

KIC 004466498

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})
004466498-01	OBS	No	405.918739	217.087266	731.2	12.930	8.7	7.3	0.69	4367	2.56	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004466498-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_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.

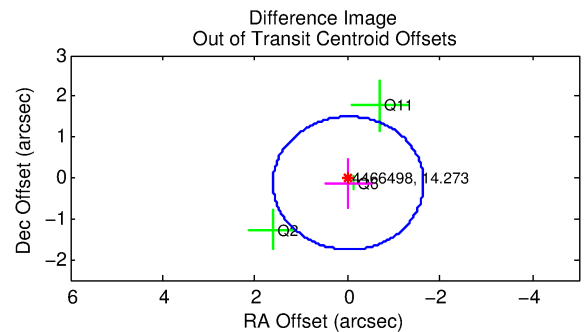
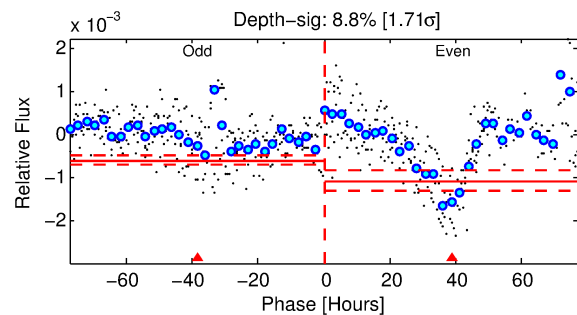
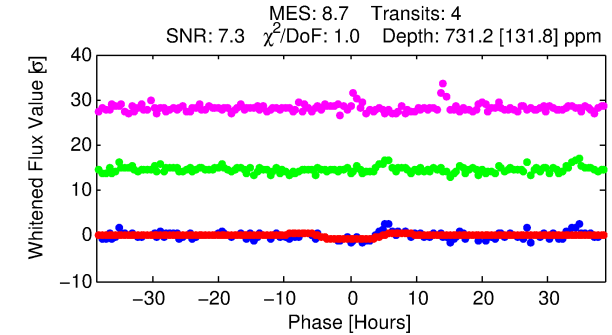
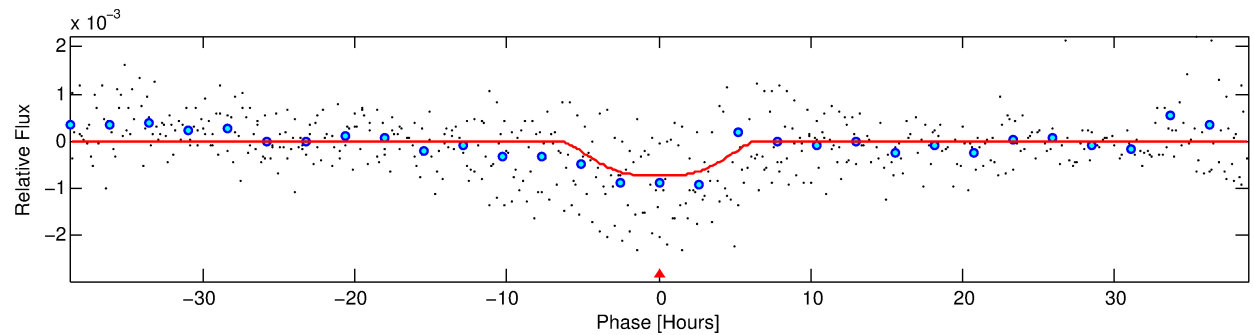
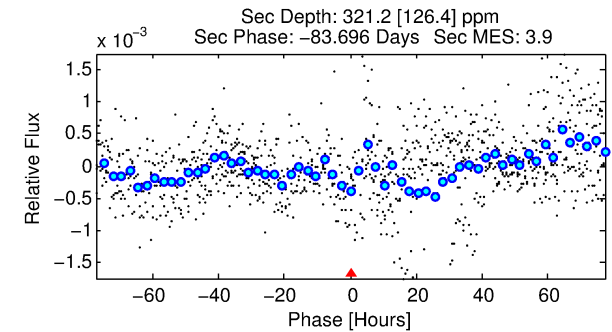
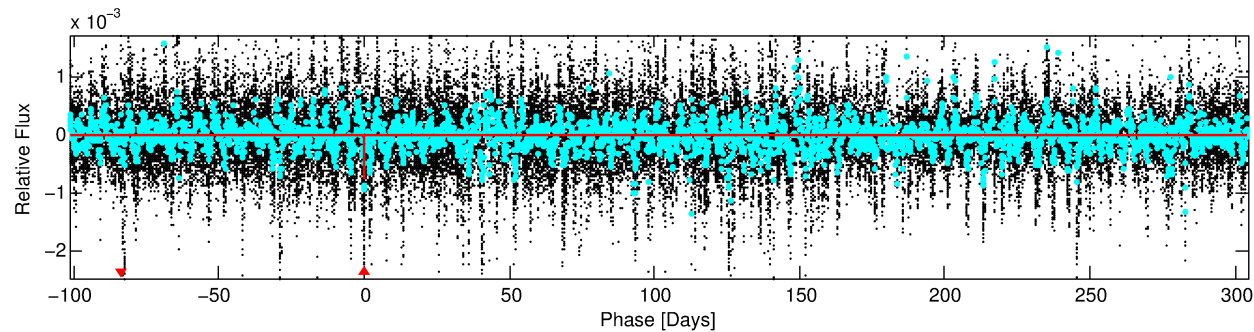
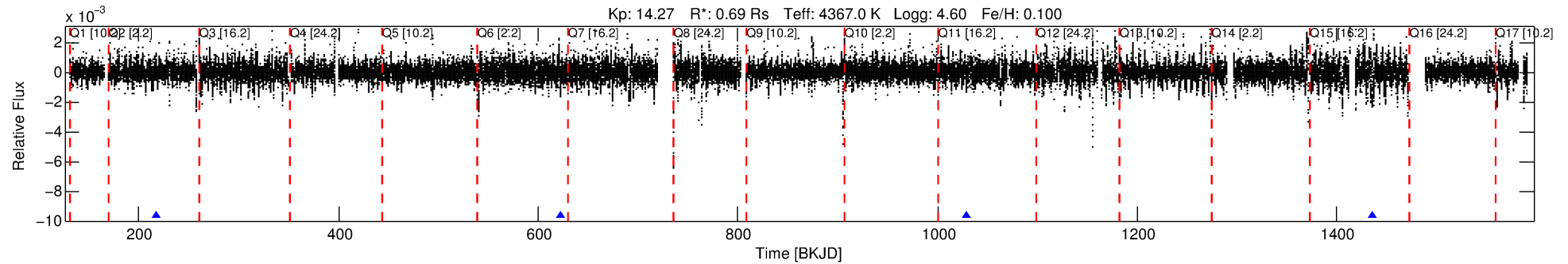
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004466498-01

No Significant Match Found

DV One-Page Summary

KIC: 4466498 Candidate: 1 of 1 Period: 405.919 d



DV Fit Results:

Period = 405.91874 [0.01479] d
Epoch = 217.0873 [0.0247] BKJD
Rp/R* = 0.0343 [0.0044]
a/R* = 92.17 [18.93]
b = 0.96 [0.02]
Seff = 0.17 [0.02]
Teq = 164 [4] K
Rp = 2.56 [0.36] Re
a = 0.9423 [0.0448] AU
Ag = 23856.44 [11355.39] [2.10 σ]
Teffp = 3159 [377] K [7.95 σ]

