

KIC 006593140

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})
006593140-01	OBS	No	5.378329	135.334565	3.4	42.947	9.0	1.5	2.12	6856	0.42	1943.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006593140-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET

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

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

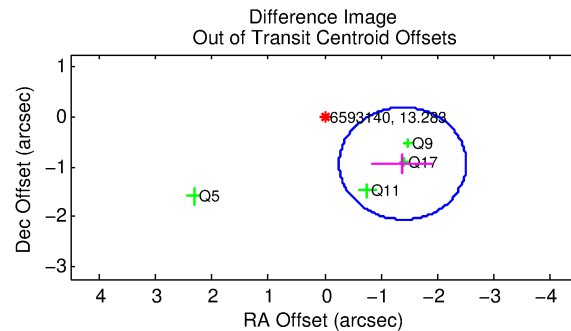
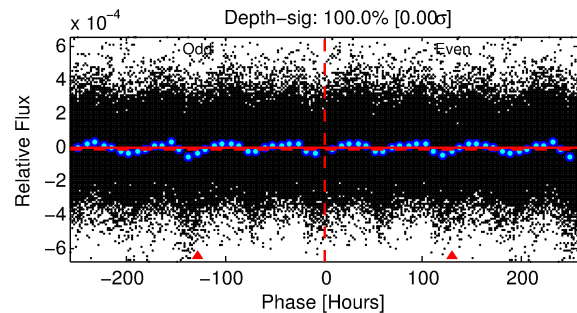
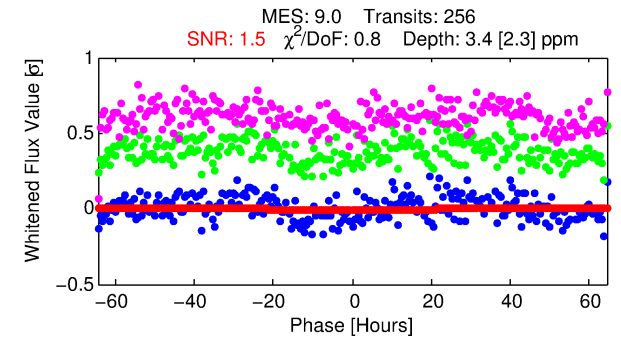
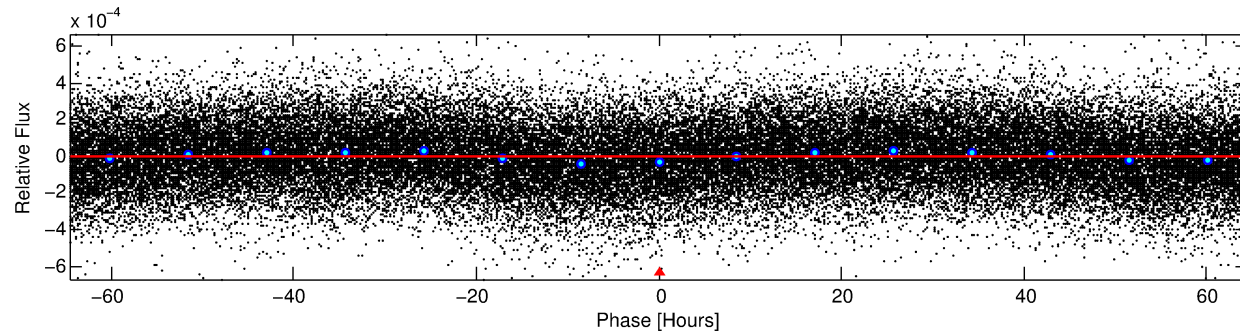
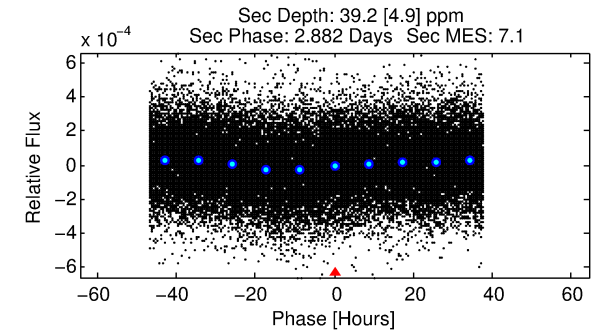
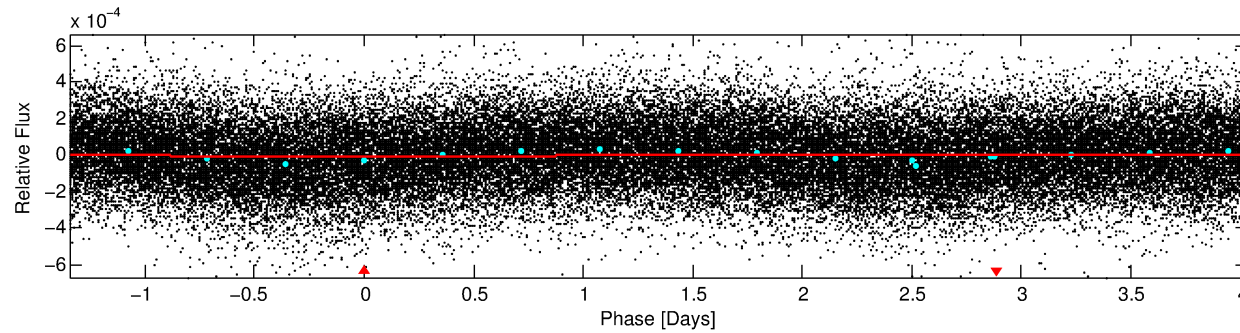
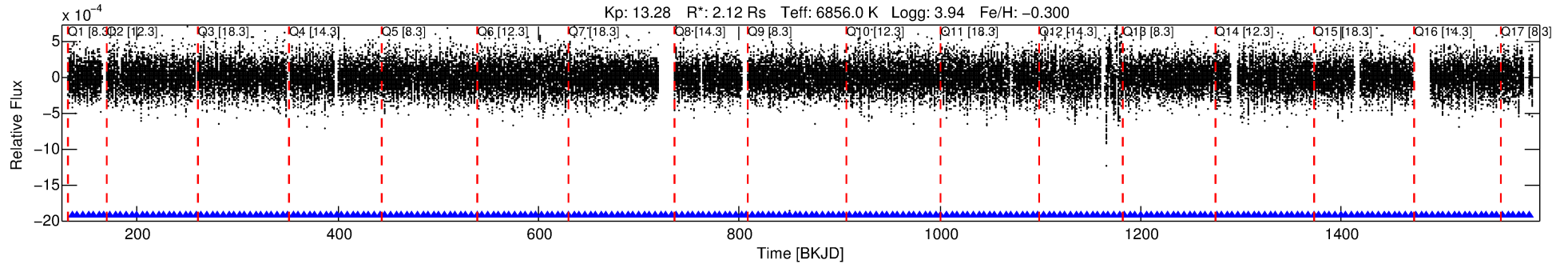
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006593140-01

No Significant Match Found

DV One-Page Summary

KIC: 6593140 Candidate: 1 of 1 Period: 5.378 d



DV Fit Results:

Period = 5.37833 [0.00081] d
Epoch = 135.3346 [0.1060] BKJD
Rp/R* = 0.0018 [0.0033]
a/R* = 1.09 [1.96]
b = 0.66 [9.37]
Seff = 1943.36 [919.34]
Teq = 1693 [200] K
Rp = 0.42 [0.79] Re
a = 0.0678 [0.0201] AU
Ag = 573.61 [2156.51] [0.27σ]
Teffp = 12810 [11959] K [0.93σ]

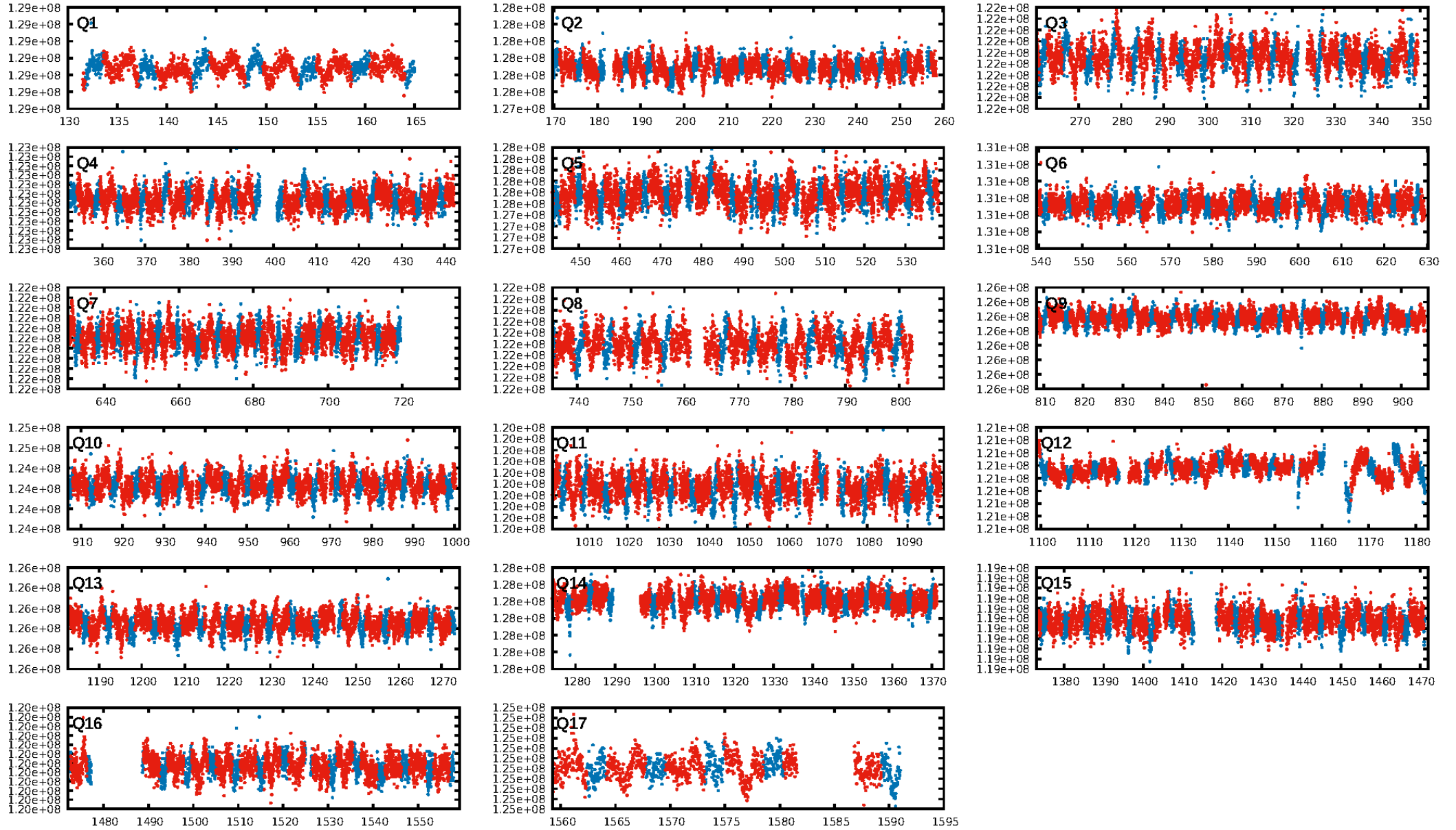
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [244/244]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.669 arcsec [4.46σ]
KicOffset-rm: 1.757 arcsec [2.49σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

