

KIC 008572168

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})
008572168-01	OBS	4263.01	1.662682	132.455017	65.0	2.139	18.3	18.9	2.24	6028	2.16	6706.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008572168-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

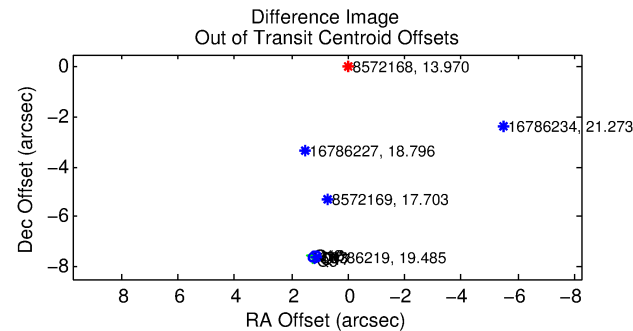
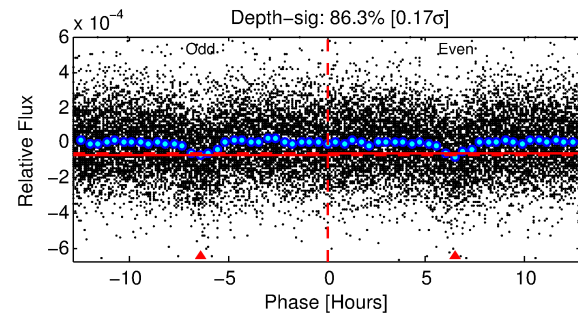
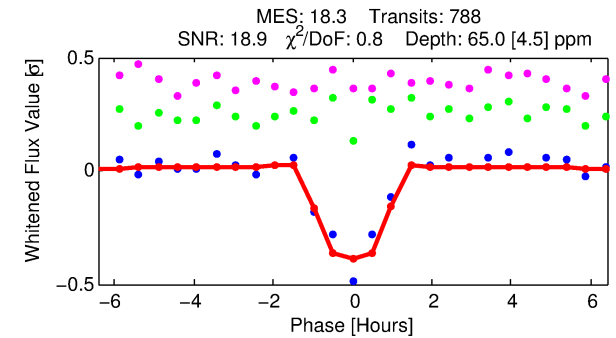
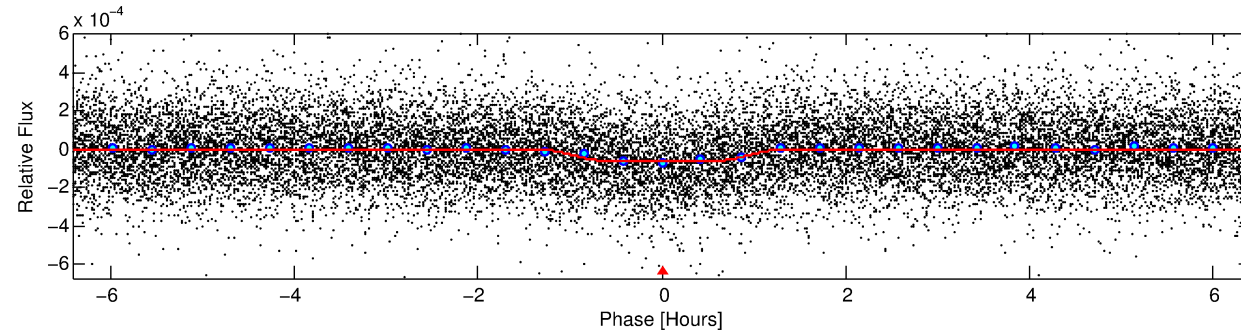
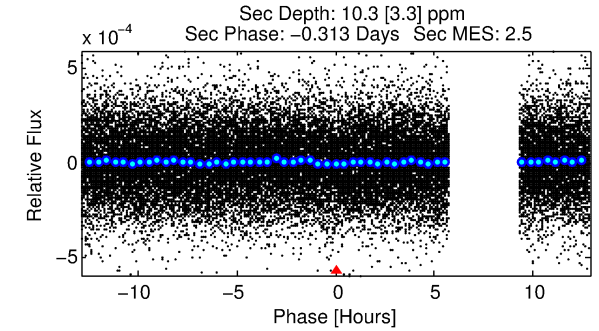
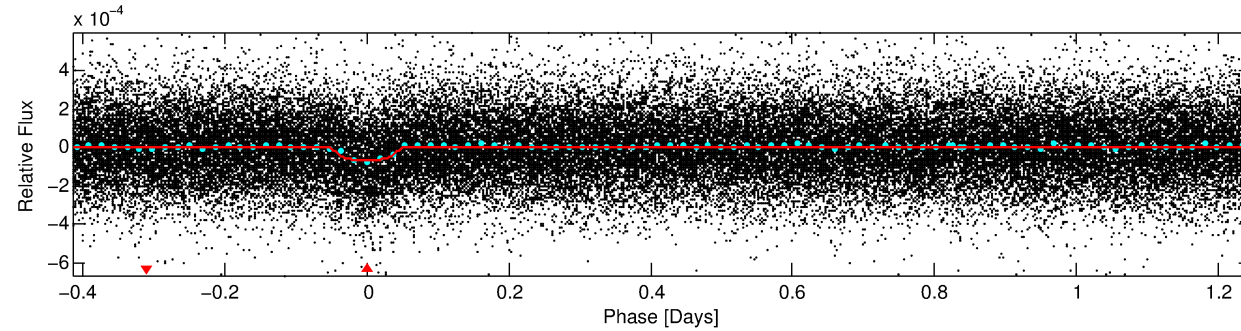
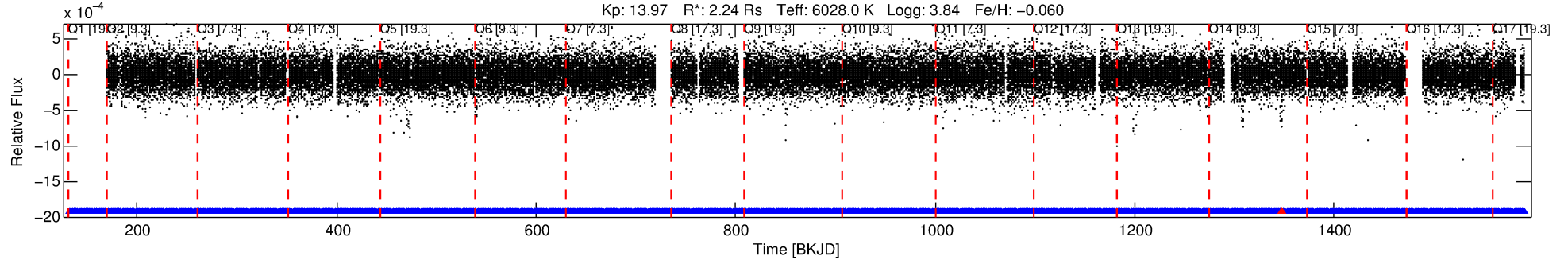
Ephemeris Match Information For 008572168-01

No Significant Match Found

DV One-Page Summary

KIC: 8572168 Candidate: 1 of 1 Period: 1.663 d
KOI: K04263.01 Corr: 0.883

Kp: 13.97 R*: 2.24 Rs Teff: 6028.0 K Logg: 3.84 Fe/H: -0.060



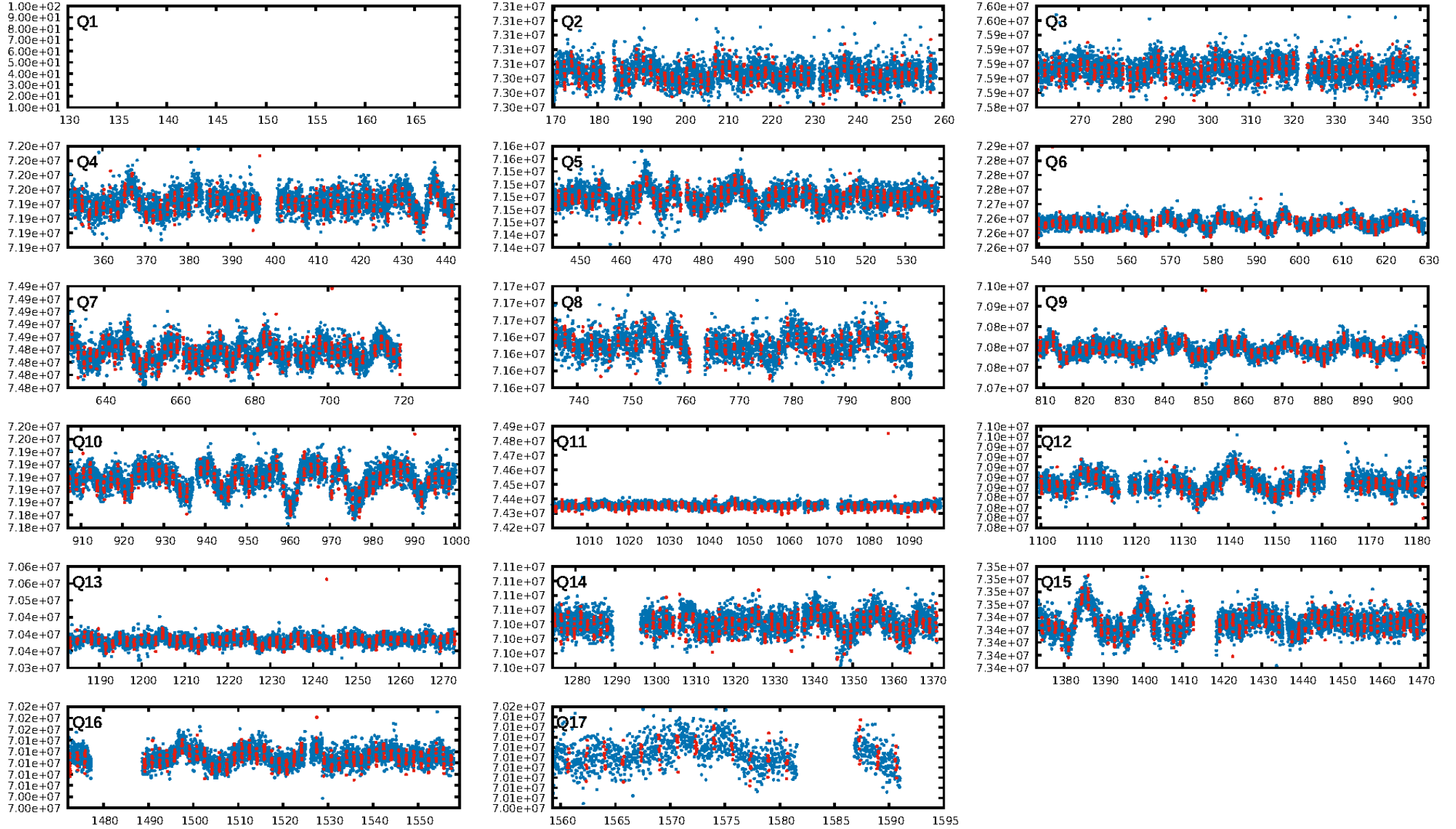
DV Fit Results:

