

KIC 007294702

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})
007294702-01	OBS	No	428.468548	369.286842	486.9	13.145	8.4	8.5	1.04	5729	2.42	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007294702-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

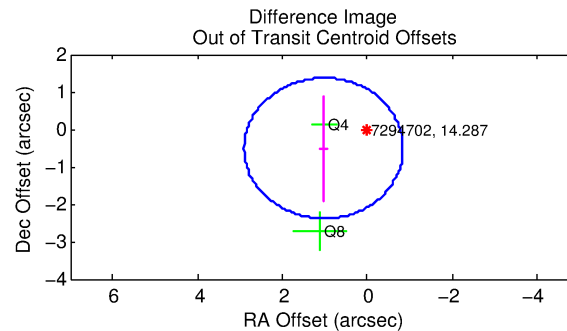
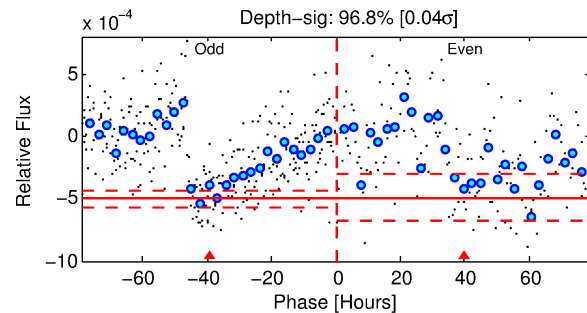
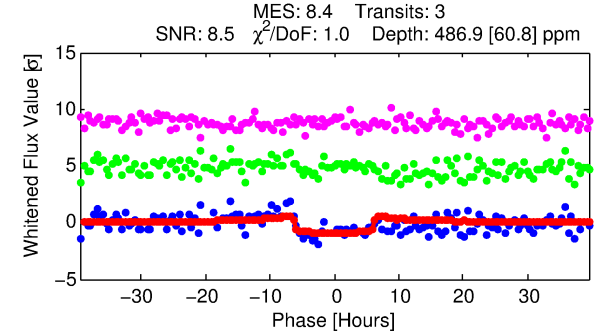
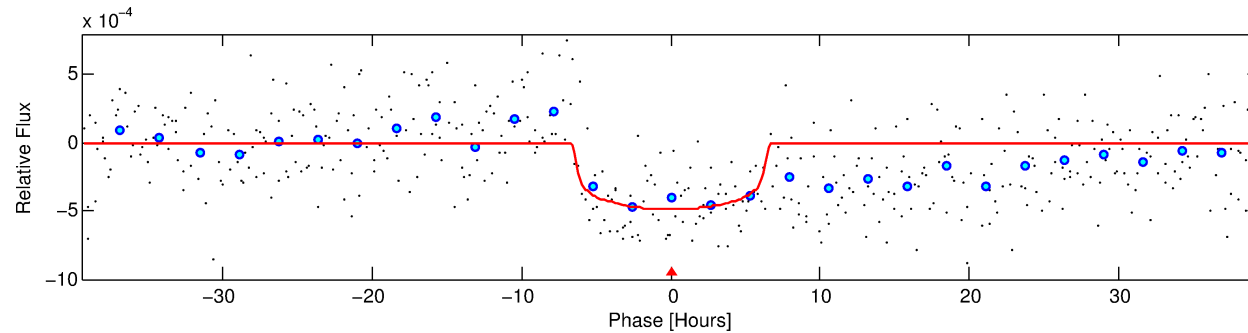
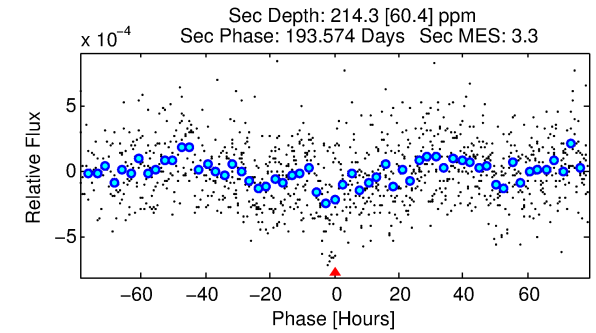
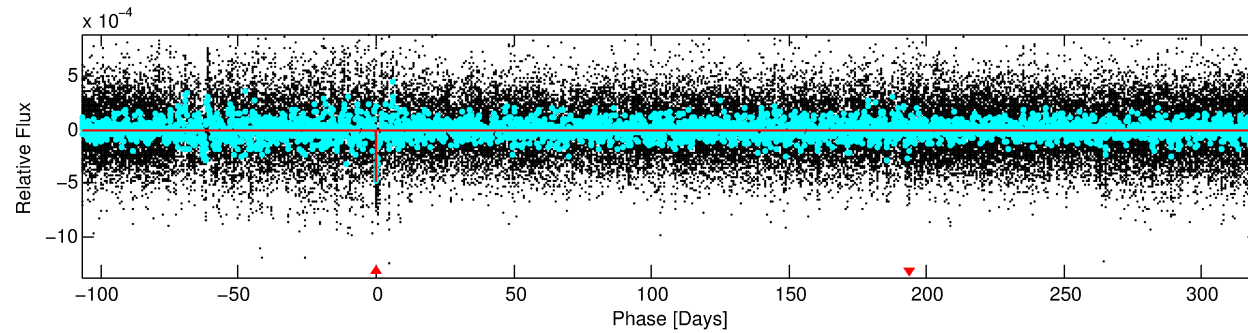
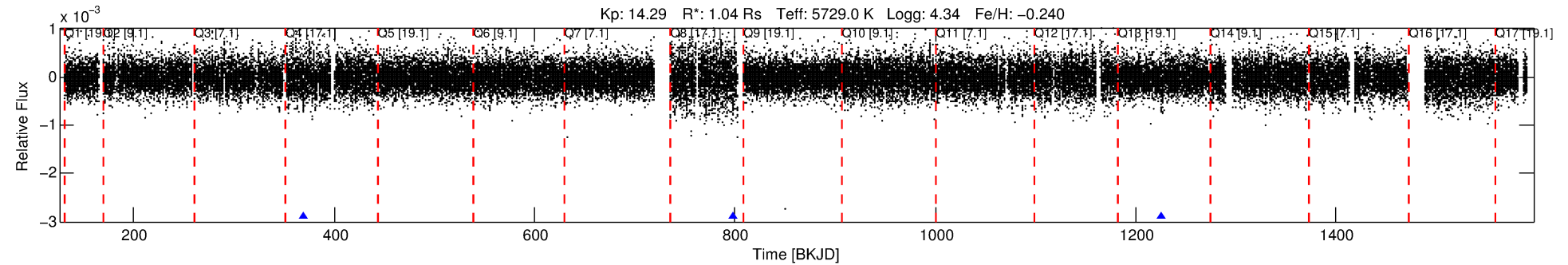
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007294702-01

No Significant Match Found

DV One-Page Summary

KIC: 7294702 Candidate: 1 of 1 Period: 428.469 d



DV Fit Results:

Period = 428.46855 [0.00952] d
Epoch = 369.2868 [0.0141] BKJD
Rp/R* = 0.0214 [0.0066]
a/R* = 193.36 [262.58]
b = 0.66 [1.15]
Seff = 0.93 [0.33]
Teq = 250 [23] K
Rp = 2.42 [1.02] Re
a = 1.0565 [0.2526] AU
Ag = 22557.24 [17239.70] [1.31σ]
Teffp = 4742 [820] K [5.48σ]