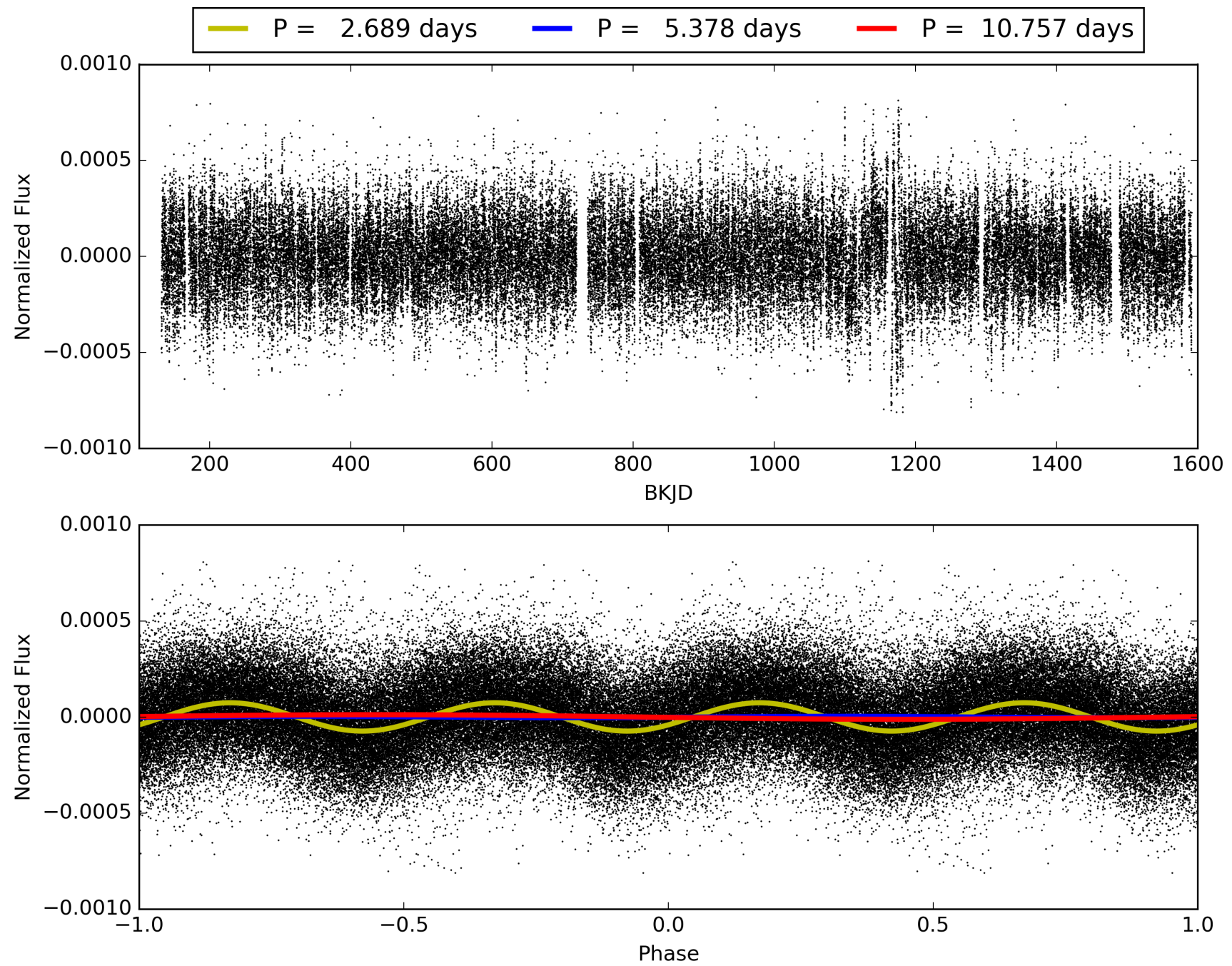
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:35:23 Z

