

KIC 009541295

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})
009541295-01	OBS	3132.01	0.536623	131.723028	13.5	4.087	14.2	11.3	2.00	6020	0.75	24683.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009541295-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—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.

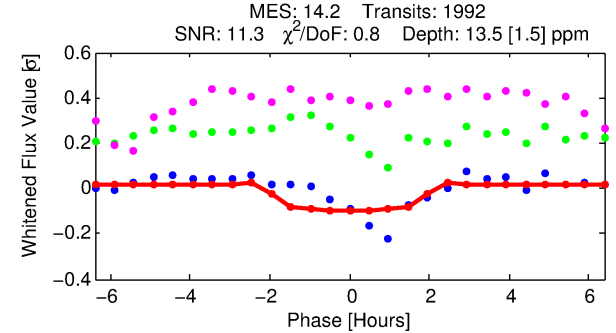
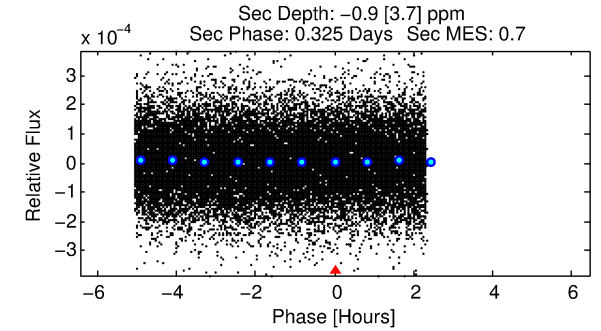
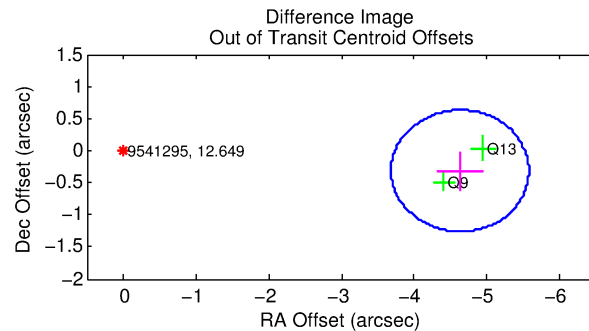
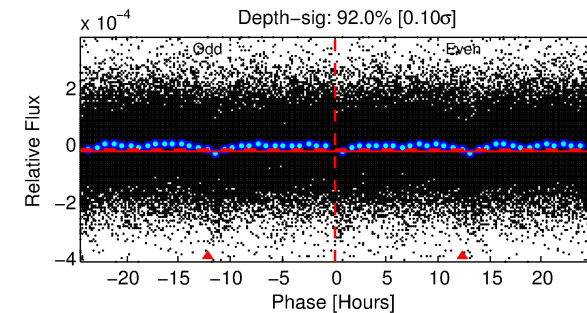
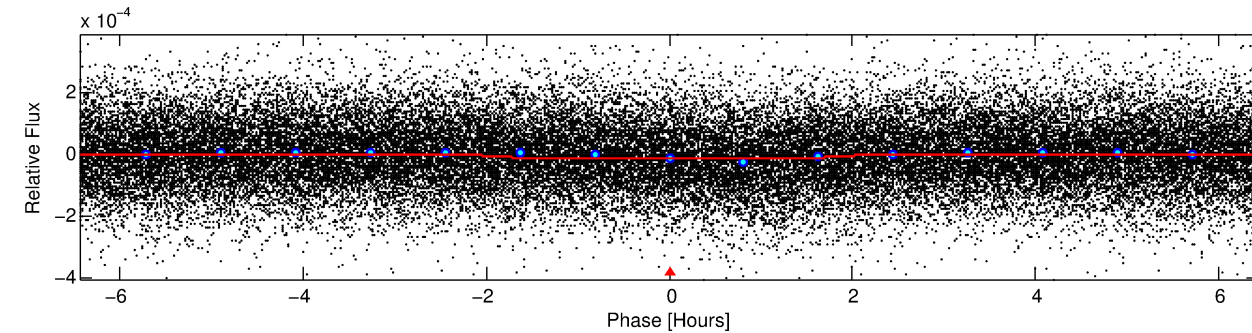
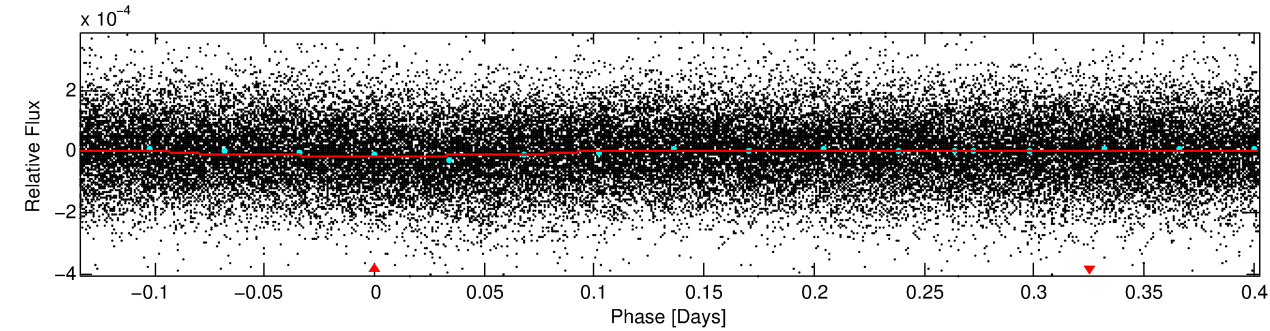
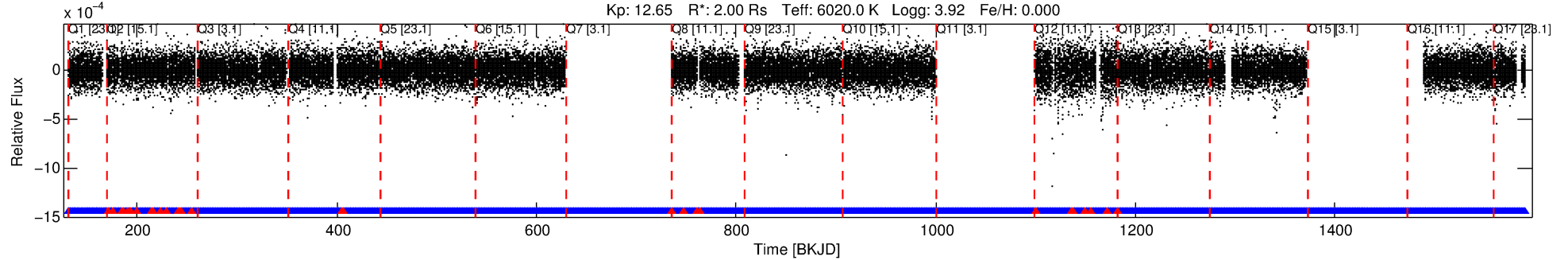
Ephemeris Match Information For 009541295-01

No Significant Match Found

DV One-Page Summary

KIC: 9541295 Candidate: 1 of 1 Period: 0.537 d
KOI: K03132 Corr: No Ephemeris Match

Kp: 12.65 R*: 2.00 Rs Teff: 6020.0 K Logg: 3.92 Fe/H: 0.000



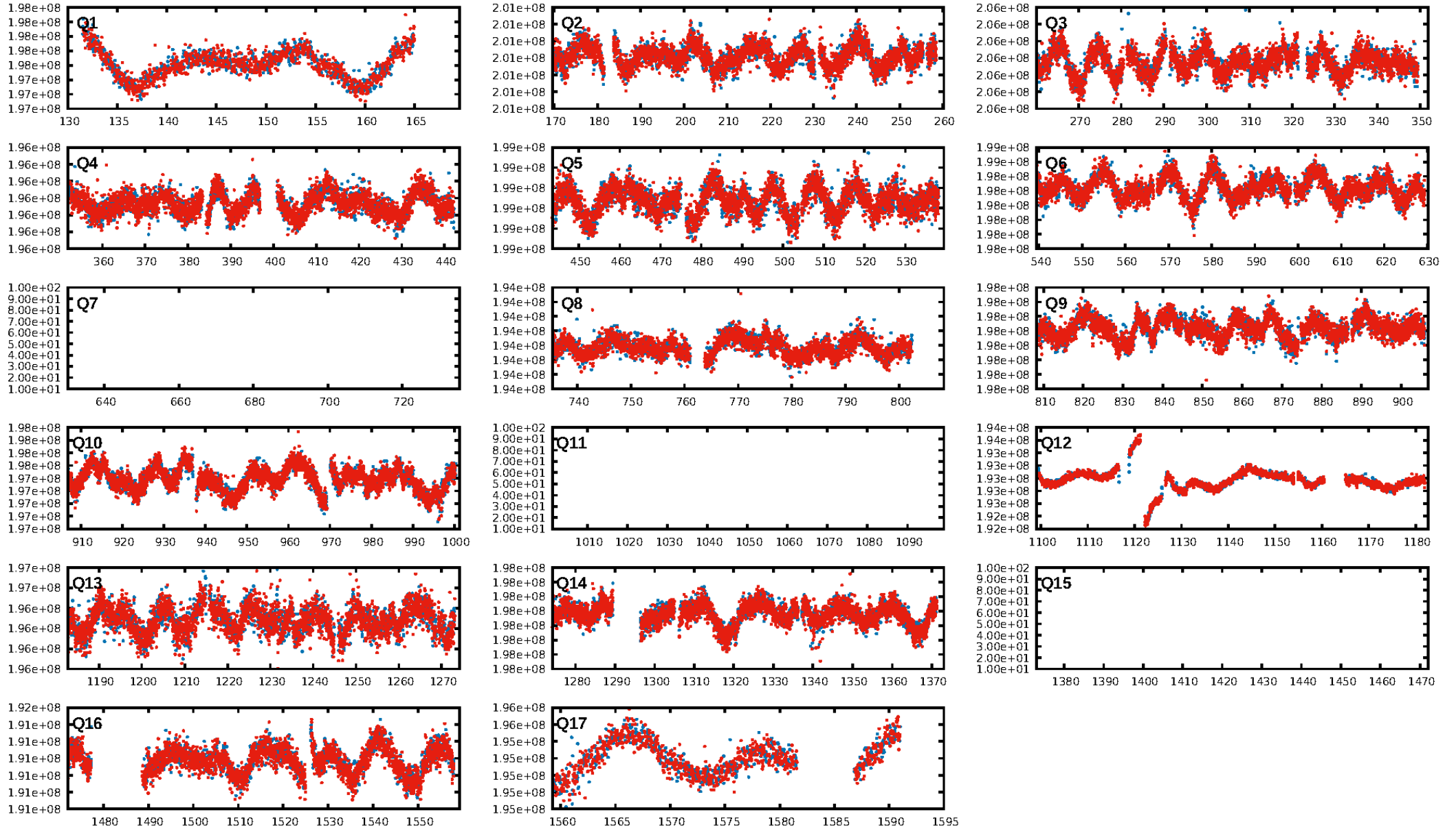
DV Fit Results:

