

KIC 007684476

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})
007684476-01	OBS	No	674.013815	204.775627	314.4	11.602	10.0	9.8	2.12	7769	4.08	4.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007684476-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

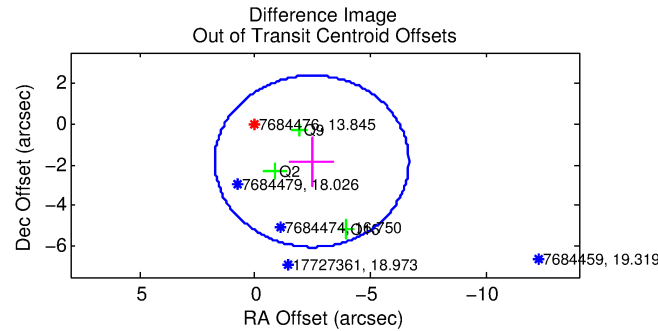
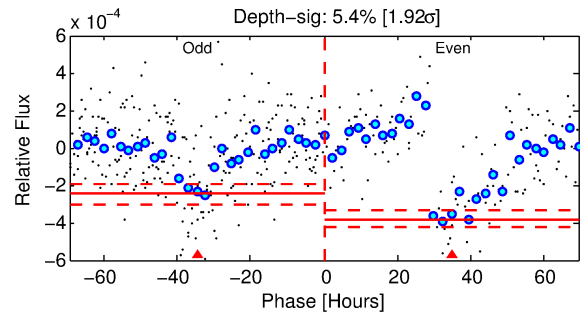
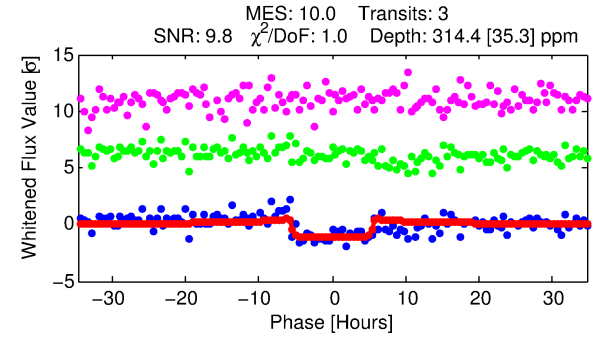
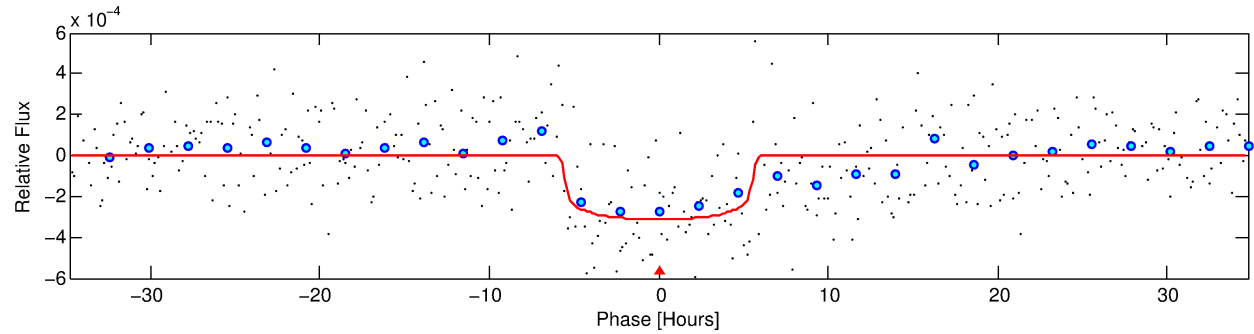
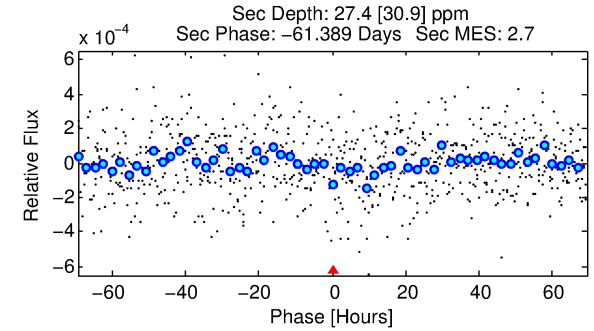
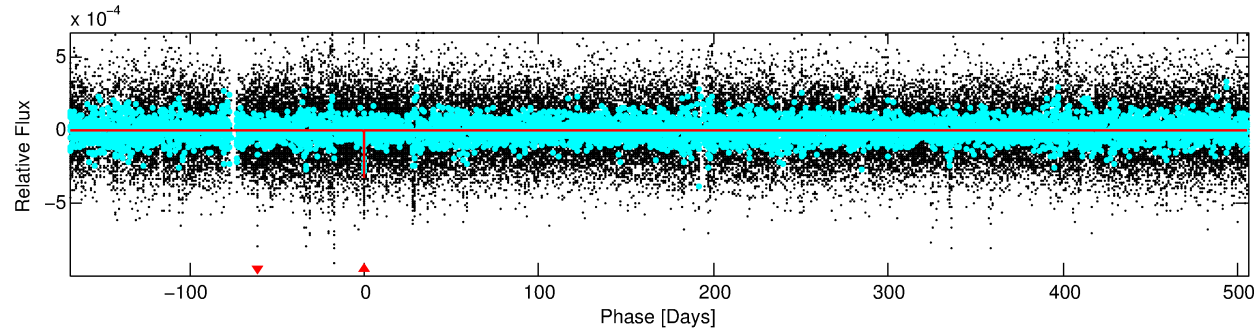
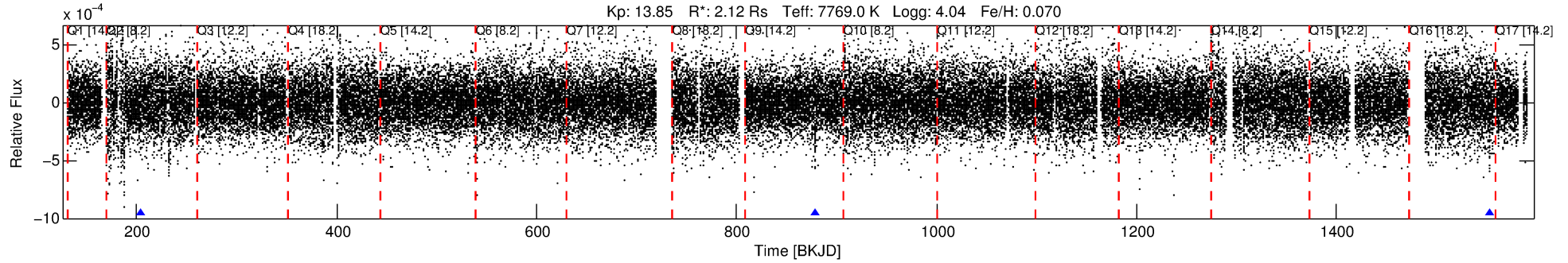
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007684476-01

No Significant Match Found

DV One-Page Summary

KIC: 7684476 Candidate: 1 of 1 Period: 674.014 d



DV Fit Results:

Period = 674.01382 [0.01023] d
Epoch = 204.7756 [0.0132] BKJD
Rp/R* = 0.0176 [0.0045]
a/R* = 305.79 [472.18]
b = 0.75 [0.91]
Seff = 4.36 [1.47]
Teq = 368 [31] K
Rp = 4.08 [1.43] Re
a = 1.8364 [0.3628] AU
Ag = 3052.89 [3881.13] [0.79σ]
Teffp = 4234 [1325] K [2.92σ]

