

KIC 005270419

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})
005270419-01	OBS	No	355.955212	384.086555	36.0	20.698	11.2	4.1	1.03	5681	0.70	1.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005270419-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

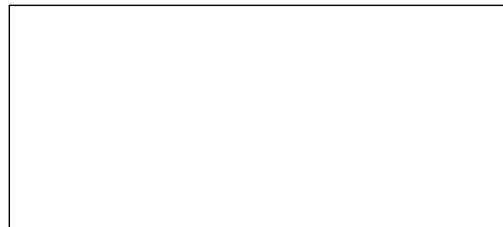
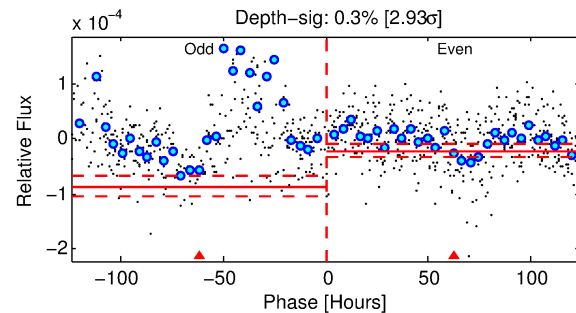
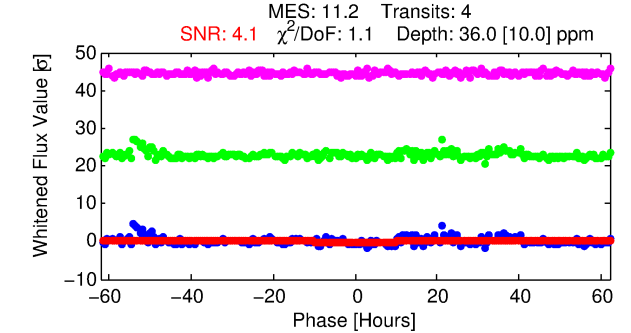
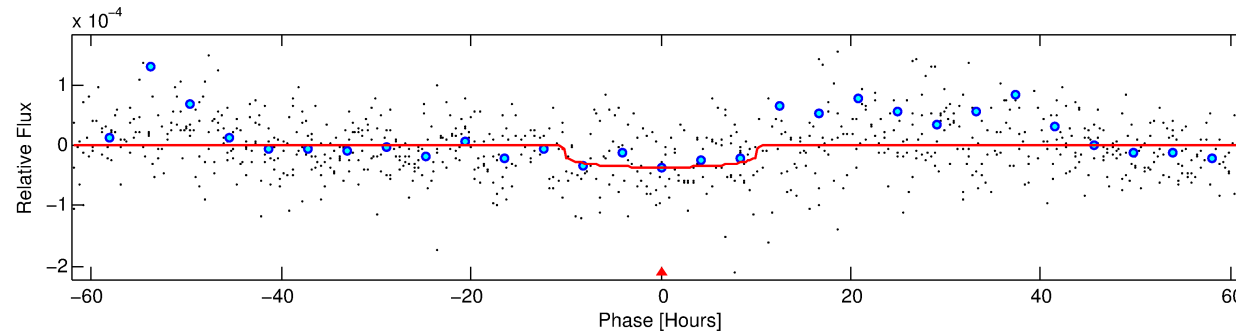
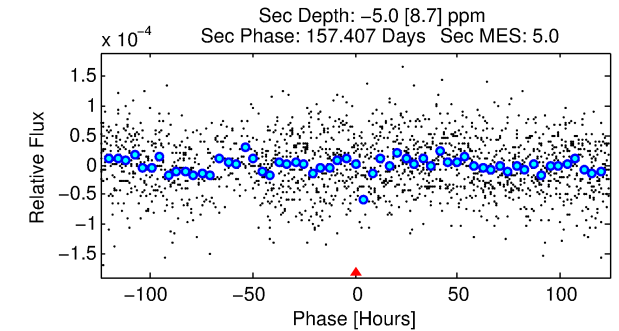
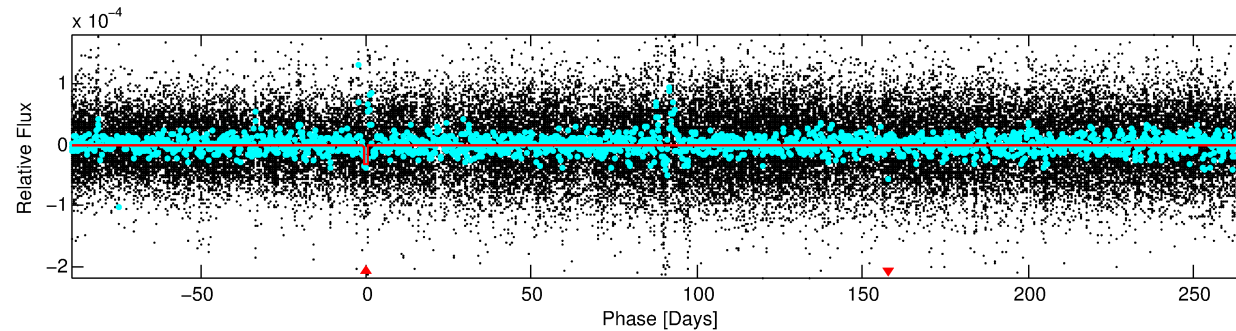
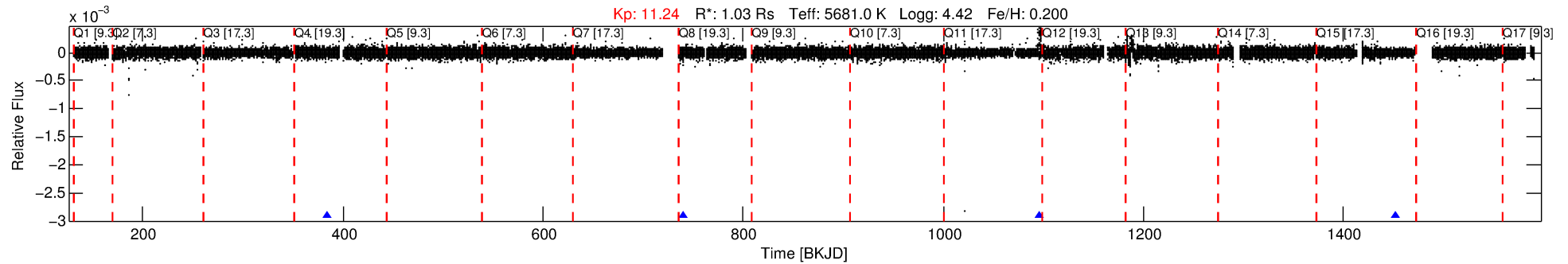
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005270419-01

No Significant Match Found

DV One-Page Summary

KIC: 5270419 Candidate: 1 of 1 Period: 355.955 d



DV Fit Results:

Period = 355.95521 [0.02212] d
Epoch = 384.0866 [0.0523] BKJD
Rp/R* = 0.0062 [0.0022]
a/R* = 74.22 [100.84]
b = 0.83 [0.51]
Seff = 1.01 [0.38]
Teq = 256 [24] K
Rp = 0.70 [0.31] Re
a = 0.9855 [0.2335] AU
Ag = N/A
Teffp = N/A

