

KIC 004988995

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})
004988995-01	OBS	No	256.805886	352.337052	244.9	6.417	7.2	7.1	1.33	5569	2.36	2.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004988995-01	OBS	FP	0.01	1	0	0	0	INDIV_TRANS_CHASES—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.

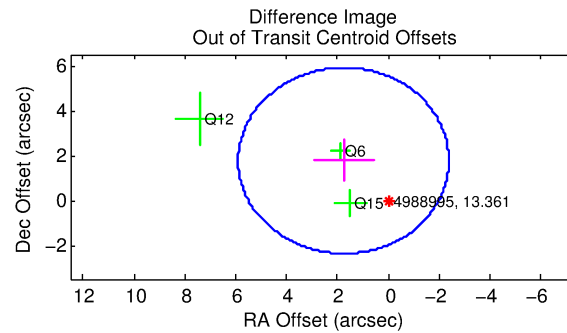
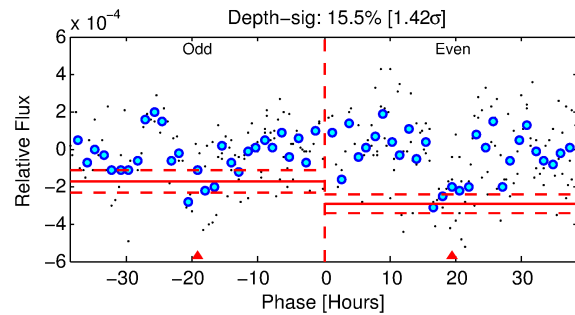
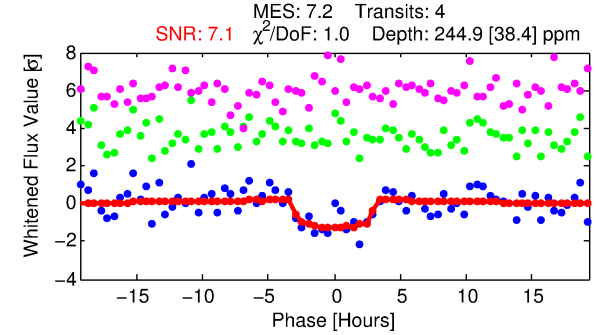
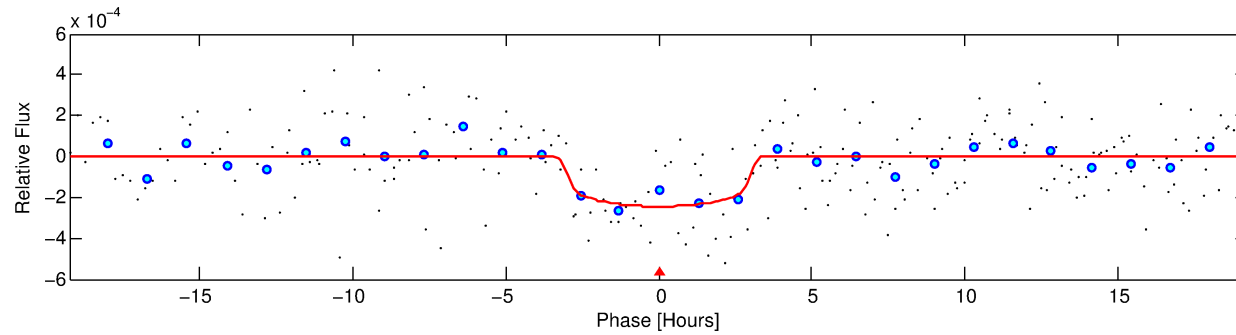
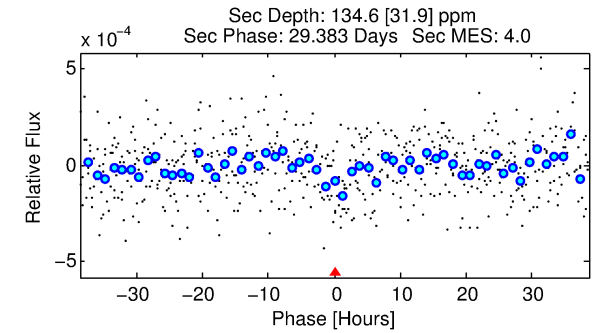
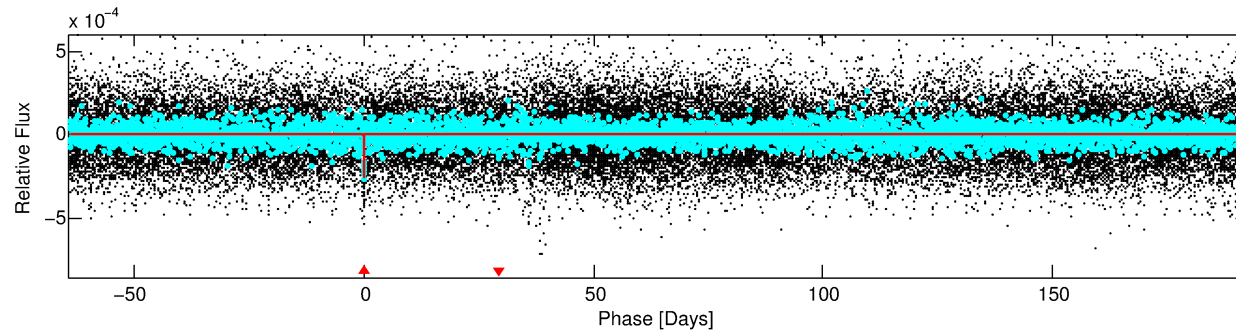
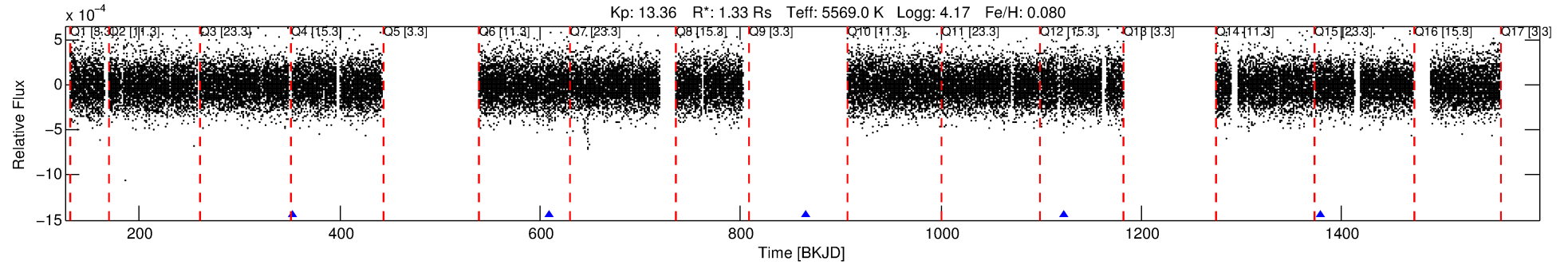
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004988995-01

No Significant Match Found

DV One-Page Summary

KIC: 4988995 Candidate: 1 of 1 Period: 256.806 d



DV Fit Results:

Period = 256.80589 [0.00556] d
Epoch = 352.3371 [0.0154] BKJD
Rp/R* = 0.0163 [0.0097]
a/R* = 175.43 [450.10]
b = 0.84 [0.91]
Seff = 2.53 [1.41]
Teq = 322 [45] K
Rp = 2.36 [1.58] Re
a = 0.7745 [0.2529] AU
Ag = 7952.62 [10550.83] [0.75σ]
Teffp = 4695 [1425] K [3.07σ]

