

KIC 003746248

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})
003746248-01	OBS	No	0.579239	131.668860	30.4	2.274	8.8	9.0	3.42	6638	2.21	71135.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003746248-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

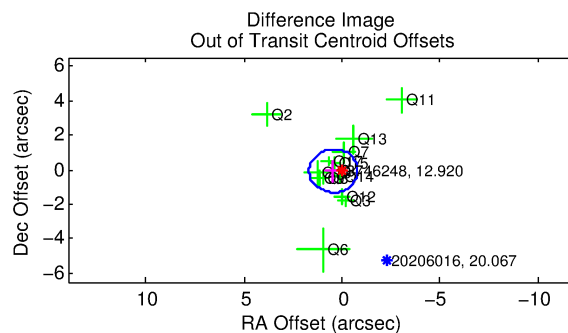
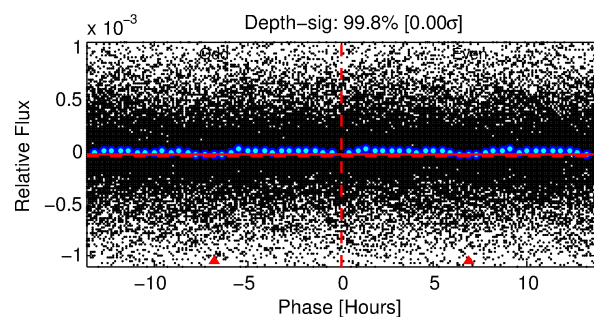
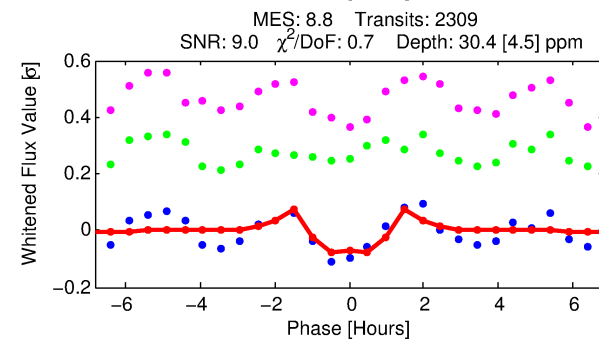
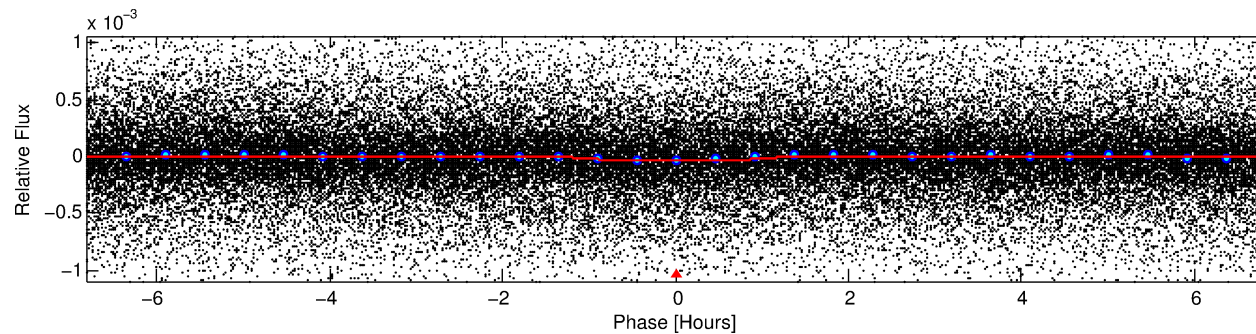
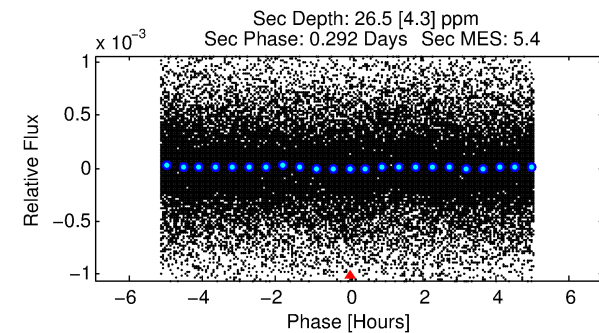
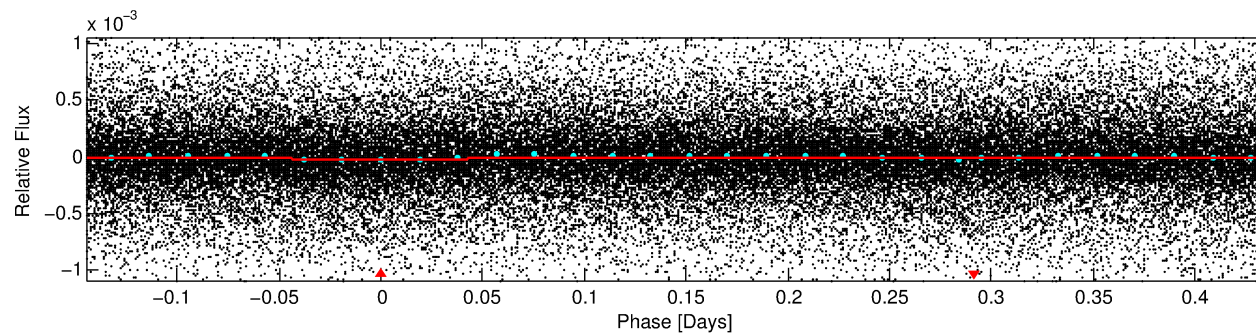
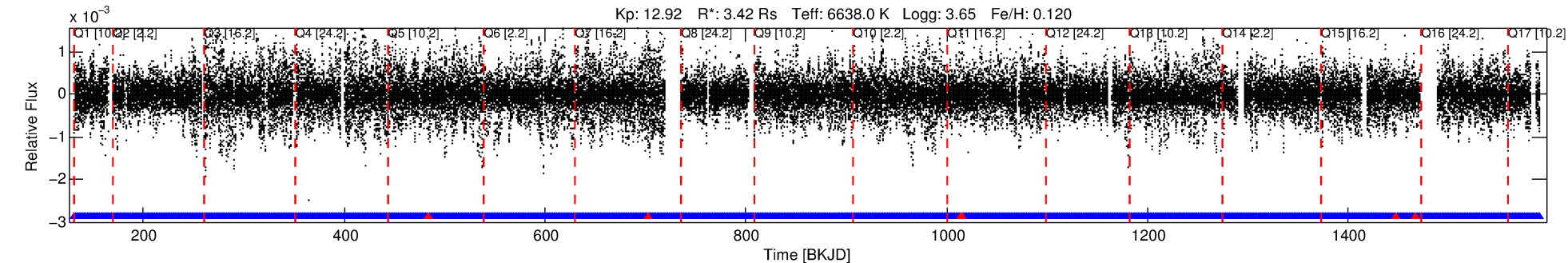
Ephemeris Match Information For 003746248-01

No Significant Match Found

DV One-Page Summary

KIC: 3746248 Candidate: 1 of 1 Period: 0.579 d
KOI: K06354 Corr: No Ephemeris Match

Kp: 12.92 R*: 3.42 Rs Teff: 6638.0 K Logg: 3.65 Fe/H: 0.120



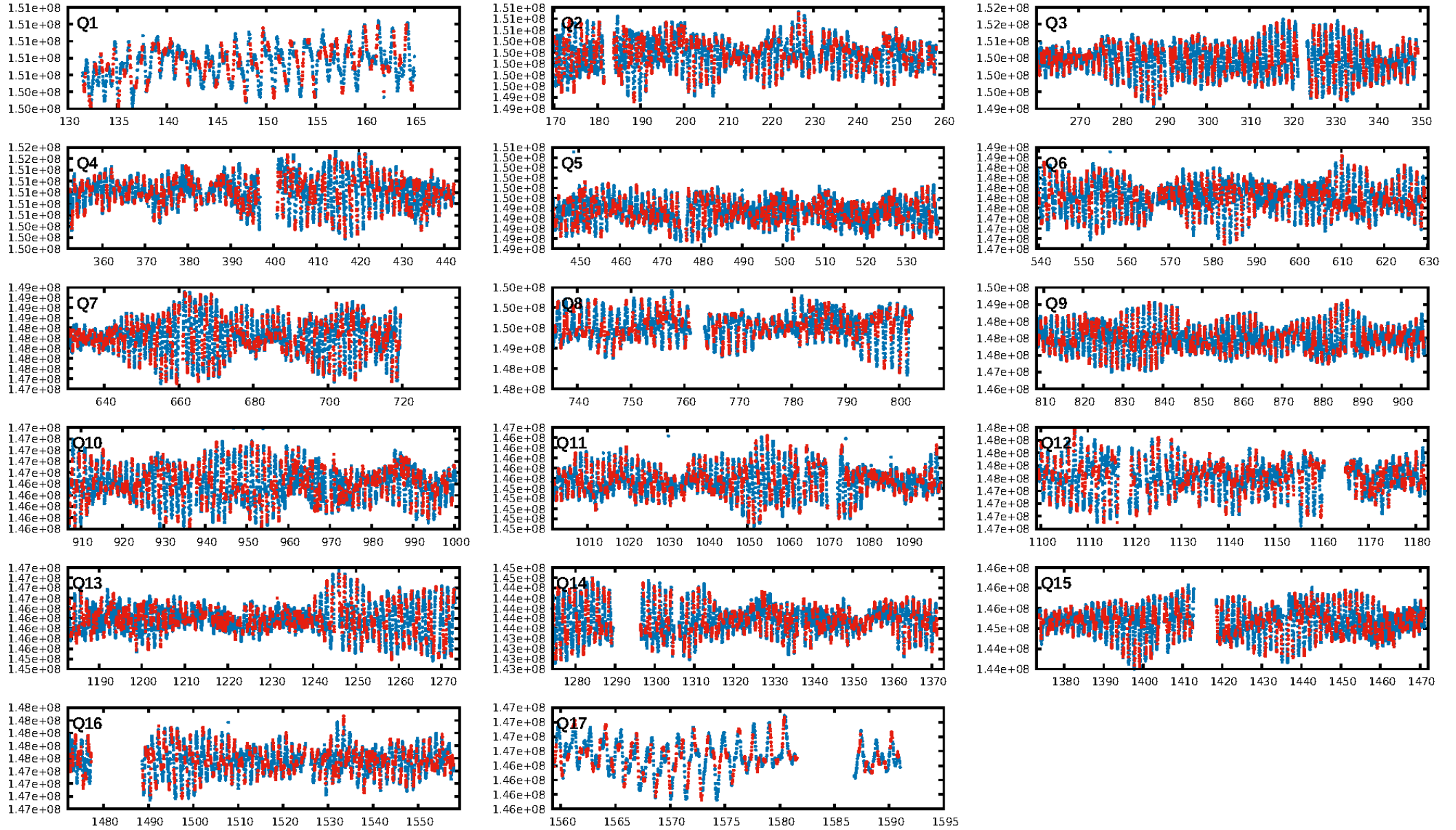
DV Fit Results:

Period = 0.57924 [0.00001] d
Epoch = 131.6689 [0.0017] BKJD
Rp/R* = 0.0059 [0.0016]
a/R* = 1.28 [0.77]
b = 0.90 [0.33]
Seff = 71135.53 [36646.70]
Teq = 4164 [536] K
Rp = 2.21 [0.98] Re
a = 0.0169 [0.0055] AU
Ag = 0.86 [0.65] [-0.22σ]
Teffp = 6197 [900] K [1.94σ]

