

KIC 006026924

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})
006026924-01	OBS	4276.01	56.644725	138.781595	110.3	15.810	11.4	11.9	2.29	6237	2.70	68.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006026924-01	OBS	PC	0.98	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.

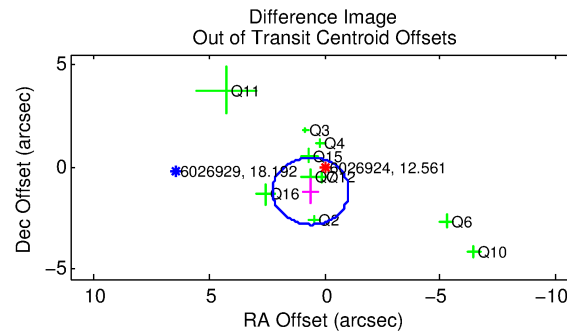
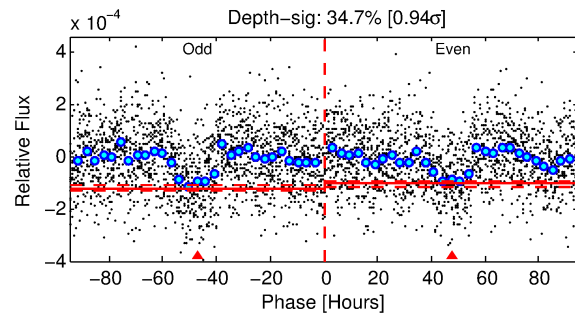
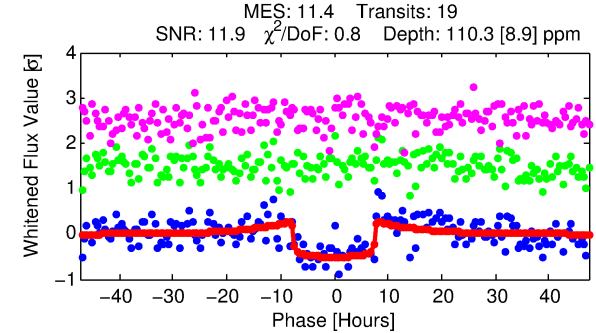
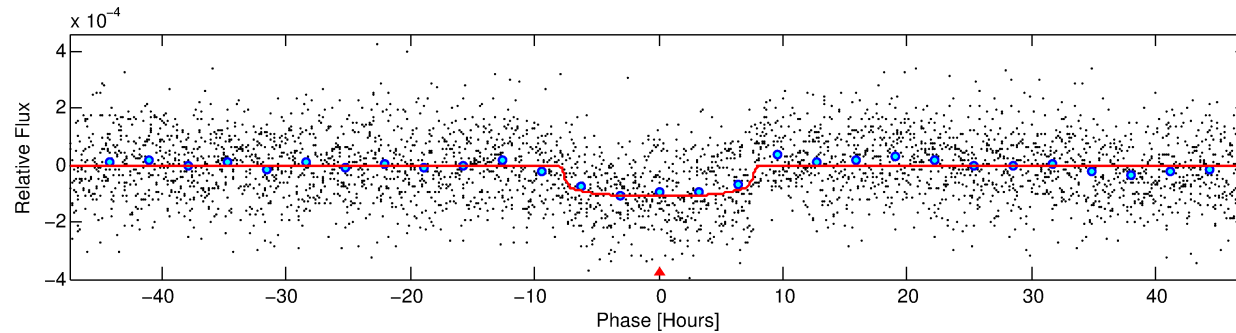
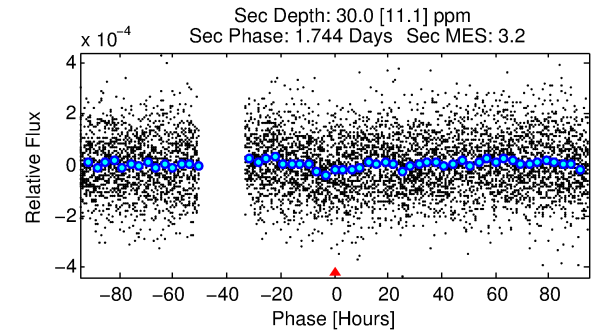
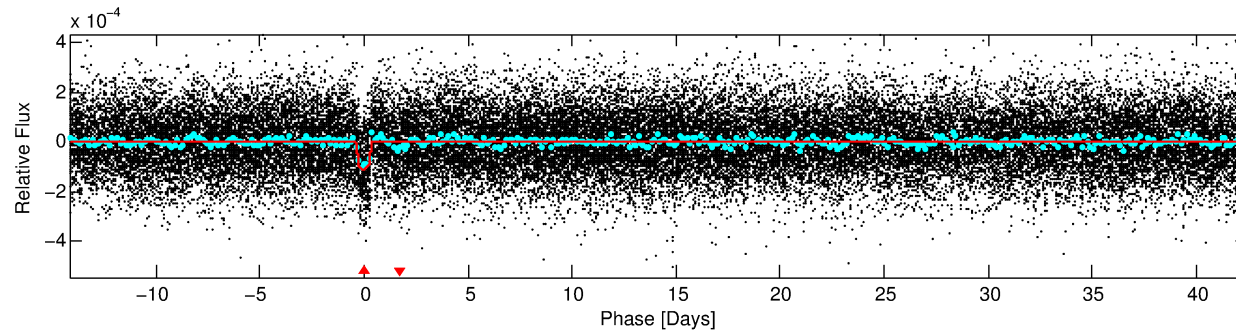
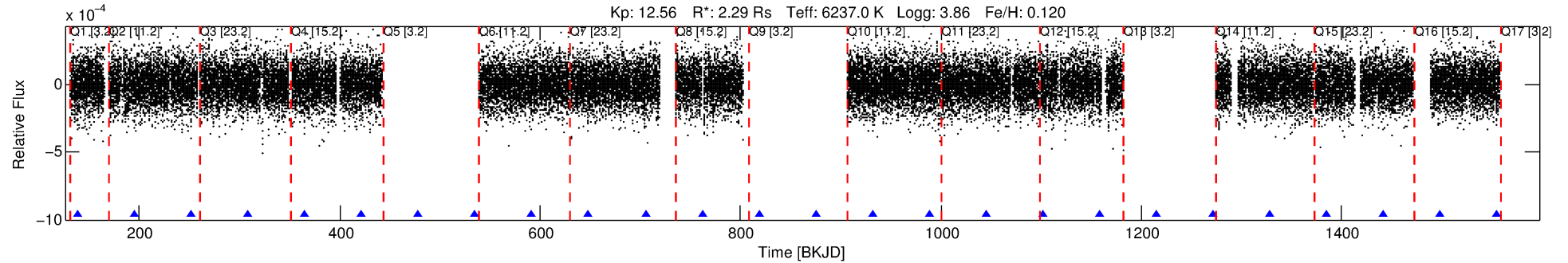
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006026924-01

No Significant Match Found

DV One-Page Summary

KIC: 6026924 Candidate: 1 of 1 Period: 56.645 d
KOI: K04276.01 Corr: 0.977



DV Fit Results:

Period = 56.64472 [0.00072] d
Epoch = 138.7816 [0.0112] BKJD
Rp/R* = 0.0108 [0.0013]
a/R* = 15.95 [9.07]
b = 0.83 [0.22]
Seff = 68.51 [22.42]
Teq = 734 [60] K
Rp = 2.70 [0.69] Re
a = 0.3228 [0.0664] AU
Ag = 236.27 [128.04] [1.84σ]
Teffp = 4447 [496] K [7.43σ]