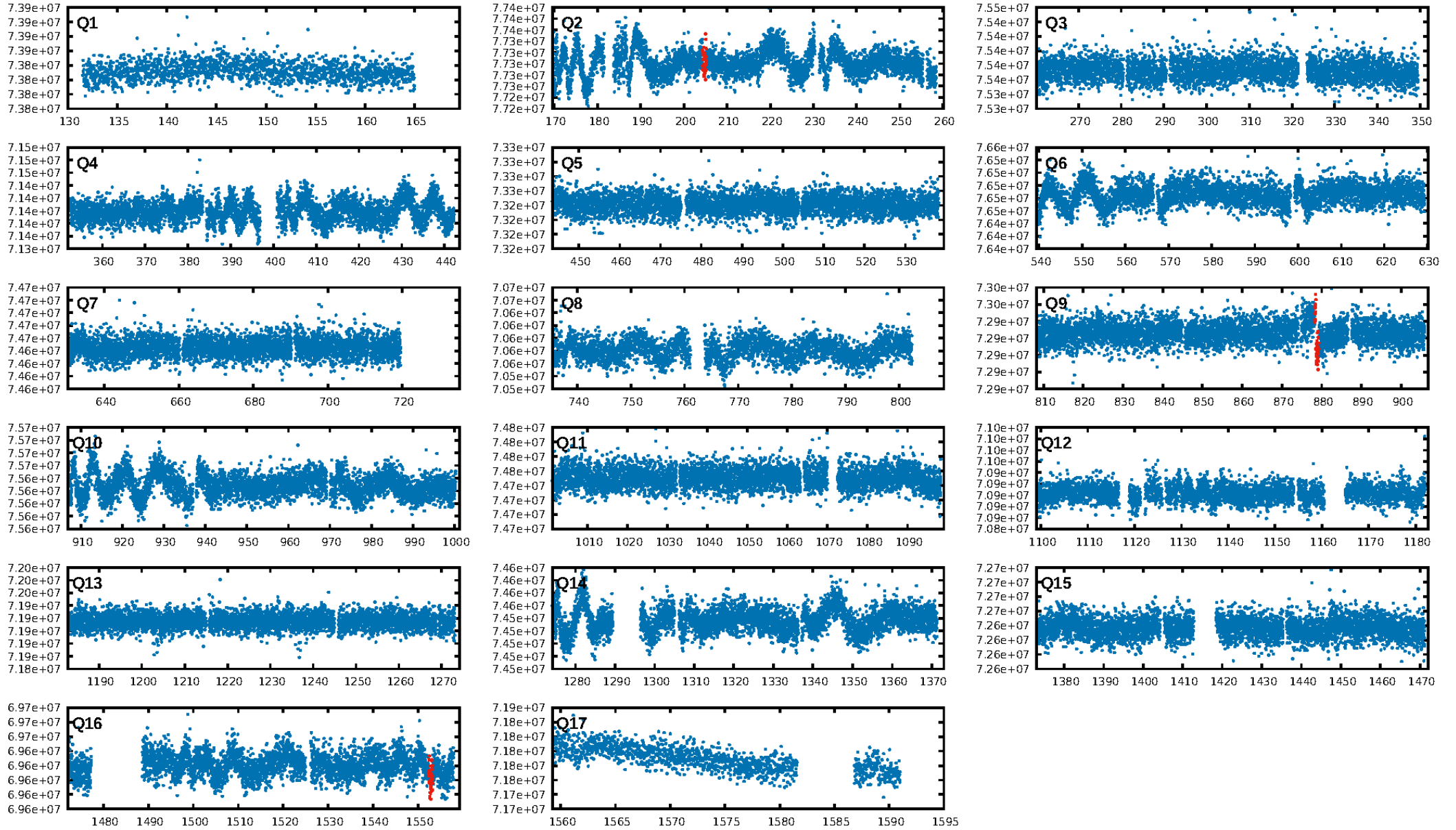
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 17.2%
ModelChiSquareGof-sig: 90.9%
Bootstrap-pfa: 1.80e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 16.24
Centroid-sig: 31.8%
Centroid-so: 0.999 arcsec [0.96σ]
OotOffset-rm: 3.063 arcsec [2.19σ]
KicOffset-rm: 3.016 arcsec [2.33σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

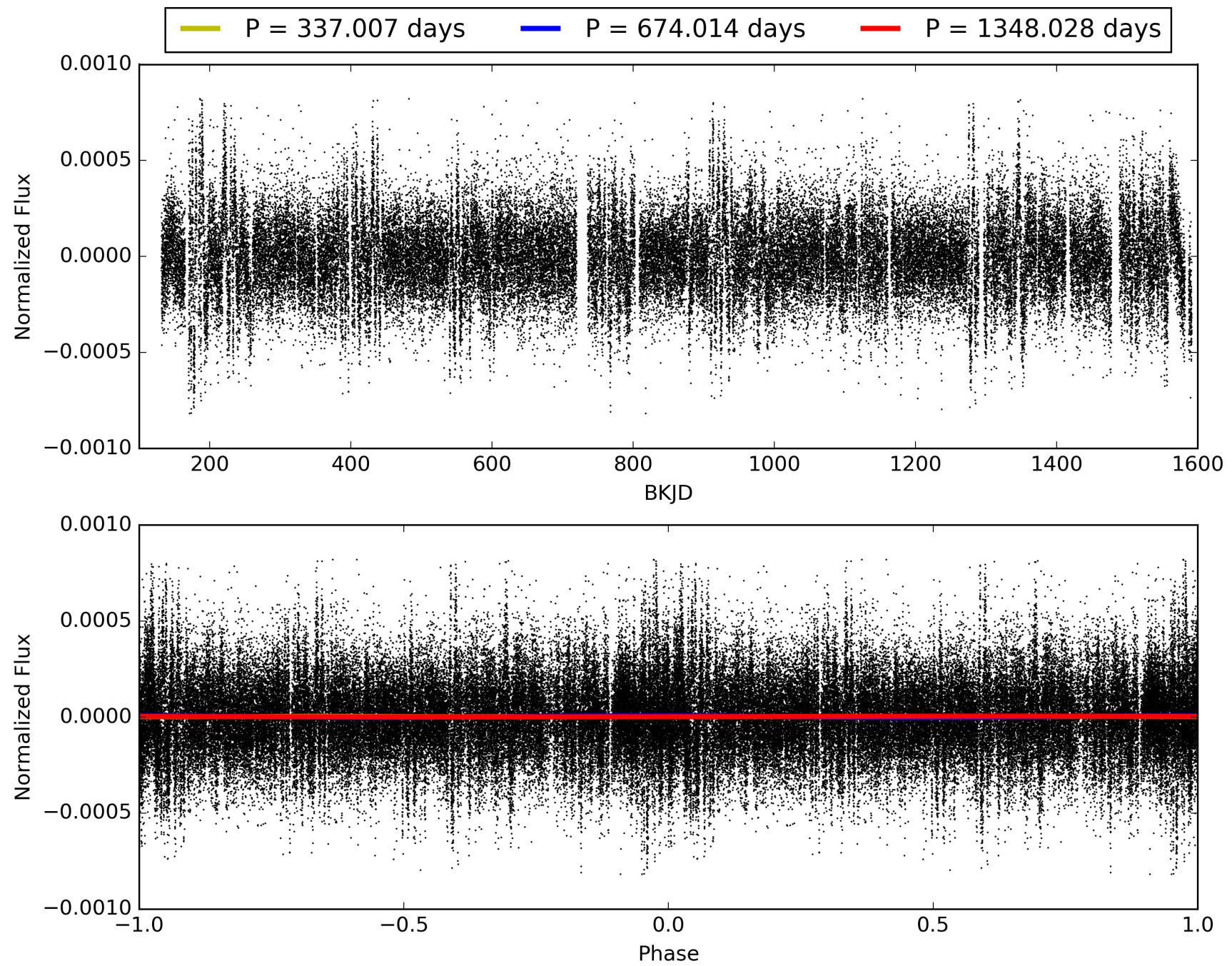
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:23:38 Z

