

KIC 009011955

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})
009011955-01	OBS	8279.01	367.081396	178.721245	1538.6	19.880	11.7	13.0	1.10	6268	5.07	1.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009011955-01	OBS	PC	0.70	0	0	0	0	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.

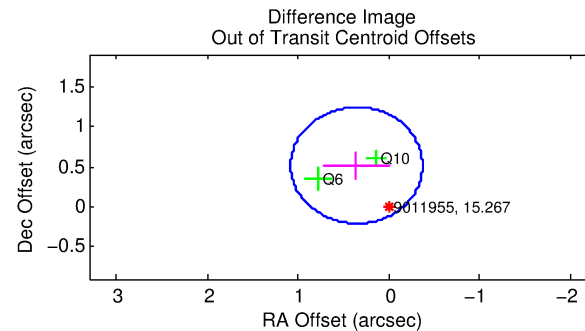
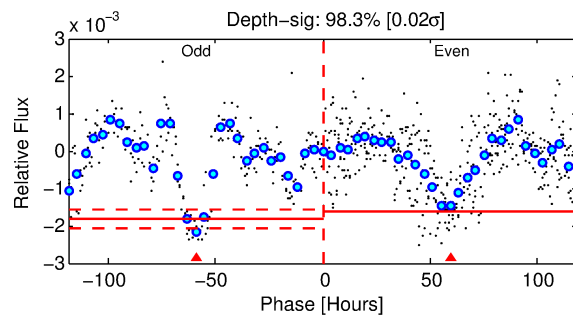
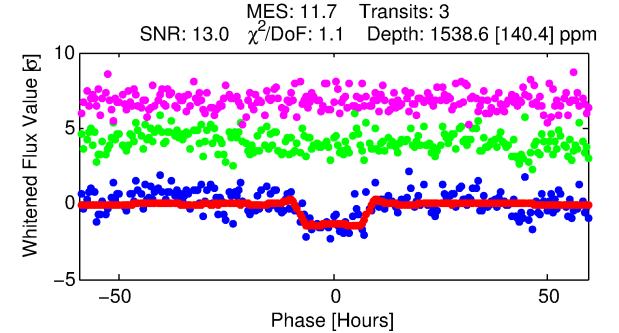
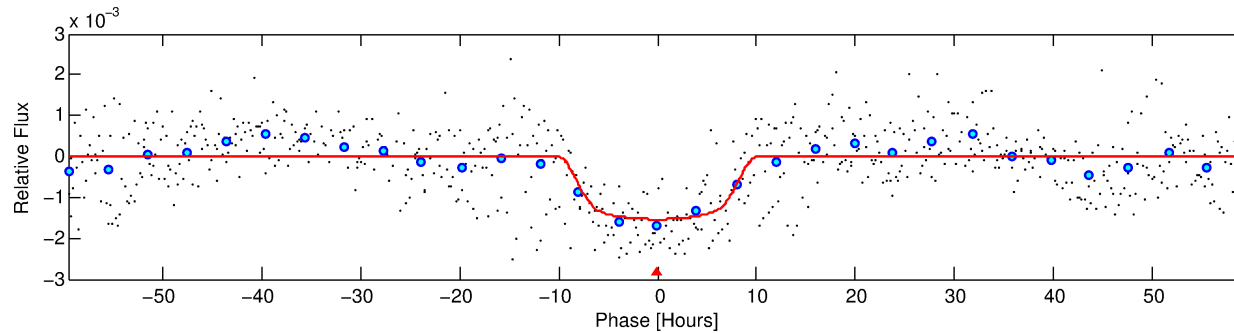
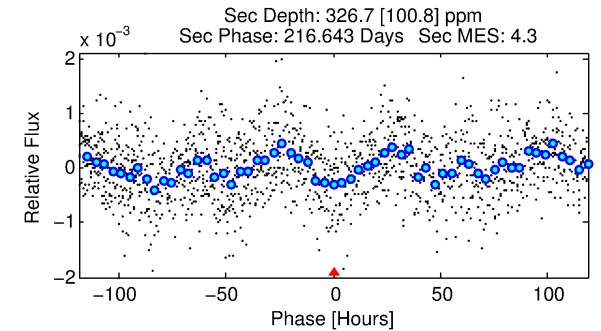
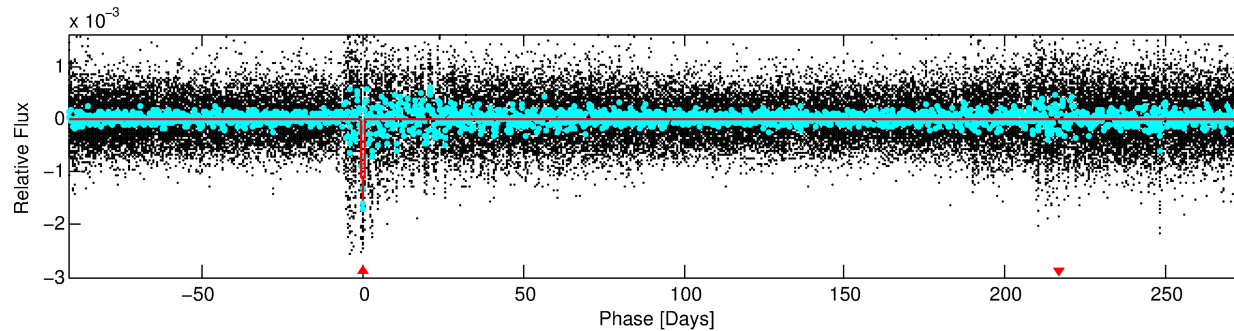
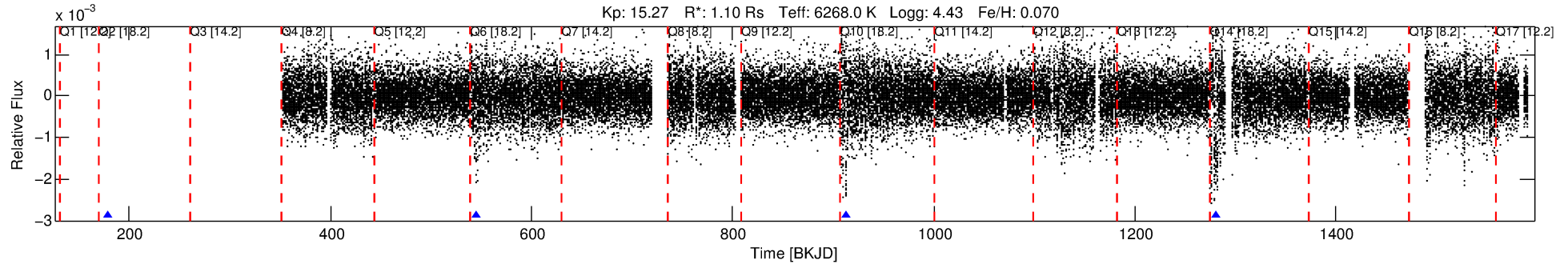
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009011955-01

No Significant Match Found

DV One-Page Summary

KIC: 9011955 Candidate: 1 of 1 Period: 367.081 d



DV Fit Results:

Period = 367.08140 [0.01704] d
Epoch = 178.7212 [0.0328] BKJD
Rp/R* = 0.0422 [0.0026]
a/R* = 74.62 [12.31]
b = 0.90 [0.04]
Seff = 1.48 [0.68]
Teq = 281 [32] K
Rp = 5.07 [1.80] Re
a = 1.0620 [0.3112] AU
Ag = 7889.01 [4254.83] [1.85σ]
Teffp = 4101 [380] K [10.01σ]

