

KIC 006593353

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})
006593353-01	OBS	No	3.661794	131.608423	16.5	27.190	10.2	8.2	1.47	6680	0.61	1532.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006593353-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

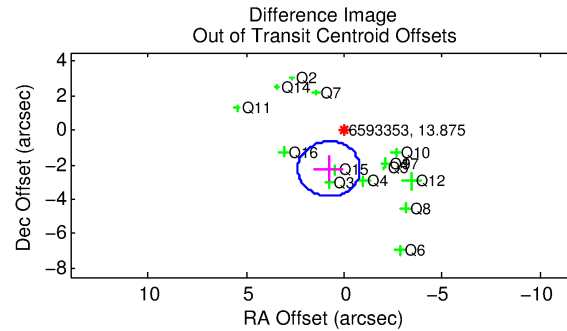
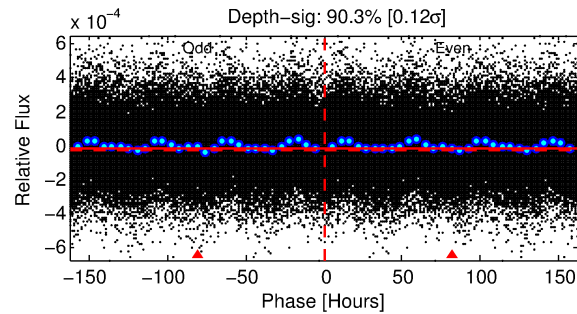
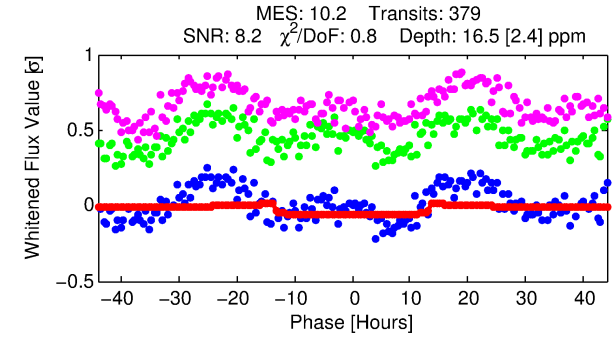
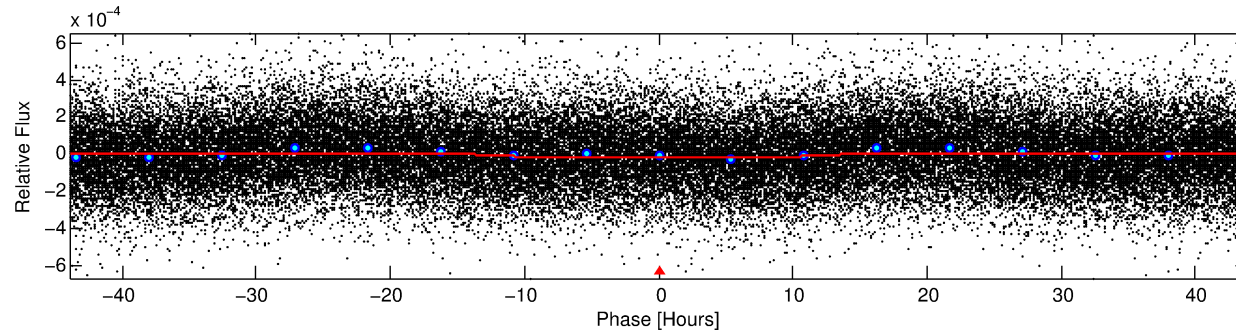
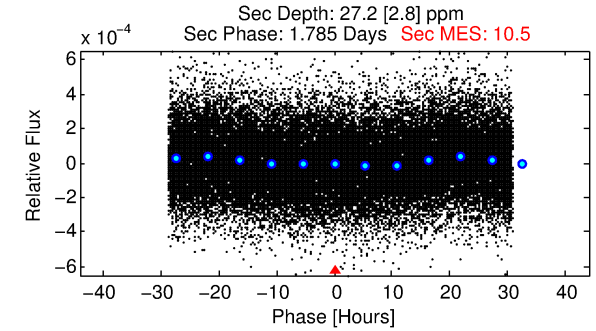
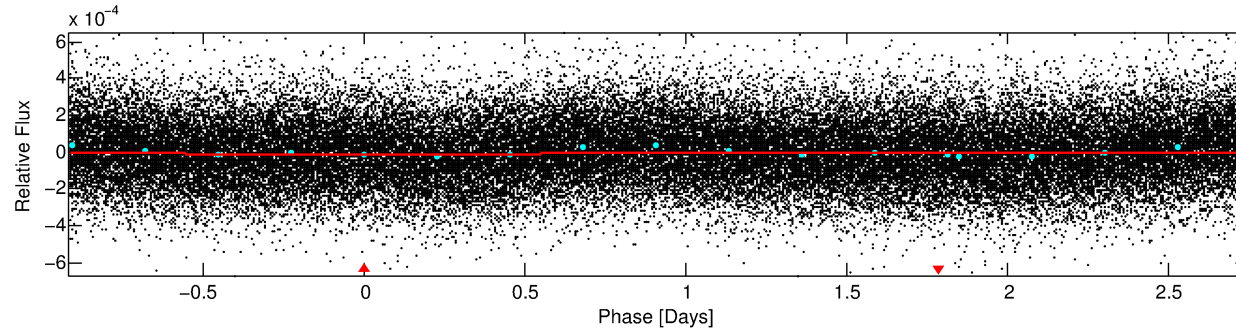
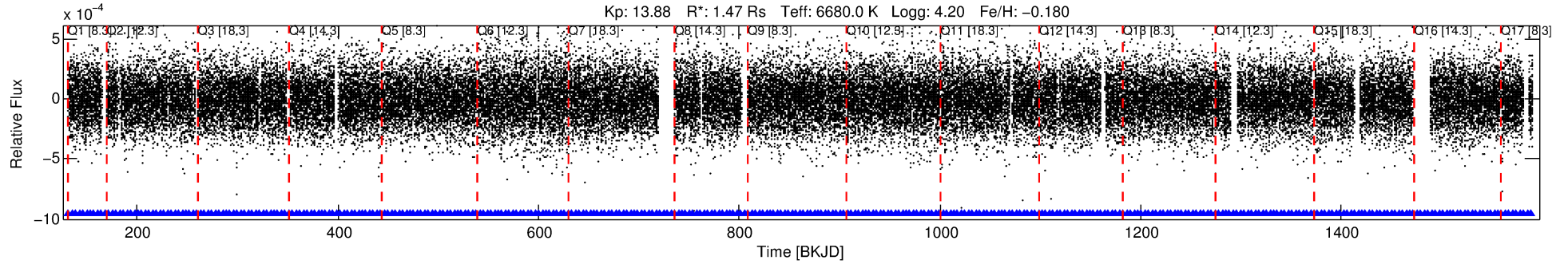
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006593353-01

No Significant Match Found

DV One-Page Summary

KIC: 6593353 Candidate: 1 of 1 Period: 3.662 d



DV Fit Results:

Period = 3.66179 [0.00010] d
Epoch = 131.6084 [0.0191] BKJD
Rp/R* = 0.0038 [0.0038]
a/R* = 1.20 [2.07]
b = 0.25 [21.16]
Seff = 1532.52 [582.89]
Teq = 1595 [152] K
Rp = 0.61 [0.64] Re
a = 0.0503 [0.0125] AU
Ag = 103.05 [210.94] [0.48σ]
Teffp = 7859 [3972] K [1.58σ]

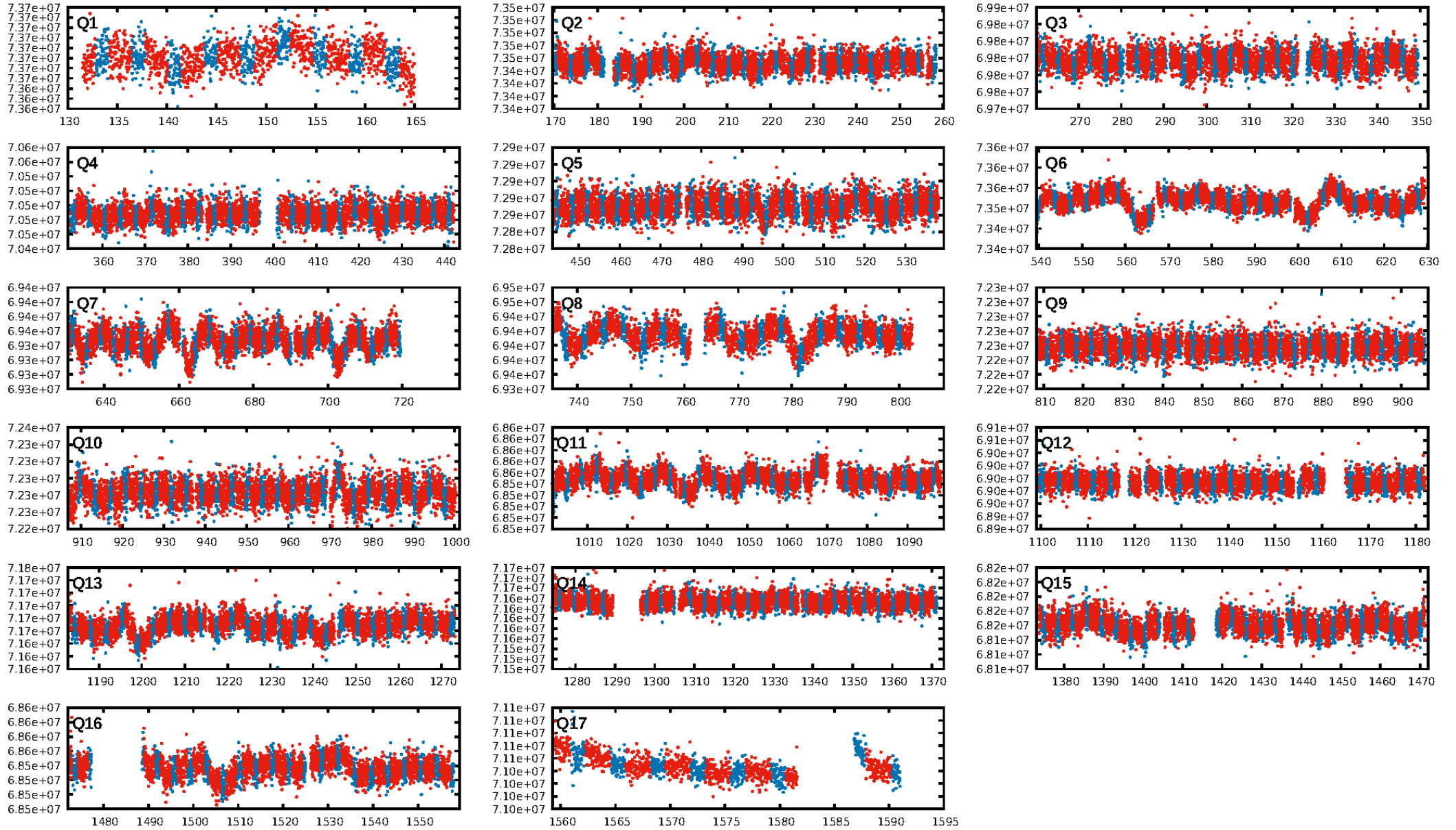
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [361/361]
GhostDiagnostic-chr: -0.007719
Centroid-sig: 0.0%
Centroid-so: 3.324 arcsec [2.77σ]
OotOffset-rm: 2.378 arcsec [4.47σ]
KicOffset-rm: 2.321 arcsec [4.81σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