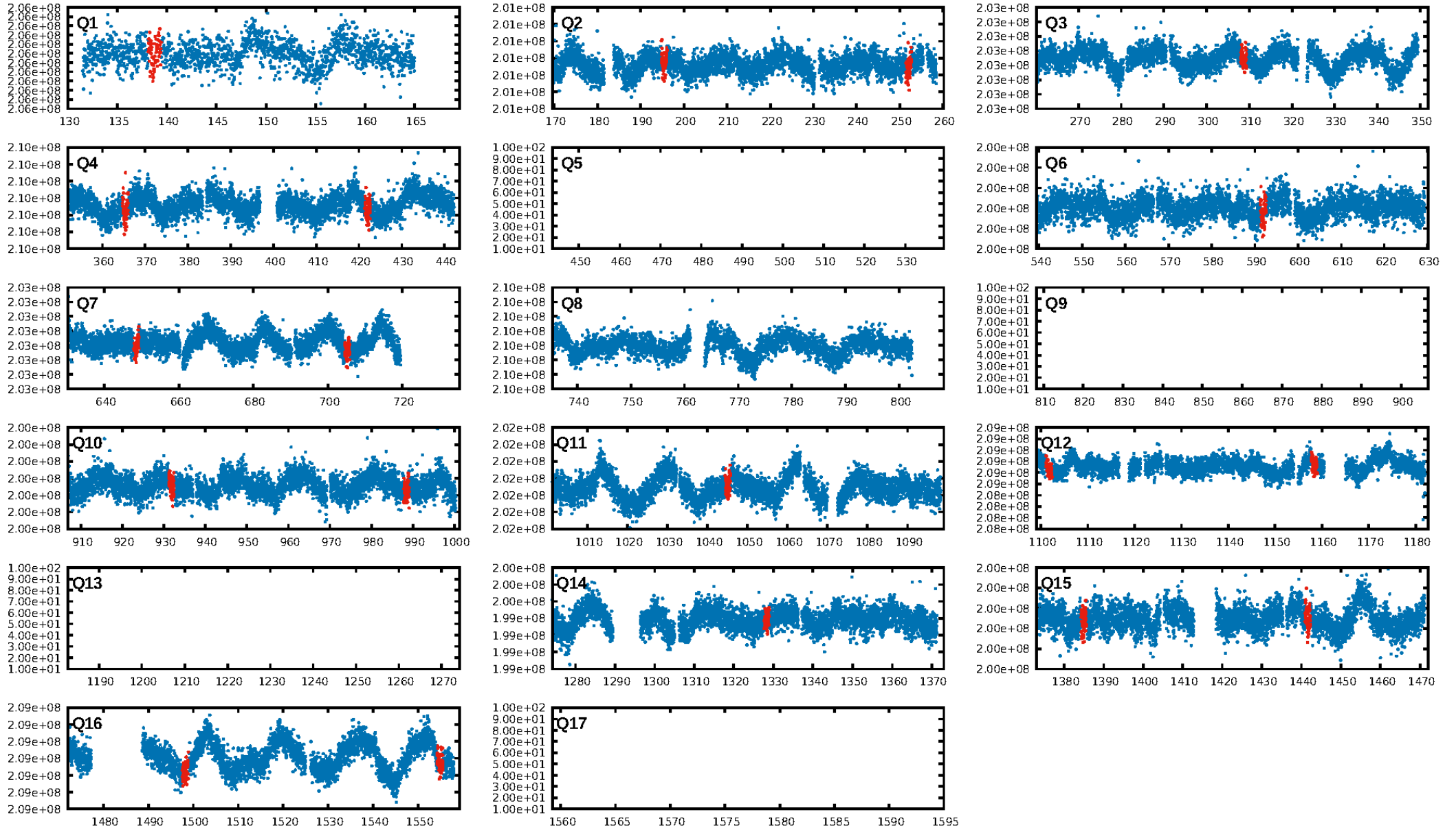
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.41e-28
RollingBand-fgt: 1.00 [18/18]
GhostDiagnostic-chr: 3.873
Centroid-sig: 9.0%
Centroid-so: 1.065 arcsec [1.71σ]
OotOffset-rm: 1.342 arcsec [2.44σ]
OotOffset-st: 3/4/3/0 [10]
KicOffset-rm: 1.282 arcsec [2.33σ]
KicOffset-st: 3/4/3/0 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [12/12]

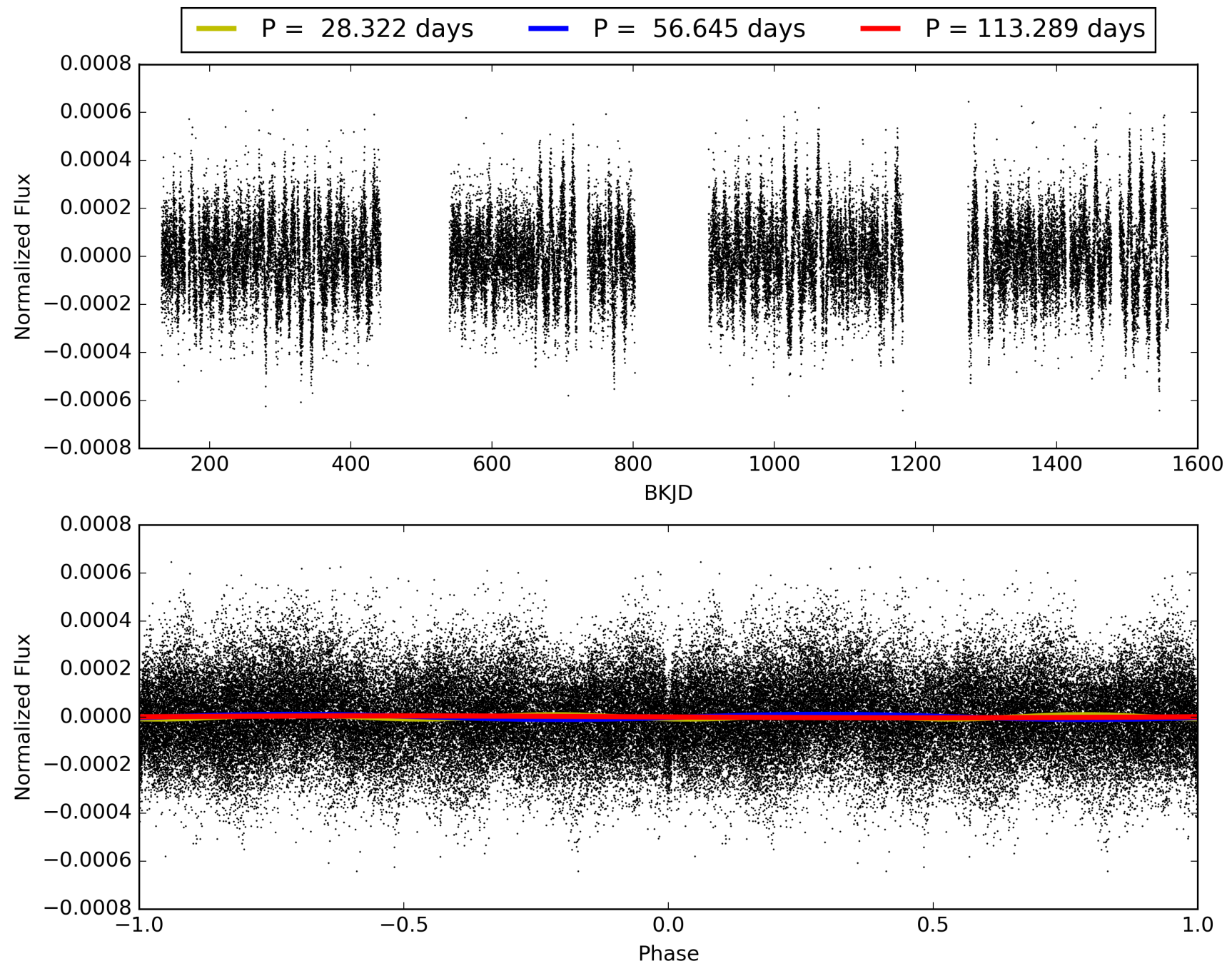
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:09:42 Z

