

KIC 010422852

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})
010422852-01	OBS	7326.01	1.398877	132.175777	41456.3	2.000	1330.6	-1.0	1.05	6134	21.53	2398.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010422852-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—CENT_NOFITS

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.

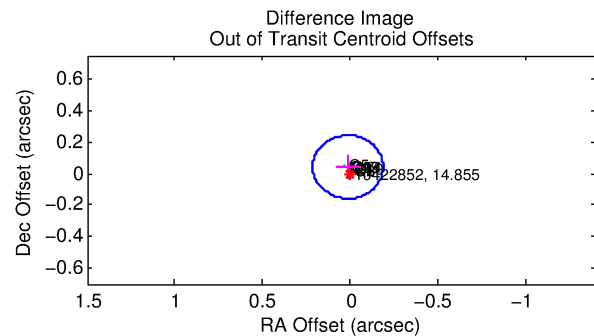
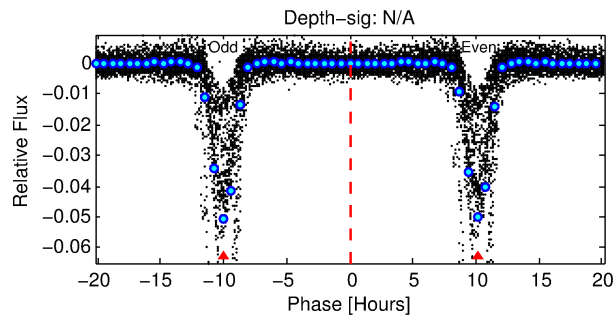
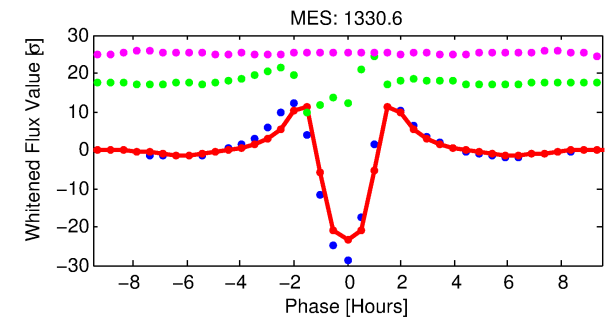
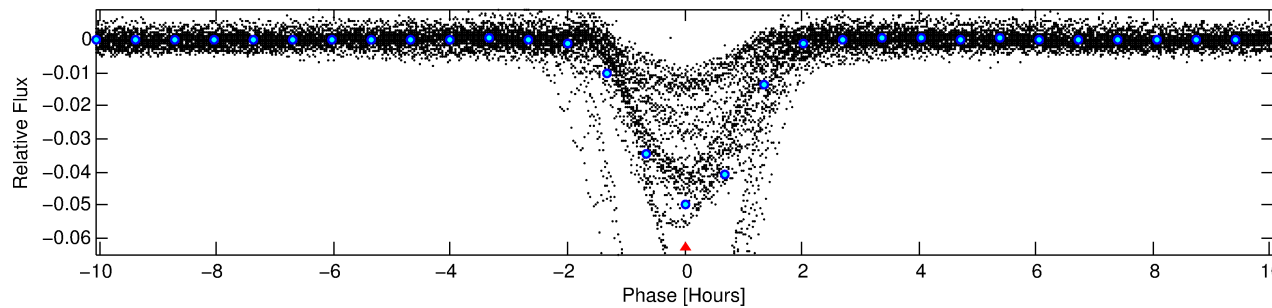
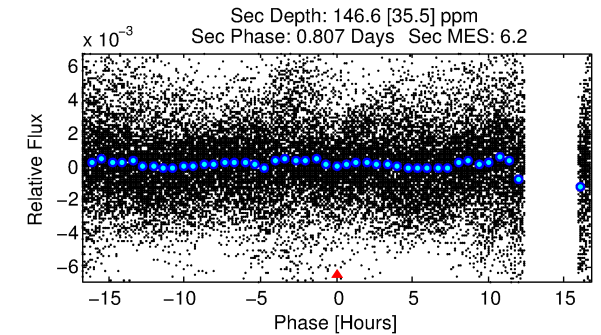
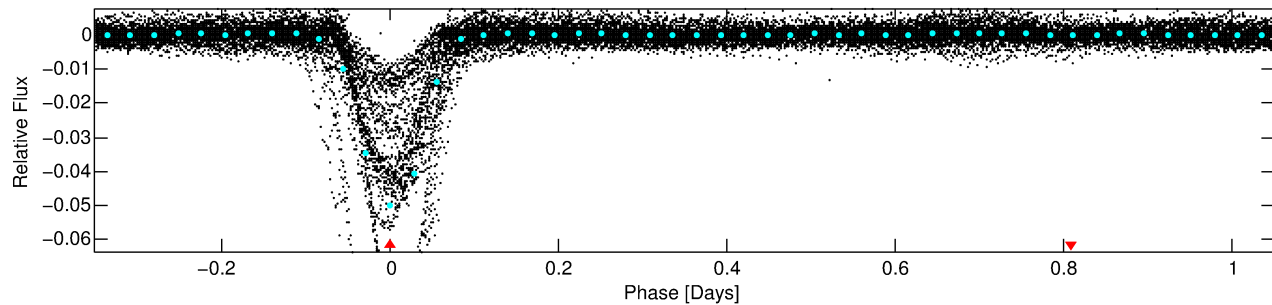
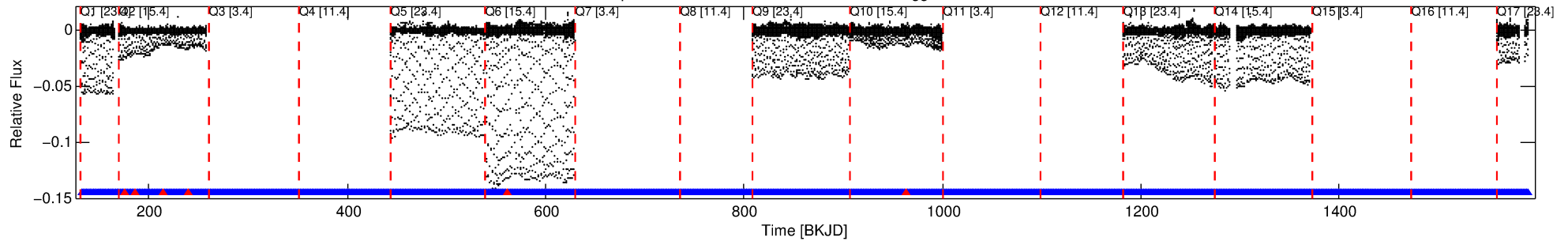
Ephemeris Match Information For 010422852-01

No Significant Match Found

DV One-Page Summary

KIC: 10422852 Candidate: 1 of 1 Period: 1.399 d
KOI: K07326 Corr: No Ephemeris Match

Kp: 14.85 R*: 1.05 Rs Teff: 6134.0 K Logg: 4.38 Fe/H: -0.320



TPS TCE Results:

Period = 1.39888 d
Epoch = 132.1758 BKJD

DV fit results are unavailable

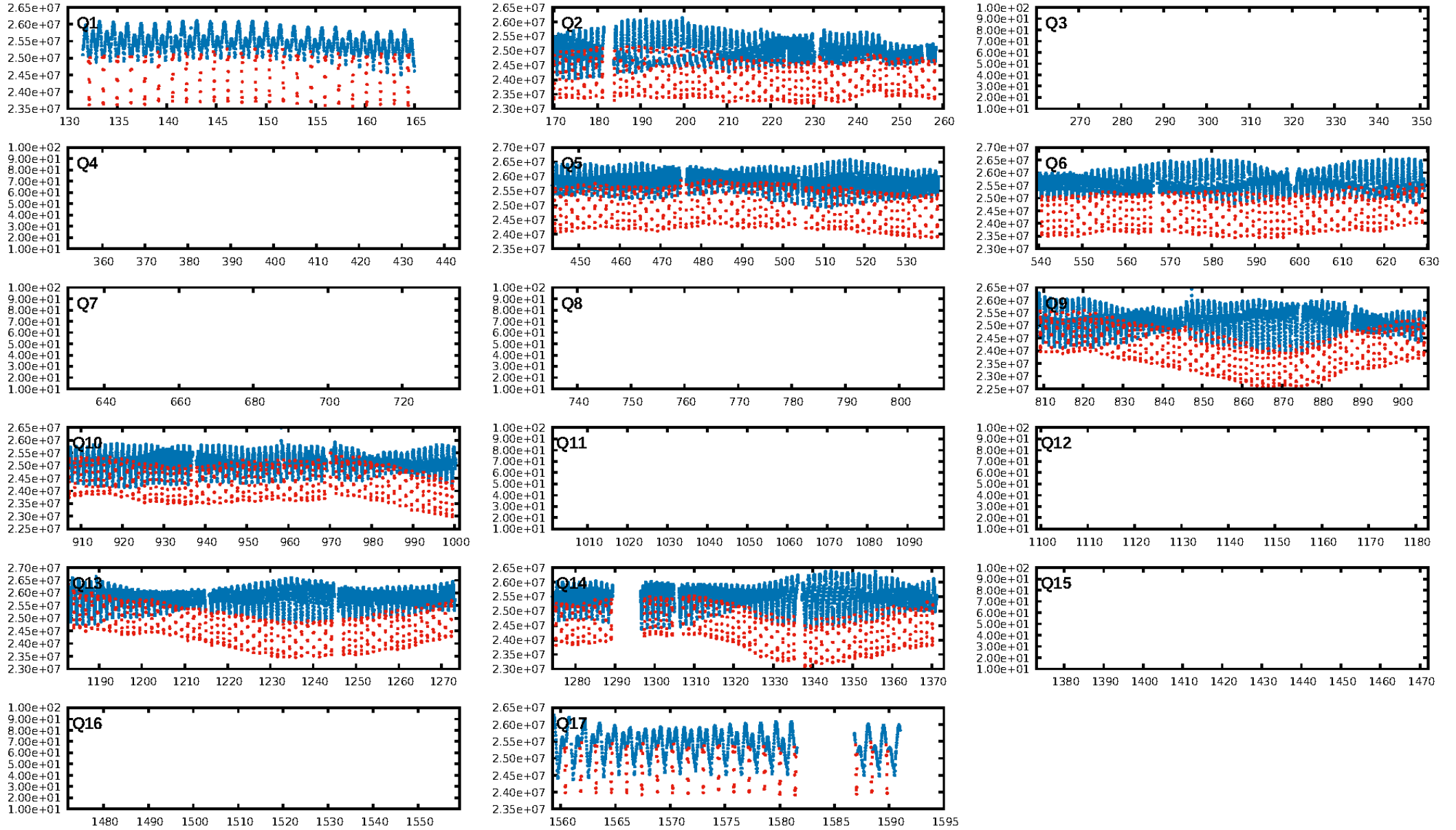
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [450/456]
GhostDiagnostic-chr: 1.192
Centroid-sig: 0.0%
Centroid-so: 0.237 arcsec [82.59σ]
OotOffset-rm: 0.045 arcsec [0.68σ]
KicOffset-rm: 0.061 arcsec [0.89σ]
OotOffset-st: 4/0/0/5 [9]
KicOffset-st: 4/0/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

