

KIC 008905804

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})
008905804-01	OBS	No	561.804345	262.448439	181.7	18.520	8.6	9.3	1.97	6434	2.85	2.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008905804-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

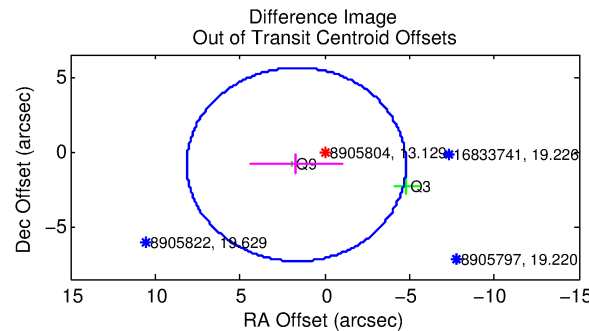
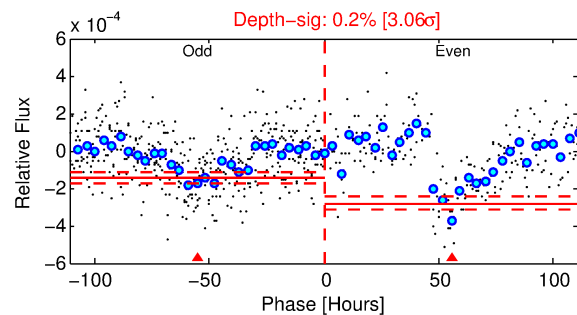
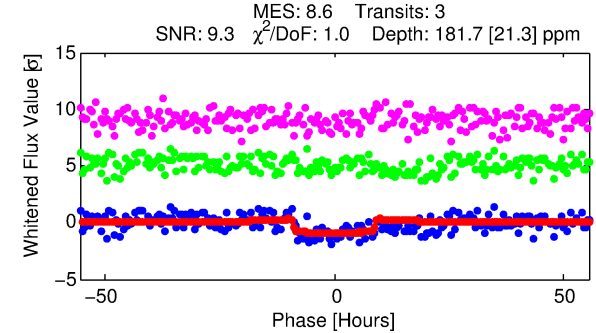
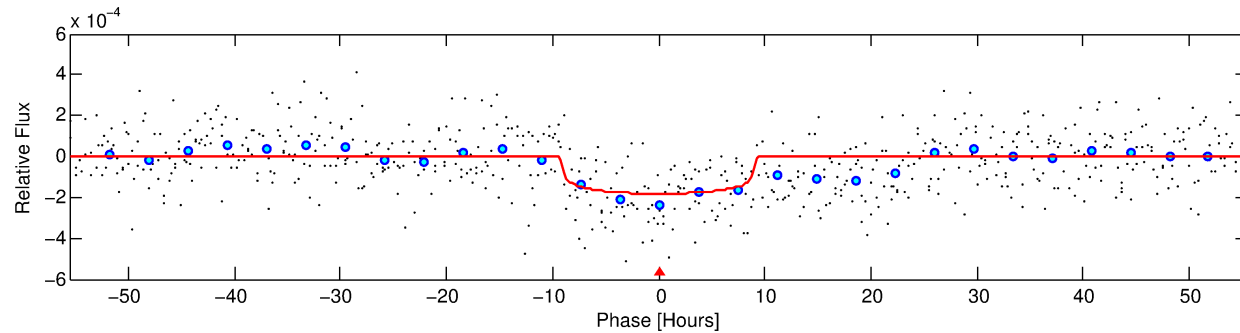
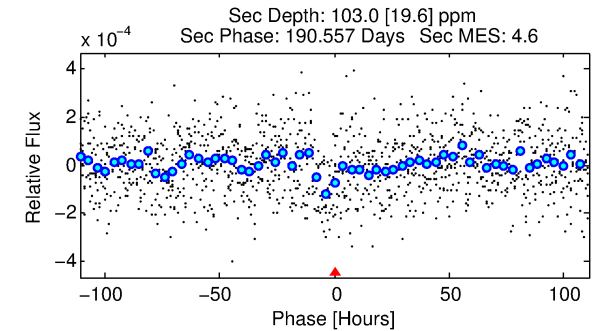
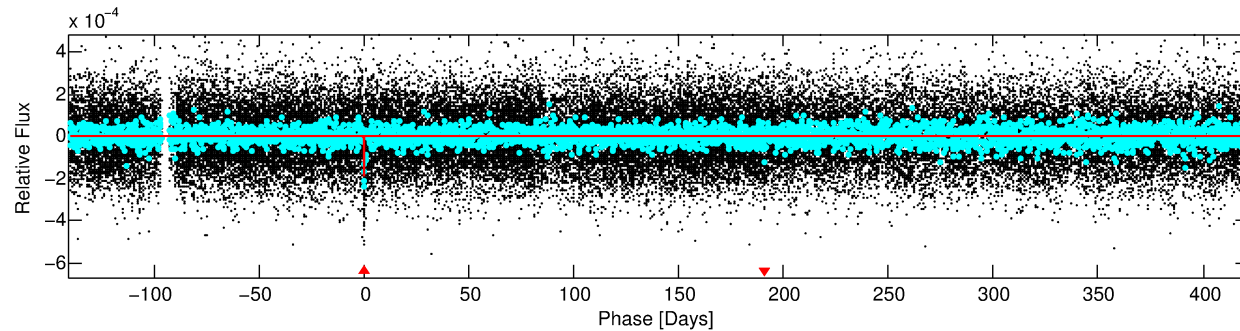
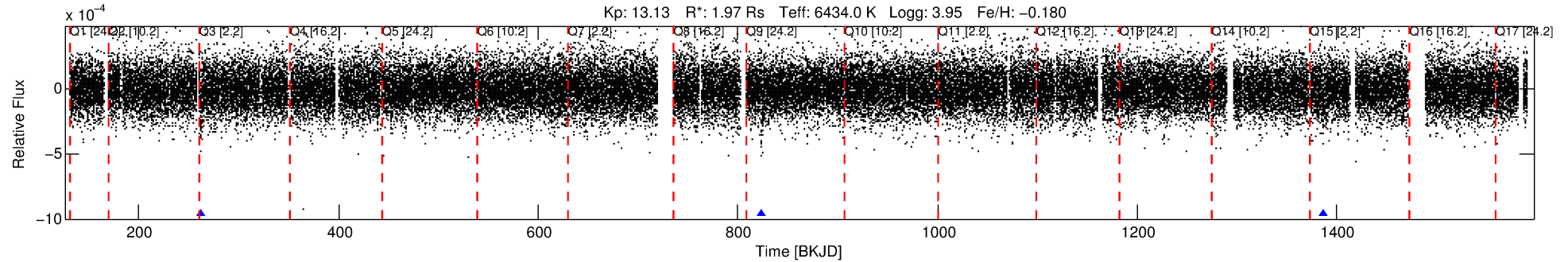
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008905804-01

No Significant Match Found

DV One-Page Summary

KIC: 8905804 Candidate: 1 of 1 Period: 561.804 d



DV Fit Results:

Period = 561.80434 [0.01569] d
Epoch = 262.4484 [0.0197] BKJD
Rp/R* = 0.0132 [0.0036]
a/R* = 167.75 [239.51]
b = 0.71 [1.00]
Seff = 2.88 [1.80]
Teq = 332 [52] K
Rp = 2.85 [1.38] Re
a = 1.4400 [0.5510] AU
Ag = 14464.04 [12077.16] [1.20σ]
Teffp = 5632 [828] K [6.39σ]

