

KIC 006186182

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})
006186182-01	OBS	4496.01	96.383891	144.871174	575.3	5.487	9.2	9.2	1.00	5919	2.60	6.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006186182-01	OBS	PC	0.97	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 006186182-01

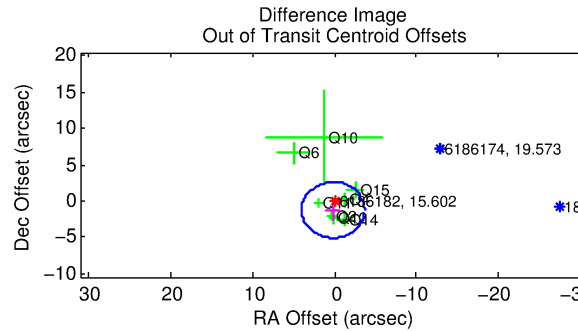
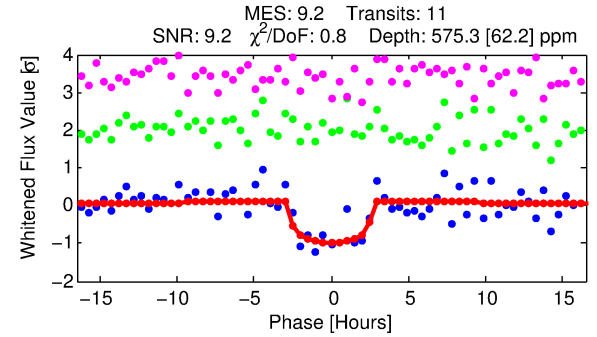
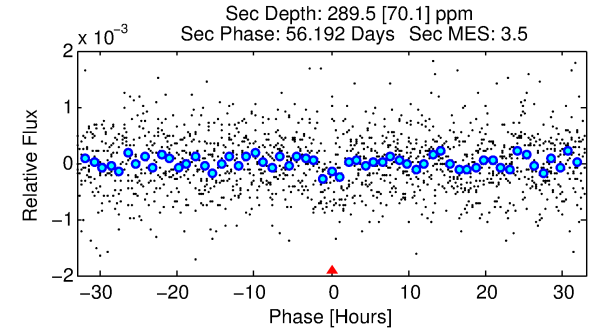
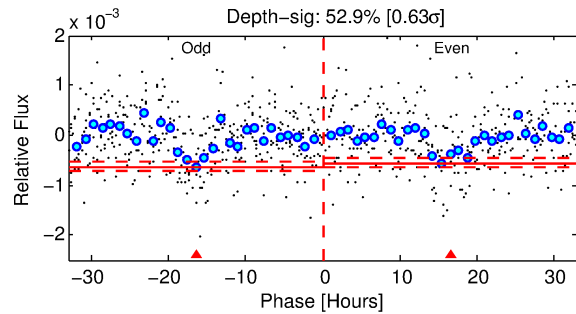
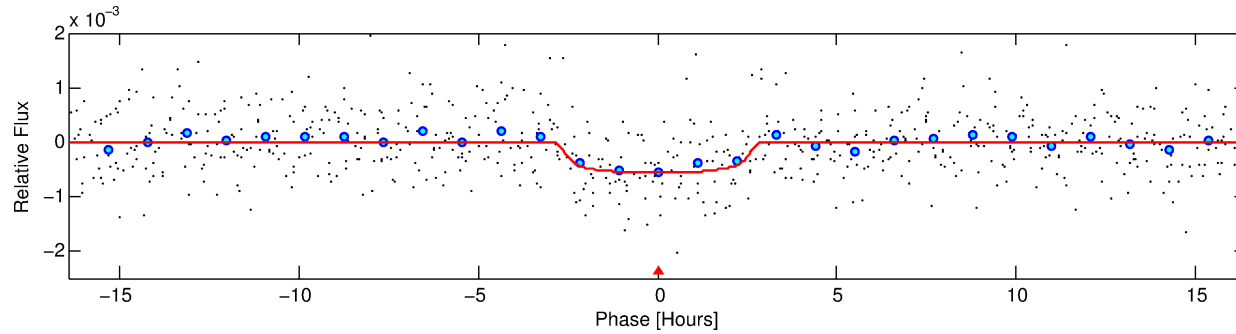
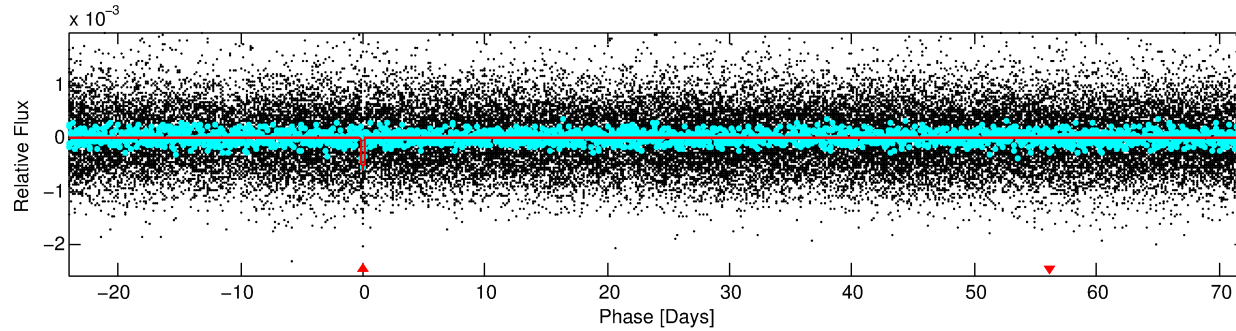
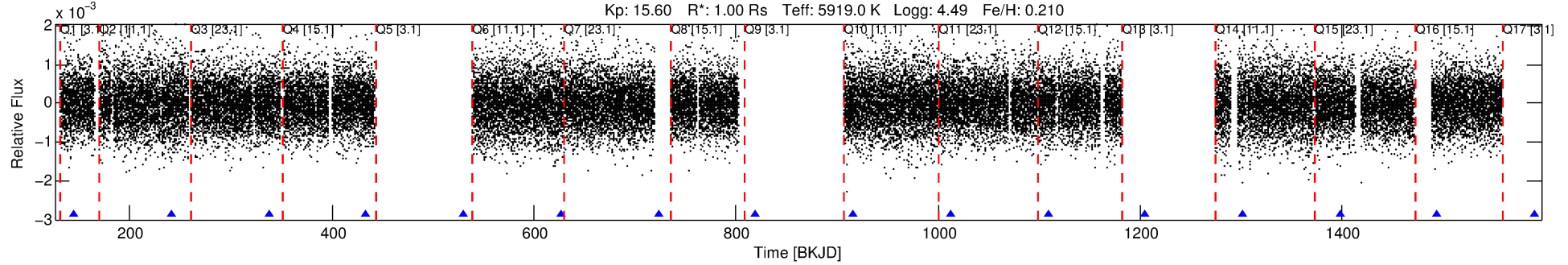
No Significant Match Found

DV One-Page Summary

KIC: 6186182 Candidate: 1 of 1 Period: 96.384 d

KOI: K04496.01 Corr: 0.970

Kp: 15.60 R*: 1.00 Rs Teff: 5919.0 K Logg: 4.49 Fe/H: 0.210



DV Fit Results:

Period = 96.38389 [0.00115] d
Epoch = 144.8712 [0.0101] BKJD
Rp/R* = 0.0238 [0.0151]
a/R* = 94.05 [265.69]
b = 0.75 [1.70]
Seff = 6.04 [2.53]
Teq = 400 [42] K
Rp = 2.60 [1.83] Re
a = 0.4266 [0.1130] AU
Ag = 4281.84 [5780.41] [0.74σ]
Teff = 5000 [1623] K [2.83σ]

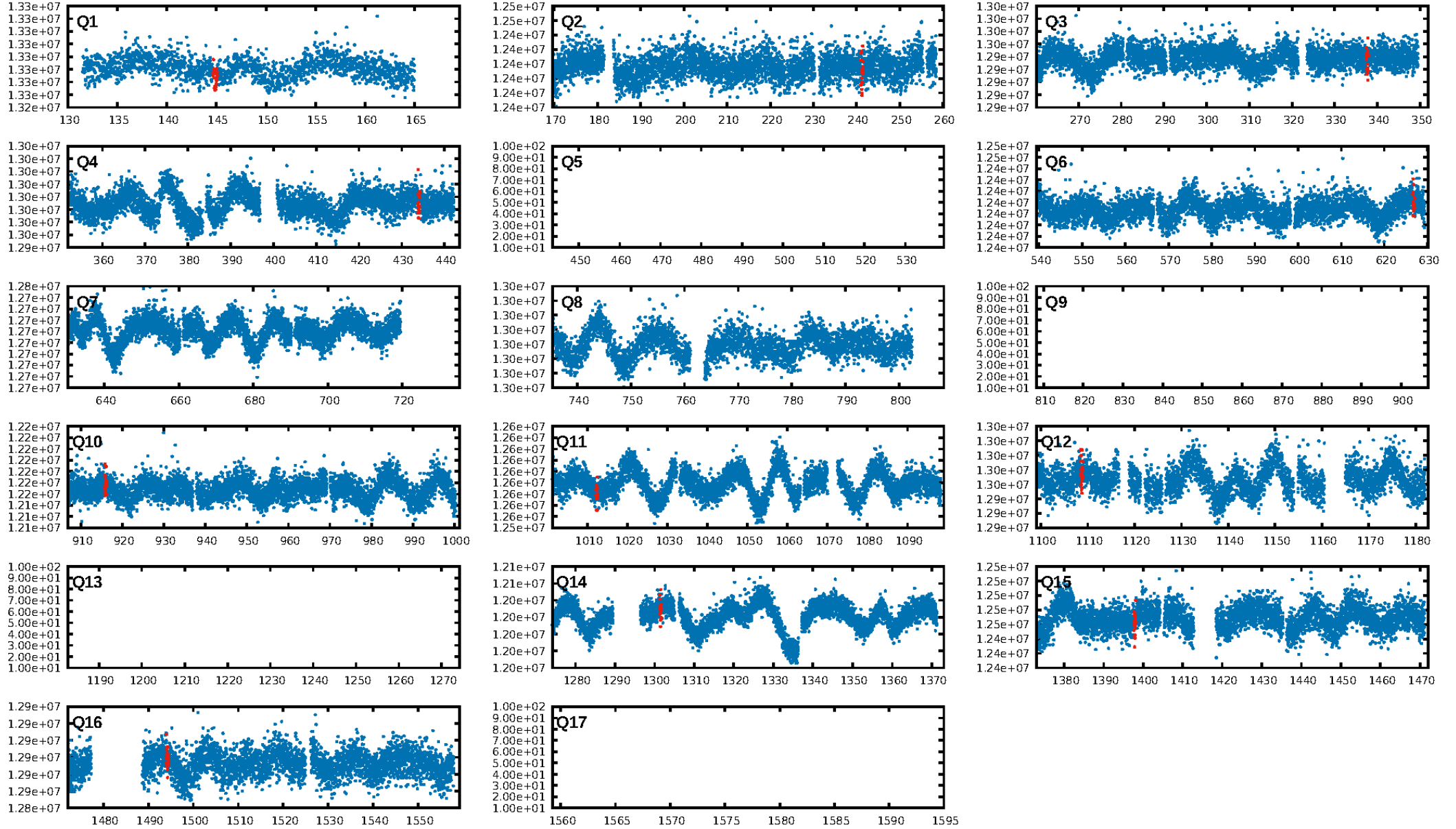
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.47e-20
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 2.337
Centroid-sig: 2.3%
Centroid-so: 2.323 arcsec [1.60σ]
OotOffset-rm: 1.282 arcsec [1.00σ]
KicOffset-rm: 1.428 arcsec [1.09σ]
OotOffset-st: 4/2/2/0 [8]
KicOffset-st: 4/2/2/0 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [11/11]

