

KIC 005554685

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})
005554685-01	OBS	No	0.798634	132.254929	199.6	3.042	10.1	12.0	2.12	7281	3.48	29892.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005554685-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

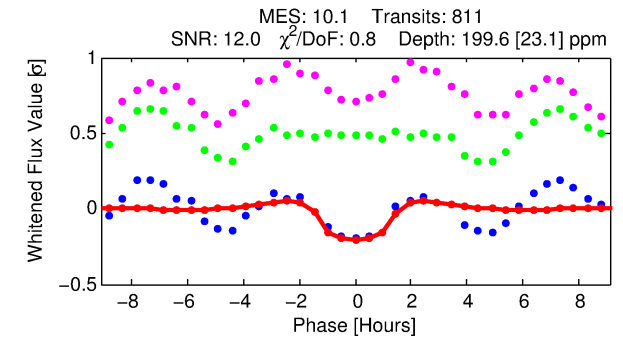
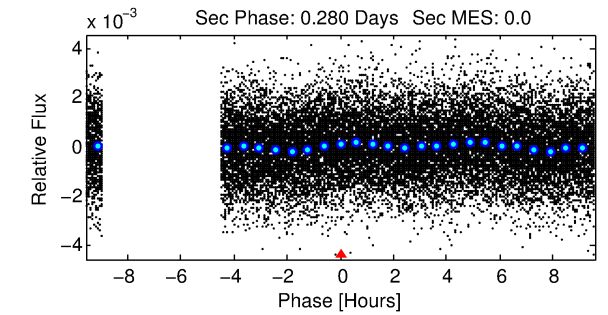
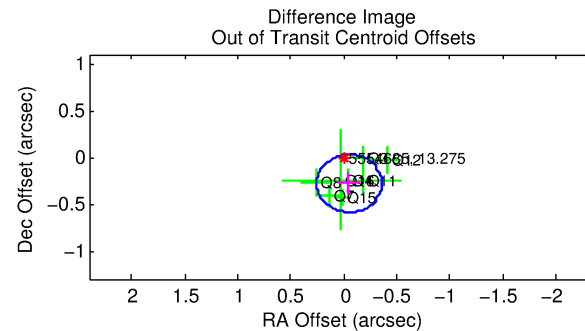
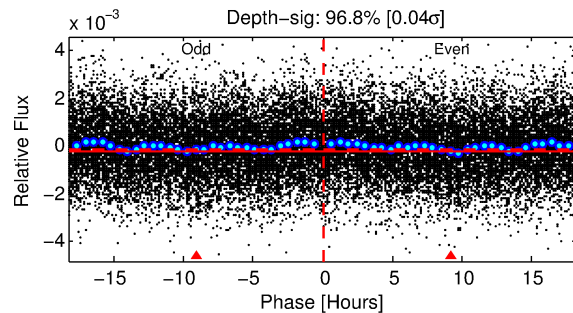
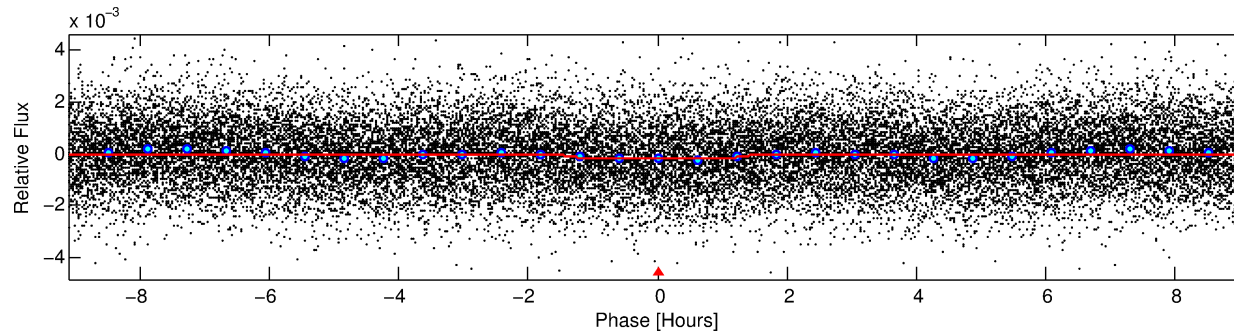
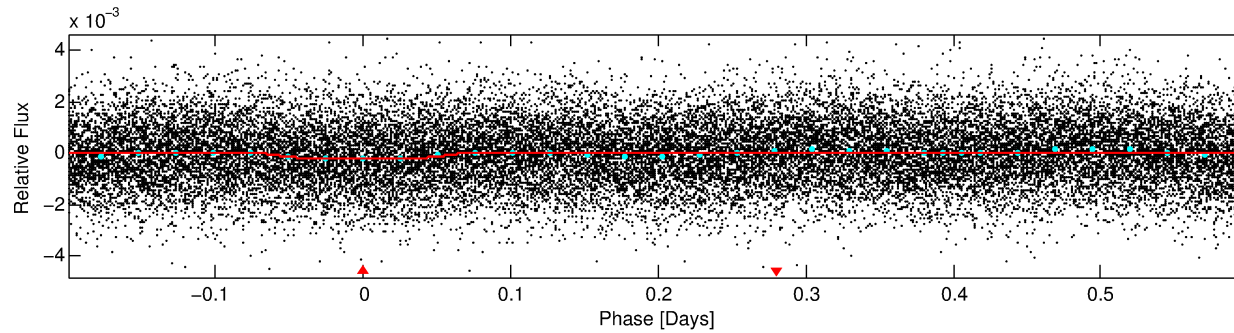
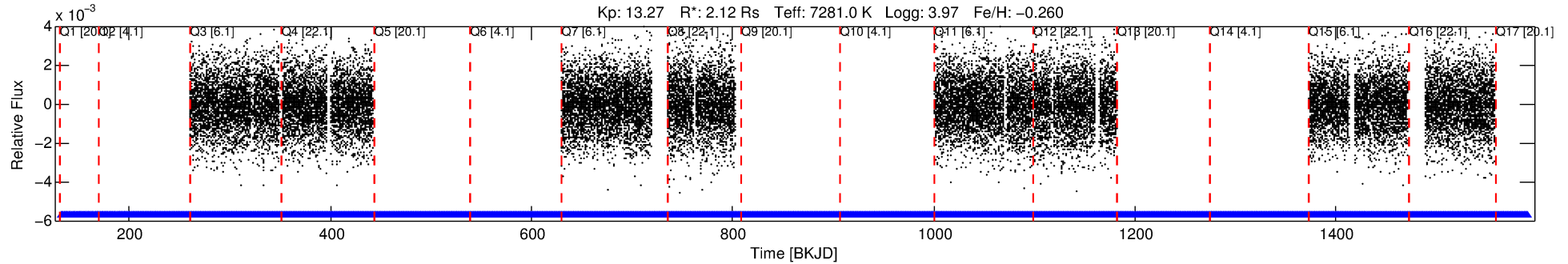
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005554685-01

No Significant Match Found

DV One-Page Summary

KIC: 5554685 Candidate: 1 of 1 Period: 0.799 d



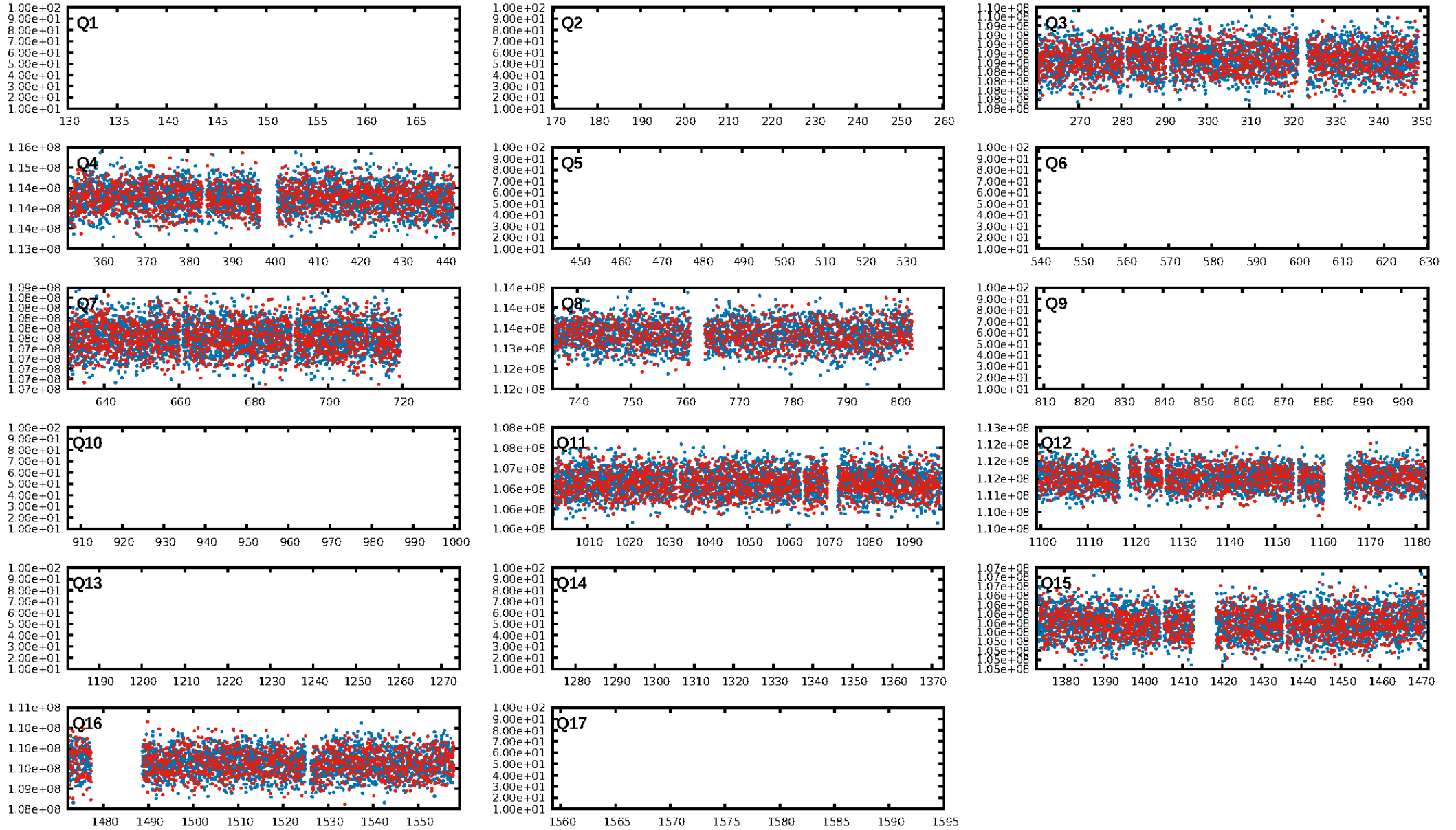
DV Fit Results:

Period = 0.79863 [0.00001] d
Epoch = 132.2549 [0.0030] BKJD
Rp/R* = 0.0150 [0.0063]
a/R* = 1.33 [1.48]
b = 0.90 [0.55]
Seff = 29892.02 [14938.07]
Teff = 3353 [419] K
Rp = 3.48 [1.84] Re
a = 0.0195 [0.0058] AU
Ag = N/A
Teffp = N/A

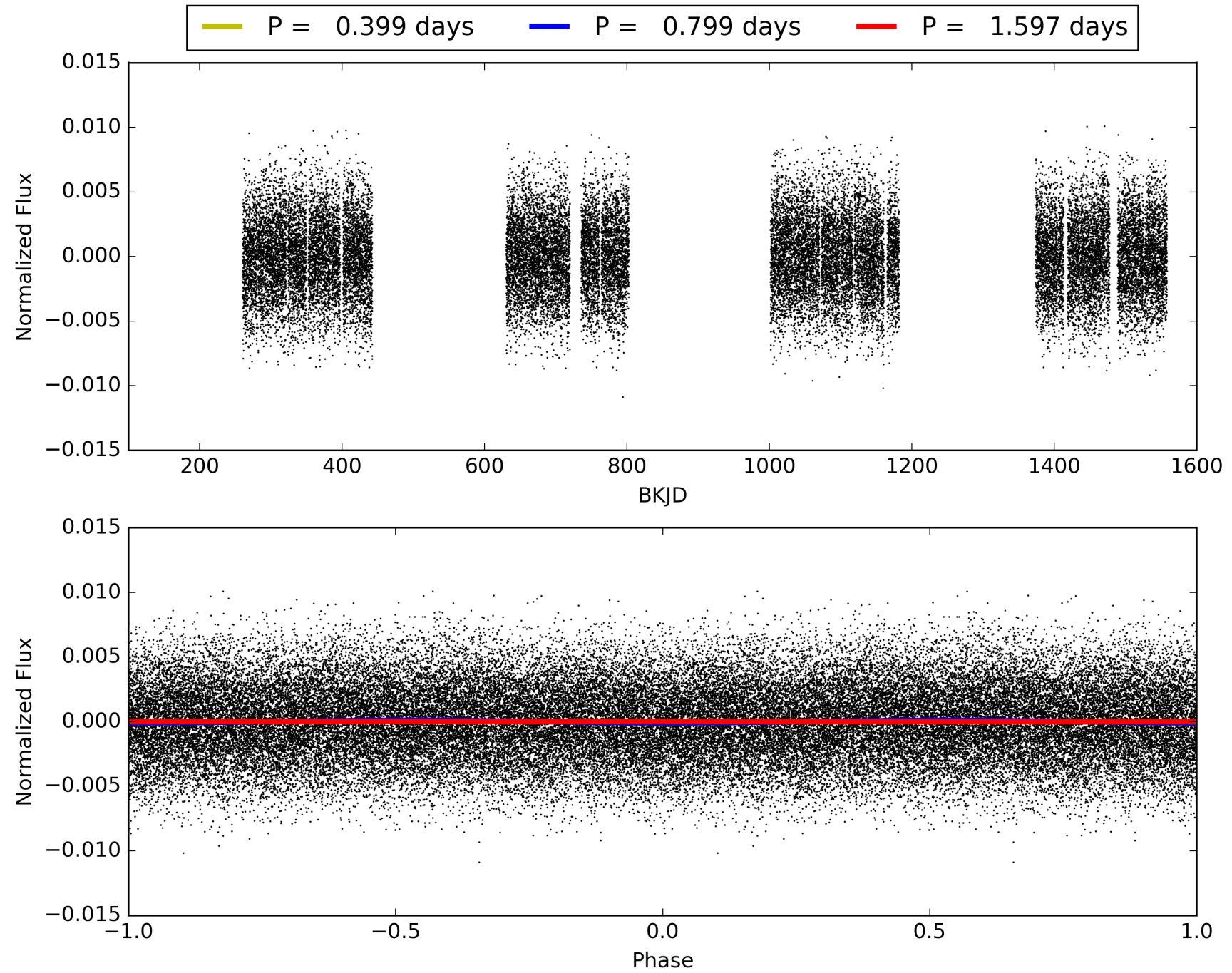
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.02e-30
RollingBand-fgt: 1.00 [811/811]
GhostDiagnostic-chr: 3.191
Centroid-sig: 0.0%
Centroid-so: 0.421 arcsec [2.40σ]
OotOffset-rm: 0.285 arcsec [2.78σ]
KicOffset-rm: 0.207 arcsec [2.02σ]
OotOffset-st: 0/4/4/0 [8]
KicOffset-st: 0/4/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 005554685-01, PDC Light Curves

