

KIC 006946700

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})
006946700-01	OBS	No	0.566767	131.852825	35.8	3.088	8.5	8.2	0.86	4879	0.53	2417.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006946700-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_KIC_POS—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.

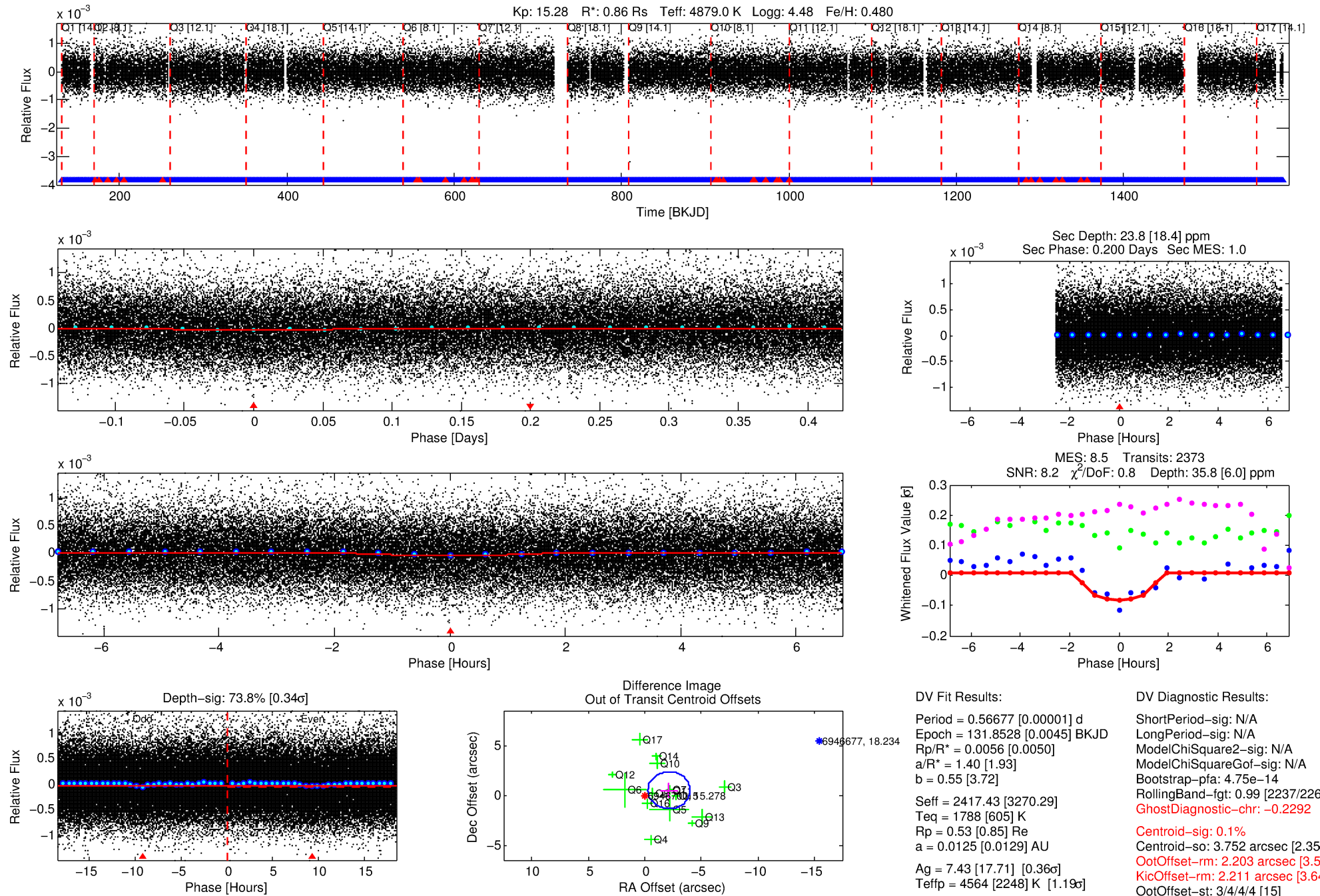
Ephemeris Match Information For 006946700-01

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
006946700-01	6946700	RR-Lyr-pri	7198959	1:1	1186.6	173	-244	7.86	15.28	17314.00	Direct-PRF	0	3.87	23.02

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 6946700 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56677 [0.00001] d
Epoch = 131.8528 [0.0045] BKJD
Rp/R* = 0.0056 [0.0050]
a/R* = 1.40 [1.93]
b = 0.55 [3.72]
Seff = 2417.43 [3270.29]
Teff = 1788 [605] K
Rp = 0.53 [0.85] Re
a = 0.0125 [0.0129] AU
Ag = 7.43 [17.71] [0.36 σ]
Teffp = 4564 [2248] K [1.19 σ]

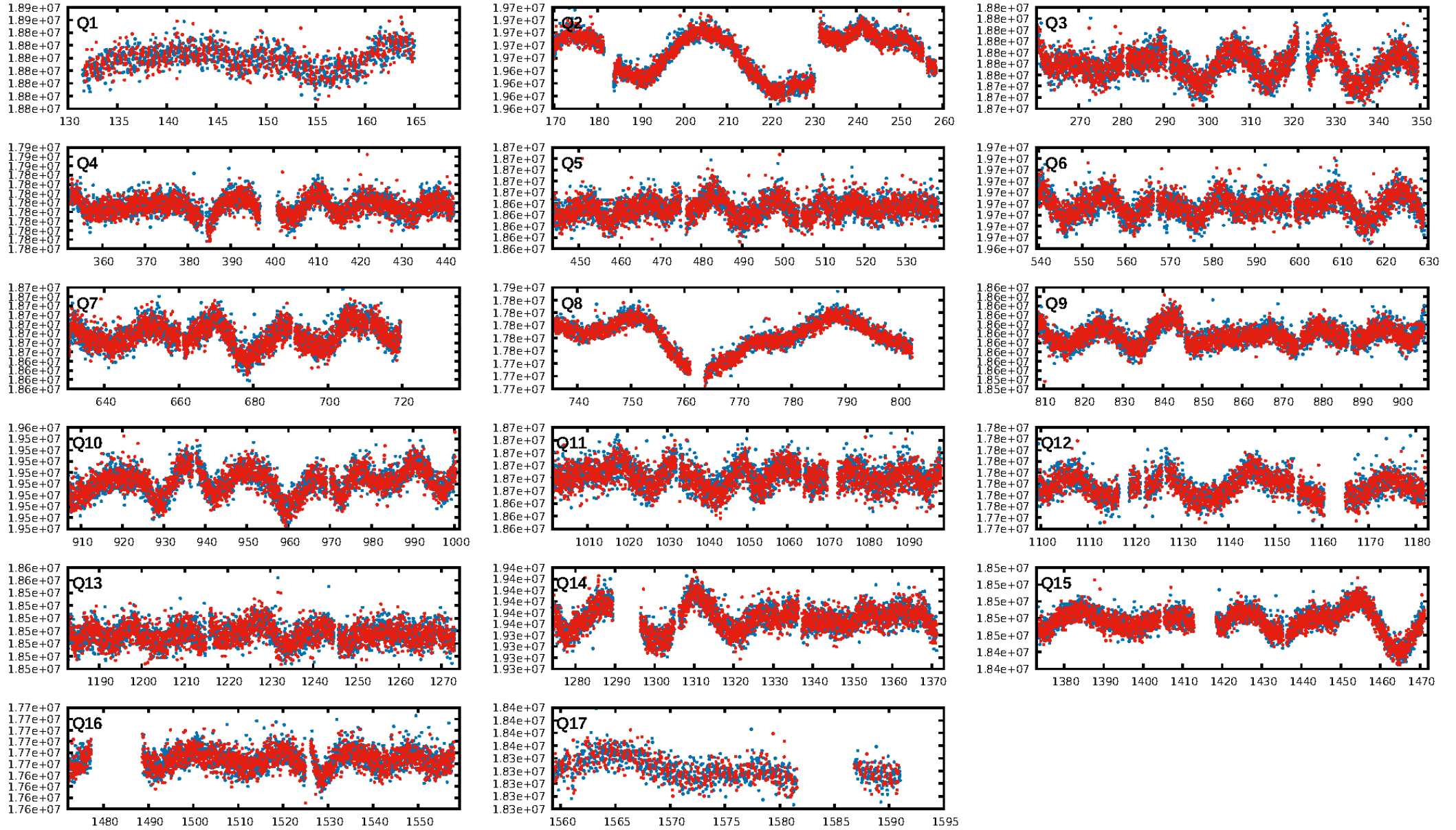
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.75e-14
RollingBand-fgt: 0.99 [2237/2267]
GhostDiagnostic-chr: -0.2292
Centroid-sig: 0.1%
Centroid-so: 3.752 arcsec [2.35 σ]
OotOffset-rm: 2.203 arcsec [3.56 σ]
KicOffset-rm: 2.211 arcsec [3.64 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [17/17]

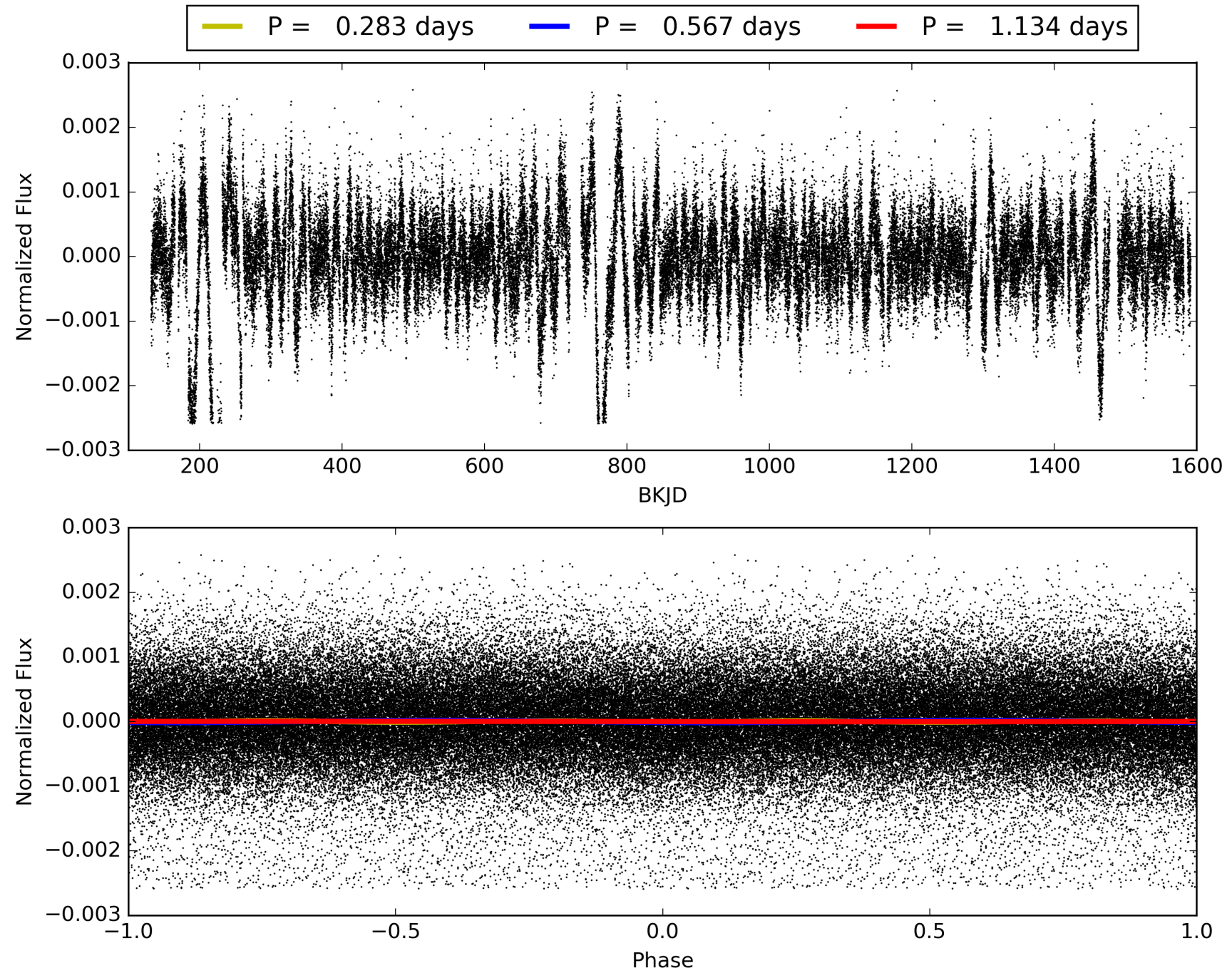
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:15:42 Z

