

KIC 006359725

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})
006359725-01	OBS	No	535.190034	424.308084	225.9	7.294	9.1	6.5	2.21	6060	3.74	3.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006359725-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—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.

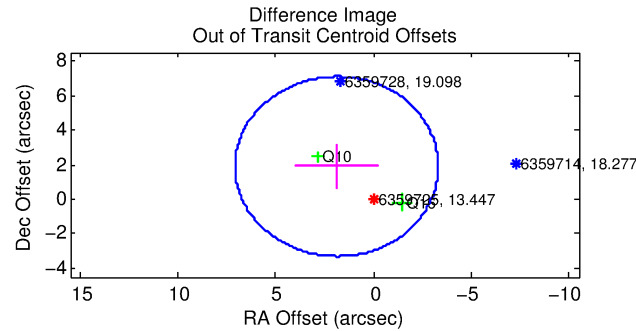
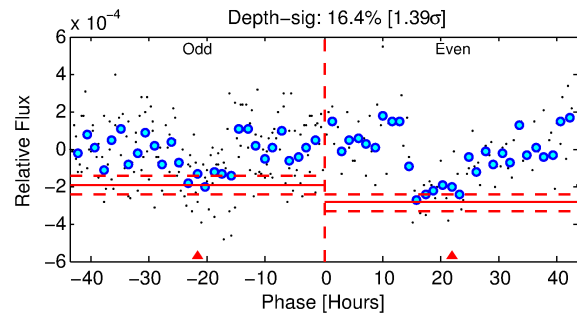
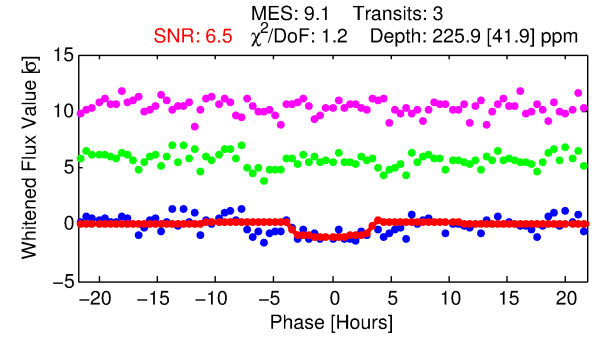
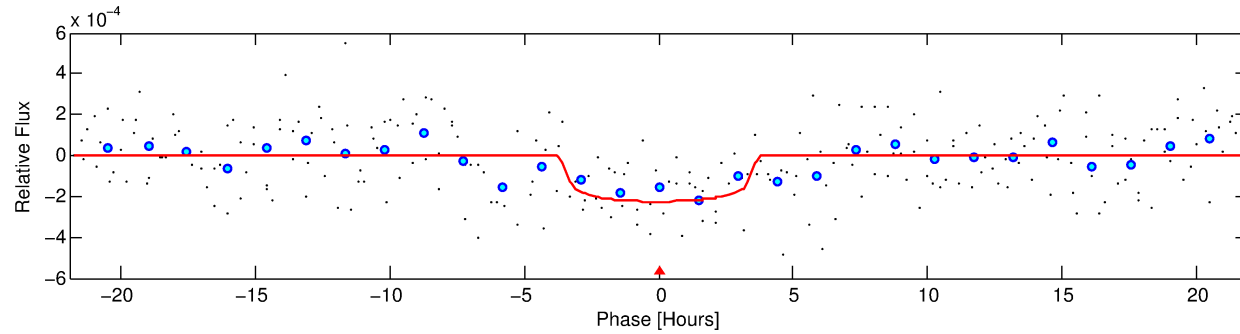
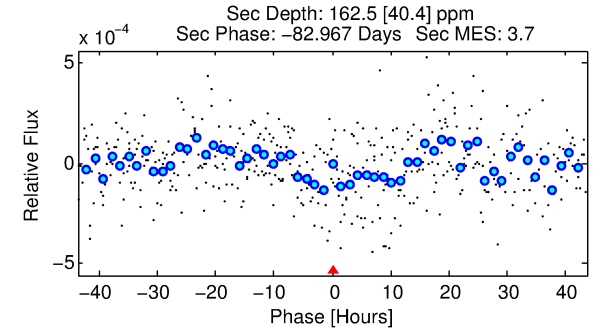
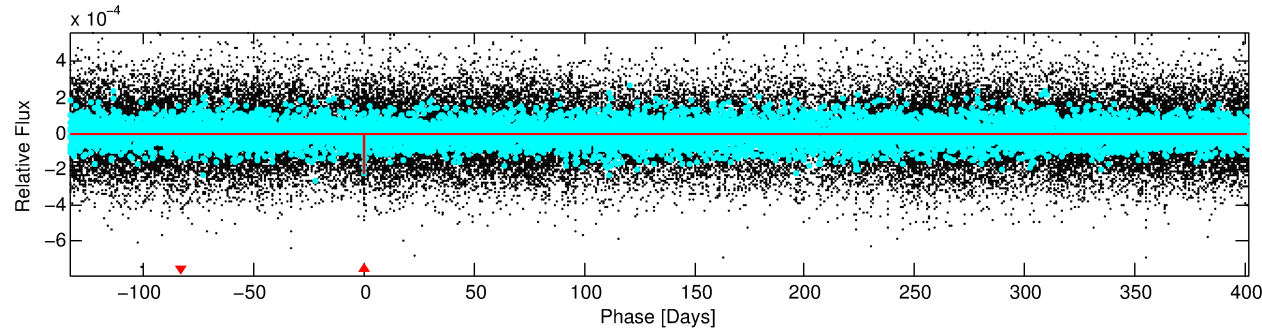
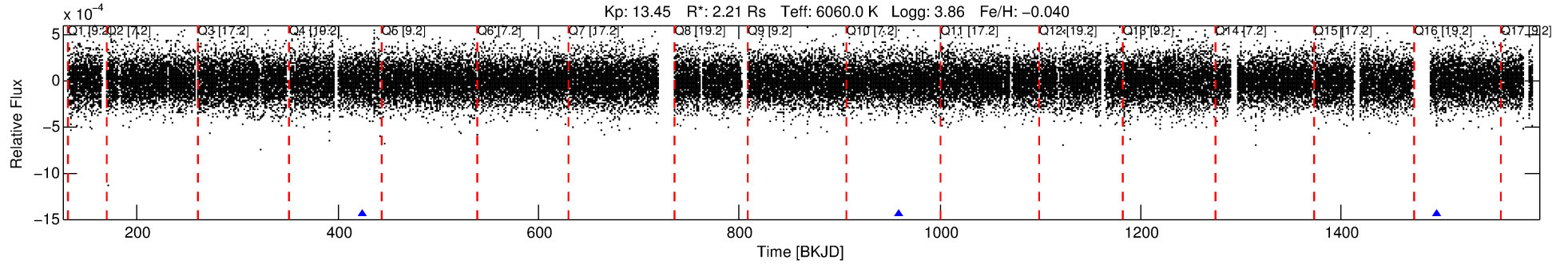
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006359725-01

No Significant Match Found

DV One-Page Summary

KIC: 6359725 Candidate: 1 of 1 Period: 535.190 d



DV Fit Results:

Period = 535.19003 [0.01429] d
Epoch = 424.3081 [0.0170] BKJD
Rp/R* = 0.0156 [0.0082]
a/R* = 319.48 [832.55]
b = 0.84 [0.92]
Seff = 2.99 [1.54]
Teq = 335 [43] K
Rp = 3.74 [2.34] Re
a = 1.4006 [0.4420] AU
Ag = 12512.50 [14942.97] [0.84σ]
Teffp = 5485 [1496] K [3.44σ]

