

KIC 007025846

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})
007025846-01	OBS	0565.01	2.340543	132.742933	200.7	4.159	30.7	35.6	0.98	6056	2.75	1064.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007025846-01	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 007025846-01

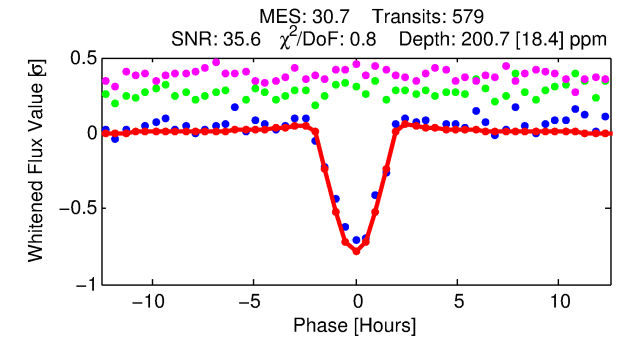
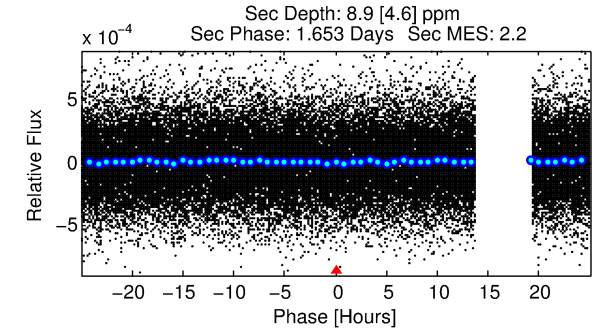
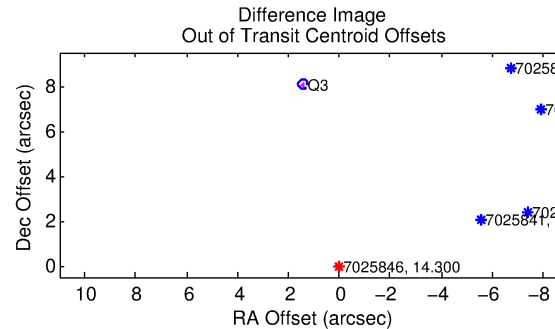
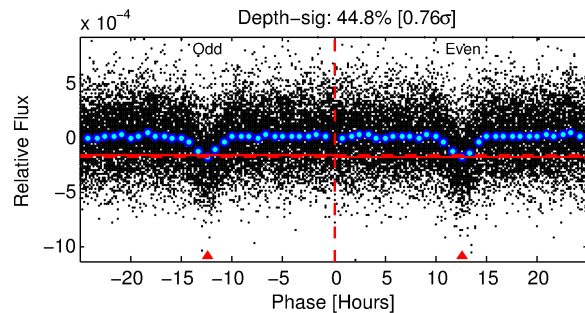
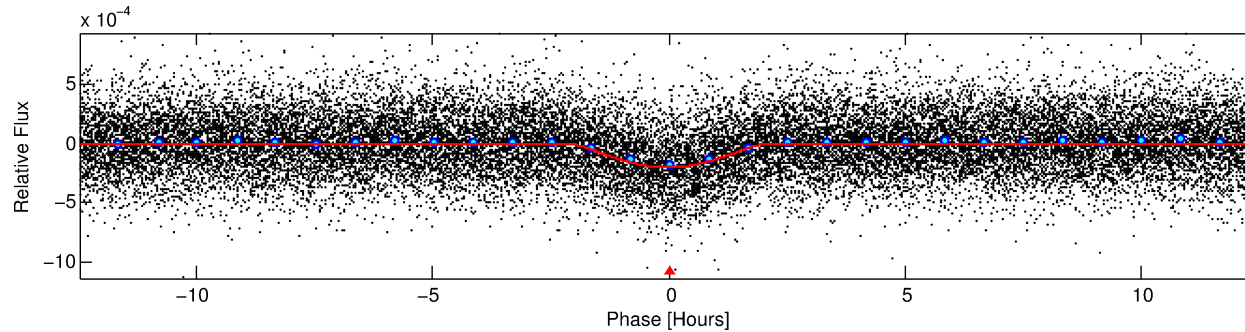
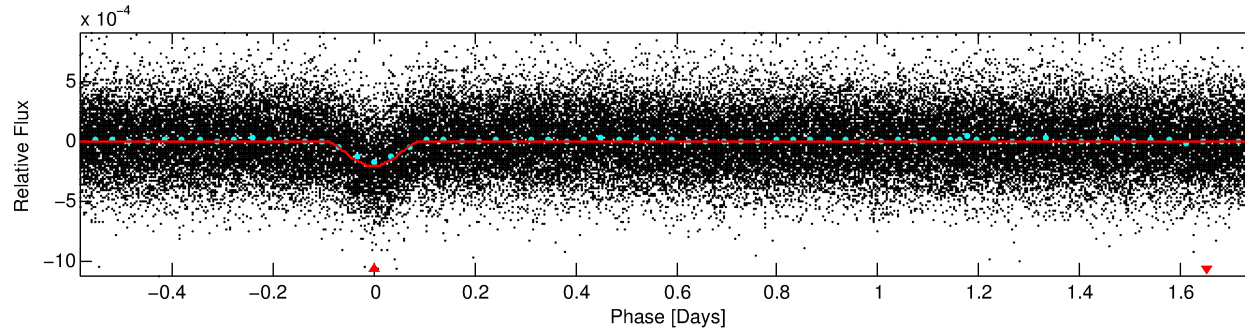
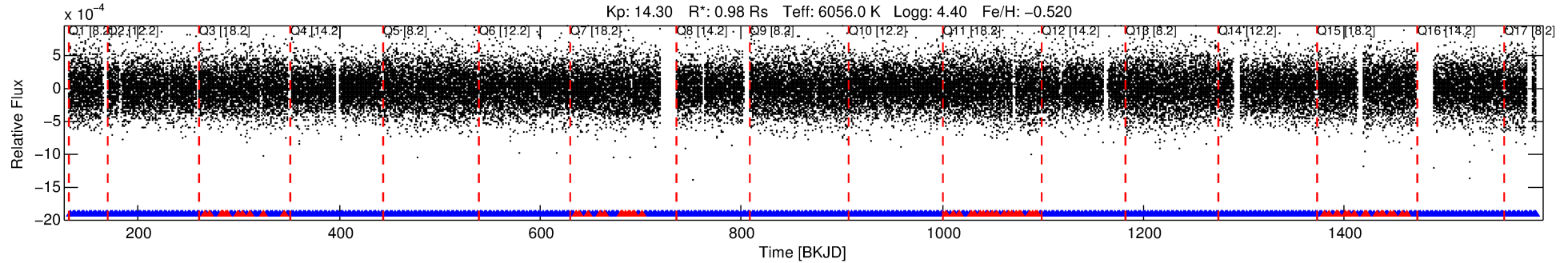
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007025846-01	7025846	6803.01	7025851	1:1	14.8	3	-2	14.39	14.30	1219.00	Direct-PRF	0	0.20	0.18

Notes: $P_1:P_2$ 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. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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: 7025846 Candidate: 1 of 1 Period: 2.341 d
KOI: K00565.01 Corr: 0.849

Kp: 14.30 R*: 0.98 Rs Teff: 6056.0 K Logg: 4.40 Fe/H: -0.520



DV Fit Results:

Period = 2.34054 [0.00001] d
Epoch = 132.7429 [0.0021] BKJD
Rp/R* = 0.0257 [0.0263]
a/R* = 1.41 [0.17]
b = 1.00 [0.04]
Seff = 1064.13 [375.74]
Teq = 1456 [129] K
Rp = 2.75 [2.90] Re
a = 0.0330 [0.0073] AU
Ag = 0.71 [1.51] [-0.19σ]
Teff = 2065 [1090] K [0.55σ]

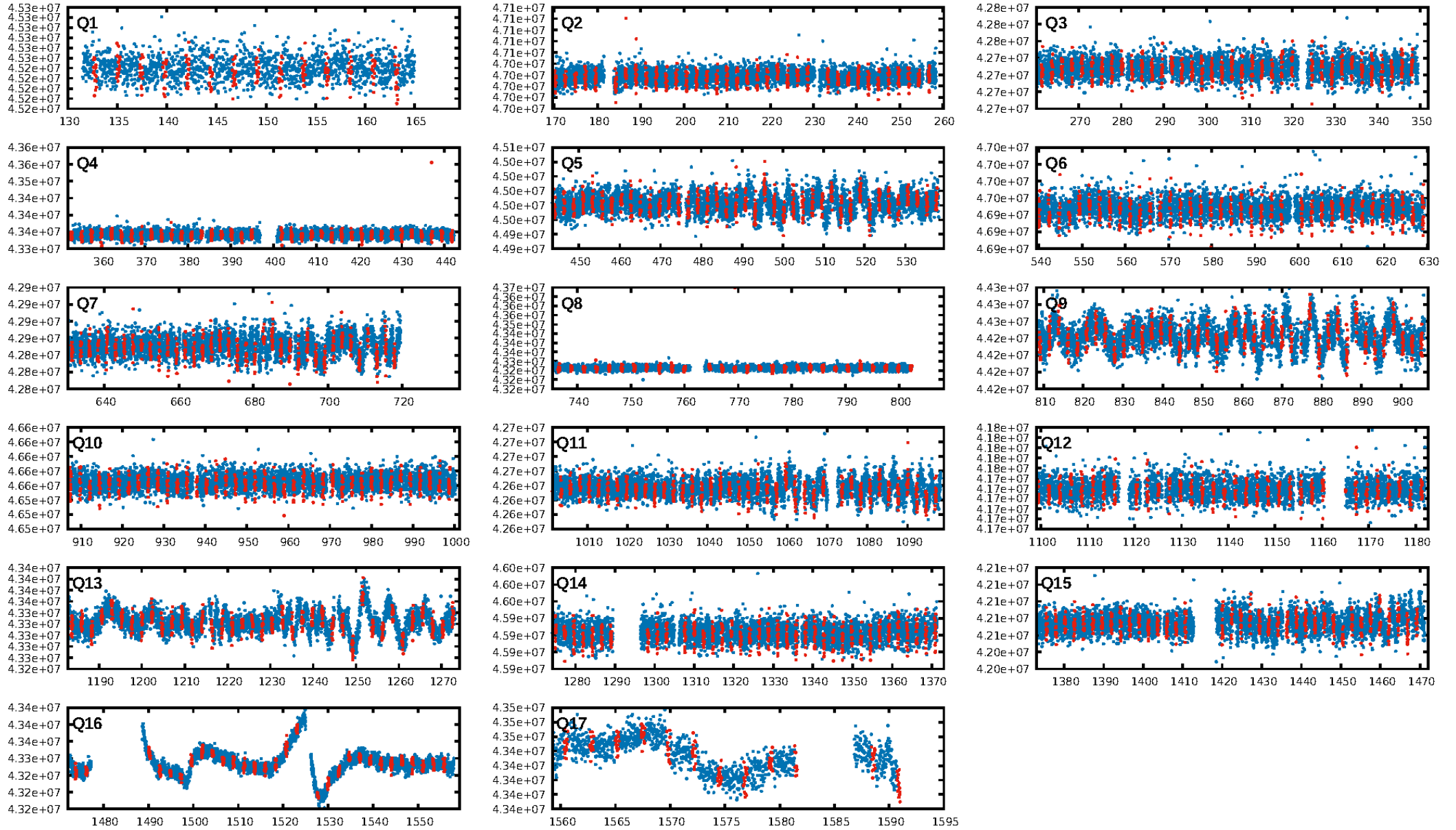
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.48e-193
RollingBand-fgt: 0.89 [493/553]
GhostDiagnostic-chr: -0.4147
Centroid-sig: 0.0%
Centroid-so: N/A
OotOffset-rm: 8.196 arcsec [117.51σ]
KicOffset-rm: 7.788 arcsec [111.64σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [17/17]