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

TCE 006946700-01, PDC Light Curves

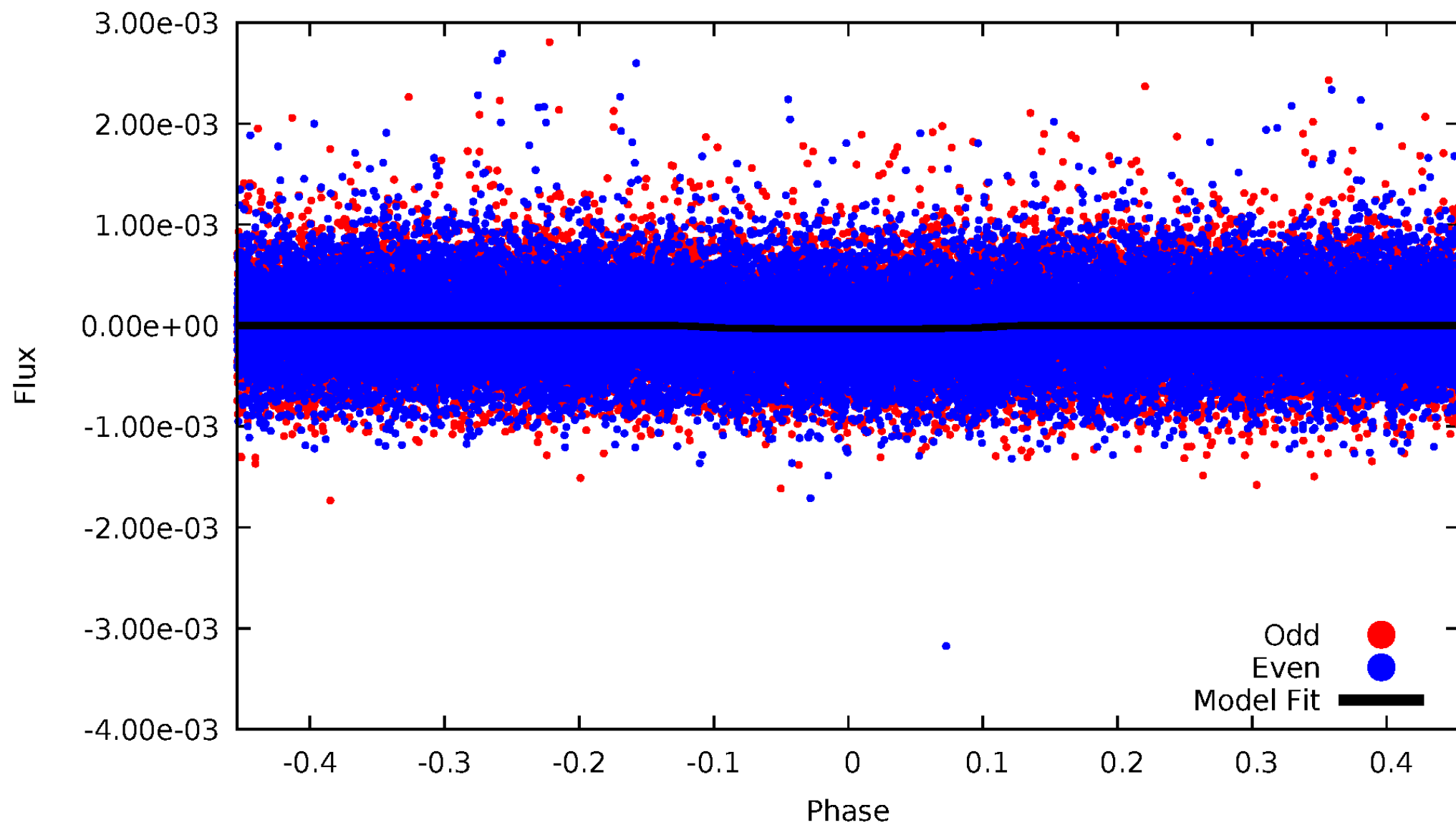


TCE 006946700-01



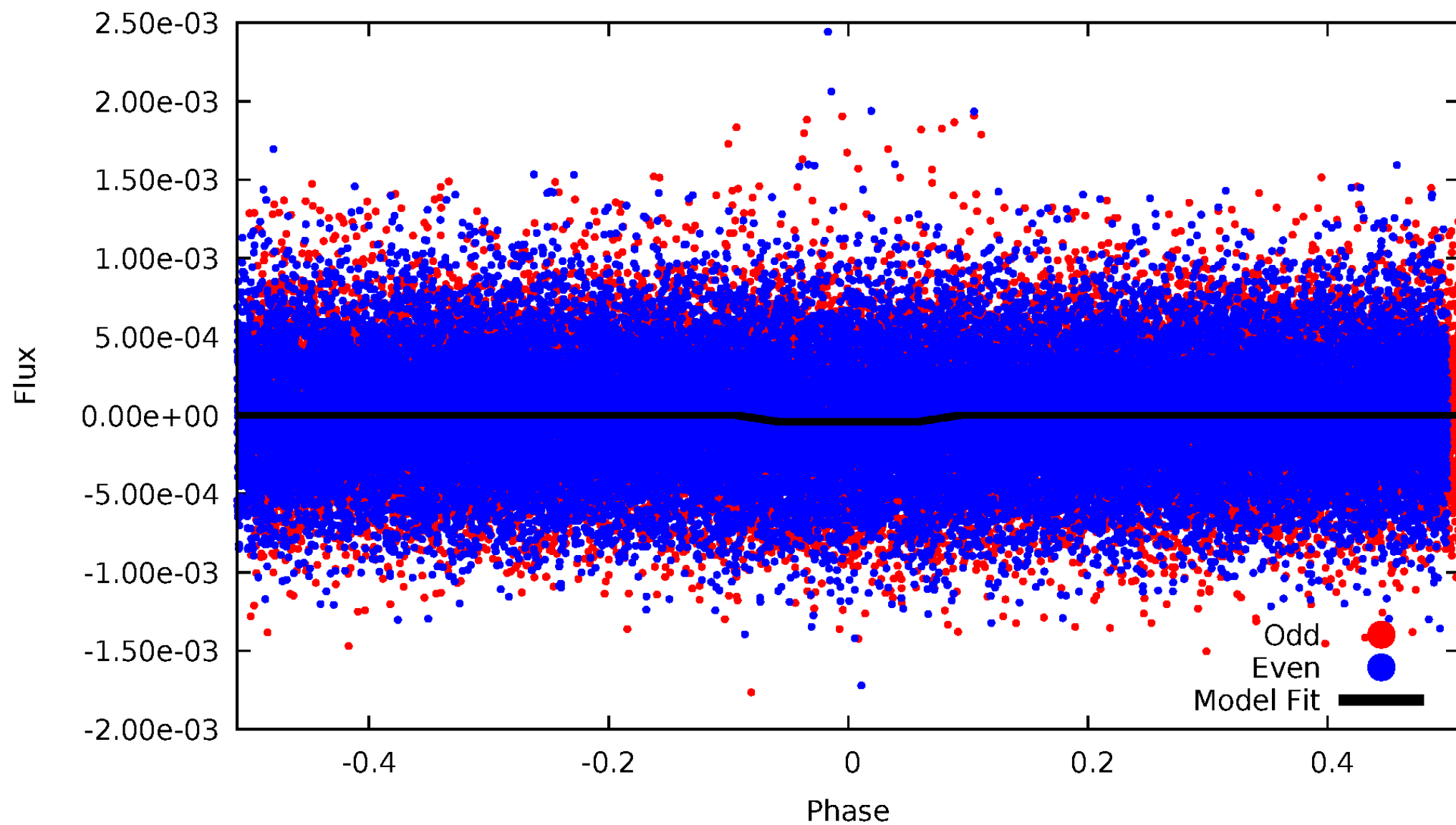
DV Odd/Even

TCE 006946700-01



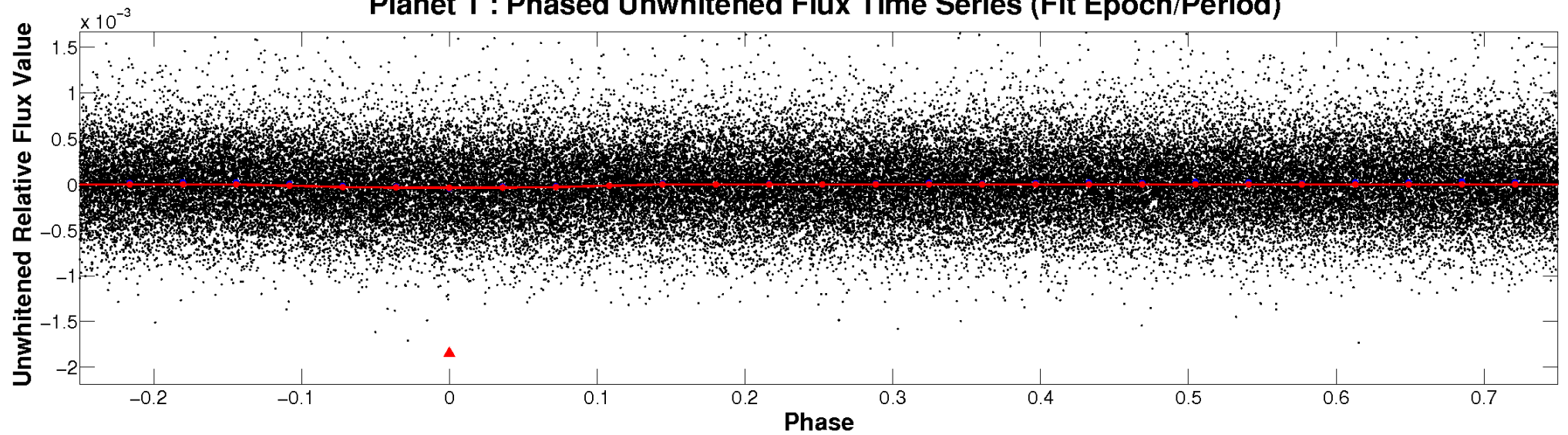
ALT Odd/Even

TCE 006946700-01

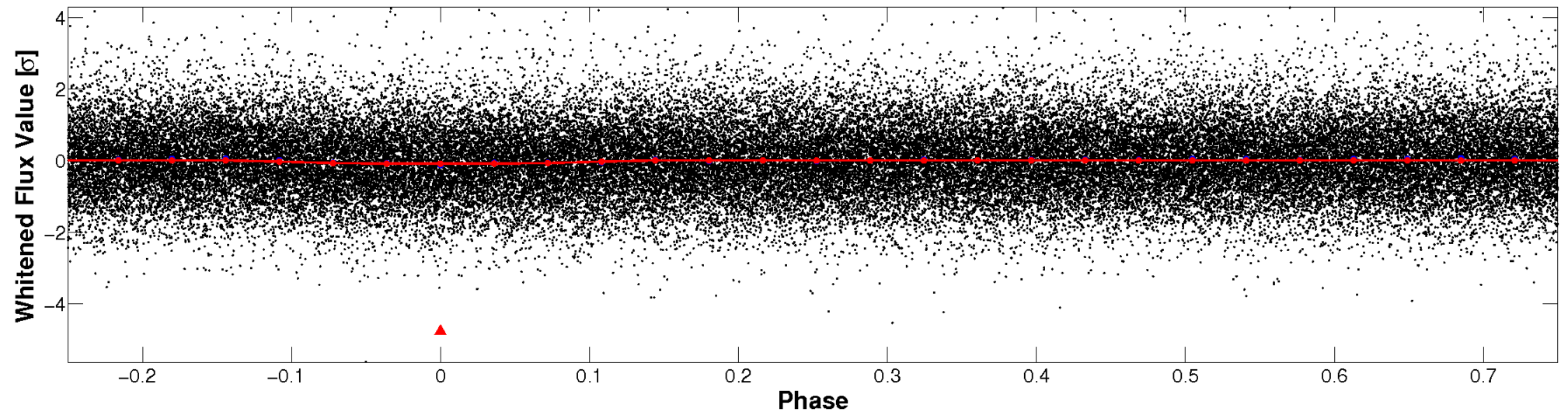