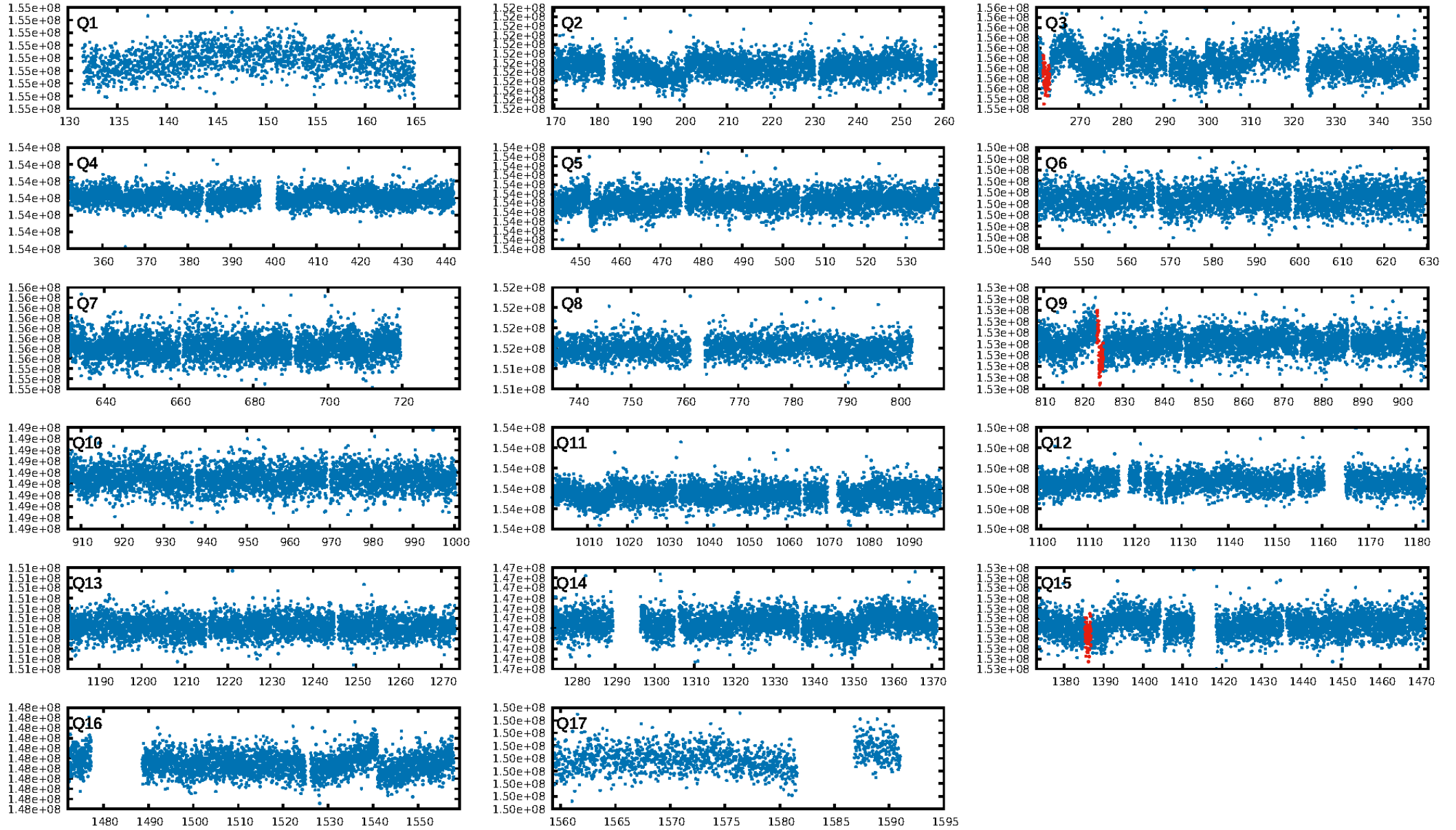
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.4%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.93e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.851
Centroid-sig: 4.1%
Centroid-so: 1.904 arcsec [1.44σ]
OotOffset-rm: 1.872 arcsec [0.87σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 1.956 arcsec [1.46σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

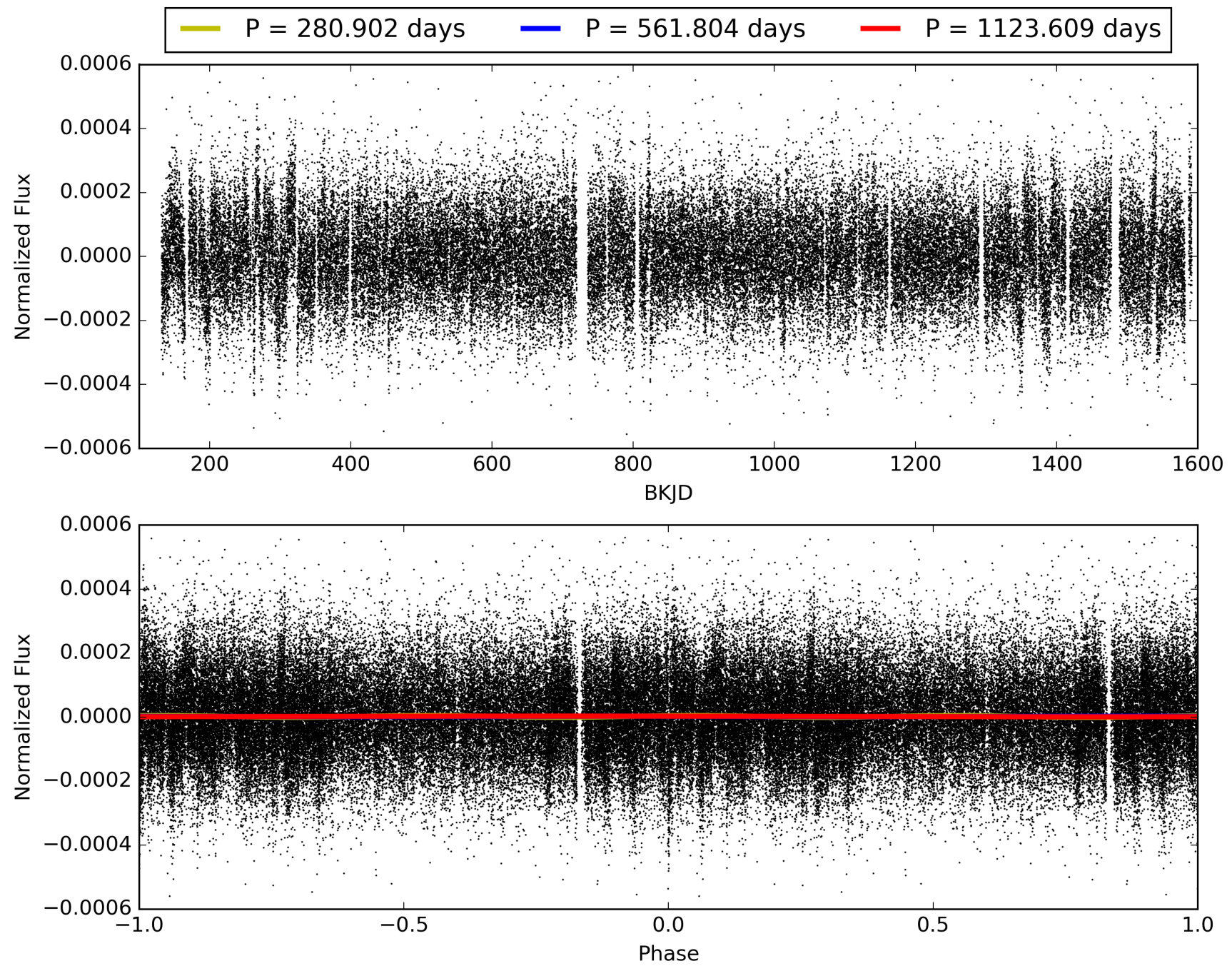
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:17:17 Z

