

KIC 005893430

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})
005893430-01	OBS	No	0.674712	131.591761	67.4	1.816	7.6	6.4	0.63	4531	0.64	912.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005893430-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

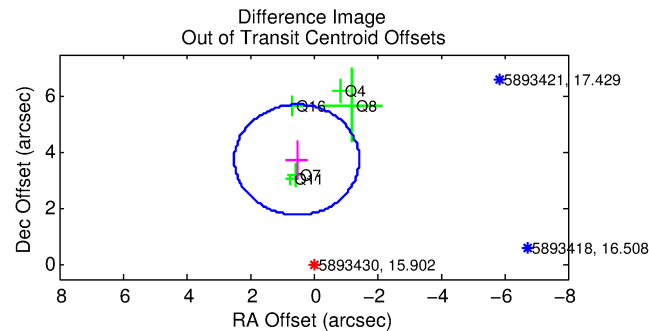
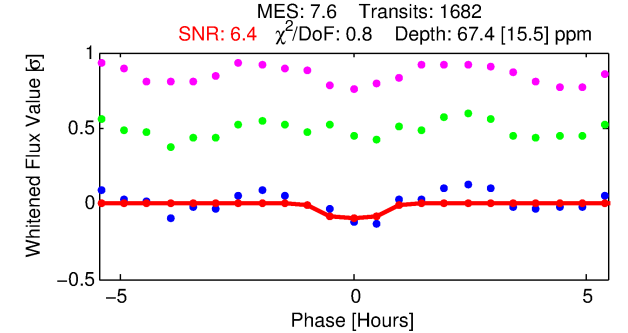
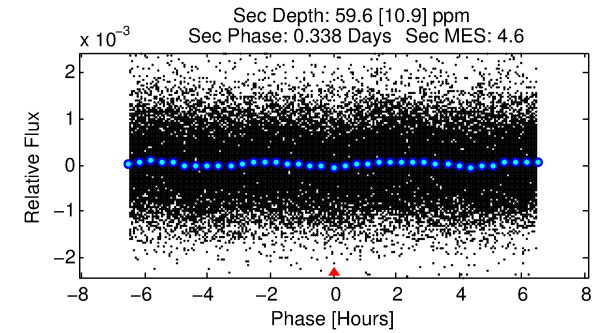
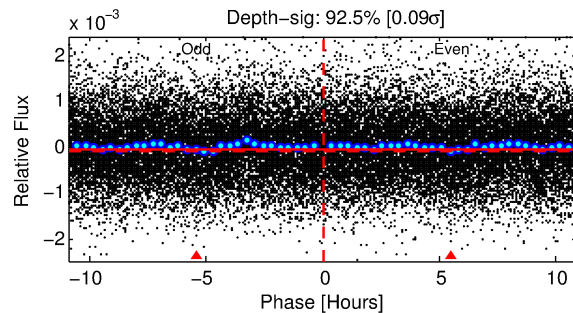
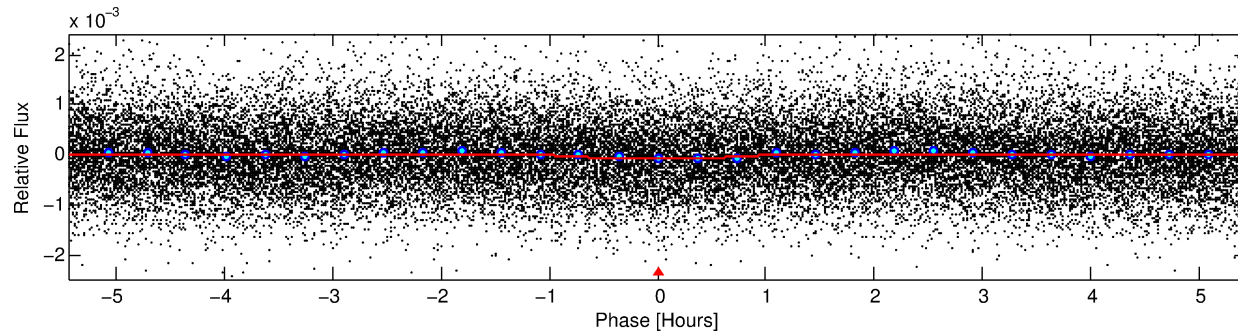
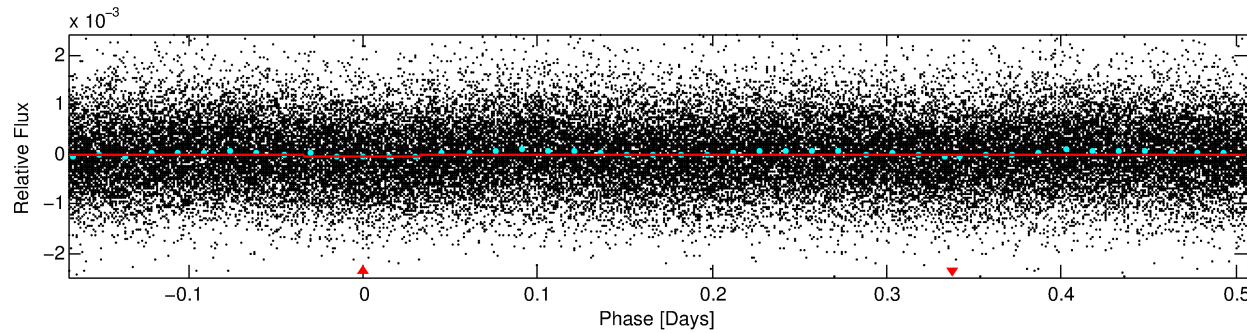
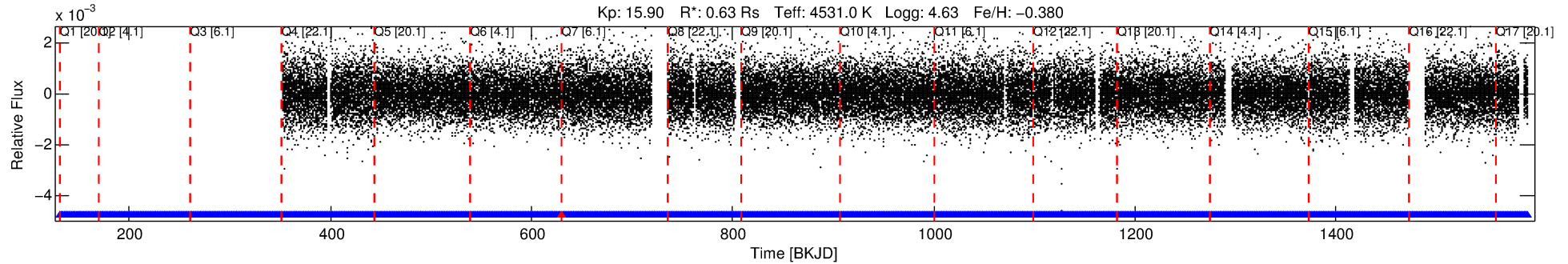
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005893430-01

No Significant Match Found

DV One-Page Summary

KIC: 5893430 Candidate: 1 of 1 Period: 0.675 d



DV Fit Results:

Period = 0.67471 [0.00002] d
Epoch = 131.5918 [0.0039] BKJD
Rp/R* = 0.0093 [0.0112]
a/R* = 1.60 [4.54]
b = 0.90 [1.02]
Seff = 912.86 [168.94]
Teff = 1402 [65] K
Rp = 0.64 [0.77] Re
a = 0.0128 [0.0009] AU
Ag = 13.31 [32.36] [0.38 σ]
Teffp = 4139 [2519] K [1.09 σ]

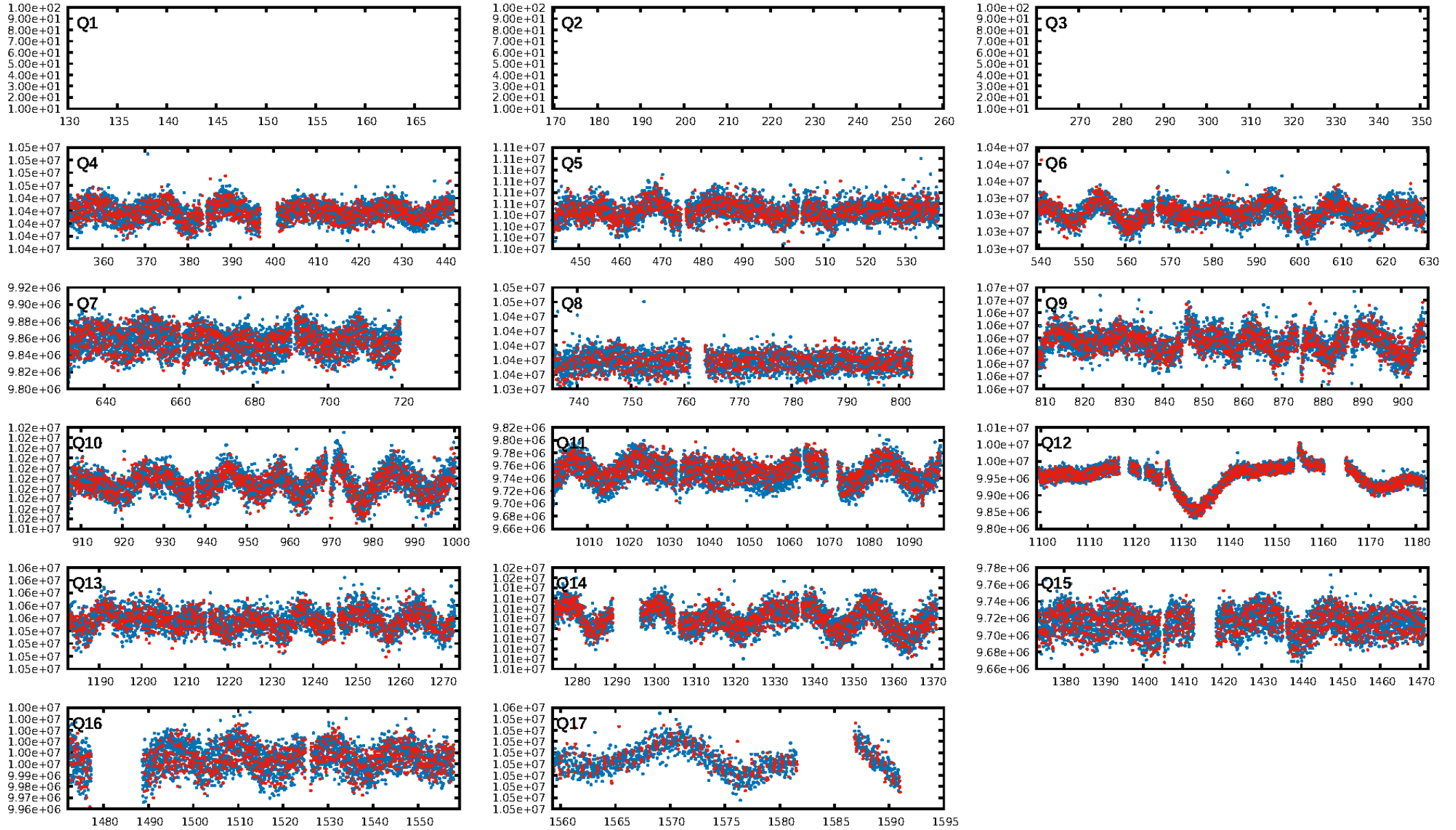
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.48e-14
RollingBand-fgt: 1.00 [1640/1641]
GhostDiagnostic-chr: -18.64
Centroid-sig: 0.3%
Centroid-so: 4.641 arcsec [4.14 σ]
OotOffset-rm: 3.783 arcsec [5.79 σ]
KicOffset-rm: 2.745 arcsec [8.38 σ]
OotOffset-st: 0/2/3/0 [5]
KicOffset-st: 0/2/3/0 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 1.00 [14/14]

