

KIC 012007057

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})
012007057-01	OBS	No	585.783404	152.749990	159.0	12.946	9.3	8.2	2.02	6767	2.83	3.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012007057-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

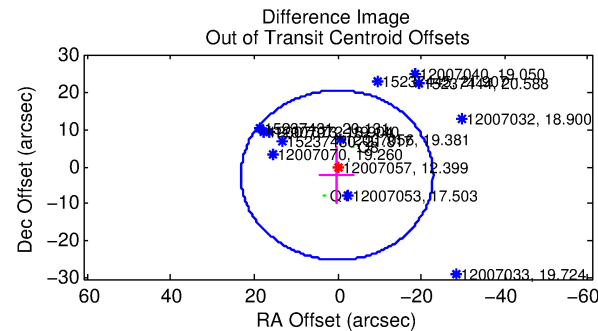
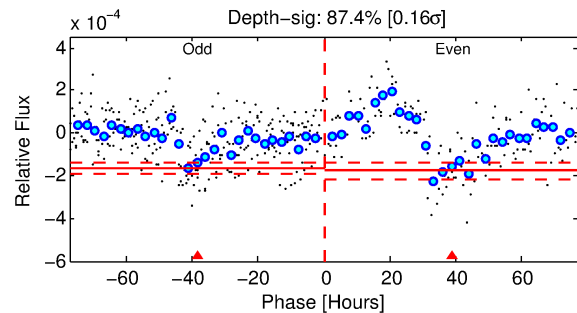
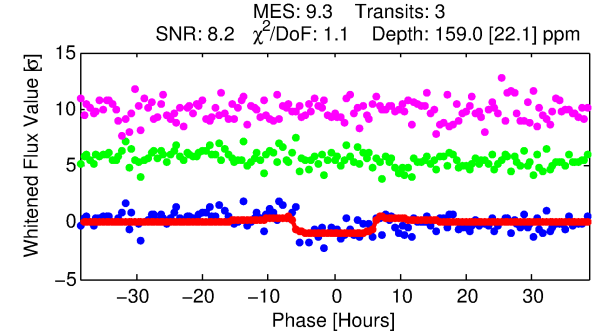
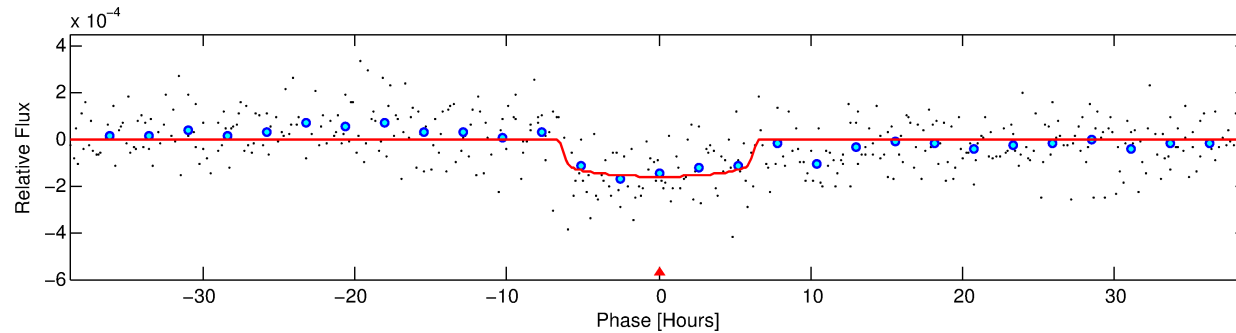
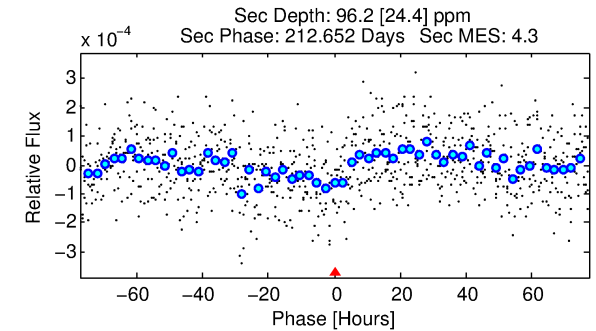
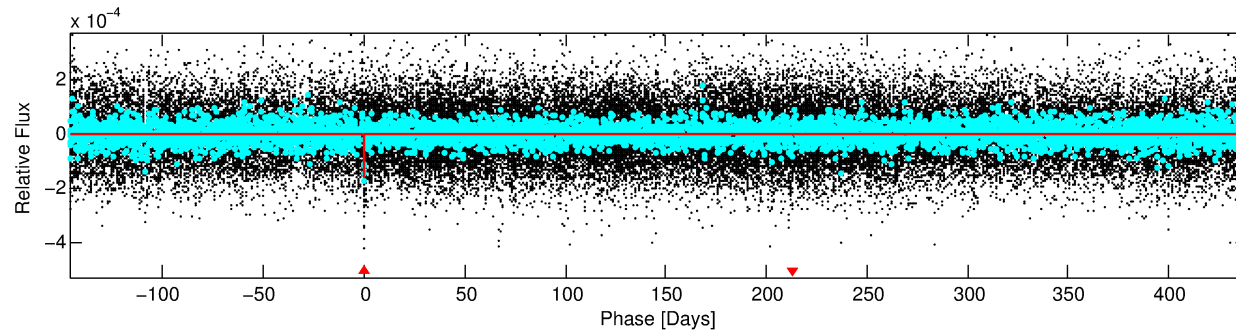
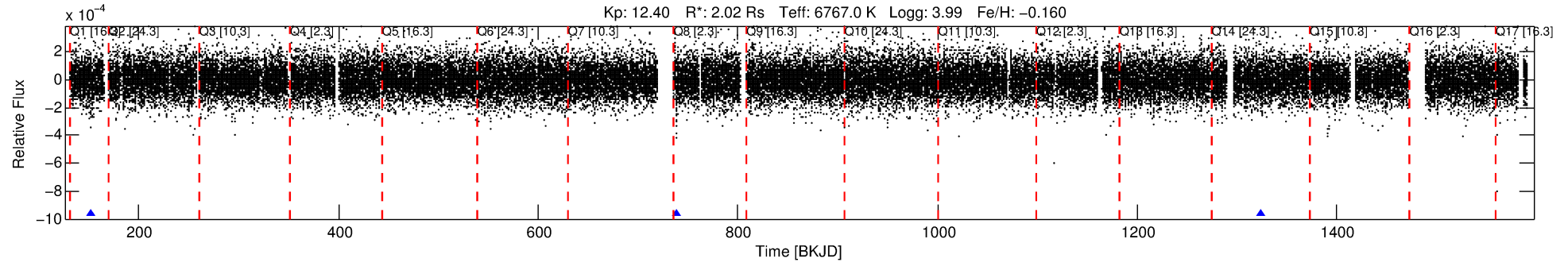
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012007057-01

No Significant Match Found

DV One-Page Summary

KIC: 12007057 Candidate: 1 of 1 Period: 585.783 d



DV Fit Results:

Period = 585.78340 [0.01098] d
Epoch = 152.7500 [0.0142] BKJD
Rp/R* = 0.0128 [0.0035]
a/R* = 207.69 [315.66]
b = 0.82 [0.62]
Seff = 3.19 [1.29]
Teq = 341 [34] K
Rp = 2.83 [1.11] Re
a = 1.5486 [0.3900] AU
Ag = 15881.98 [11271.98] [1.41σ]
Teffp = 5916 [906] K [6.15σ]

