

KIC 004945285

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})
004945285-01	OBS	No	12.693193	143.020845	111.3	26.666	12.6	14.2	0.90	6004	1.81	83.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004945285-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

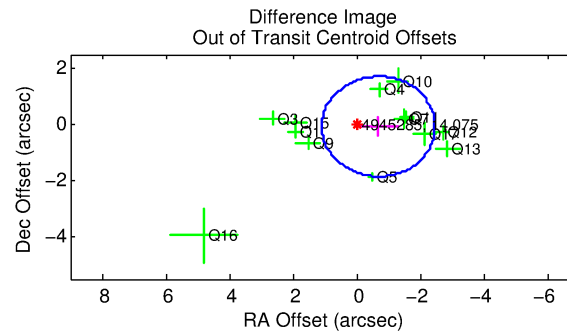
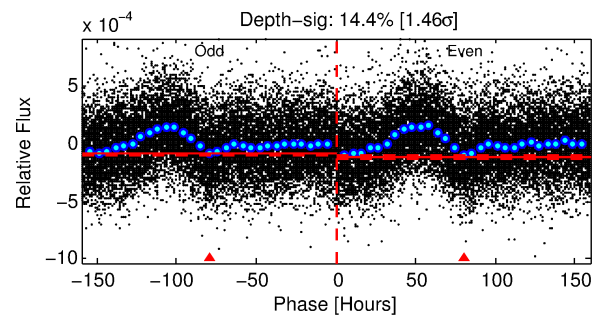
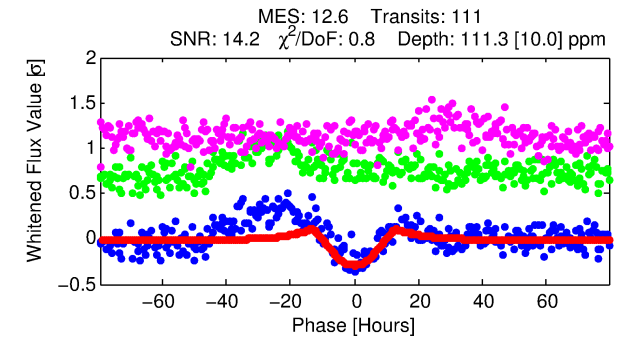
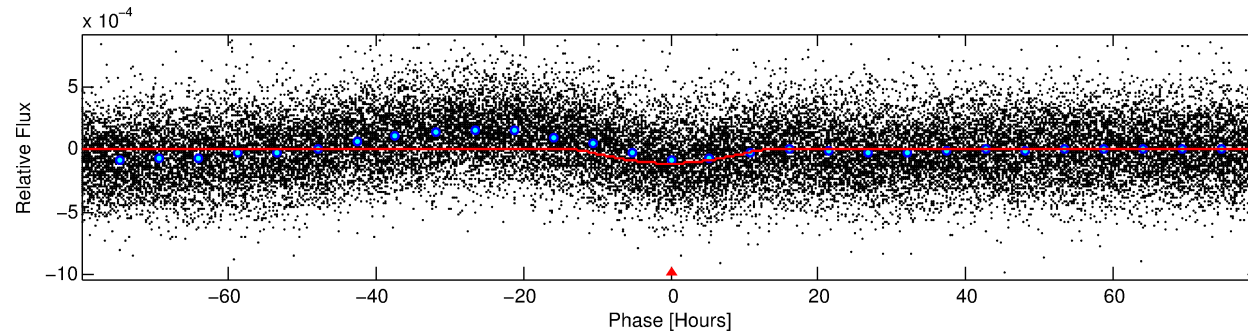
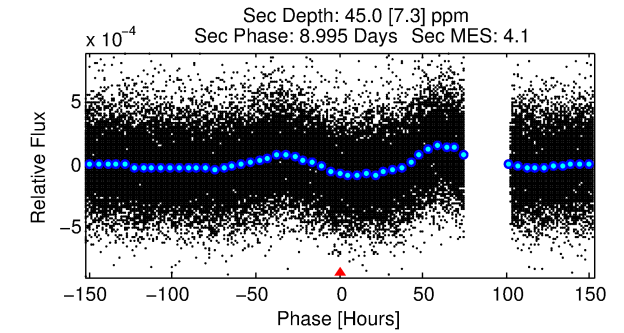
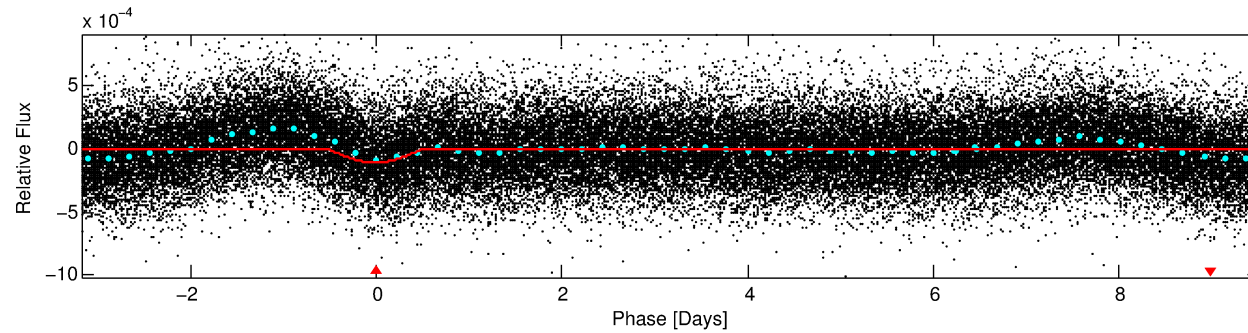
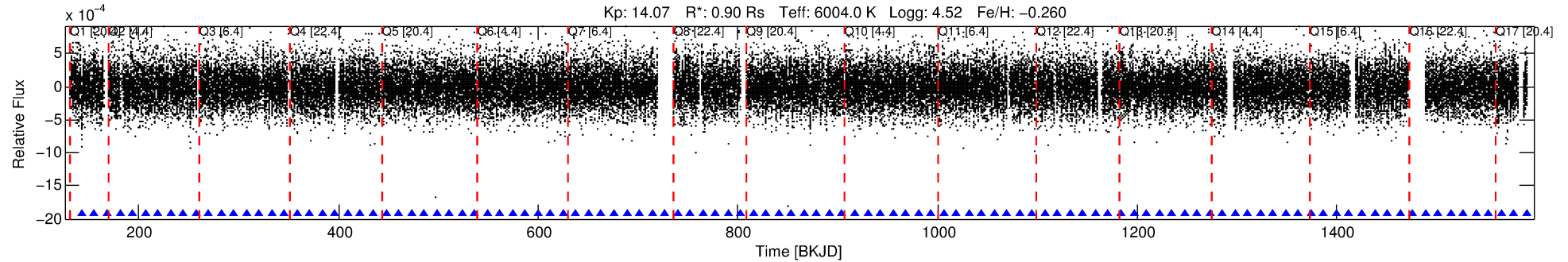
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004945285-01

No Significant Match Found

DV One-Page Summary

KIC: 4945285 Candidate: 1 of 1 Period: 12.693 d



DV Fit Results:

Period = 12.69319 [0.00050] d
Epoch = 143.0208 [0.0333] BKJD
Rp/R* = 0.0185 [0.0206]
a/R* = 1.25 [0.12]
b = 1.00 [0.03]
Seff = 83.96 [33.96]
Teff = 772 [78] K
Rp = 1.81 [2.09] Re
a = 0.1057 [0.0278] AU
Ag = 84.53 [191.54] [0.44σ]
Teffp = 3619 [2023] K [1.41σ]

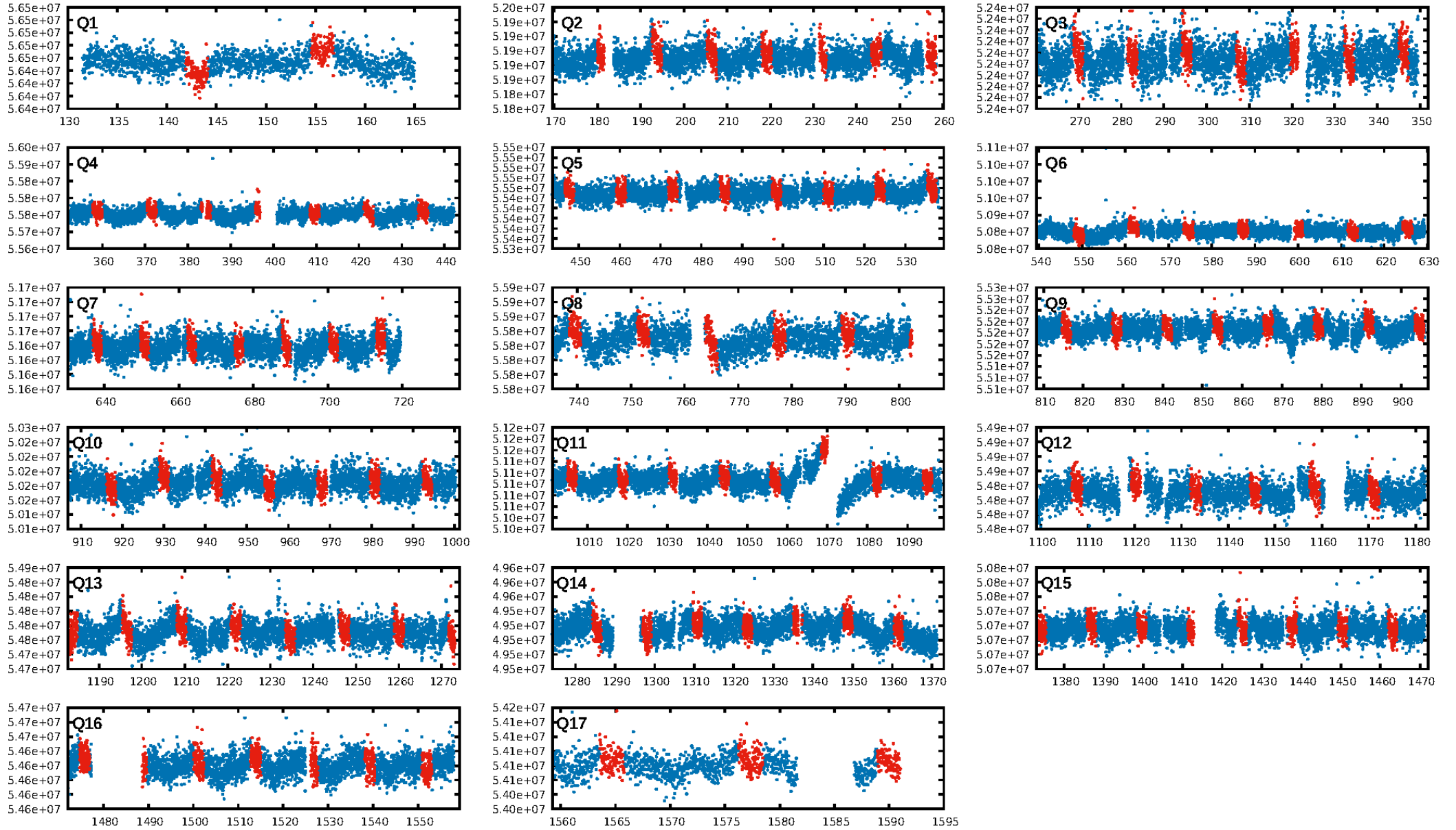
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.06e-37
RollingBand-fgt: 1.00 [106/106]
GhostDiagnostic-chr: 1.838
Centroid-sig: 9.2%
Centroid-so: 0.529 arcsec [0.88σ]
OotOffset-rm: 0.693 arcsec [1.17σ]
OotOffset-st: 1/4/3/5 [13]
KicOffset-rm: 0.644 arcsec [1.19σ]
KicOffset-st: 1/4/3/5 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

