

KIC 006184298

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})
006184298-01	OBS	No	1.419342	132.484557	92.0	9.340	15.0	20.0	1.87	7051	2.48	9275.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006184298-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

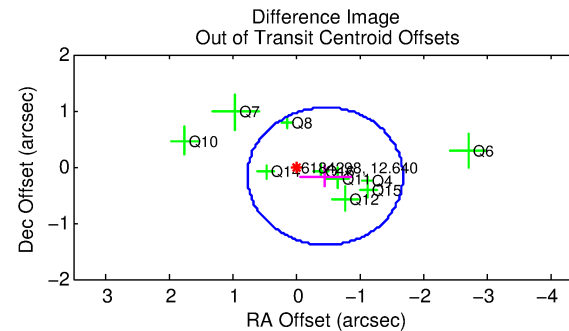
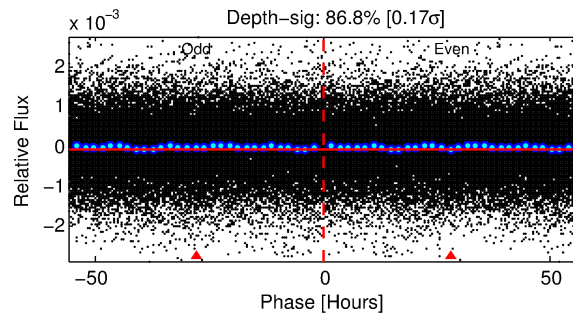
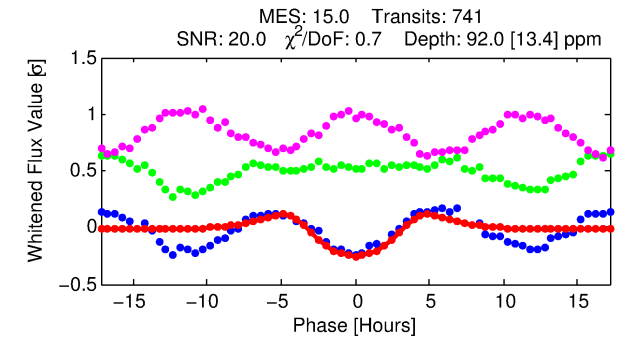
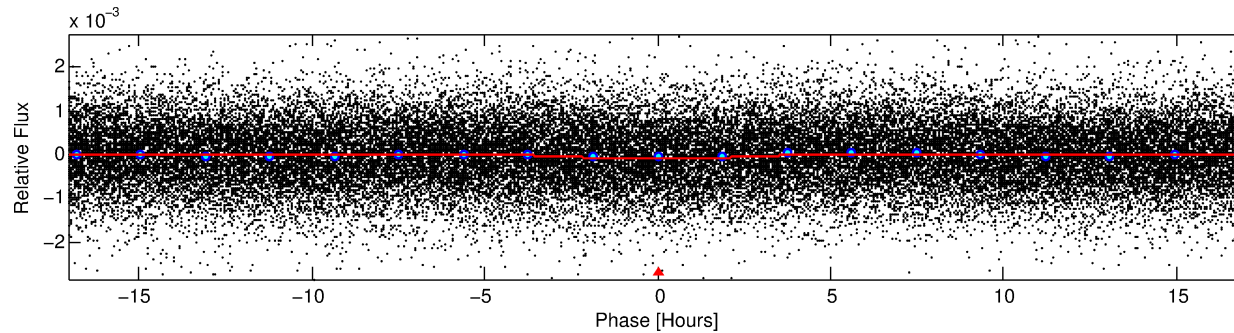
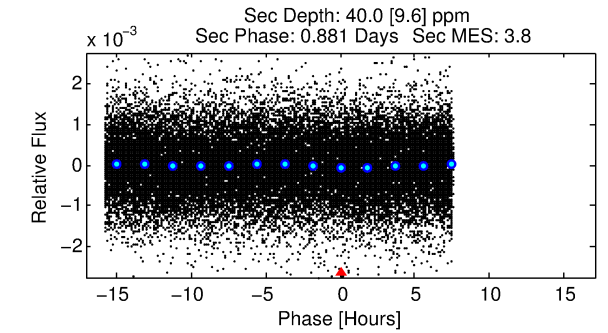
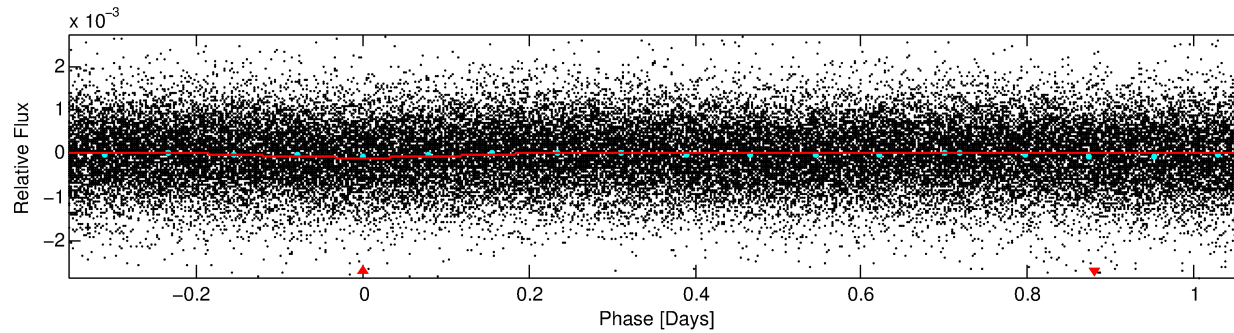
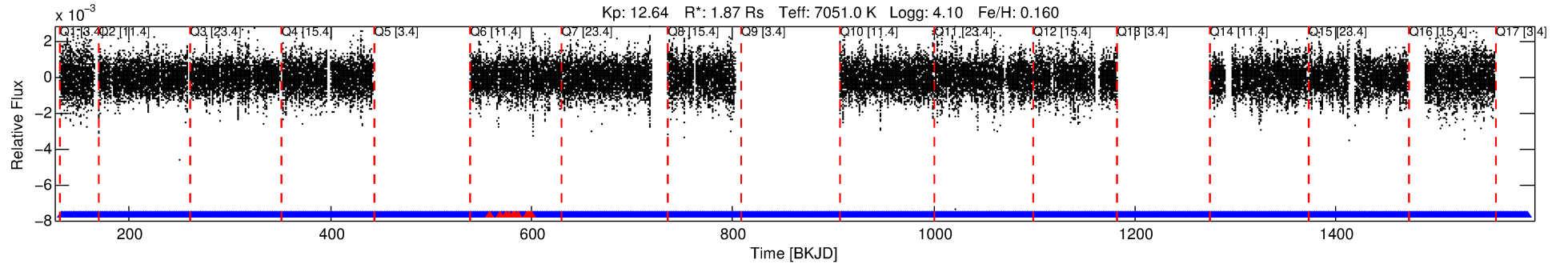
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006184298-01

No Significant Match Found

DV One-Page Summary

KIC: 6184298 Candidate: 1 of 1 Period: 1.419 d



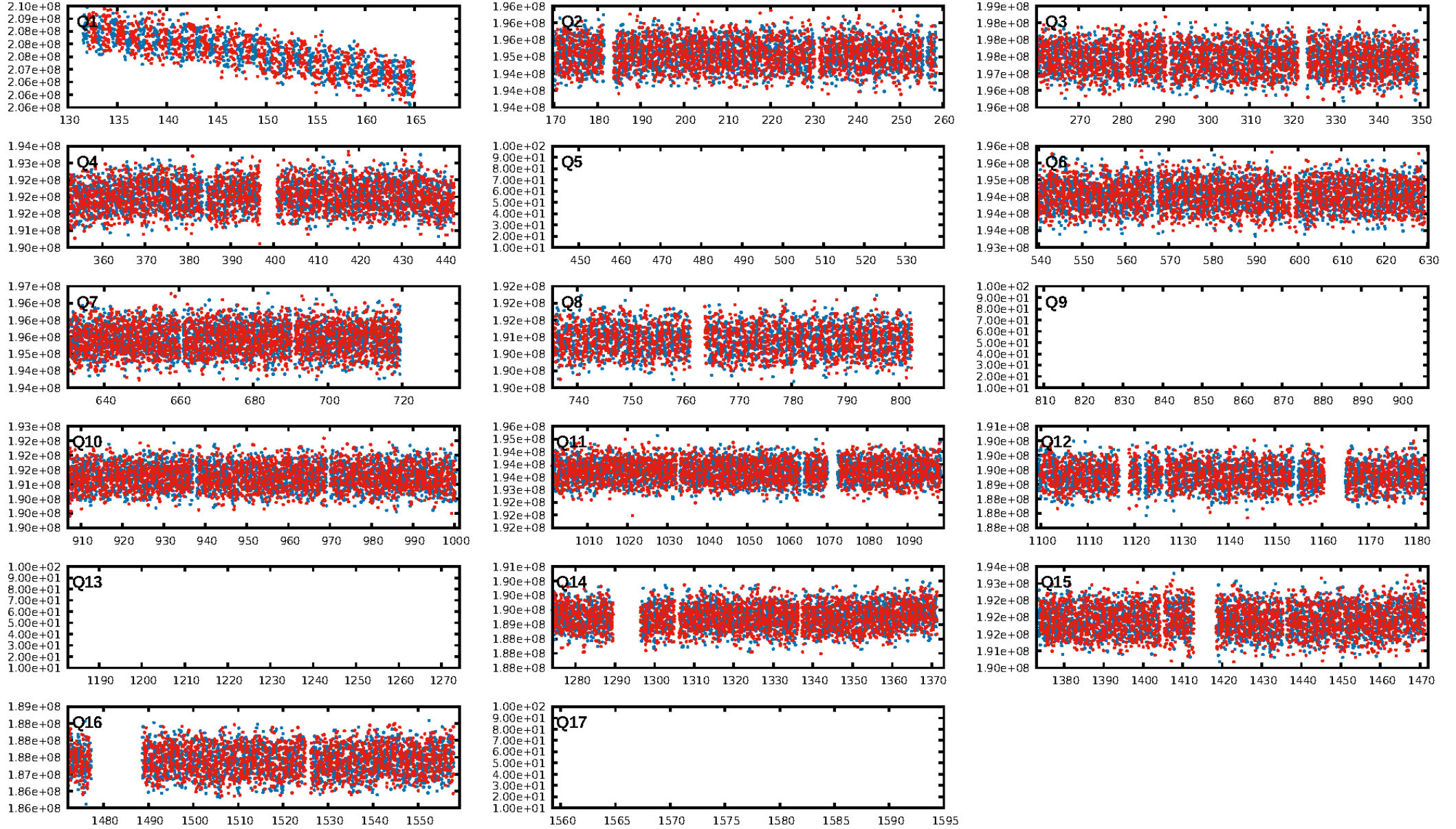
DV Fit Results:

Period = 1.41934 [0.00001] d
Epoch = 132.4846 [0.0061] BKJD
Rp/R* = 0.0121 [0.0014]
a/R* = 1.03 [0.00]
b = 0.99 [0.00]
Seff = 9275.09 [3484.52]
Teq = 2502 [235] K
Rp = 2.48 [0.82] Re
a = 0.0289 [0.0072] AU
Ag = 2.99 [1.43] [1.39σ]
Teffp = 5088 [456] K [5.04σ]

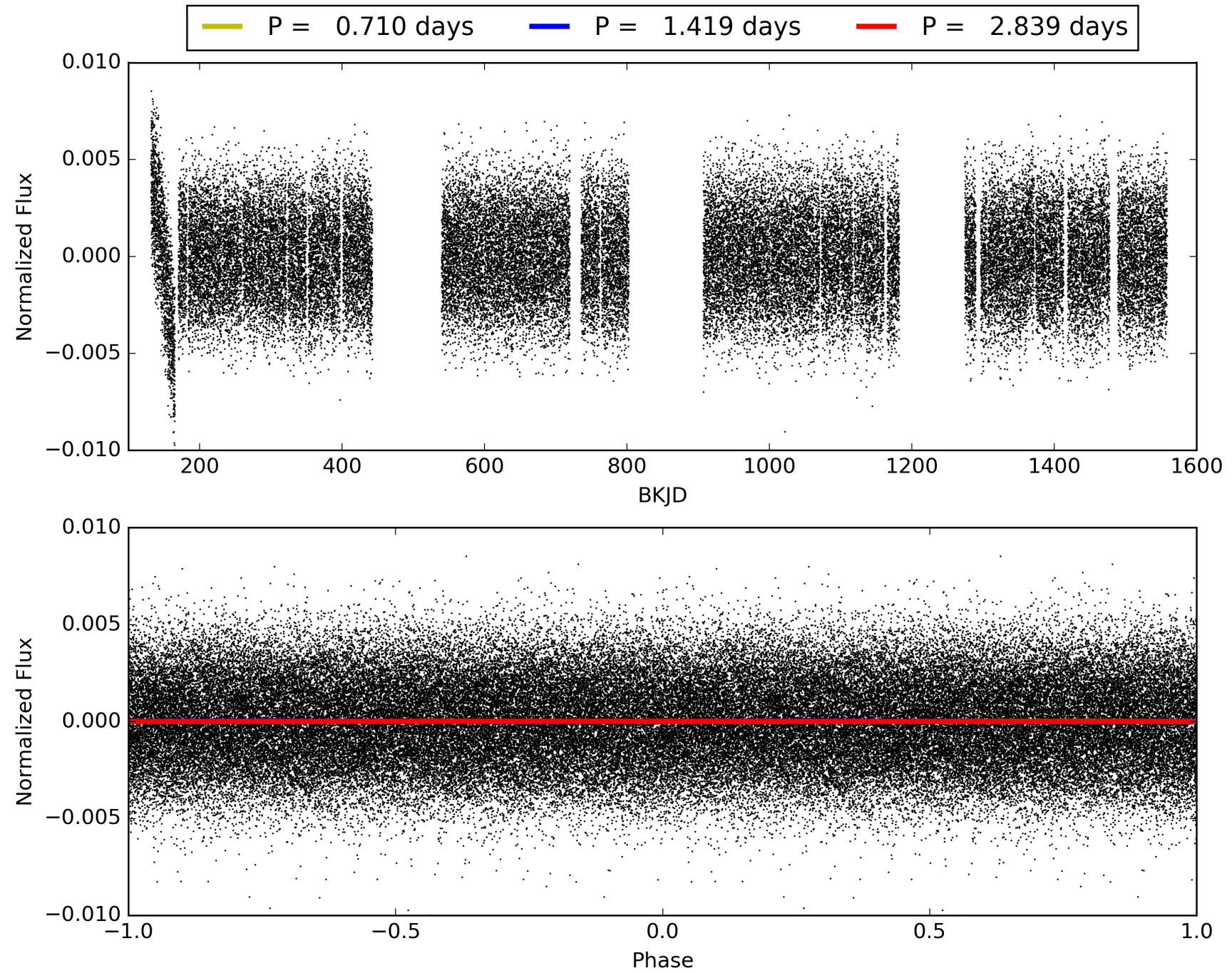
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.20e-57
RollingBand-fgt: 0.98 [705/717]
GhostDiagnostic-chr: 2.36
Centroid-sig: 0.0%
Centroid-so: 0.845 arcsec [3.41σ]
OotOffset-rm: 0.496 arcsec [1.22σ]
KicOffset-rm: 0.594 arcsec [1.38σ]
OotOffset-st: 3/3/4/0 [10]
KicOffset-st: 3/3/4/0 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006184298-01, PDC Light Curves

