

KIC 006285396

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})
006285396-01	OBS	6684.01	5.243606	132.694725	112.6	11.791	8.9	9.5	0.86	6212	1.72	297.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006285396-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—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 006285396-01

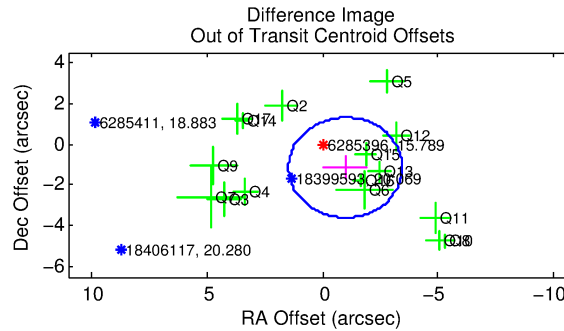
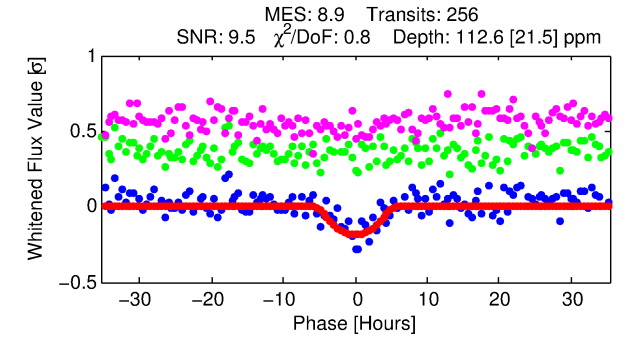
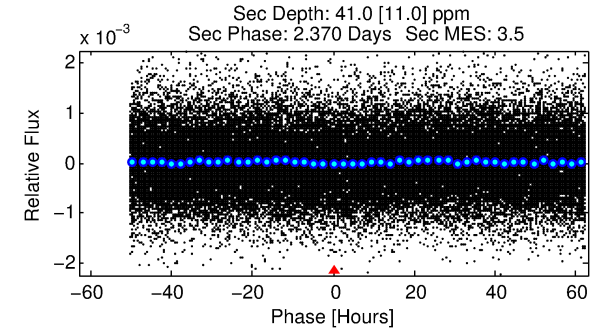
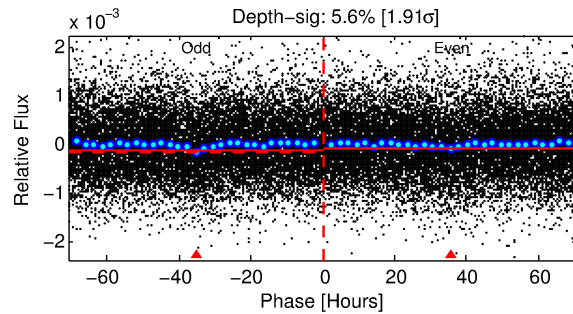
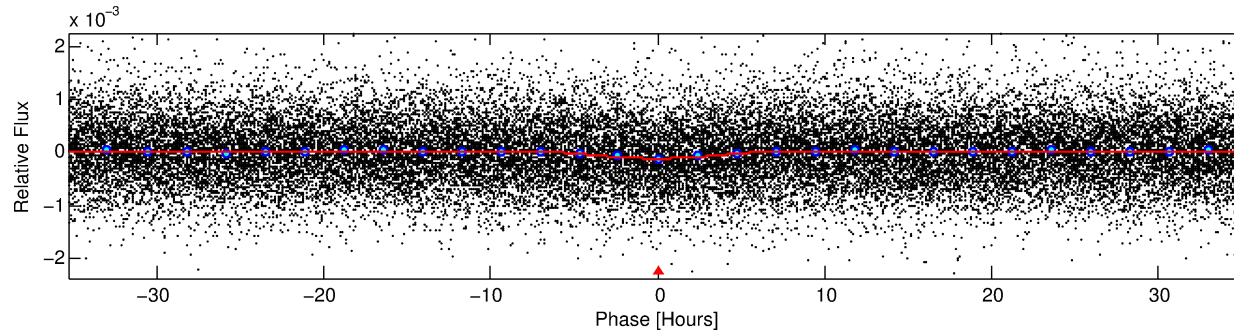
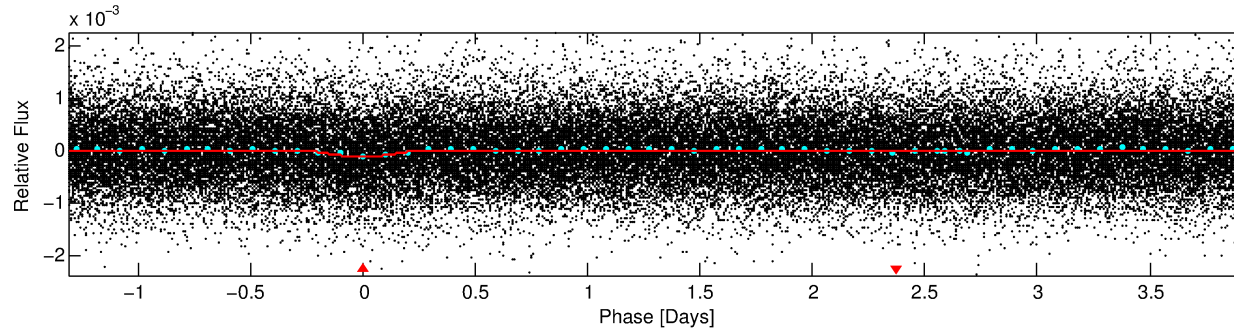
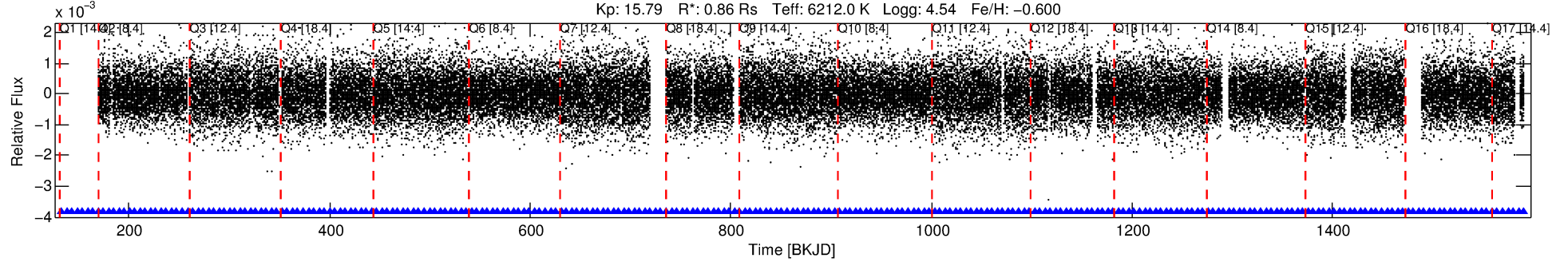
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
006285396-01	6285396	TT-Lyr-pri	6364290	1:1	283.6	-42	-26	9.49	15.79	7558.60	Direct-PRF	0	1.14	0.06

Notes: P₁:P₂ 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. 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 $\sigma_P < 5.0$ 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: 6285396 Candidate: 1 of 1 Period: 5.244 d
KOI: K06684.01 Corr: 0.944

Kp: 15.79 R*: 0.86 Rs Teff: 6212.0 K Logg: 4.54 Fe/H: -0.600



DV Fit Results:

Period = 5.24361 [0.00019] d
Epoch = 132.6947 [0.0301] BKJD
Rp/R* = 0.0182 [0.0509]
a/R* = 1.22 [0.27]
b = 1.00 [0.08]
Seff = 297.38 [116.27]
Teff = 1059 [103] K
Rp = 1.72 [4.81] Re
a = 0.0577 [0.0144] AU
Ag = 25.51 [142.74] [0.17σ]
Teffp = 3679 [5137] K [0.51σ]

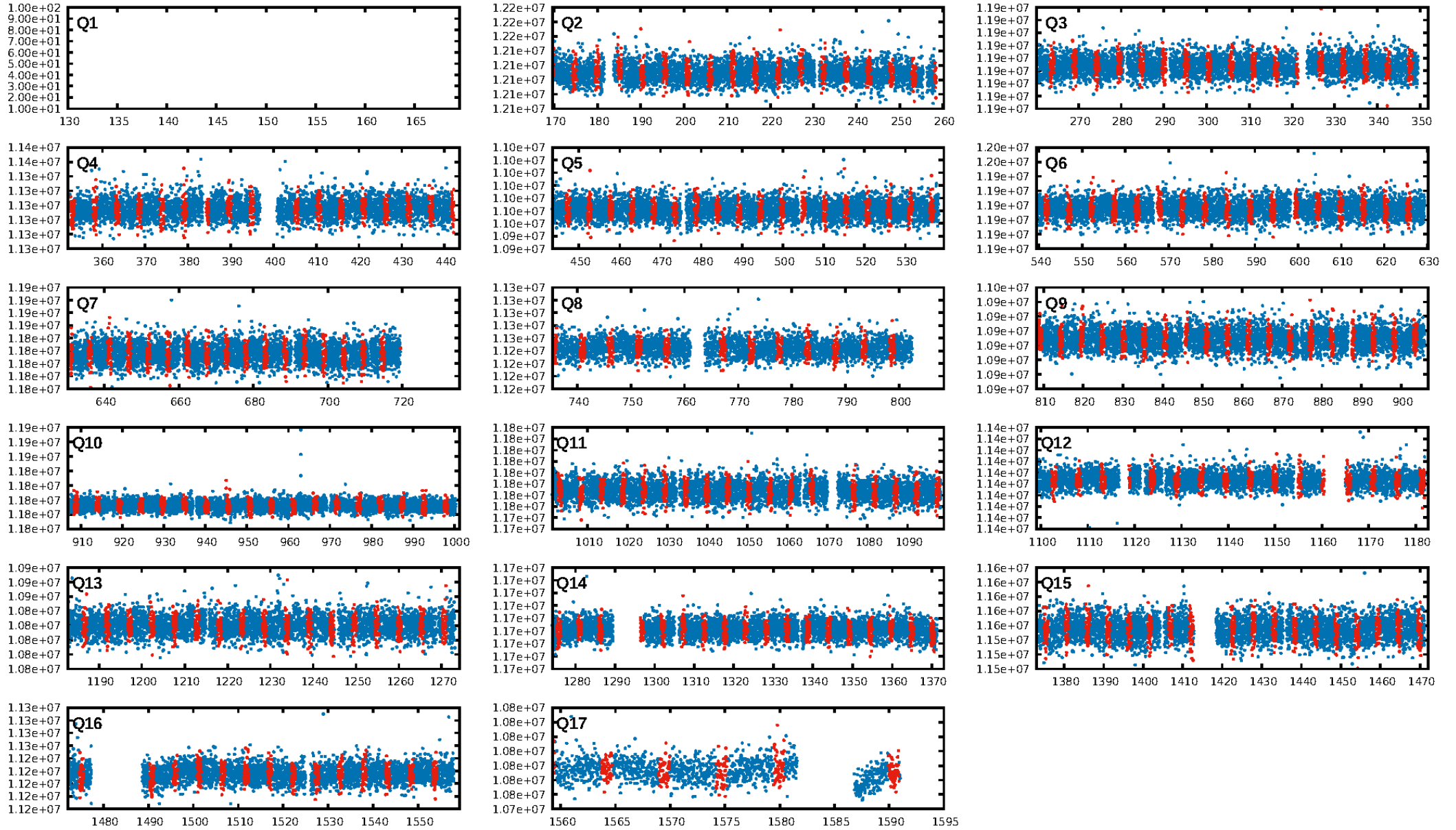
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.99e-19
RollingBand-fgt: 1.00 [251/251]
GhostDiagnostic-chr: 0.09524
Centroid-sig: 0.4%
Centroid-so: 2.811 arcsec [1.74σ]
OotOffset-rm: 1.509 arcsec [1.85σ]
KicOffset-rm: 1.446 arcsec [1.76σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [16/16]

