

KIC 007816334

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})
007816334-01	OBS	No	219.860268	284.678957	581.4	22.179	11.8	11.4	1.00	5749	2.45	2.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007816334-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—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.

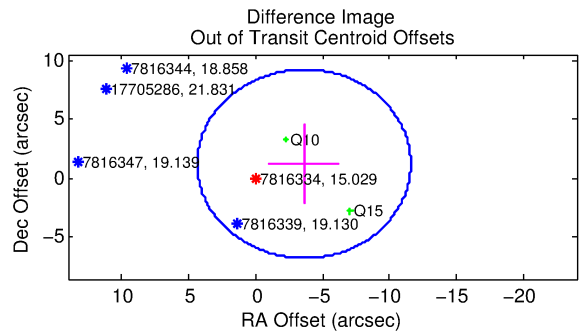
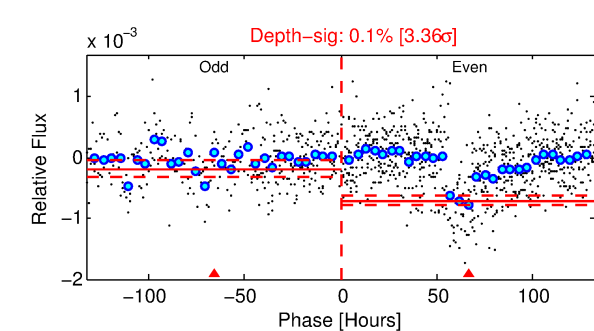
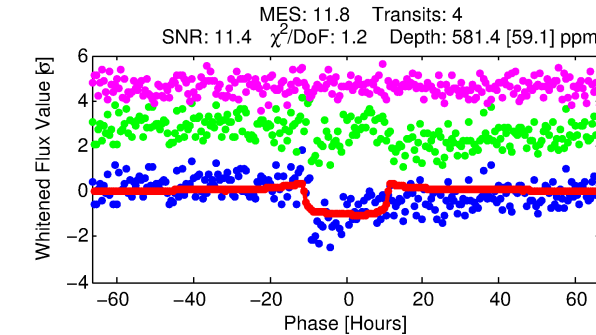
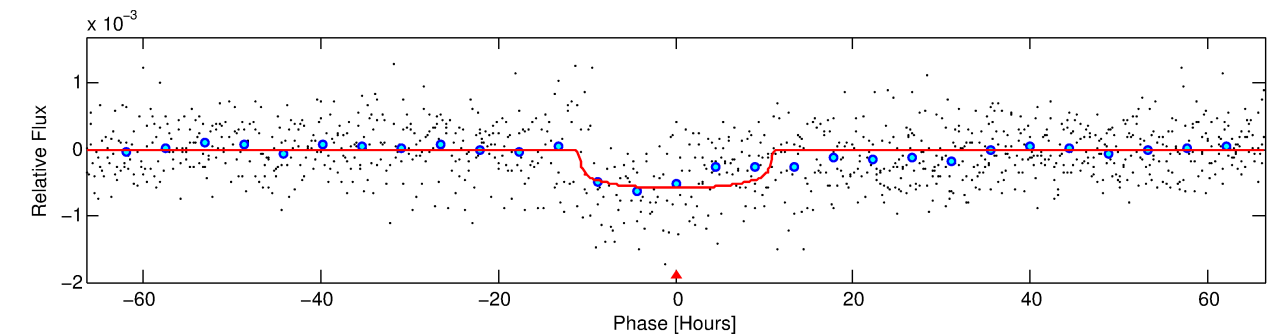
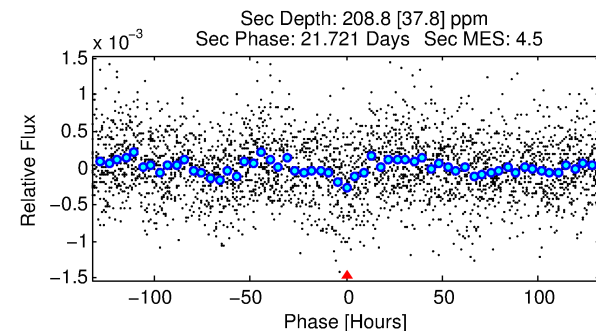
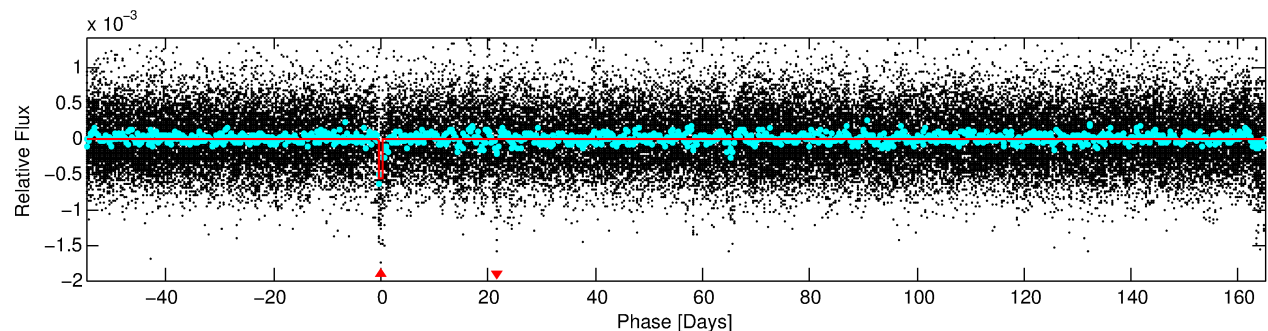
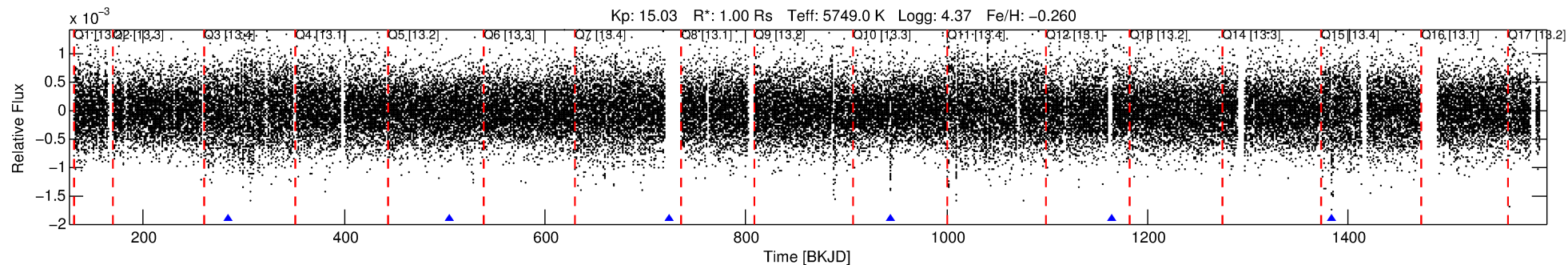
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007816334-01

No Significant Match Found

DV One-Page Summary

KIC: 7816334 Candidate: 1 of 1 Period: 219.860 d



DV Fit Results:

Period = 219.86027 [0.00708] d
Epoch = 284.6790 [0.0208] BKJD
Rp/R* = 0.0224 [0.0103]
a/R* = 70.42 [145.43]
b = 0.43 [4.00]
Seff = 2.13 [0.78]
Teq = 308 [28] K
Rp = 2.45 [1.31] Re
a = 0.6778 [0.1611] AU
Ag = 8818.29 [8812.99] [1.00σ]
Teffp = 4618 [1088] K [3.96σ]