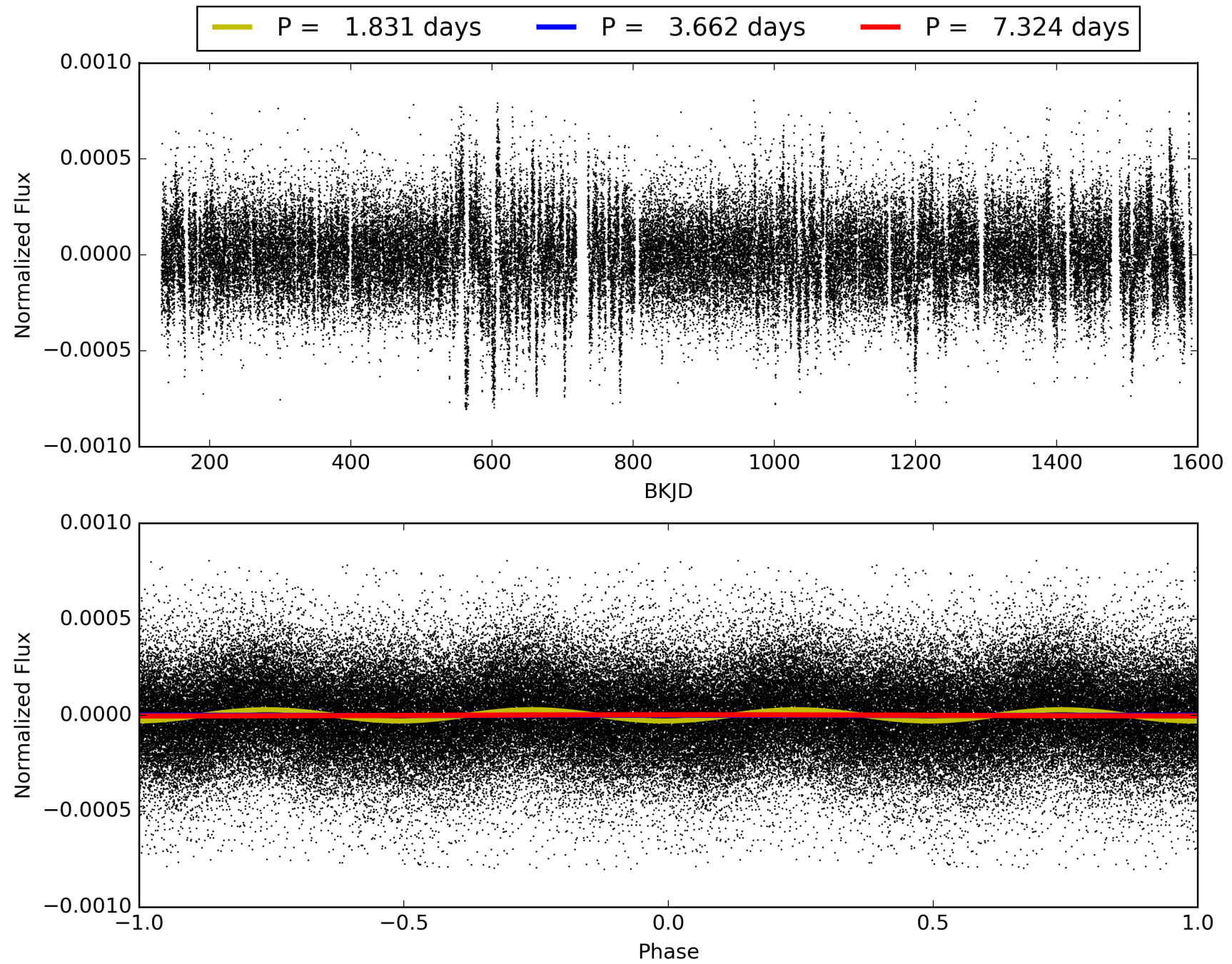
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:38:00 Z