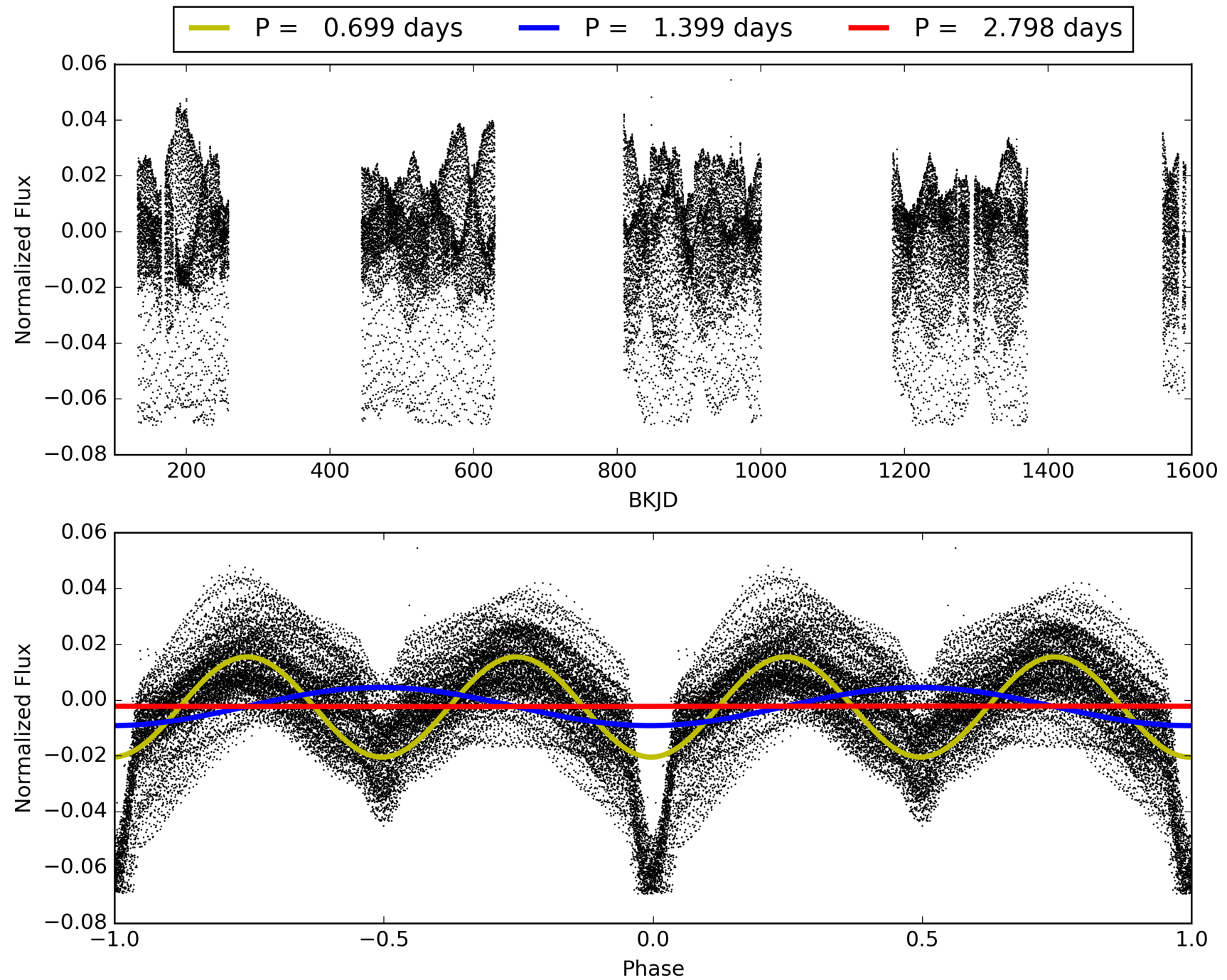
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:15:36 Z