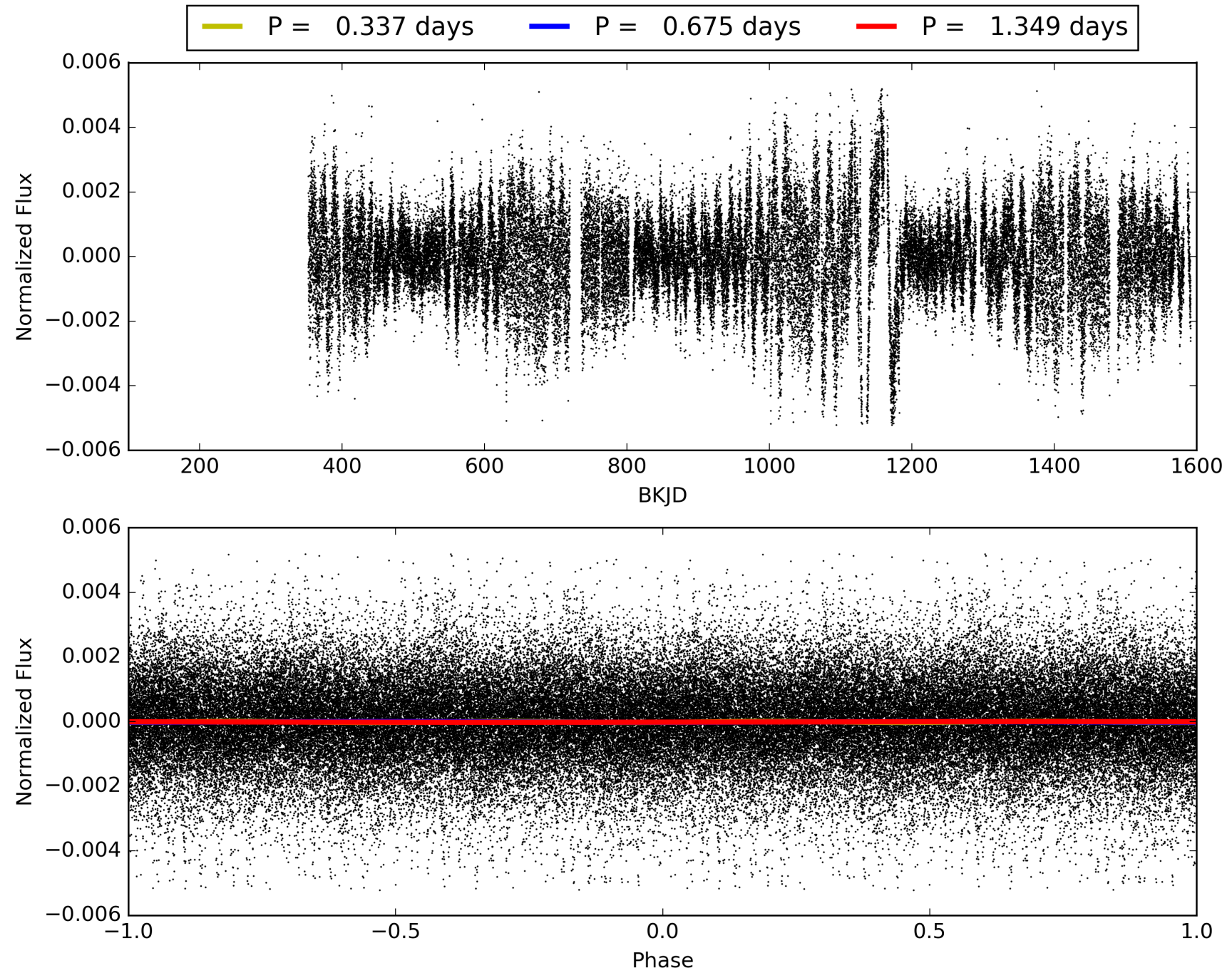
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:28:07 Z