Period = 0.53662 [0.00001] d
Epoch = 131.7230 [0.0035] BKJD
Rp/R* = 0.0034 [0.0027]
a/R* = 1.16 [1.13]
b = 0.41 [7.52]
Seff = 24683.56 [12461.59]
Teq = 3196 [403] K
Rp = 0.75 [0.63] Re
a = 0.0138 [0.0043] AU
Ag = N/A
Teffp = N/A

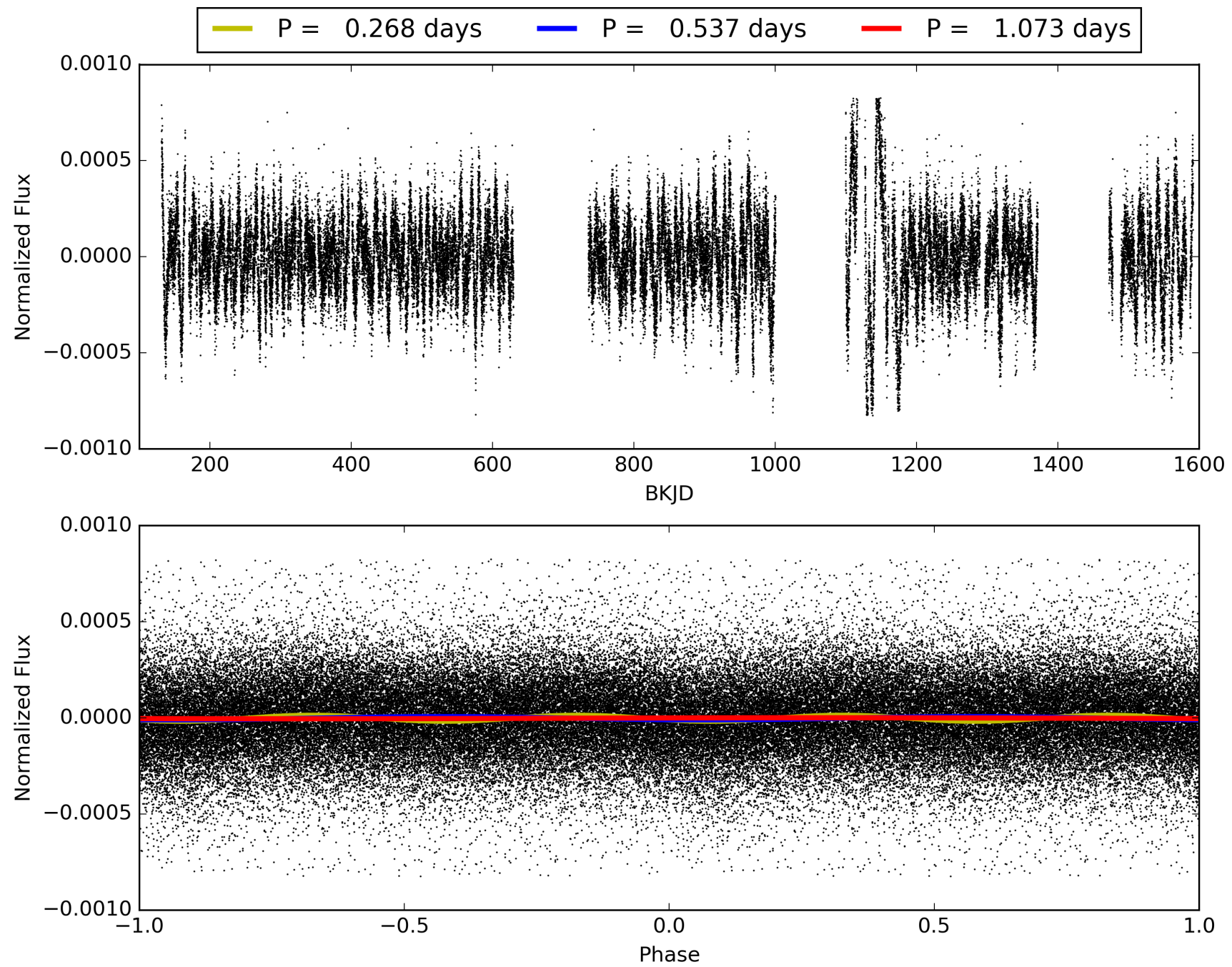
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.07e-37
RollingBand-fgt: 0.98 [1851/1880]
GhostDiagnostic-chr: 1.665
Centroid-sig: 6.7%
Centroid-so: 1.262 arcsec [1.60σ]
OotOffset-rm: 4.640 arcsec [14.70σ]
KicOffset-rm: 4.600 arcsec [13.35σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 009541295-01, PDC Light Curves