Period = 1.66268 [0.00001] d
Epoch = 132.4550 [0.0017] BKJD
Rp/R* = 0.0088 [0.0030]
a/R* = 2.74 [4.33]
b = 0.91 [0.35]
Seff = 6706.93 [5661.66]
Teq = 2308 [487] K
Rp = 2.16 [1.32] Re
a = 0.0298 [0.0151] AU
Ag = 1.09 [1.22] [0.07σ]
Teff = 3642 [704] K [1.56σ]

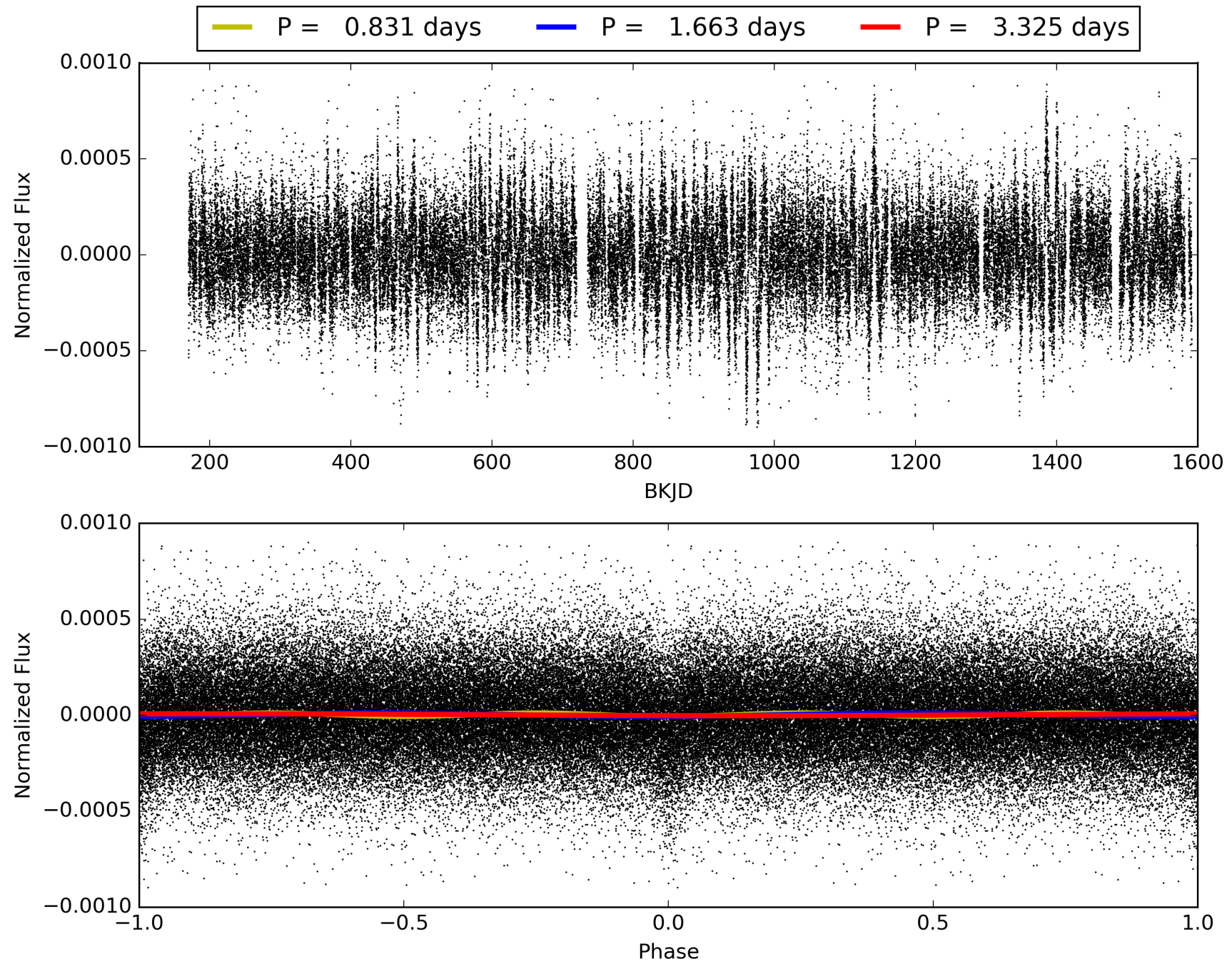
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.85e-72
RollingBand-fgt: 1.00 [771/772]
GhostDiagnostic-chr: -0.2964
Centroid-sig: 0.0%
Centroid-so: 14.665 arcsec [23.46σ]
OotOffset-rm: 7.711 arcsec [109.77σ]
KicOffset-rm: 7.694 arcsec [108.50σ]
OotOffset-st: 0/0/4/4 [8]
KicOffset-st: 0/0/4/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 008572168-01, PDC Light Curves

