

KIC 010905641

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})
010905641-01	OBS	5840.01	460.824742	533.871177	184.5	12.864	7.6	5.6	2.72	6126	4.13	5.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010905641-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

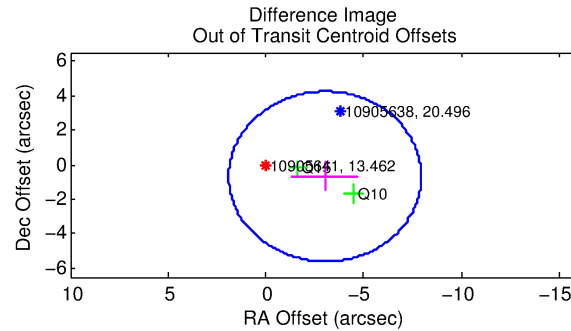
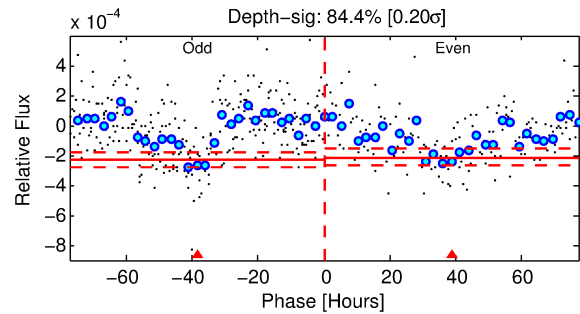
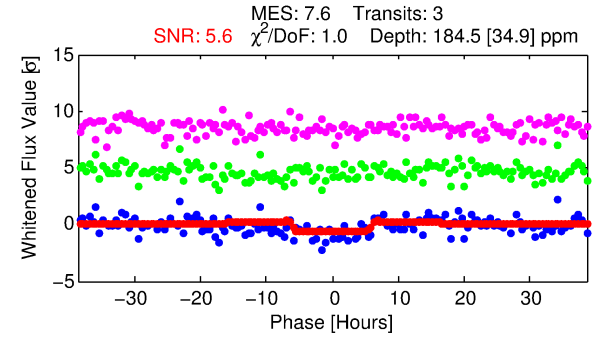
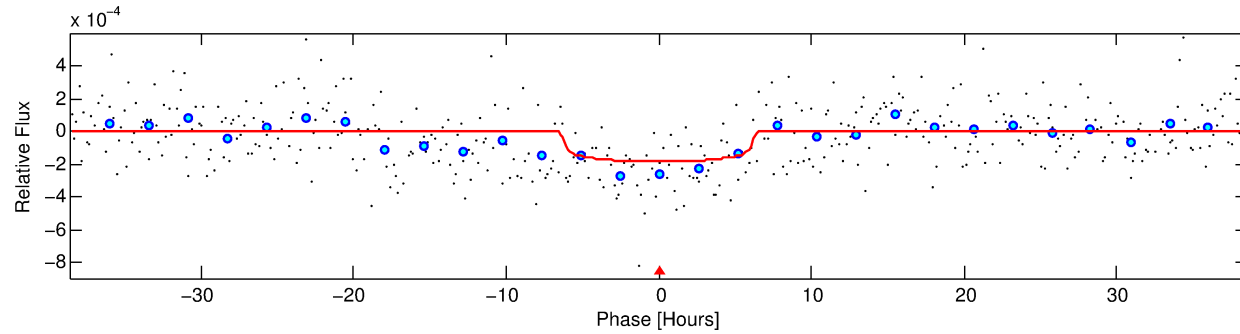
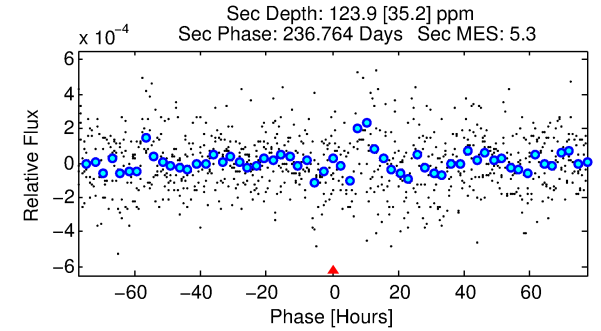
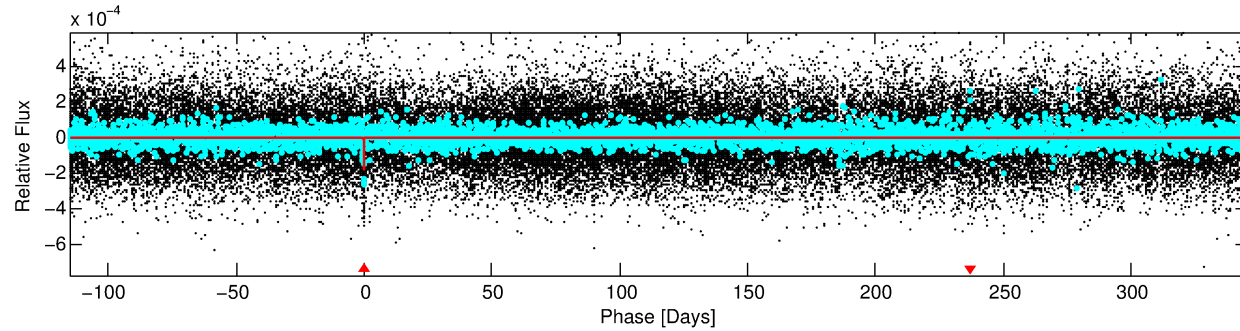
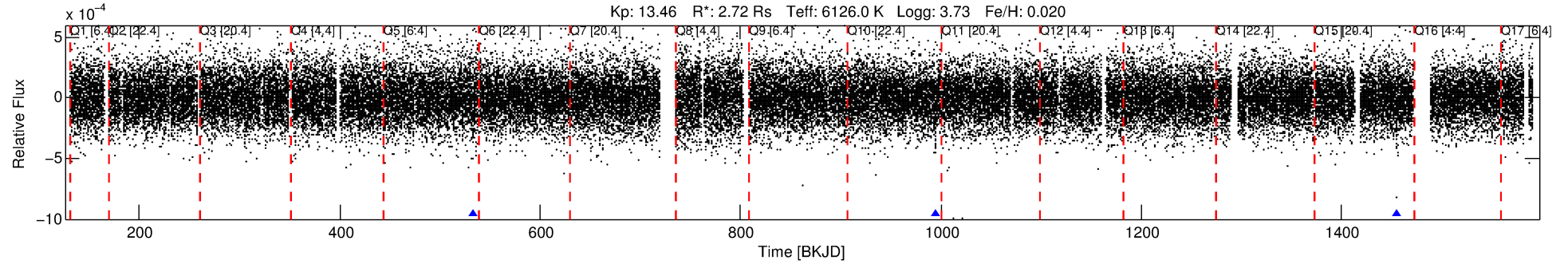
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010905641-01

No Significant Match Found

DV One-Page Summary

KIC: 10905641 Candidate: 1 of 1 Period: 460.825 d
KOI: K05840.01 Corr: 0.869



DV Fit Results:

Period = 460.82474 [0.01851] d
Epoch = 533.8712 [0.0251] BKJD
Rp/R* = 0.0139 [0.0046]
a/R* = 161.07 [255.94]
b = 0.83 [0.62]
Seff = 5.33 [2.79]
Teq = 387 [51] K
Rp = 4.13 [2.02] Re
a = 1.3216 [0.4335] AU
Ag = 6971.75 [6153.58] [1.13σ]
Teffp = 5474 [1000] K [5.08σ]

