

KIC 008105522

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})
008105522-01	OBS	No	468.739973	318.852640	159.7	12.580	9.2	9.3	0.91	5749	1.27	0.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008105522-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

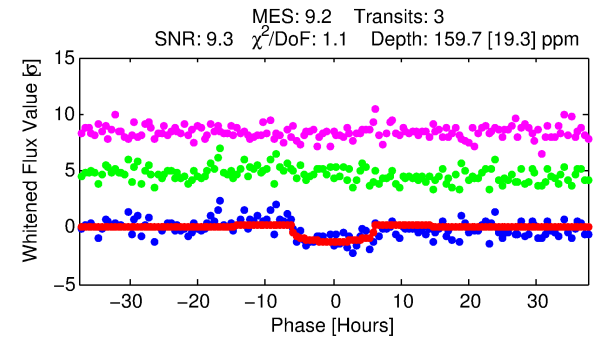
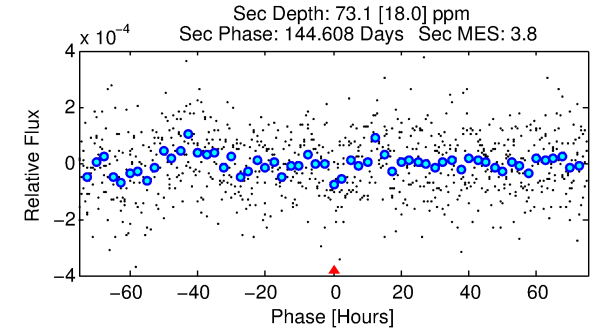
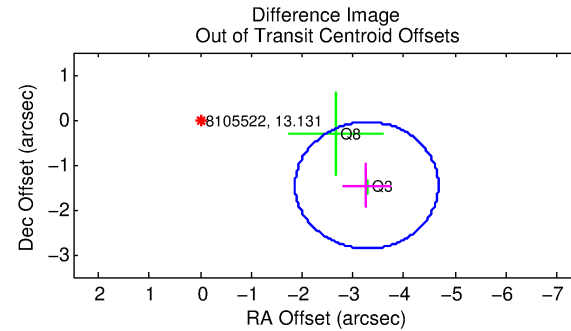
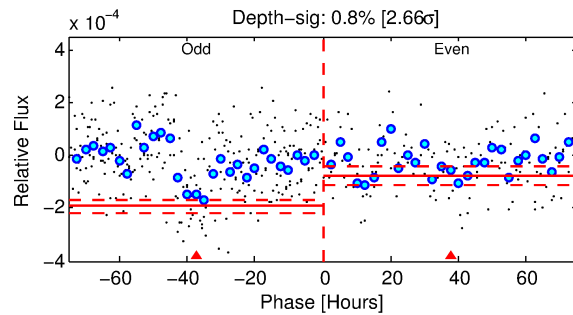
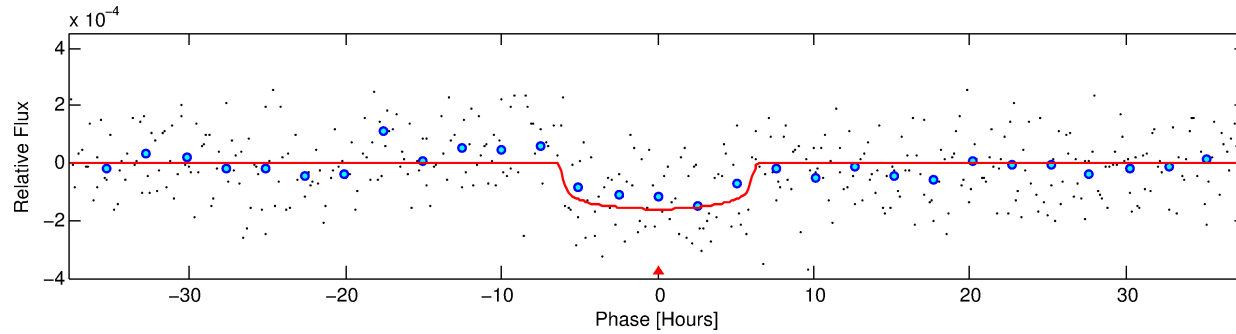
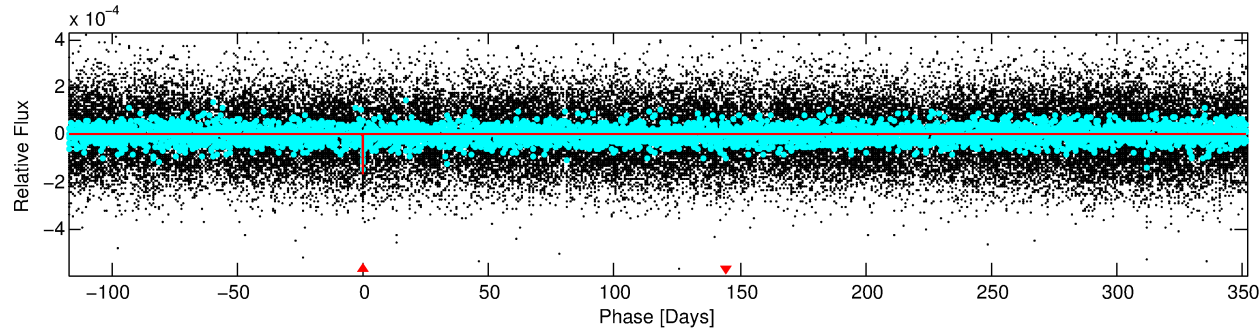
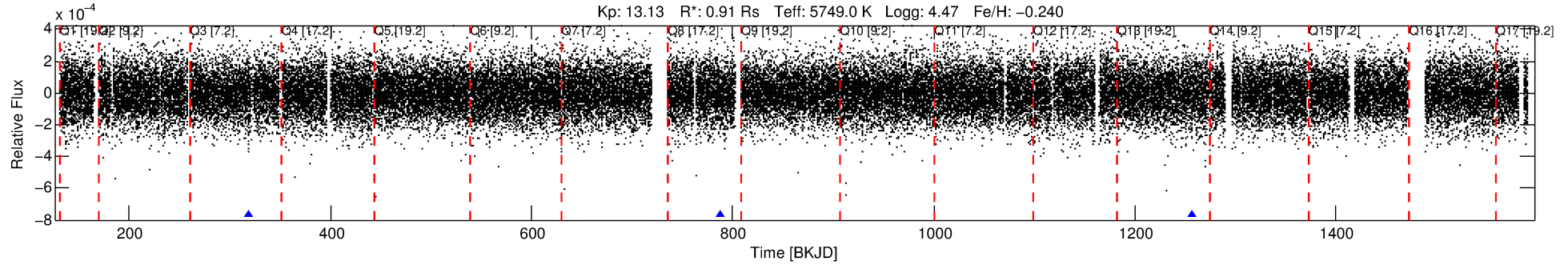
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008105522-01

No Significant Match Found

DV One-Page Summary

KIC: 8105522 Candidate: 1 of 1 Period: 468.740 d



DV Fit Results:

Period = 468.73997 [0.01348] d
Epoch = 318.8526 [0.0175] BKJD
Rp/R* = 0.0128 [0.0052]
a/R* = 176.44 [328.83]
b = 0.80 [0.84]
Seff = 0.63 [0.16]
Teq = 227 [14] K
Rp = 1.27 [0.57] Re
a = 1.1334 [0.1783] AU
Ag = 31861.97 [27857.01] [1.14 σ]
Teffp = 4689 [997] K [4.48 σ]

