

KIC 010026502

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})
010026502-01	OBS	4706.01	101.952575	206.347167	172.4	6.065	10.0	10.5	1.05	6210	1.55	7.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010026502-01	OBS	PC	0.67	0	0	0	0	NO_COMMENT

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 010026502-01

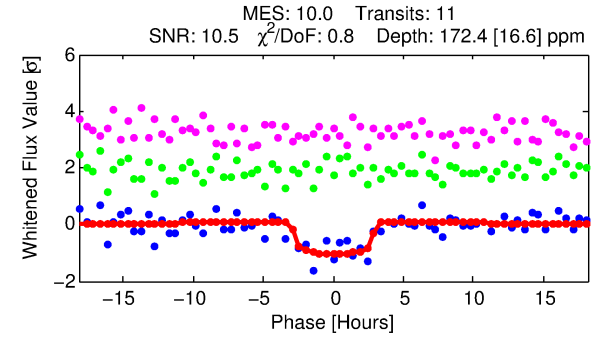
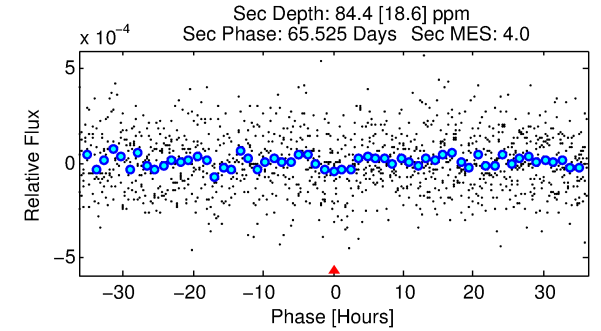
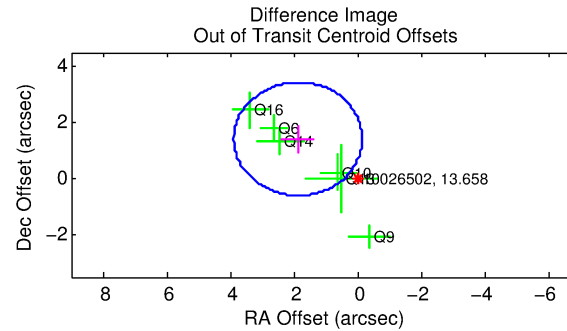
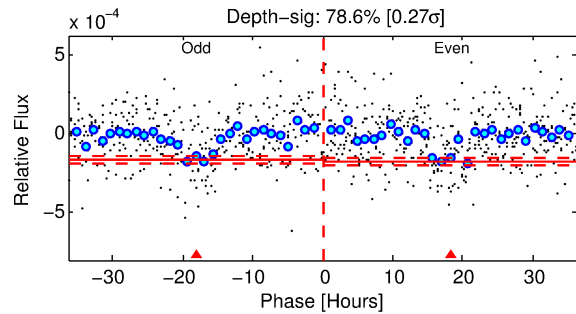
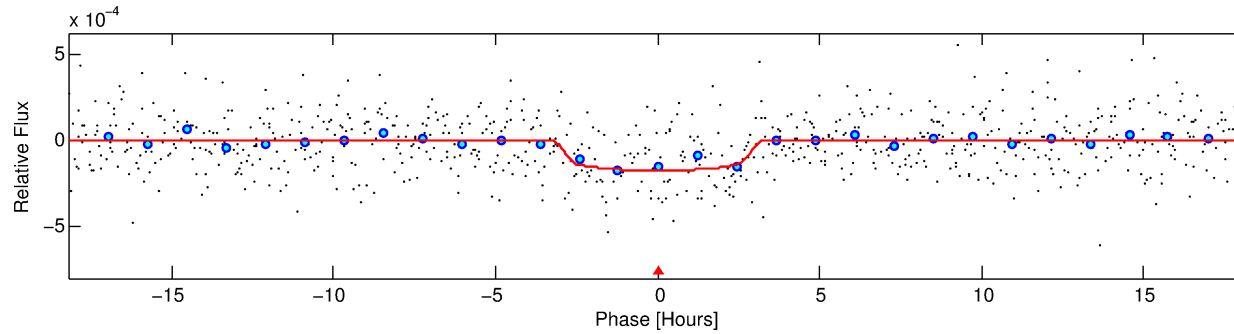
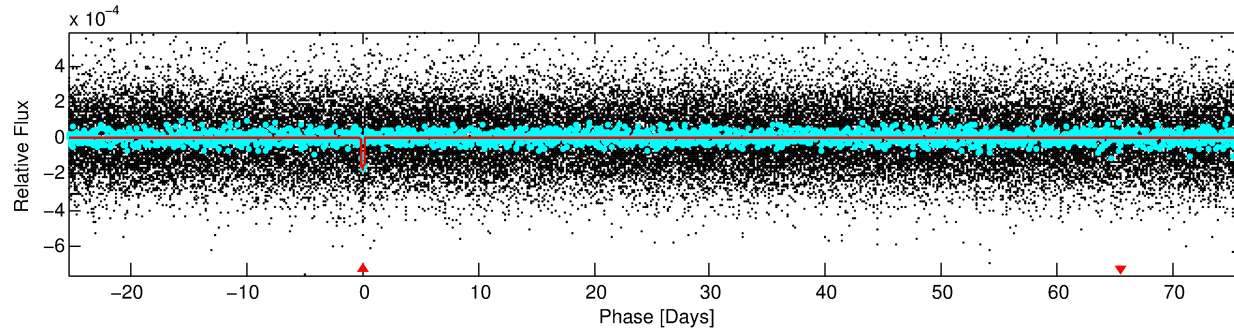
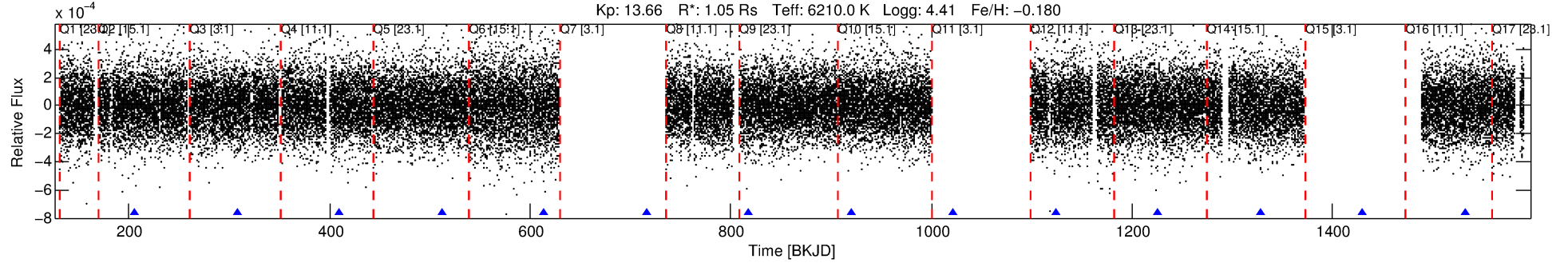
No Significant Match Found

DV One-Page Summary

KIC: 10026502 Candidate: 1 of 1 Period: 101.953 d

KOI: K04706.01 Corr: 0.988

Kp: 13.66 R*: 1.05 Rs Teff: 6210.0 K Logg: 4.41 Fe/H: -0.180



DV Fit Results:

Period = 101.95257 [0.00134] d
Epoch = 206.3472 [0.0094] BKJD
Rp/R* = 0.0135 [0.0065]
a/R* = 74.17 [185.90]
b = 0.83 [0.93]
Seff = 7.93 [3.21]
Teq = 428 [43] K
Rp = 1.55 [0.90] Re
a = 0.4320 [0.1145] AU
Ag = 3588.94 [3779.73] [0.95σ]
Teffp = 5121 [1272] K [3.69σ]

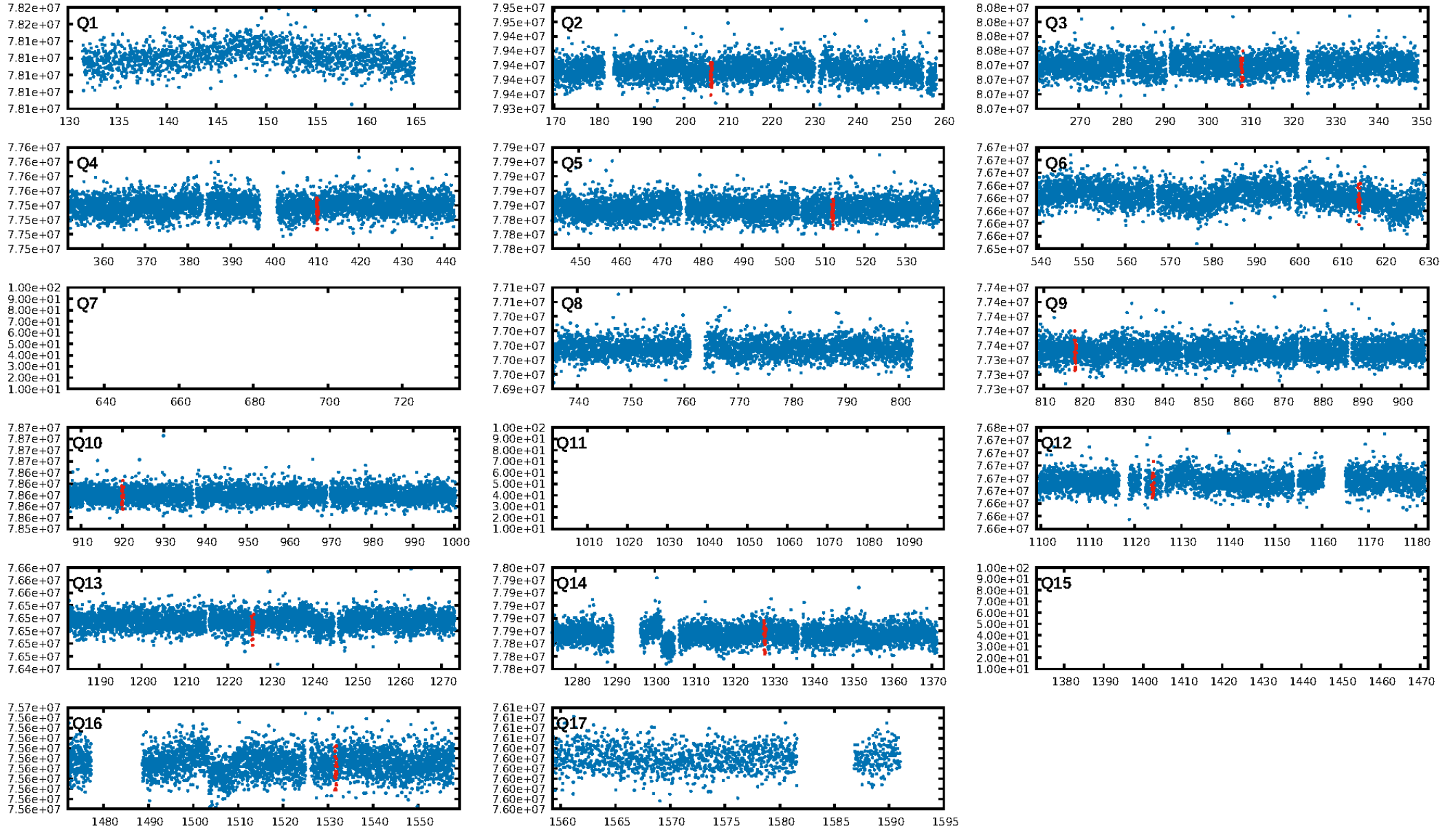
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 87.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.60e-22
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 3.666
Centroid-sig: 58.7%
Centroid-so: 0.952 arcsec [0.71σ]
OotOffset-rm: 2.344 arcsec [3.49σ]
KicOffset-rm: 2.462 arcsec [2.97σ]
OotOffset-st: 3/0/1/2 [6]
KicOffset-st: 3/0/1/2 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [10/10]