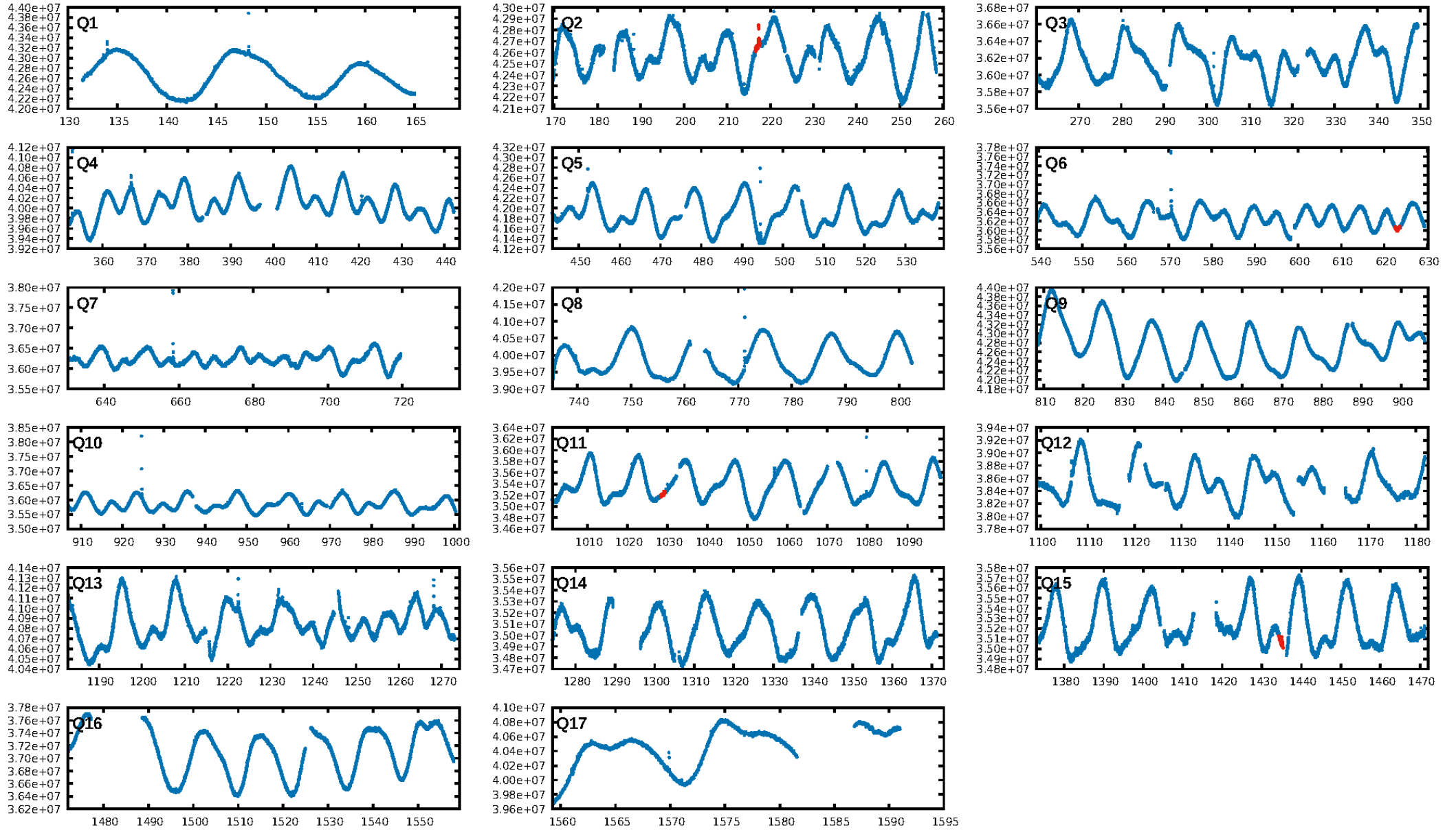
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.19e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.819
Centroid-sig: 5.3%
Centroid-so: 3.777 arcsec [2.46 σ]
OotOffset-rm: 0.129 arcsec [0.24 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-rm: 0.856 arcsec [1.87 σ]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

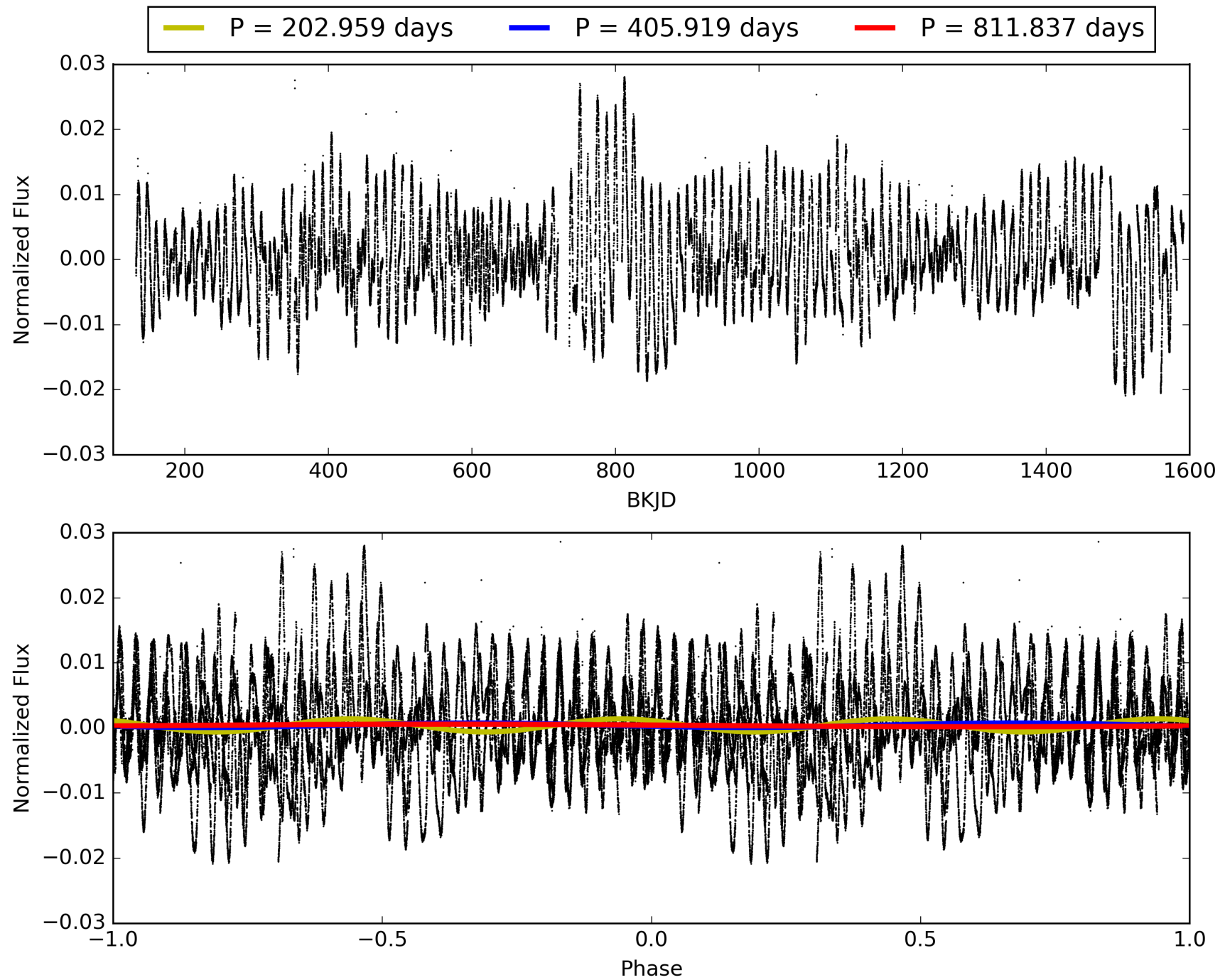
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:50:51 Z