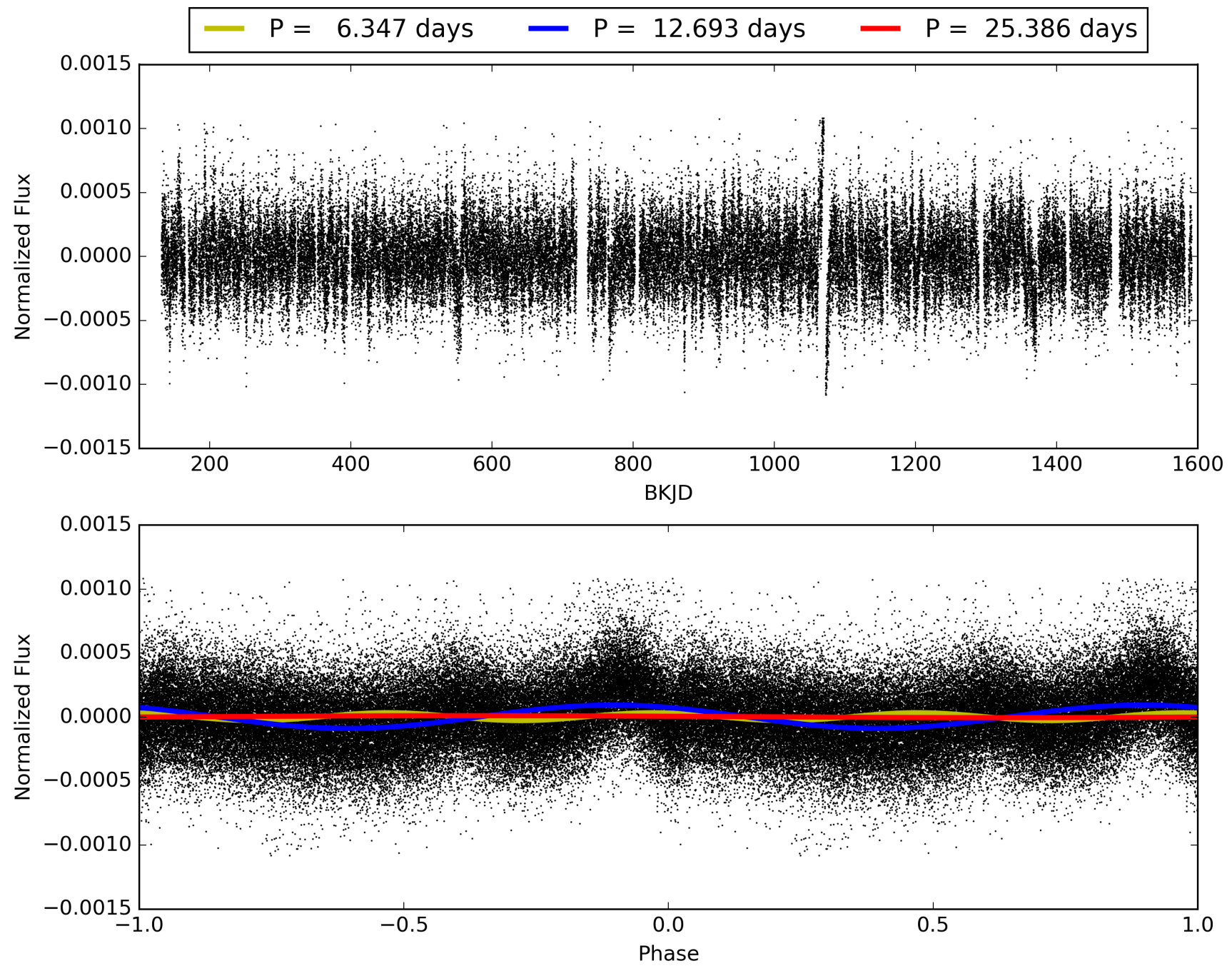
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:17:35 Z

