

KIC 008955756

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})
008955756-01	OBS	No	414.191973	449.026956	171.5	12.889	8.2	6.6	3.01	6324	4.62	7.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008955756-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—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.

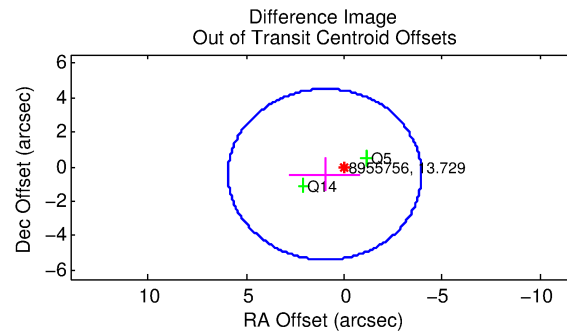
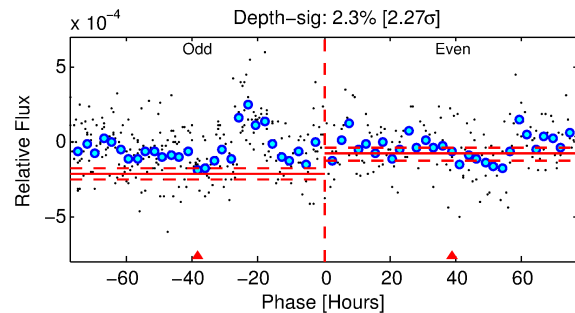
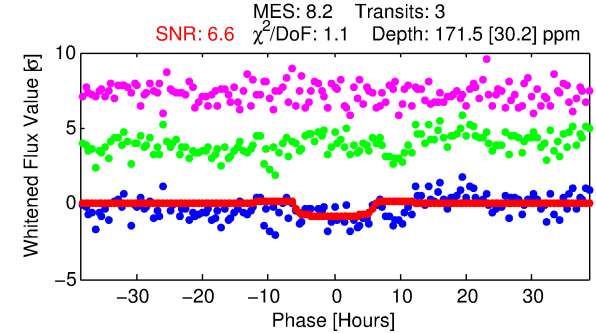
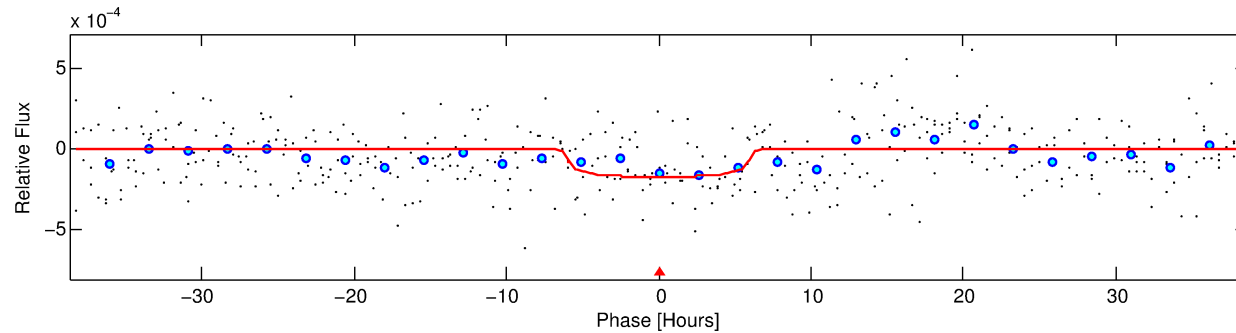
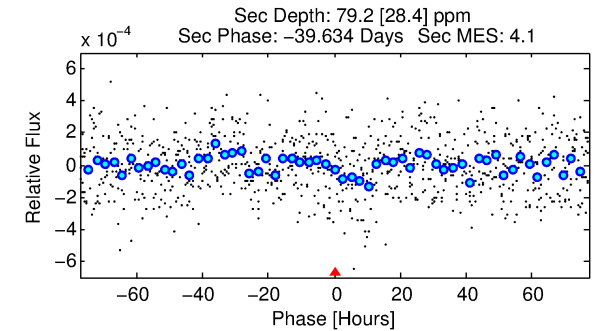
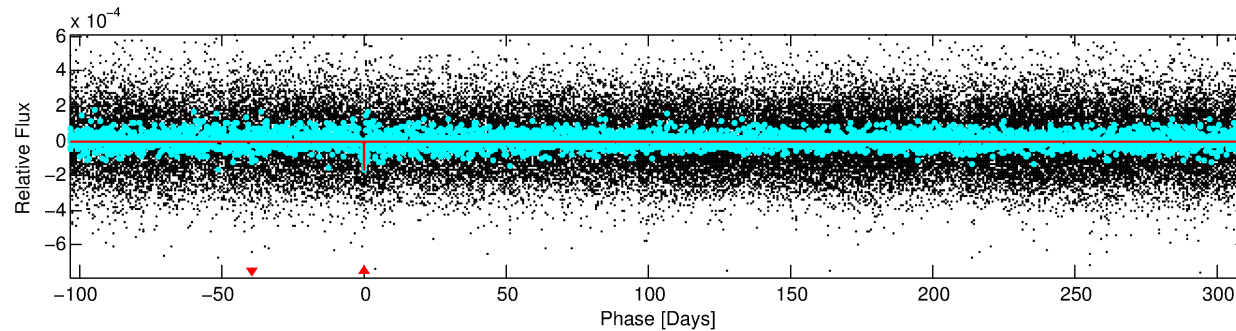
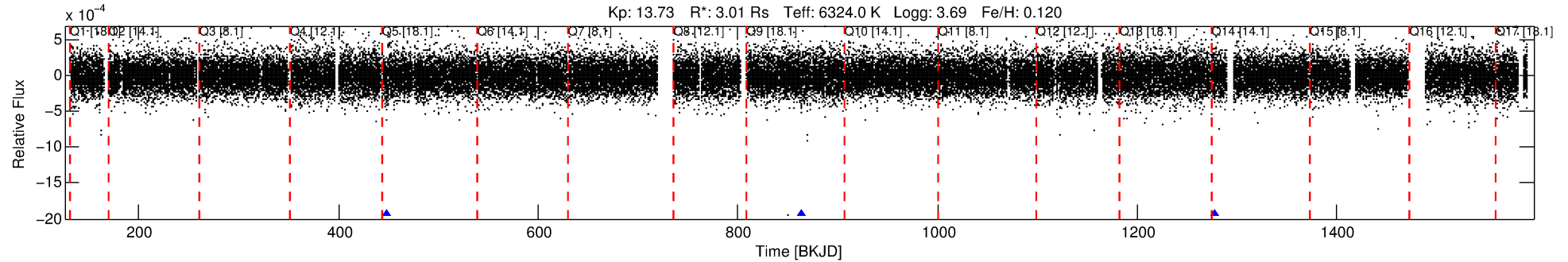
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008955756-01

No Significant Match Found

DV One-Page Summary

KIC: 8955756 Candidate: 1 of 1 Period: 414.192 d



DV Fit Results:

Period = 414.19197 [0.02125] d
Epoch = 449.0270 [0.0277] BKJD
Rp/R* = 0.0141 [0.0037]
a/R* = 114.13 [152.74]
b = 0.90 [0.28]
Seff = 7.97 [7.27]
Teff = 428 [98] K
Rp = 4.62 [2.85] Re
a = 1.2749 [0.7067] AU
Ag = 3317.41 [3659.46] [0.91σ]
Teffp = 5027 [817] K [5.59σ]