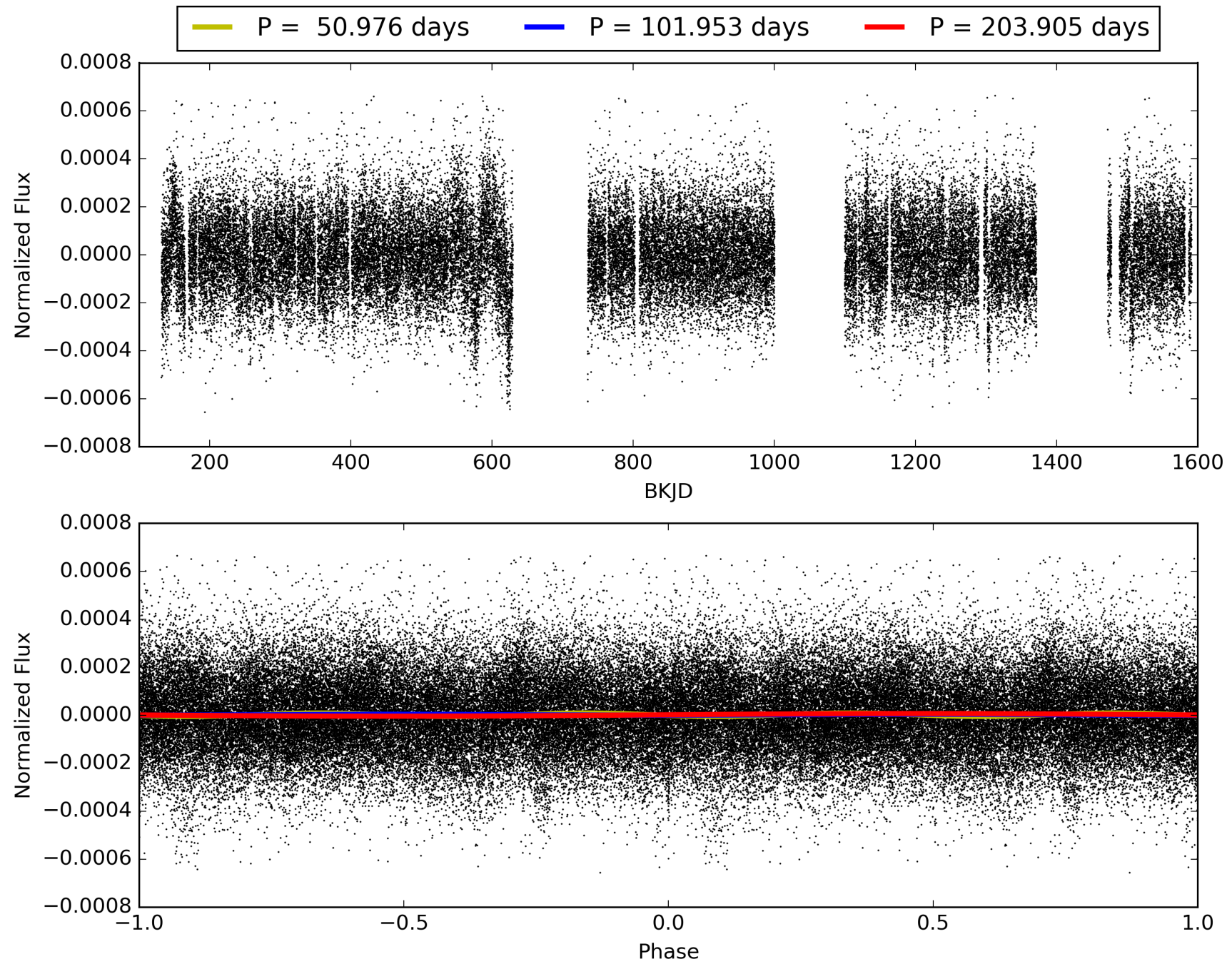
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:14:46 Z

