

KIC 008557784

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})
008557784-01	OBS	No	291.761381	188.198042	63.0	2.392	12.0	2.5	0.88	5575	0.78	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008557784-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED

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

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

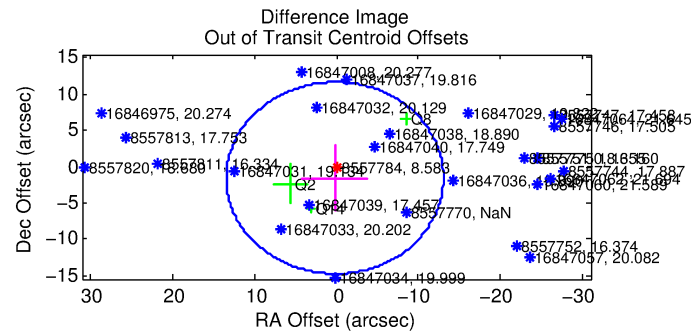
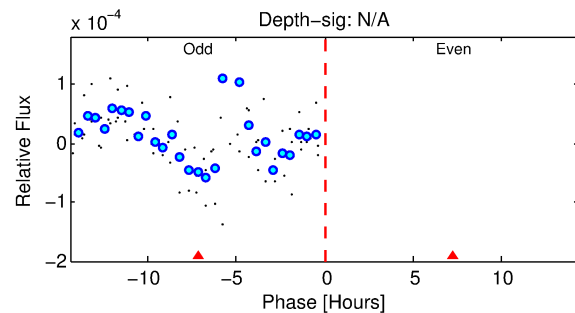
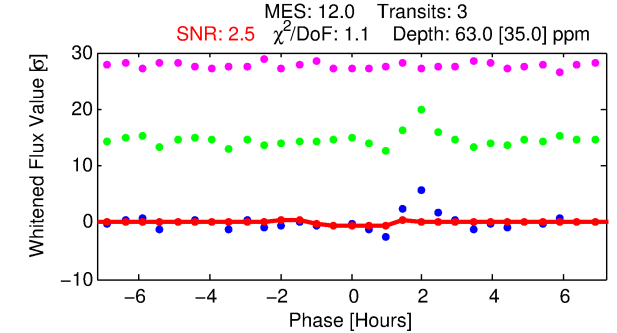
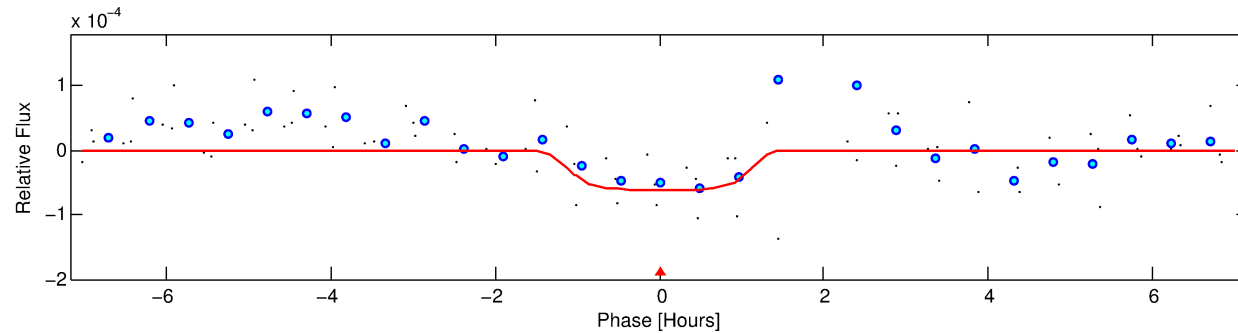
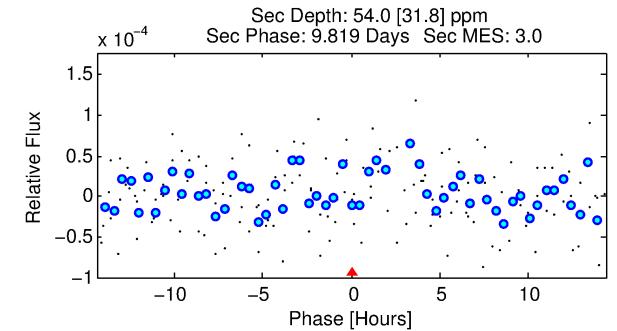
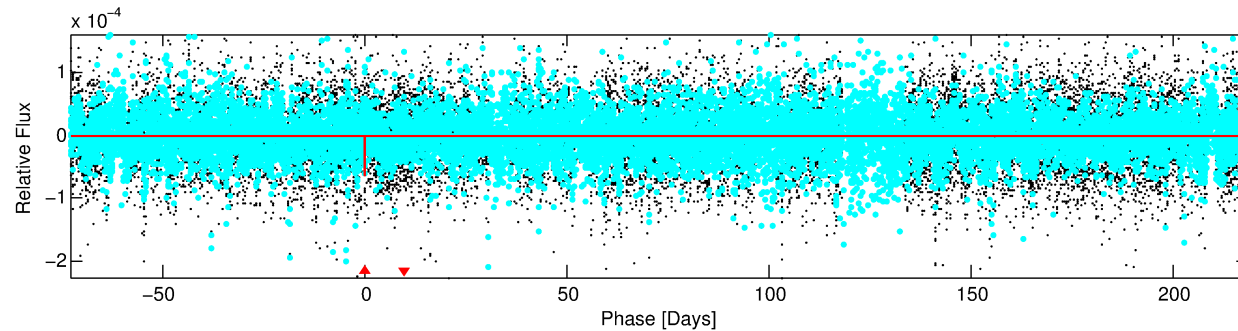
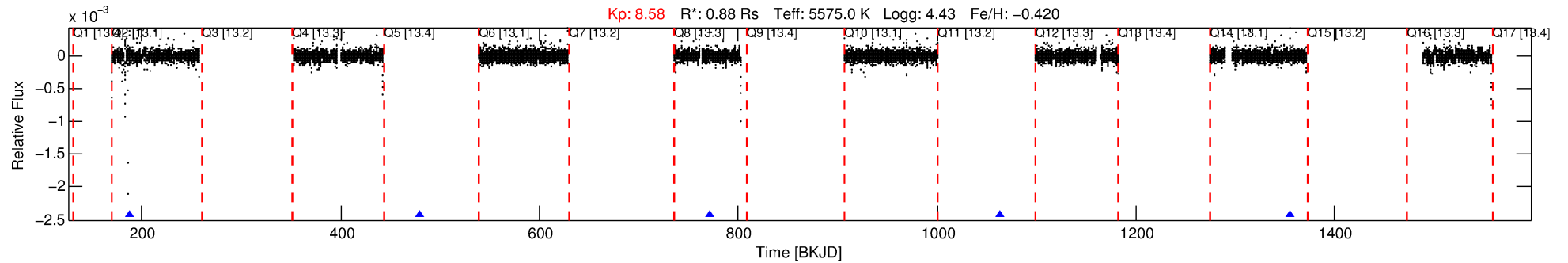
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008557784-01

No Significant Match Found

DV One-Page Summary

KIC: 8557784 Candidate: 1 of 1 Period: 291.761 d



DV Fit Results:

Period = 291.76138 [0.00664] d
Epoch = 188.1980 [0.0206] BKJD
Rp/R* = 0.0081 [0.0109]
a/R* = 572.50 [3390.74]
b = 0.80 [2.70]
Seff = 1.09 [0.40]
Teq = 261 [24] K
Rp = 0.78 [1.07] Re
a = 0.7859 [0.1739] AU
Ag = 30272.19 [84427.18] [0.36σ]
Teff = 5317 [3686] K [1.37σ]