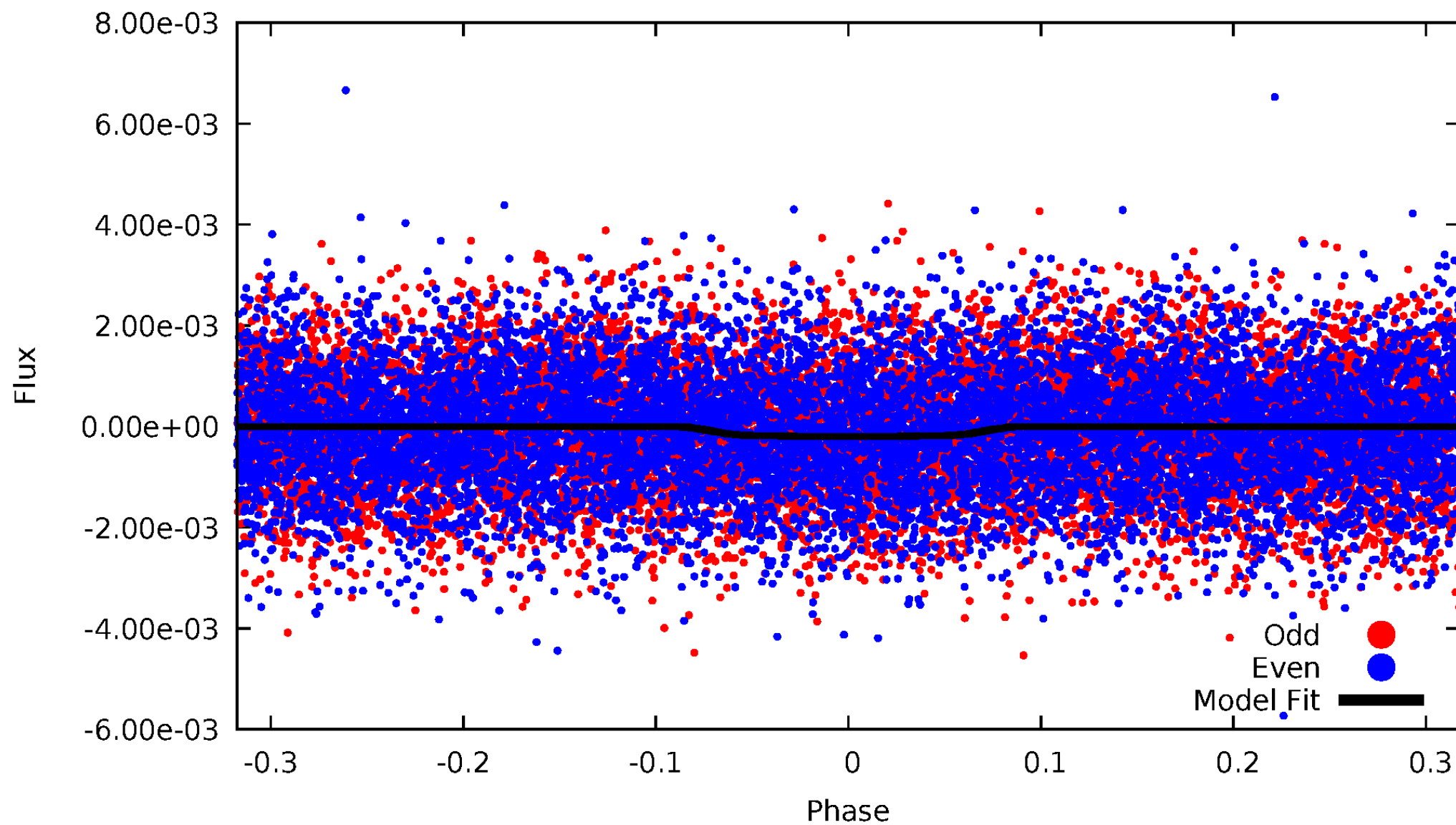


TCE 005554685-01



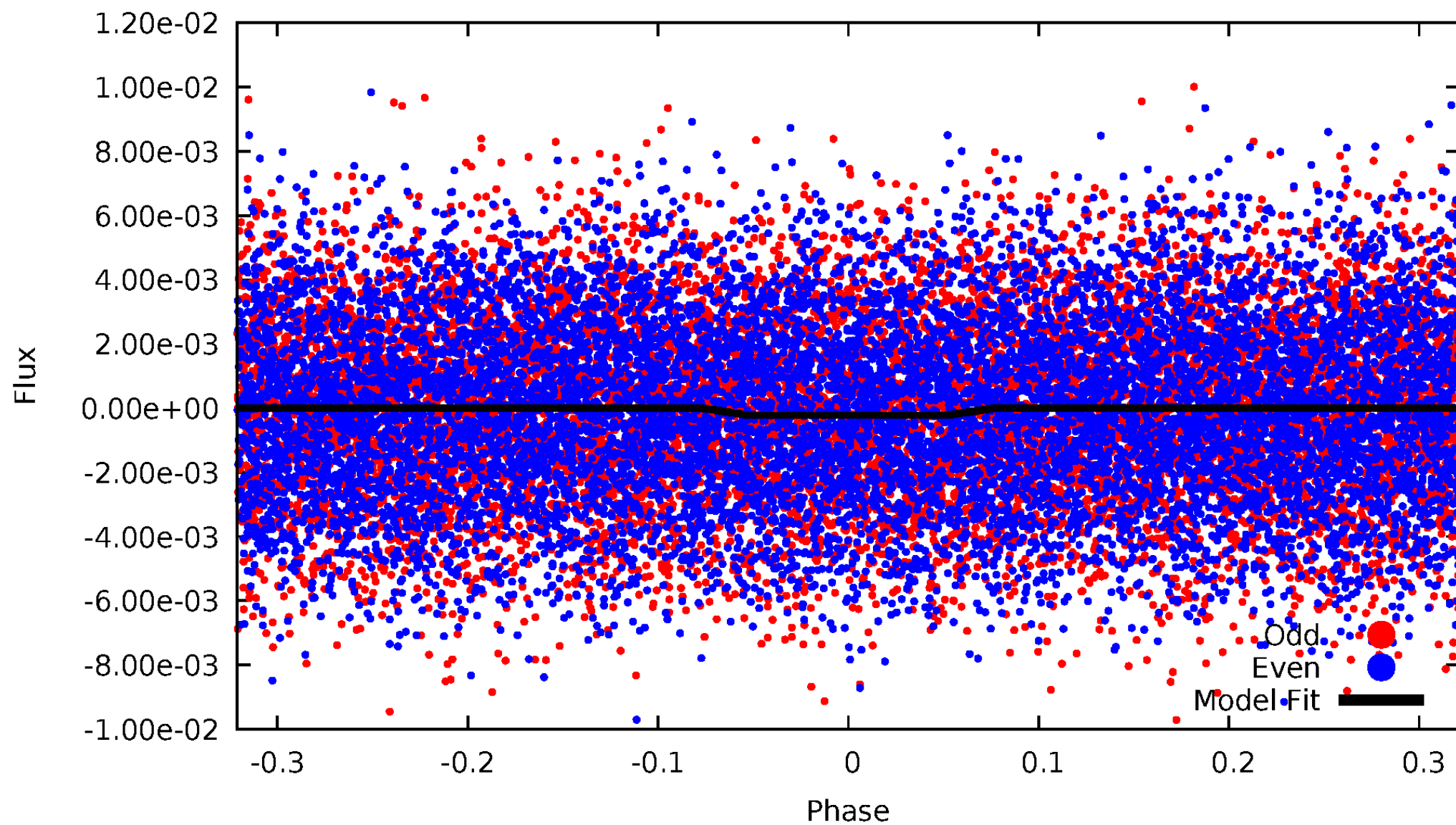
DV Odd/Even

TCE 005554685-01



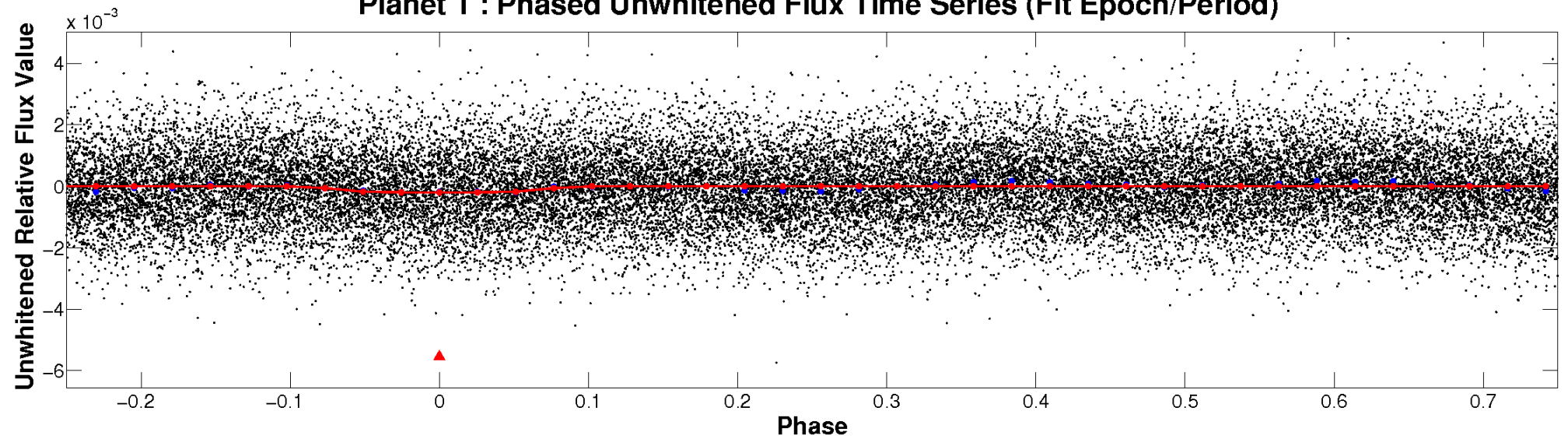
ALT Odd/Even

TCE 005554685-01

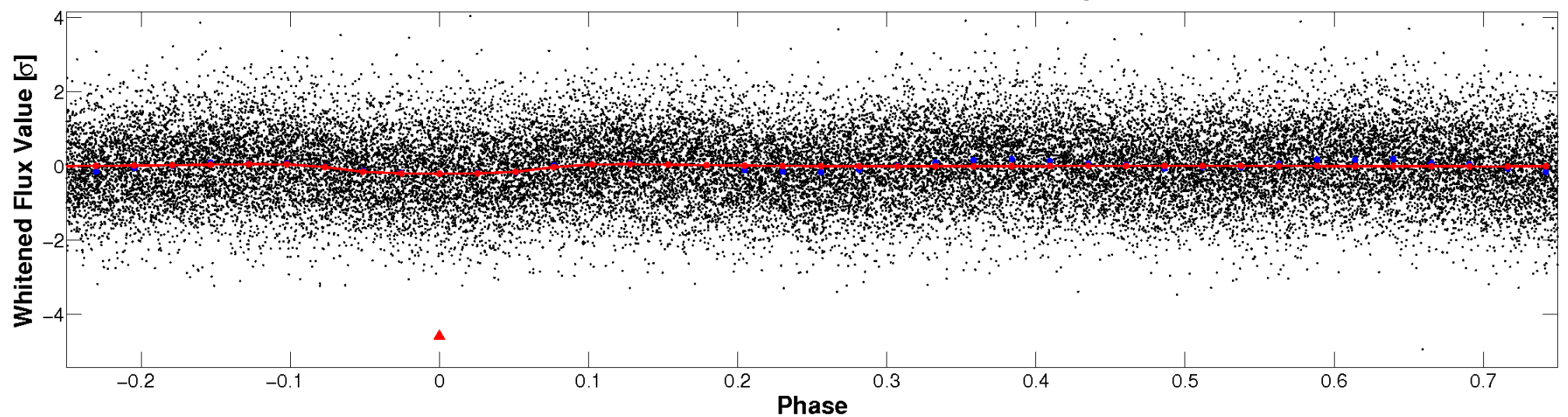


Non-Whitened Vs. Whitened Light Curve

