

KIC 004355661

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})
004355661-01	OBS	No	645.487422	242.716659	376.6	16.814	7.1	7.5	1.63	6603	3.61	1.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004355661-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

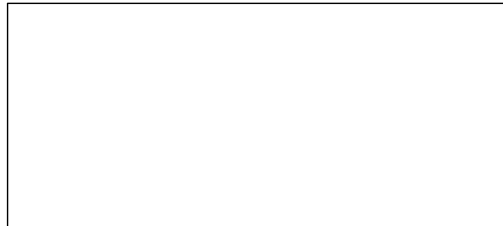
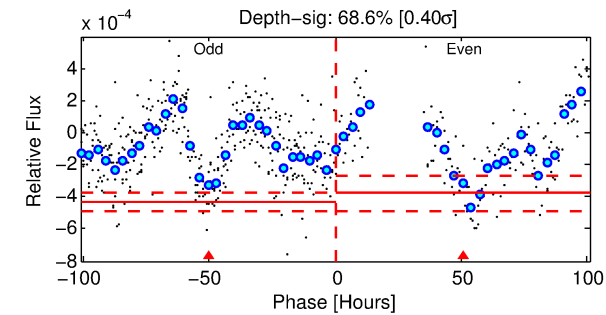
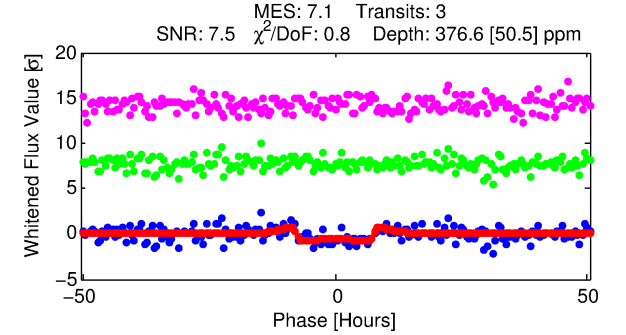
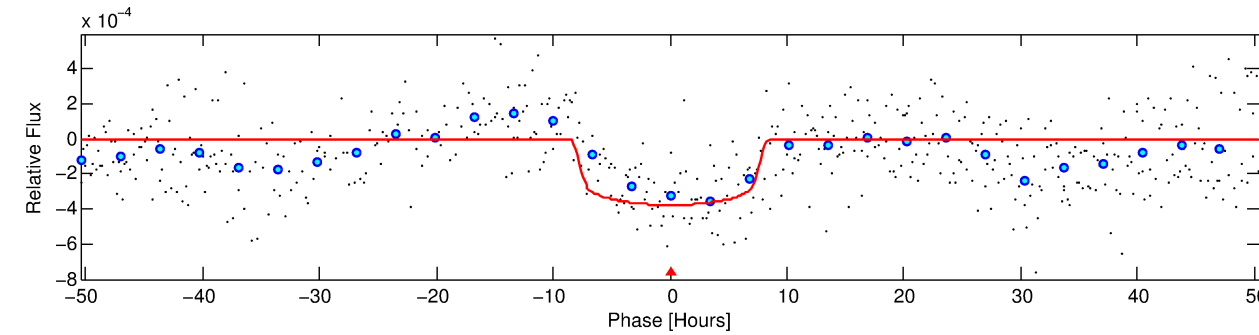
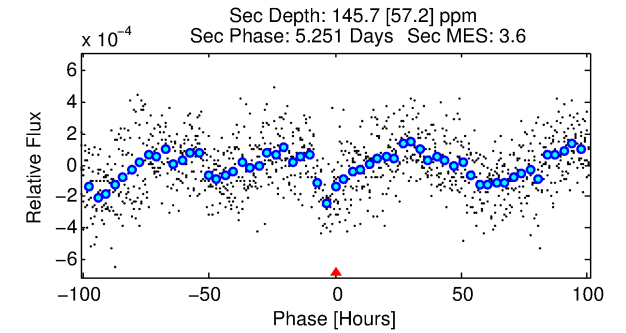
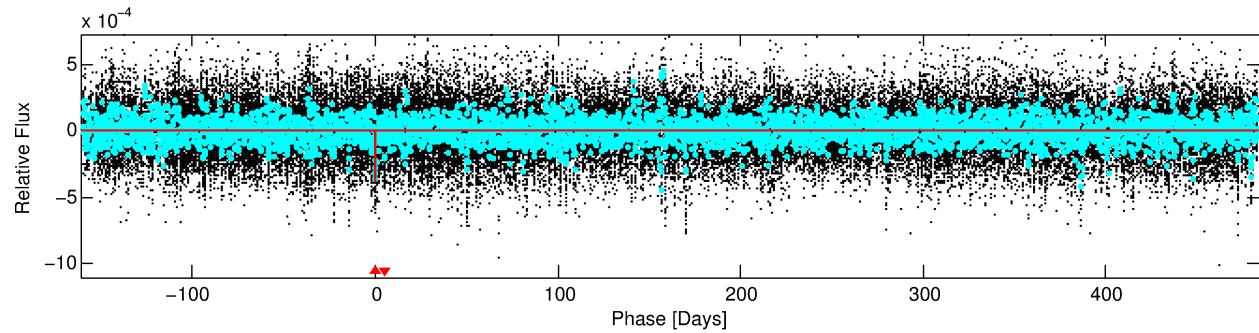
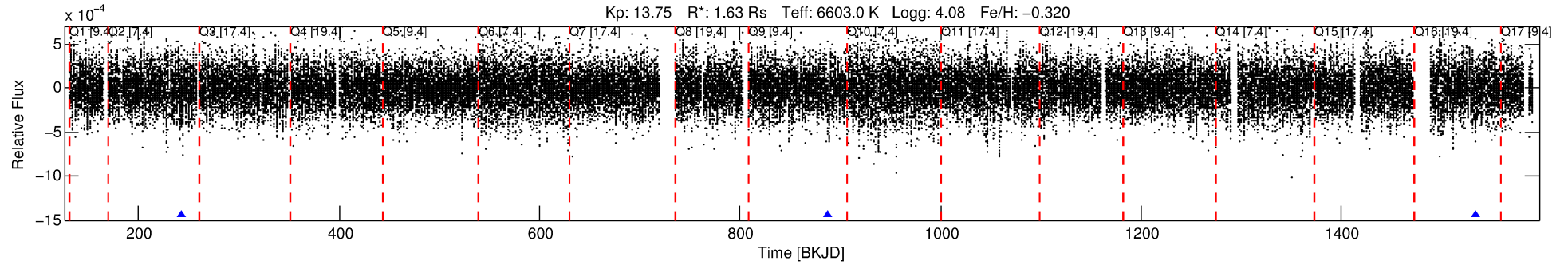
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004355661-01

No Significant Match Found

DV One-Page Summary

KIC: 4355661 Candidate: 1 of 1 Period: 645.487 d



DV Fit Results:

Period = 645.48742 [0.00987] d
Epoch = 242.7167 [0.0128] BKJD
Rp/R* = 0.0203 [0.0019]
a/R* = 155.50 [48.05]
b = 0.87 [0.09]
Seff = 1.90 [0.88]
Teq = 299 [35] K
Rp = 3.61 [1.12] Re
a = 1.5395 [0.4298] AU
Ag = 14611.68 [9057.94] [1.61σ]
Teffp = 5089 [578] K [8.27σ]