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

TCE 004945285-01, PDC Light Curves

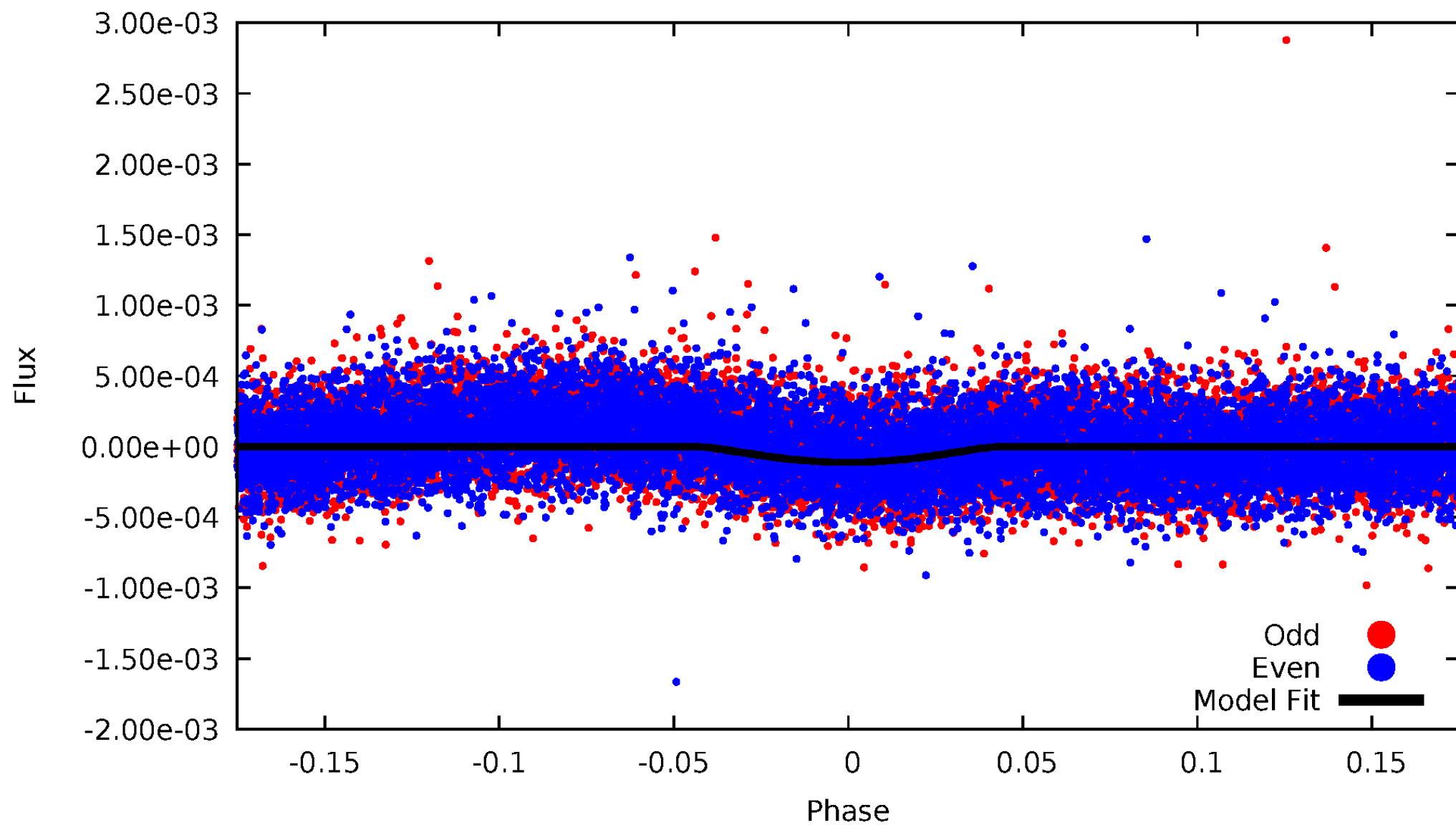


TCE 004945285-01



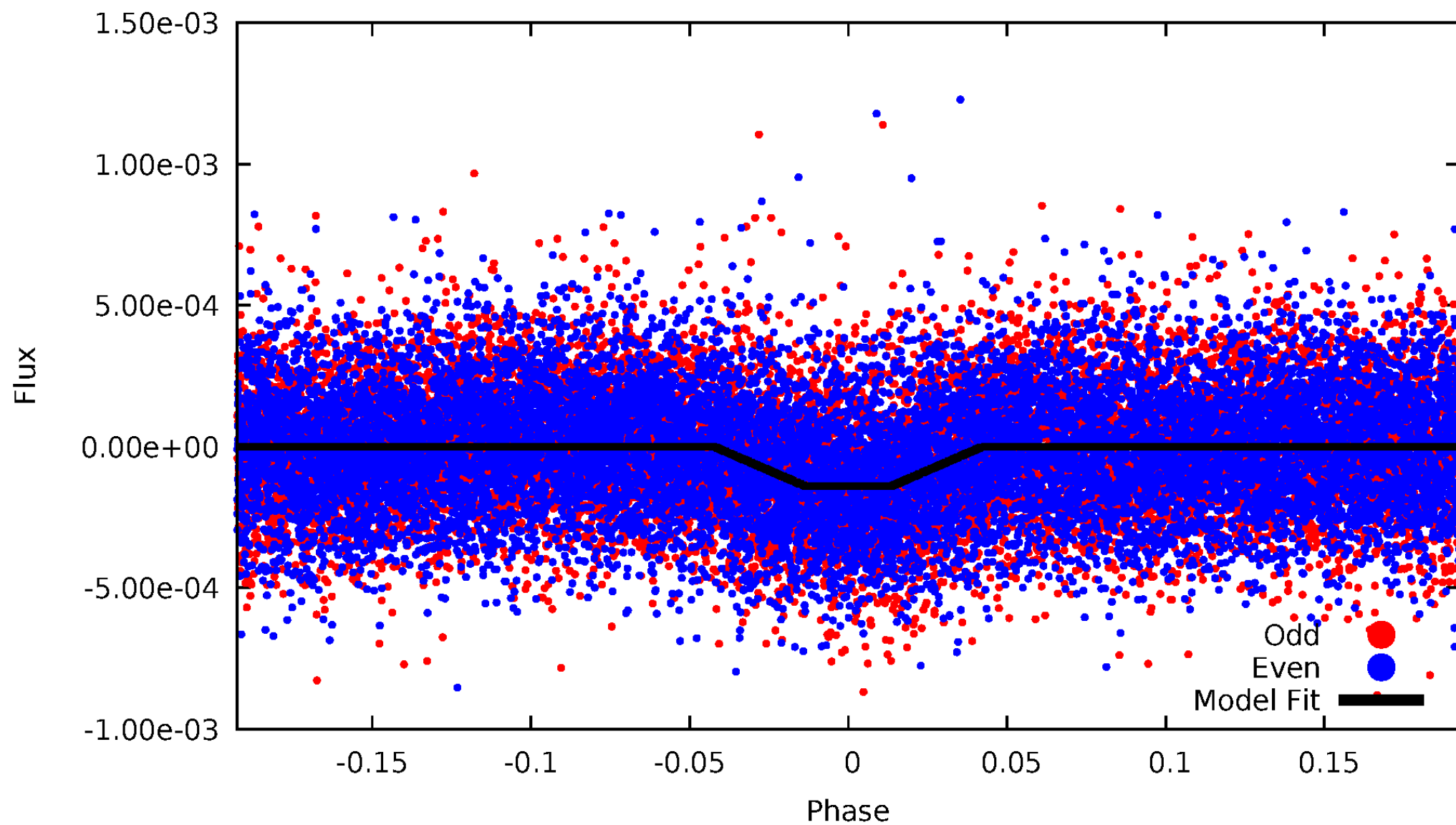
DV Odd/Even

TCE 004945285-01



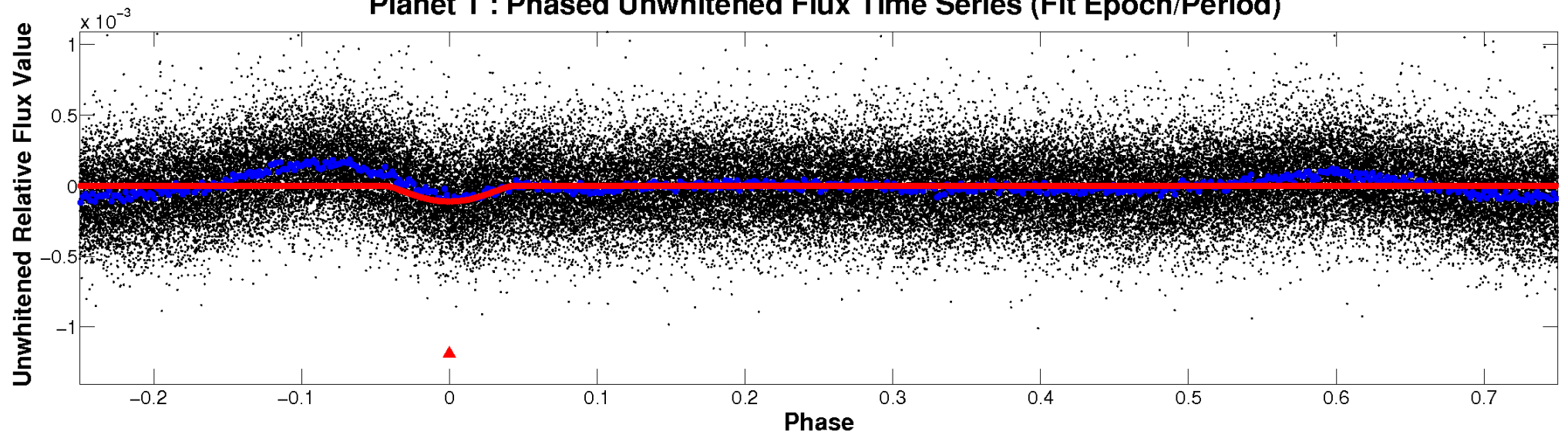
ALT Odd/Even

TCE 004945285-01

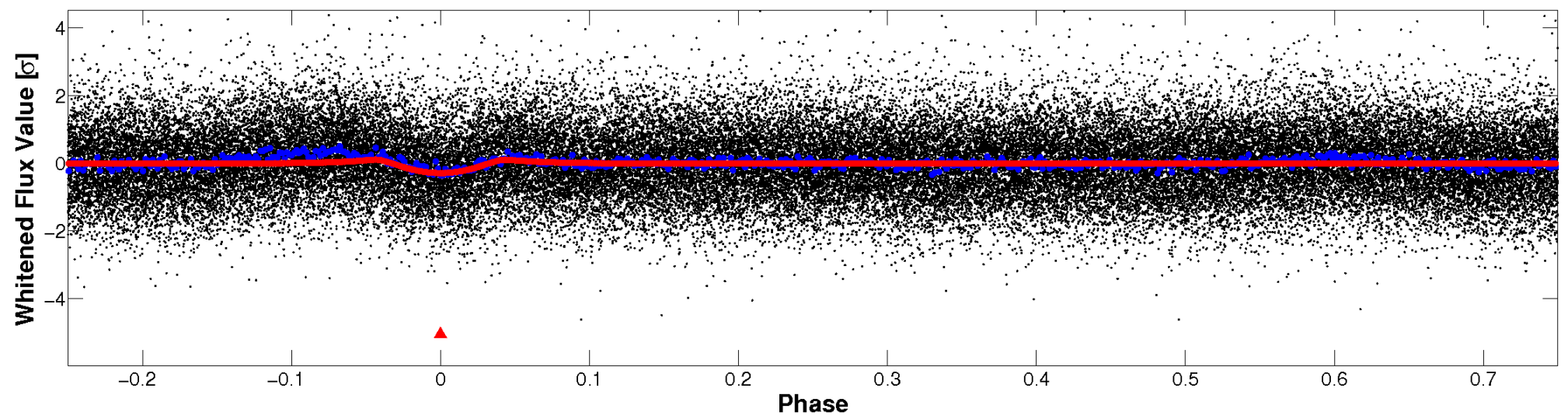


Non-Whitened Vs. Whitened Light Curve

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

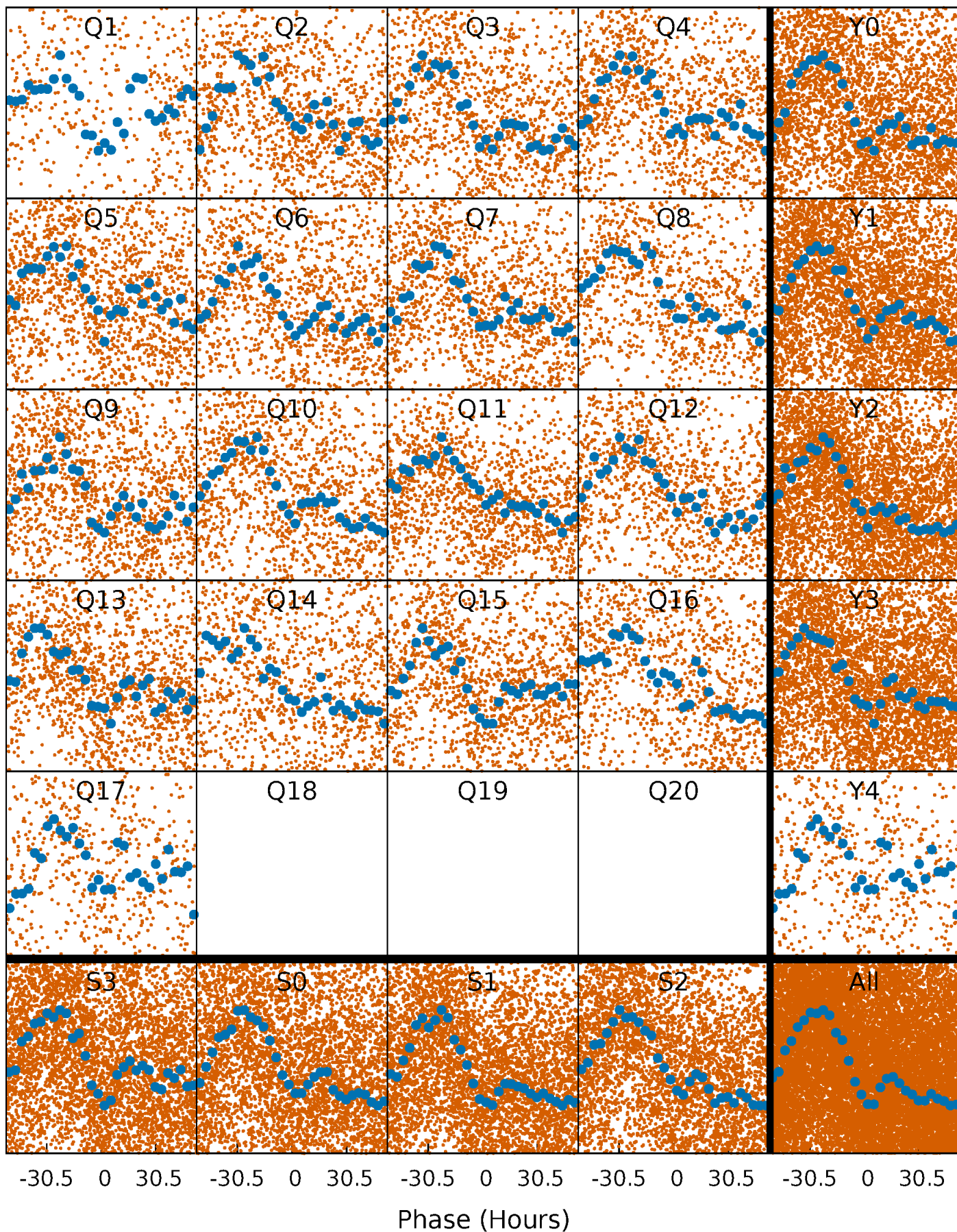


