

KIC 003836772

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})
003836772-01	OBS	No	0.678828	131.954401	67.3	5.872	9.4	8.2	1.65	6214	1.37	15387.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003836772-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

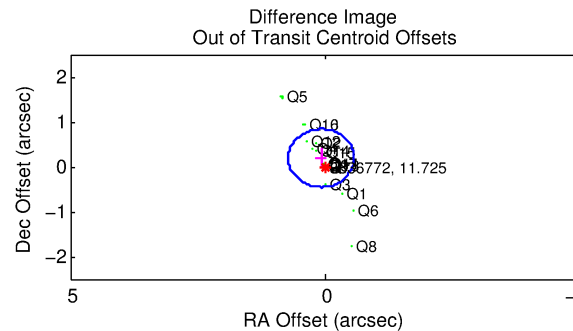
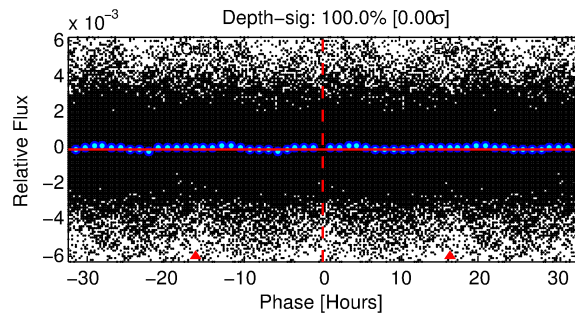
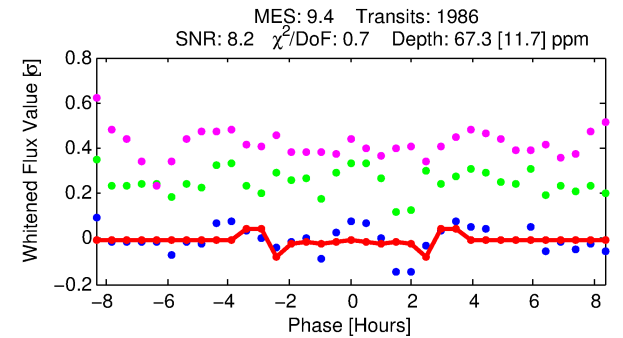
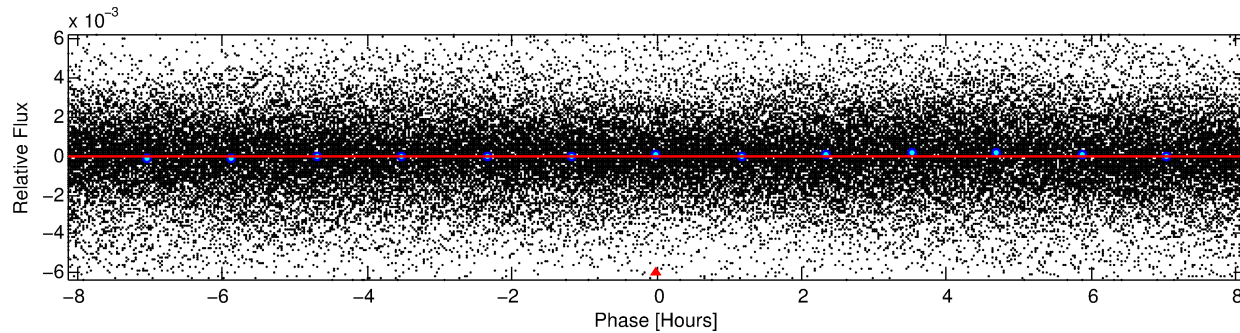
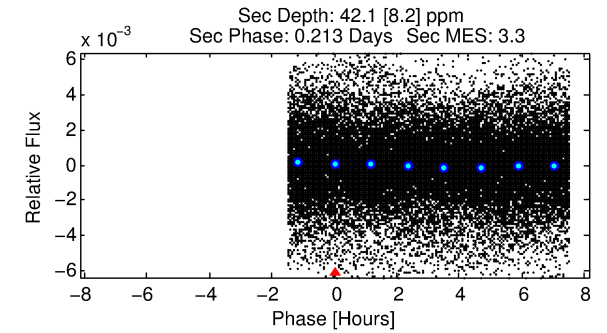
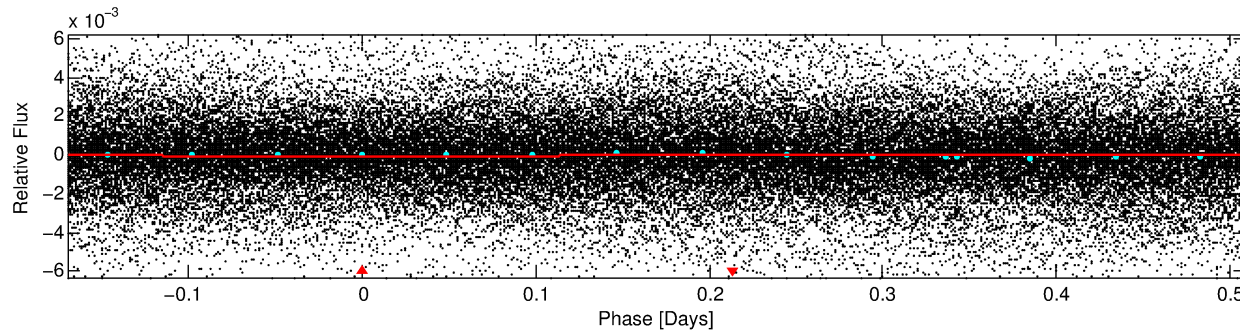
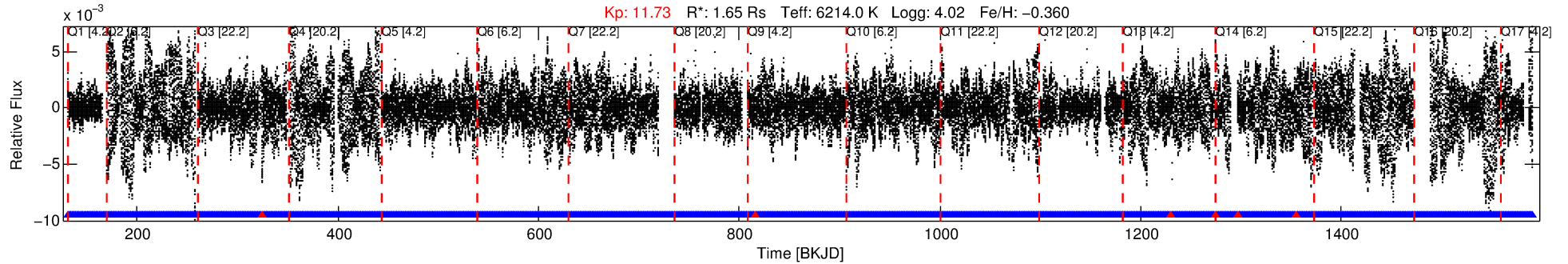
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003836772-01

No Significant Match Found

DV One-Page Summary

KIC: 3836772 Candidate: 1 of 1 Period: 0.679 d



DV Fit Results:

Period = 0.67883 [0.00001] d
Epoch = 131.9544 [0.0011] BKJD
 $R_p/R^* = 0.0076$ [0.0027]
 $a/R^* = 1.10$ [0.39]
 $b = 0.30$ [6.13]
 $\text{Seff} = 15387.29$ [9480.16]
 $T_{\text{eq}} = 2840$ [437] K
 $R_p = 1.37$ [0.72] R_e
 $a = 0.0153$ [0.0057] AU
 $A_g = 2.92$ [2.80] [0.69σ]
 $T_{\text{eff}} = 5741$ [1082] K [2.49σ]

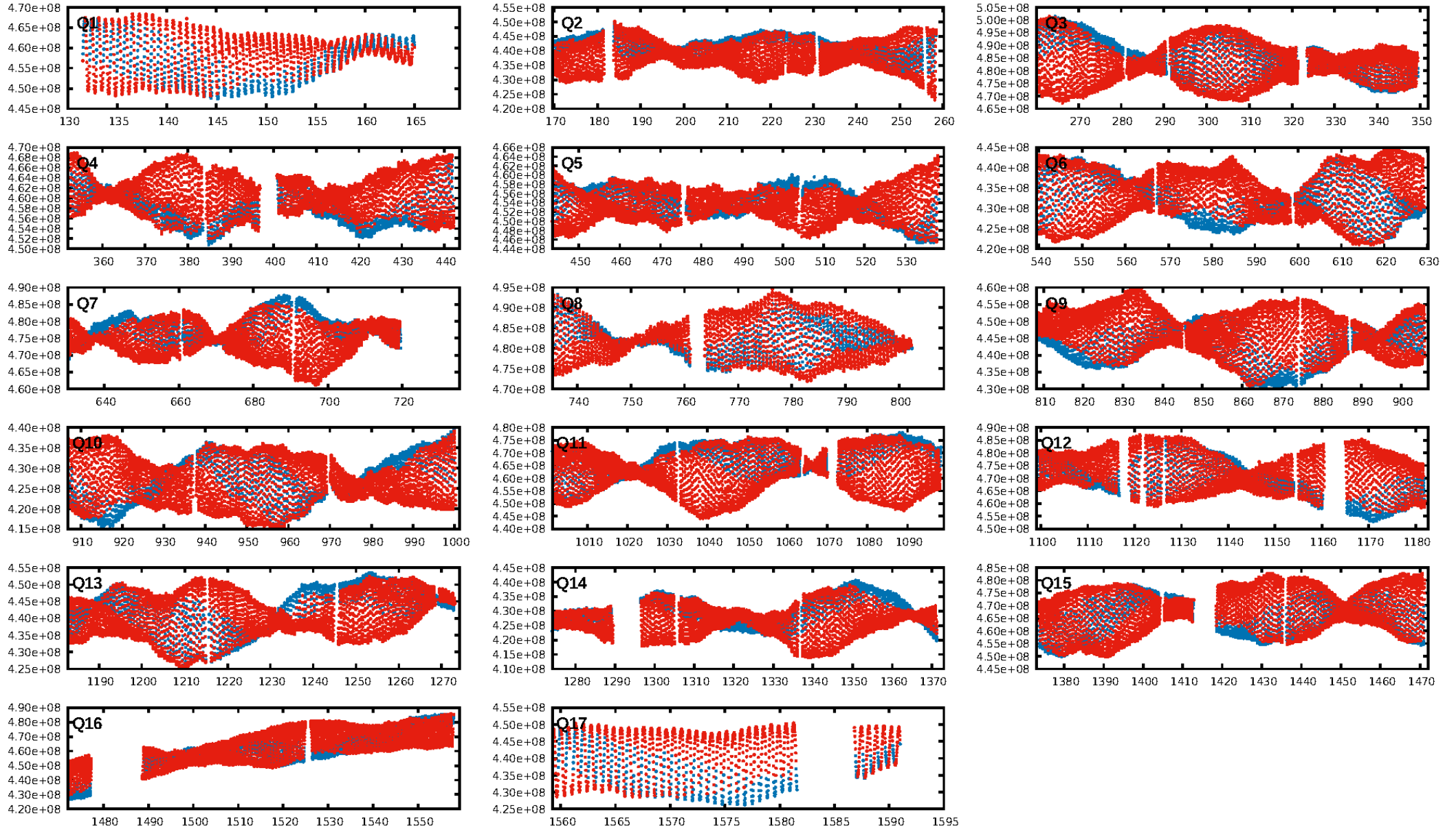
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1892/1898]
GhostDiagnostic-chr: -3.276
Centroid-sig: 17.4%
Centroid-so: 0.166 arcsec [1.34σ]
OotOffset-rm: 0.202 arcsec [0.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.190 arcsec [0.91σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 1.00 [17/17]

