

KIC 008613218

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})
008613218-01	OBS	No	399.070248	196.455784	485.5	10.436	7.2	7.1	0.96	6122	2.28	1.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008613218-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

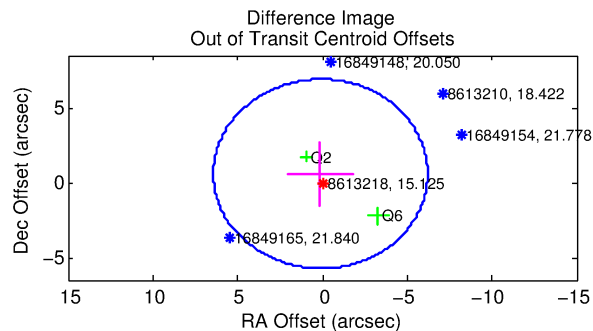
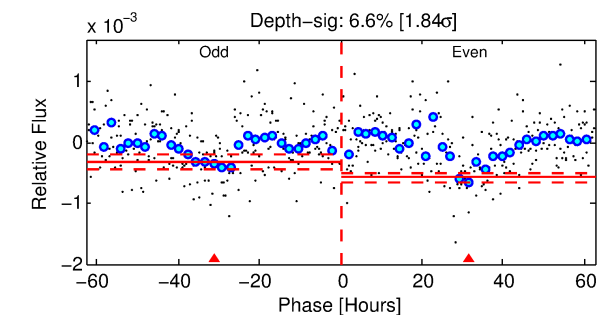
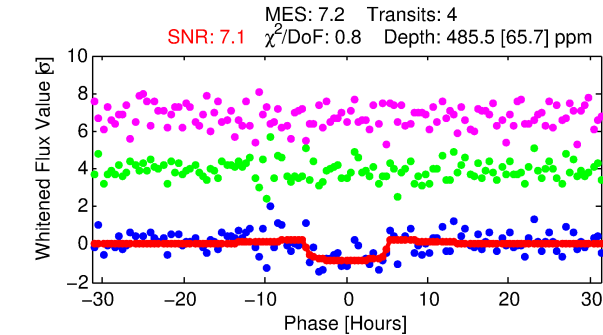
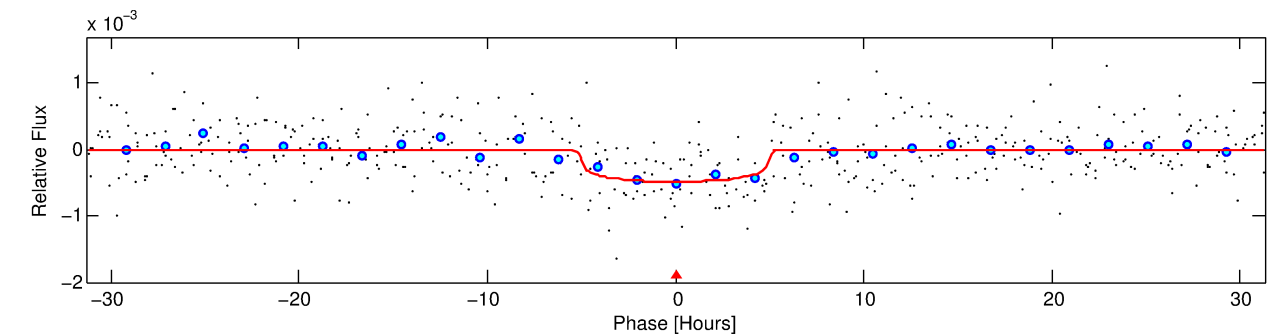
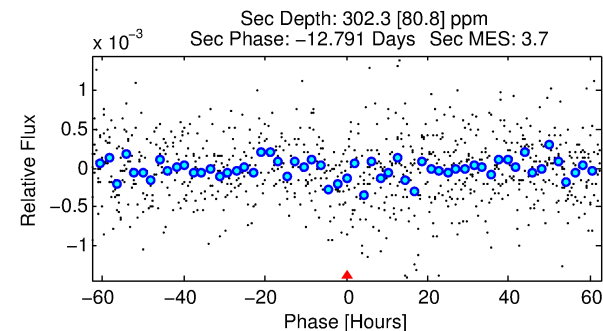
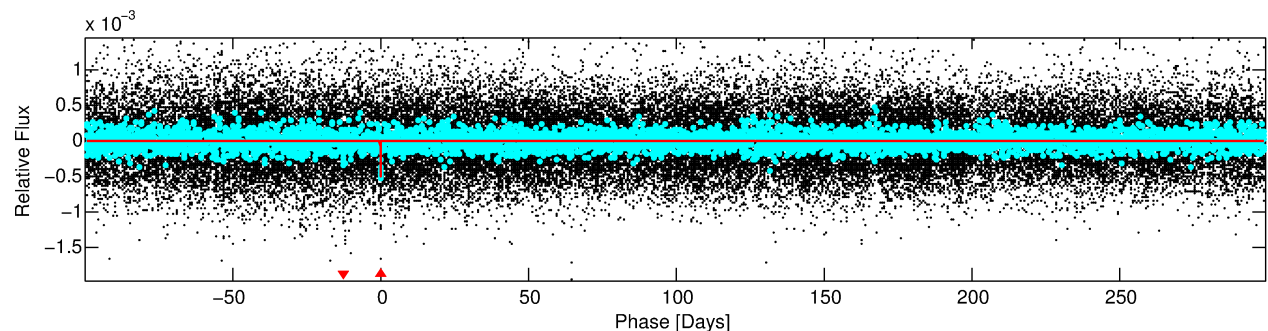
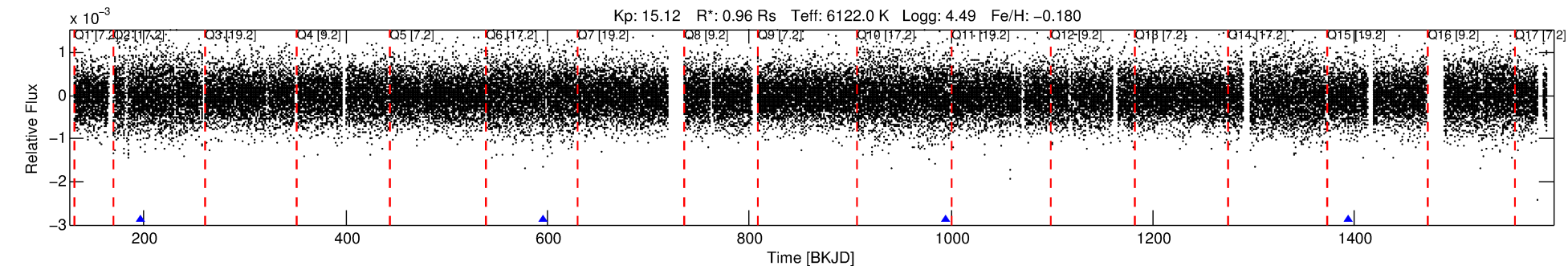
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008613218-01

No Significant Match Found

DV One-Page Summary

KIC: 8613218 Candidate: 1 of 1 Period: 399.070 d
KOI: K04485 Corr: No Ephemeris Match