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

TCE 005893430-01, PDC Light Curves

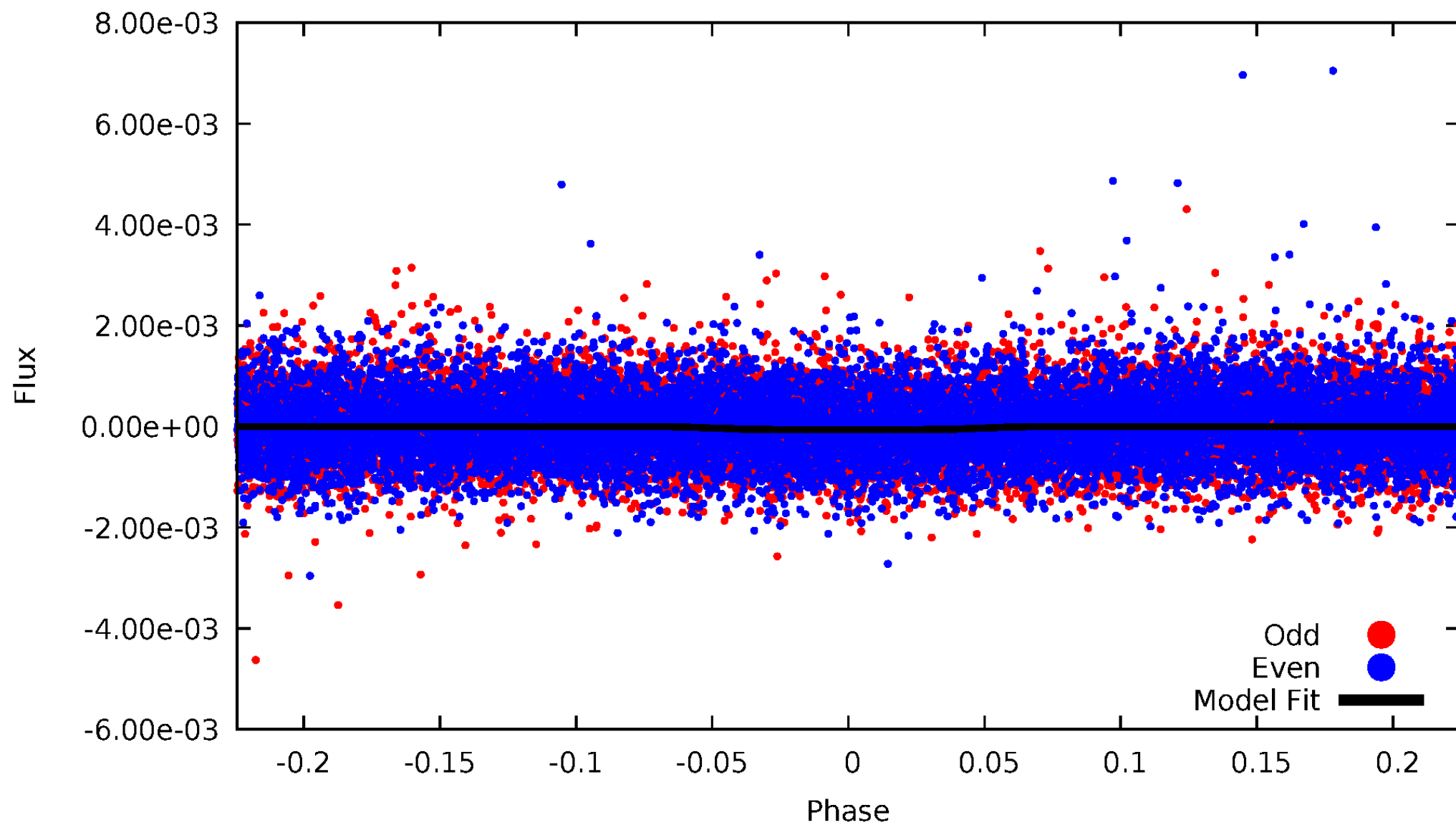


TCE 005893430-01



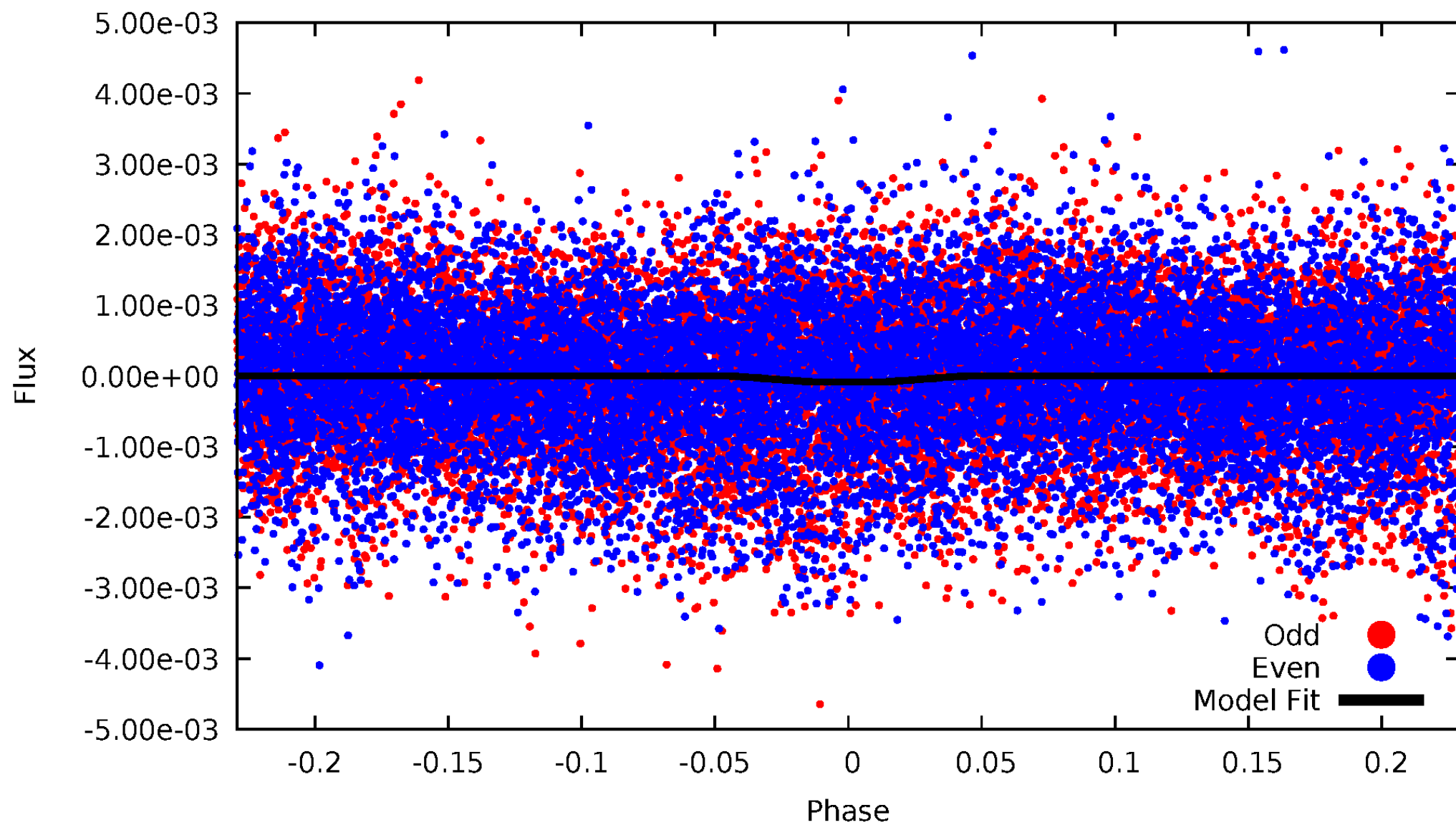
DV Odd/Even

TCE 005893430-01



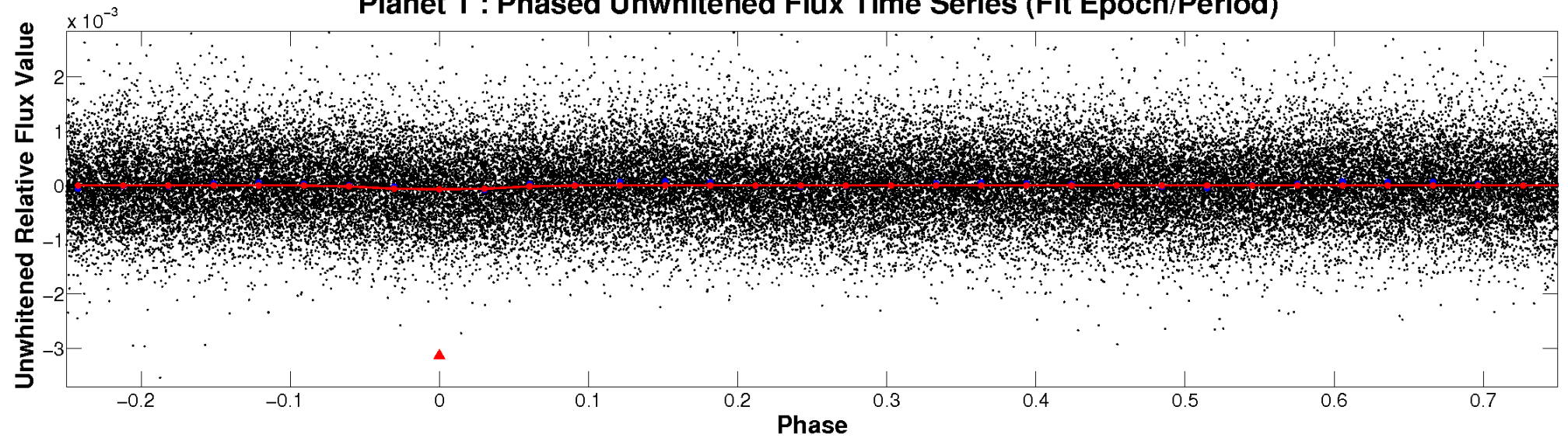
ALT Odd/Even

TCE 005893430-01

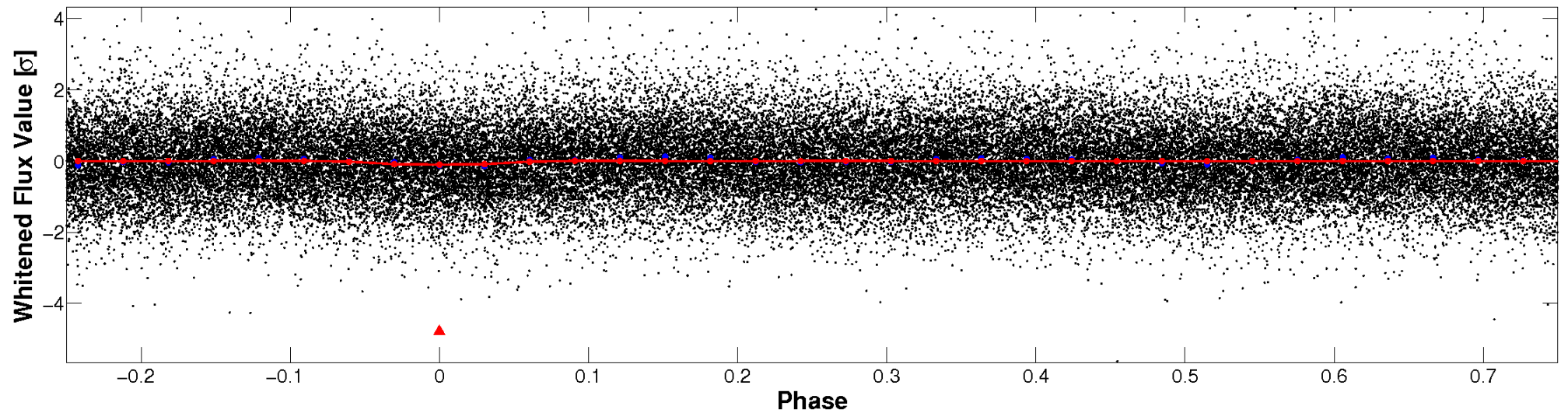


Non-Whitened Vs. Whitened Light Curve

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

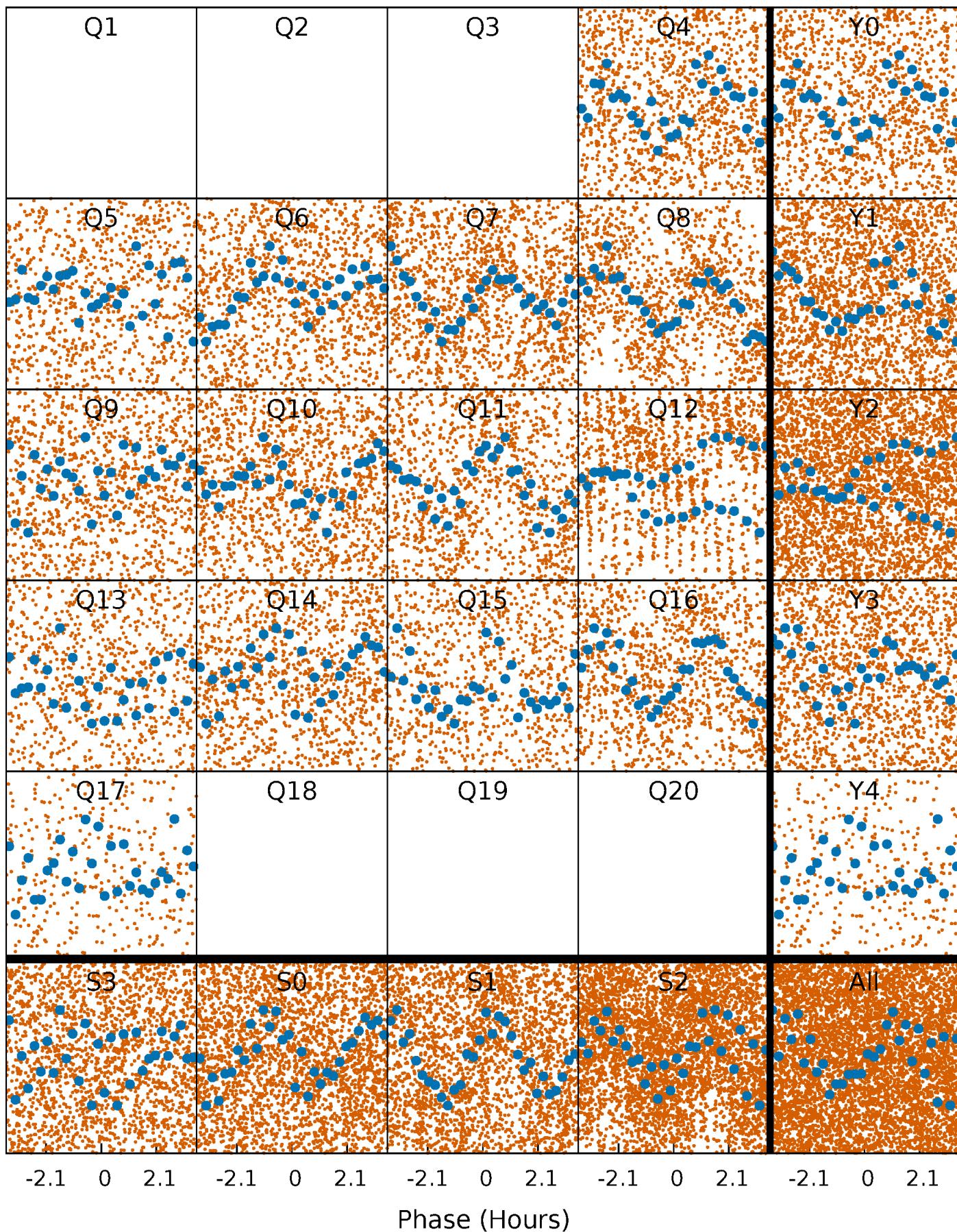


