

KIC 005185765

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})
005185765-01	OBS	7720.01	46.943771	176.321524	126.8	1.331	7.2	7.9	1.55	6253	2.02	47.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005185765-01	OBS	FP	0.07	1	0	1	0	MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET

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

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

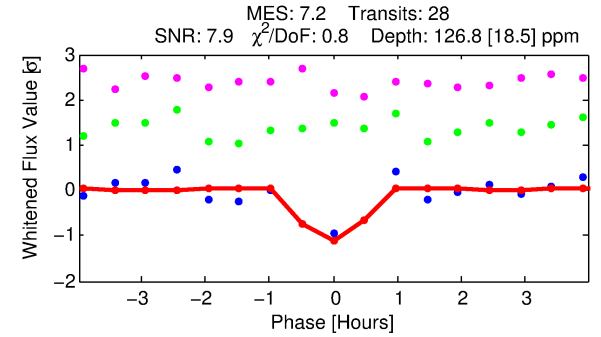
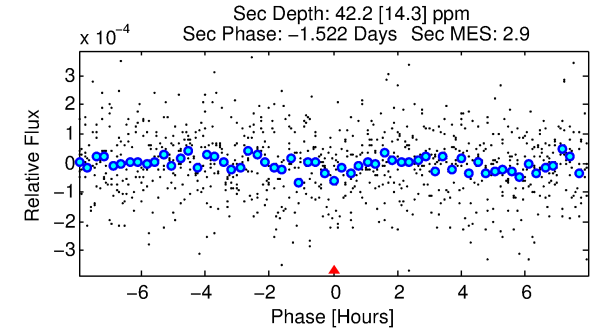
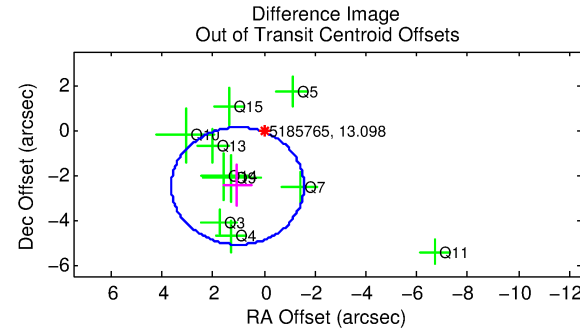
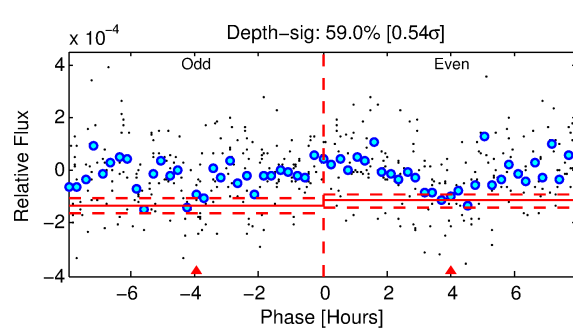
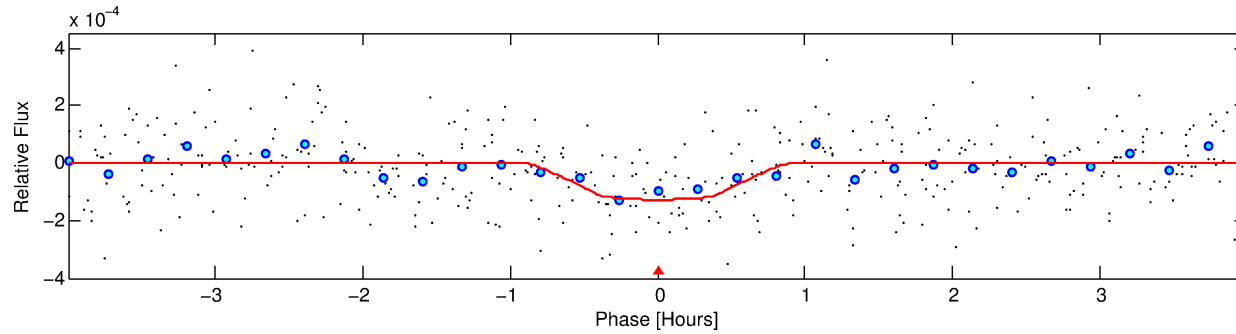
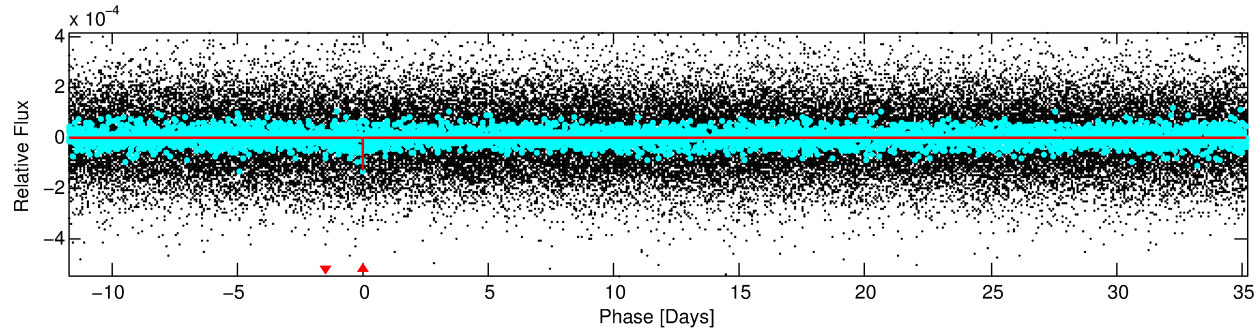
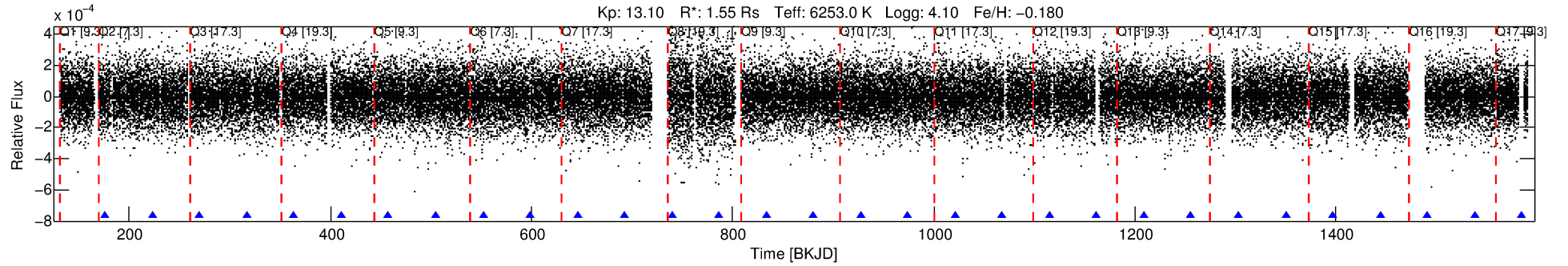
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005185765-01

No Significant Match Found

DV One-Page Summary

KIC: 5185765 Candidate: 1 of 1 Period: 46.944 d



DV Fit Results:

Period = 46.94377 [0.00028] d
Epoch = 176.3215 [0.0050] BKJD
Rp/R* = 0.0119 [0.0127]
a/R* = 136.76 [790.56]
b = 0.88 [1.57]
Seff = 47.35 [19.20]
Teq = 669 [68] K
Rp = 2.02 [2.21] Re
a = 0.2636 [0.0635] AU
Ag = 396.58 [868.77] [0.46 σ]
Teffp = 4615 [2492] K [1.58 σ]

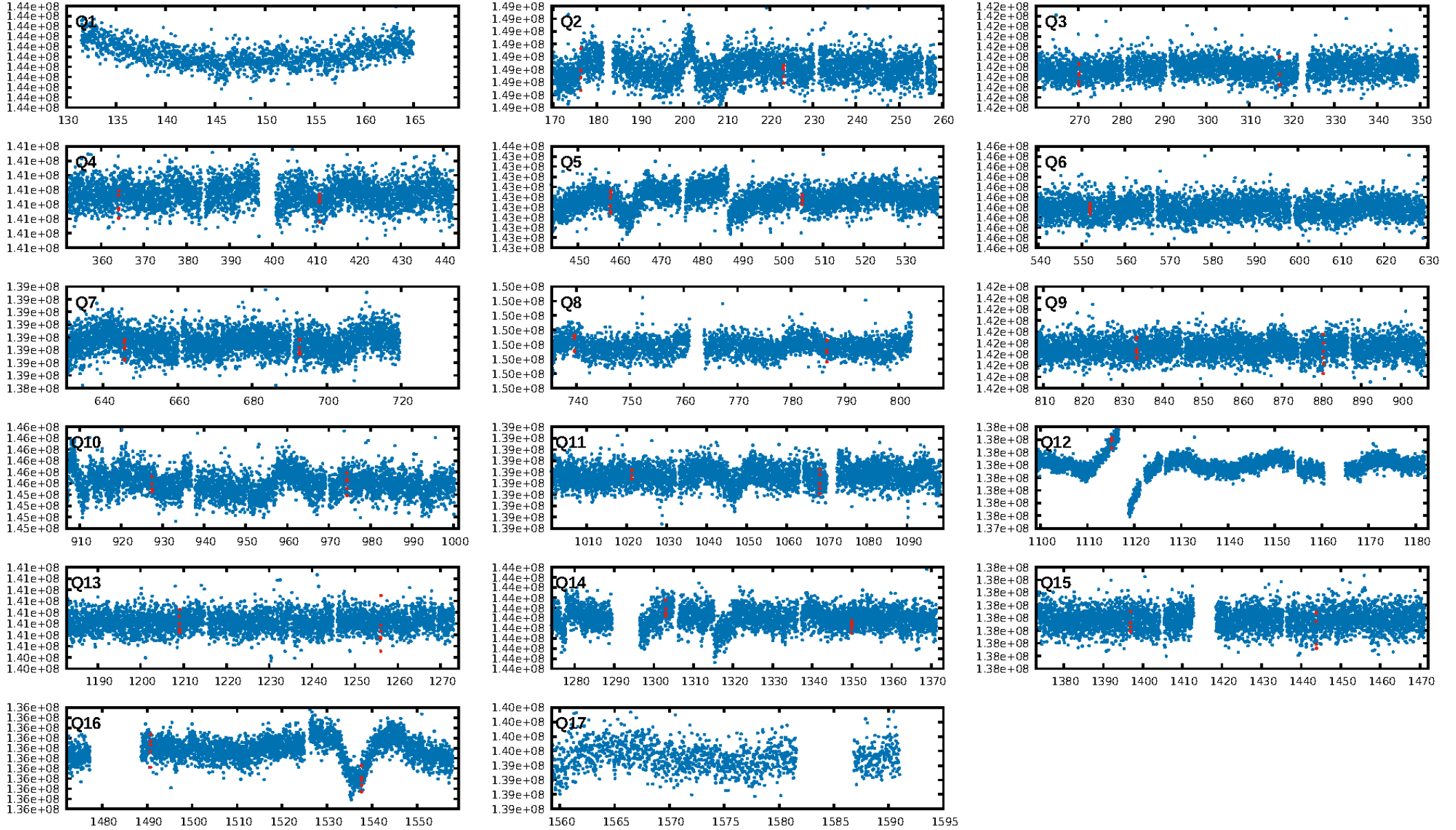
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.40e-12
RollingBand-fgt: 1.00 [28/28]
GhostDiagnostic-chr: 12.47
Centroid-sig: 3.7%
Centroid-so: 2.130 arcsec [1.65 σ]
OotOffset-rm: 2.702 arcsec [3.11 σ]
KicOffset-rm: 2.818 arcsec [3.28 σ]
OotOffset-st: 2/4/1/3 [10]
KicOffset-st: 2/4/1/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [15/15]

