

KIC 003544640

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})
003544640-01	OBS	3279.01	30.827859	143.142613	661.0	4.370	13.3	13.7	0.96	5982	2.69	27.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003544640-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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

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

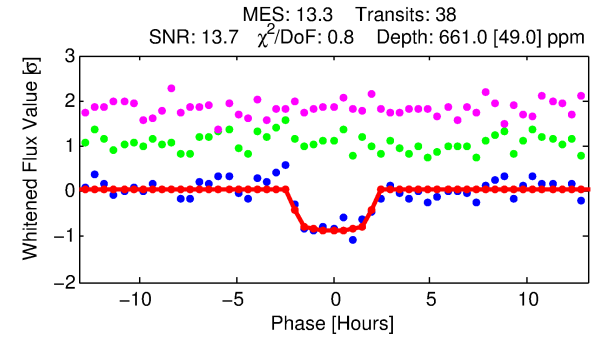
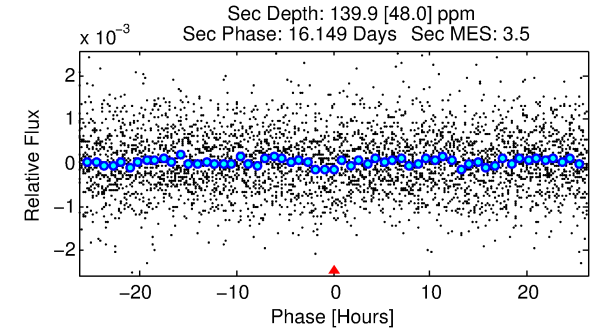
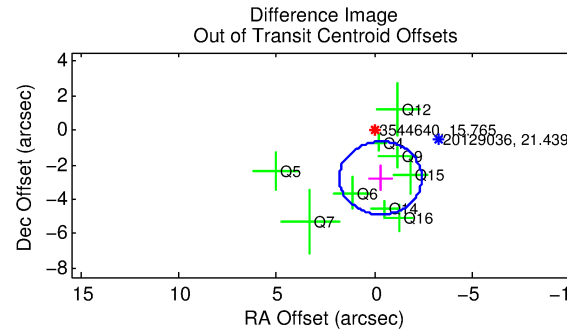
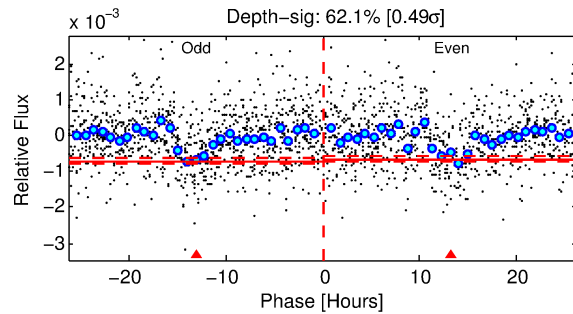
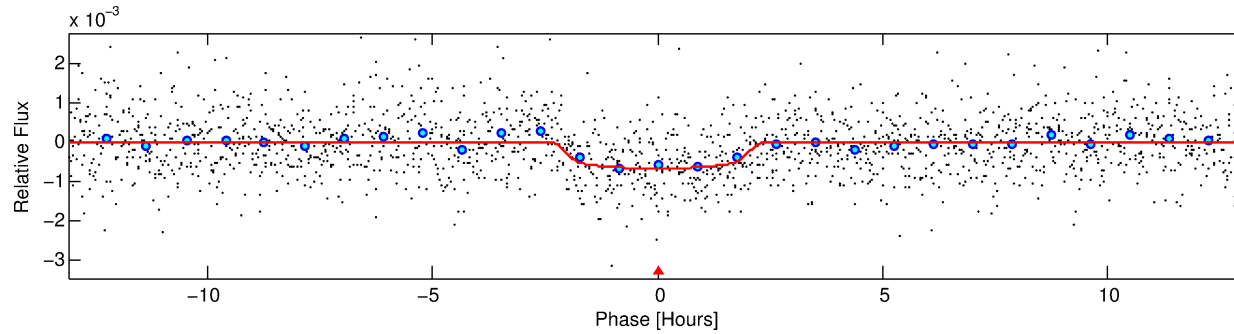
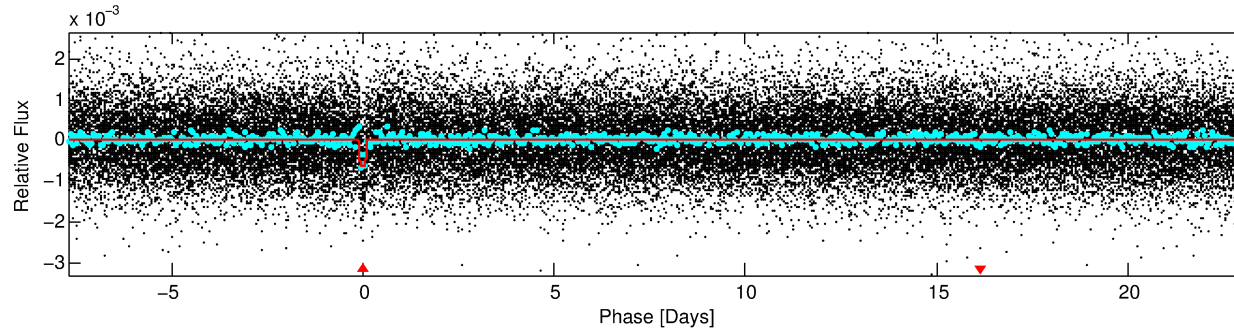
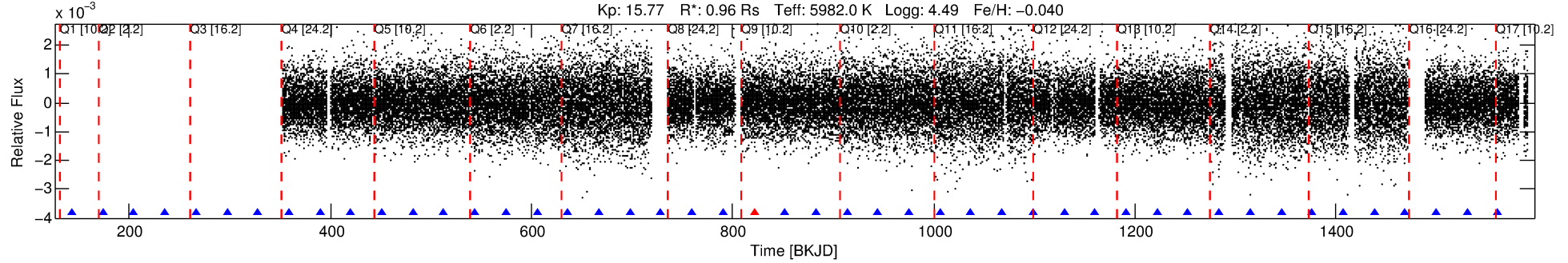
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003544640-01

No Significant Match Found

DV One-Page Summary

KIC: 3544640 Candidate: 1 of 1 Period: 30.828 d
KOI: K03279.01 Corr: 0.980



DV Fit Results:

Period = 30.82786 [0.00028] d
Epoch = 143.1426 [0.0080] BKJD
Rp/R* = 0.0256 [0.0130]
a/R* = 37.32 [89.38]
b = 0.76 [1.37]
Seff = 27.70 [10.59]
Teq = 585 [56] K
Rp = 2.69 [1.56] Re
a = 0.1954 [0.0466] AU
Ag = 406.81 [458.26] [0.89 σ]
Teffp = 4062 [1099] K [3.16 σ]

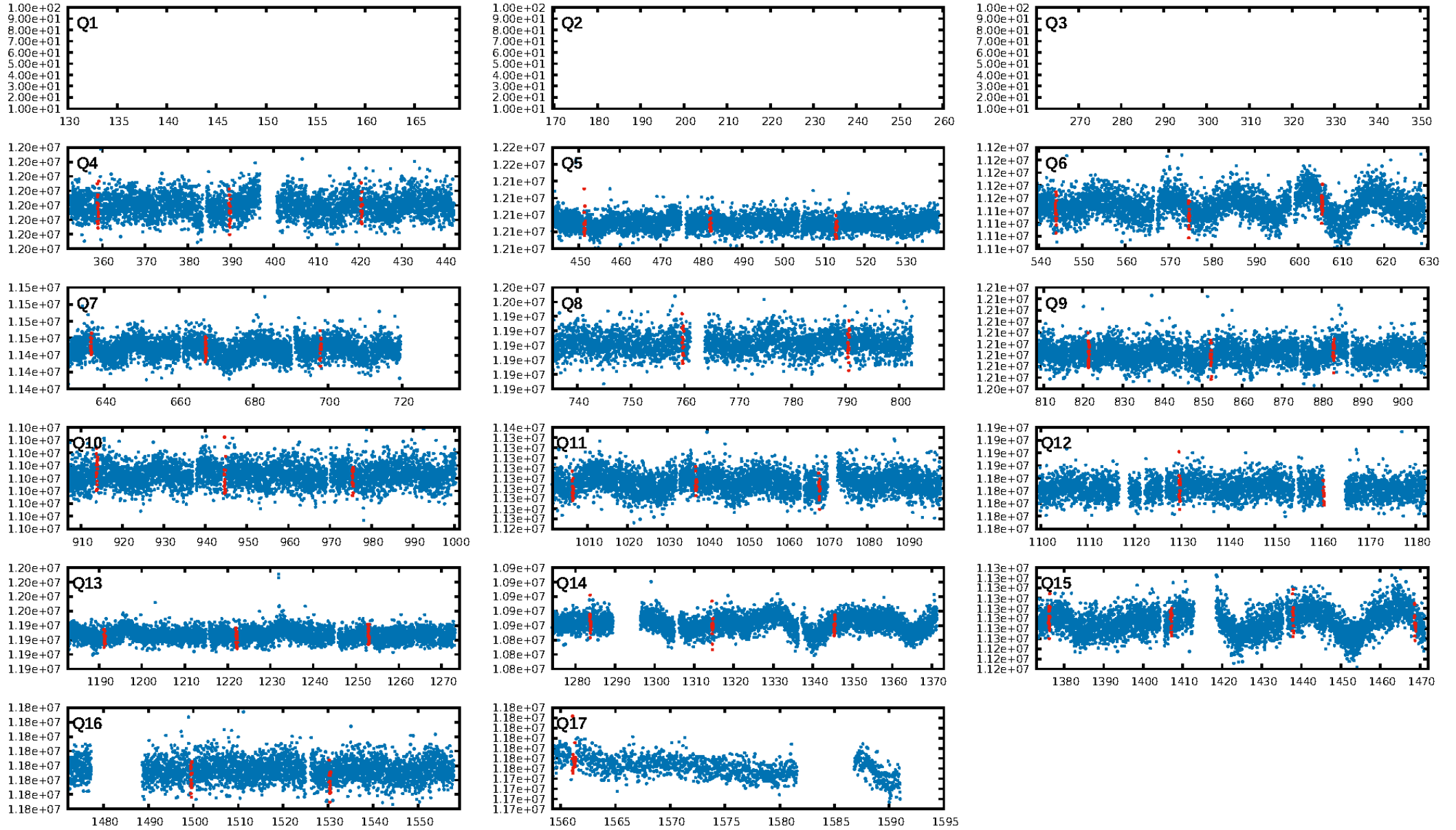
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.72e-40
RollingBand-fgt: 0.97 [36/37]
GhostDiagnostic-chr: 6.887
Centroid-sig: 48.3%
Centroid-so: 1.680 arcsec [1.92 σ]
OotOffset-rm: 2.794 arcsec [3.97 σ]
KicOffset-rm: 0.900 arcsec [1.68 σ]
OotOffset-st: 2/2/3/2 [9]
KicOffset-st: 2/2/3/2 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [13/13]