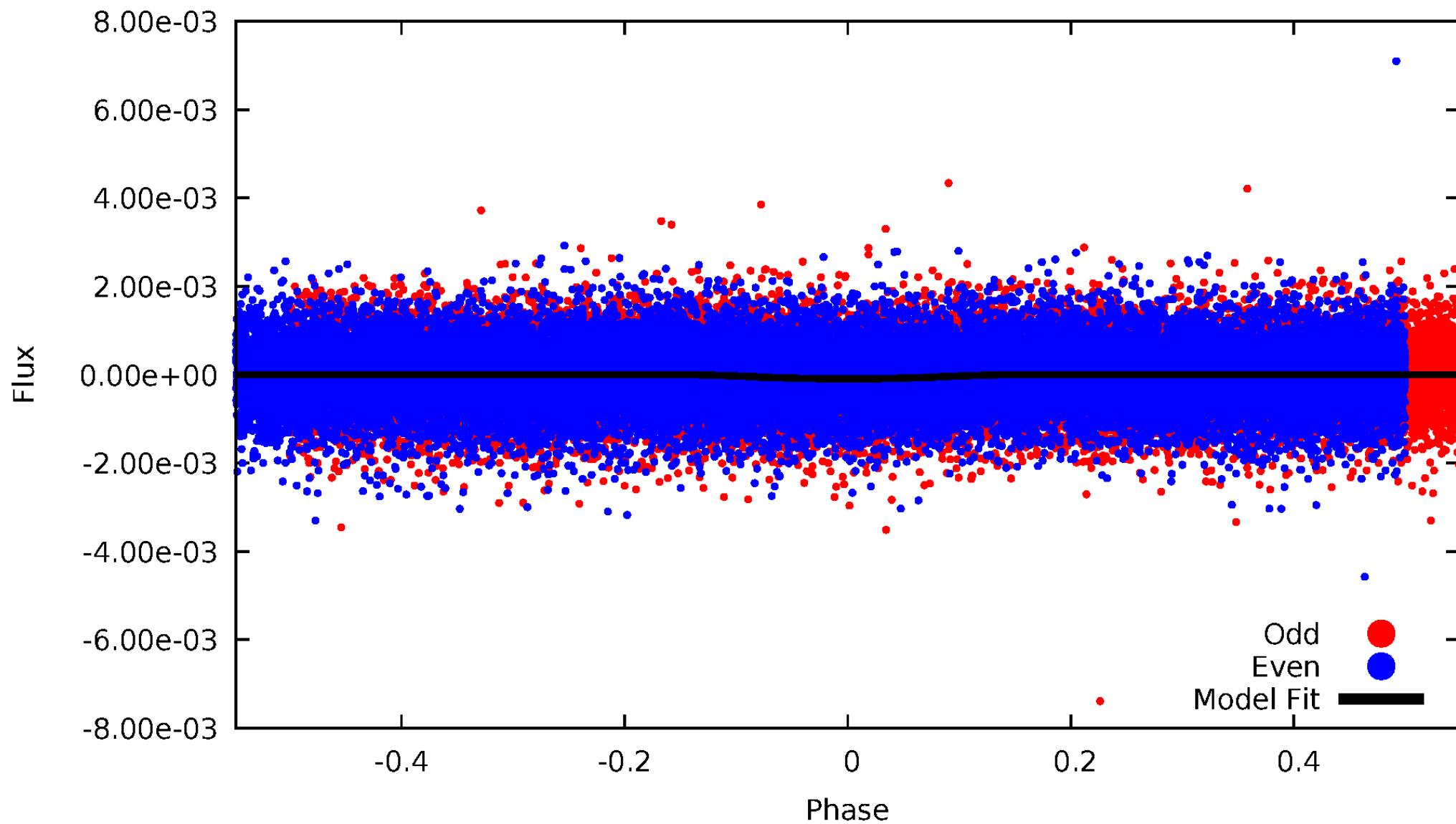


TCE 006184298-01



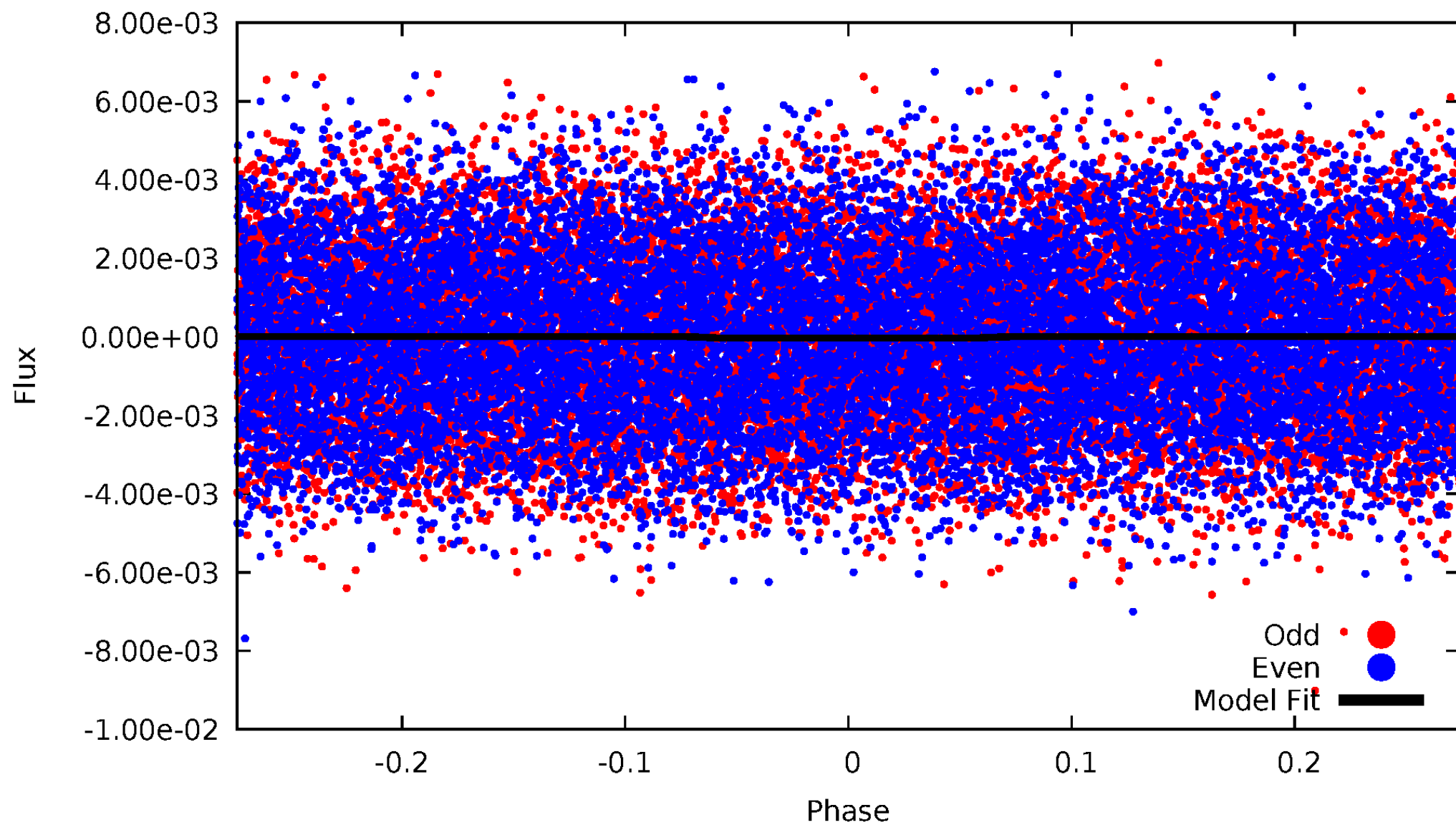
DV Odd/Even

TCE 006184298-01



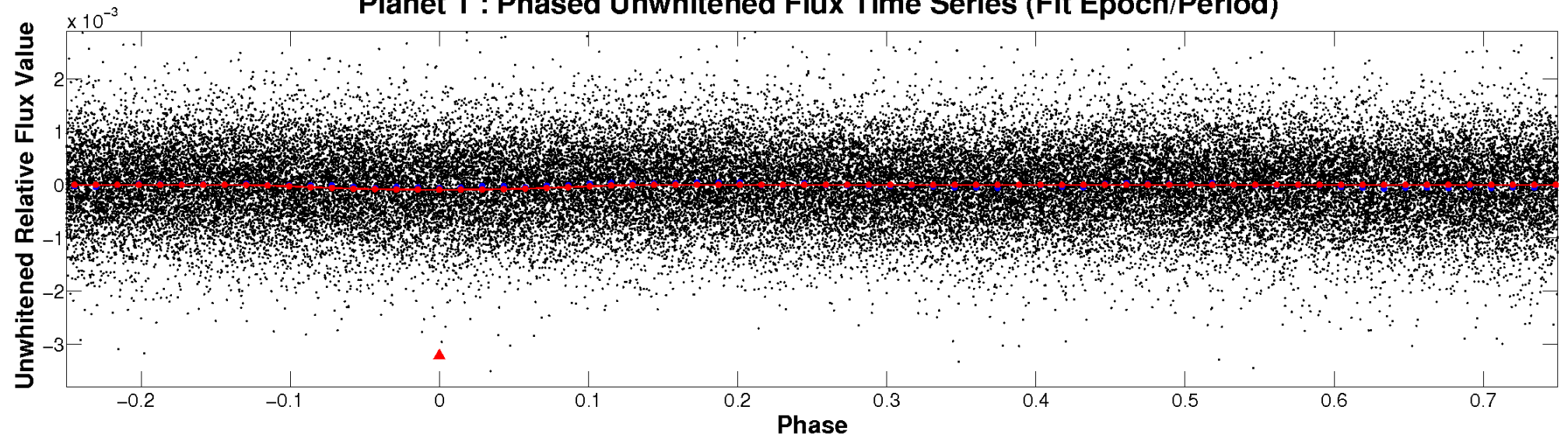
ALT Odd/Even

TCE 006184298-01

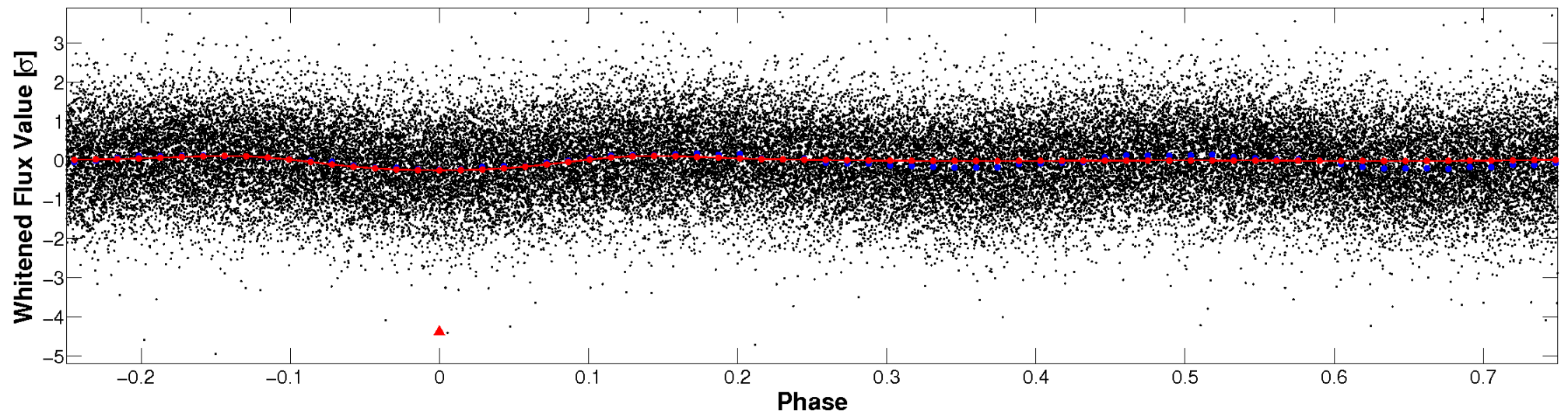


Non-Whitened Vs. Whitened Light Curve