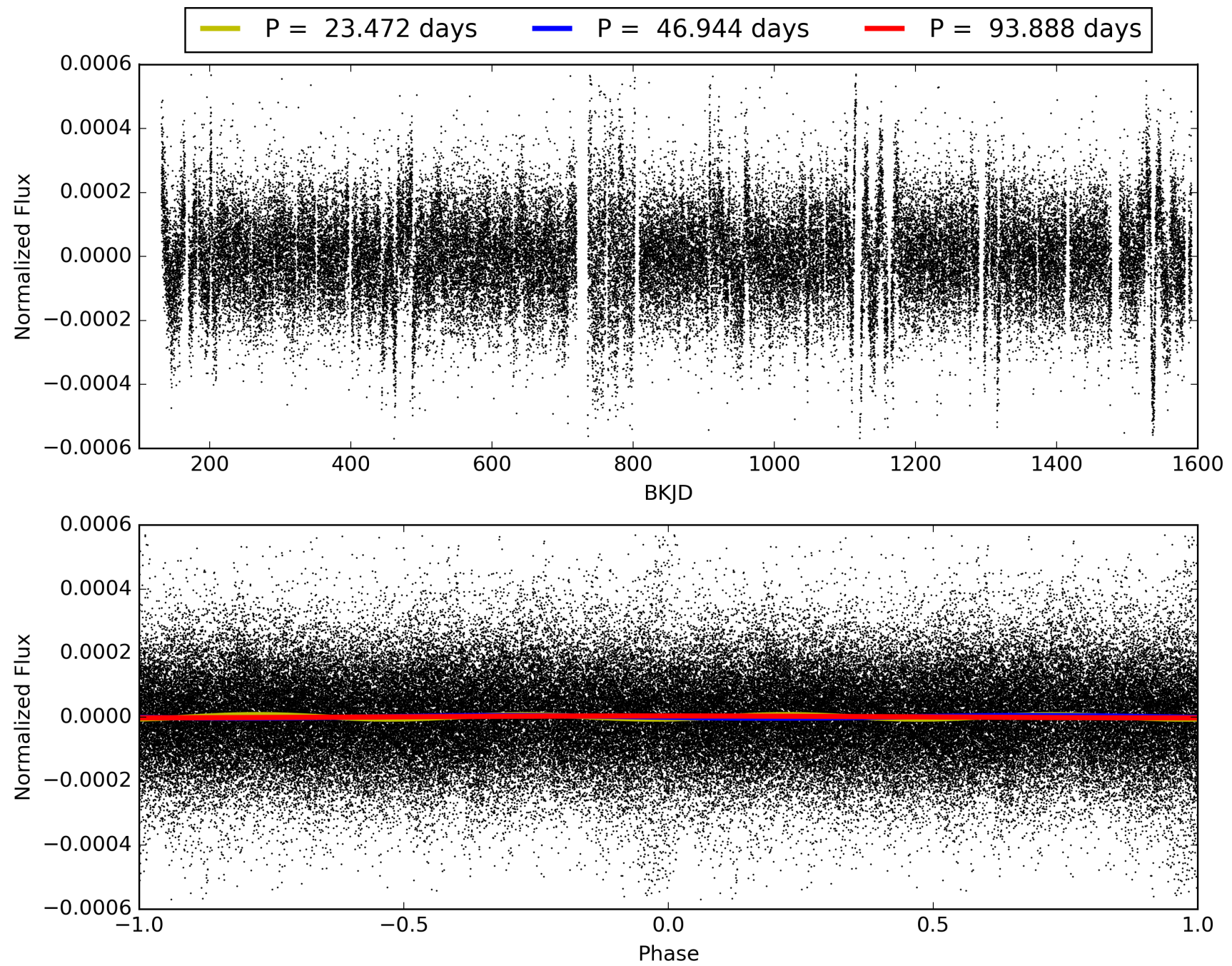
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:17:46 Z

