

KIC 007031340

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})
007031340-01	OBS	7804.01	0.566782	131.836513	53.8	1.092	12.5	12.1	1.53	5496	1.34	11881.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031340-01	OBS	FP	0.00	1	0	1	1	LPP_DV—HALO_GHOST—EPHEM_MATCH

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.

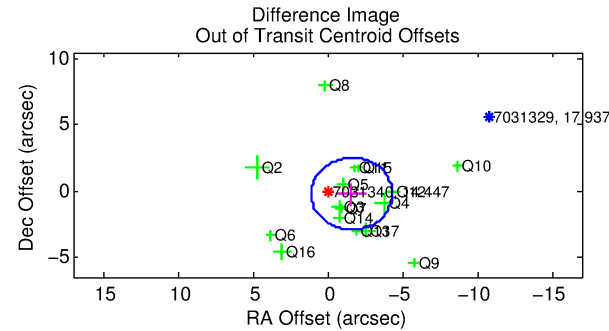
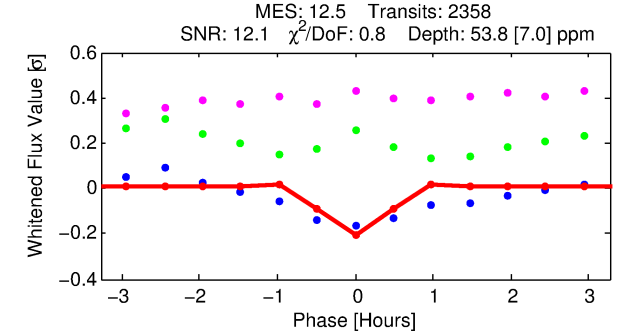
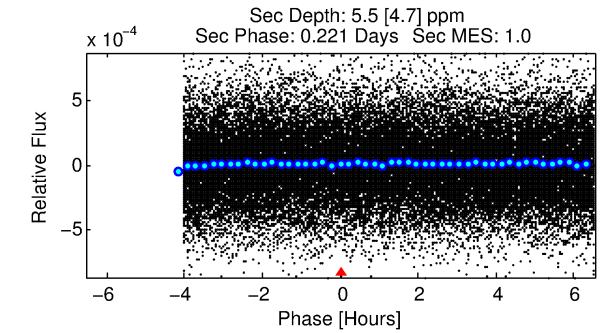
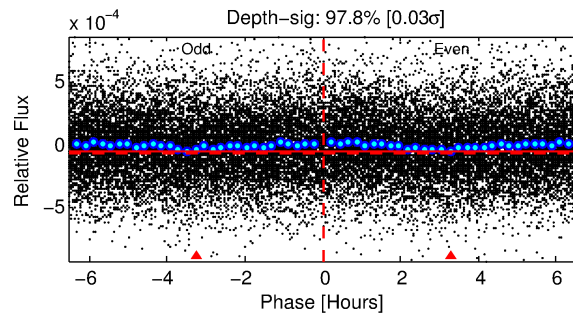
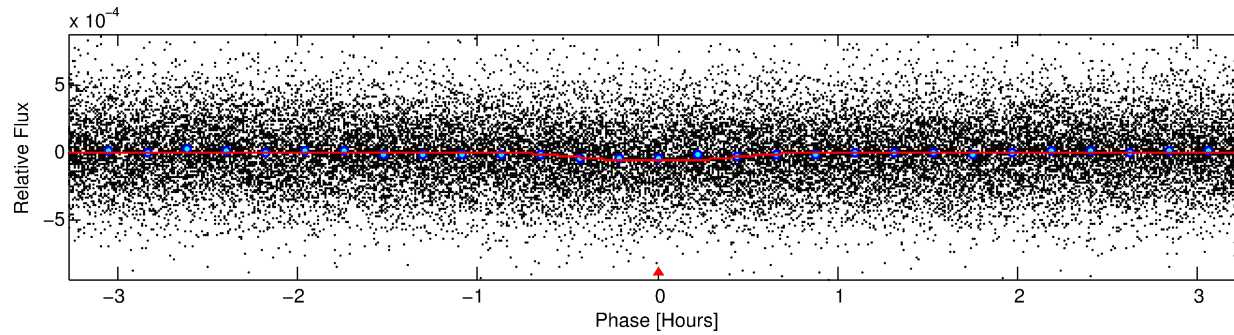
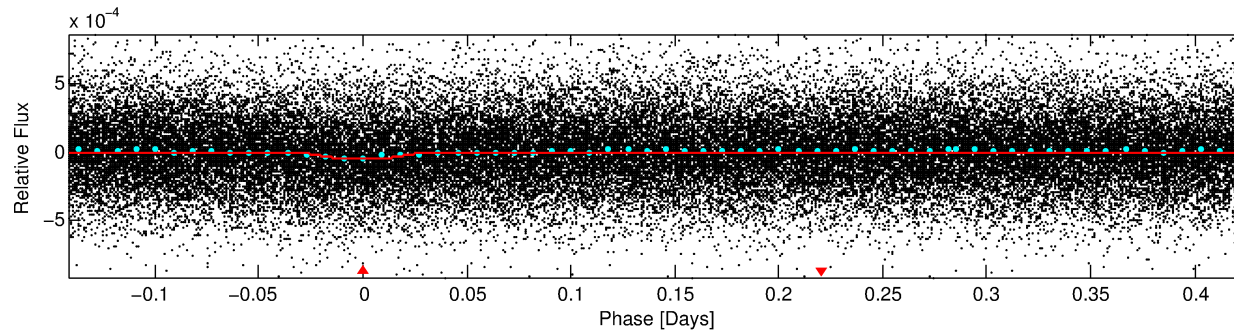
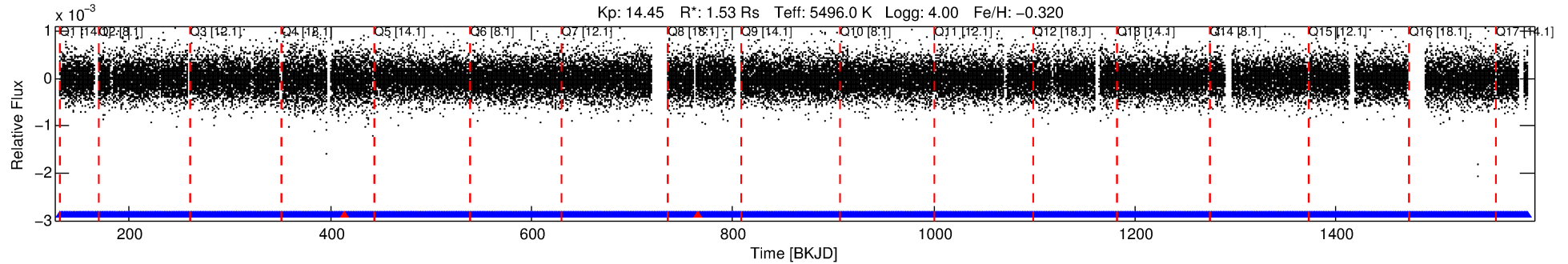
Ephemeris Match Information For 007031340-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007031340-01	7031340	RR-Lyr-pri	7198959	1:1	1092.3	42	-272	7.86	14.44	11543.00	Direct-PRF	0	3.13	17.94

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7031340 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56678 [0.00001] d
Epoch = 131.8365 [0.0014] BKJD
Rp/R* = 0.0080 [0.0026]
a/R* = 2.08 [2.37]
b = 0.89 [0.35]
Seff = 11881.95 [10890.65]
Teff = 2662 [610] K
Rp = 1.34 [0.78] Re
a = 0.0127 [0.0068] AU
Ag = 0.27 [0.38] [-1.89 σ]
Teffp = 2975 [803] K [0.31 σ]

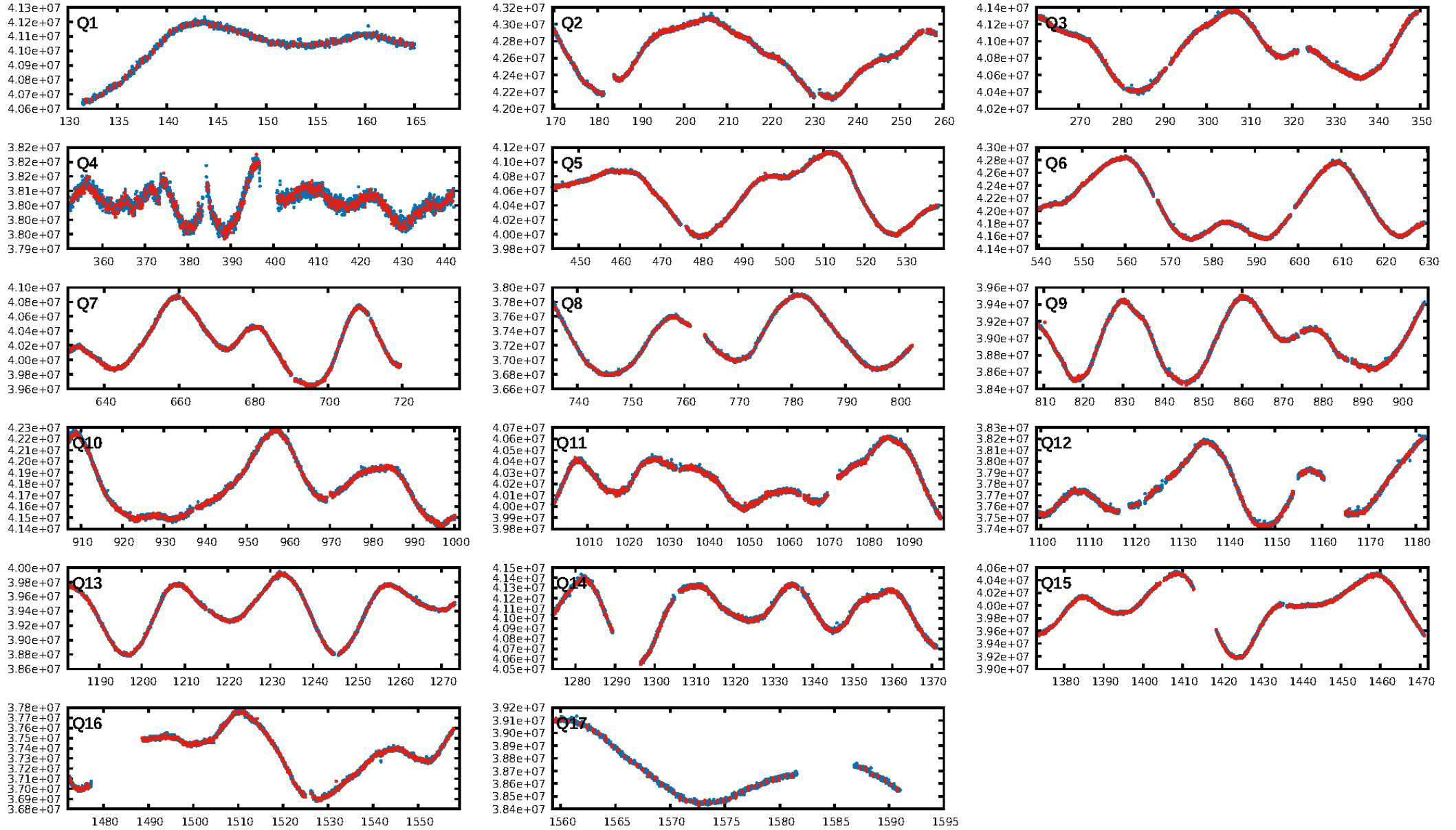
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.78e-33
RollingBand-fgt: 1.00 [2251/2253]
GhostDiagnostic-chr: -0.2245
Centroid-sig: 0.0%
Centroid-so: 2.320 arcsec [2.38 σ]
OotOffset-rm: 1.628 arcsec [1.80 σ]
KicOffset-rm: 1.716 arcsec [2.12 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.12 [2/16]
DiffImageOverlap-fno: 1.00 [17/17]