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

TCE 004466498-01, PDC Light Curves

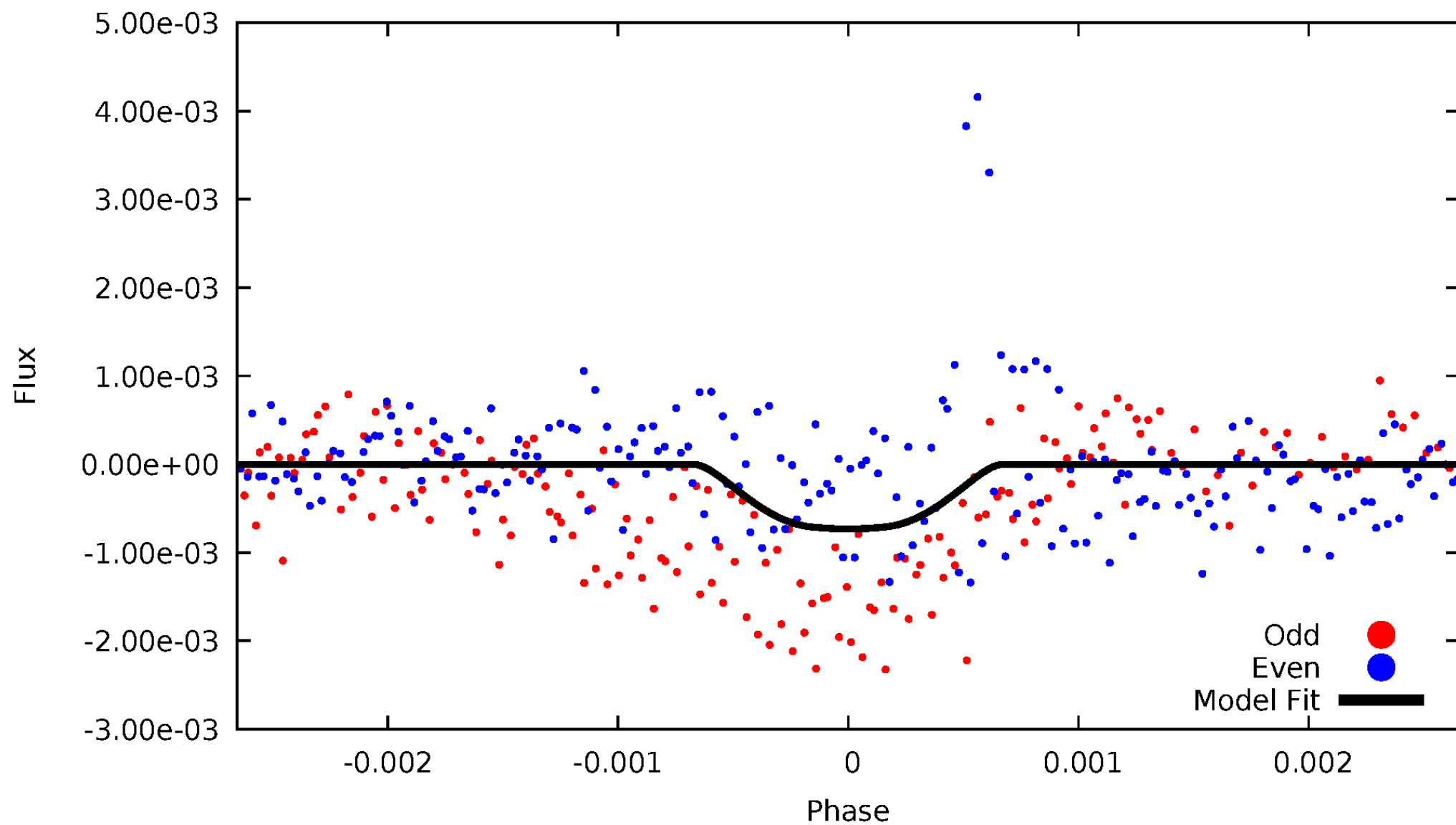


TCE 004466498-01



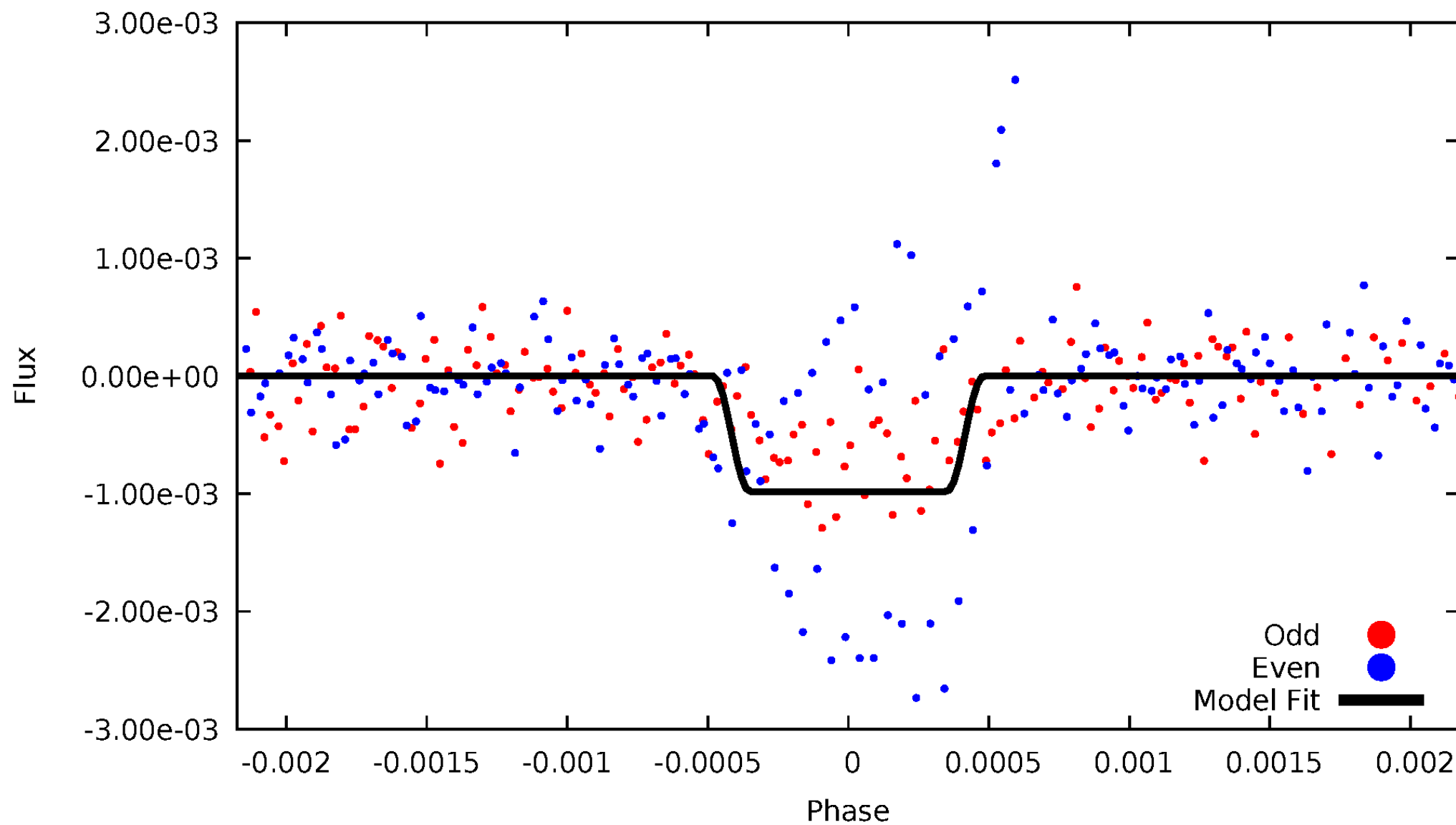
DV Odd/Even

TCE 004466498-01



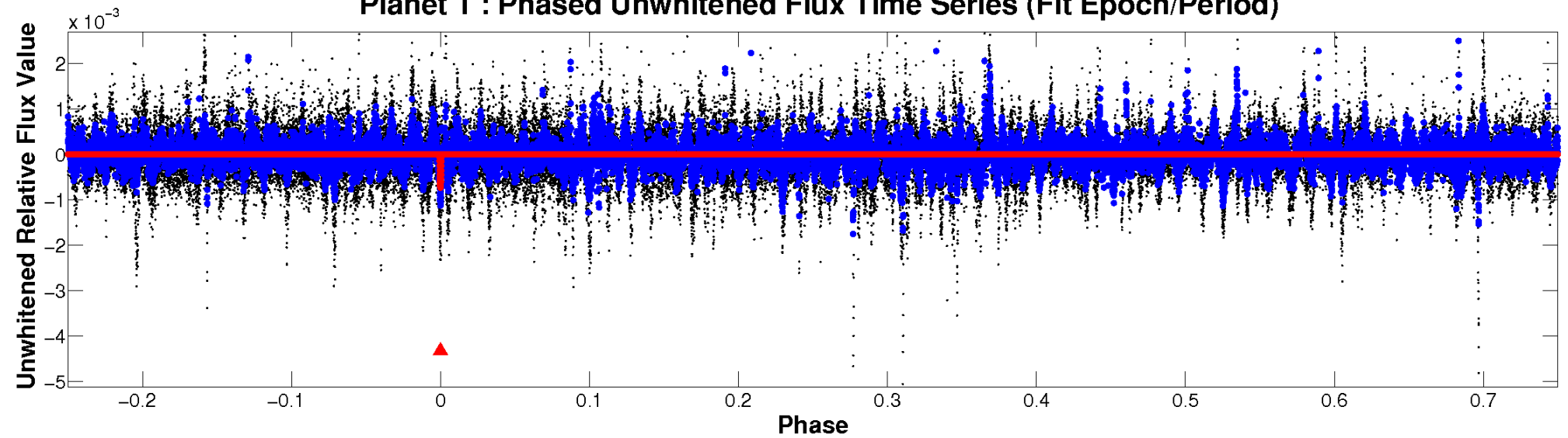
ALT Odd/Even

TCE 004466498-01

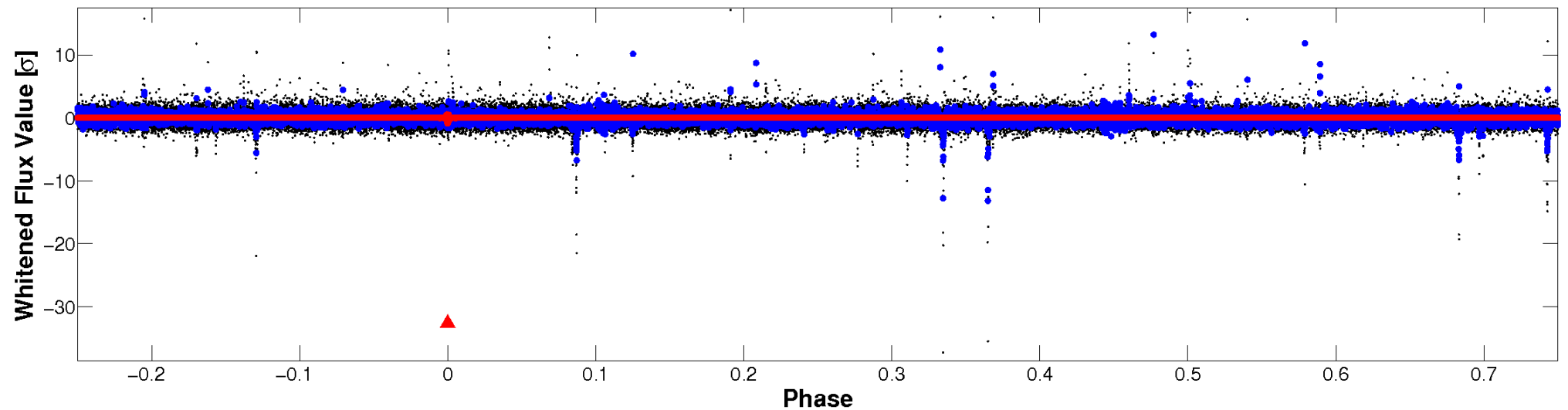