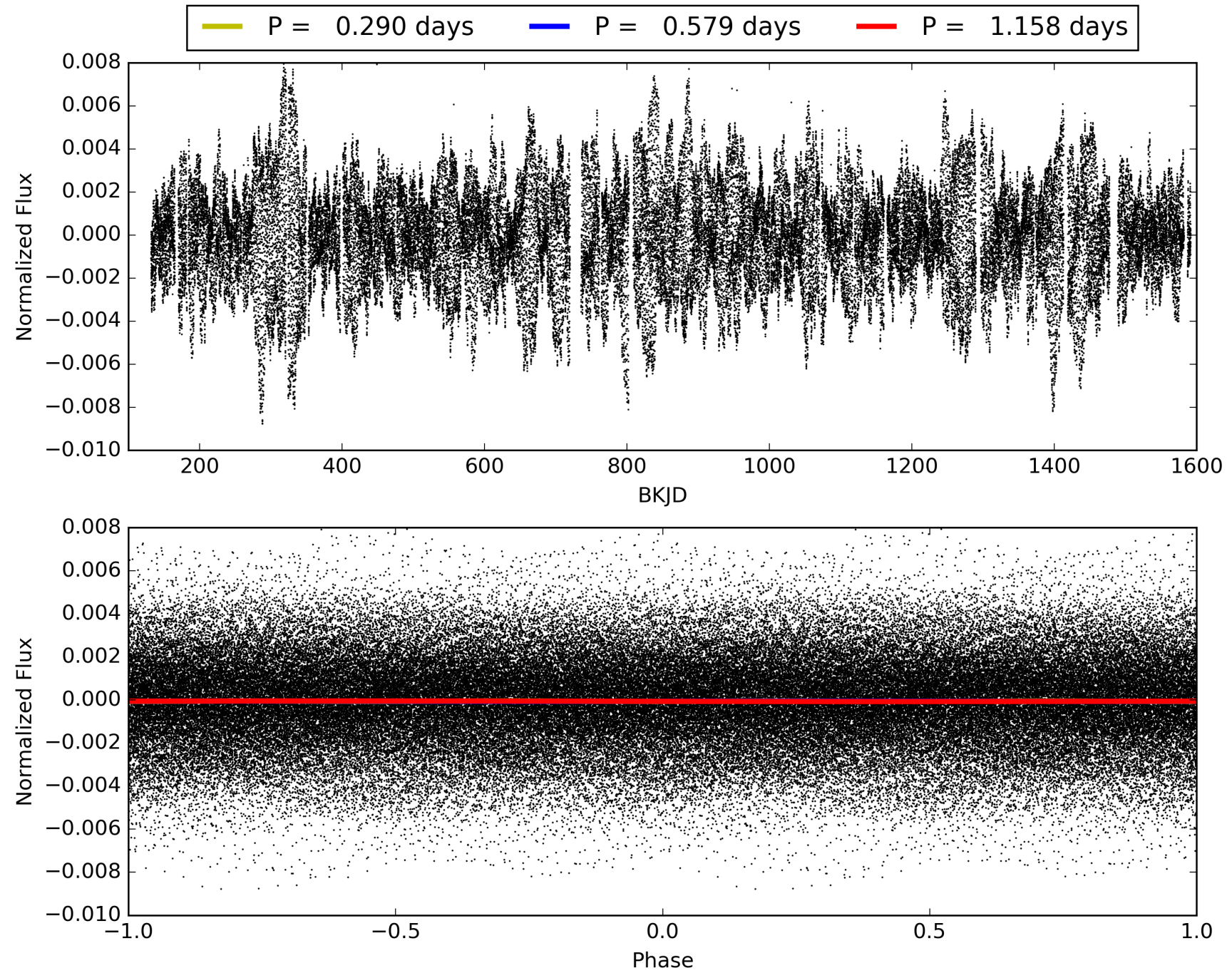
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.03e-23
RollingBand-fgt: 1.00 [2199/2205]
GhostDiagnostic-chr: -3.257
Centroid-sig: 35.4%
Centroid-so: 0.641 arcsec [1.06σ]
OotOffset-rm: 0.440 arcsec [1.06σ]
KicOffset-rm: 0.457 arcsec [1.23σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003746248-01, PDC Light Curves

