

KIC 009758032

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})
009758032-01	OBS	3137.01	1.332044	131.578948	117.3	1.289	9.8	10.4	0.73	5376	0.78	822.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009758032-01	OBS	PC	1.00	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.

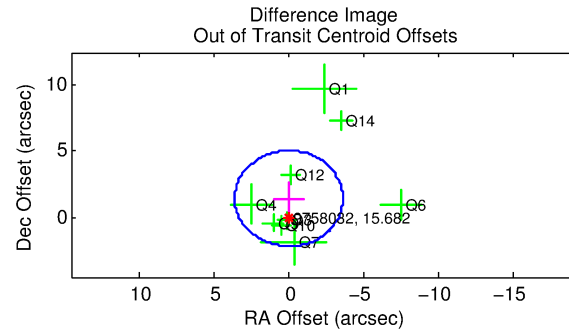
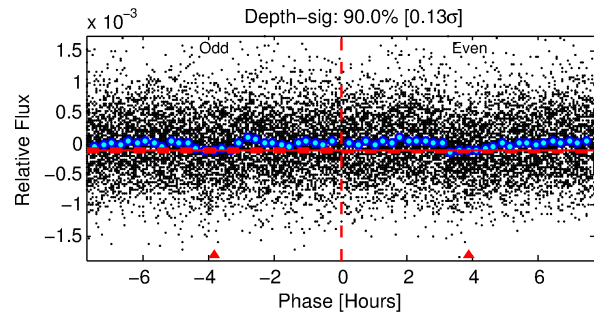
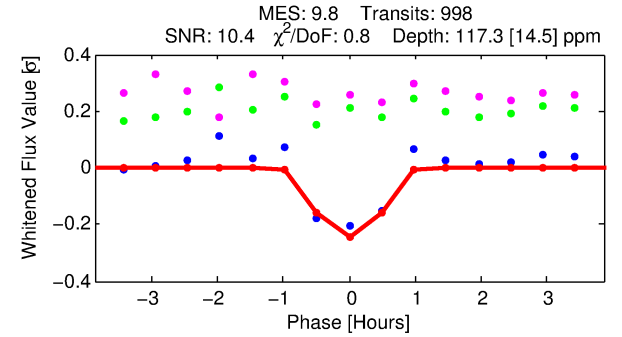
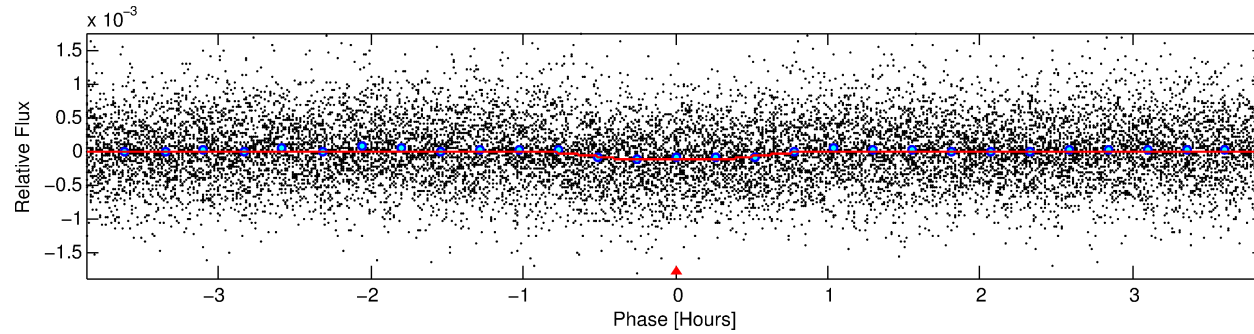
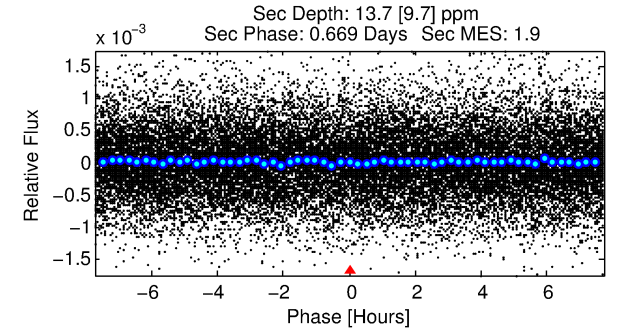
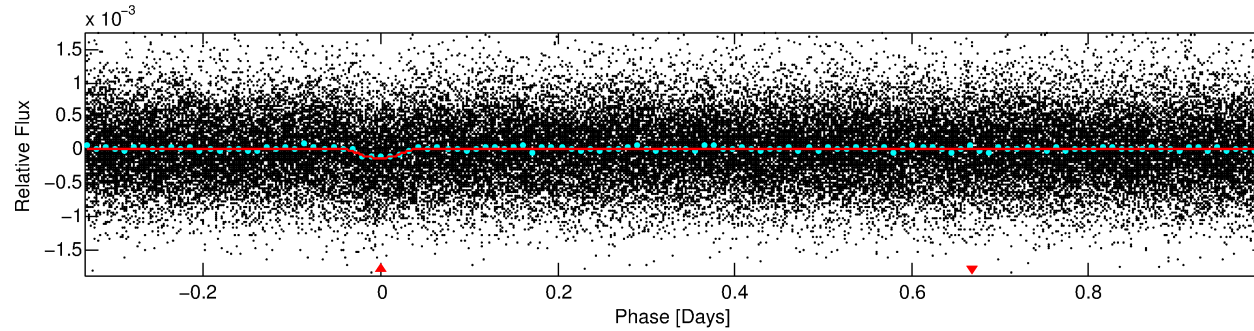
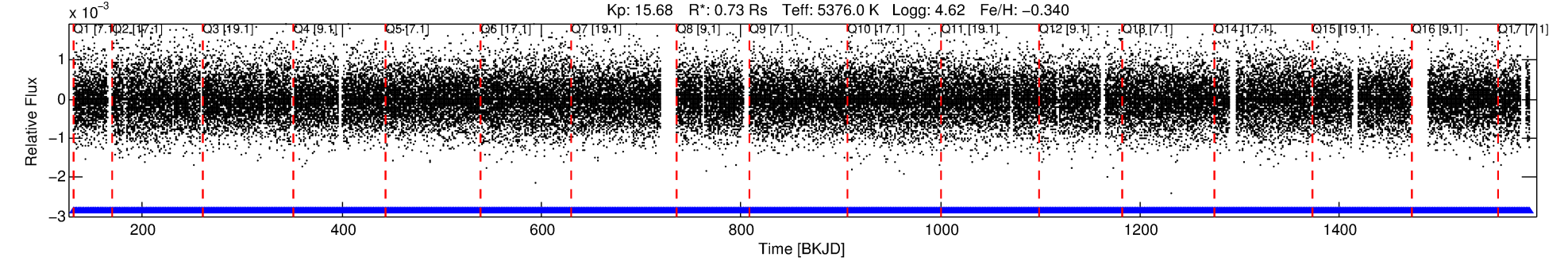
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009758032-01

No Significant Match Found

DV One-Page Summary

KIC: 9758032 Candidate: 1 of 1 Period: 1.332 d
KOI: K03137.01 Corr: 0.914



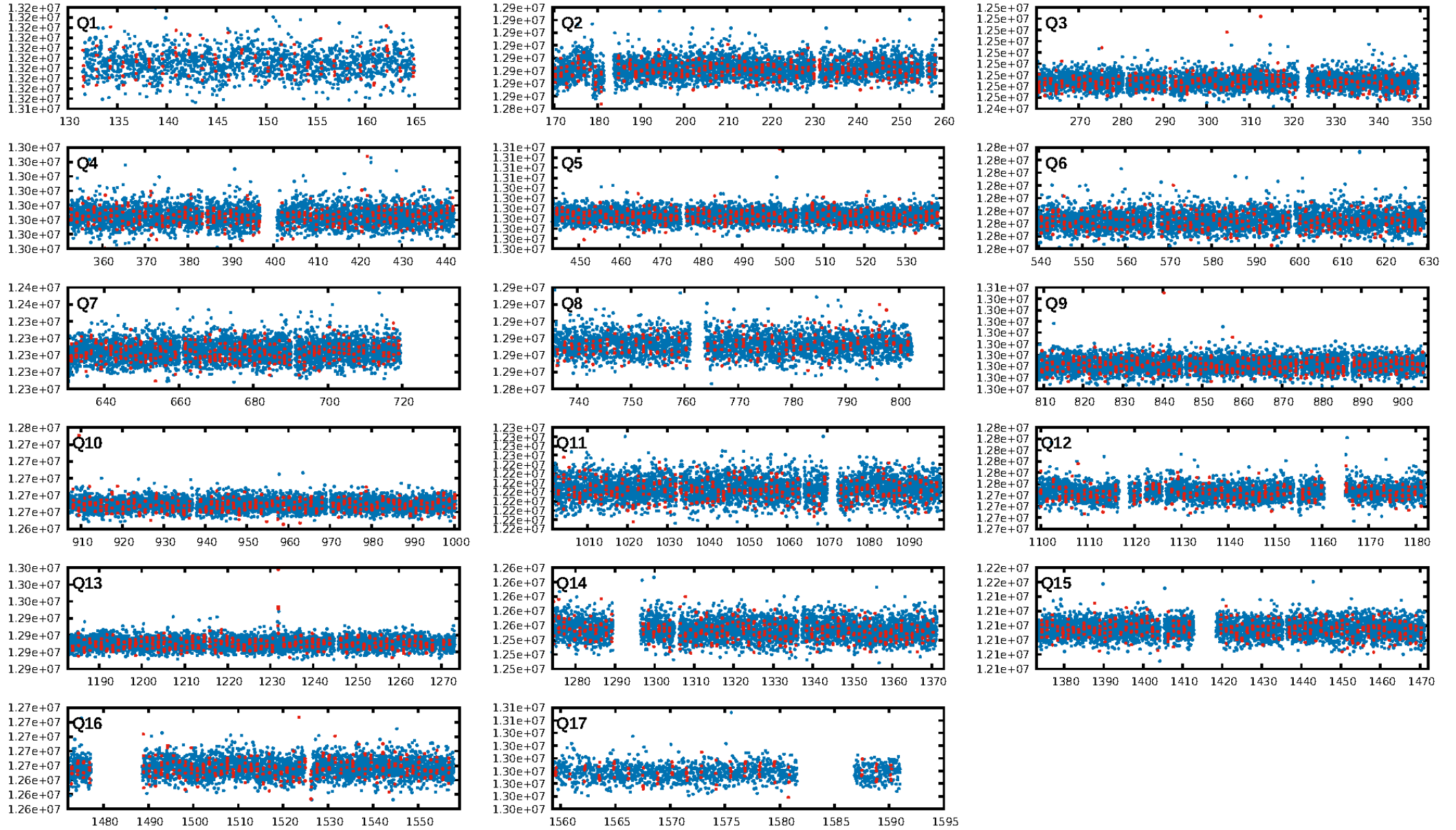
DV Fit Results:

Period = 1.33204 [0.00001] d
Epoch = 131.5789 [0.0021] BKJD
Rp/R* = 0.0098 [0.0226]
a/R* = 7.99 [75.06]
b = 0.02 [385.25]
Seff = 822.09 [187.60]
Teff = 1365 [78] K
Rp = 0.78 [1.81] Re
a = 0.0220 [0.0030] AU
Ag = 5.98 [27.95] [0.18σ]
Teffp = 3301 [3854] K [0.50σ]