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



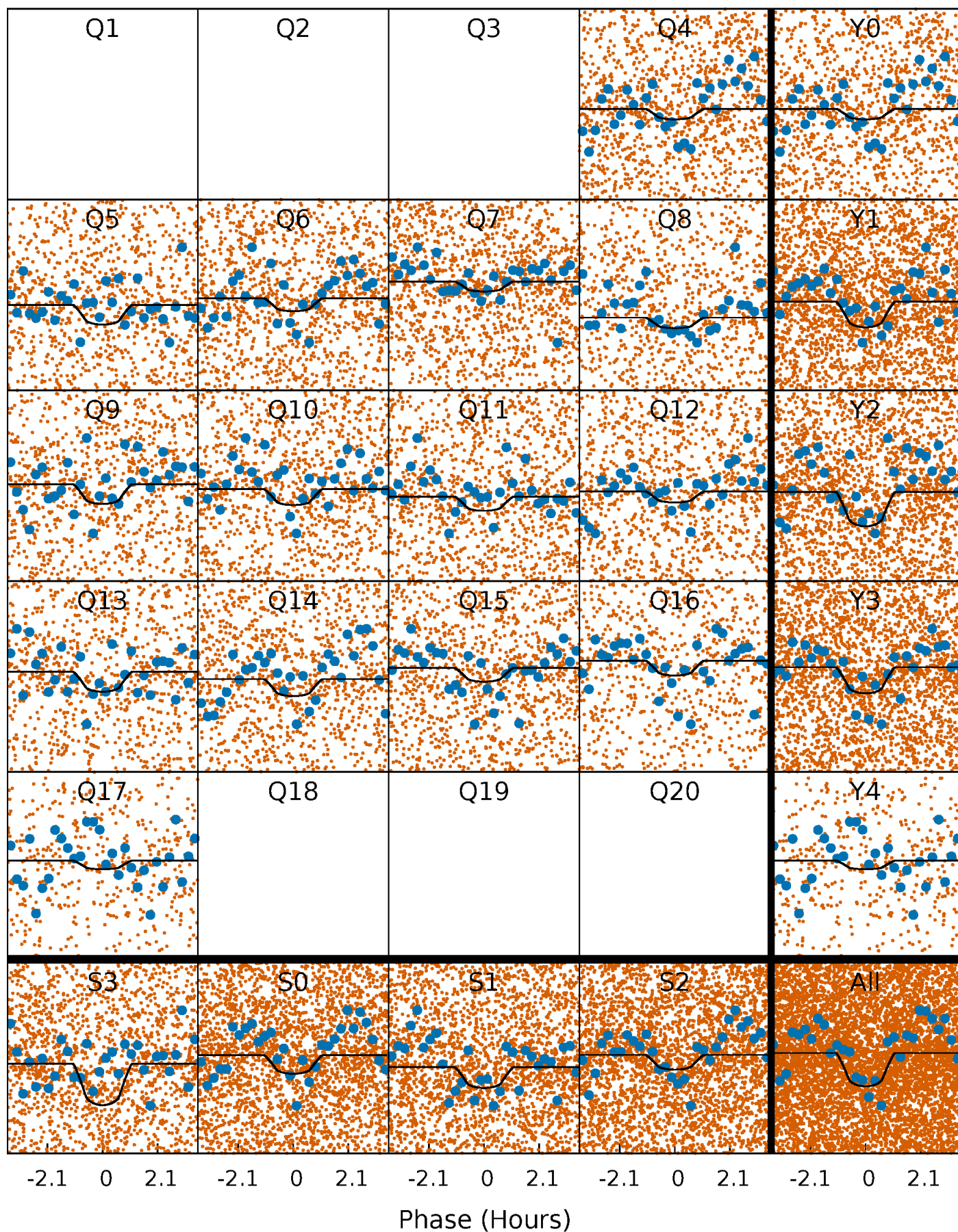
PDC Quarter-Phased Transit Curves

TCE 005893430-01 P= 0.674712 Days $T_0=131.591761$ (BKJD)



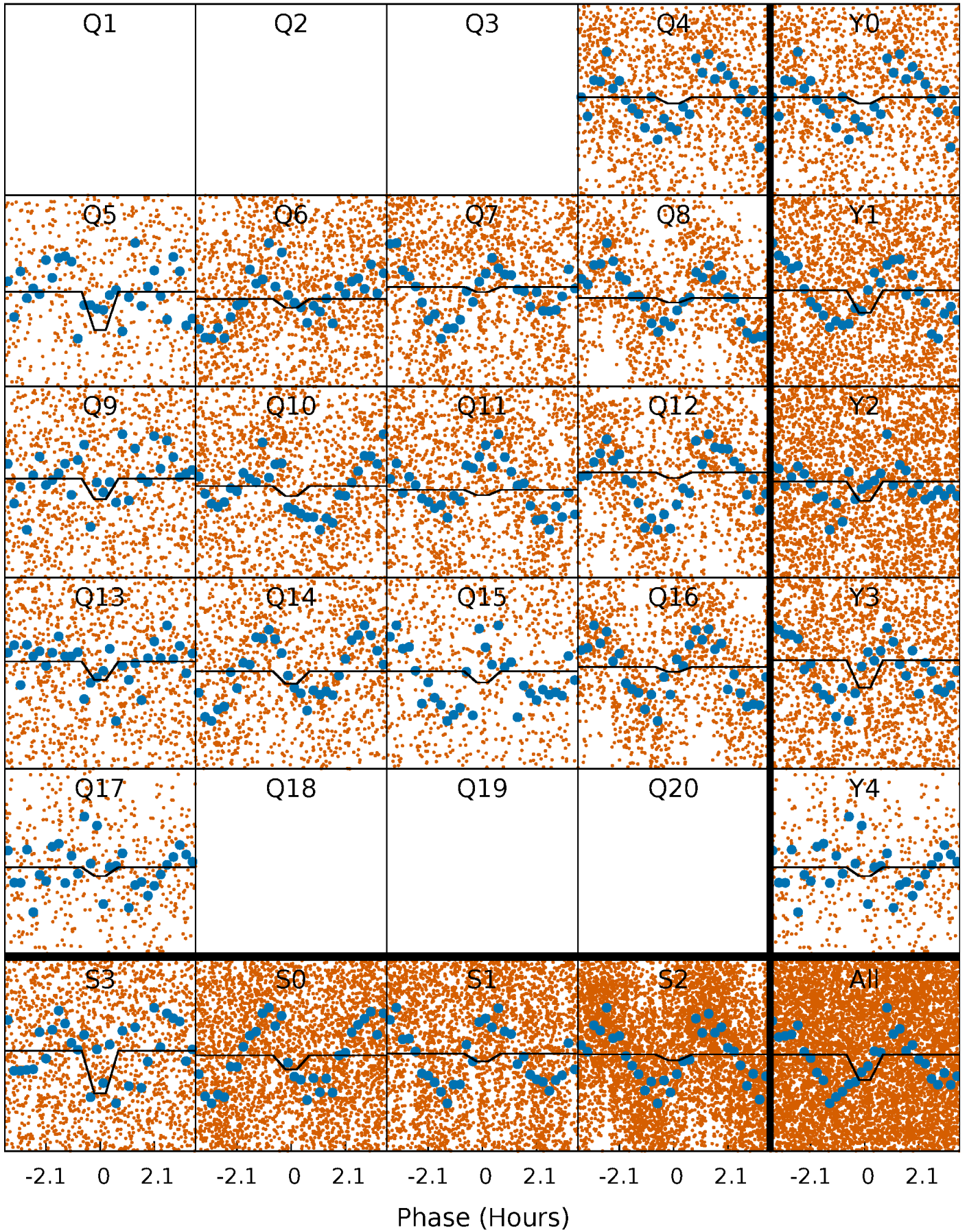
DV Quarter-Phased Transit Curves

TCE 005893430-01 P= 0.674712 Days $T_0=131.591761$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

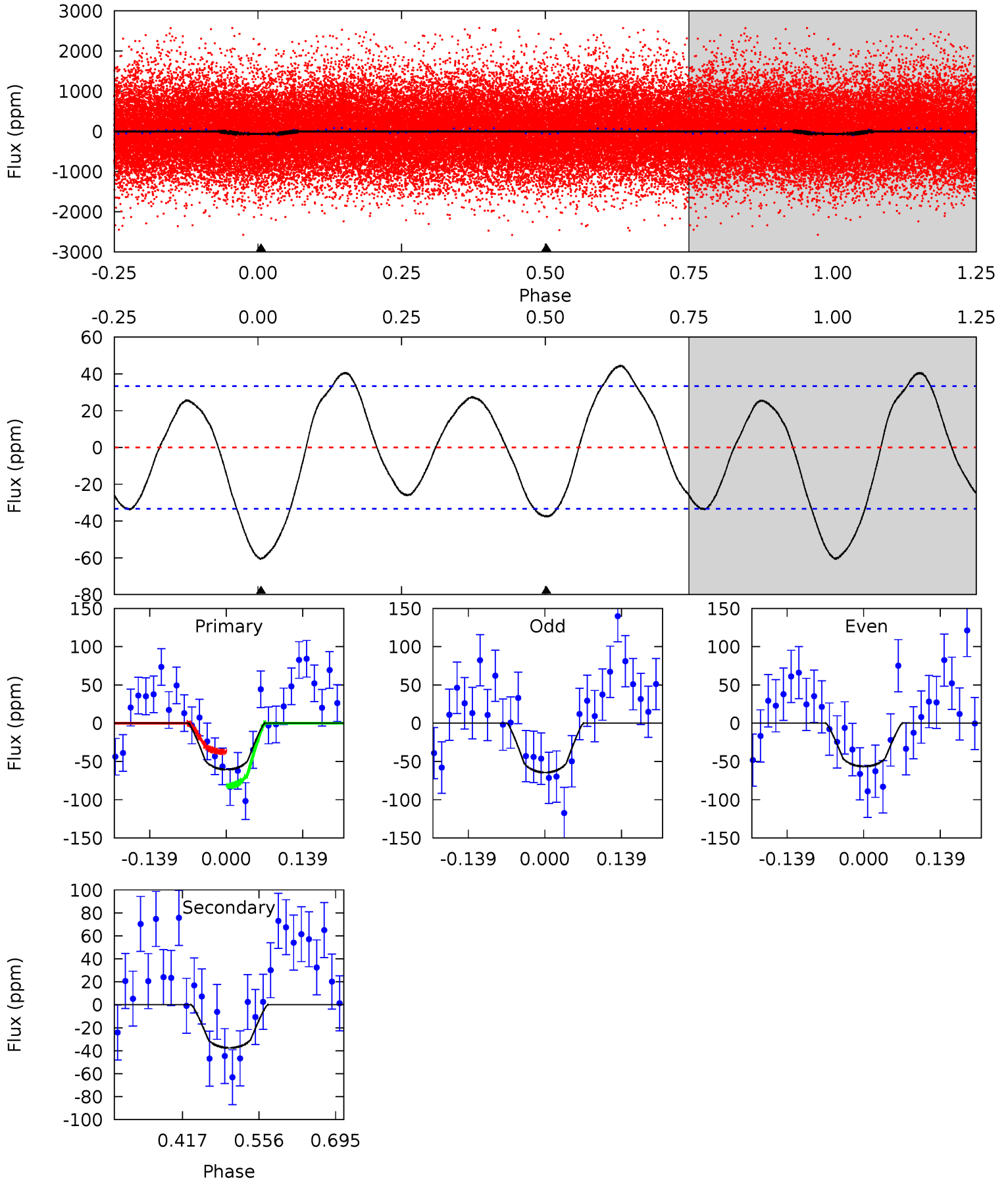
TCE 005893430-01 P= 0.674714 Days $T_0=131.591770$ (BKJD)