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

TCE 010422852-01, PDC Light Curves

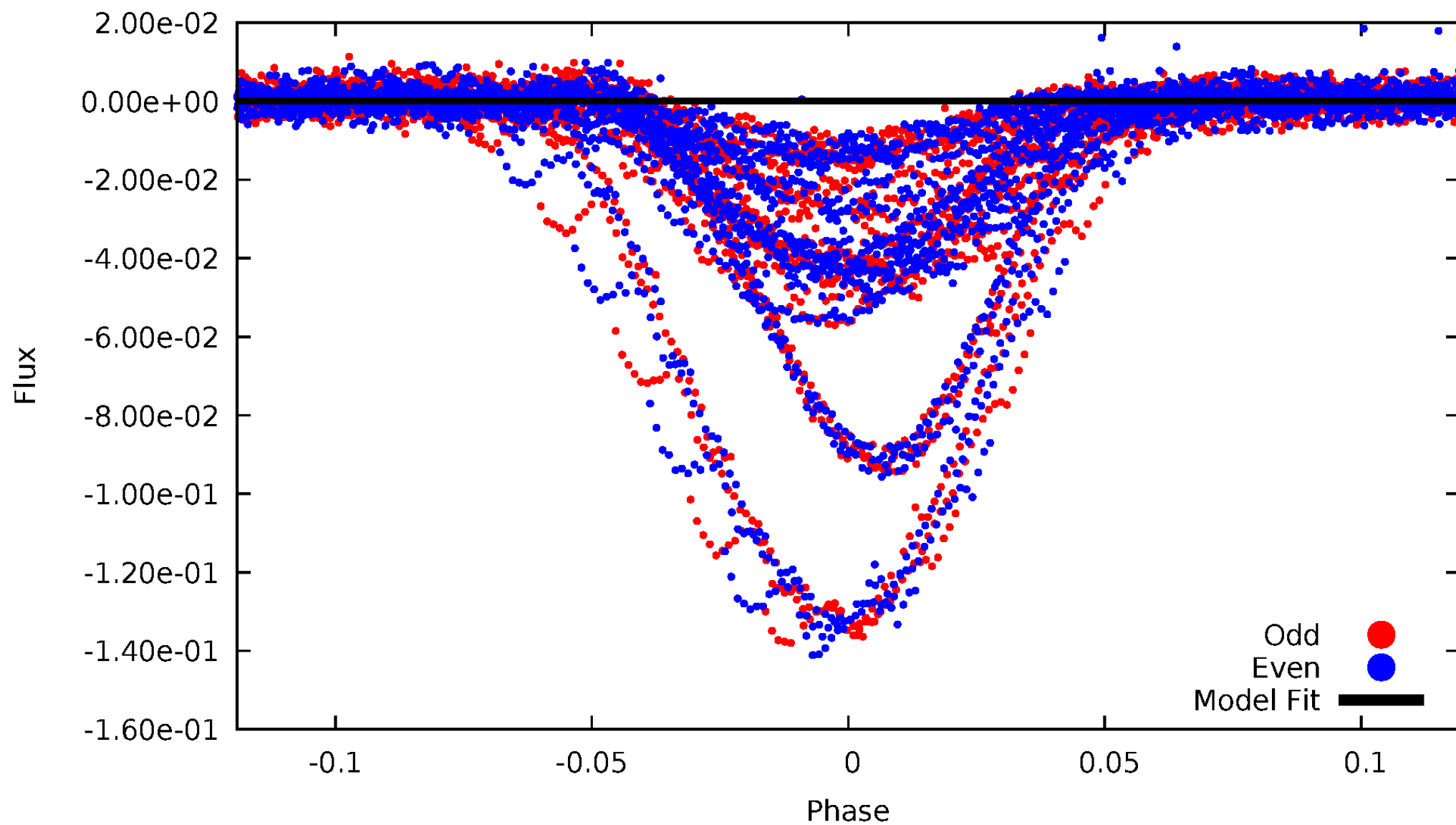


TCE 010422852-01



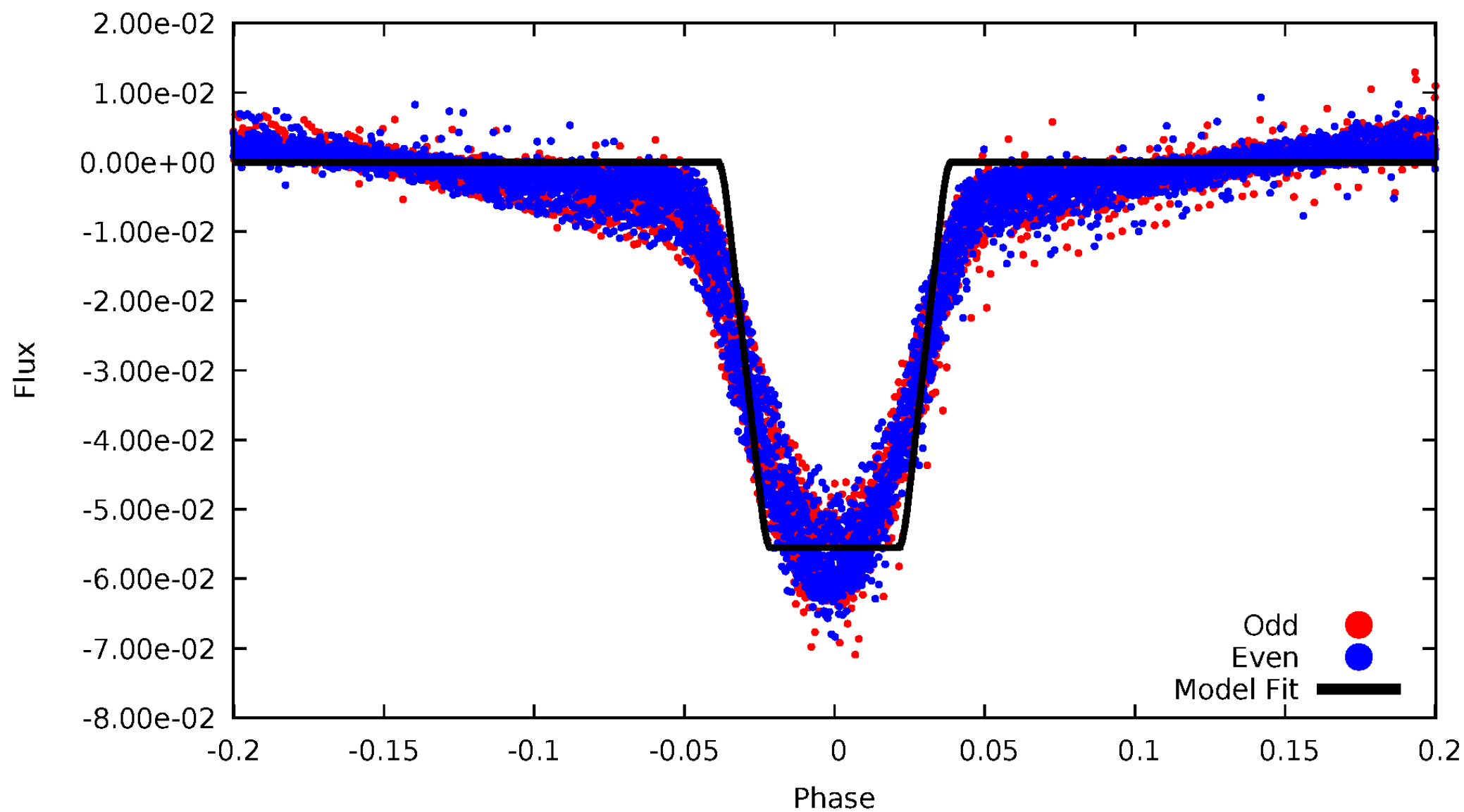
DV Odd/Even

TCE 010422852-01



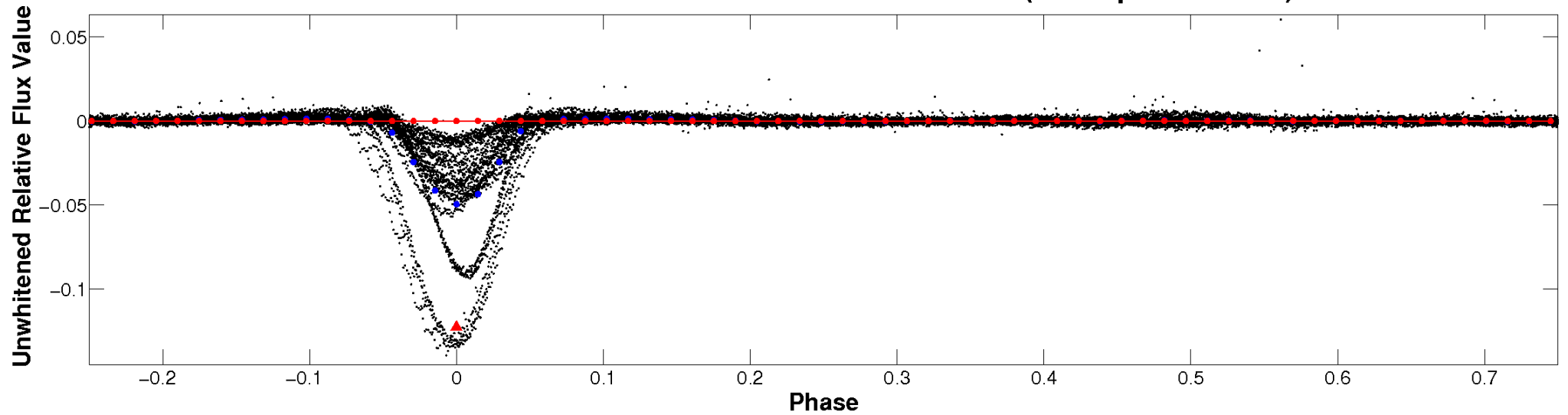
ALT Odd/Even

TCE 010422852-01

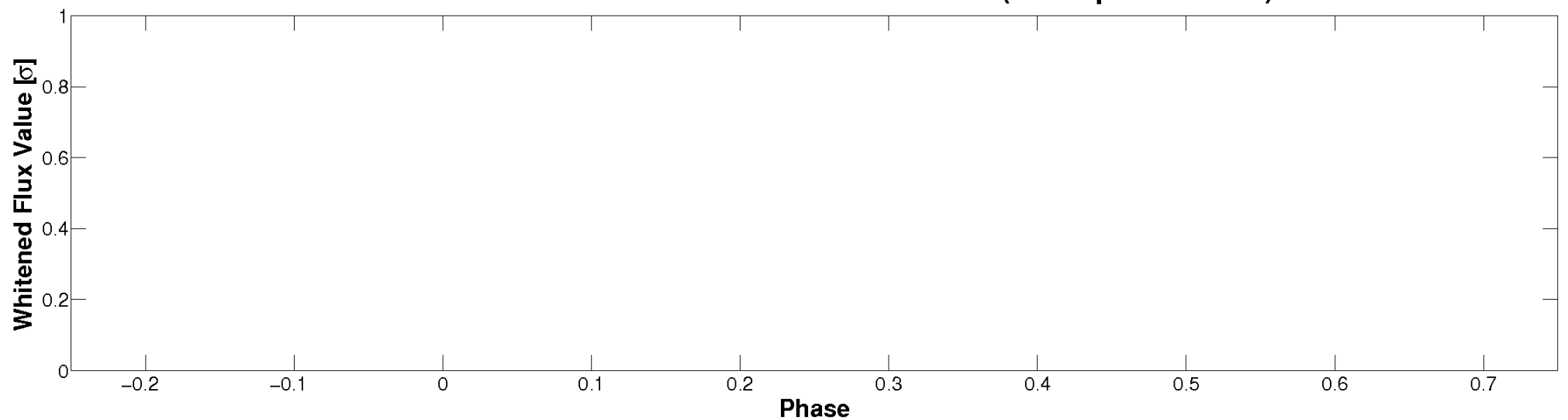


Non-Whitened Vs. Whitened Light Curve

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

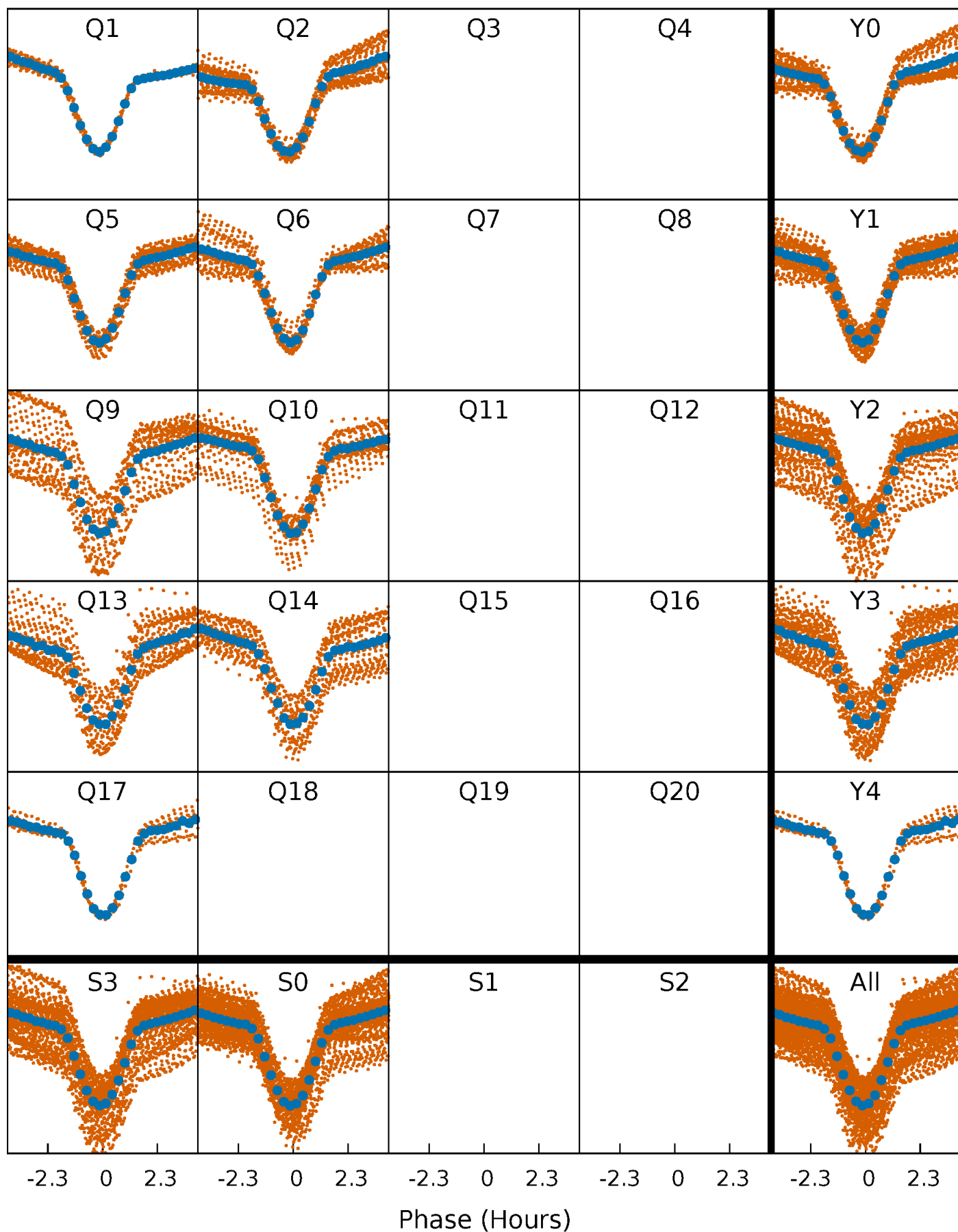


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



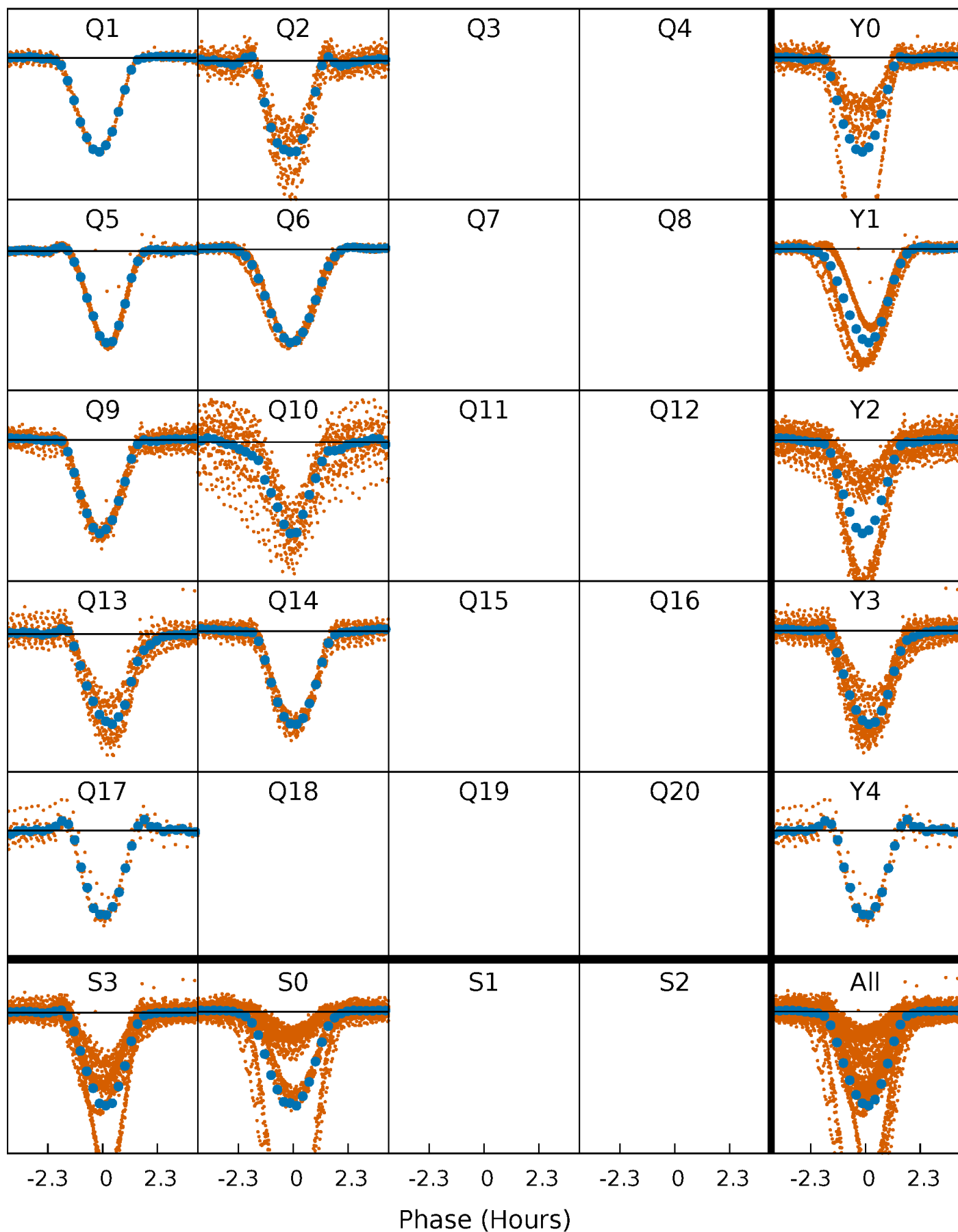
PDC Quarter-Phased Transit Curves

TCE 010422852-01 P= 1.398877 Days $T_0=132.175777$ (BKJD)