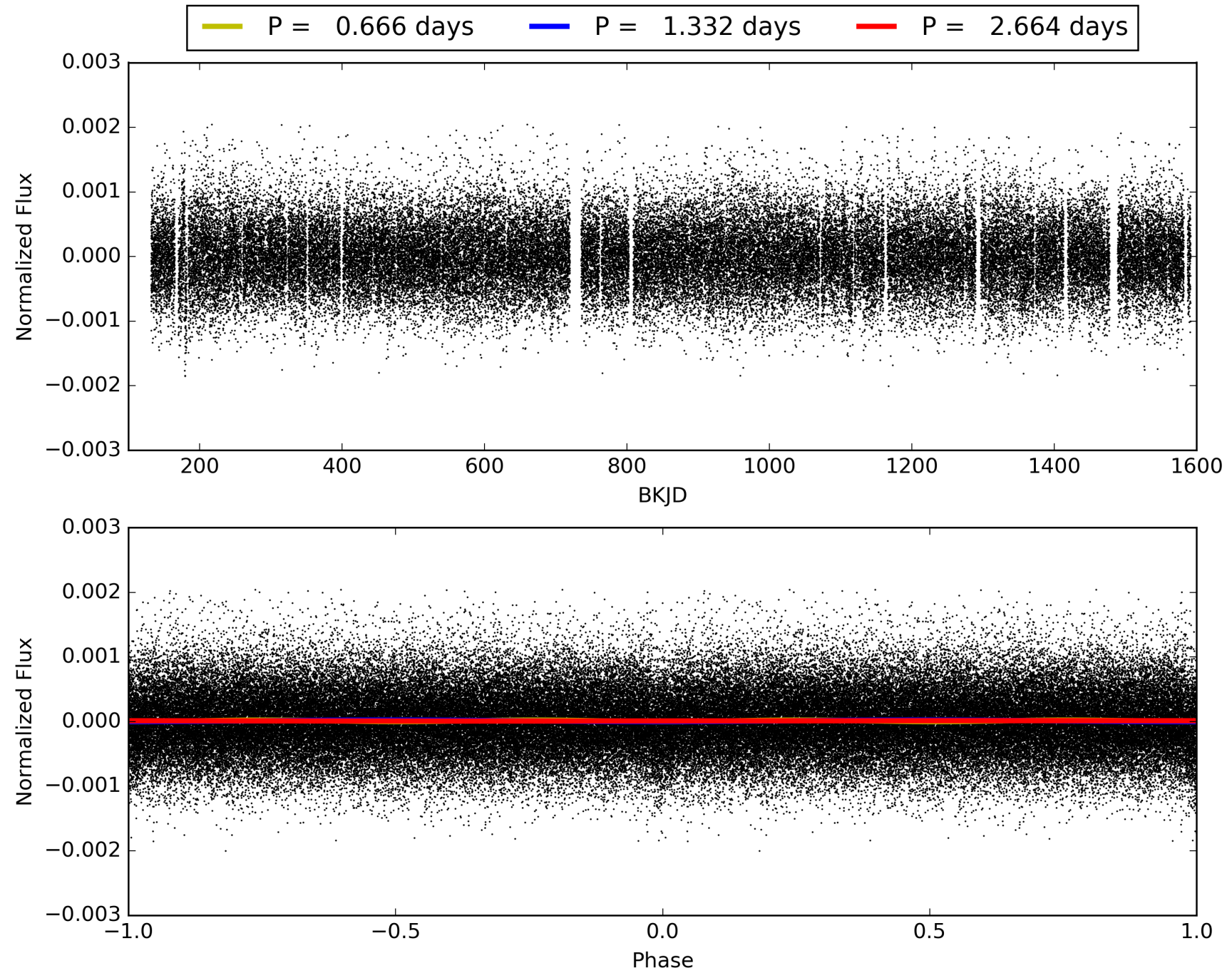
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.56e-22
RollingBand-fgt: 1.00 [952/952]
GhostDiagnostic-chr: 3.152
Centroid-sig: 33.6%
Centroid-so: 1.144 arcsec [0.76σ]
OotOffset-rm: 1.442 arcsec [1.20σ]
KicOffset-rm: 1.441 arcsec [1.06σ]
OotOffset-st: 3/2/2/2 [9]
KicOffset-st: 3/2/2/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009758032-01, PDC Light Curves

