

KIC 008160057

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})
008160057-01	OBS	No	370.064243	299.520307	916.0	53.931	12.5	18.5	0.99	6217	5.64	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008160057-01	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.

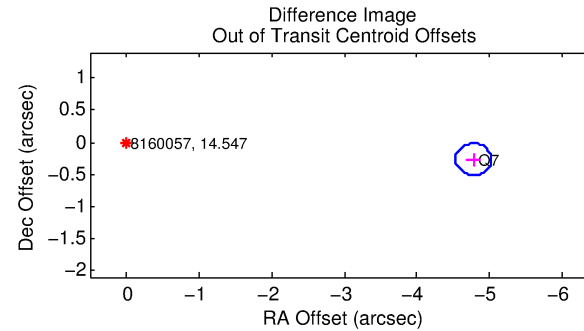
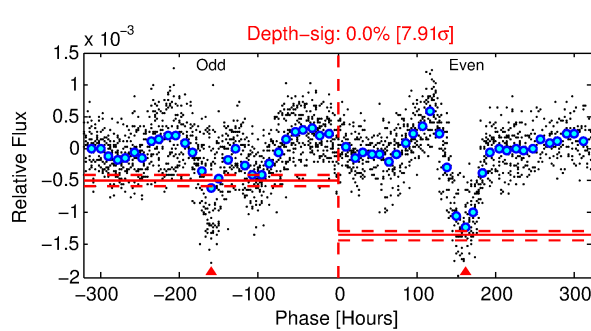
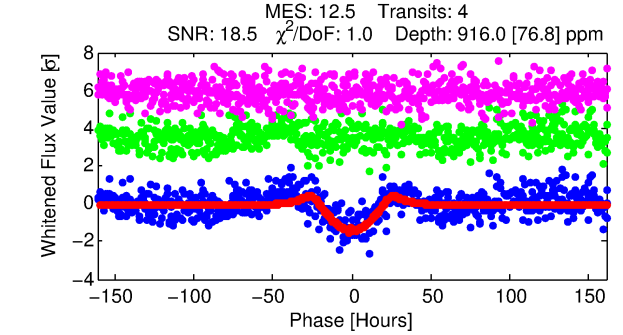
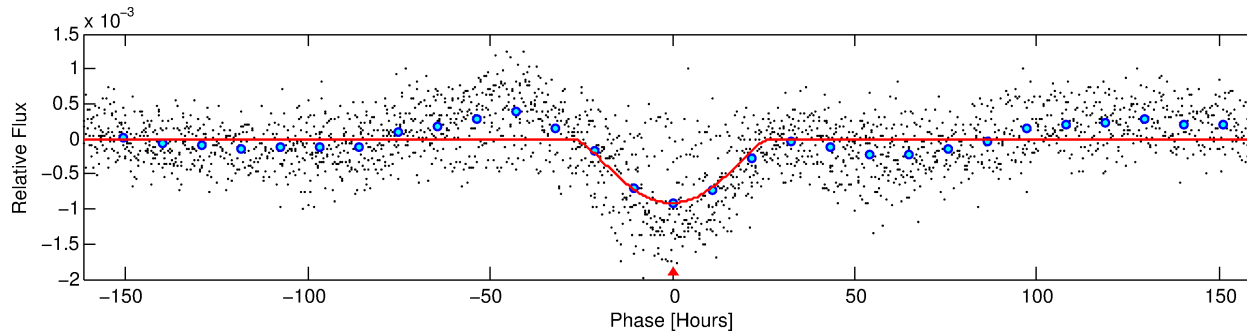
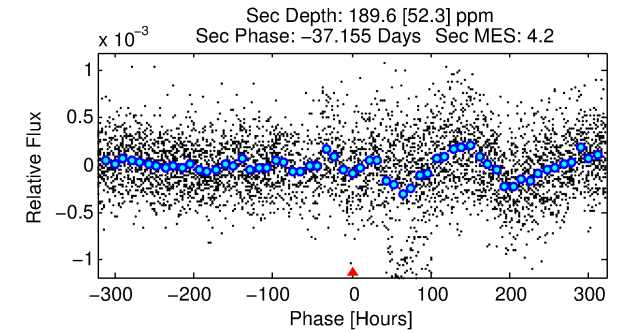
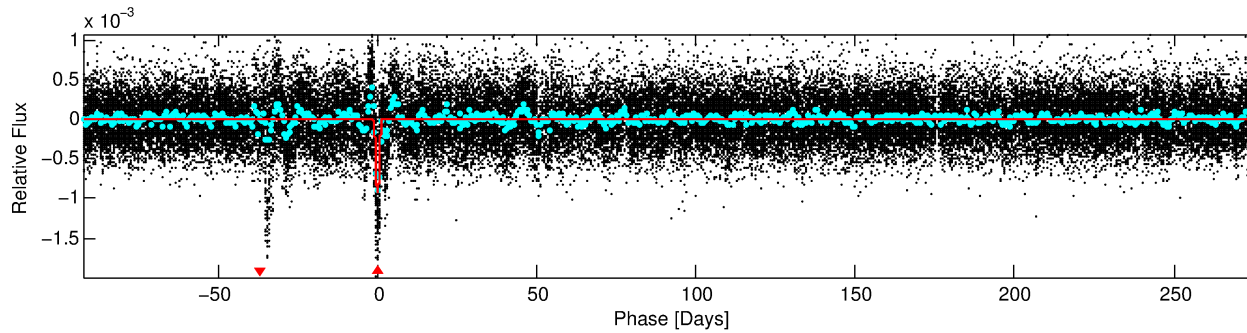
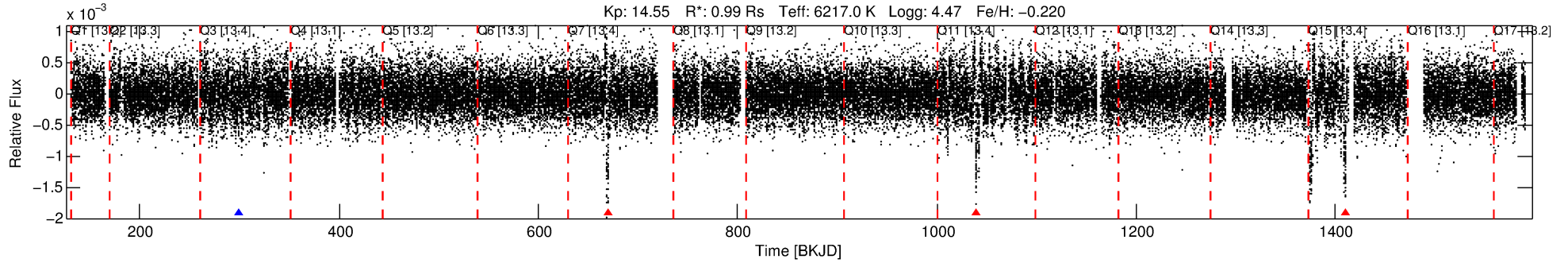
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008160057-01

No Significant Match Found

DV One-Page Summary

KIC: 8160057 Candidate: 1 of 1 Period: 370.064 d



DV Fit Results:

Period = 370.06424 [0.02699] d
Epoch = 299.5203 [0.0427] BKJD
Rp/R* = 0.0523 [0.0577]
a/R* = 17.35 [4.65]
b = 1.00 [0.09]
Seff = 1.24 [0.42]
Teq = 269 [23] K
Rp = 5.64 [6.40] Re
a = 1.0280 [0.2249] AU
Ag = 3463.79 [7789.85] [0.44σ]
Teffp = 3191 [1779] K [1.64σ]

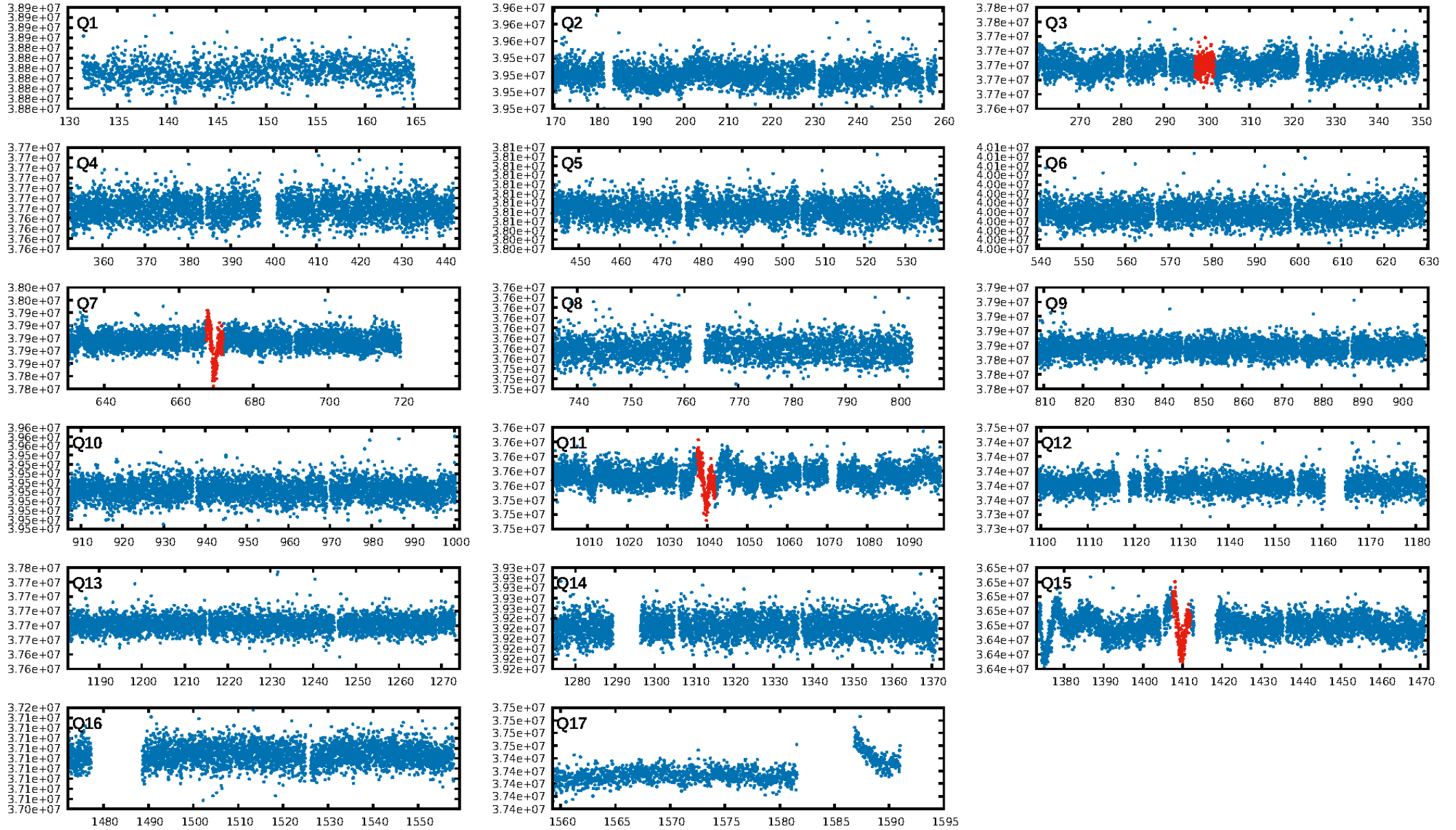
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.55e-34
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -1.692
Centroid-sig: 55.6%
Centroid-so: 0.310 arcsec [0.32σ]
OotOffset-rm: 4.785 arcsec [58.52σ]
KicOffset-rm: 4.824 arcsec [58.98σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

