

KIC 010790401

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})
010790401-01	OBS	8031.01	254.341335	200.580252	428.8	8.828	7.3	6.4	6.50	5193	14.71	27.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010790401-01	OBS	PC	0.37	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

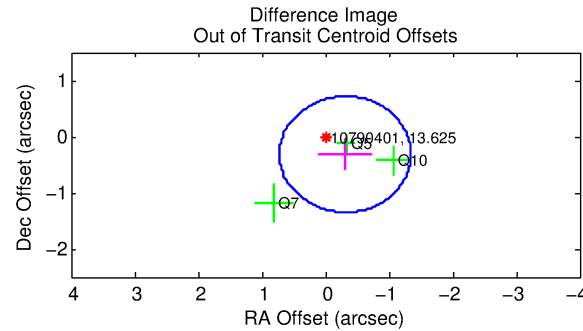
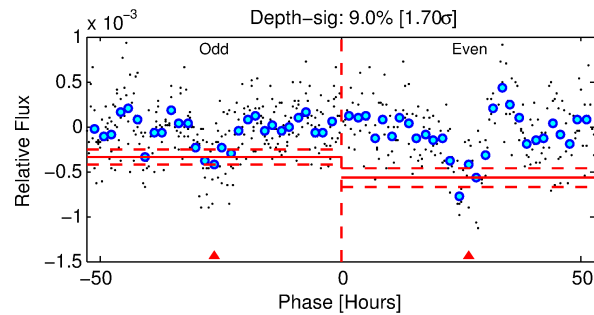
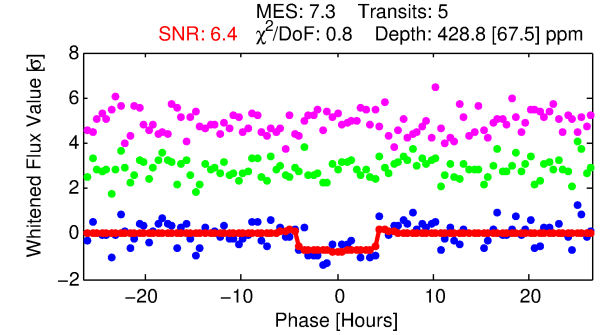
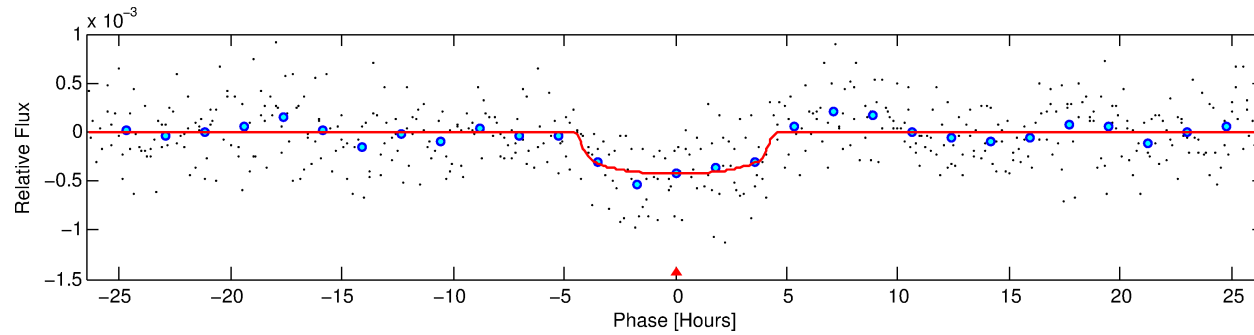
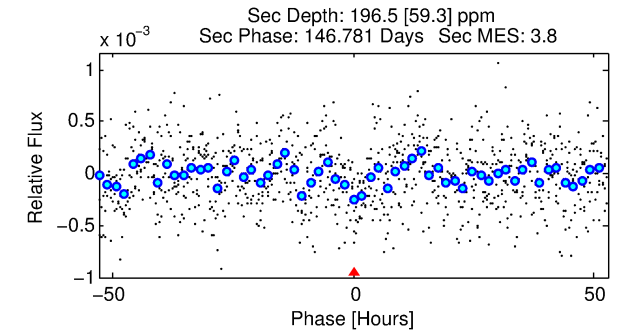
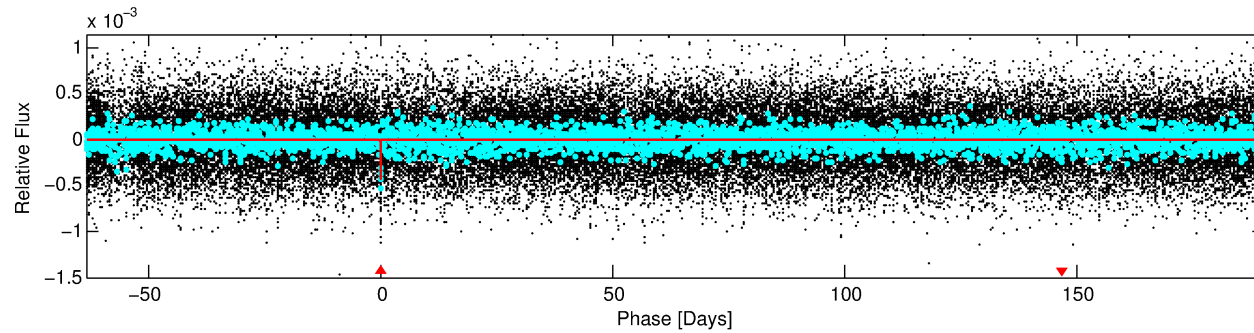
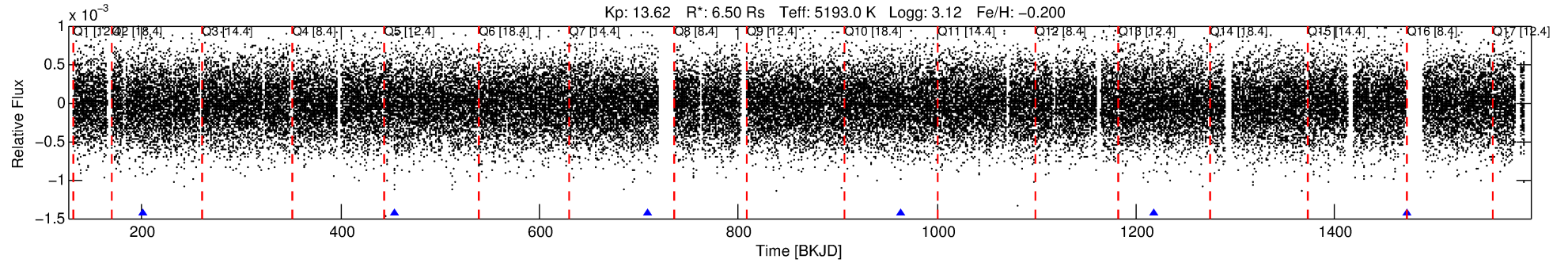
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010790401-01

No Significant Match Found

DV One-Page Summary

KIC: 10790401 Candidate: 1 of 1 Period: 254.341 d



DV Fit Results:

Period = 254.34134 [0.00654] d
Epoch = 200.5803 [0.0154] BKJD
Rp/R* = 0.0207 [0.0101]
a/R* = 149.92 [285.57]
b = 0.76 [1.07]
Seff = 27.93 [6.59]
Teq = 586 [35] K
Rp = 14.71 [8.26] Re
a = 0.9931 [0.1857] AU
Ag = 492.76 [512.09] [0.96 σ]
Teffp = 4270 [1100] K [3.35 σ]