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



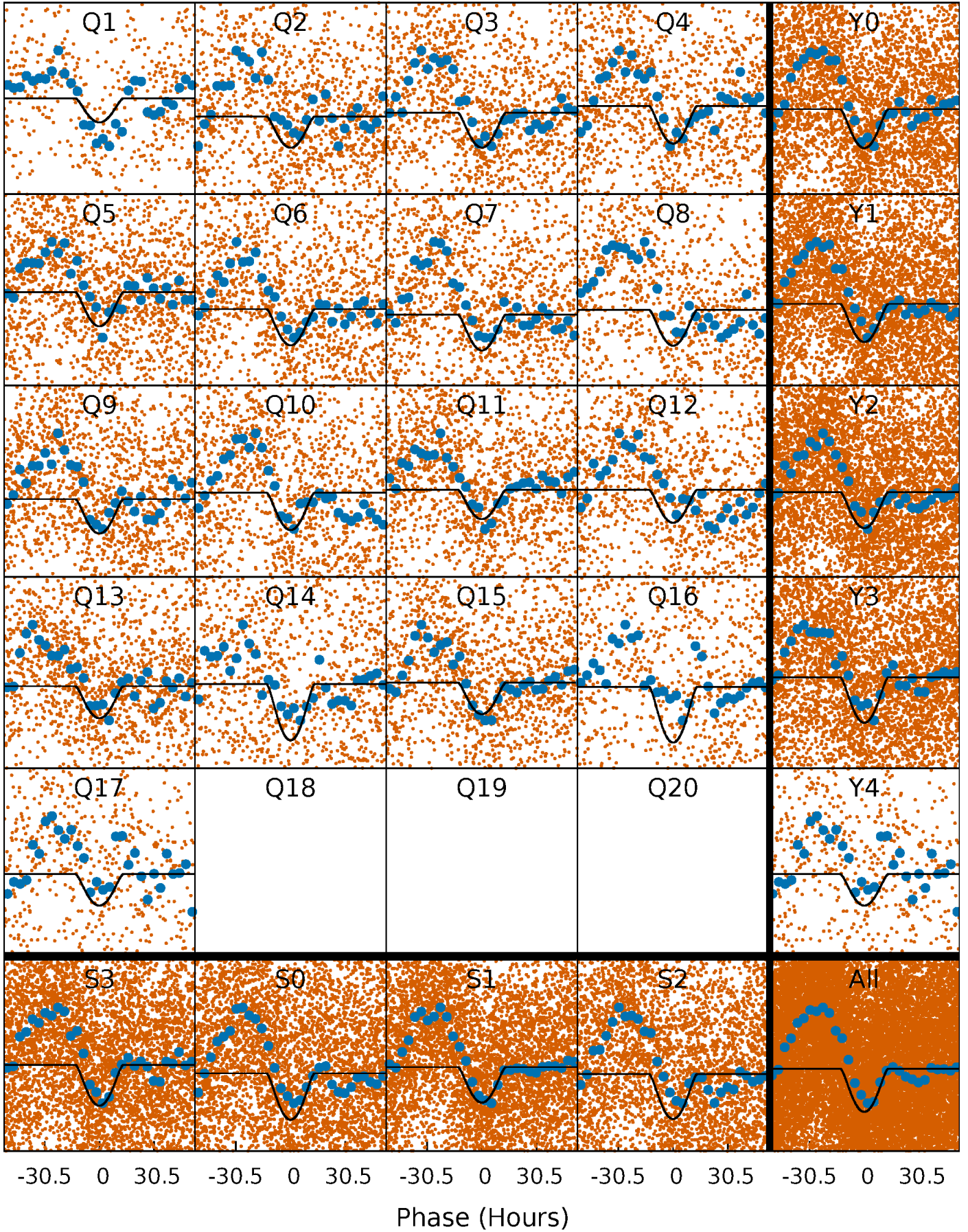
PDC Quarter-Phased Transit Curves

TCE 004945285-01 P= 12.693193 Days $T_0=143.020845$ (BKJD)



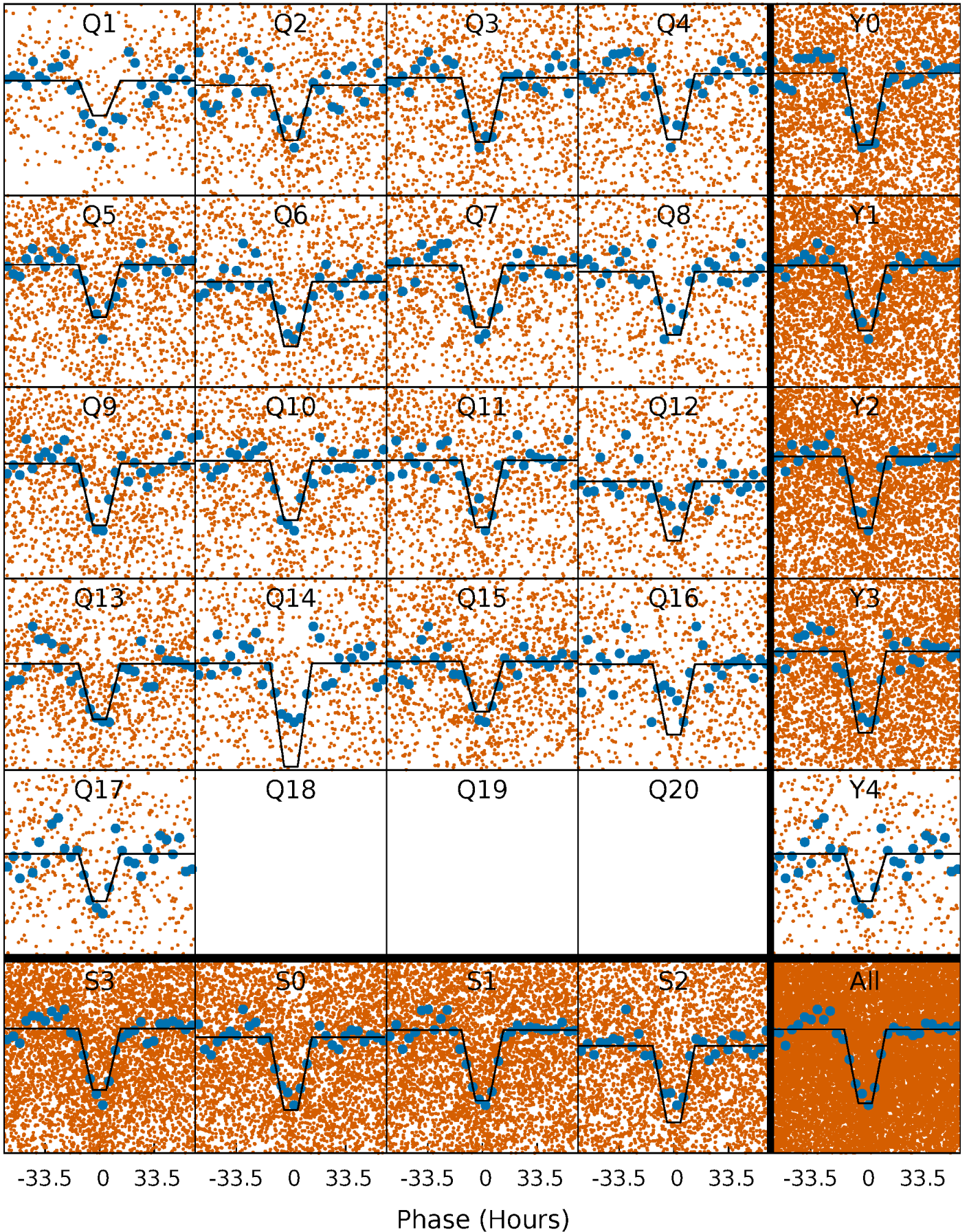
DV Quarter-Phased Transit Curves

TCE 004945285-01 P= 12.693193 Days $T_0=143.020845$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

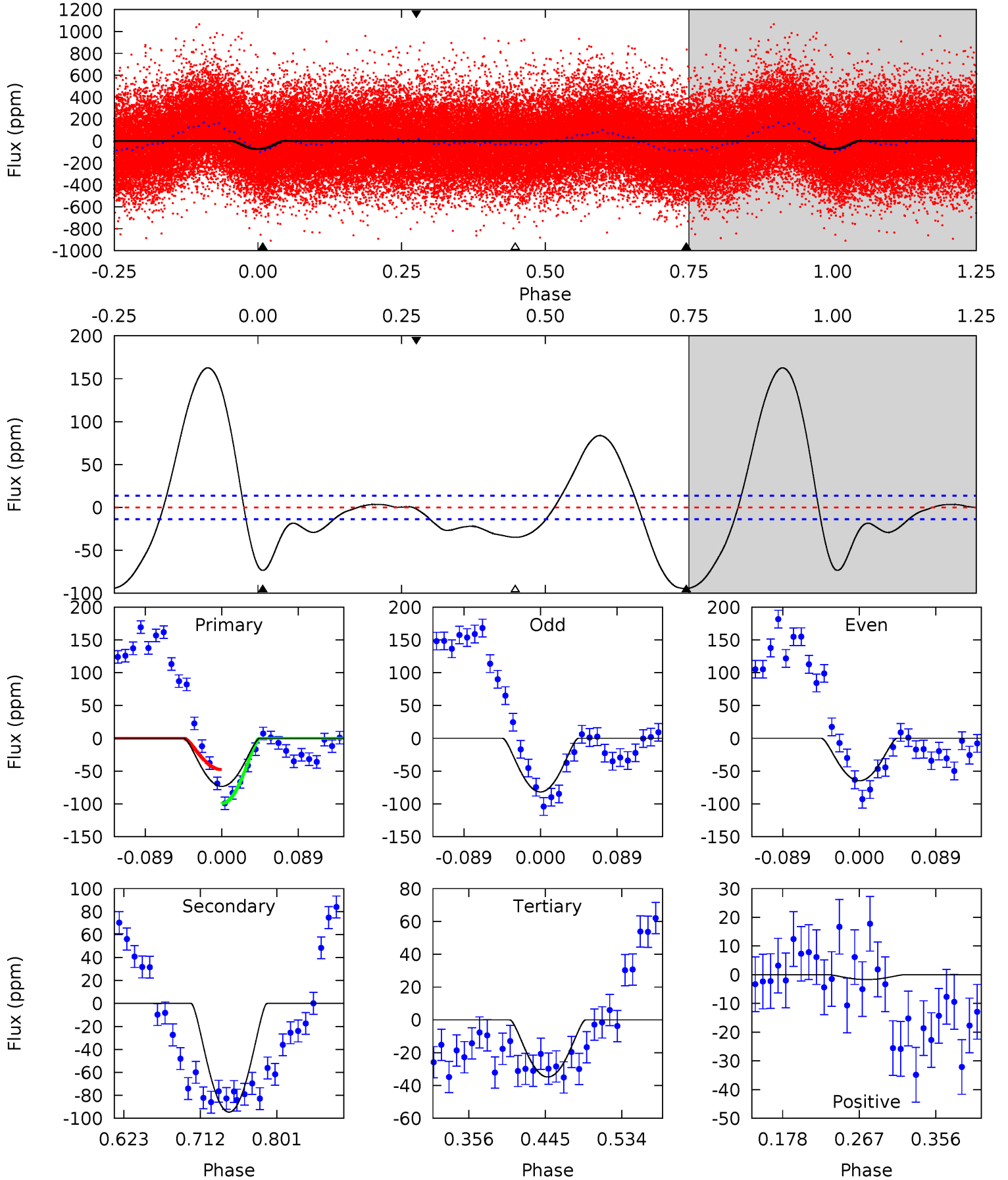
TCE 004945285-01 P= 12.693299 Days $T_0=143.012444$ (BKJD)



