

KIC 006600407

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})
006600407-01	OBS	No	443.804767	562.815729	828.8	11.126	10.6	10.2	0.92	5880	2.75	0.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006600407-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

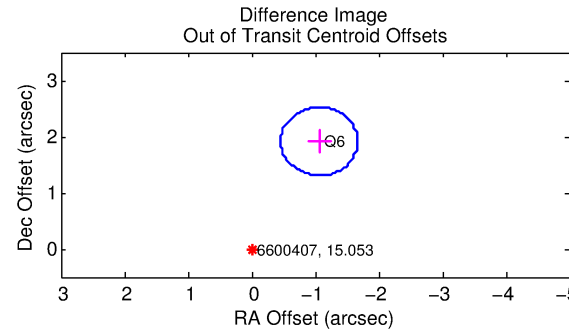
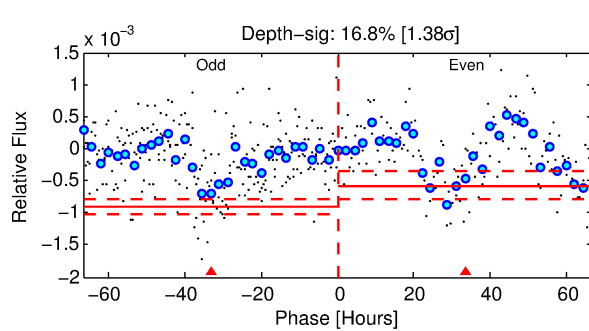
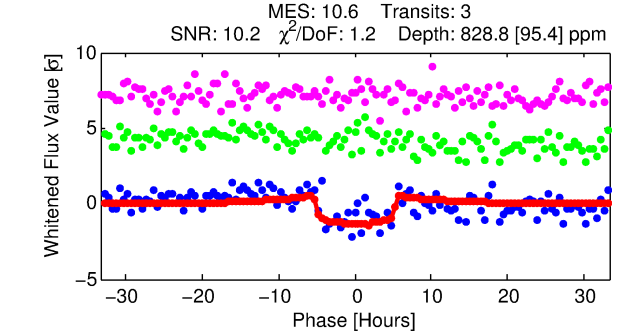
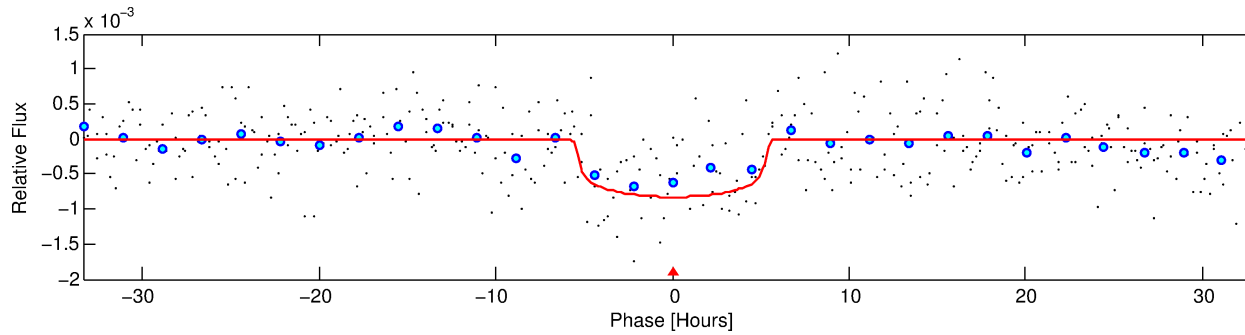
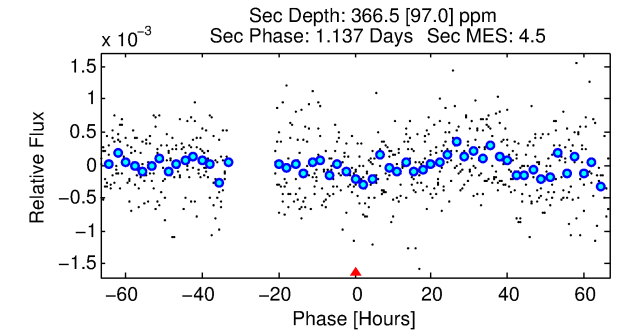
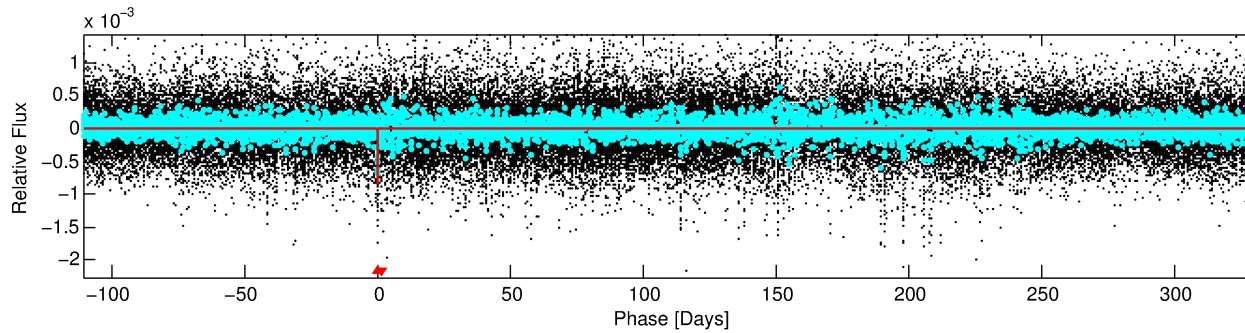
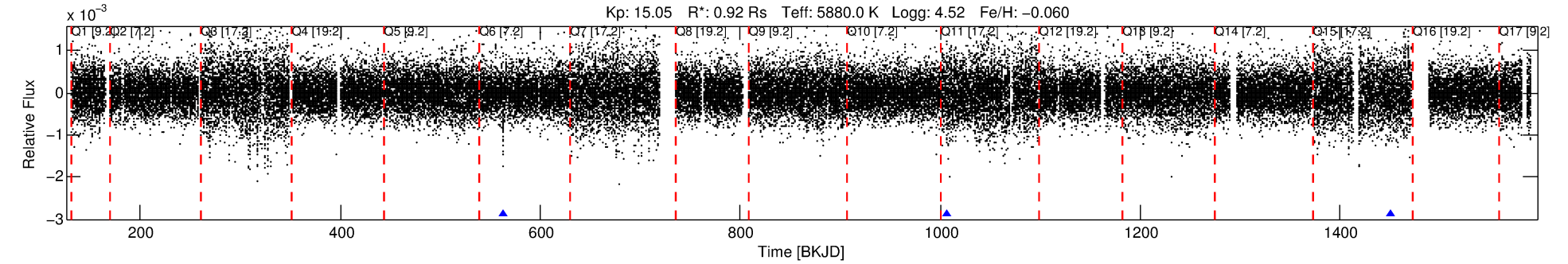
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006600407-01

No Significant Match Found

DV One-Page Summary

KIC: 6600407 Candidate: 1 of 1 Period: 443.805 d



DV Fit Results:

Period = 443.80477 [0.01056] d
Epoch = 562.8157 [0.0118] BKJD
Rp/R* = 0.0275 [0.0109]
a/R* = 253.91 [452.36]
b = 0.60 [1.90]
Seff = 0.69 [0.25]
Teq = 232 [21] K
Rp = 2.75 [1.31] Re
a = 1.1431 [0.2585] AU
Ag = 34812.06 [31384.27] [1.11σ]
Teffp = 4907 [1040] K [4.49σ]

