

KIC 008951949

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})
008951949-01	OBS	No	367.737606	156.226352	437.3	18.907	7.2	7.2	0.62	5205	1.38	0.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008951949-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

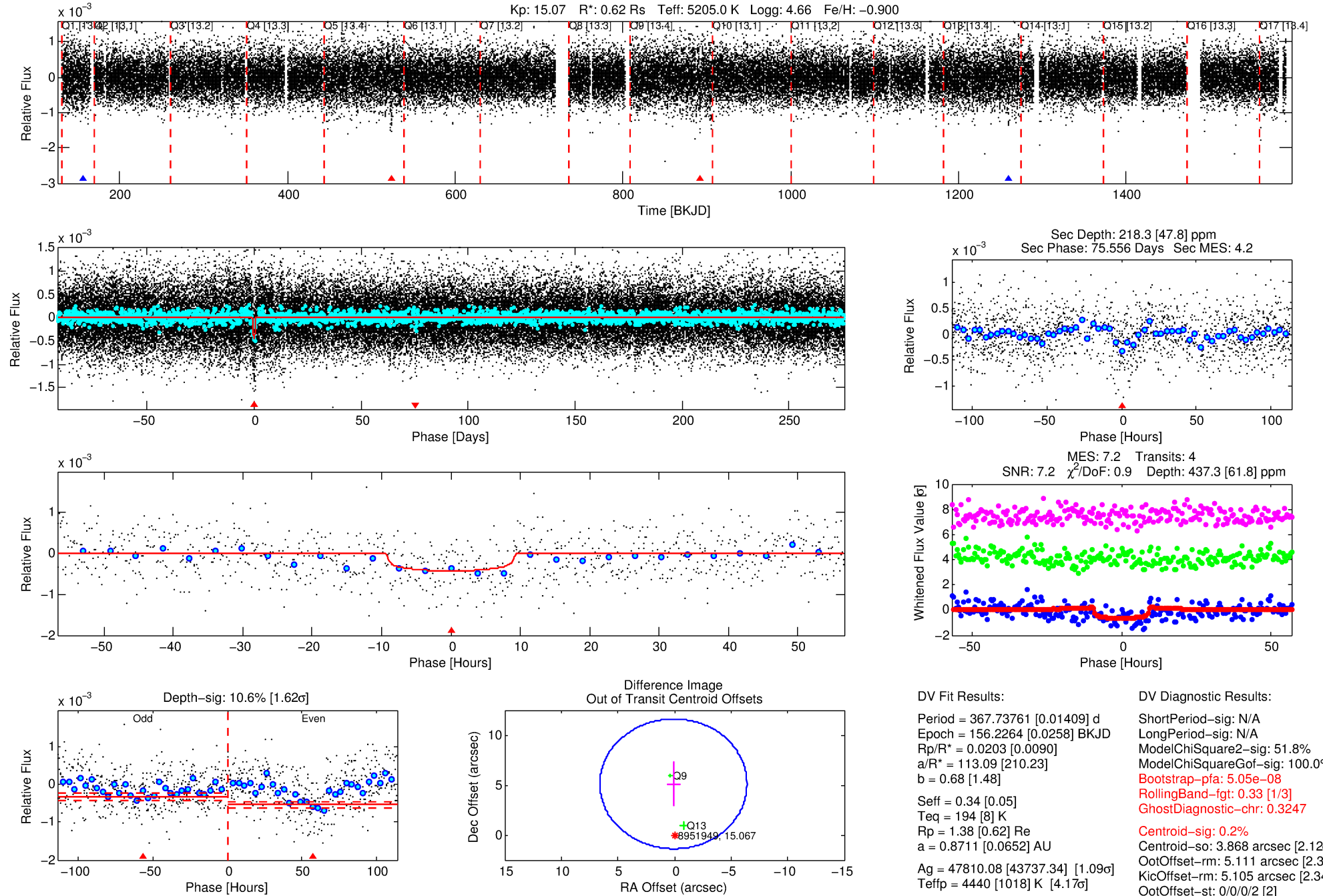
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008951949-01

No Significant Match Found

DV One-Page Summary

KIC: 8951949 Candidate: 1 of 1 Period: 367.738 d



DV Fit Results:

Period = 367.73761 [0.01409] d
Epoch = 156.2264 [0.0258] BKJD
Rp/R* = 0.0203 [0.0090]
a/R* = 113.09 [210.23]
b = 0.68 [1.48]
Seff = 0.34 [0.05]
Teq = 194 [8] K
Rp = 1.38 [0.62] Re
a = 0.8711 [0.0652] AU
Ag = 47810.08 [43737.34] [1.09 σ]
Teffp = 4440 [1018] K [4.17 σ]

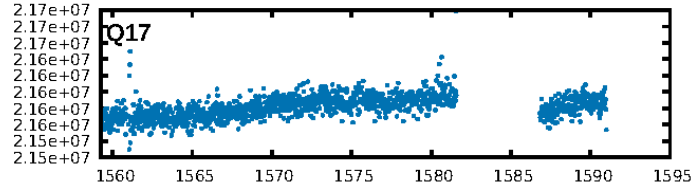
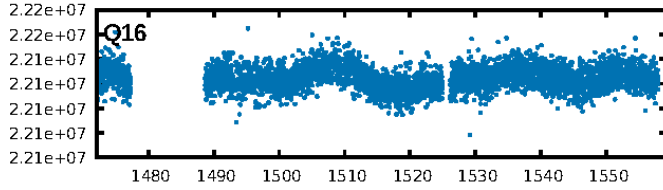
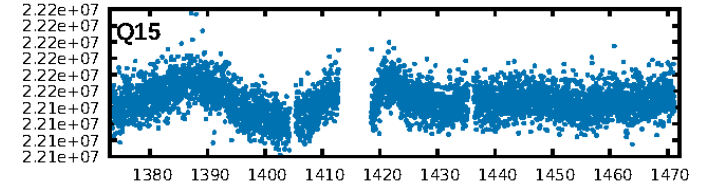
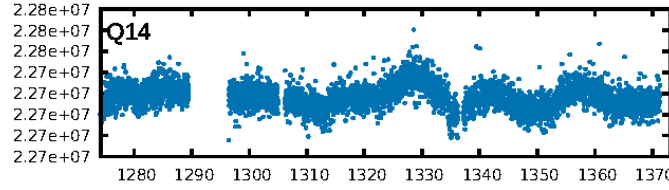
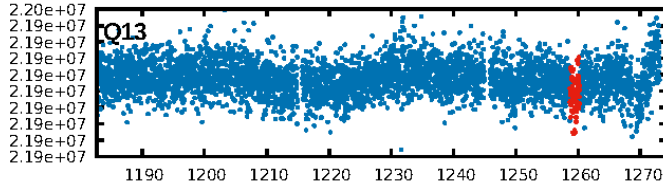
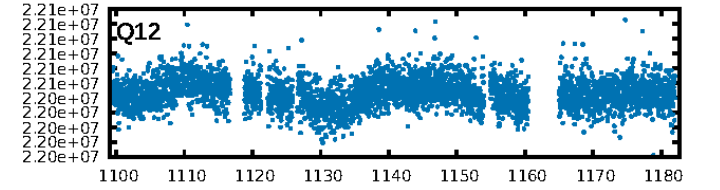
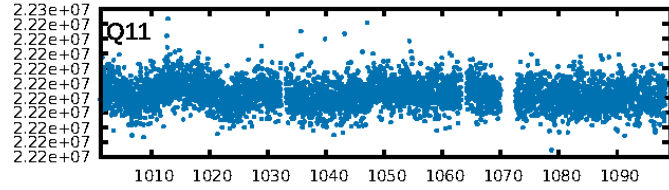
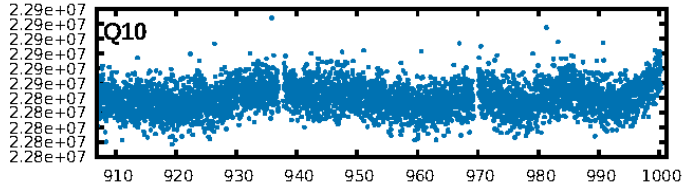
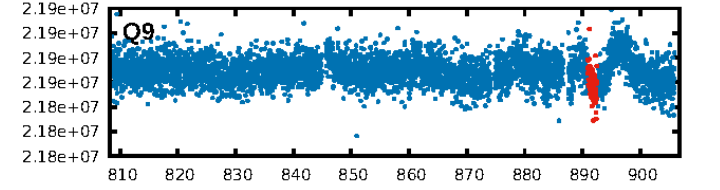
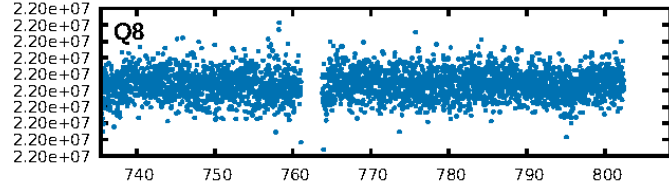
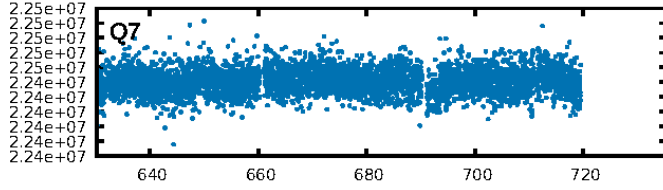
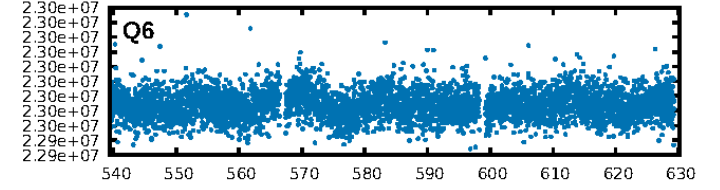
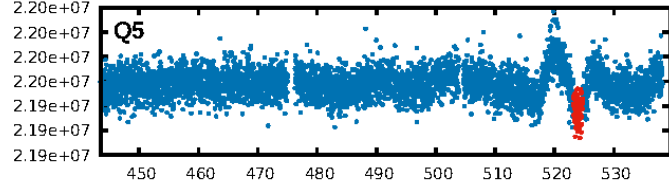
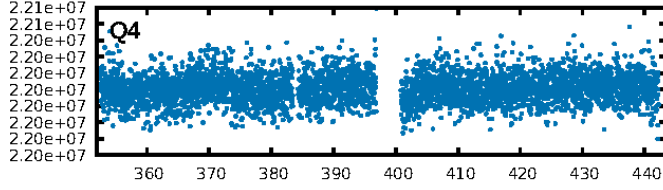
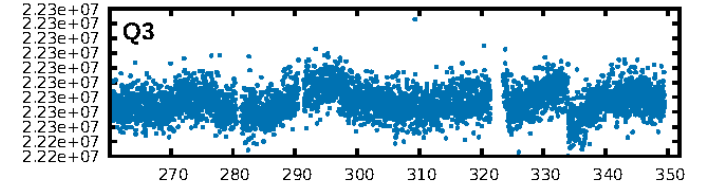
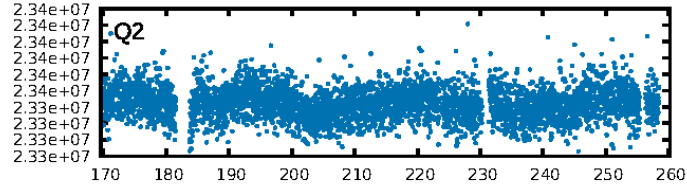
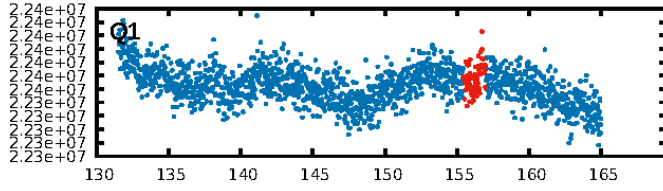
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 51.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.05e-08
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 0.3247
Centroid-sig: 0.2%
Centroid-so: 3.868 arcsec [2.12 σ]
OotOffset-rm: 5.111 arcsec [2.36 σ]
KicOffset-rm: 5.105 arcsec [2.34 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [4/4]