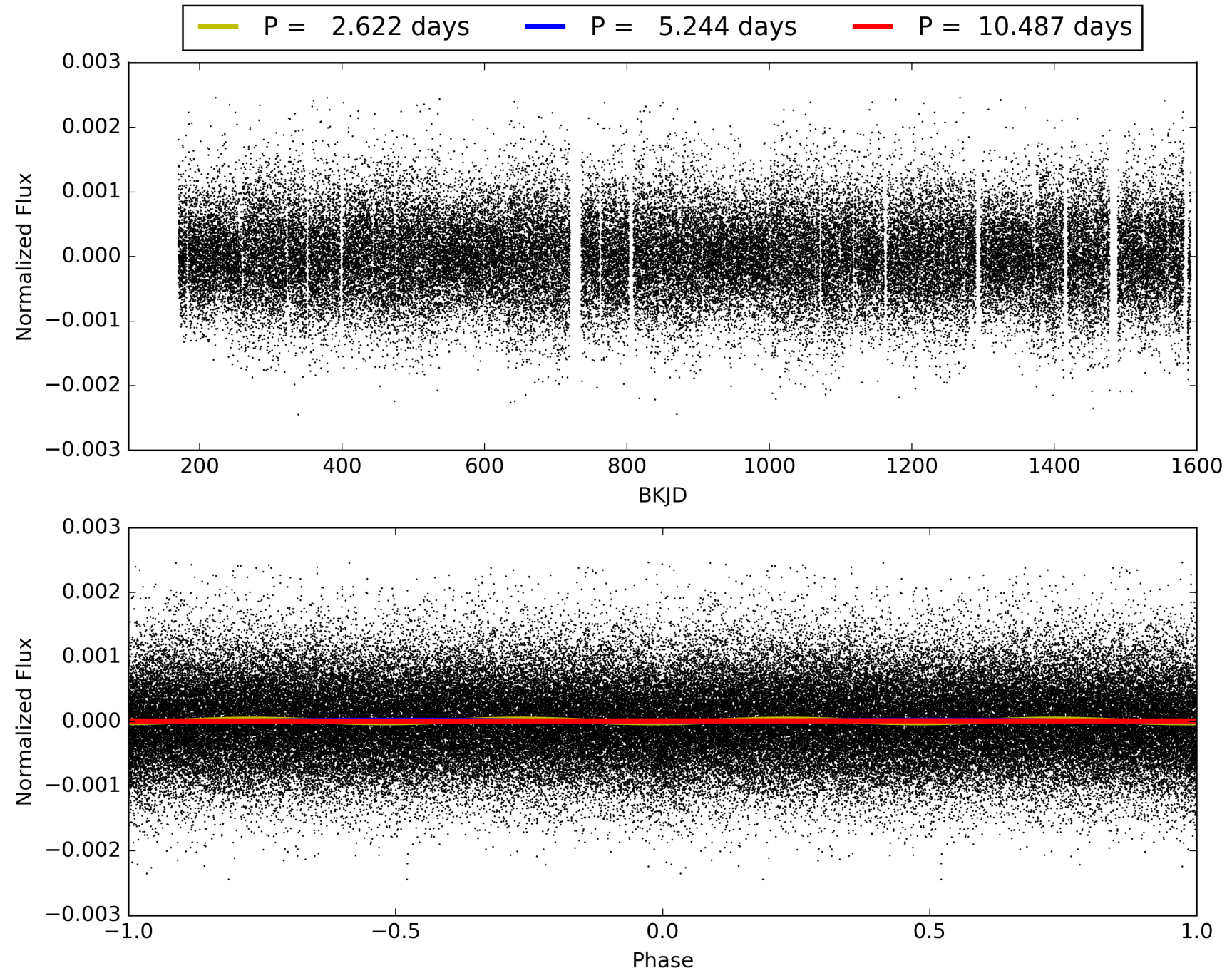
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:52:16 Z

