

KIC 009955262

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})
009955262-01	OBS	0076.01	77.480041	154.704115	1296.3	10.236	47.7	63.3	2.91	6711	10.79	86.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009955262-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_ALT—CENT_SATURATED

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.

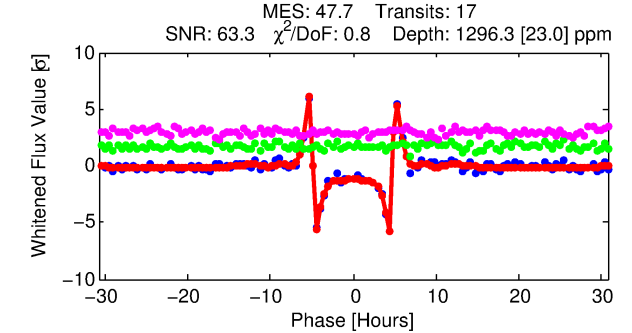
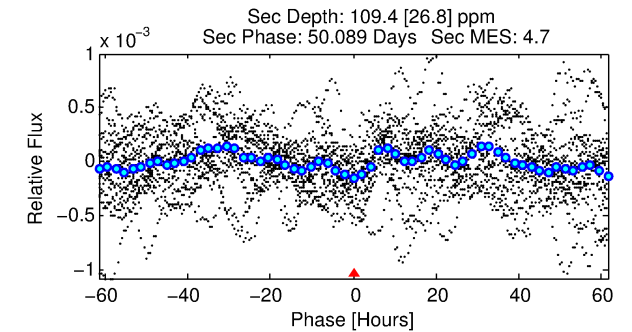
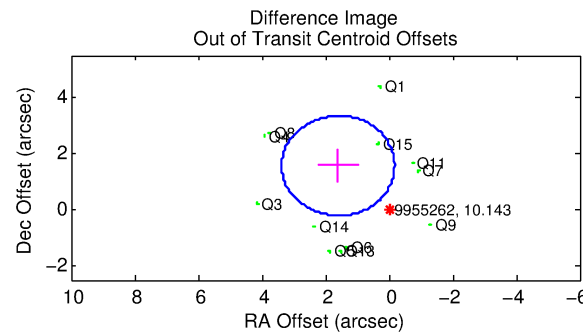
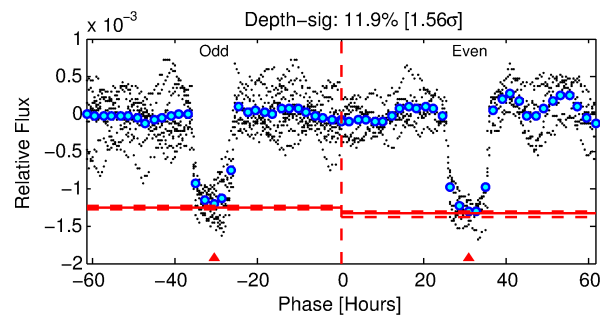
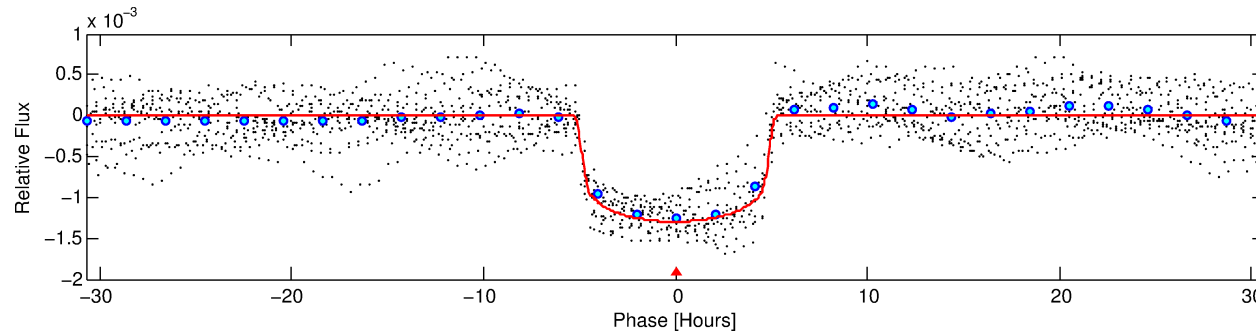
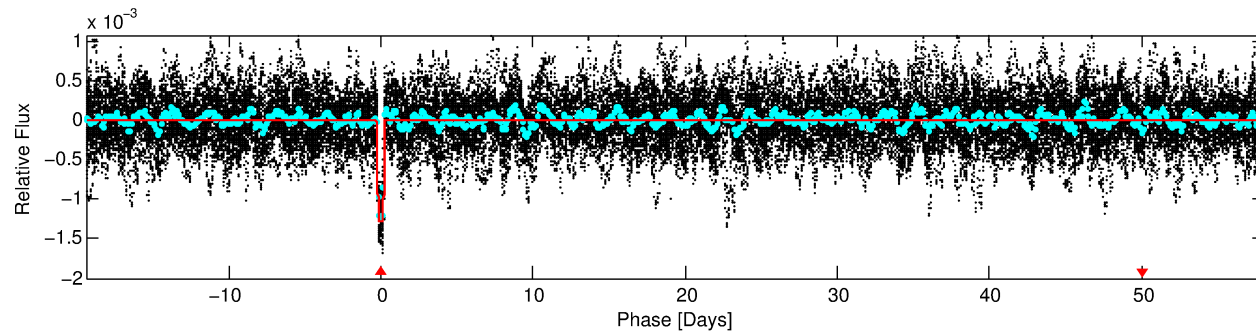
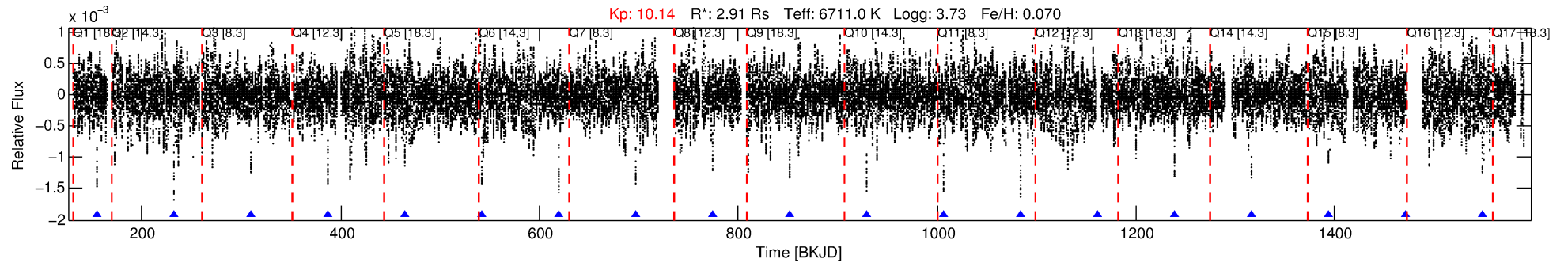
Ephemeris Match Information For 009955262-01