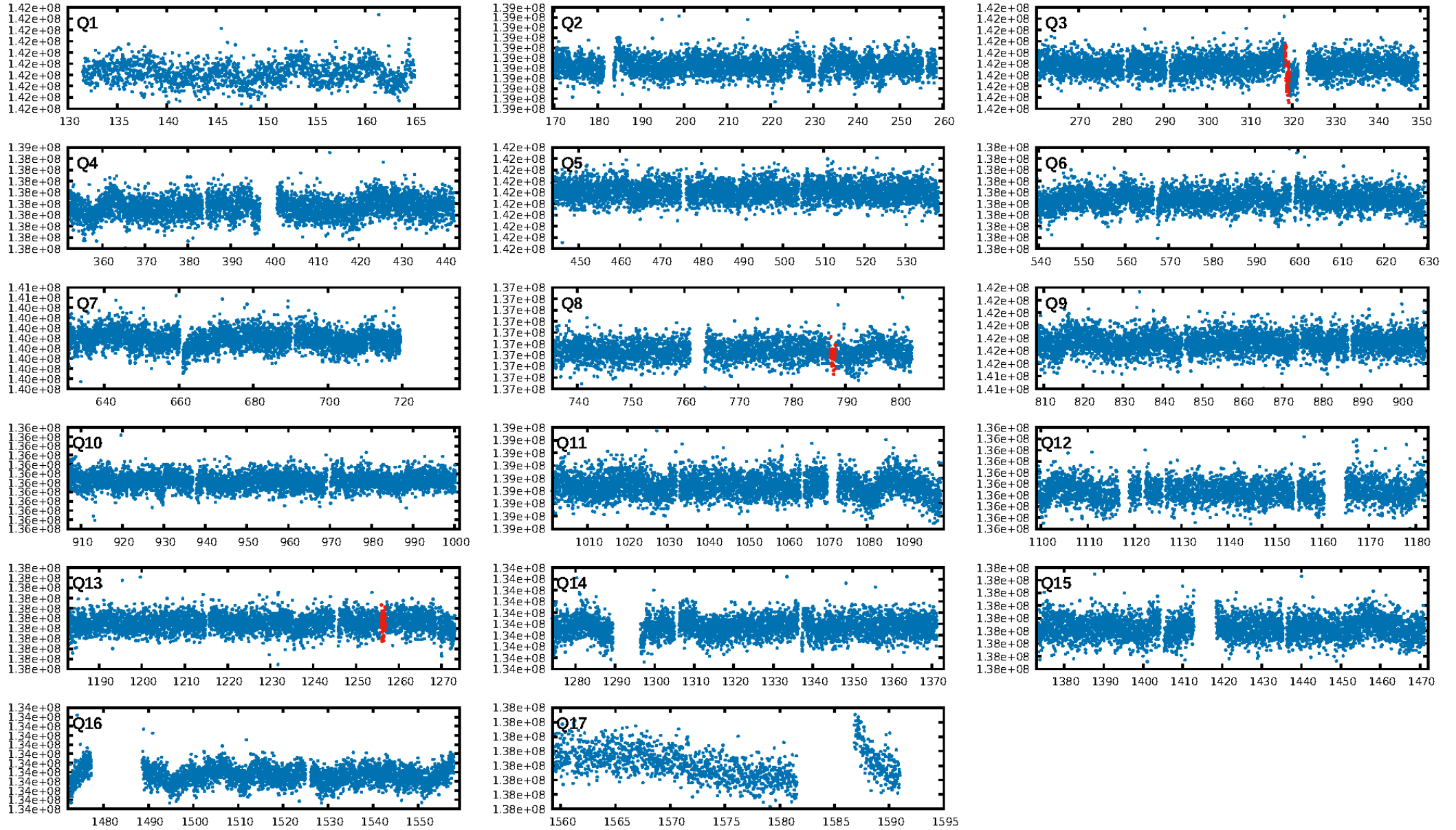
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 90.1%
Bootstrap-pfa: 8.50e-13
RollingBand-fgm: 1.00 [3/3]
GhostDiagnostic-chr: 2.021
Centroid-sig: 0.1%
Centroid-so: 2.857 arcsec [1.92 σ]
OotOffset-rm: 3.581 arcsec [7.63 σ]
KicOffset-rm: 3.523 arcsec [7.51 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

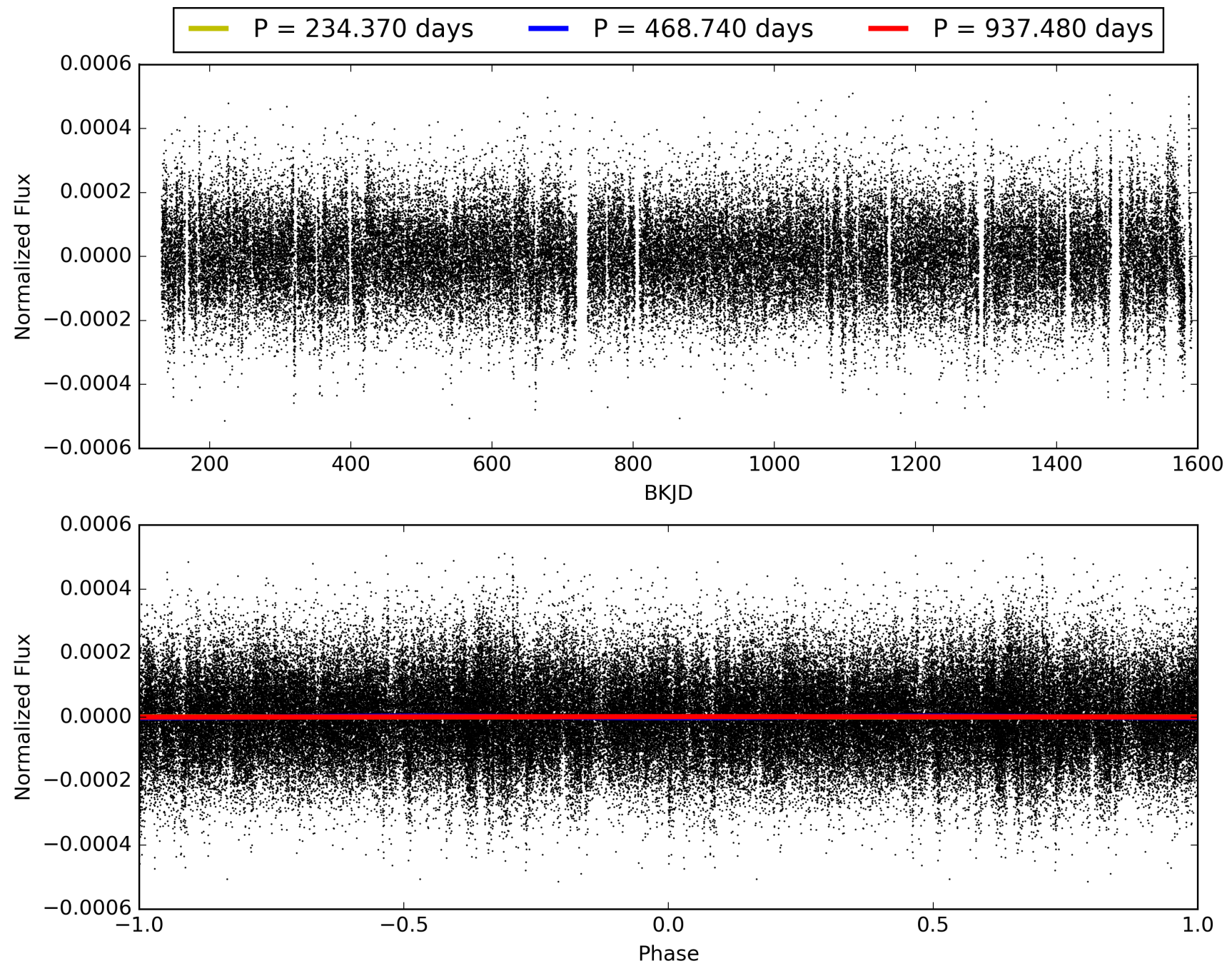
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:00:17 Z