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

TCE 007684476-01, PDC Light Curves

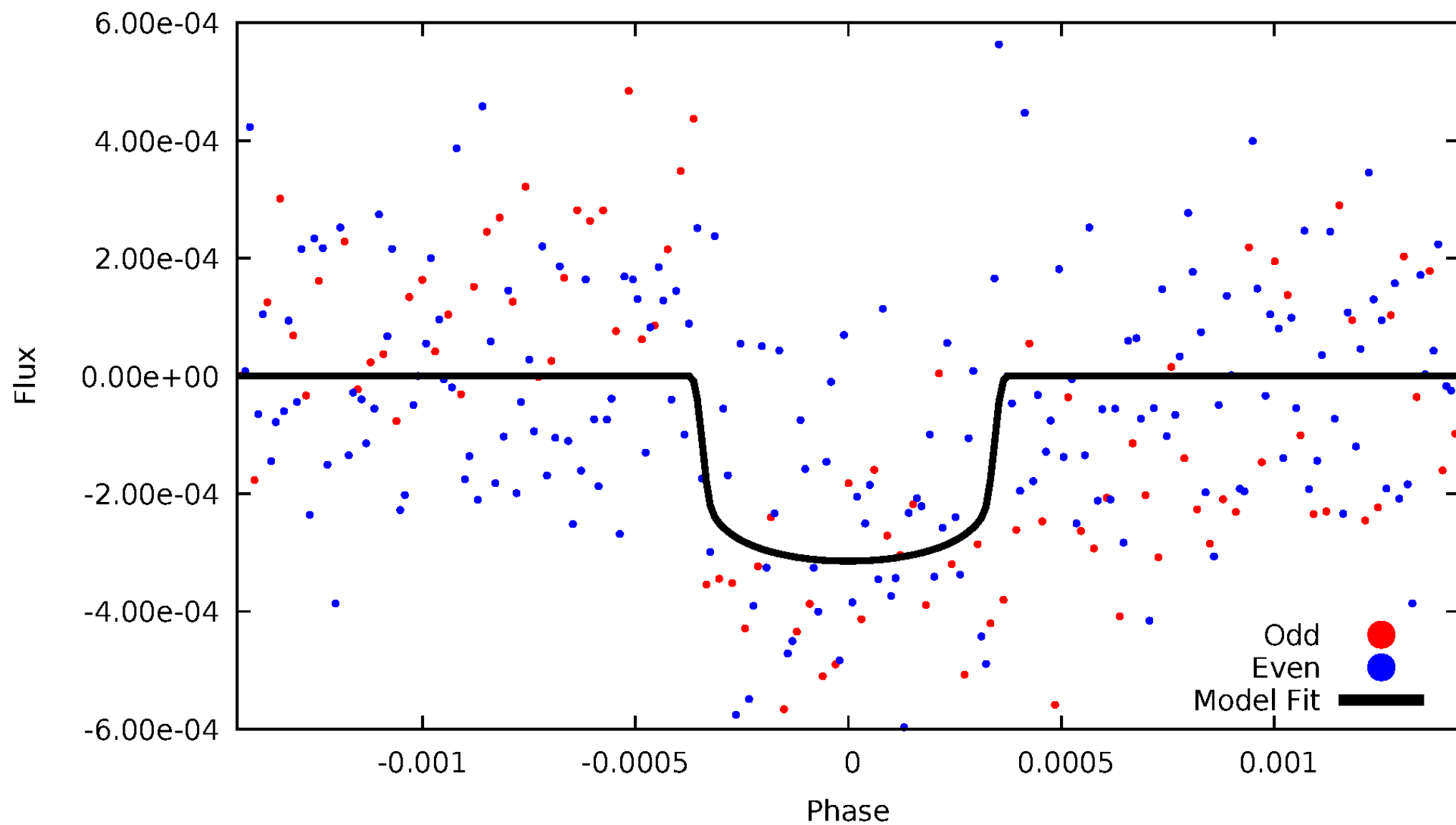


TCE 007684476-01



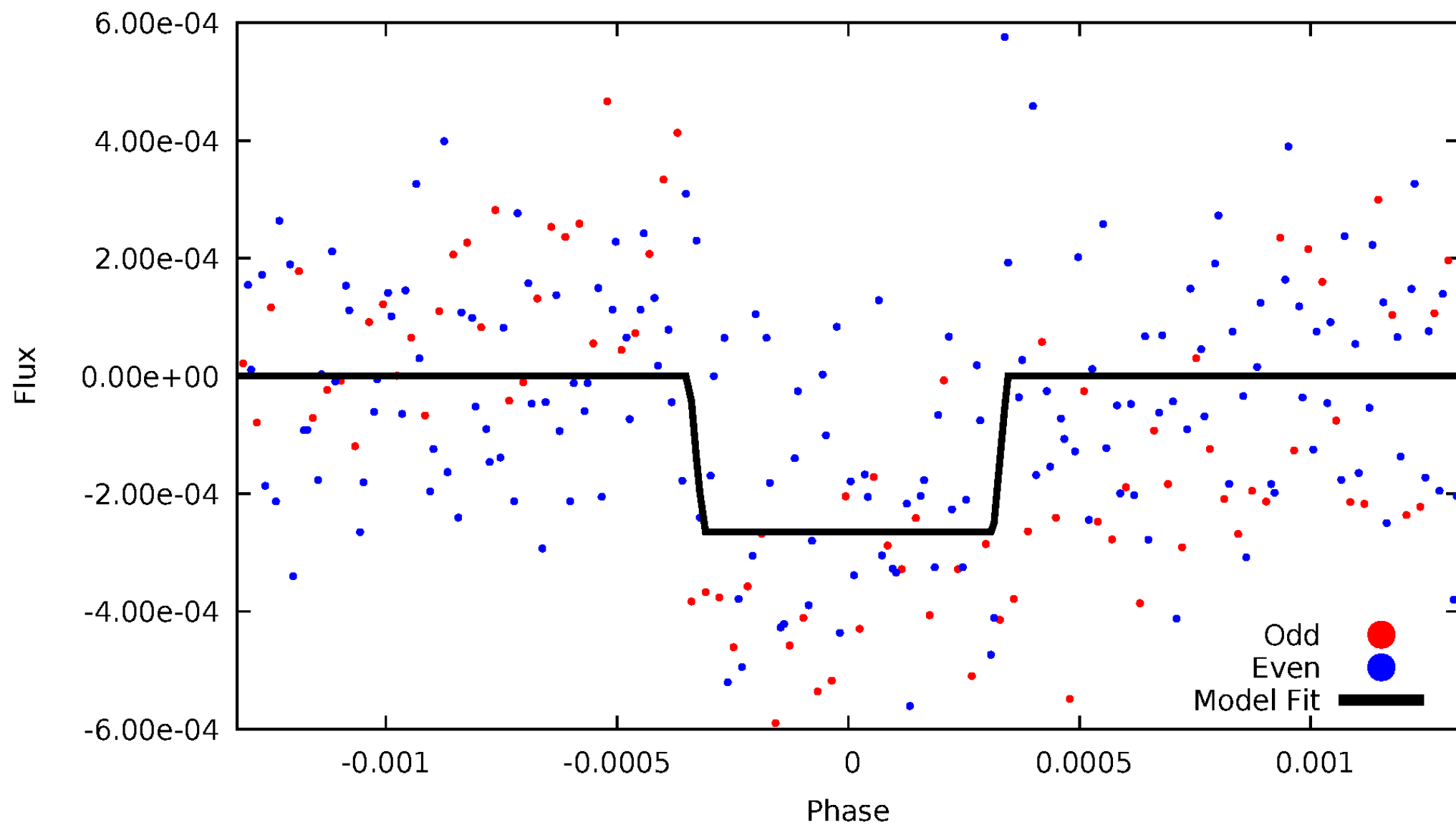
DV Odd/Even

TCE 007684476-01

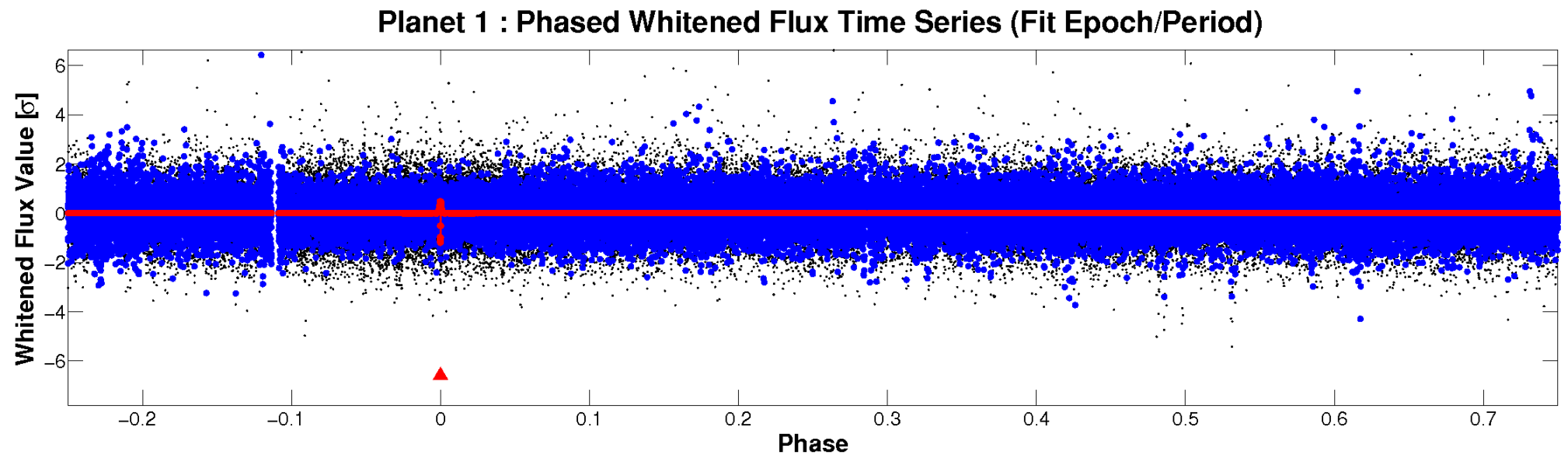