Non-Whitened Vs. Whitened Light Curve

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

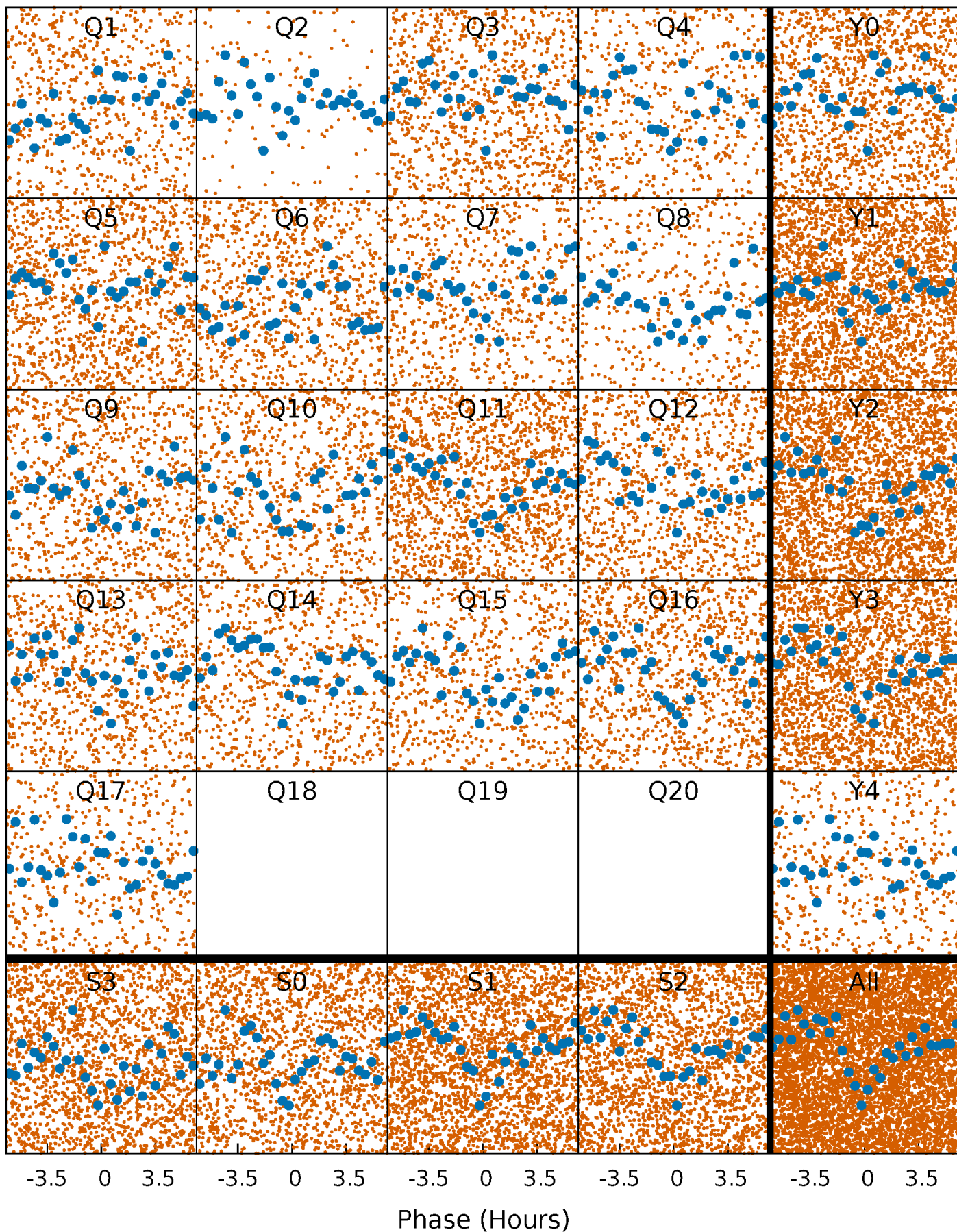


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



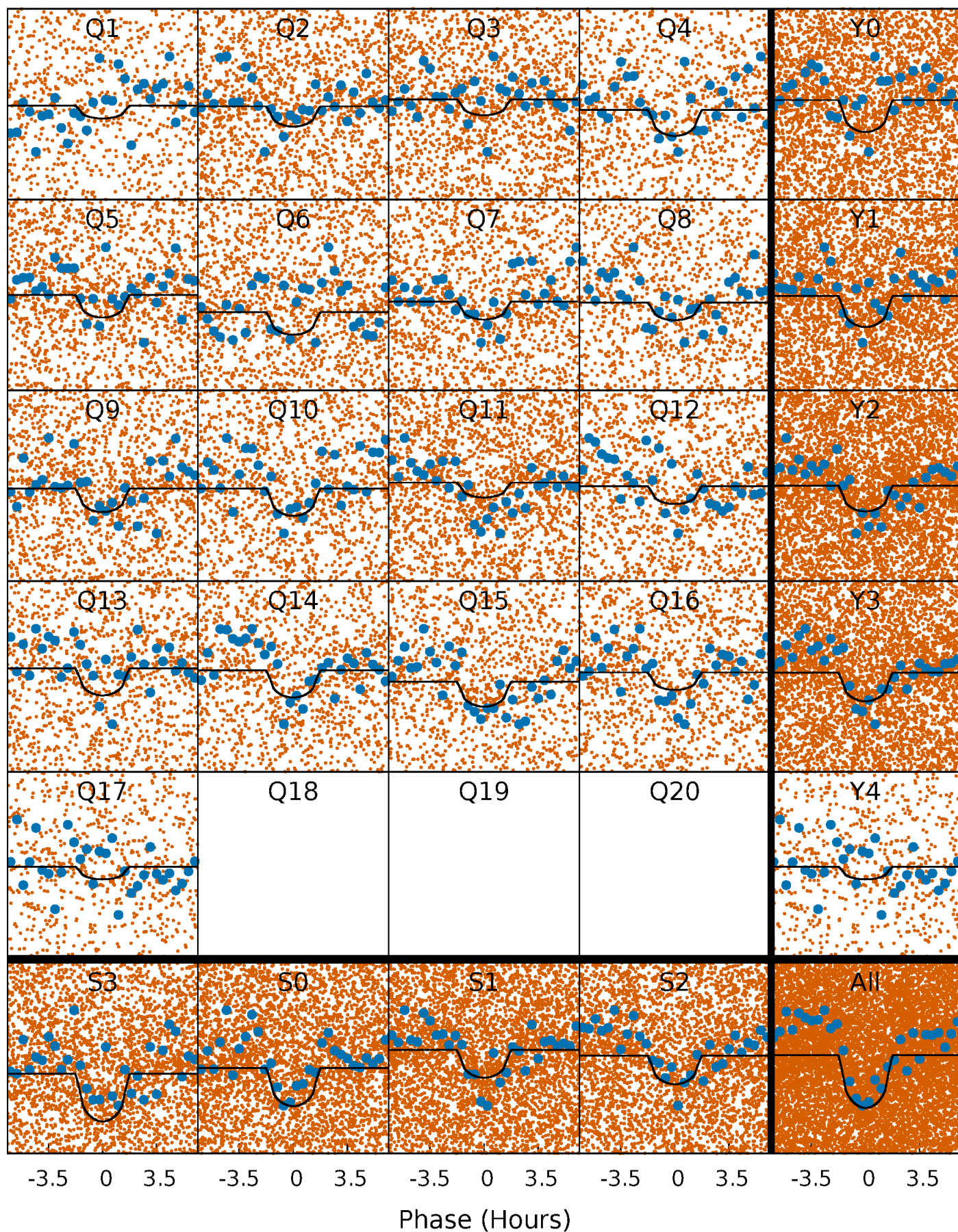
PDC Quarter-Phased Transit Curves

TCE 006946700-01 P= 0.566767 Days $T_0=131.852825$ (BKJD)