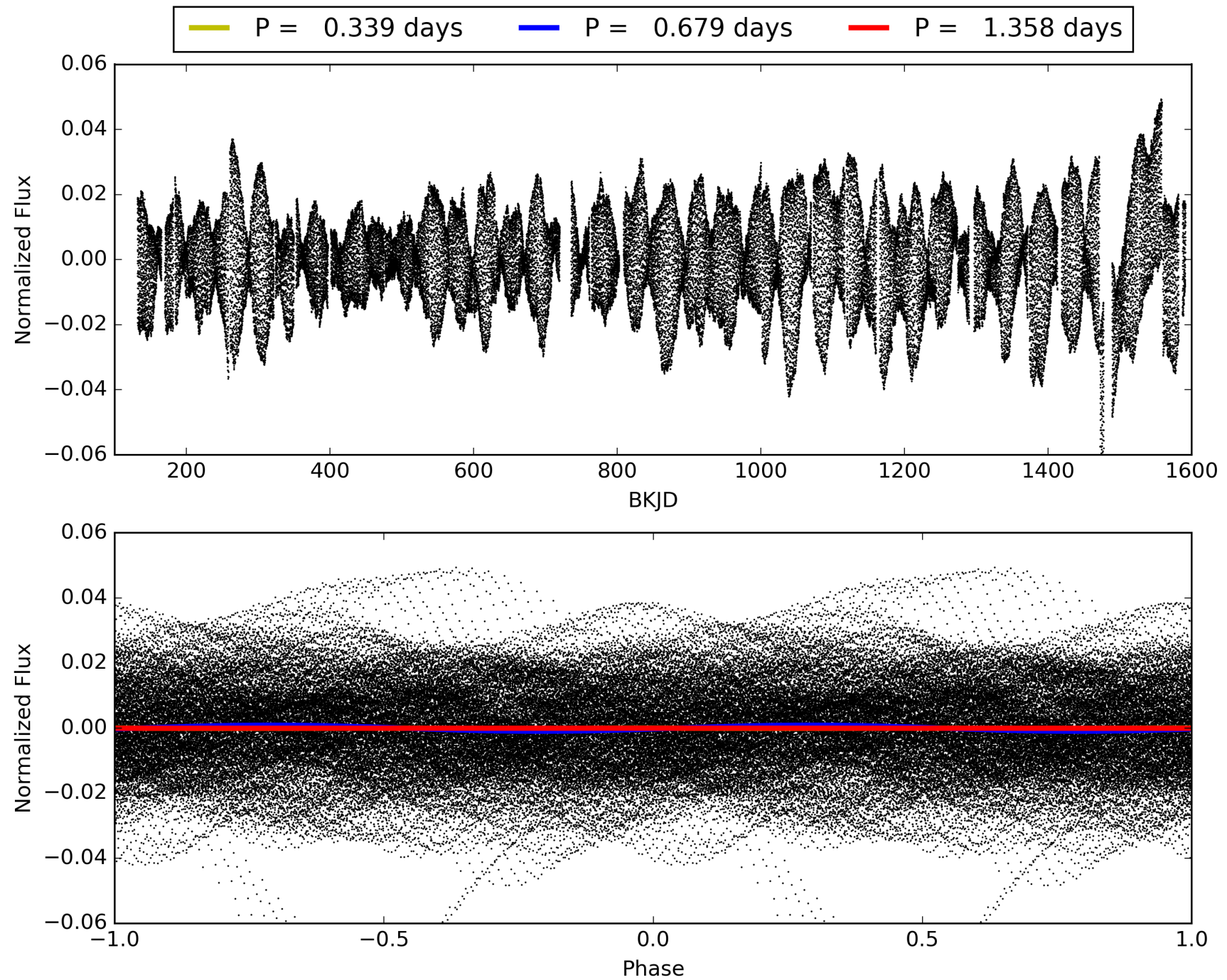
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:25:40 Z