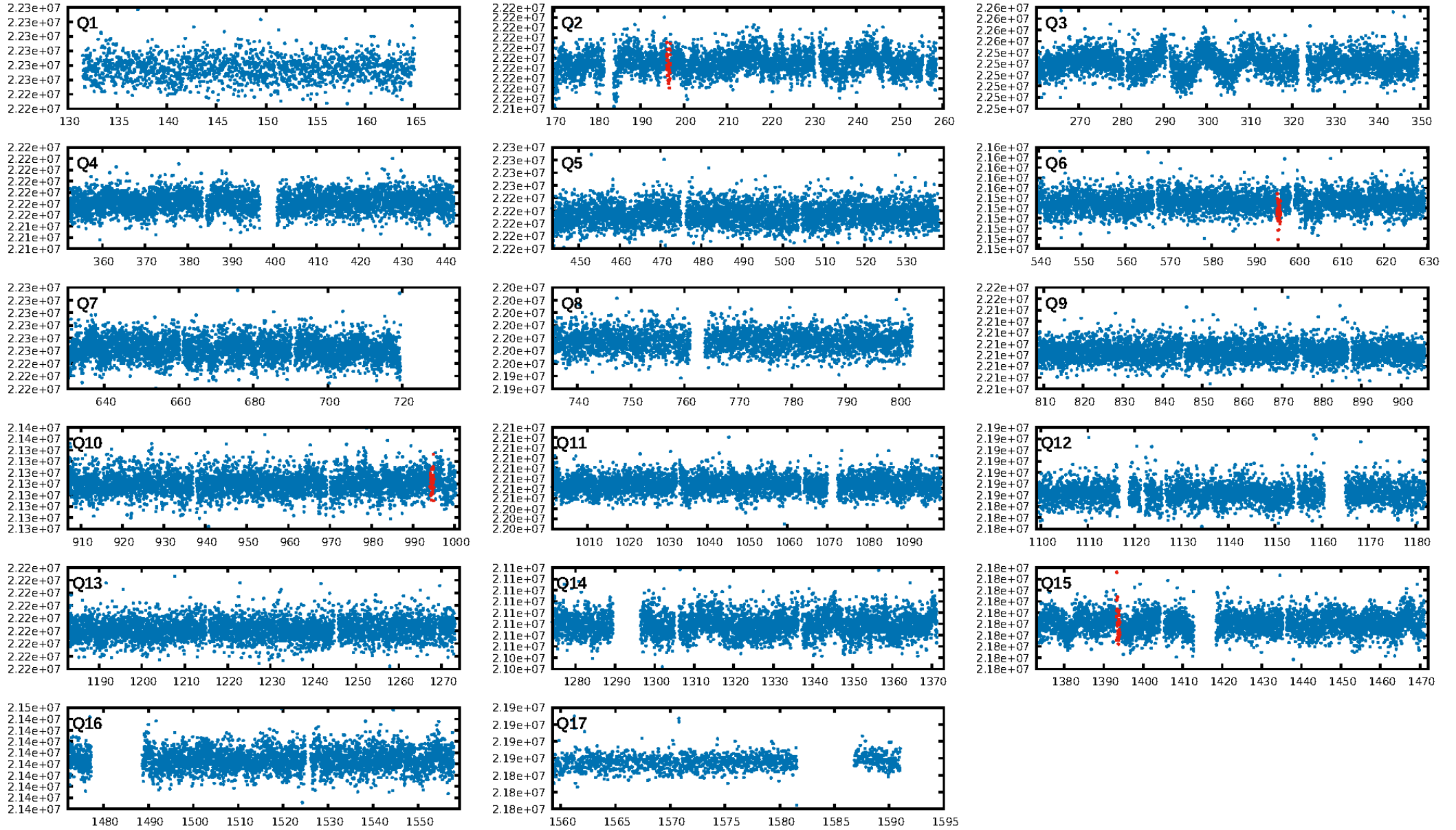
DV Fit Results:

Period = 399.07025 [0.00906] d
Epoch = 196.4558 [0.0181] BKJD
Rp/R* = 0.0217 [0.0082]
a/R* = 212.13 [388.96]
b = 0.72 [1.25]
Seff = 1.01 [0.43]
Teq = 256 [27] K
Rp = 2.28 [1.16] Re
a = 1.0751 [0.2991] AU
Ag = 36903.87 [33187.77] [1.11σ]
Teffp = 5480 [1118] K [4.67σ]

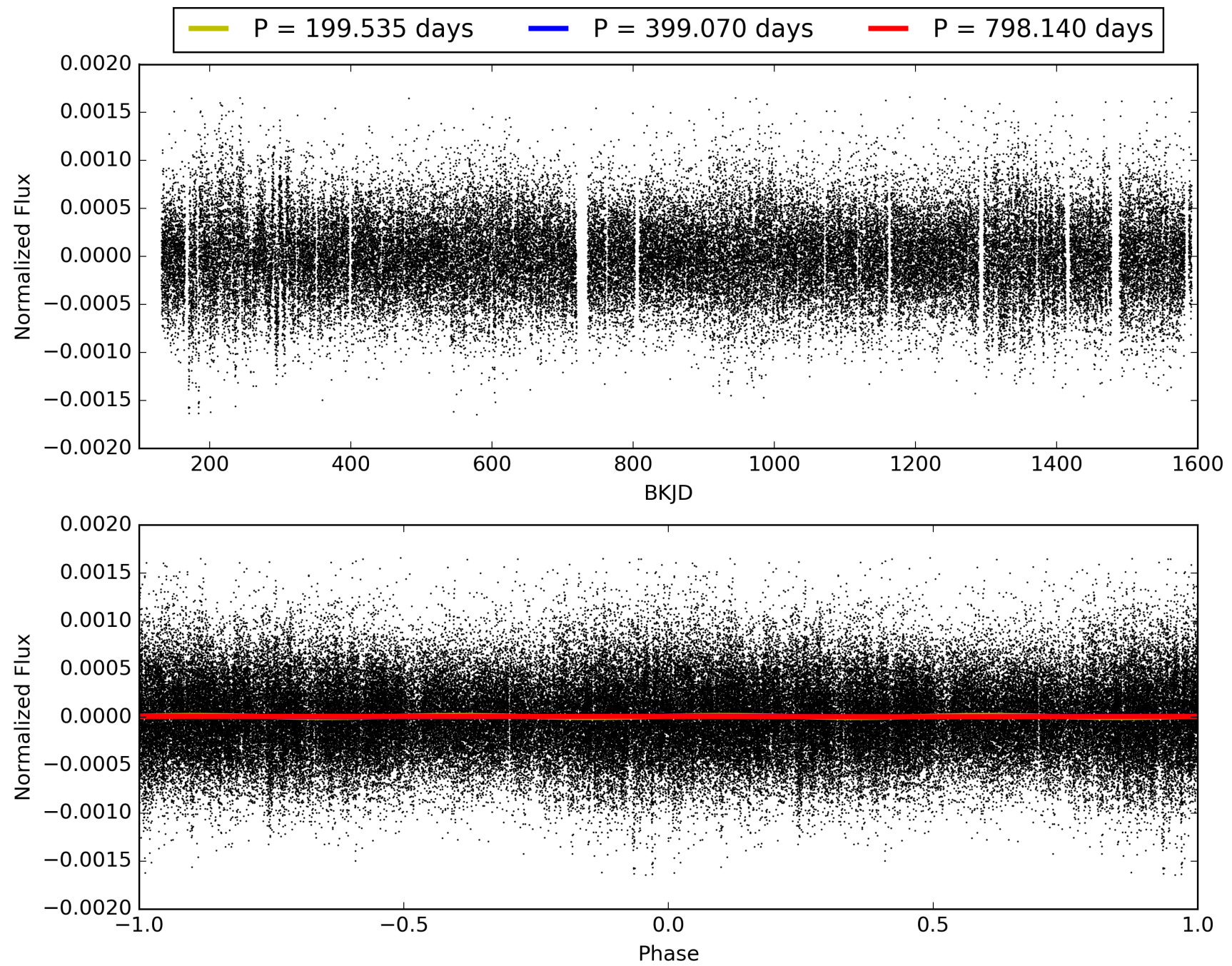
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 25.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.24e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.996
Centroid-sig: 20.9%
Centroid-so: 2.821 arcsec [1.33σ]
OotOffset-rm: 0.596 arcsec [0.28σ]
KicOffset-rm: 0.481 arcsec [0.23σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008613218-01, PDC Light Curves