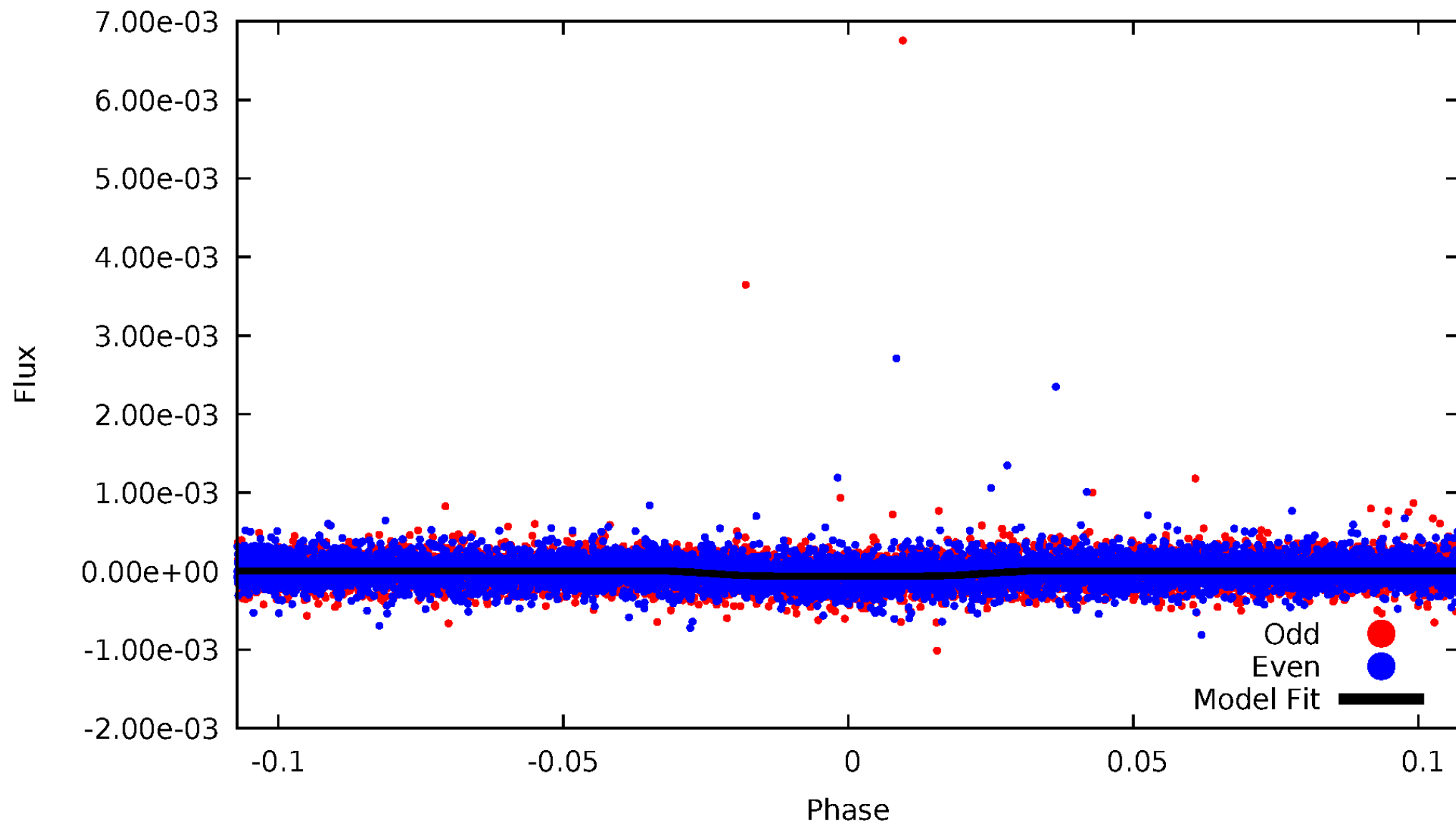


TCE 008572168-01



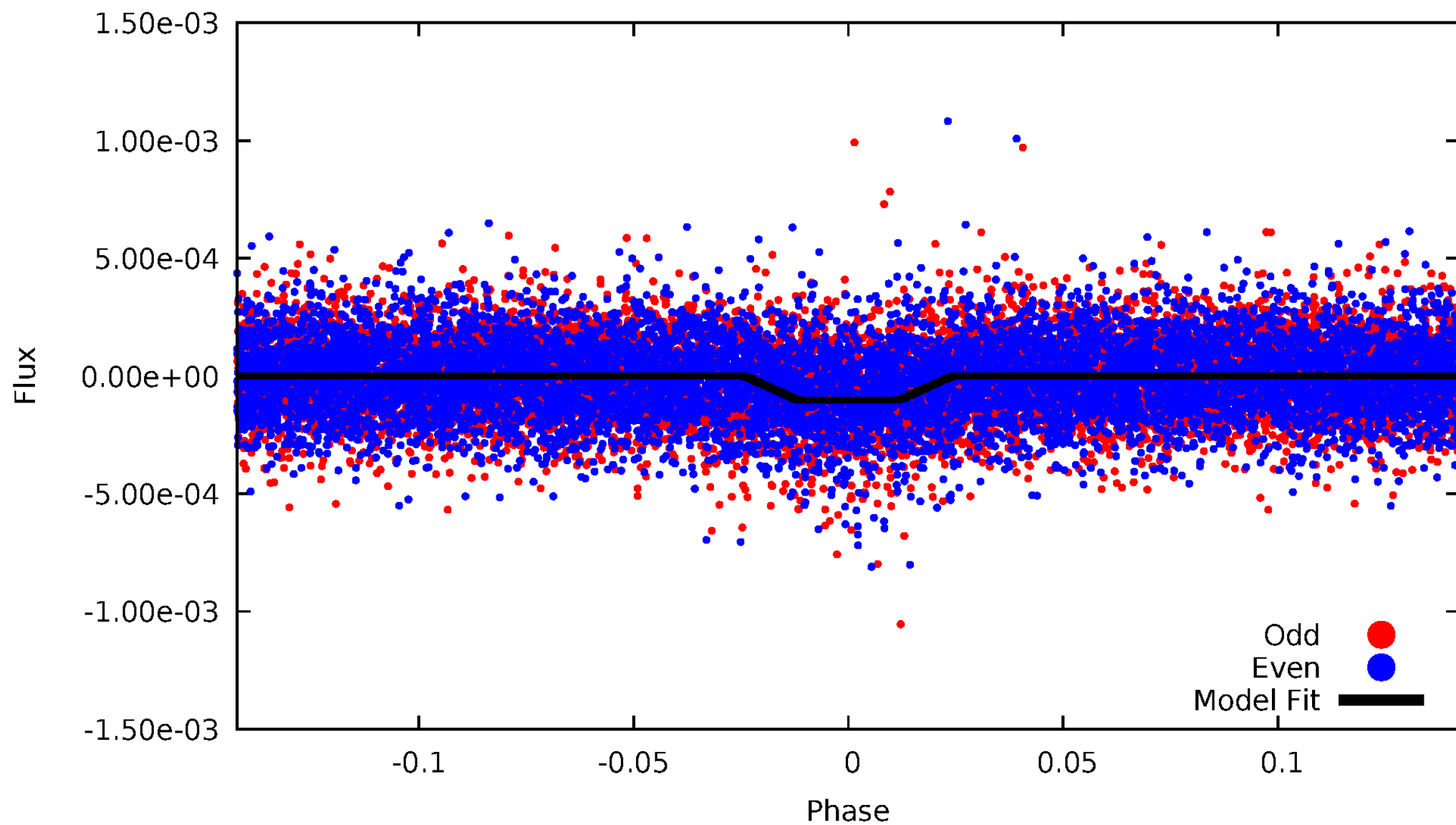
DV Odd/Even

TCE 008572168-01



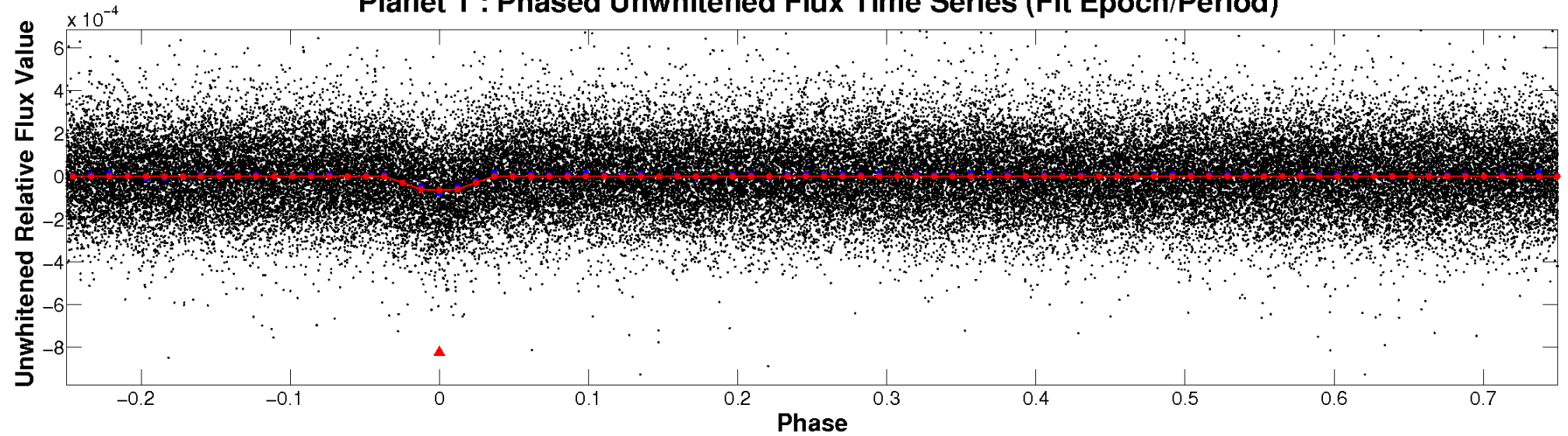
ALT Odd/Even

TCE 008572168-01

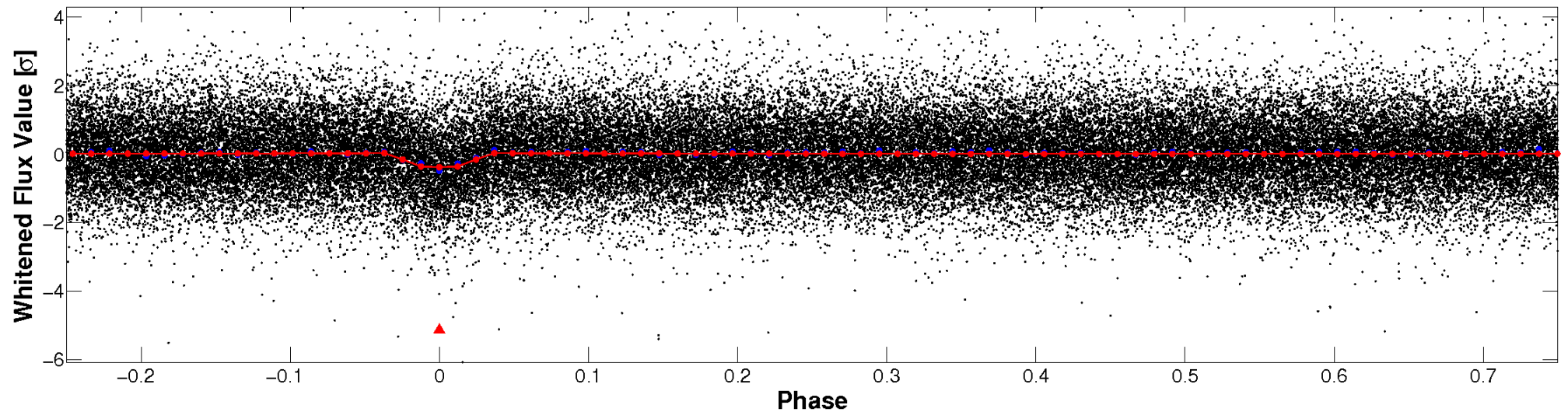


Non-Whitened Vs. Whitened Light Curve

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

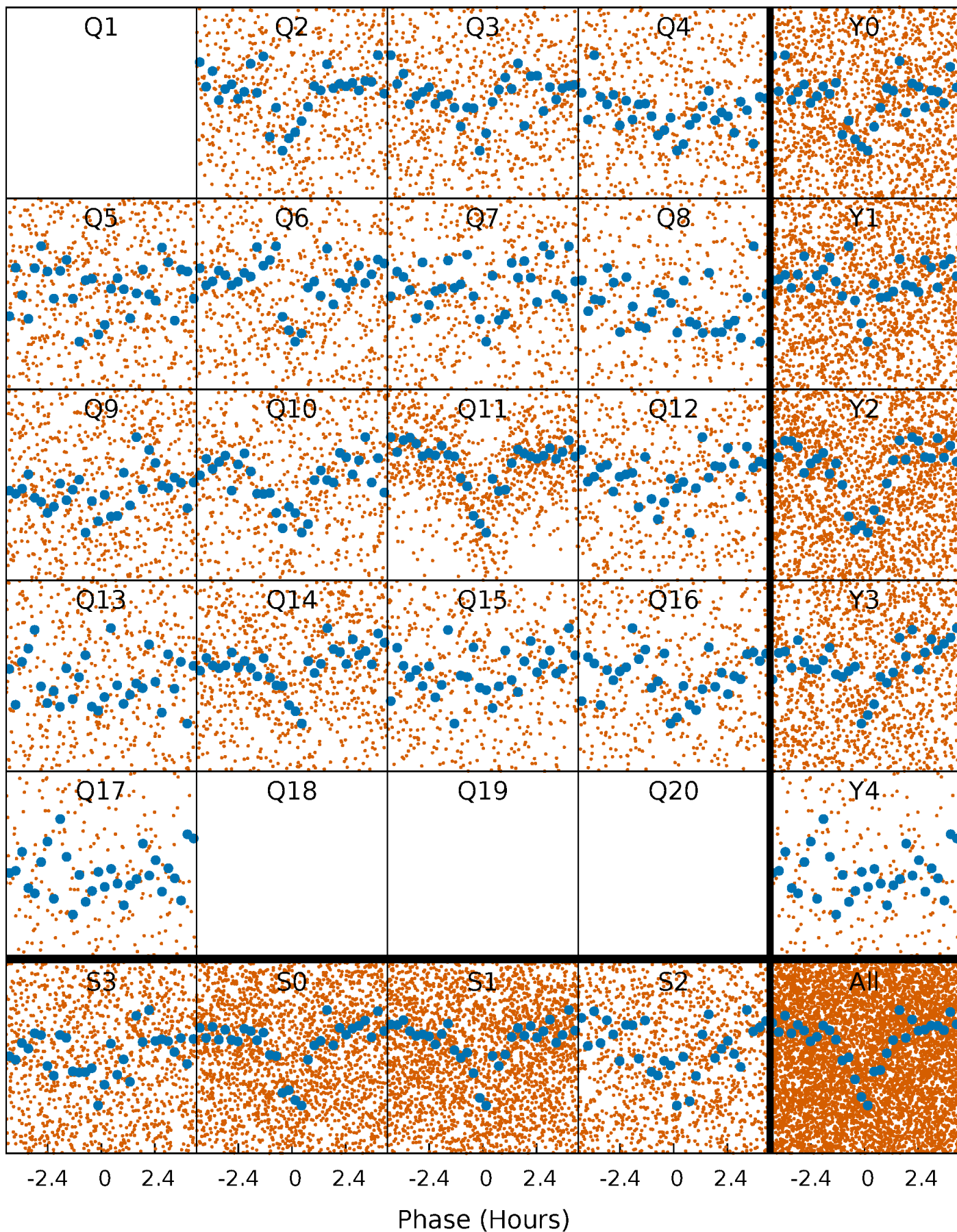


