

KIC 003425851

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})
003425851-01	OBS	0268.01	110.378690	175.929603	511.8	12.410	59.9	63.0	1.36	6342	3.23	11.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003425851-01	OBS	PC	1.00	0	0	0	0	CENT_SATURATED

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 003425851-01

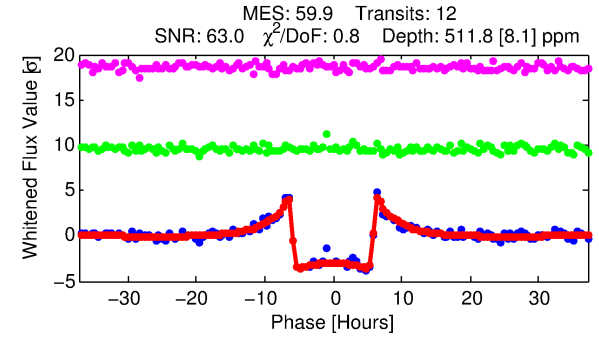
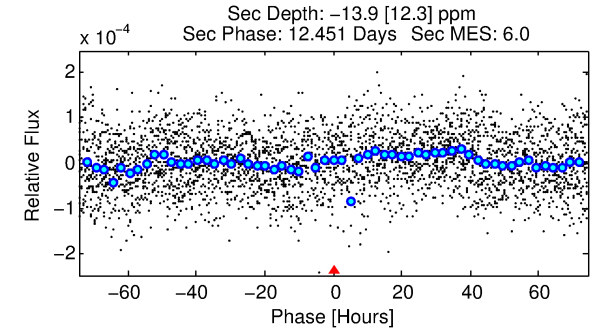
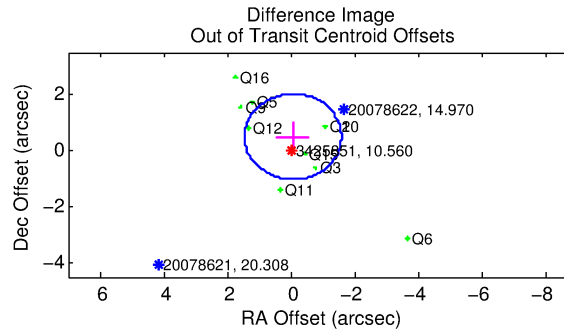
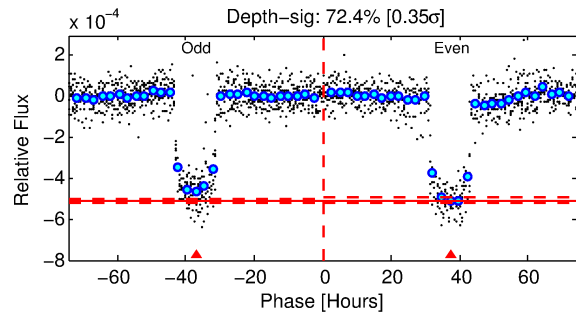
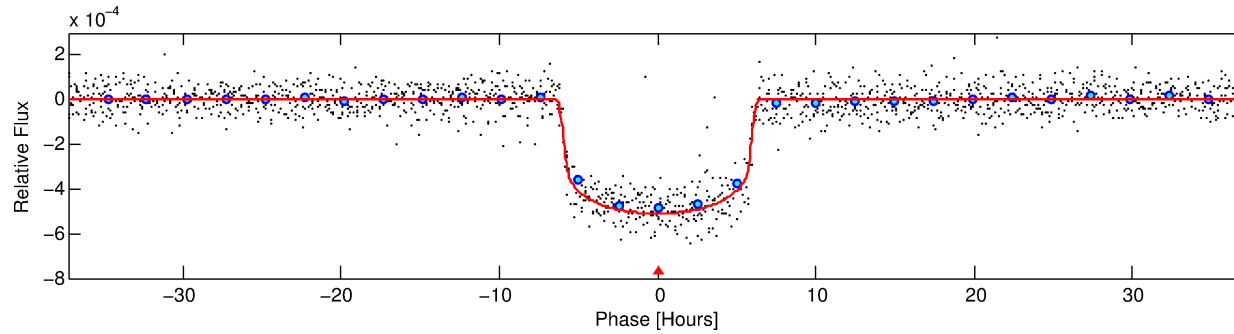
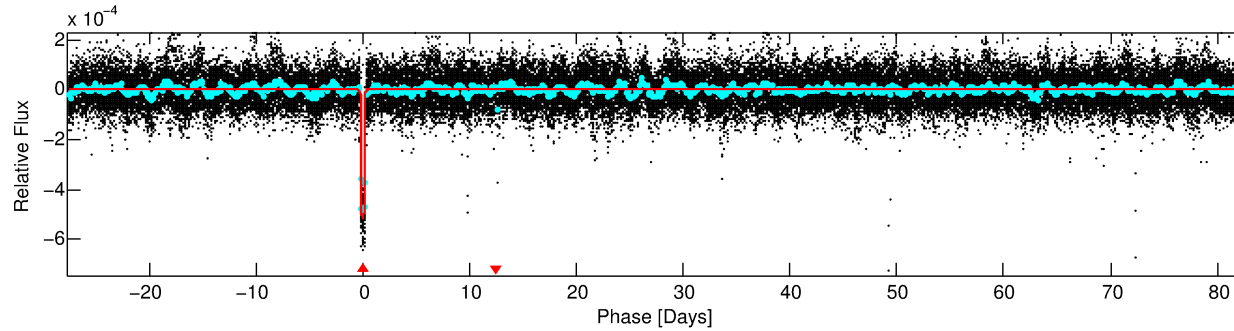
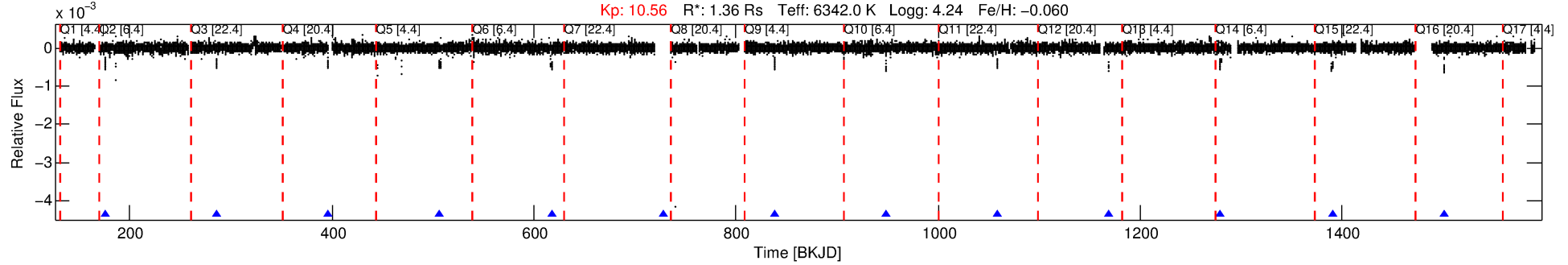
No Significant Match Found

DV One-Page Summary

KIC: 3425851 Candidate: 1 of 1 Period: 110.379 d

KOI: K00268.01 Corr: 0.992

Kp: 10.56 R*: 1.36 Rs Teff: 6342.0 K Logg: 4.24 Fe/H: -0.060



DV Fit Results:

Period = 110.37869 [0.00017] d
Epoch = 175.9296 [0.0013] BKJD
Rp/R* = 0.0218 [0.0006]
a/R* = 55.18 [7.77]
b = 0.62 [0.14]
Seff = 11.84 [0.96]
Teq = 473 [10] K
Rp = 3.23 [0.19] Re
a = 0.4754 [0.0199] AU
Ag = N/A
Teffp = N/A