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

TCE 008105522-01, PDC Light Curves

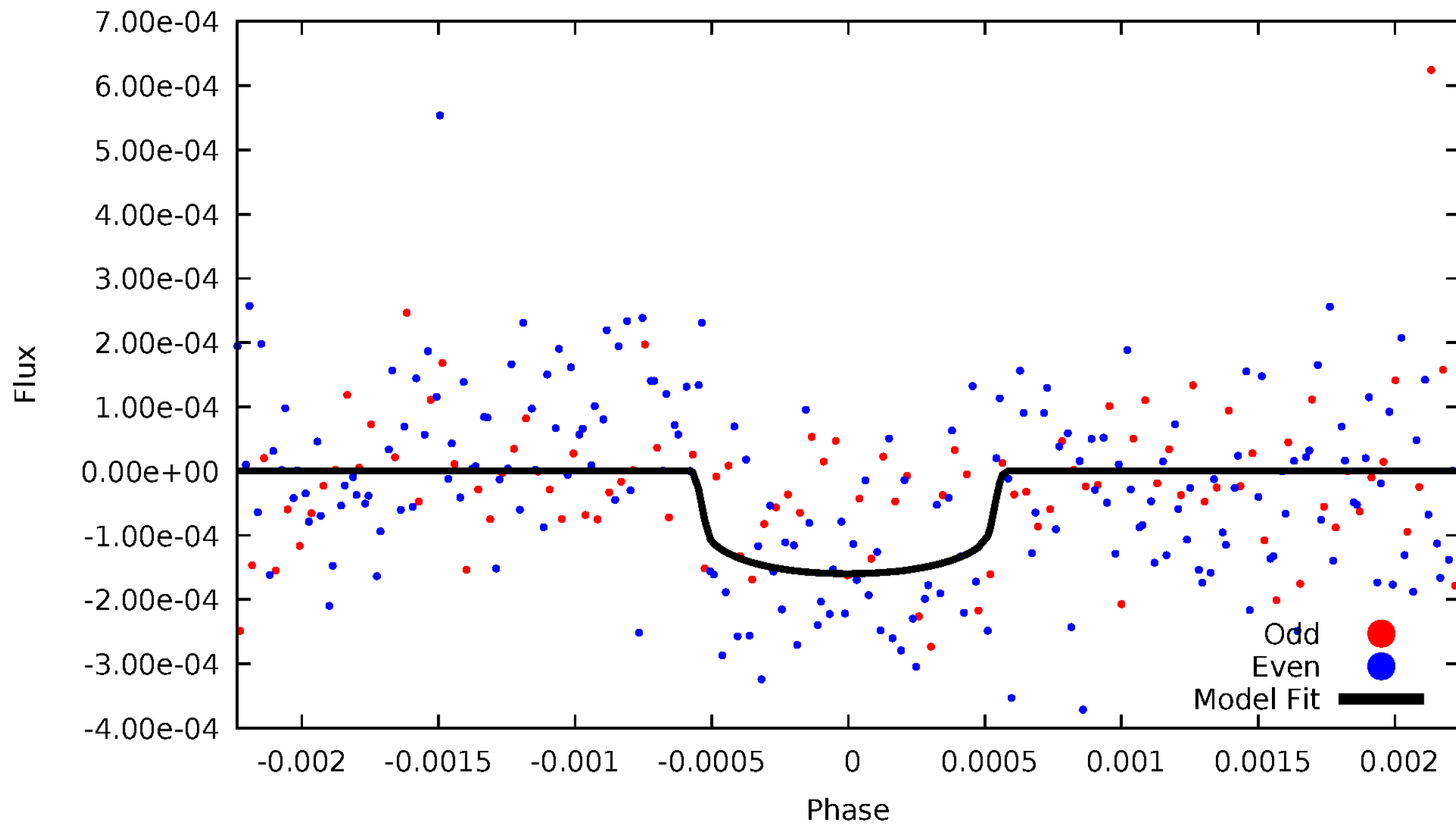


TCE 008105522-01



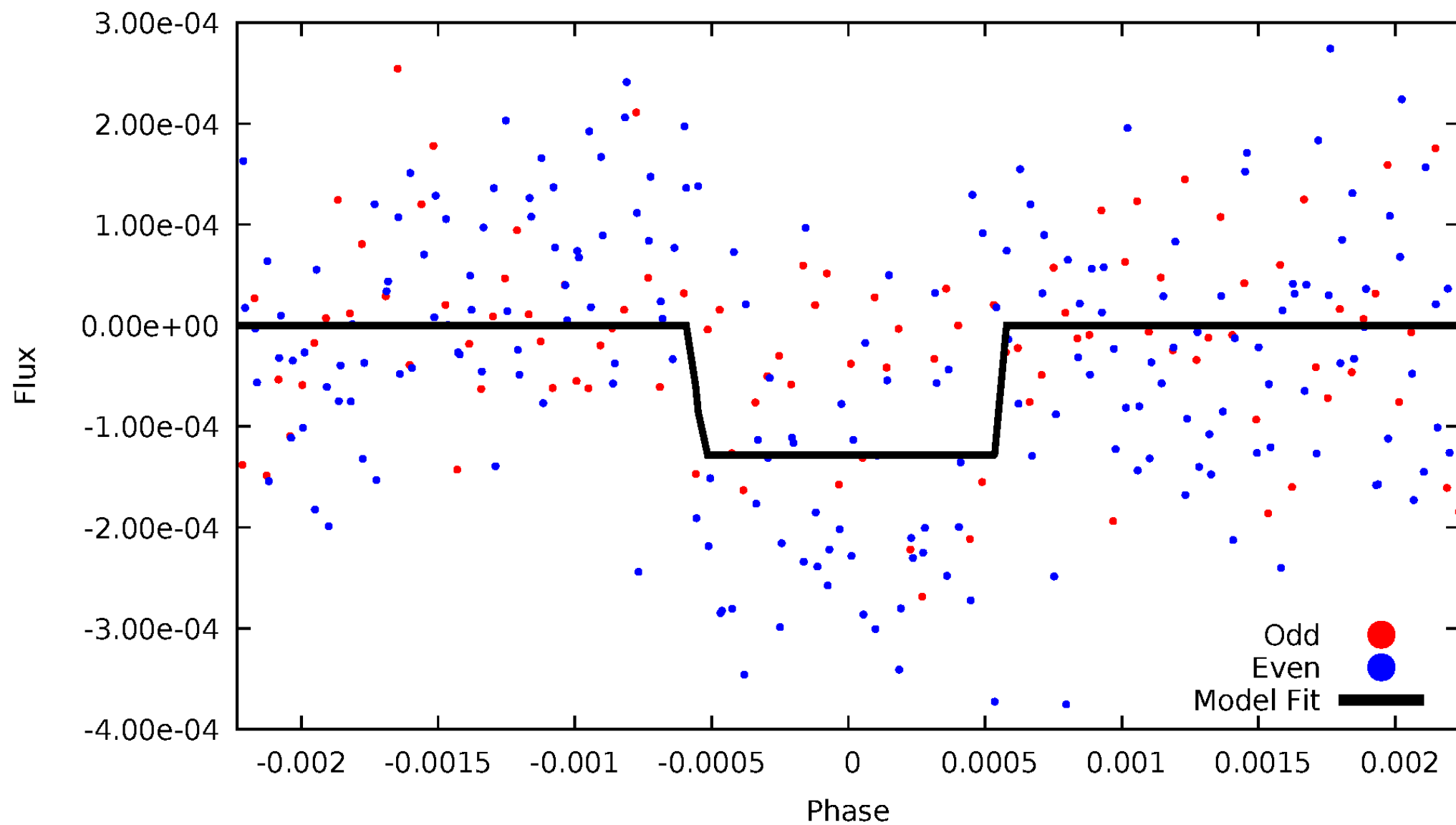
DV Odd/Even

TCE 008105522-01

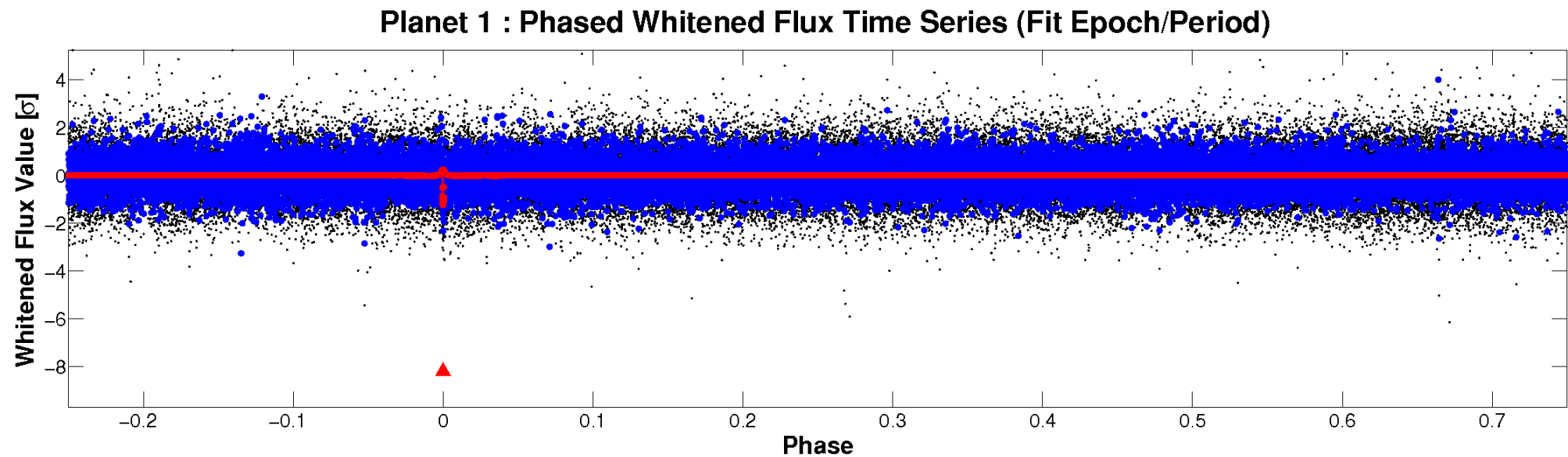