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

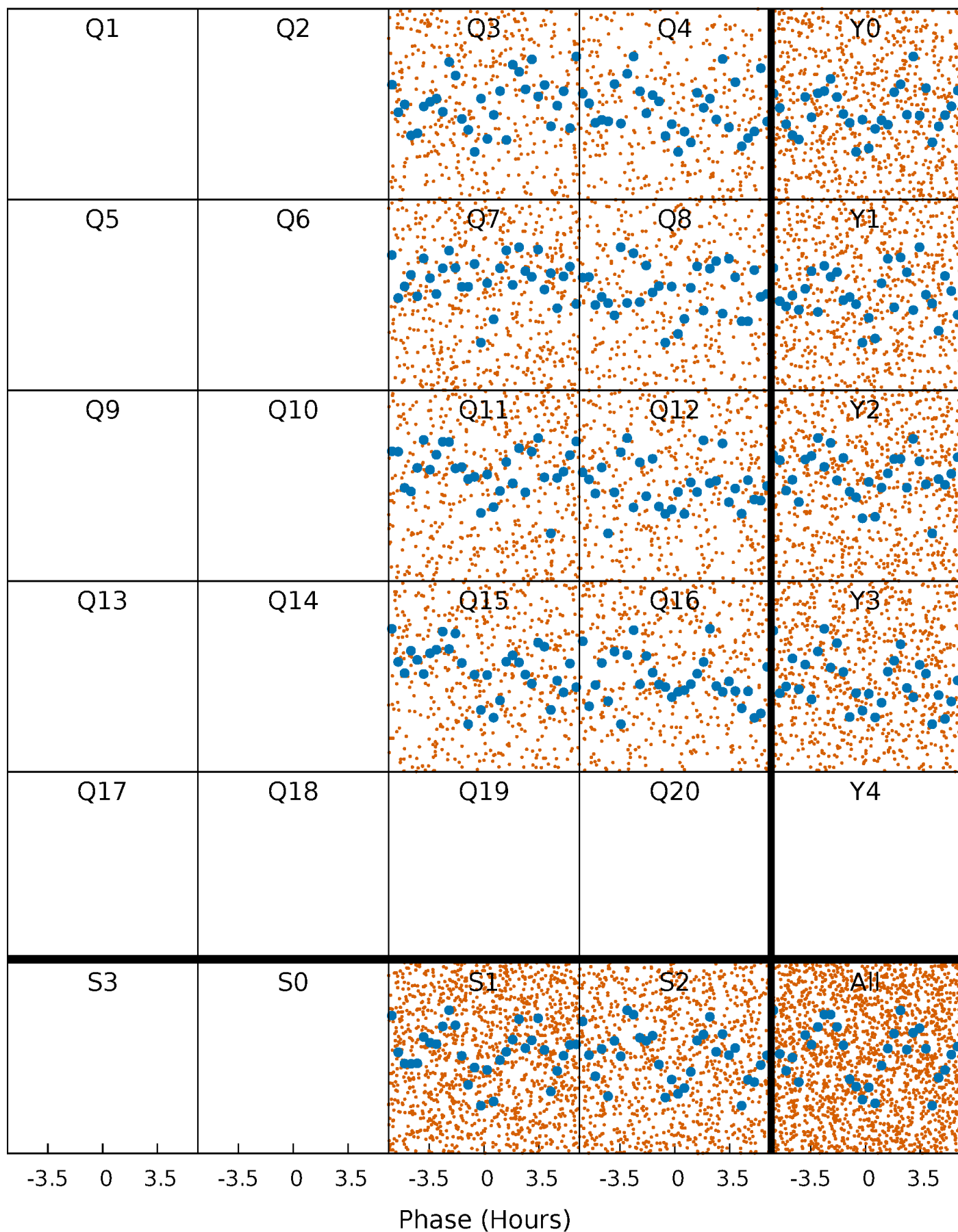


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



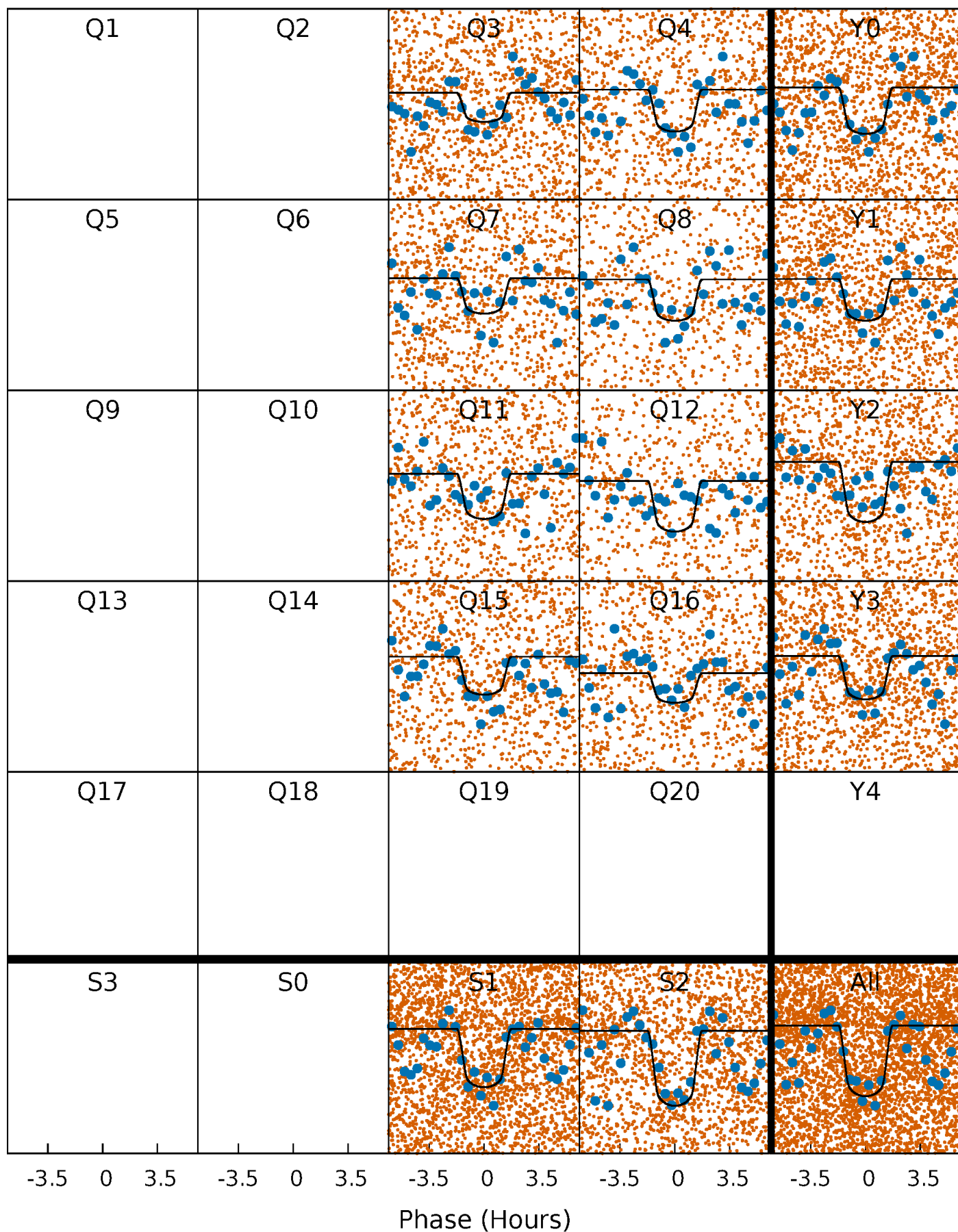
PDC Quarter-Phased Transit Curves

TCE 005554685-01 P= 0.798634 Days $T_0=132.254929$ (BKJD)