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



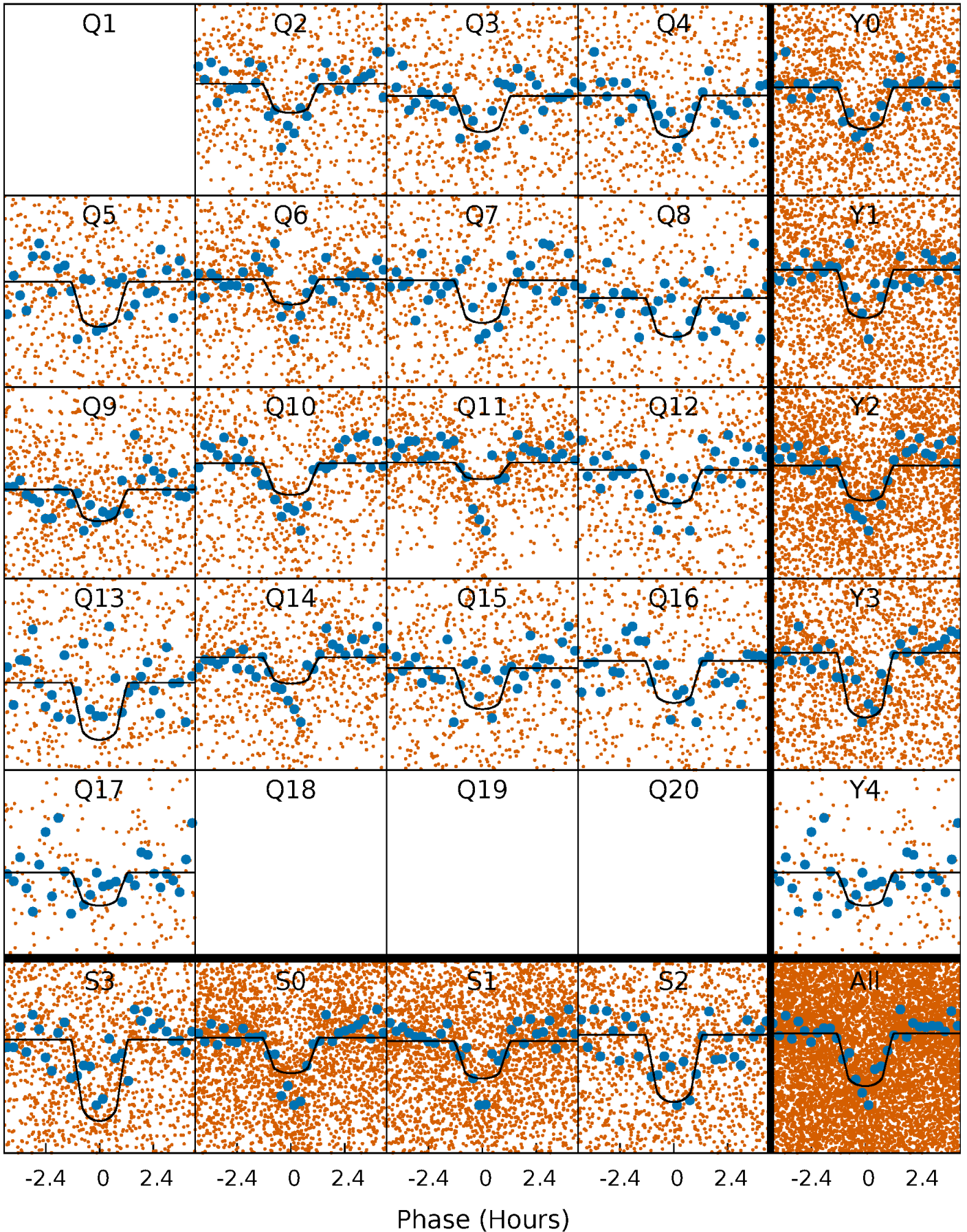
PDC Quarter-Phased Transit Curves

TCE 008572168-01 P= 1.662682 Days $T_0=132.455017$ (BKJD)



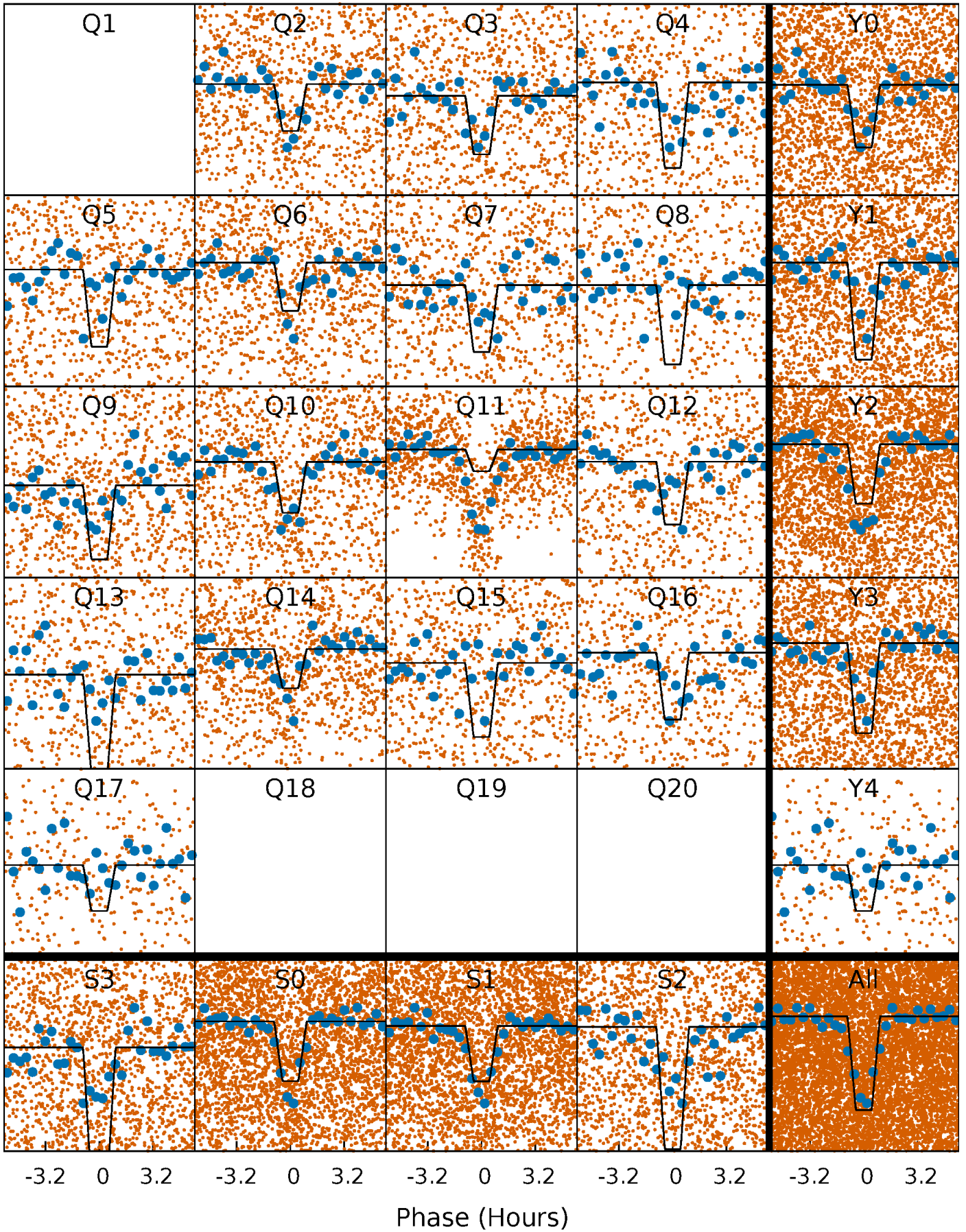
DV Quarter-Phased Transit Curves

TCE 008572168-01 P= 1.662682 Days $T_0=132.455017$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