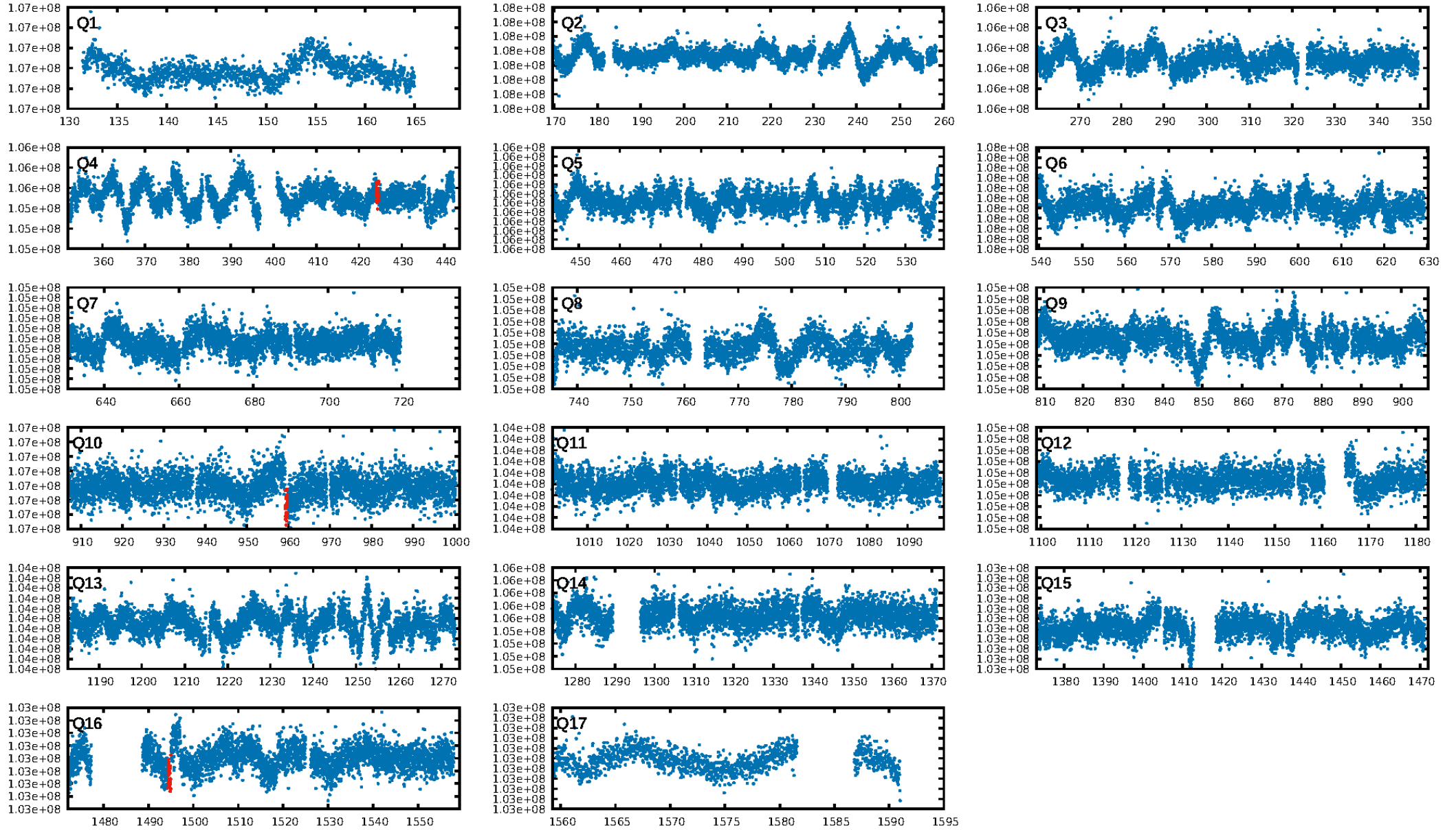
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.9%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 9.52e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -11.2
Centroid-sig: 39.4%
Centroid-so: 1.803 arcsec [1.01σ]
OotOffset-rm: 2.668 arcsec [1.54σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 2.385 arcsec [1.37σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

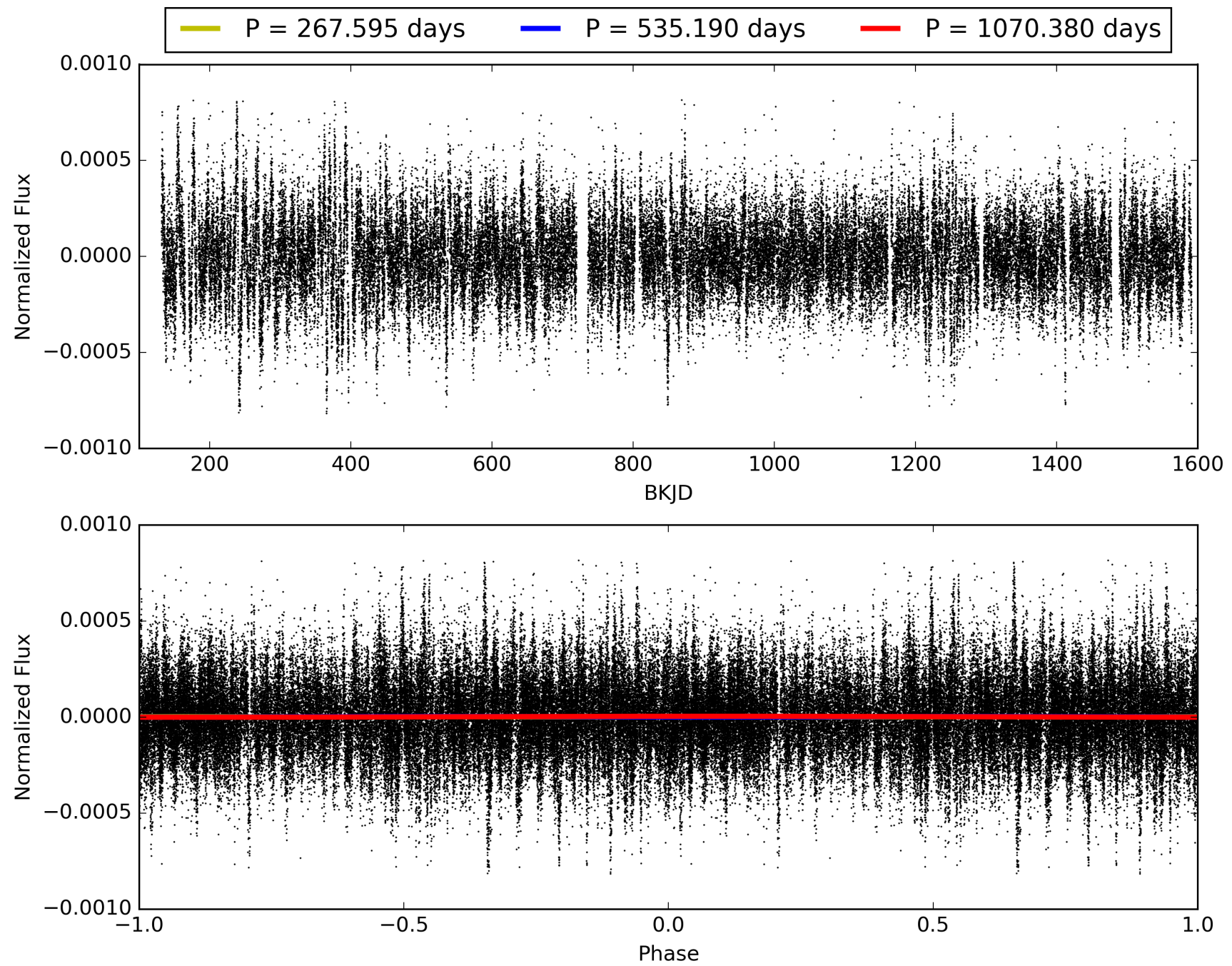
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:51:08 Z