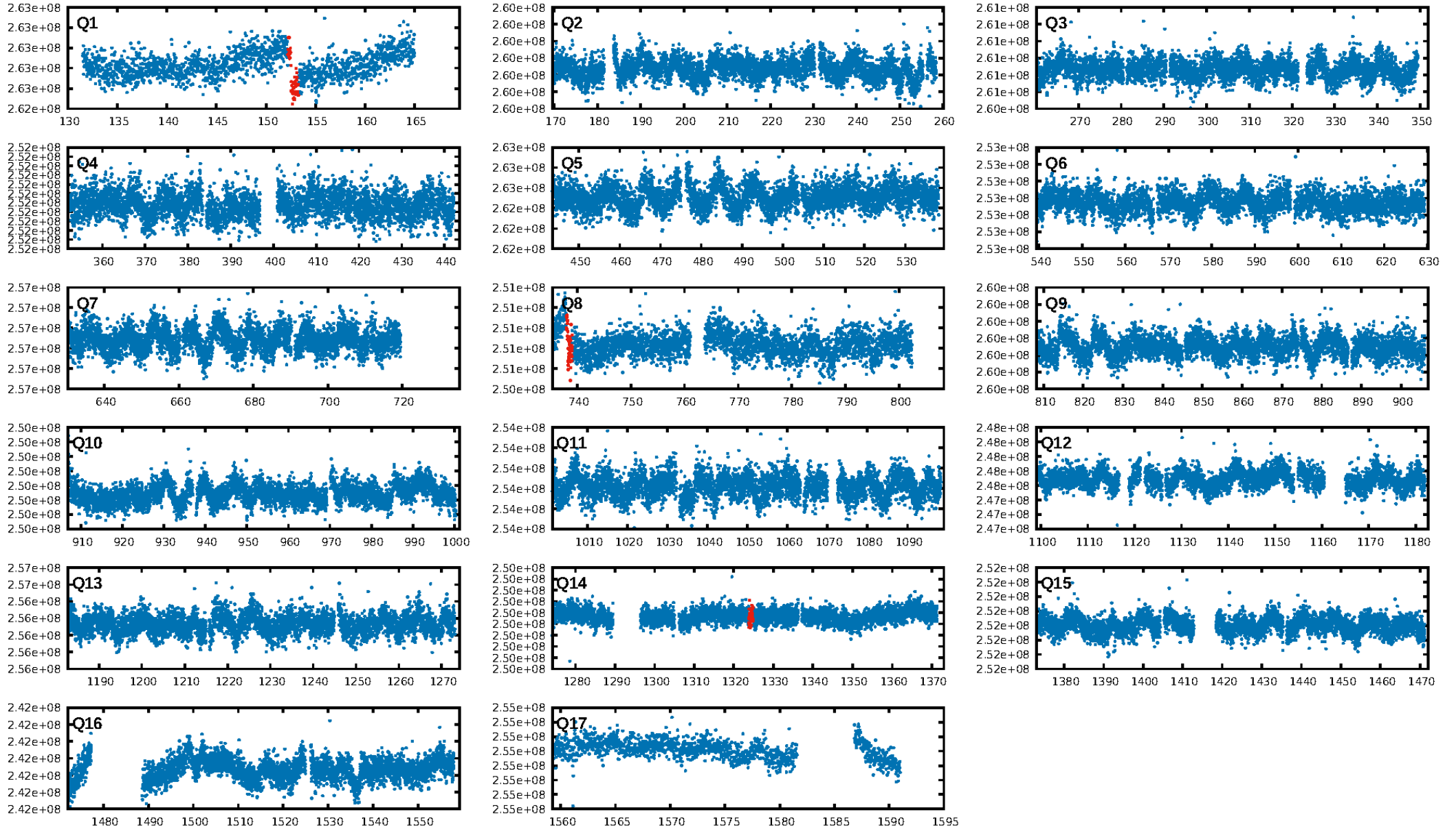
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 94.8%
Bootstrap-pfa: 1.14e-21
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.6513
Centroid-sig: 12.8%
Centroid-so: 2.012 arcsec [1.75σ]
OotOffset-rm: 2.308 arcsec [0.30σ]
KicOffset-rm: 2.093 arcsec [0.27σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

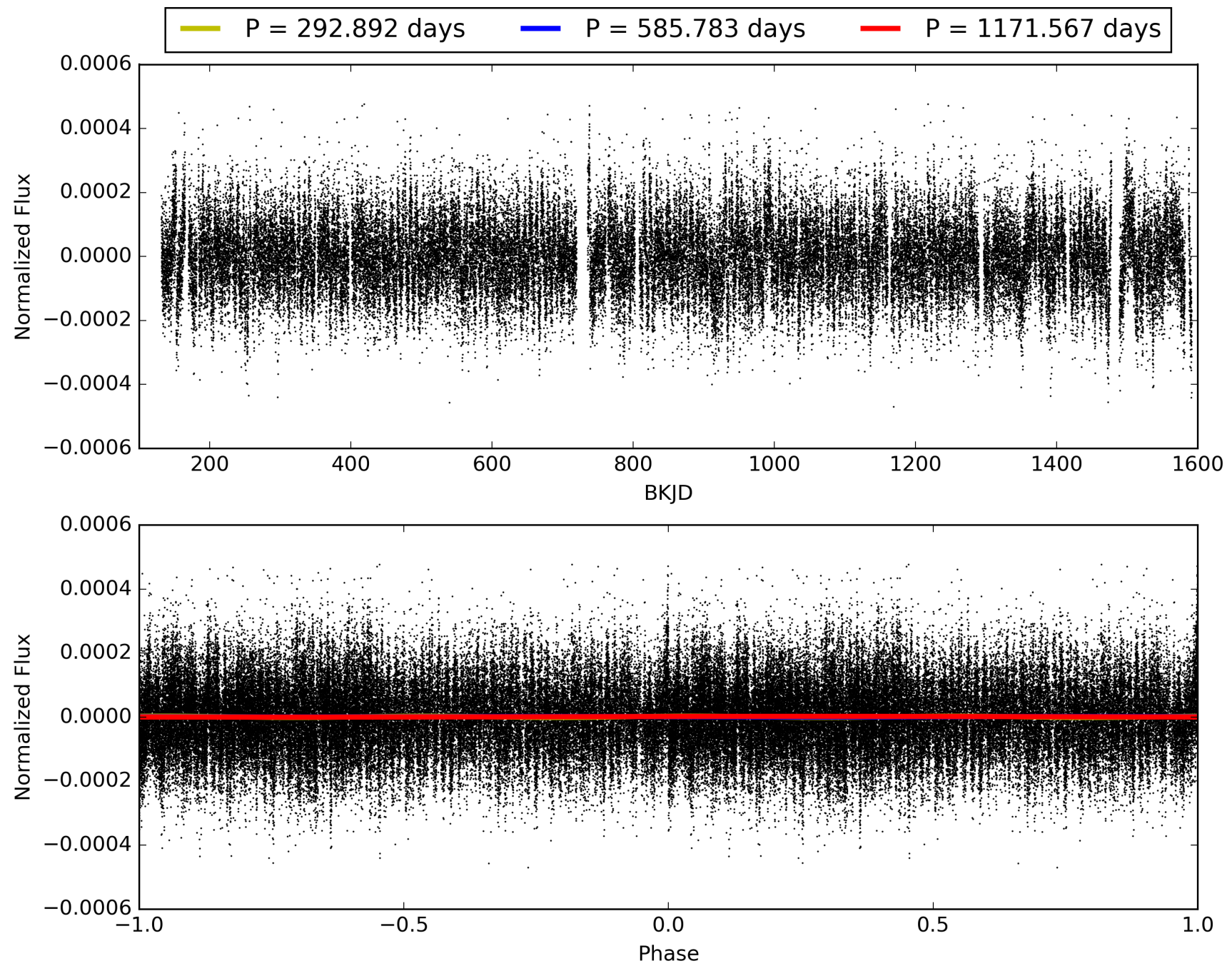
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:20:24 Z