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

TCE 006593353-01, PDC Light Curves

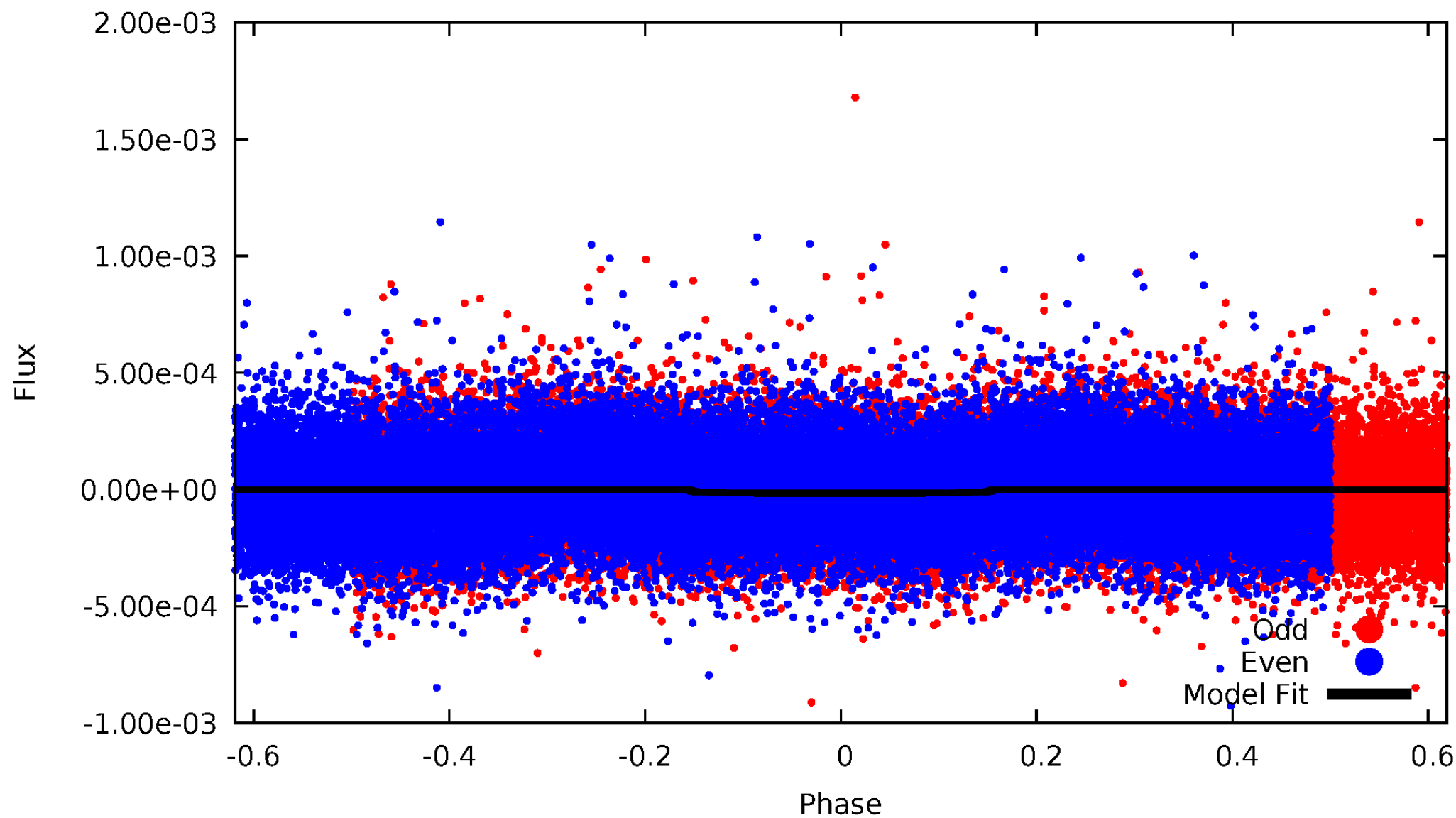


TCE 006593353-01



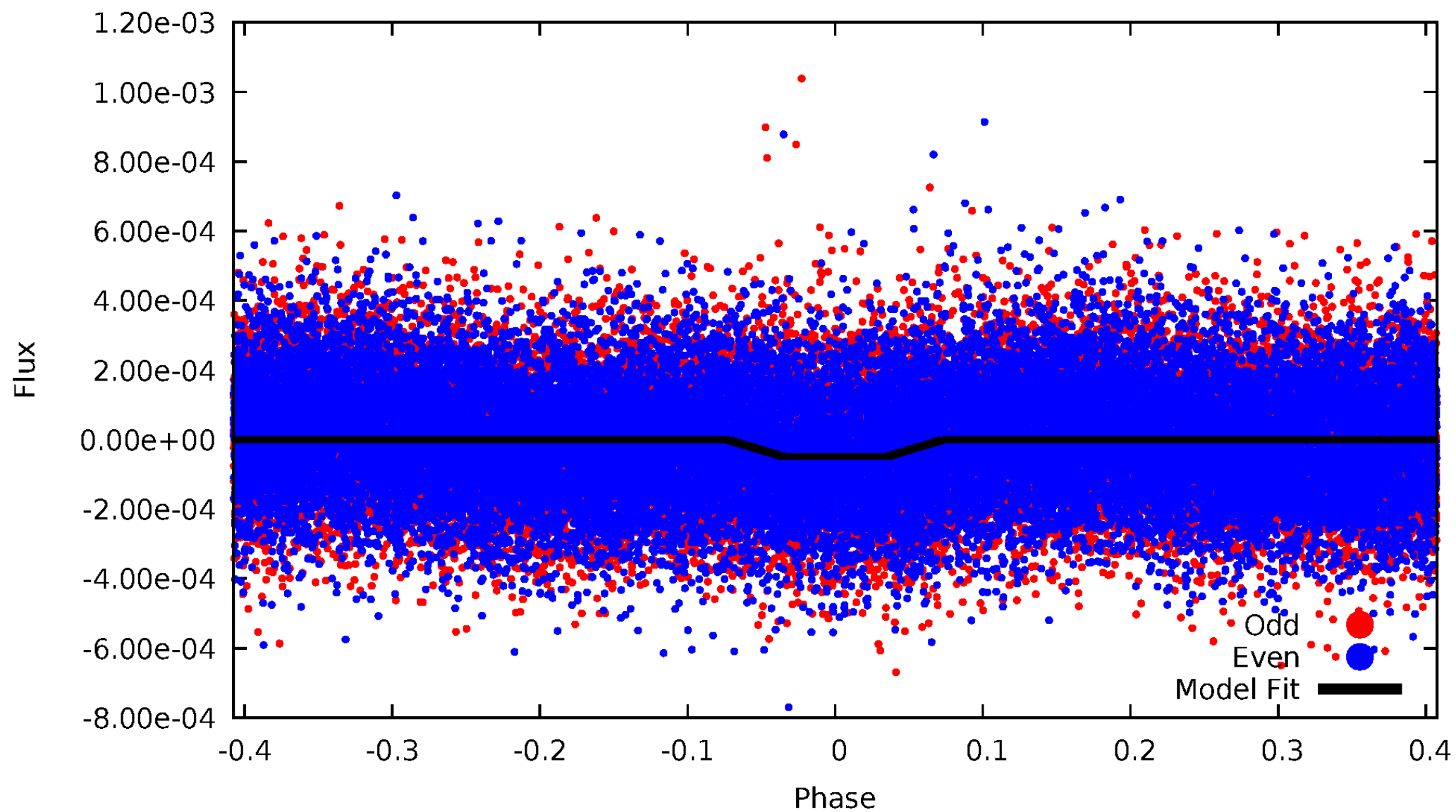
DV Odd/Even

TCE 006593353-01



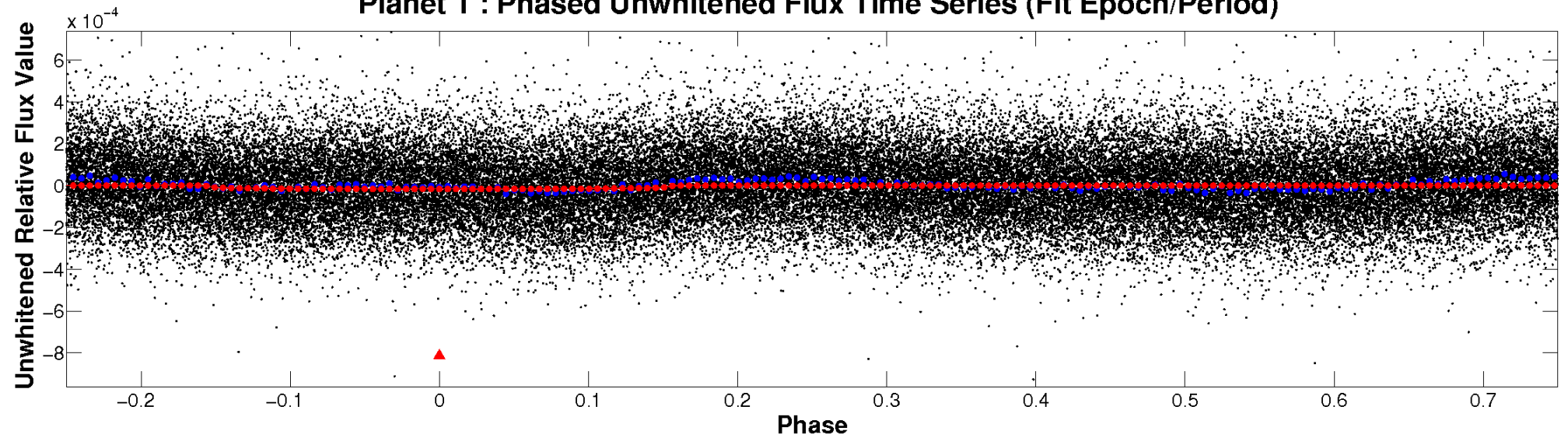
ALT Odd/Even

TCE 006593353-01

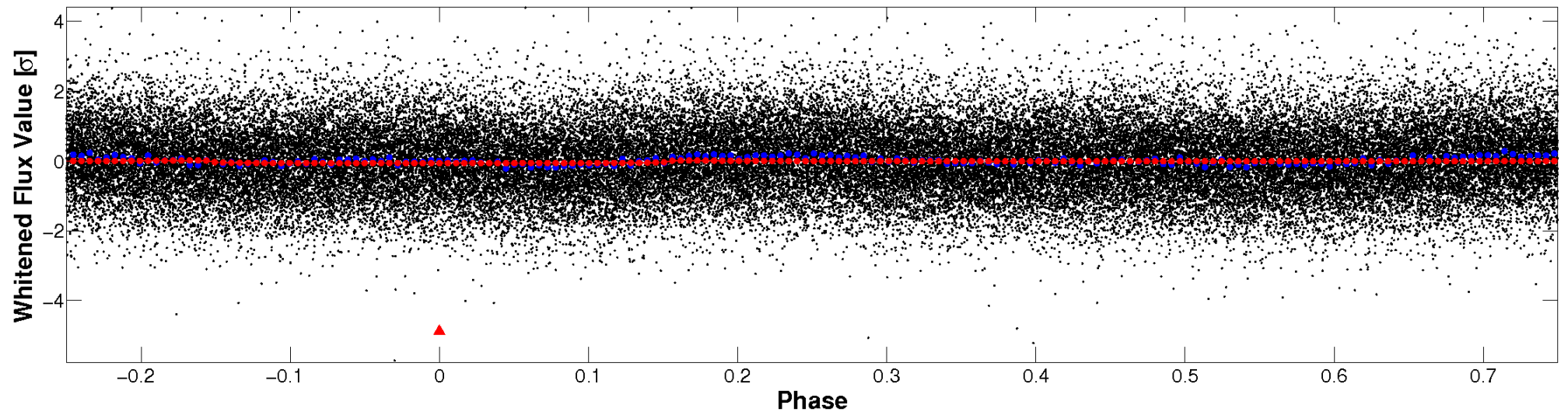


Non-Whitened Vs. Whitened Light Curve

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

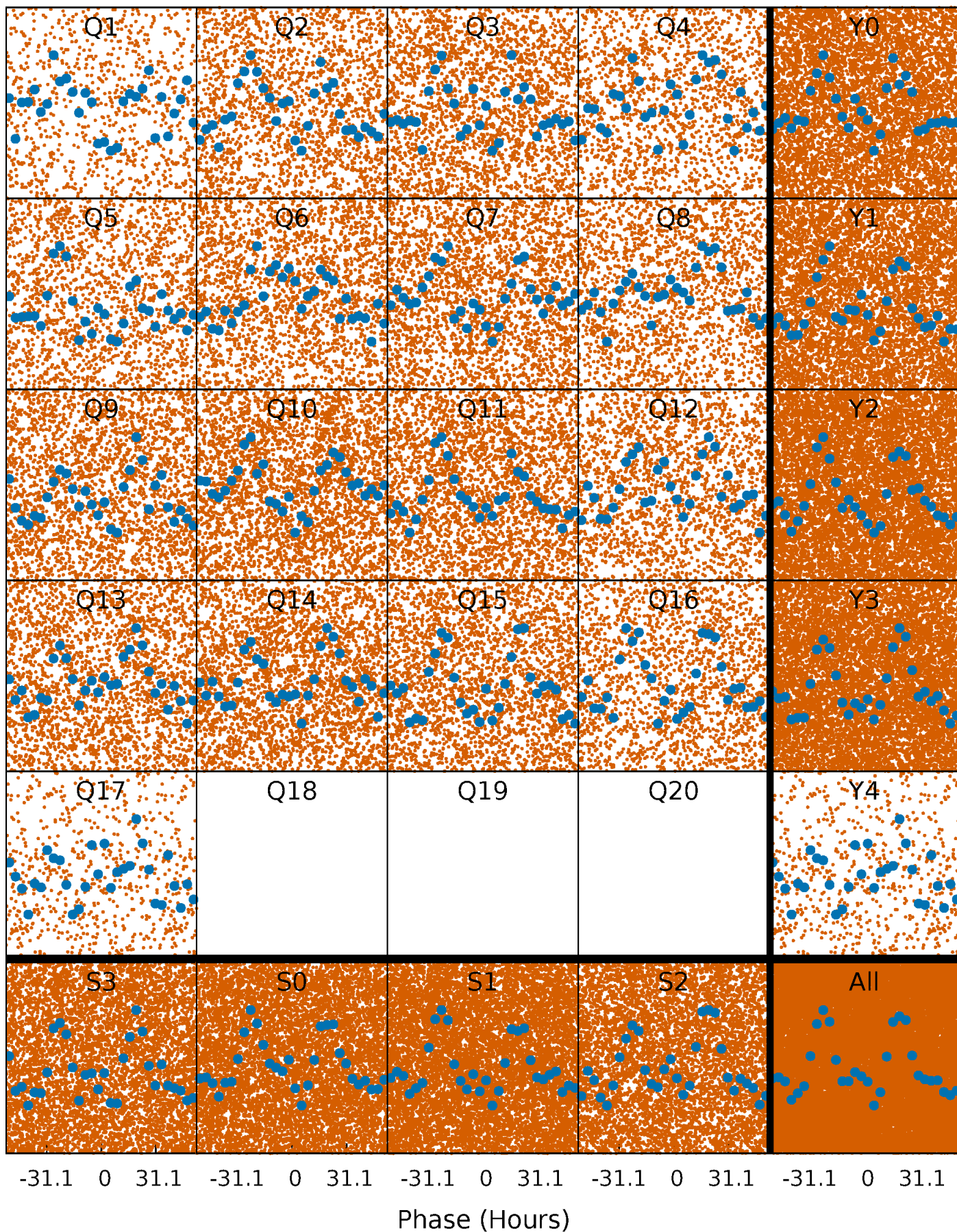


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



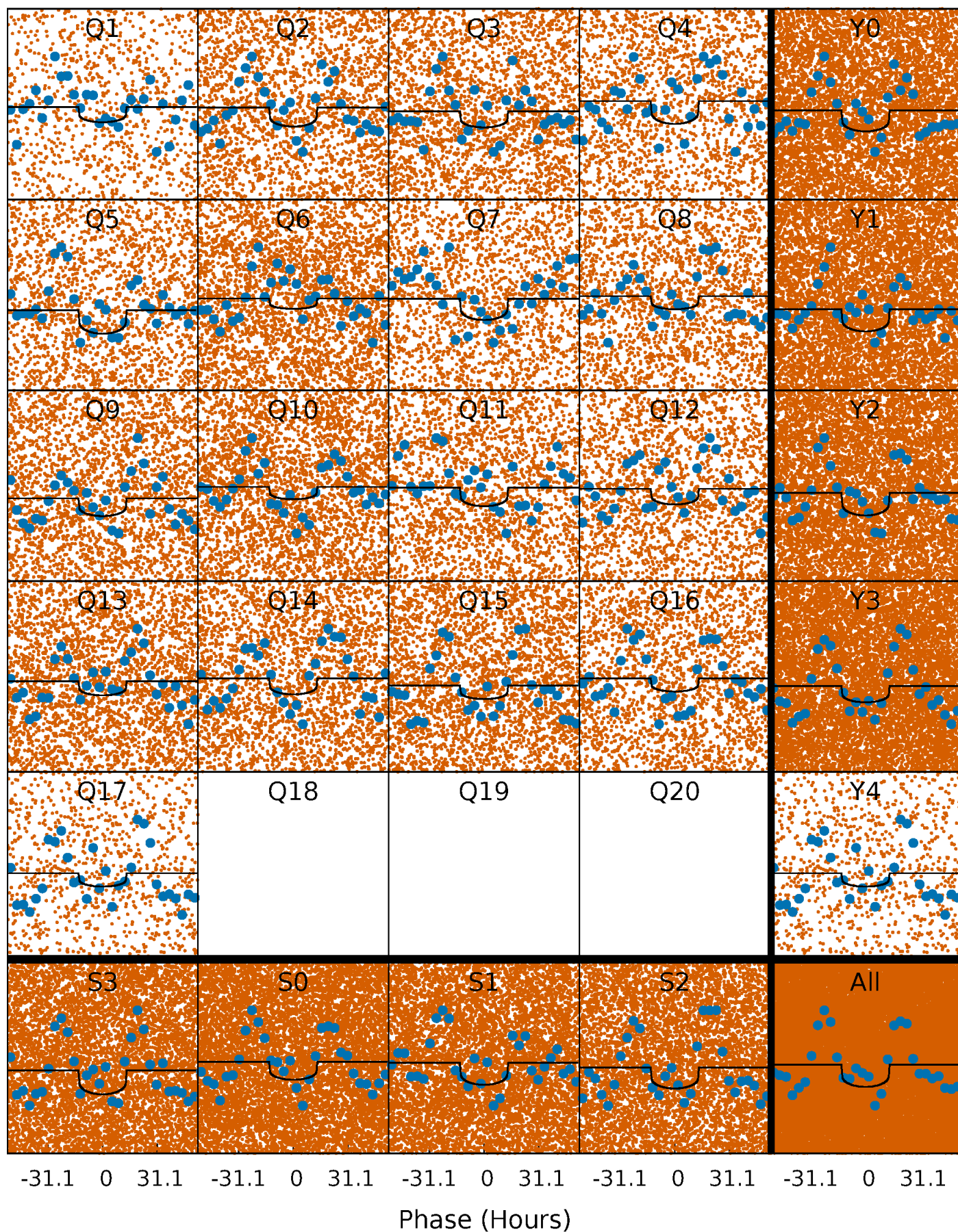
PDC Quarter-Phased Transit Curves

TCE 006593353-01 P= 3.661794 Days $T_0=131.608423$ (BKJD)