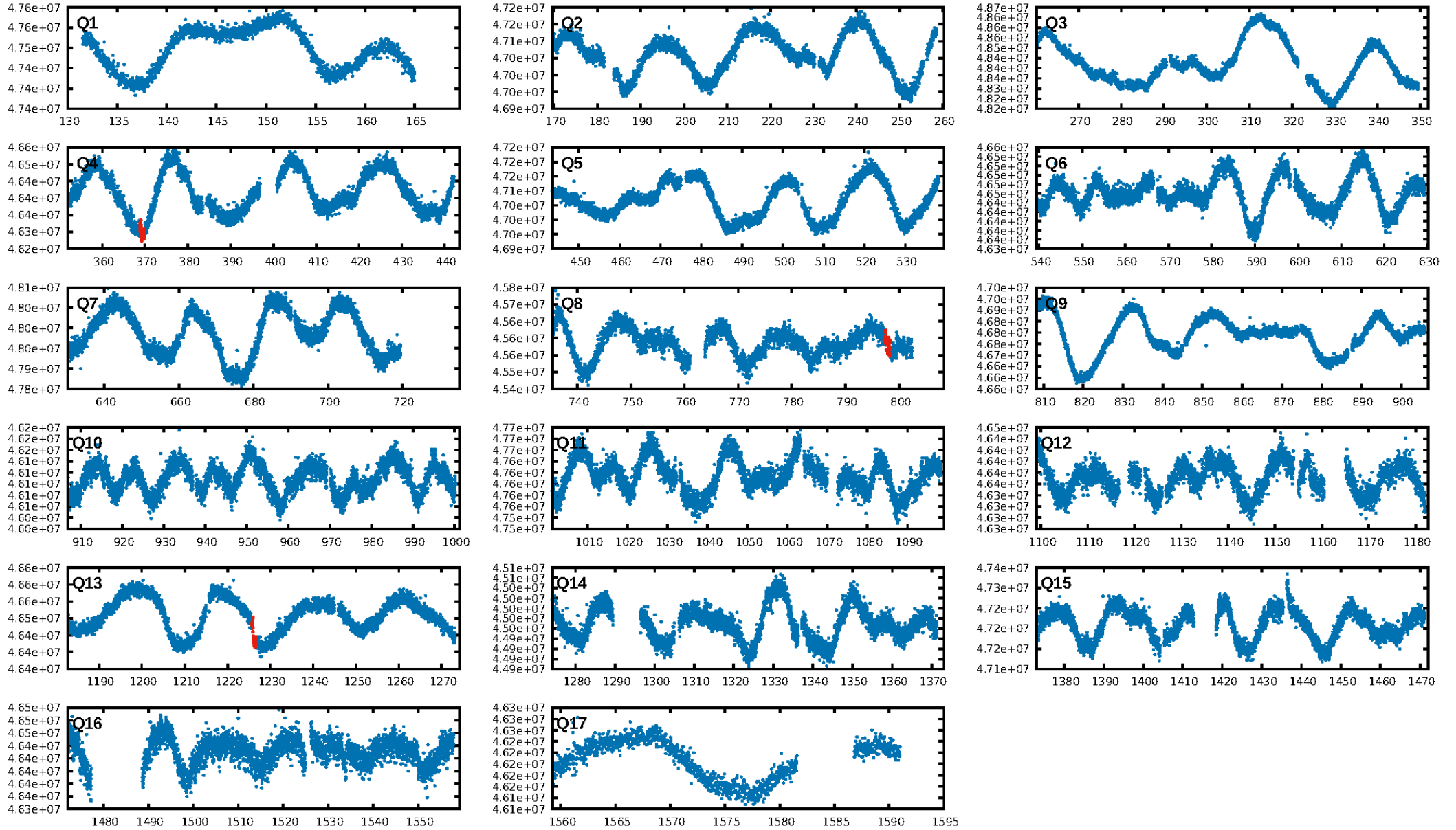
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.10e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8769
Centroid-sig: 7.4%
Centroid-so: 0.839 arcsec [1.19σ]
OotOffset-rm: 1.143 arcsec [1.83σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-rm: 1.320 arcsec [2.32σ]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

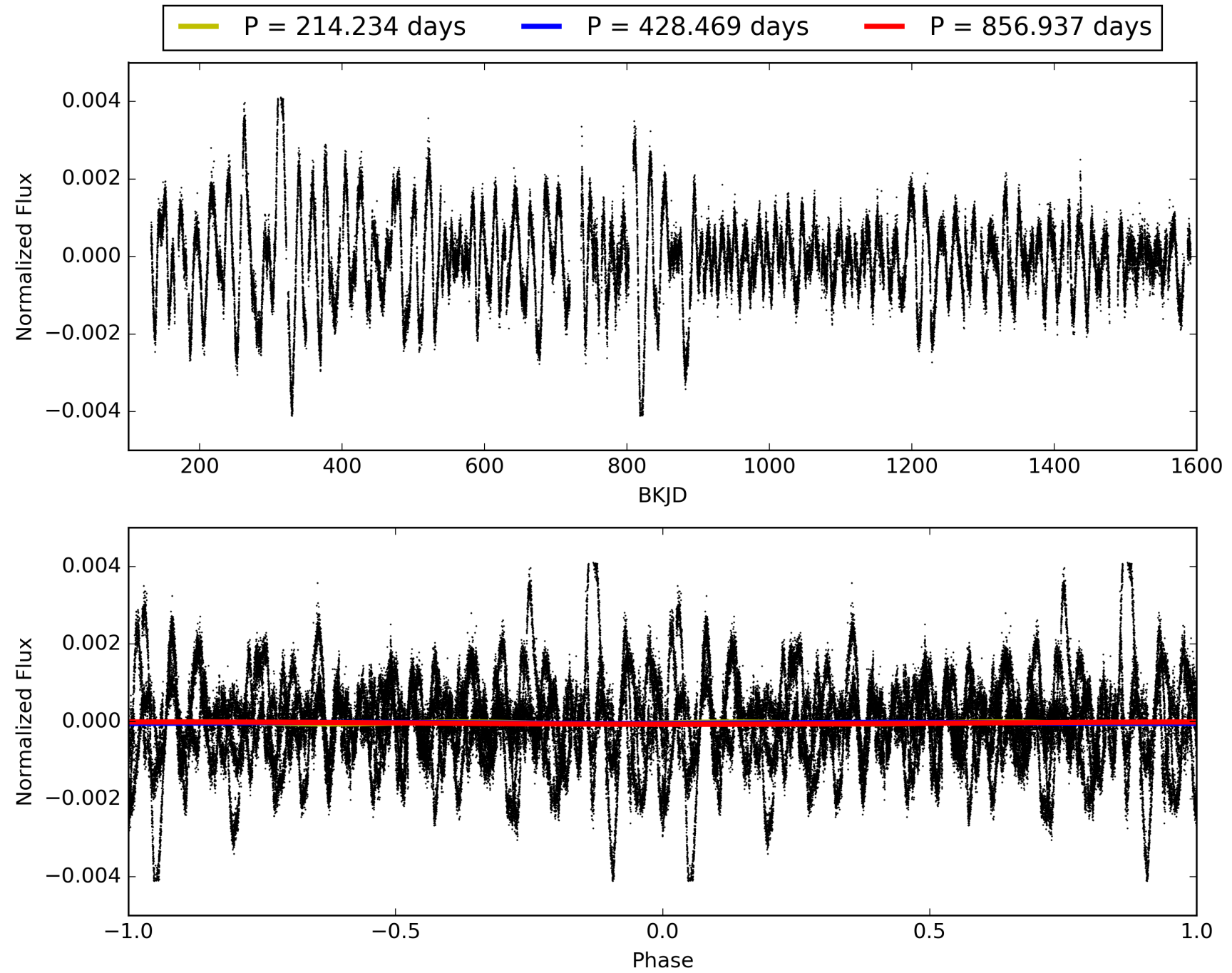
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:34:47 Z

