

KIC 006606167

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})
006606167-01	OBS	No	398.987150	486.030351	1317.3	1.768	11.6	6.3	0.73	4895	2.91	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006606167-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—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.

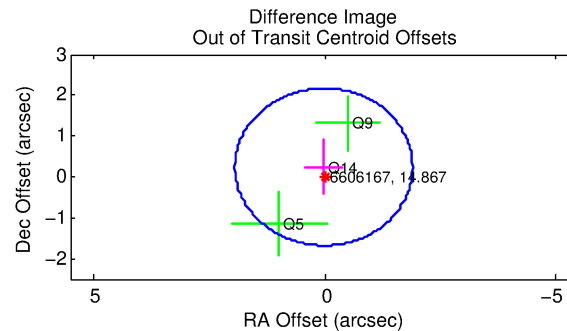
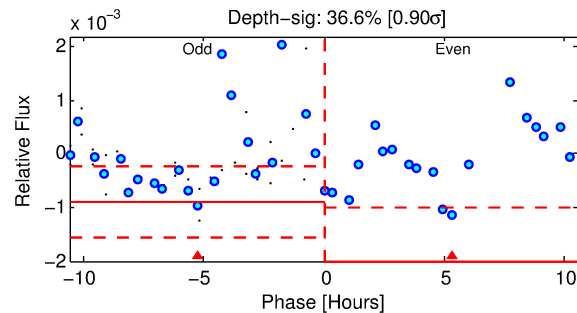
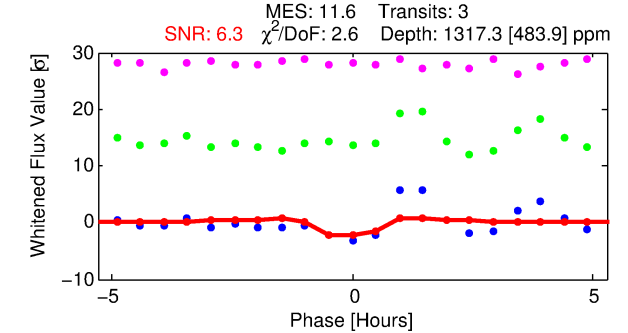
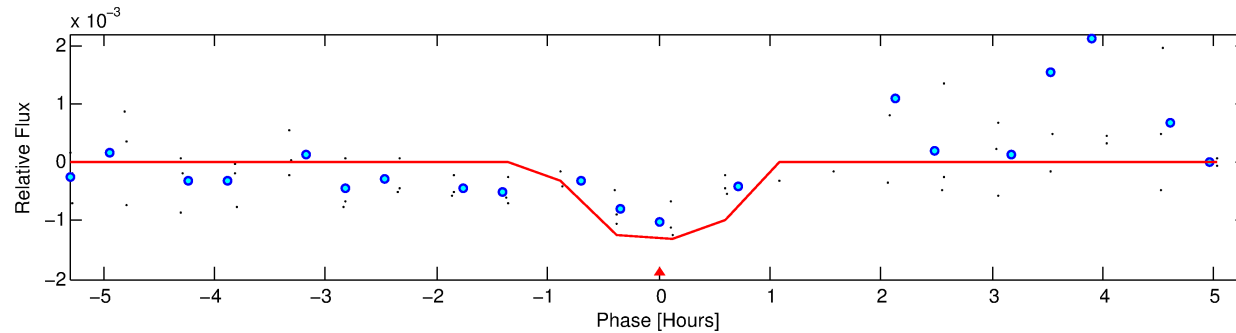
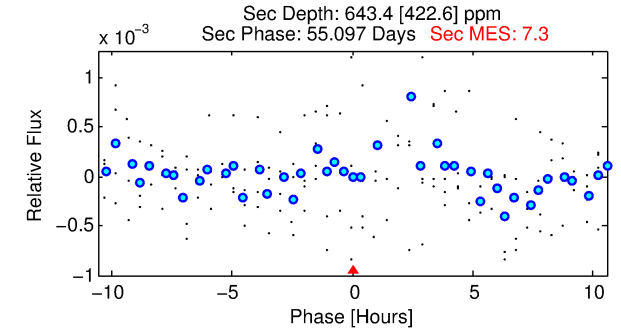
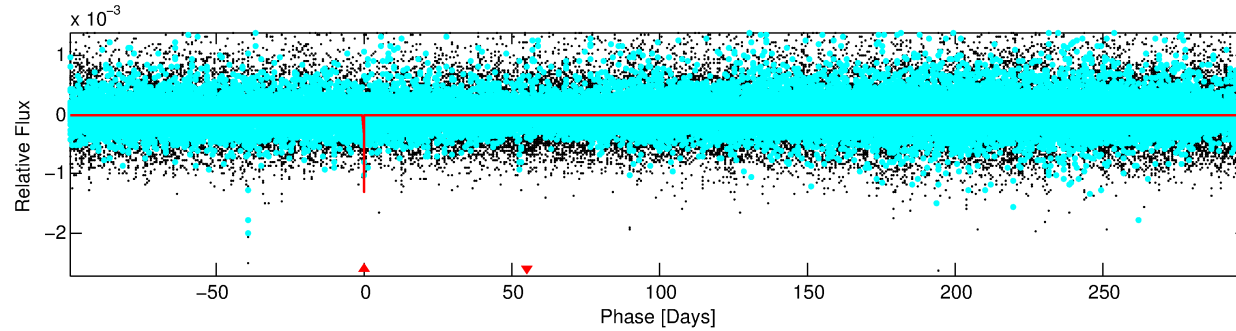
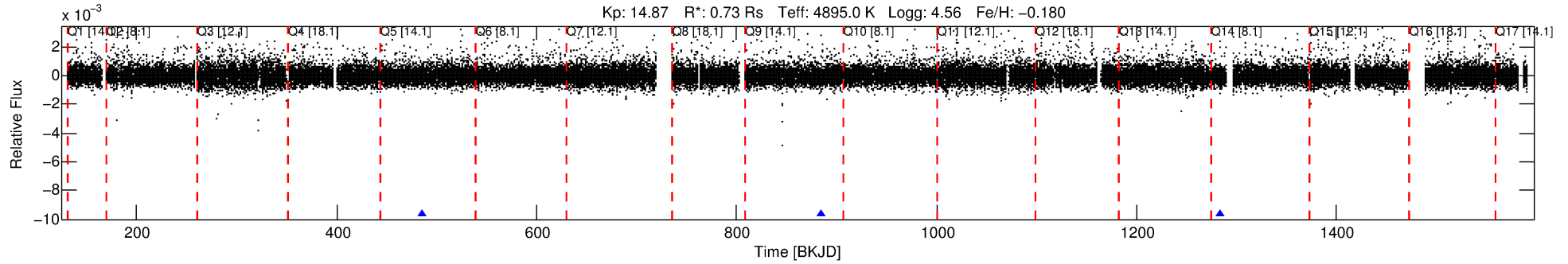
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006606167-01

No Significant Match Found

DV One-Page Summary

KIC: 6606167 Candidate: 1 of 1 Period: 398.987 d



DV Fit Results:

Period = 398.98715 [0.00881] d
Epoch = 486.0304 [0.0123] BKJD
Rp/R* = 0.0366 [0.1464]
a/R* = 1227.40 [16553.10]
b = 0.75 [8.02]
Seff = 0.31 [0.05]
Teq = 190 [8] K
Rp = 2.91 [11.65] Re
a = 0.9444 [0.0832] AU
Ag = 37327.72 [300032.76] [0.12 σ]
Teffp = 4077 [8193] K [0.47 σ]

