

KIC 008164450

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})
008164450-01	OBS	No	536.522645	251.741885	107.1	14.805	7.8	7.6	1.44	6308	1.83	1.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008164450-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

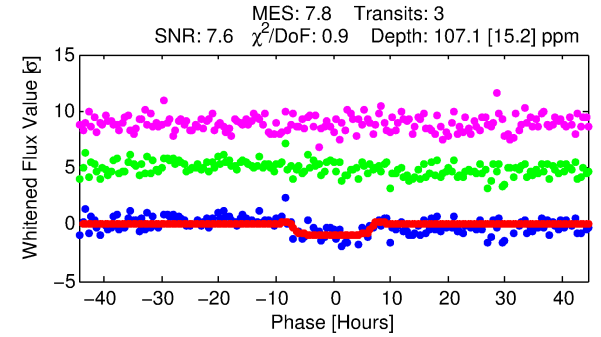
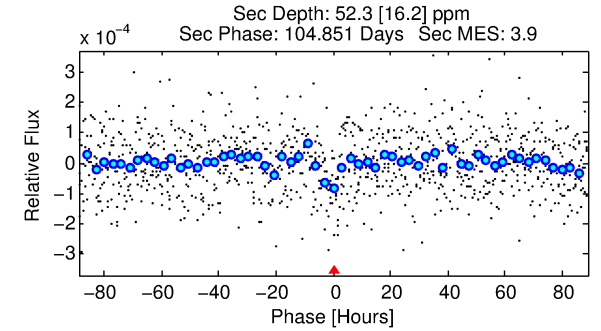
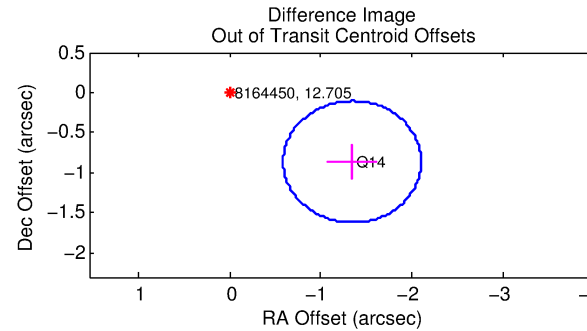
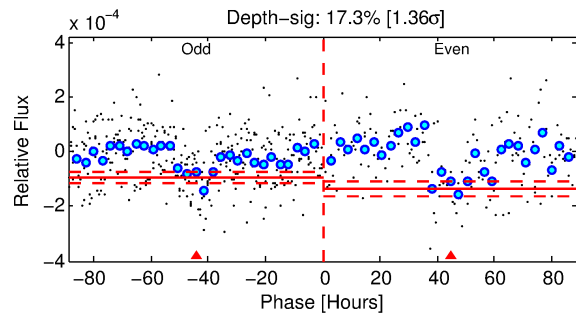
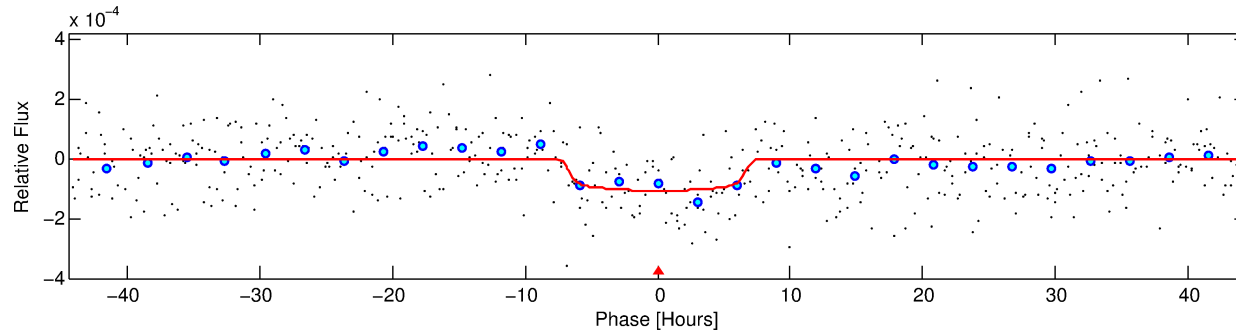
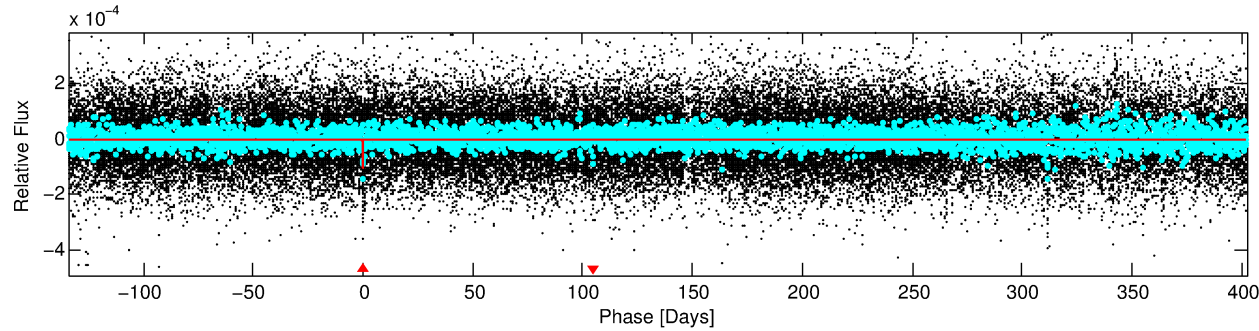
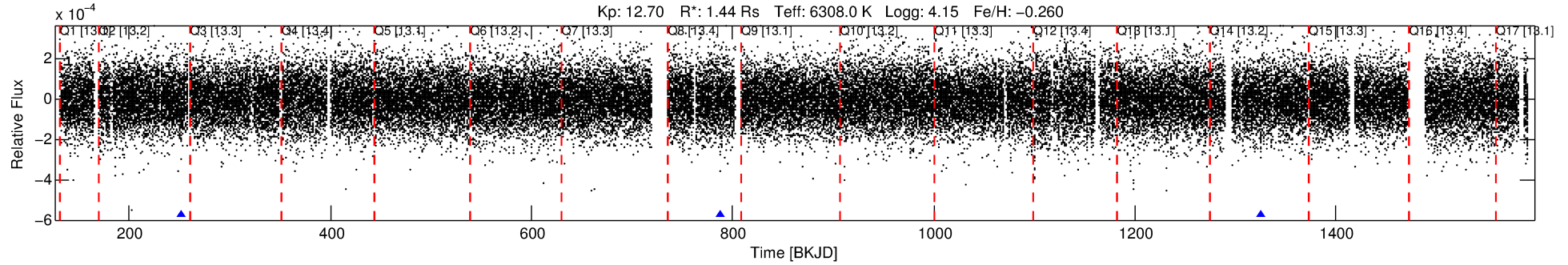
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008164450-01

No Significant Match Found

DV One-Page Summary

KIC: 8164450 Candidate: 1 of 1 Period: 536.523 d



DV Fit Results:

Period = 536.52265 [0.02080] d
Epoch = 251.7419 [0.0267] BKJD
Rp/R* = 0.0116 [0.0017]
a/R* = 101.62 [71.81]
b = 0.94 [0.08]
Seff = 1.68 [0.61]
Teq = 290 [27] K
Rp = 1.83 [0.53] Re
a = 1.3249 [0.2978] AU
Ag = 15124.40 [8290.56] [1.82 σ]
Teffp = 4976 [549] K [8.52 σ]

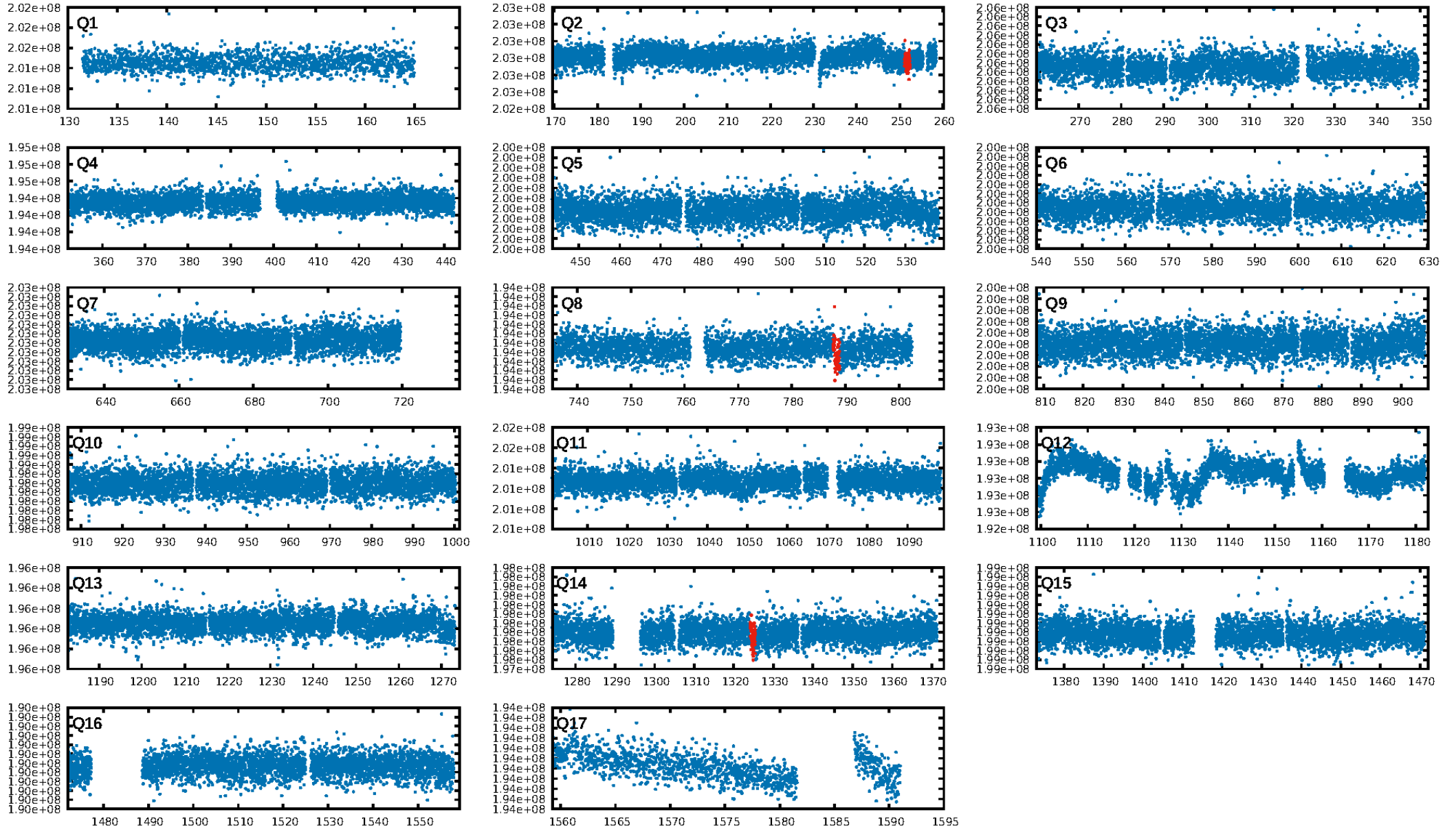
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.29e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.347
Centroid-sig: 2.8%
Centroid-so: 2.599 arcsec [1.57 σ]
OotOffset-rm: 1.598 arcsec [6.32 σ]
KicOffset-rm: 1.469 arcsec [5.82 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