No Significant Match Found

DV One-Page Summary

KIC: 9955262 Candidate: 1 of 1 Period: 77.480 d

KOI: K00076.01 Corr: 0.995



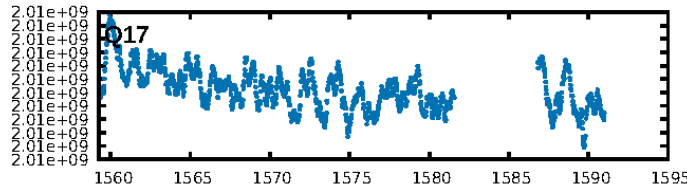
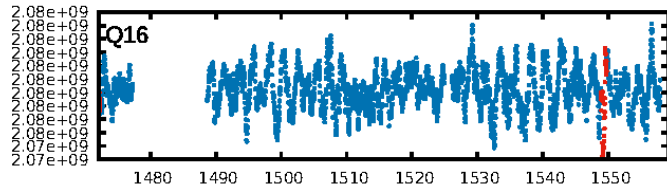
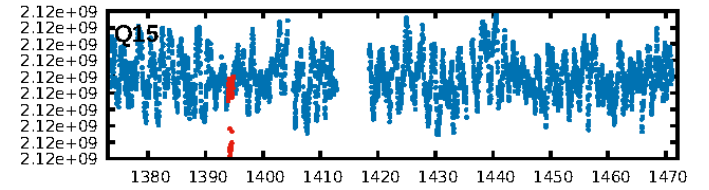
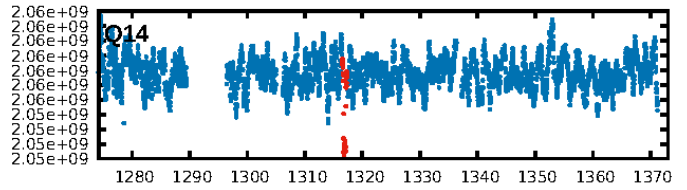
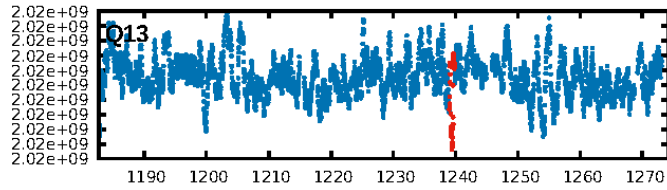
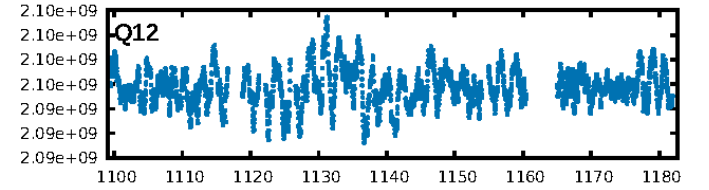
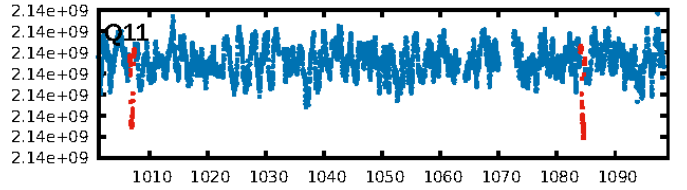
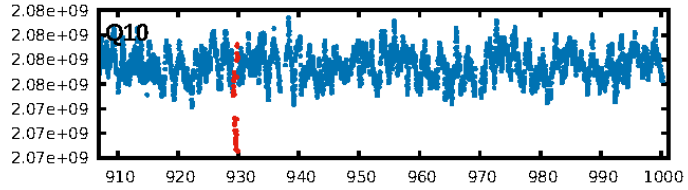
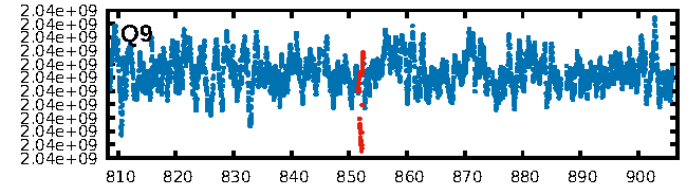
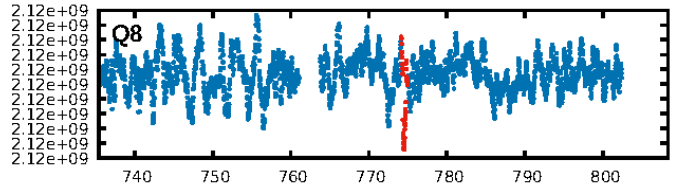
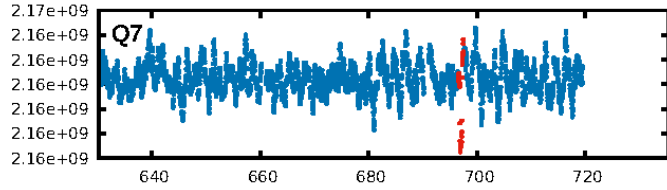
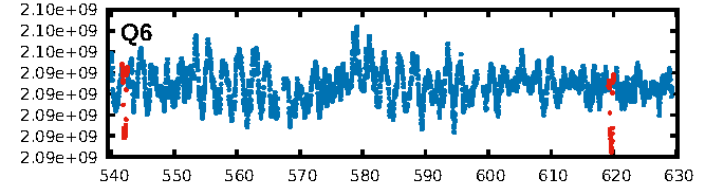
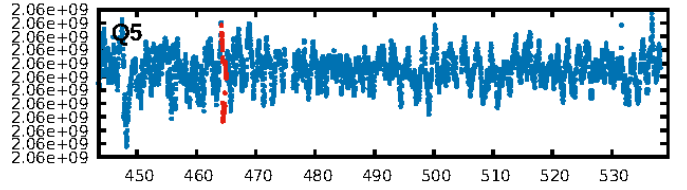
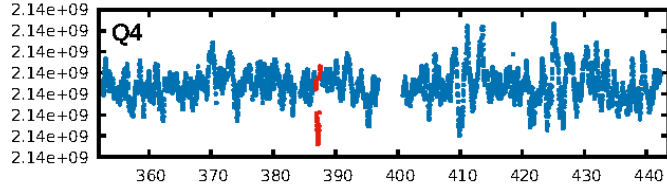
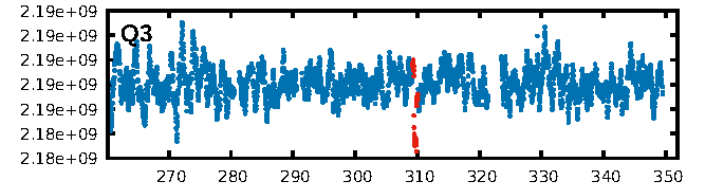
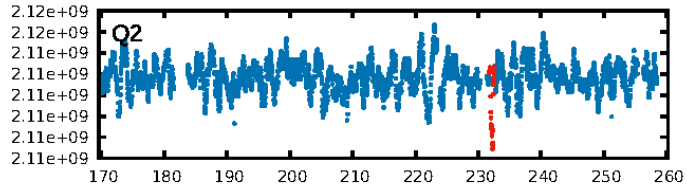
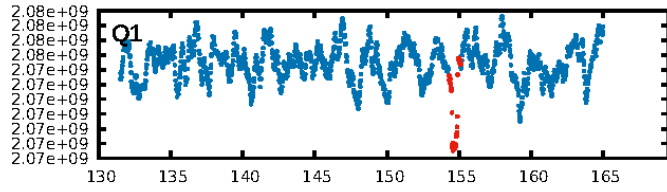
DV Fit Results:

Period = 77.48004 [0.00005] d
Epoch = 154.7041 [0.0005] BKJD
Rp/R* = 0.0340 [0.0005]
a/R* = 53.16 [2.86]
b = 0.47 [0.09]
Seff = 86.75 [42.65]
Teff = 778 [96] K
Rp = 10.79 [3.51] Re
a = 0.4210 [0.1277] AU
Ag = 91.61 [49.23] [1.84 σ]
Teffp = 3722 [255] K [10.80 σ]

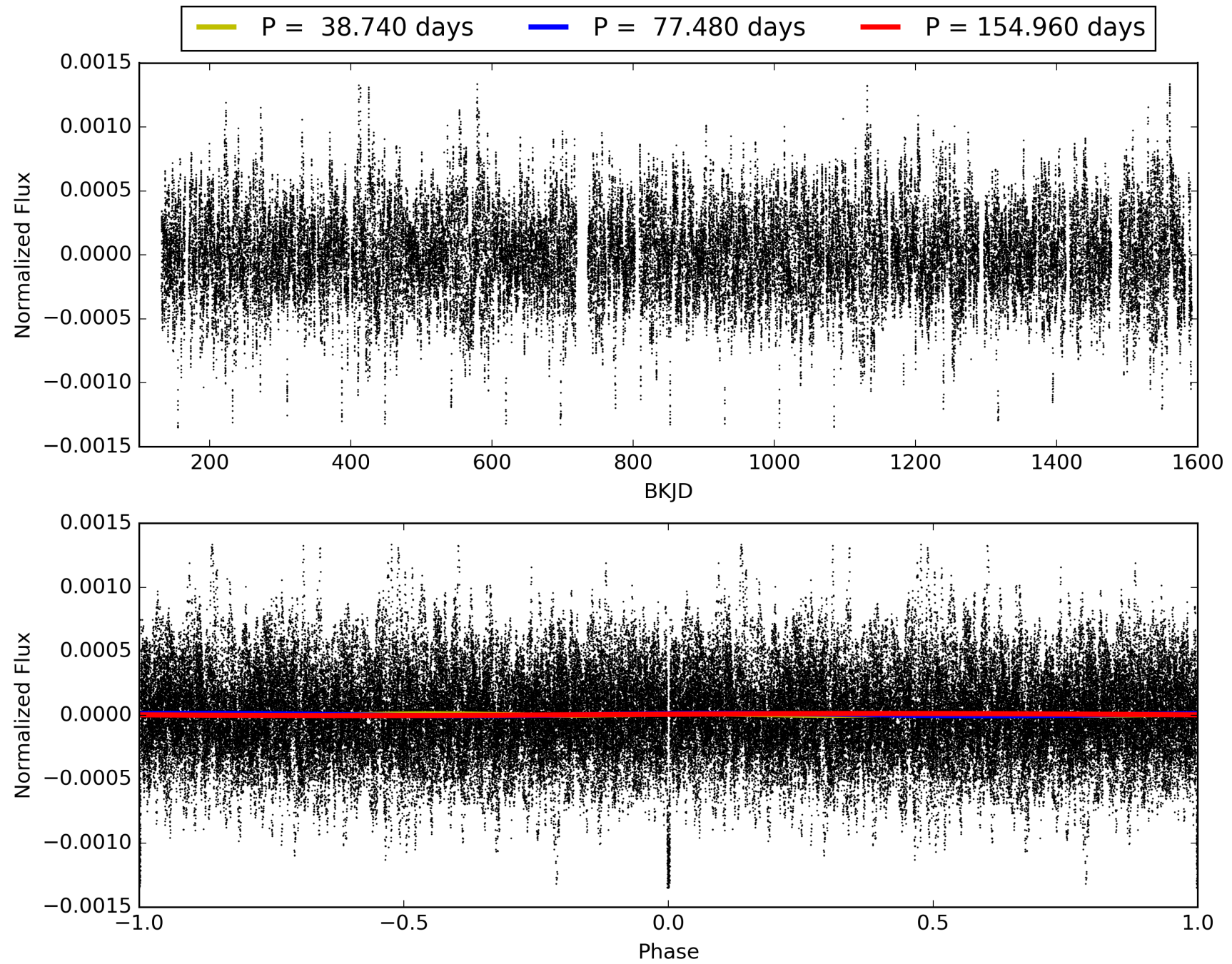
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.515 arcsec [19.23 σ]
OotOffset-rm: 2.238 arcsec [3.78 σ]
KicOffset-rm: 2.396 arcsec [2.80 σ]
OotOffset-st: 2/4/2/4 [12]
KicOffset-st: 2/4/2/4 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 009955262-01, PDC Light Curves

