

KIC 005802292

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
005802292-01	OBS	4767.01	1.208521	131.983885	168.3	1.314	8.2	9.8	0.92	6072	1.35	2095.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005802292-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—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 005802292-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
005802292-01	5802292	005802285-pri	5802285	1:2	7.0	0	-2	15.35	15.91	58.93	Direct-PRF	0	0.49	0.04

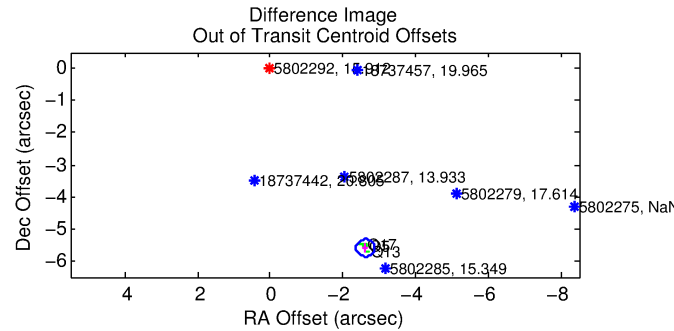
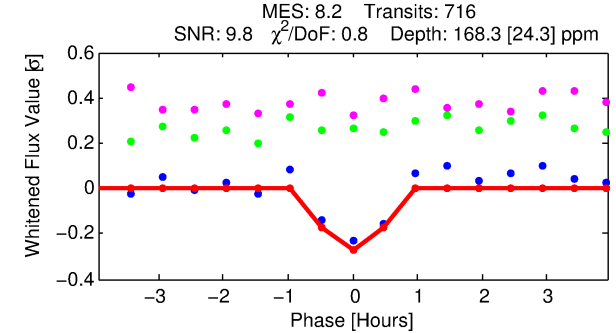
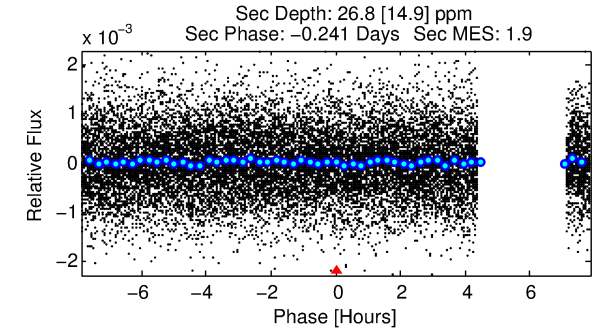
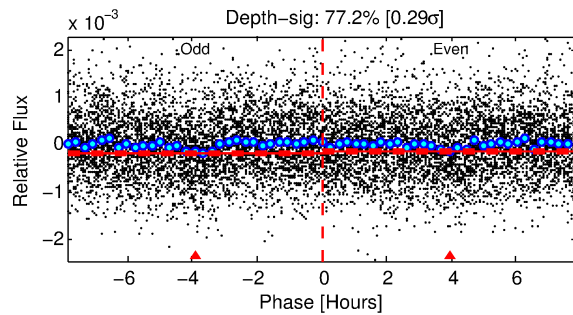
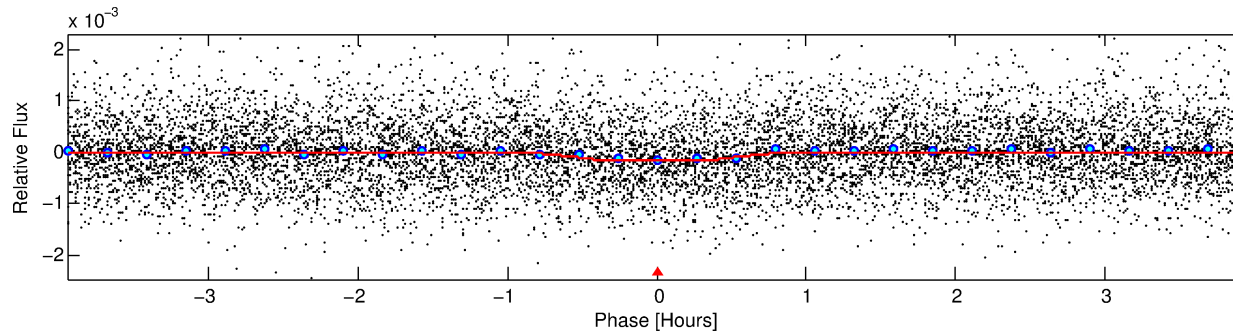
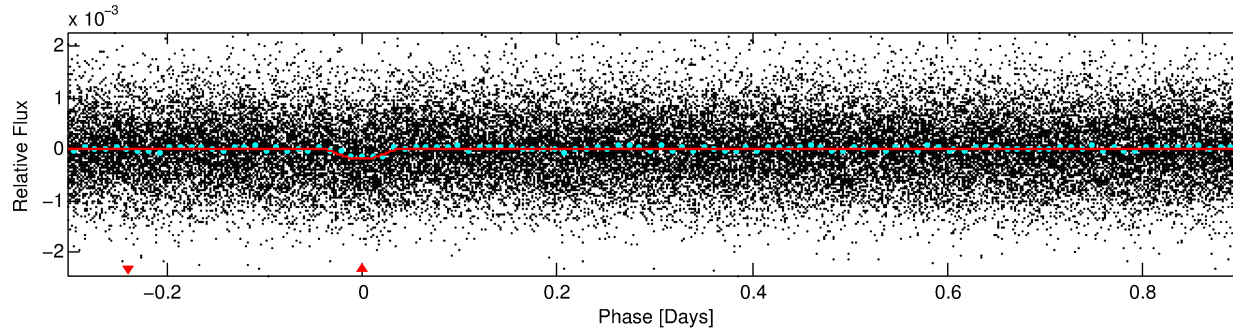
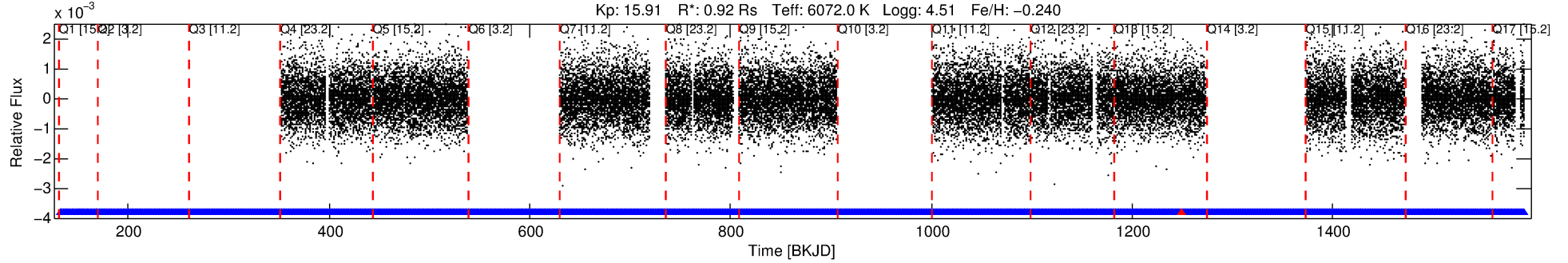
Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_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: 5802292 Candidate: 1 of 1 Period: 1.209 d

KOI: K04767.01 Corr: 0.958

Kp: 15.91 R*: 0.92 Rs Teff: 6072.0 K Logg: 4.51 Fe/H: -0.240



DV Fit Results:

Period = 1.20852 [0.00001] d
Epoch = 131.9839 [0.0022] BKJD
Rp/R* = 0.0134 [0.0091]
a/R* = 4.20 [13.68]
b = 0.83 [1.33]
Seff = 2095.80 [862.03]
Teq = 1725 [177] K
Rp = 1.35 [1.01] Re
a = 0.0223 [0.0059] AU
Ag = 4.01 [6.09] [0.49σ]
Teff = 3776 [1394] K [1.46σ]