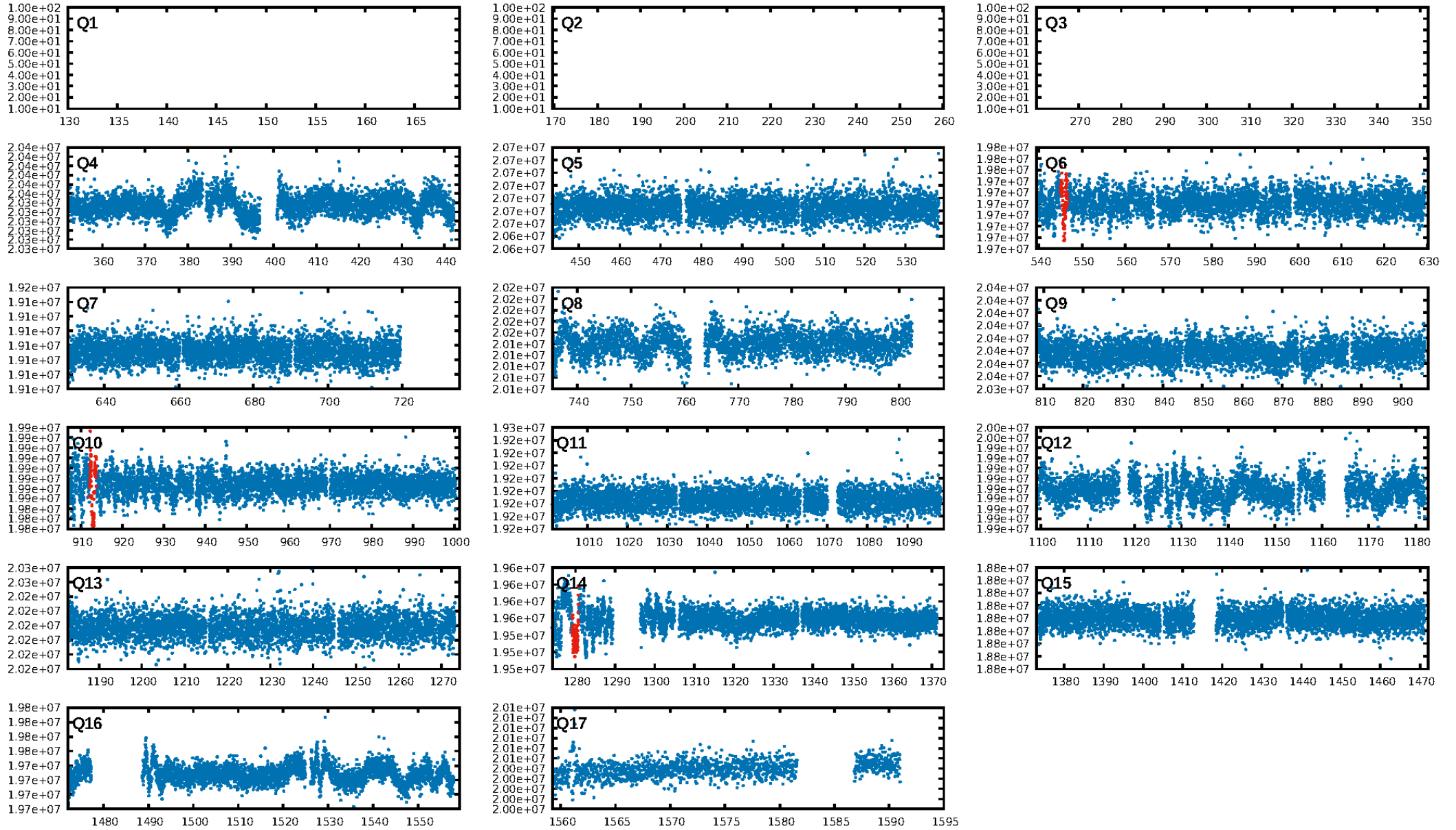
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 4.81e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.411
Centroid-sig: 0.0%
Centroid-so: 2.419 arcsec [2.08σ]
OotOffset-rm: 0.627 arcsec [2.59σ]
KicOffset-rm: 0.691 arcsec [2.85σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

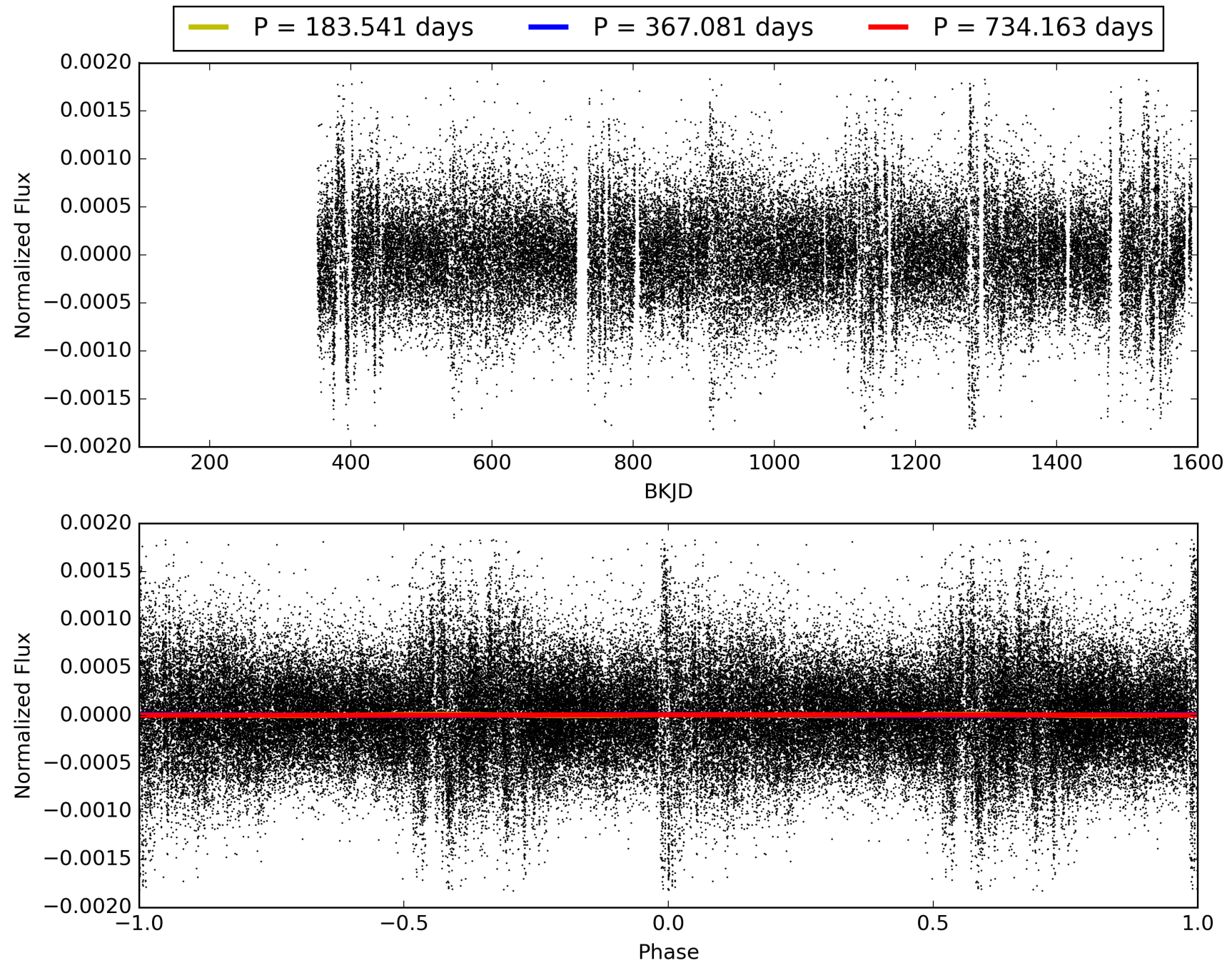
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:28:37 Z