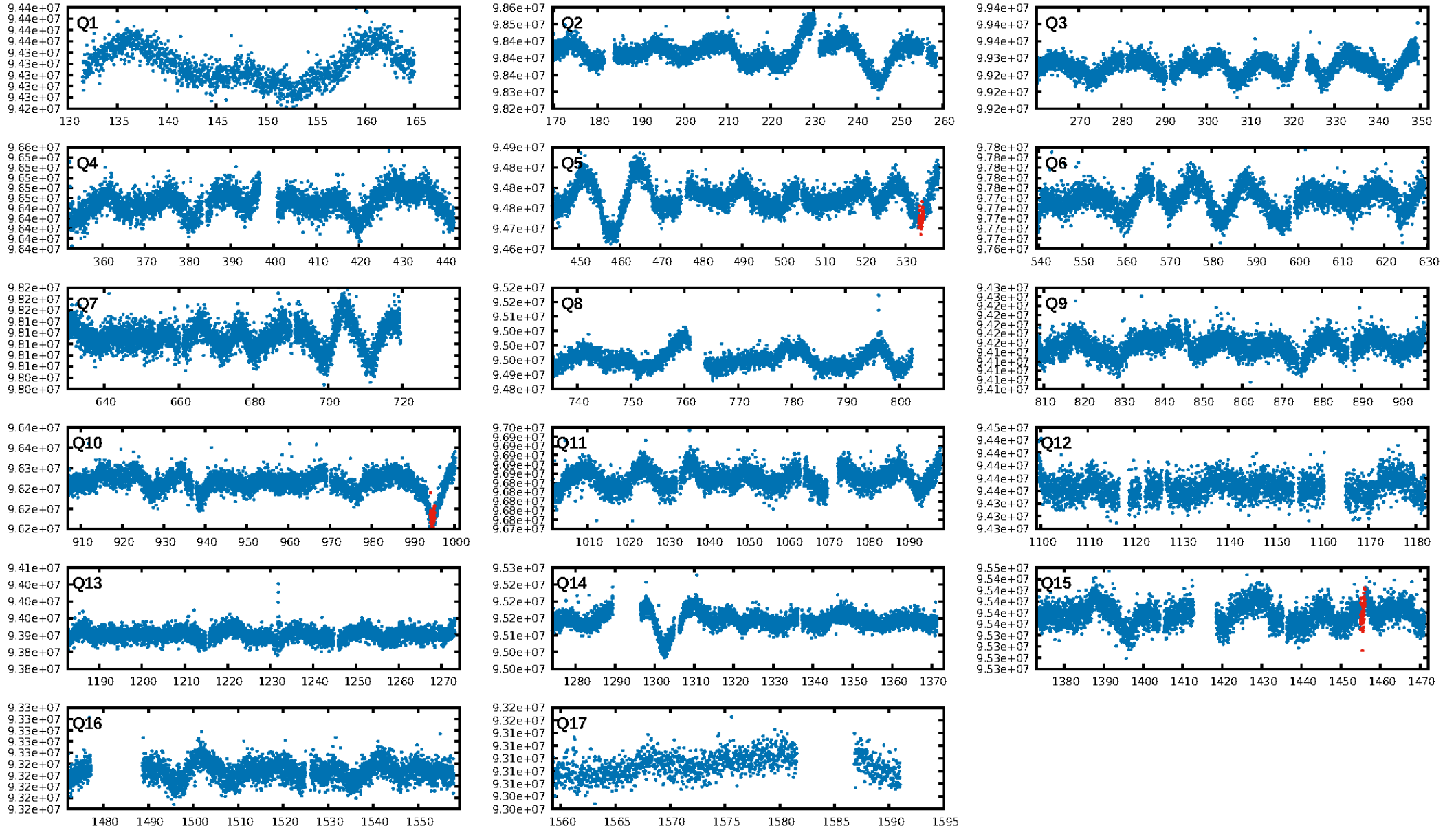
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.9%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.07e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -80.14
Centroid-sig: 10.9%
Centroid-so: 2.305 arcsec [1.24σ]
OotOffset-rm: 3.099 arcsec [1.89σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 3.079 arcsec [1.82σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

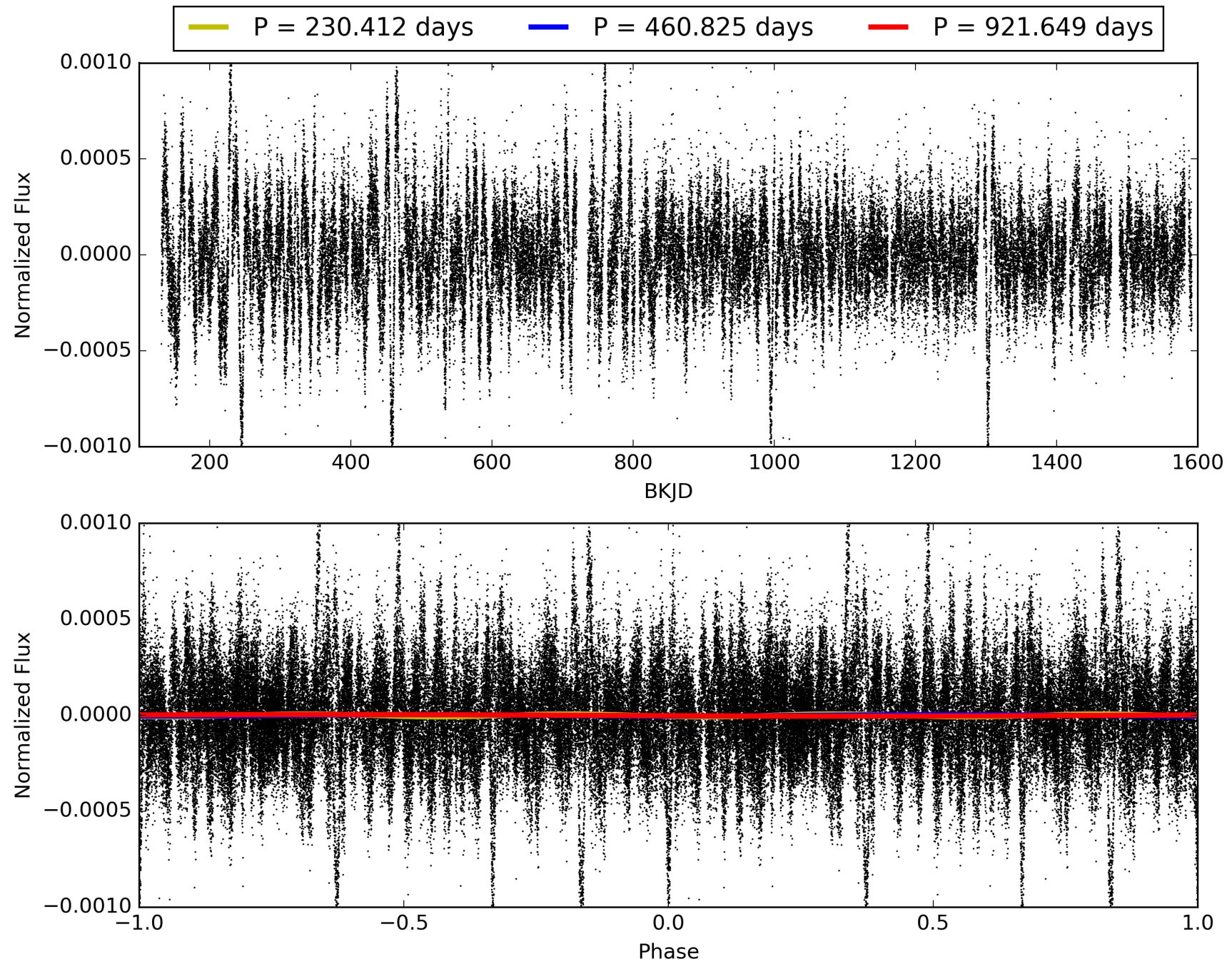
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:35:06 Z