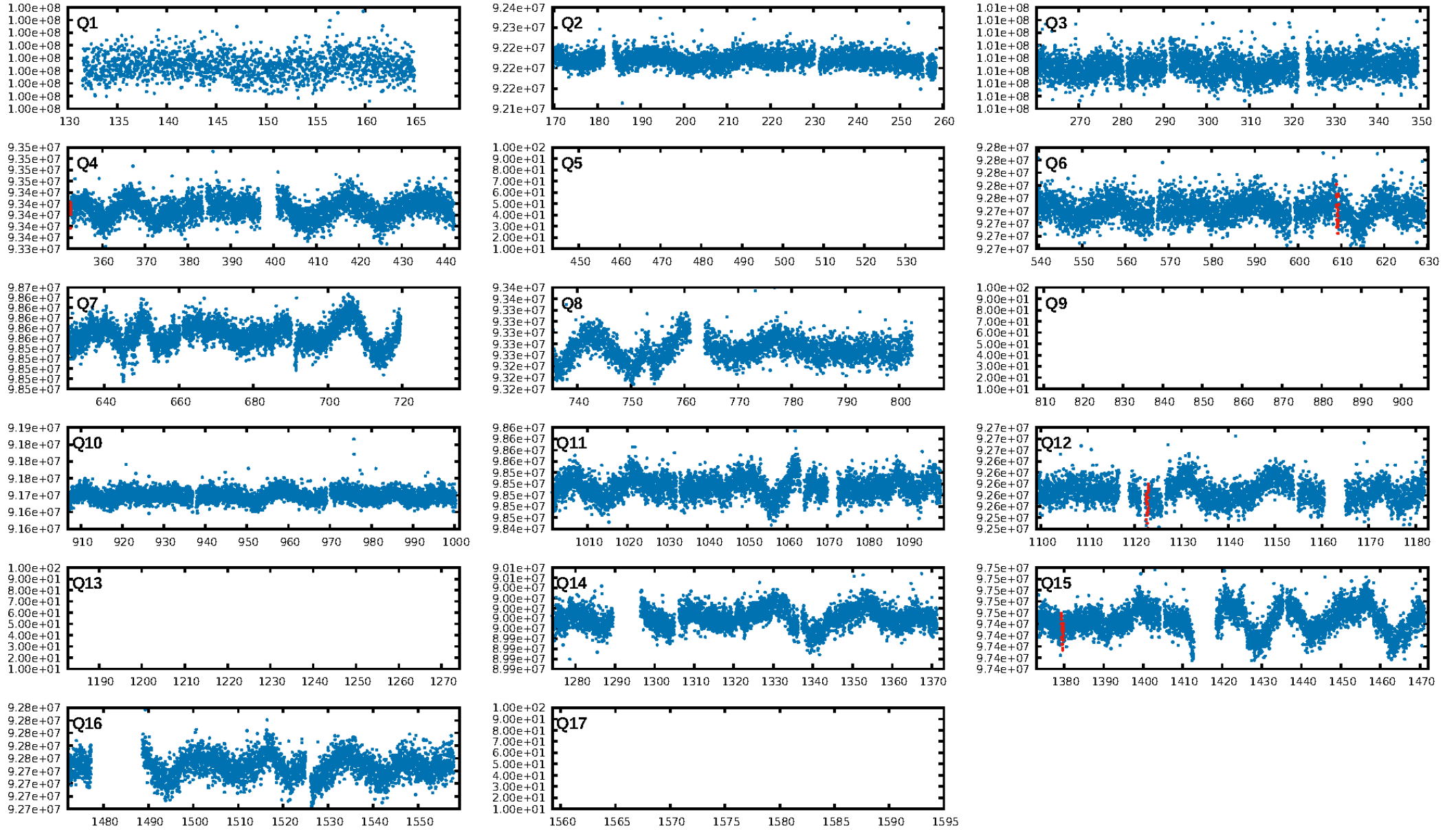
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.2%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 1.58e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -49.88
Centroid-sig: 24.0%
Centroid-so: 2.104 arcsec [0.93σ]
OotOffset-rm: 2.490 arcsec [1.80σ]
KicOffset-rm: 1.847 arcsec [1.18σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

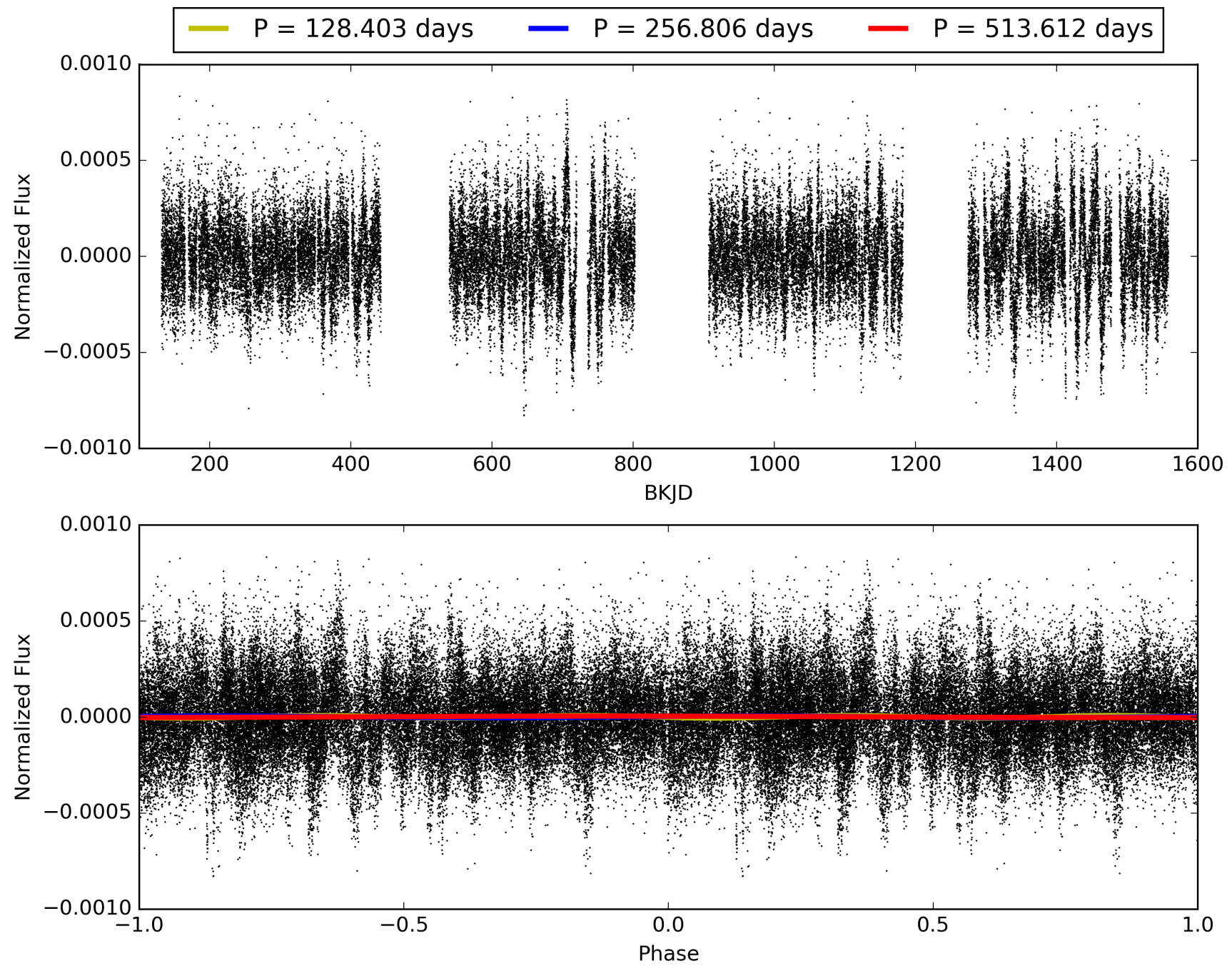
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:43:04 Z