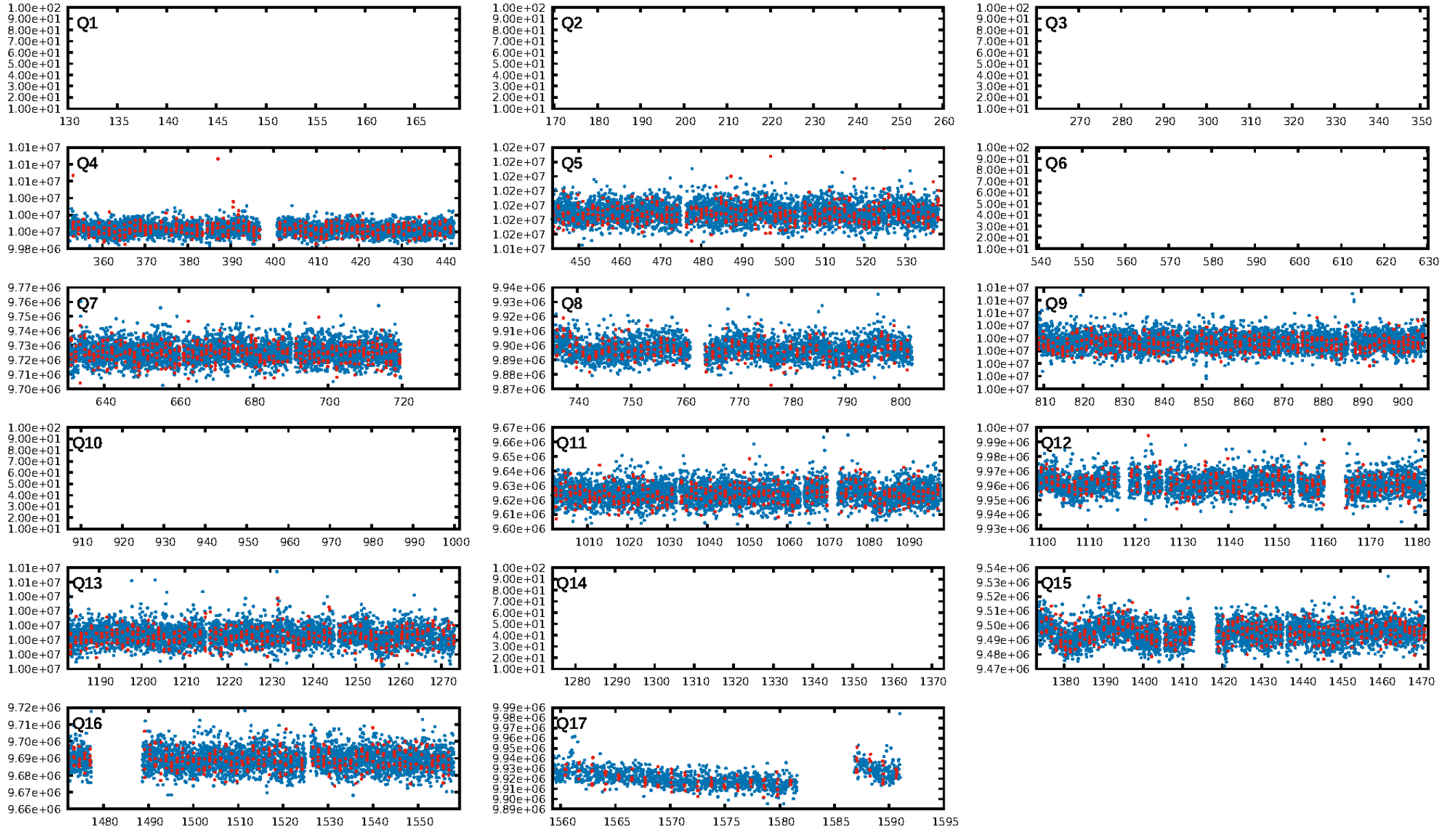
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.16e-16
RollingBand-fgt: 1.00 [692/693]
GhostDiagnostic-chr: -0.5787
Centroid-sig: 0.0%
Centroid-so: 24.588 arcsec [24.71σ]
OotOffset-rm: 6.174 arcsec [68.93σ]
KicOffset-rm: 9.190 arcsec [64.03σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [11/11]

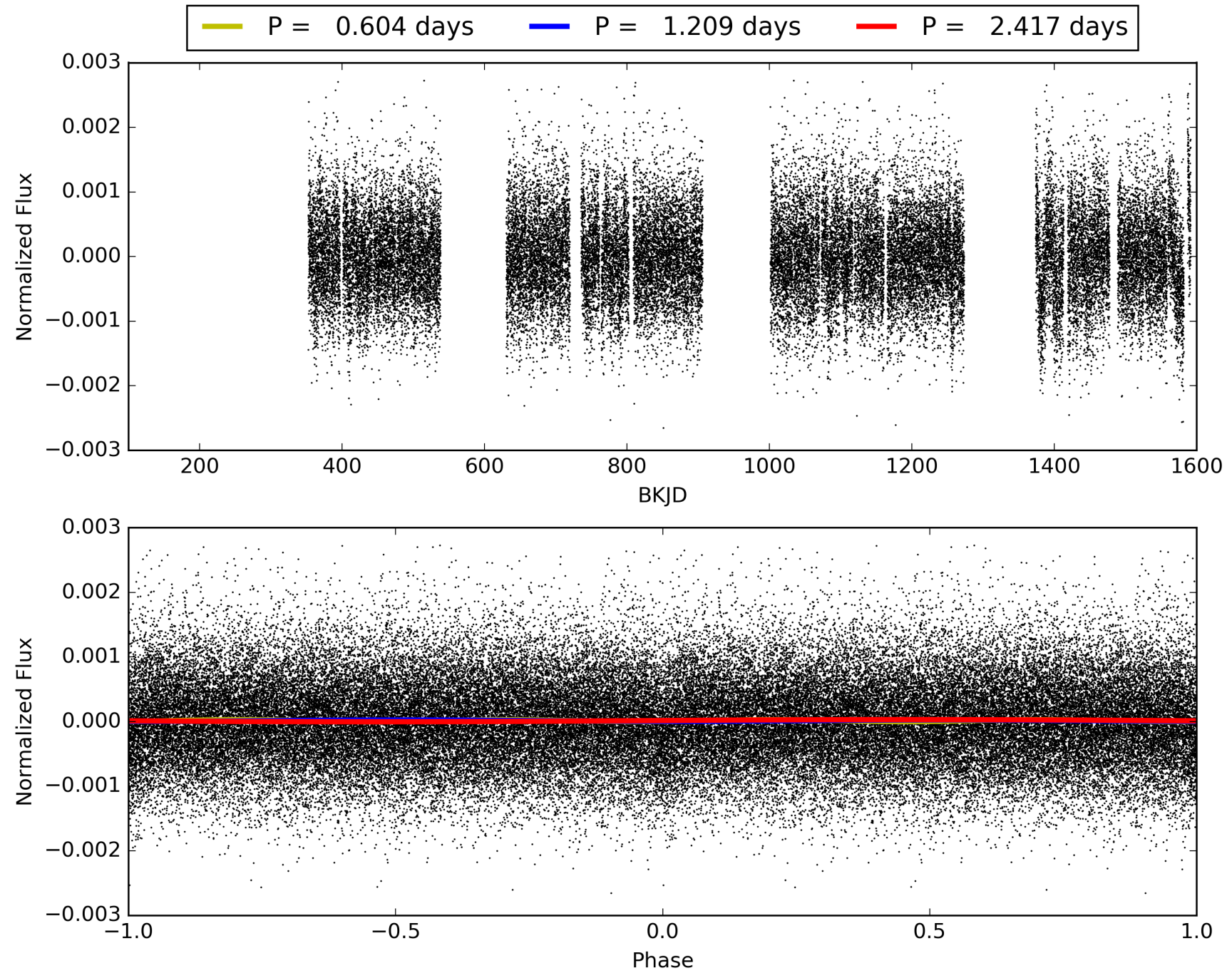
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:45:18 Z