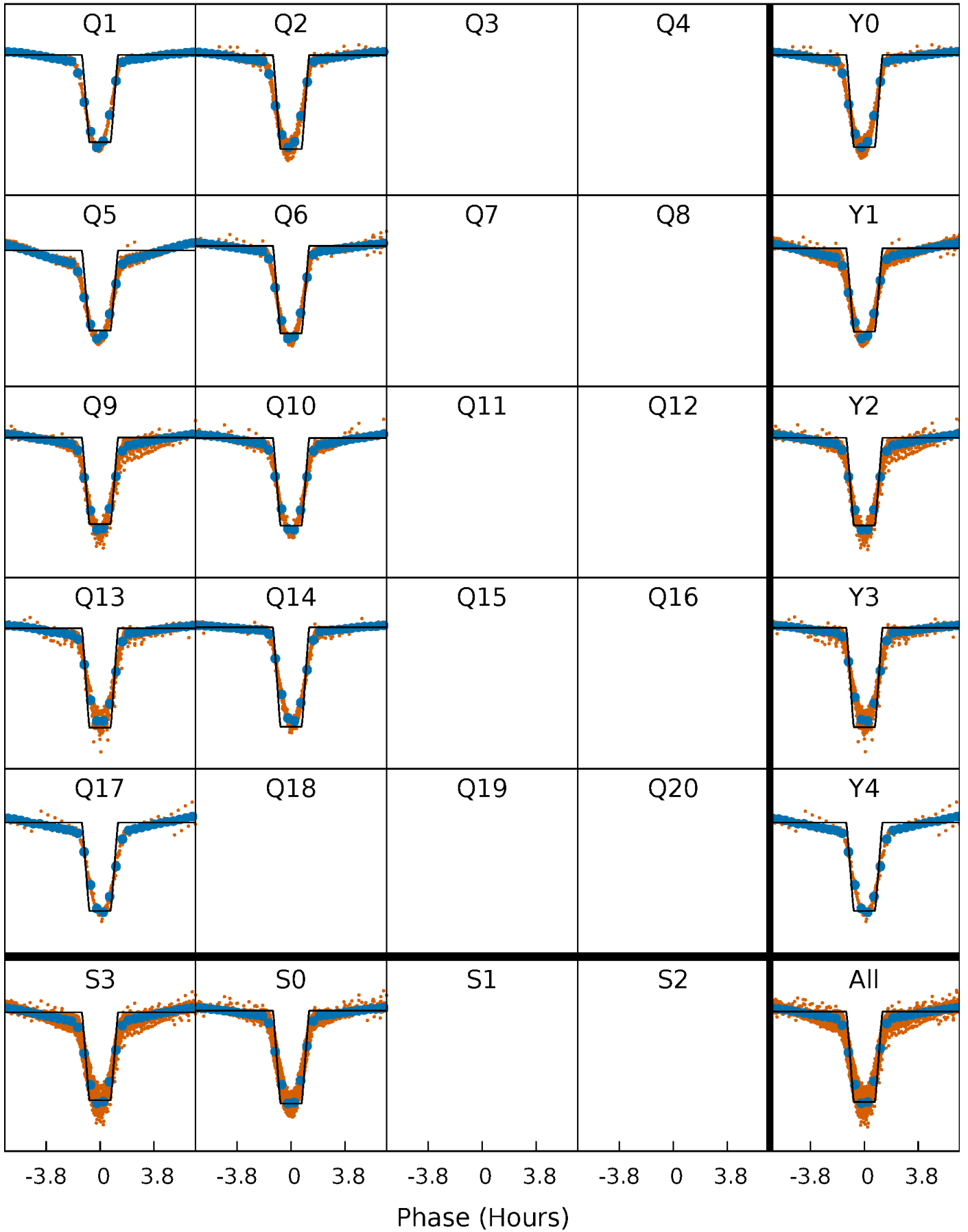
DV Quarter-Phased Transit Curves

TCE 010422852-01 P= 1.398877 Days $T_0=132.175777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

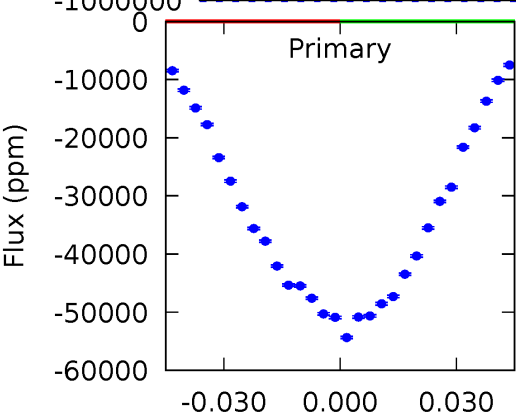
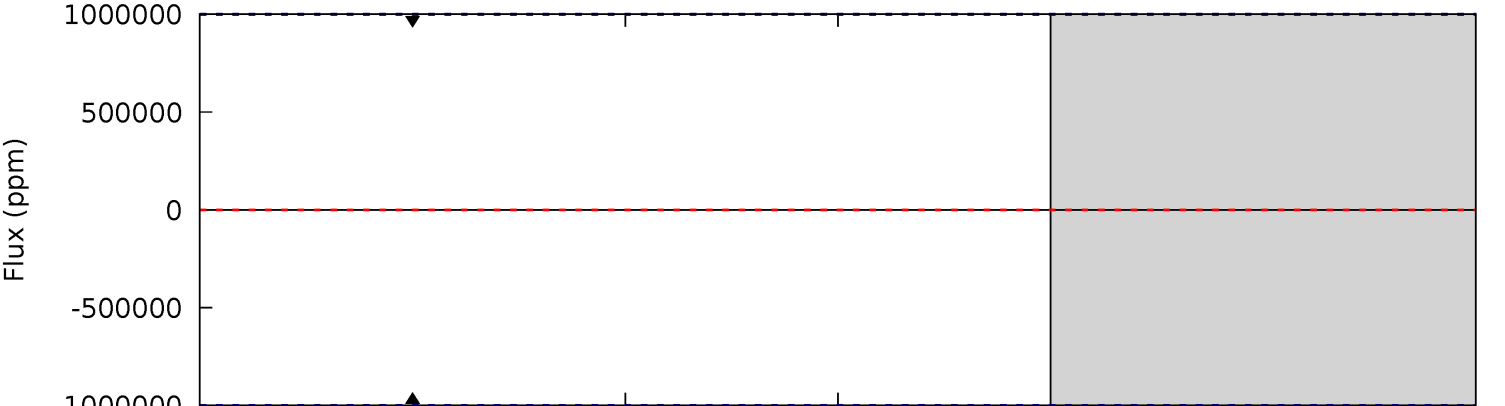
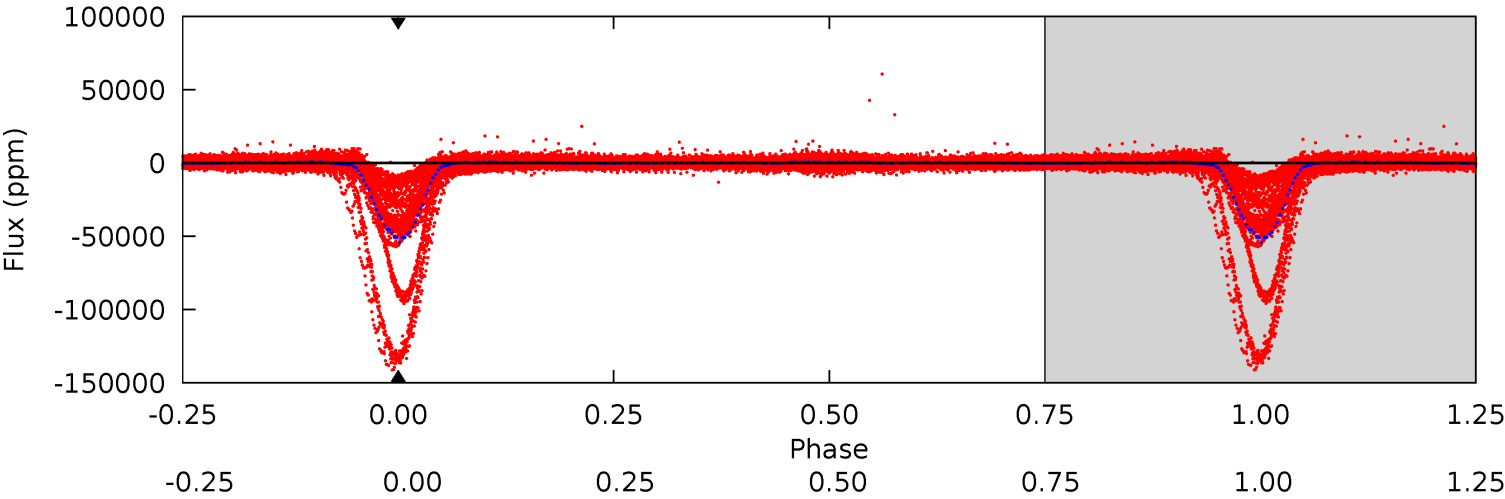
TCE 010422852-01 P= 1.398877 Days $T_0=132.173200$ (BKJD)