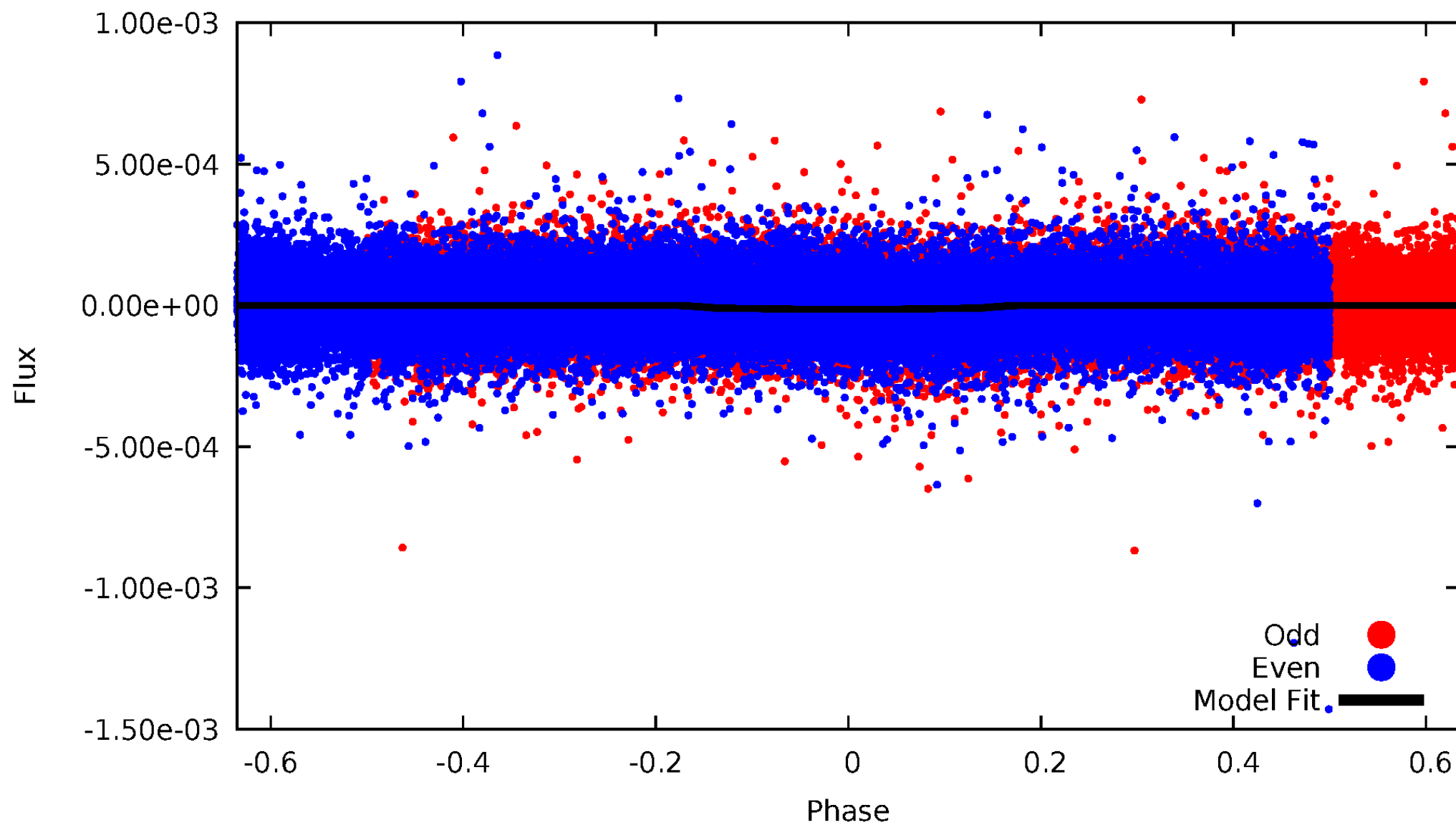


TCE 009541295-01



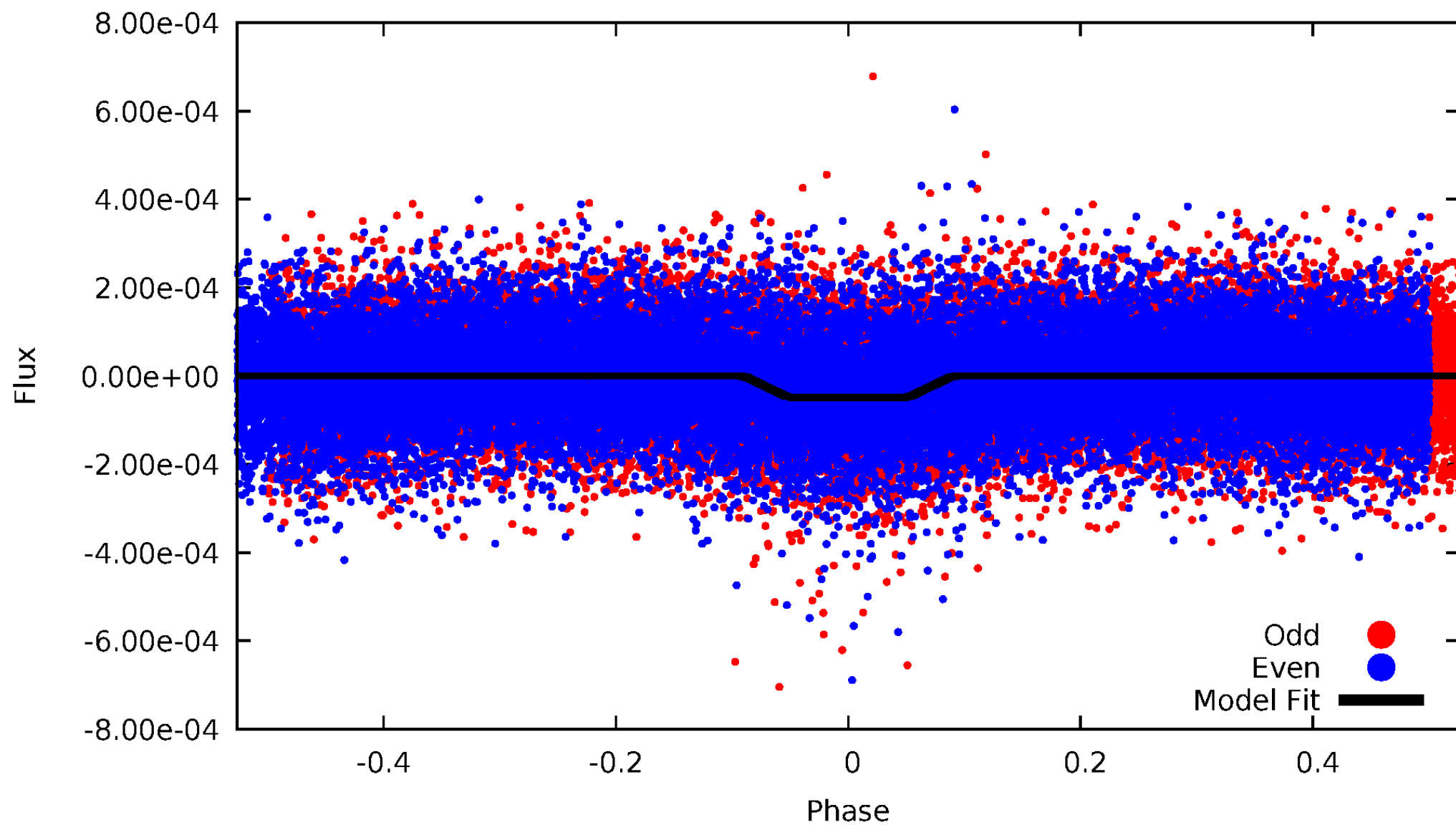
DV Odd/Even

TCE 009541295-01



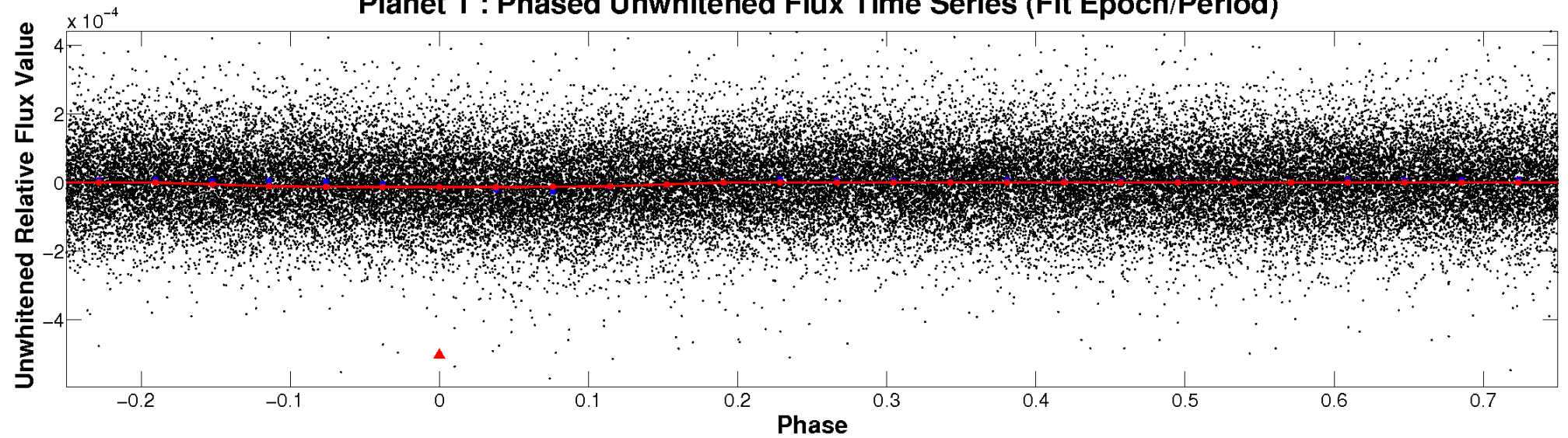
ALT Odd/Even

TCE 009541295-01

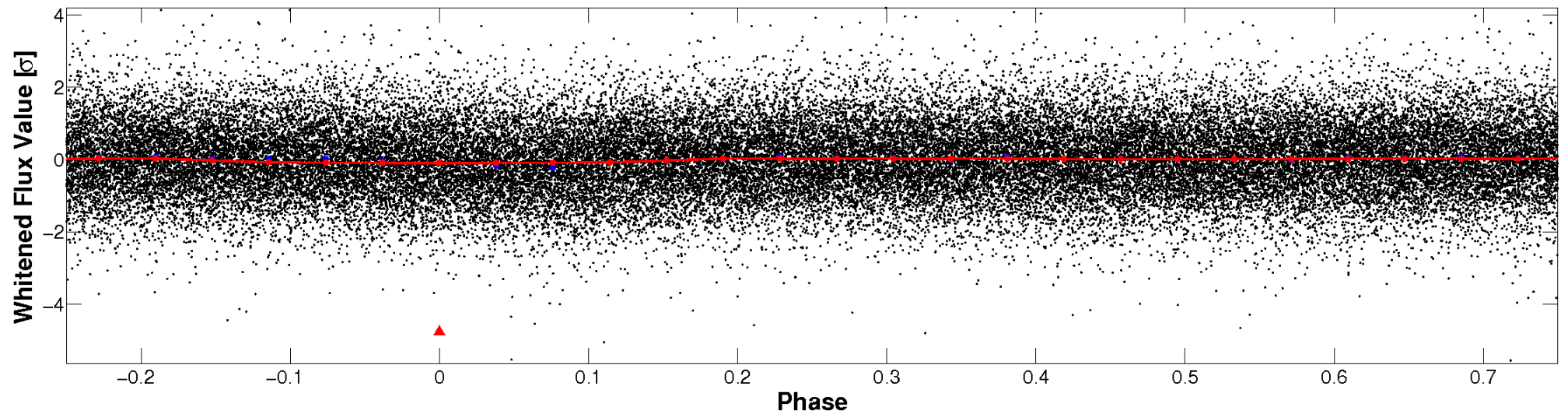


Non-Whitened Vs. Whitened Light Curve

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

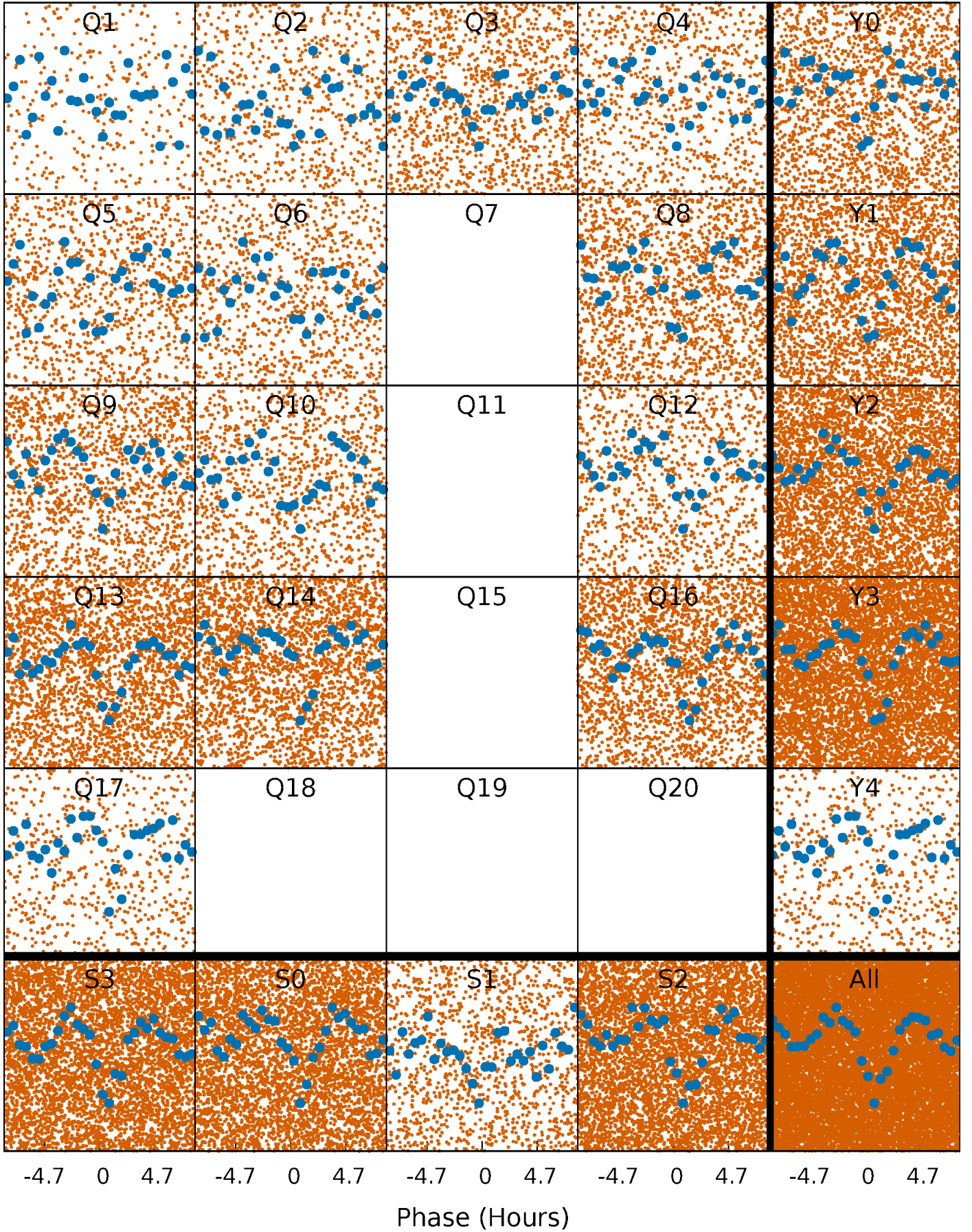


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