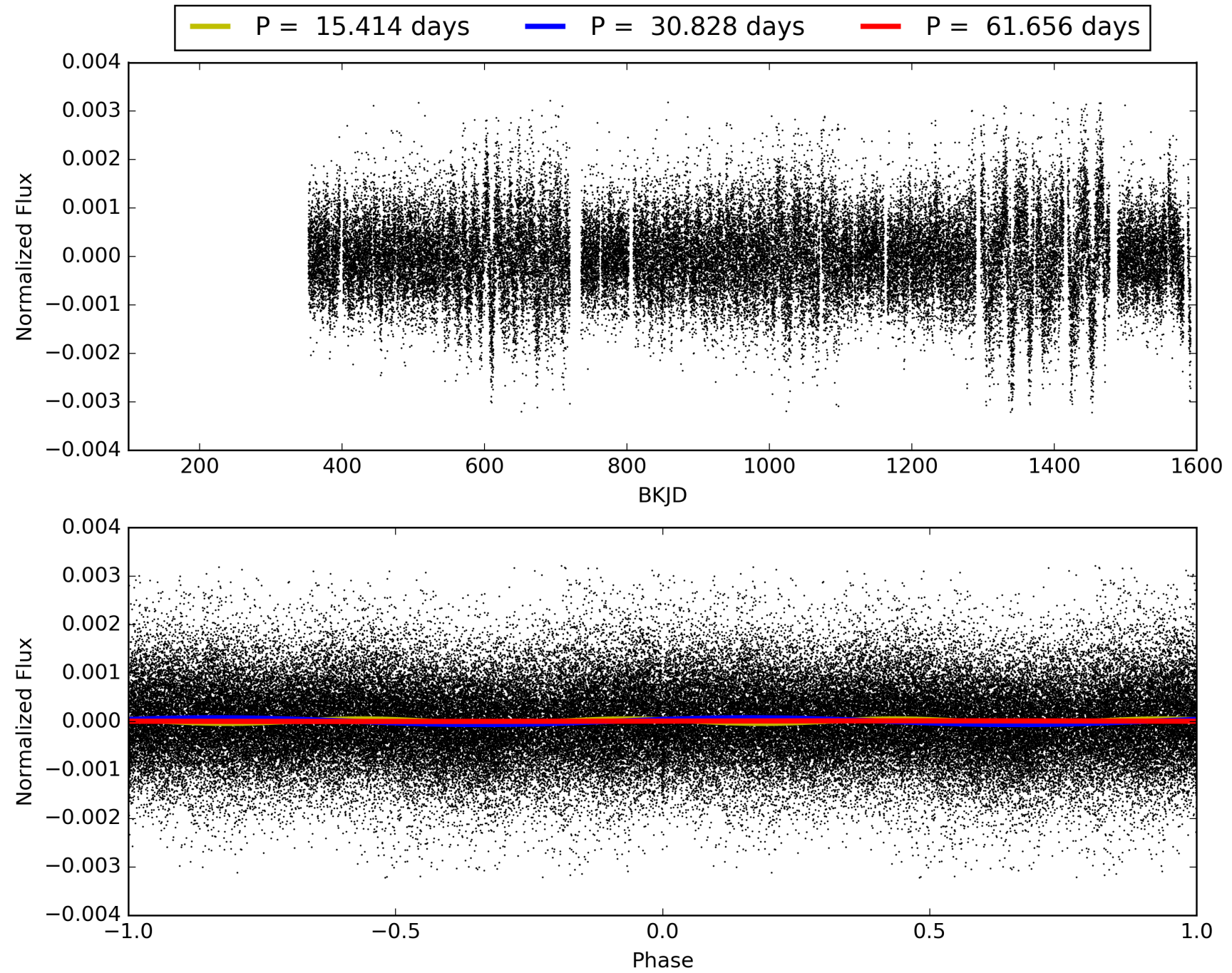
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:46:11 Z