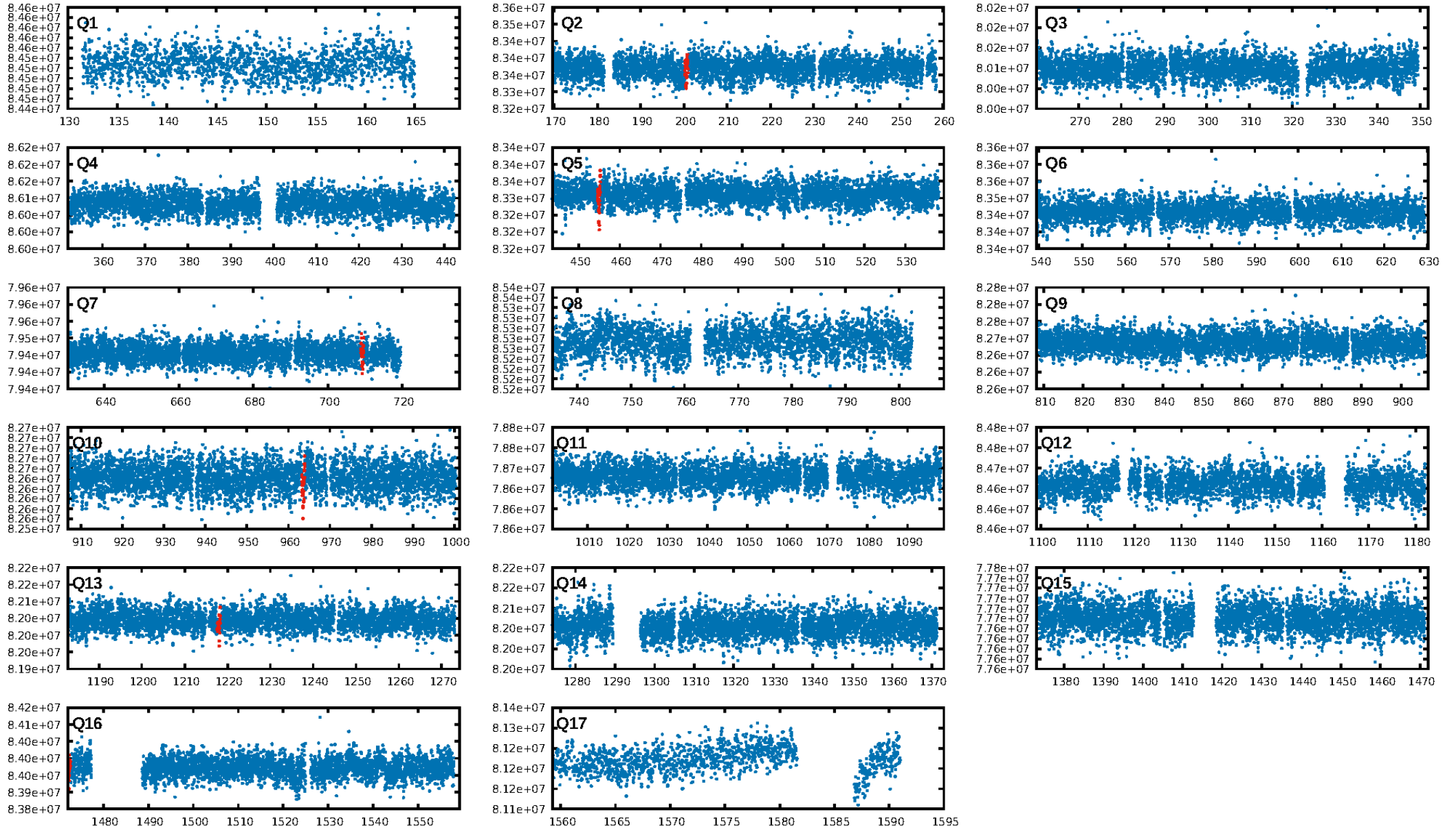
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.95e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.931
Centroid-sig: 0.1%
Centroid-so: 1.283 arcsec [1.86 σ]
OotOffset-rm: 0.443 arcsec [1.29 σ]
KicOffset-rm: 0.356 arcsec [1.00 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

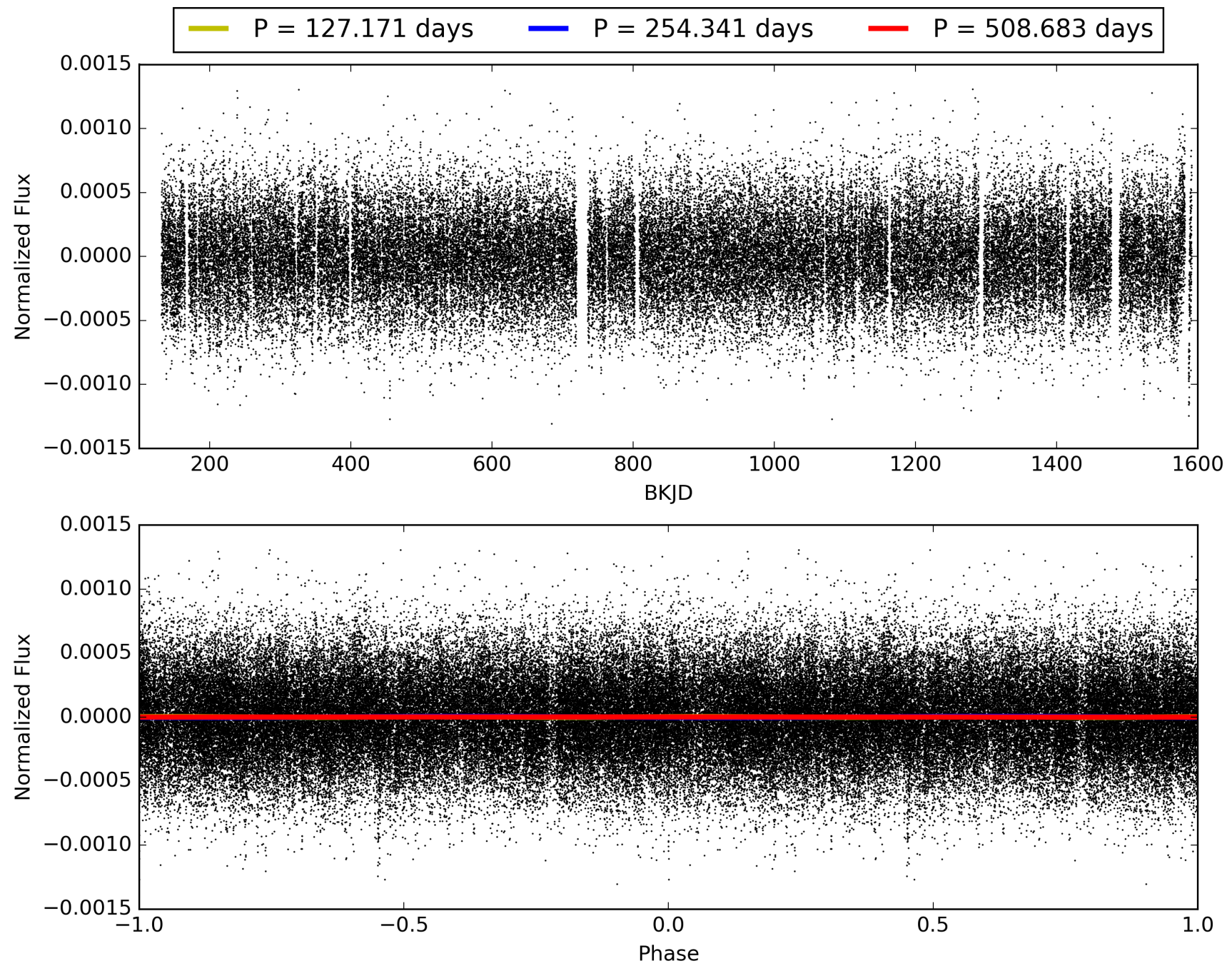
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:08:07 Z