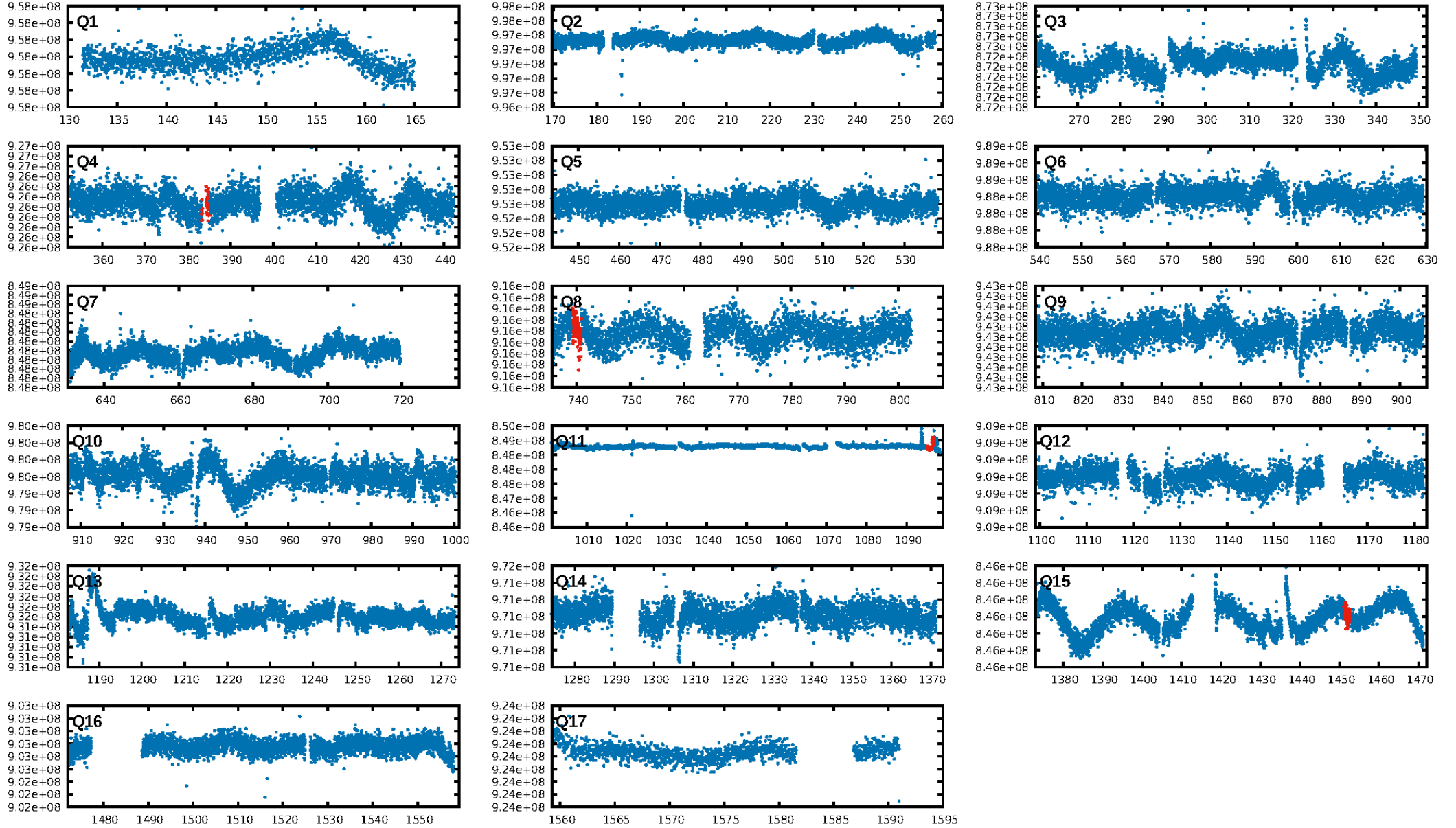
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.41e-21
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.3494
Centroid-sig: 22.1%
Centroid-so: 6.589 arcsec [1.36σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

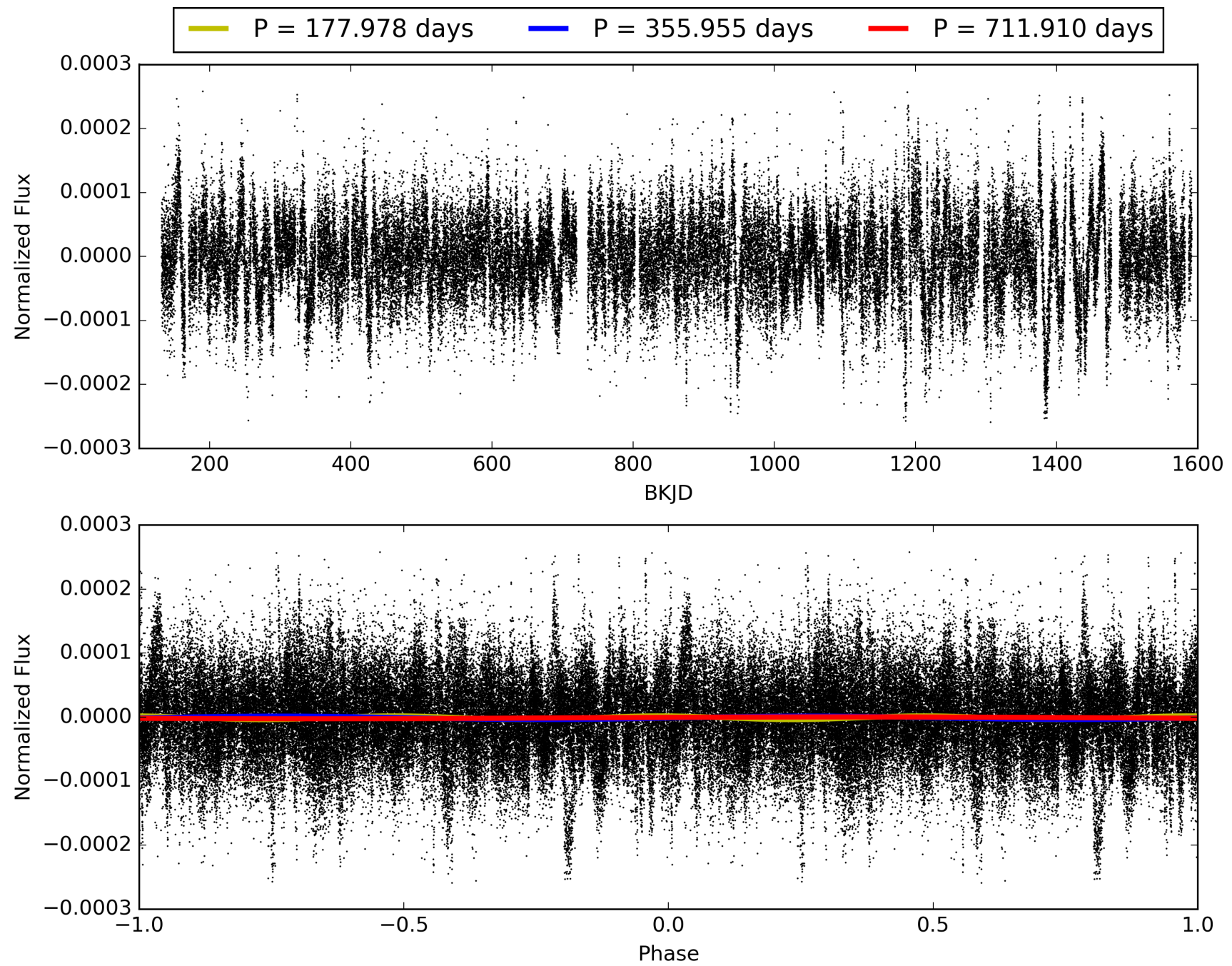
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:43:25 Z