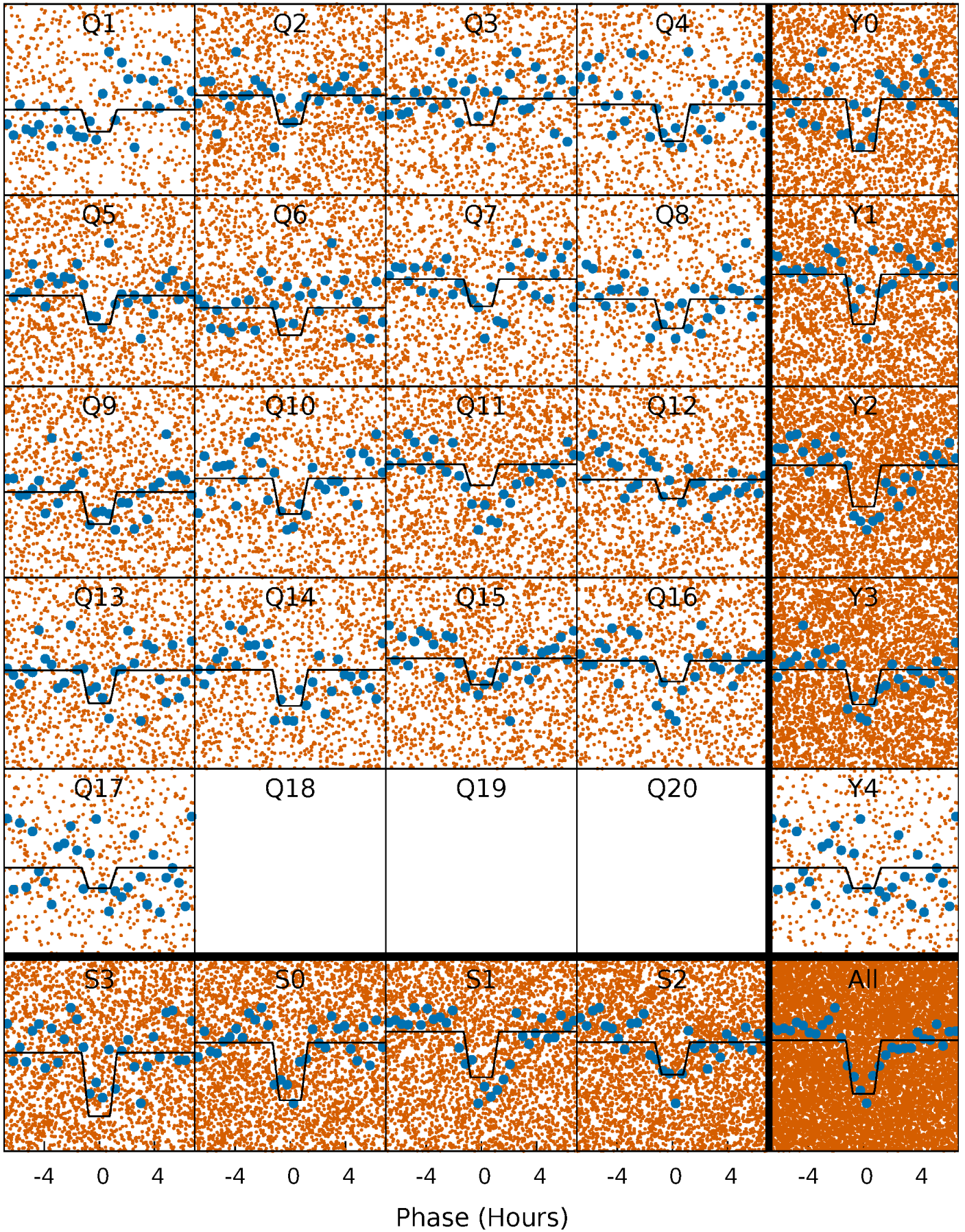
DV Quarter-Phased Transit Curves

TCE 006946700-01 P= 0.566767 Days $T_0=131.852825$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

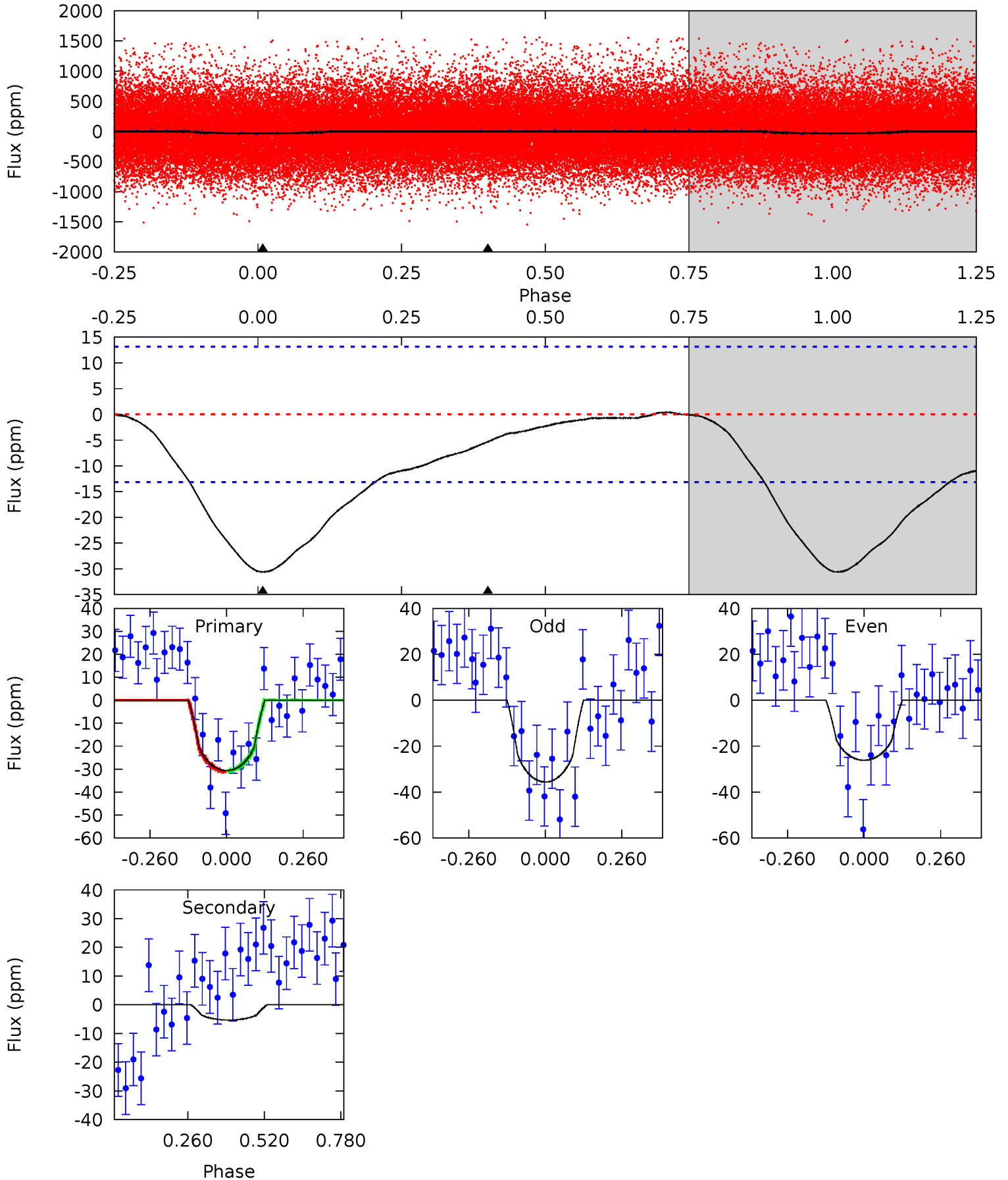
TCE 006946700-01 P= 0.566788 Days $T_0=131.818072$ (BKJD)



DV Model-Shift Uniqueness Test

006946700-01, P = 0.566767 Days, E = 131.286058 Days

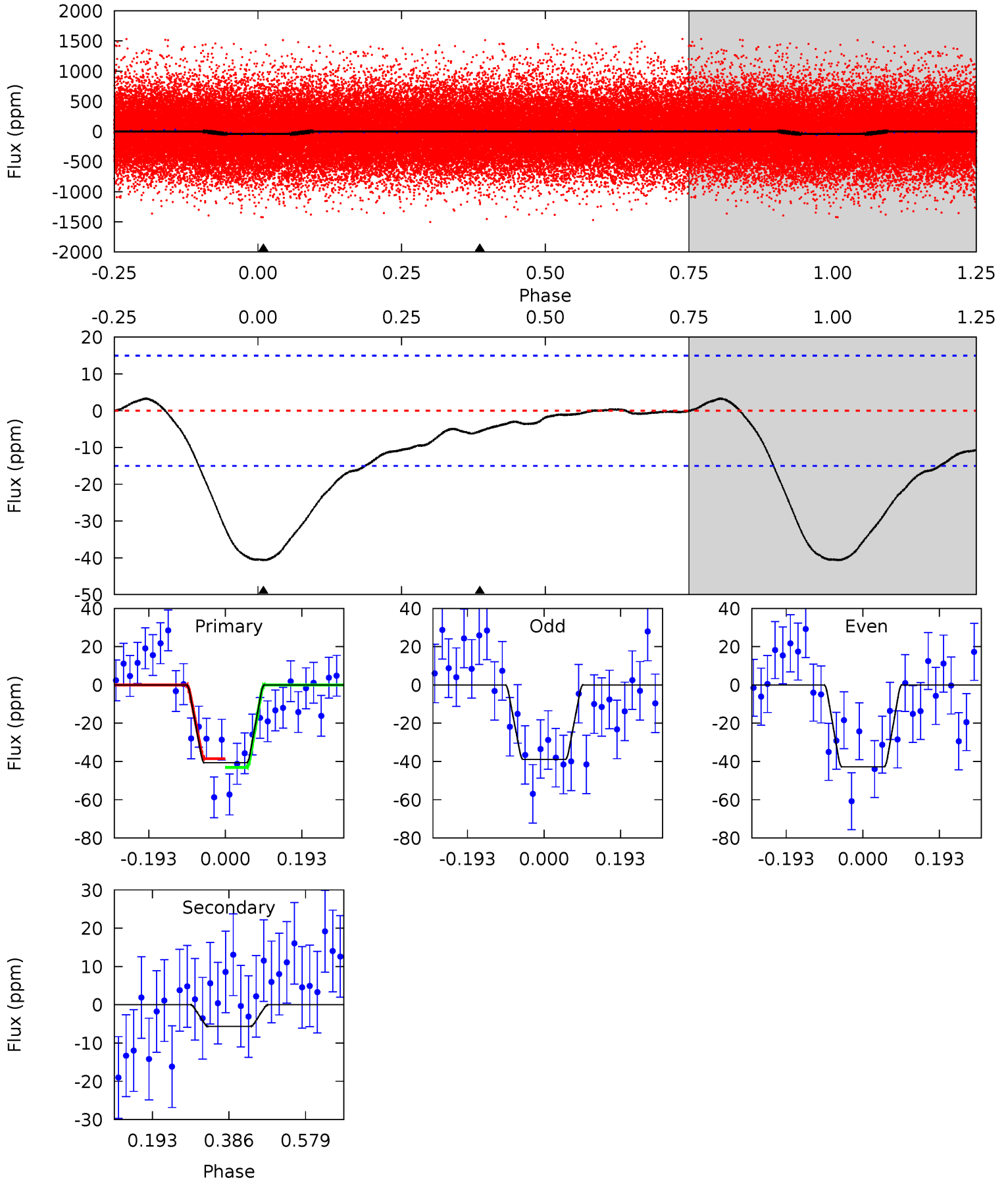
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	1.76	0	0	4.36	1.13	0.11	10.1	10.1	1.76	1.76	1.60	0.89	0.01	0.06