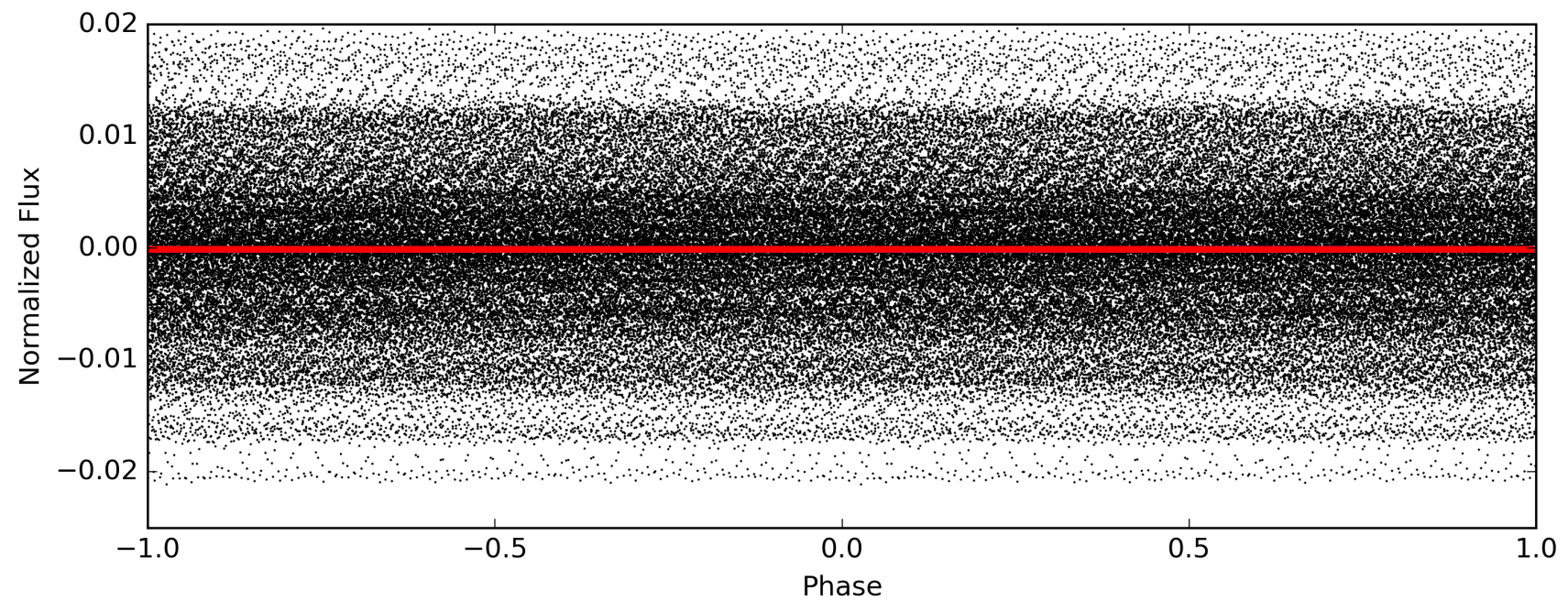
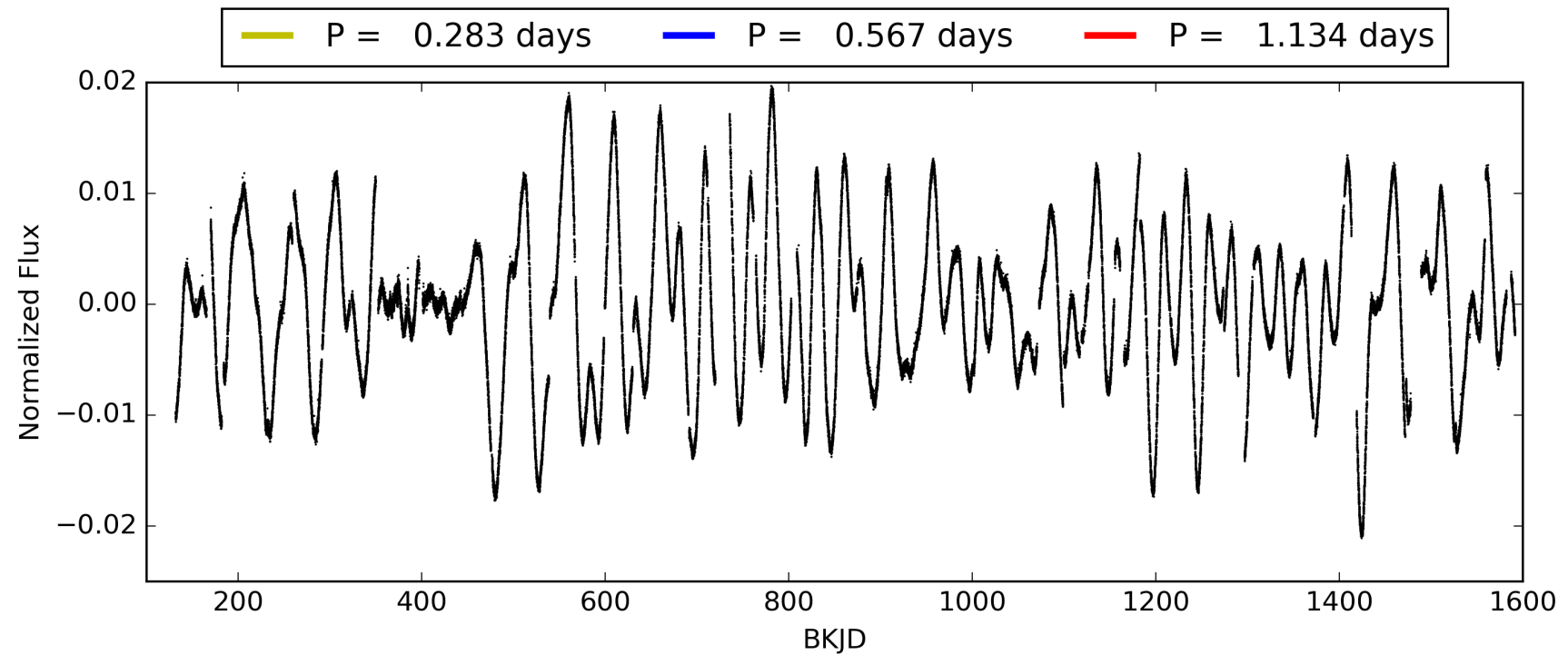
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:55:38 Z