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

TCE 003544640-01, PDC Light Curves

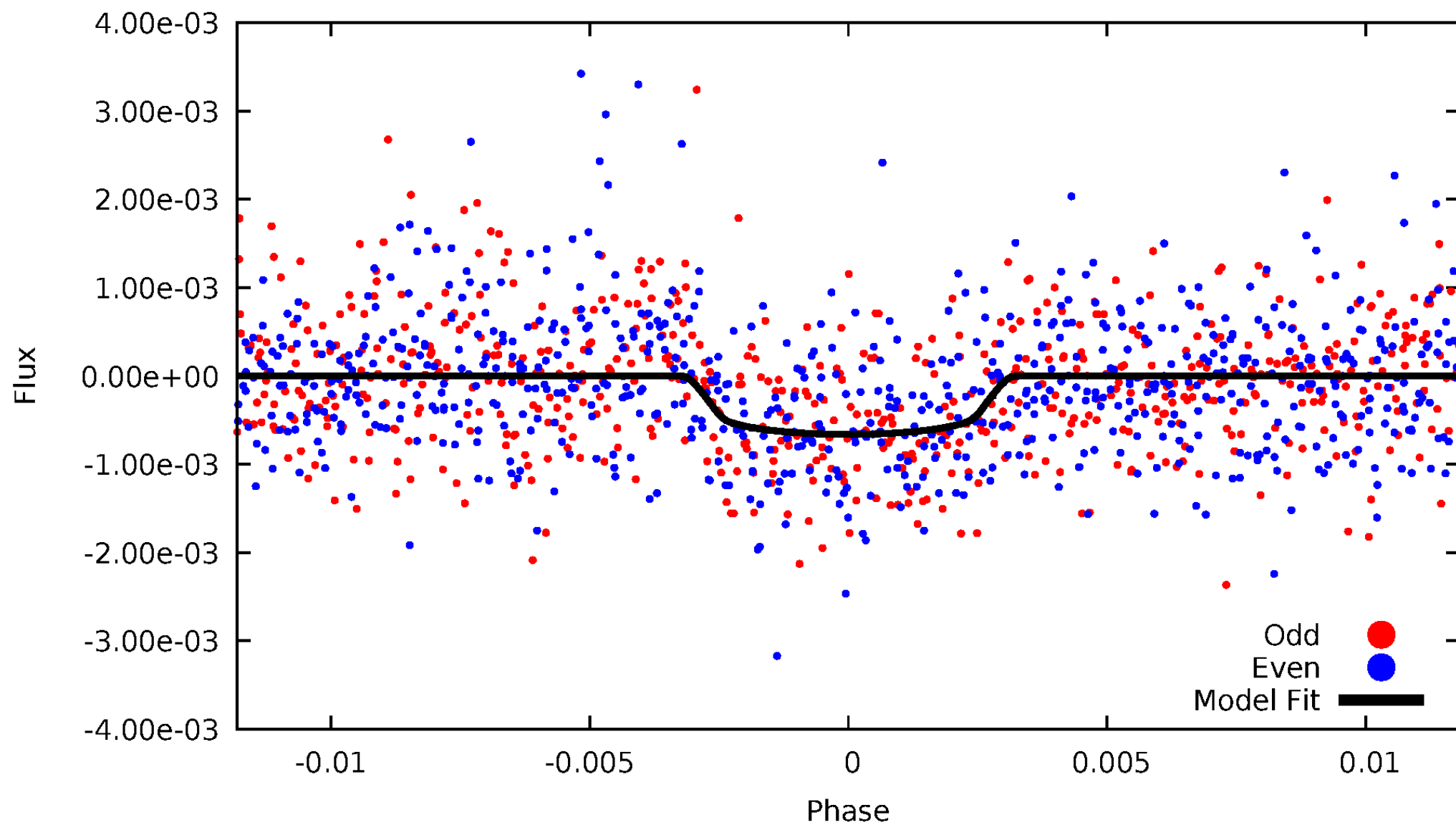


TCE 003544640-01



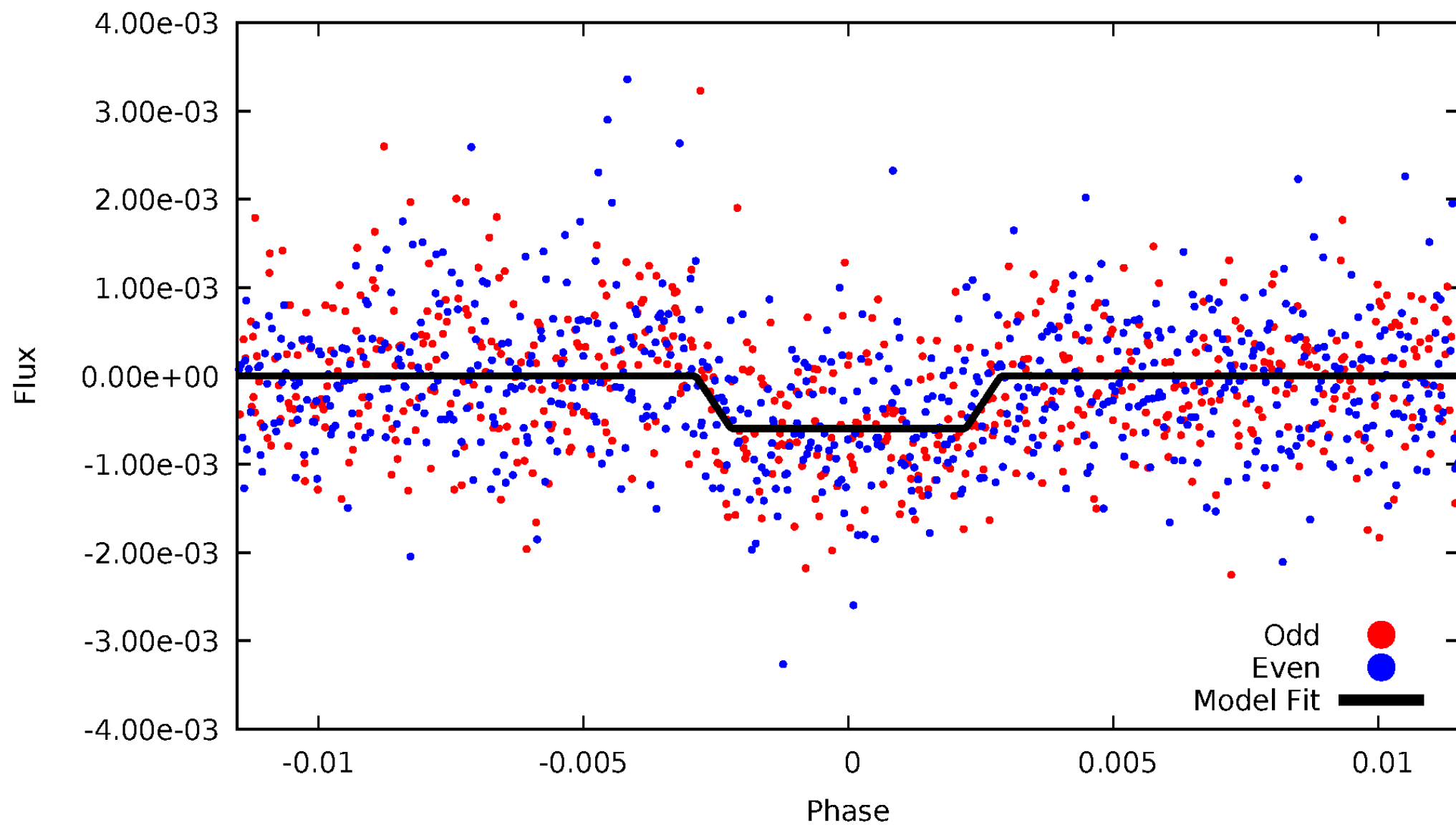
DV Odd/Even

TCE 003544640-01



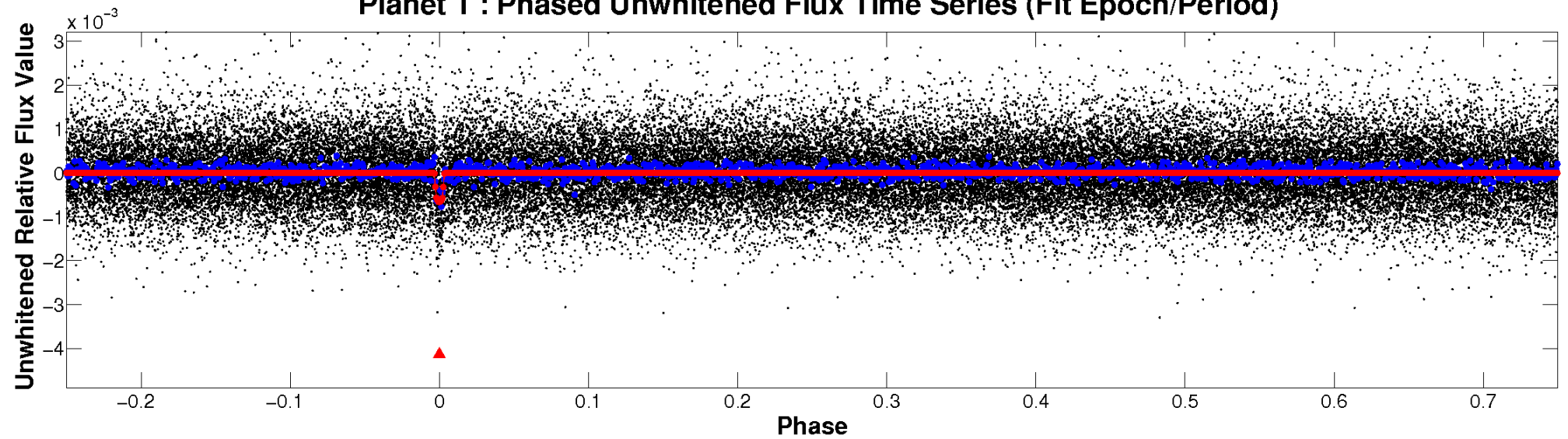
ALT Odd/Even

TCE 003544640-01

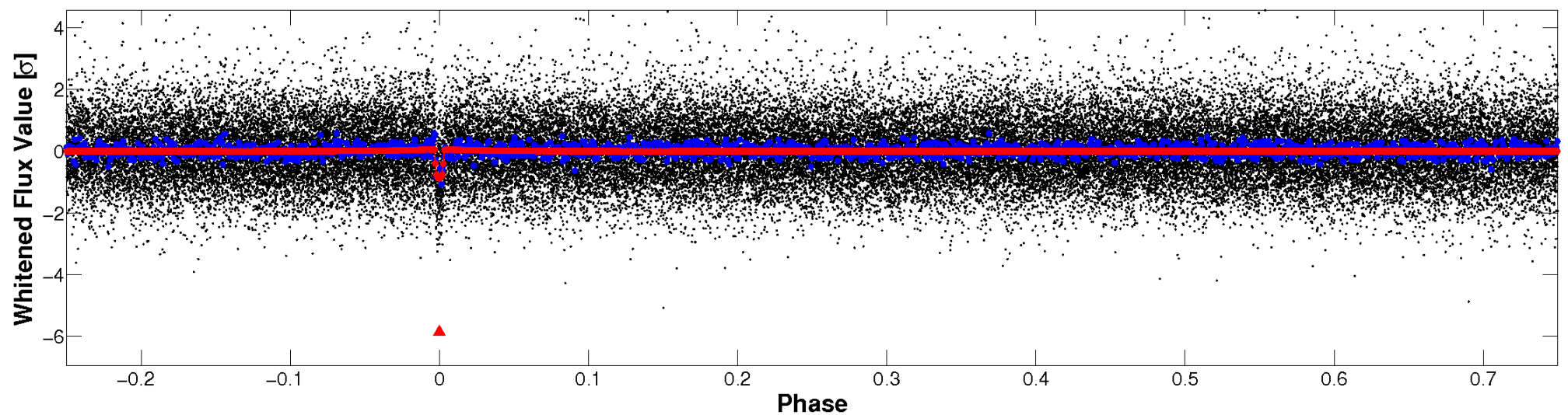


Non-Whitened Vs. Whitened Light Curve

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

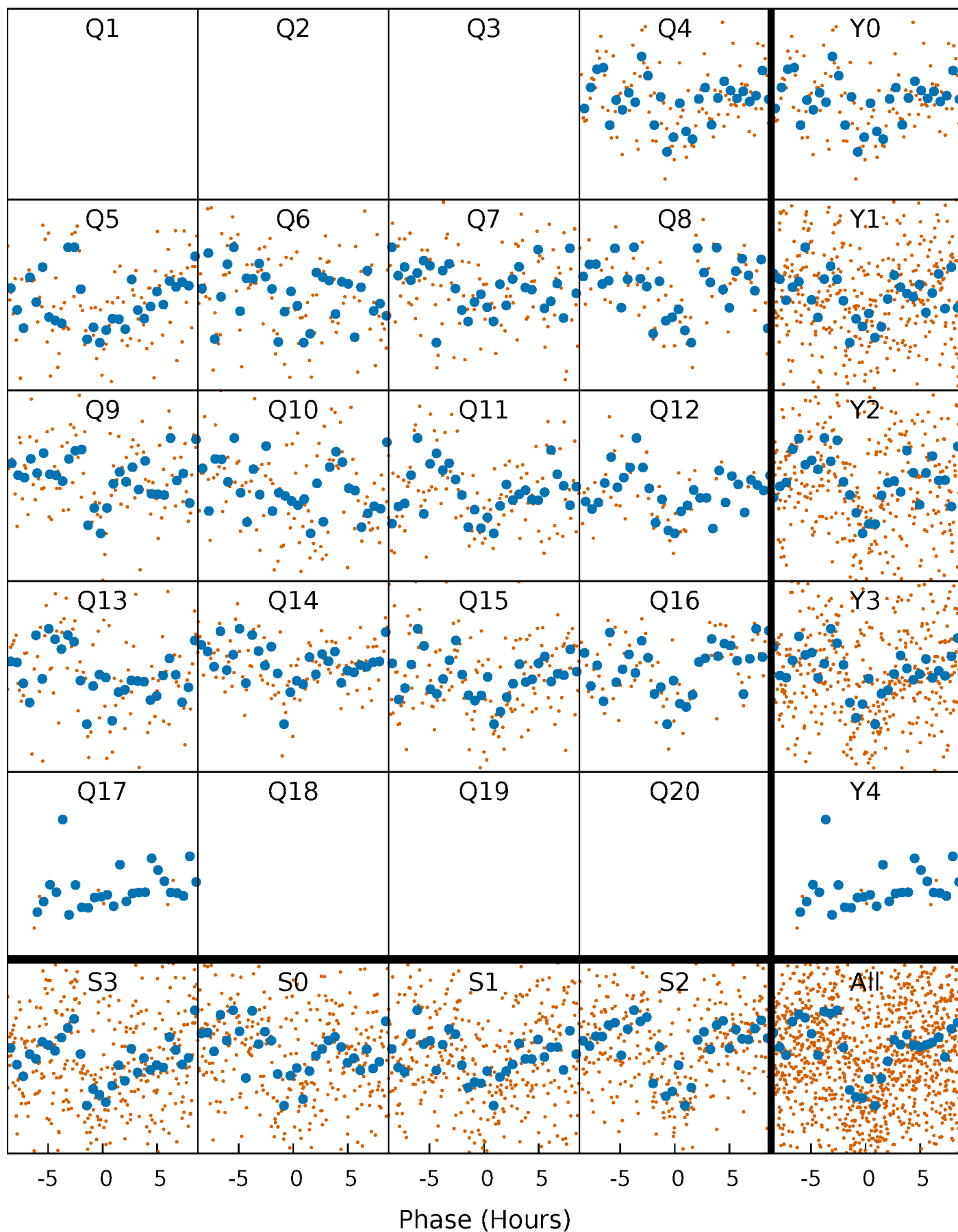