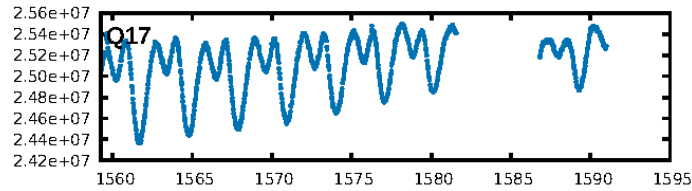
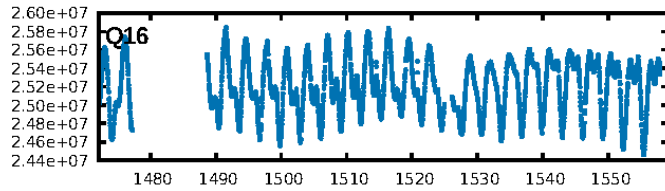
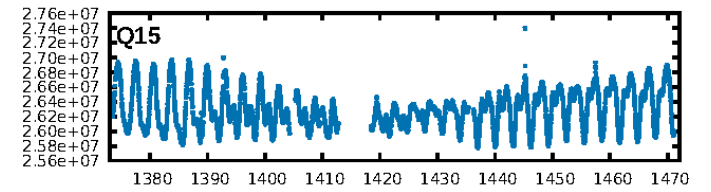
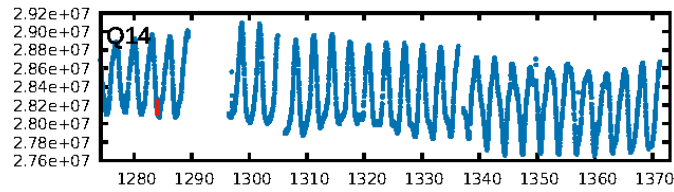
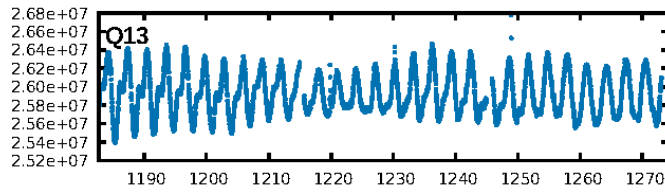
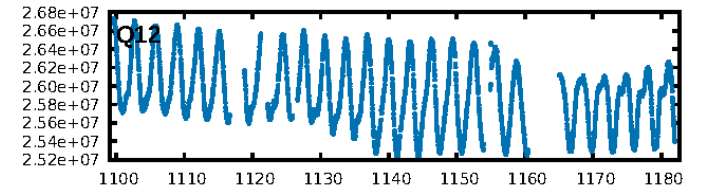
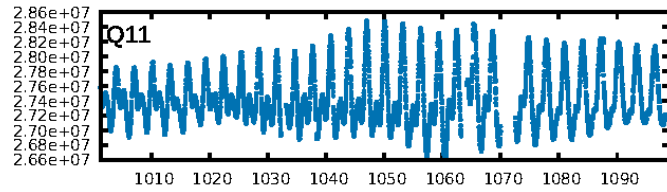
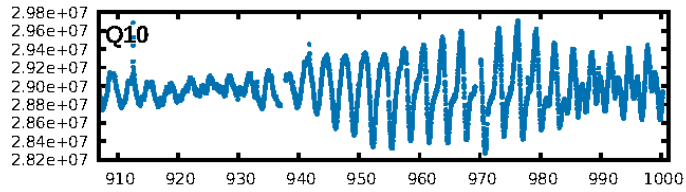
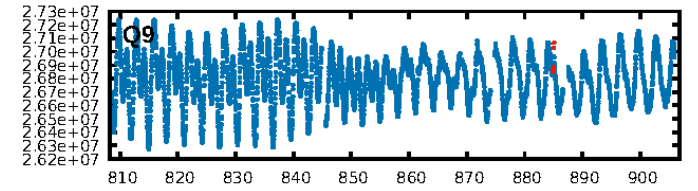
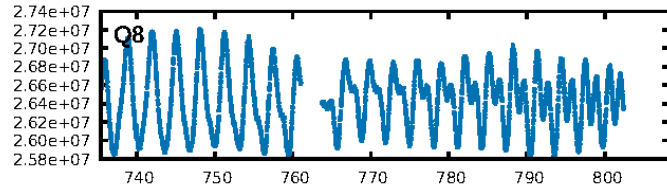
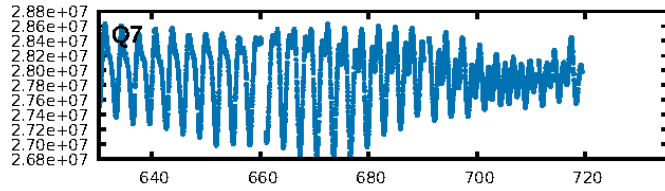
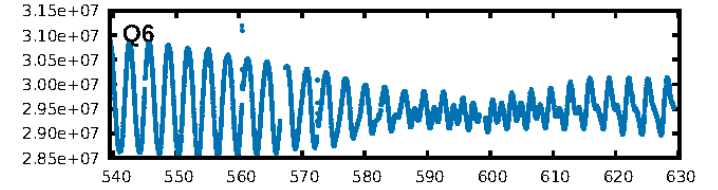
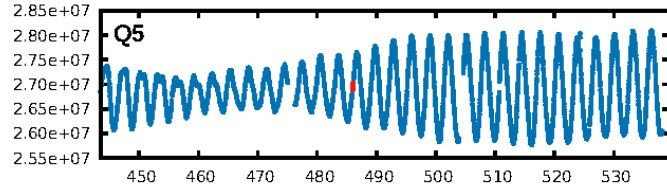
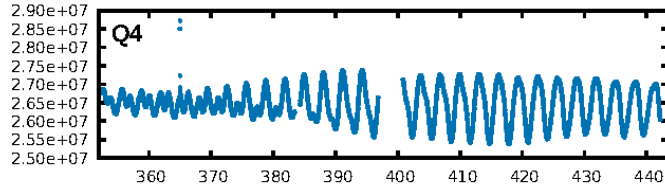
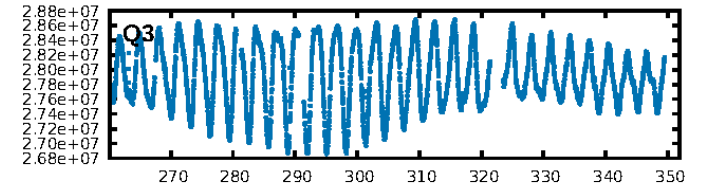
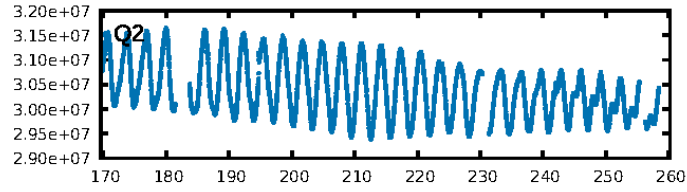
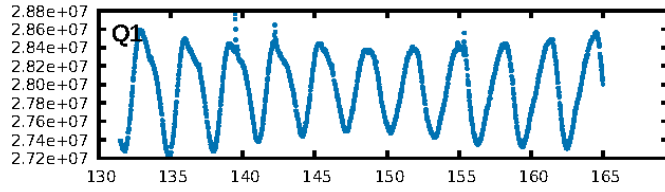
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 28.0%
Bootstrap-pfa: 6.81e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -5.47
Centroid-sig: 12.4%
Centroid-so: 1.015 arcsec [0.80 σ]
OotOffset-rm: 0.243 arcsec [0.38 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 0.107 arcsec [0.12 σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

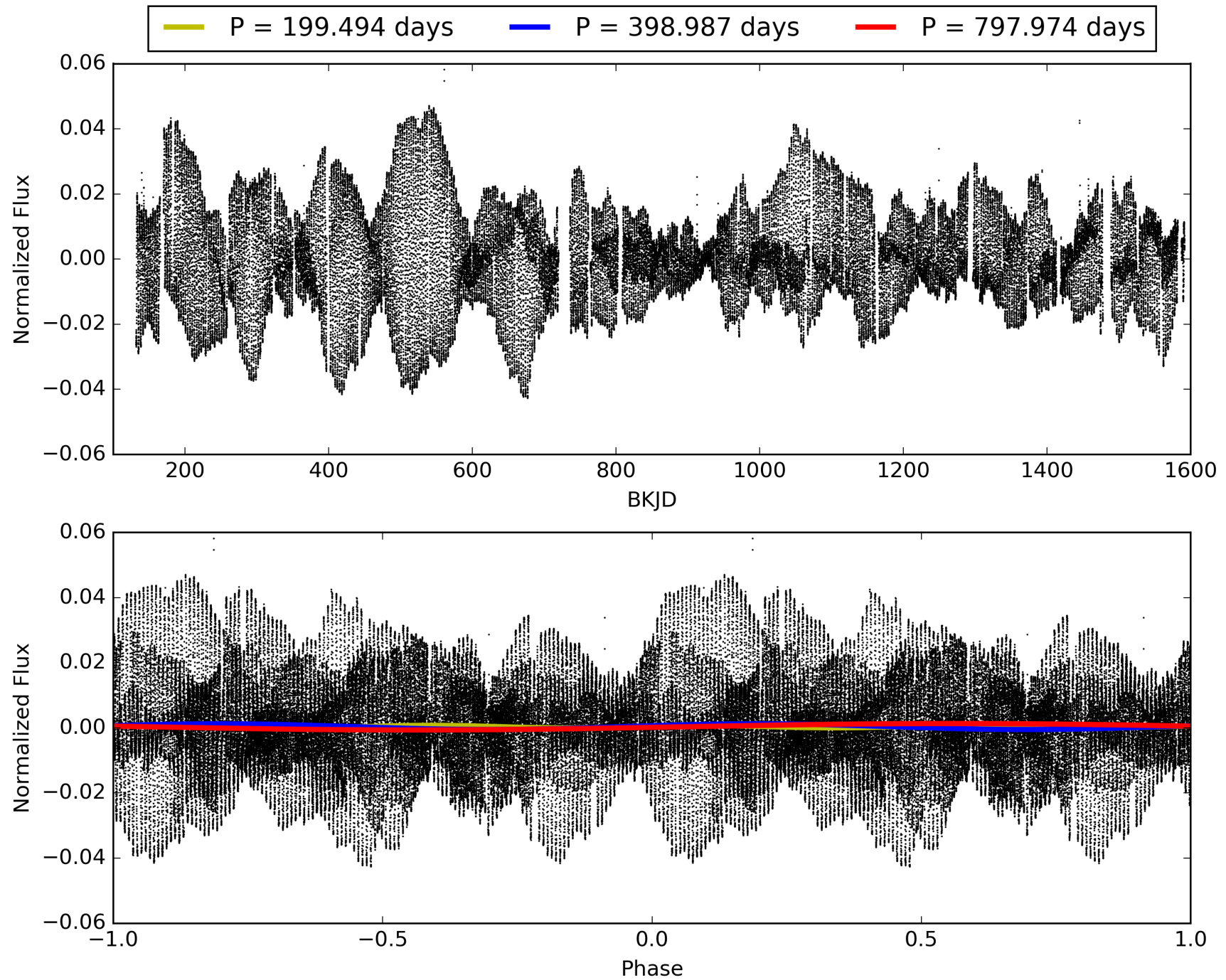
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:12:31 Z