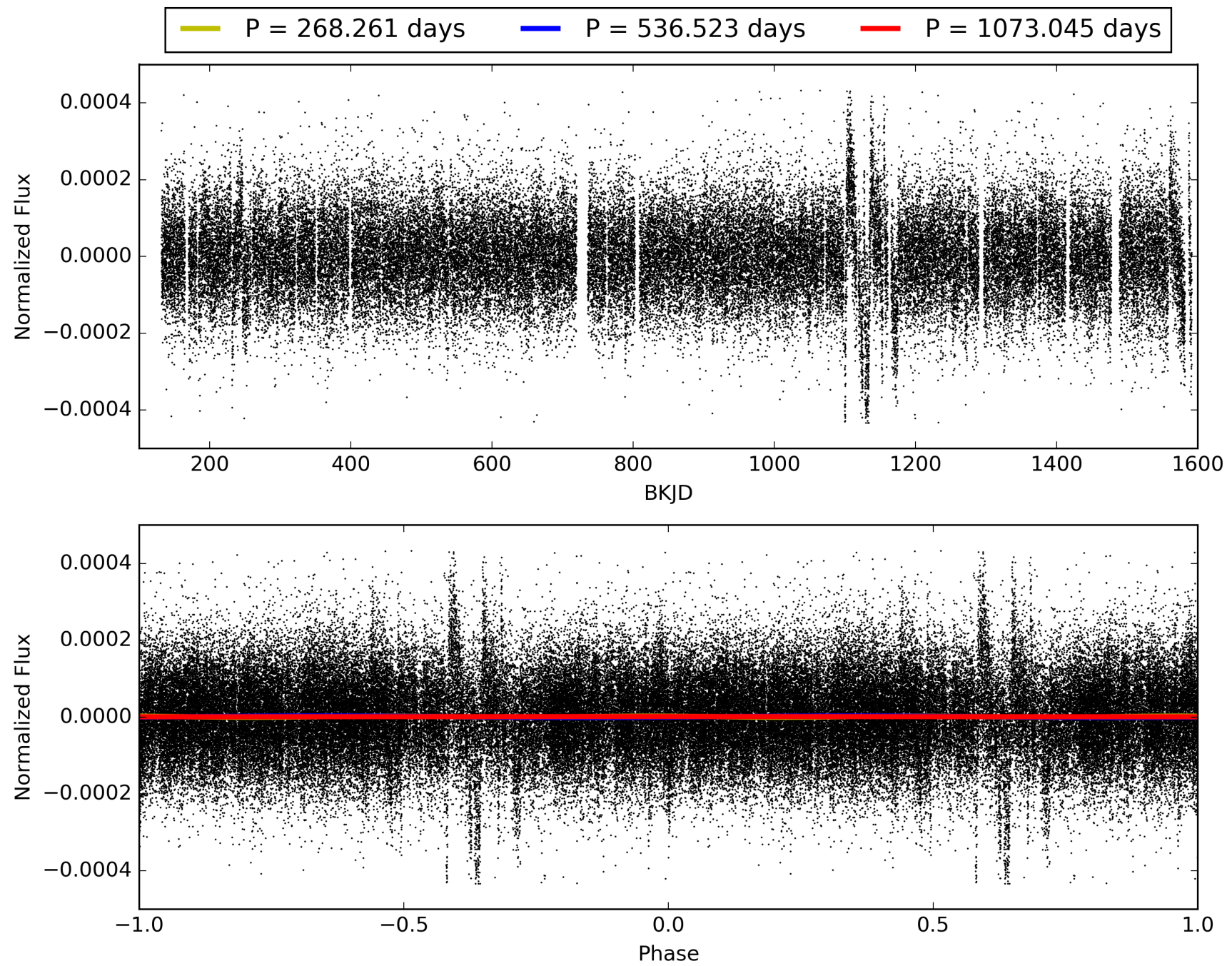
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:06:33 Z