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

TCE 010905641-01, PDC Light Curves

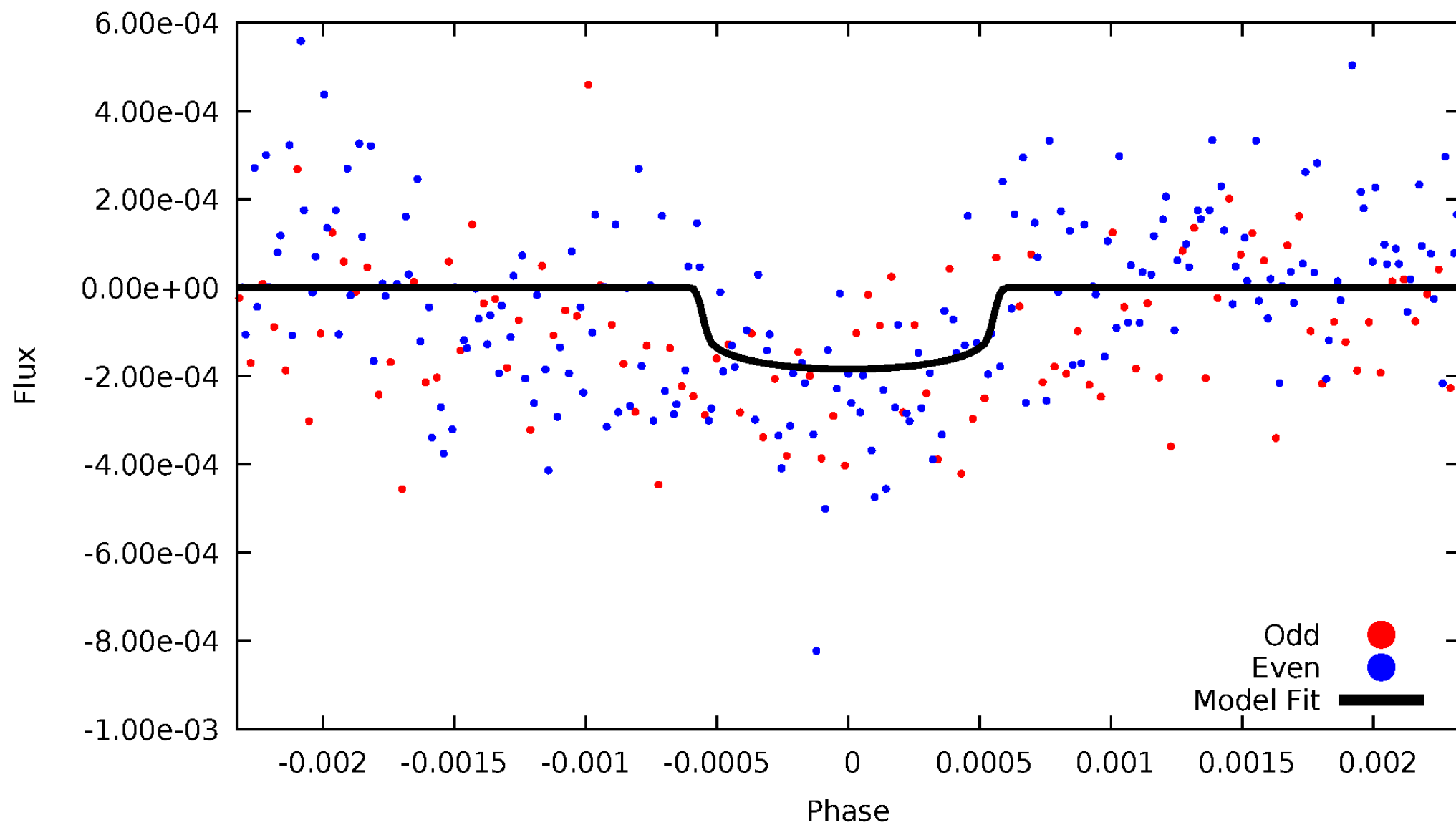


TCE 010905641-01