DV Model-Shift Uniqueness Test

004945285-01, P = 12.693193 Days, E = 130.327652 Days

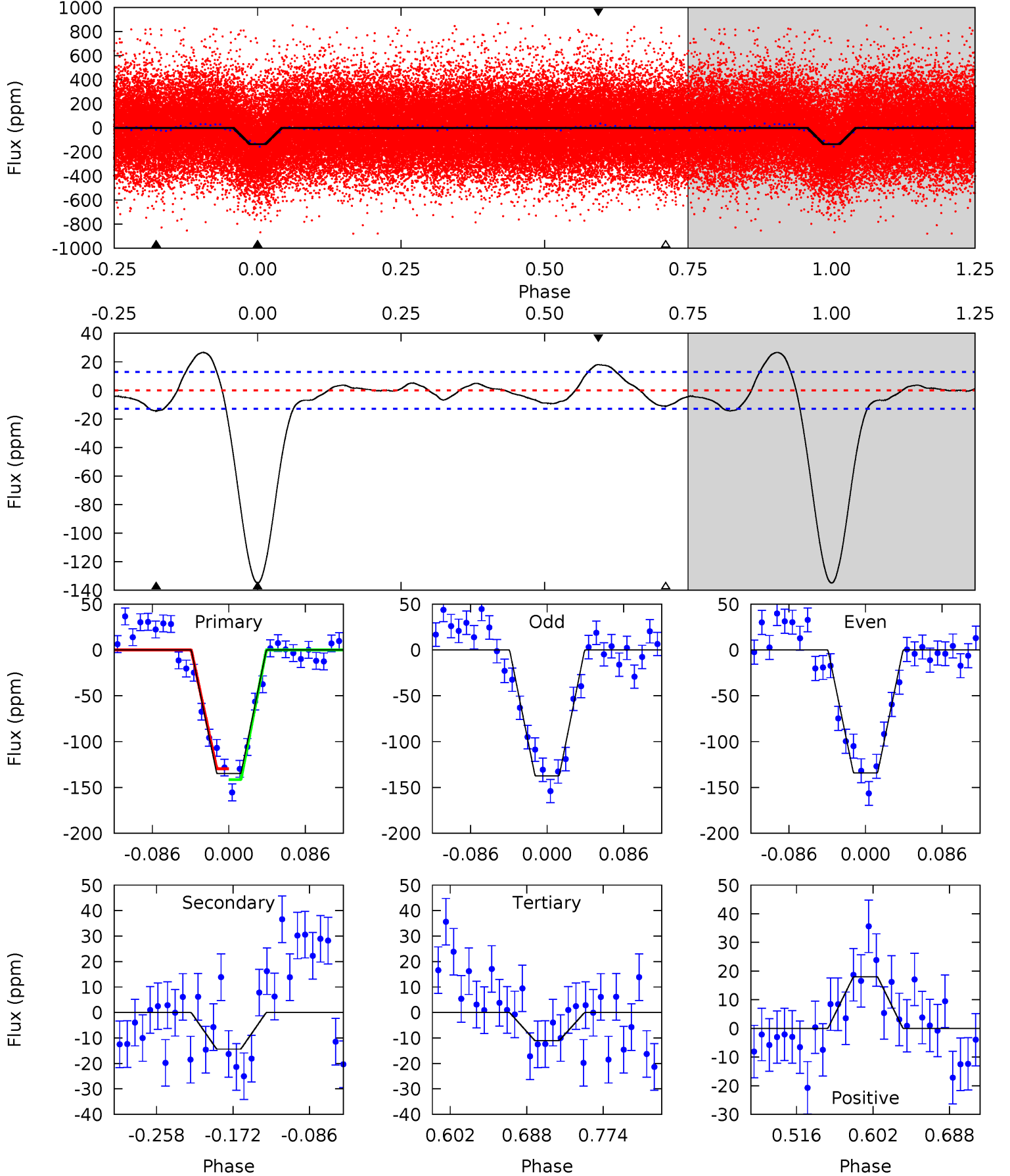
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	31.8	11.7	-0.57	4.59	1.70	16.8	12.9	25.2	20.1	32.4	2.87	1.03	0.63	8.72



Alt Model-Shift Uniqueness Test

004945285-01, P = 12.693299 Days, E = 130.319145 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.2	5.13	3.96	6.44	4.60	1.72	2.53	44.2	41.7	1.17	-1.31	0.55	1.00	0.16	2.14



Stellar Parameters For KIC 004945285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6004^{+162}_{-180}	$4.522^{+0.050}_{-0.213}$	$-0.260^{+0.300}_{-0.300}$	$0.898^{+0.277}_{-0.092}$	$0.978^{+0.117}_{-0.130}$	$1.901^{+0.404}_{-1.031}$
	+3%/-3%	+1%/-5%	+115%/-115%	+31%/-10%	+12%/-13%	+21%/-54%
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 004945285-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-95 ± 3	$2.40^{+1.96}_{-1.52}$	1100^{+84}_{-51}	4160^{+2176}_{-767}	98^{+622}_{-68}
Alt.	-14 ± 3	$2.02^{+1.89}_{-1.33}$	1101^{+78}_{-53}	3194^{+1476}_{-549}	21^{+172}_{-15}

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 $A_{obs} \gg 1.0$

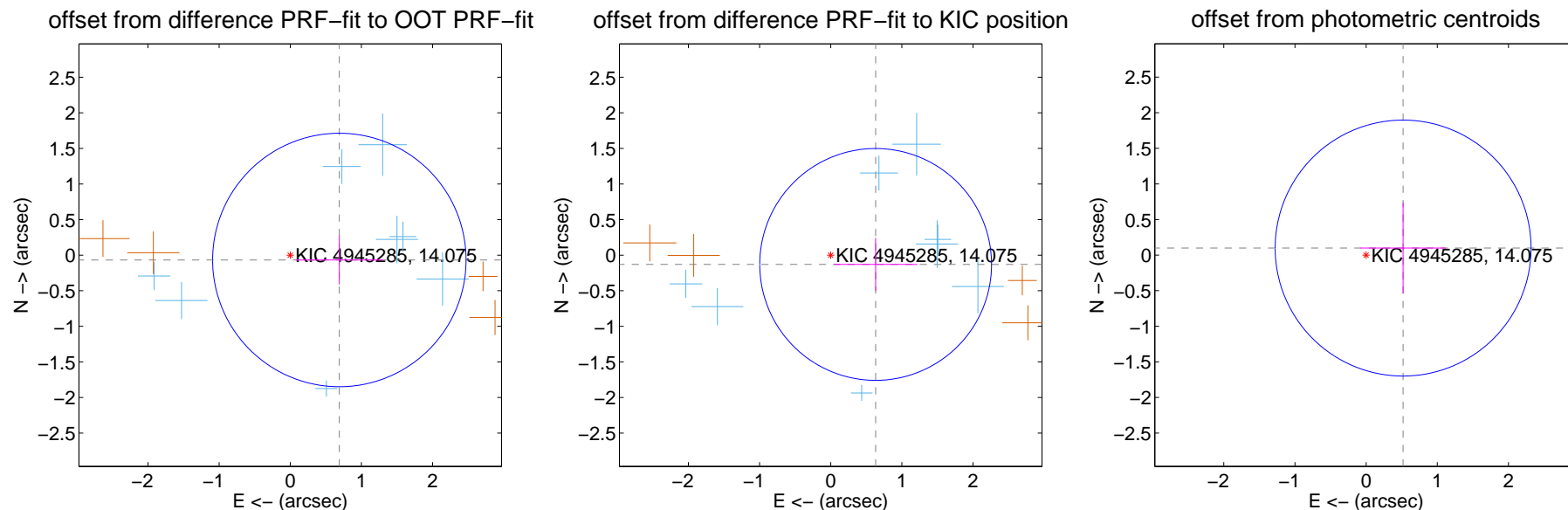
DV Centroid Data

Supplemental centroid analysis for 004945285-01. Kepler magnitude: 14.07. Transit SNR 14.23

There are 8 quarters with good PRF difference image offsets

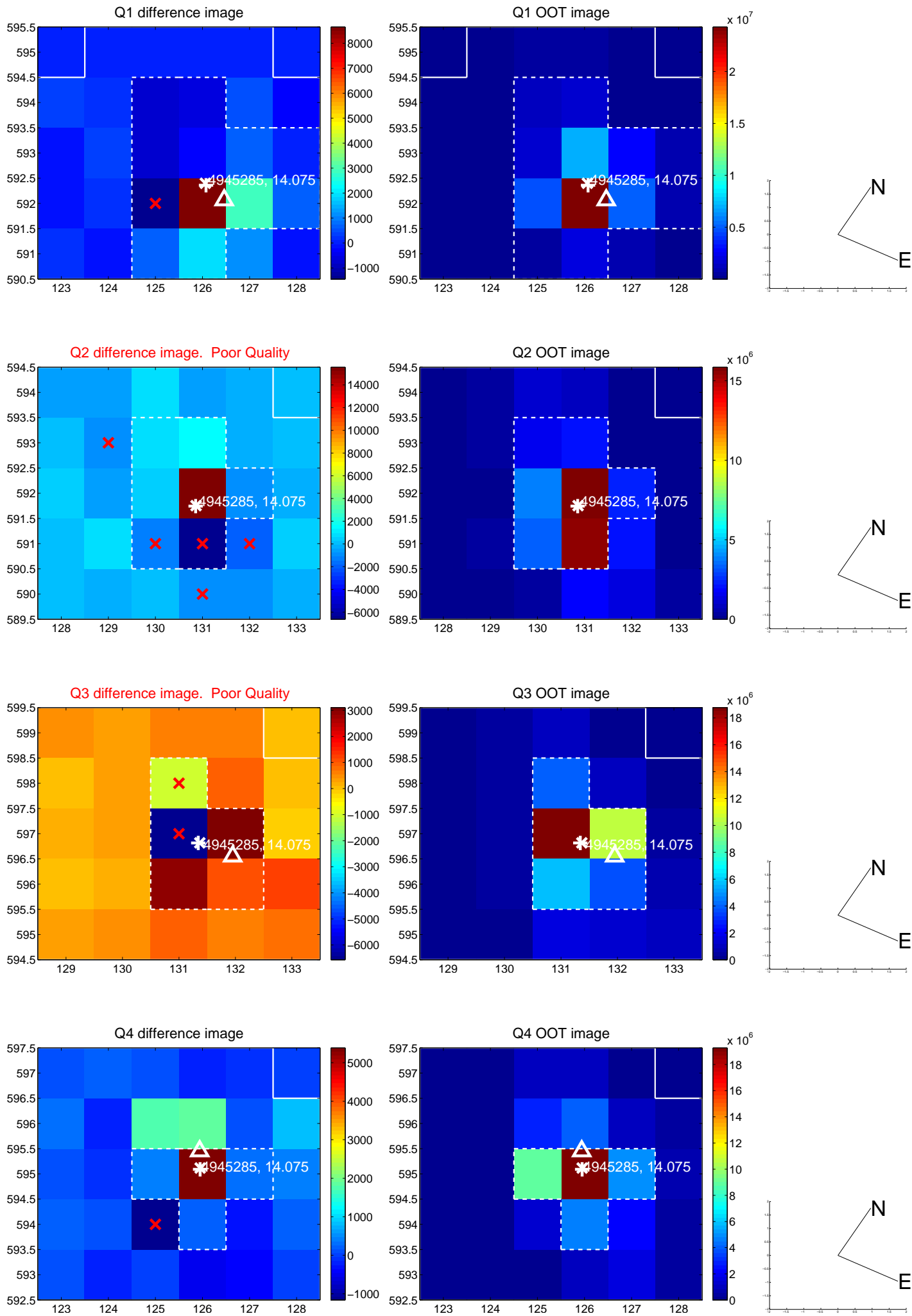
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.693 ± 0.593	1.17	-0.690 ± 0.610	-0.068 ± 0.345
PRF-fit source offset from KIC position	0.644 ± 0.543	1.19	-0.631 ± 0.587	-0.130 ± 0.372
photometric centroid source offset	0.53 ± 0.60	0.88	-0.52 ± 0.60	0.10 ± 0.64