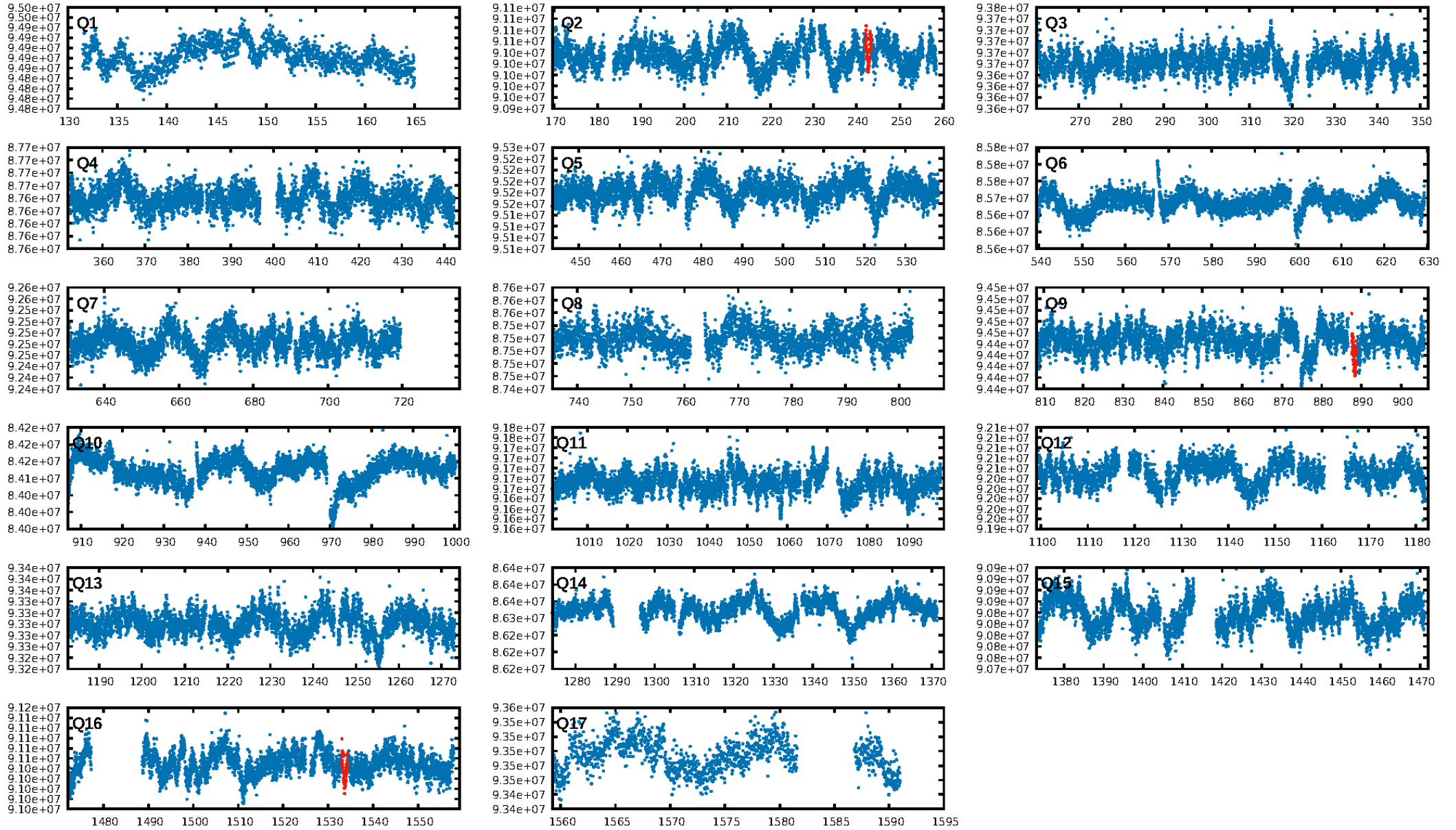
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 67.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.02e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.851
Centroid-sig: 2.2%
Centroid-so: 1.119 arcsec [1.41σ]
OotOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-rm: N/A
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

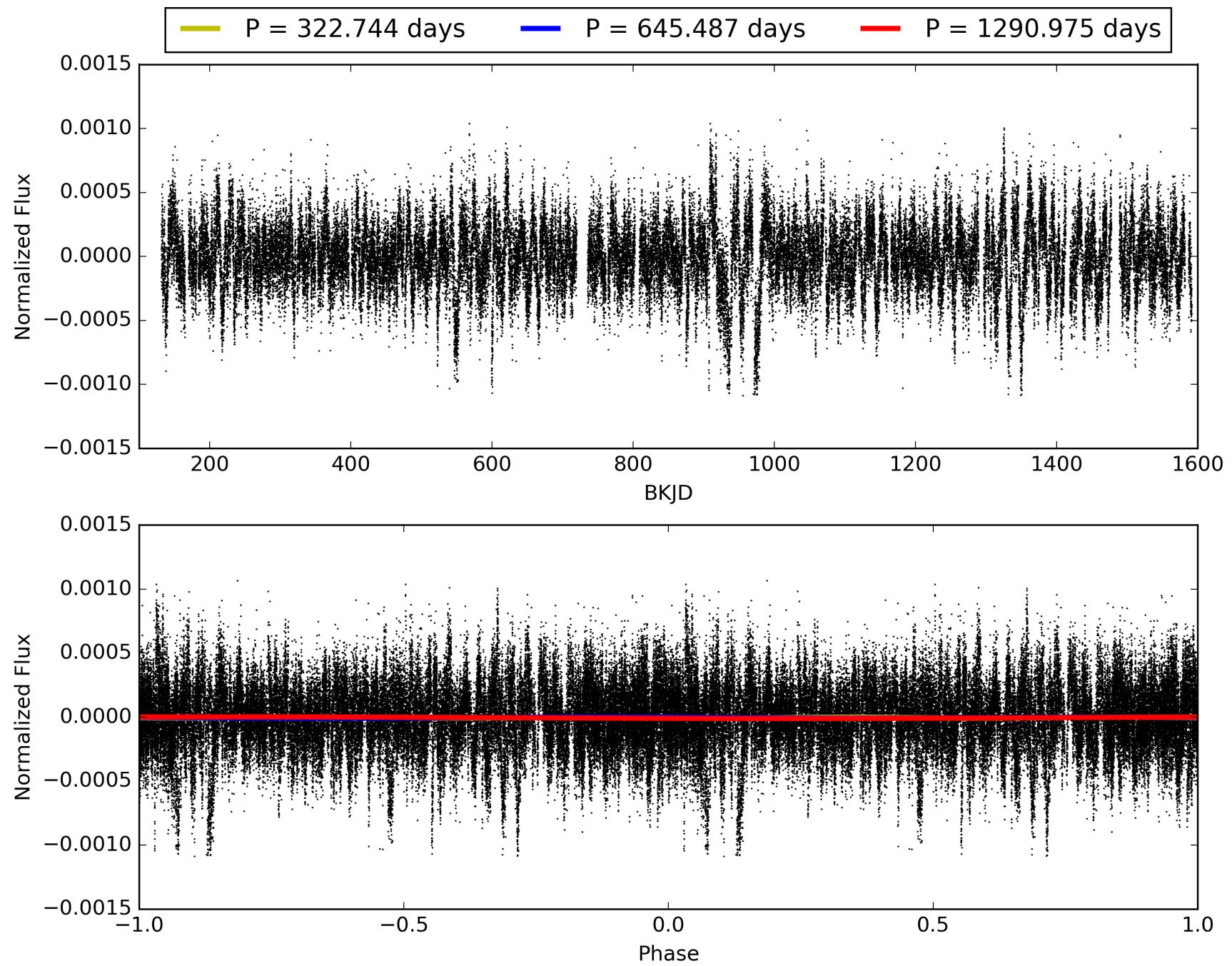
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:01:34 Z