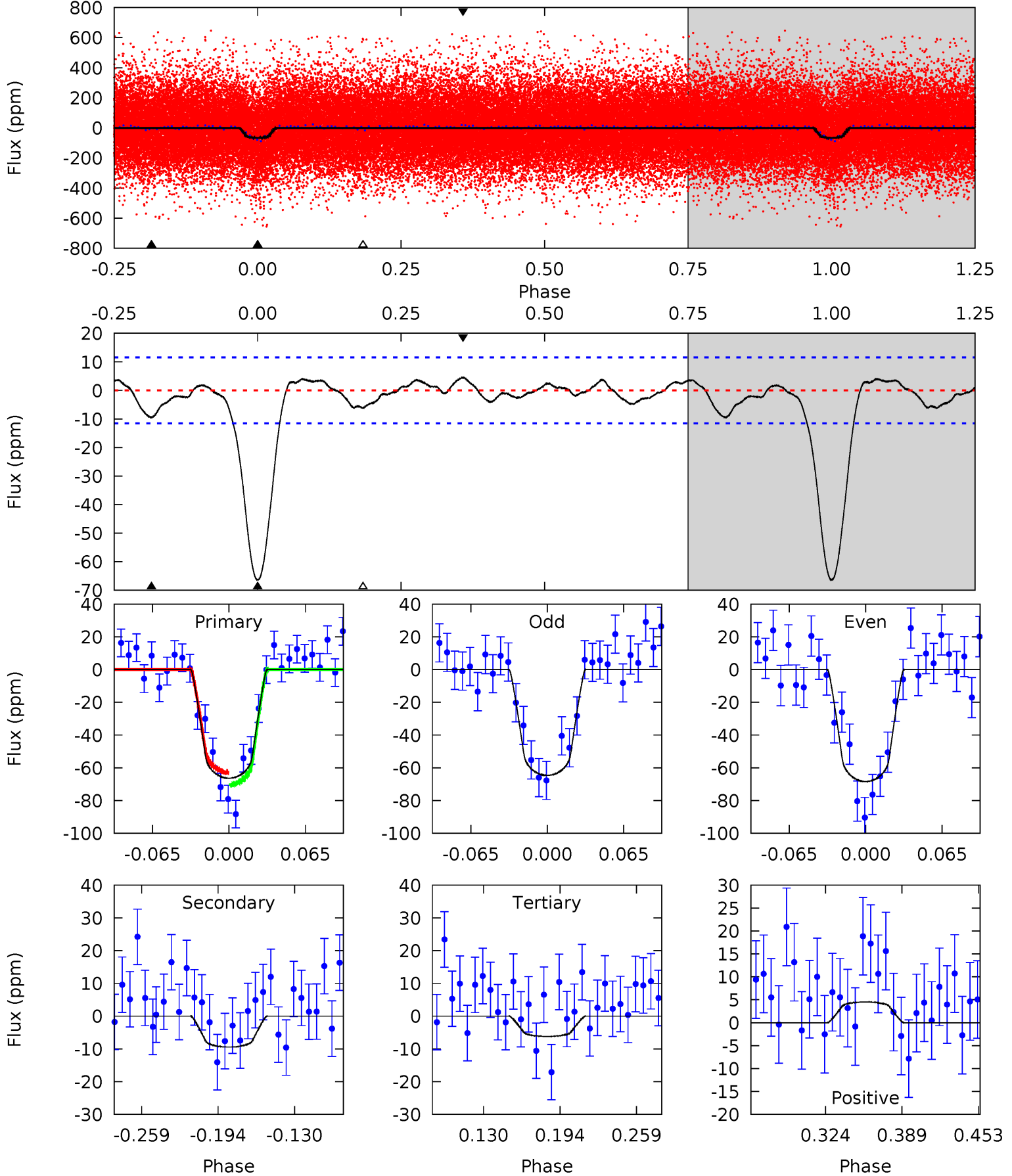
TCE 008572168-01 P= 1.662704 Days $T_0=132.446816$ (BKJD)



DV Model-Shift Uniqueness Test

008572168-01, P = 1.662682 Days, E = 132.455017 Days

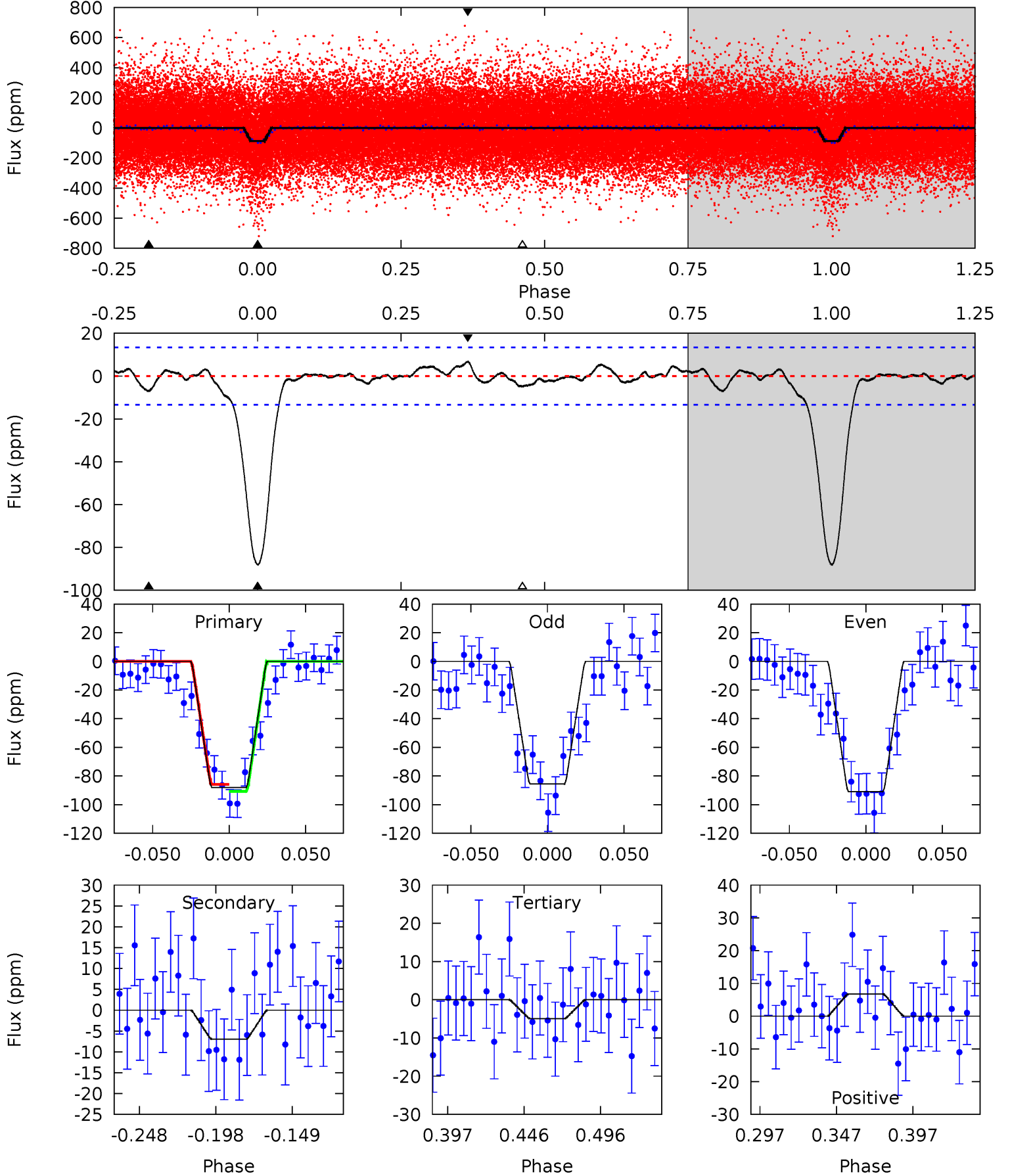
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	3.81	2.50	1.82	4.66	1.85	1.04	24.3	25.0	1.31	1.99	0.76	0.95	0.06	1.55



Alt Model-Shift Uniqueness Test

008572168-01, P = 1.662704 Days, E = 132.446816 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	2.45	1.73	2.37	4.71	1.96	0.94	29.2	28.6	0.72	0.08	0.93	1.16	0.07	0.85



Stellar Parameters For KIC 008572168

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+192}_{-213}	$3.842^{+0.496}_{-0.124}$	$-0.060^{+0.300}_{-0.300}$	$2.244^{+0.485}_{-1.131}$	$1.276^{+0.176}_{-0.301}$	$0.159^{+0.847}_{-0.058}$
	+3%/-4%	+13%/-3%	+500%/-500%	+22%/-50%	+14%/-24%	+533%/-37%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008572168-01 / KOI 4263.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 2	$2.02^{+0.82}_{-0.84}$	3131^{+271}_{-357}	3679^{+746}_{-583}	$1.129^{+1.987}_{-0.582}$
Alt.	-7 ± 3	$2.23^{+0.89}_{-0.78}$	3138^{+245}_{-419}	3202^{+619}_{-5375}	$0.664^{+0.904}_{-0.377}$

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

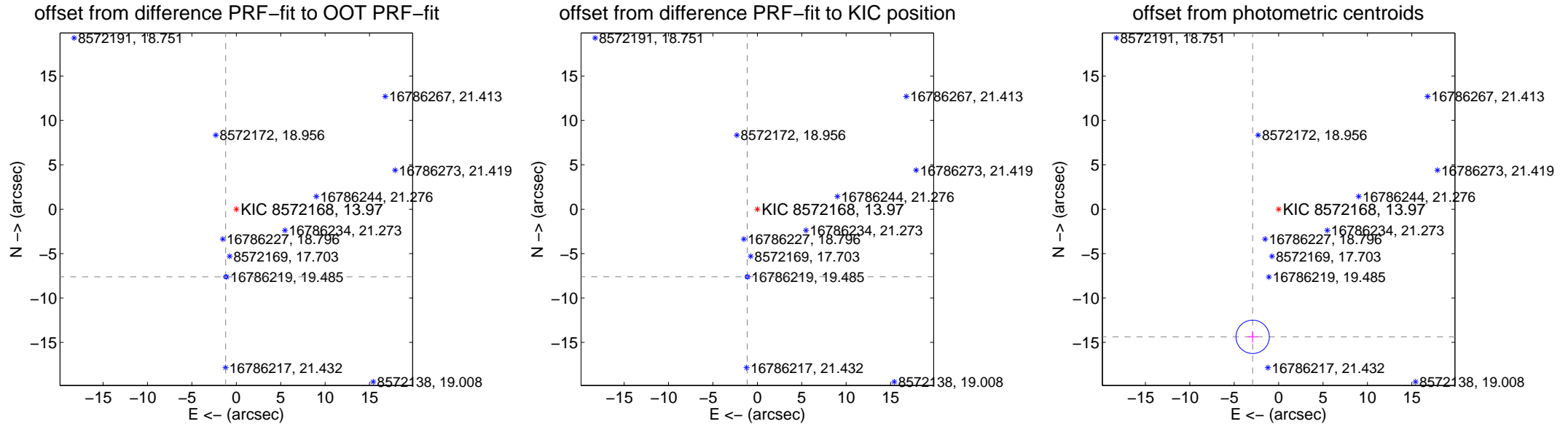
DV Centroid Data

Supplemental centroid analysis for 008572168-01. Kepler magnitude: 13.97. Transit SNR 18.93

There are 8 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.711 \pm 0.070	109.77	1.199 \pm 0.072	-7.617 \pm 0.071
PRF-fit source offset from KIC position	7.694 \pm 0.071	108.50	1.143 \pm 0.075	-7.608 \pm 0.071
photometric centroid source offset	14.66 \pm 0.63	23.46	2.92 \pm 0.59	-14.37 \pm 0.63



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.