Non-Whitened Vs. Whitened Light Curve

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

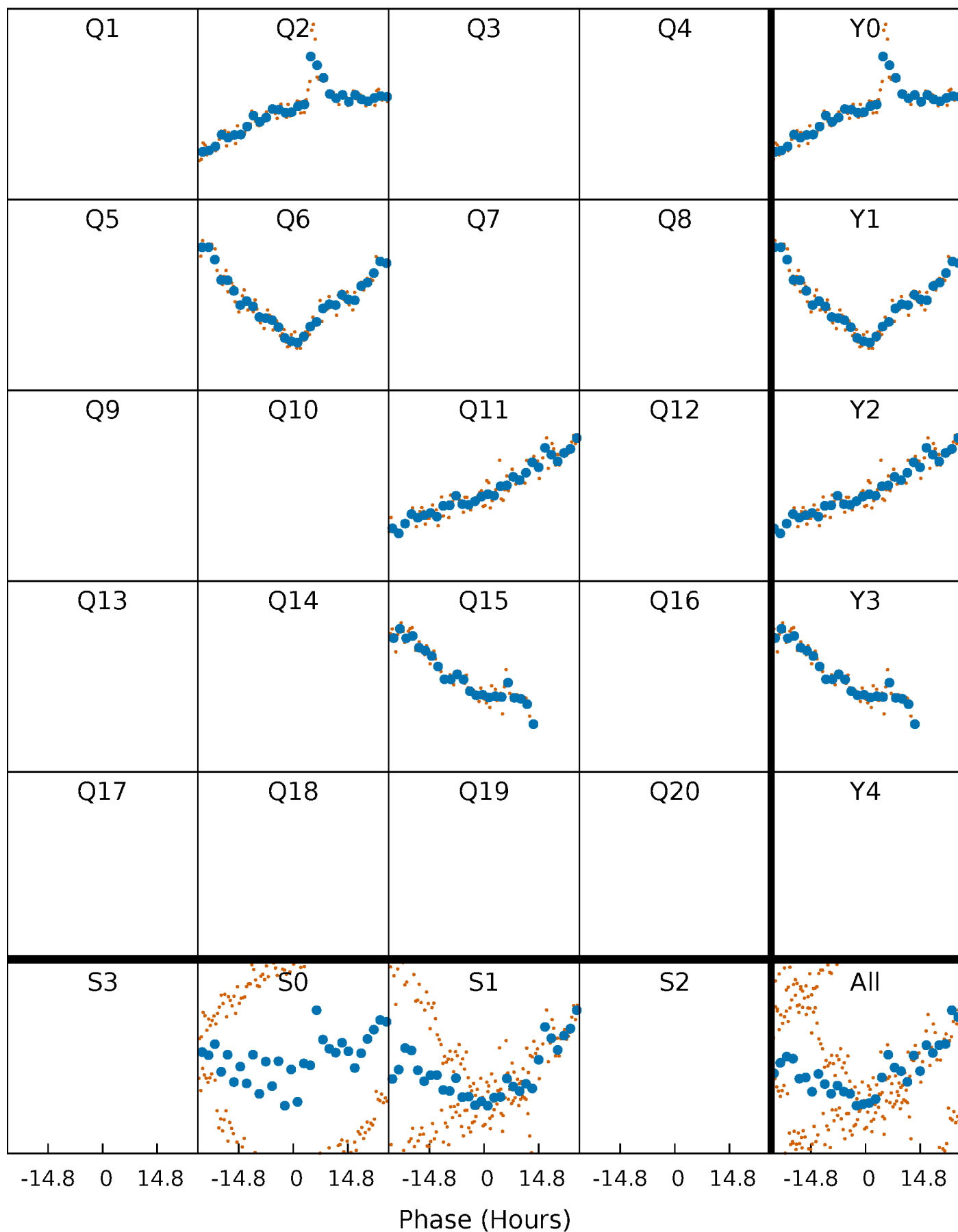


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



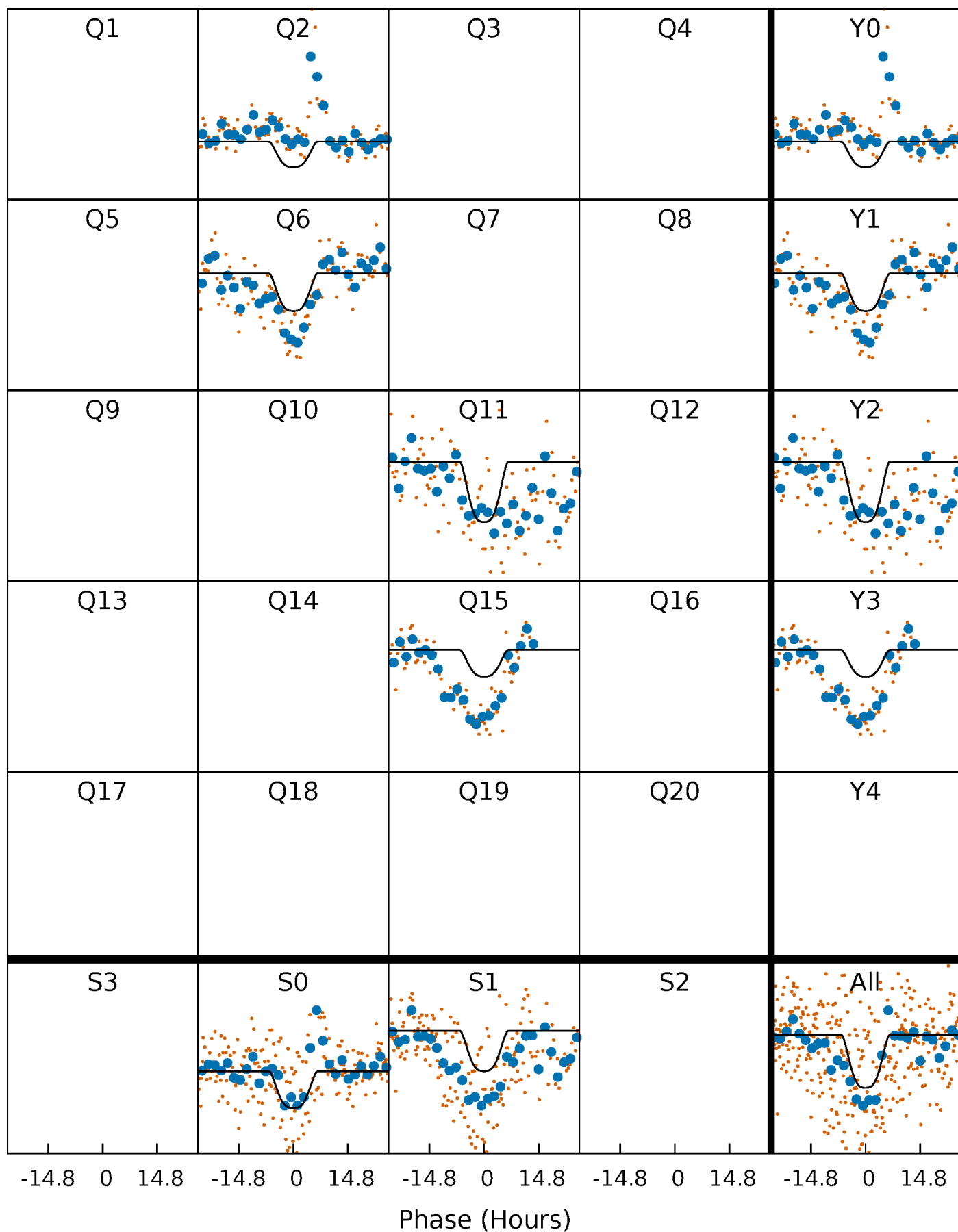
PDC Quarter-Phased Transit Curves

TCE 004466498-01 P=405.918739 Days $T_0=217.087266$ (BKJD)