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

TCE 005802292-01, PDC Light Curves

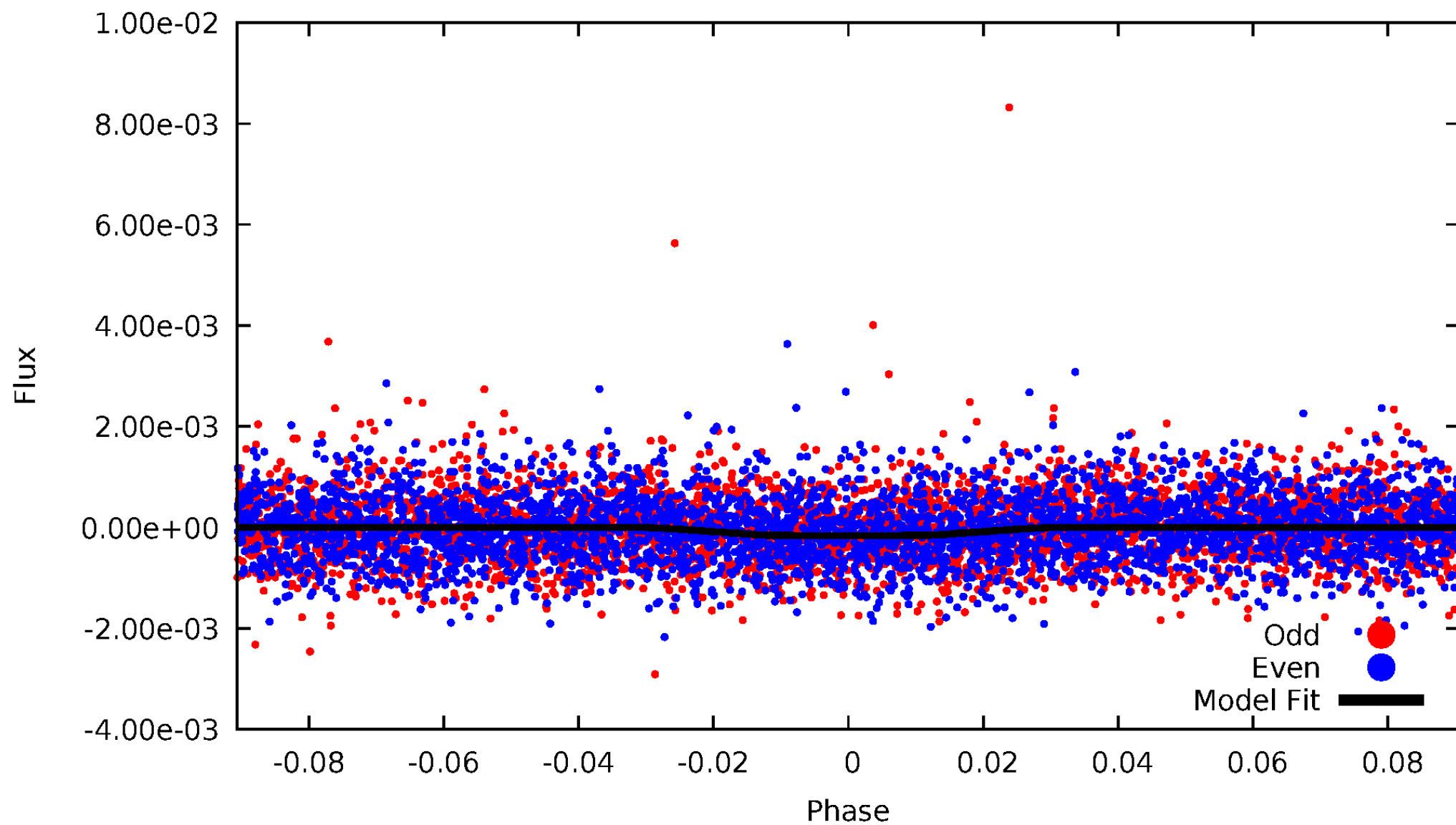


TCE 005802292-01



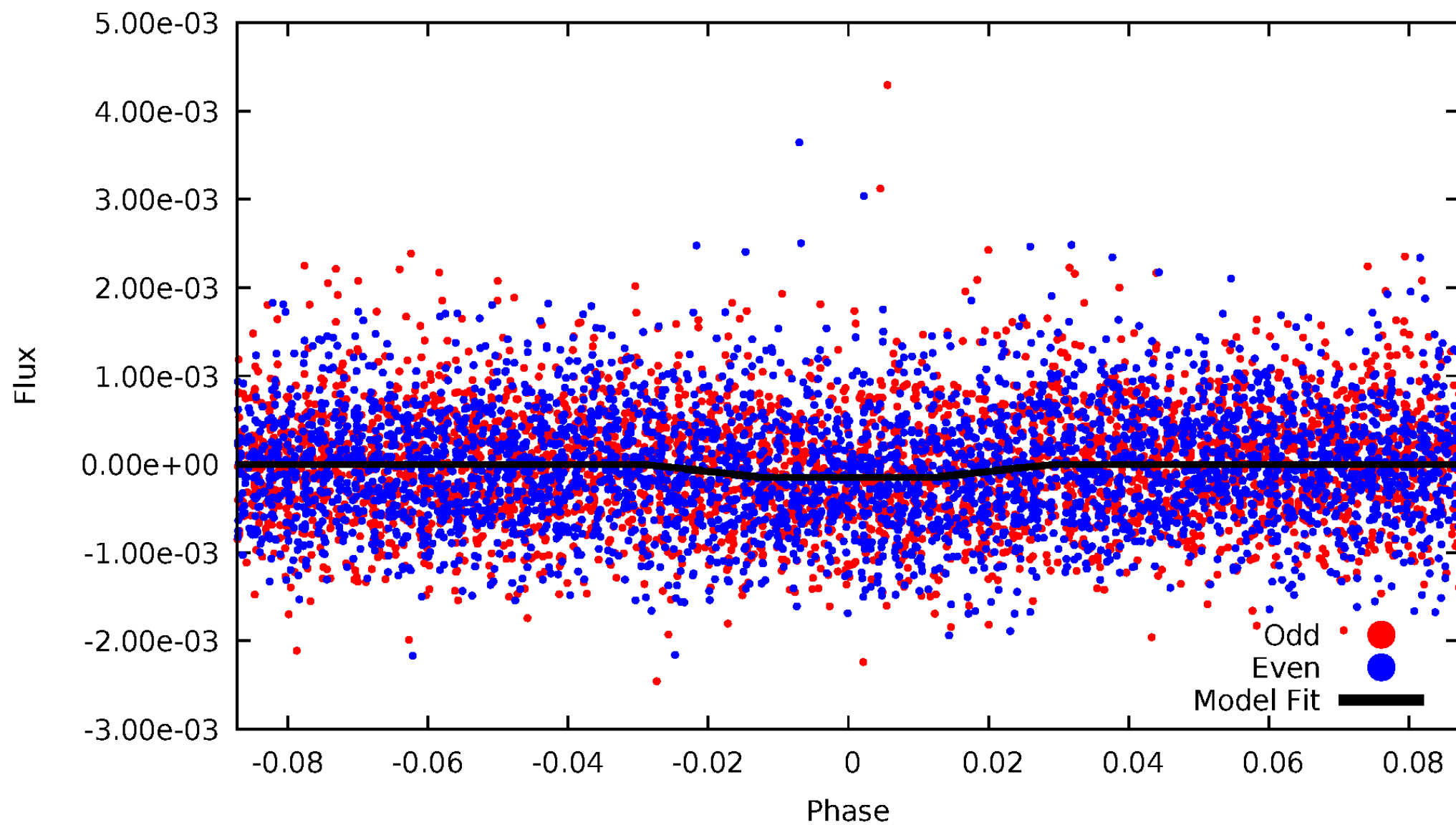
DV Odd/Even

TCE 005802292-01



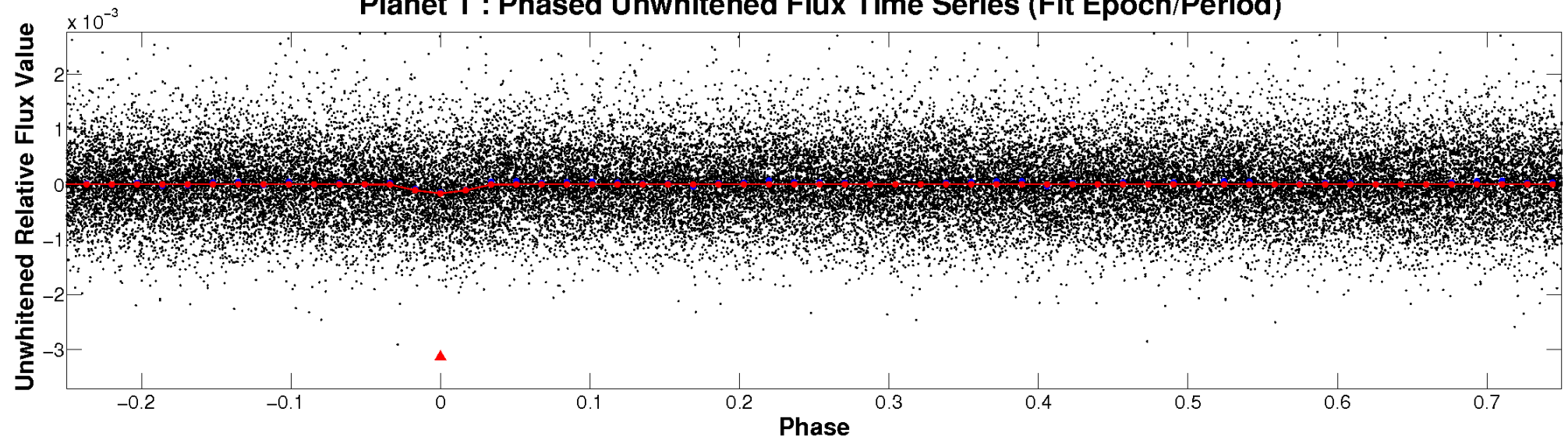
ALT Odd/Even

TCE 005802292-01

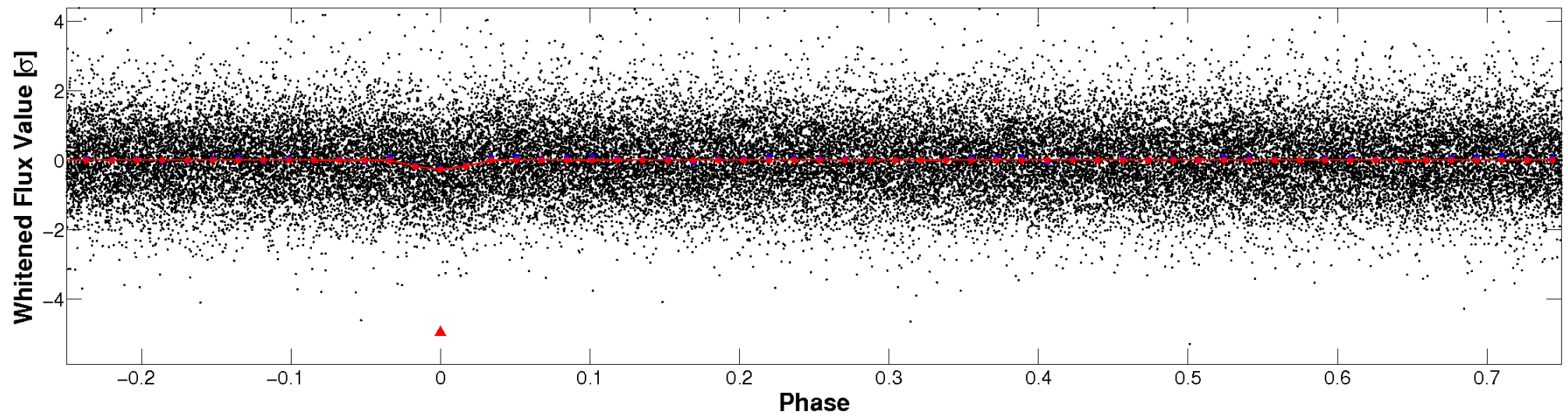


Non-Whitened Vs. Whitened Light Curve

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