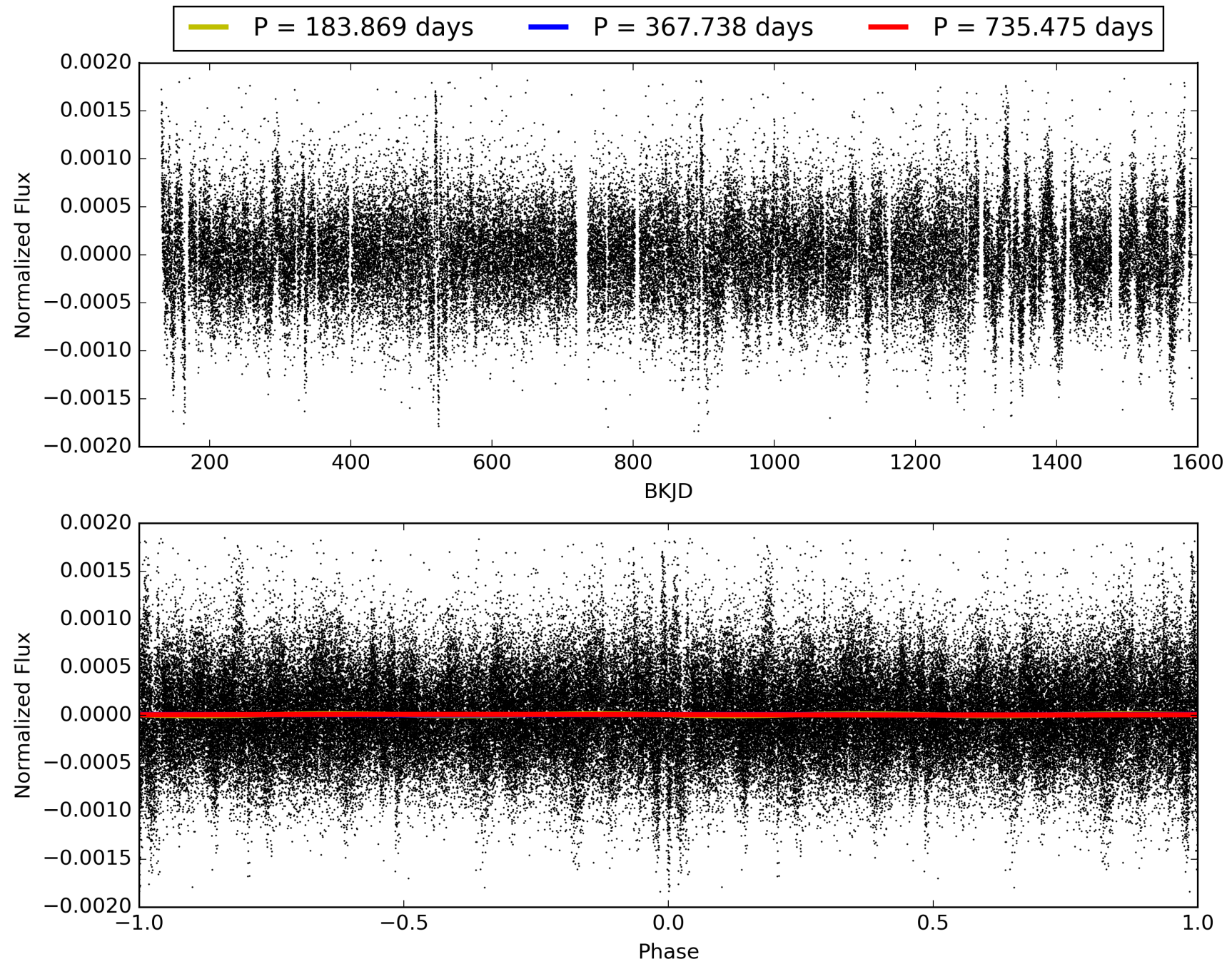
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:50:14 Z