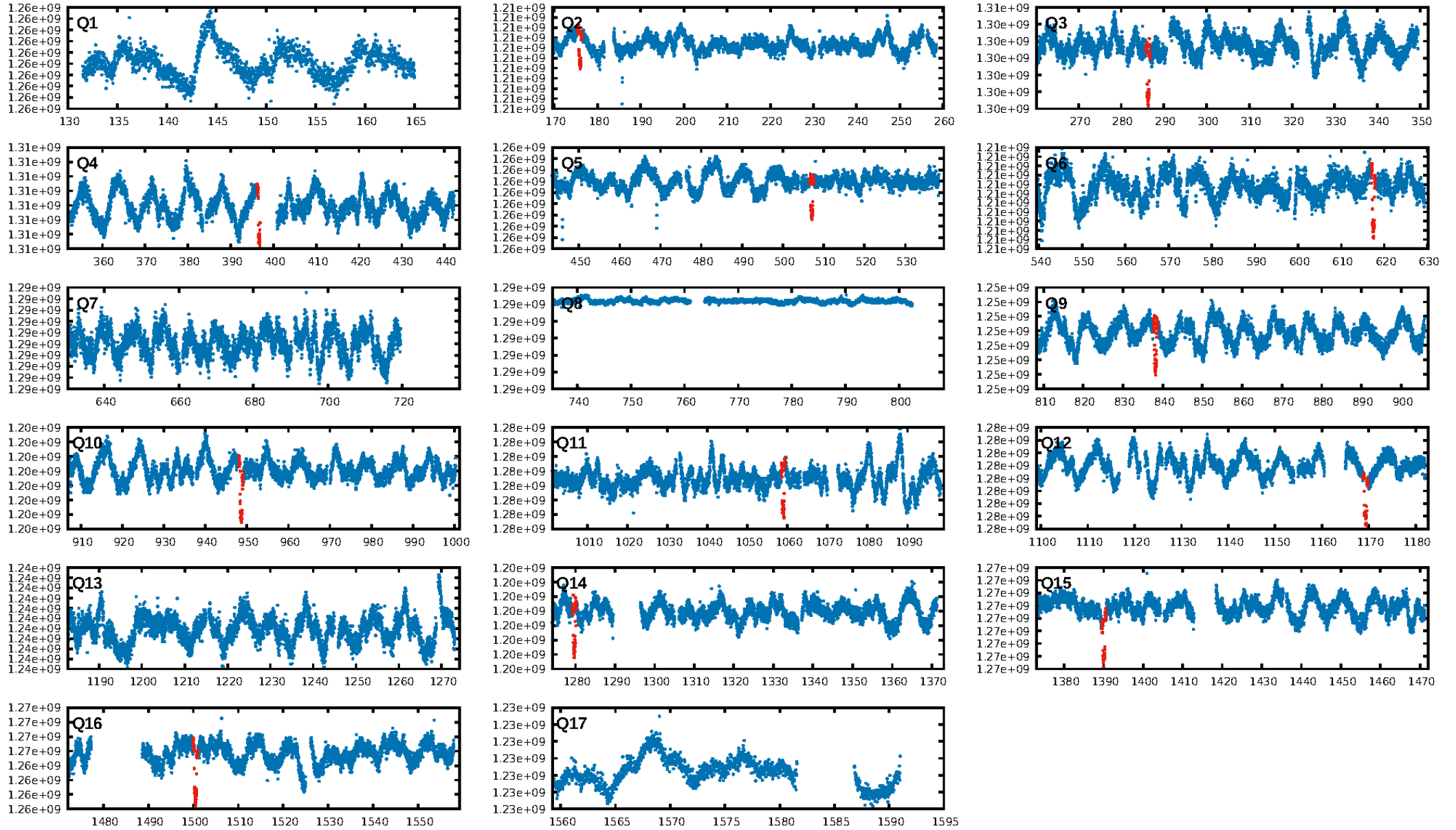
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.507 arcsec [1.80σ]
OotOffset-rm: 0.500 arcsec [0.98σ]
KicOffset-rm: 0.291 arcsec [0.56σ]
OotOffset-st: 3/3/2/2 [10]
KicOffset-st: 3/3/2/2 [10]
DiffImageQuality-fgm: 0.90 [9/10]
DiffImageOverlap-fno: 1.00 [10/10]

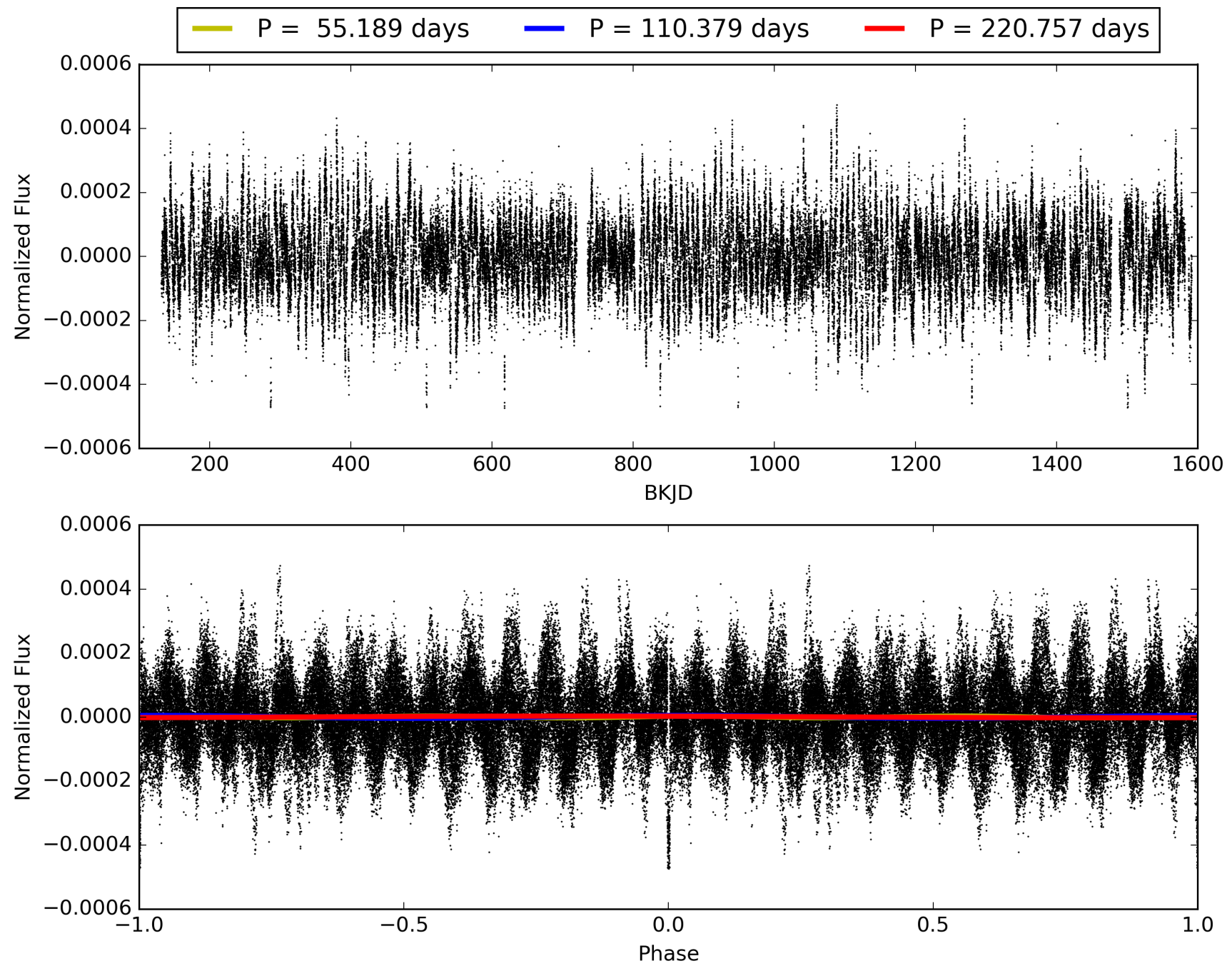
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:33:54 Z