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

TCE 006593140-01, PDC Light Curves

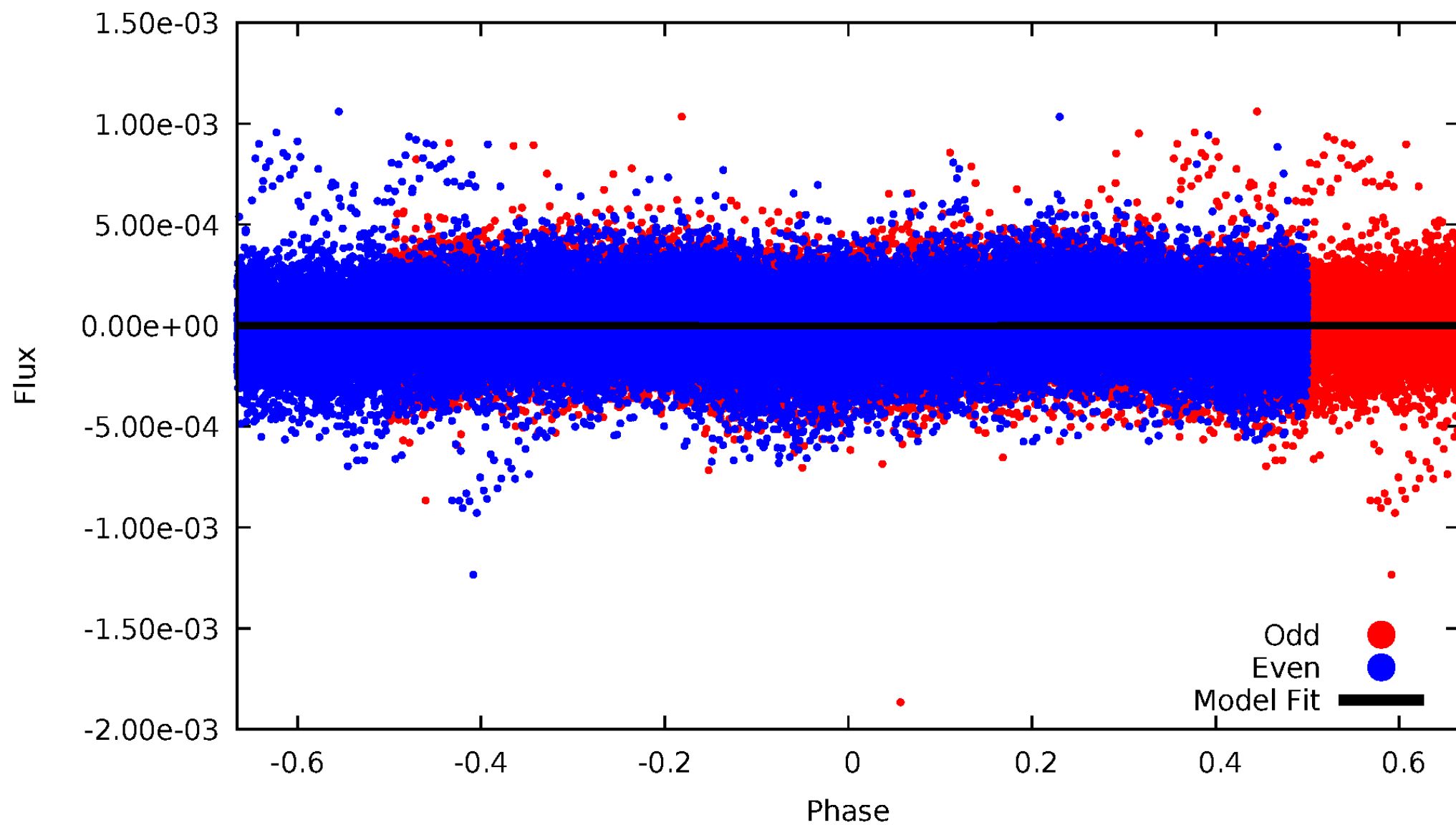


TCE 006593140-01



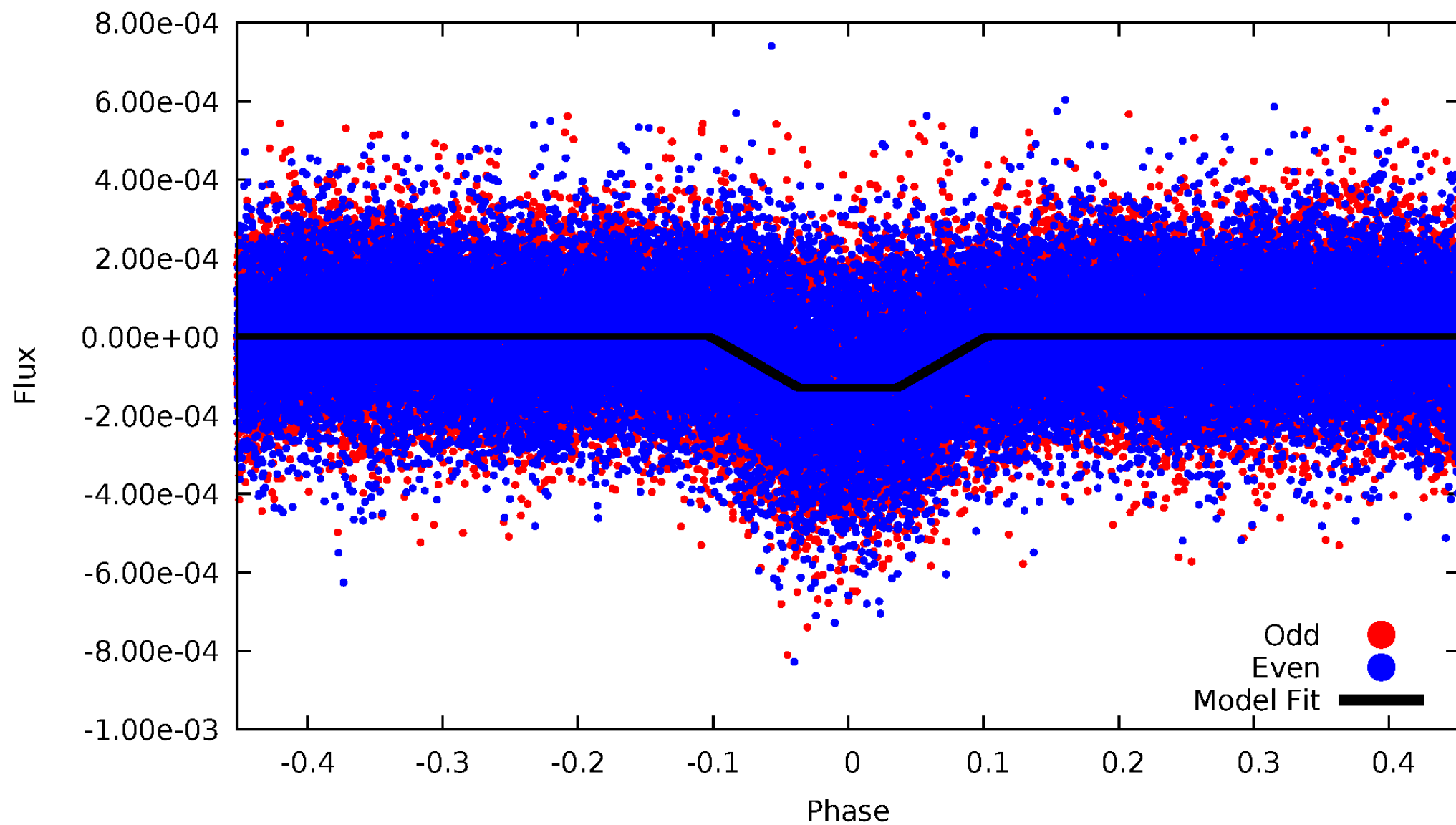
DV Odd/Even

TCE 006593140-01



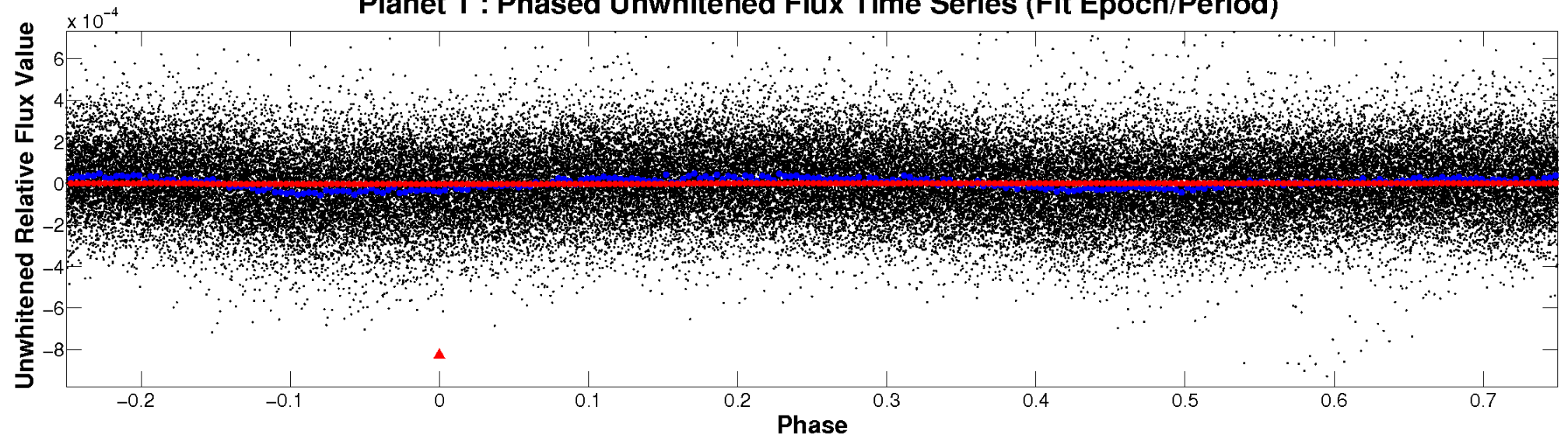
ALT Odd/Even

TCE 006593140-01

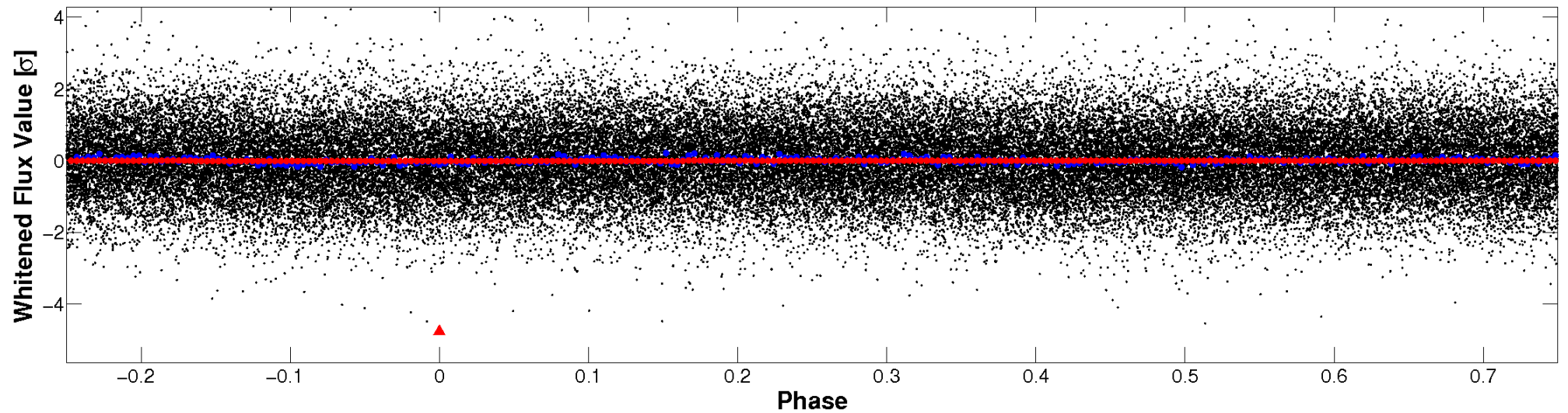


Non-Whitened Vs. Whitened Light Curve

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

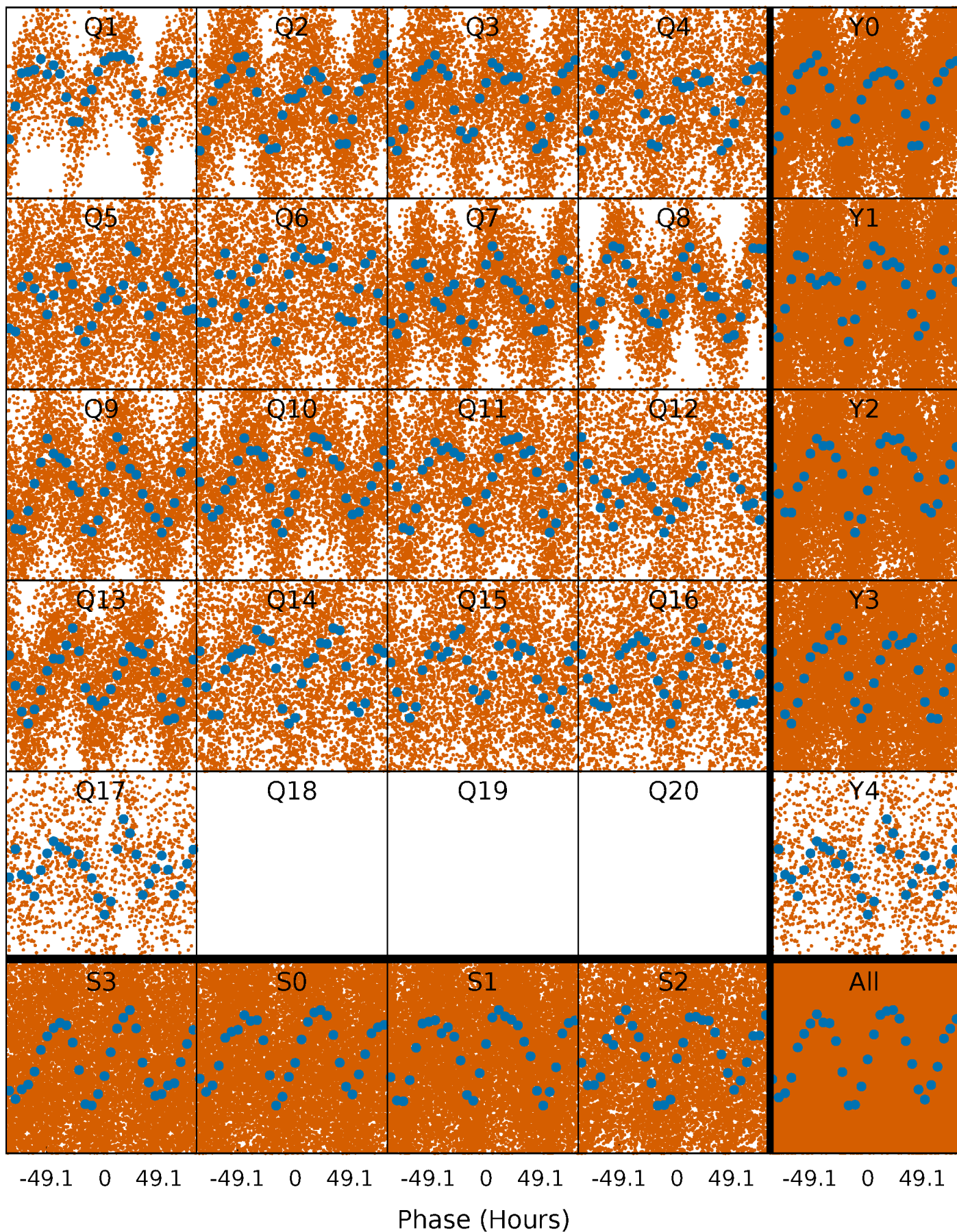