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

TCE 006285396-01, PDC Light Curves

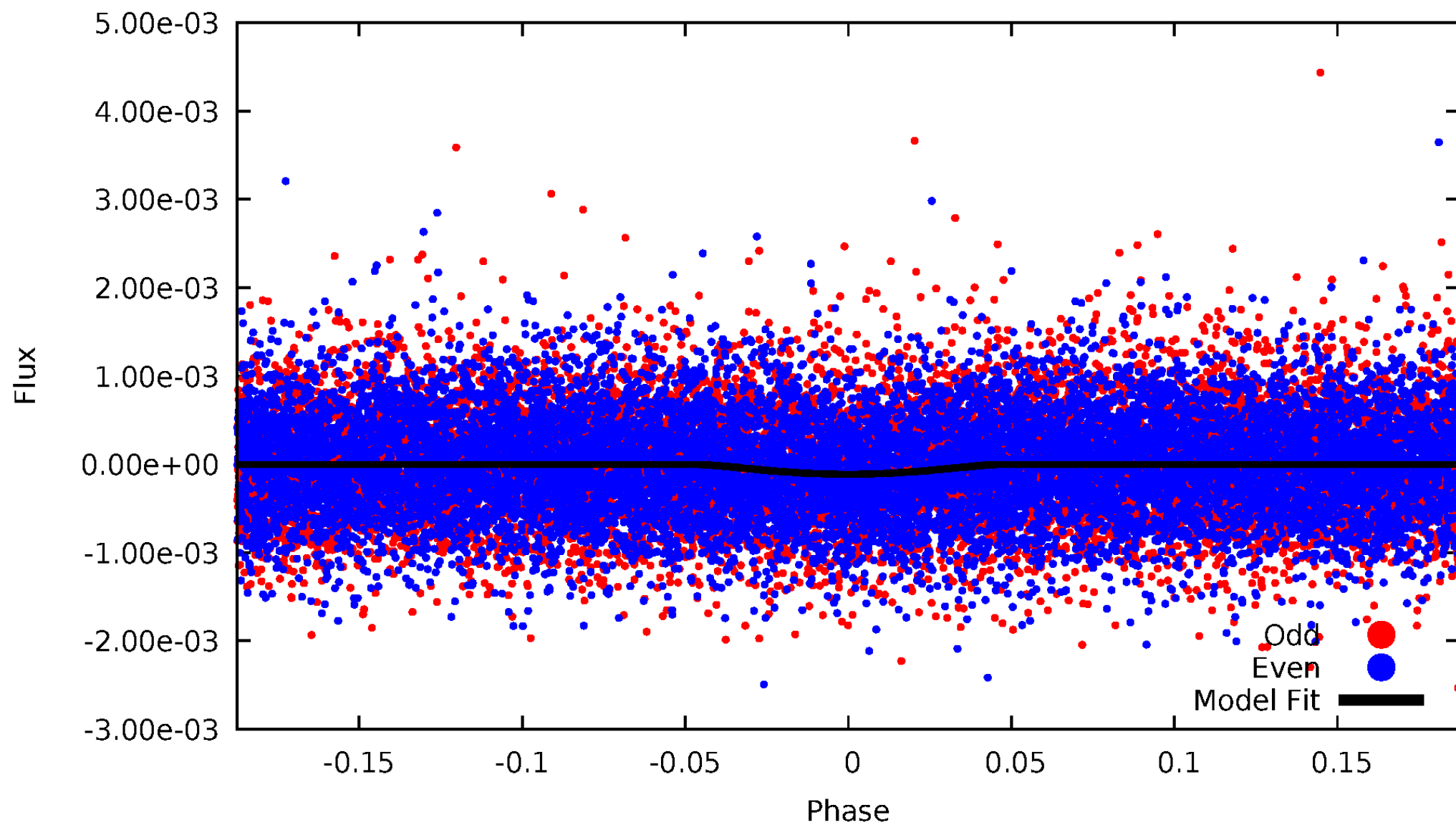


TCE 006285396-01



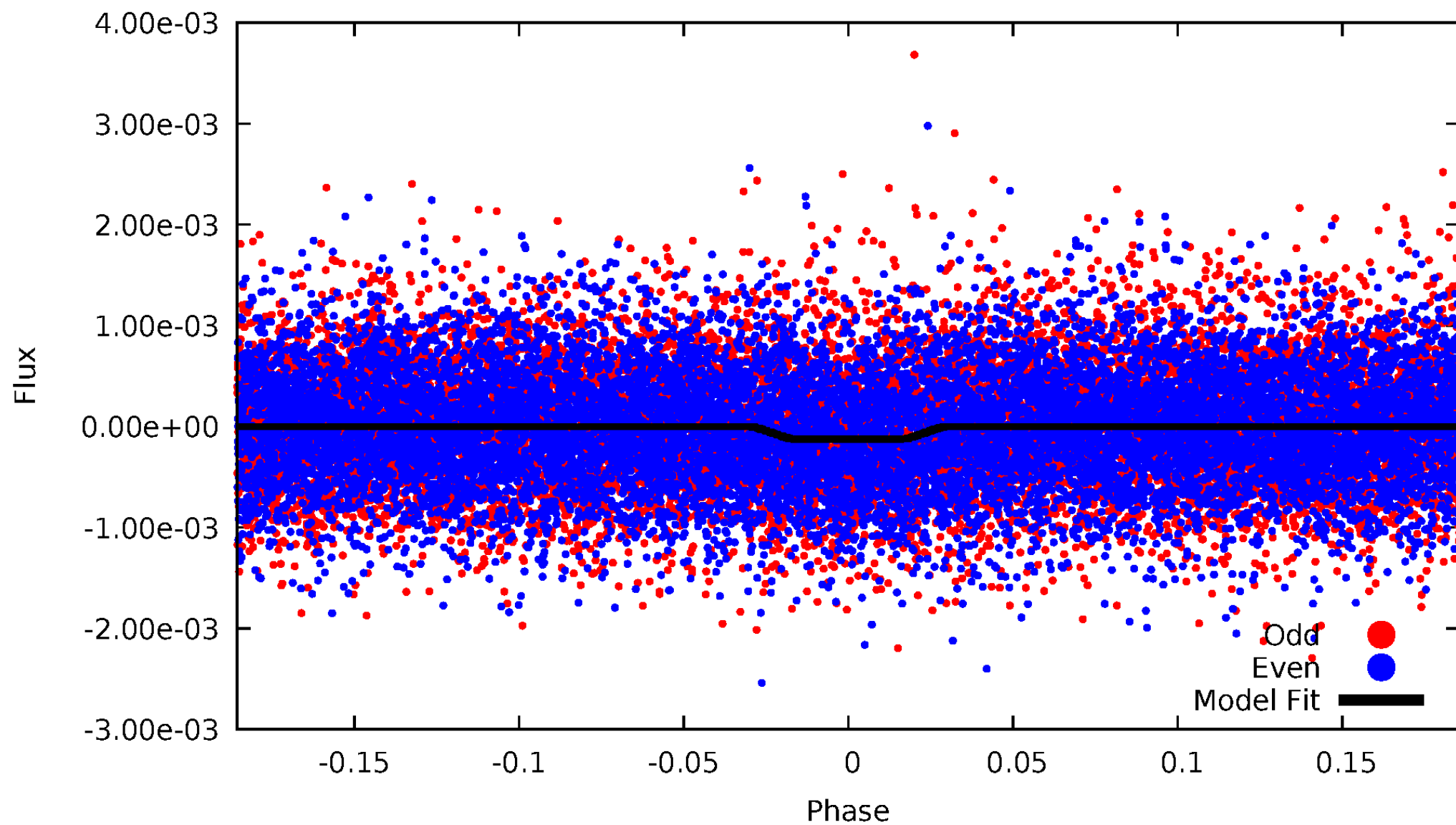
DV Odd/Even

TCE 006285396-01



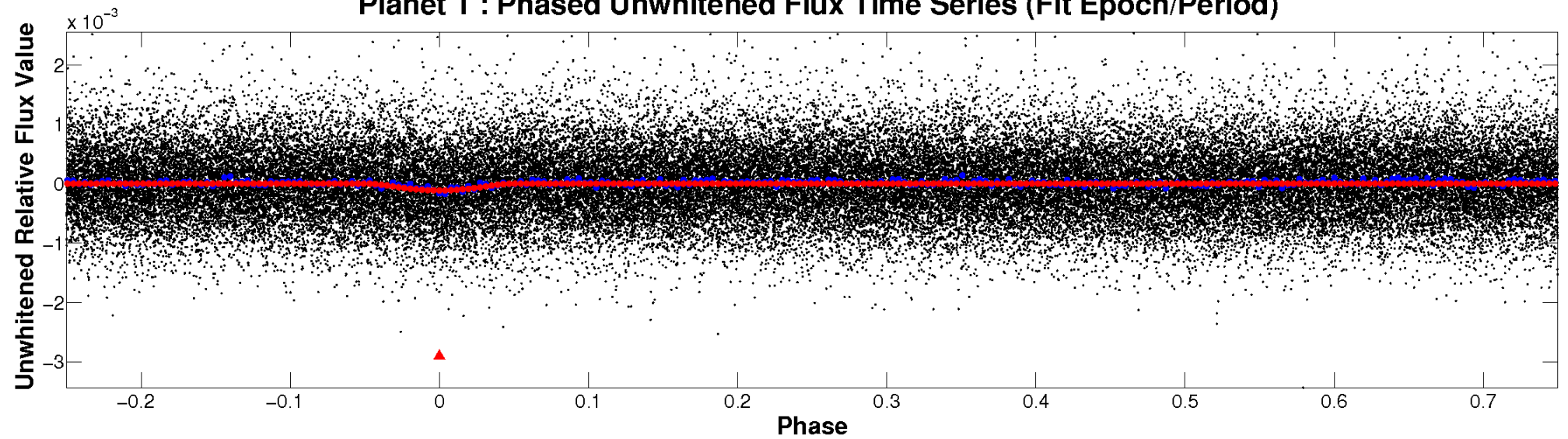
ALT Odd/Even

TCE 006285396-01

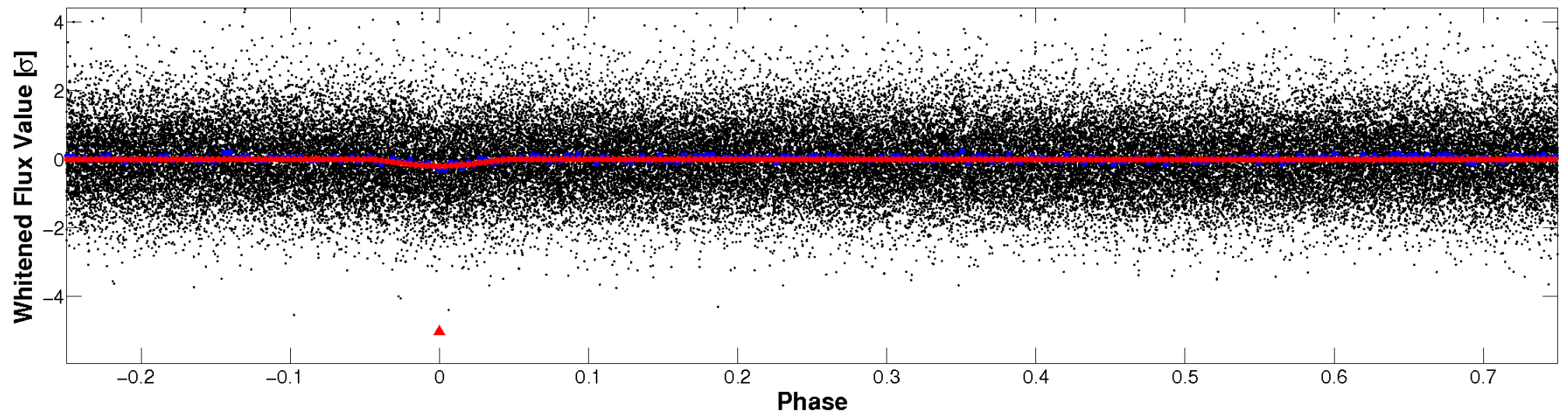


Non-Whitened Vs. Whitened Light Curve

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

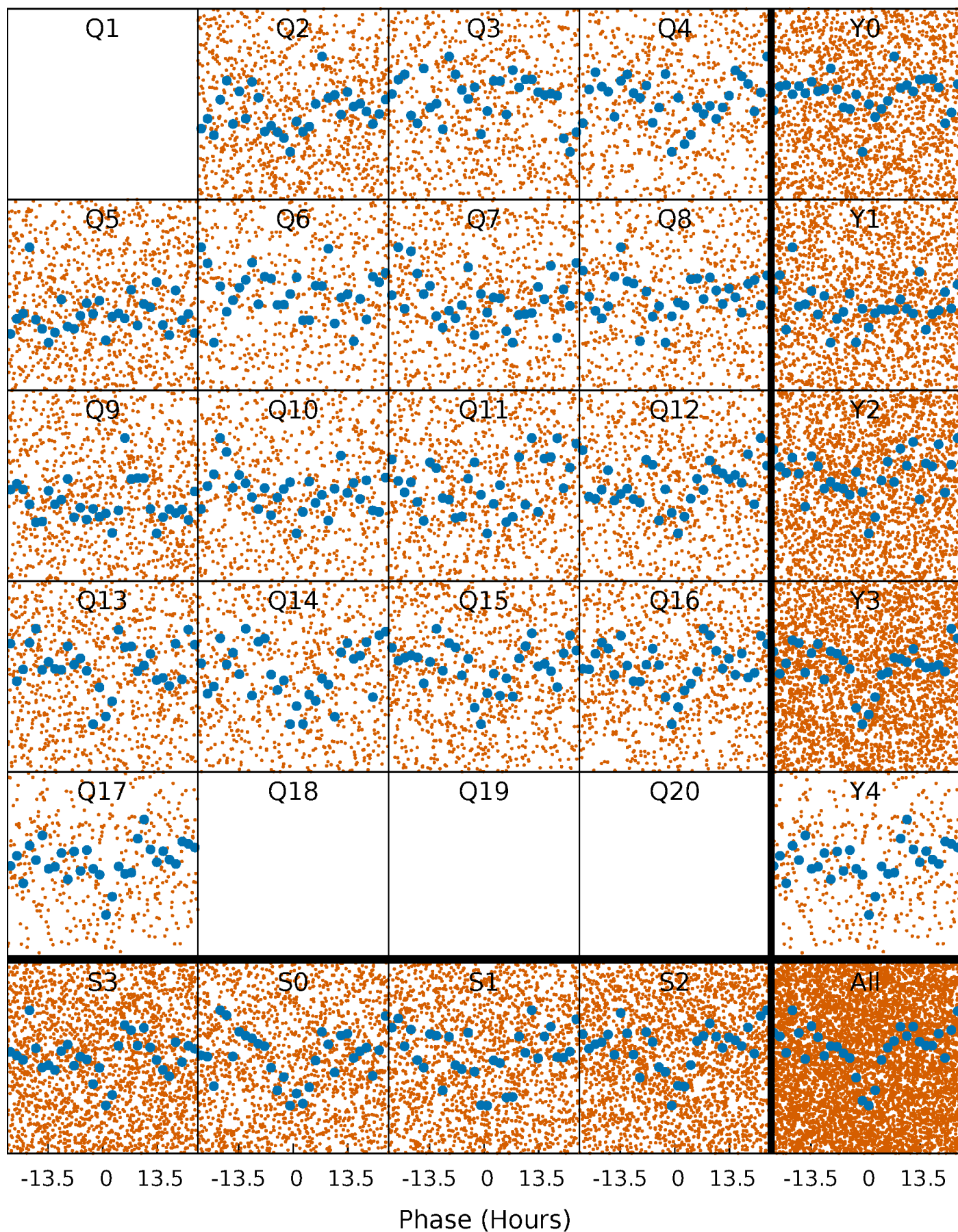