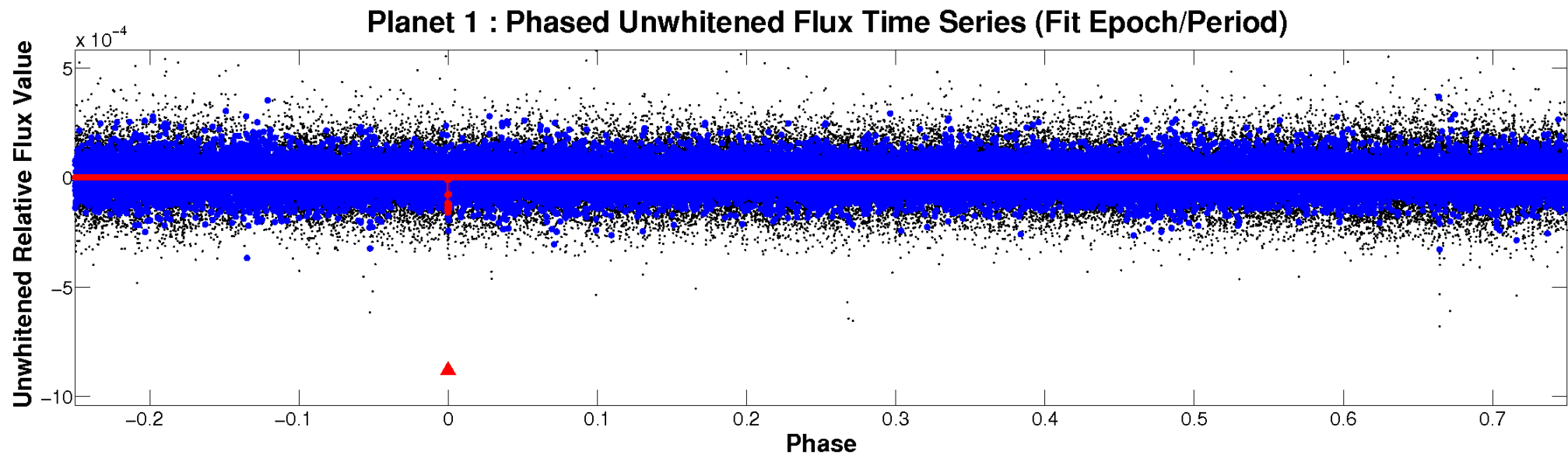


ALT Odd/Even

TCE 008105522-01

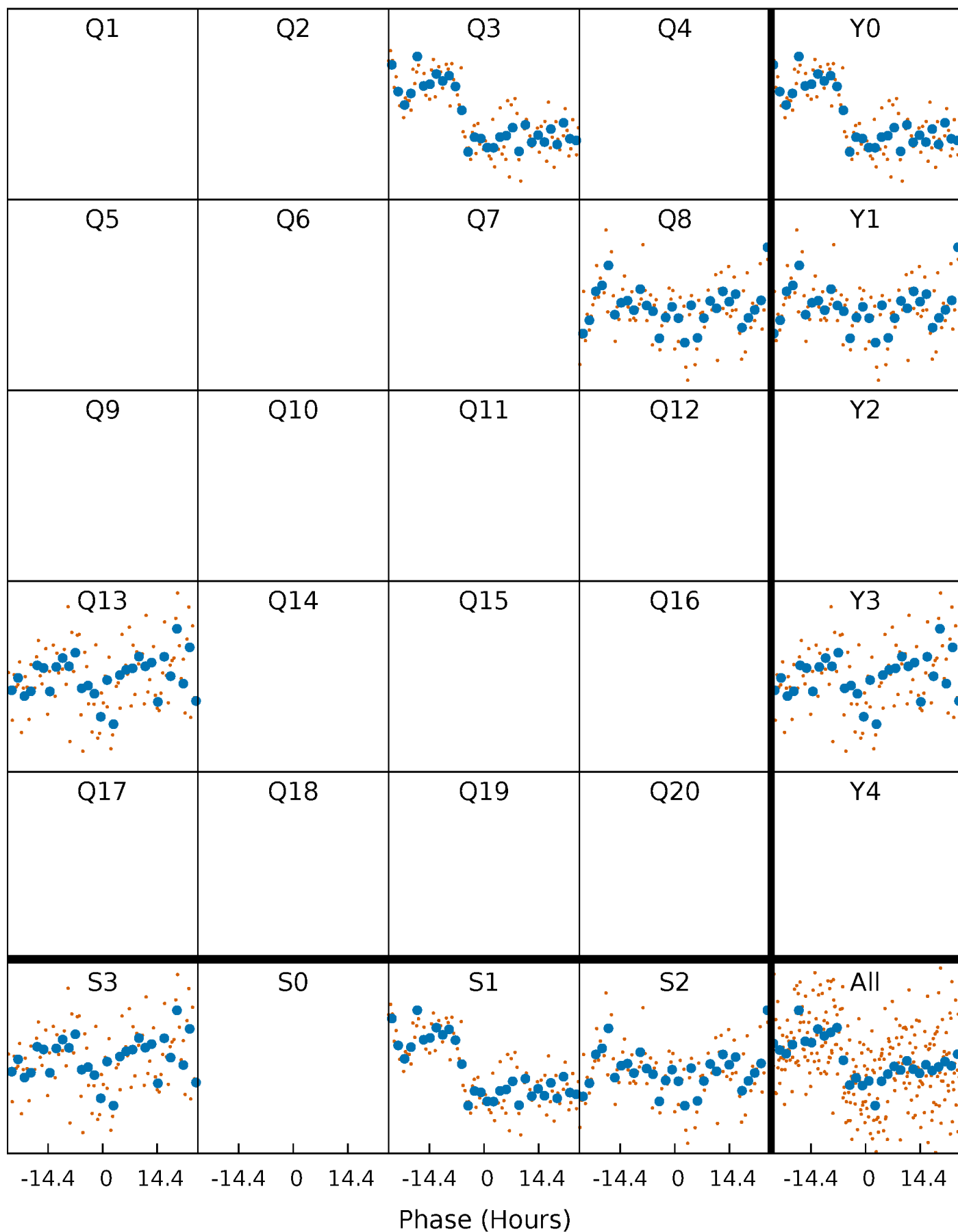


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008105522-01 P=468.739973 Days $T_0=318.852640$ (BKJD)