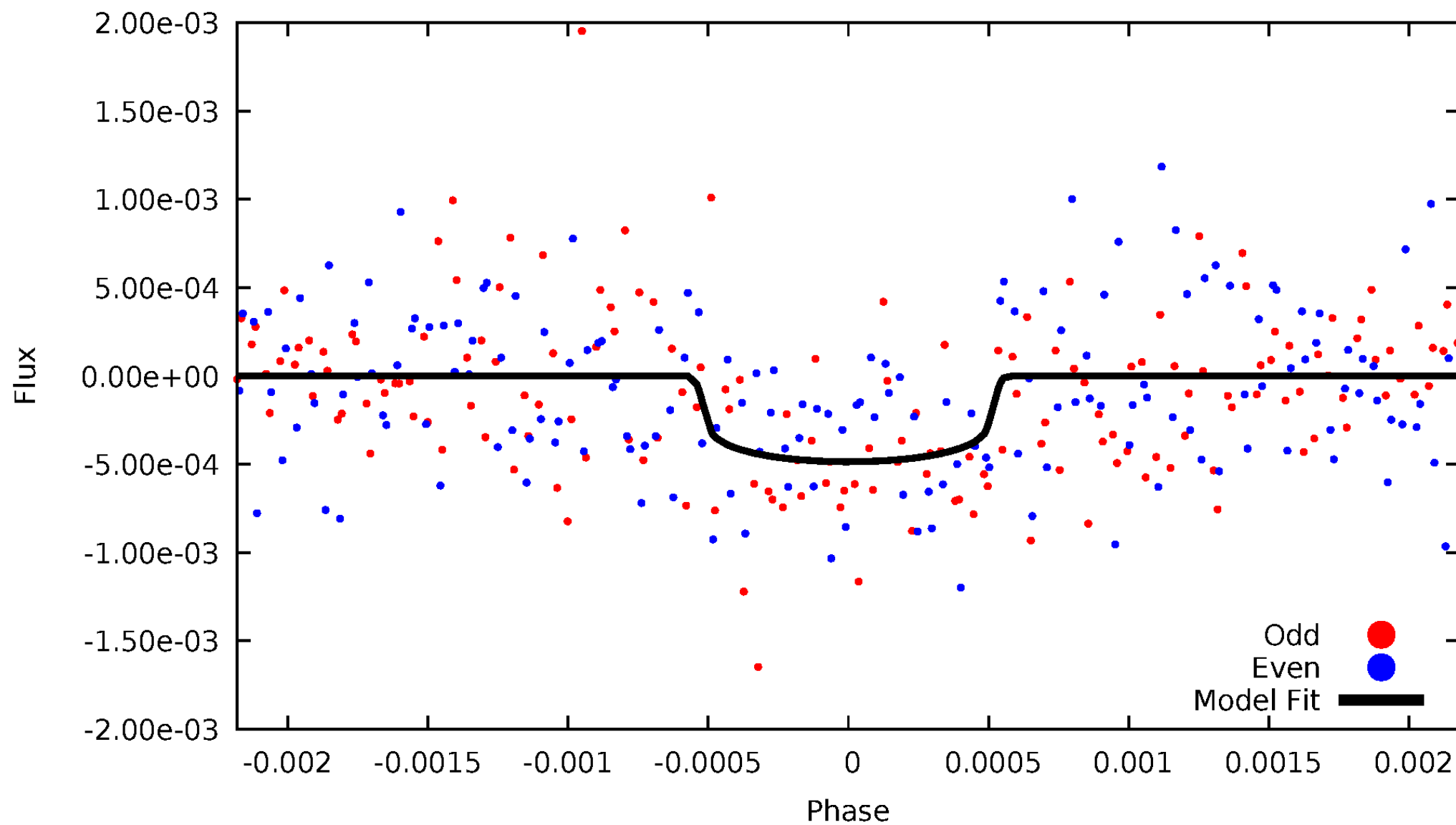


TCE 008613218-01



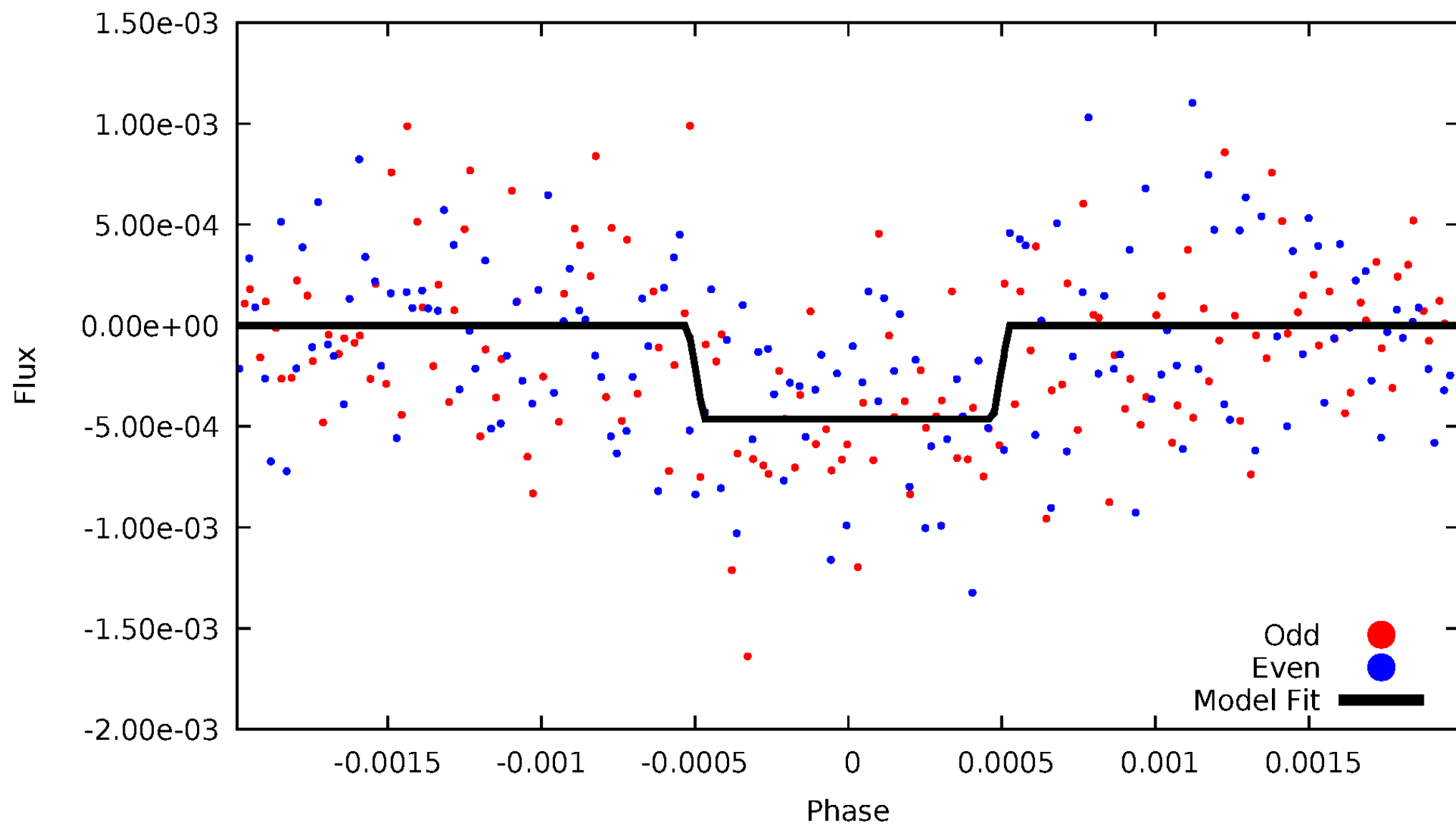
DV Odd/Even

TCE 008613218-01

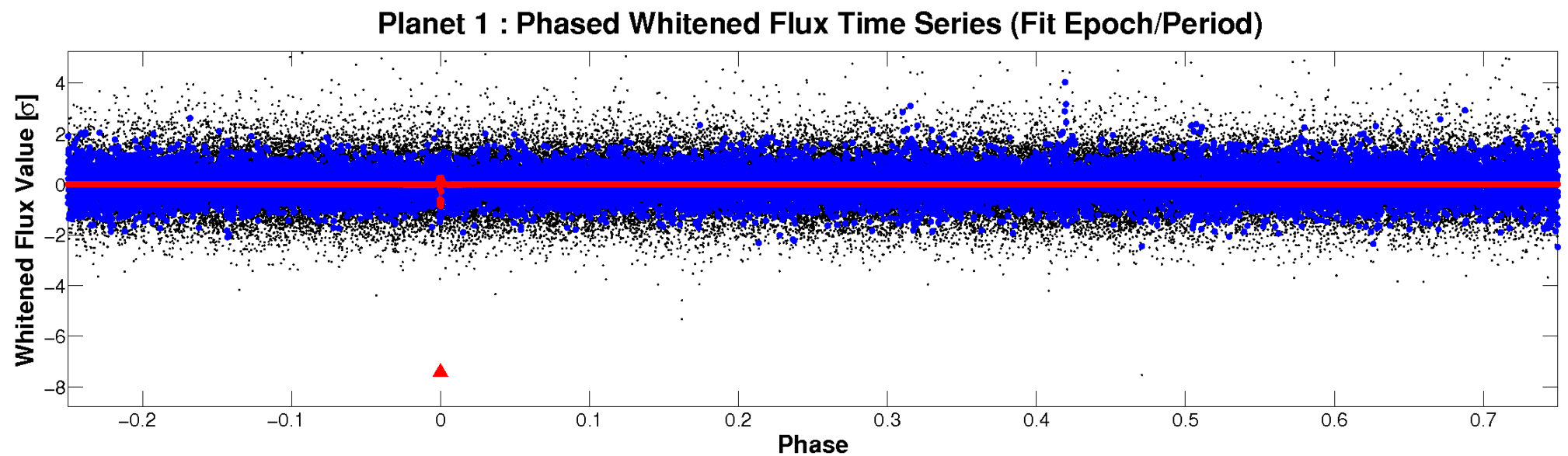
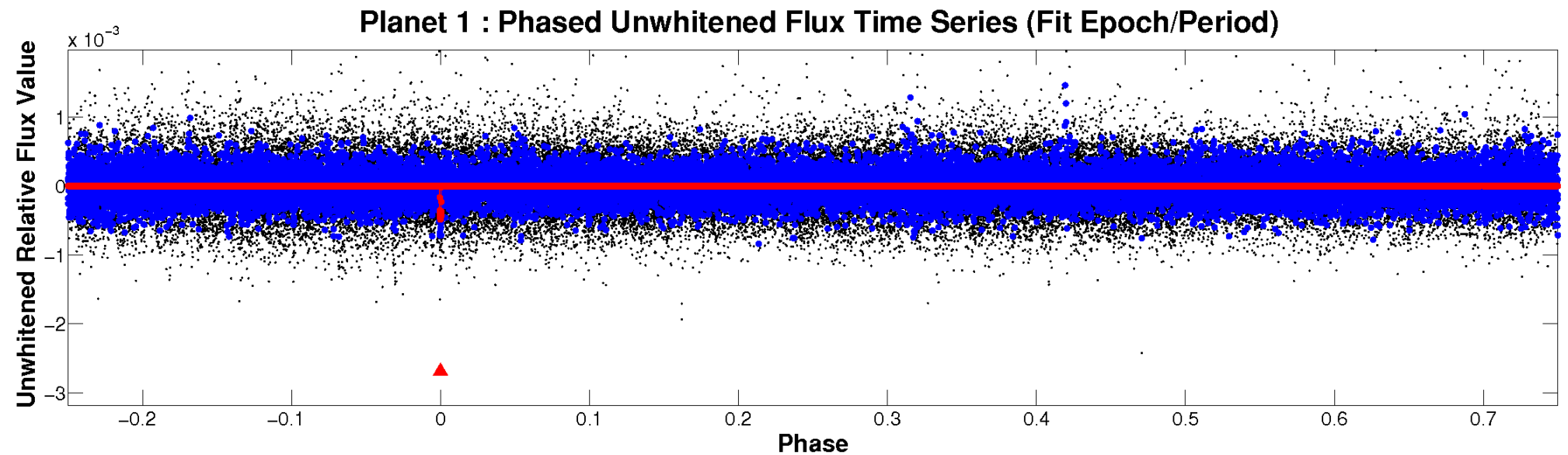