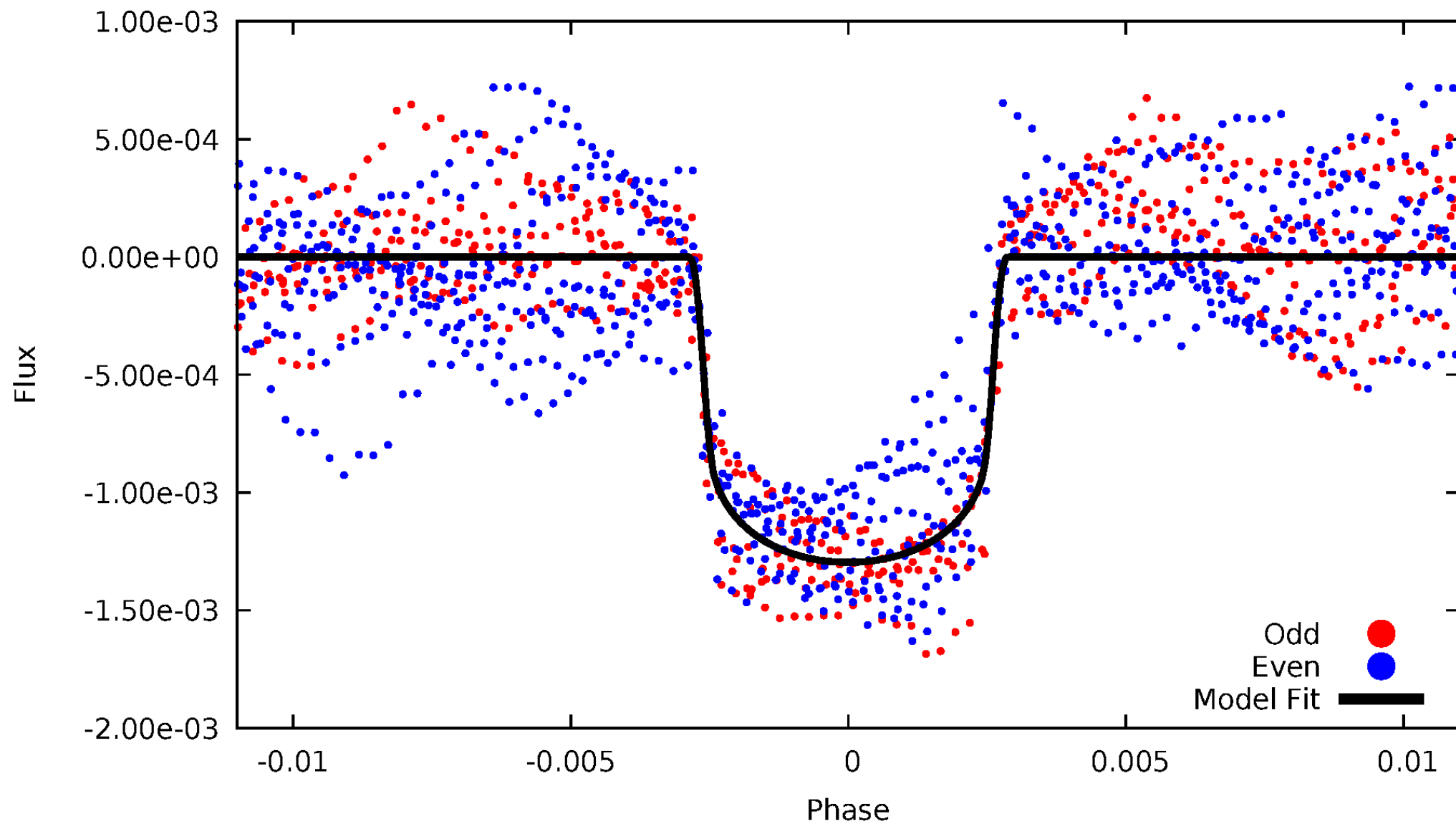


TCE 009955262-01



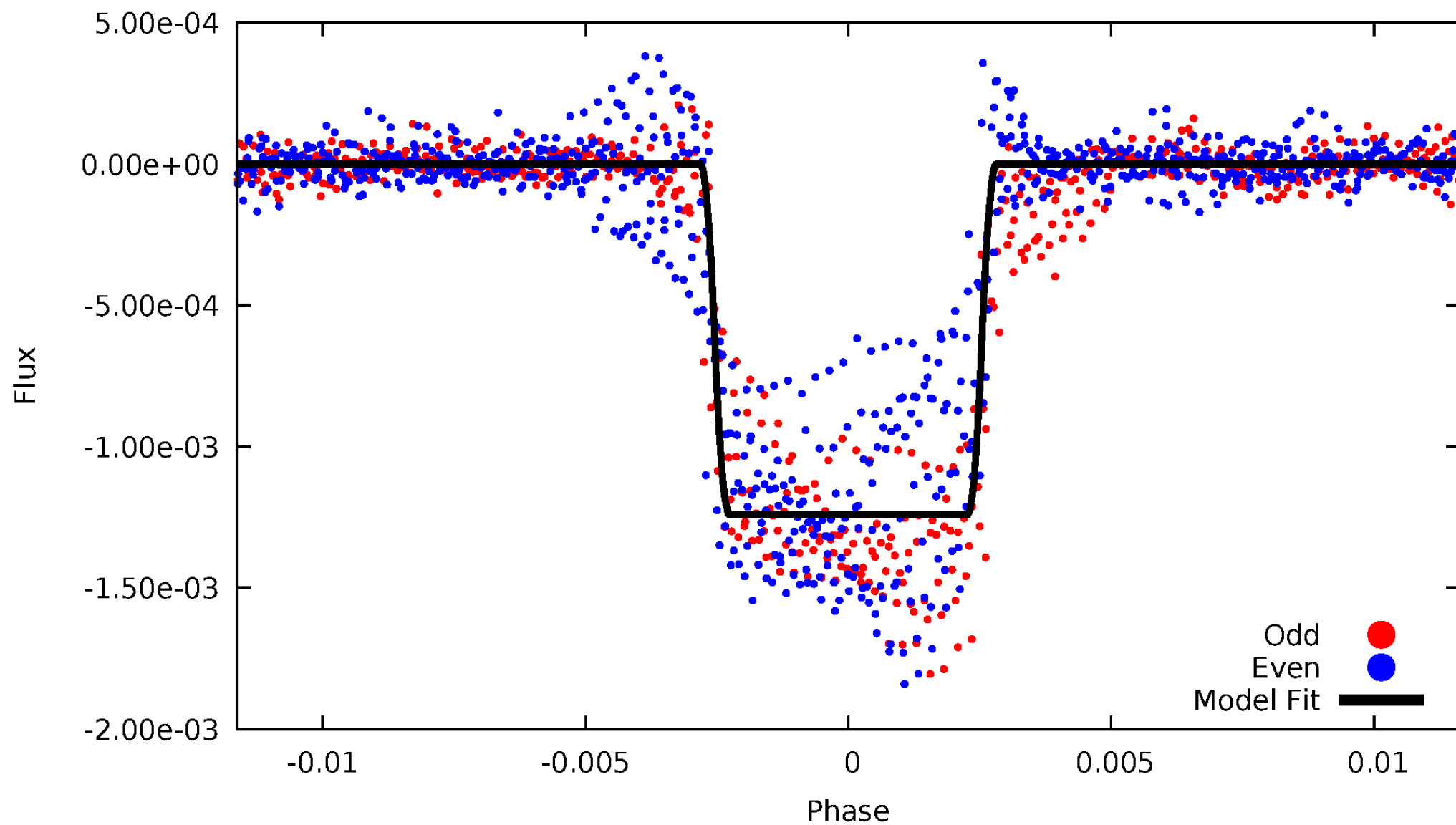
DV Odd/Even

TCE 009955262-01



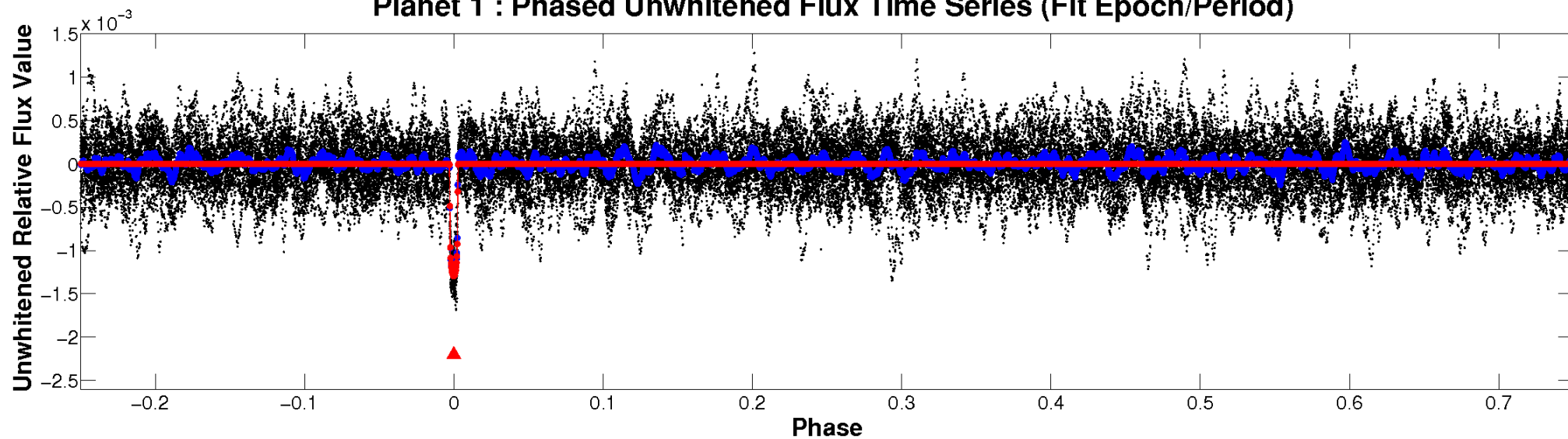
ALT Odd/Even

TCE 009955262-01

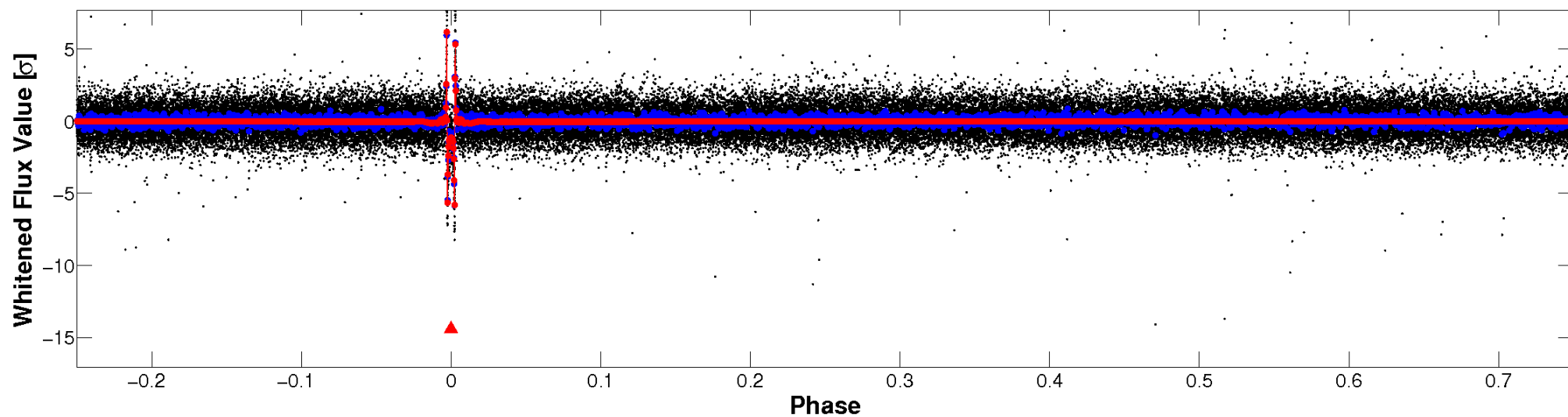


Non-Whitened Vs. Whitened Light Curve

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

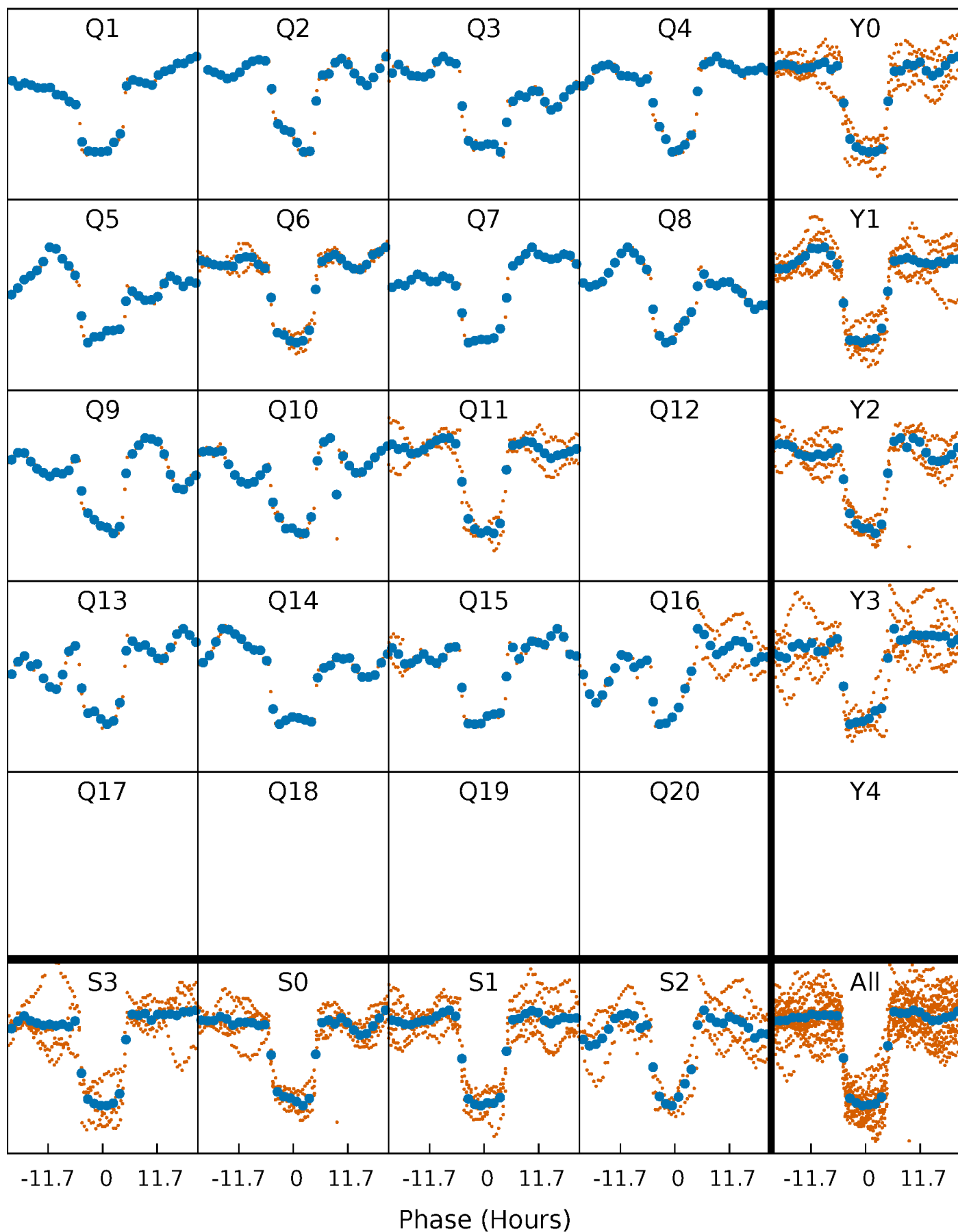