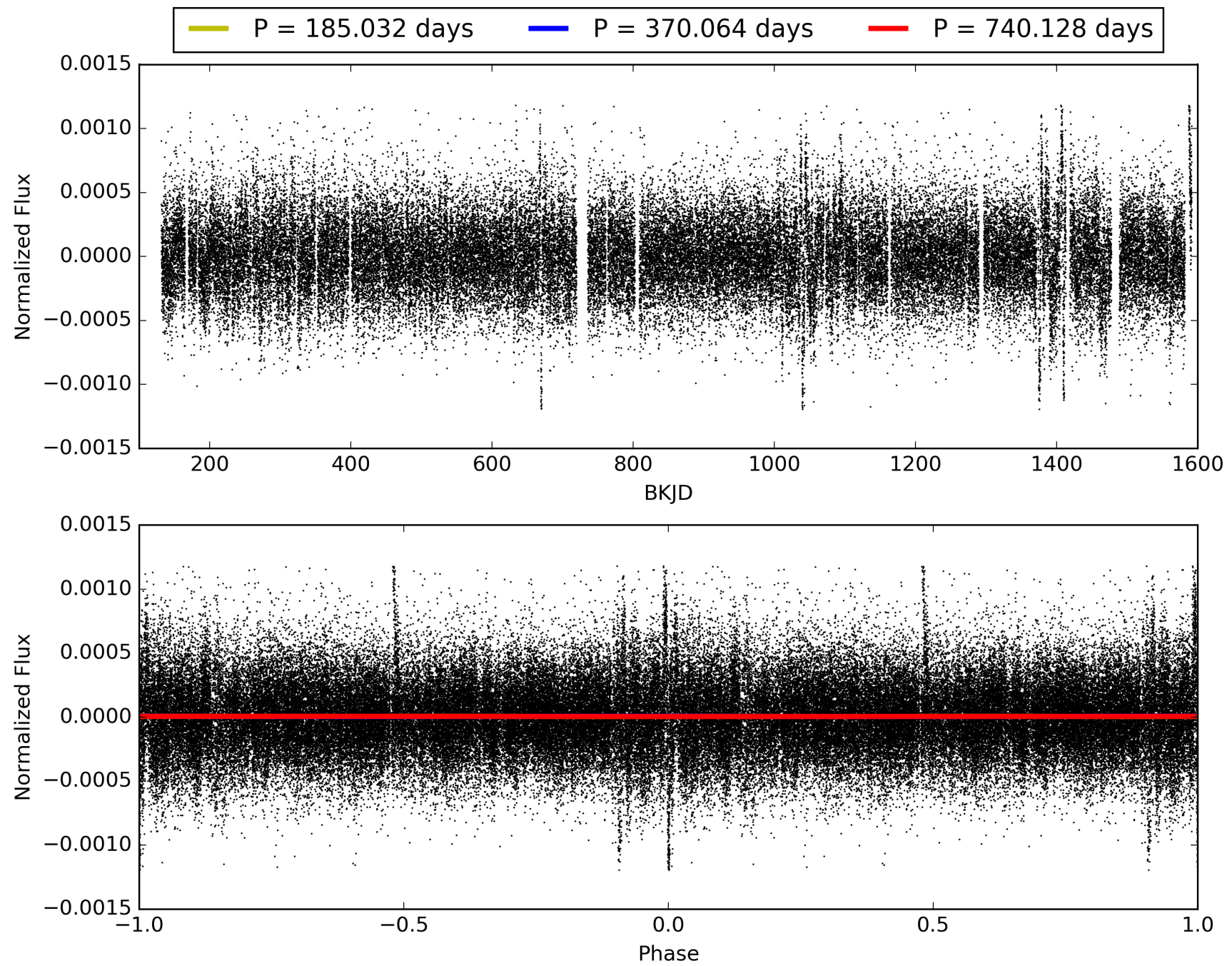
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:03:04 Z