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

TCE 012007057-01, PDC Light Curves

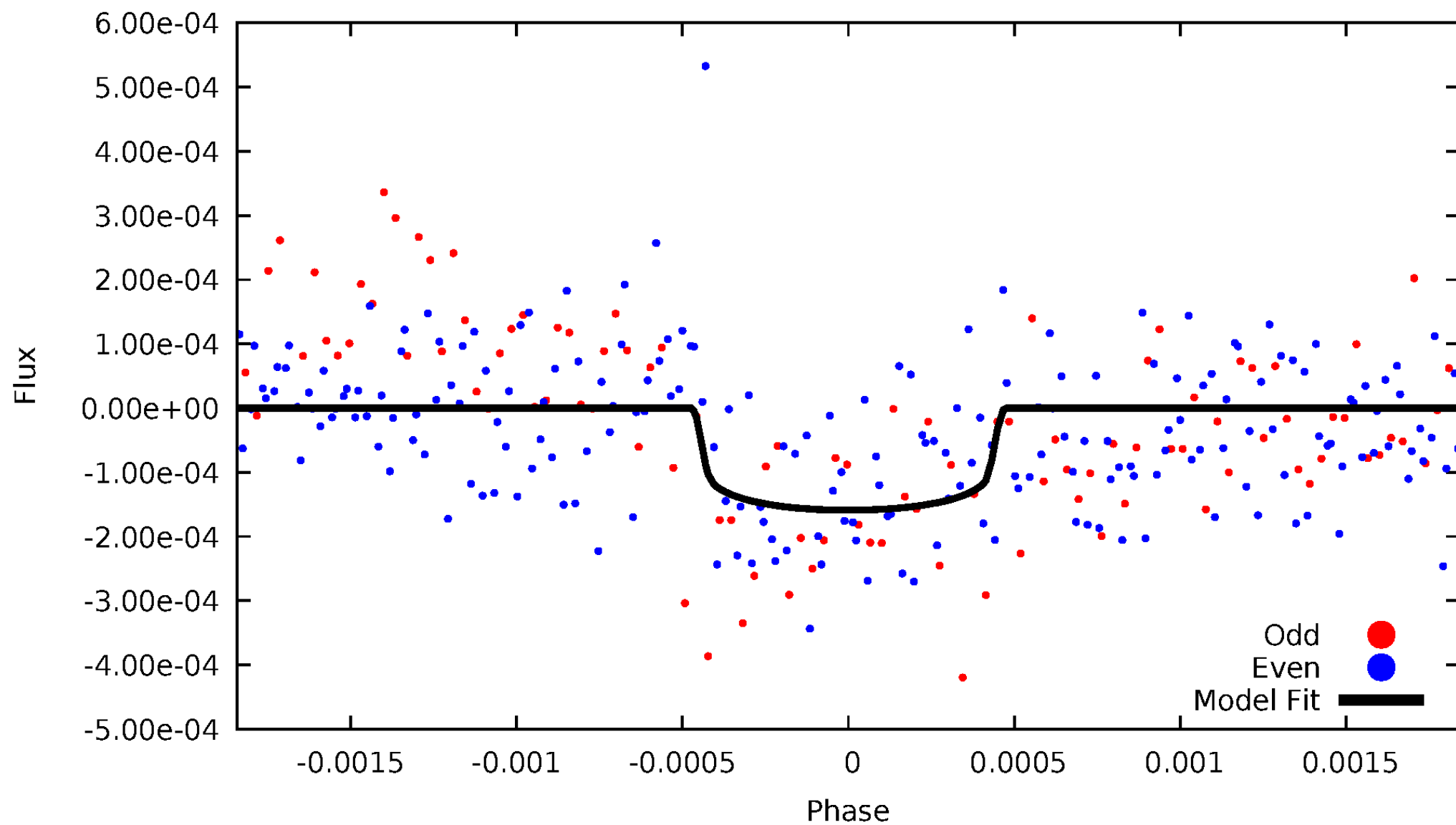


TCE 012007057-01



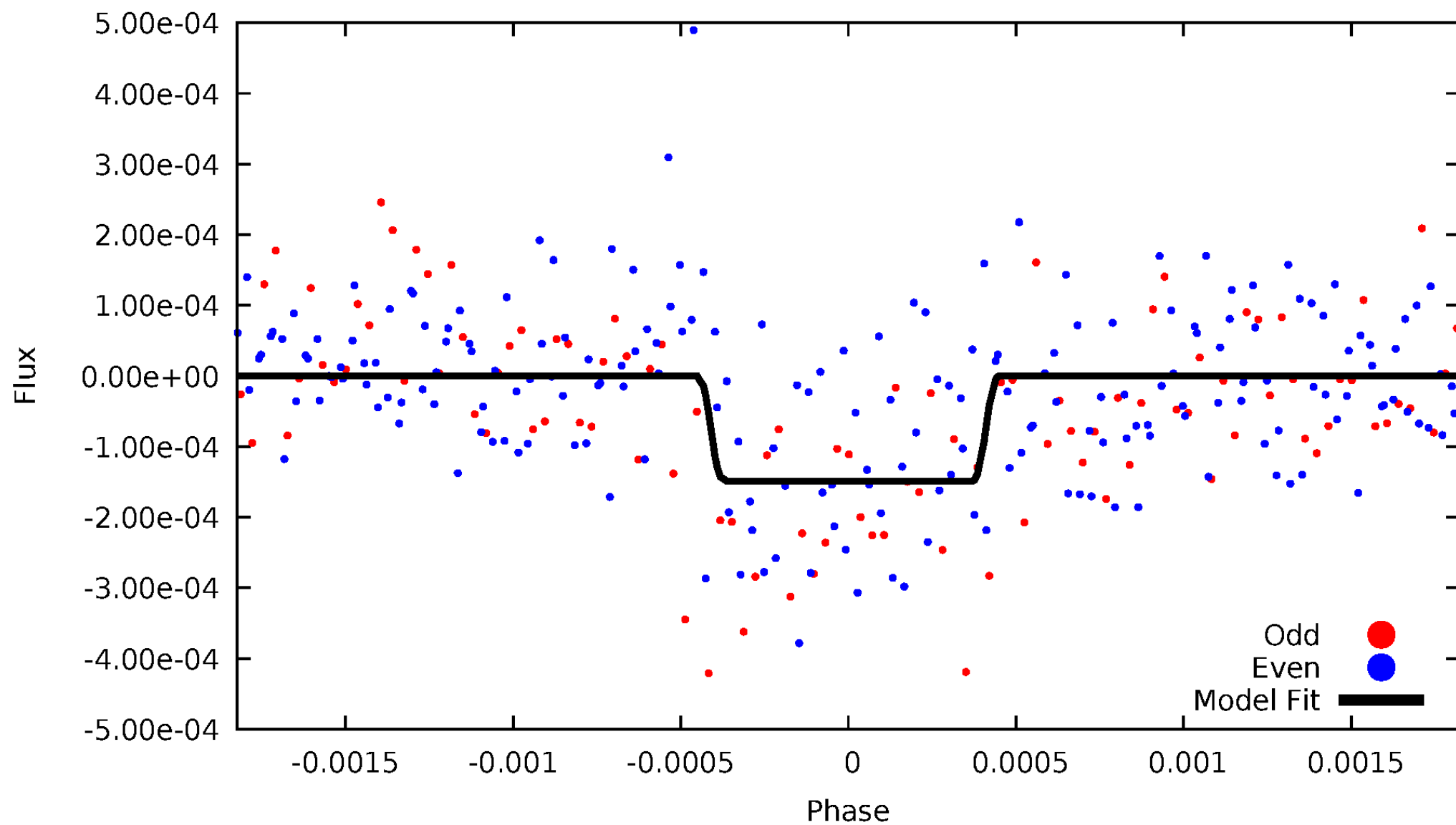
DV Odd/Even

TCE 012007057-01

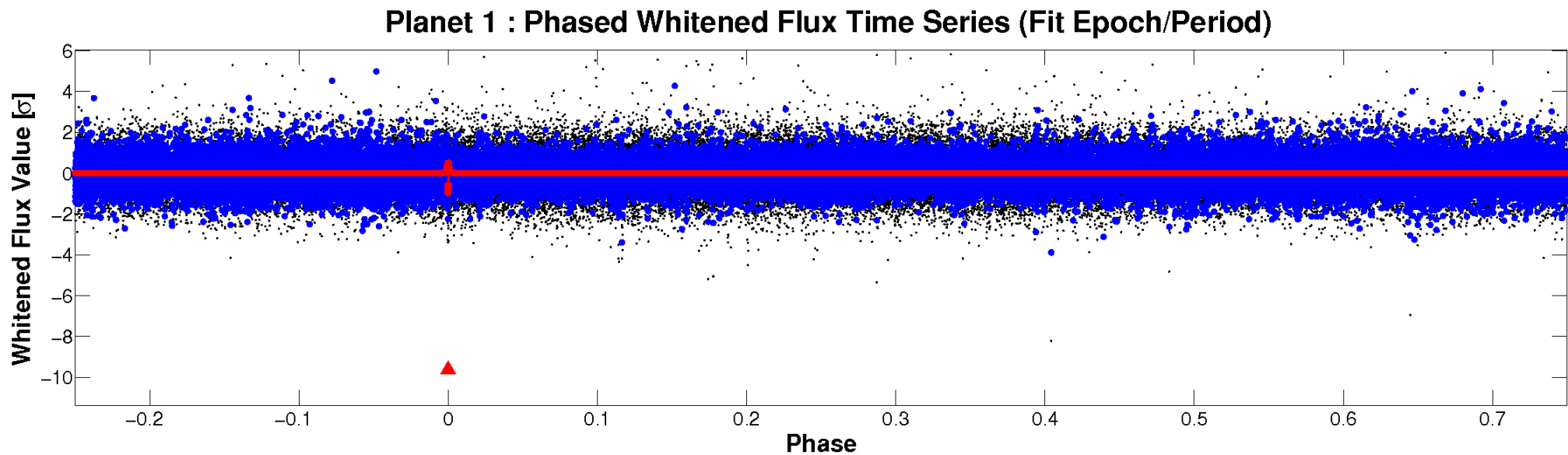
