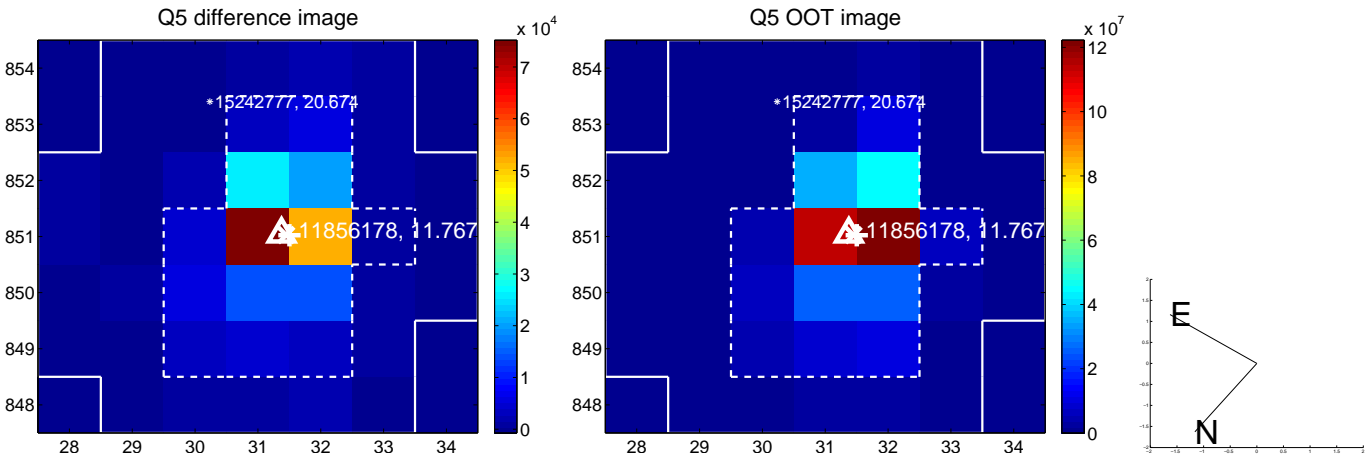


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