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

TCE 004355661-01, PDC Light Curves

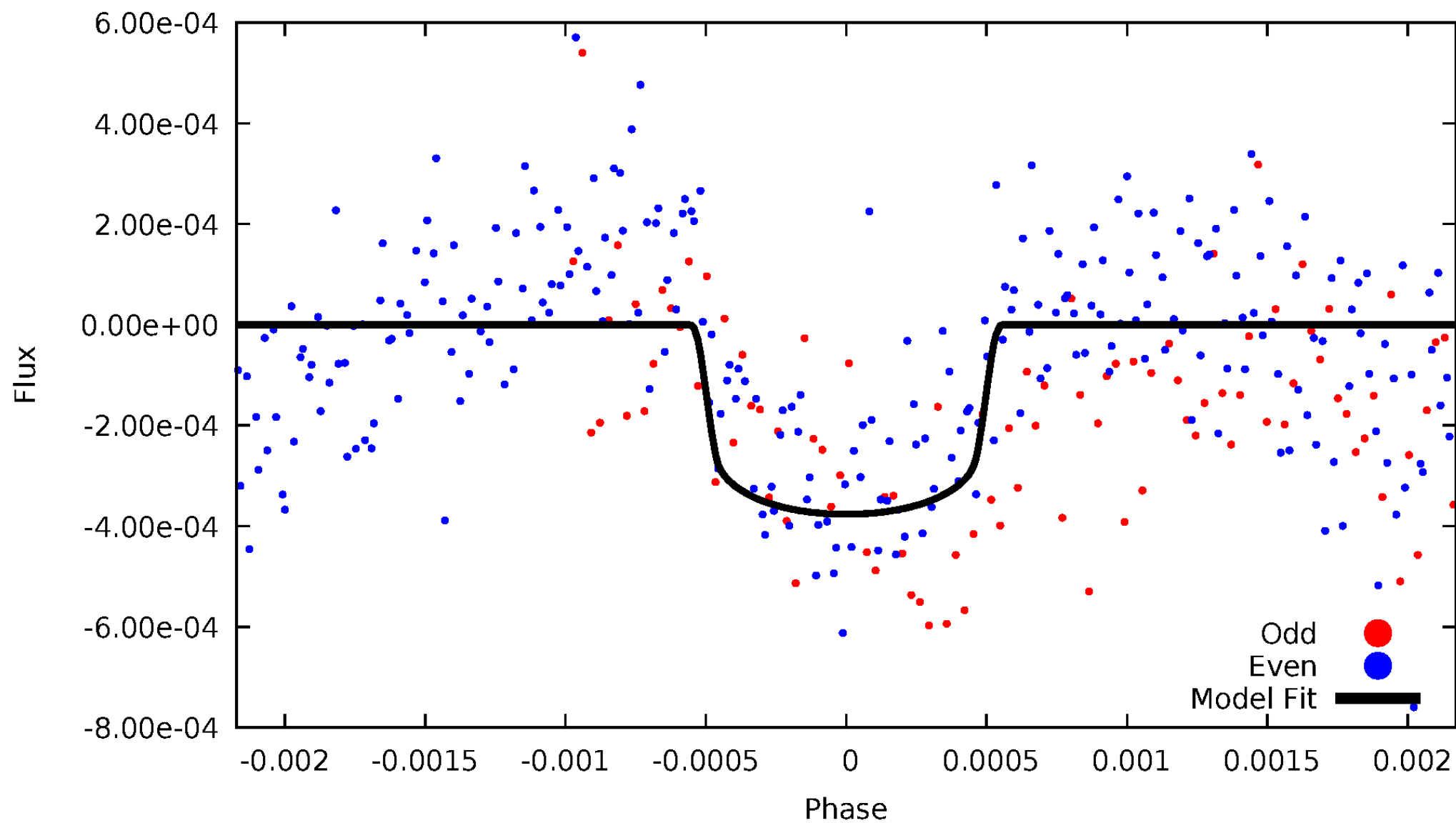


TCE 004355661-01