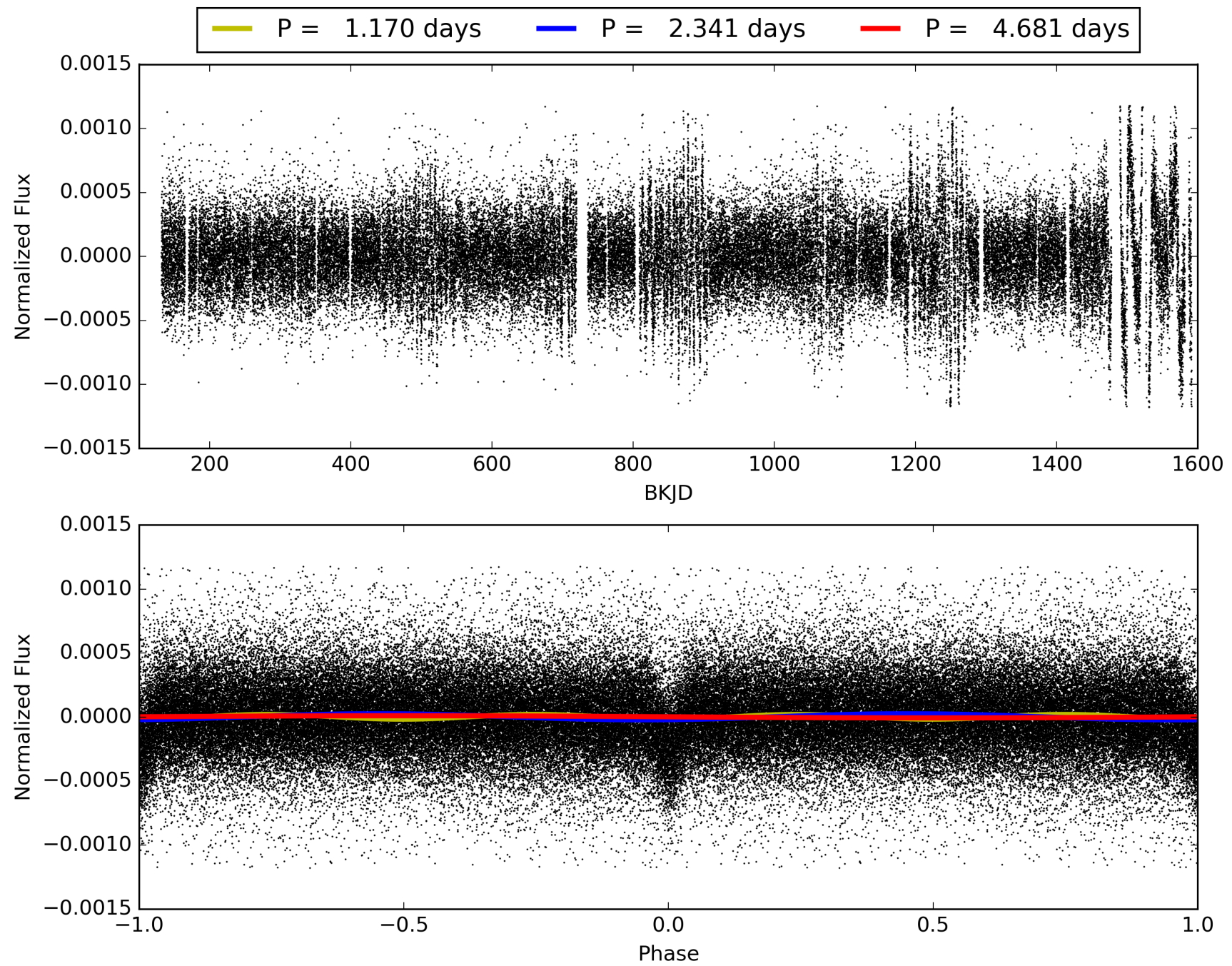
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:05 Z