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

TCE 005270419-01, PDC Light Curves

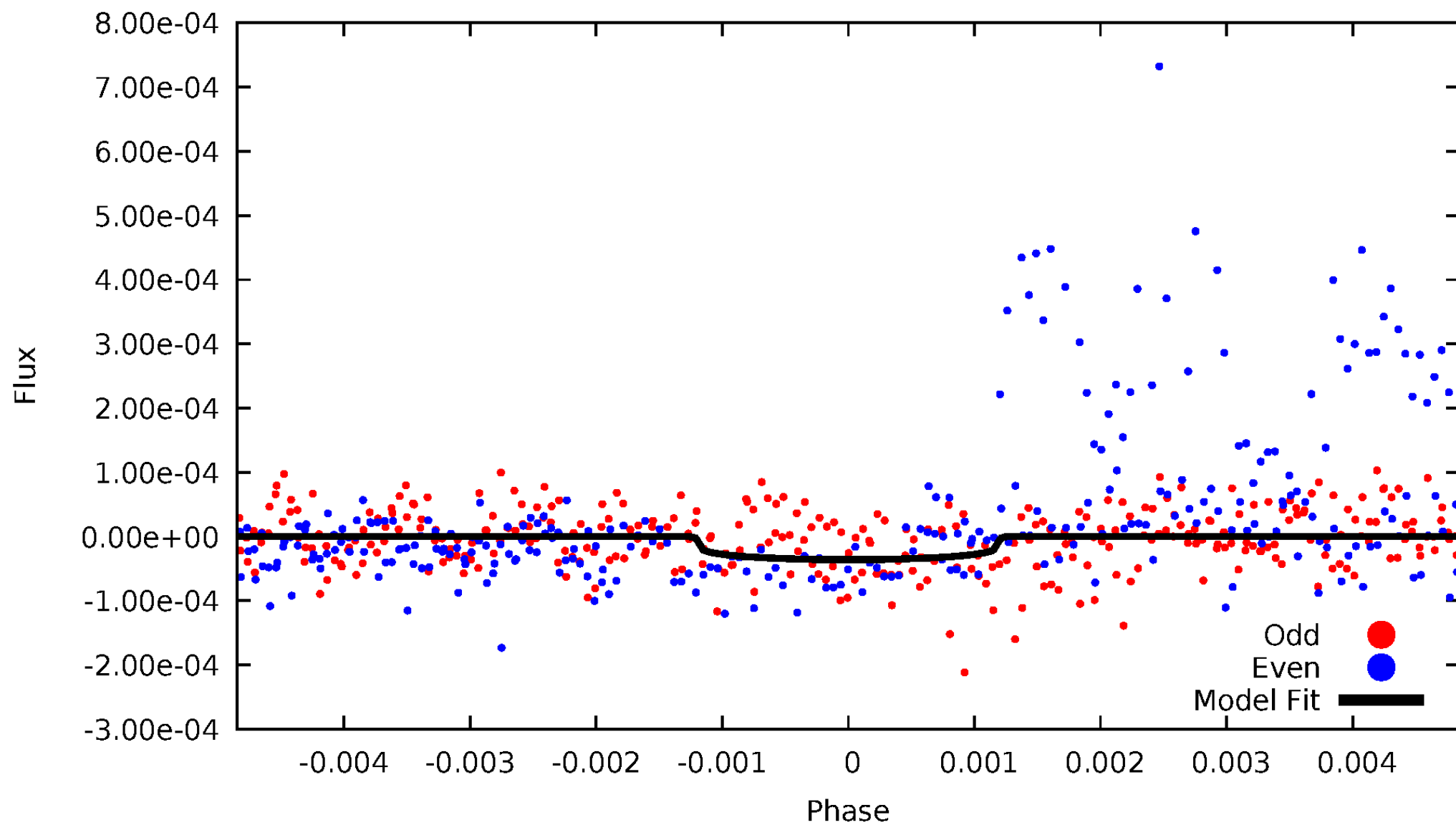


TCE 005270419-01



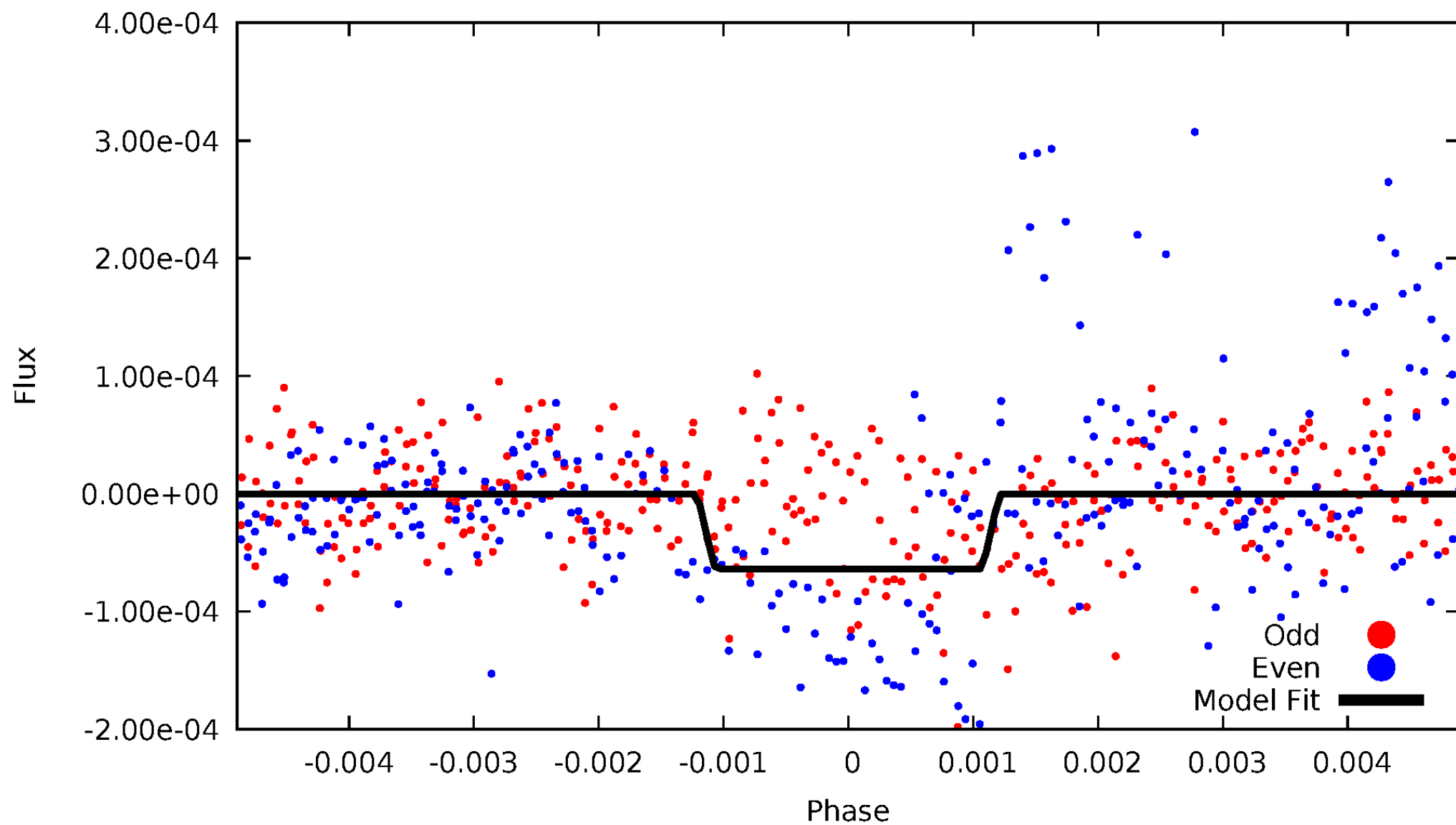
DV Odd/Even

TCE 005270419-01



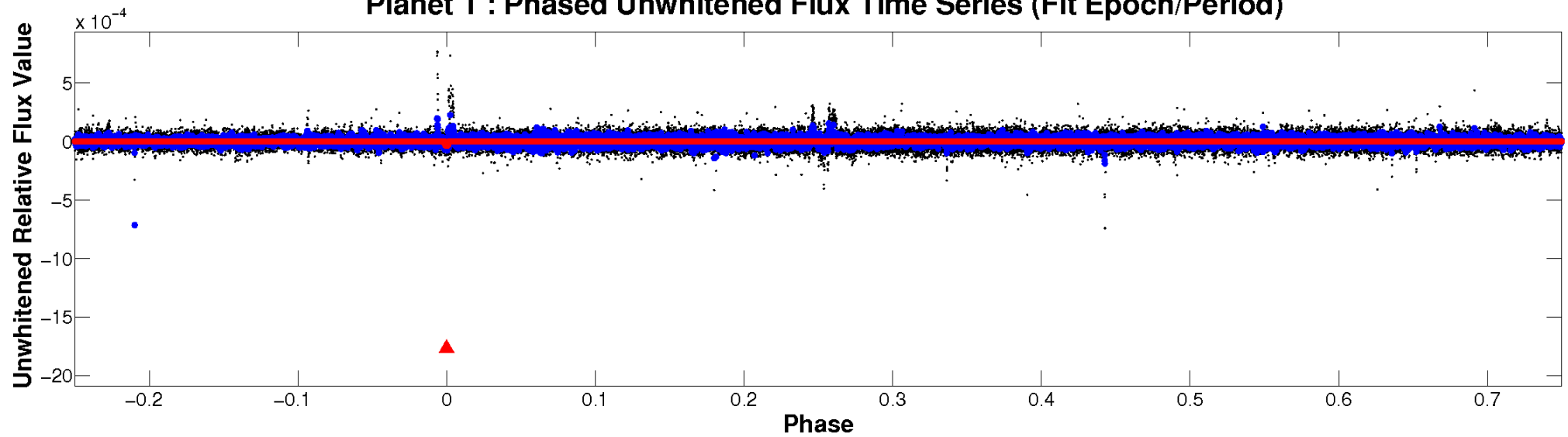