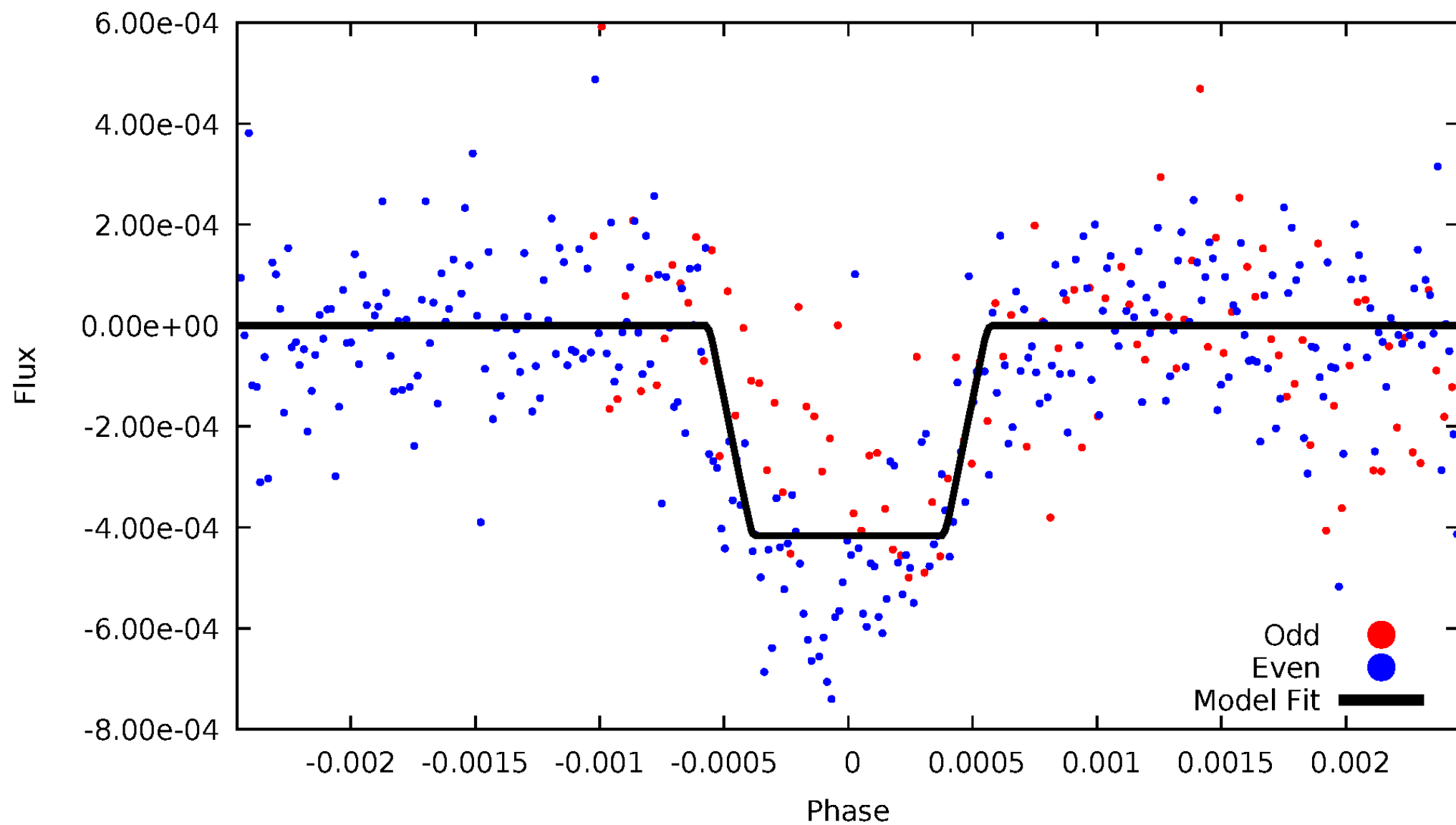
DV Odd/Even

TCE 004355661-01

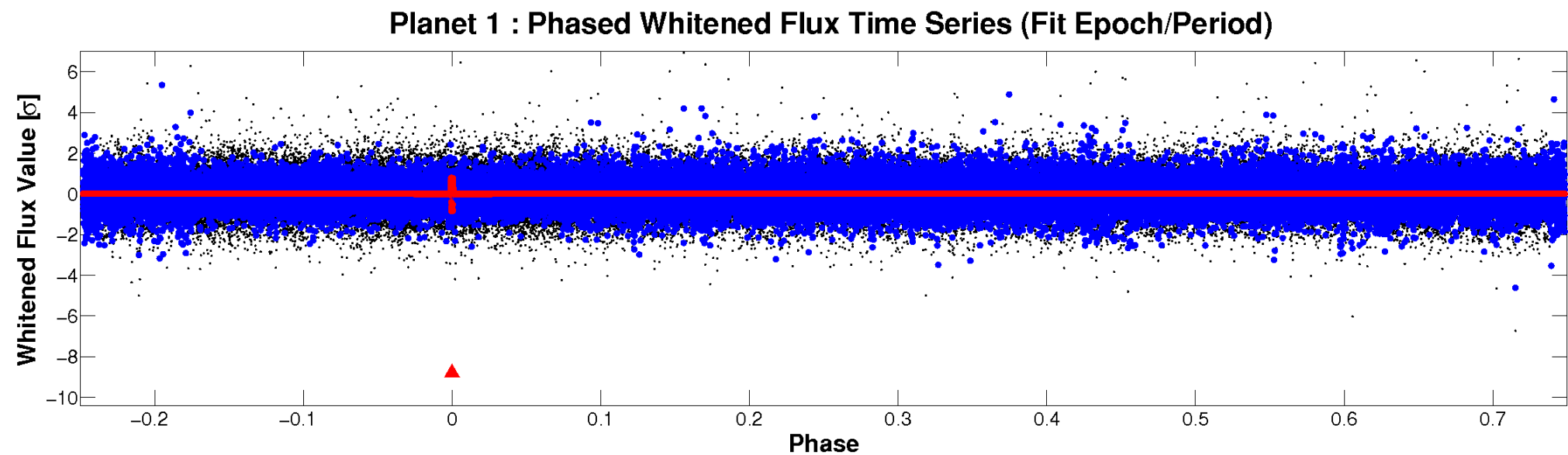
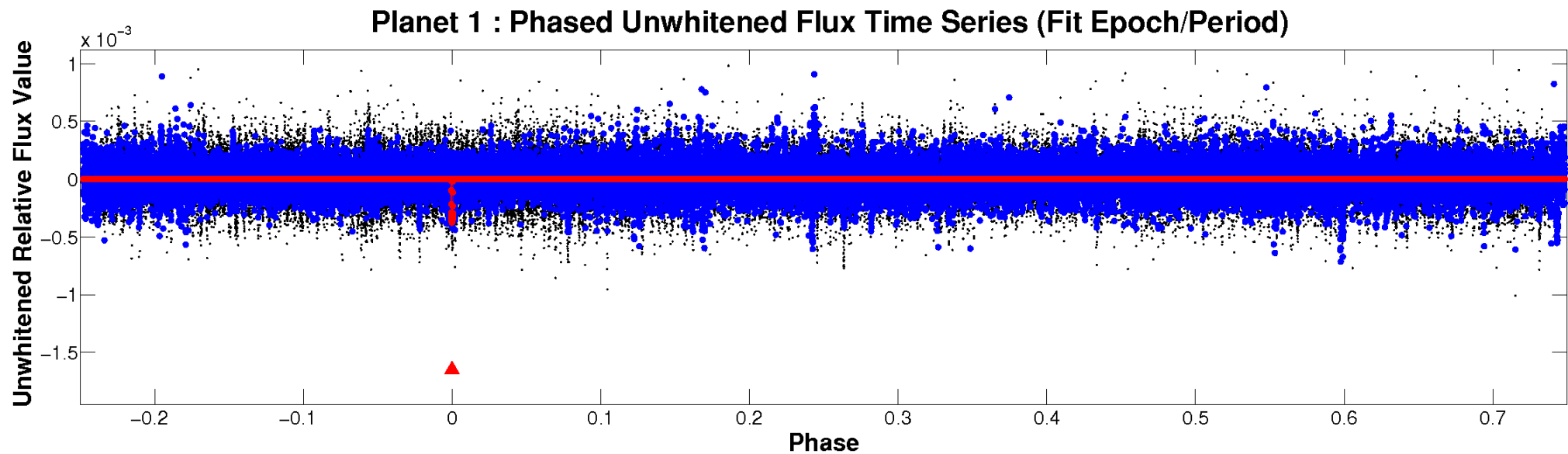