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



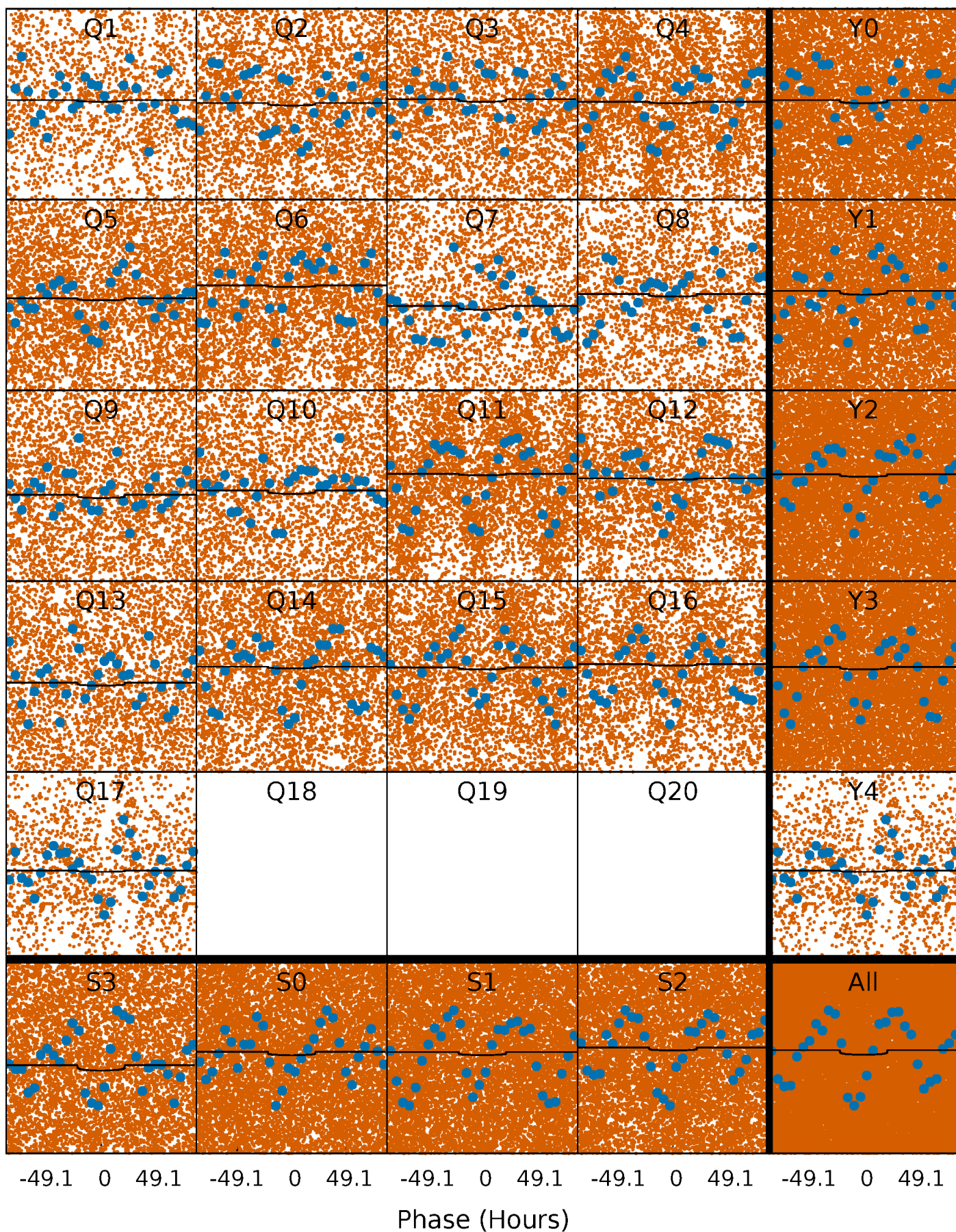
PDC Quarter-Phased Transit Curves

TCE 006593140-01 P= 5.378329 Days $T_0=135.334565$ (BKJD)



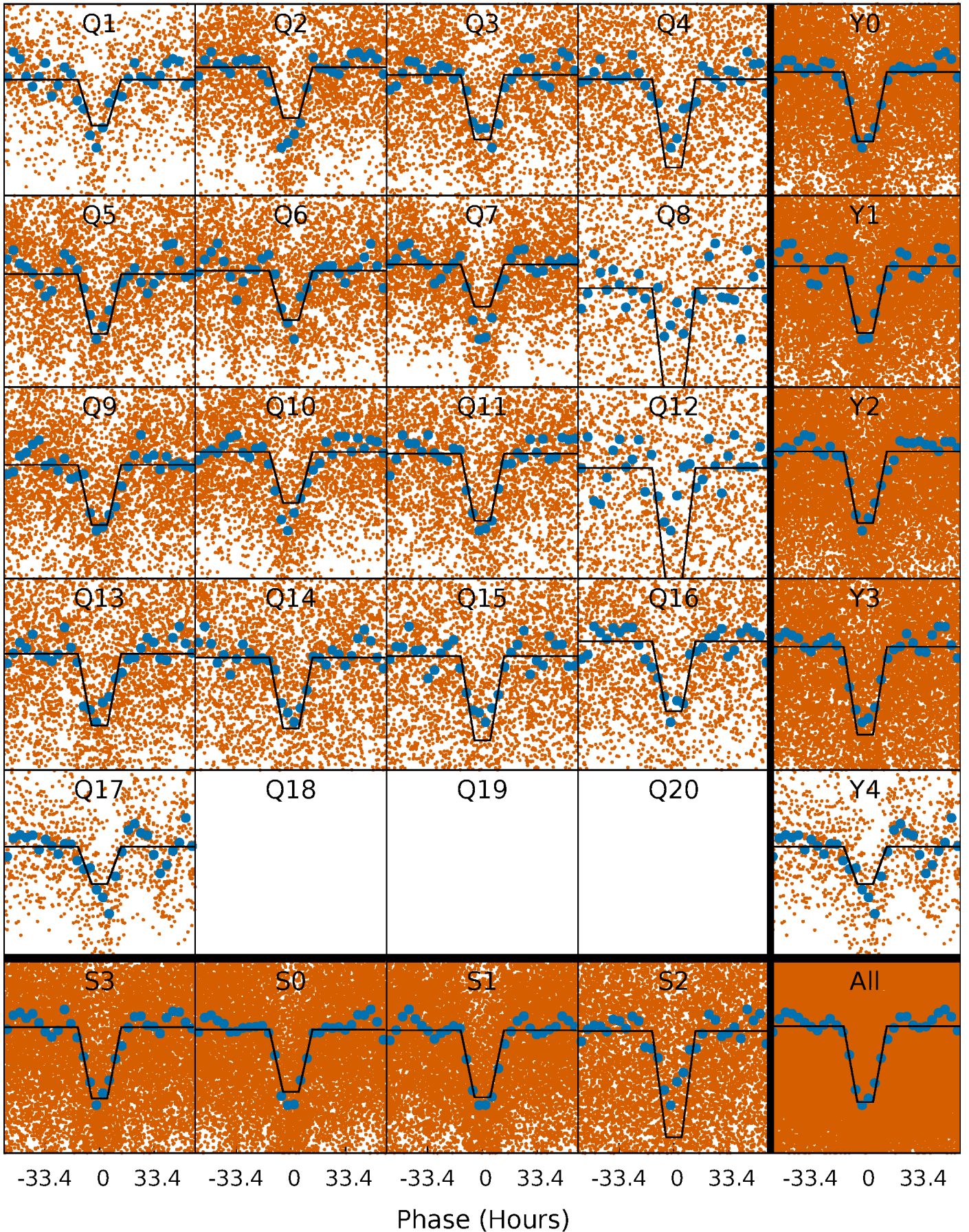
DV Quarter-Phased Transit Curves

TCE 006593140-01 P= 5.378329 Days $T_0=135.334565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

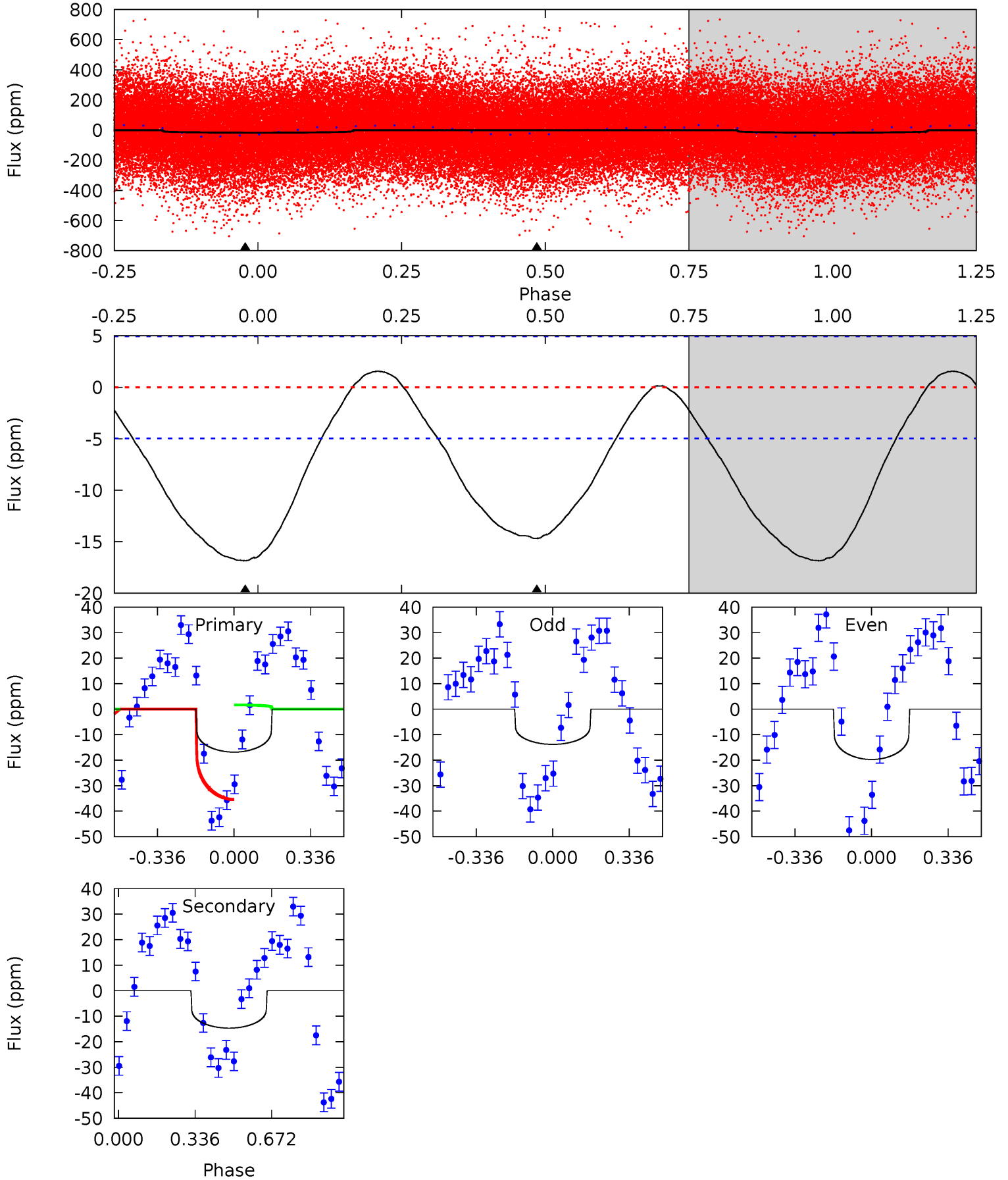
TCE 006593140-01 P= 5.381521 Days $T_0=134.487016$ (BKJD)