ALT Odd/Even

TCE 005270419-01

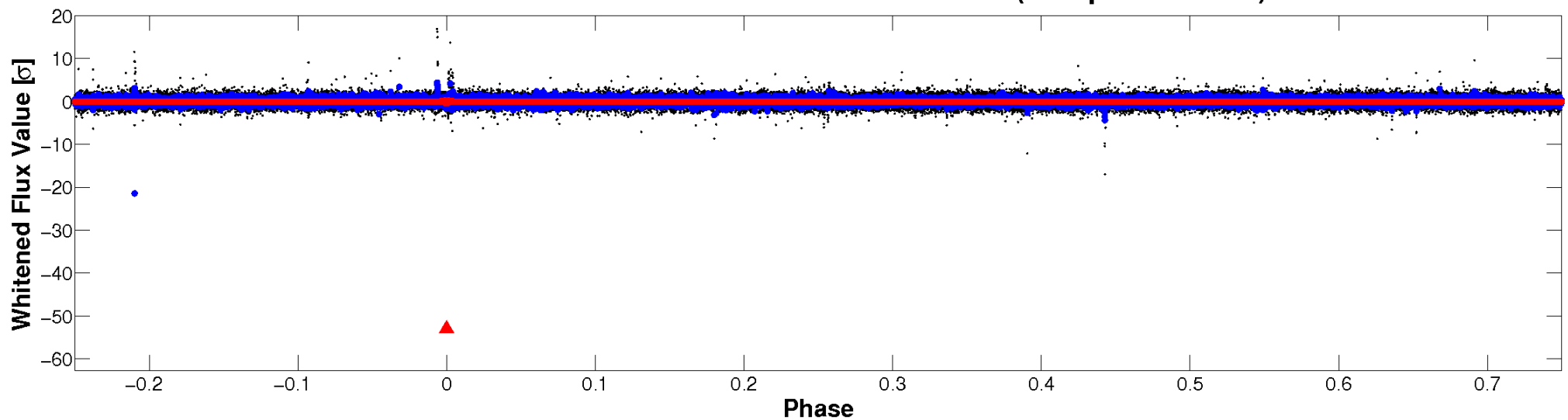


Non-Whitened Vs. Whitened Light Curve

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

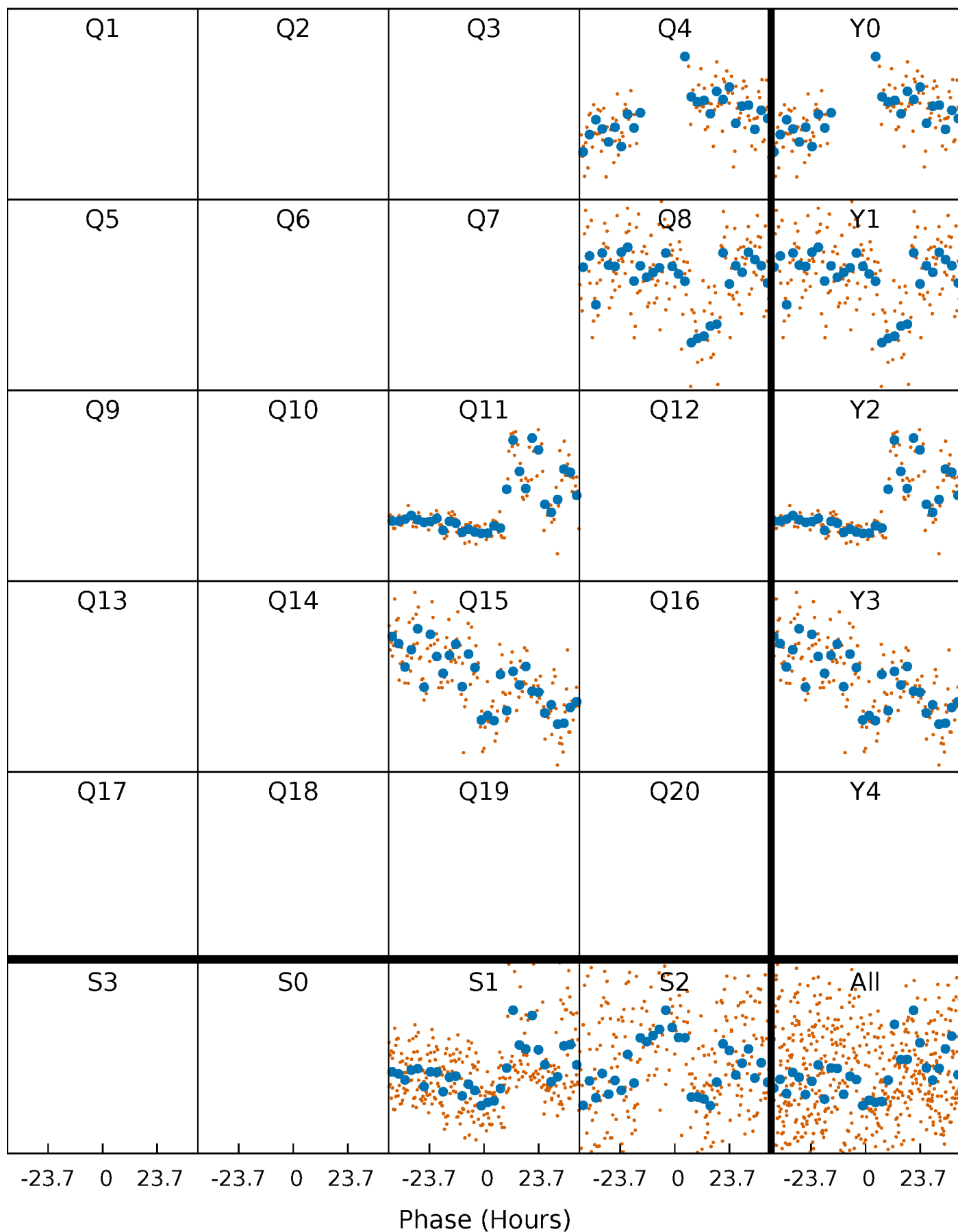