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

TCE 008905804-01, PDC Light Curves

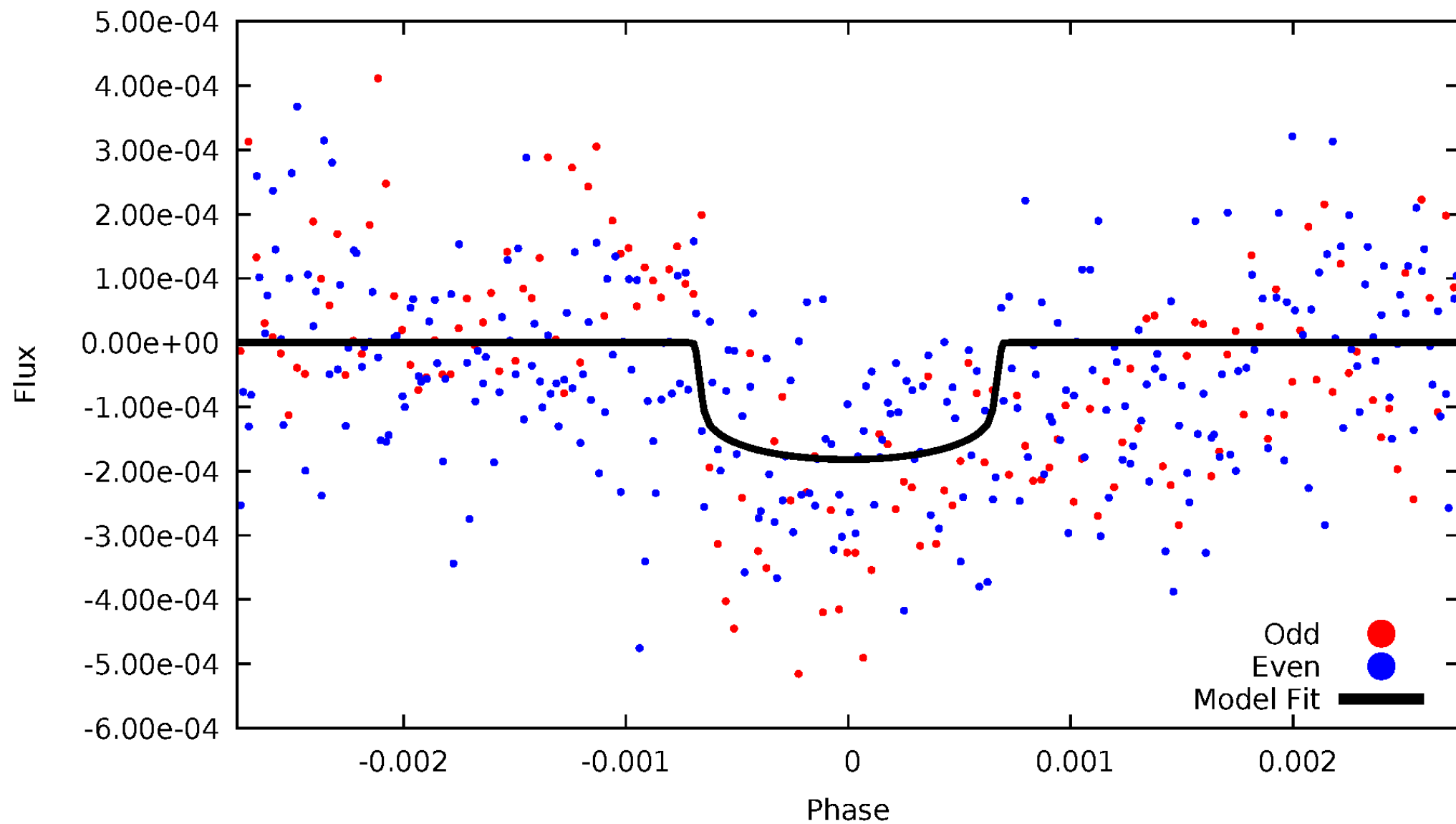


TCE 008905804-01



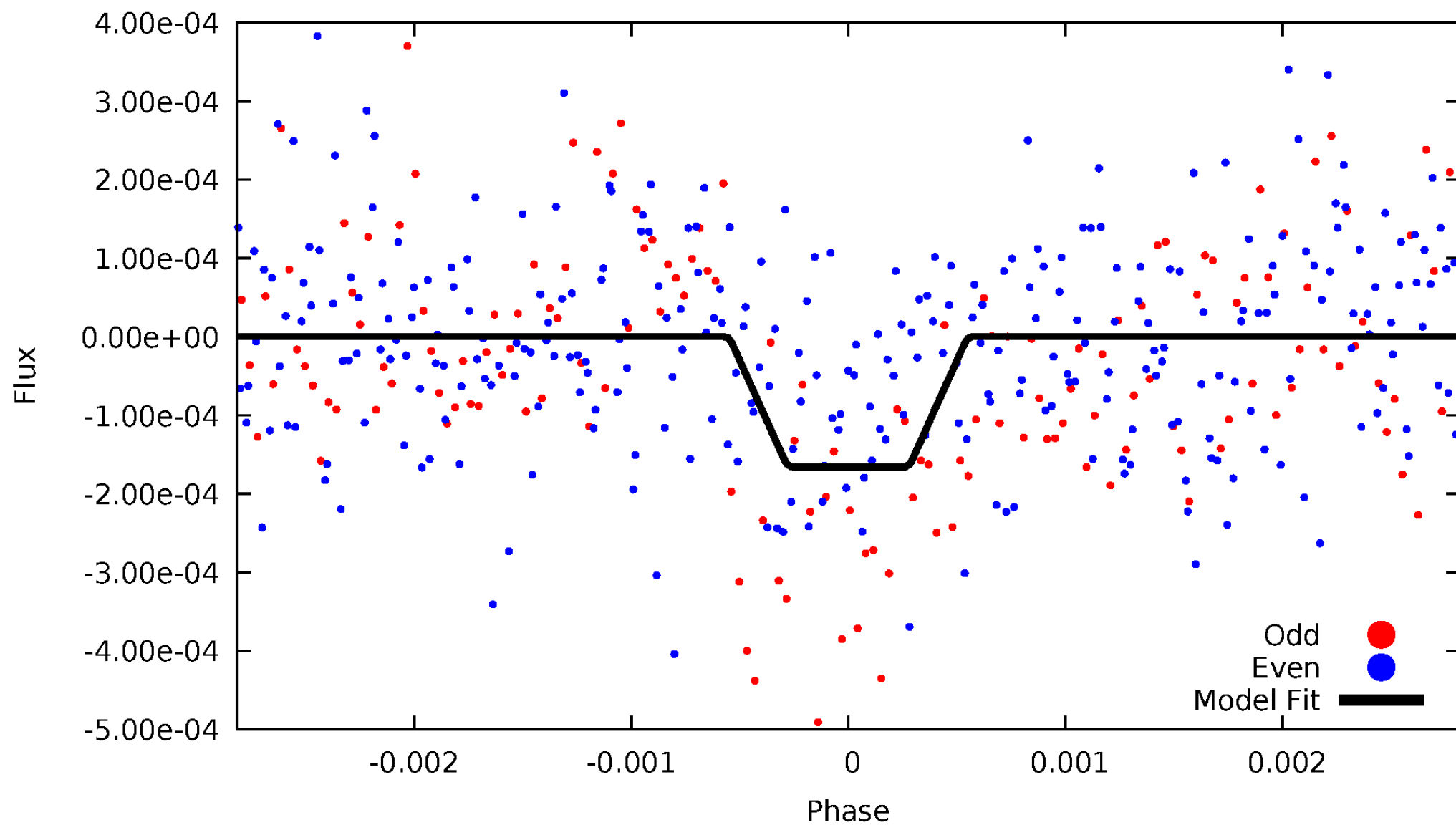
DV Odd/Even

TCE 008905804-01

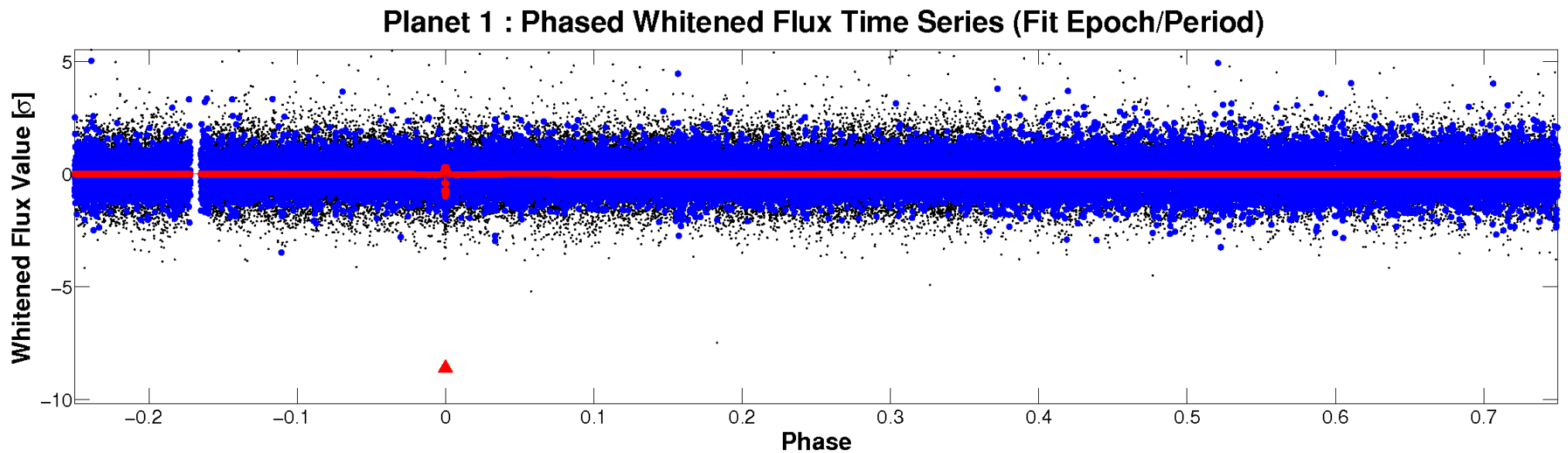
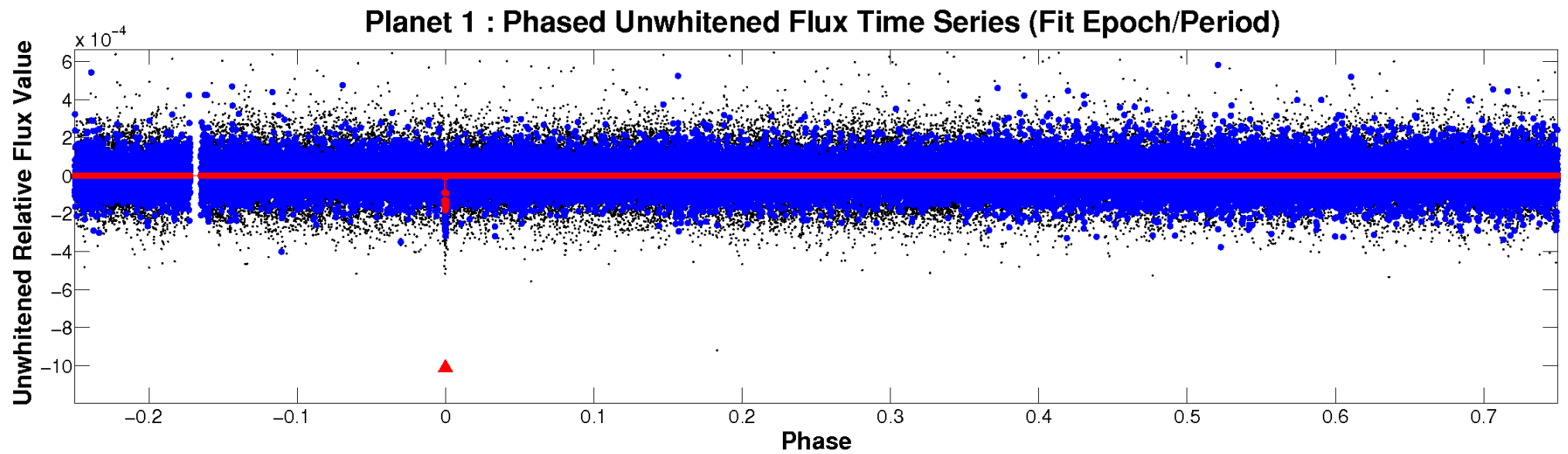


ALT Odd/Even