Alt Model-Shift Uniqueness Test

006946700-01, P = 0.566788 Days, E = 131.251284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	1.67	0	0	4.42	1.30	0.35	12.0	12.0	1.67	1.67	0.57	0.90	0.08	0.68



Stellar Parameters For KIC 006946700

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4879^{+145}_{-130}	$4.476^{+0.077}_{-0.654}$	$0.480^{+0.050}_{-0.250}$	$0.864^{+1.165}_{-0.116}$	$0.815^{+0.057}_{-0.041}$	$1.780^{+0.565}_{-1.629}$
	+3%/-3%	+2%/-15%	+10%/-52%	+135%/-13%	+7%/-5%	+32%/-92%
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 006946700-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 3	$0.74^{+0.63}_{-0.47}$	2610^{+793}_{-197}	3052^{+1420}_{-5843}	$0.717^{+4.255}_{-0.575}$
Alt.	-6 ± 3	$0.79^{+0.67}_{-0.47}$	2601^{+822}_{-184}	2999^{+1345}_{-5861}	$0.674^{+3.705}_{-0.558}$

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 $A_{obs} \gg 1.0$

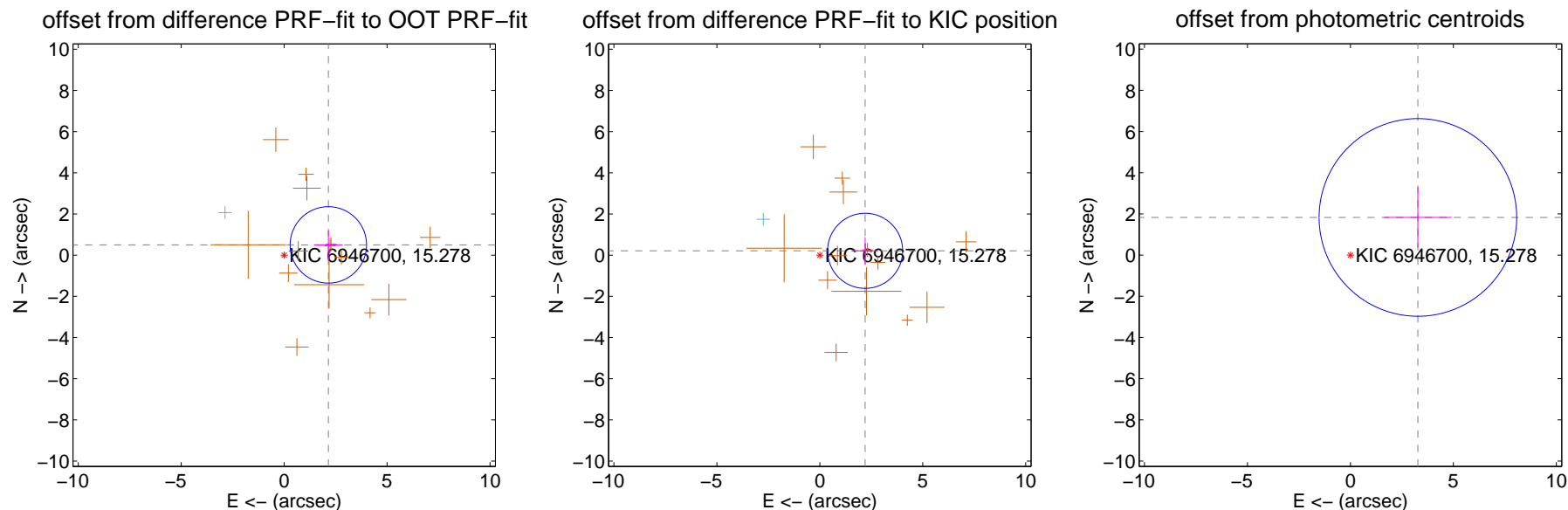
DV Centroid Data

Supplemental centroid analysis for 006946700-01. Kepler magnitude: 15.28. Transit SNR 8.24

There are 1 quarters with good PRF difference image offsets

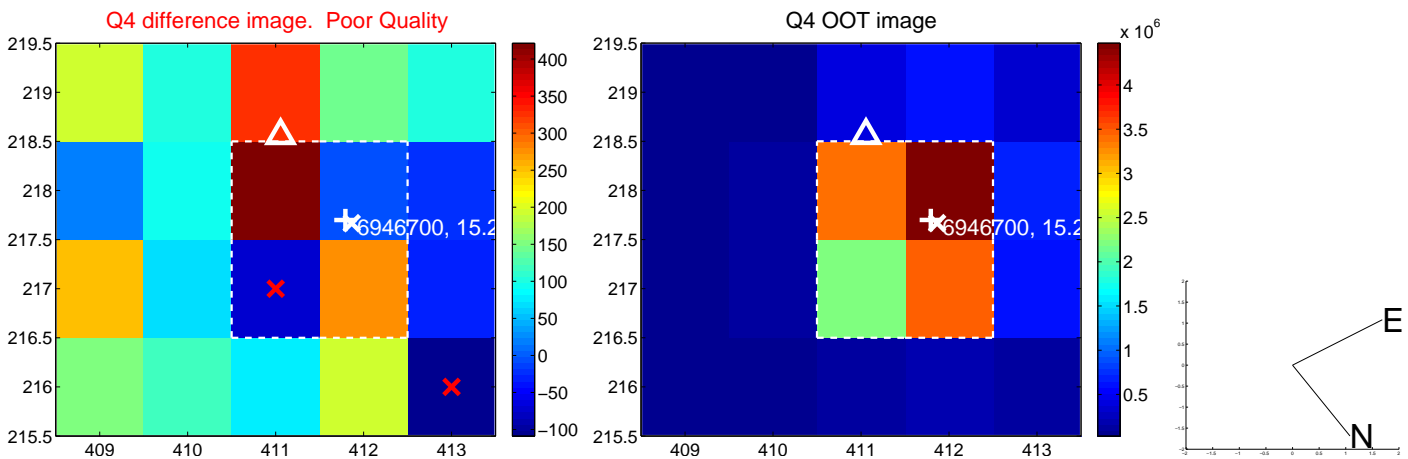
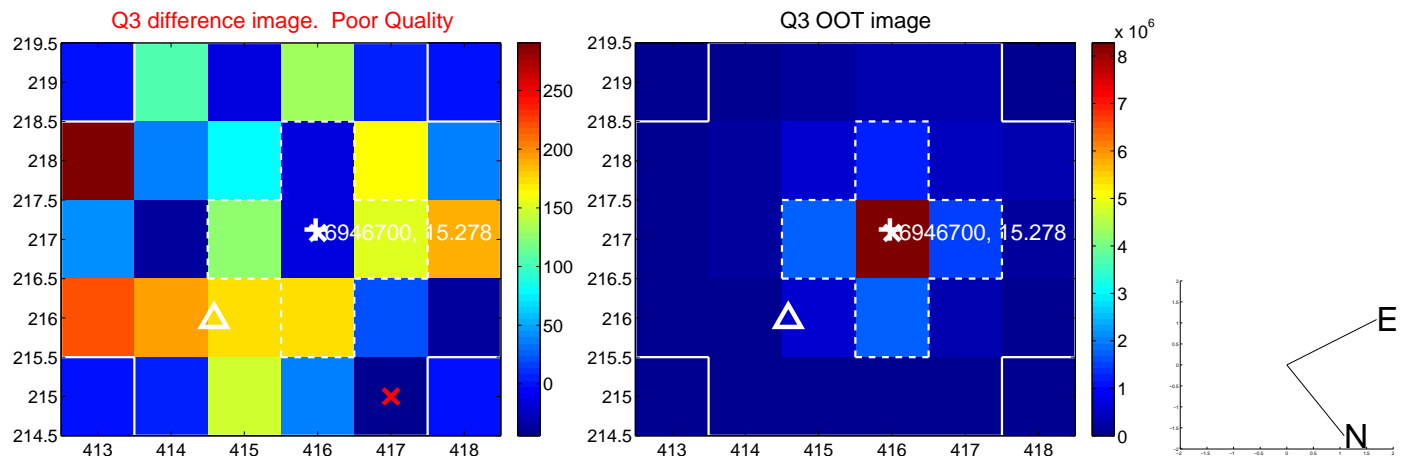
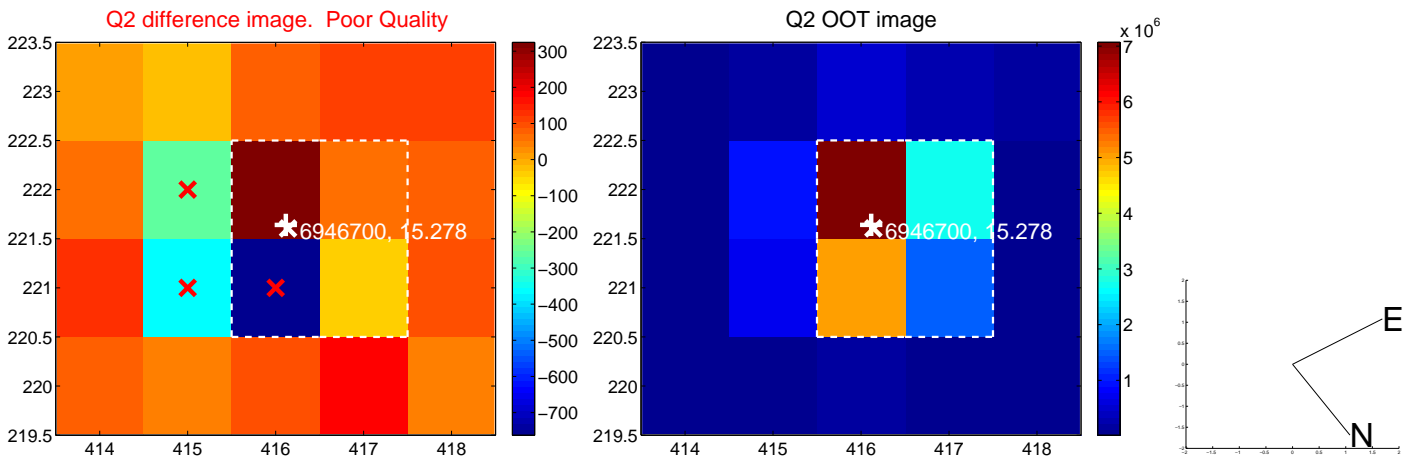
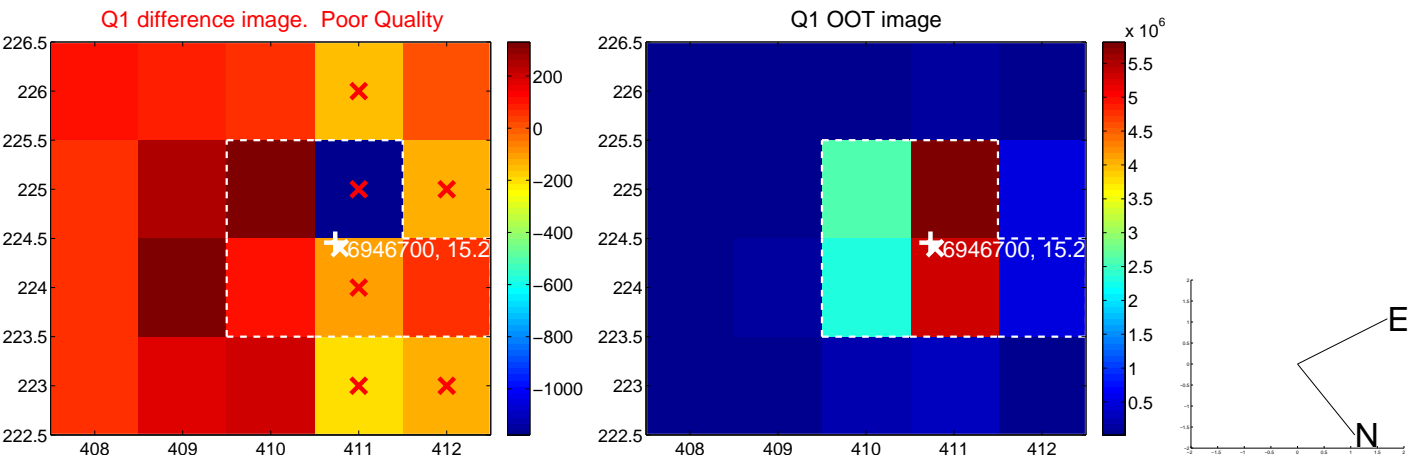
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.203 ± 0.618	3.56	-2.146 ± 0.695	0.498 ± 0.693
PRF-fit source offset from KIC position	2.211 ± 0.608	3.64	-2.201 ± 0.631	0.211 ± 0.661
photometric centroid source offset	3.75 ± 1.60	2.35	-3.28 ± 1.64	1.83 ± 1.47