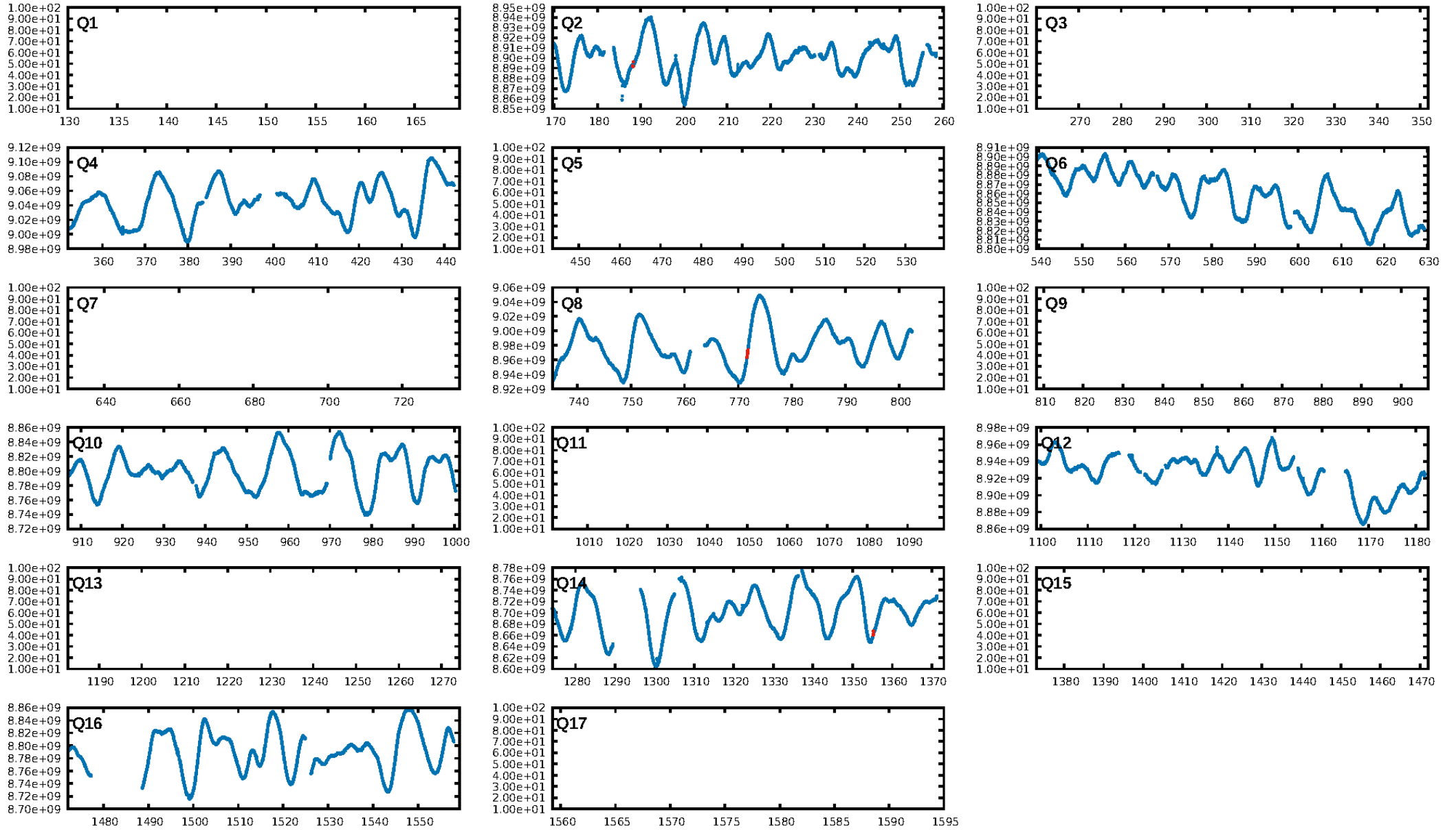
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.2%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 1.33e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 77.1%
Centroid-so: 1.174 arcsec [0.20σ]
OotOffset-rm: 1.572 arcsec [0.36σ]
KicOffset-rm: 2.745 arcsec [0.74σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

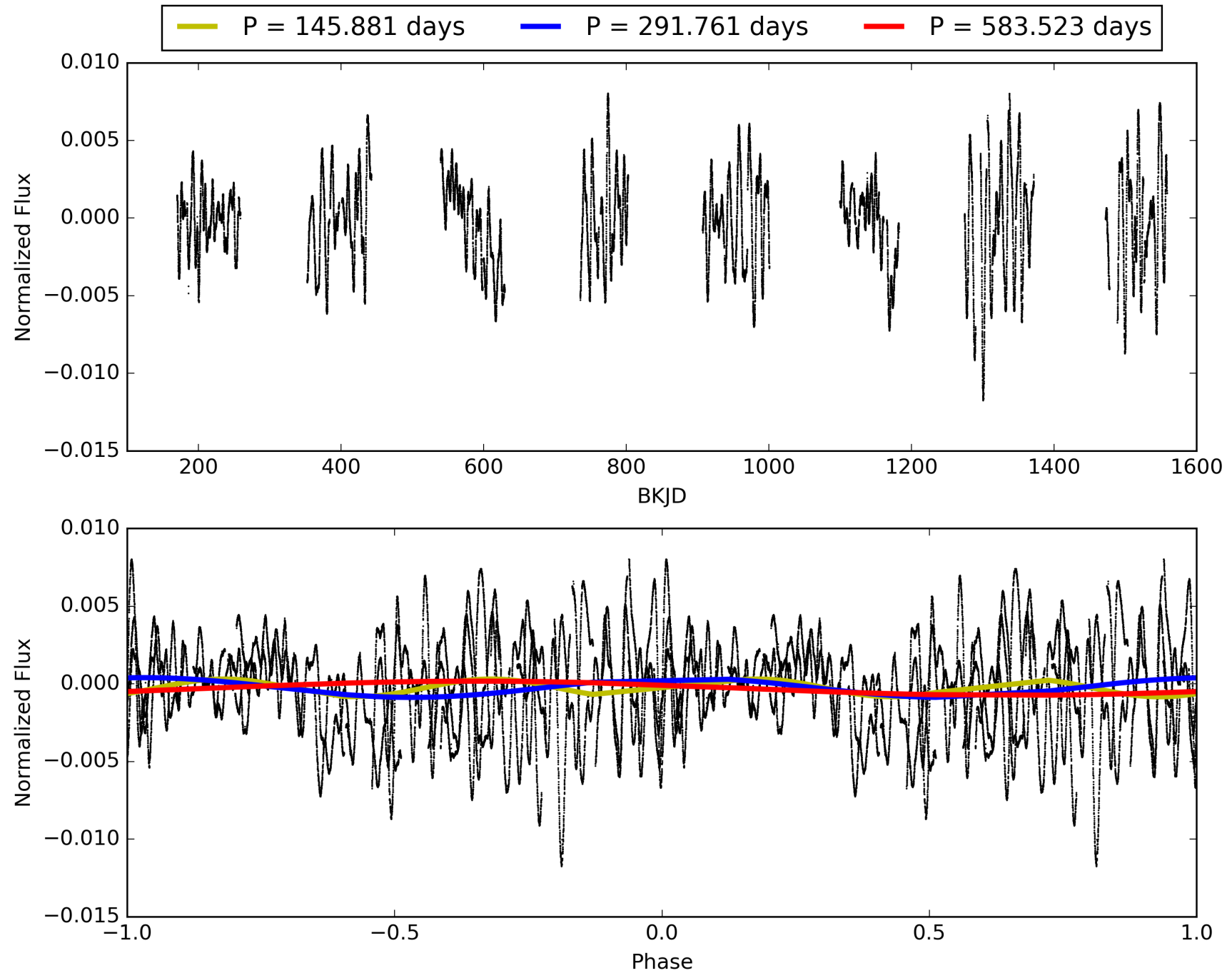
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:49:29 Z