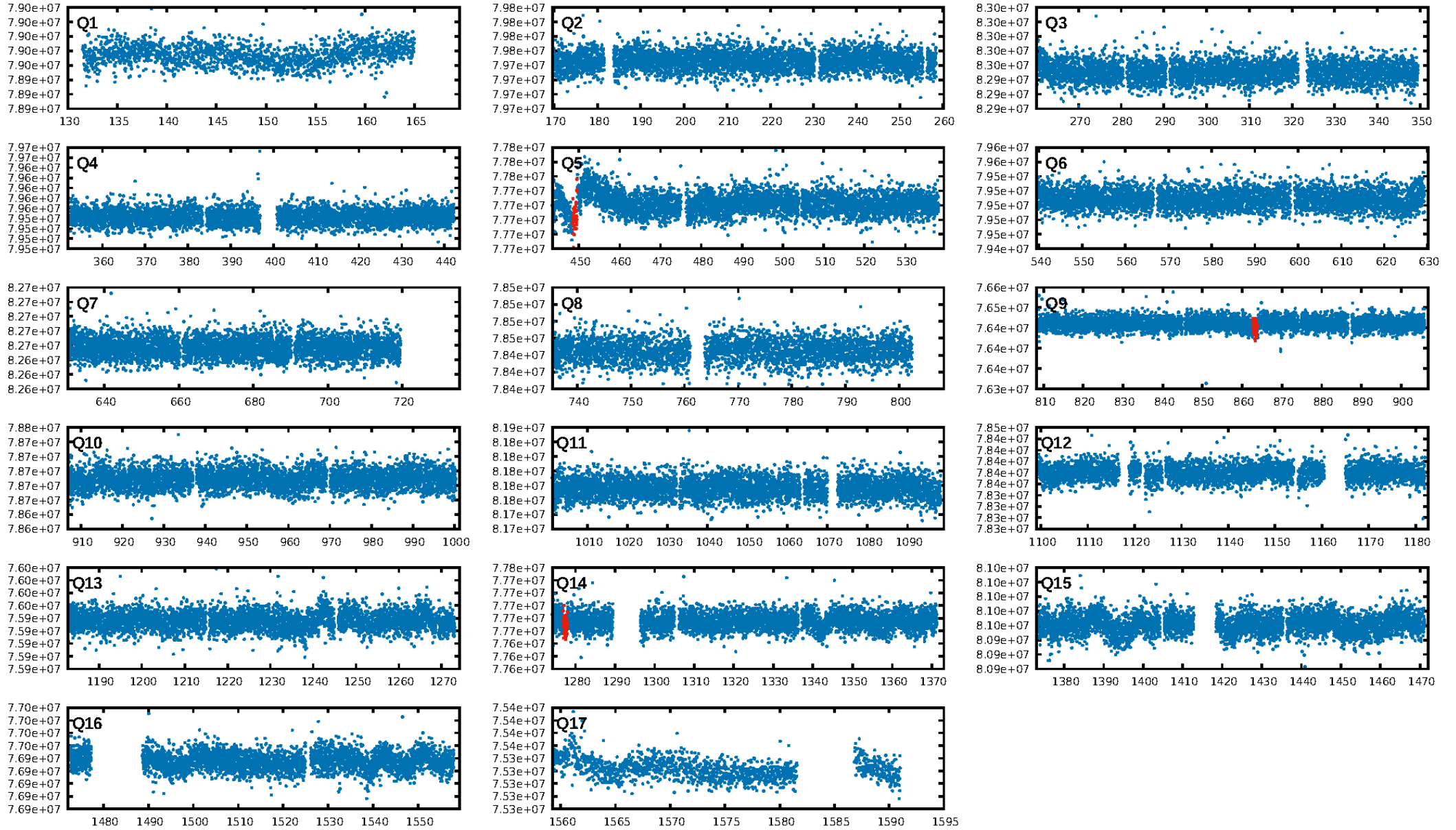
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 4.91e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.106
Centroid-sig: 1.9%
Centroid-so: 2.700 arcsec [1.59σ]
OotOffset-rm: 1.087 arcsec [0.66σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 1.163 arcsec [0.75σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

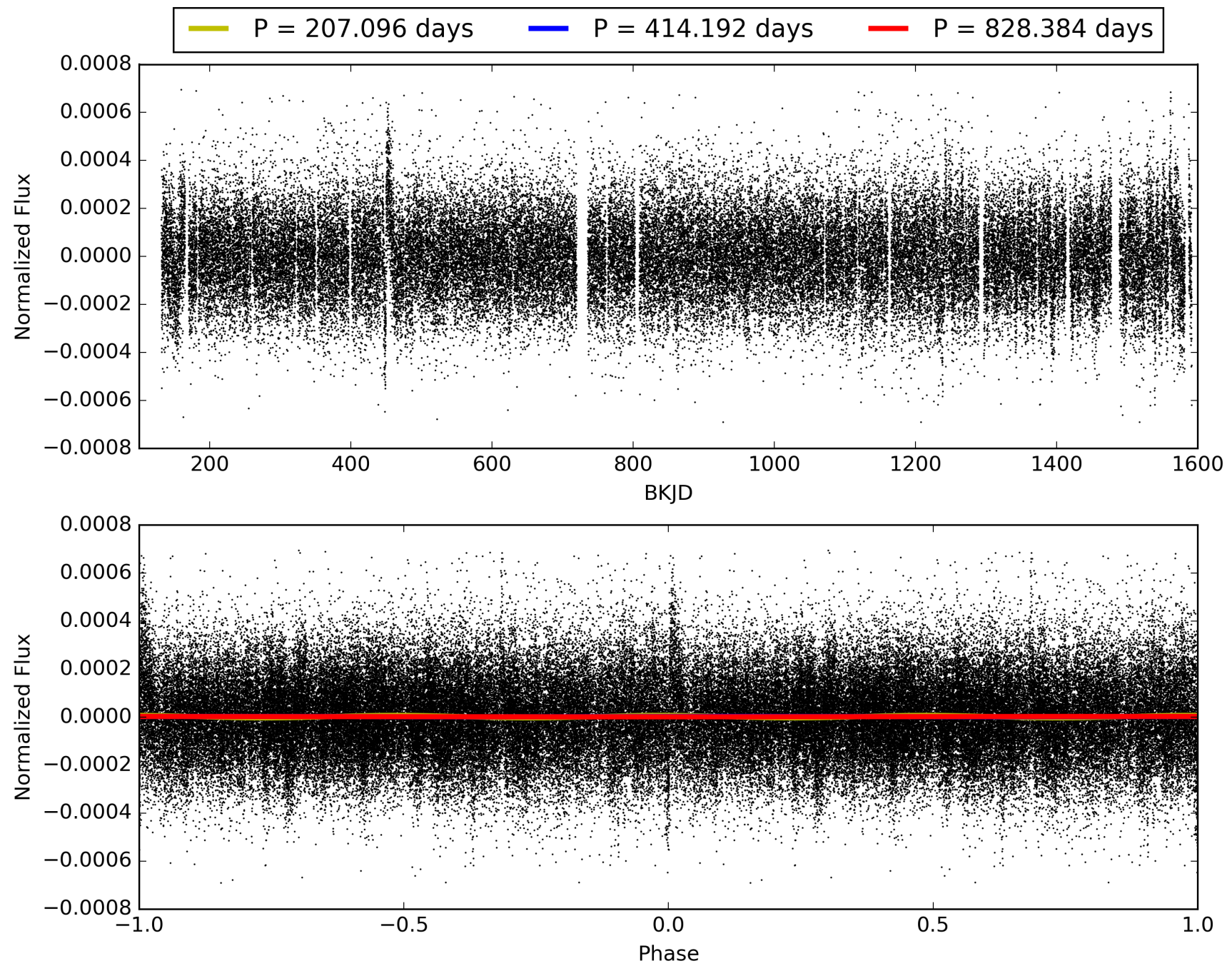
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:49:18 Z