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

TCE 004988995-01, PDC Light Curves

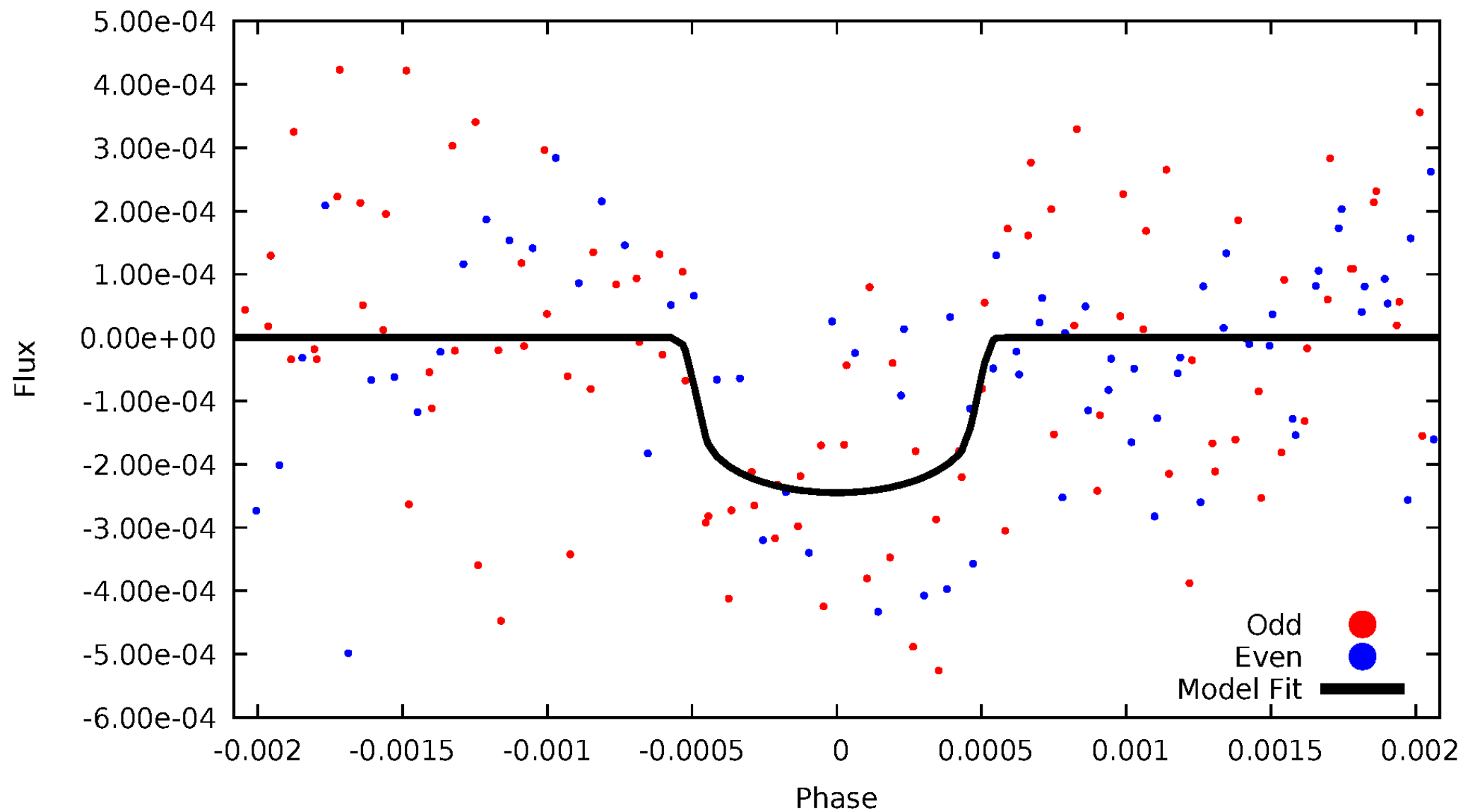


TCE 004988995-01



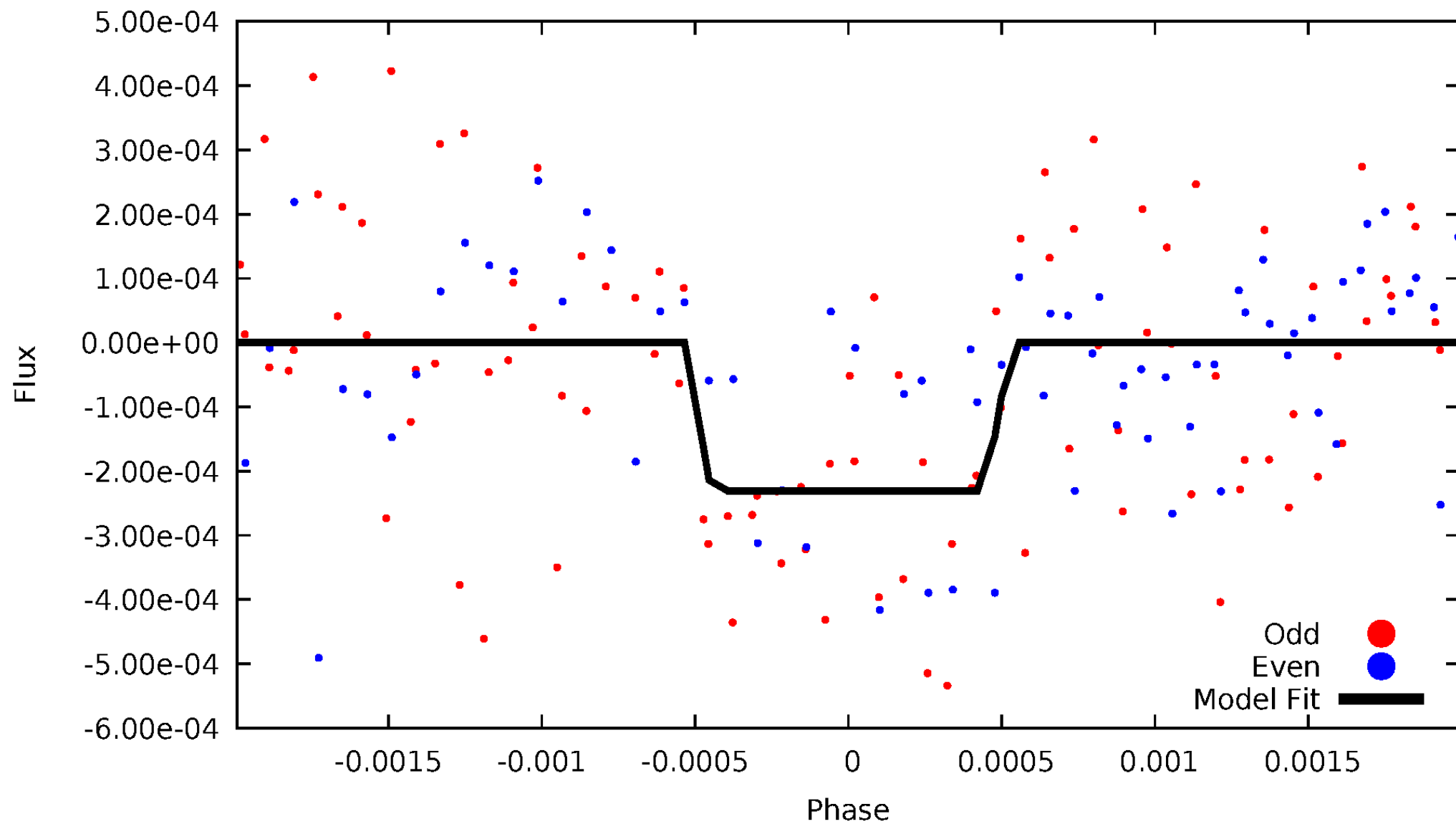
DV Odd/Even

TCE 004988995-01

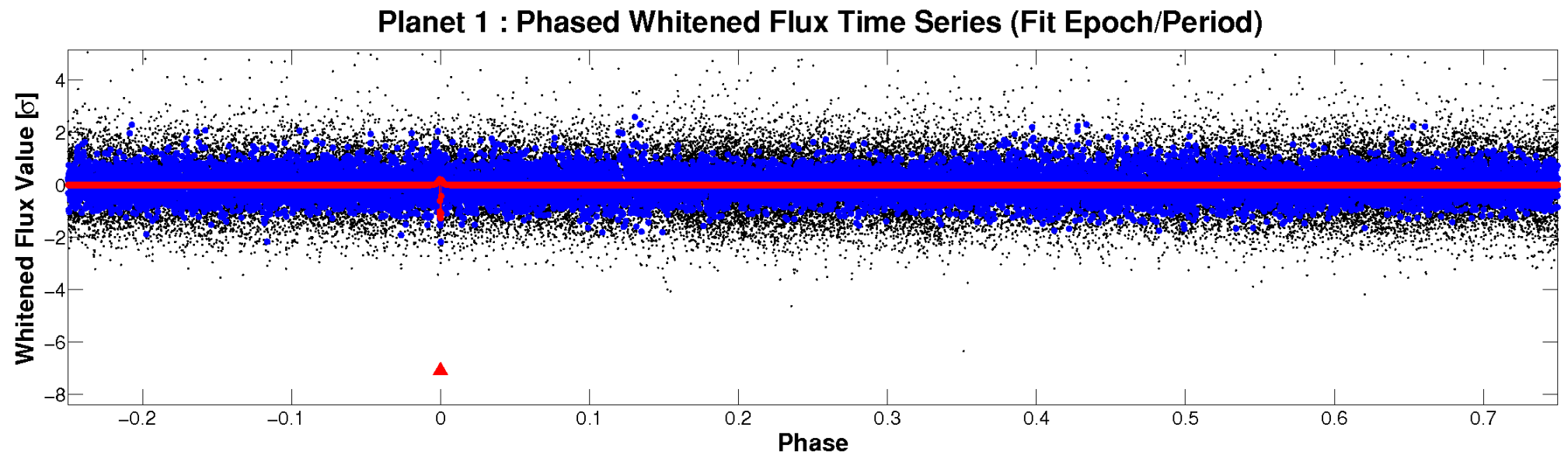
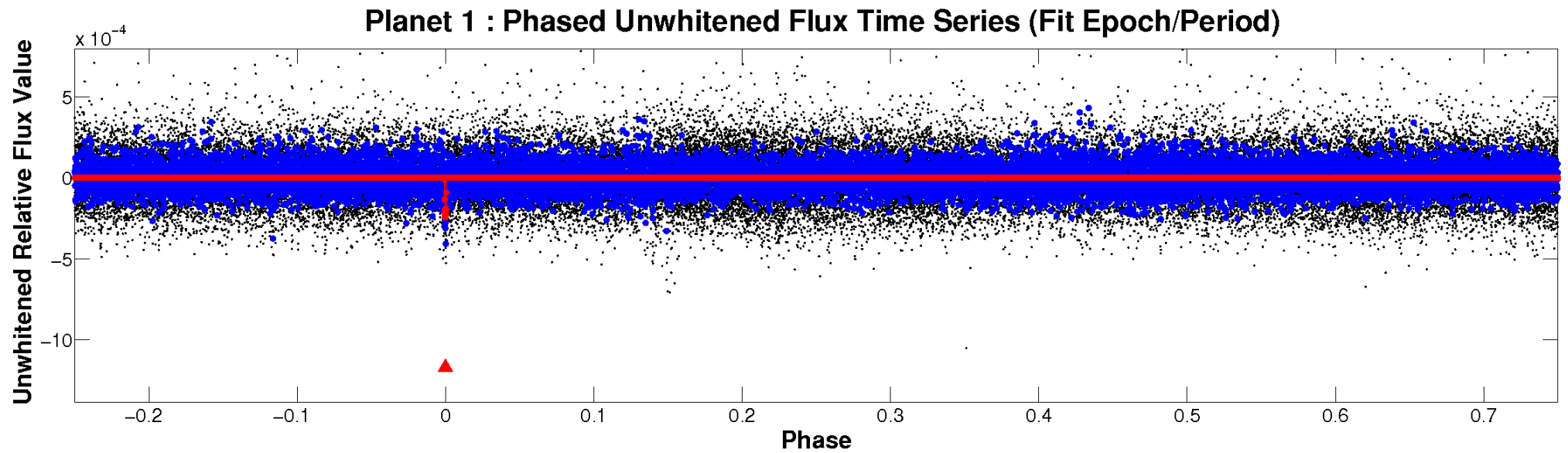