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

TCE 008160057-01, PDC Light Curves

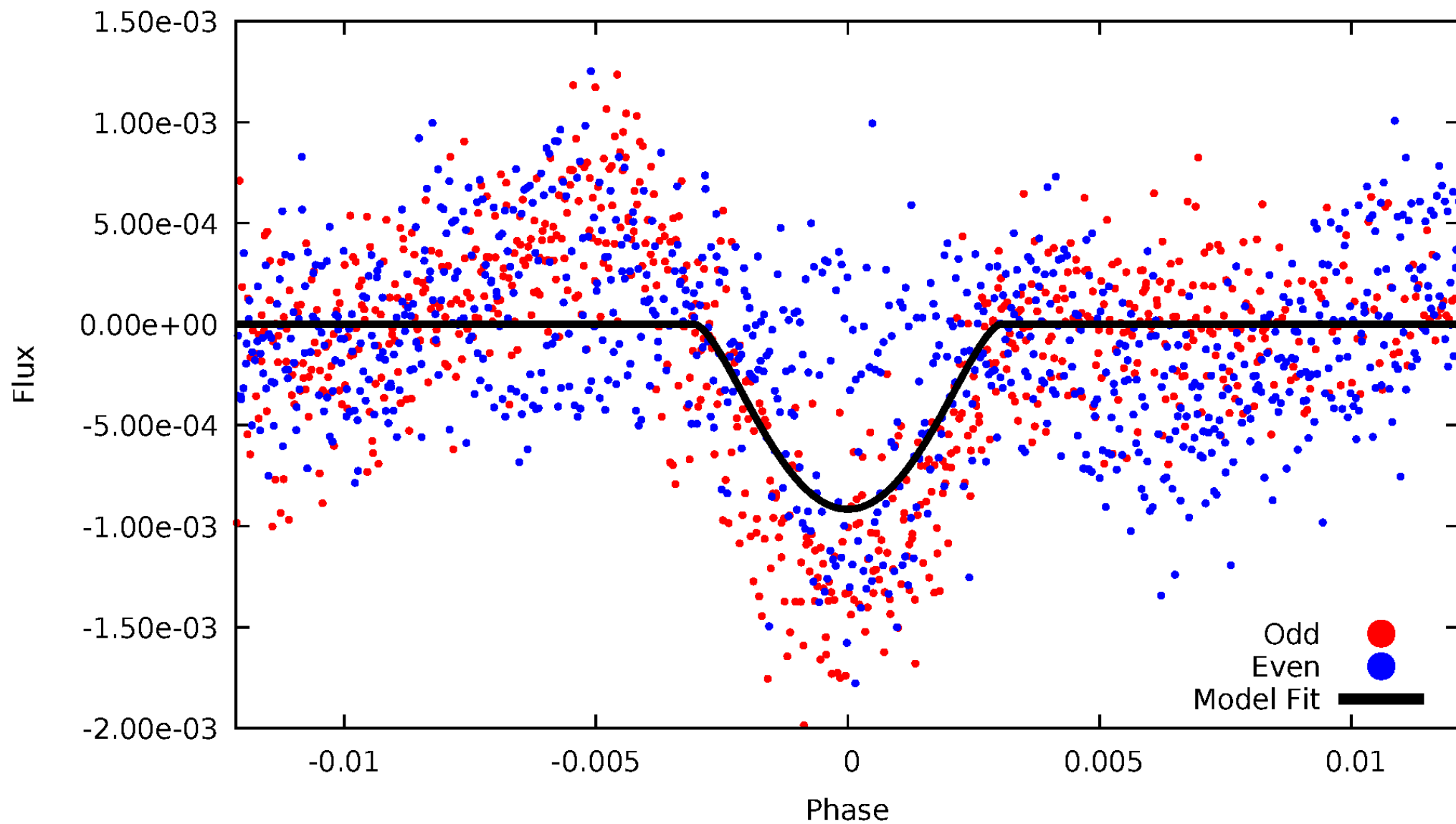


TCE 008160057-01



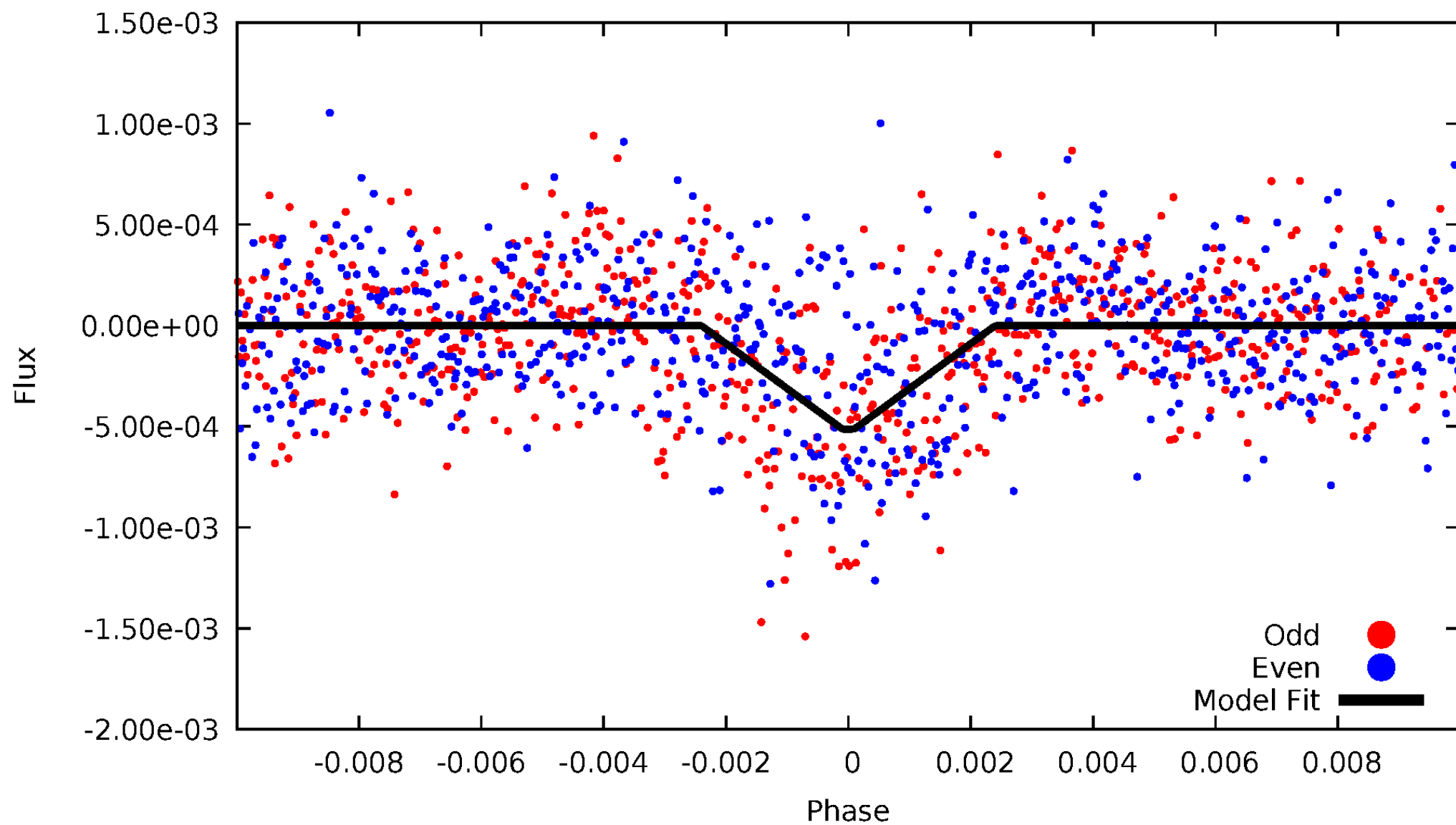
DV Odd/Even

TCE 008160057-01

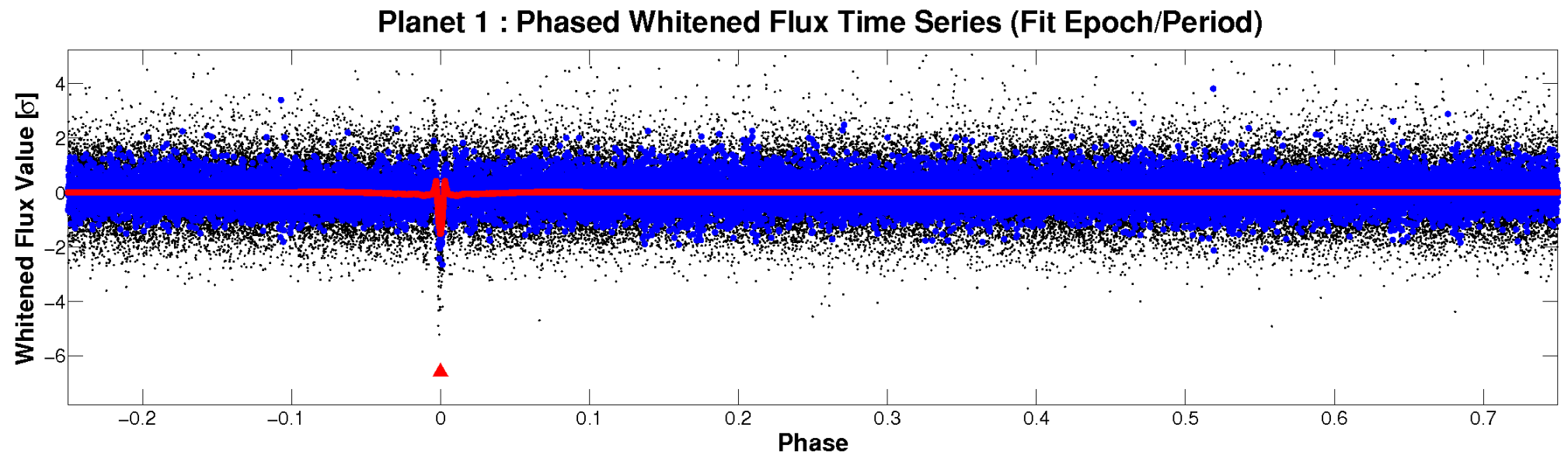
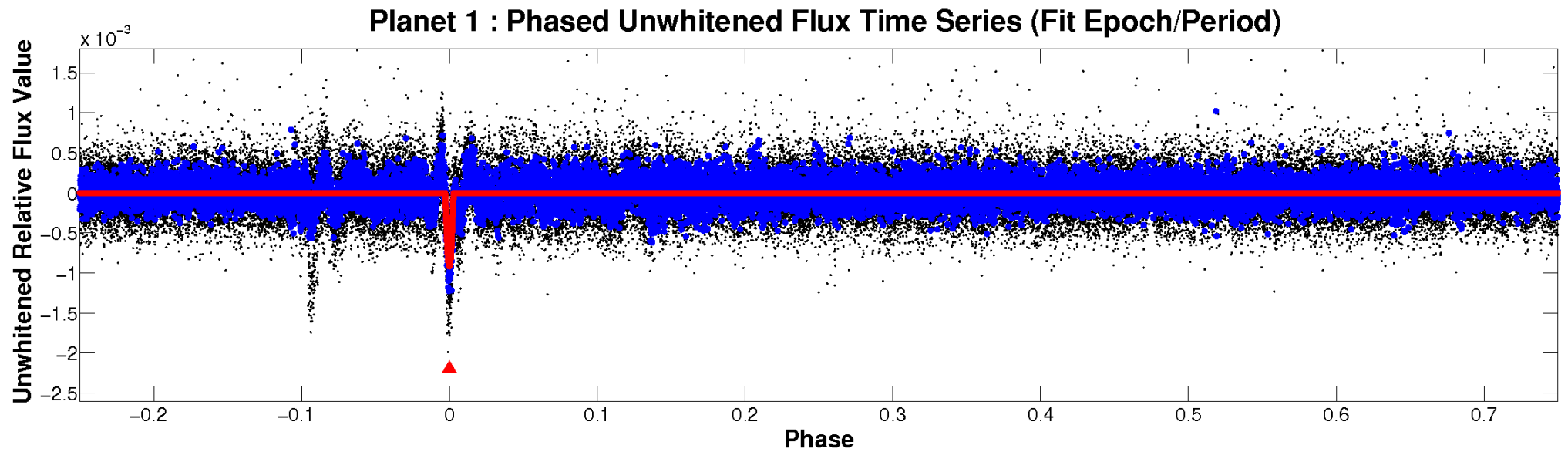