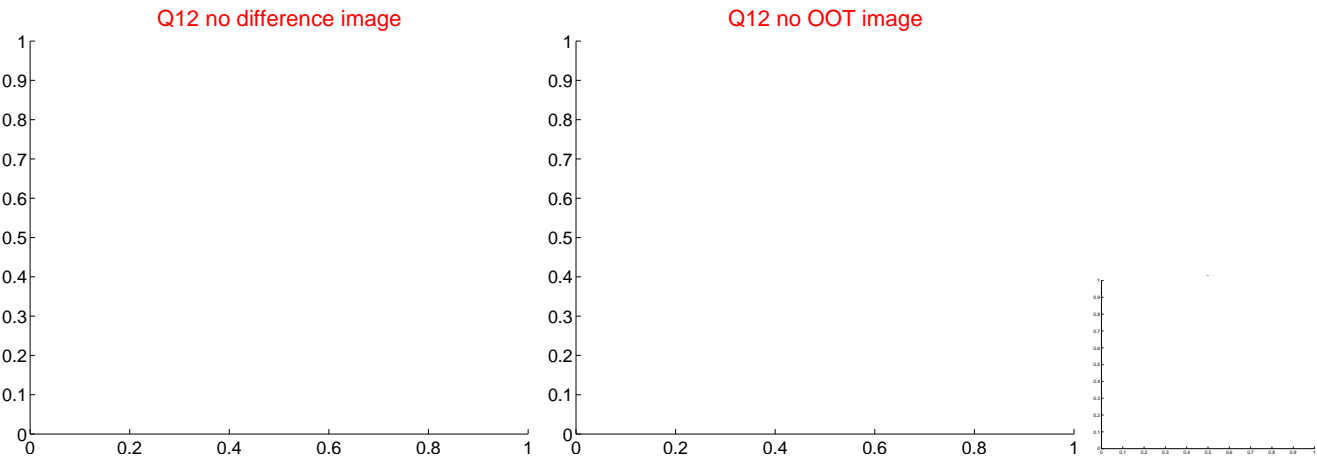
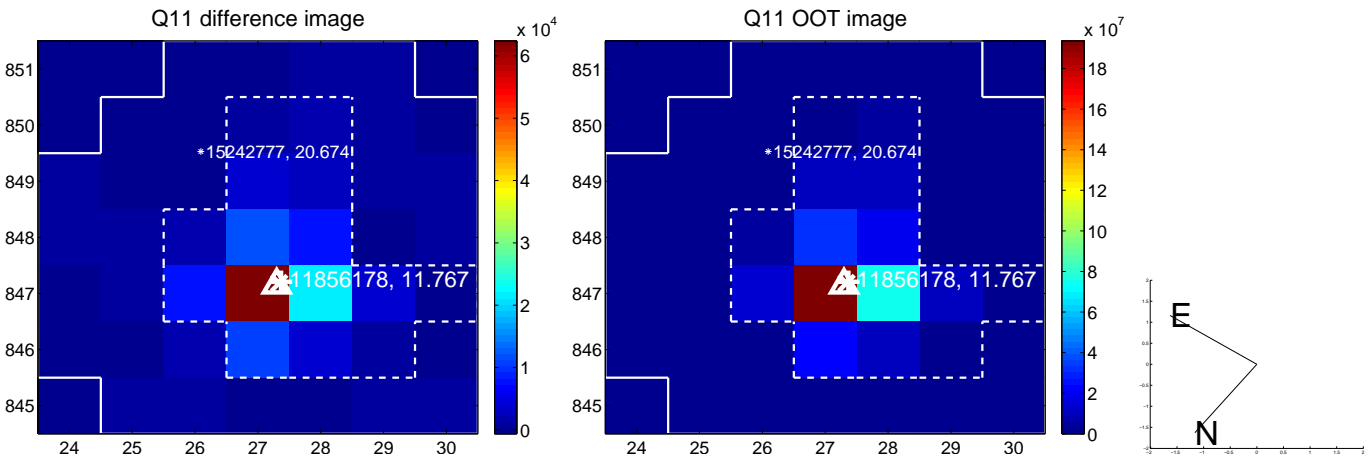
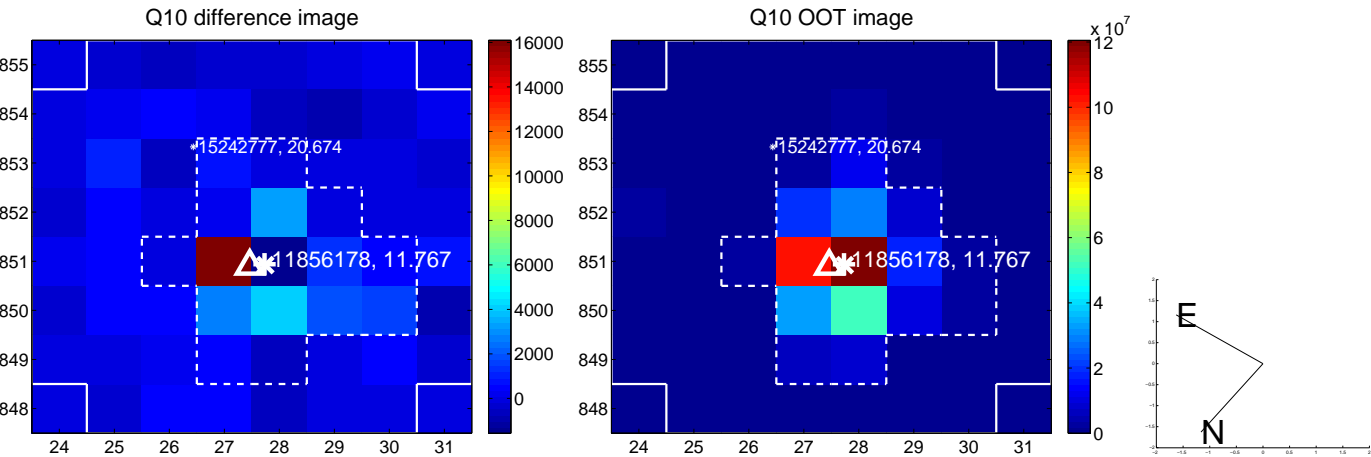