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

TCE 006026924-01, PDC Light Curves

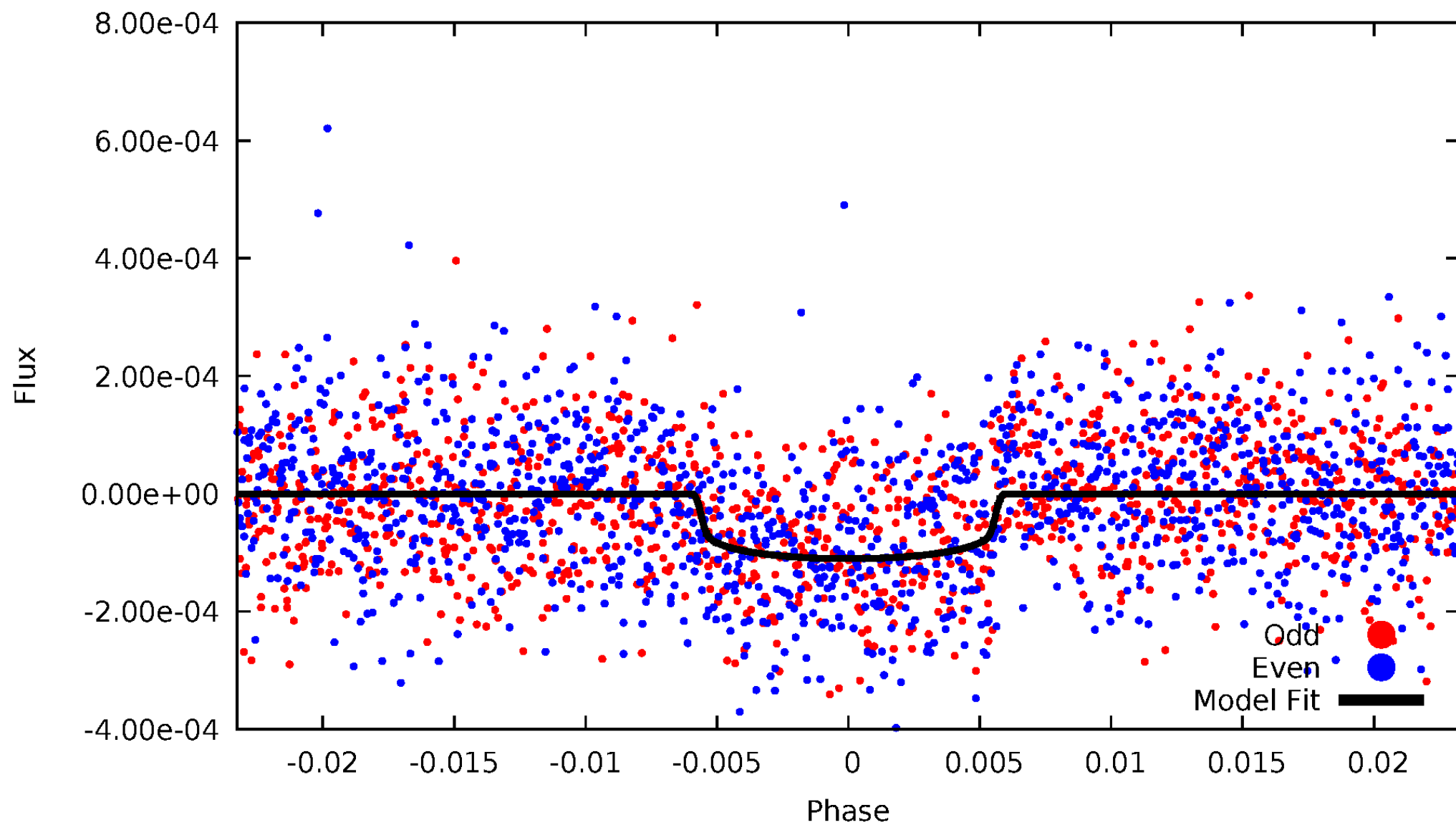


TCE 006026924-01



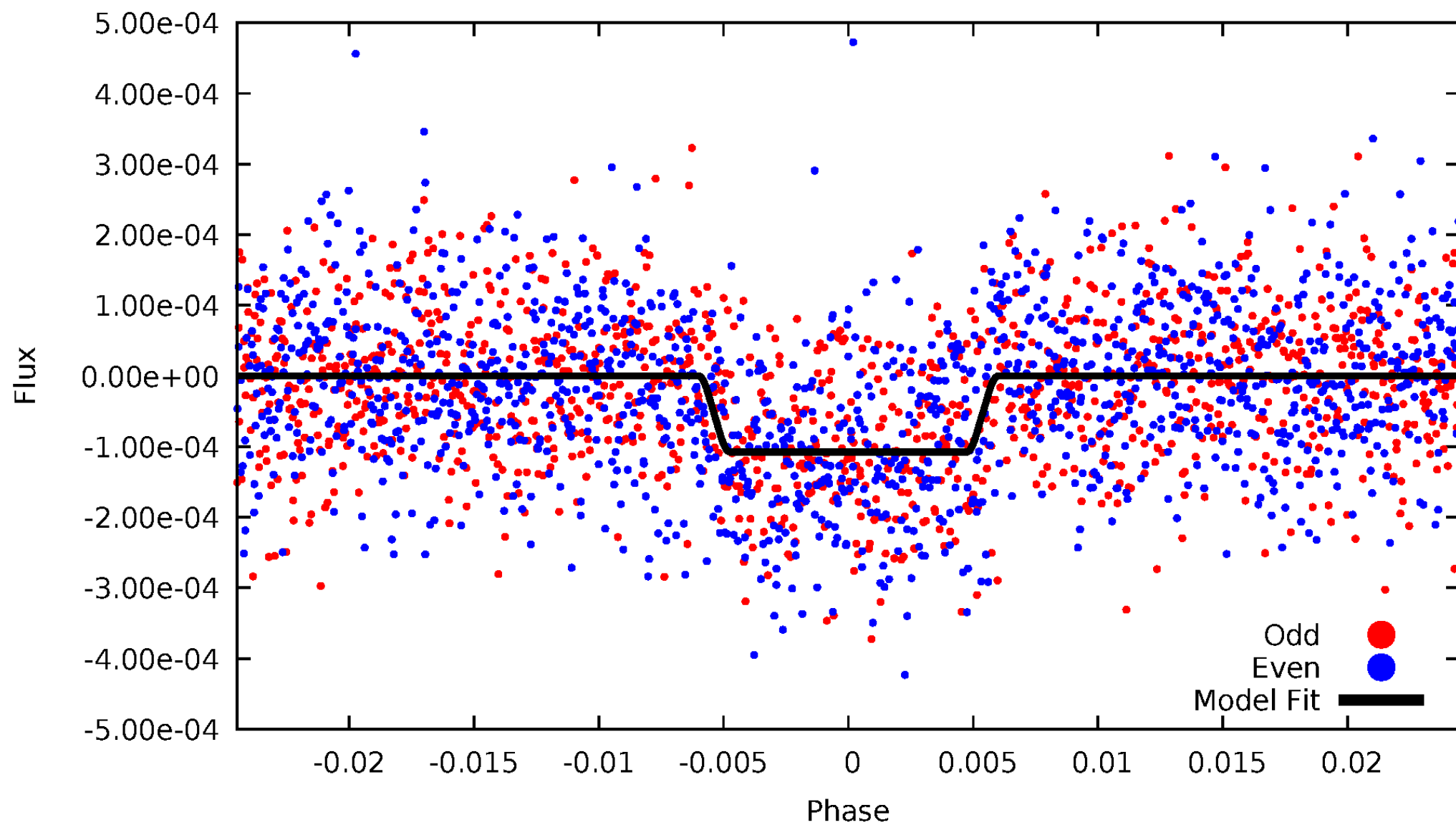
DV Odd/Even

TCE 006026924-01



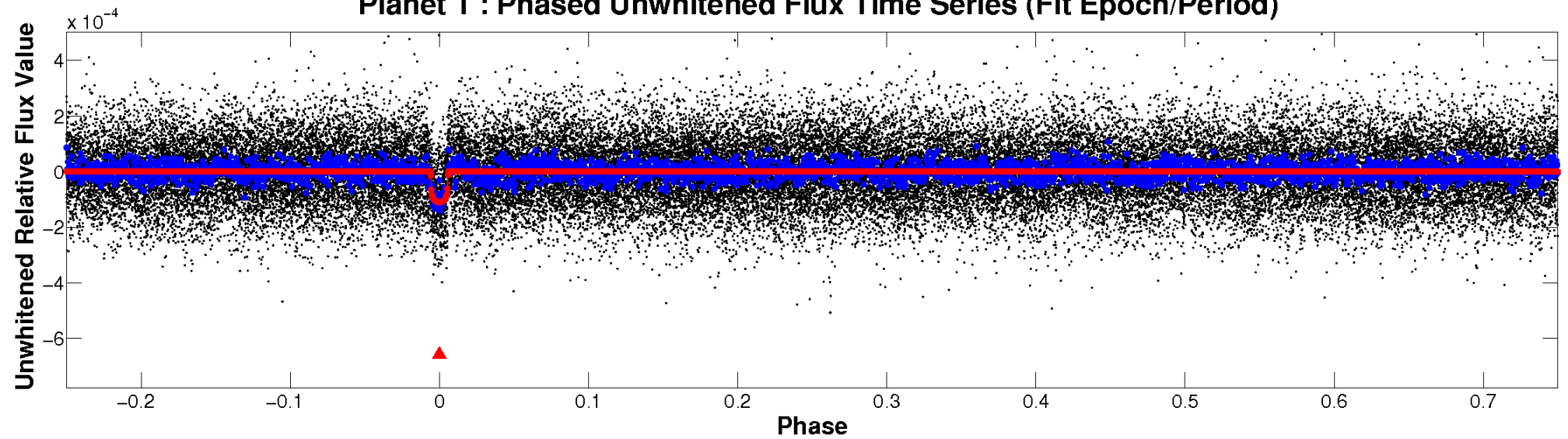
ALT Odd/Even

TCE 006026924-01

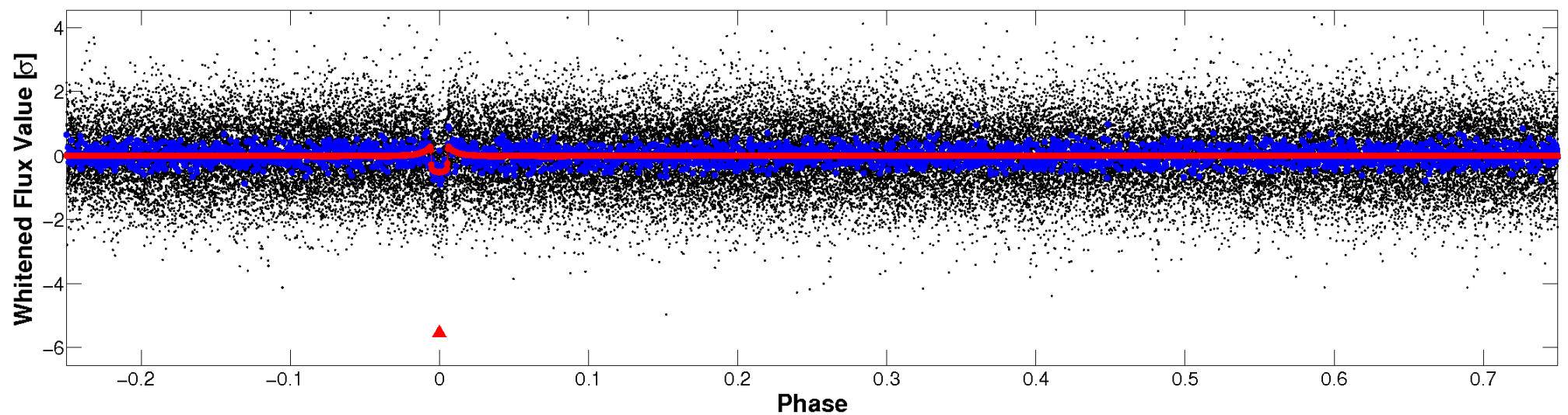