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



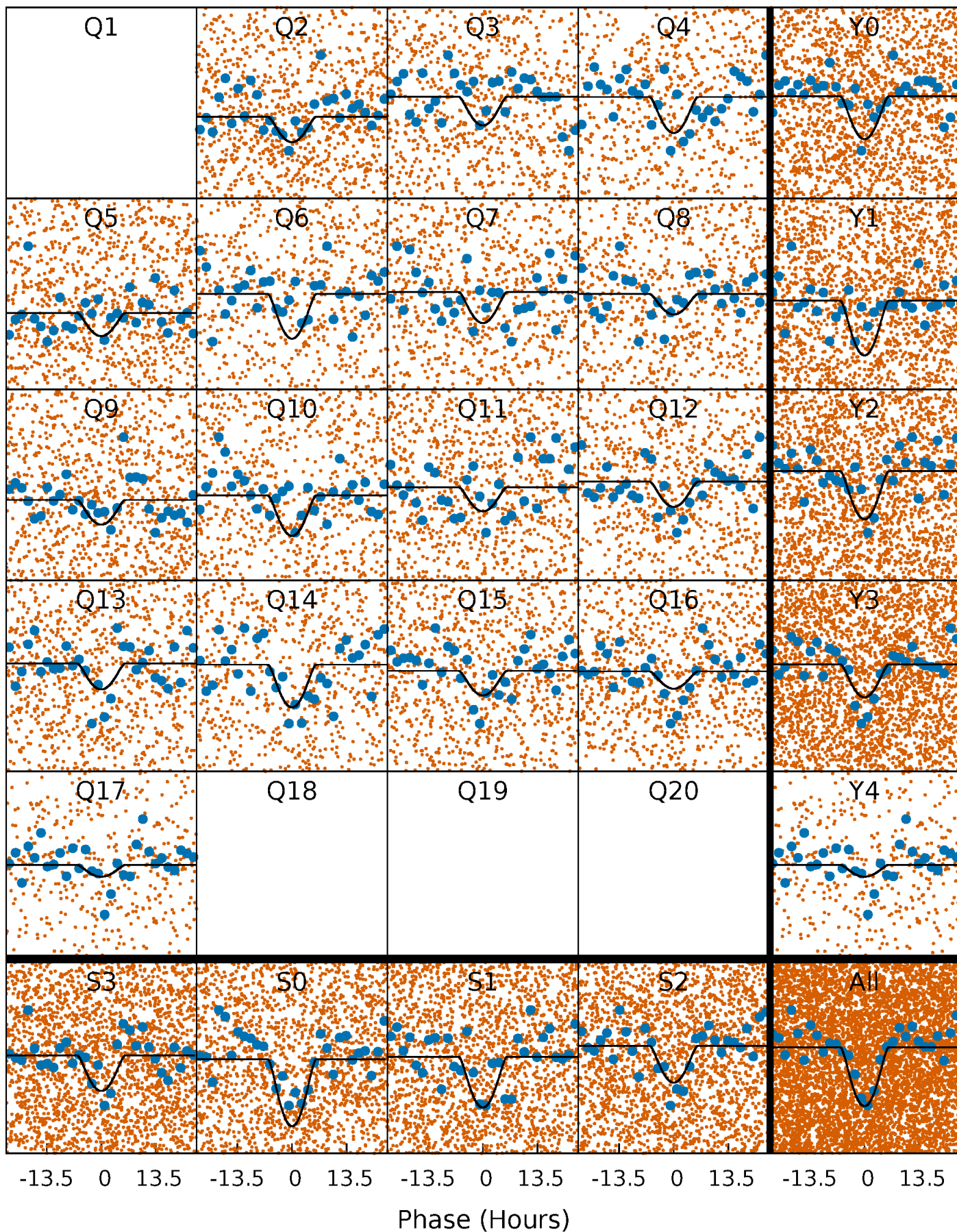
PDC Quarter-Phased Transit Curves

TCE 006285396-01 P= 5.243606 Days $T_0=132.694725$ (BKJD)



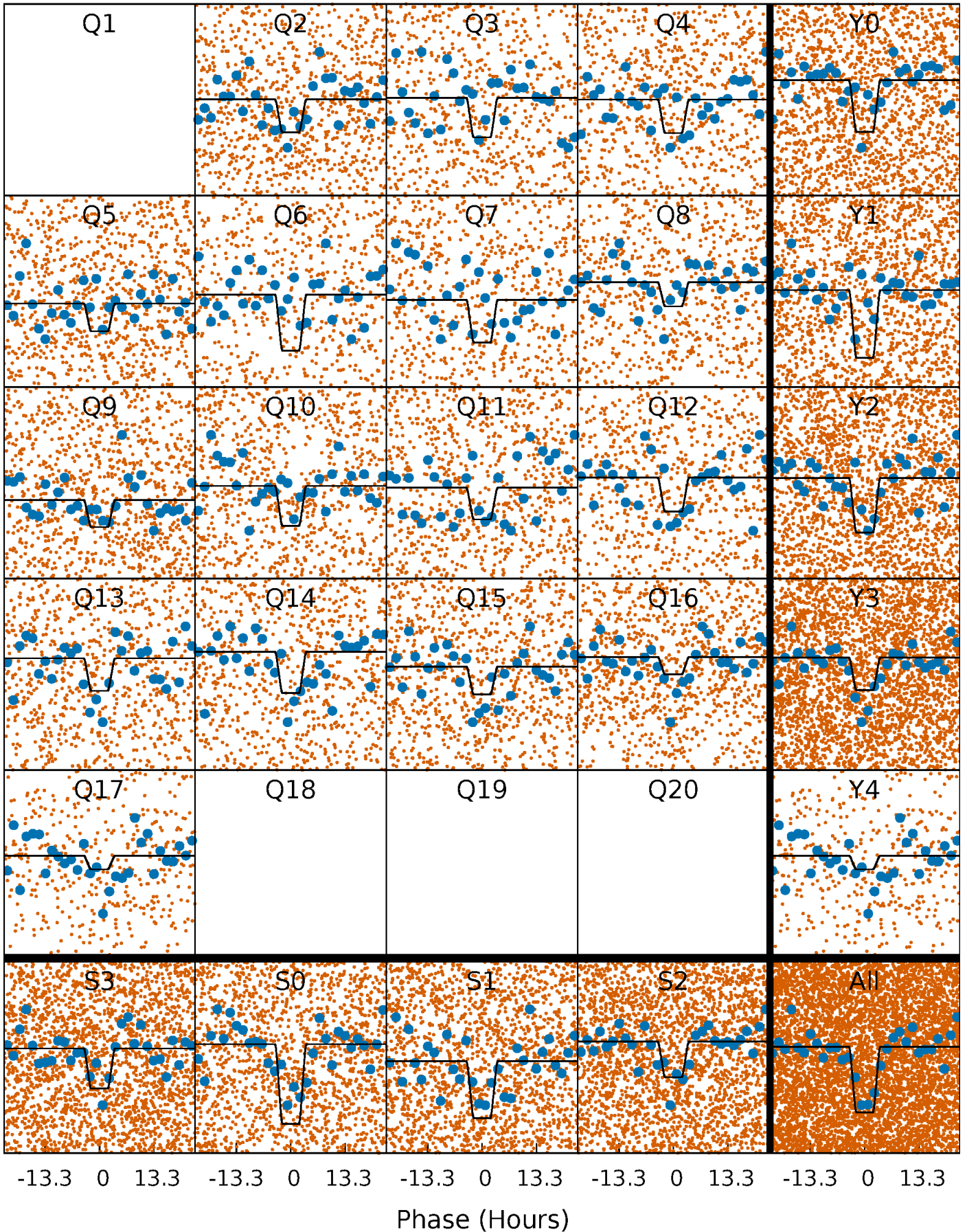
DV Quarter-Phased Transit Curves

TCE 006285396-01 P= 5.243606 Days $T_0=132.694725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

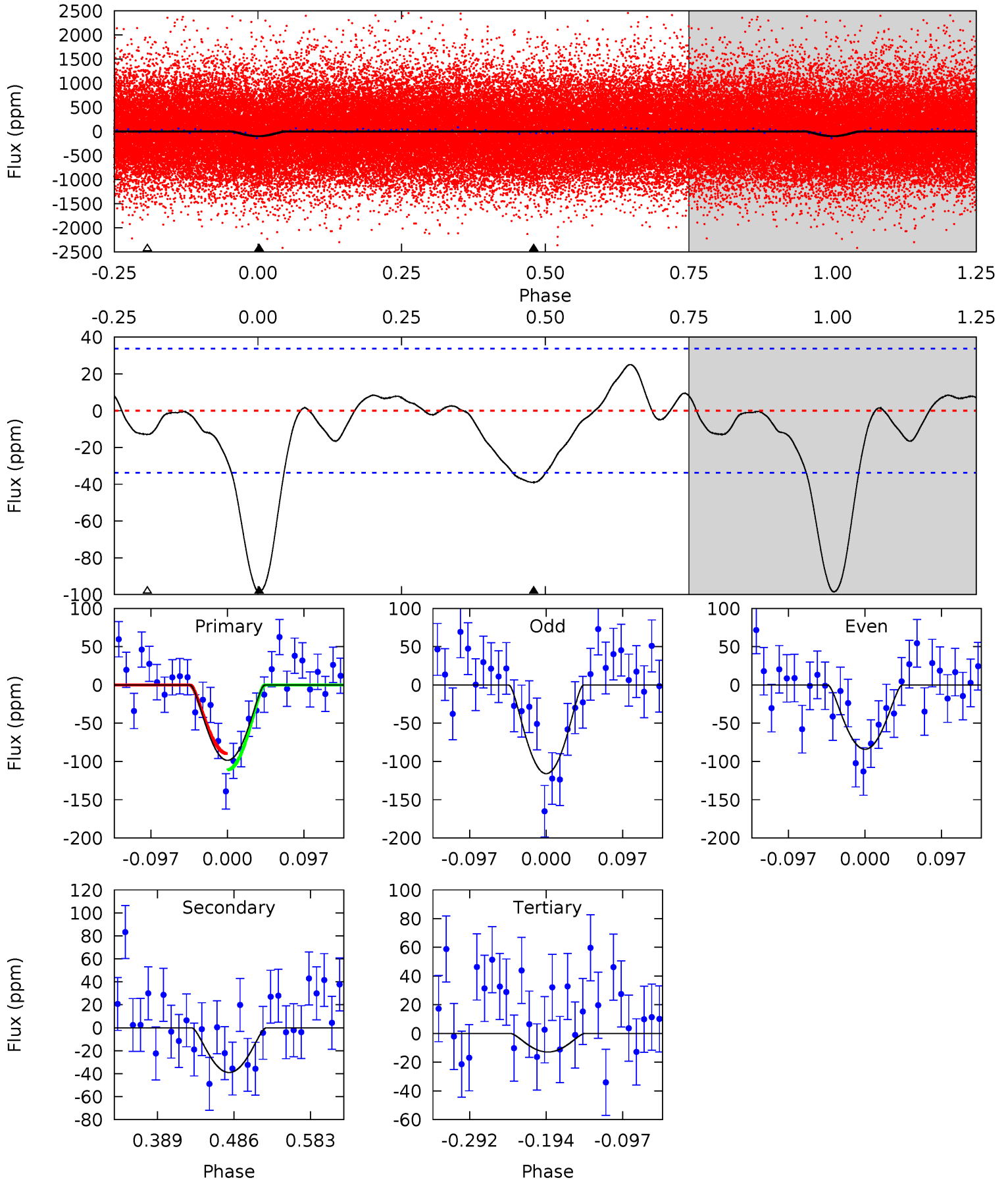
TCE 006285396-01 P= 5.243640 Days $T_0=132.695275$ (BKJD)