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

TCE 010026502-01, PDC Light Curves

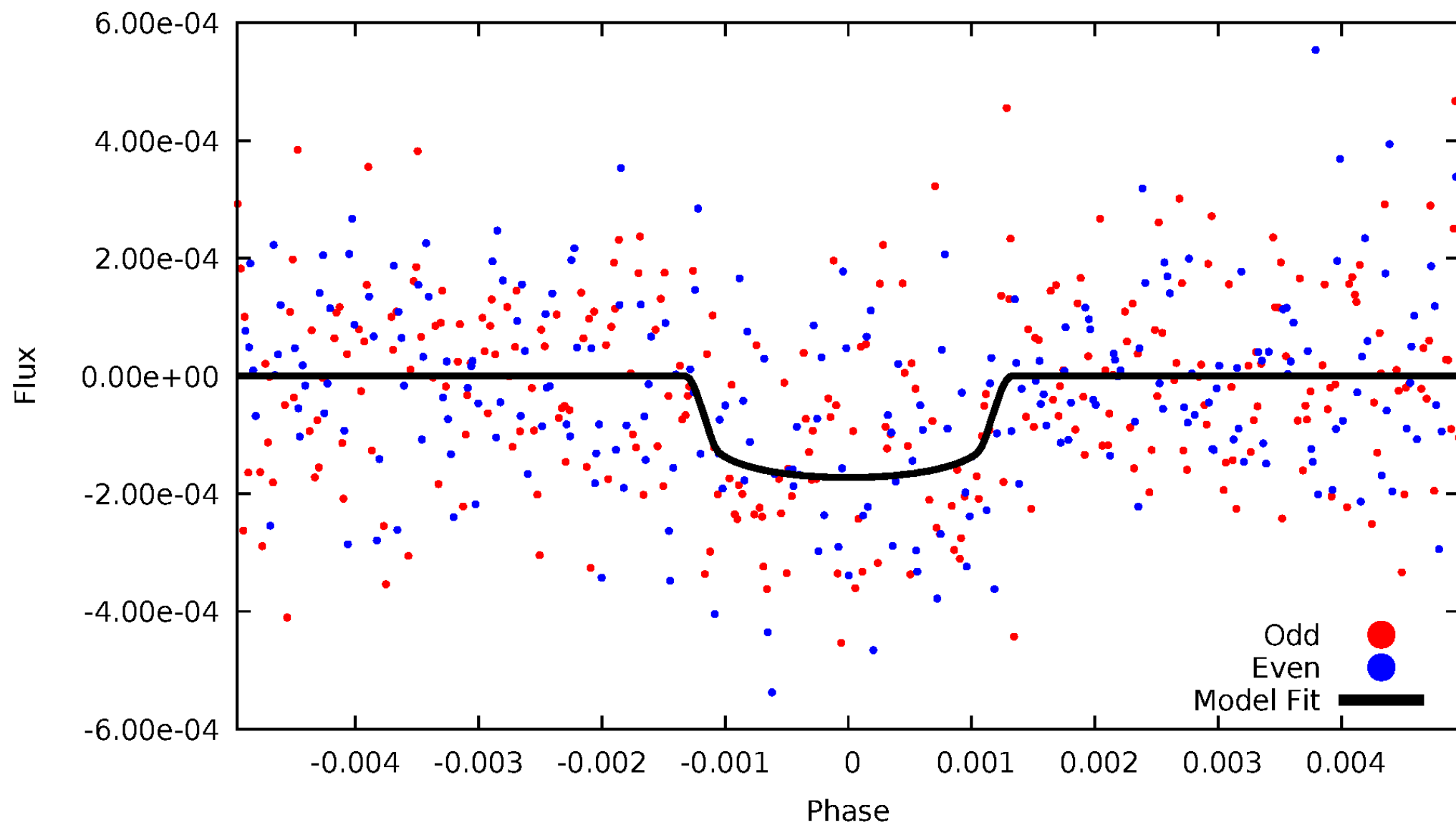


TCE 010026502-01



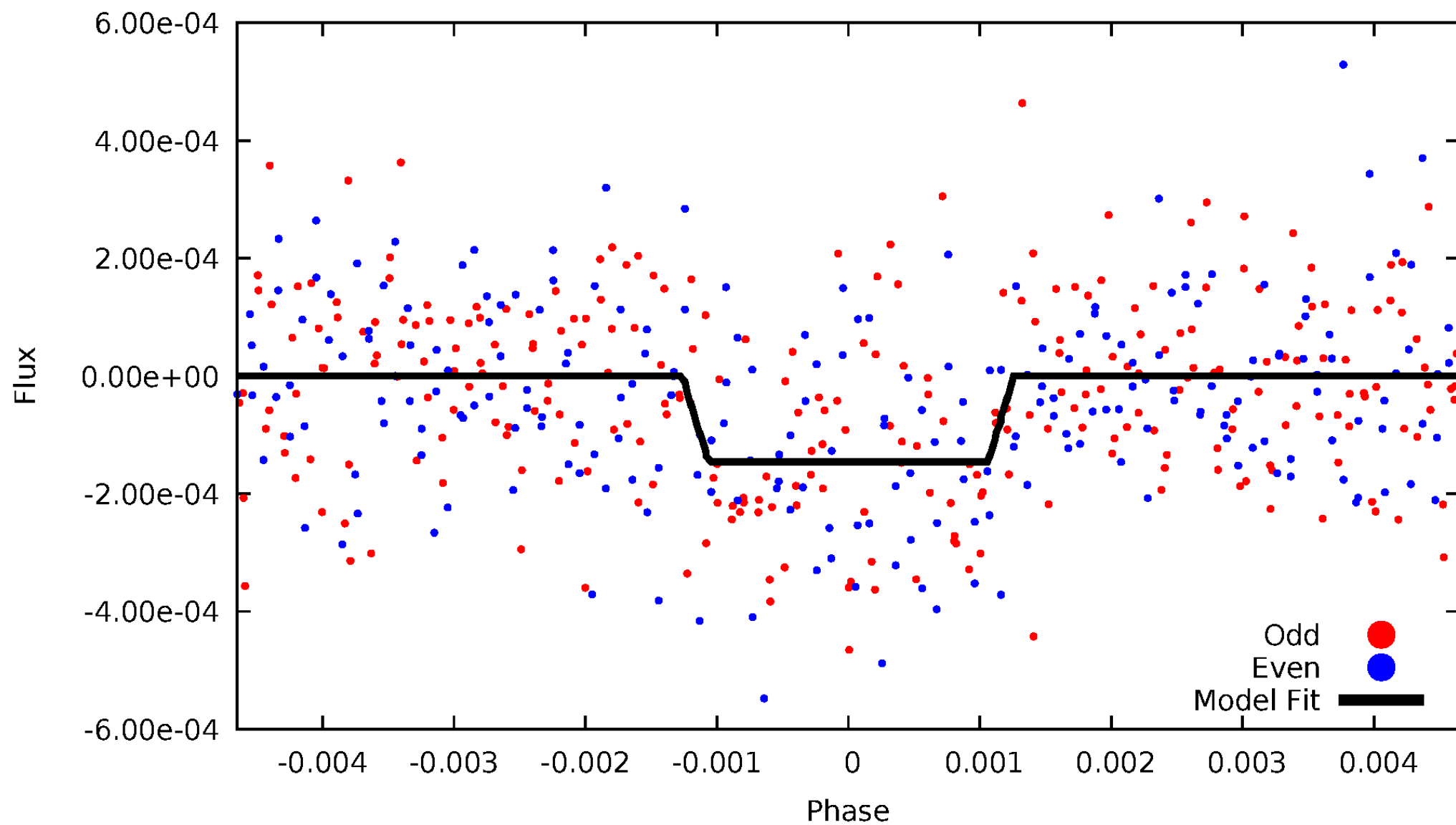
DV Odd/Even

TCE 010026502-01



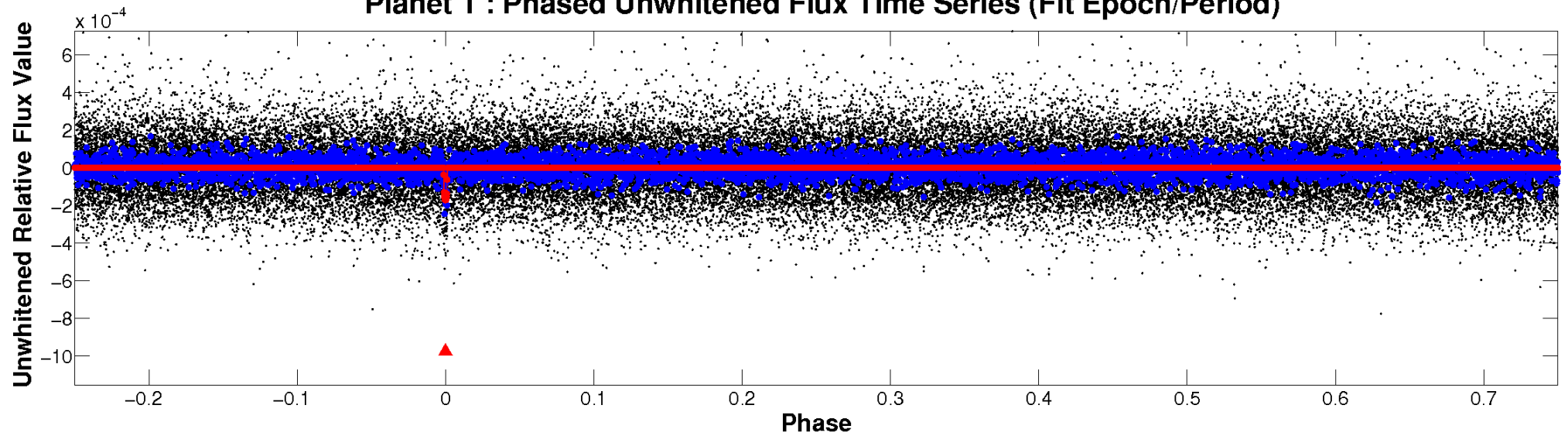
ALT Odd/Even

TCE 010026502-01

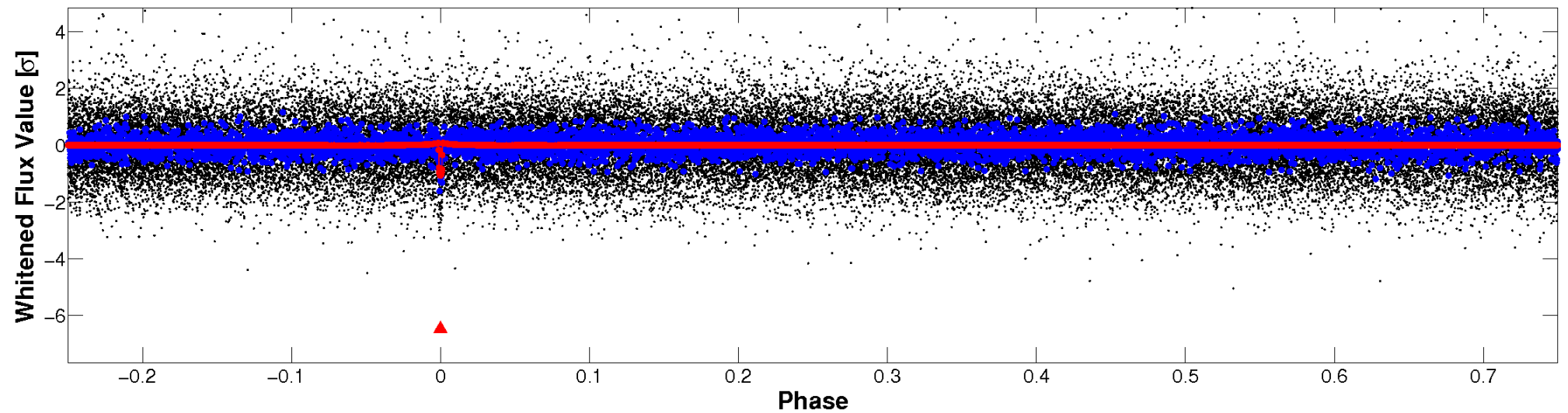


Non-Whitened Vs. Whitened Light Curve

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