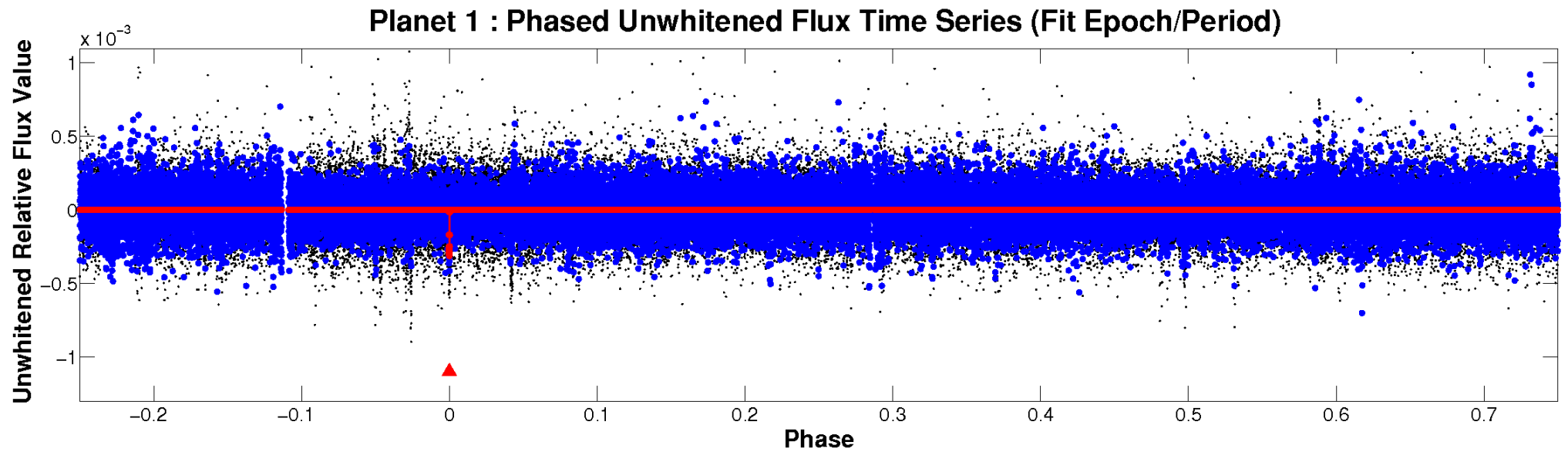


ALT Odd/Even

TCE 007684476-01



Non-Whitened Vs. Whitened Light Curve



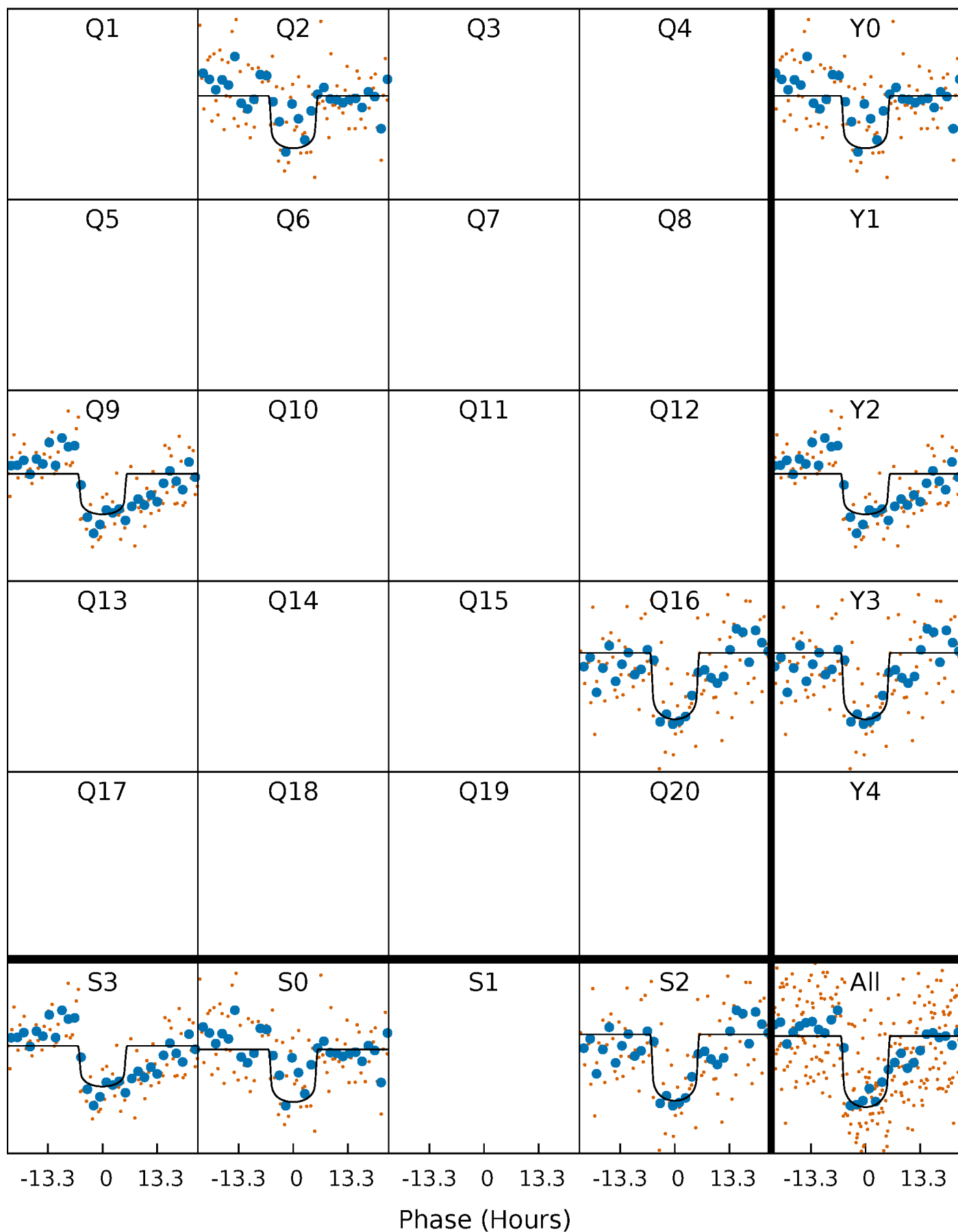
PDC Quarter-Phased Transit Curves

TCE 007684476-01 P=674.013815 Days $T_0=204.775628$ (BKJD)