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

TCE 003836772-01, PDC Light Curves

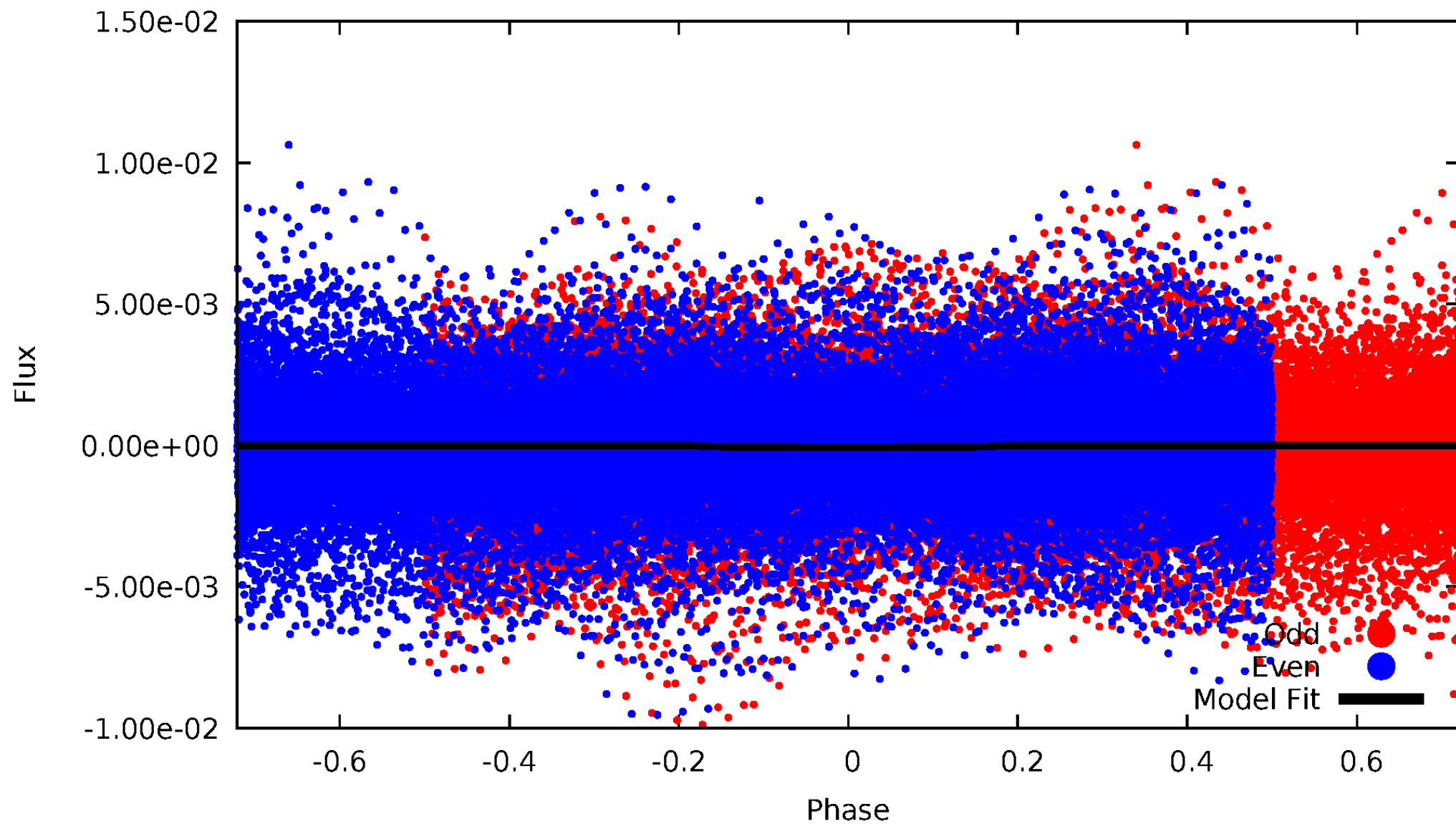


TCE 003836772-01



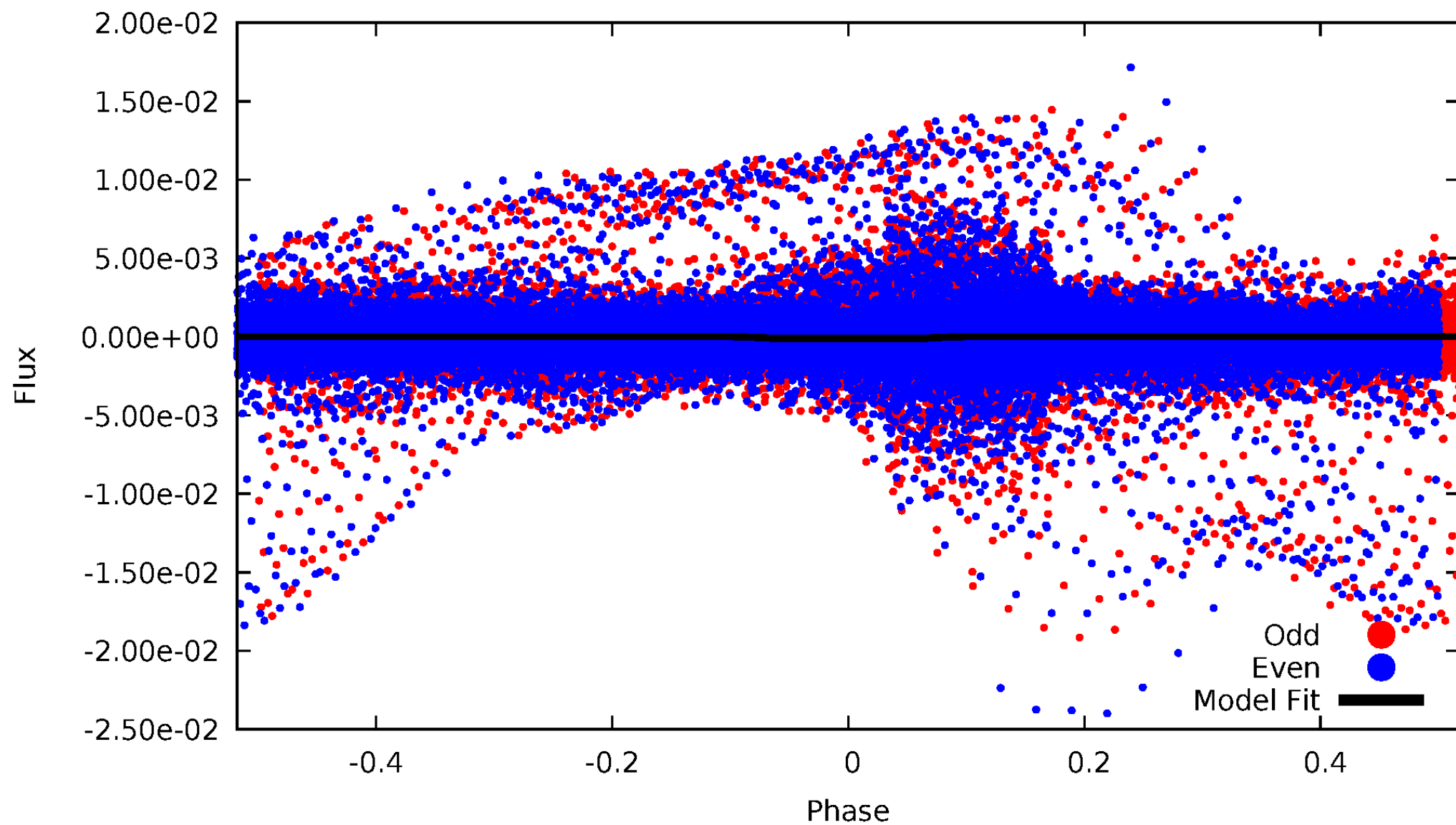
DV Odd/Even

TCE 003836772-01

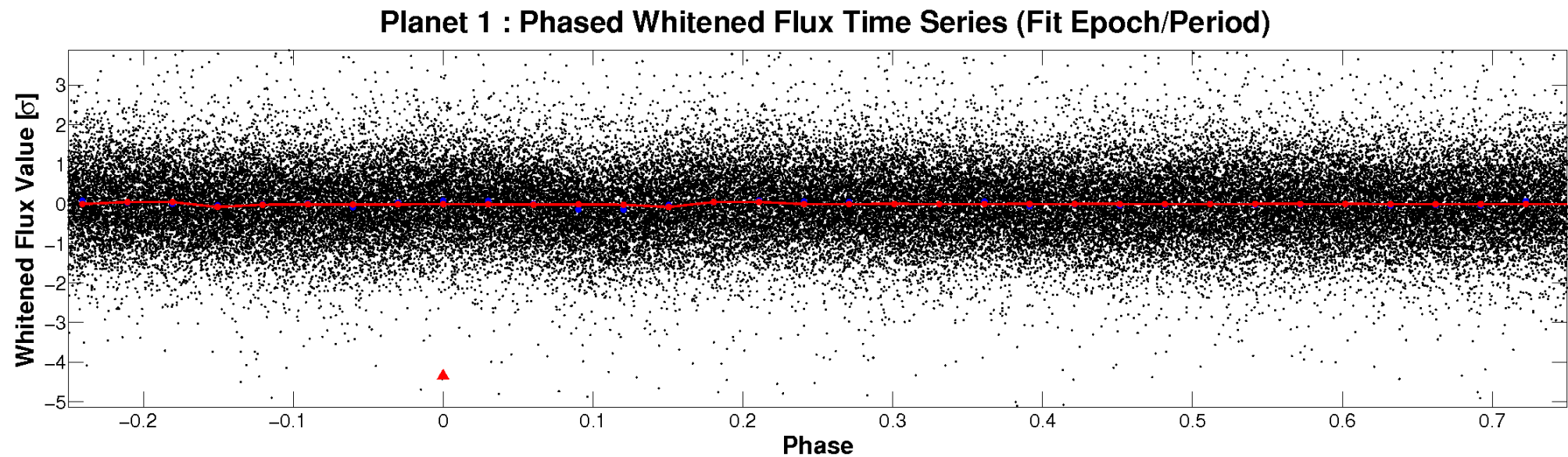
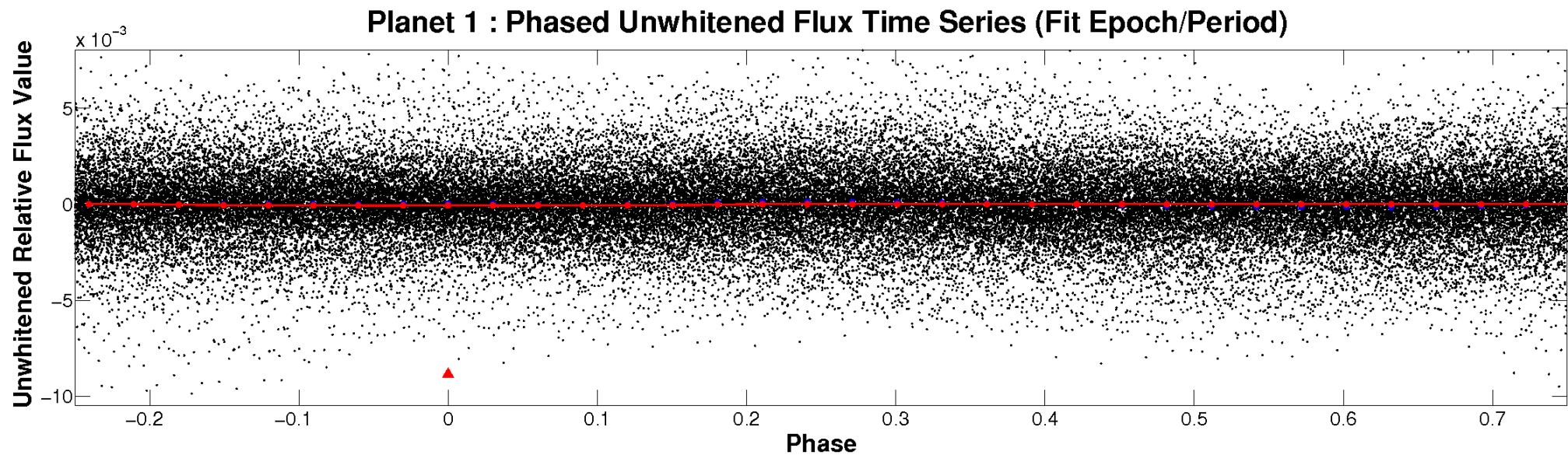