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

TCE 006359725-01, PDC Light Curves

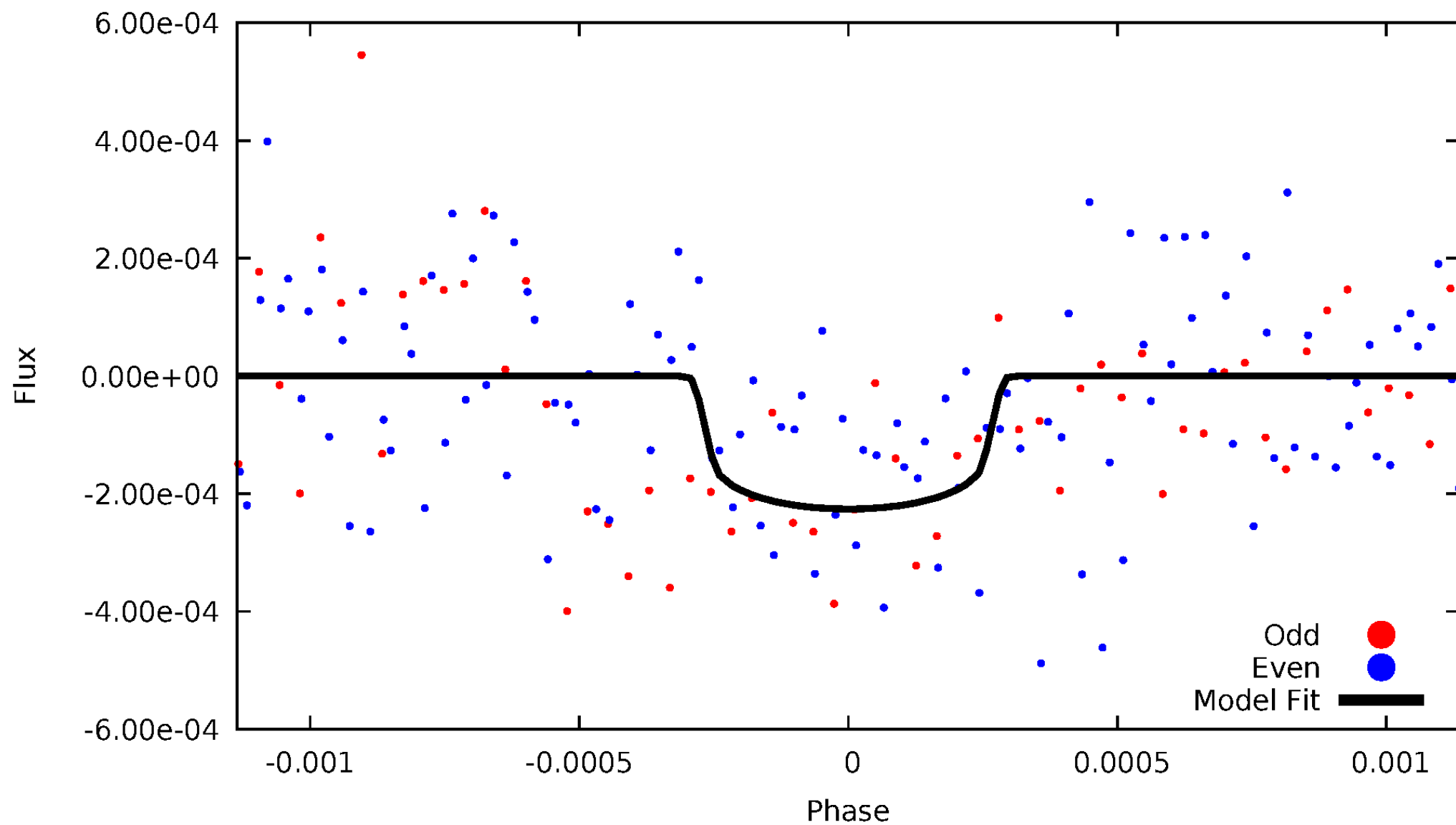


TCE 006359725-01



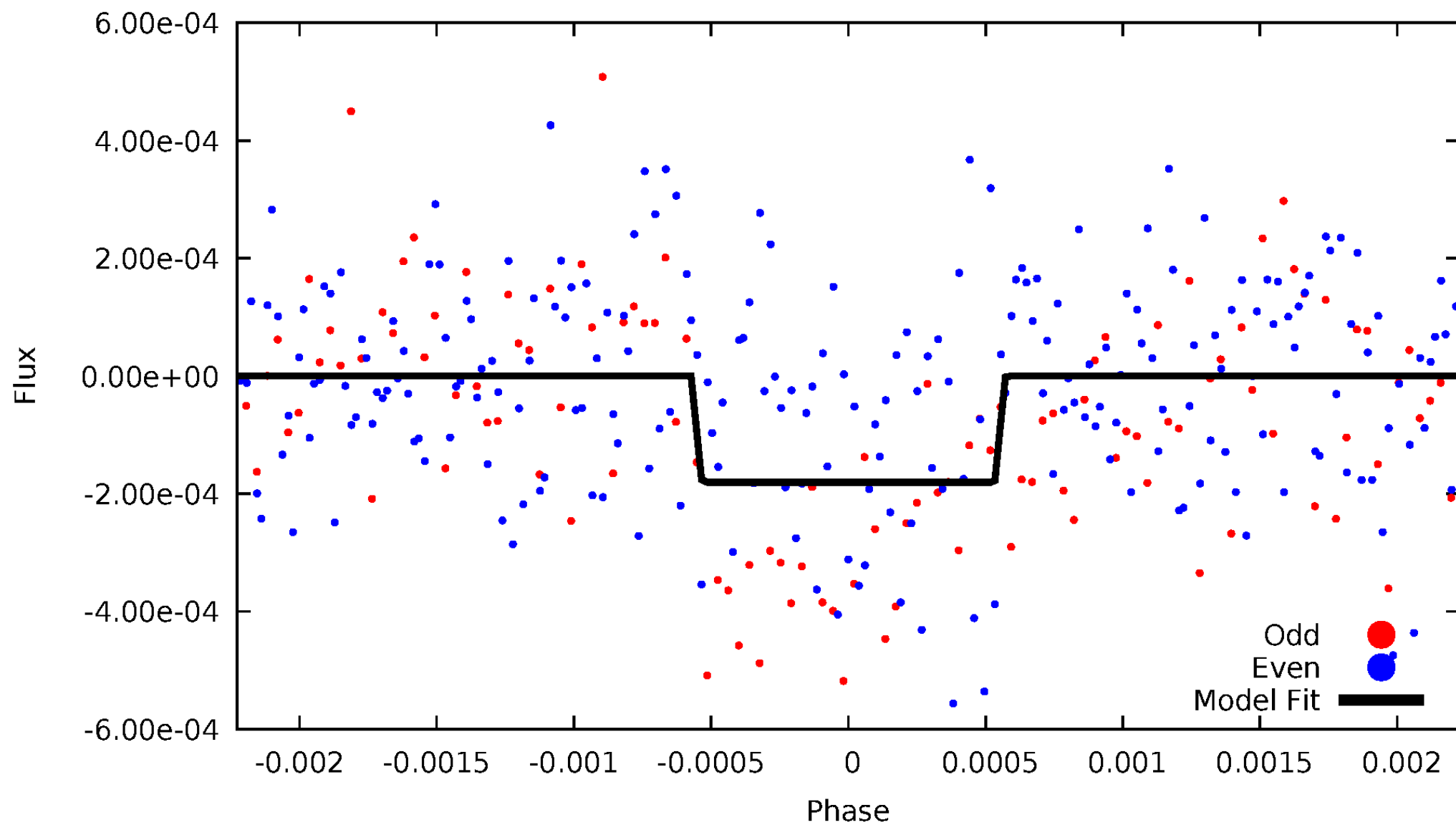
DV Odd/Even

TCE 006359725-01

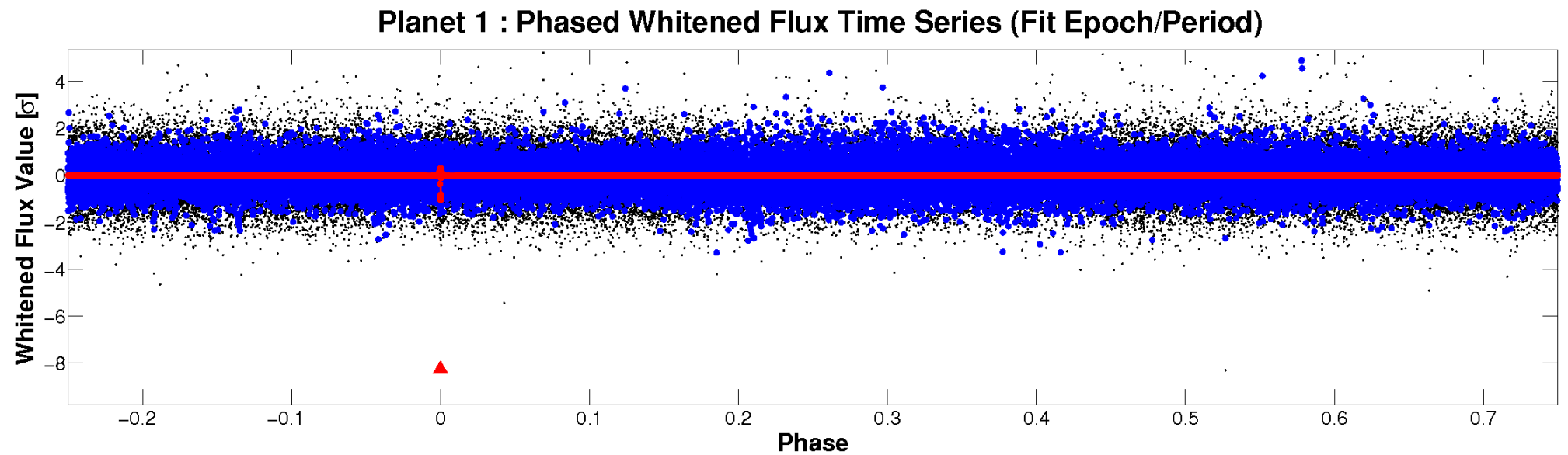
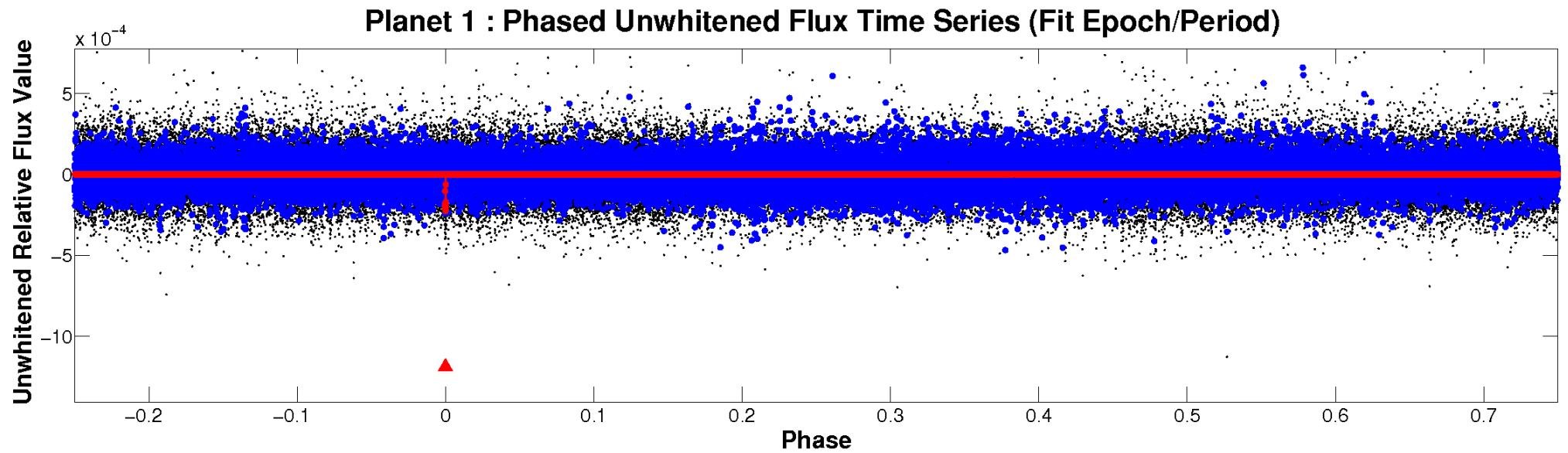