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005270419-01 P=355.955213 Days $T_0=384.086555$ (BKJD)



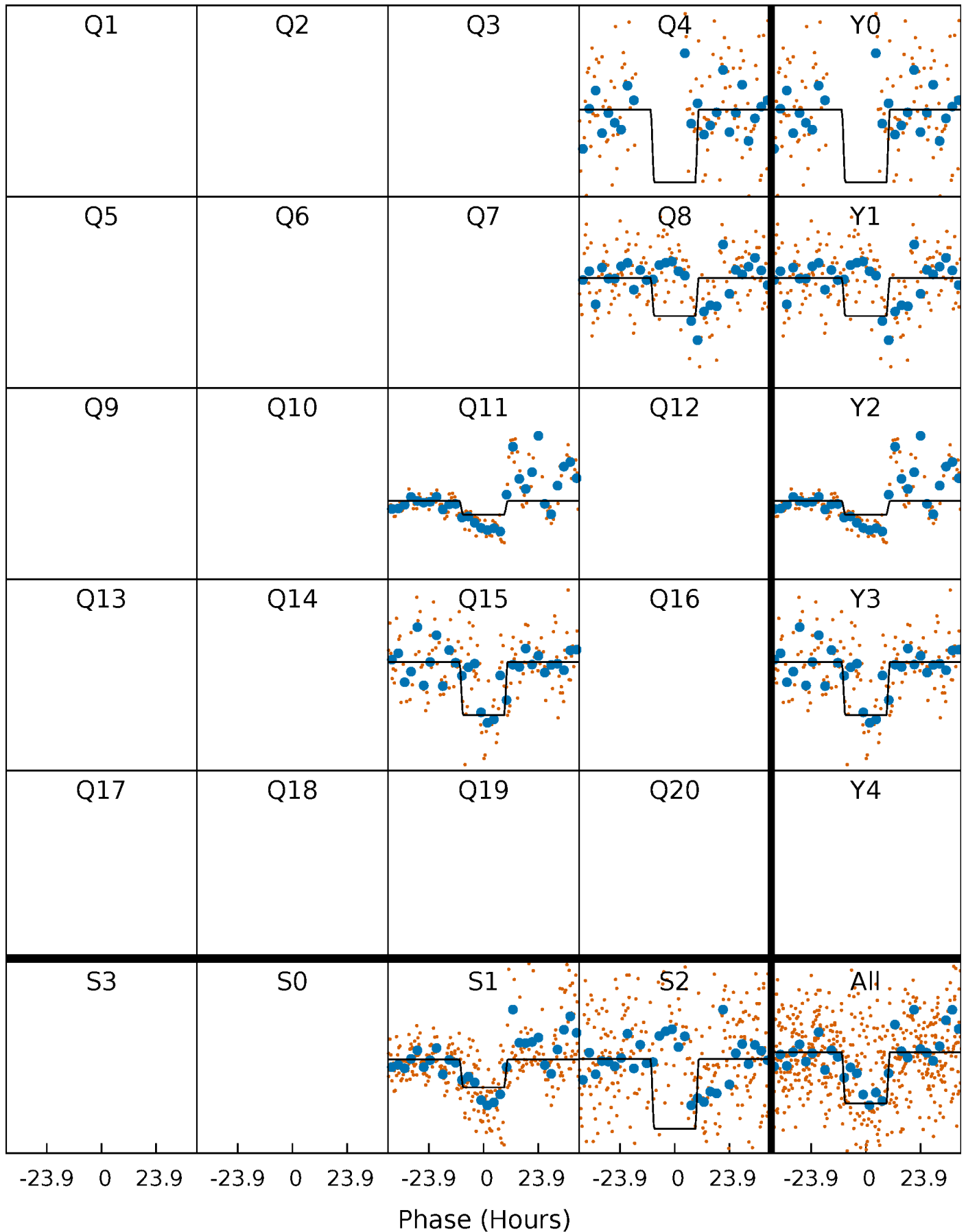
DV Quarter-Phased Transit Curves

TCE 005270419-01 P=355.955213 Days $T_0=384.086555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