ALT Odd/Even

TCE 004355661-01

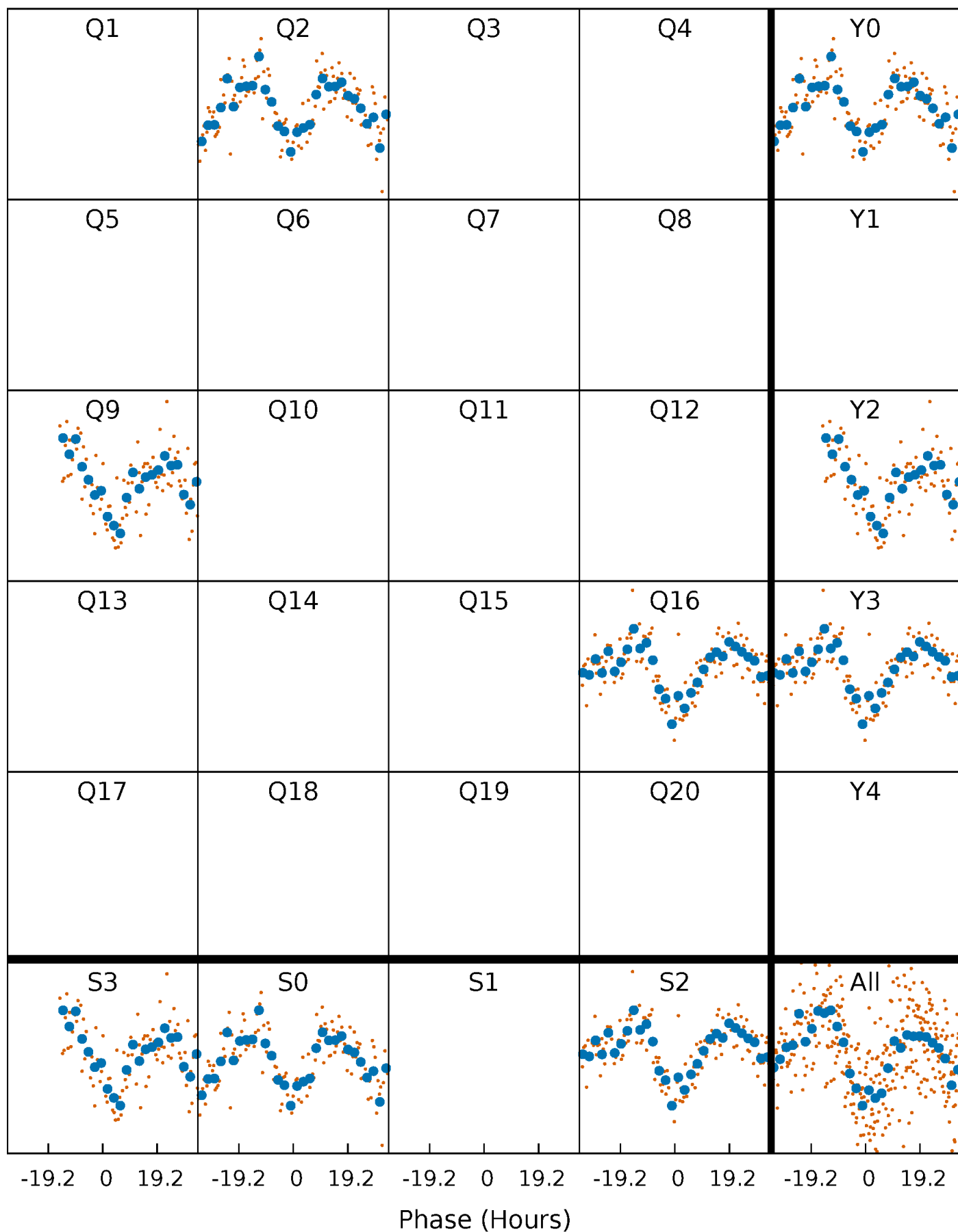


Non-Whitened Vs. Whitened Light Curve



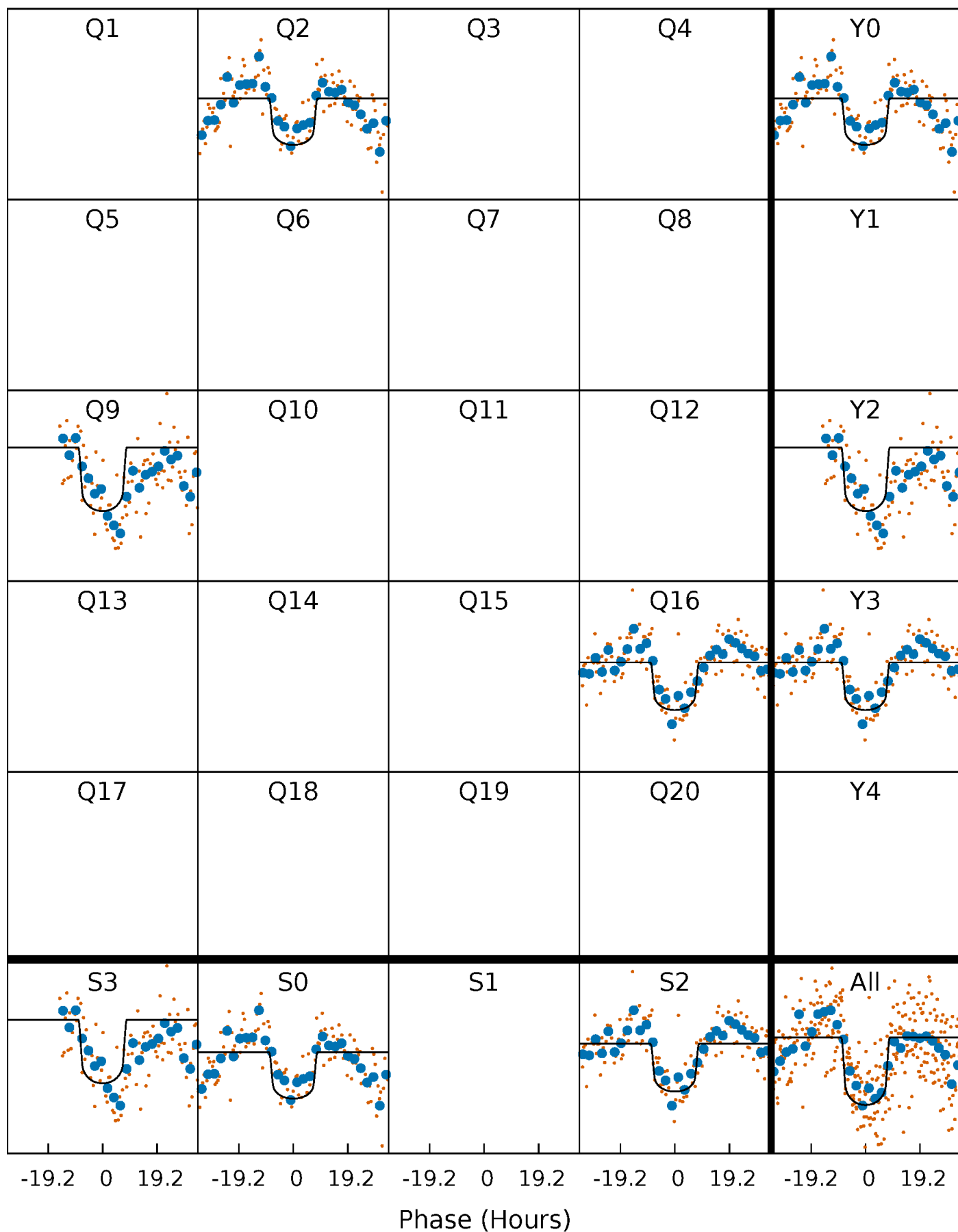
PDC Quarter-Phased Transit Curves

TCE 004355661-01 P=645.487422 Days $T_0=242.716659$ (BKJD)