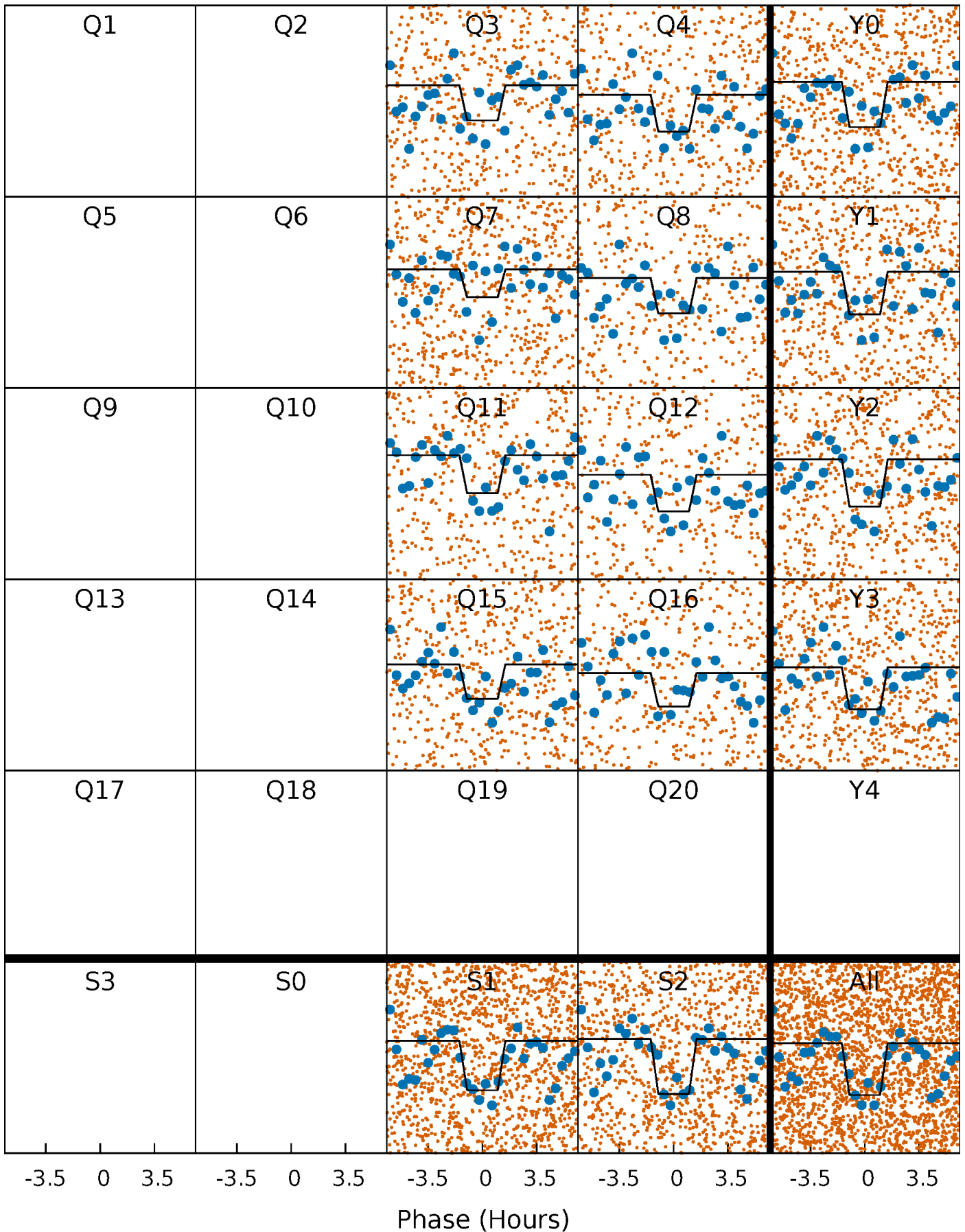
DV Quarter-Phased Transit Curves

TCE 005554685-01 P= 0.798634 Days $T_0=132.254929$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

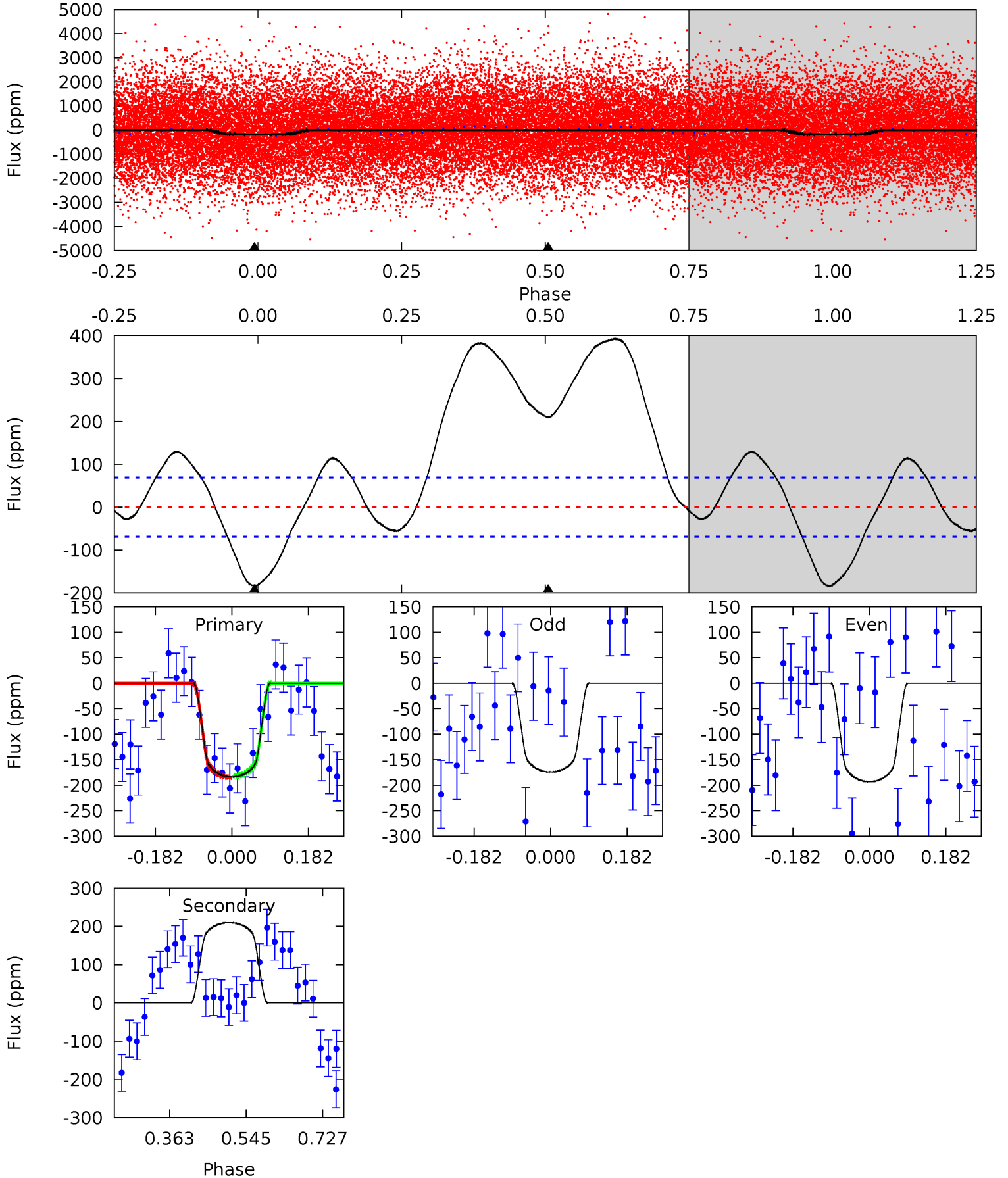
TCE 005554685-01 P= 0.798632 Days $T_0=132.254857$ (BKJD)