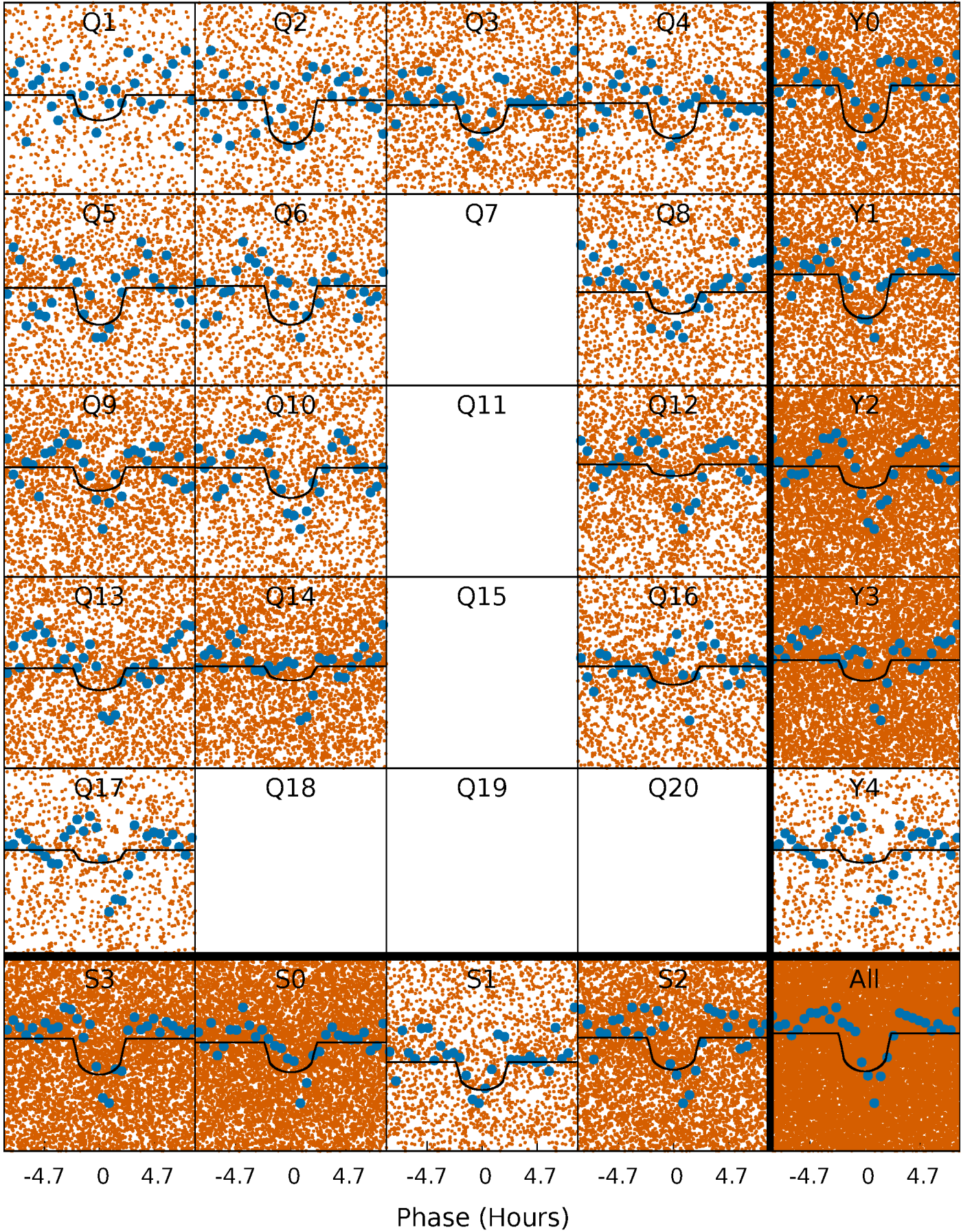
PDC Quarter-Phased Transit Curves

TCE 009541295-01 P= 0.536623 Days $T_0=131.723028$ (BKJD)



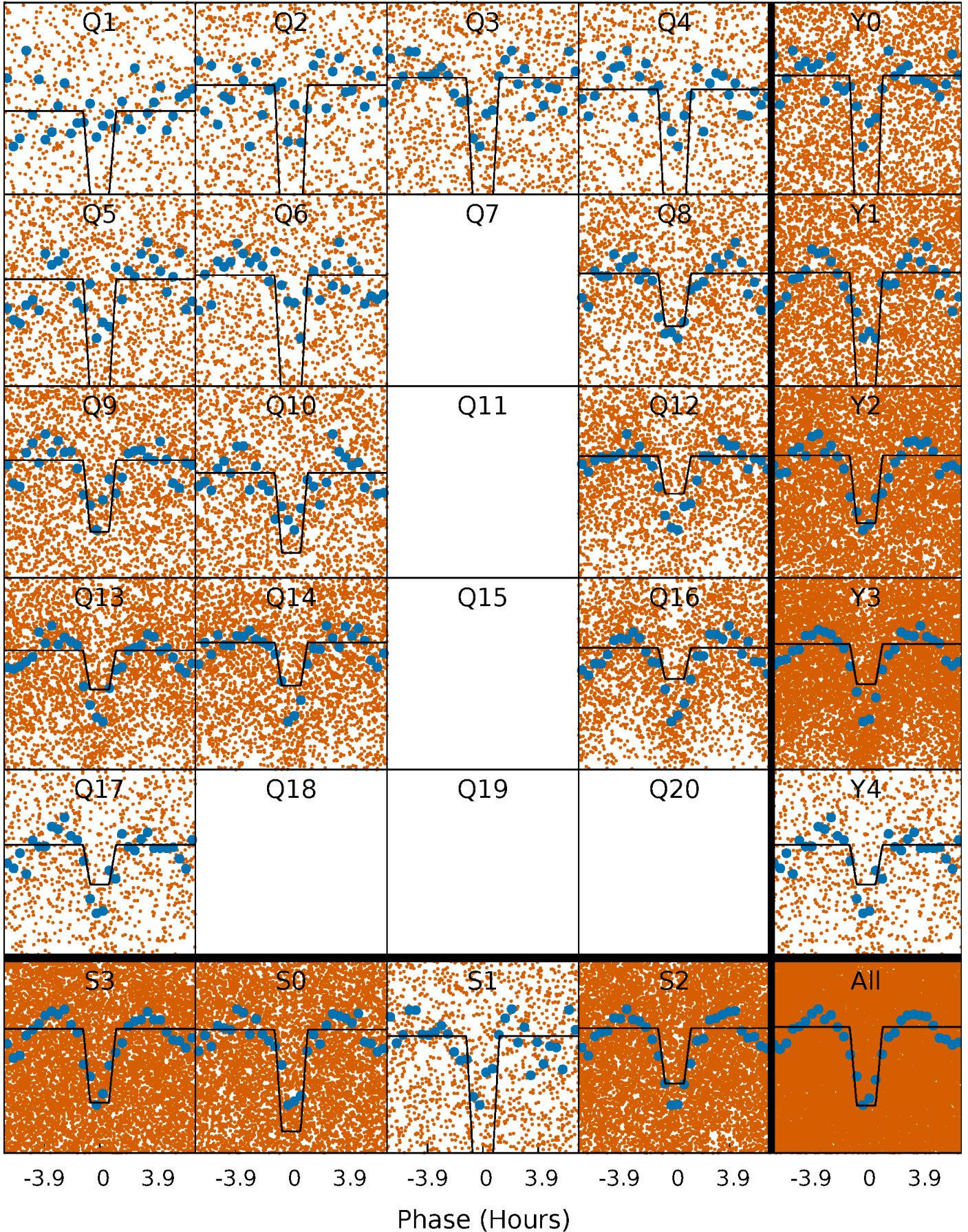
DV Quarter-Phased Transit Curves

TCE 009541295-01 P= 0.536623 Days $T_0=131.723028$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

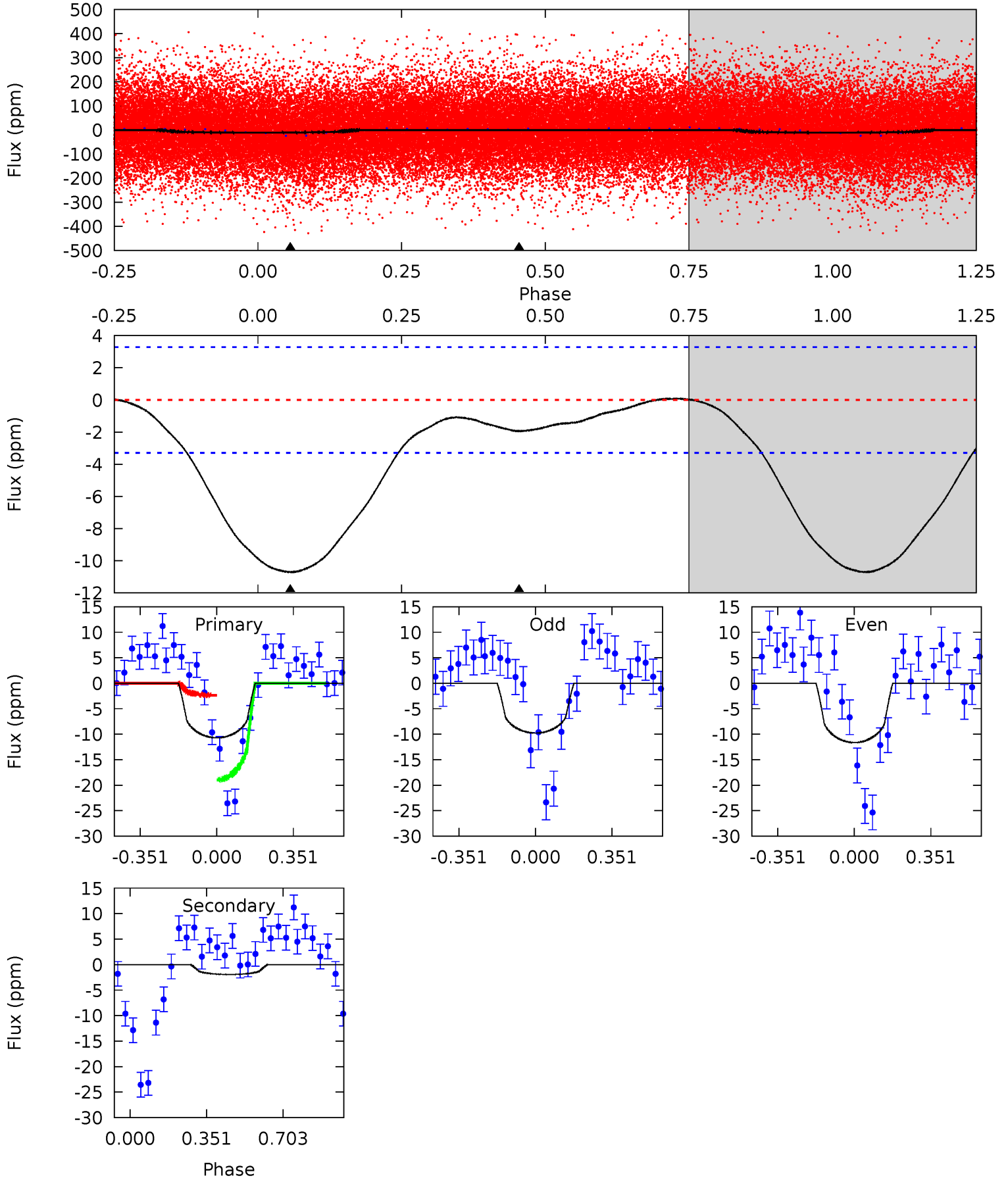
TCE 009541295-01 P= 0.536648 Days $T_0=131.713513$ (BKJD)