ALT Odd/Even

TCE 008160057-01

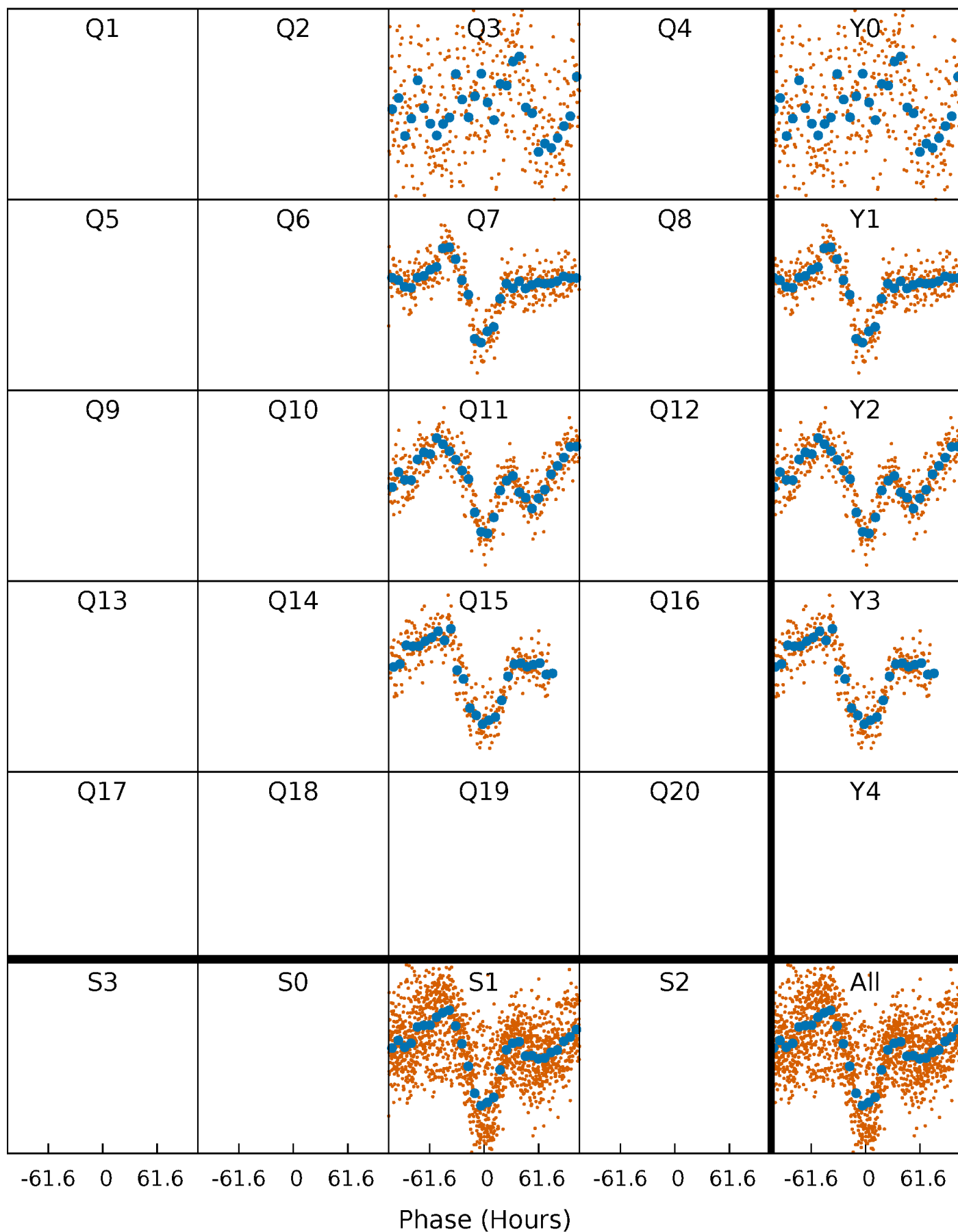


Non-Whitened Vs. Whitened Light Curve



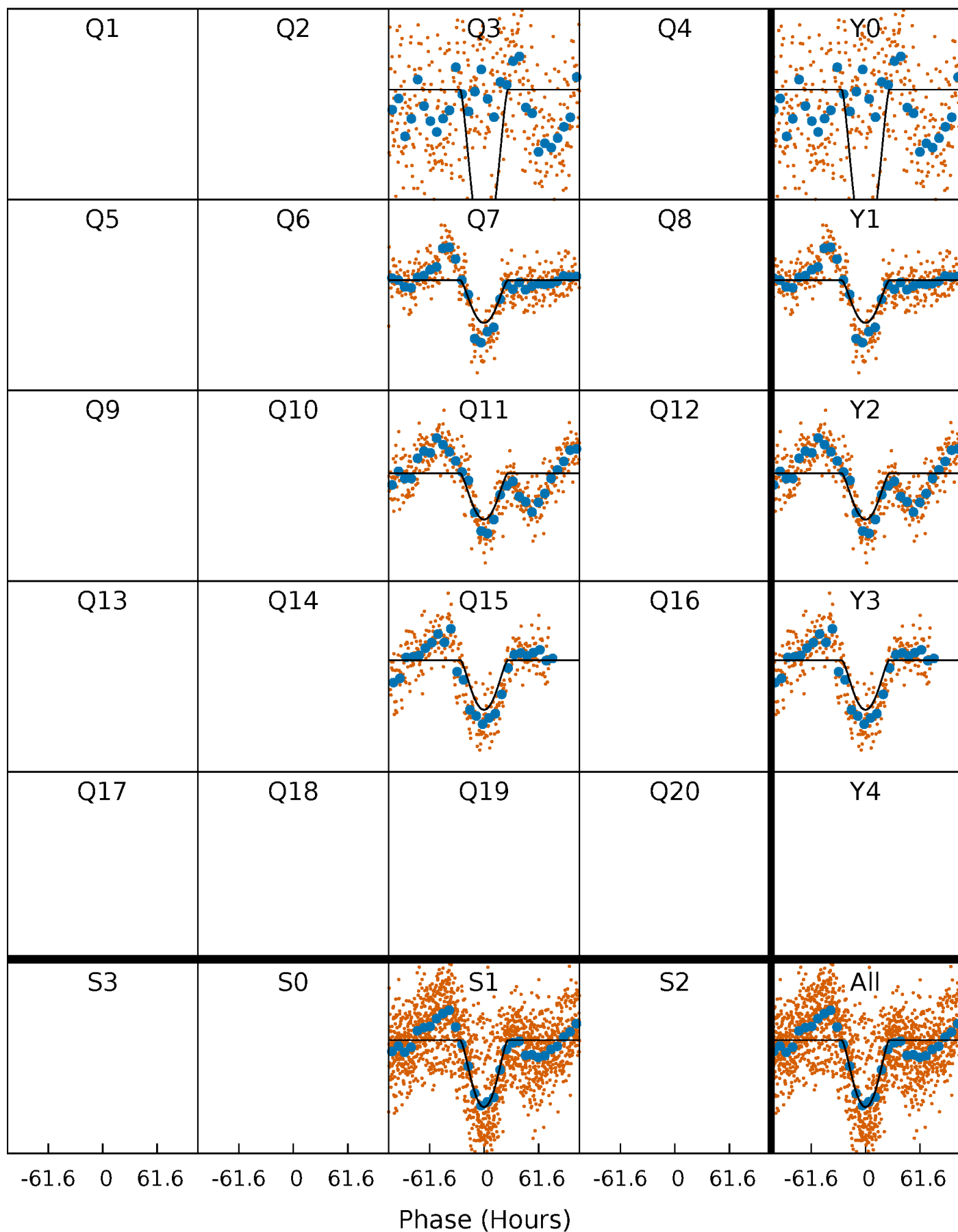
PDC Quarter-Phased Transit Curves

TCE 008160057-01 P=370.064243 Days $T_0=299.520307$ (BKJD)



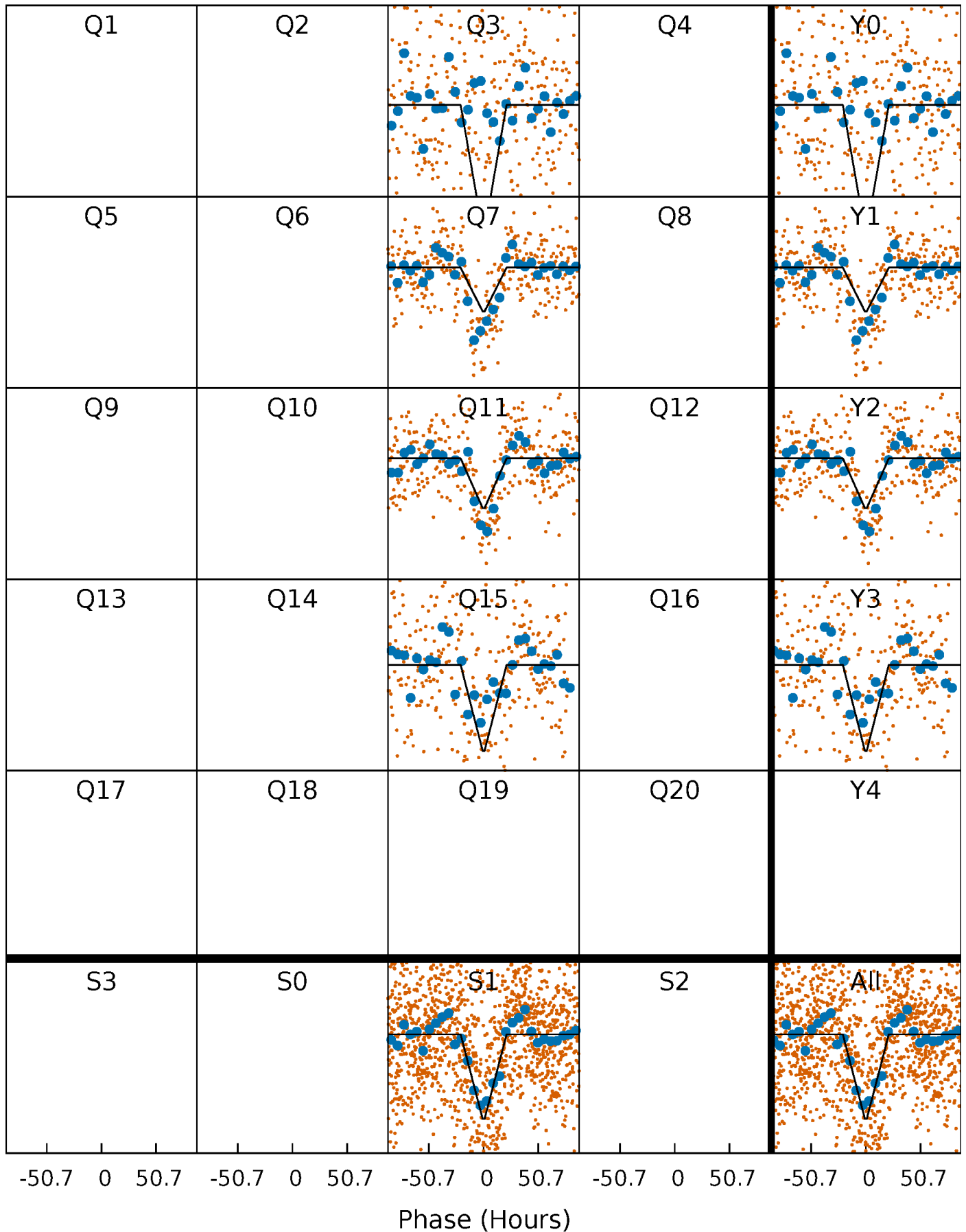
DV Quarter-Phased Transit Curves

TCE 008160057-01 P=370.064243 Days $T_0=299.520307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