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

TCE 006606167-01, PDC Light Curves

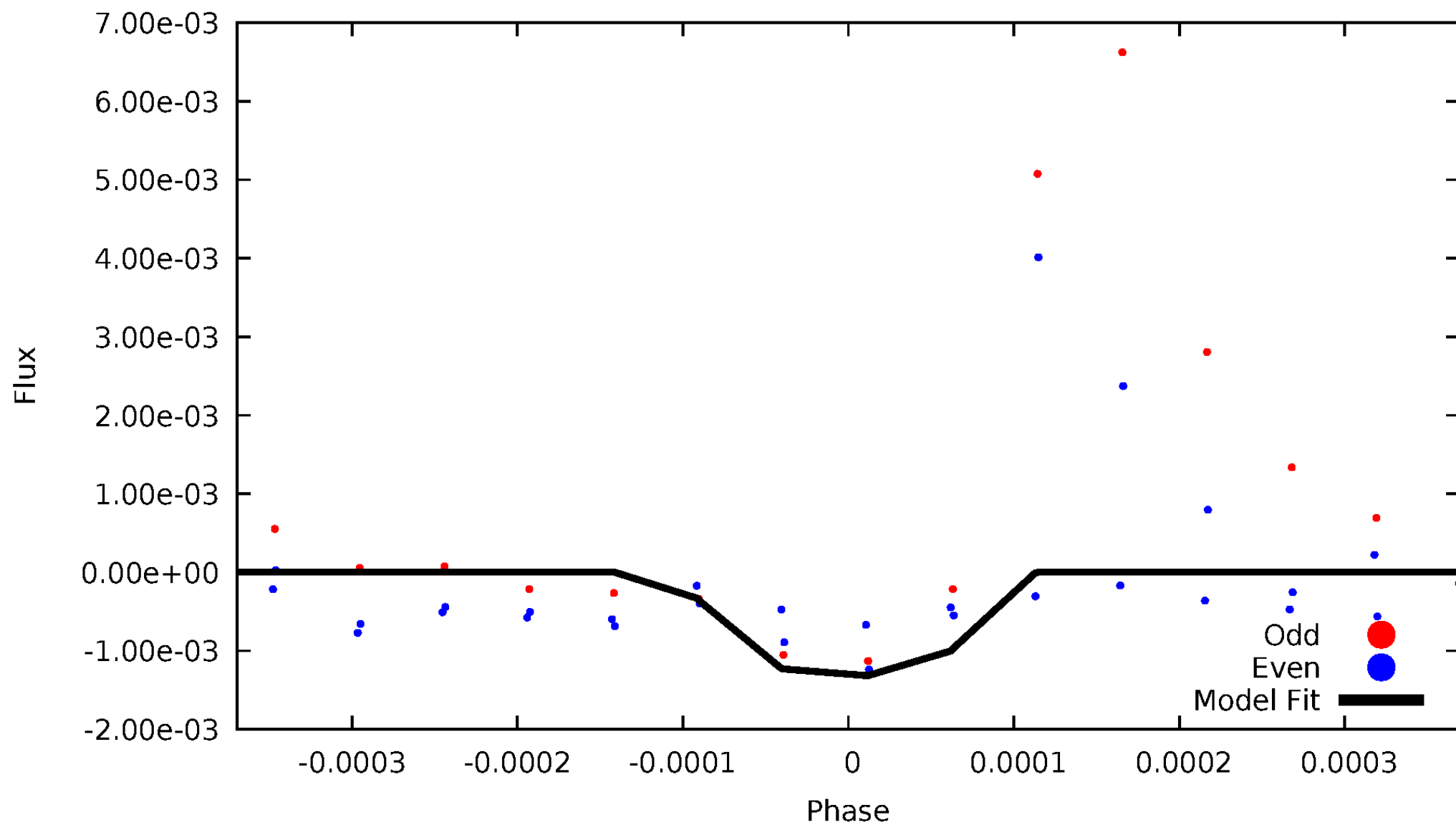


TCE 006606167-01



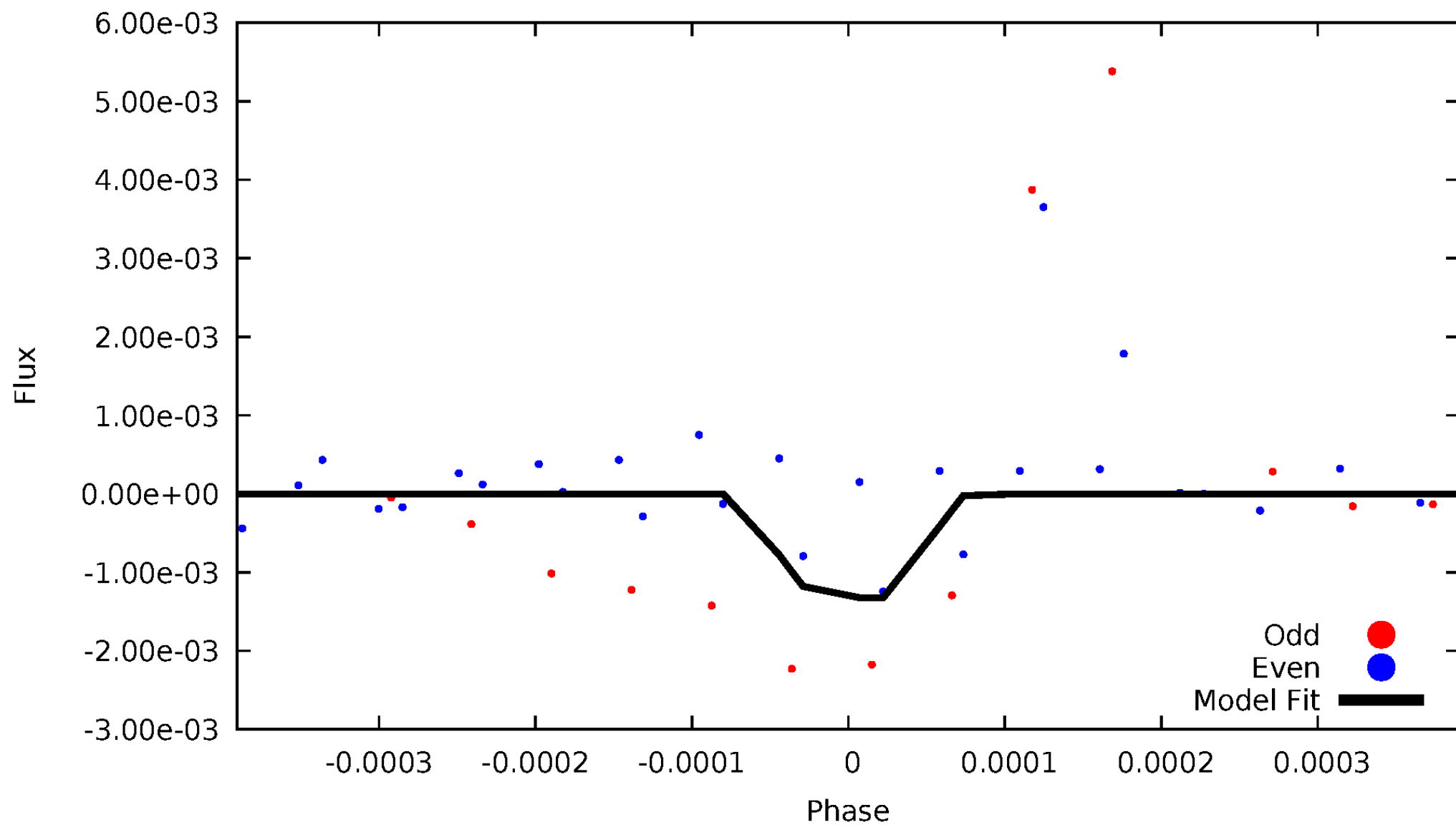
DV Odd/Even

TCE 006606167-01



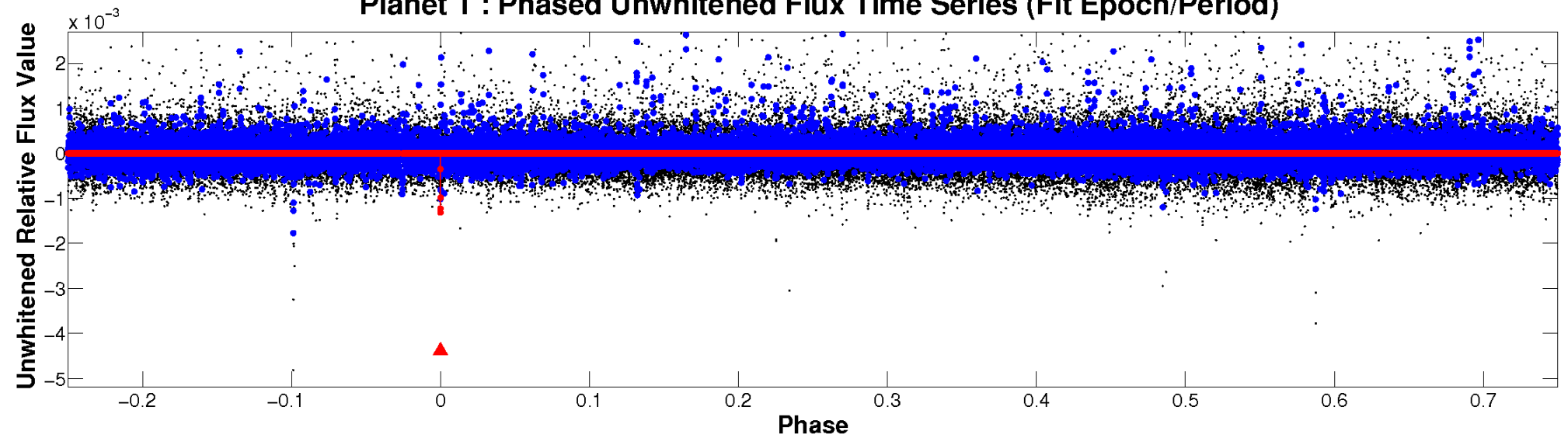
ALT Odd/Even