ALT Odd/Even

TCE 003836772-01

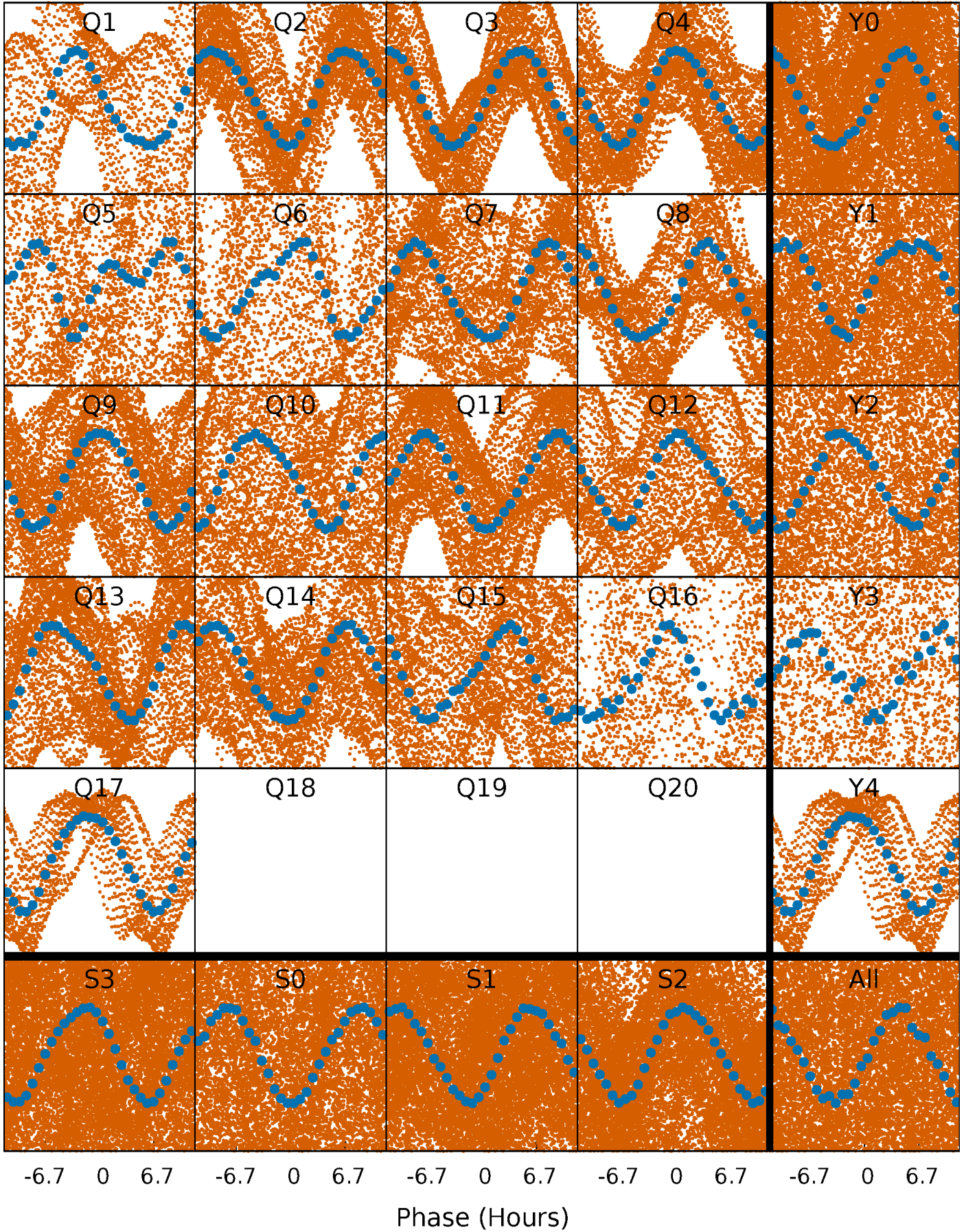


Non-Whitened Vs. Whitened Light Curve



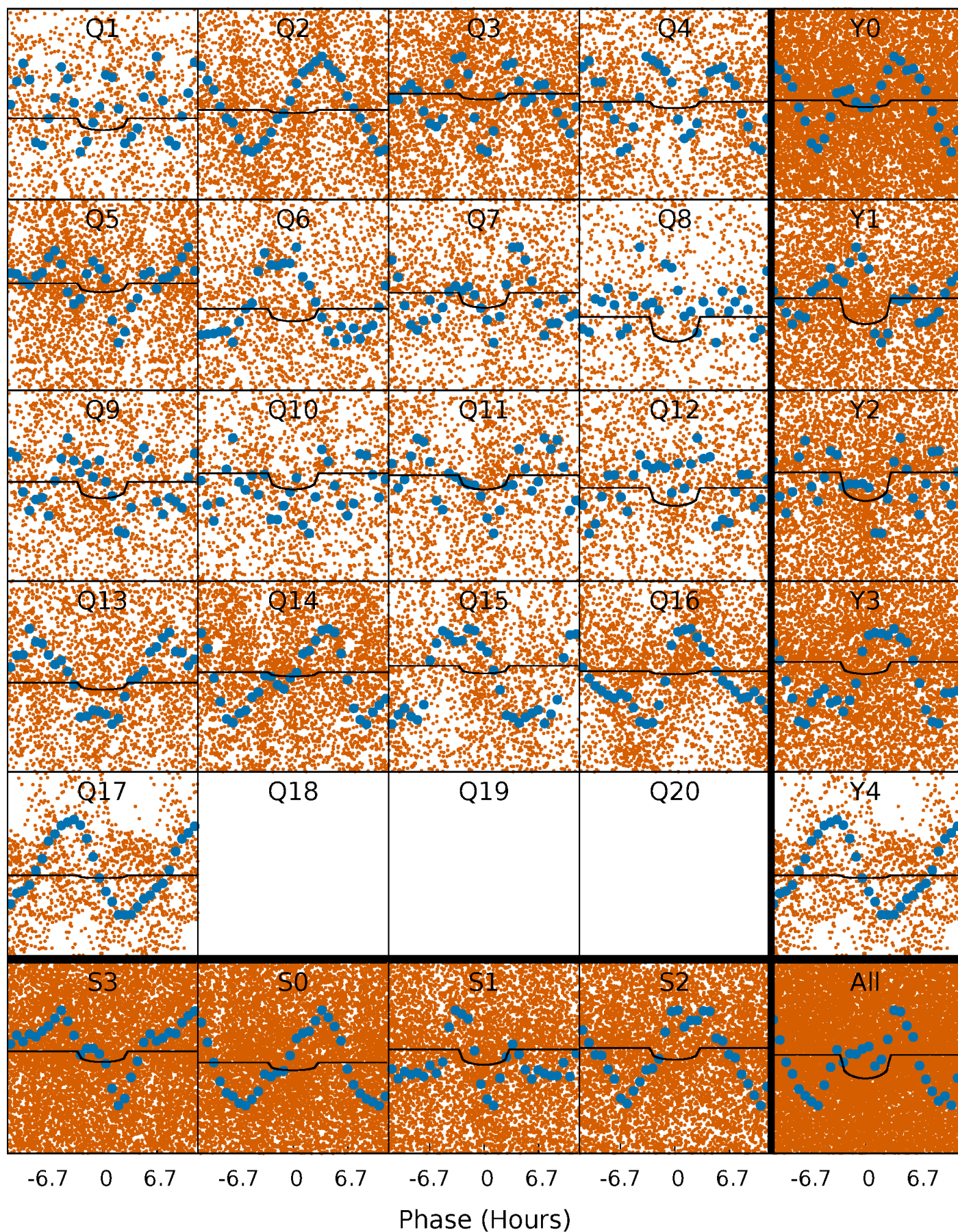
PDC Quarter-Phased Transit Curves

TCE 003836772-01 P= 0.678828 Days $T_0=131.954401$ (BKJD)



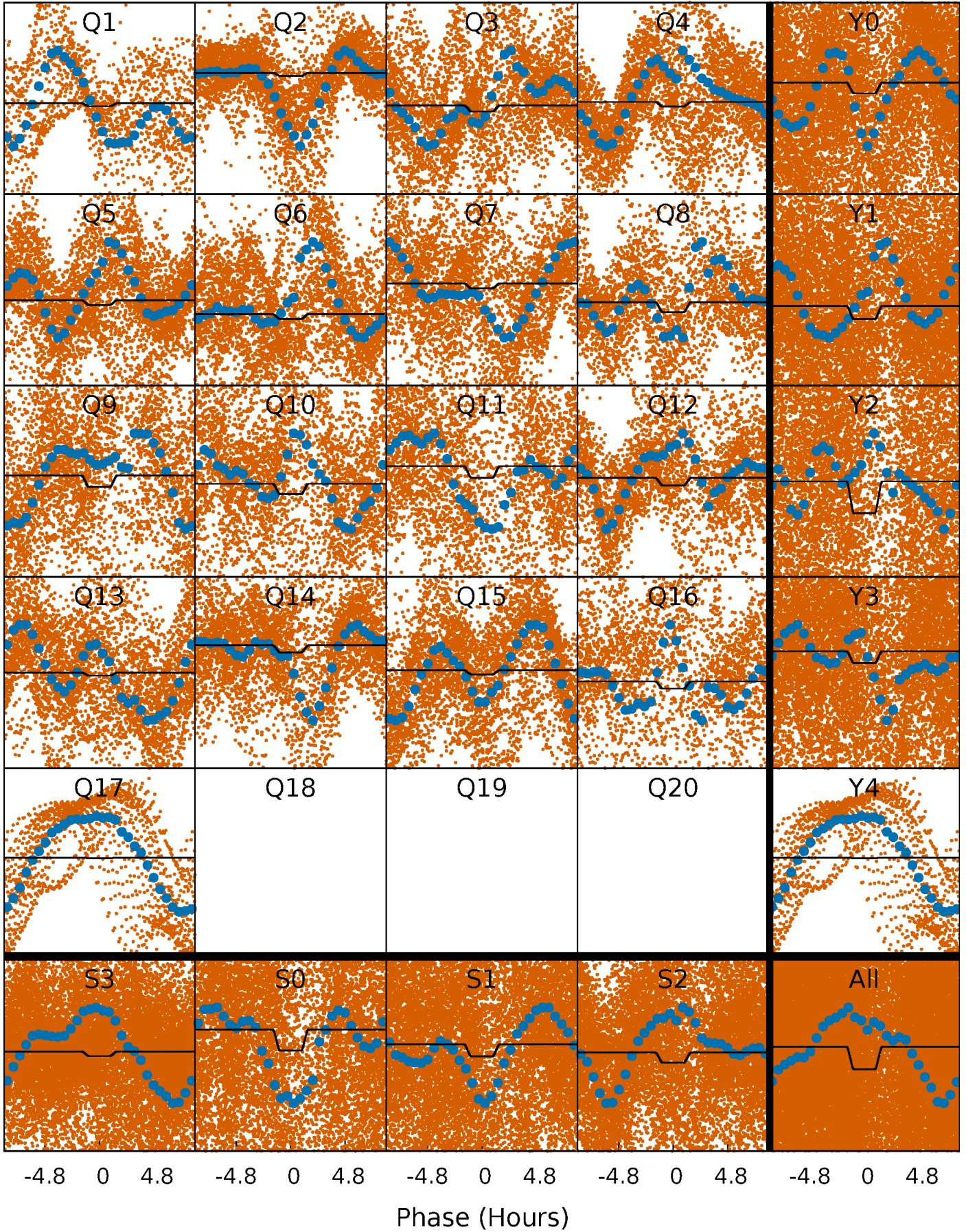
DV Quarter-Phased Transit Curves

TCE 003836772-01 P= 0.678828 Days $T_0=131.954401$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

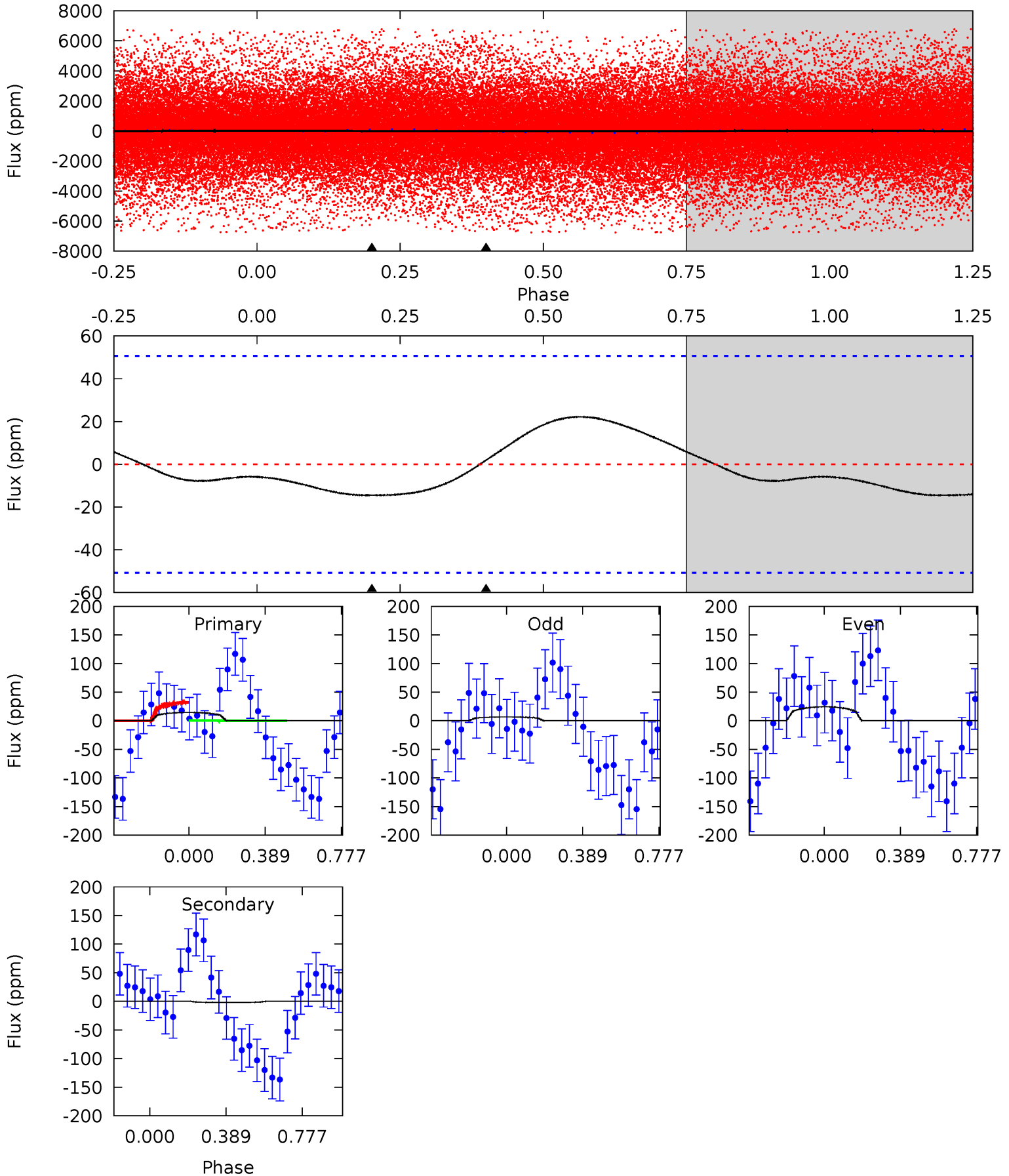
TCE 003836772-01 P= 0.678822 Days $T_0=131.954746$ (BKJD)