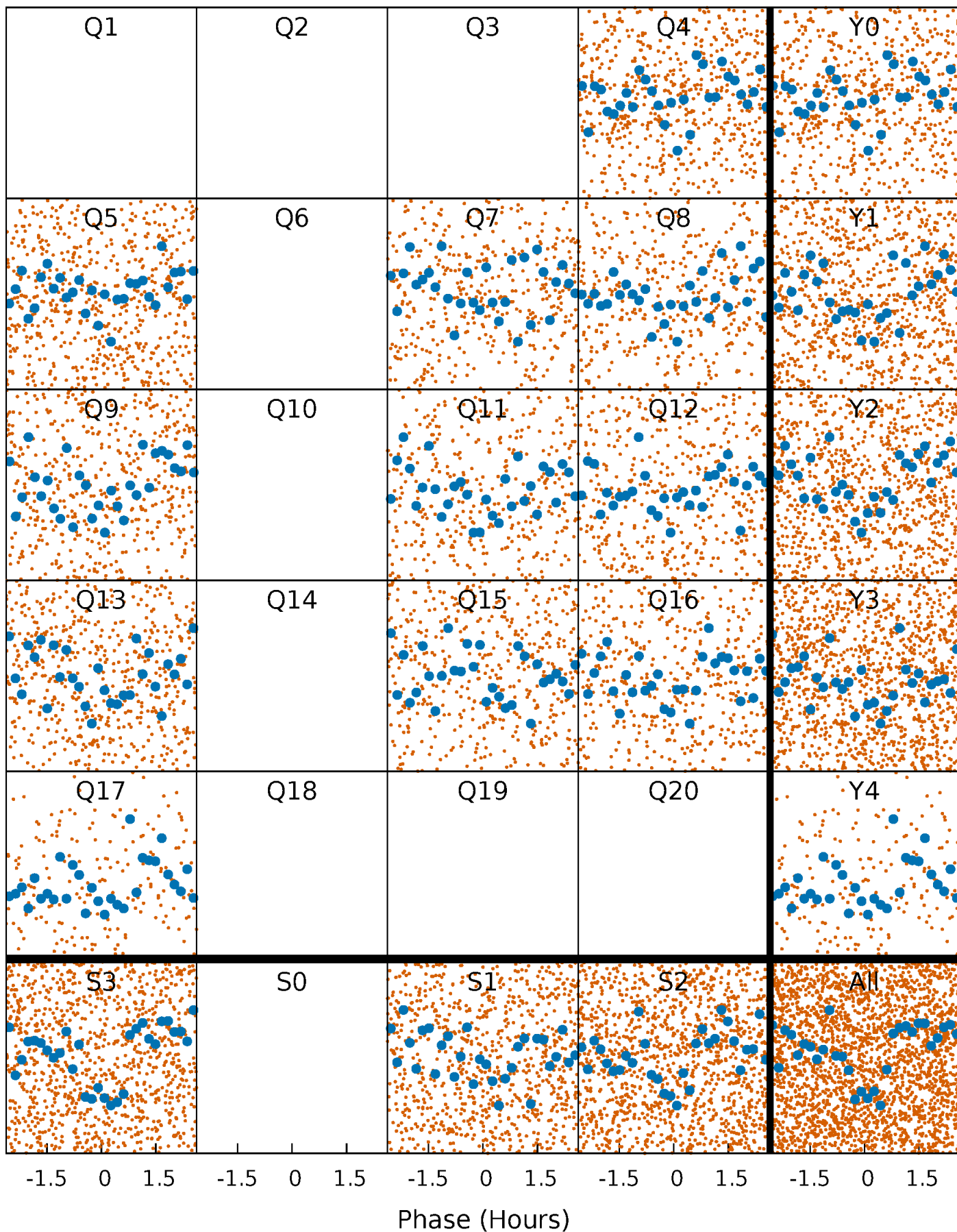


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



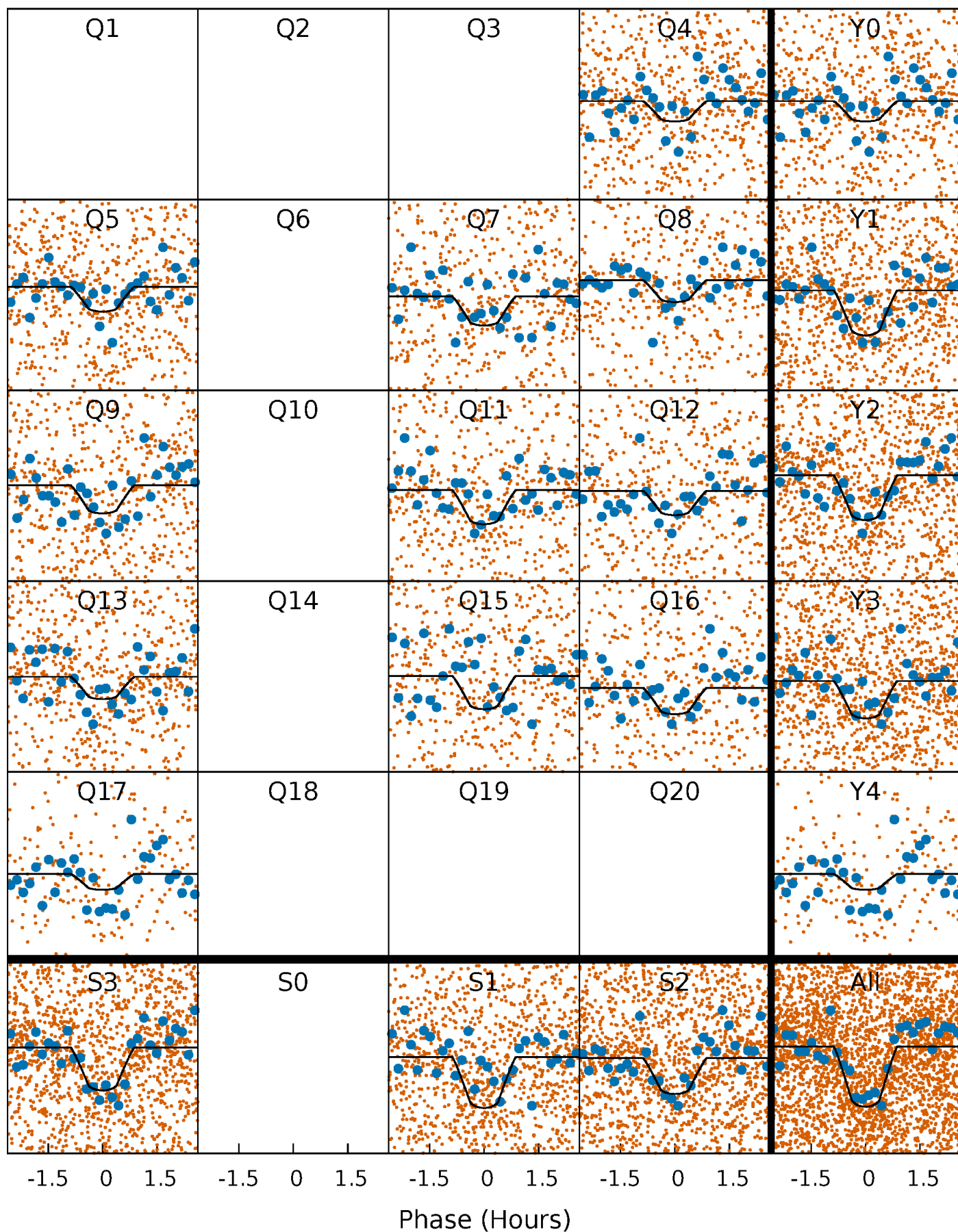
PDC Quarter-Phased Transit Curves

TCE 005802292-01 P= 1.208521 Days $T_0=131.983885$ (BKJD)



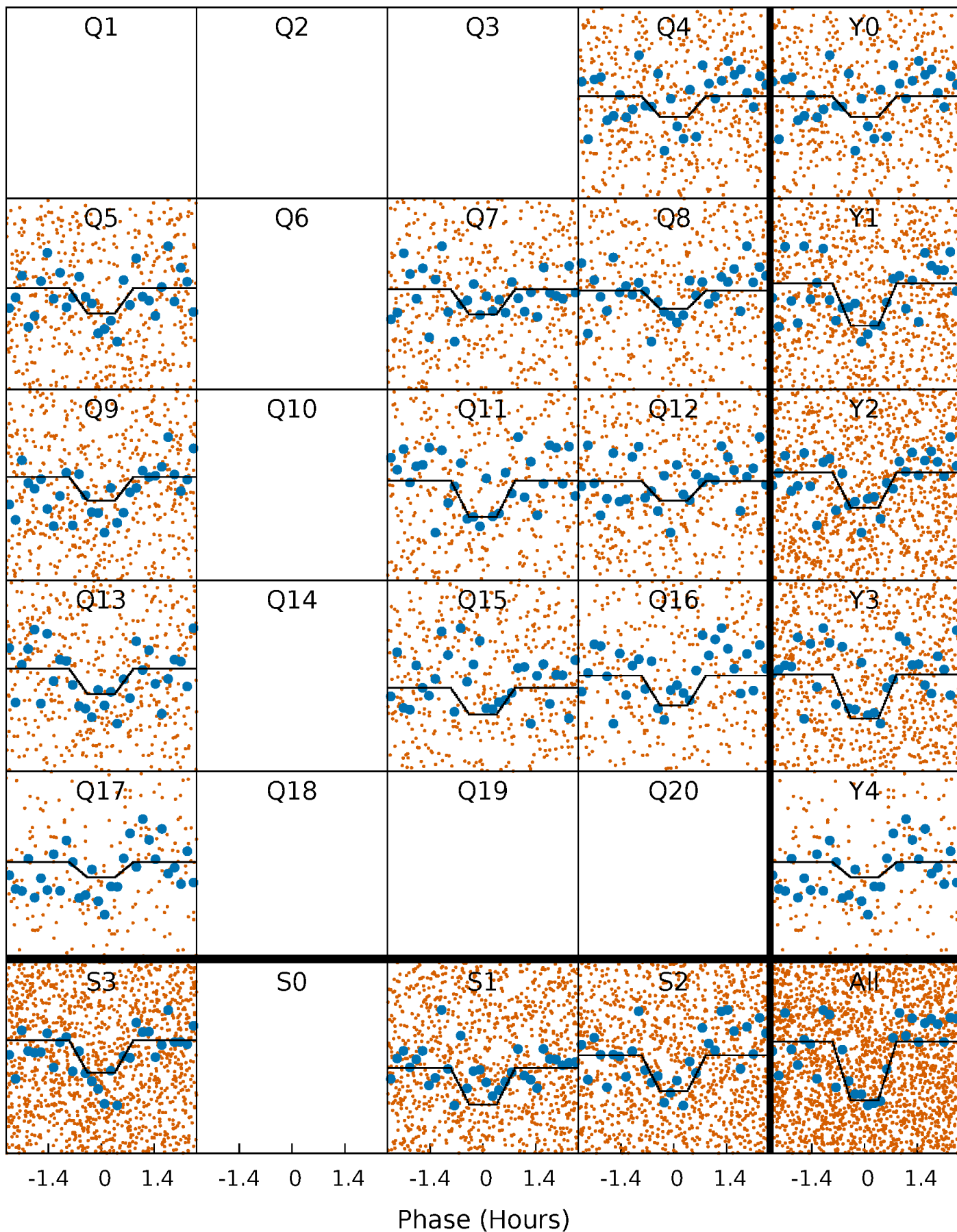
DV Quarter-Phased Transit Curves

TCE 005802292-01 P= 1.208521 Days $T_0=131.983885$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