TCE 006606167-01

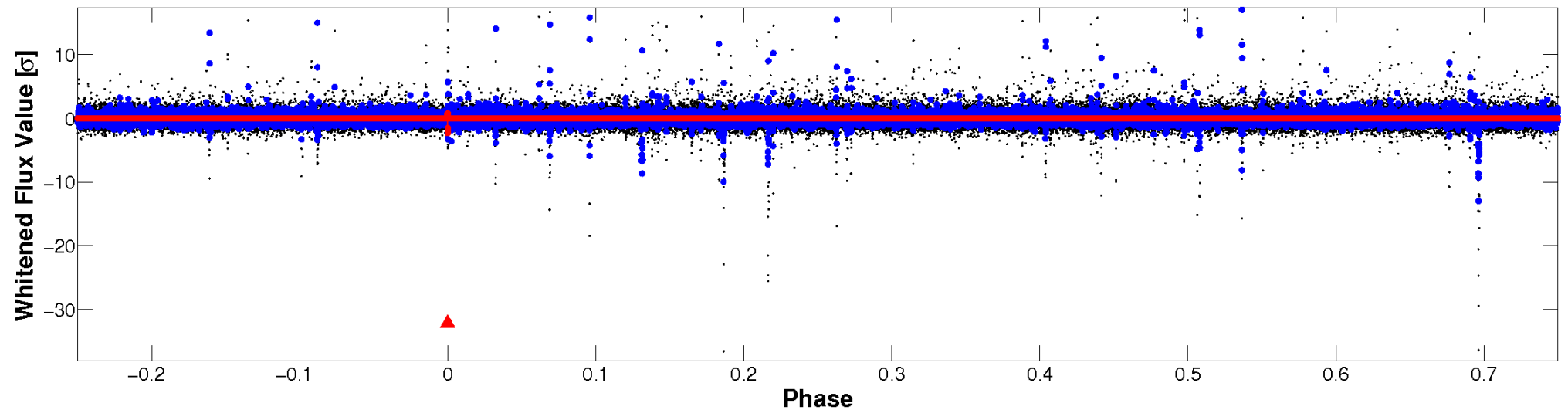


Non-Whitened Vs. Whitened Light Curve

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

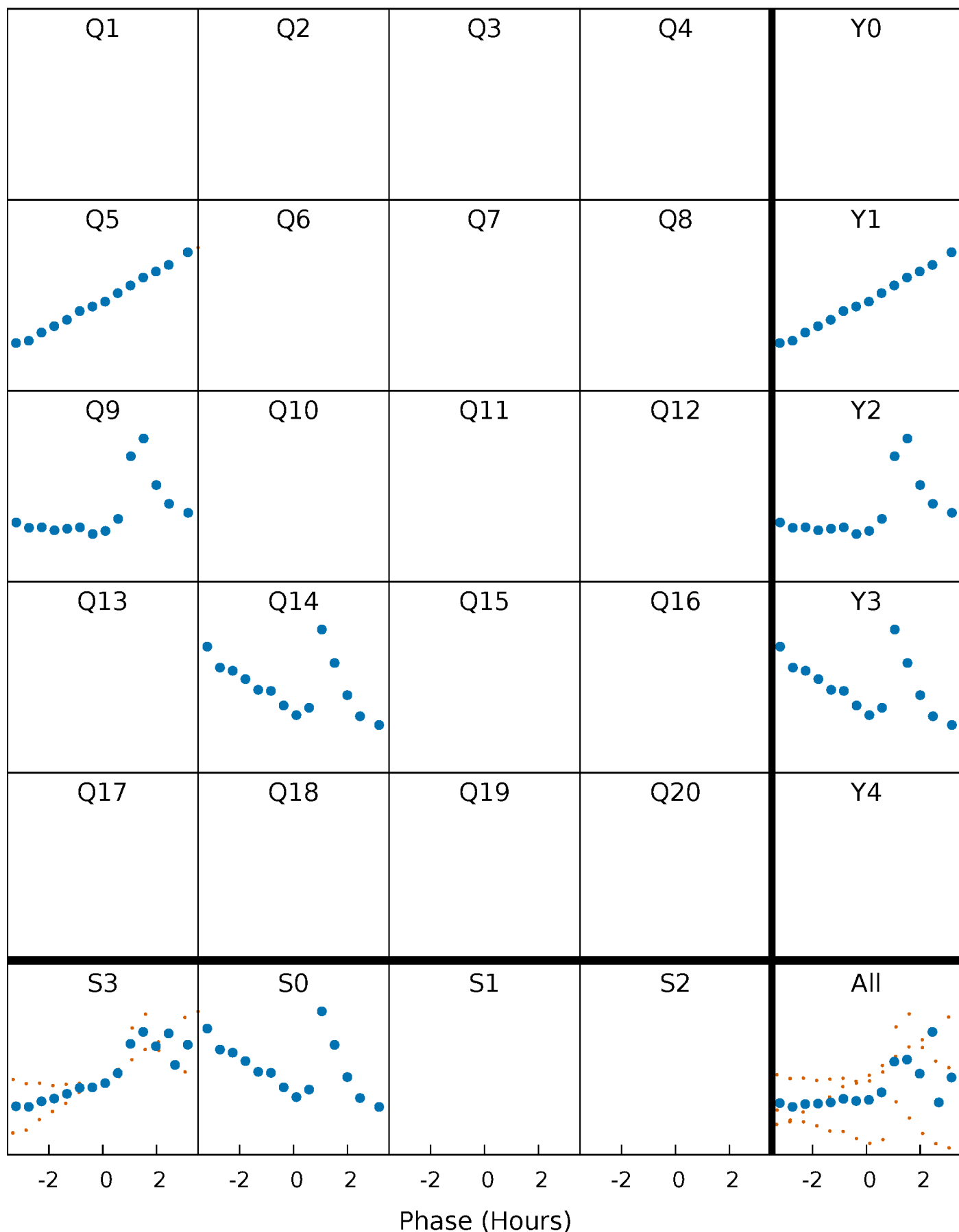


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



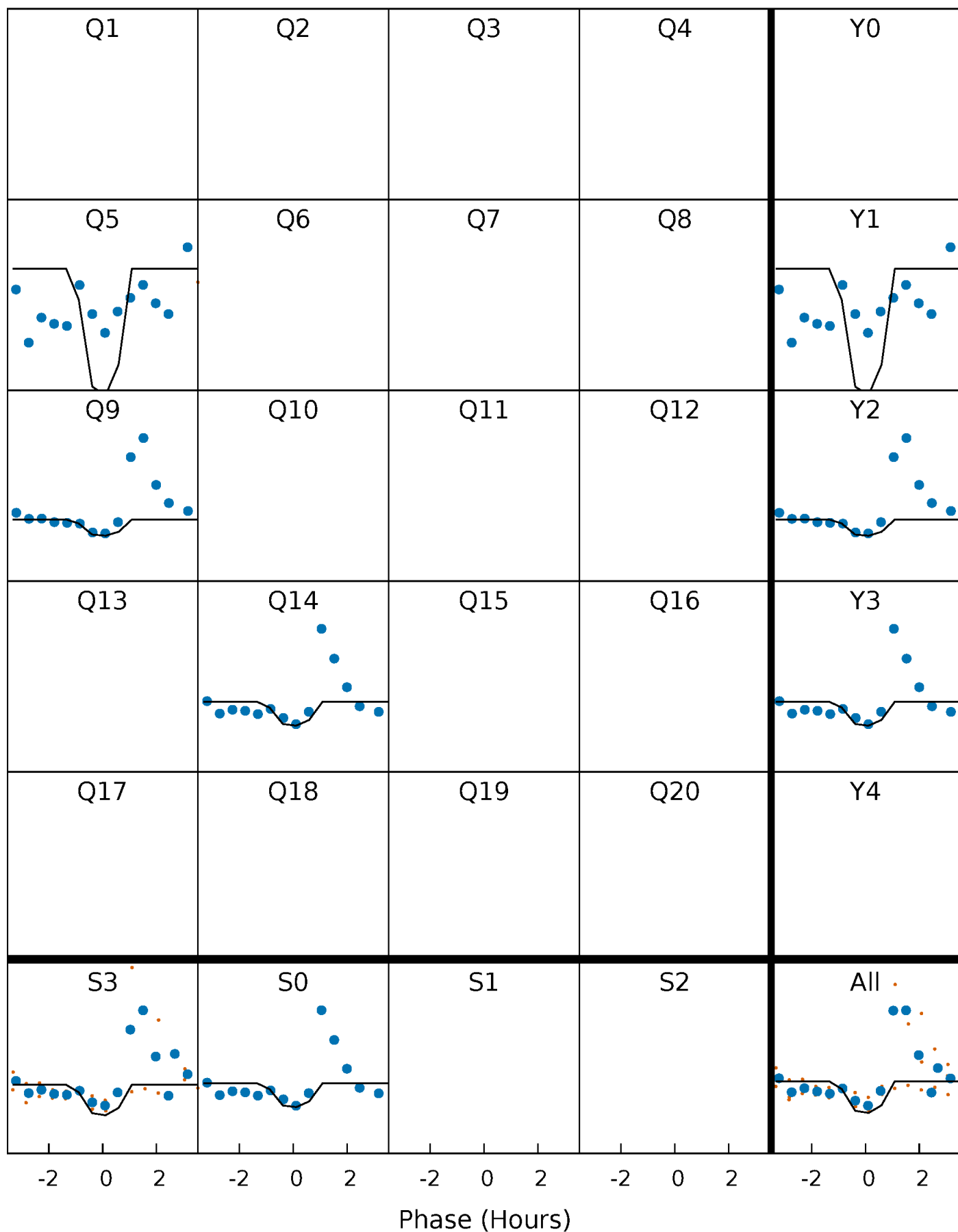