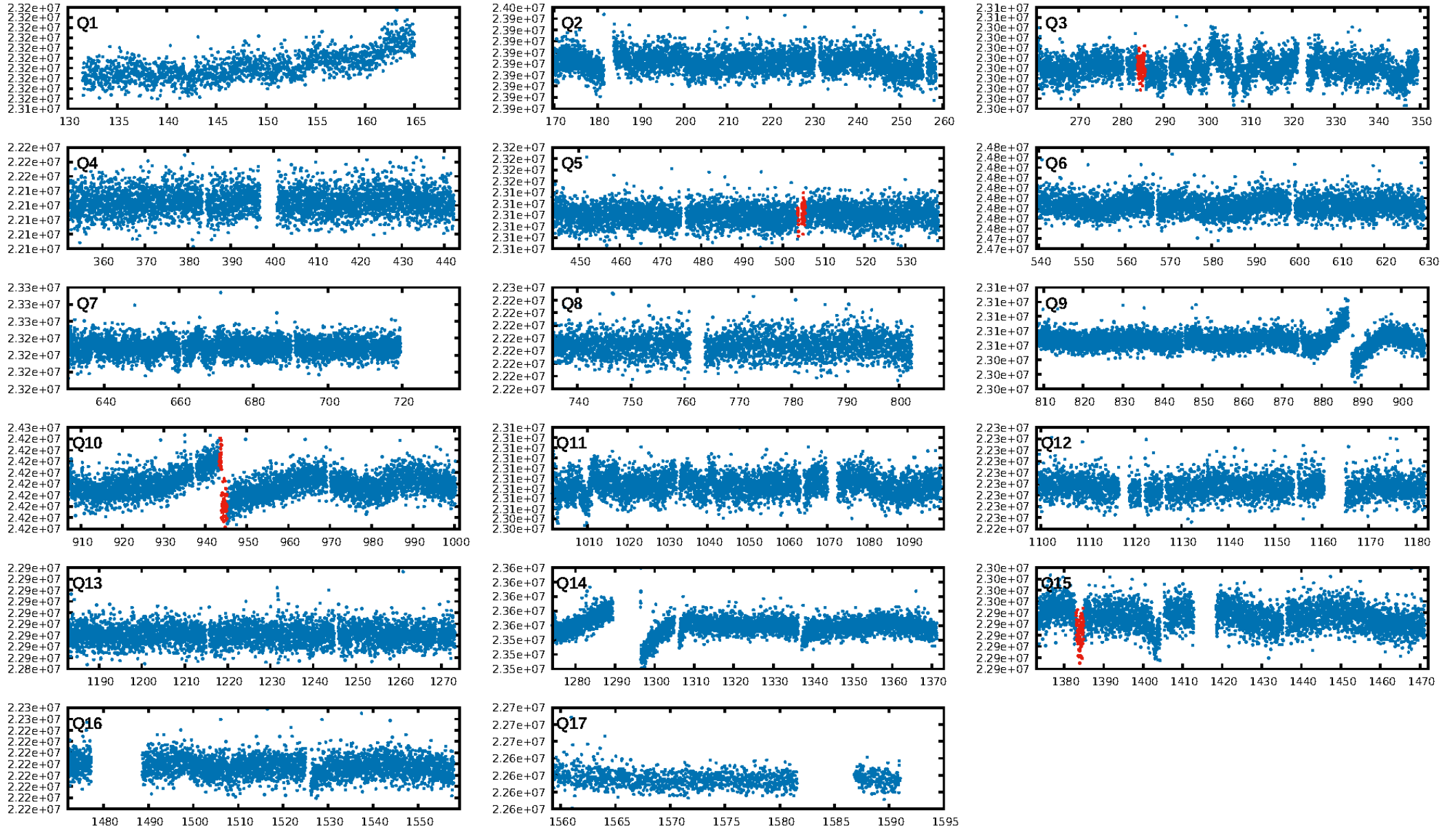
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 94.7%
Bootstrap-pfa: 2.18e-17
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 71
Centroid-sig: 4.7%
Centroid-so: 2.341 arcsec [1.88σ]
OotOffset-rm: 3.831 arcsec [1.44σ]
KicOffset-rm: 3.954 arcsec [1.49σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

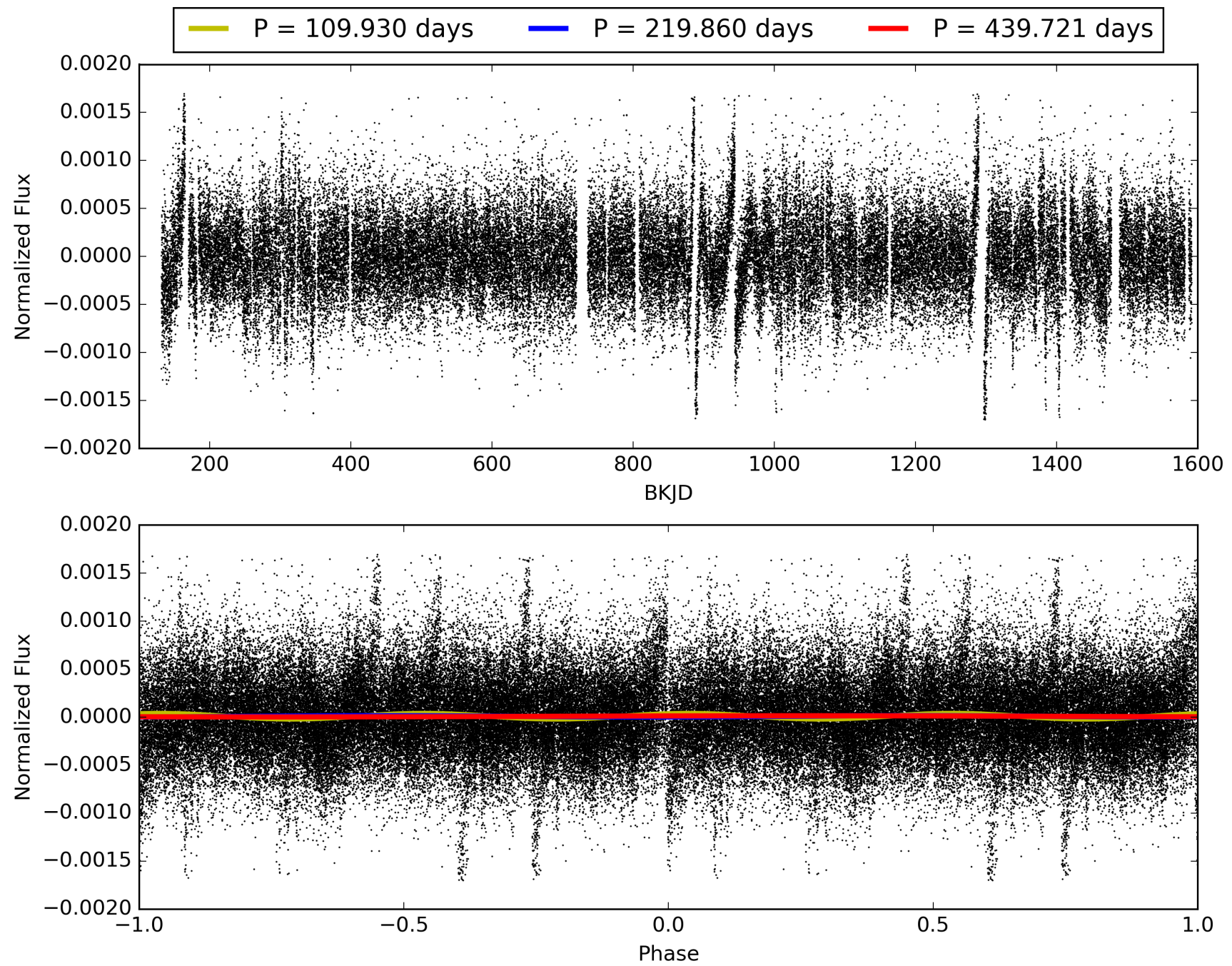
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:43:23 Z