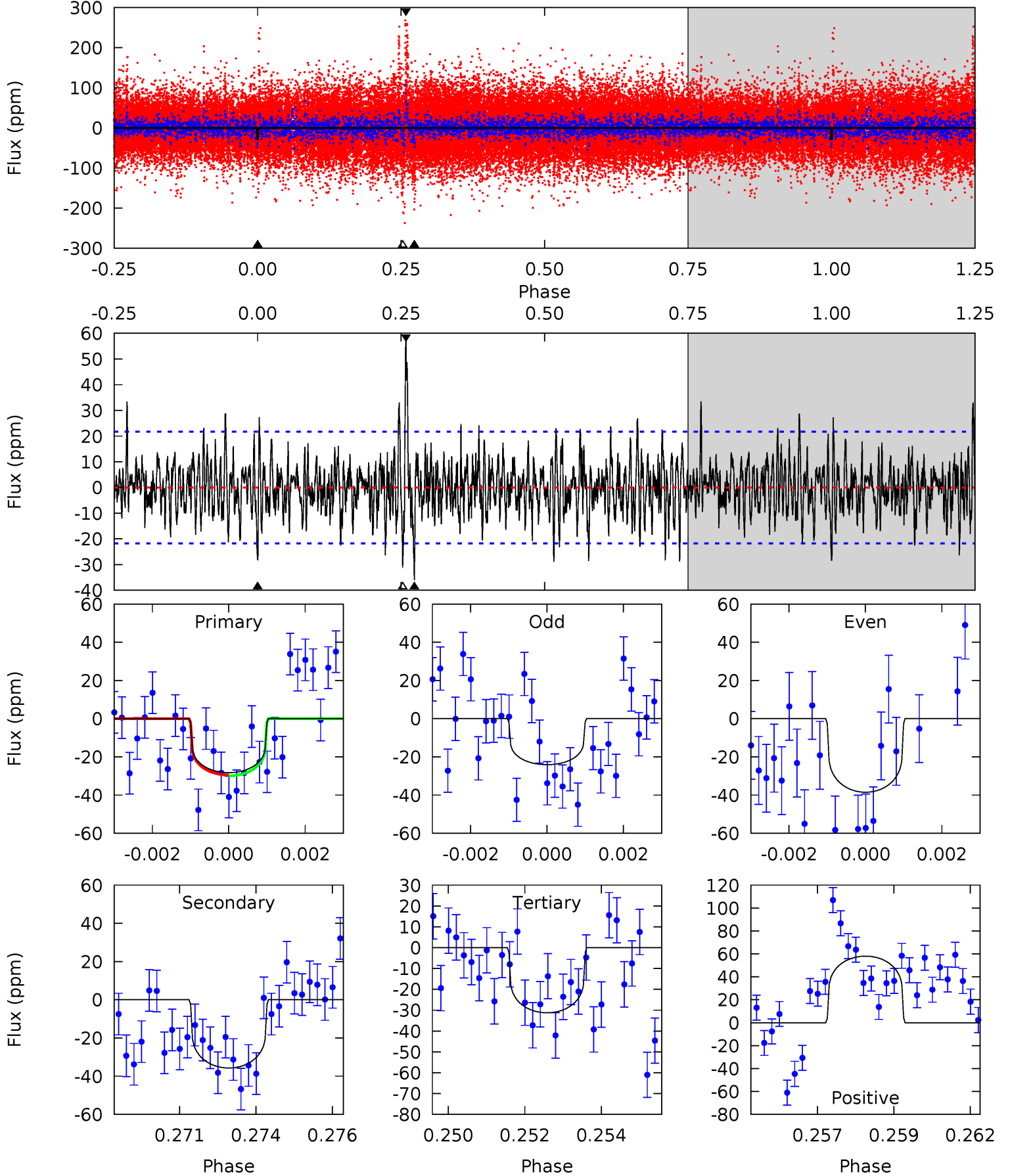
TCE 005270419-01 P=355.932182 Days $T_0=384.124858$ (BKJD)



DV Model-Shift Uniqueness Test

005270419-01, P = 355.955213 Days, E = 28.131342 Days

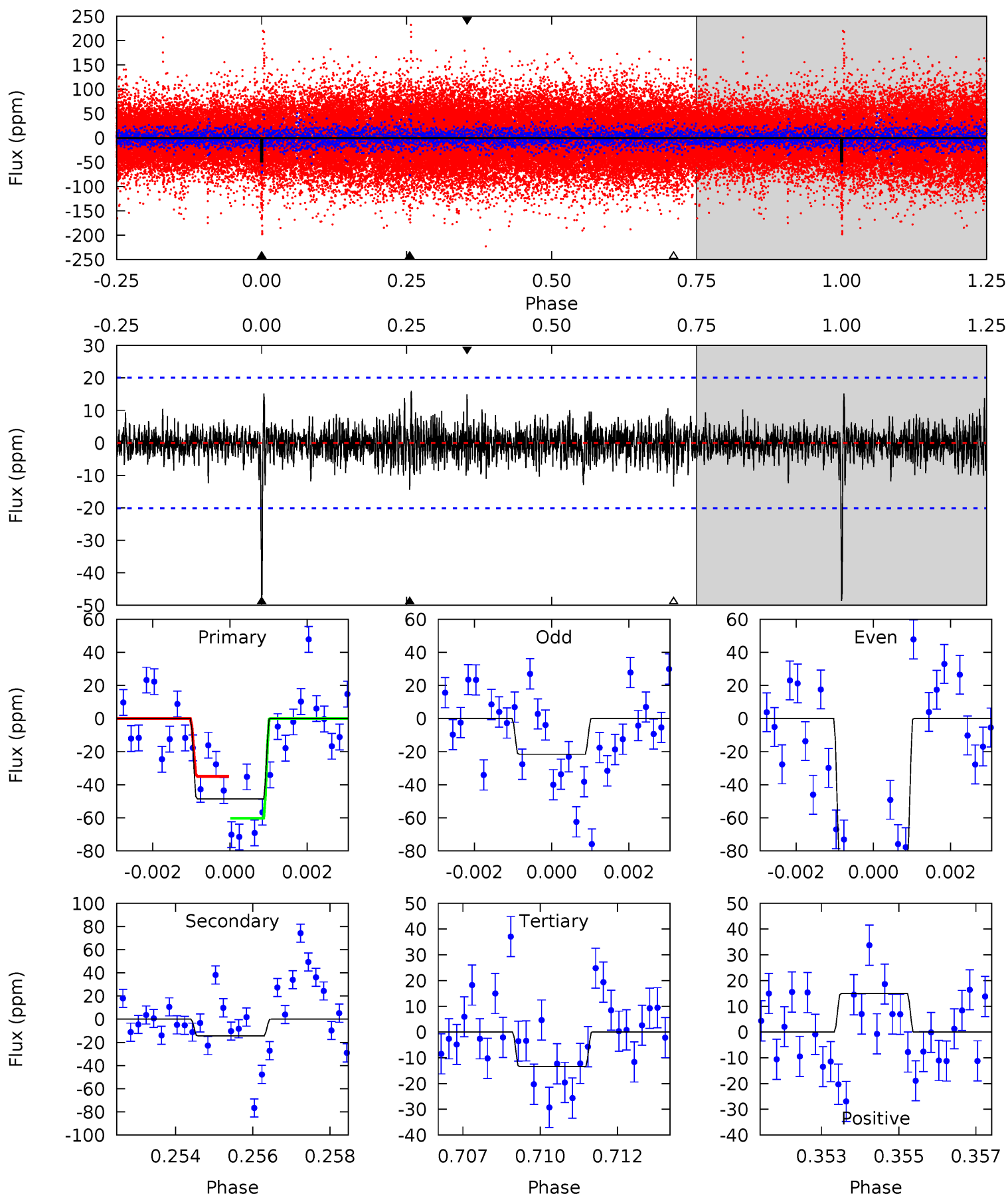
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.89	8.70	7.62	14.1	5.29	3.03	2.24	-0.73	-7.25	1.08	-5.44	1.67	0.85	0.62	0.06



Alt Model-Shift Uniqueness Test

005270419-01, P = 355.932182 Days, E = 28.192676 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	3.79	3.53	3.93	5.29	3.03	0.93	9.27	8.87	0.26	-0.15	8.89	1.81	0.25	3.34