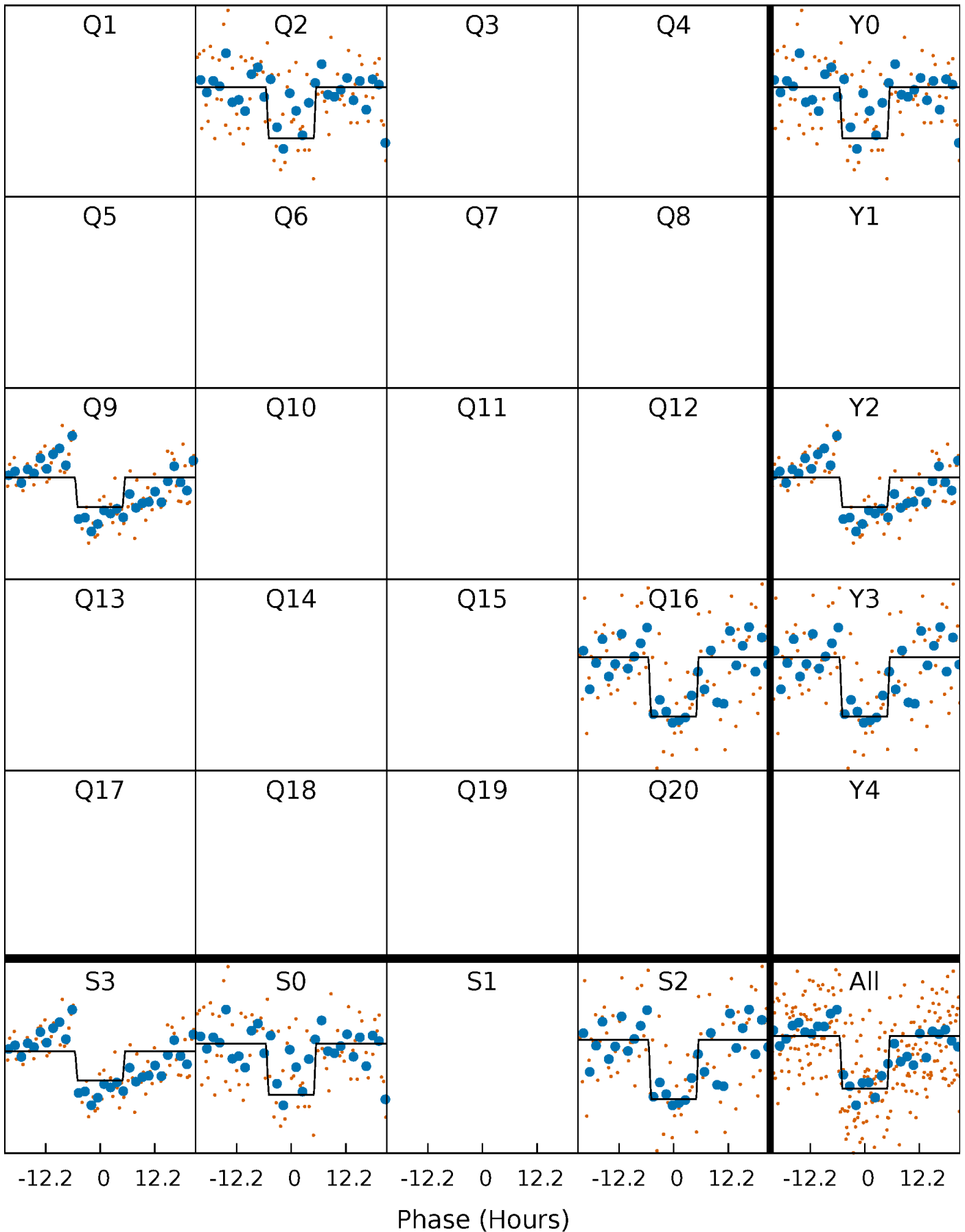
DV Quarter-Phased Transit Curves

TCE 007684476-01 P=674.013815 Days $T_0=204.775628$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

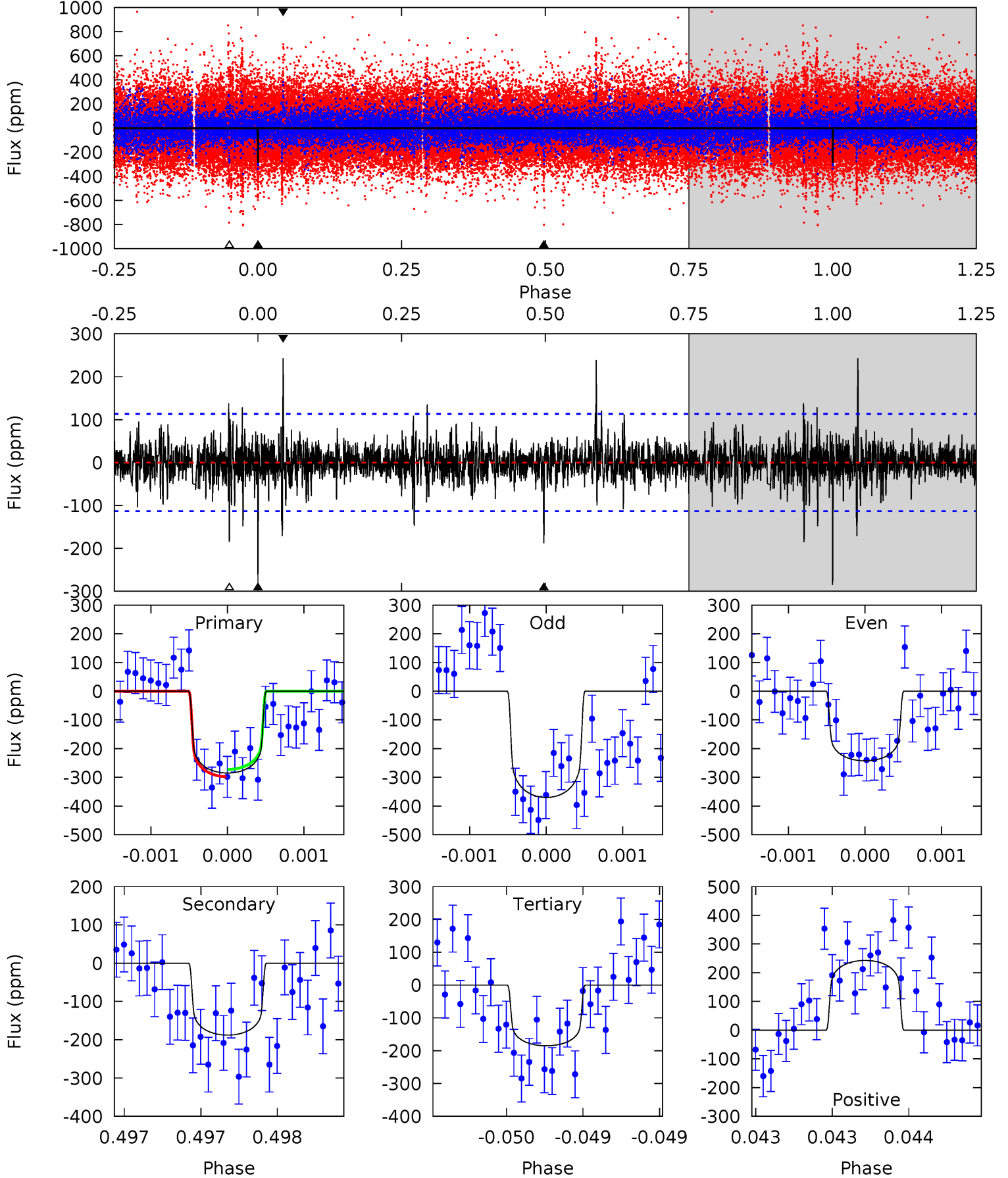
TCE 007684476-01 P=674.007788 Days $T_0=204.785781$ (BKJD)