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

TCE 007816334-01, PDC Light Curves

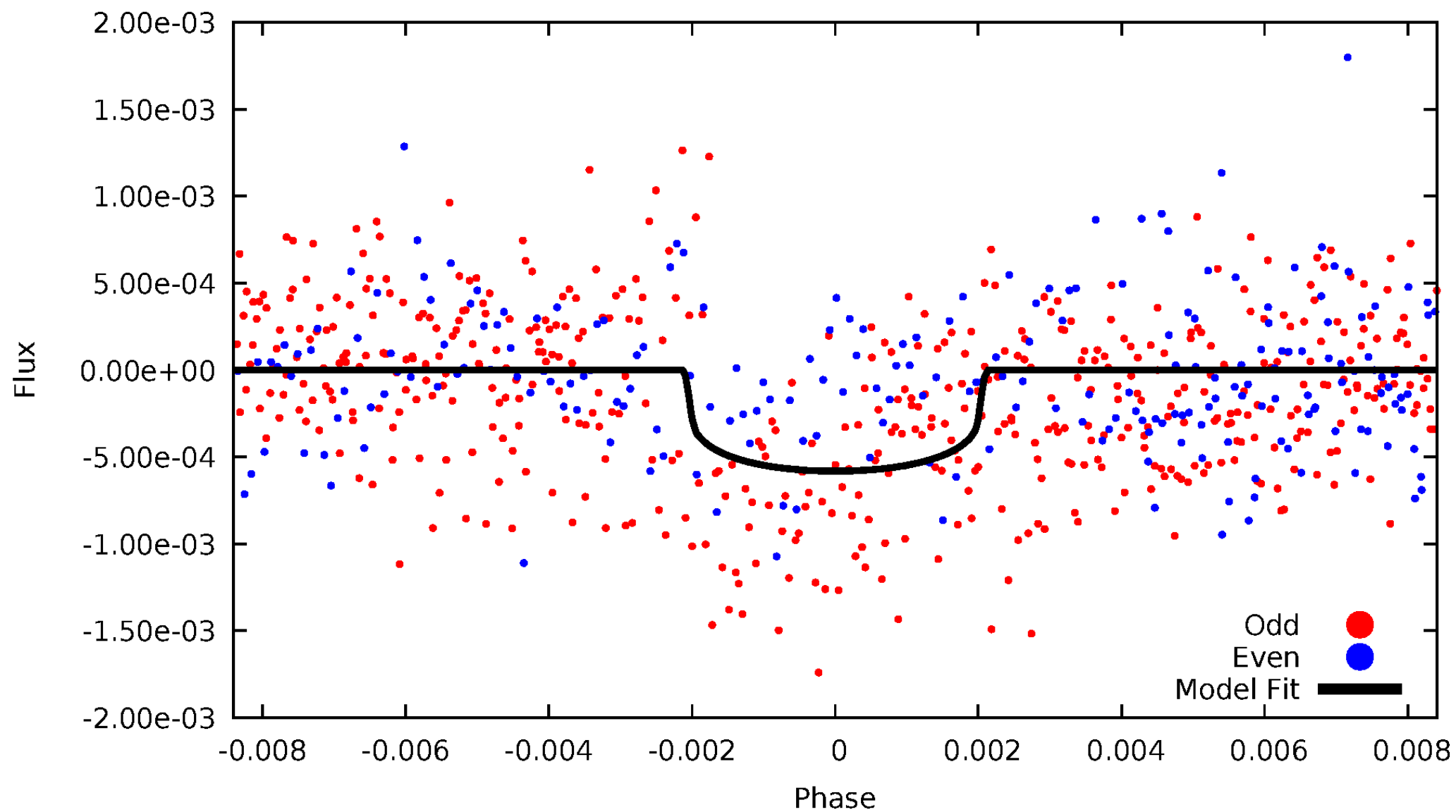


TCE 007816334-01



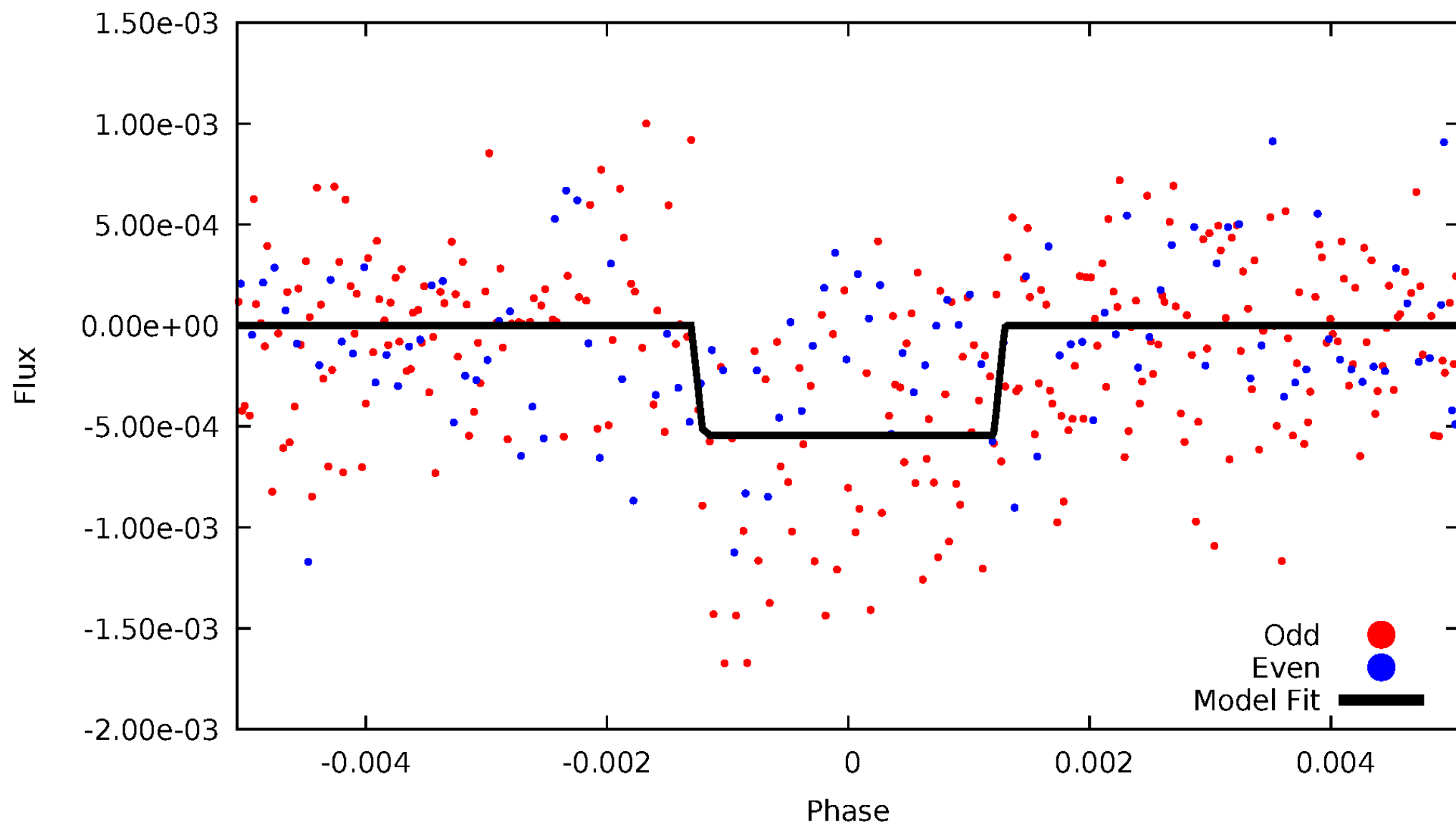
DV Odd/Even

TCE 007816334-01



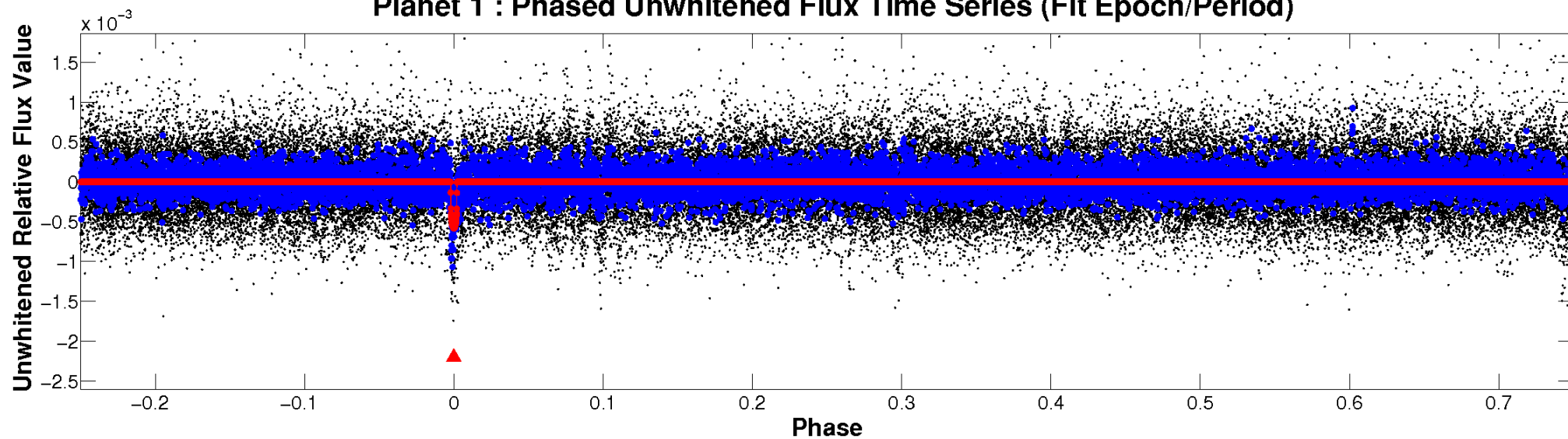
ALT Odd/Even

TCE 007816334-01