DV Model-Shift Uniqueness Test

010422852-01, P = 1.398877 Days, E = 130.776900 Days

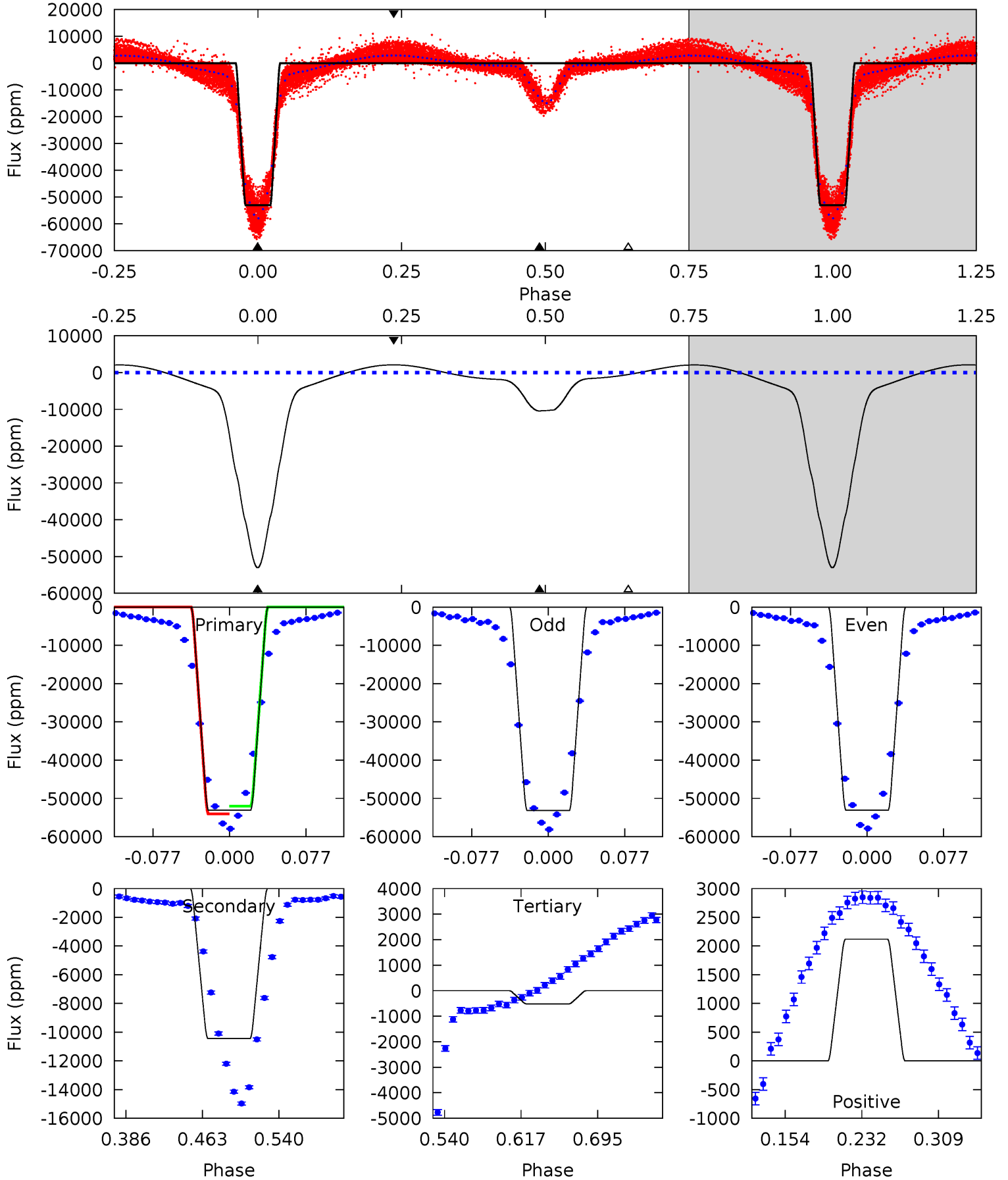
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010422852-01, P = 1.398877 Days, E = 130.774323 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1109	218.4	10.8	44.3	4.62	1.77	36.0	1099	1065	207.6	174.1	0.68	1.00	0.04	21.1



Stellar Parameters For KIC 010422852

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6134^{+192}_{-235}	$4.378^{+0.124}_{-0.186}$	$-0.320^{+0.300}_{-0.300}$	$1.051^{+0.307}_{-0.165}$	$0.962^{+0.140}_{-0.115}$	$1.169^{+0.658}_{-0.568}$
	+3%/-4%	+3%/-4%	+94%/-94%	+29%/-16%	+15%/-12%	+56%/-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 010422852-01 / KOI 7326.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$22.51^{+11.69}_{-10.89}$	2509^{+190}_{-154}	3861^{+5055}_{-12044}	$3.013^{+88.615}_{-70.847}$
Alt.	-10444 ± 48	$28.17^{+12.81}_{-11.79}$	2512^{+186}_{-154}	4203^{+1074}_{-556}	$4.323^{+8.051}_{-2.278}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

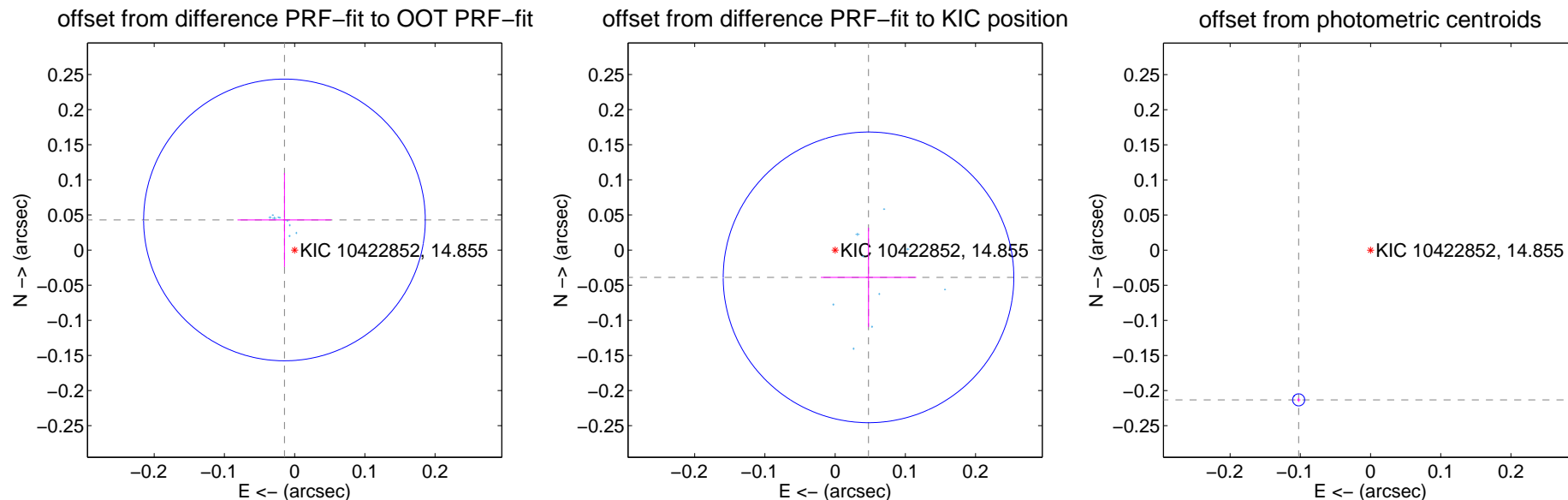
DV Centroid Data

Supplemental centroid analysis for 010422852-01. Kepler magnitude: 14.86. Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

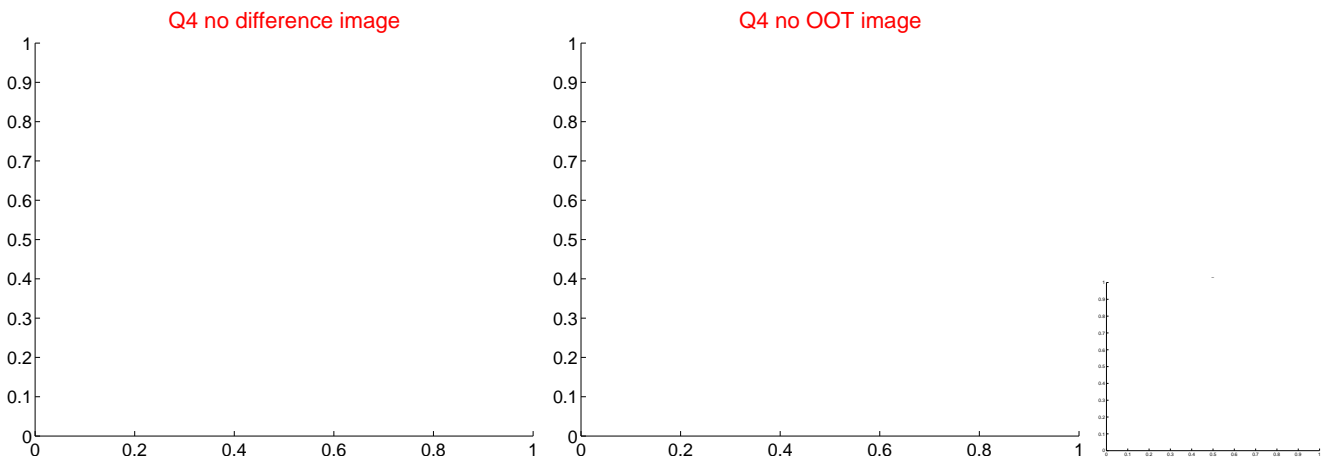
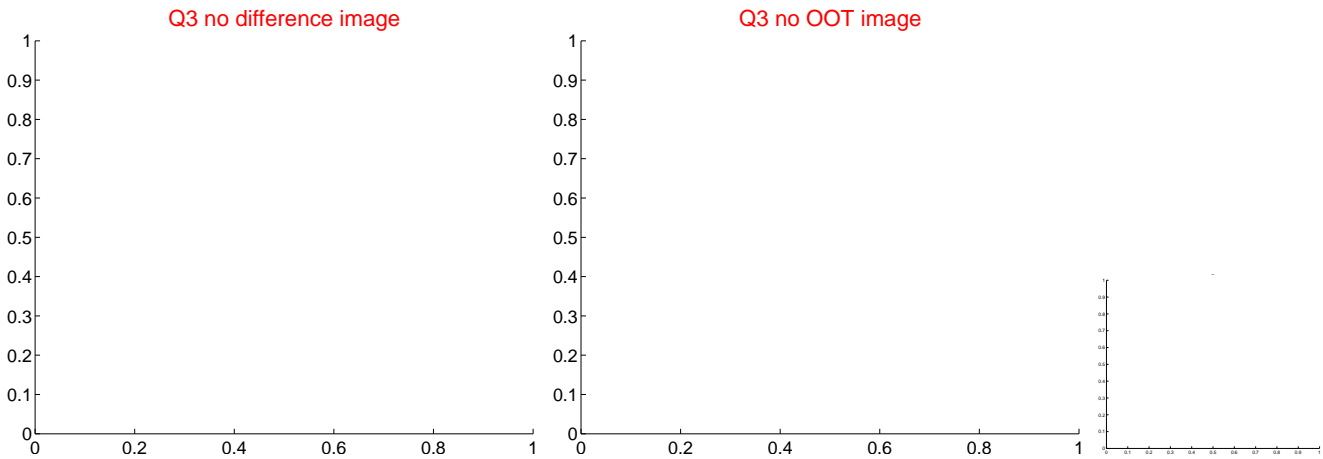
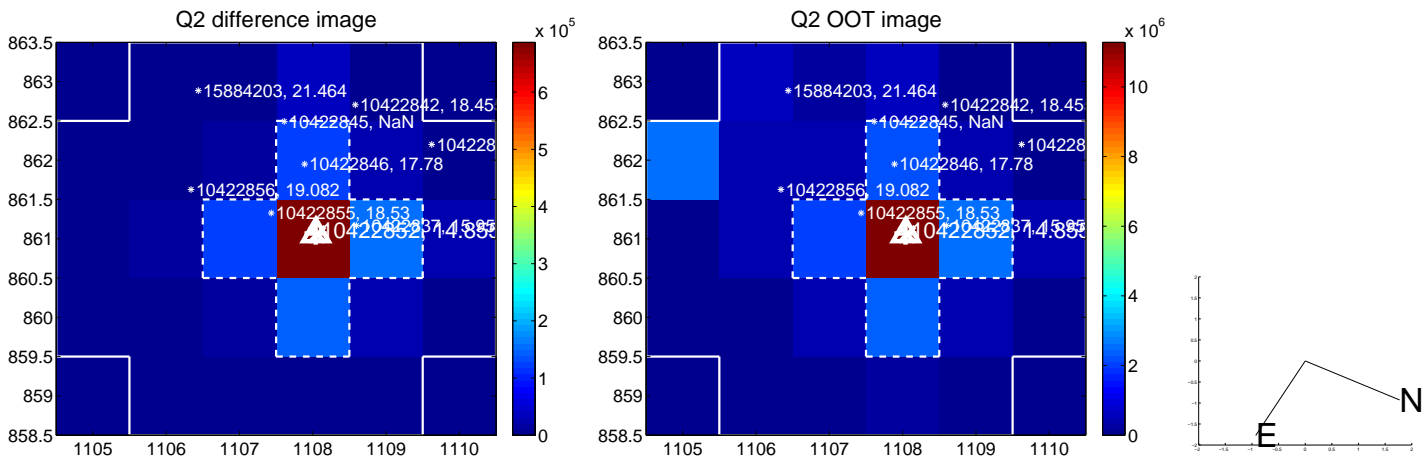
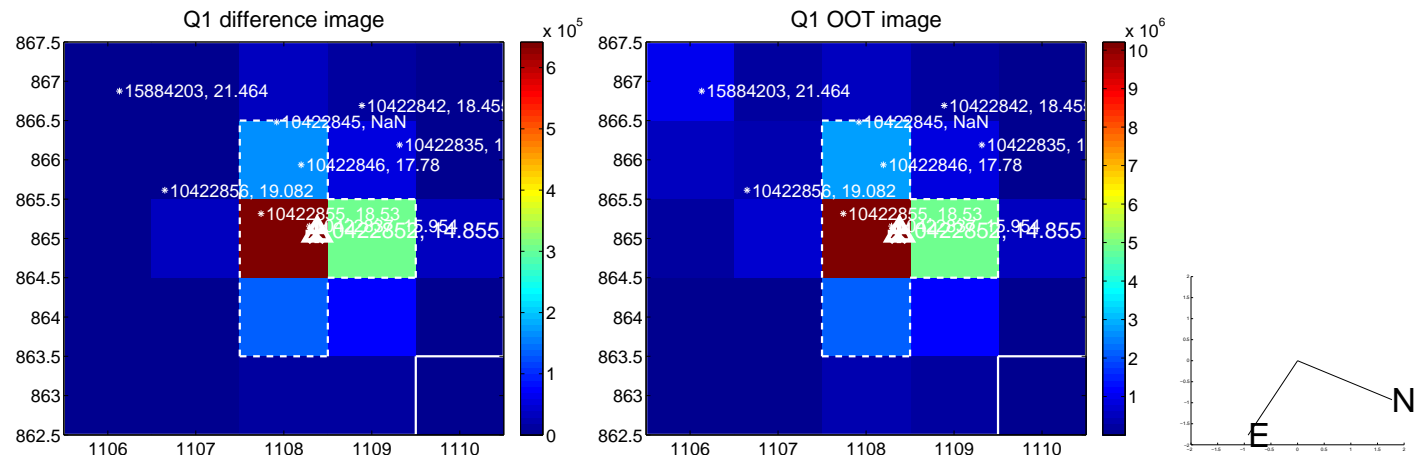
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.067	0.68	0.014 ± 0.067	0.043 ± 0.067
PRF-fit source offset from KIC position	0.061 ± 0.069	0.89	-0.048 ± 0.068	-0.039 ± 0.071
photometric centroid source offset	0.24 ± 0.00	82.59	0.10 ± 0.00	-0.21 ± 0.00