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

TCE 008955756-01, PDC Light Curves

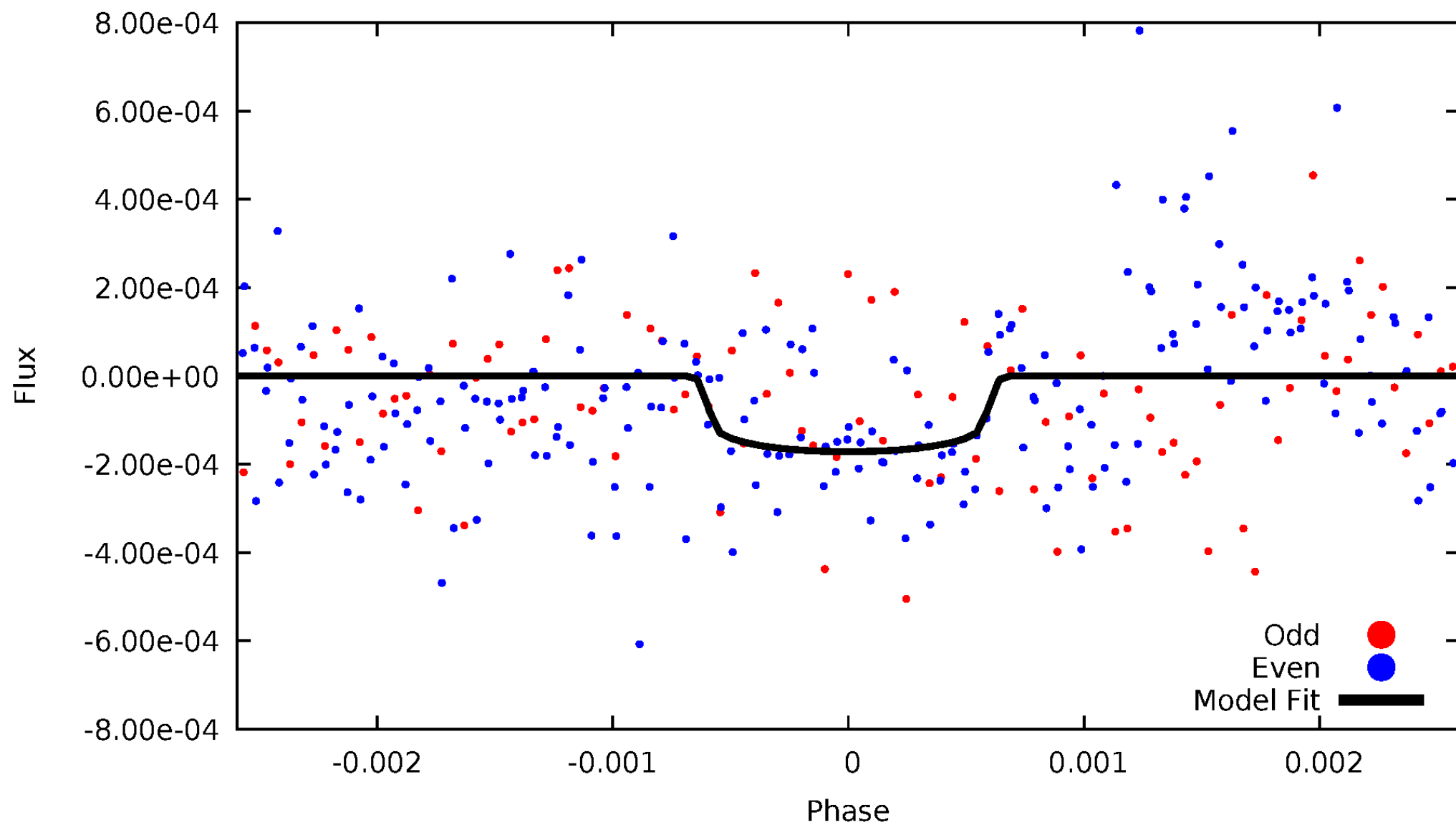


TCE 008955756-01



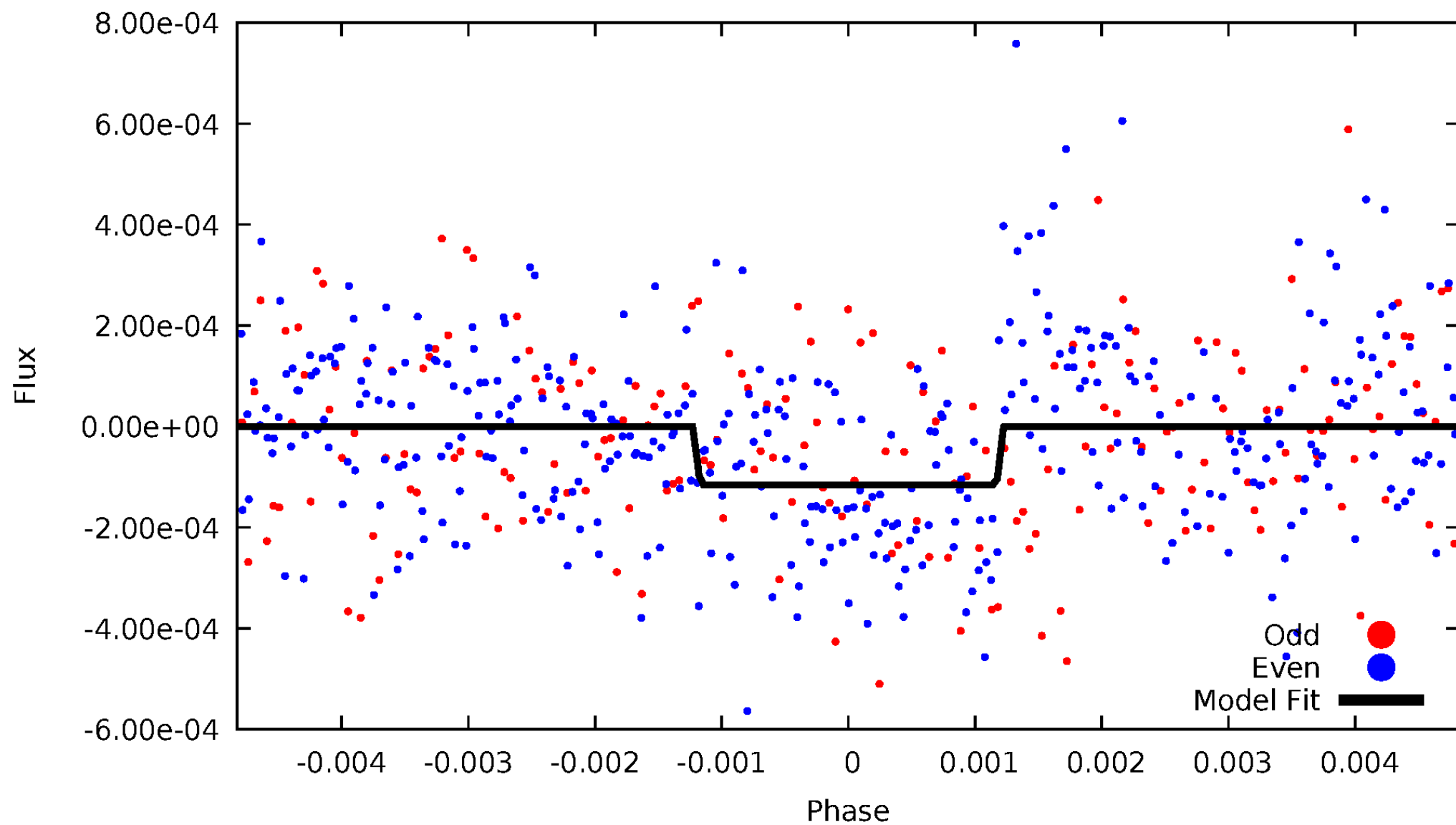
DV Odd/Even

TCE 008955756-01



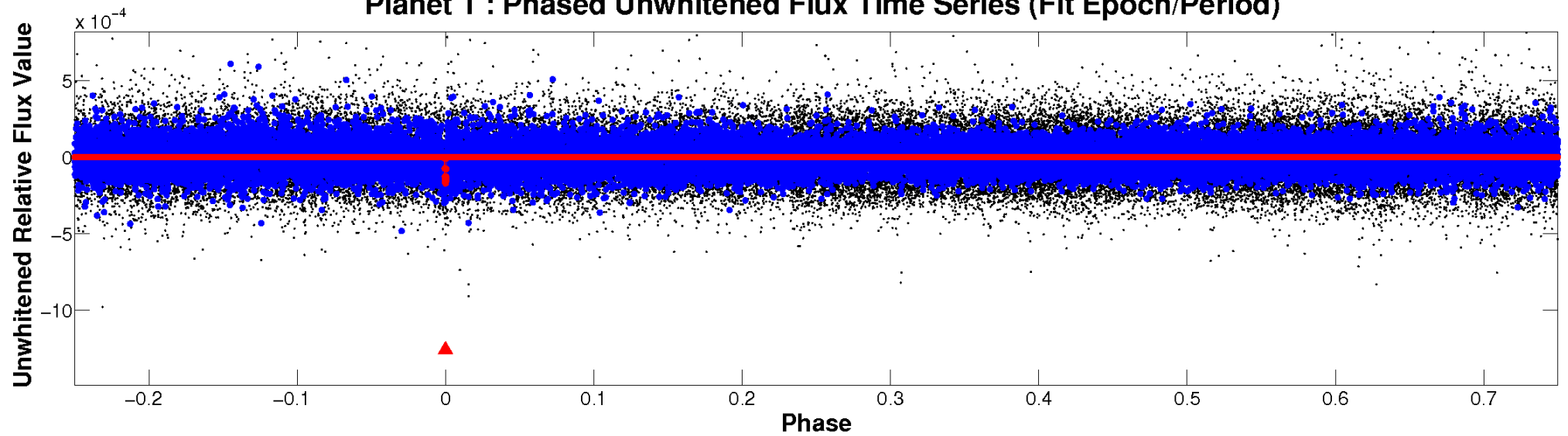
ALT Odd/Even

TCE 008955756-01

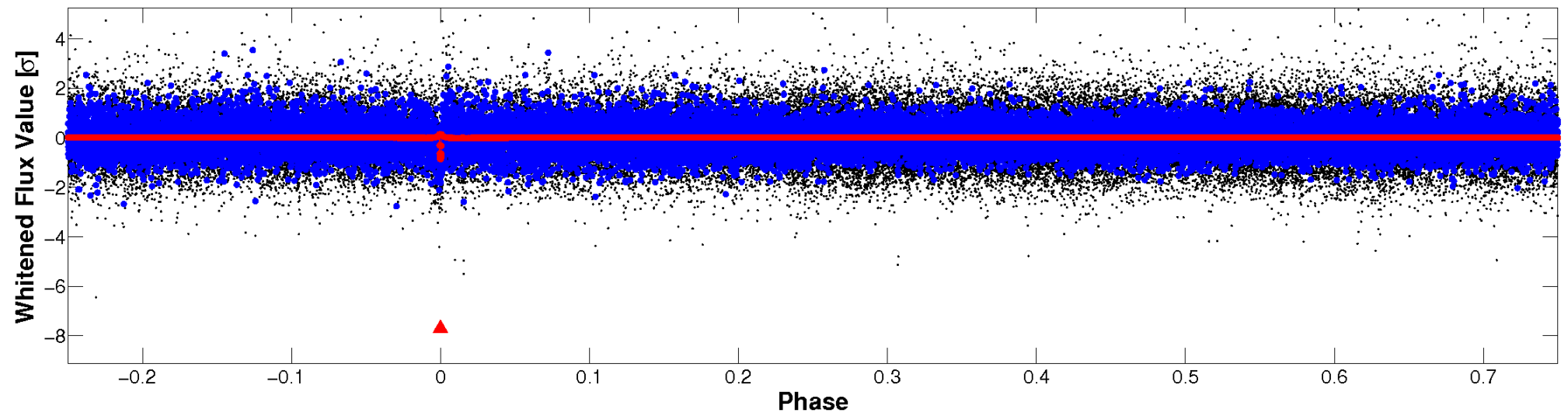


Non-Whitened Vs. Whitened Light Curve