DV Model-Shift Uniqueness Test

003836772-01, P = 0.678828 Days, E = 131.275573 Days

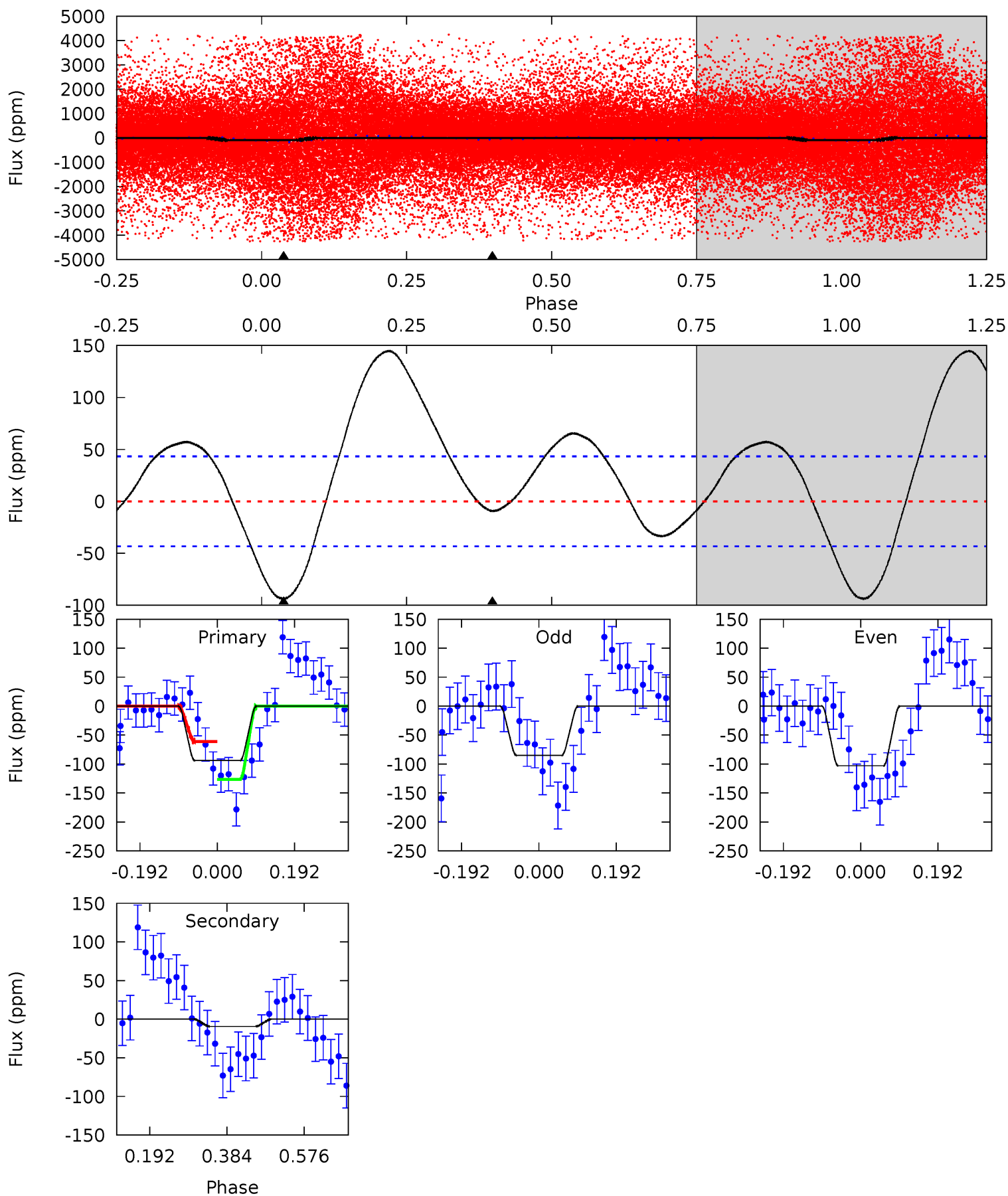
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.22	-0.16	0	0	4.27	0.86	0.29	1.22	1.22	-0.16	-0.16	0.75	0.03	0.60	1.32



Alt Model-Shift Uniqueness Test

003836772-01, P = 0.678822 Days, E = 131.275924 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.62	0.96	0	0	4.43	1.30	2.88	9.62	9.62	0.96	0.96	0.92	-1.86	0.61	3.08



Stellar Parameters For KIC 003836772

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6214^{+169}_{-188}	$4.024^{+0.357}_{-0.153}$	$-0.360^{+0.300}_{-0.300}$	$1.647^{+0.419}_{-0.628}$	$1.046^{+0.169}_{-0.154}$	$0.330^{+0.913}_{-0.144}$
	+3%/-3%	+9%/-4%	+83%/-83%	+25%/-38%	+16%/-15%	+277%/-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 003836772-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 12	$1.30^{+0.54}_{-0.52}$	3924^{+303}_{-419}	-3823^{+7822}_{-1100}	$-0.104^{+0.918}_{-1.116}$
Alt.	-9 ± 10	$1.76^{+0.61}_{-0.54}$	3911^{+305}_{-395}	2669^{+1499}_{-6394}	$0.336^{+0.749}_{-0.361}$

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 $A_{obs} \gg 1.0$

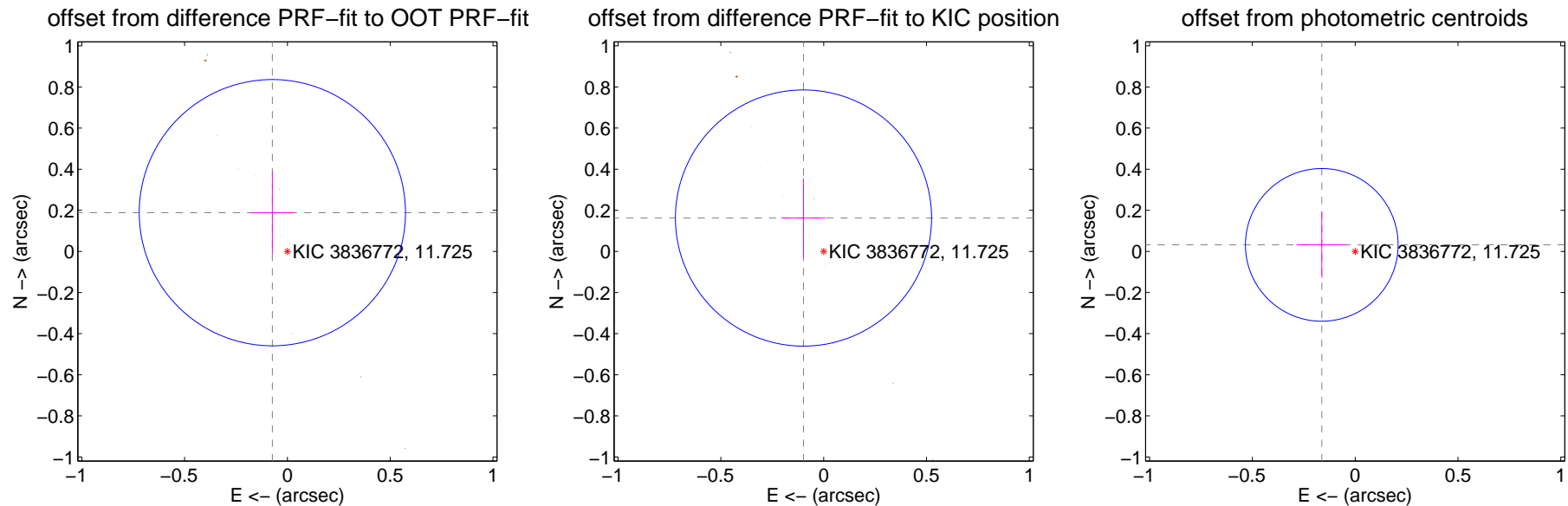
DV Centroid Data

Supplemental centroid analysis for 003836772-01. **Kepler magnitude: 11.72.** Transit SNR 8.17

There are 8 quarters with good PRF difference image offsets

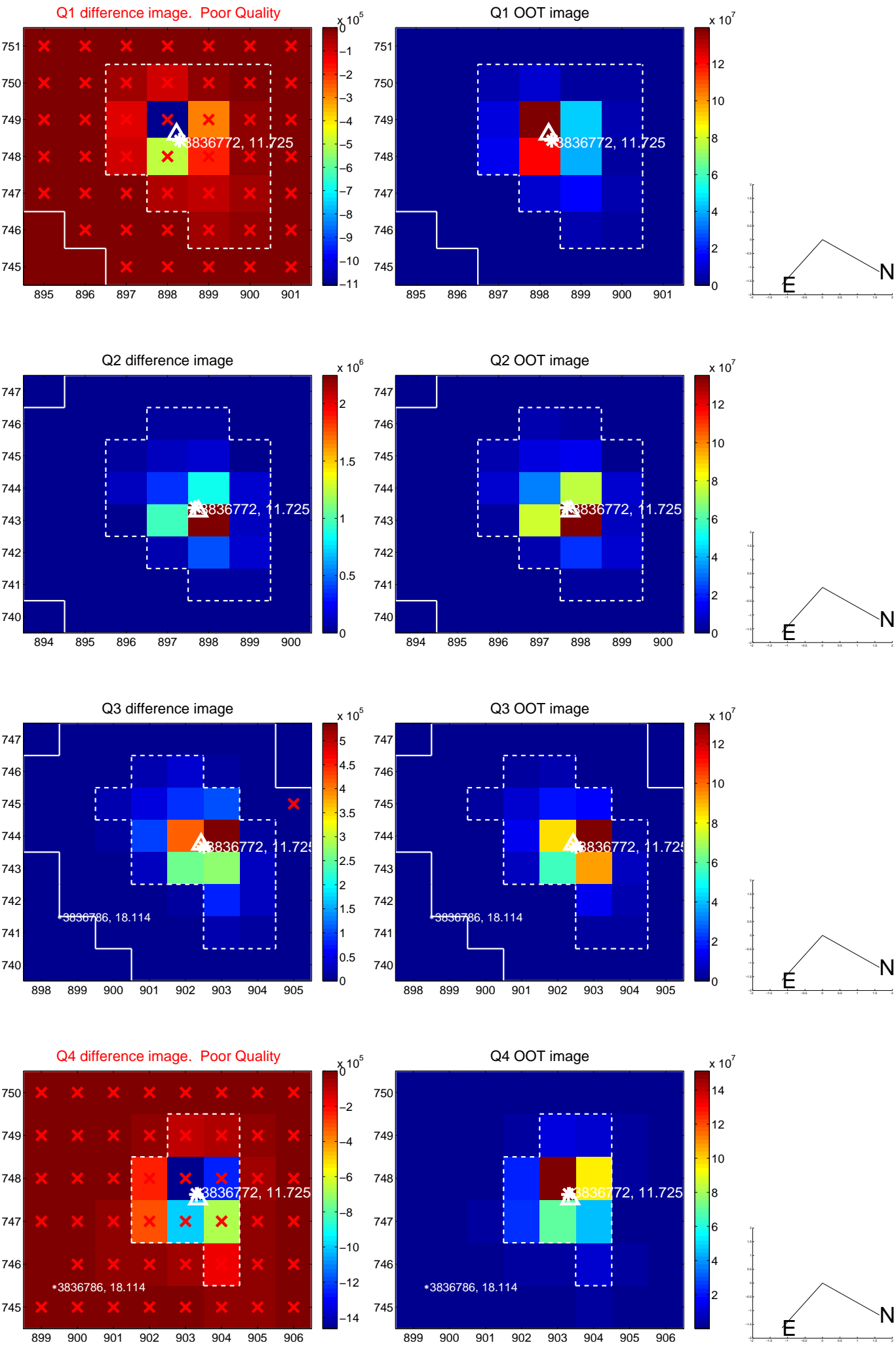
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.202 ± 0.216	0.94	0.073 ± 0.107	0.188 ± 0.200
PRF-fit source offset from KIC position	0.190 ± 0.208	0.91	0.098 ± 0.107	0.162 ± 0.193
photometric centroid source offset	0.17 ± 0.12	1.34	0.16 ± 0.12	0.03 ± 0.16