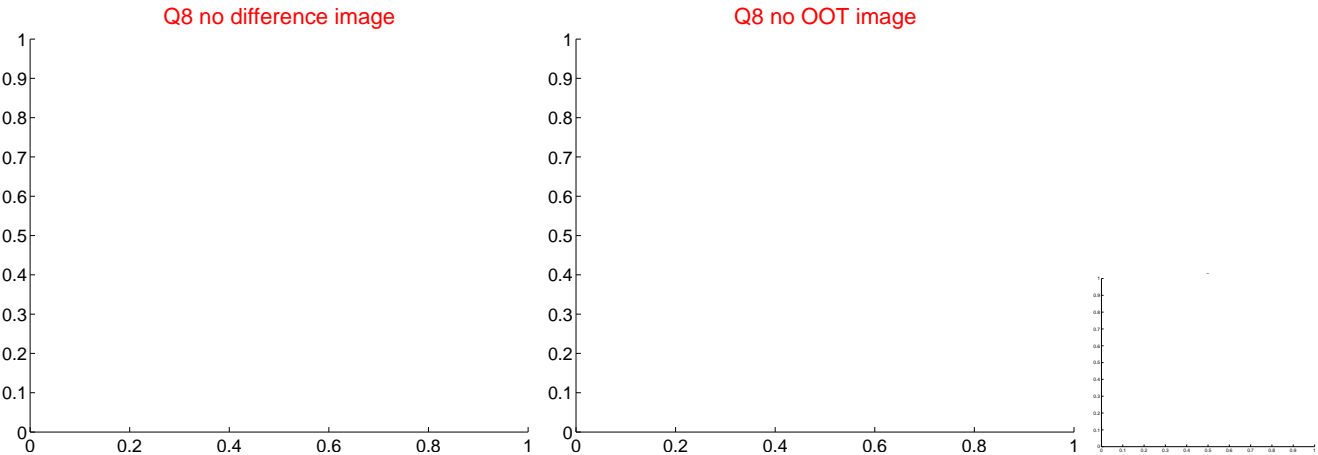
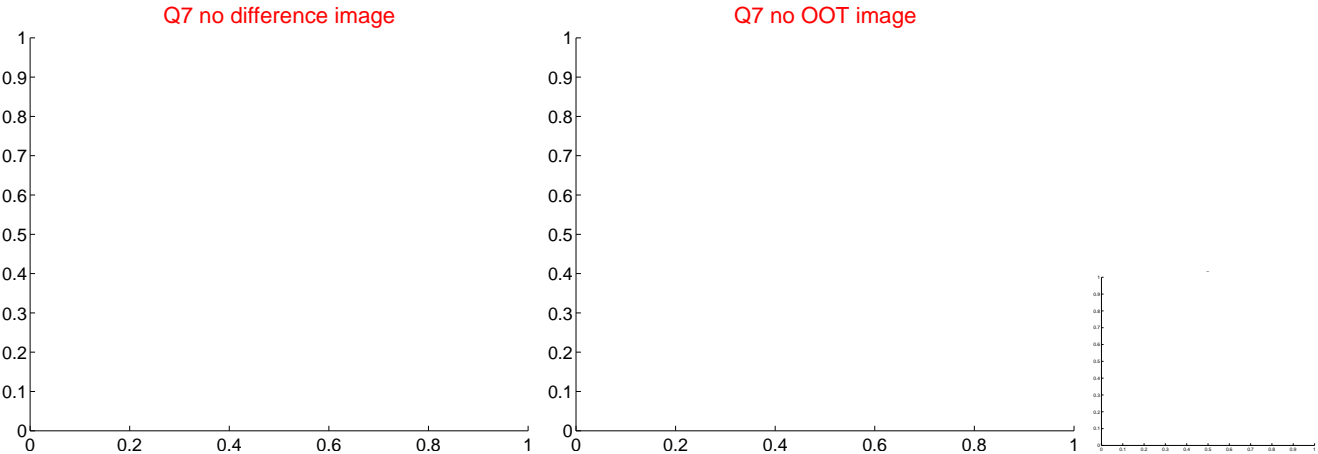
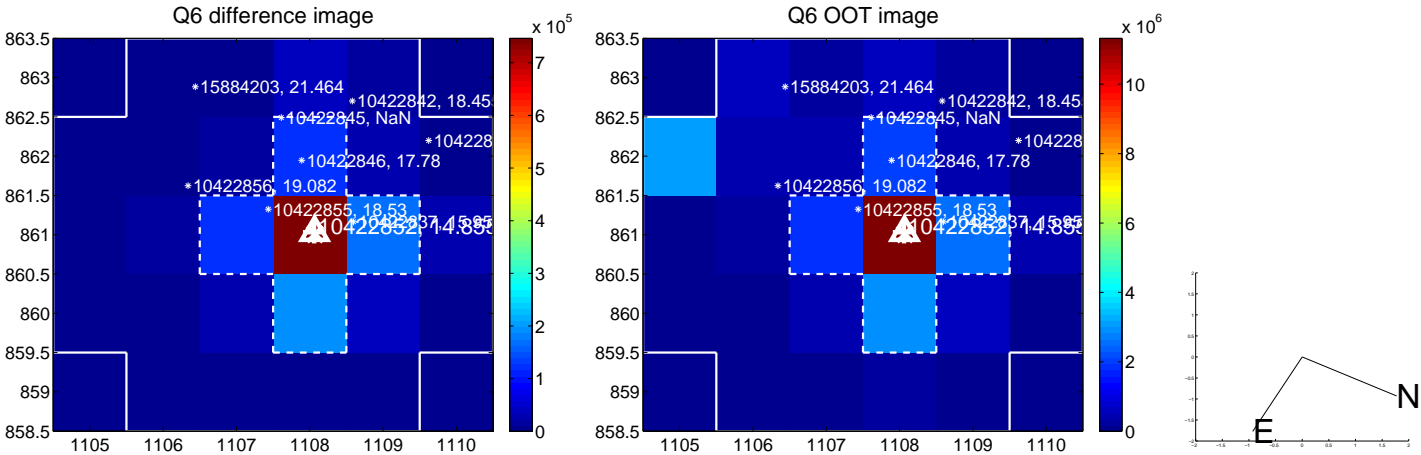
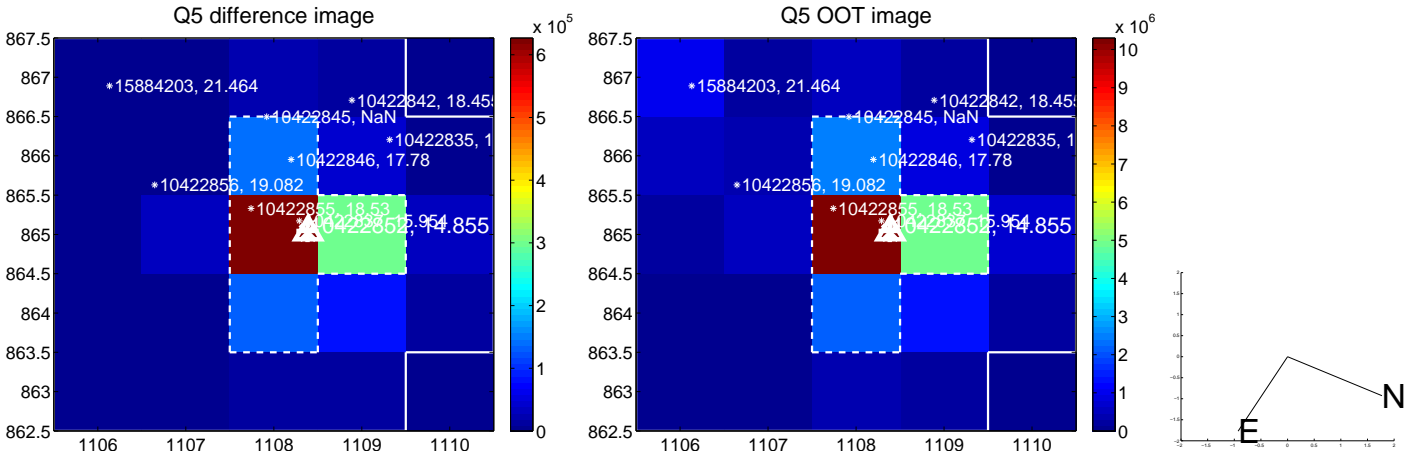