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

TCE 007031340-01, PDC Light Curves

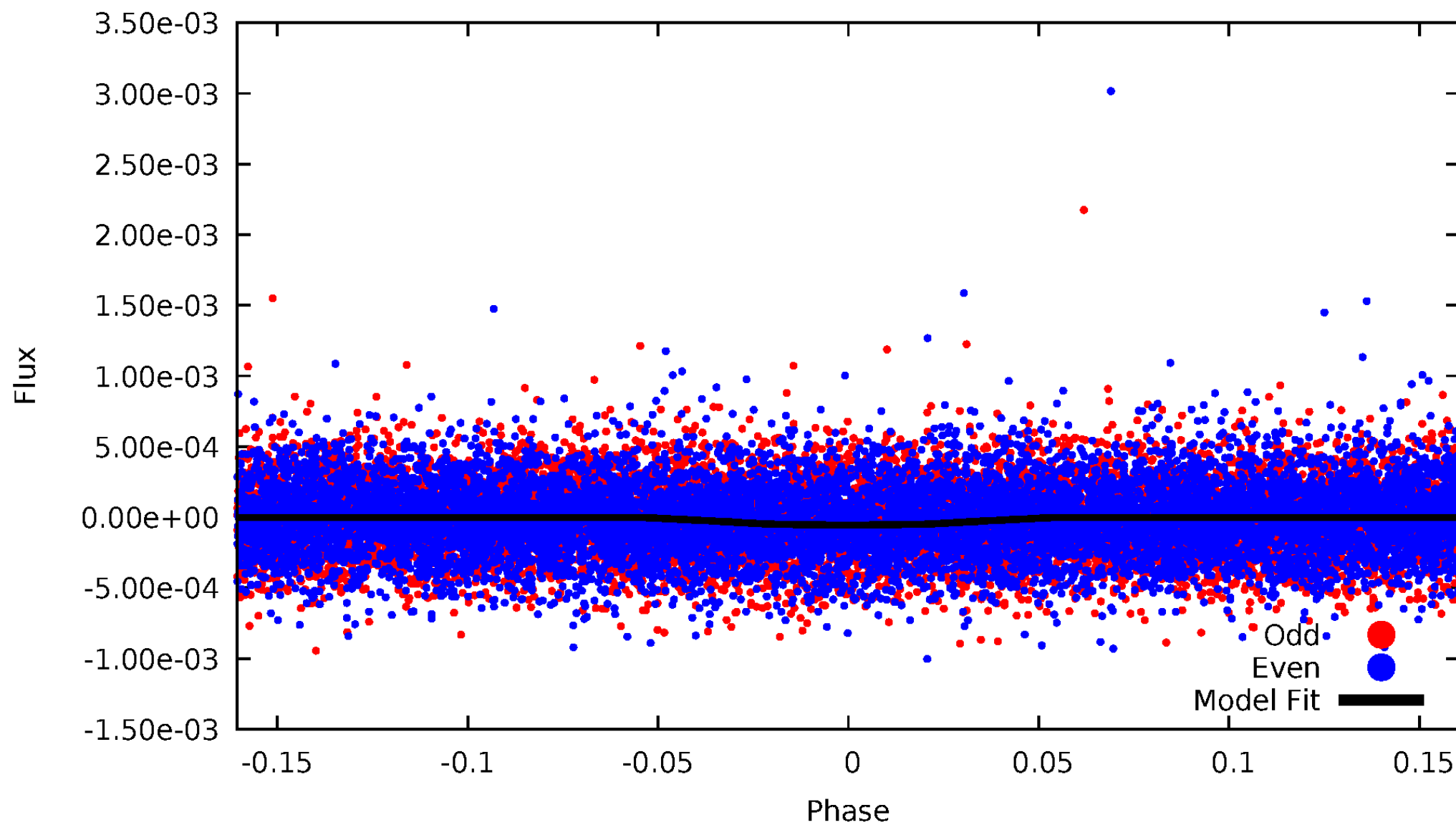


TCE 007031340-01



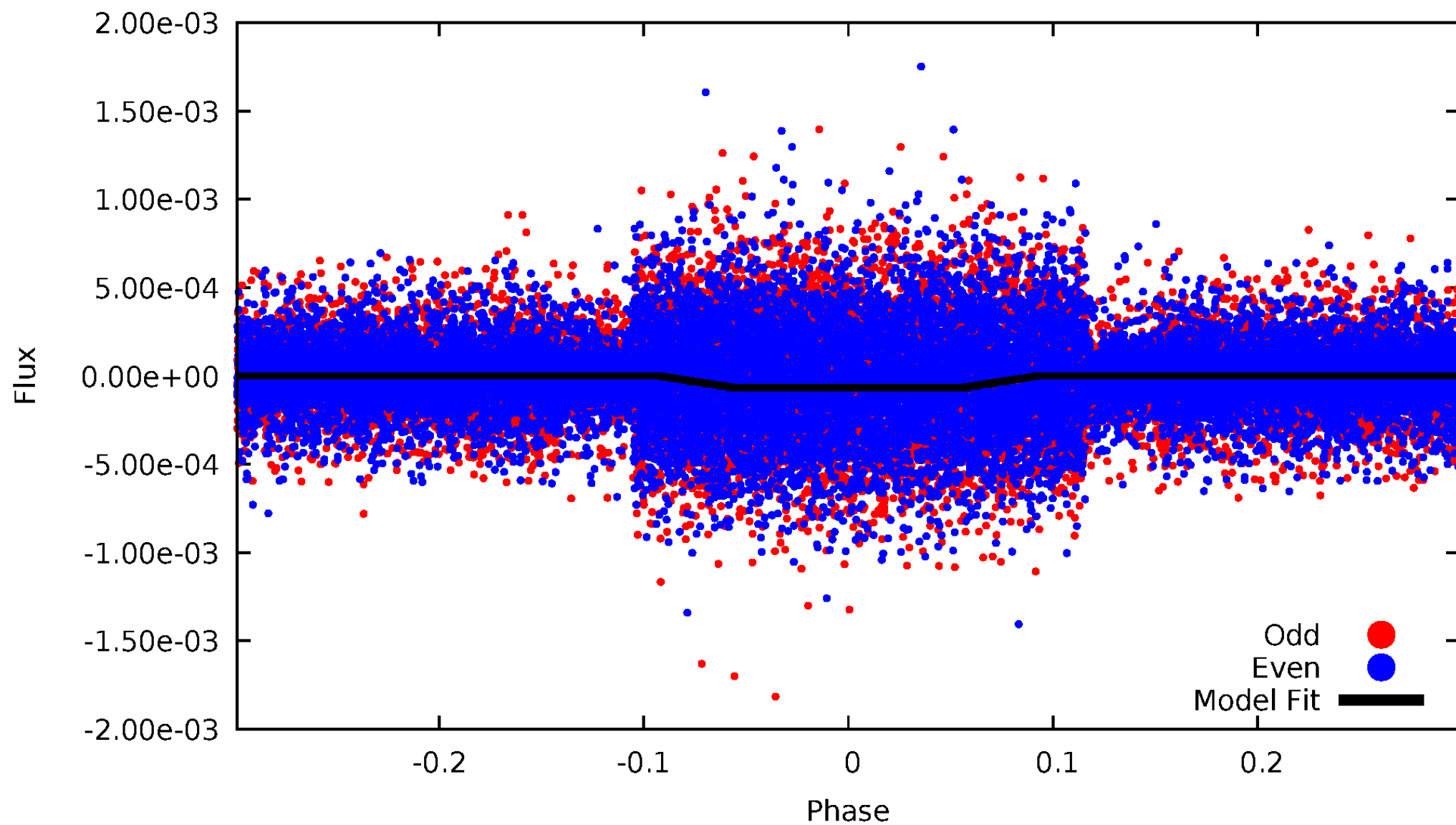
DV Odd/Even

TCE 007031340-01

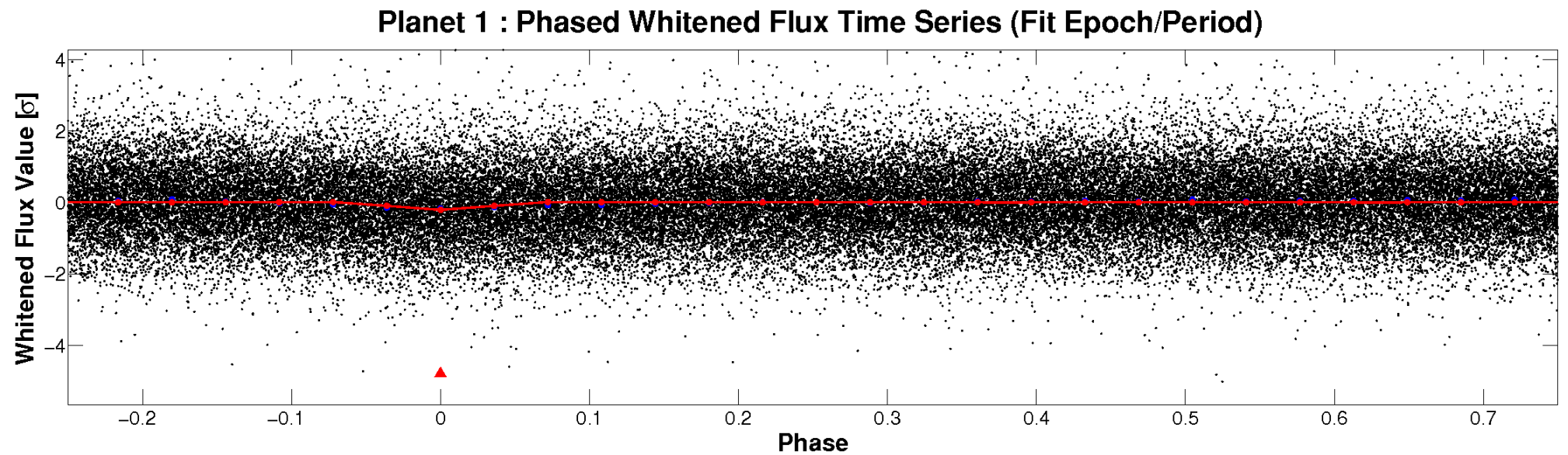
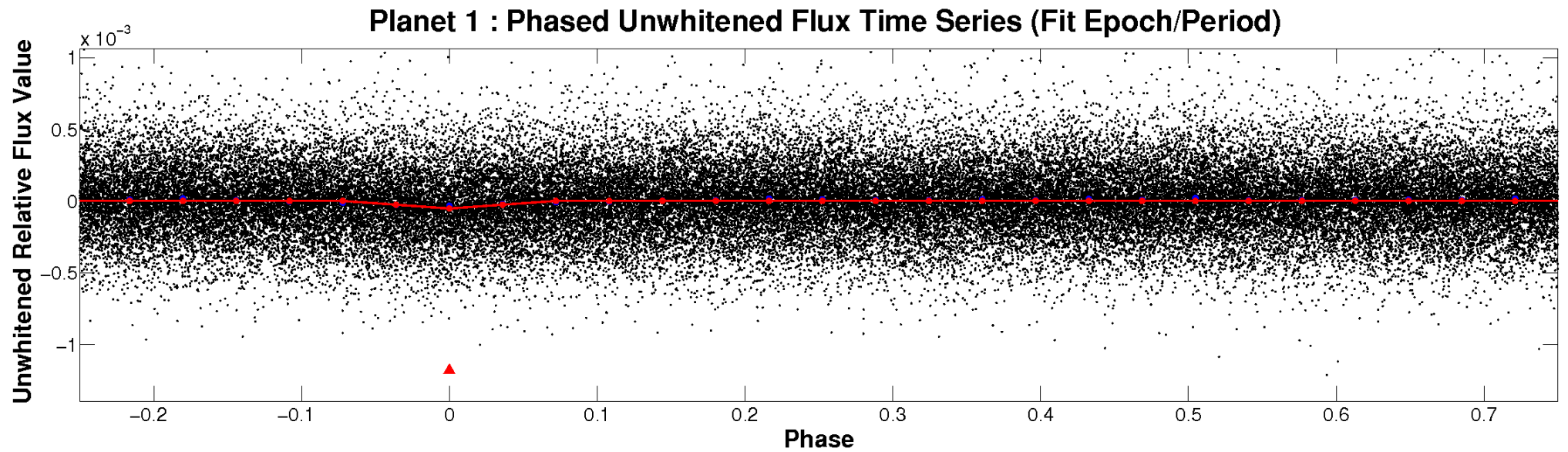