DV Model-Shift Uniqueness Test

006593140-01, P = 5.378329 Days, E = 129.956236 Days

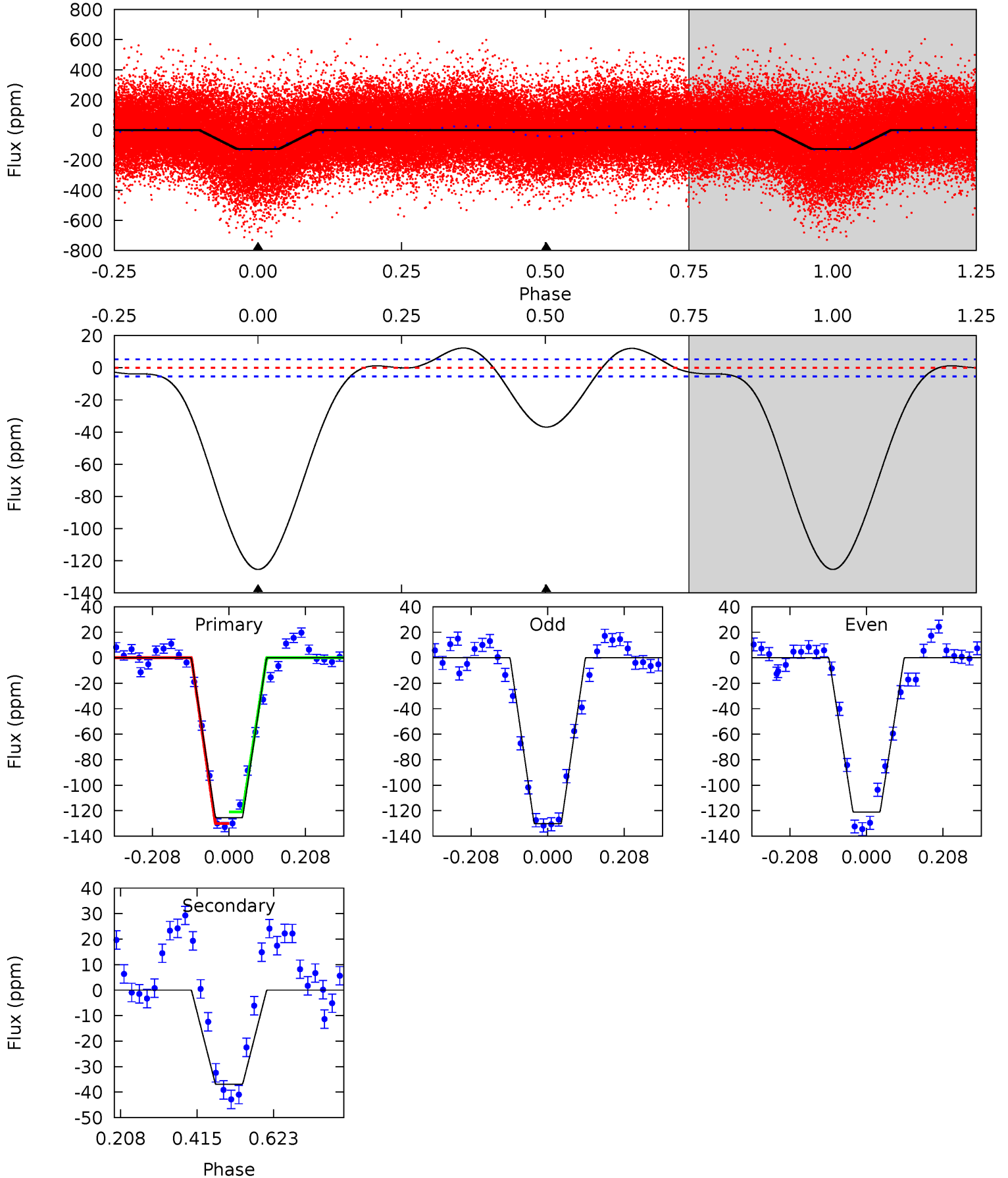
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	12.7	0	0	4.30	0.96	1.04	14.6	14.6	12.7	12.7	2.58	1.30	0.09	14.4



Alt Model-Shift Uniqueness Test

006593140-01, P = 5.381521 Days, E = 129.105495 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
104.2	30.7	0	0	4.41	1.26	1.66	104.2	104.2	30.7	30.7	3.79	1.17	0.09	3.79



Stellar Parameters For KIC 006593140

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6856^{+183}_{-224}	$3.941^{+0.259}_{-0.111}$	$-0.300^{+0.300}_{-0.250}$	$2.125^{+0.433}_{-0.703}$	$1.436^{+0.184}_{-0.276}$	$0.211^{+0.339}_{-0.071}$
	+3%/-3%	+7%/-3%	+100%/-83%	+20%/-33%	+13%/-19%	+161%/-34%
Source	PHO1	FLK73	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 006593140-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-15 ± 1	$0.69^{+0.64}_{-0.48}$	2323^{+155}_{-179}	7768^{+12930}_{-2276}	78^{+756}_{-57}
Alt.	-37 ± 1	$2.50^{+0.99}_{-0.79}$	2333^{+143}_{-191}	5043^{+805}_{-569}	15^{+16}_{-7}

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 $A_{obs} \gg 1.0$

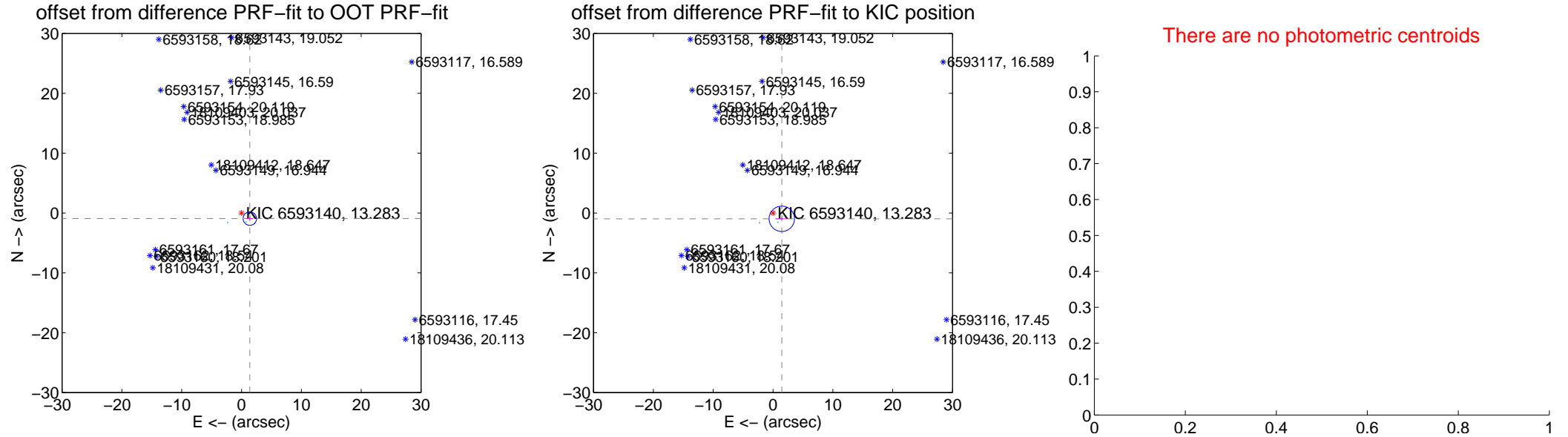
DV Centroid Data

Supplemental centroid analysis for 006593140-01. Kepler magnitude: 13.28. Transit SNR 1.49