DV Model-Shift Uniqueness Test

006285396-01, P = 5.243606 Days, E = 132.694725 Days

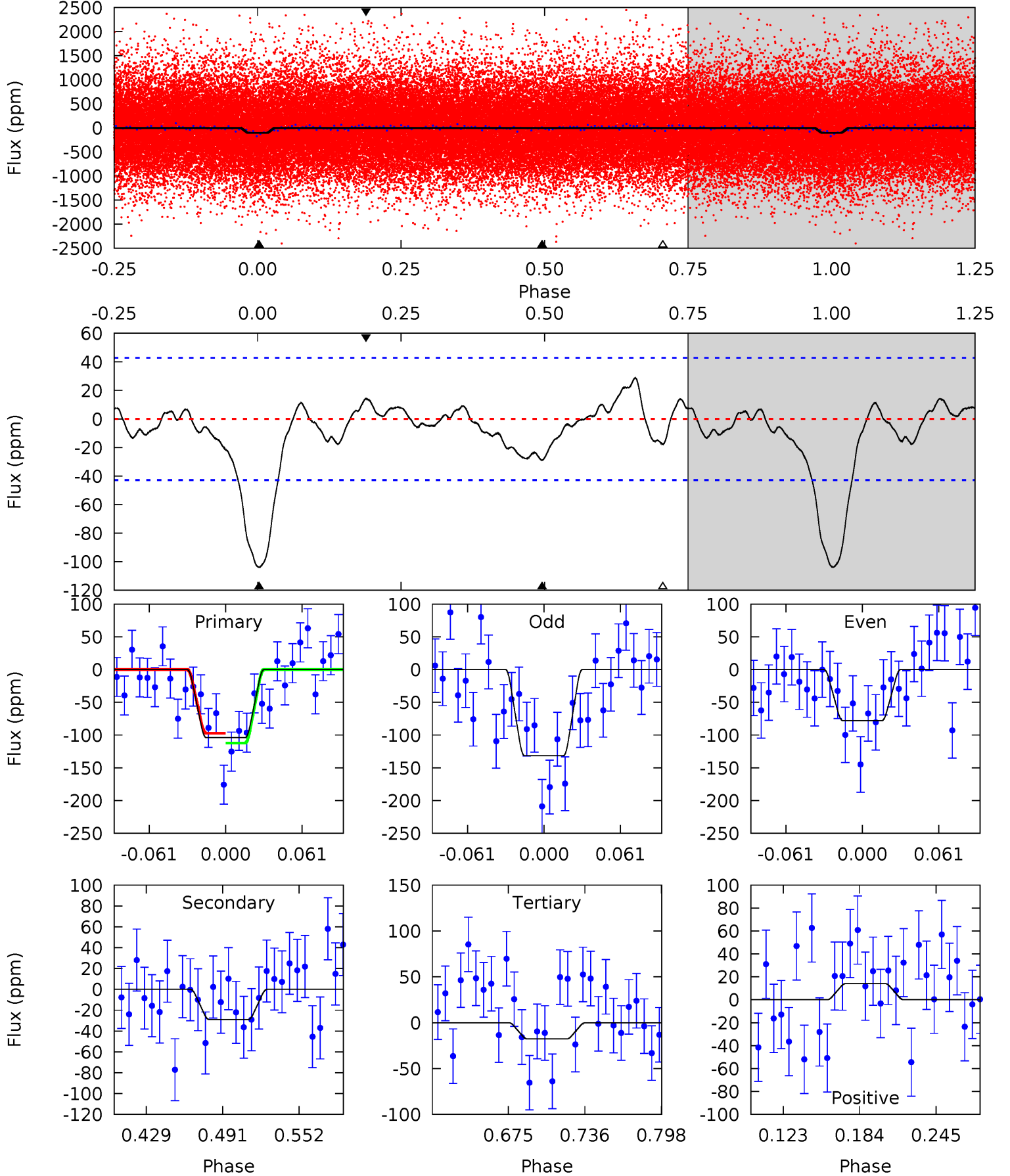
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.28	1.75	0	4.57	1.66	1.22	11.6	13.3	3.53	5.28	2.16	1.01	0.20	1.43



Alt Model-Shift Uniqueness Test

006285396-01, P = 5.243640 Days, E = 132.695275 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.15	1.93	1.54	4.67	1.87	1.08	9.38	9.78	1.22	1.62	2.91	1.04	0.22	0.80



Stellar Parameters For KIC 006285396

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6212^{+196}_{-218}	$4.537^{+0.050}_{-0.200}$	$-0.600^{+0.300}_{-0.300}$	$0.862^{+0.255}_{-0.080}$	$0.932^{+0.105}_{-0.105}$	$2.048^{+0.419}_{-1.081}$
	+3%/-4%	+1%/-4%	+50%/-50%	+30%/-9%	+11%/-11%	+20%/-53%
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 006285396-01 / KOI 6684.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-39 ± 7	$4.12^{+4.38}_{-2.86}$	1508^{+107}_{-73}	3022^{+1455}_{-608}	$4.134^{+36.232}_{-3.147}$
Alt.	-29 ± 9	$3.98^{+3.86}_{-2.76}$	1510^{+97}_{-78}	2918^{+1332}_{-601}	$3.383^{+27.943}_{-2.579}$

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

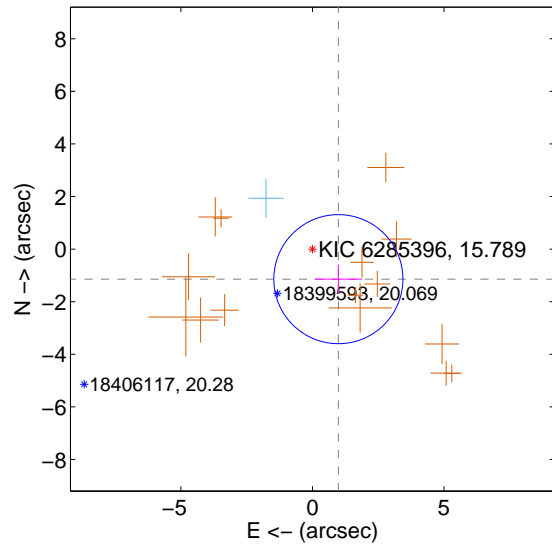
Supplemental centroid analysis for 006285396-01. Kepler magnitude: 15.79. Transit SNR 9.46

There are 1 quarters with good PRF difference image offsets

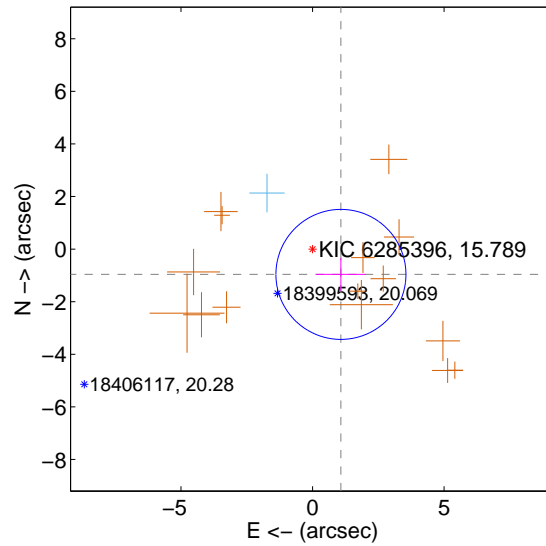
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.509 ± 0.818	1.85	-0.986 ± 0.906	-1.143 ± 0.548
PRF-fit source offset from KIC position	1.446 ± 0.824	1.76	-1.080 ± 0.949	-0.962 ± 0.631
photometric centroid source offset	2.81 ± 1.62	1.74	1.33 ± 1.70	-2.48 ± 1.60

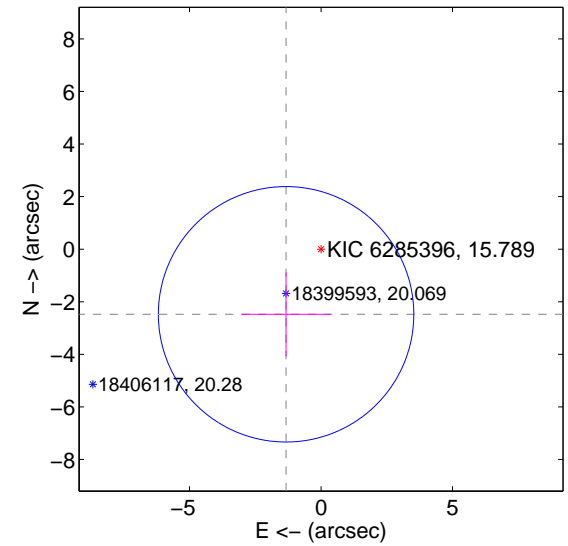
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