TCE 008905804-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008905804-01 P=561.804345 Days $T_0=262.448439$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008905804-01 P=561.804345 Days $T_0=262.448439$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

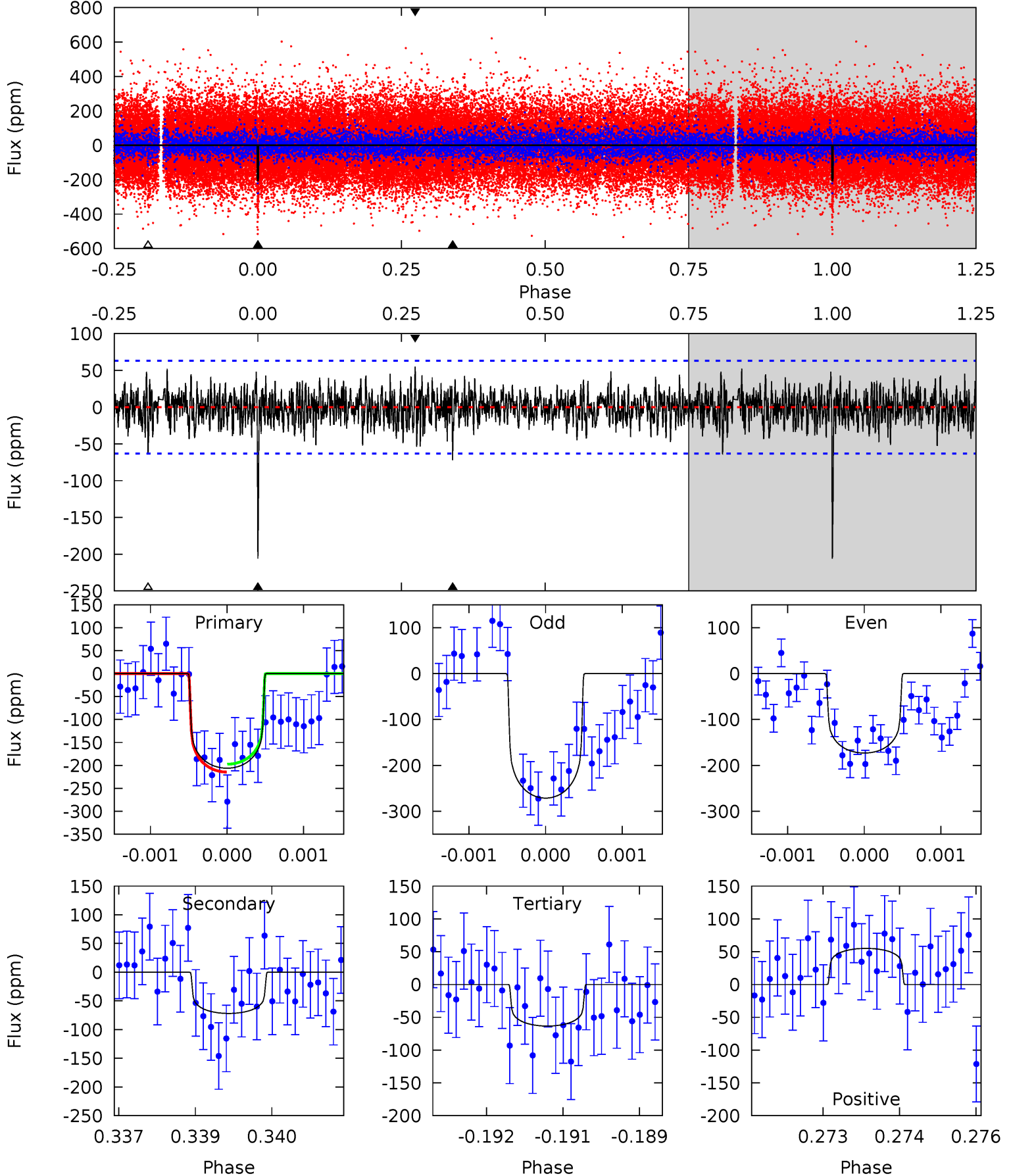
TCE 008905804-01 P=561.834355 Days $T_0=262.370965$ (BKJD)