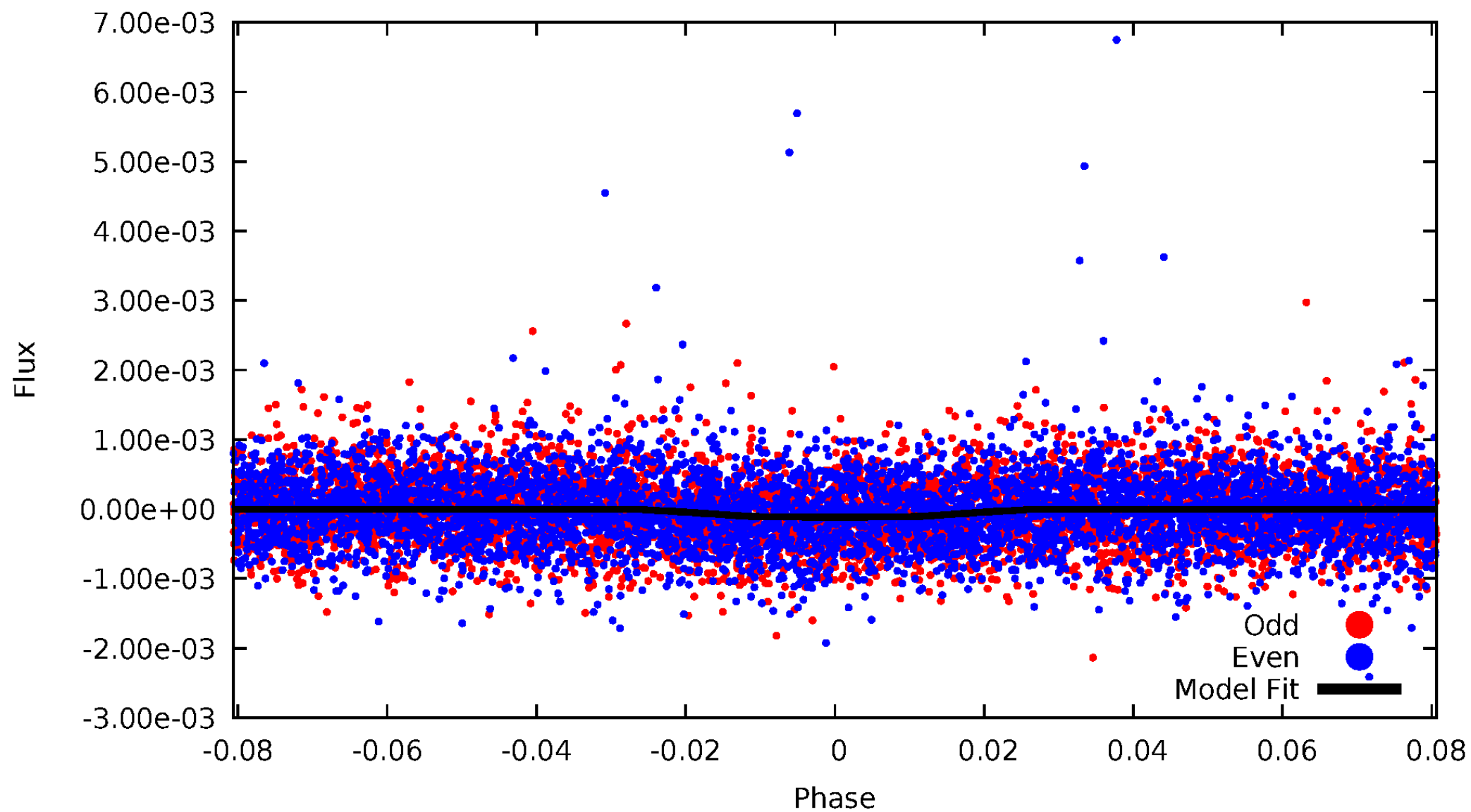


TCE 009758032-01



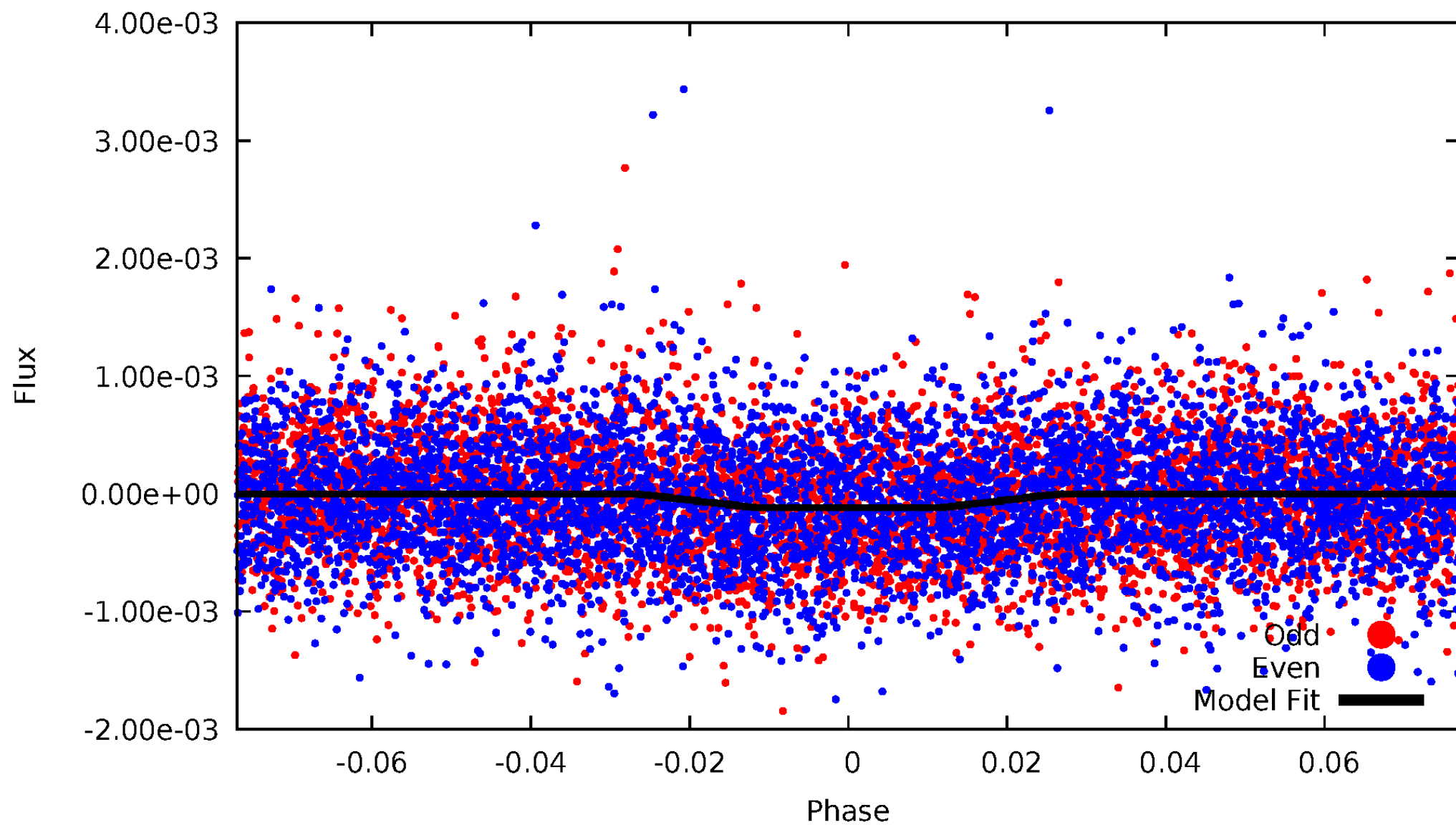
DV Odd/Even

TCE 009758032-01



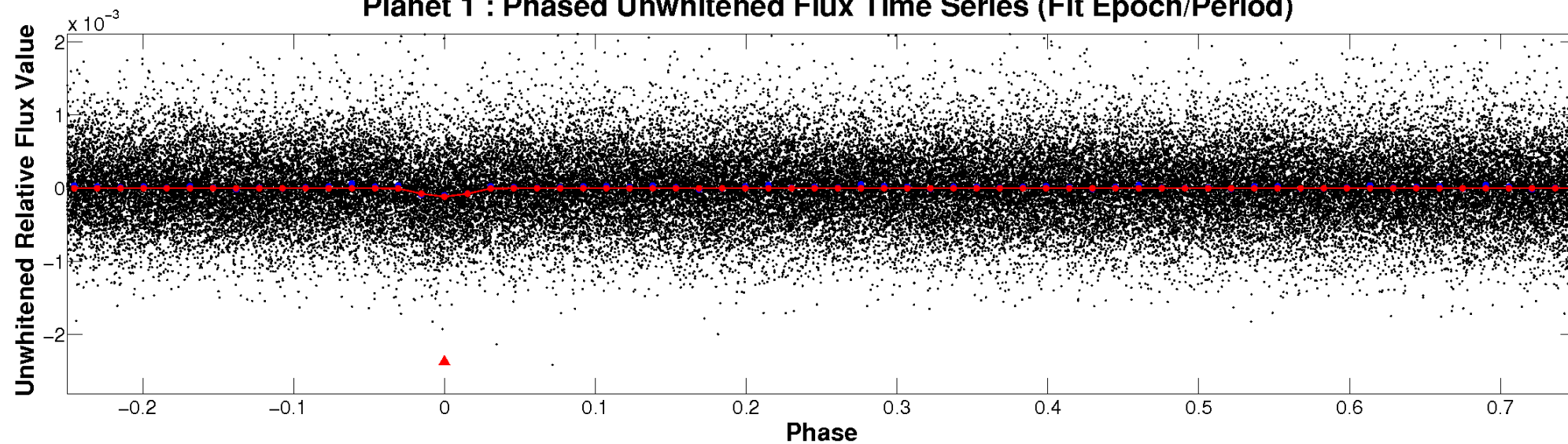
ALT Odd/Even

TCE 009758032-01

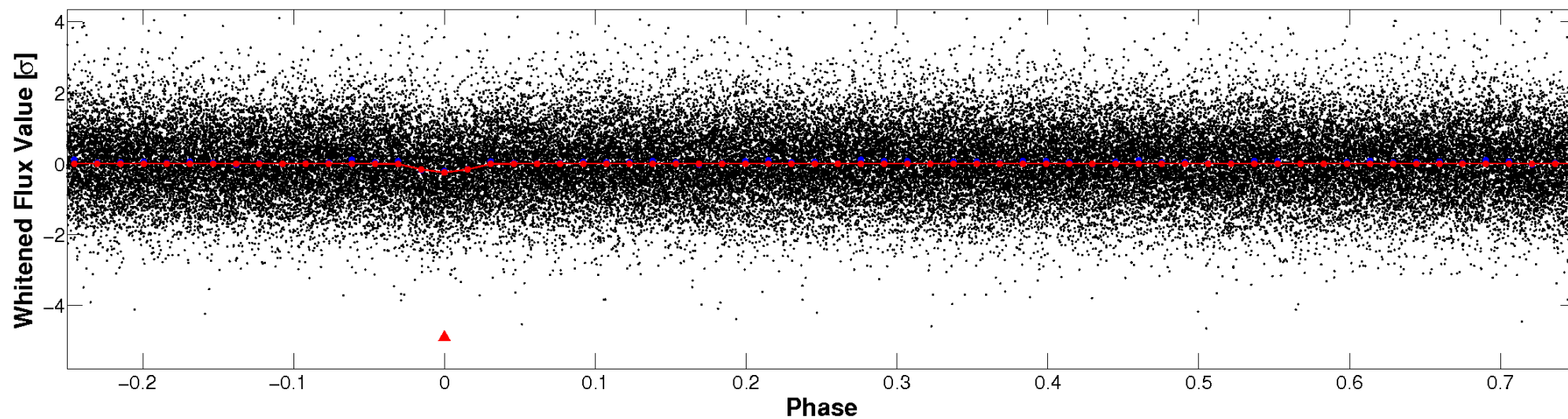


Non-Whitened Vs. Whitened Light Curve

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

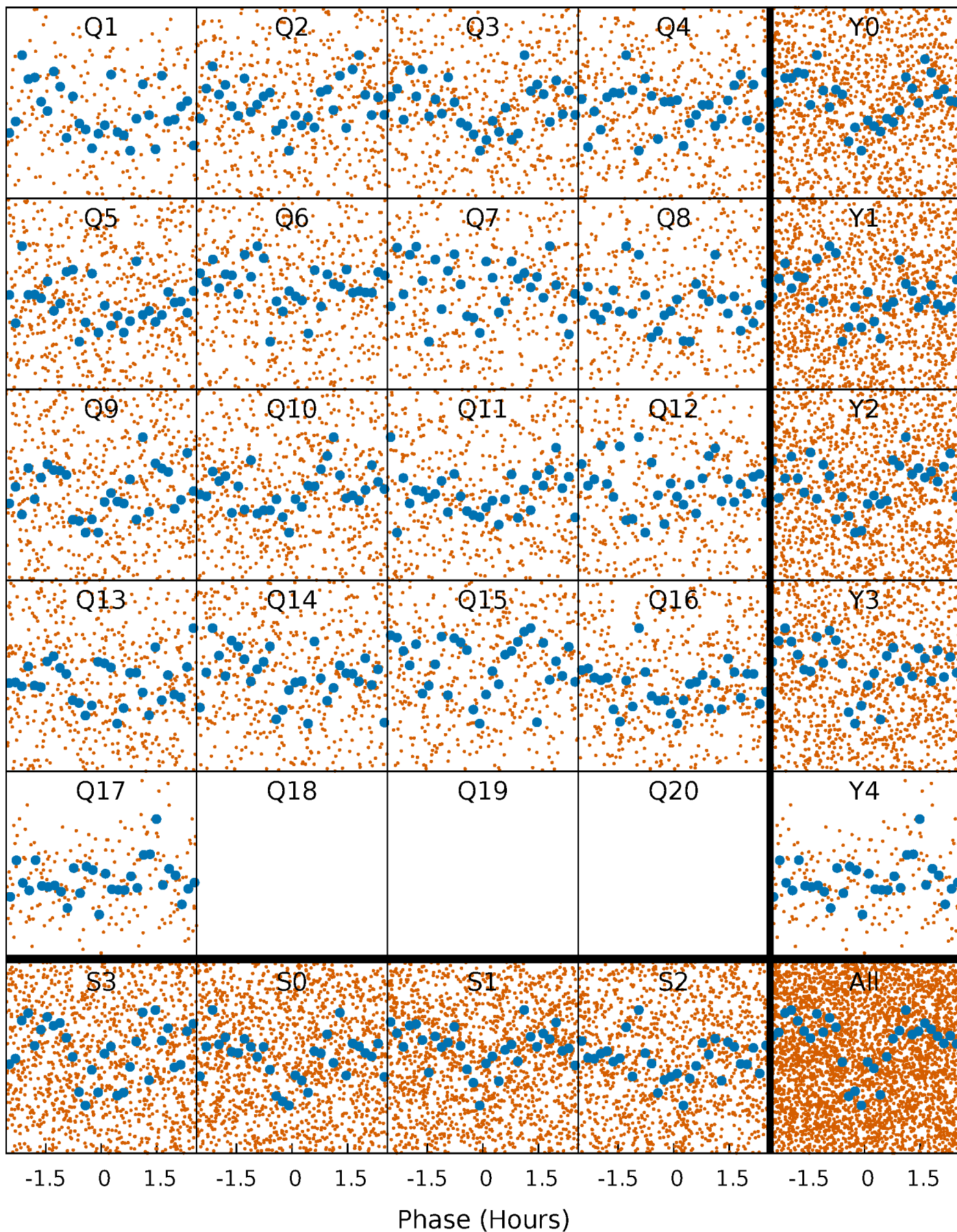


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



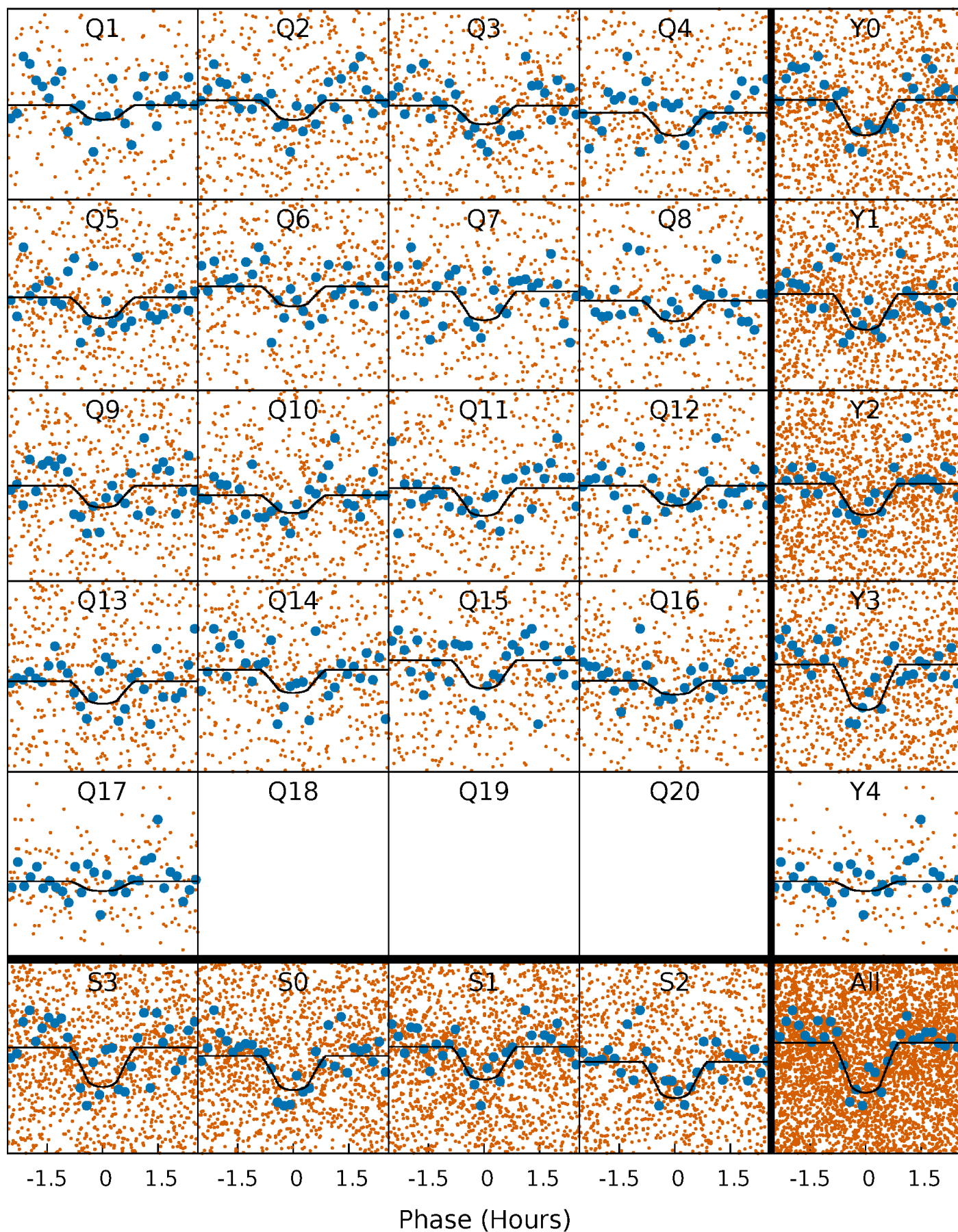
PDC Quarter-Phased Transit Curves

TCE 009758032-01 P= 1.332044 Days $T_0=131.578948$ (BKJD)