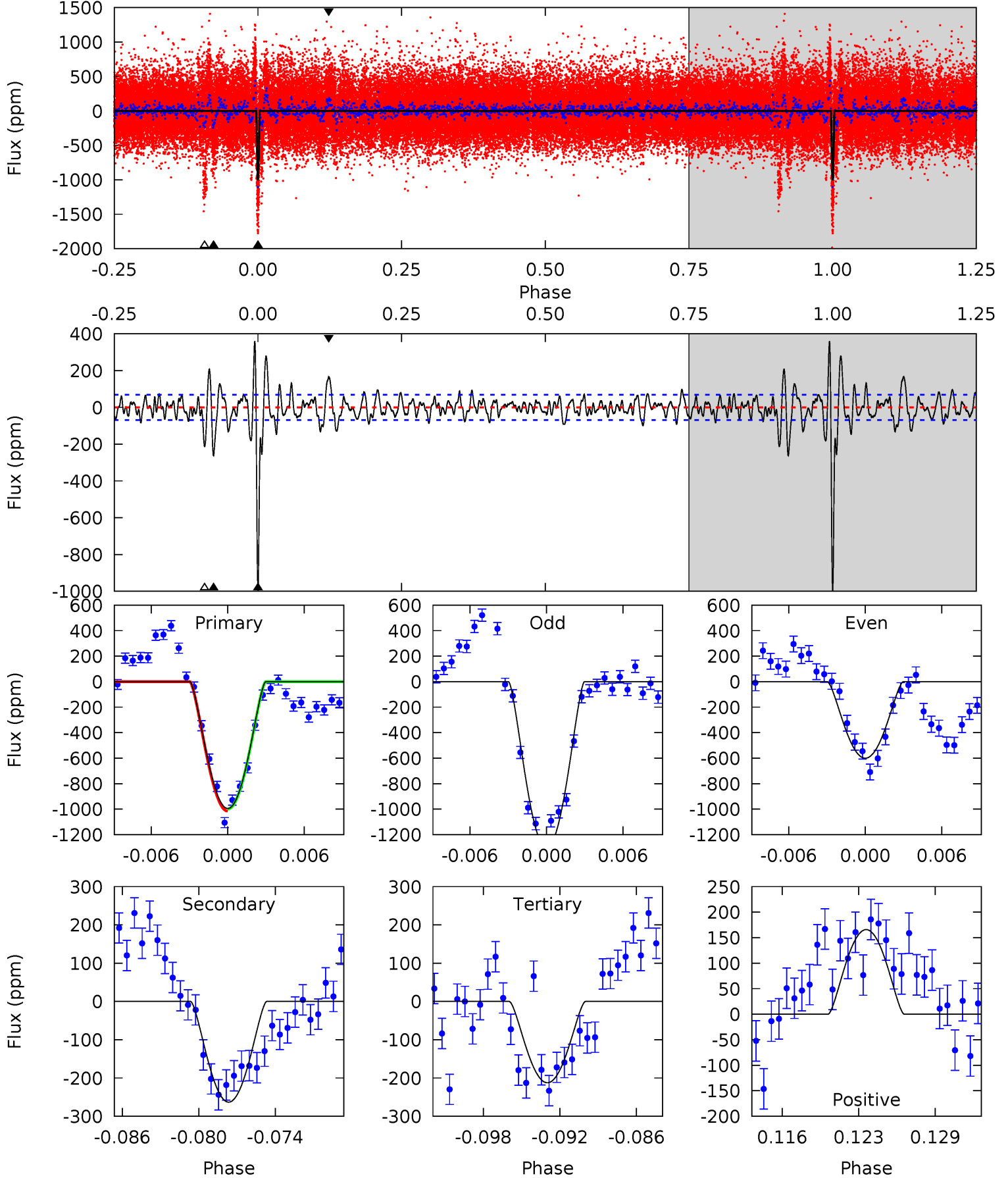
TCE 008160057-01 P=370.017716 Days $T_0=299.506442$ (BKJD)



DV Model-Shift Uniqueness Test

008160057-01, P = 370.064243 Days, E = 299.520307 Days

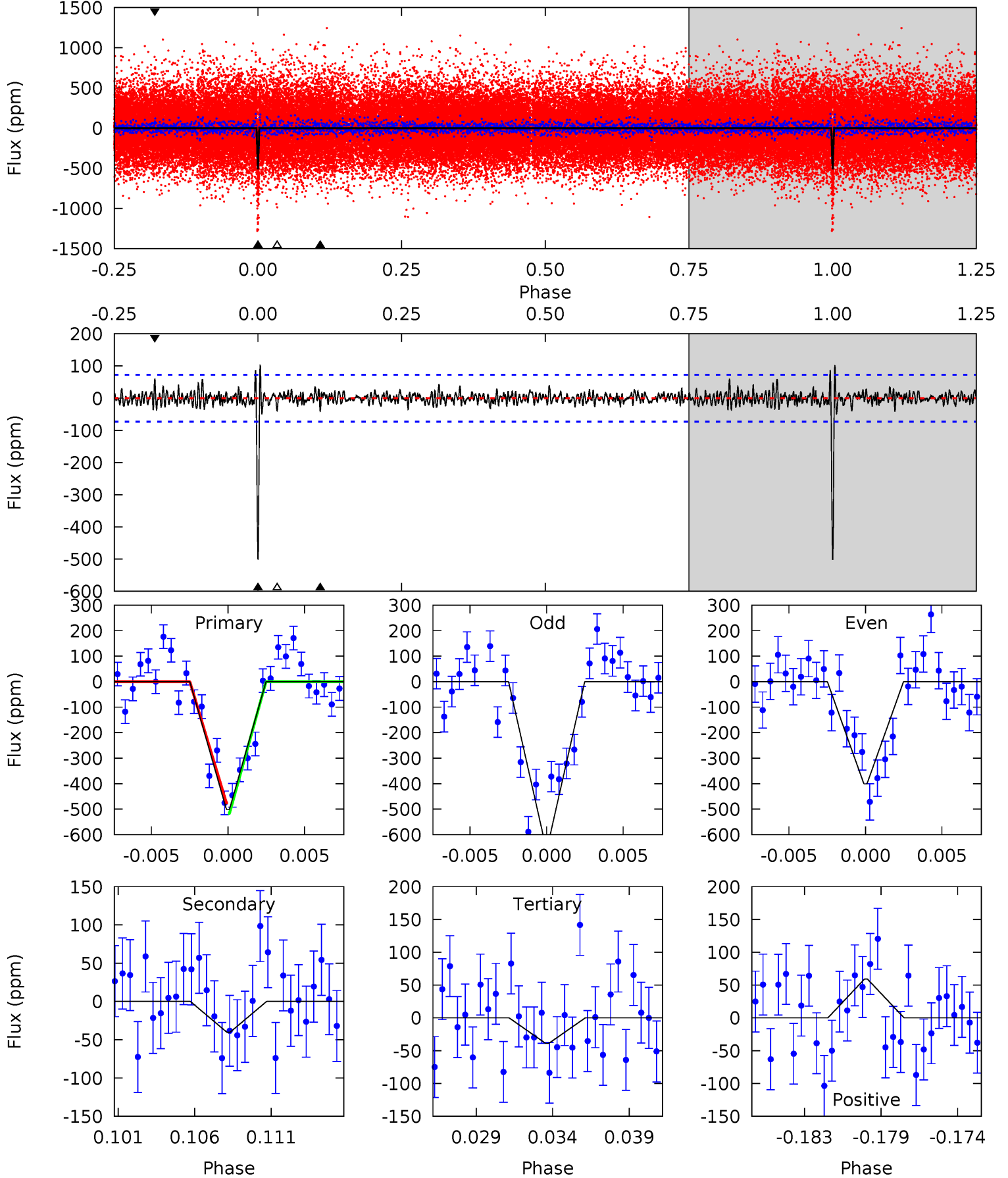
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
74.0	19.6	15.8	12.3	5.12	2.74	4.09	58.2	61.7	3.77	7.24	26.7	0.78	0.27	0



Alt Model-Shift Uniqueness Test

008160057-01, P = 370.017716 Days, E = 299.506442 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.5	2.86	2.76	4.19	5.16	2.82	0.94	32.8	31.3	0.09	-1.33	8.37	0.92	0.17	1.46



Stellar Parameters For KIC 008160057

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6217^{+169}_{-188}	$4.472^{+0.058}_{-0.173}$	$-0.220^{+0.250}_{-0.300}$	$0.989^{+0.258}_{-0.111}$	$1.056^{+0.134}_{-0.134}$	$1.540^{+0.370}_{-0.693}$
	+3%/-3%	+1%/-4%	+114%/-136%	+26%/-11%	+13%/-13%	+24%/-45%
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 008160057-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-263 ± 13	$7.52^{+6.36}_{-4.73}$	382^{+23}_{-17}	3547^{+1483}_{-595}	2627^{+16131}_{-1860}
Alt.	-40 ± 14	$5.47^{+5.12}_{-3.67}$	382^{+23}_{-17}	2902^{+1256}_{-479}	710^{+6336}_{-533}

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

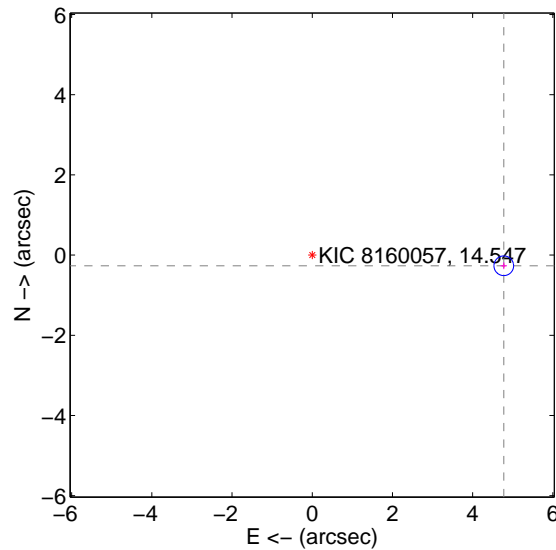
Supplemental centroid analysis for 008160057-01. Kepler magnitude: 14.55. Transit SNR 18.54