ALT Odd/Even

TCE 007031340-01

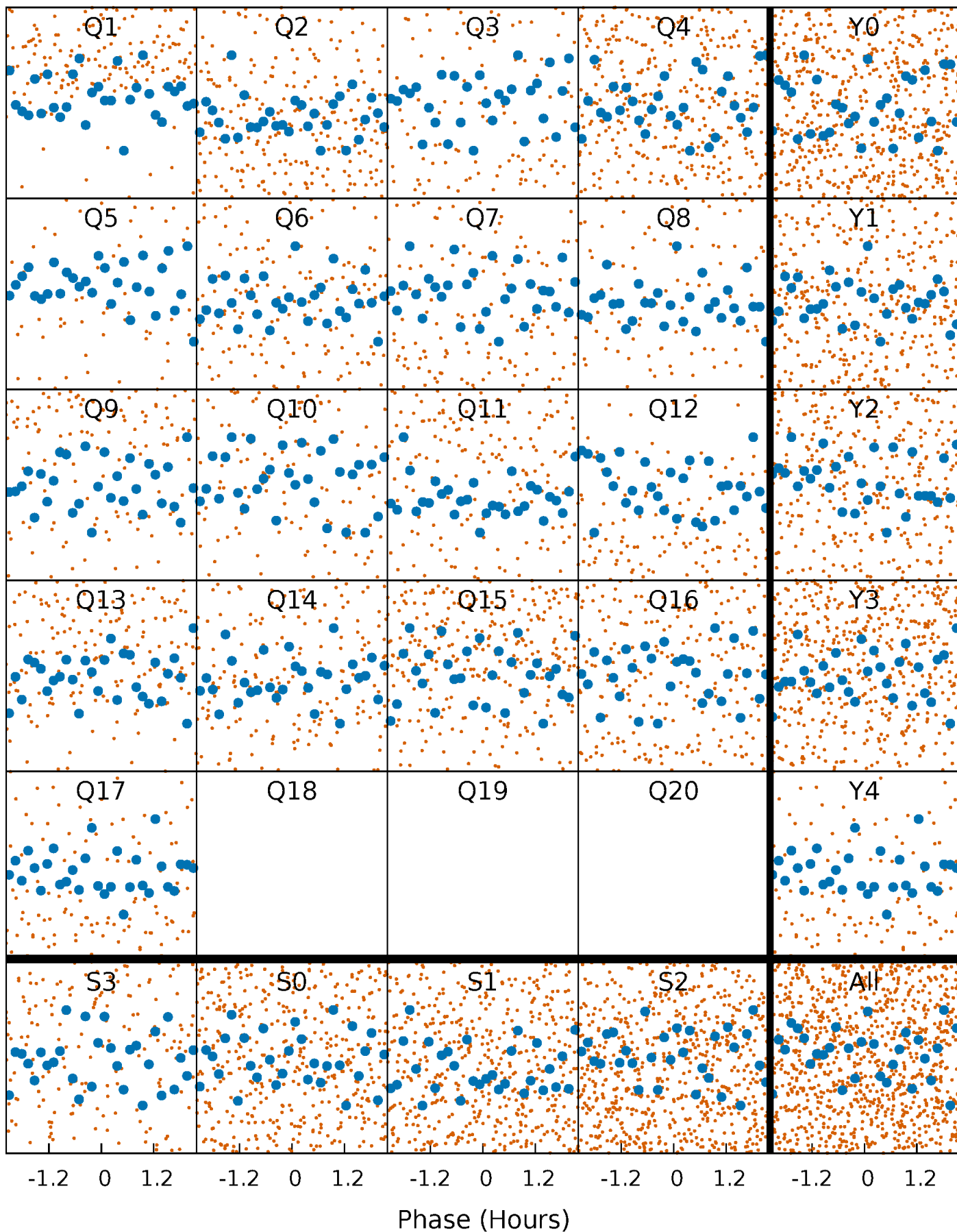


Non-Whitened Vs. Whitened Light Curve



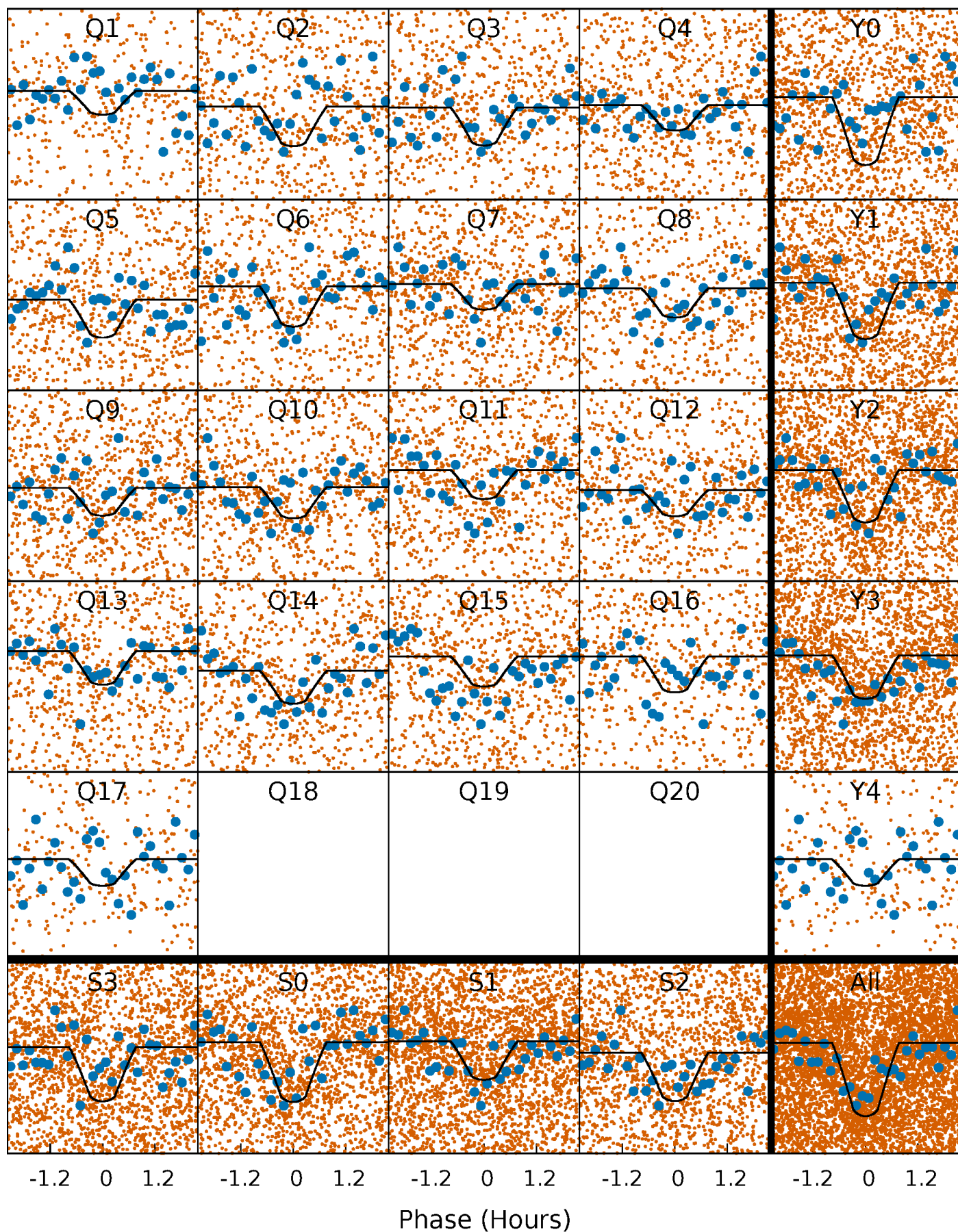
PDC Quarter-Phased Transit Curves

TCE 007031340-01 P= 0.566782 Days $T_0=131.836513$ (BKJD)



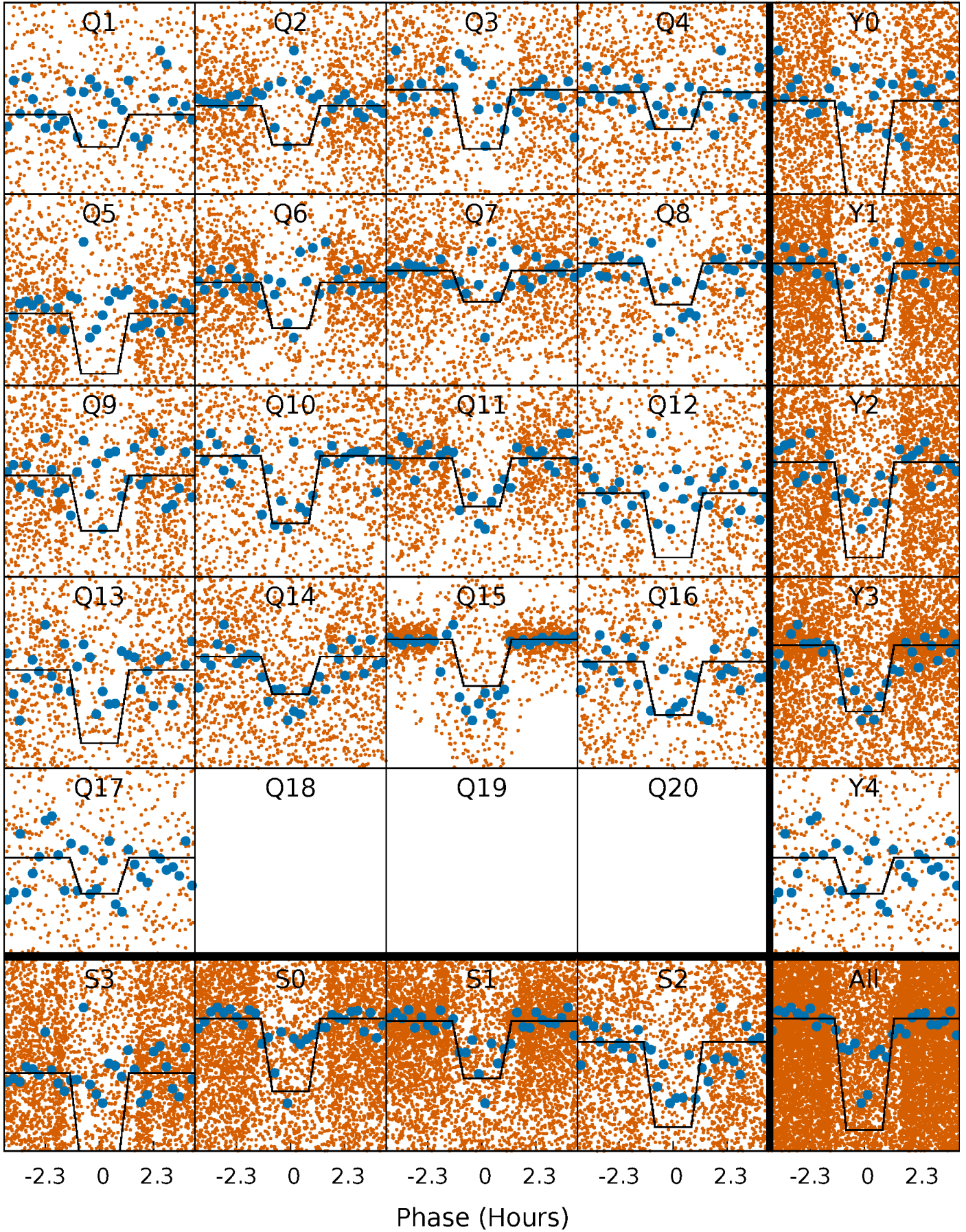
DV Quarter-Phased Transit Curves

TCE 007031340-01 P= 0.566782 Days $T_0=131.836513$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

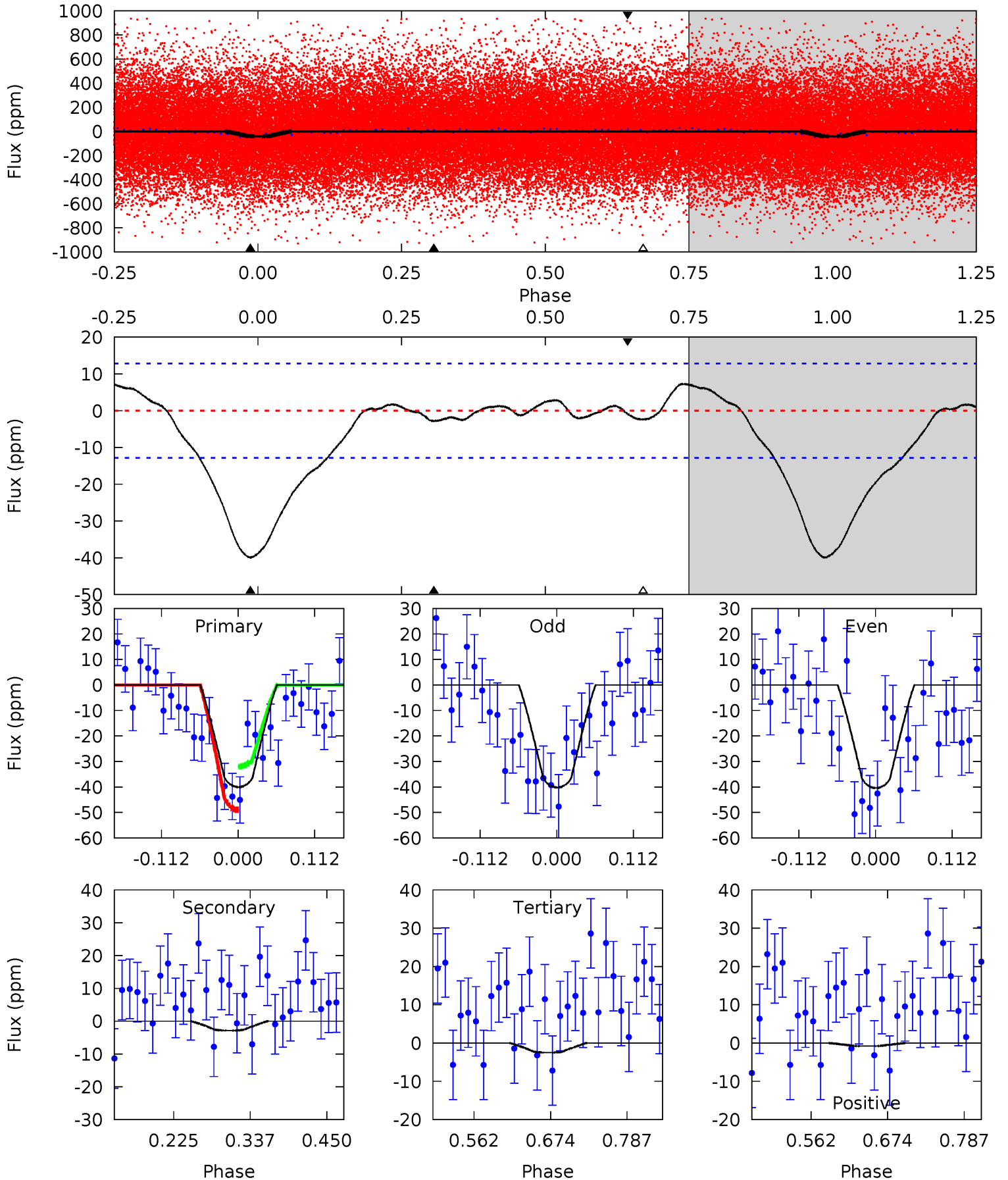
TCE 007031340-01 P= 0.566775 Days $T_0=131.836194$ (BKJD)