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

TCE 007294702-01, PDC Light Curves

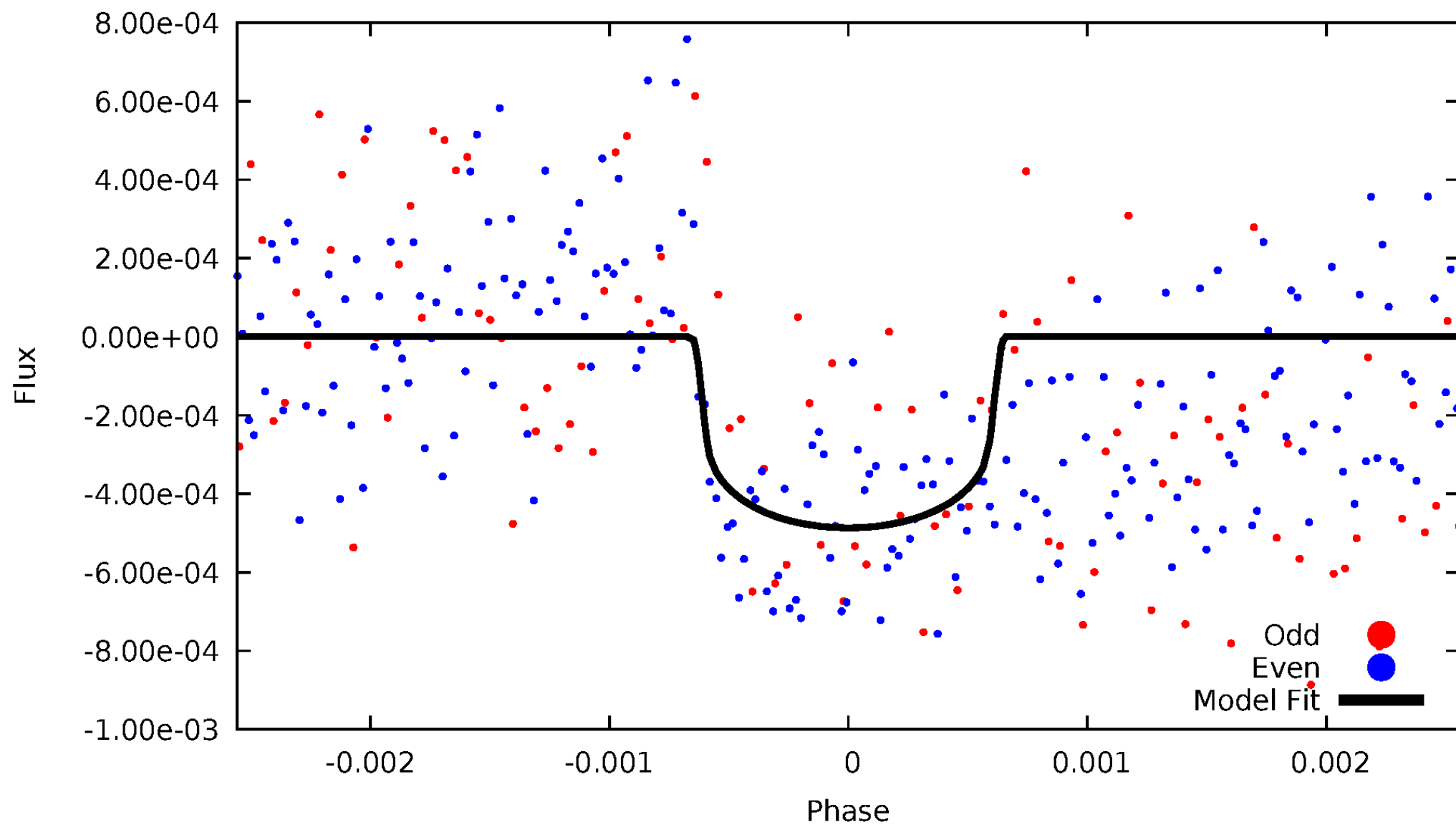


TCE 007294702-01



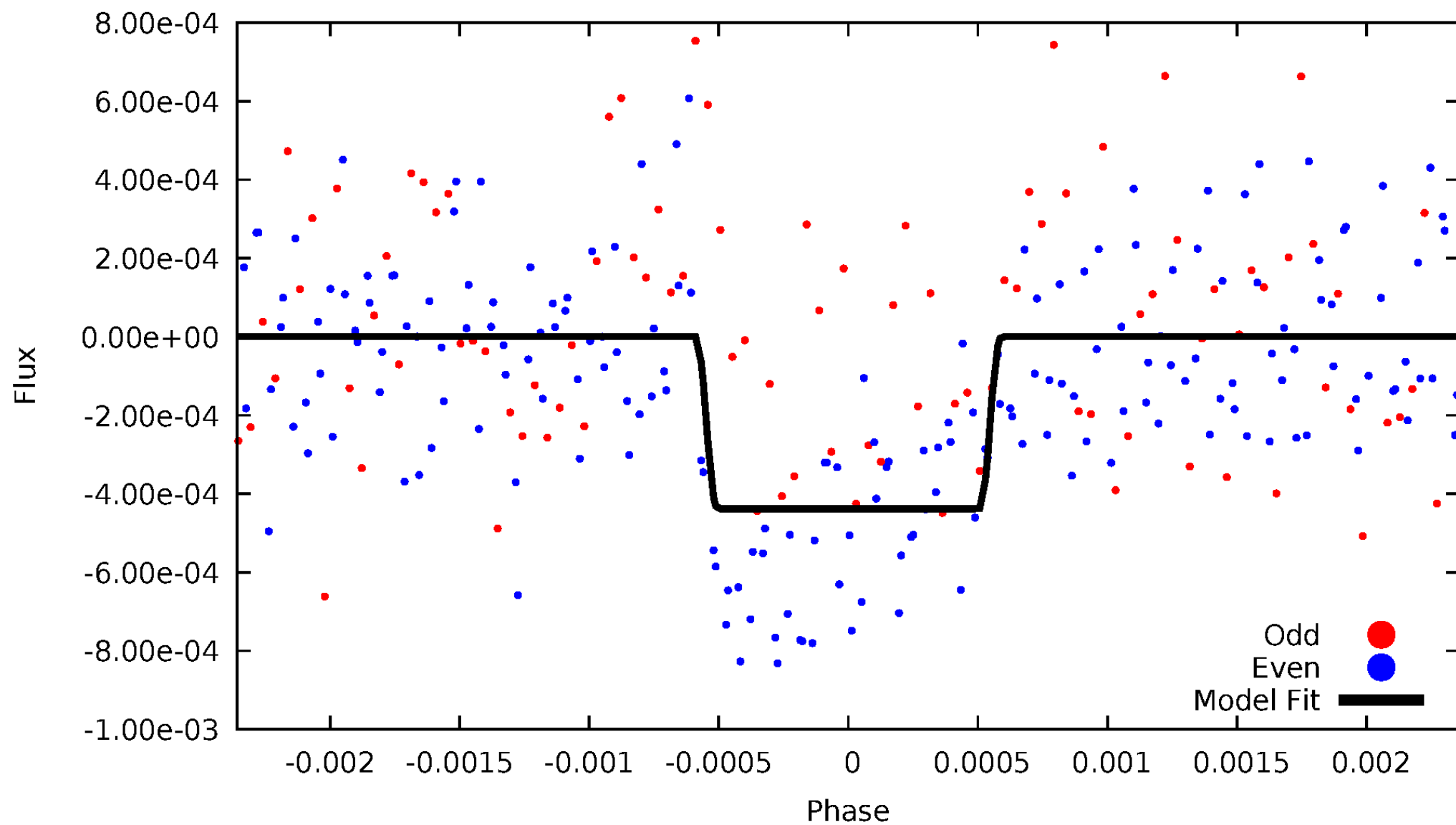
DV Odd/Even

TCE 007294702-01

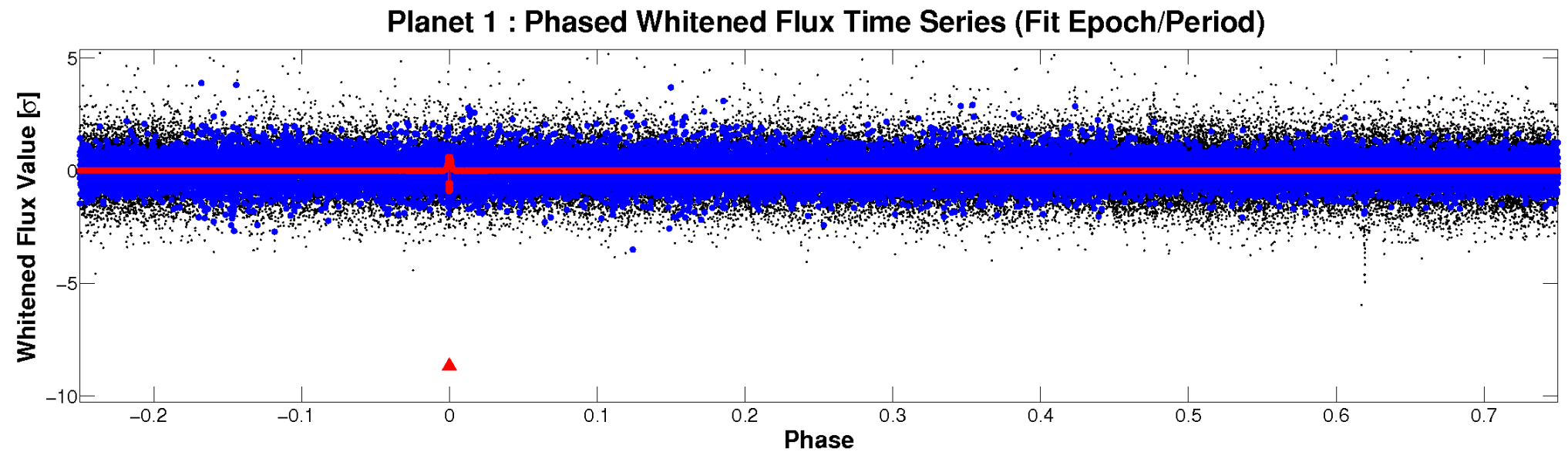