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

TCE 009011955-01, PDC Light Curves

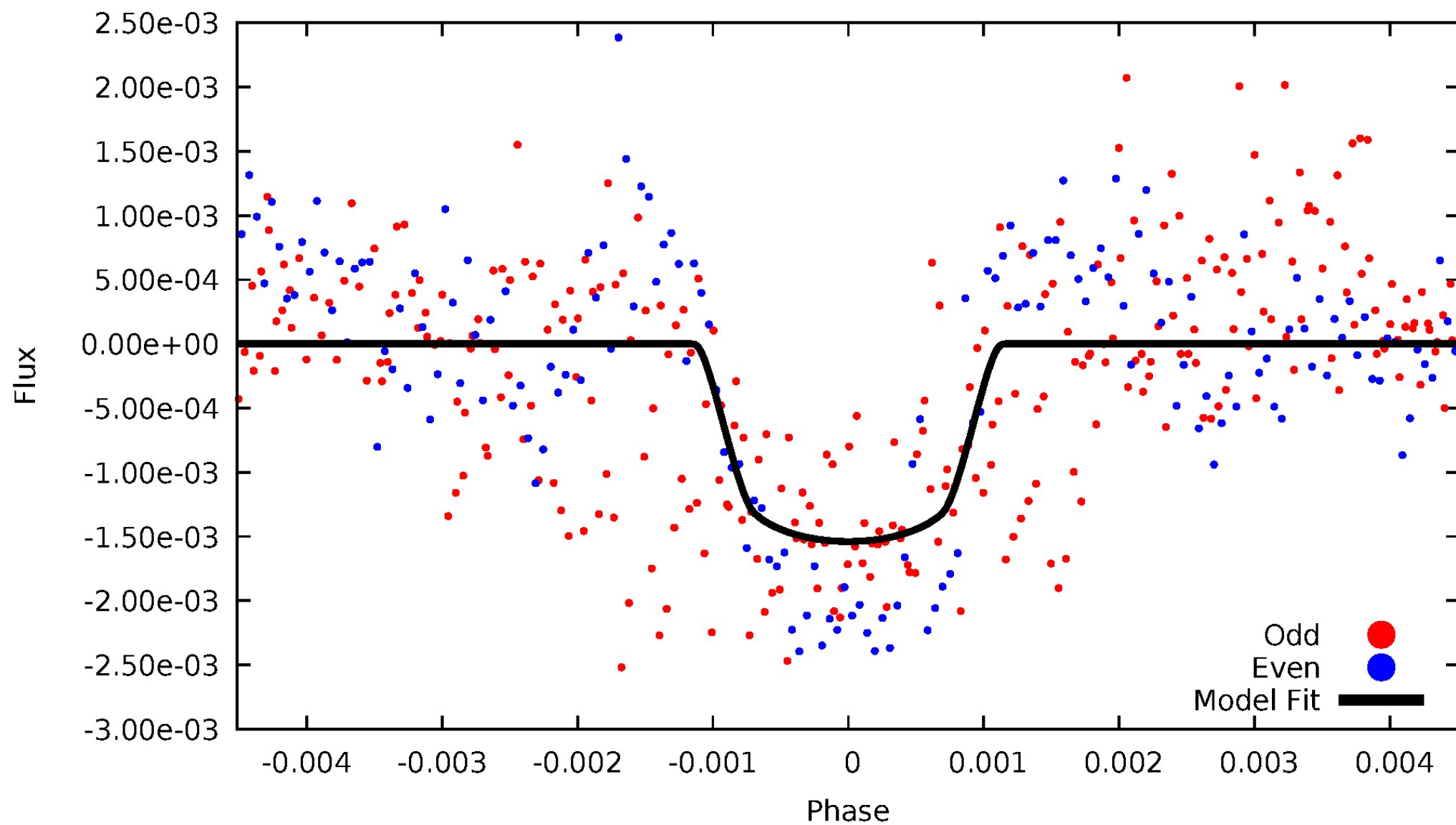


TCE 009011955-01



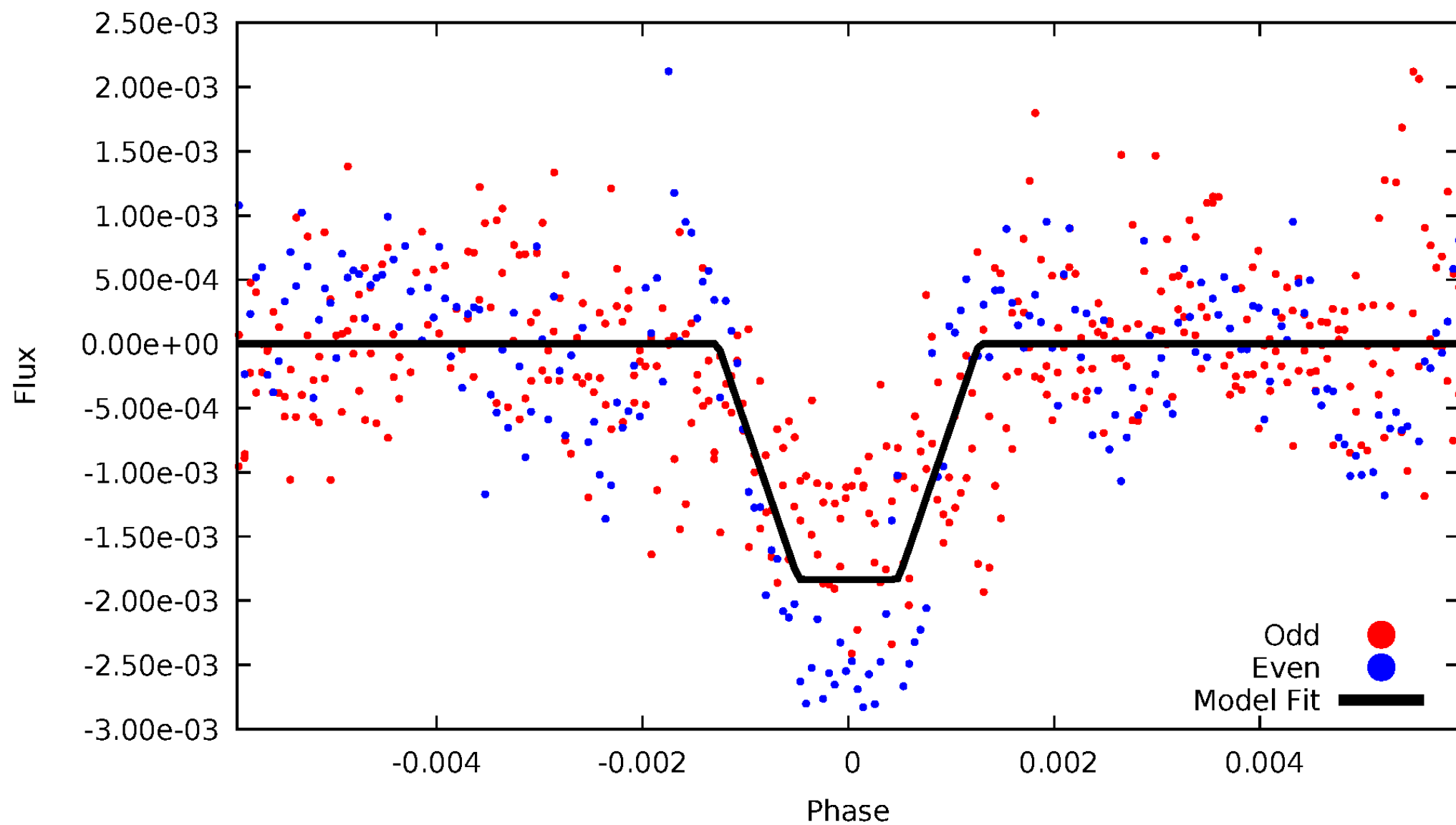
DV Odd/Even

TCE 009011955-01



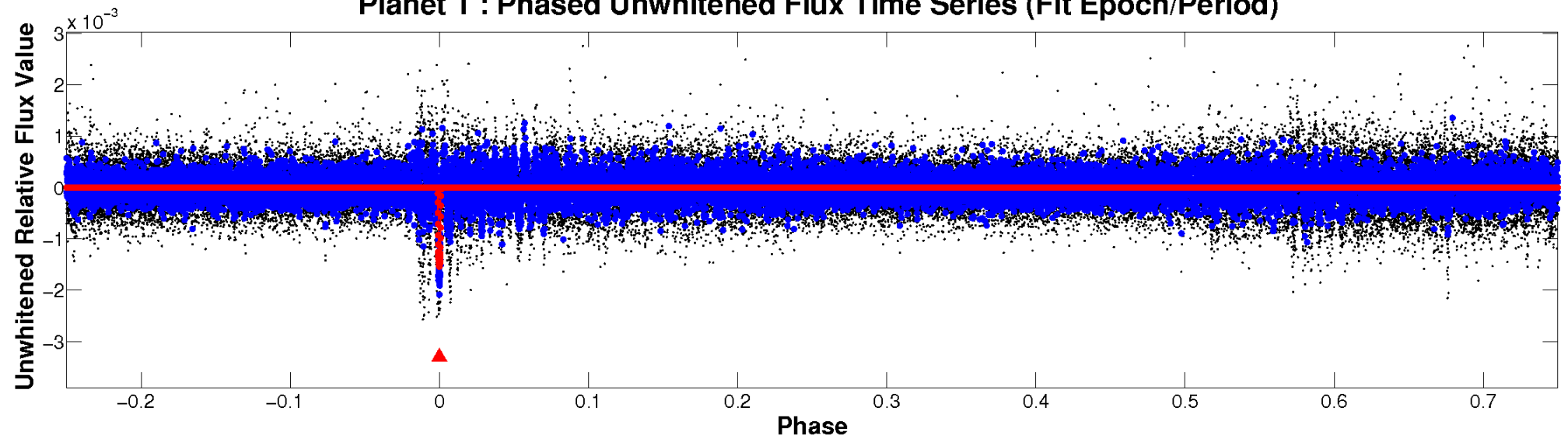
ALT Odd/Even