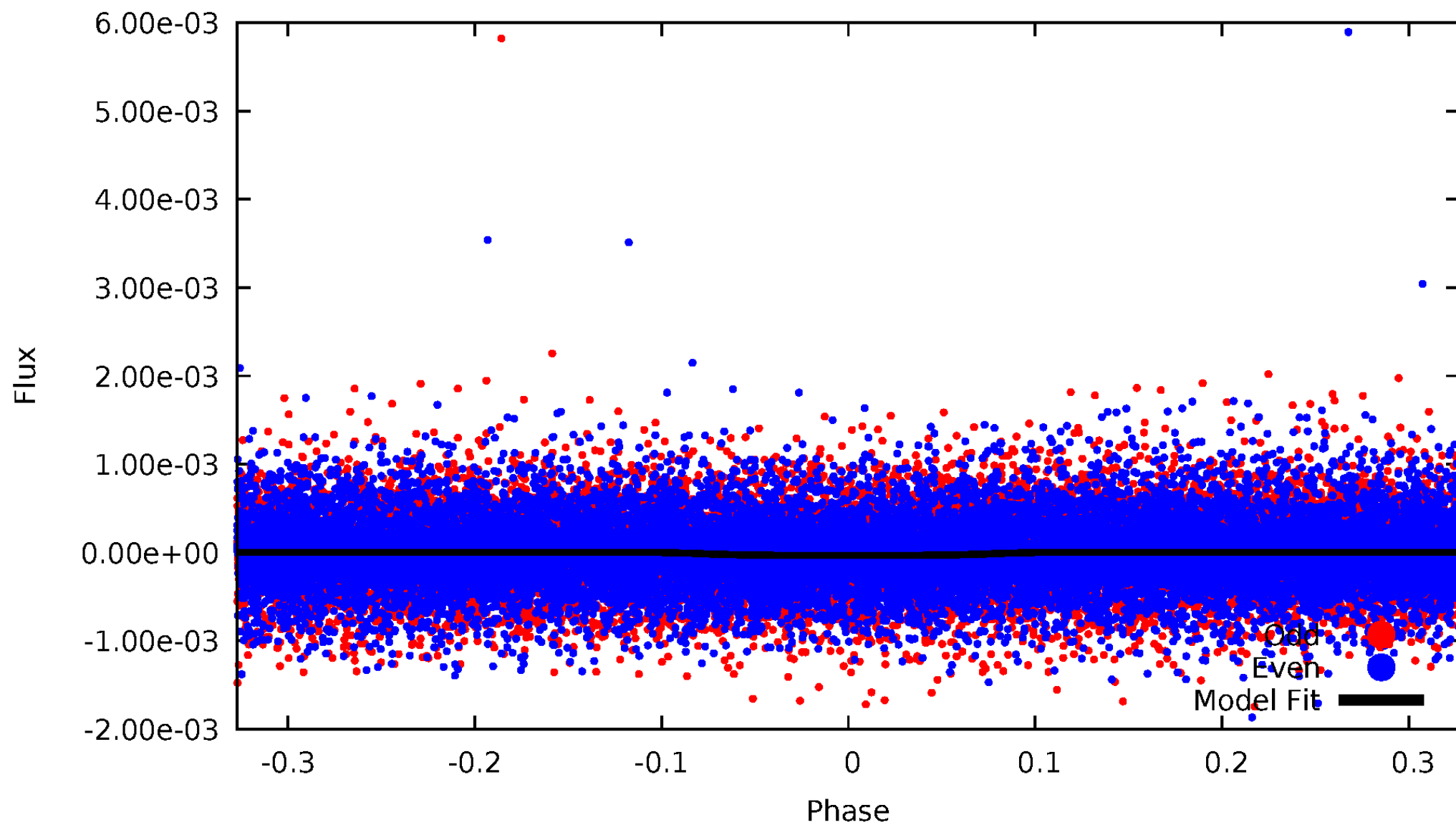


TCE 003746248-01



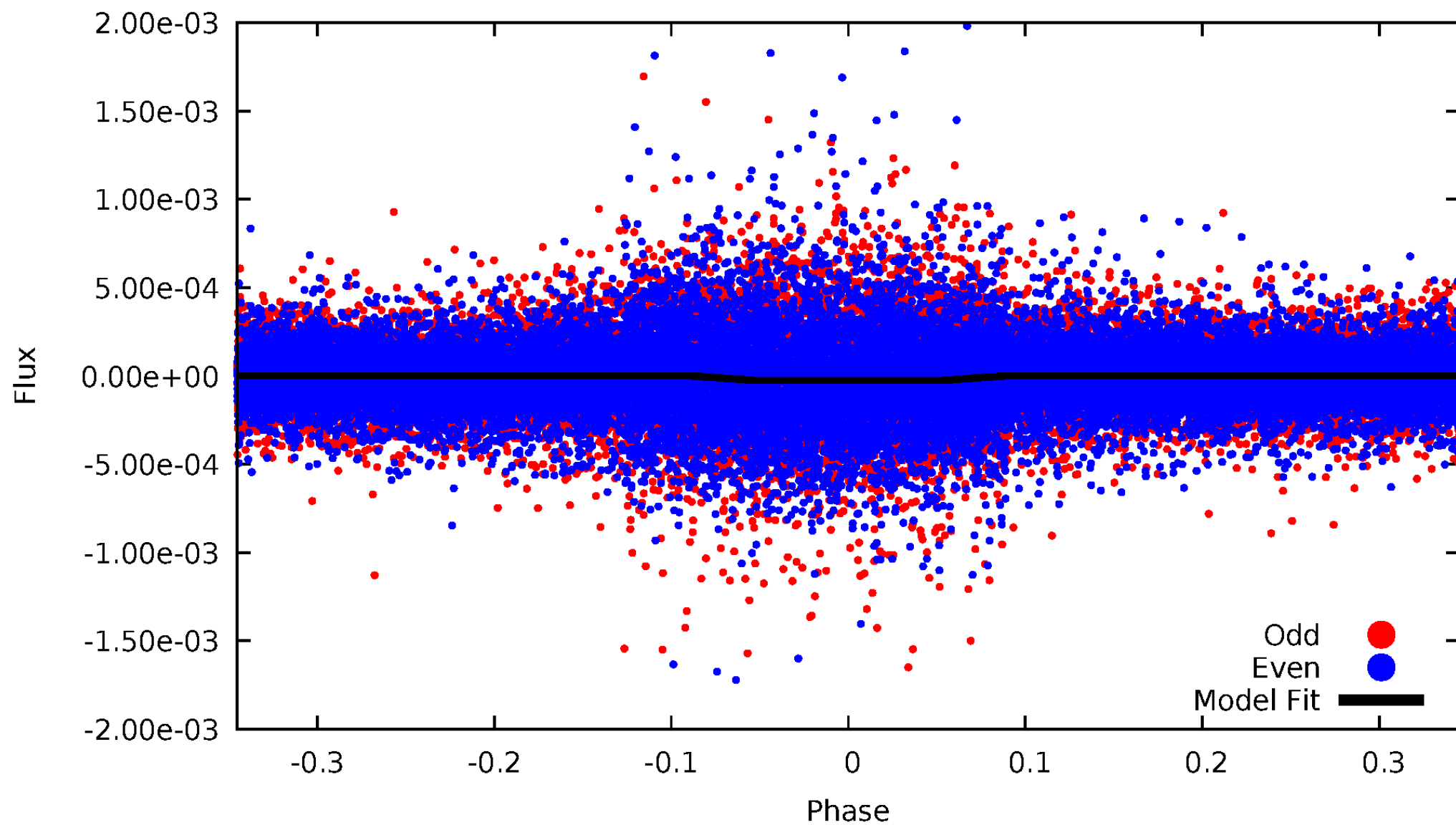
DV Odd/Even

TCE 003746248-01



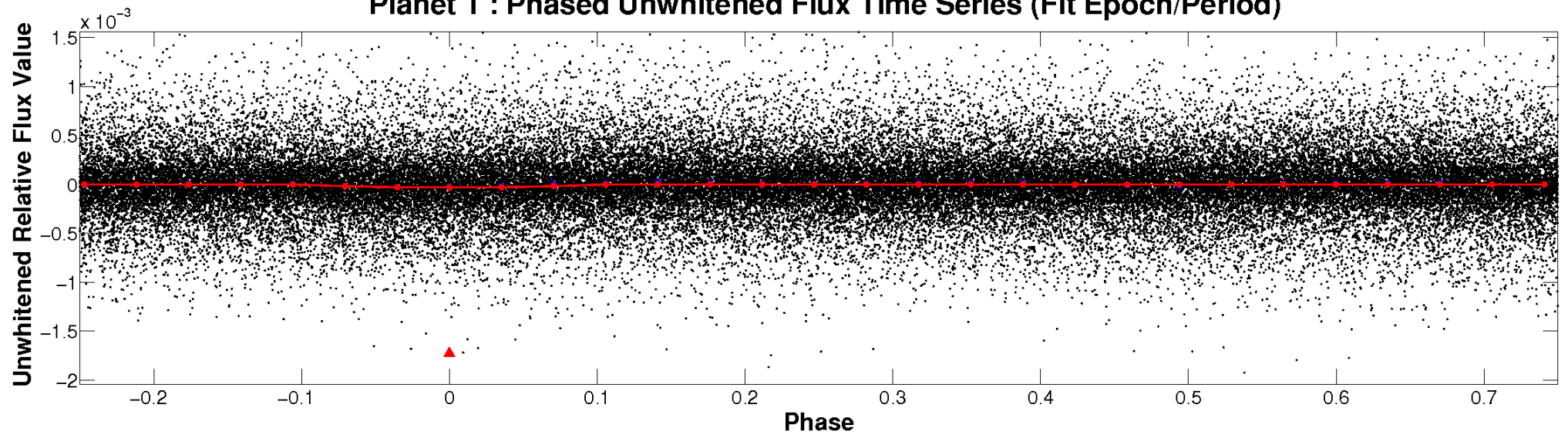
ALT Odd/Even

TCE 003746248-01

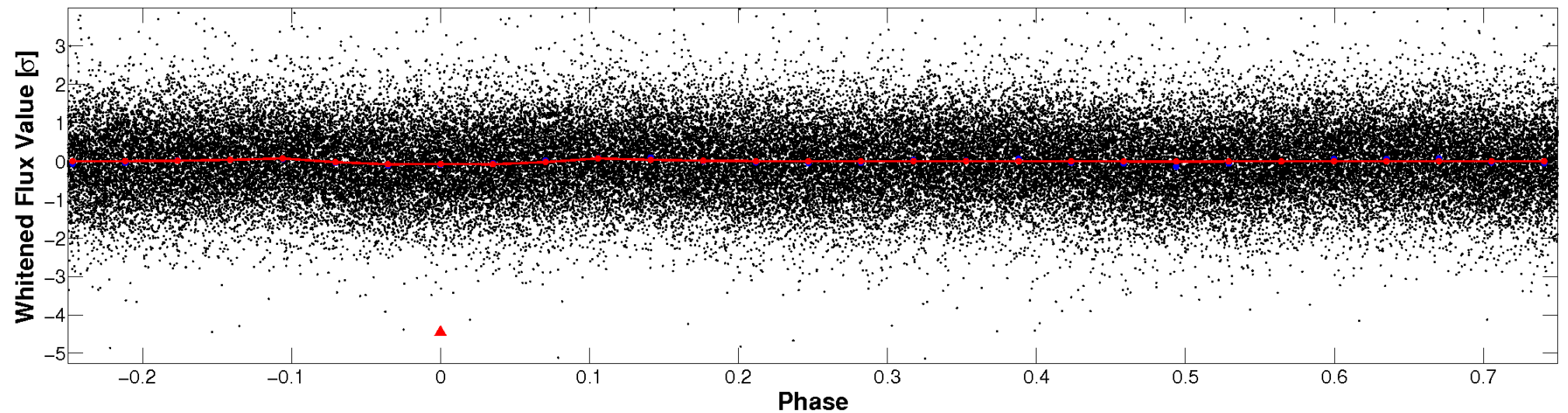


Non-Whitened Vs. Whitened Light Curve

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

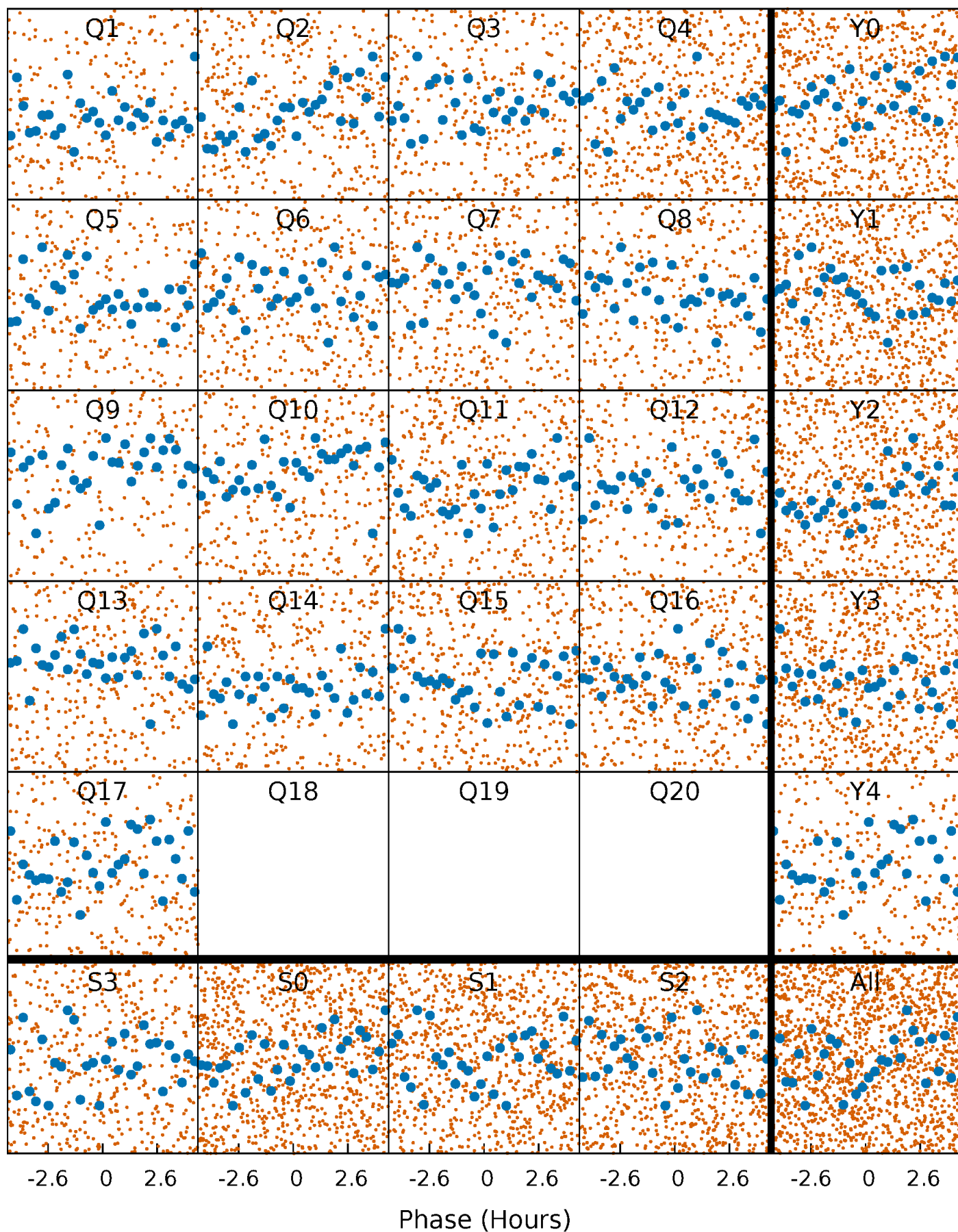


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



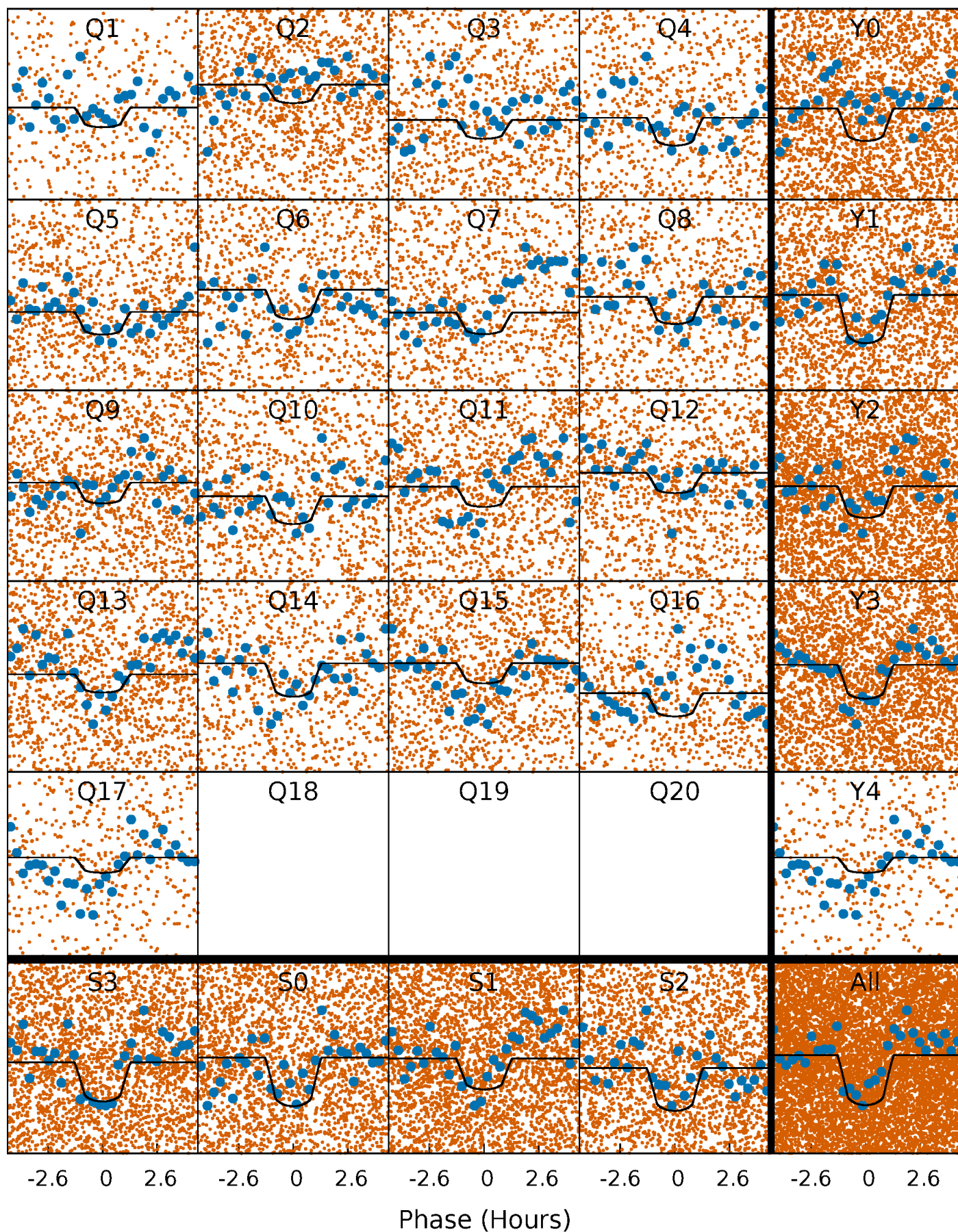
PDC Quarter-Phased Transit Curves

TCE 003746248-01 P= 0.579239 Days $T_0=131.668860$ (BKJD)