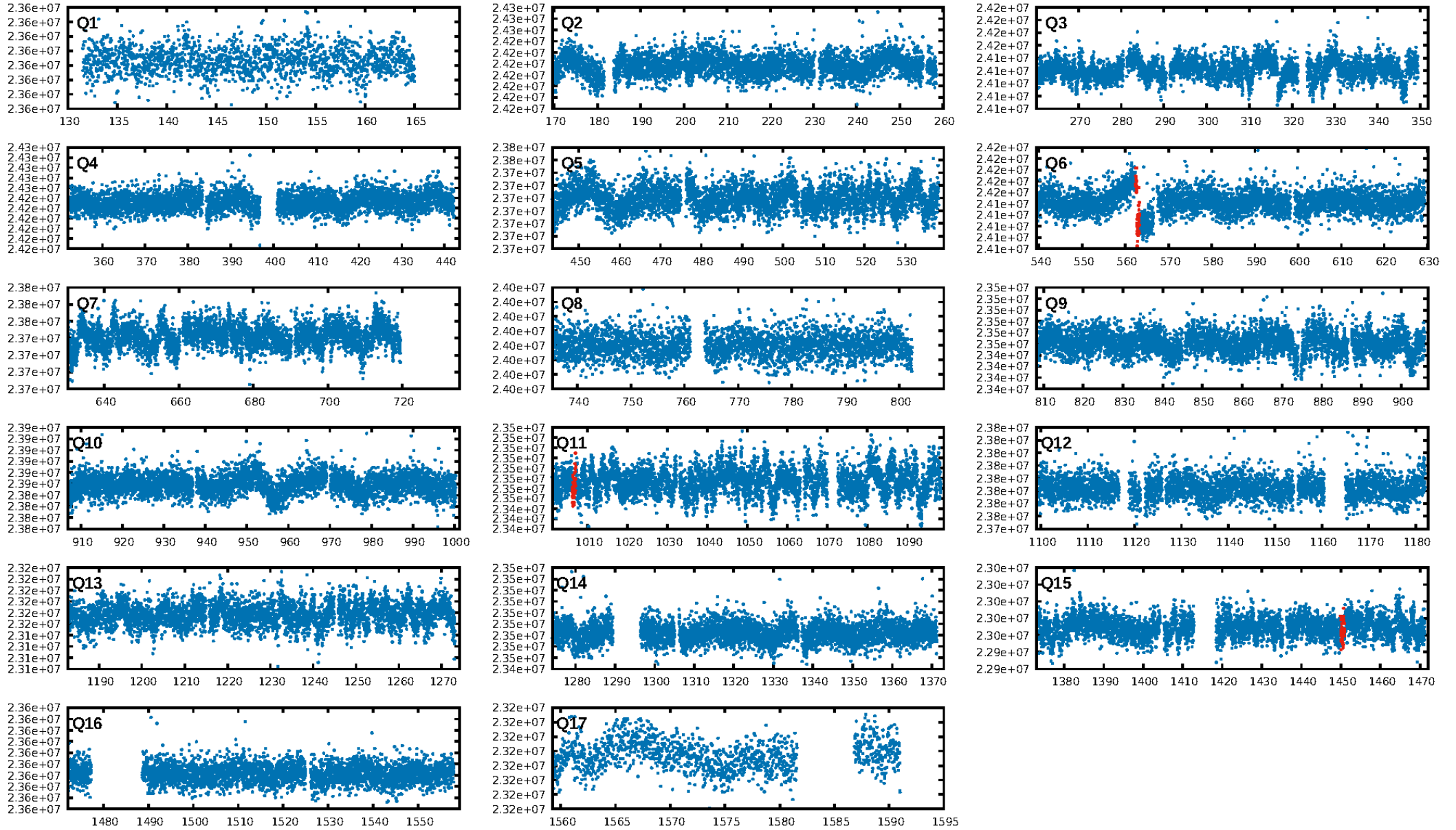
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.7%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 5.17e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -6.155
Centroid-sig: 38.3%
Centroid-so: 1.199 arcsec [0.98σ]
OotOffset-rm: 2.188 arcsec [10.82σ]
KicOffset-rm: 2.416 arcsec [11.95σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

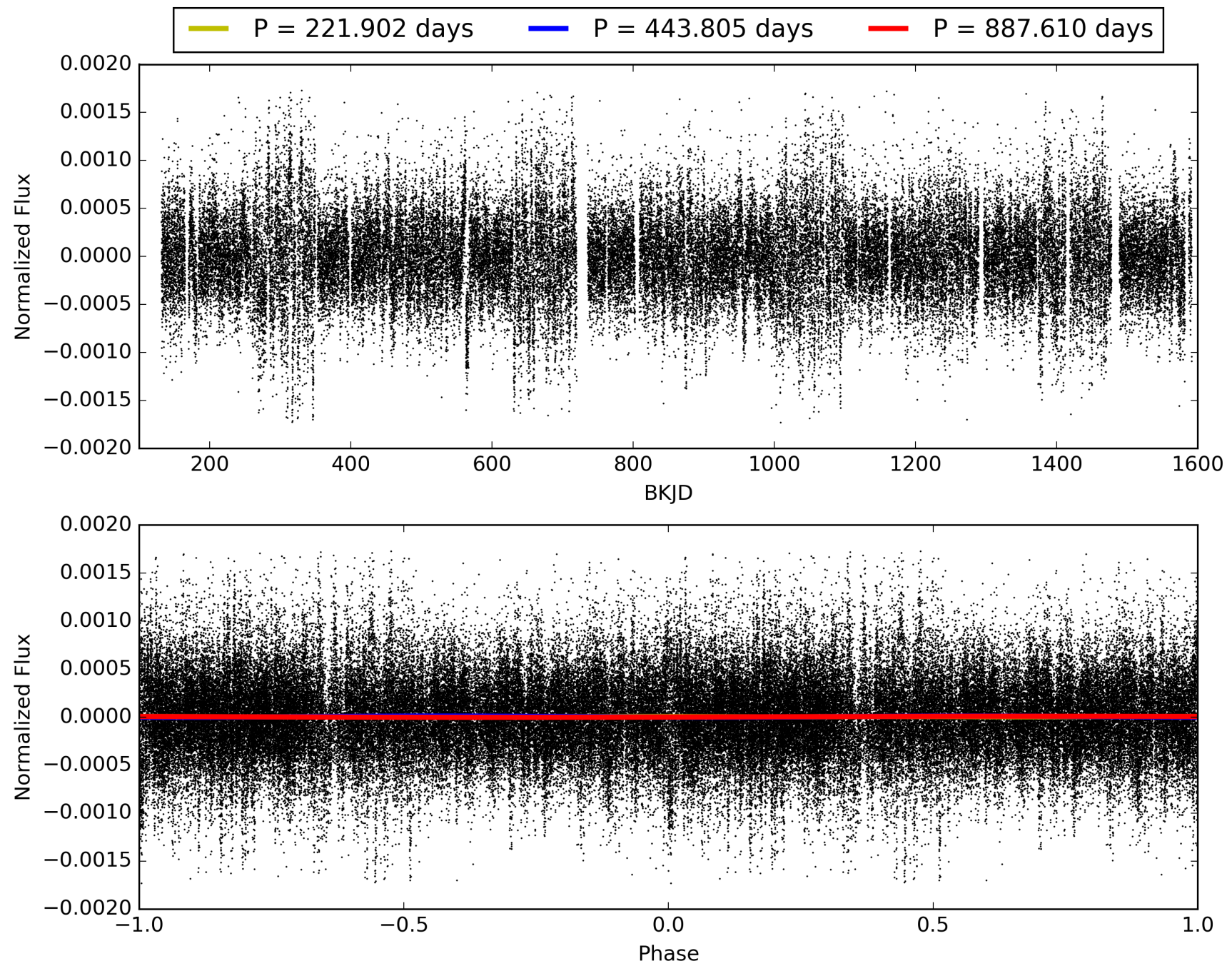
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:51:27 Z