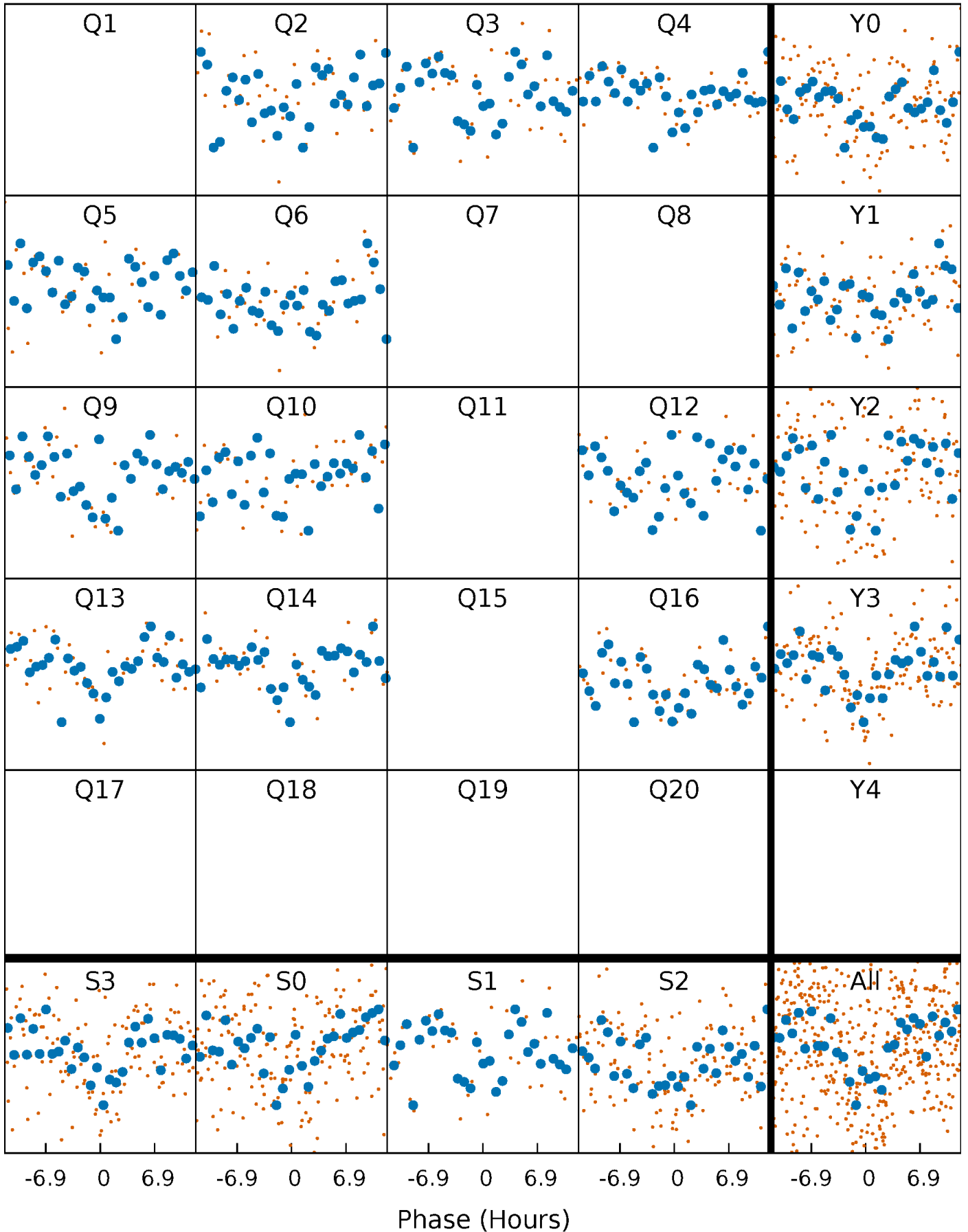


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



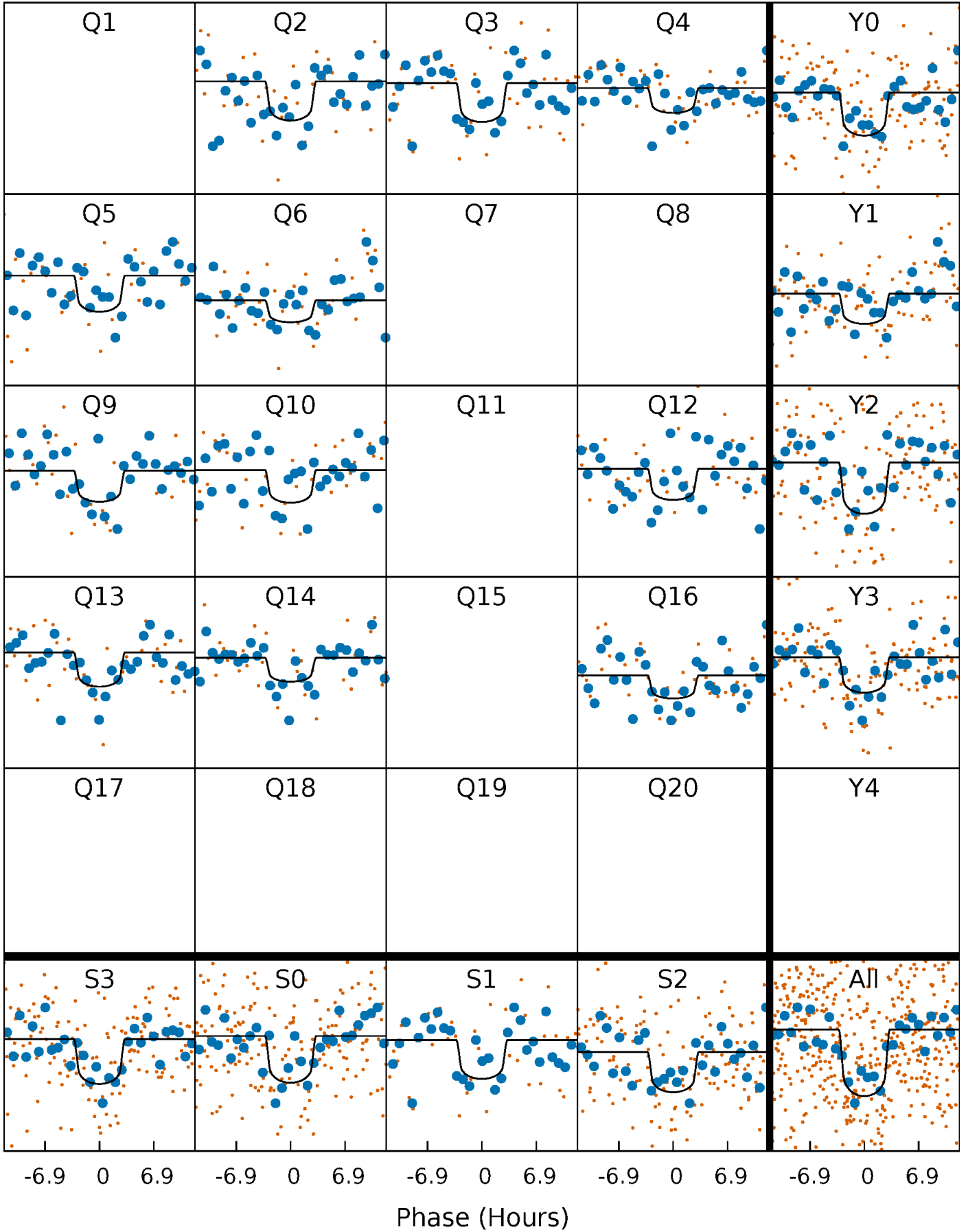
PDC Quarter-Phased Transit Curves

TCE 010026502-01 P=101.952575 Days $T_0=206.347167$ (BKJD)



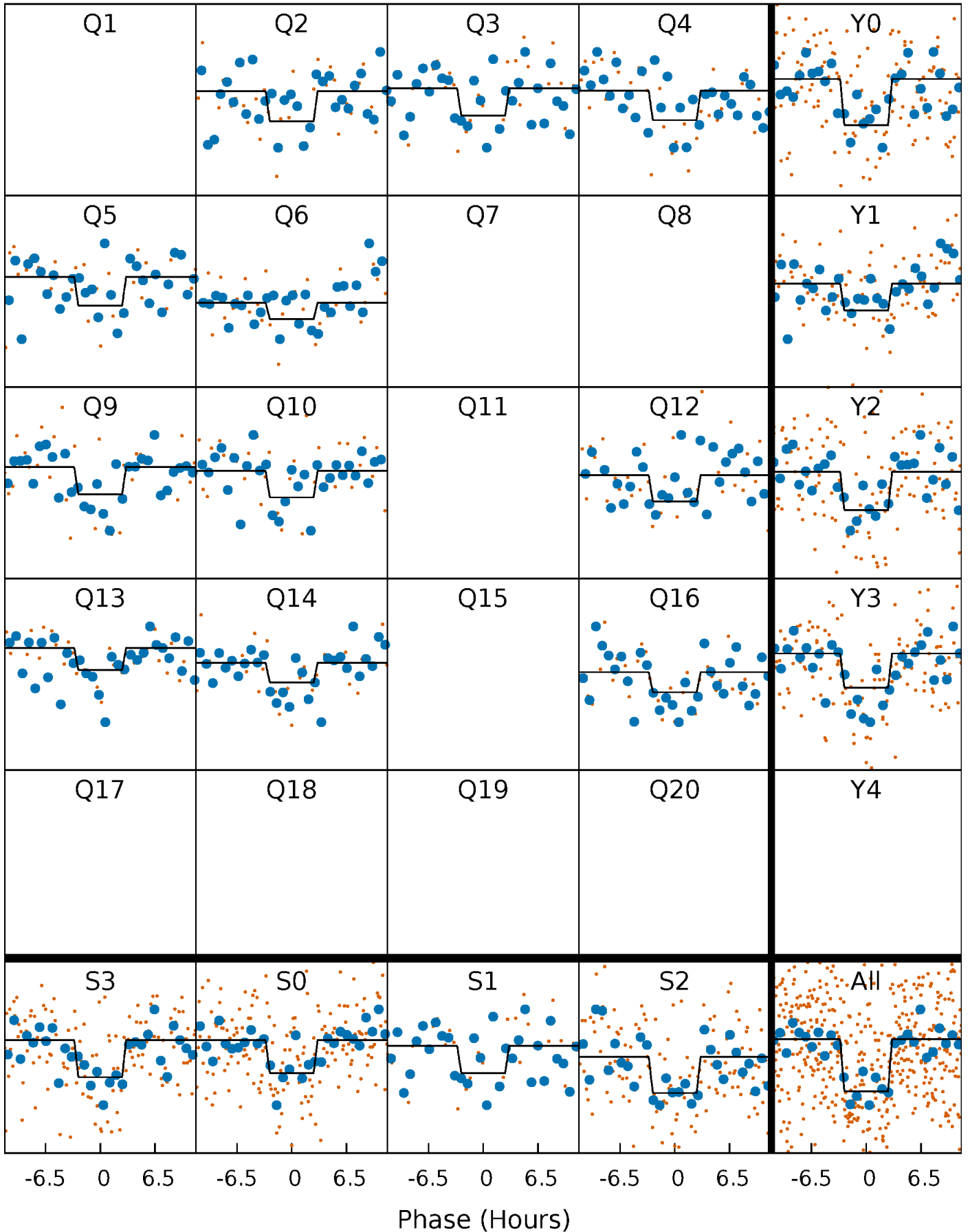
DV Quarter-Phased Transit Curves

TCE 010026502-01 P=101.952575 Days $T_0=206.347167$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