DV Model-Shift Uniqueness Test

008905804-01, P = 561.804345 Days, E = 262.448439 Days

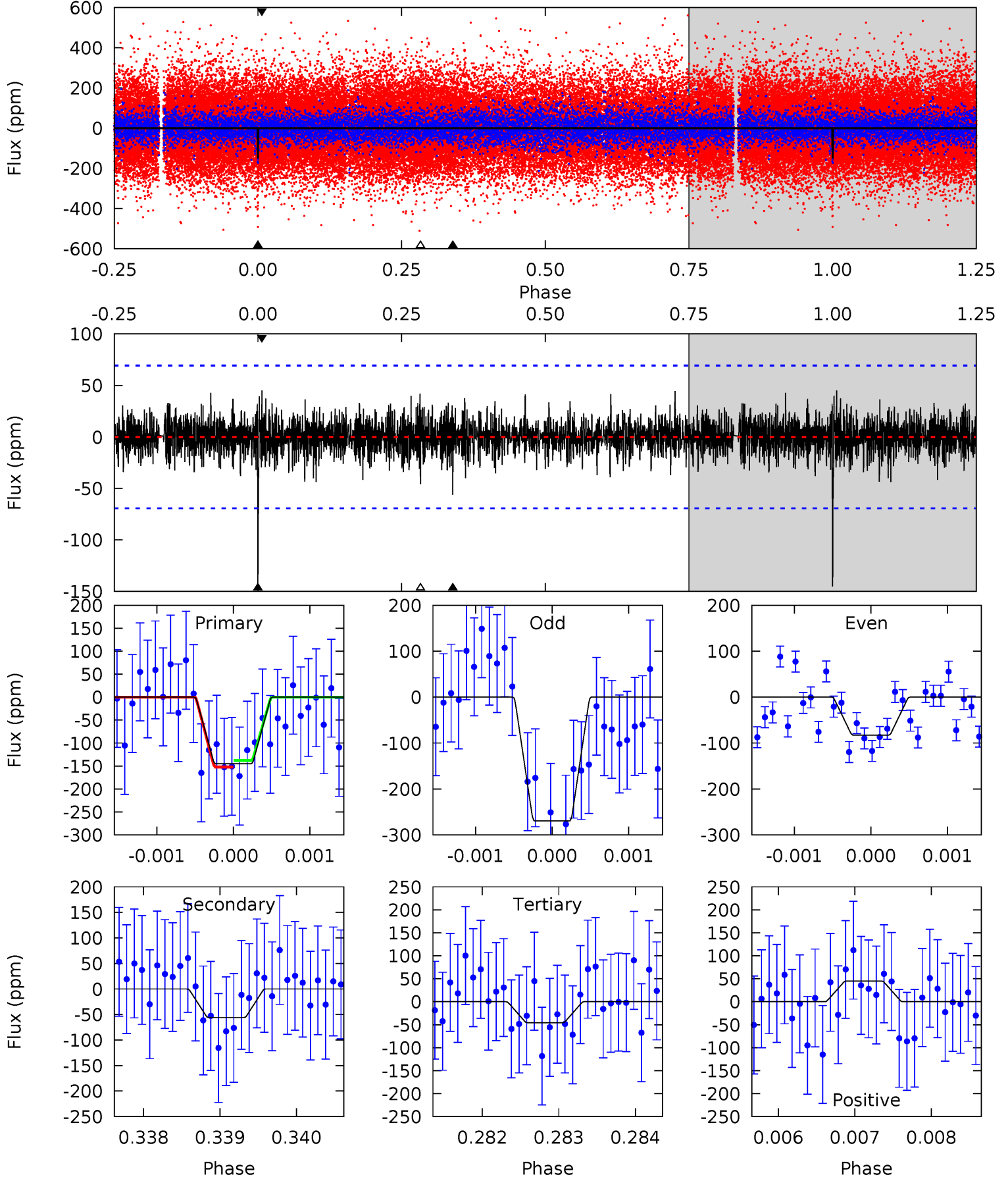
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	6.14	5.42	4.70	5.39	3.20	1.44	12.2	12.9	0.72	1.44	3.92	0.96	0.21	0.73



Alt Model-Shift Uniqueness Test

008905804-01, P = 561.834355 Days, E = 262.370965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	4.39	3.58	3.52	5.43	3.26	0.99	7.79	7.85	0.81	0.87	6.90	1.49	0.24	0.57



Stellar Parameters For KIC 008905804

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6434^{+181}_{-227}	$3.949^{+0.357}_{-0.153}$	$-0.180^{+0.250}_{-0.300}$	$1.972^{+0.527}_{-0.790}$	$1.260^{+0.193}_{-0.236}$	$0.232^{+0.654}_{-0.100}$
	+3%/-4%	+9%/-4%	+139%/-167%	+27%/-40%	+15%/-19%	+282%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008905804-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-72 ± 12	$2.72^{+1.01}_{-0.89}$	456^{+37}_{-52}	5157^{+826}_{-546}	10833^{+13804}_{-5083}
Alt.	-56 ± 13	$2.52^{+1.02}_{-0.79}$	455^{+39}_{-46}	5023^{+850}_{-564}	9735^{+11787}_{-4762}

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

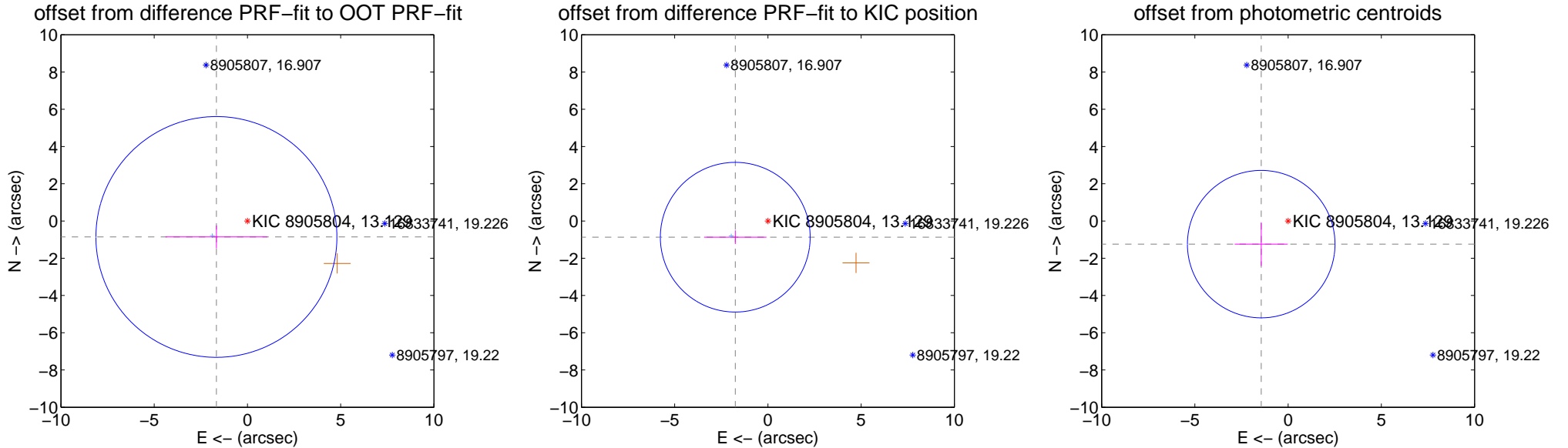
DV Centroid Data

Supplemental centroid analysis for 008905804-01. Kepler magnitude: 13.13. Transit SNR 9.25