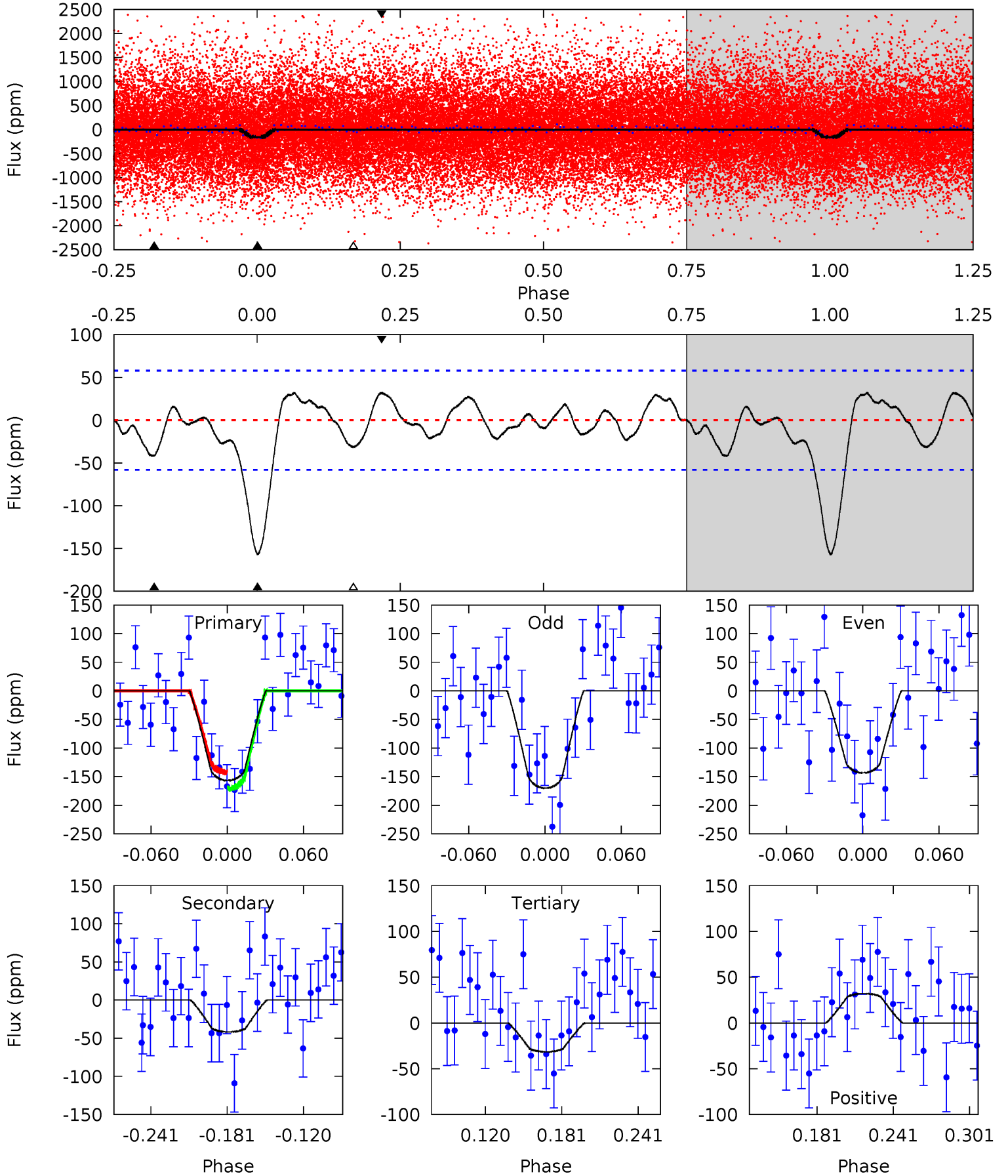
TCE 005802292-01 P= 1.208529 Days $T_0=131.979076$ (BKJD)



DV Model-Shift Uniqueness Test

005802292-01, P = 1.208521 Days, E = 131.983885 Days

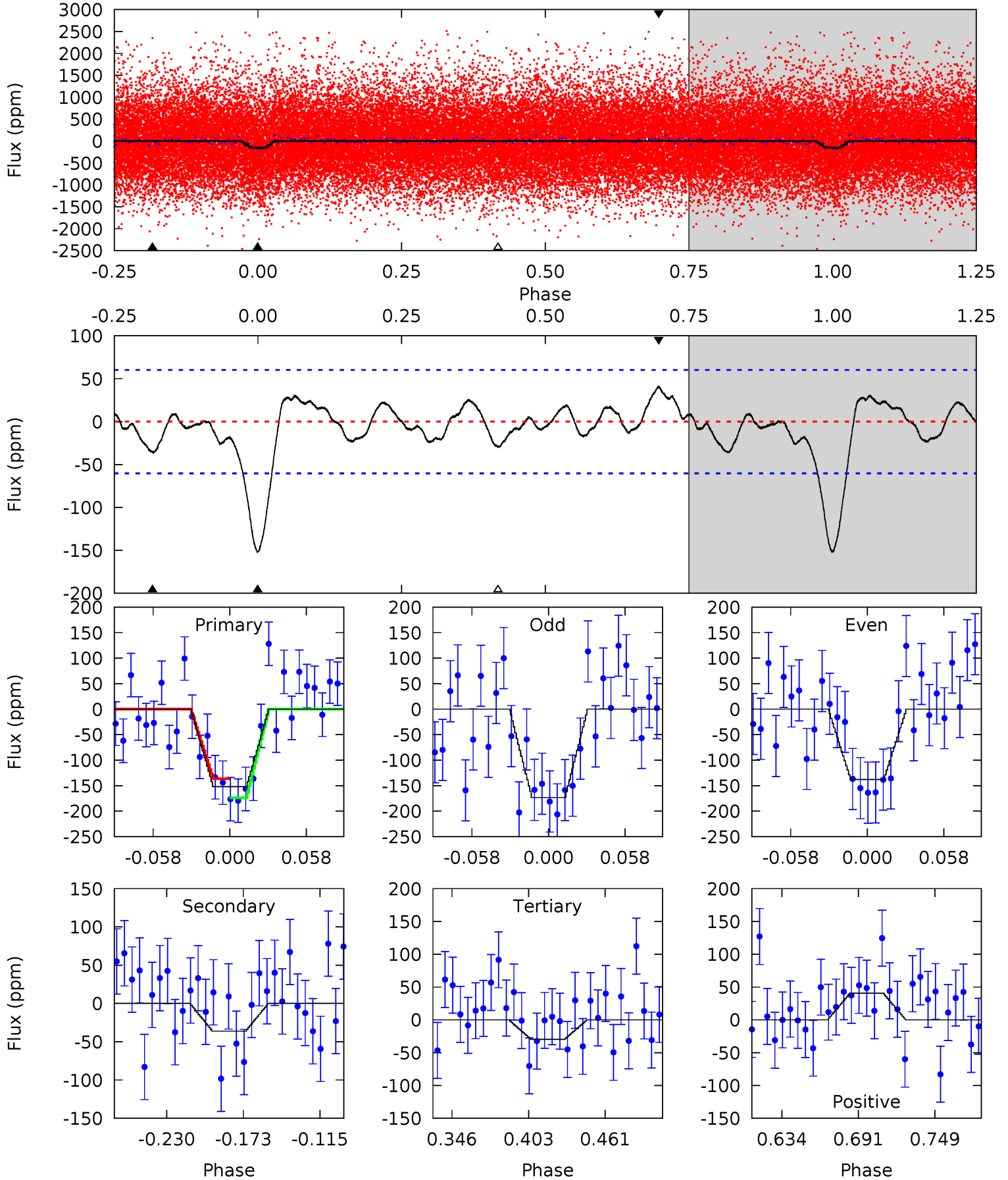
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.37	2.54	2.58	4.67	1.88	1.29	10.1	10.0	0.83	0.79	1.08	1.05	0.17	1.16



Alt Model-Shift Uniqueness Test

005802292-01, P = 1.208529 Days, E = 131.979076 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	2.81	2.32	3.16	4.68	1.90	1.23	9.48	8.64	0.49	-0.35	1.37	0.86	0.21	1.45



Stellar Parameters For KIC 005802292

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6072^{+211}_{-232}	$4.510^{+0.052}_{-0.208}$	$-0.240^{+0.300}_{-0.300}$	$0.923^{+0.290}_{-0.097}$	$1.005^{+0.130}_{-0.130}$	$1.800^{+0.478}_{-0.951}$
	+3%/-4%	+1%/-5%	+125%/-125%	+31%/-11%	+13%/-13%	+27%/-53%
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 005802292-01 / KOI 4767.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-42 ± 12	$1.53^{+0.98}_{-0.90}$	2471^{+191}_{-133}	4217^{+1912}_{-751}	$4.642^{+20.358}_{-3.033}$
Alt.	-36 ± 13	$1.36^{+0.94}_{-0.81}$	2461^{+175}_{-127}	4314^{+2027}_{-858}	$5.243^{+23.986}_{-3.664}$