ALT Odd/Even

TCE 004988995-01

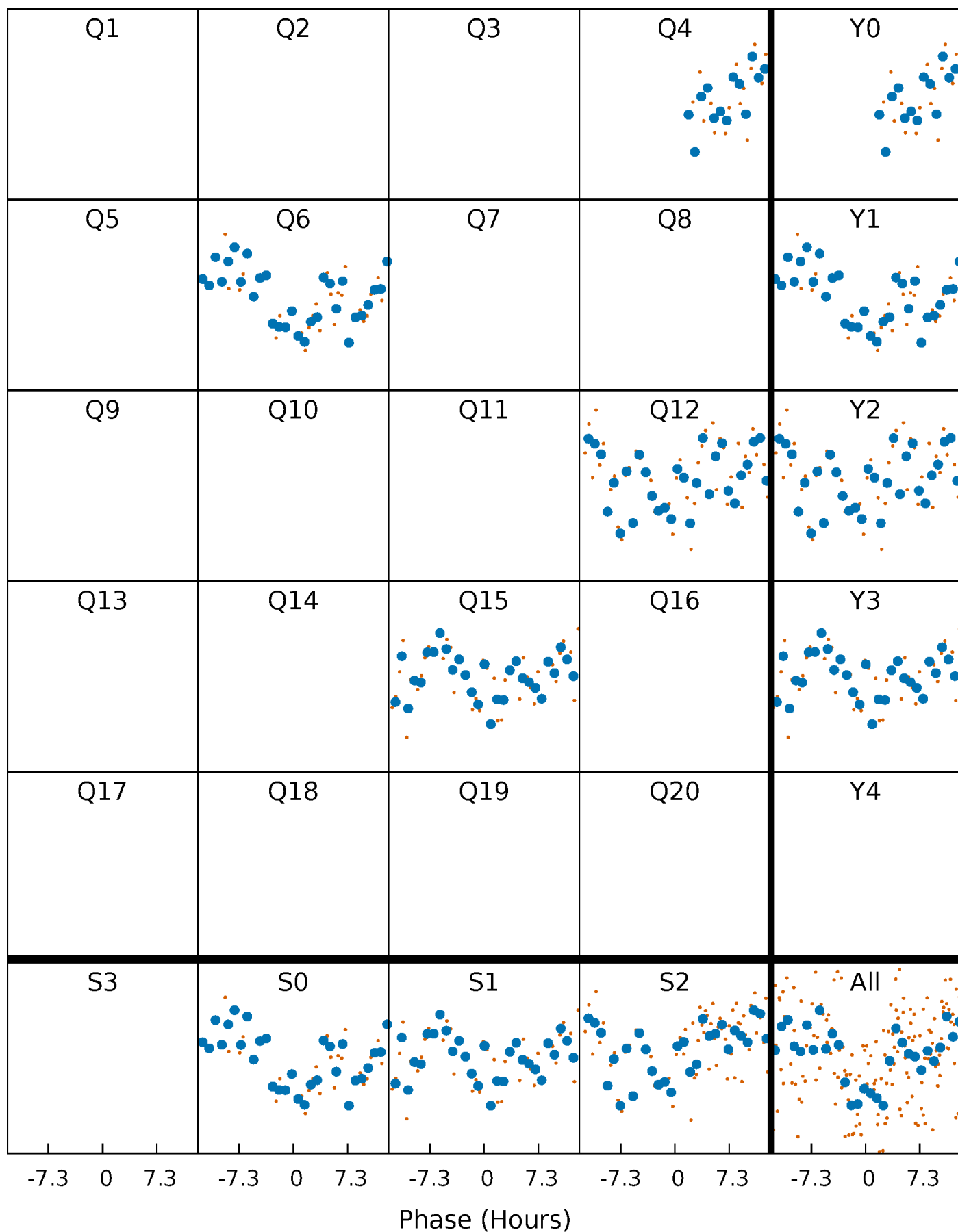


Non-Whitened Vs. Whitened Light Curve



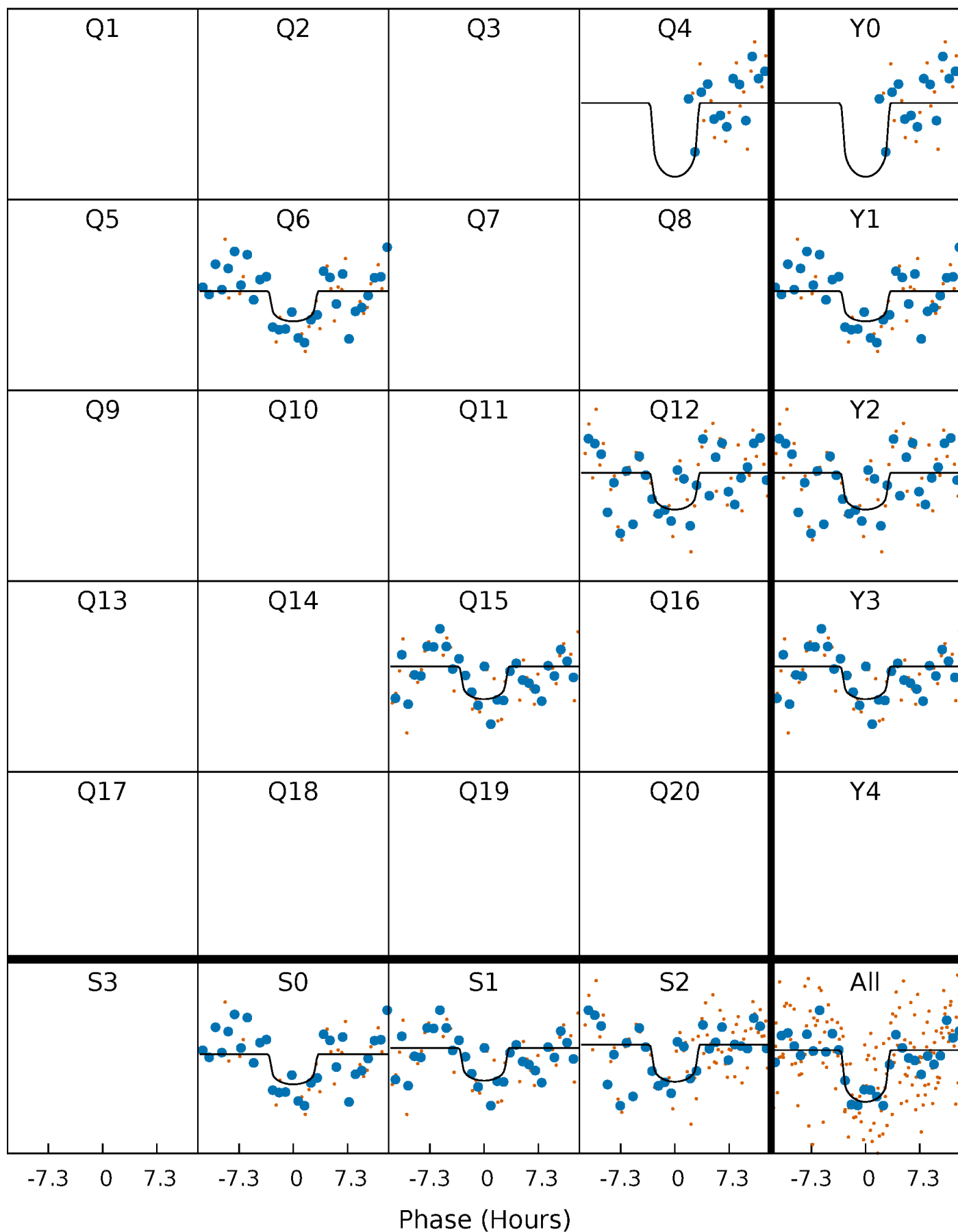
PDC Quarter-Phased Transit Curves

TCE 004988995-01 P=256.805886 Days $T_0=352.337052$ (BKJD)