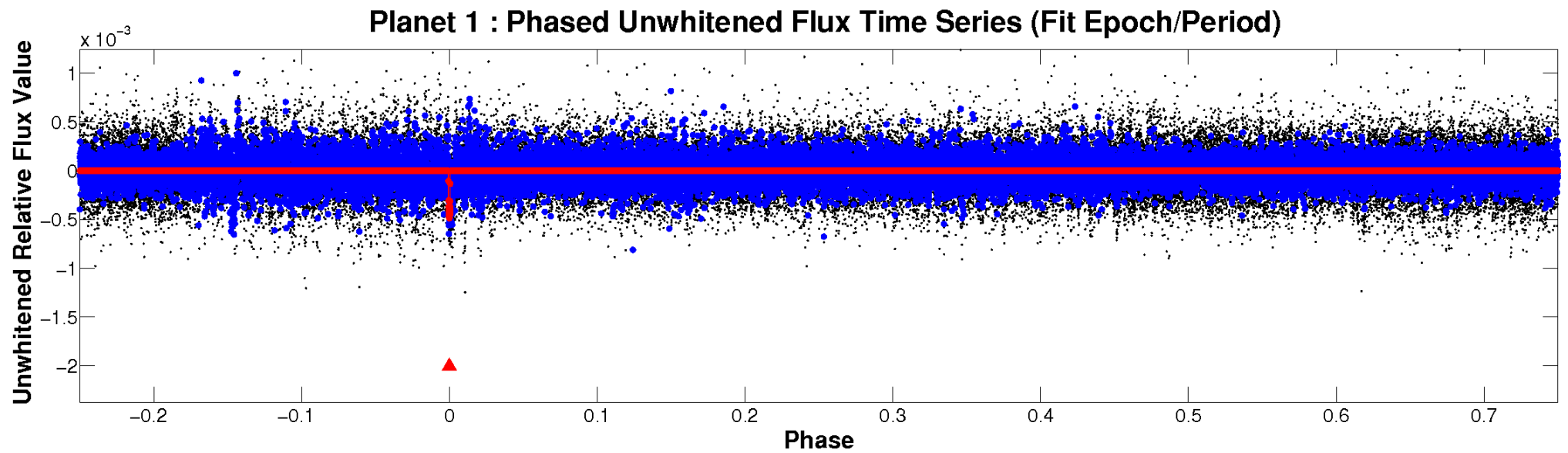


ALT Odd/Even

TCE 007294702-01



Non-Whitened Vs. Whitened Light Curve



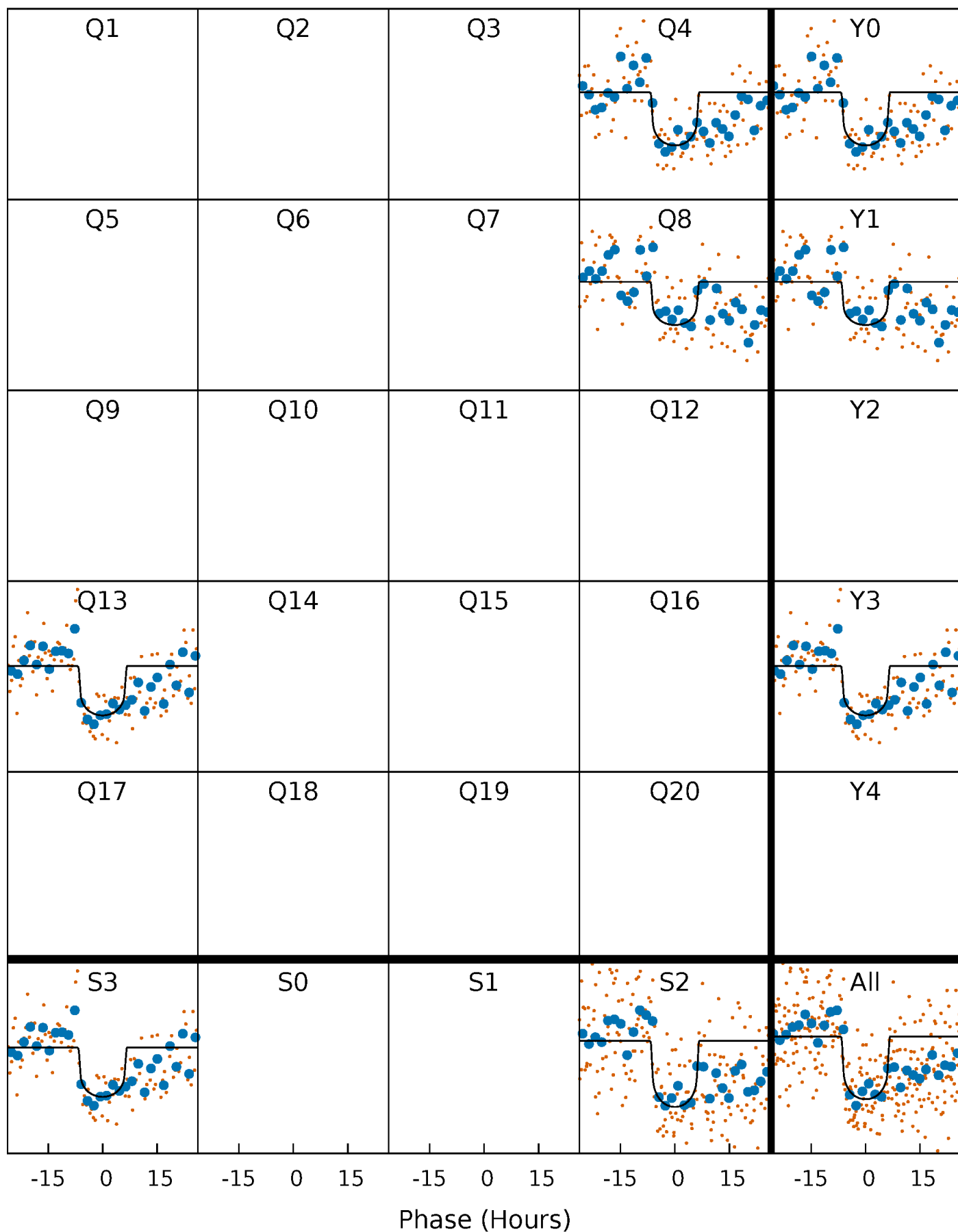
PDC Quarter-Phased Transit Curves

TCE 007294702-01 P=428.468548 Days $T_0=369.286842$ (BKJD)