DV Model-Shift Uniqueness Test

005893430-01, P = 0.674712 Days, E = 131.591761 Days

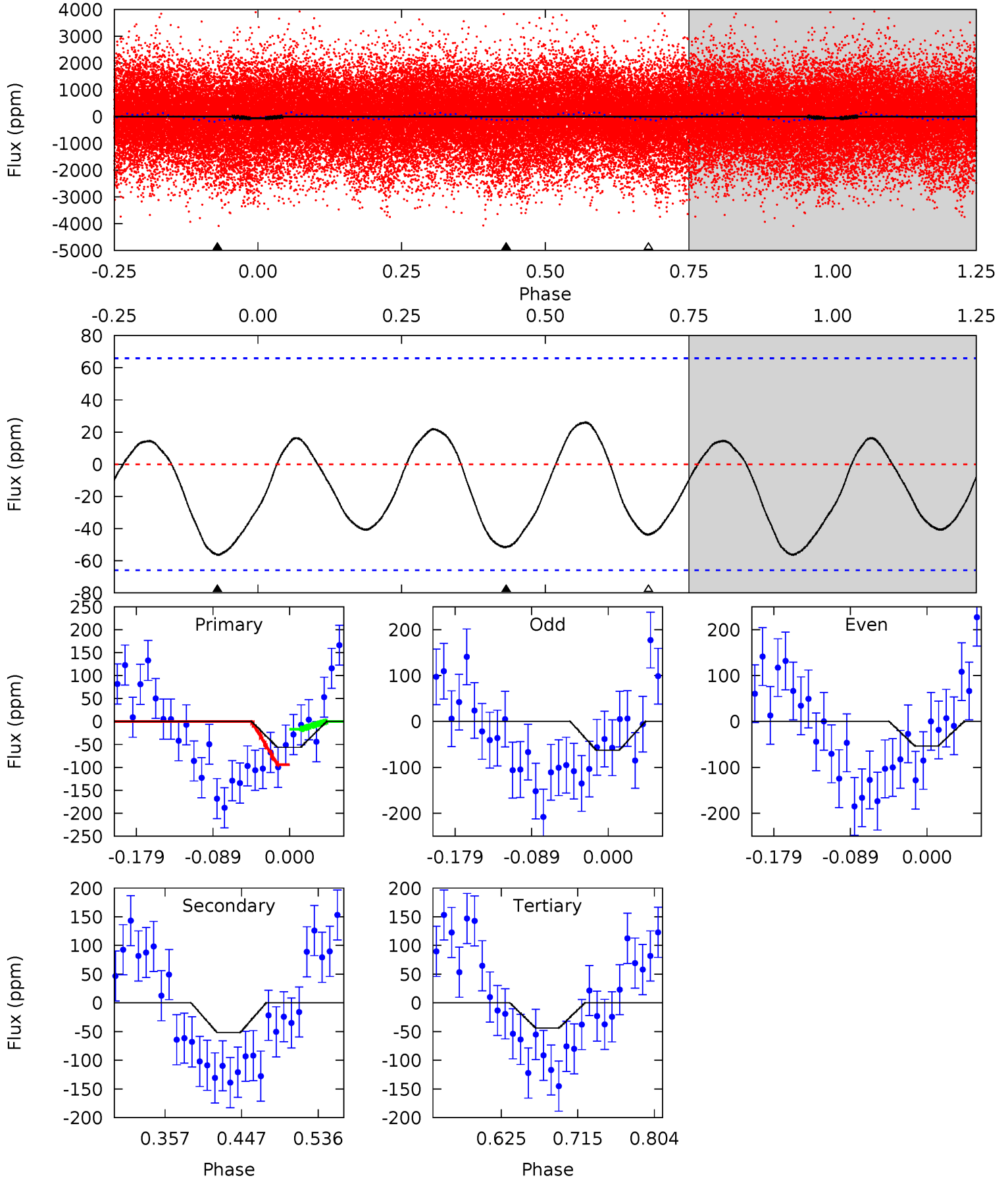
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.17	5.07	0	0	4.50	1.48	3.01	8.17	8.17	5.07	5.07	0.53	1.15	0.42	3.01



Alt Model-Shift Uniqueness Test

005893430-01, P = 0.674714 Days, E = 131.591770 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.92	3.60	3.05	0	4.59	1.70	1.53	0.87	3.92	0.54	3.60	0.31	17.4	0.32	2.65



Stellar Parameters For KIC 005893430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4531^{+159}_{-175}	$4.629^{+0.054}_{-0.027}$	$-0.380^{+0.300}_{-0.300}$	$0.630^{+0.051}_{-0.056}$	$0.615^{+0.077}_{-0.045}$	$3.469^{+0.869}_{-0.445}$
	+4%/-4%	+1%/-1%	+79%/-79%	+8%/-9%	+13%/-7%	+25%/-13%
Source	KIC0	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 005893430-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 7	$0.81^{+0.70}_{-0.53}$	1945^{+67}_{-80}	3511^{+1793}_{-669}	$5.227^{+39.171}_{-3.814}$
Alt.	-52 ± 14	$0.82^{+0.77}_{-0.48}$	1947^{+74}_{-84}	3668^{+1713}_{-684}	$6.762^{+36.024}_{-4.912}$

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

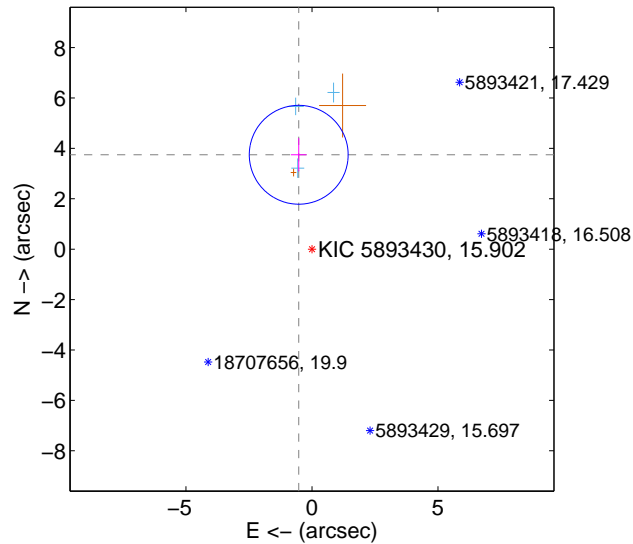
Supplemental centroid analysis for 005893430-01. Kepler magnitude: 15.90. Transit SNR 6.36

There are 3 quarters with good PRF difference image offsets

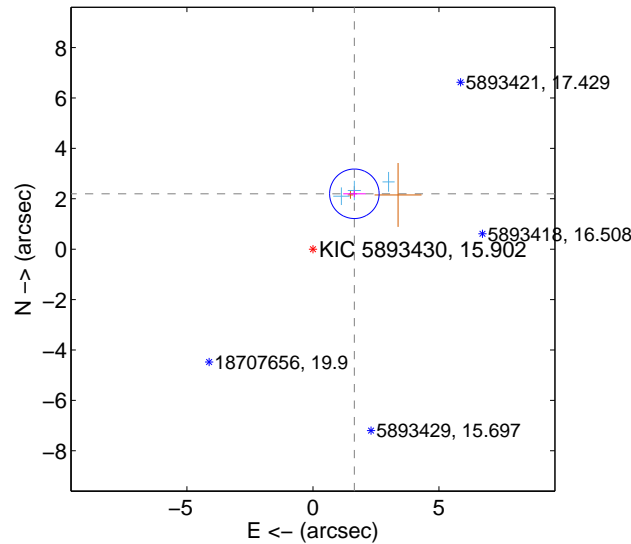
The OOT PRF centroid is offset from the target star catalog position by about 3.98 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.783 ± 0.654	5.79	0.526 ± 0.309	3.746 ± 0.659
PRF-fit source offset from KIC position	2.745 ± 0.328	8.38	-1.644 ± 0.443	2.198 ± 0.134
photometric centroid source offset	4.64 ± 1.12	4.14	-4.27 ± 1.13	-1.82 ± 1.05

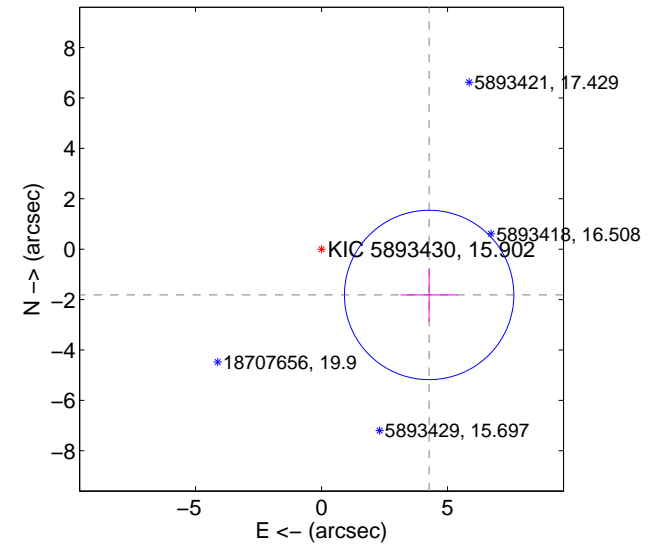
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