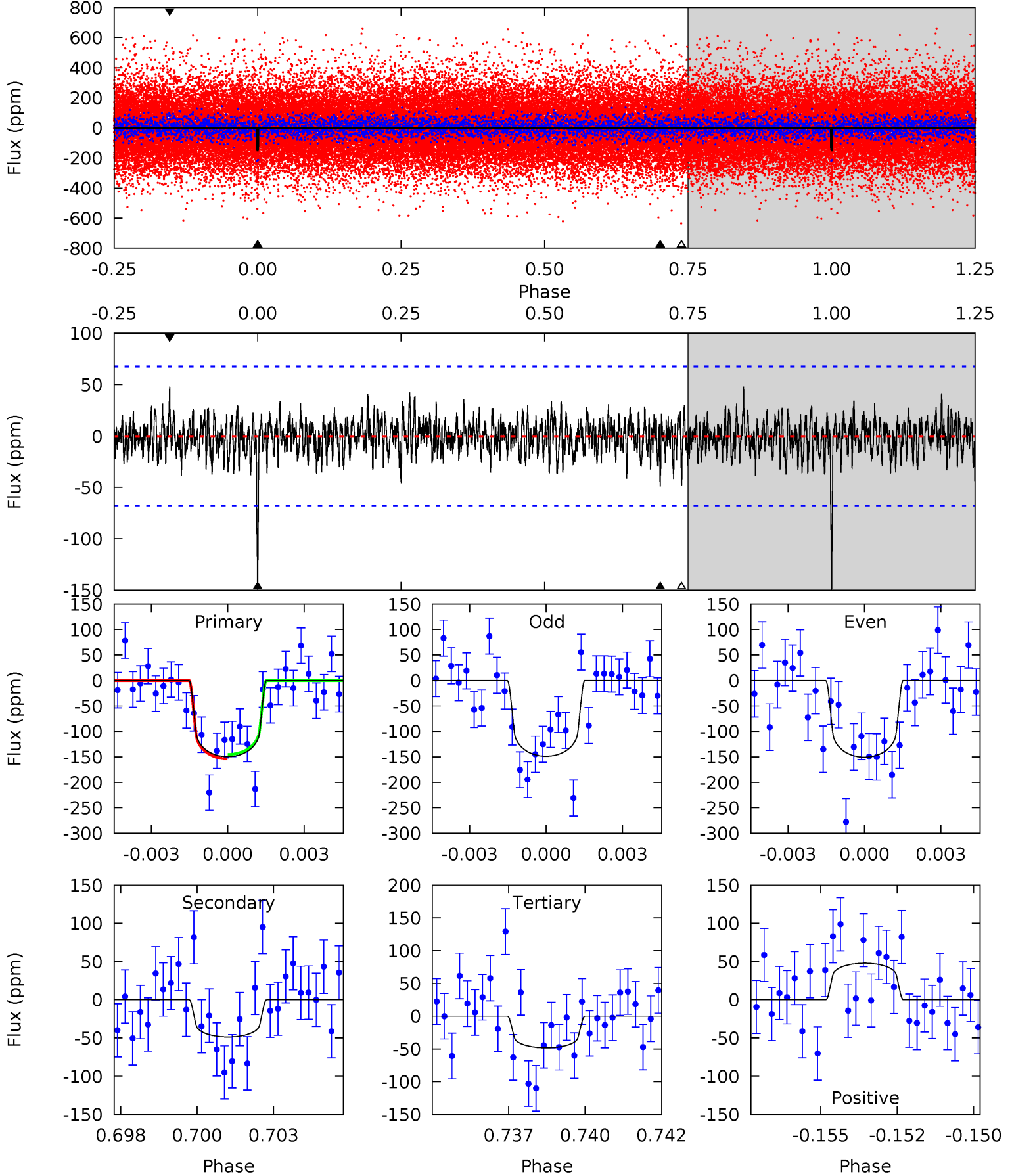
TCE 010026502-01 P=101.951286 Days $T_0=206.354720$ (BKJD)



DV Model-Shift Uniqueness Test

010026502-01, P = 101.952575 Days, E = 104.394592 Days

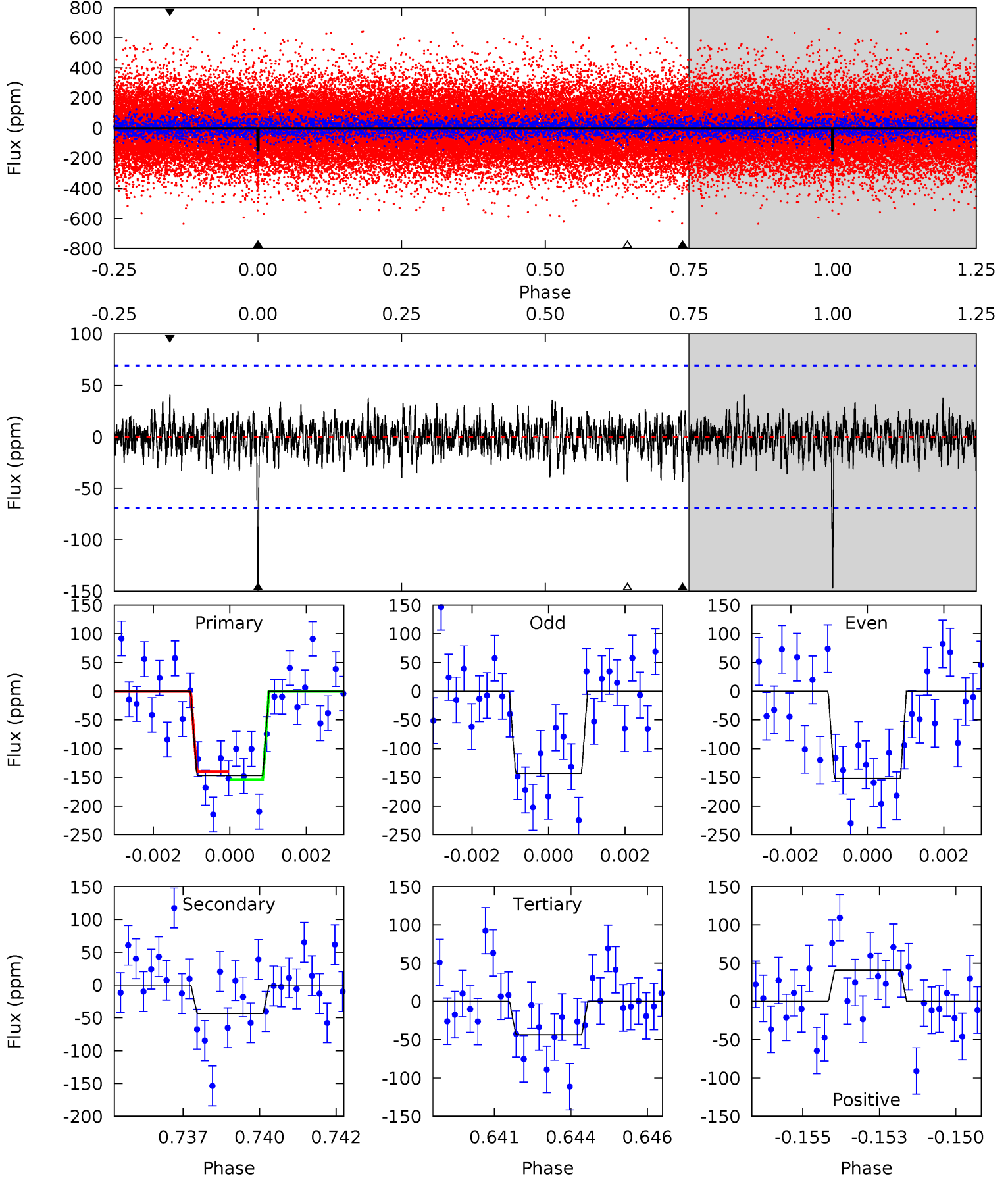
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.81	3.77	3.73	5.28	3.01	1.07	7.91	7.95	0.03	0.07	0.07	1.04	0.24	0.34



Alt Model-Shift Uniqueness Test

010026502-01, P = 101.951286 Days, E = 104.403434 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	3.34	3.31	3.12	5.29	3.03	0.93	7.92	8.11	0.03	0.21	0.34	1.14	0.22	0.52



Stellar Parameters For KIC 010026502

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6210^{+169}_{-225}	$4.407^{+0.087}_{-0.203}$	$-0.180^{+0.250}_{-0.300}$	$1.054^{+0.339}_{-0.121}$	$1.028^{+0.158}_{-0.115}$	$1.238^{+0.472}_{-0.653}$
	+3%/-4%	+2%/-5%	+139%/-167%	+32%/-11%	+15%/-11%	+38%/-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 010026502-01 / KOI 4706.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49 ± 13	$1.66^{+0.76}_{-0.71}$	603^{+45}_{-30}	4532^{+1226}_{-627}	1748^{+3724}_{-997}
Alt.	-44 ± 13	$1.42^{+0.74}_{-0.72}$	605^{+41}_{-31}	4726^{+1895}_{-737}	2105^{+6850}_{-1268}