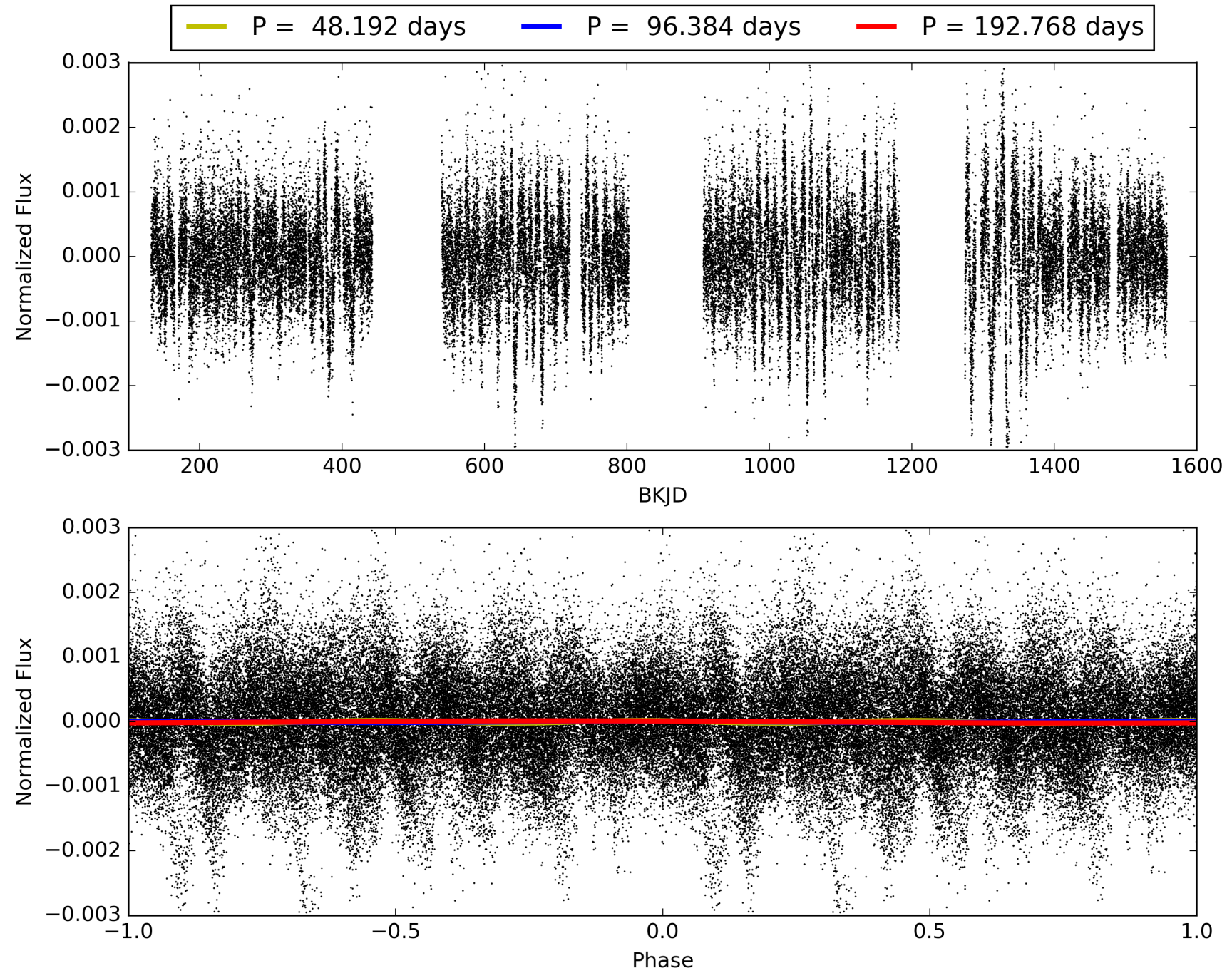
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:16:11 Z