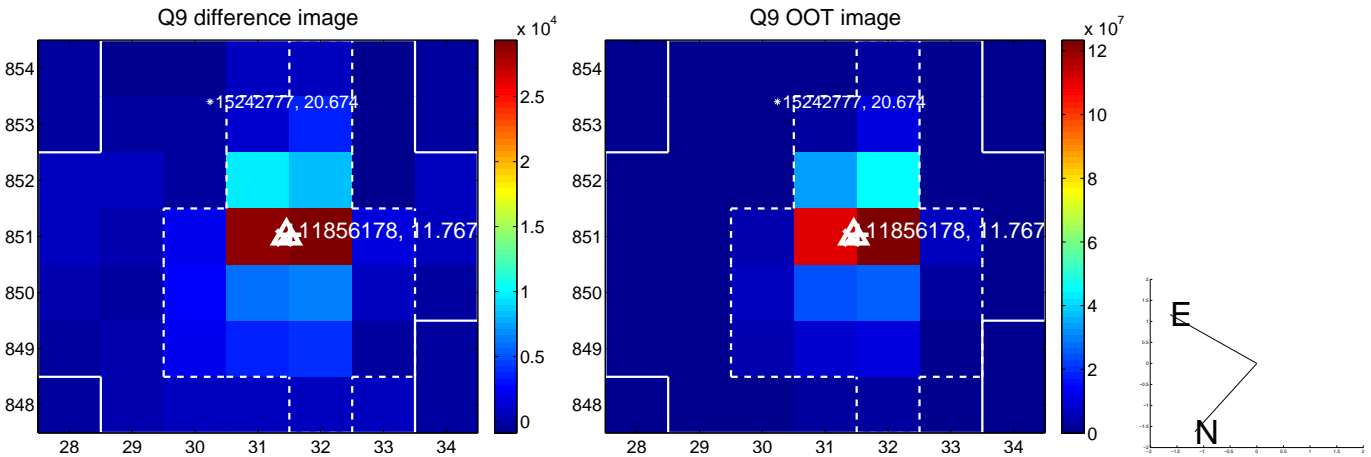
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