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

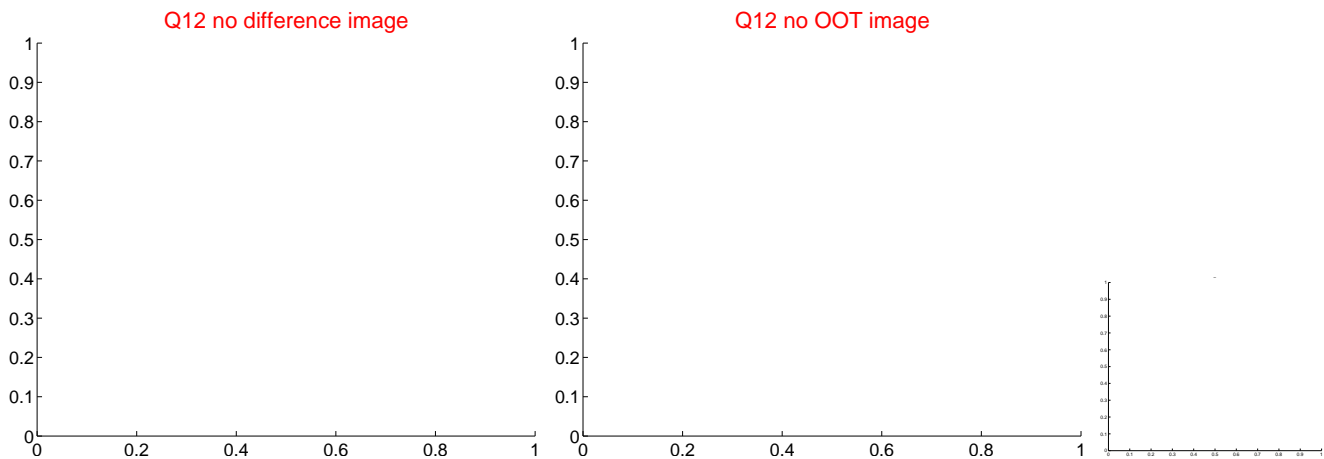
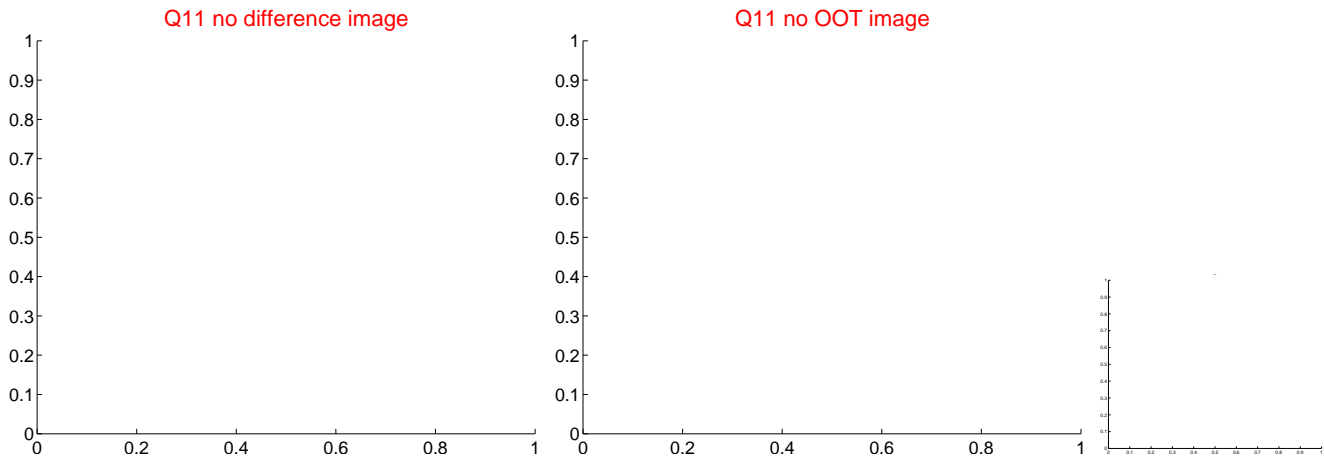
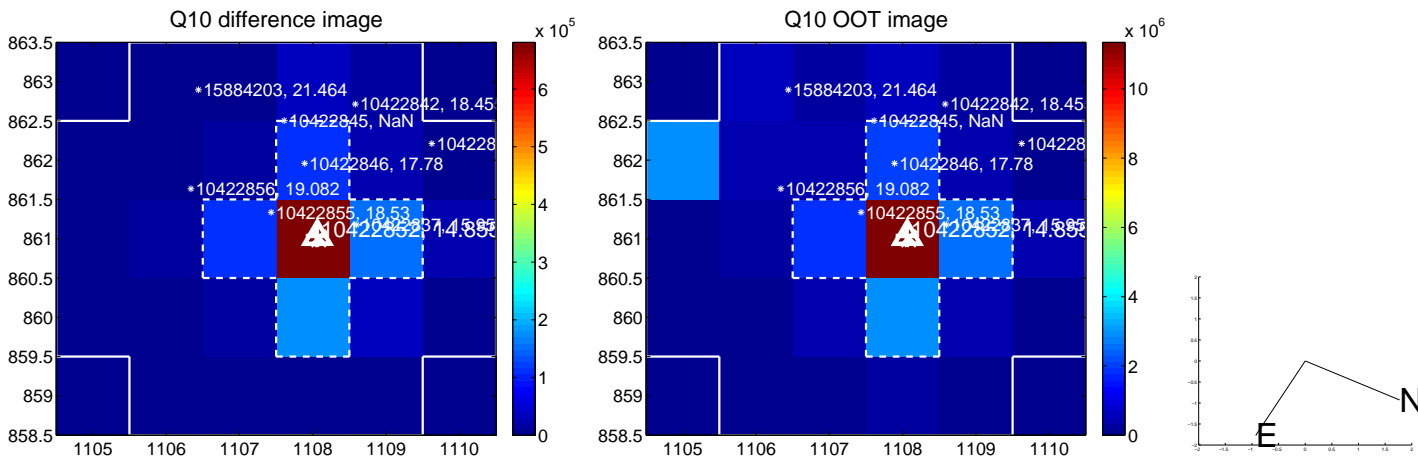
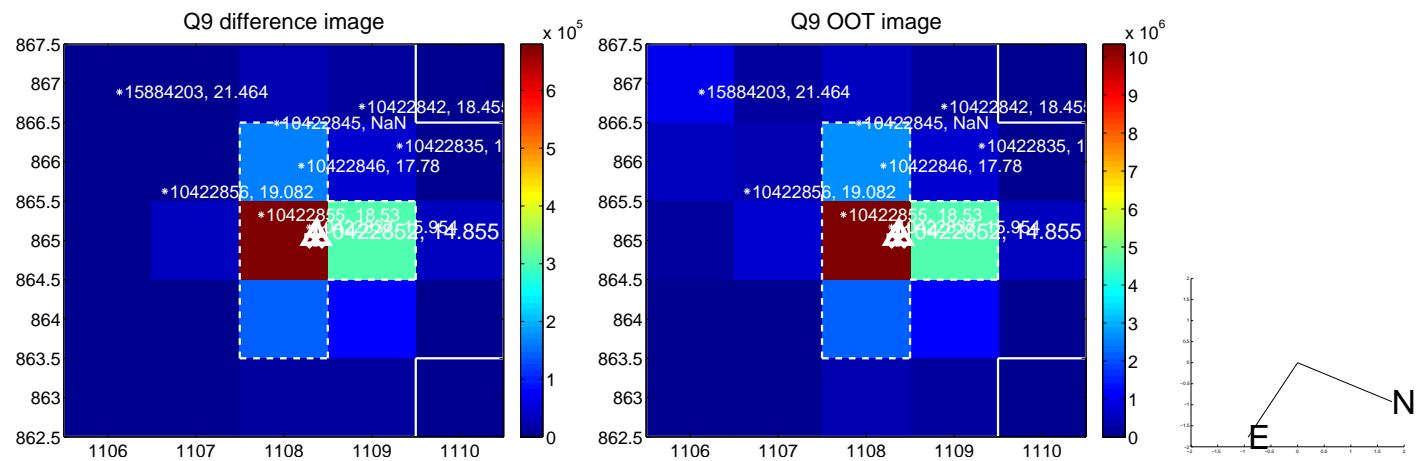
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