TCE 009011955-01

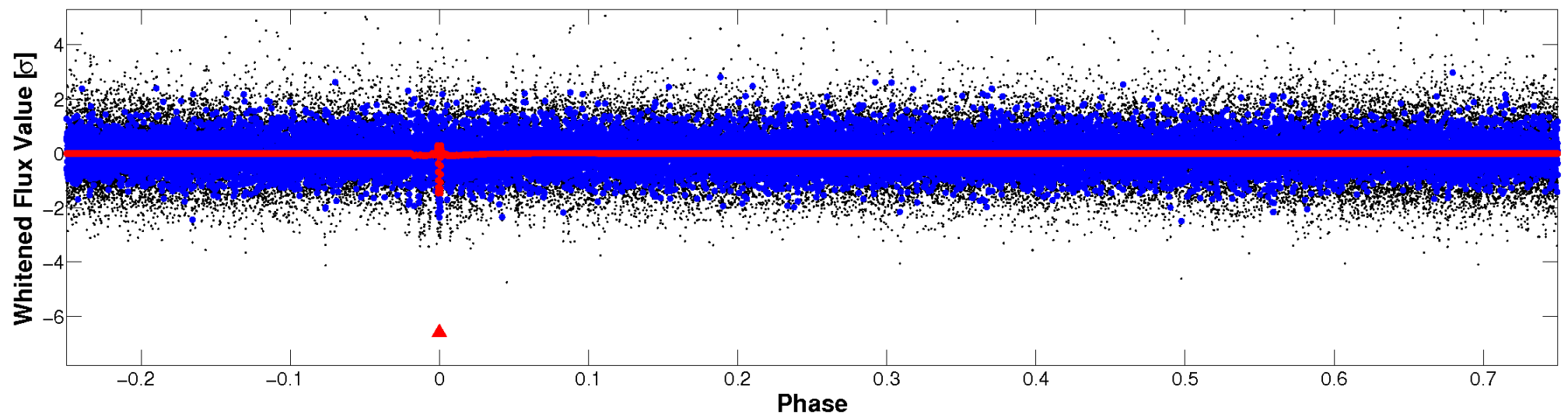


Non-Whitened Vs. Whitened Light Curve

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

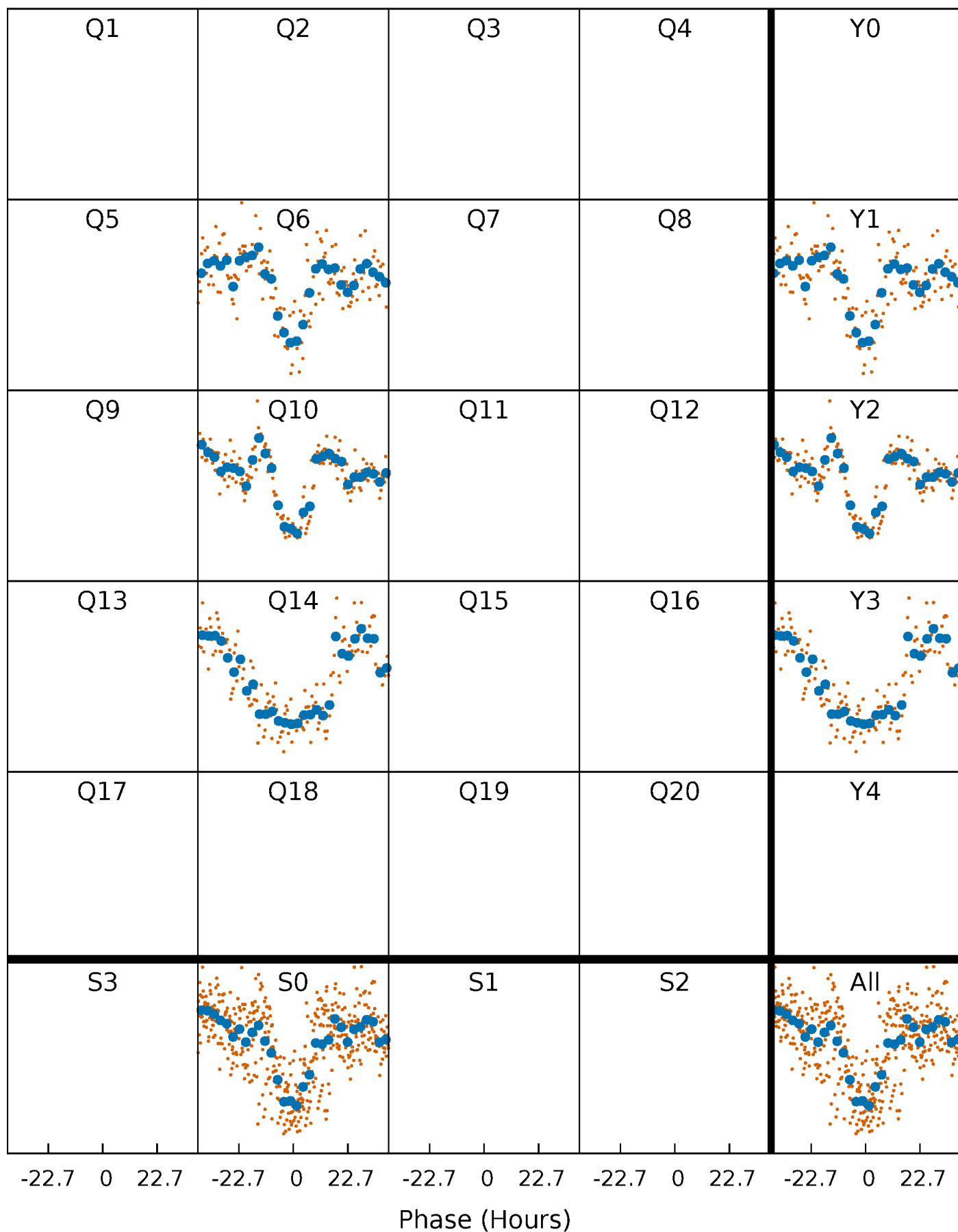


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



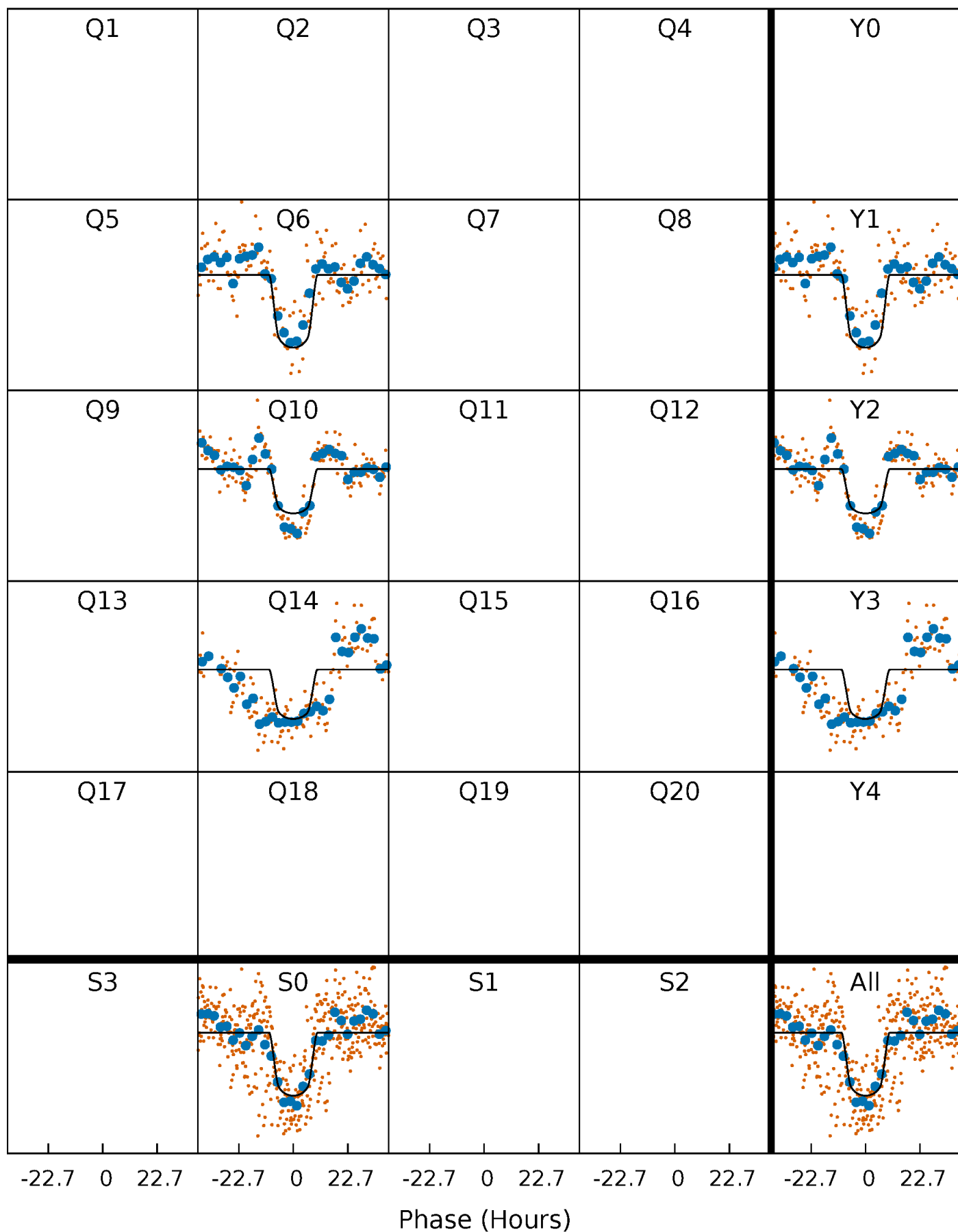