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



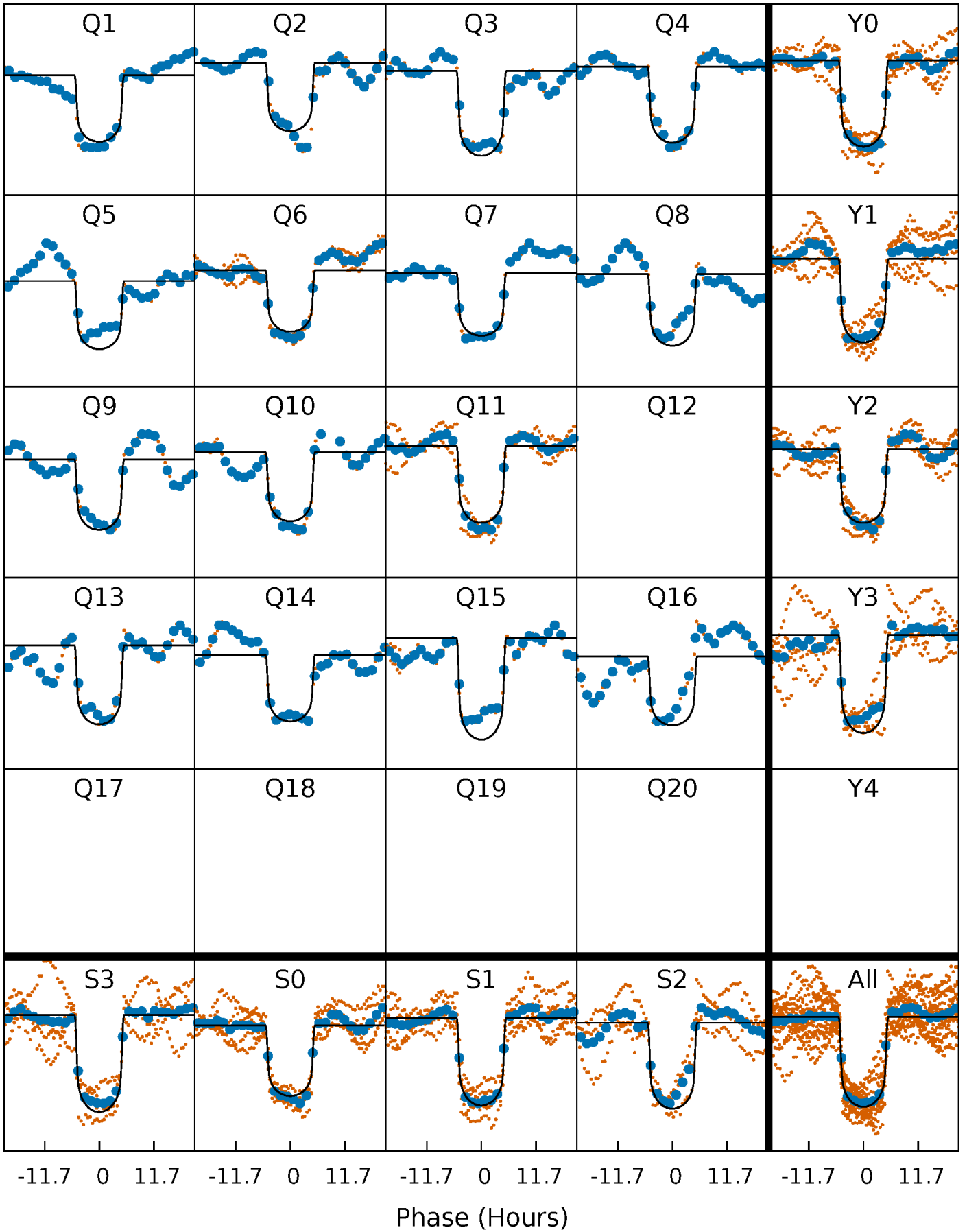
PDC Quarter-Phased Transit Curves

TCE 009955262-01 P= 77.480041 Days $T_0=154.704115$ (BKJD)



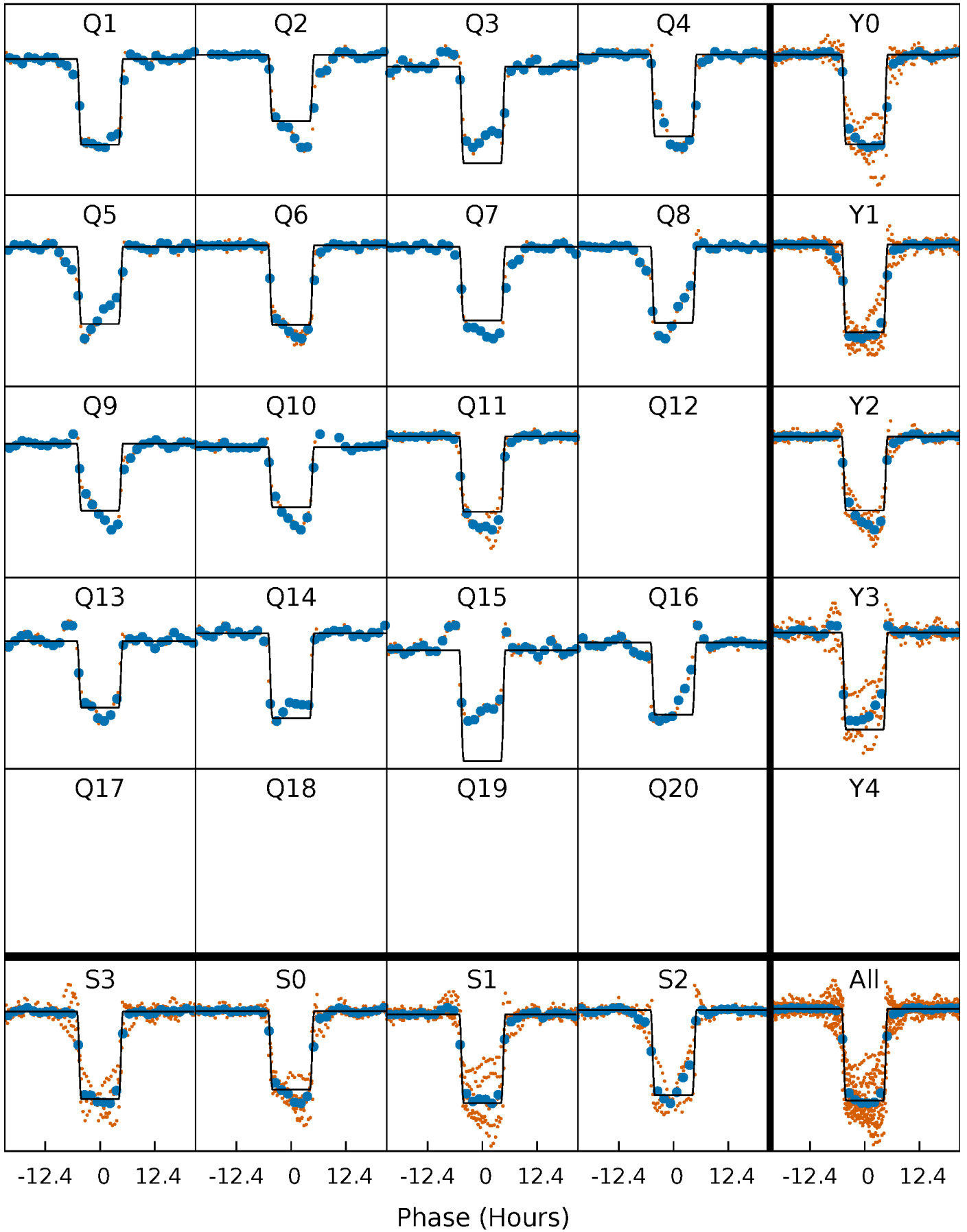
DV Quarter-Phased Transit Curves

TCE 009955262-01 P= 77.480041 Days $T_0=154.704115$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