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

TCE 007025846-01, PDC Light Curves

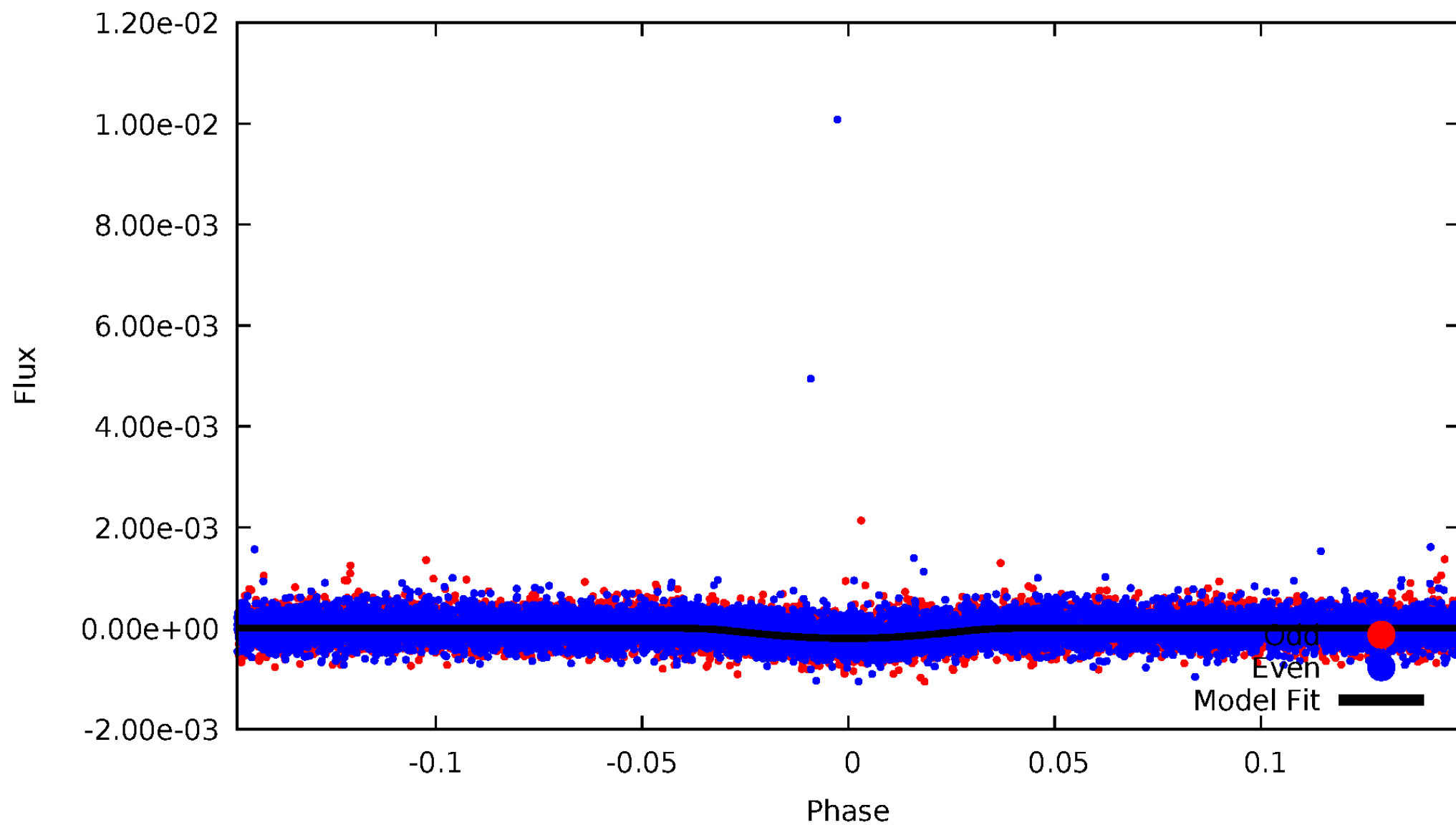


TCE 007025846-01



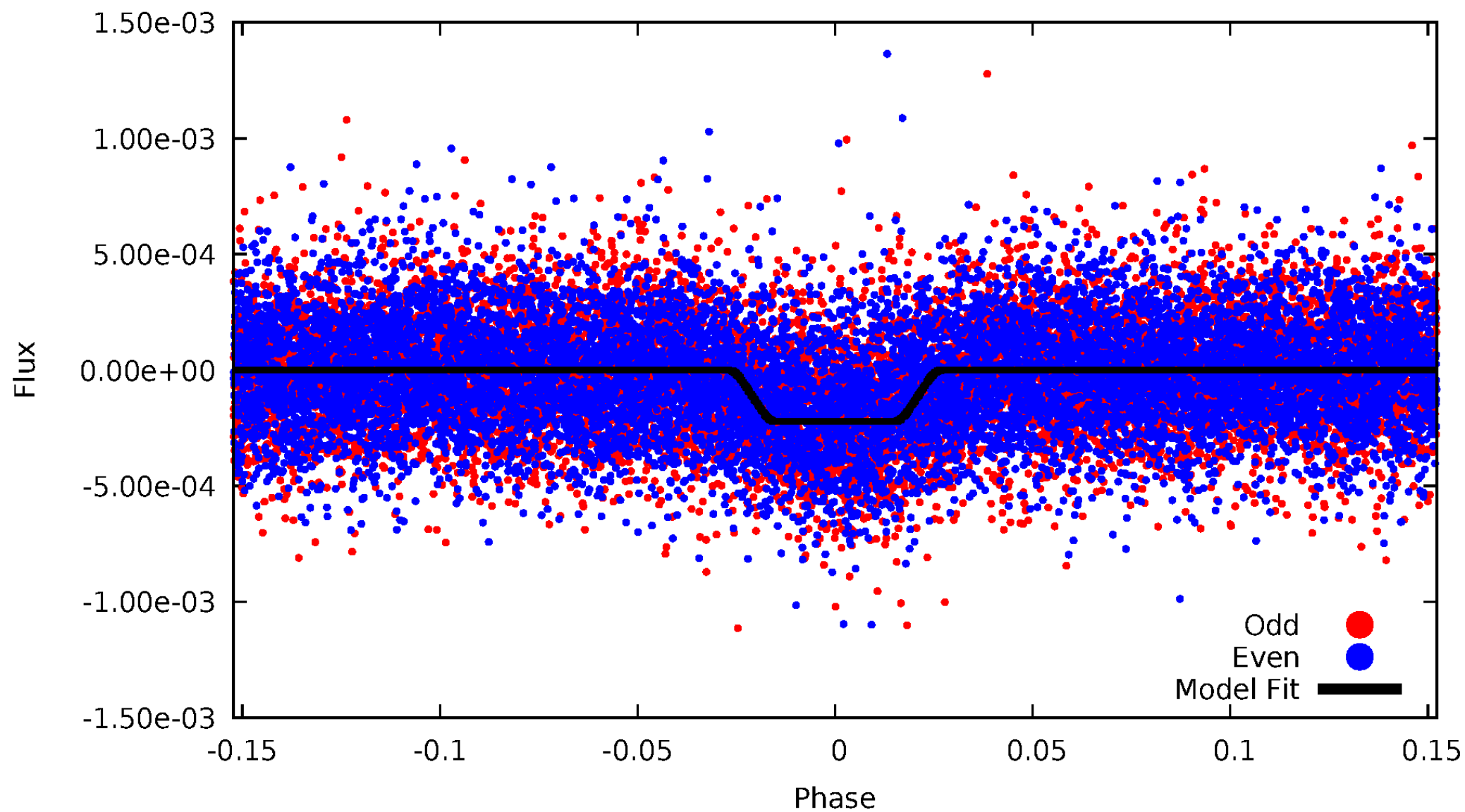
DV Odd/Even

TCE 007025846-01



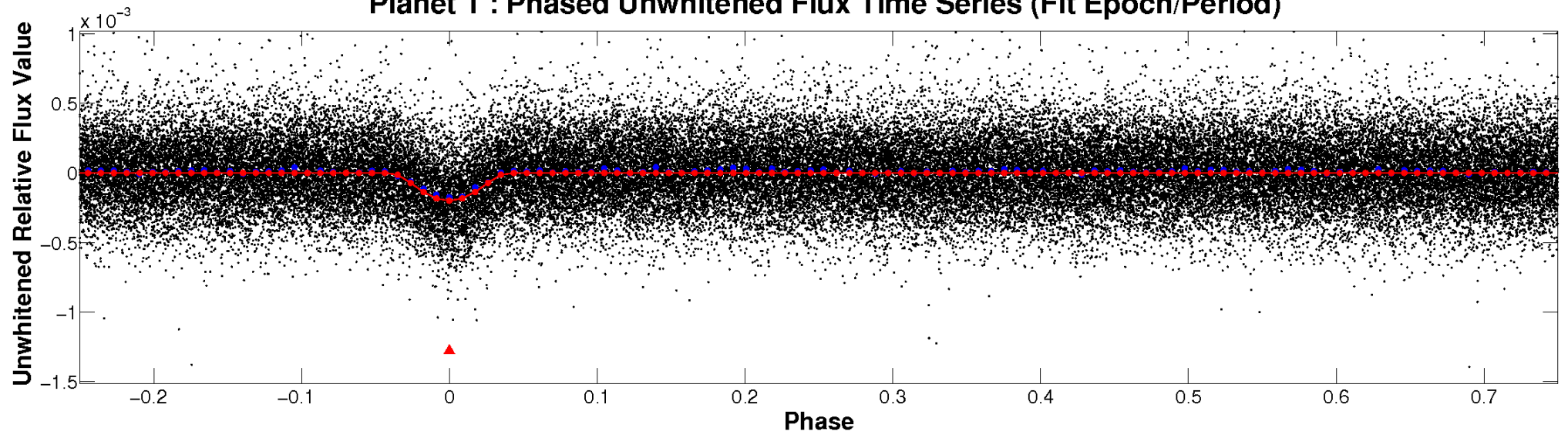
ALT Odd/Even

TCE 007025846-01

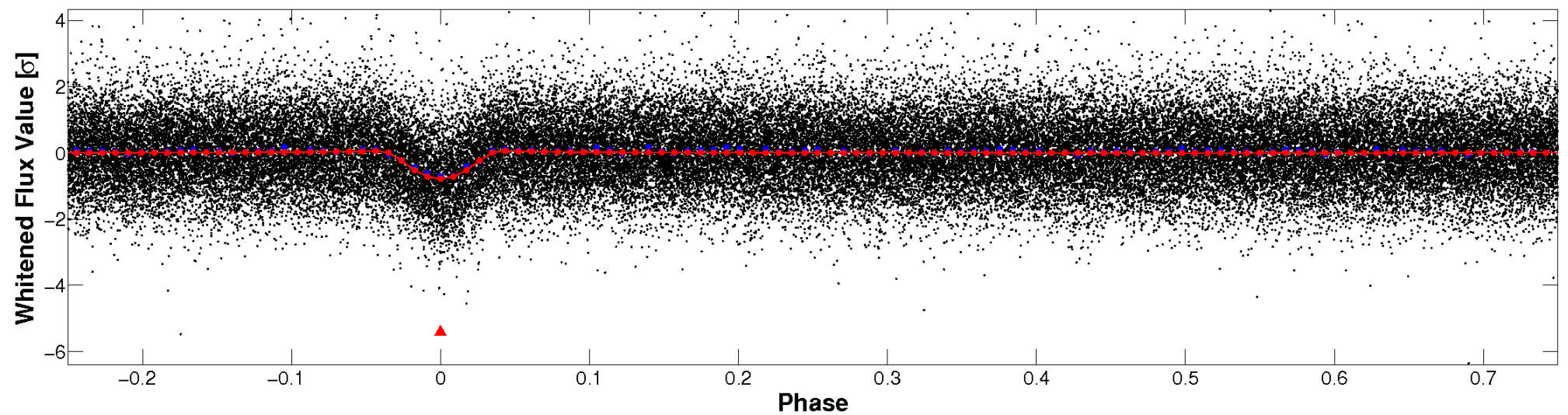


Non-Whitened Vs. Whitened Light Curve

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

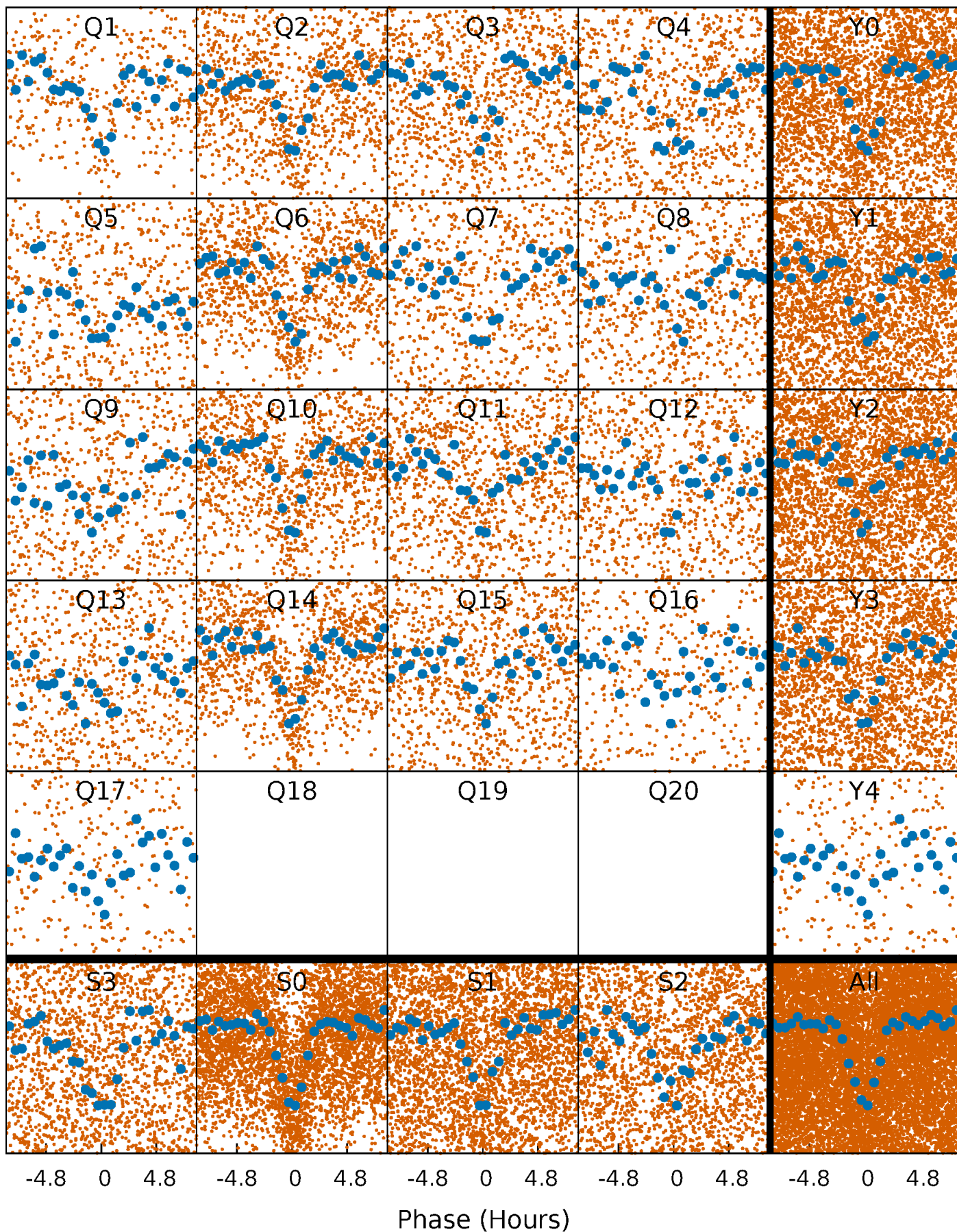


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



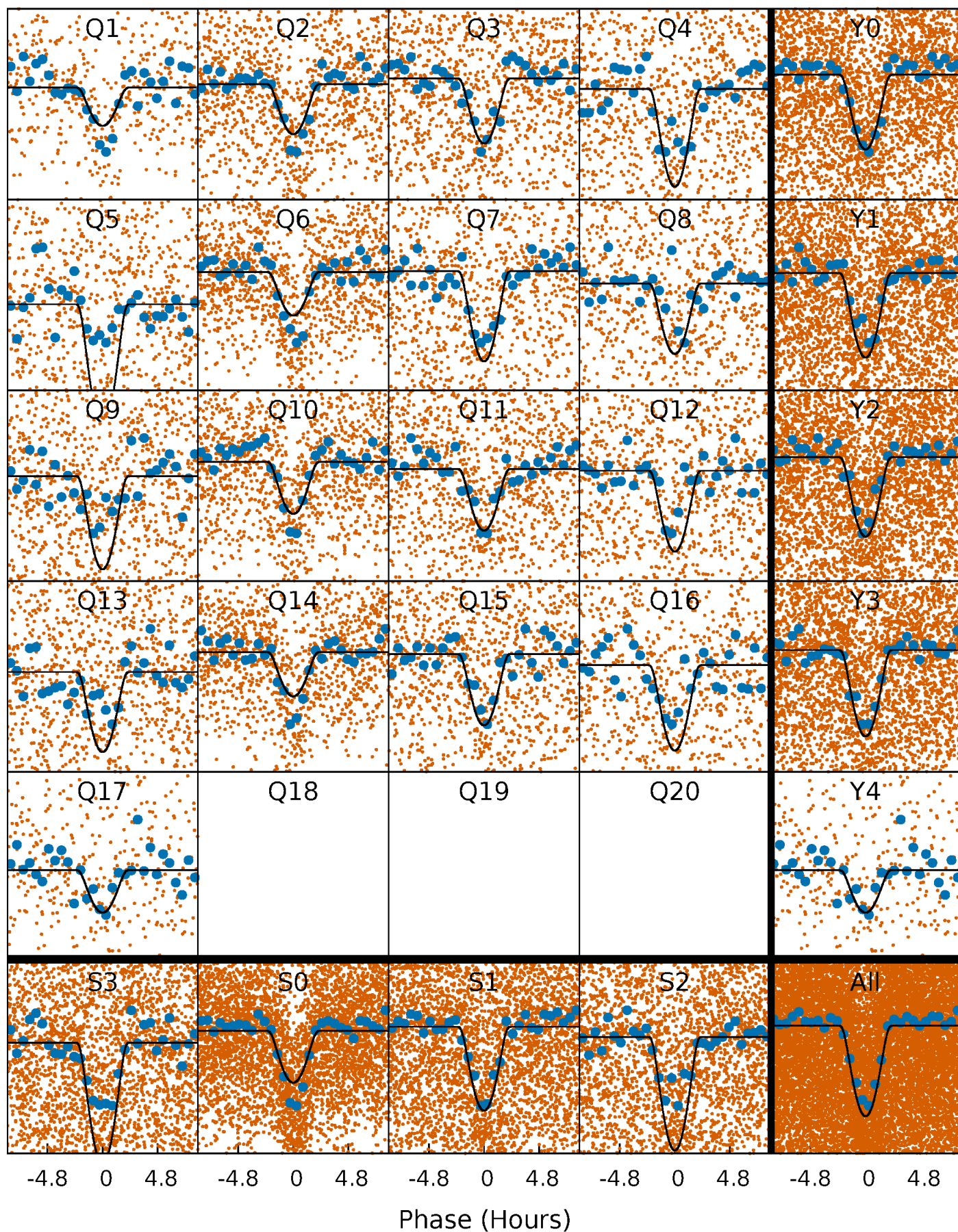
PDC Quarter-Phased Transit Curves

TCE 007025846-01 P= 2.340543 Days $T_0=132.742933$ (BKJD)