ALT Odd/Even

TCE 008613218-01

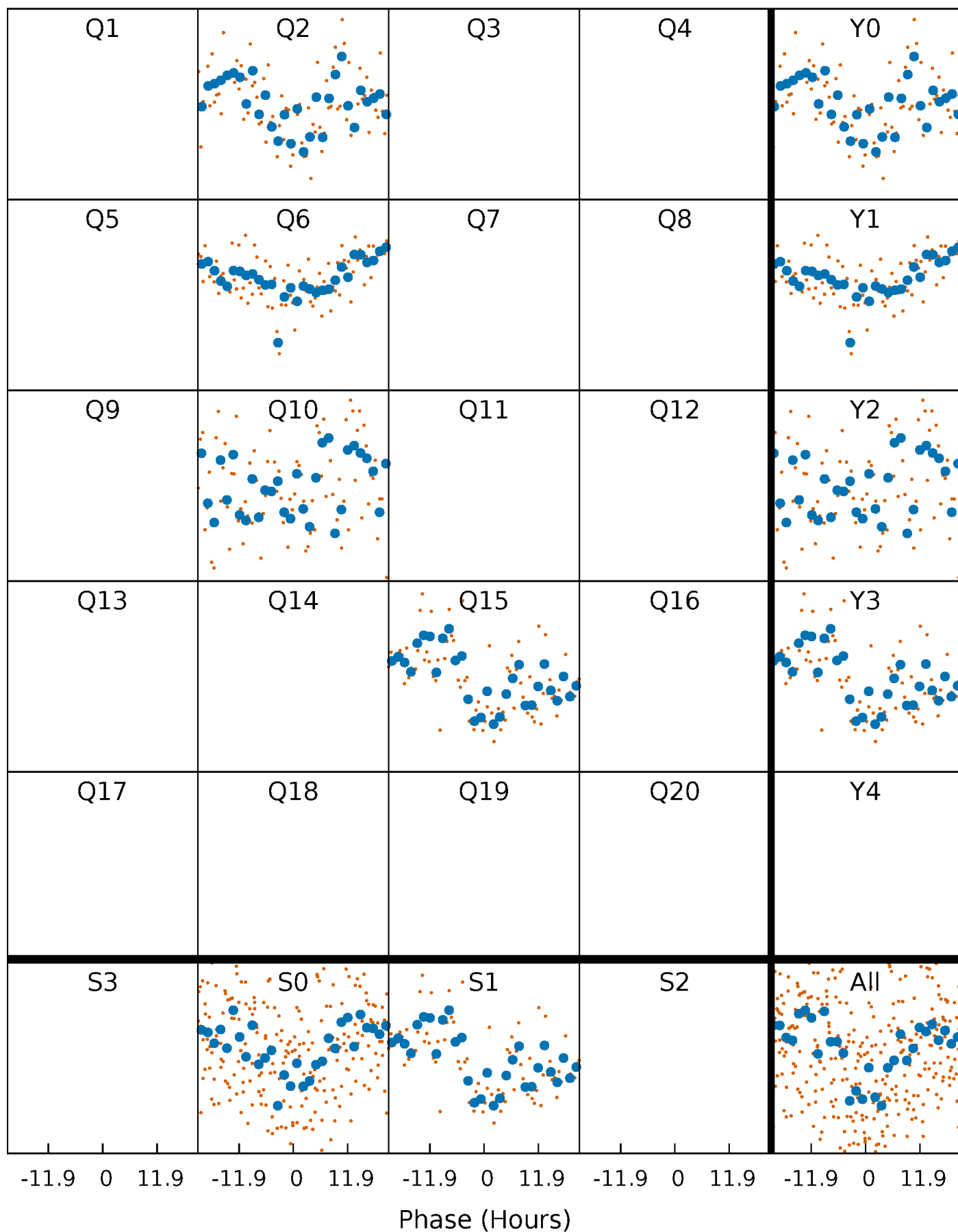


Non-Whitened Vs. Whitened Light Curve



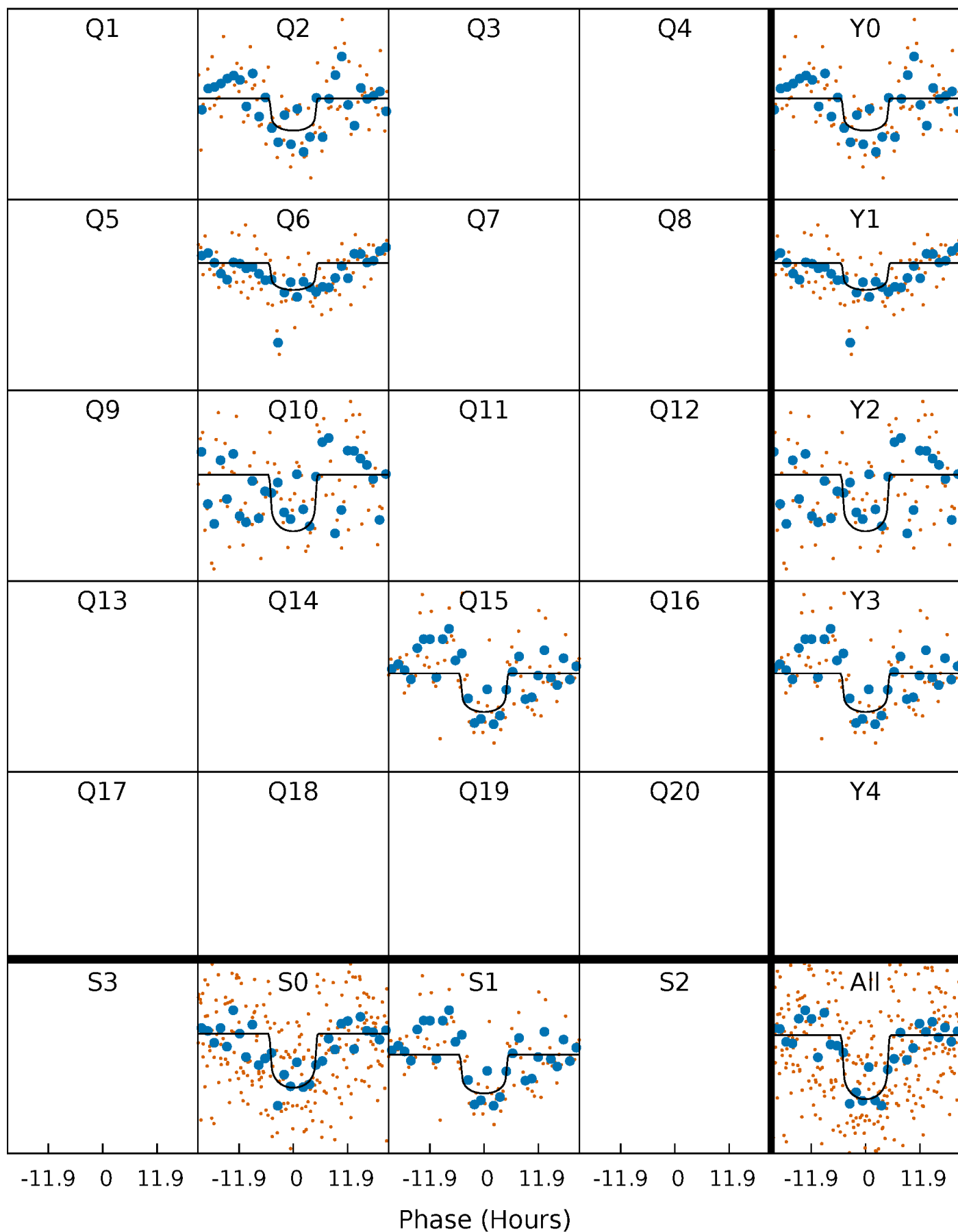
PDC Quarter-Phased Transit Curves

TCE 008613218-01 P=399.070248 Days $T_0=196.455784$ (BKJD)