There are 0 quarters with good PRF difference image offsets

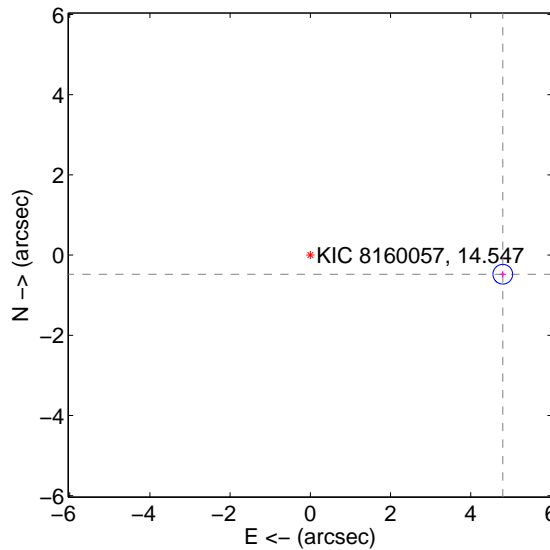
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.785 ± 0.082	58.52	-4.778 ± 0.082	-0.266 ± 0.085
PRF-fit source offset from KIC position	4.824 ± 0.082	58.98	-4.801 ± 0.082	-0.477 ± 0.085
photometric centroid source offset	0.31 ± 0.97	0.32	-0.09 ± 0.84	0.30 ± 0.98

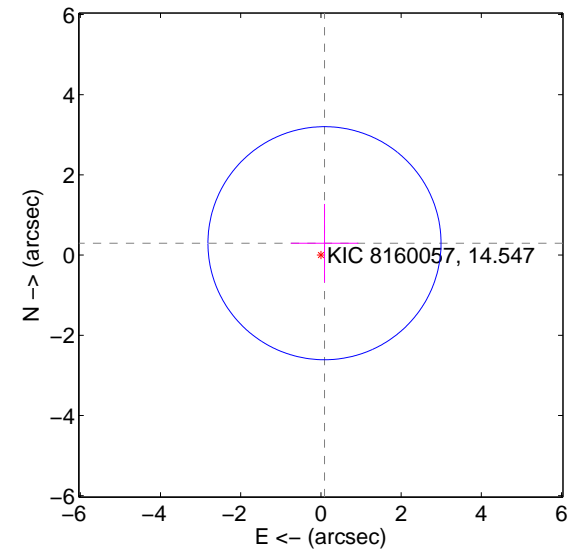
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

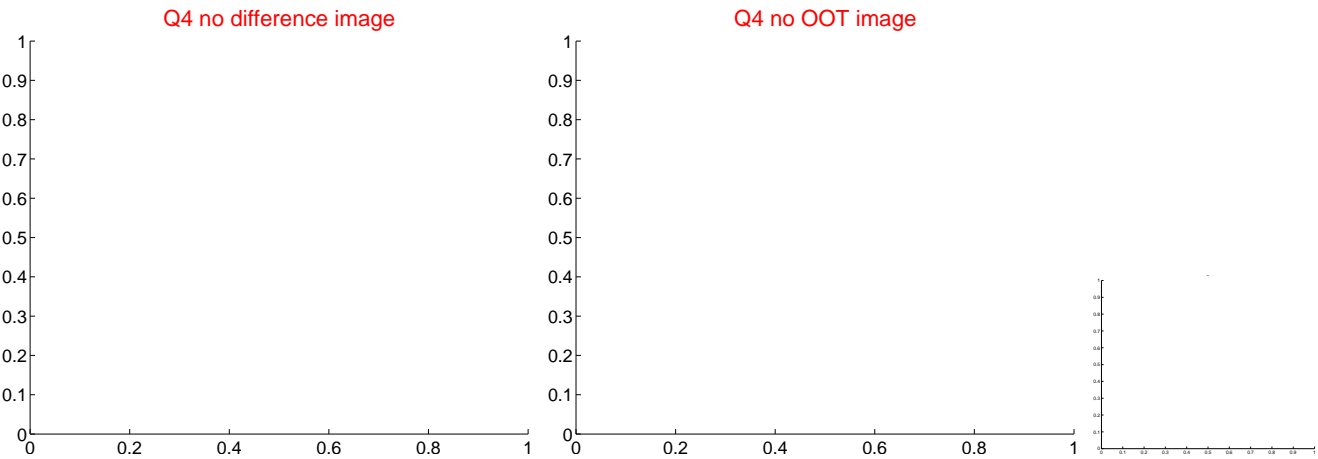
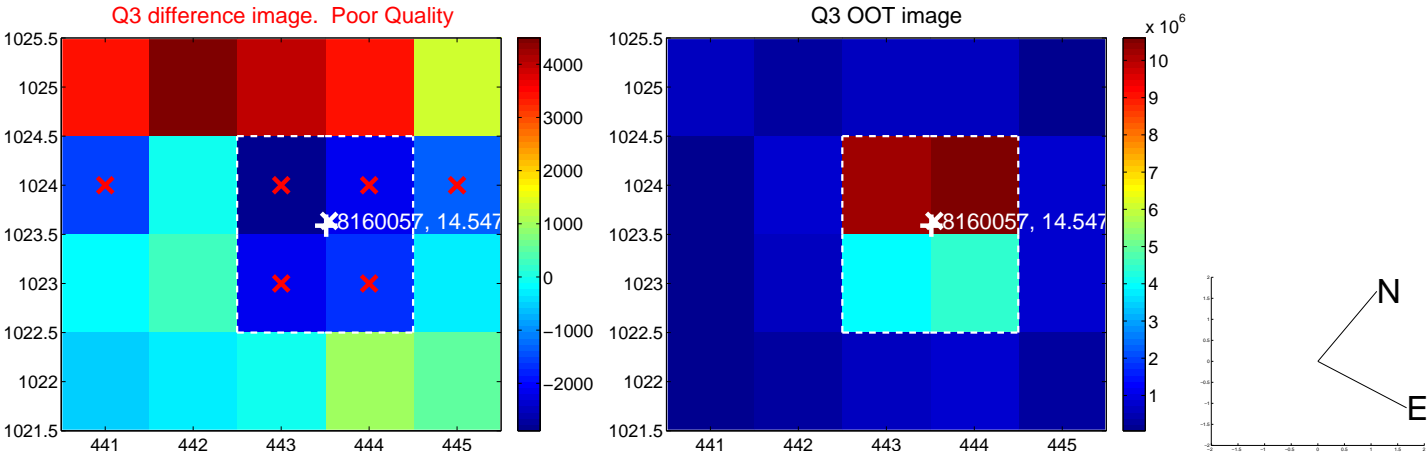
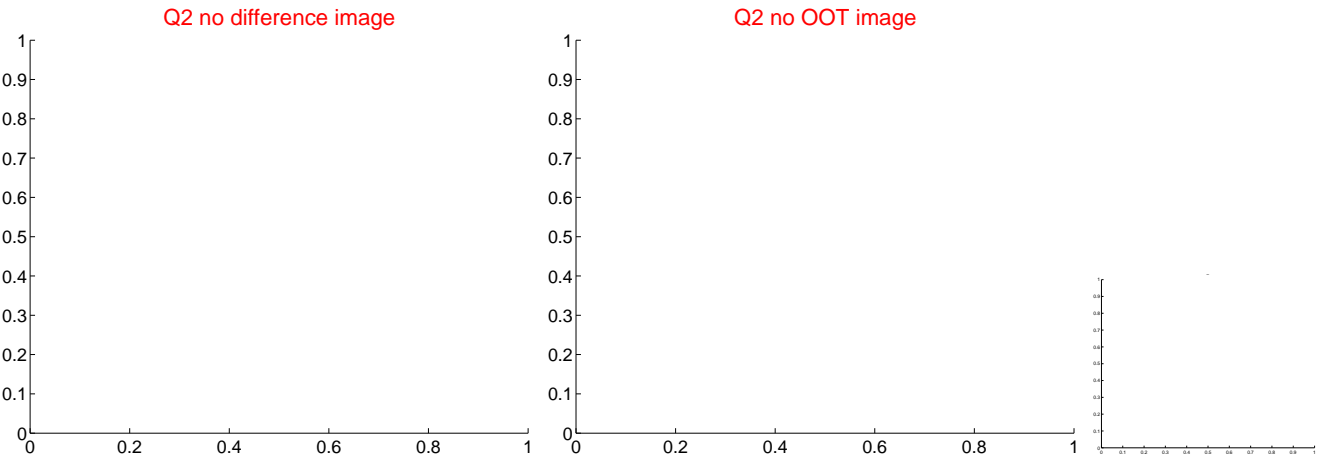
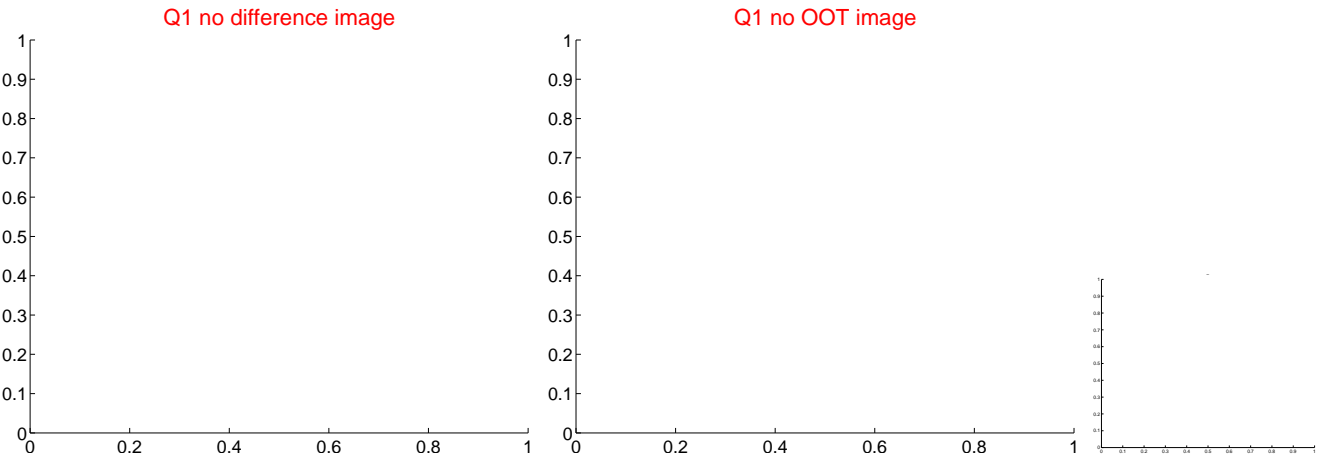


offset from photometric centroids



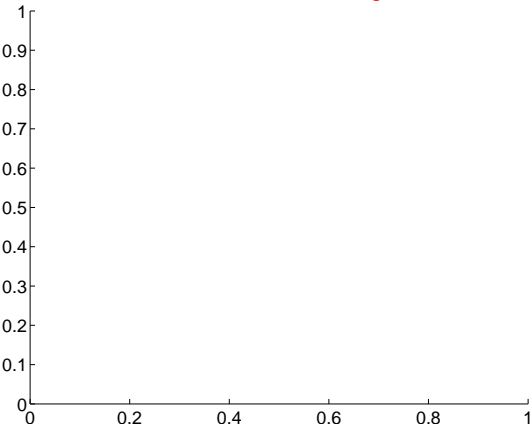
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