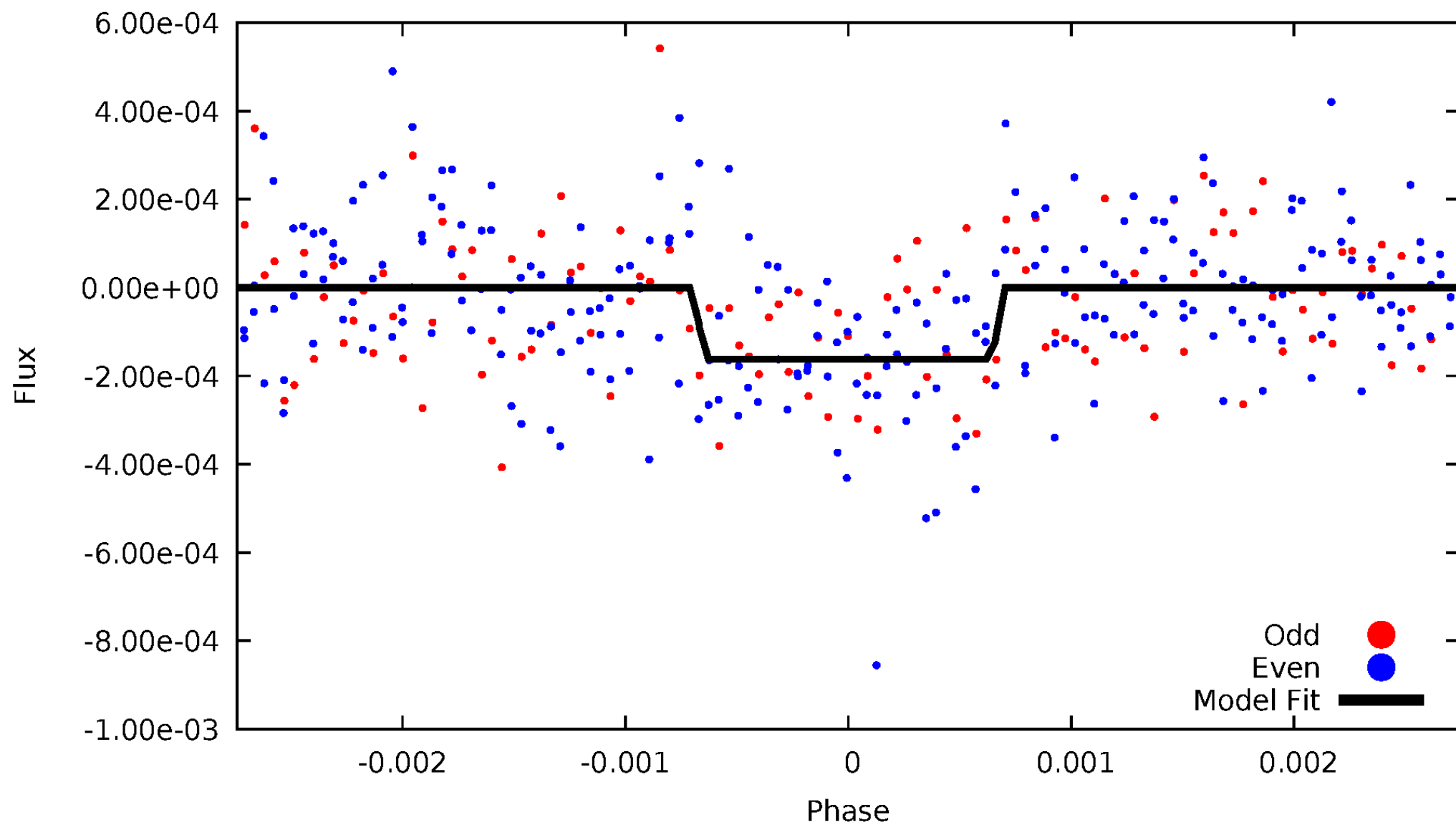
DV Odd/Even

TCE 010905641-01

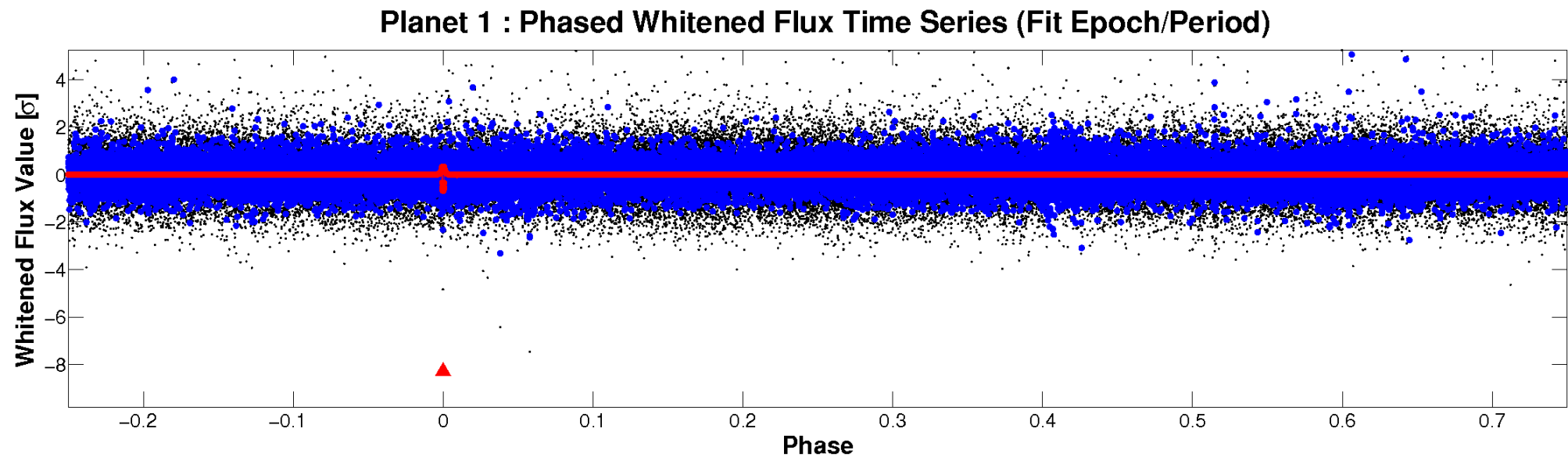
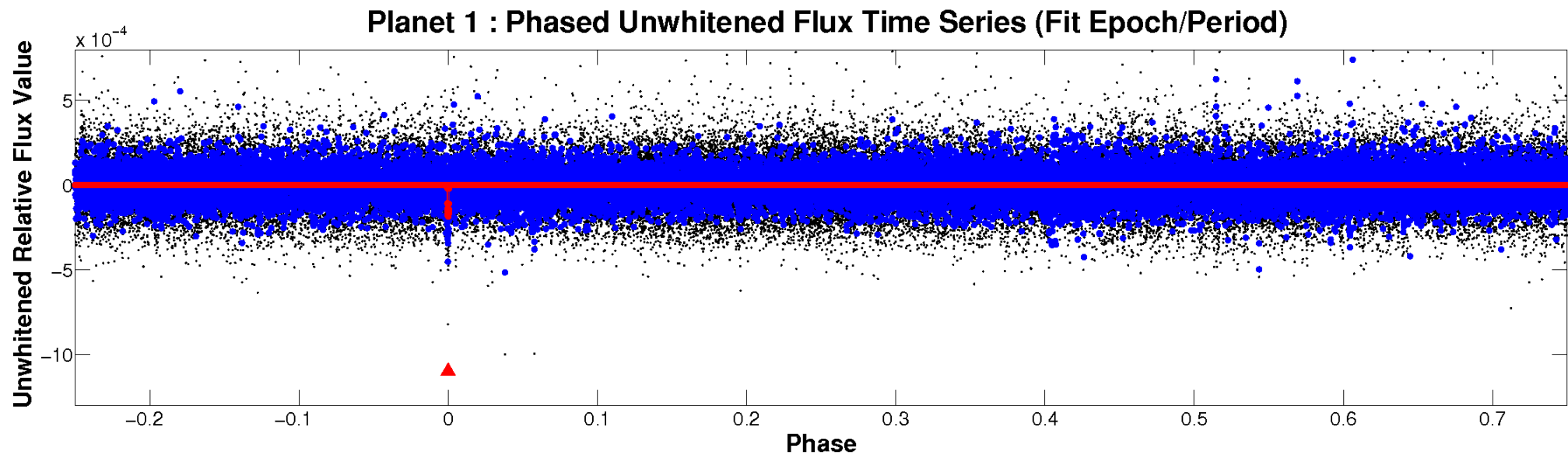