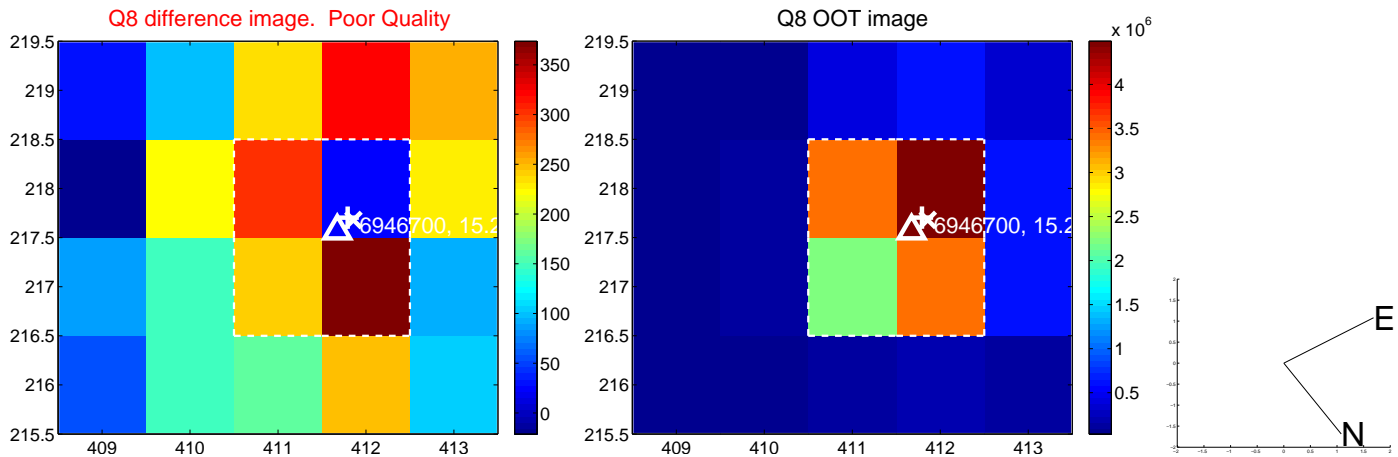
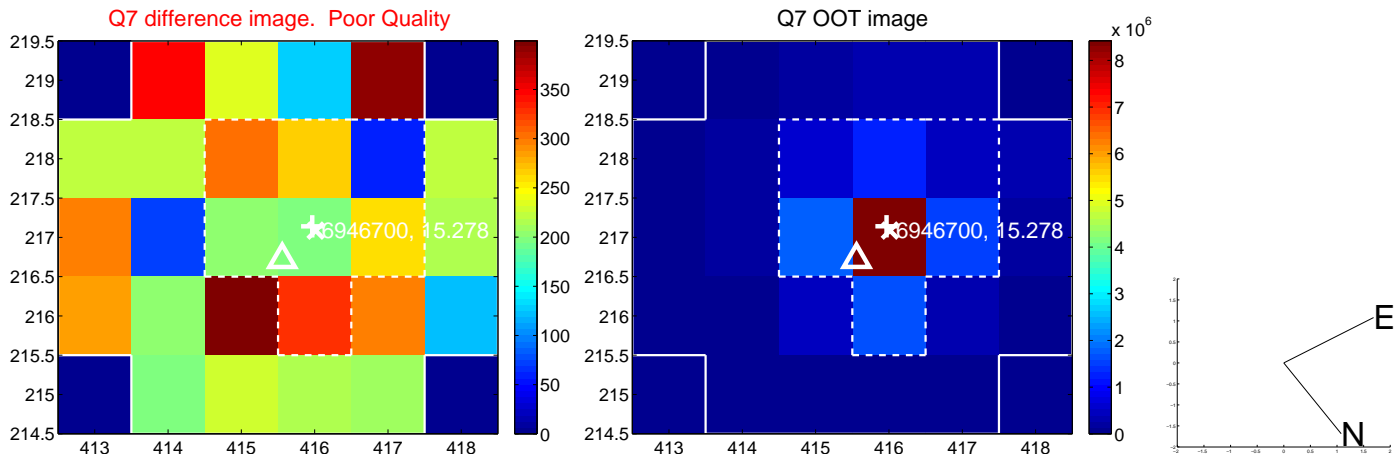
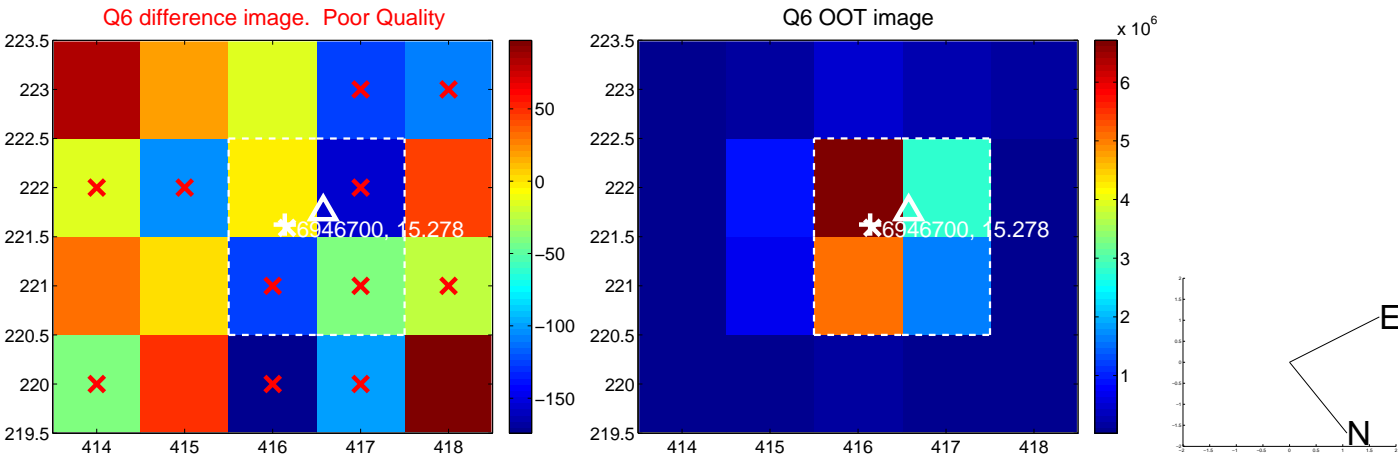
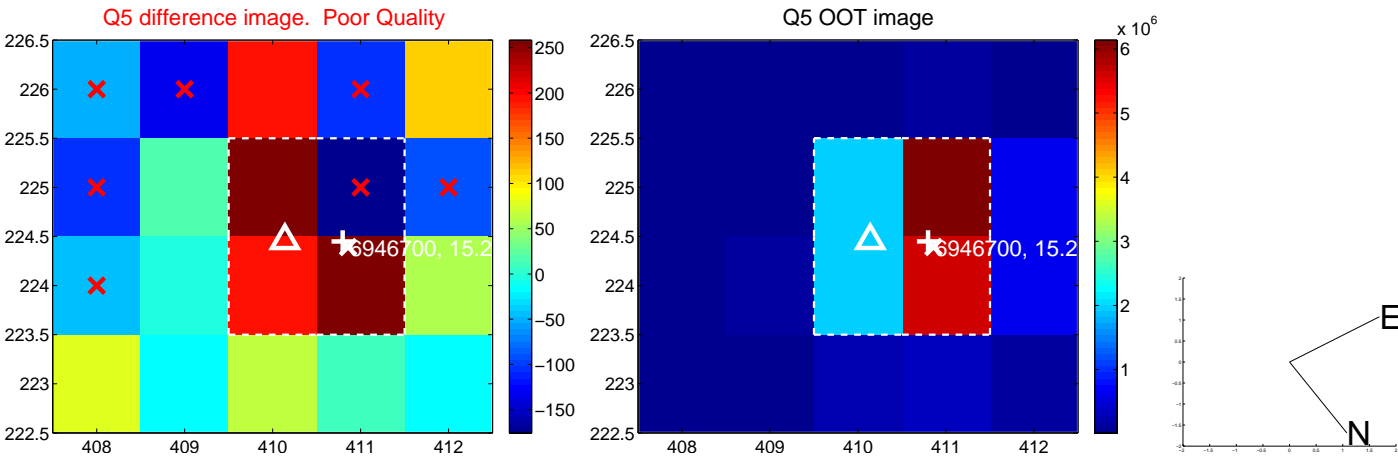