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

TCE 008164450-01, PDC Light Curves

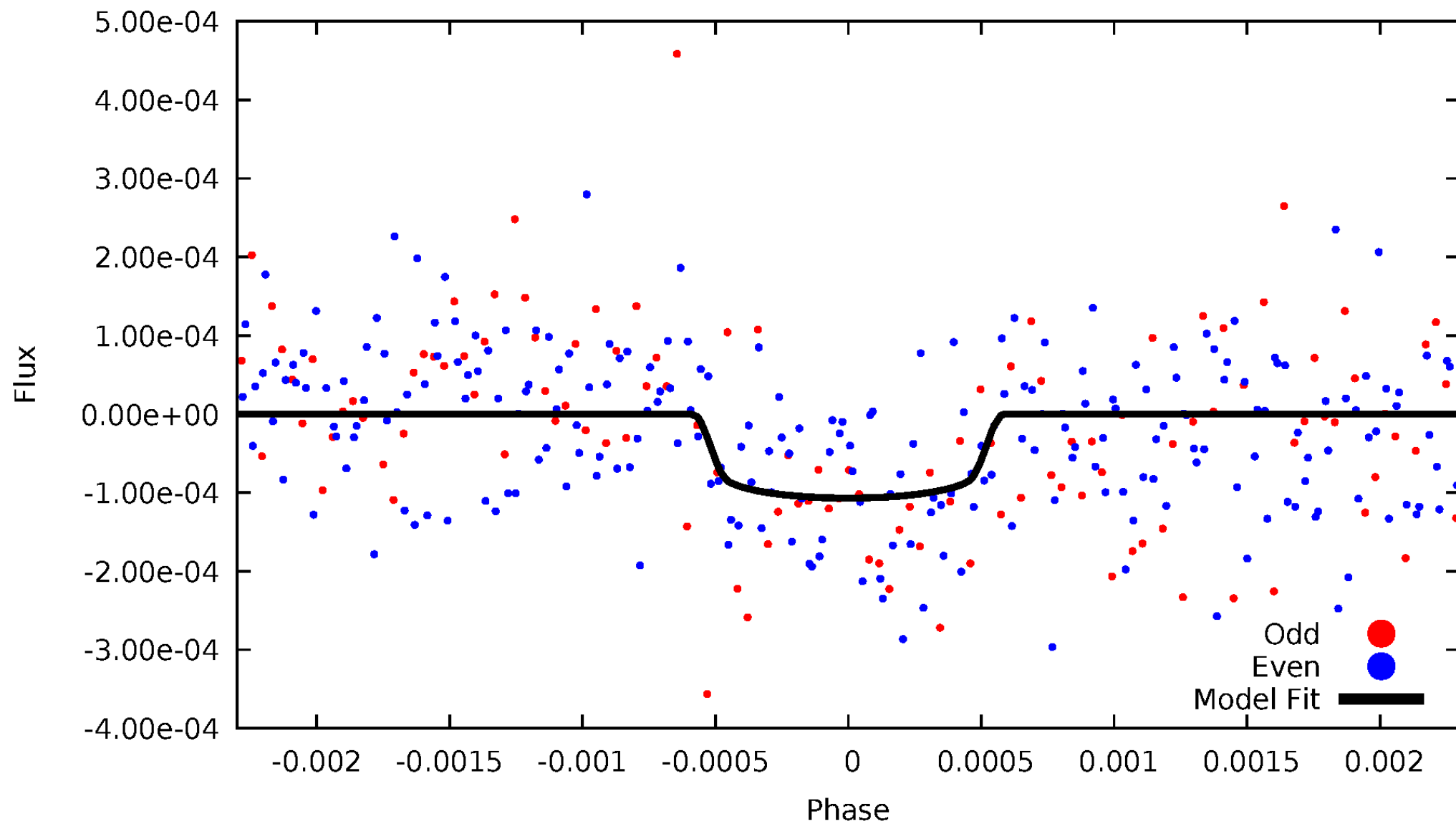


TCE 008164450-01



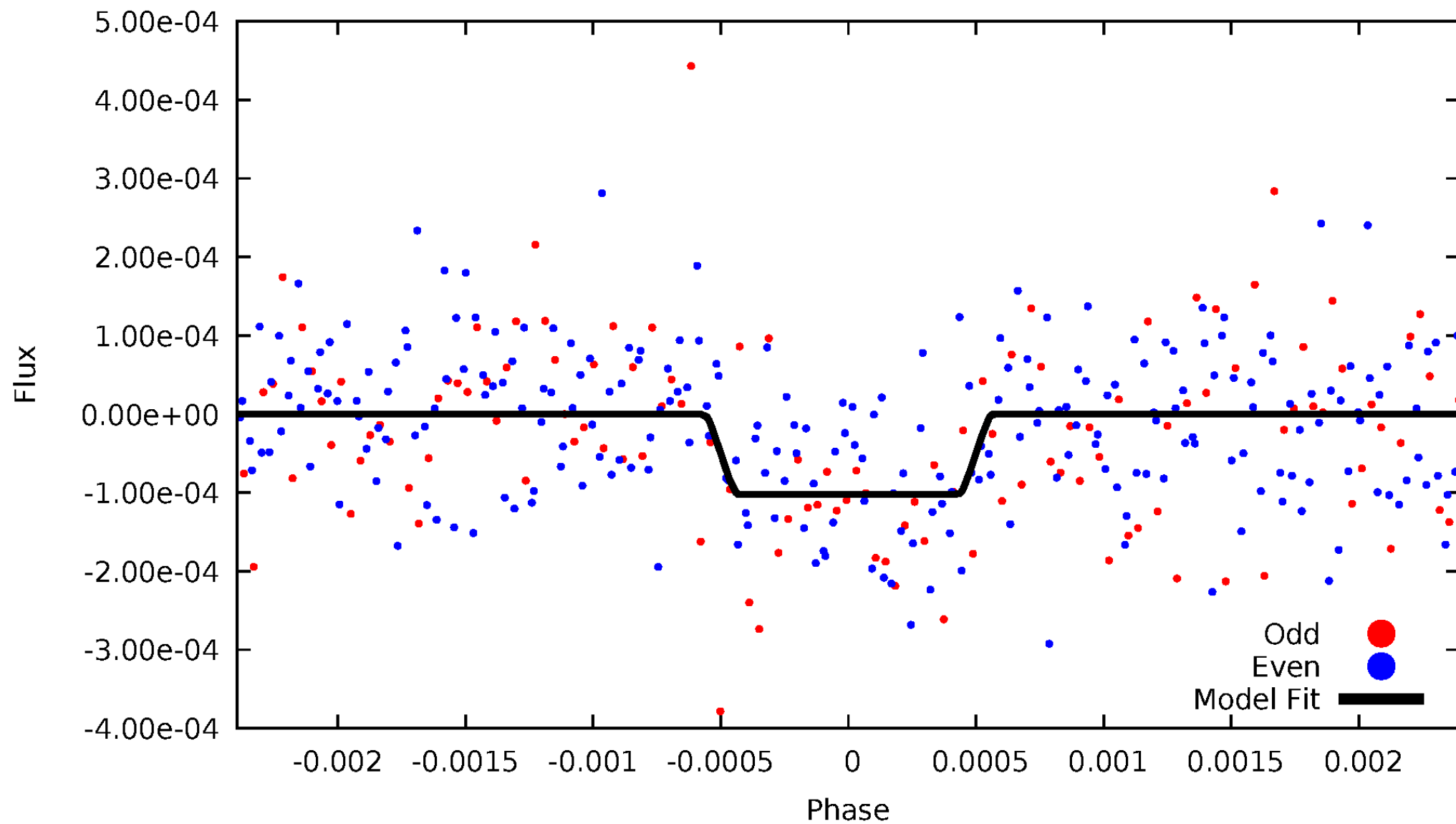
DV Odd/Even

TCE 008164450-01



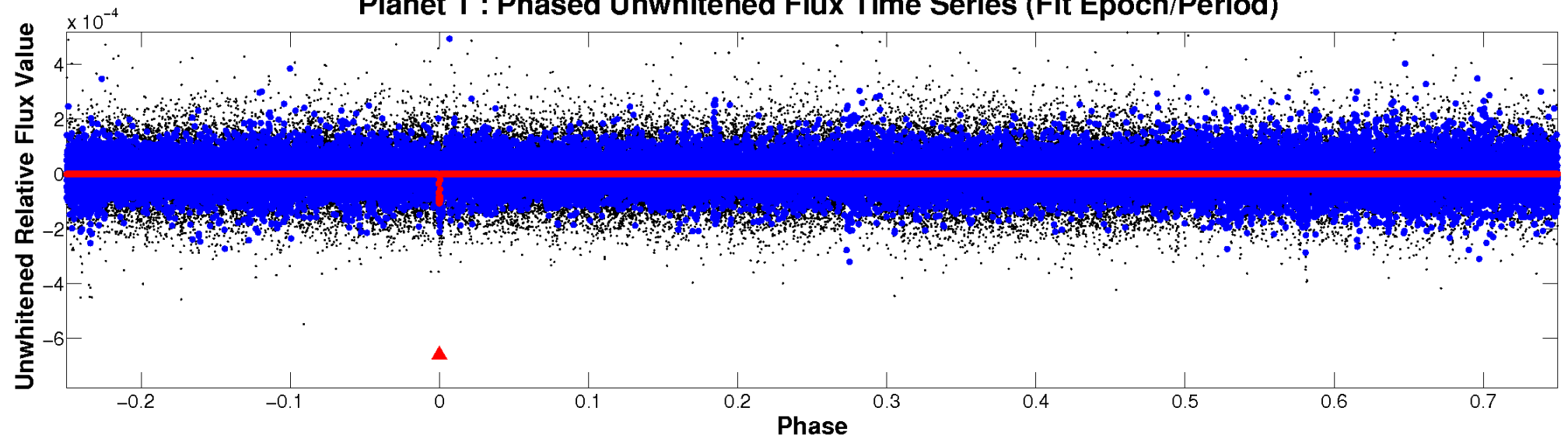
ALT Odd/Even

TCE 008164450-01

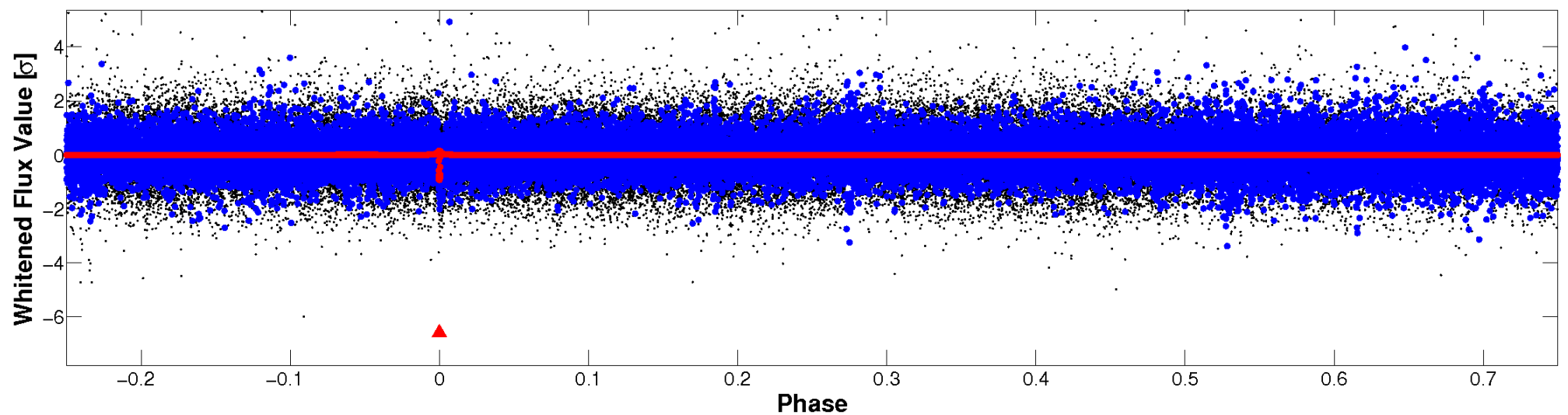


Non-Whitened Vs. Whitened Light Curve

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



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



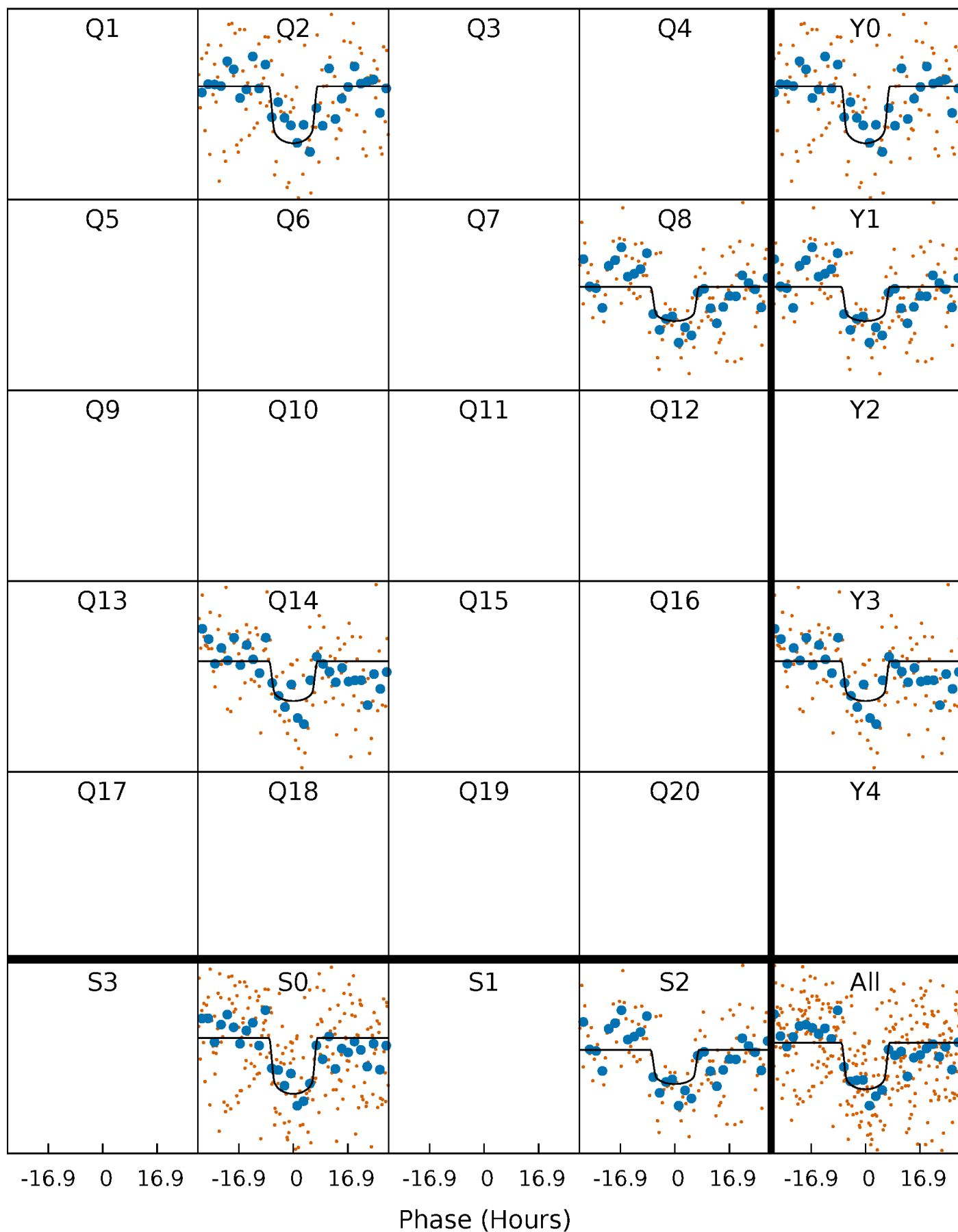
PDC Quarter-Phased Transit Curves

TCE 008164450-01 P=536.522645 Days $T_0=251.741885$ (BKJD)