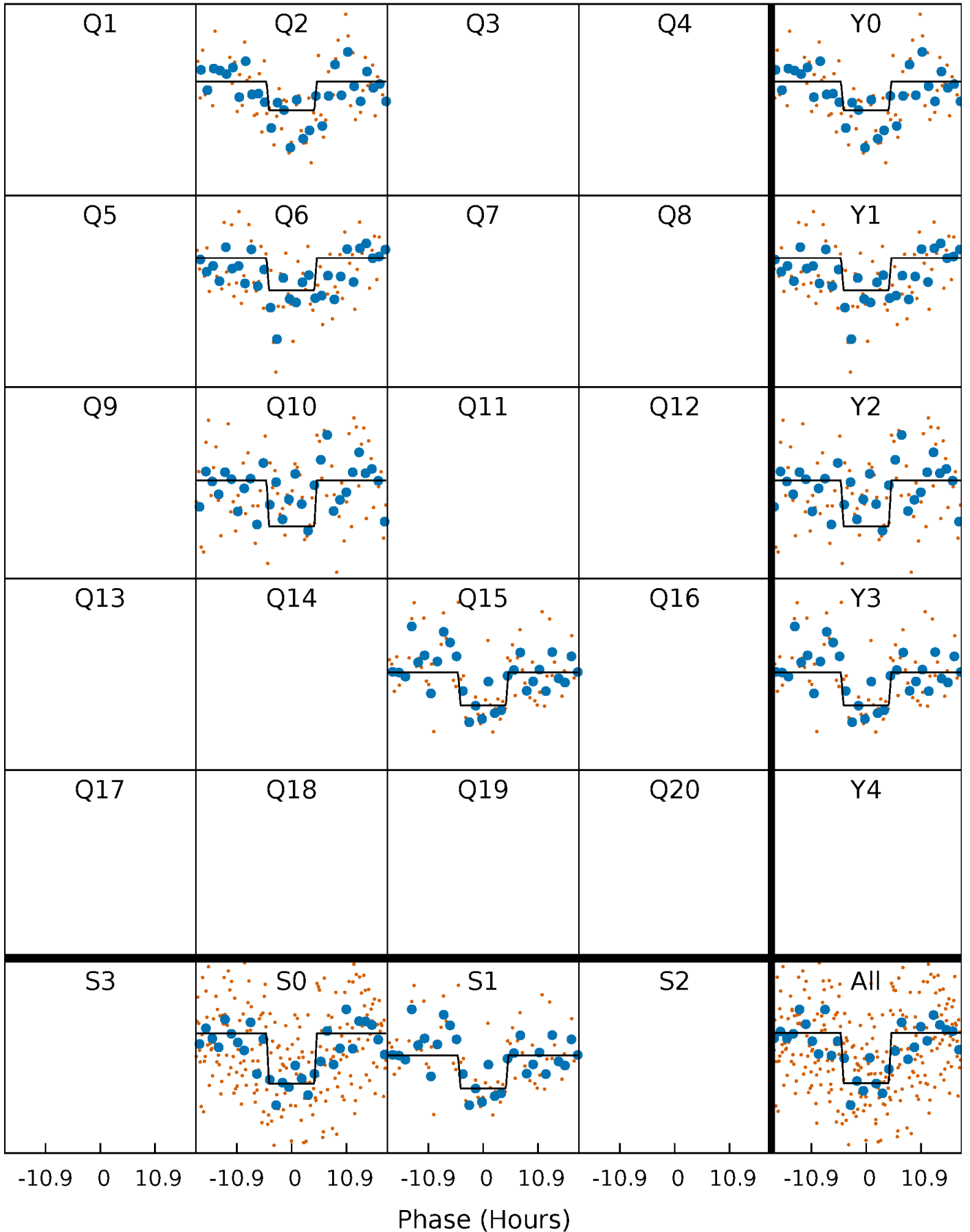
DV Quarter-Phased Transit Curves

TCE 008613218-01 P=399.070248 Days $T_0=196.455784$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

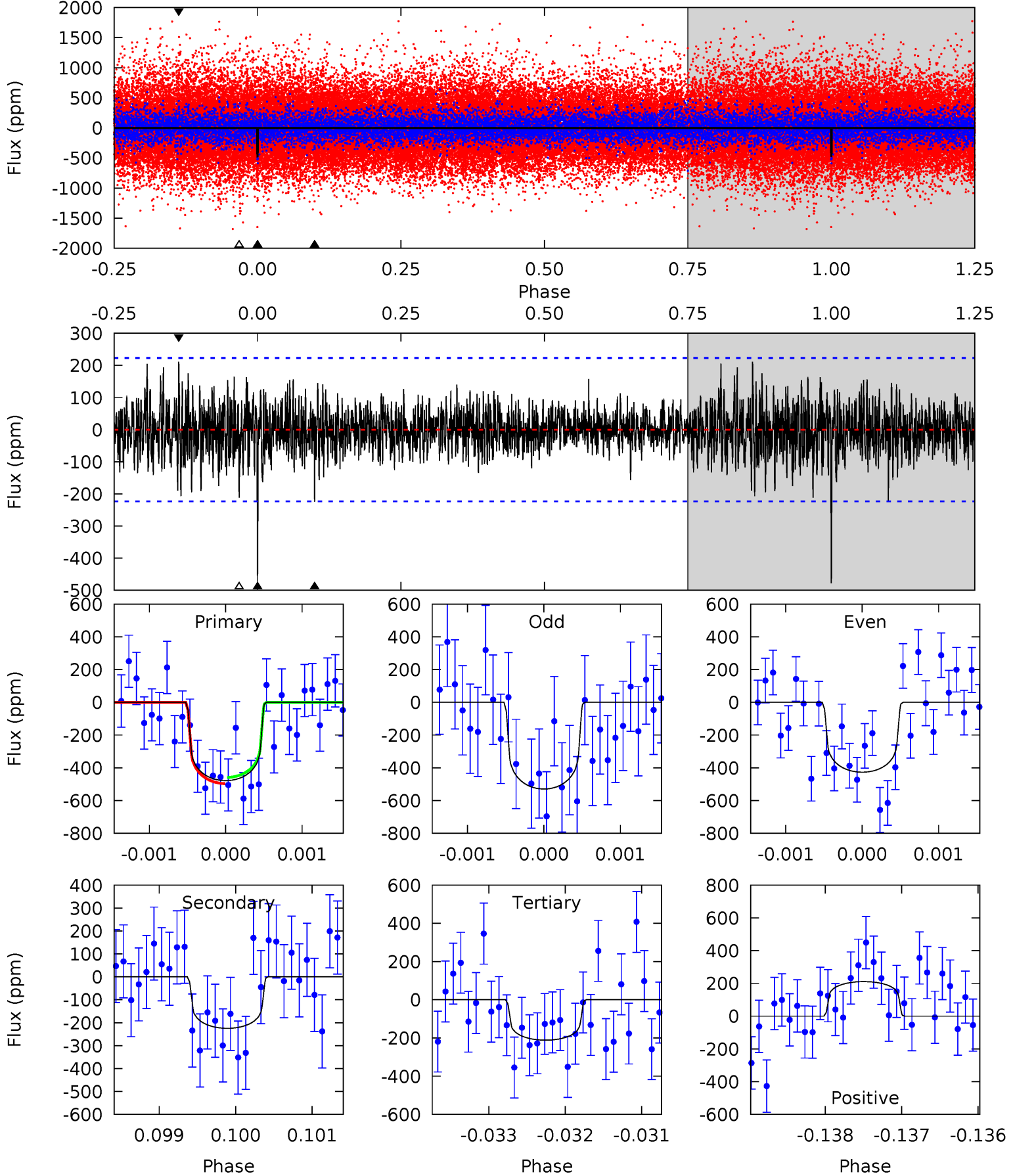
TCE 008613218-01 $P=399.074238$ Days $T_0=196.454204$ (BKJD)