Non-Whitened Vs. Whitened Light Curve

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

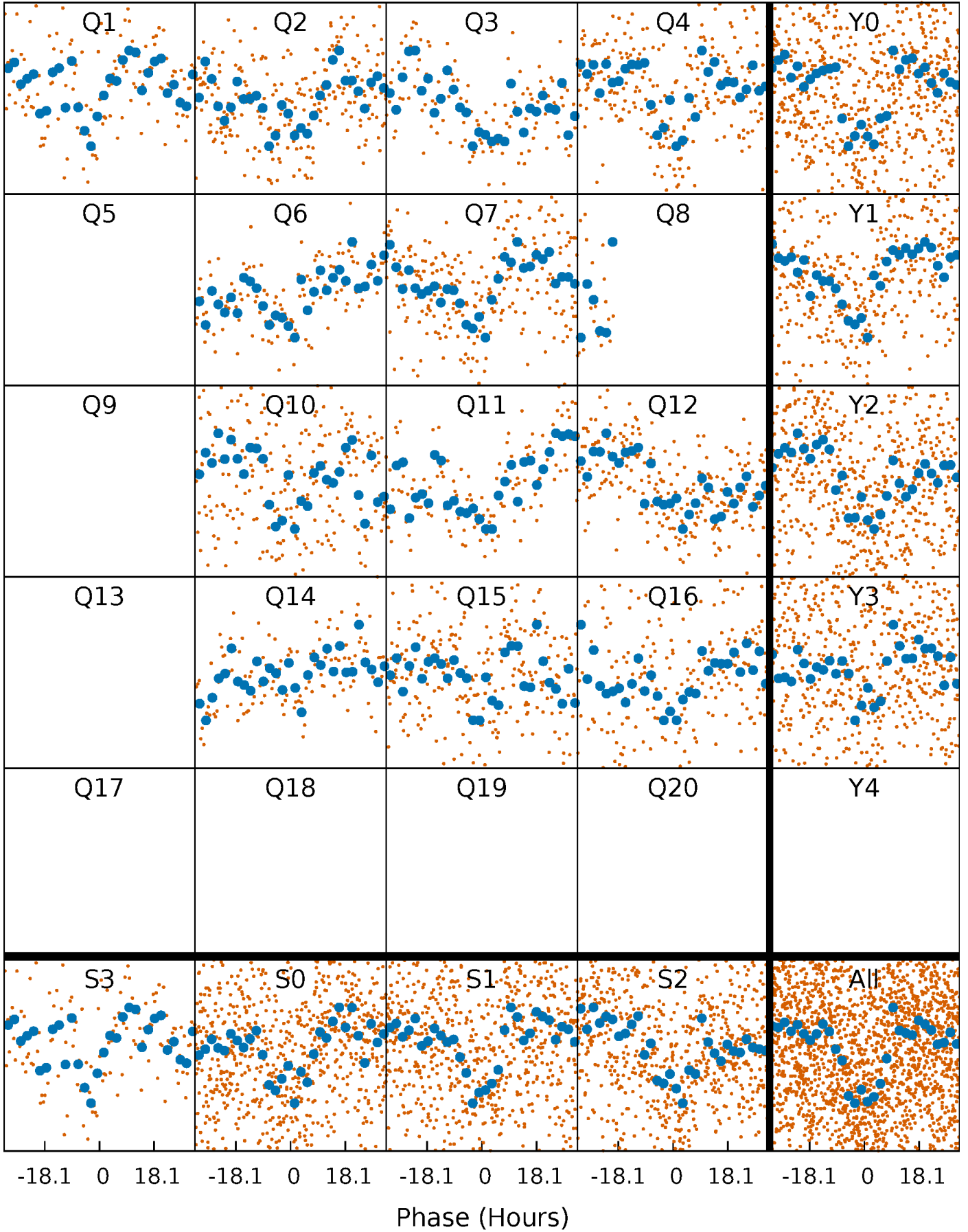


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



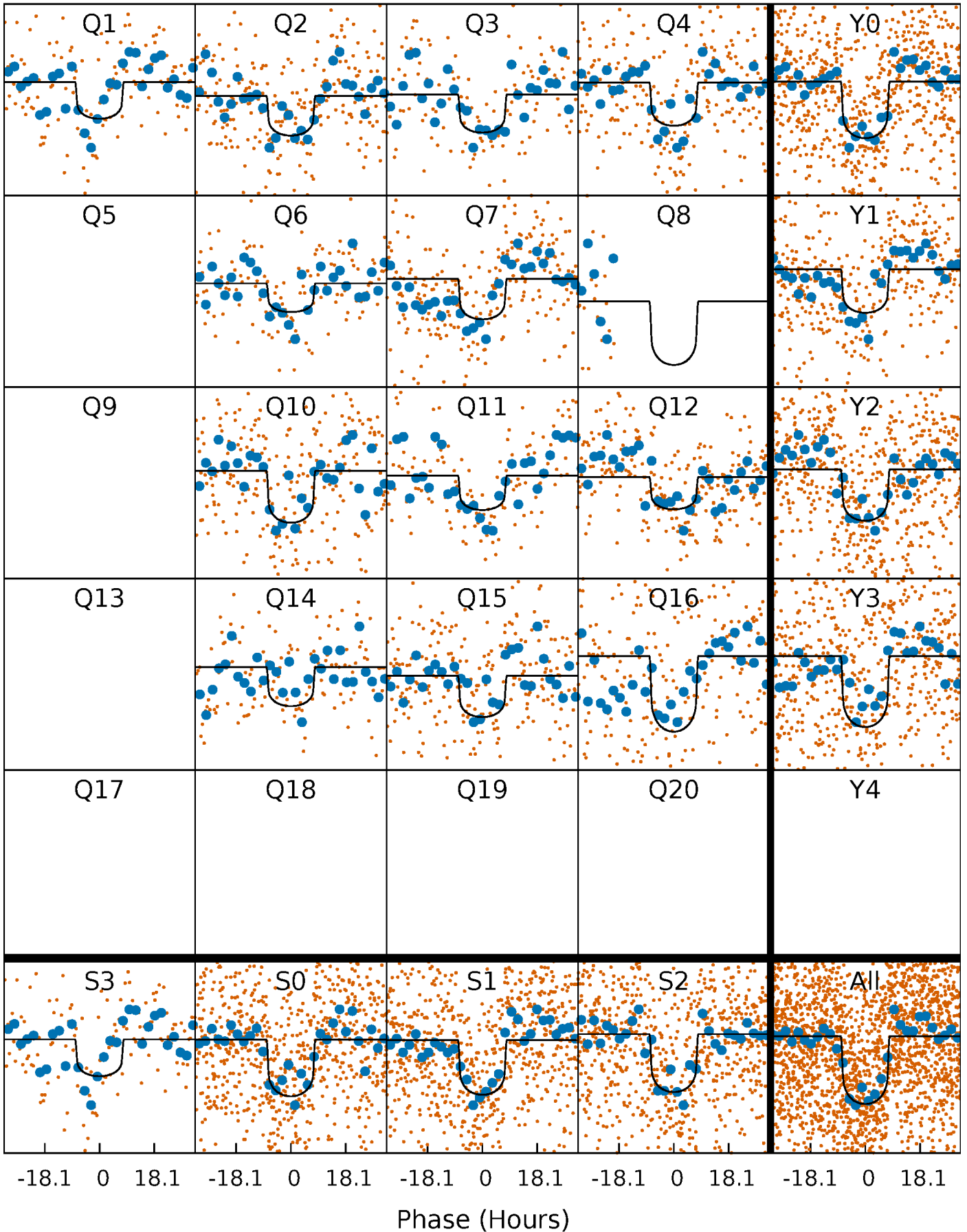
PDC Quarter-Phased Transit Curves

TCE 006026924-01 P= 56.644725 Days $T_0=138.781595$ (BKJD)