DV Model-Shift Uniqueness Test

009541295-01, P = 0.536623 Days, E = 131.186405 Days

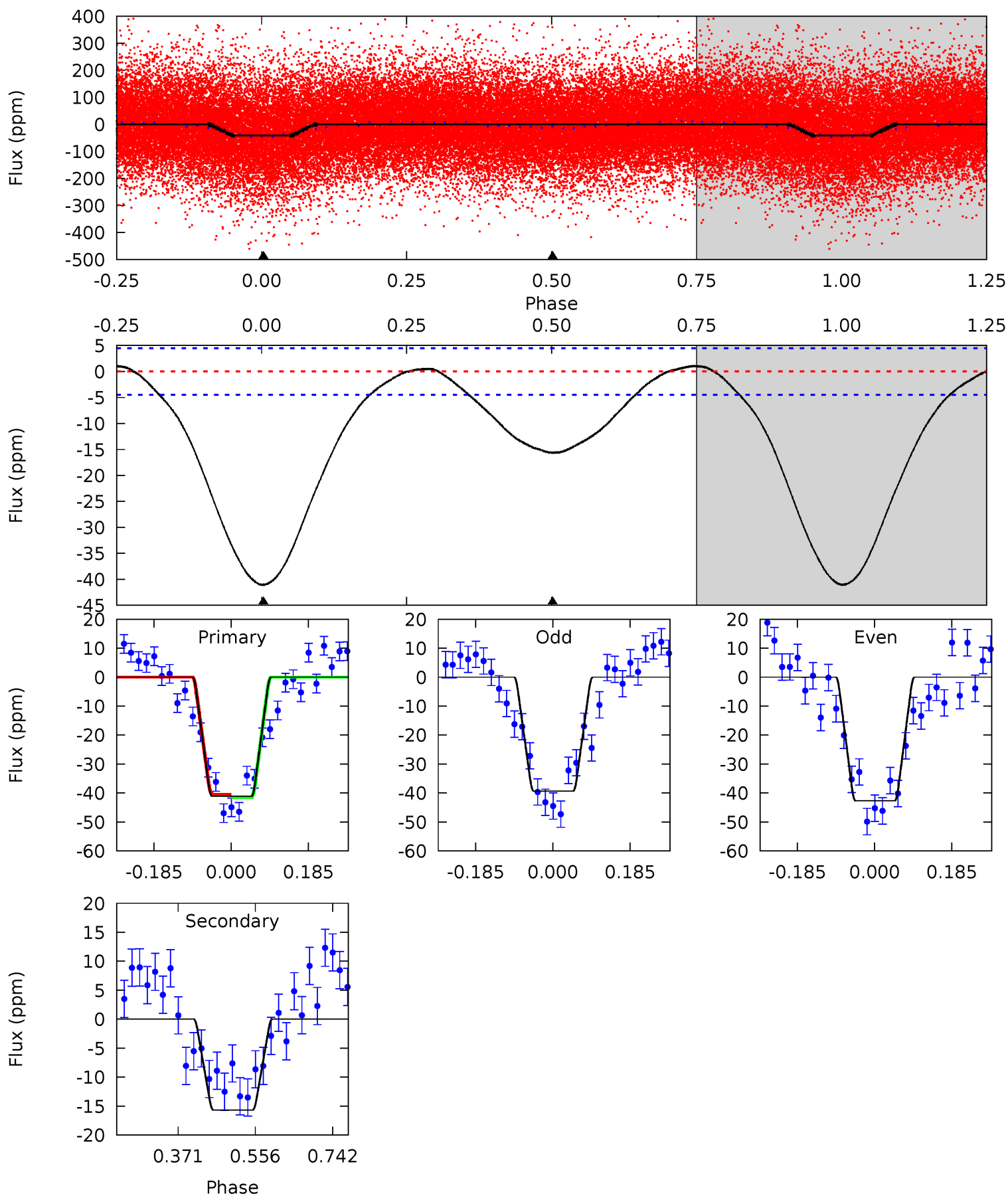
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	2.54	0	0	4.29	0.93	0.29	14.0	14.0	2.54	2.54	1.22	0.97	0.01	10.7



Alt Model-Shift Uniqueness Test

009541295-01, P = 0.536648 Days, E = 131.176865 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	15.5	0	0	4.43	1.32	1.33	40.6	40.6	15.5	15.5	1.63	1.12	0.03	0.53



Stellar Parameters For KIC 009541295

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6020^{+183}_{-183}	$3.922^{+0.285}_{-0.095}$	$0.000^{+0.250}_{-0.250}$	$2.000^{+0.357}_{-0.662}$	$1.220^{+0.198}_{-0.198}$	$0.215^{+0.378}_{-0.065}$
	+3%/-3%	+7%/-2%	+inf%/-inf%	+18%/-33%	+16%/-16%	+176%/-30%
Source	PHO1	FLK73	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 009541295-01 / KOI 3132.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2 ± 1	$0.74^{+0.59}_{-0.42}$	4381^{+285}_{-379}	2963^{+2508}_{-6633}	$0.355^{+1.643}_{-0.245}$
Alt.	-16 ± 1	$1.44^{+0.61}_{-0.56}$	4395^{+261}_{-373}	4278^{+1208}_{-988}	$0.810^{+1.366}_{-0.412}$

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

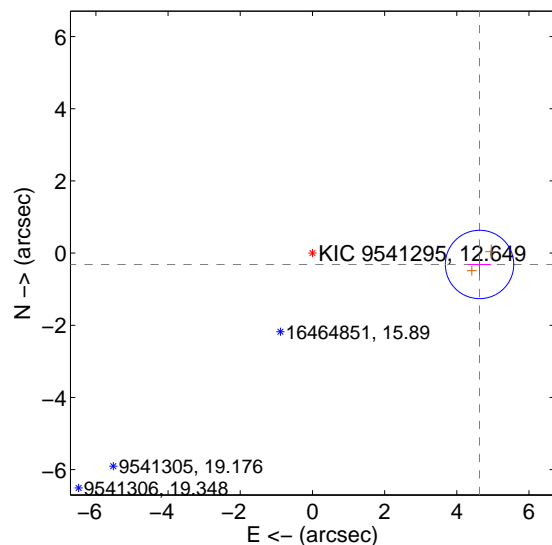
Supplemental centroid analysis for 009541295-01. Kepler magnitude: 12.65. Transit SNR 11.33

There are 0 quarters with good PRF difference image offsets

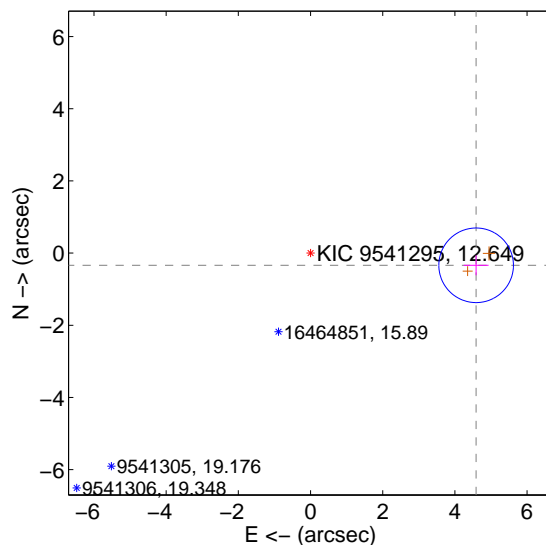
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.640 ± 0.316	14.70	-4.629 ± 0.316	-0.315 ± 0.298
PRF-fit source offset from KIC position	4.600 ± 0.344	13.35	-4.588 ± 0.345	-0.338 ± 0.277
photometric centroid source offset	1.26 ± 0.79	1.60	-1.19 ± 0.79	0.42 ± 0.80

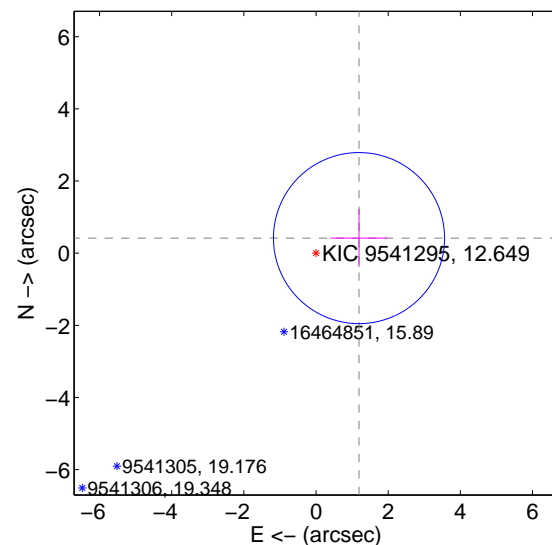
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