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



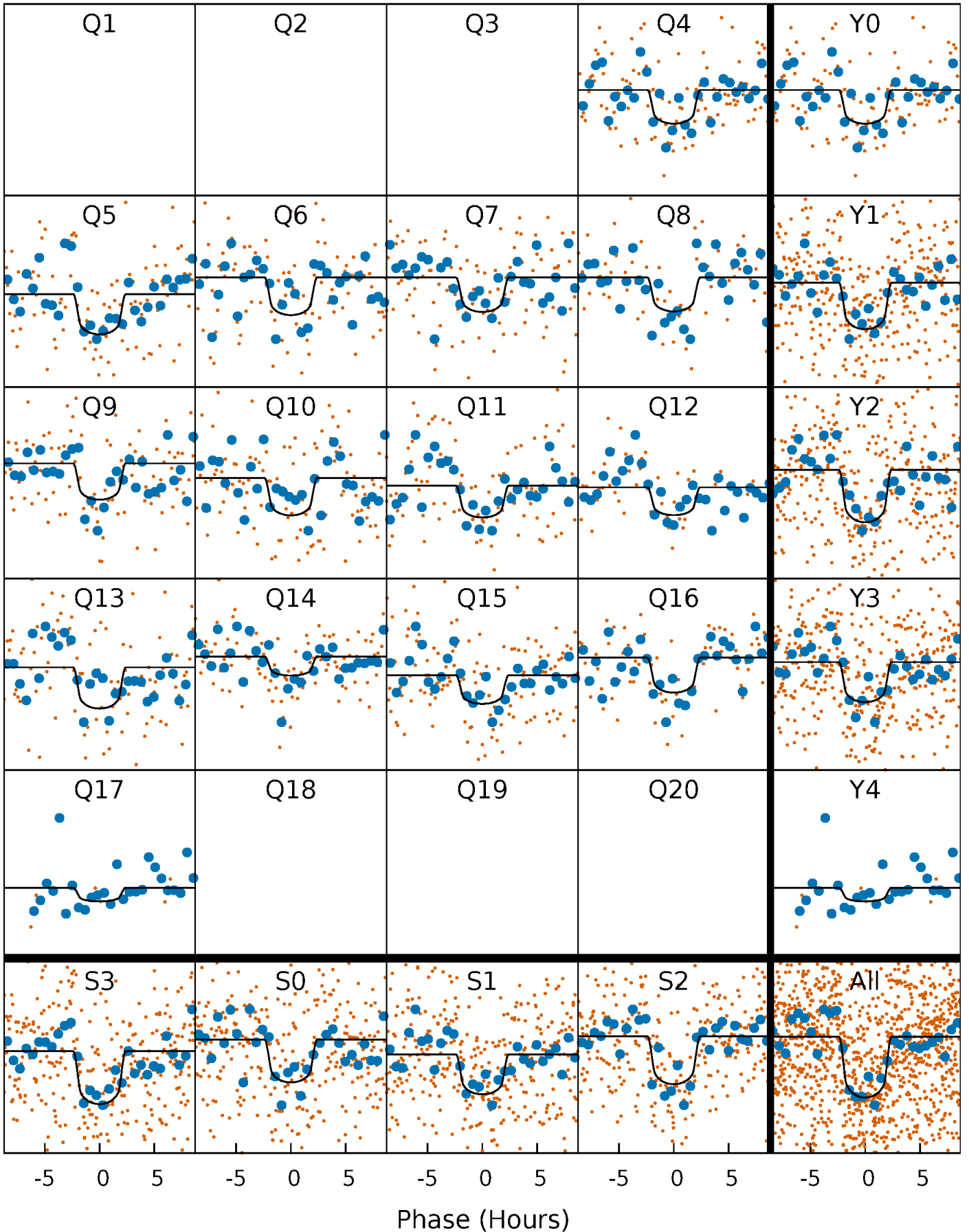
PDC Quarter-Phased Transit Curves

TCE 003544640-01 P= 30.827859 Days $T_0=143.142613$ (BKJD)



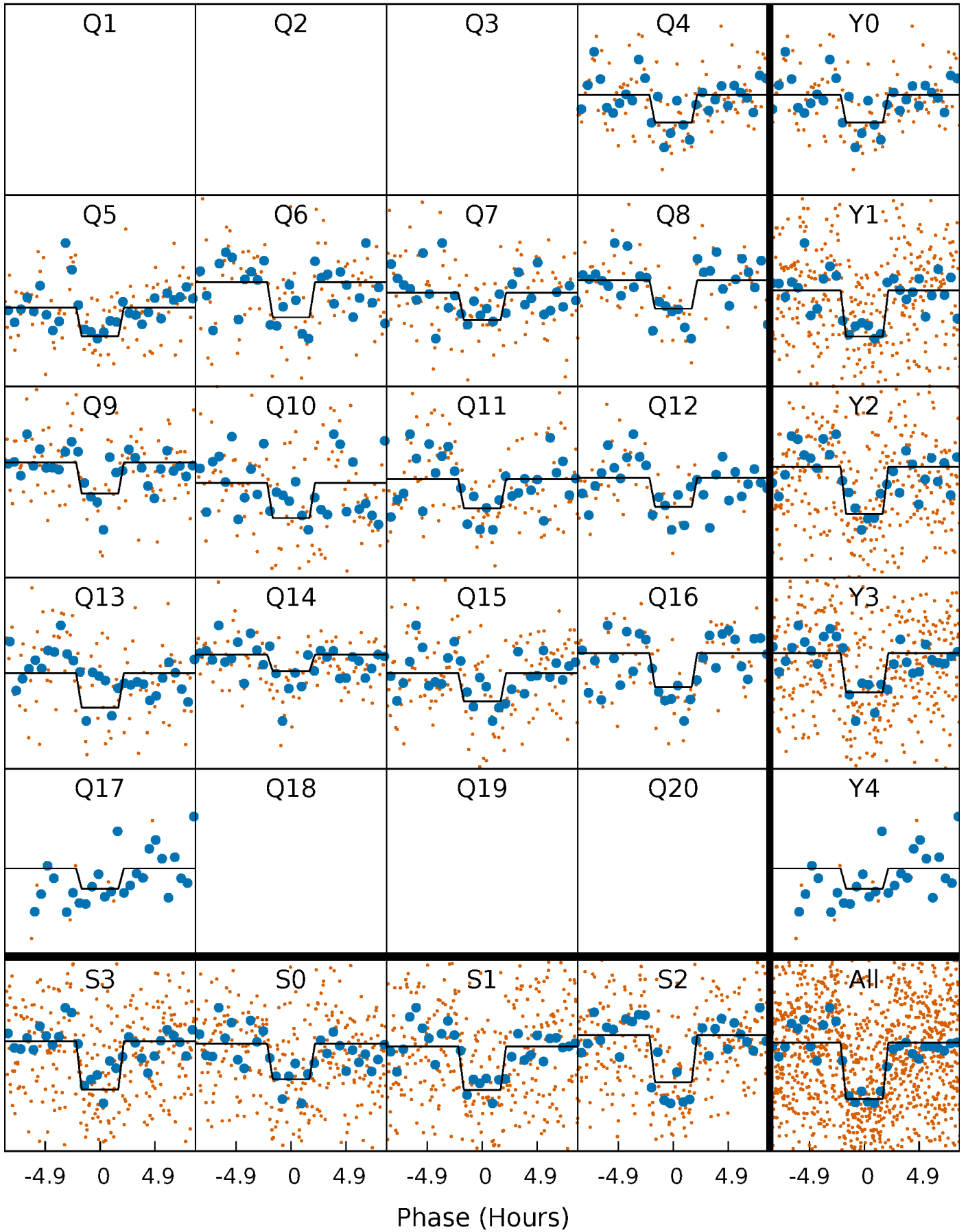
DV Quarter-Phased Transit Curves

TCE 003544640-01 P= 30.827859 Days $T_0=143.142613$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

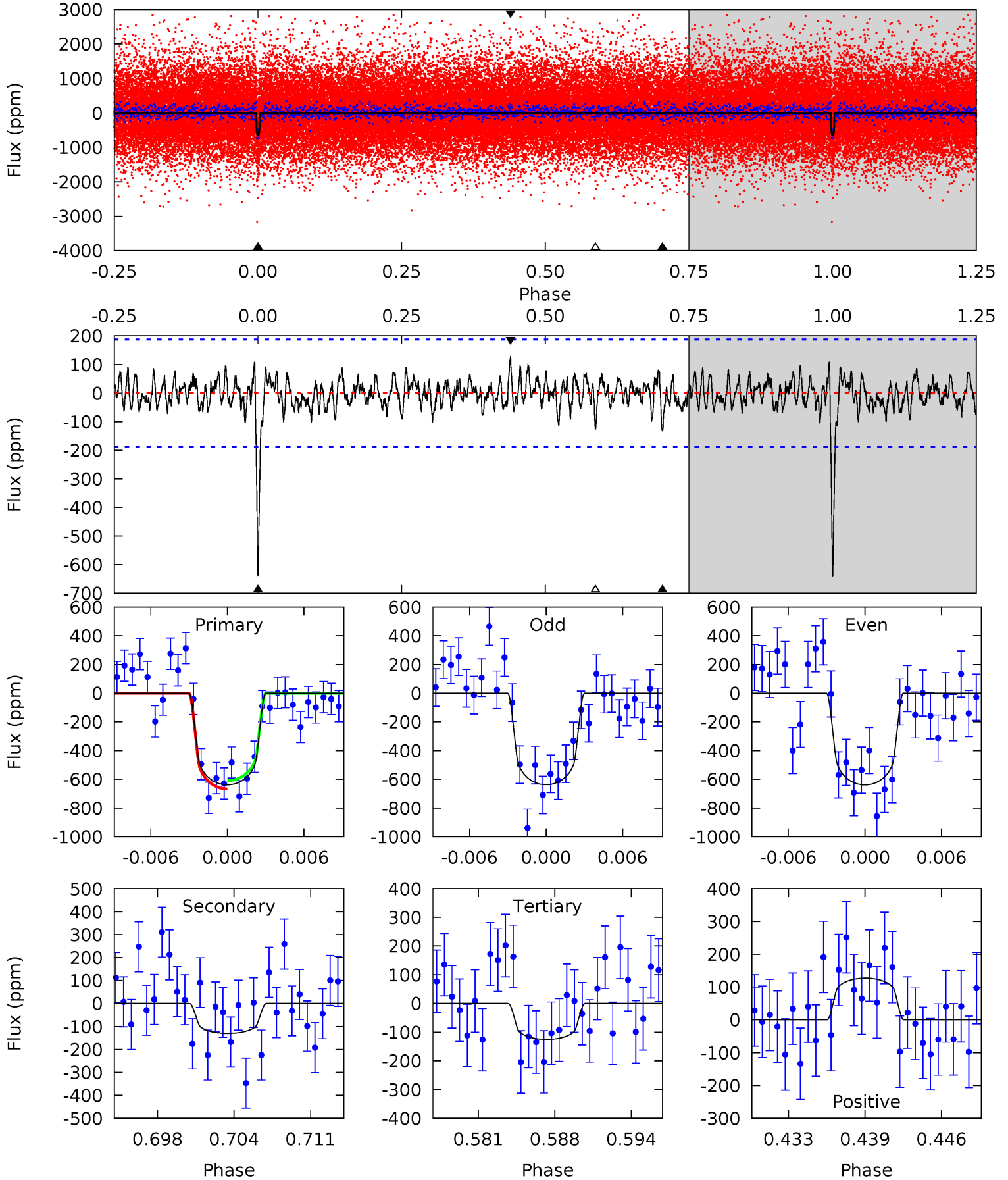
TCE 003544640-01 P= 30.827580 Days $T_0=143.148690$ (BKJD)