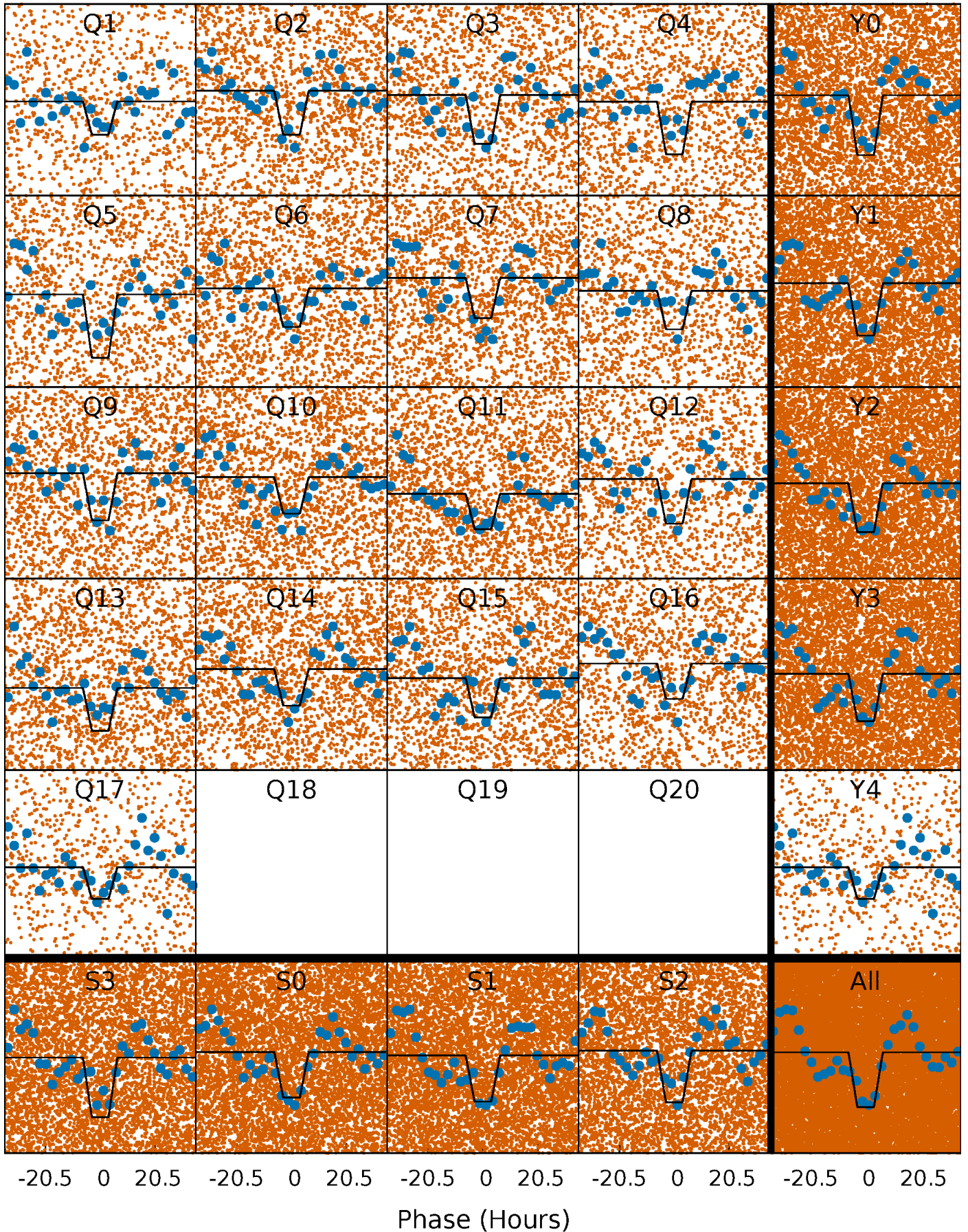
DV Quarter-Phased Transit Curves

TCE 006593353-01 P= 3.661794 Days $T_0=131.608423$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

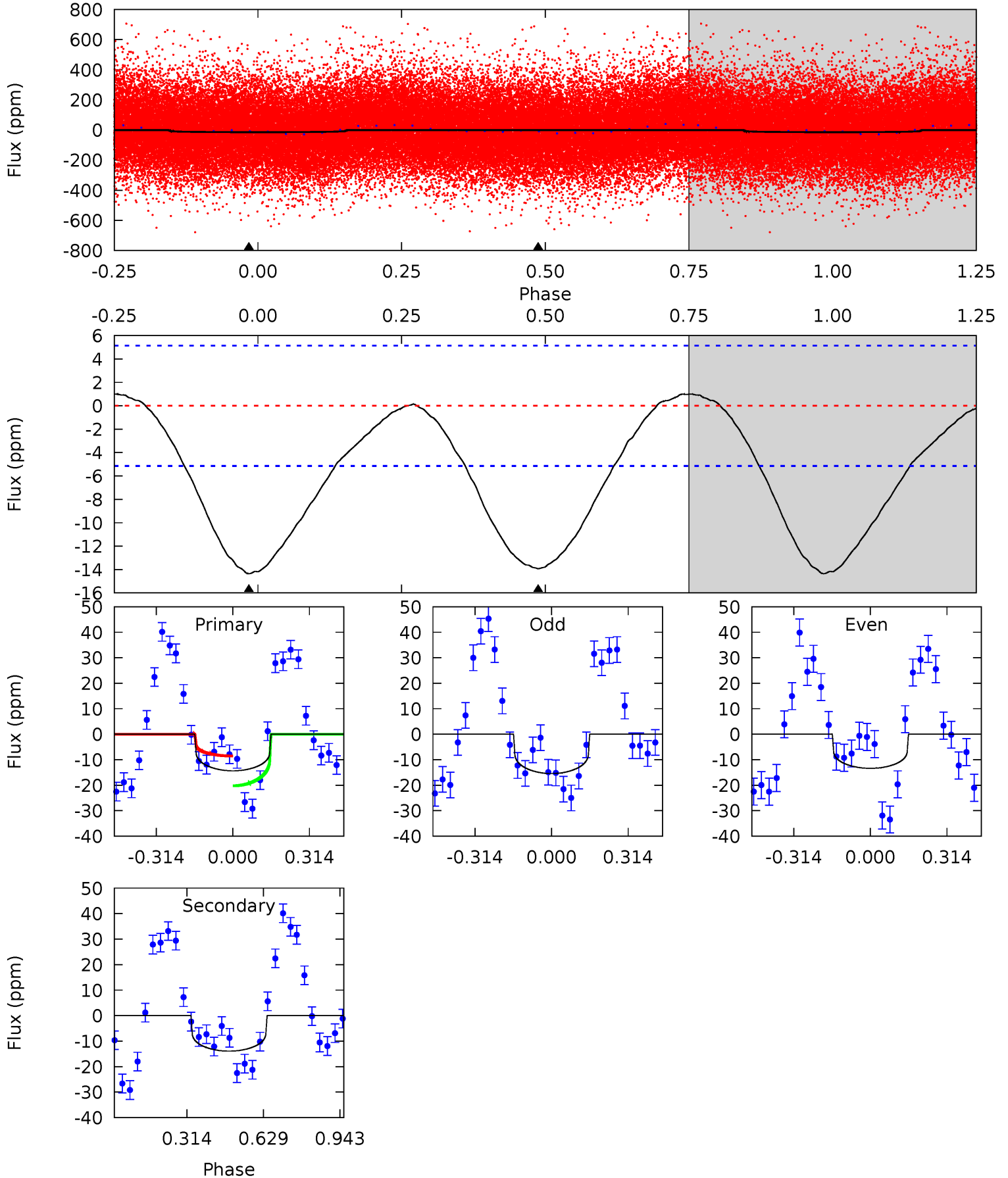
TCE 006593353-01 P= 3.661824 Days $T_0=131.848170$ (BKJD)



DV Model-Shift Uniqueness Test

006593353-01, P = 3.661794 Days, E = 127.946629 Days

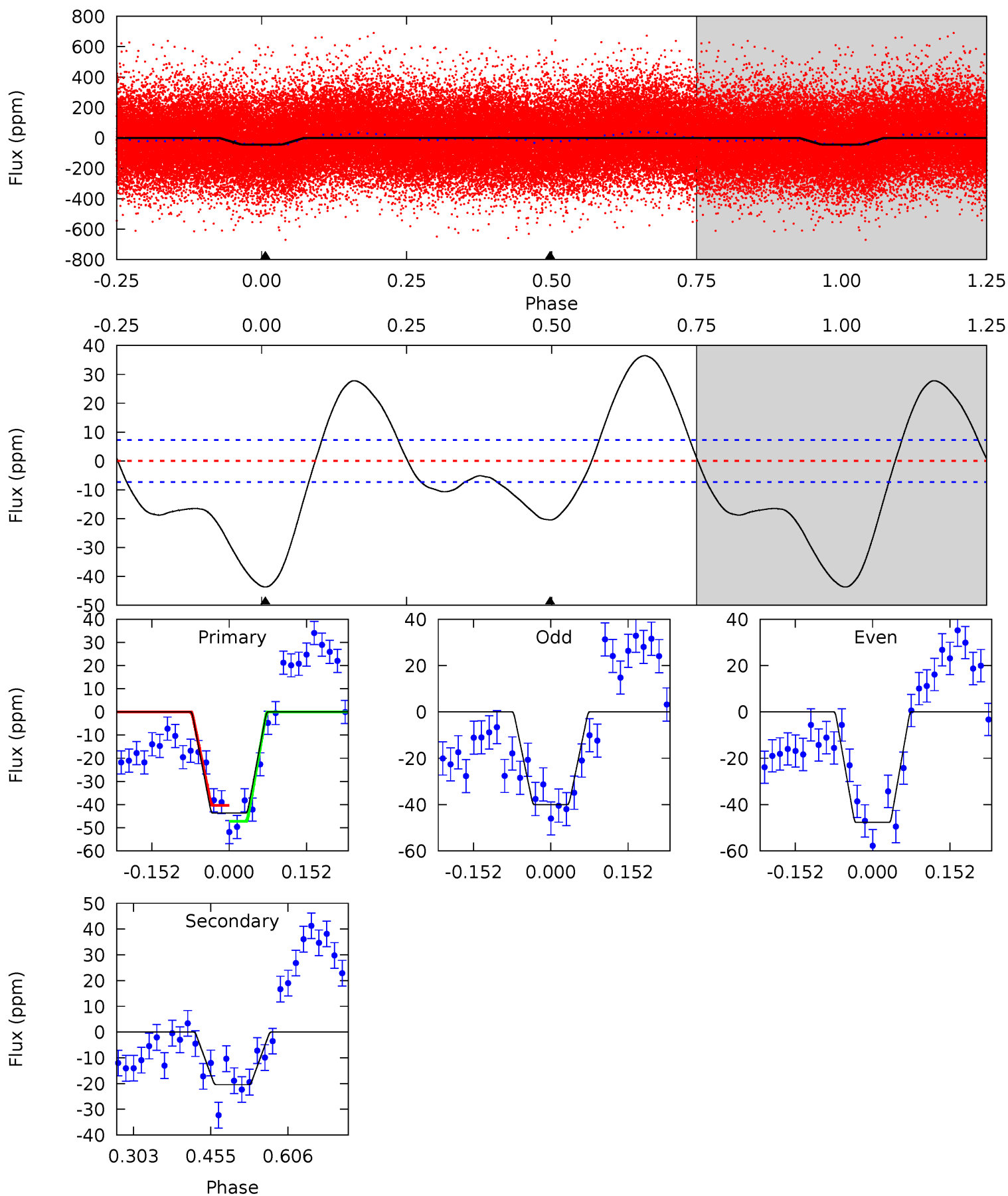
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	11.7	0	0	4.32	1.01	0.69	12.1	12.1	11.7	11.7	0.87	1.02	0.07	5.01