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 $A_{\text{obs}} \gg 1.0$

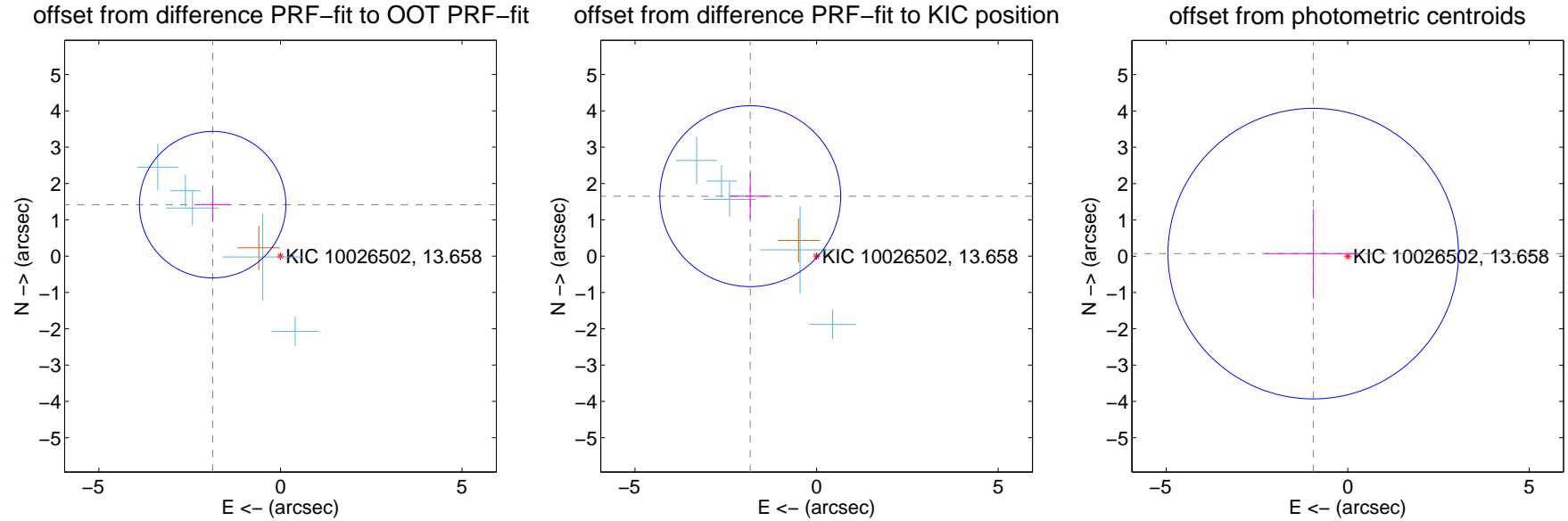
DV Centroid Data

Supplemental centroid analysis for 010026502-01. Kepler magnitude: 13.66. Transit SNR 10.46

There are 5 quarters with good PRF difference image offsets

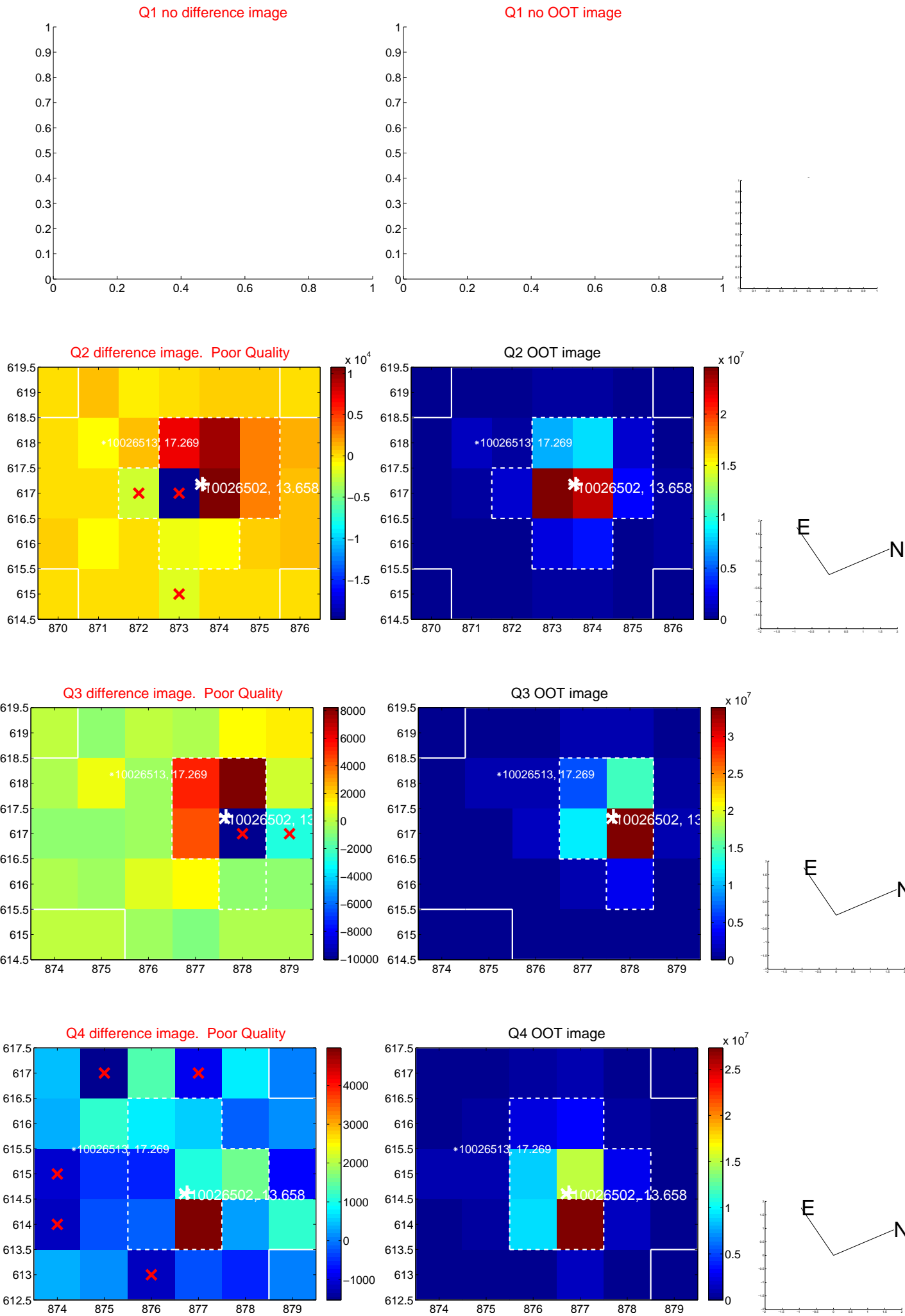
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.344 ± 0.672	3.49	1.867 ± 0.503	1.417 ± 0.464
PRF-fit source offset from KIC position	2.462 ± 0.830	2.97	1.826 ± 0.581	1.651 ± 0.618
photometric centroid source offset	0.95 ± 1.33	0.71	0.95 ± 1.33	0.07 ± 1.23

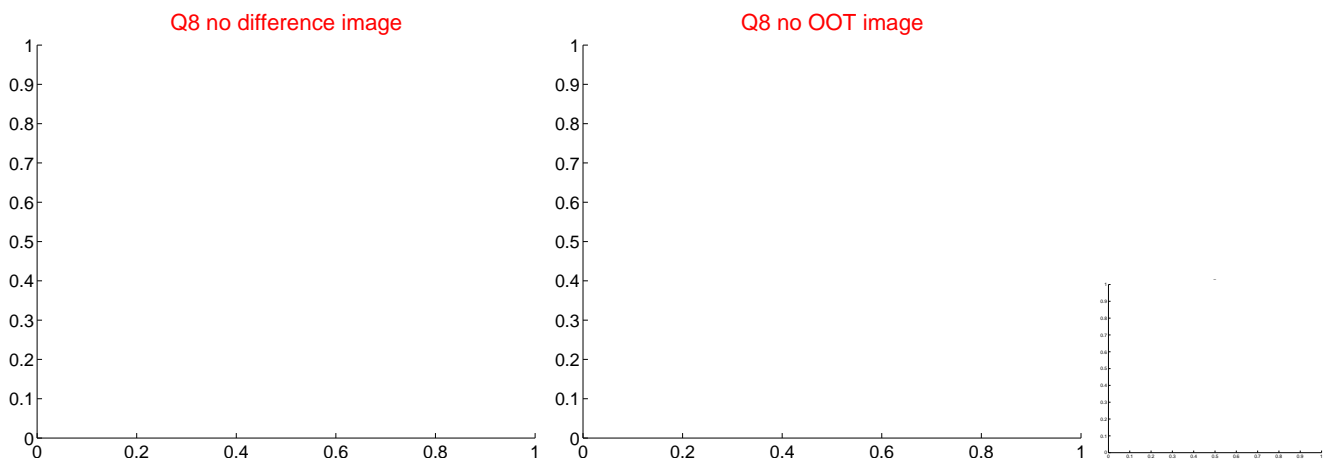
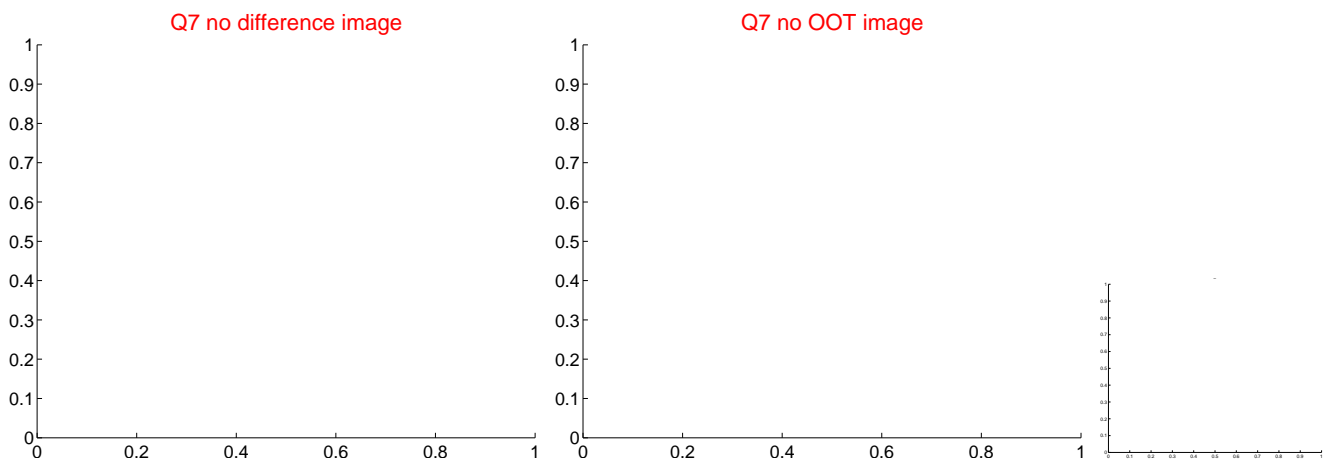
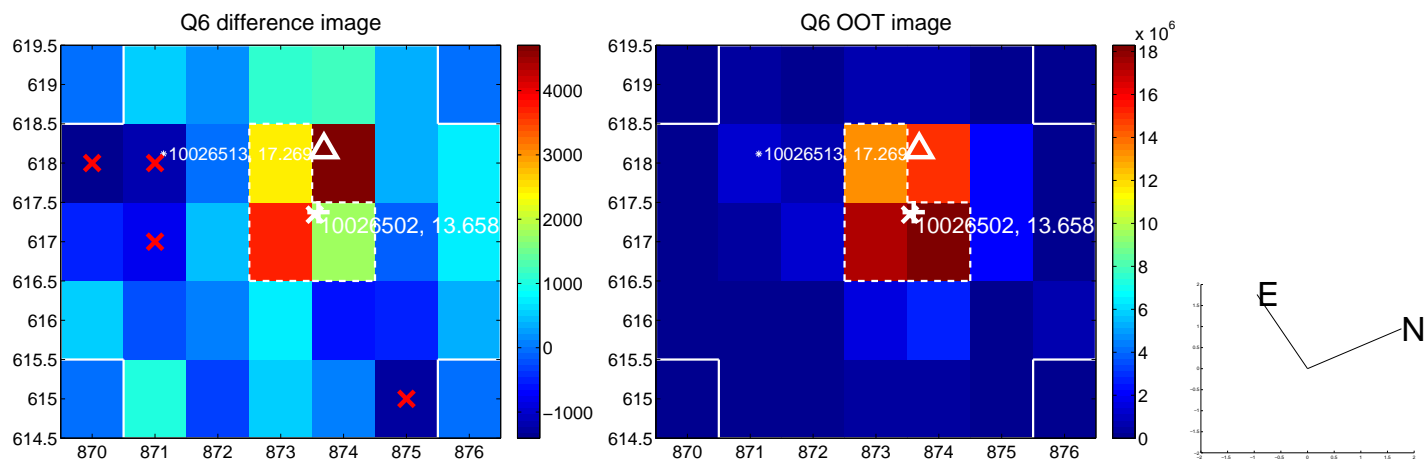
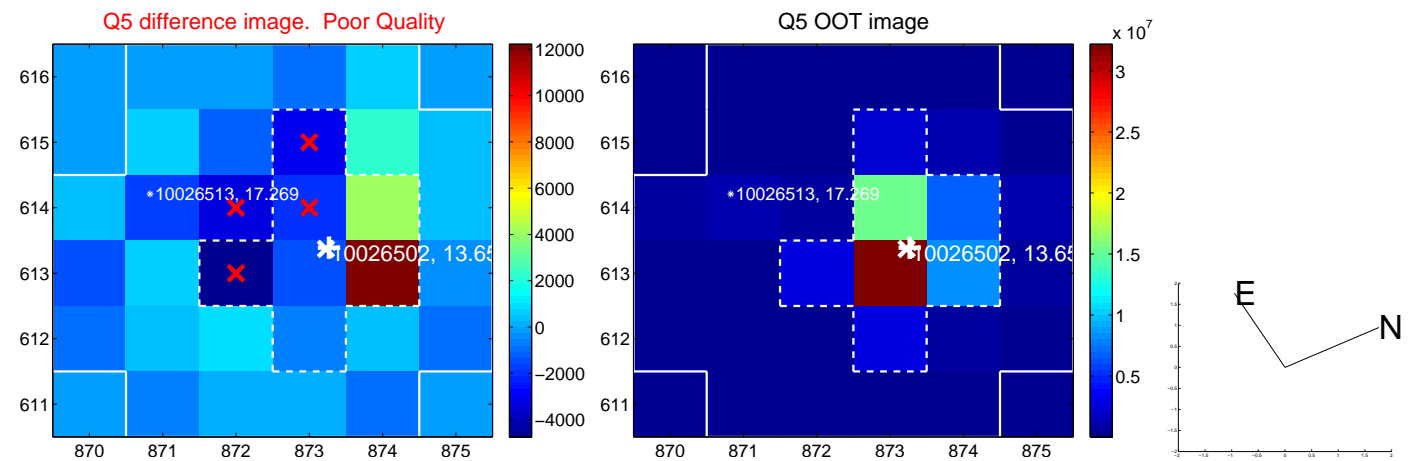