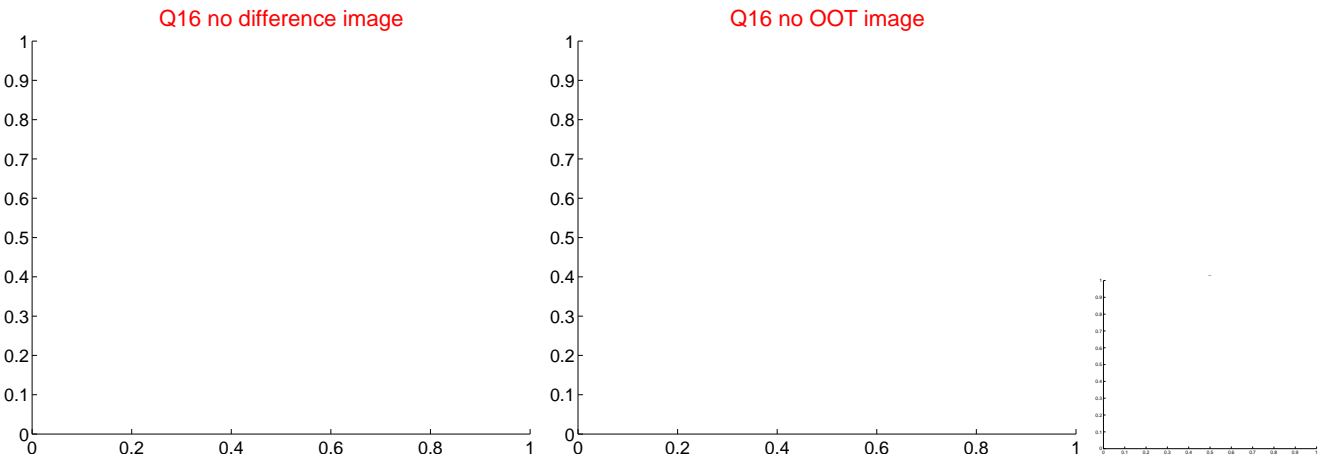
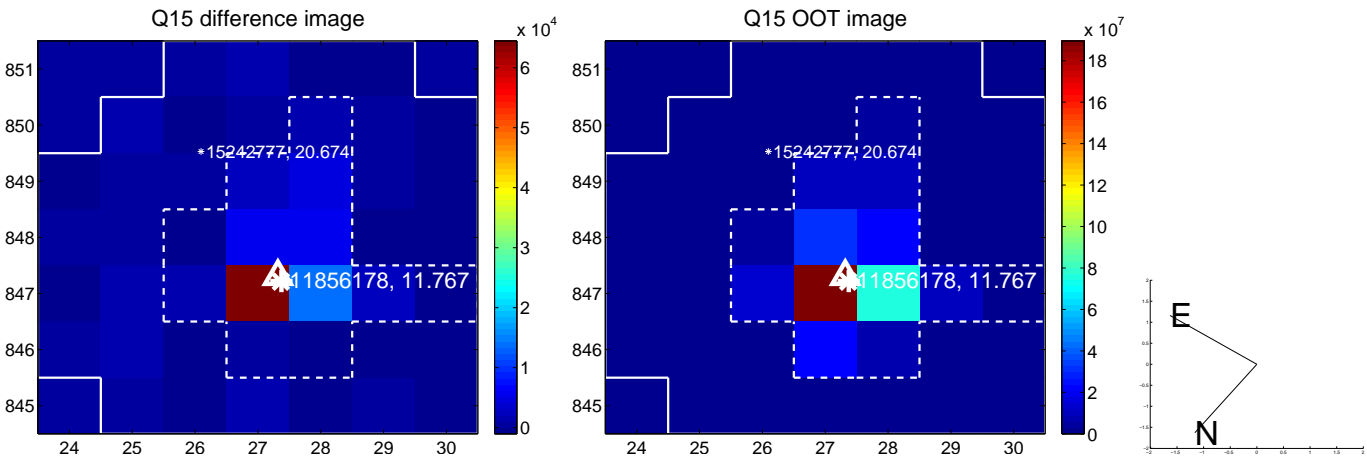
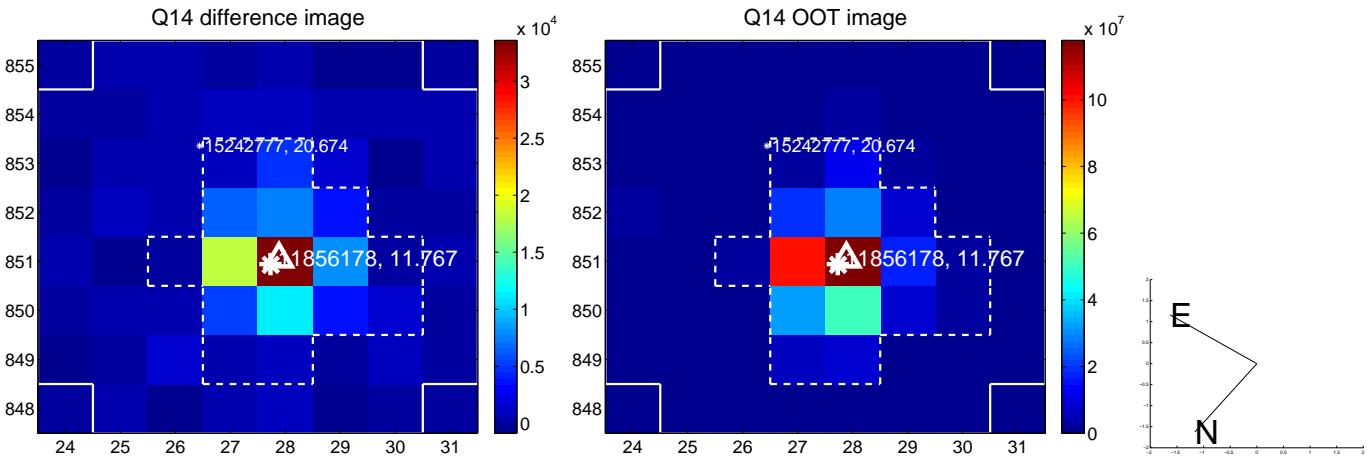