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

TCE 006186182-01, PDC Light Curves

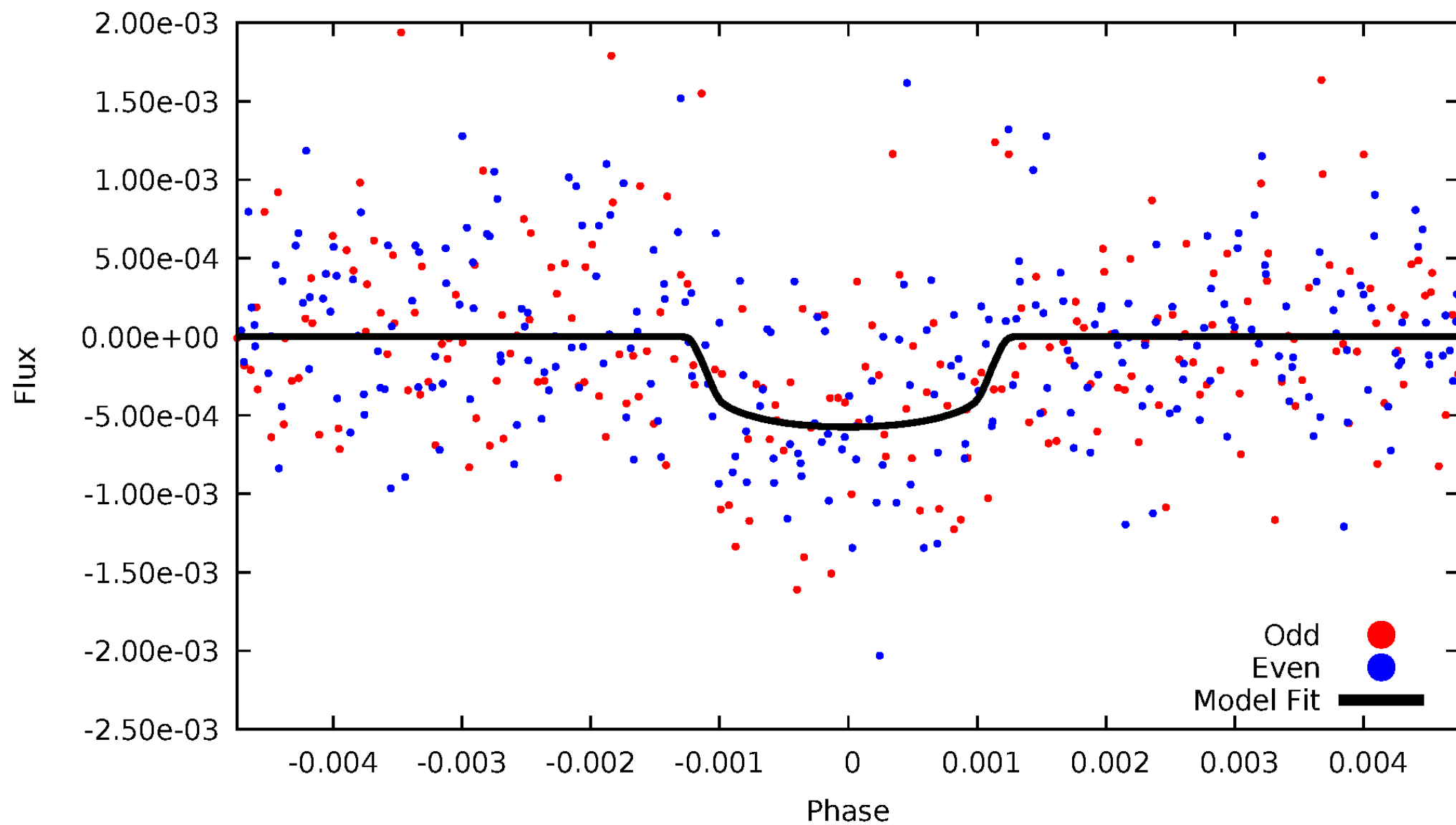


TCE 006186182-01



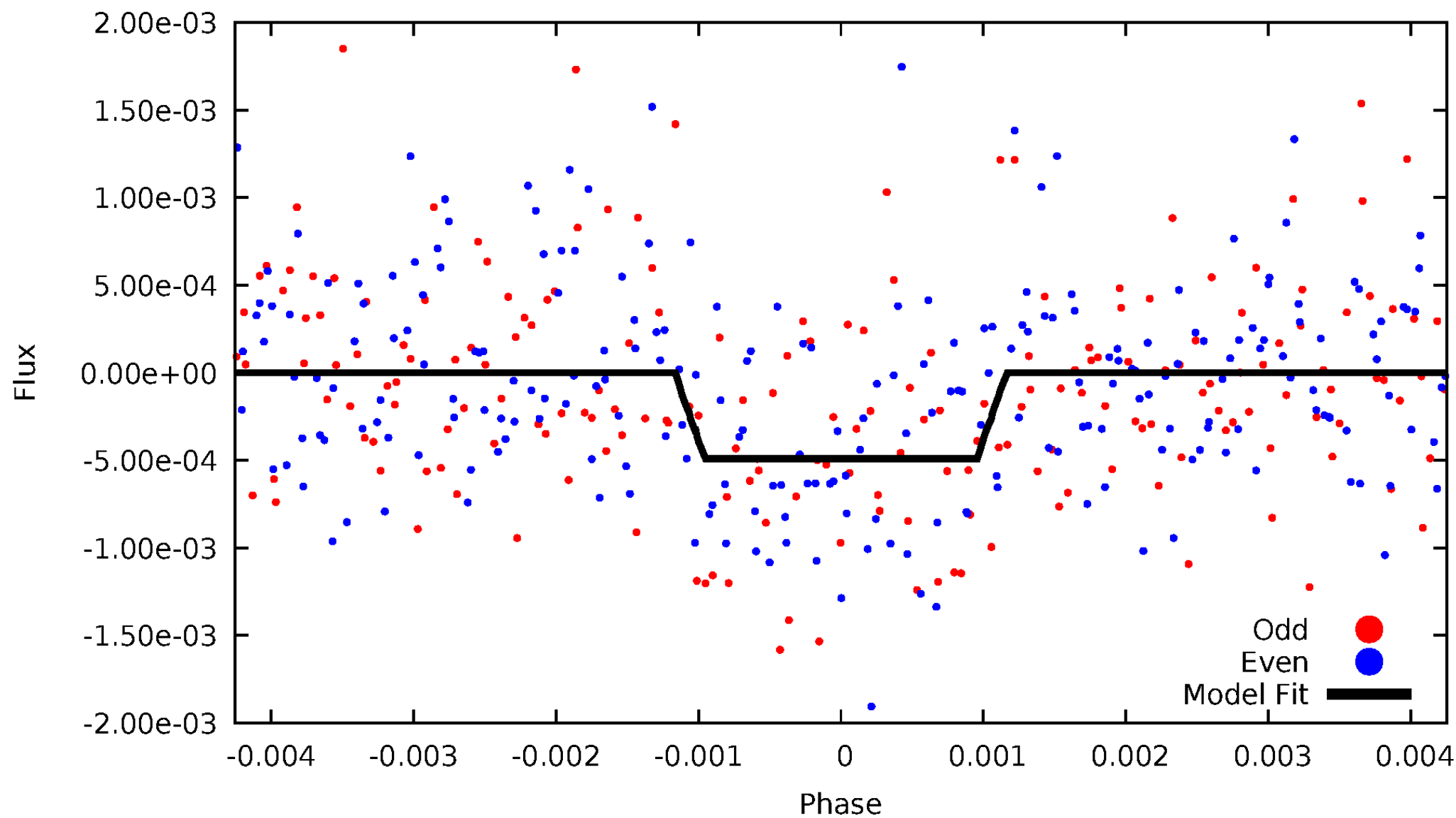
DV Odd/Even

TCE 006186182-01

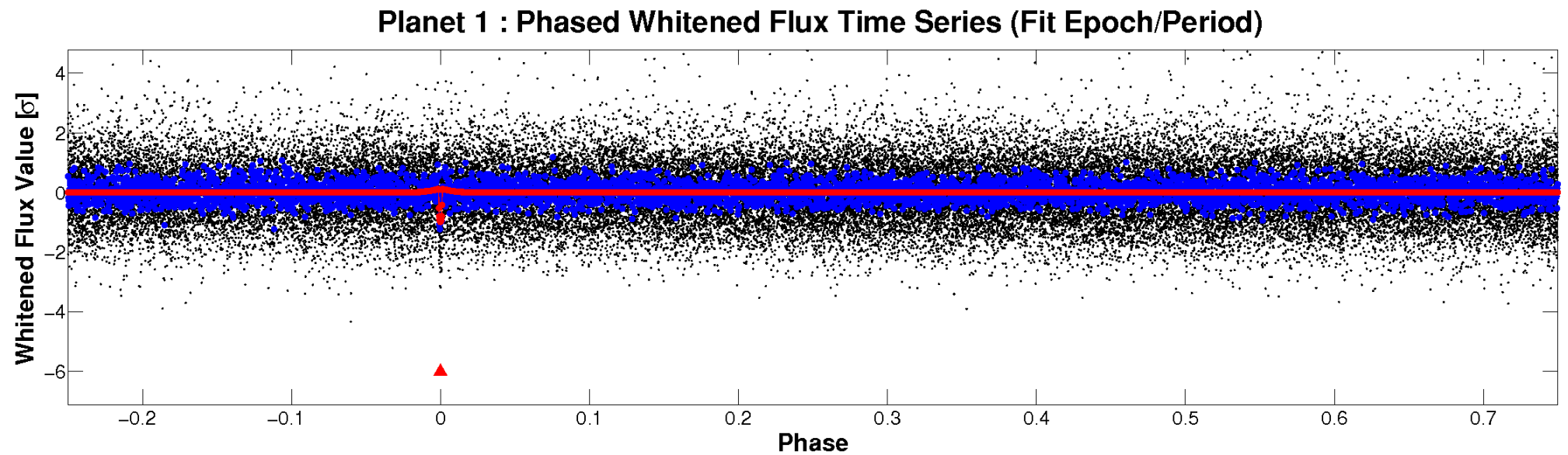
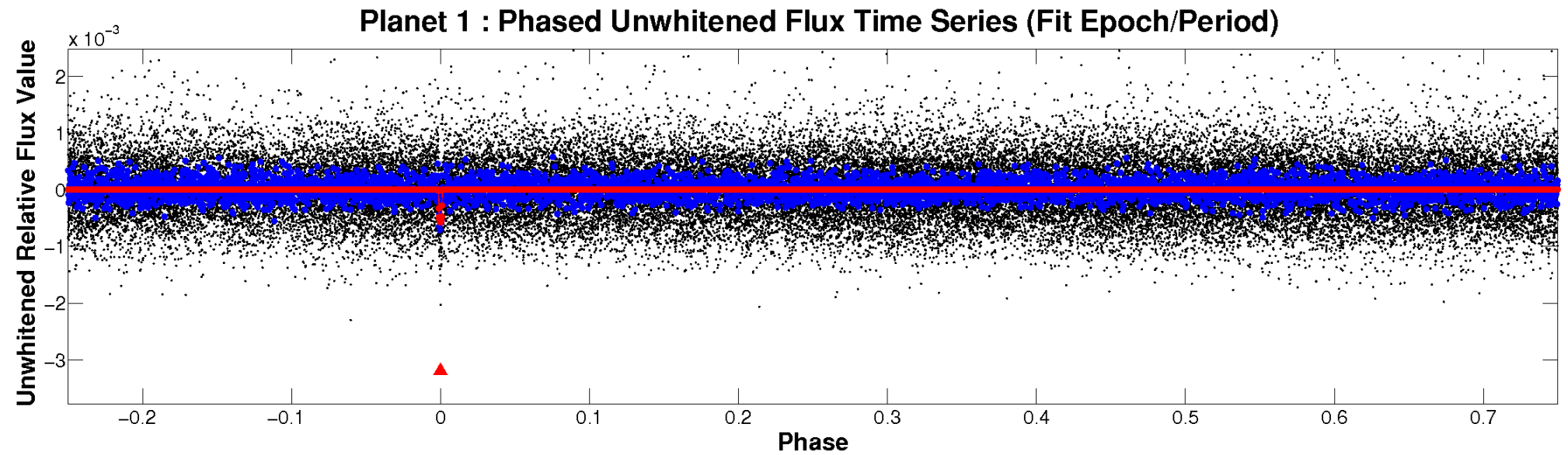