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

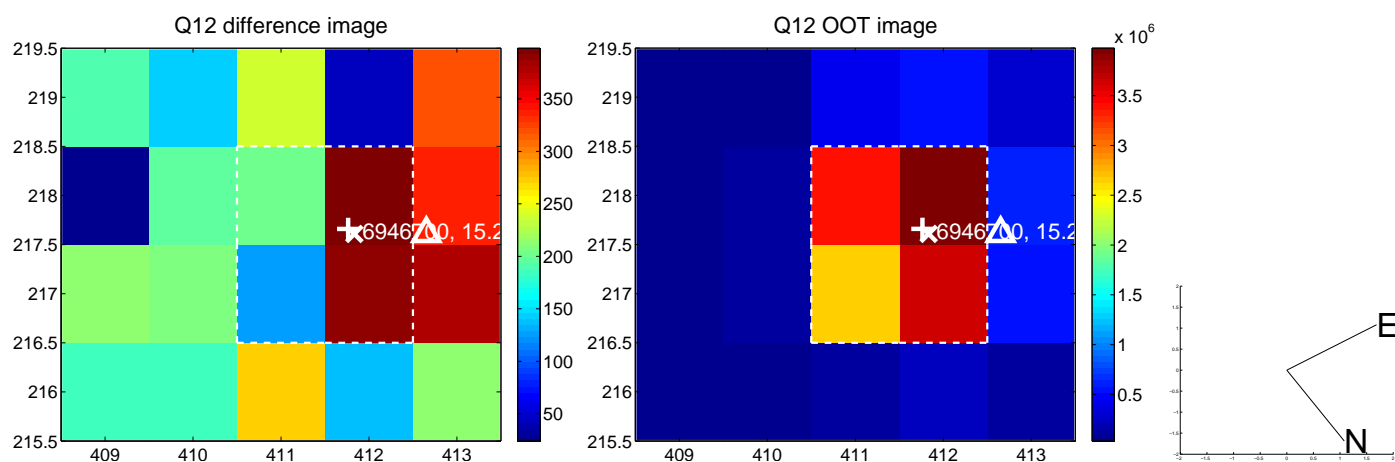
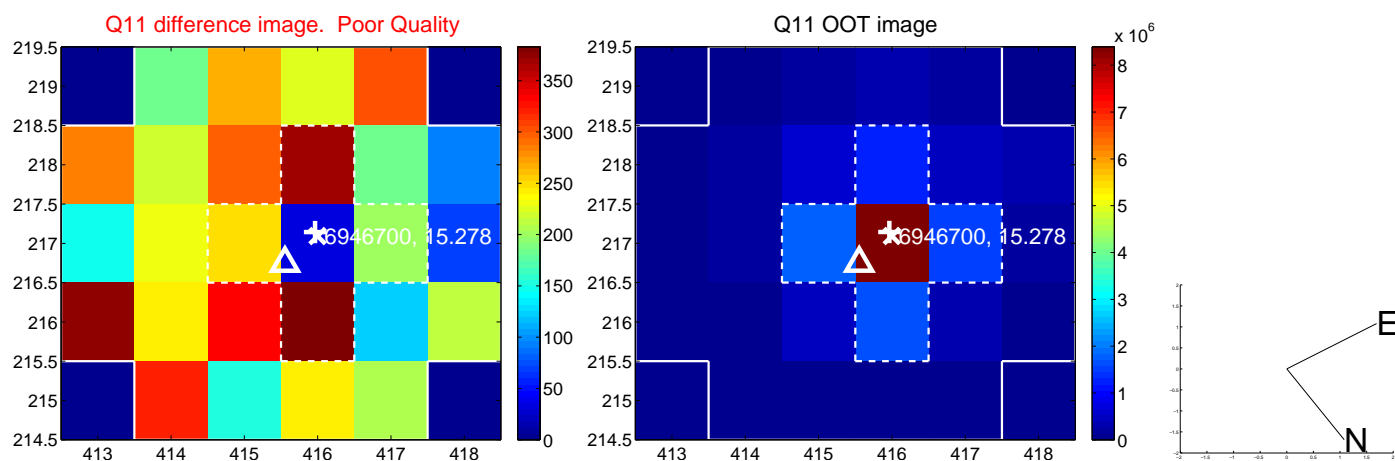
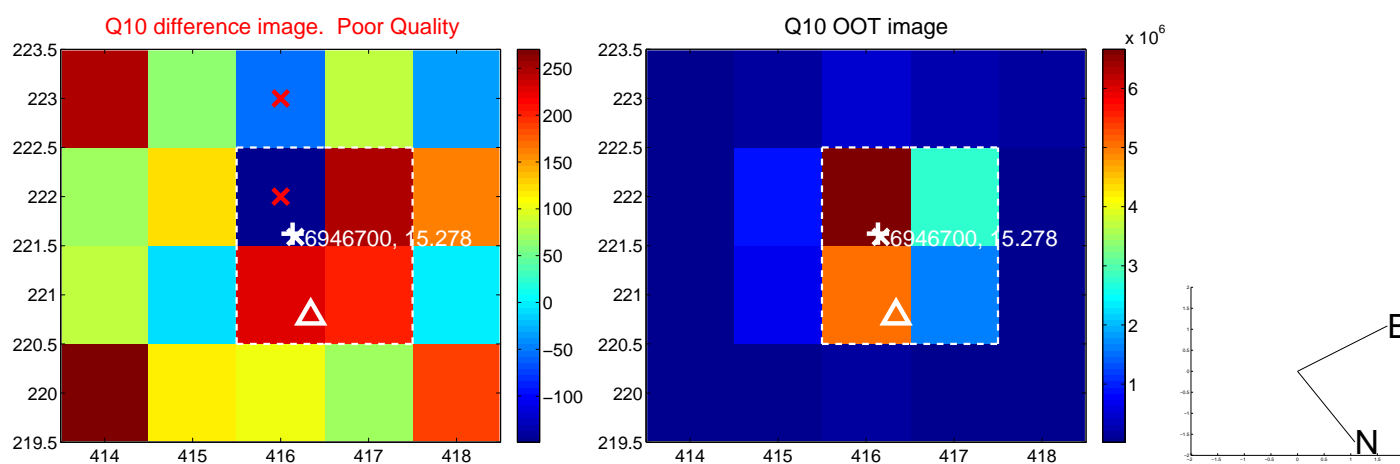
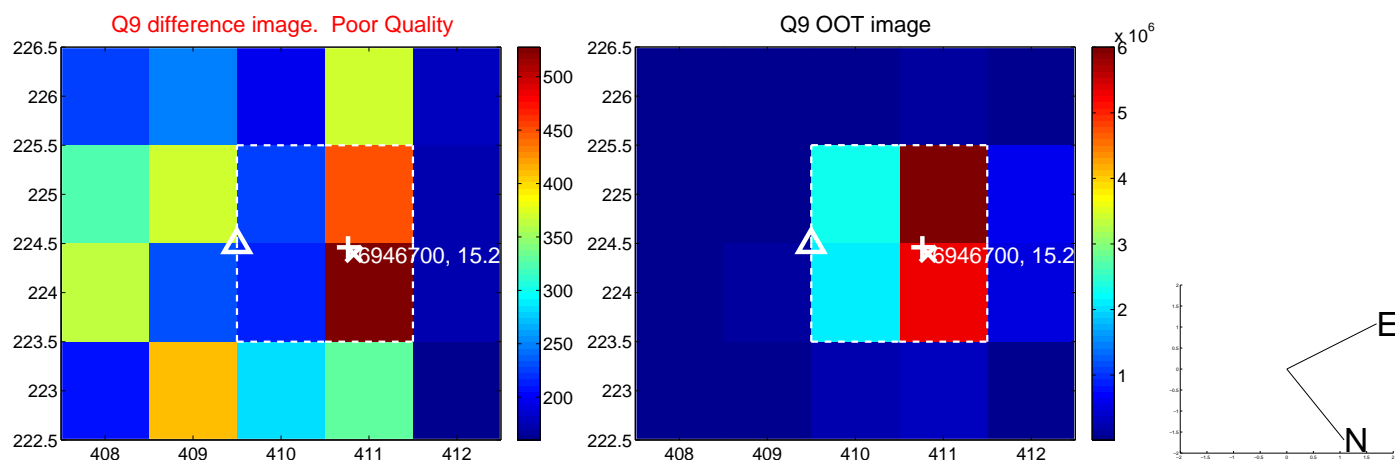
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