DV Model-Shift Uniqueness Test

003544640-01, P = 30.827859 Days, E = 143.142613 Days

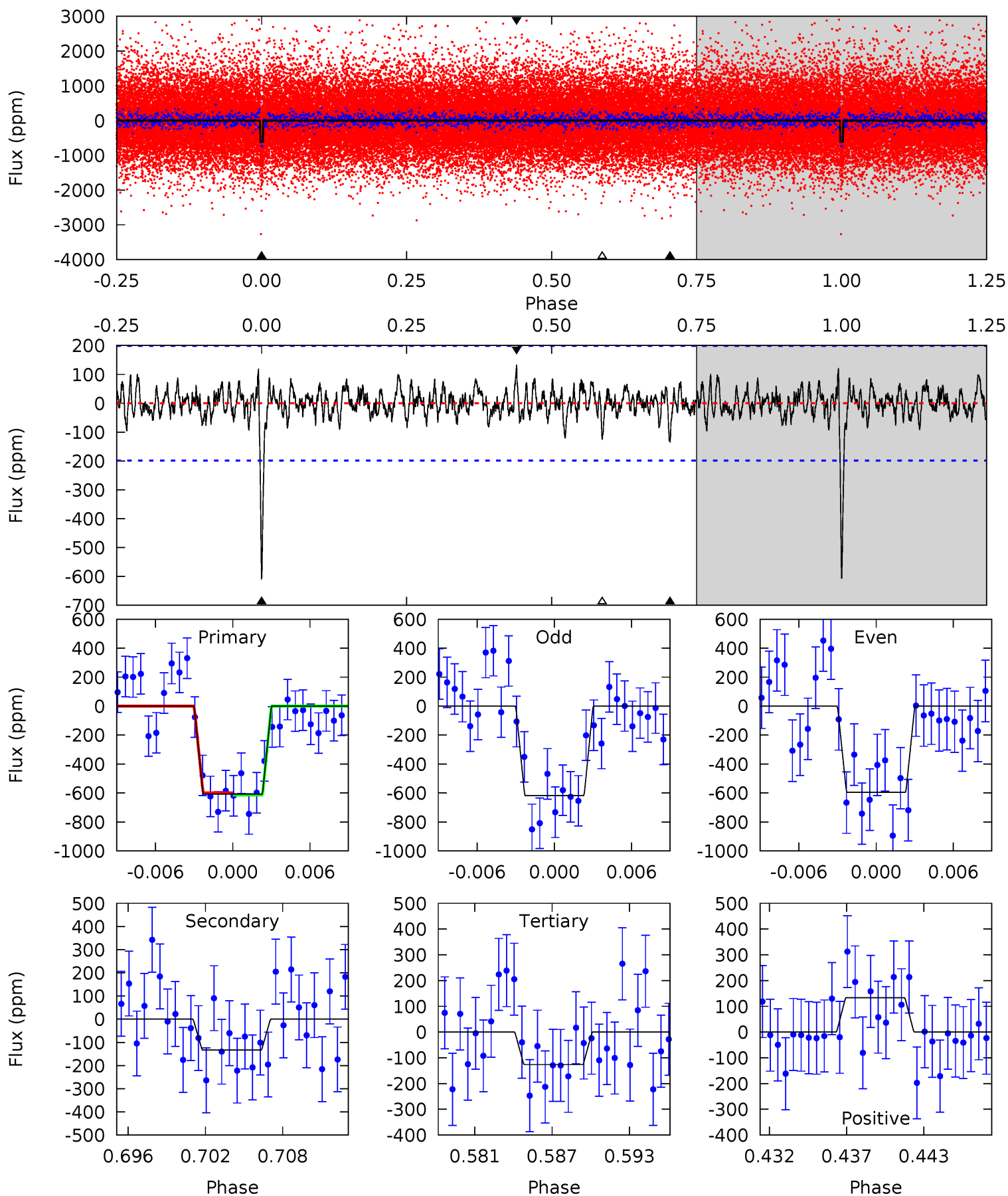
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	3.55	3.41	3.47	5.11	2.72	1.09	14.0	13.9	0.14	0.08	0.01	1.00	0.17	0.79



Alt Model-Shift Uniqueness Test

003544640-01, $P = 30.827580$ Days, $E = 143.148690$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.45	3.27	3.44	5.13	2.76	0.97	12.4	12.3	0.18	0.00	0.30	1.01	0.18	0.22



Stellar Parameters For KIC 003544640

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5982^{+189}_{-232}	$4.493^{+0.048}_{-0.192}$	$-0.040^{+0.250}_{-0.350}$	$0.960^{+0.270}_{-0.108}$	$1.047^{+0.126}_{-0.139}$	$1.667^{+0.422}_{-0.821}$
	+3%/-4%	+1%/-4%	+625%/-875%	+28%/-11%	+12%/-13%	+25%/-49%
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 003544640-01 / KOI 3279.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-130 ± 37	$2.96^{+1.45}_{-1.48}$	837^{+55}_{-51}	4175^{+1351}_{-590}	316^{+879}_{-187}
Alt.	-133 ± 39	$2.67^{+1.54}_{-1.32}$	835^{+51}_{-42}	4341^{+1382}_{-687}	377^{+1126}_{-238}

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

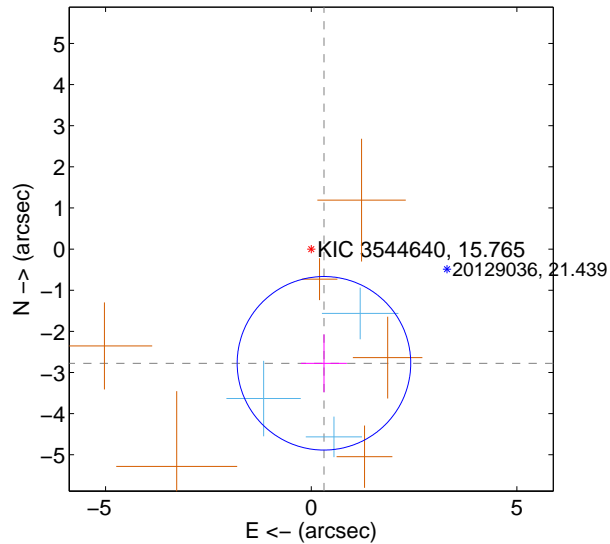
Supplemental centroid analysis for 003544640-01. Kepler magnitude: 15.77. Transit SNR 13.72

There are 3 quarters with good PRF difference image offsets

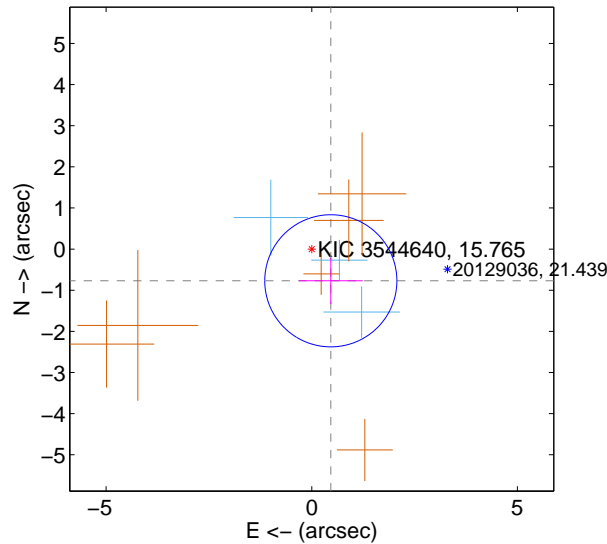
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.794 ± 0.703	3.97	-0.309 ± 0.557	-2.777 ± 0.705
PRF-fit source offset from KIC position	0.900 ± 0.535	1.68	-0.464 ± 0.777	-0.771 ± 0.566
photometric centroid source offset	1.68 ± 0.87	1.92	-0.33 ± 0.73	1.65 ± 0.88

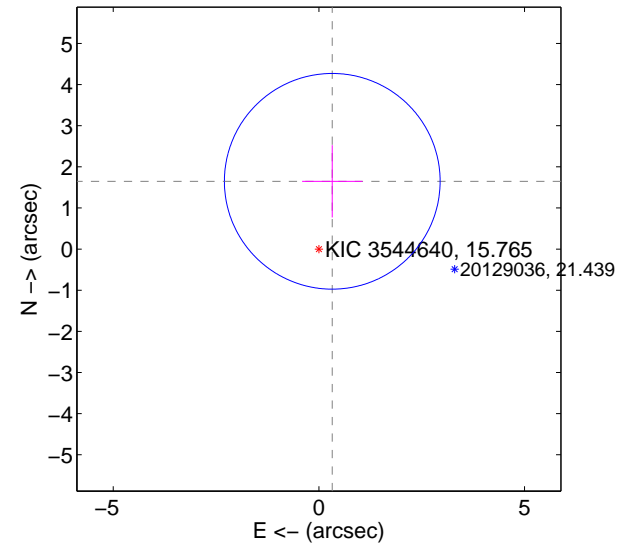
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