PDC Quarter-Phased Transit Curves

TCE 006606167-01 P=398.987150 Days $T_0=486.030351$ (BKJD)



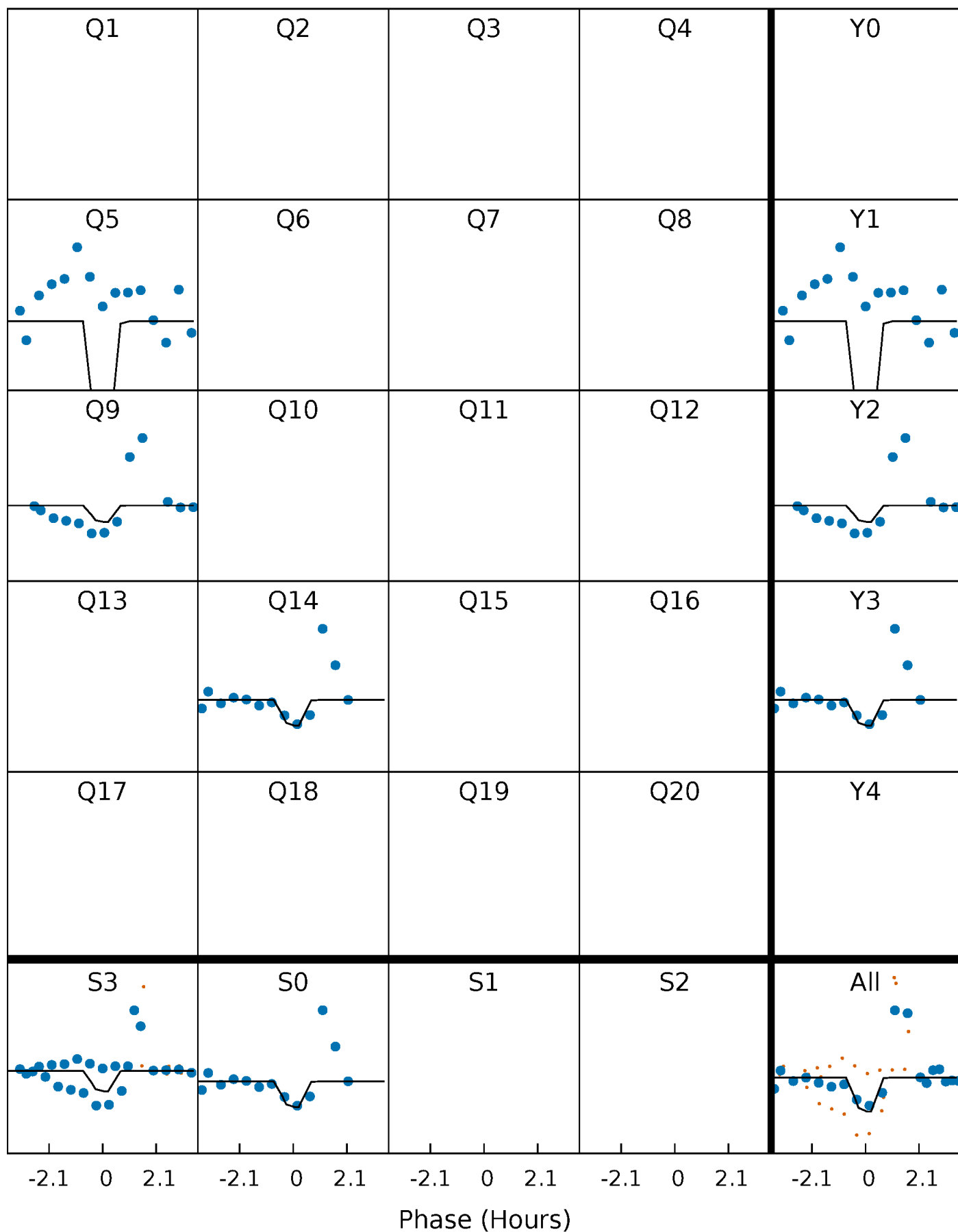
DV Quarter-Phased Transit Curves

TCE 006606167-01 P=398.987150 Days $T_0=486.030351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