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

TCE 005185765-01, PDC Light Curves

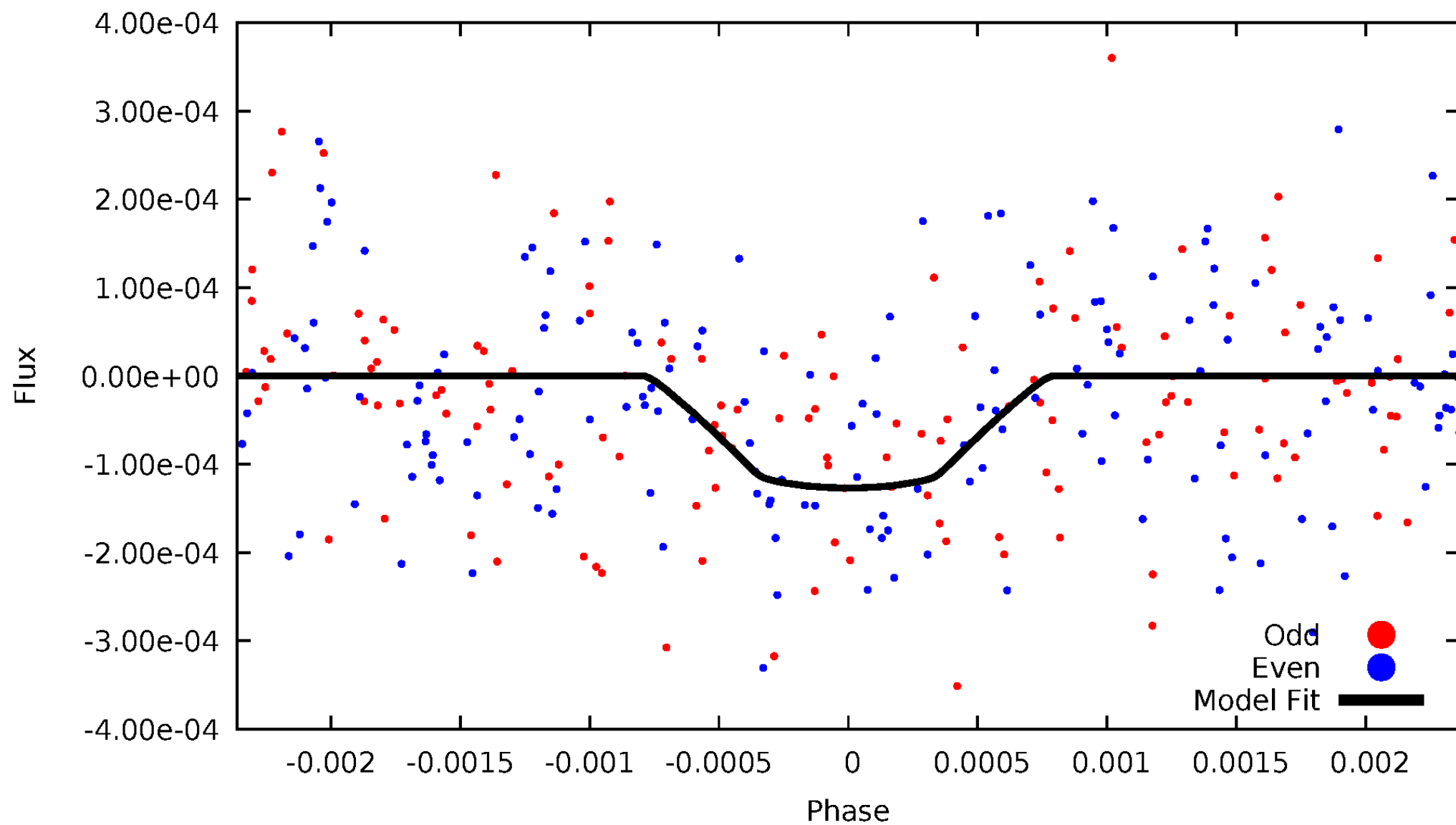


TCE 005185765-01



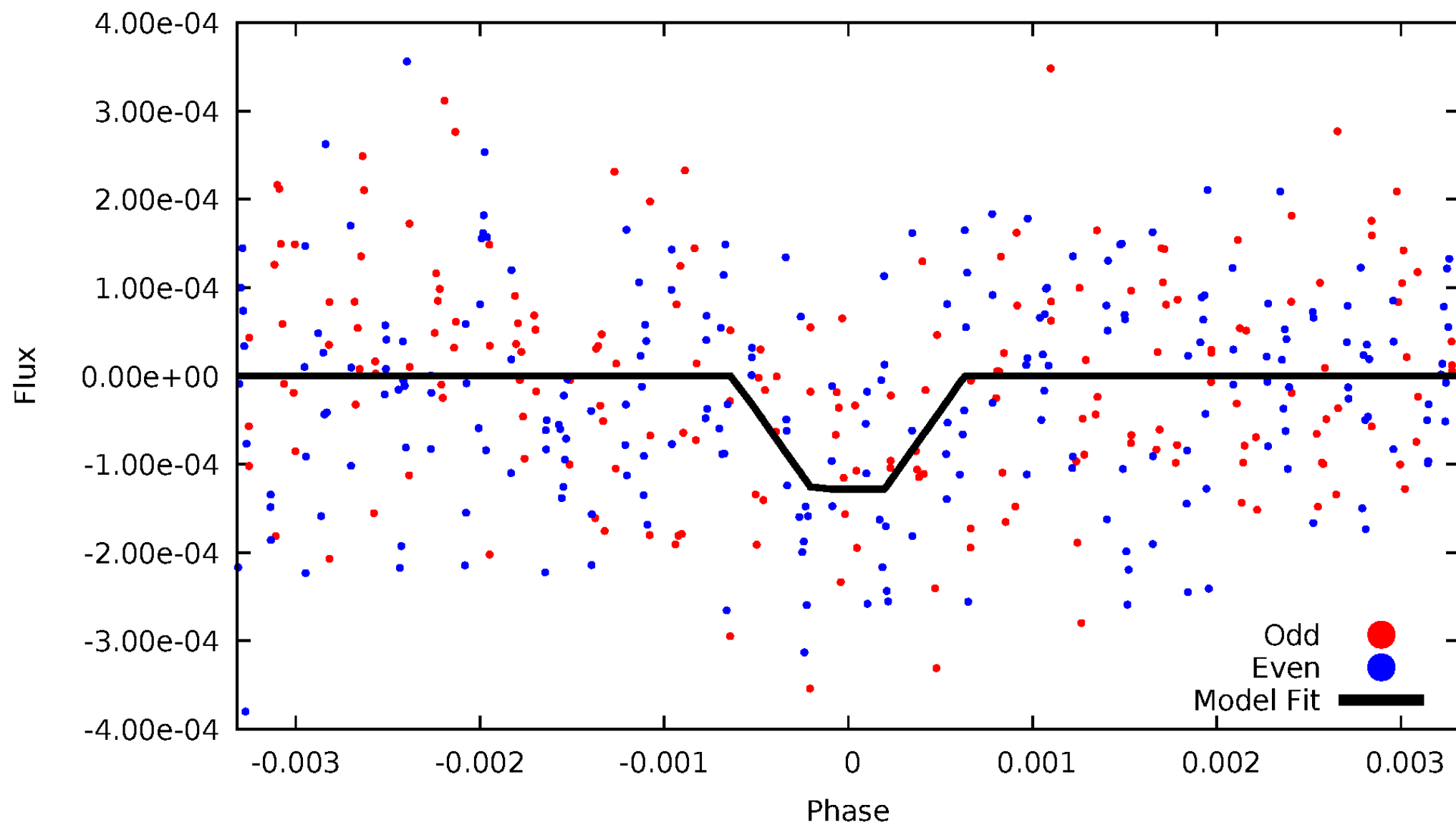
DV Odd/Even

TCE 005185765-01



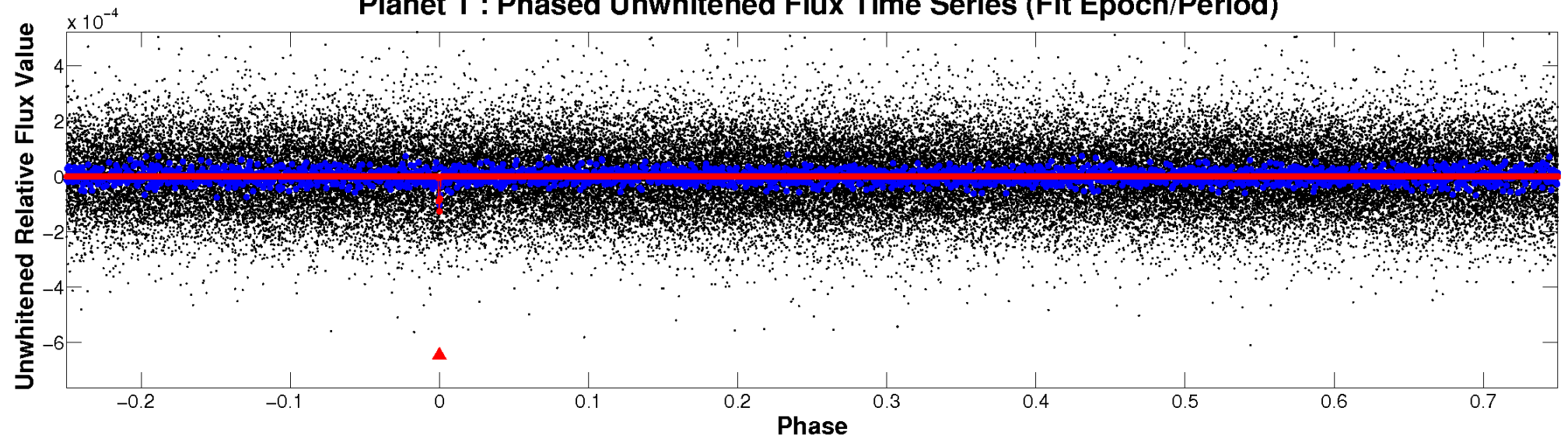
ALT Odd/Even

TCE 005185765-01

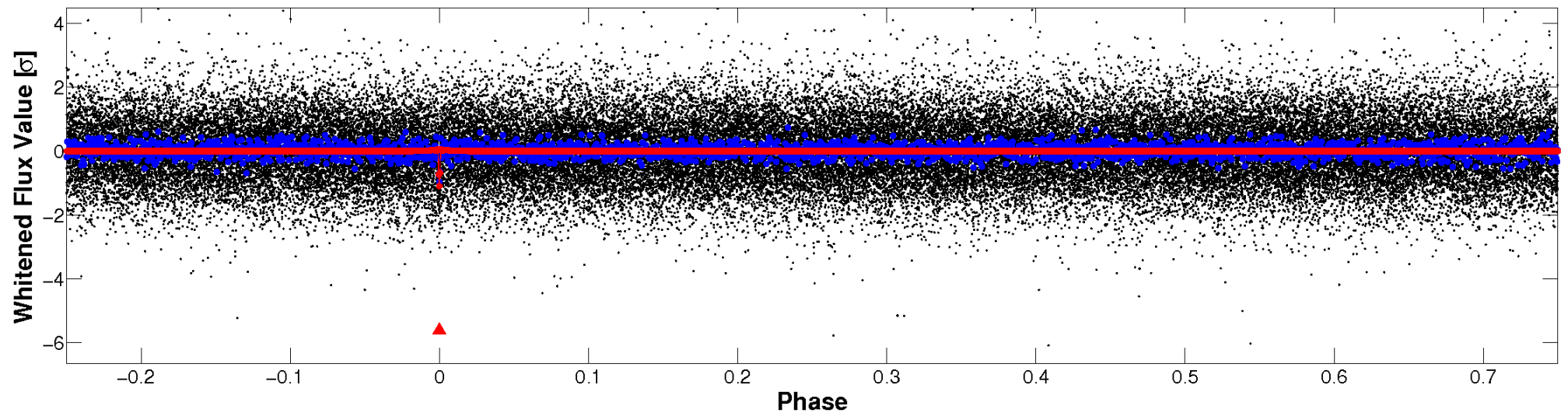


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

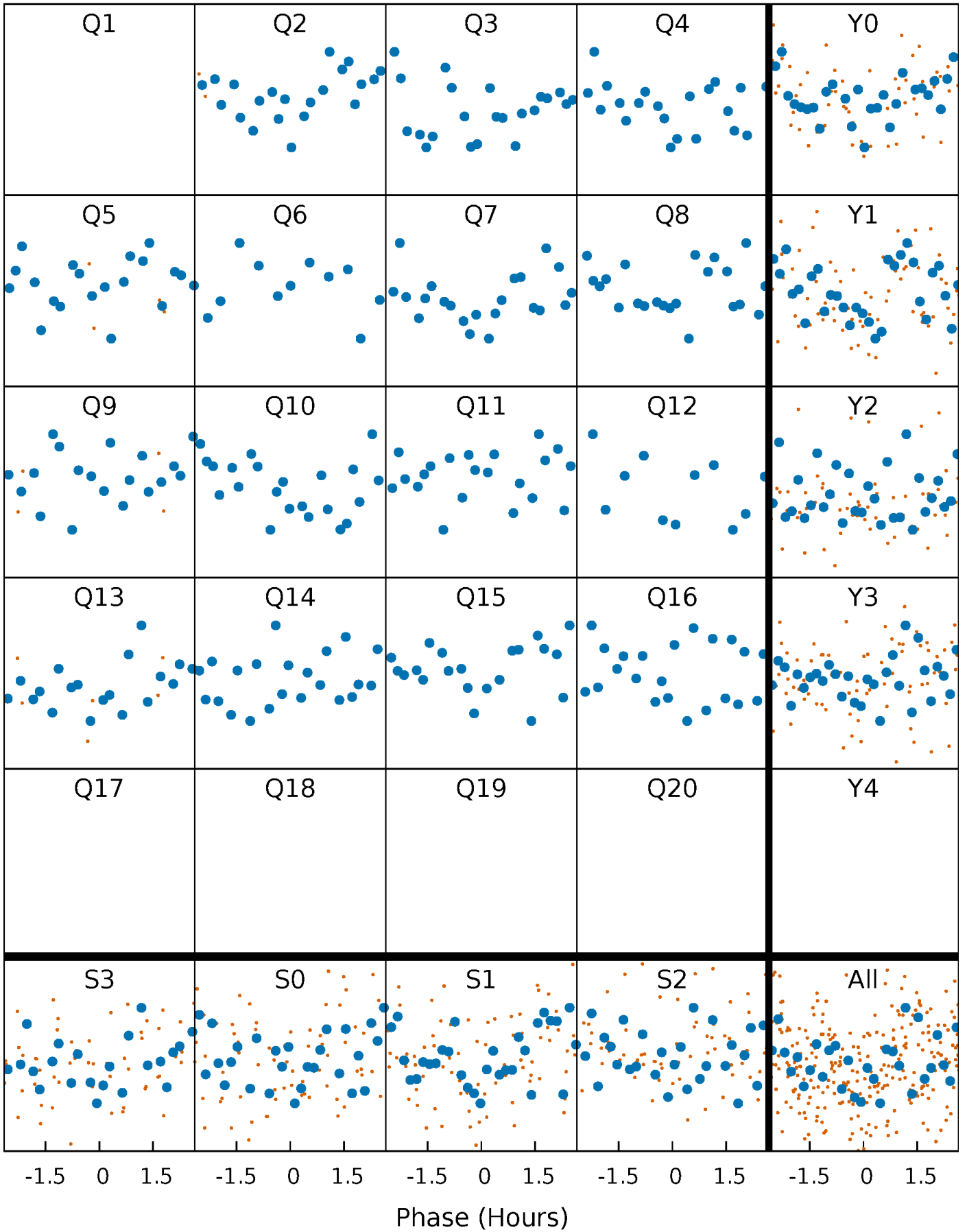


