

KIC 005078426

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})
005078426-01	OBS	No	0.618445	131.801601	25.7	5.898	7.5	5.5	1.19	6253	0.61	9055.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005078426-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

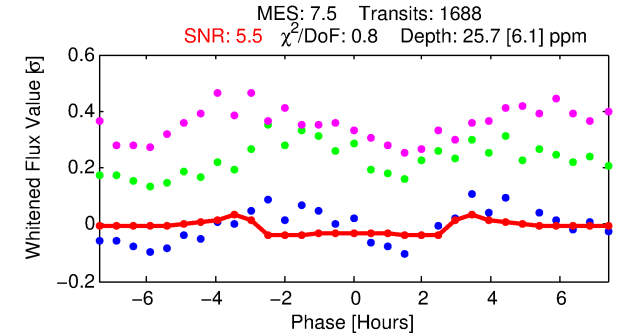
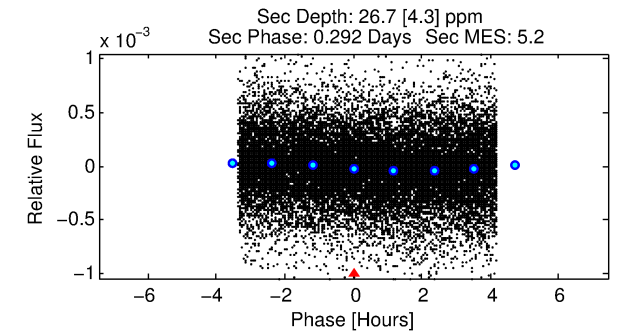
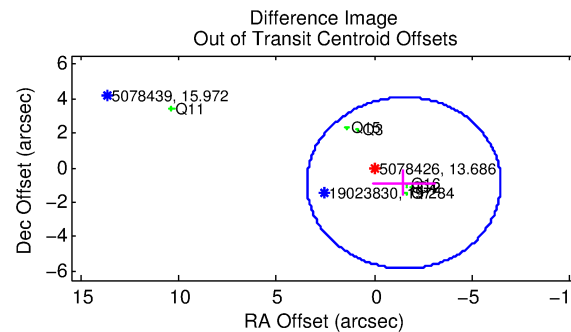
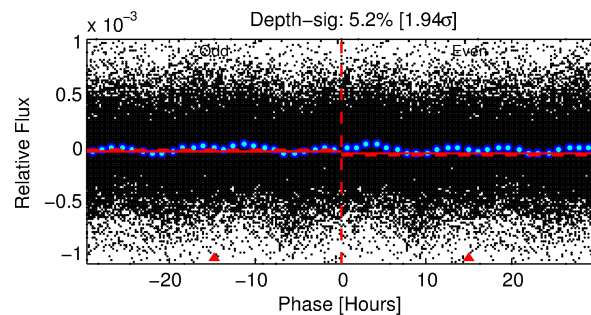
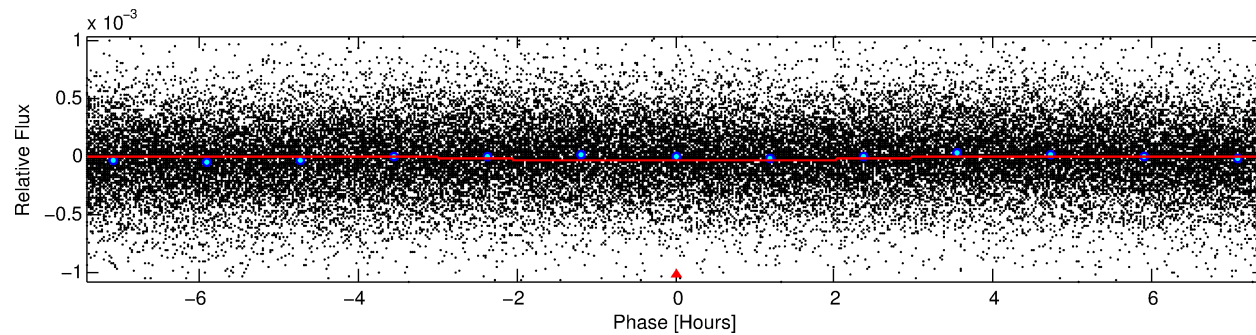
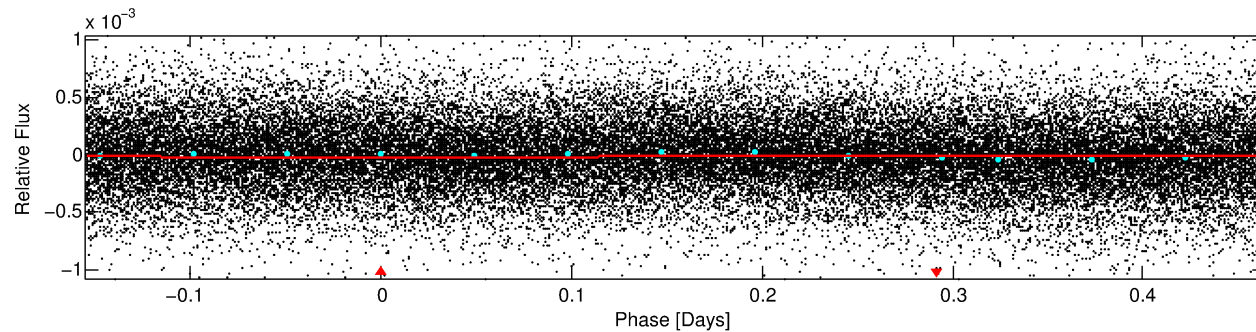
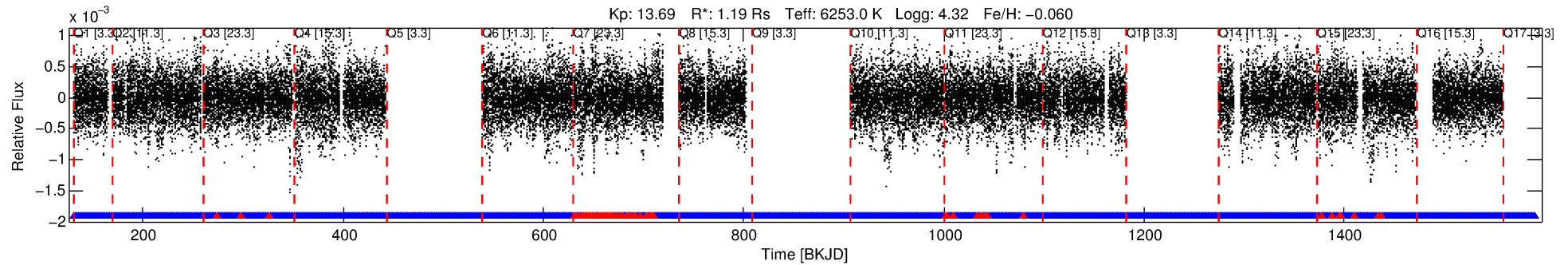
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005078426-01

No Significant Match Found

DV One-Page Summary

KIC: 5078426 Candidate: 1 of 1 Period: 0.618 d



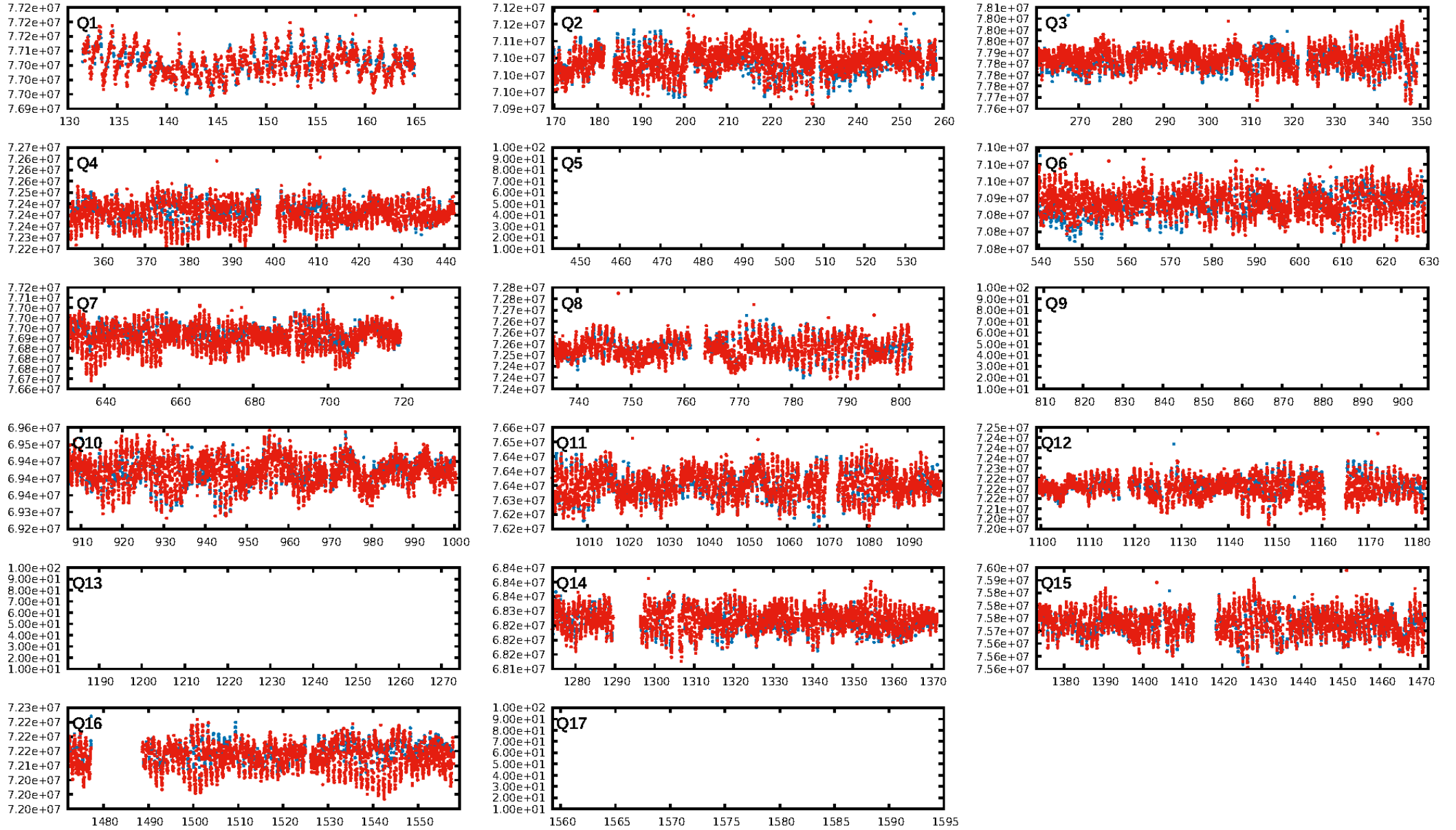
DV Fit Results:

Period = 0.61845 [0.00002] d
Epoch = 131.8016 [0.0045] BKJD
Rp/R* = 0.0047 [0.0043]
a/R* = 1.05 [0.49]
b = 0.31 [13.95]
Seff = 9055.30 [3621.73]
Teff = 2487 [249] K
Rp = 0.61 [0.59] Re
a = 0.0146 [0.0039] AU
Ag = 8.48 [15.84] [0.47σ]
Teffp = 6562 [3010] K [1.35σ]

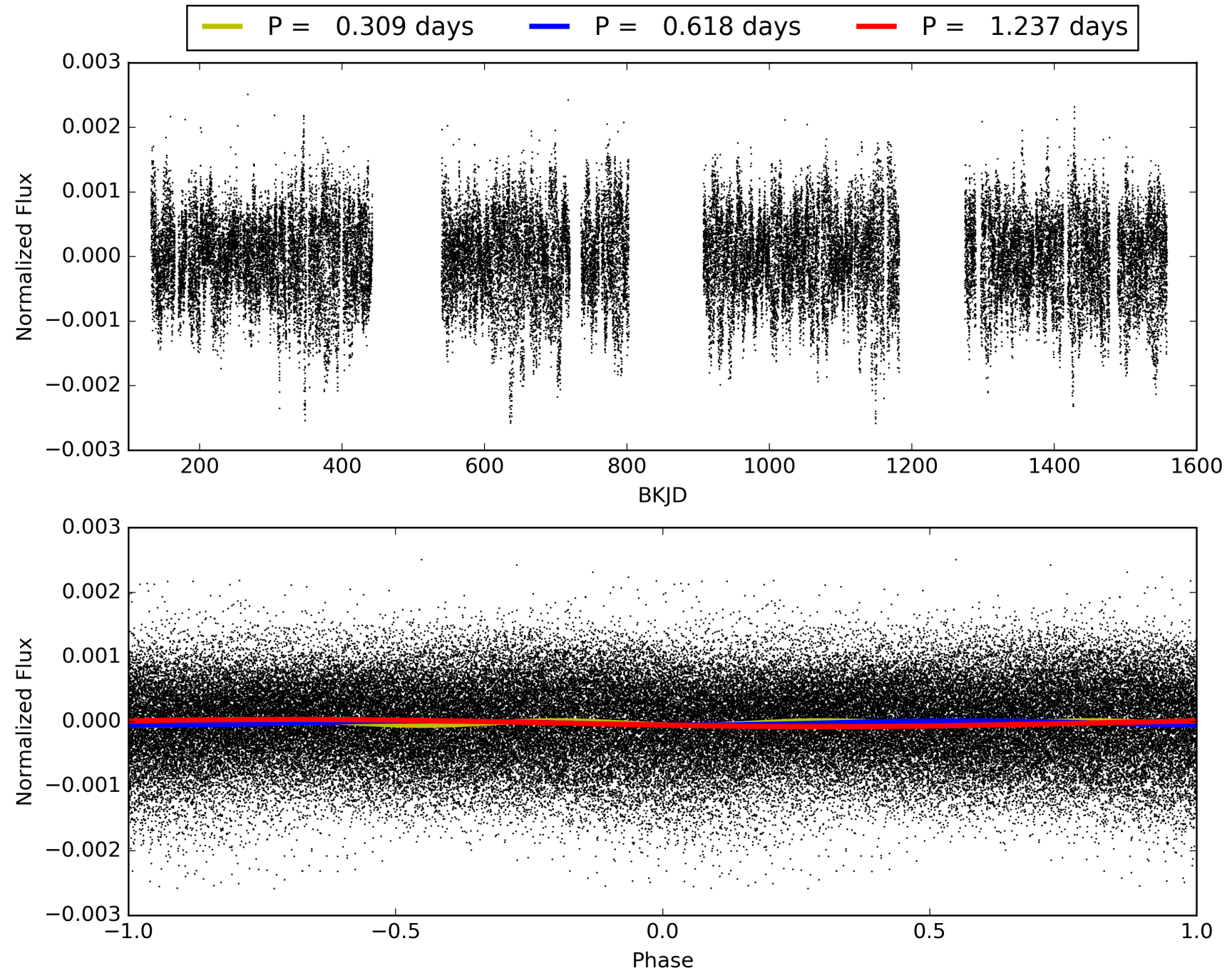
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [1548/1634]
GhostDiagnostic-chr: 0.4935
Centroid-sig: 68.0%
Centroid-so: 0.382 arcsec [0.40σ]
OotOffset-rm: 1.746 arcsec [1.06σ]
KicOffset-rm: 1.606 arcsec [1.04σ]
OotOffset-st: 0/4/3/0 [7]
KicOffset-st: 0/4/3/0 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005078426-01, PDC Light Curves