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

TCE 010790401-01, PDC Light Curves

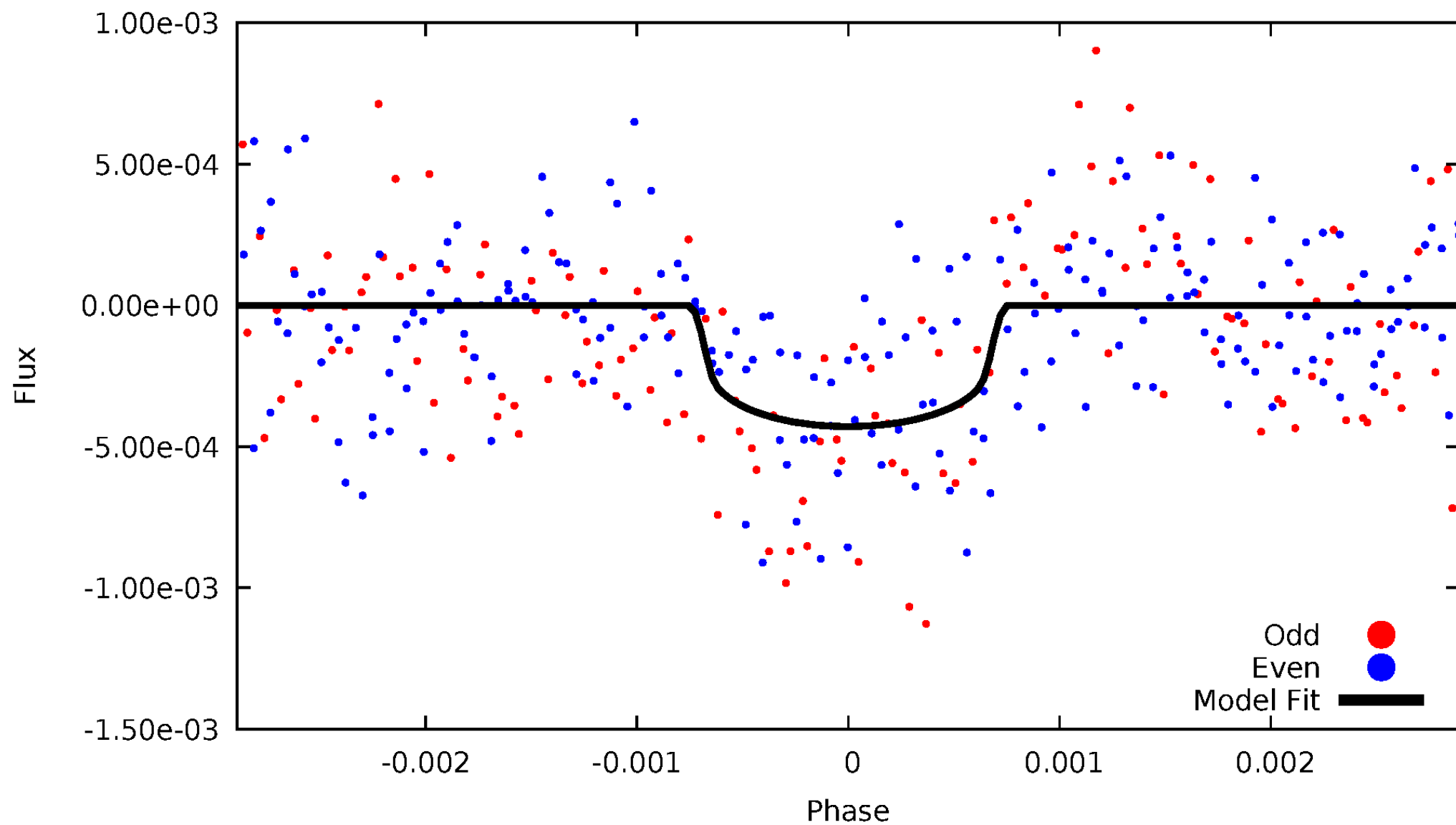


TCE 010790401-01



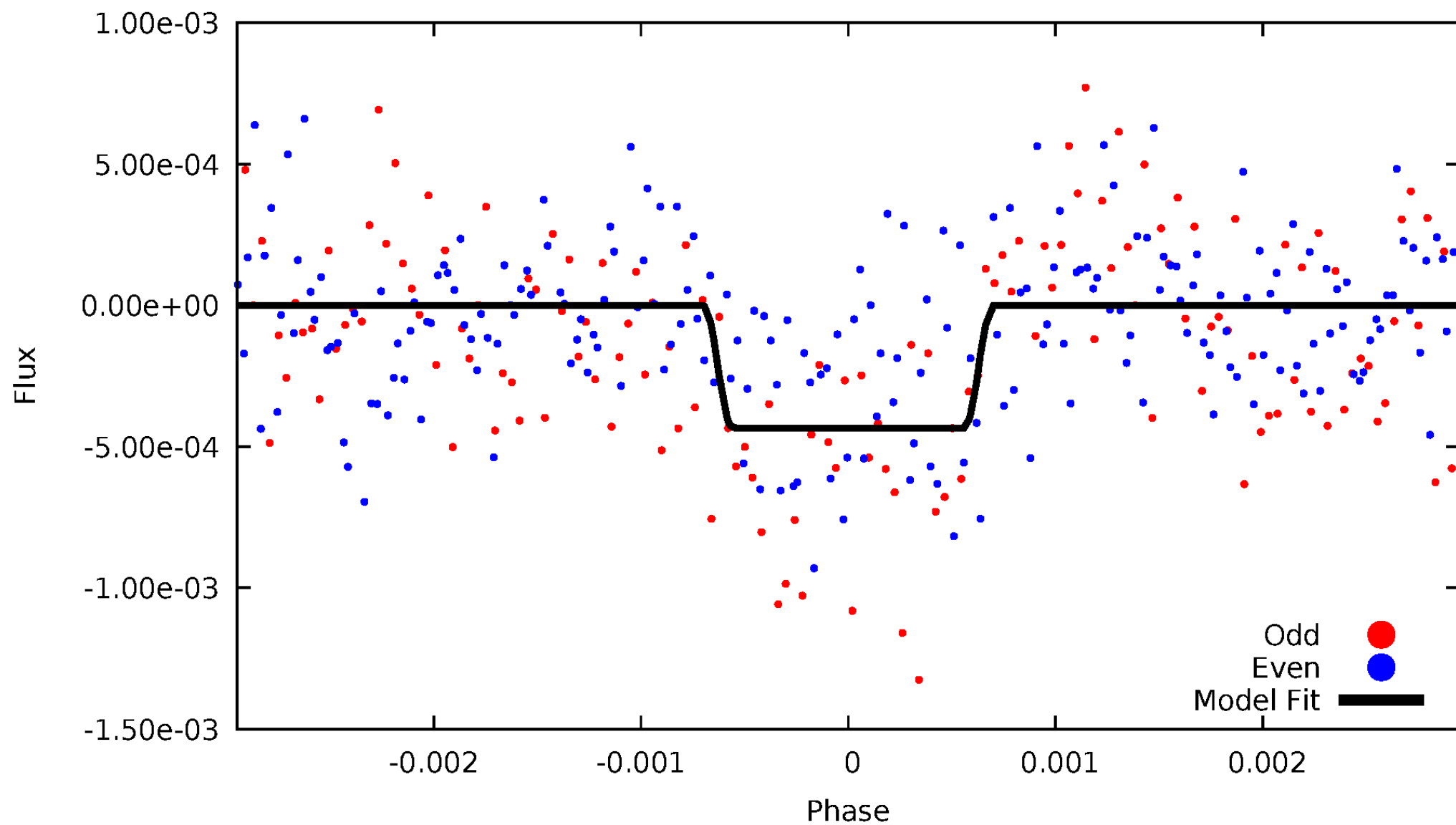
DV Odd/Even

TCE 010790401-01

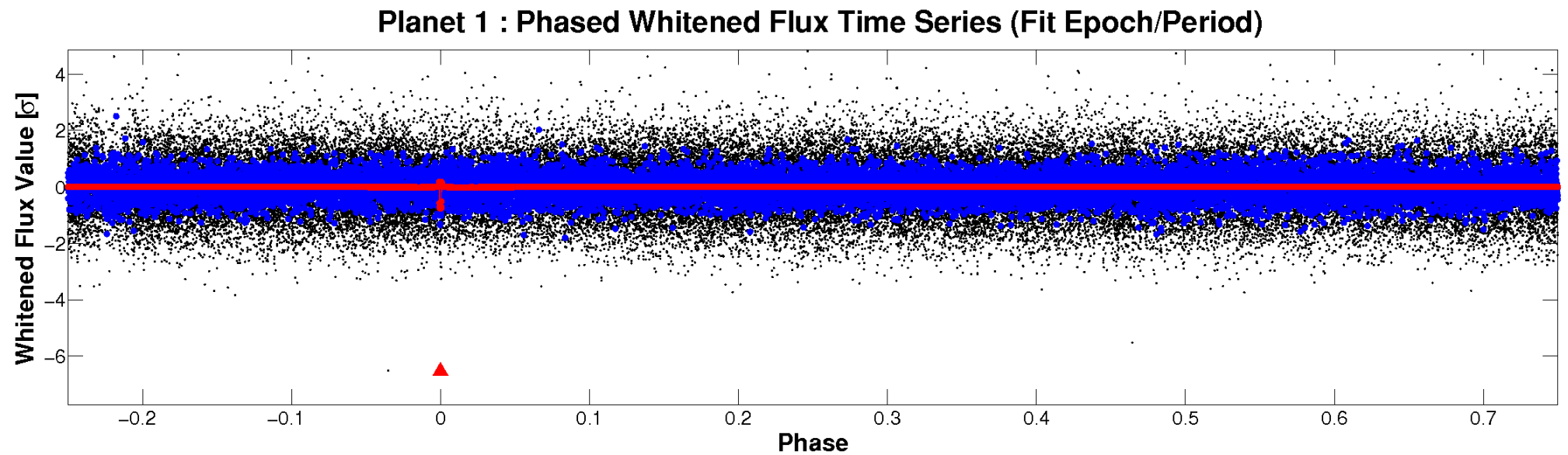
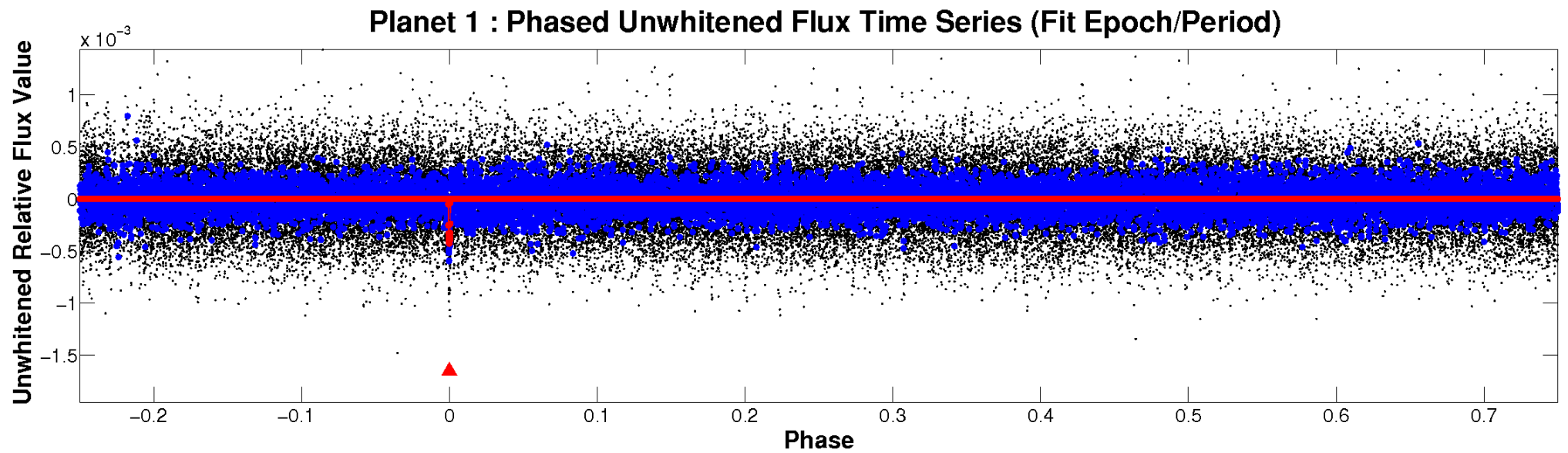