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

TCE 003425851-01, PDC Light Curves

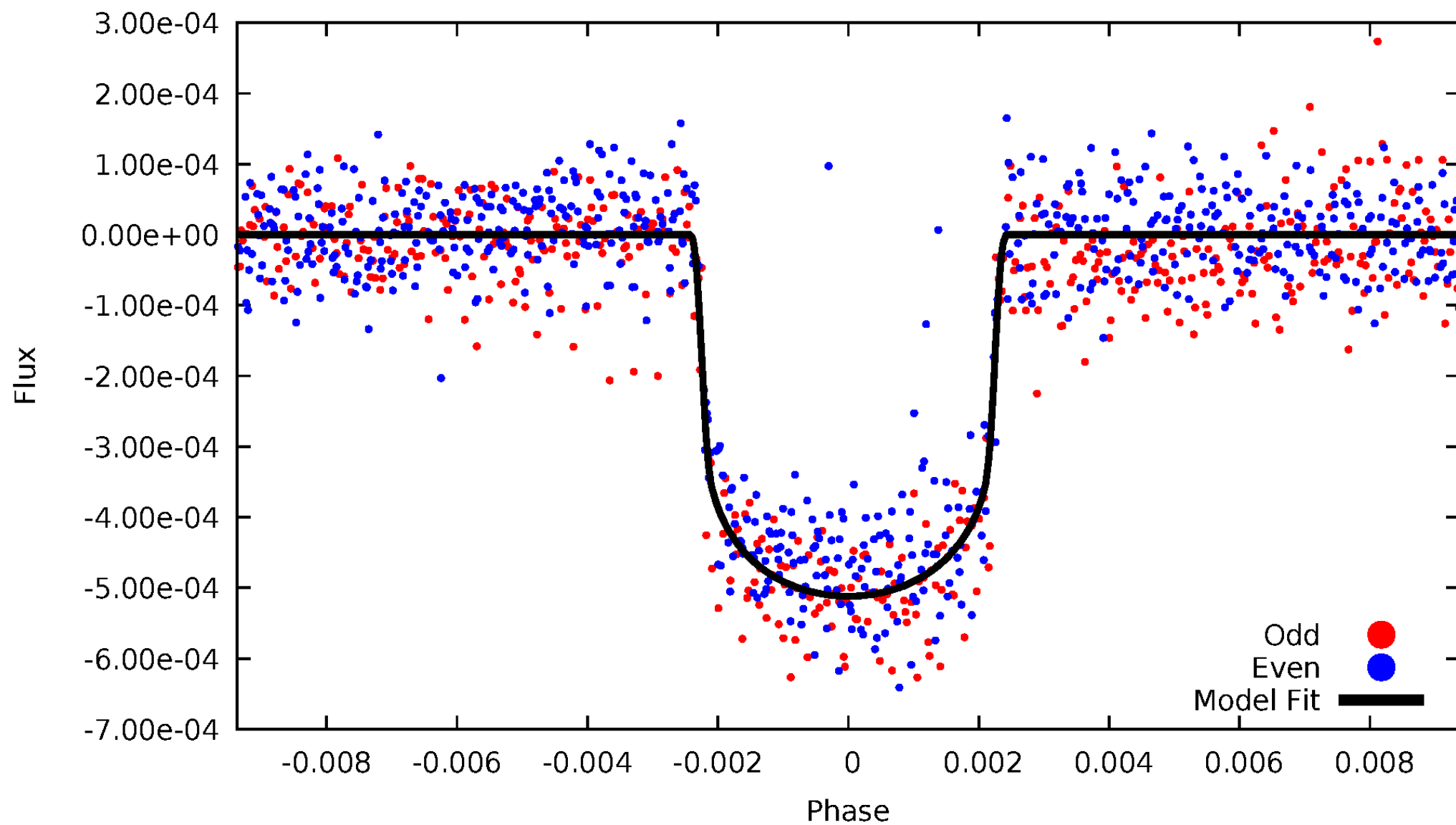


TCE 003425851-01



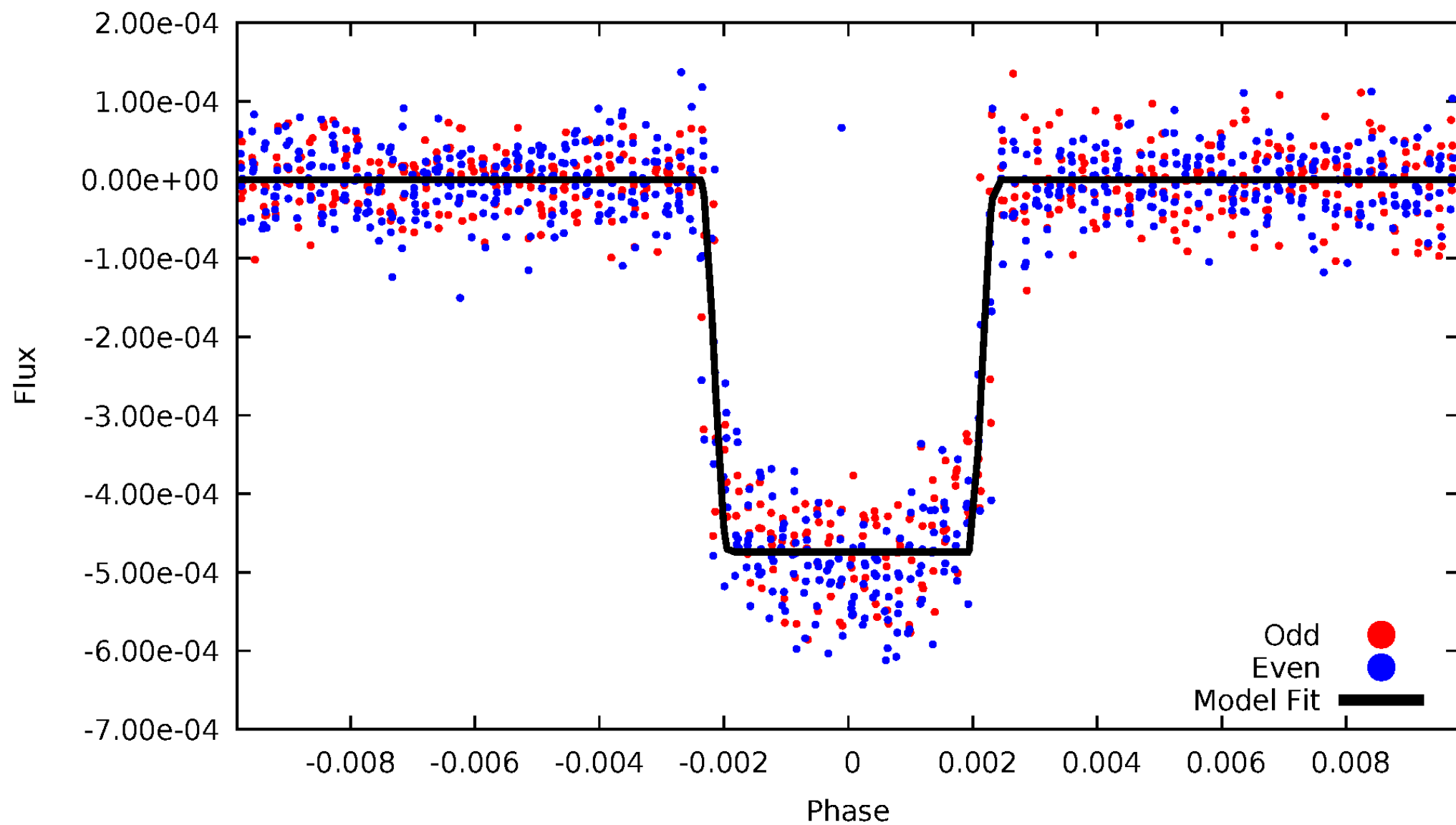
DV Odd/Even

TCE 003425851-01

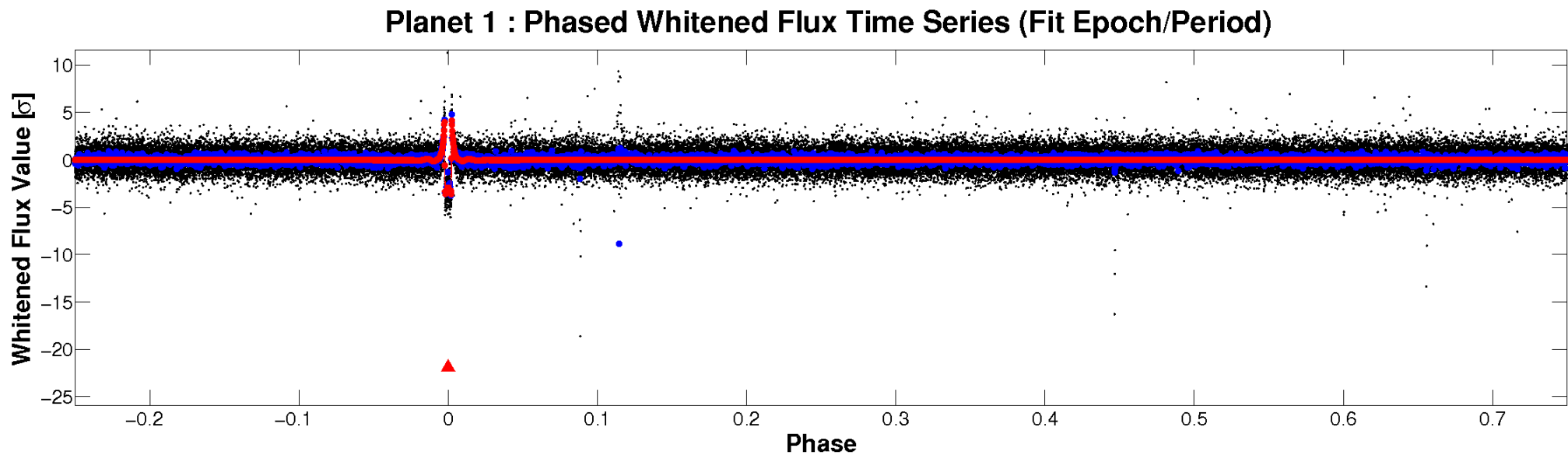
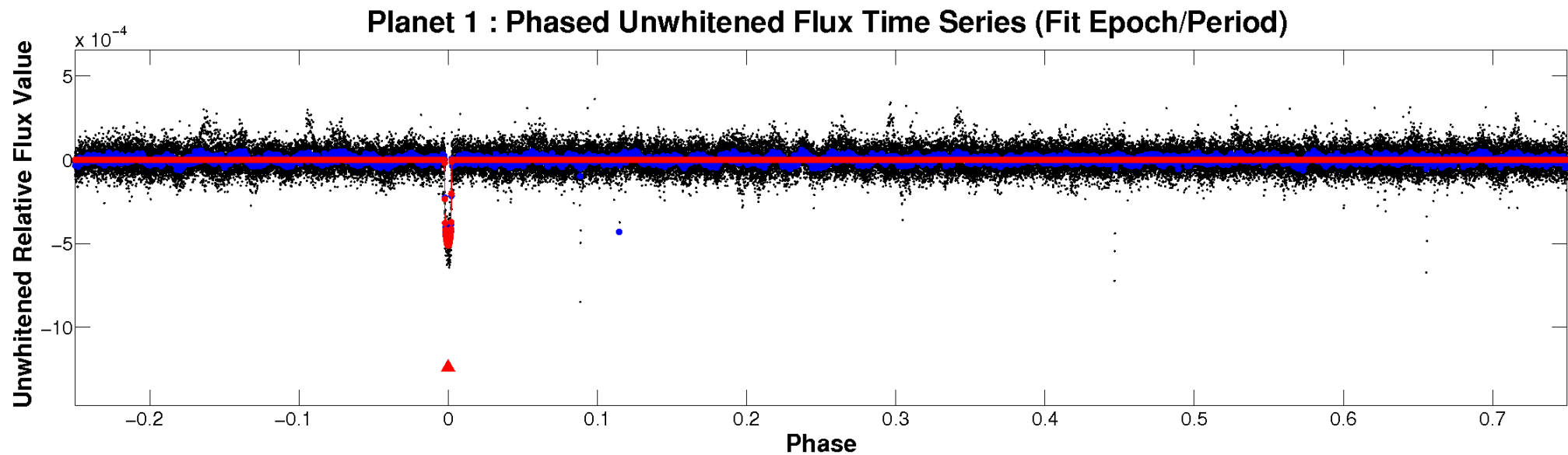