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

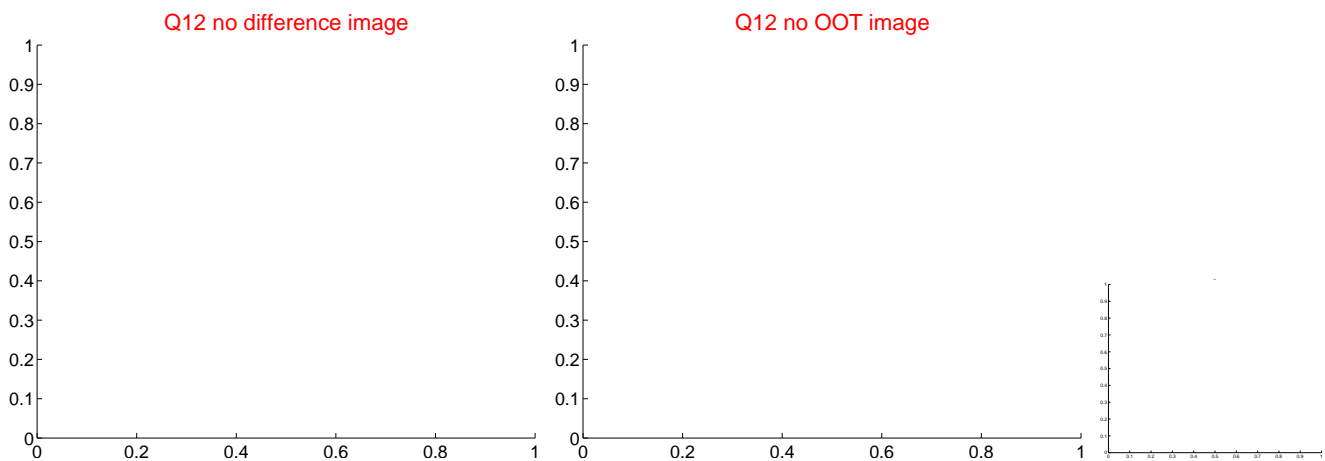
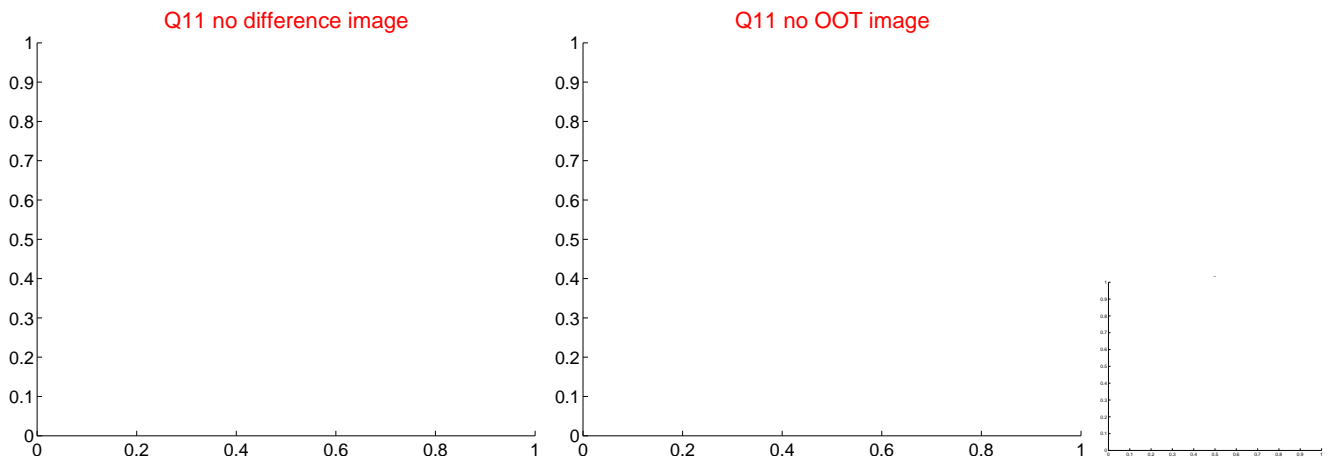
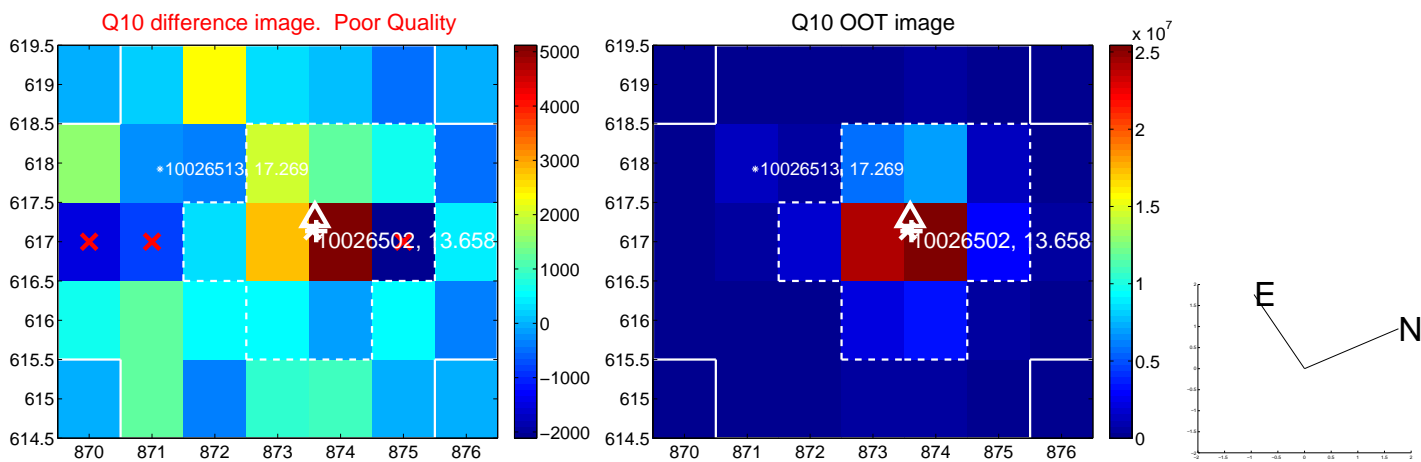
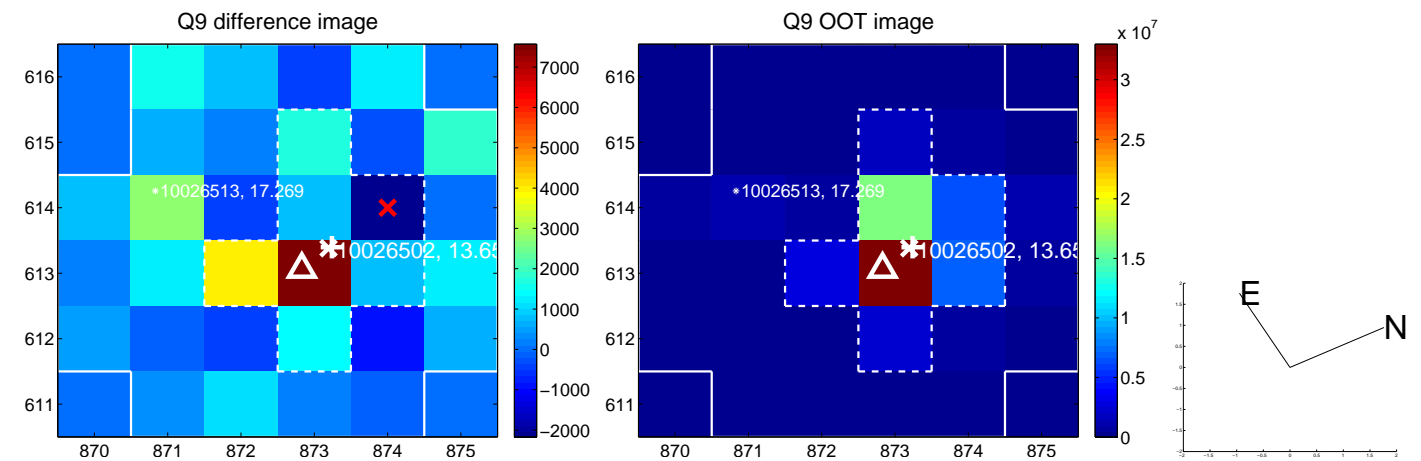
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