ALT Odd/Even

TCE 010790401-01



Non-Whitened Vs. Whitened Light Curve



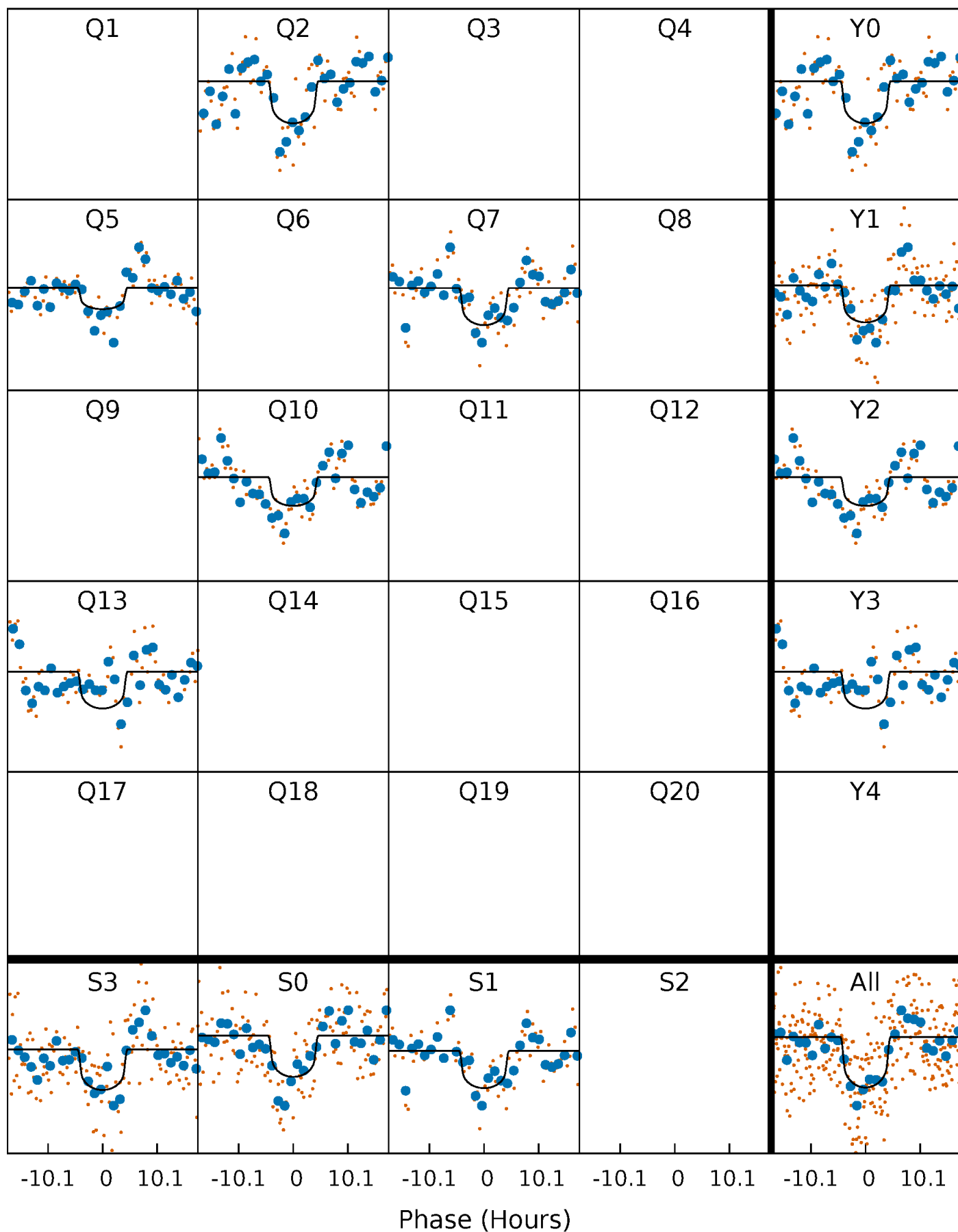
PDC Quarter-Phased Transit Curves

TCE 010790401-01 P=254.341335 Days $T_0=200.580252$ (BKJD)



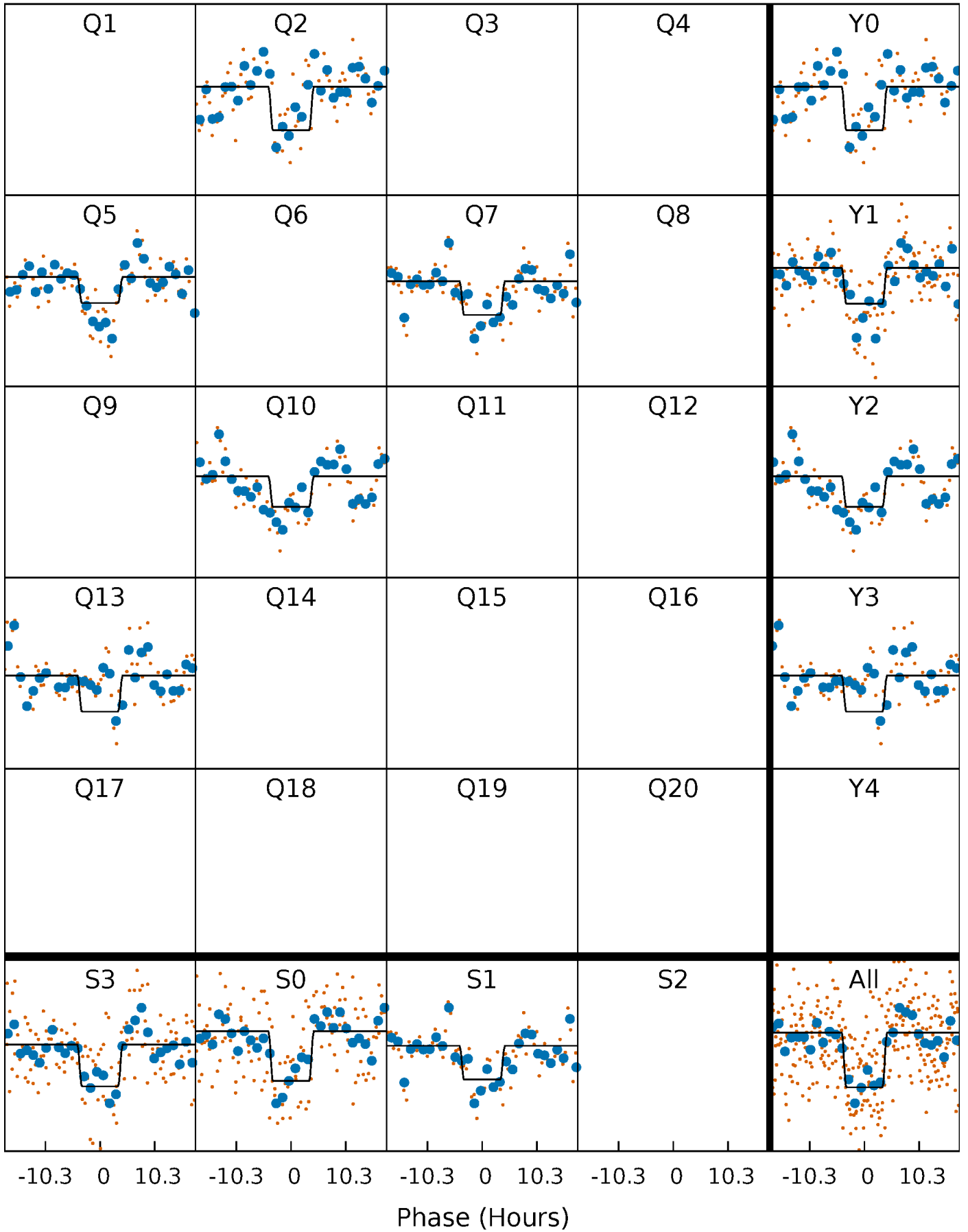
DV Quarter-Phased Transit Curves

TCE 010790401-01 $P=254.341335$ Days $T_0=200.580252$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