DV Model-Shift Uniqueness Test

005554685-01, P = 0.798634 Days, E = 132.254929 Days

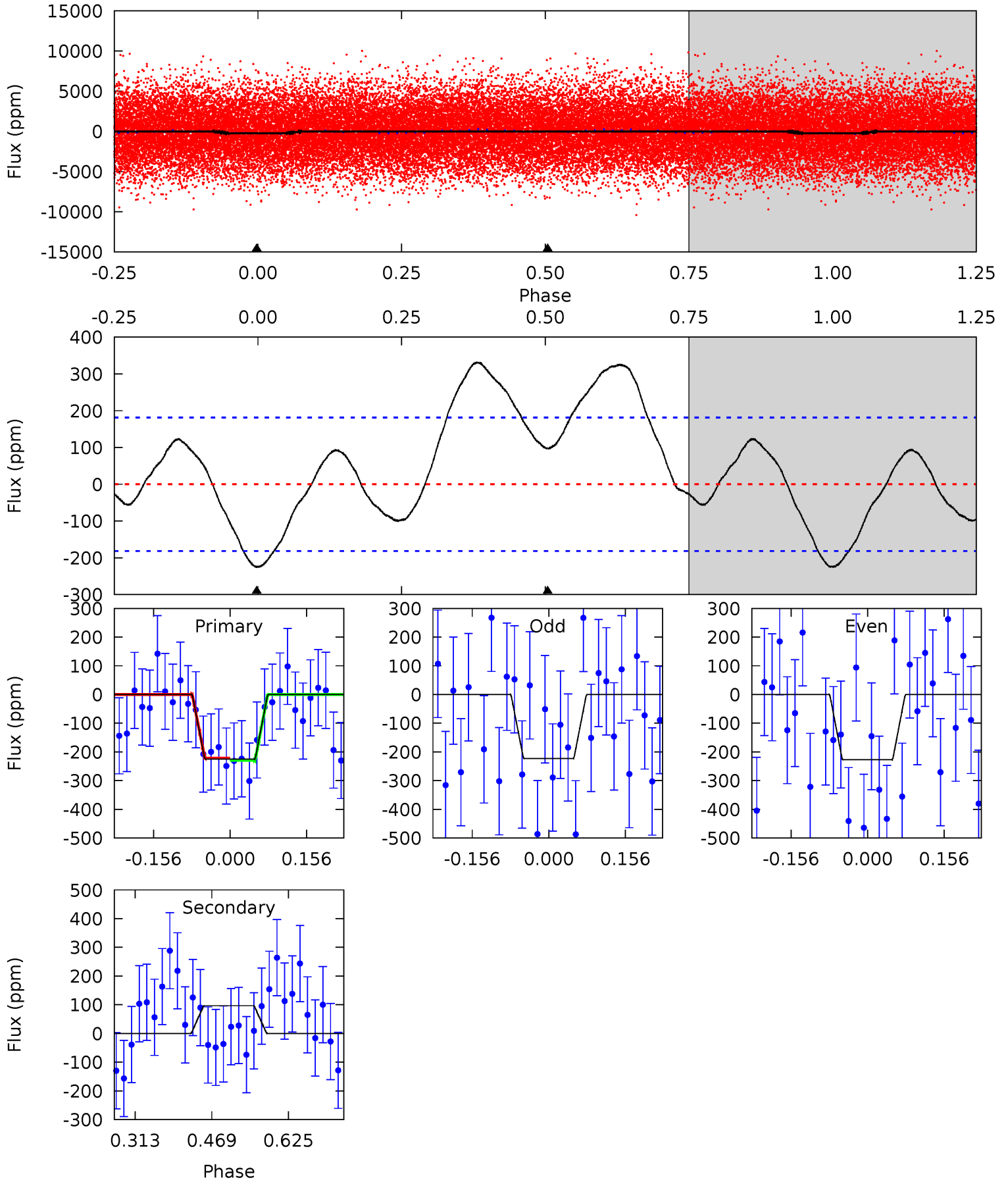
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	-13.5	0	0	4.44	1.34	4.30	11.8	11.8	-13.5	-13.5	0.62	0.86	0.68	0.07



Alt Model-Shift Uniqueness Test

005554685-01, P = 0.798632 Days, E = 132.254857 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.54	-2.39	0	0	4.47	1.42	2.34	5.54	5.54	-2.39	-2.39	0.05	0.96	0.60	0.10



Stellar Parameters For KIC 005554685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7281^{+228}_{-304}	$3.973^{+0.273}_{-0.147}$	$-0.260^{+0.250}_{-0.300}$	$2.121^{+0.560}_{-0.684}$	$1.542^{+0.211}_{-0.316}$	$0.228^{+0.396}_{-0.093}$
	+3%/-4%	+7%/-4%	+96%/-115%	+26%/-32%	+14%/-20%	+174%/-41%
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 005554685-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	210 ± 16	$3.41^{+1.62}_{-1.52}$	4621^{+369}_{-426}	-7172^{+1138}_{-2674}	$-3.701^{+1.954}_{-7.982}$
Alt.	97 ± 41	$3.35^{+1.47}_{-1.45}$	4622^{+347}_{-413}	-5970^{+848}_{-2022}	$-1.701^{+1.001}_{-4.120}$

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 $A_{obs} \gg 1.0$

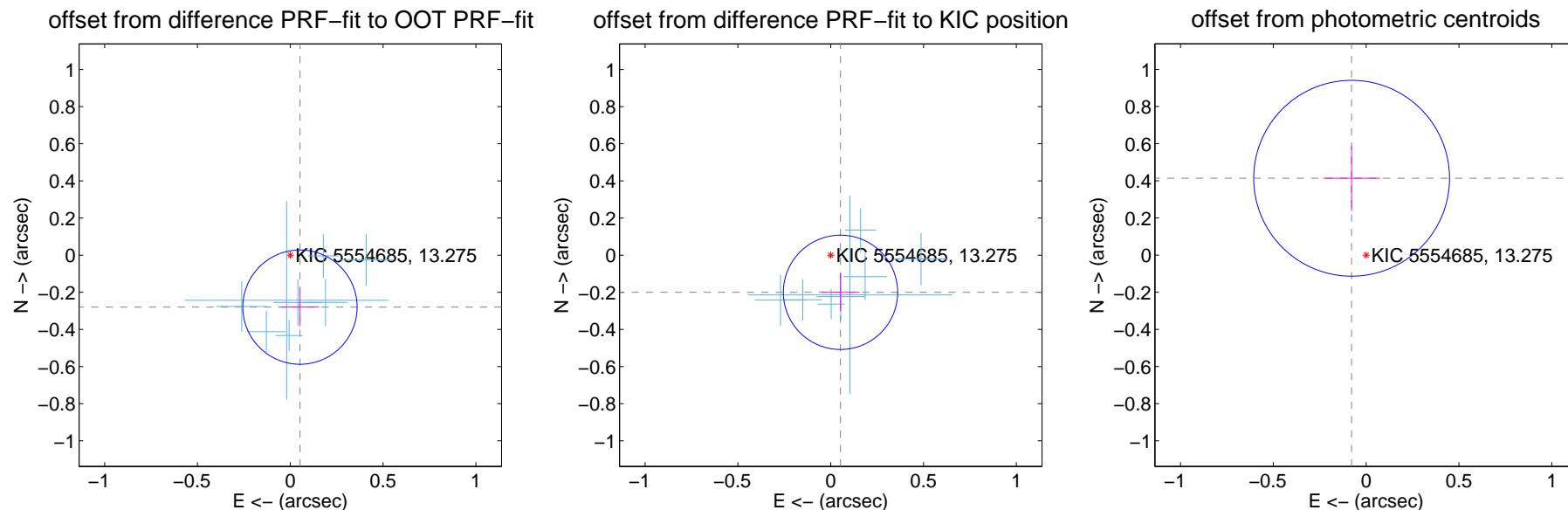
DV Centroid Data

Supplemental centroid analysis for 005554685-01. Kepler magnitude: 13.28. Transit SNR 11.98

There are 8 quarters with good PRF difference image offsets

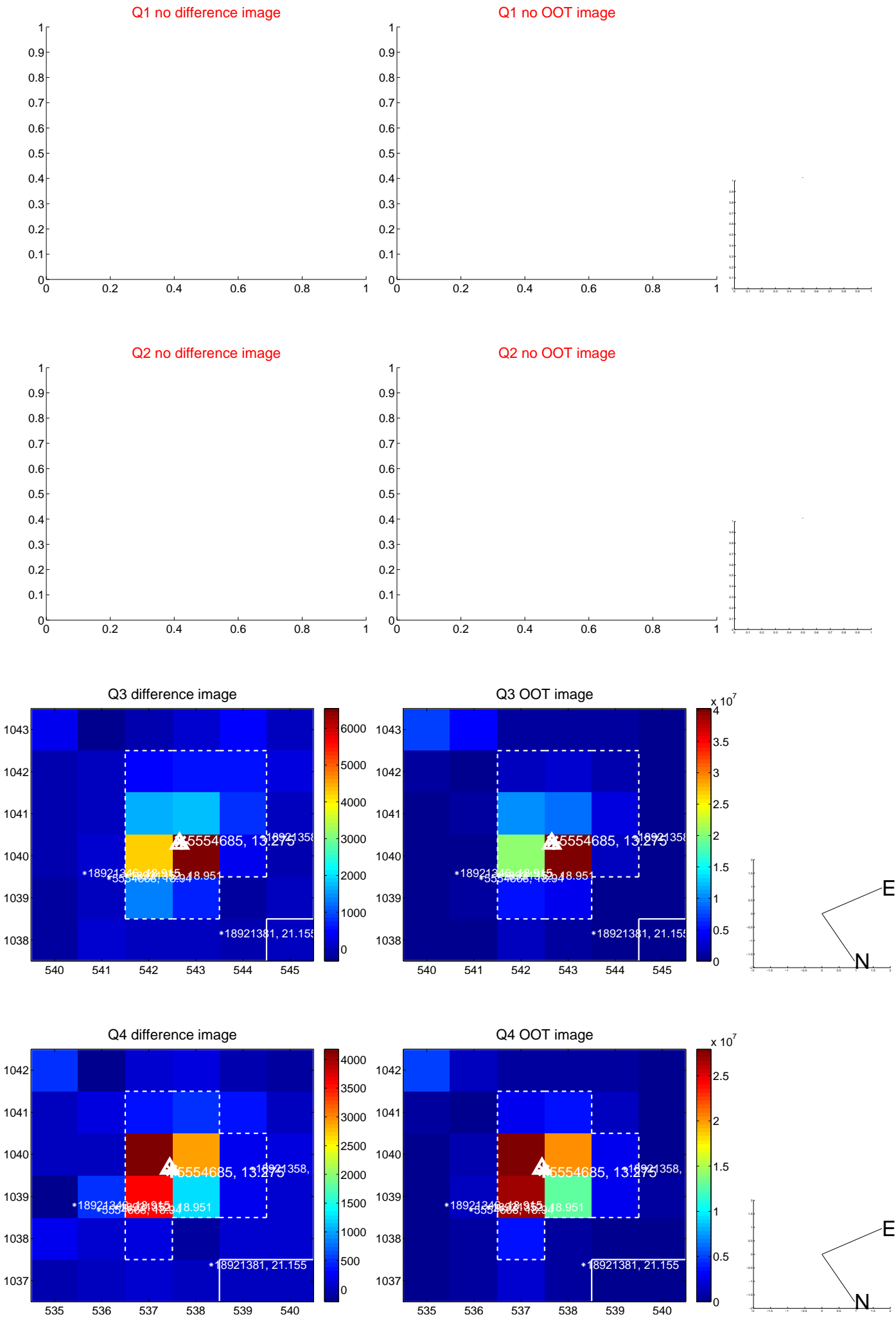
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.285 ± 0.103	2.78	-0.052 ± 0.103	-0.280 ± 0.103
PRF-fit source offset from KIC position	0.207 ± 0.103	2.02	-0.053 ± 0.103	-0.200 ± 0.103
photometric centroid source offset	0.42 ± 0.18	2.40	0.08 ± 0.15	0.41 ± 0.18