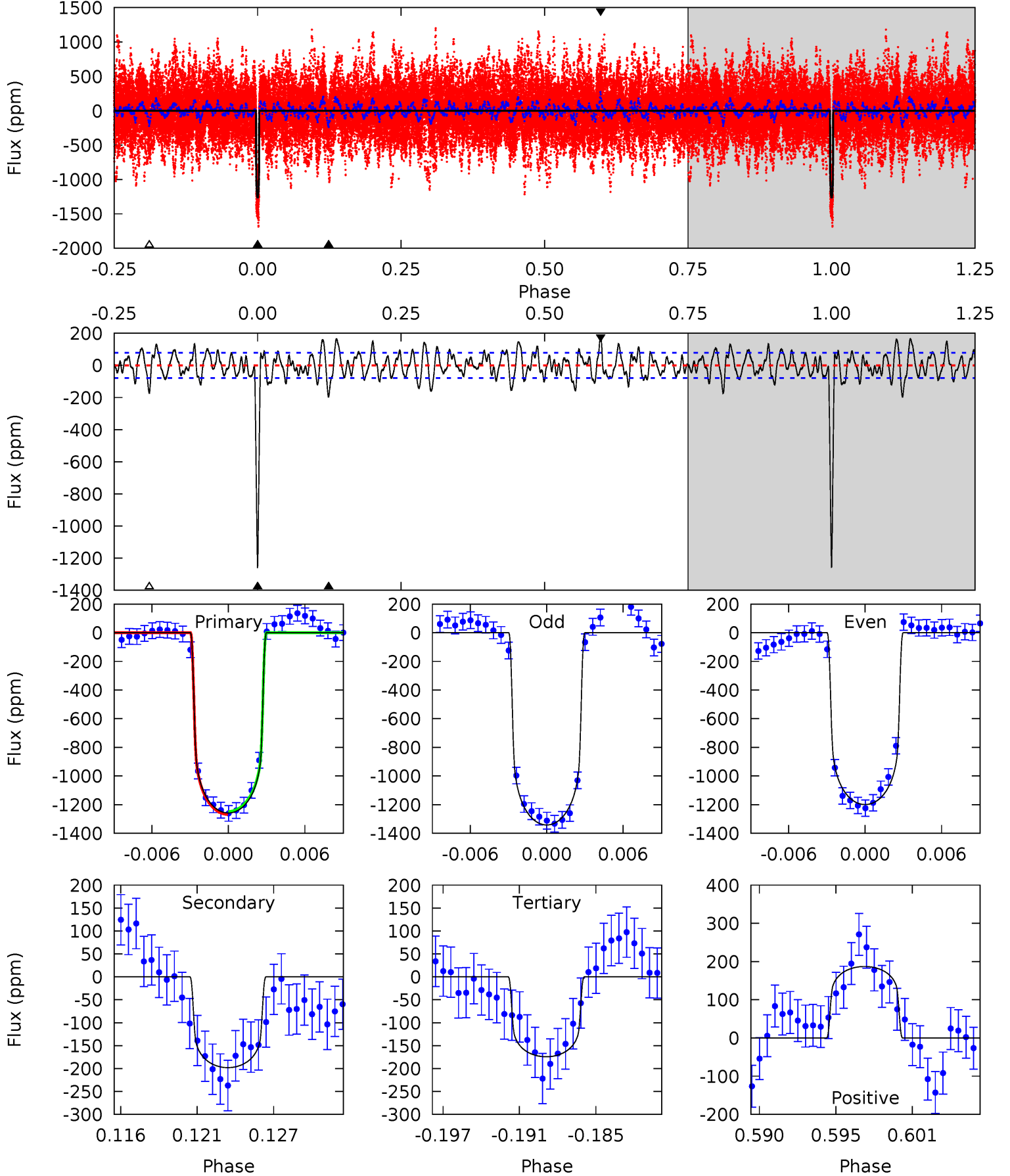
TCE 009955262-01 P= 77.481784 Days $T_0=154.689984$ (BKJD)



DV Model-Shift Uniqueness Test

009955262-01, P = 77.480041 Days, E = 77.224074 Days

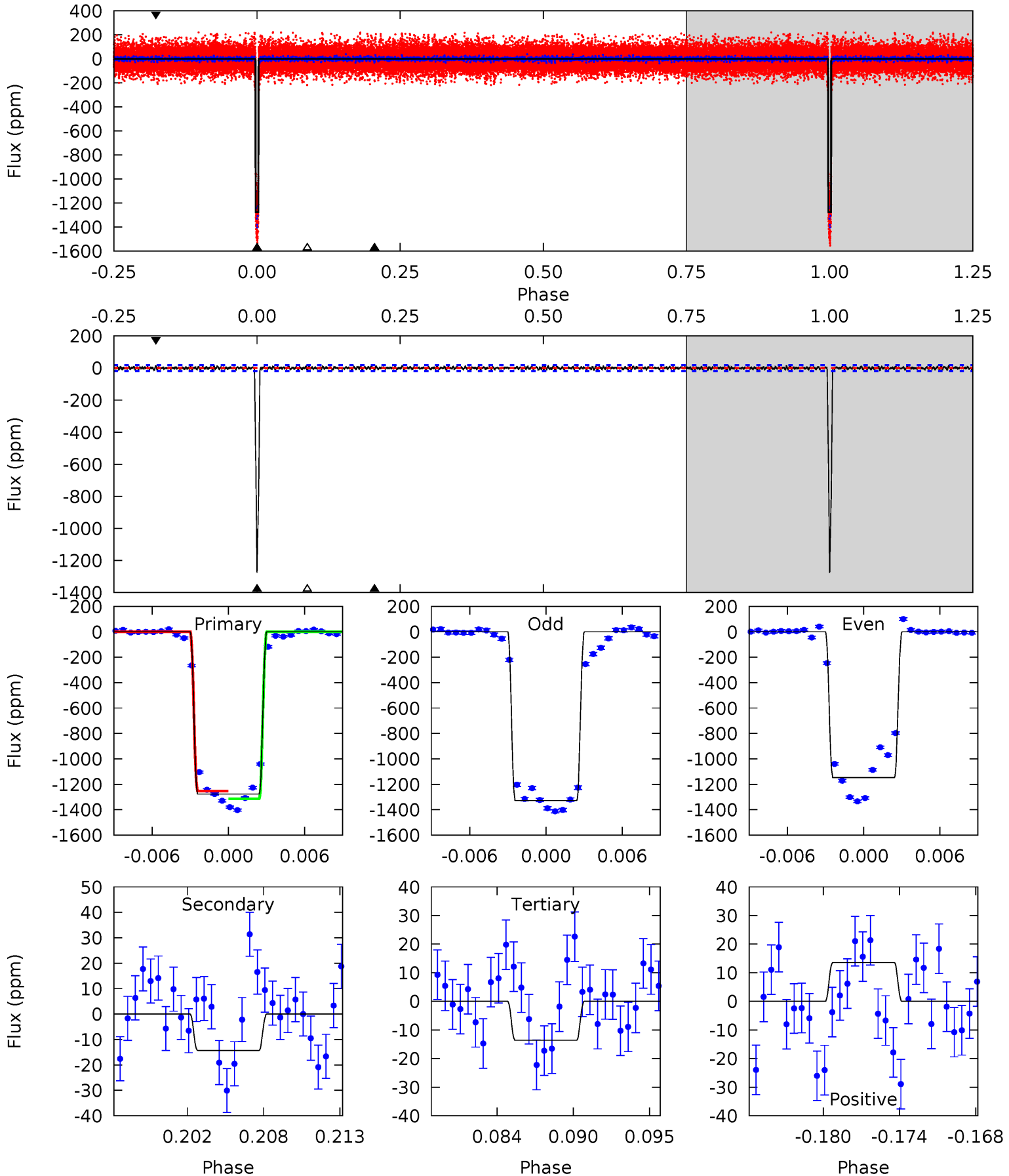
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.2	12.9	11.4	12.2	5.13	2.76	4.17	70.8	70.0	1.55	0.72	4.60	0.96	0.13	0.68



Alt Model-Shift Uniqueness Test

009955262-01, P = 77.481784 Days, E = 77.208200 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
349.3	3.90	3.72	3.71	5.14	2.77	1.18	345.5	345.6	0.18	0.19	25.5	0.97	0.01	8.04



Stellar Parameters For KIC 009955262

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6711^{+149}_{-199}	$3.730^{+0.277}_{-0.092}$	$0.070^{+0.250}_{-0.300}$	$2.909^{+0.508}_{-0.944}$	$1.657^{+0.239}_{-0.263}$	$0.095^{+0.178}_{-0.028}$
	+2%/-3%	+7%/-2%	+357%/-429%	+17%/-32%	+14%/-16%	+188%/-29%
Source	PHO1	FLK73	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 009955262-01 / KOI 0076.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-198 ± 15	$10.63^{+1.11}_{-1.91}$	1064^{+65}_{-85}	4488^{+112}_{-122}	176^{+72}_{-31}
Alt.	-14 ± 4	$10.98^{+1.23}_{-1.86}$	1068^{+62}_{-85}	2883^{+109}_{-125}	12^{+6}_{-4}

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 $A_{obs} \gg 1.0$

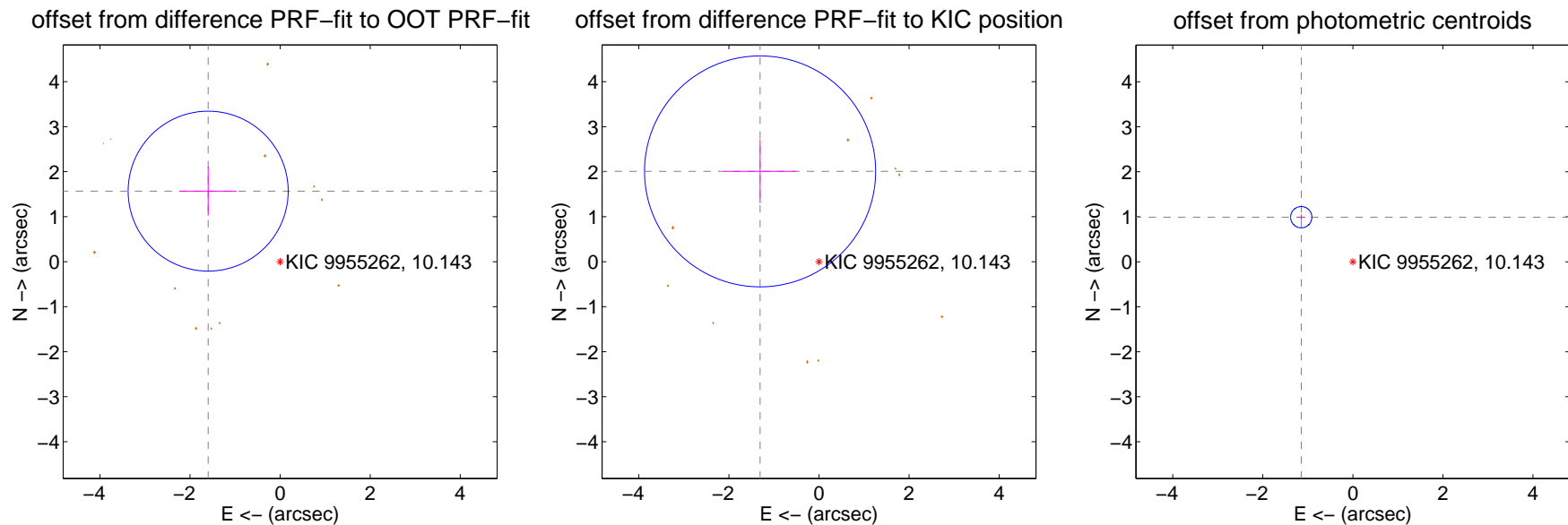
DV Centroid Data

Supplemental centroid analysis for 009955262-01. **Kepler magnitude: 10.14.** Transit SNR 63.28