ALT Odd/Even

TCE 003425851-01

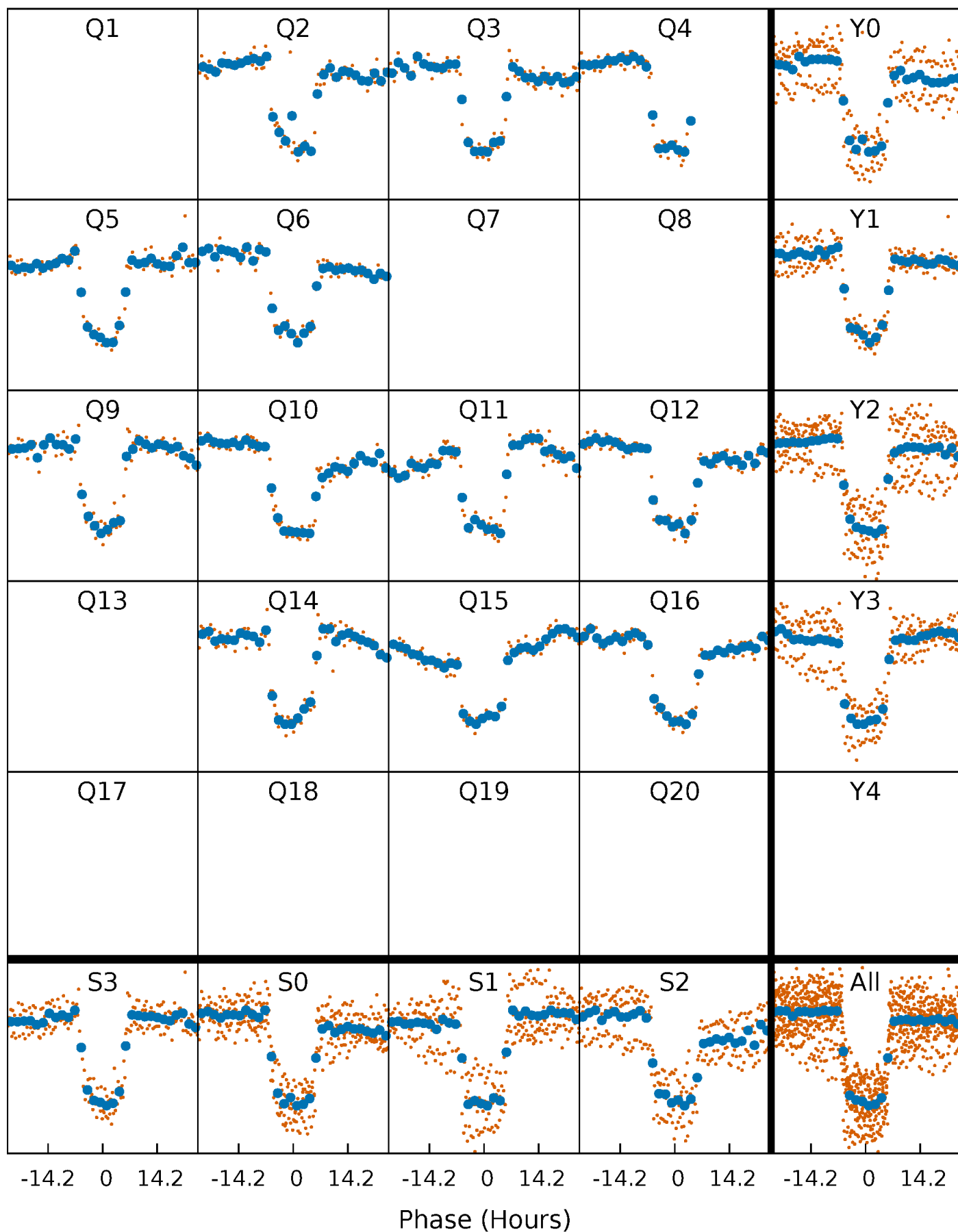


Non-Whitened Vs. Whitened Light Curve



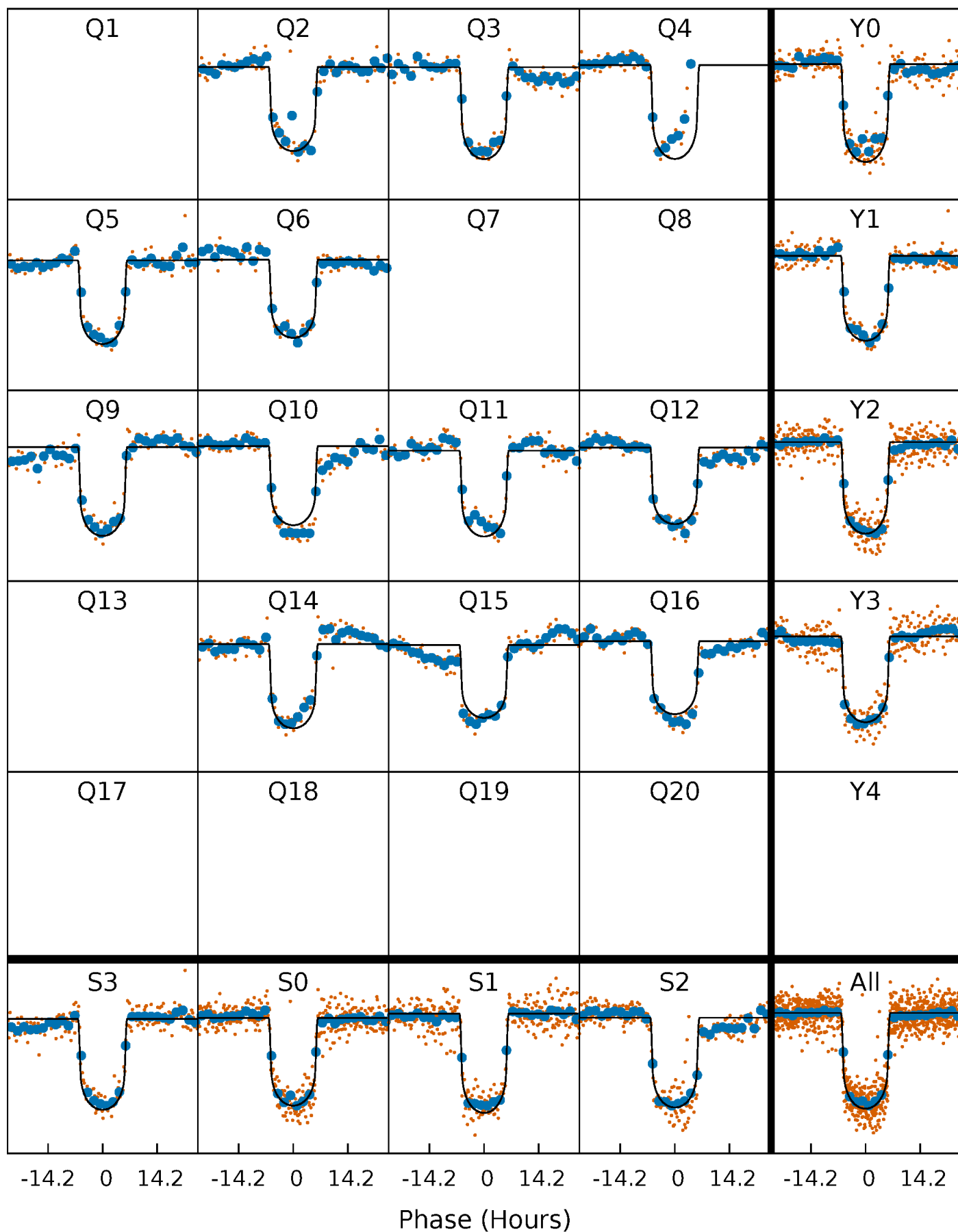
PDC Quarter-Phased Transit Curves

TCE 003425851-01 P=110.378690 Days $T_0=175.929603$ (BKJD)