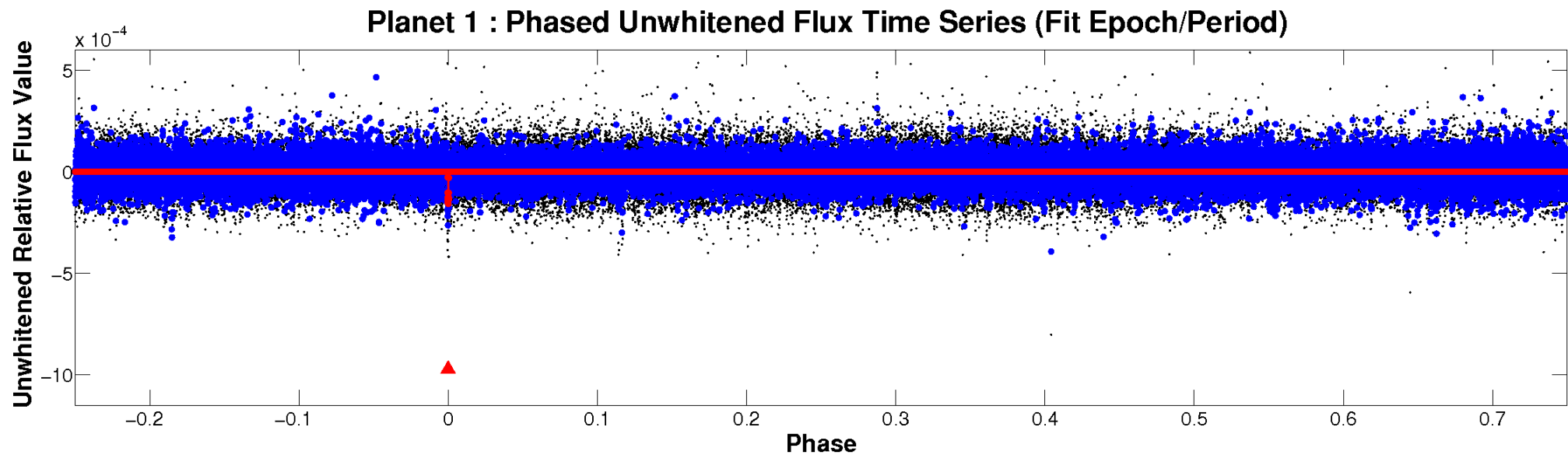


ALT Odd/Even

TCE 012007057-01

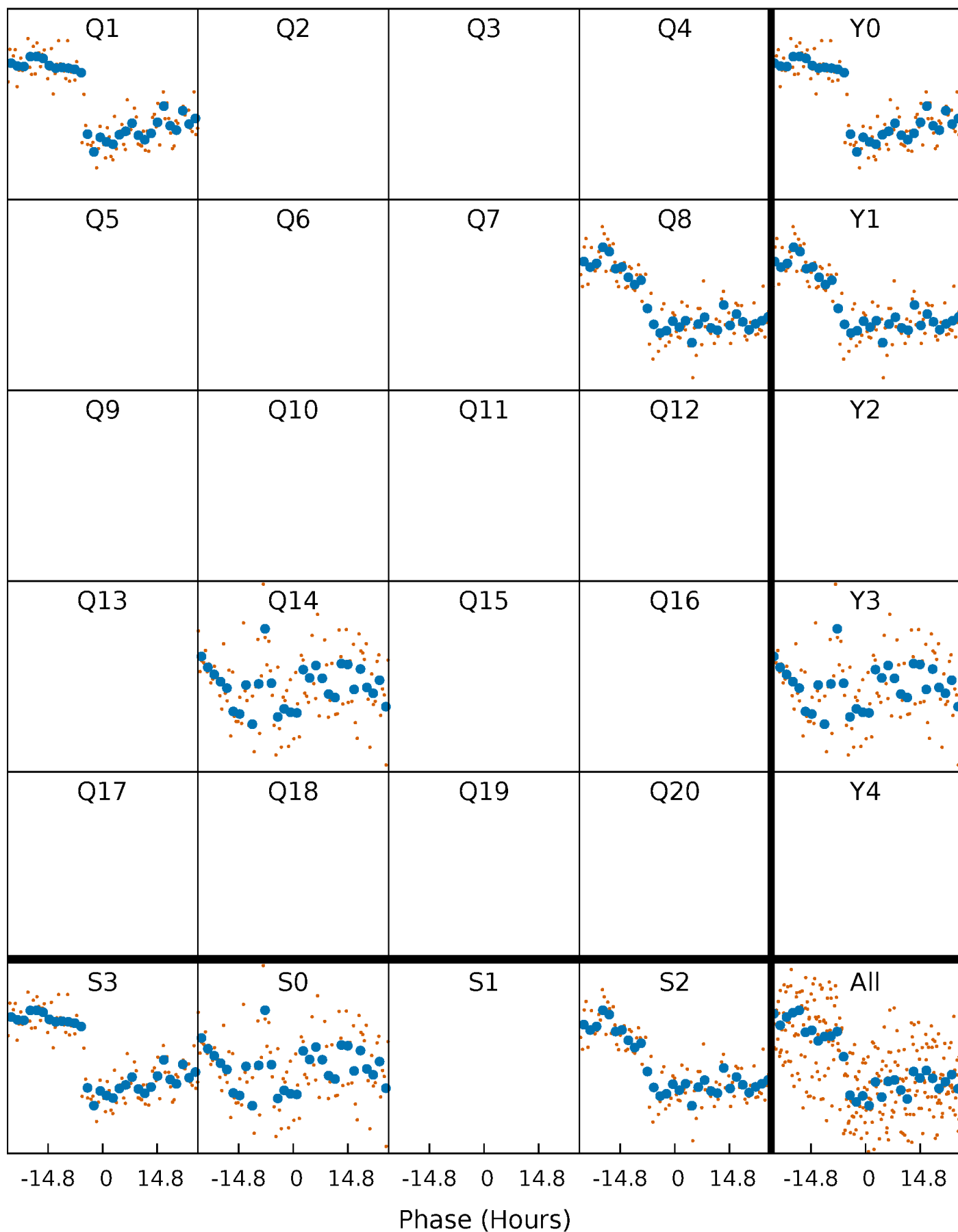


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 012007057-01 P=585.783404 Days $T_0=152.749990$ (BKJD)