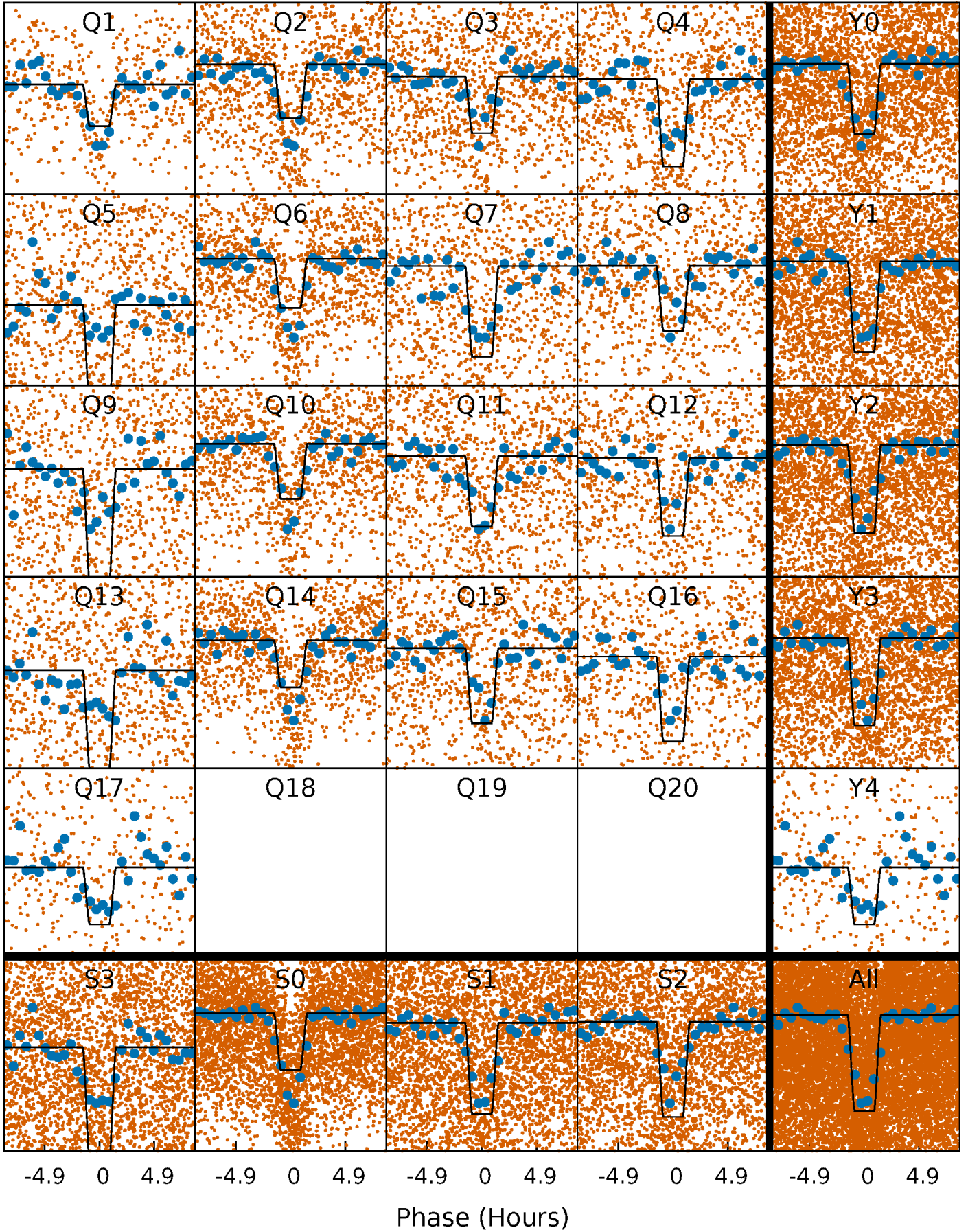
DV Quarter-Phased Transit Curves

TCE 007025846-01 P= 2.340543 Days $T_0=132.742933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

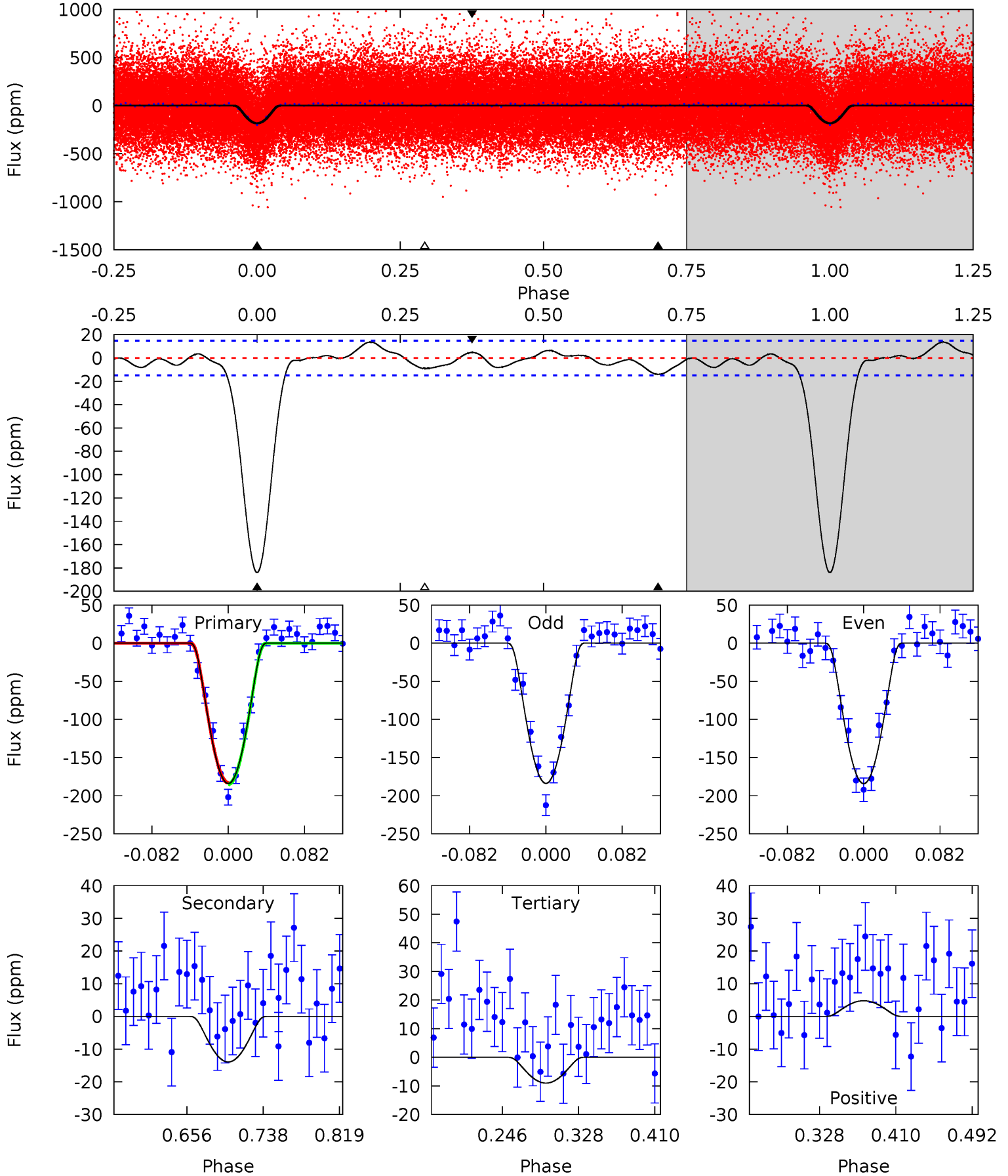
TCE 007025846-01 P= 2.340517 Days $T_0=132.749811$ (BKJD)



DV Model-Shift Uniqueness Test

007025846-01, P = 2.340543 Days, E = 130.402390 Days

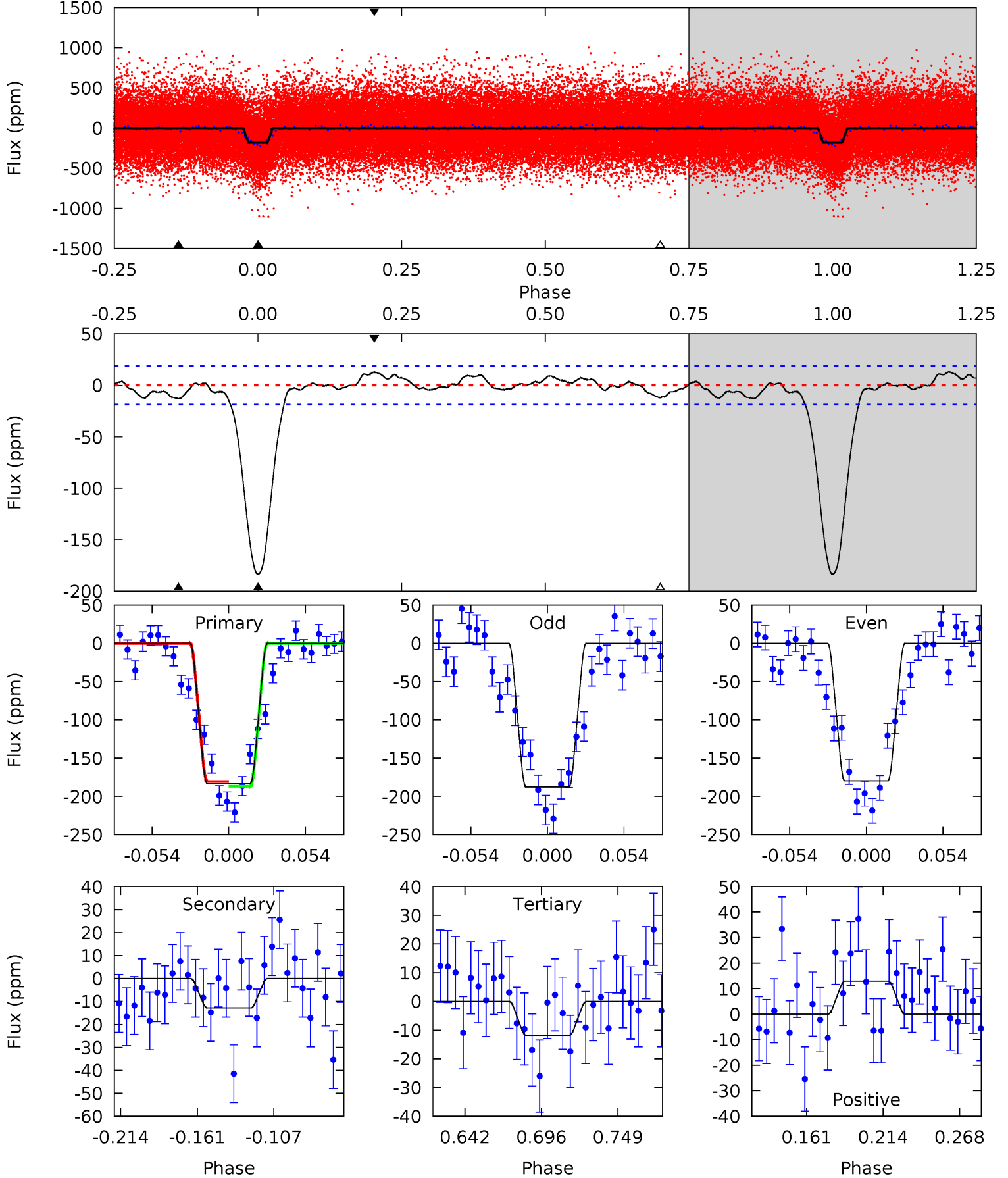
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.2	4.33	2.80	1.49	4.61	1.74	1.63	54.4	55.7	1.52	2.84	0.05	1.00	0.07	0.31