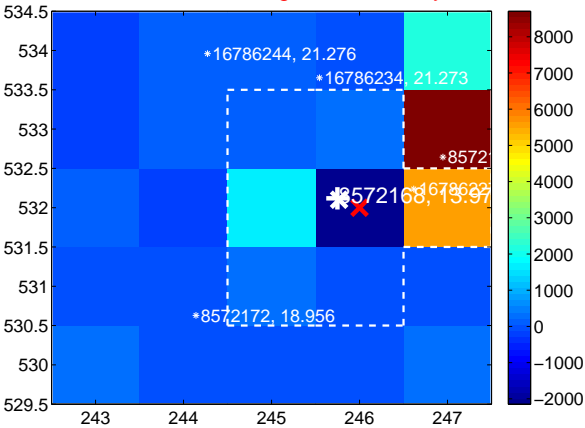
Q1 no difference image



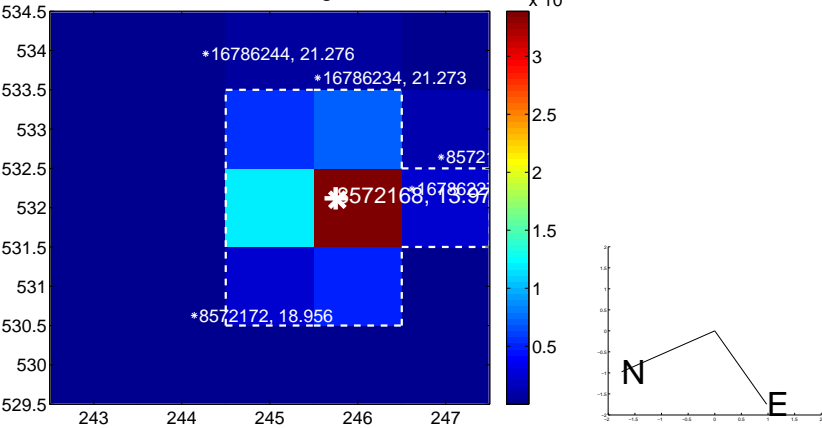
Q1 no OOT image



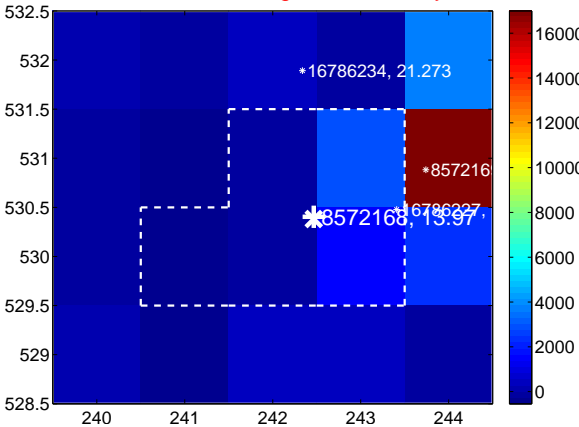
Q2 difference image. Poor Quality



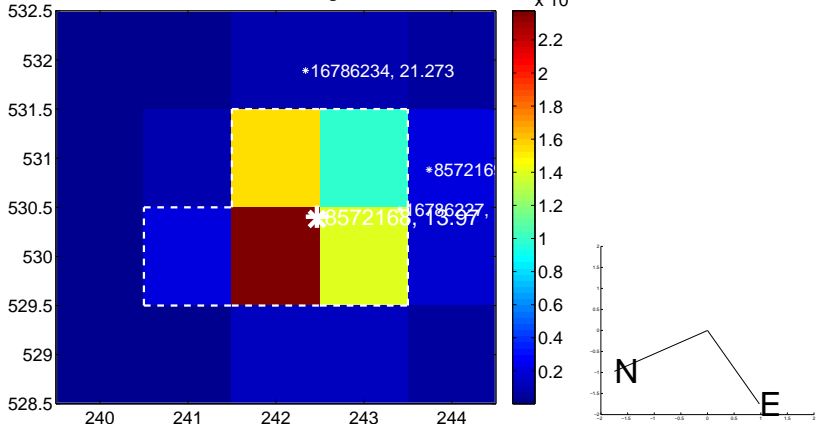
Q2 OOT image



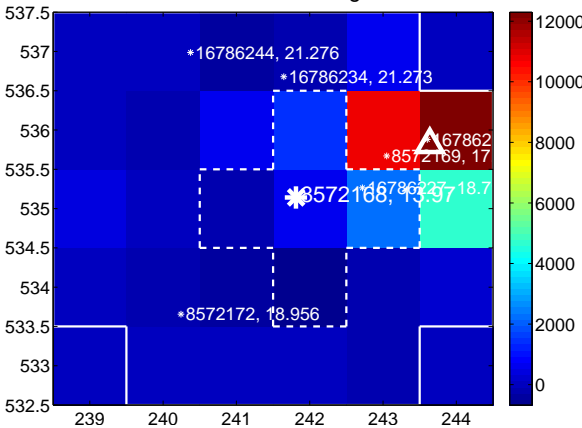
Q3 difference image. Poor Quality



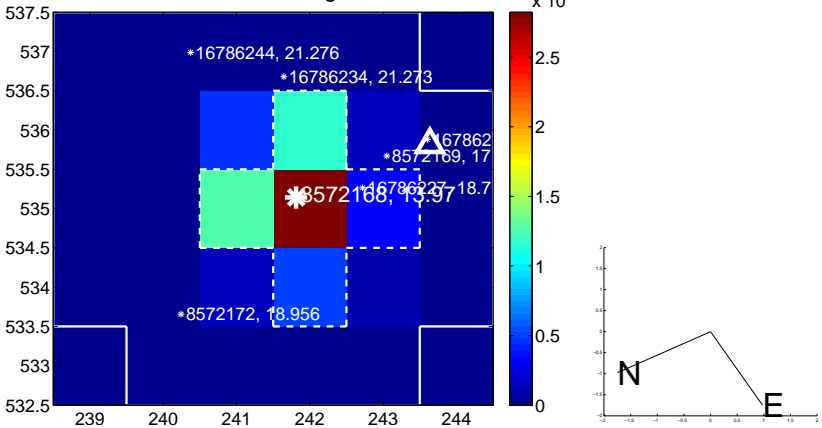