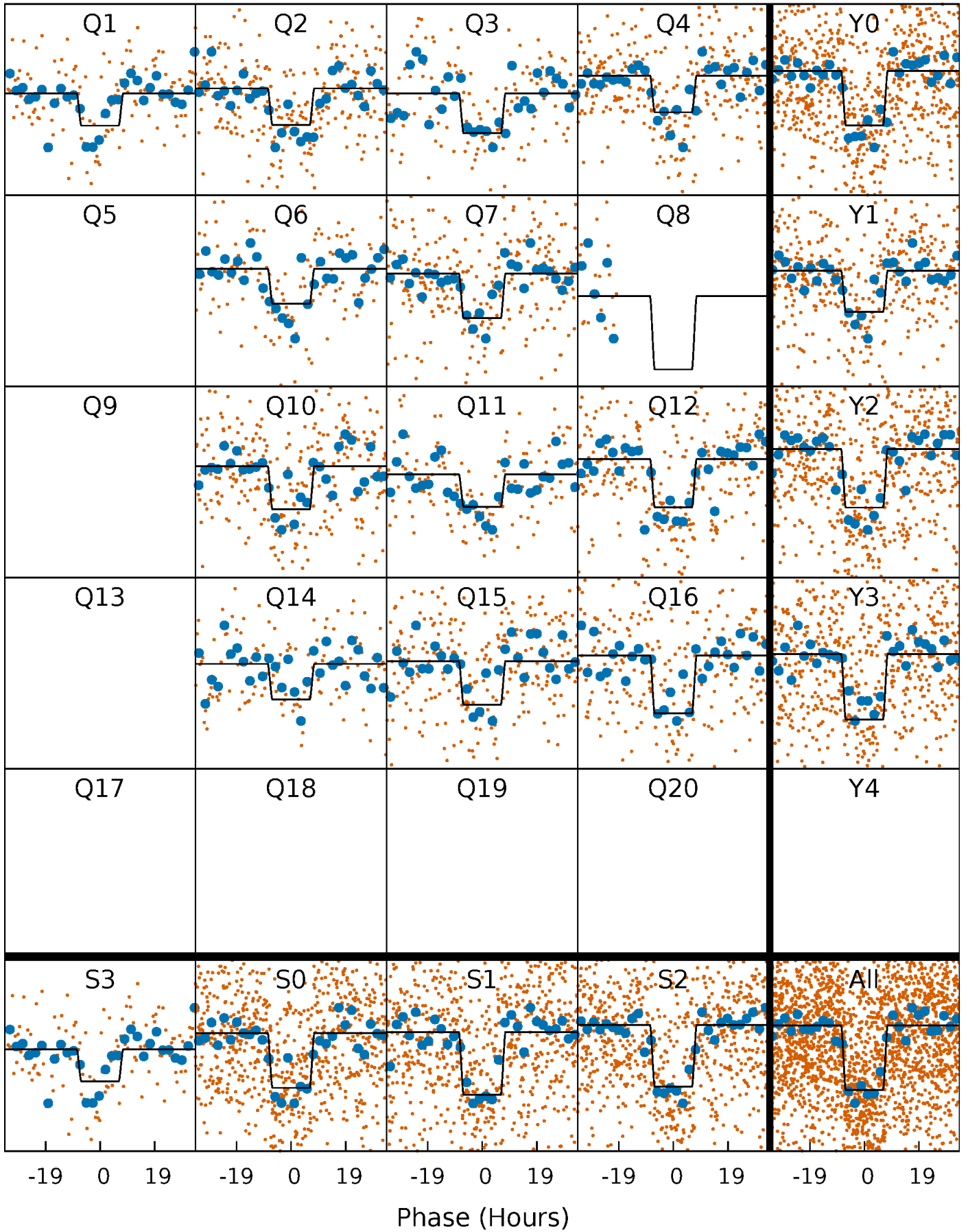
DV Quarter-Phased Transit Curves

TCE 006026924-01 P= 56.644725 Days $T_0=138.781595$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

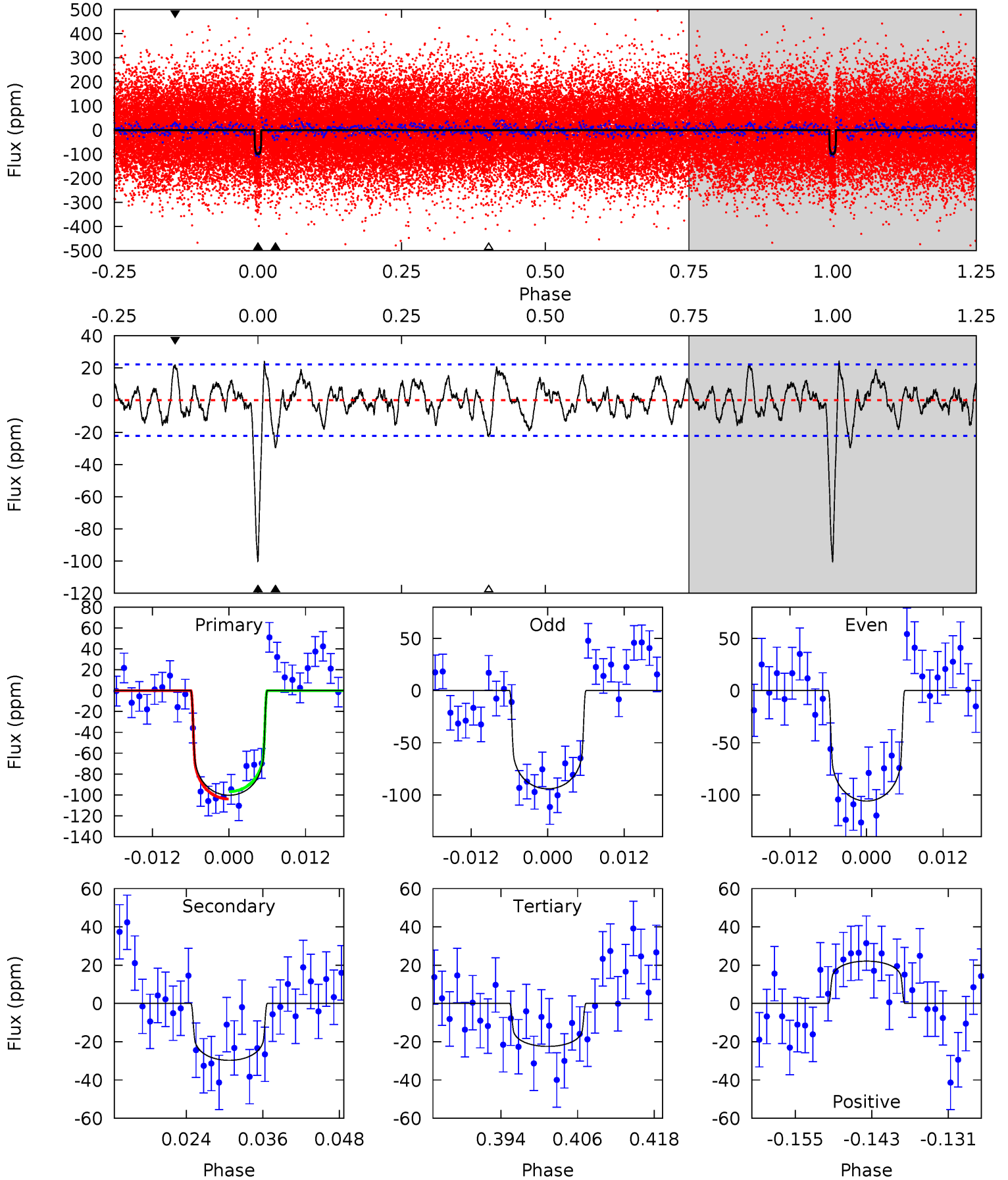
TCE 006026924-01 P= 56.647285 Days $T_0=138.751267$ (BKJD)



DV Model-Shift Uniqueness Test

006026924-01, P = 56.644725 Days, E = 82.136870 Days

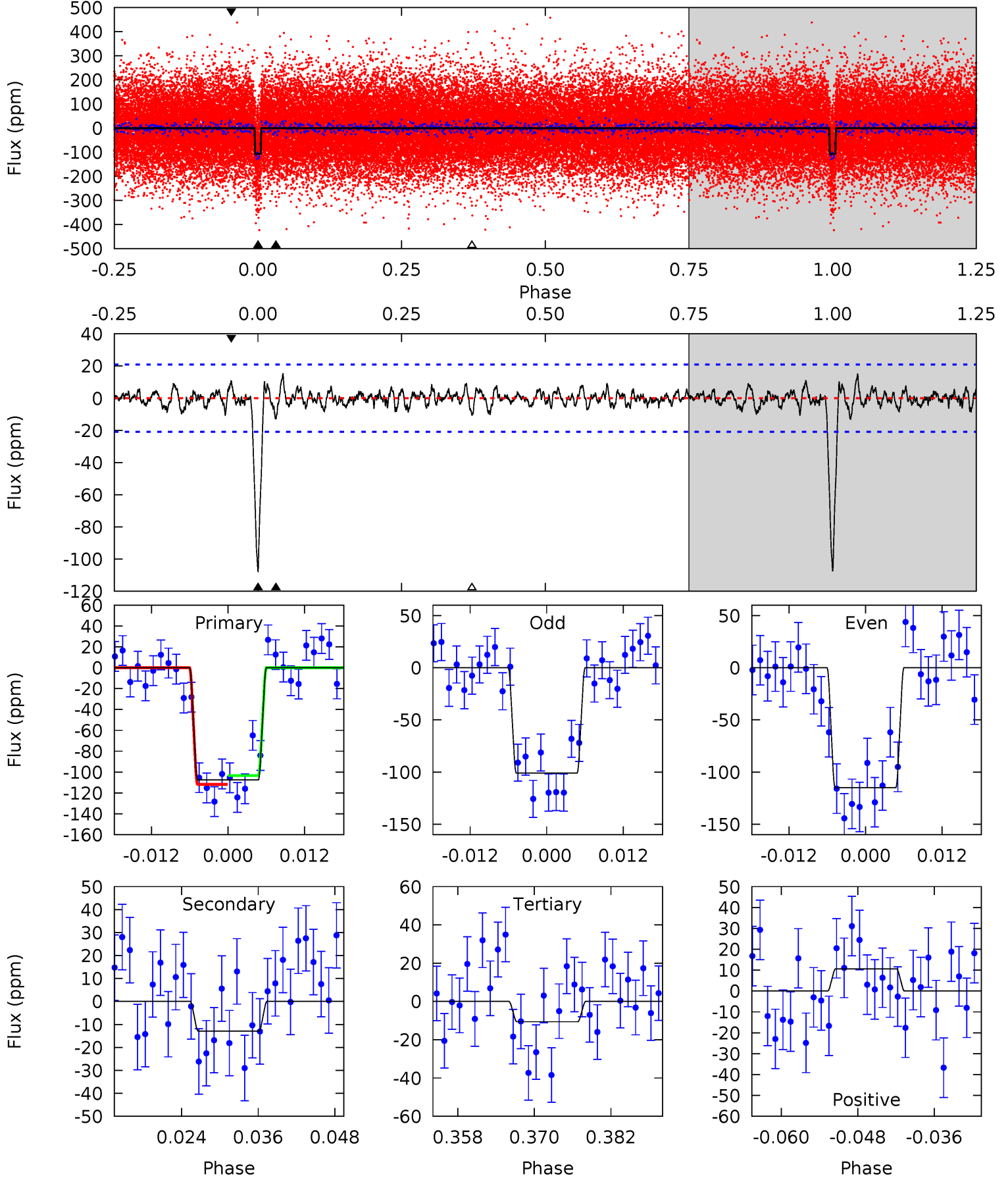
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	6.68	5.04	4.97	4.99	2.51	1.78	17.5	17.6	1.64	1.71	1.32	0.93	0.19	0.80