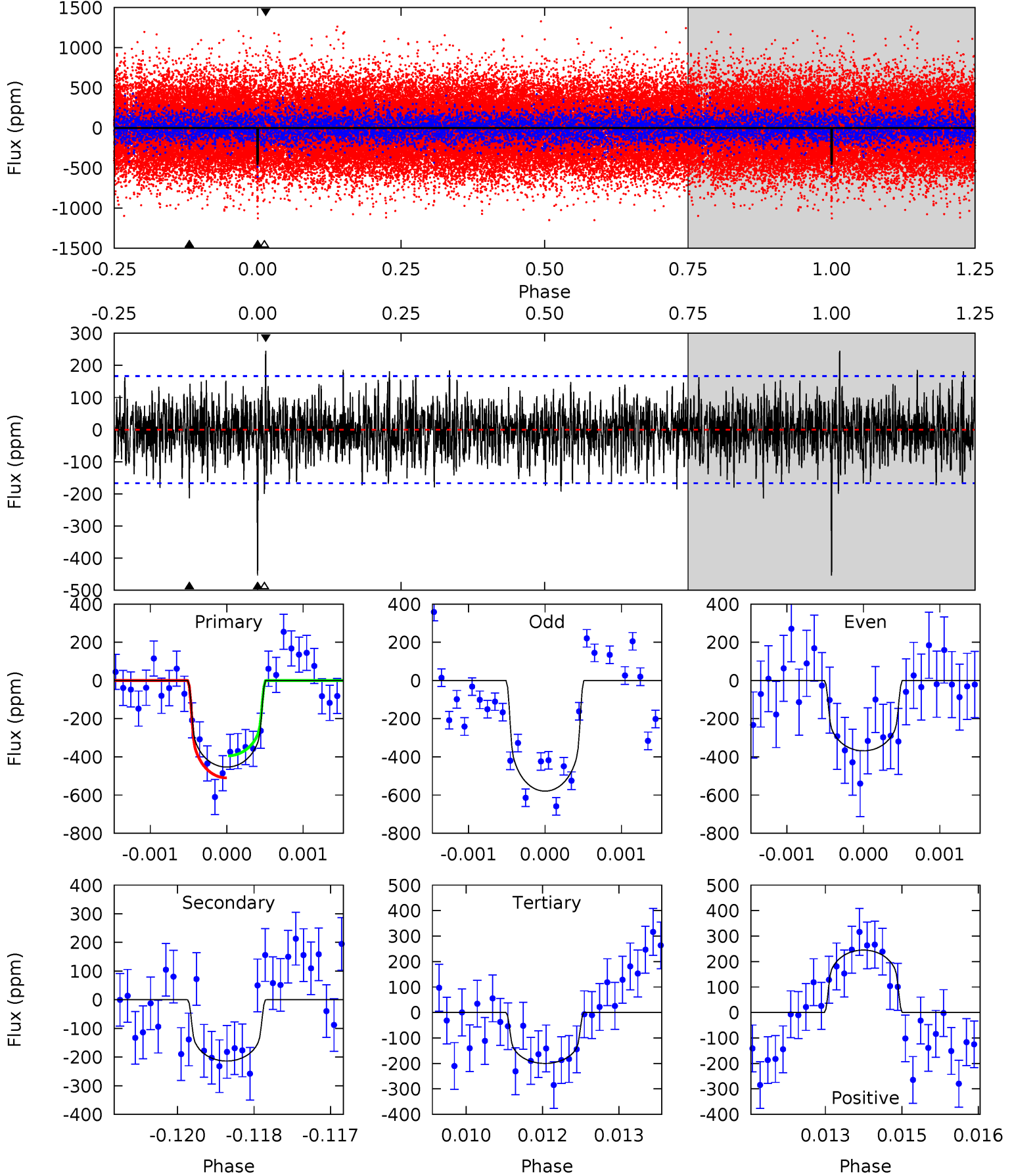
TCE 010790401-01 $P=254.343333$ Days $T_0=200.585351$ (BKJD)



DV Model-Shift Uniqueness Test

010790401-01, P = 254.341335 Days, E = 200.580252 Days

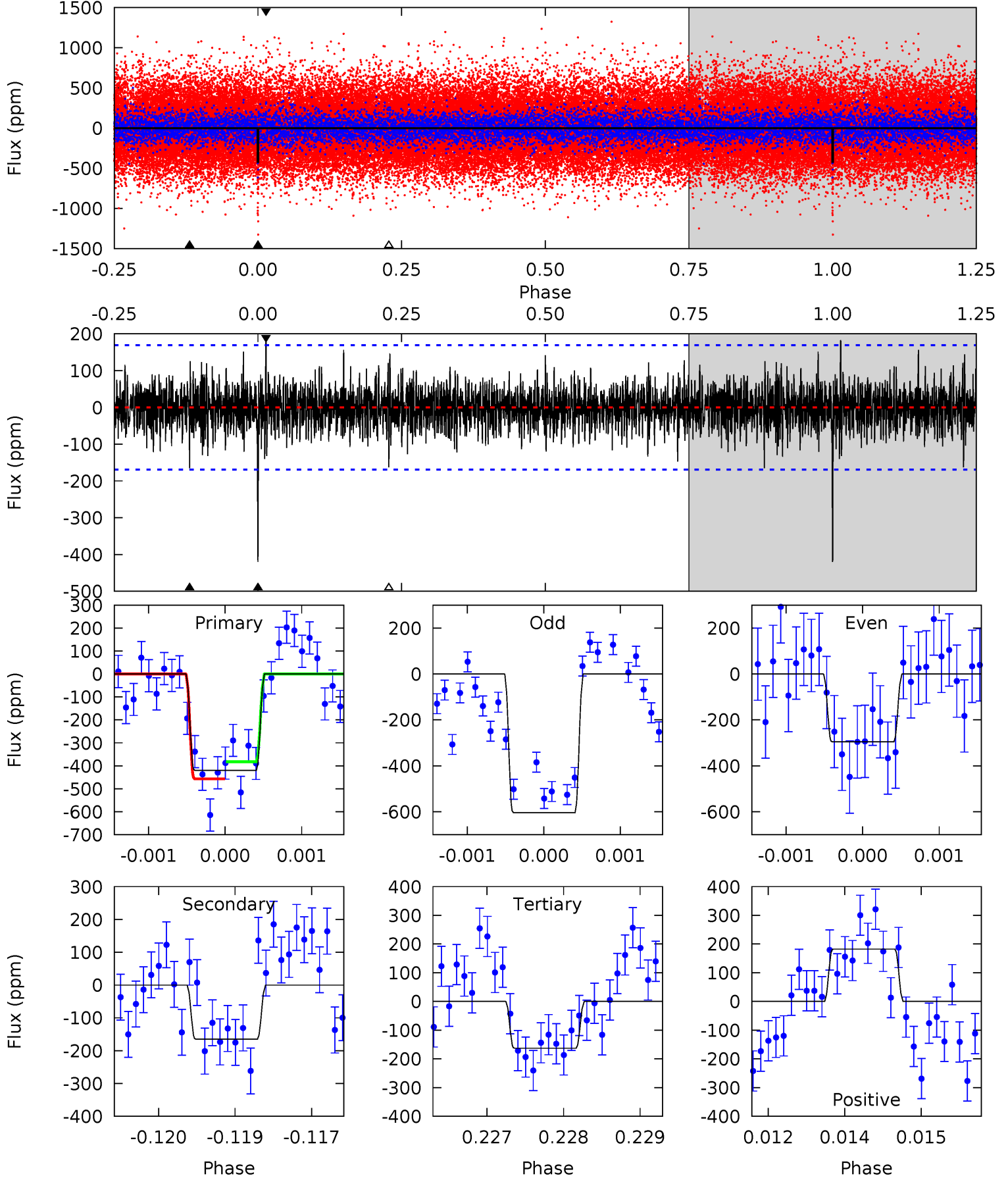
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	6.90	6.45	7.91	5.38	3.18	1.91	8.18	6.73	0.45	-1.01	3.35	0.97	0.35	1.85



Alt Model-Shift Uniqueness Test

010790401-01, P = 254.343333 Days, E = 200.585351 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	5.26	5.20	5.82	5.40	3.20	1.36	8.19	7.57	0.06	-0.56	4.86	0.92	0.30	1.19



Stellar Parameters For KIC 010790401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5193^{+76}_{-178}	$3.117^{+0.033}_{-0.027}$	$-0.200^{+0.150}_{-0.400}$	$6.502^{+0.190}_{-1.807}$	$2.018^{+0.105}_{-0.942}$	$0.010^{+0.004}_{-0.001}$
	+1%/-3%	+1%/-1%	+75%/-200%	+3%/-28%	+5%/-47%	+42%/-8%
Source	PHO1	AST9	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 010790401-01 / KOI 8031.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-214 ± 31	$14.48^{+8.03}_{-6.99}$	817^{+17}_{-29}	4493^{+1409}_{-677}	538^{+1430}_{-314}
Alt.	-165 ± 31	$14.89^{+6.76}_{-6.69}$	819^{+16}_{-31}	4247^{+1126}_{-554}	412^{+933}_{-224}