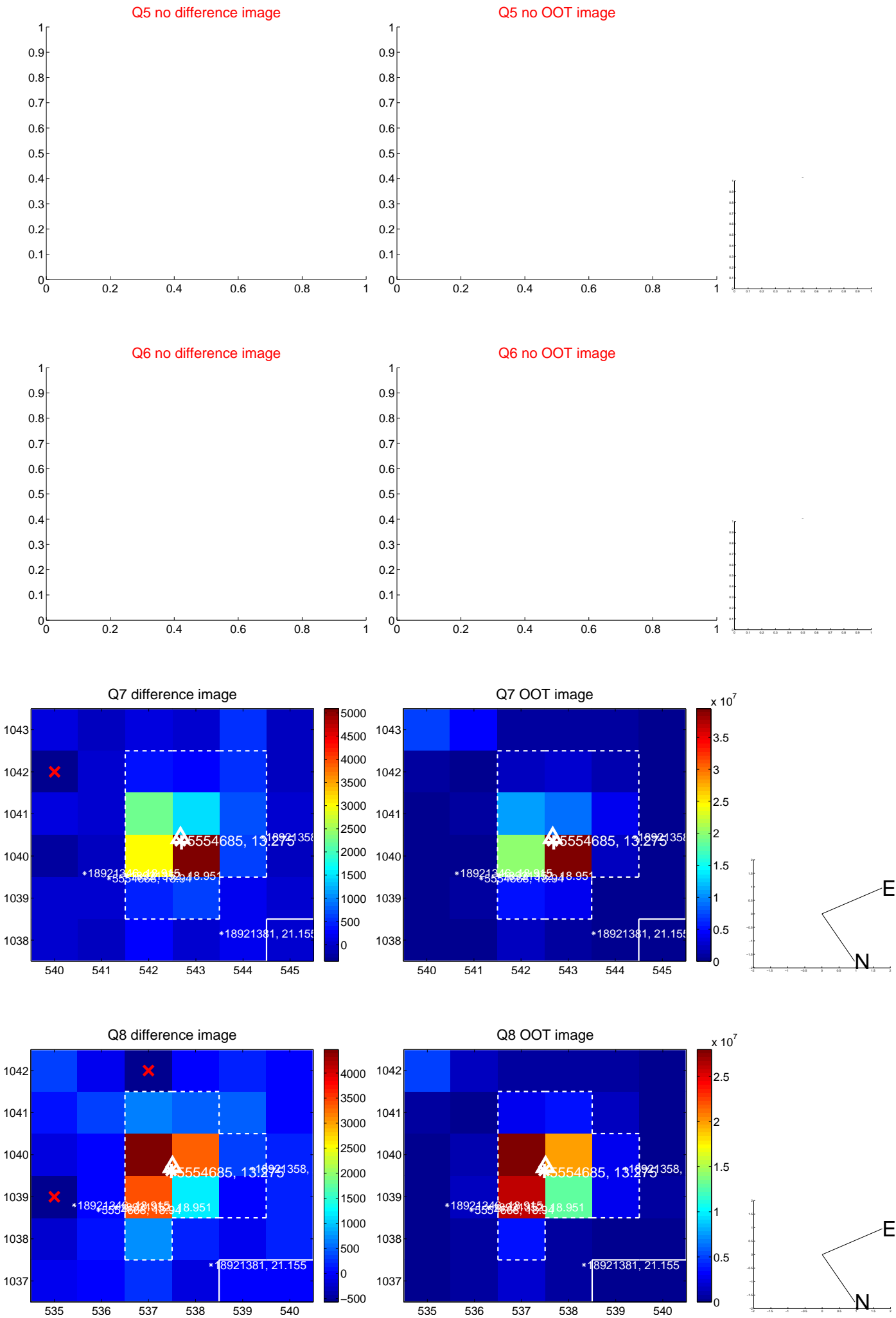


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

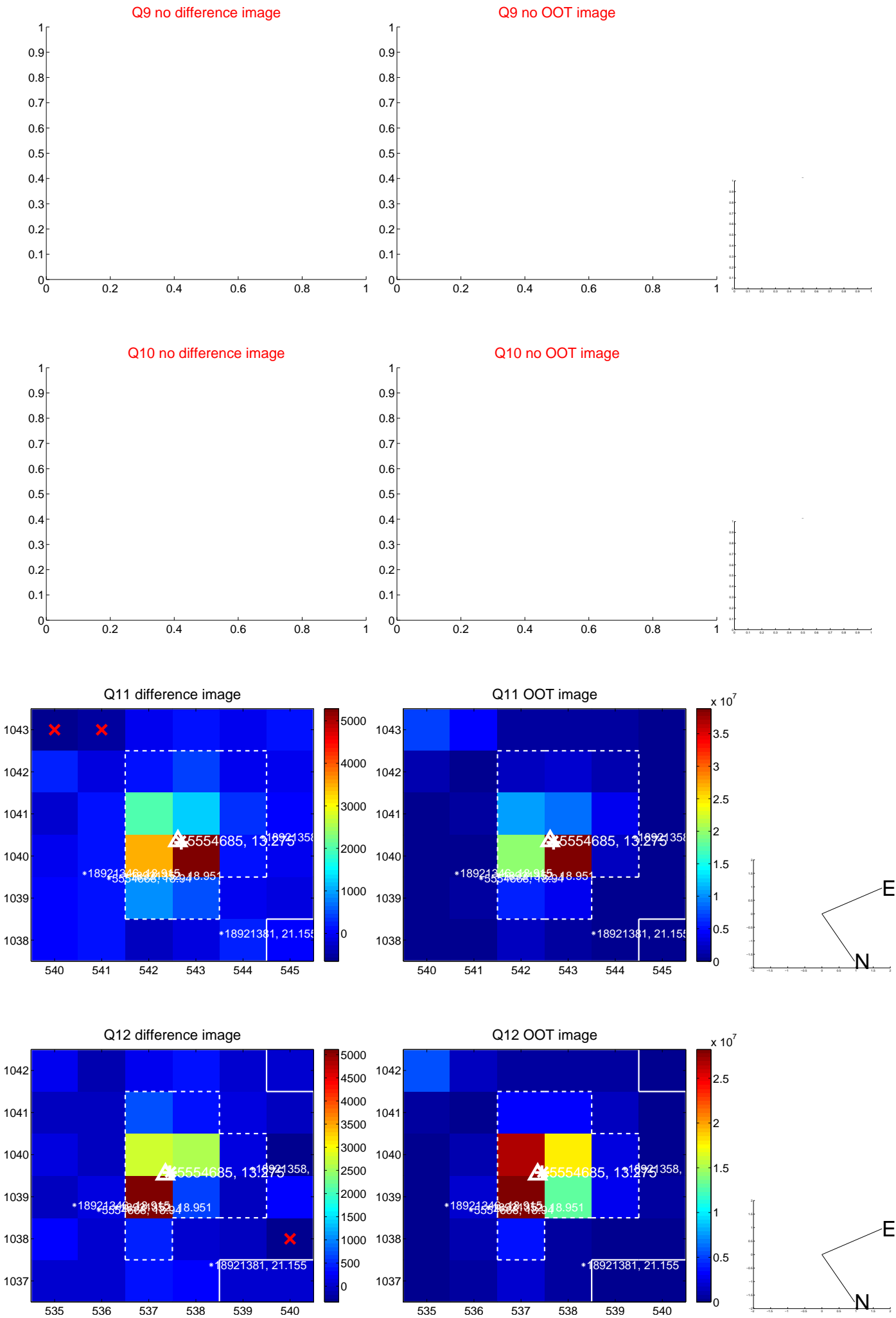
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