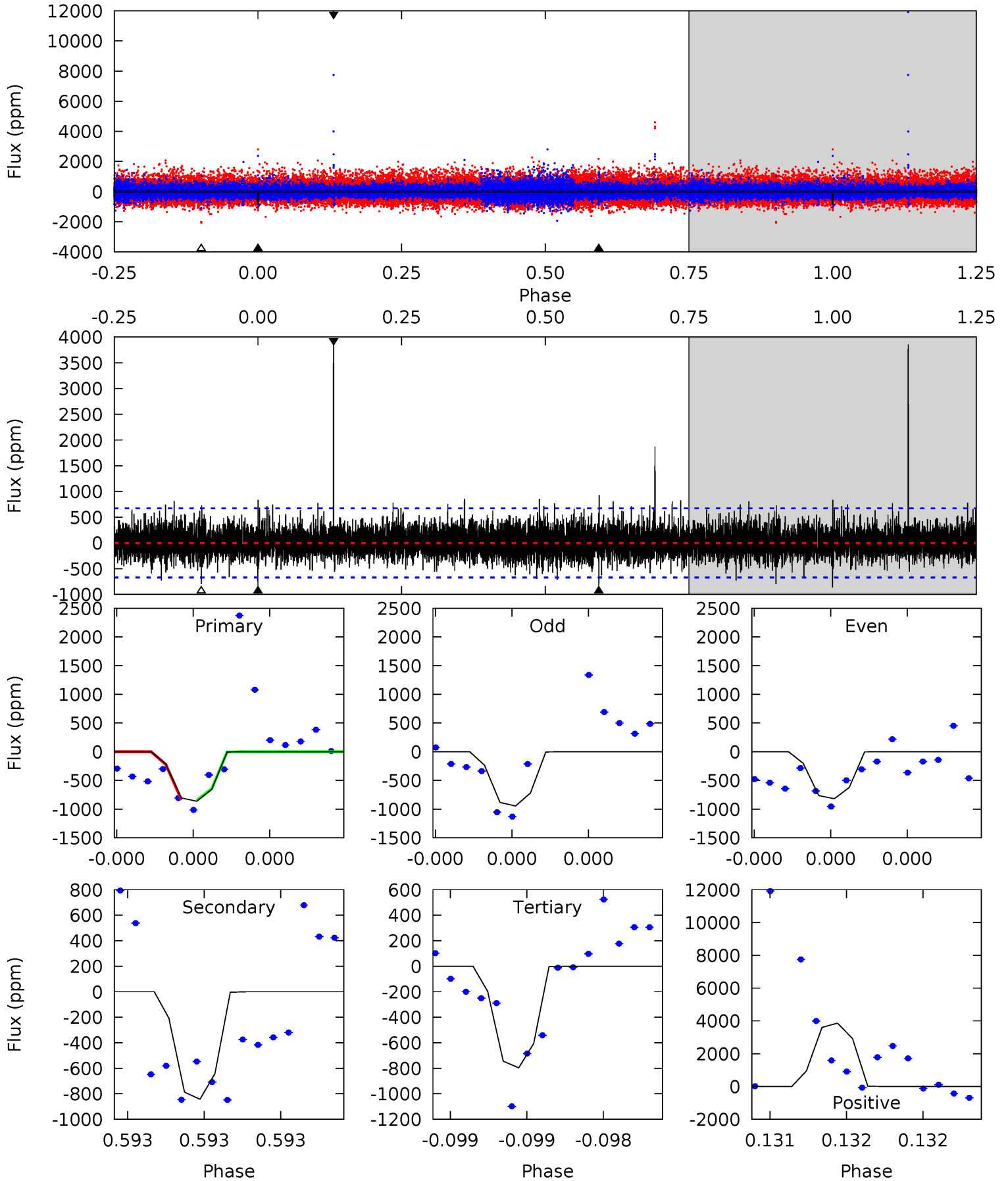
TCE 006606167-01 P=398.984445 Days $T_0=486.031817$ (BKJD)



DV Model-Shift Uniqueness Test

006606167-01, P = 398.987150 Days, E = 87.043201 Days

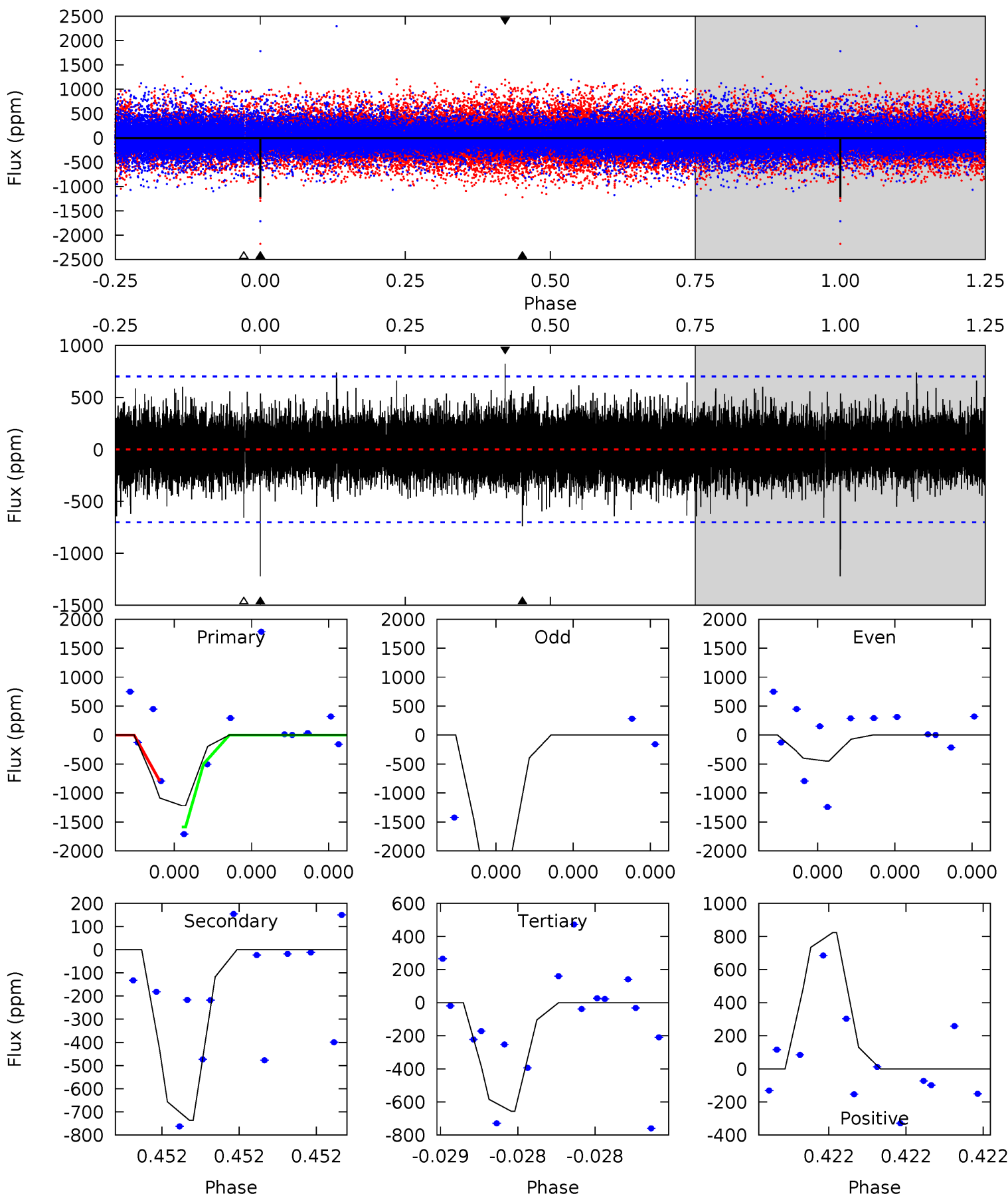
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.30	7.13	6.74	32.6	5.69	3.66	1.57	0.56	-25.3	0.39	-25.5	0.43	0.91	0.82	0.06



Alt Model-Shift Uniqueness Test

006606167-01, P = 398.984445 Days, E = 87.047372 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	6.06	5.40	6.78	5.78	3.79	1.19	4.64	3.26	0.66	-0.72	8.67	1.00	0.40	2.49



Stellar Parameters For KIC 006606167

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4895^{+146}_{-131}	$4.561^{+0.072}_{-0.039}$	$-0.180^{+0.300}_{-0.300}$	$0.729^{+0.062}_{-0.075}$	$0.706^{+0.090}_{-0.053}$	$2.565^{+0.787}_{-0.389}$
	+3%/-3%	+2%/-1%	+167%/-167%	+9%/-10%	+13%/-8%	+31%/-15%
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 006606167-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-842 ± 118	$9.14^{+8.45}_{-6.56}$	264^{+9}_{-10}	3072^{+1570}_{-496}	5168^{+60256}_{-3809}
Alt.	-737 ± 121	$8.65^{+9.87}_{-5.98}$	264^{+9}_{-10}	3045^{+1444}_{-558}	4998^{+44603}_{-3919}

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 $A_{obs} \gg 1.0$

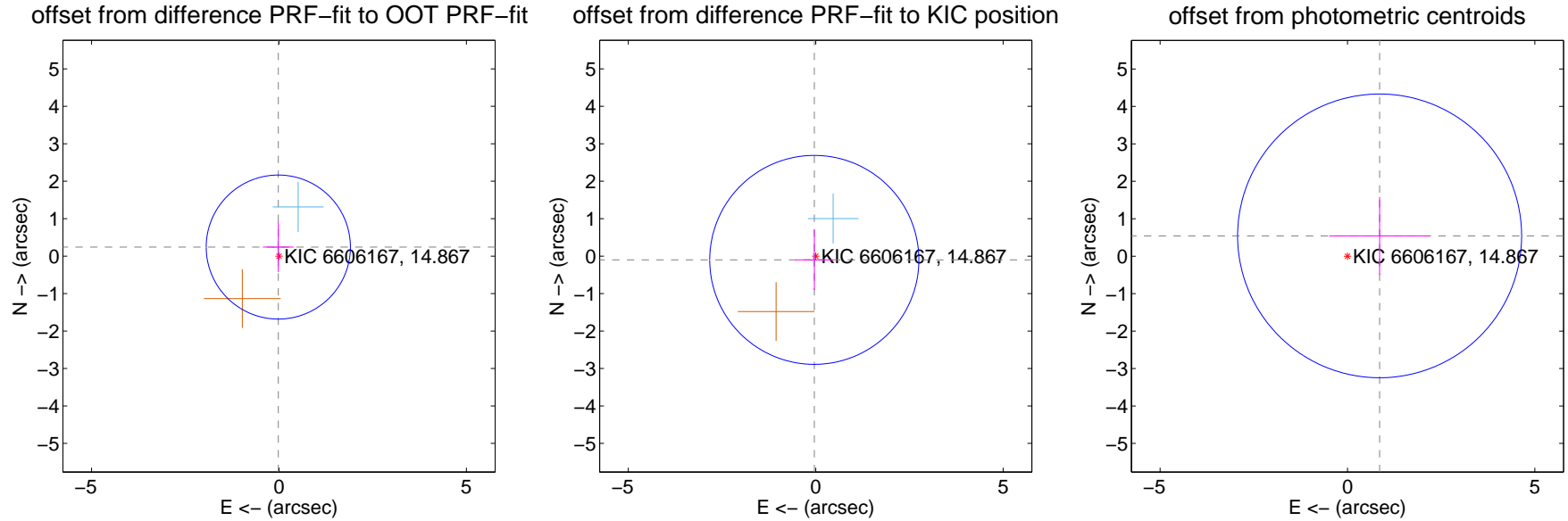
DV Centroid Data

Supplemental centroid analysis for 006606167-01. Kepler magnitude: 14.87. Transit SNR 6.30