DV Model-Shift Uniqueness Test

007031340-01, P = 0.566782 Days, E = 131.269731 Days

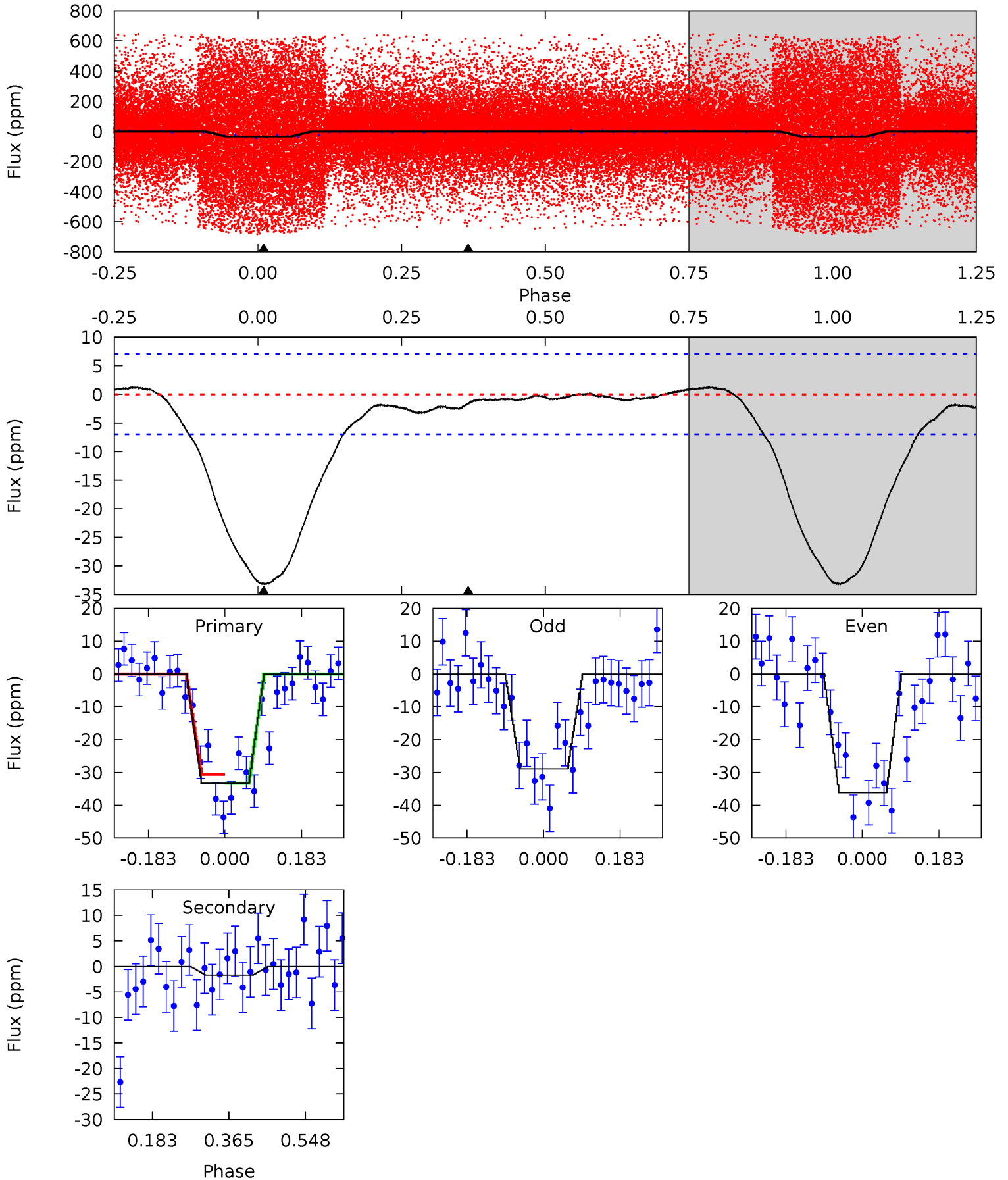
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	1.02	0.88	-0.28	4.54	1.59	1.72	13.3	14.5	0.14	1.30	0.04	0.91	0.16	3.01



Alt Model-Shift Uniqueness Test

007031340-01, P = 0.566775 Days, E = 131.269419 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	1.07	0	0	4.44	1.33	0.44	21.1	21.1	1.07	1.07	2.29	1.00	0.04	0.84



Stellar Parameters For KIC 007031340

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$3.998^{+0.553}_{-0.237}$	$-0.320^{+0.350}_{-0.250}$	$1.533^{+0.610}_{-0.746}$	$0.853^{+0.088}_{-0.107}$	$0.334^{+2.024}_{-0.188}$
	+3%/-3%	+14%/-6%	+109%/-78%	+40%/-49%	+10%/-13%	+606%/-56%
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 007031340-01 / KOI 7804.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 3	$1.25^{+0.57}_{-0.49}$	3659^{+402}_{-540}	-3089^{+6171}_{-504}	$0.145^{+0.338}_{-0.143}$
Alt.	-2 ± 2	$1.27^{+0.52}_{-0.52}$	3669^{+430}_{-498}	-3263^{+907}_{-382}	$0.087^{+0.190}_{-0.079}$

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

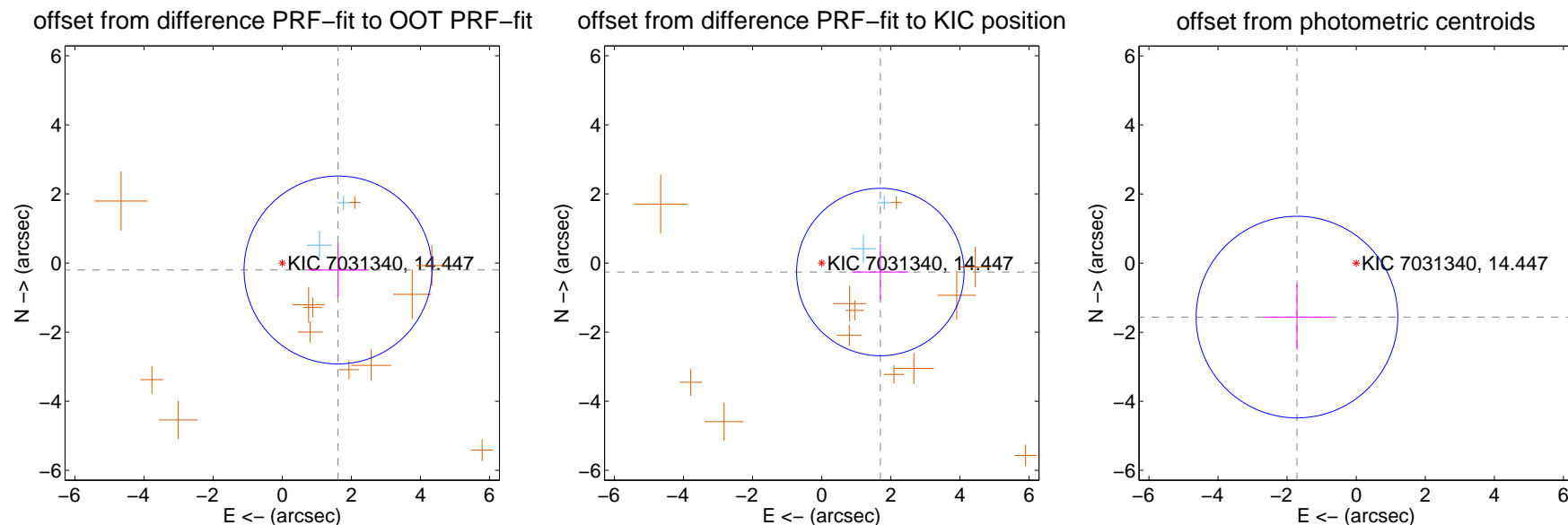
DV Centroid Data

Supplemental centroid analysis for 007031340-01. Kepler magnitude: 14.45. Transit SNR 12.15

There are 2 quarters with good PRF difference image offsets

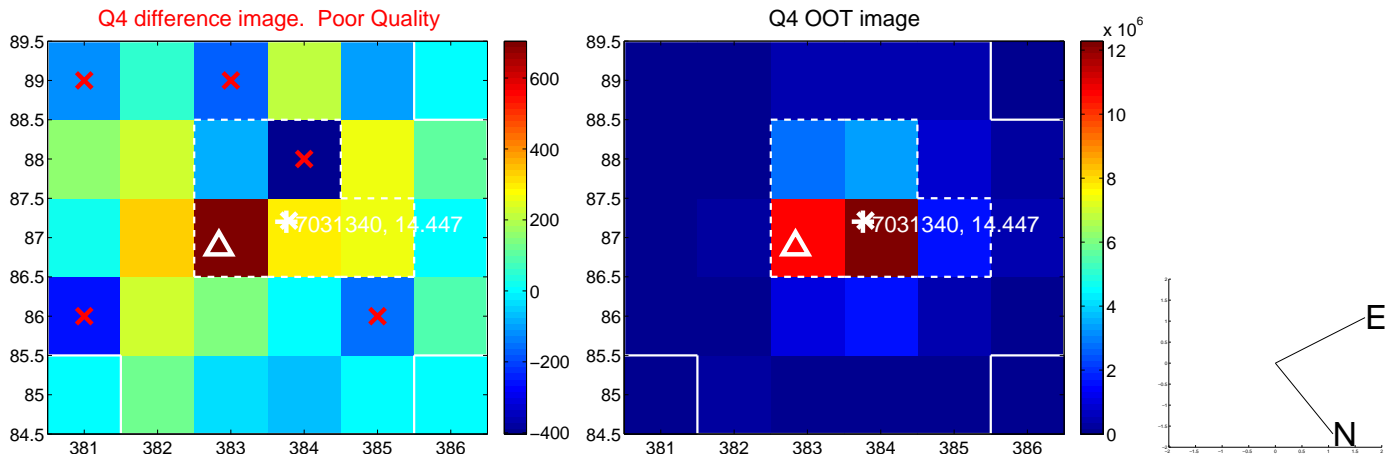
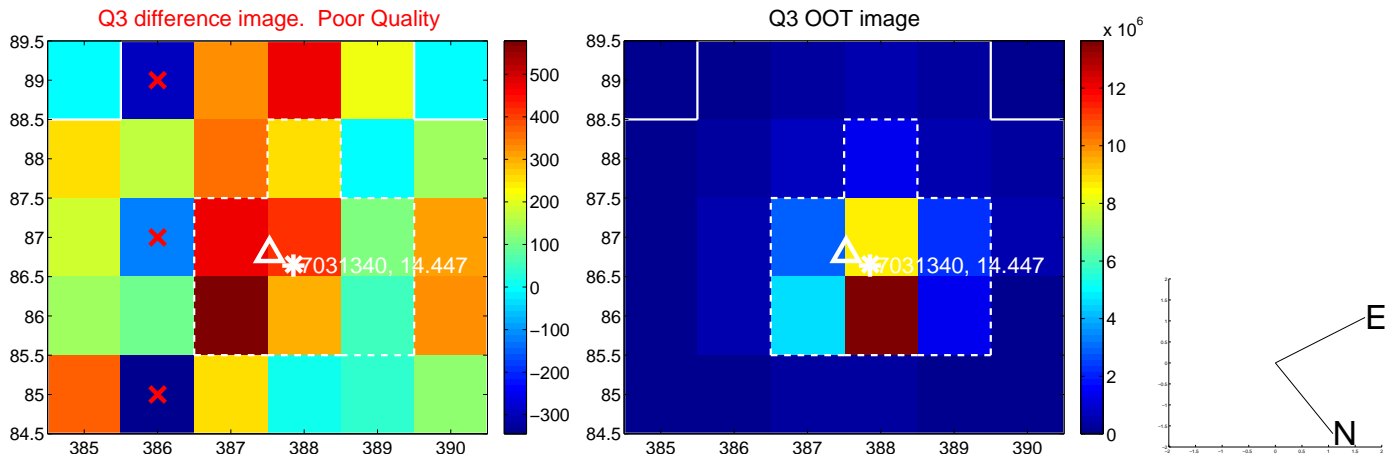
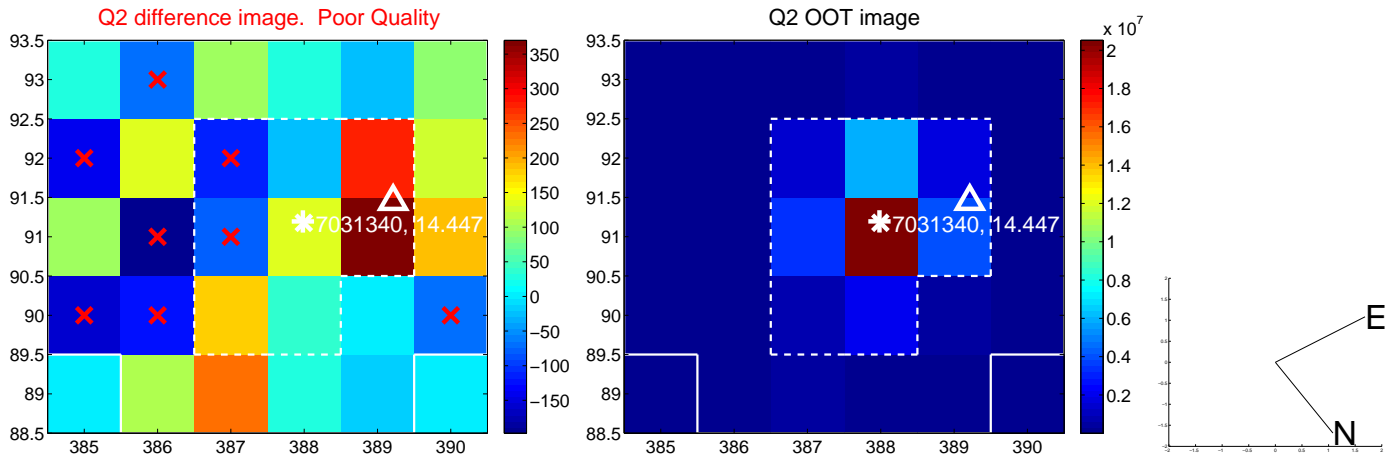
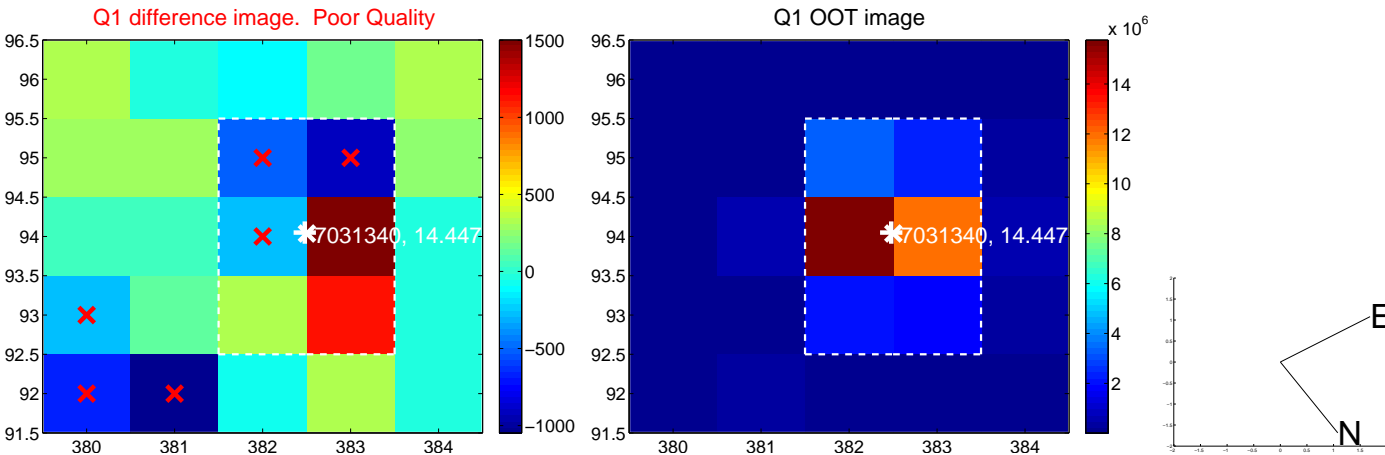
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.628 ± 0.907	1.80	-1.615 ± 0.900	-0.201 ± 0.782
PRF-fit source offset from KIC position	1.716 ± 0.808	2.12	-1.697 ± 0.816	-0.260 ± 0.808
photometric centroid source offset	2.32 ± 0.97	2.38	1.72 ± 0.99	-1.56 ± 0.95