There are 2 quarters with good PRF difference image offsets

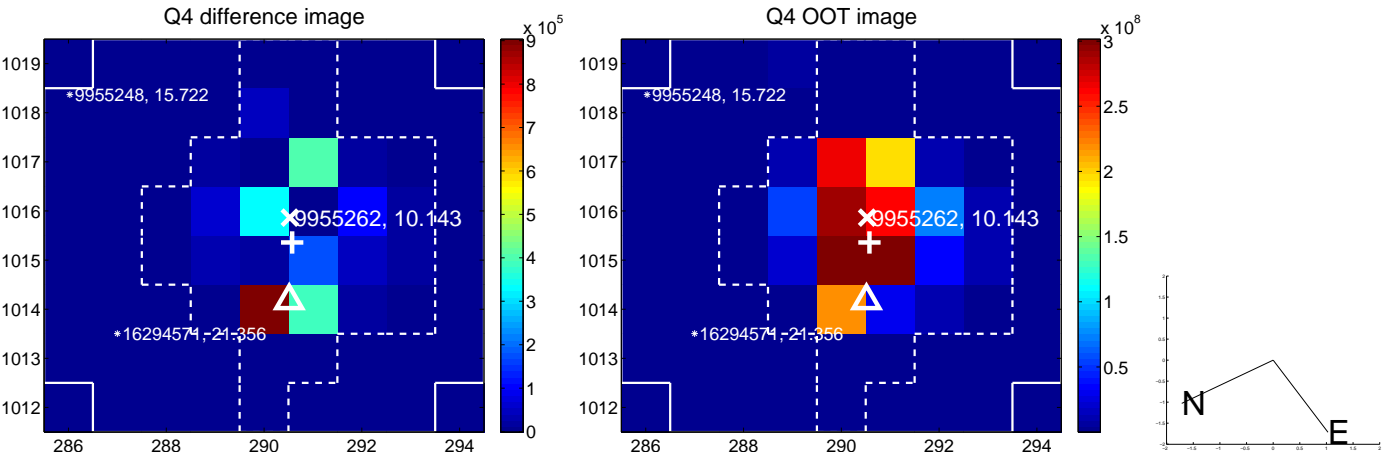
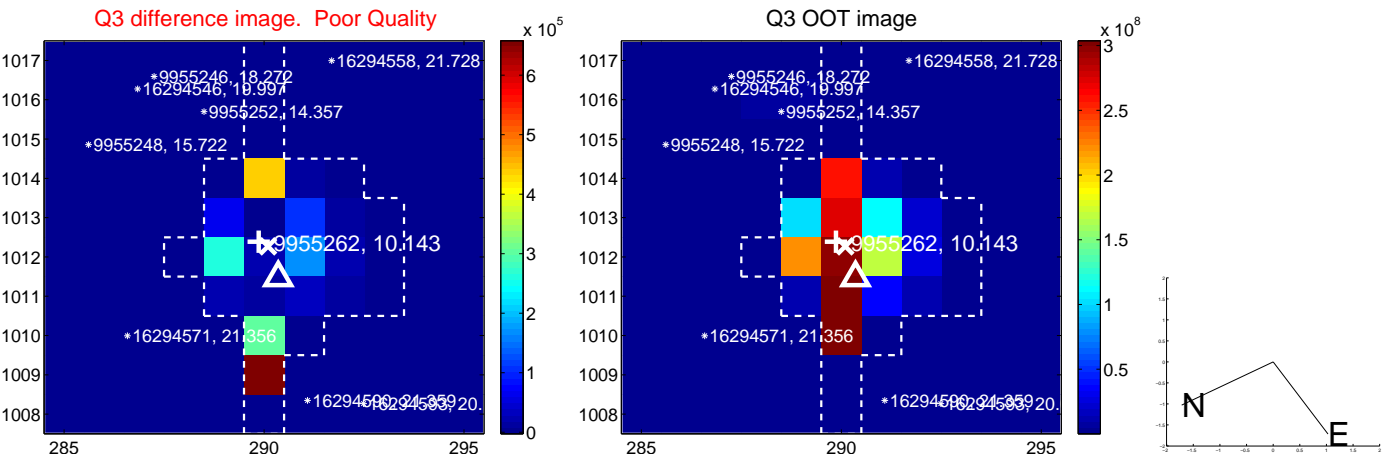
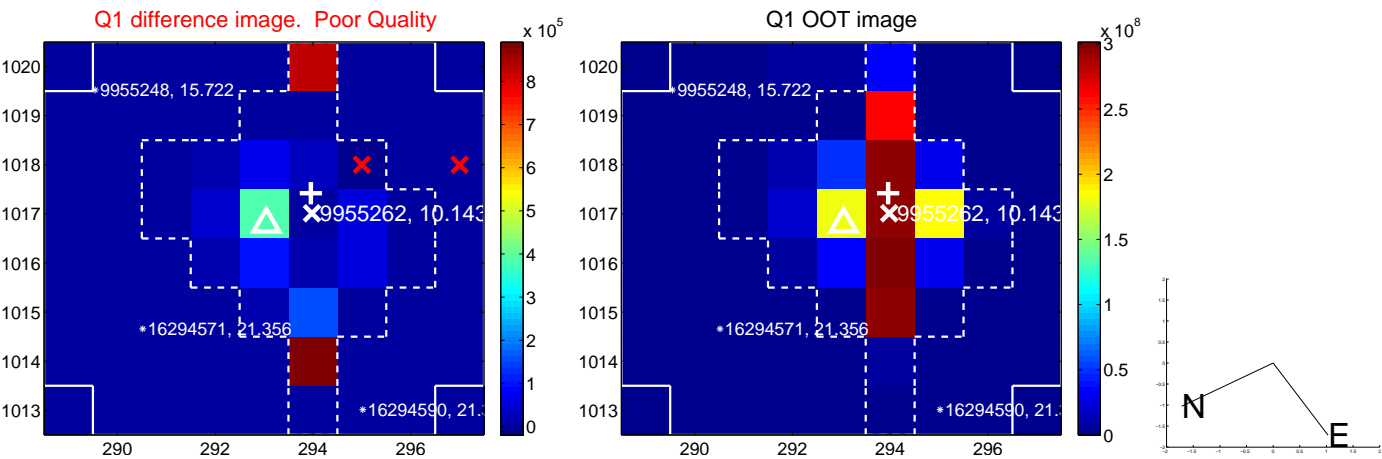
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.238 ± 0.592	3.78	1.597 ± 0.634	1.568 ± 0.546
PRF-fit source offset from KIC position	2.396 ± 0.855	2.80	1.308 ± 0.803	2.007 ± 0.709
photometric centroid source offset	1.52 ± 0.08	19.23	1.15 ± 0.09	0.99 ± 0.06