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 $A_{obs} \gg 1.0$

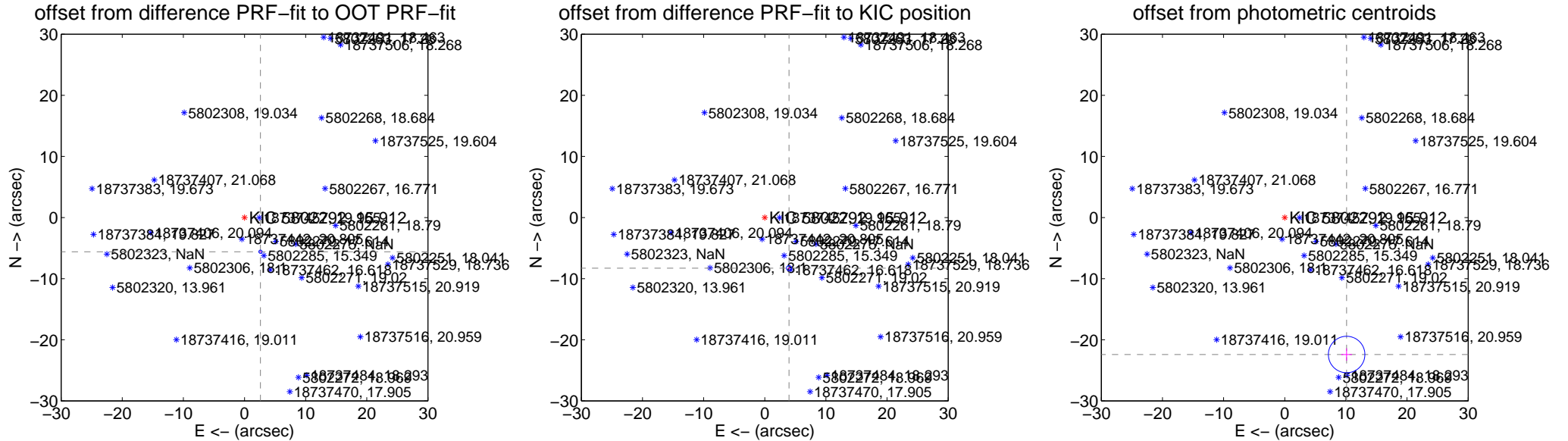
DV Centroid Data

Supplemental centroid analysis for 005802292-01. Kepler magnitude: 15.91. Transit SNR 9.76

There are 3 quarters with good PRF difference image offsets

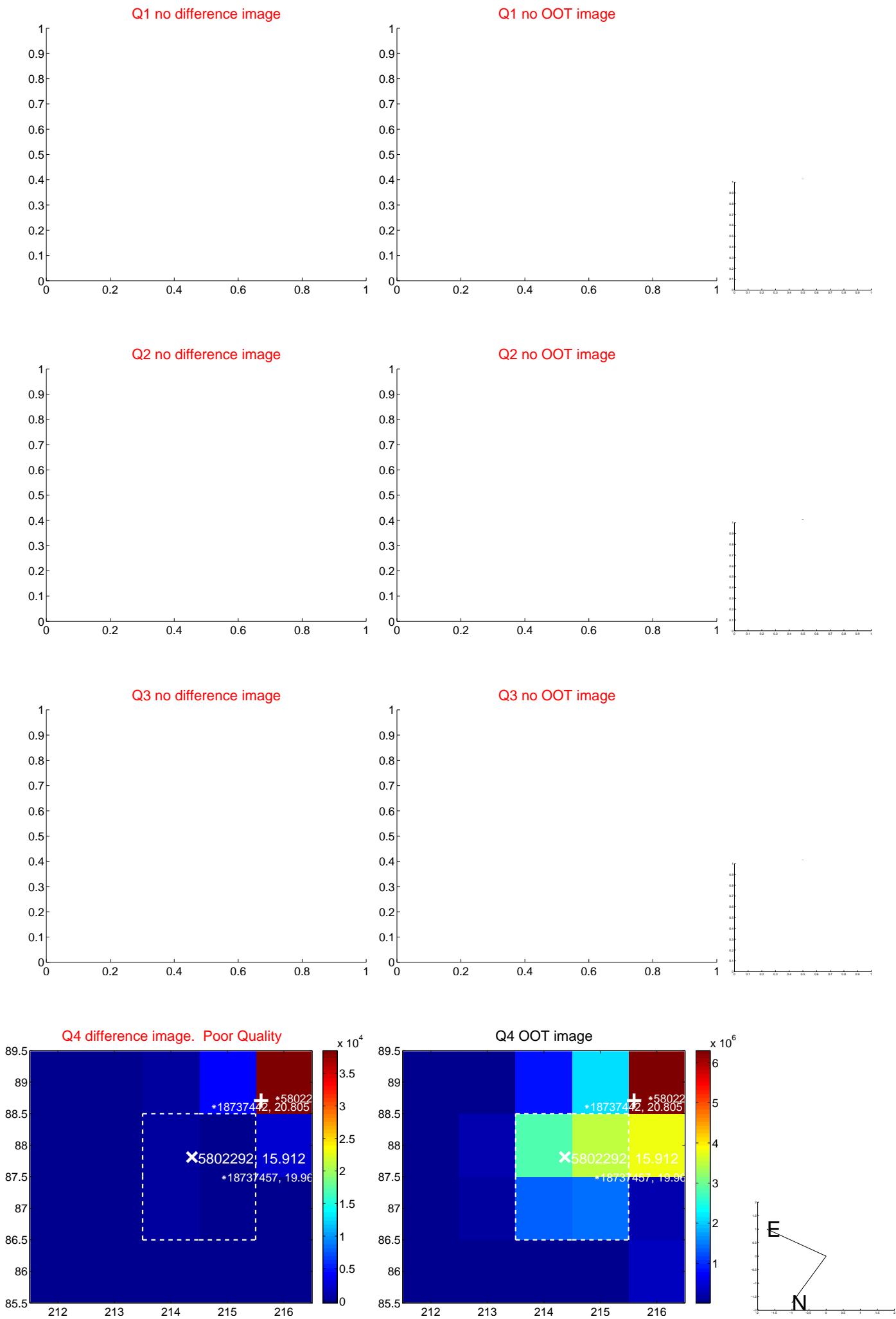
The OOT PRF centroid is offset from the target star catalog position by about 2.82 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.174 ± 0.090	68.93	-2.611 ± 0.070	-5.595 ± 0.093
PRF-fit source offset from KIC position	9.190 ± 0.144	64.03	-3.974 ± 0.111	-8.287 ± 0.150
photometric centroid source offset	24.59 ± 0.99	24.71	-10.12 ± 0.87	-22.41 ± 1.02

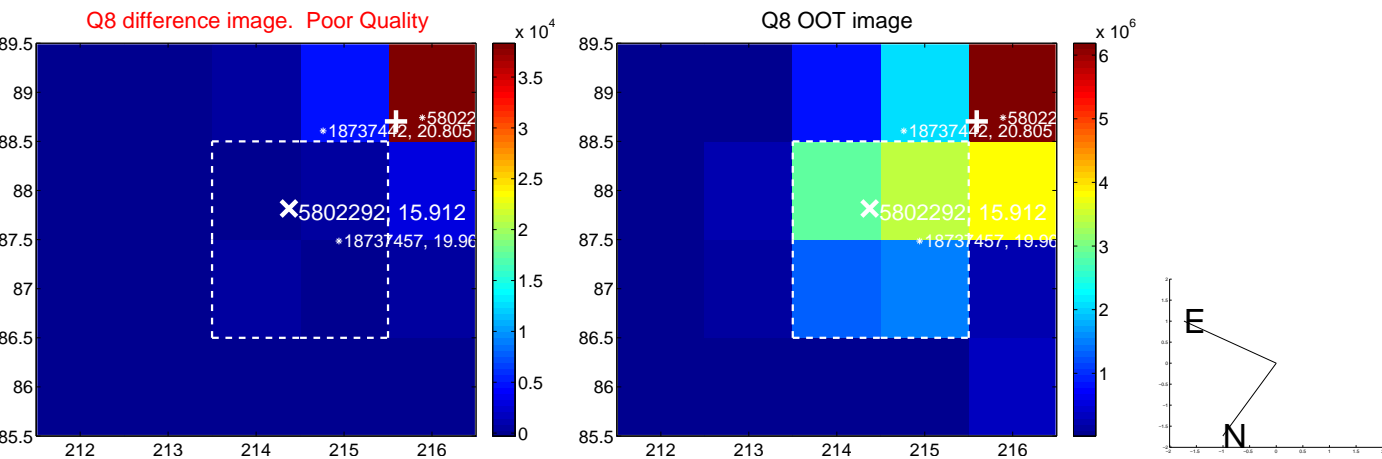
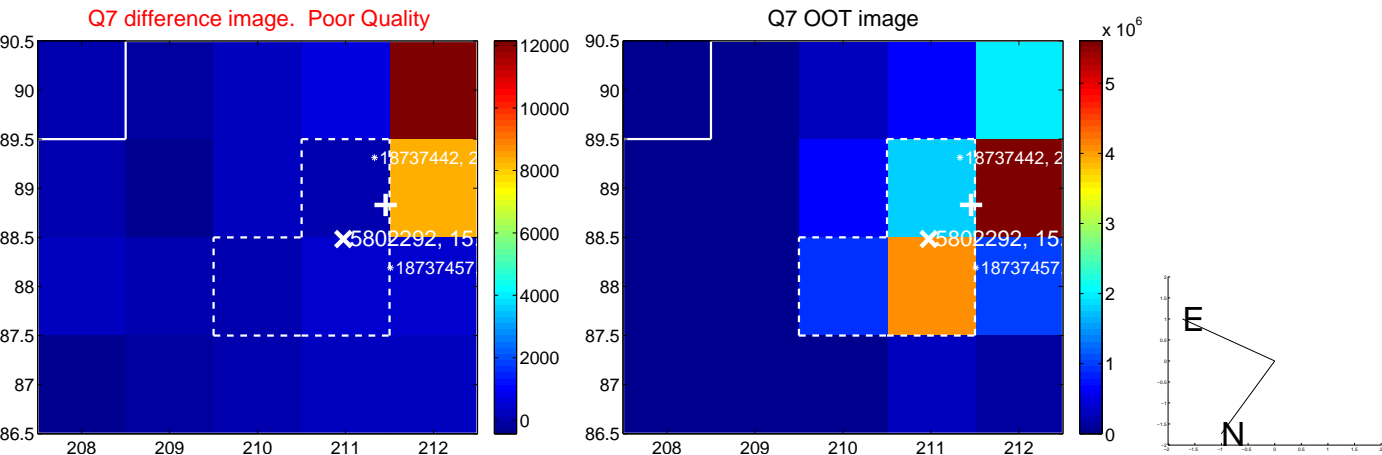
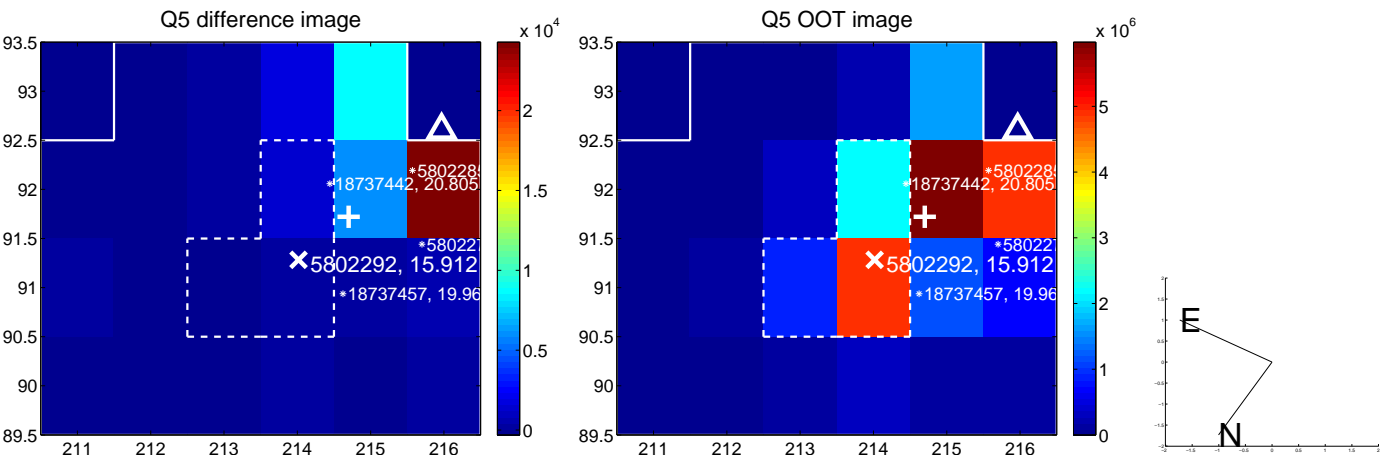