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

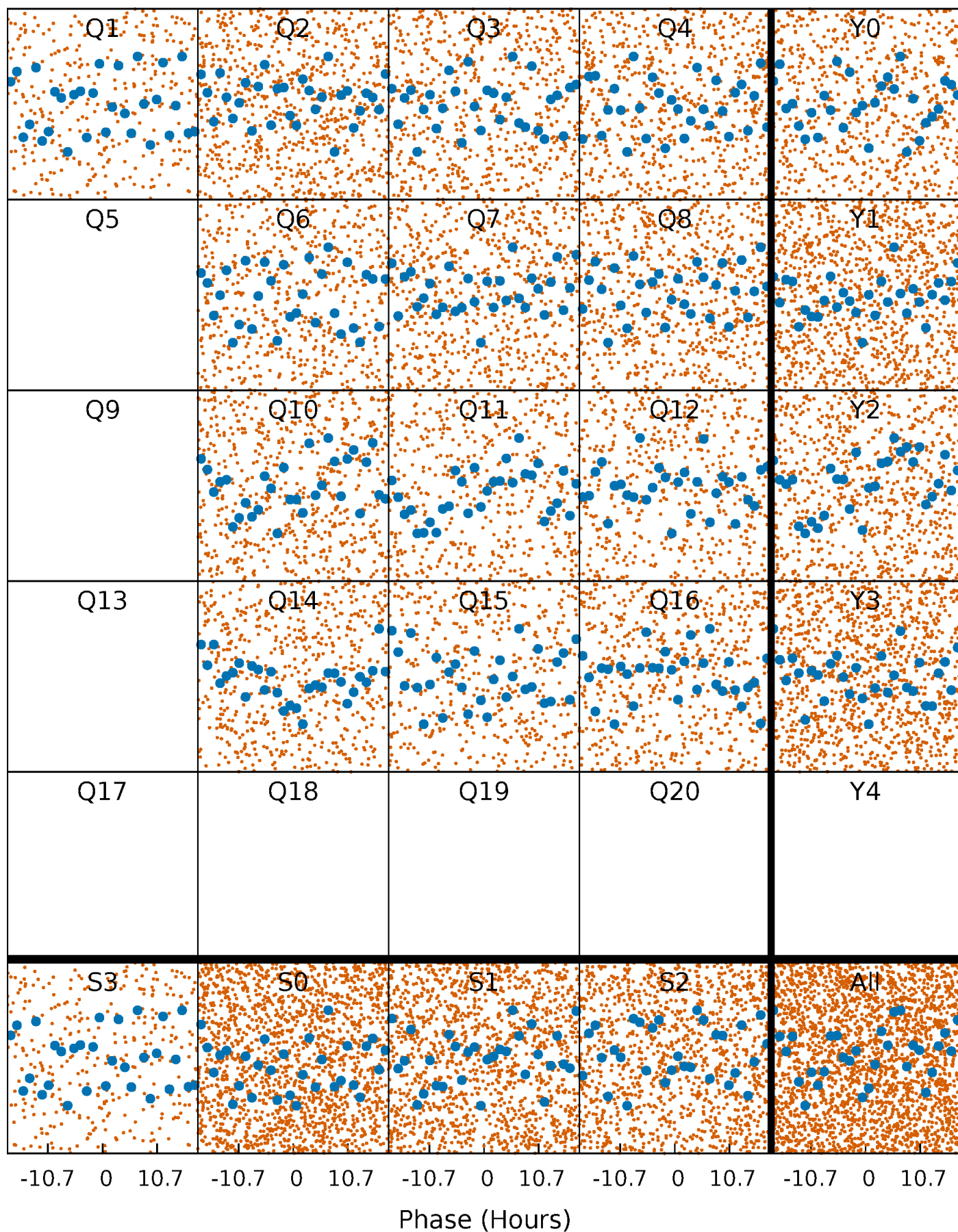


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



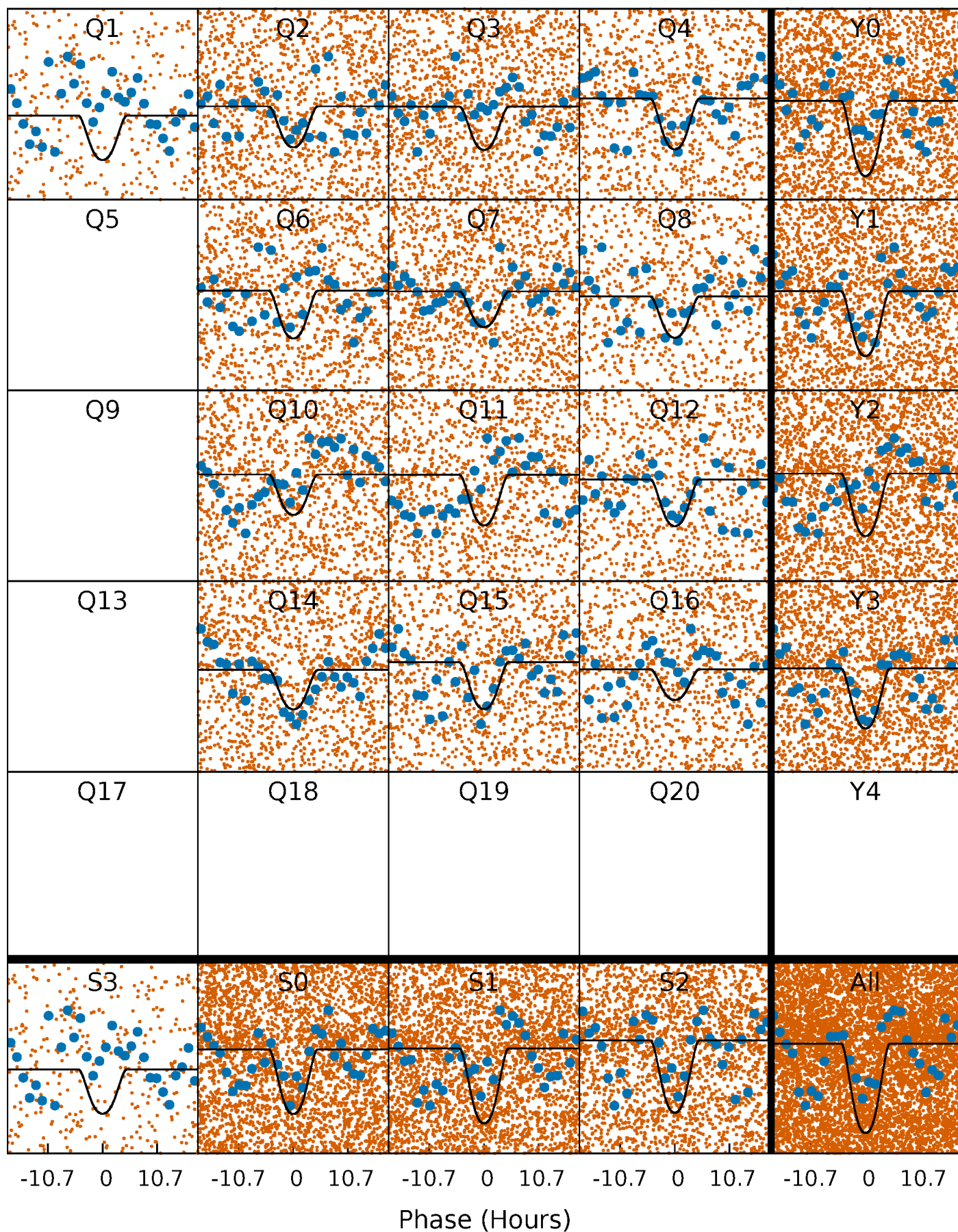
PDC Quarter-Phased Transit Curves

TCE 006184298-01 P= 1.419342 Days $T_0=132.484557$ (BKJD)