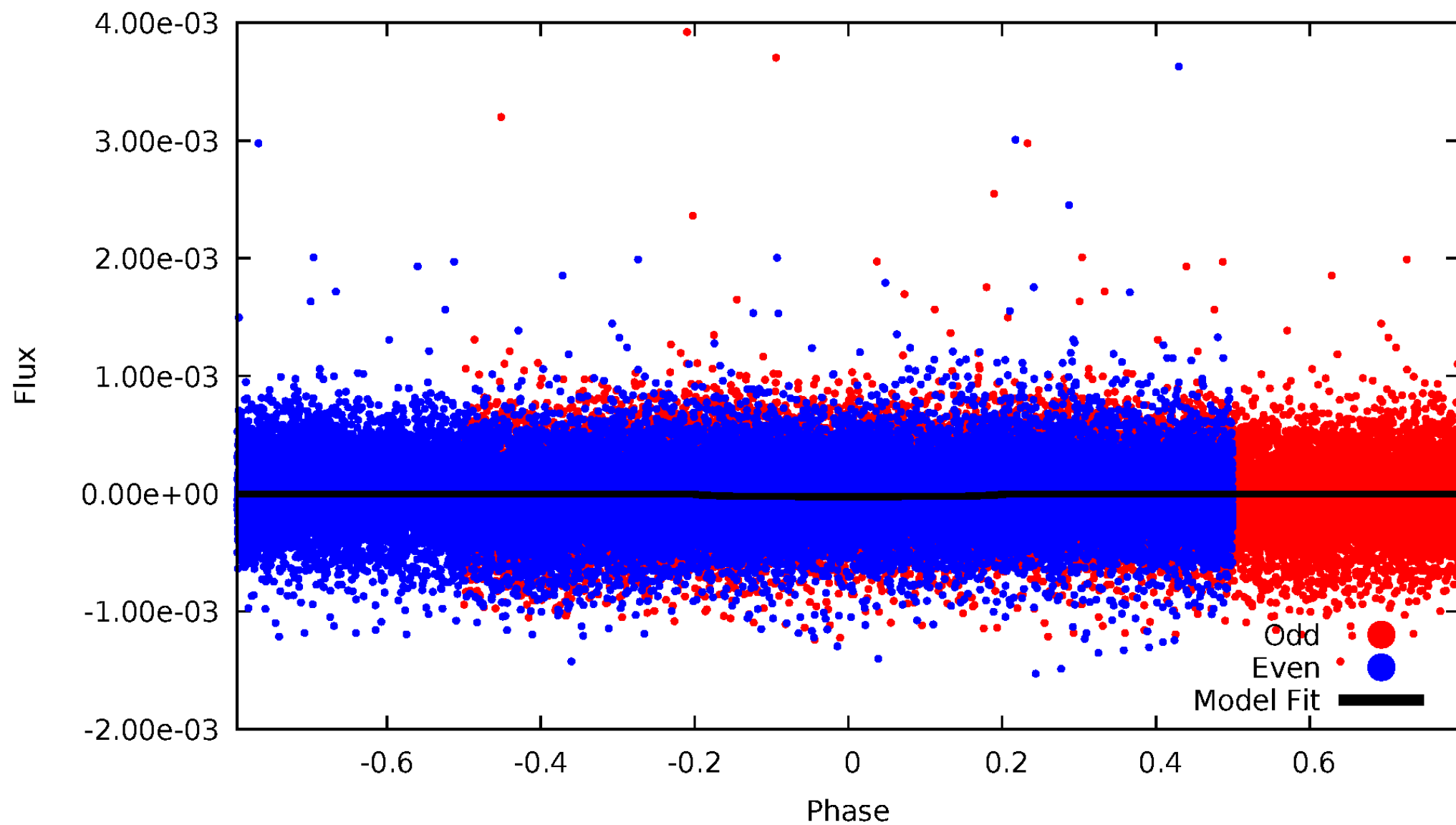


TCE 005078426-01



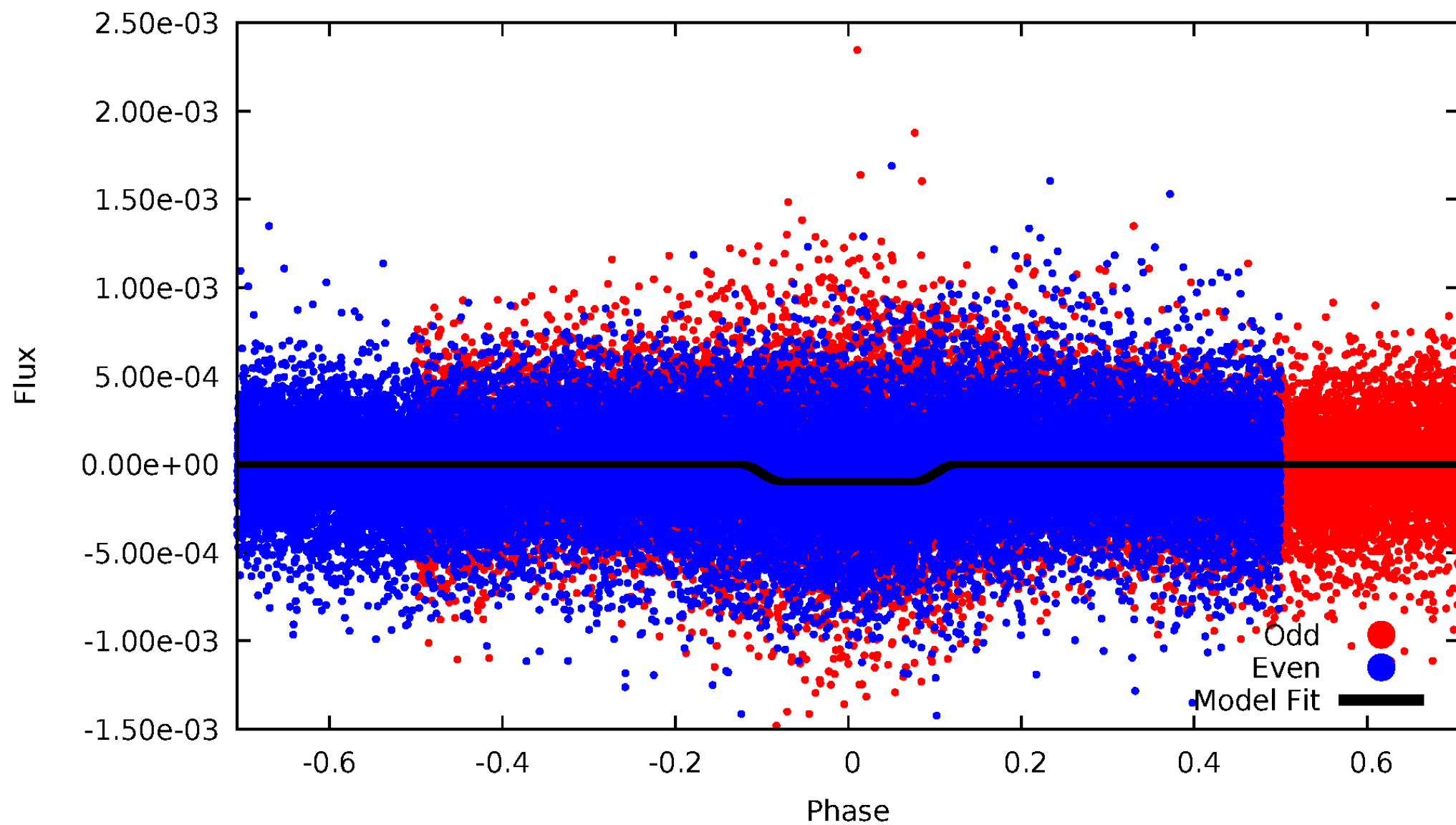
DV Odd/Even

TCE 005078426-01

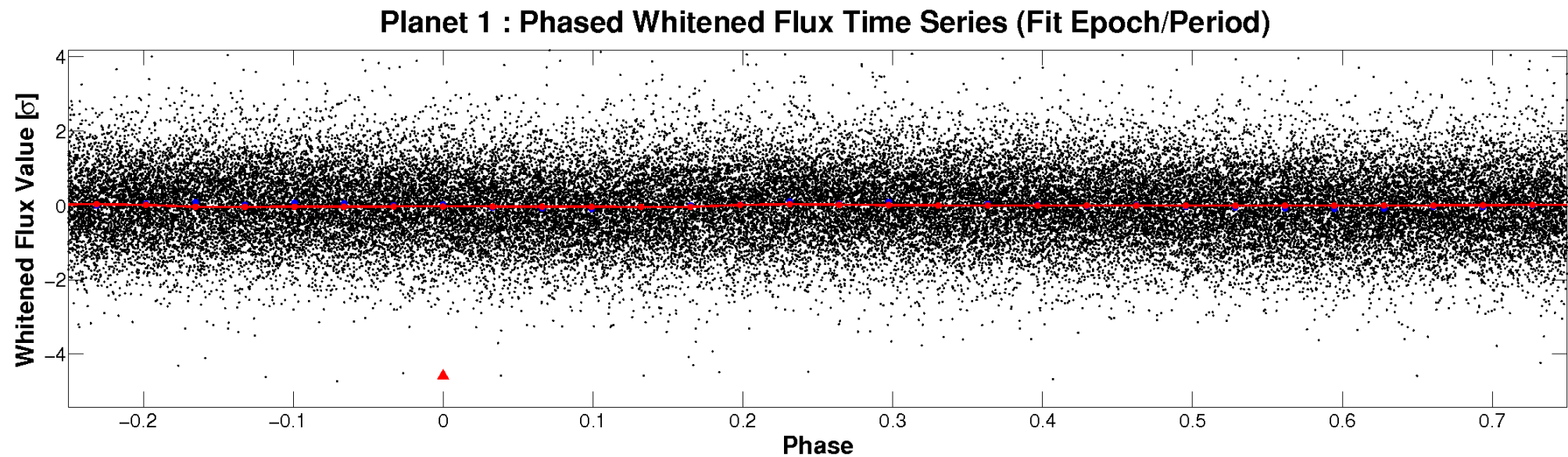
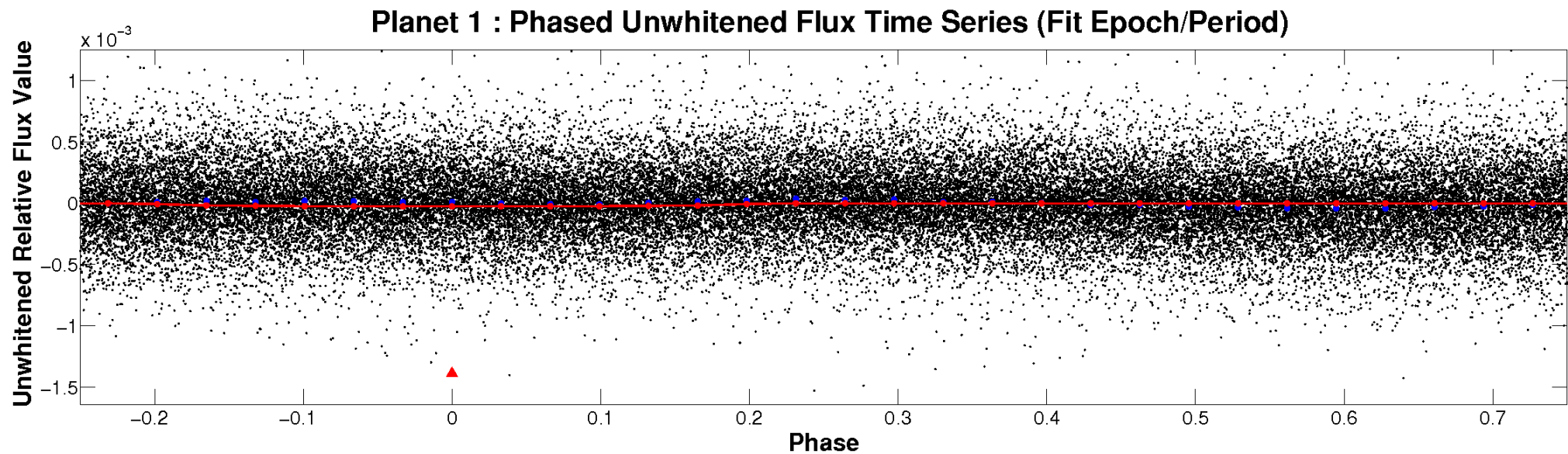