DV Model-Shift Uniqueness Test

007684476-01, P = 674.013815 Days, E = 204.775628 Days

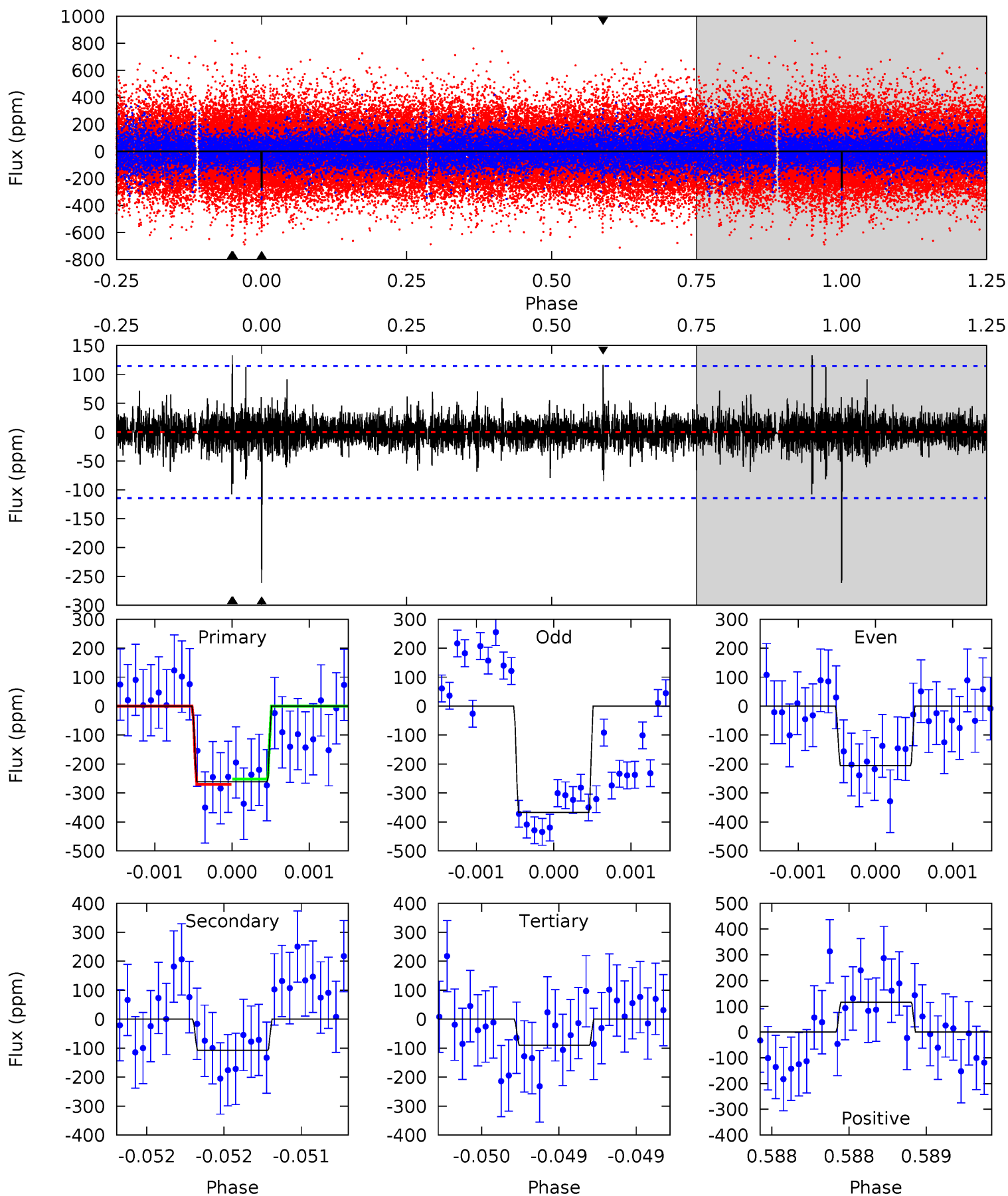
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	9.14	9.00	11.8	5.51	3.38	1.61	4.87	2.06	0.14	-2.68	2.94	0.93	0.46	0.62



Alt Model-Shift Uniqueness Test

007684476-01, P = 674.007788 Days, E = 204.785781 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	5.21	4.32	5.60	5.52	3.40	0.89	8.29	7.01	0.89	-0.39	3.70	1.03	0.34	0.44



Stellar Parameters For KIC 007684476

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7769^{+214}_{-349}	$4.044^{+0.155}_{-0.155}$	$0.070^{+0.200}_{-0.350}$	$2.122^{+0.502}_{-0.502}$	$1.815^{+0.170}_{-0.315}$	$0.268^{+0.225}_{-0.123}$
	+3%/-4%	+4%/-4%	+286%/-500%	+24%/-24%	+9%/-17%	+84%/-46%
Source	KIC0	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 007684476-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-188 ± 21	$4.07^{+1.24}_{-1.22}$	514^{+36}_{-33}	6675^{+1403}_{-744}	20304^{+21823}_{-8260}
Alt.	-108 ± 21	$3.69^{+1.21}_{-1.10}$	513^{+38}_{-34}	6050^{+1234}_{-753}	14149^{+15618}_{-6590}

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 $A_{obs} \gg 1.0$

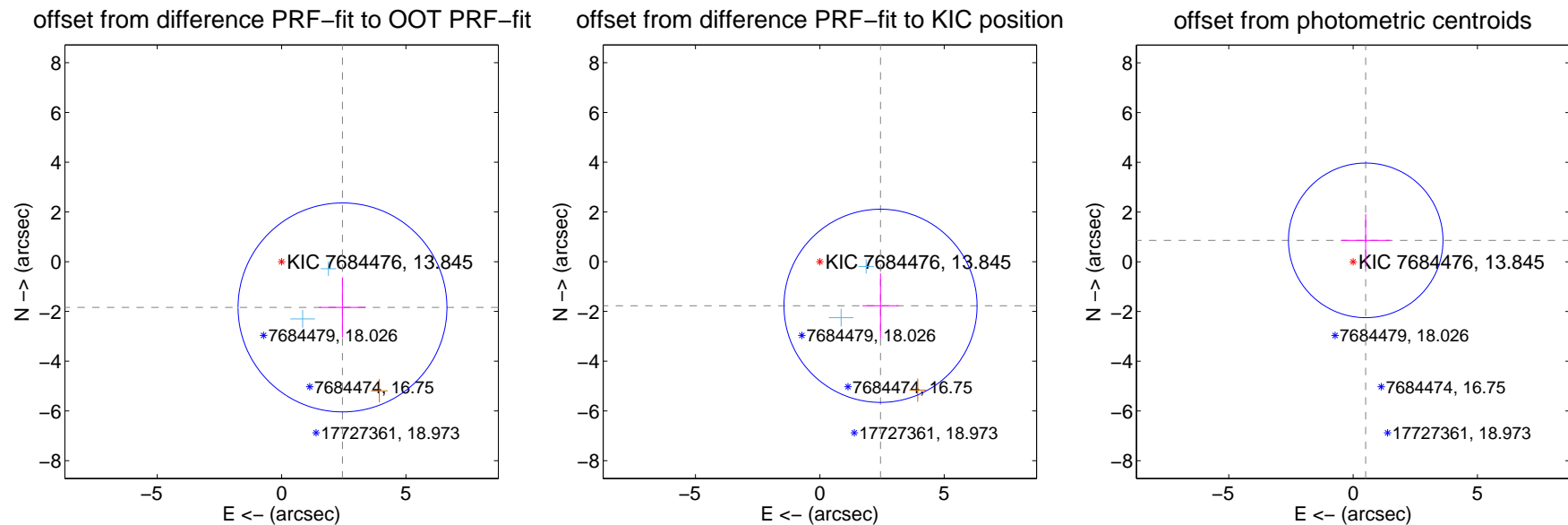
DV Centroid Data

Supplemental centroid analysis for 007684476-01. Kepler magnitude: 13.85. Transit SNR 9.78

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.063 ± 1.400	2.19	-2.450 ± 0.937	-1.839 ± 1.209
PRF-fit source offset from KIC position	3.016 ± 1.294	2.33	-2.440 ± 0.727	-1.773 ± 1.306
photometric centroid source offset	1.00 ± 1.04	0.96	-0.51 ± 0.99	0.86 ± 1.05



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.