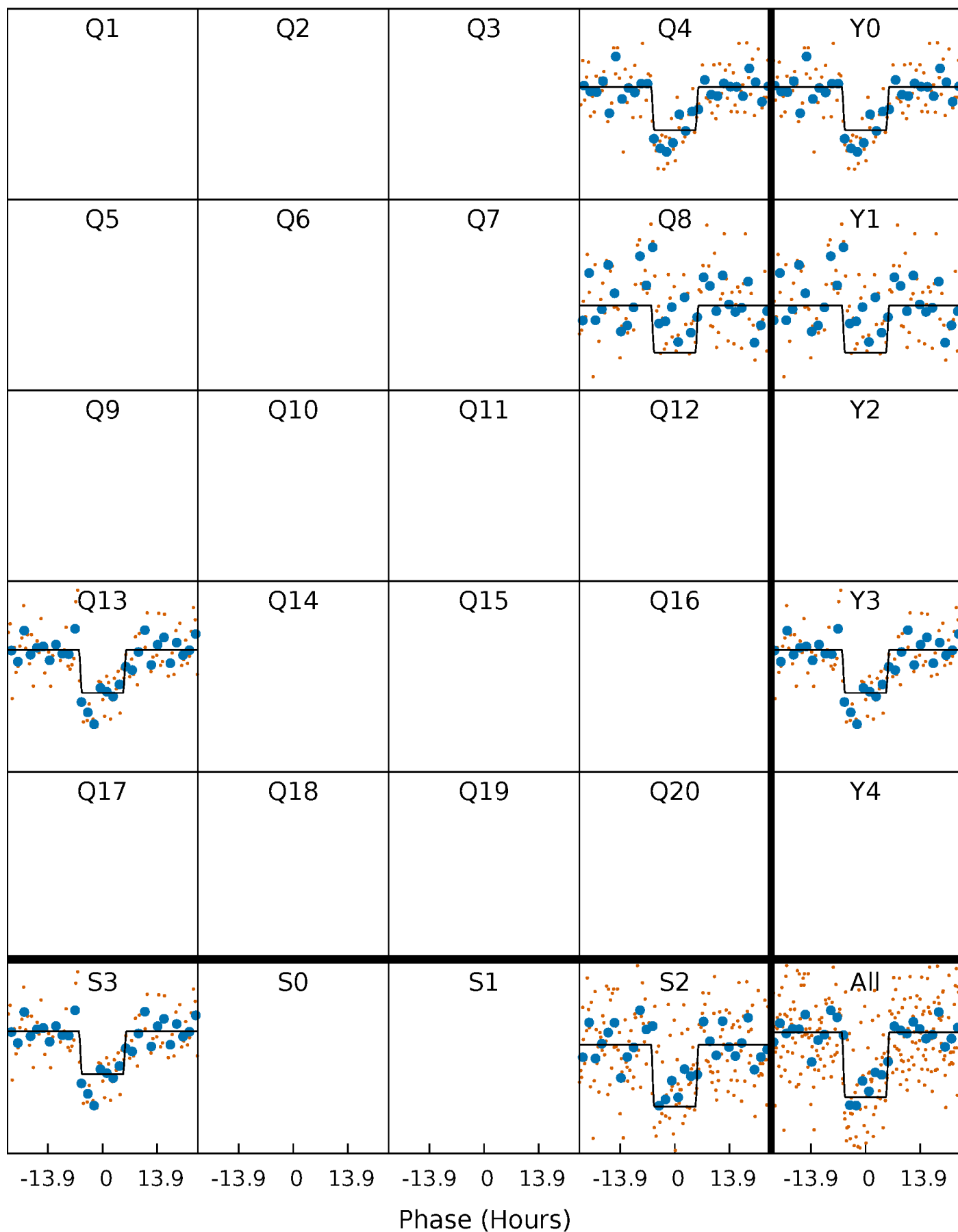
DV Quarter-Phased Transit Curves

TCE 007294702-01 $P=428.468548$ Days $T_0=369.286842$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

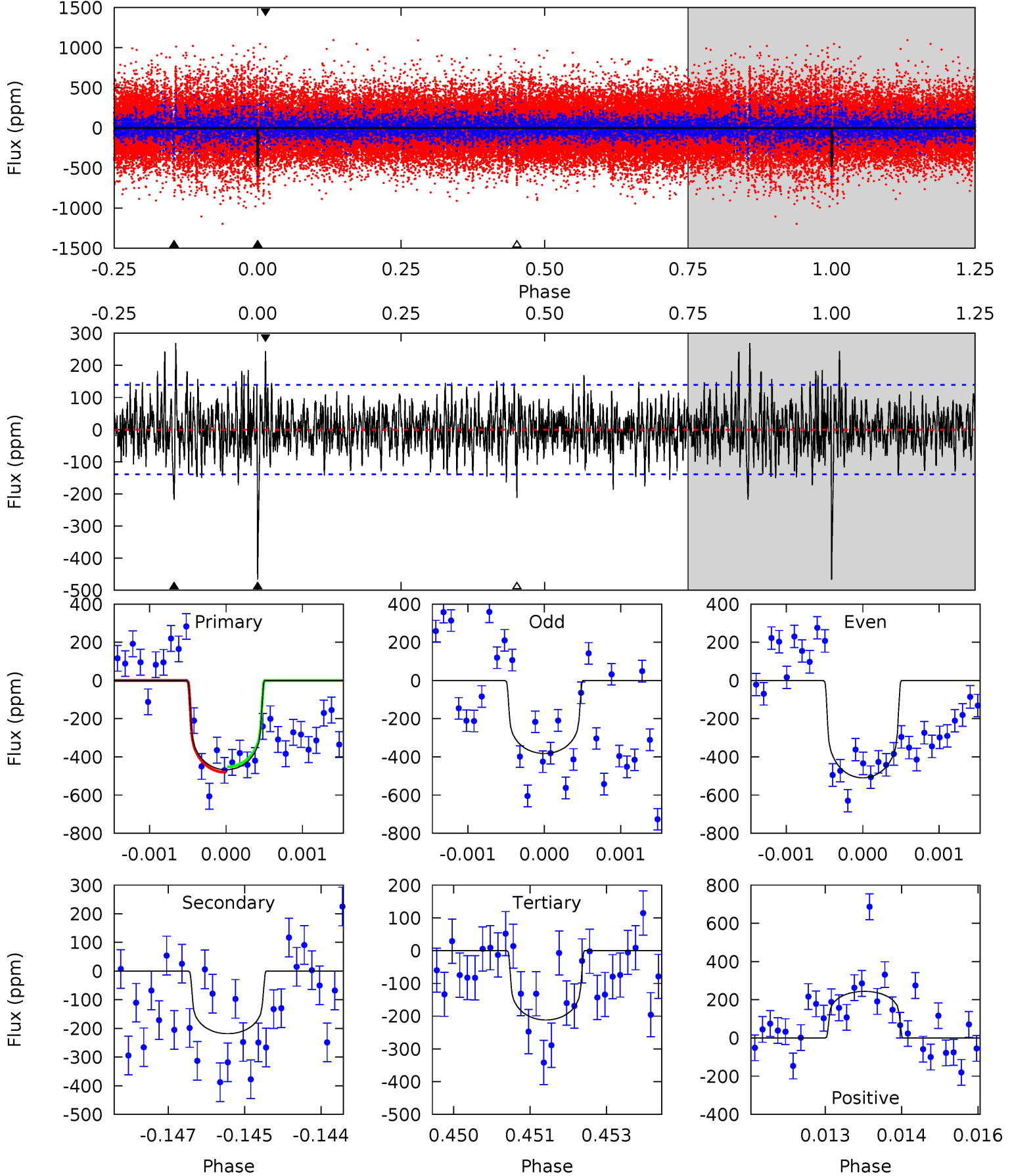
TCE 007294702-01 P=428.464508 Days $T_0=369.269416$ (BKJD)