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

TCE 008557784-01, PDC Light Curves

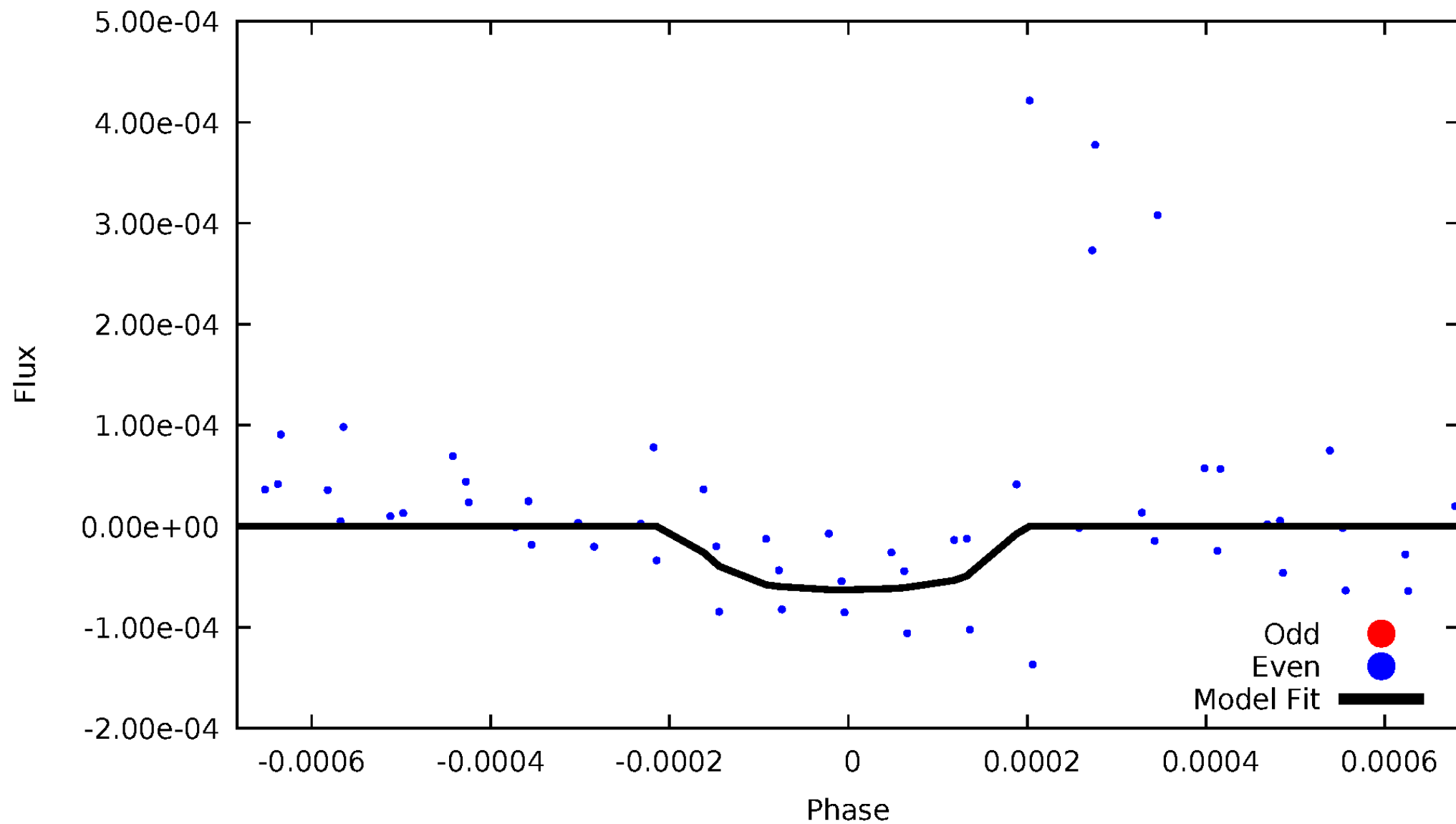


TCE 008557784-01



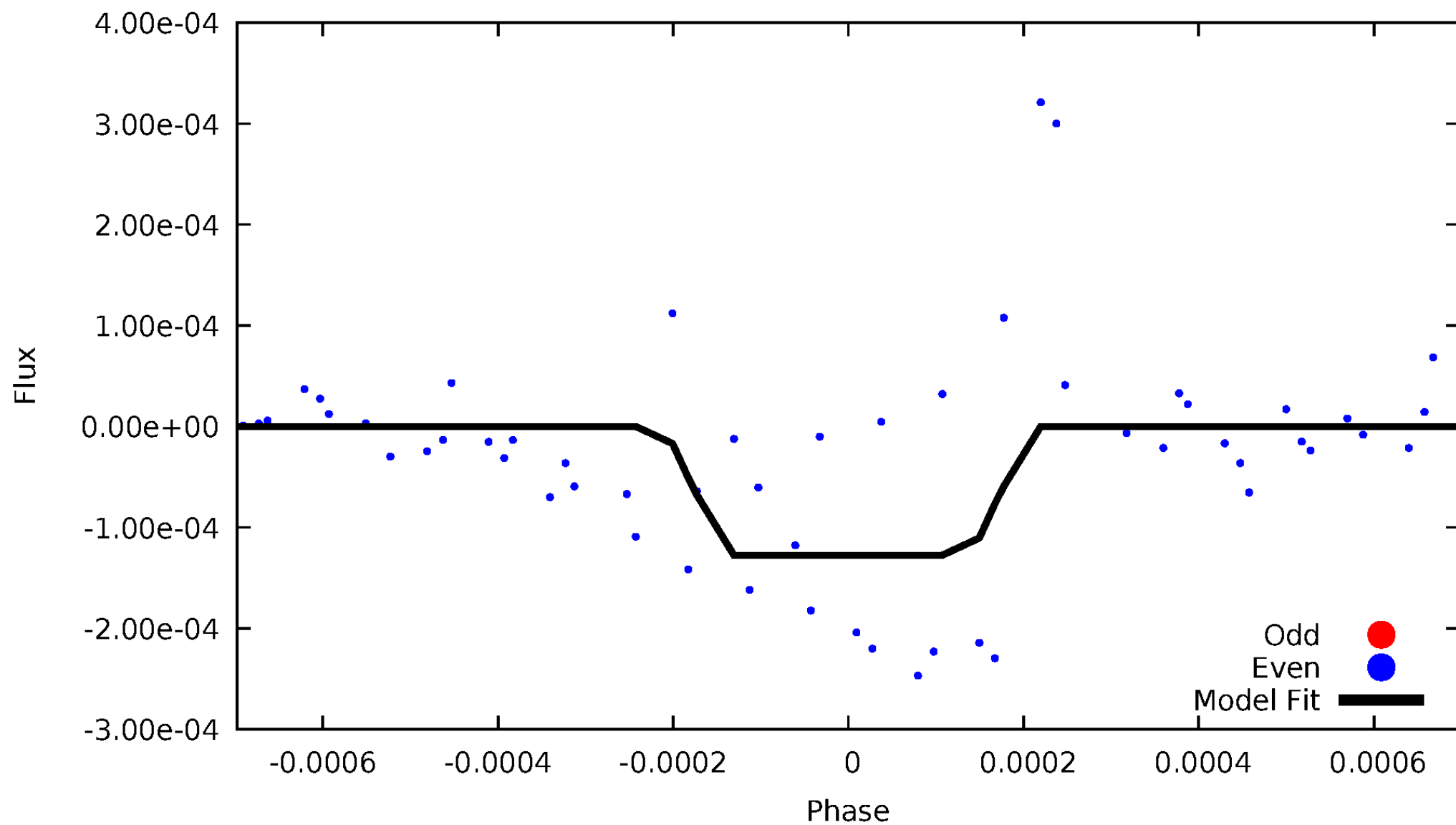
DV Odd/Even

TCE 008557784-01



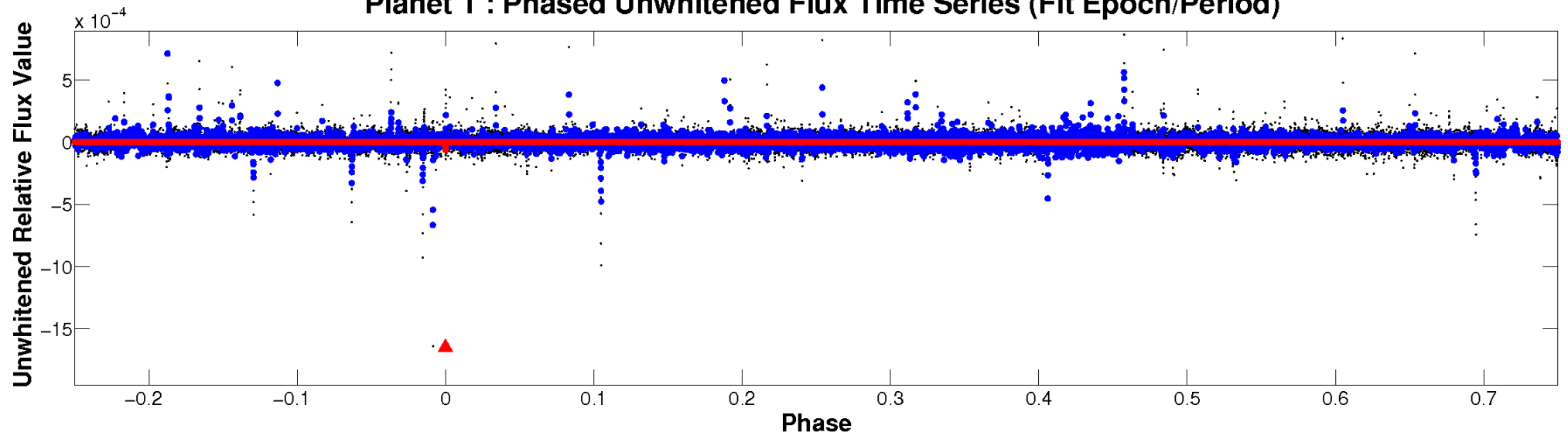
ALT Odd/Even

TCE 008557784-01

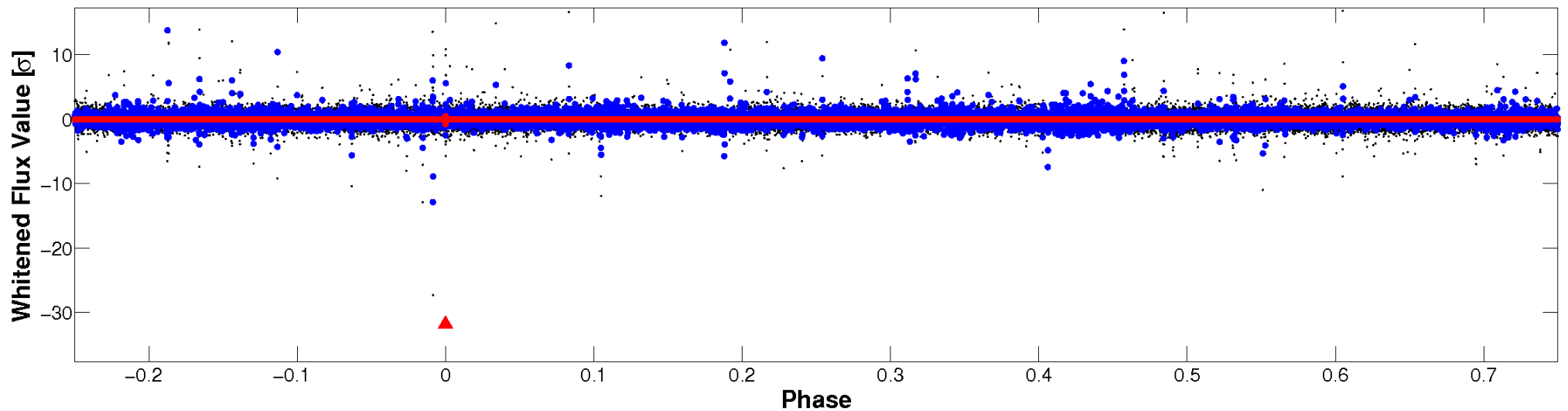