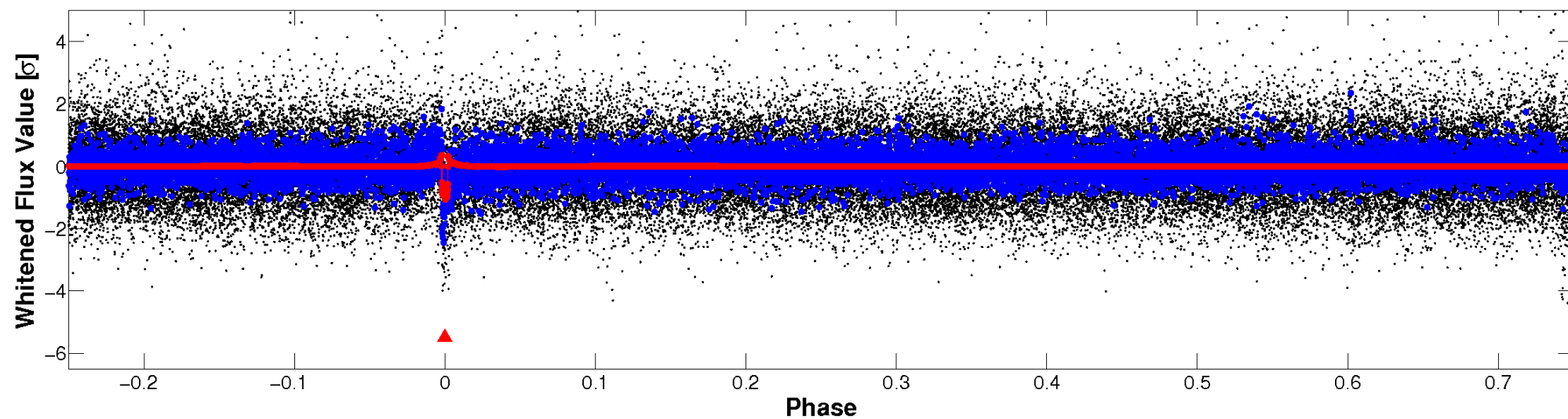


Non-Whitened Vs. Whitened Light Curve

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



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



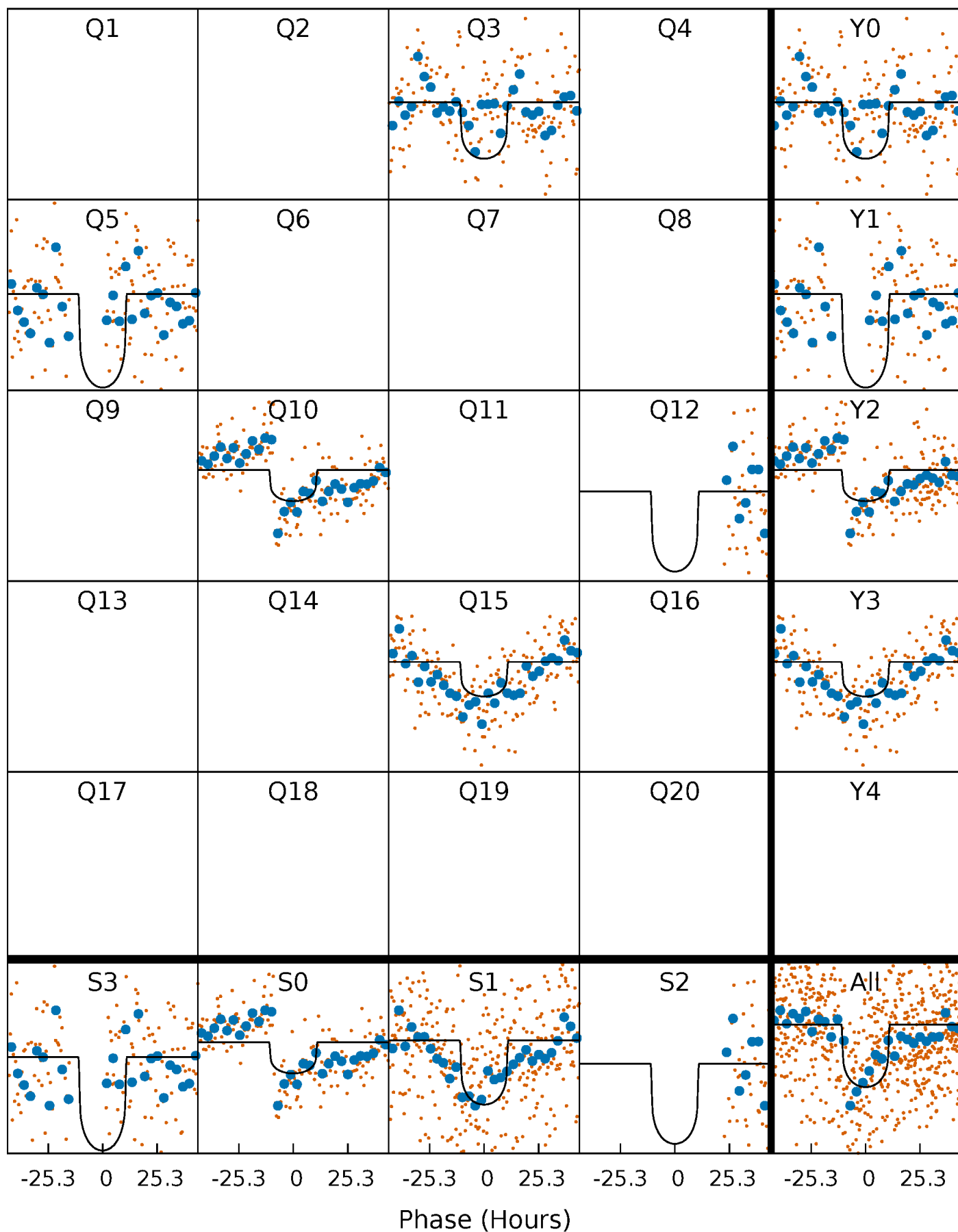
PDC Quarter-Phased Transit Curves

TCE 007816334-01 P=219.860268 Days $T_0=284.678958$ (BKJD)