DV Model-Shift Uniqueness Test

007294702-01, P = 428.468548 Days, E = 369.286842 Days

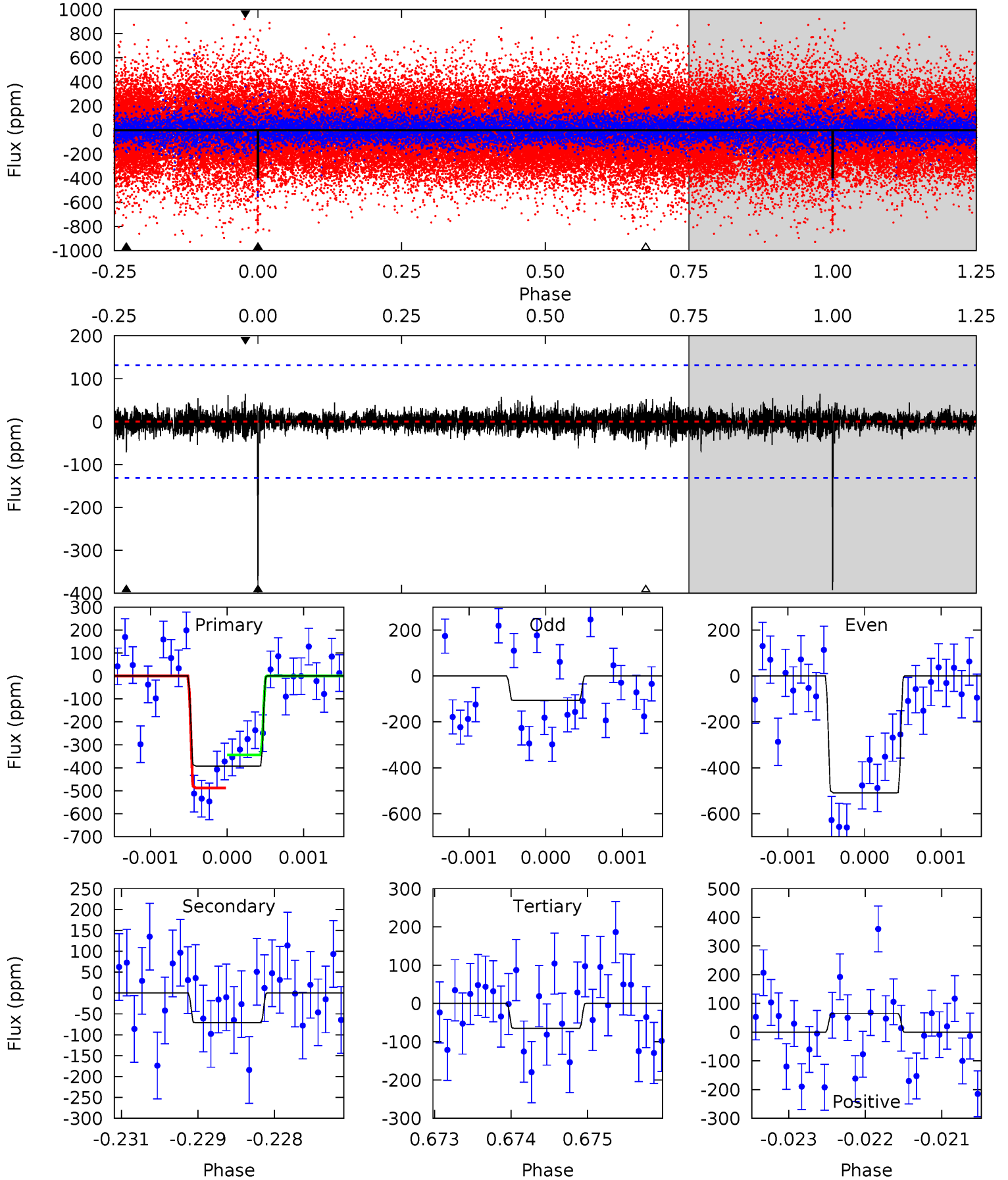
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	8.48	8.22	9.47	5.40	3.21	2.19	9.91	8.66	0.26	-0.99	2.32	0.95	0.37	0.55



Alt Model-Shift Uniqueness Test

007294702-01, P = 428.464508 Days, E = 369.269416 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	2.94	2.69	2.67	5.43	3.25	0.58	13.5	13.5	0.26	0.28	7.80	0.76	0.14	2.91



Stellar Parameters For KIC 007294702

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5729^{+155}_{-155}	$4.340^{+0.185}_{-0.185}$	$-0.240^{+0.300}_{-0.300}$	$1.036^{+0.299}_{-0.199}$	$0.858^{+0.130}_{-0.070}$	$1.086^{+0.891}_{-0.569}$
	+3%/-3%	+4%/-4%	+125%/-125%	+29%/-19%	+15%/-8%	+82%/-52%
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 007294702-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-218 ± 26	$2.41^{+0.86}_{-0.81}$	349^{+27}_{-21}	4873^{+860}_{-531}	23357^{+30402}_{-11130}
Alt.	-71 ± 24	$2.36^{+0.93}_{-0.75}$	350^{+25}_{-24}	3951^{+637}_{-467}	7603^{+9660}_{-4189}

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

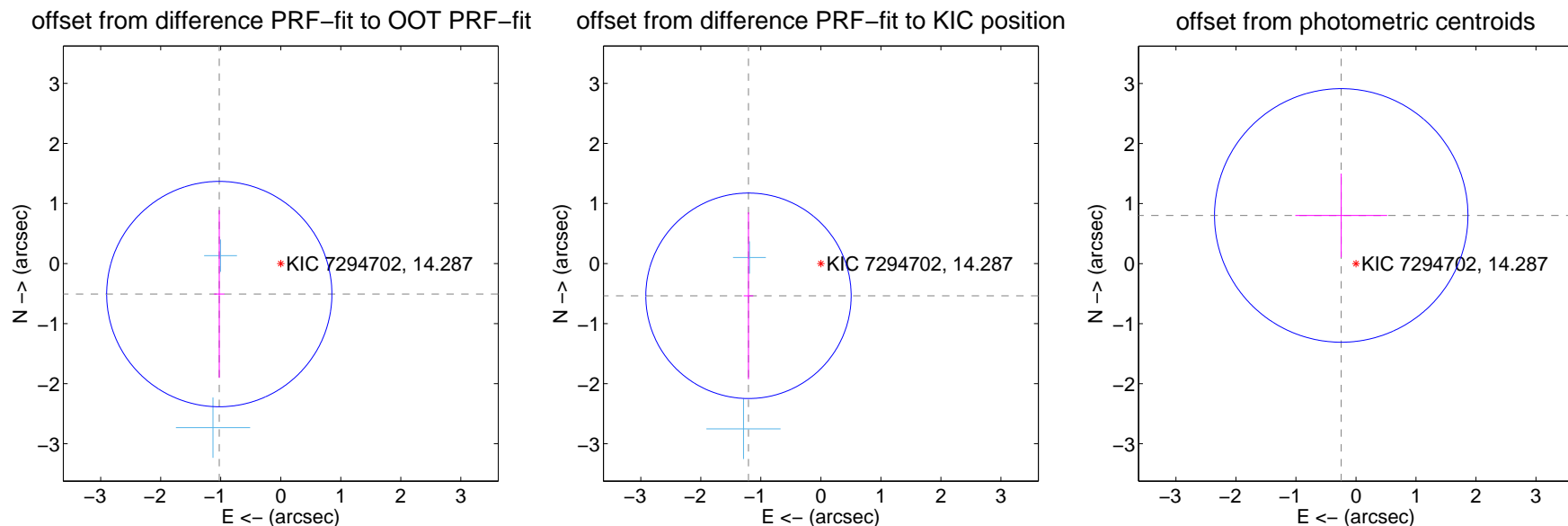
DV Centroid Data

Supplemental centroid analysis for 007294702-01. Kepler magnitude: 14.29. Transit SNR 8.53