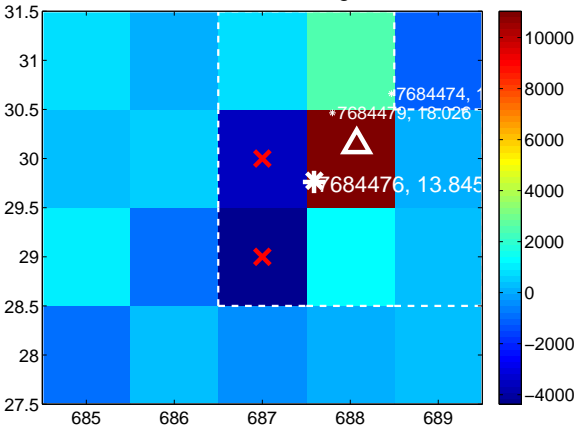
Q1 no difference image



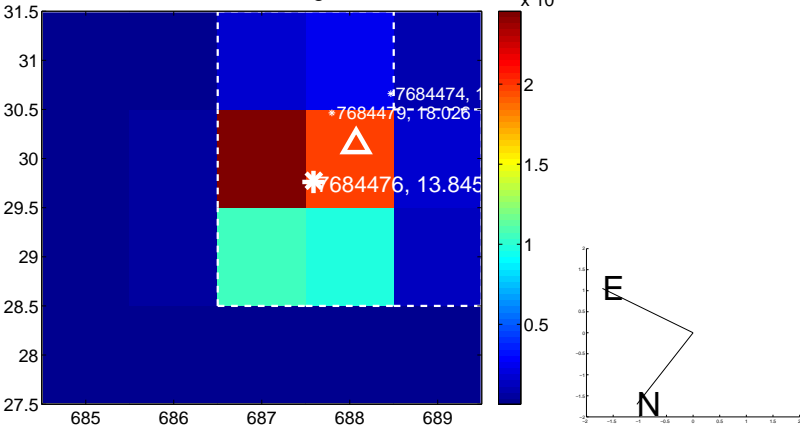
Q1 no OOT image



Q2 difference image



Q2 OOT image



Q3 no difference image



Q3 no OOT image



Q4 no difference image



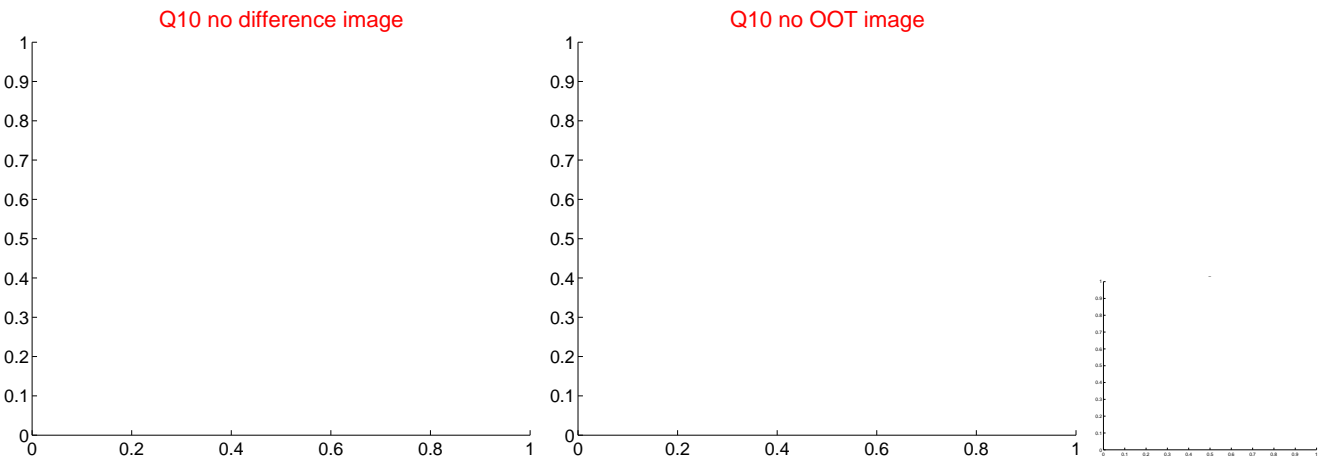
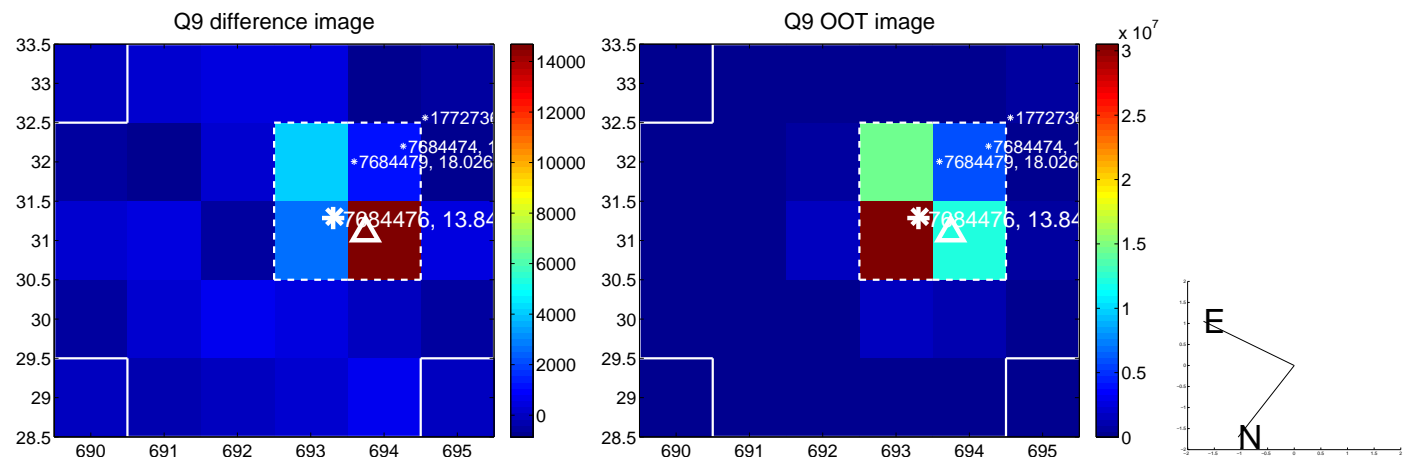
Q4 no OOT image