Alt Model-Shift Uniqueness Test

006593353-01, P = 3.661824 Days, E = 128.186346 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	12.6	0	0	4.48	1.43	11.2	26.9	26.9	12.6	12.6	2.37	1.03	0.46	2.14



Stellar Parameters For KIC 006593353

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6680^{+160}_{-240}	$4.203^{+0.153}_{-0.187}$	$-0.180^{+0.250}_{-0.300}$	$1.474^{+0.451}_{-0.301}$	$1.273^{+0.189}_{-0.189}$	$0.560^{+0.429}_{-0.283}$
	+2%/-4%	+4%/-4%	+139%/-167%	+31%/-20%	+15%/-15%	+77%/-51%
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 006593353-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 1	$0.74^{+0.55}_{-0.44}$	2225^{+168}_{-144}	5927^{+4017}_{-1228}	35^{+169}_{-24}
Alt.	-20 ± 2	$1.14^{+0.73}_{-0.56}$	2234^{+167}_{-143}	5328^{+2286}_{-939}	22^{+60}_{-13}

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

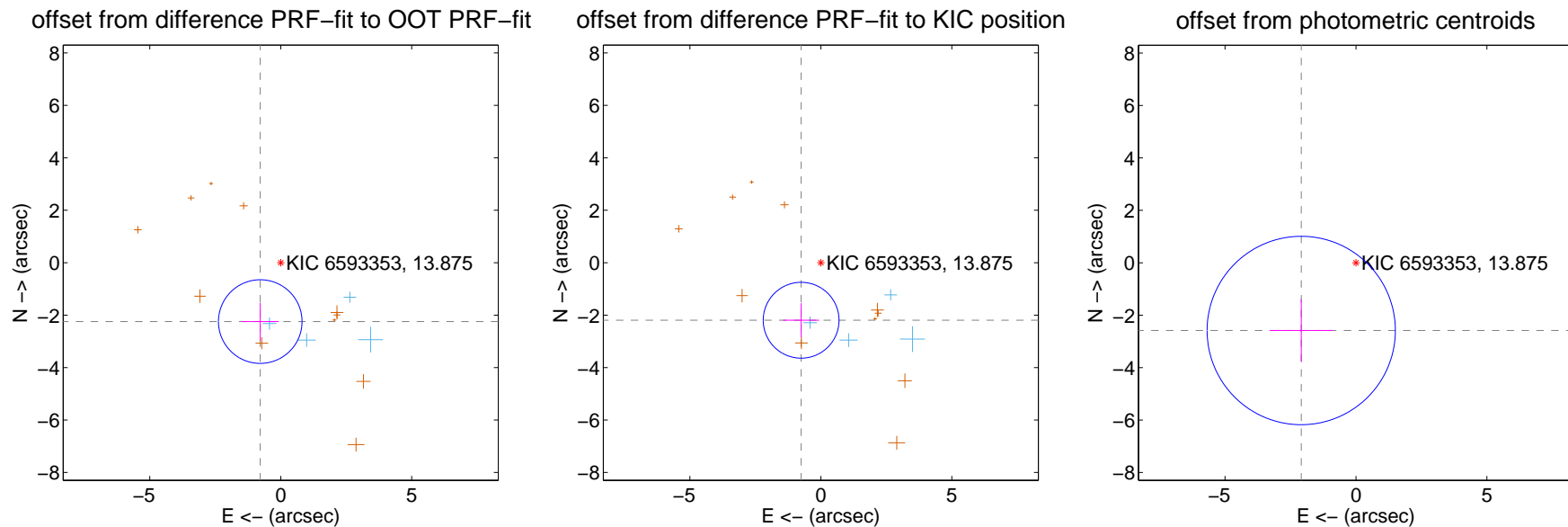
DV Centroid Data

Supplemental centroid analysis for 006593353-01. Kepler magnitude: 13.88. Transit SNR 8.21

There are 4 quarters with good PRF difference image offsets

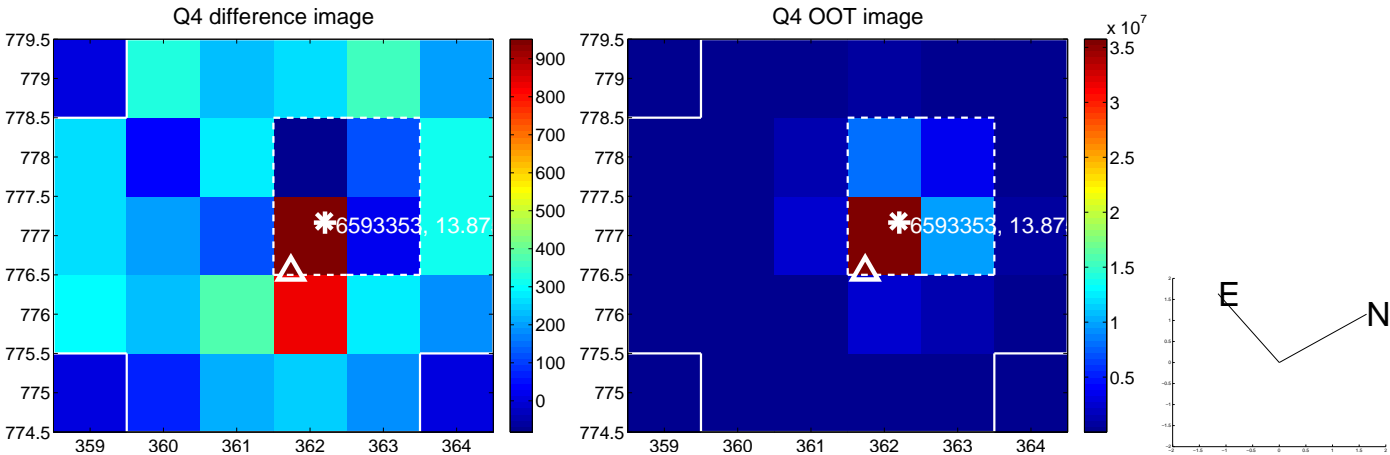
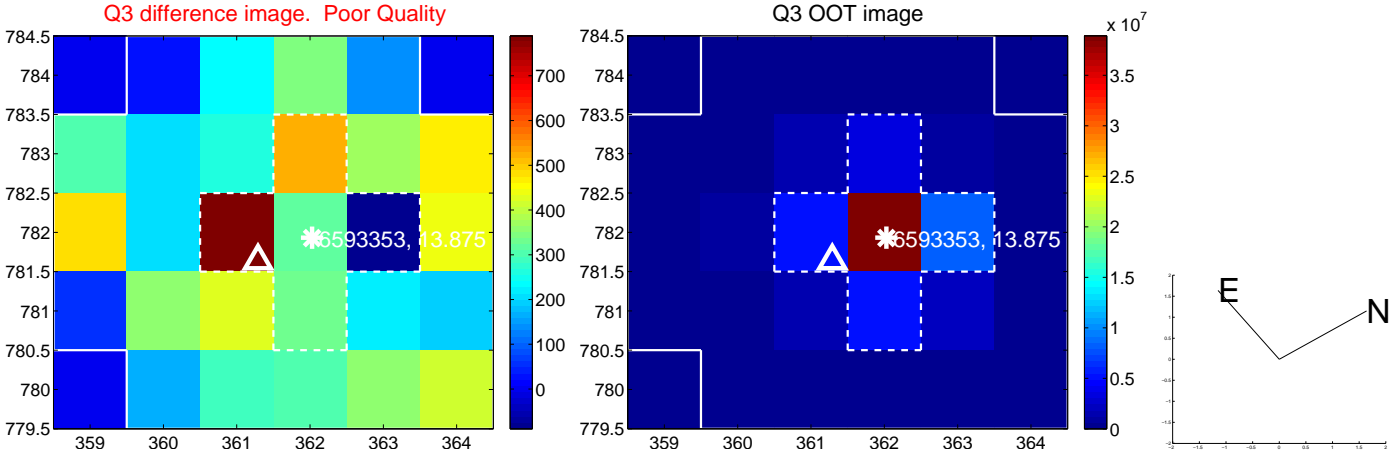
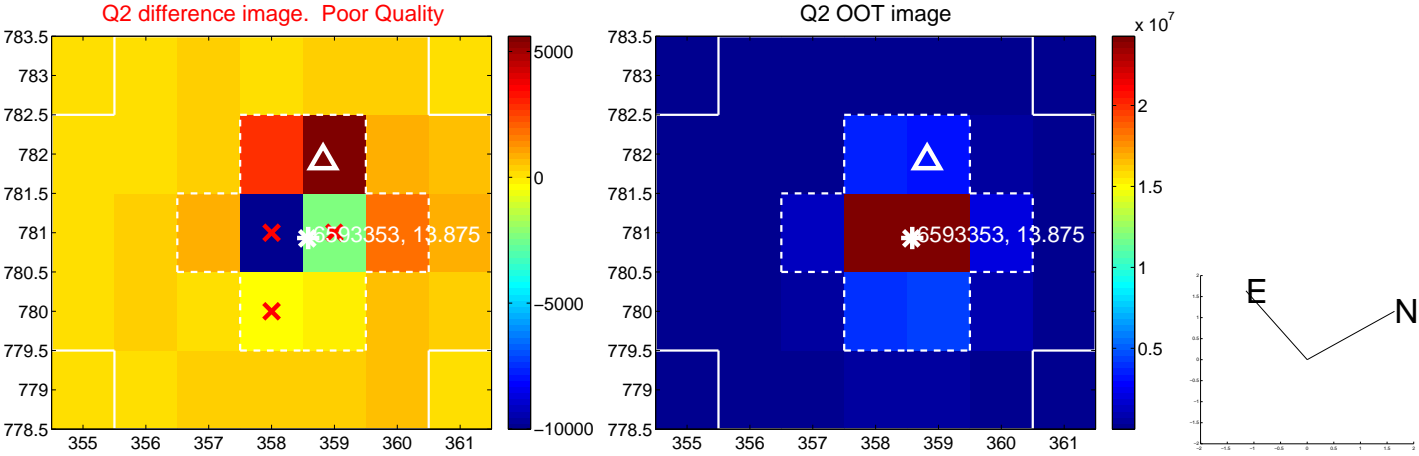
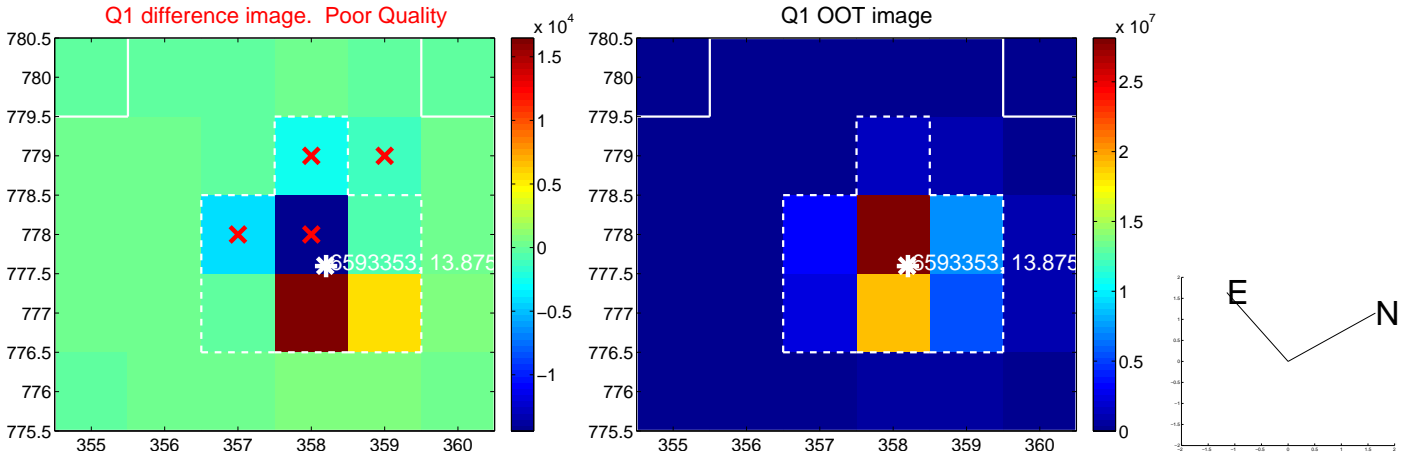
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.378 ± 0.532	4.47	0.782 ± 0.710	-2.246 ± 0.716
PRF-fit source offset from KIC position	2.321 ± 0.482	4.81	0.753 ± 0.689	-2.195 ± 0.649
photometric centroid source offset	3.32 ± 1.20	2.77	2.09 ± 1.20	-2.58 ± 1.19