There are 2 quarters with good PRF difference image offsets

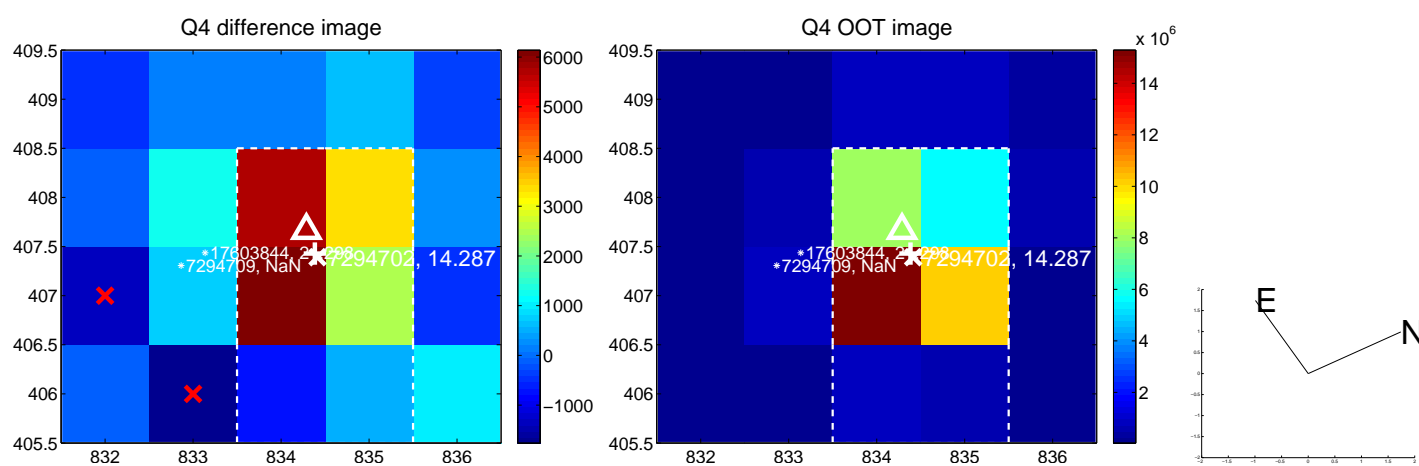
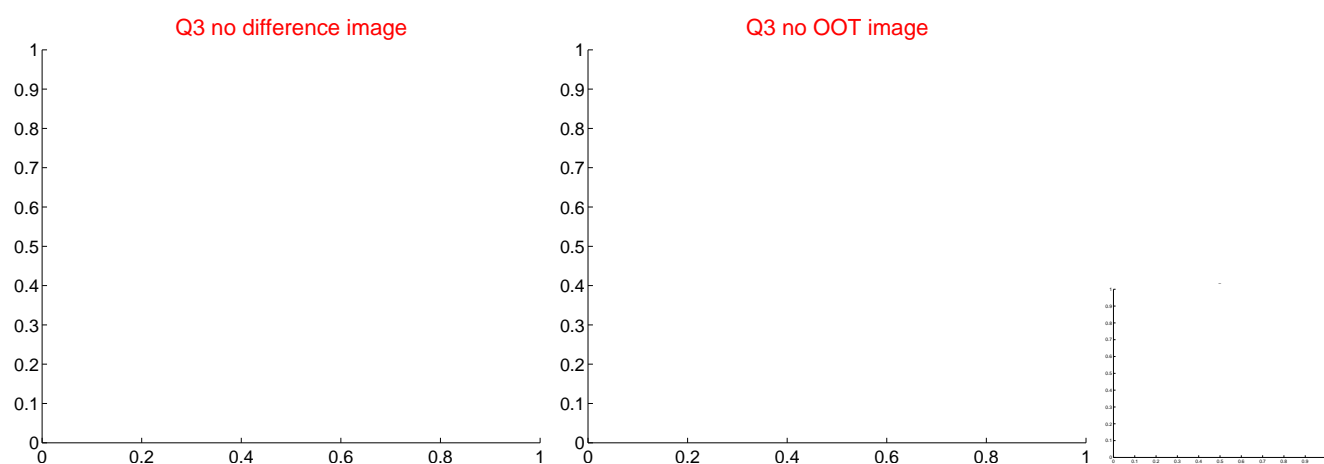
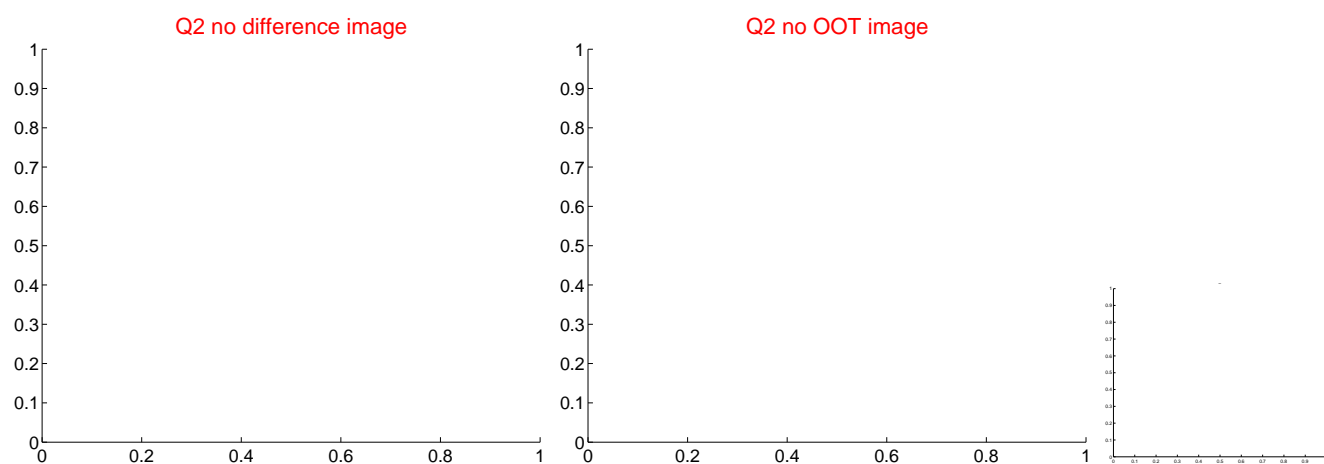
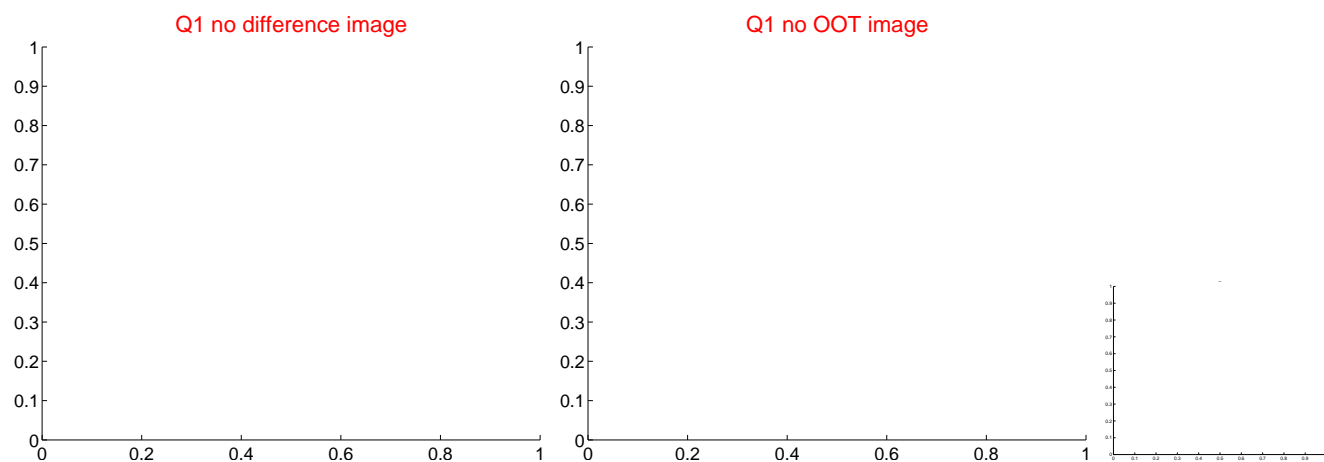
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.143 ± 0.625	1.83	1.024 ± 0.086	-0.509 ± 1.396
PRF-fit source offset from KIC position	1.320 ± 0.570	2.32	1.206 ± 0.079	-0.537 ± 1.390
photometric centroid source offset	0.84 ± 0.70	1.19	0.25 ± 0.77	0.80 ± 0.70