Alt Model-Shift Uniqueness Test

007025846-01, P = 2.340517 Days, E = 130.409294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.2	3.24	2.96	3.27	4.69	1.93	1.42	43.2	42.9	0.28	-0.03	1.02	1.02	0.07	0.78



Stellar Parameters For KIC 007025846

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6056^{+163}_{-181}	$4.397^{+0.139}_{-0.186}$	$-0.520^{+0.300}_{-0.300}$	$0.981^{+0.250}_{-0.146}$	$0.875^{+0.108}_{-0.081}$	$1.305^{+0.842}_{-0.626}$
	+3%/-3%	+3%/-4%	+58%/-58%	+25%/-15%	+12%/-9%	+65%/-48%
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 007025846-01 / KOI 0565.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 3	$3.27^{+2.55}_{-2.06}$	2042^{+144}_{-115}	2660^{+1164}_{-4797}	$0.766^{+4.863}_{-0.533}$
Alt.	-13 ± 4	$2.70^{+2.29}_{-1.86}$	2047^{+143}_{-114}	2824^{+1341}_{-4765}	$1.002^{+8.635}_{-0.727}$

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 $A_{obs} \gg 1.0$

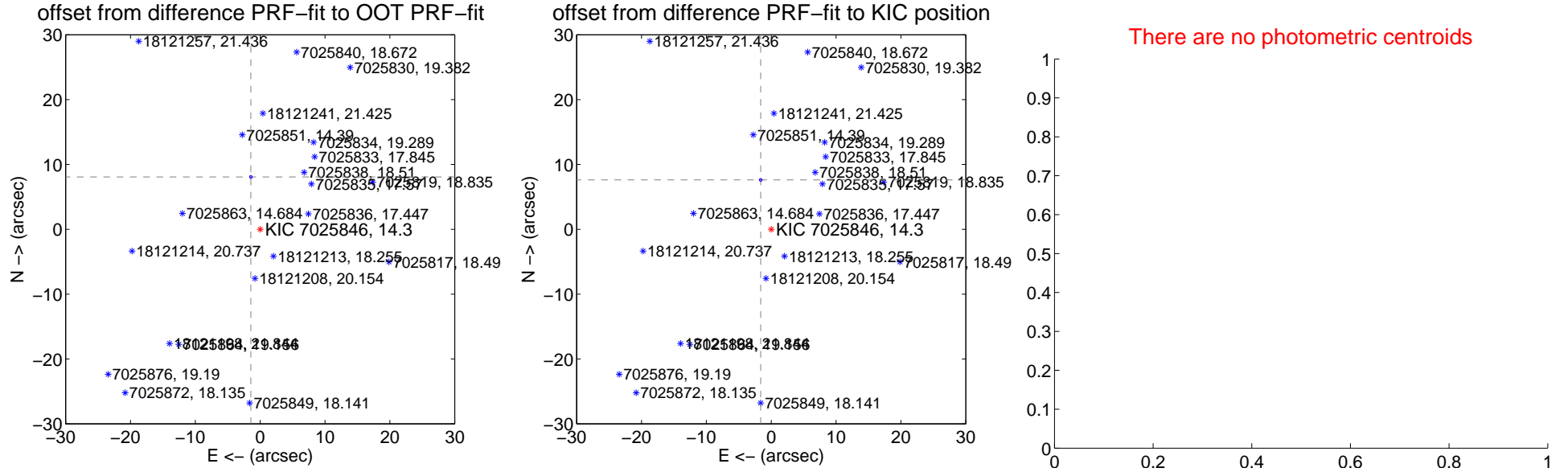
DV Centroid Data

Supplemental centroid analysis for 007025846-01. Kepler magnitude: 14.30. Transit SNR 35.62

There are 1 quarters with good PRF difference image offsets

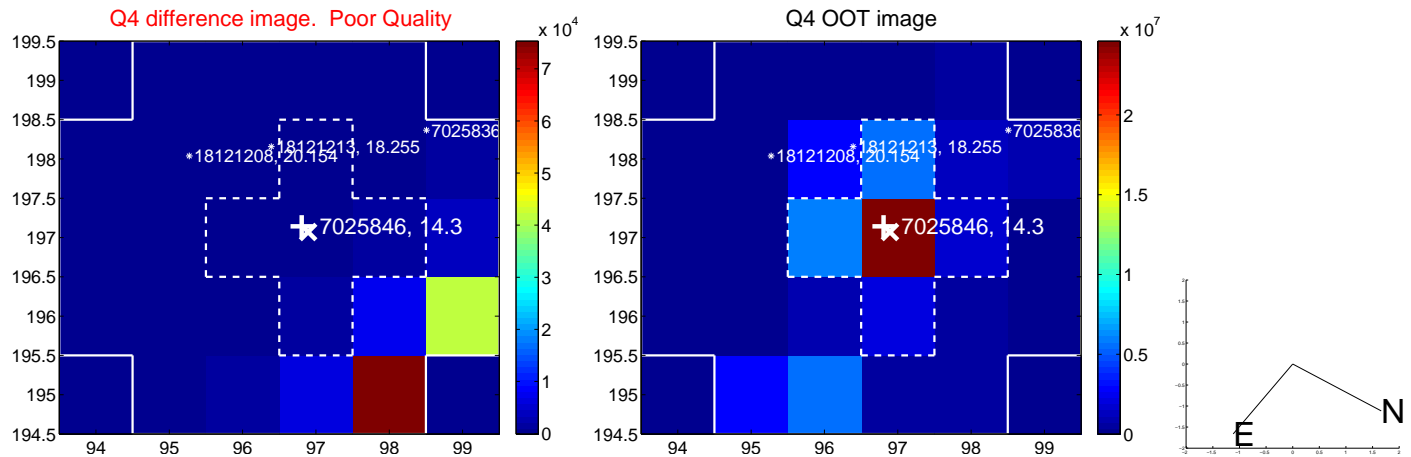
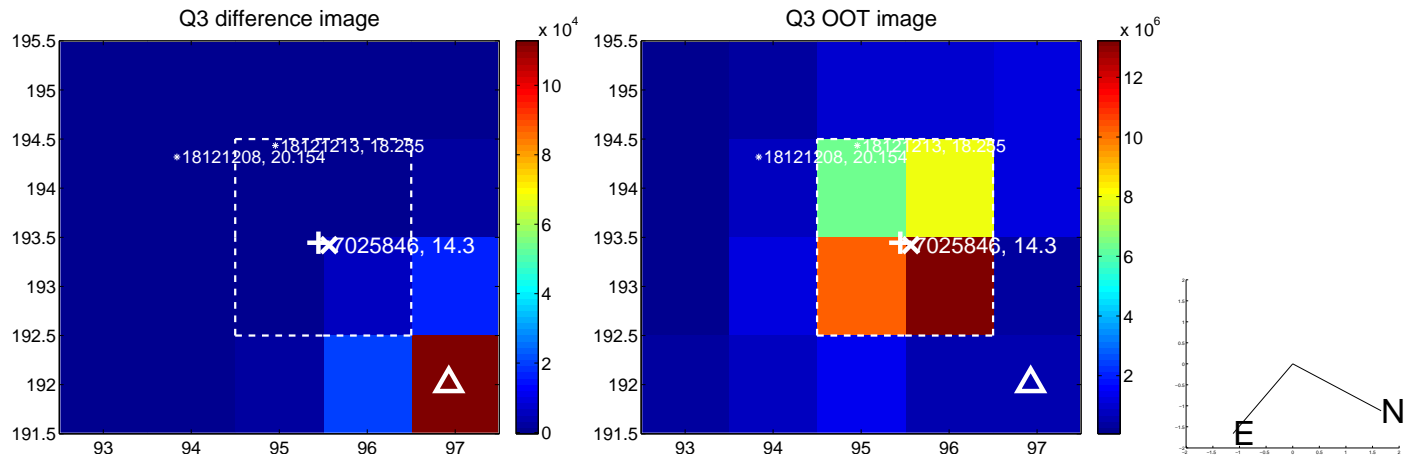
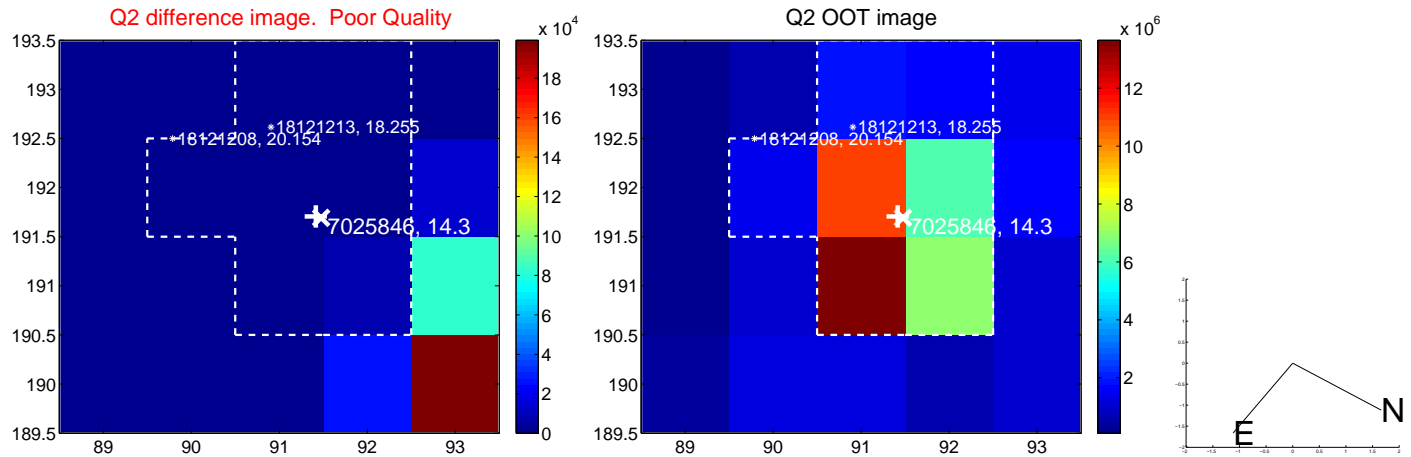
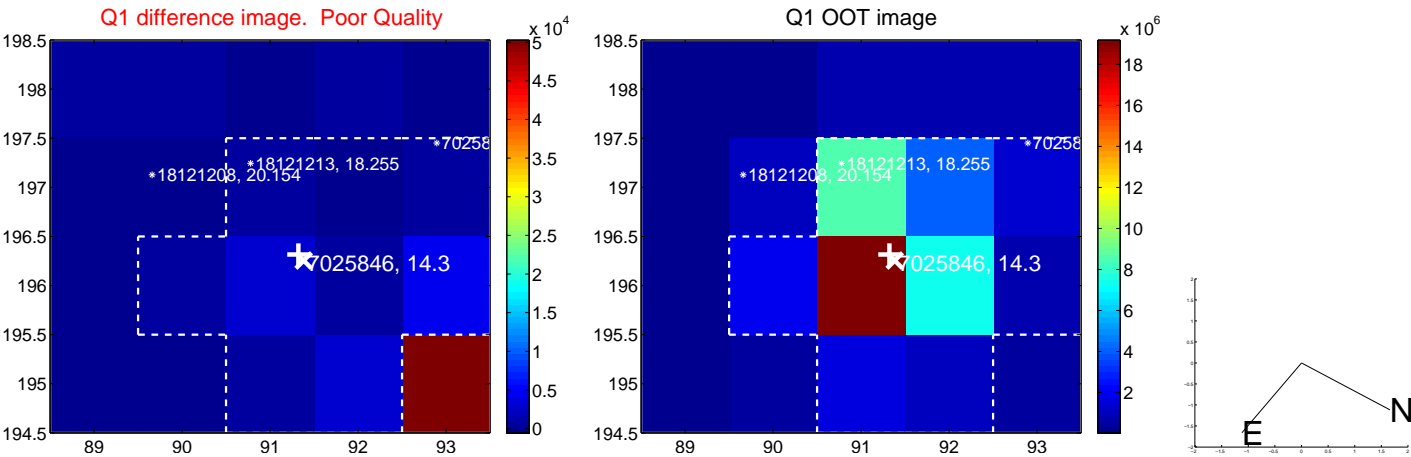
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.196 \pm 0.070	117.51	1.438 \pm 0.070	8.069 \pm 0.070
PRF-fit source offset from KIC position	7.788 \pm 0.070	111.64	1.625 \pm 0.070	7.616 \pm 0.070
photometric centroid source offset	—	—	—	—