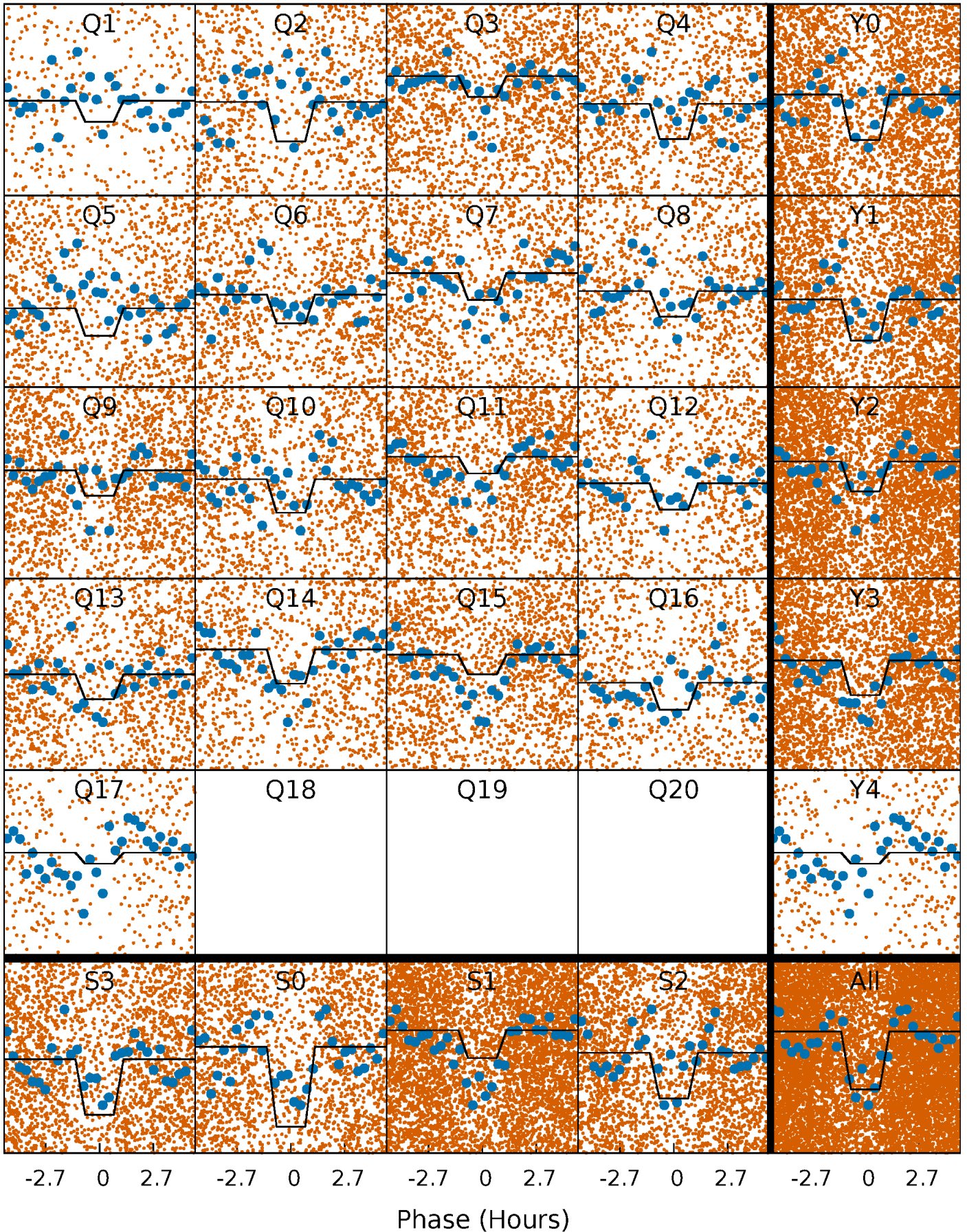
DV Quarter-Phased Transit Curves

TCE 003746248-01 P= 0.579239 Days $T_0=131.668860$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

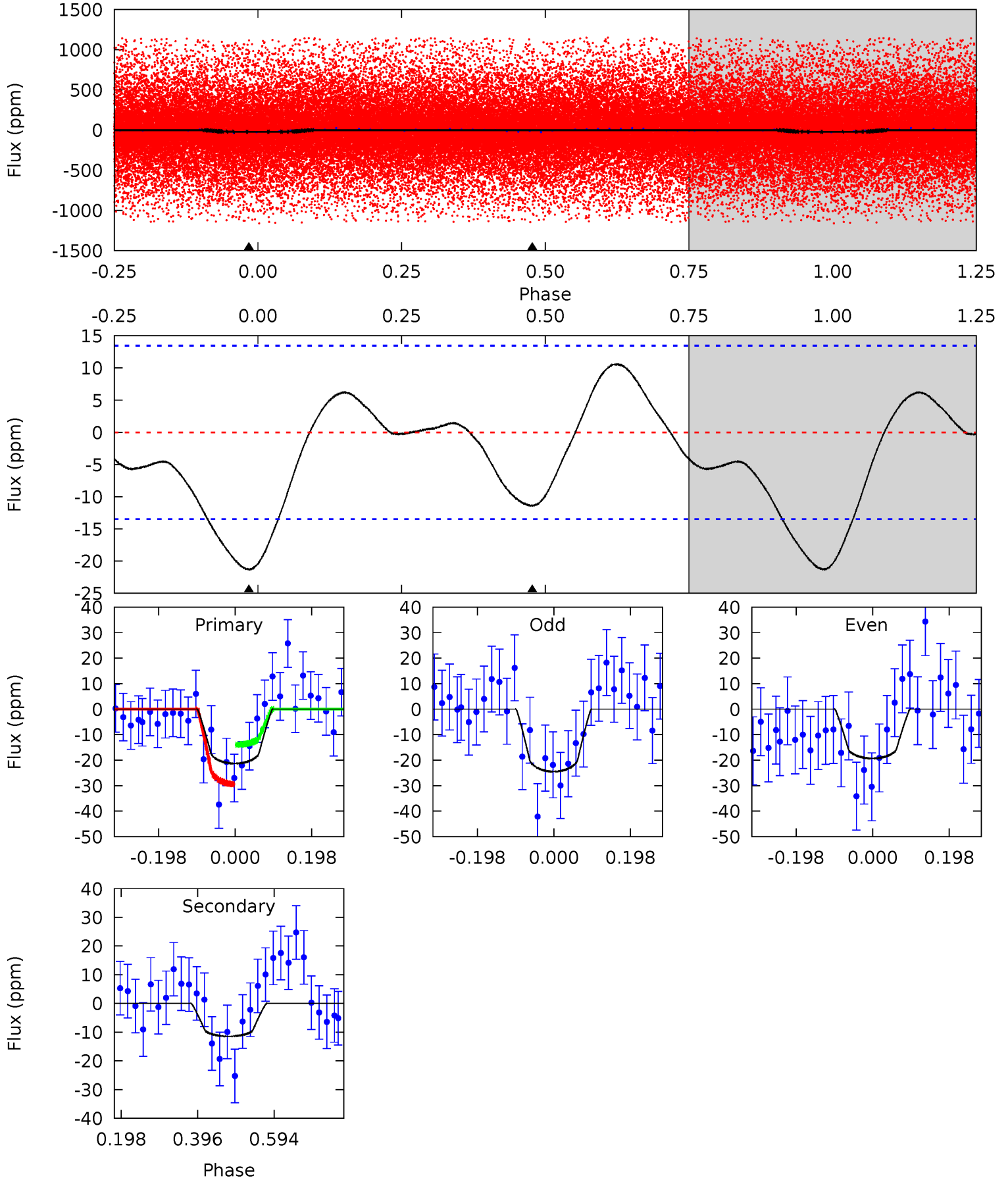
TCE 003746248-01 P= 0.579237 Days $T_0=131.666602$ (BKJD)



DV Model-Shift Uniqueness Test

003746248-01, P = 0.579239 Days, E = 131.089621 Days

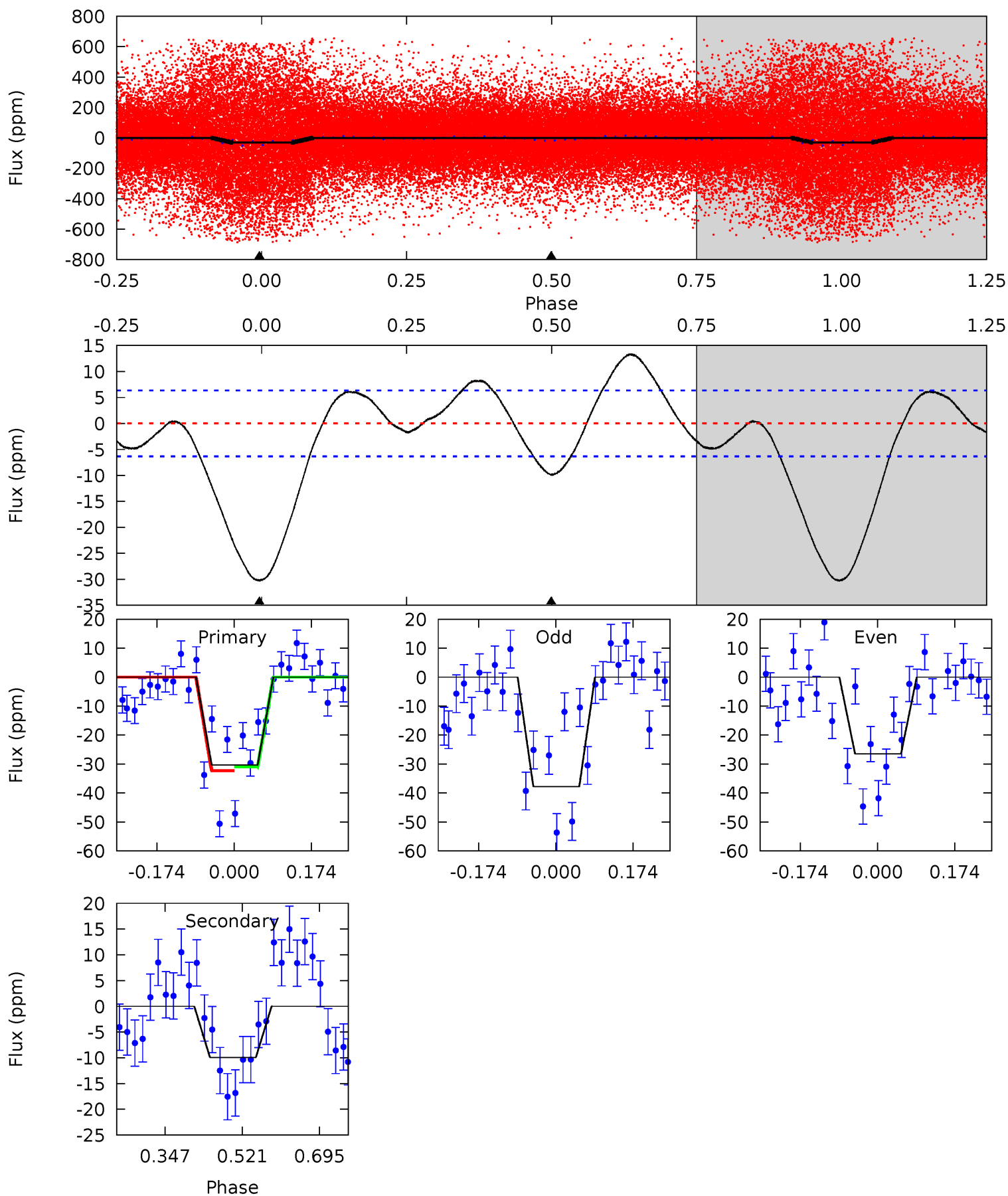
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.99	3.75	0	0	4.42	1.29	1.00	6.99	6.99	3.75	3.75	0.86	1.01	0.33	2.58