ALT Odd/Even

TCE 006186182-01

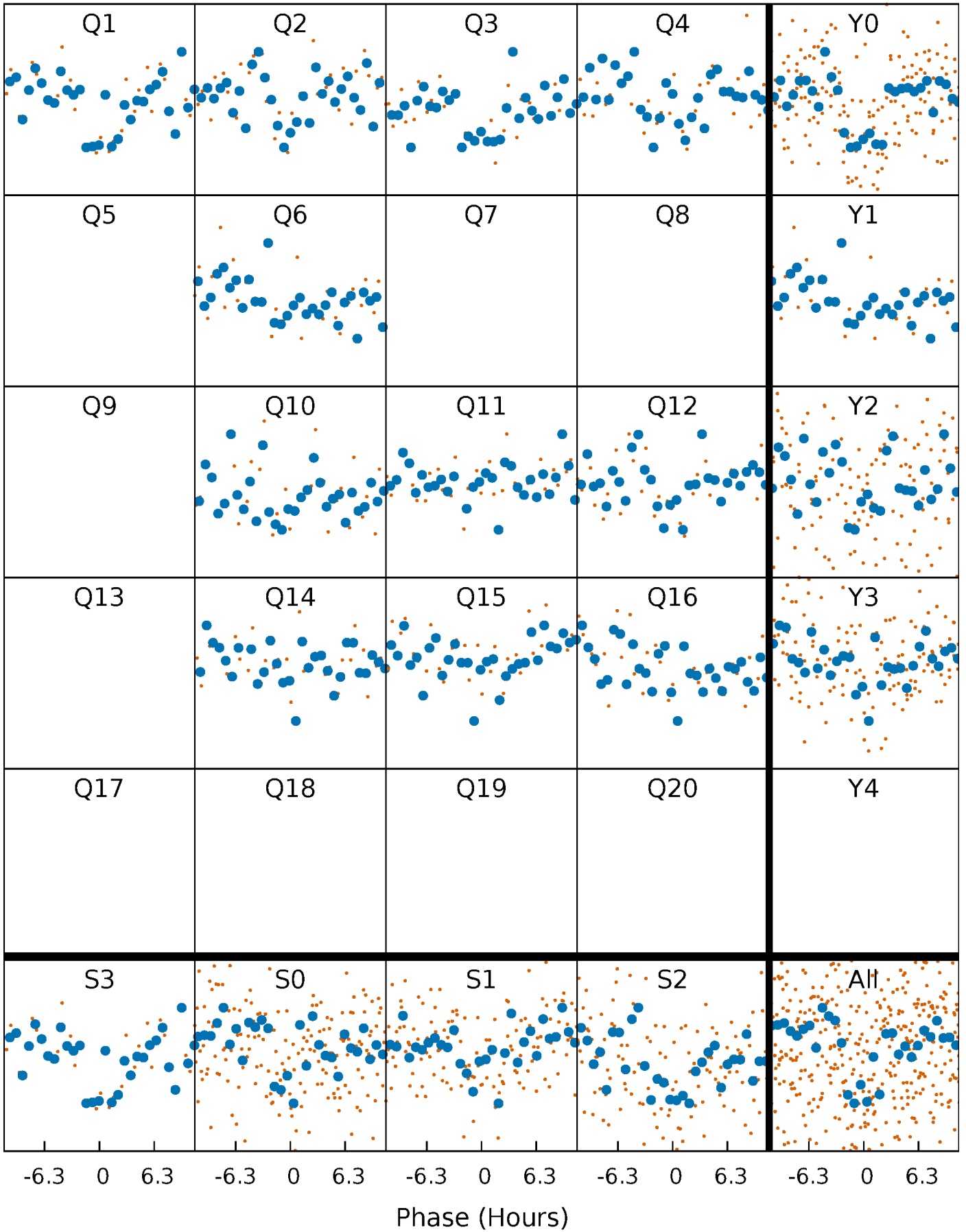


Non-Whitened Vs. Whitened Light Curve



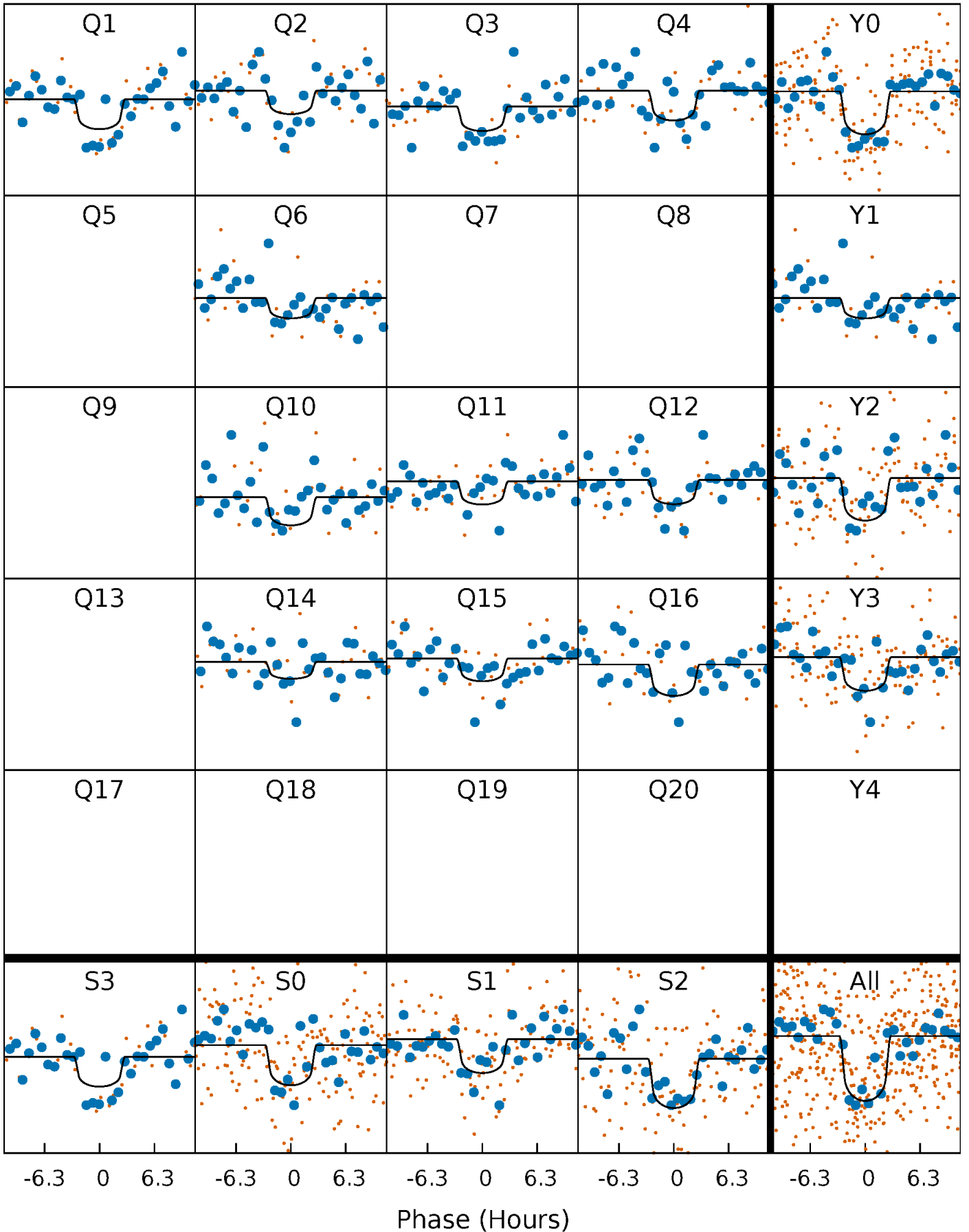
PDC Quarter-Phased Transit Curves

TCE 006186182-01 P= 96.383891 Days $T_0=144.871174$ (BKJD)



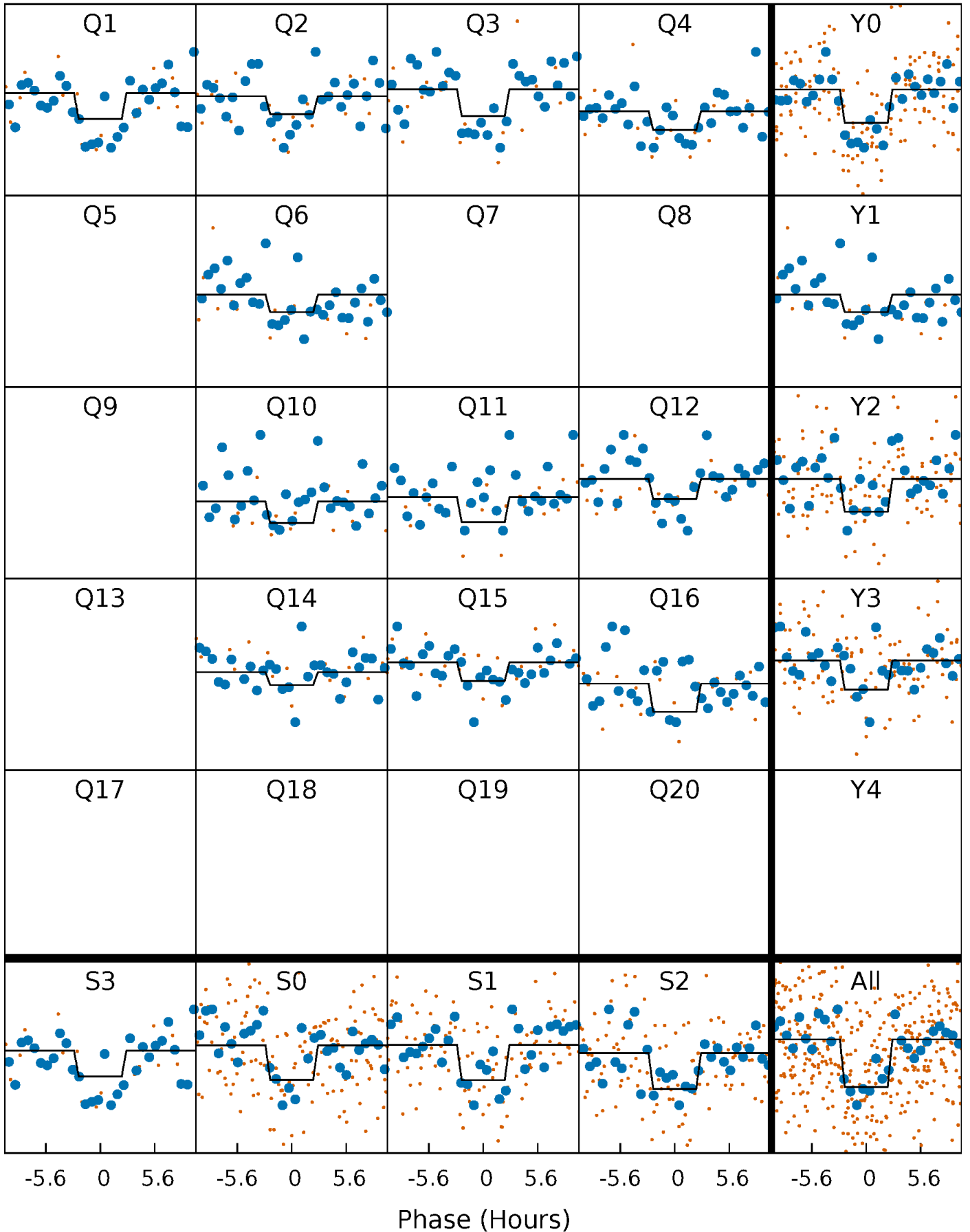
DV Quarter-Phased Transit Curves

TCE 006186182-01 P= 96.383891 Days $T_0=144.871174$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

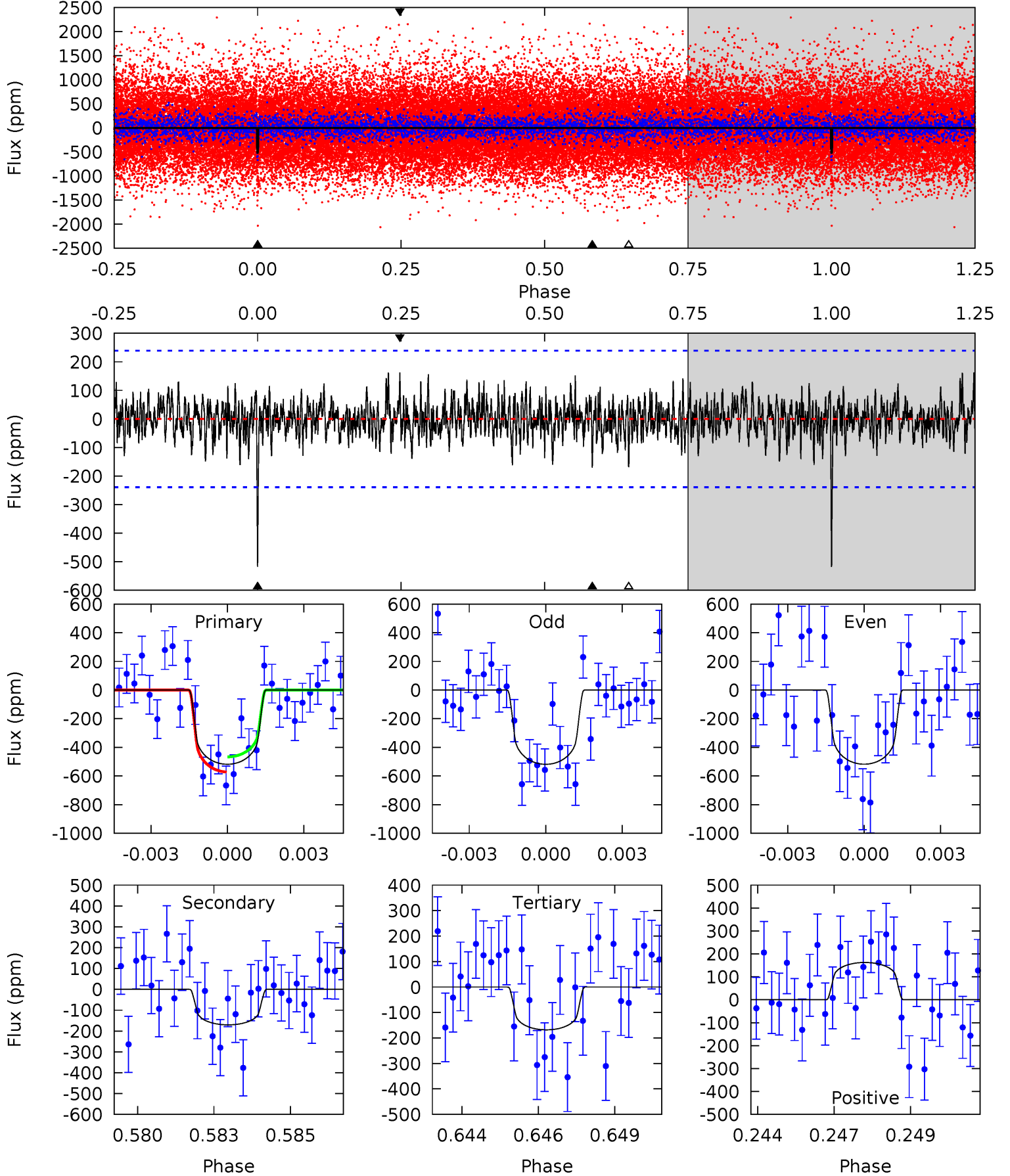
TCE 006186182-01 P= 96.383966 Days $T_0=144.872984$ (BKJD)