ALT Odd/Even

TCE 010905641-01

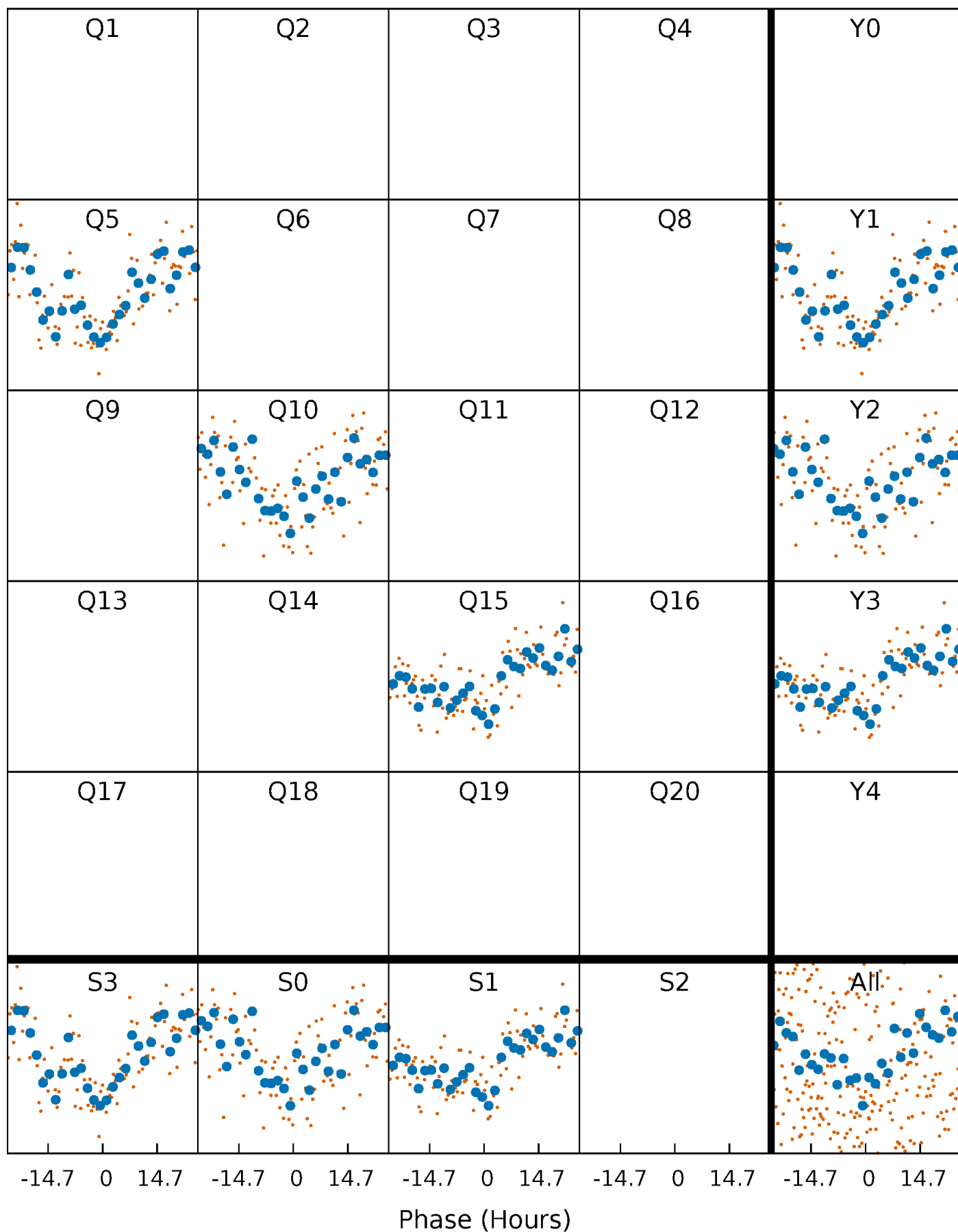


Non-Whitened Vs. Whitened Light Curve



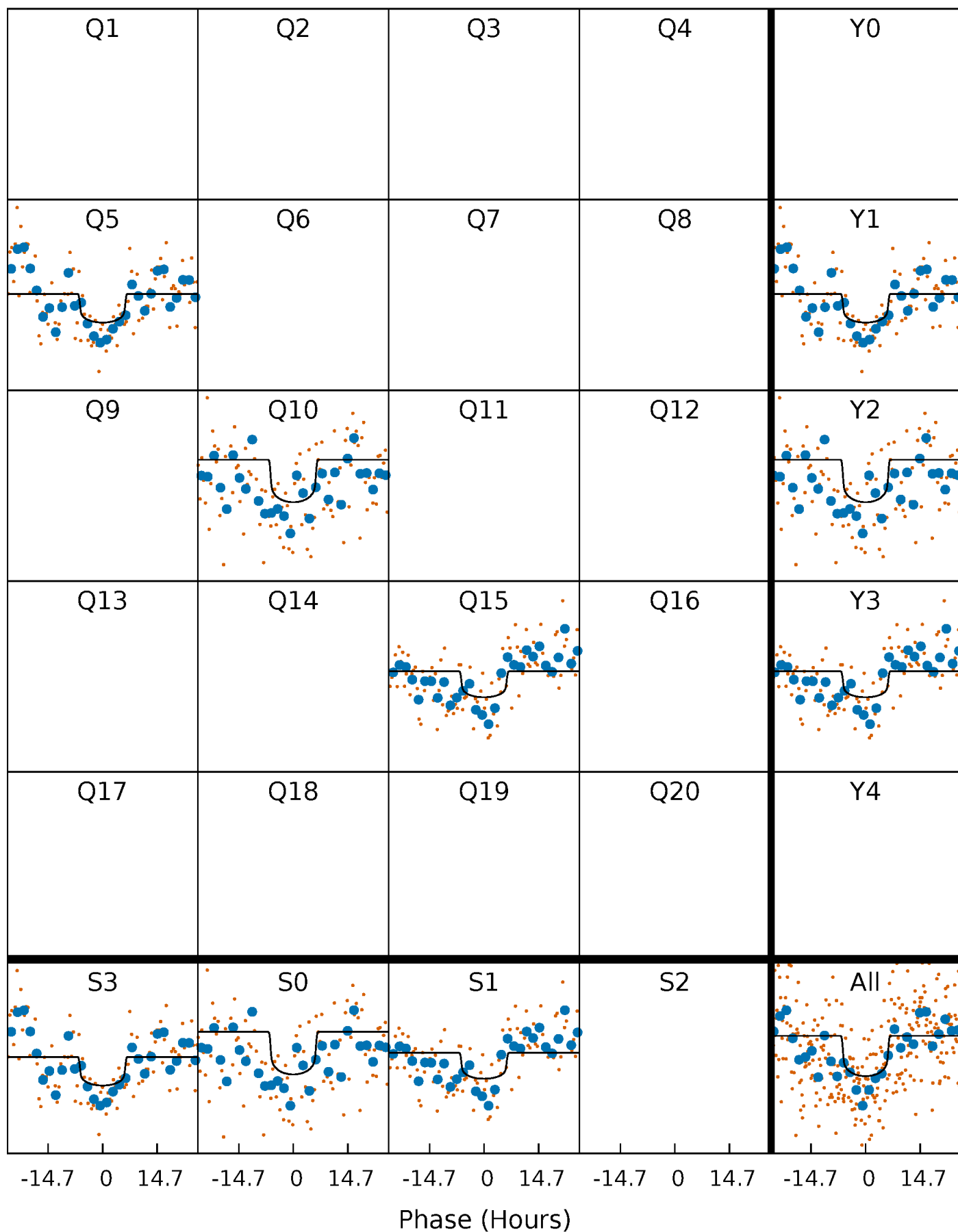
PDC Quarter-Phased Transit Curves

TCE 010905641-01 P=460.824742 Days $T_0=533.871177$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010905641-01 P=460.824742 Days $T_0=533.871177$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

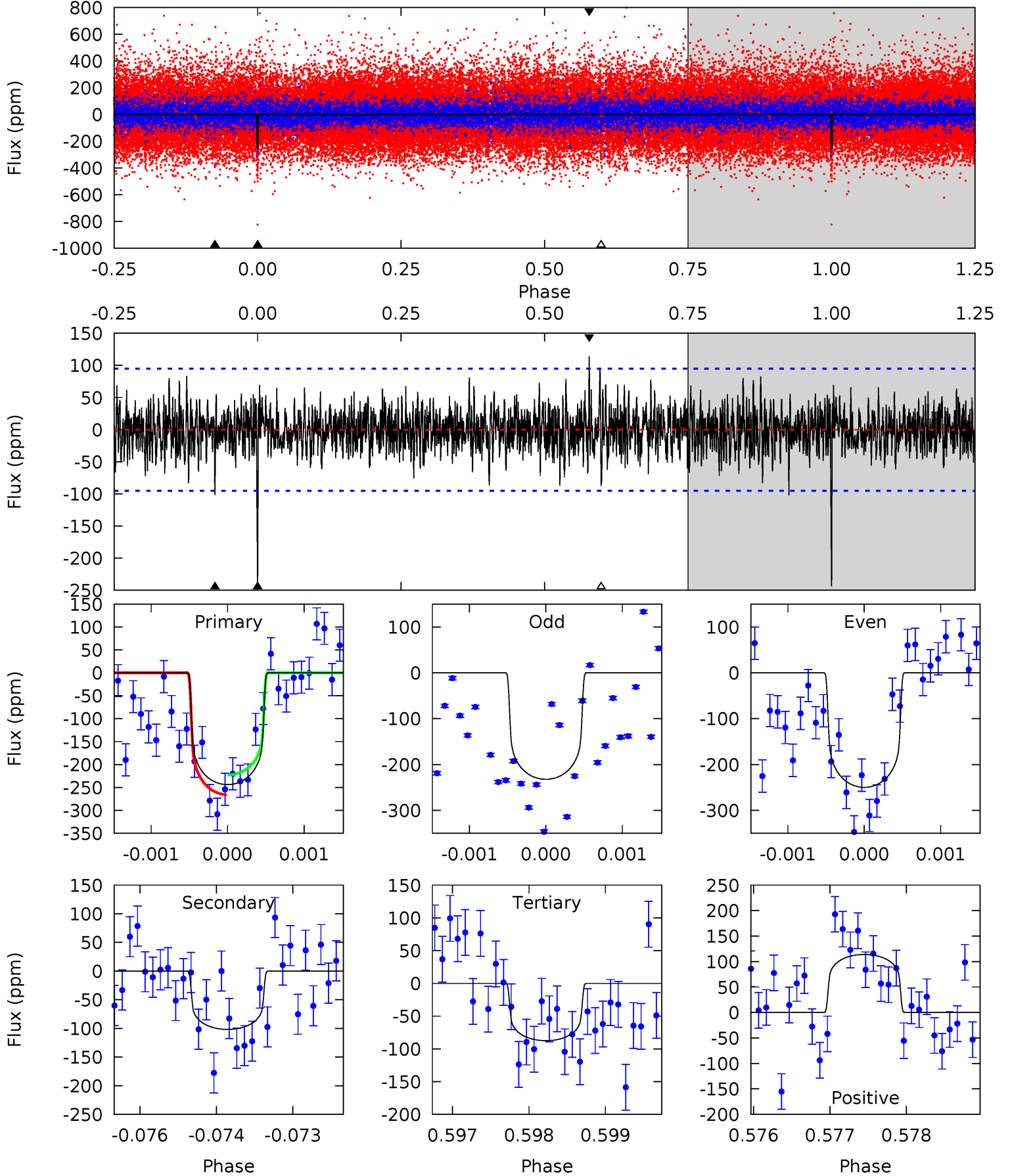
TCE 010905641-01 P=460.776778 Days $T_0=533.852581$ (BKJD)