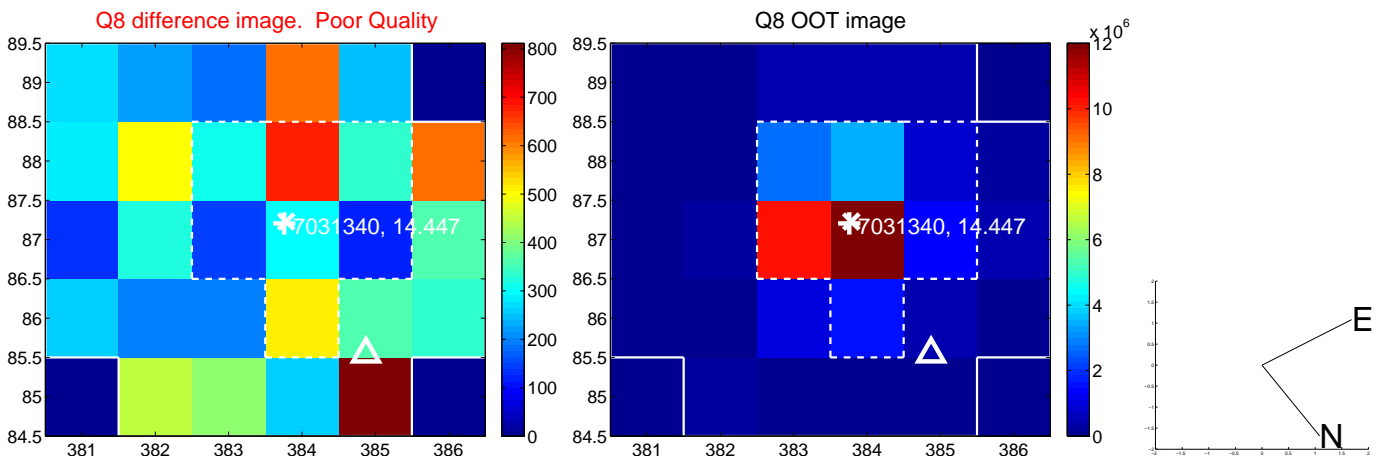
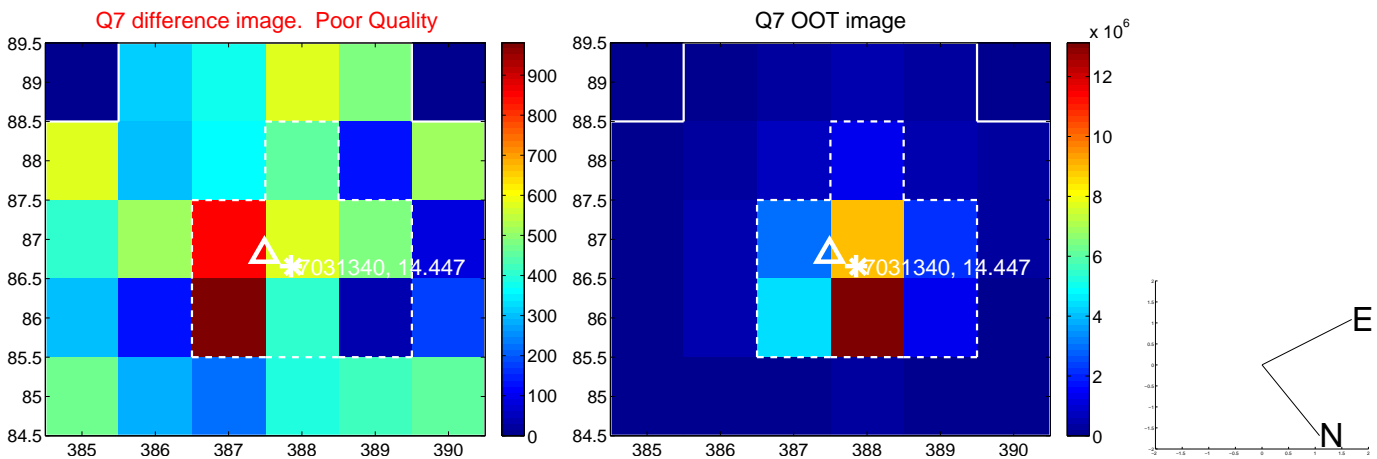
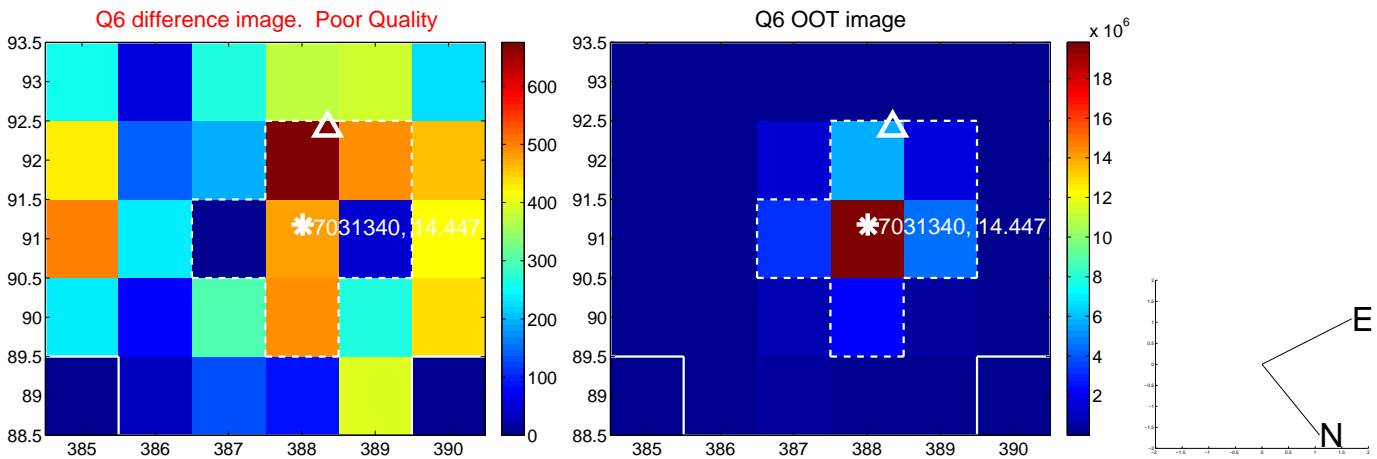
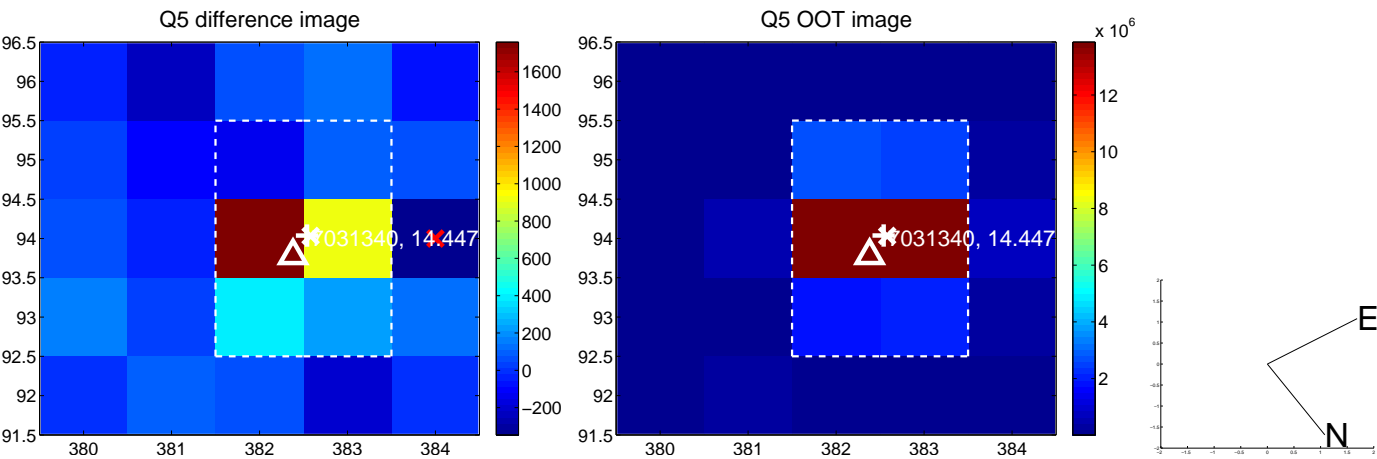