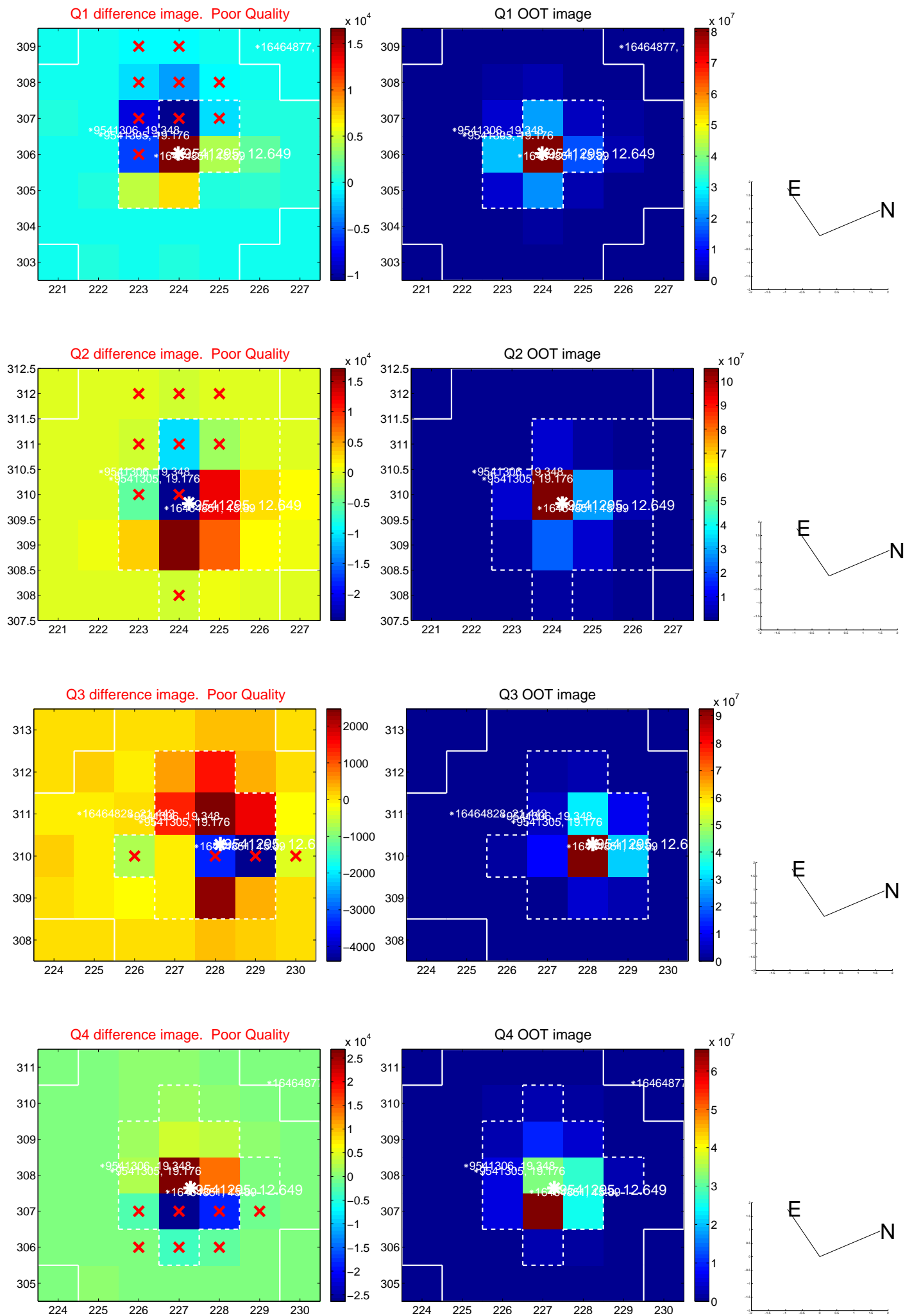


offset from photometric centroids

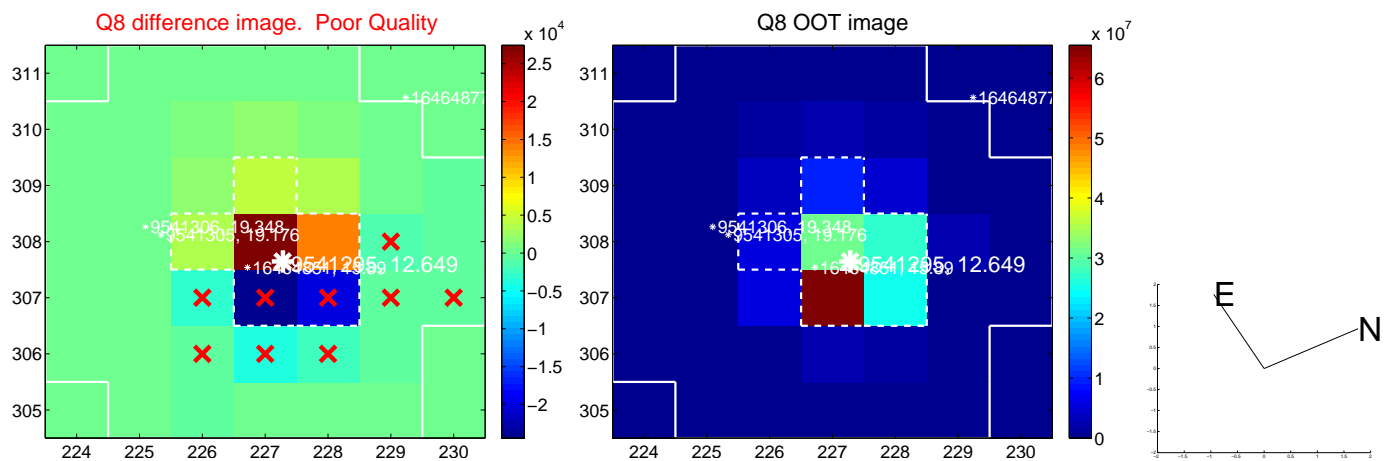
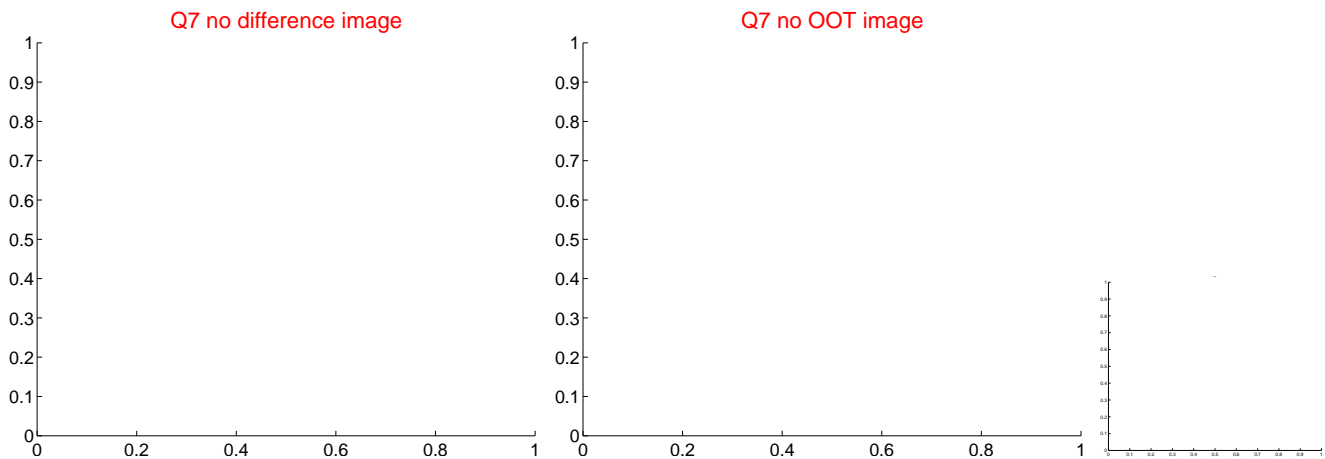
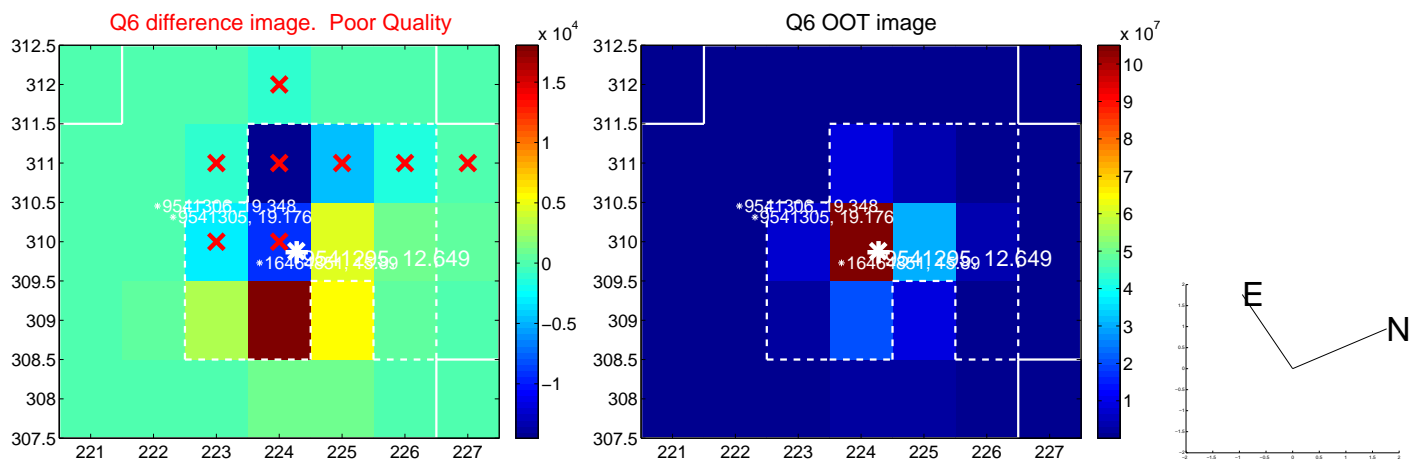
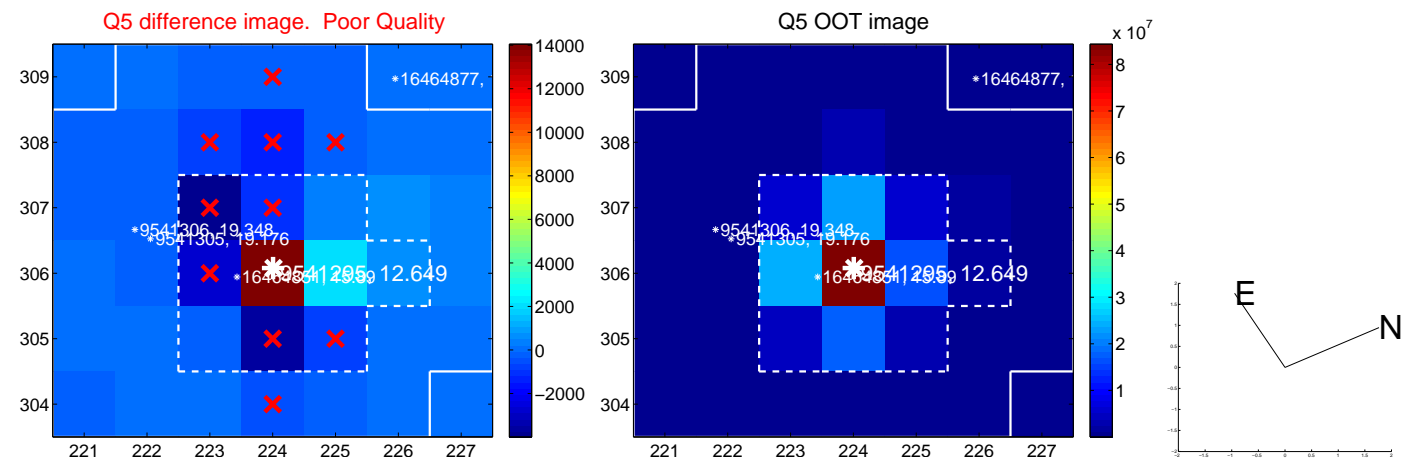