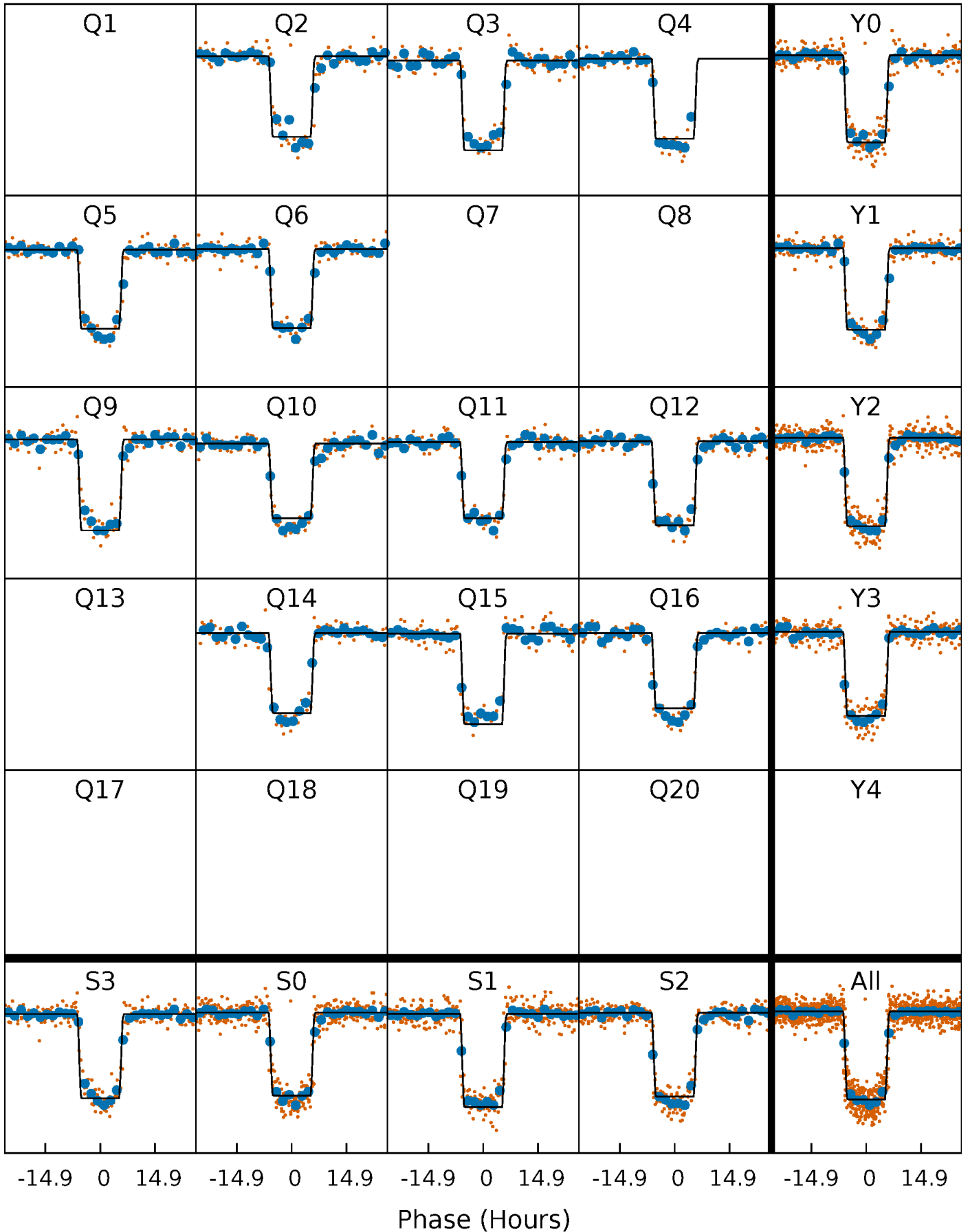
DV Quarter-Phased Transit Curves

TCE 003425851-01 P=110.378690 Days $T_0=175.929603$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

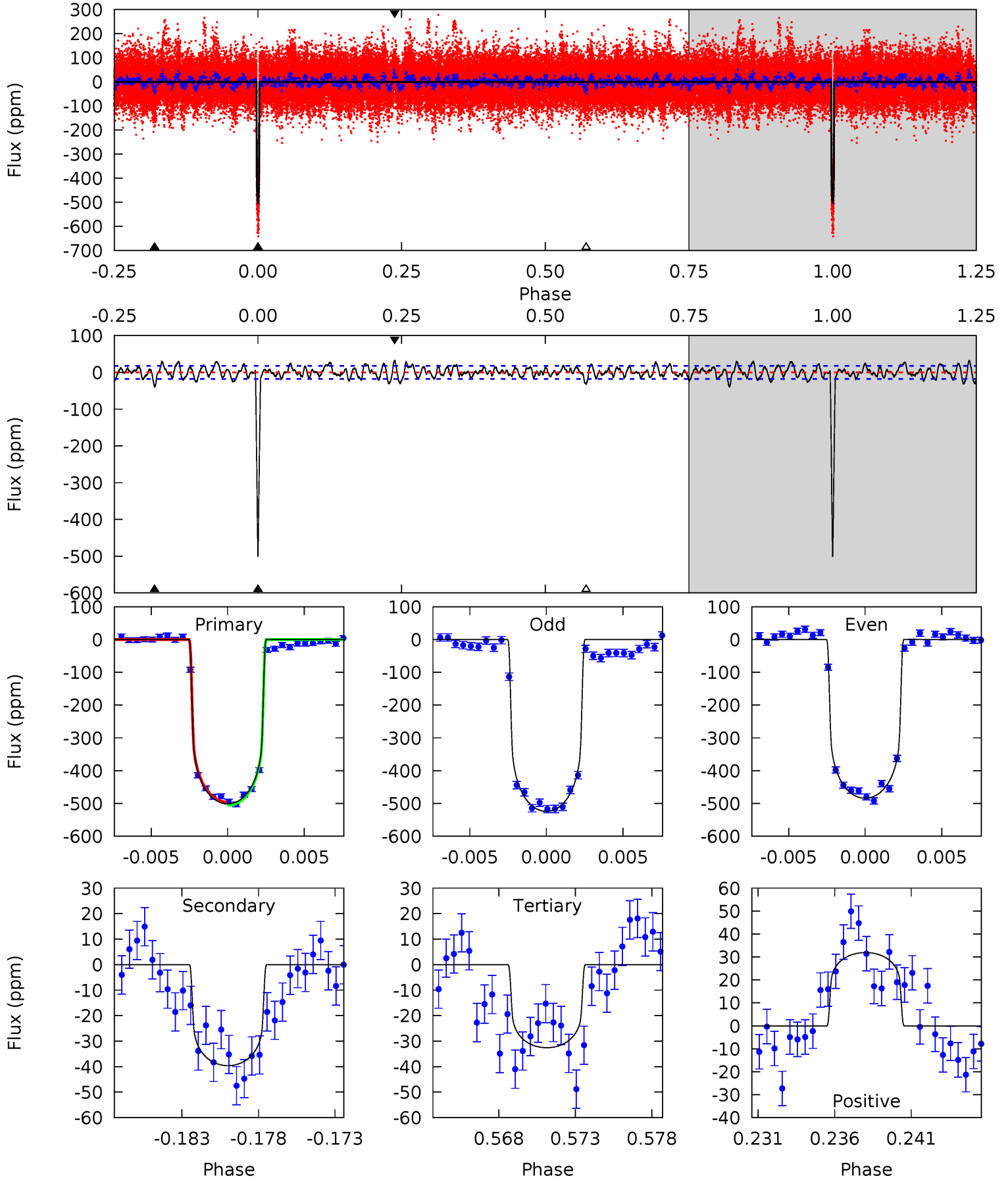
TCE 003425851-01 P=110.382091 Days $T_0=175.908302$ (BKJD)