Alt Model-Shift Uniqueness Test

003746248-01, P = 0.579237 Days, E = 131.087365 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	6.95	0	0	4.45	1.36	2.41	21.2	21.2	6.95	6.95	3.95	0.81	0.31	0.45



Stellar Parameters For KIC 003746248

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6638^{+179}_{-199}	$3.654^{+0.288}_{-0.072}$	$0.120^{+0.250}_{-0.250}$	$3.422^{+0.403}_{-1.210}$	$1.924^{+0.176}_{-0.412}$	$0.068^{+0.138}_{-0.017}$
	+3%/-3%	+8%/-2%	+208%/-208%	+12%/-35%	+9%/-21%	+204%/-24%
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 003746248-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 3	$2.03^{+0.68}_{-0.58}$	5702^{+296}_{-530}	3980^{+1295}_{-7726}	$0.423^{+0.422}_{-0.201}$
Alt.	-10 ± 1	$1.75^{+0.69}_{-0.59}$	5708^{+295}_{-469}	4339^{+1501}_{-7760}	$0.501^{+0.635}_{-0.244}$

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 $A_{obs} \gg 1.0$

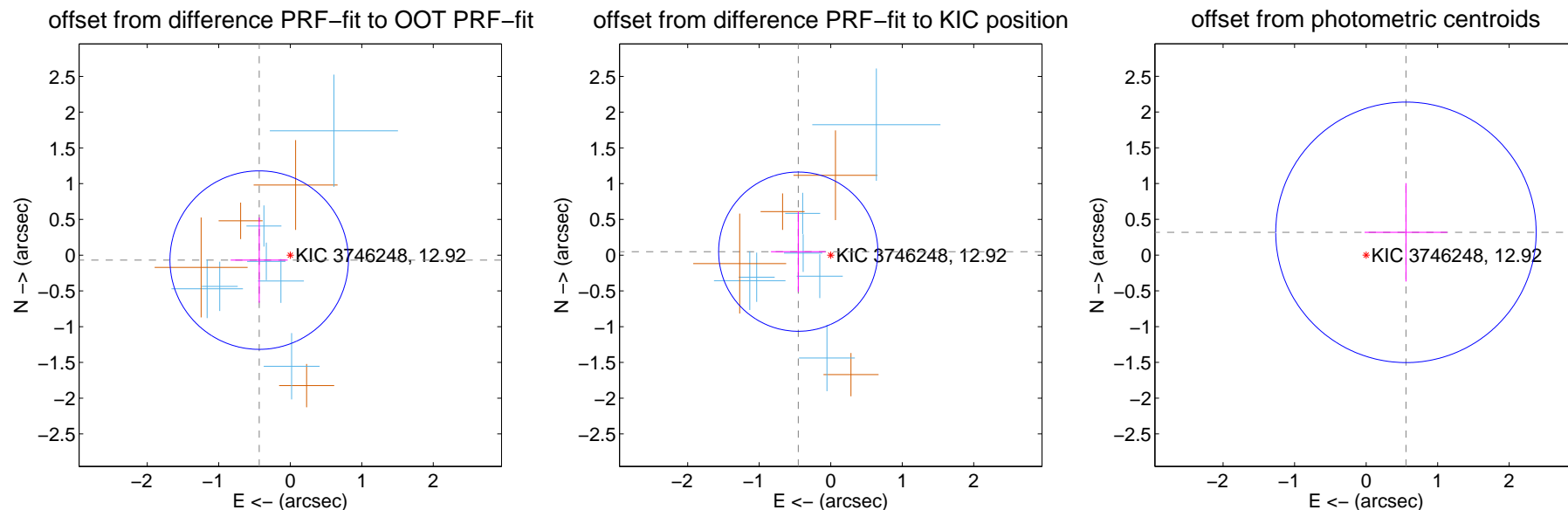
DV Centroid Data

Supplemental centroid analysis for 003746248-01. Kepler magnitude: 12.92. Transit SNR 8.99

There are 7 quarters with good PRF difference image offsets

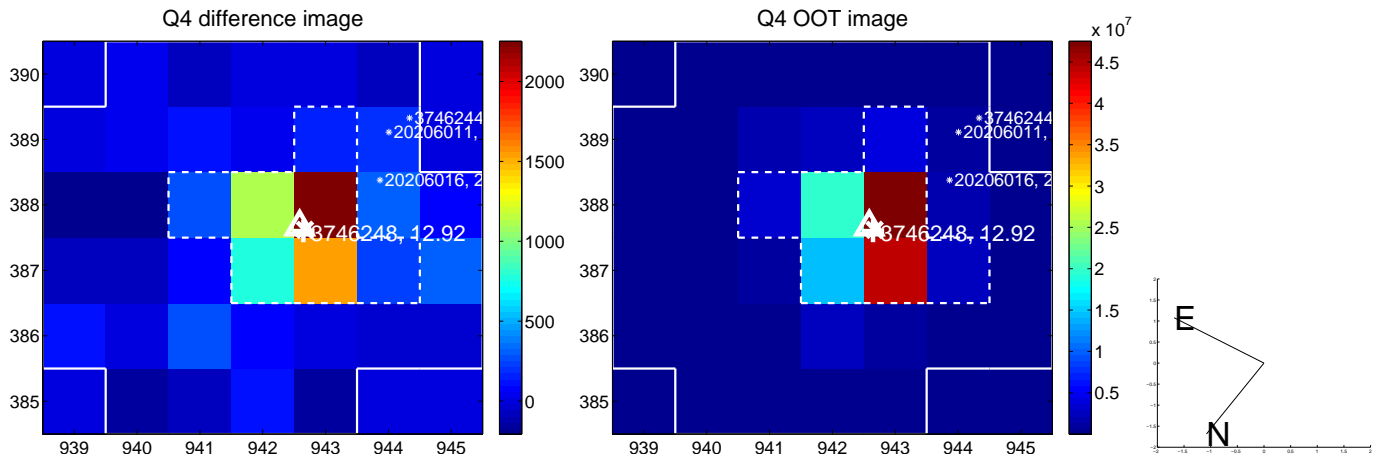
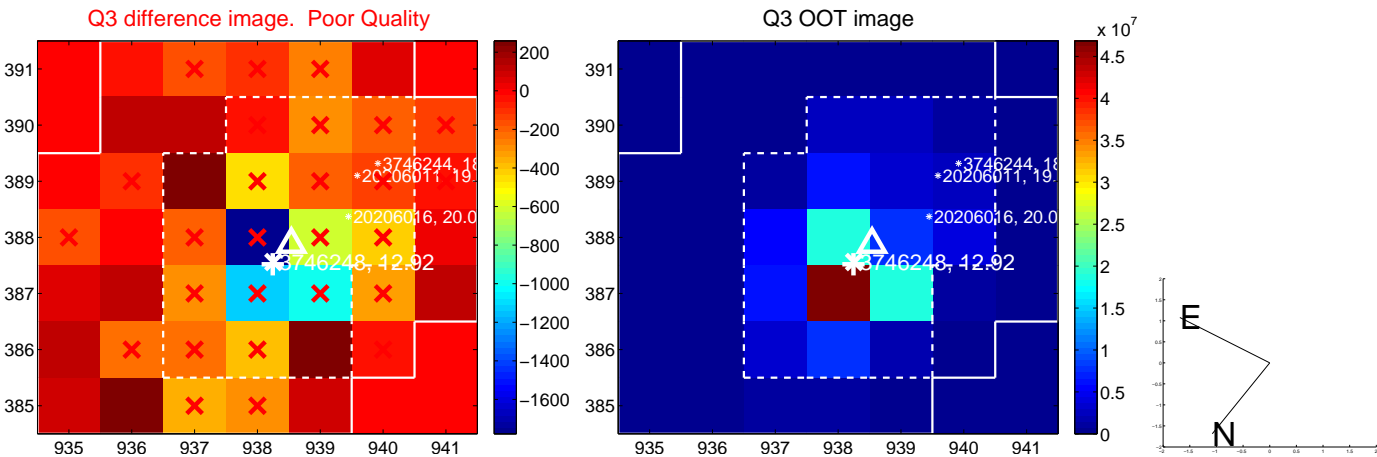
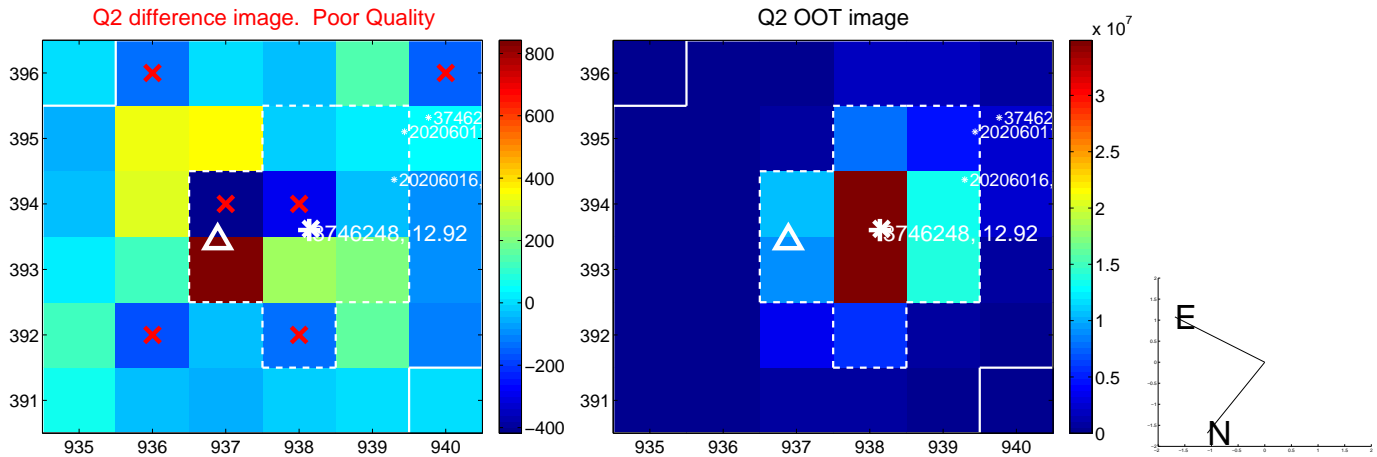
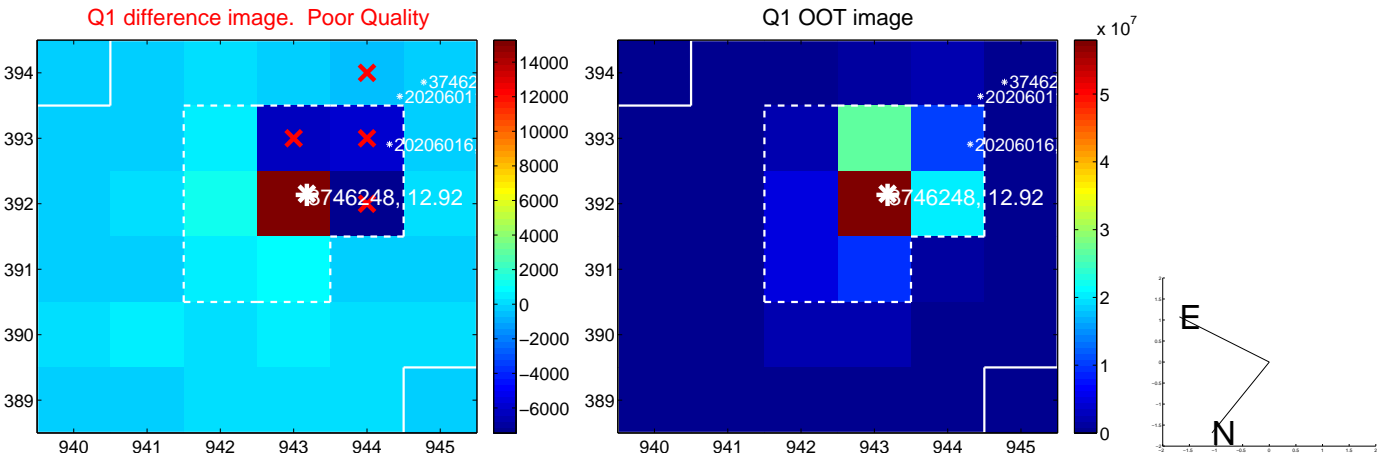
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.440 ± 0.416	1.06	0.435 ± 0.399	-0.069 ± 0.596
PRF-fit source offset from KIC position	0.457 ± 0.371	1.23	0.454 ± 0.381	0.049 ± 0.562
photometric centroid source offset	0.64 ± 0.61	1.06	-0.56 ± 0.58	0.32 ± 0.69