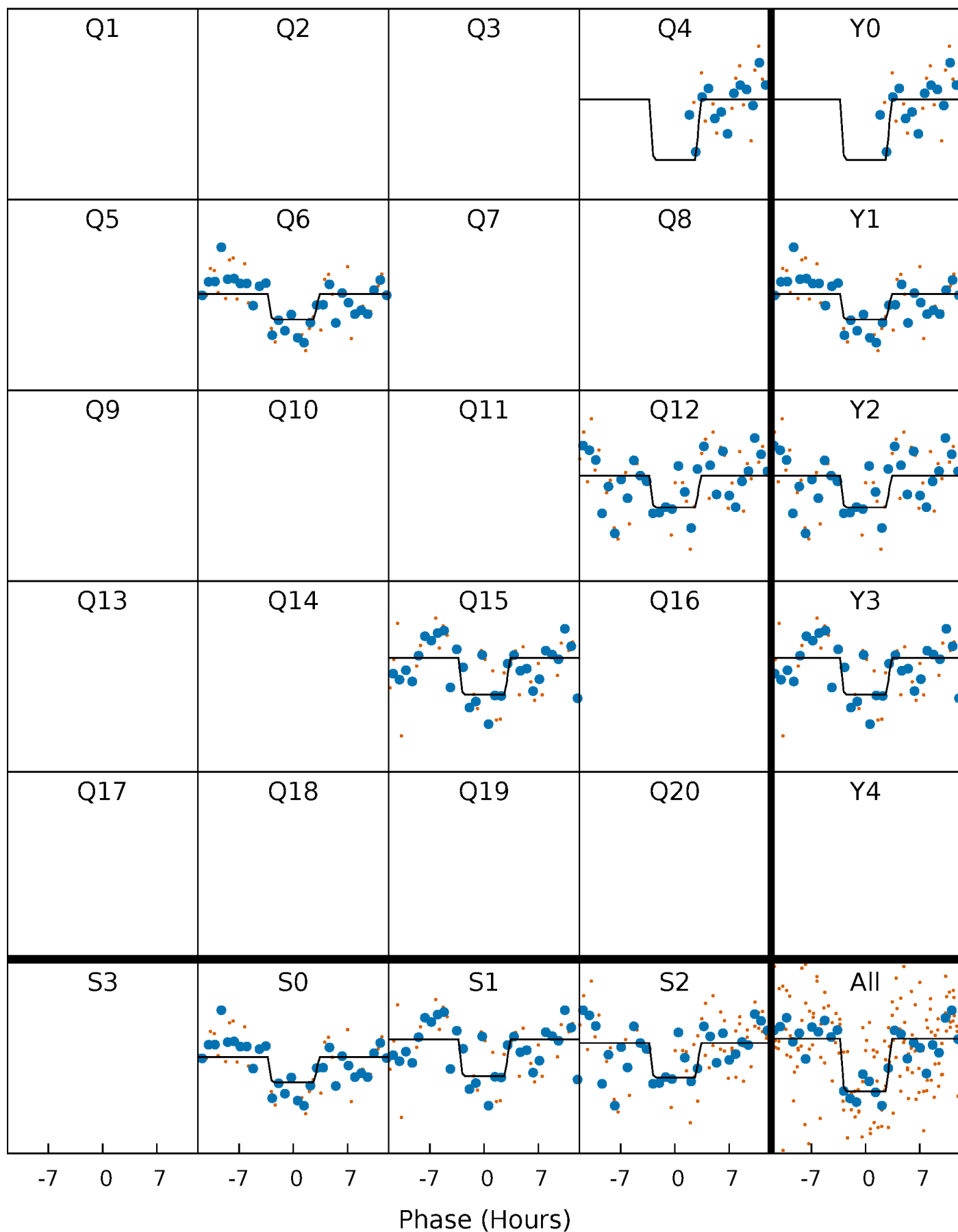
DV Quarter-Phased Transit Curves

TCE 004988995-01 P=256.805886 Days $T_0=352.337052$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

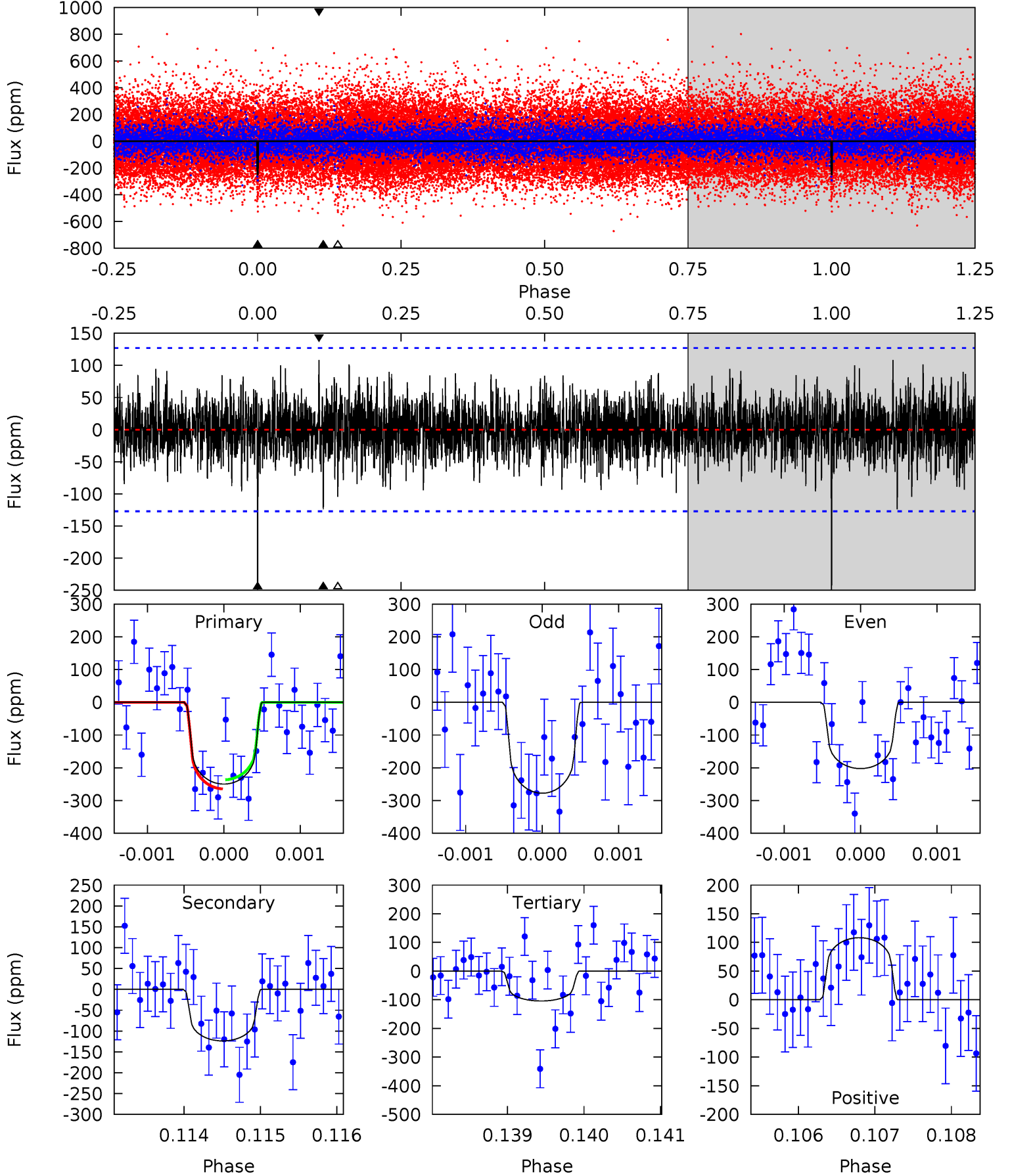
TCE 004988995-01 P=256.808982 Days $T_0=352.335141$ (BKJD)