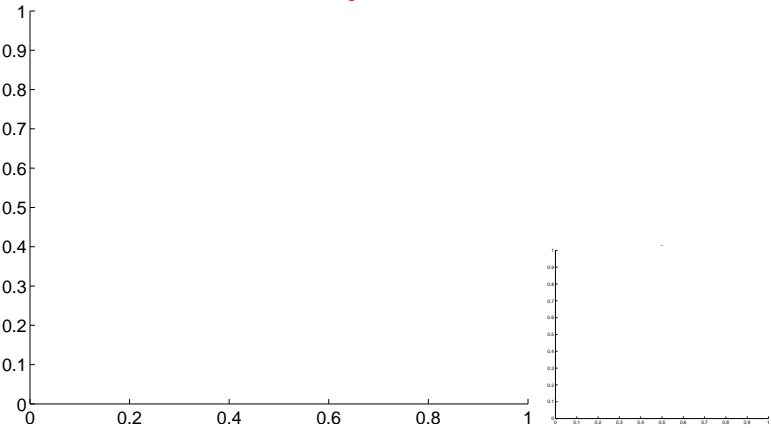


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

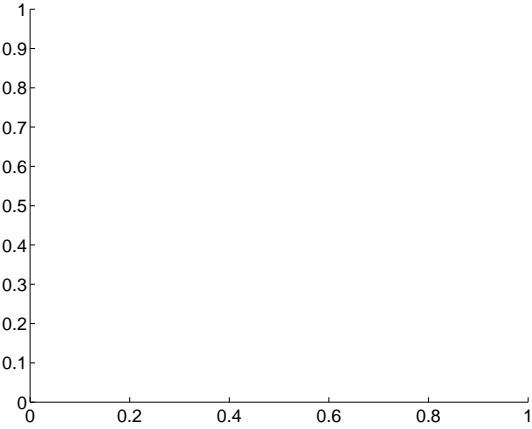
Q5 no difference image



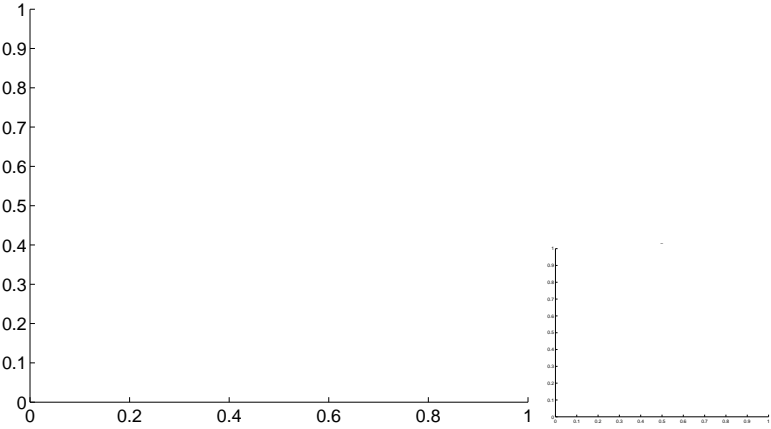
Q5 no OOT image



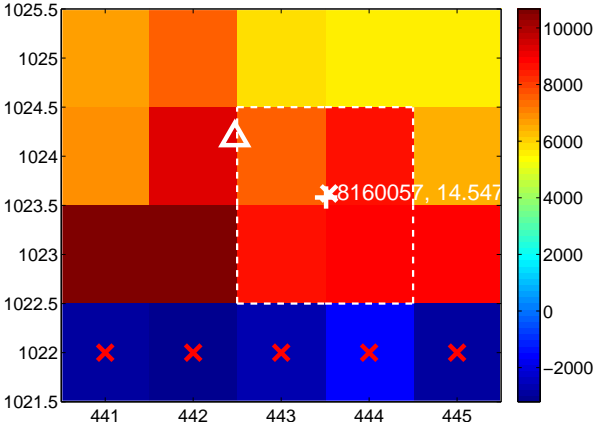
Q6 no difference image



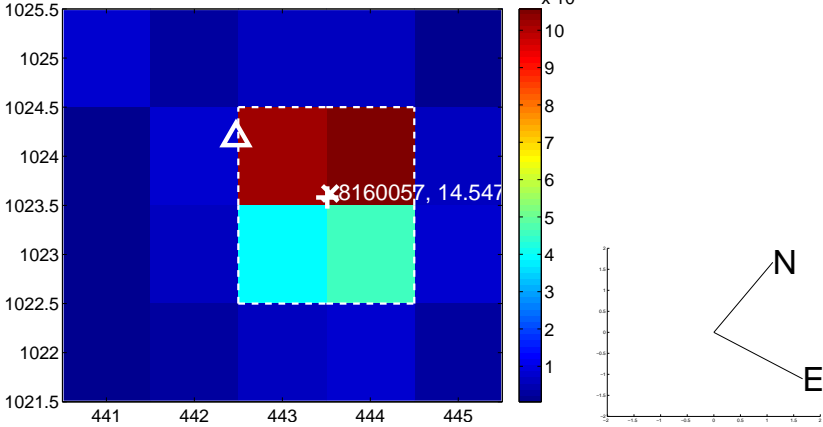
Q6 no OOT image



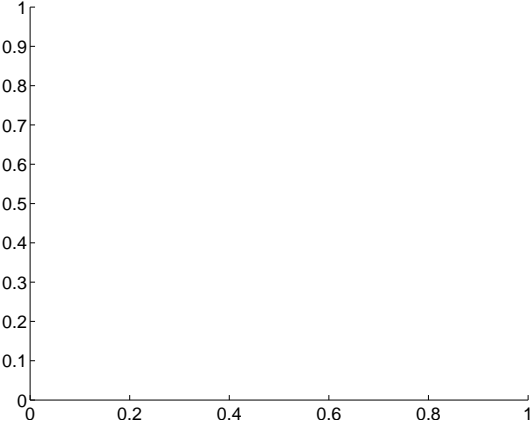