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

TCE 008951949-01, PDC Light Curves

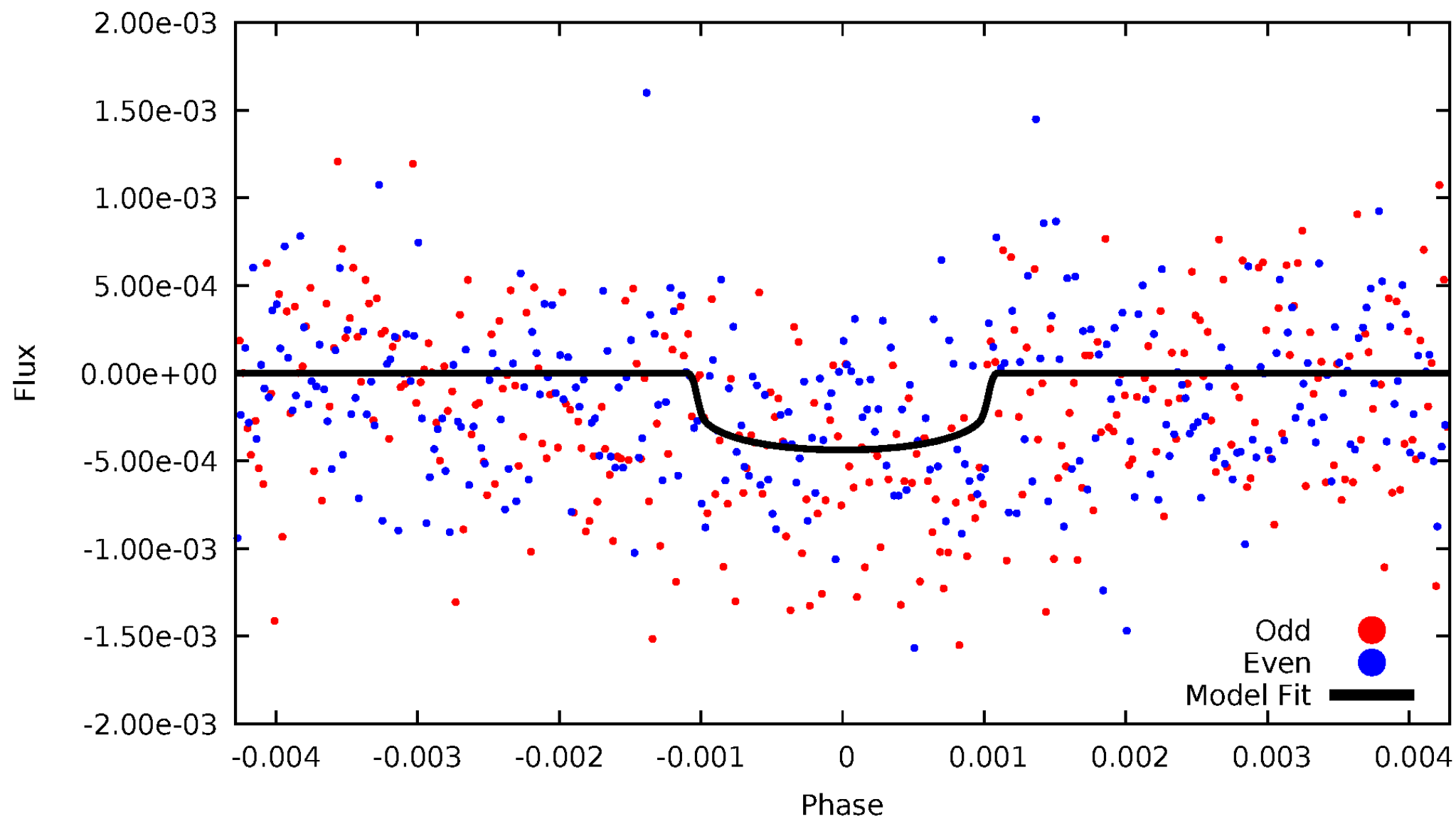


TCE 008951949-01



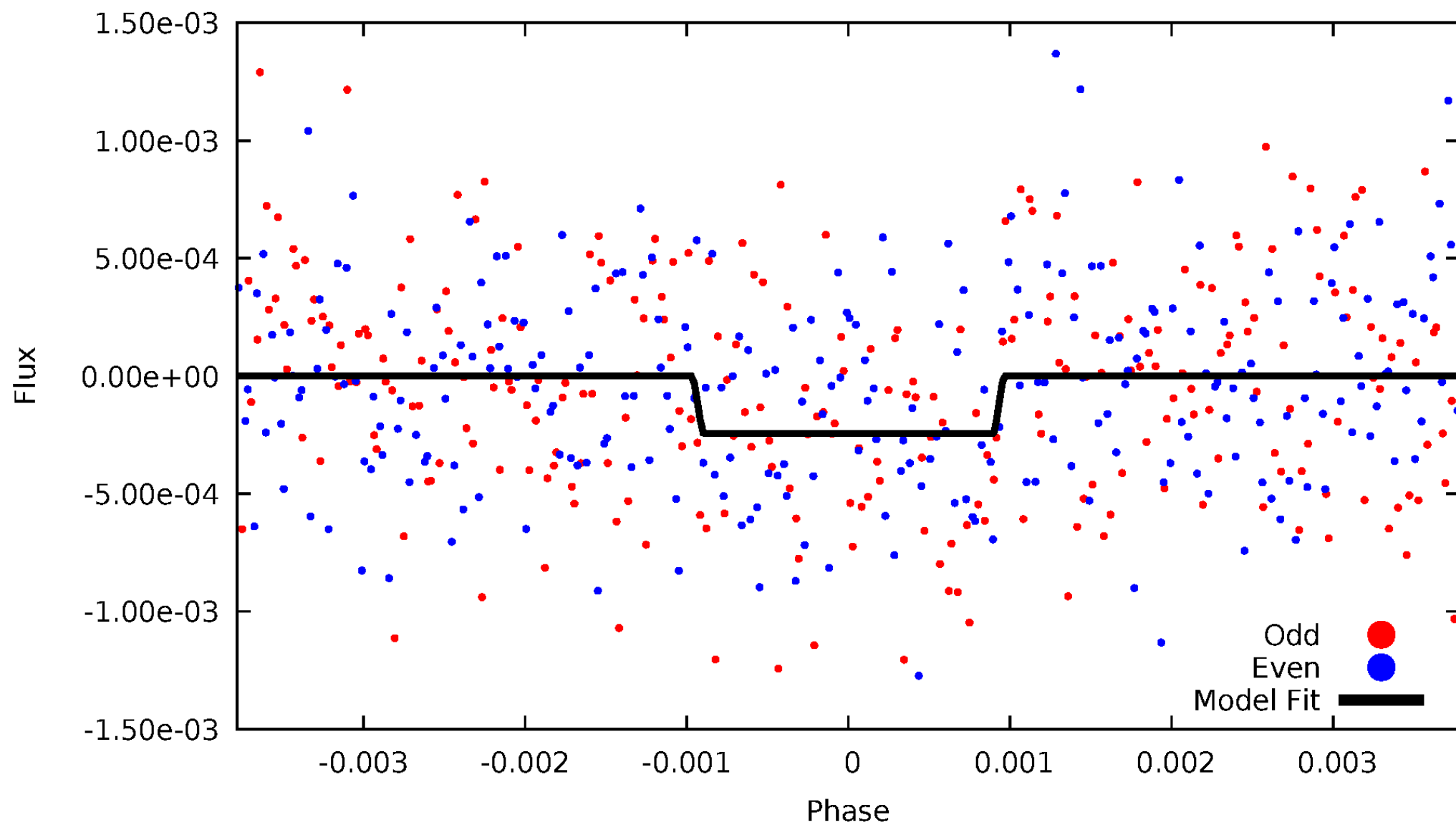
DV Odd/Even

TCE 008951949-01



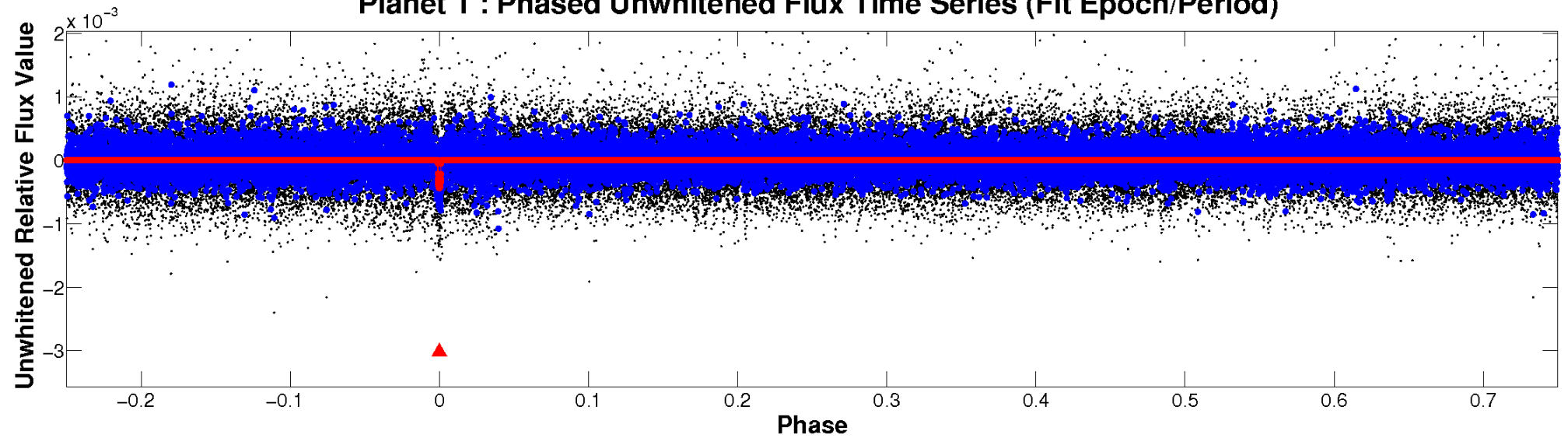
ALT Odd/Even

TCE 008951949-01

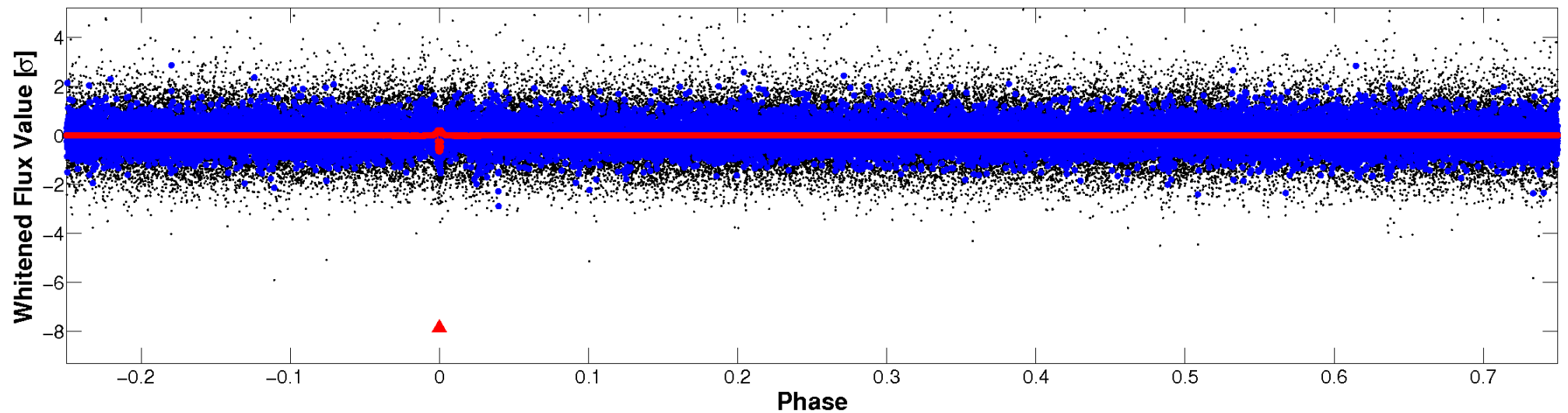


Non-Whitened Vs. Whitened Light Curve

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



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



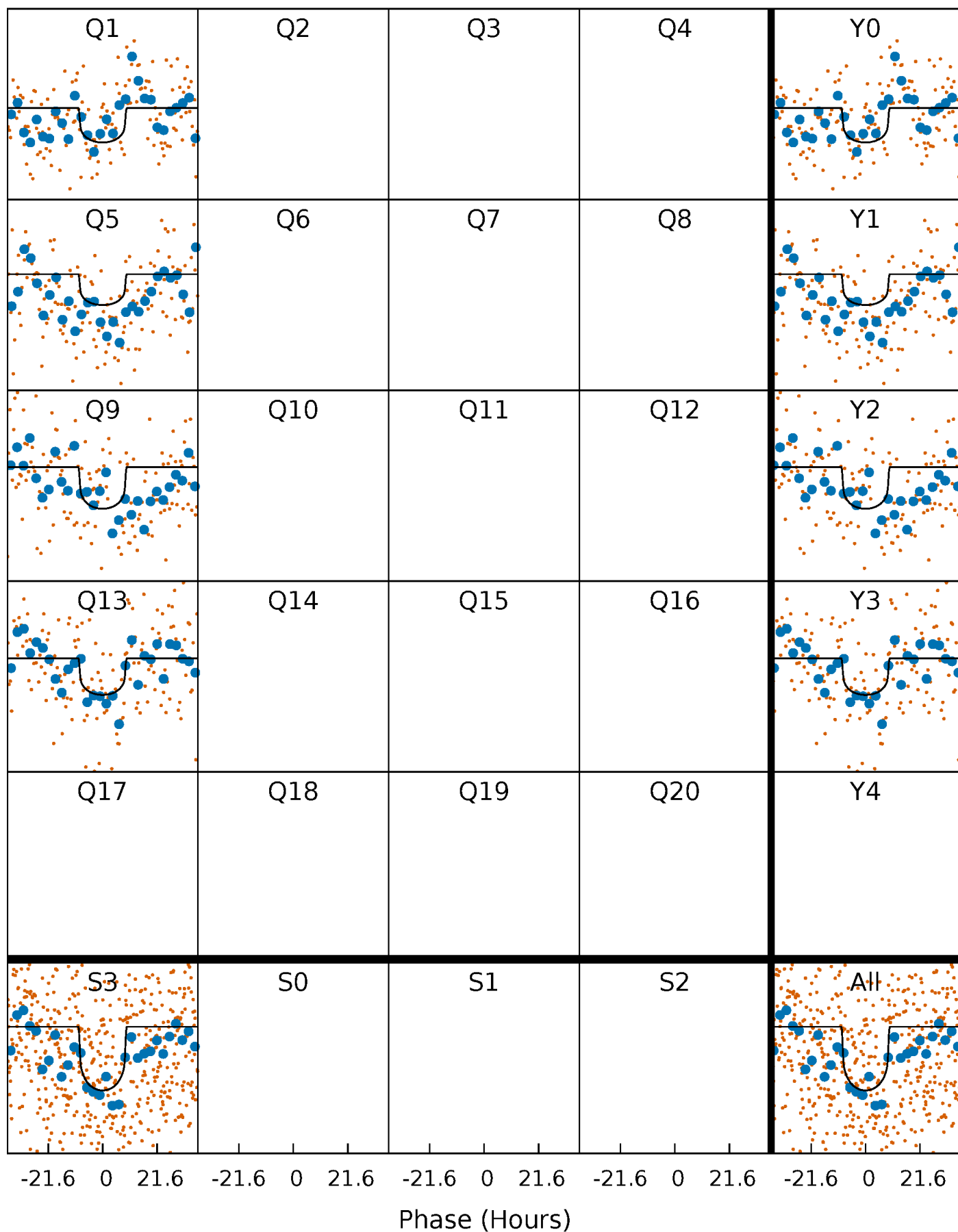
PDC Quarter-Phased Transit Curves

TCE 008951949-01 P=367.737606 Days $T_0=156.226352$ (BKJD)