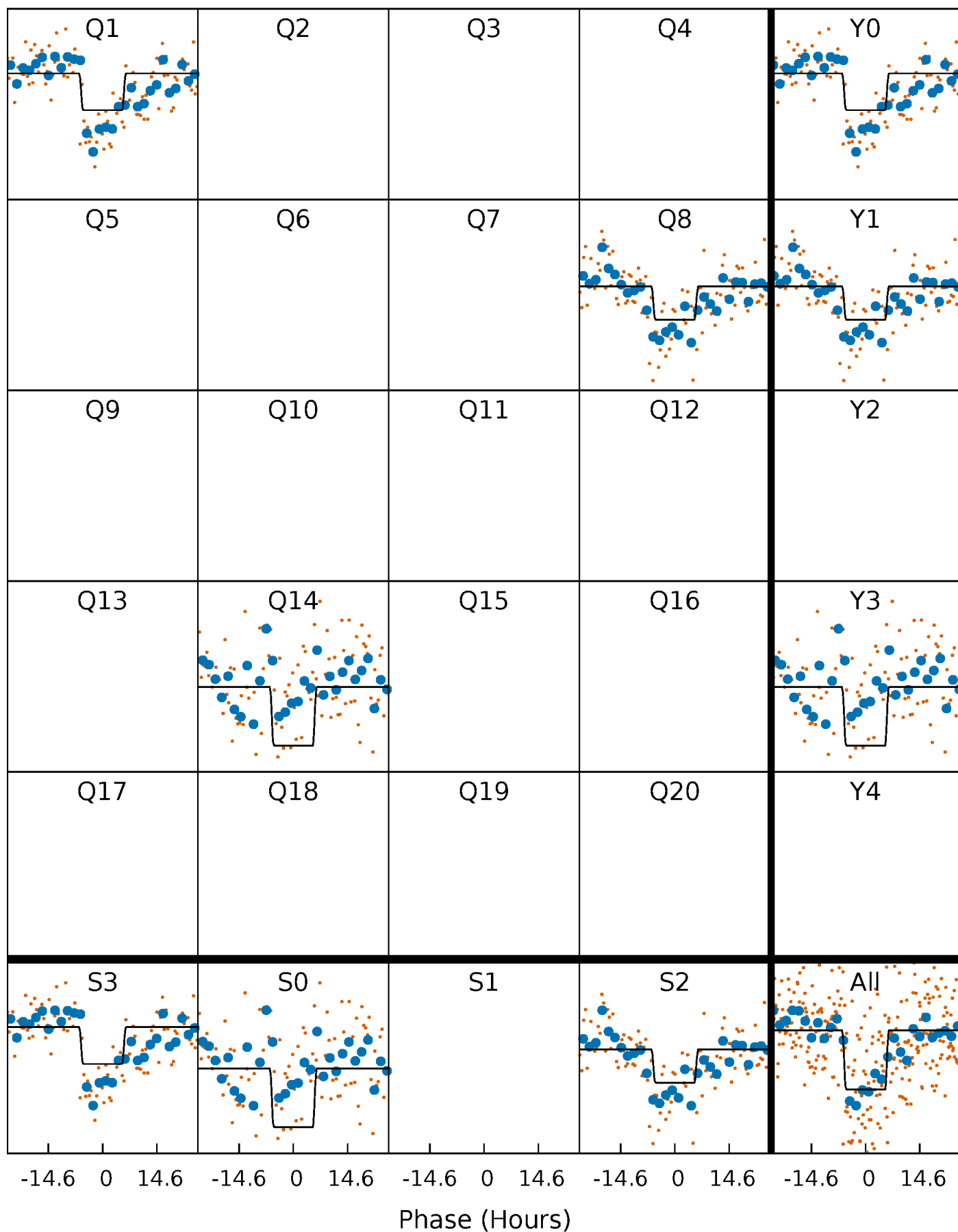
DV Quarter-Phased Transit Curves

TCE 012007057-01 P=585.783404 Days $T_0=152.749990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

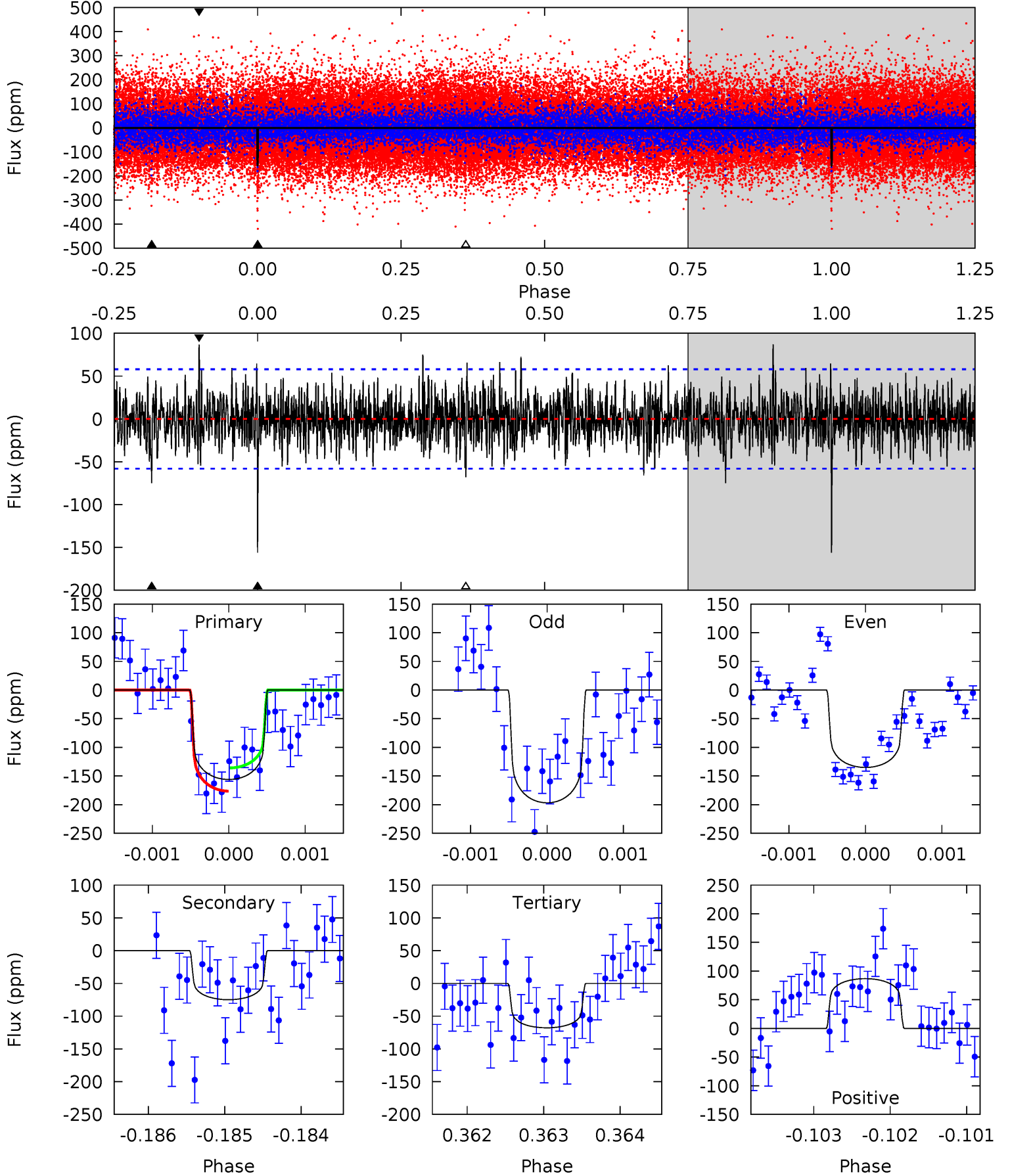
TCE 012007057-01 P=585.762053 Days $T_0=152.768043$ (BKJD)