Non-Whitened Vs. Whitened Light Curve

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

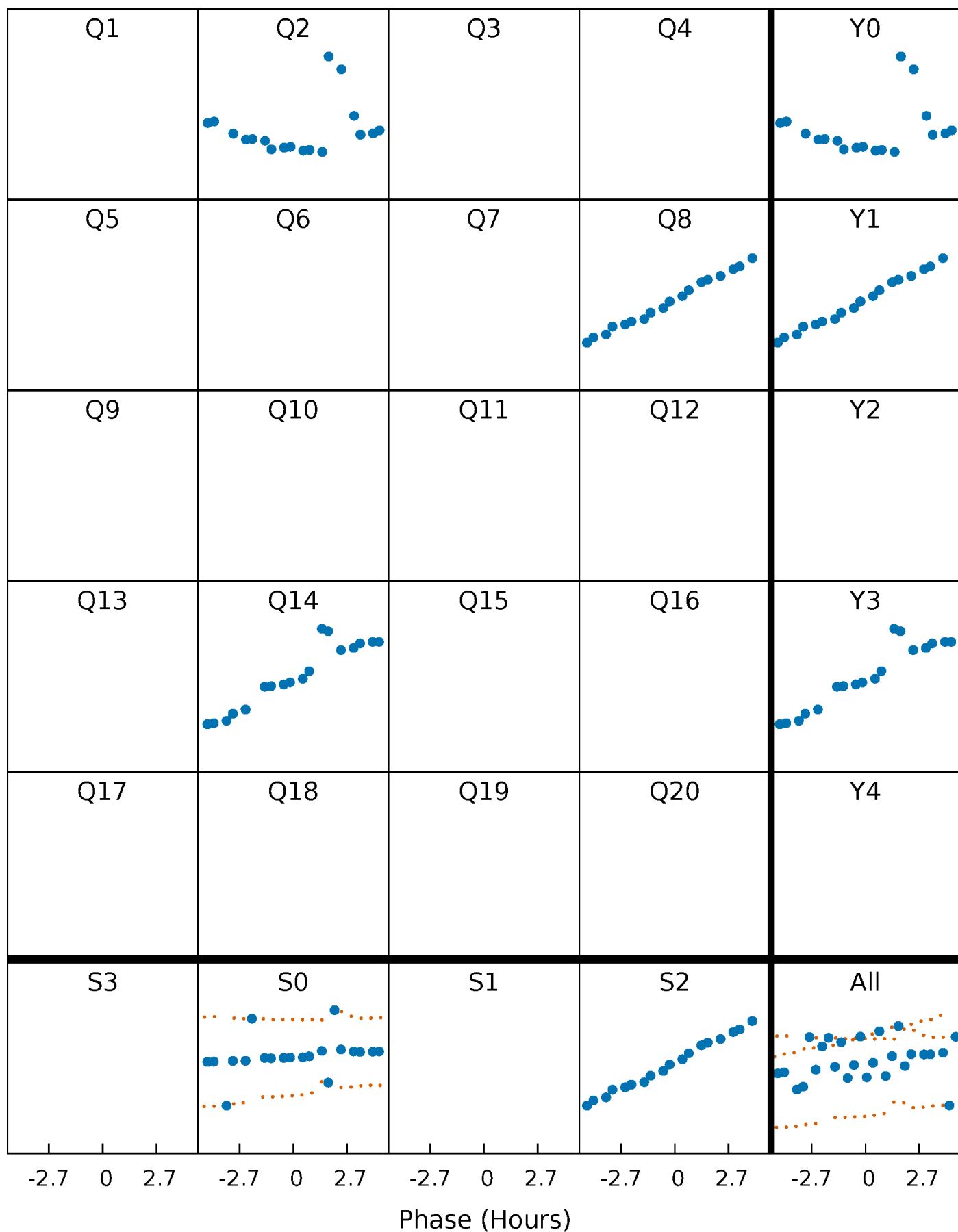


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



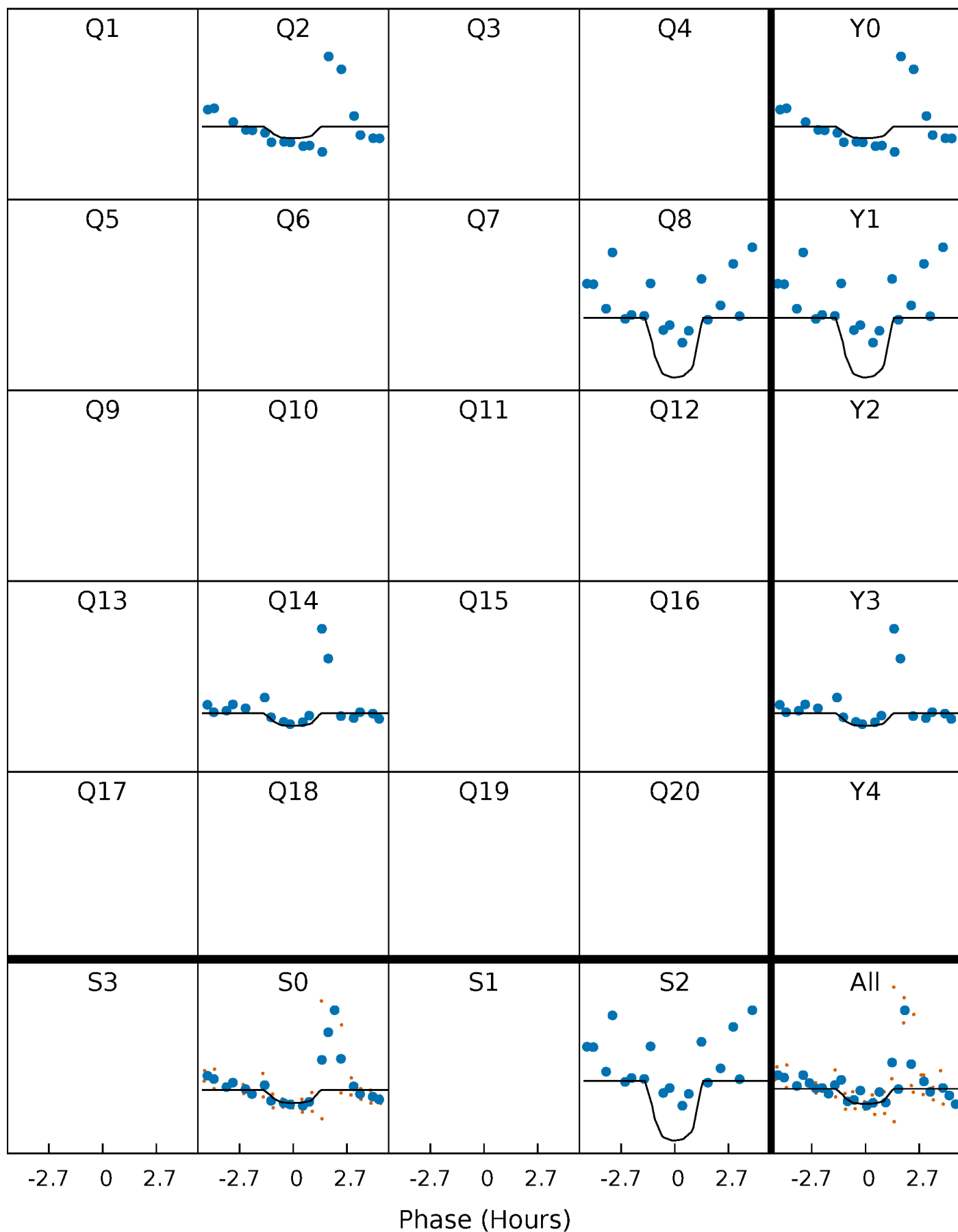
PDC Quarter-Phased Transit Curves

TCE 008557784-01 P=291.761382 Days $T_0=188.198042$ (BKJD)