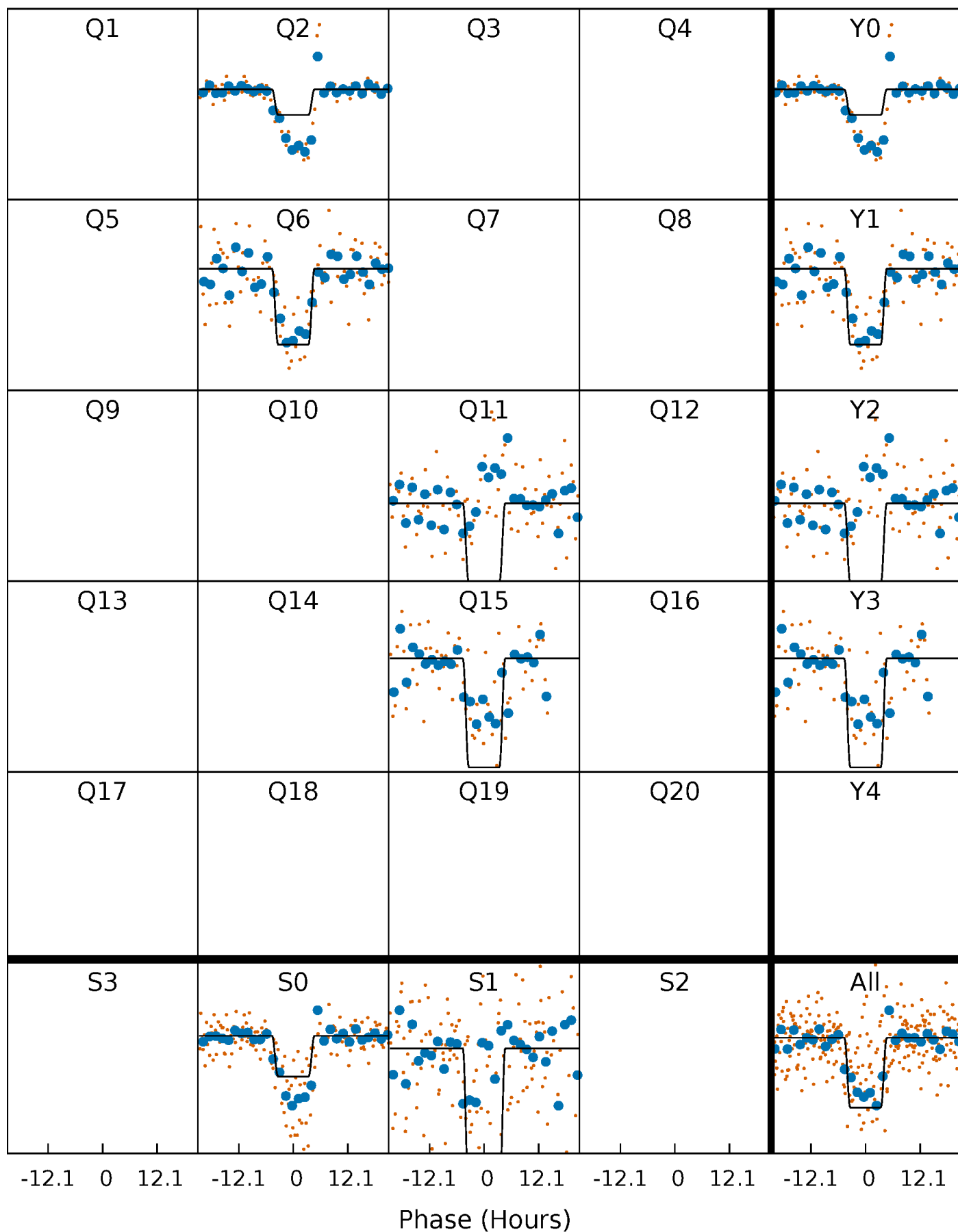
DV Quarter-Phased Transit Curves

TCE 004466498-01 P=405.918739 Days $T_0=217.087266$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

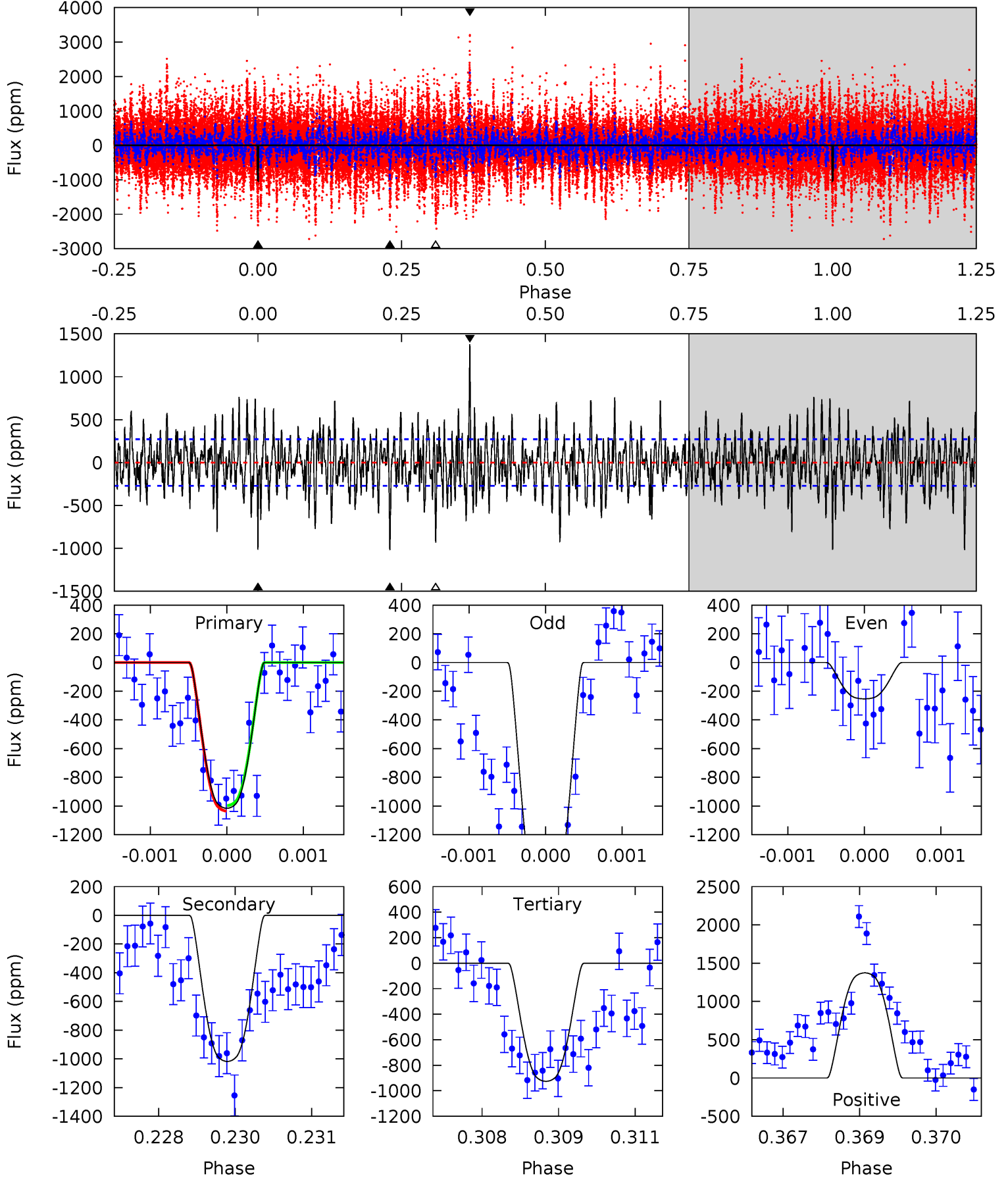
TCE 004466498-01 P=405.905858 Days $T_0=217.074354$ (BKJD)