DV Model-Shift Uniqueness Test

012007057-01, P = 585.783404 Days, E = 152.749990 Days

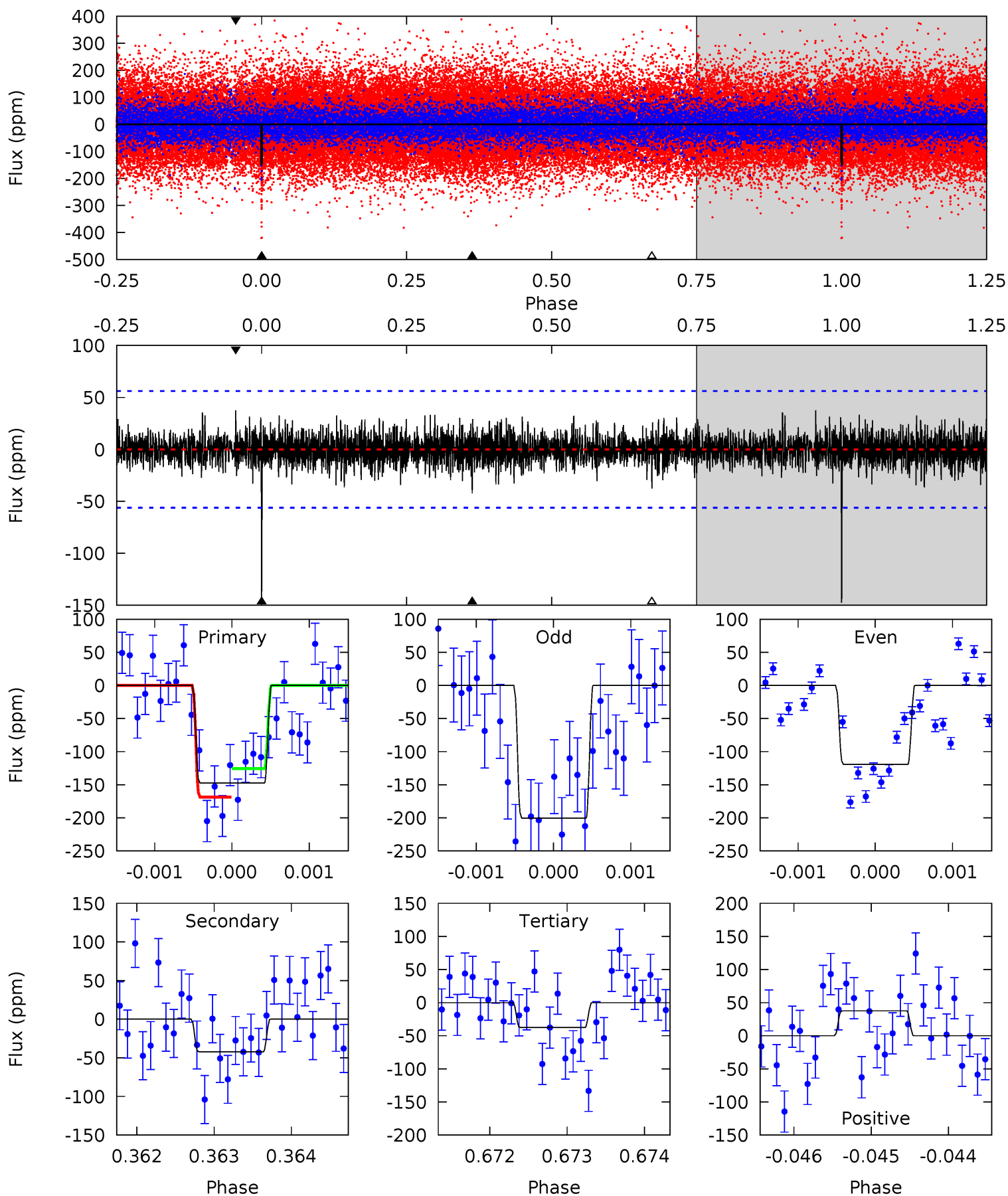
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	7.06	6.39	8.18	5.46	3.31	1.90	8.32	6.53	0.67	-1.12	2.78	0.82	0.36	1.91



Alt Model-Shift Uniqueness Test

012007057-01, $P = 585.762053$ Days, $E = 152.768043$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	4.12	3.67	3.66	5.47	3.33	0.99	10.7	10.7	0.45	0.45	3.71	0.74	0.20	2.09



Stellar Parameters For KIC 012007057

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6767^{+182}_{-223}	$3.987^{+0.216}_{-0.126}$	$-0.160^{+0.300}_{-0.300}$	$2.019^{+0.418}_{-0.574}$	$1.445^{+0.183}_{-0.275}$	$0.247^{+0.347}_{-0.093}$
	+3%/-3%	+5%/-3%	+188%/-188%	+21%/-28%	+13%/-19%	+140%/-37%
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 012007057-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-75 ± 11	$2.73^{+0.85}_{-0.79}$	472^{+30}_{-36}	5579^{+960}_{-663}	13191^{+14252}_{-5675}
Alt.	-42 ± 10	$2.68^{+0.83}_{-0.89}$	473^{+34}_{-34}	4984^{+879}_{-545}	7659^{+9777}_{-3319}

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

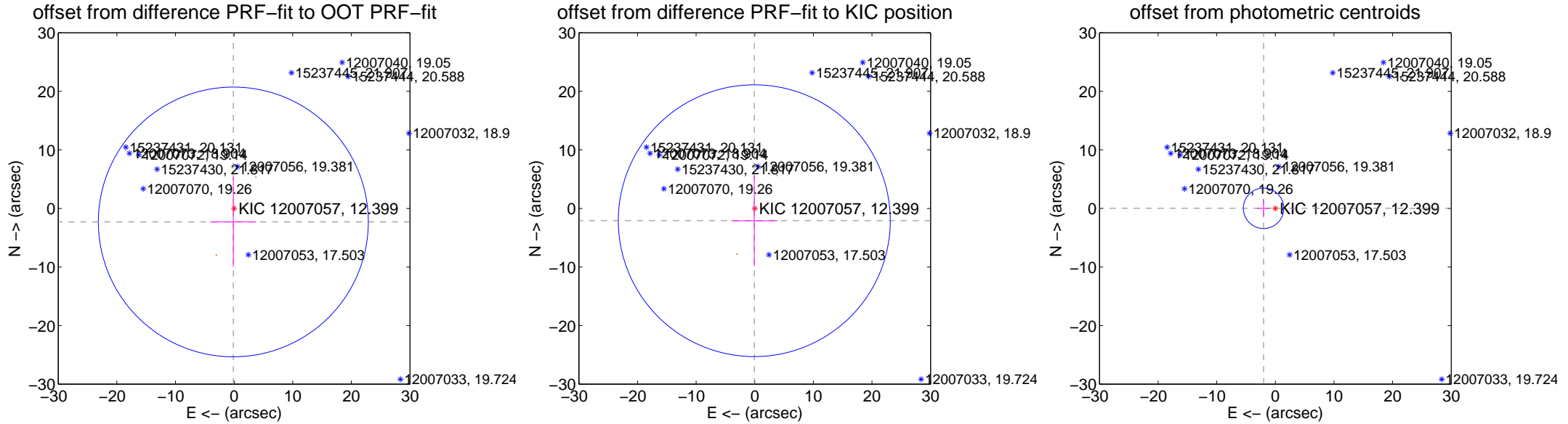
DV Centroid Data

Supplemental centroid analysis for 012007057-01. Kepler magnitude: 12.40. Transit SNR 8.17

There are 1 quarters with good PRF difference image offsets

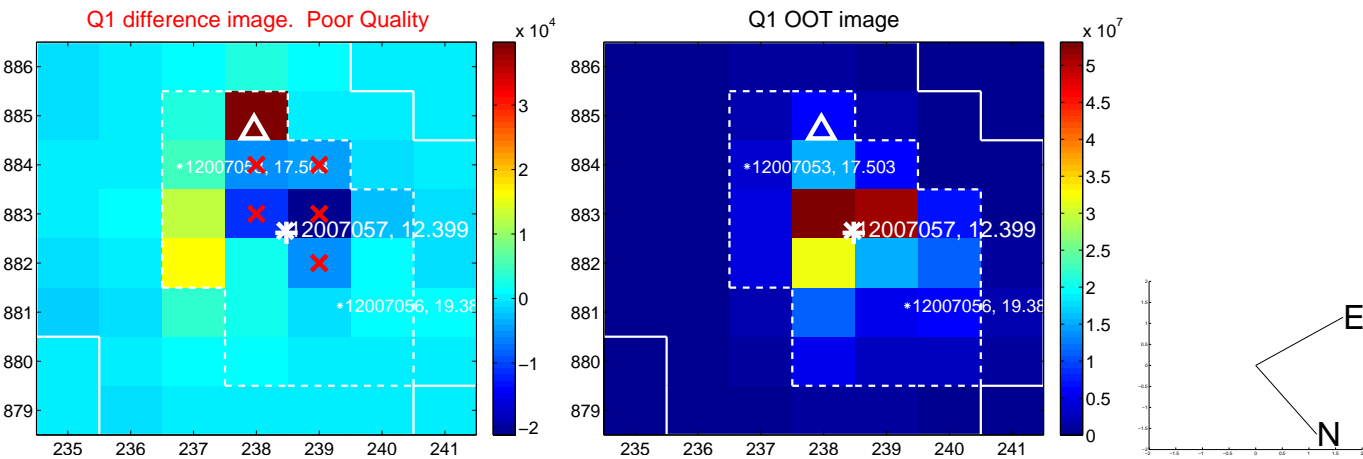
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.308 ± 7.675	0.30	0.133 ± 3.914	-2.304 ± 7.685
PRF-fit source offset from KIC position	2.093 ± 7.733	0.27	0.074 ± 3.944	-2.092 ± 7.737
photometric centroid source offset	2.01 ± 1.15	1.75	2.01 ± 1.15	0.02 ± 1.54