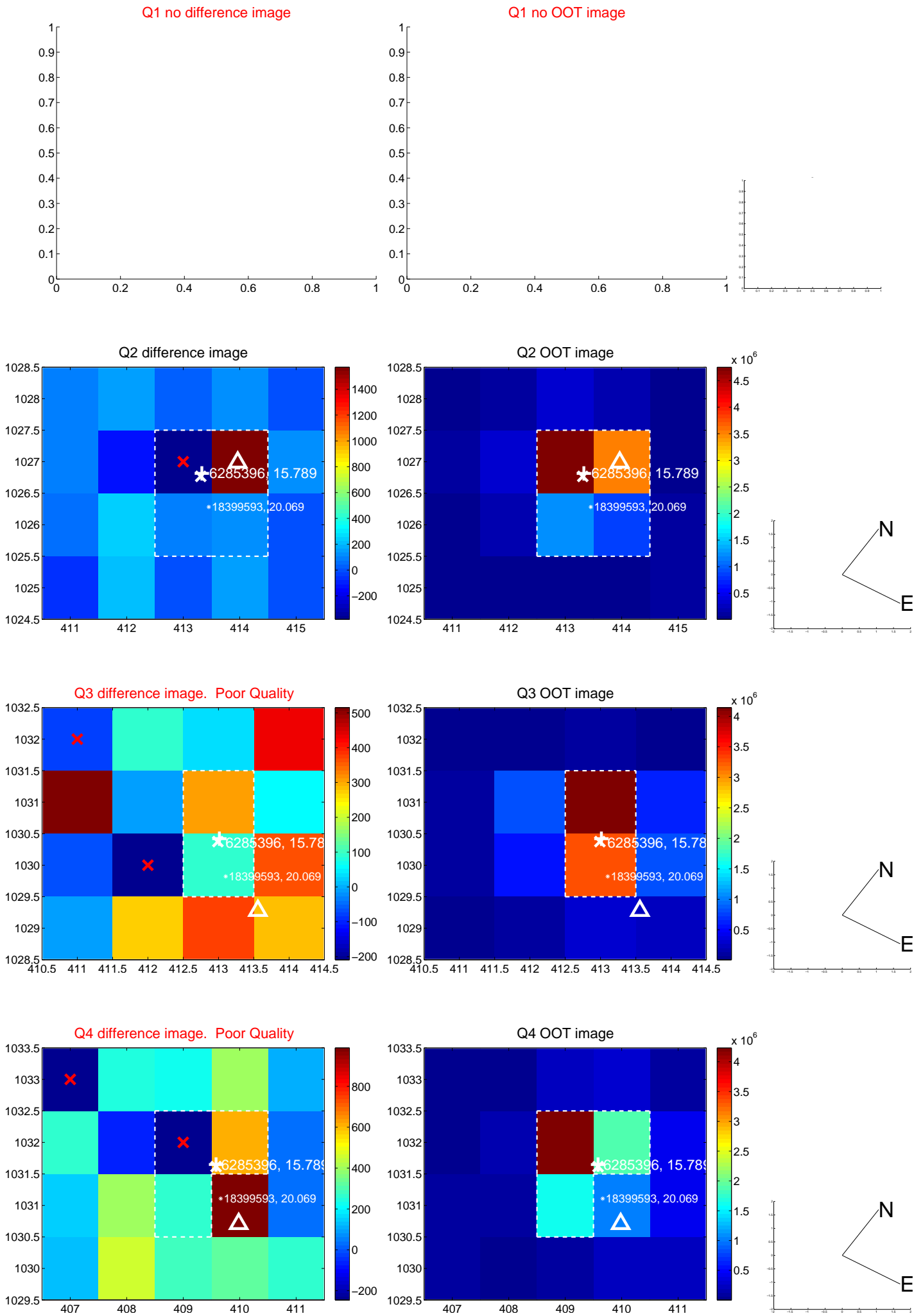


offset from photometric centroids

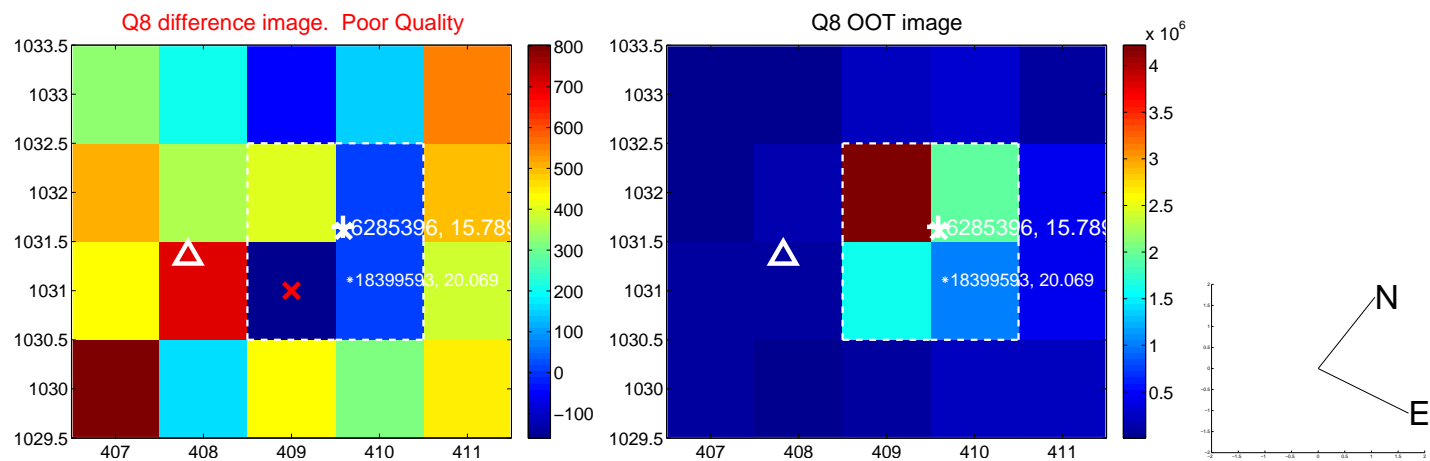
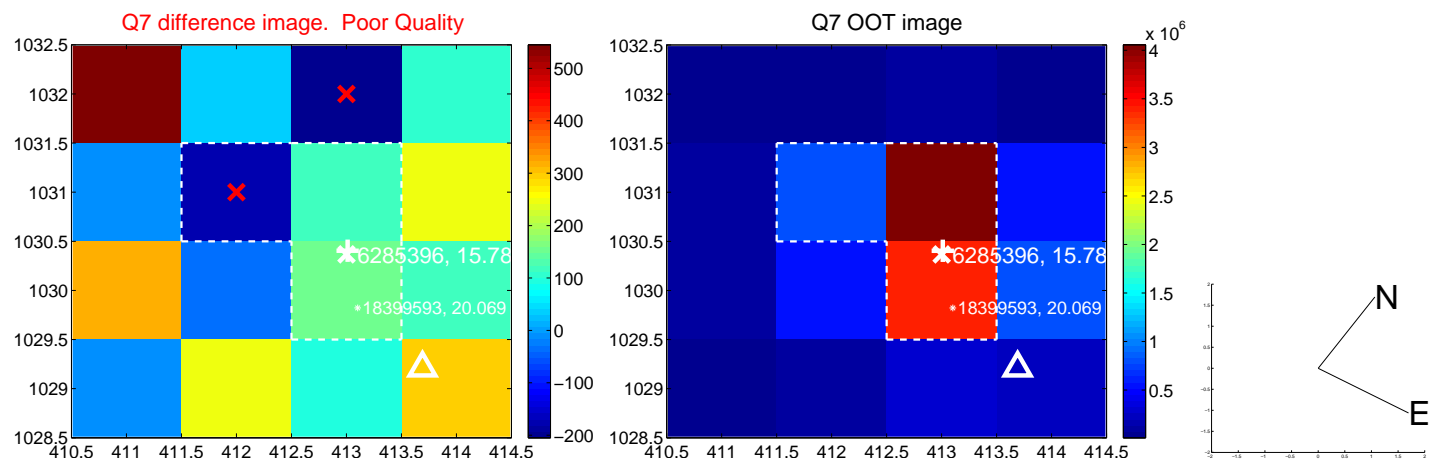
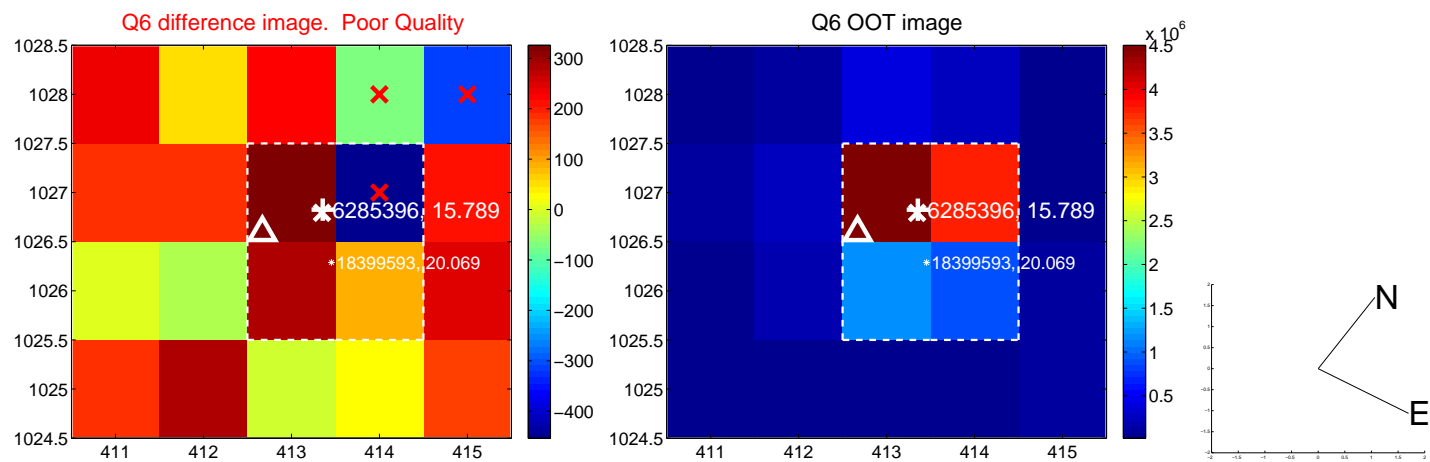
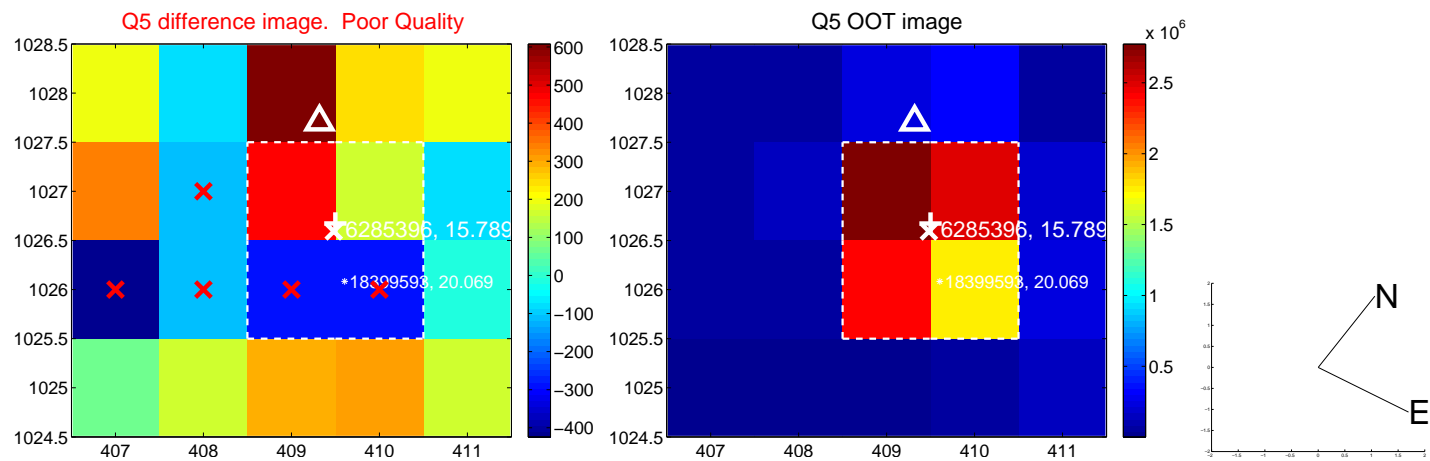