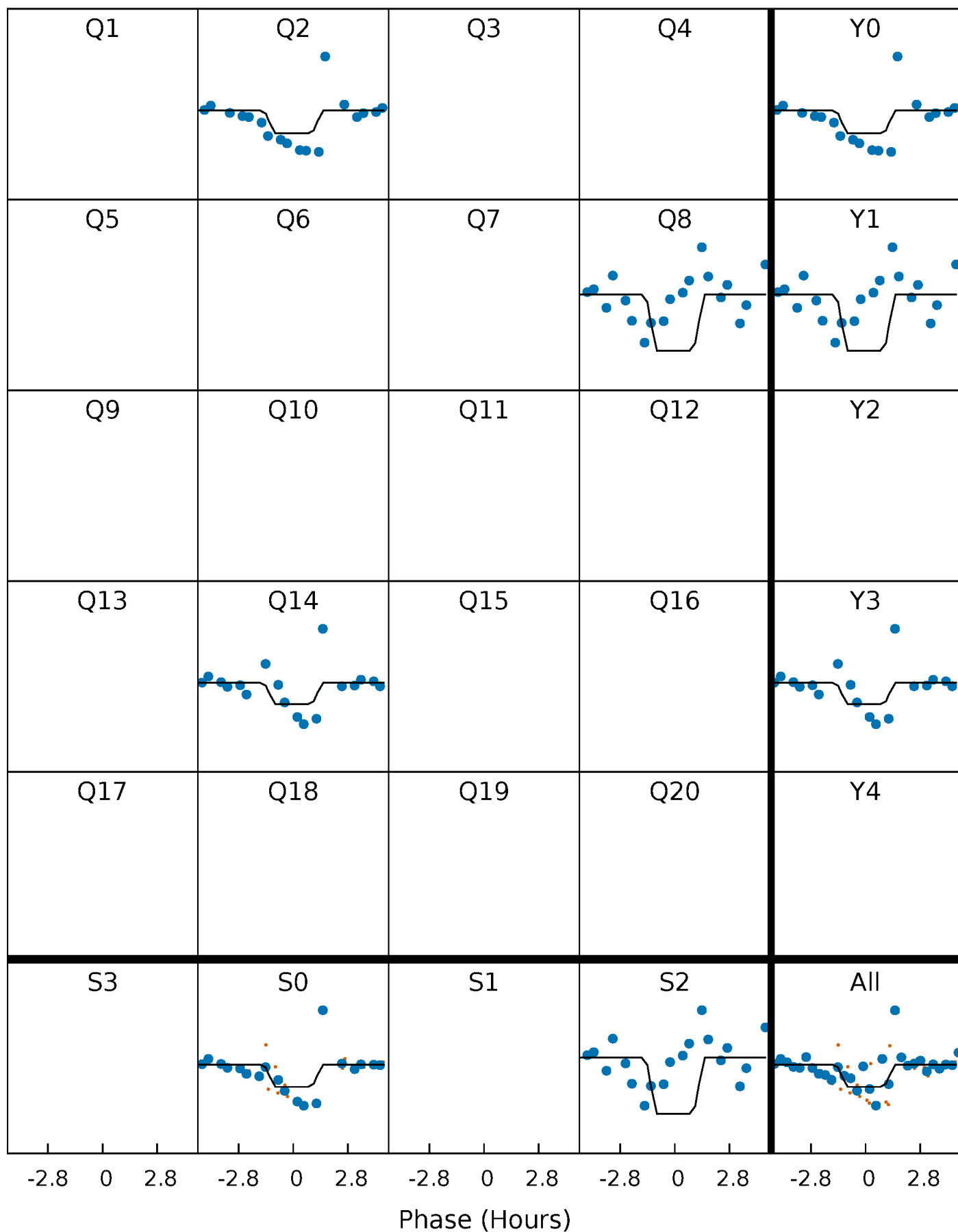
DV Quarter-Phased Transit Curves

TCE 008557784-01 P=291.761382 Days $T_0=188.198042$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

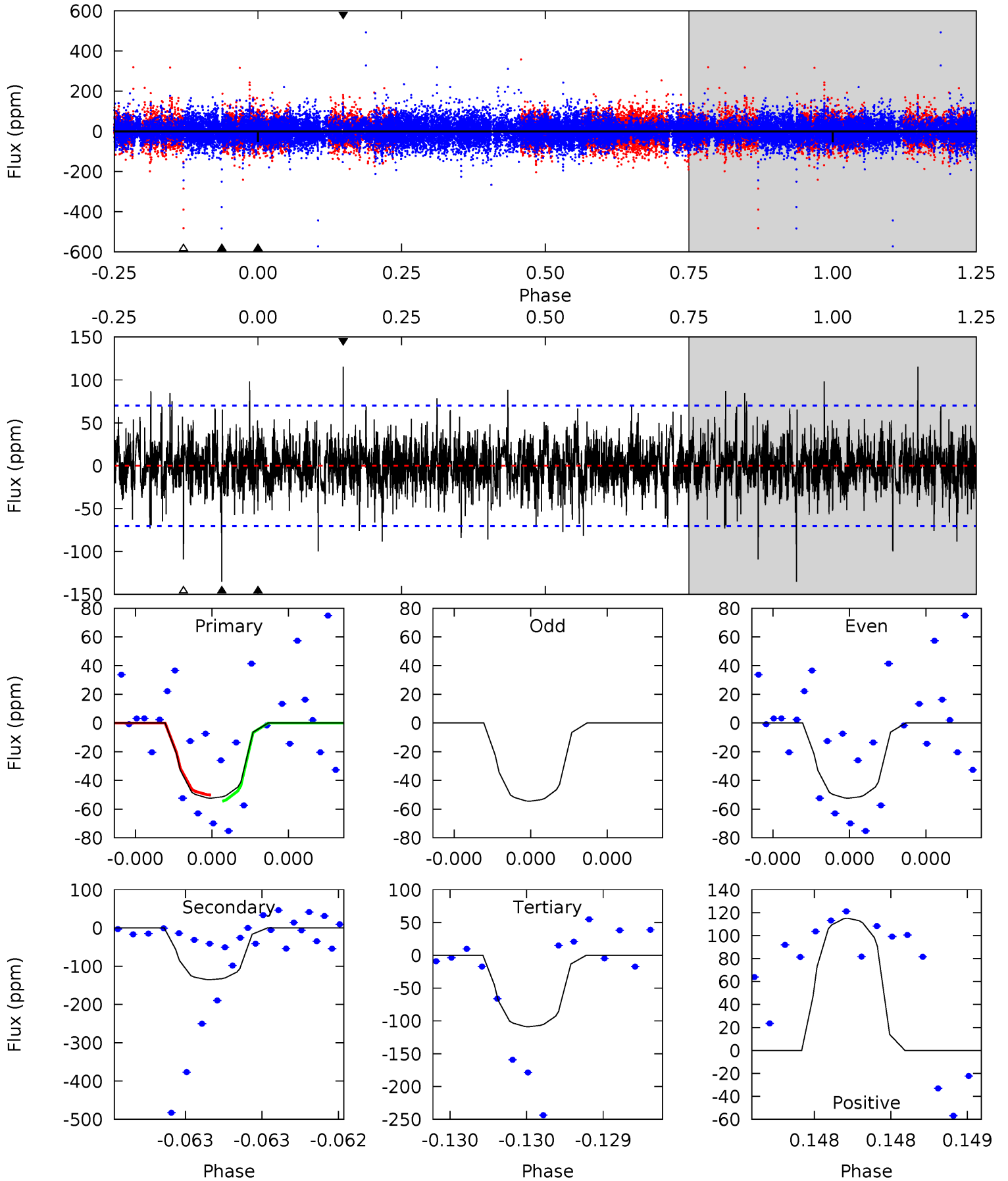
TCE 008557784-01 P=291.757336 Days $T_0=188.209272$ (BKJD)