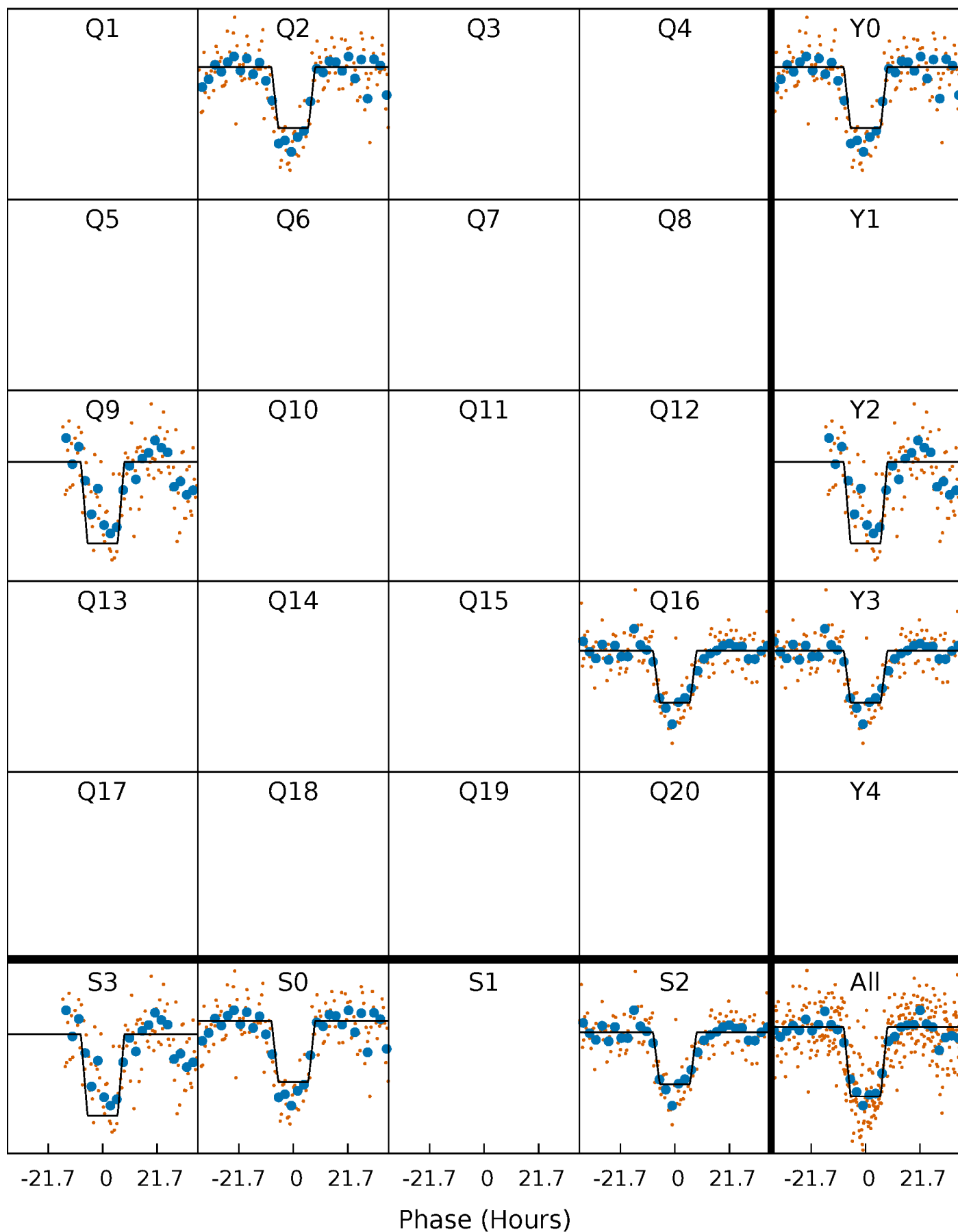
DV Quarter-Phased Transit Curves

TCE 004355661-01 P=645.487422 Days $T_0=242.716659$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

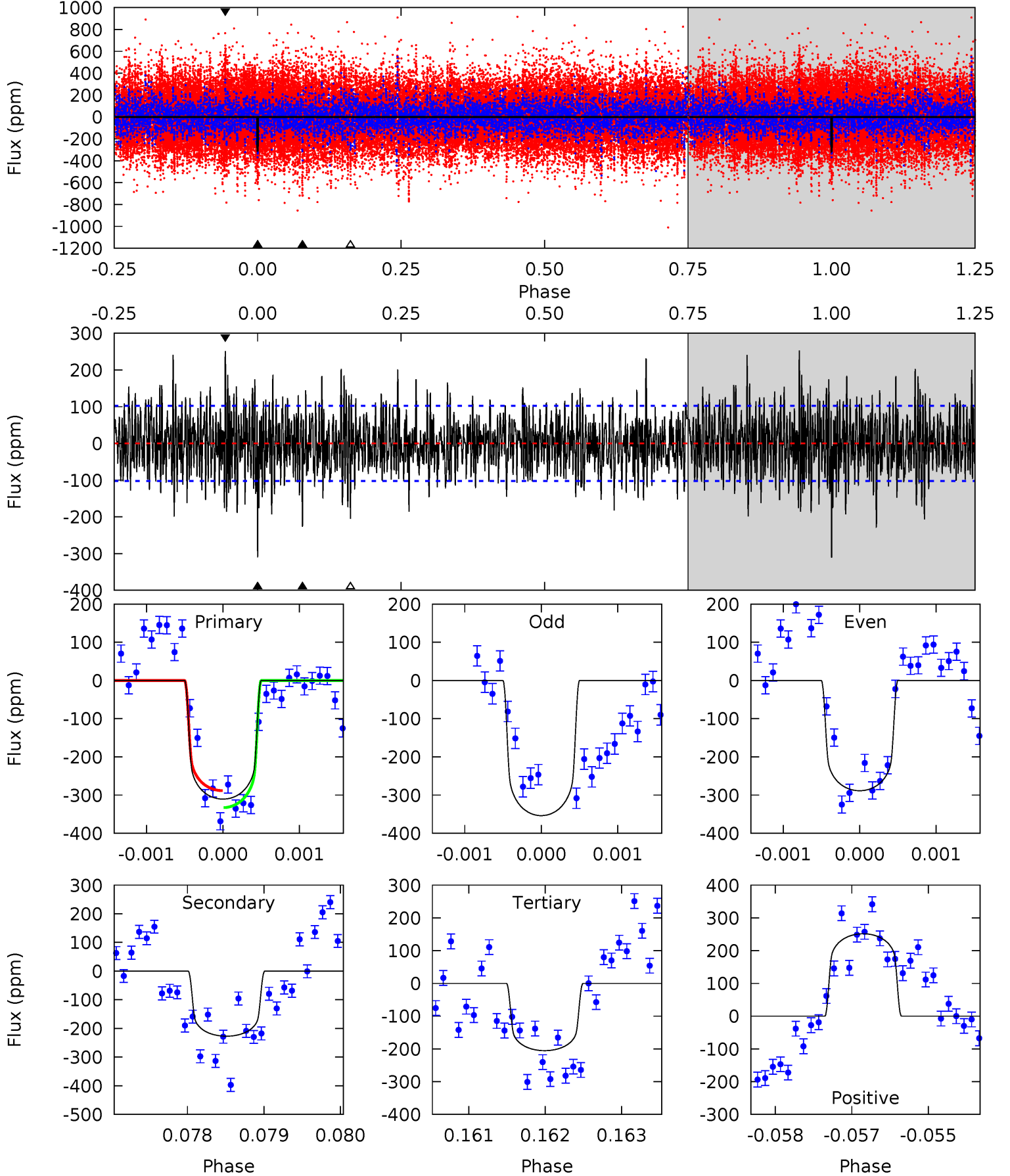
TCE 004355661-01 P=645.489349 Days $T_0=242.748284$ (BKJD)