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



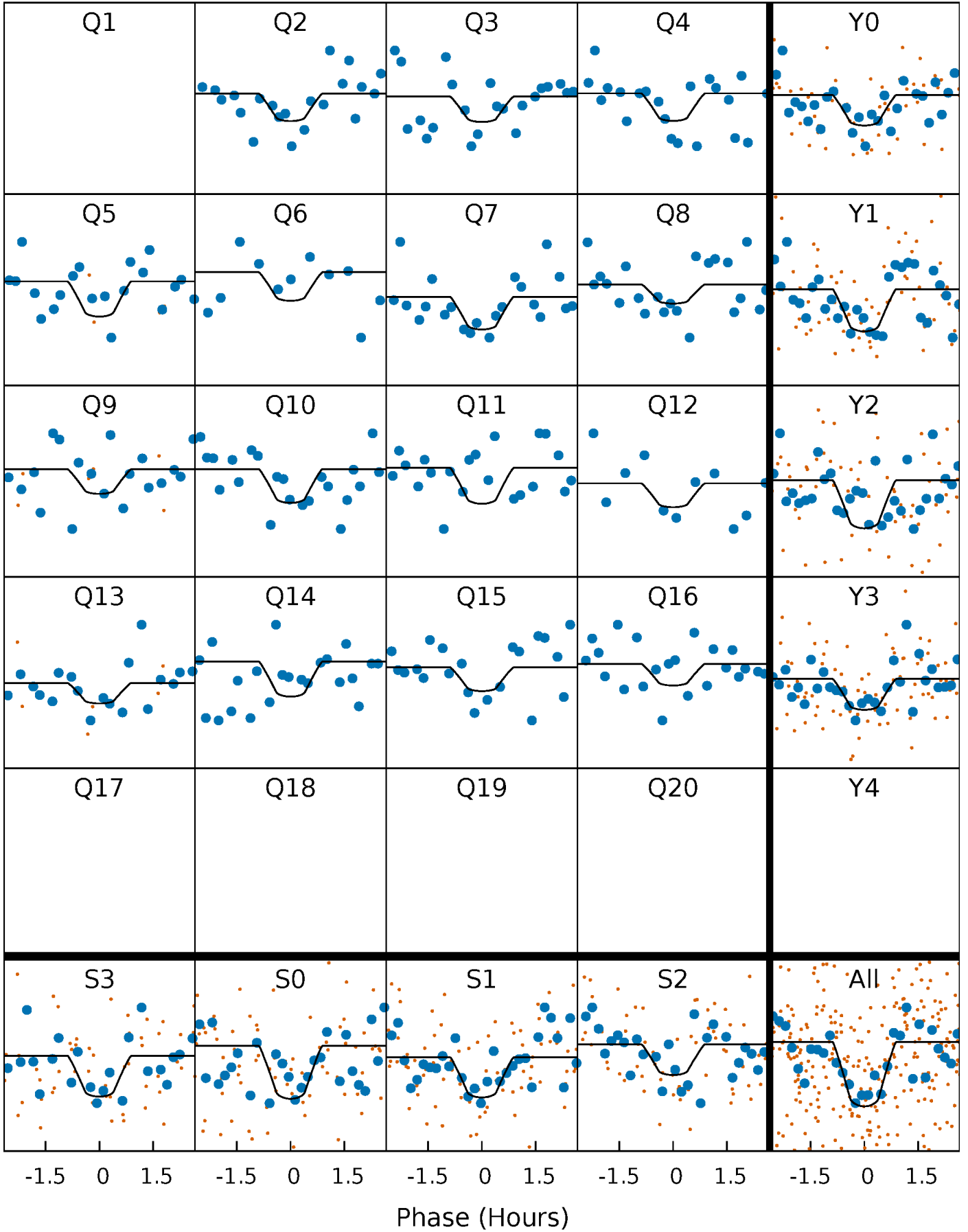
PDC Quarter-Phased Transit Curves

TCE 005185765-01 P= 46.943771 Days $T_0=176.321524$ (BKJD)



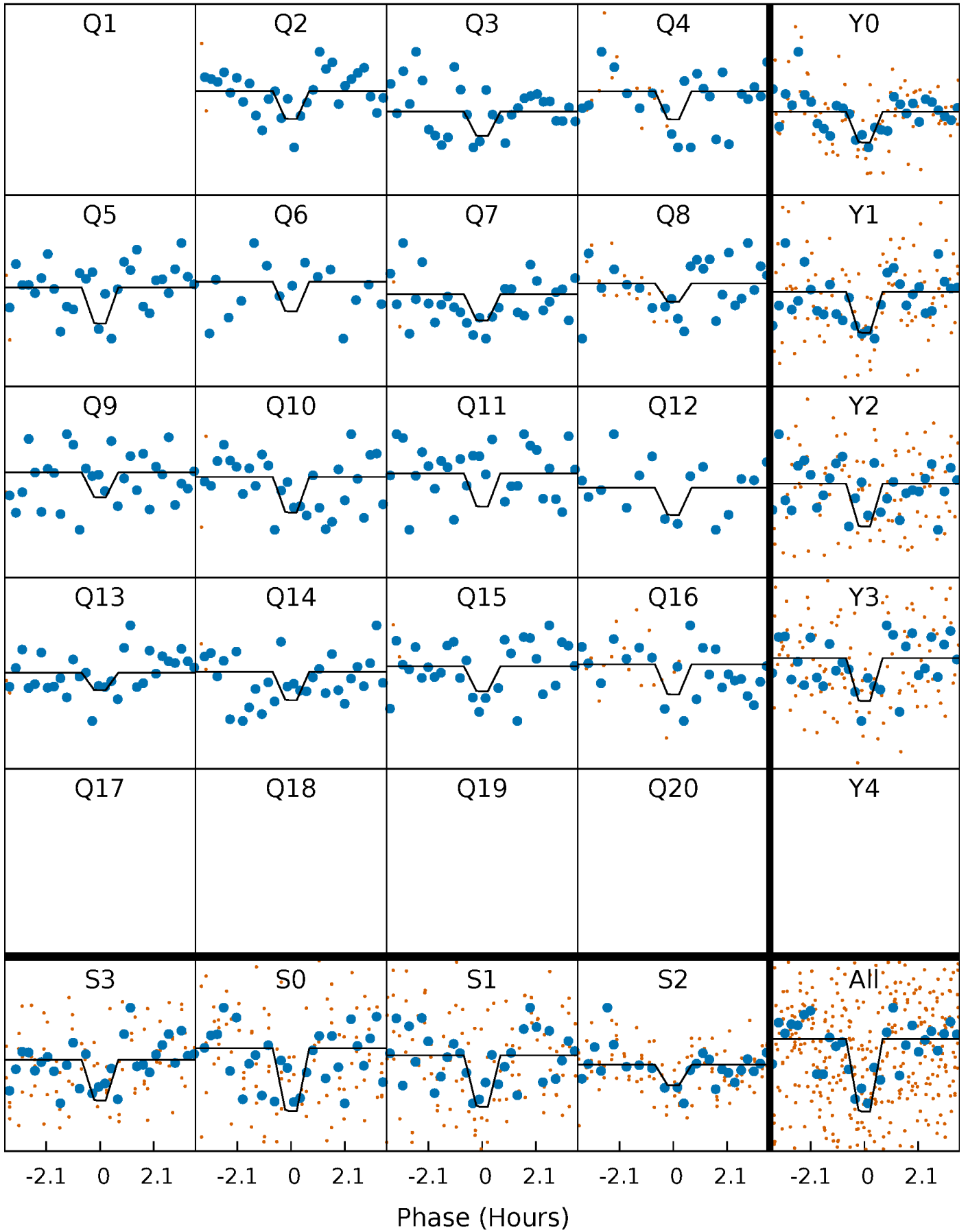
DV Quarter-Phased Transit Curves

TCE 005185765-01 P= 46.943771 Days $T_0=176.321524$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

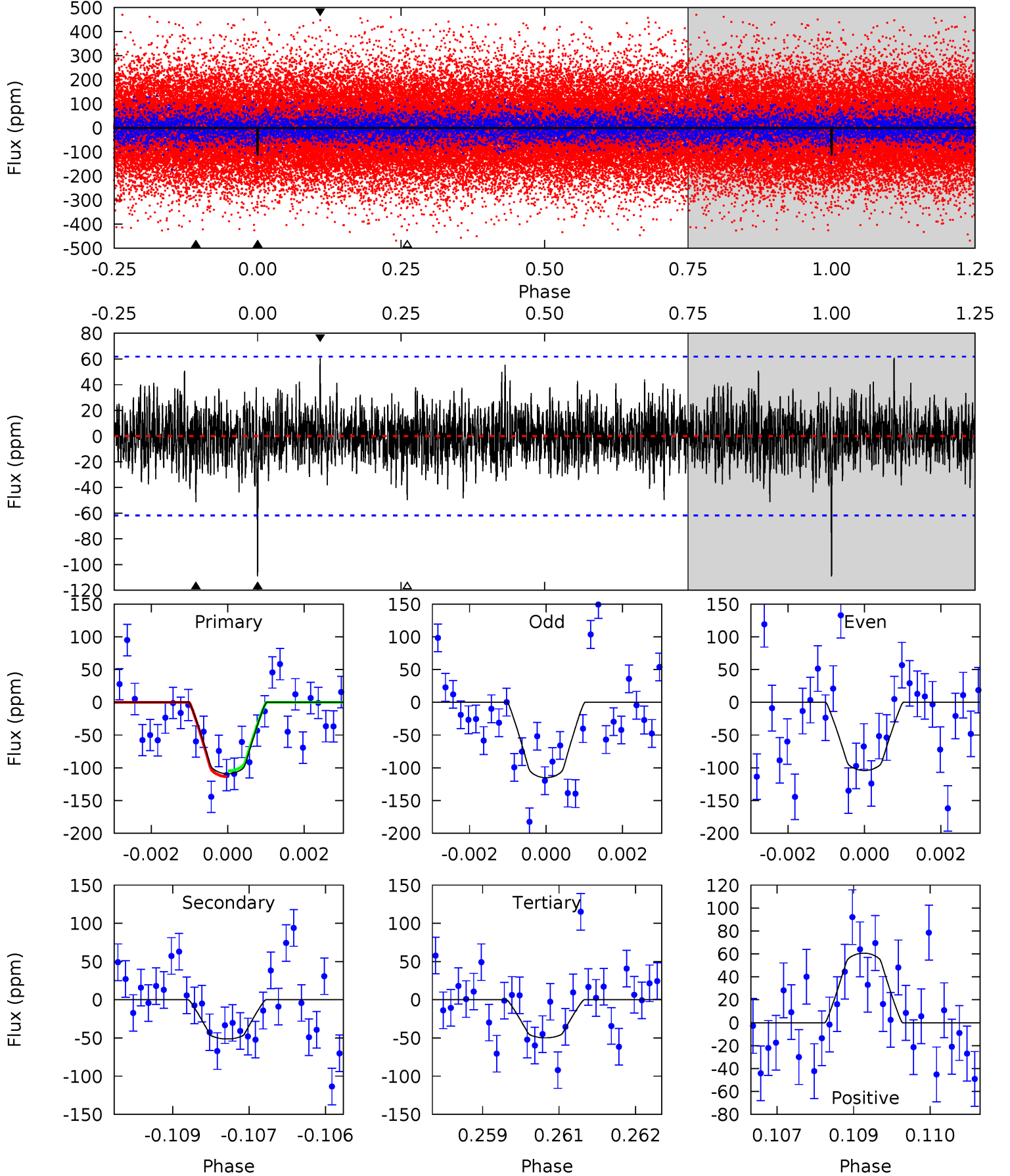
TCE 005185765-01 P= 46.943666 Days $T_0=176.320189$ (BKJD)