DV Model-Shift Uniqueness Test

006186182-01, P = 96.383891 Days, E = 48.487283 Days

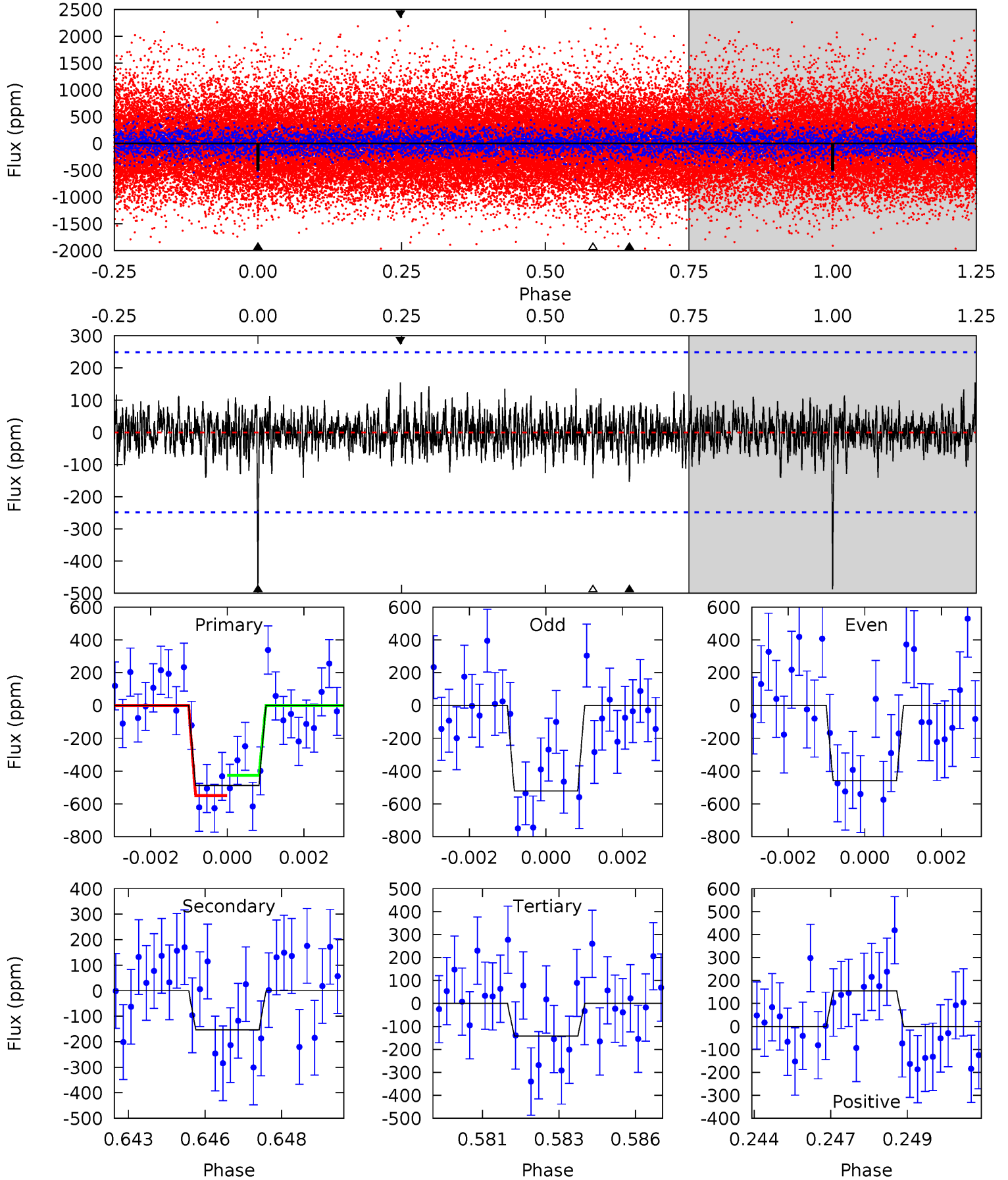
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.77	3.72	3.59	5.28	3.02	1.12	7.73	7.86	0.05	0.18	0.01	0.99	0.24	1.16



Alt Model-Shift Uniqueness Test

006186182-01, P = 96.383966 Days, E = 48.489018 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	3.26	3.02	3.29	5.30	3.05	0.92	7.36	7.09	0.24	-0.03	0.66	0.90	0.24	1.32



Stellar Parameters For KIC 006186182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5919^{+162}_{-203}	$4.485^{+0.039}_{-0.221}$	$0.210^{+0.150}_{-0.350}$	$1.000^{+0.305}_{-0.102}$	$1.114^{+0.109}_{-0.163}$	$1.570^{+0.339}_{-0.855}$
	+3%/-3%	+1%/-5%	+71%/-167%	+30%/-10%	+10%/-15%	+22%/-54%
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 006186182-01 / KOI 4496.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-170 ± 45	$2.91^{+1.84}_{-1.59}$	576^{+40}_{-31}	4422^{+1787}_{-744}	1866^{+7207}_{-1216}
Alt.	-153 ± 47	$2.83^{+1.66}_{-1.47}$	572^{+40}_{-27}	4368^{+1671}_{-678}	1871^{+6155}_{-1181}

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 $A_{obs} \gg 1.0$

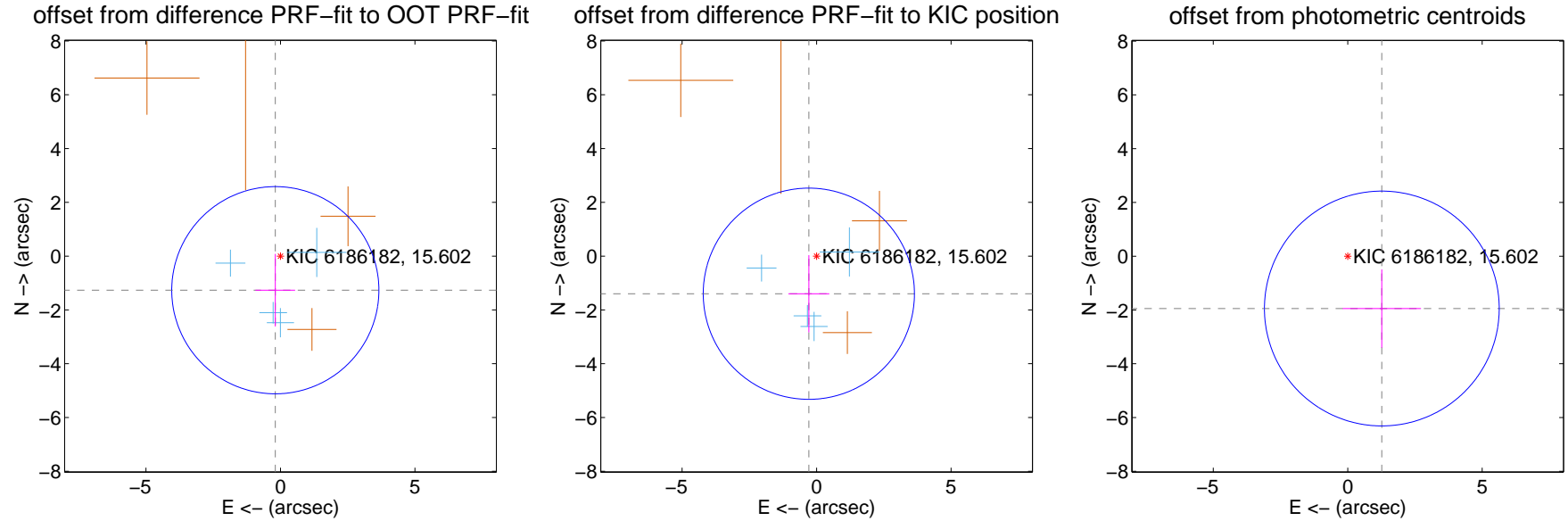
DV Centroid Data

Supplemental centroid analysis for 006186182-01. Kepler magnitude: 15.60. Transit SNR 9.19