ALT Odd/Even

TCE 005078426-01

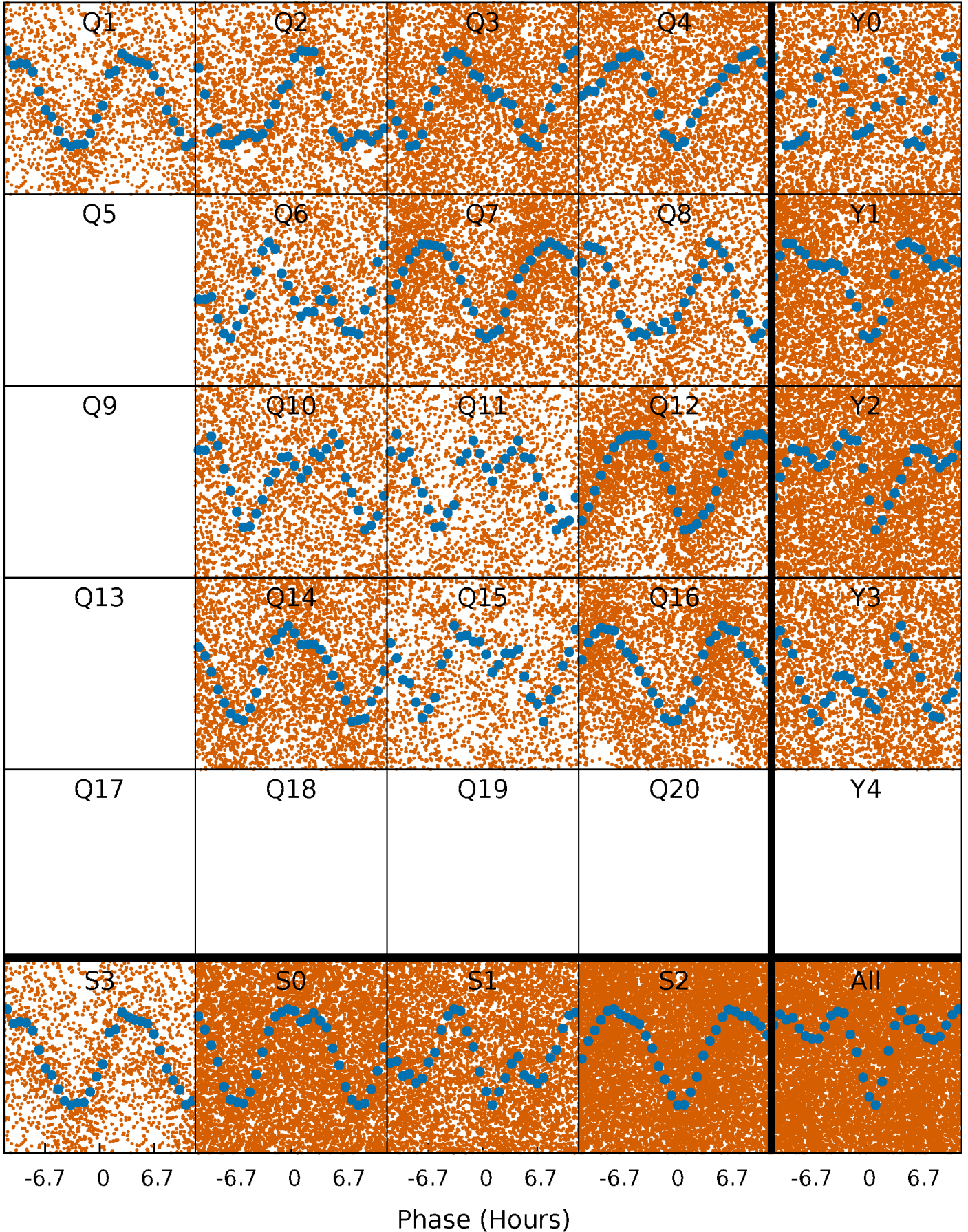


Non-Whitened Vs. Whitened Light Curve



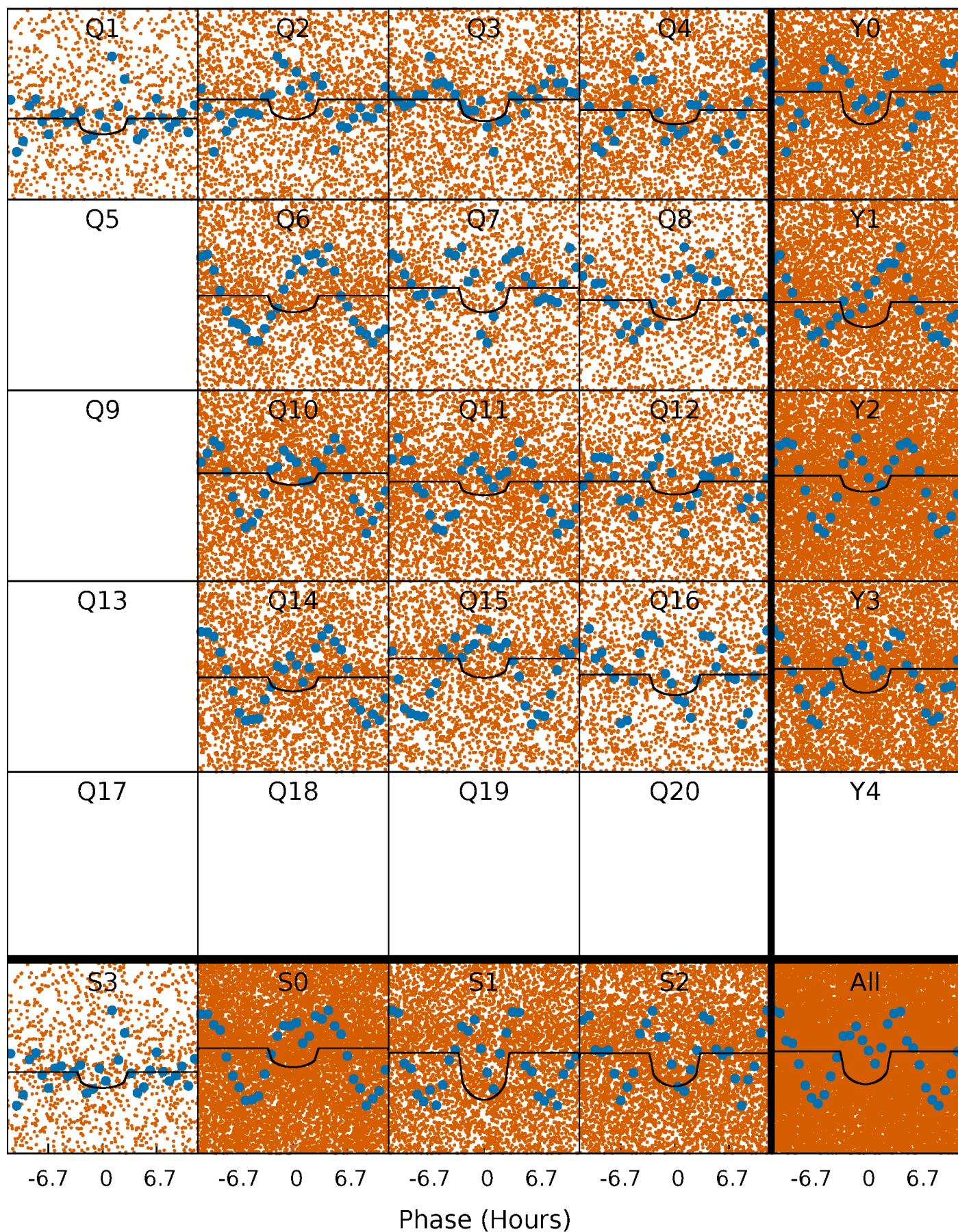
PDC Quarter-Phased Transit Curves

TCE 005078426-01 P= 0.618445 Days $T_0=131.801601$ (BKJD)