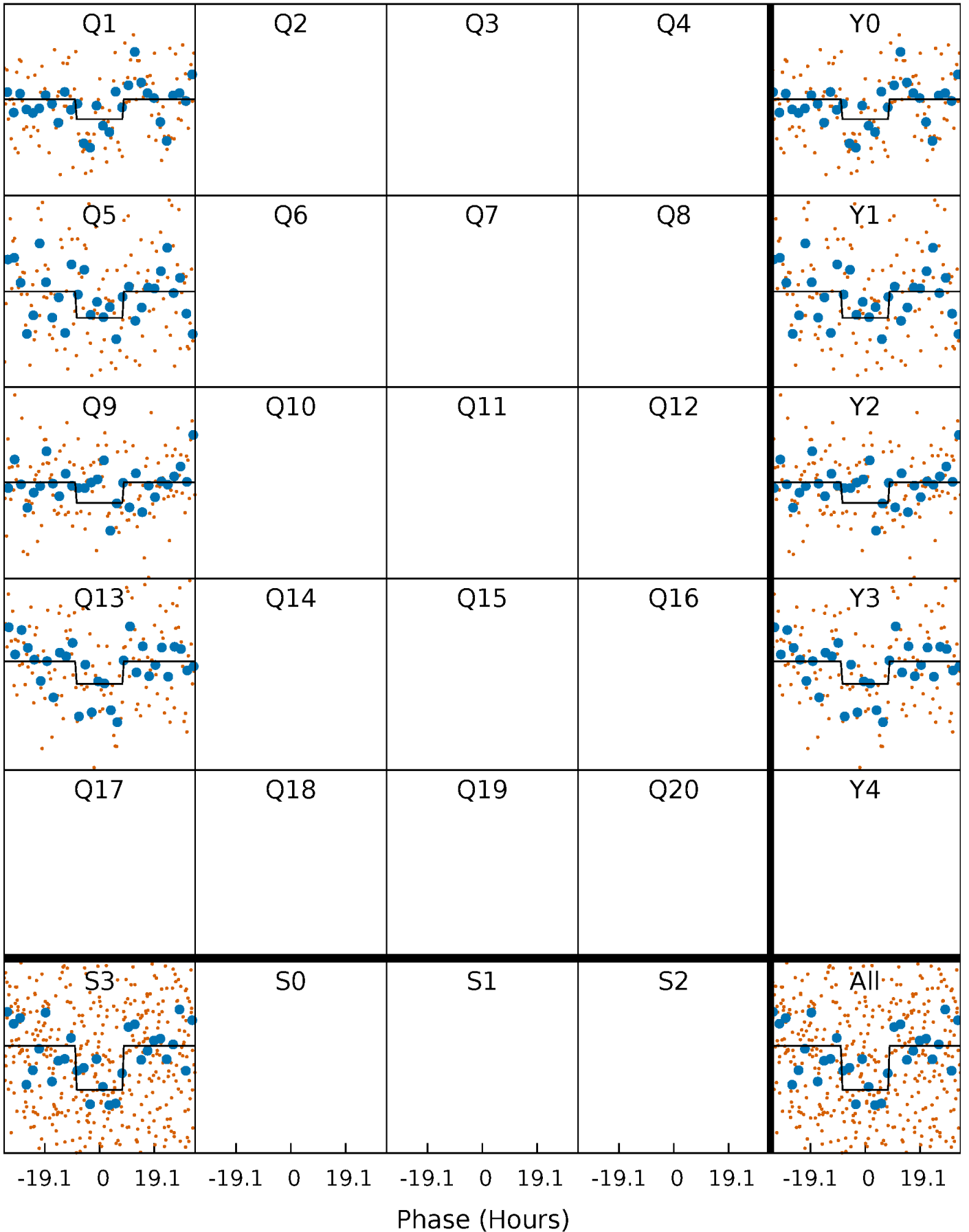
DV Quarter-Phased Transit Curves

TCE 008951949-01 $P=367.737606$ Days $T_0=156.226352$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

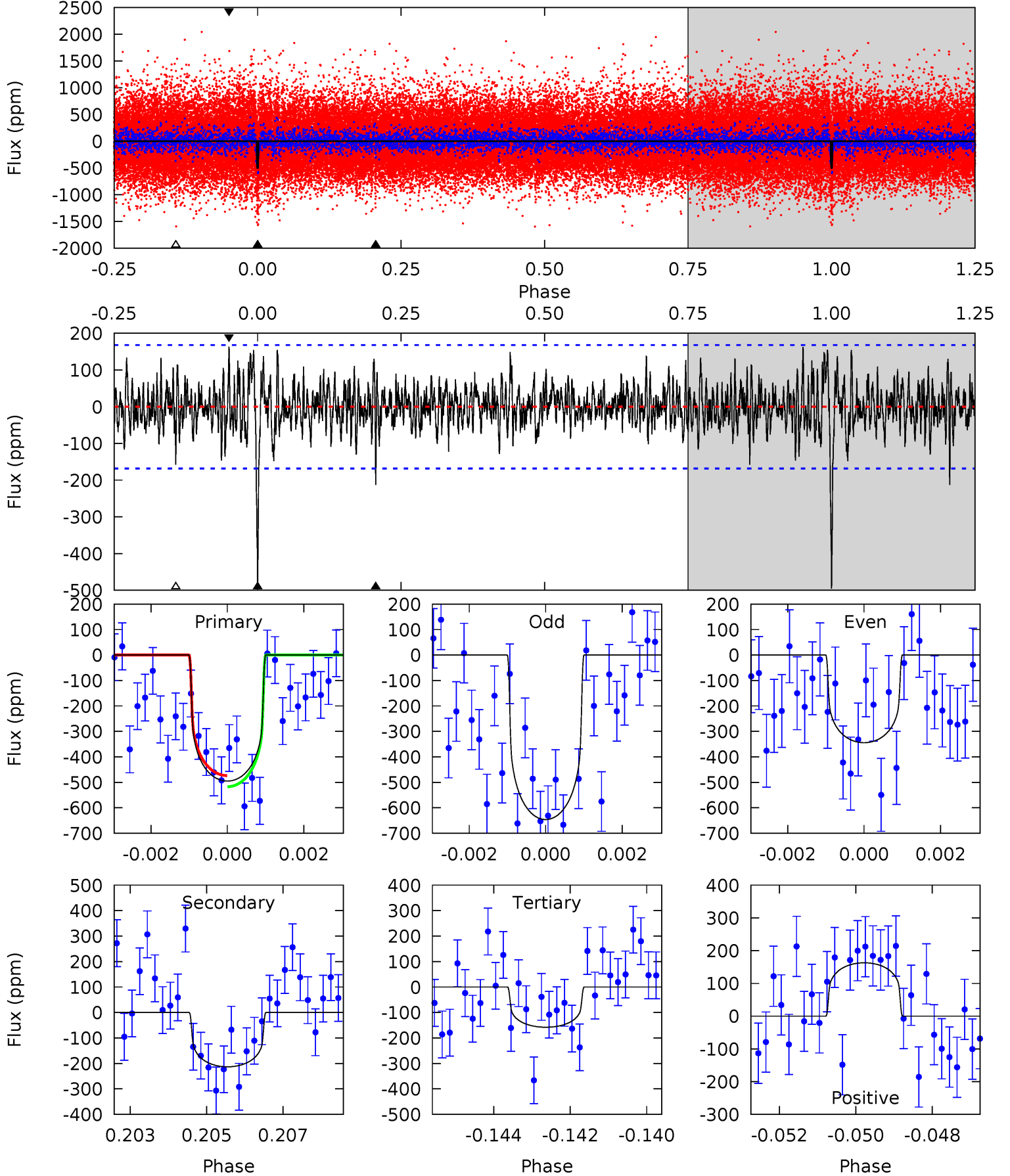
TCE 008951949-01 P=367.735968 Days $T_0=156.255783$ (BKJD)



DV Model-Shift Uniqueness Test

008951949-01, $P = 367.737606$ Days, $E = 156.226352$ Days

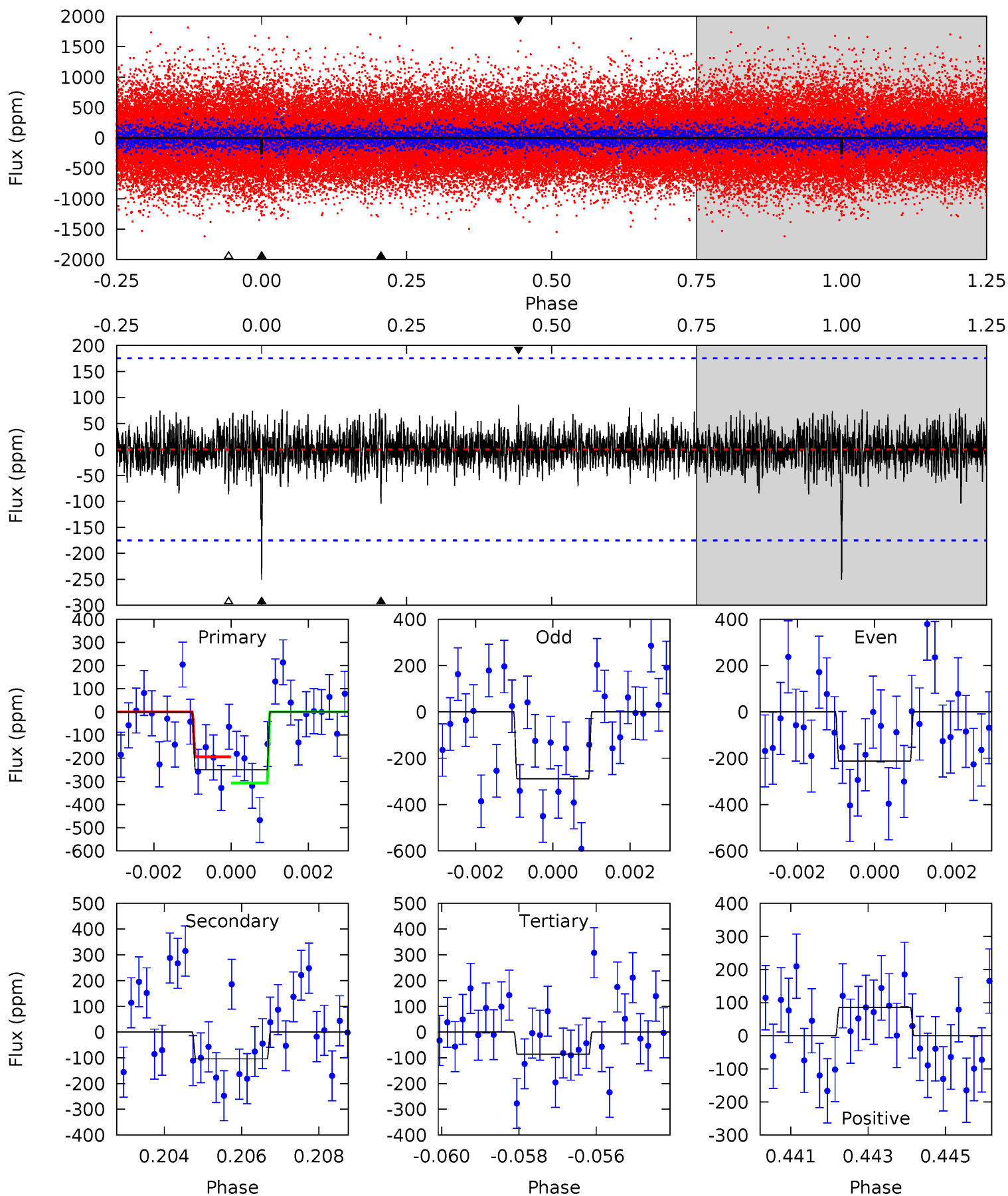
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	6.73	4.98	5.14	5.31	3.06	1.49	10.6	10.5	1.75	1.59	4.76	1.04	0.25	0.69