ALT Odd/Even

TCE 006359725-01

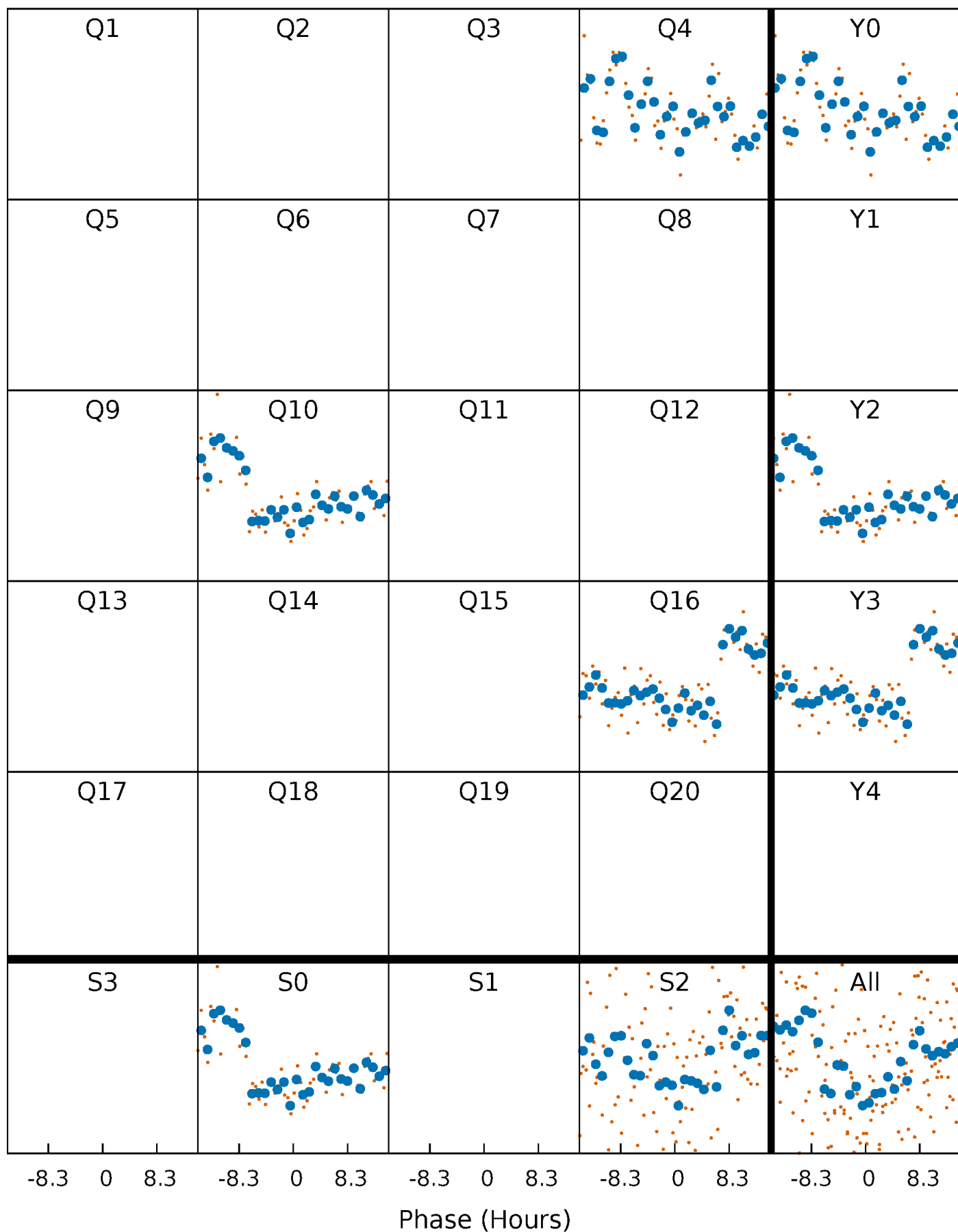


Non-Whitened Vs. Whitened Light Curve



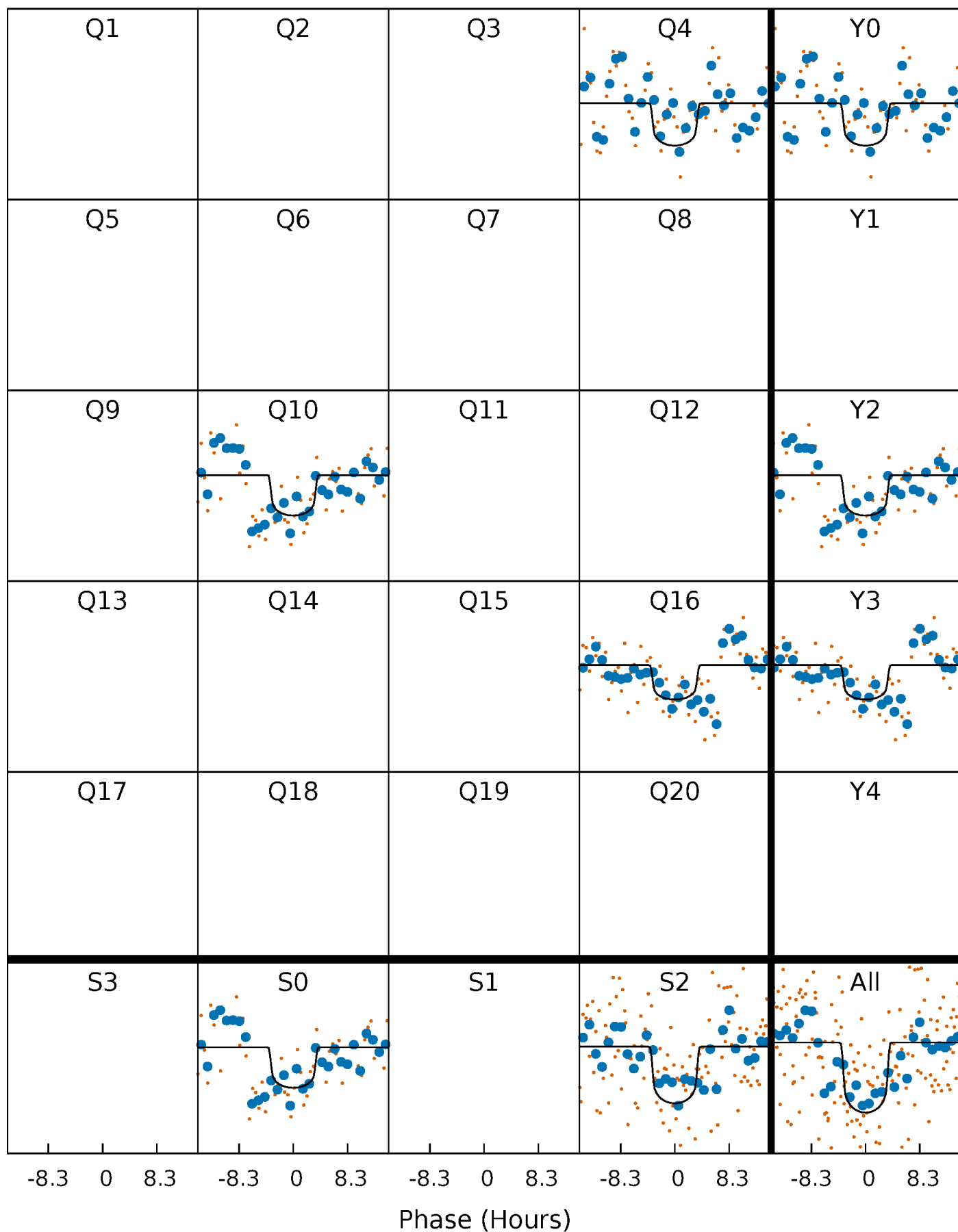
PDC Quarter-Phased Transit Curves

TCE 006359725-01 P=535.190034 Days $T_0=424.308084$ (BKJD)