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

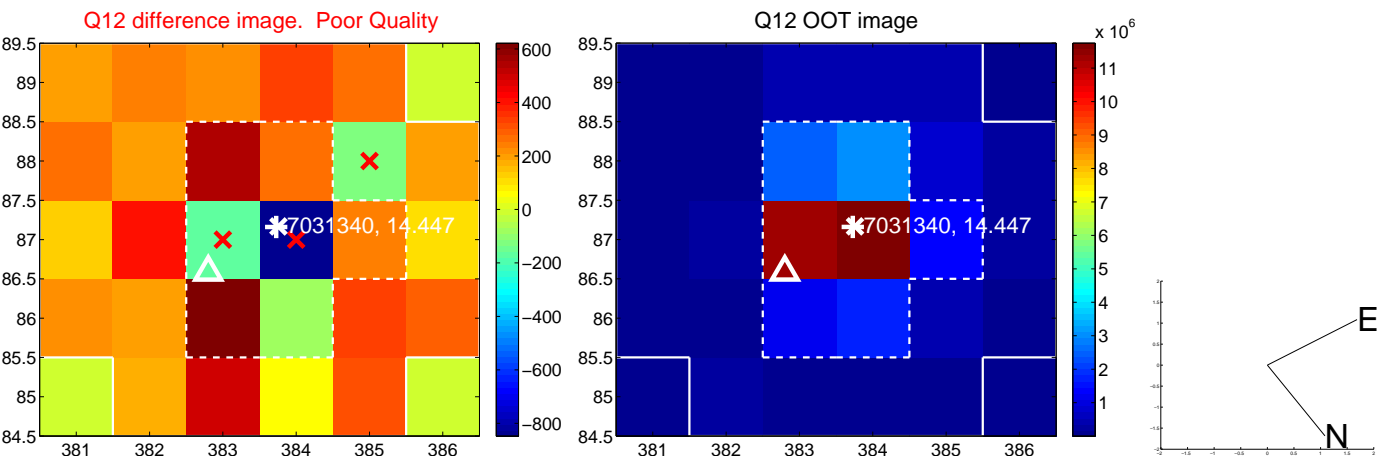
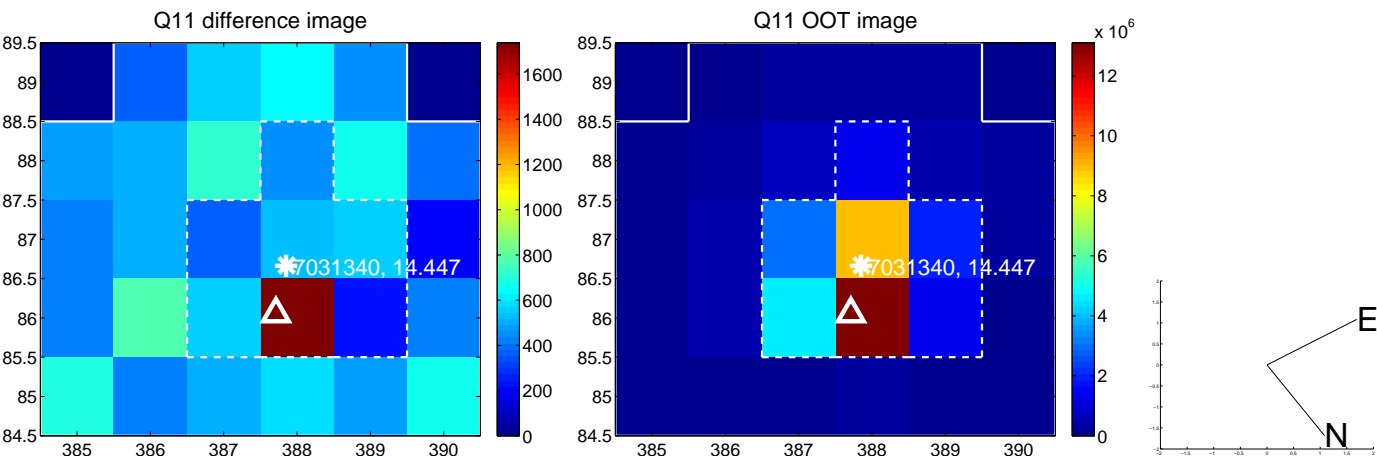
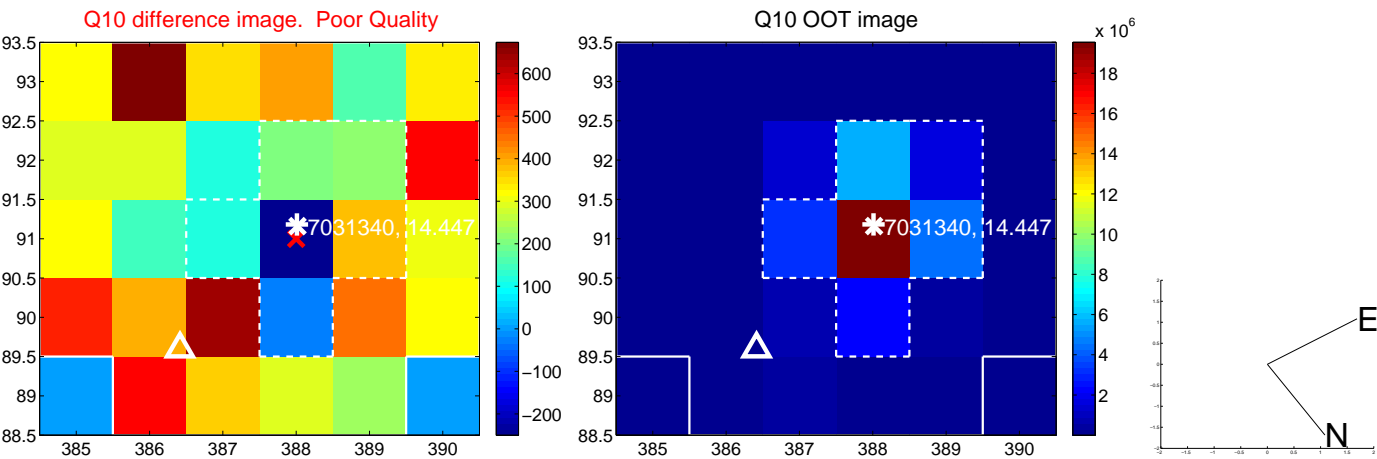
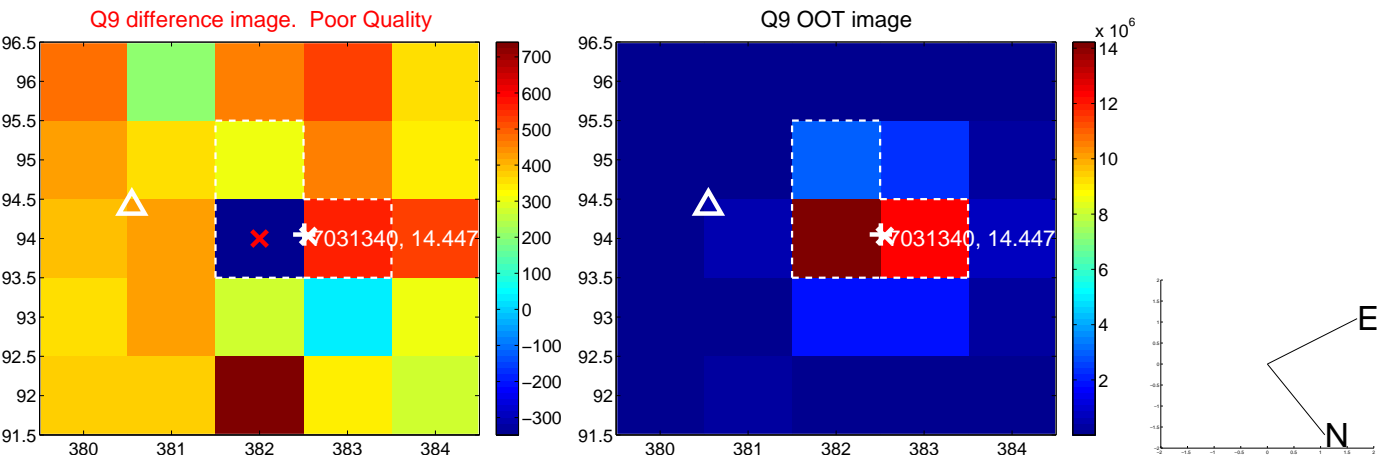
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