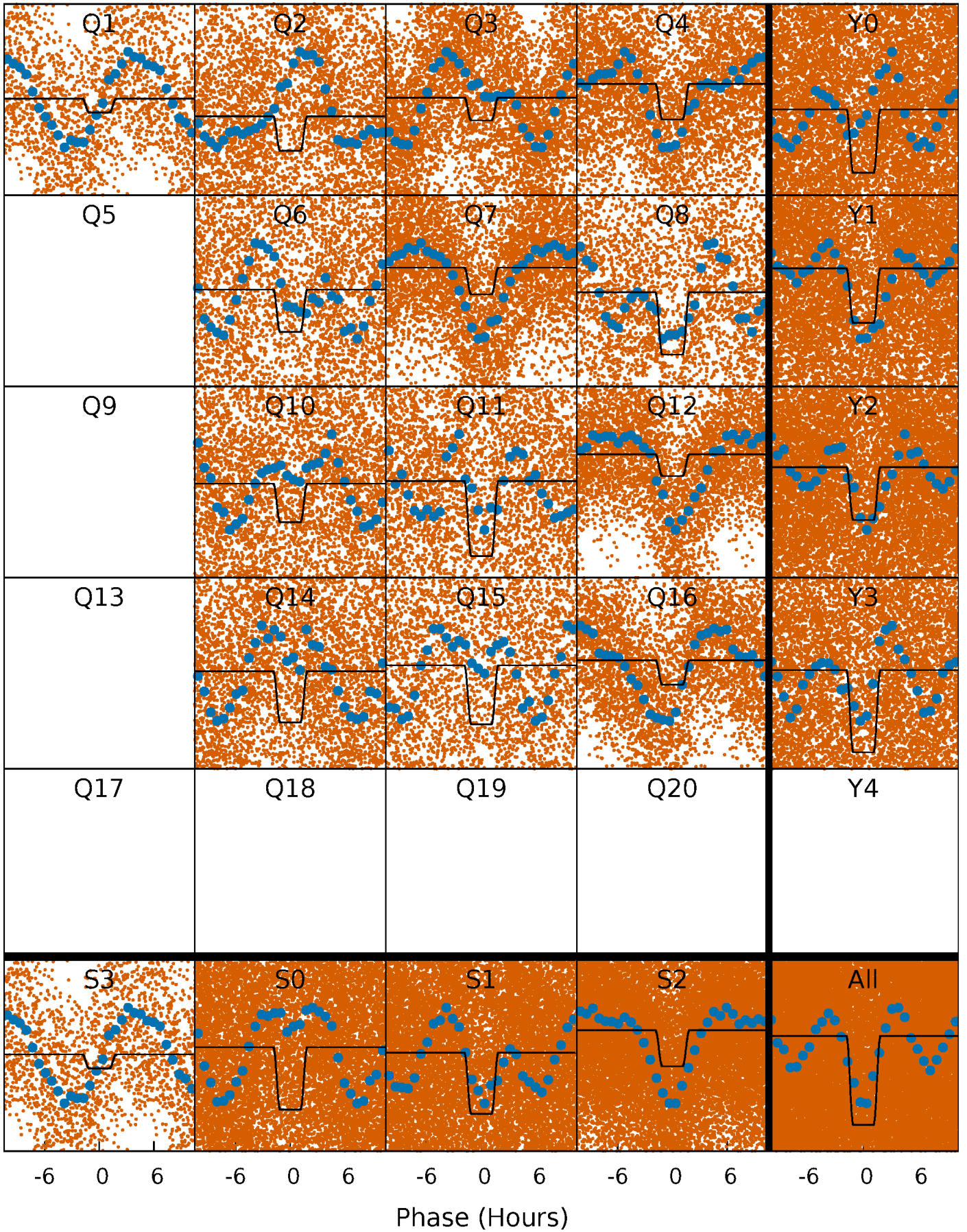
DV Quarter-Phased Transit Curves

TCE 005078426-01 P= 0.618445 Days $T_0=131.801601$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

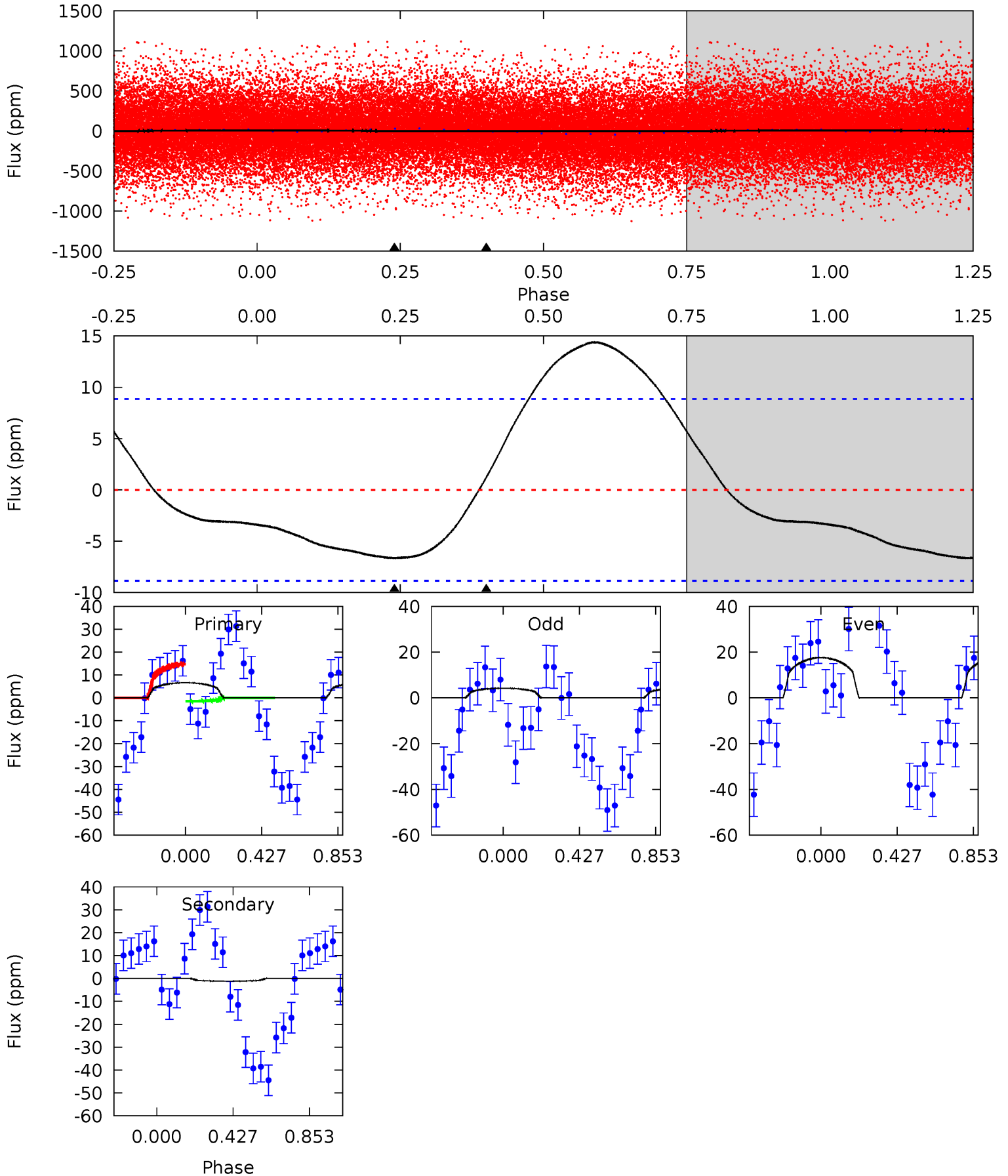
TCE 005078426-01 P= 0.618475 Days $T_0=131.797954$ (BKJD)



DV Model-Shift Uniqueness Test

005078426-01, P = 0.618445 Days, E = 131.183156 Days

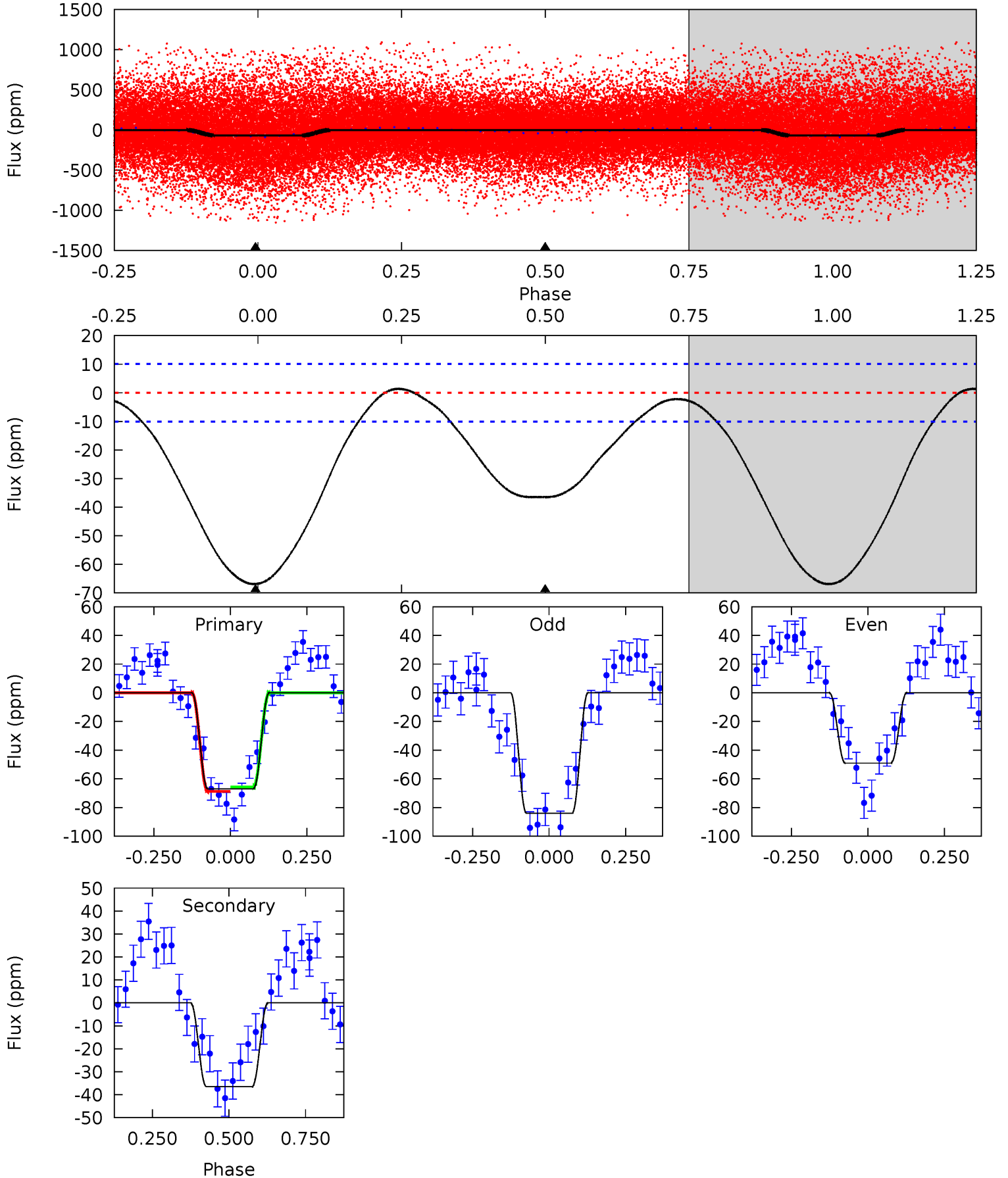
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.19	-0.58	0	0	4.25	0.79	0.92	3.19	3.19	-0.58	-0.58	3.26	0.74	0.68	3.26