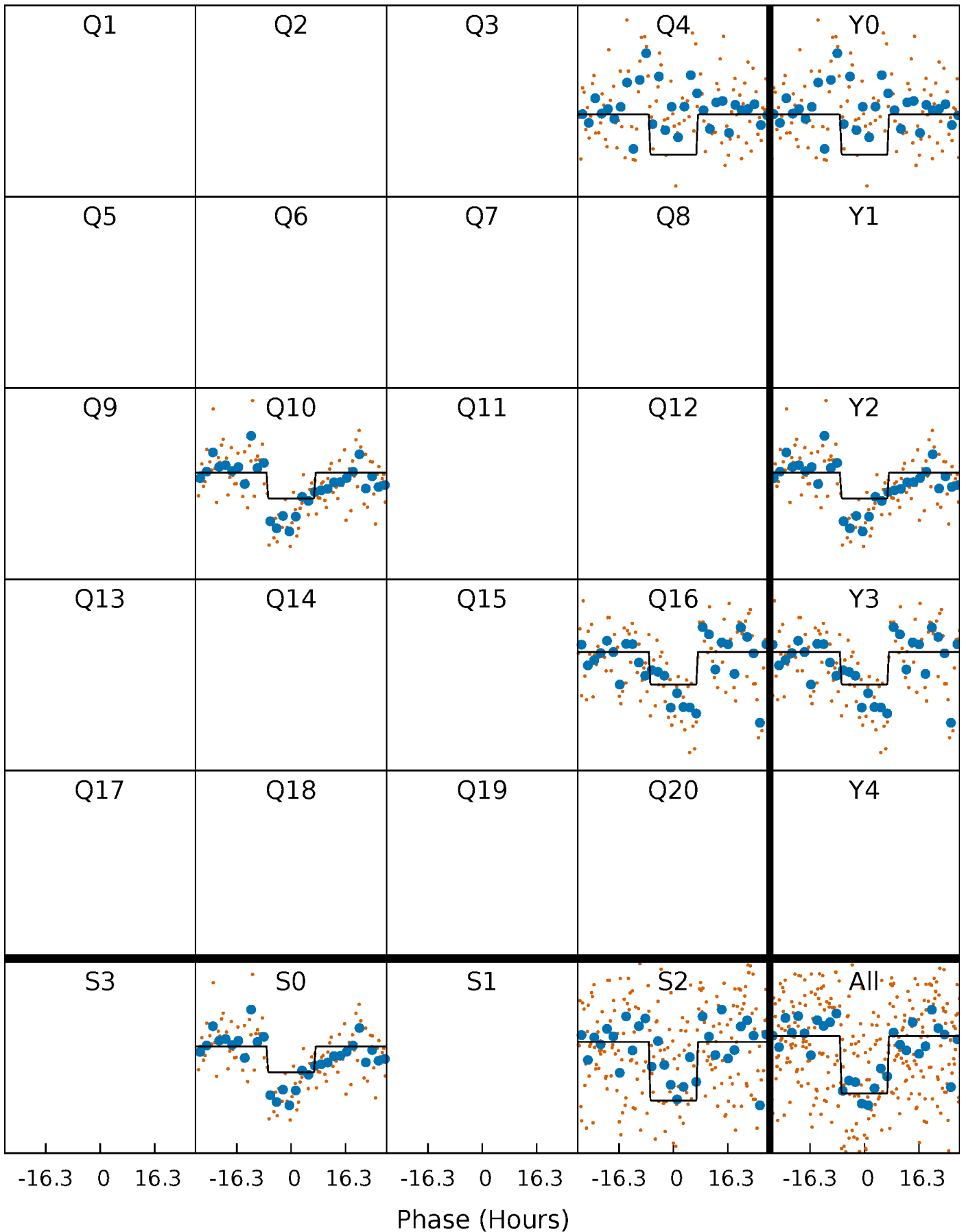
DV Quarter-Phased Transit Curves

TCE 006359725-01 P=535.190034 Days $T_0=424.308084$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

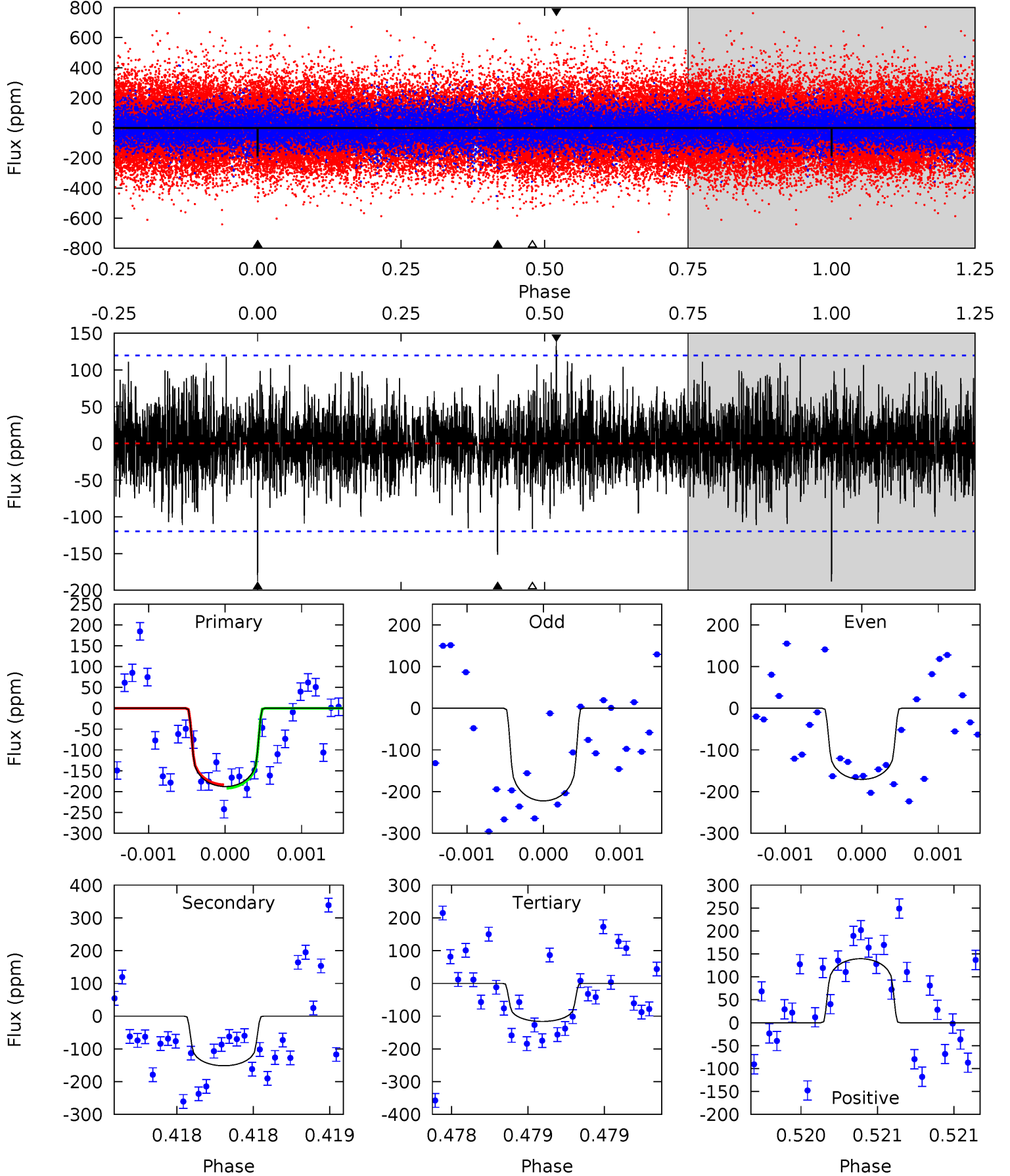
TCE 006359725-01 P=535.182181 Days $T_0=424.311149$ (BKJD)



DV Model-Shift Uniqueness Test

006359725-01, P = 535.190034 Days, E = 424.308084 Days

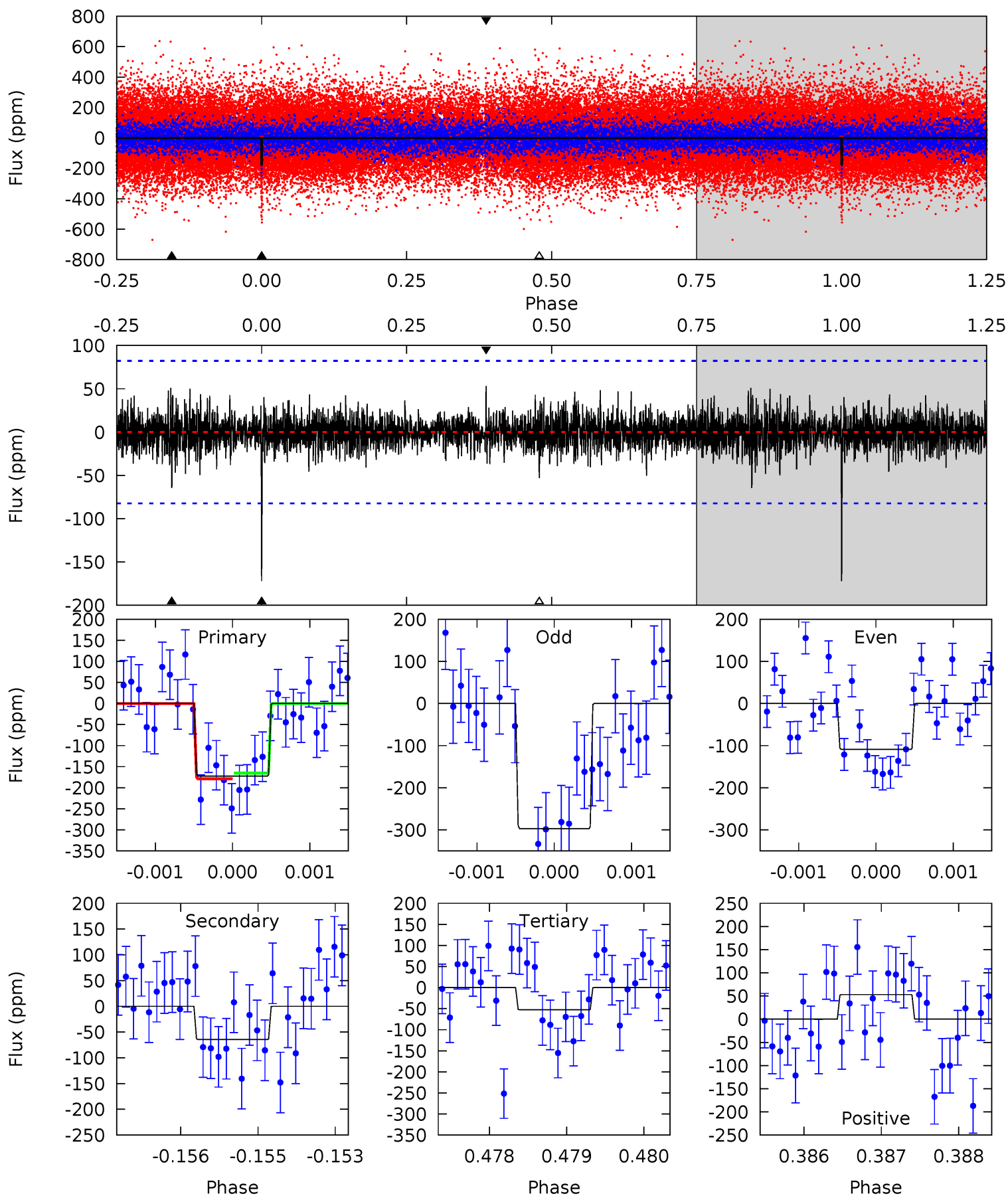
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.69	7.01	5.38	6.45	5.54	3.43	1.48	3.32	2.24	1.63	0.55	1.13	0.85	0.43	0.18