DV Model-Shift Uniqueness Test

005185765-01, P = 46.943771 Days, E = 129.377753 Days

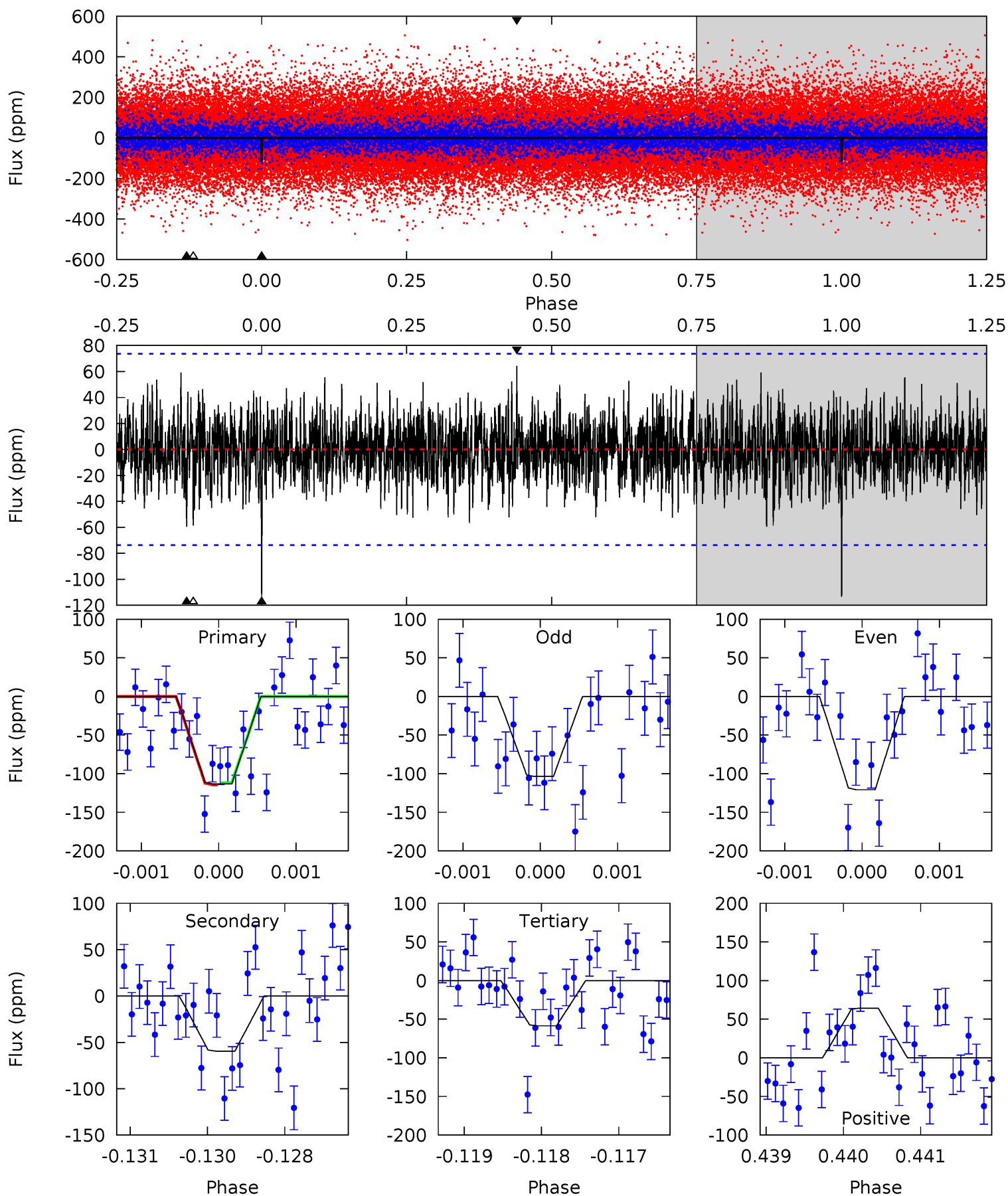
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.48	4.46	4.33	5.27	5.37	3.16	1.30	5.16	4.21	0.13	-0.81	0.48	0.86	0.36	0.39



Alt Model-Shift Uniqueness Test

005185765-01, P = 46.943666 Days, E = 129.376523 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.35	4.38	4.32	4.73	5.43	3.25	1.31	4.03	3.61	0.07	-0.35	0.63	0.95	0.36	0.09



Stellar Parameters For KIC 005185765

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6253^{+169}_{-188}	$4.102^{+0.228}_{-0.123}$	$-0.180^{+0.300}_{-0.300}$	$1.550^{+0.350}_{-0.385}$	$1.107^{+0.190}_{-0.138}$	$0.419^{+0.532}_{-0.147}$
	+3%/-3%	+6%/-3%	+167%/-167%	+23%/-25%	+17%/-12%	+127%/-35%
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 005185765-01 / KOI 7720.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 12	$2.47^{+1.96}_{-1.53}$	926^{+57}_{-69}	4494^{+2735}_{-865}	323^{+2113}_{-227}
Alt.	-59 ± 14	$2.45^{+1.85}_{-1.44}$	925^{+60}_{-61}	4654^{+2389}_{-864}	389^{+1886}_{-270}

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

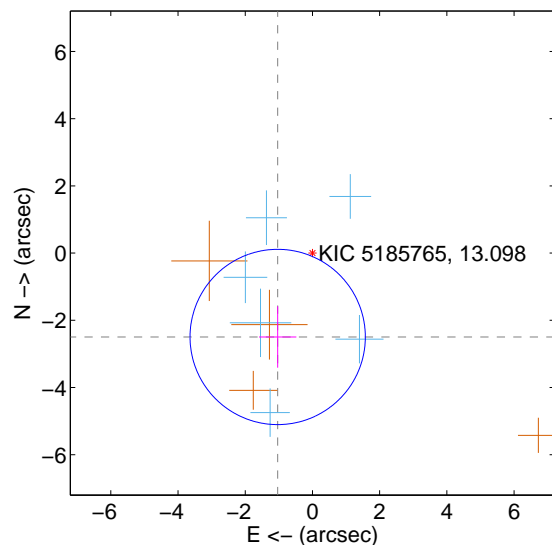
Supplemental centroid analysis for 005185765-01. Kepler magnitude: 13.10. Transit SNR 7.93

There are 6 quarters with good PRF difference image offsets

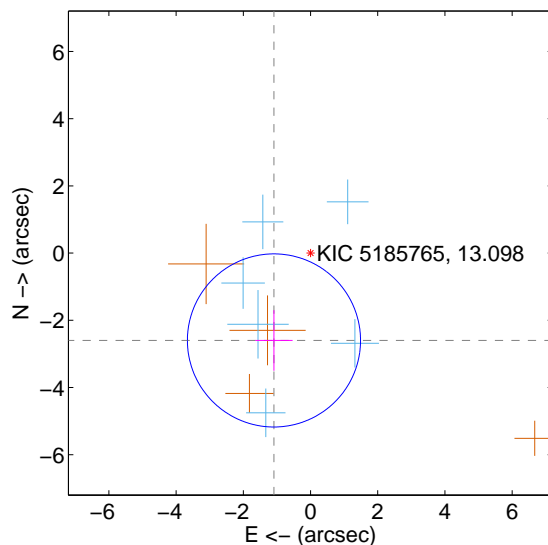
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.702 ± 0.869	3.11	1.034 ± 0.555	-2.496 ± 0.912
PRF-fit source offset from KIC position	2.818 ± 0.859	3.28	1.088 ± 0.553	-2.599 ± 0.902
photometric centroid source offset	2.13 ± 1.29	1.65	1.91 ± 1.28	0.94 ± 1.34

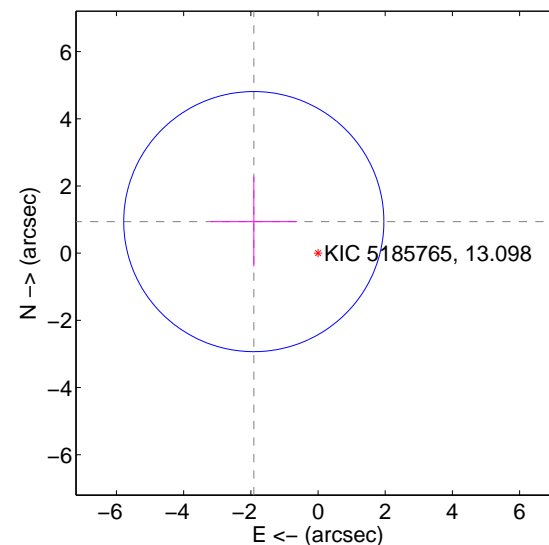
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