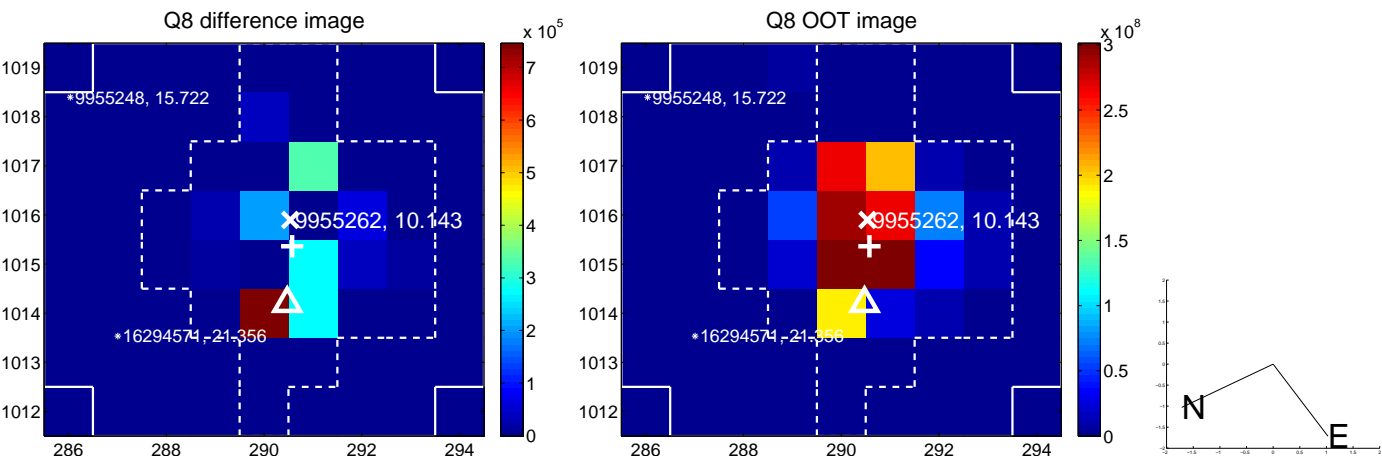
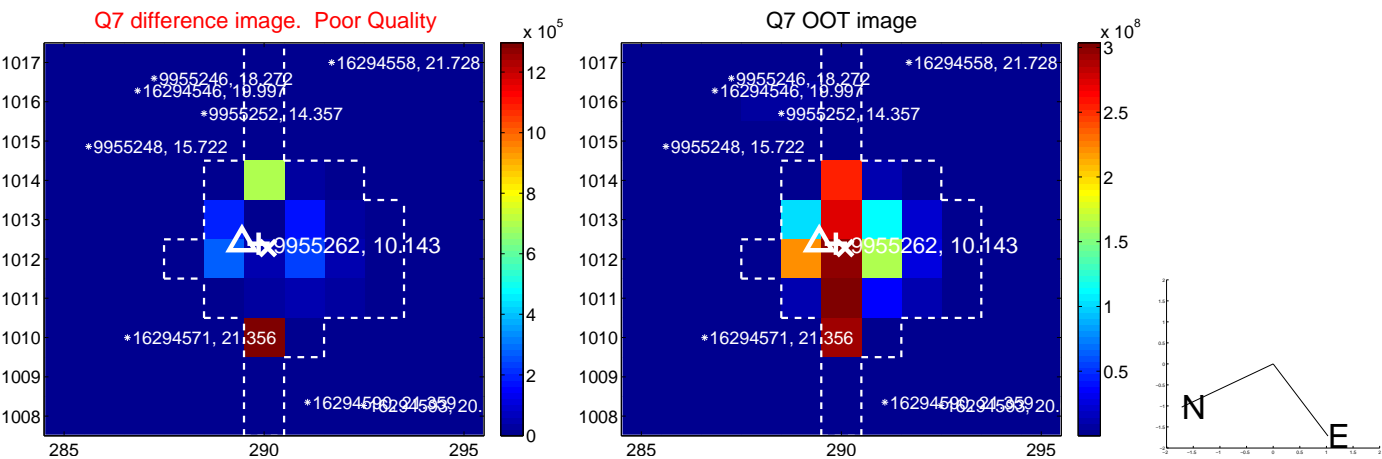
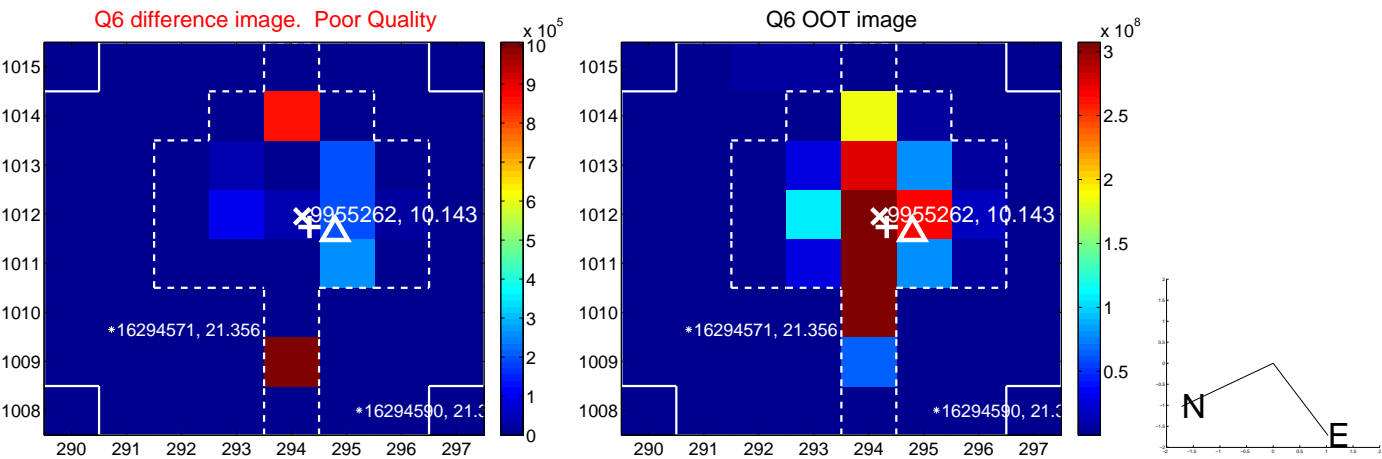
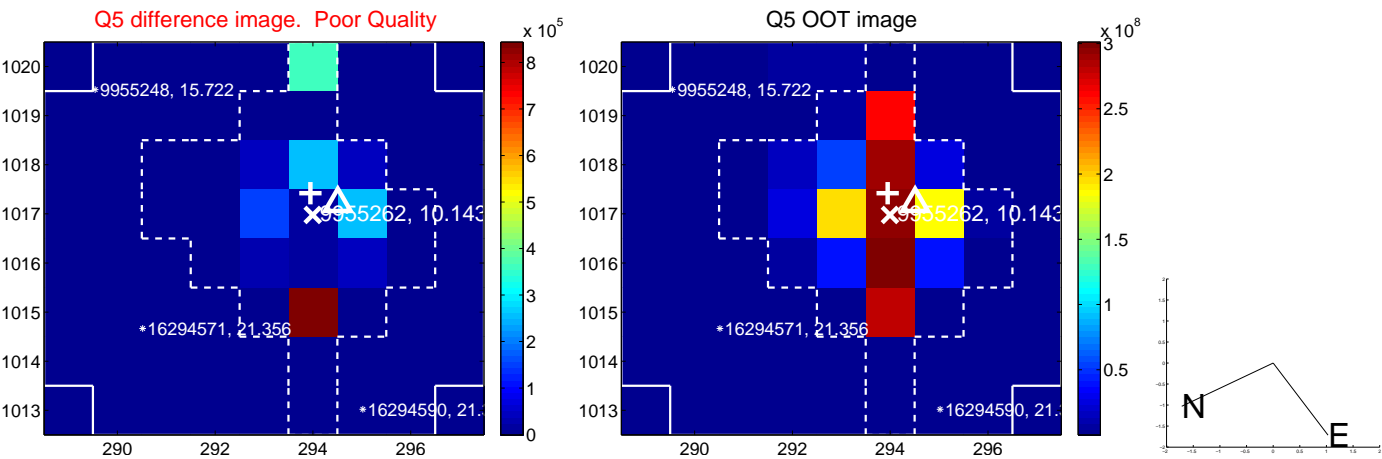


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

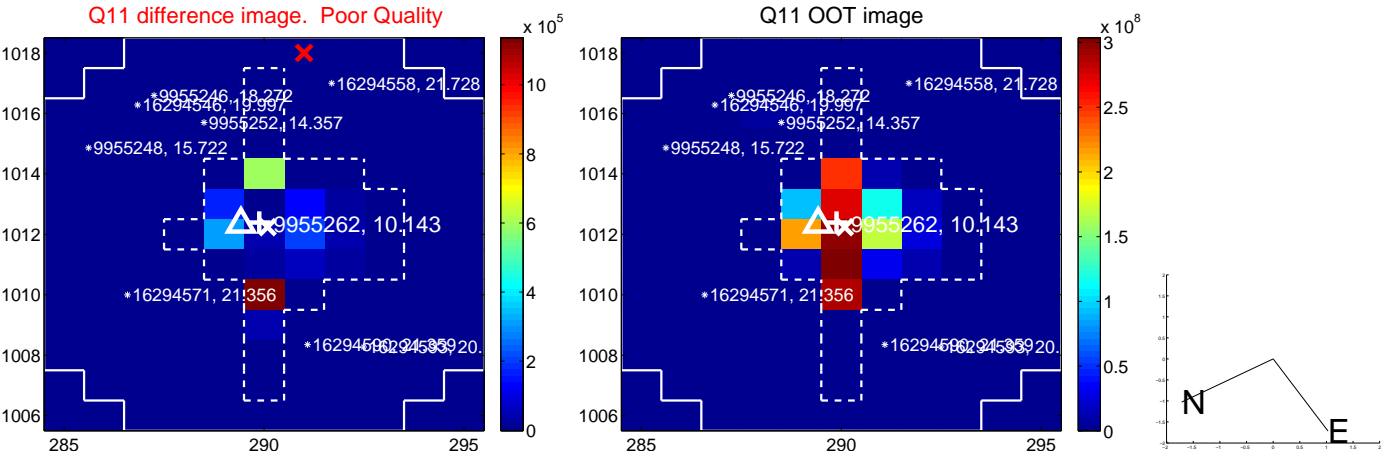
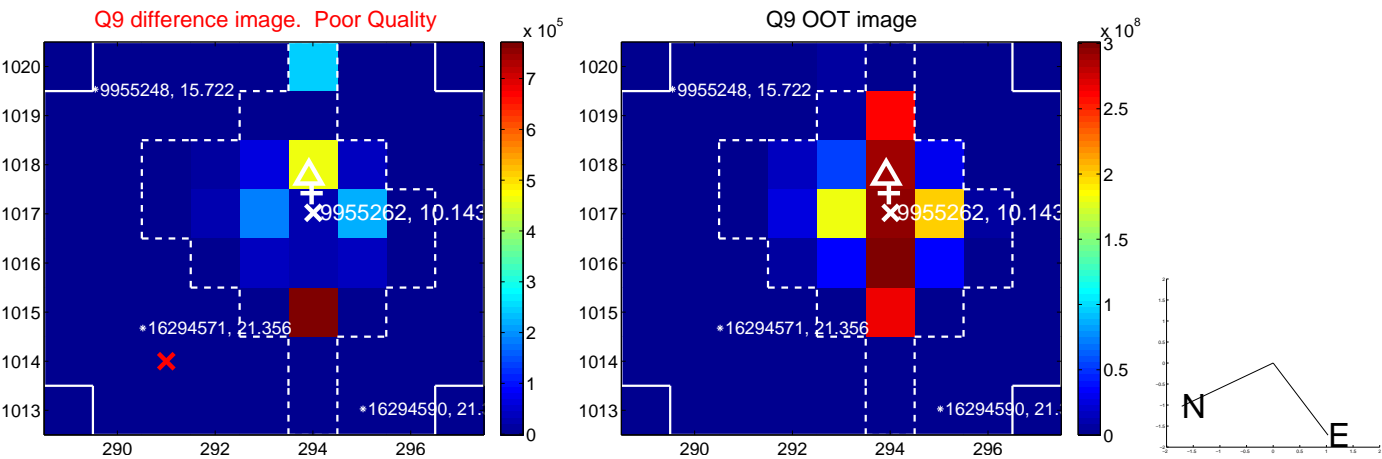
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