Alt Model-Shift Uniqueness Test

006359725-01, P = 535.182181 Days, E = 424.311149 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	4.25	3.49	3.50	5.43	3.25	0.88	7.86	7.85	0.76	0.75	5.91	0.69	0.24	0.45



Stellar Parameters For KIC 006359725

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6060^{+182}_{-182}	$3.858^{+0.292}_{-0.097}$	$-0.040^{+0.300}_{-0.250}$	$2.205^{+0.396}_{-0.735}$	$1.278^{+0.204}_{-0.250}$	$0.168^{+0.343}_{-0.052}$
	+3%/-3%	+8%/-3%	+750%/-625%	+18%/-33%	+16%/-20%	+205%/-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 006359725-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-151 ± 22	$3.61^{+2.12}_{-1.86}$	460^{+29}_{-40}	5335^{+2402}_{-855}	12217^{+39734}_{-7233}
Alt.	-64 ± 15	$3.08^{+2.04}_{-1.73}$	460^{+28}_{-36}	4725^{+2161}_{-801}	7071^{+30351}_{-4550}

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

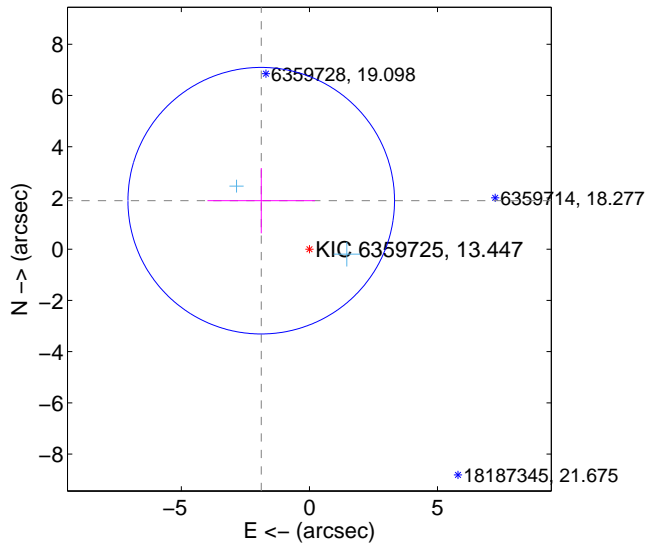
Supplemental centroid analysis for 006359725-01. Kepler magnitude: 13.45. Transit SNR 6.48

There are 2 quarters with good PRF difference image offsets

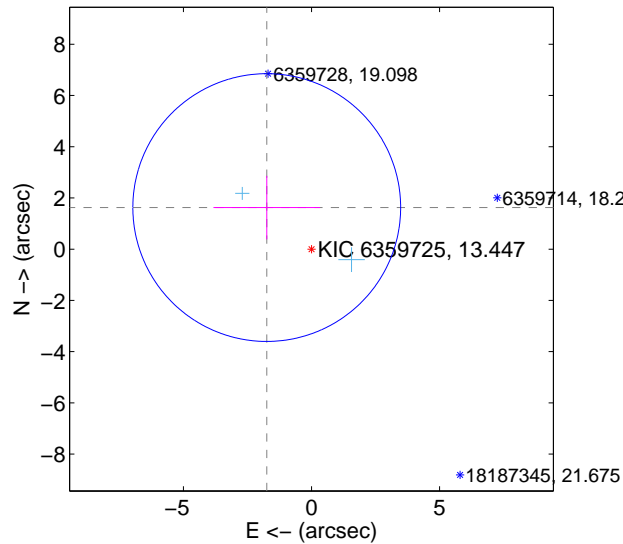
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.668 ± 1.734	1.54	1.881 ± 2.099	1.892 ± 1.274
PRF-fit source offset from KIC position	2.385 ± 1.742	1.37	1.747 ± 2.080	1.624 ± 1.241
photometric centroid source offset	1.80 ± 1.78	1.01	1.65 ± 1.83	-0.73 ± 1.50

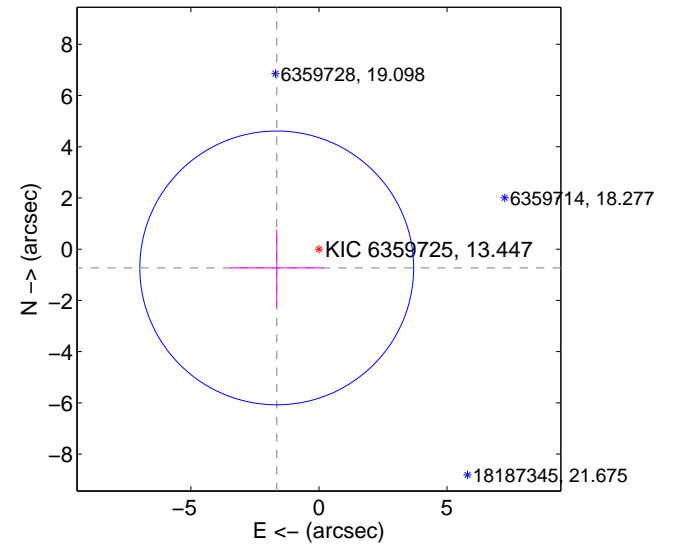
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