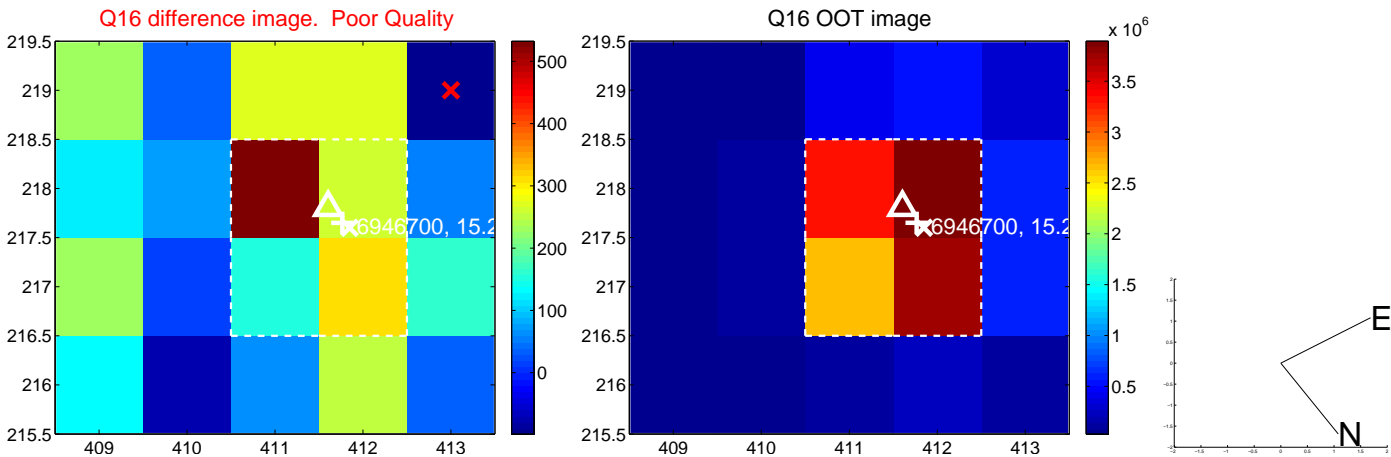
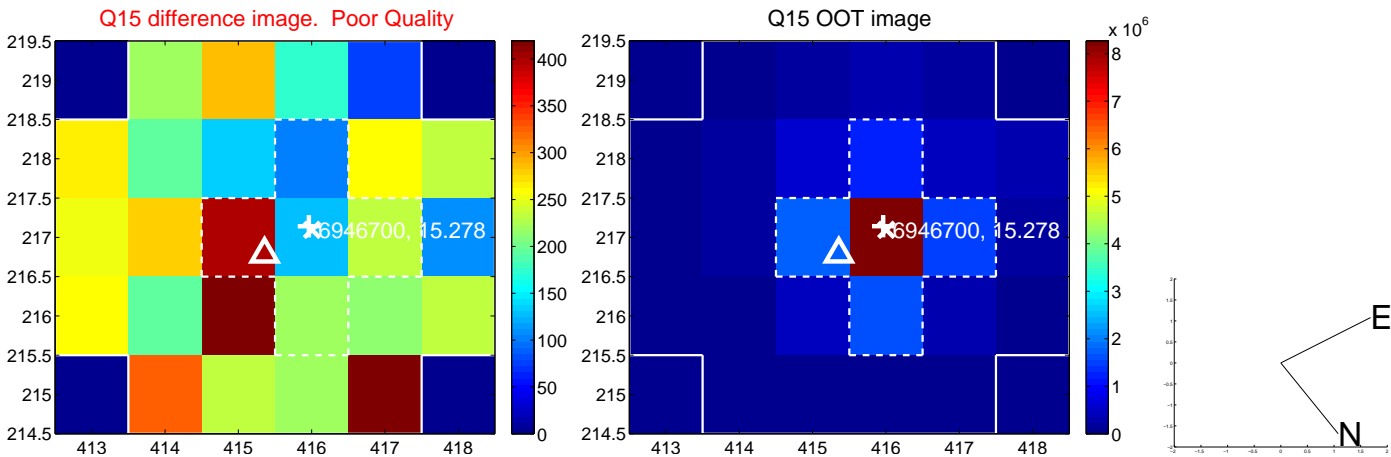
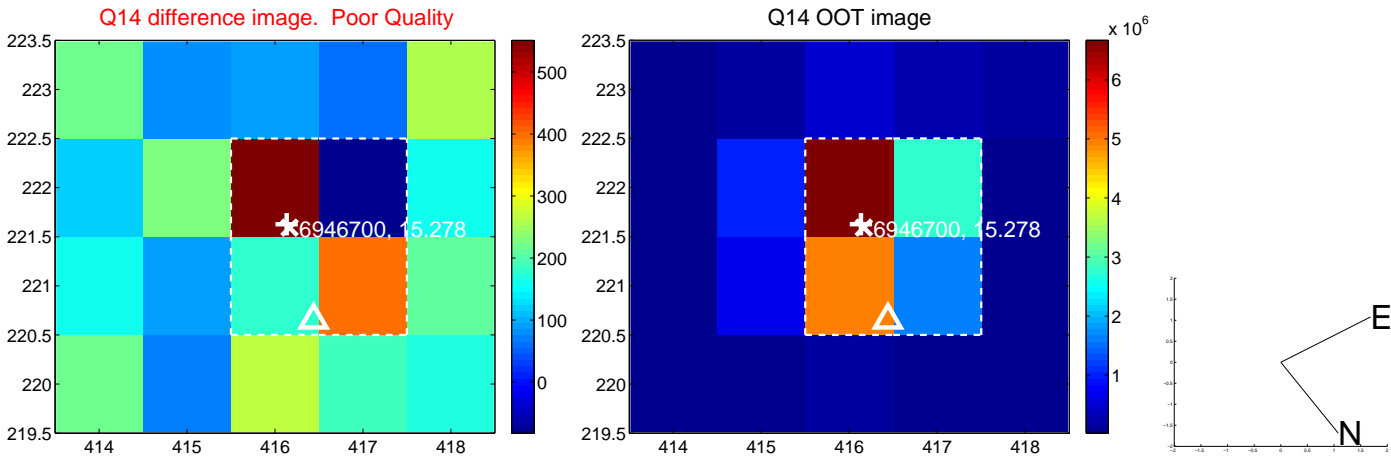
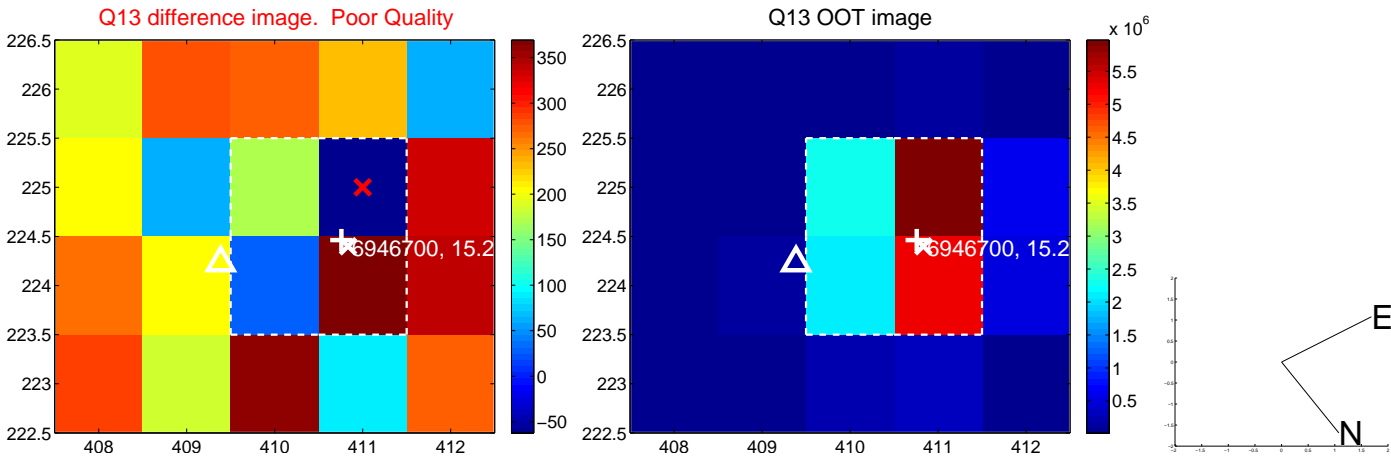
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



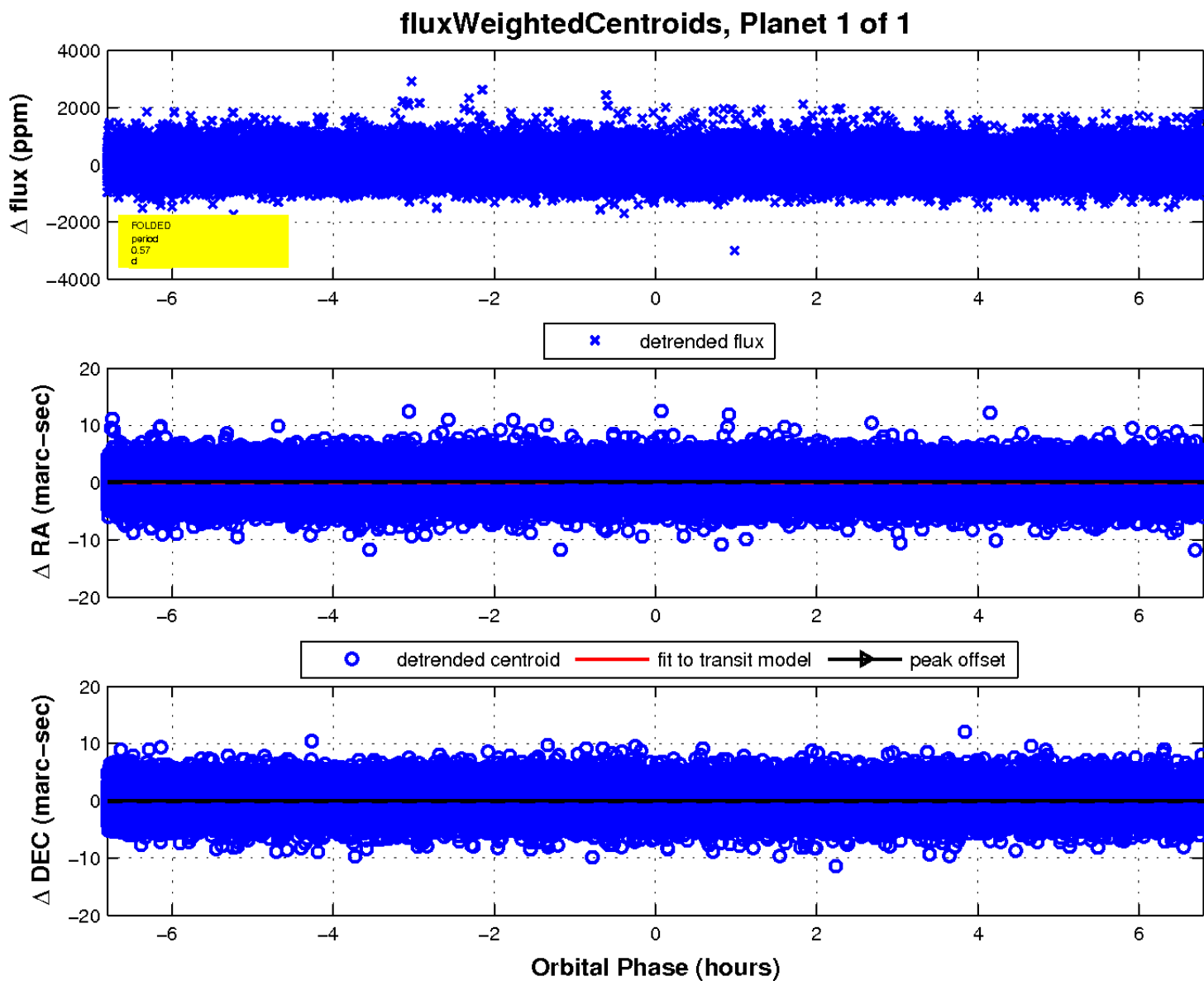
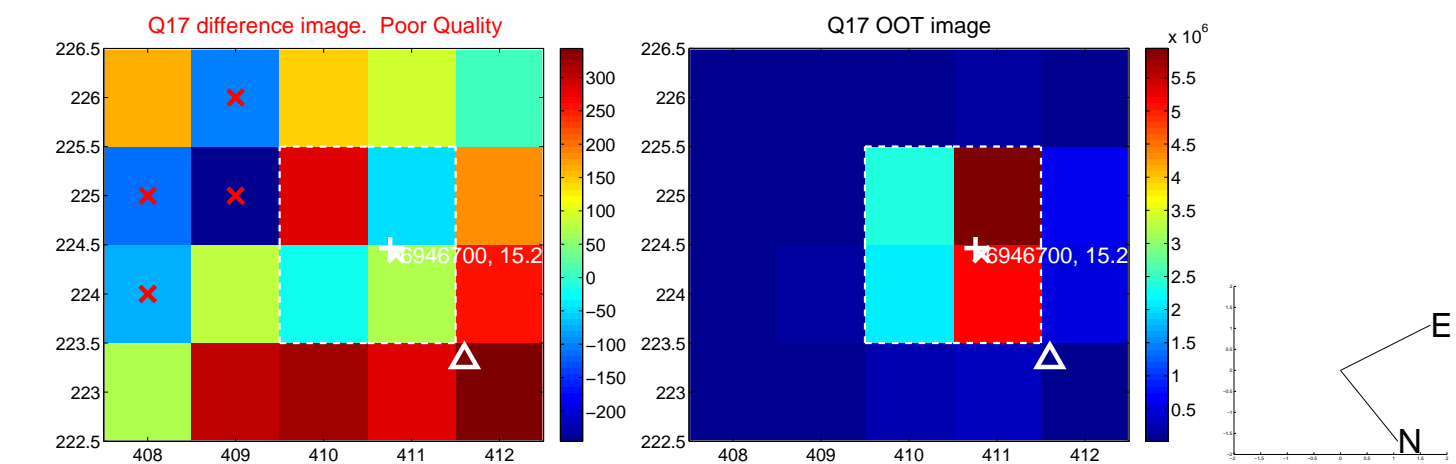
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