PDC Quarter-Phased Transit Curves

TCE 009011955-01 P=367.081396 Days $T_0=178.721245$ (BKJD)



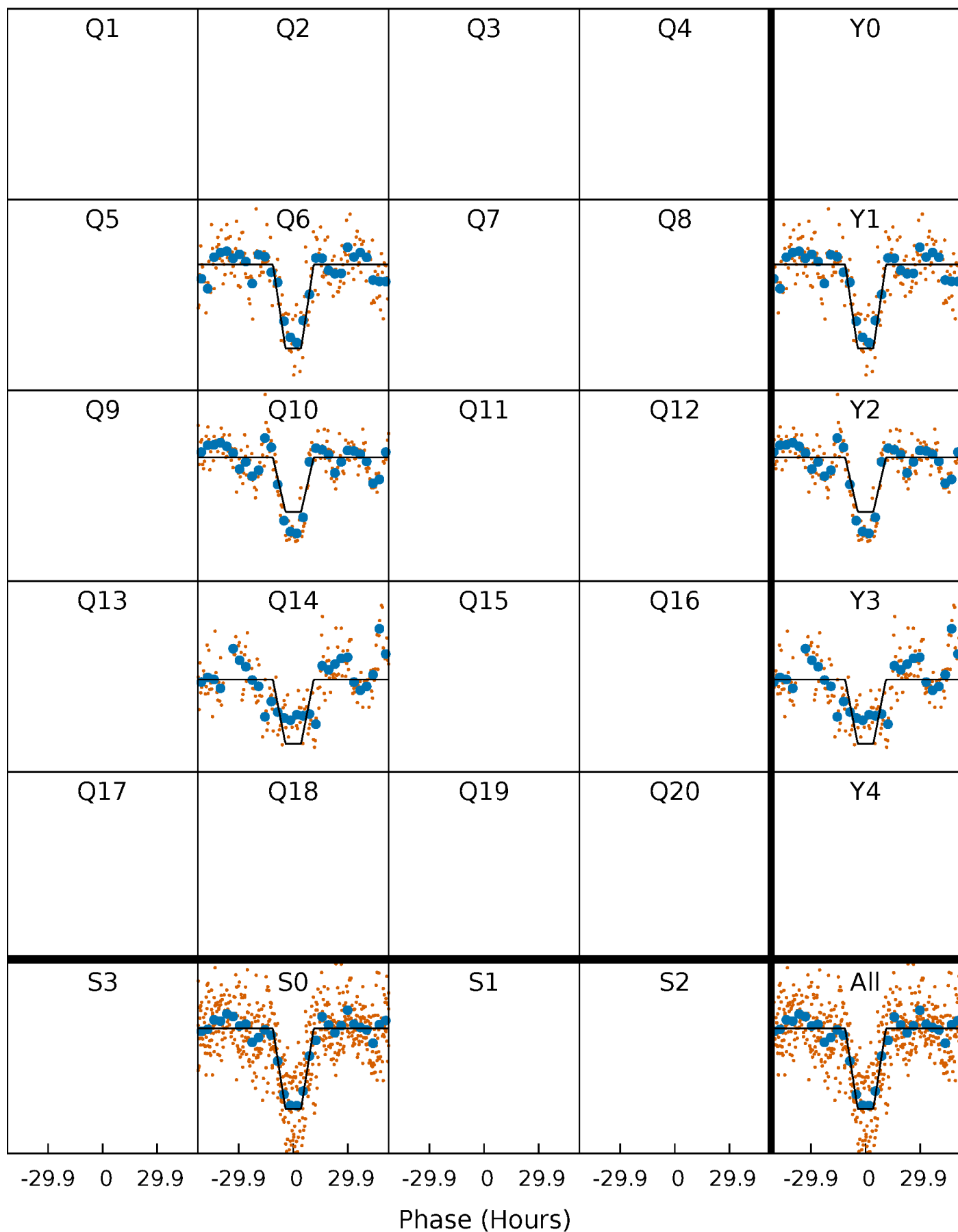
DV Quarter-Phased Transit Curves

TCE 009011955-01 P=367.081396 Days $T_0=178.721245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