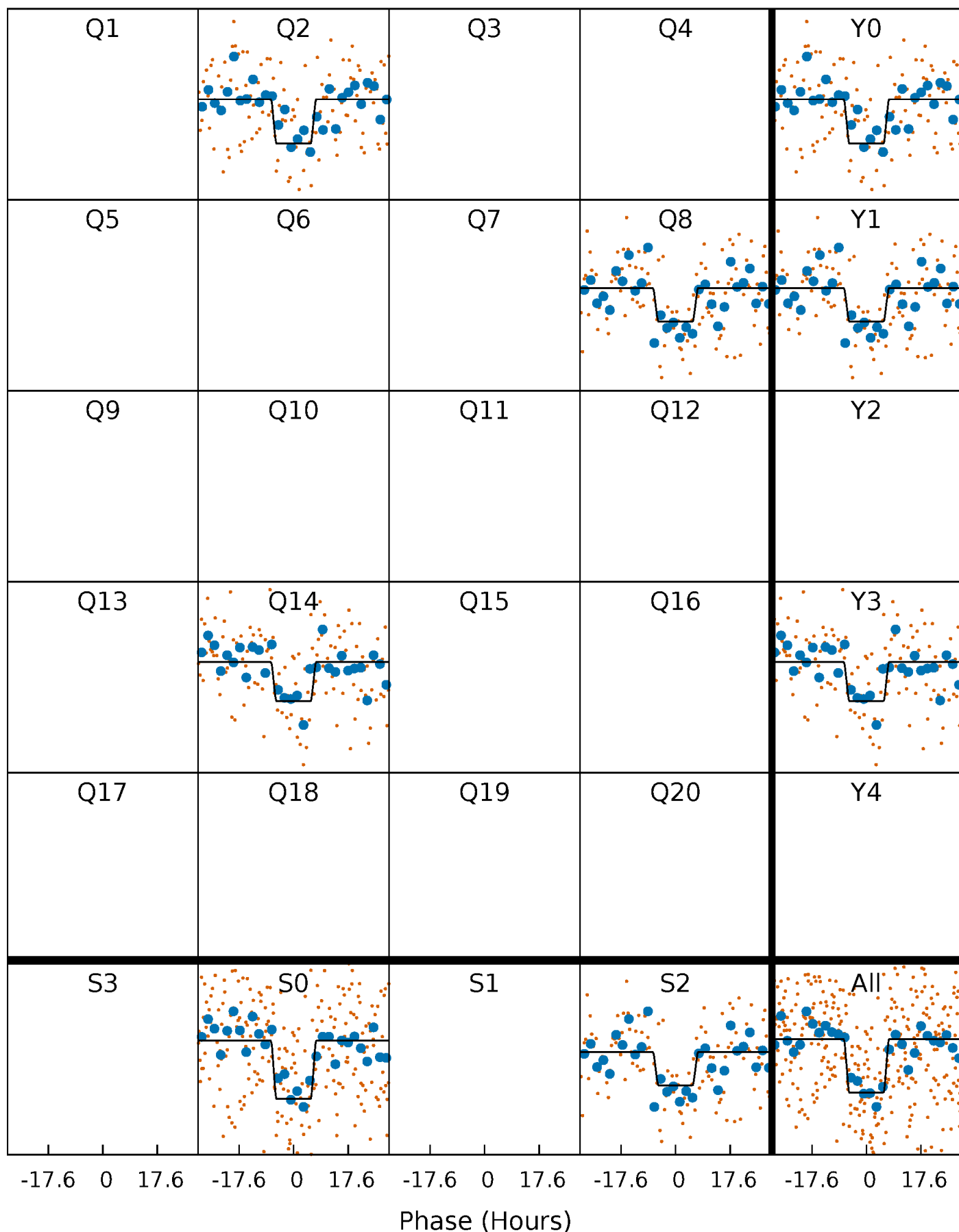
DV Quarter-Phased Transit Curves

TCE 008164450-01 P=536.522645 Days $T_0=251.741885$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

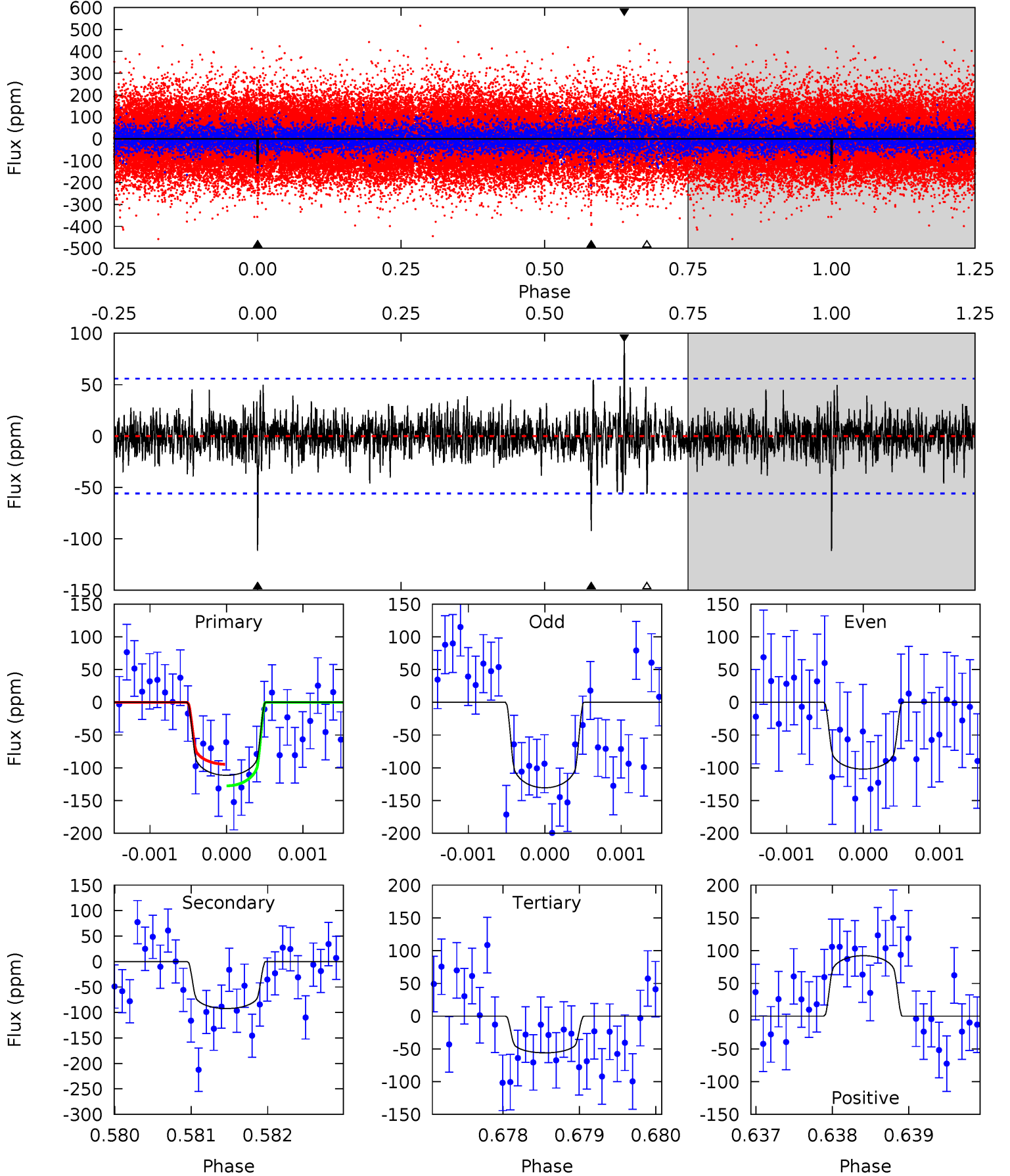
TCE 008164450-01 P=536.517174 Days $T_0=251.731831$ (BKJD)



DV Model-Shift Uniqueness Test

008164450-01, P = 536.522645 Days, E = 251.741885 Days

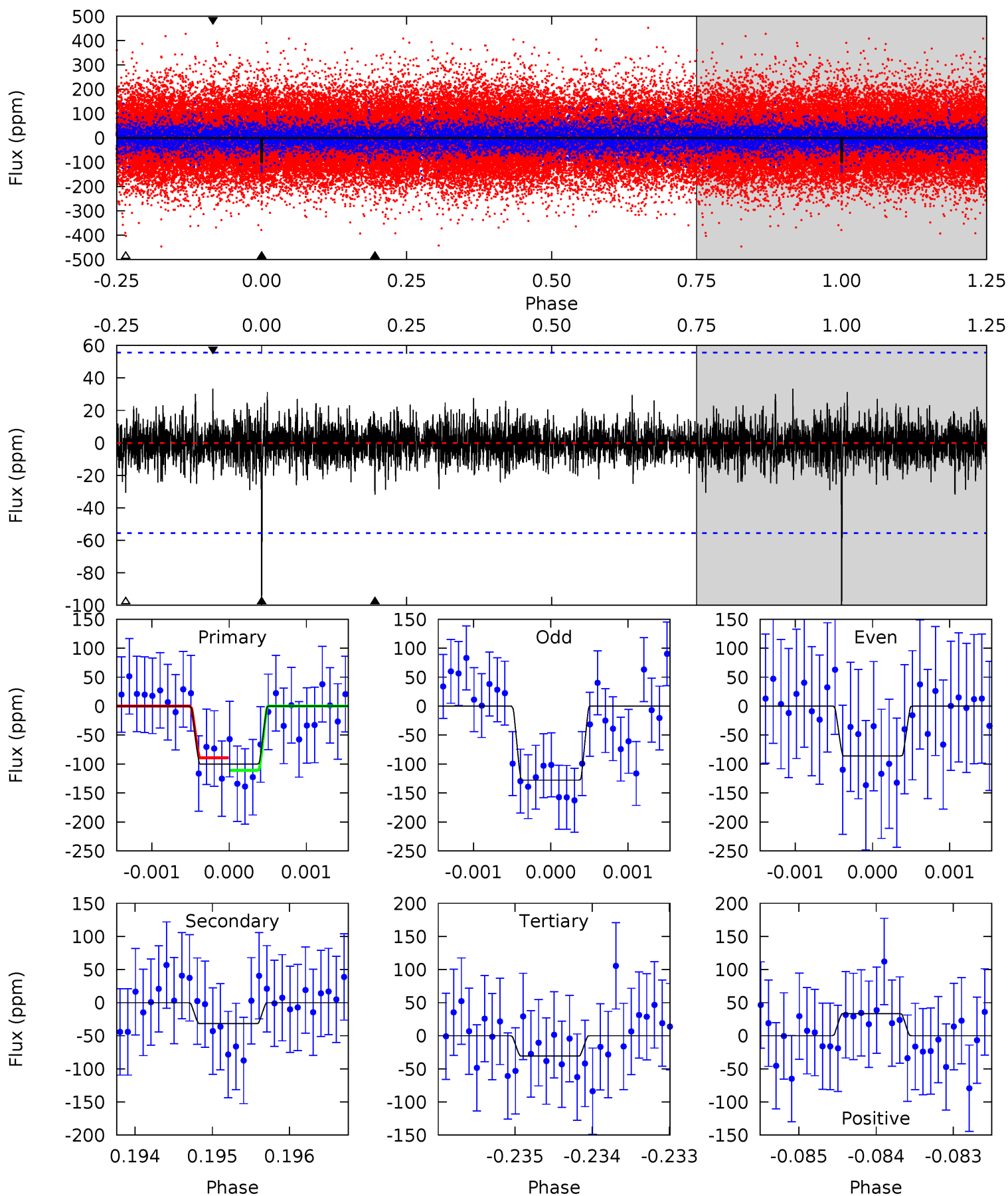
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.96	5.45	8.97	5.43	3.25	1.30	5.39	1.87	3.52	-0.00	1.32	0.94	0.45	1.60