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

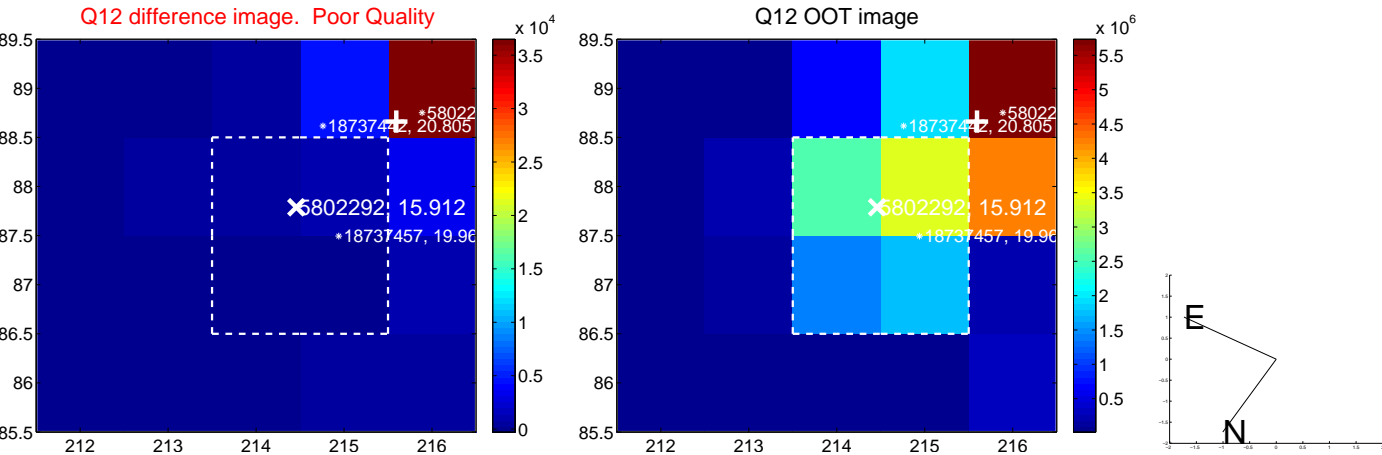
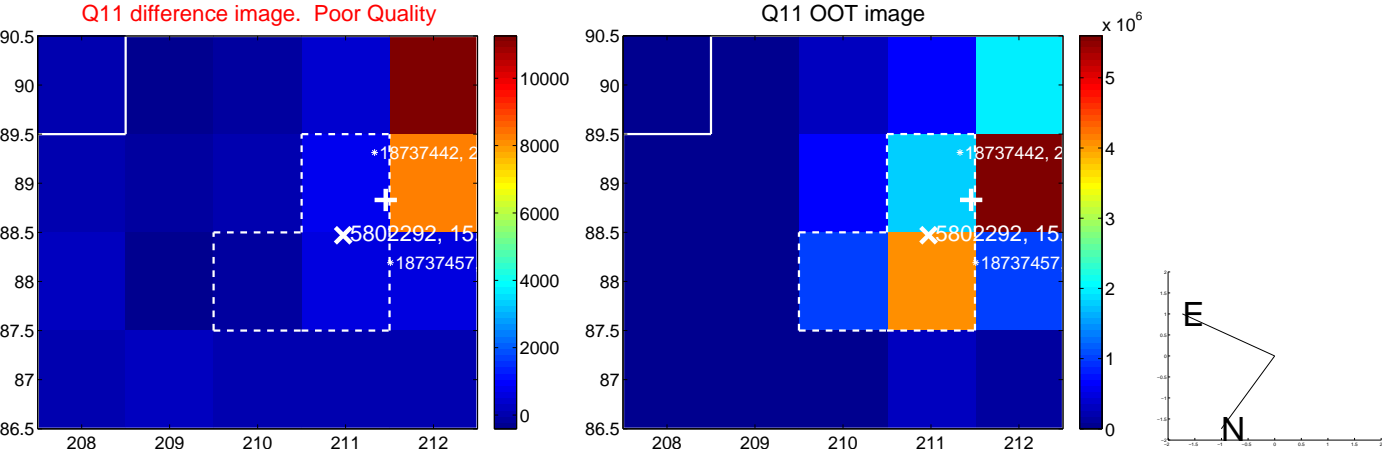
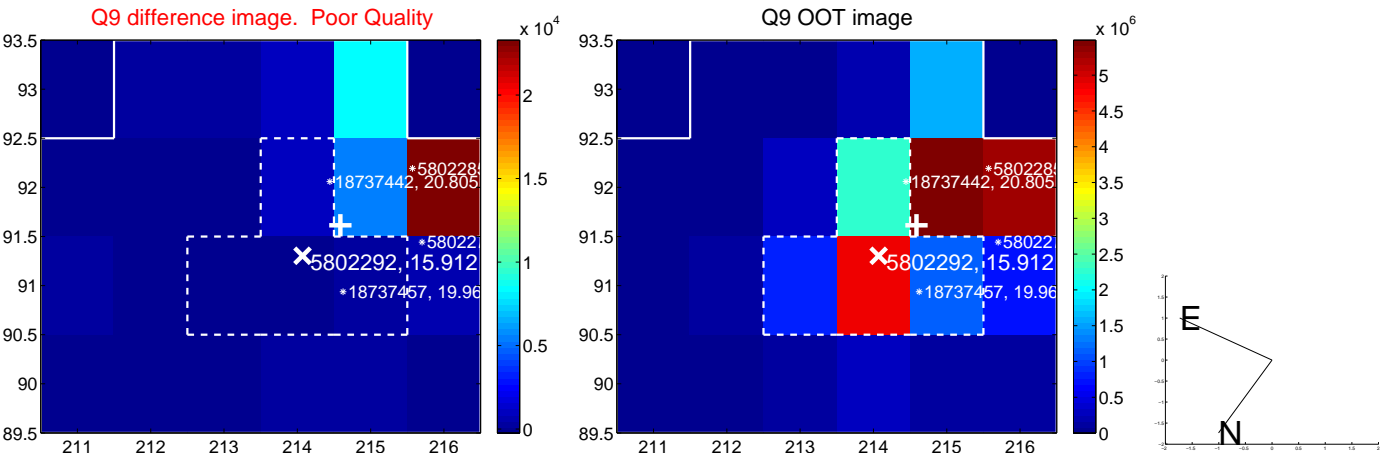
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