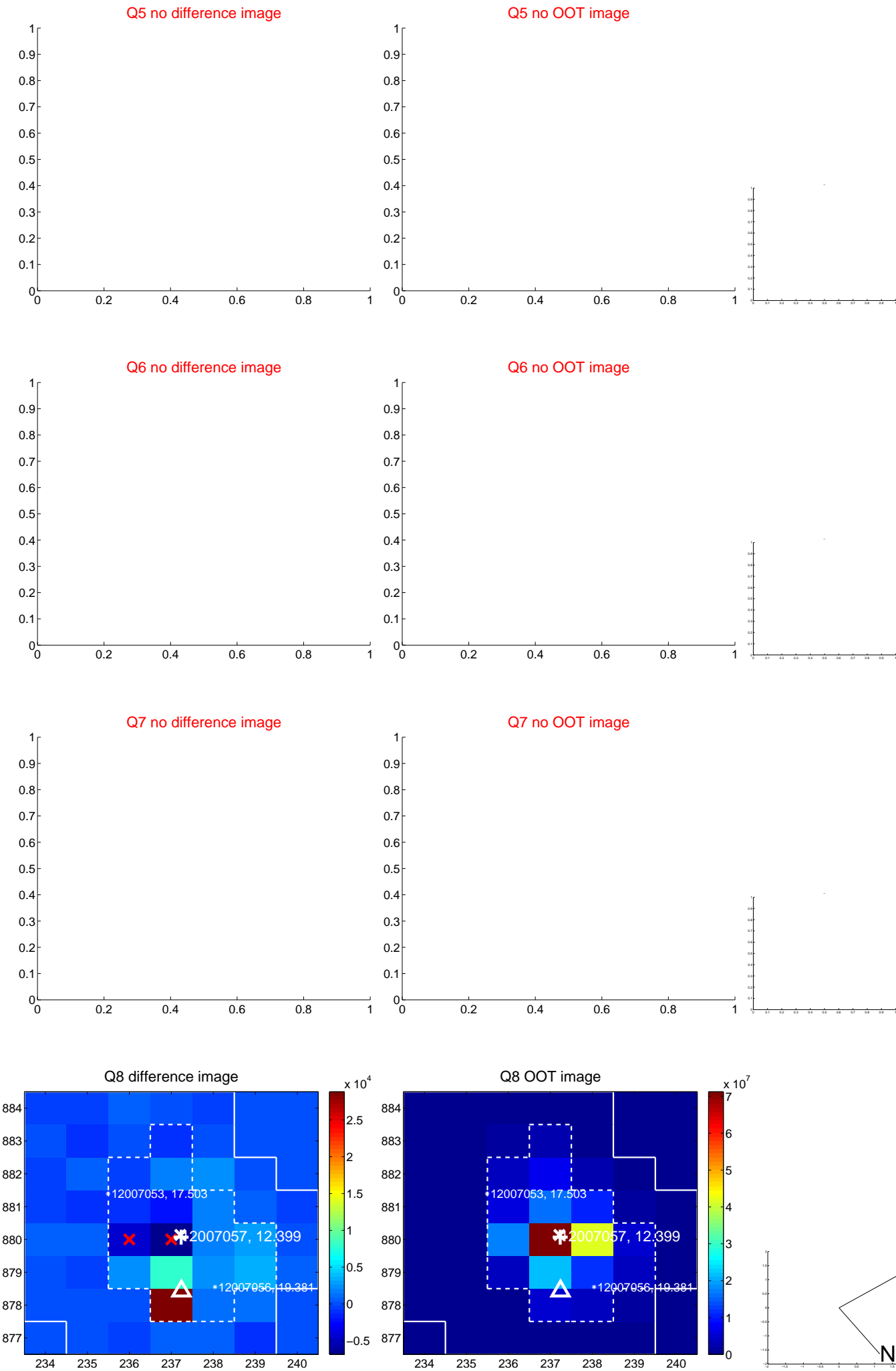


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



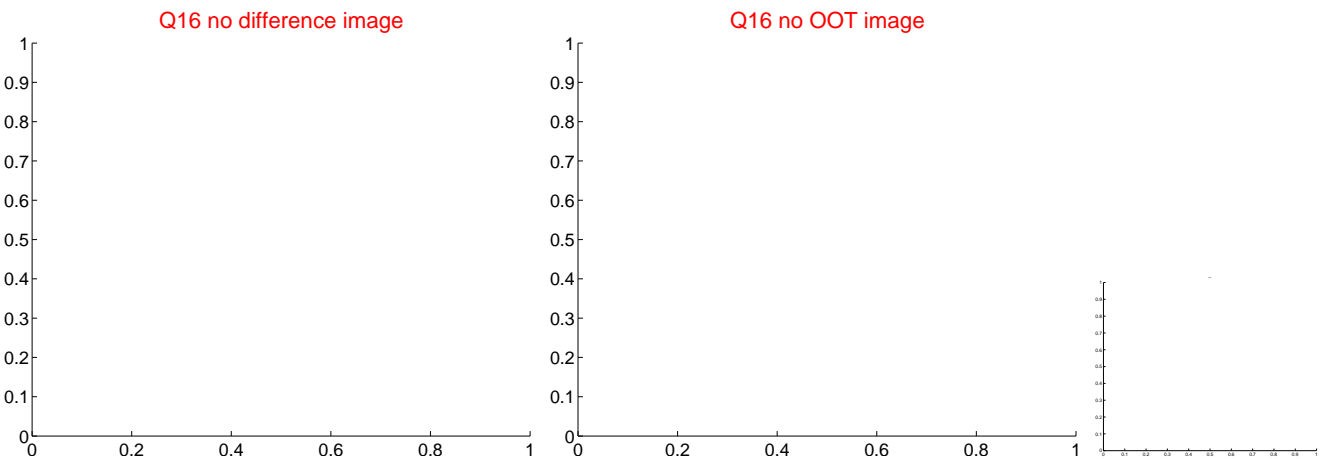
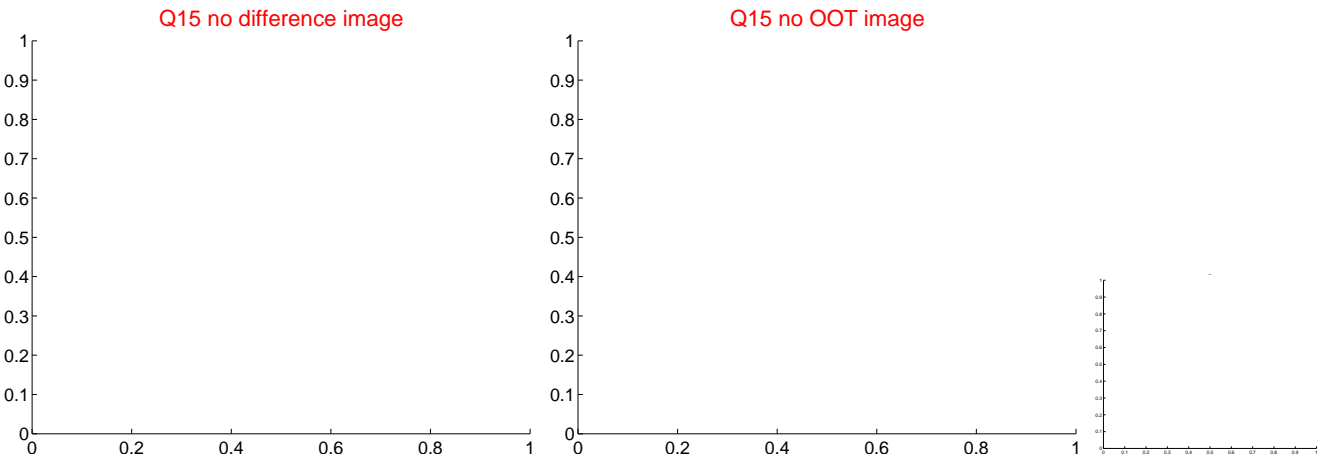