Alt Model-Shift Uniqueness Test

005078426-01, P = 0.618475 Days, E = 131.179479 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	15.8	0	0	4.37	1.15	0.88	29.0	29.0	15.8	15.8	7.62	0.86	0.02	0.55



Stellar Parameters For KIC 005078426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6253^{+168}_{-205}	$4.324^{+0.108}_{-0.201}$	$-0.060^{+0.250}_{-0.300}$	$1.186^{+0.388}_{-0.194}$	$1.080^{+0.187}_{-0.125}$	$0.910^{+0.463}_{-0.491}$
	+3%/-3%	+2%/-5%	+417%/-500%	+33%/-16%	+17%/-12%	+51%/-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 005078426-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 2	$0.72^{+0.56}_{-0.46}$	3513^{+268}_{-200}	-3706^{+611}_{-1191}	$-0.180^{+0.316}_{-1.745}$
Alt.	-37 ± 2	$1.30^{+0.63}_{-0.54}$	3511^{+266}_{-203}	4845^{+1507}_{-774}	$2.545^{+4.787}_{-1.388}$

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

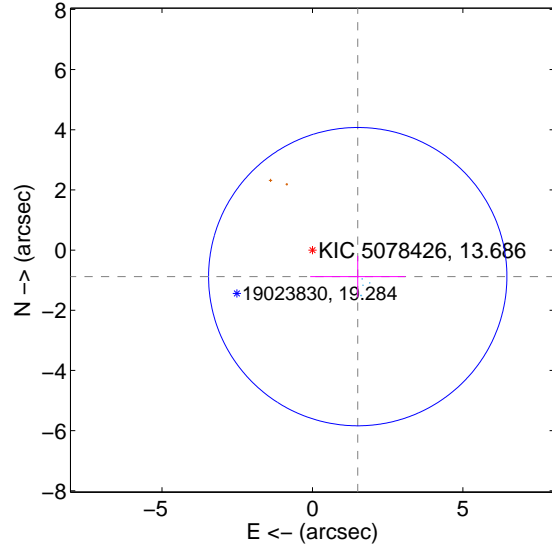
Supplemental centroid analysis for 005078426-01. Kepler magnitude: 13.69. Transit SNR 5.47

There are 4 quarters with good PRF difference image offsets

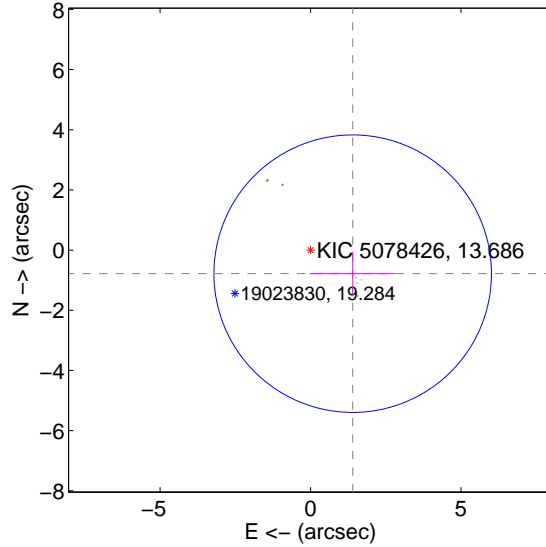
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.746 ± 1.653	1.06	-1.506 ± 1.581	-0.882 ± 0.690
PRF-fit source offset from KIC position	1.606 ± 1.537	1.04	-1.402 ± 1.425	-0.784 ± 0.732
photometric centroid source offset	0.38 ± 0.95	0.40	-0.30 ± 0.99	-0.23 ± 0.89

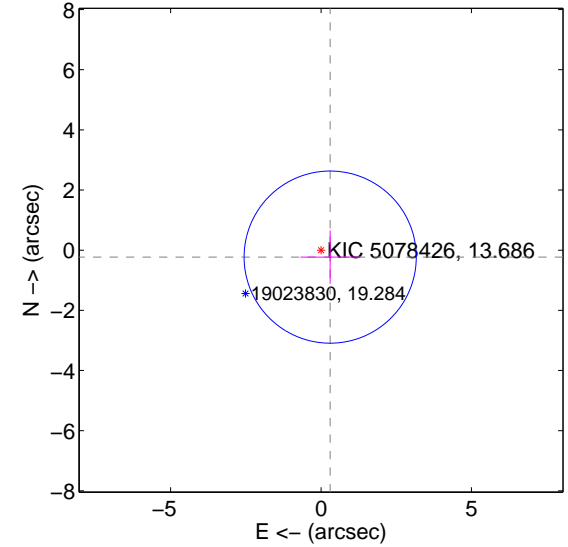
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

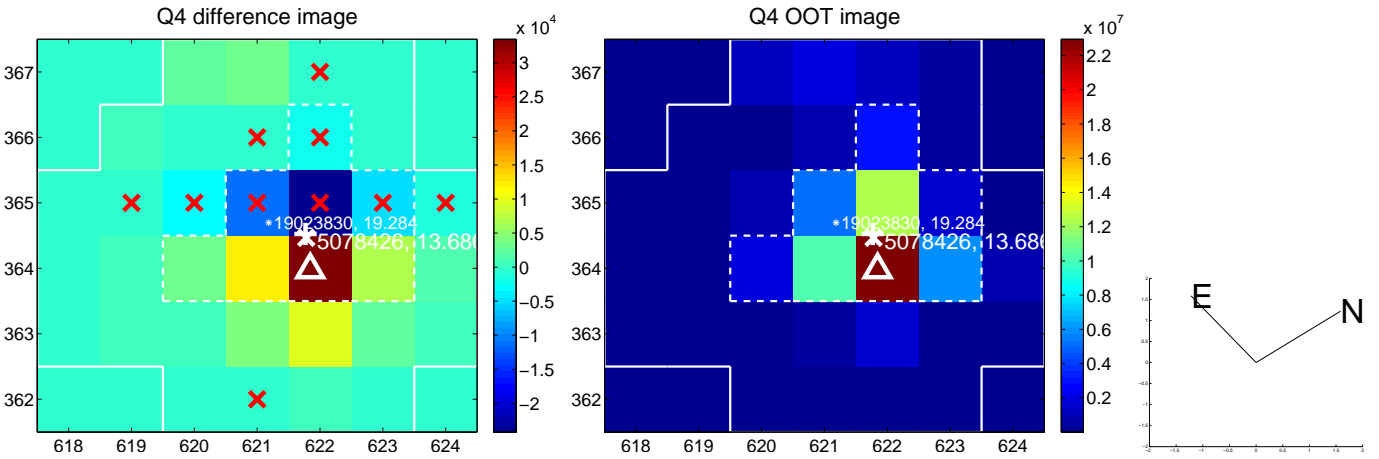
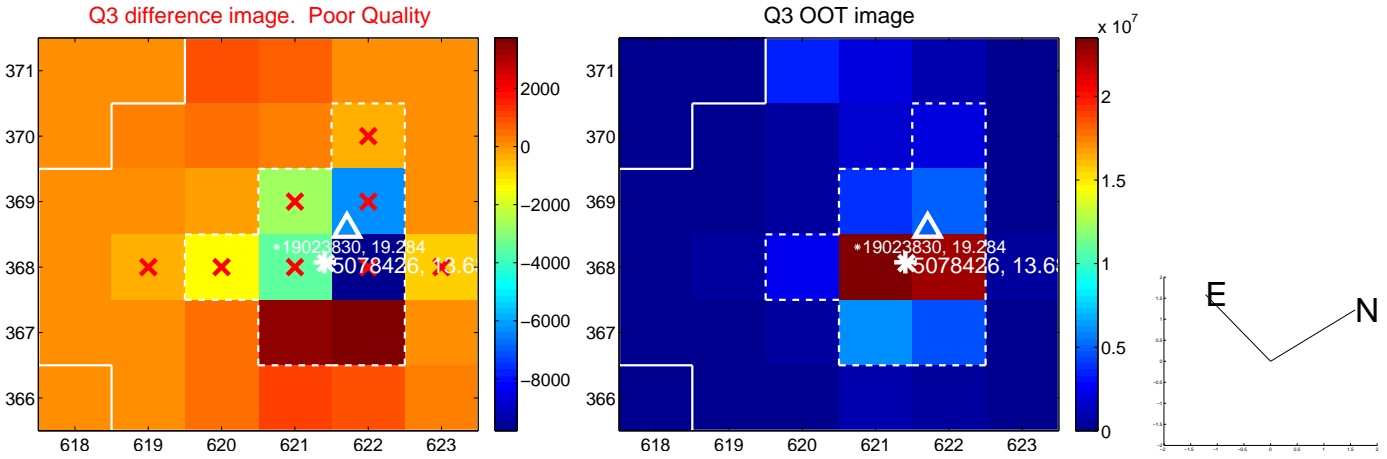
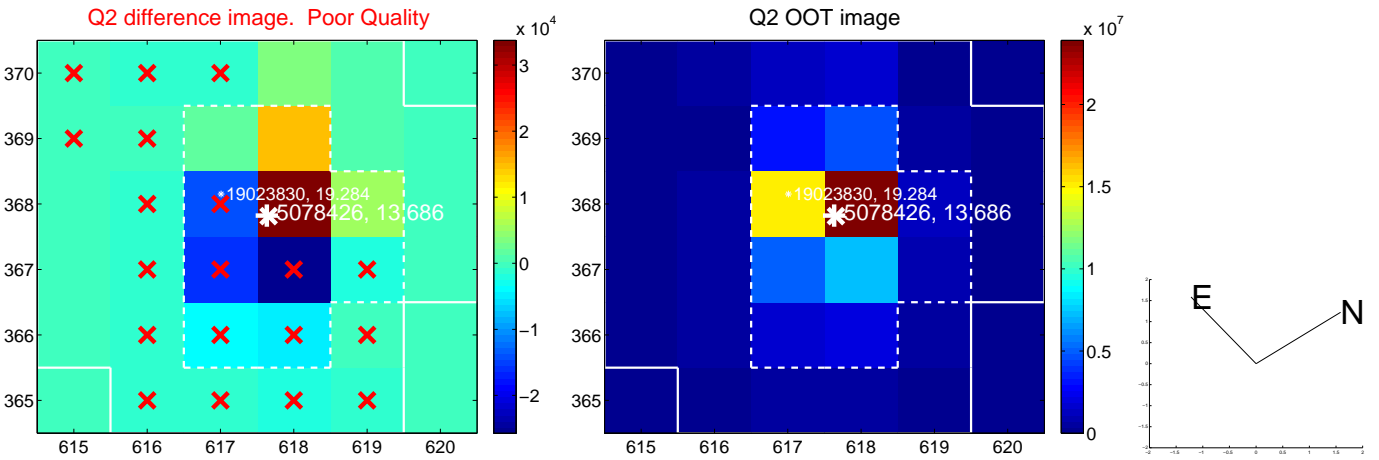
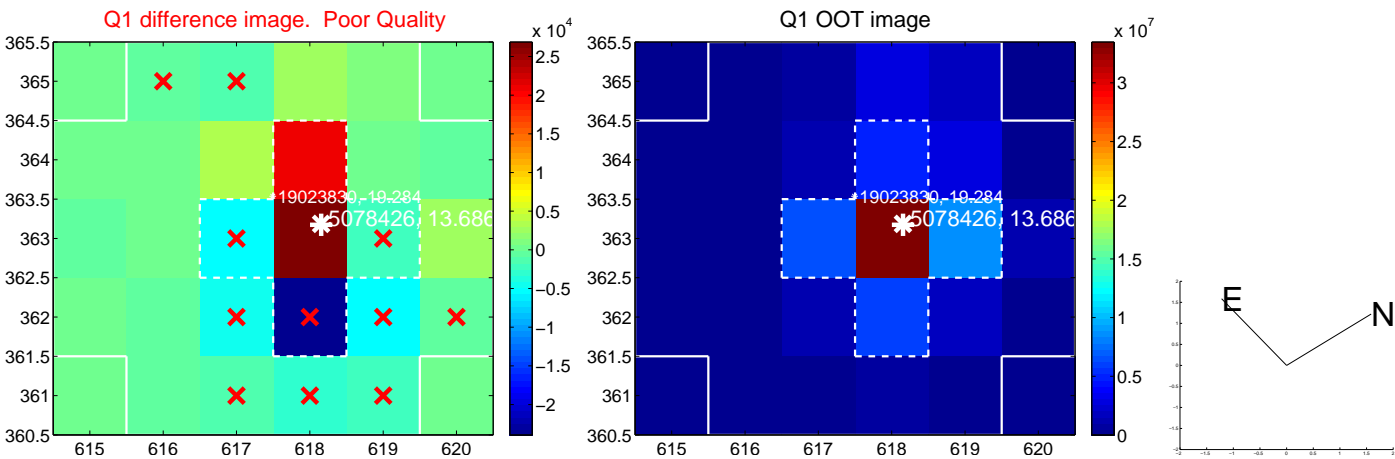