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

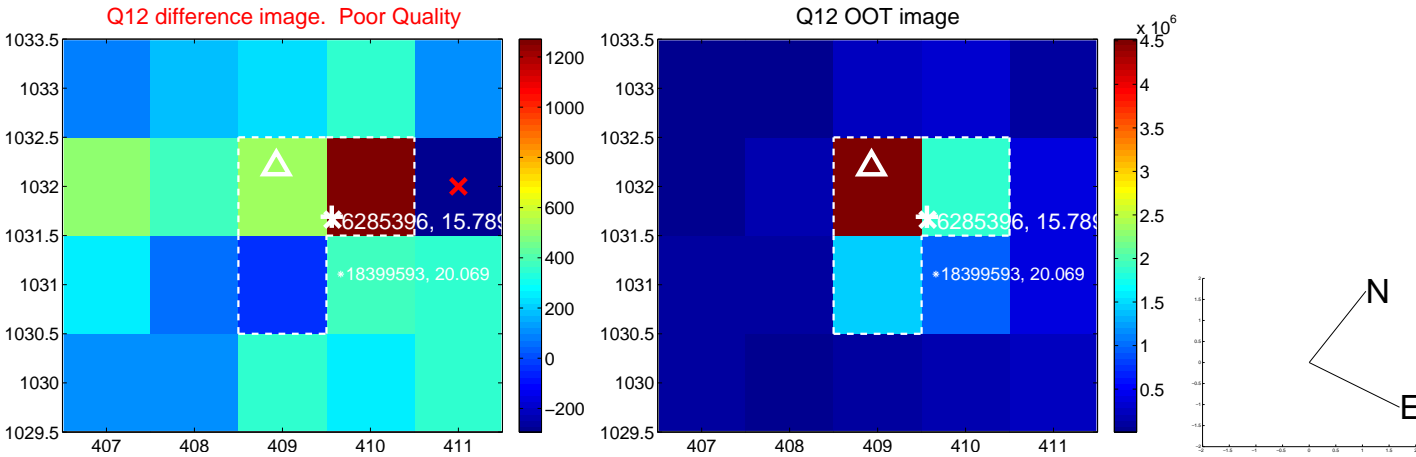
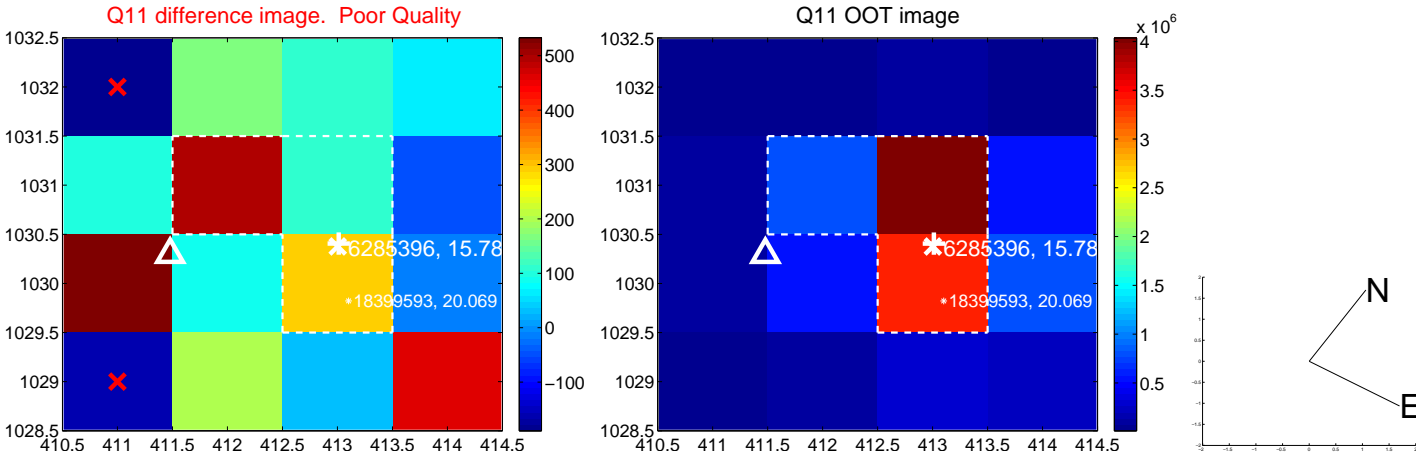
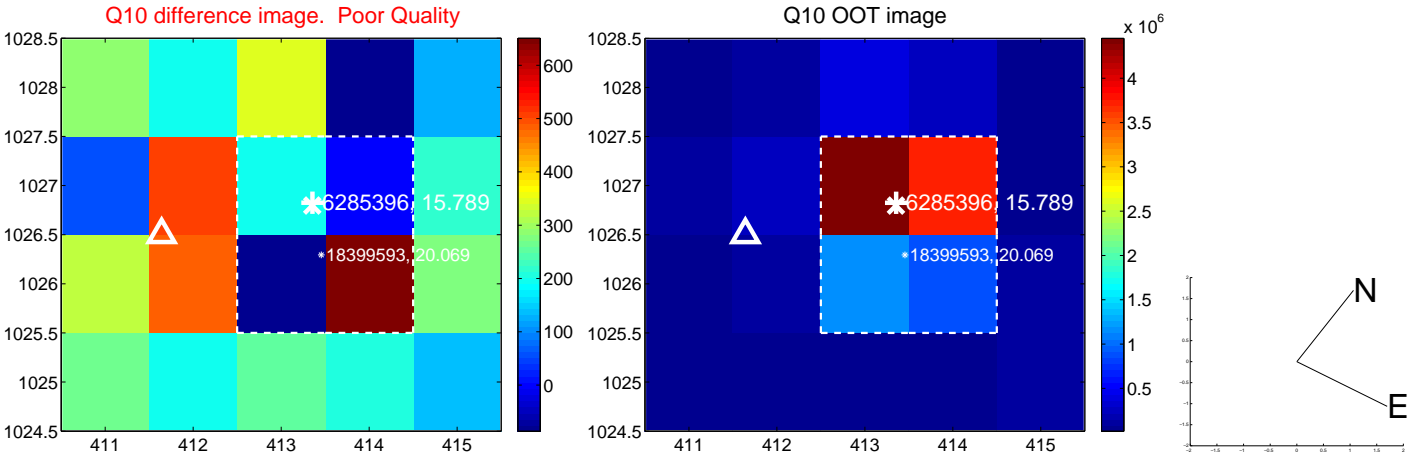
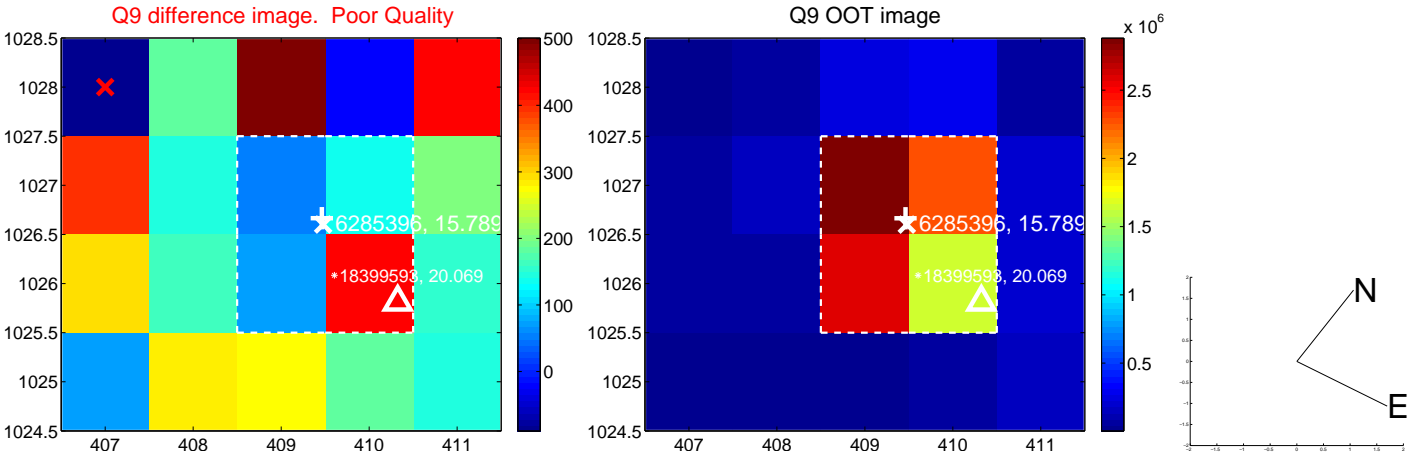
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