Alt Model-Shift Uniqueness Test

006026924-01, P = 56.647285 Days, E = 82.103982 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.7	3.08	2.53	2.54	4.99	2.51	0.86	23.1	23.1	0.55	0.55	1.65	0.99	0.12	1.01



Stellar Parameters For KIC 006026924

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6237^{+124}_{-111}	$3.862^{+0.182}_{-0.098}$	$0.120^{+0.150}_{-0.150}$	$2.295^{+0.425}_{-0.519}$	$1.399^{+0.190}_{-0.156}$	$0.163^{+0.159}_{-0.050}$
	+2%/-2%	+5%/-3%	+125%/-125%	+19%/-23%	+14%/-11%	+97%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006026924-01 / KOI 4276.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 4	$2.64^{+0.47}_{-0.41}$	1019^{+52}_{-61}	4609^{+268}_{-268}	241^{+106}_{-68}
Alt.	-13 ± 4	$2.55^{+0.45}_{-0.42}$	1017^{+50}_{-64}	3984^{+309}_{-301}	113^{+69}_{-42}

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

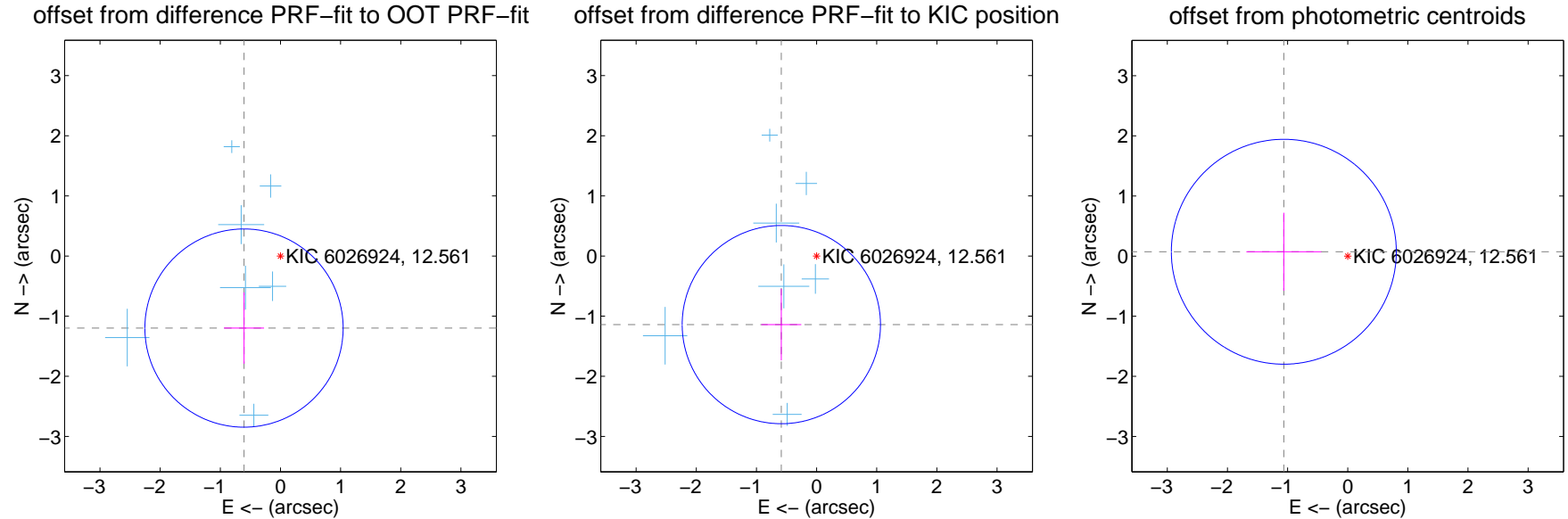
DV Centroid Data

Supplemental centroid analysis for 006026924-01. Kepler magnitude: 12.56. Transit SNR 11.90

There are 7 quarters with good PRF difference image offsets

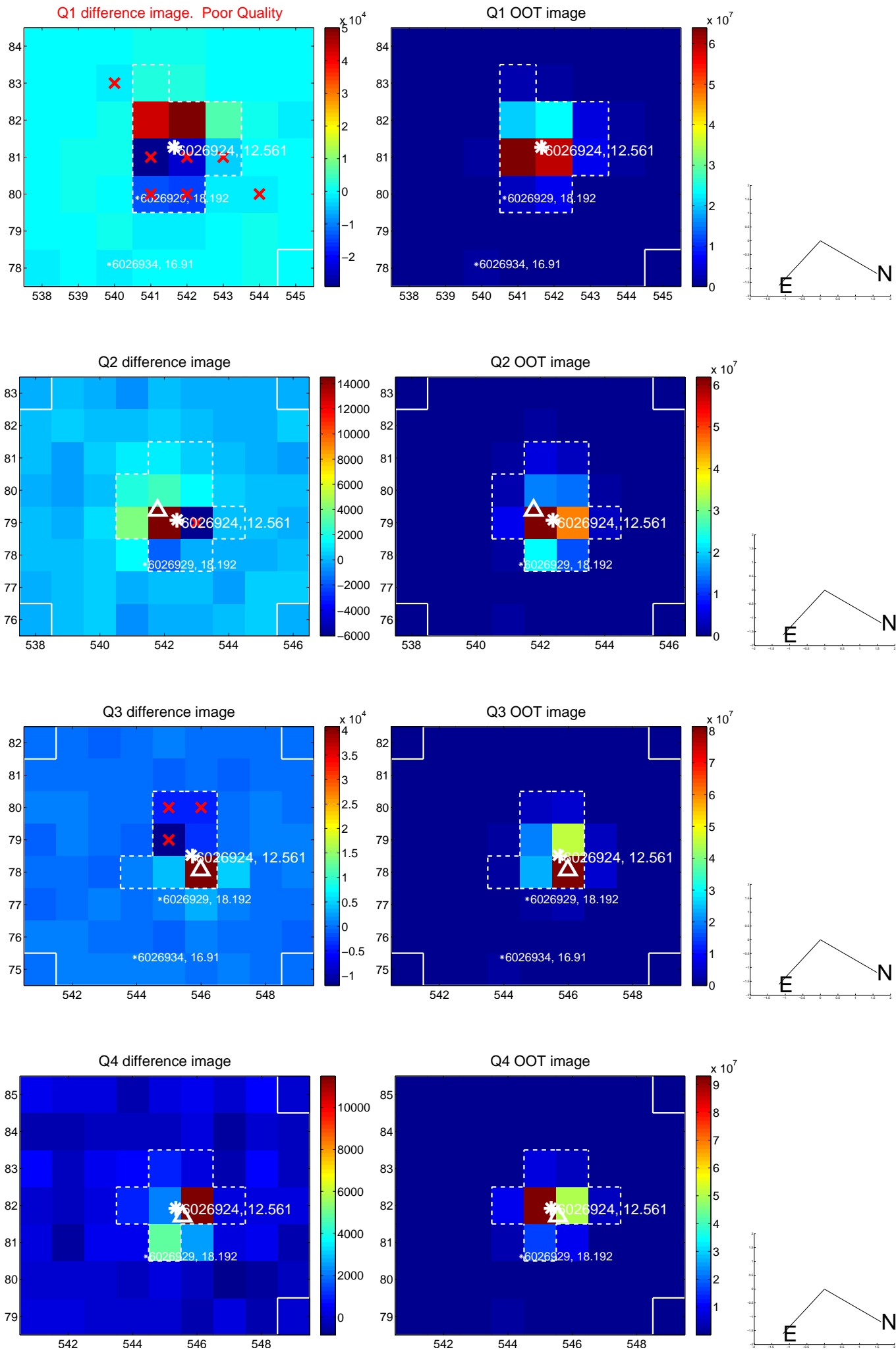
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.342 ± 0.549	2.44	0.606 ± 0.333	-1.198 ± 0.592
PRF-fit source offset from KIC position	1.282 ± 0.549	2.33	0.586 ± 0.332	-1.140 ± 0.594
photometric centroid source offset	1.06 ± 0.62	1.71	1.06 ± 0.62	0.07 ± 0.65



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.