DV Model-Shift Uniqueness Test

003425851-01, P = 110.378690 Days, E = 65.550913 Days

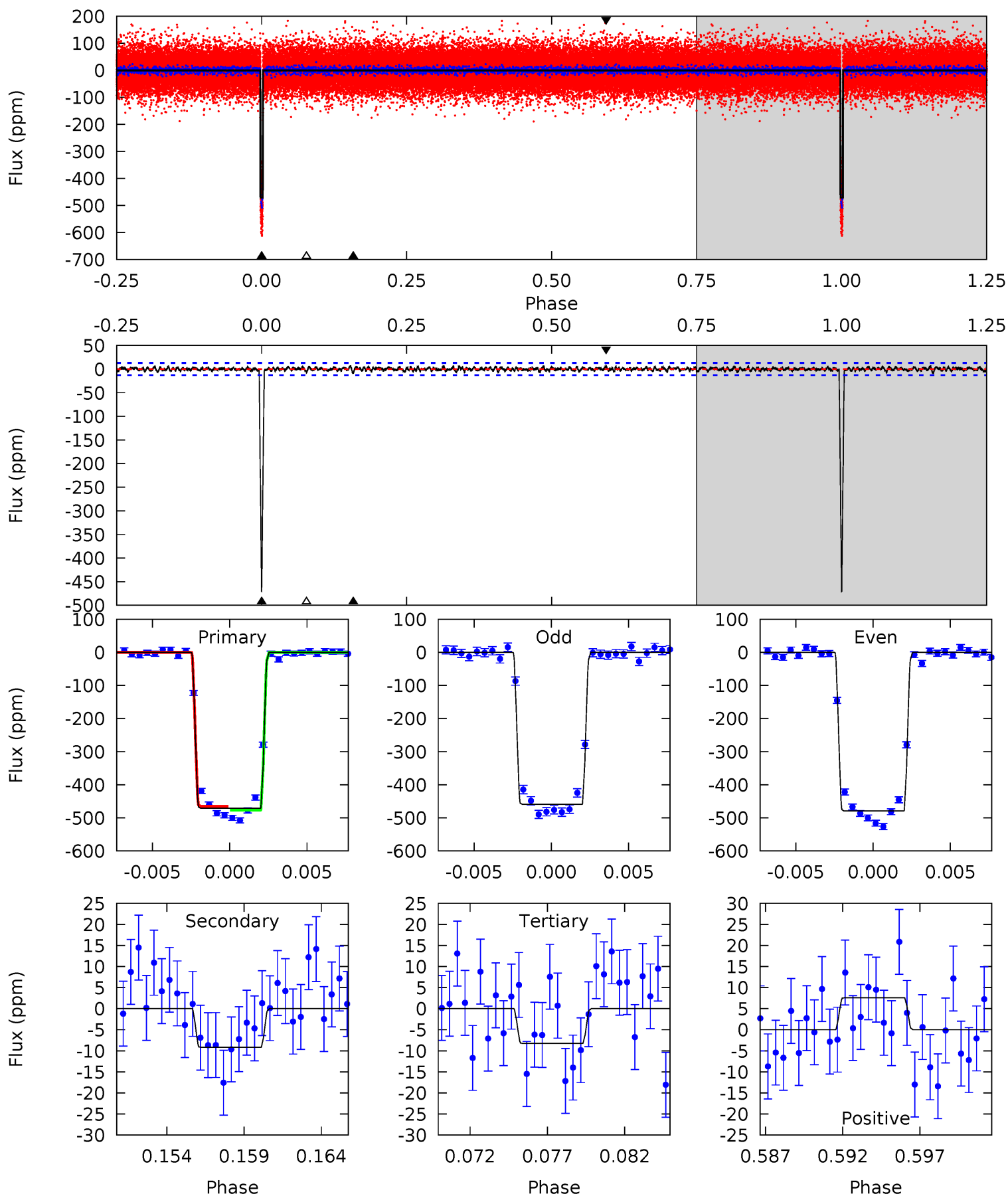
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.4	11.5	9.45	9.26	5.16	2.82	3.32	136.0	136.2	2.04	2.23	5.76	1.04	0.06	1.43



Alt Model-Shift Uniqueness Test

003425851-01, P = 110.382091 Days, E = 65.526211 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
189.3	3.68	3.31	3.04	5.16	2.82	0.97	186.0	186.2	0.37	0.64	4.03	0.98	0.02	2.35



Stellar Parameters For KIC 003425851

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6342^{+86}_{-76}	$4.242^{+0.033}_{-0.030}$	$-0.060^{+0.100}_{-0.100}$	$1.359^{+0.062}_{-0.068}$	$1.175^{+0.058}_{-0.065}$	$0.659^{+0.080}_{-0.065}$
	+1%/-1%	+1%/-1%	+167%/-167%	+5%/-5%	+5%/-6%	+12%/-10%
Source	SPE8	AST69	SPE69	DSEP		

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

Secondary Eclipse Parameters for KIC 003425851-01 / KOI 0268.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 3	$3.23^{+0.14}_{-0.14}$	661^{+12}_{-11}	3794^{+75}_{-78}	469^{+58}_{-54}
Alt.	-9 ± 2	$3.23^{+0.13}_{-0.14}$	661^{+12}_{-12}	3021^{+113}_{-138}	109^{+30}_{-32}

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

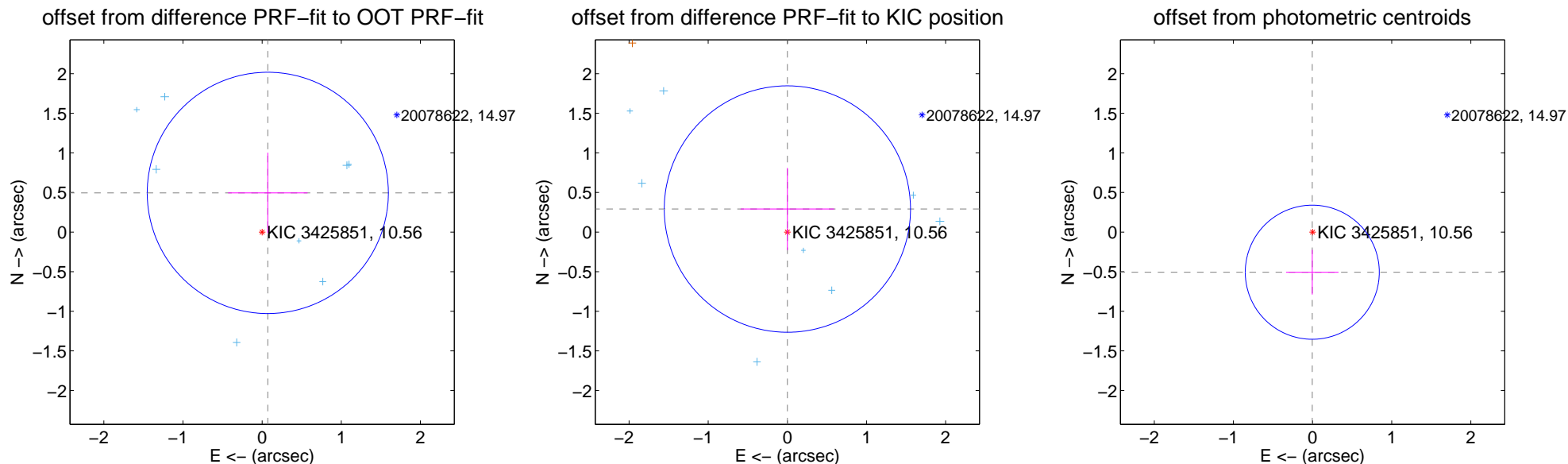
DV Centroid Data

Supplemental centroid analysis for 003425851-01. **Kepler magnitude: 10.56.** Transit SNR 63.00