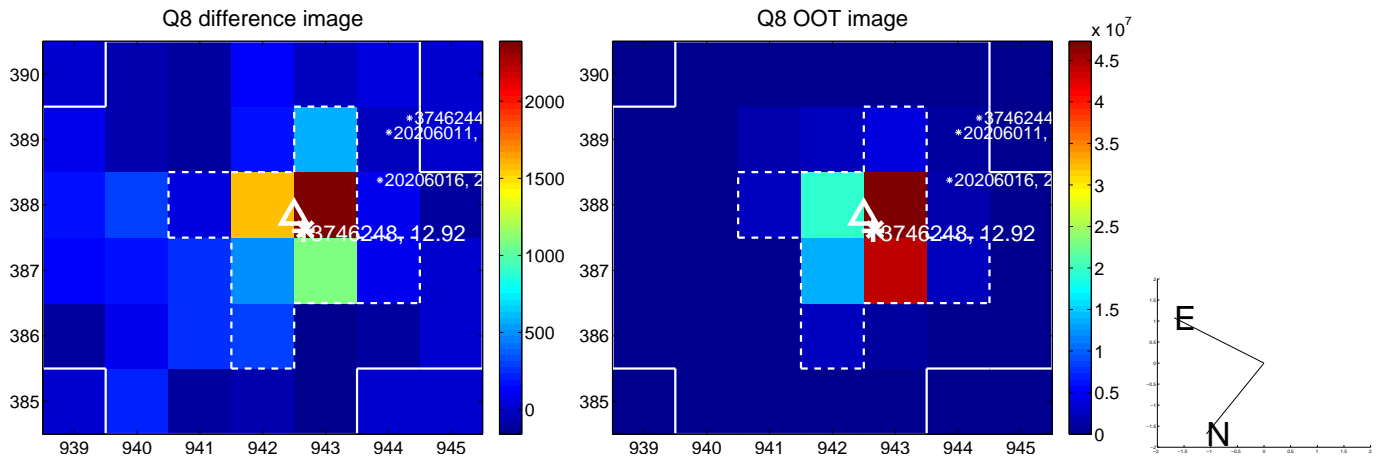
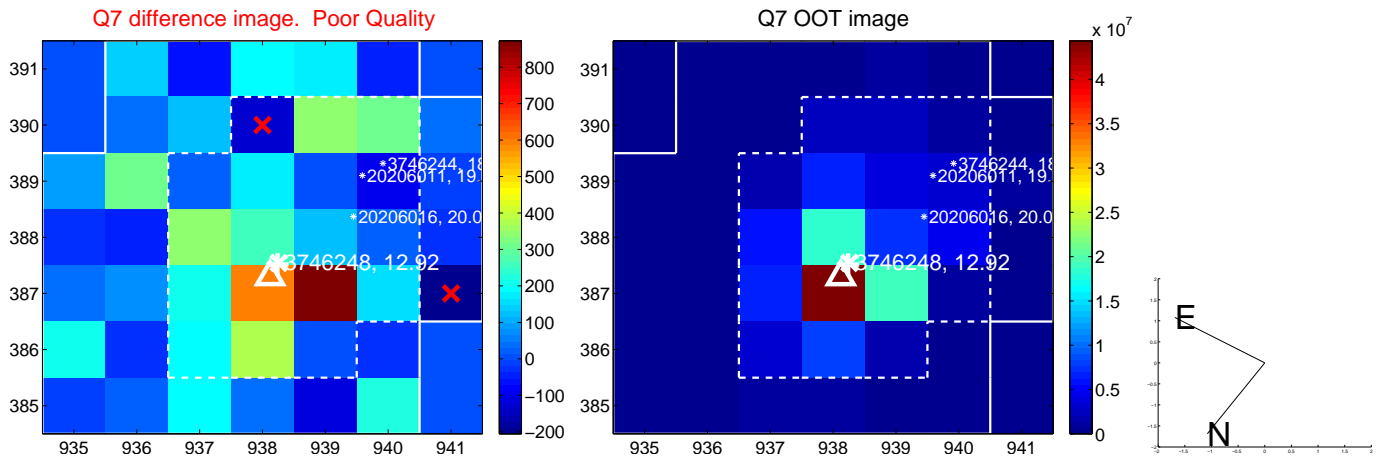
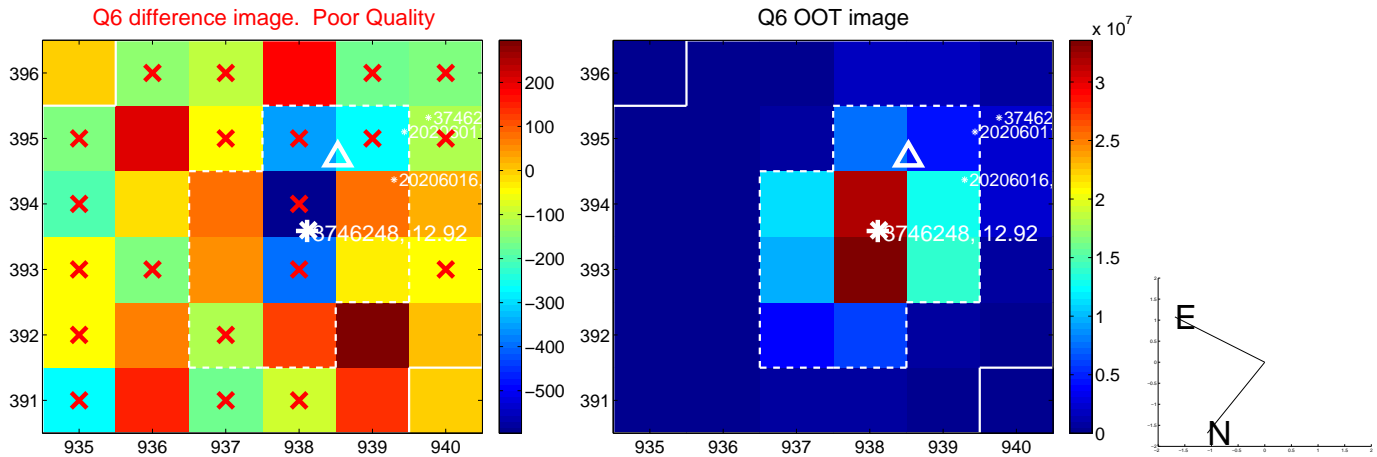
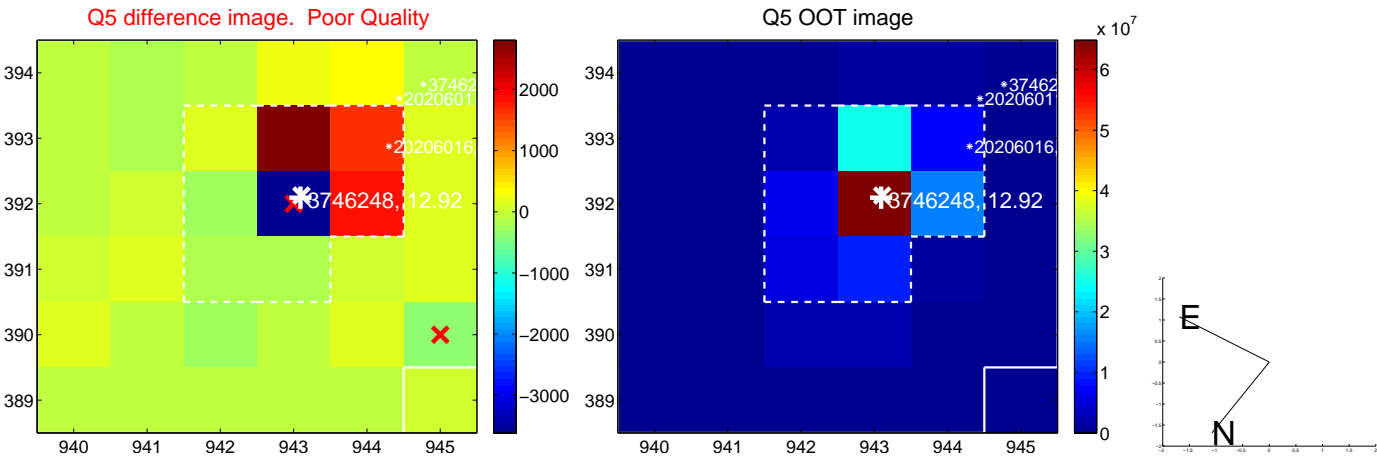