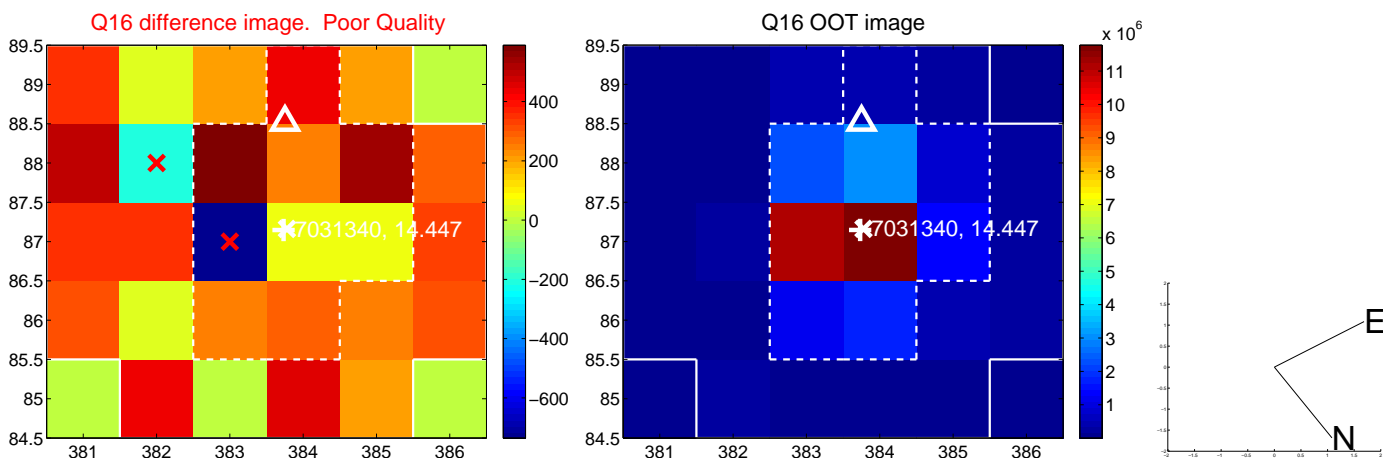
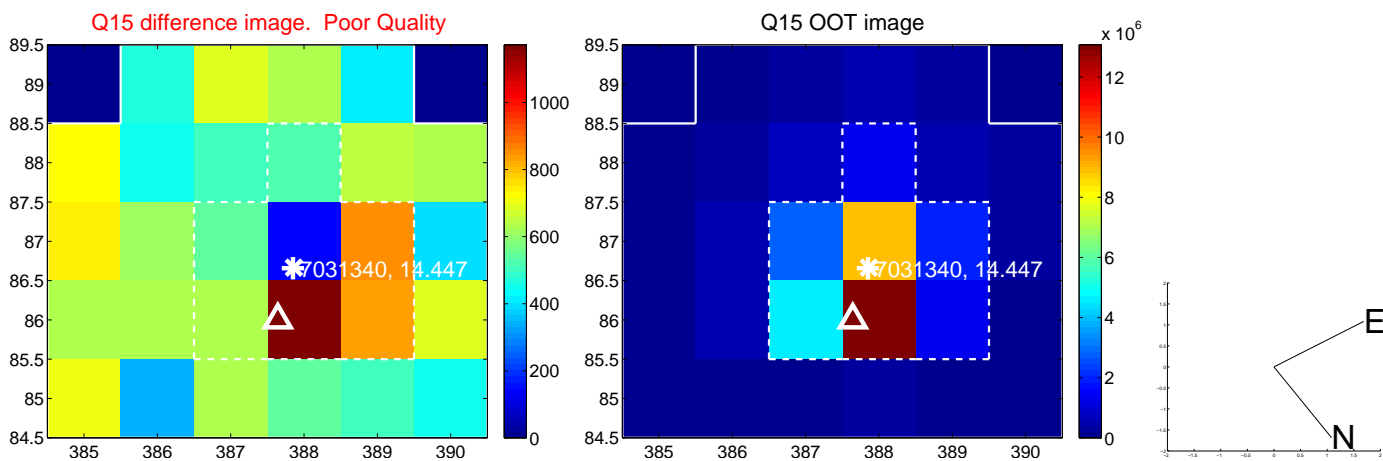
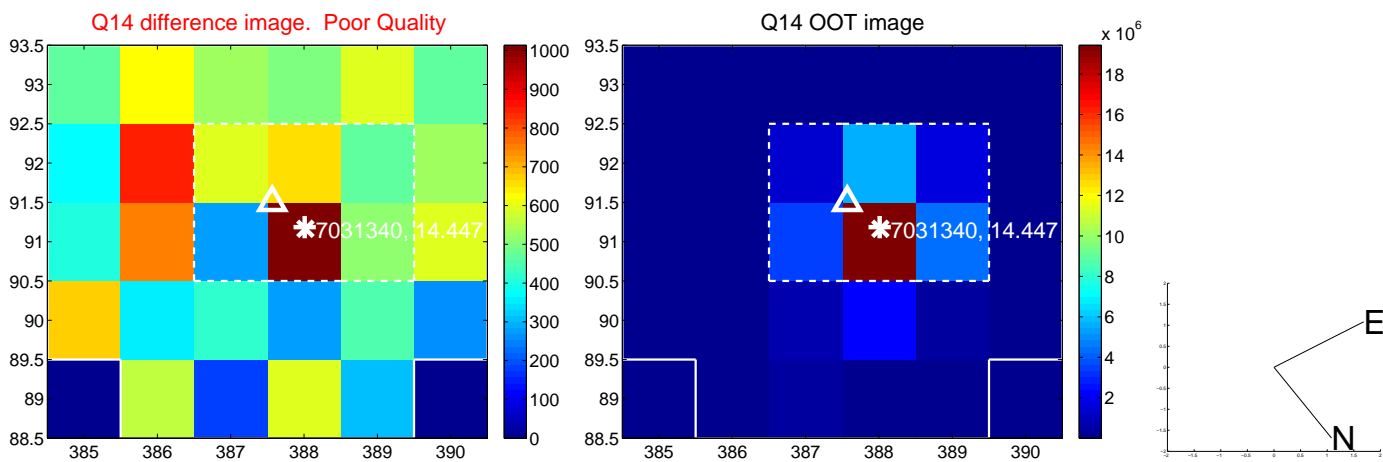
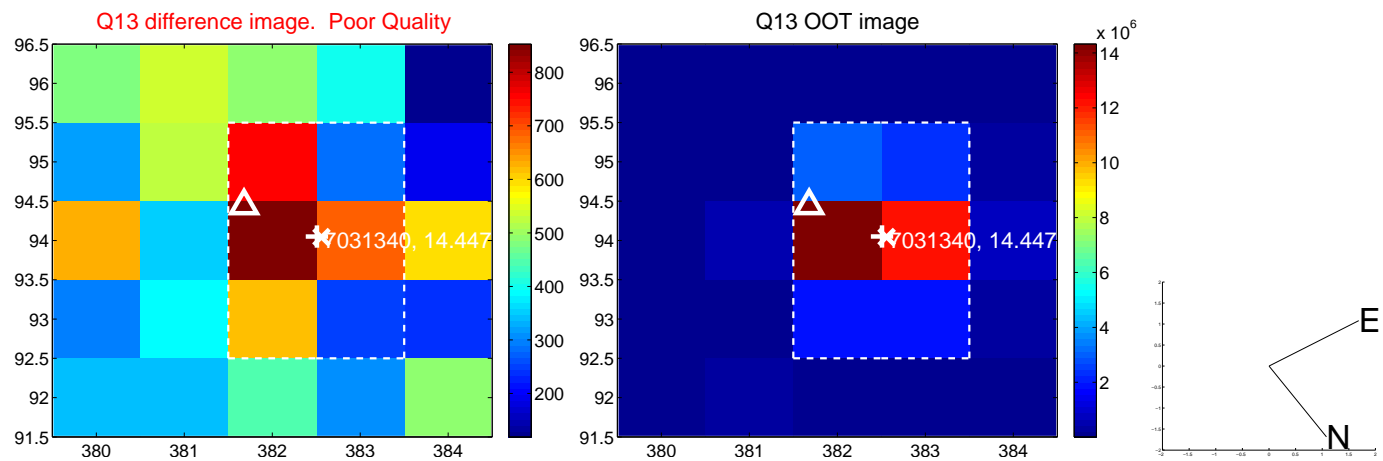
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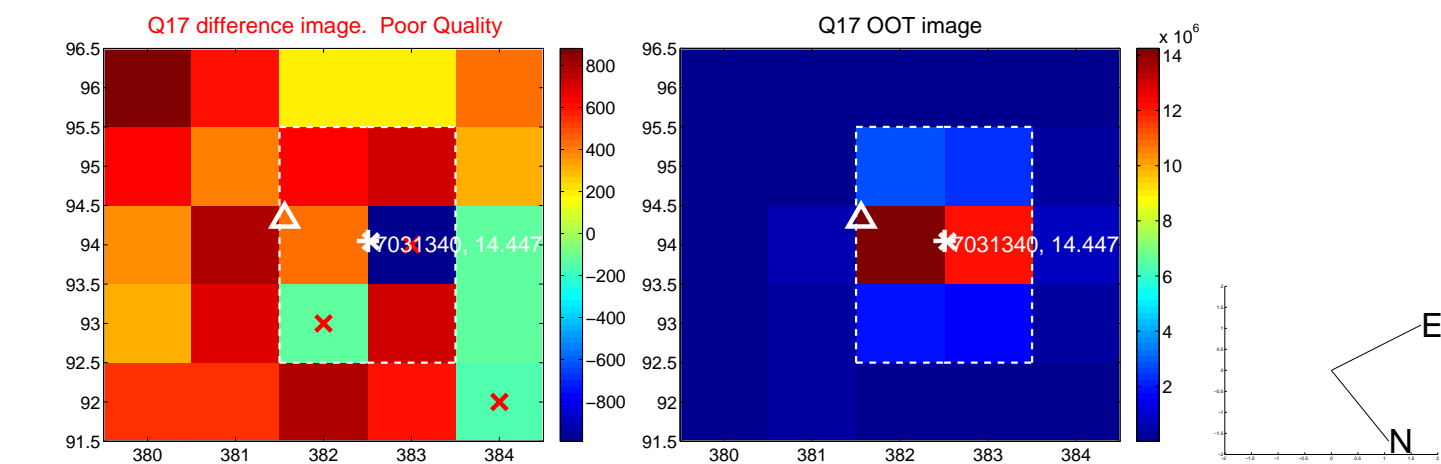
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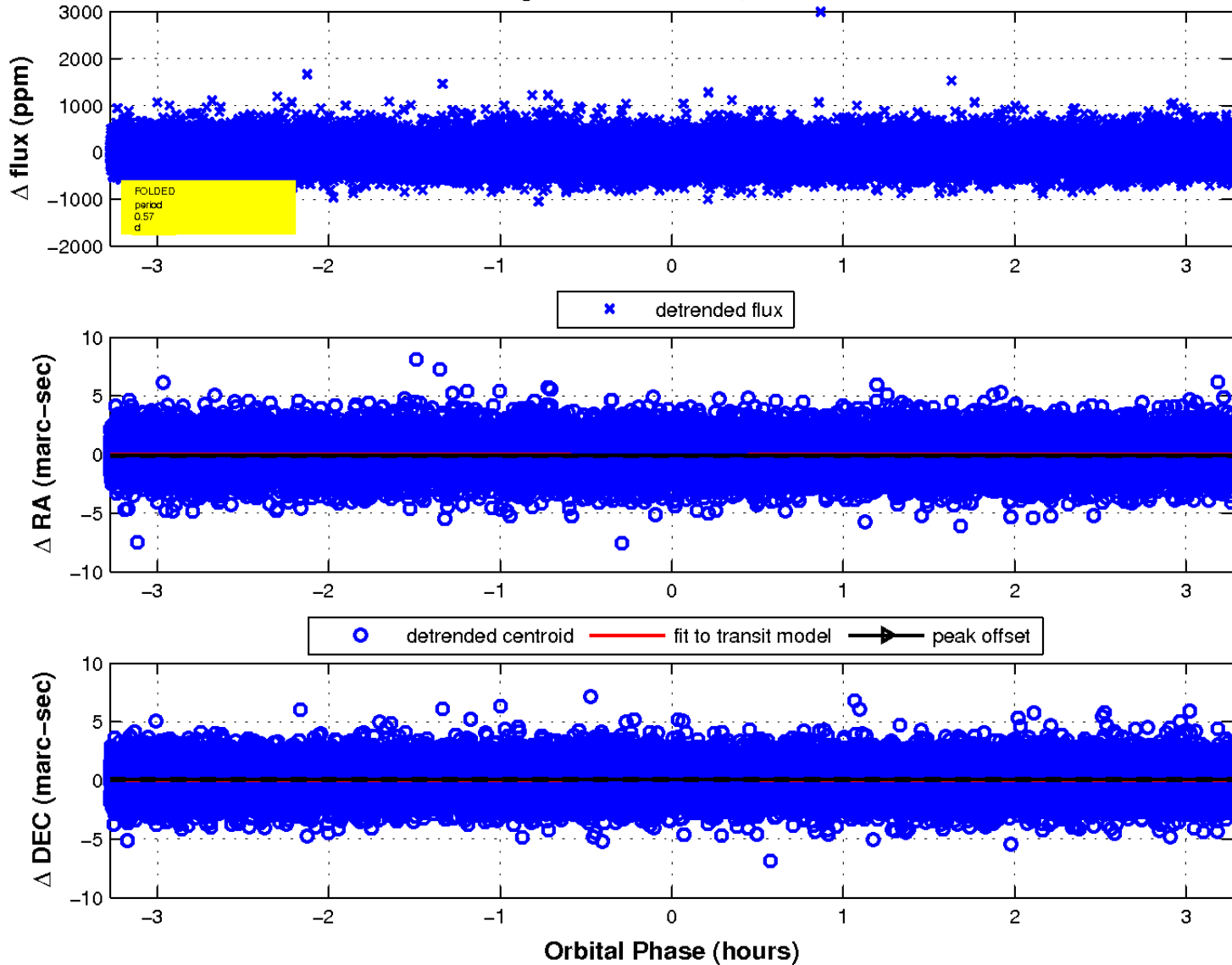
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