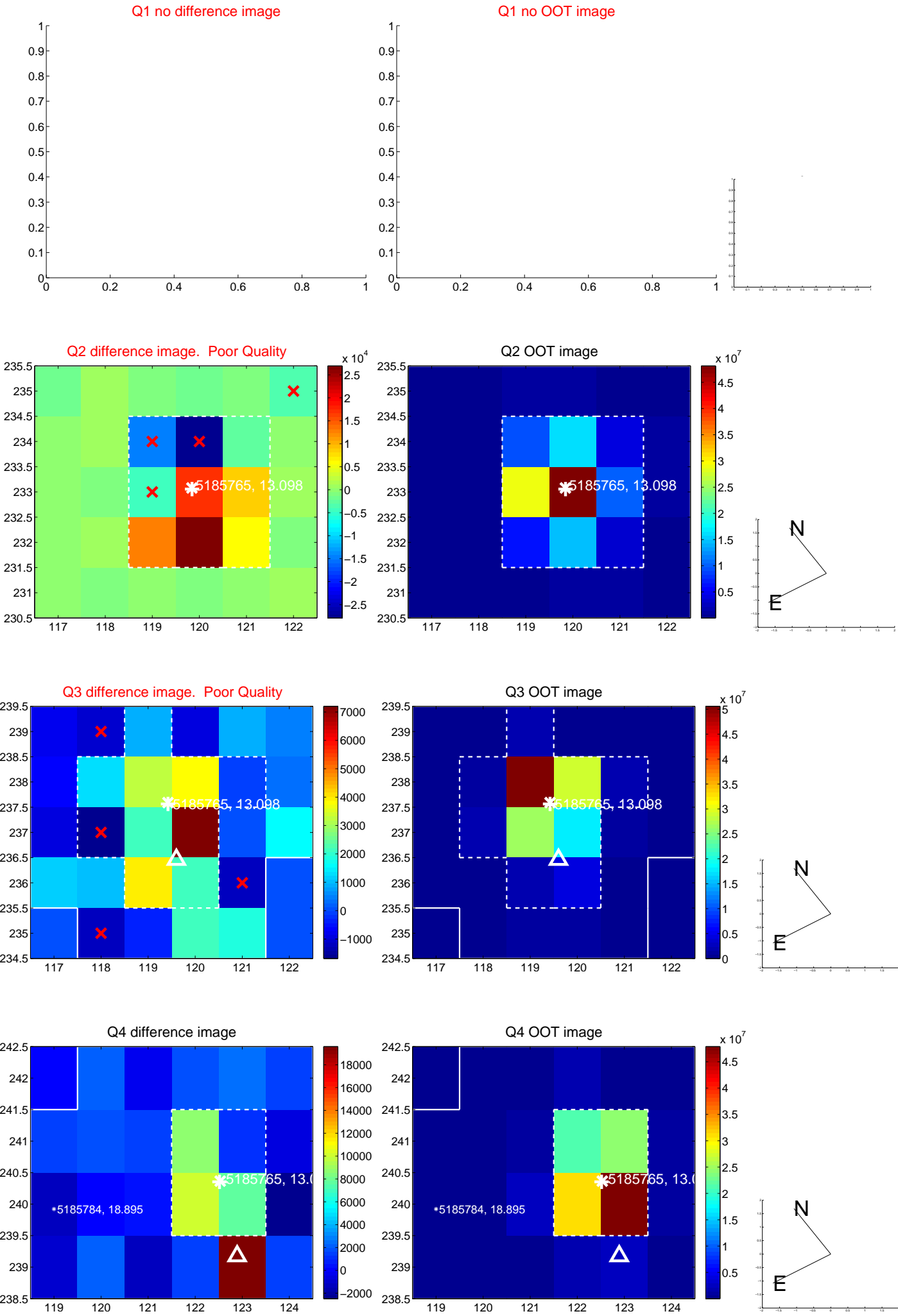


offset from photometric centroids

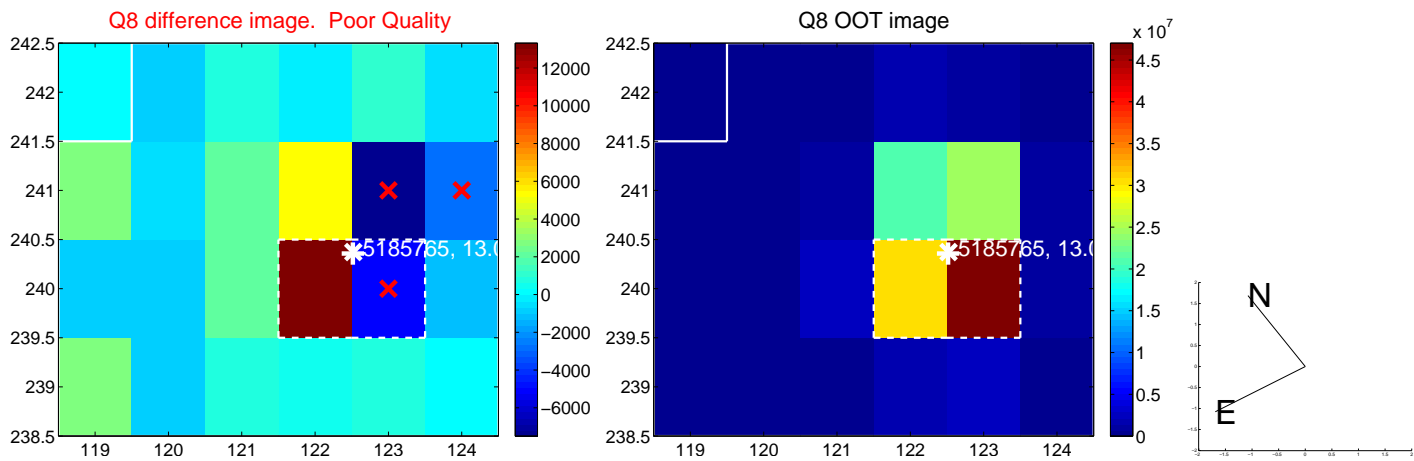
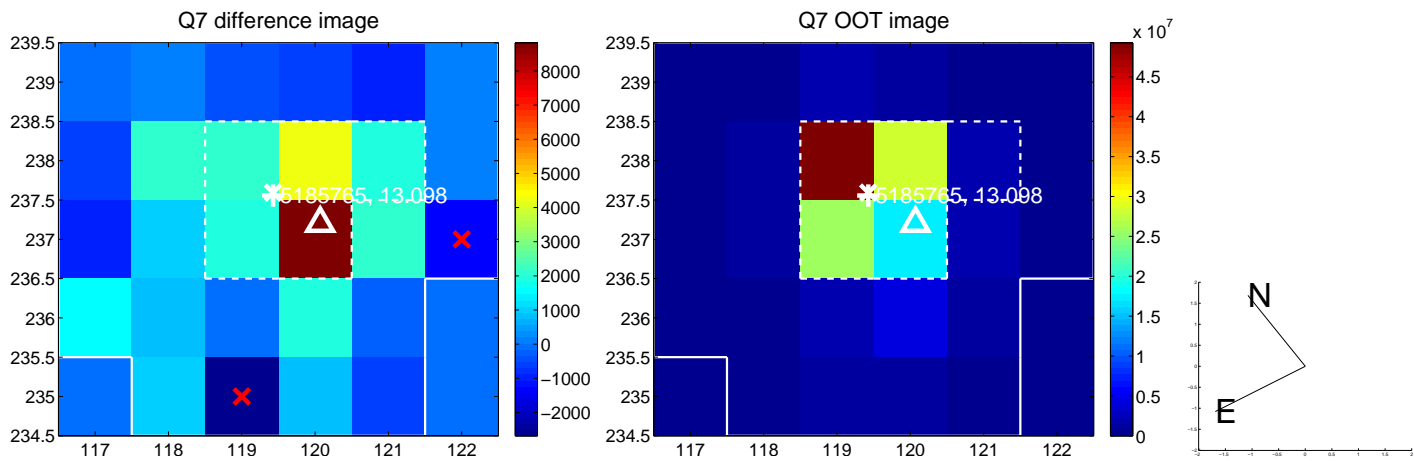
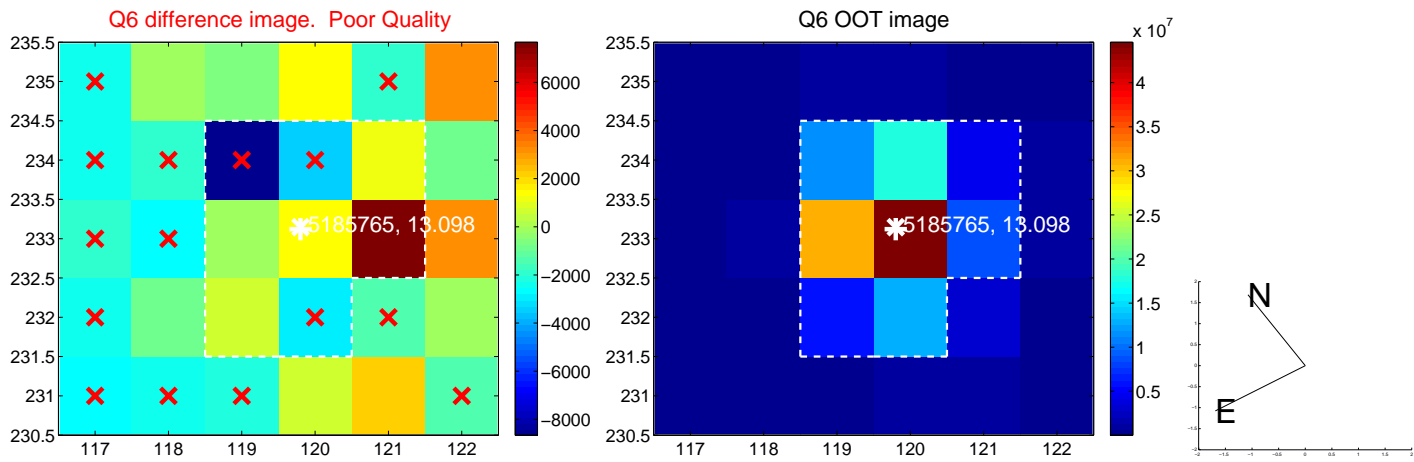
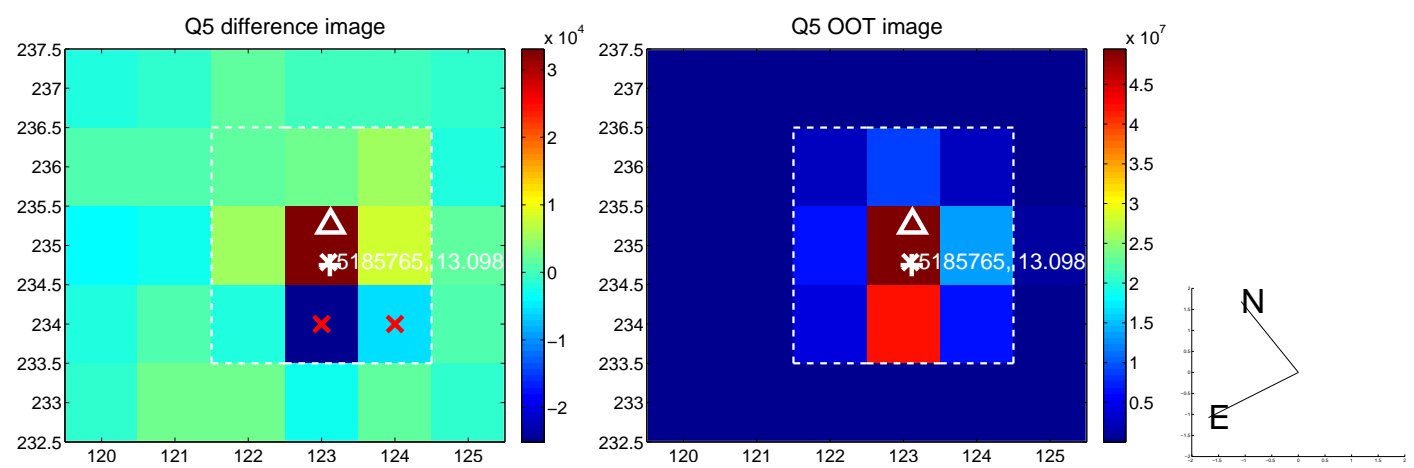