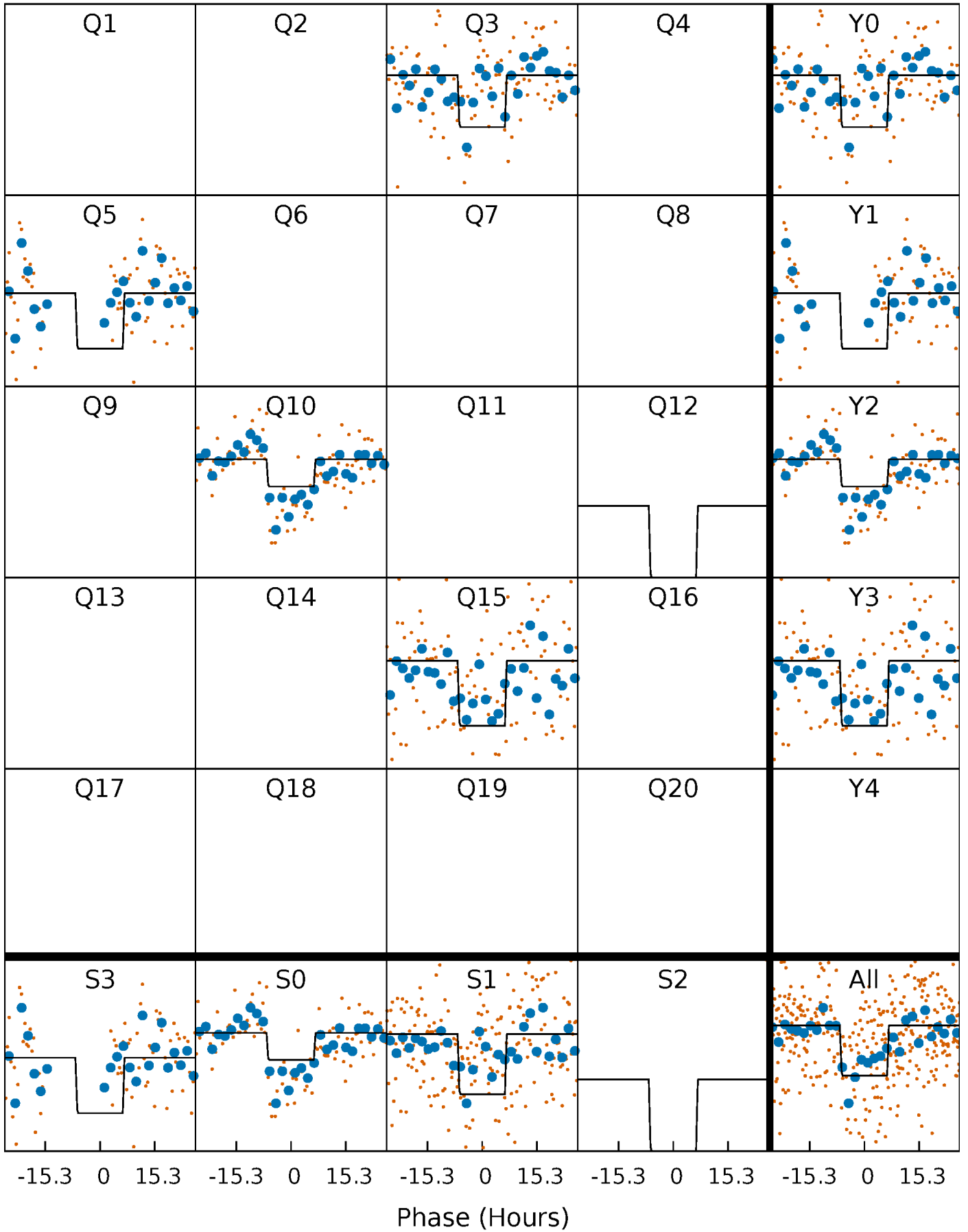
DV Quarter-Phased Transit Curves

TCE 007816334-01 P=219.860268 Days $T_0=284.678958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

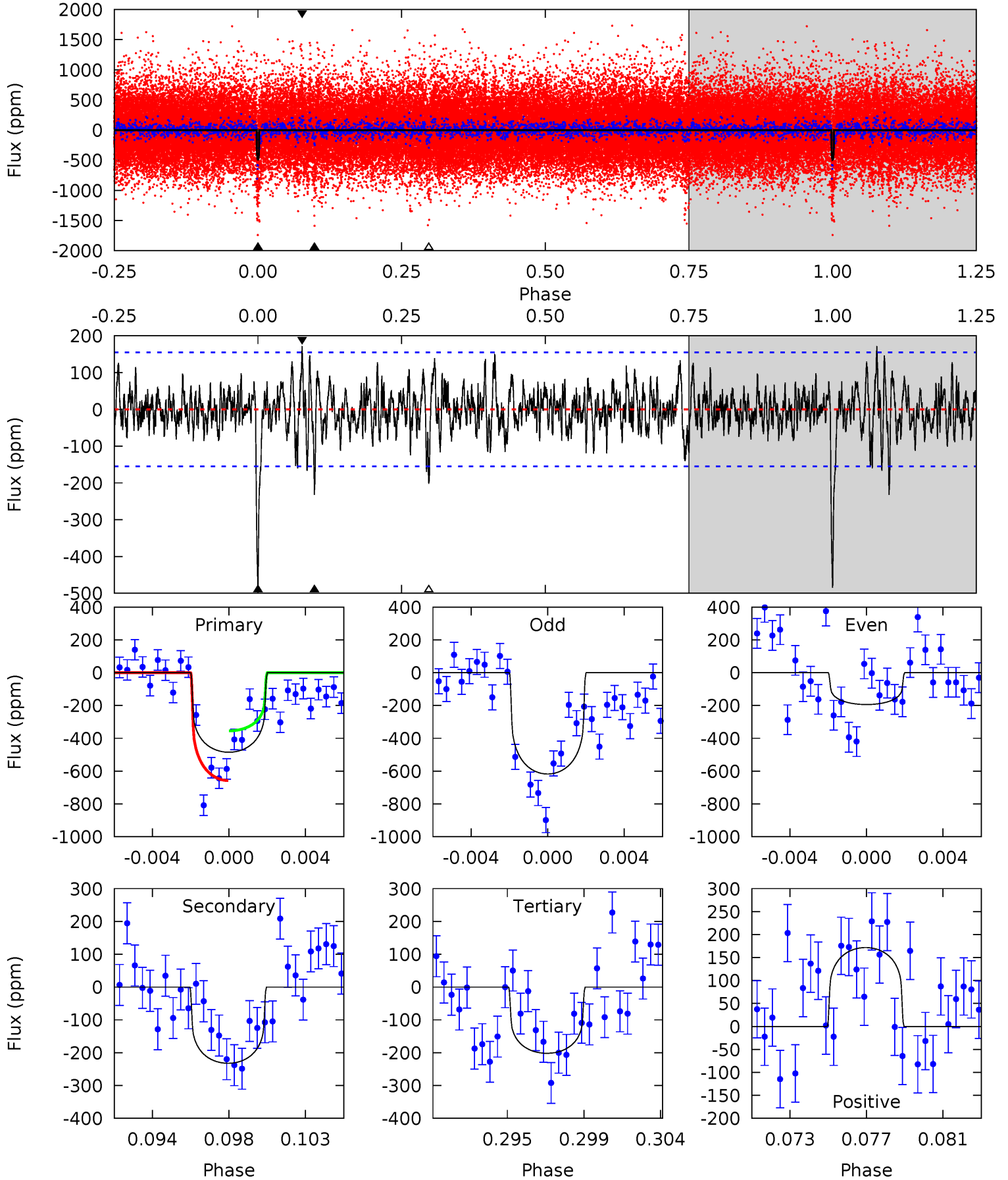
TCE 007816334-01 P=219.817427 Days $T_0=284.706612$ (BKJD)



DV Model-Shift Uniqueness Test

007816334-01, $P = 219.860268$ Days, $E = 64.818690$ Days

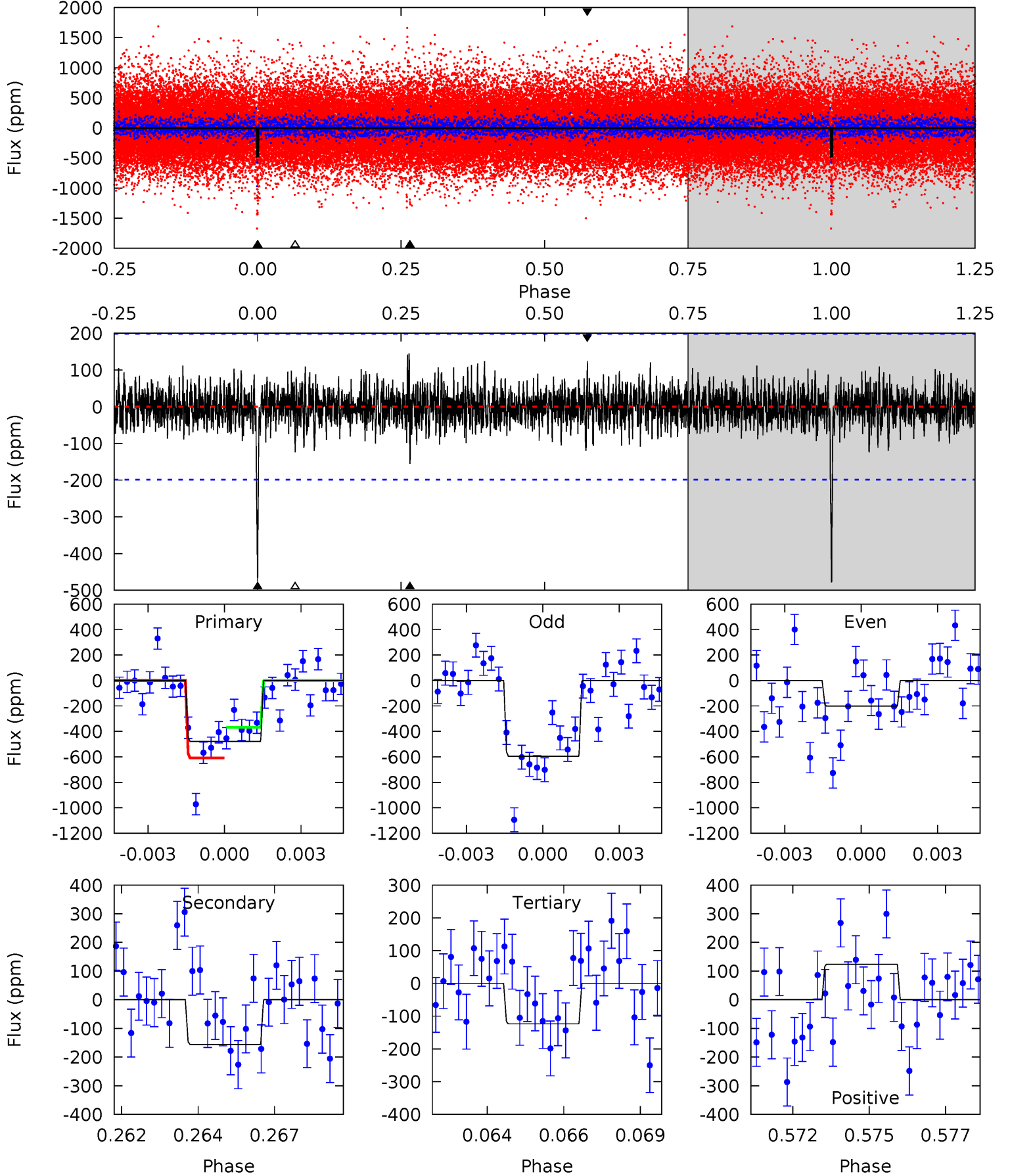
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	7.78	6.76	5.75	5.19	2.86	1.65	9.48	10.5	1.02	2.03	6.41	1.01	0.26	5.03