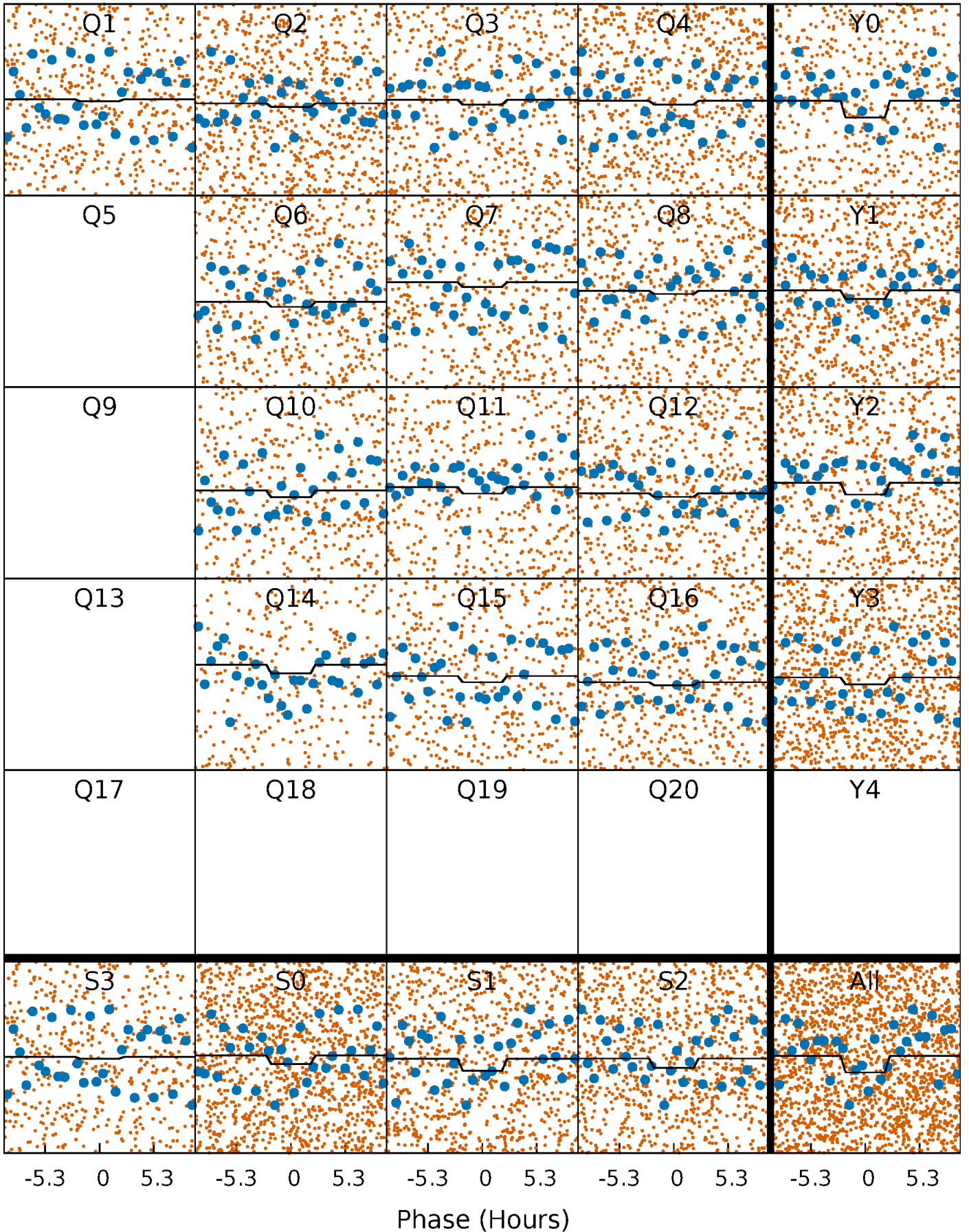
DV Quarter-Phased Transit Curves

TCE 006184298-01 P= 1.419342 Days $T_0=132.484557$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

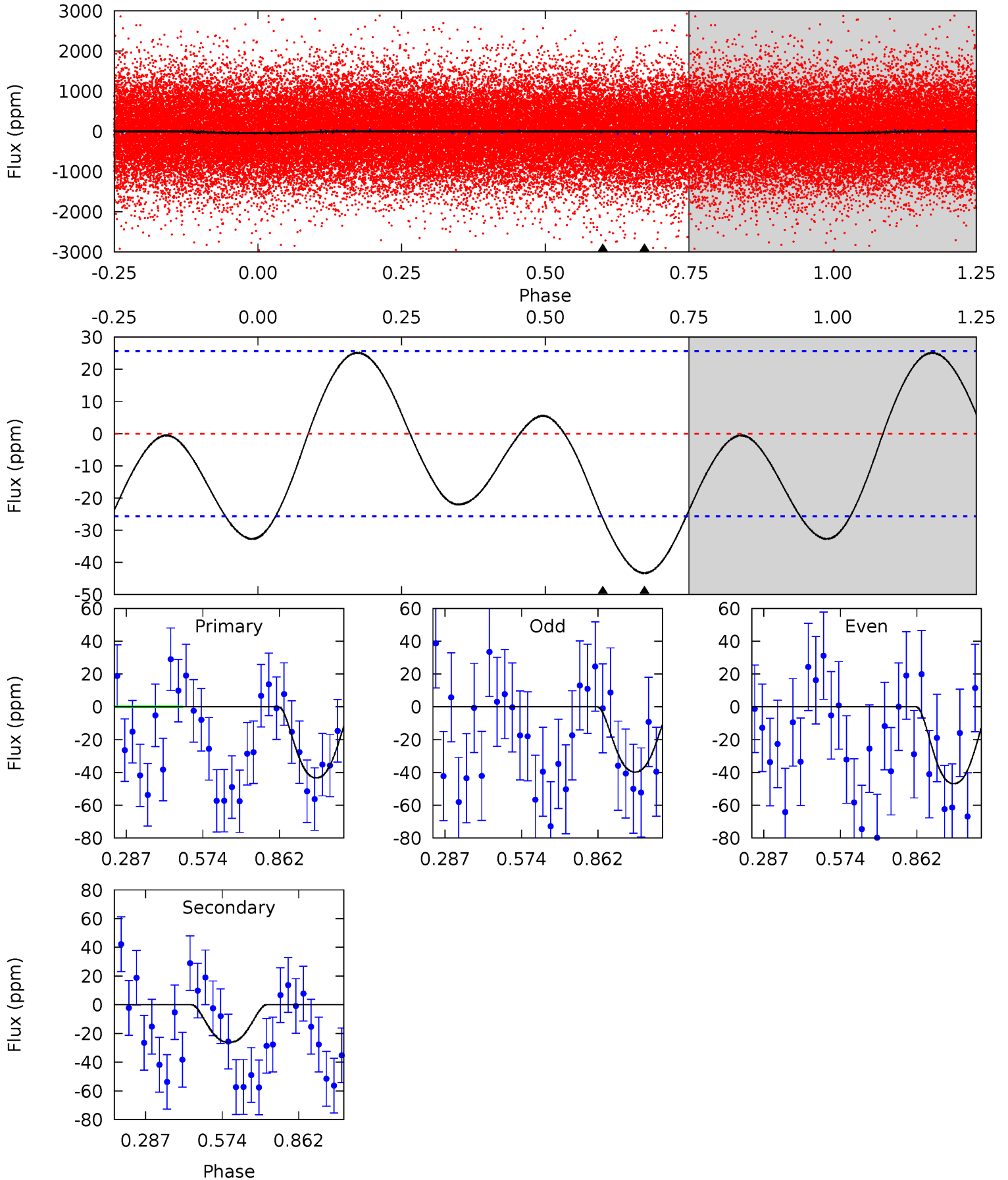
TCE 006184298-01 P= 1.419348 Days $T_0=132.505198$ (BKJD)



DV Model-Shift Uniqueness Test

006184298-01, P = 1.419342 Days, E = 131.065215 Days

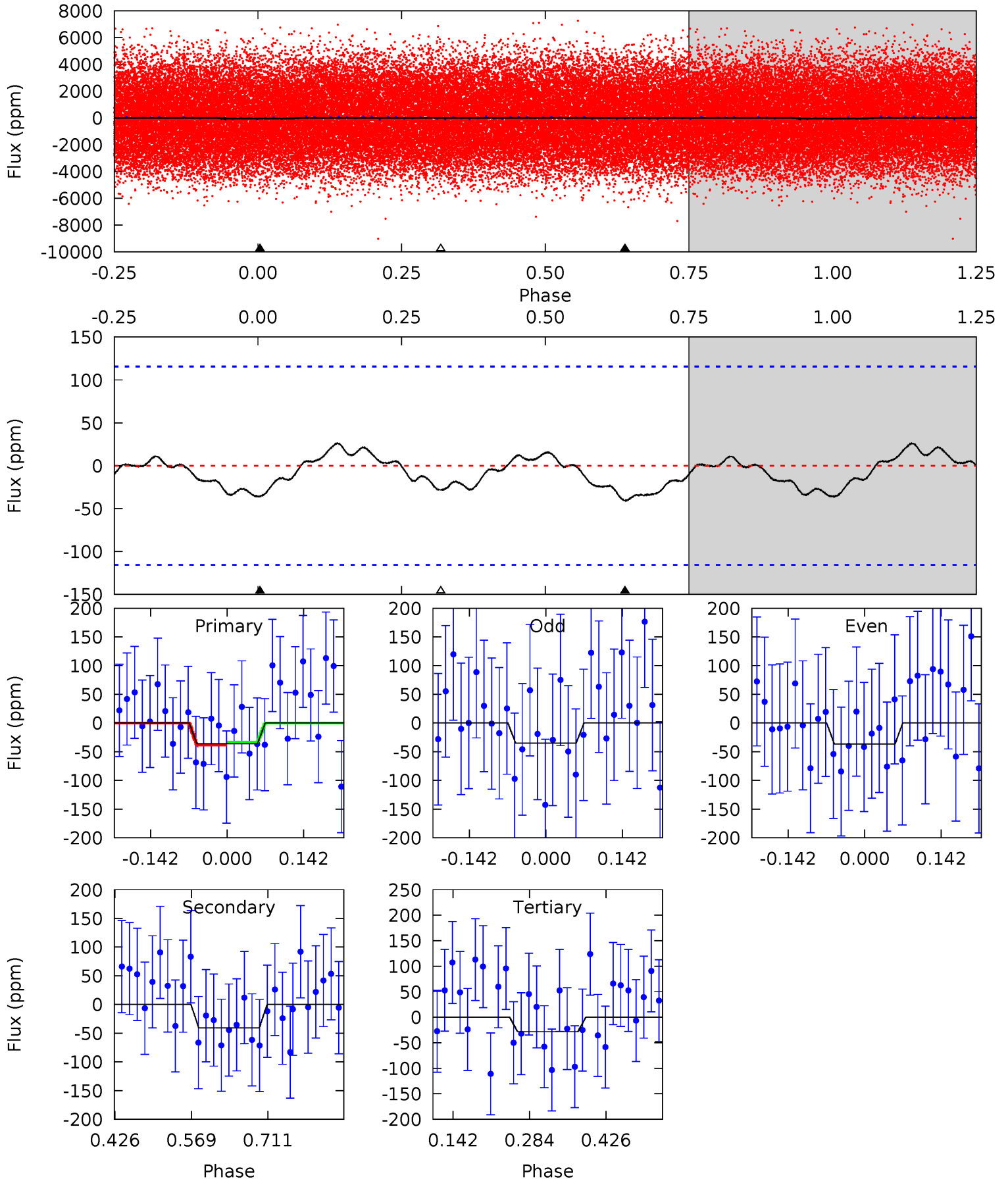
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.33	4.44	0	0	4.34	1.06	3.39	7.33	7.33	4.44	4.44	0.60	0.85	0.37	1.35