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.243 ± 0.641	0.38	0.018 ± 0.411	0.242 ± 0.673
PRF-fit source offset from KIC position	0.107 ± 0.930	0.12	0.038 ± 0.503	-0.100 ± 0.807
photometric centroid source offset	1.01 ± 1.26	0.80	-0.86 ± 1.34	0.54 ± 1.04

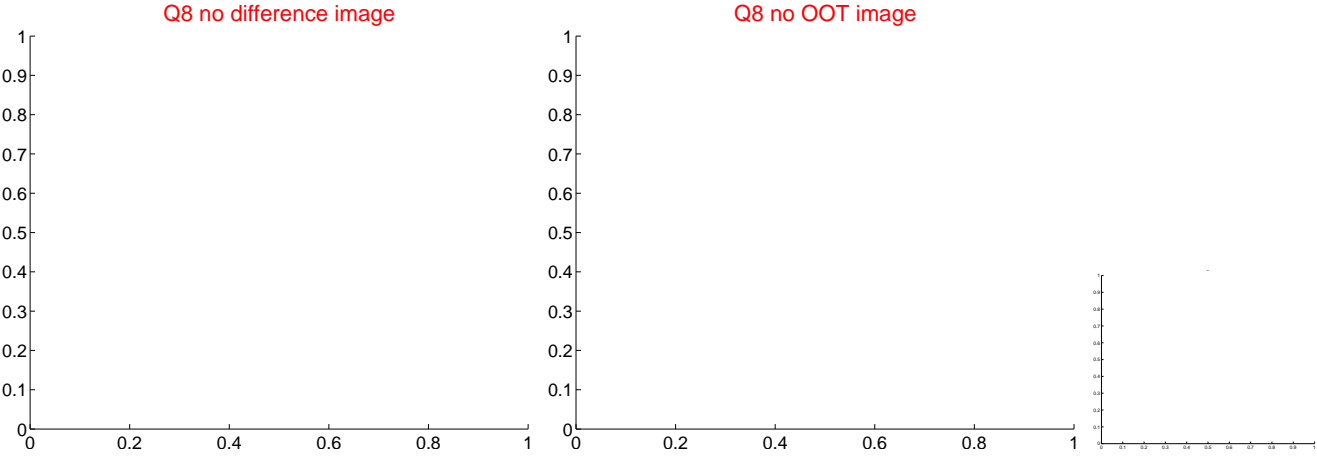
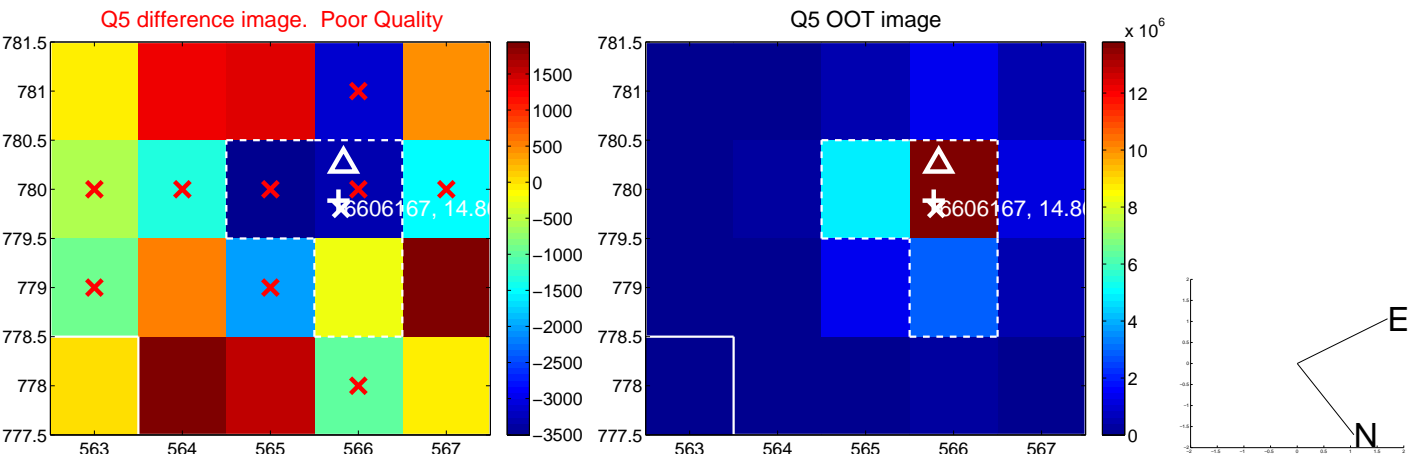


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

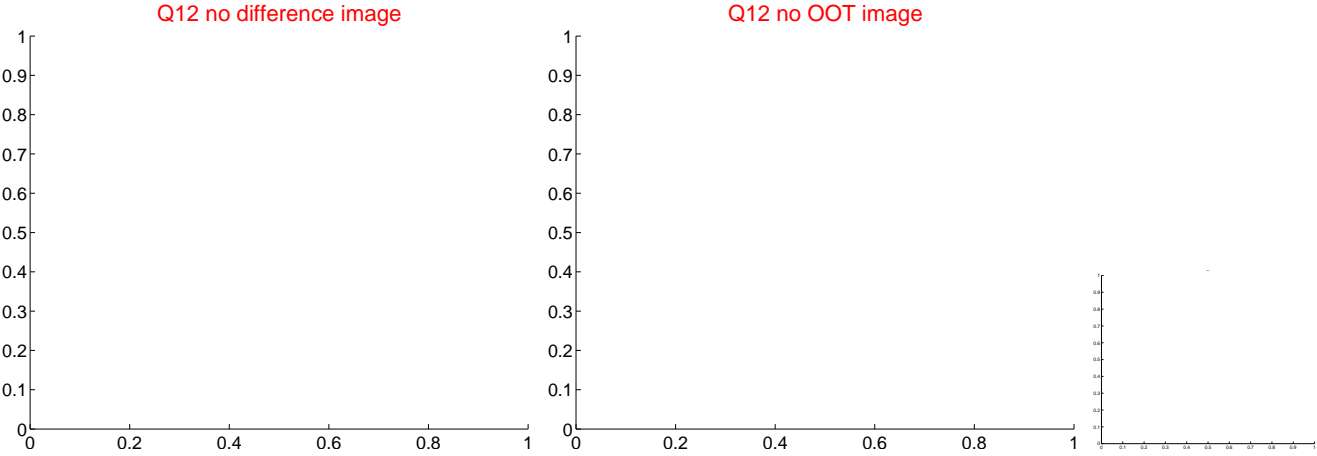
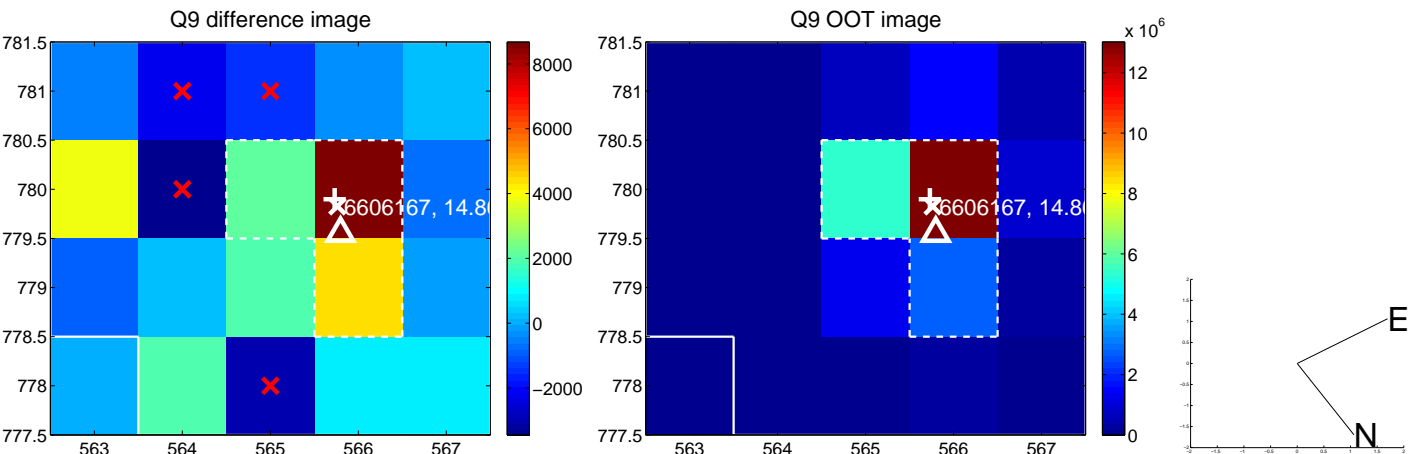
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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