There are 4 quarters with good PRF difference image offsets

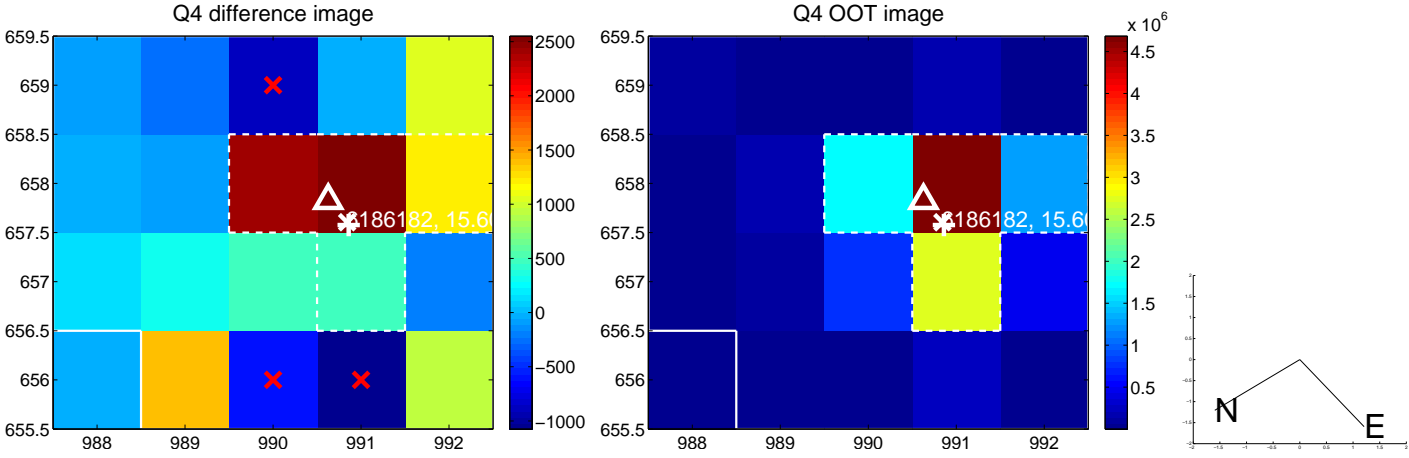
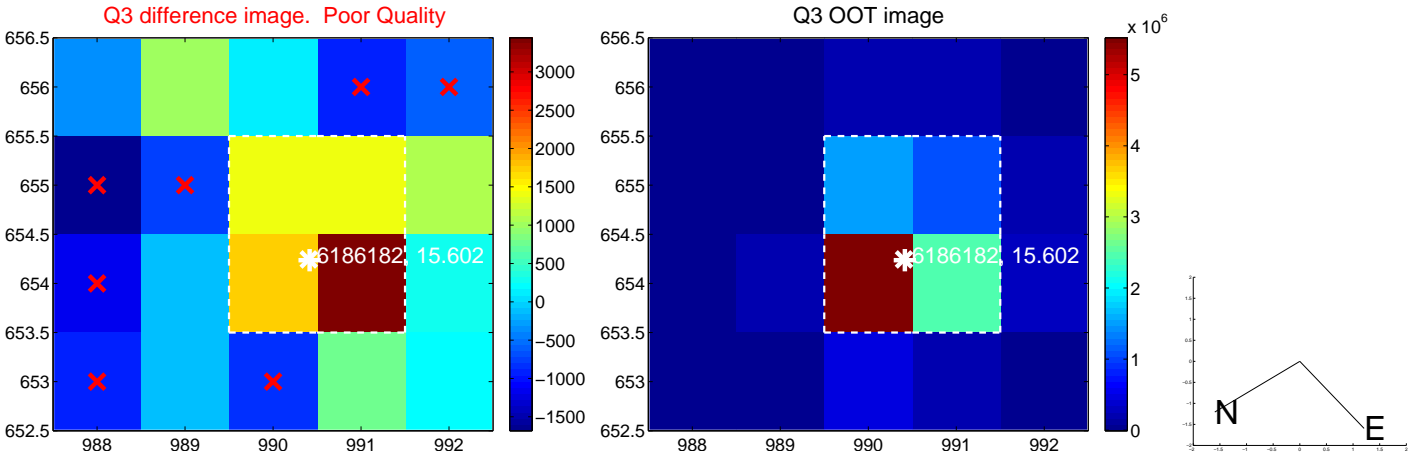
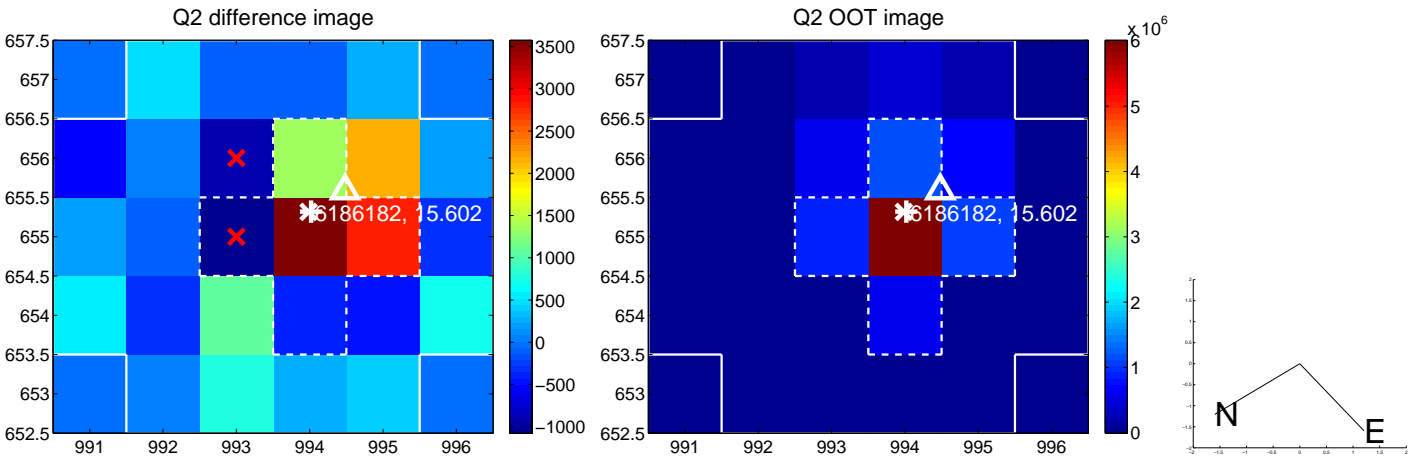
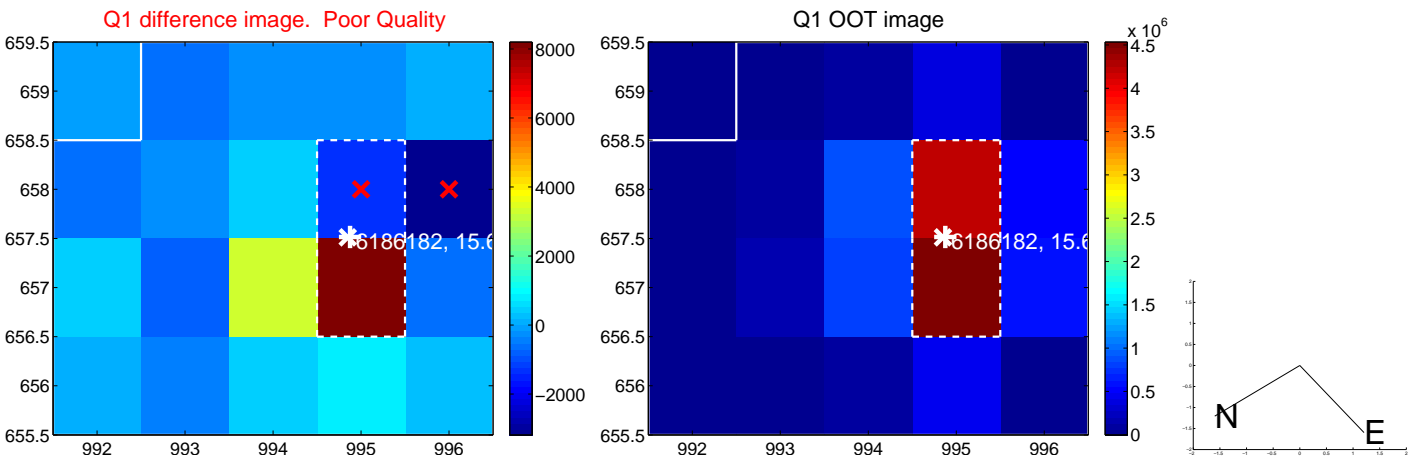
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.282 ± 1.284	1.00	0.191 ± 0.737	-1.267 ± 1.350
PRF-fit source offset from KIC position	1.428 ± 1.309	1.09	0.288 ± 0.762	-1.398 ± 1.435
photometric centroid source offset	2.32 ± 1.46	1.60	-1.27 ± 1.46	-1.95 ± 1.45