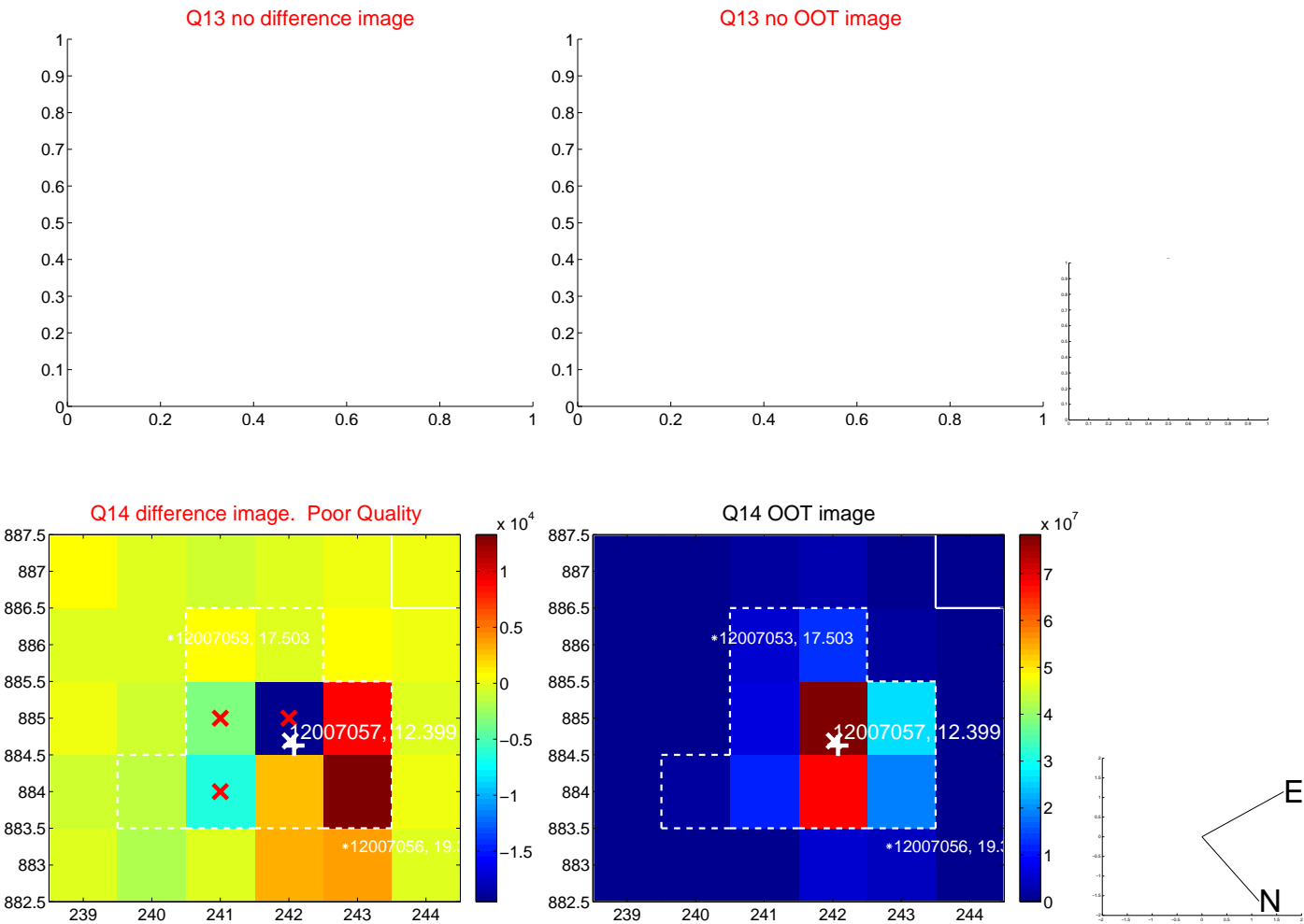
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



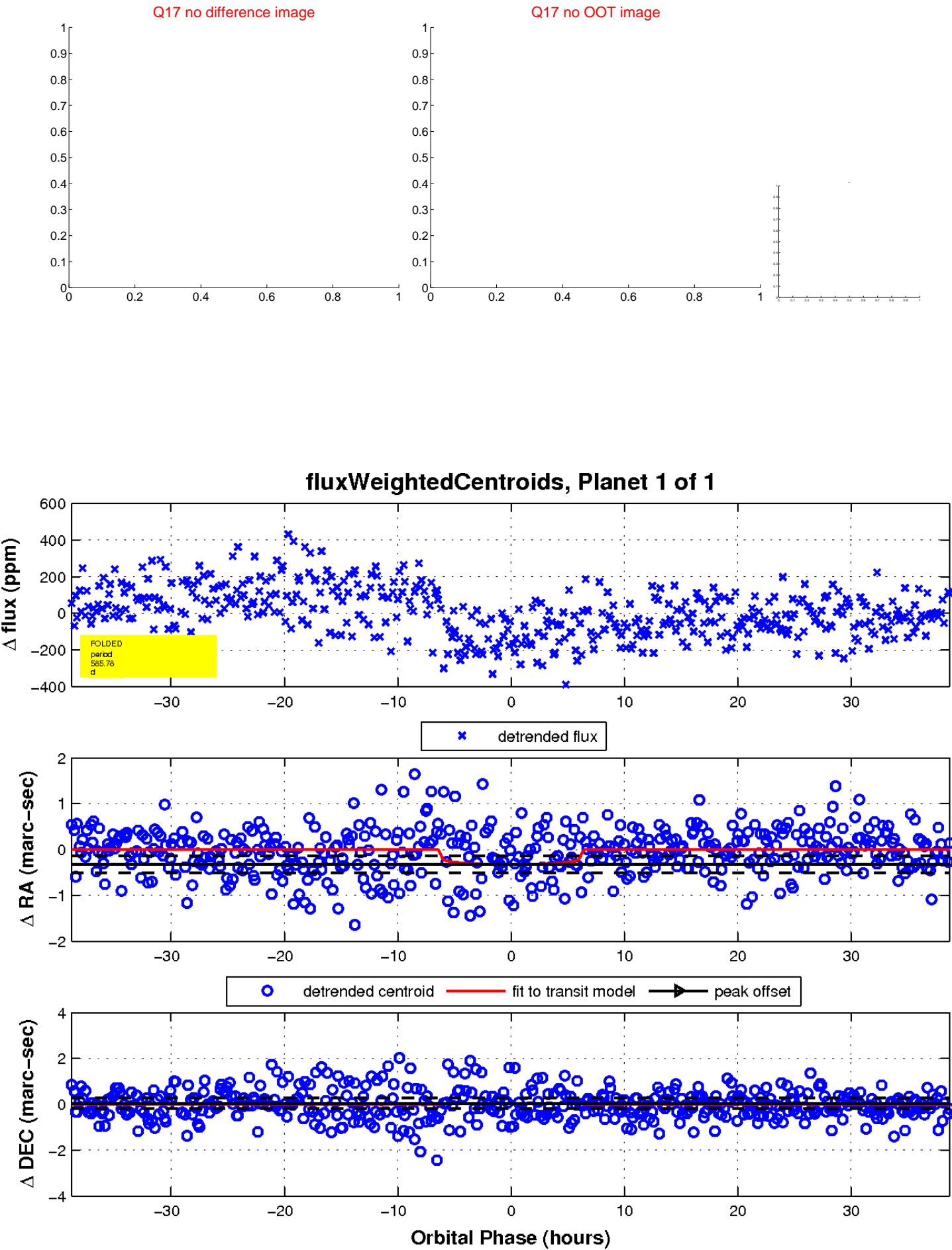
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