There are 1 quarters with good PRF difference image offsets

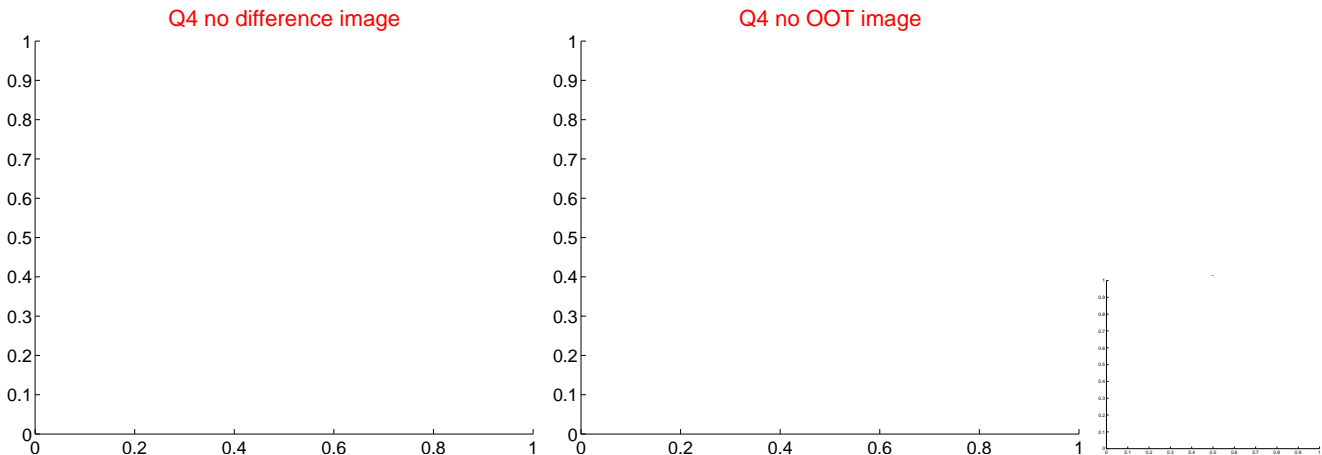
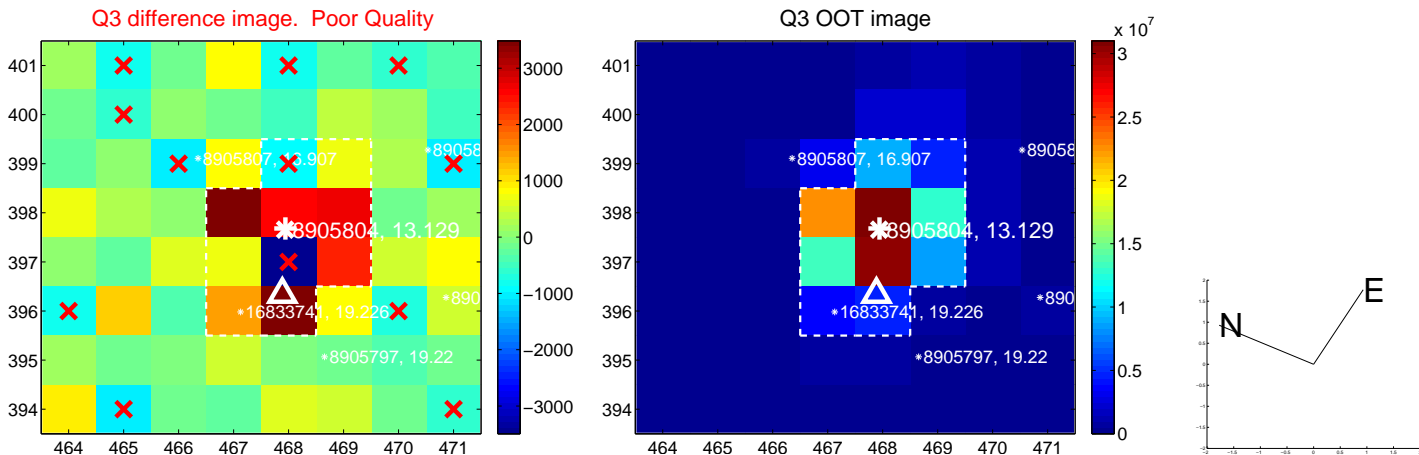
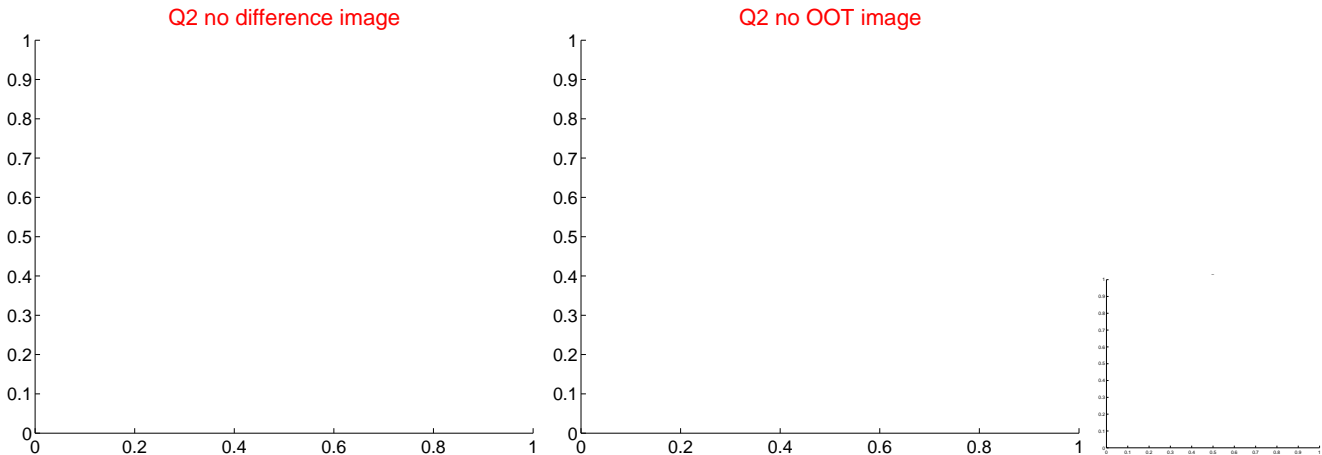
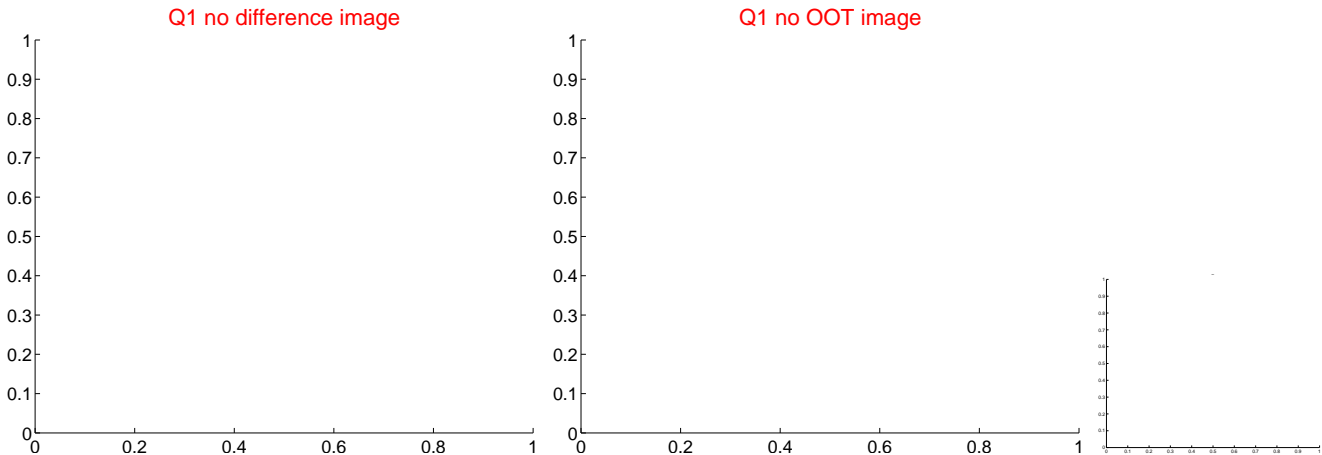
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.872 ± 2.155	0.87	1.665 ± 2.736	-0.856 ± 0.612
PRF-fit source offset from KIC position	1.956 ± 1.340	1.46	1.751 ± 1.675	-0.870 ± 0.368
photometric centroid source offset	1.90 ± 1.32	1.44	1.44 ± 1.42	-1.24 ± 1.17