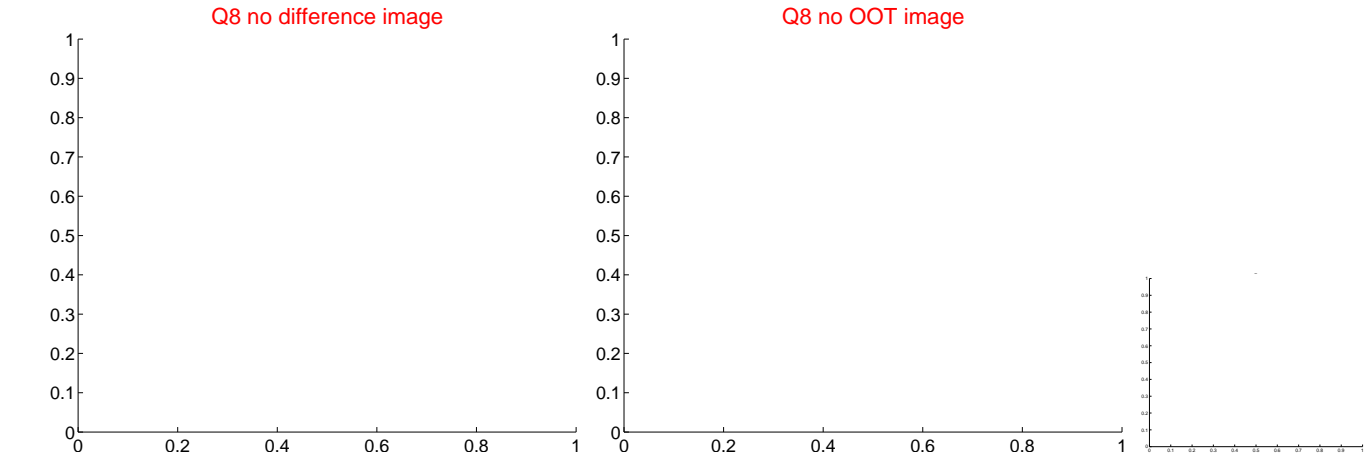
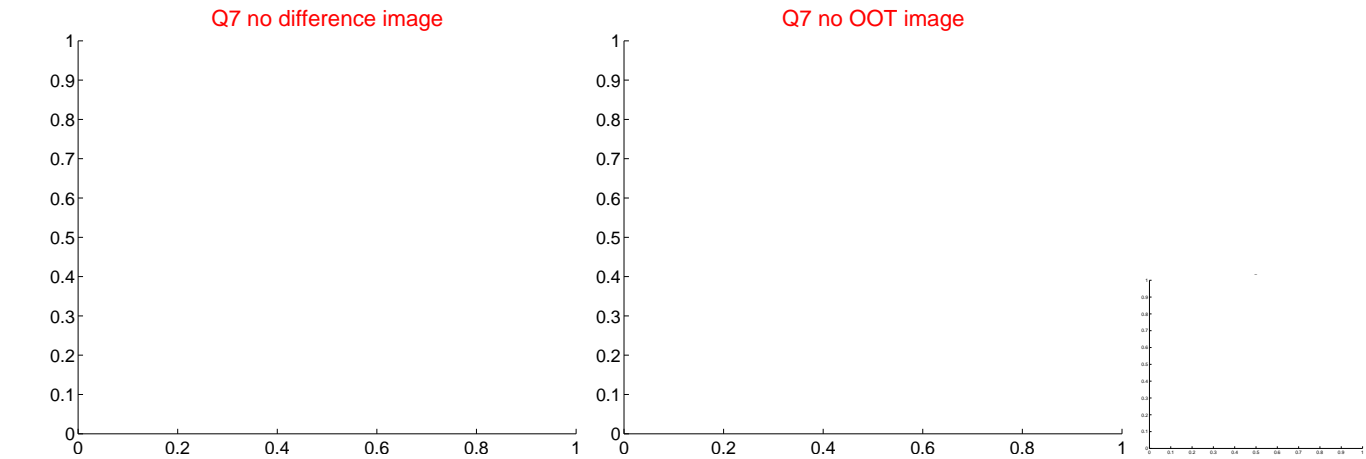
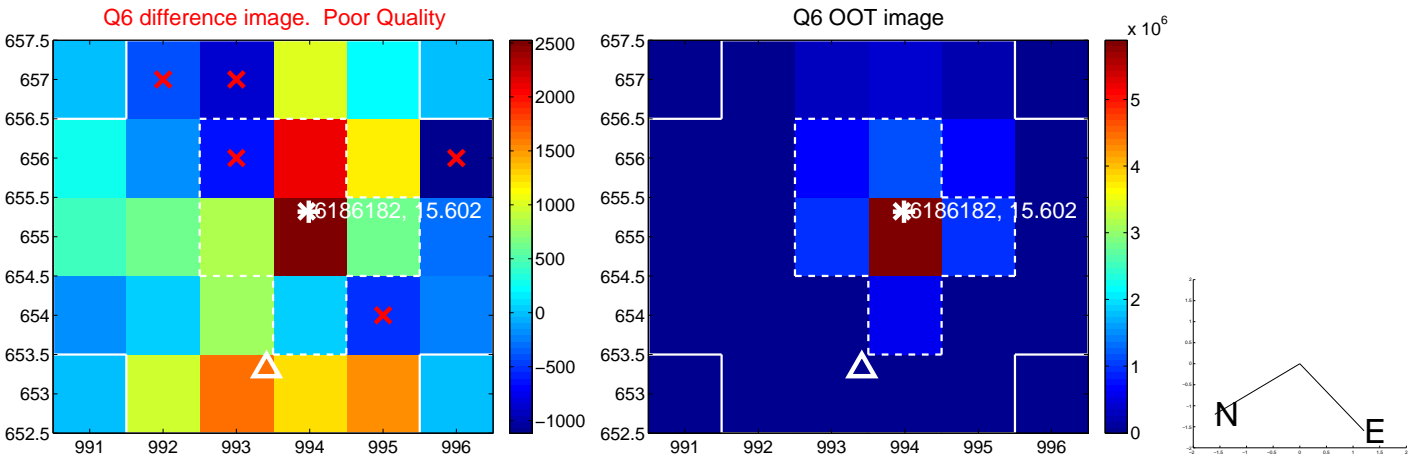
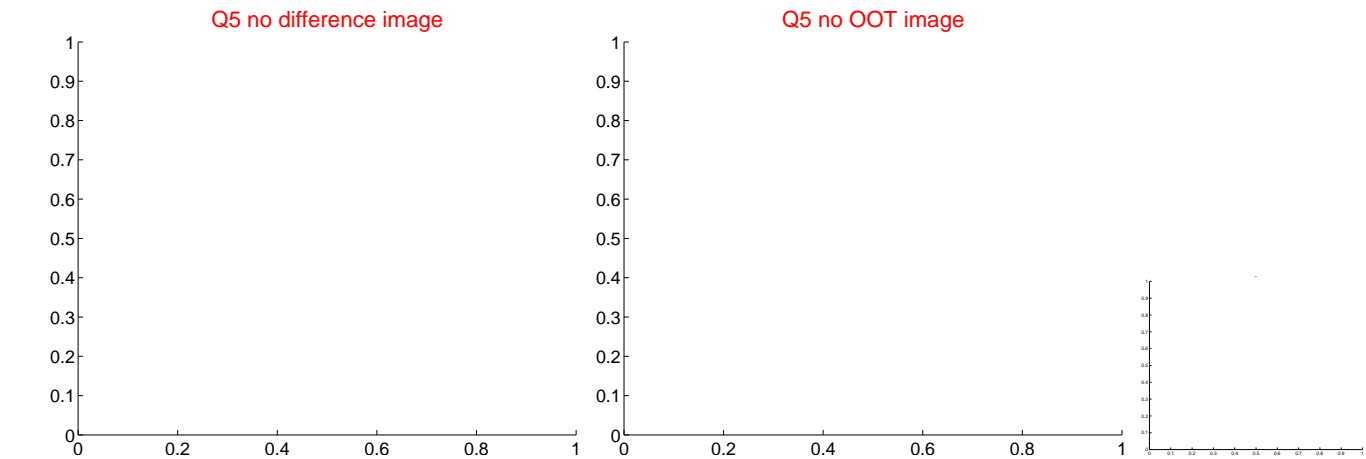


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

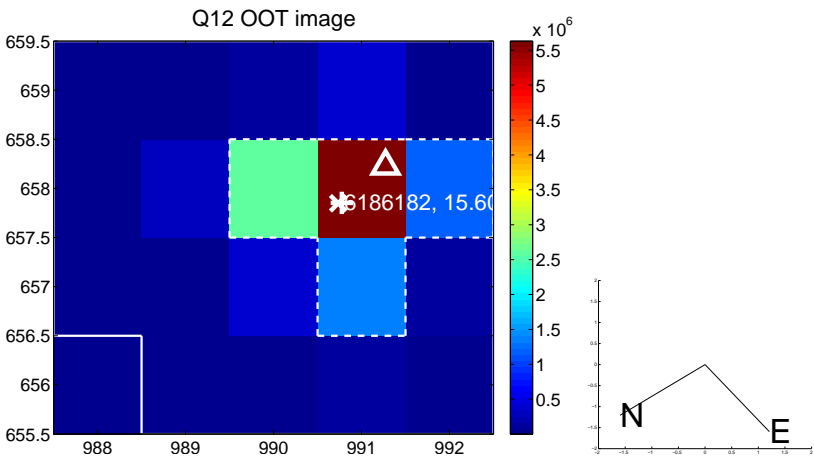
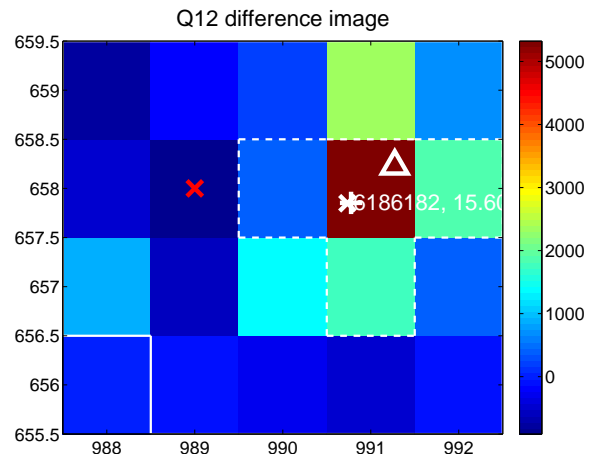
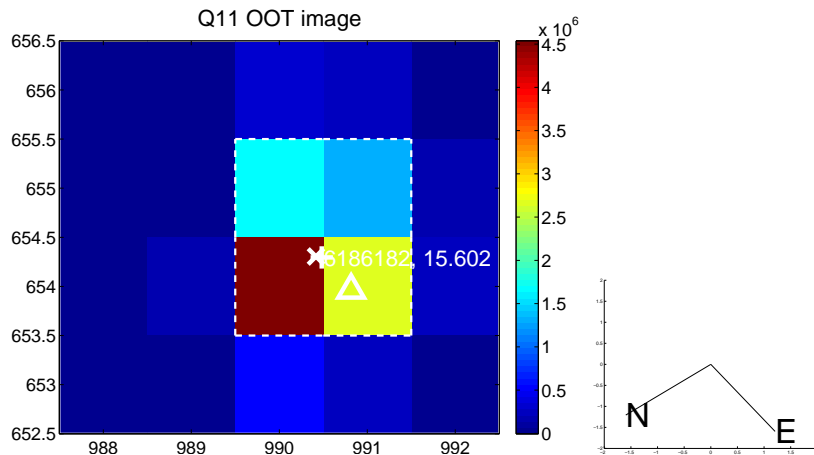
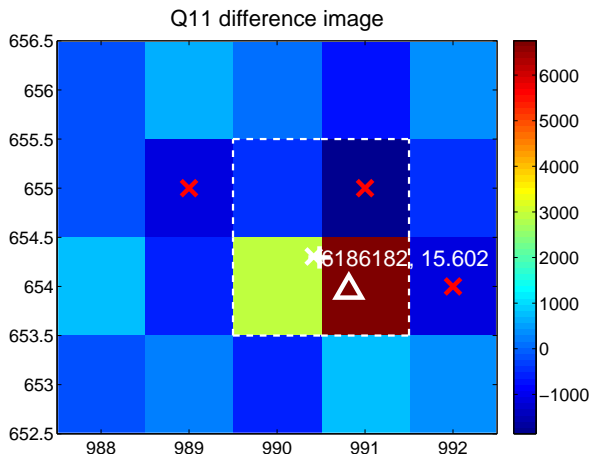
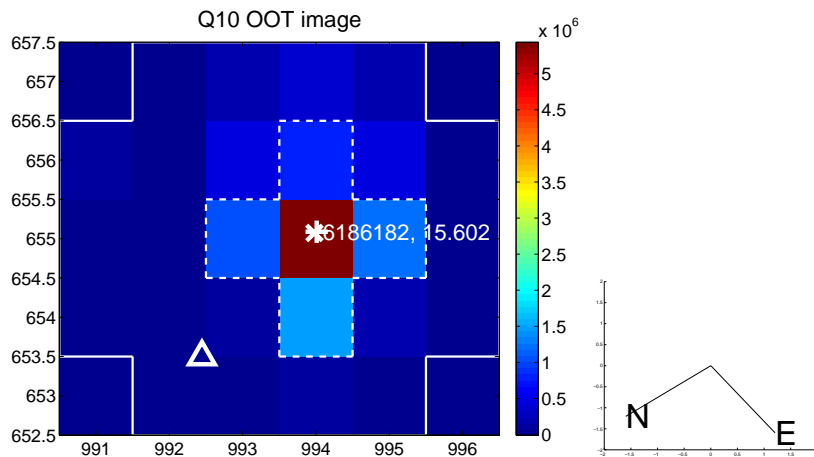
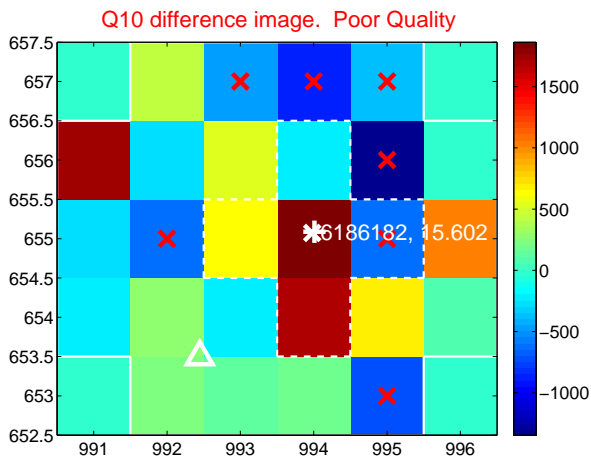
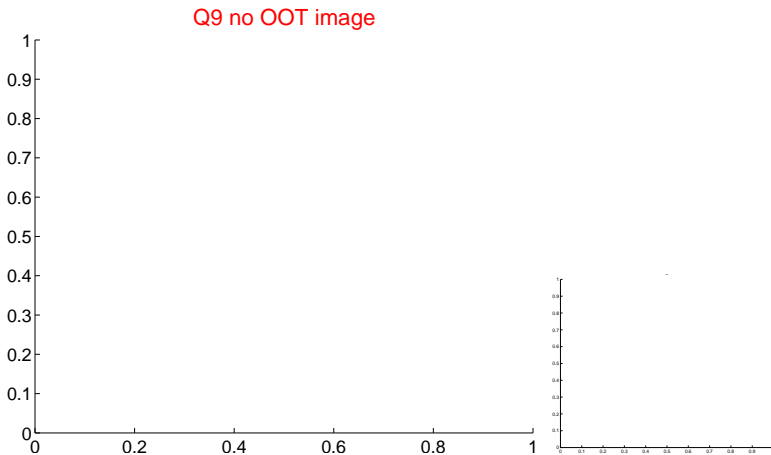
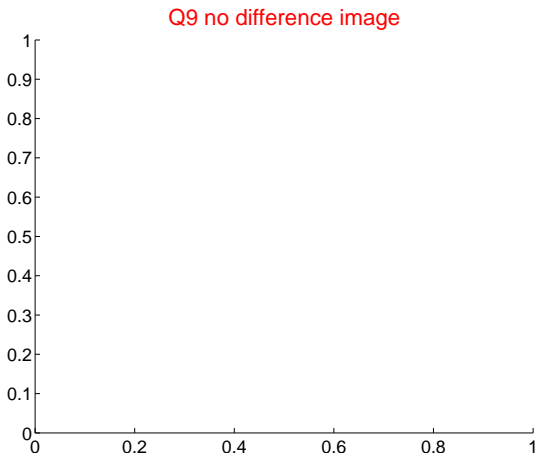
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