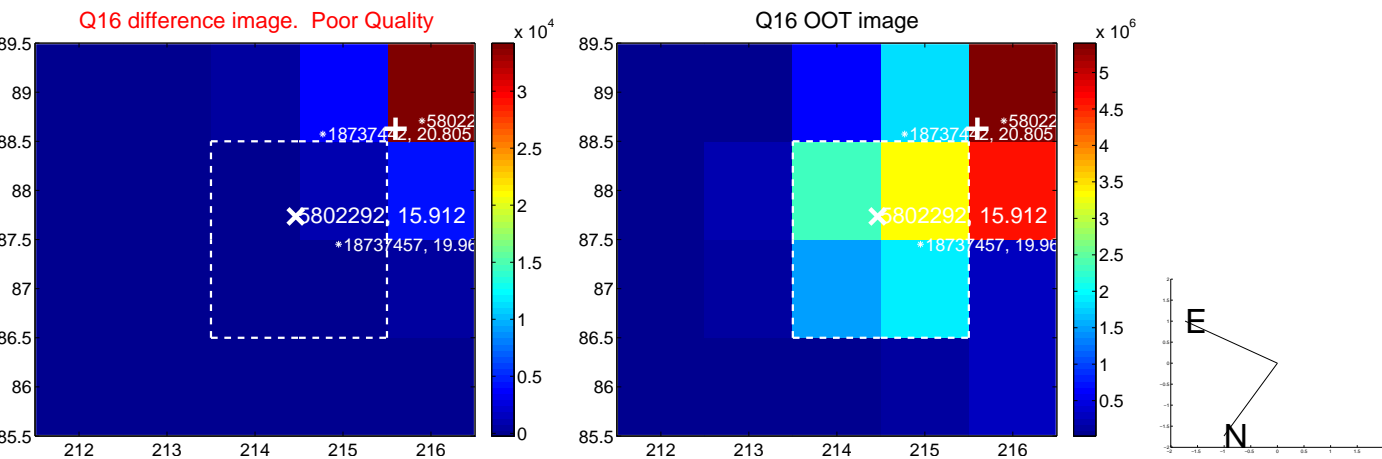
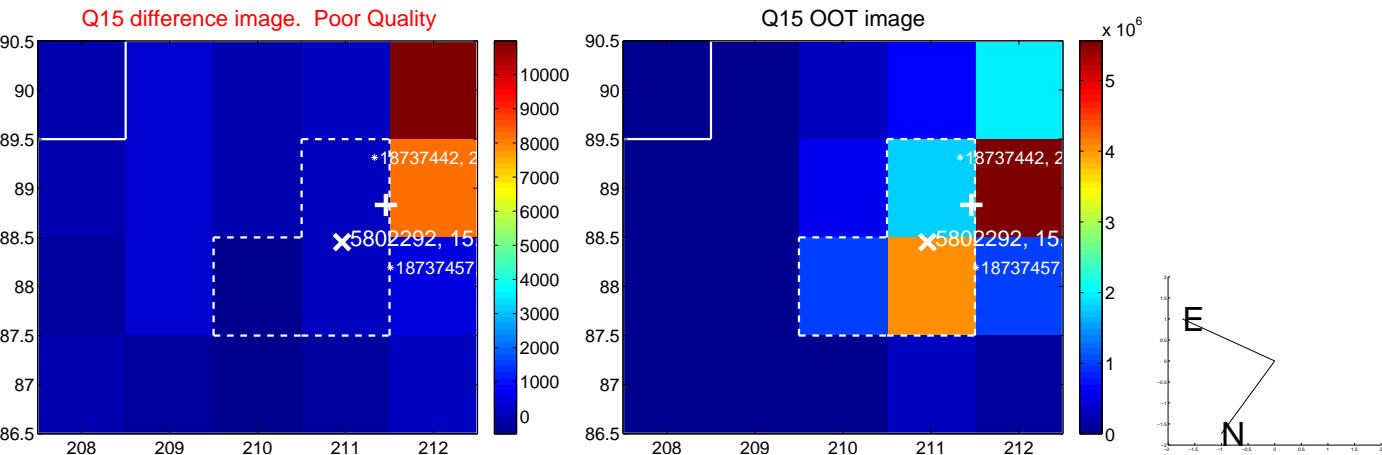
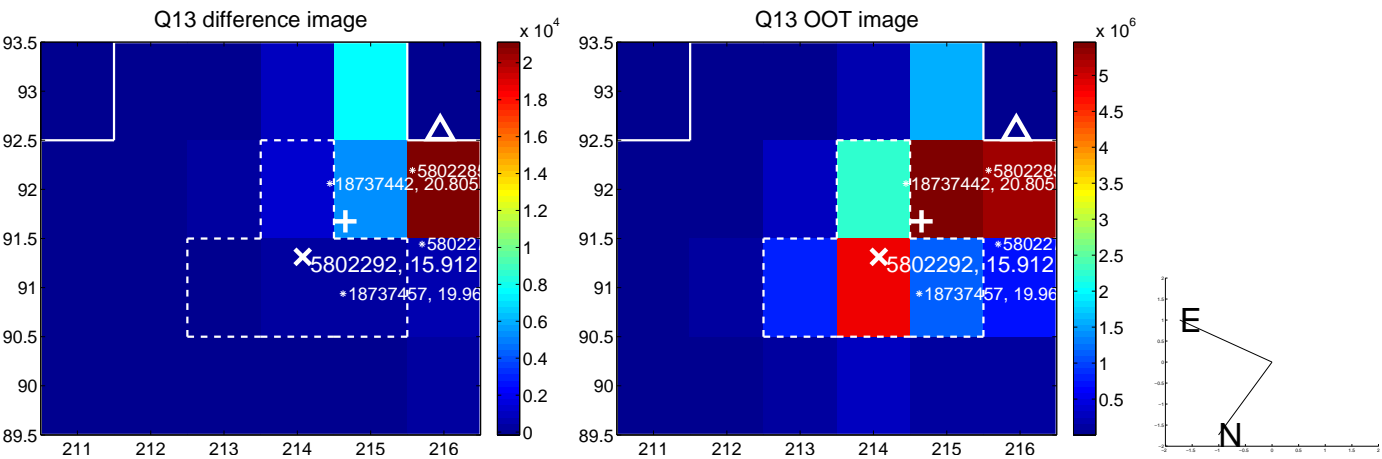
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



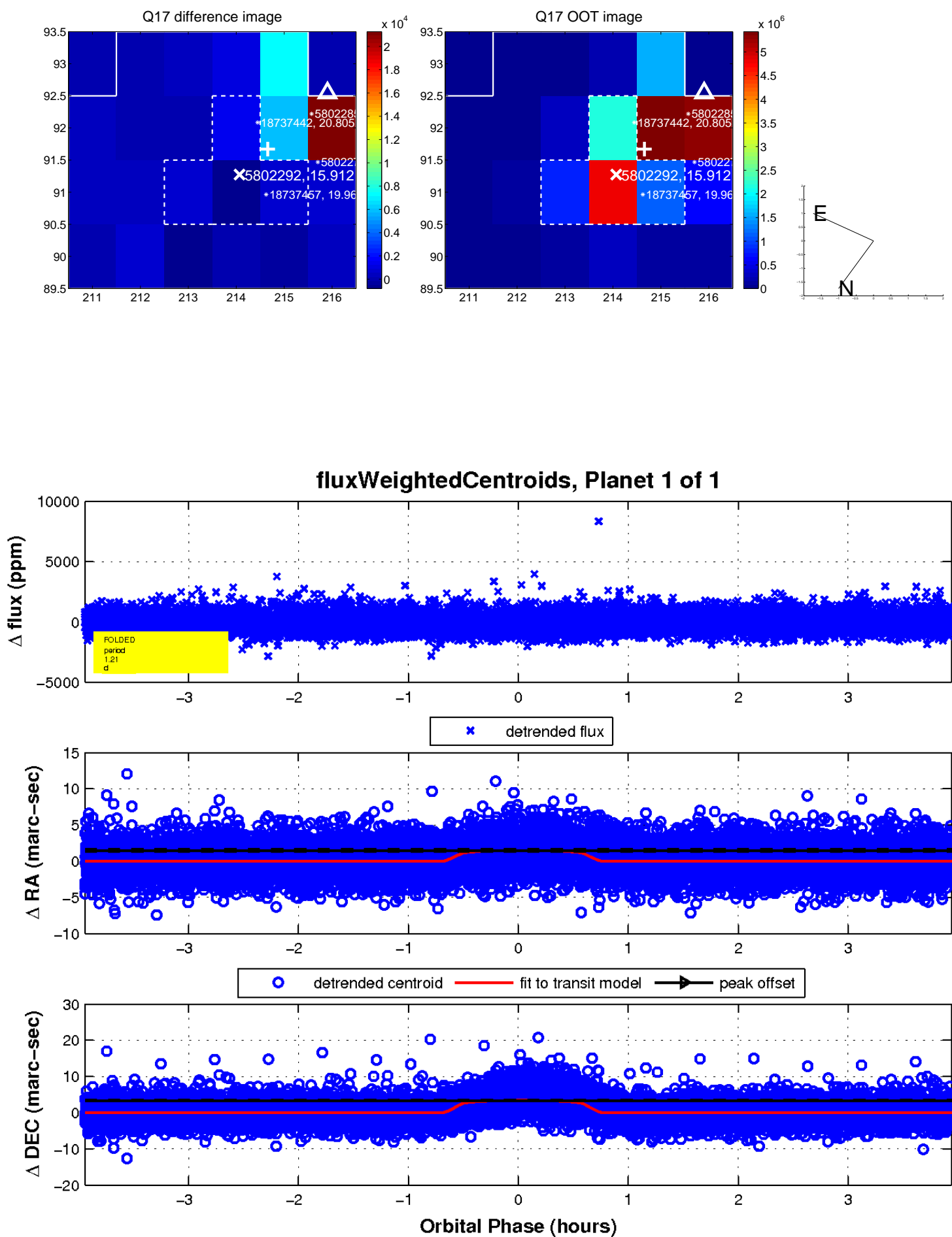
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