DV Model-Shift Uniqueness Test

008613218-01, P = 399.070248 Days, E = 196.455784 Days

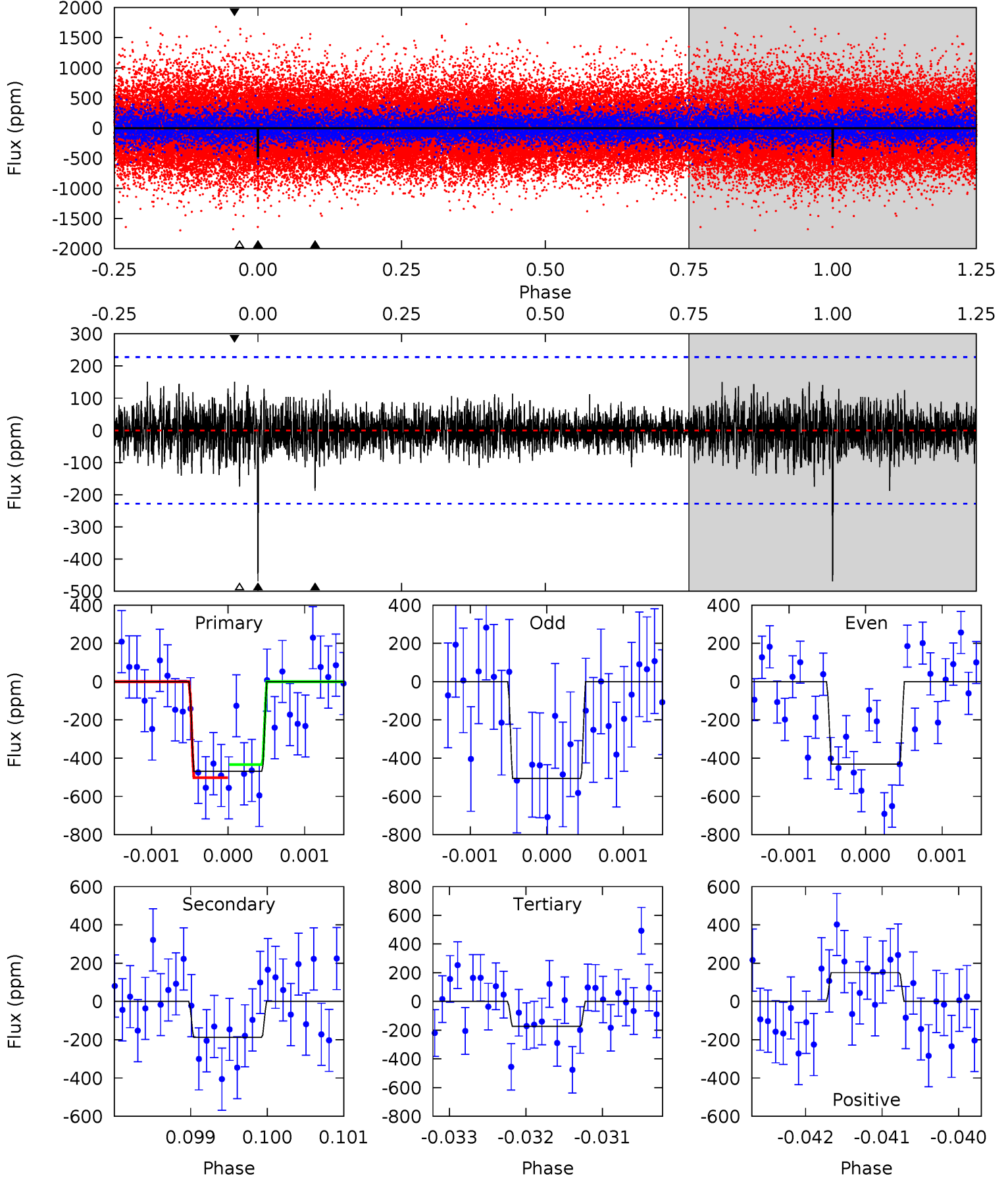
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	5.47	5.15	5.13	5.44	3.27	1.32	6.50	6.52	0.32	0.34	1.25	0.94	0.31	0.45



Alt Model-Shift Uniqueness Test

008613218-01, P = 399.074238 Days, E = 196.454204 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.47	4.16	3.61	5.44	3.28	0.98	7.04	7.59	0.31	0.87	0.89	0.93	0.24	0.81



Stellar Parameters For KIC 008613218

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6122^{+181}_{-200}	$4.487^{+0.054}_{-0.216}$	$-0.180^{+0.250}_{-0.350}$	$0.964^{+0.323}_{-0.101}$	$1.041^{+0.139}_{-0.139}$	$1.635^{+0.465}_{-0.858}$
	+3%/-3%	+1%/-5%	+139%/-194%	+34%/-10%	+13%/-13%	+28%/-52%
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 008613218-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-225 ± 41	$2.35^{+1.08}_{-0.94}$	365^{+29}_{-19}	5177^{+1390}_{-693}	25351^{+44768}_{-13611}
Alt.	-187 ± 42	$2.44^{+0.96}_{-0.98}$	365^{+29}_{-18}	4920^{+1322}_{-659}	19636^{+38482}_{-10012}

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 $A_{obs} \gg 1.0$

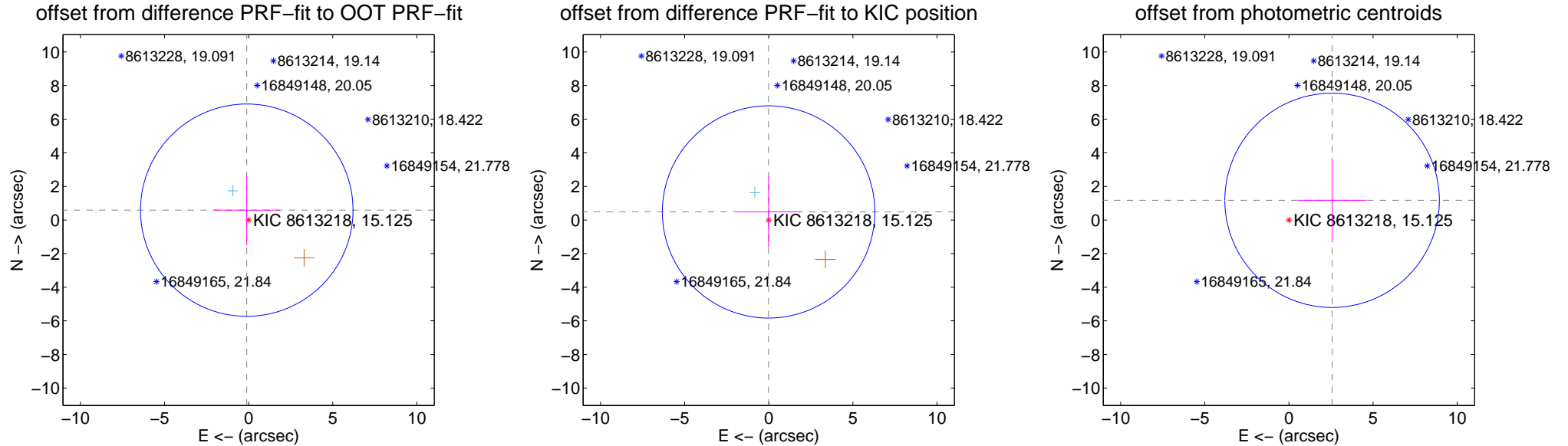
DV Centroid Data

Supplemental centroid analysis for 008613218-01. Kepler magnitude: 15.12. Transit SNR 7.09

There are 1 quarters with good PRF difference image offsets

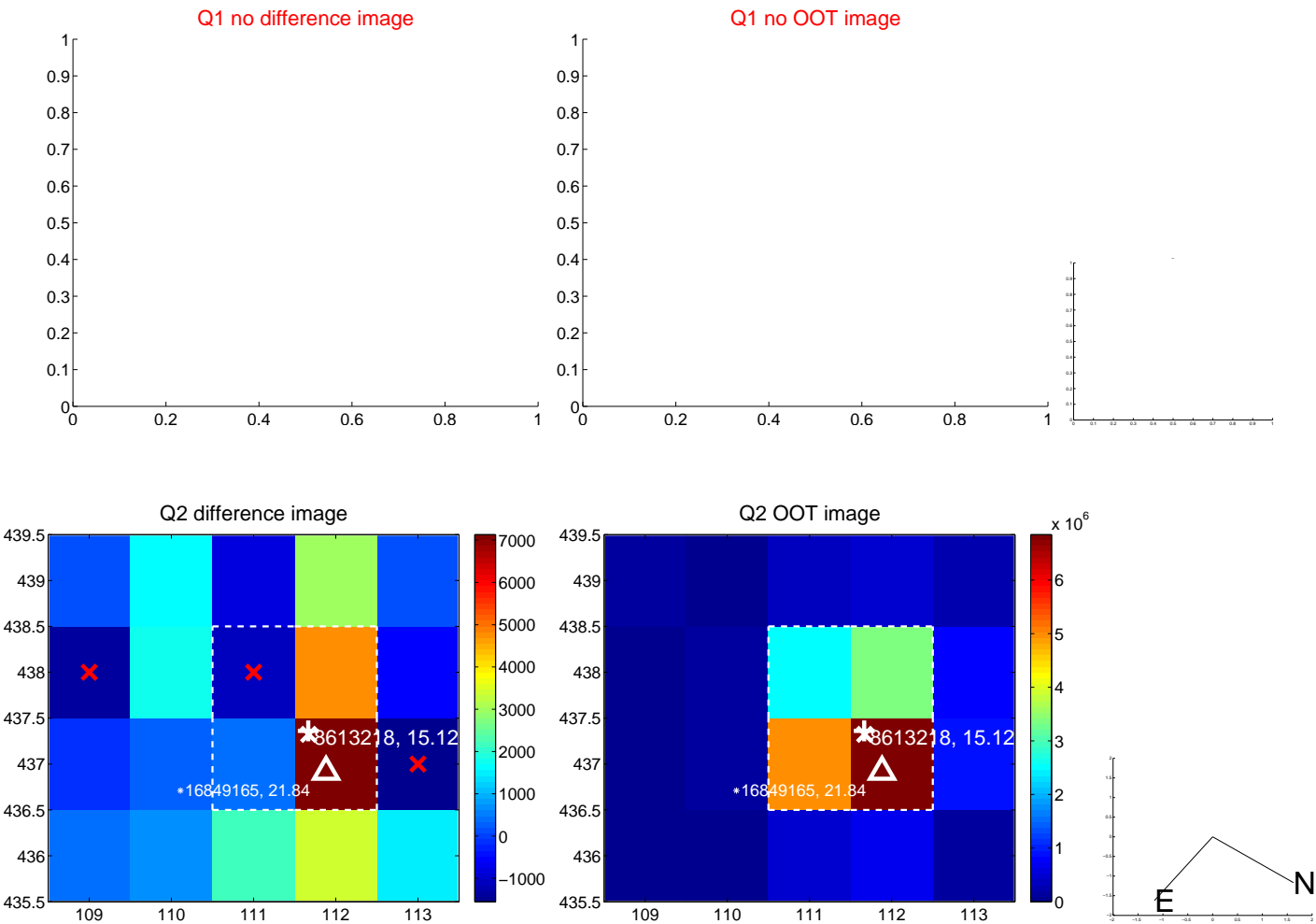
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.596 ± 2.105	0.28	0.111 ± 1.961	0.586 ± 2.110
PRF-fit source offset from KIC position	0.481 ± 2.105	0.23	0.011 ± 1.941	0.481 ± 2.105
photometric centroid source offset	2.82 ± 2.12	1.33	-2.57 ± 2.04	1.17 ± 2.50