Alt Model-Shift Uniqueness Test

006184298-01, P = 1.419348 Days, E = 131.085850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.39	1.59	1.09	0	4.49	1.47	0.54	0.30	1.39	0.50	1.59	0.03	0.90	0.39	0.09



Stellar Parameters For KIC 006184298

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7051^{+167}_{-251}	$4.098^{+0.132}_{-0.182}$	$0.160^{+0.200}_{-0.350}$	$1.872^{+0.581}_{-0.387}$	$1.598^{+0.207}_{-0.253}$	$0.343^{+0.262}_{-0.173}$
	+2%/-4%	+3%/-4%	+125%/-219%	+31%/-21%	+13%/-16%	+76%/-50%
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 006184298-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-26 ± 6	$2.52^{+0.47}_{-0.42}$	3507^{+269}_{-213}	4521^{+382}_{-341}	$1.882^{+0.952}_{-0.650}$
Alt.	-41 ± 26	$1.22^{+0.33}_{-0.29}$	3493^{+252}_{-214}	7109^{+1889}_{-1636}	11^{+15}_{-7}

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

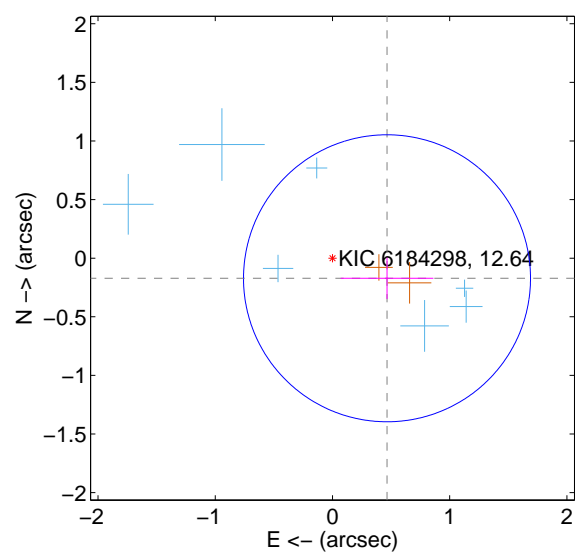
Supplemental centroid analysis for 006184298-01. Kepler magnitude: 12.64. Transit SNR 19.95

There are 7 quarters with good PRF difference image offsets

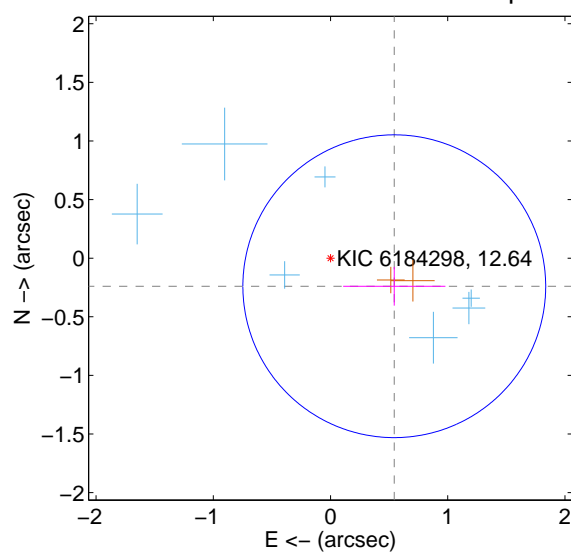
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.496 ± 0.408	1.22	-0.465 ± 0.396	-0.172 ± 0.176
PRF-fit source offset from KIC position	0.594 ± 0.430	1.38	-0.544 ± 0.436	-0.239 ± 0.165
photometric centroid source offset	0.85 ± 0.25	3.41	-0.84 ± 0.25	0.05 ± 0.21

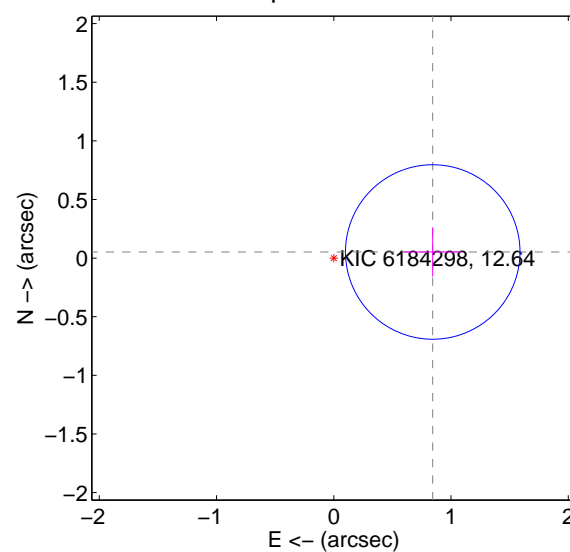
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

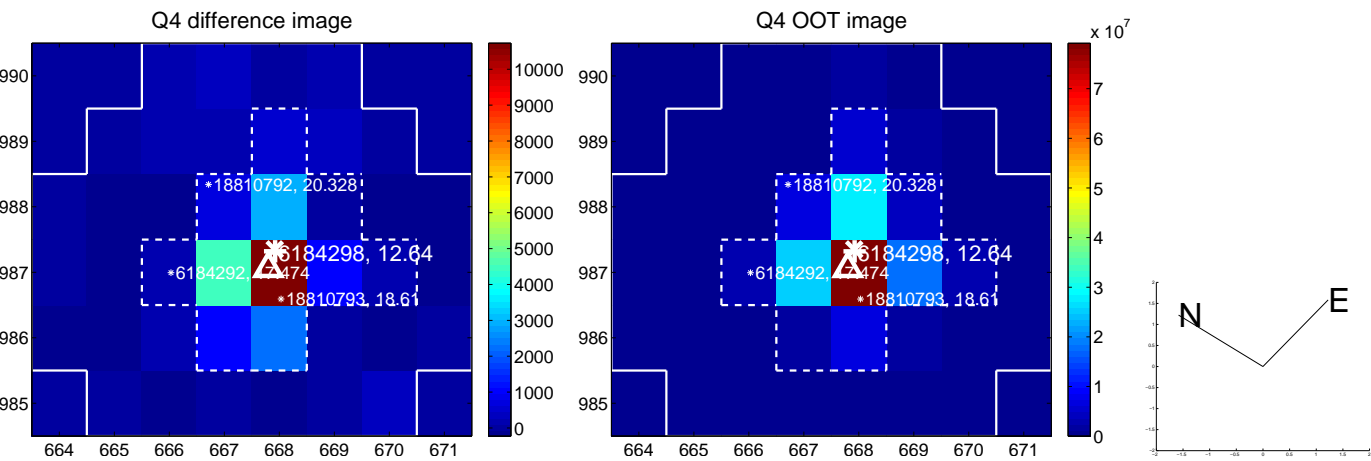
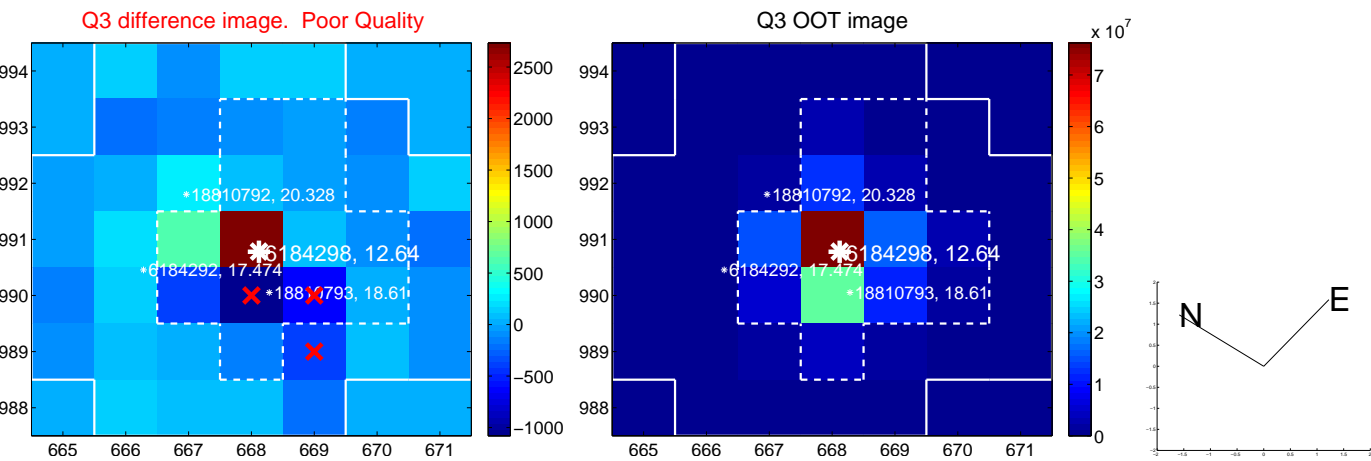
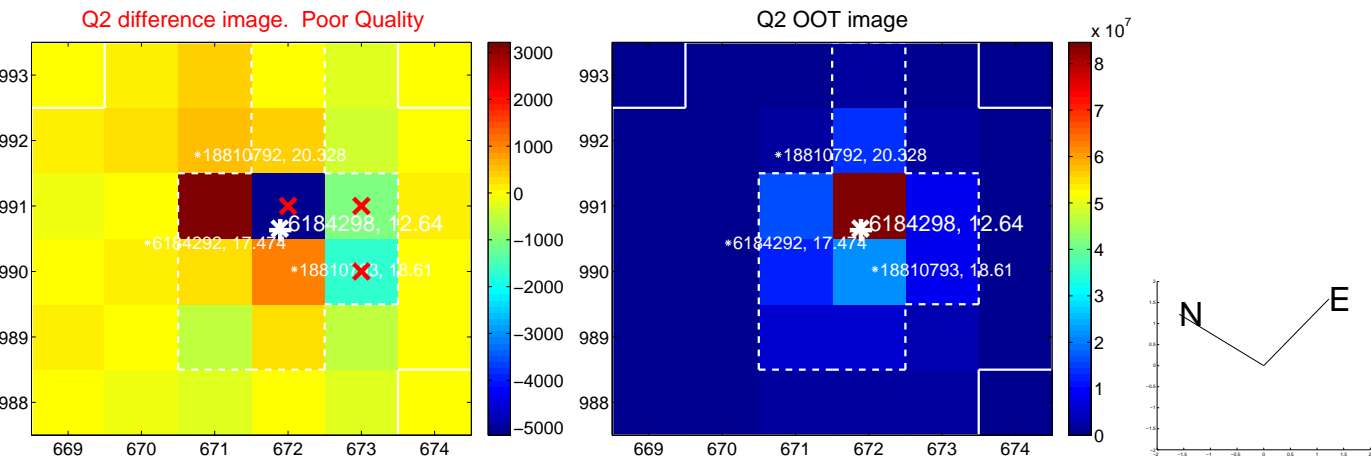
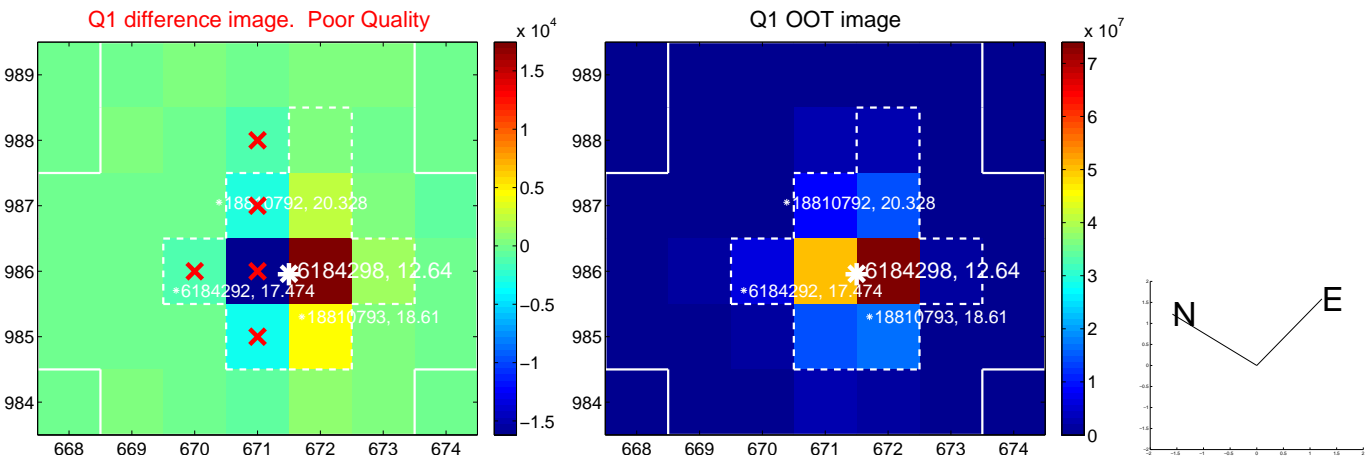