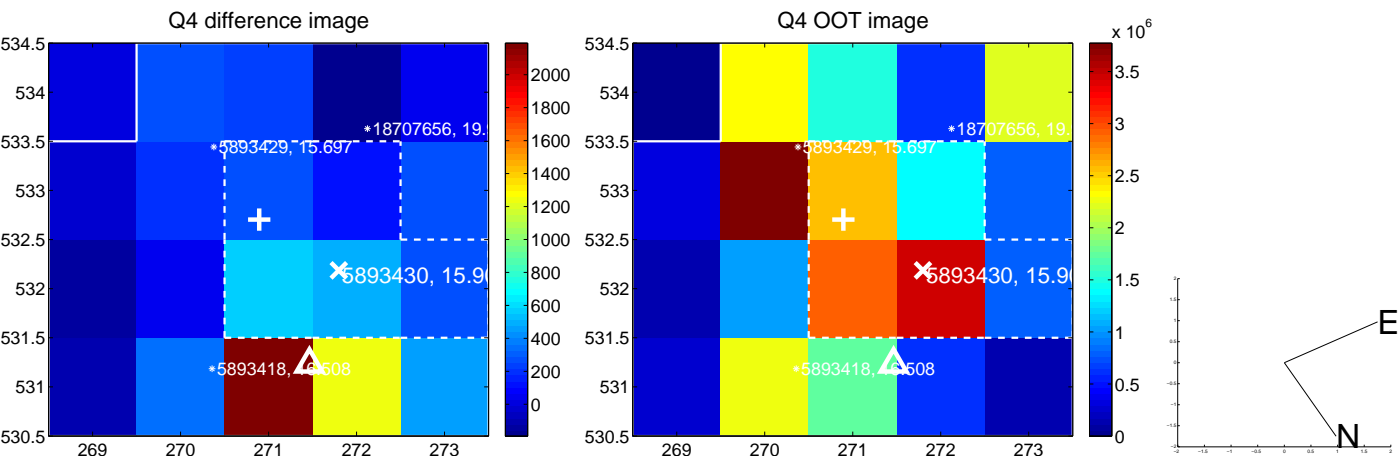


offset from photometric centroids

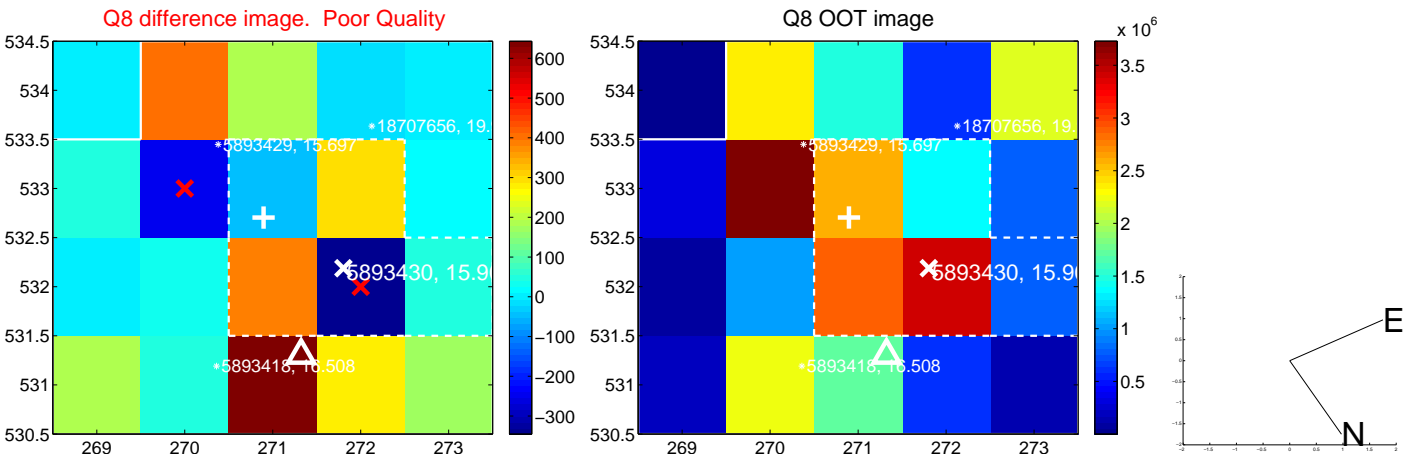
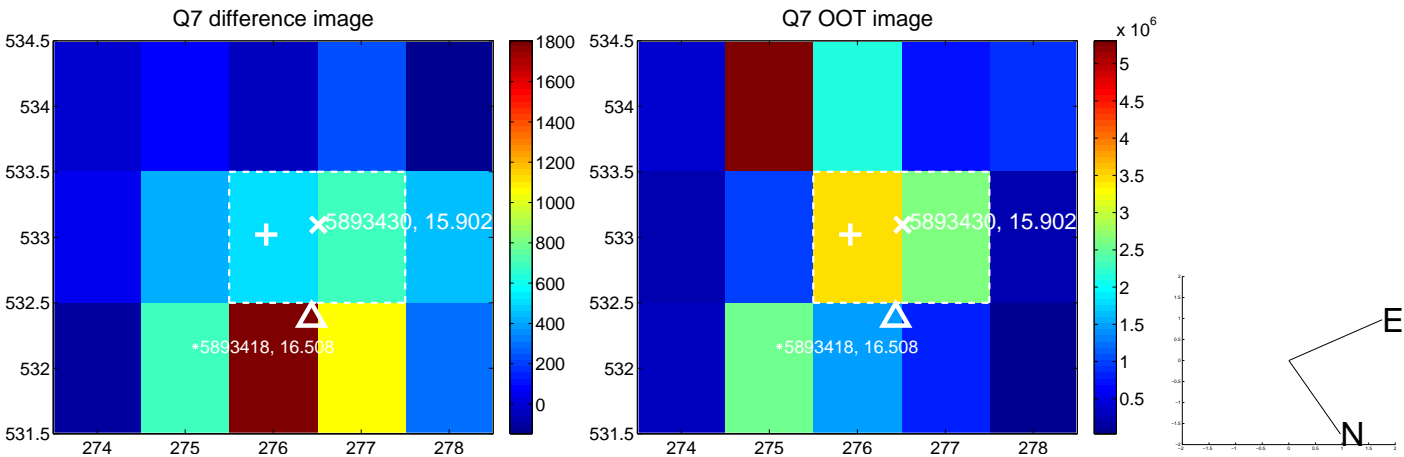
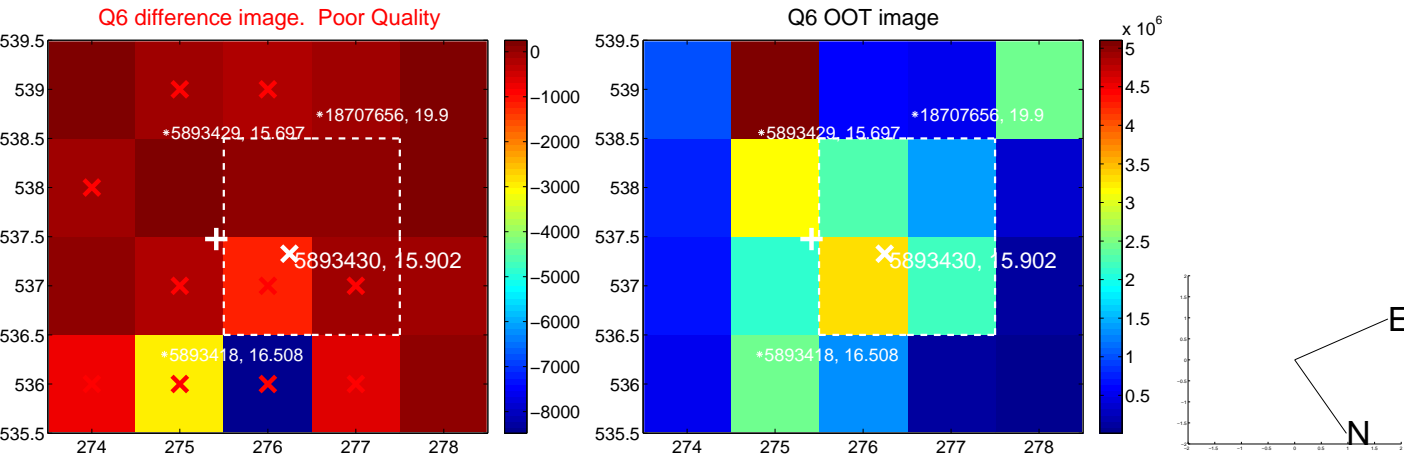
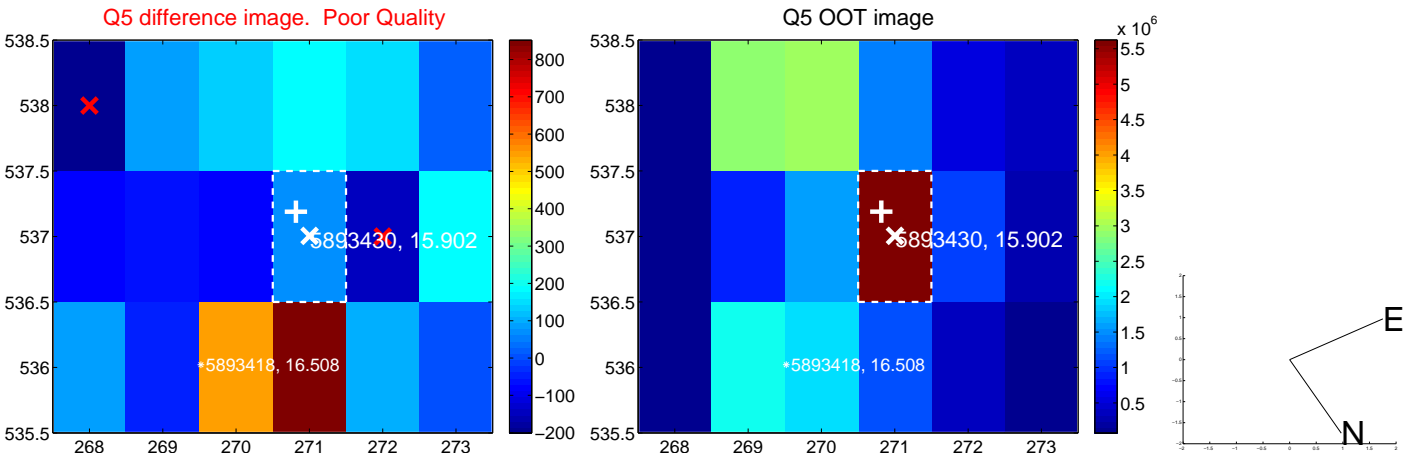