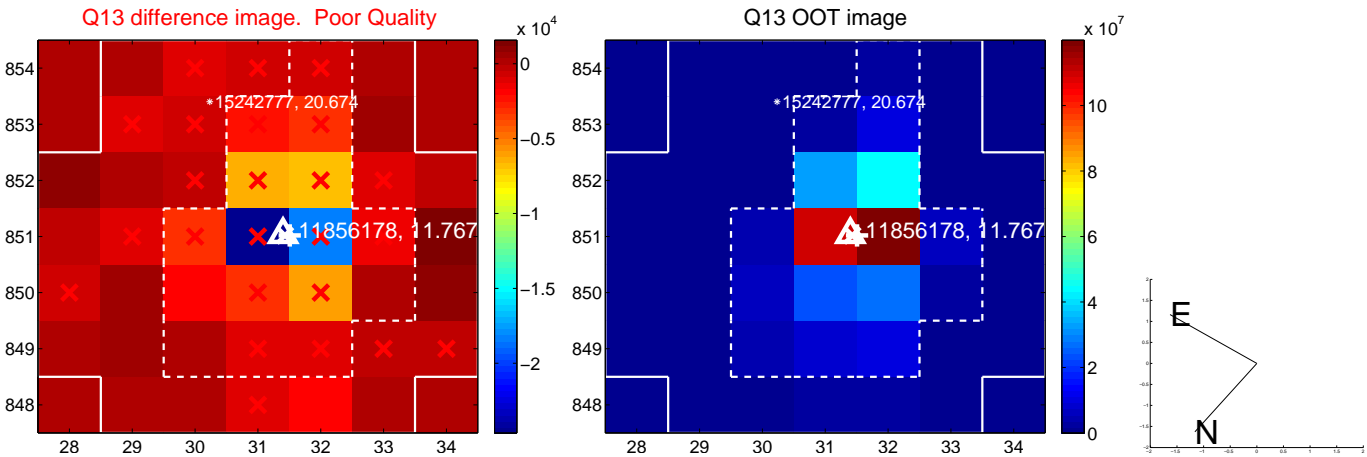
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



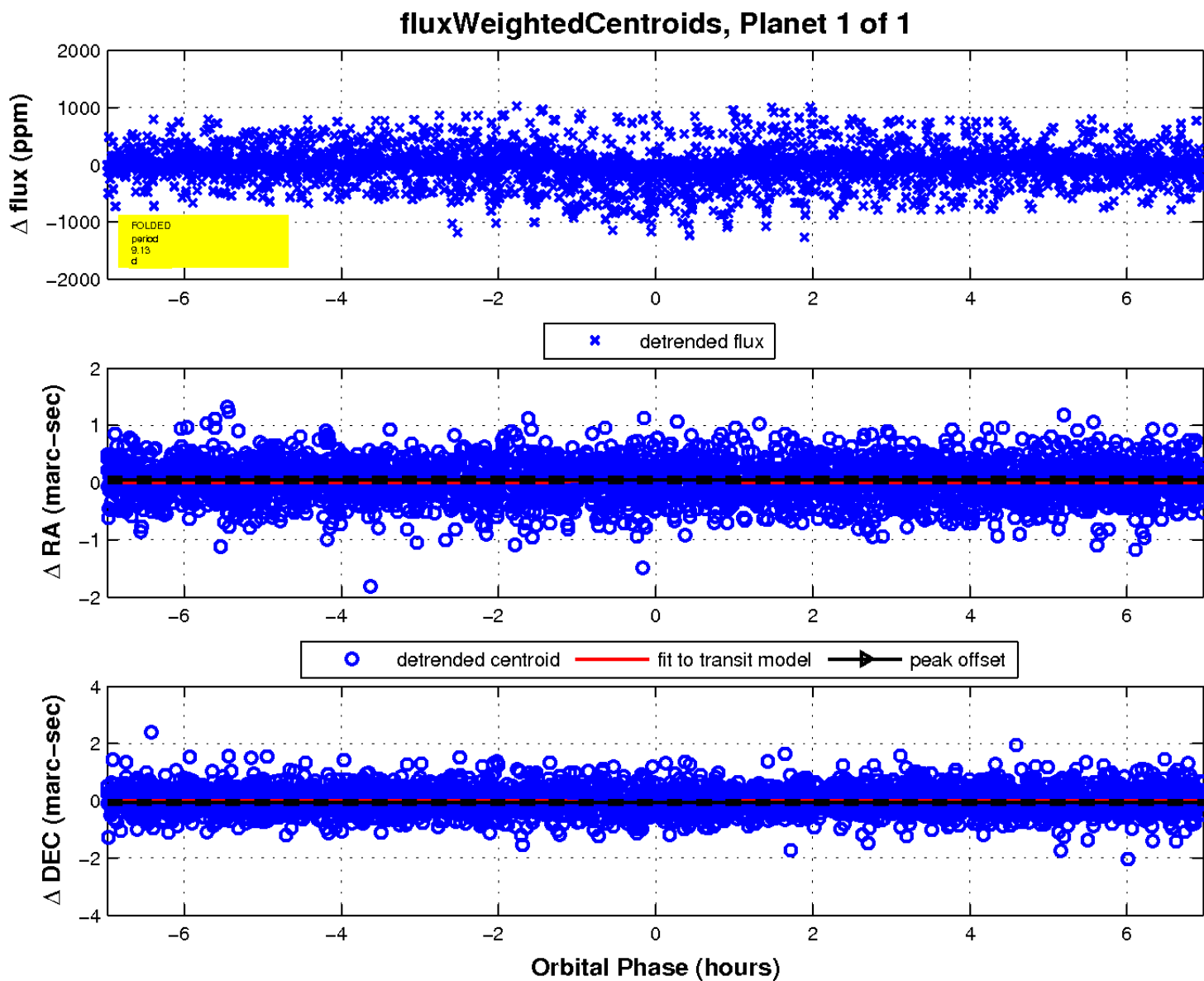