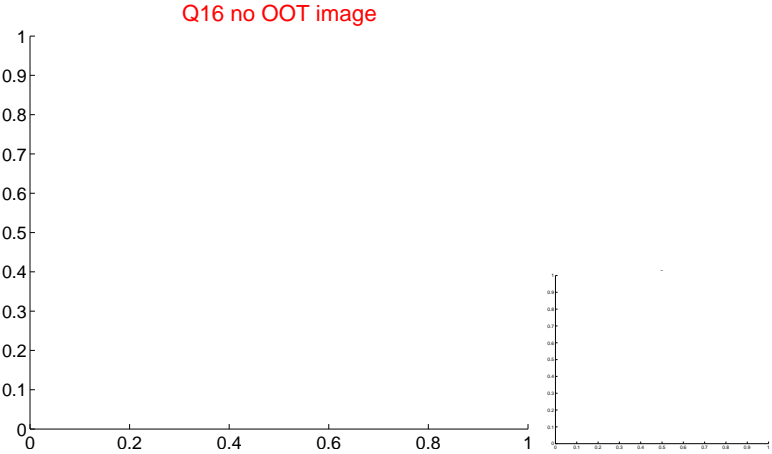
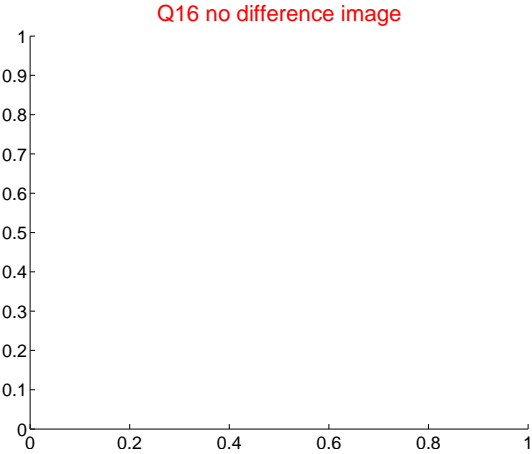
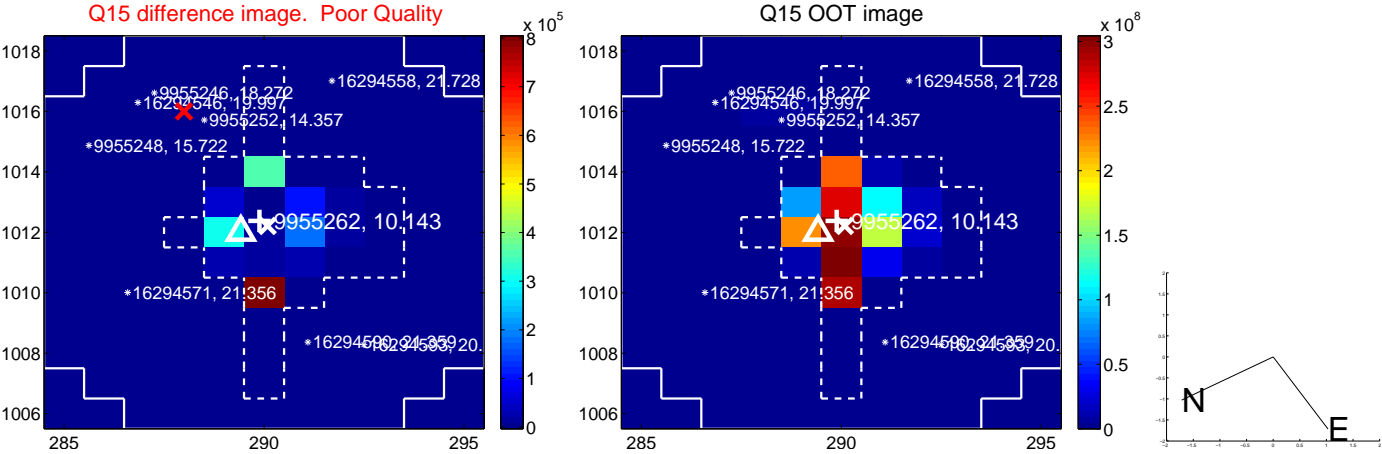
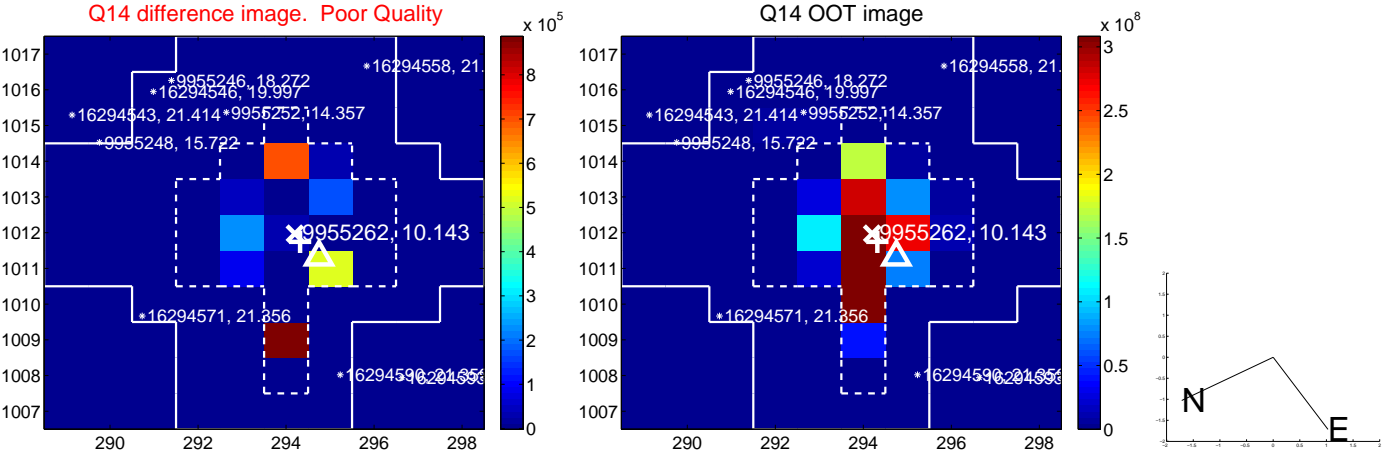
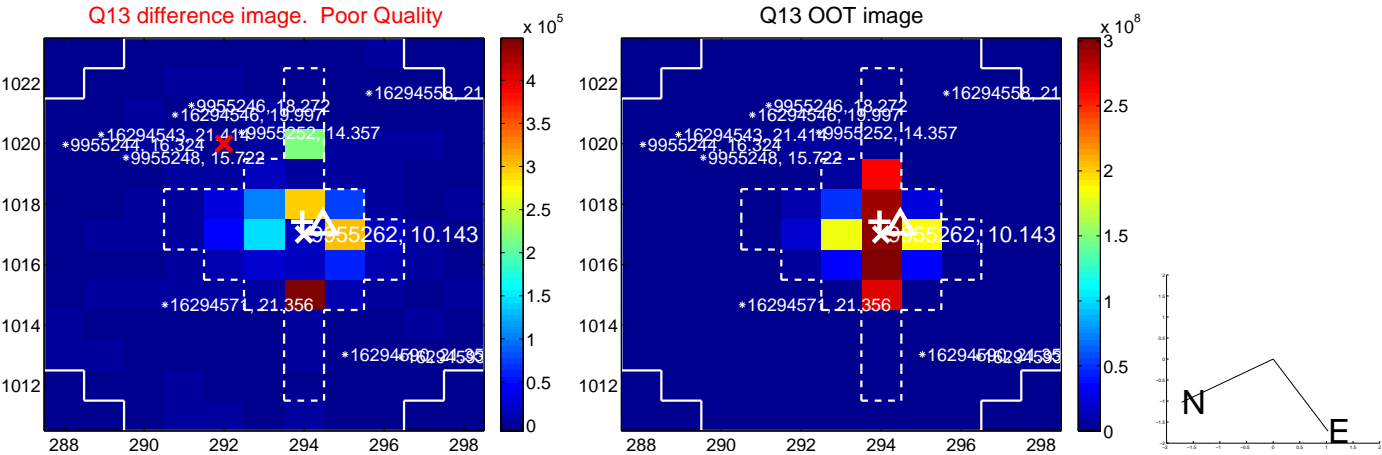
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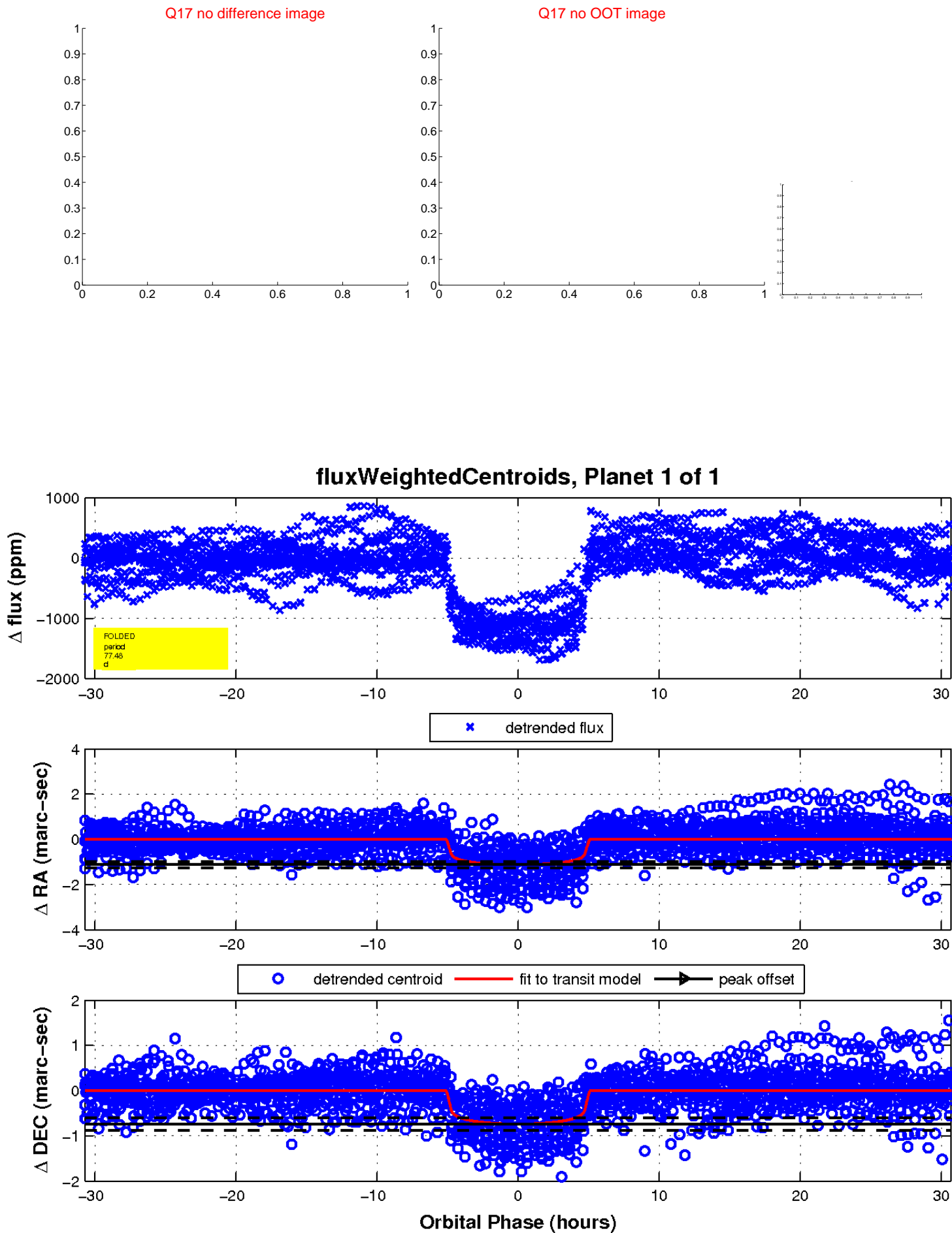
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UKIRT Image