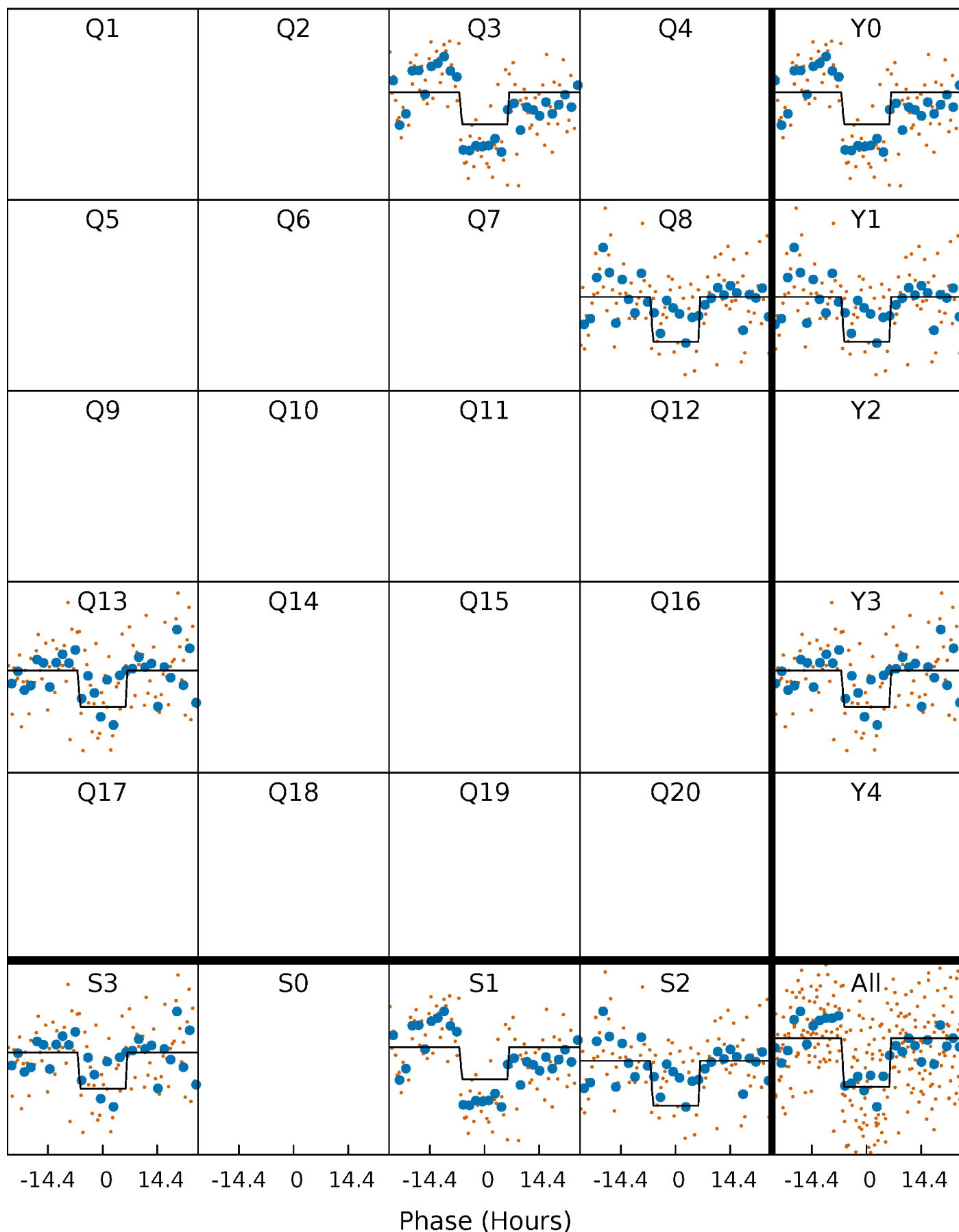
DV Quarter-Phased Transit Curves

TCE 008105522-01 P=468.739973 Days $T_0=318.852640$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

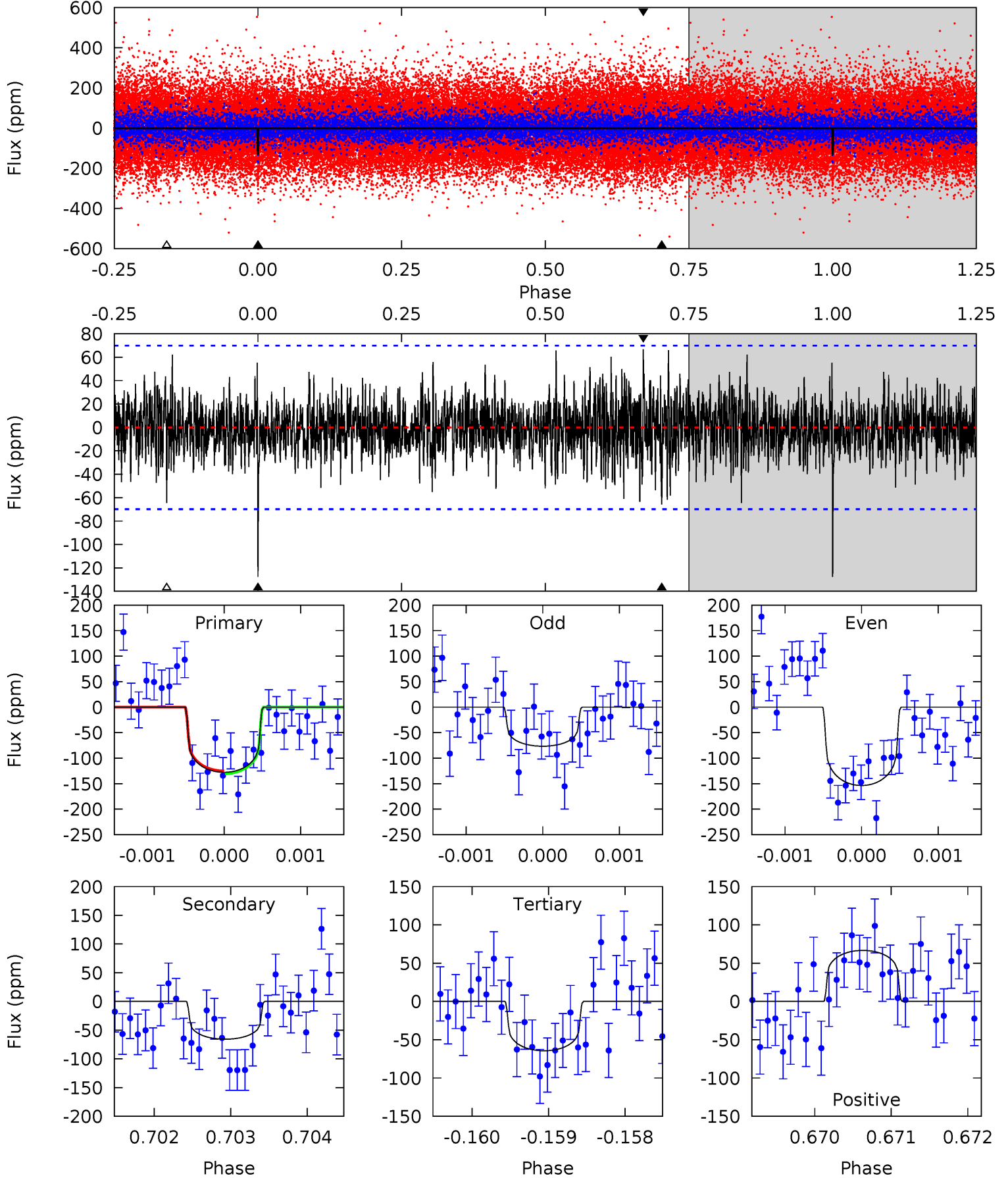
TCE 008105522-01 P=468.725433 Days $T_0=318.882034$ (BKJD)