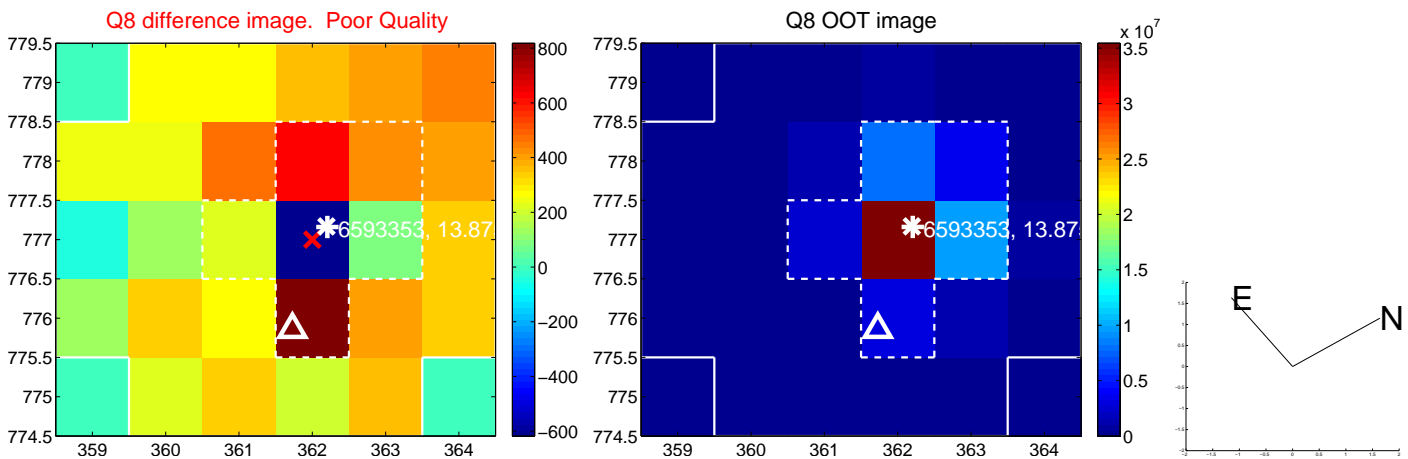
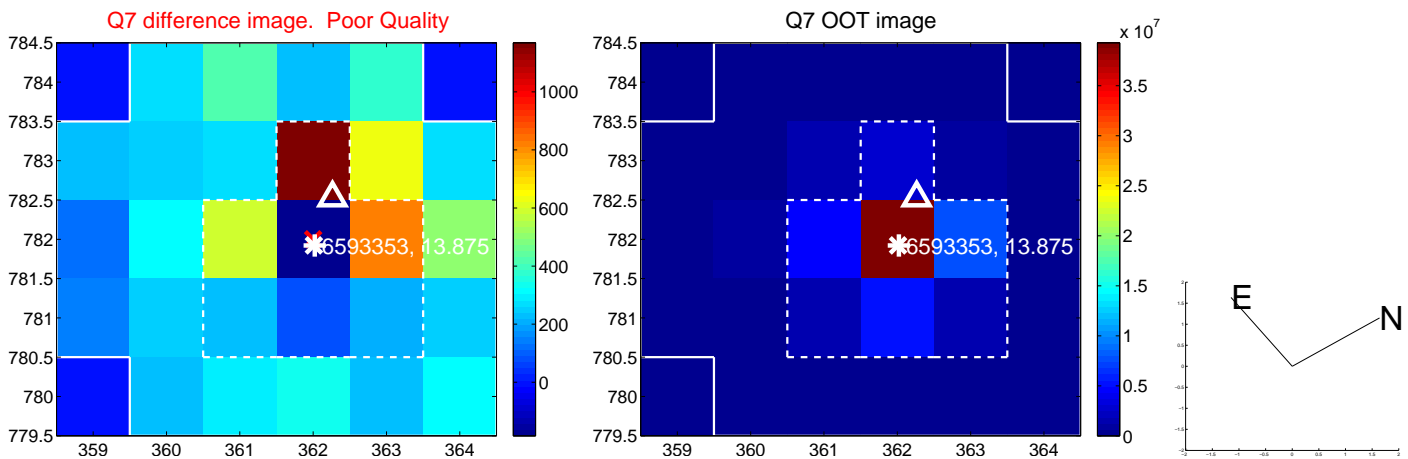
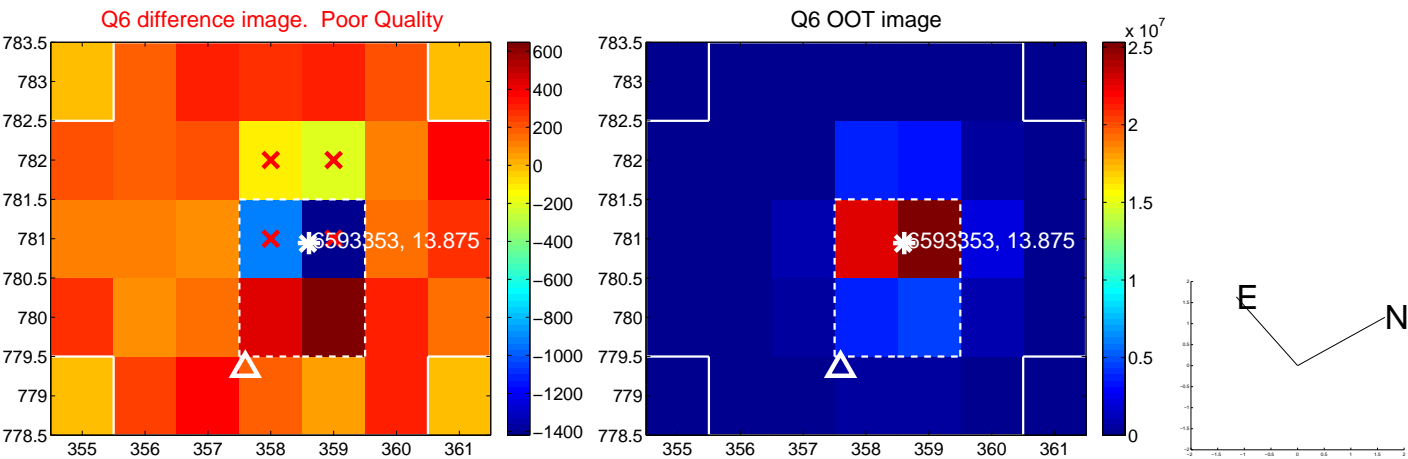
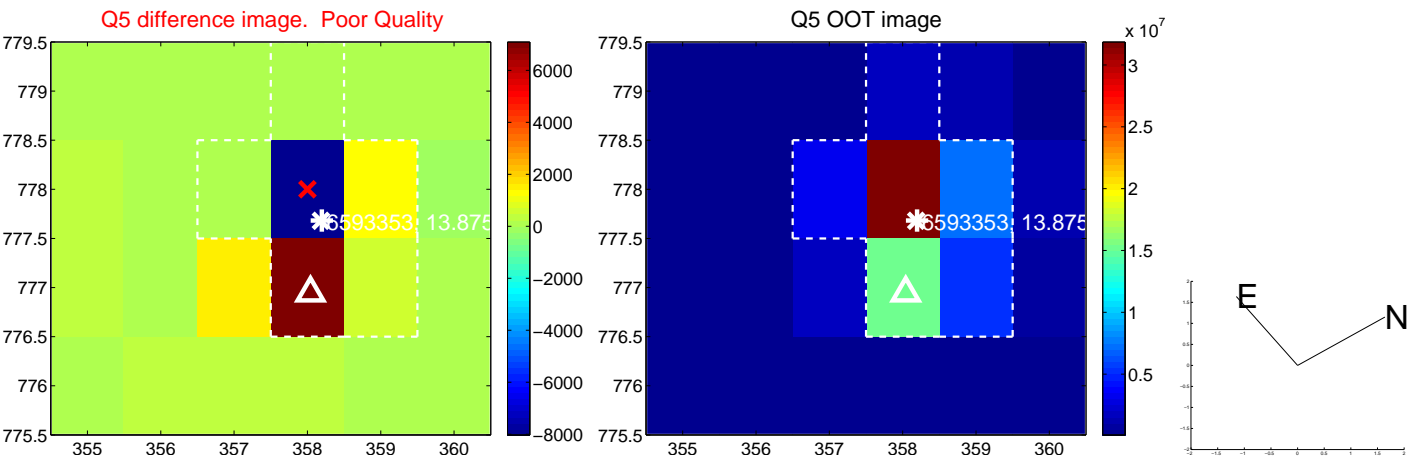


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs $> 15,000$ are from the UKIRT catalog.