Q3 OOT image



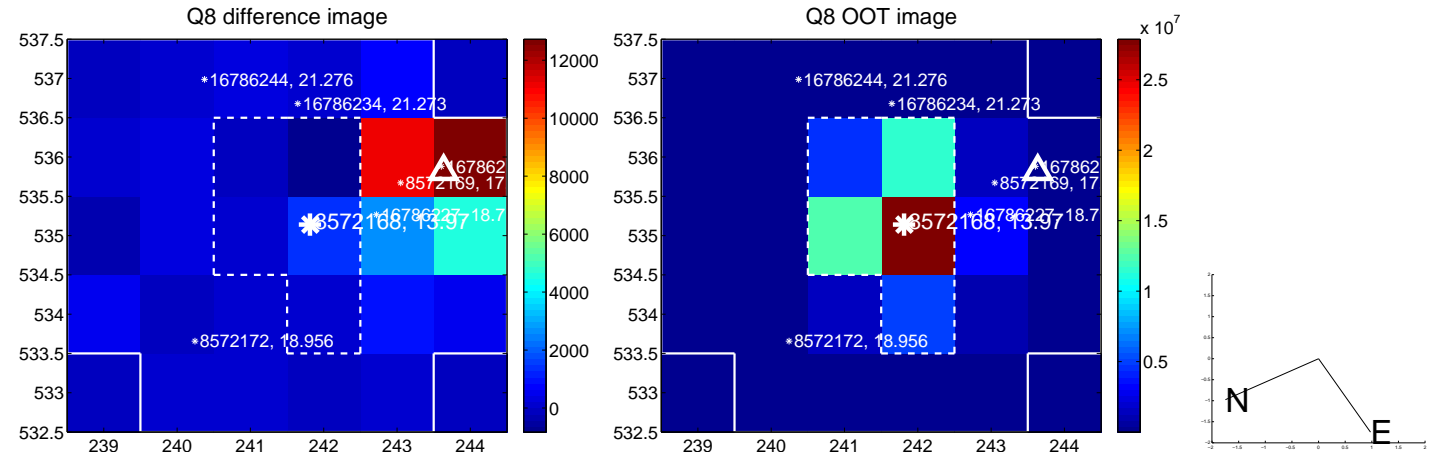
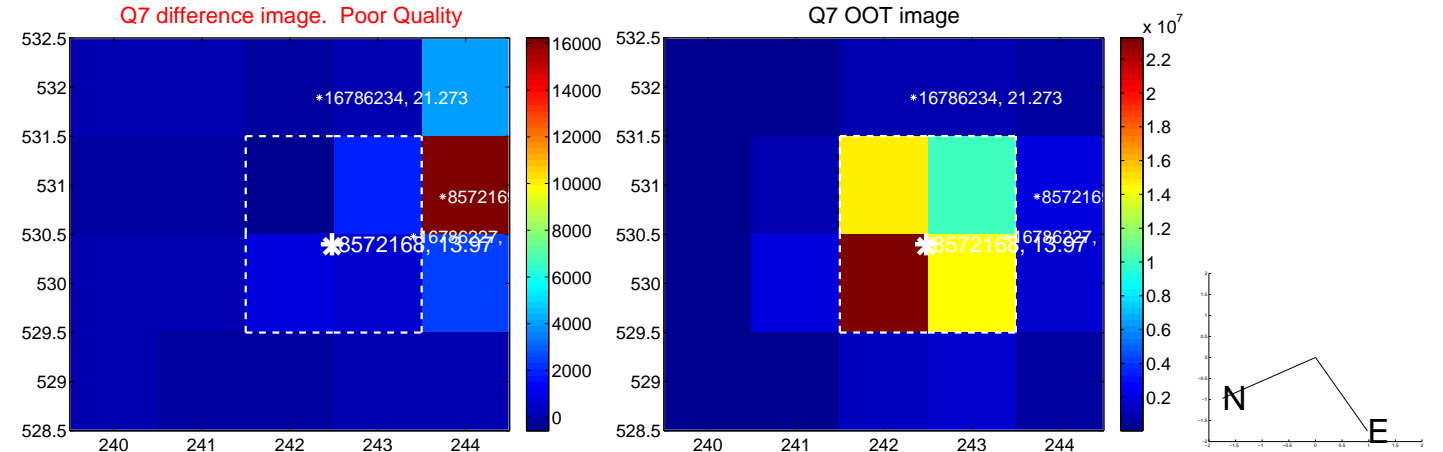
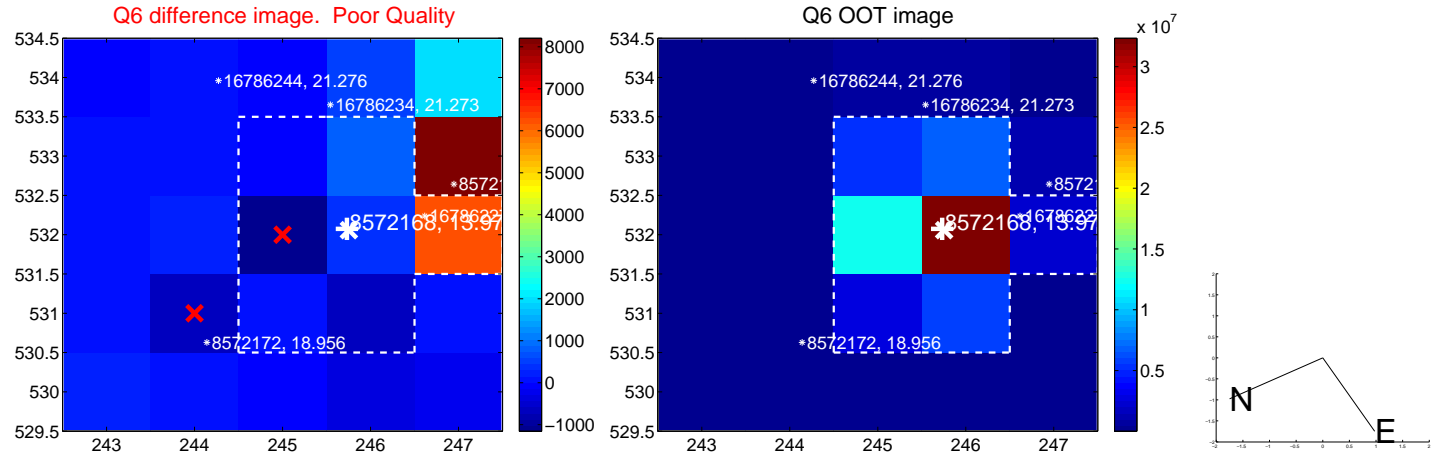
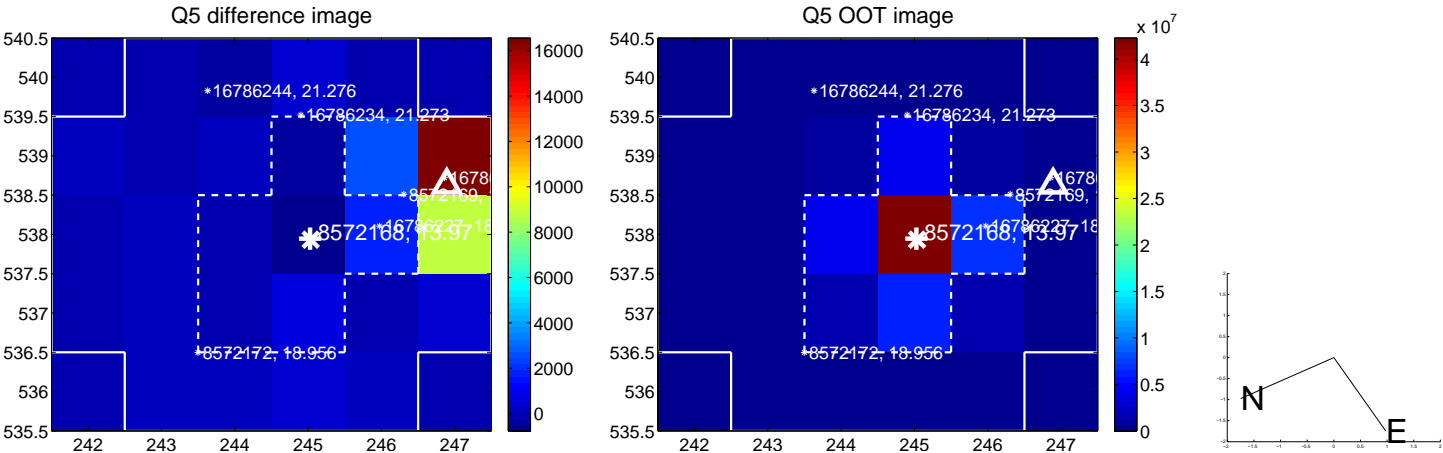
Q4 difference image



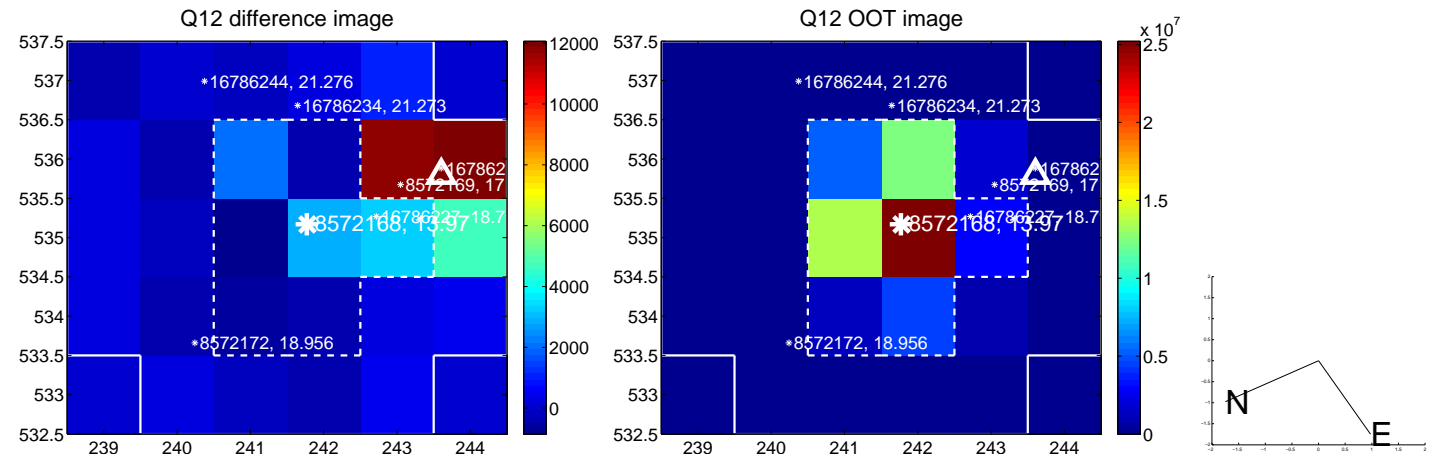
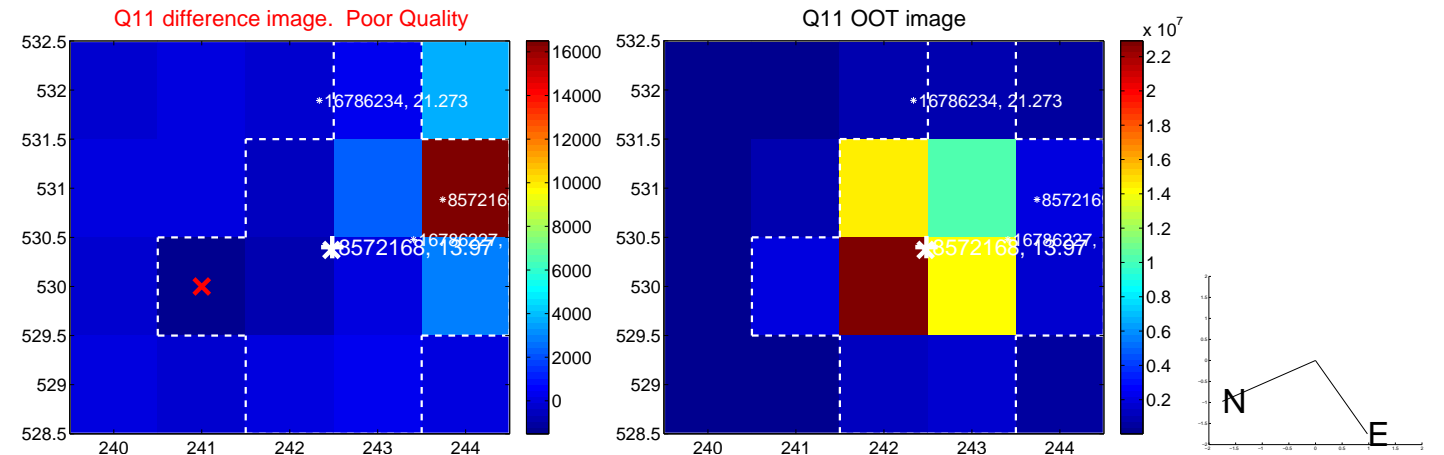
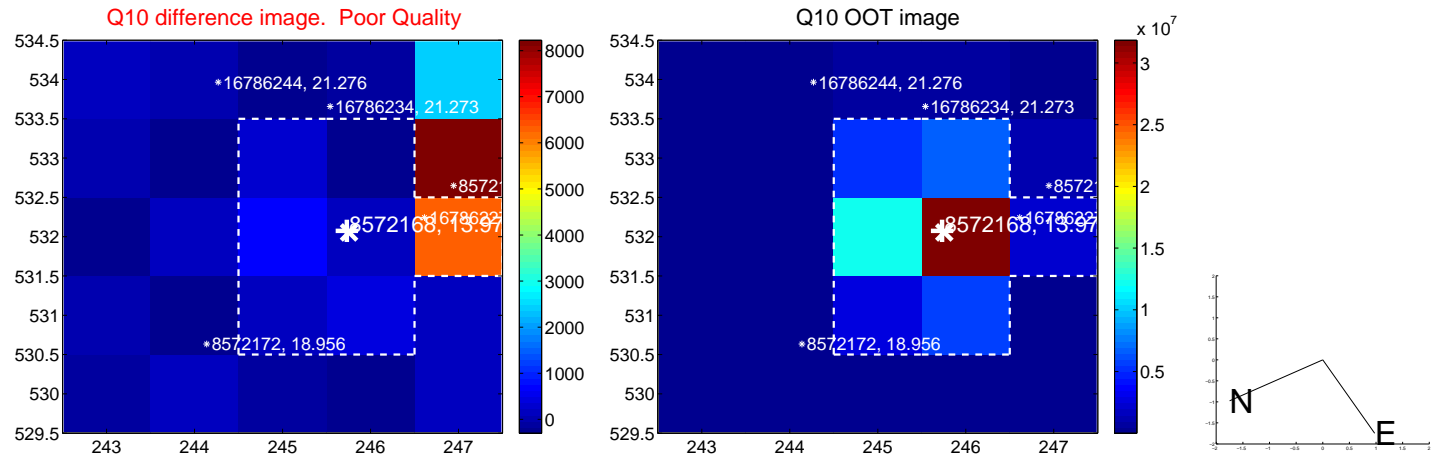
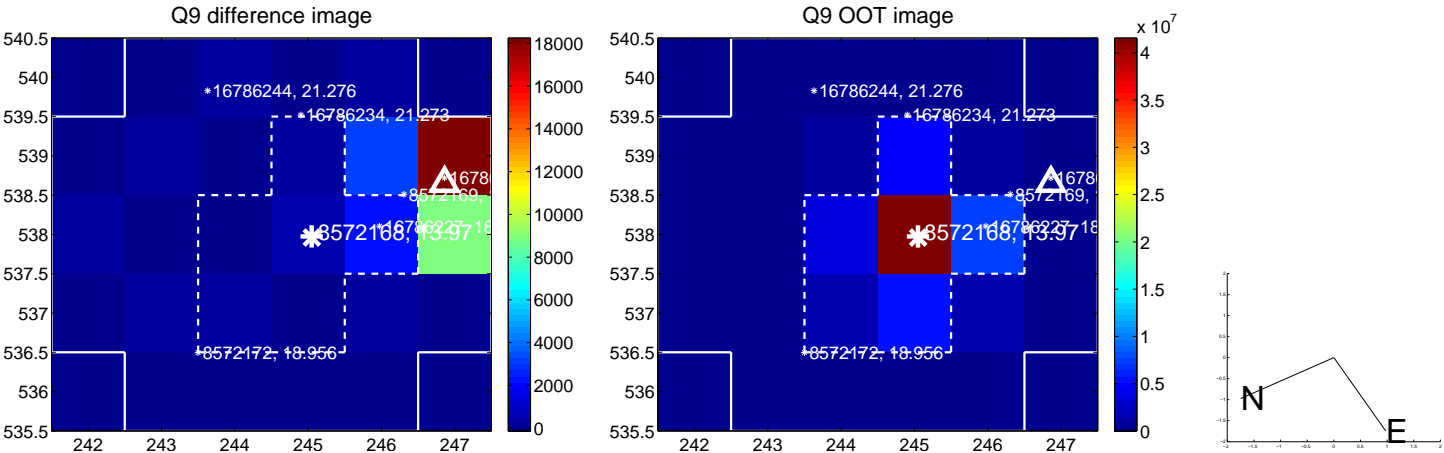
Q4 OOT image