DV Model-Shift Uniqueness Test

008557784-01, P = 291.761382 Days, E = 188.198042 Days

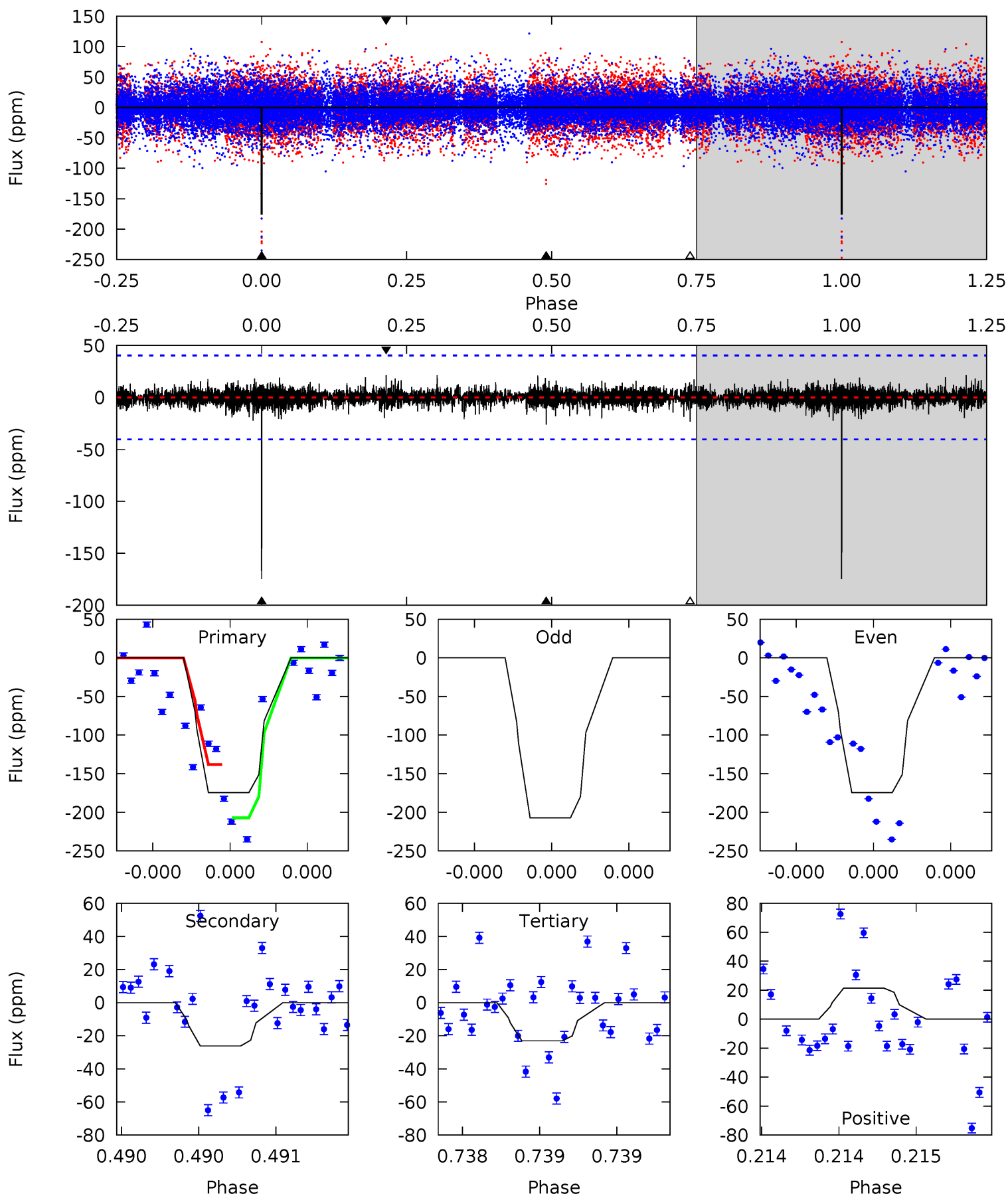
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.21	10.9	8.74	9.25	5.63	3.58	1.60	-4.53	-5.04	2.11	1.61	0.09	1.23	0.46	0.18



Alt Model-Shift Uniqueness Test

008557784-01, P = 291.757336 Days, E = 188.209272 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.3	3.64	3.21	2.98	5.61	3.54	0.63	21.1	21.3	0.42	0.66	2.52	0.80	0.11	0



Stellar Parameters For KIC 008557784

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5575^{+203}_{-186}	$4.427^{+0.153}_{-0.187}$	$-0.420^{+0.300}_{-0.300}$	$0.883^{+0.223}_{-0.148}$	$0.761^{+0.124}_{-0.053}$	$1.558^{+1.063}_{-0.735}$
	+4%/-3%	+3%/-4%	+71%/-71%	+25%/-17%	+16%/-7%	+68%/-47%
Source	KIC0	KIC0	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 008557784-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-135 ± 12	$1.06^{+0.98}_{-0.69}$	366^{+27}_{-24}	5810^{+4910}_{-1454}	$41872^{+279011}_{-30856}$
Alt.	-26 ± 7	$1.30^{+1.02}_{-0.77}$	366^{+28}_{-24}	3819^{+1679}_{-649}	5361^{+29515}_{-3756}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

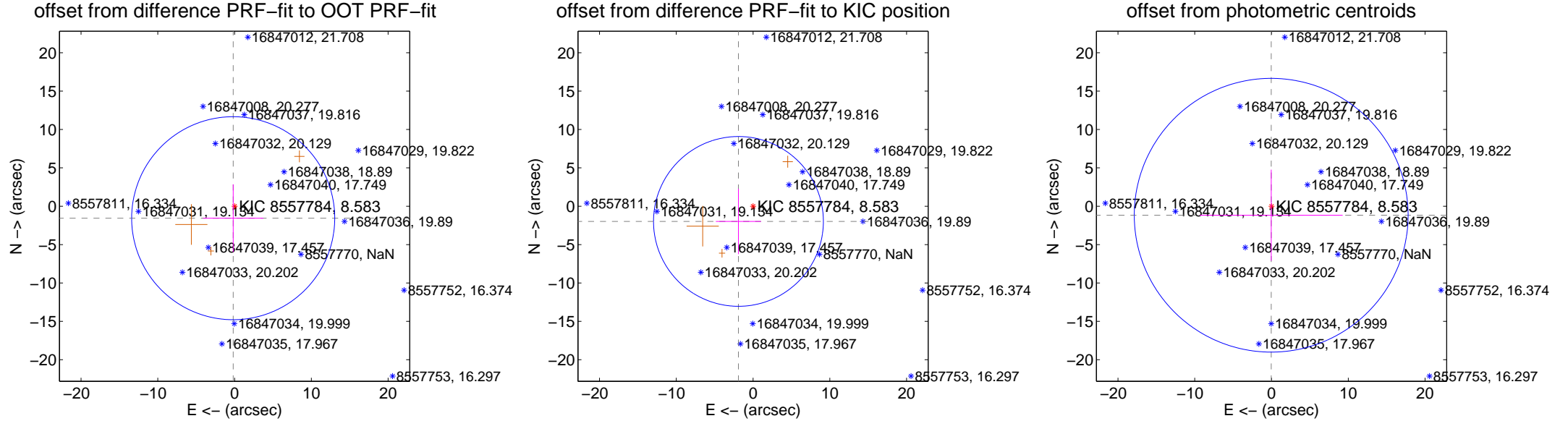
DV Centroid Data

Supplemental centroid analysis for 008557784-01. **Kepler magnitude: 8.58.** Transit SNR 2.52

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.00 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.572 ± 4.410	0.36	0.182 ± 3.926	-1.562 ± 4.416
PRF-fit source offset from KIC position	2.745 ± 3.688	0.74	1.903 ± 2.937	-1.979 ± 4.267
photometric centroid source offset	1.17 ± 5.95	0.20	0.04 ± 9.32	-1.17 ± 5.94



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.