DV Model-Shift Uniqueness Test

004355661-01, P = 645.487422 Days, E = 242.716659 Days

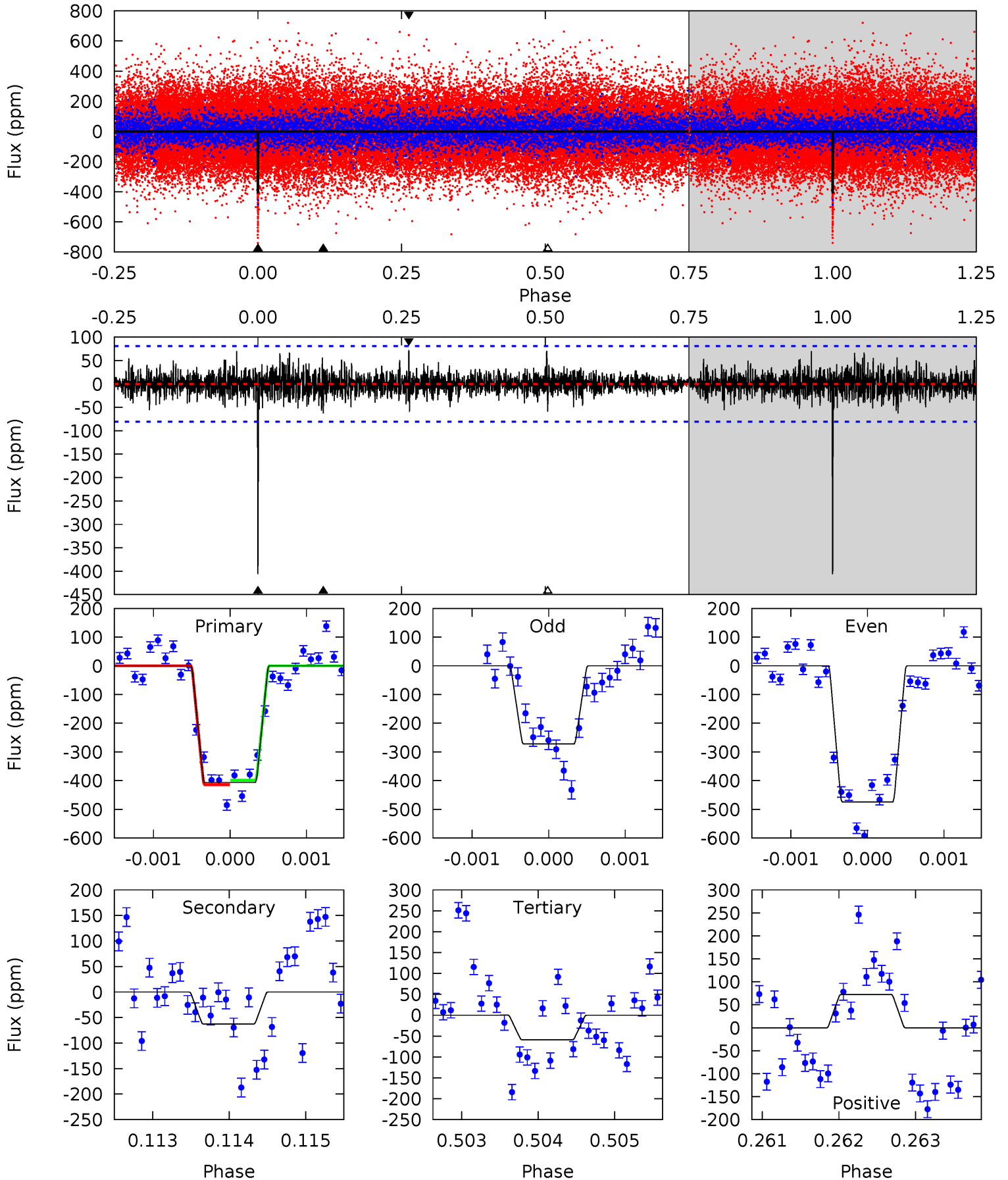
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	12.1	10.9	13.4	5.43	3.26	3.49	5.59	3.14	1.16	-1.29	1.64	0.95	0.45	1.18



Alt Model-Shift Uniqueness Test

004355661-01, P = 645.489349 Days, E = 242.748284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	4.22	3.96	4.85	5.43	3.26	1.12	23.3	22.4	0.26	-0.63	6.36	0.91	0.15	0.52



Stellar Parameters For KIC 004355661

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6603^{+161}_{-221}	$4.083^{+0.258}_{-0.172}$	$-0.320^{+0.250}_{-0.300}$	$1.626^{+0.480}_{-0.480}$	$1.167^{+0.196}_{-0.160}$	$0.382^{+0.616}_{-0.184}$
	+2%/-3%	+6%/-4%	+78%/-94%	+30%/-30%	+17%/-14%	+161%/-48%
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 004355661-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-227 ± 19	$3.57^{+0.70}_{-0.67}$	415^{+34}_{-34}	5688^{+334}_{-315}	23220^{+12228}_{-6619}
Alt.	-63 ± 15	$3.60^{+0.69}_{-0.67}$	415^{+33}_{-34}	4311^{+275}_{-272}	6165^{+3638}_{-2119}

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 $A_{obs} \gg 1.0$

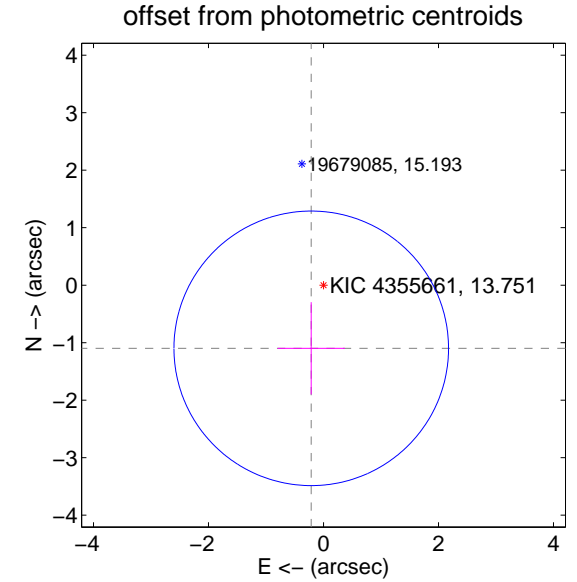
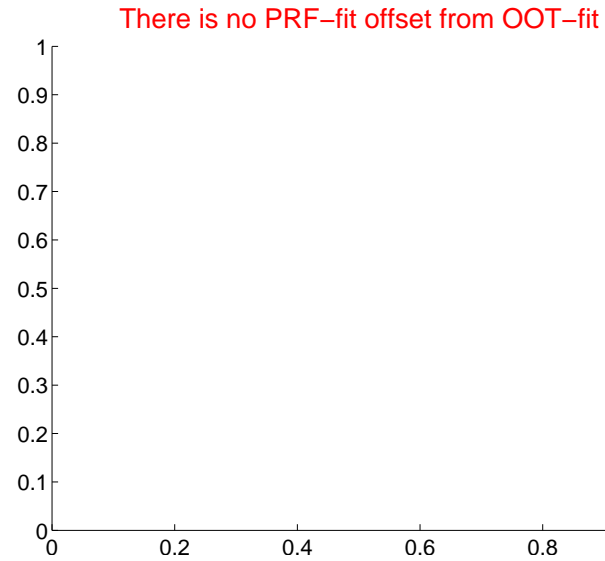
DV Centroid Data

Supplemental centroid analysis for 004355661-01. Kepler magnitude: 13.75. Transit SNR 7.53