DV Model-Shift Uniqueness Test

008105522-01, P = 468.739973 Days, E = 318.852640 Days

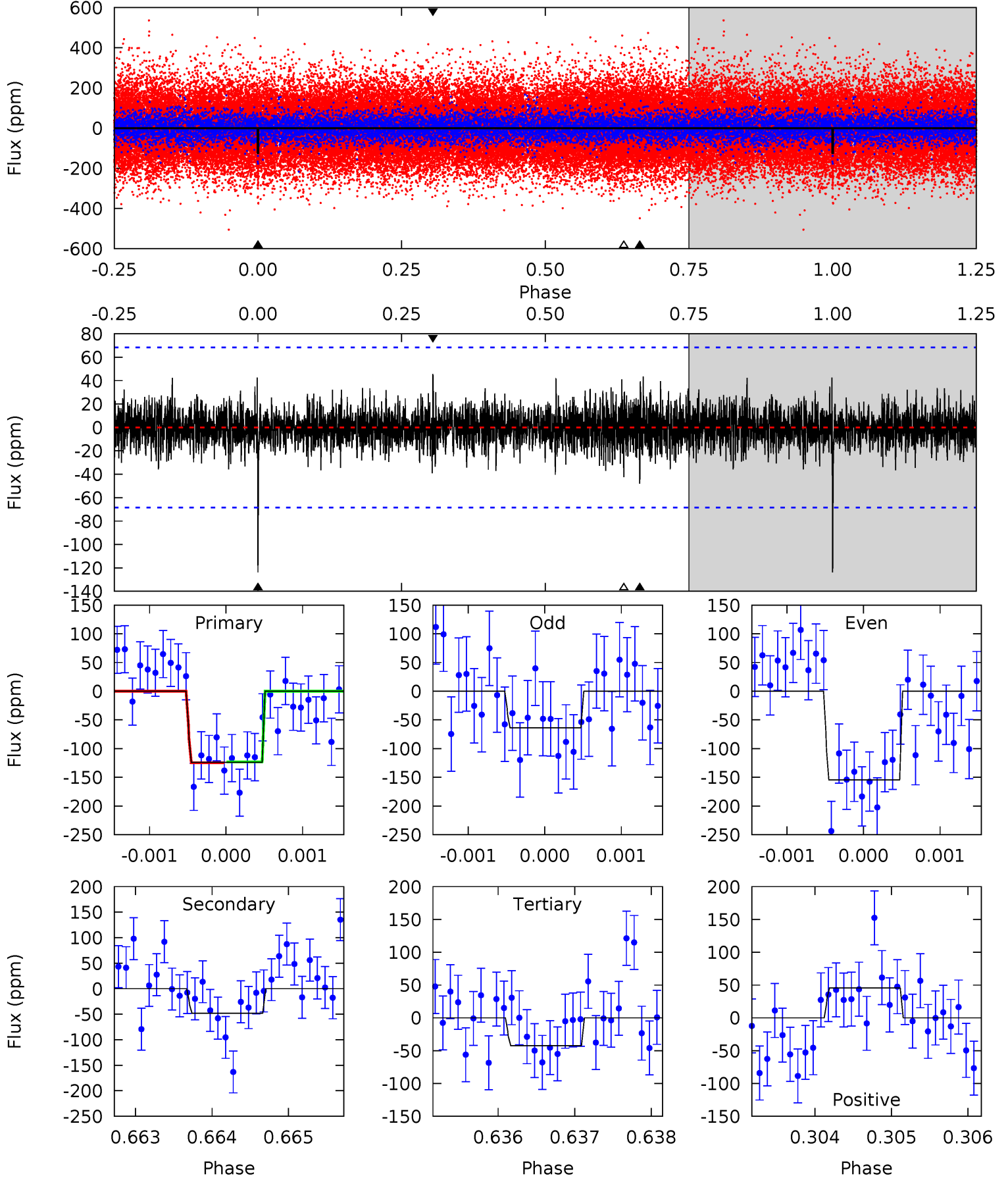
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	5.11	5.00	5.18	5.43	3.26	1.40	4.92	4.74	0.10	-0.07	2.85	1.19	0.34	0.20



Alt Model-Shift Uniqueness Test

008105522-01, P = 468.725433 Days, E = 318.882034 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	3.81	3.36	3.62	5.43	3.26	0.92	6.47	6.22	0.45	0.19	3.43	1.36	0.27	0.06



Stellar Parameters For KIC 008105522

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5749^{+138}_{-155}	$4.468^{+0.084}_{-0.126}$	$-0.240^{+0.300}_{-0.300}$	$0.908^{+0.169}_{-0.113}$	$0.883^{+0.110}_{-0.080}$	$1.662^{+0.617}_{-0.629}$
	+2%/-3%	+2%/-3%	+125%/-125%	+19%/-12%	+12%/-9%	+37%/-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 008105522-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-66 ± 13	$1.28^{+0.59}_{-0.49}$	319^{+16}_{-14}	4698^{+1155}_{-624}	27300^{+47907}_{-14197}
Alt.	-48 ± 13	$1.18^{+0.55}_{-0.54}$	319^{+16}_{-12}	4611^{+1362}_{-682}	24746^{+55302}_{-14252}

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

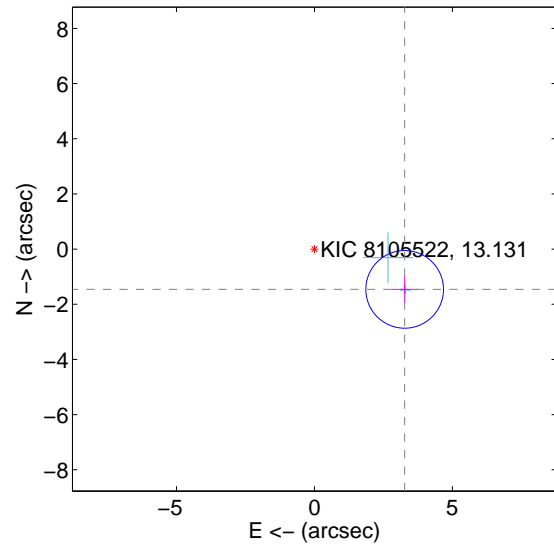
Supplemental centroid analysis for 008105522-01. Kepler magnitude: 13.13. Transit SNR 9.32