Alt Model-Shift Uniqueness Test

008951949-01, $P = 367.735968$ Days, $E = 156.255783$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.61	3.17	2.63	2.60	5.33	3.10	0.72	4.99	5.01	0.54	0.57	1.17	1.07	0.25	1.71



Stellar Parameters For KIC 008951949

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5205^{+157}_{-157}	$4.663^{+0.041}_{-0.050}$	$-0.900^{+0.300}_{-0.300}$	$0.623^{+0.060}_{-0.040}$	$0.651^{+0.051}_{-0.037}$	$3.794^{+0.681}_{-0.692}$
	+3%/-3%	+1%/-1%	+33%/-33%	+10%/-6%	+8%/-6%	+18%/-18%
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 008951949-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-213 ± 32	$1.39^{+0.59}_{-0.60}$	272^{+9}_{-10}	4556^{+1268}_{-607}	$46040^{+101975}_{-24111}$
Alt.	-104 ± 33	$1.06^{+0.62}_{-0.53}$	272^{+10}_{-9}	4334^{+1645}_{-660}	$35986^{+122598}_{-20968}$

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

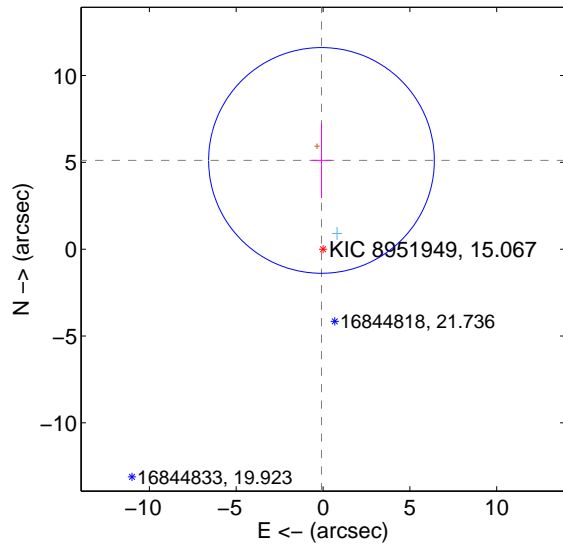
Supplemental centroid analysis for 008951949-01. Kepler magnitude: 15.07. Transit SNR 7.19

There are 1 quarters with good PRF difference image offsets

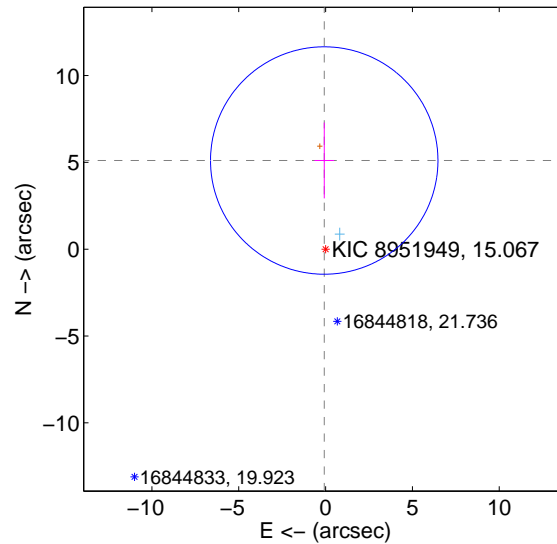
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.111 ± 2.166	2.36	0.090 ± 0.568	5.110 ± 2.166
PRF-fit source offset from KIC position	5.105 ± 2.182	2.34	0.078 ± 0.561	5.104 ± 2.182
photometric centroid source offset	3.87 ± 1.82	2.12	-1.77 ± 1.66	3.44 ± 1.86

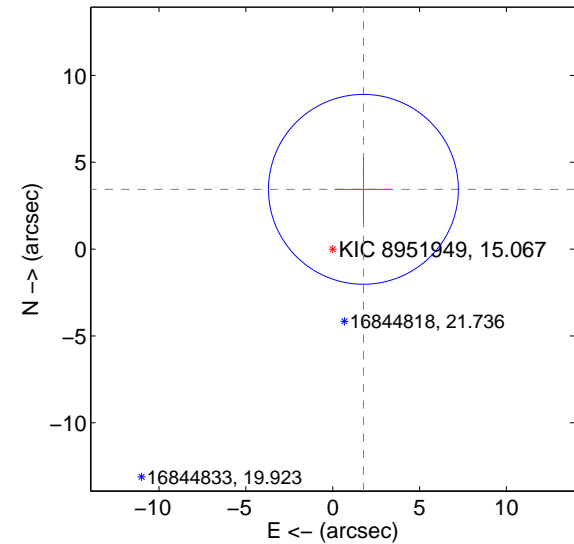
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

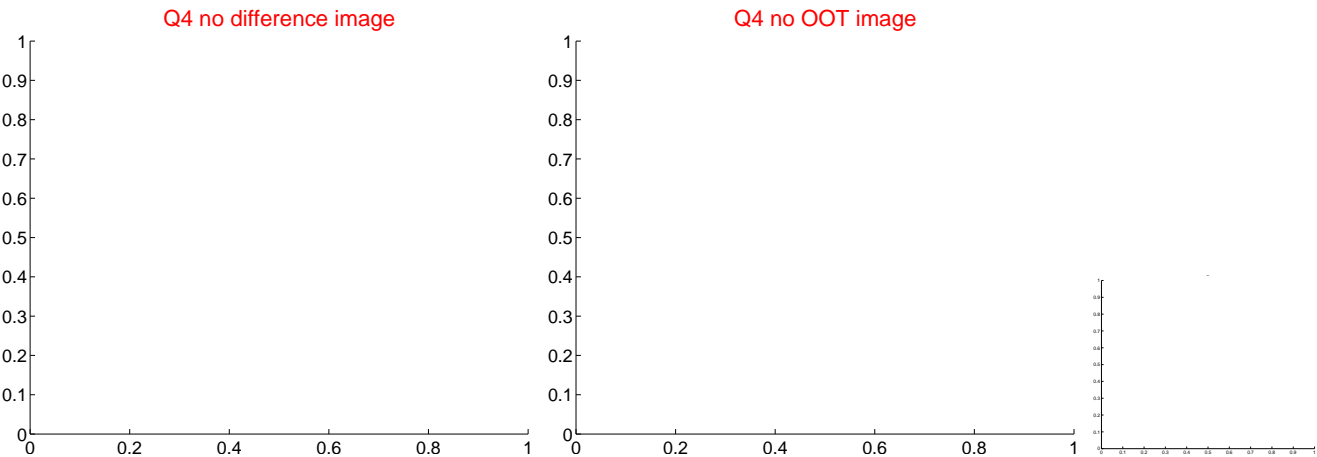
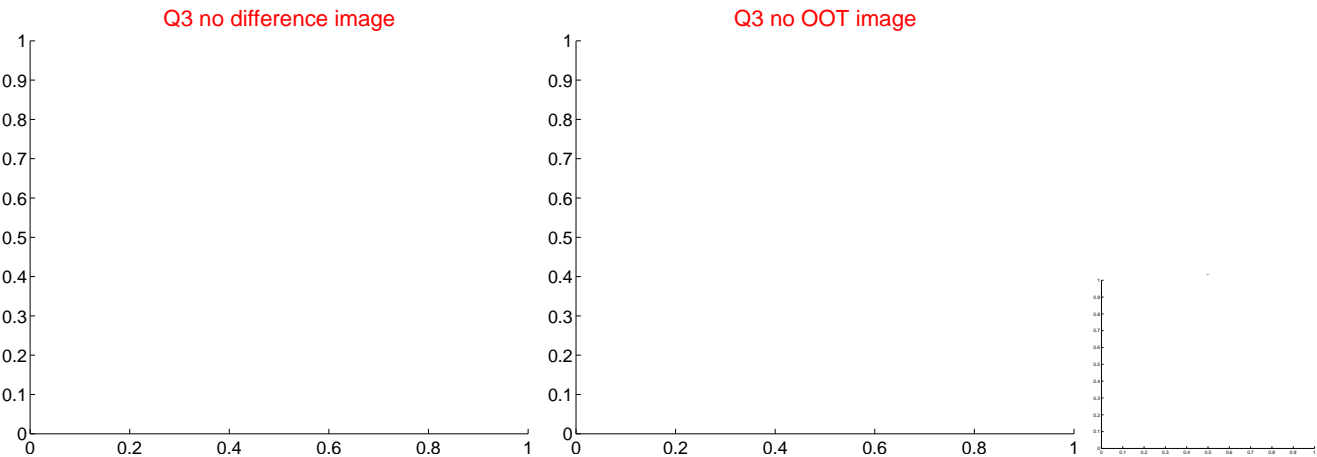
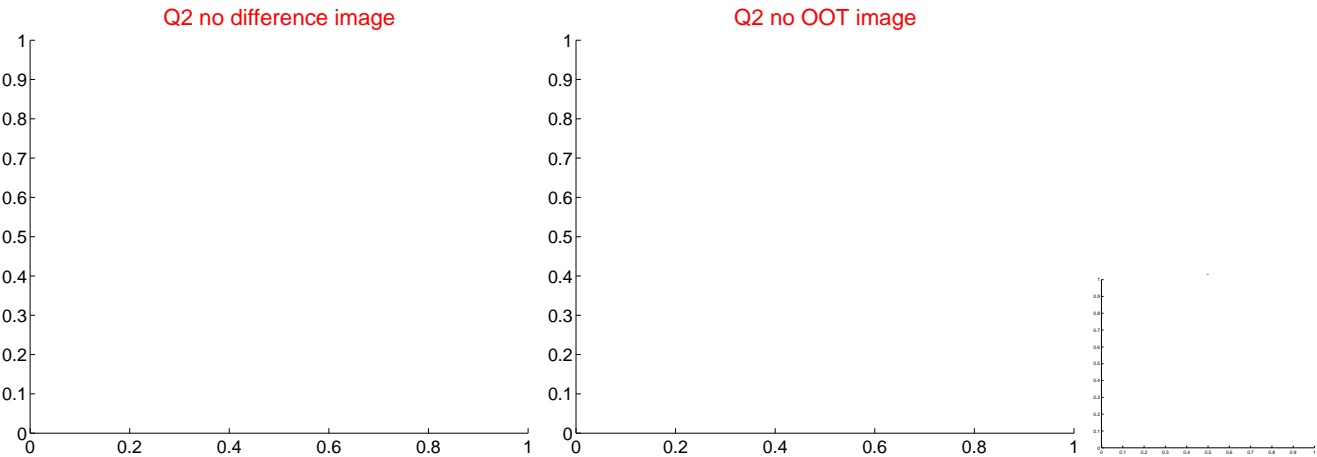
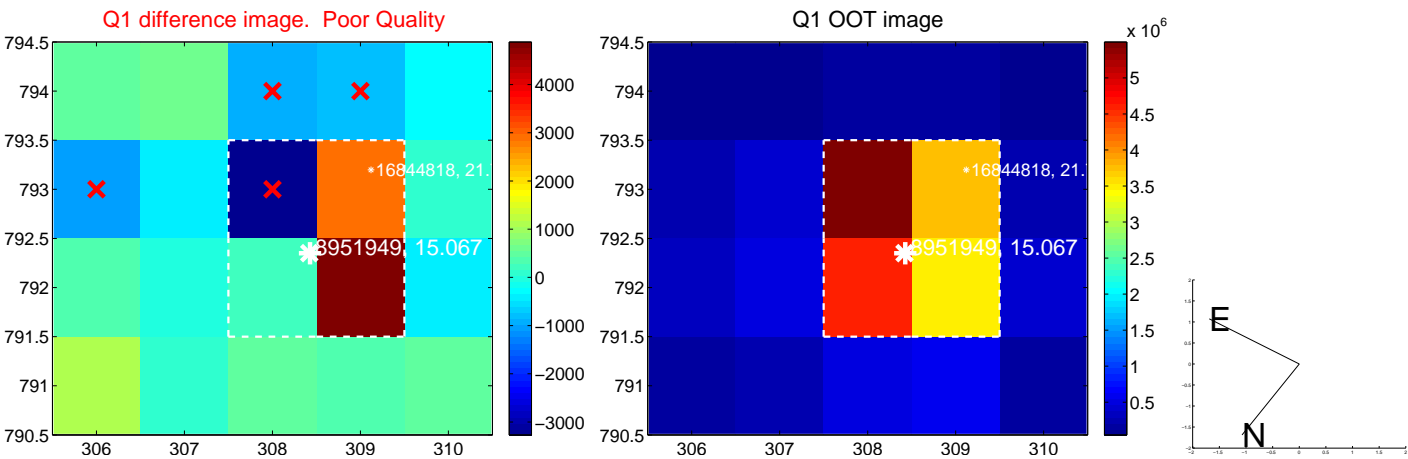