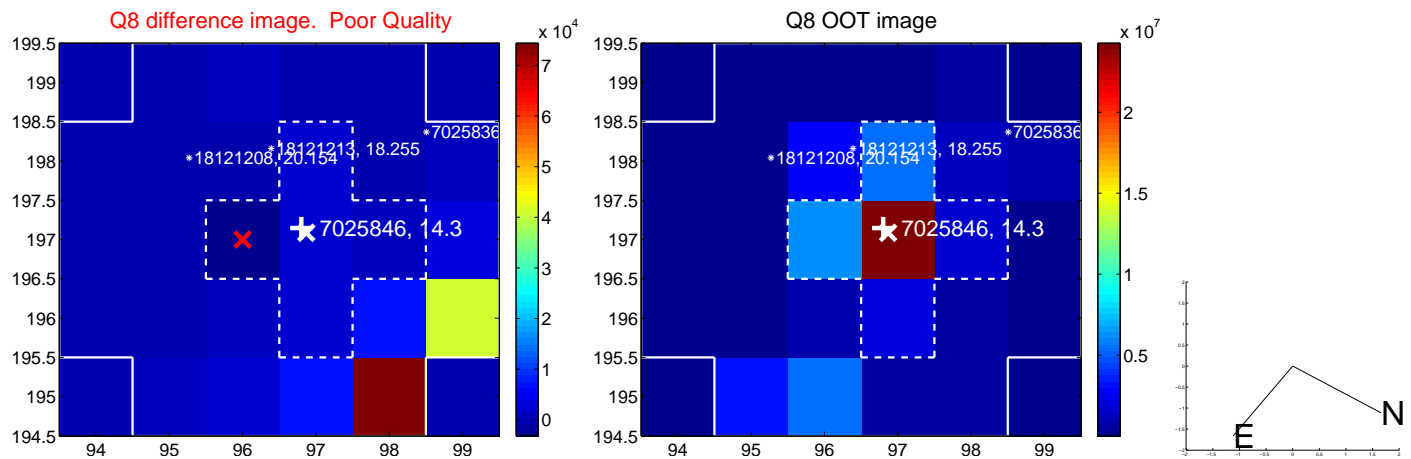
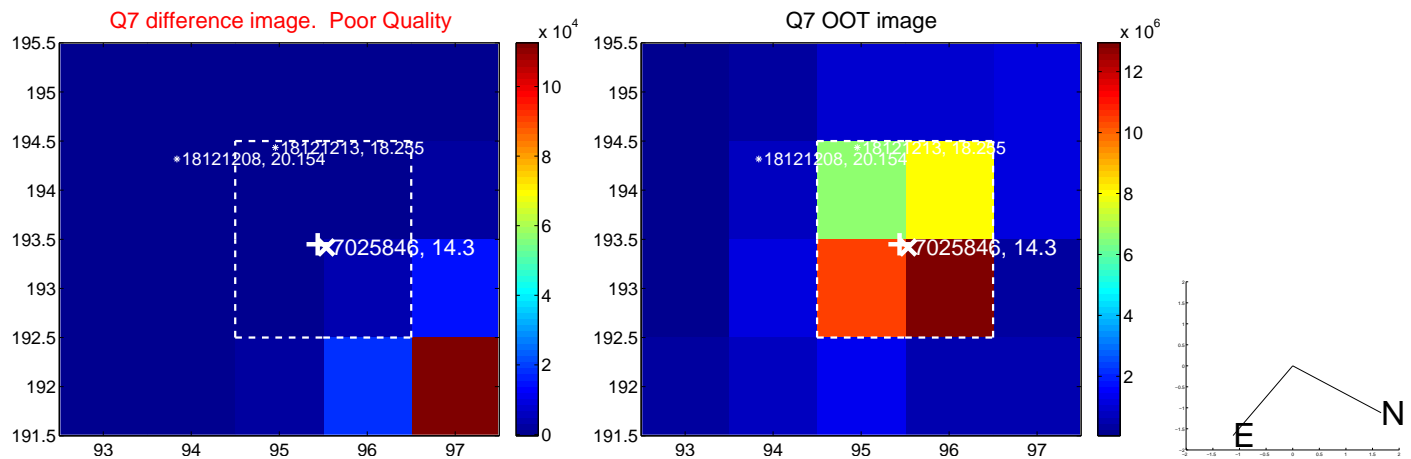
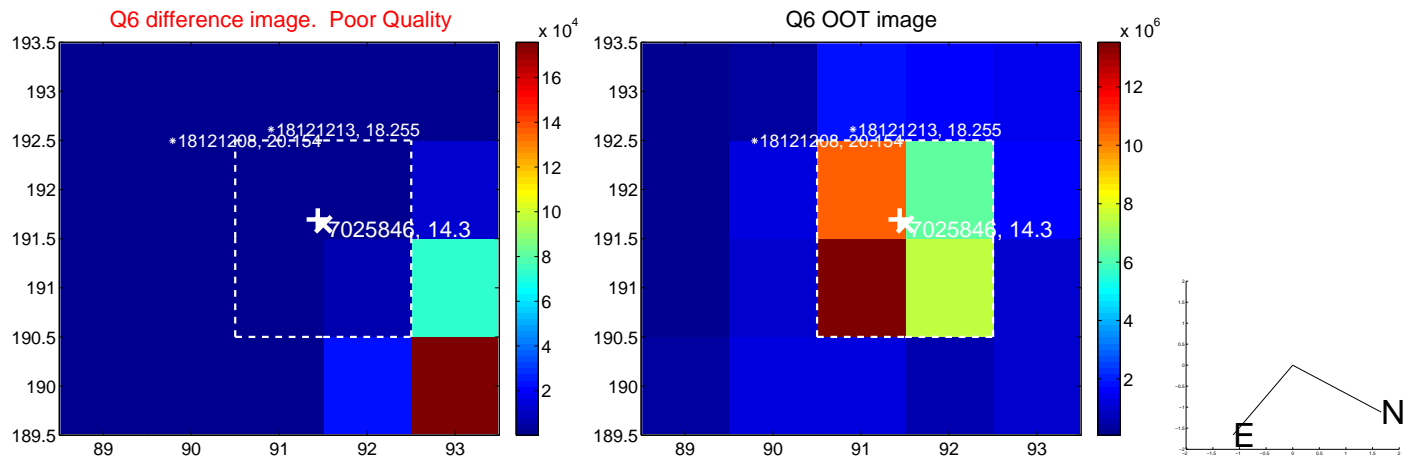
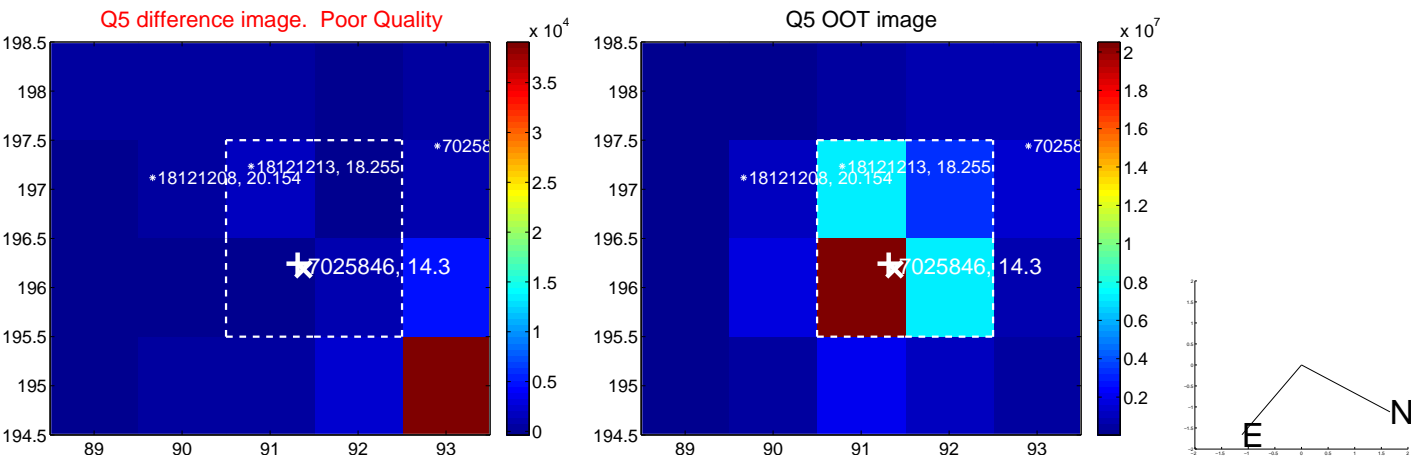