DV Model-Shift Uniqueness Test

004988995-01, $P = 256.805886$ Days, $E = 95.531166$ Days

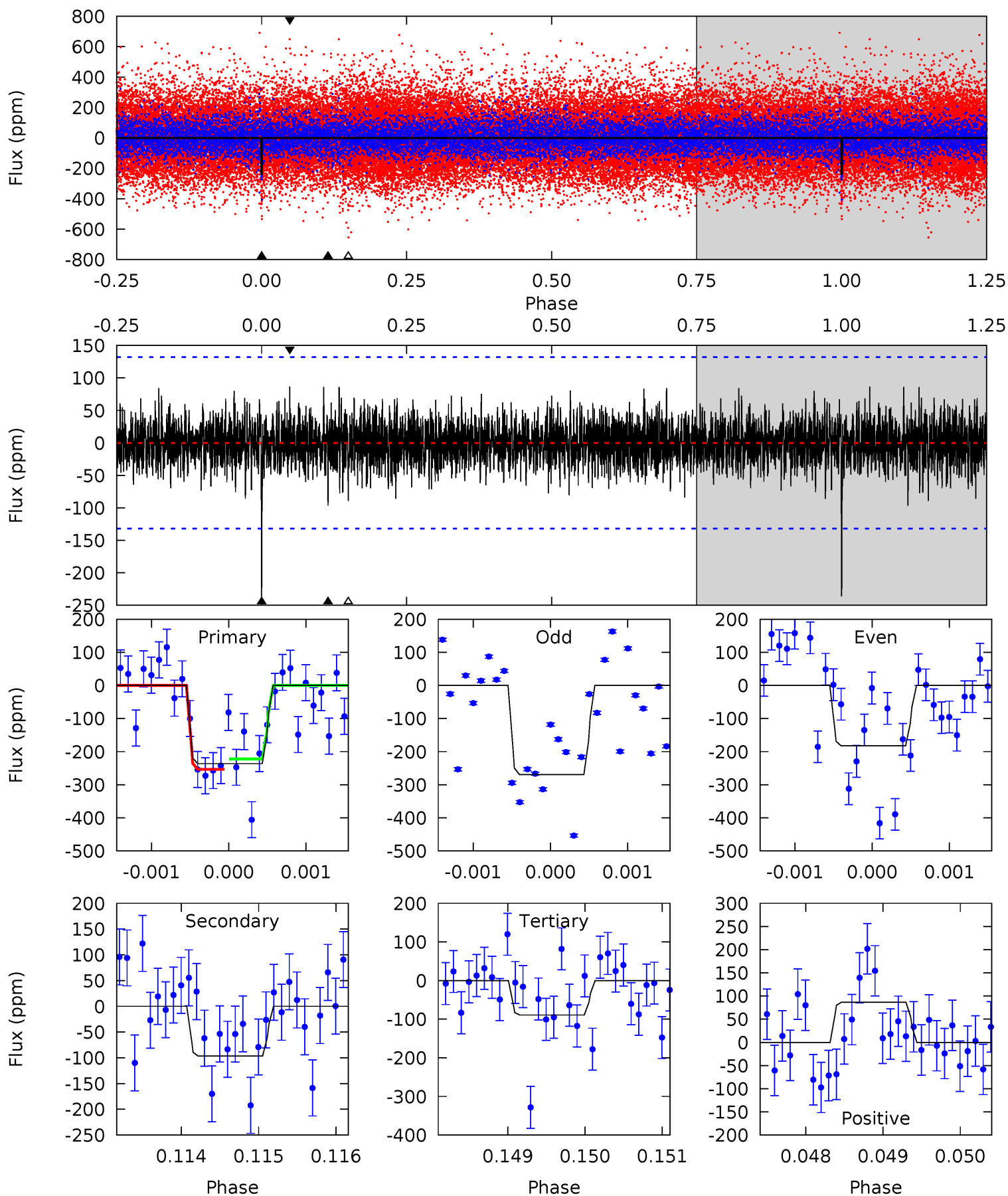
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	5.29	4.46	4.63	5.43	3.26	1.27	6.22	6.05	0.83	0.66	1.59	0.94	0.30	0.59



Alt Model-Shift Uniqueness Test

004988995-01, P = 256.808982 Days, E = 95.526159 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.77	3.99	3.69	3.58	5.46	3.30	1.01	6.08	6.19	0.30	0.41	1.75	1.05	0.27	0.64



Stellar Parameters For KIC 004988995

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5569^{+150}_{-150}	$4.165^{+0.329}_{-0.165}$	$0.080^{+0.250}_{-0.250}$	$1.327^{+0.337}_{-0.412}$	$0.940^{+0.113}_{-0.085}$	$0.566^{+1.118}_{-0.248}$
	+3%/-3%	+8%/-4%	+312%/-312%	+25%/-31%	+12%/-9%	+197%/-44%
Source	PHO1	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 004988995-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-124 ± 23	$2.33^{+1.40}_{-1.15}$	444^{+33}_{-39}	4628^{+1632}_{-705}	7553^{+23026}_{-4614}
Alt.	-96 ± 24	$2.17^{+1.50}_{-1.24}$	445^{+36}_{-42}	4543^{+2084}_{-750}	6905^{+27674}_{-4696}

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 $A_{obs} \gg 1.0$

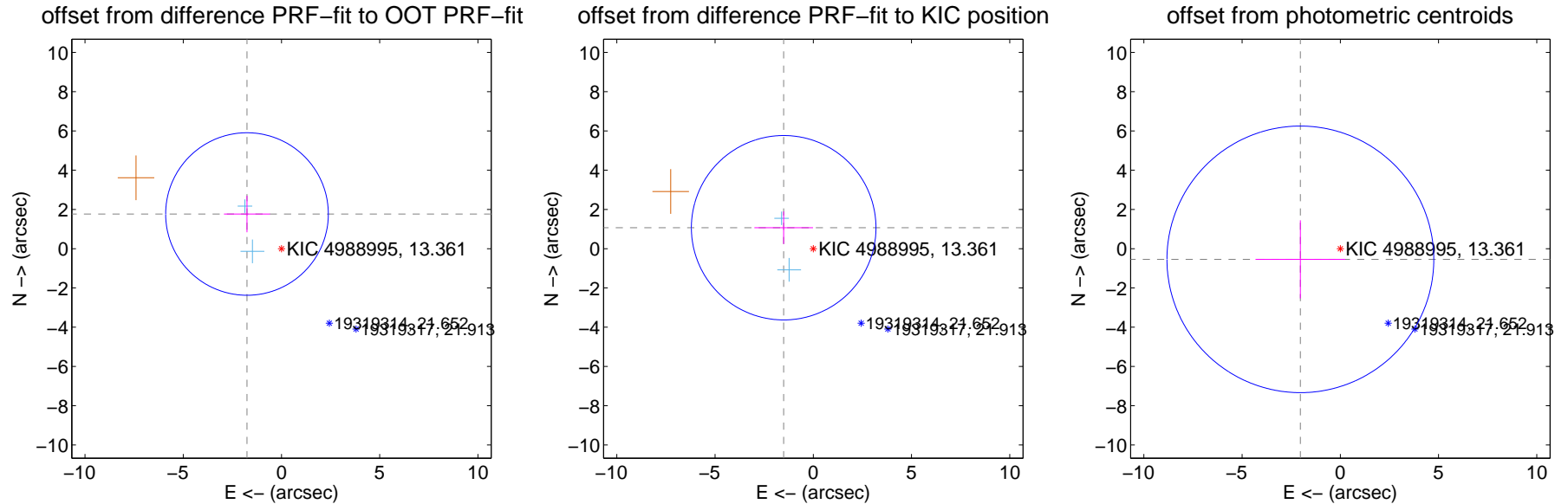
DV Centroid Data

Supplemental centroid analysis for 004988995-01. Kepler magnitude: 13.36. Transit SNR 7.06