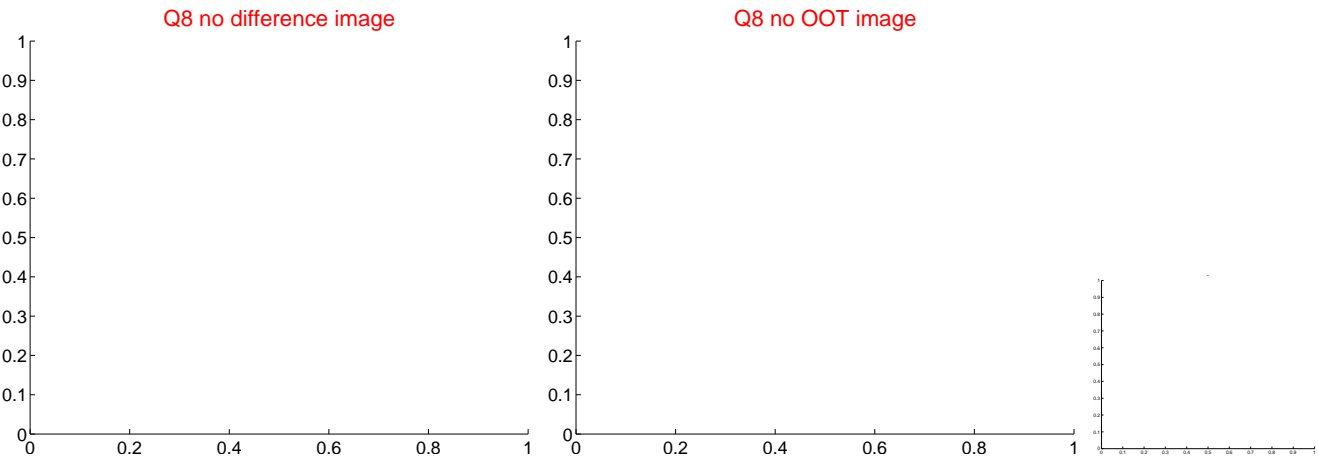
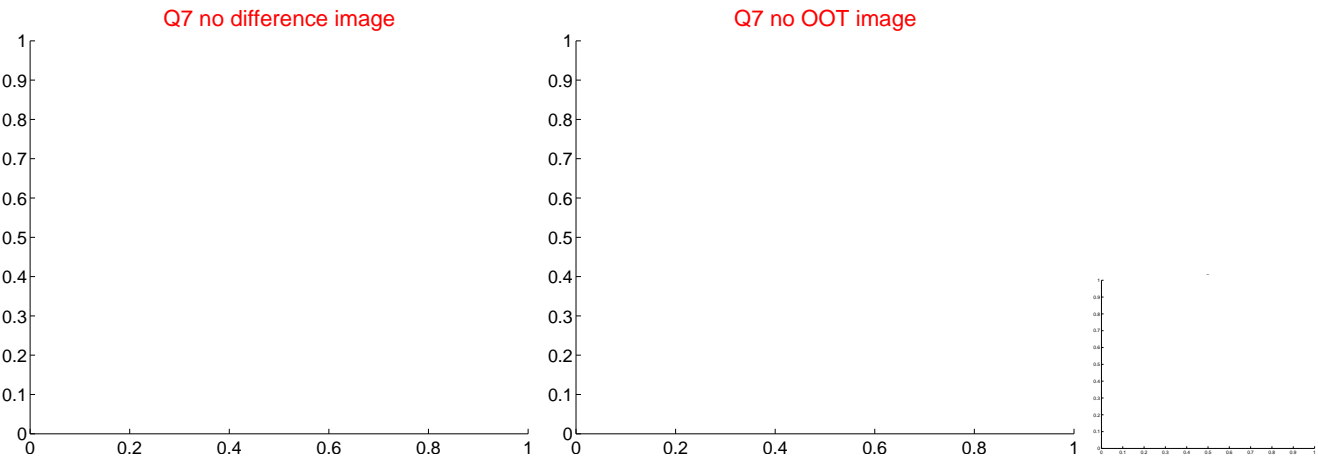
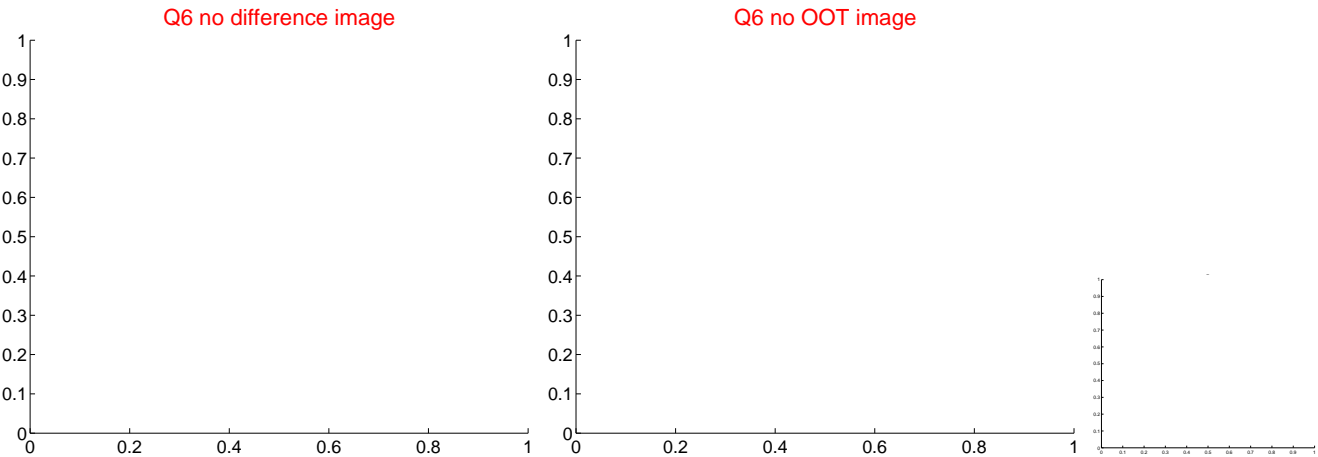
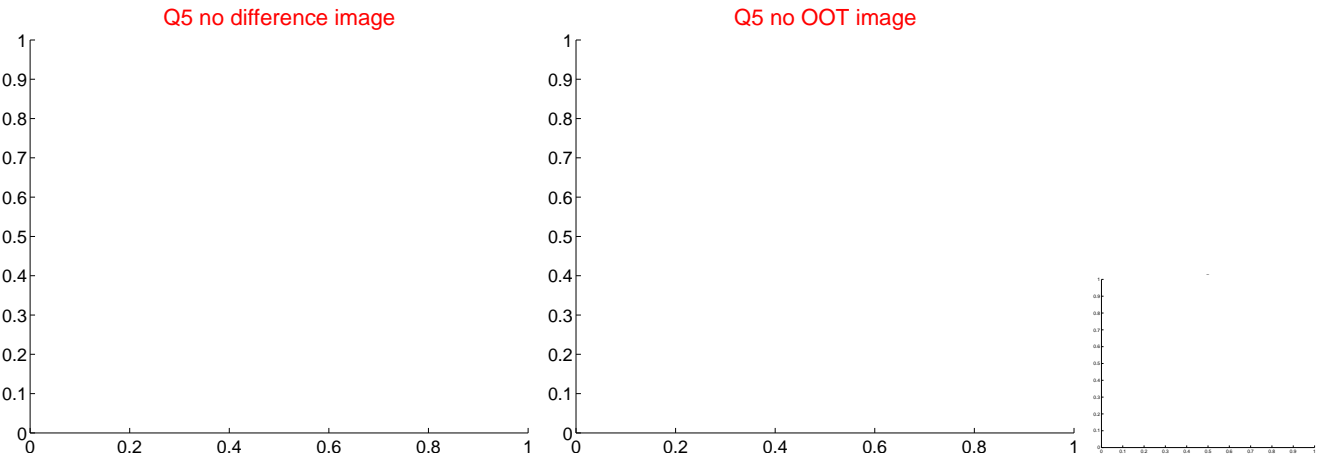