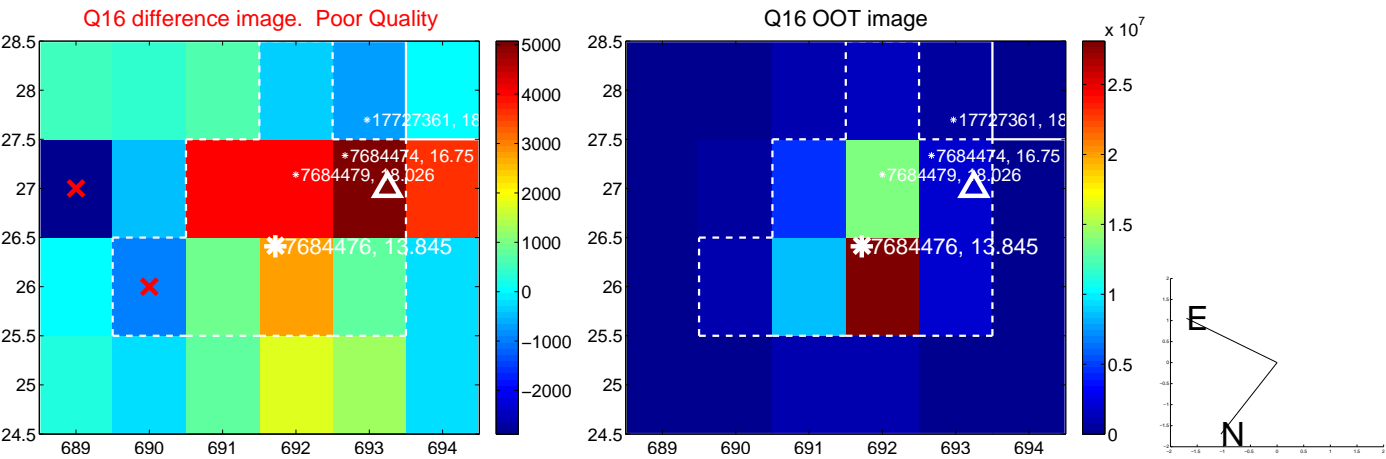
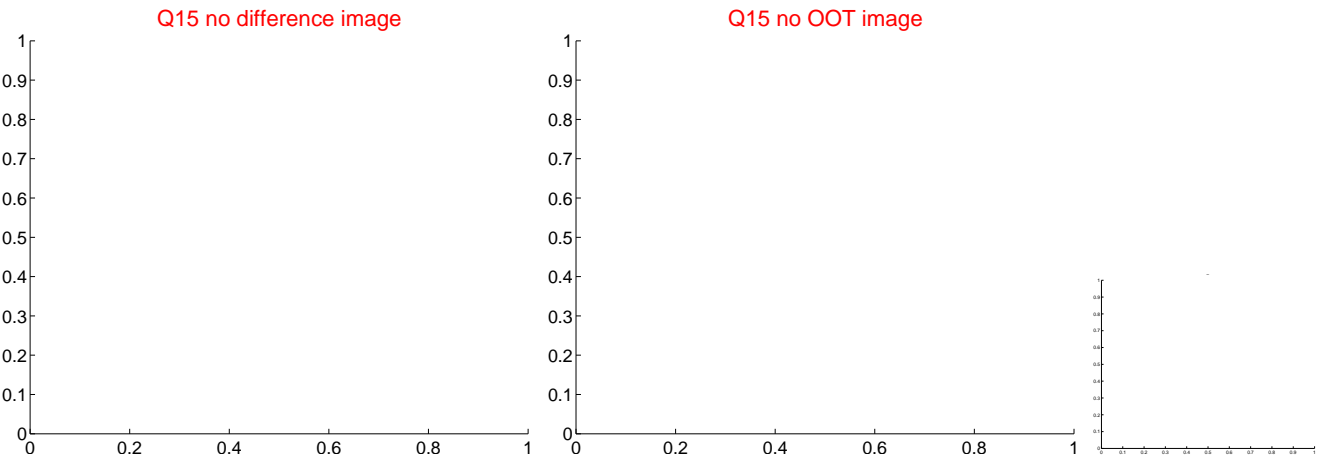
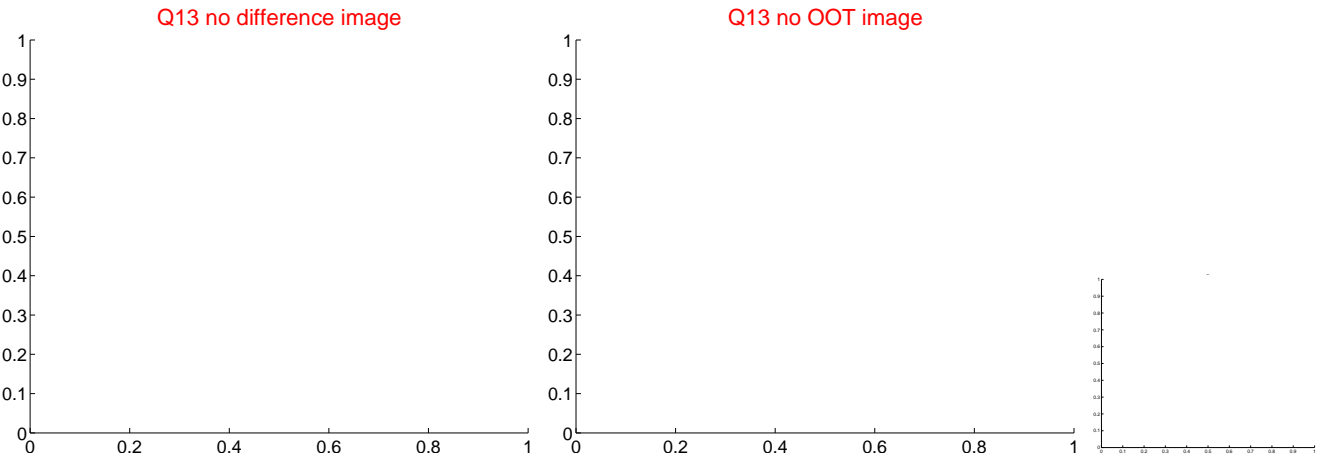
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



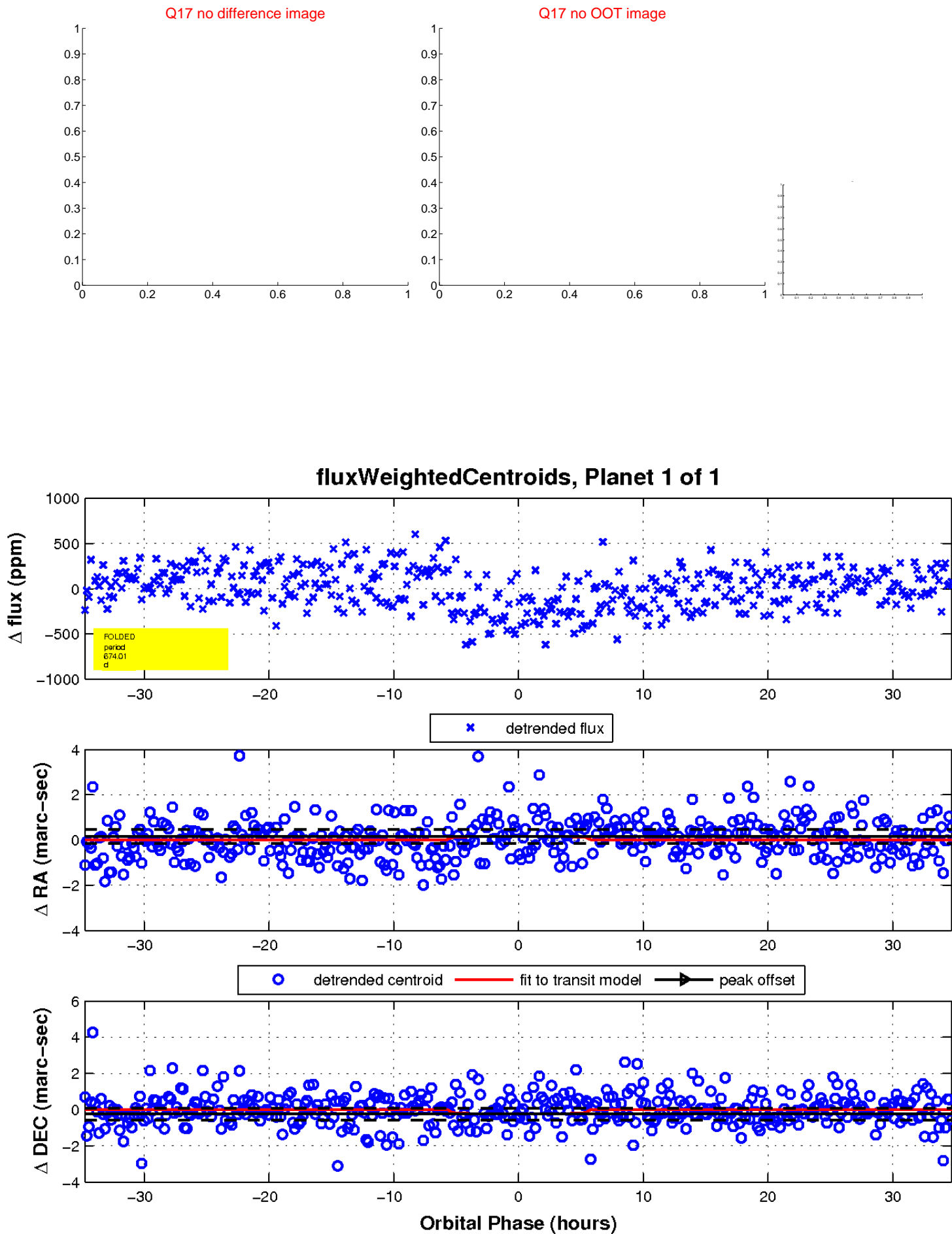
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UKIRT Image