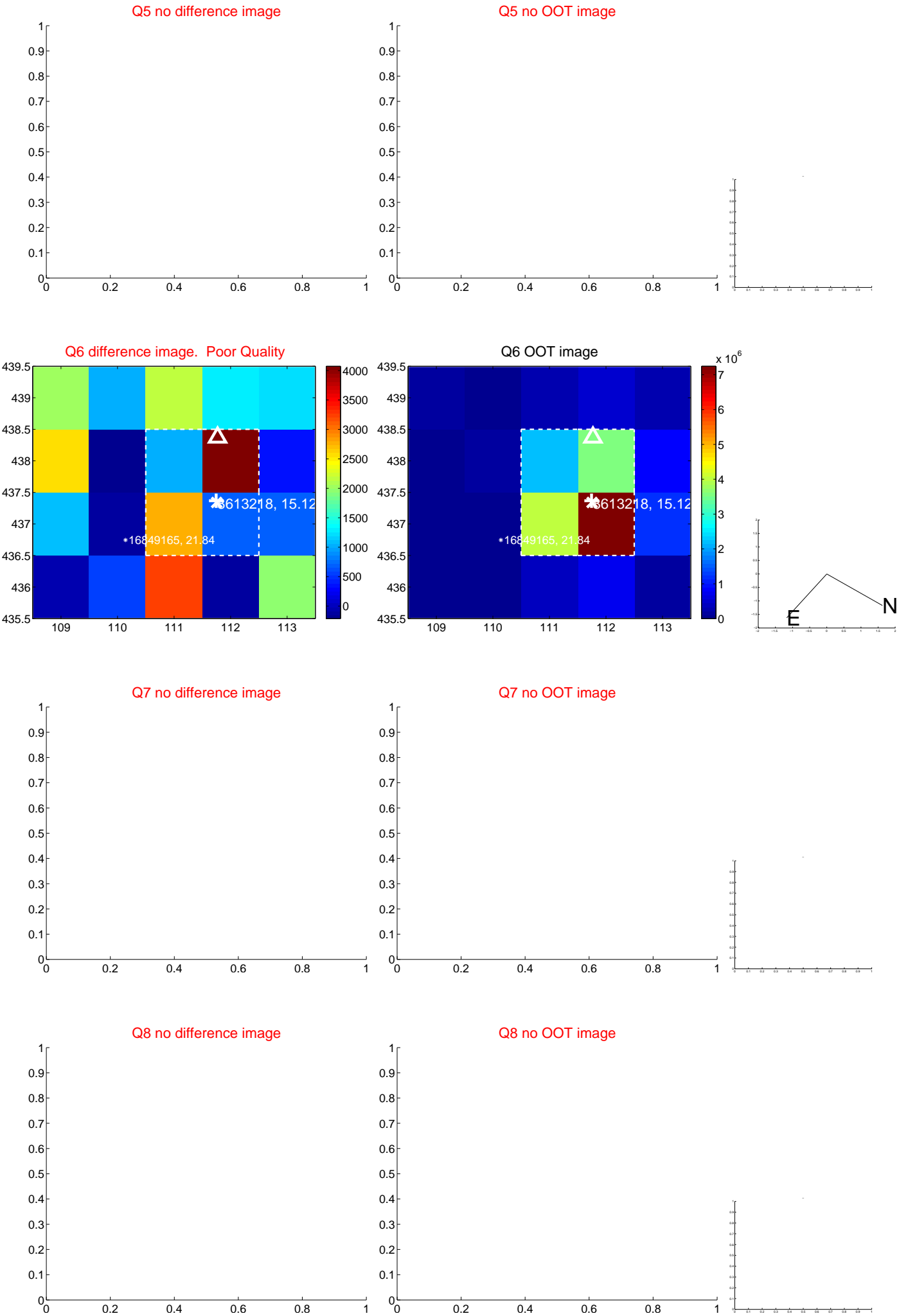


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

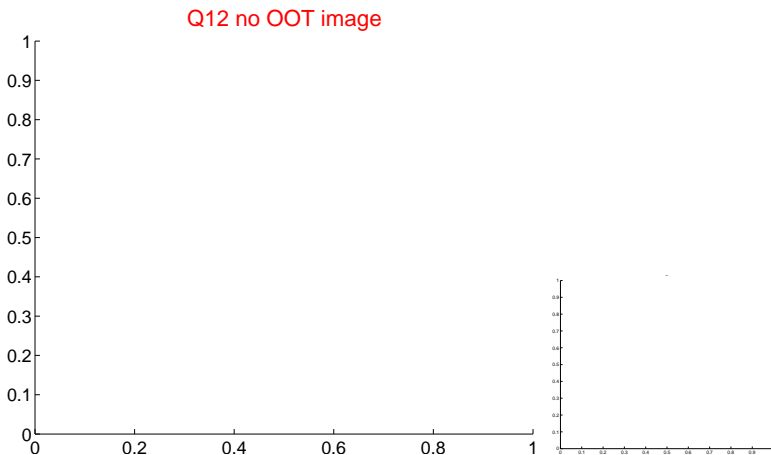
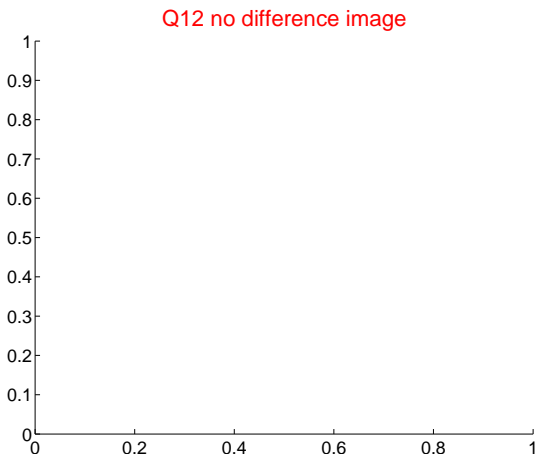
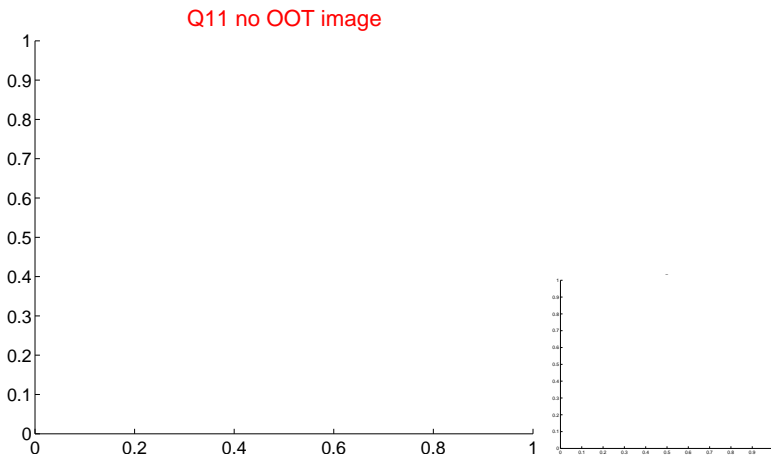
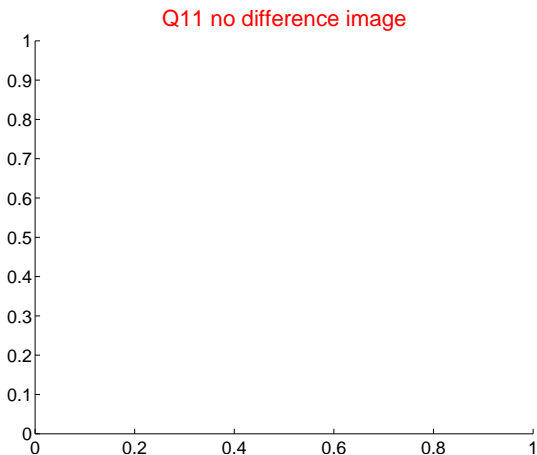
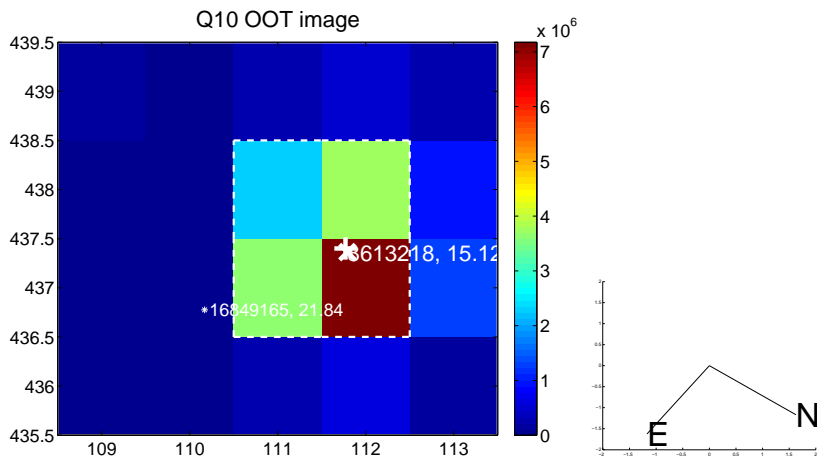
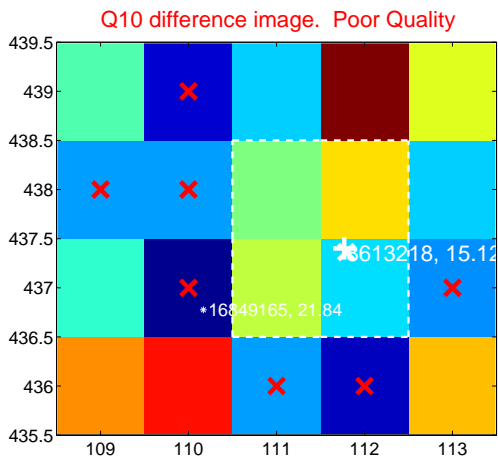