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.97 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.490 ± 1.380	1.80	1.755 ± 1.171	1.767 ± 0.929
PRF-fit source offset from KIC position	1.847 ± 1.566	1.18	1.507 ± 1.494	1.068 ± 0.829
photometric centroid source offset	2.10 ± 2.26	0.93	2.03 ± 2.28	-0.54 ± 1.99

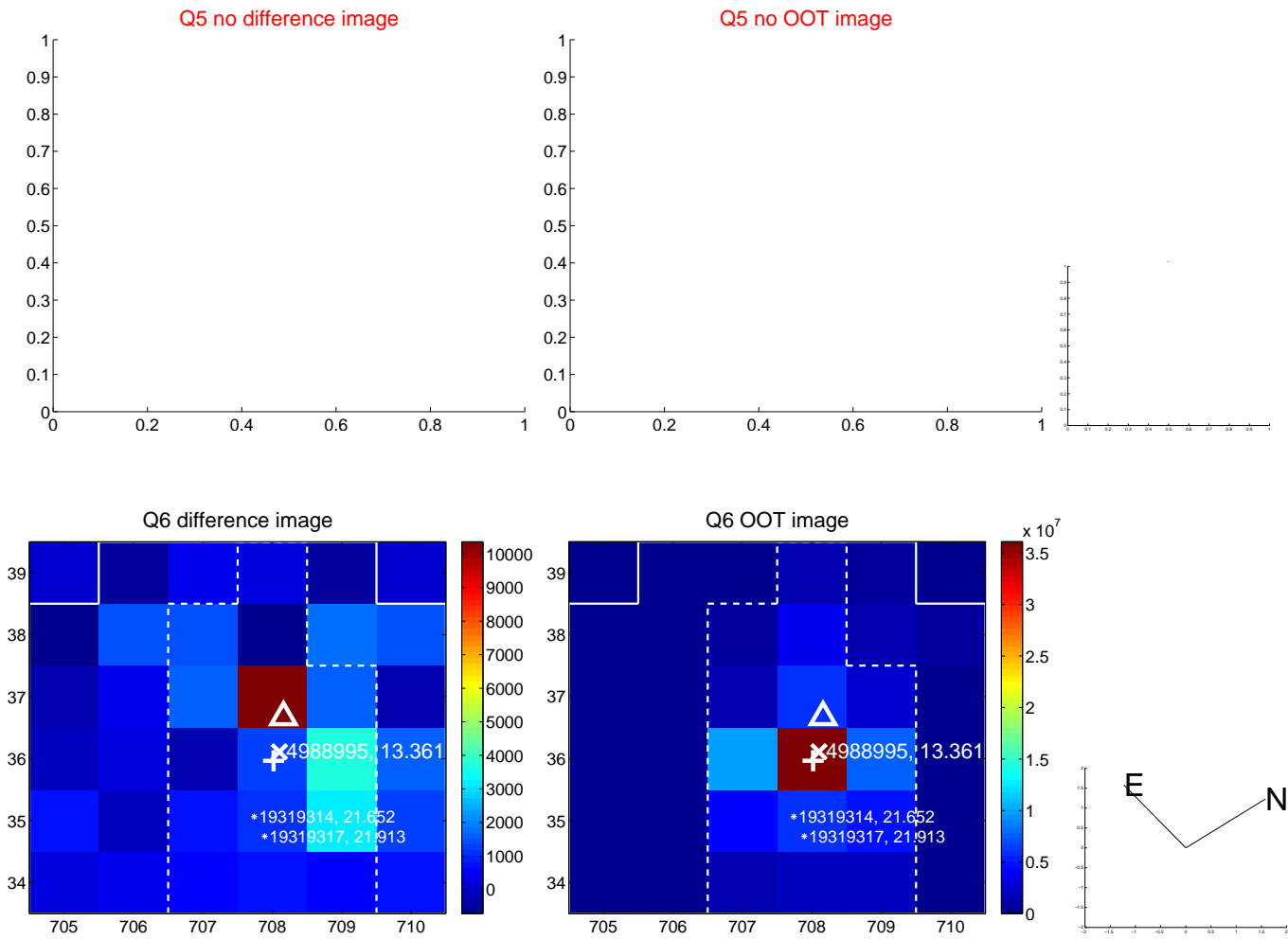


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



Q9 no OOT image



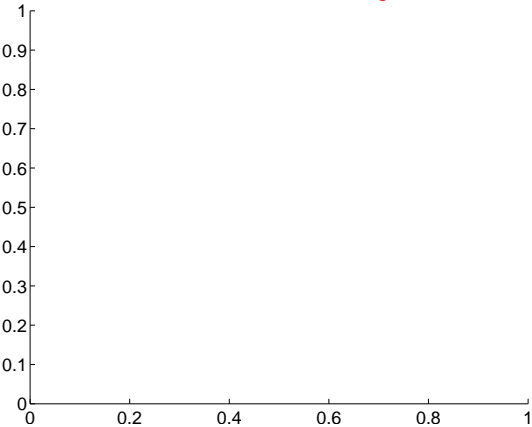
Q10 no difference image



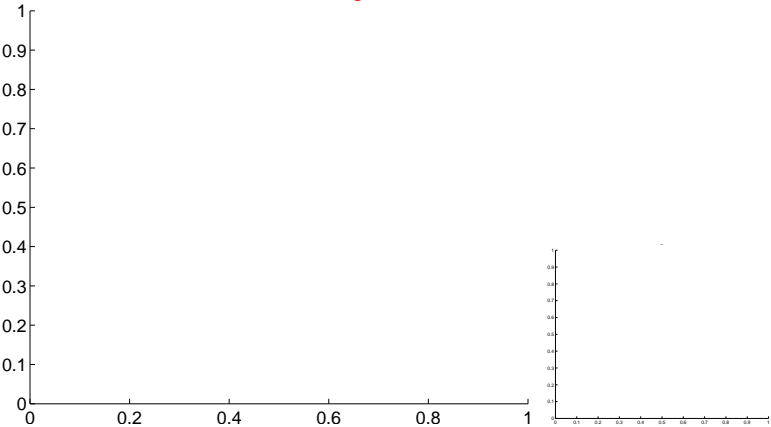
Q10 no OOT image



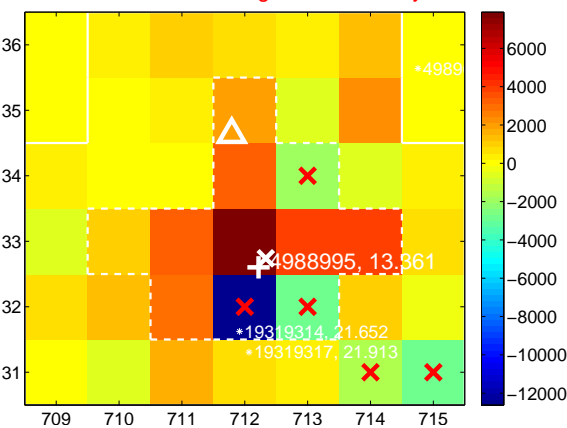
Q11 no difference image



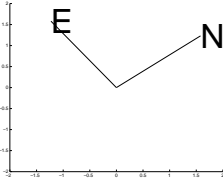
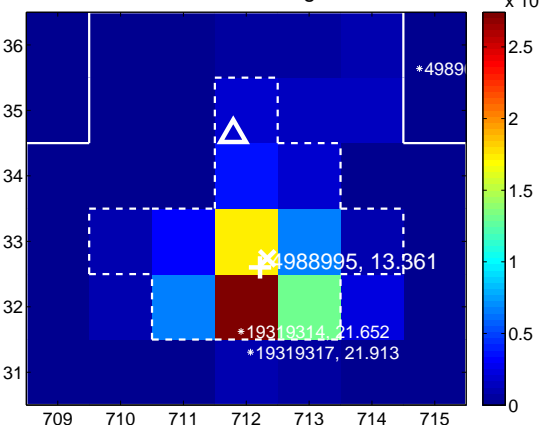
Q11 no OOT image