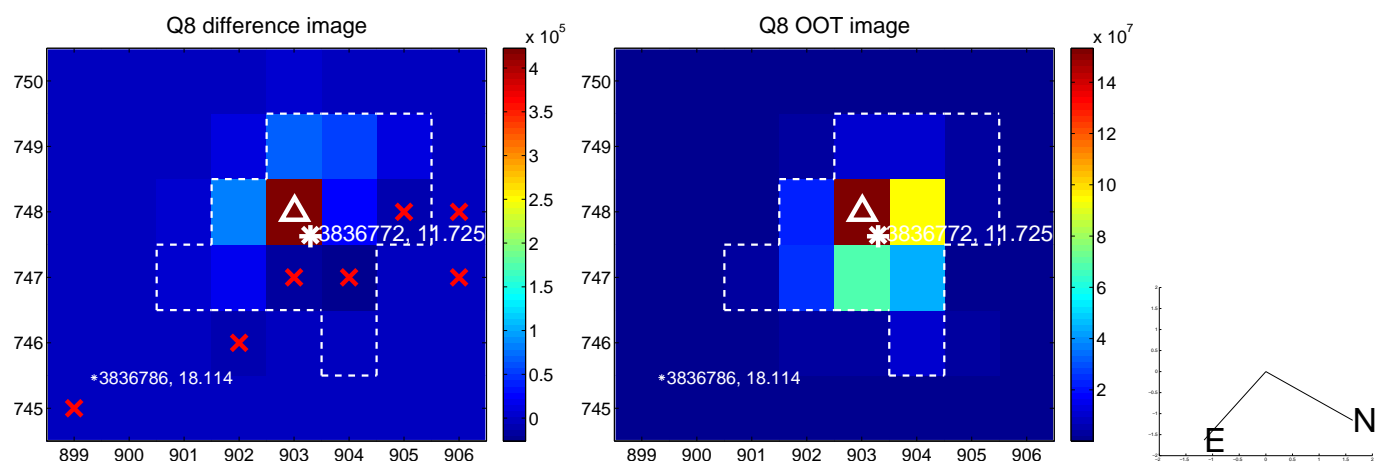
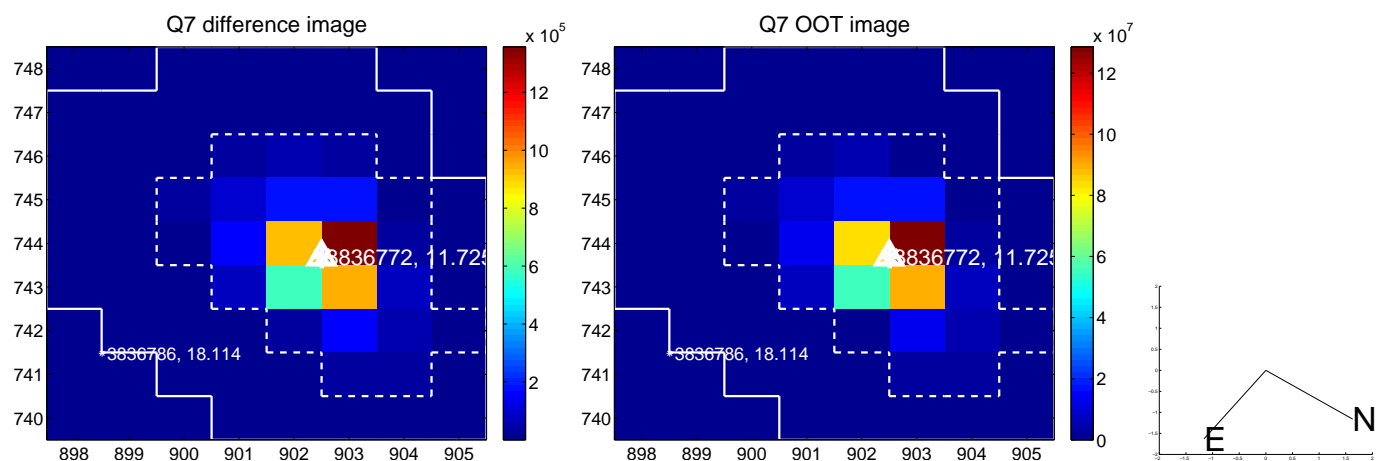
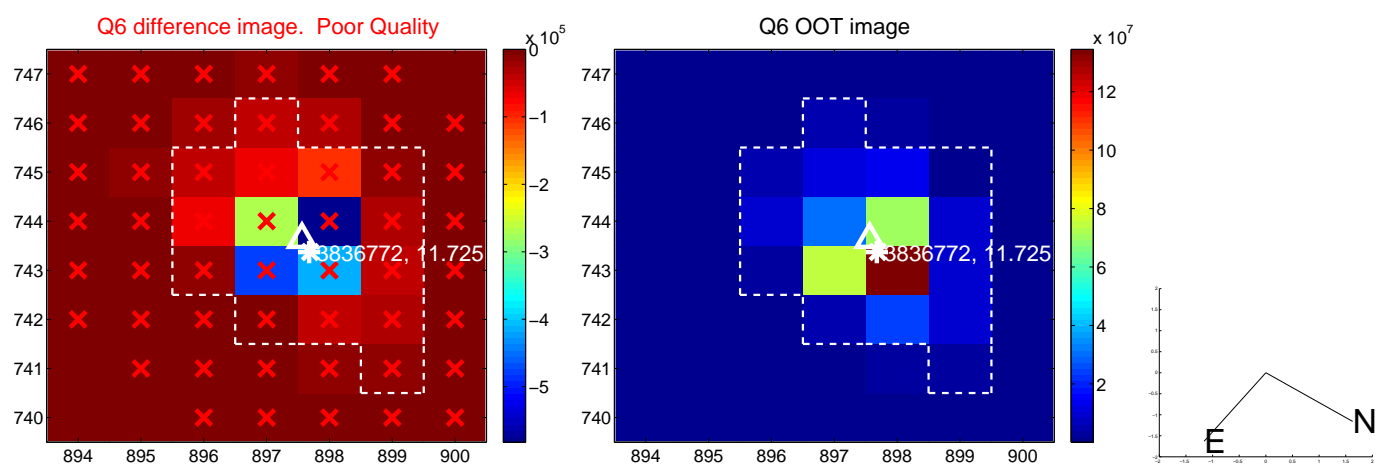
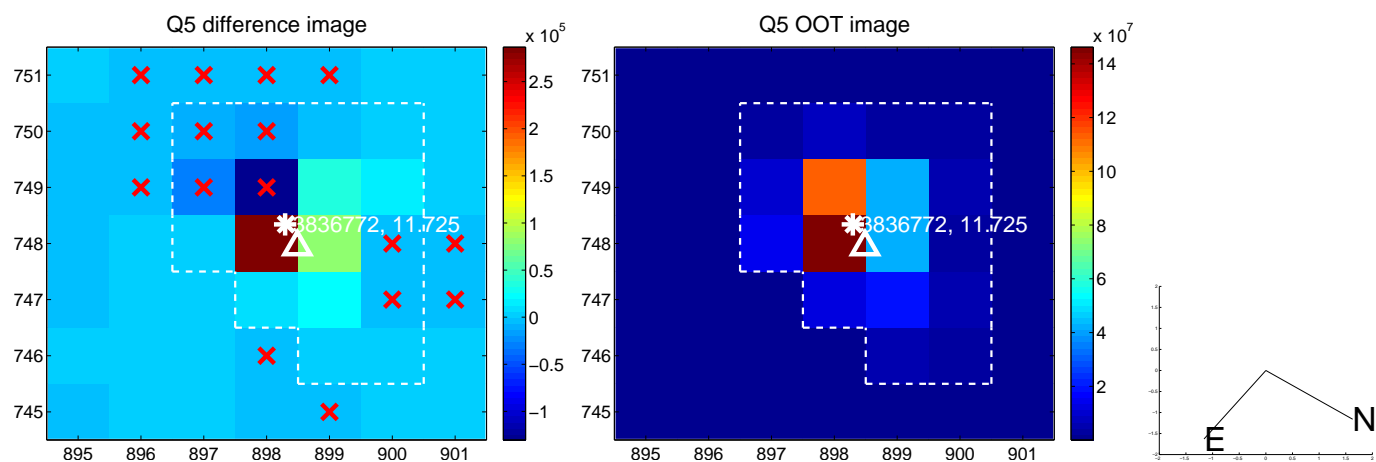