There are 4 quarters with good PRF difference image offsets

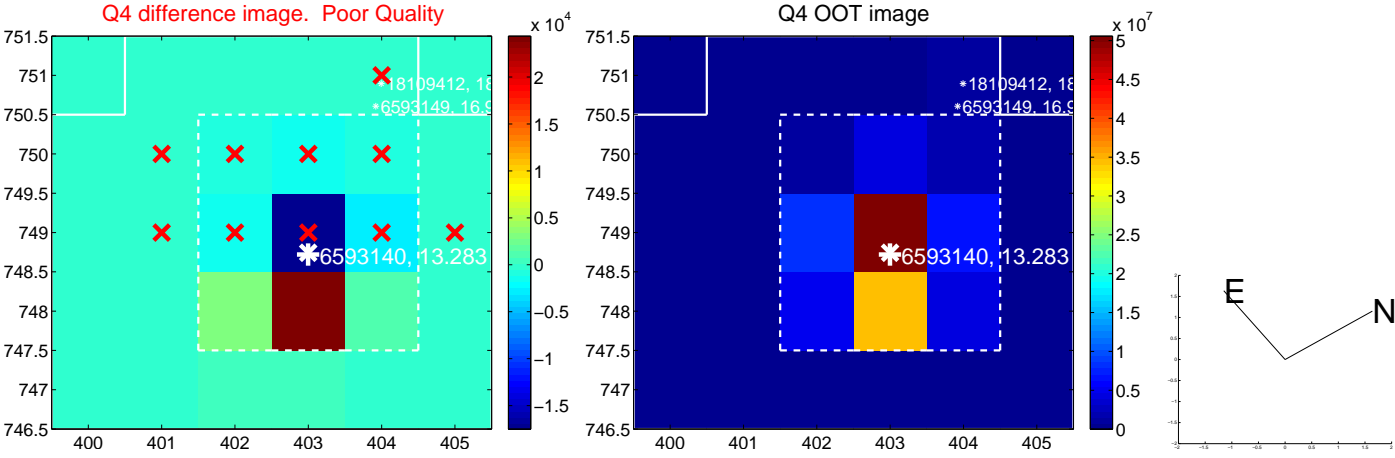
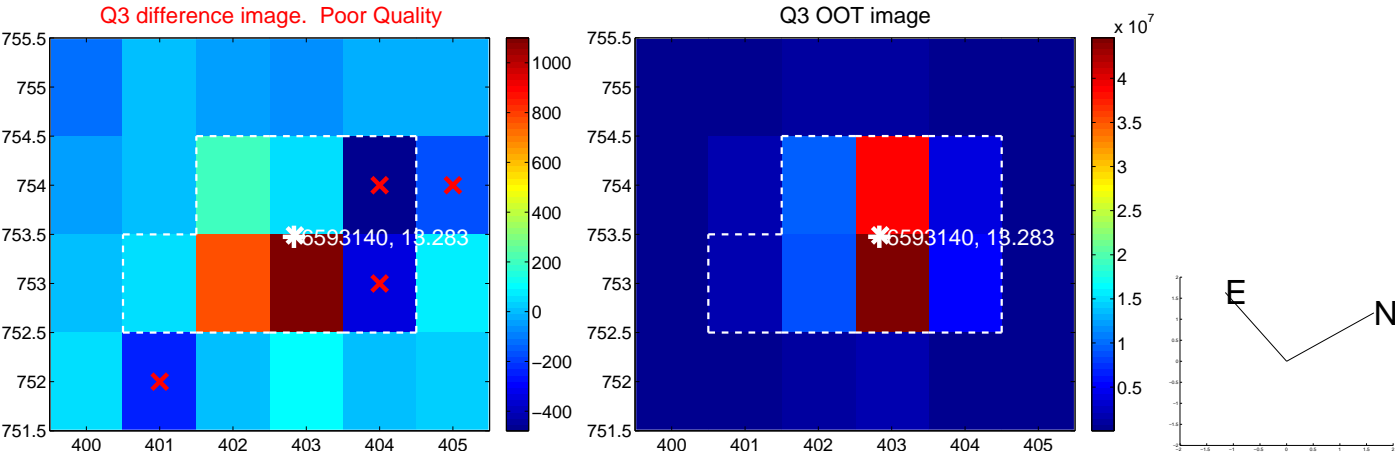
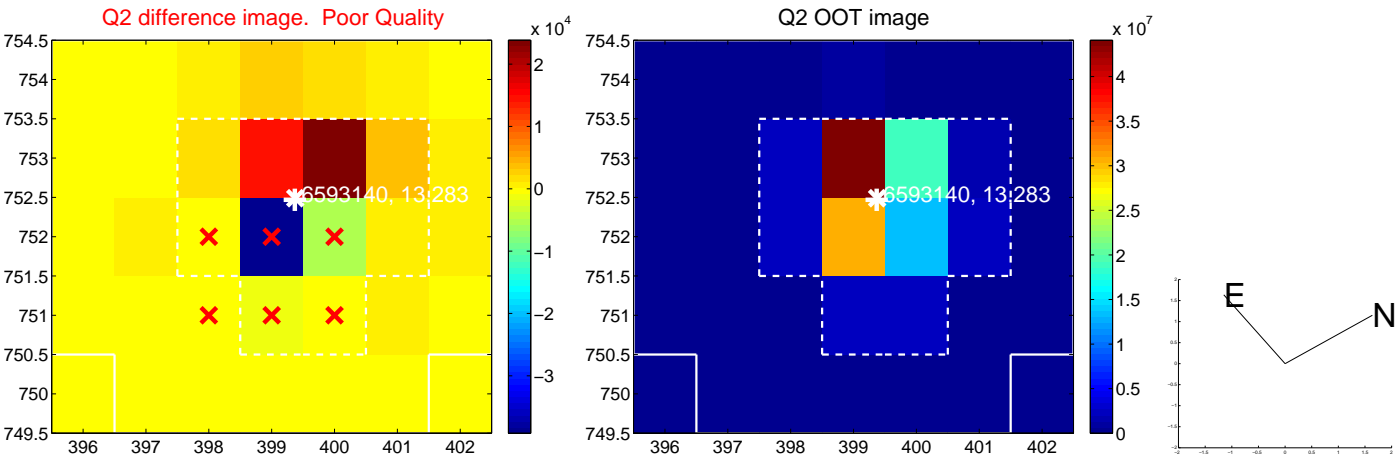
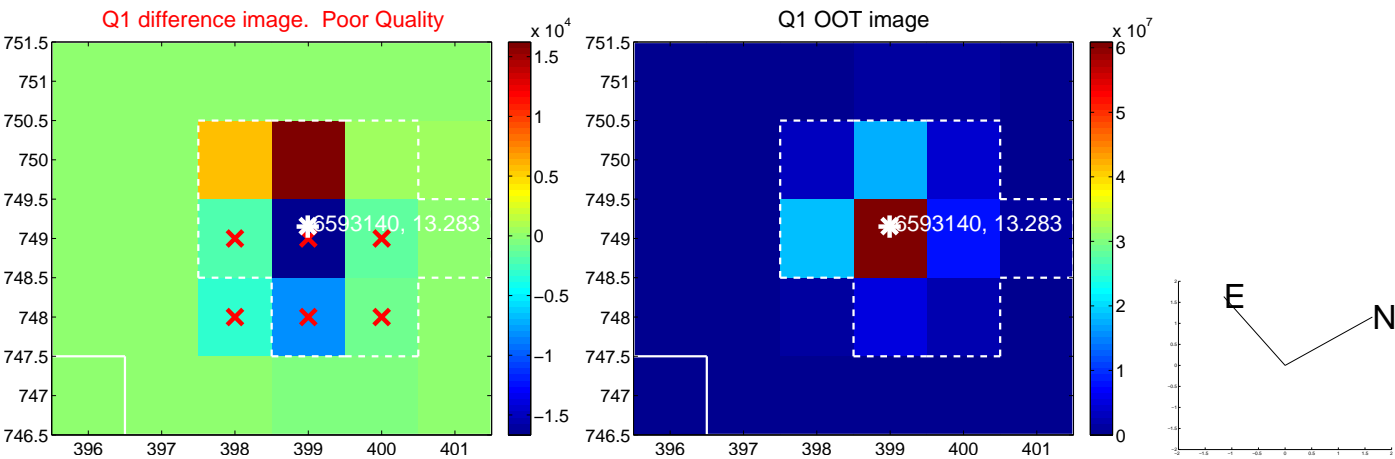
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.669 ± 0.374	4.46	-1.381 ± 0.534	-0.937 ± 0.188
PRF-fit source offset from KIC position	1.757 ± 0.707	2.49	-1.467 ± 0.929	-0.967 ± 0.217
photometric centroid source offset	—	—	—	—

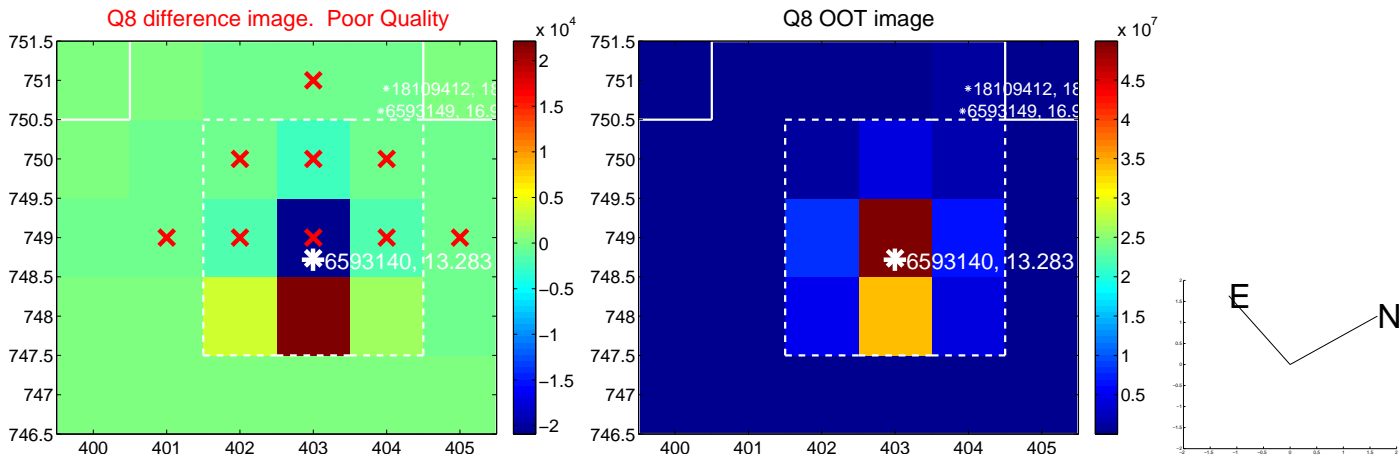
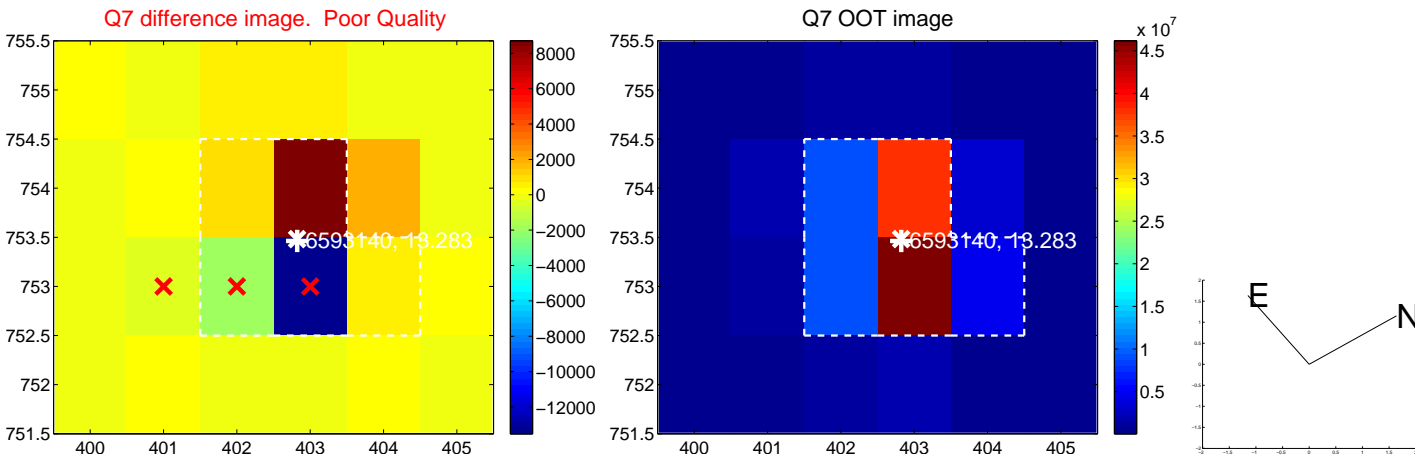
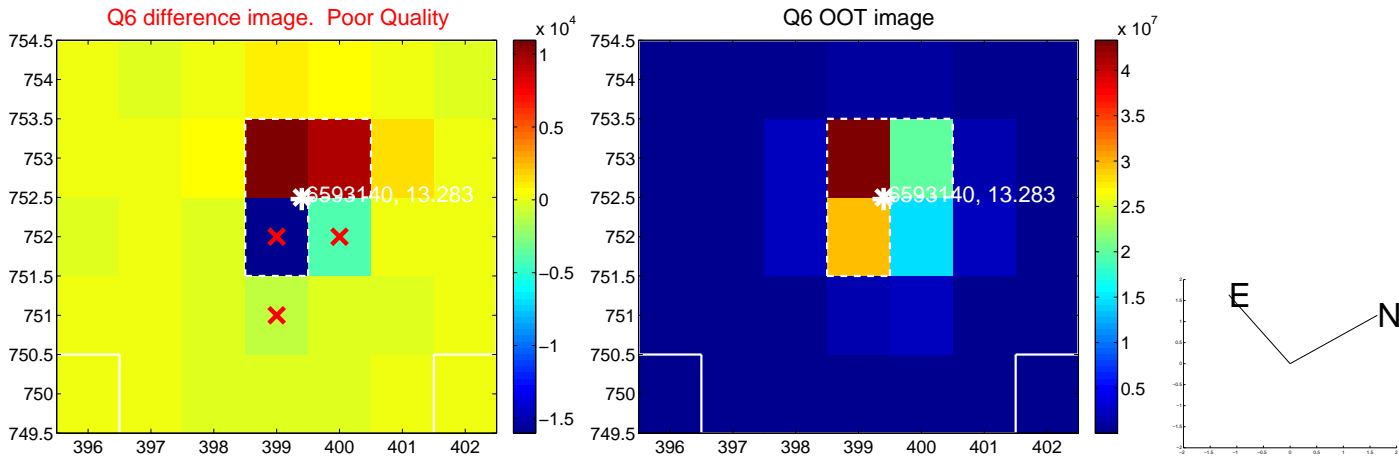
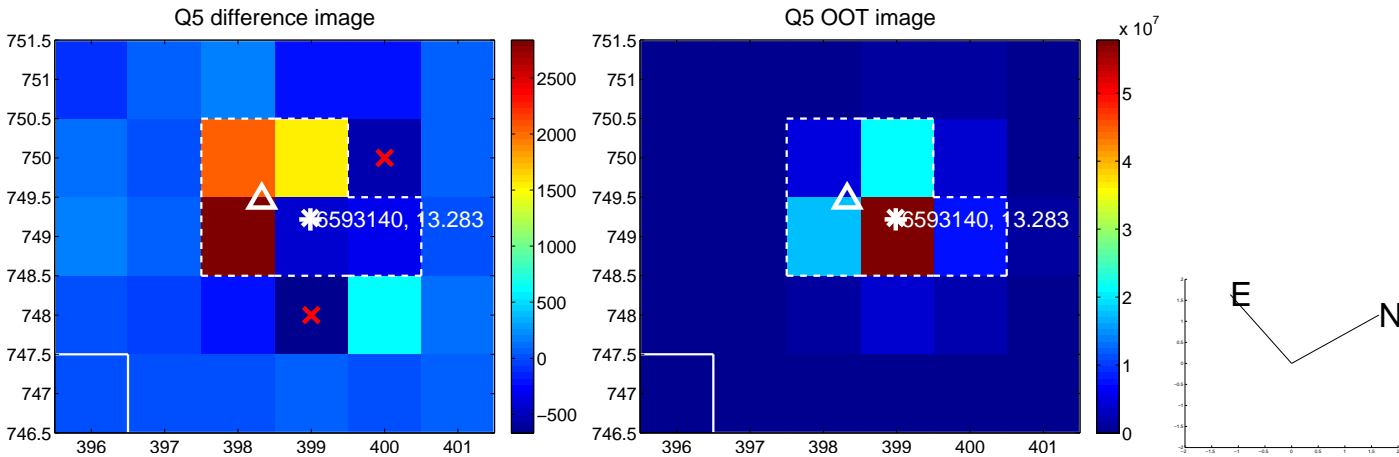