There are 2 quarters with good PRF difference image offsets

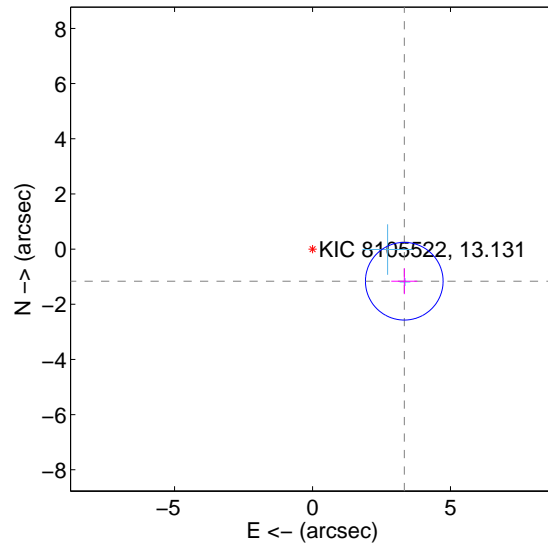
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.581 ± 0.469	7.63	-3.270 ± 0.469	-1.460 ± 0.468
PRF-fit source offset from KIC position	3.523 ± 0.469	7.51	-3.326 ± 0.469	-1.164 ± 0.468
photometric centroid source offset	2.86 ± 1.48	1.92	-1.07 ± 1.44	-2.65 ± 1.49

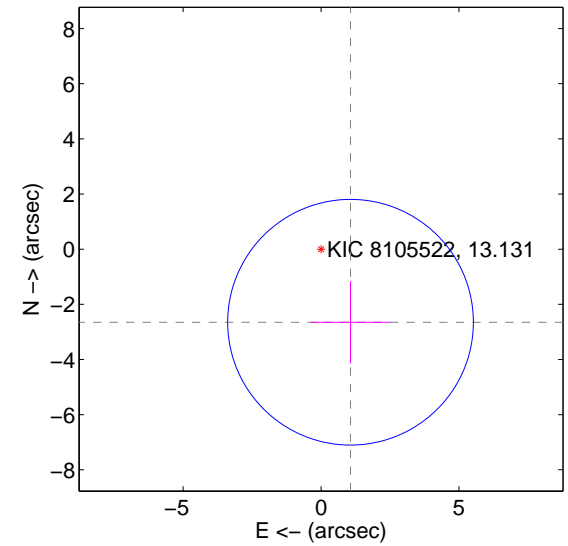
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