Alt Model-Shift Uniqueness Test

007816334-01, $P = 219.817427$ Days, $E = 64.889185$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	4.14	3.29	3.30	5.28	3.02	0.93	9.42	9.40	0.85	0.84	4.80	1.45	0.23	3.17



Stellar Parameters For KIC 007816334

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5749^{+155}_{-155}	$4.371^{+0.158}_{-0.193}$	$-0.260^{+0.300}_{-0.300}$	$1.001^{+0.279}_{-0.186}$	$0.860^{+0.120}_{-0.080}$	$1.206^{+0.897}_{-0.599}$
	+3%/-3%	+4%/-4%	+115%/-115%	+28%/-19%	+14%/-9%	+74%/-50%
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 007816334-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-232 ± 30	$2.51^{+1.18}_{-1.03}$	431^{+33}_{-27}	4812^{+1270}_{-677}	9455^{+18445}_{-5266}
Alt.	-156 ± 38	$2.61^{+1.26}_{-1.16}$	433^{+31}_{-26}	4354^{+1311}_{-567}	5745^{+13480}_{-3283}

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

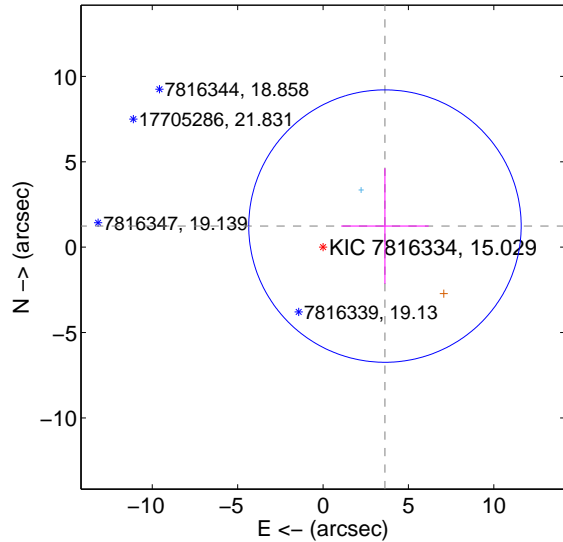
Supplemental centroid analysis for 007816334-01. Kepler magnitude: 15.03. Transit SNR 11.45

There are 1 quarters with good PRF difference image offsets

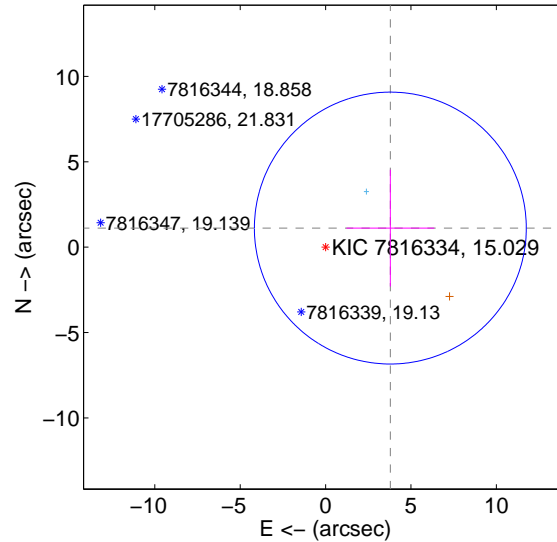
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.831 ± 2.659	1.44	-3.627 ± 2.562	1.235 ± 3.380
PRF-fit source offset from KIC position	3.954 ± 2.654	1.49	-3.792 ± 2.577	1.119 ± 3.419
photometric centroid source offset	2.34 ± 1.25	1.88	-2.33 ± 1.25	0.27 ± 1.08

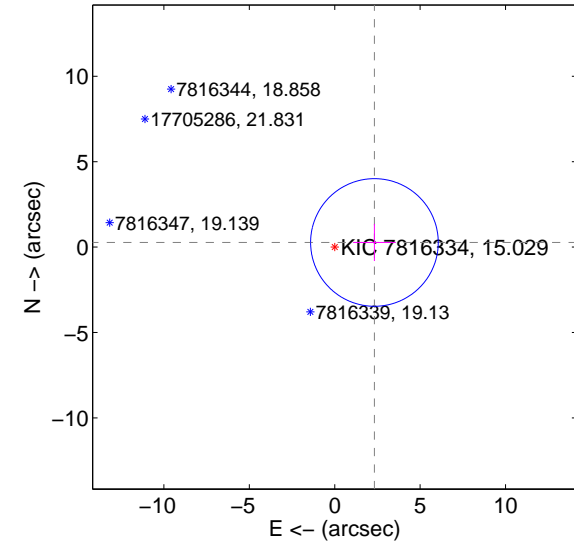
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