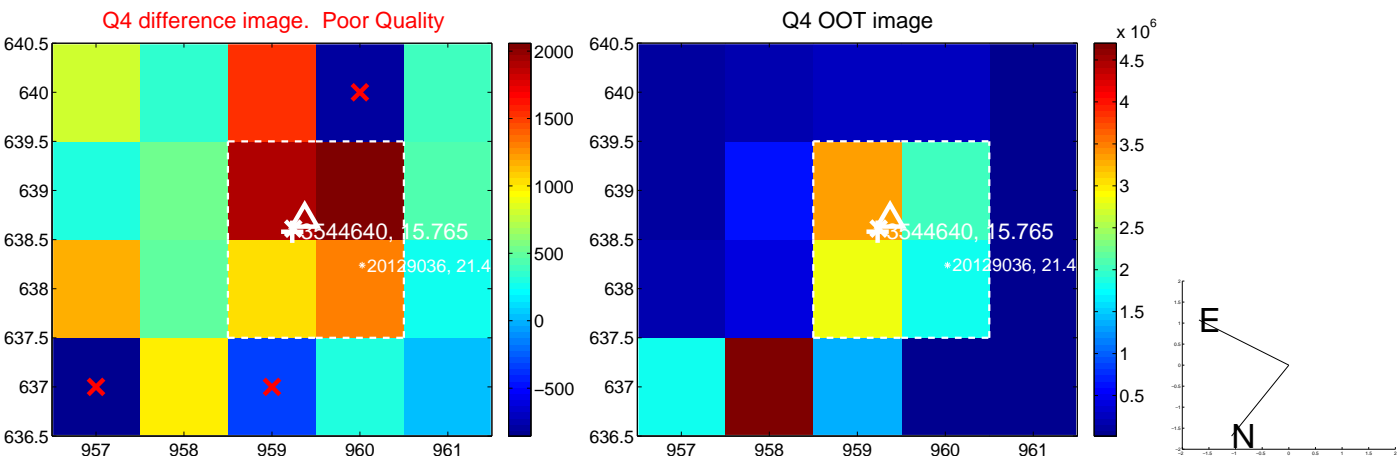
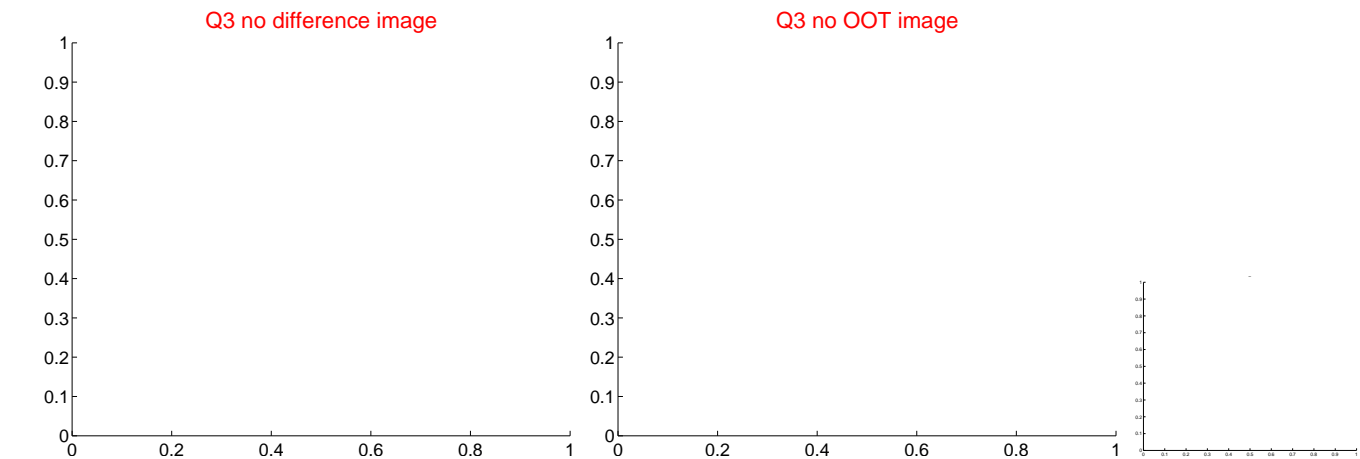
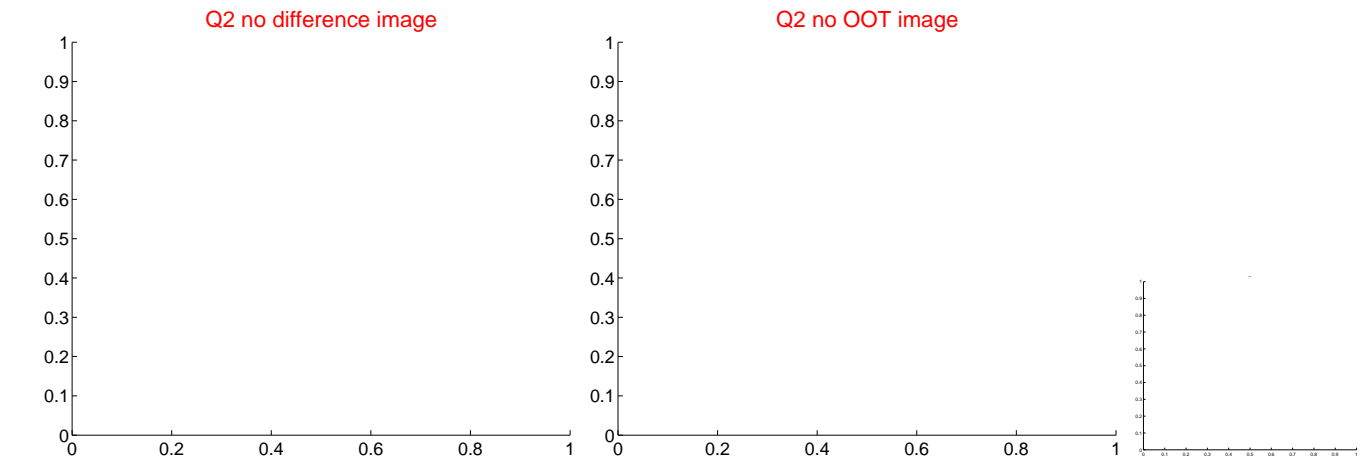
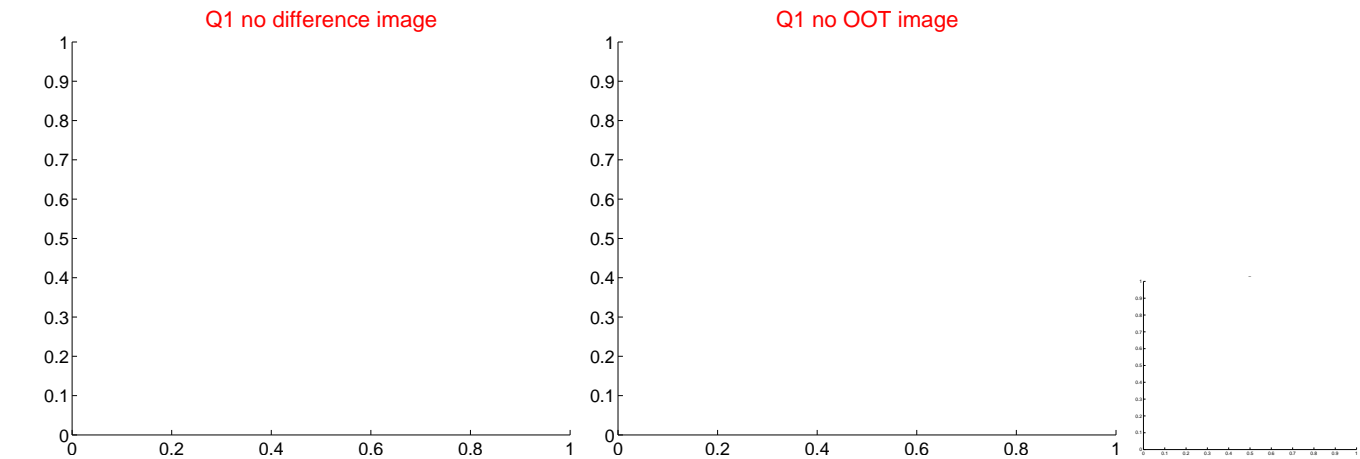


offset from photometric centroids

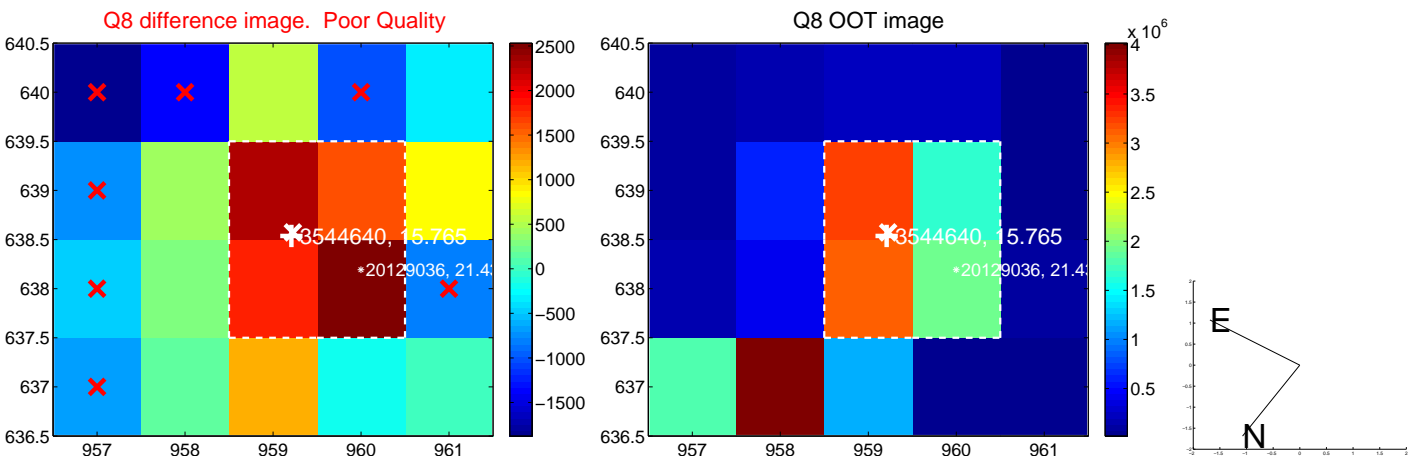
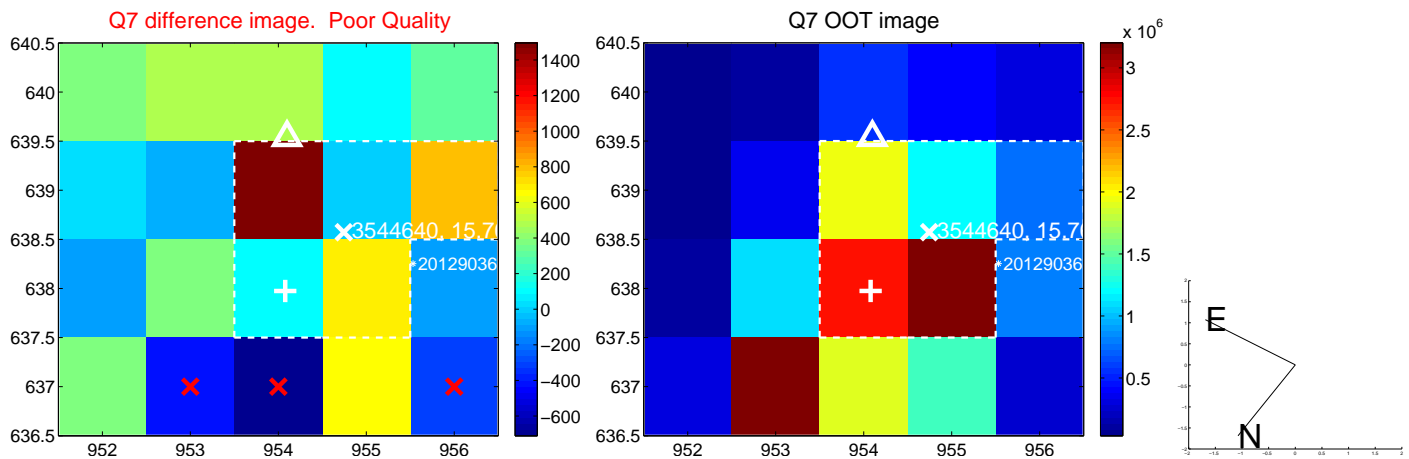
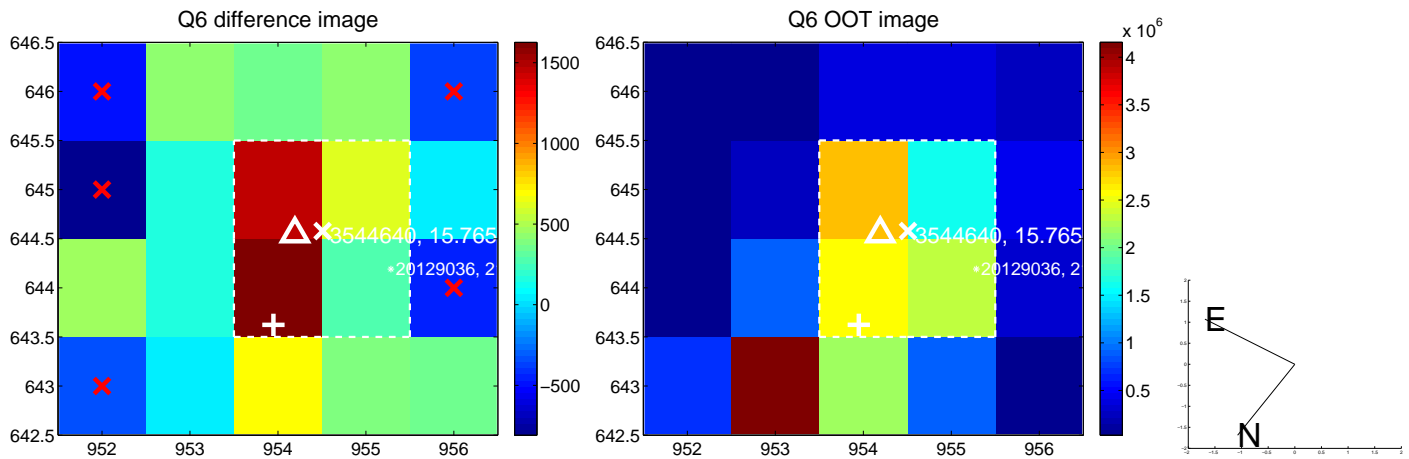
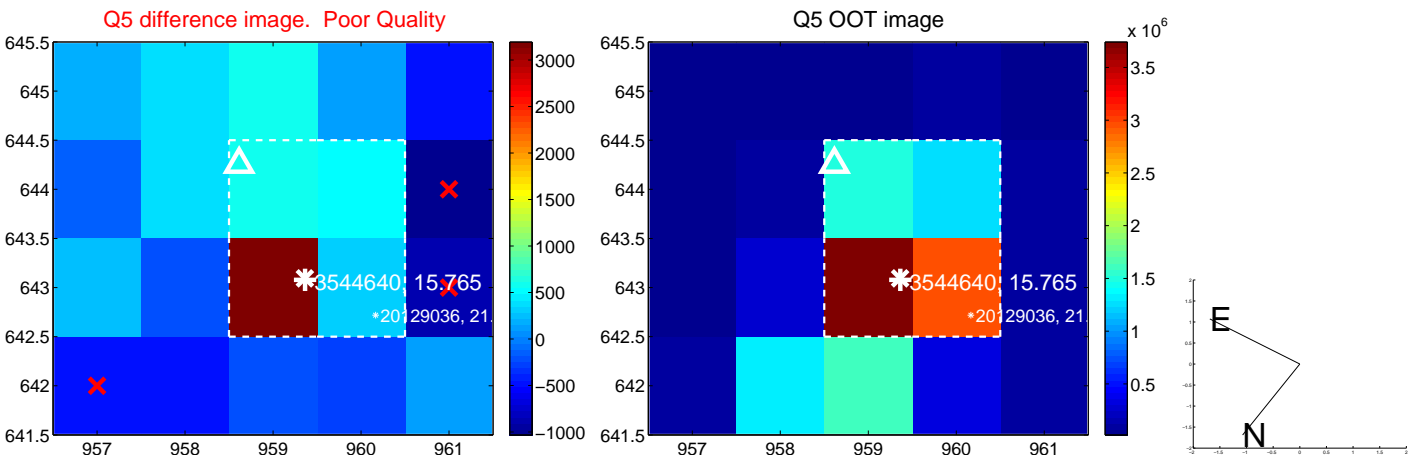