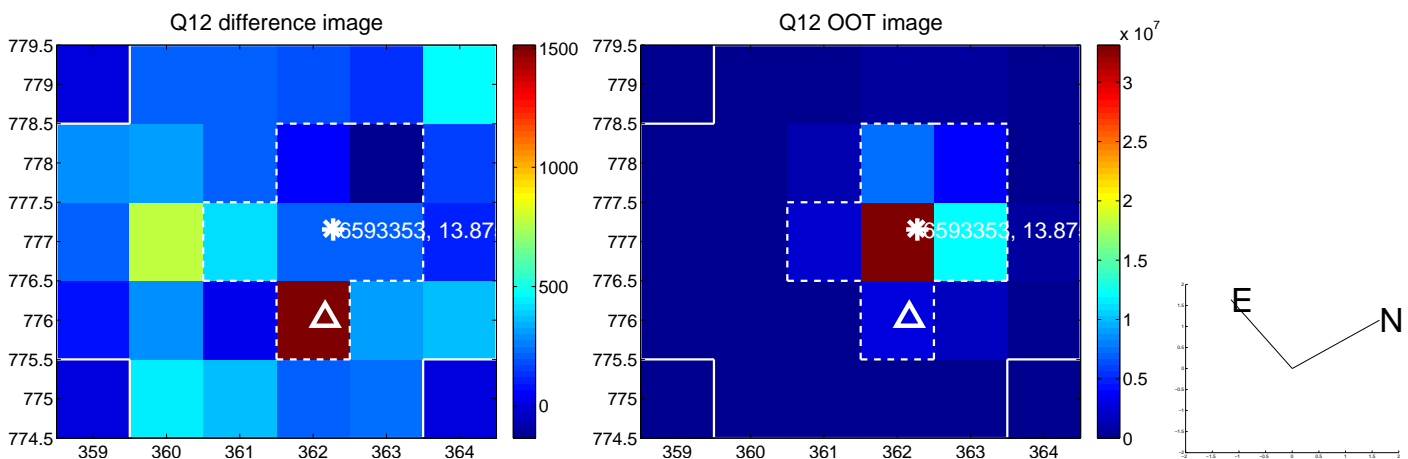
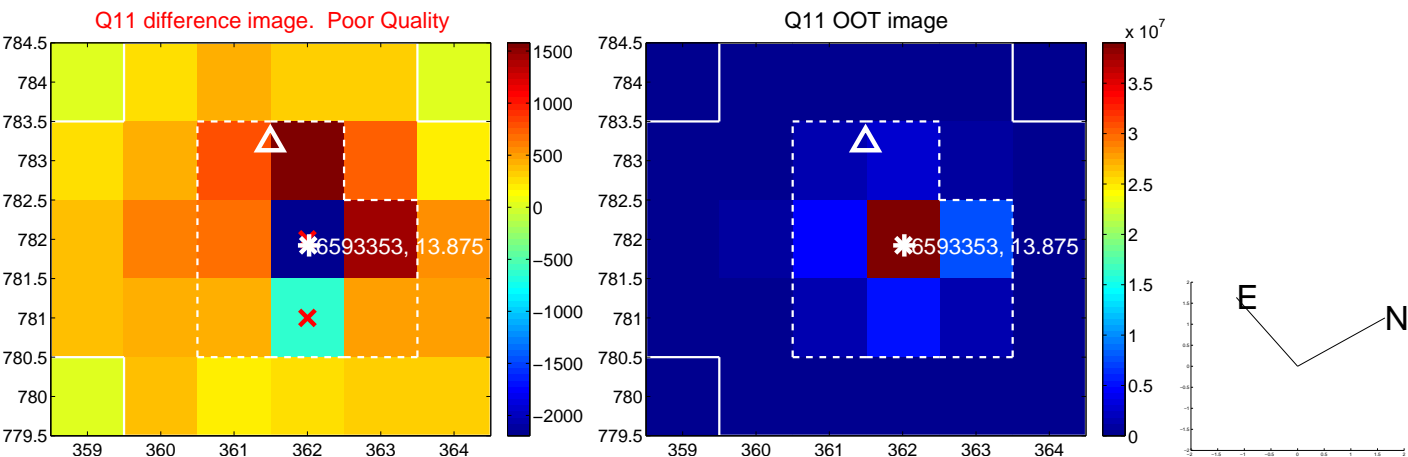
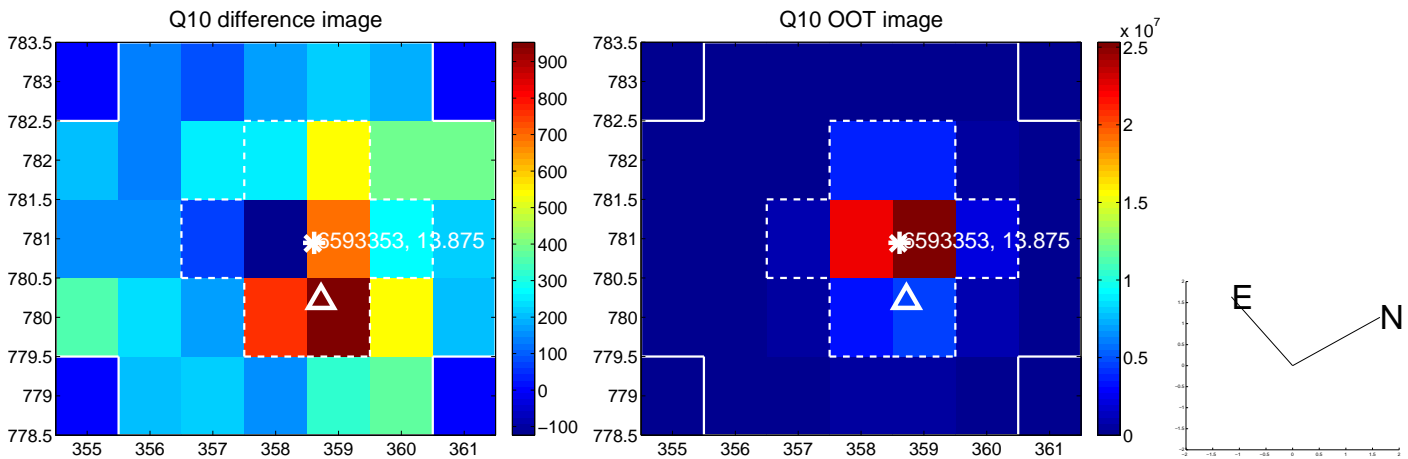
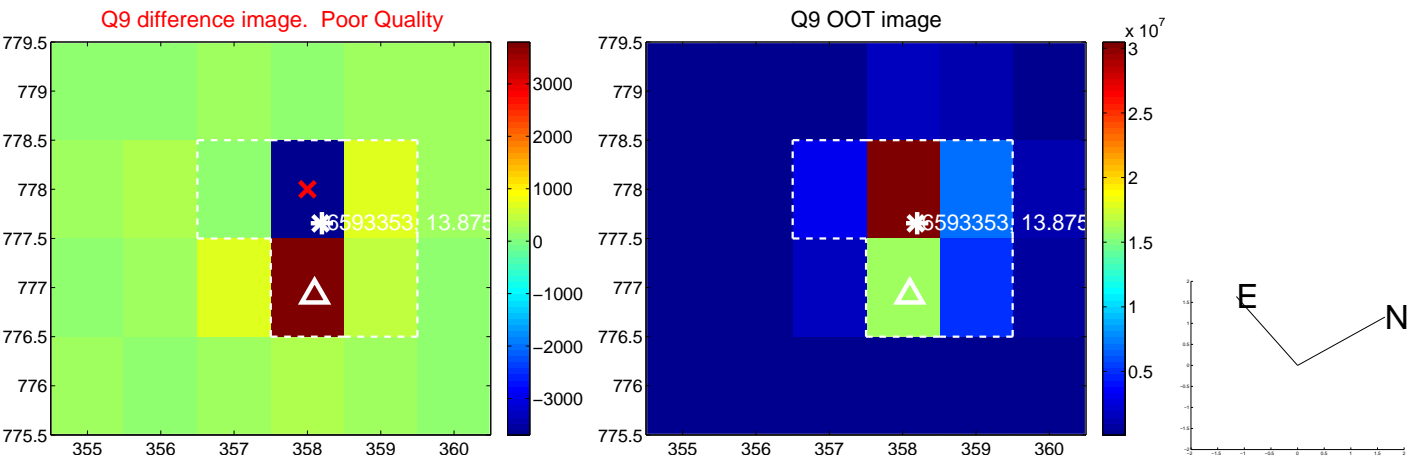
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