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

TCE 006600407-01, PDC Light Curves

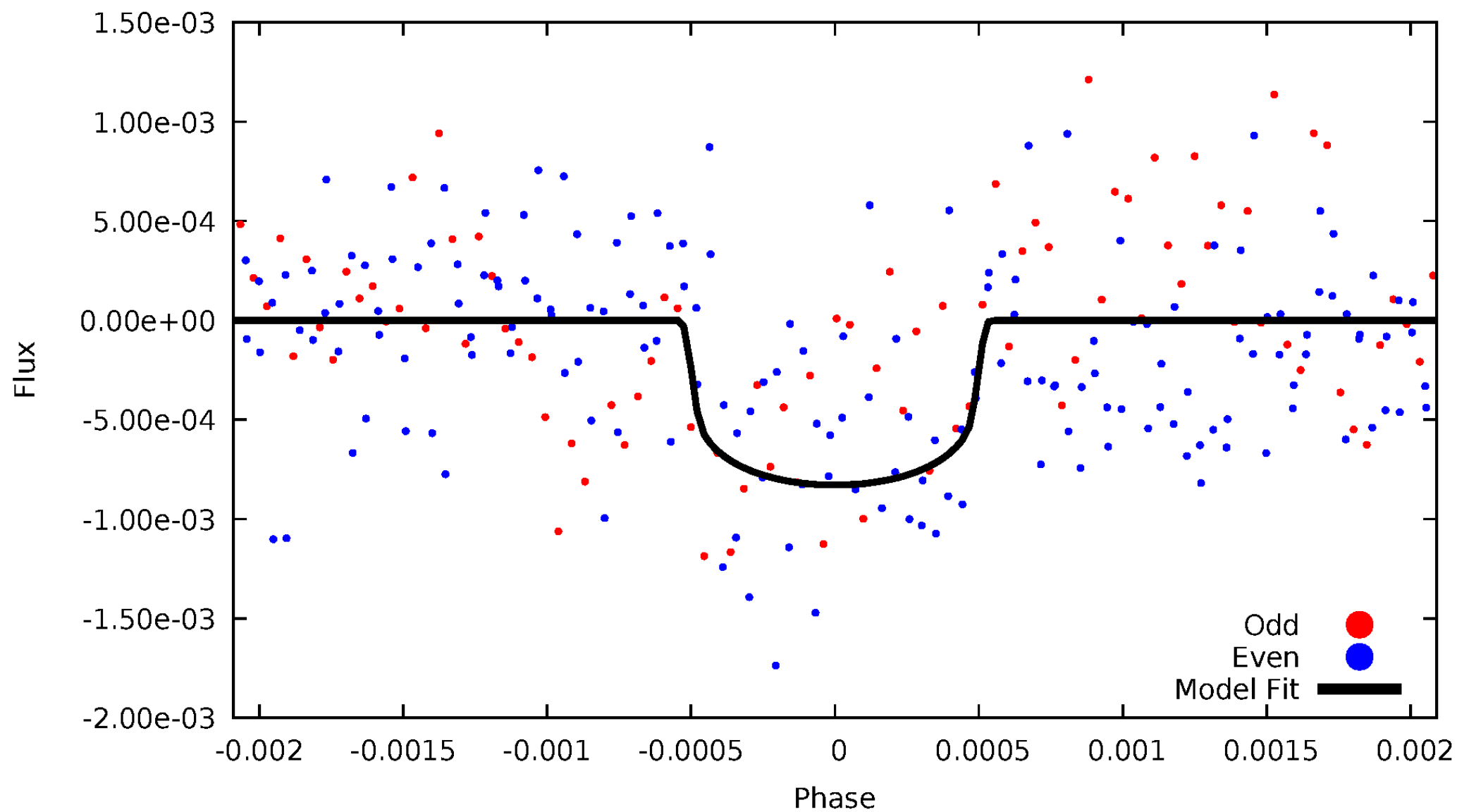


TCE 006600407-01



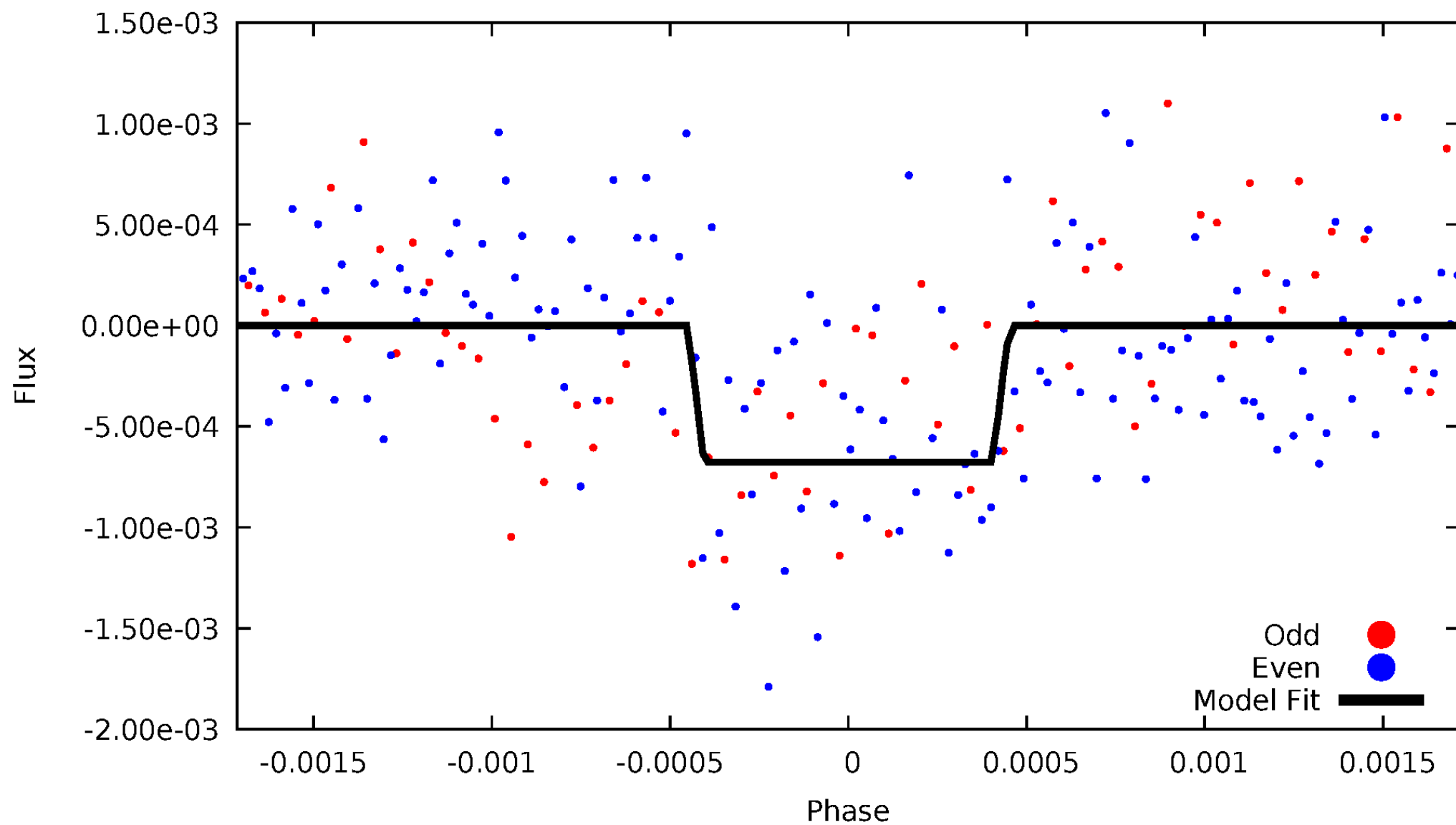
DV Odd/Even

TCE 006600407-01

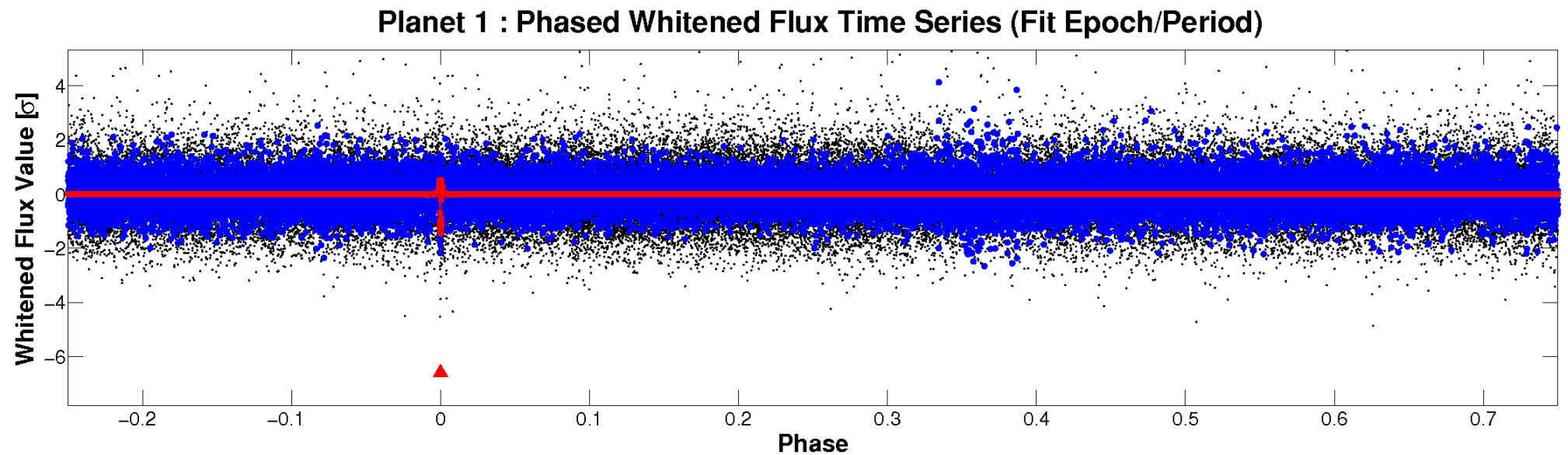
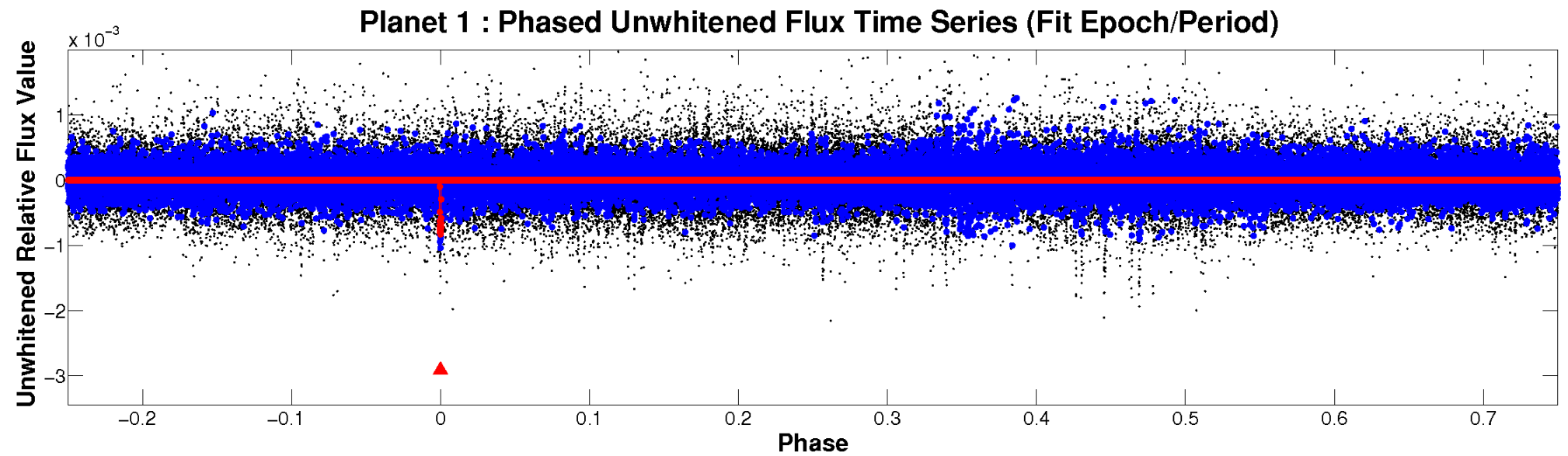