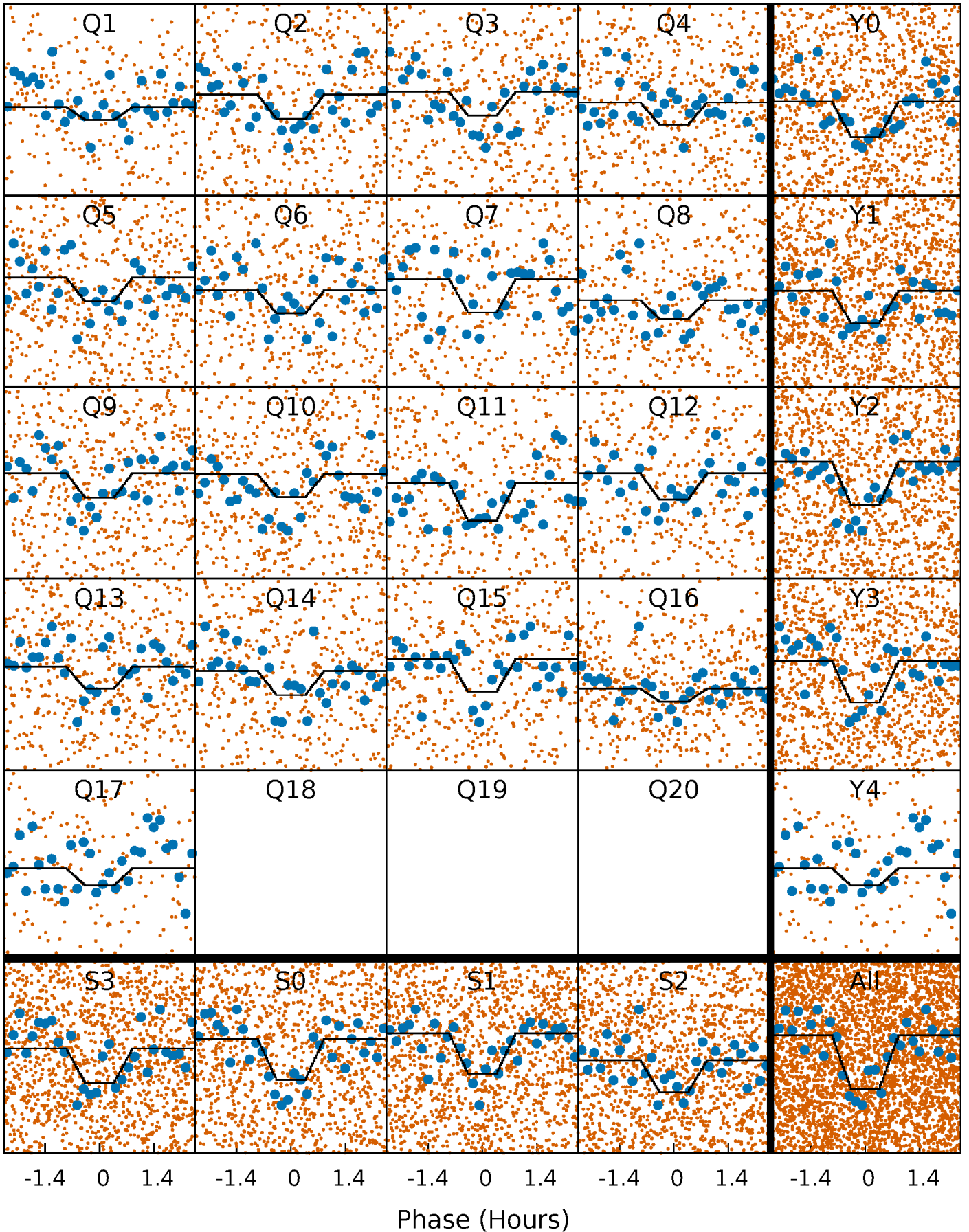
DV Quarter-Phased Transit Curves

TCE 009758032-01 P= 1.332044 Days $T_0=131.578948$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

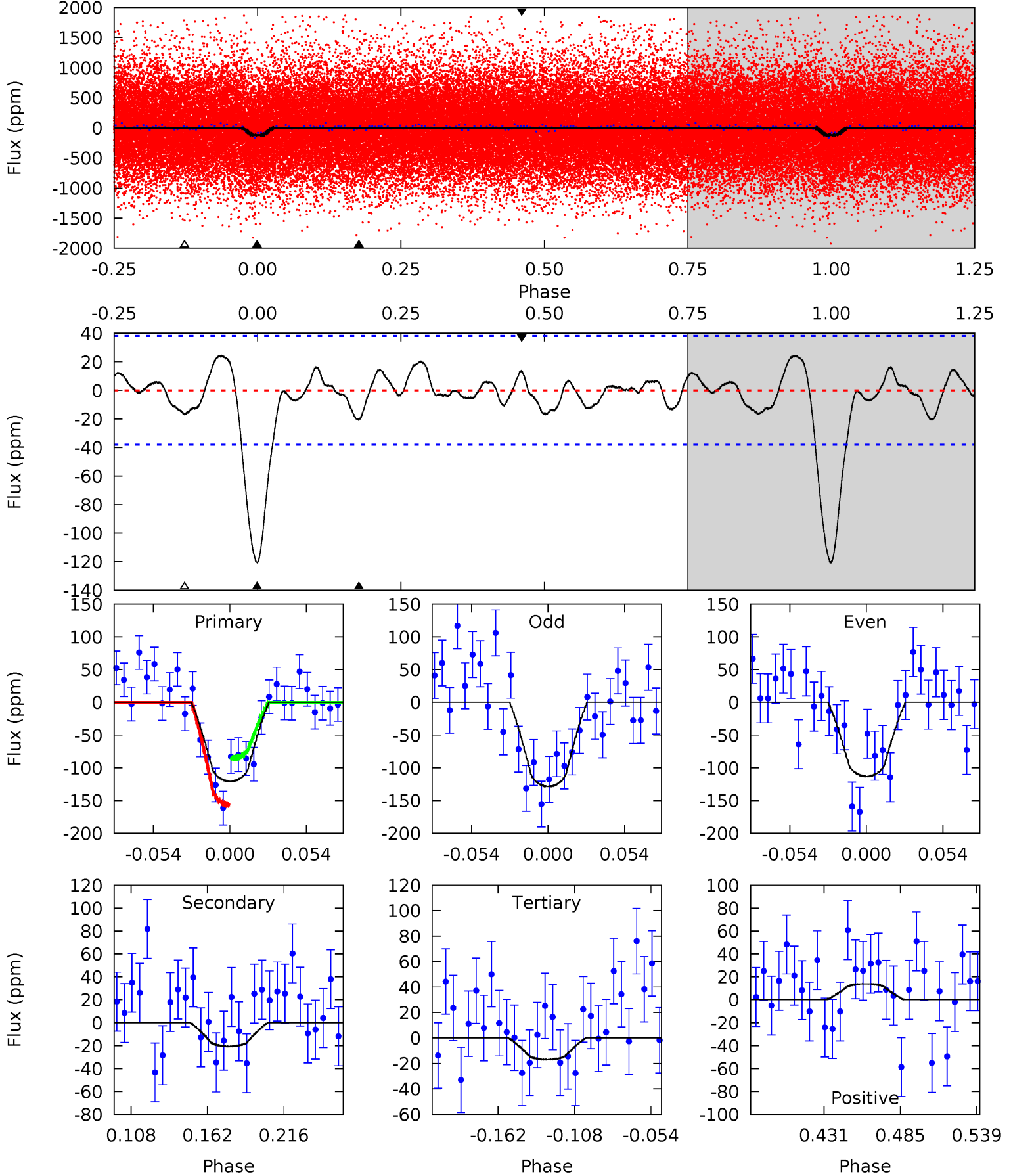
TCE 009758032-01 P= 1.332044 Days $T_0=131.579976$ (BKJD)



DV Model-Shift Uniqueness Test

009758032-01, P = 1.332044 Days, E = 130.246904 Days

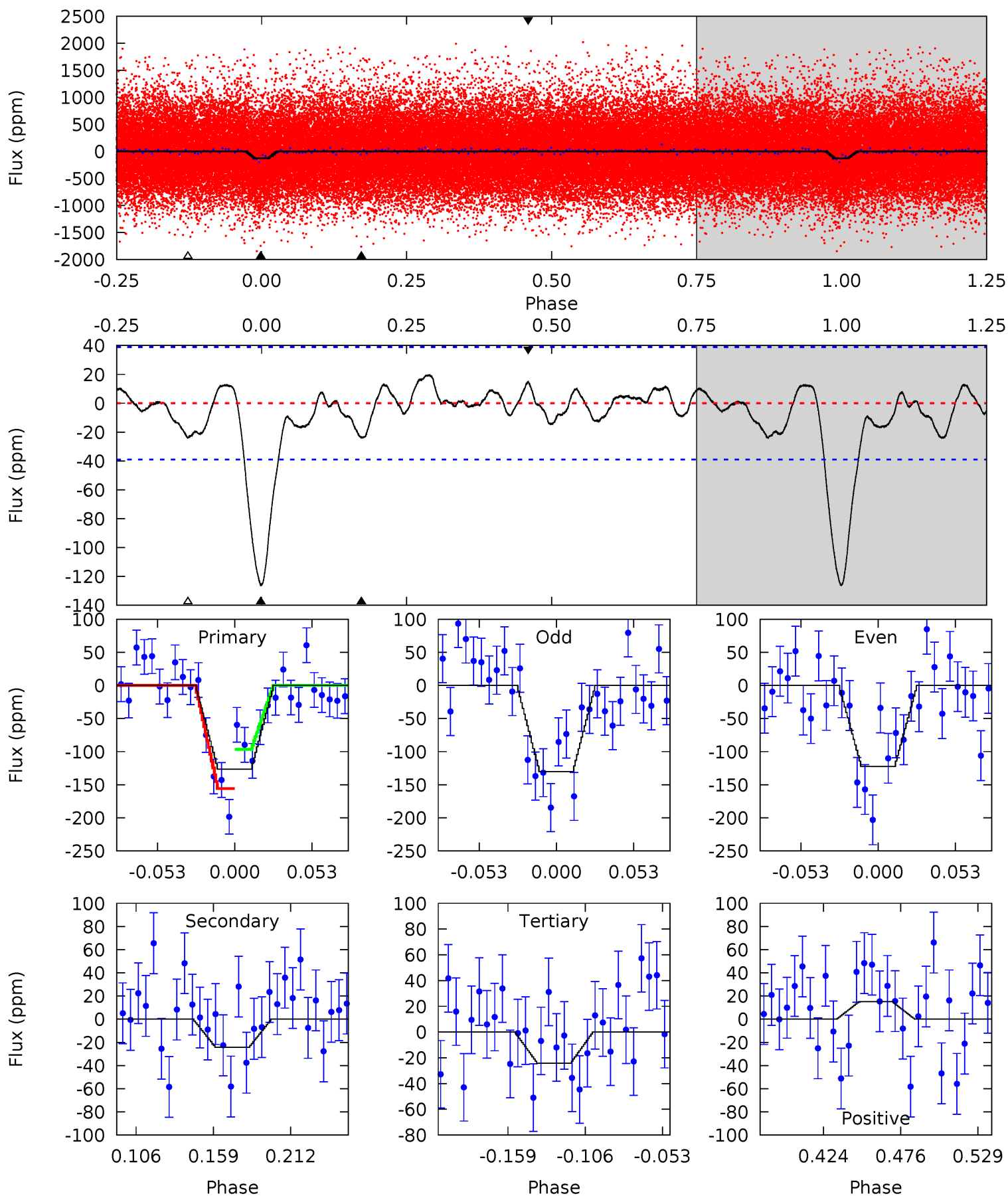
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	2.54	2.08	1.70	4.69	1.93	1.12	12.8	13.2	0.45	0.83	0.96	0.94	0.17	4.39