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

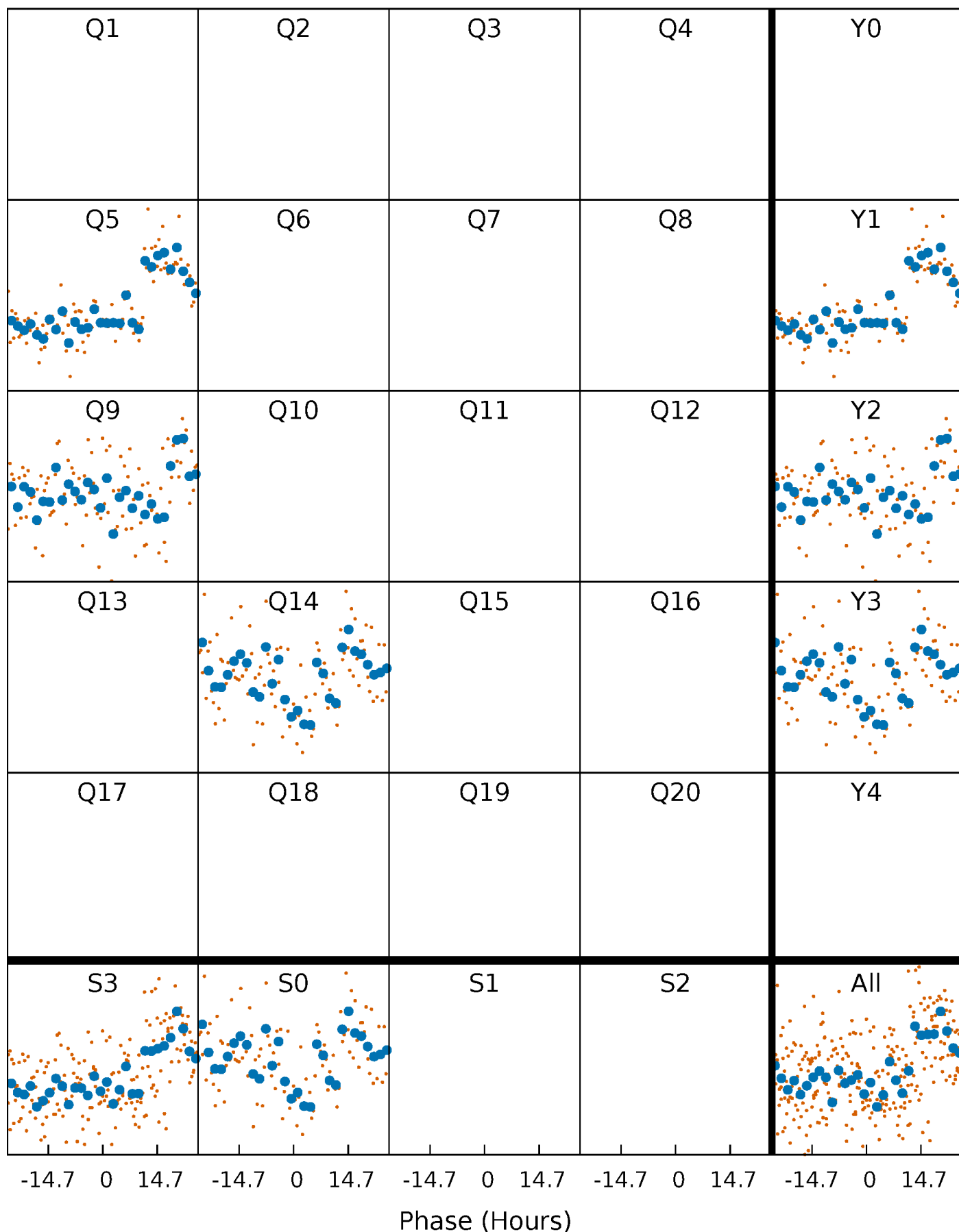


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



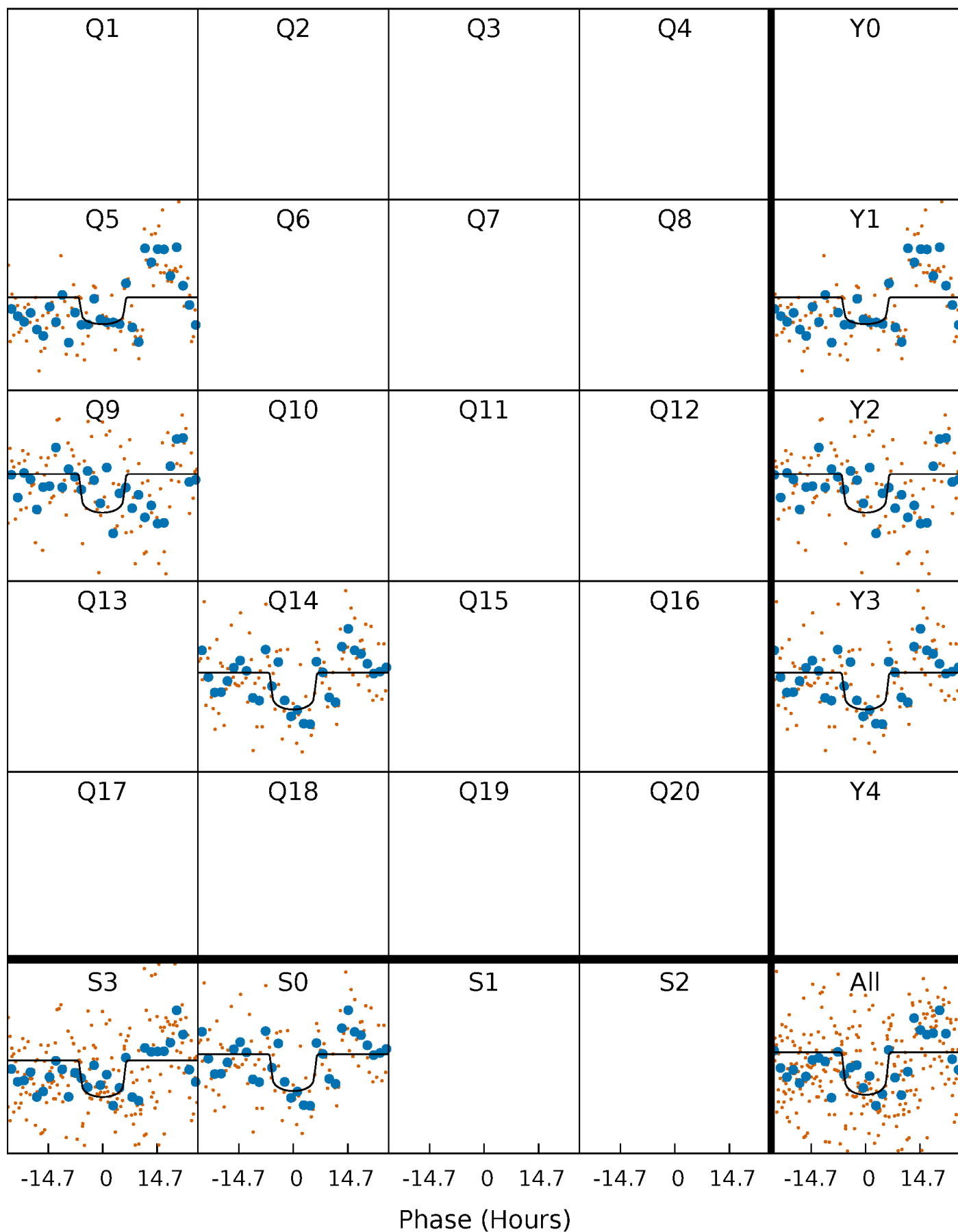
PDC Quarter-Phased Transit Curves

TCE 008955756-01 P=414.191973 Days $T_0=449.026956$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008955756-01 P=414.191973 Days $T_0=449.026956$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