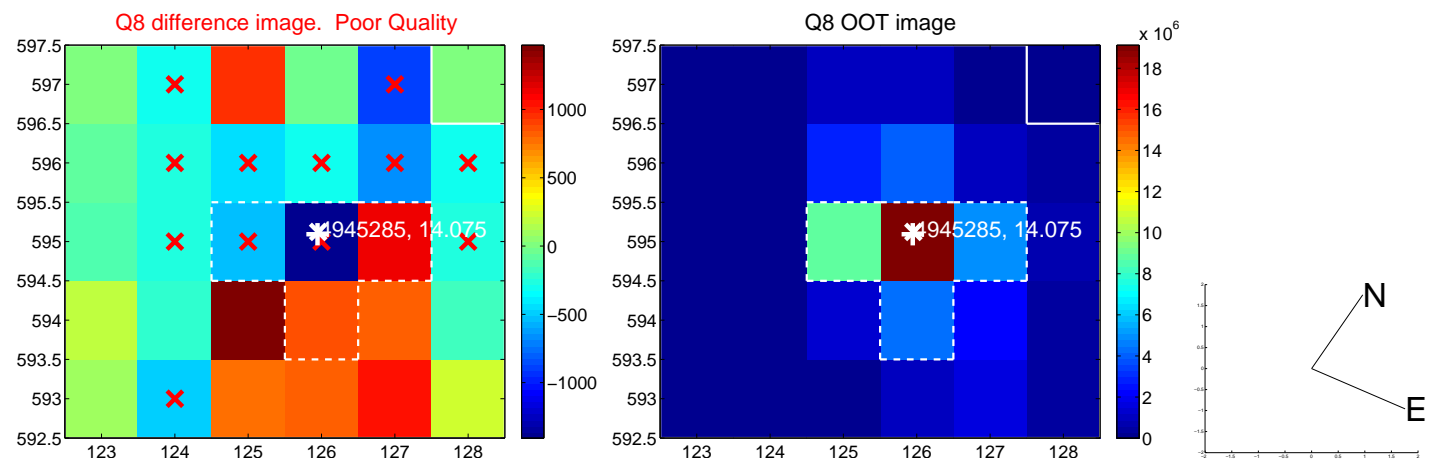
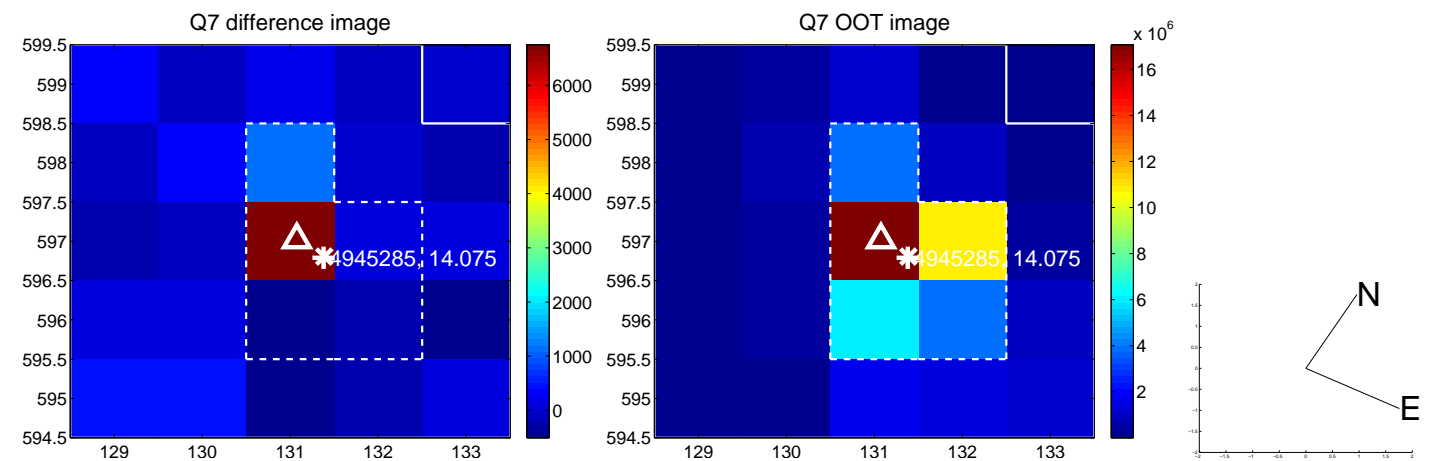
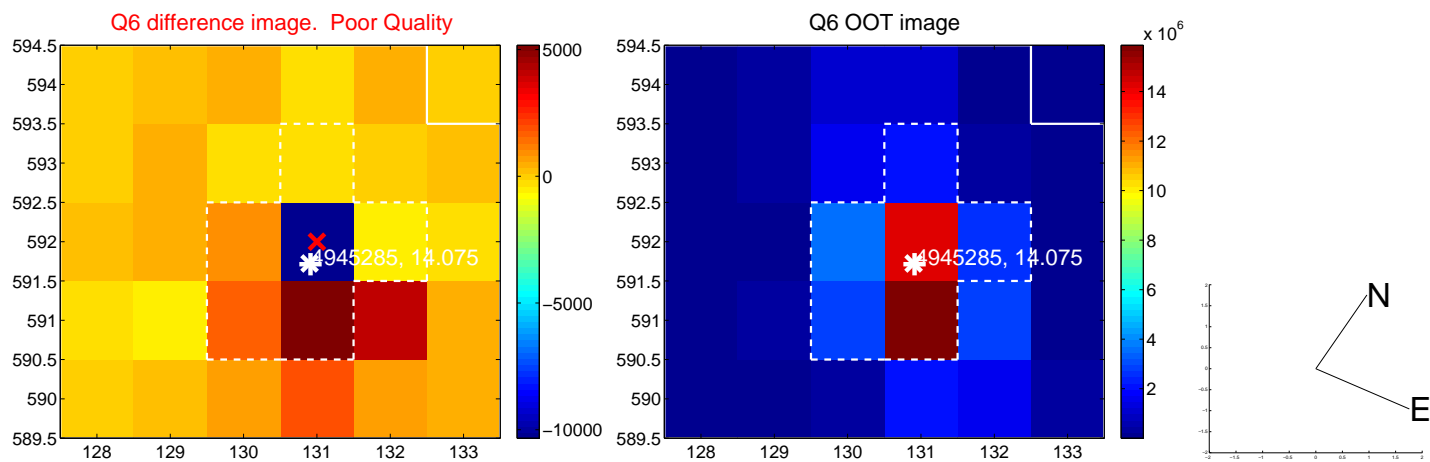
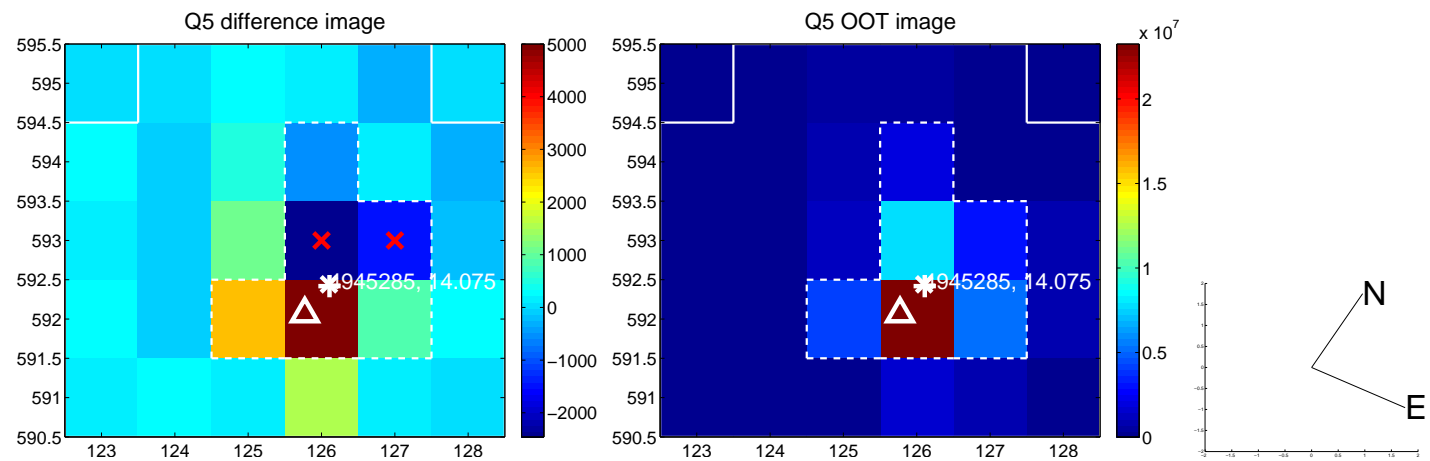