Alt Model-Shift Uniqueness Test

009758032-01, P = 1.332044 Days, E = 130.247932 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	2.94	2.91	1.81	4.70	1.94	1.11	12.3	13.4	0.02	1.12	0.47	1.07	0.14	3.57



Stellar Parameters For KIC 009758032

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5376^{+160}_{-144}	$4.616^{+0.032}_{-0.104}$	$-0.340^{+0.350}_{-0.300}$	$0.730^{+0.122}_{-0.052}$	$0.811^{+0.076}_{-0.093}$	$2.932^{+0.440}_{-0.953}$
	+3%/-3%	+1%/-2%	+103%/-88%	+17%/-7%	+9%/-11%	+15%/-33%
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 009758032-01 / KOI 3137.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-21 ± 8	$1.58^{+1.54}_{-1.07}$	1935^{+81}_{-63}	3067^{+1545}_{-781}	$1.872^{+17.497}_{-1.397}$
Alt.	-24 ± 8	$1.69^{+1.56}_{-1.18}$	1935^{+88}_{-69}	3118^{+1754}_{-698}	$2.036^{+22.449}_{-1.470}$

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 $A_{obs} \gg 1.0$

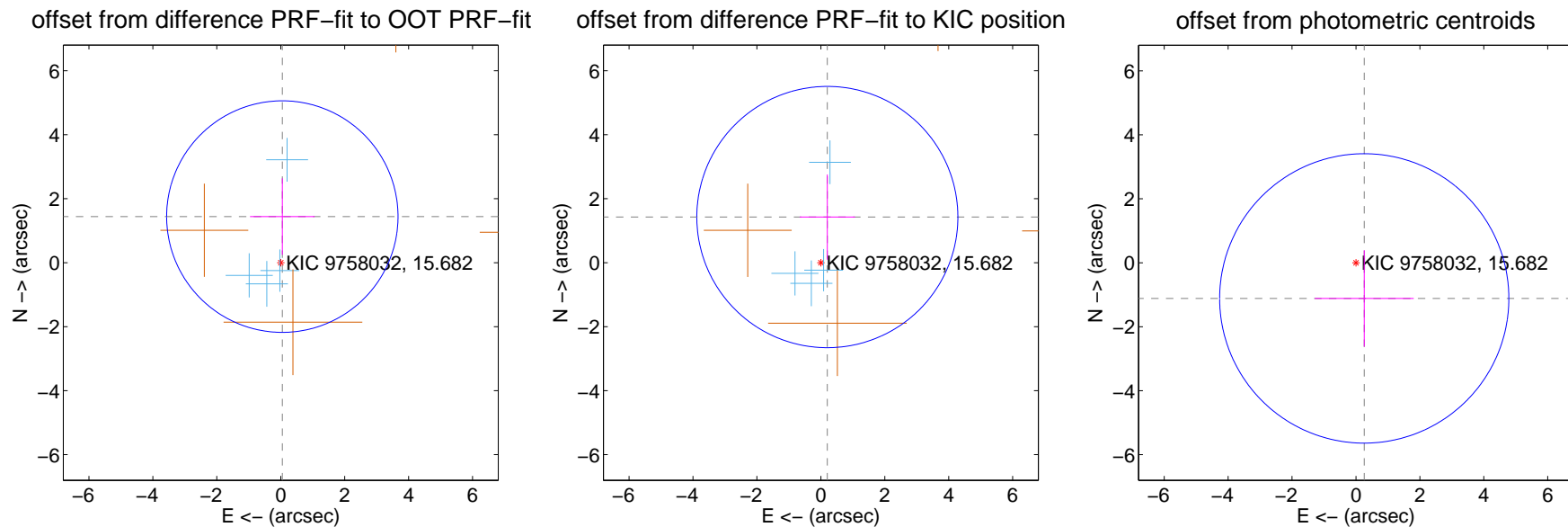
DV Centroid Data

Supplemental centroid analysis for 009758032-01. Kepler magnitude: 15.68. Transit SNR 10.44

There are 4 quarters with good PRF difference image offsets

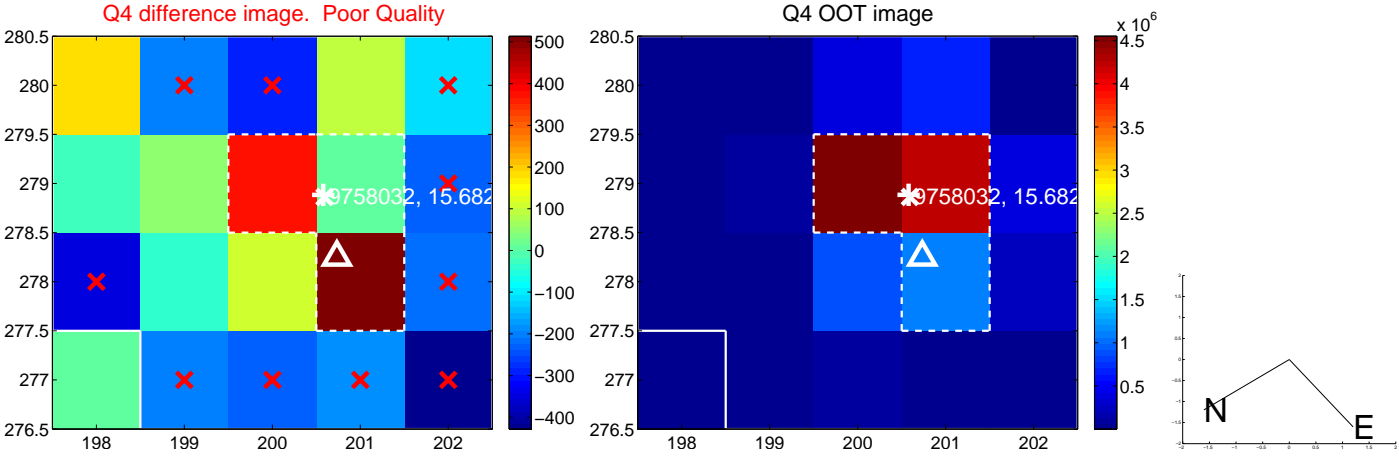
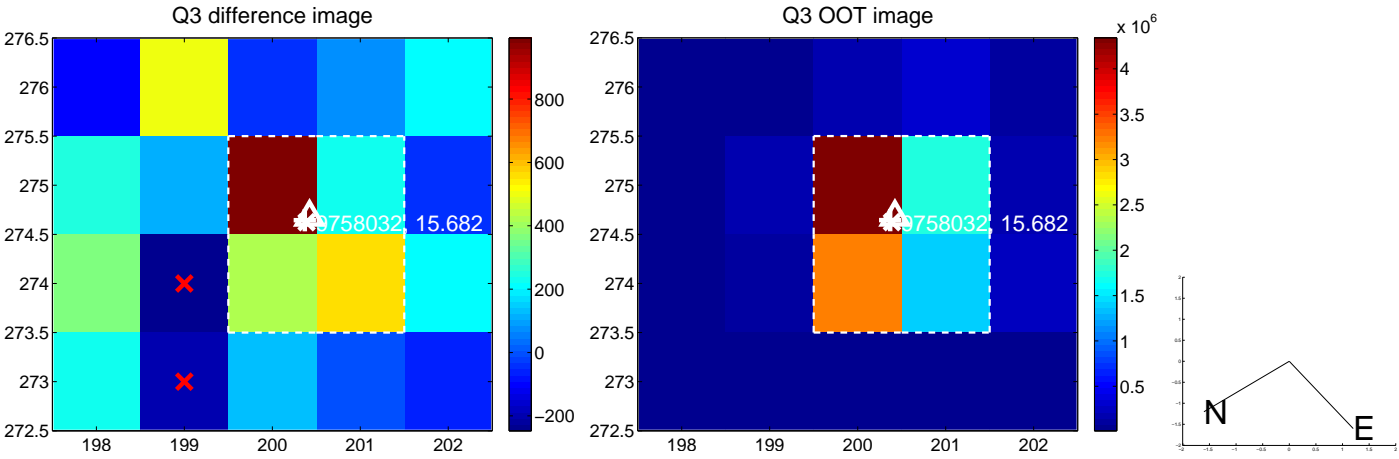
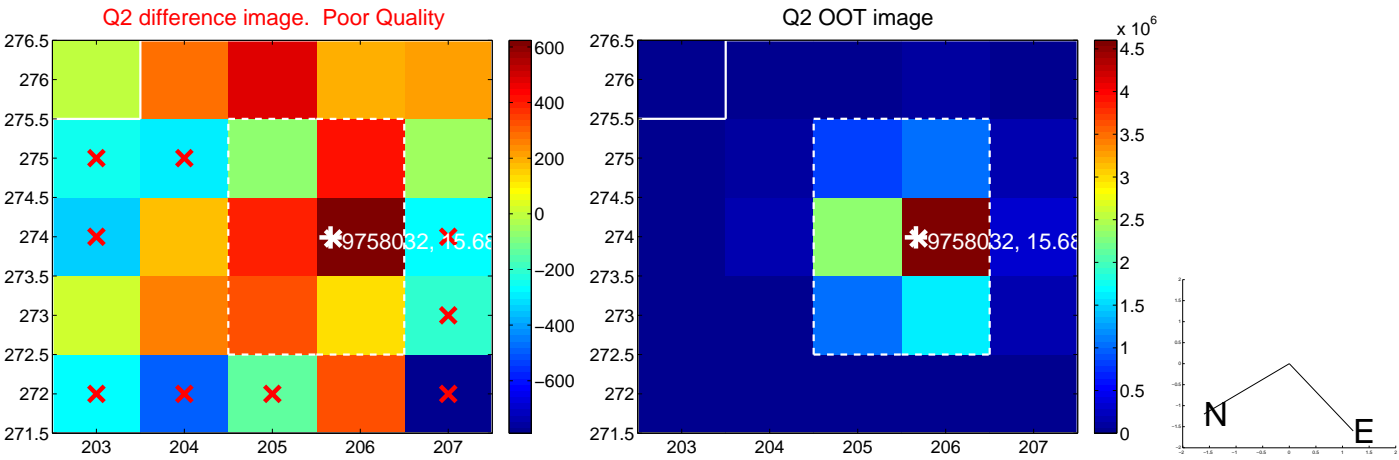
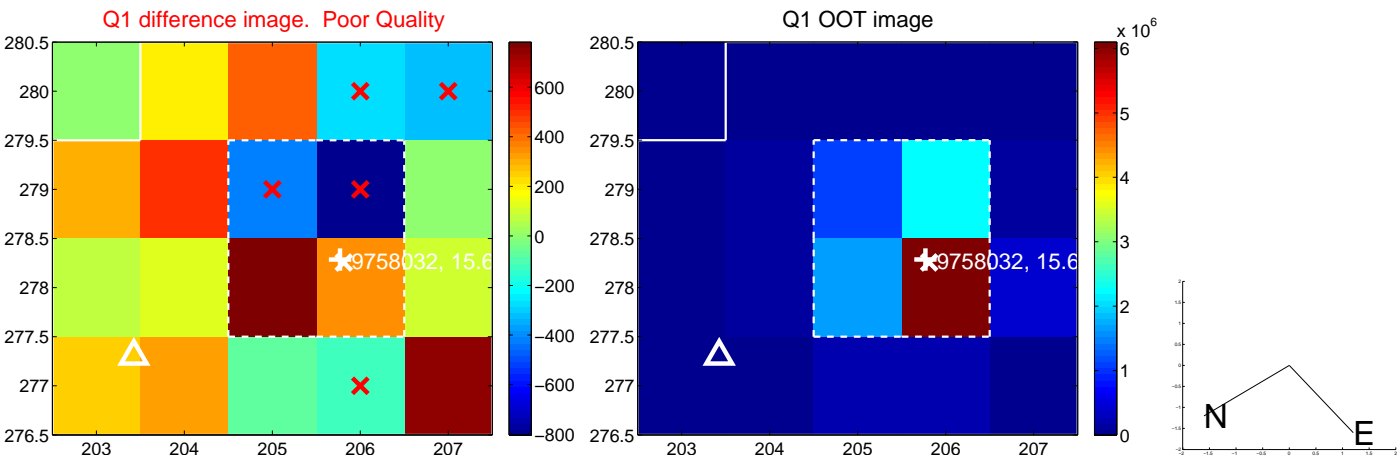
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.442 ± 1.206	1.20	-0.049 ± 1.011	1.441 ± 1.195
PRF-fit source offset from KIC position	1.441 ± 1.361	1.06	-0.203 ± 0.865	1.426 ± 1.330
photometric centroid source offset	1.14 ± 1.51	0.76	-0.26 ± 1.55	-1.11 ± 1.51