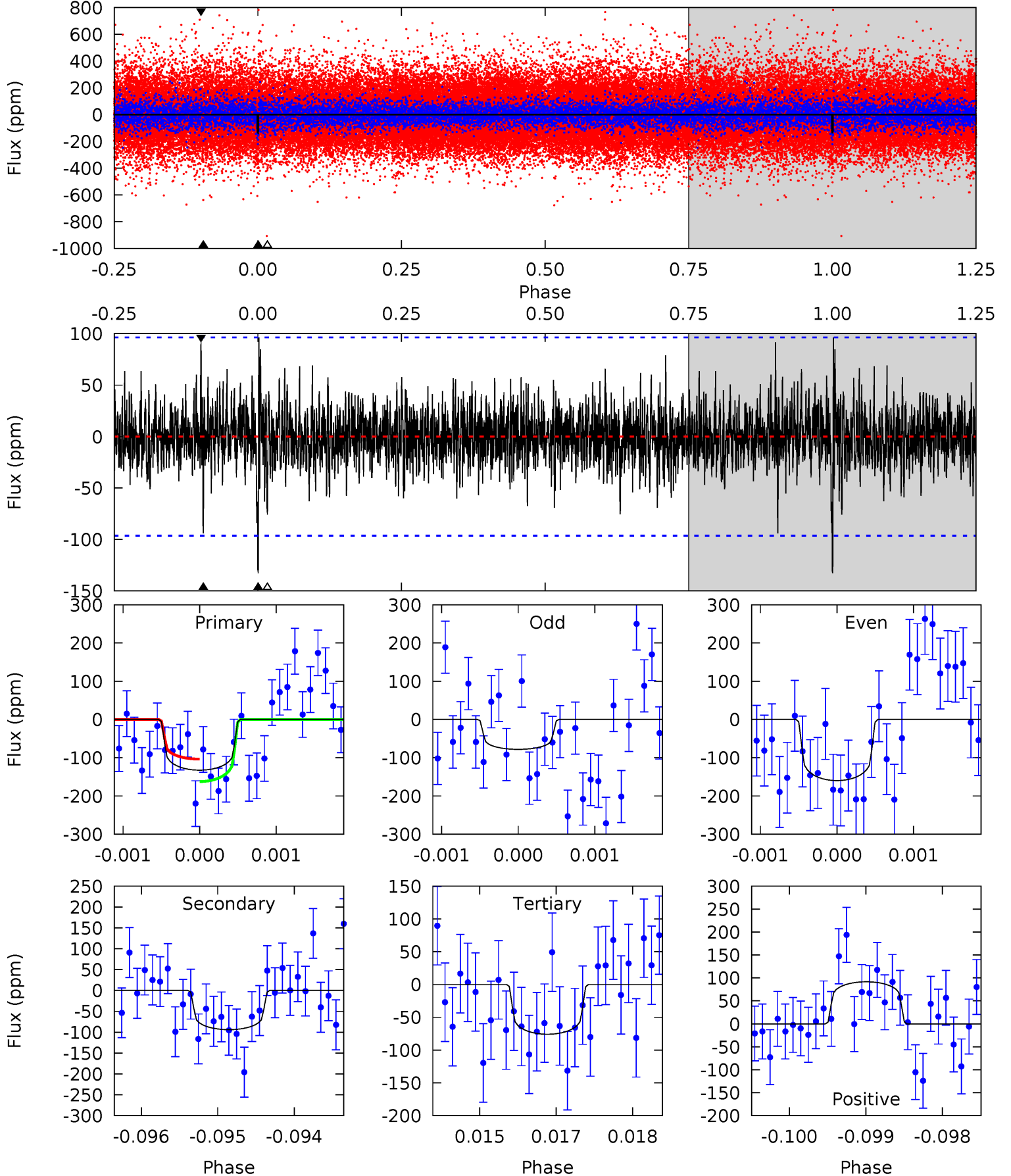
TCE 008955756-01 P=414.229128 Days $T_0=448.990100$ (BKJD)



DV Model-Shift Uniqueness Test

008955756-01, $P = 414.191973$ Days, $E = 34.834983$ Days

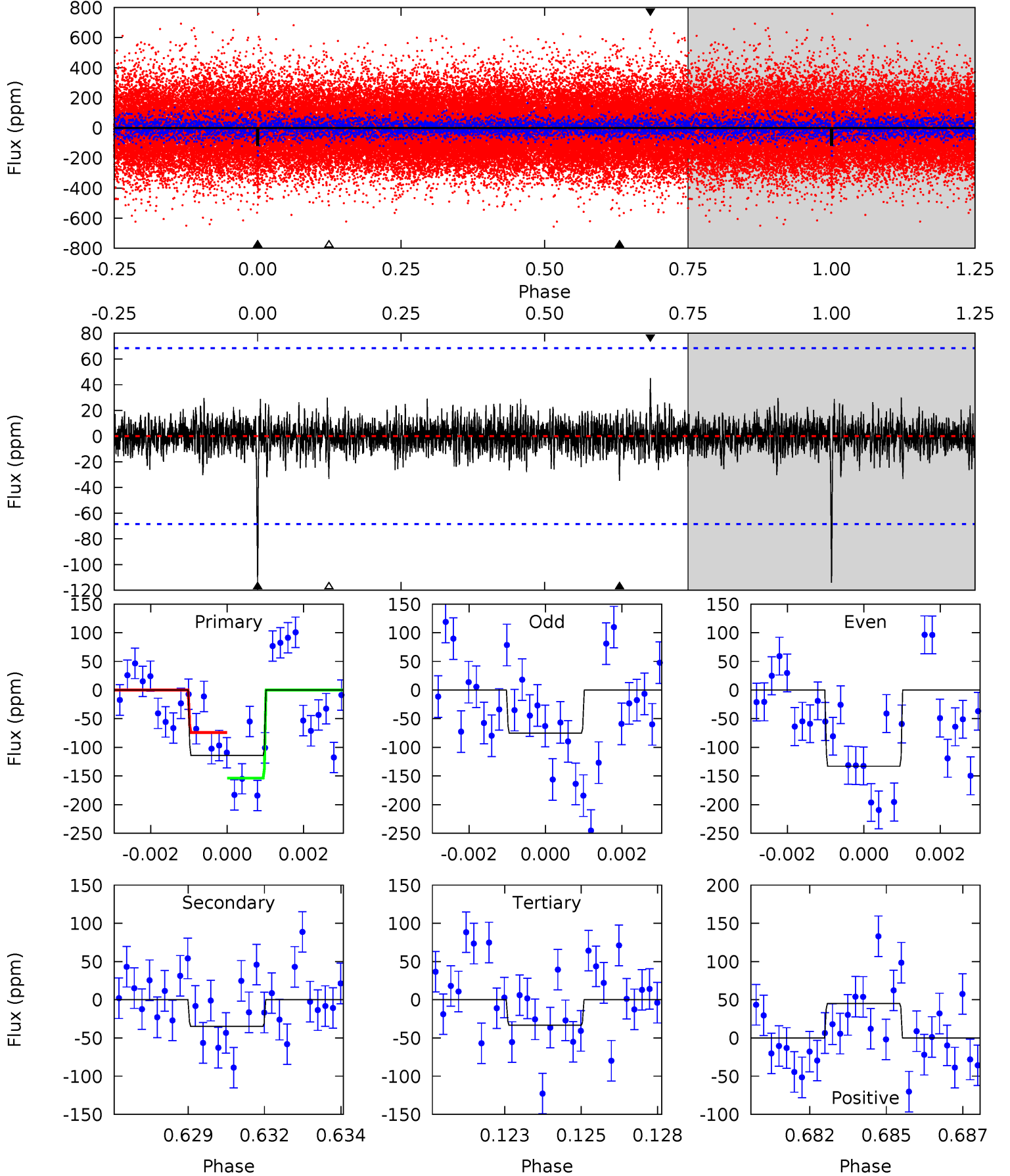
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.44	5.27	4.26	5.14	5.41	3.22	1.19	3.18	2.30	1.01	0.13	2.16	0.86	0.42	1.65