There are 9 quarters with good PRF difference image offsets

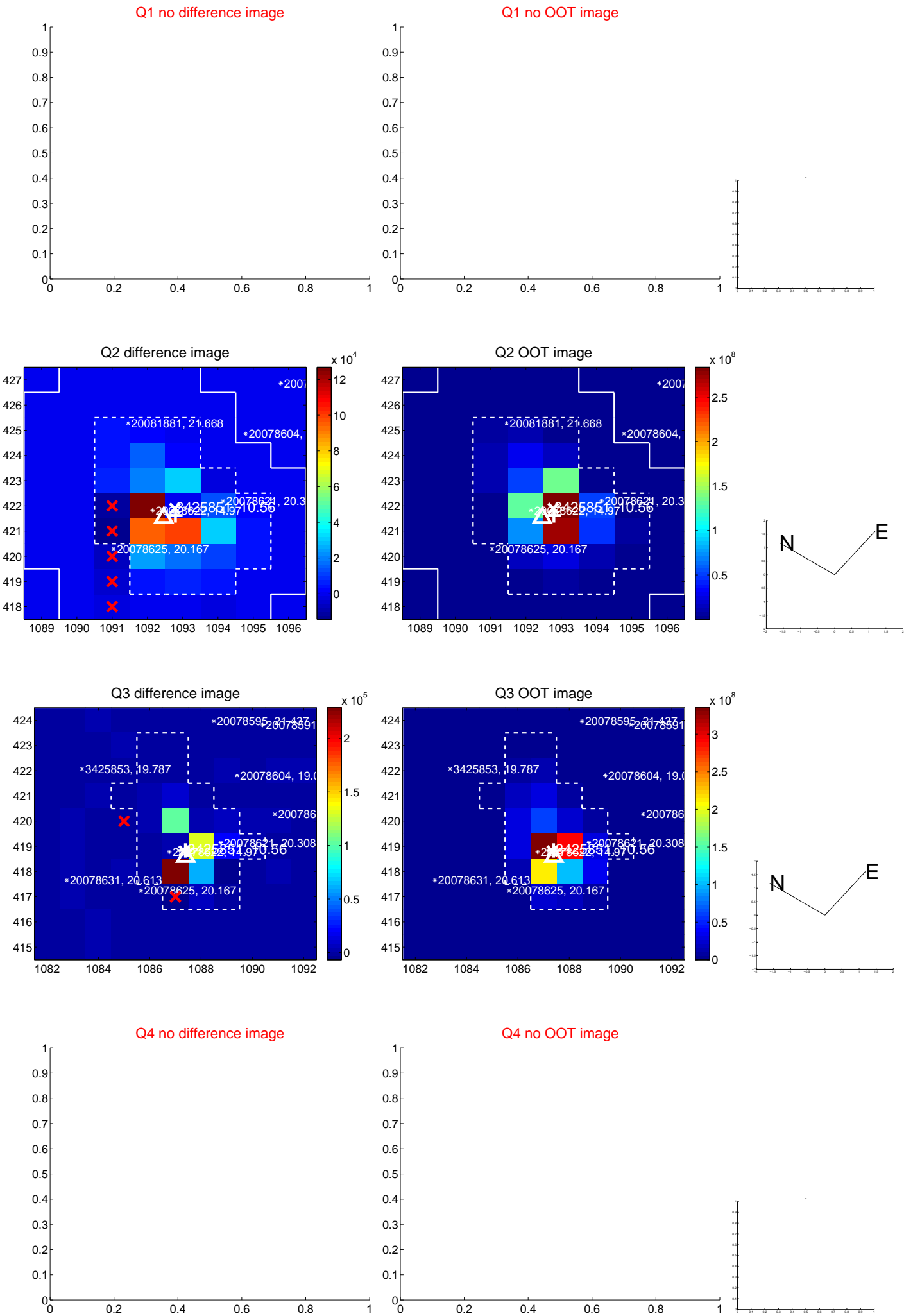
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.500 ± 0.508	0.98	-0.072 ± 0.502	0.495 ± 0.508
PRF-fit source offset from KIC position	0.291 ± 0.519	0.56	-0.000 ± 0.590	0.291 ± 0.519
photometric centroid source offset	0.51 ± 0.28	1.80	0.00 ± 0.33	-0.51 ± 0.28