There are 0 quarters with good PRF difference image offsets

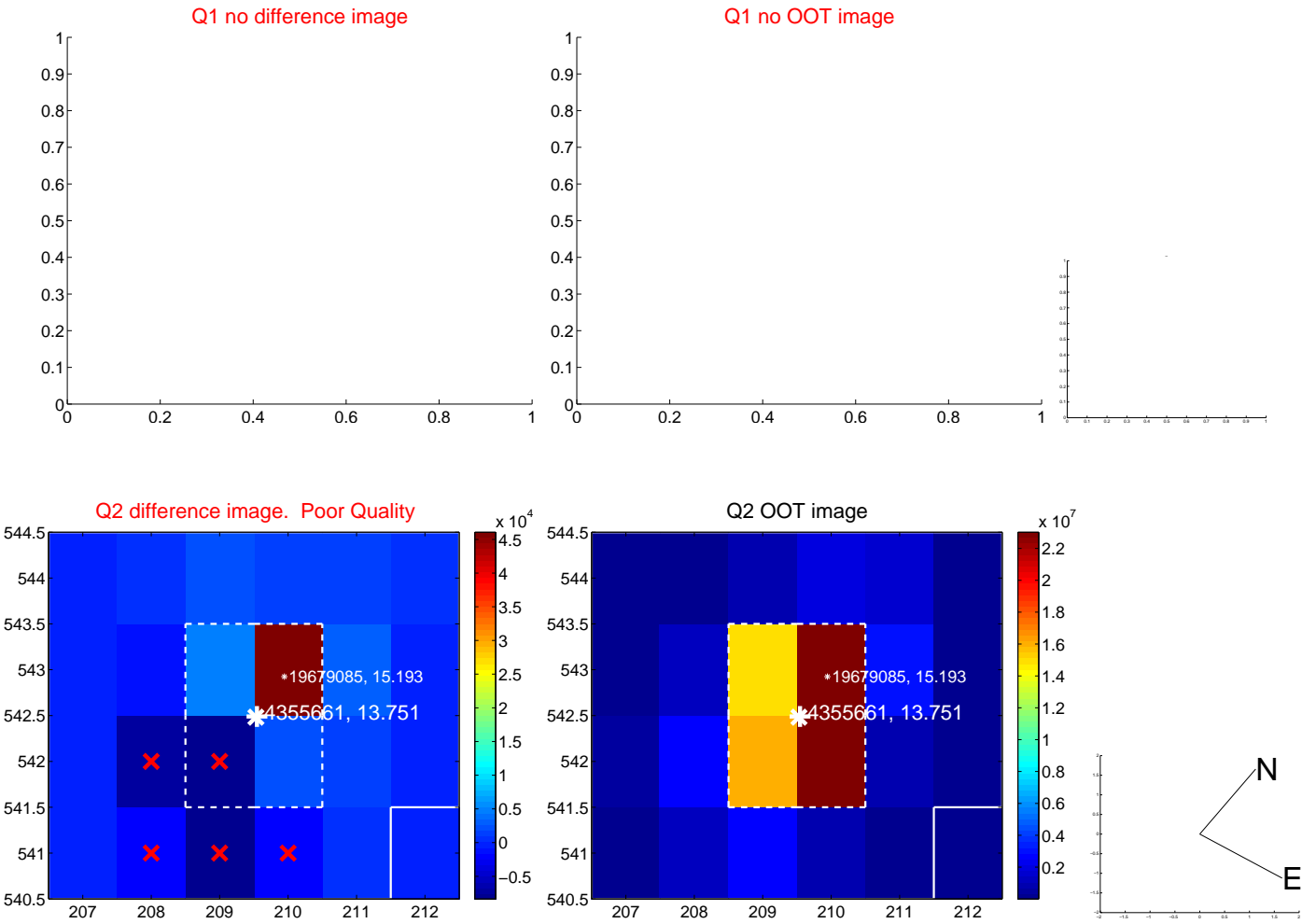
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.12 ± 0.80	1.41	0.21 ± 0.58	-1.10 ± 0.80



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.



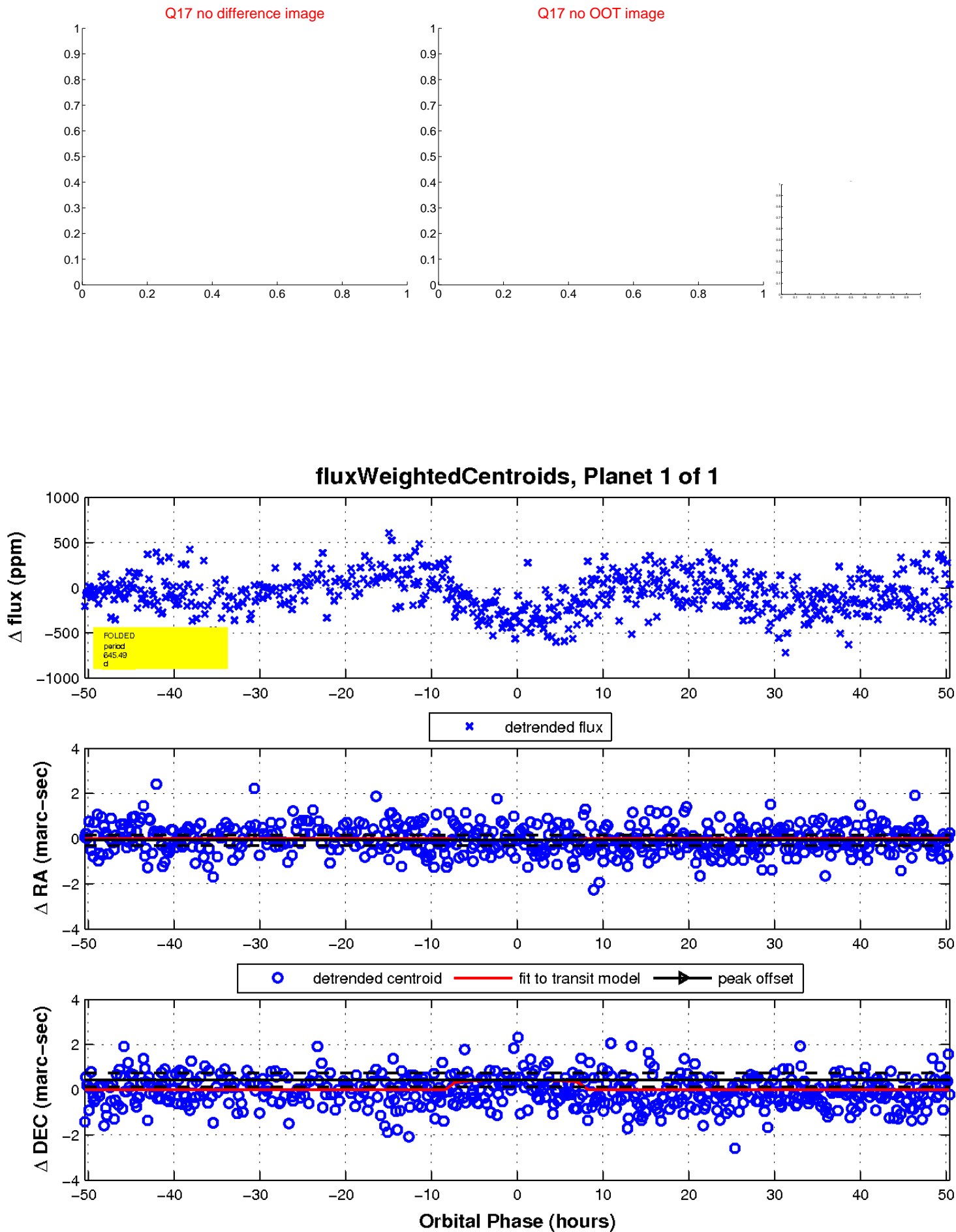
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