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

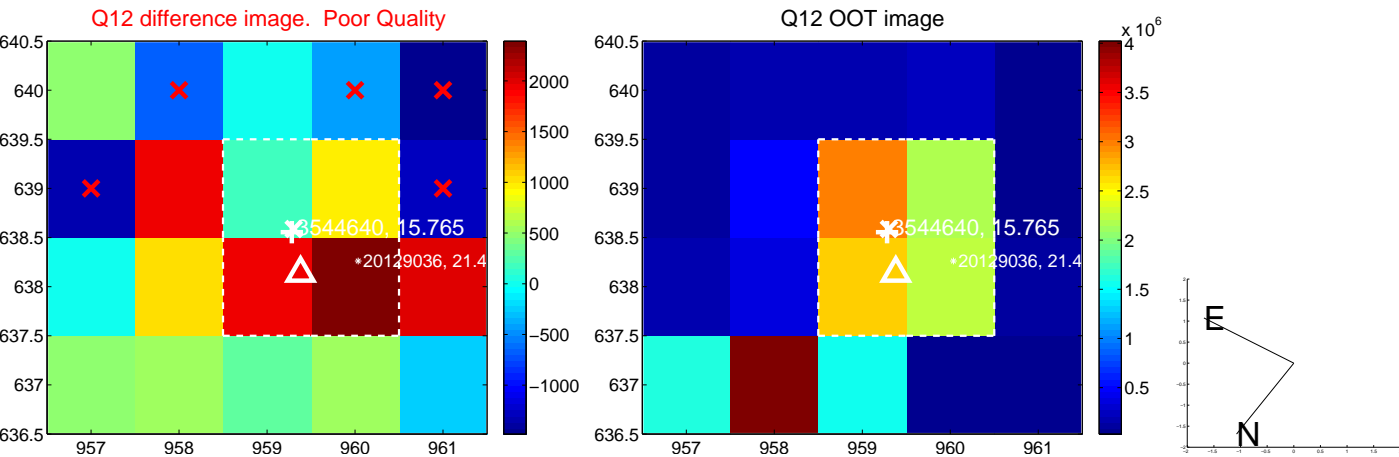
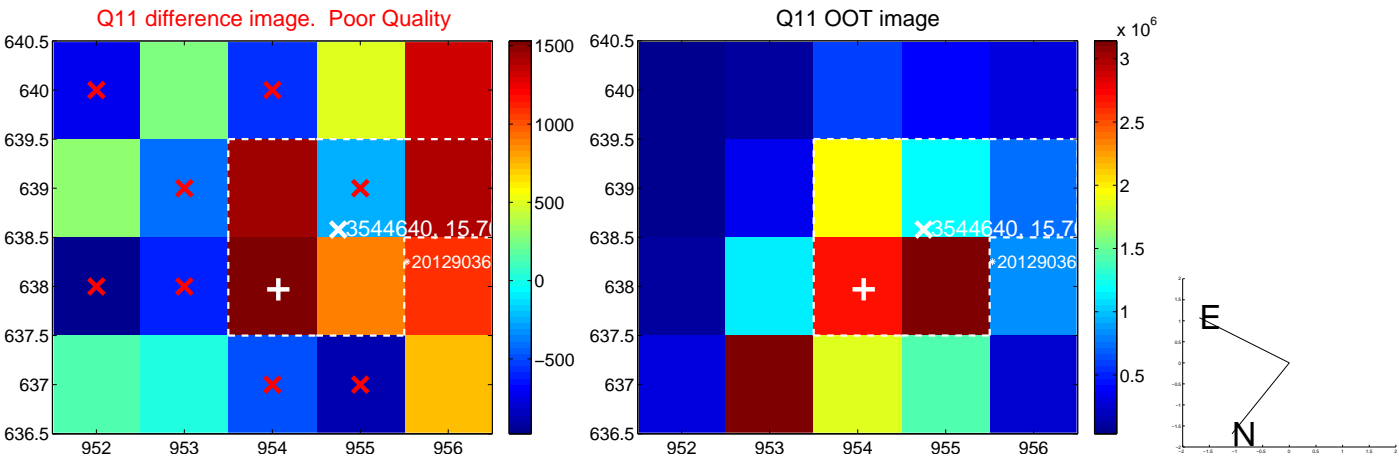
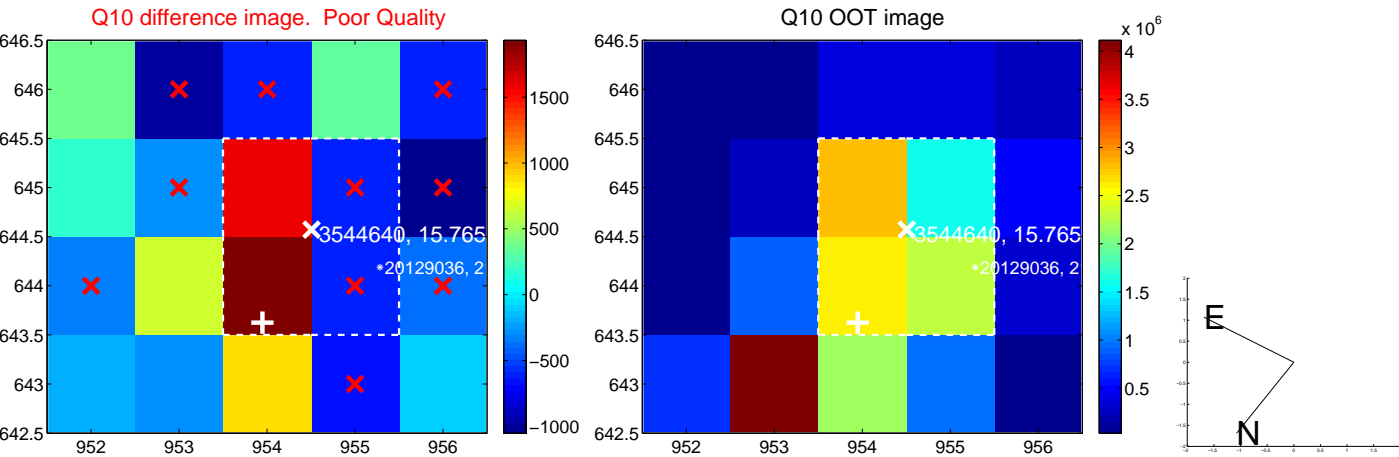
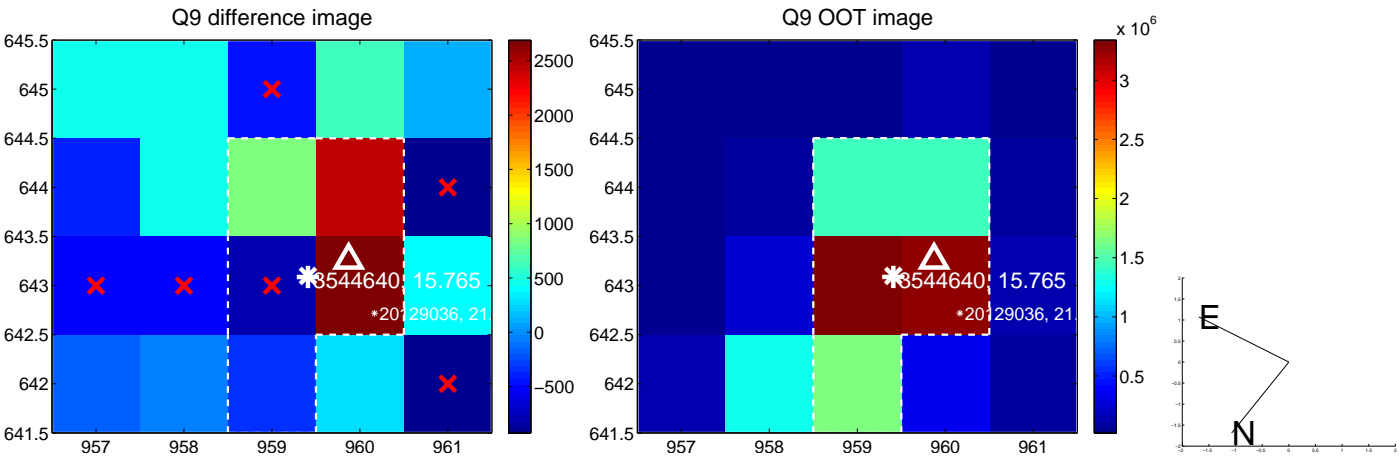
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