Alt Model-Shift Uniqueness Test

008164450-01, P = 536.517174 Days, E = 251.731831 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.76	3.10	3.00	3.25	5.43	3.25	0.80	6.77	6.51	0.10	-0.15	1.96	1.10	0.25	1.06



Stellar Parameters For KIC 008164450

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6308^{+170}_{-189}	$4.153^{+0.198}_{-0.132}$	$-0.260^{+0.250}_{-0.300}$	$1.441^{+0.326}_{-0.358}$	$1.075^{+0.167}_{-0.136}$	$0.506^{+0.526}_{-0.191}$
	+3%/-3%	+5%/-3%	+96%/-115%	+23%/-25%	+16%/-13%	+104%/-38%
Source	PHO1	FLK73	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 008164450-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-92 ± 10	$1.81^{+0.36}_{-0.35}$	401^{+26}_{-26}	5736^{+461}_{-382}	27746^{+13659}_{-8820}
Alt.	-32 ± 10	$1.55^{+0.36}_{-0.32}$	402^{+24}_{-29}	4787^{+505}_{-470}	12381^{+8640}_{-5177}

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

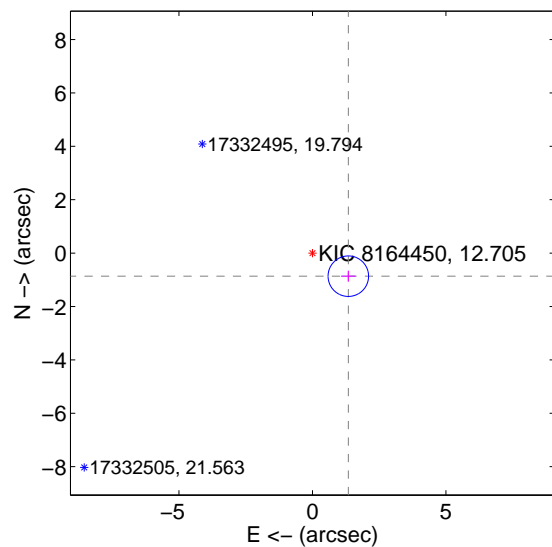
Supplemental centroid analysis for 008164450-01. Kepler magnitude: 12.71. Transit SNR 7.65

There are 1 quarters with good PRF difference image offsets

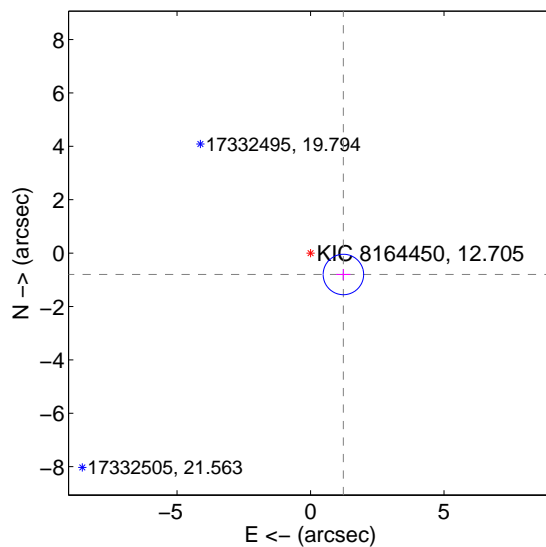
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.598 ± 0.253	6.32	-1.344 ± 0.269	-0.865 ± 0.208
PRF-fit source offset from KIC position	1.469 ± 0.253	5.82	-1.231 ± 0.269	-0.801 ± 0.208
photometric centroid source offset	2.60 ± 1.65	1.57	1.20 ± 1.74	2.31 ± 1.63

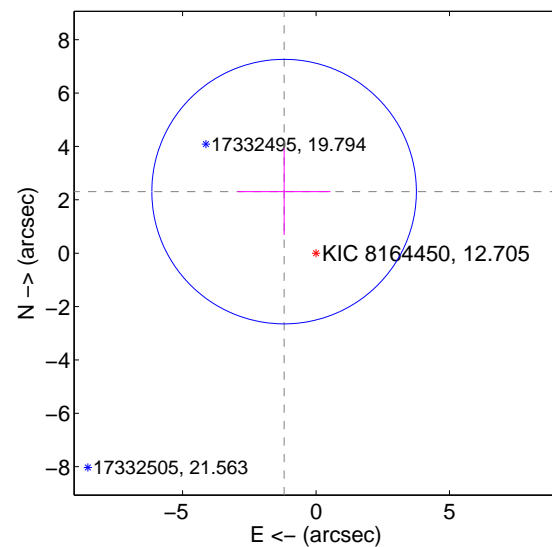
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

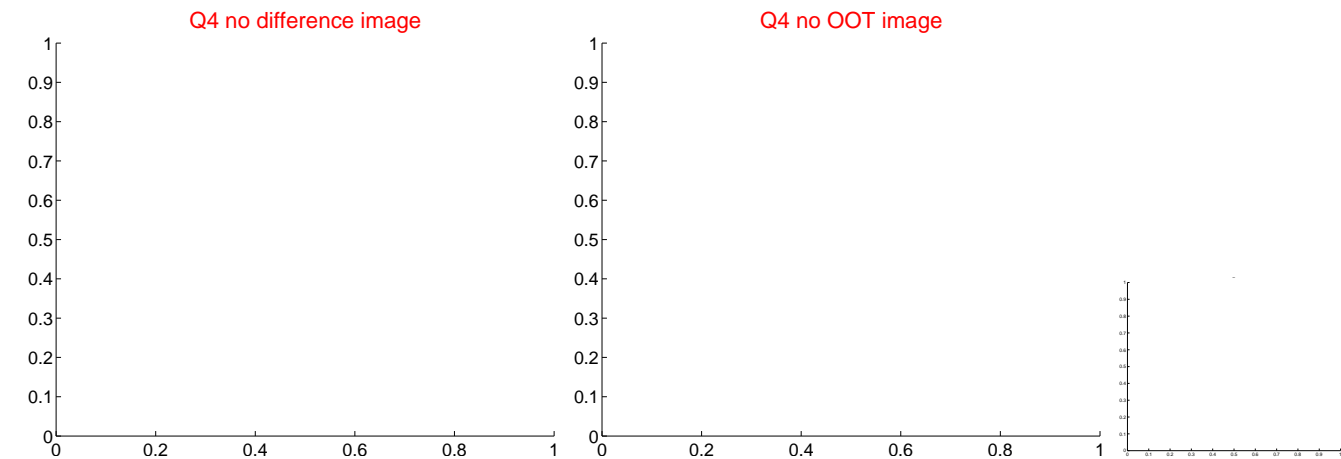
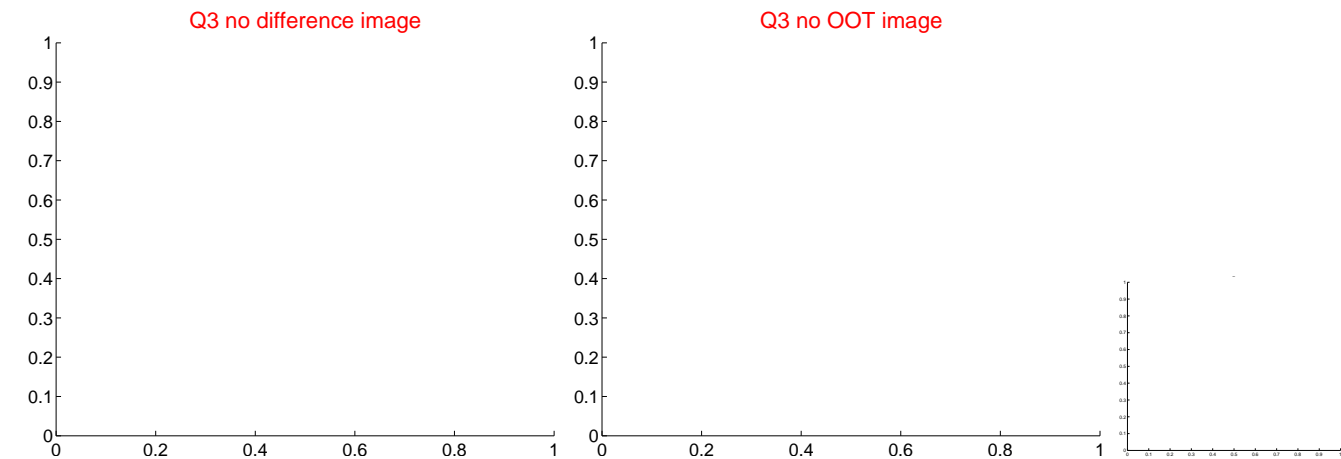
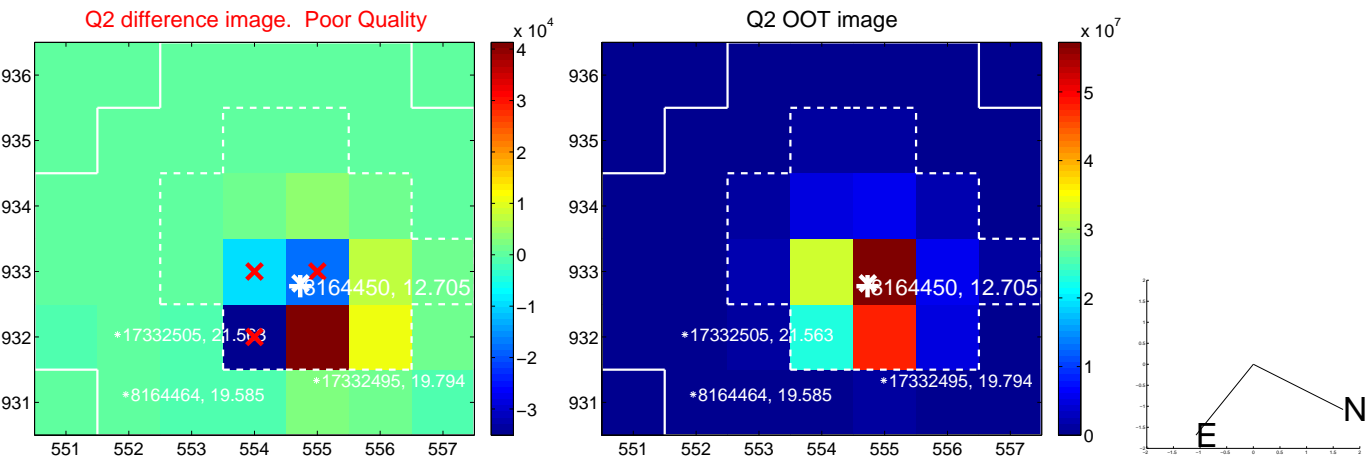
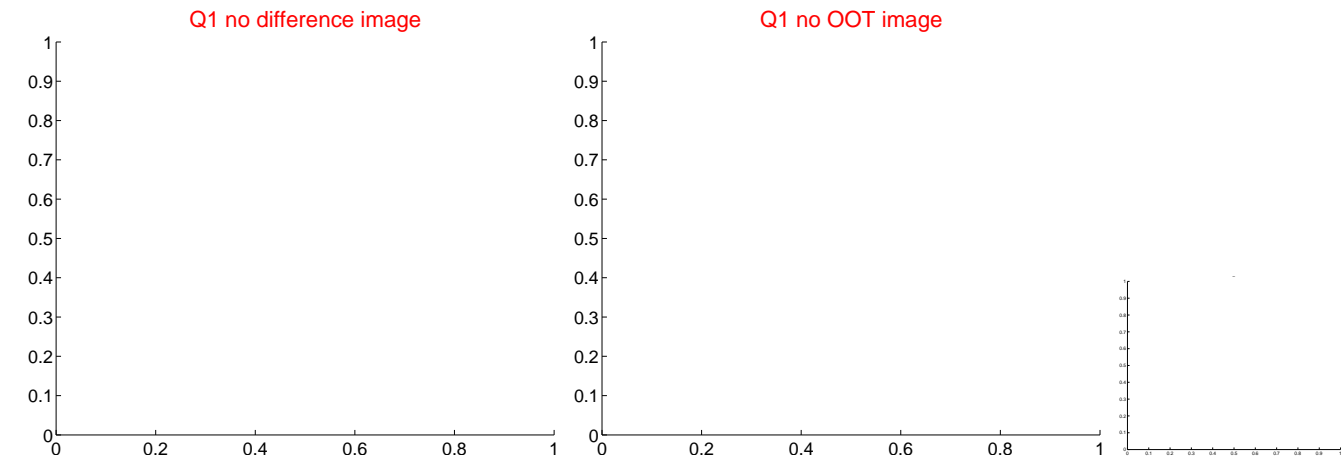