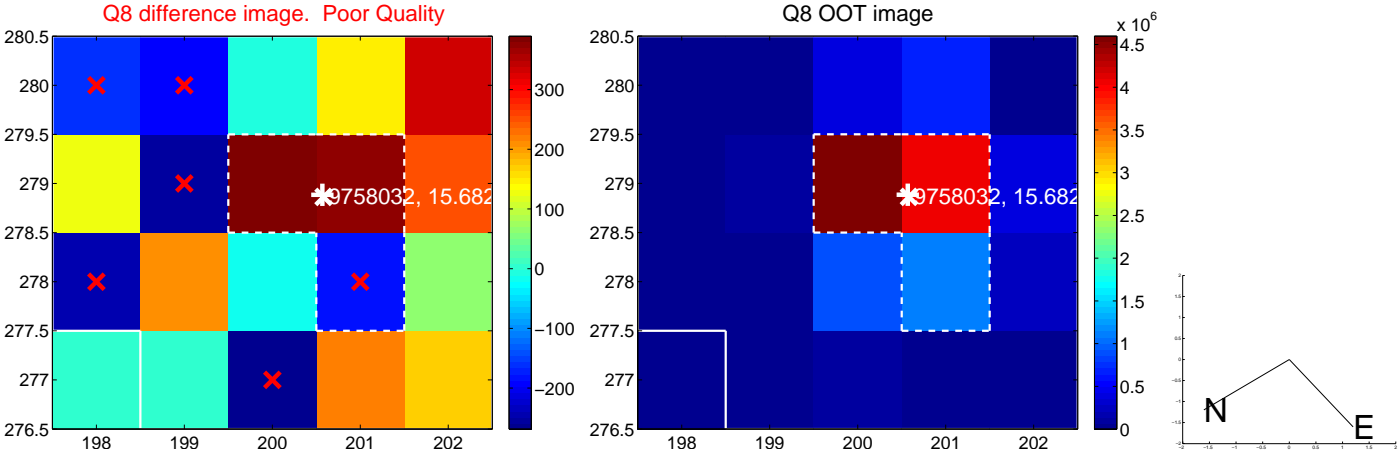
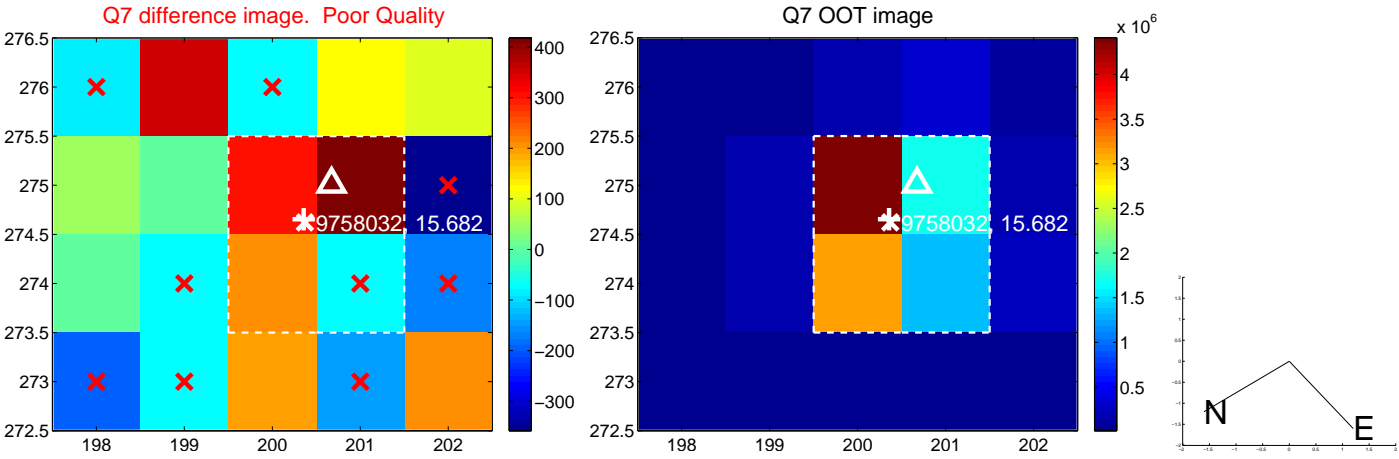
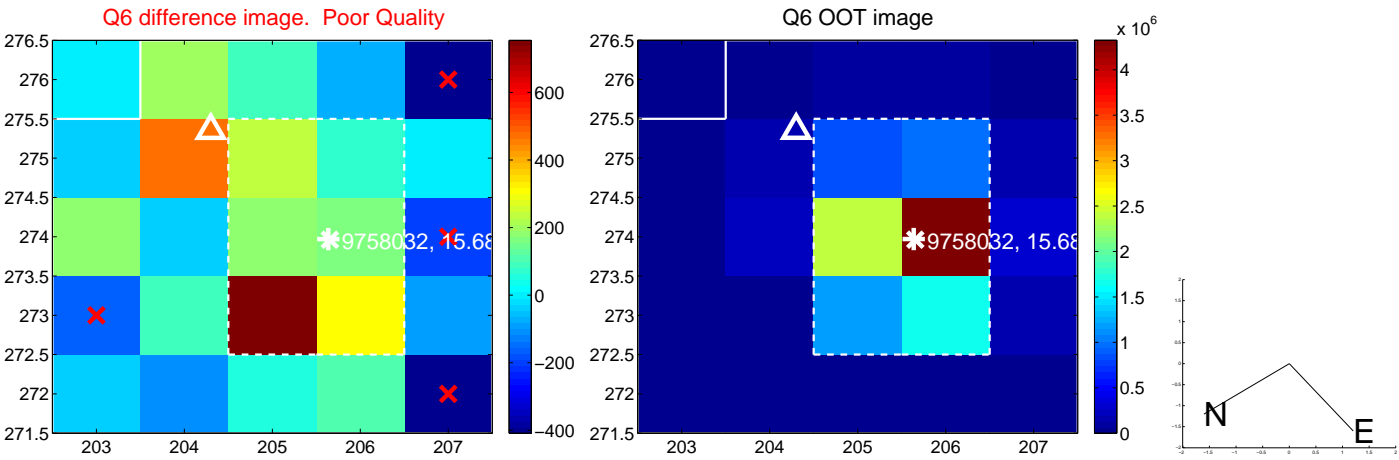
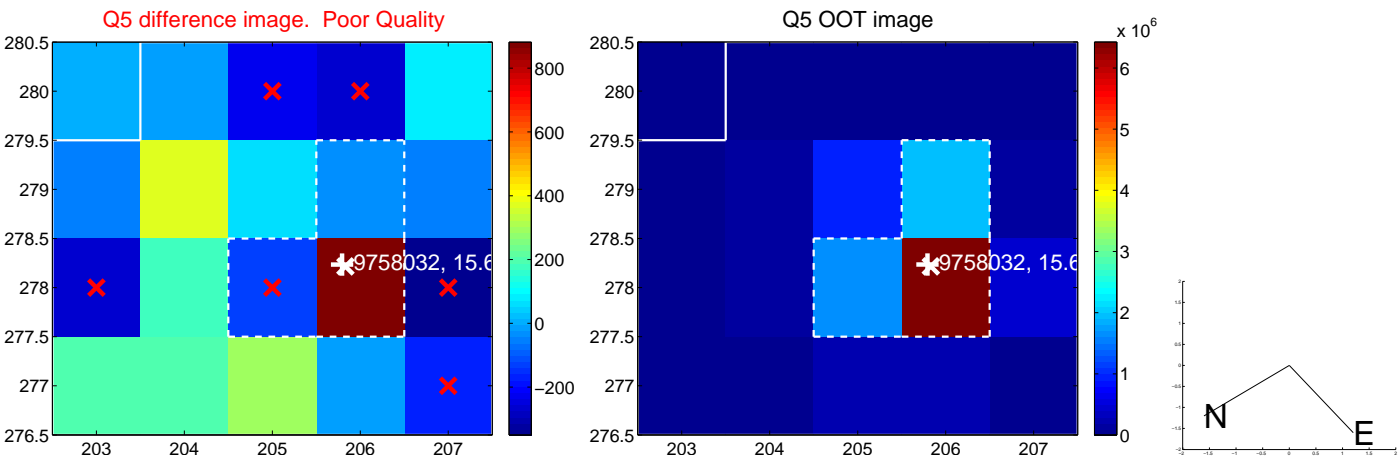