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 $A_{obs} \gg 1.0$

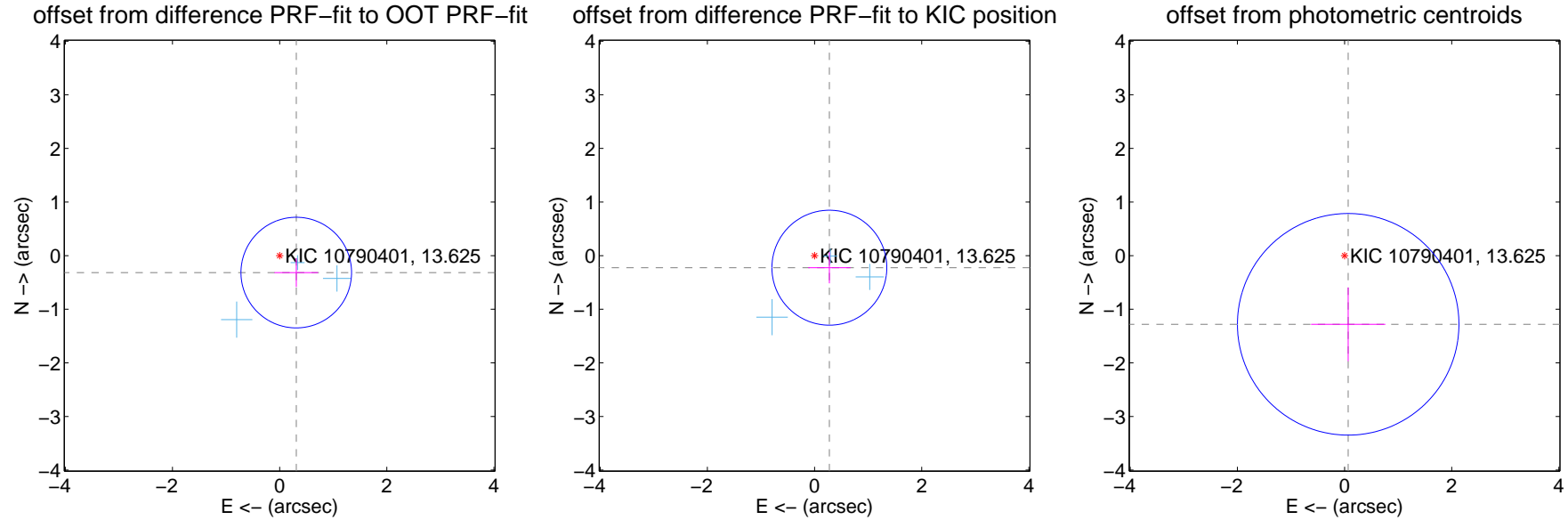
DV Centroid Data

Supplemental centroid analysis for 010790401-01. Kepler magnitude: 13.62. Transit SNR 6.43

There are 3 quarters with good PRF difference image offsets

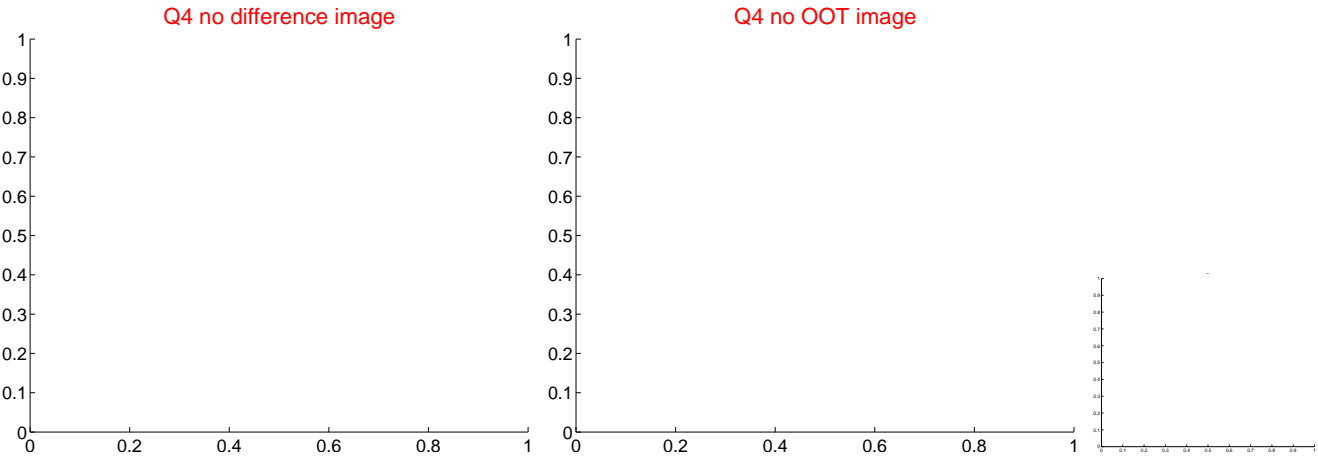
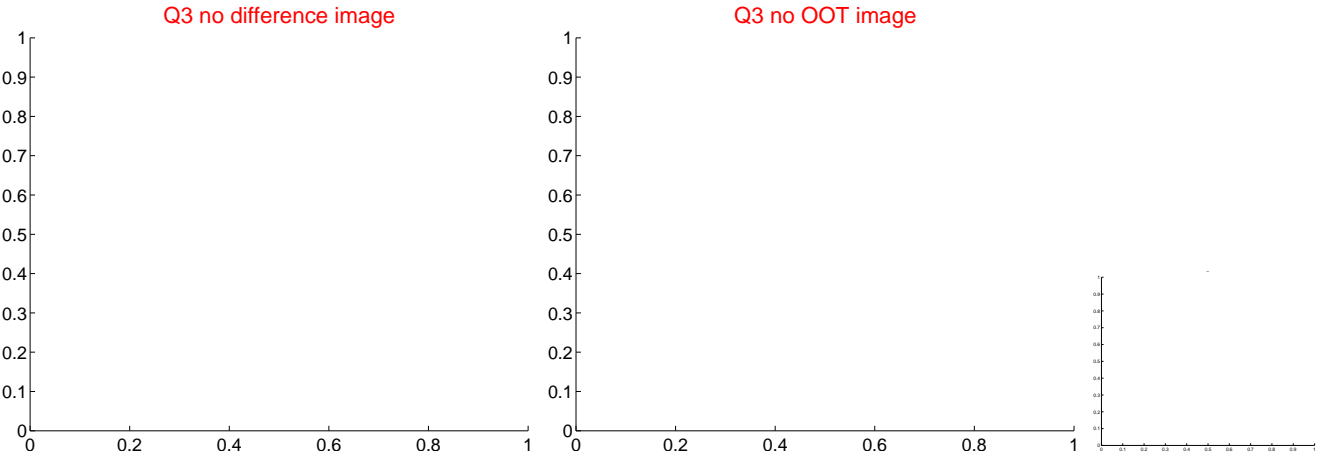
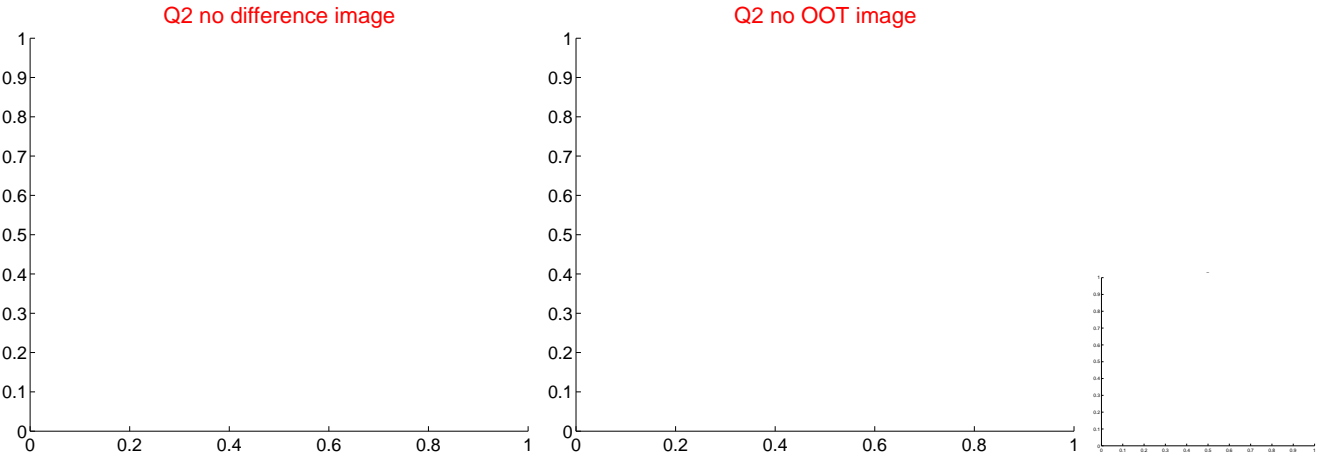
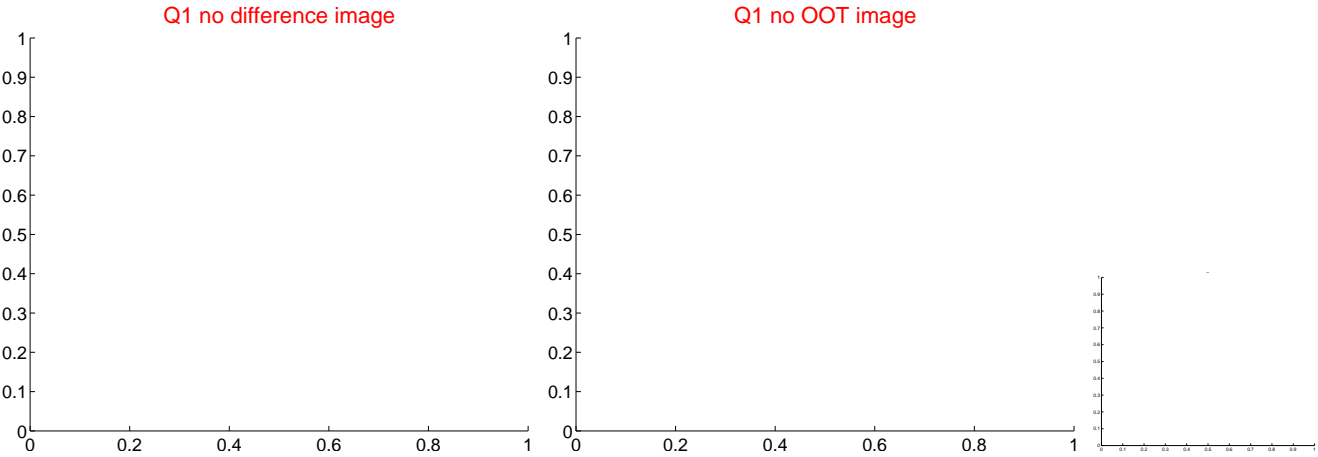
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.443 ± 0.344	1.29	-0.310 ± 0.407	-0.316 ± 0.269
PRF-fit source offset from KIC position	0.356 ± 0.357	1.00	-0.276 ± 0.395	-0.225 ± 0.291
photometric centroid source offset	1.28 ± 0.69	1.86	-0.07 ± 0.69	-1.28 ± 0.69