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

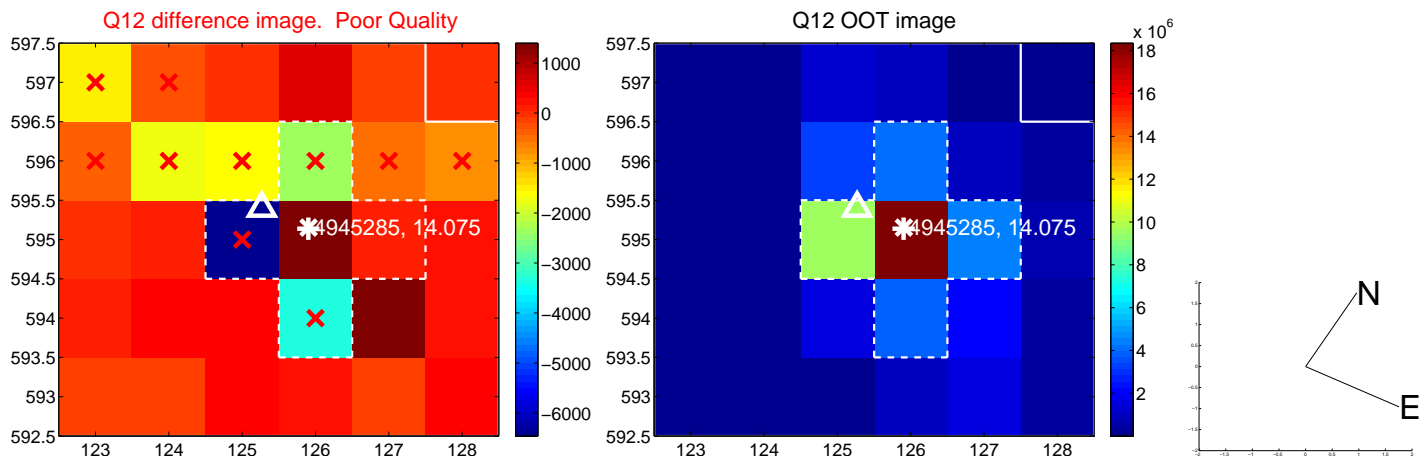
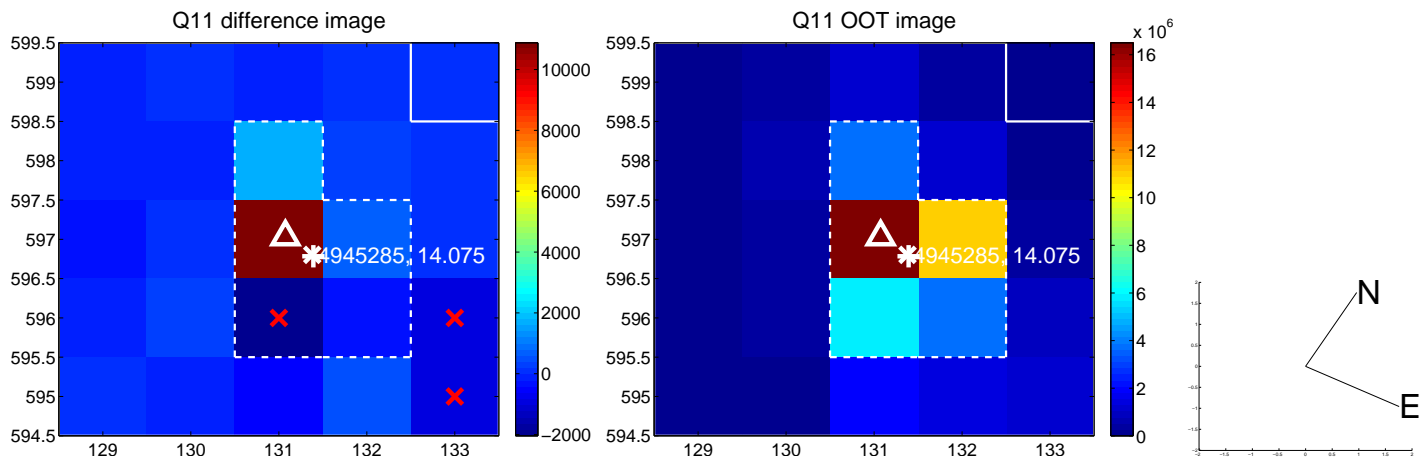
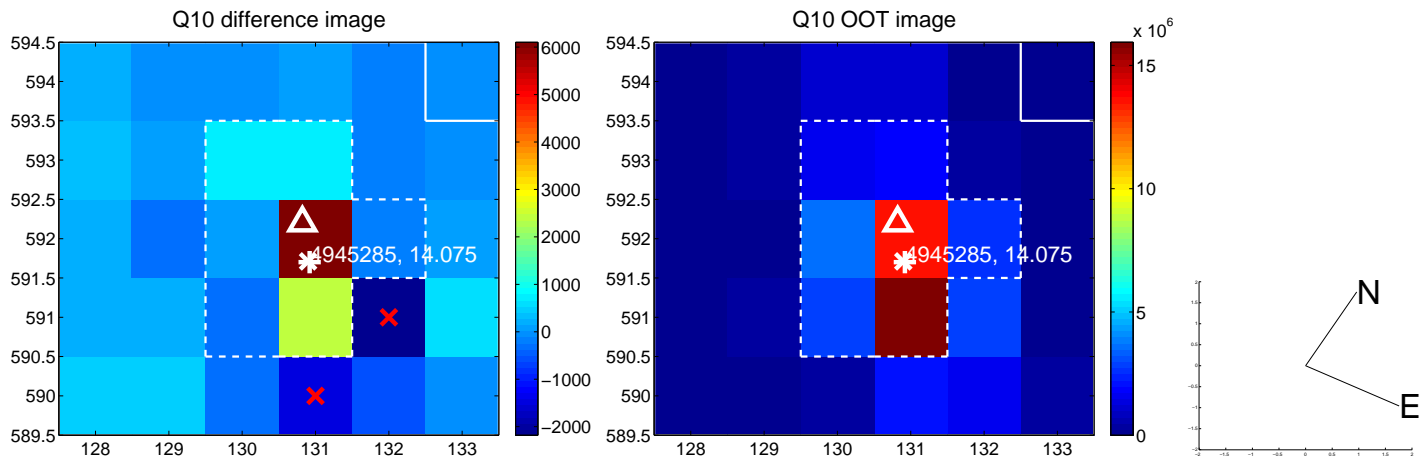
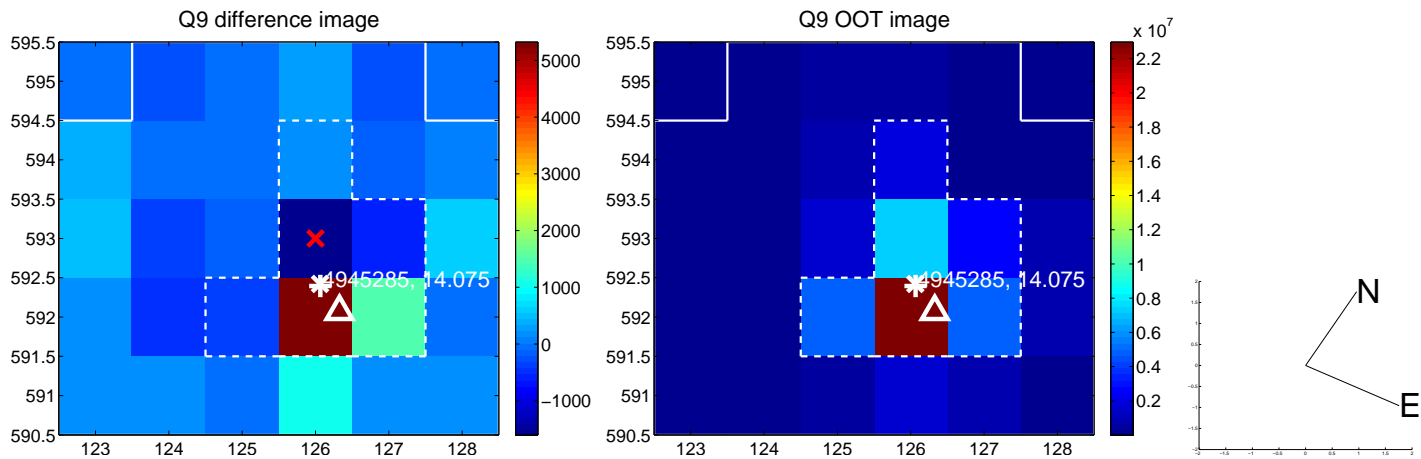
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