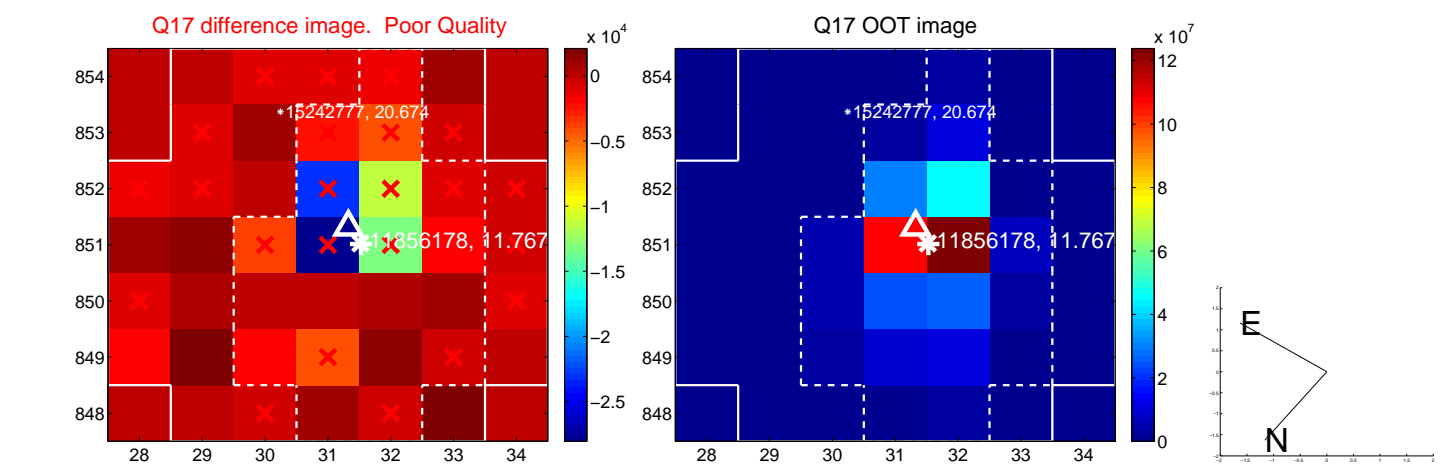
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