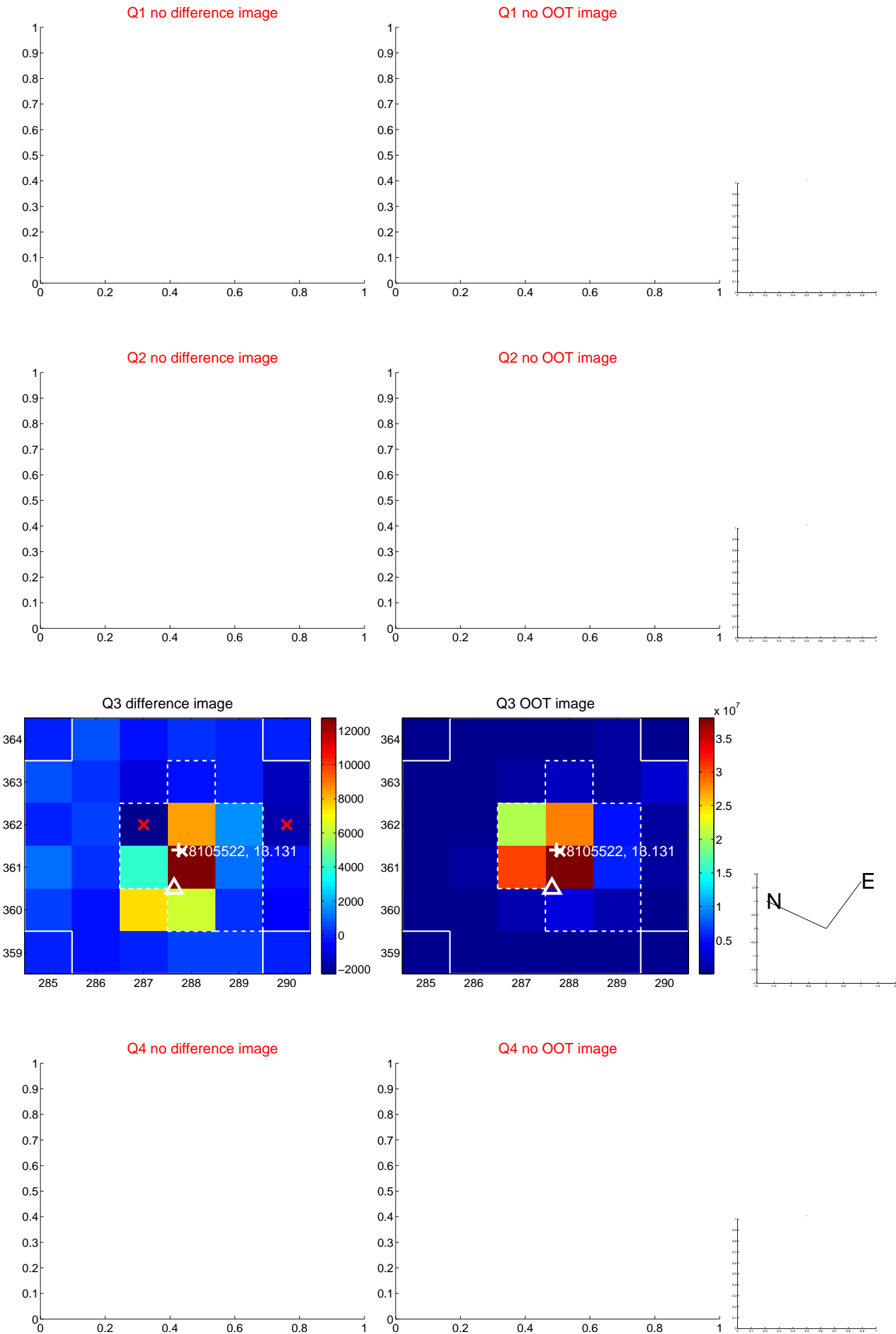


offset from photometric centroids

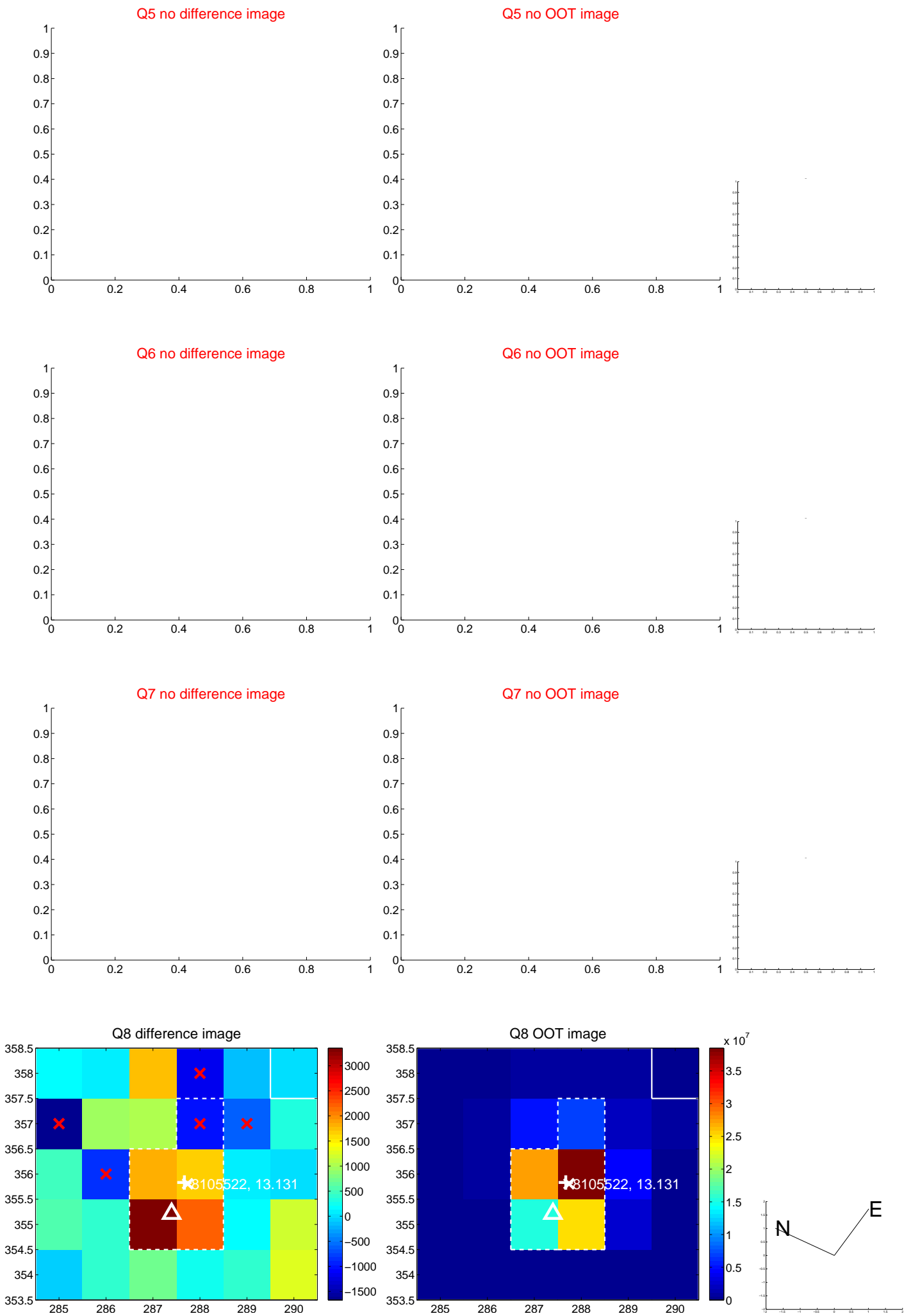


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



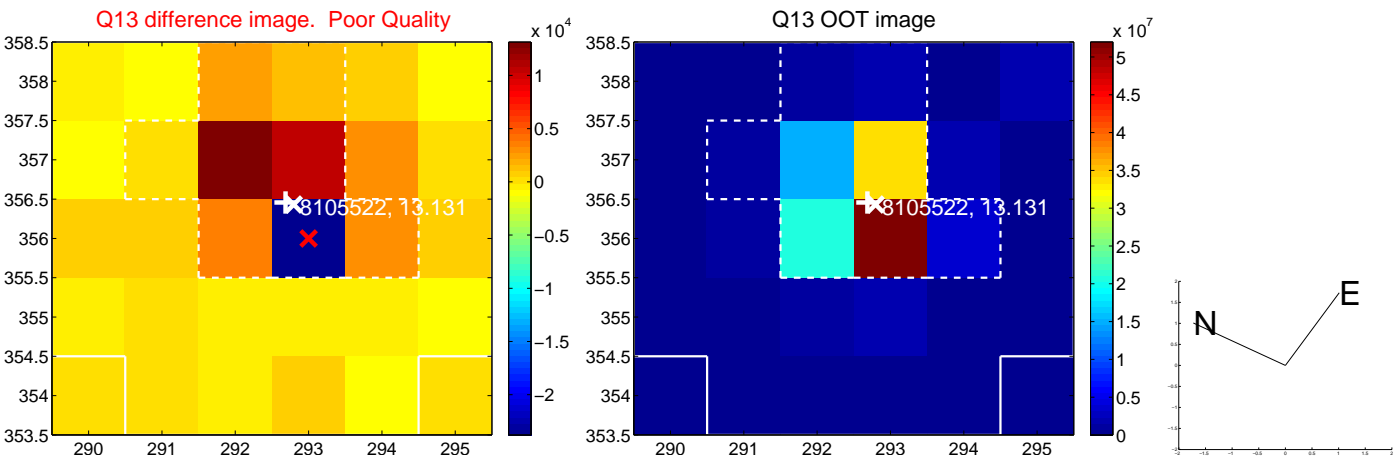
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



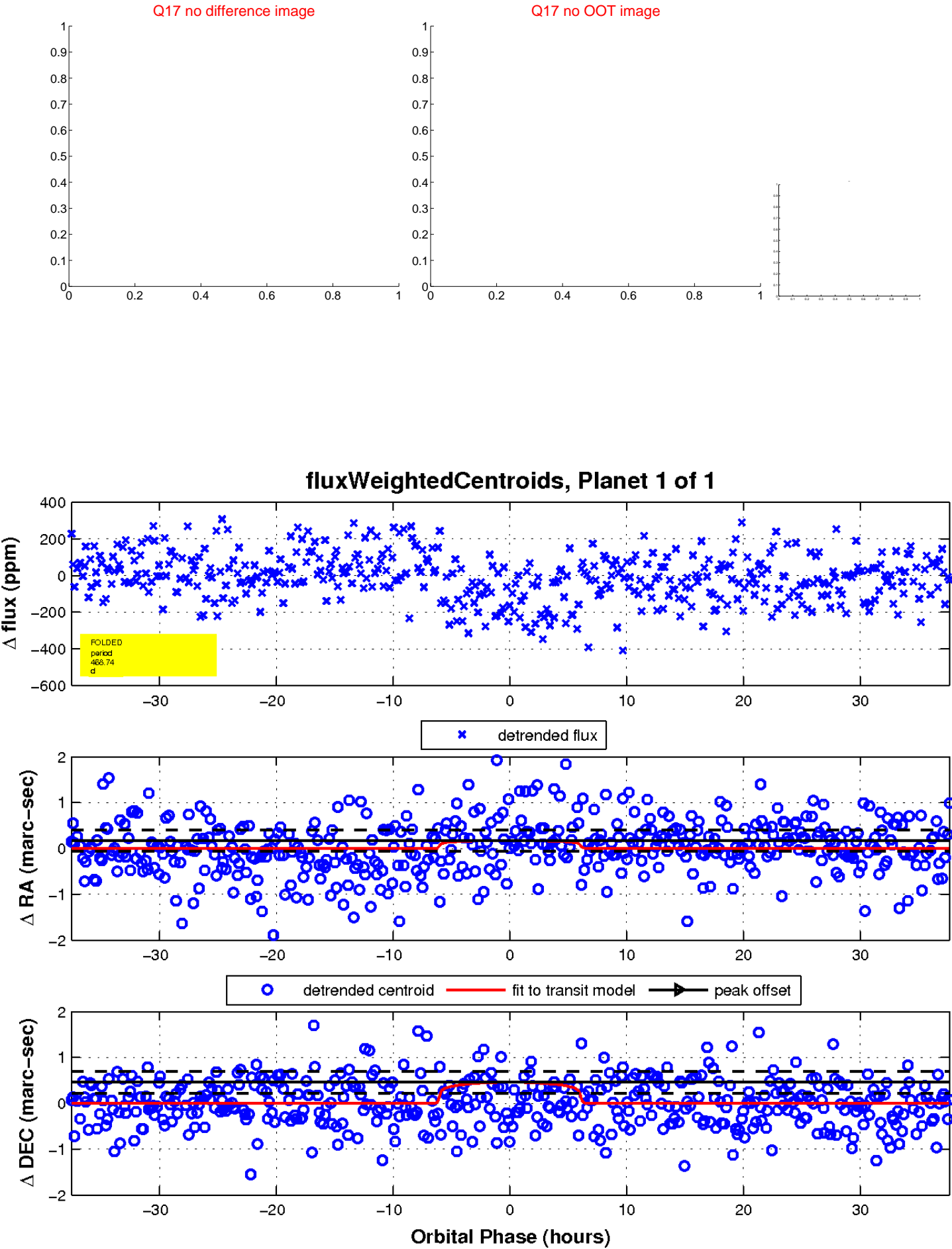
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