ALT Odd/Even

TCE 006600407-01

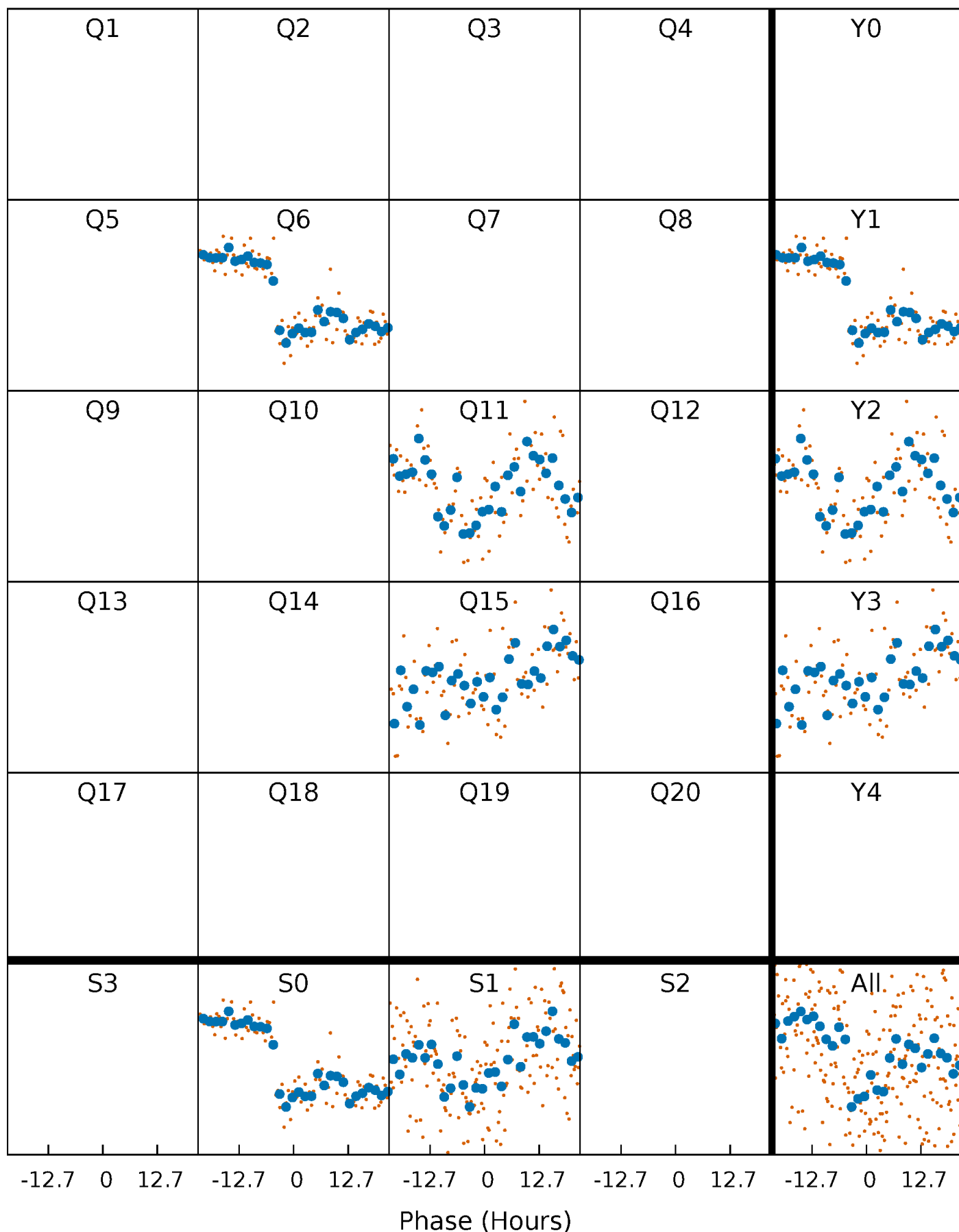


Non-Whitened Vs. Whitened Light Curve



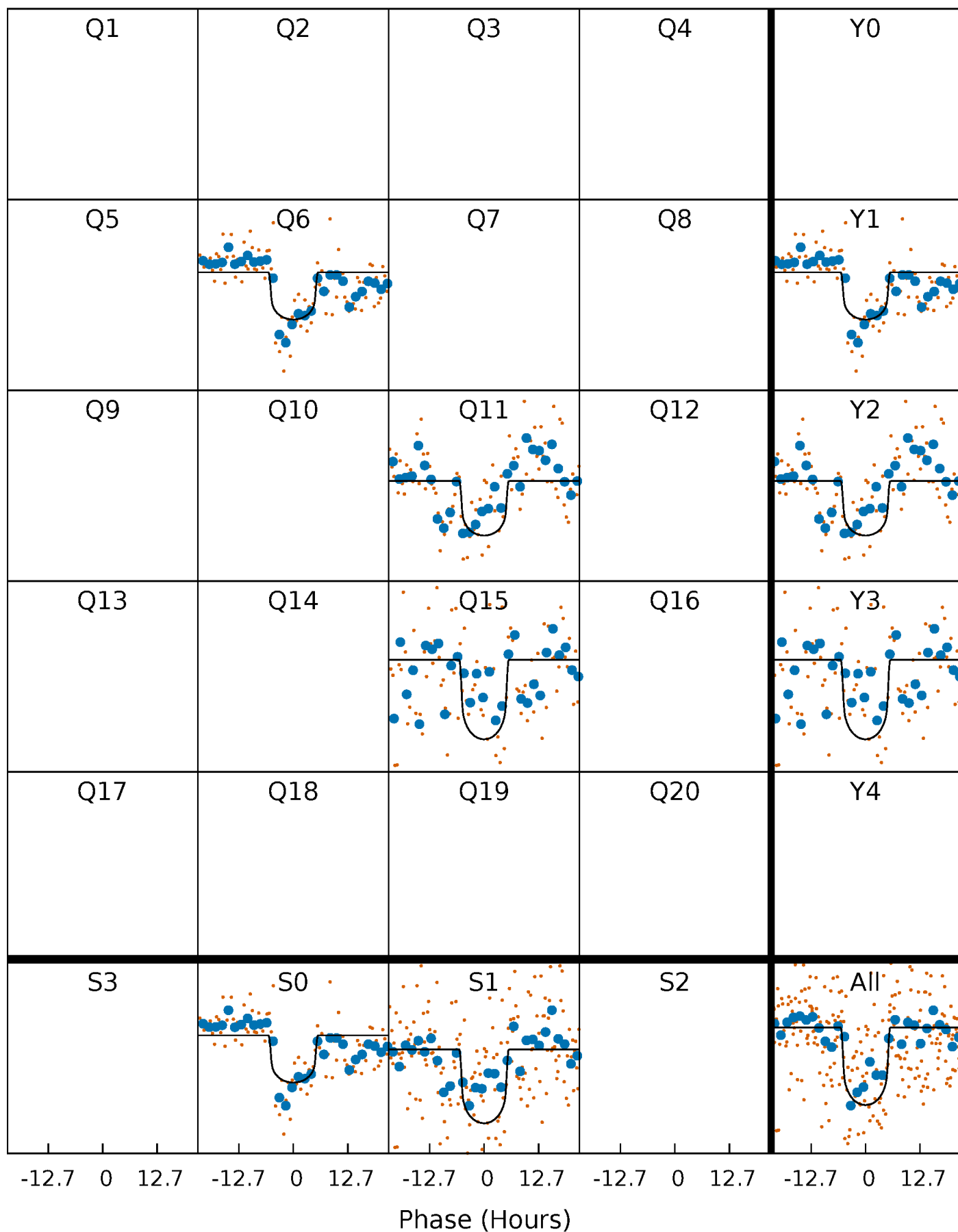
PDC Quarter-Phased Transit Curves

TCE 006600407-01 P=443.804767 Days $T_0=562.815729$ (BKJD)