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

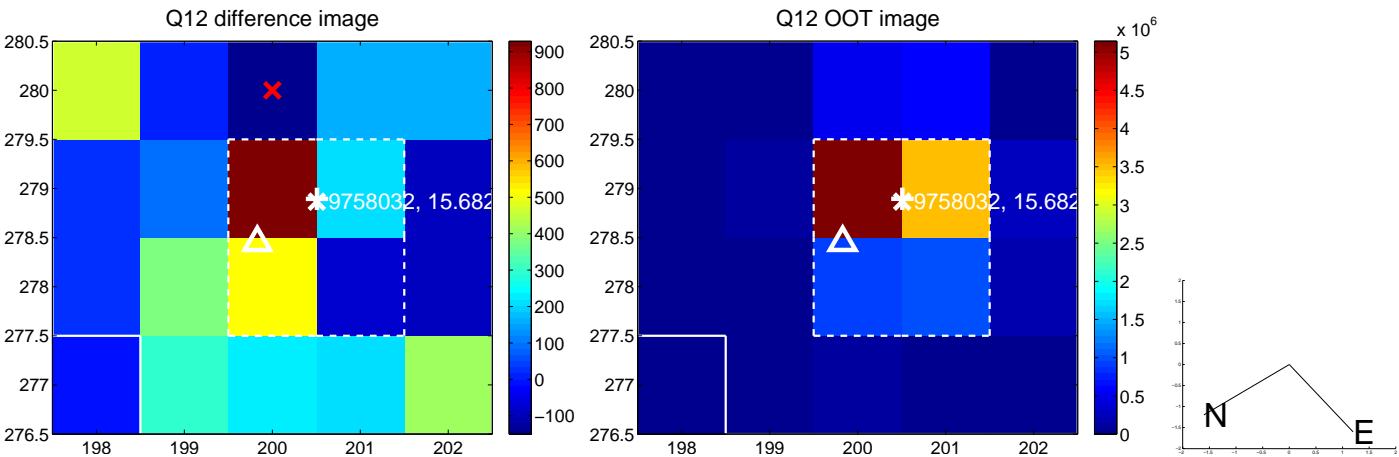
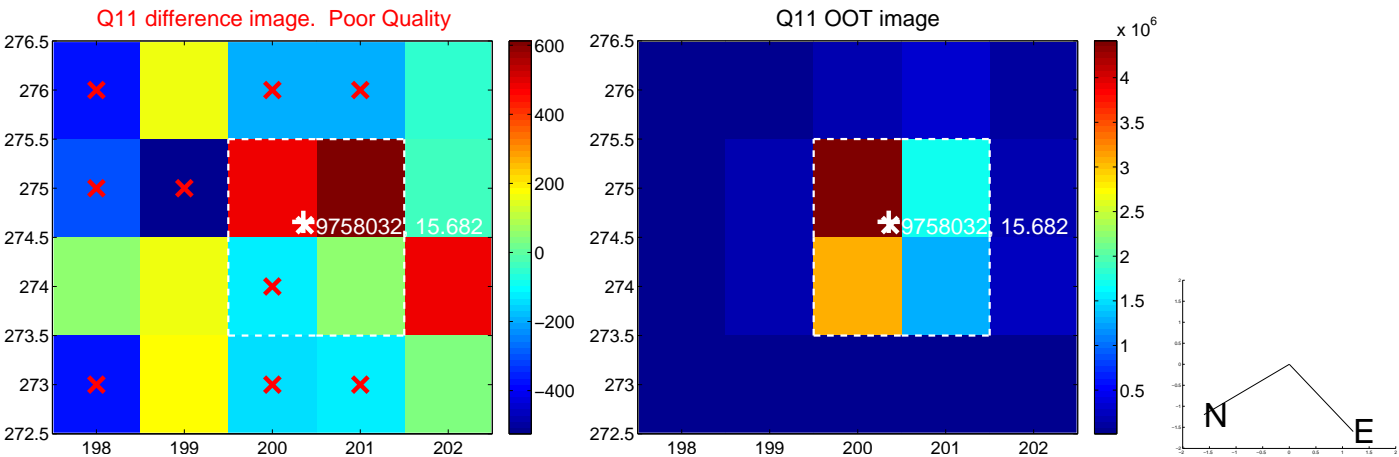
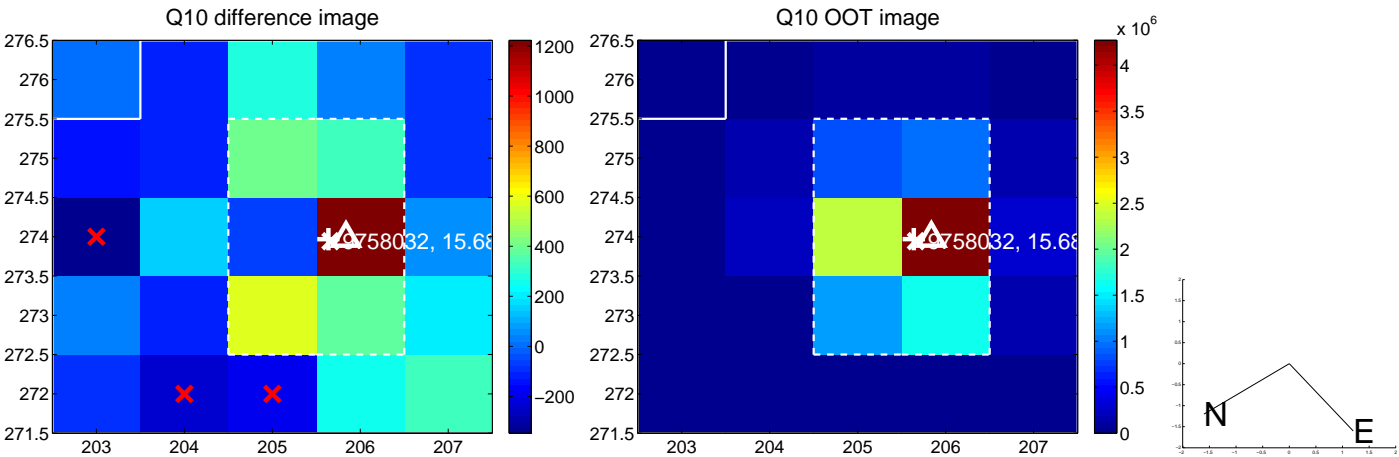
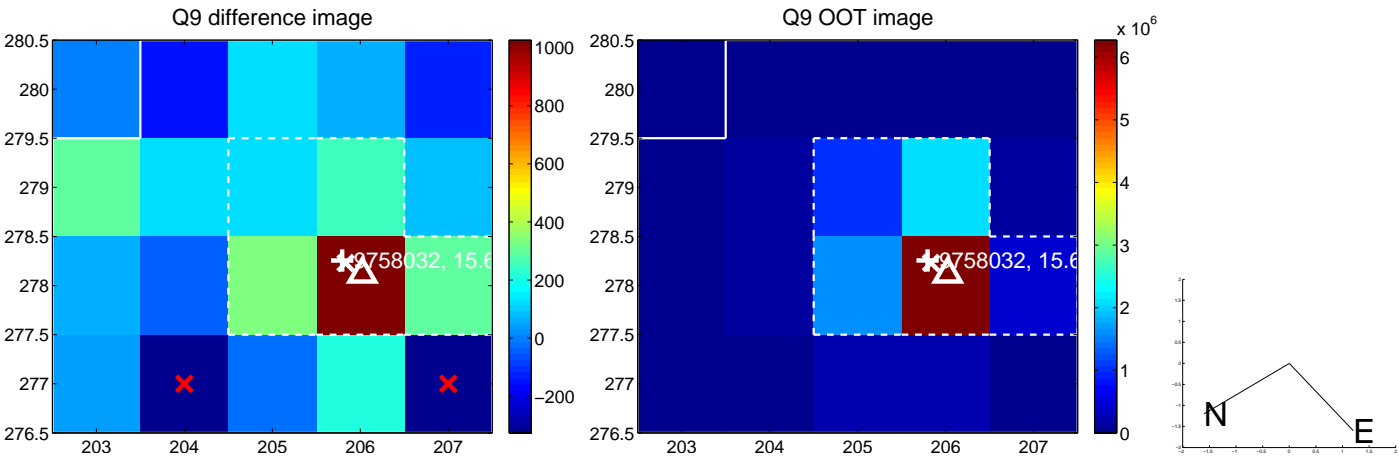
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