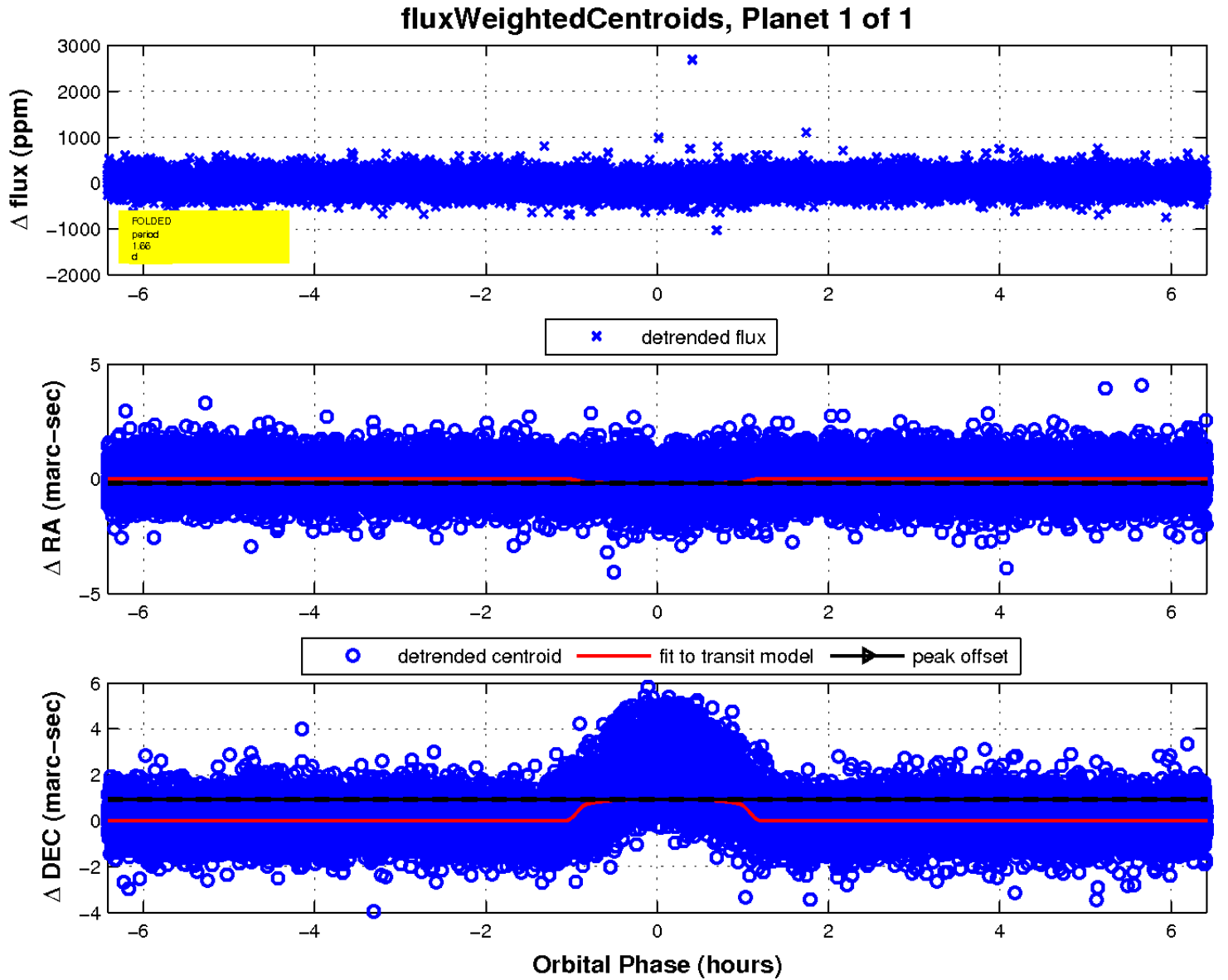
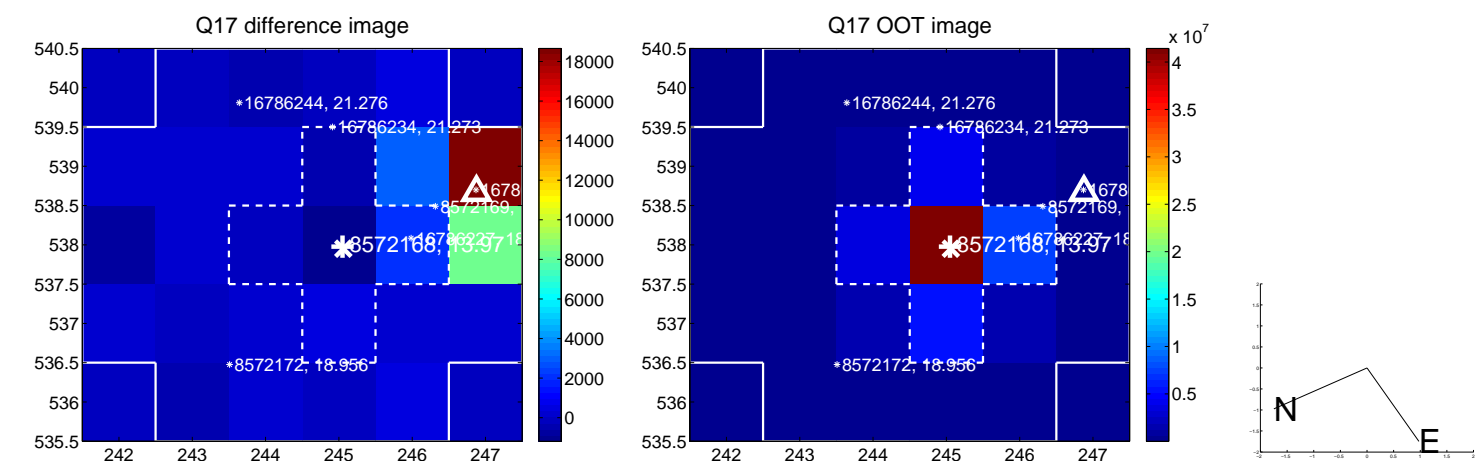
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