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

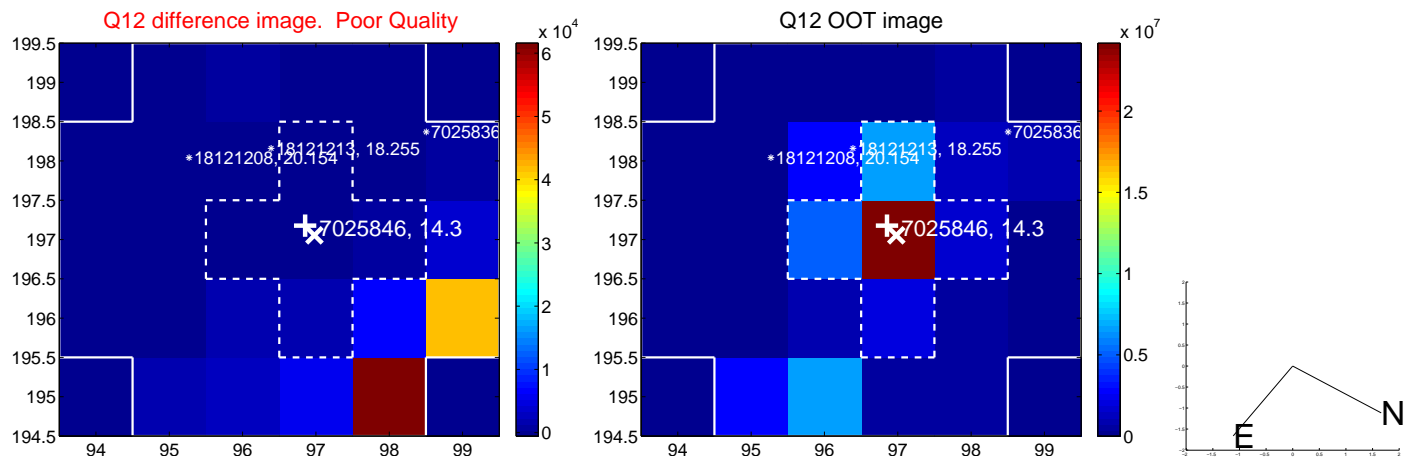
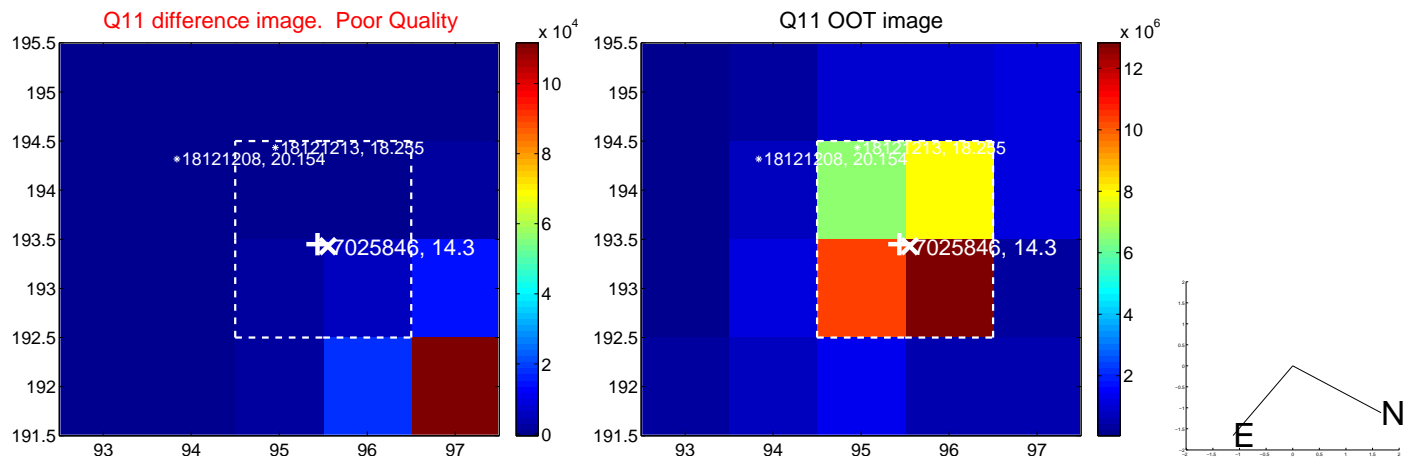
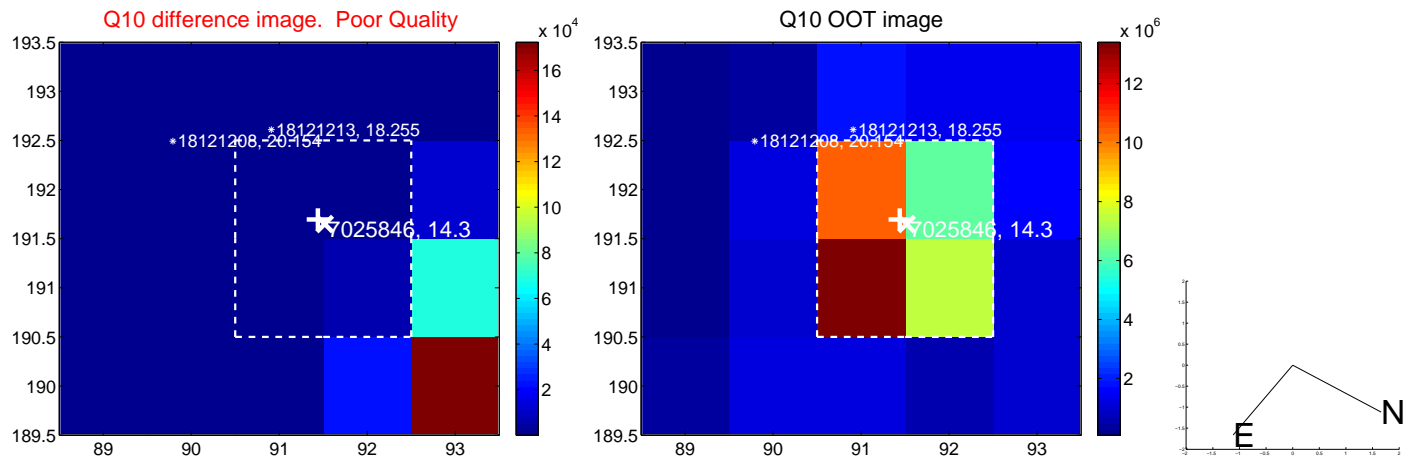
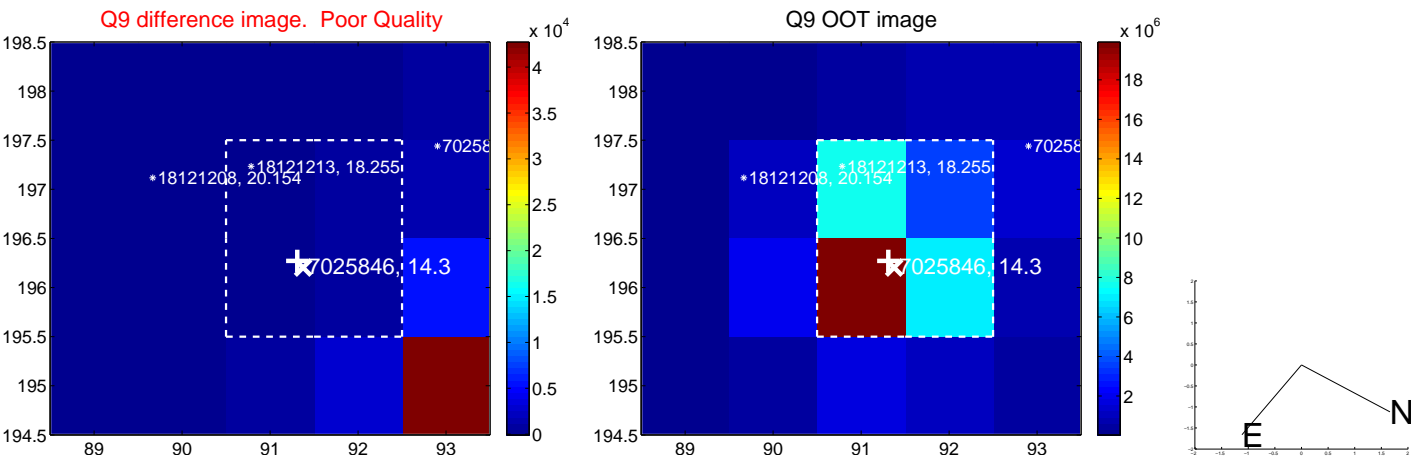
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