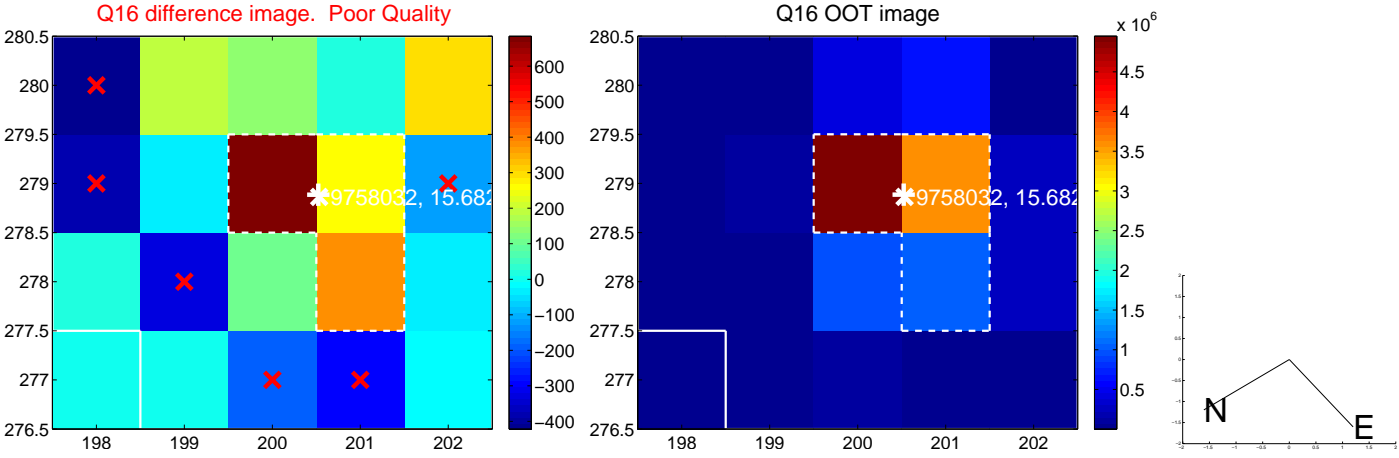
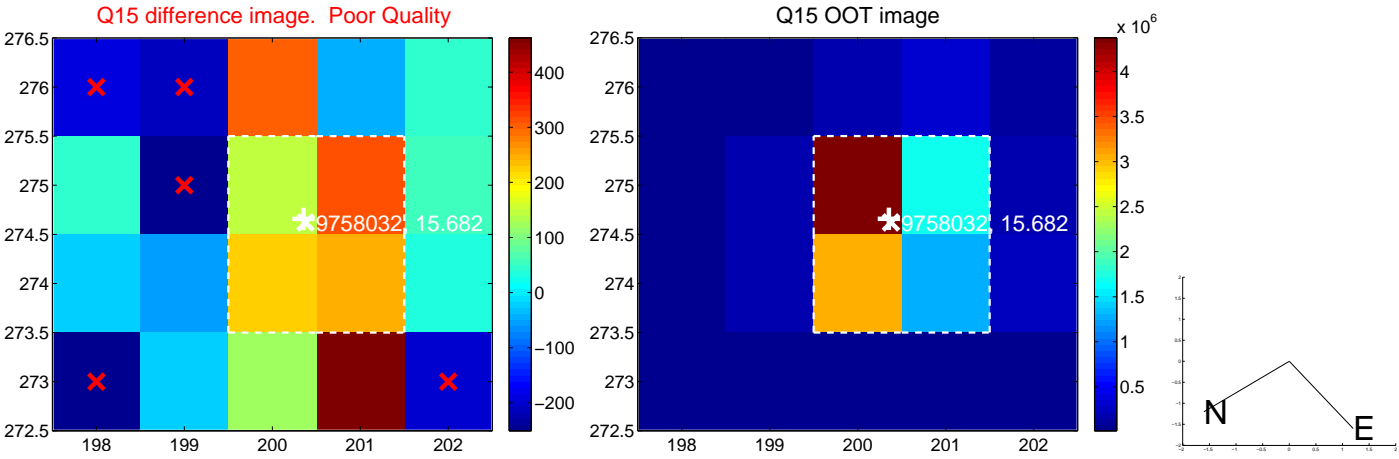
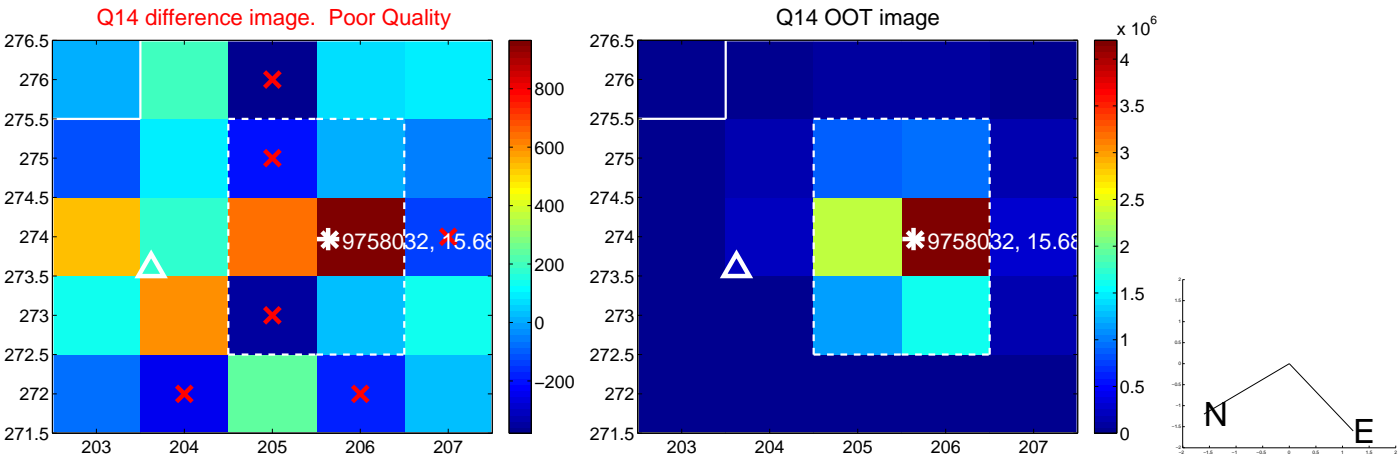
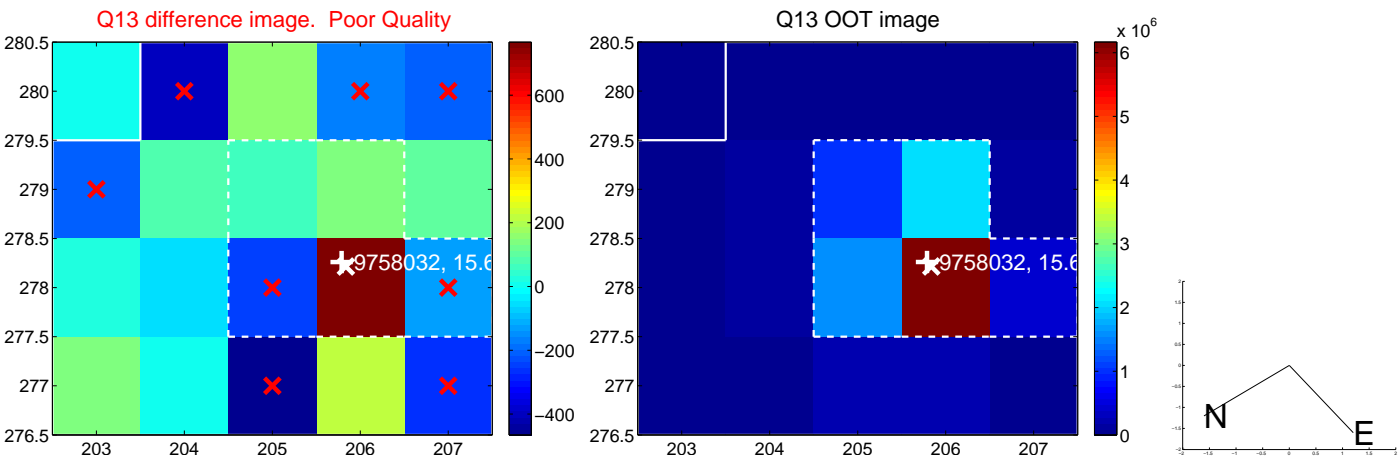
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



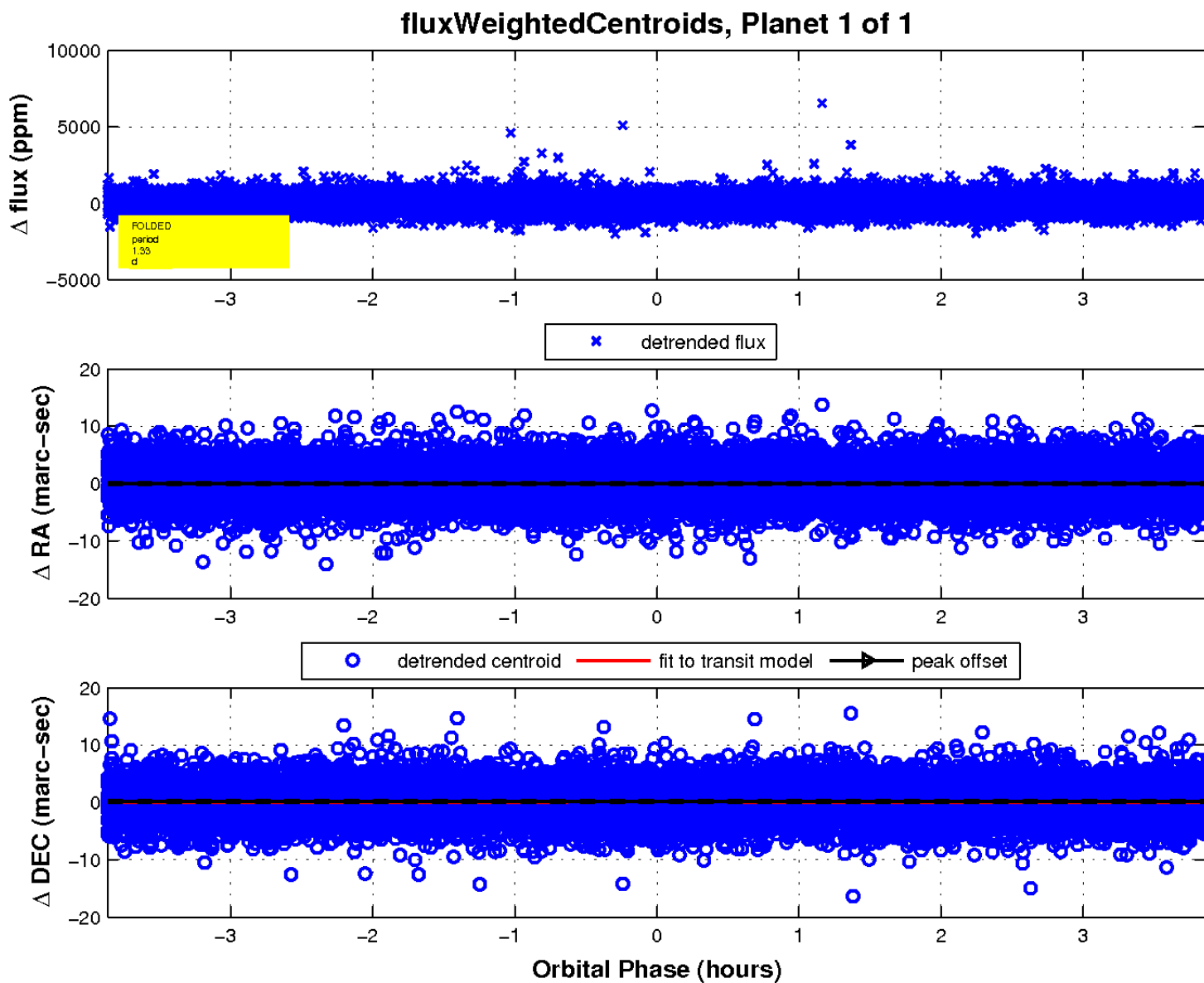
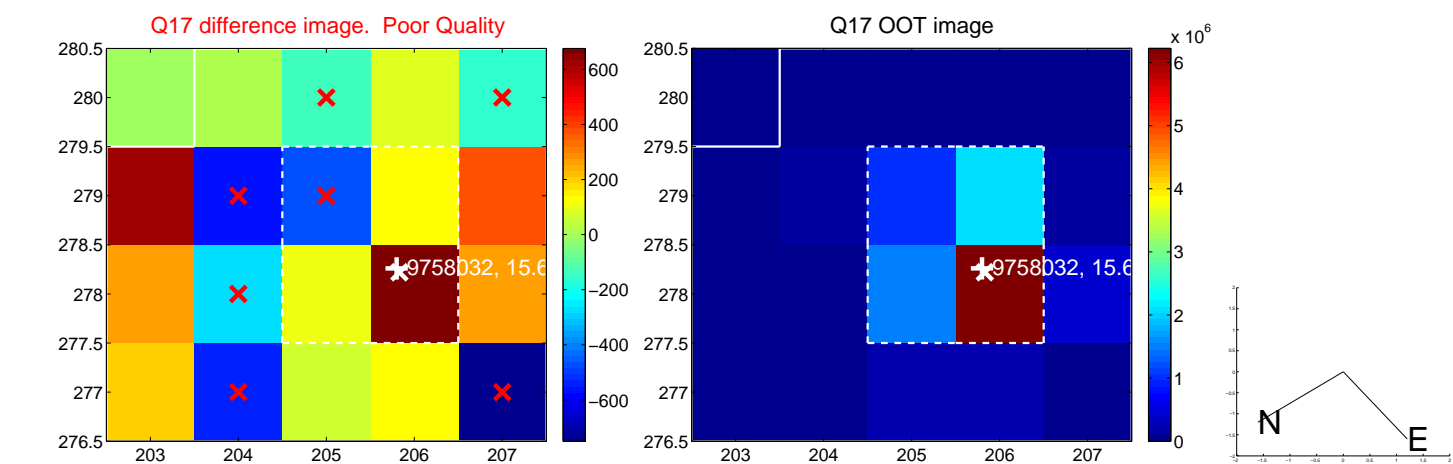
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