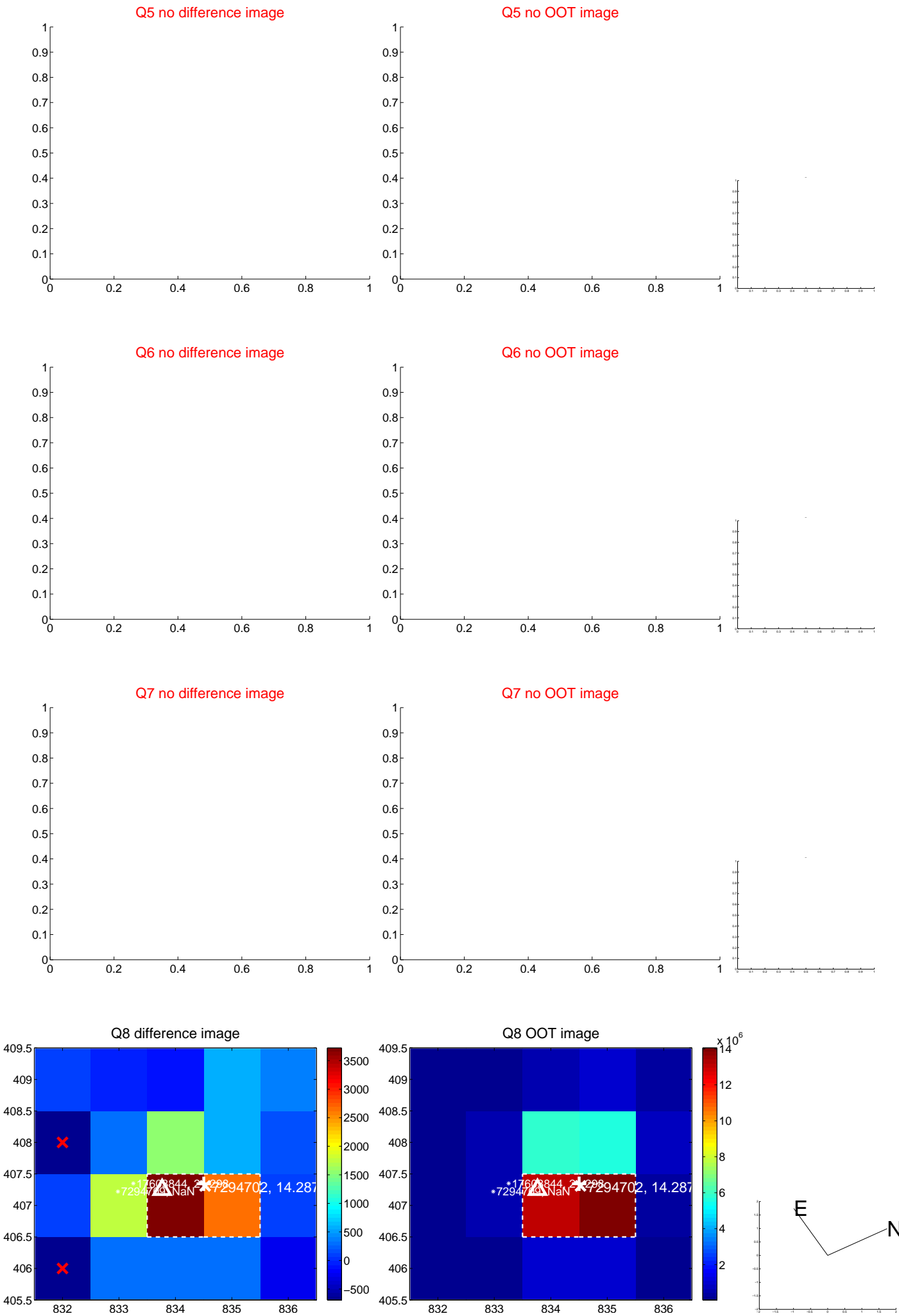


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



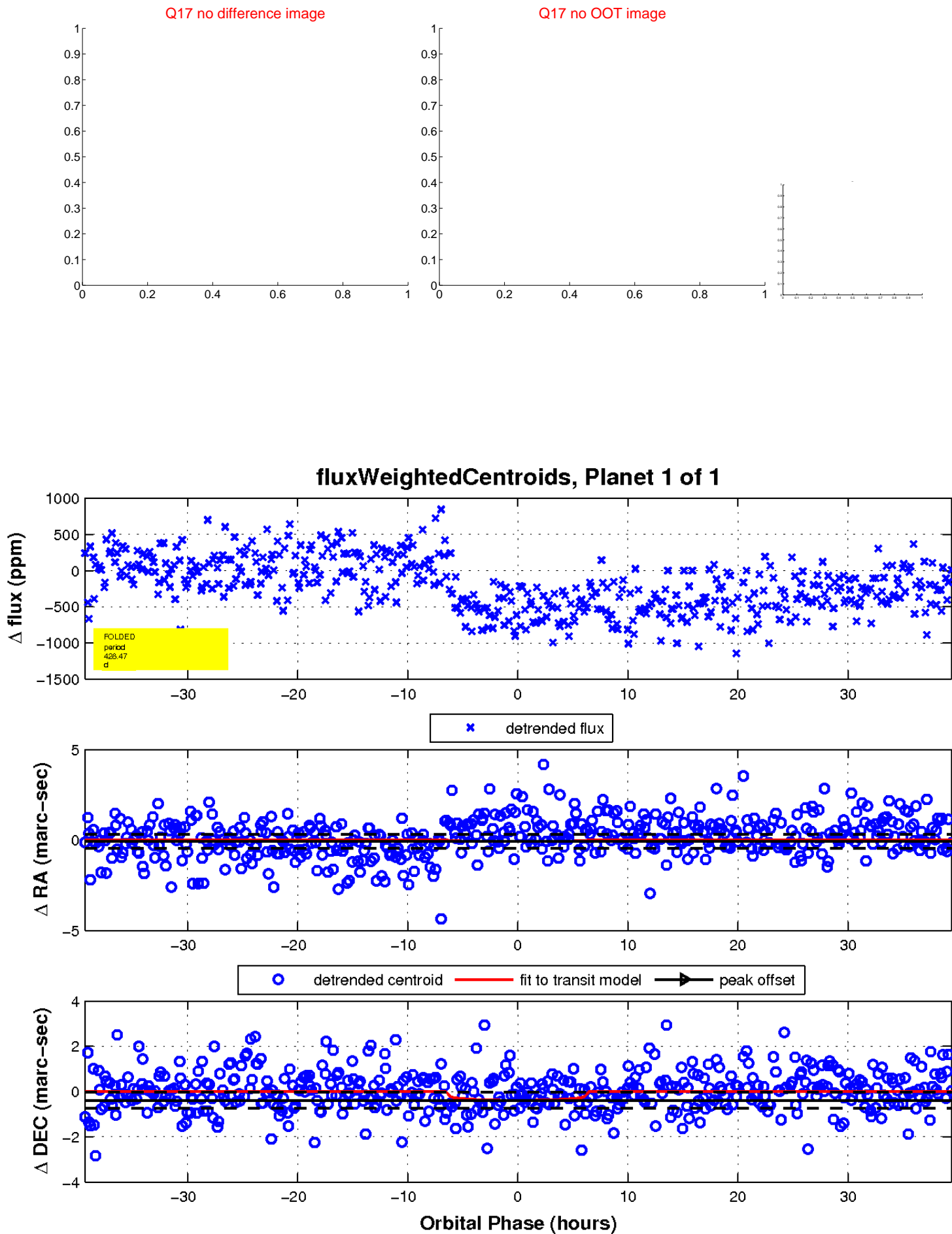
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