offset from photometric centroids

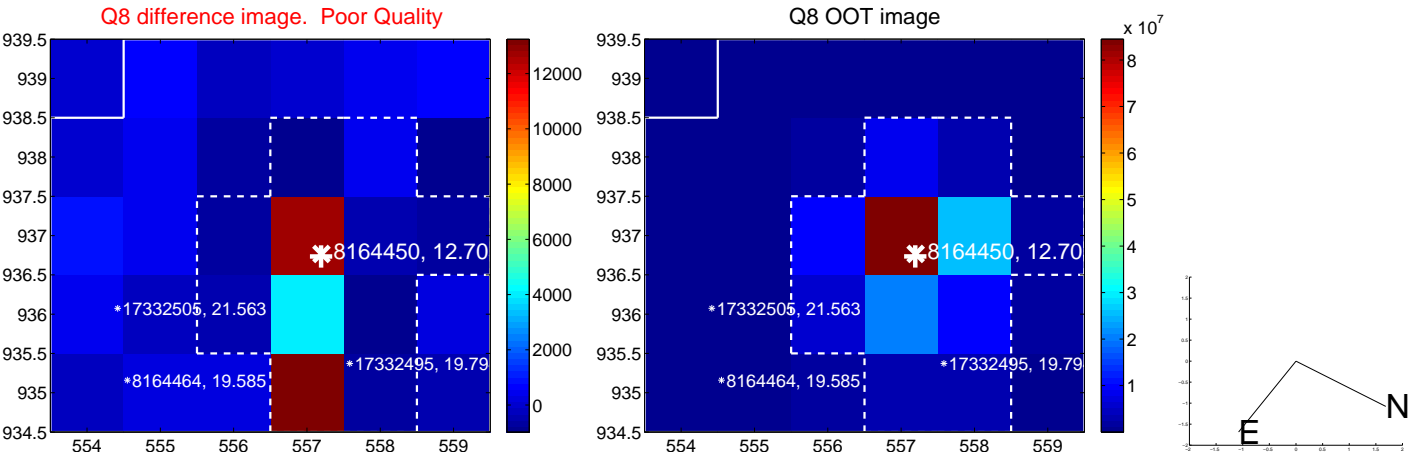
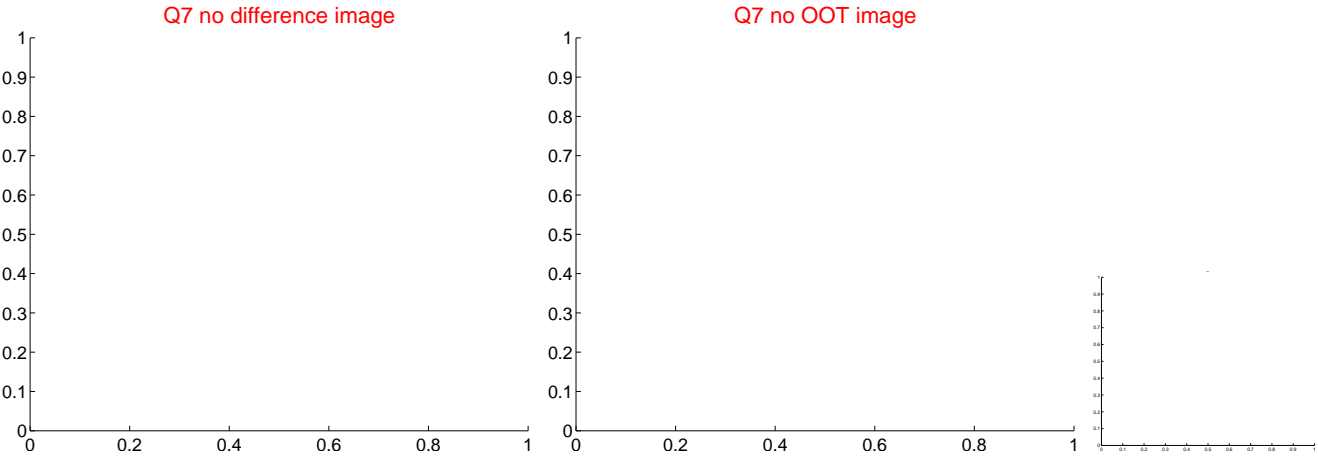
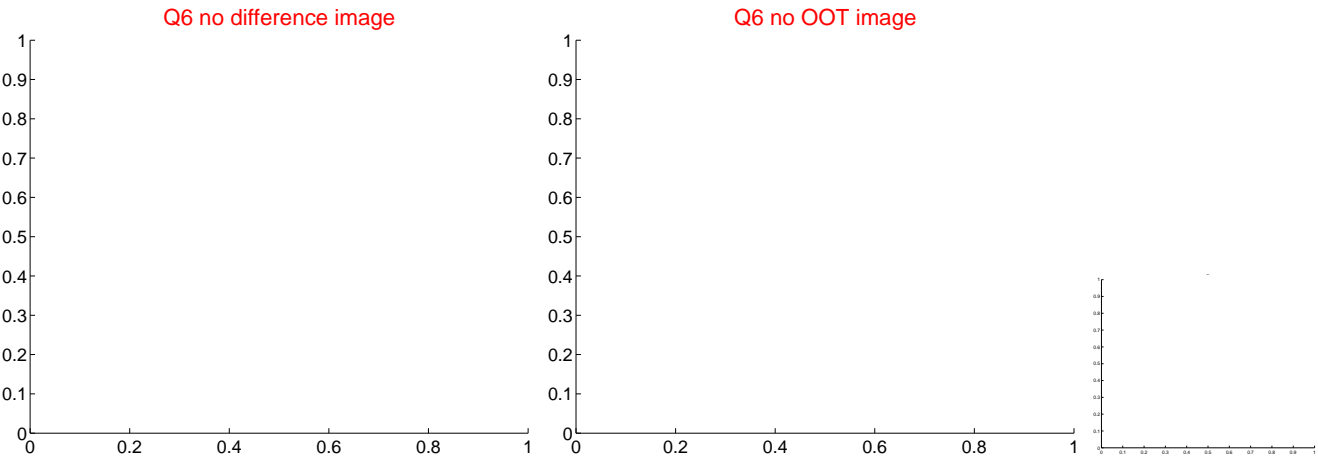
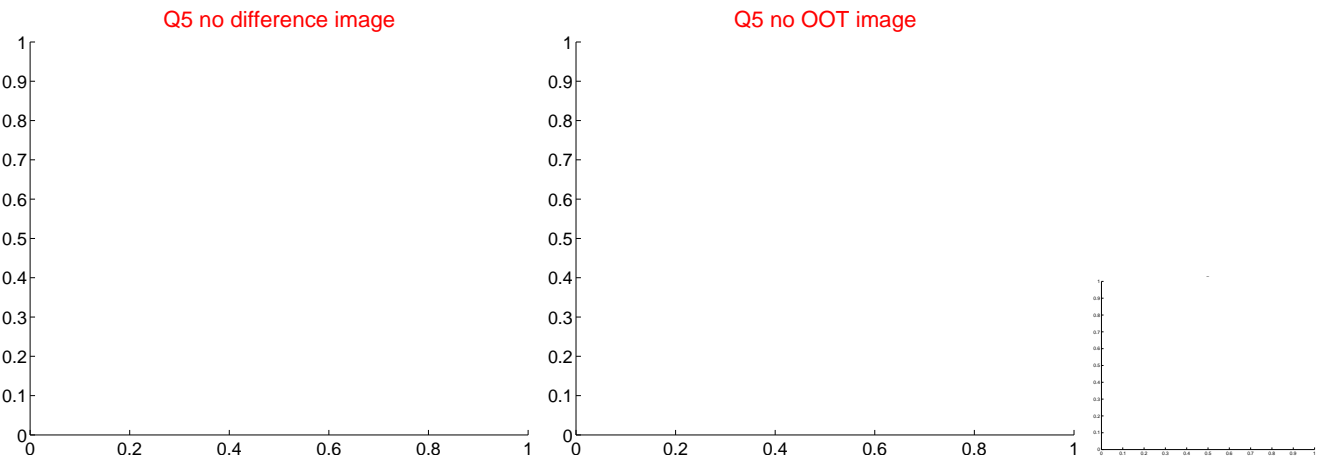