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

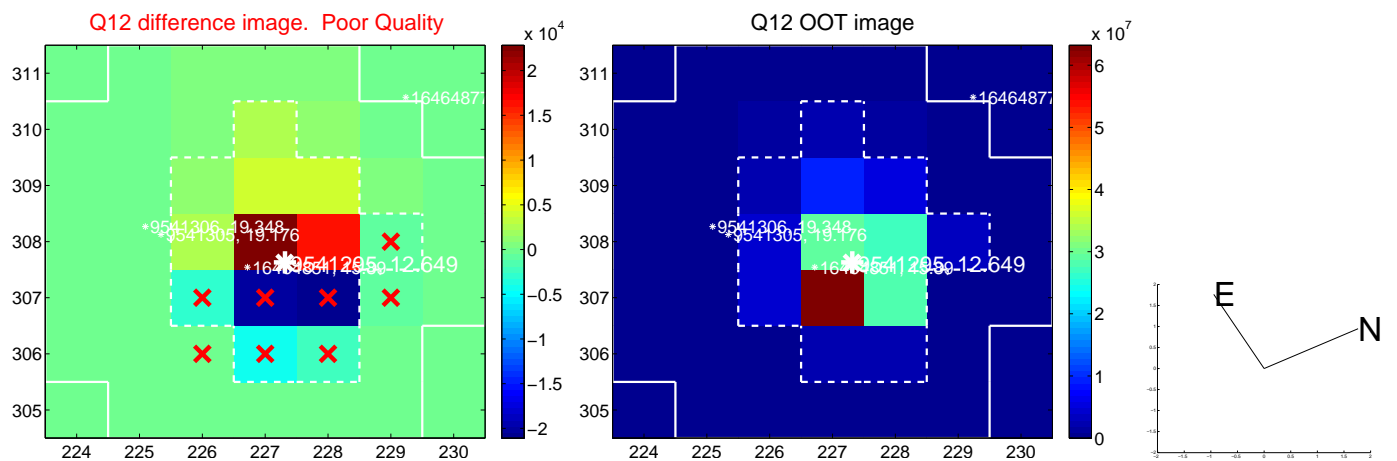
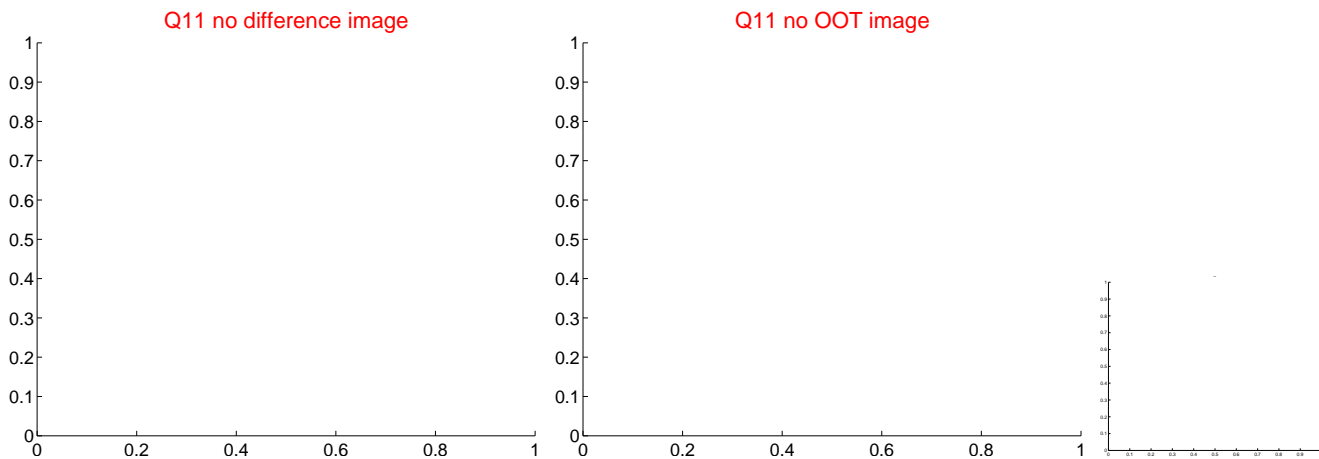
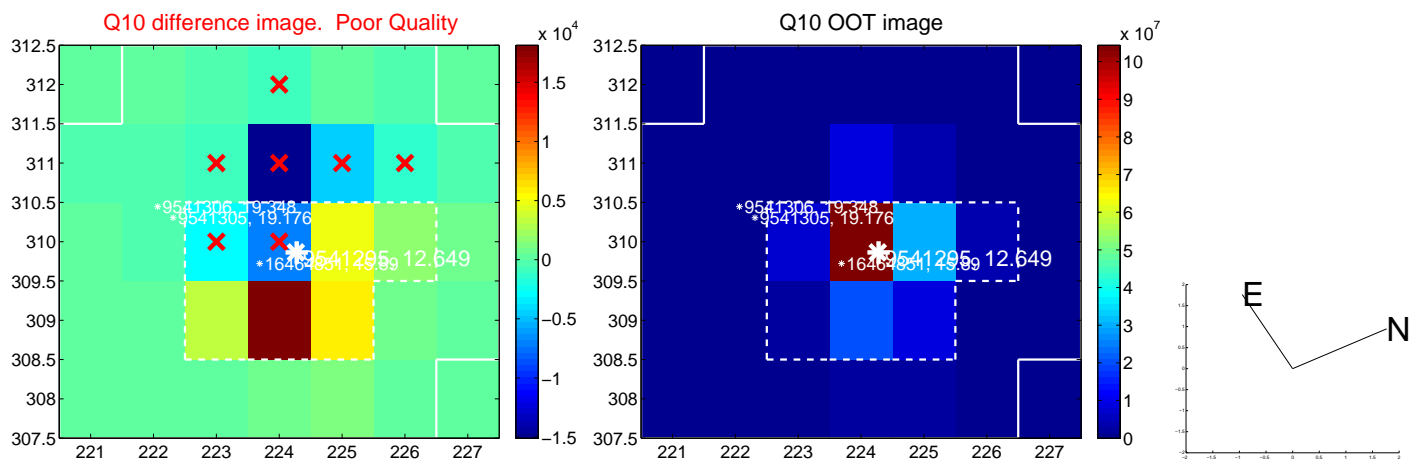
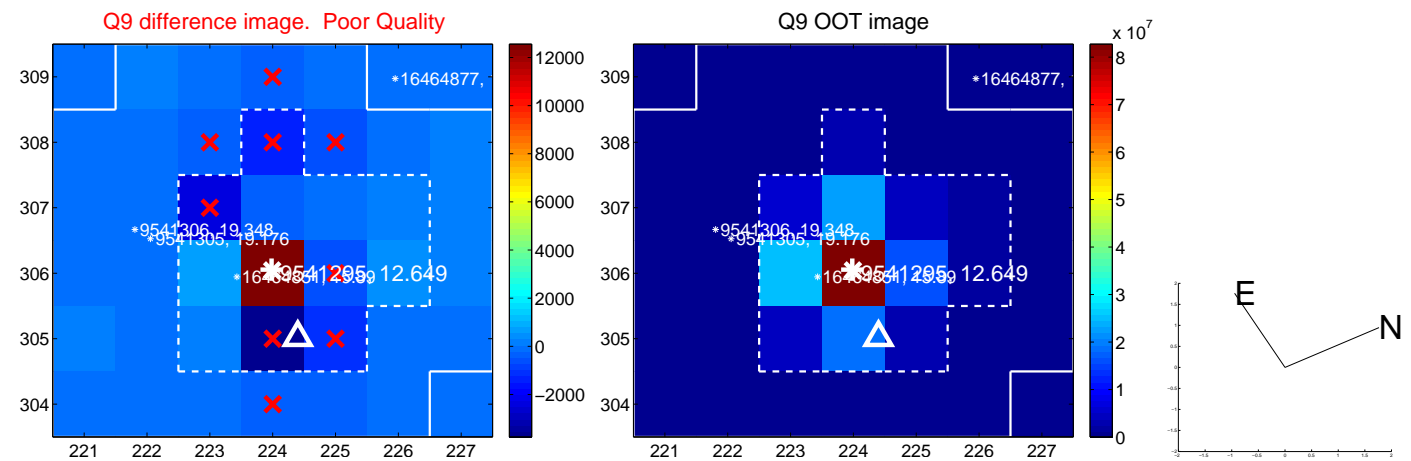
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