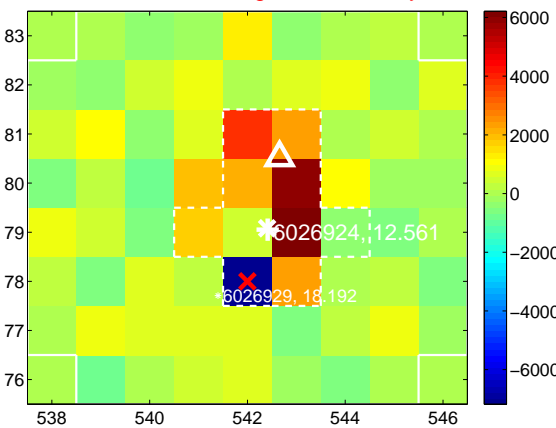
Q5 no difference image



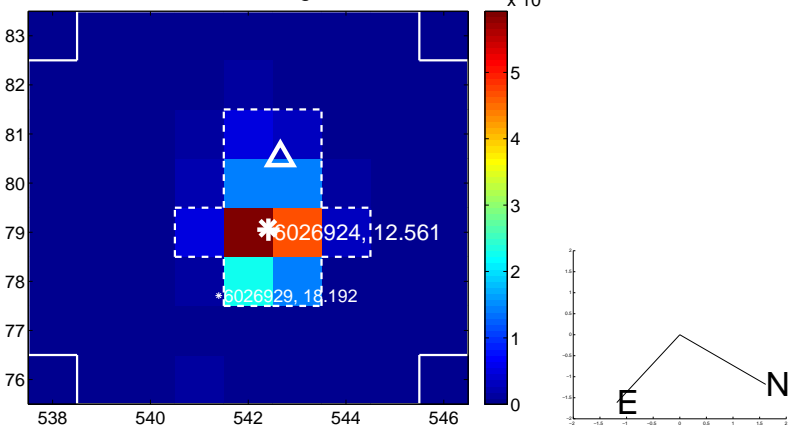
Q5 no OOT image



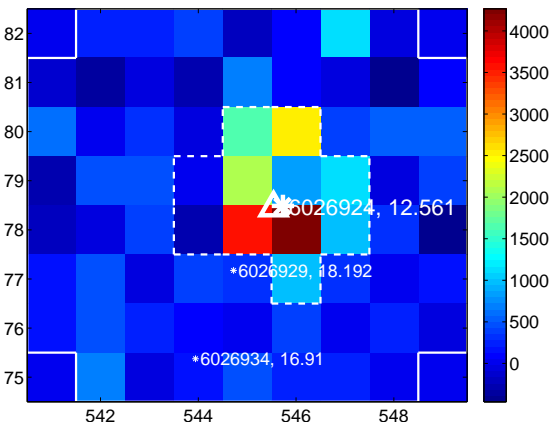
Q6 difference image. Poor Quality



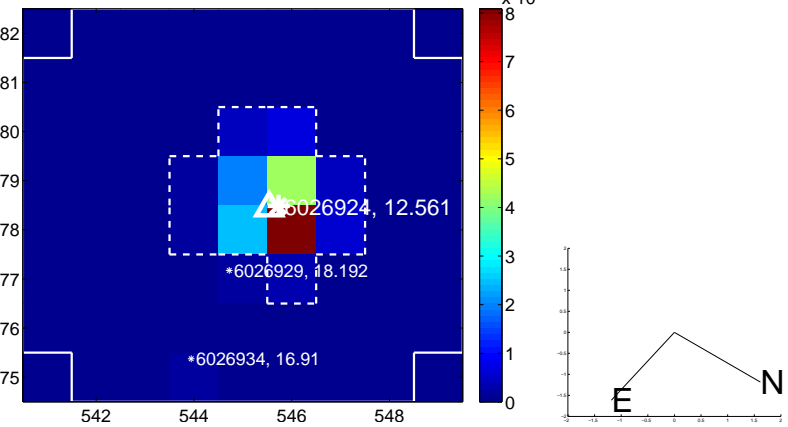
Q6 OOT image



Q7 difference image



Q7 OOT image



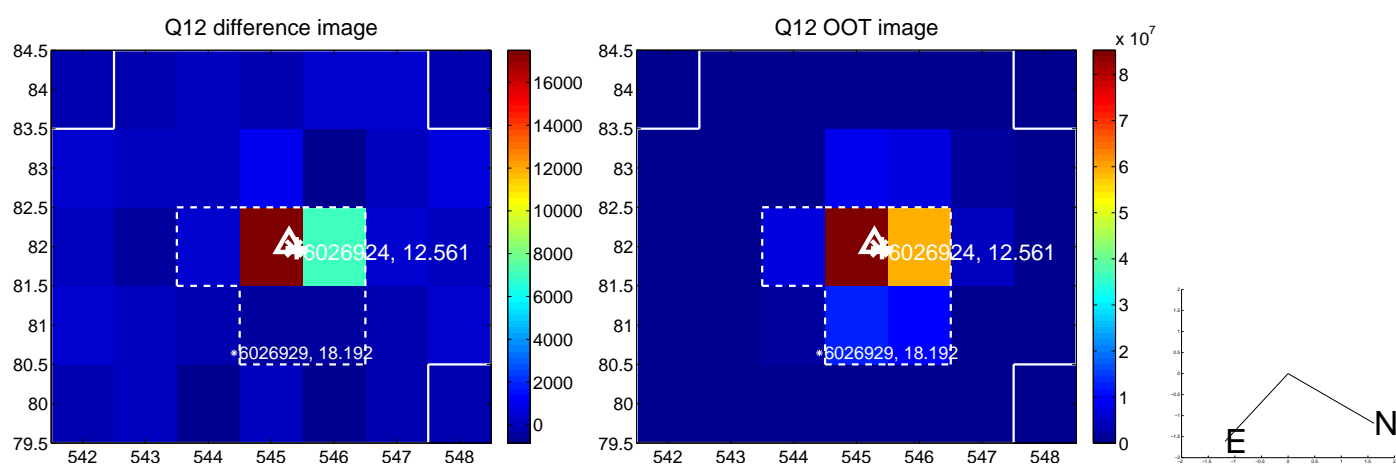
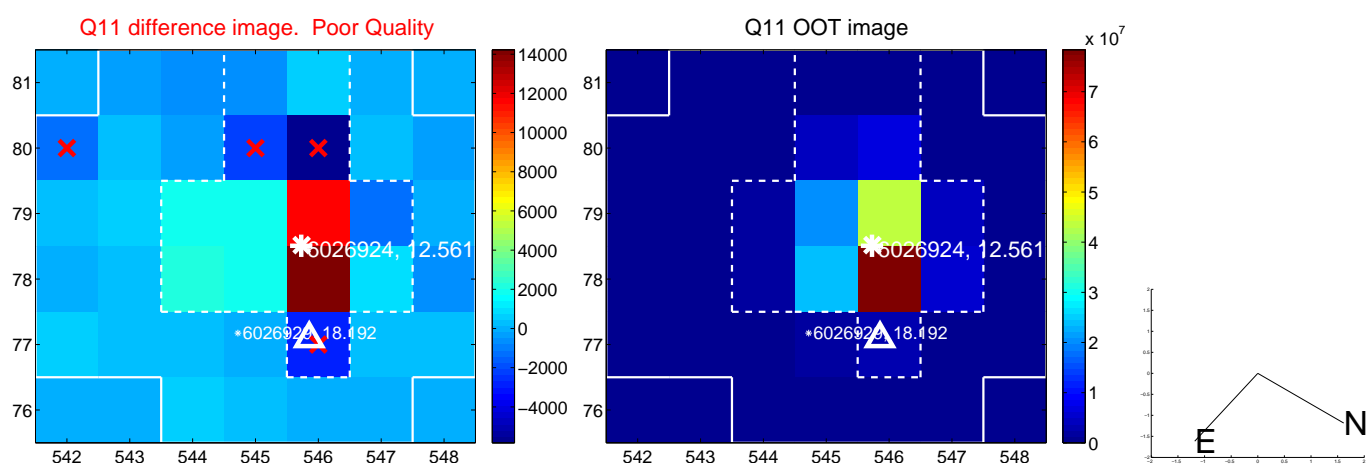
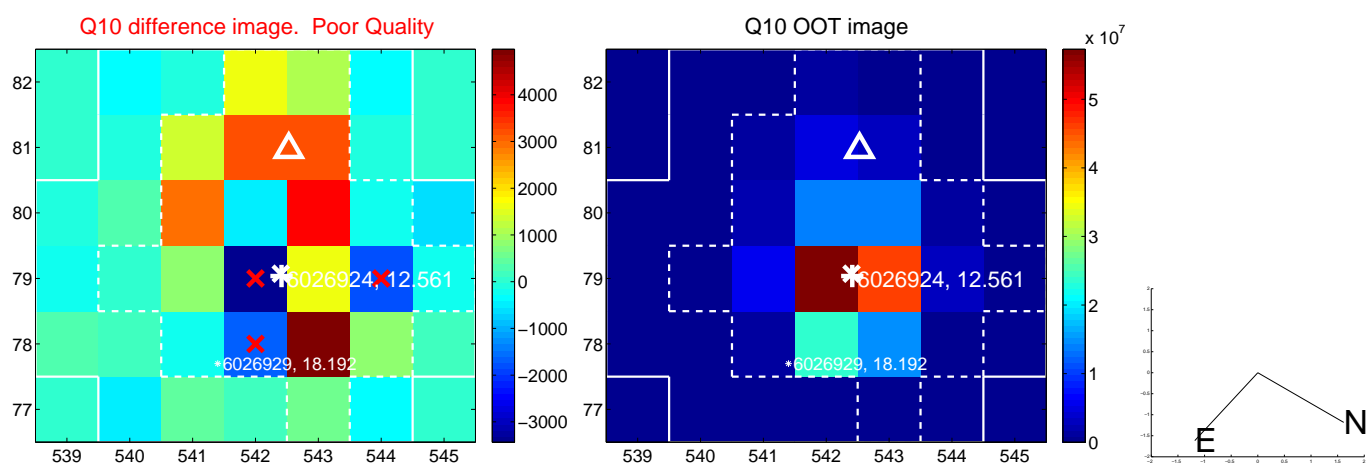
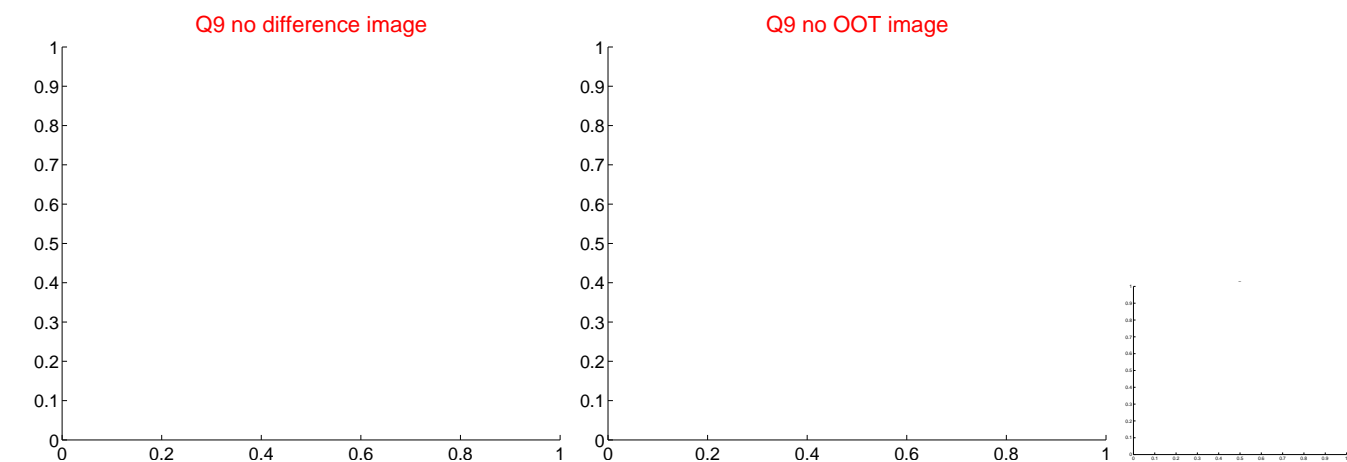
Q8 no difference image