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

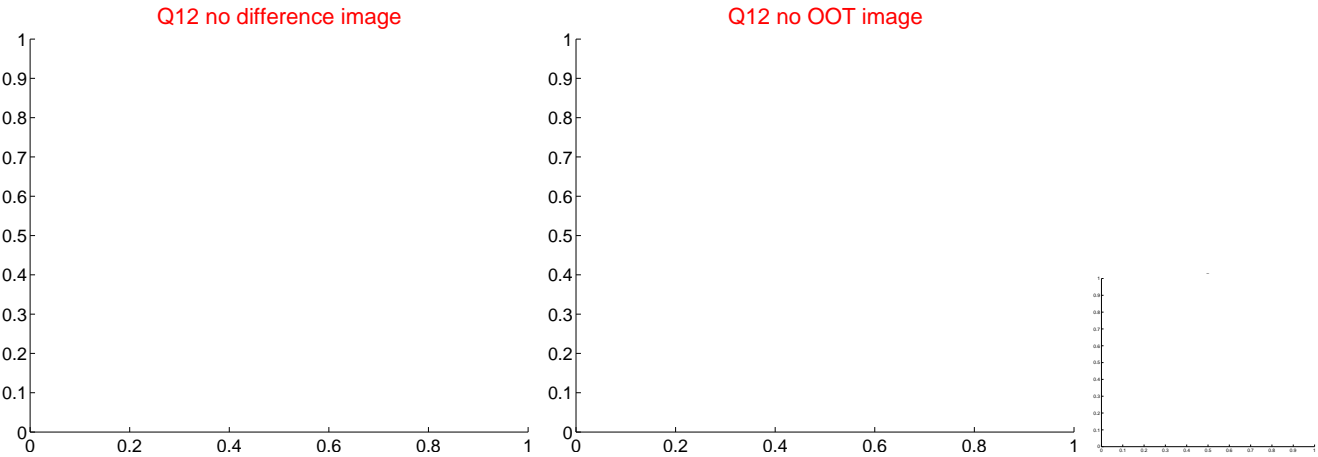
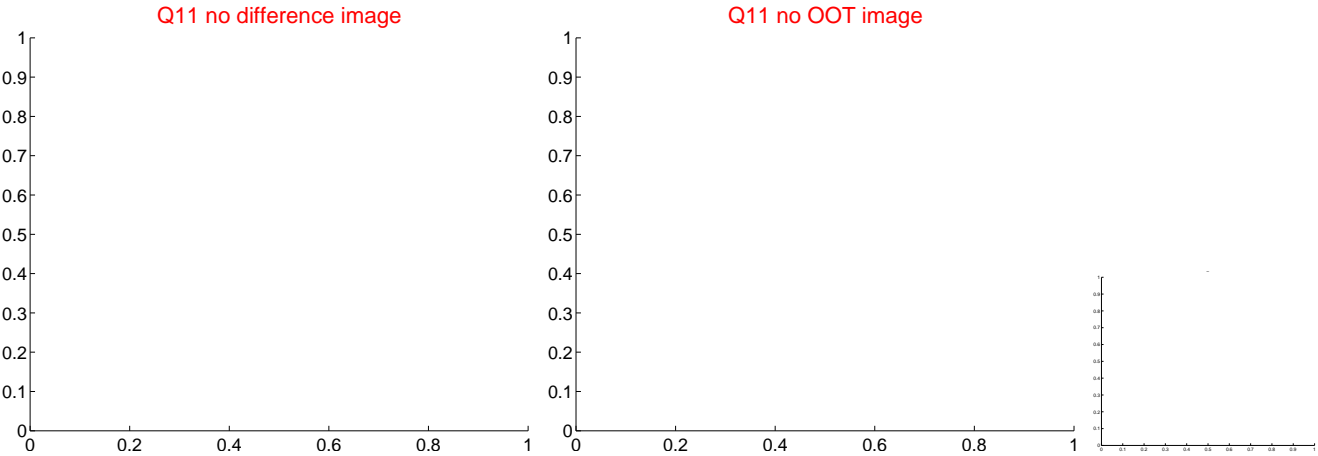
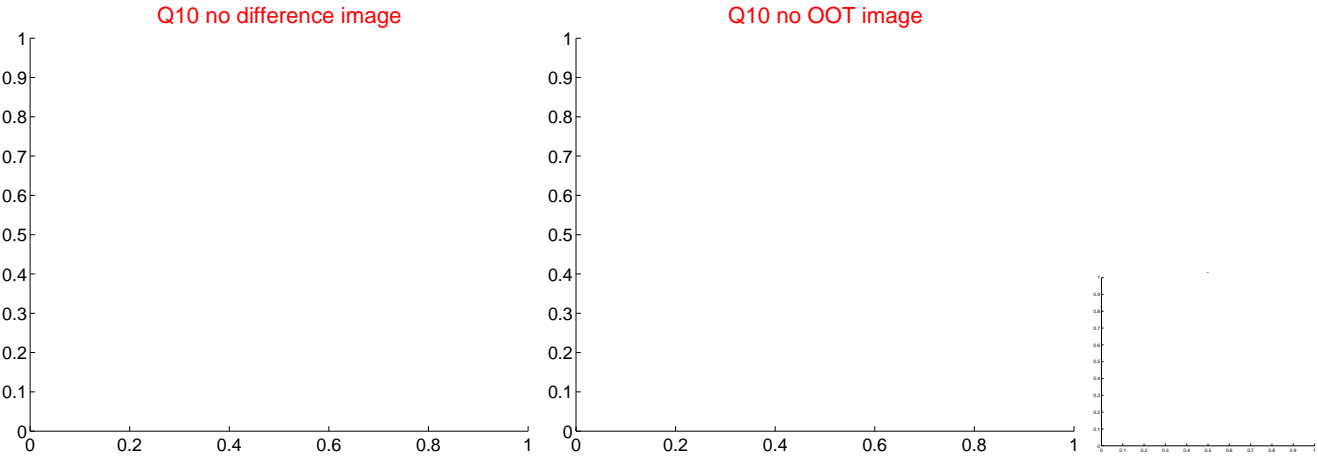
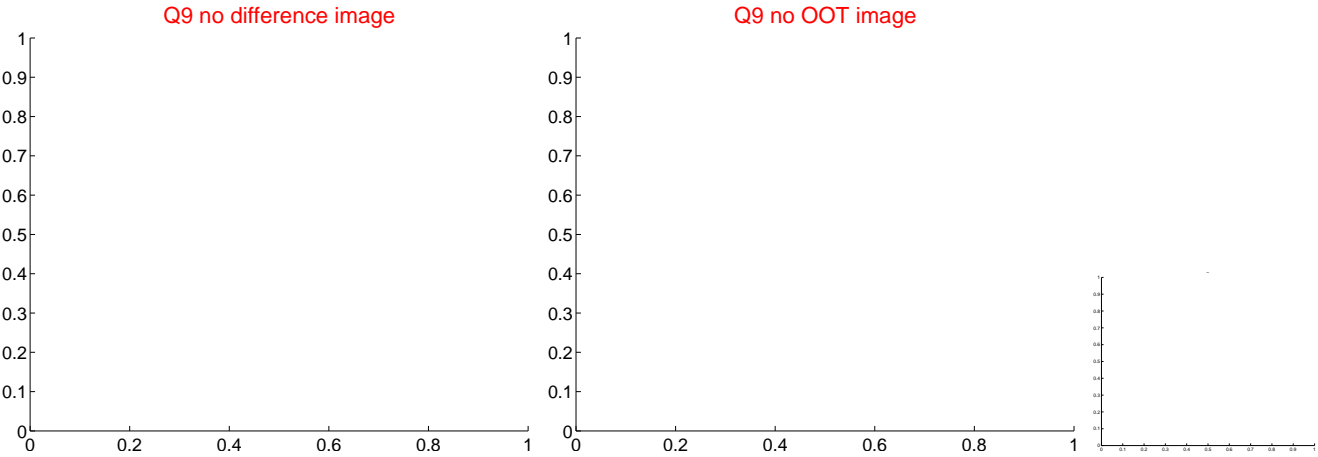
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