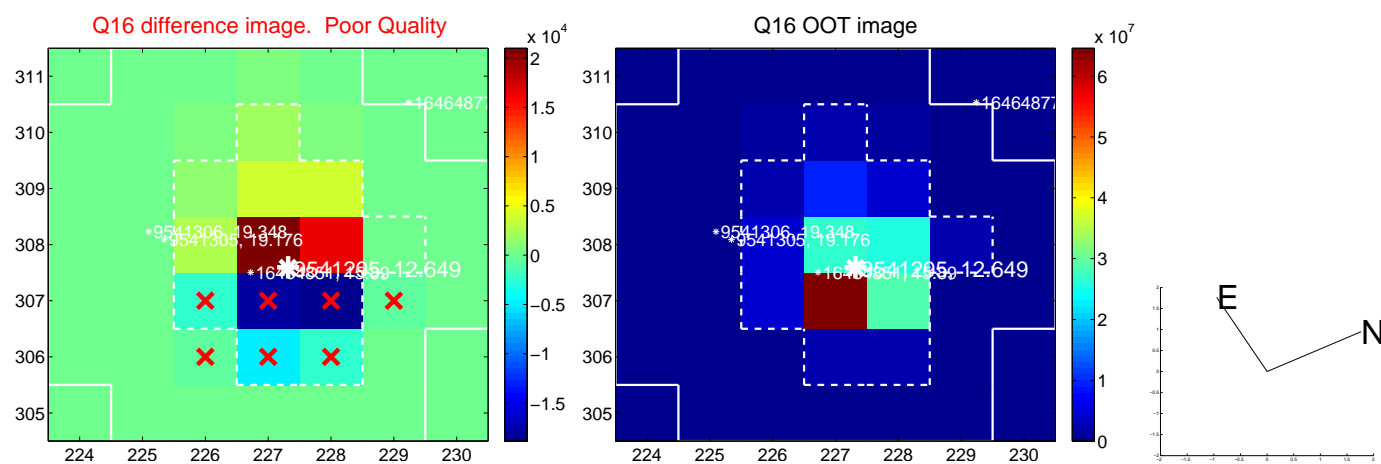
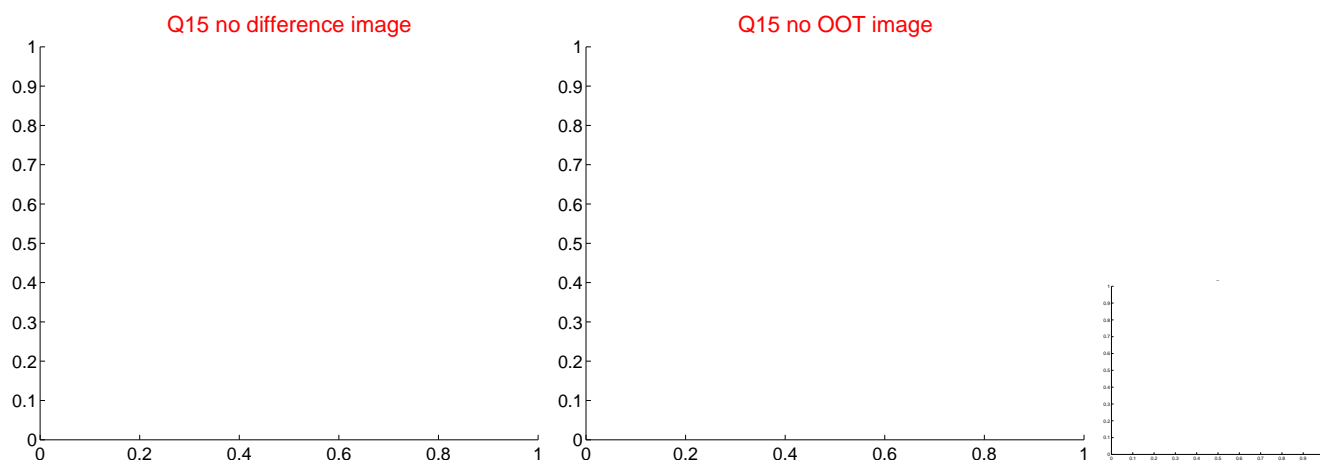
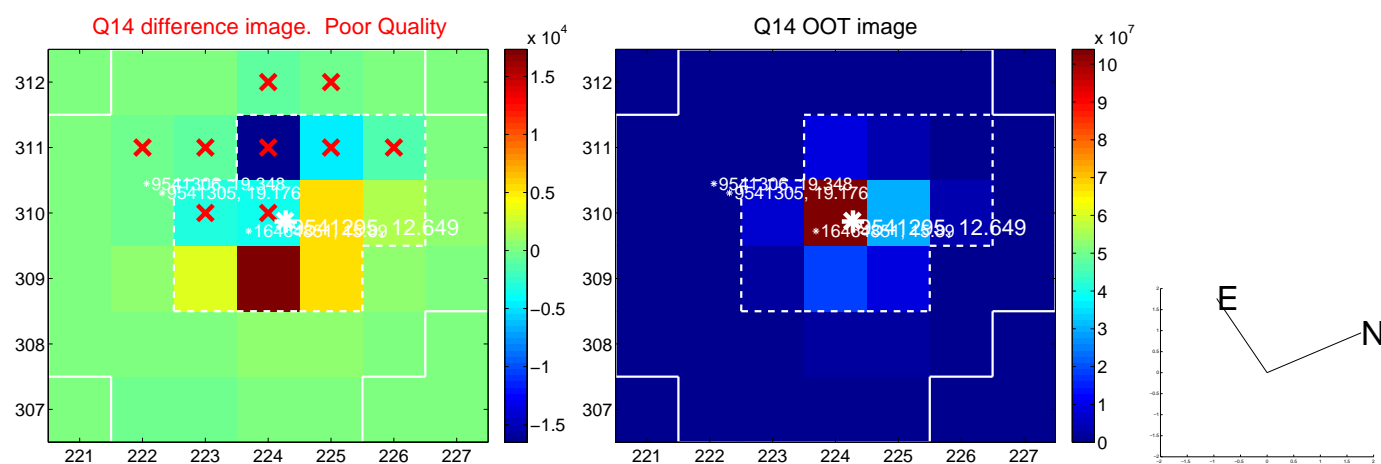
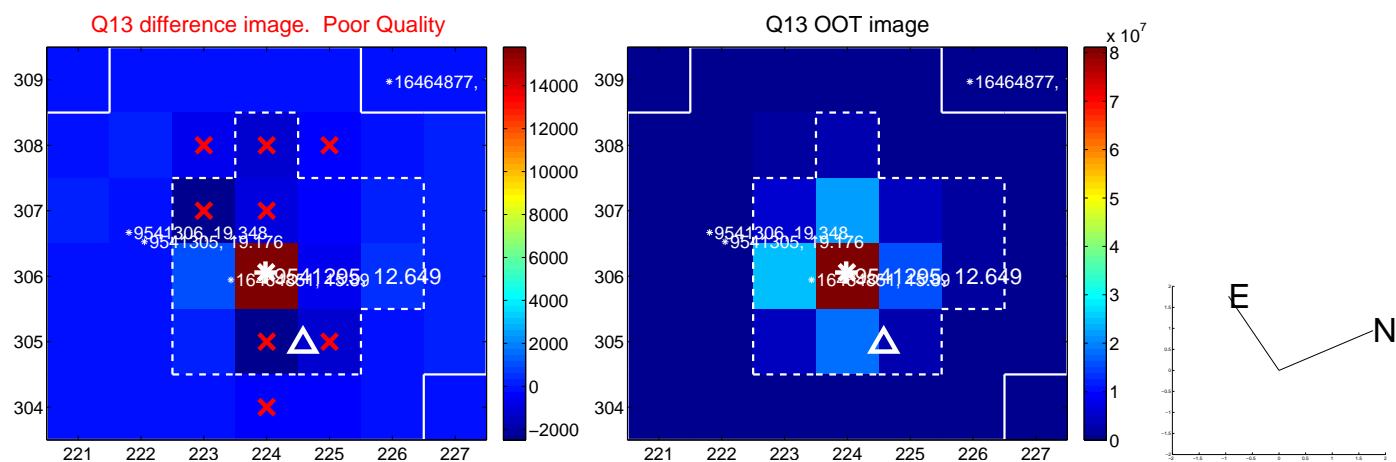
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



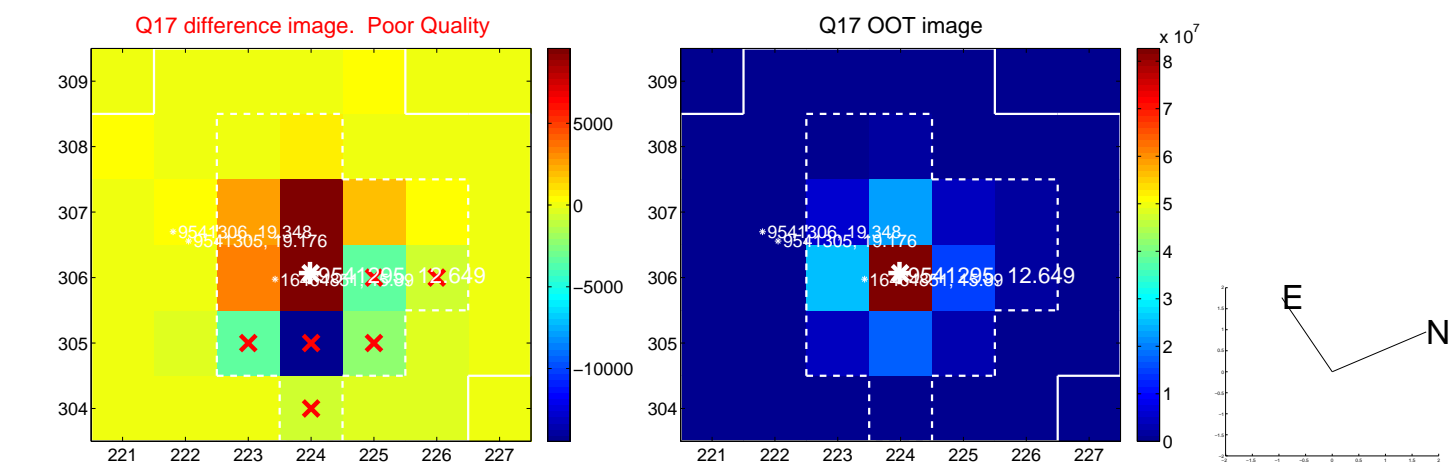
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



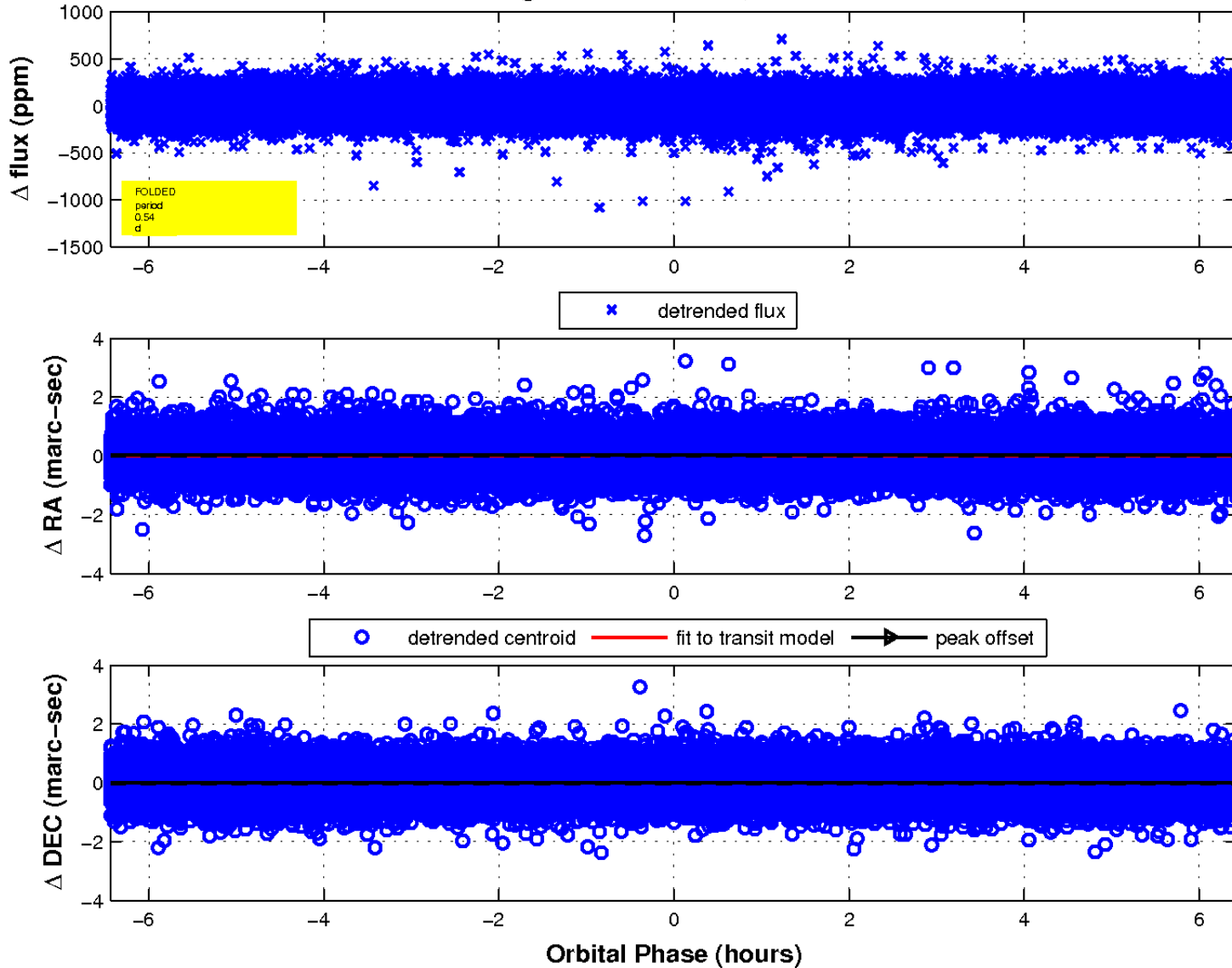
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