offset from photometric centroids

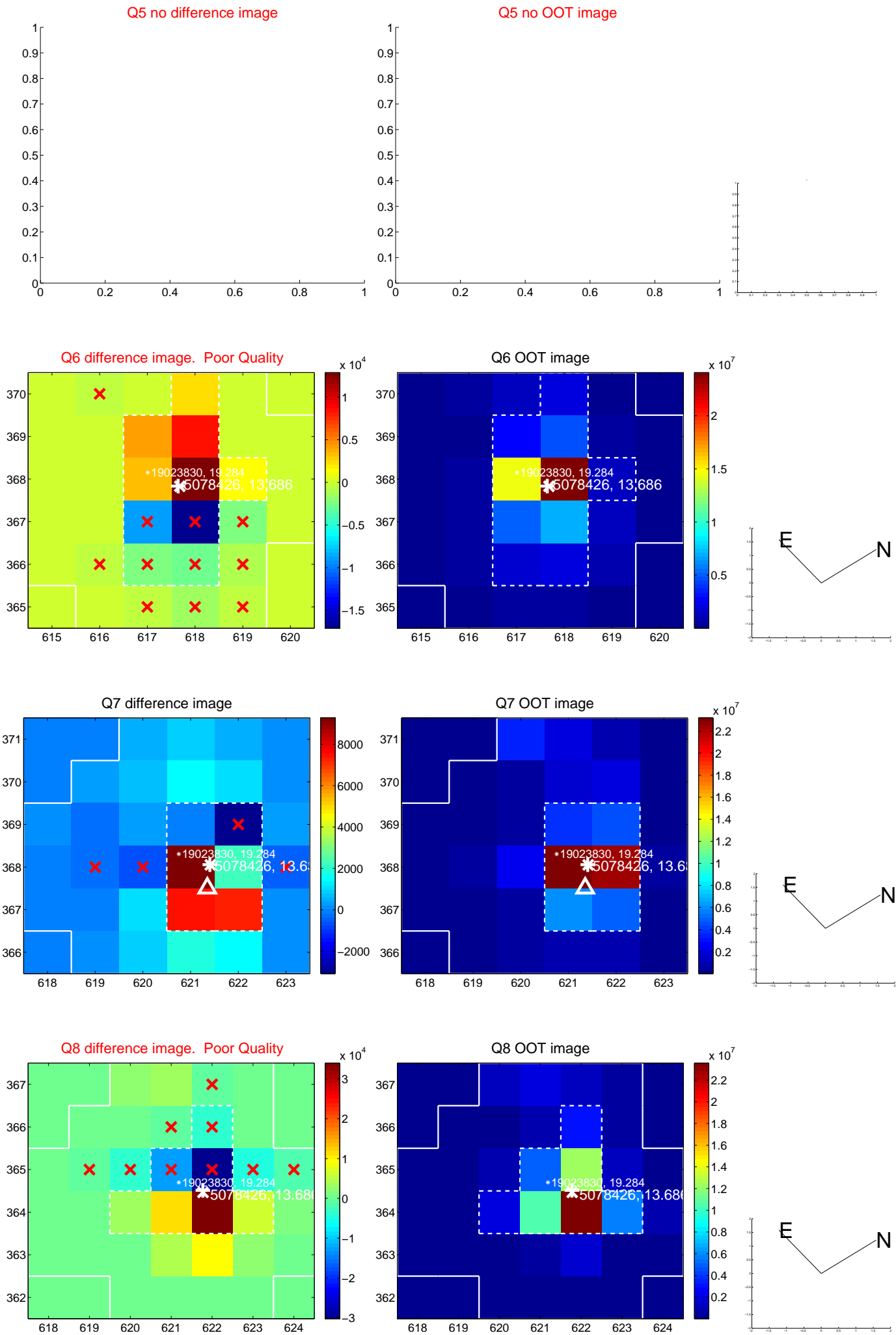


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

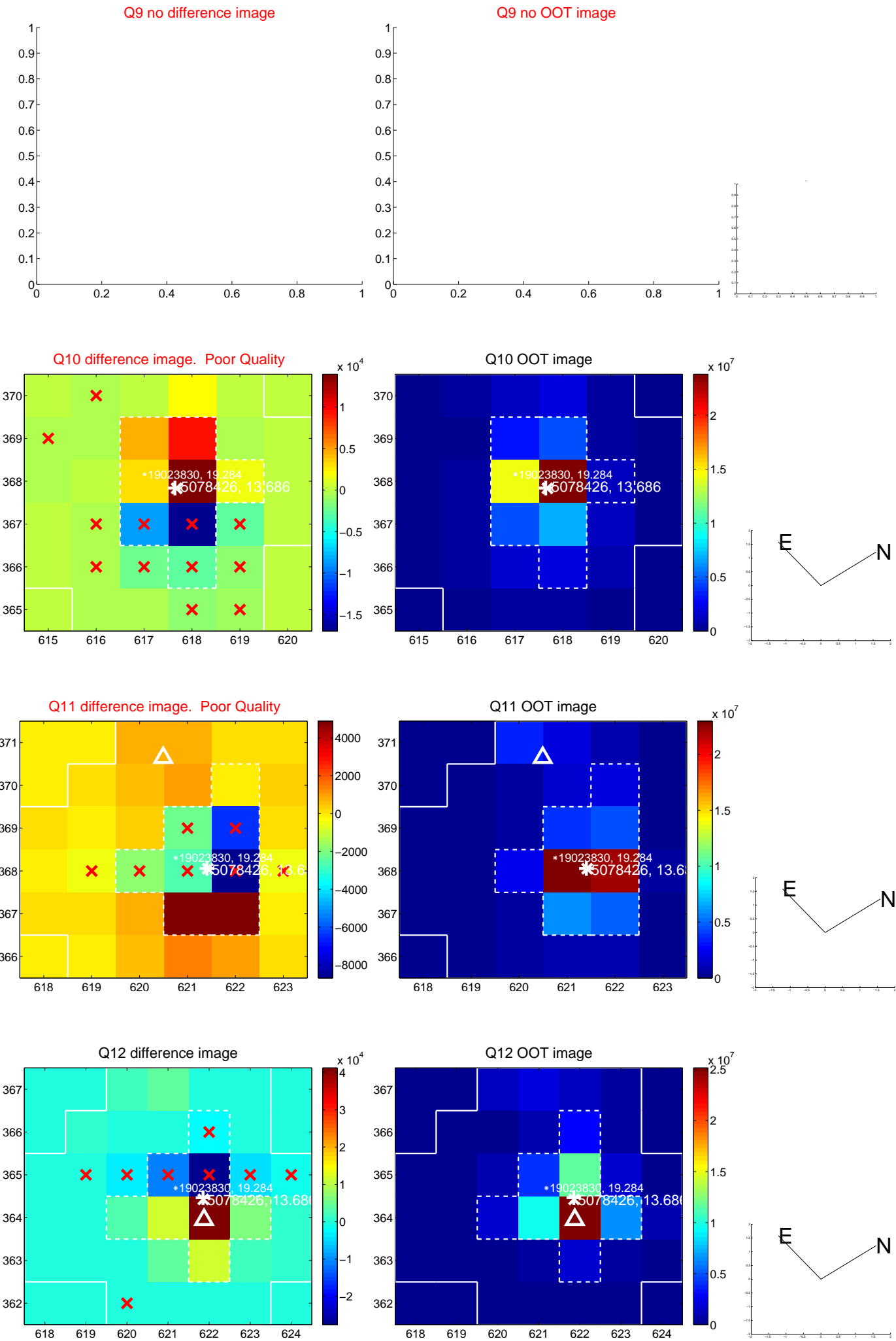
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