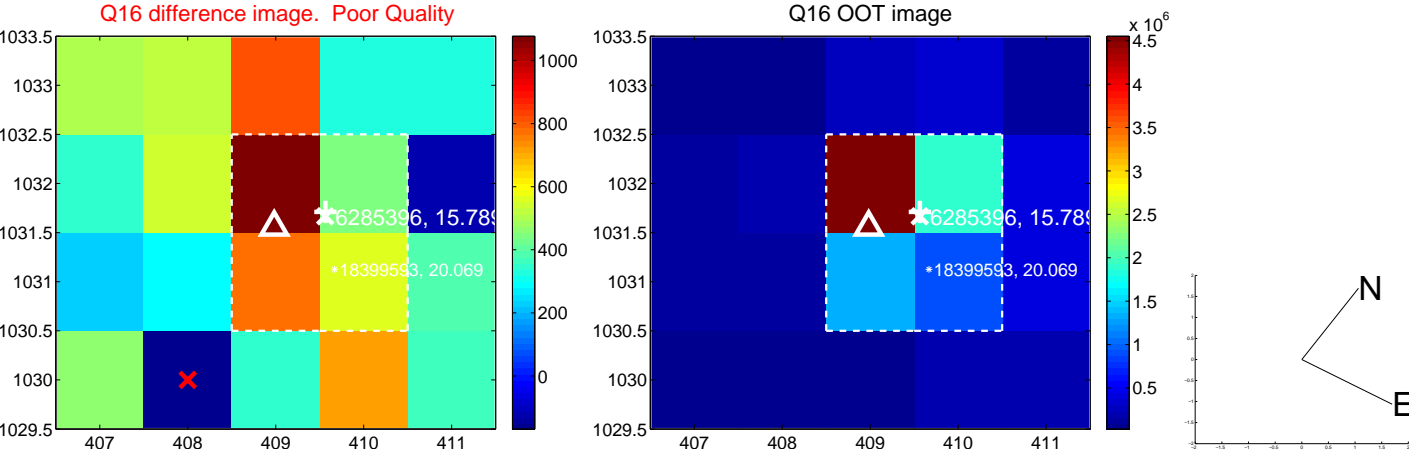
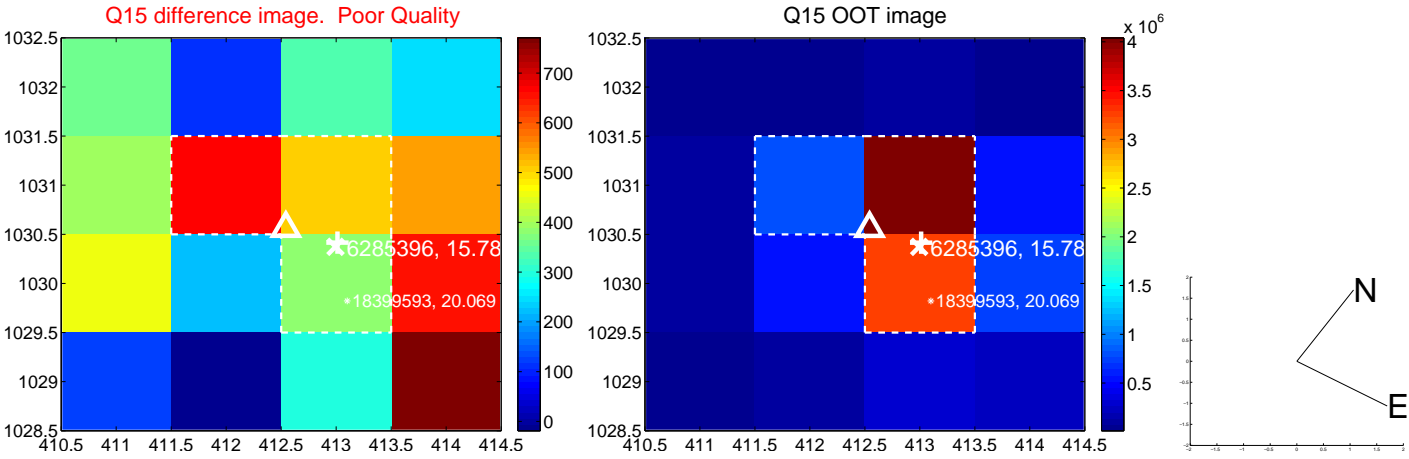
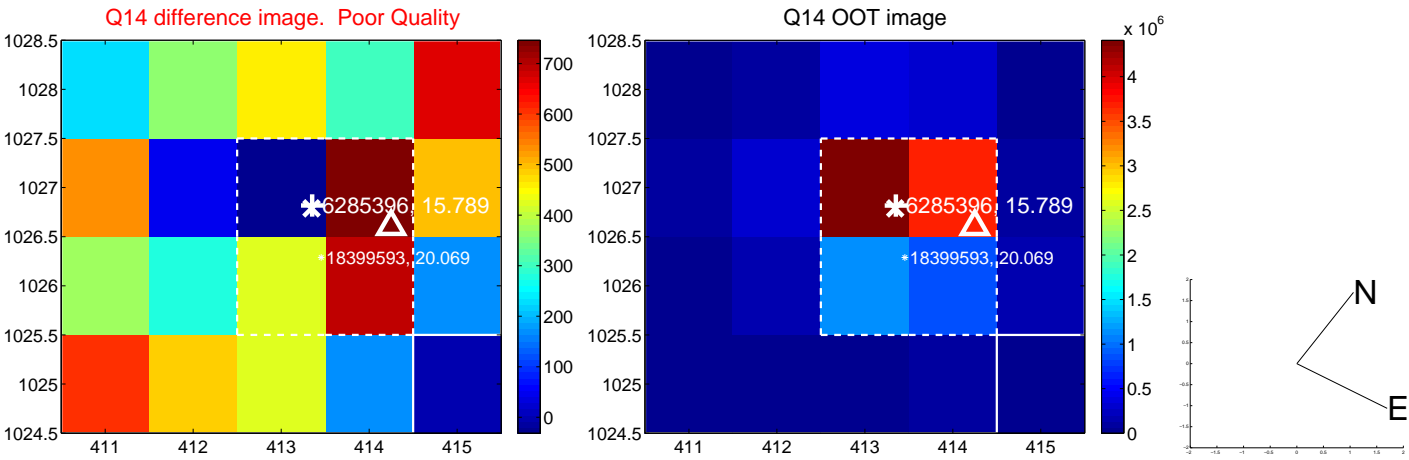
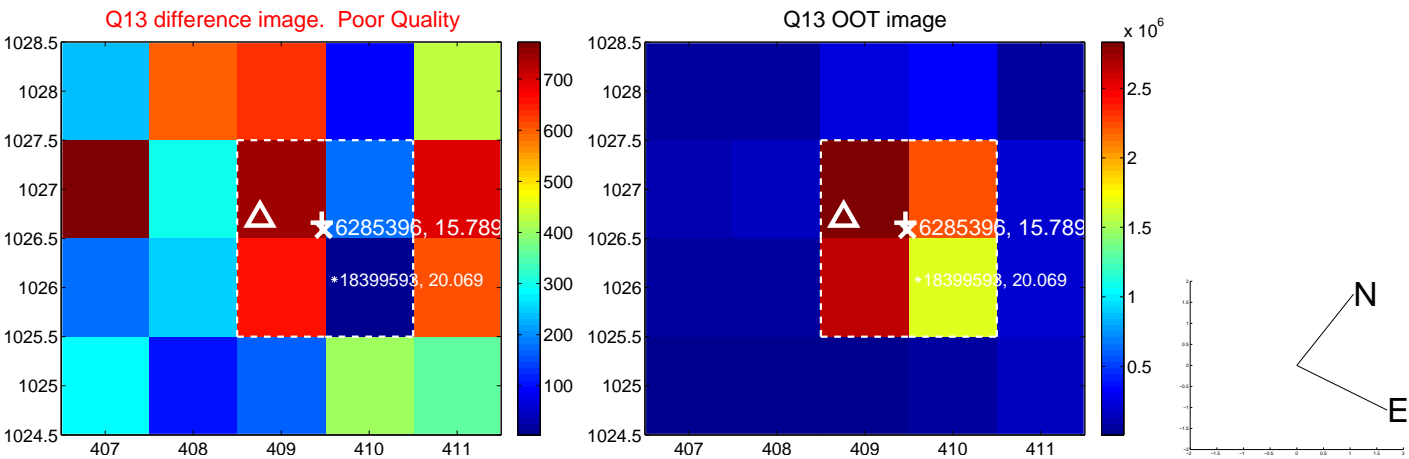
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



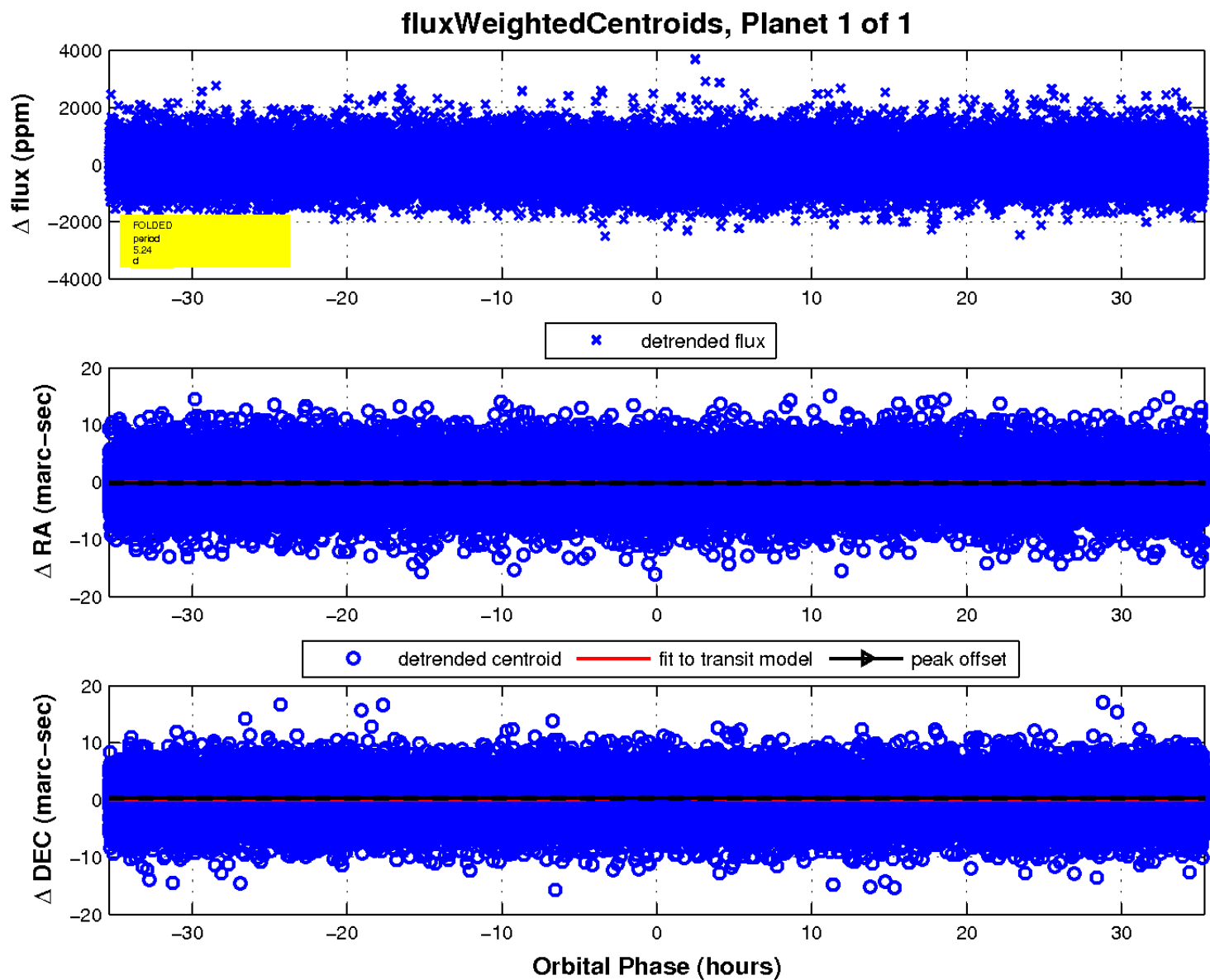
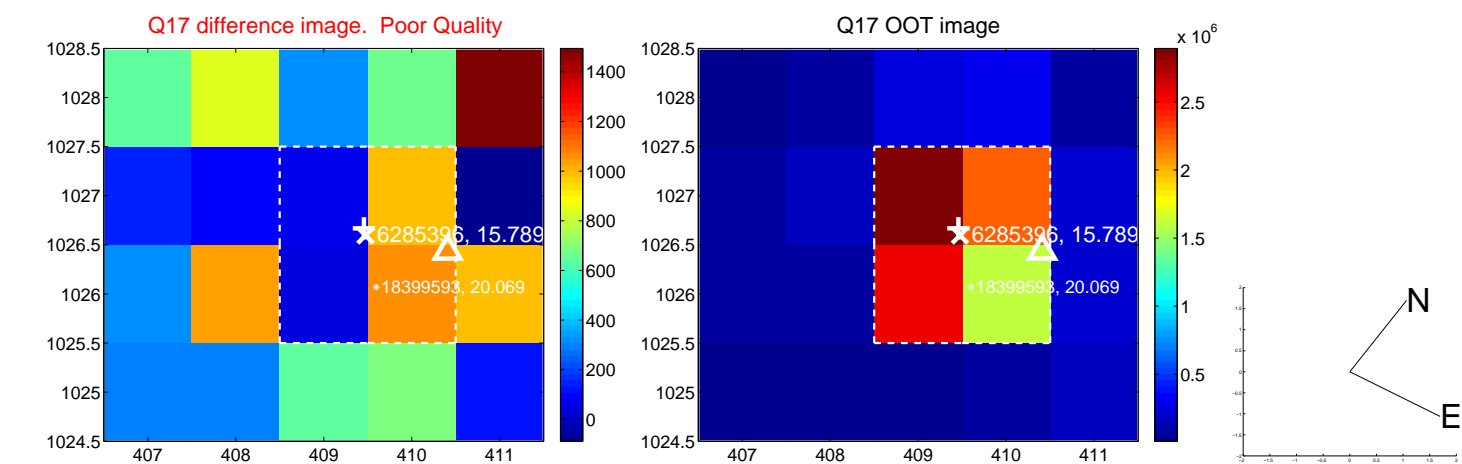
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UKIRT Image

Declination