Alt Model-Shift Uniqueness Test

008955756-01, $P = 414.229128$ Days, $E = 34.760972$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.82	2.69	2.58	3.49	5.29	3.03	0.66	6.24	5.34	0.10	-0.80	2.10	0.97	0.28	3.08



Stellar Parameters For KIC 008955756

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6324^{+197}_{-219}	$3.689^{+0.535}_{-0.094}$	$0.120^{+0.250}_{-0.300}$	$3.006^{+0.525}_{-1.679}$	$1.611^{+0.191}_{-0.446}$	$0.083^{+0.509}_{-0.024}$
	+3%/-3%	+15%/-3%	+208%/-250%	+17%/-56%	+12%/-28%	+610%/-28%
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 008955756-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-94 ± 18	$4.10^{+1.54}_{-1.48}$	579^{+44}_{-78}	5307^{+862}_{-566}	4912^{+6853}_{-2363}
Alt.	-35 ± 13	$3.09^{+1.43}_{-1.32}$	575^{+45}_{-83}	4770^{+1098}_{-657}	3211^{+6365}_{-1920}

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

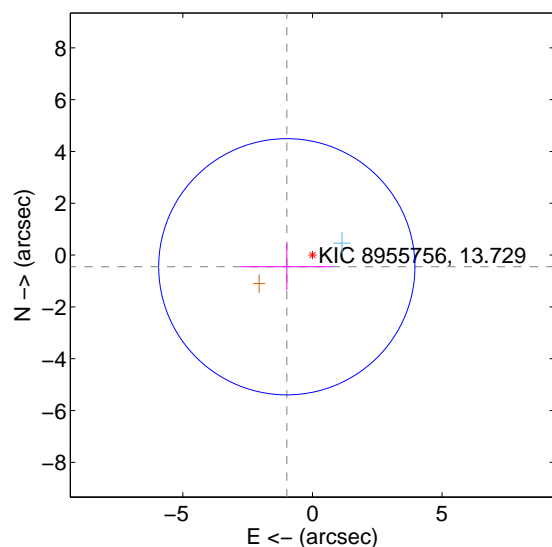
Supplemental centroid analysis for 008955756-01. Kepler magnitude: 13.73. Transit SNR 6.63

There are 1 quarters with good PRF difference image offsets

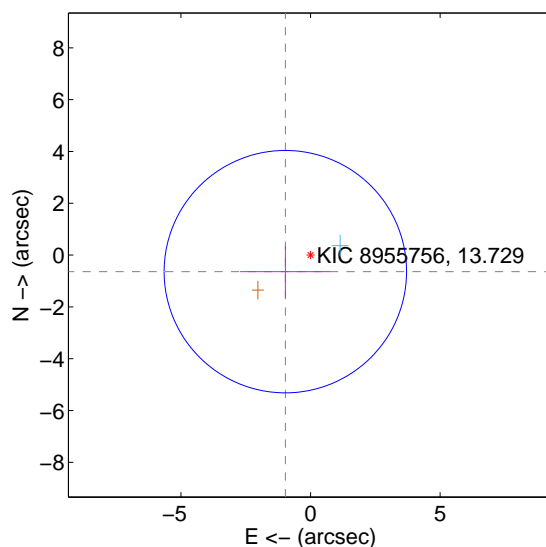
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.087 ± 1.648	0.66	0.989 ± 1.763	-0.450 ± 0.903
PRF-fit source offset from KIC position	1.163 ± 1.559	0.75	0.972 ± 1.748	-0.639 ± 0.990
photometric centroid source offset	2.70 ± 1.69	1.59	-1.39 ± 1.53	2.32 ± 1.75

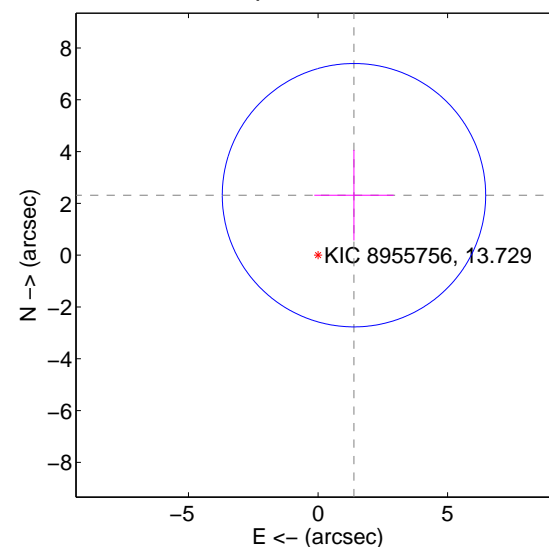
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