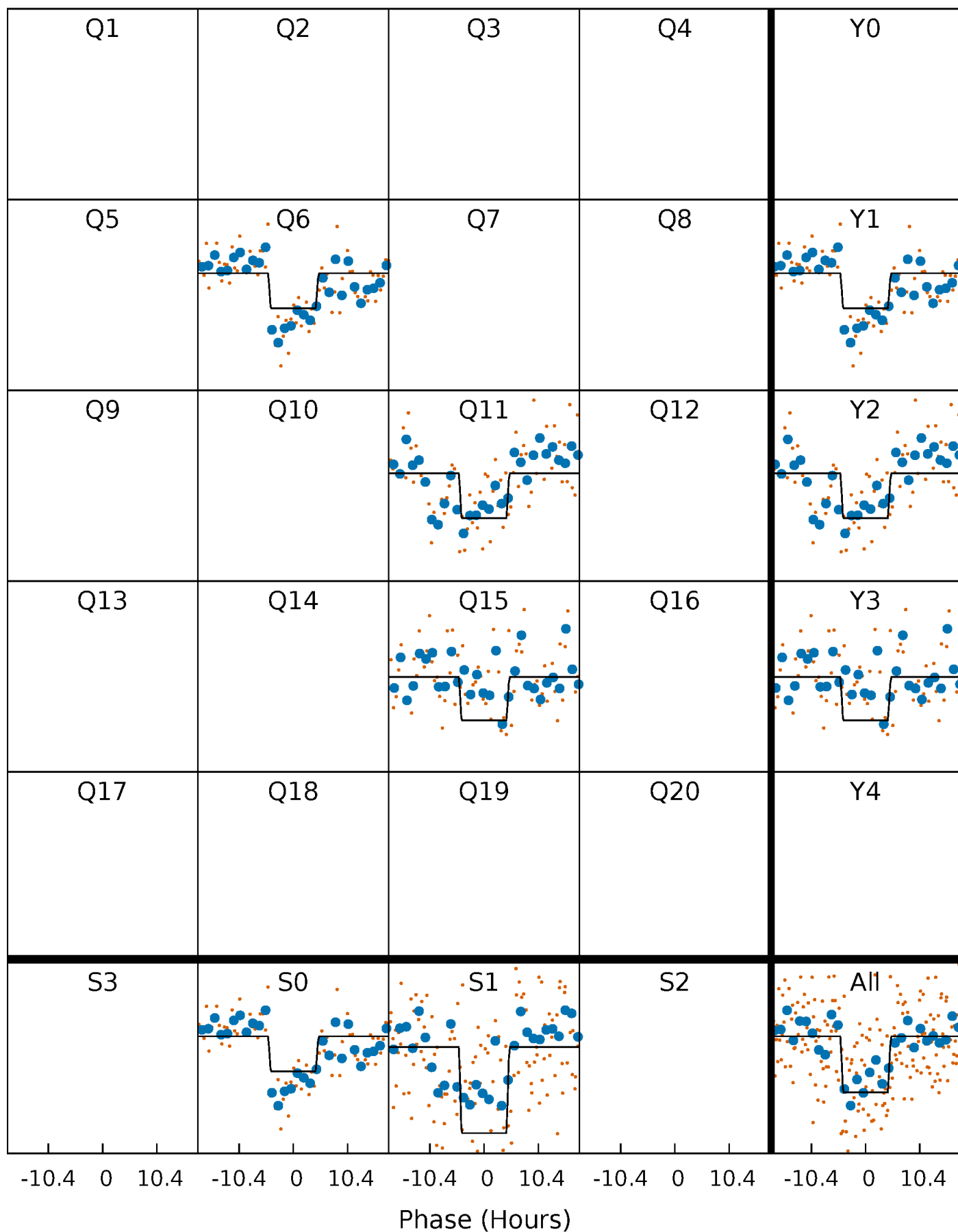
DV Quarter-Phased Transit Curves

TCE 006600407-01 P=443.804767 Days $T_0=562.815729$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

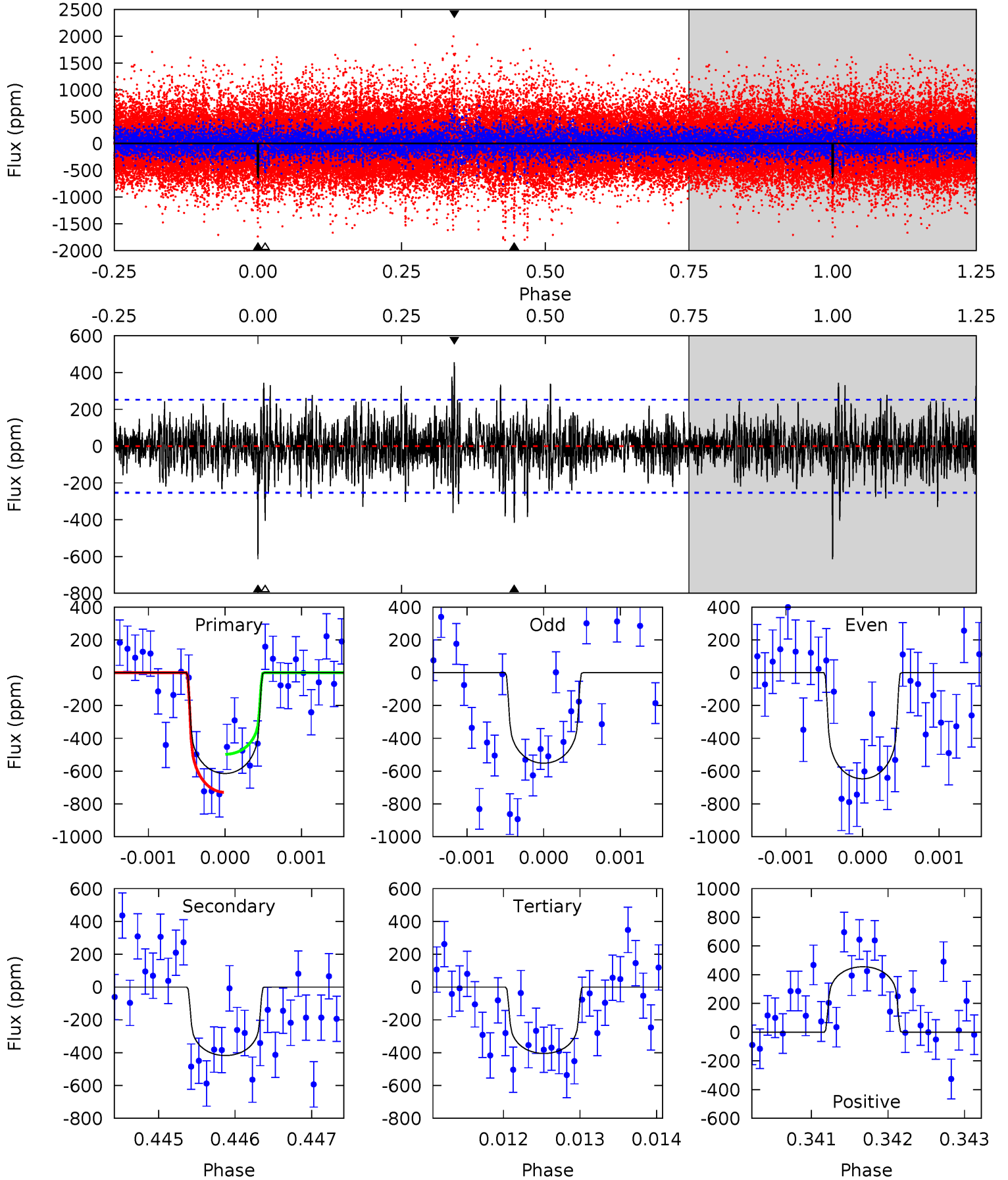
TCE 006600407-01 P=443.789678 Days $T_0=562.824078$ (BKJD)