DV Model-Shift Uniqueness Test

004466498-01, P = 405.918739 Days, E = 217.087266 Days

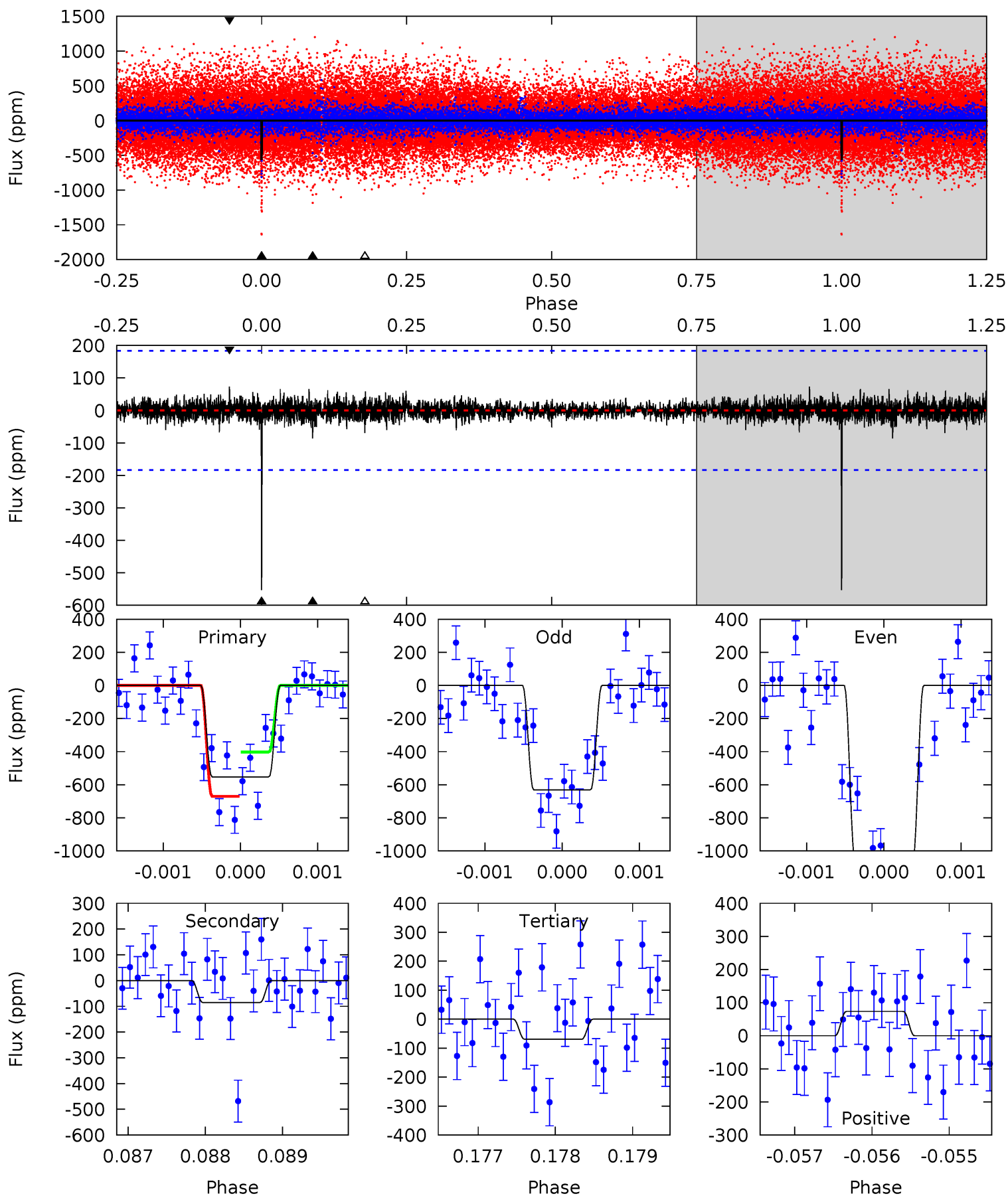
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	20.2	18.4	27.3	5.39	3.20	5.14	1.79	-7.11	1.83	-7.07	12.6	0.93	0.57	0.38



Alt Model-Shift Uniqueness Test

004466498-01, P = 405.905858 Days, E = 217.074354 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	2.55	2.07	2.19	5.46	3.31	0.45	14.4	14.3	0.48	0.36	7.35	1.24	0.12	0



Stellar Parameters For KIC 004466498

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4367^{+87}_{-78}	$4.596^{+0.042}_{-0.012}$	$0.100^{+0.150}_{-0.150}$	$0.686^{+0.020}_{-0.036}$	$0.677^{+0.040}_{-0.025}$	$2.950^{+0.466}_{-0.158}$
	+2%/-2%	+1%/-0%	+150%/-150%	+3%/-5%	+6%/-4%	+16%/-5%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004466498-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1018 ± 50	$2.55^{+0.36}_{-0.34}$	229^{+5}_{-5}	4247^{+277}_{-210}	77584^{+26540}_{-18564}
Alt.	-86 ± 34	$2.33^{+0.35}_{-0.35}$	228^{+5}_{-5}	2923^{+218}_{-216}	7336^{+4670}_{-3140}

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 $A_{obs} \gg 1.0$

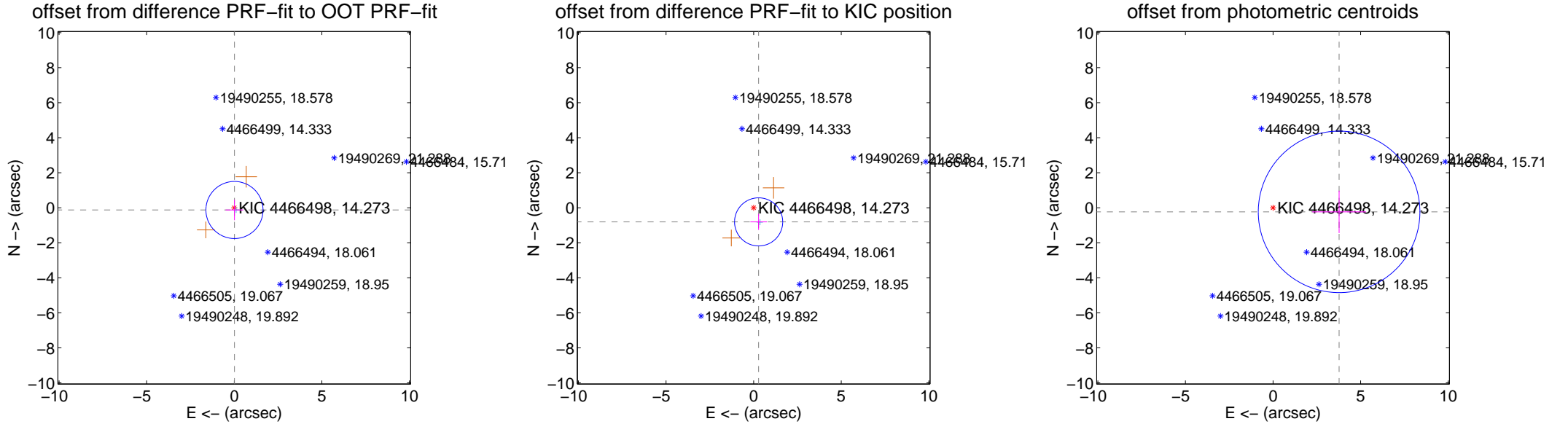
DV Centroid Data

Supplemental centroid analysis for 004466498-01. Kepler magnitude: 14.27. Transit SNR 7.25