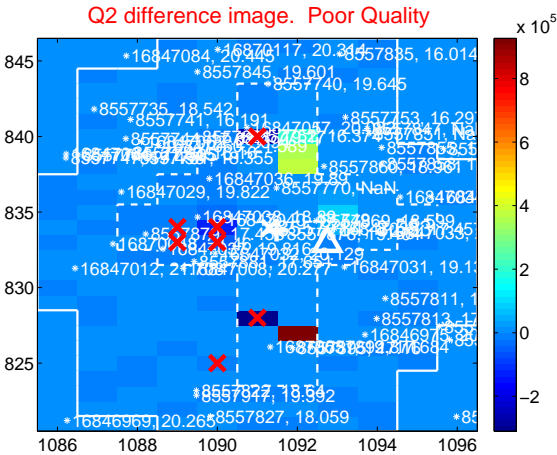
Q1 no difference image



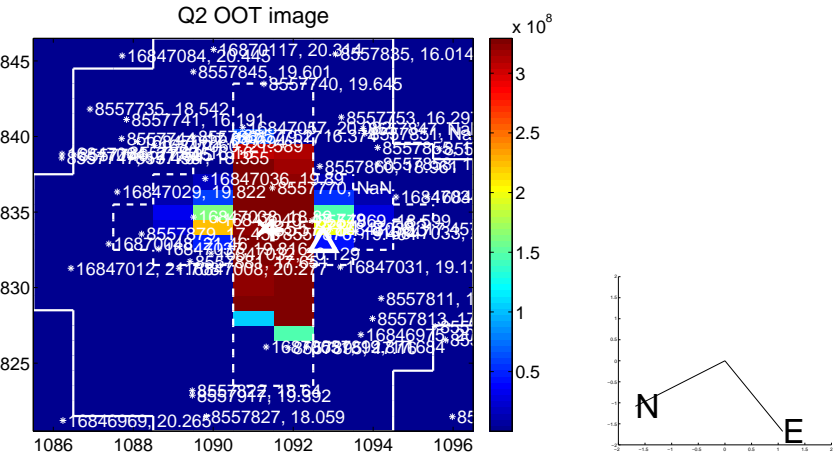
Q1 no OOT image



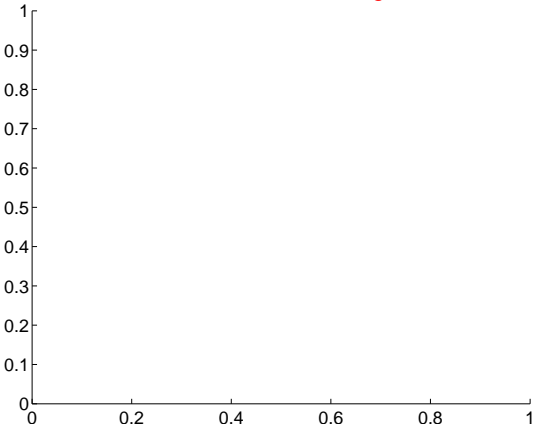
Q2 difference image. Poor Quality



Q2 OOT image



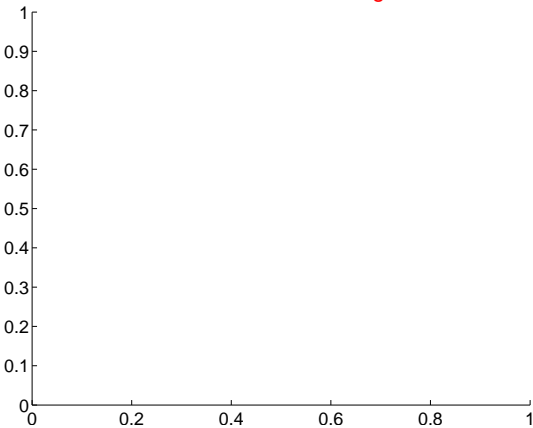
Q3 no difference image



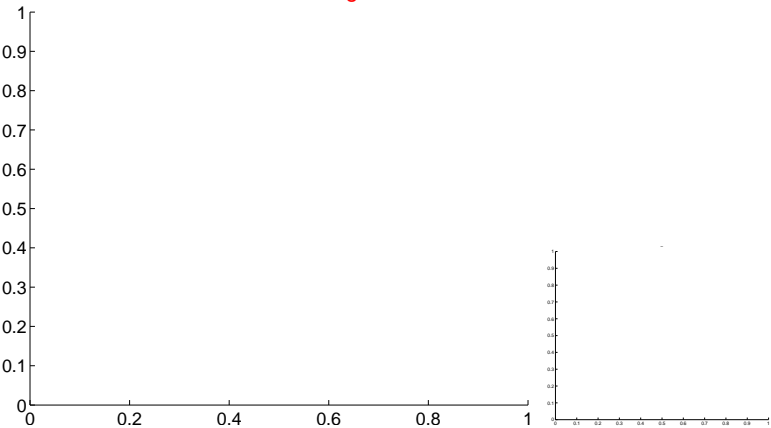
Q3 no OOT image



Q4 no difference image



Q4 no OOT image

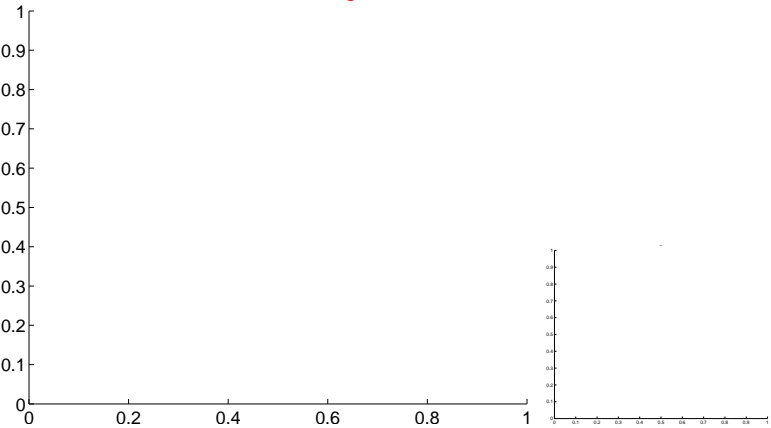


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q5 no difference image



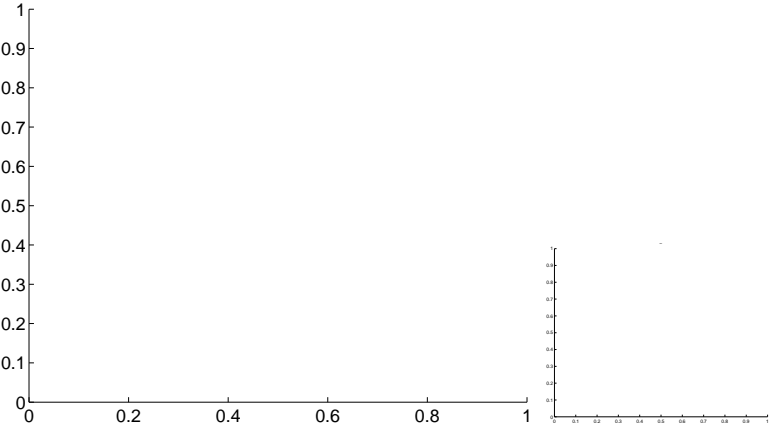
Q5 no OOT image



Q6 no difference image



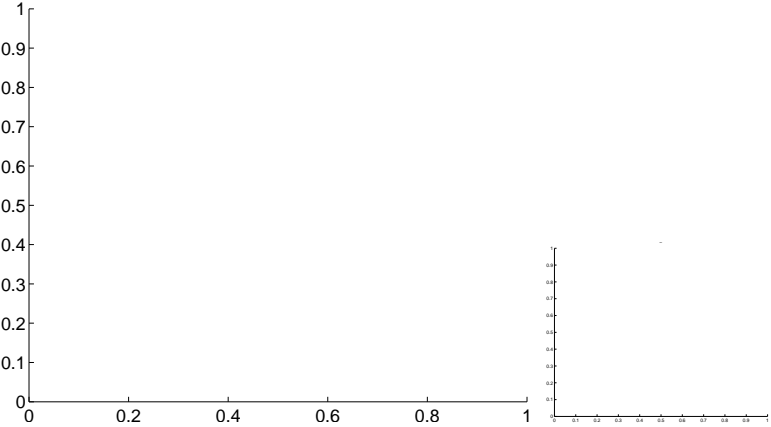
Q6 no OOT image



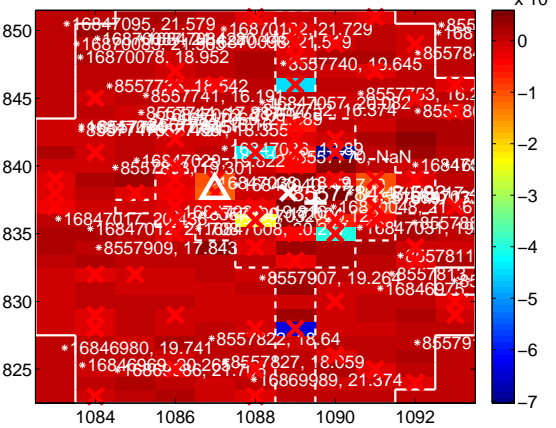
Q7 no difference image



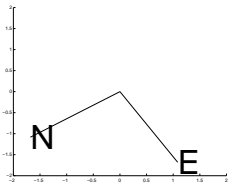
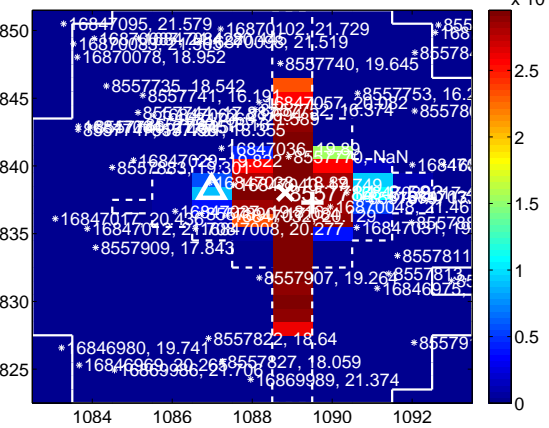
Q7 no OOT image