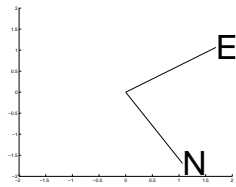
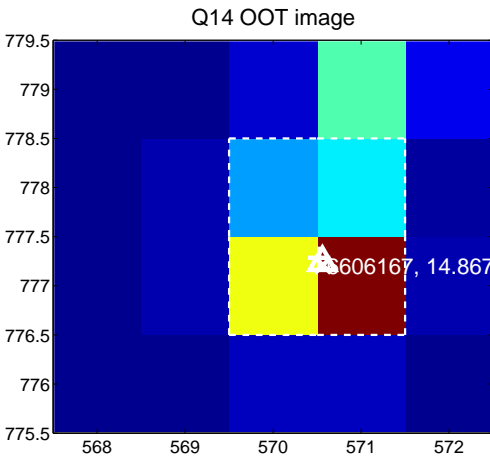
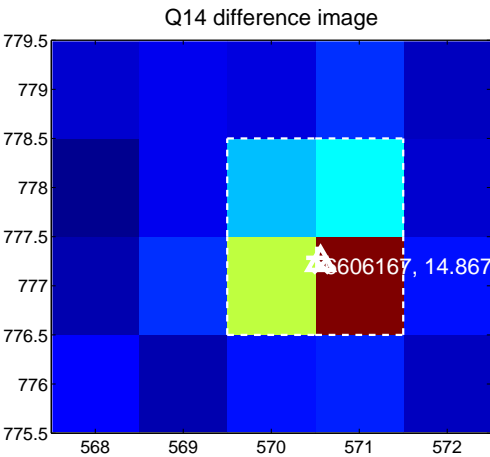


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

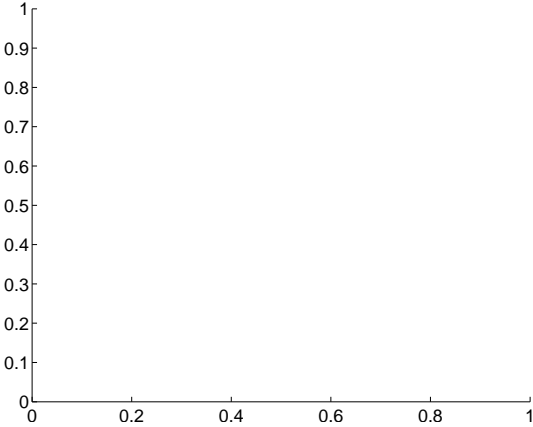
Q13 no difference image



Q13 no OOT image



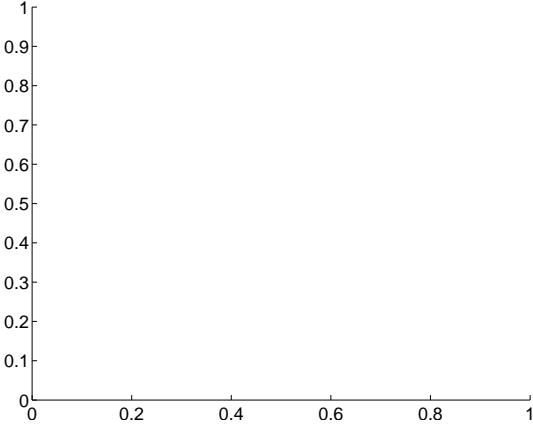
Q15 no difference image



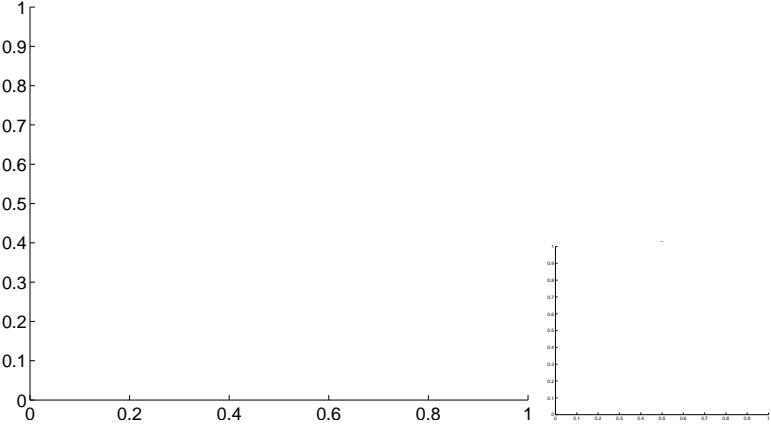
Q15 no OOT image



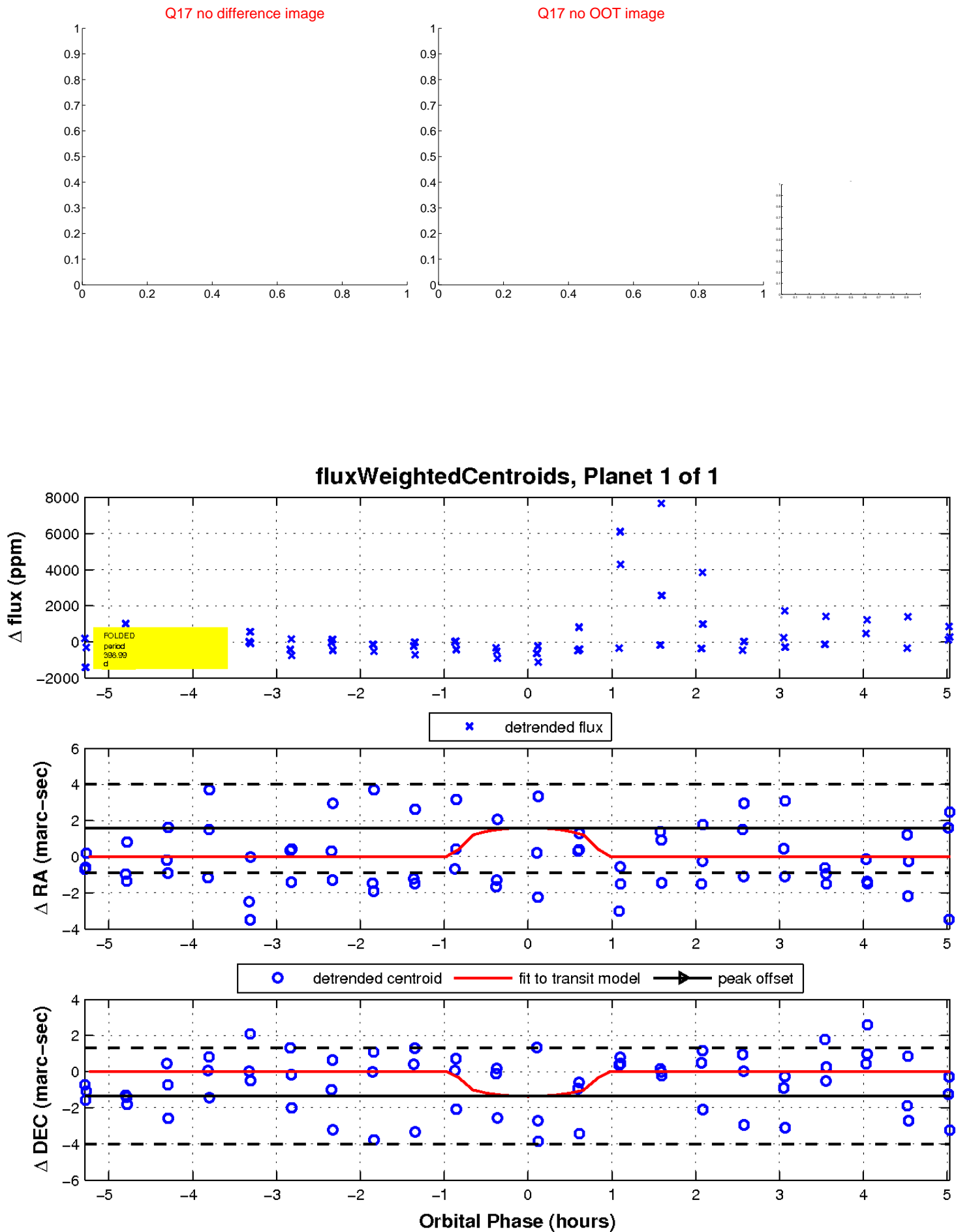
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