offset from photometric centroids

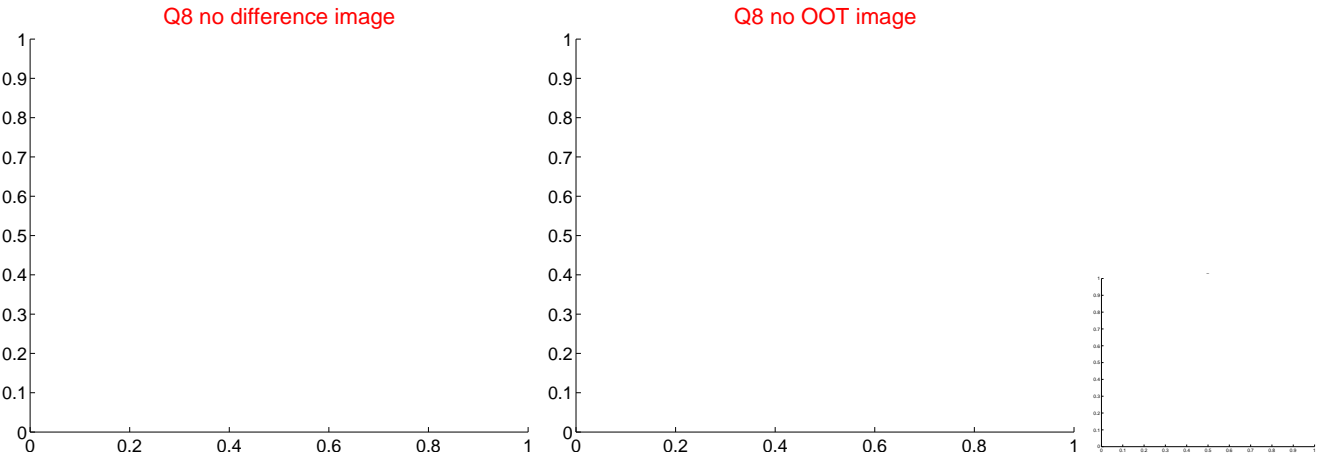
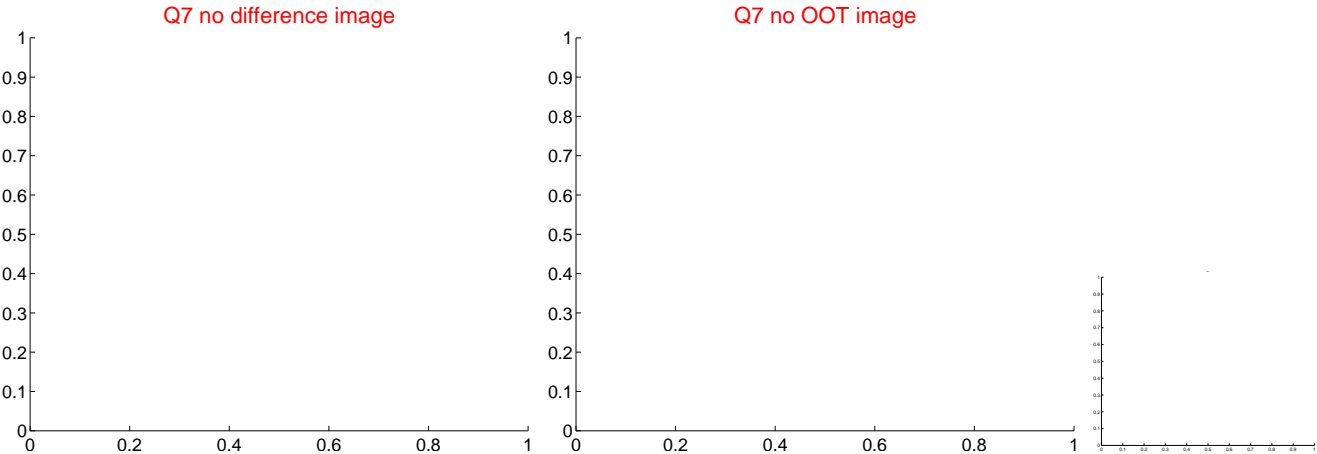
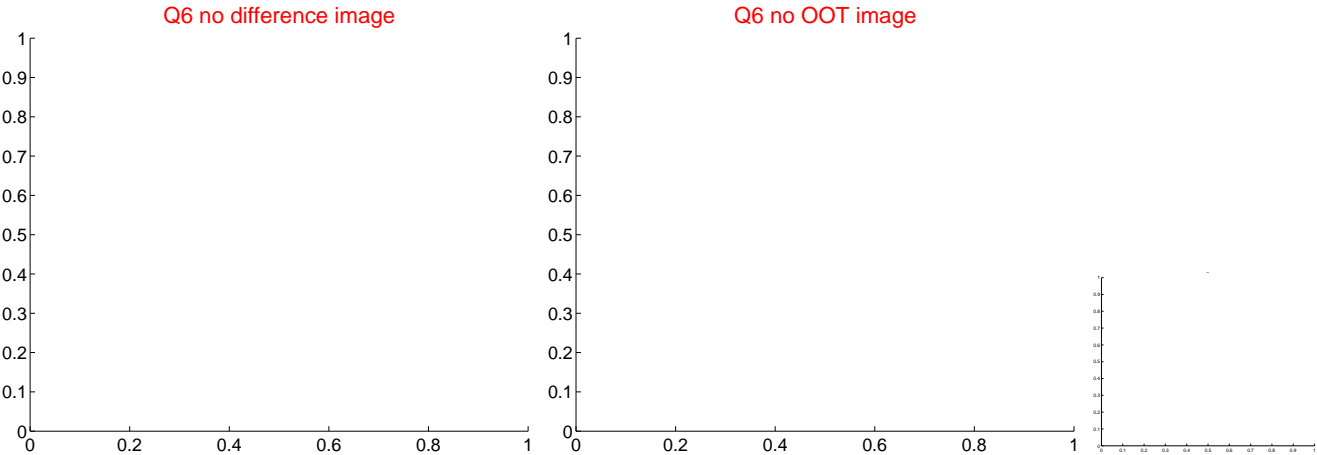
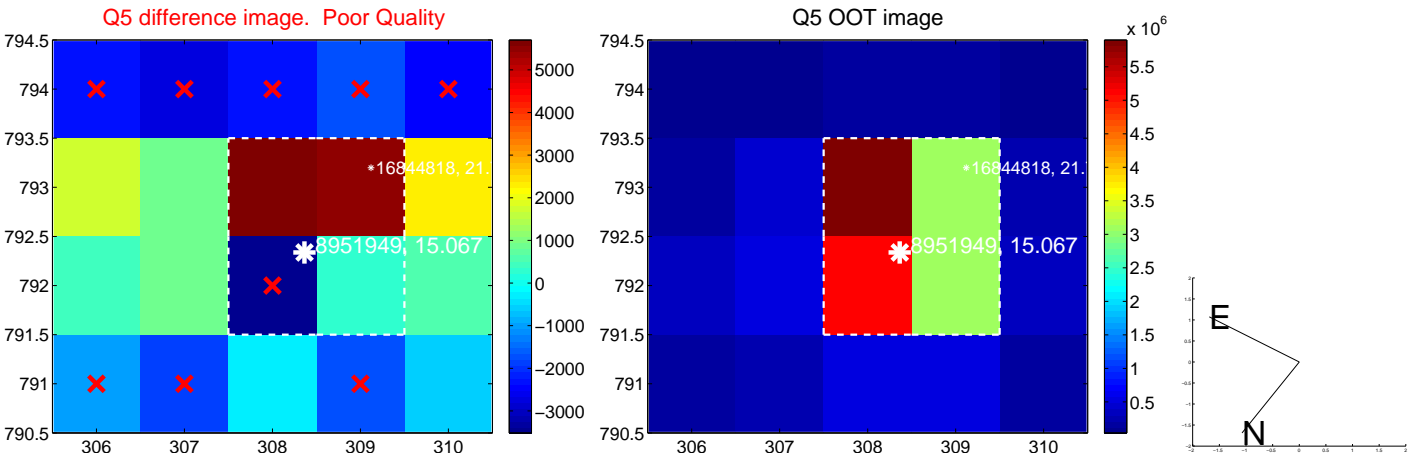