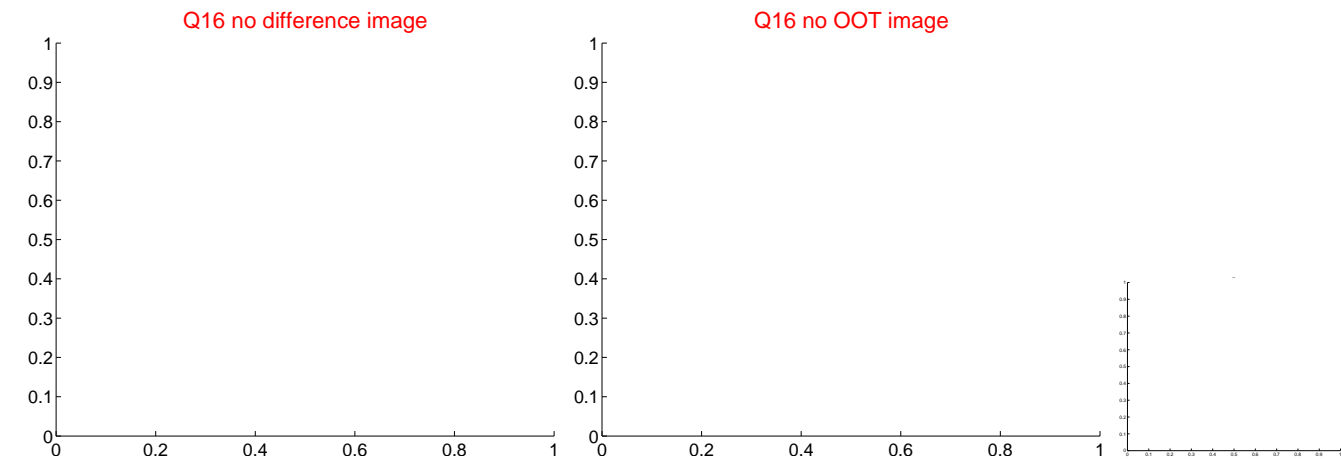
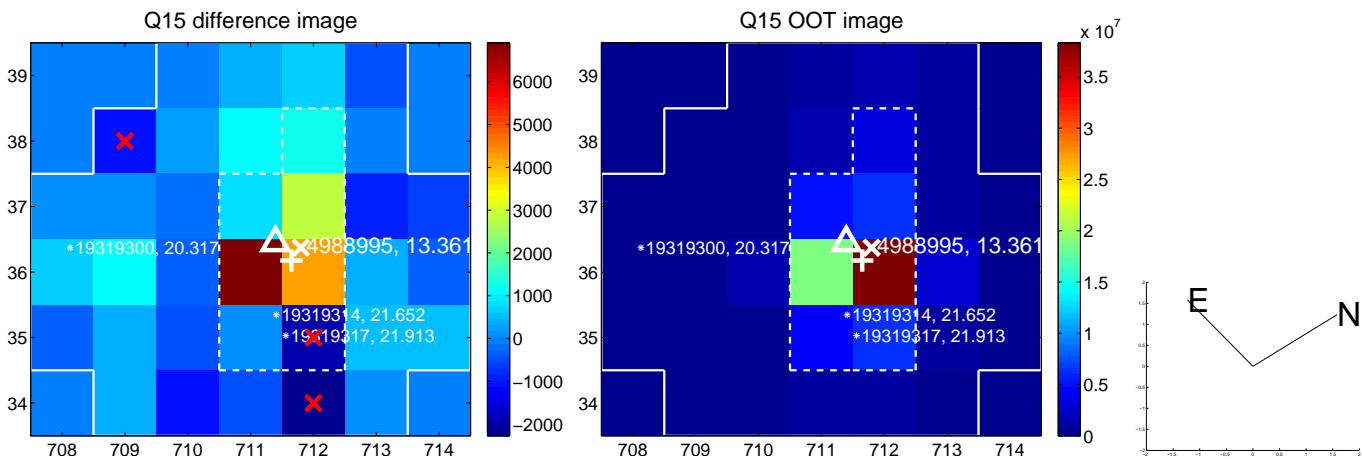
Q12 difference image. Poor Quality



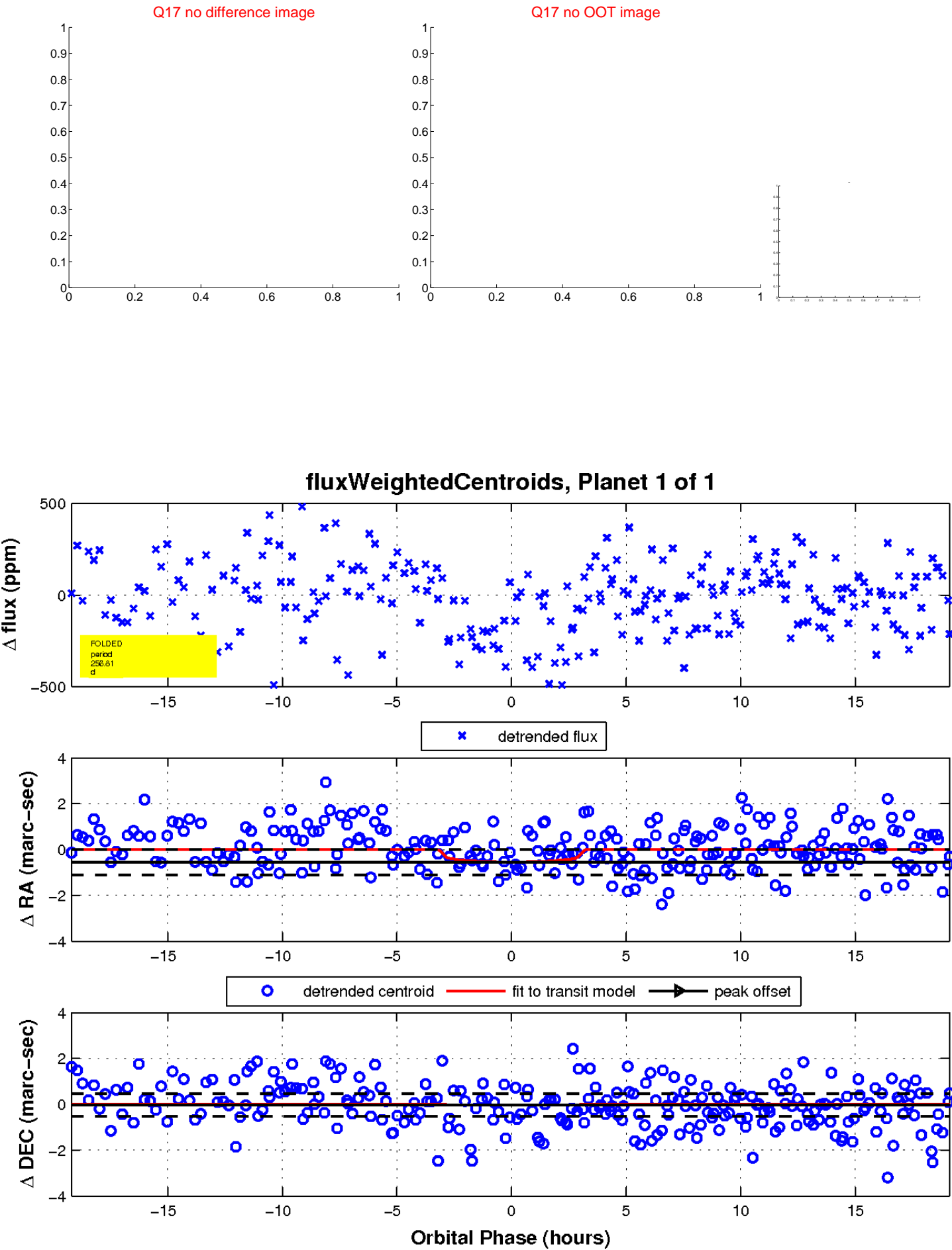
Q12 OOT image



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.



UKIRT Image

Declination