DV Model-Shift Uniqueness Test

006600407-01, P = 443.804767 Days, E = 119.010962 Days

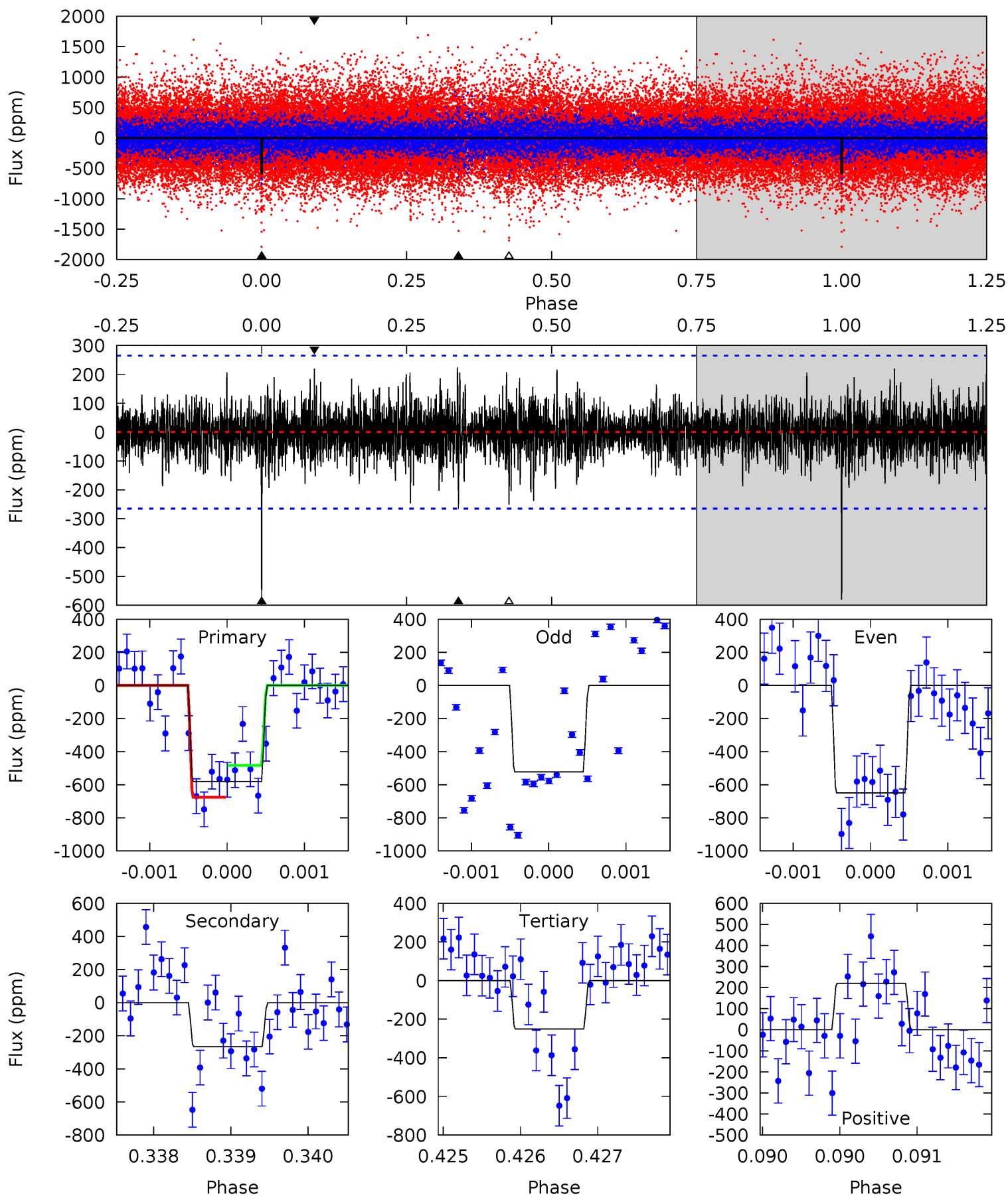
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	8.97	8.70	9.79	5.44	3.27	1.96	4.51	3.42	0.27	-0.82	0.96	1.11	0.43	2.50



Alt Model-Shift Uniqueness Test

006600407-01, P = 443.789678 Days, E = 119.034400 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	5.49	5.18	4.54	5.47	3.32	1.18	6.81	7.44	0.31	0.95	1.23	1.10	0.28	1.99



Stellar Parameters For KIC 006600407

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5880^{+157}_{-192}	$4.518^{+0.046}_{-0.184}$	$-0.060^{+0.250}_{-0.350}$	$0.917^{+0.243}_{-0.087}$	$1.010^{+0.113}_{-0.139}$	$1.844^{+0.432}_{-0.859}$
	+3%/-3%	+1%/-4%	+417%/-583%	+26%/-9%	+11%/-14%	+23%/-47%
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 006600407-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-418 ± 47	$2.77^{+1.32}_{-1.11}$	331^{+22}_{-15}	5175^{+1454}_{-702}	37301^{+64987}_{-19520}
Alt.	-266 ± 48	$2.70^{+1.29}_{-1.14}$	331^{+20}_{-15}	4751^{+1302}_{-659}	25574^{+49909}_{-14467}

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

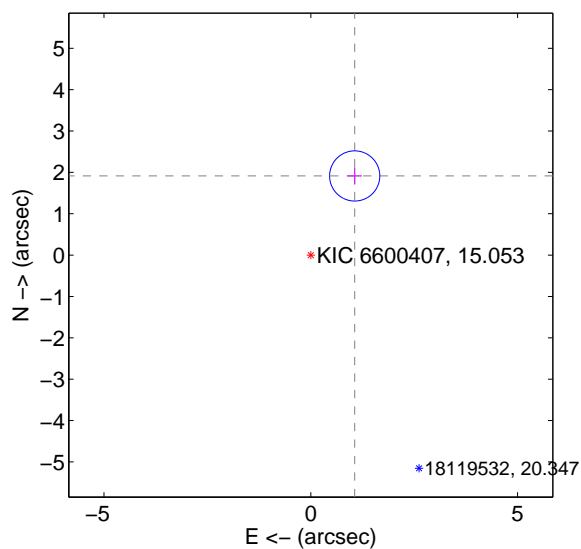
Supplemental centroid analysis for 006600407-01. Kepler magnitude: 15.05. Transit SNR 10.16

There are 1 quarters with good PRF difference image offsets

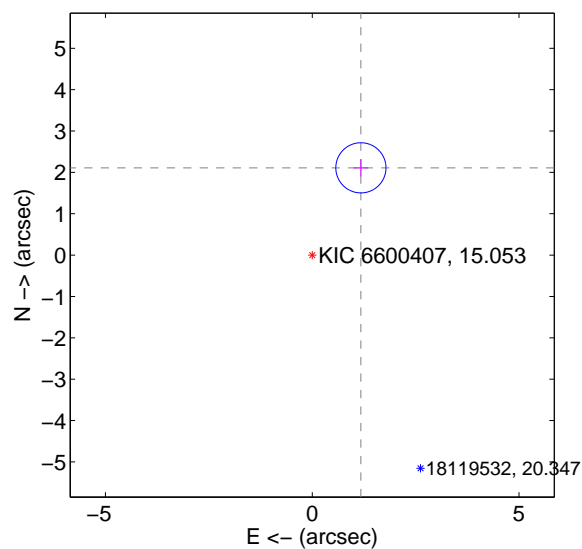
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.188 ± 0.202	10.82	-1.062 ± 0.176	1.914 ± 0.210
PRF-fit source offset from KIC position	2.416 ± 0.202	11.95	-1.177 ± 0.176	2.110 ± 0.210
photometric centroid source offset	1.20 ± 1.23	0.98	-1.18 ± 1.23	-0.20 ± 1.24