Q7 difference image. Poor Quality



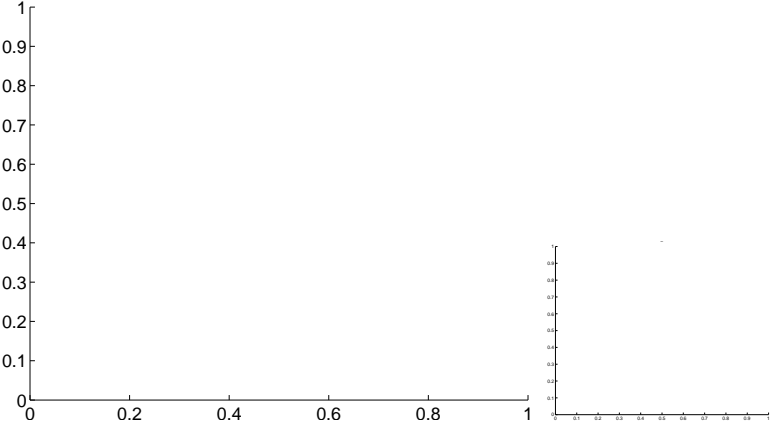
Q7 OOT image



Q8 no difference image



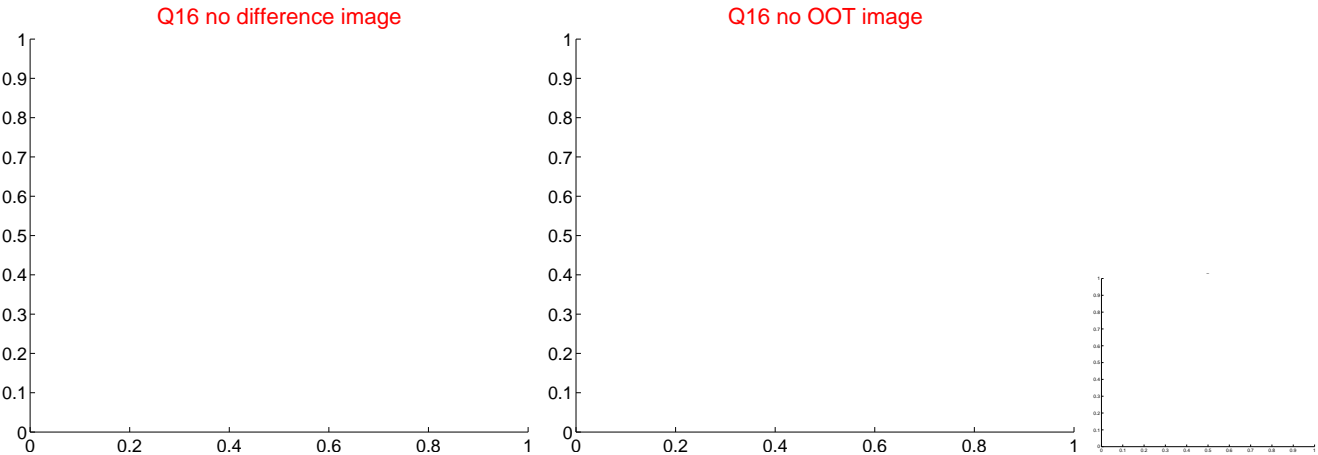
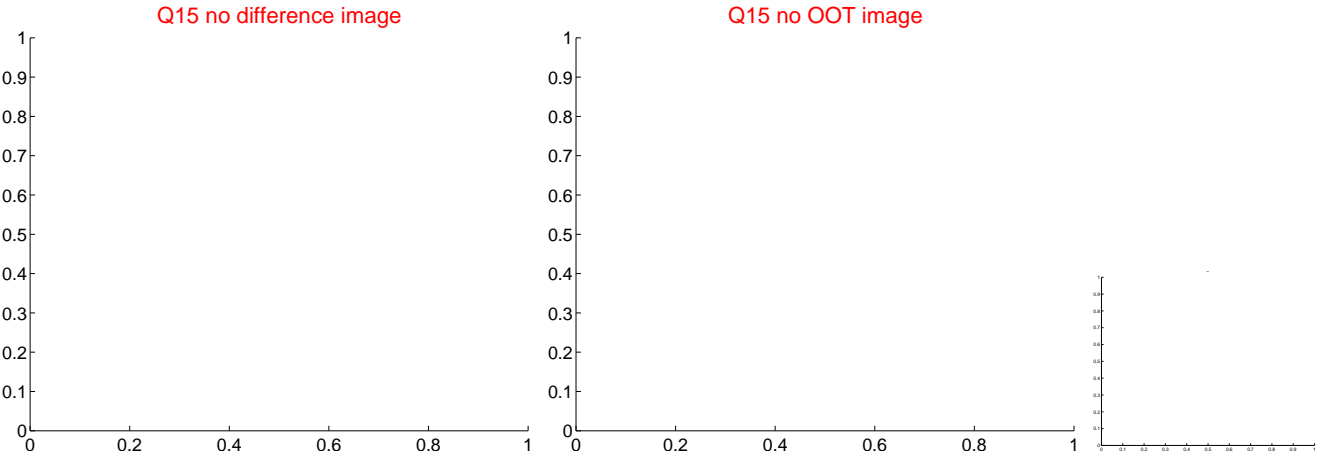
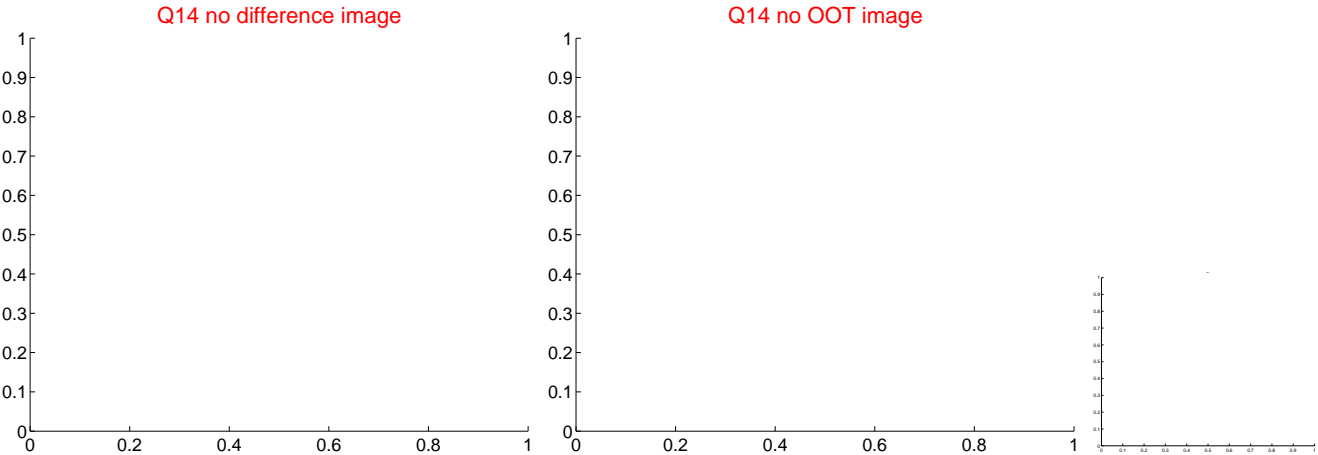
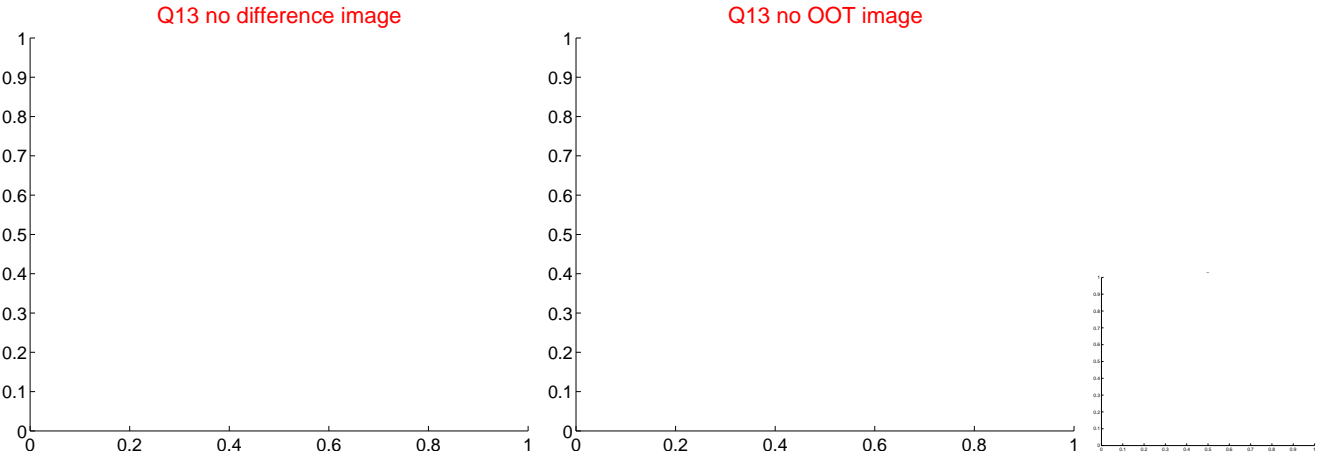
Q8 no OOT image



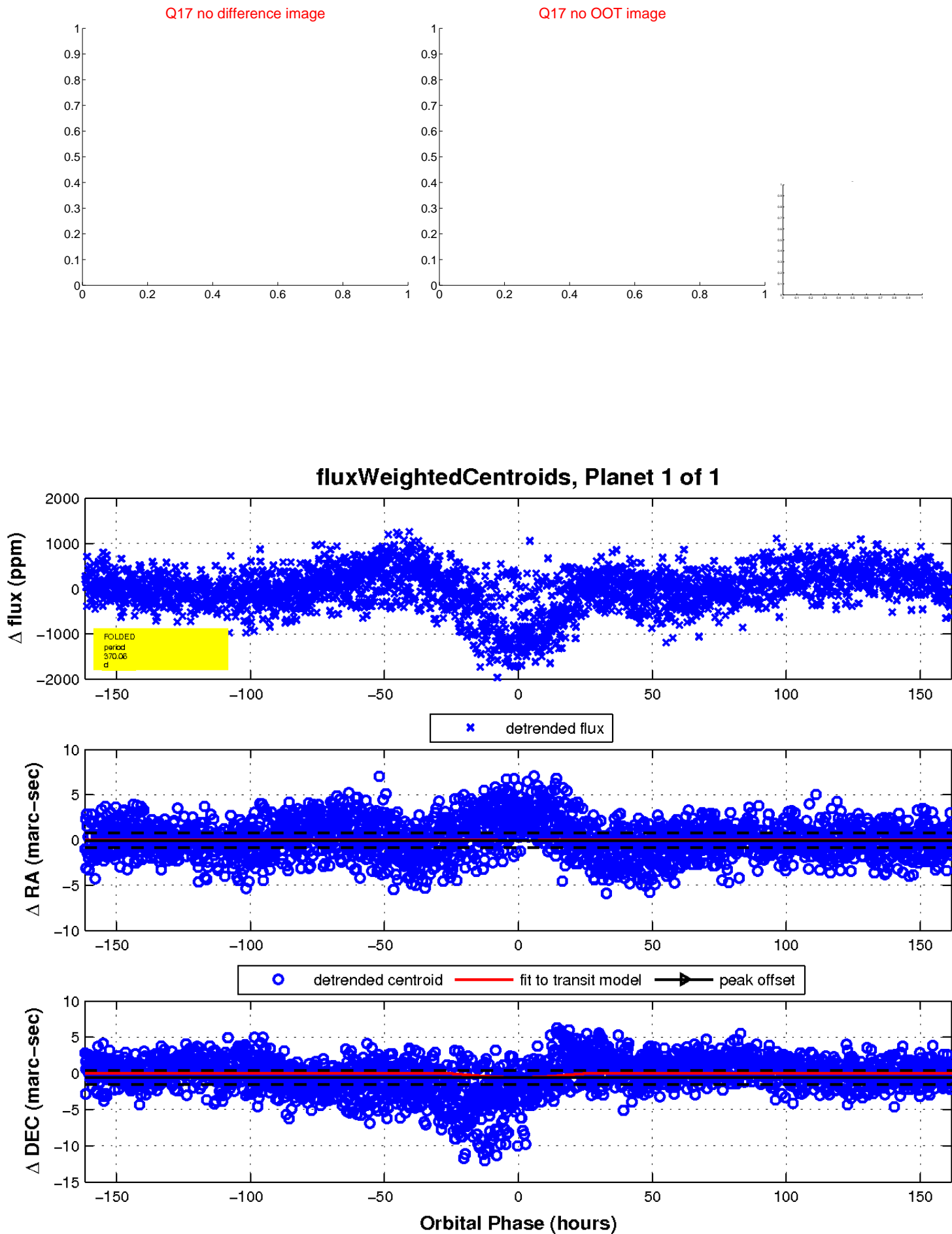
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