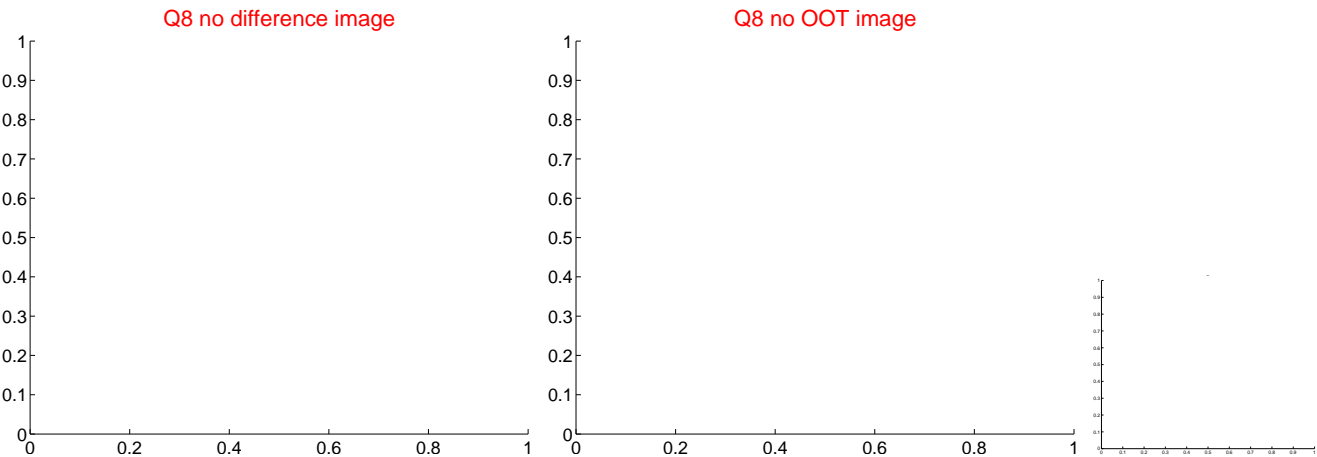
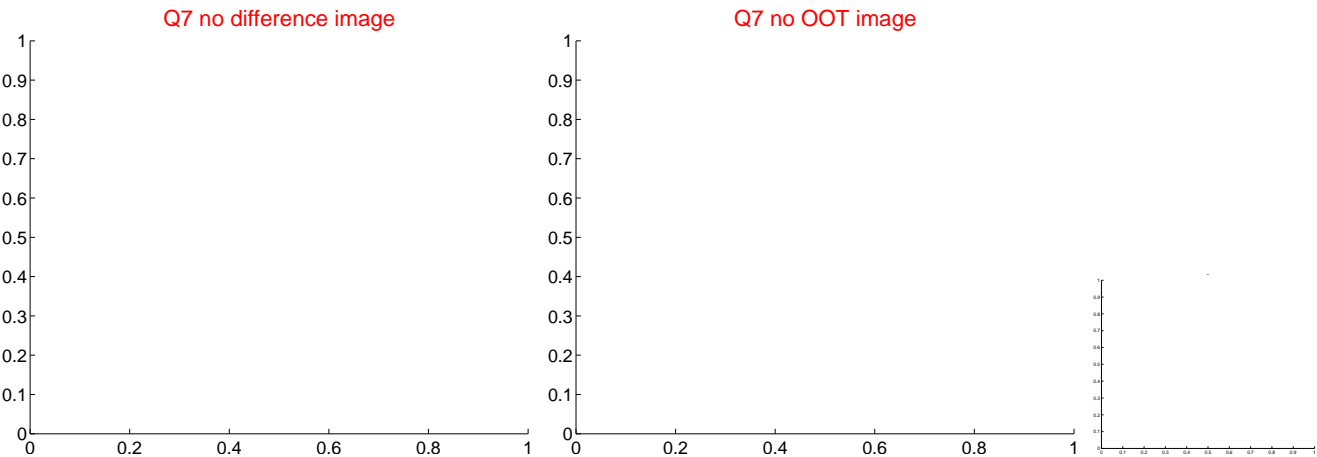
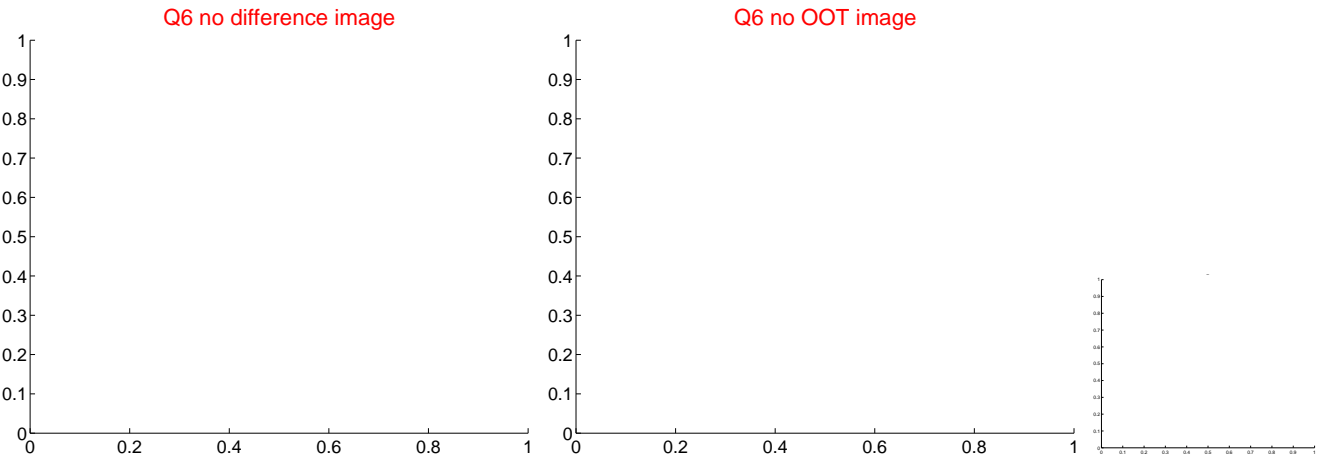
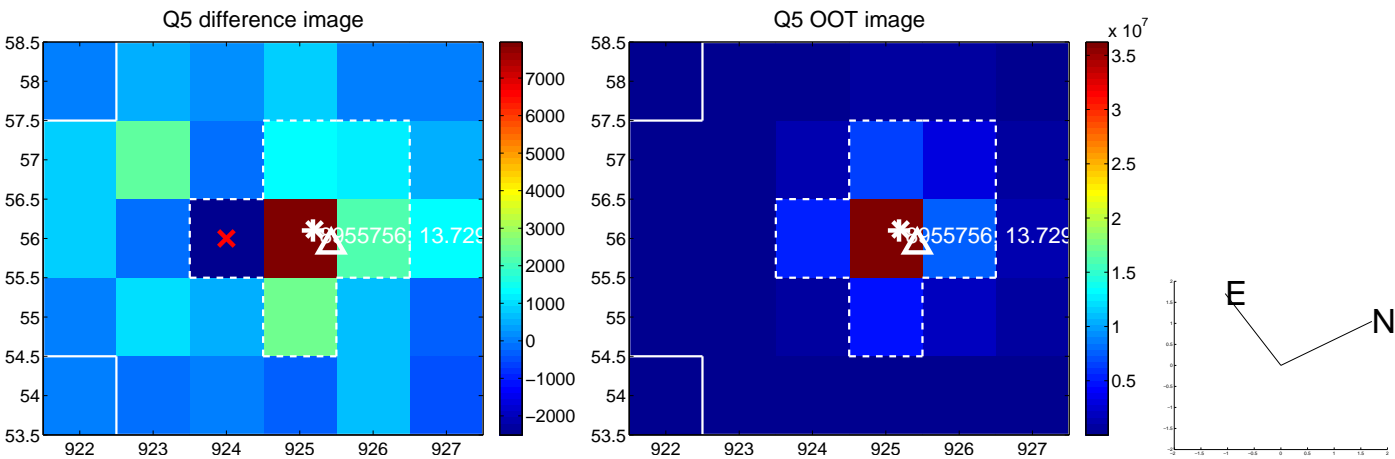