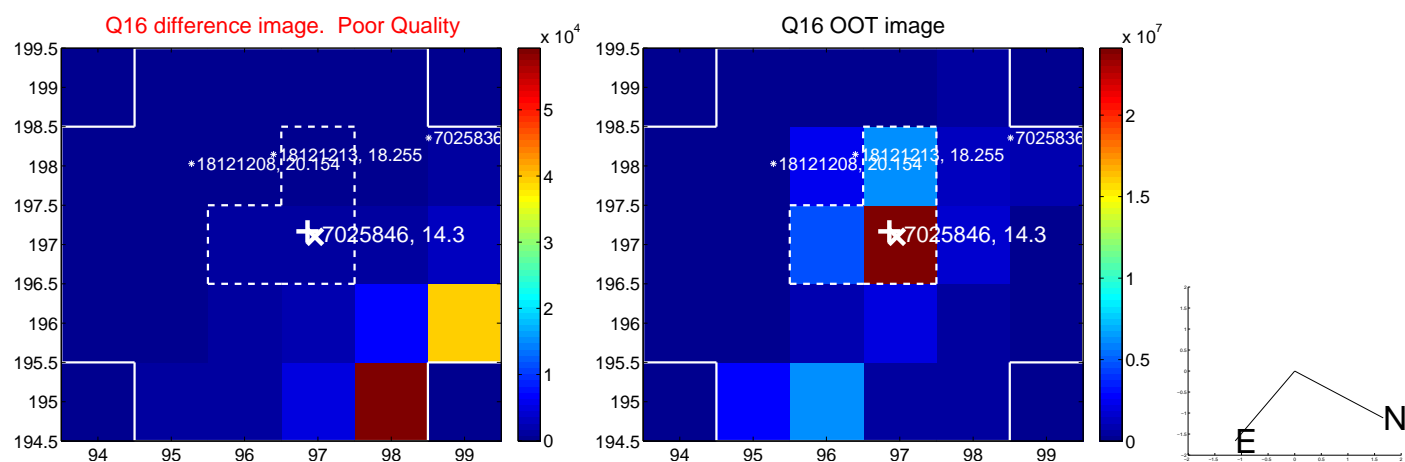
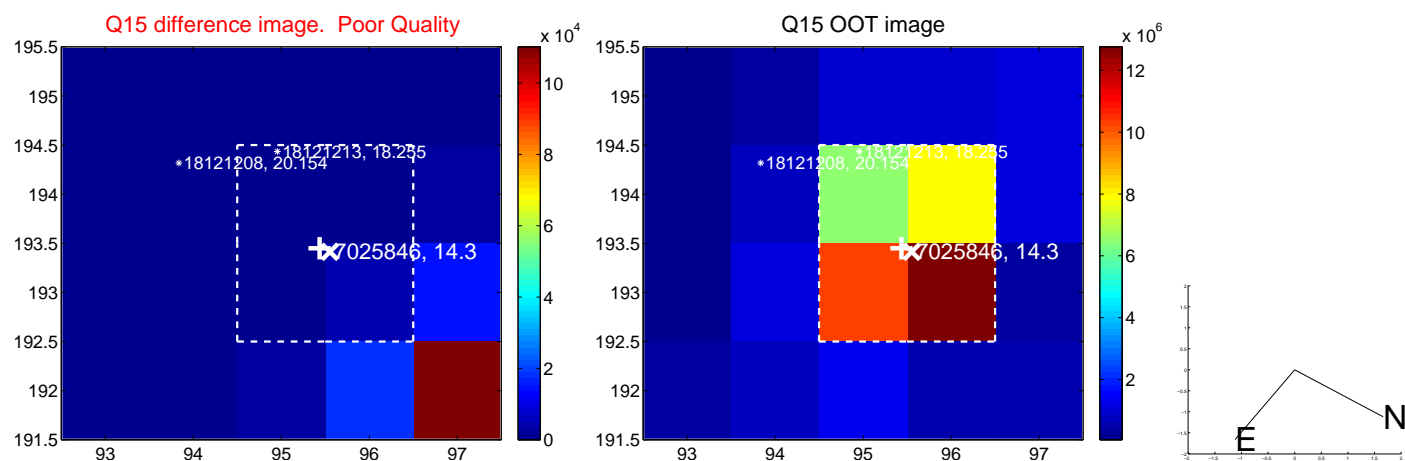
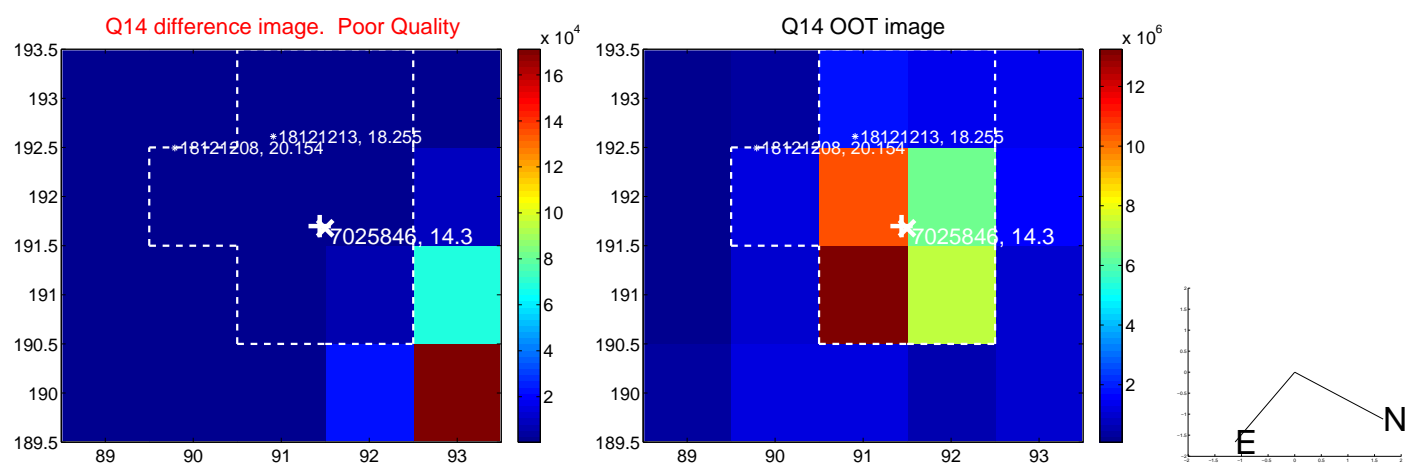
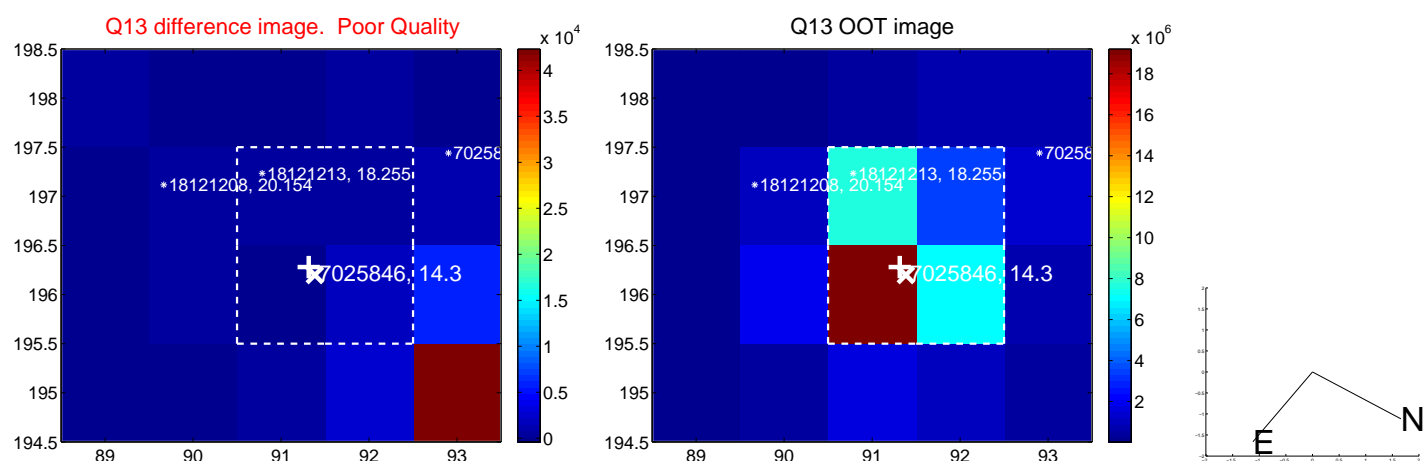
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



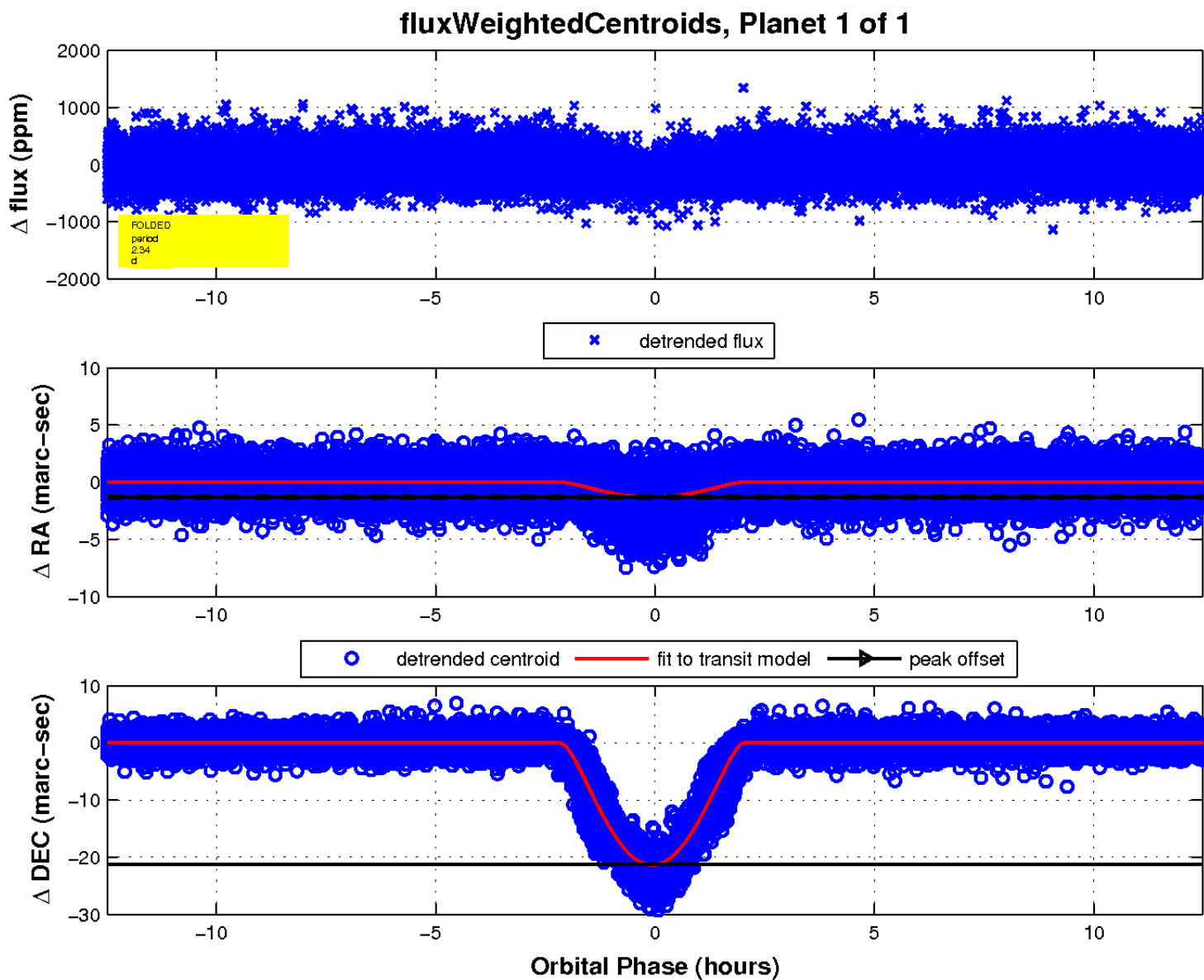
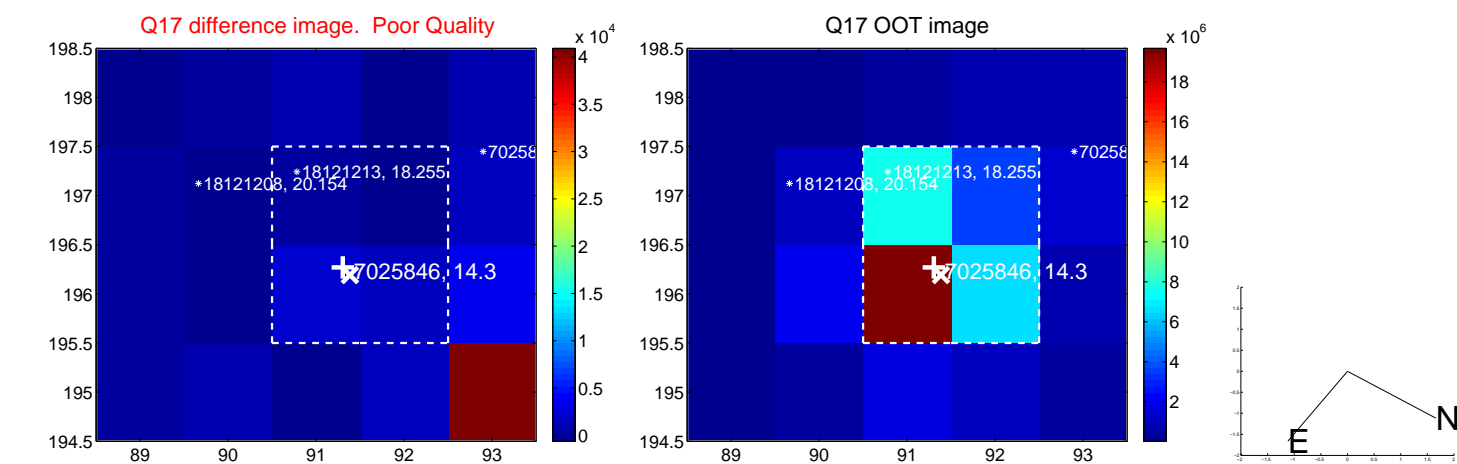
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