There are 1 quarters with good PRF difference image offsets

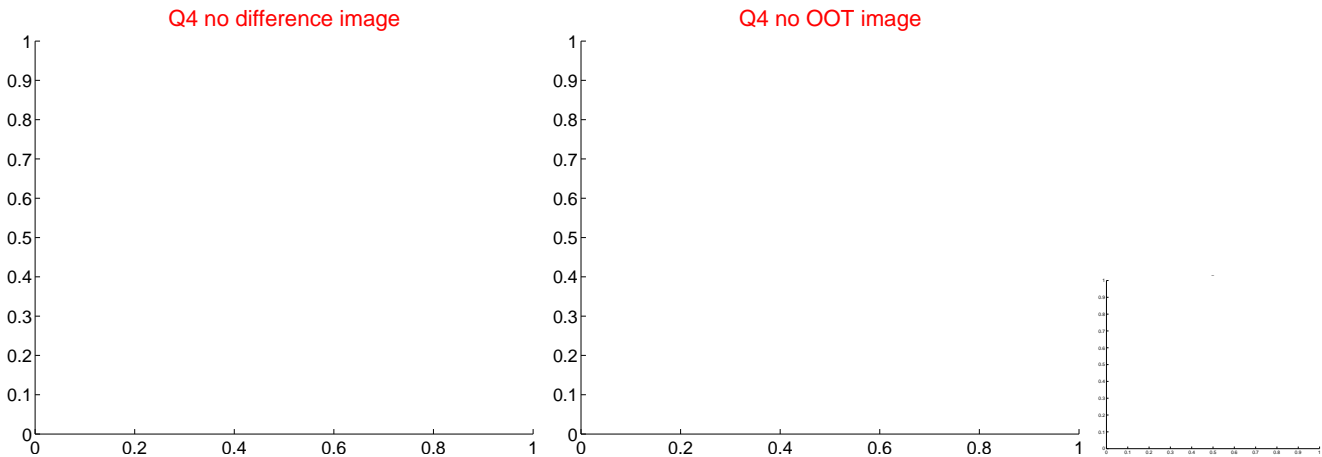
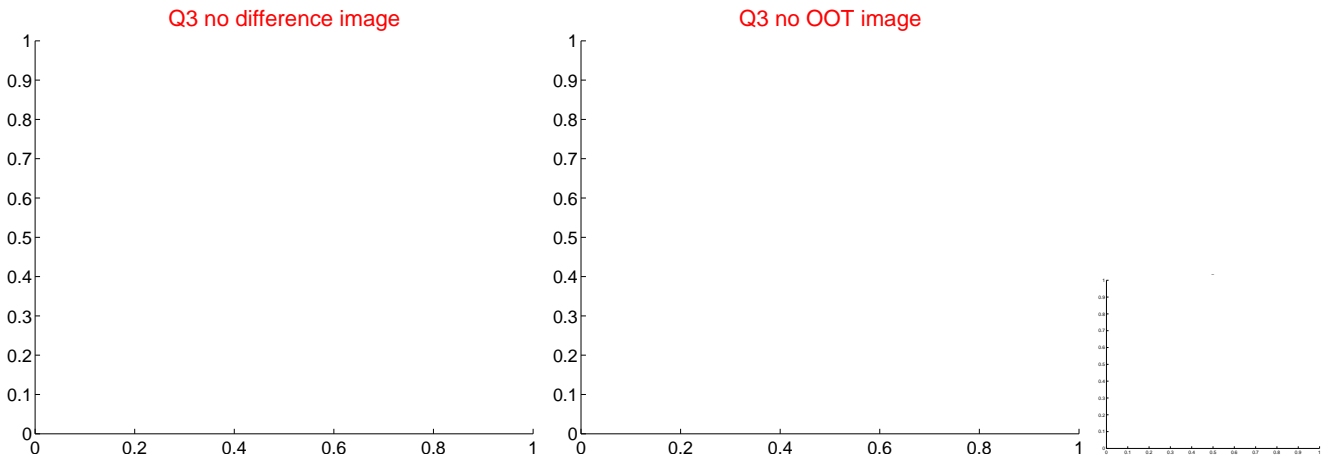
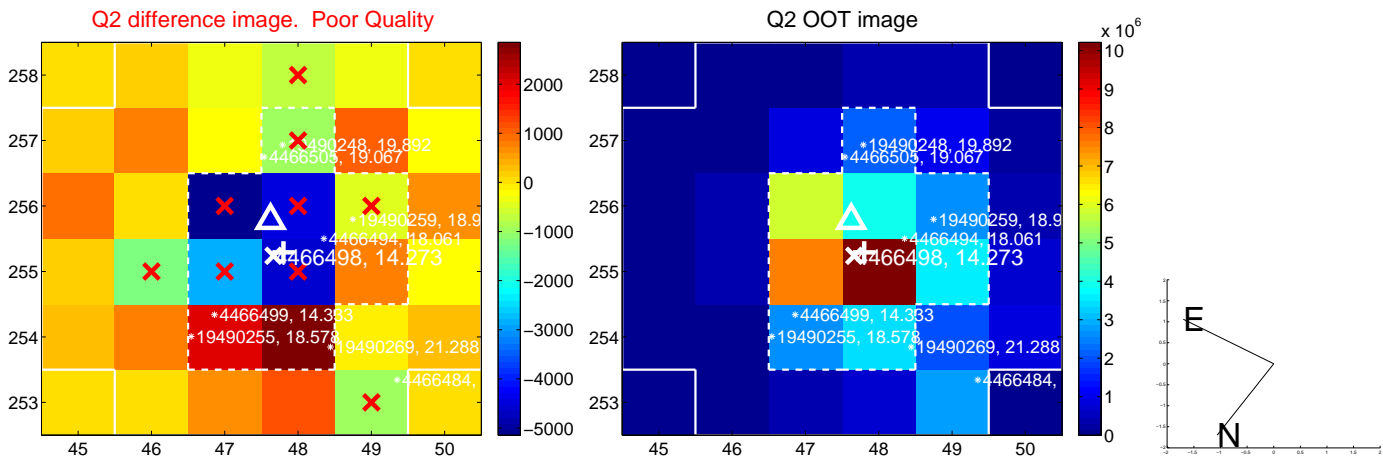
The direct PRF centroid is offset from the target star catalog position by about 0.78 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.129 ± 0.543	0.24	-0.012 ± 0.508	-0.128 ± 0.586
PRF-fit source offset from KIC position	0.856 ± 0.458	1.87	-0.285 ± 0.474	-0.808 ± 0.456
photometric centroid source offset	3.78 ± 1.54	2.46	-3.77 ± 1.54	-0.24 ± 1.21