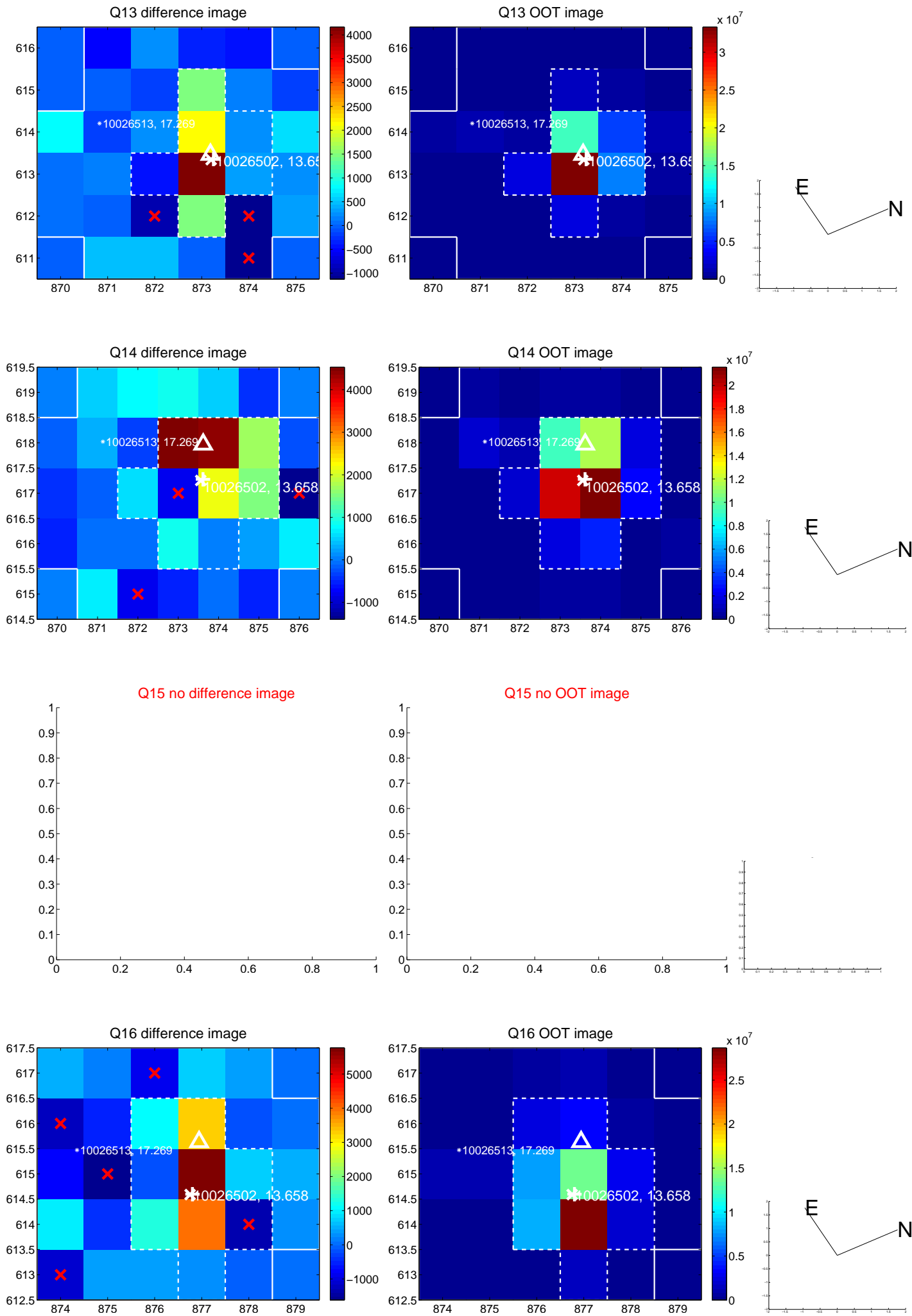
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



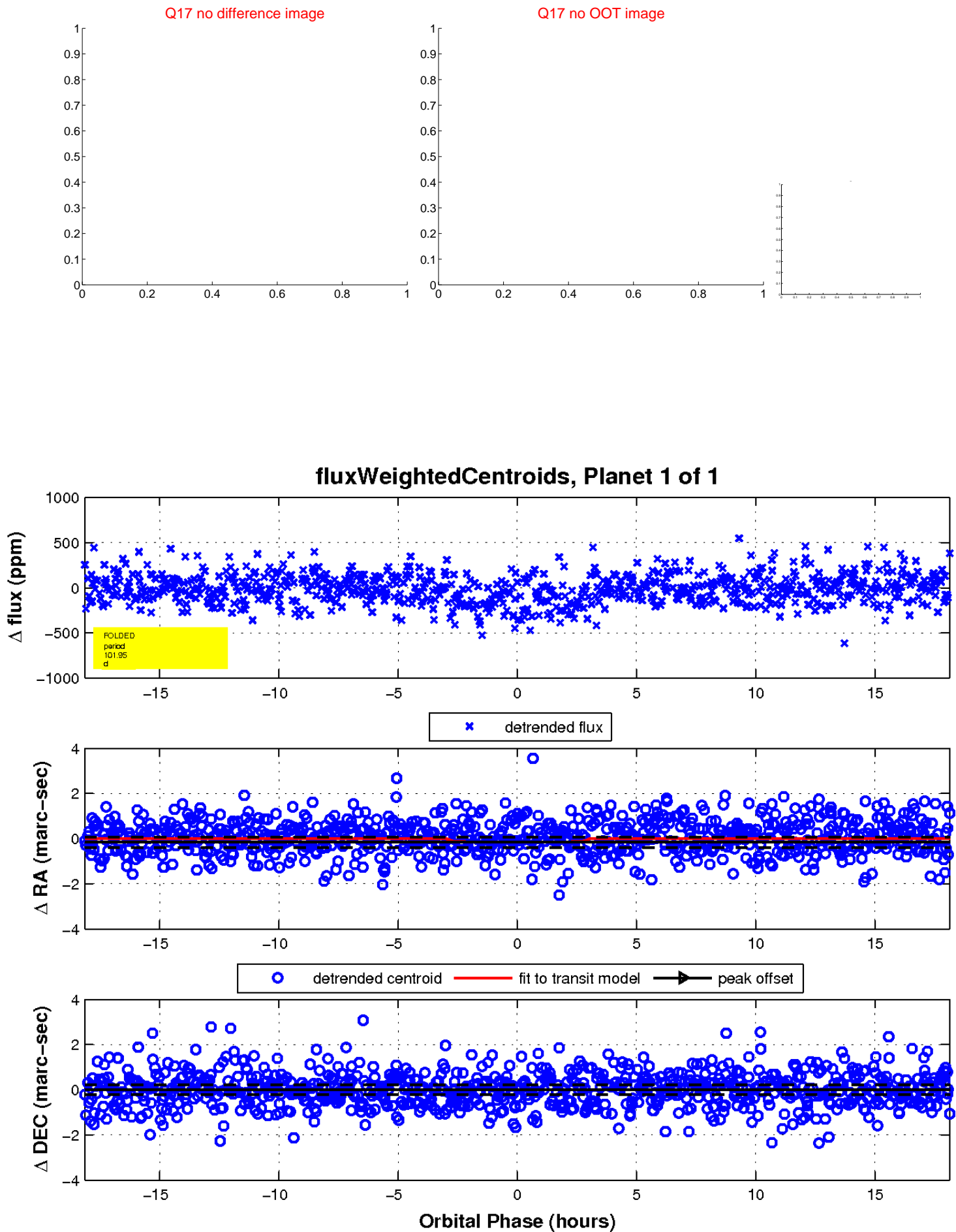
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