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

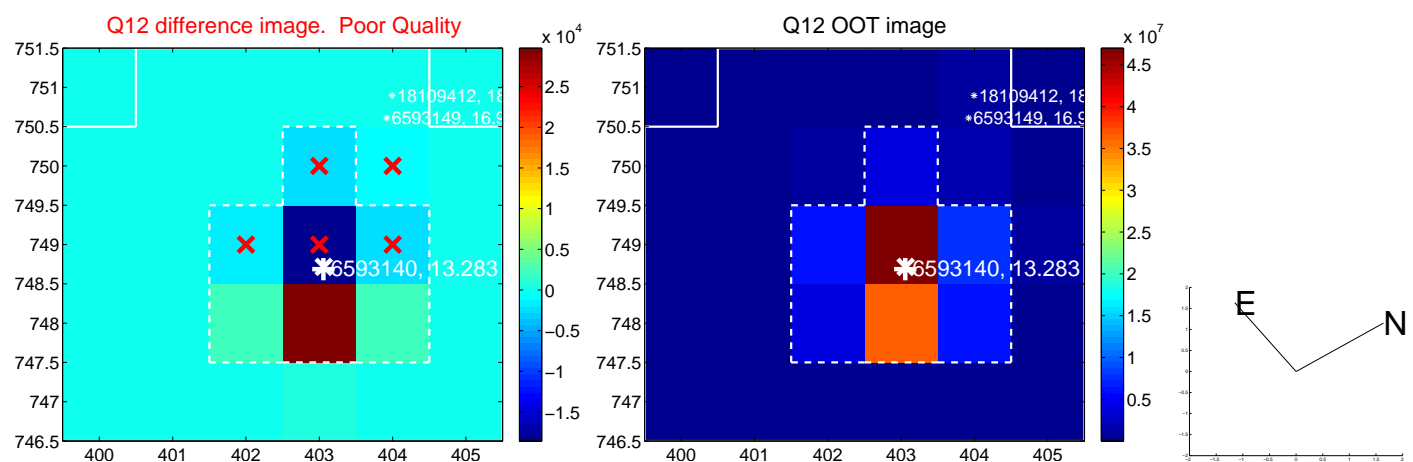
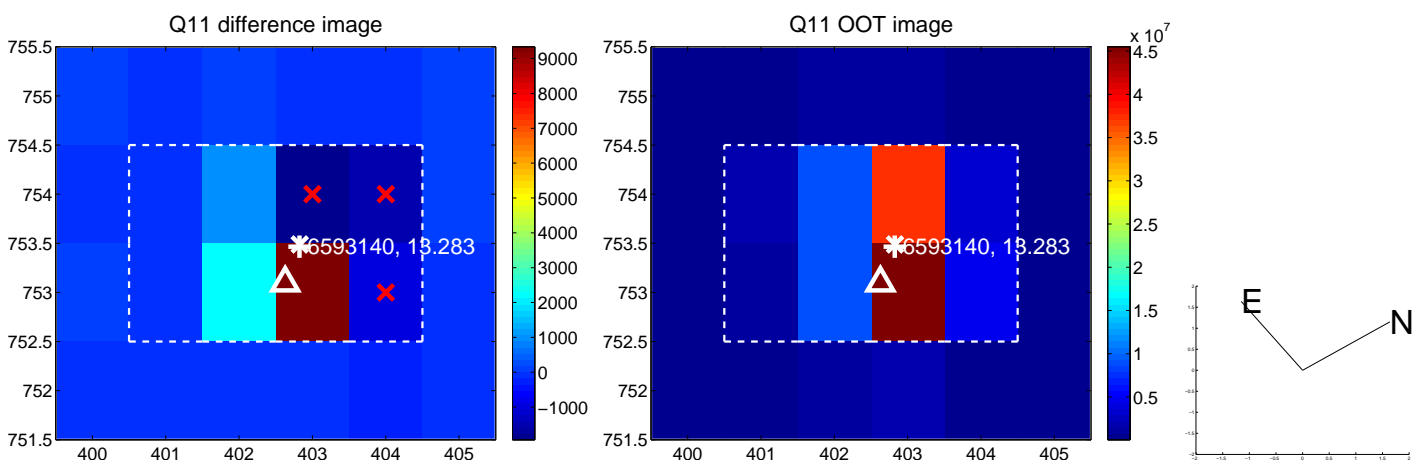
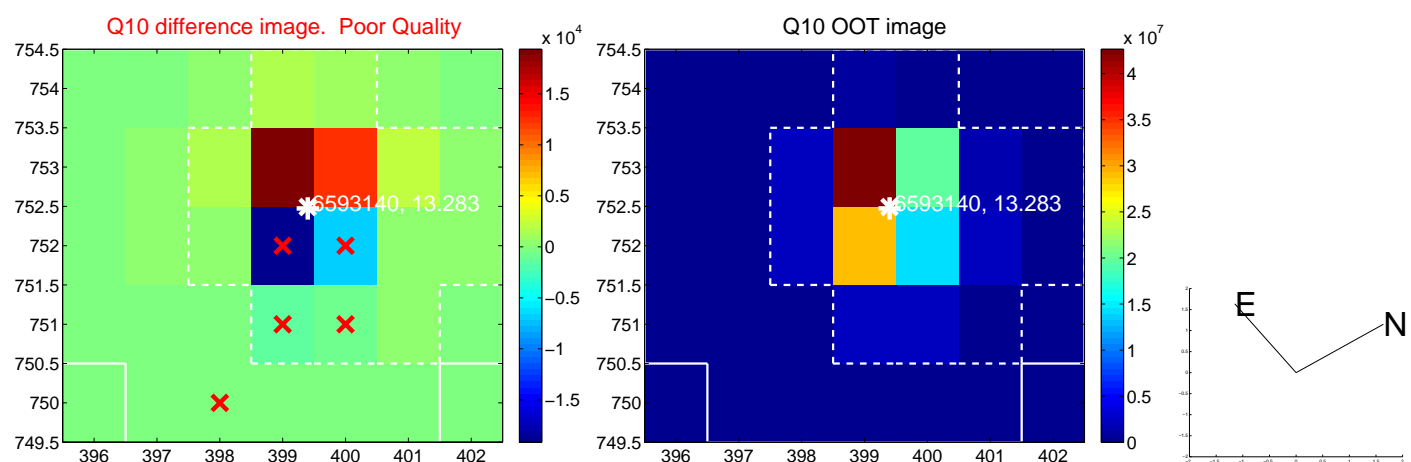
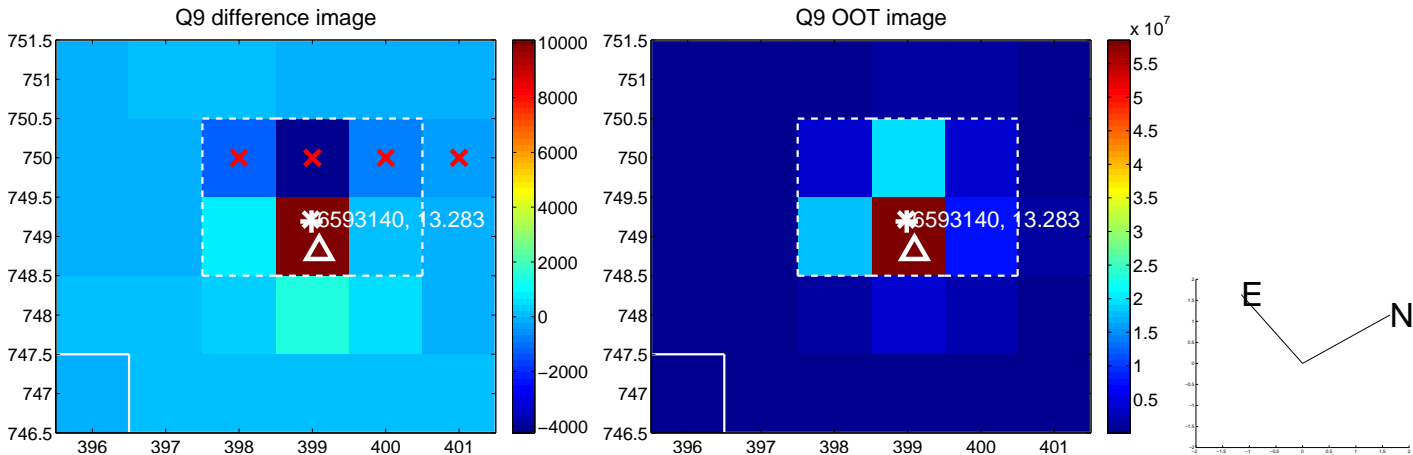
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