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

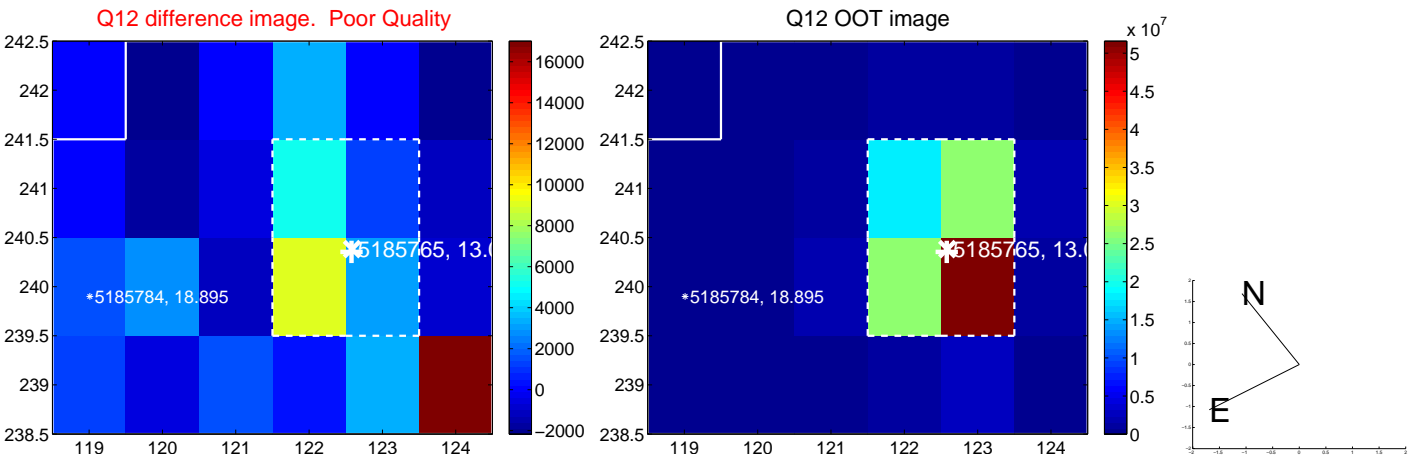
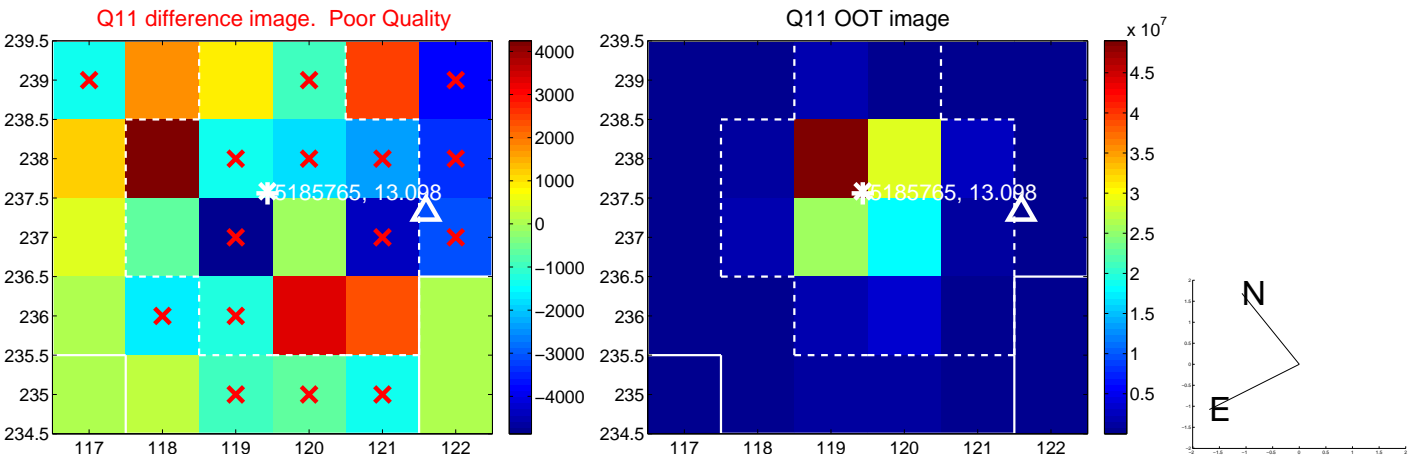
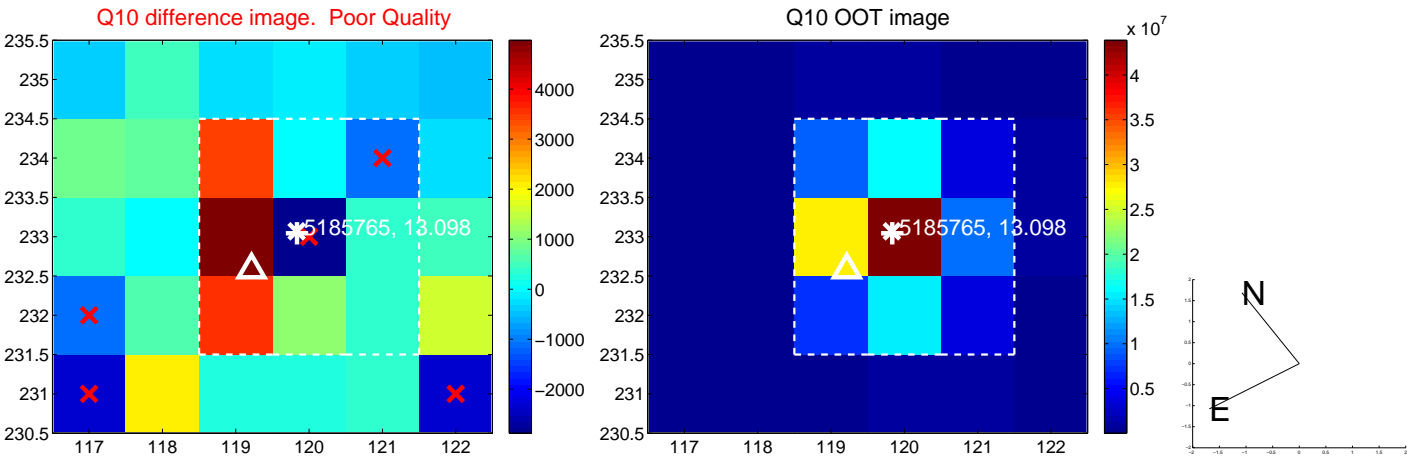
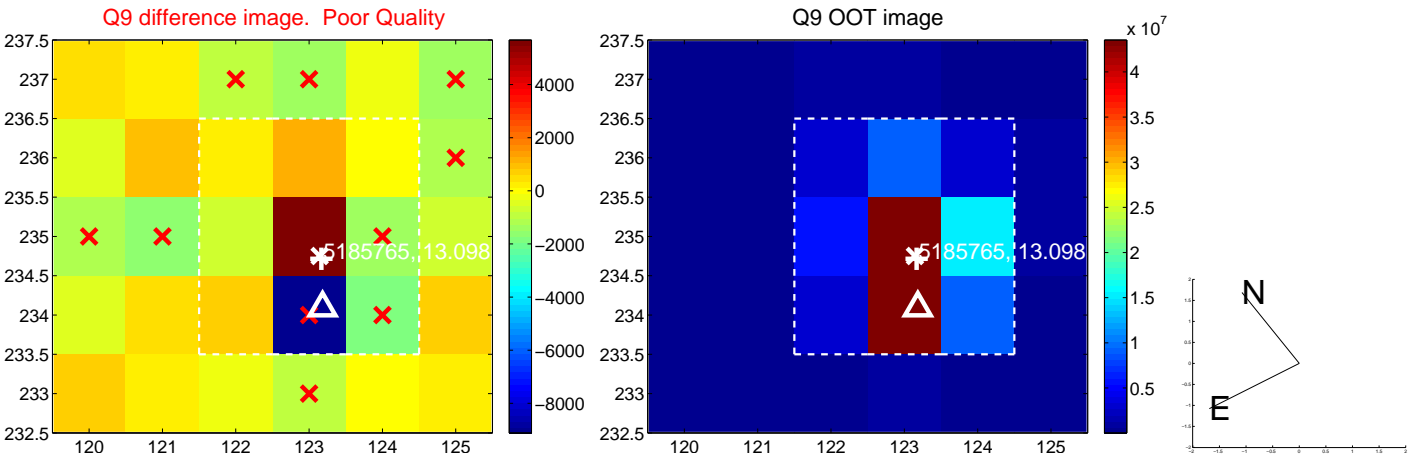
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