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

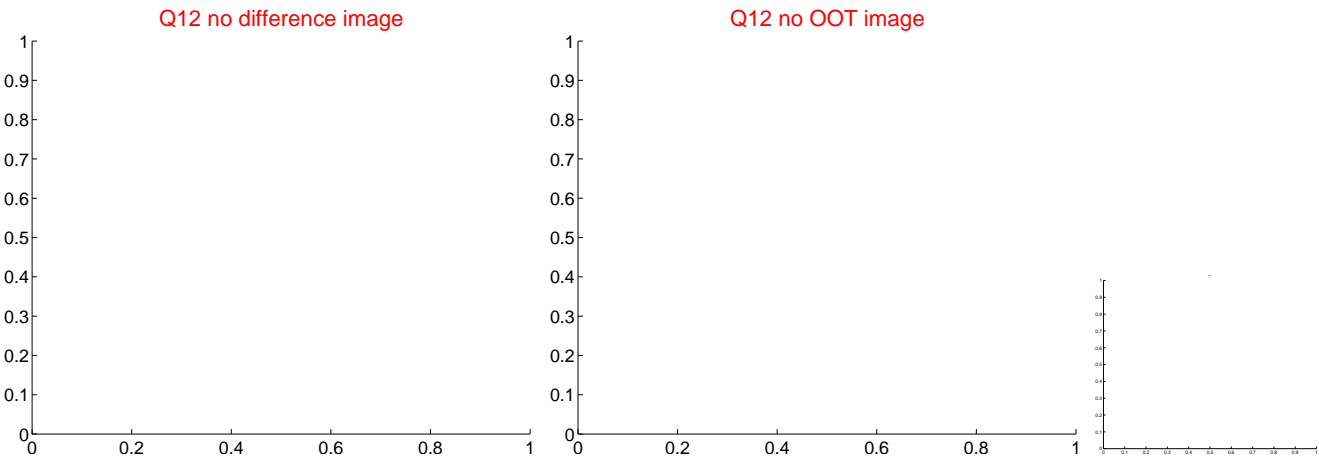
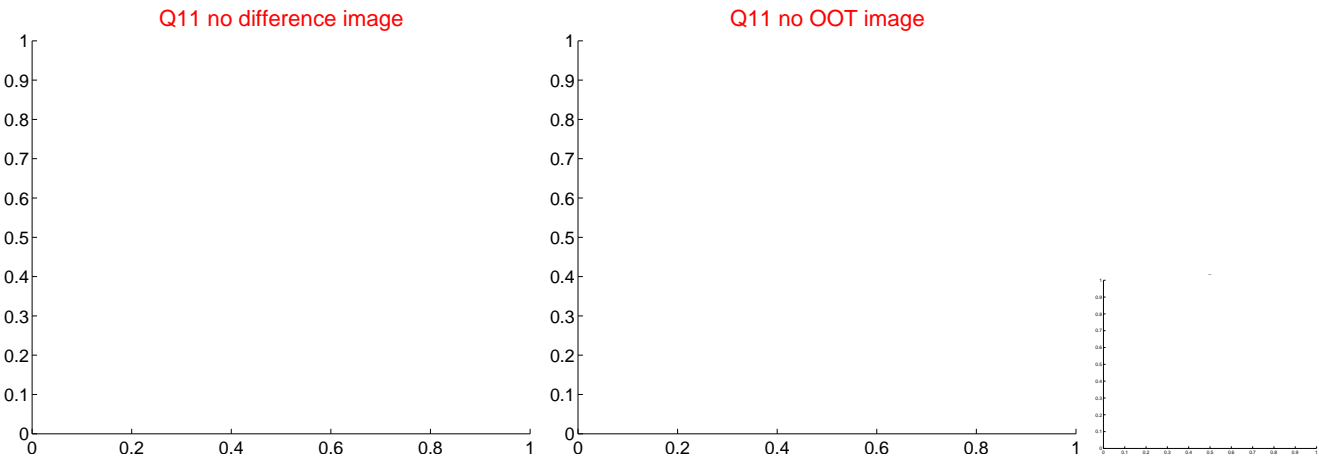
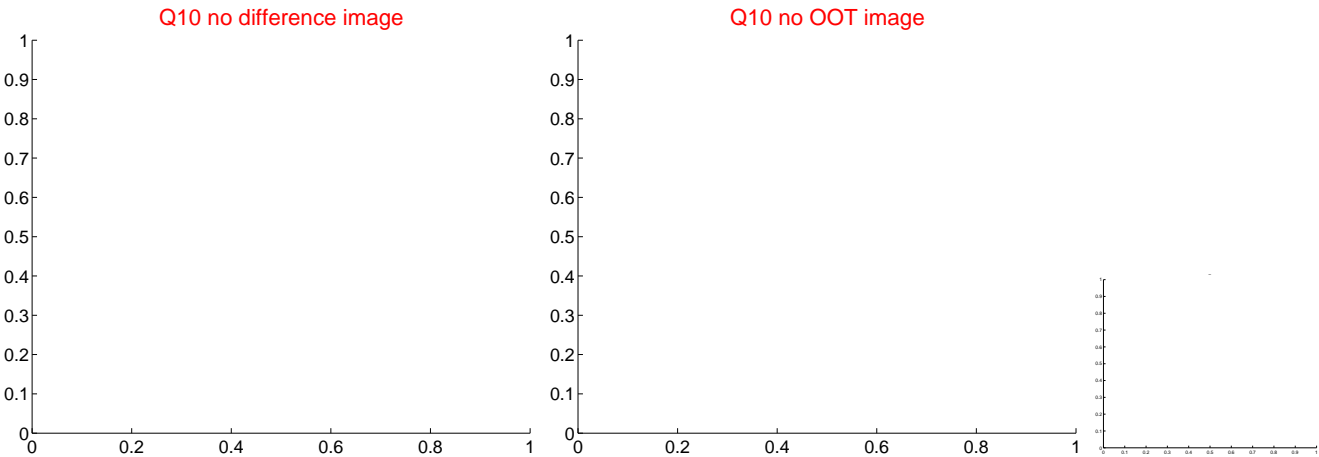
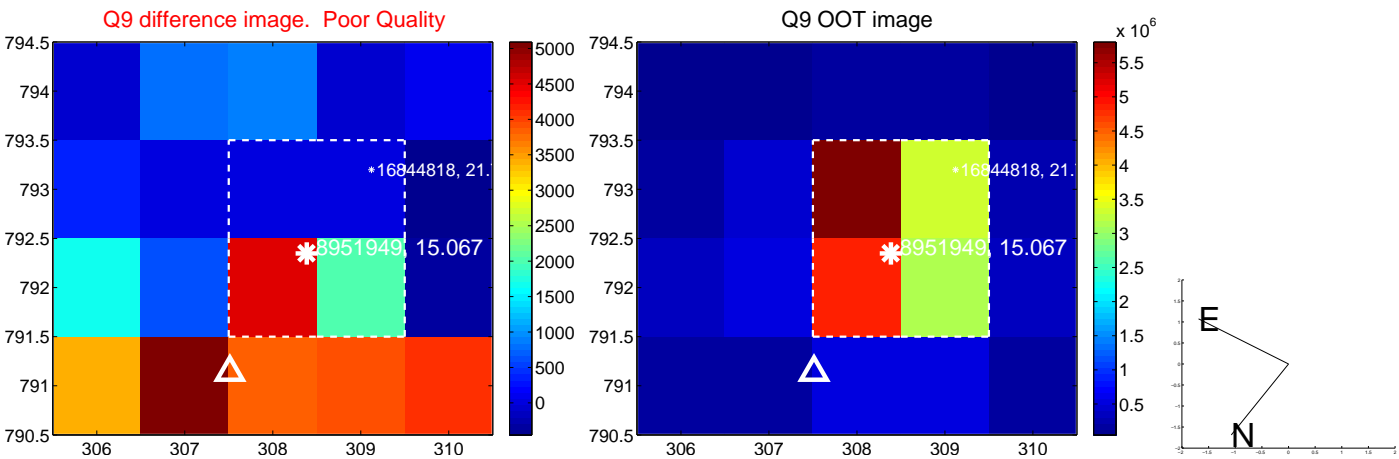
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