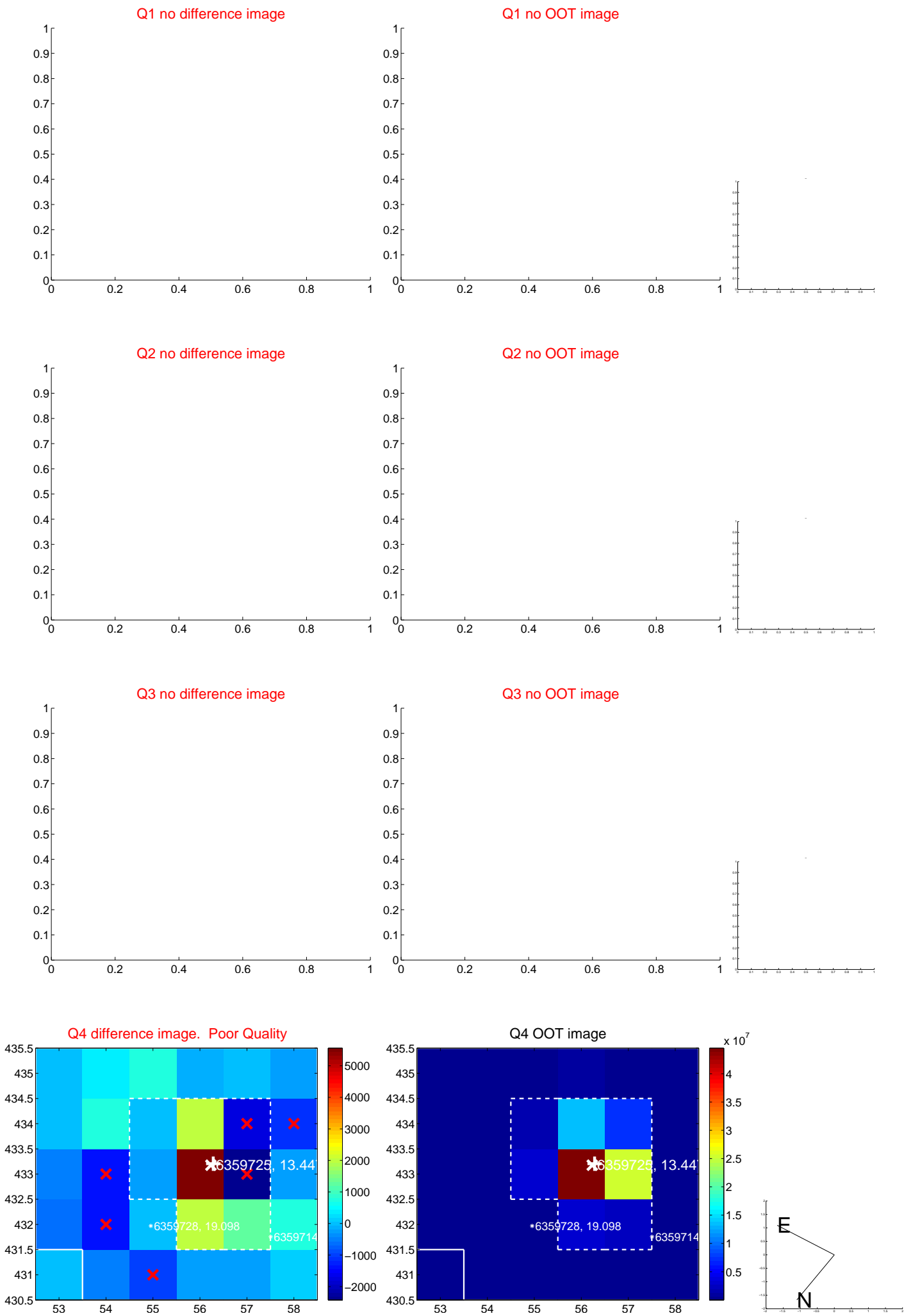


offset from photometric centroids

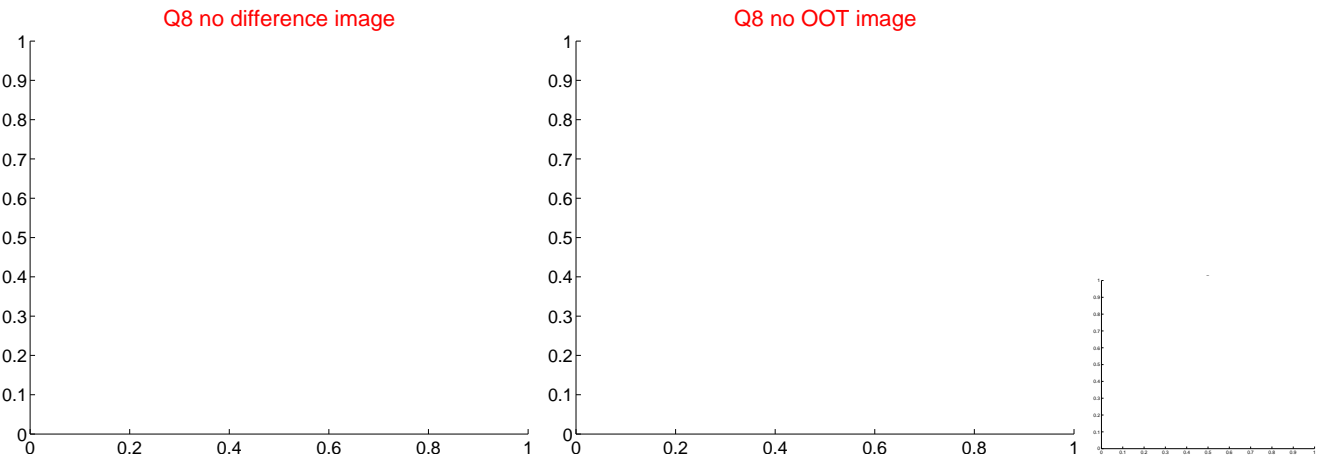


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

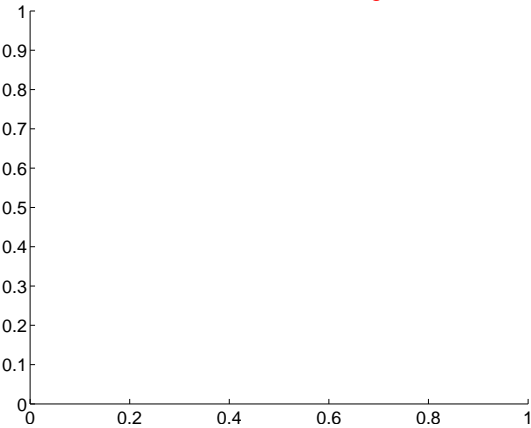


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

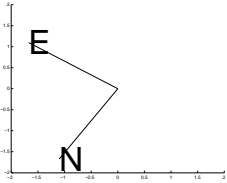
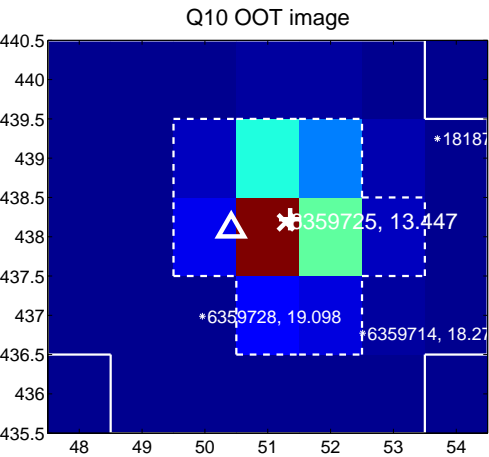
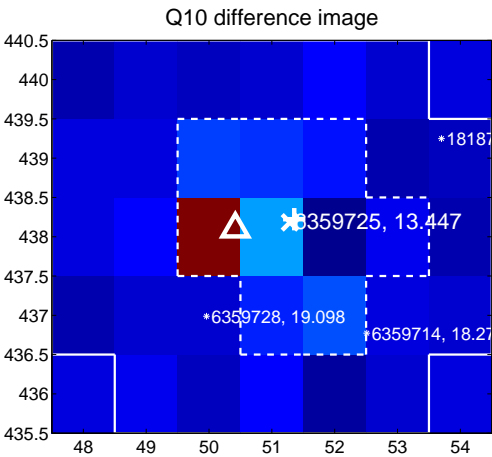
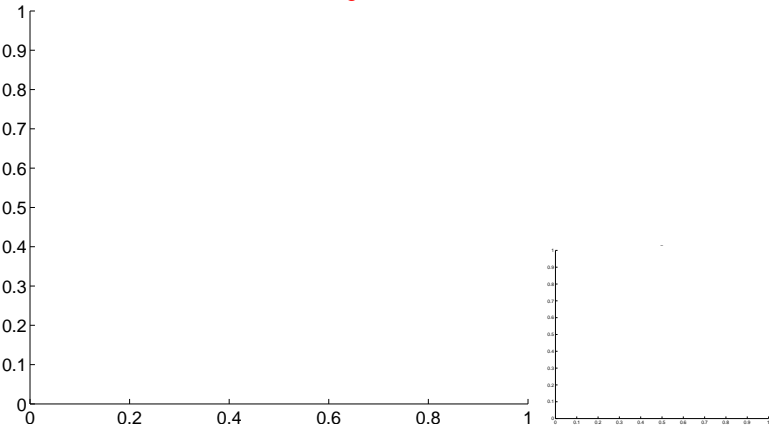