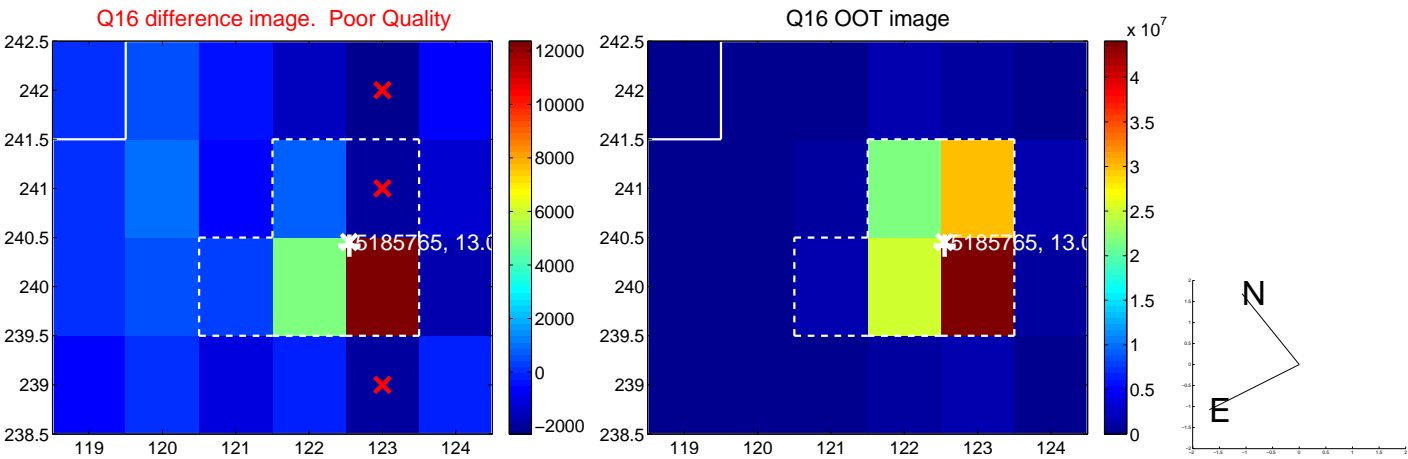
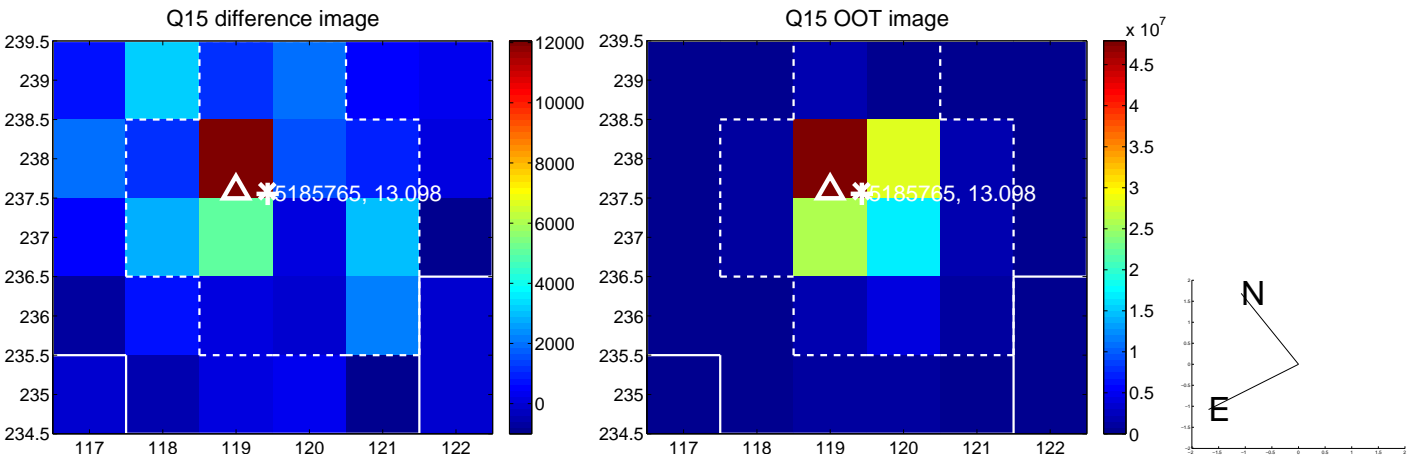
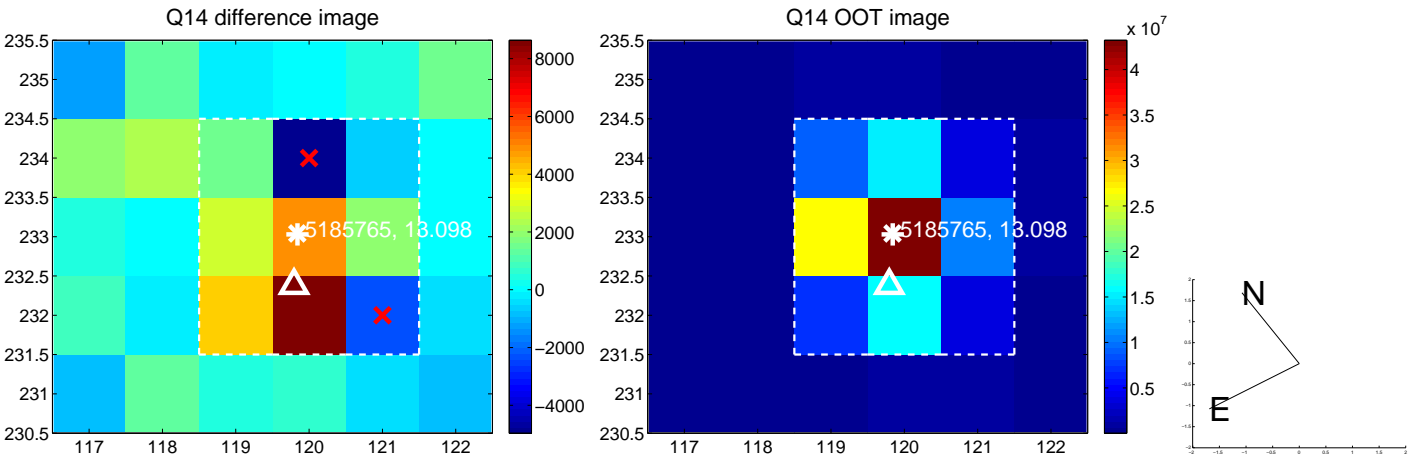
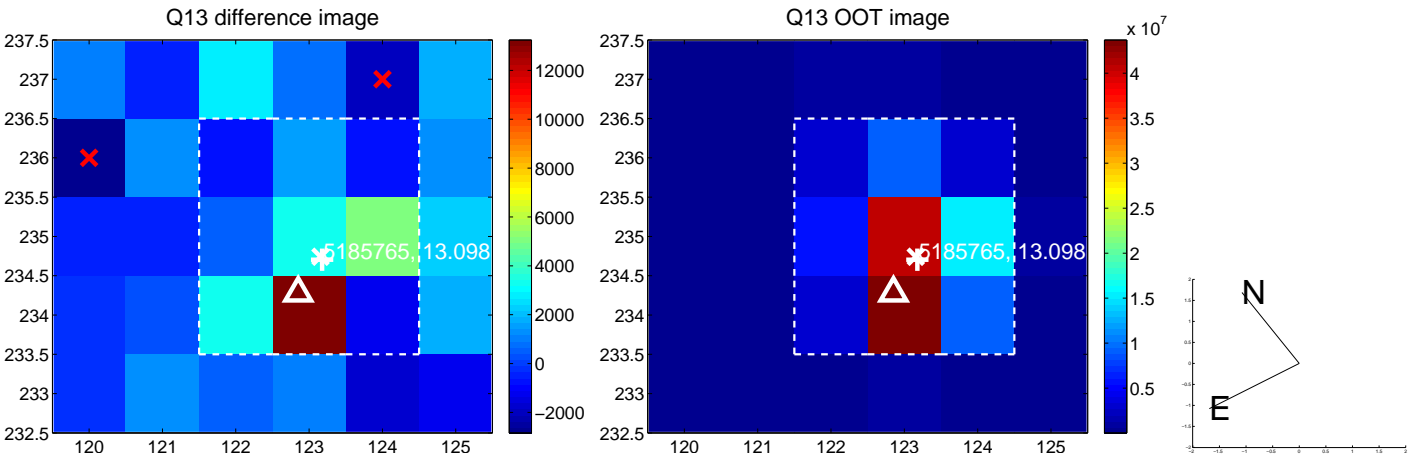
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



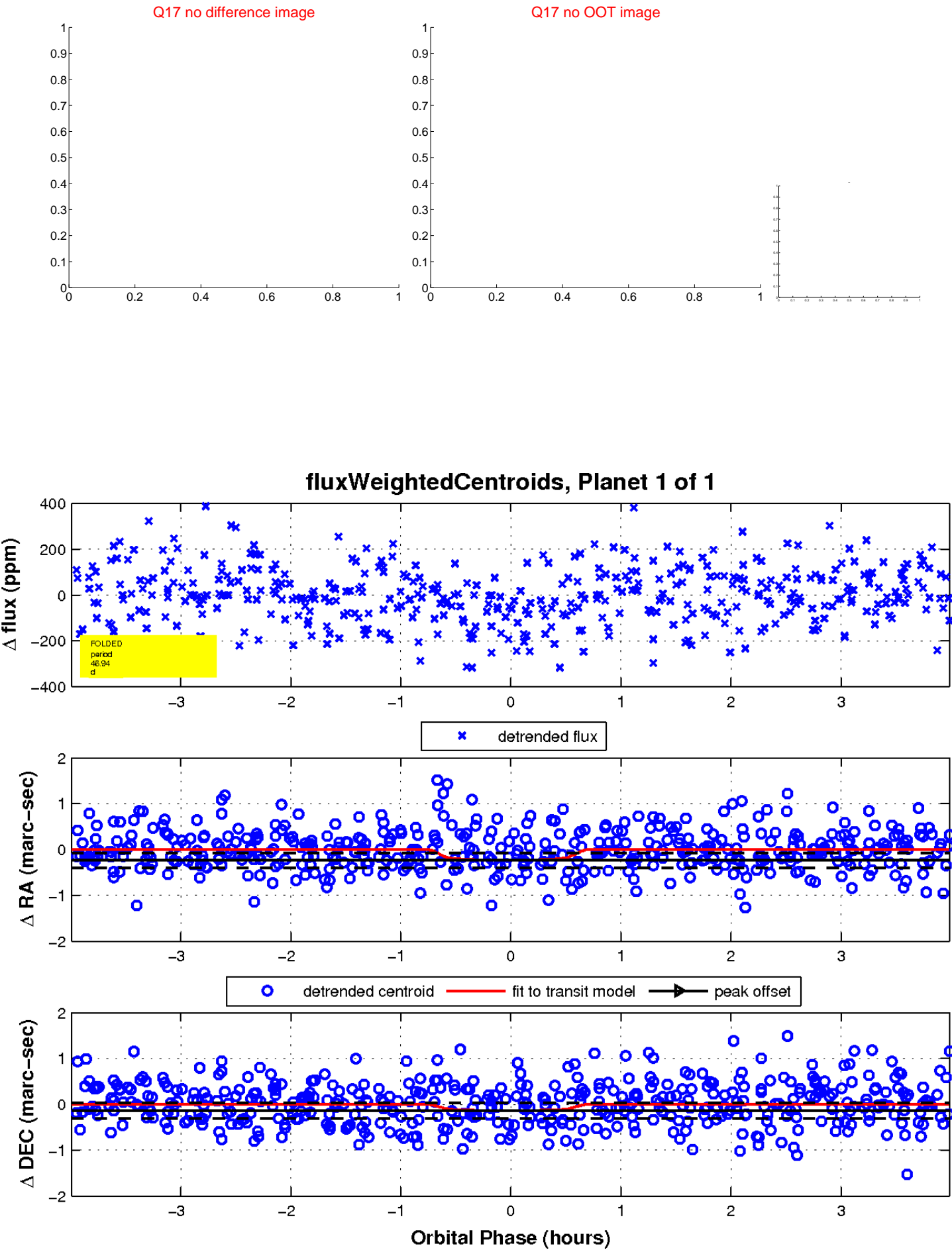
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