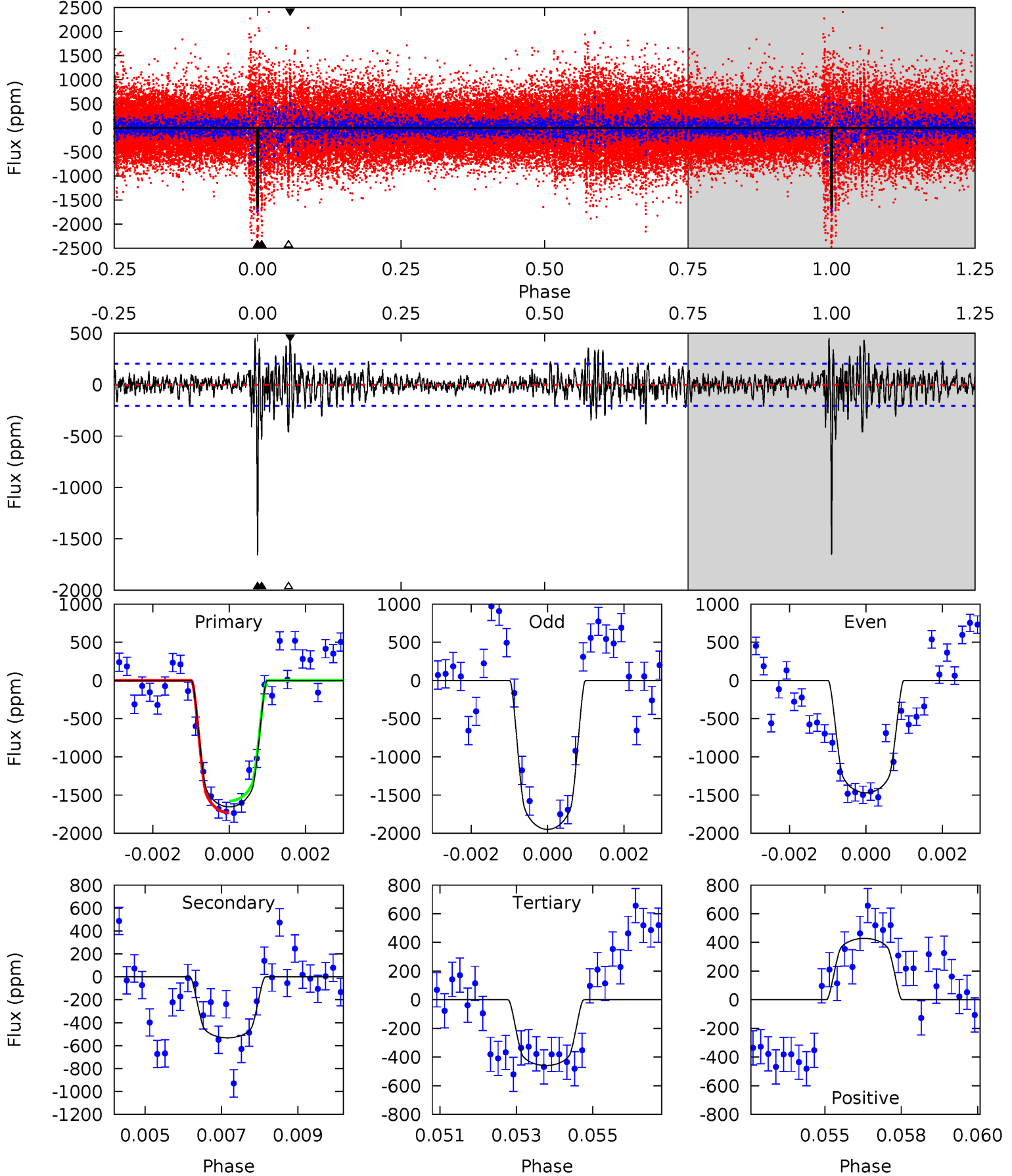
TCE 009011955-01 P=367.150206 Days $T_0=178.602101$ (BKJD)



DV Model-Shift Uniqueness Test

009011955-01, P = 367.081396 Days, E = 178.721245 Days

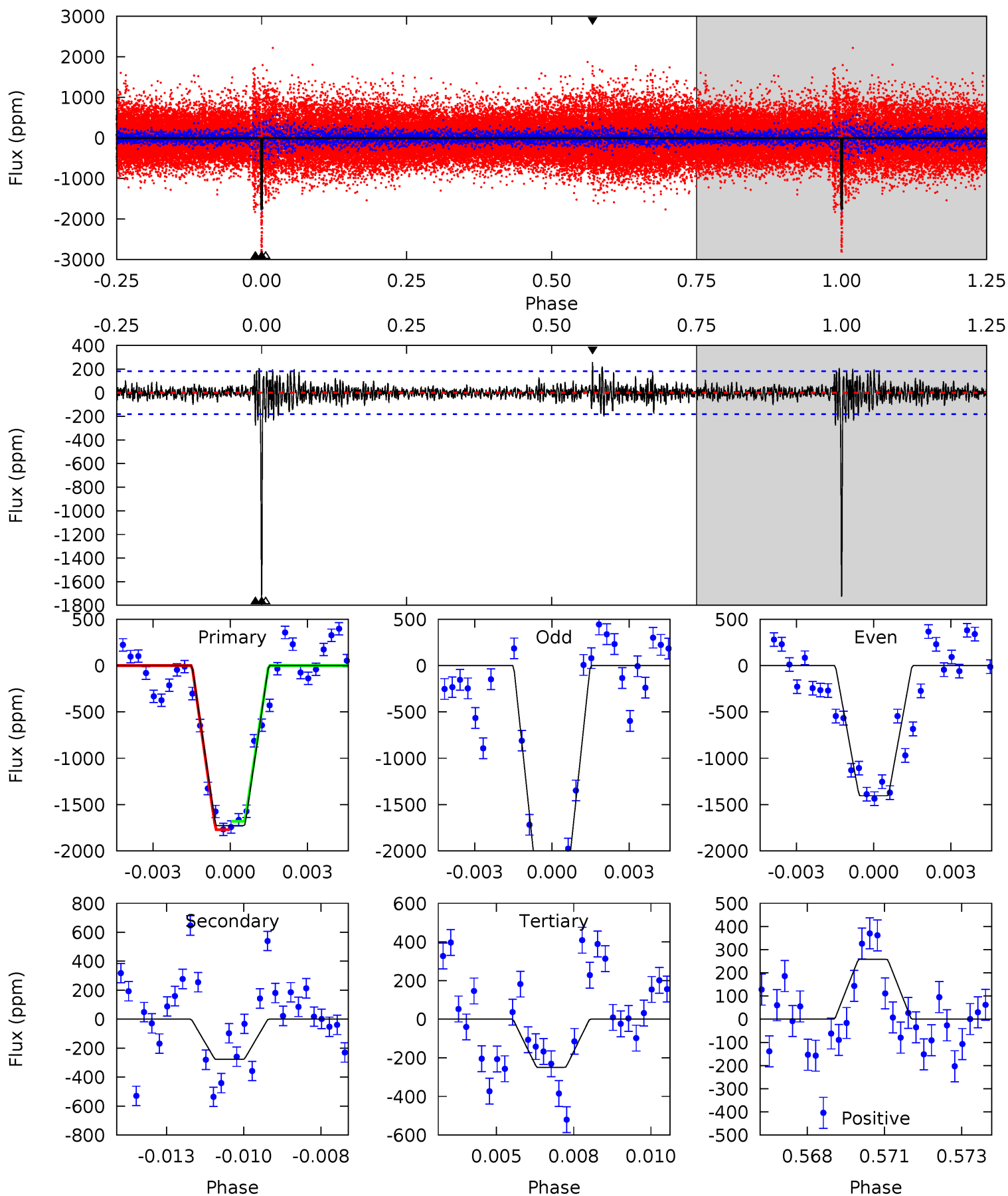
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.8	13.8	11.9	11.1	5.30	3.05	2.40	30.9	31.7	1.90	2.69	5.84	0.93	0.21	2.01