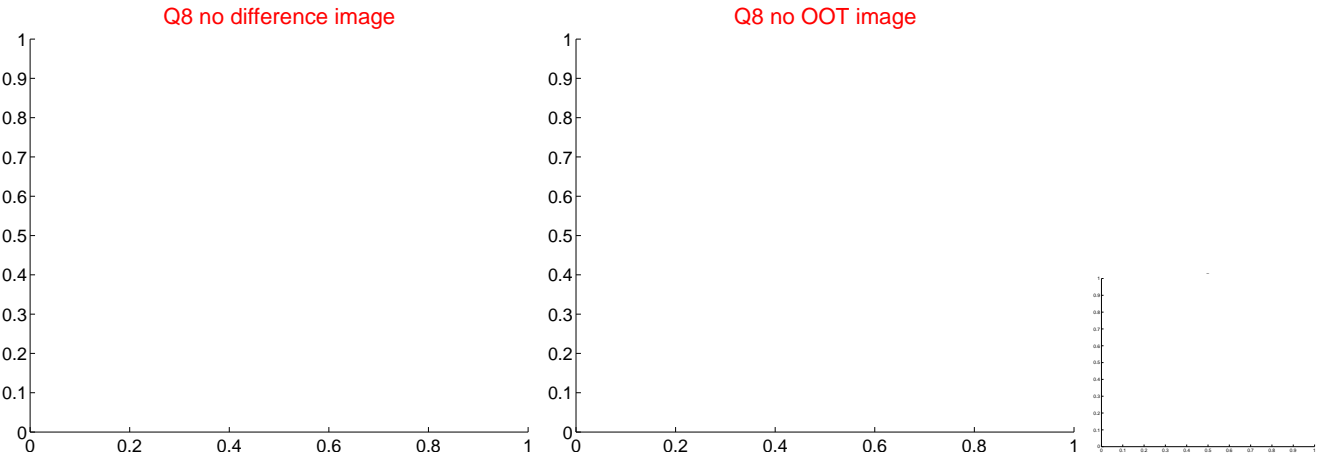
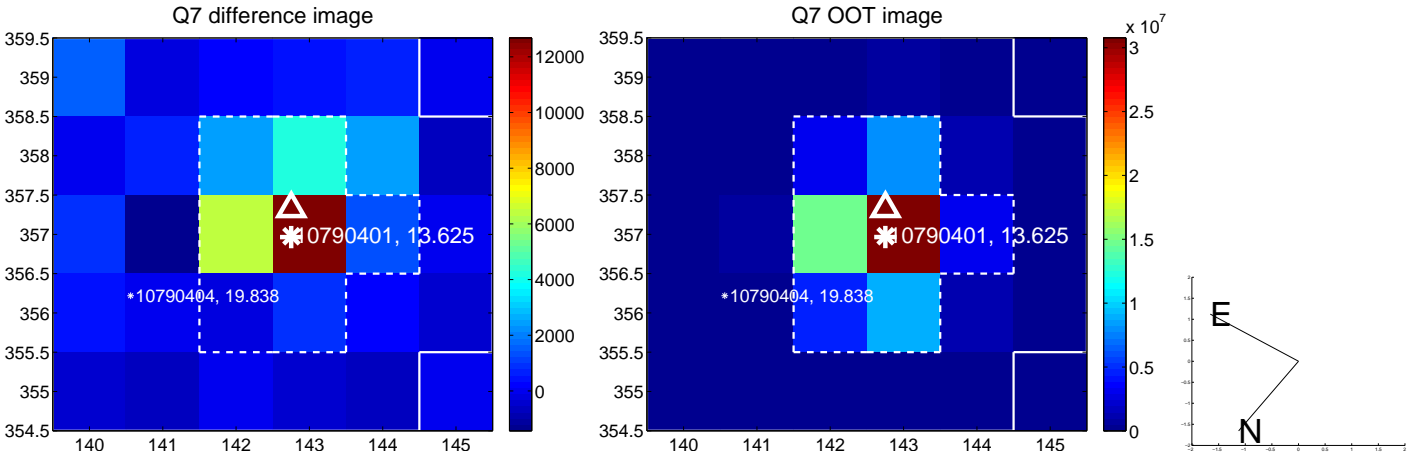
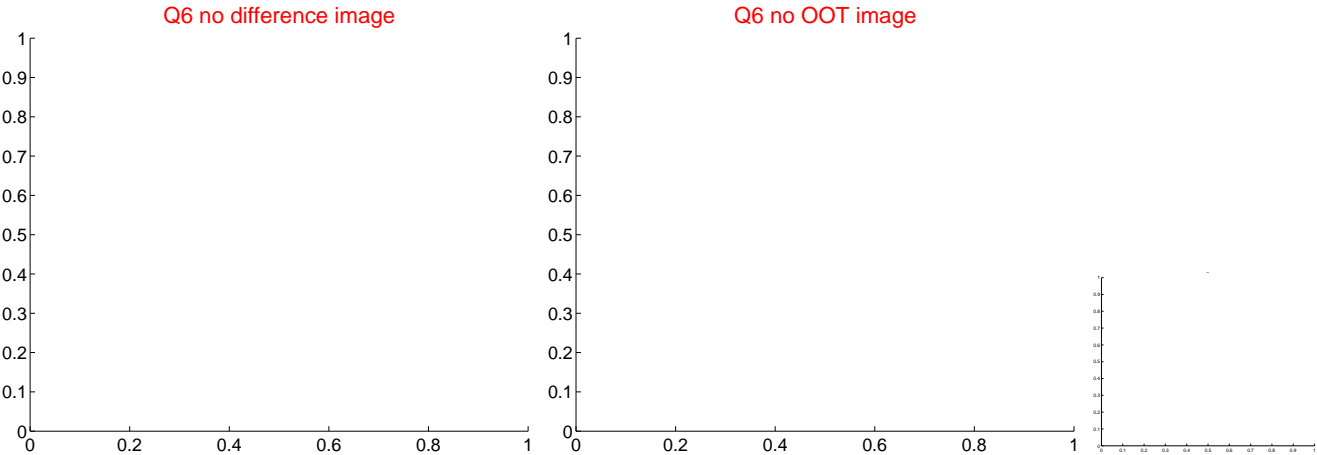
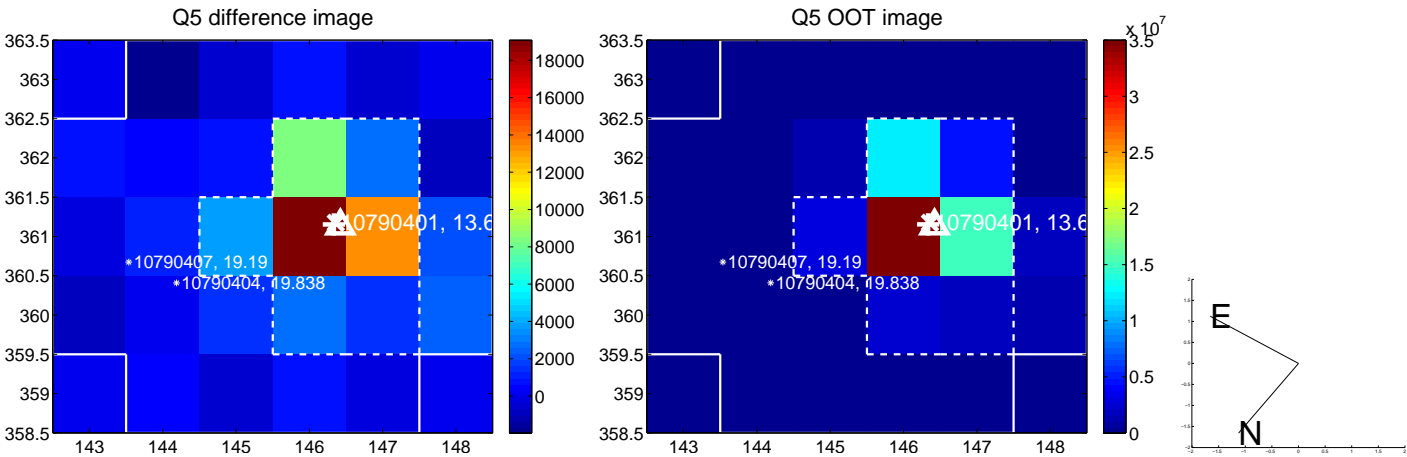