Stellar Parameters For KIC 005270419

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5681^{+171}_{-188}	$4.418^{+0.084}_{-0.196}$	$0.200^{+0.200}_{-0.300}$	$1.027^{+0.282}_{-0.152}$	$1.007^{+0.111}_{-0.111}$	$1.310^{+0.570}_{-0.639}$
	+3%/-3%	+2%/-4%	+100%/-150%	+27%/-15%	+11%/-11%	+43%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005270419-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 4	$0.72^{+0.26}_{-0.26}$	362^{+26}_{-20}	5525^{+1333}_{-650}	35792^{+48037}_{-16142}
Alt.	-14 ± 4	$0.92^{+0.27}_{-0.26}$	362^{+26}_{-20}	4149^{+608}_{-375}	8771^{+9195}_{-3977}

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 005270419-01. **Kepler magnitude: 11.24.** Transit SNR 4.07

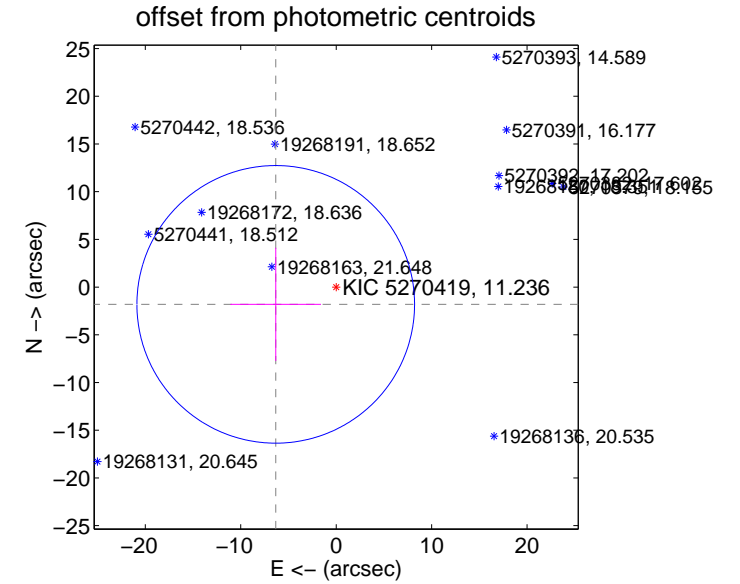
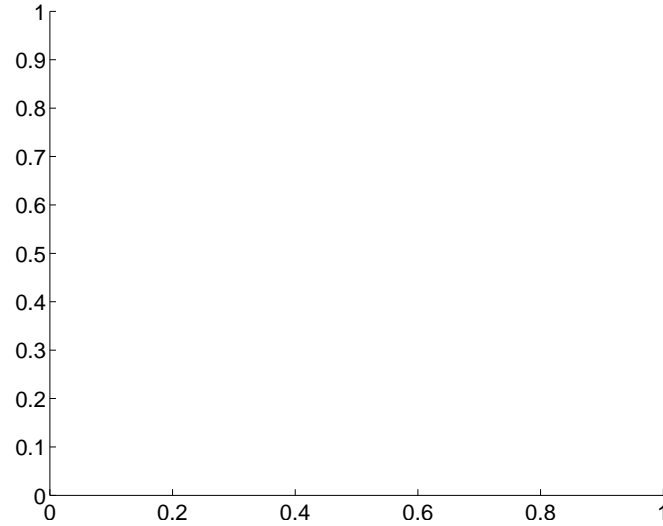
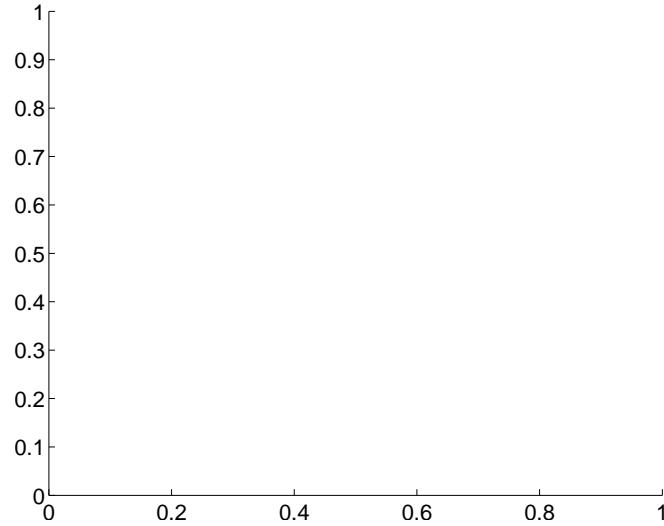
There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	6.59 ± 4.85	1.36	6.34 ± 4.75	-1.81 ± 5.93