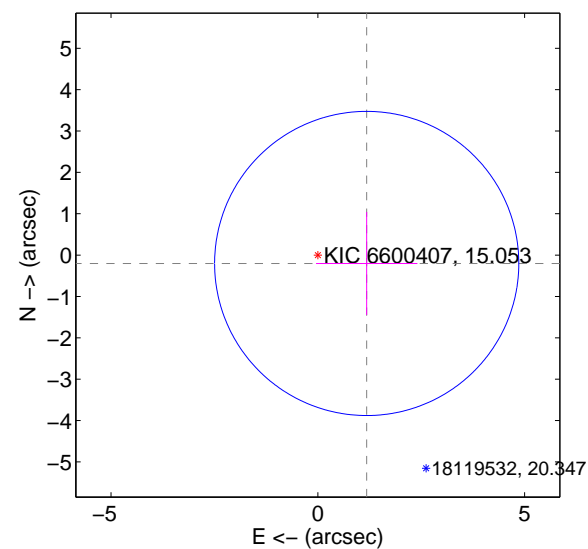
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

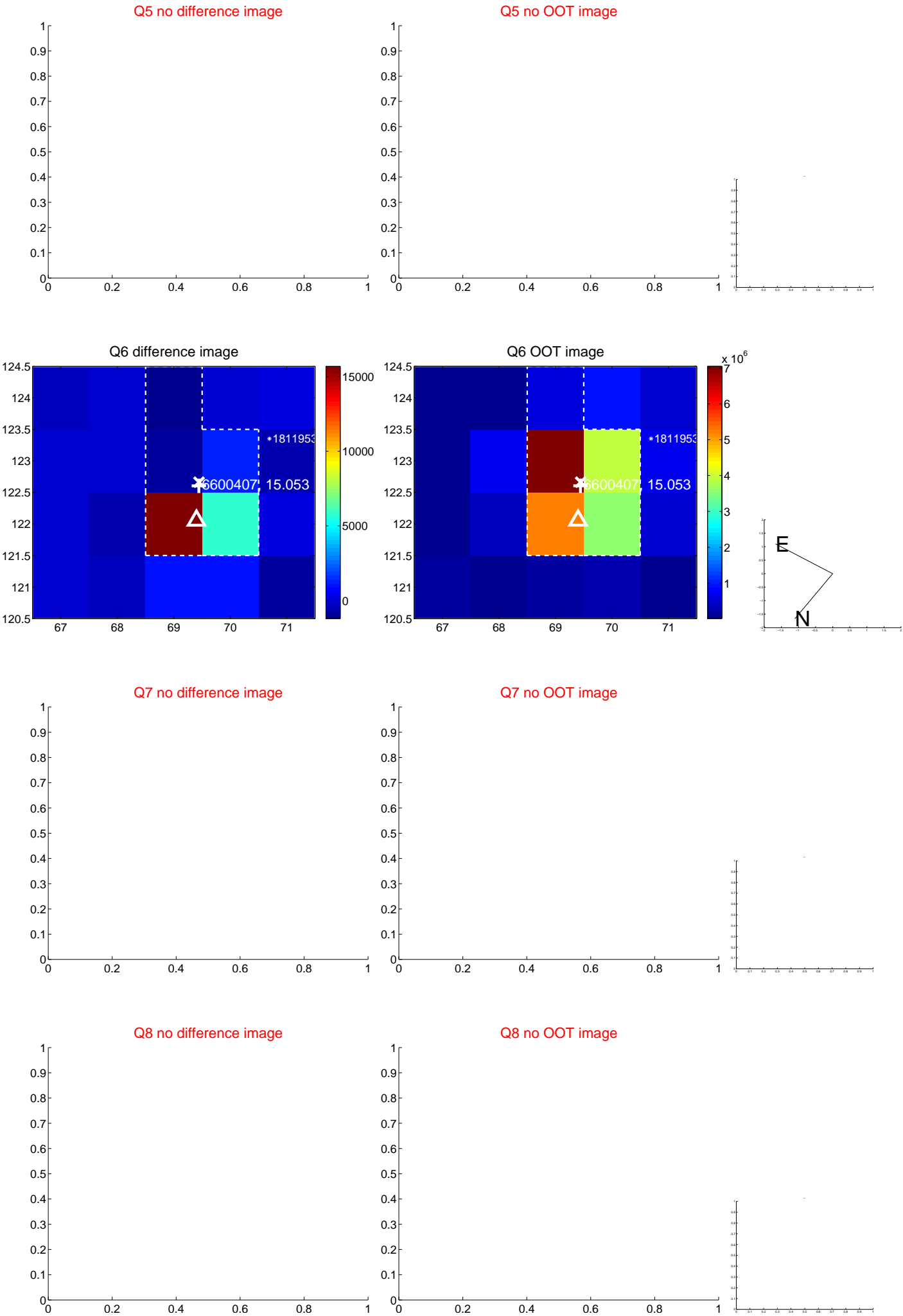


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

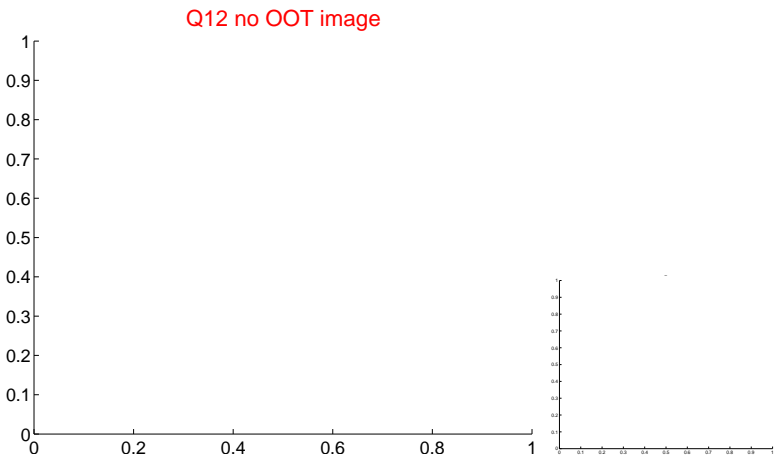
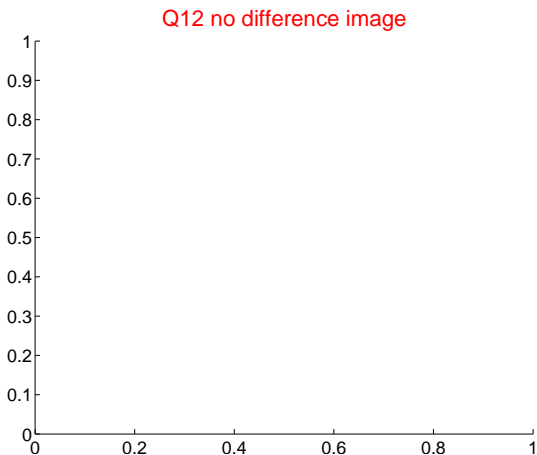
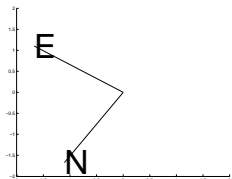
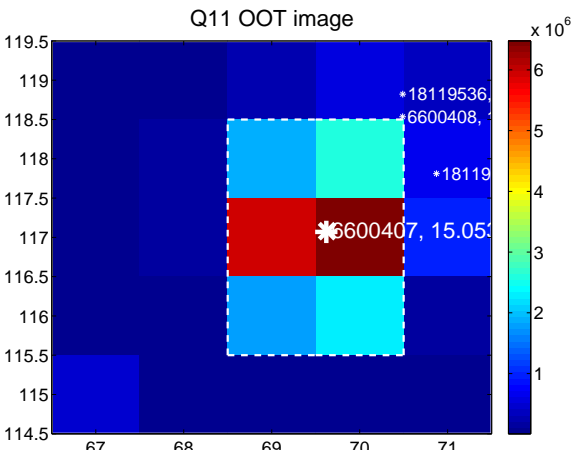