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

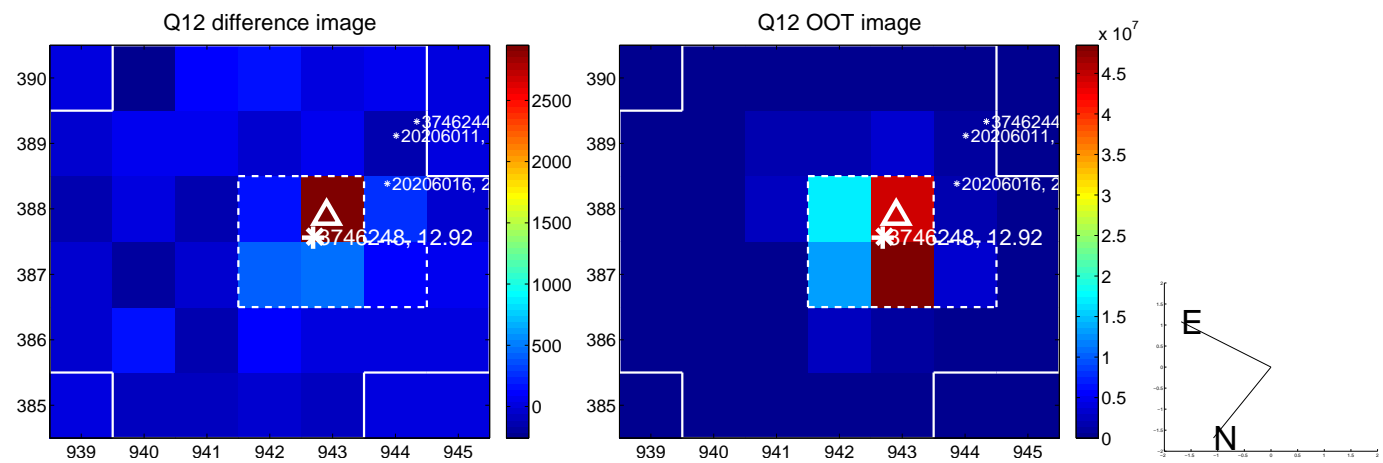
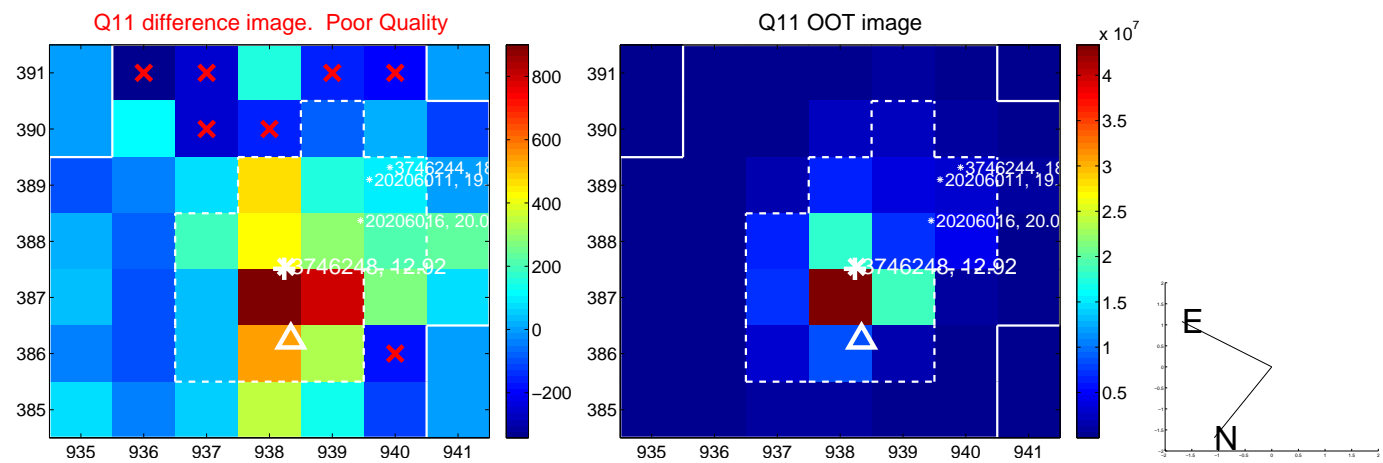
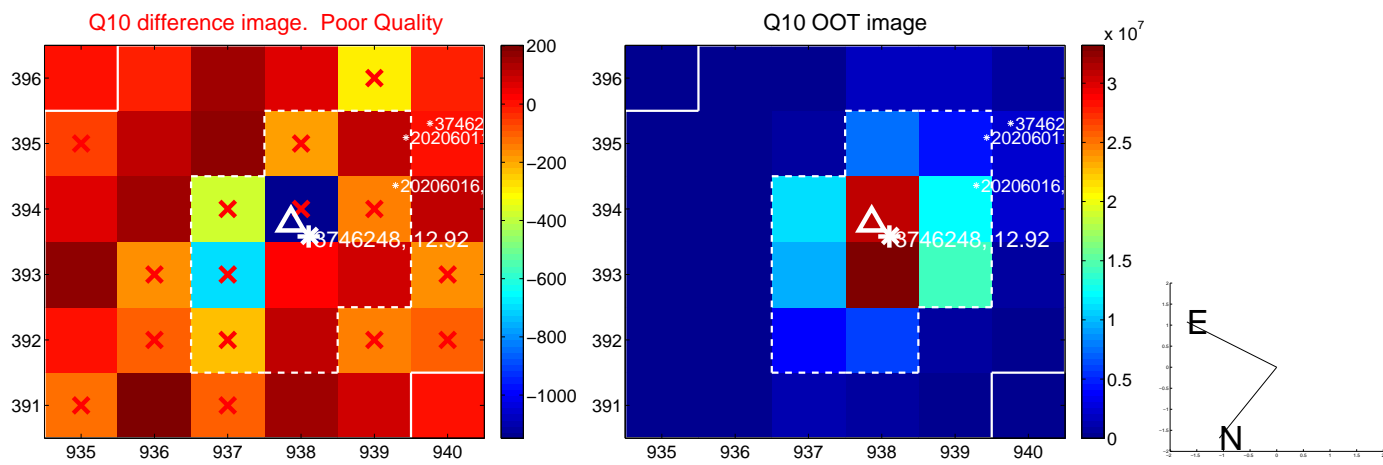
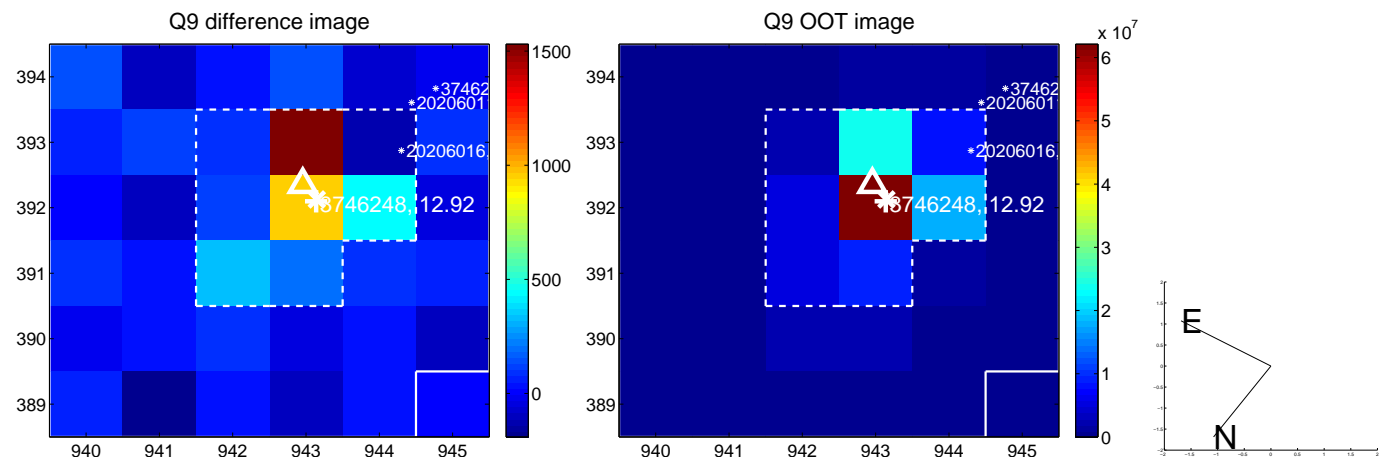
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