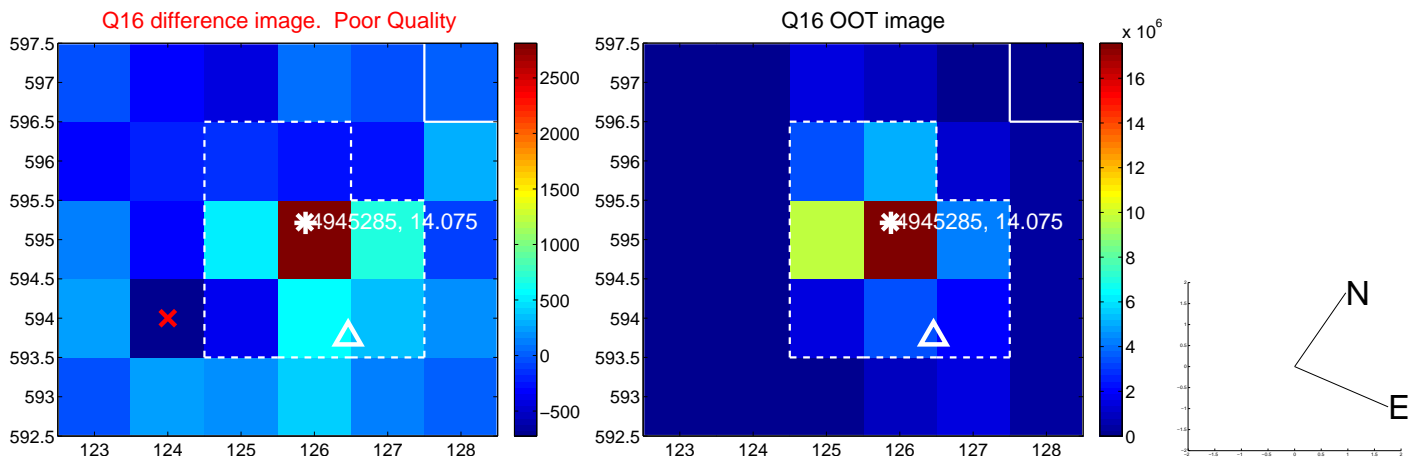
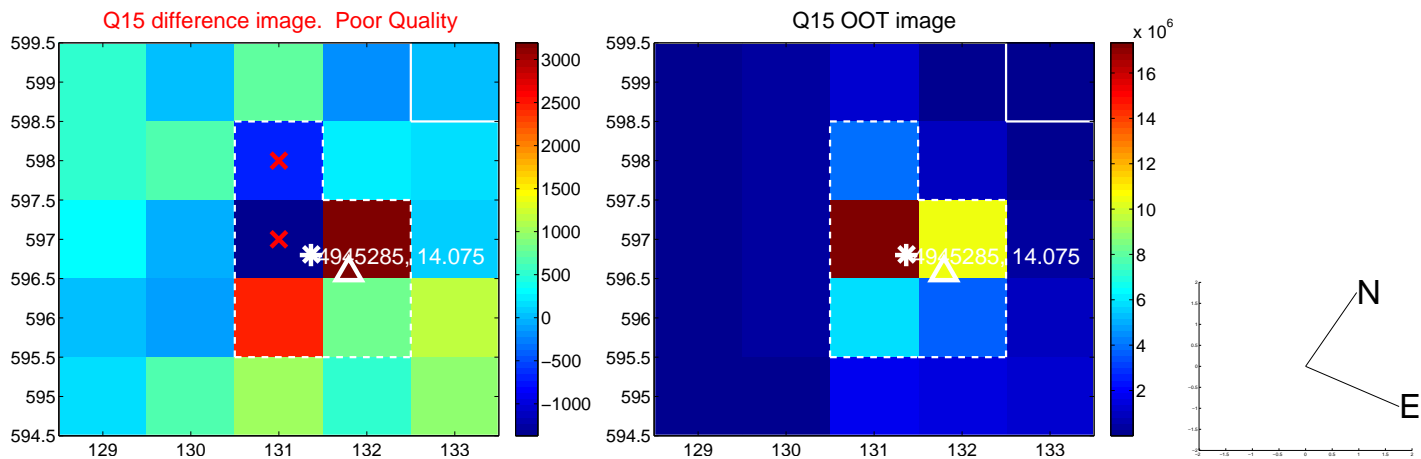
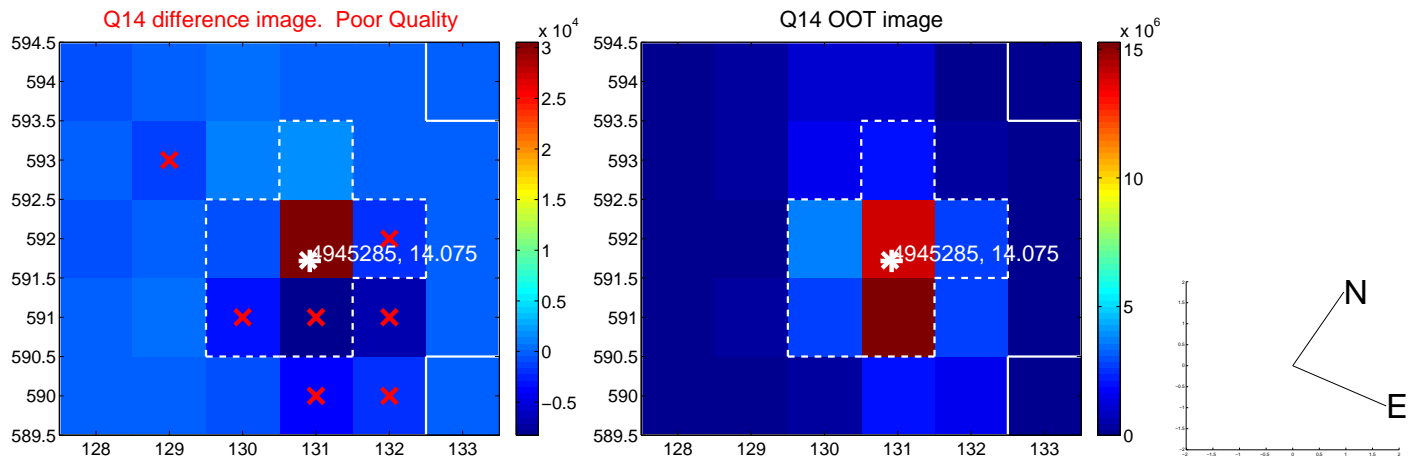
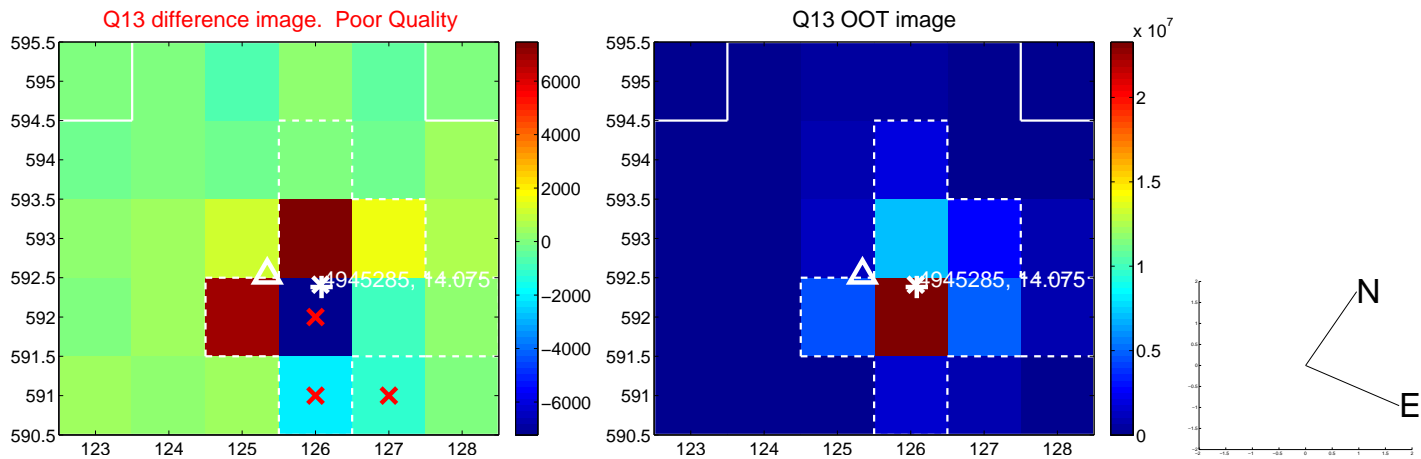
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



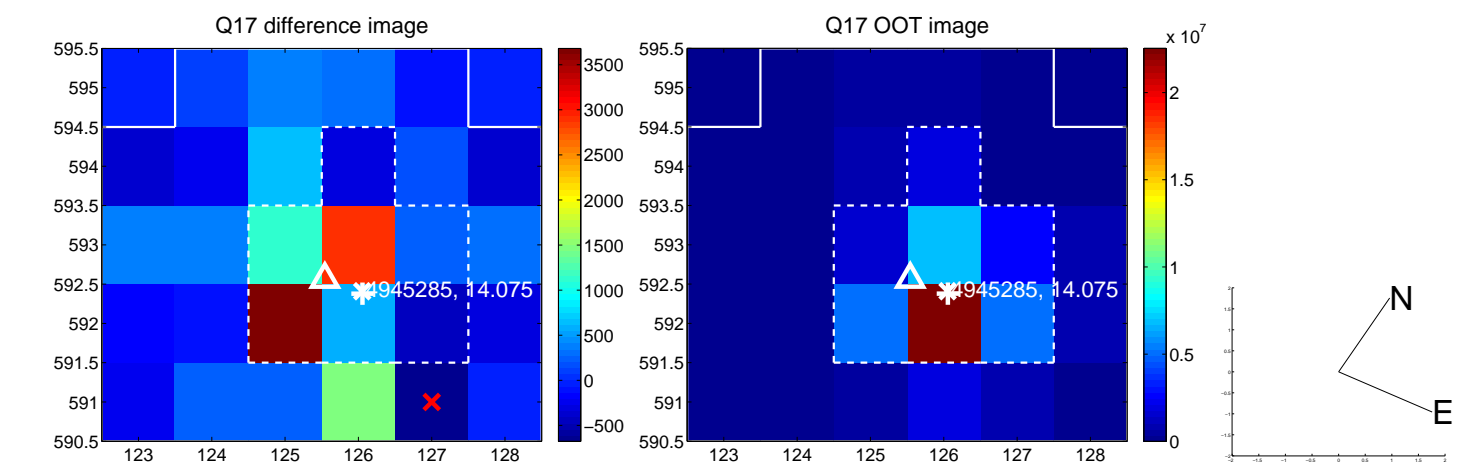
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



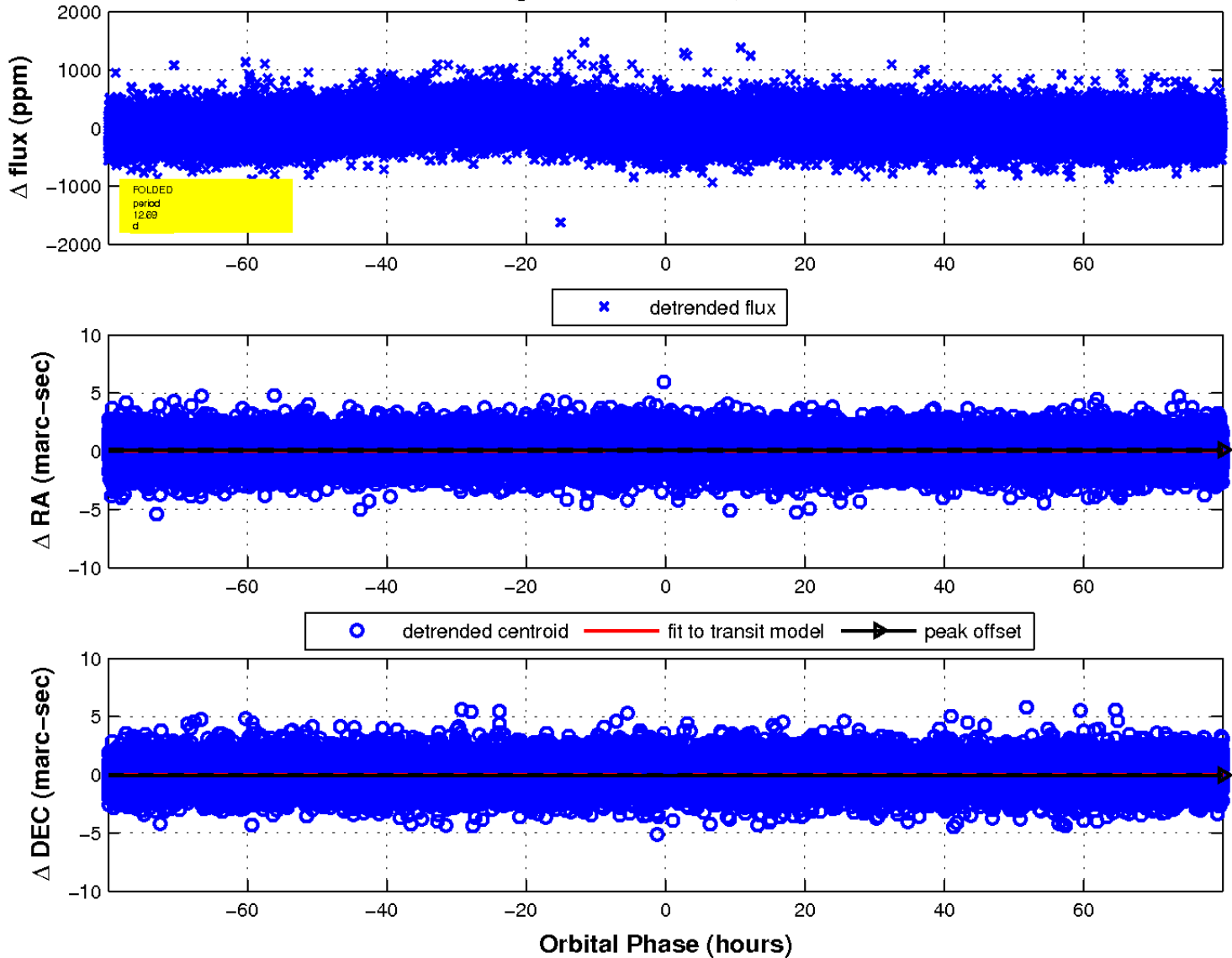
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