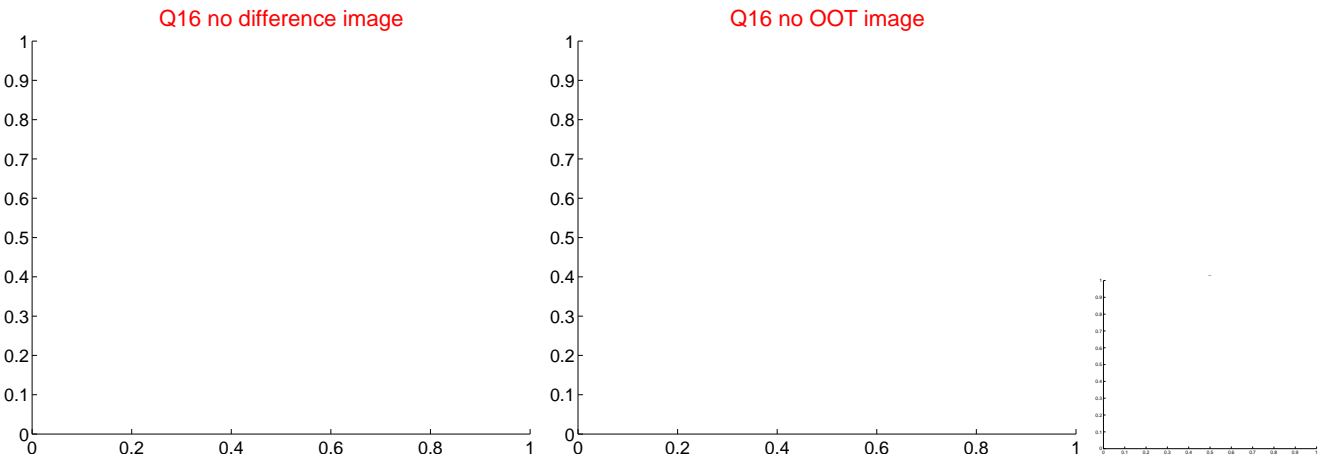
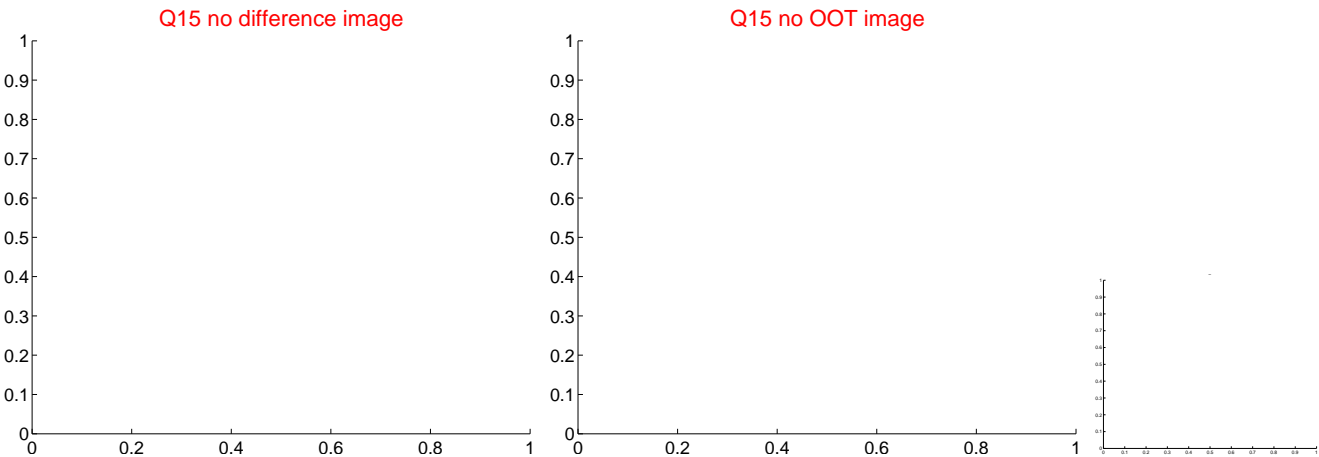
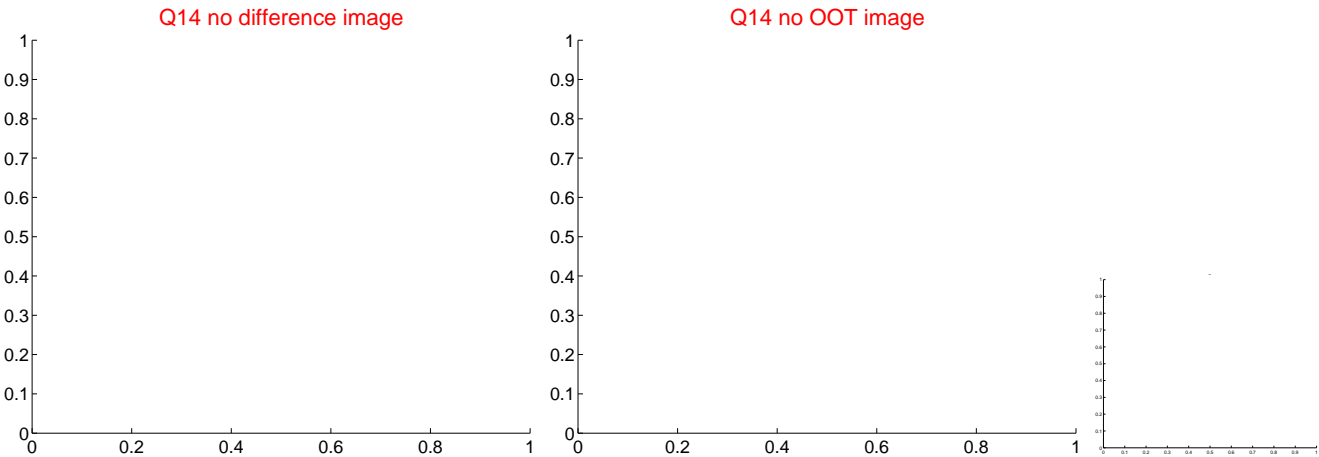
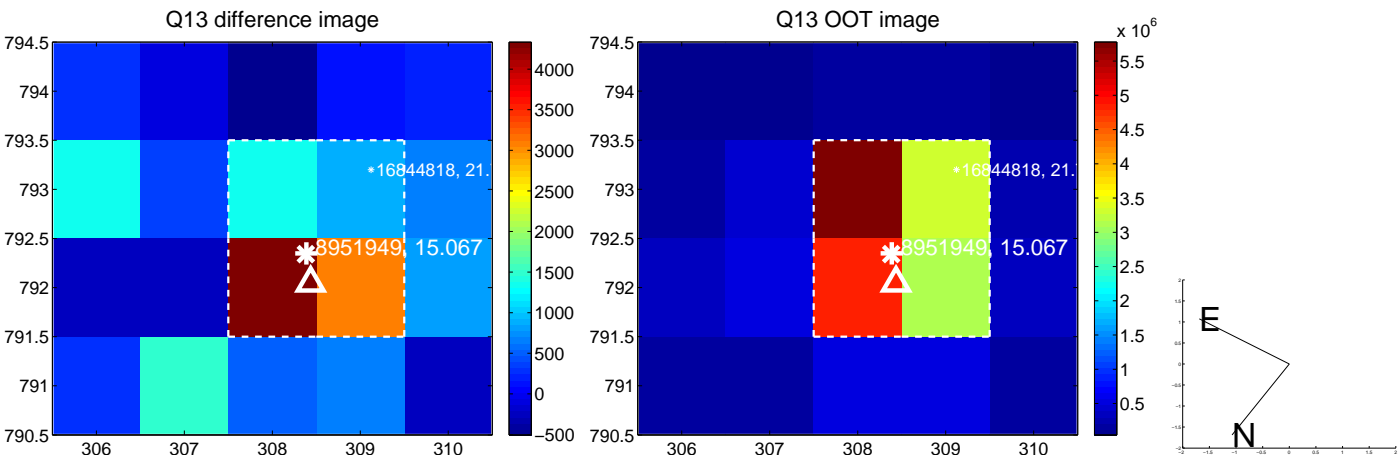
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



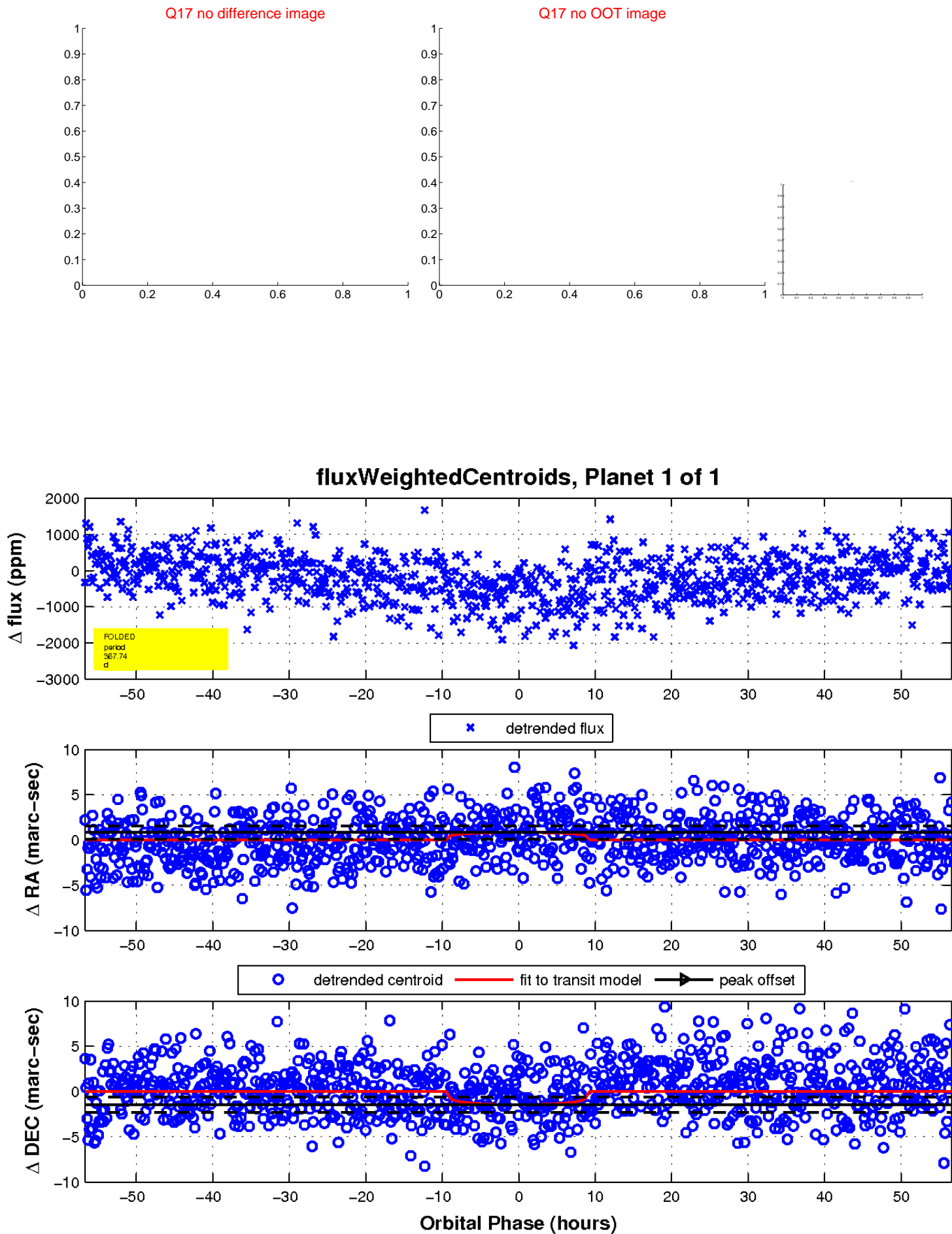
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