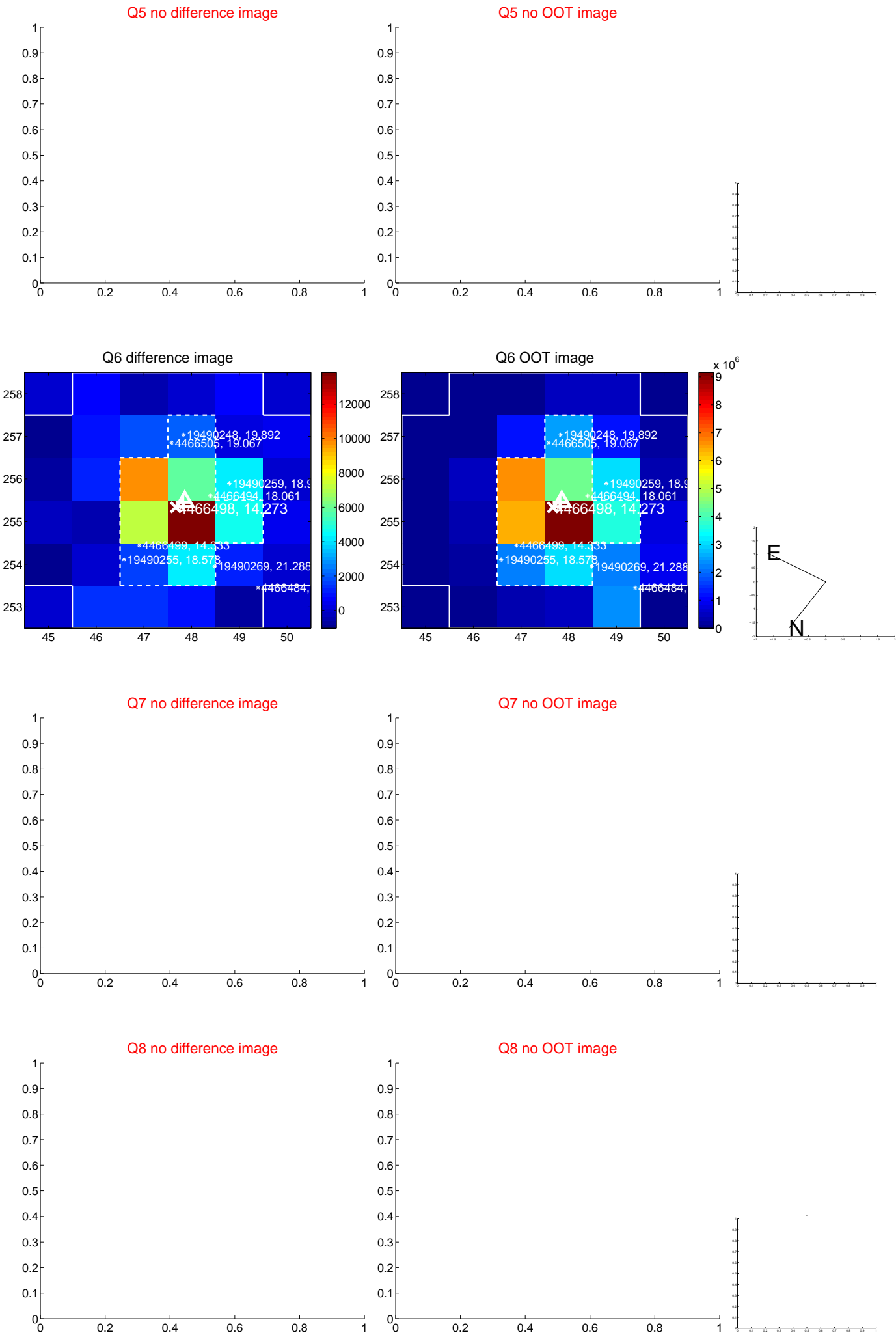


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

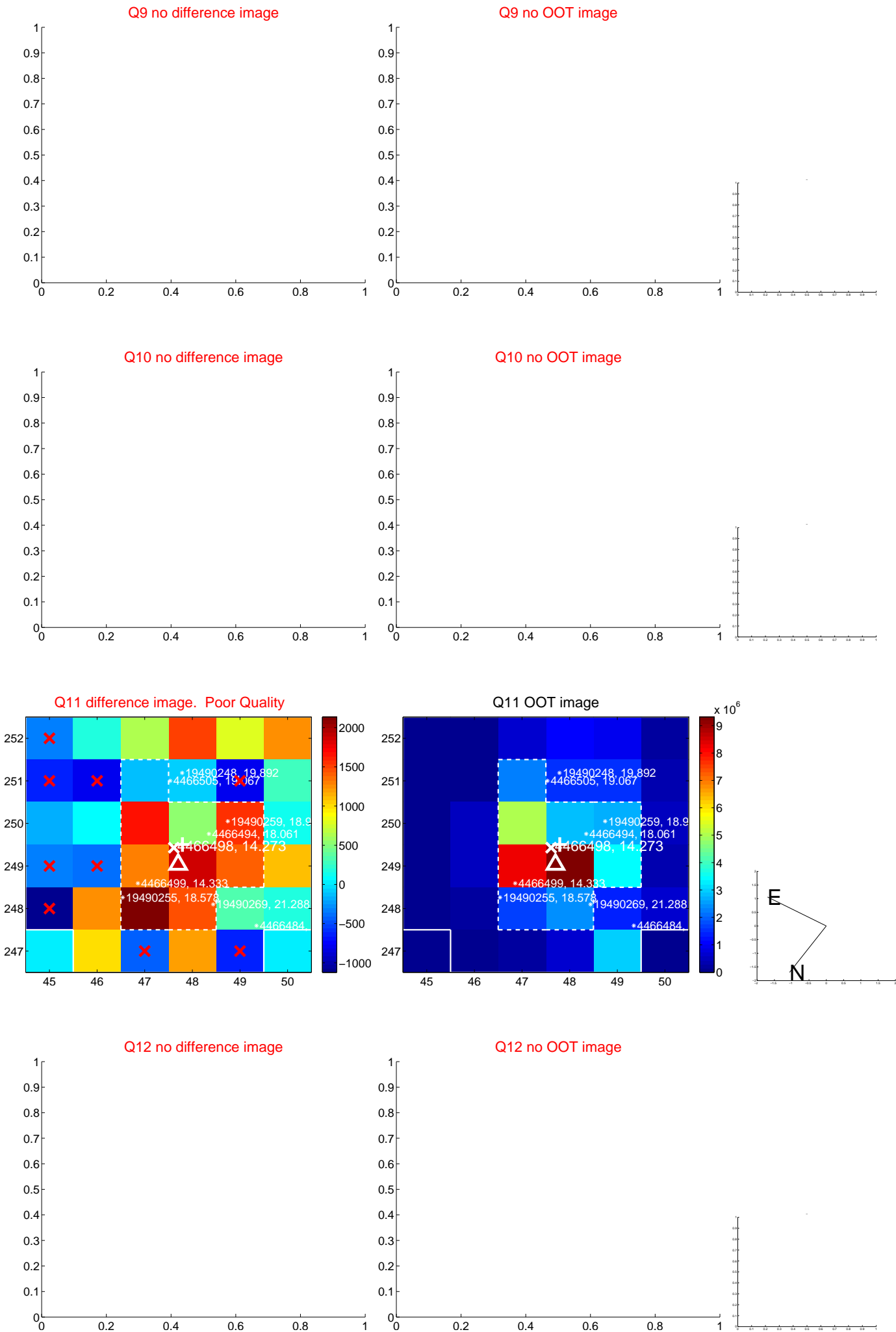
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



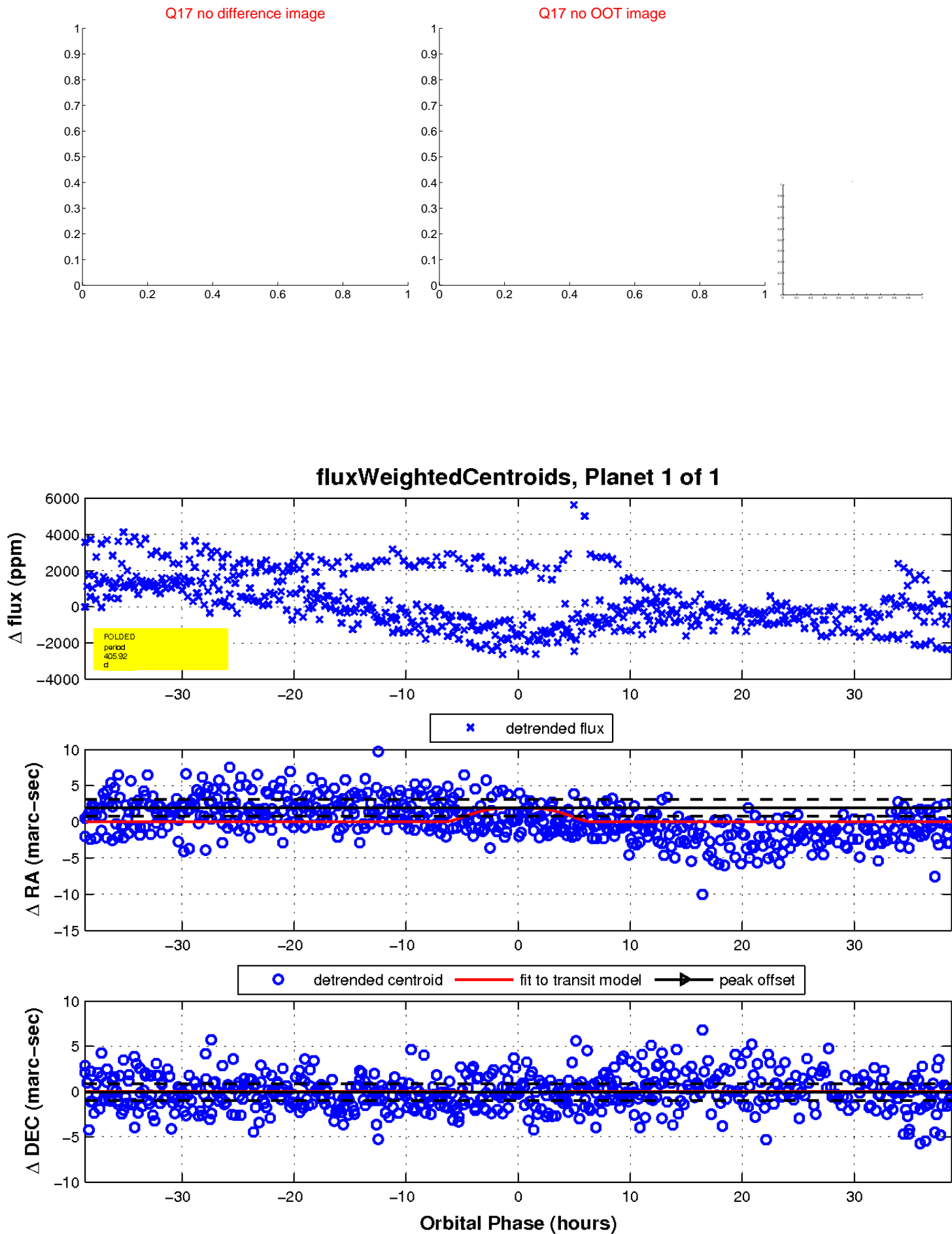
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