offset from photometric centroids

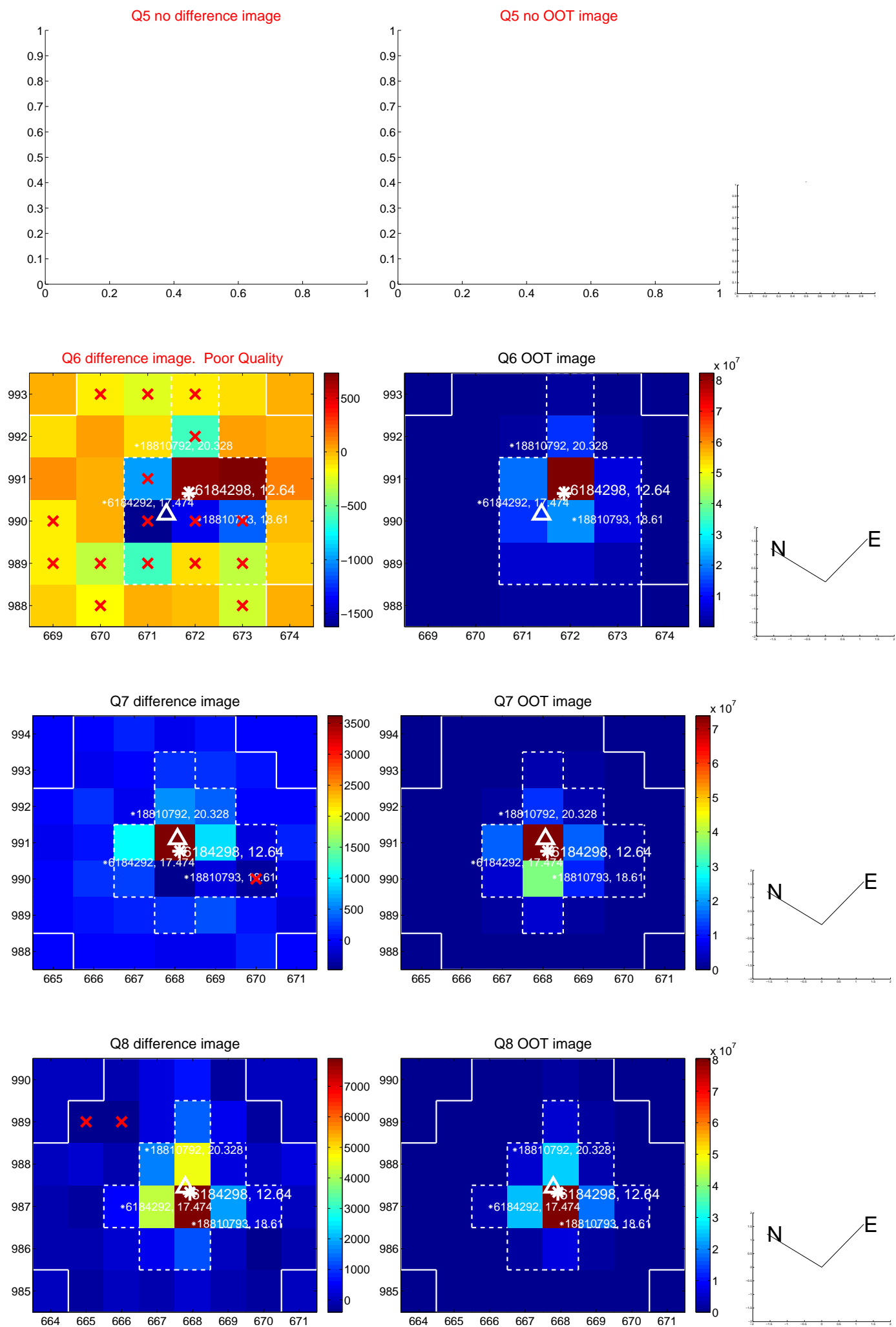


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

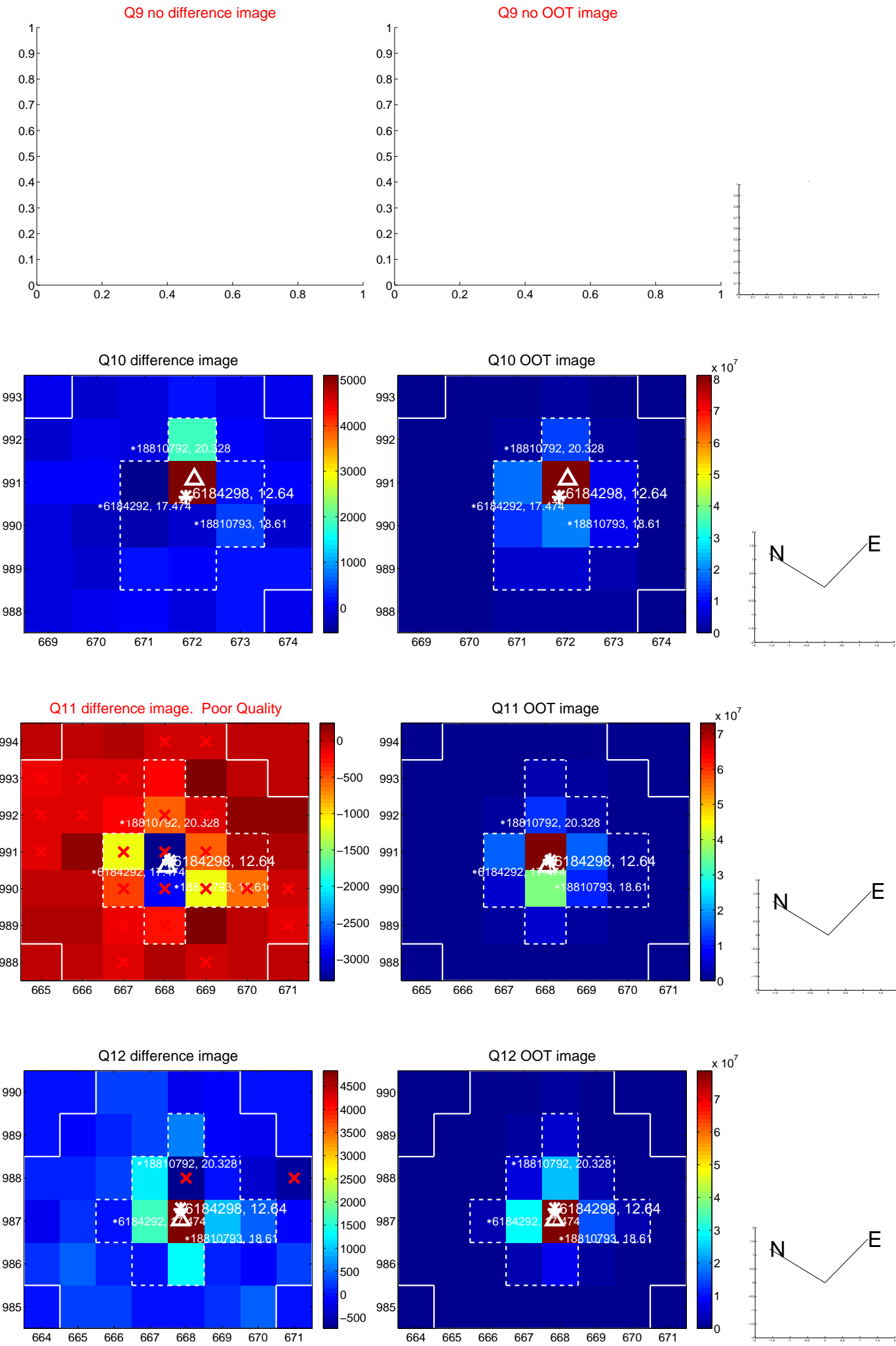
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