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

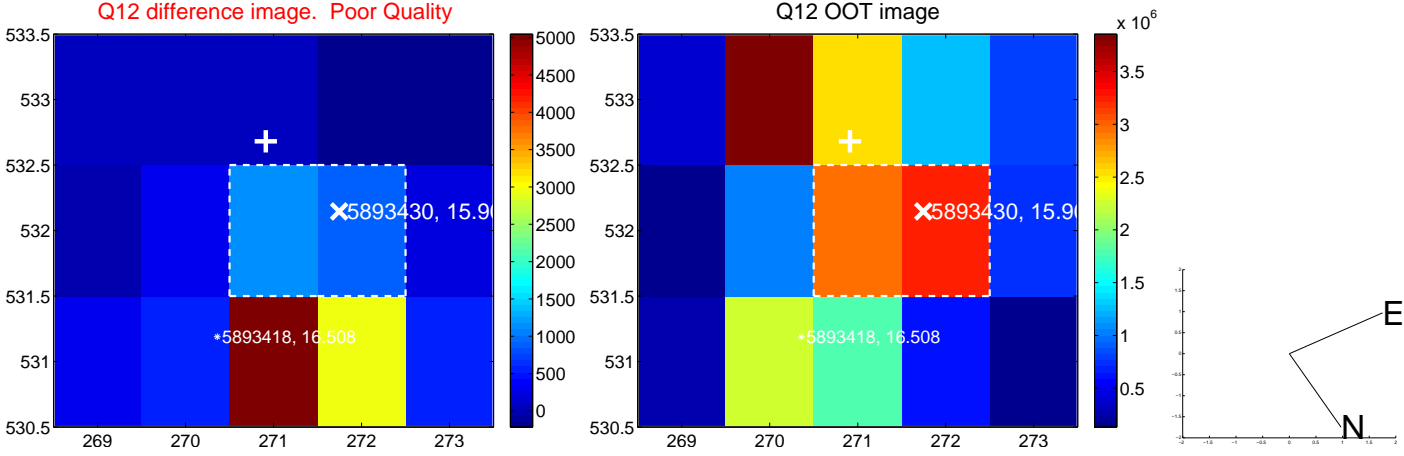
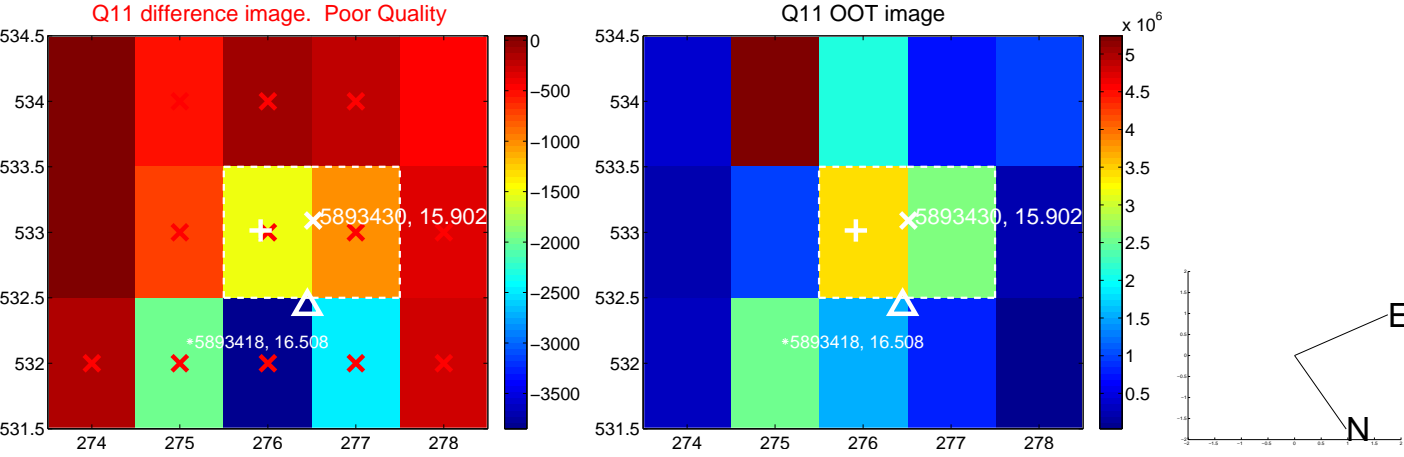
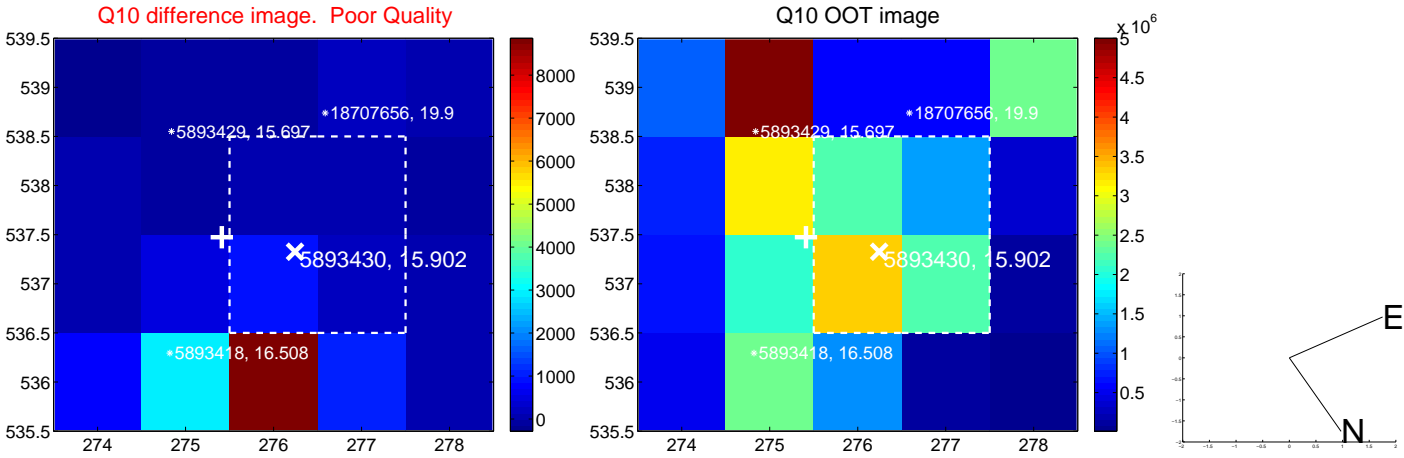
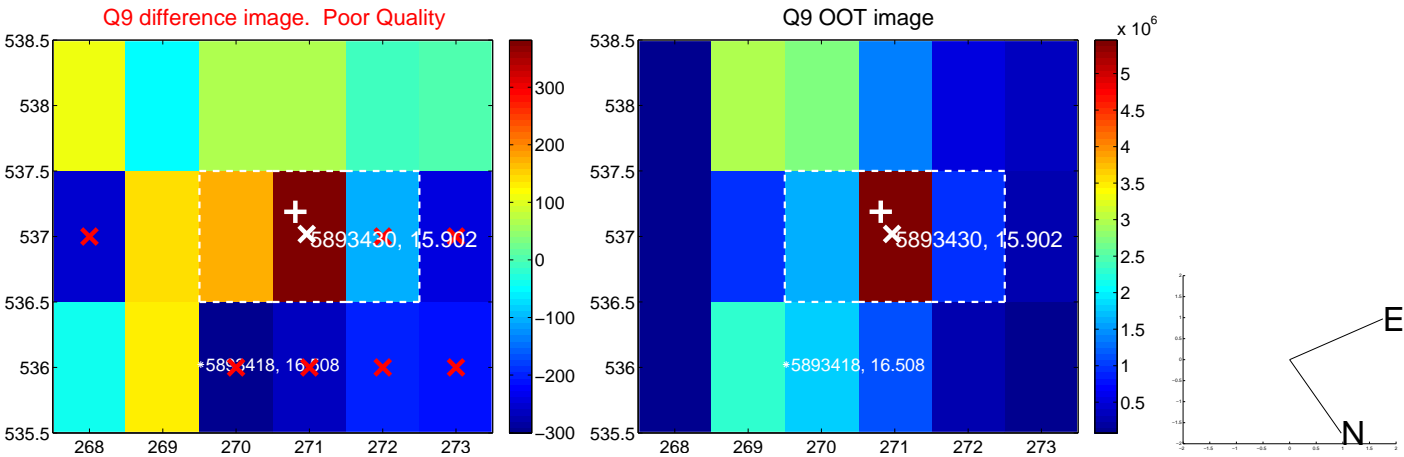
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