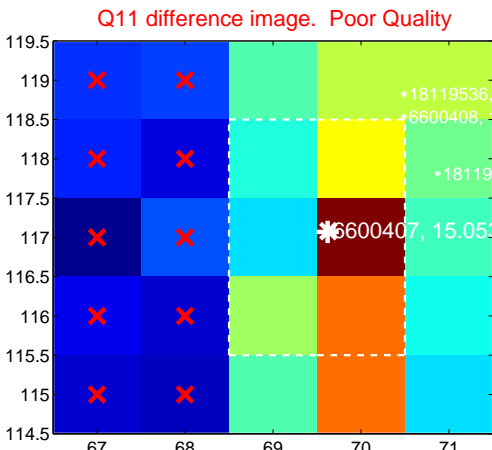
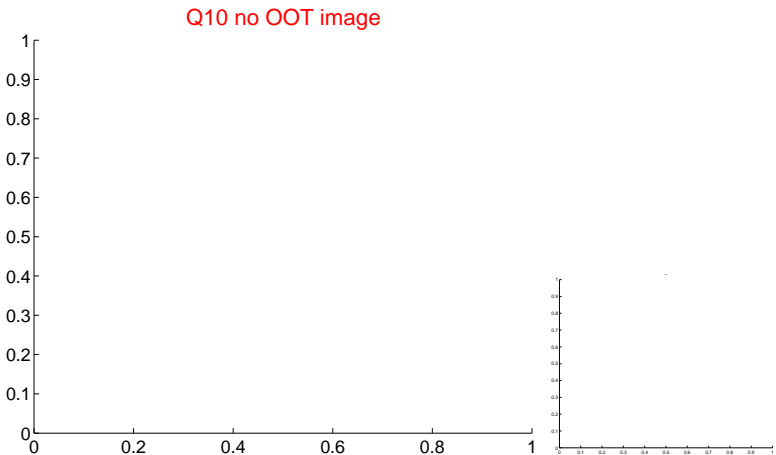
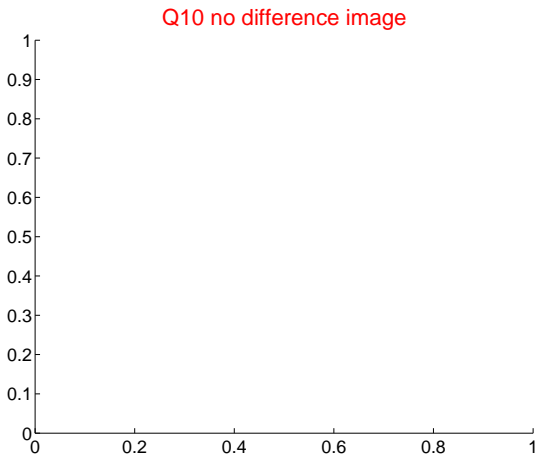
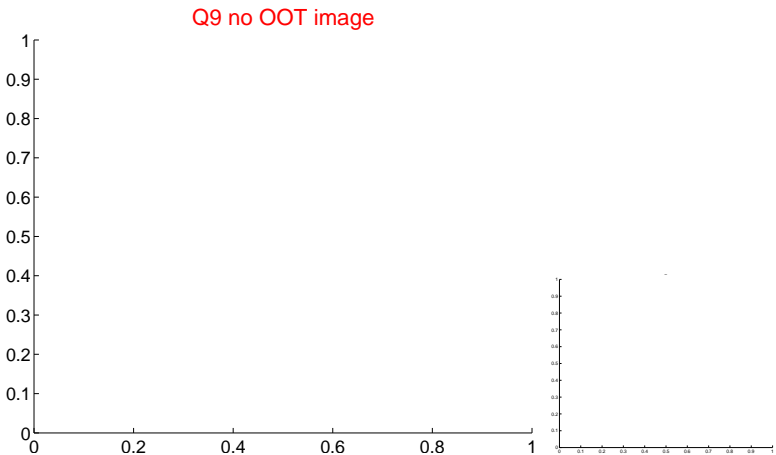
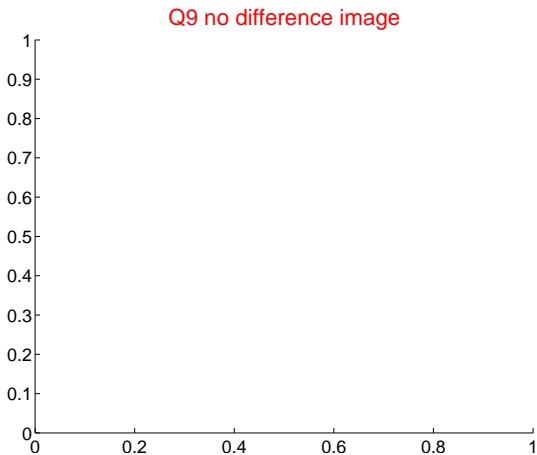
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



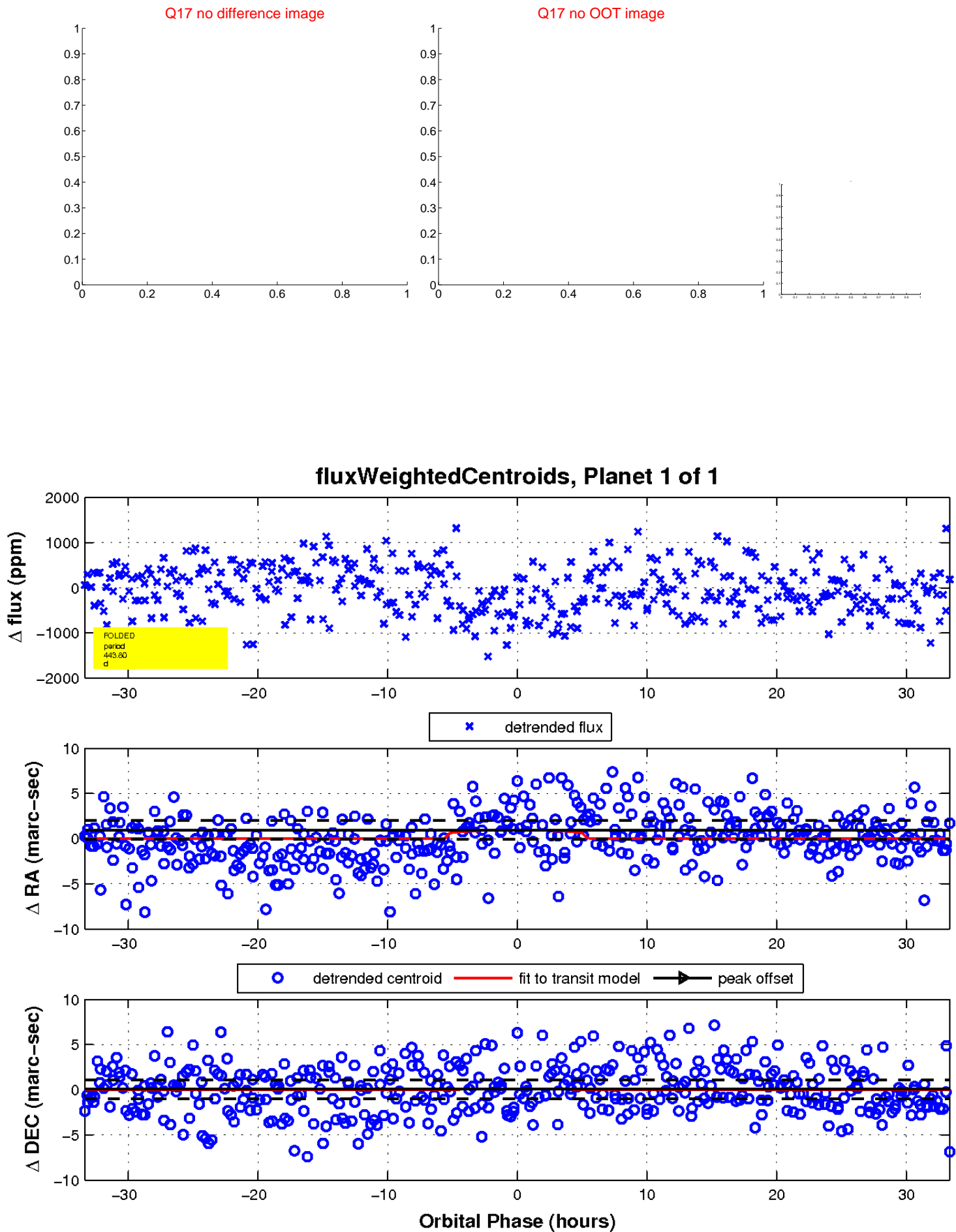
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