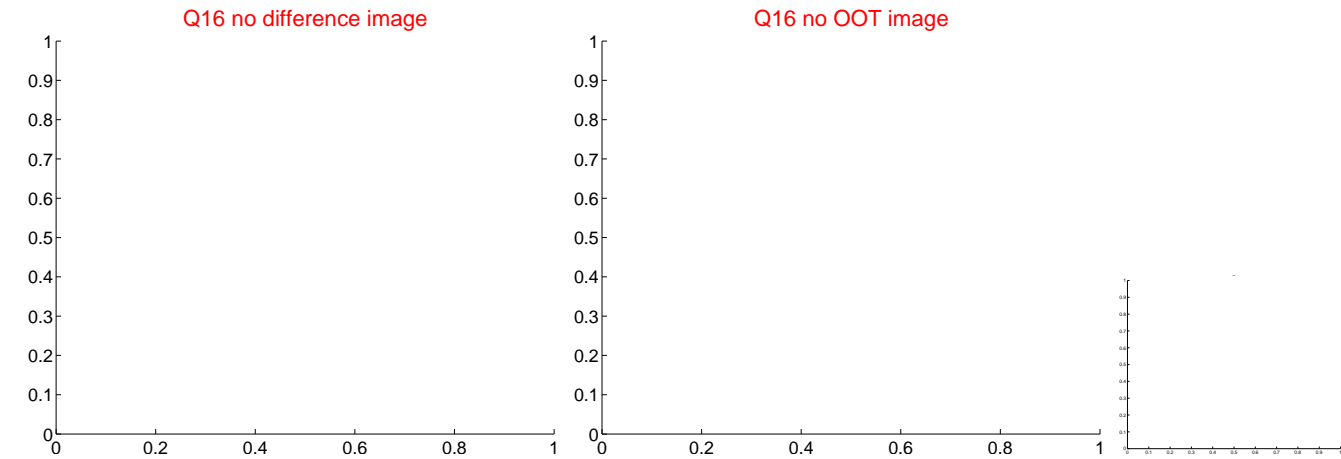
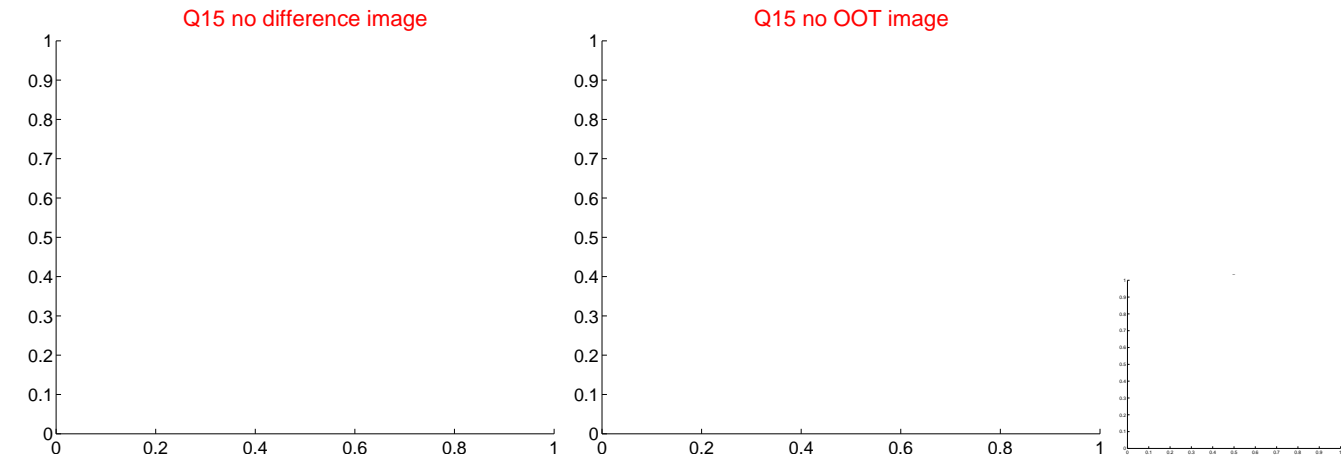
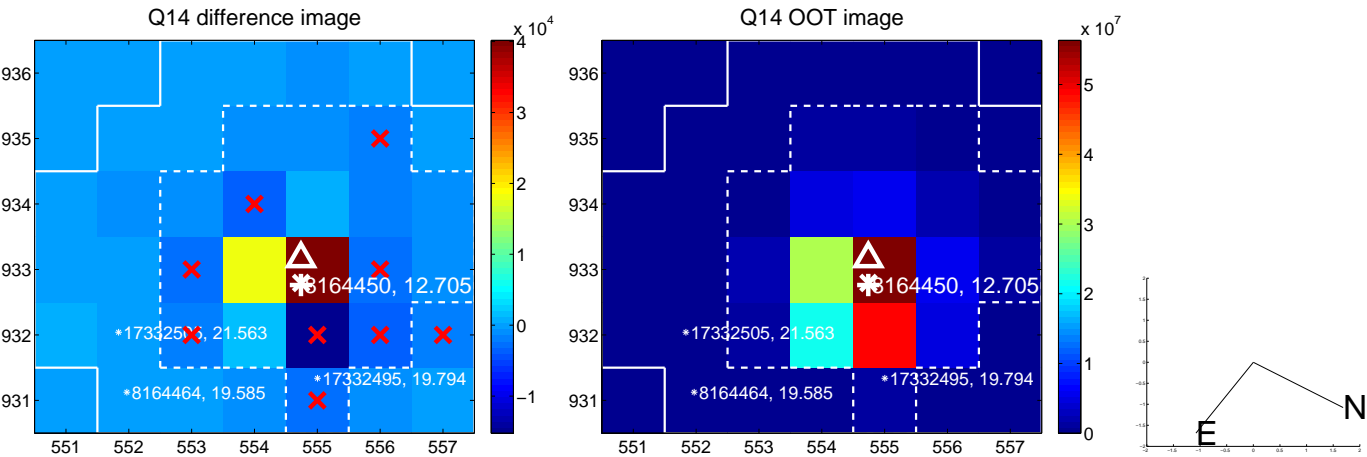
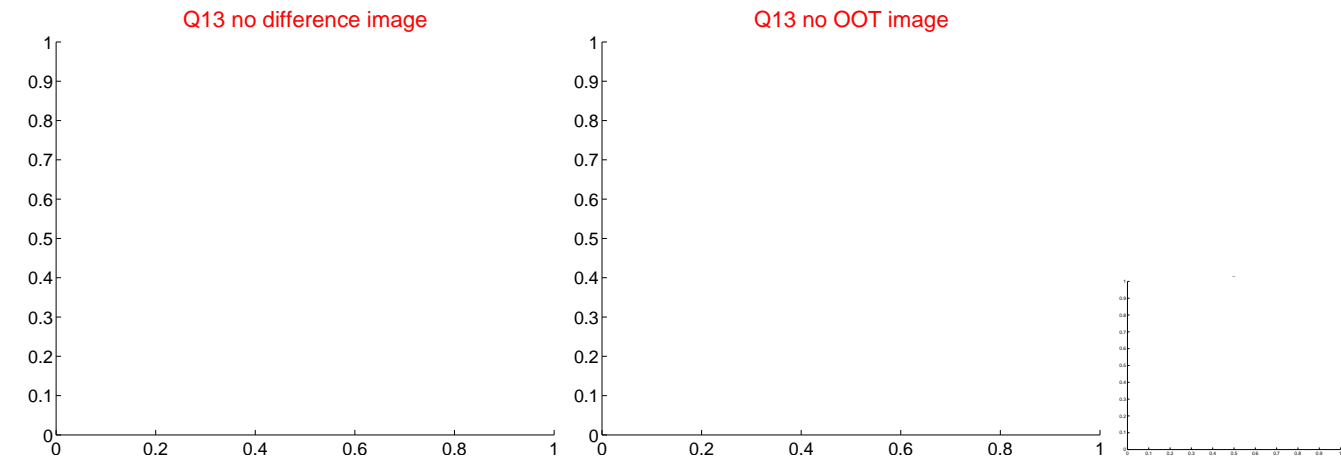
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



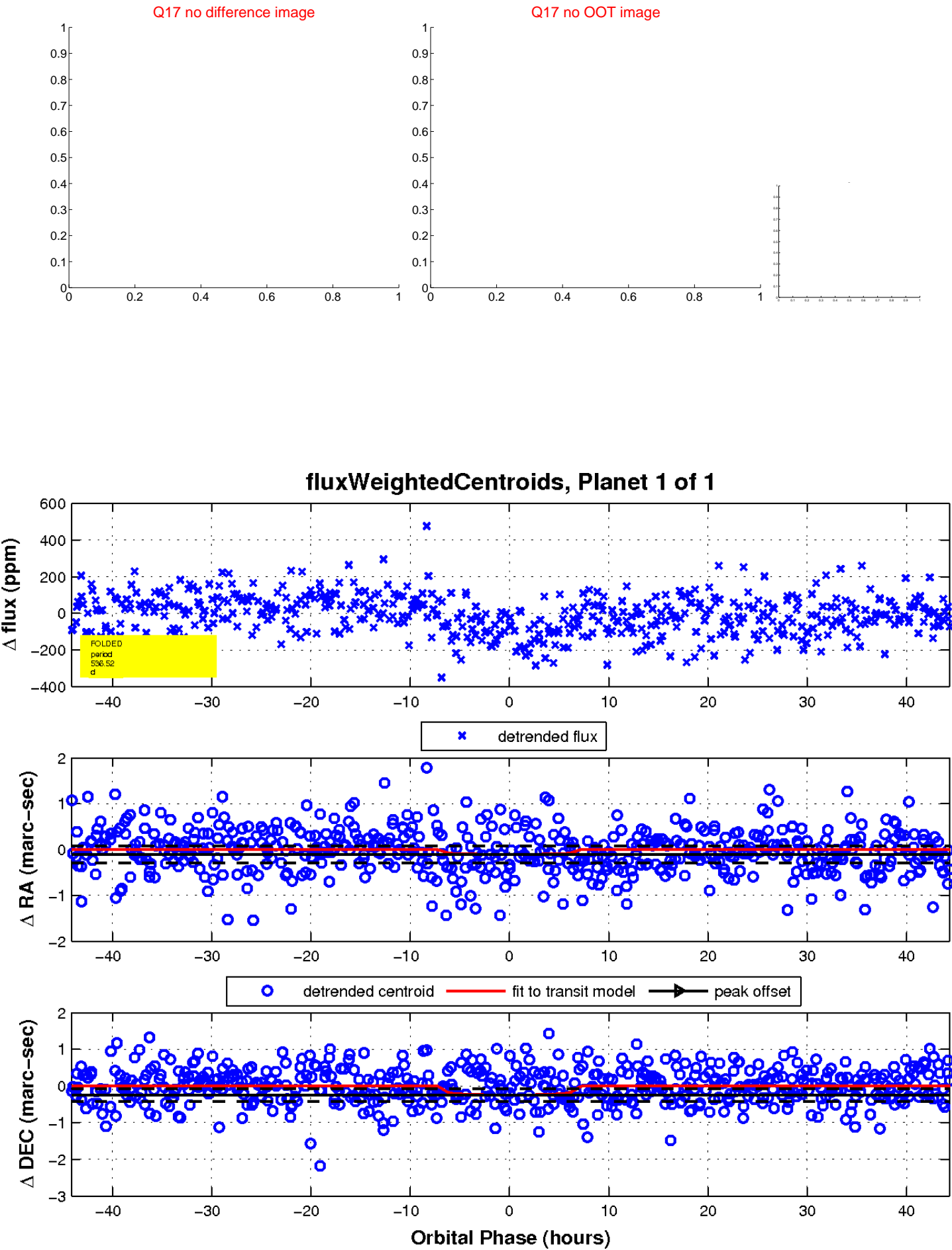
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