Q8 difference image. Poor Quality



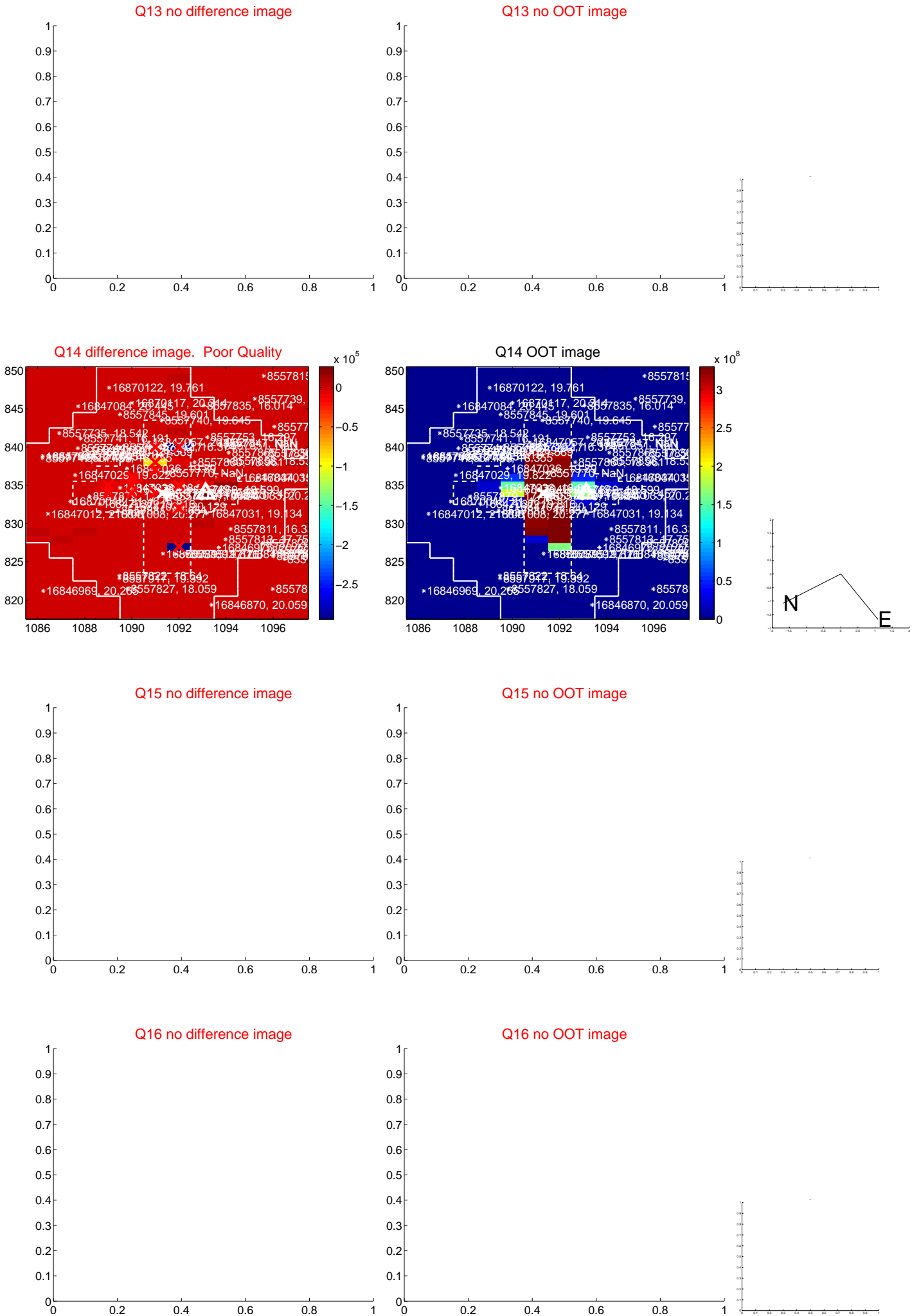
Q8 OOT image



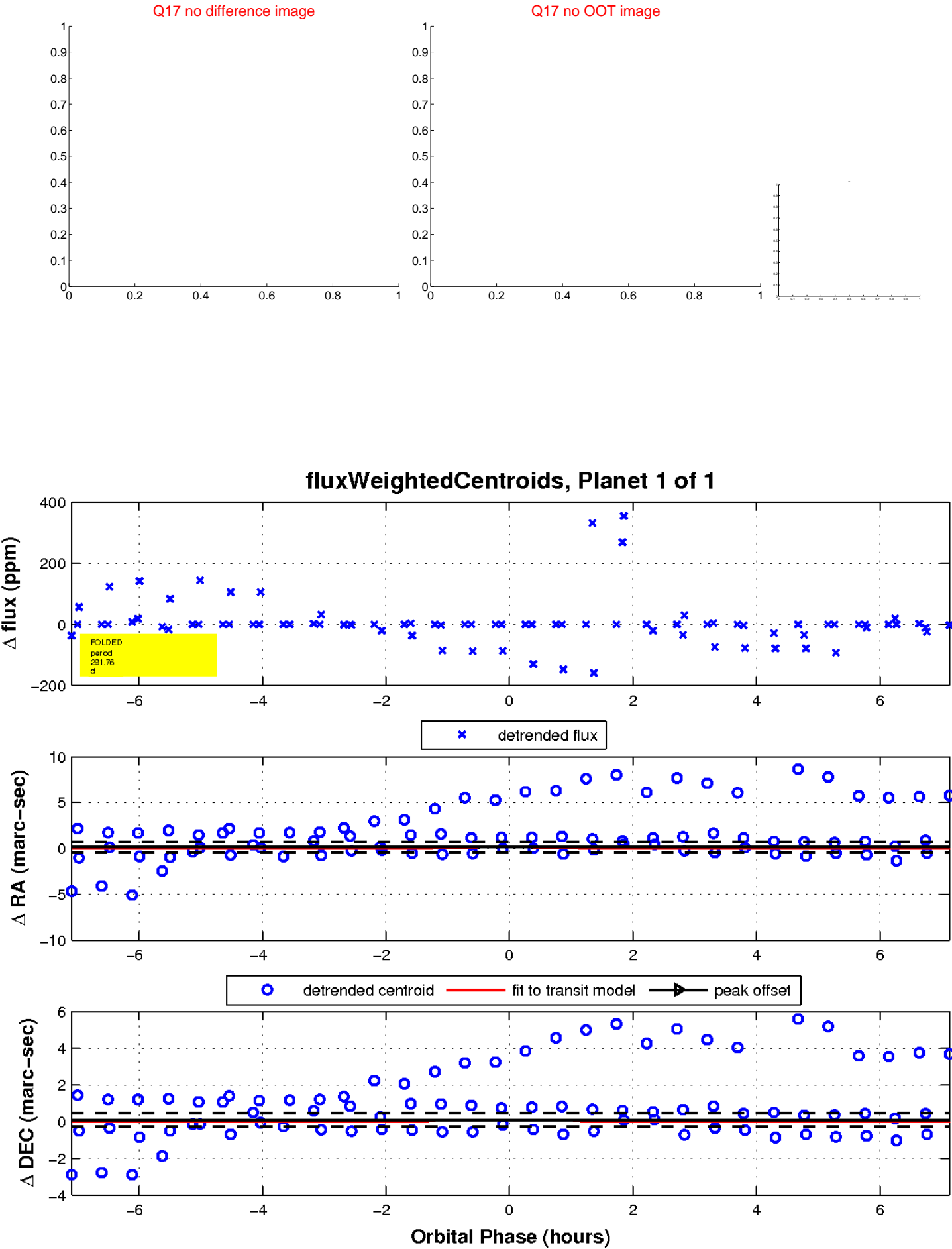
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