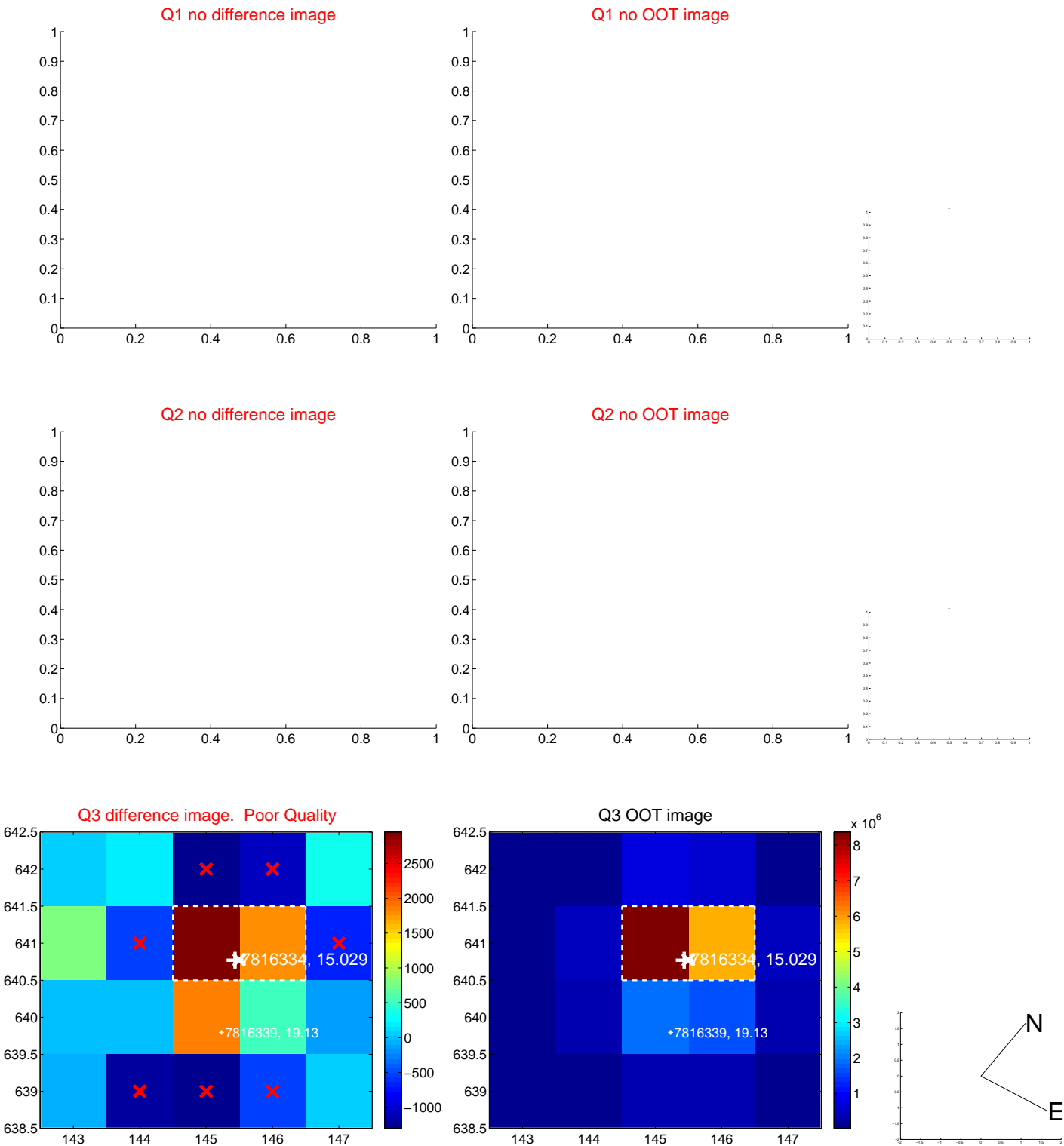


offset from photometric centroids



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 ×: 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.

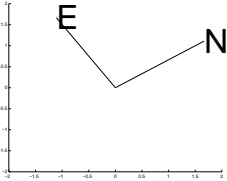
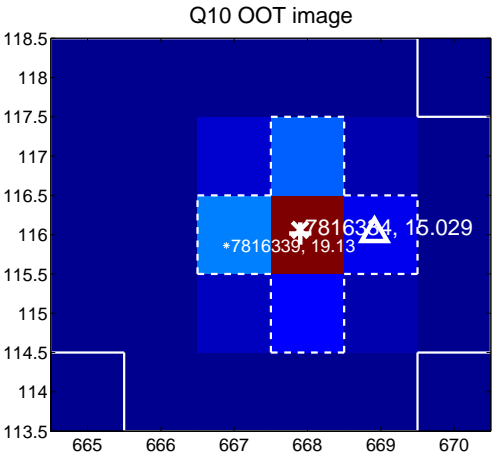
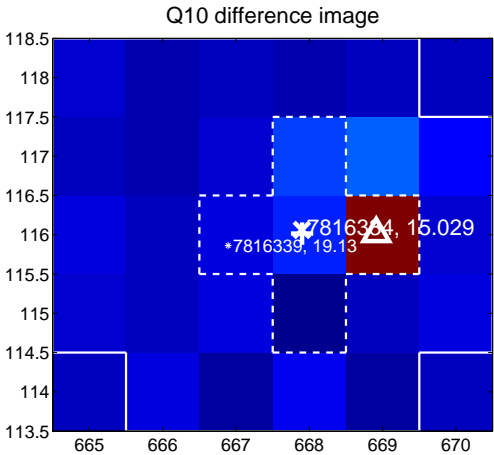