DV Model-Shift Uniqueness Test

010905641-01, $P = 460.824742$ Days, $E = 73.046435$ Days

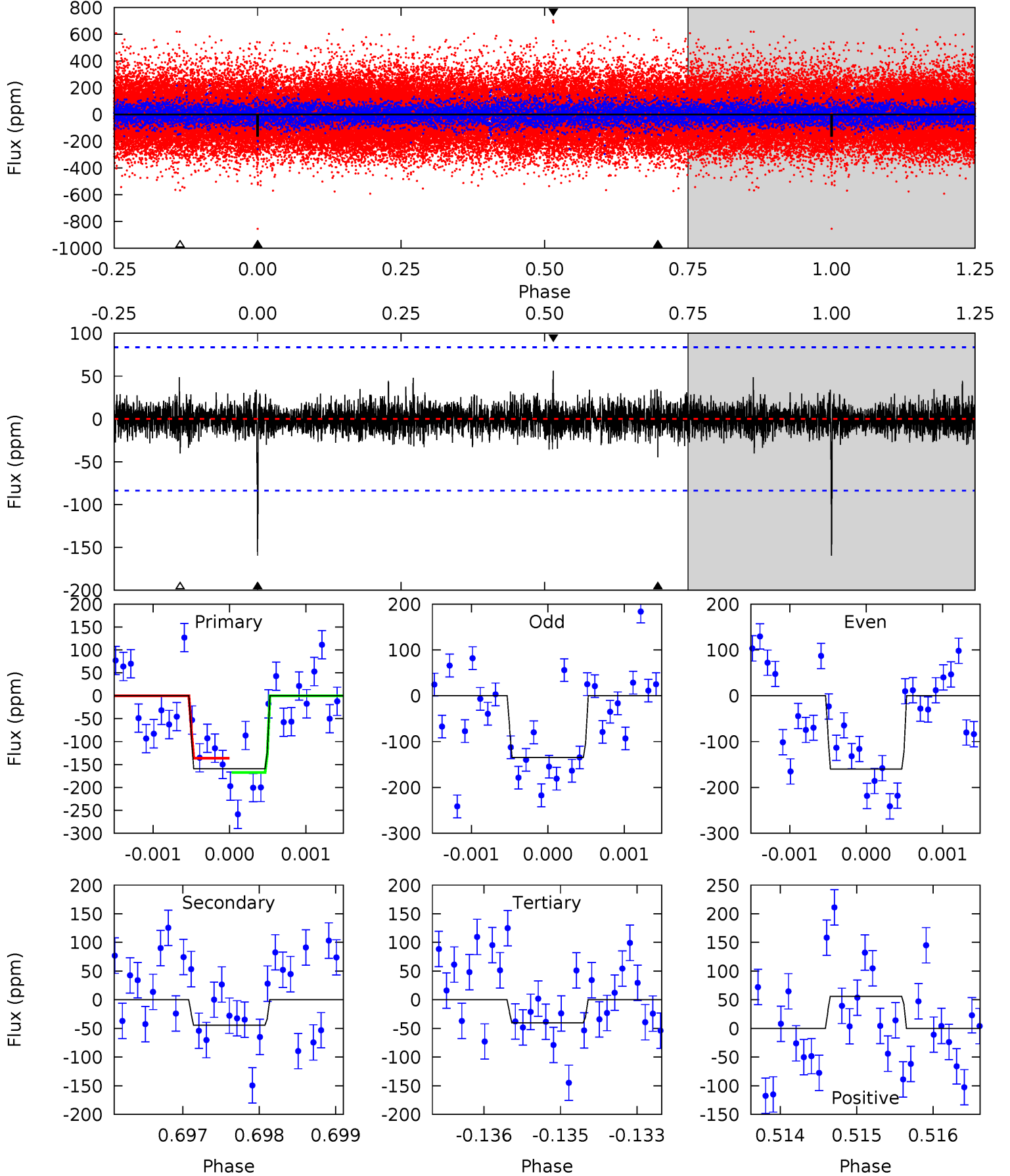
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	5.81	4.99	6.50	5.42	3.25	1.44	8.92	7.42	0.82	-0.69	0.48	1.01	0.32	1.23



Alt Model-Shift Uniqueness Test

010905641-01, $P = 460.776778$ Days, $E = 73.075803$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.87	2.59	3.61	5.40	3.21	0.69	7.68	6.66	0.28	-0.75	0.77	1.18	0.26	0.99



Stellar Parameters For KIC 010905641

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6126^{+184}_{-165}	$3.731^{+0.293}_{-0.098}$	$0.020^{+0.250}_{-0.250}$	$2.717^{+0.417}_{-0.973}$	$1.449^{+0.211}_{-0.316}$	$0.102^{+0.208}_{-0.031}$
	+3%/-3%	+8%/-3%	+1250%/-1250%	+15%/-36%	+15%/-22%	+204%/-31%
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 010905641-01 / KOI 5840.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-102 ± 18	$3.89^{+1.55}_{-1.42}$	535^{+27}_{-44}	5273^{+1265}_{-638}	6324^{+9861}_{-3015}
Alt.	-44 ± 16	$3.52^{+1.53}_{-1.27}$	534^{+32}_{-45}	4561^{+978}_{-565}	3179^{+5216}_{-1703}

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 $A_{\text{obs}} \gg 1.0$

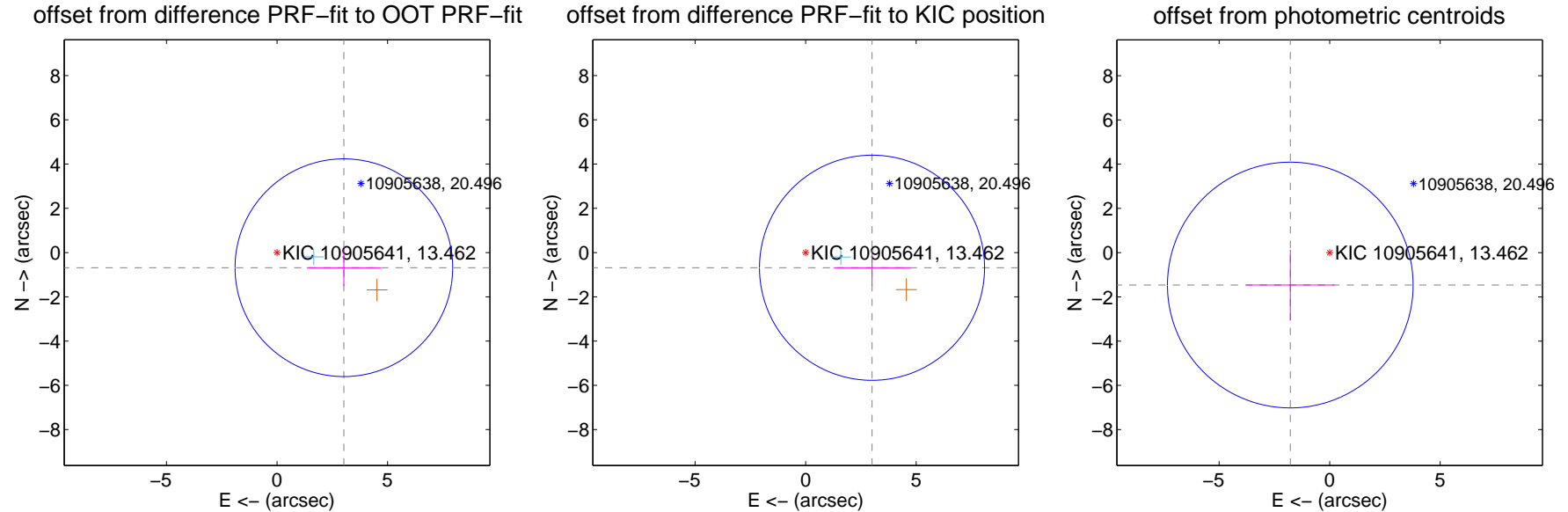
DV Centroid Data

Supplemental centroid analysis for 010905641-01. Kepler magnitude: 13.46. Transit SNR 5.63

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.099 ± 1.640	1.89	-3.022 ± 1.671	-0.684 ± 0.824
PRF-fit source offset from KIC position	3.079 ± 1.696	1.82	-3.002 ± 1.730	-0.686 ± 0.811
photometric centroid source offset	2.31 ± 1.85	1.24	1.78 ± 2.00	-1.46 ± 1.60