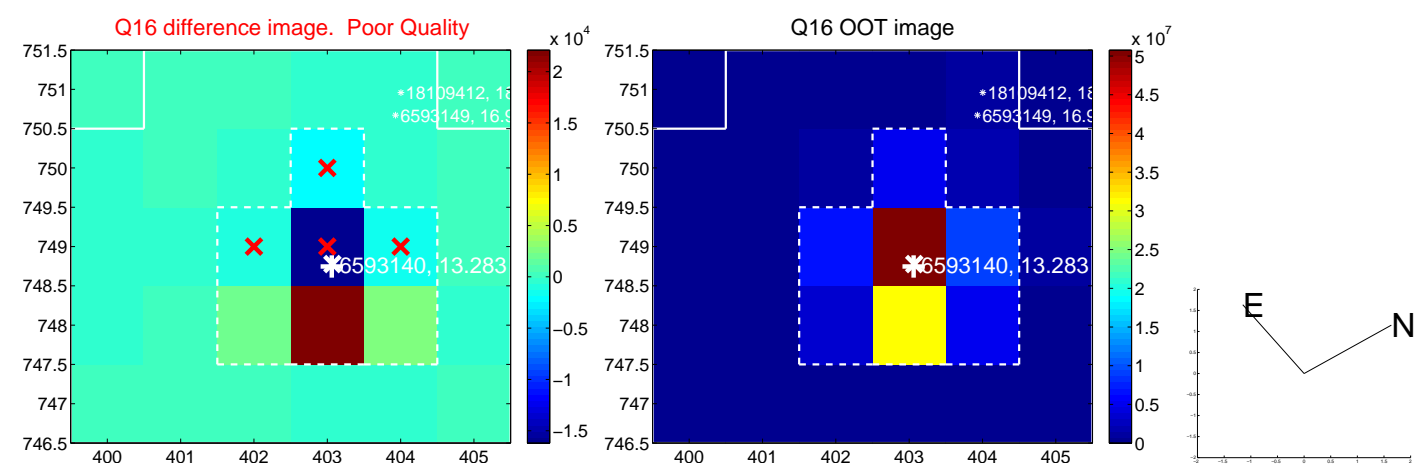
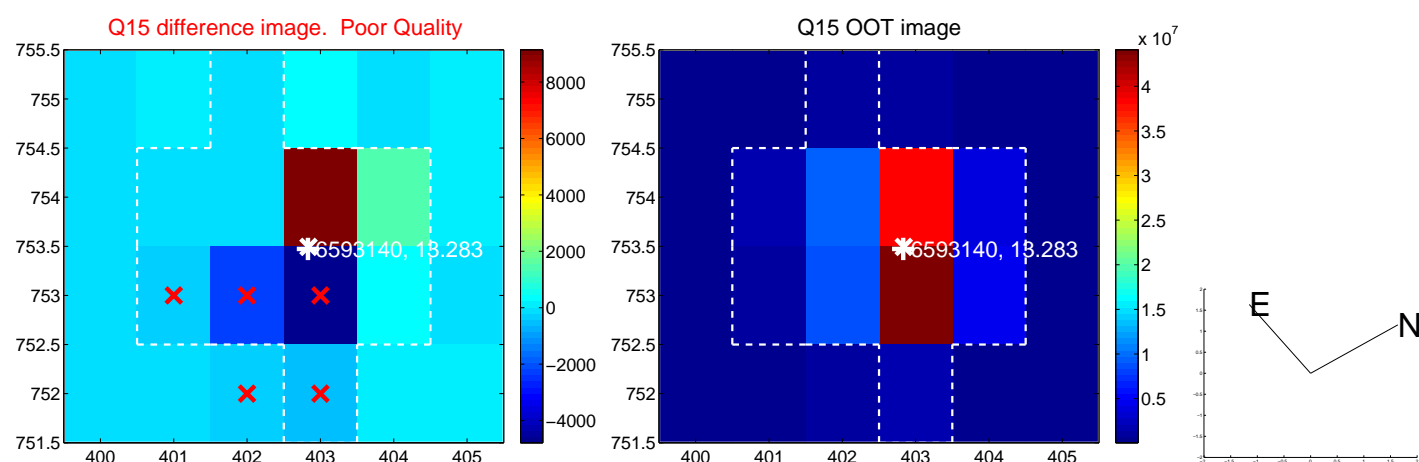
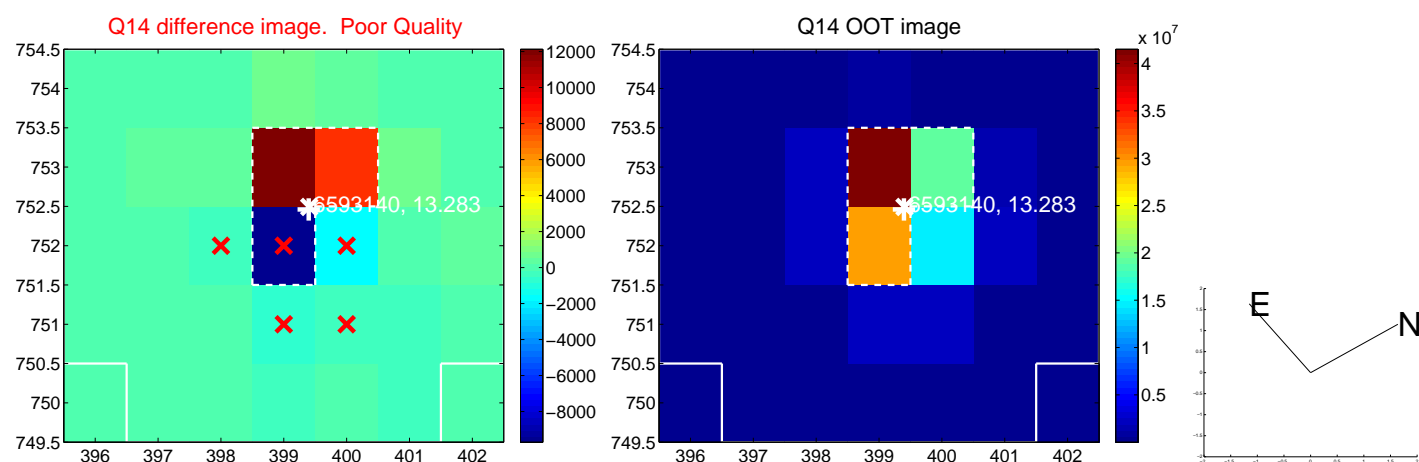
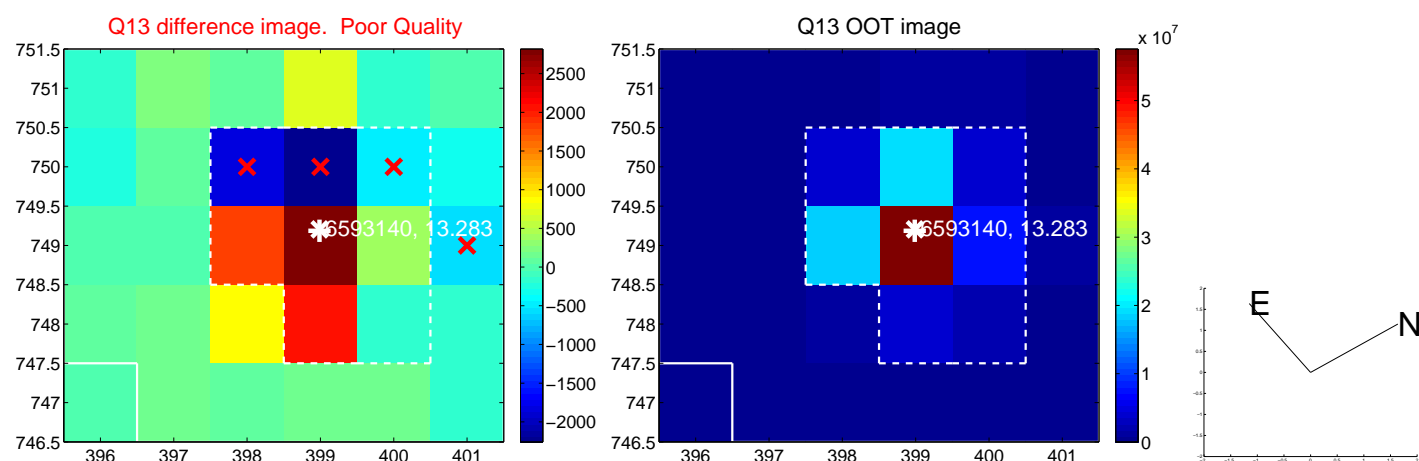
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



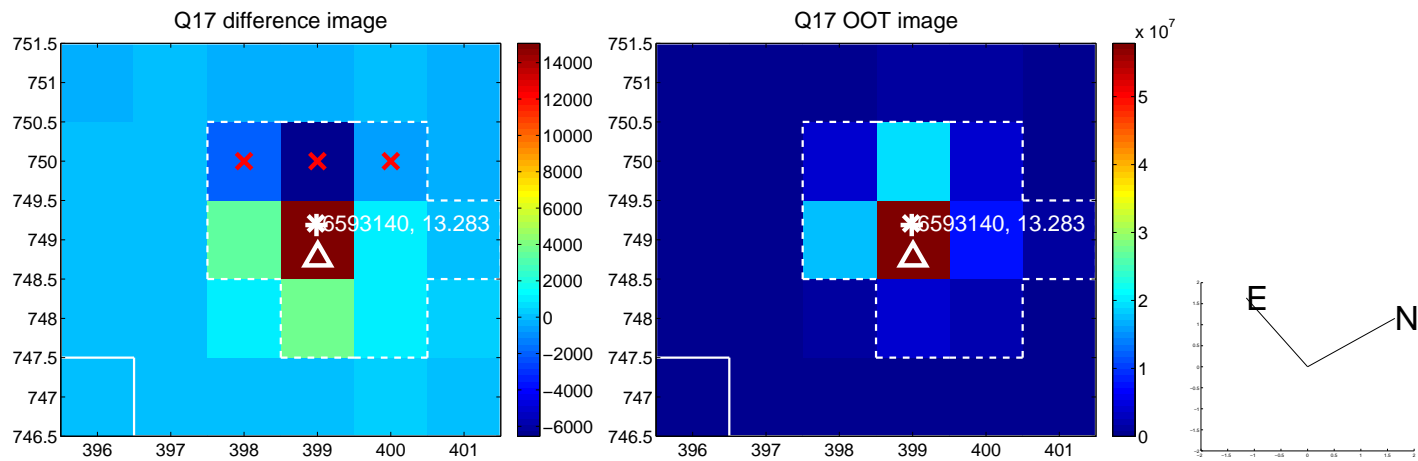
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