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

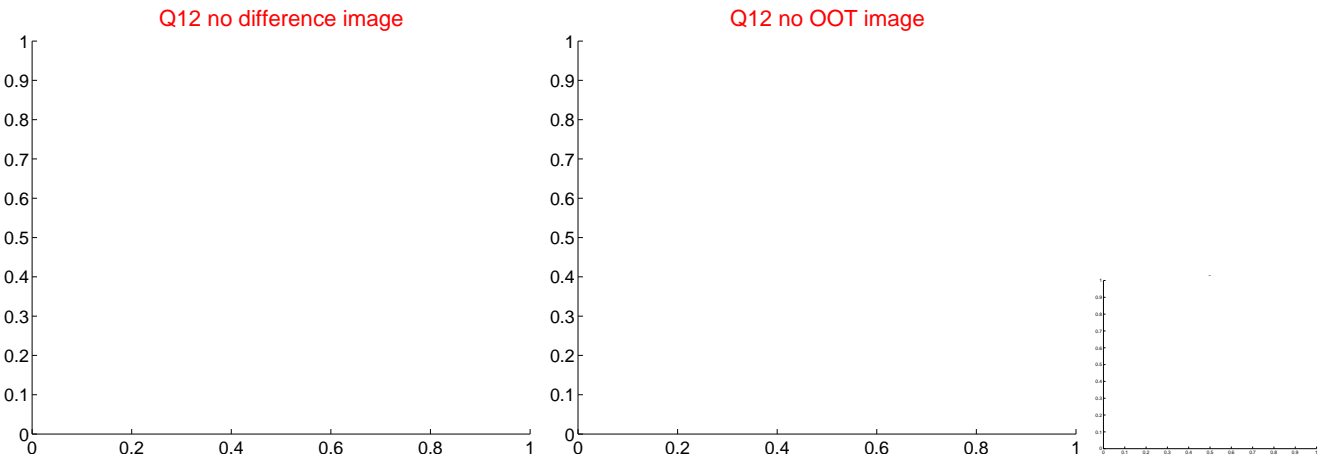
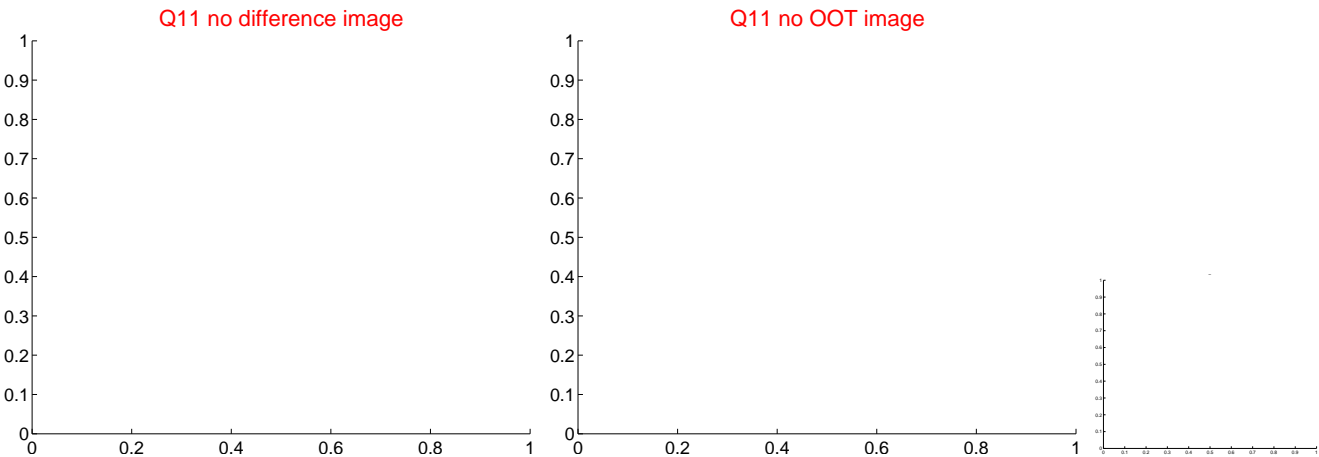
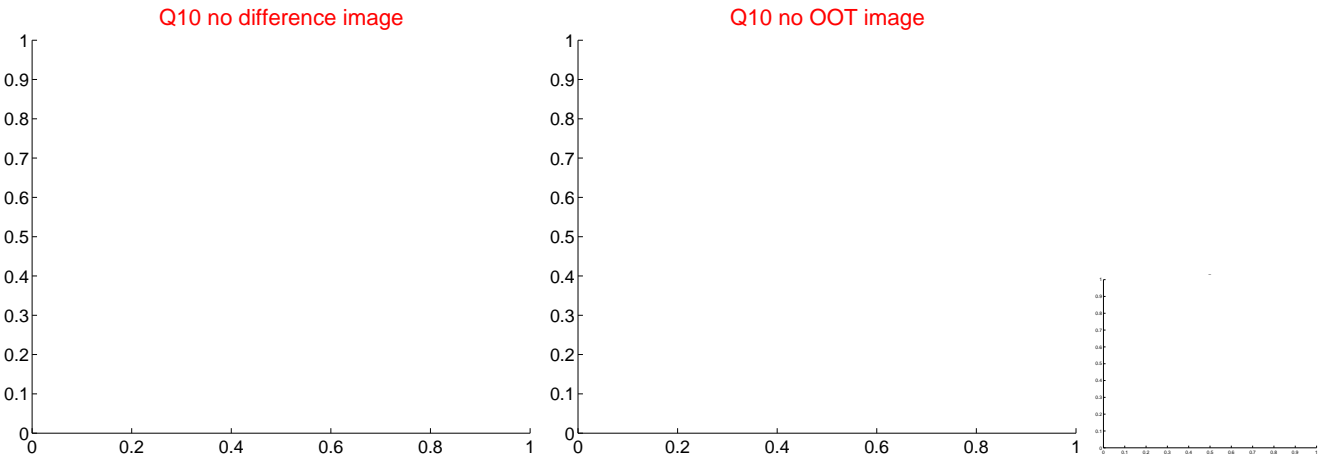
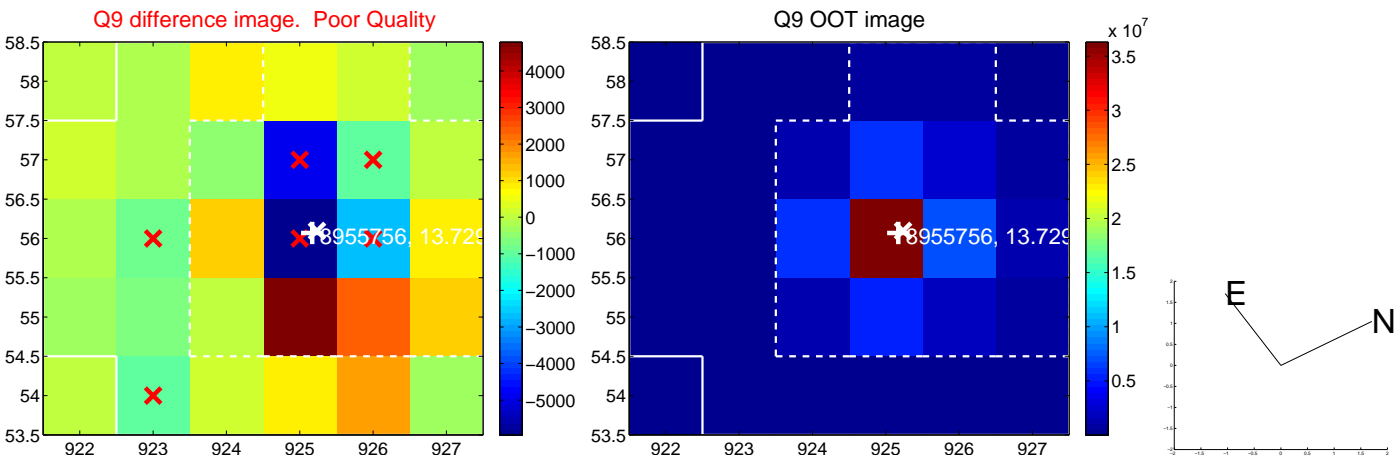
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



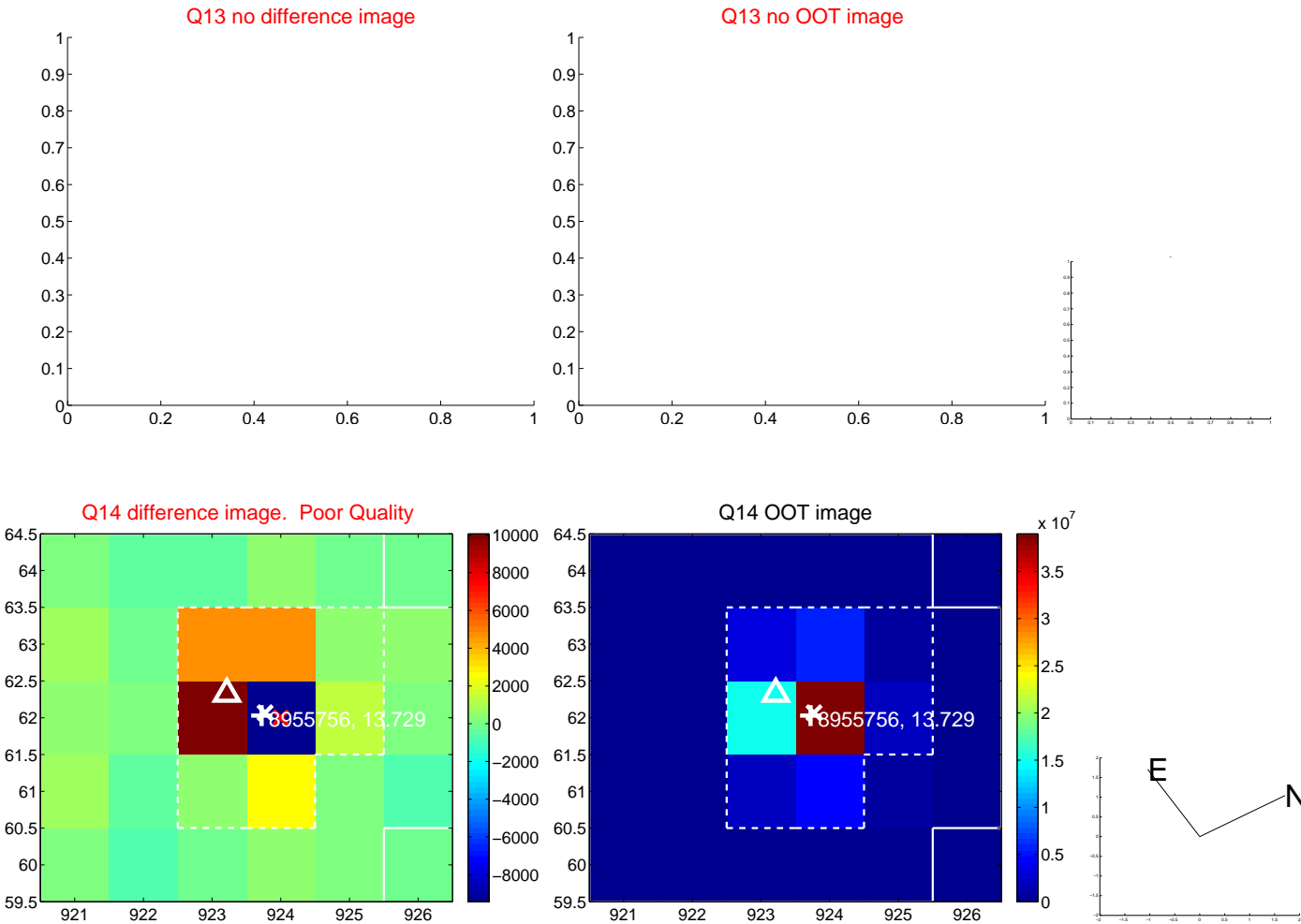
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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.