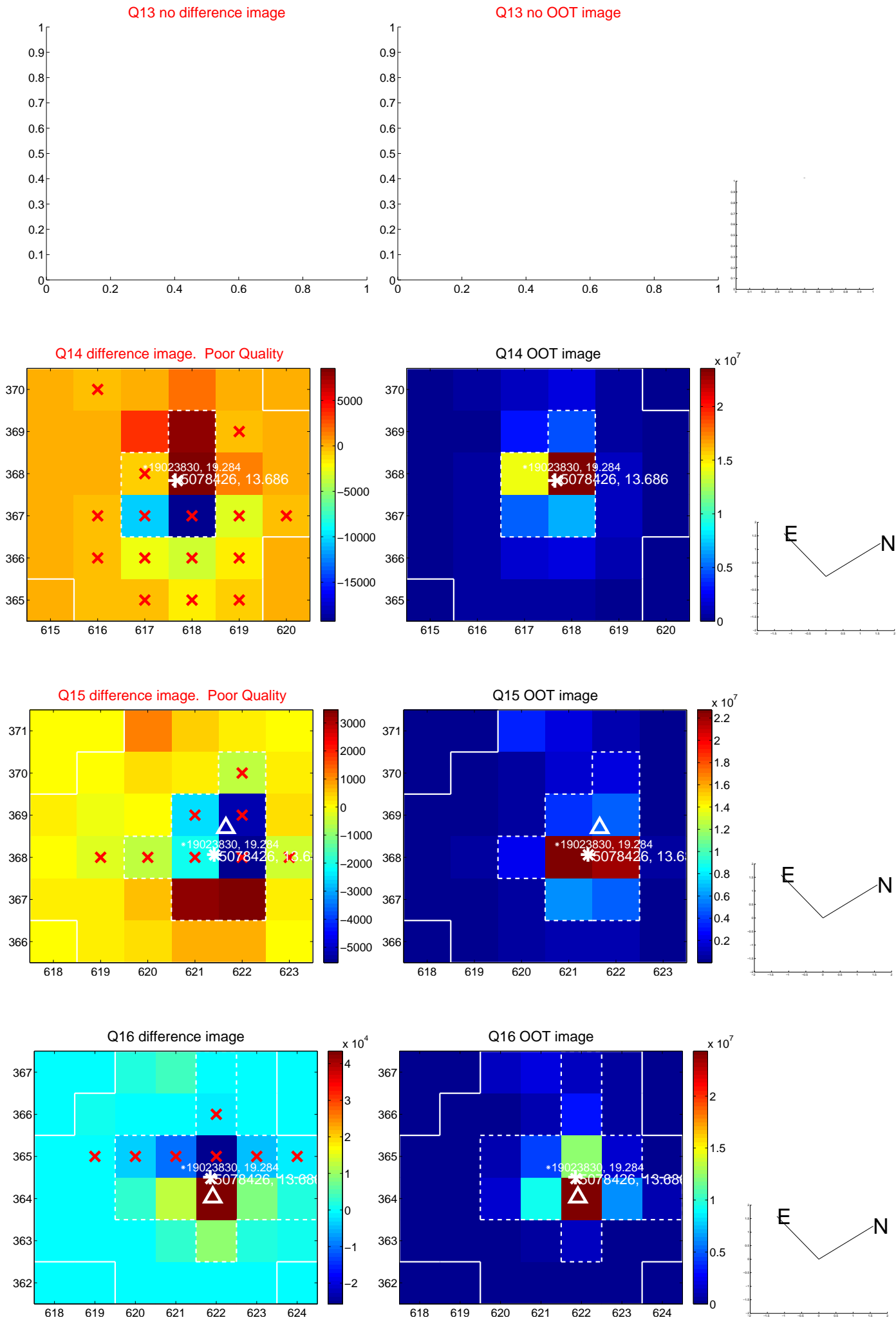
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



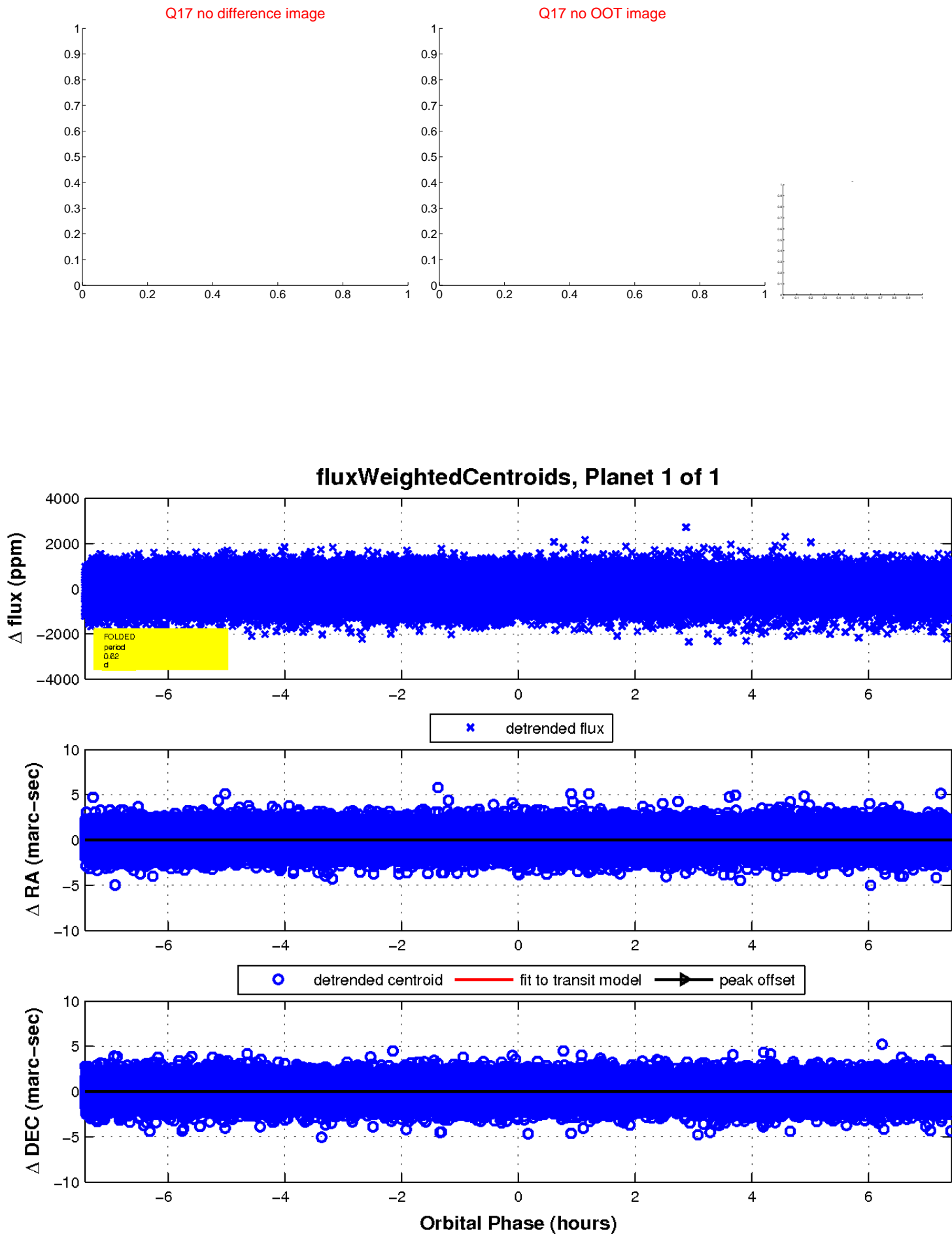
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