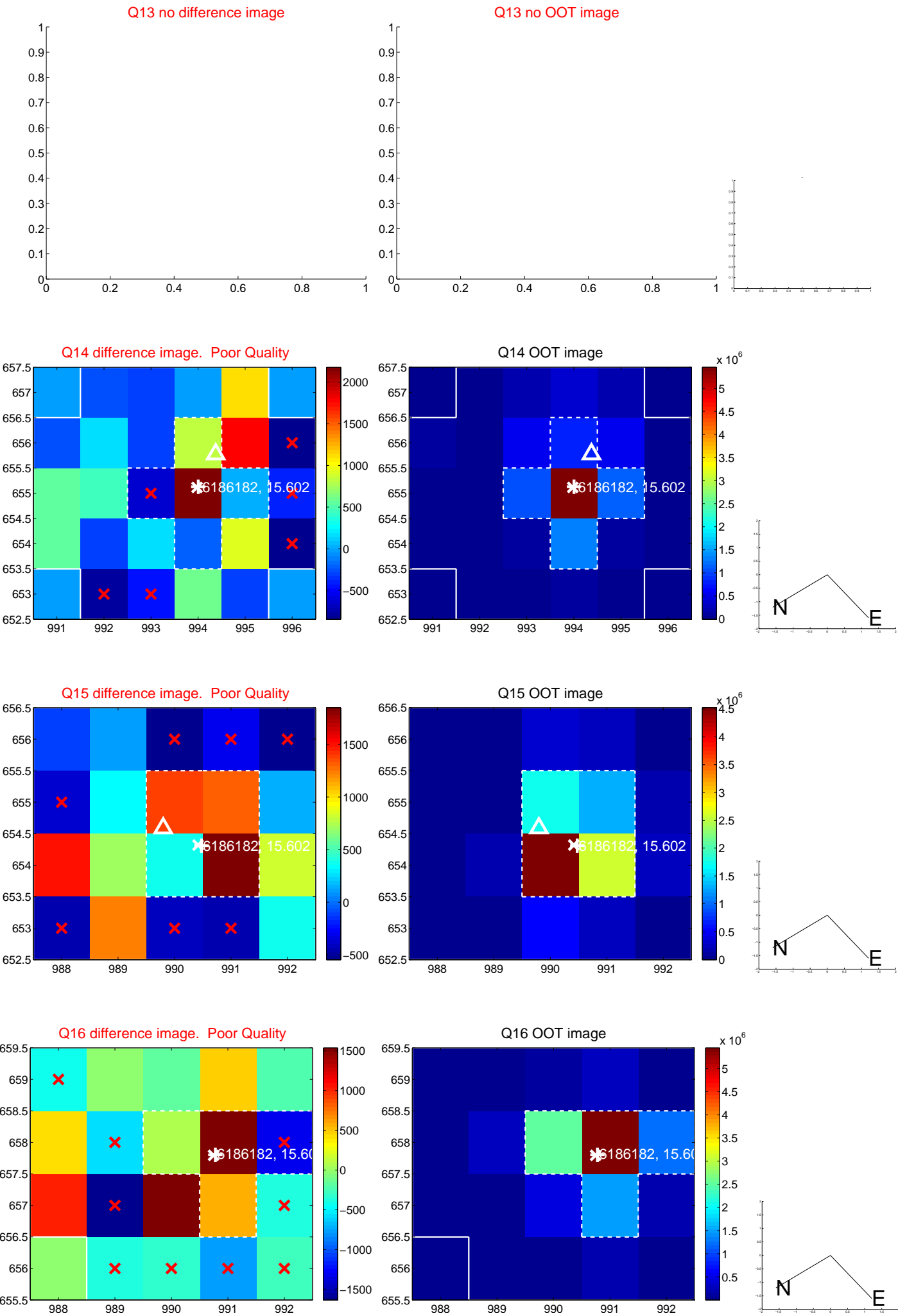
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



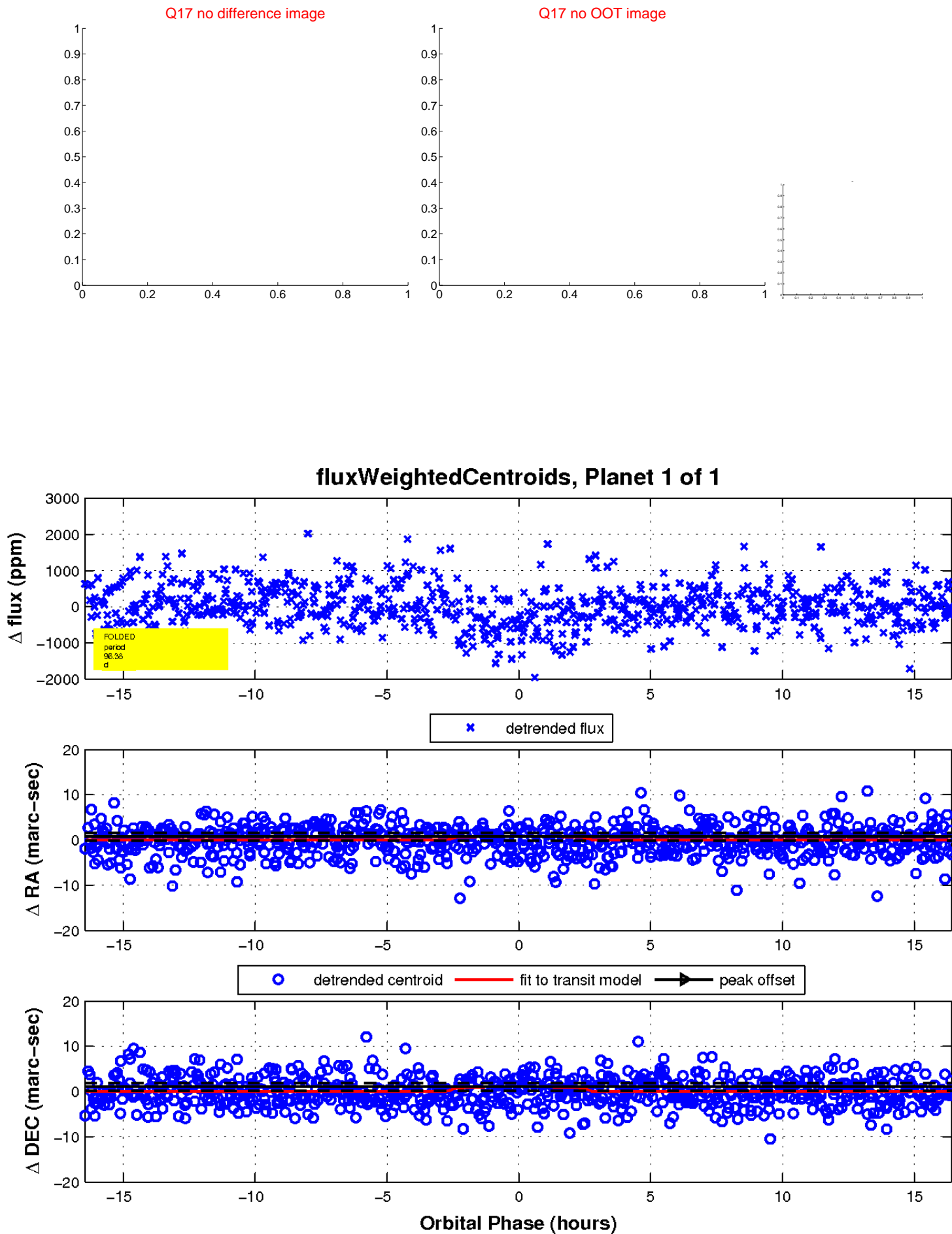
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