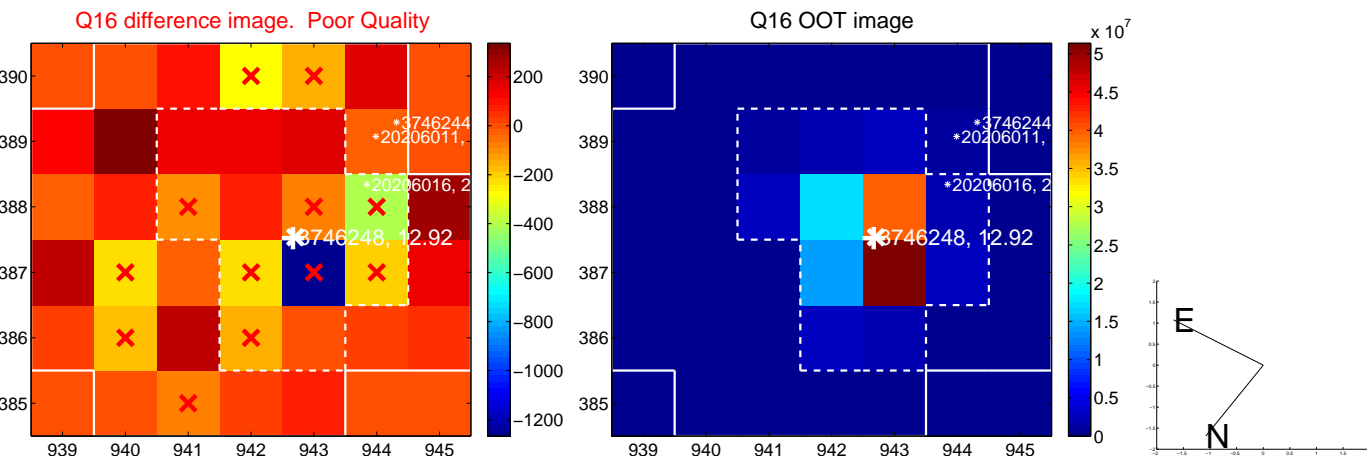
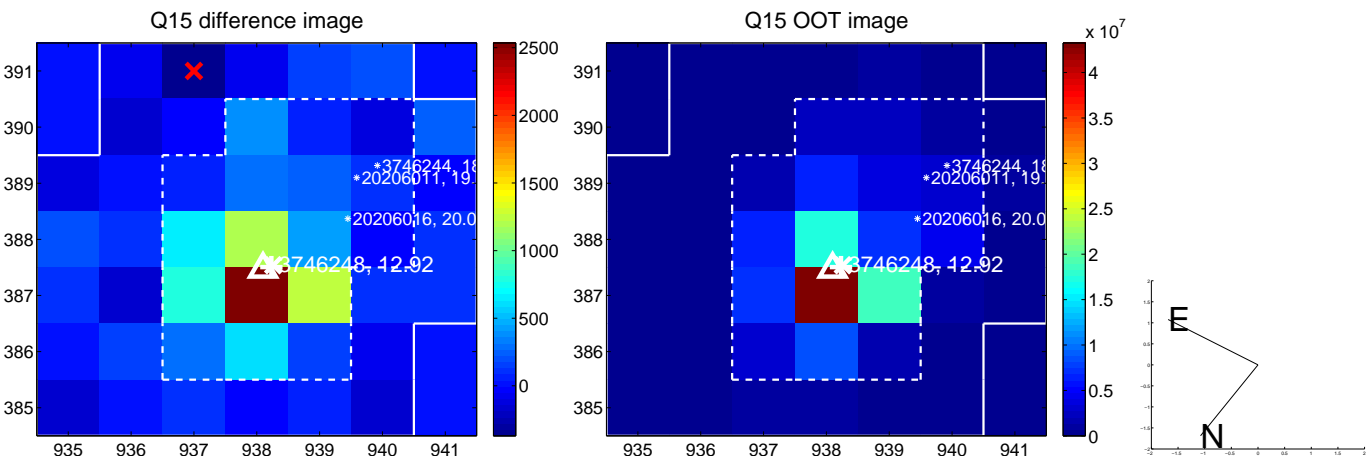
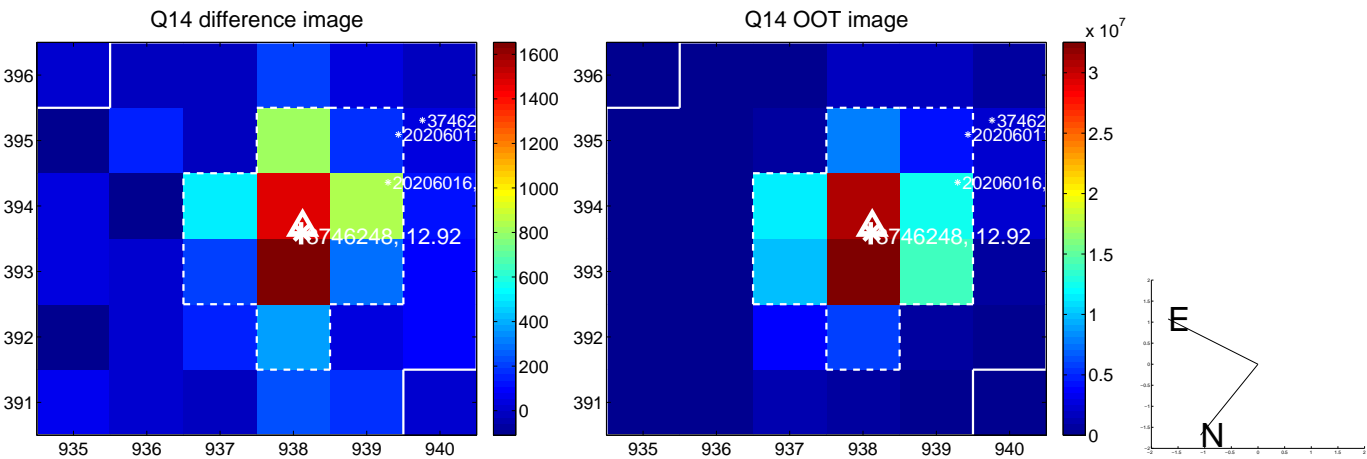
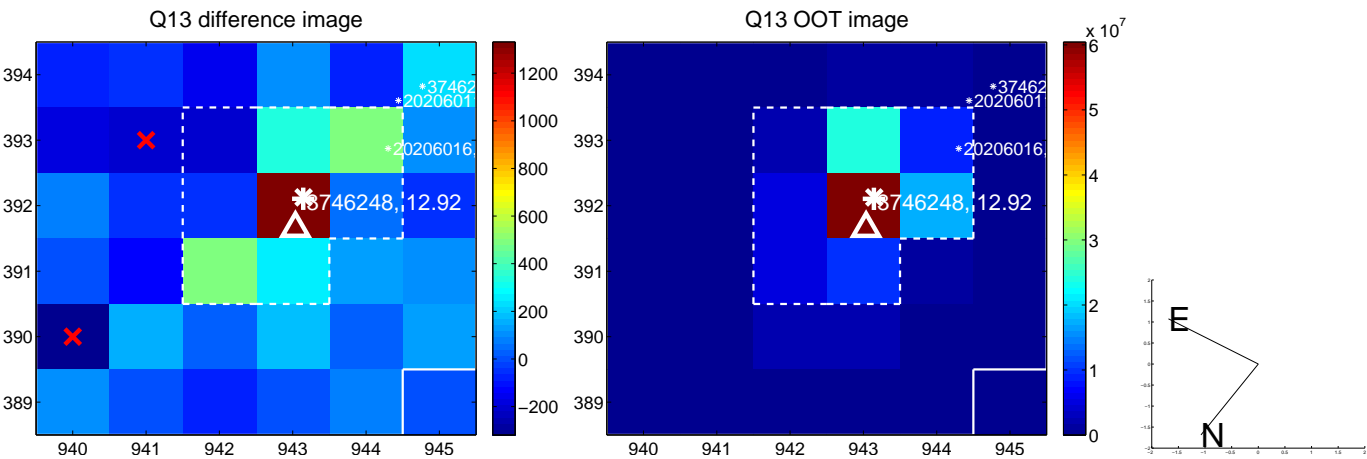
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



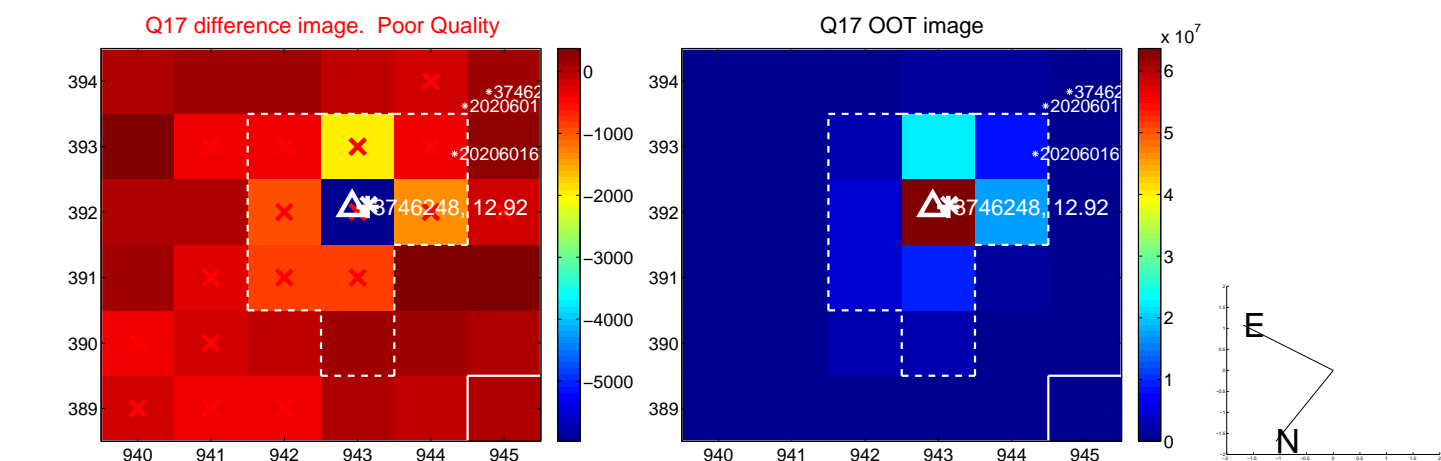
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



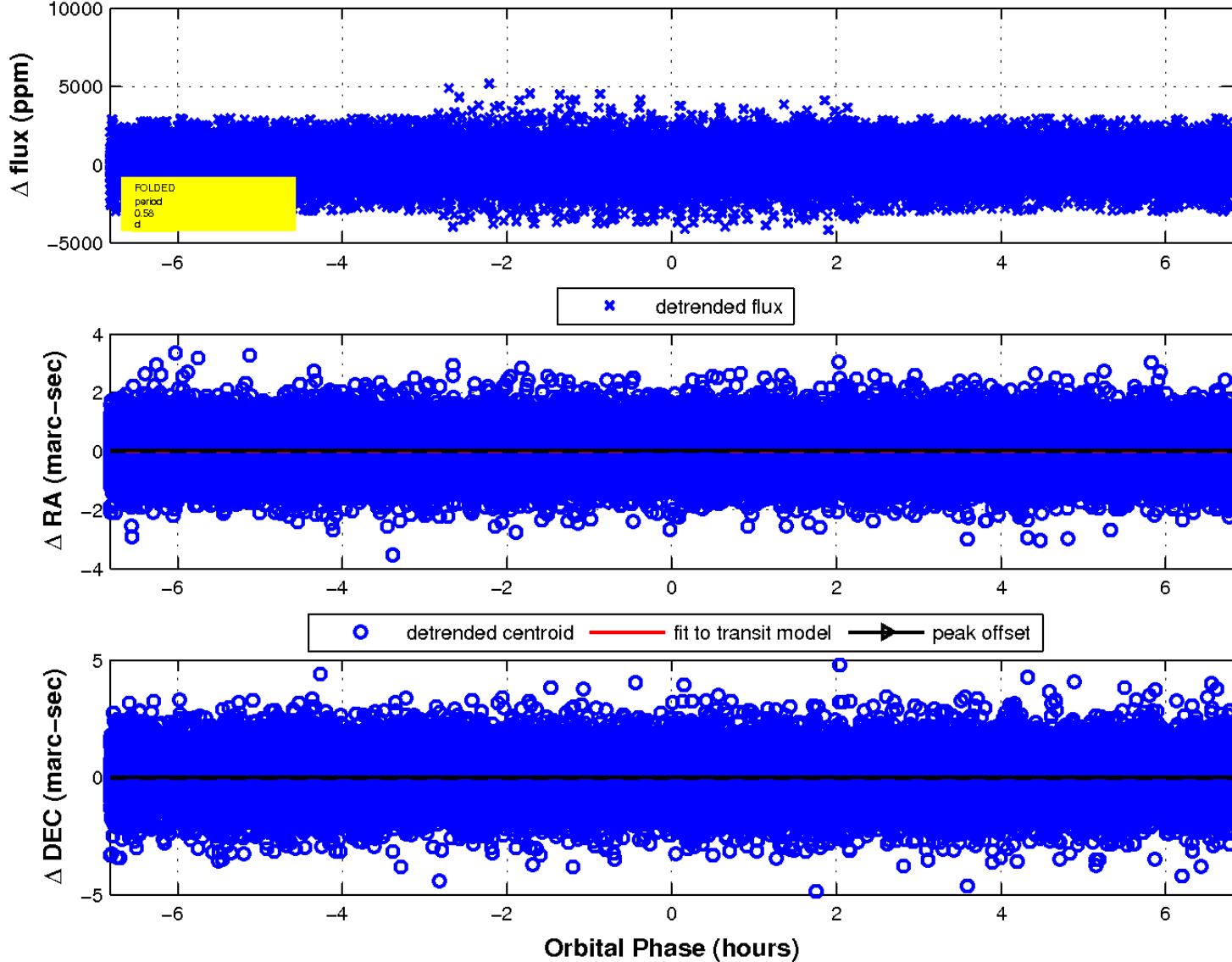
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