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

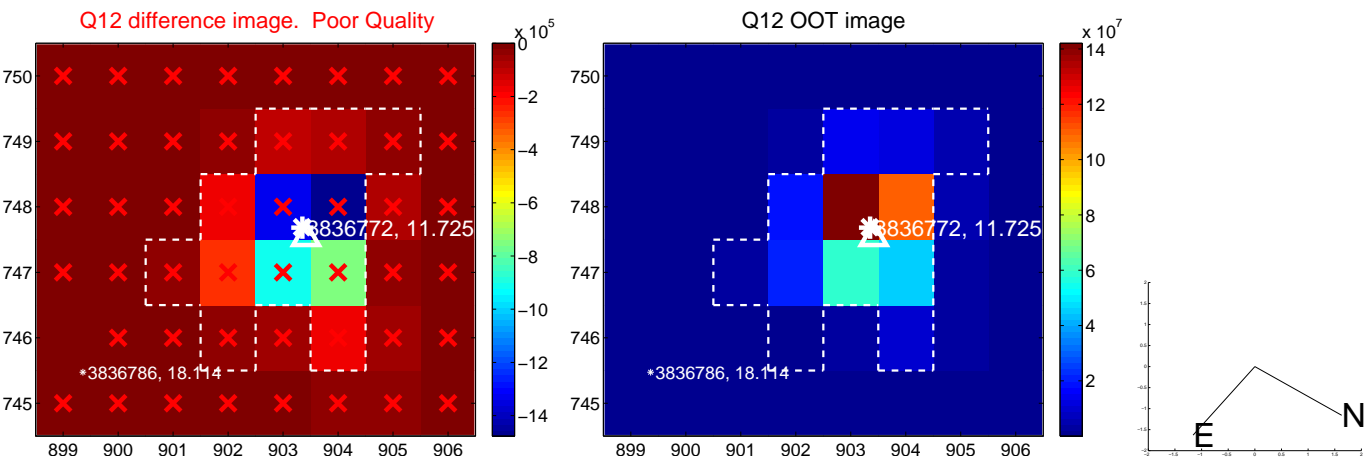
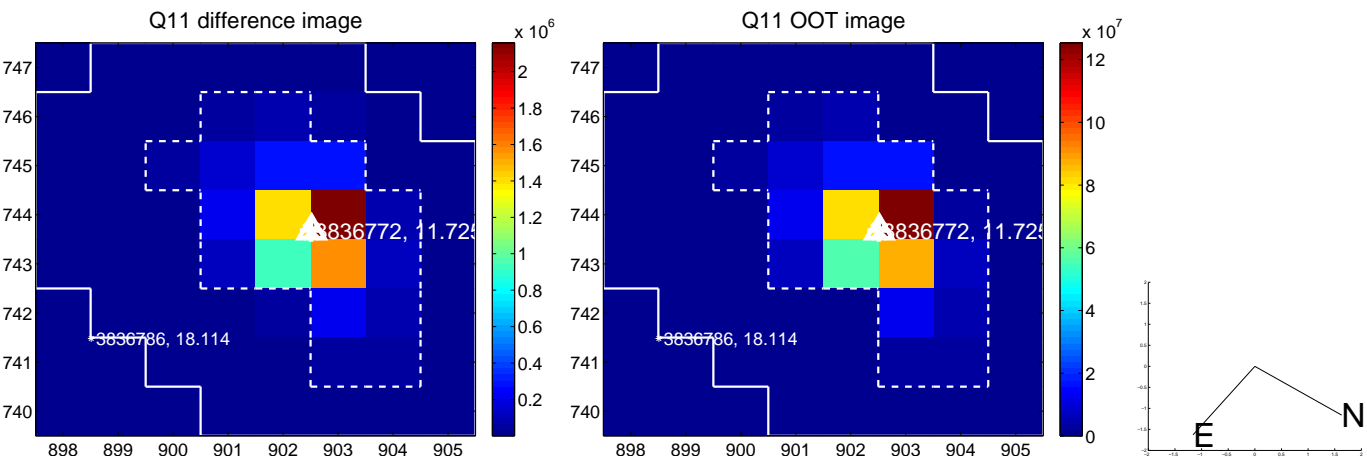
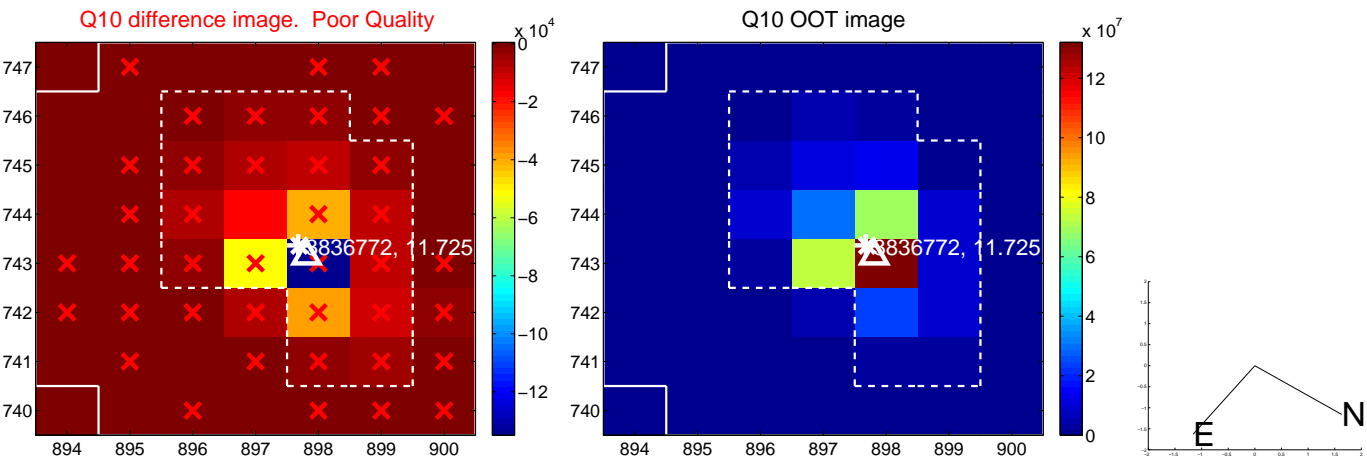
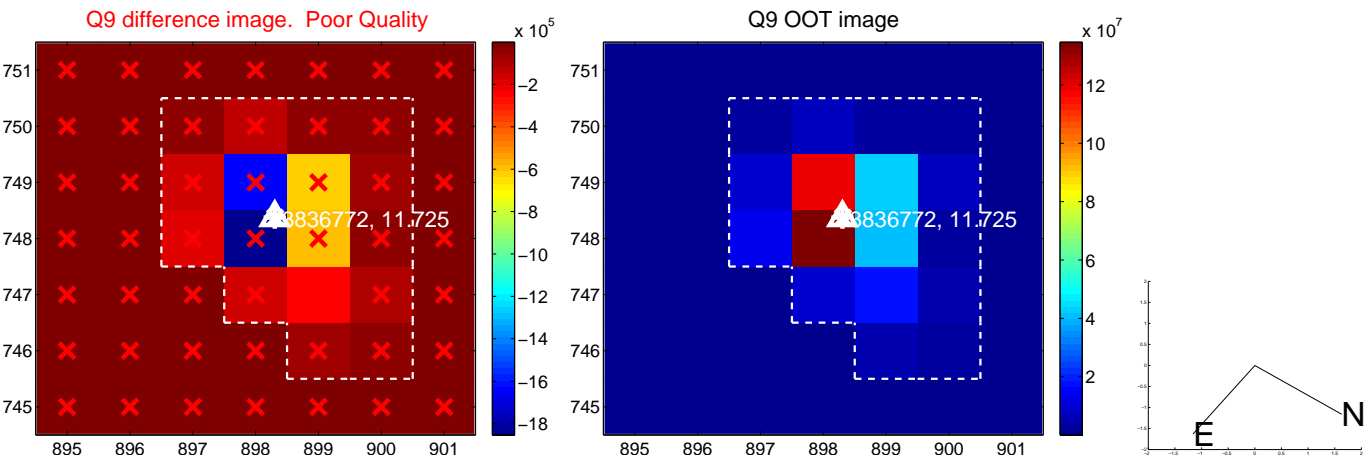
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