There is no PRF-fit offset from OOT-fit

There is no PRF-fit offset from KIC

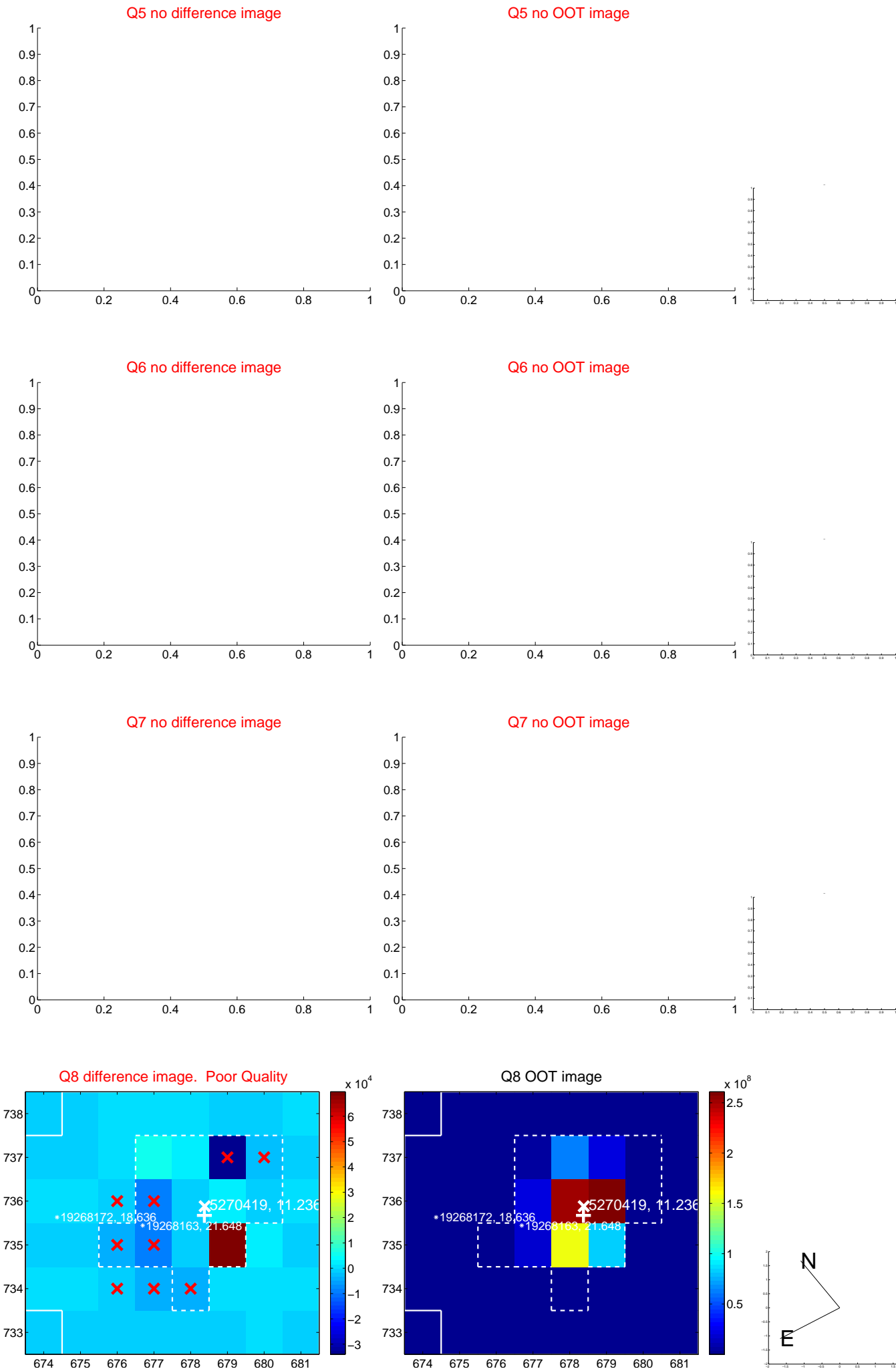


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



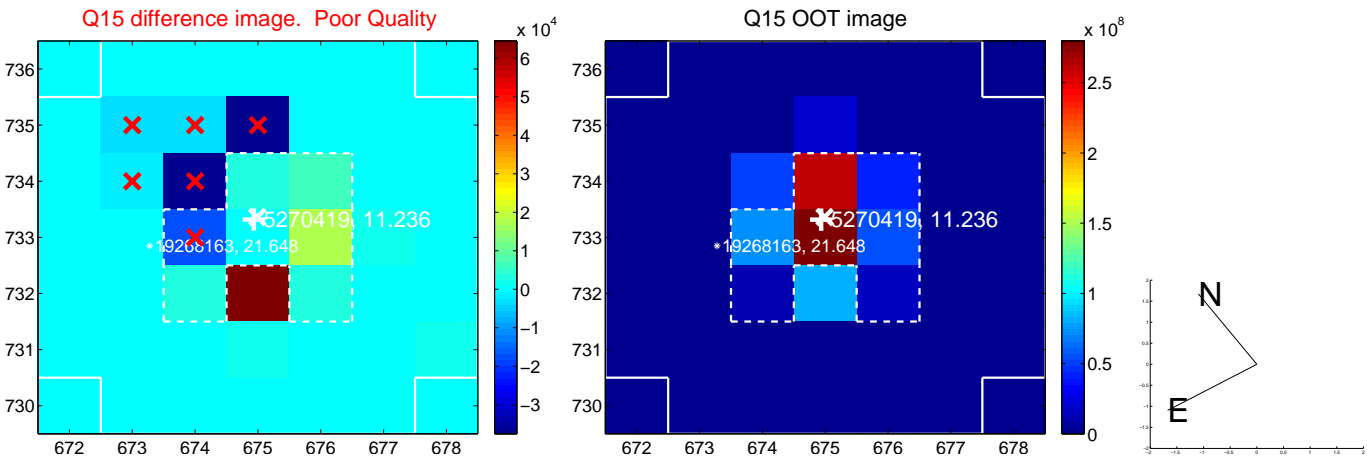
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



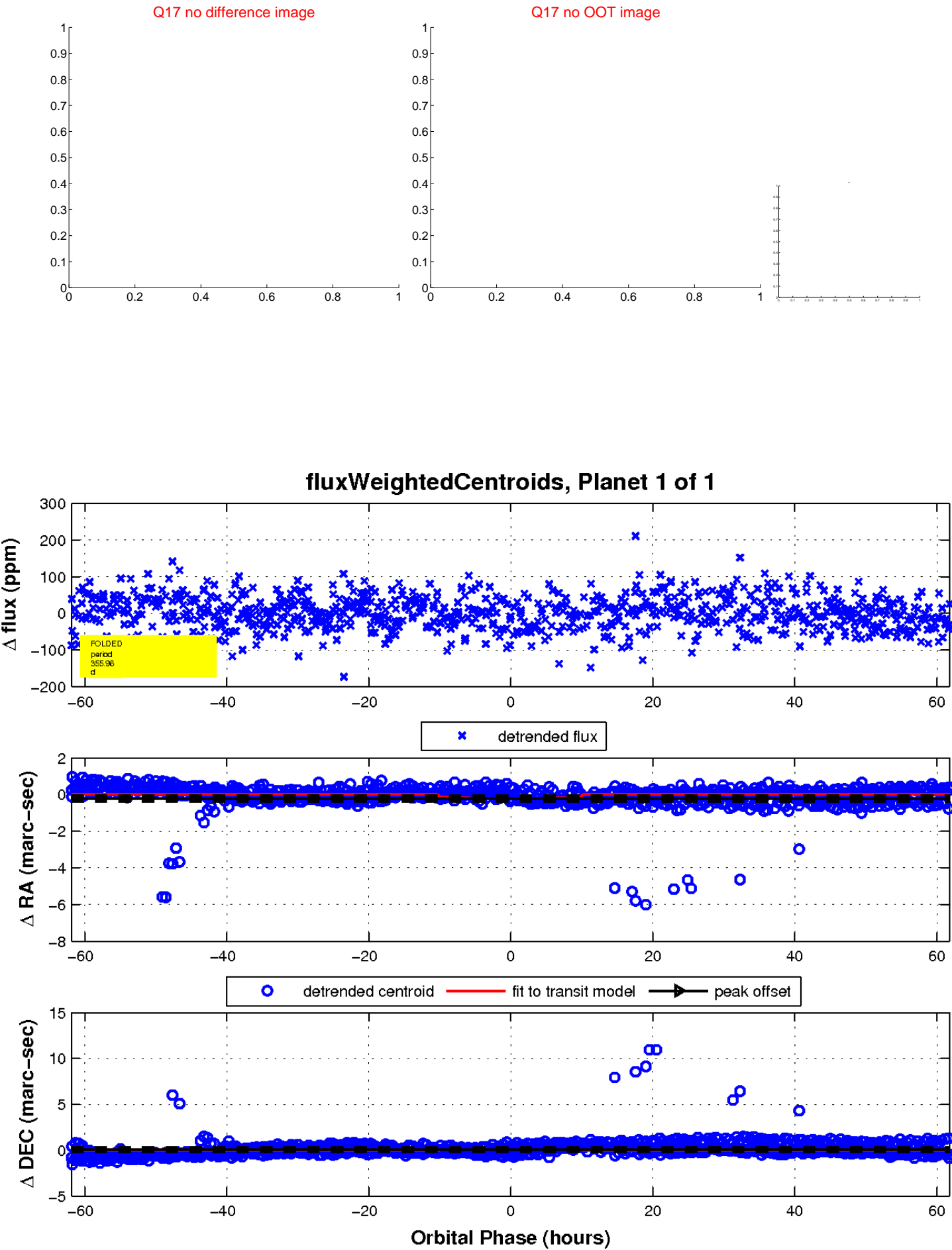
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