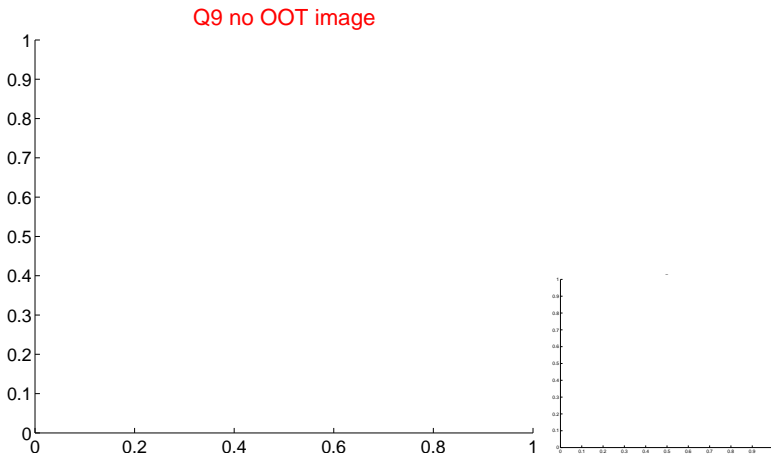
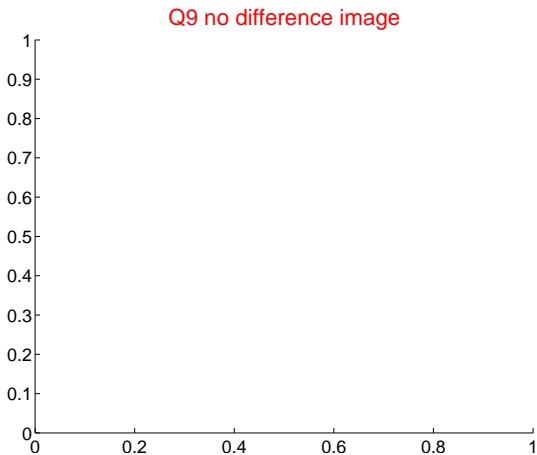
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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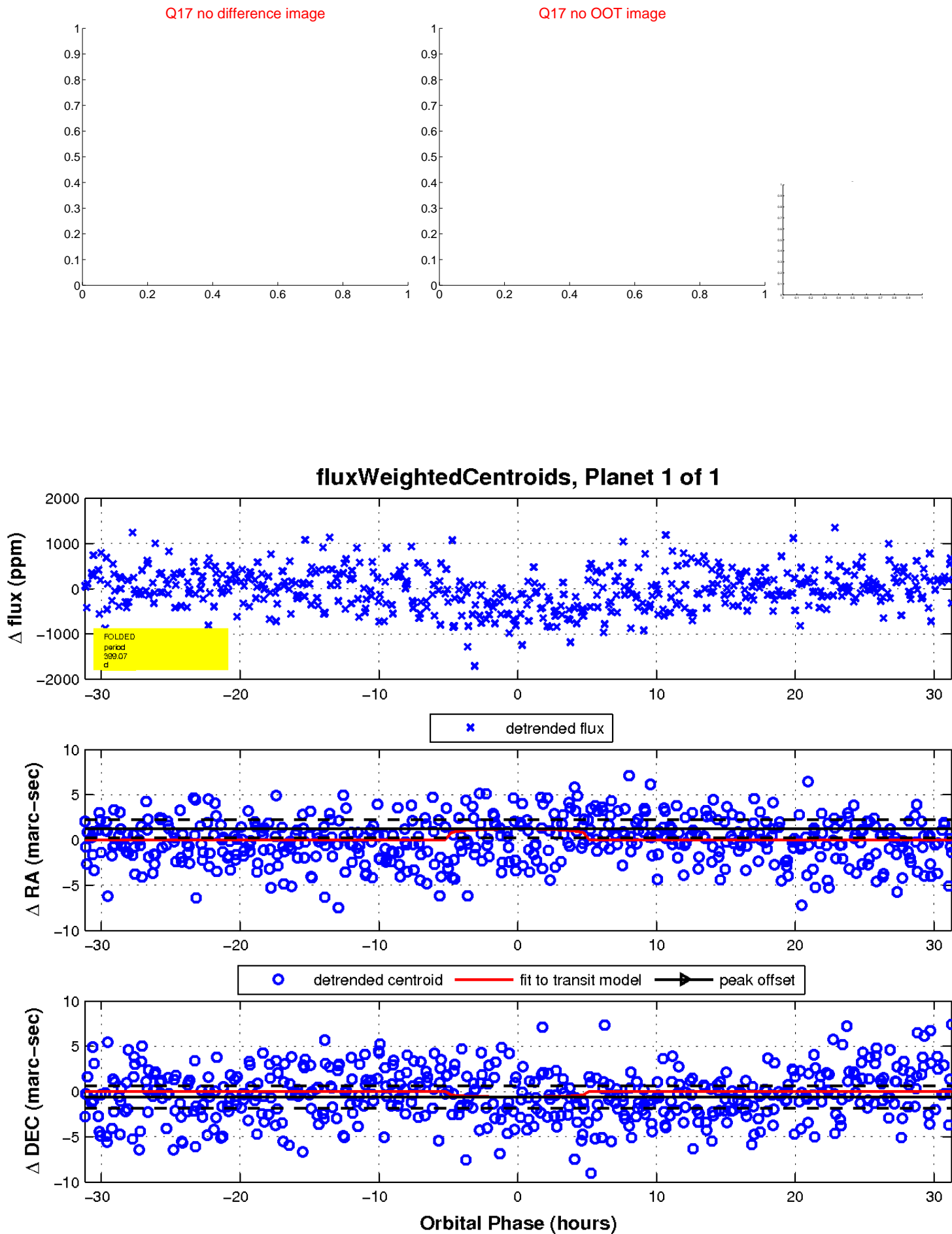
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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UKIRT Image

Declination