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

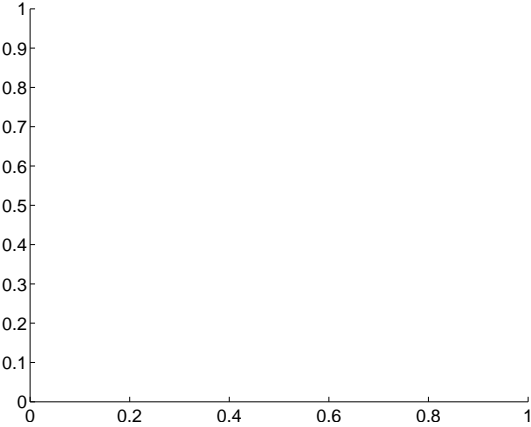
Q9 no difference image



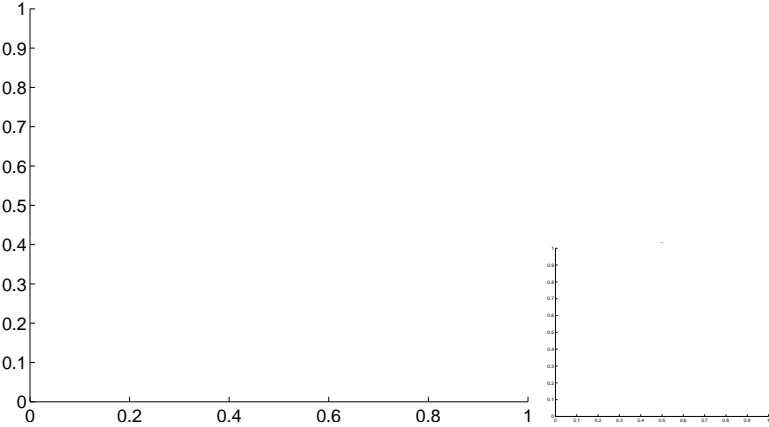
Q9 no OOT image



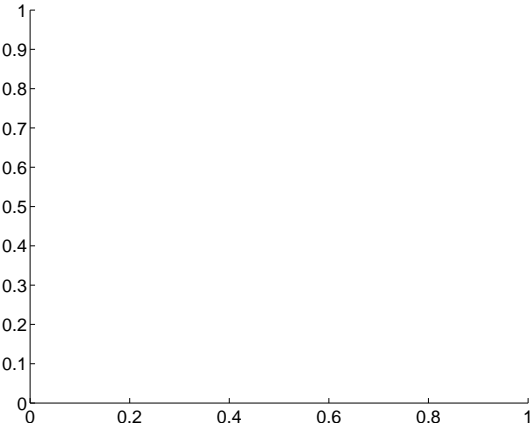
Q11 no difference image



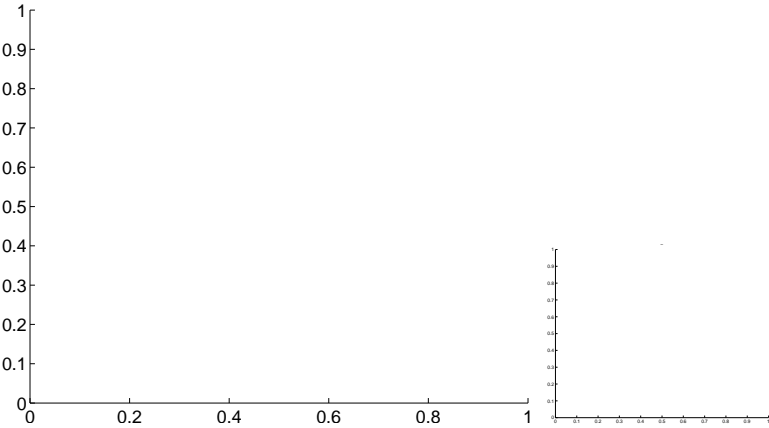
Q11 no OOT image



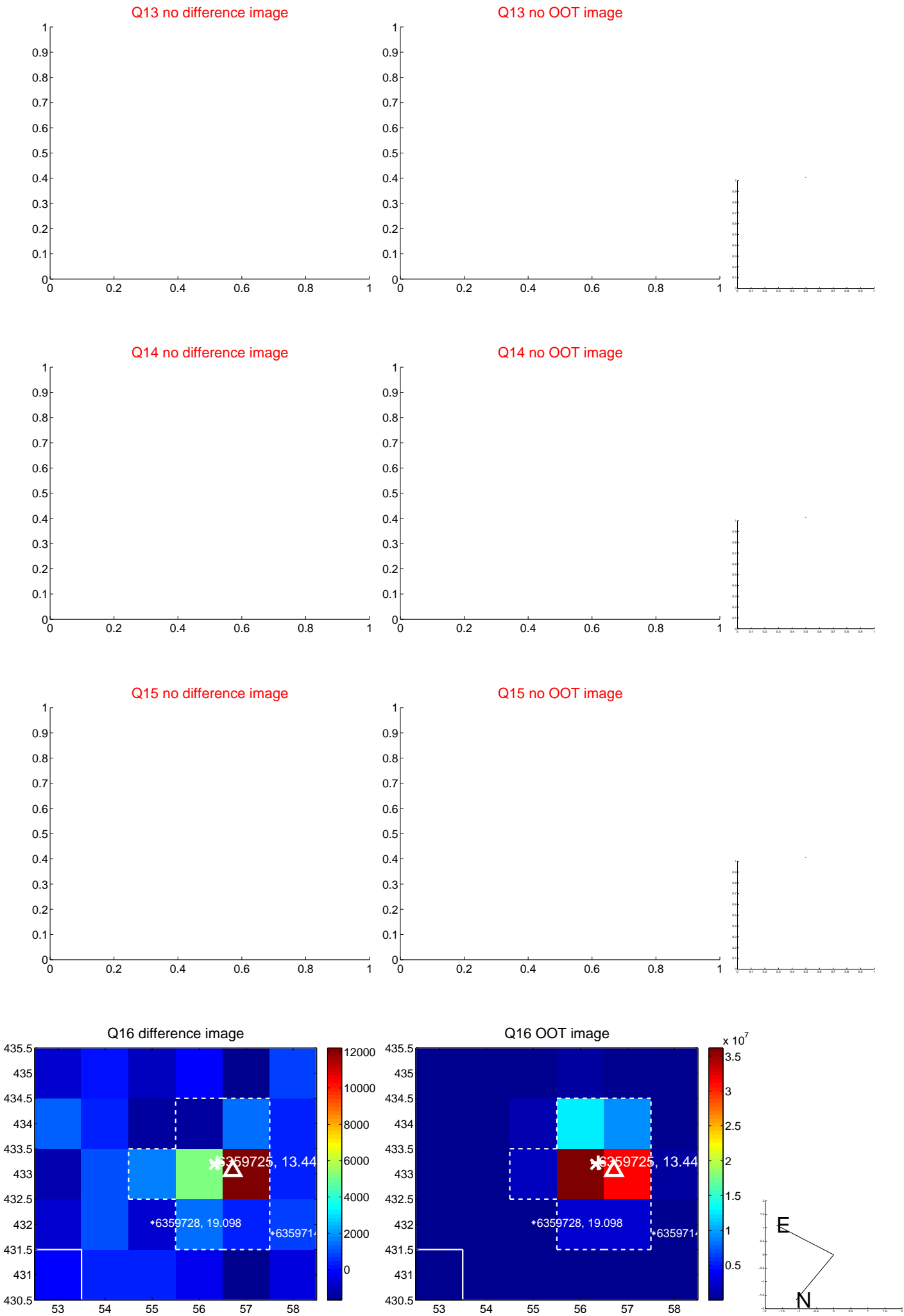
Q12 no difference image



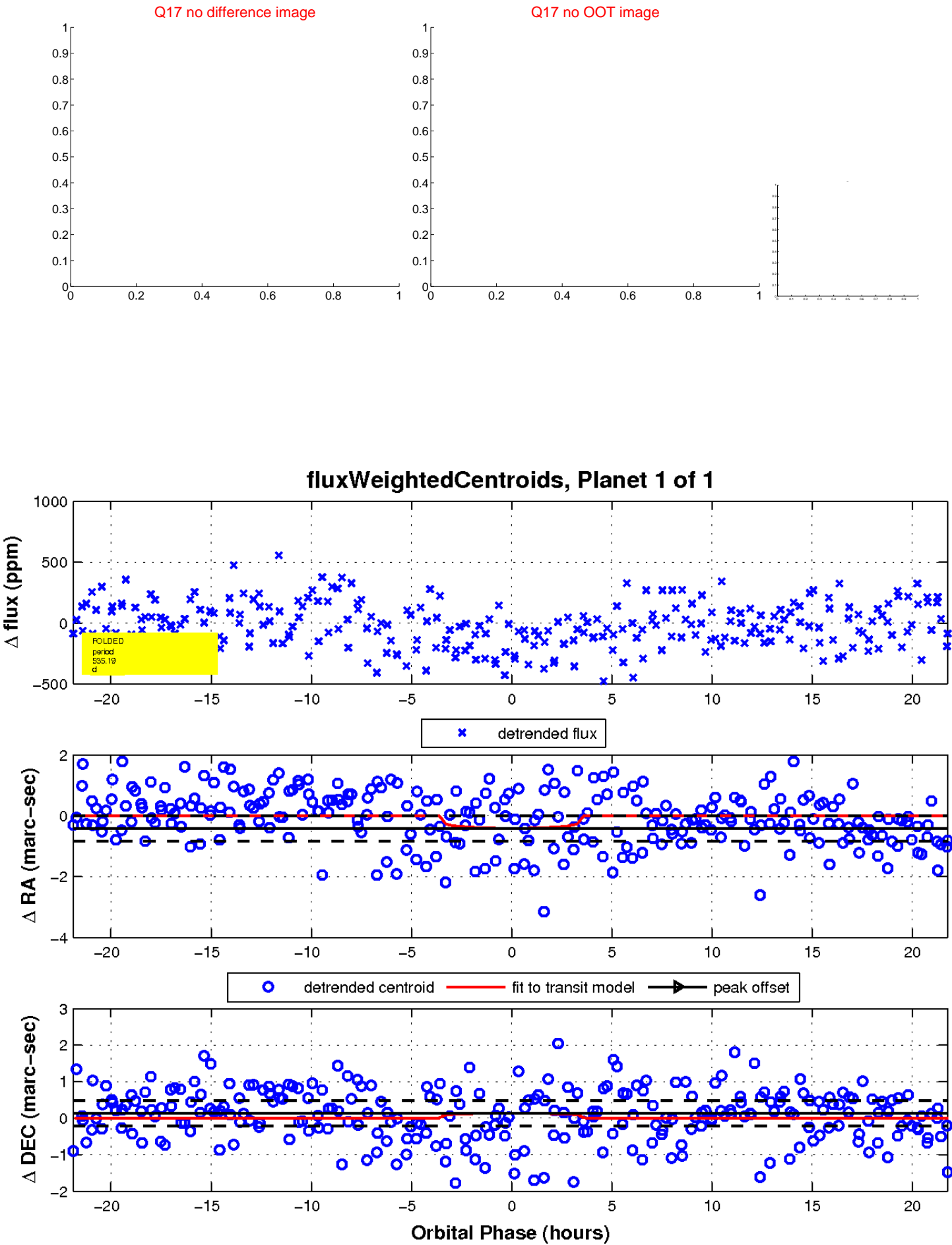
Q12 no OOT image



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