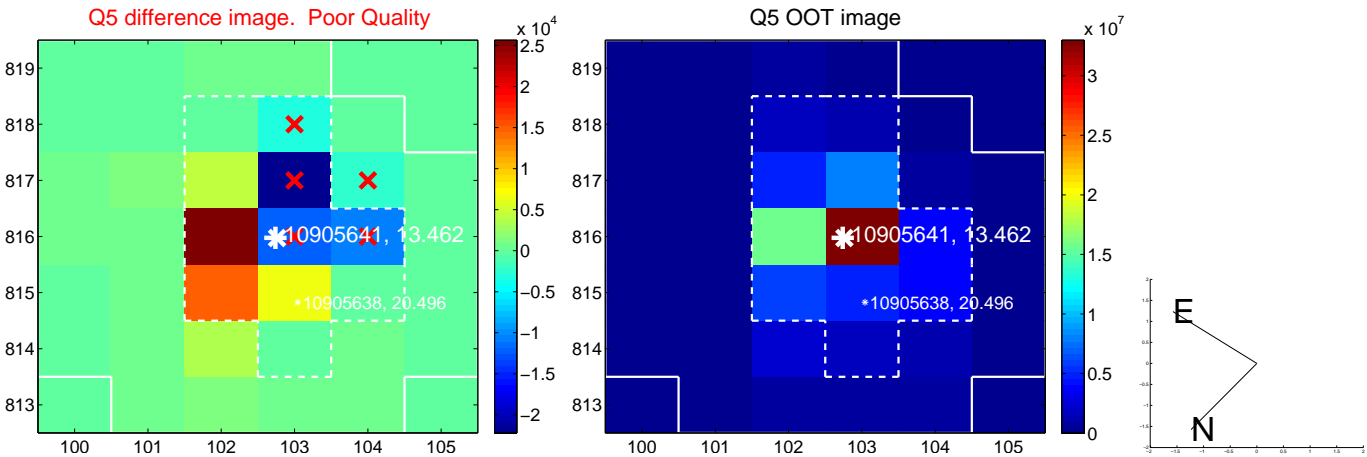


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

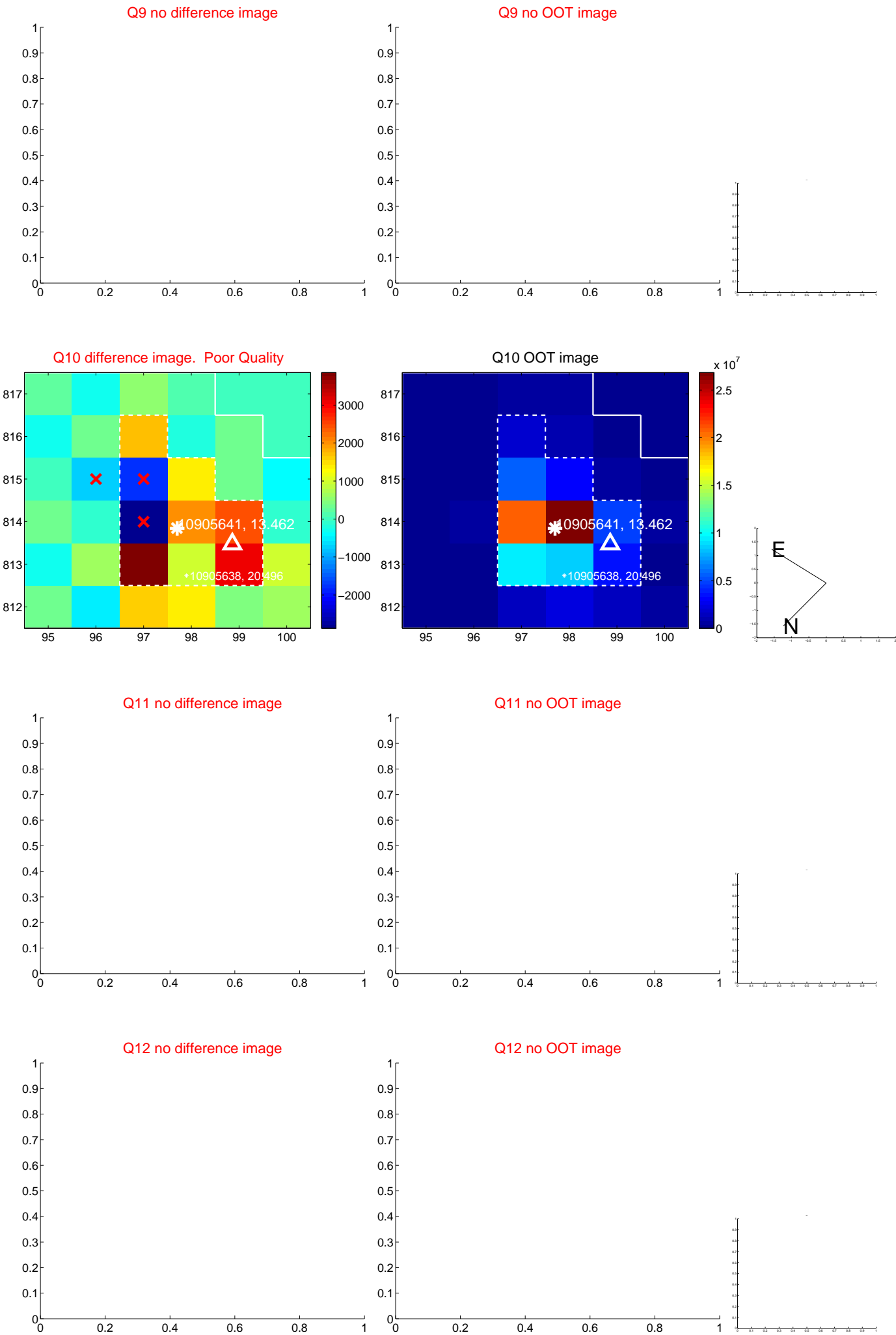
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