Alt Model-Shift Uniqueness Test

009011955-01, P = 367.150206 Days, E = 178.602101 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.2	8.06	7.25	7.51	5.28	3.02	1.40	43.0	42.7	0.81	0.55	13.7	1.11	0.13	1.34



Stellar Parameters For KIC 009011955

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6268^{+173}_{-260}	$4.429^{+0.058}_{-0.232}$	$0.070^{+0.250}_{-0.300}$	$1.100^{+0.384}_{-0.128}$	$1.188^{+0.153}_{-0.170}$	$1.257^{+0.386}_{-0.690}$
	+3%/-4%	+1%/-5%	+357%/-429%	+35%/-12%	+13%/-14%	+31%/-55%
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 009011955-01 / KOI 8279.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-532 ± 39	$5.22^{+1.02}_{-0.58}$	400^{+32}_{-22}	4751^{+186}_{-196}	11804^{+3113}_{-3385}
Alt.	-277 ± 34	$5.30^{+1.14}_{-0.57}$	401^{+37}_{-24}	4164^{+172}_{-182}	5853^{+1747}_{-1761}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

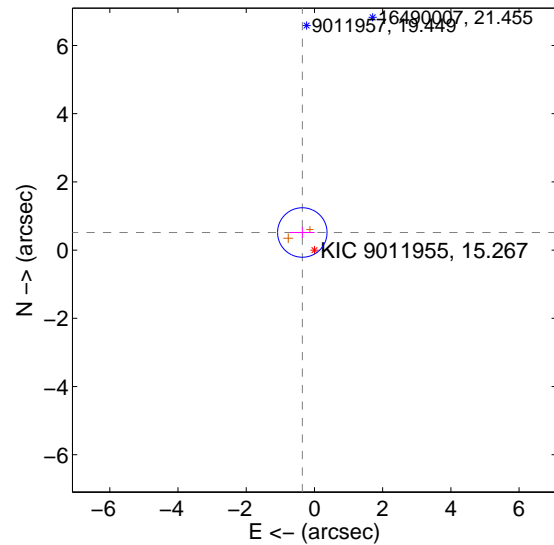
Supplemental centroid analysis for 009011955-01. Kepler magnitude: 15.27. Transit SNR 13.05

There are 0 quarters with good PRF difference image offsets

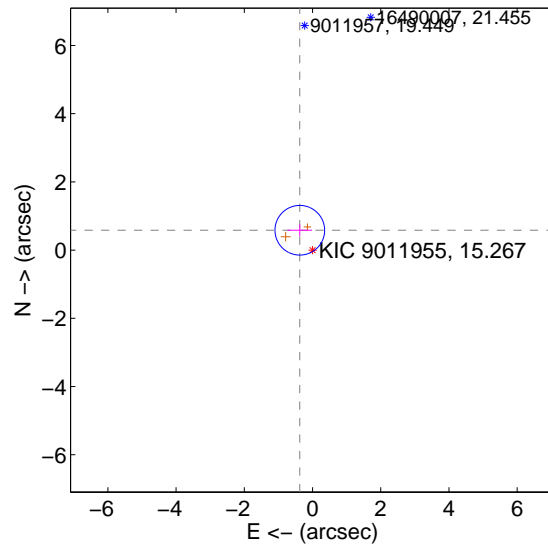
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.627 ± 0.242	2.59	0.356 ± 0.360	0.516 ± 0.157
PRF-fit source offset from KIC position	0.691 ± 0.243	2.85	0.373 ± 0.360	0.582 ± 0.172
photometric centroid source offset	2.42 ± 1.16	2.08	0.99 ± 1.28	2.21 ± 1.14

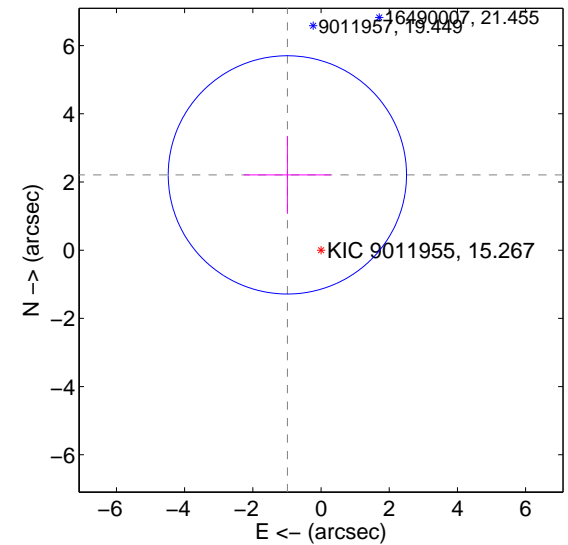
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