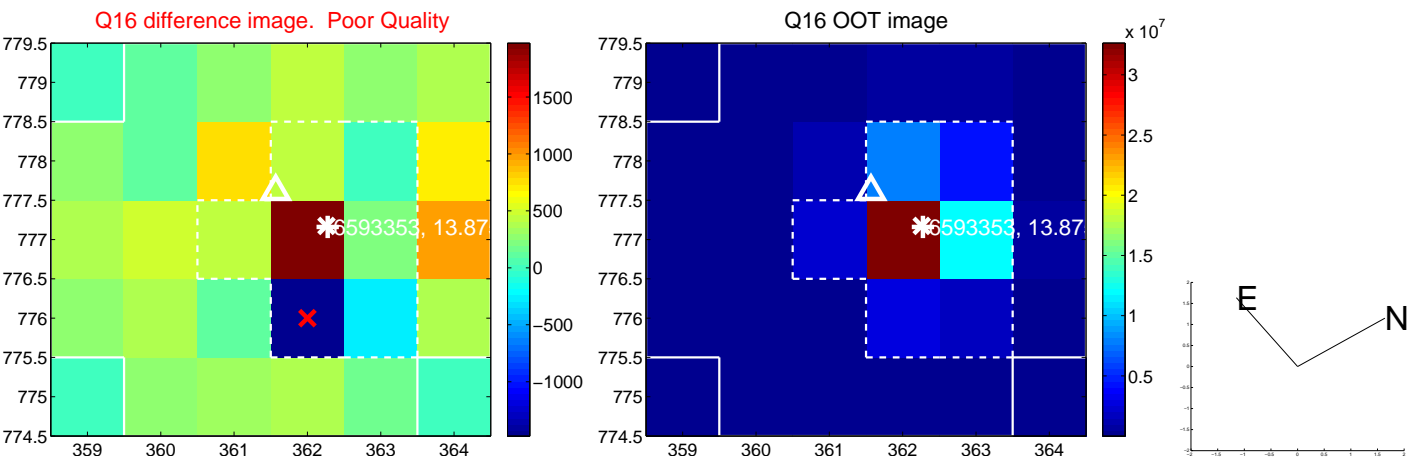
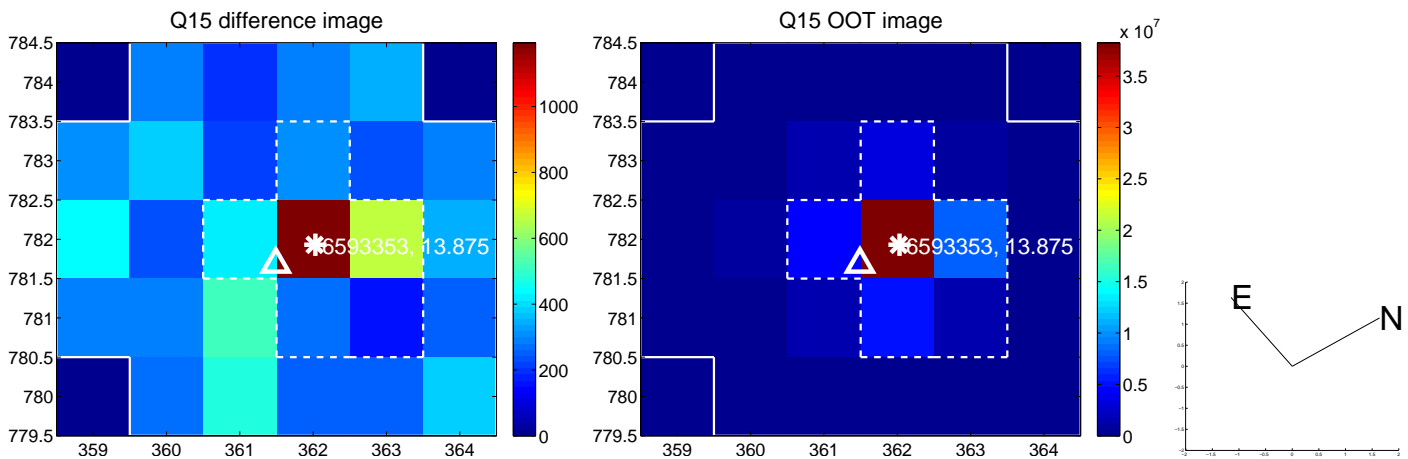
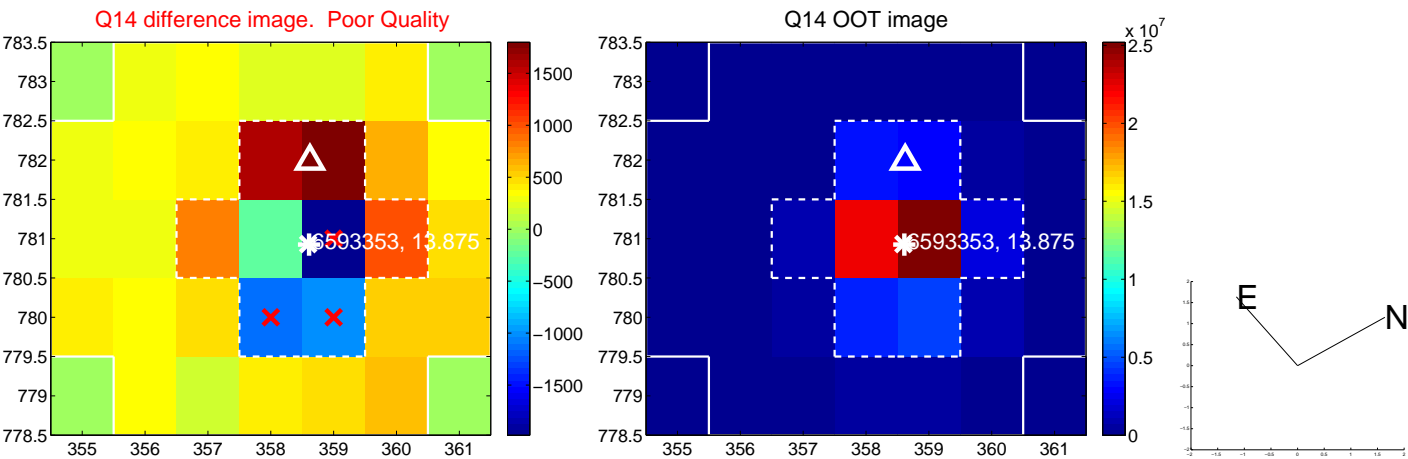
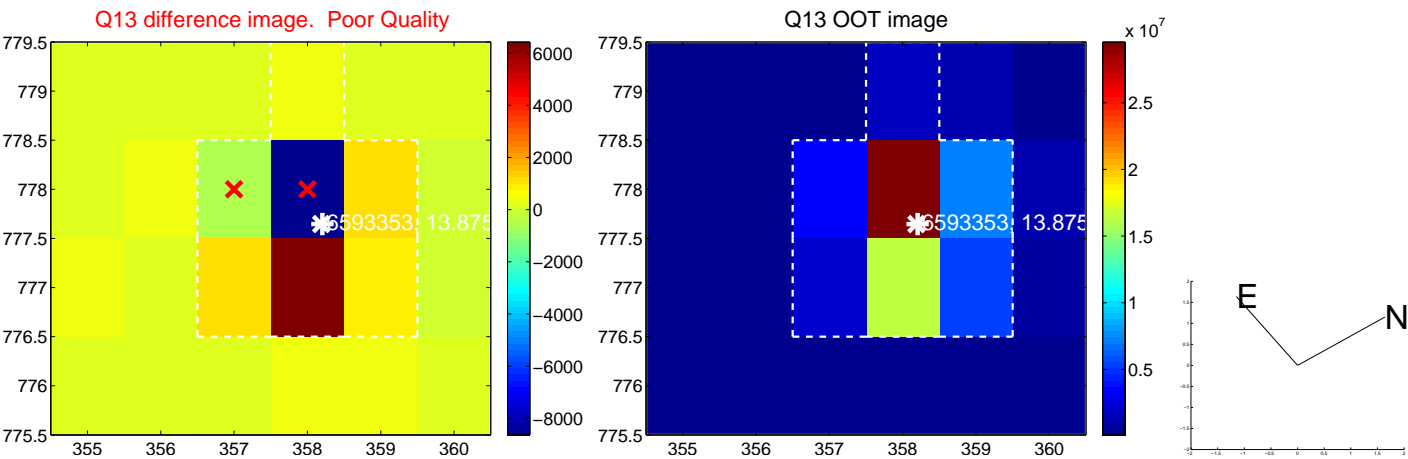
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



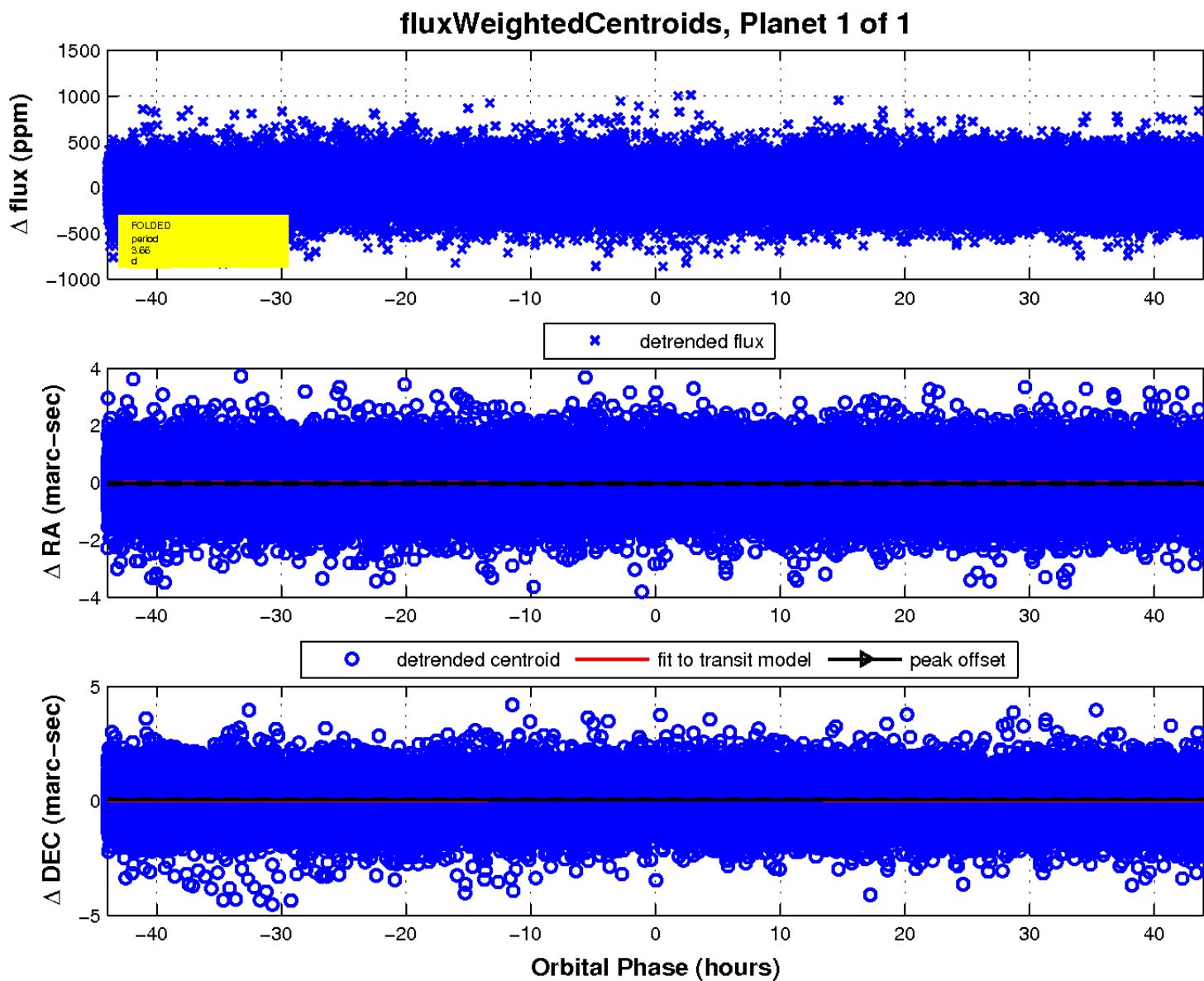
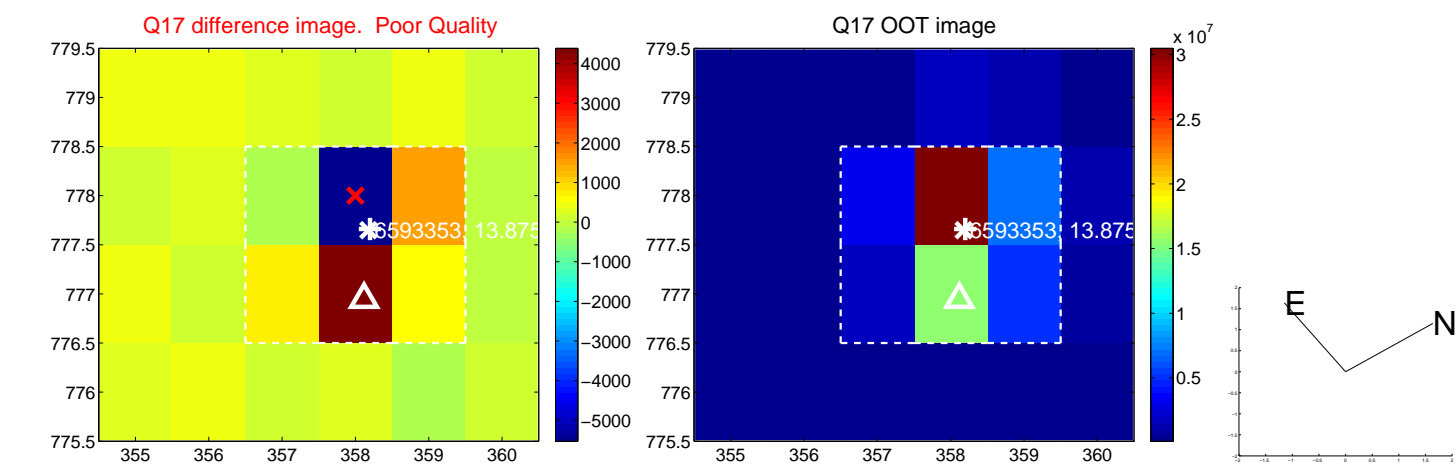
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