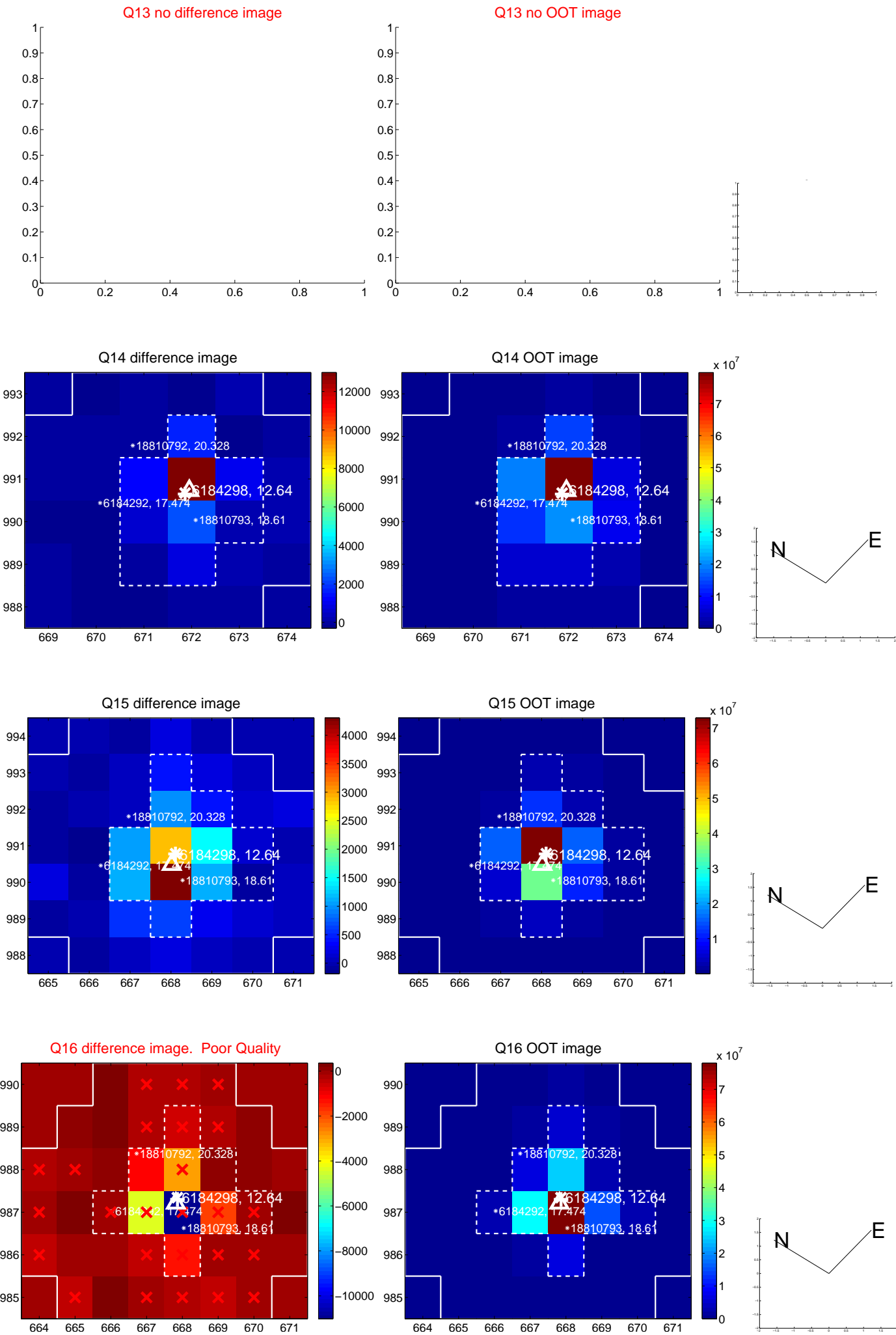
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



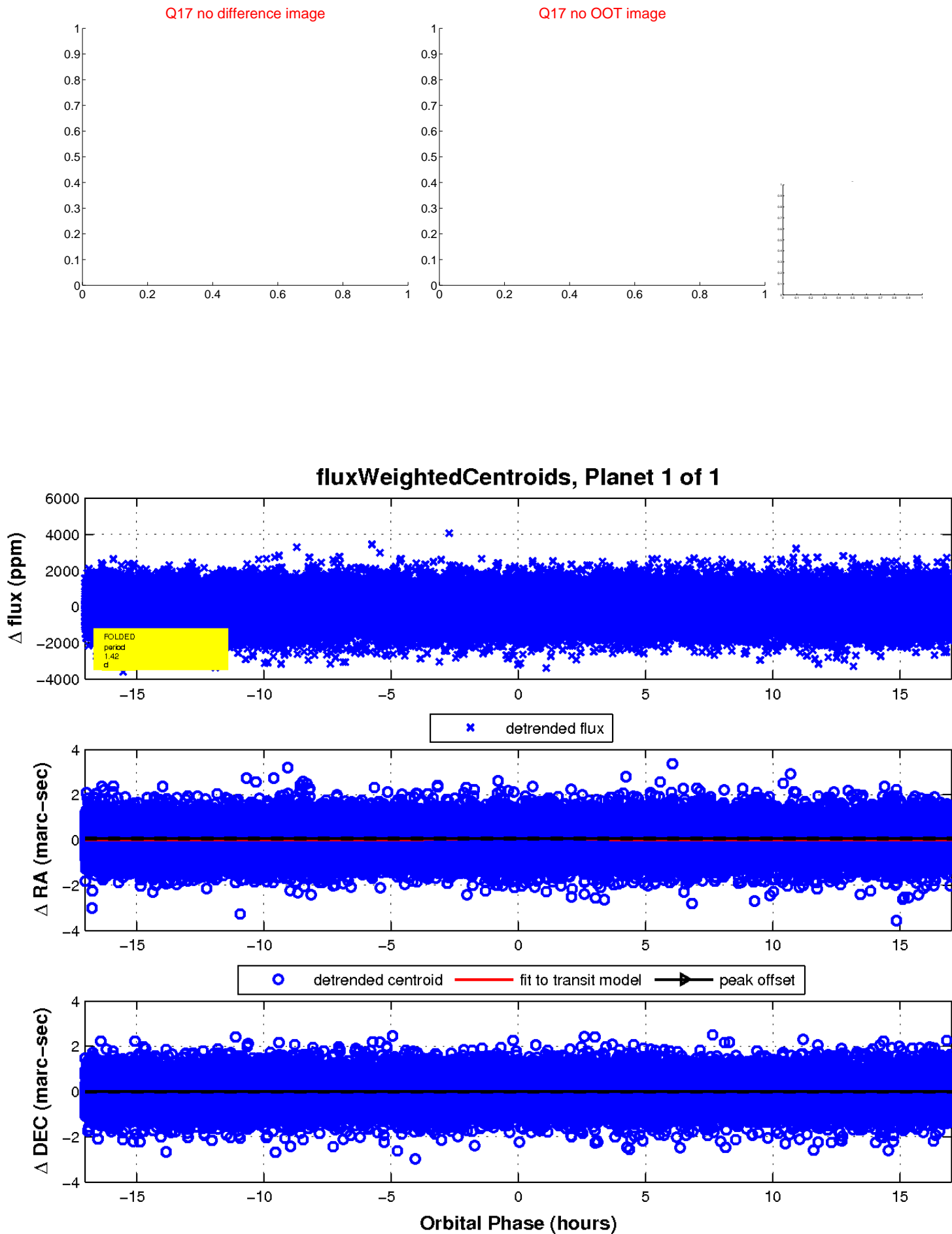
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