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

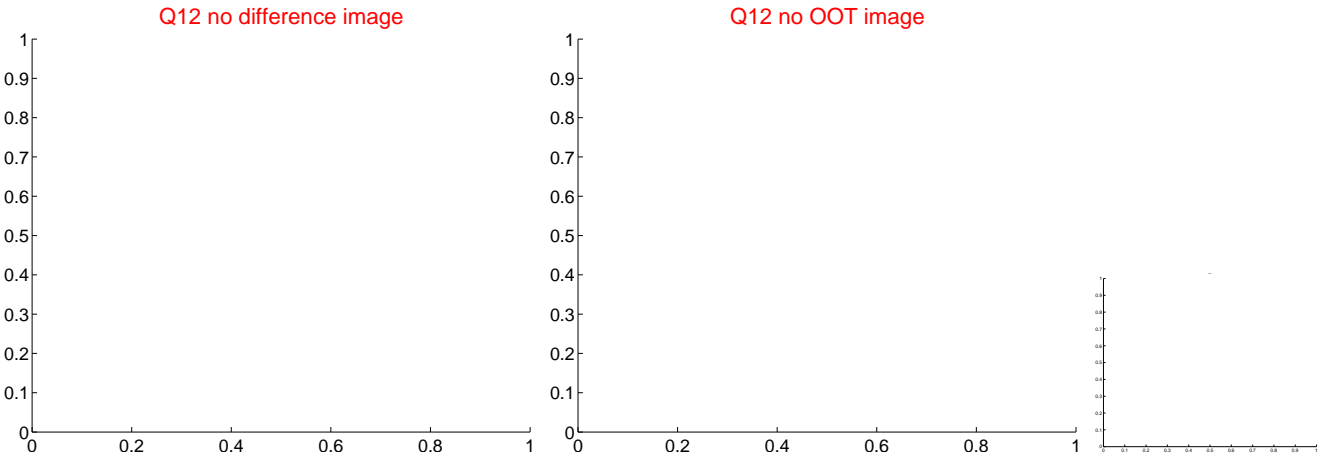
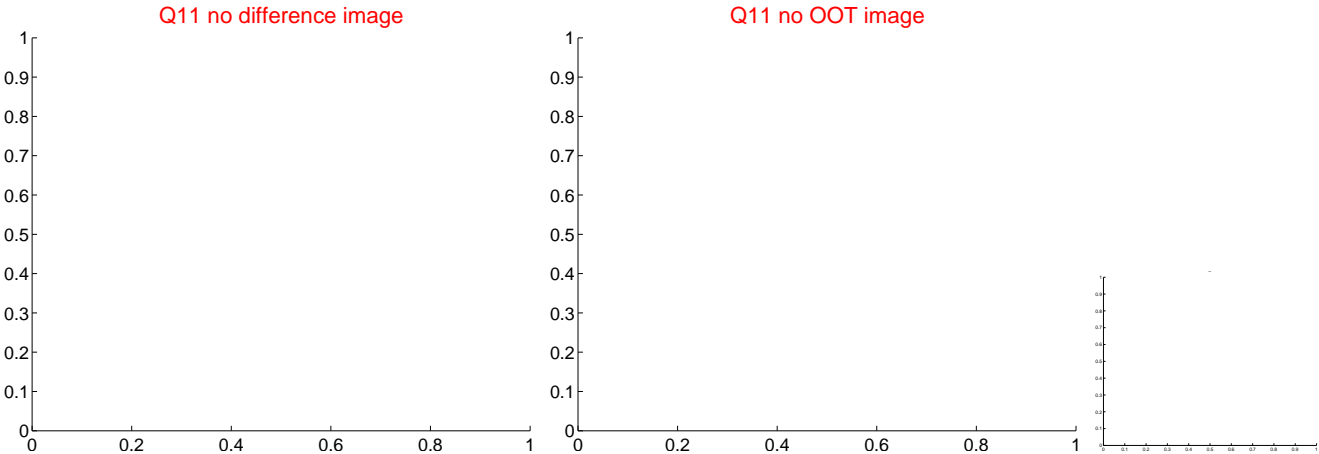
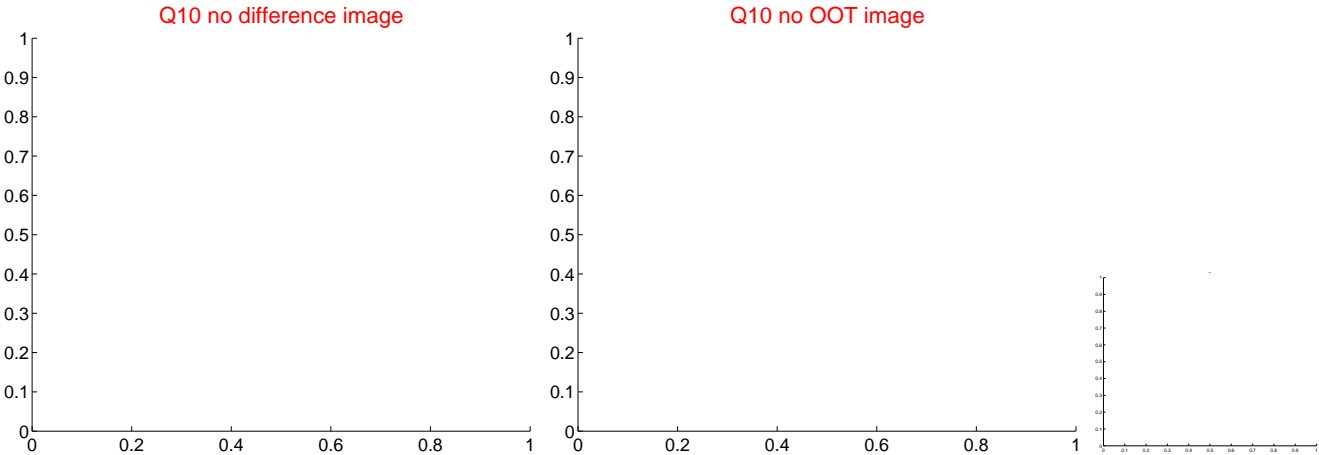
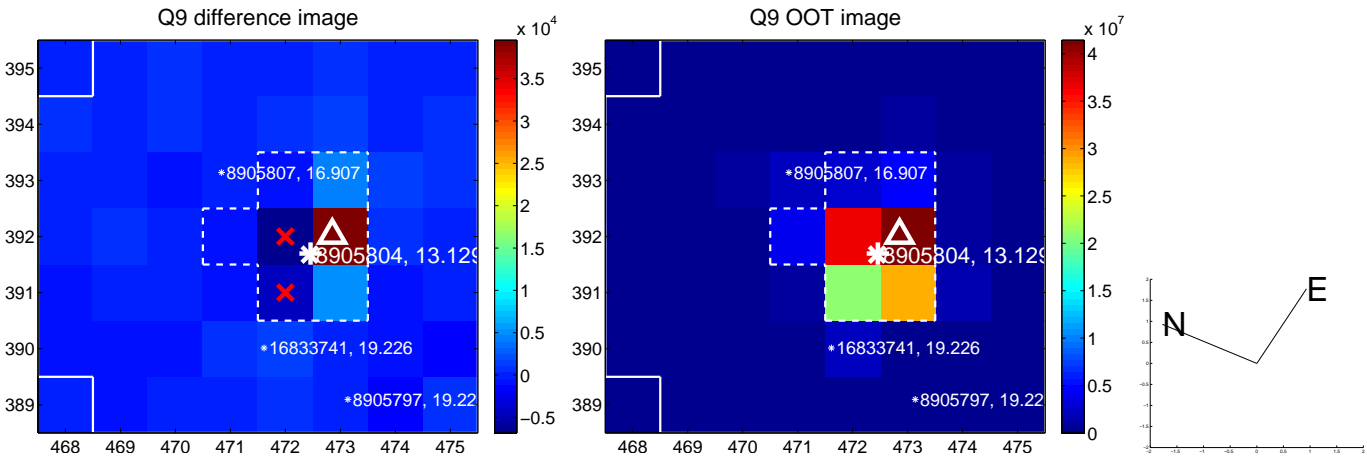
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



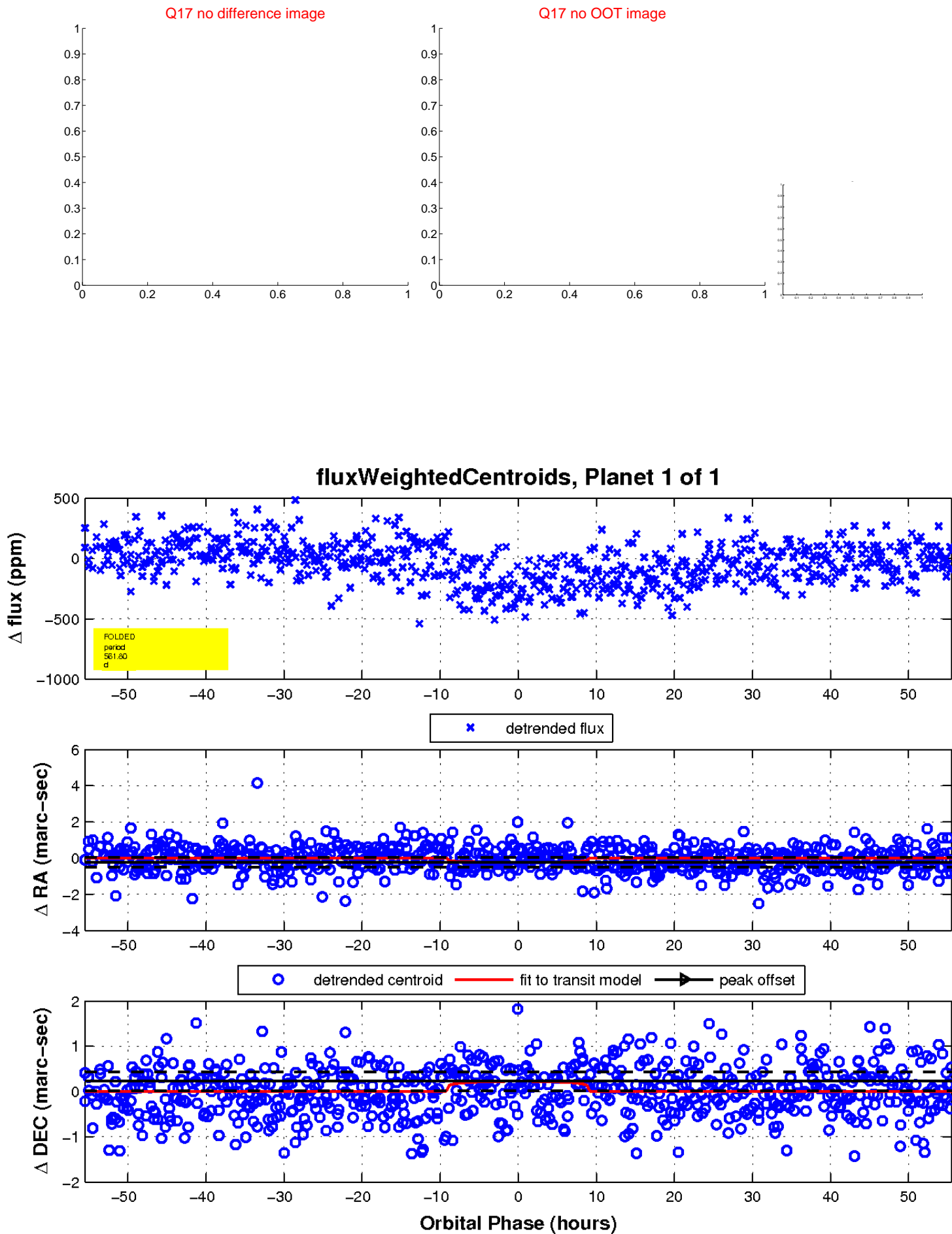
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