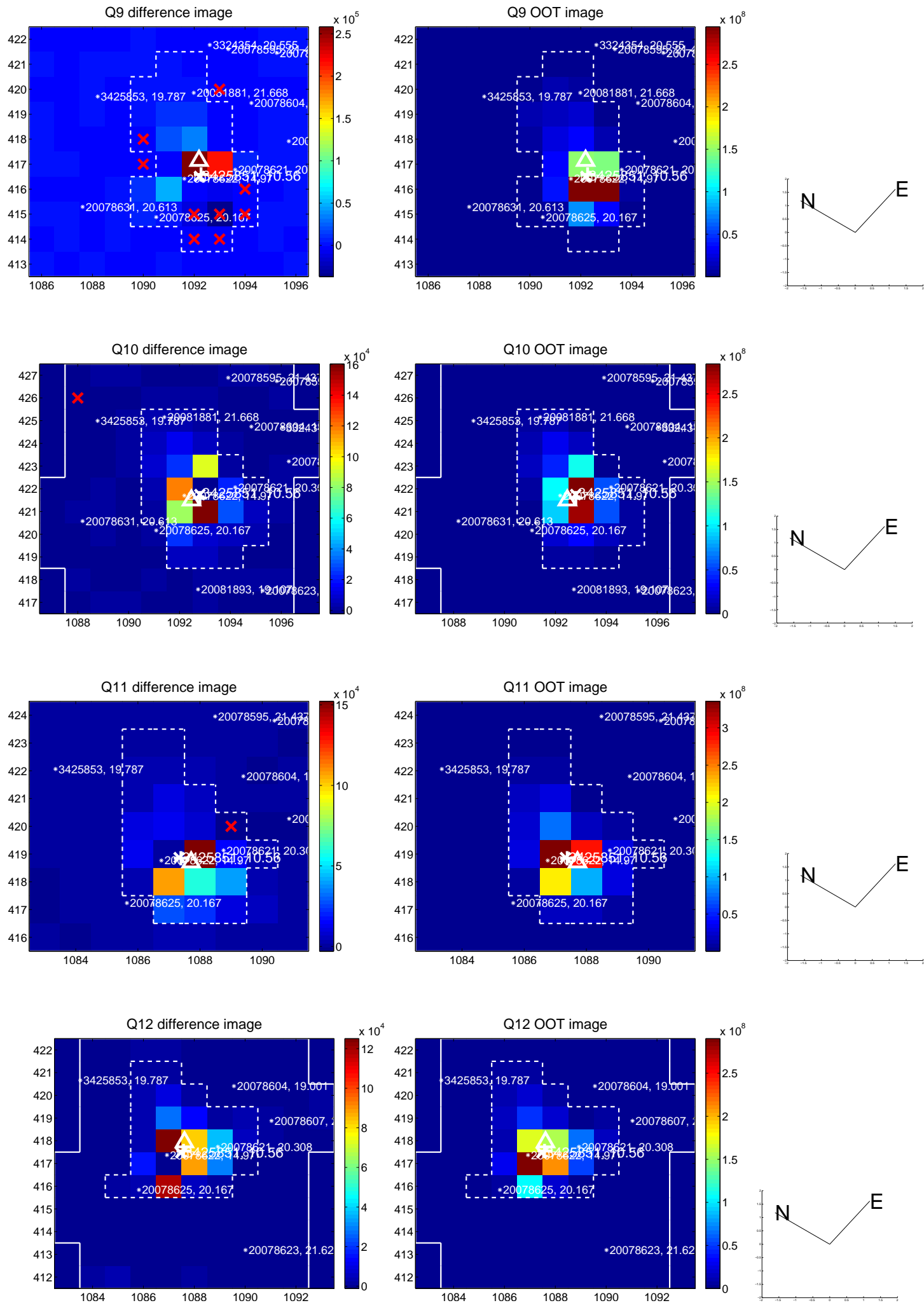


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

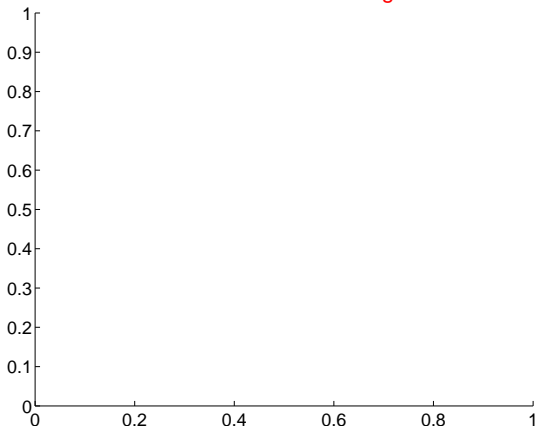


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

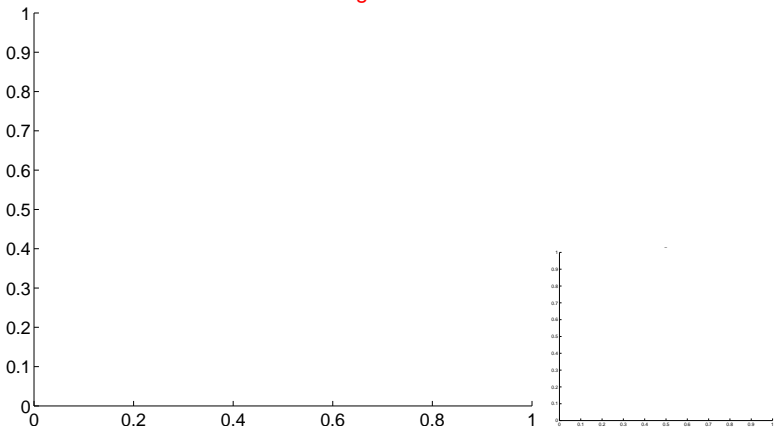


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

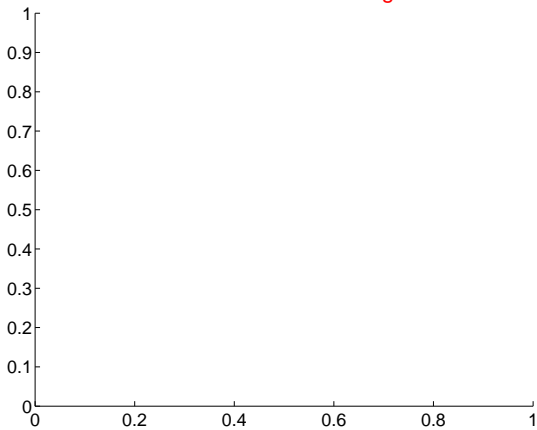
Q13 no difference image



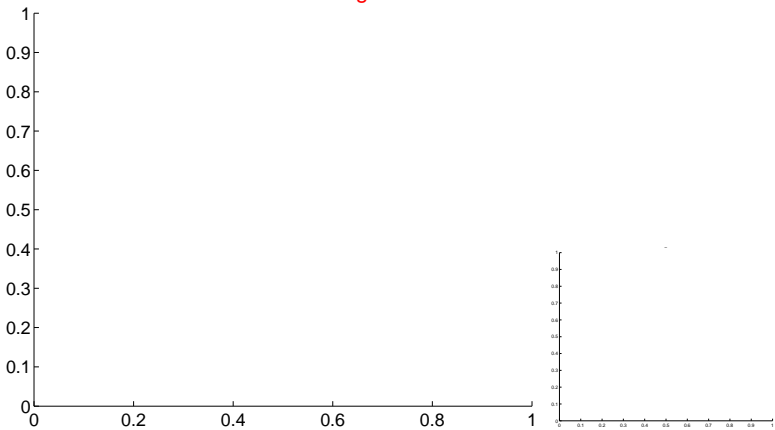
Q13 no OOT image



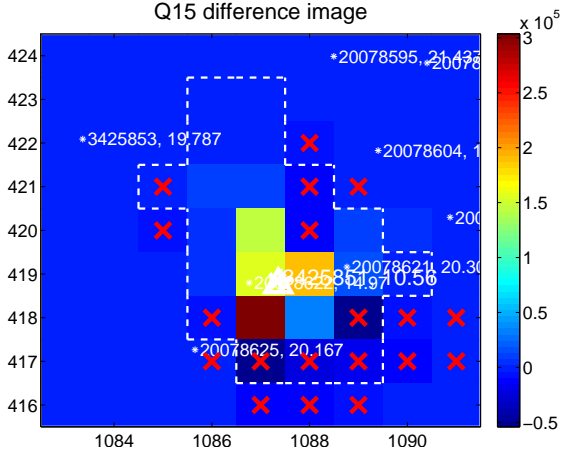
Q14 no difference image



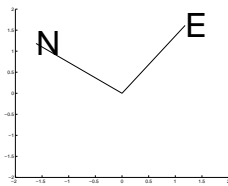
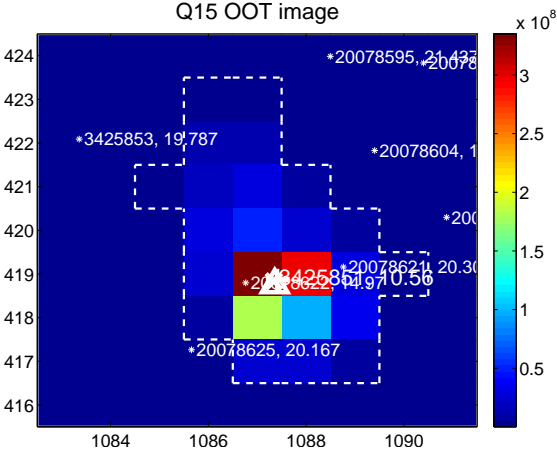
Q14 no OOT image



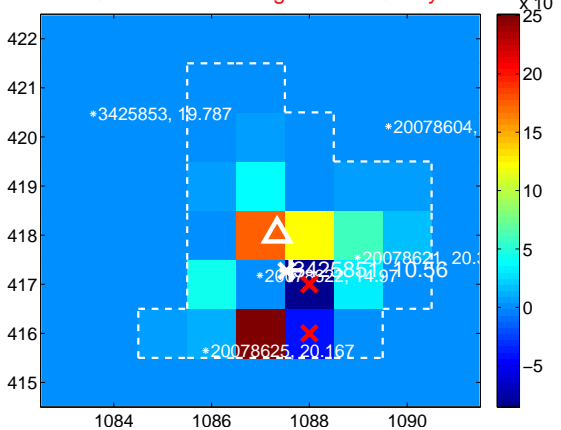
Q15 difference image



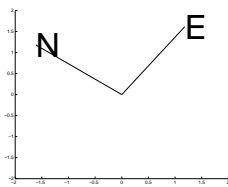
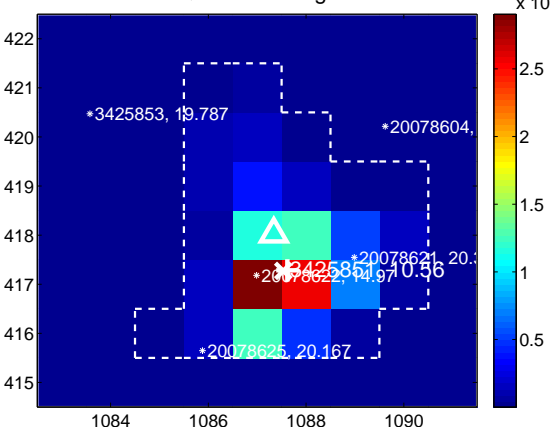
Q15 OOT image



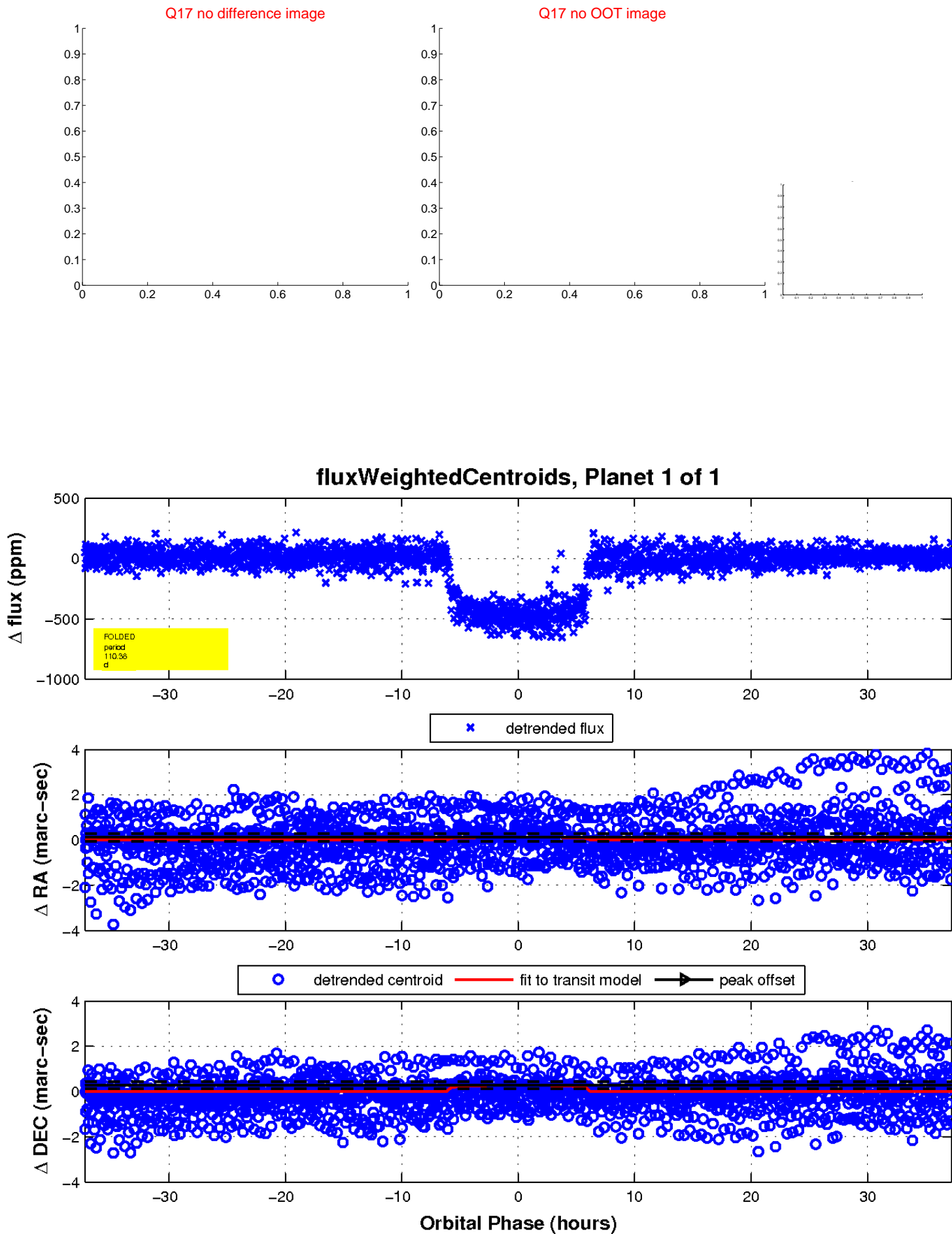
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