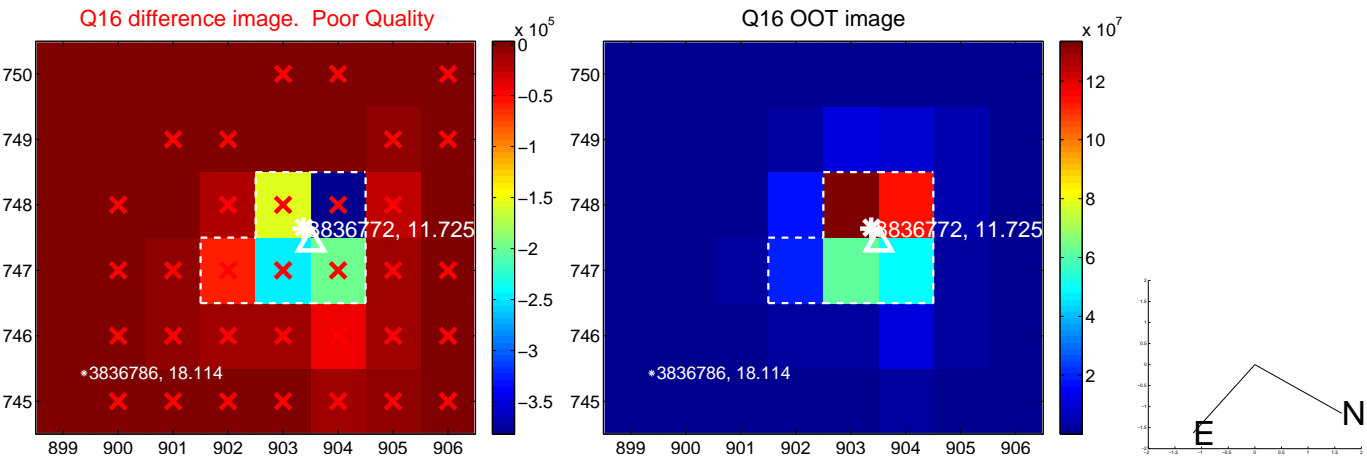
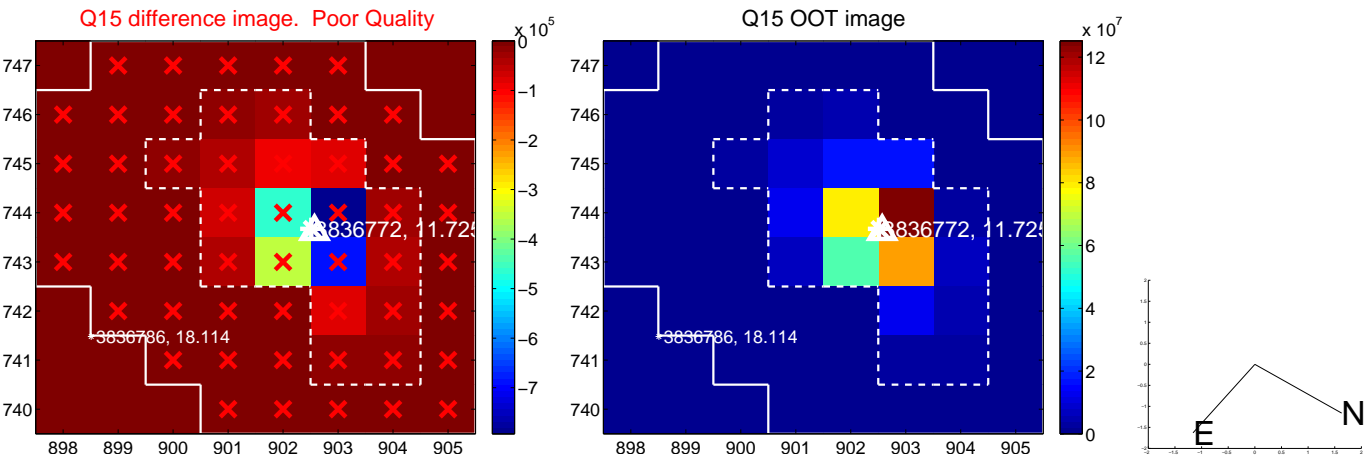
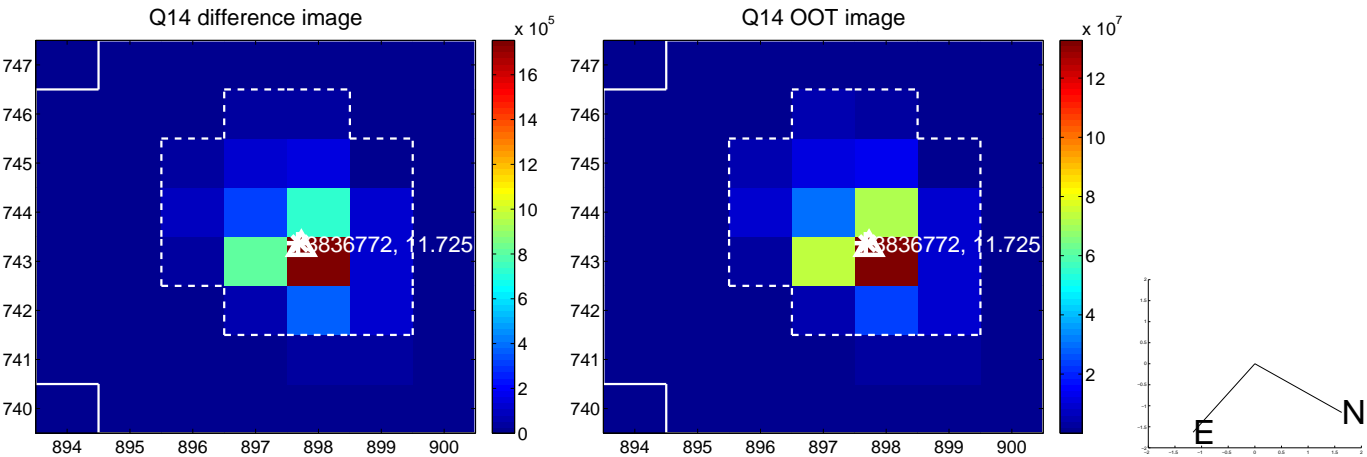
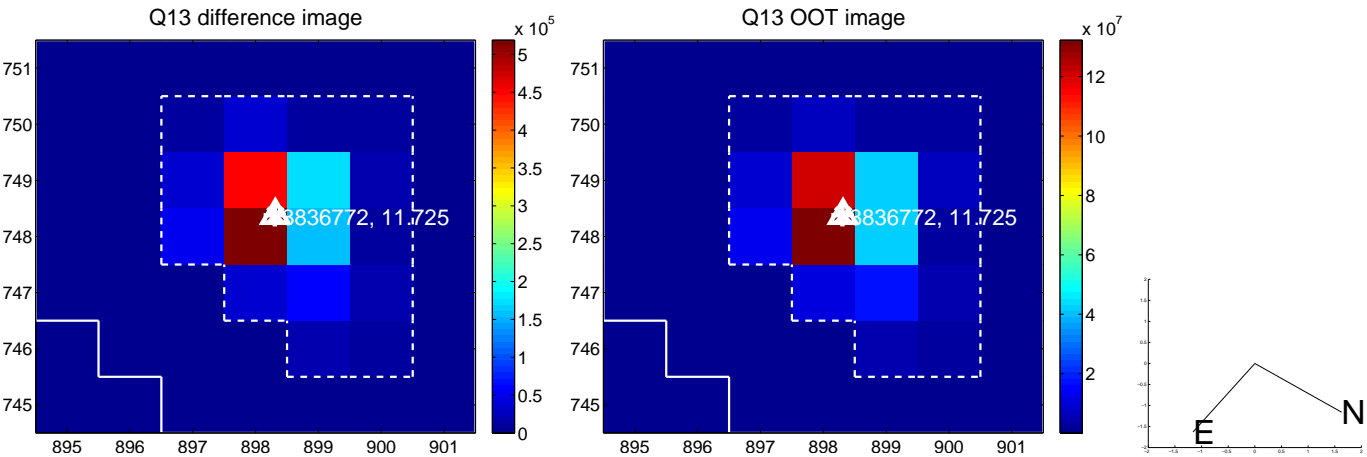
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



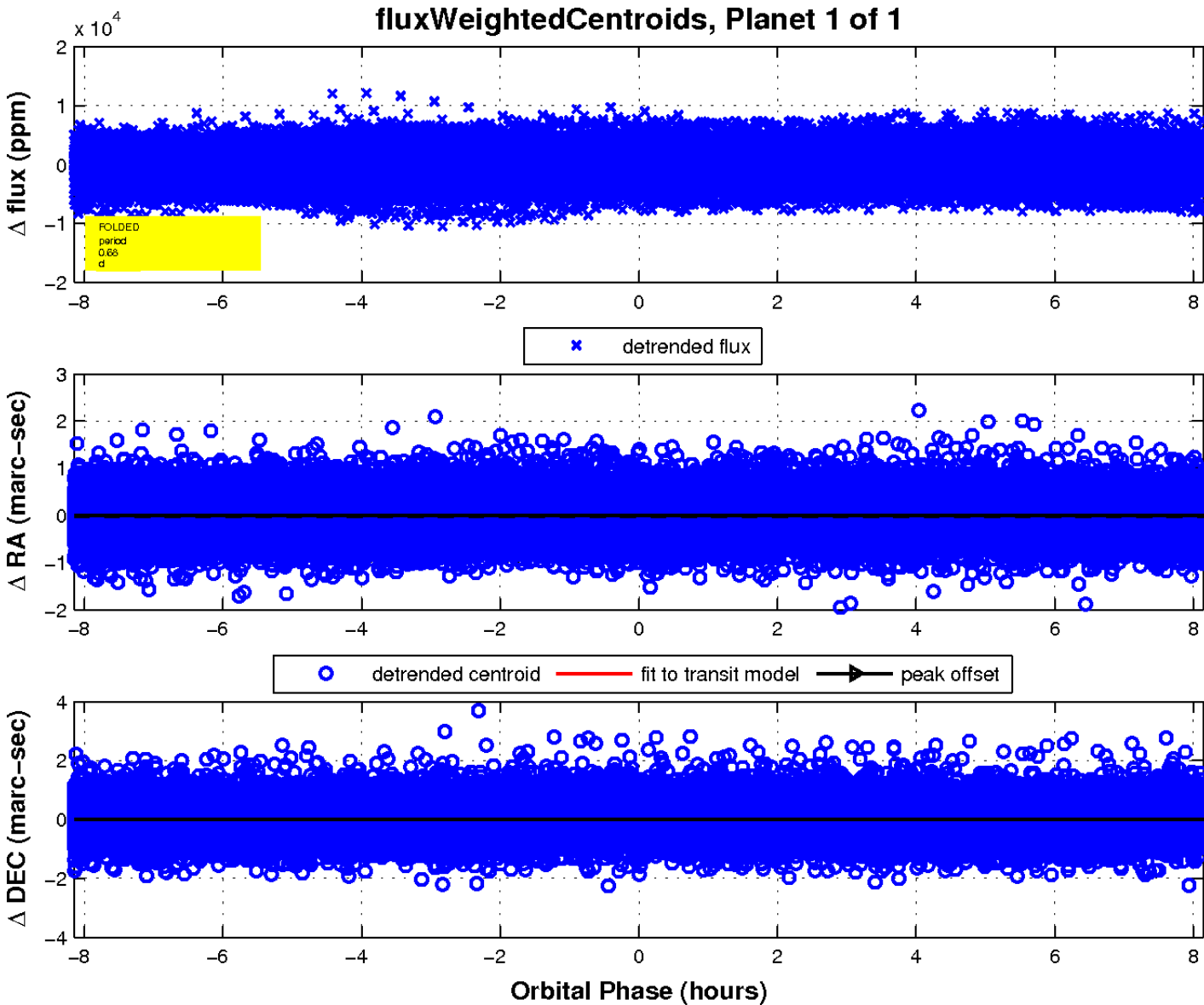
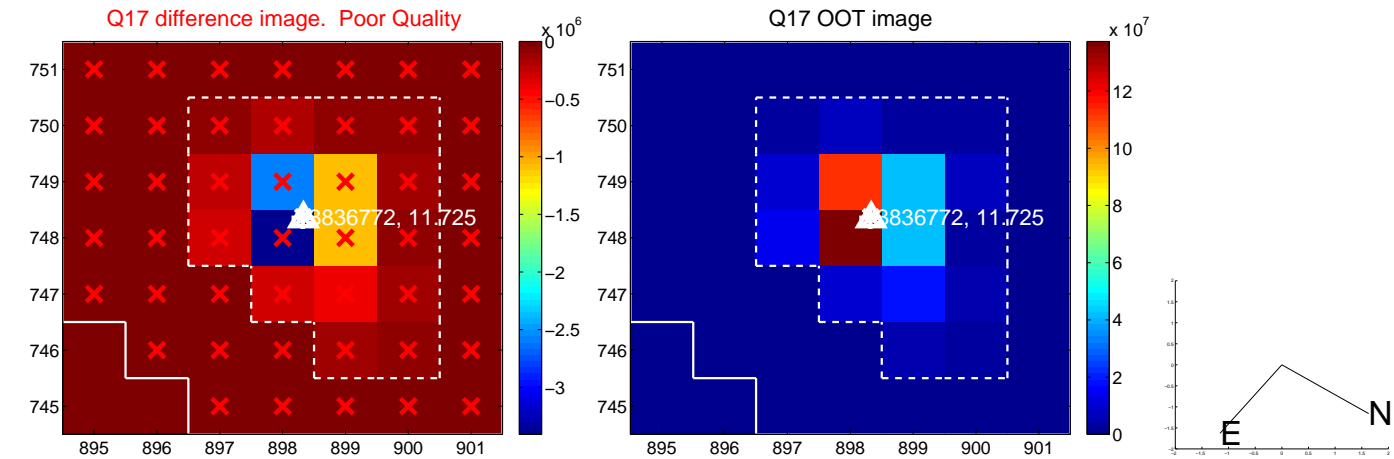
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UKIRT Image