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

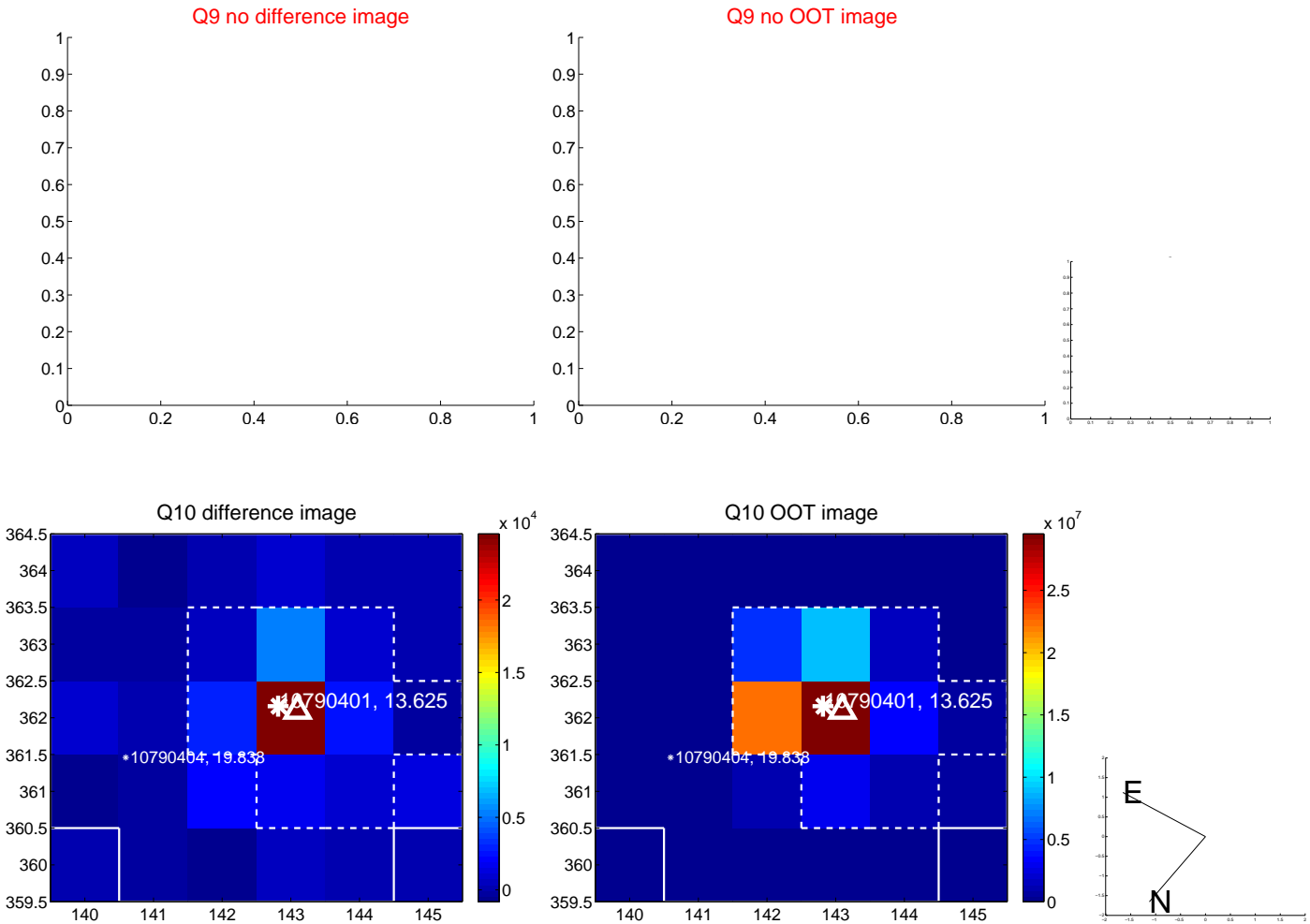
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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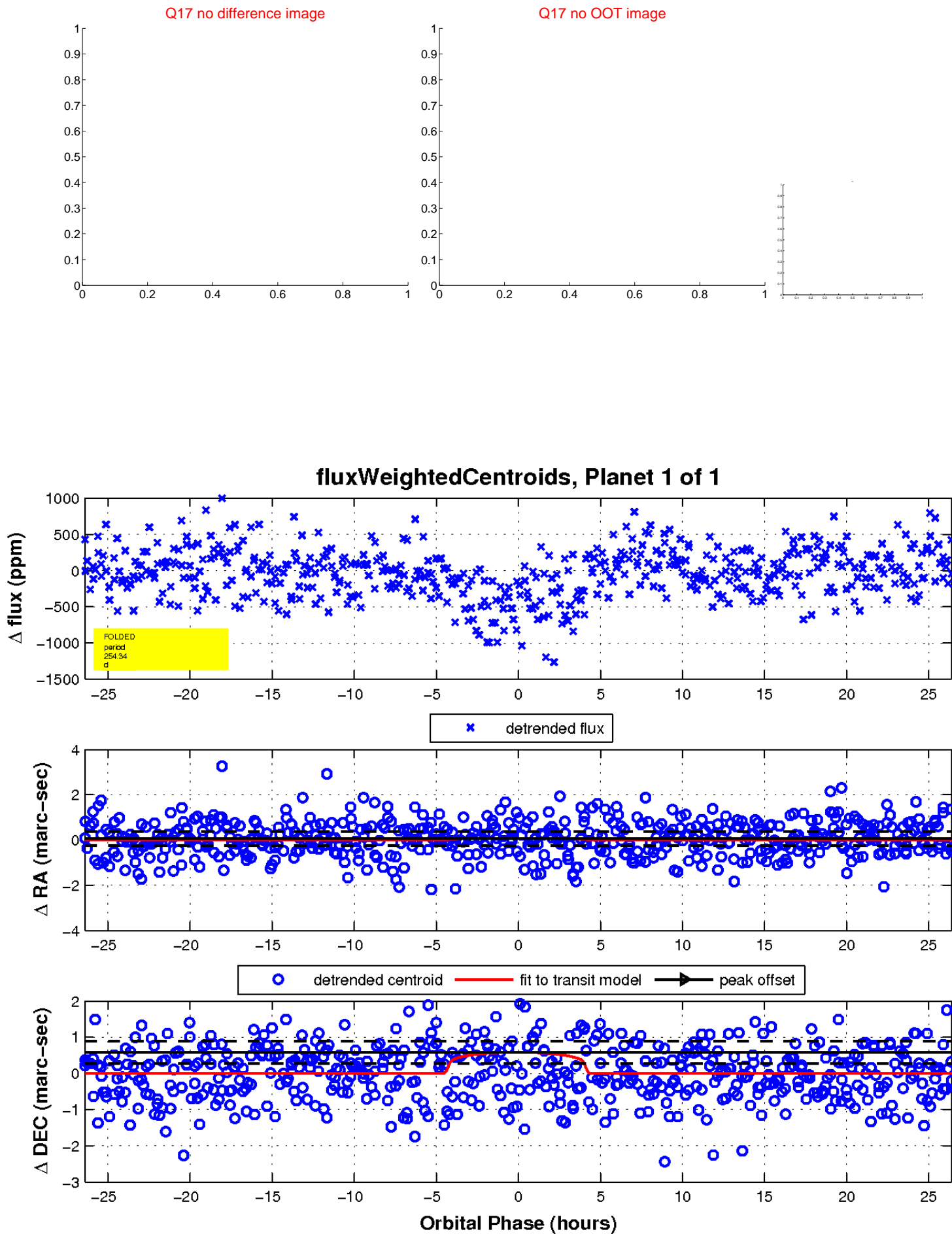
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