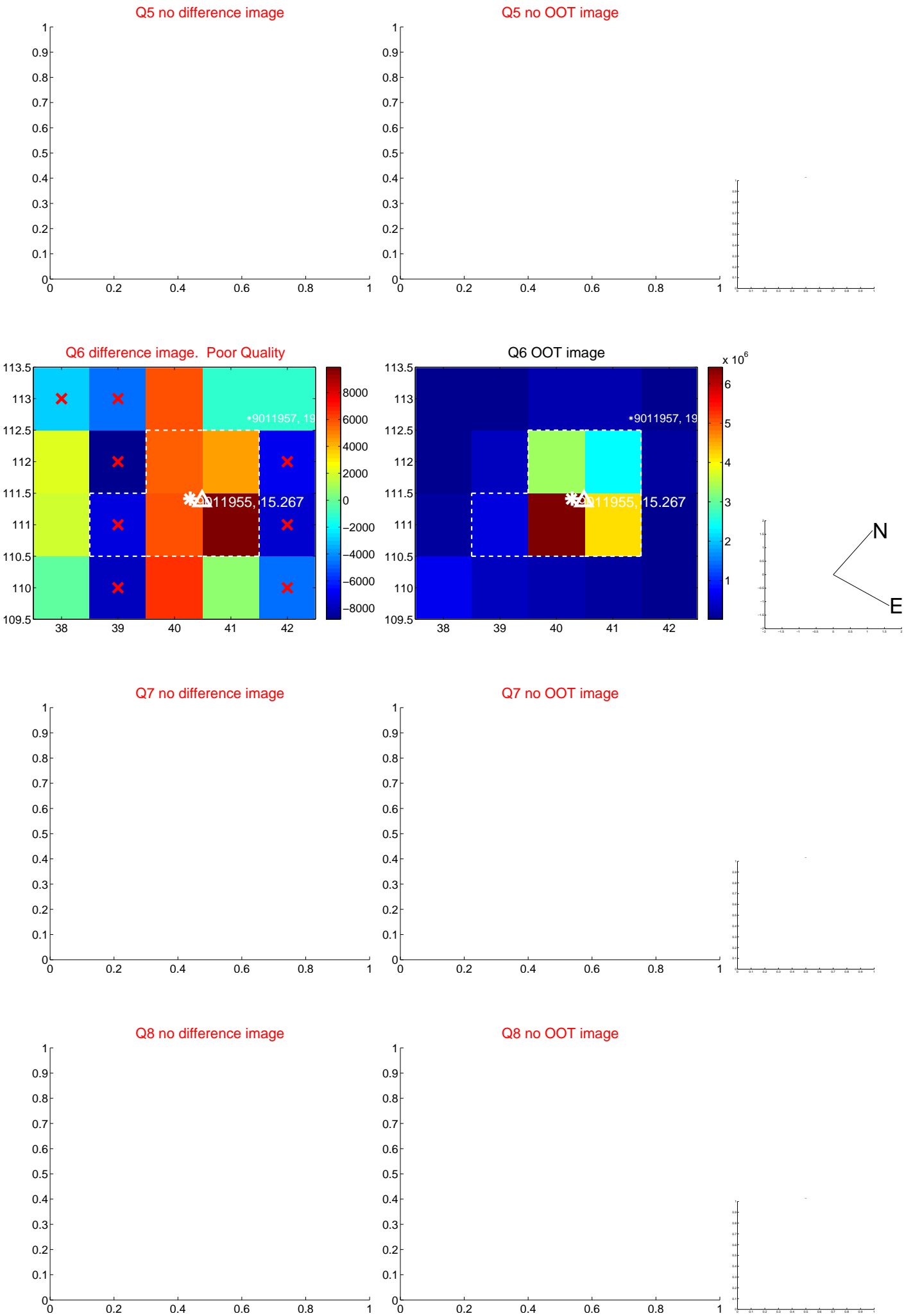


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 \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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

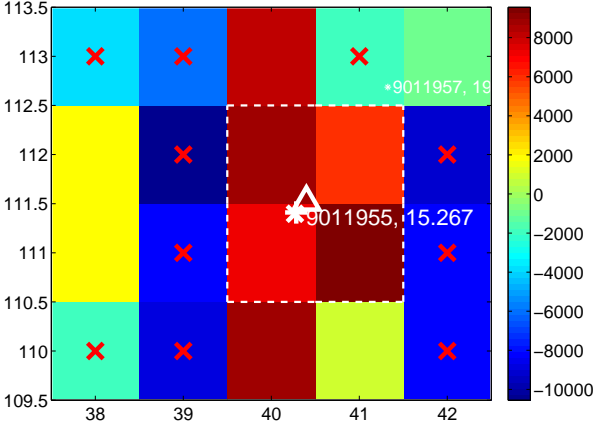
Q9 no difference image



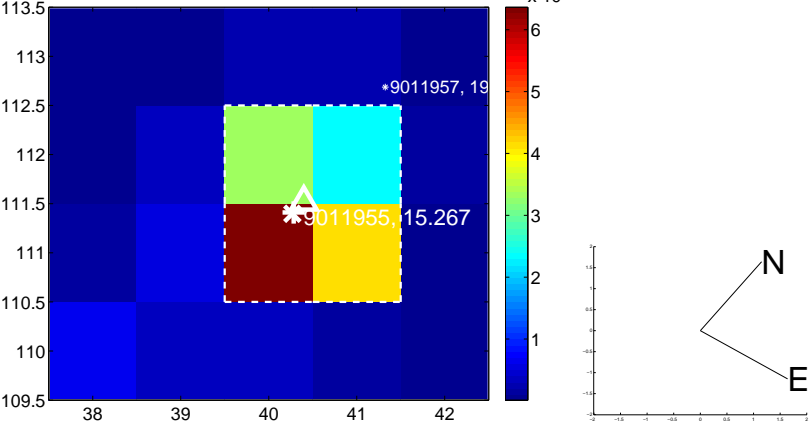
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



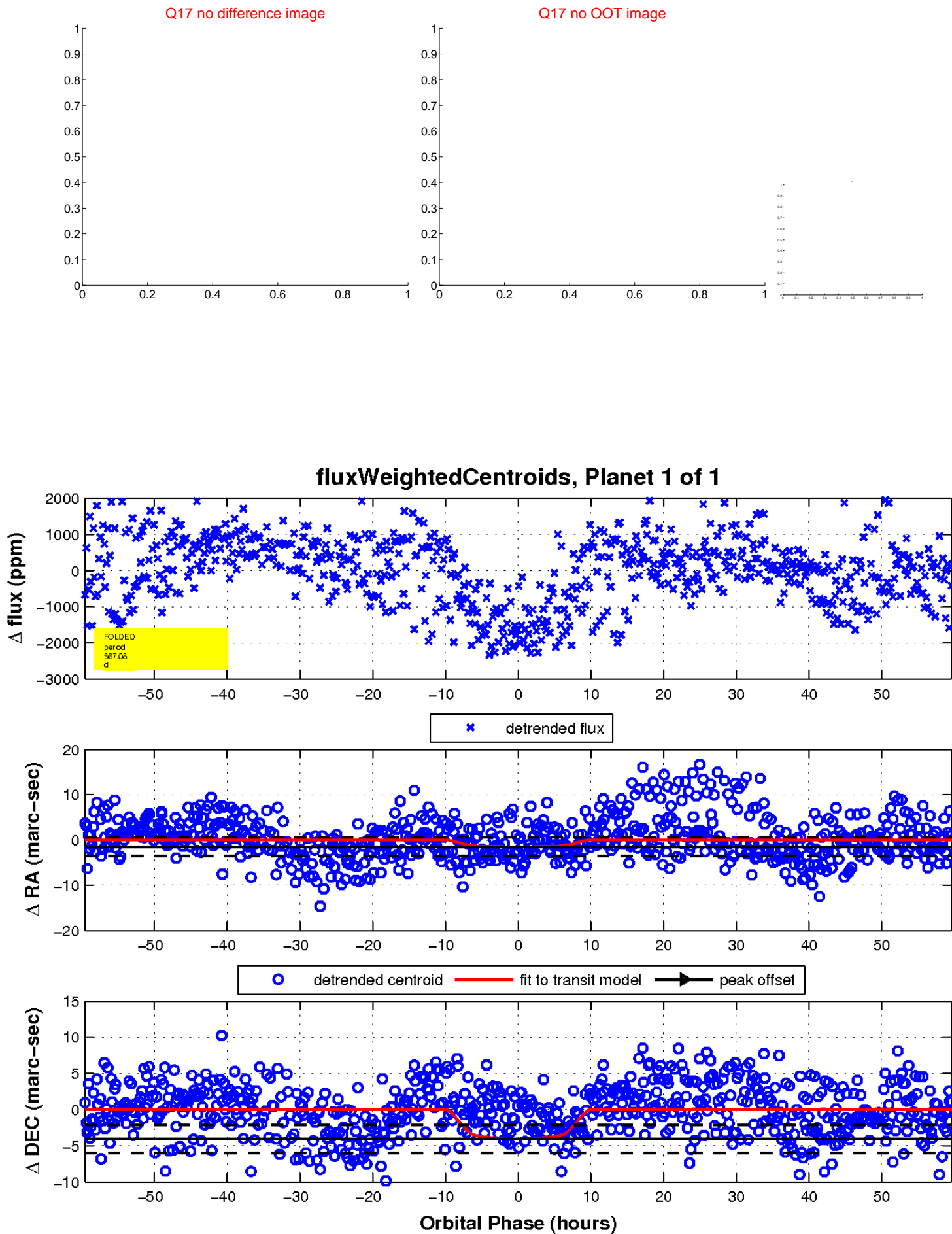
Q12 no OOT image



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