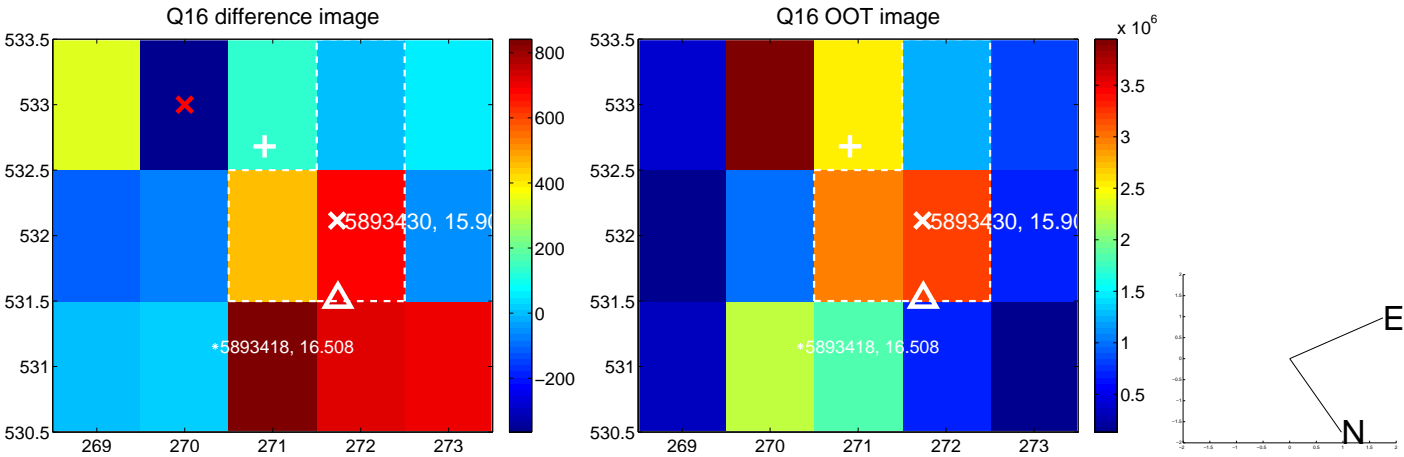
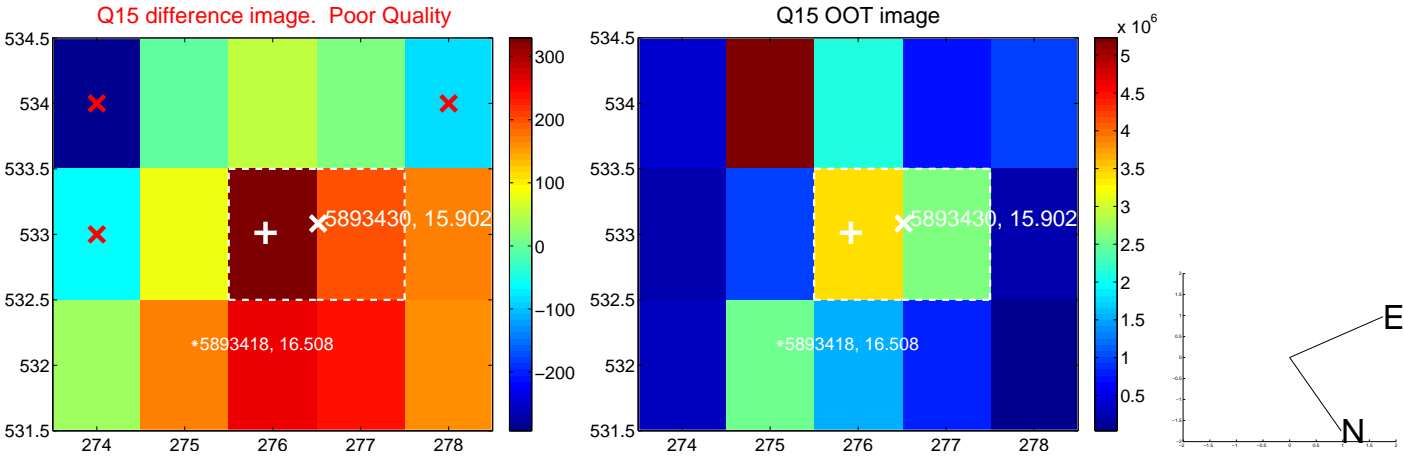
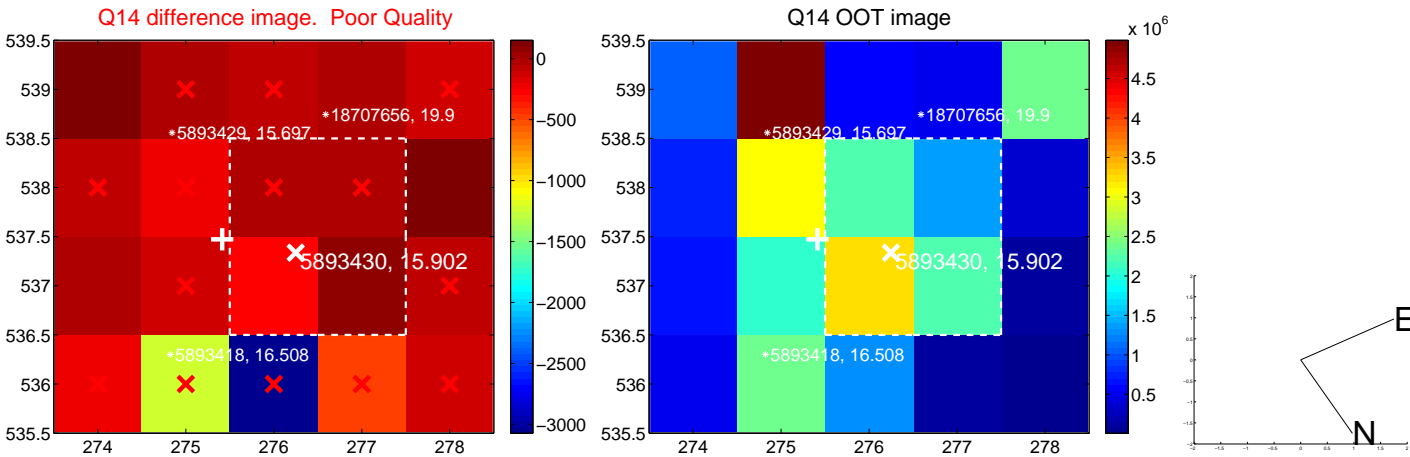
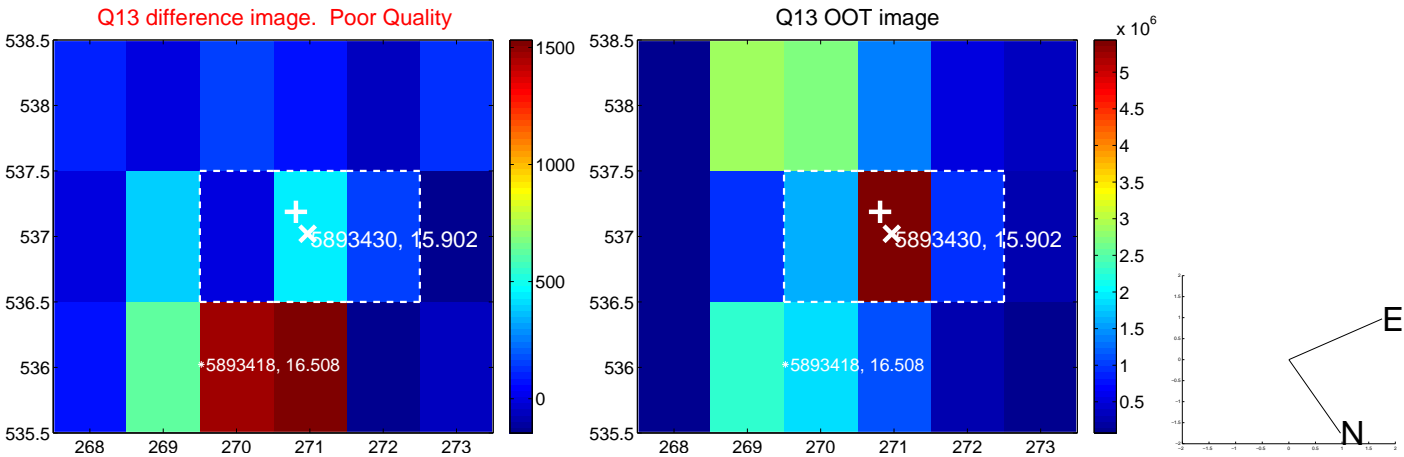
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



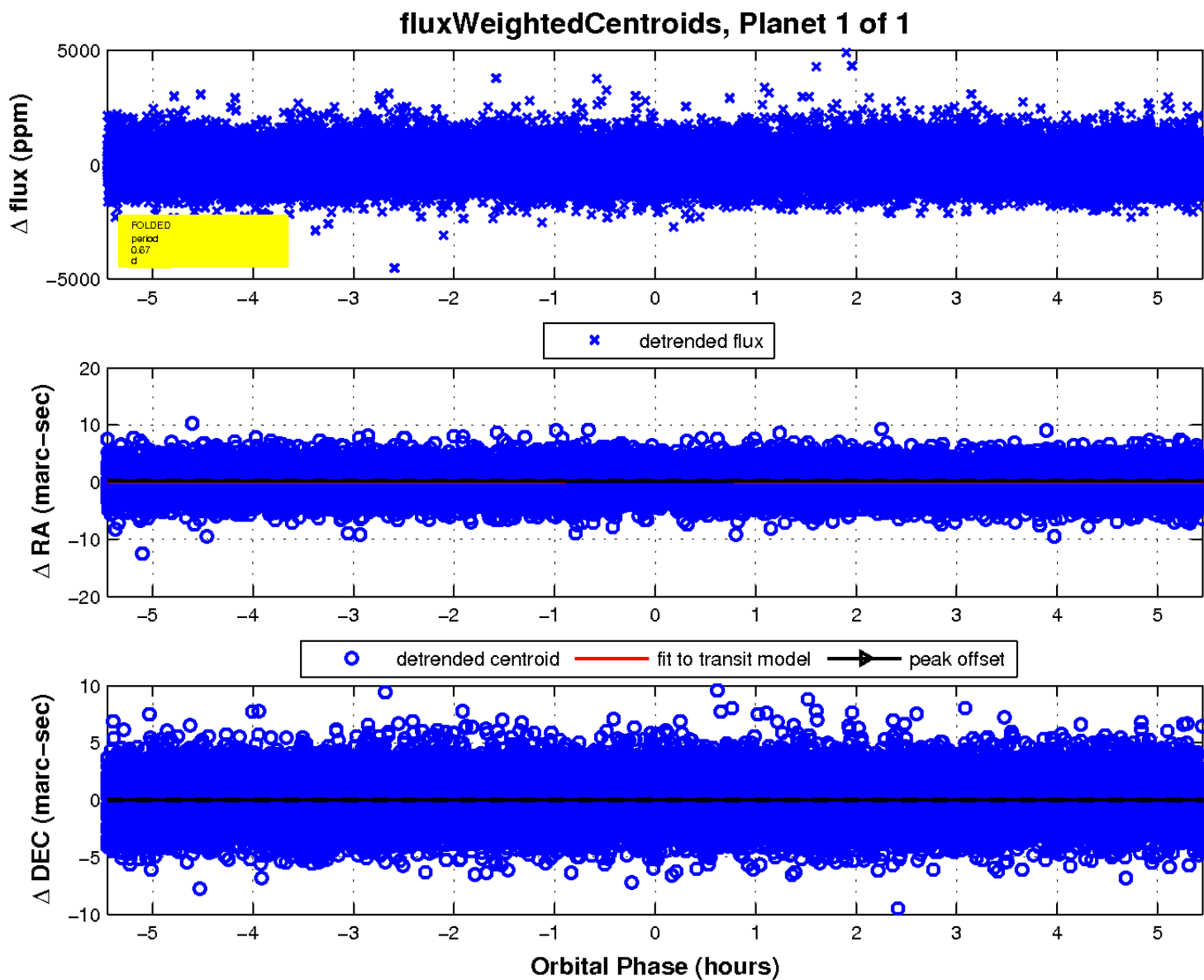
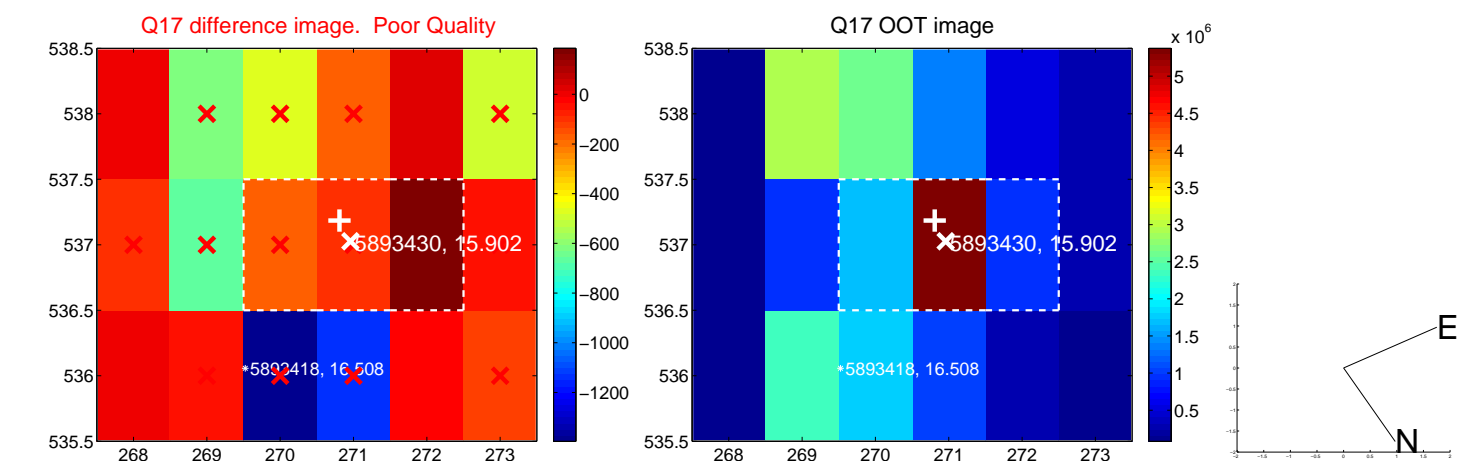
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