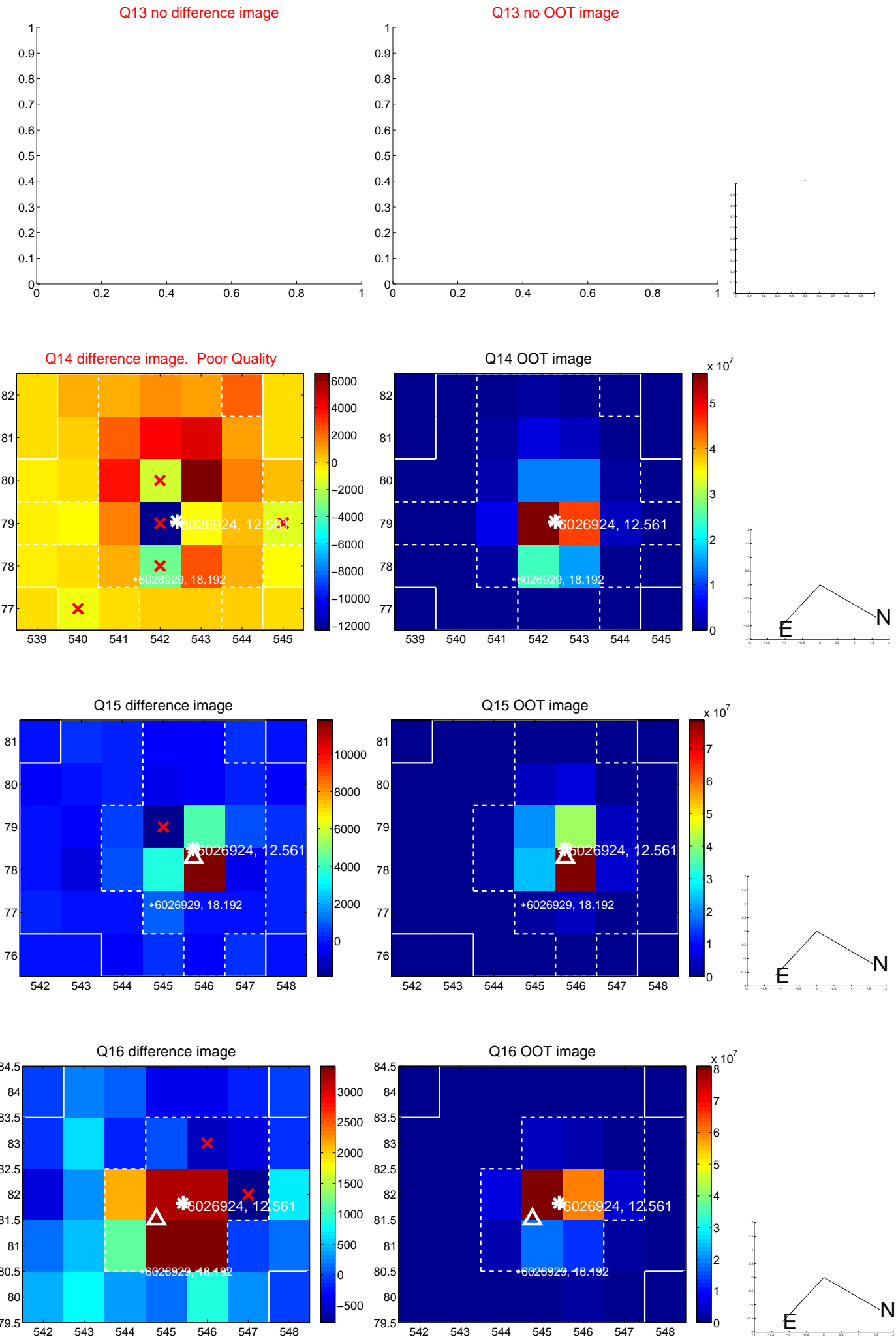
Q8 no OOT image



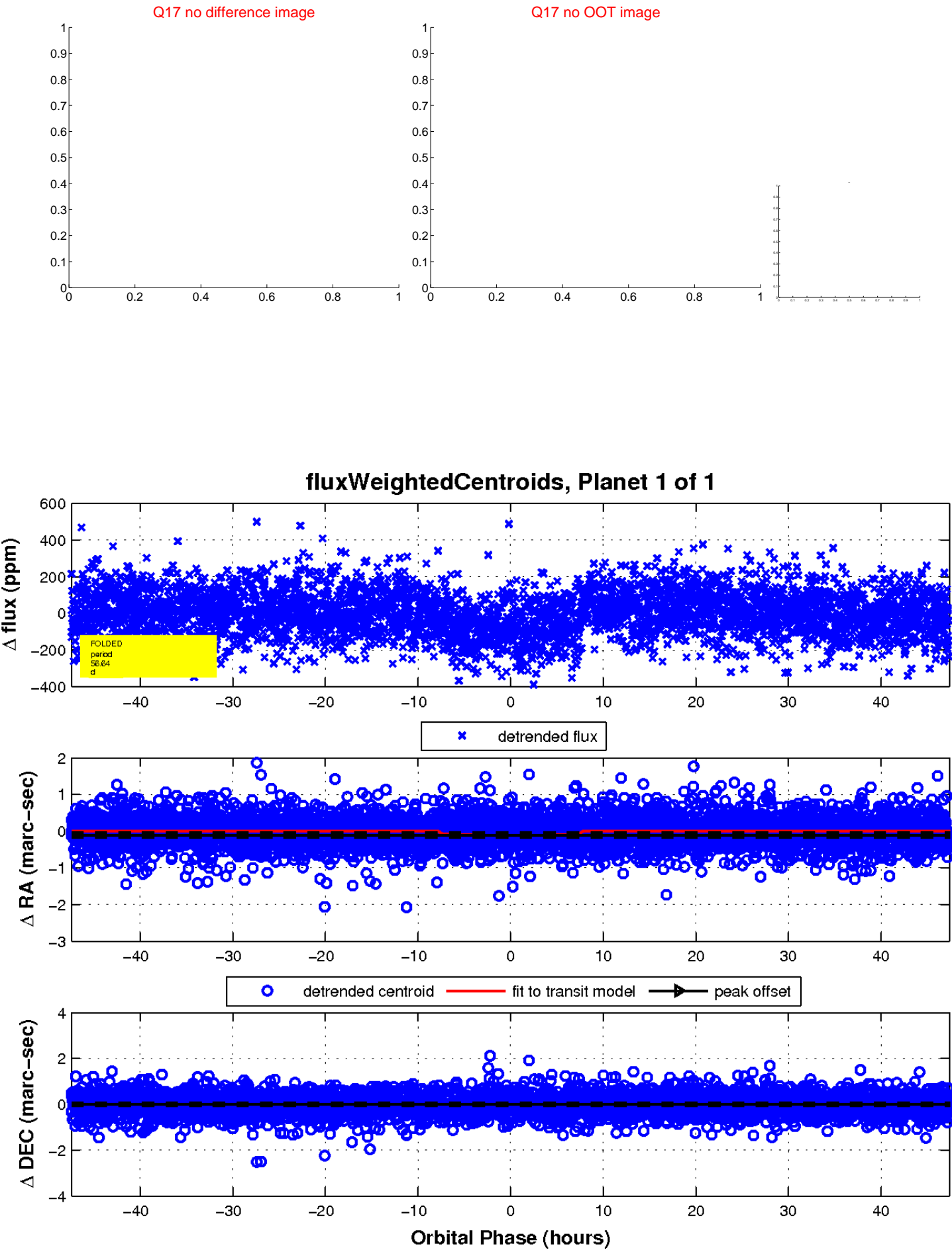
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