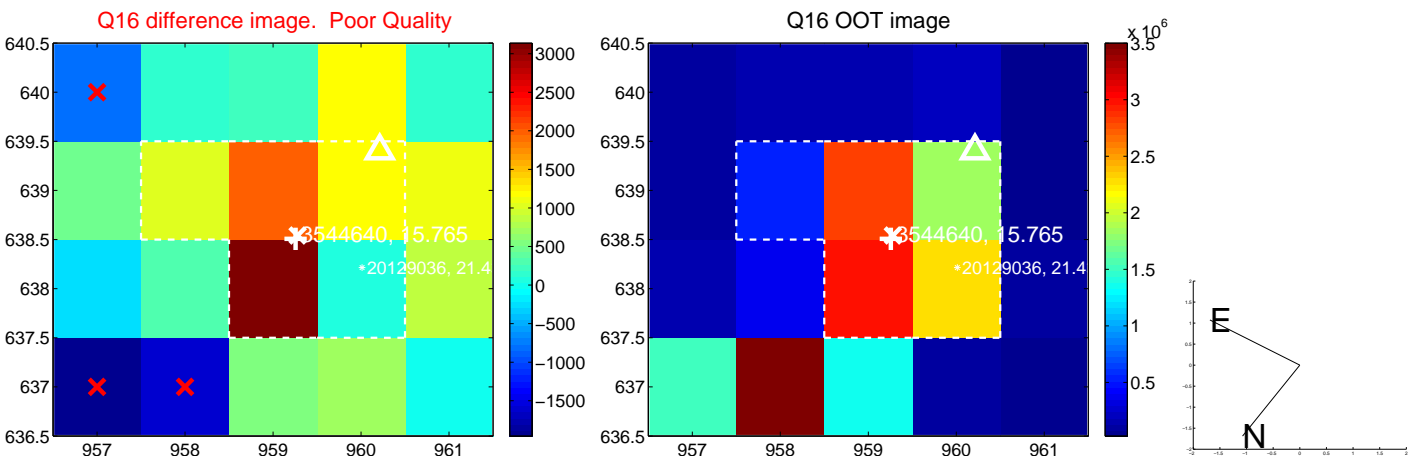
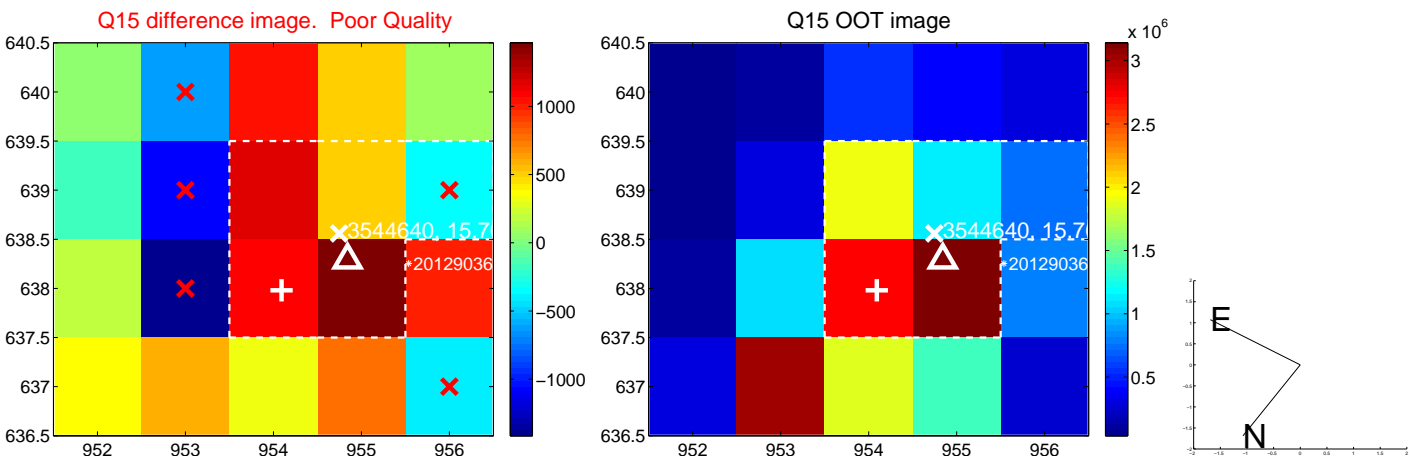
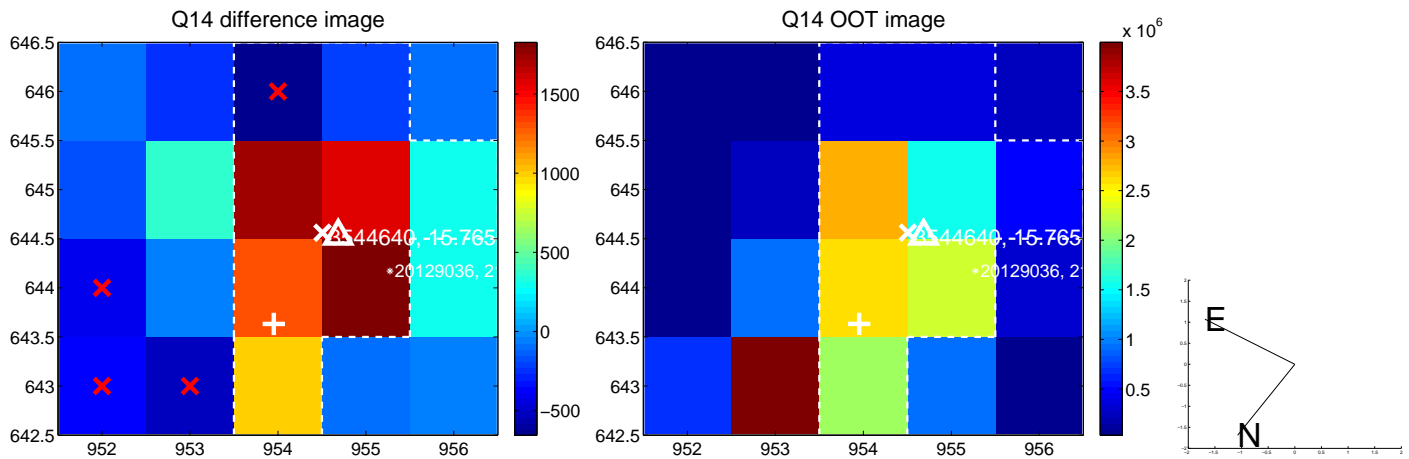
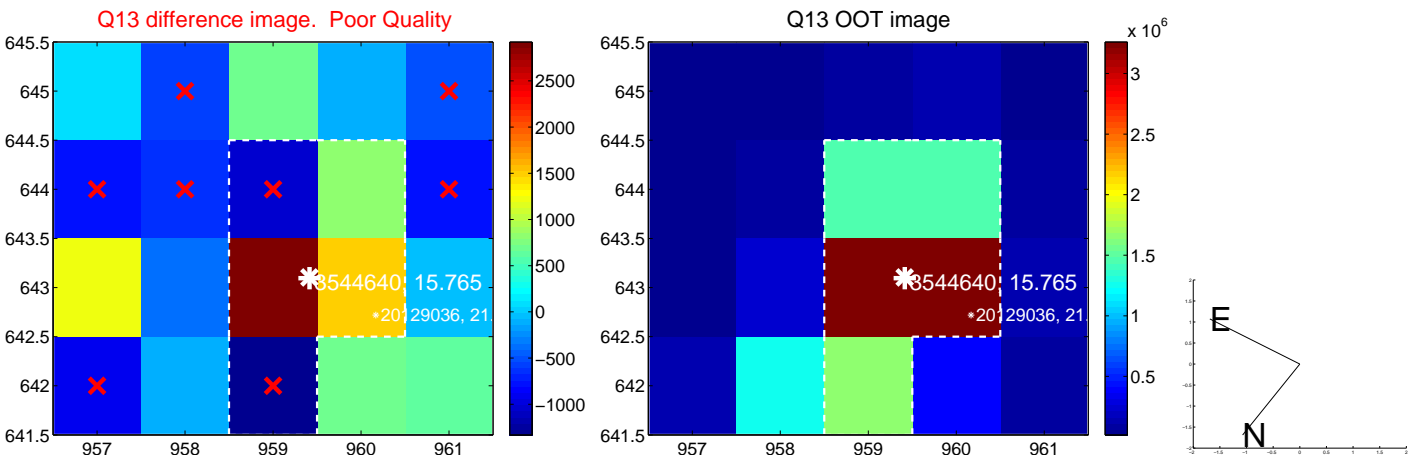
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



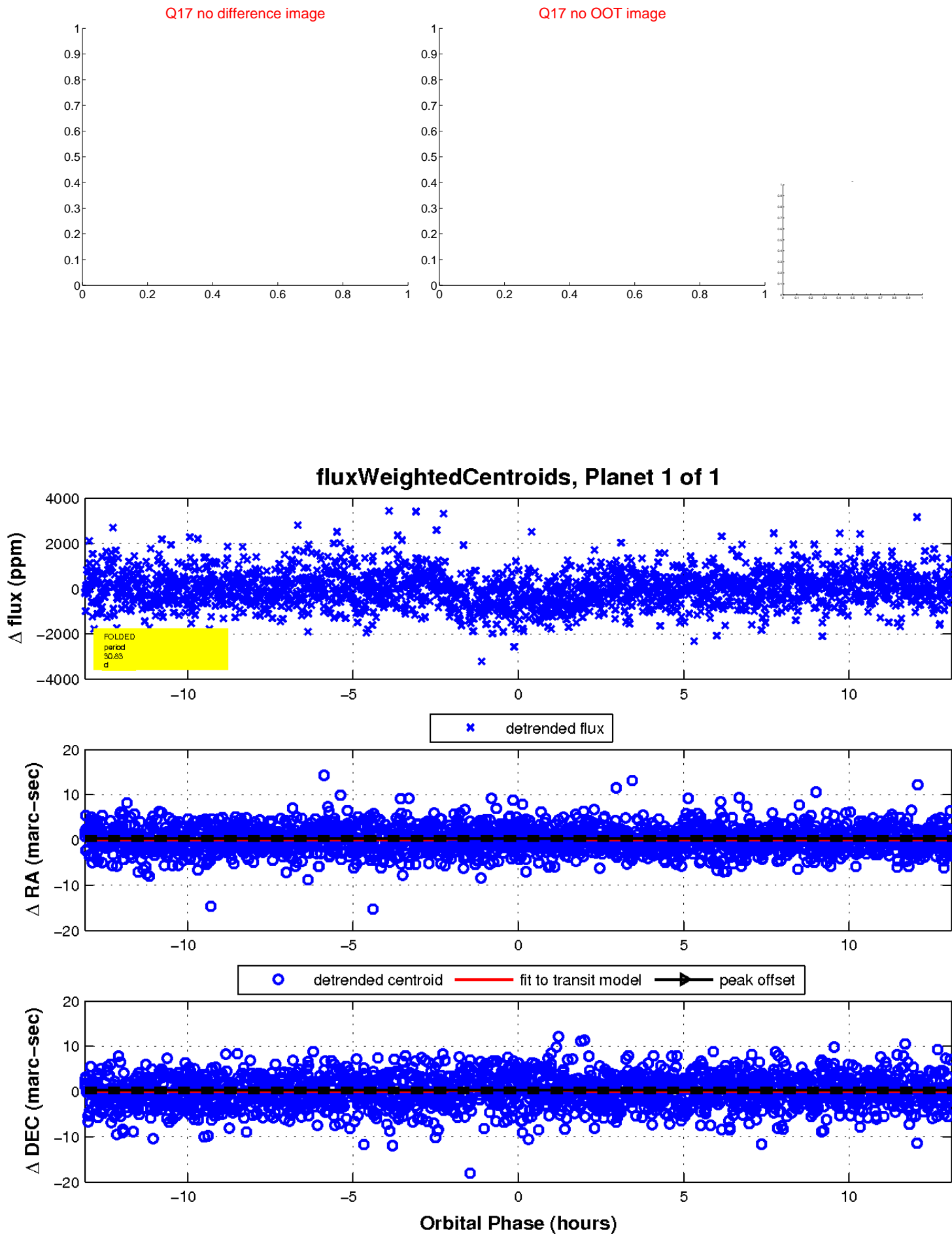
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