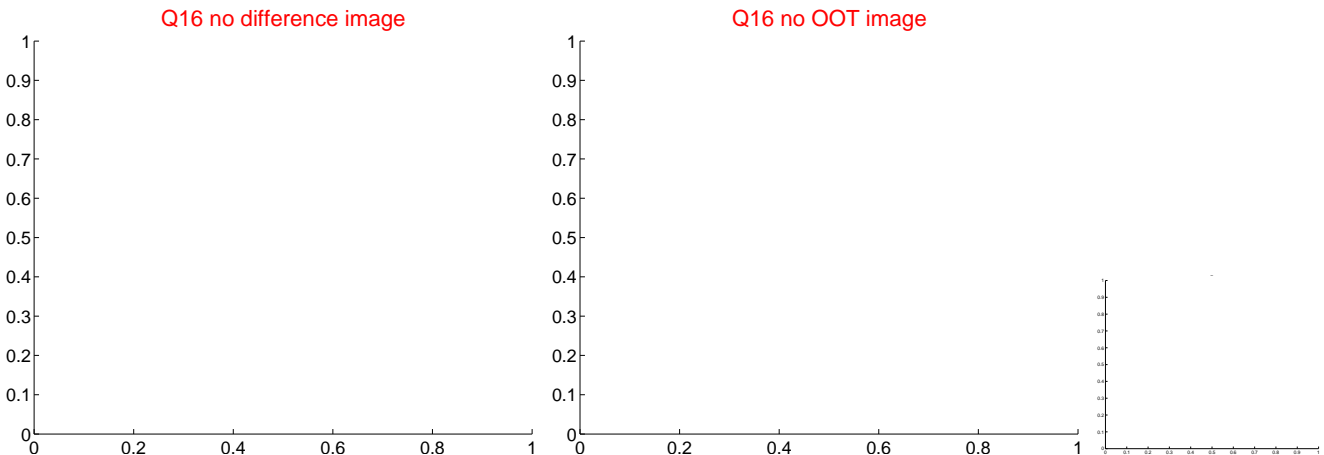
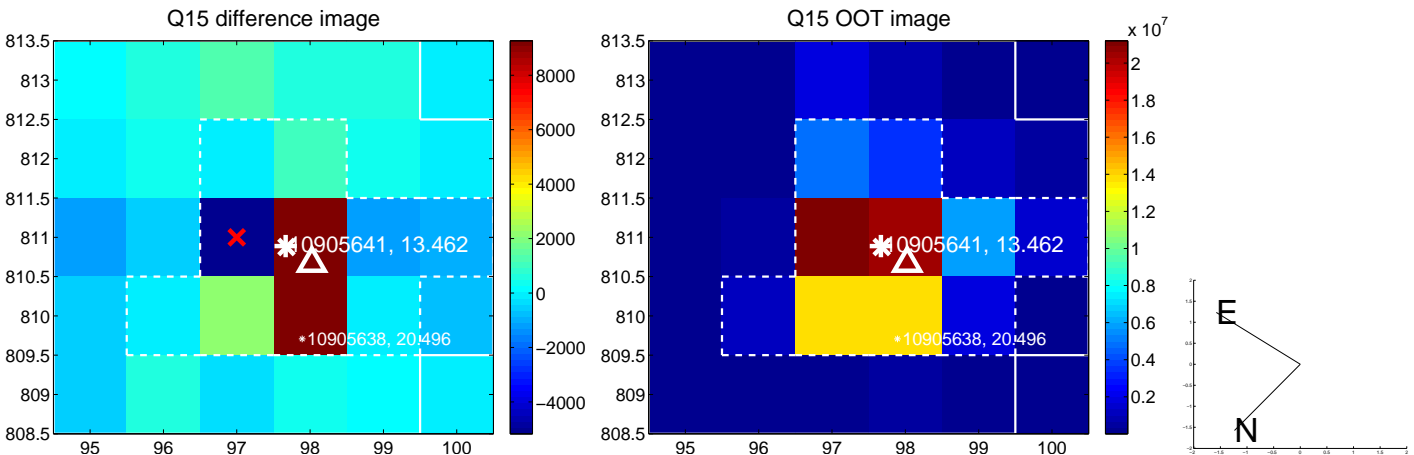
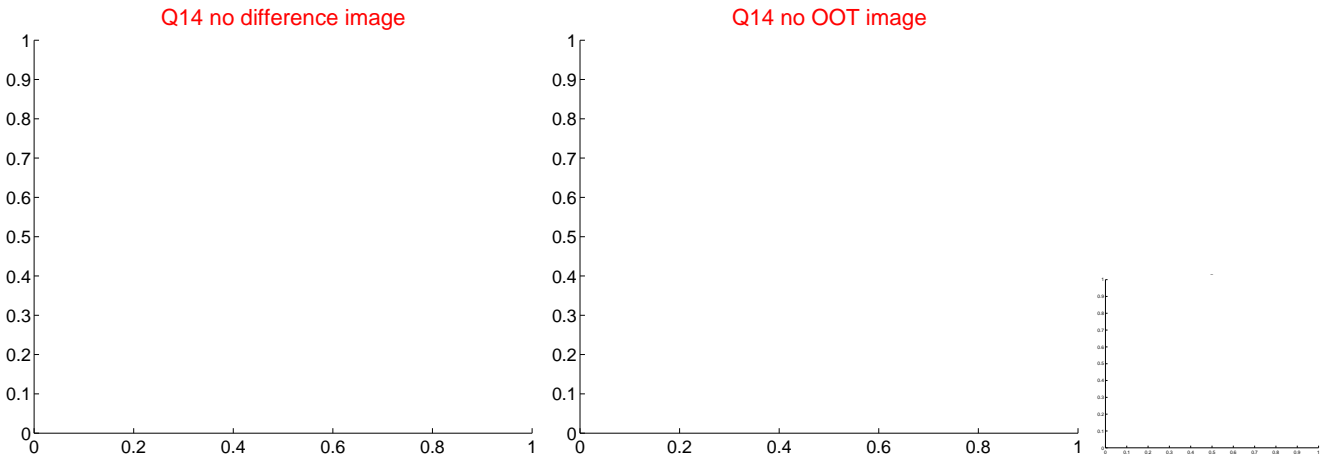
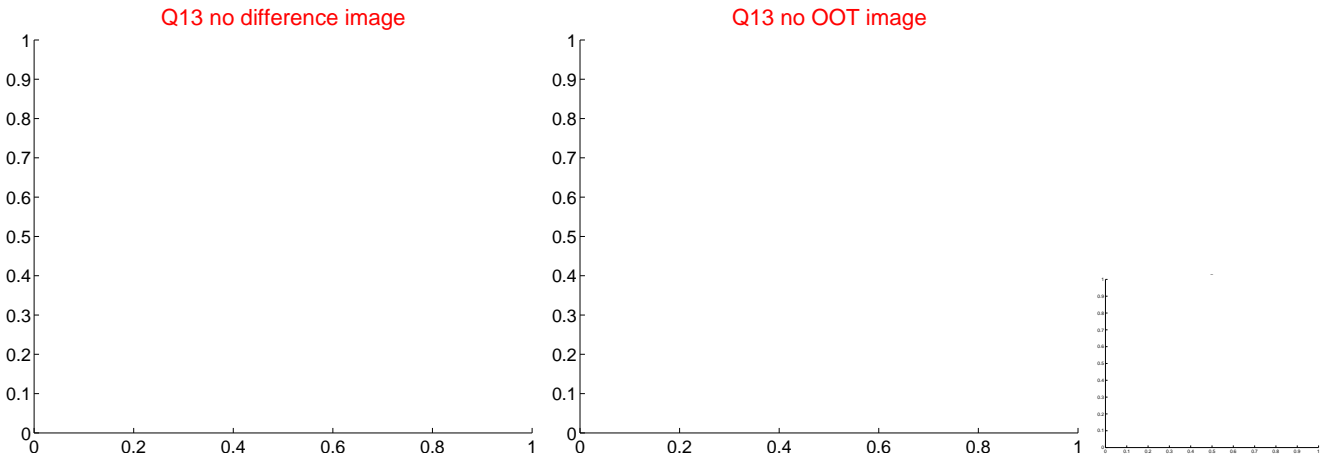
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



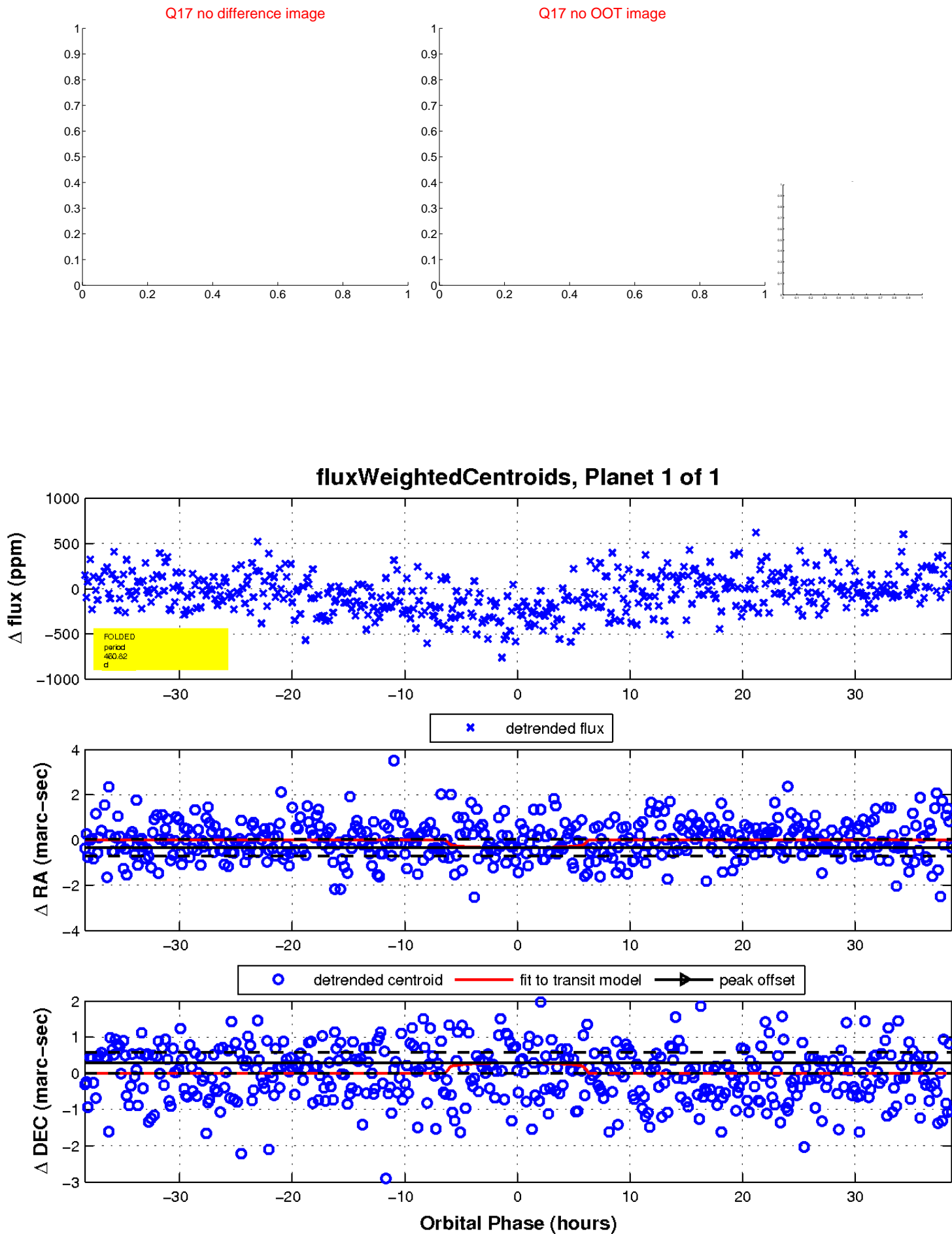
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