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

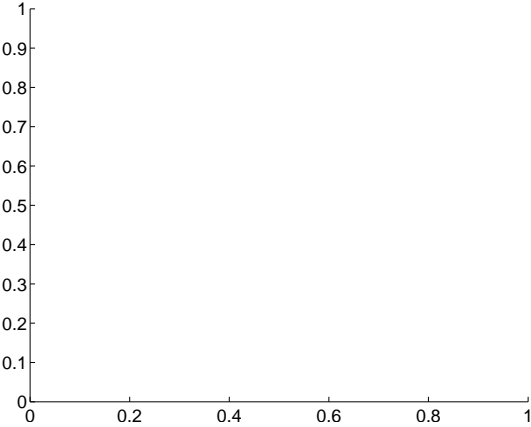
Q9 no difference image



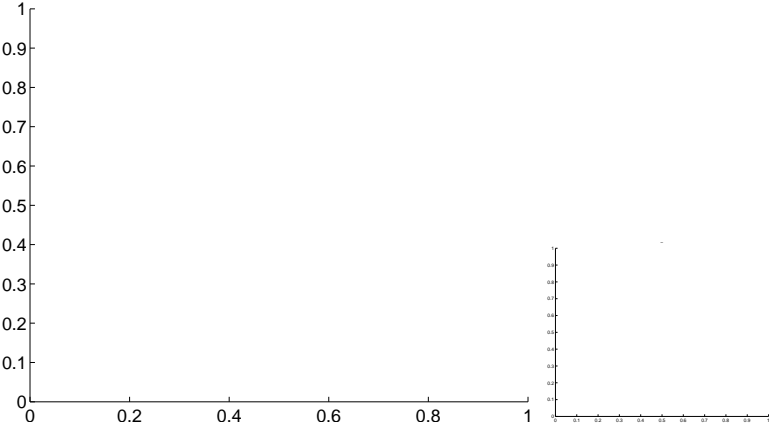
Q9 no OOT image



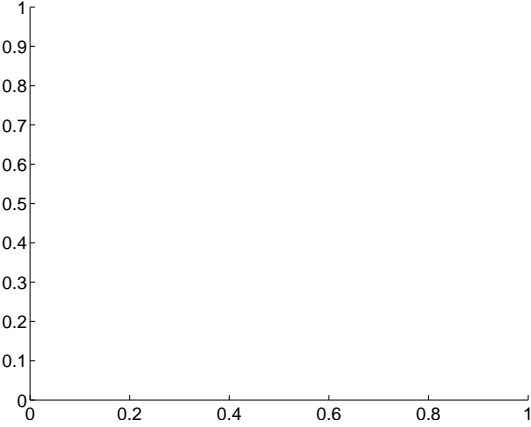
Q11 no difference image



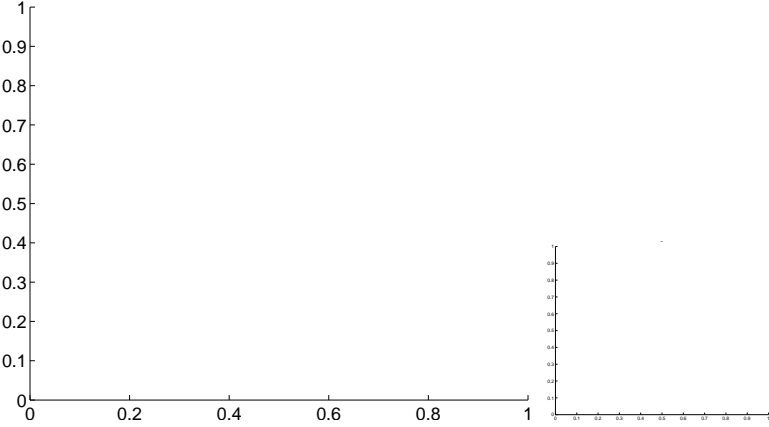
Q11 no OOT image



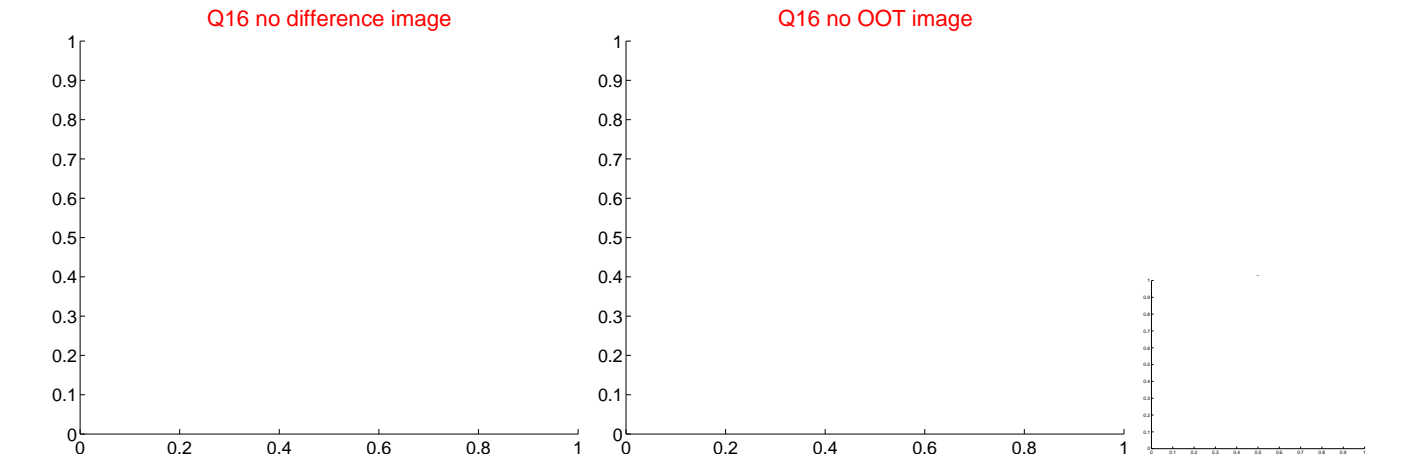
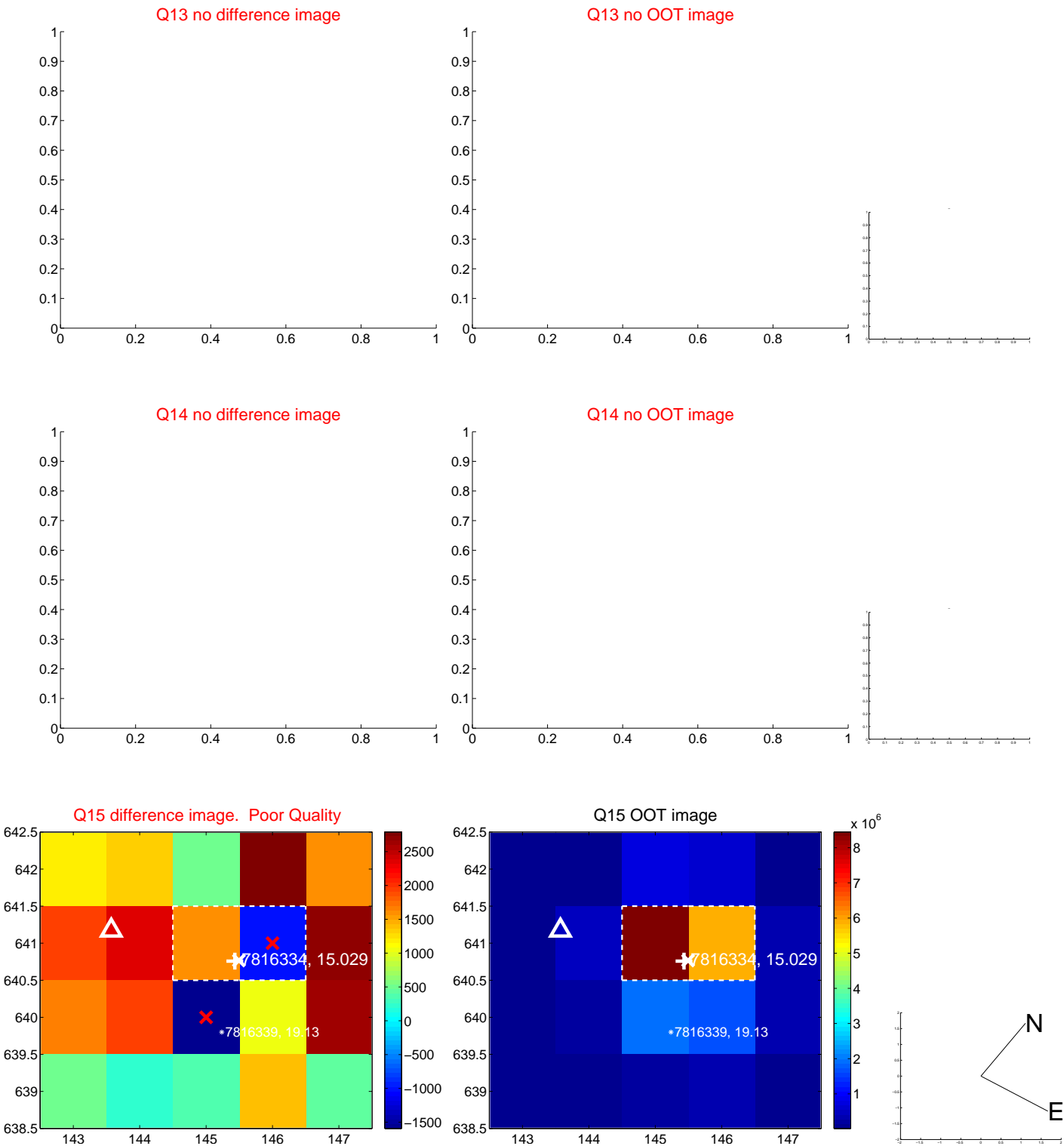
Q12 no difference image



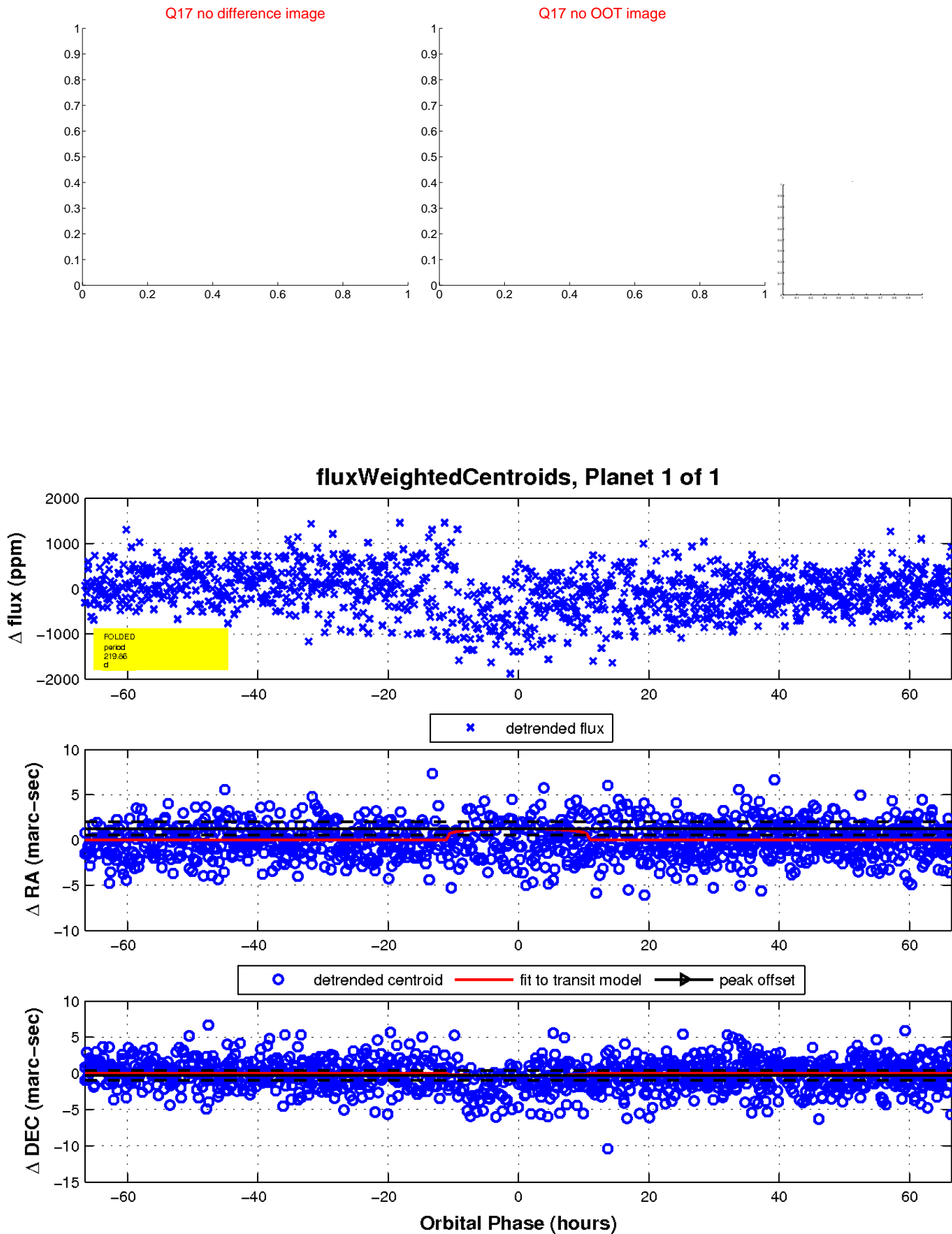
Q12 no OOT image



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.



UKIRT Image

Declination