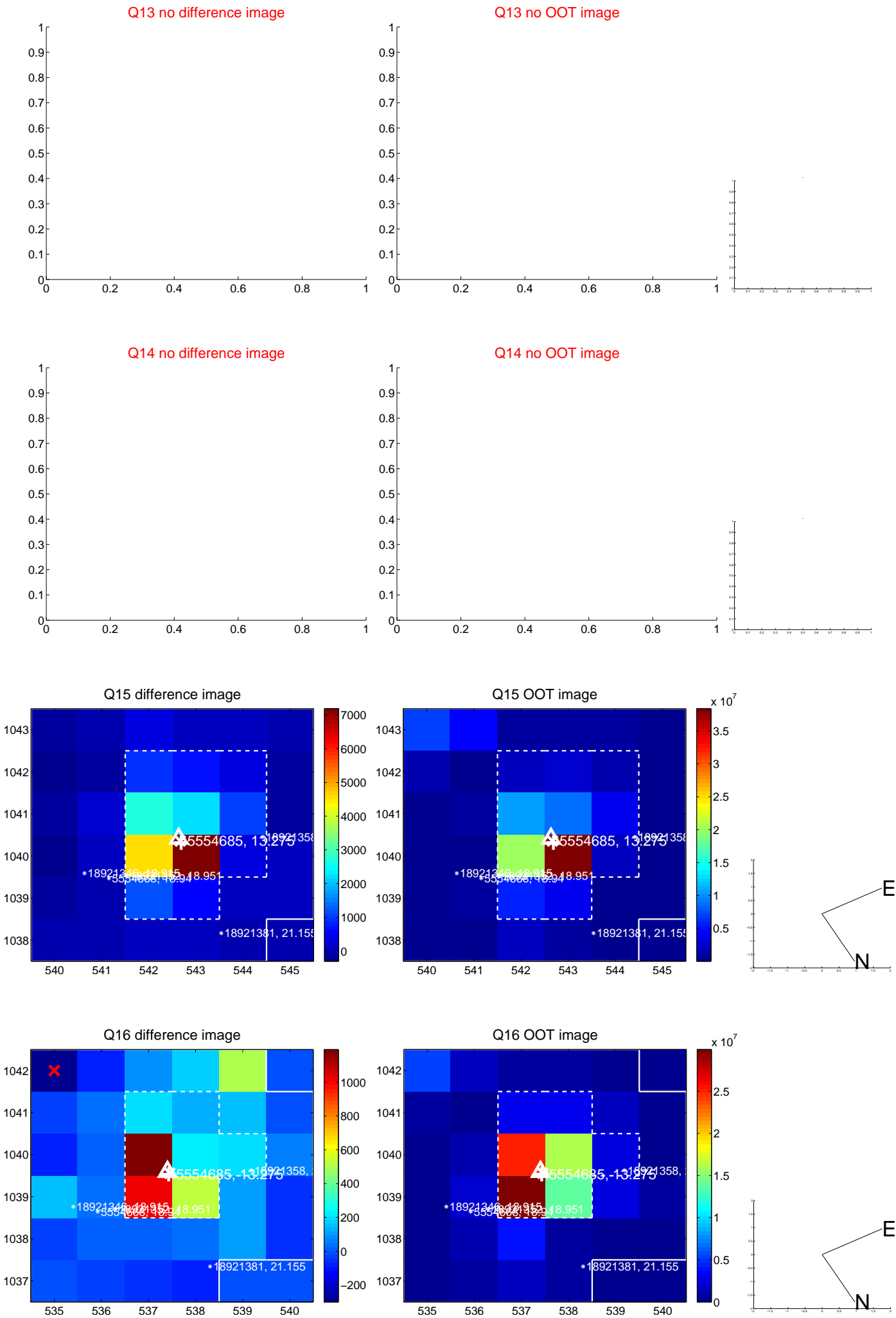
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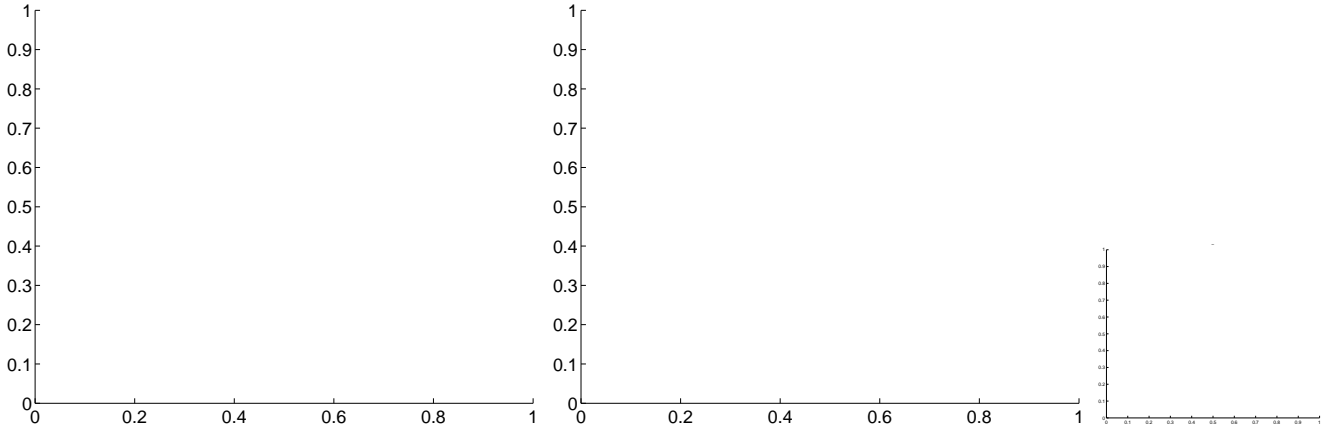
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



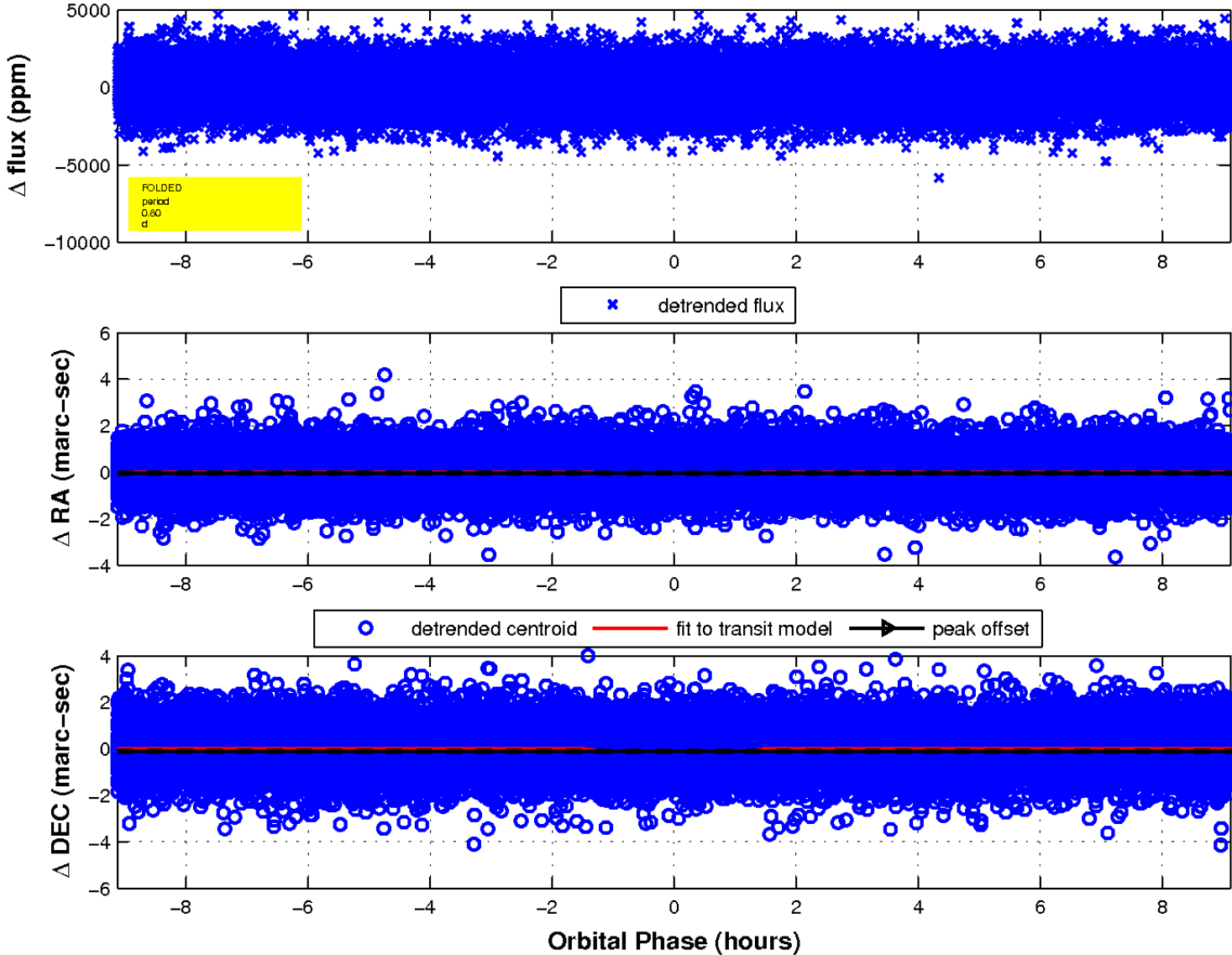
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