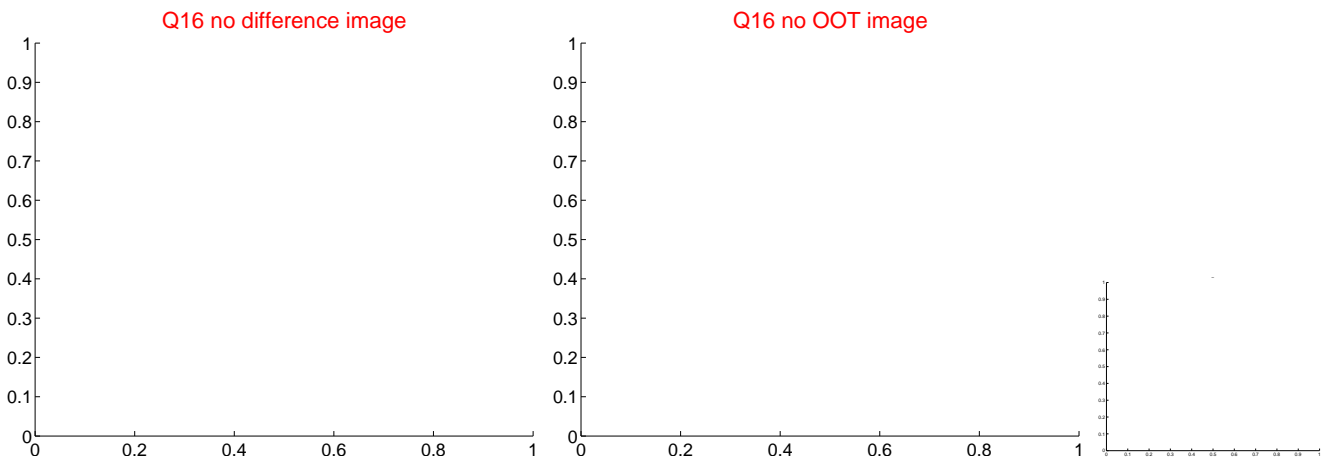
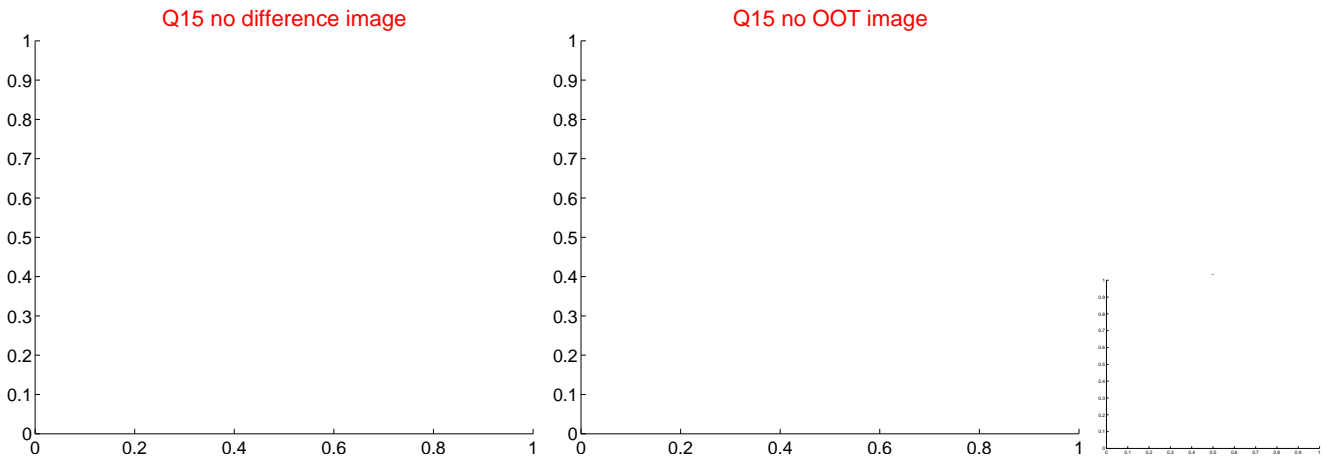
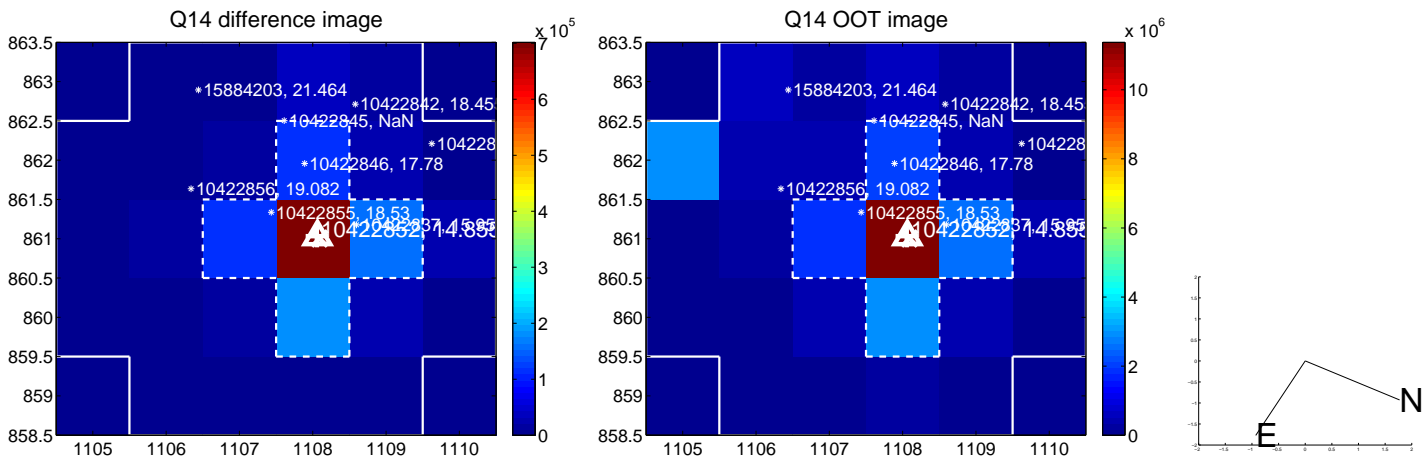
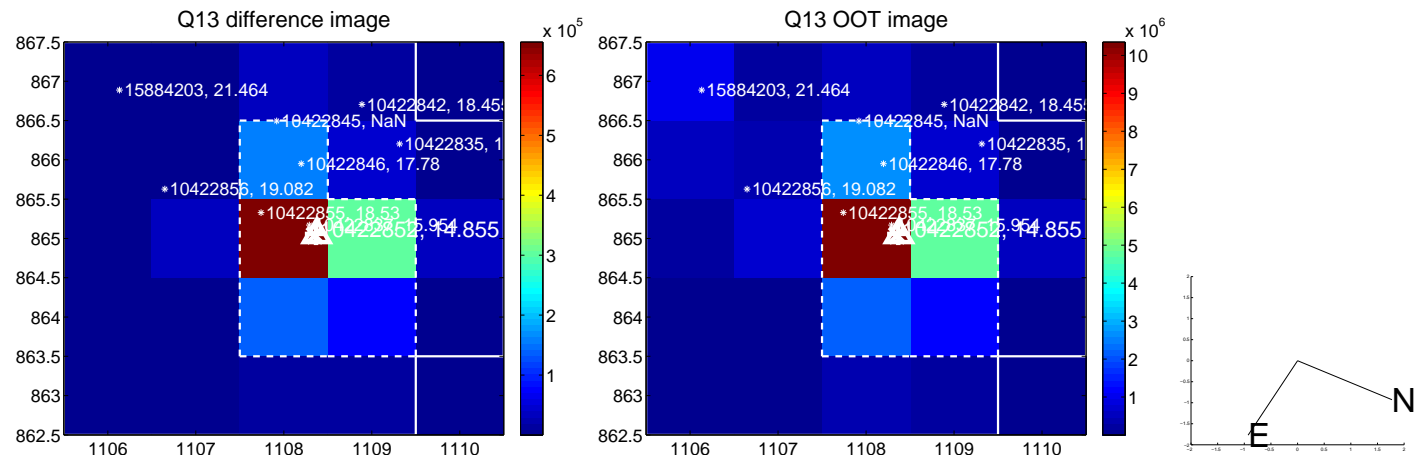
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



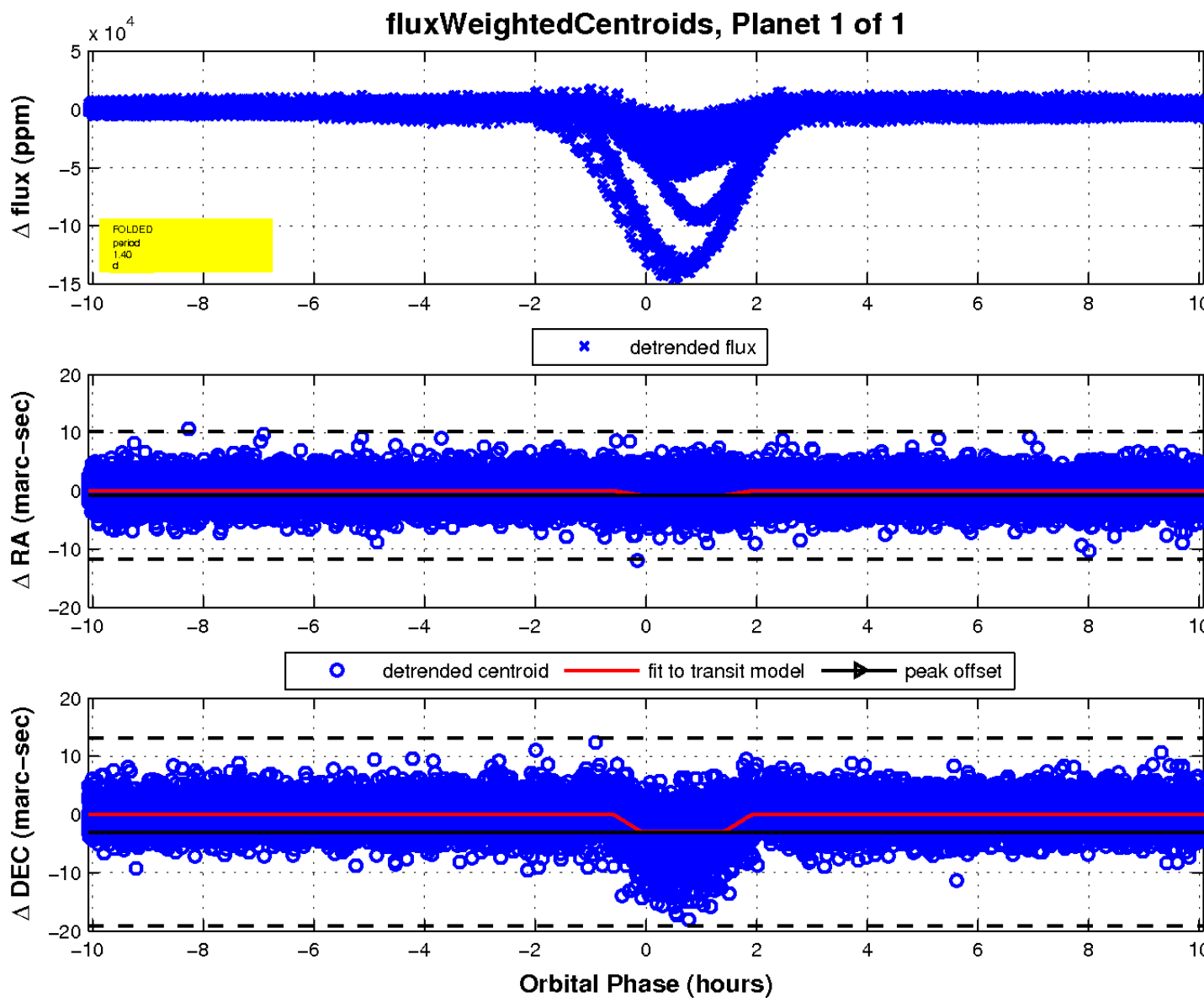
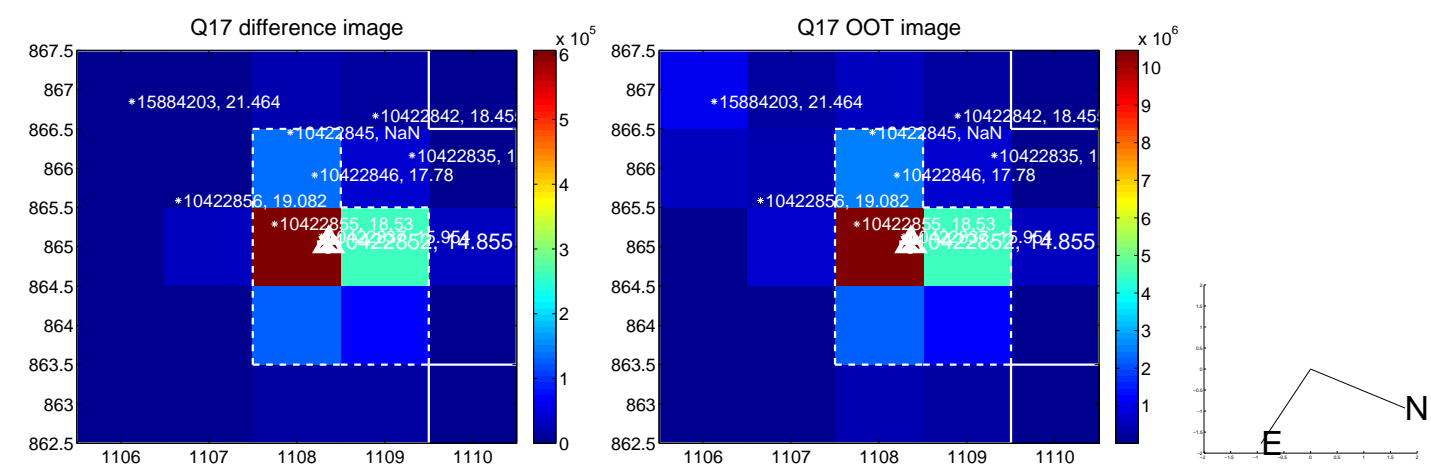
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

