

KIC 009536048

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})
009536048-01	OBS	7186.01	1.855936	132.644777	58.9	0.859	7.8	10.2	1.26	6302	1.15	2332.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009536048-01	OBS	FP	0.28	0	0	1	0	CENT_RESOLVED_OFFSET

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.

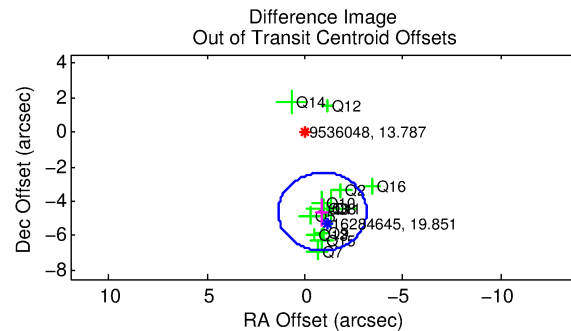
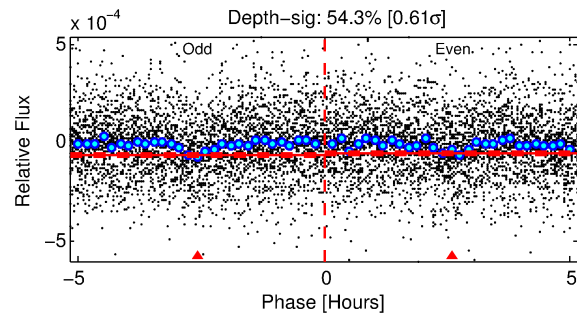
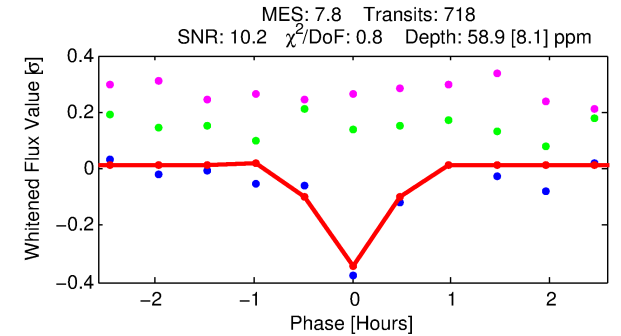
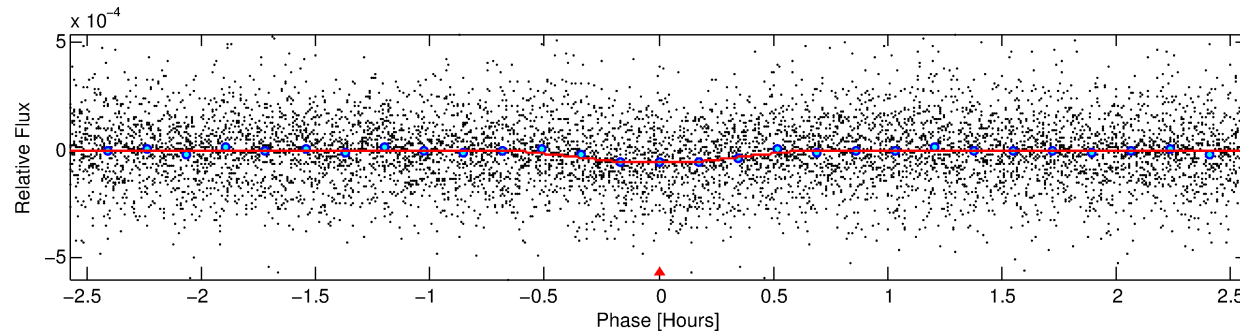
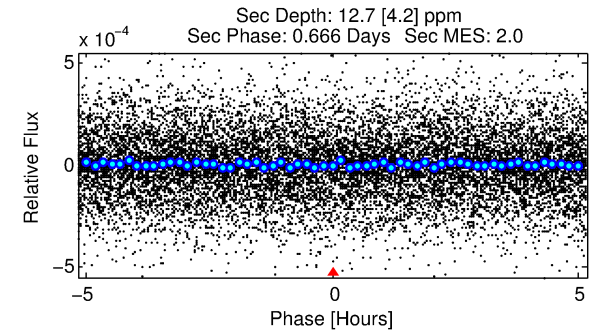
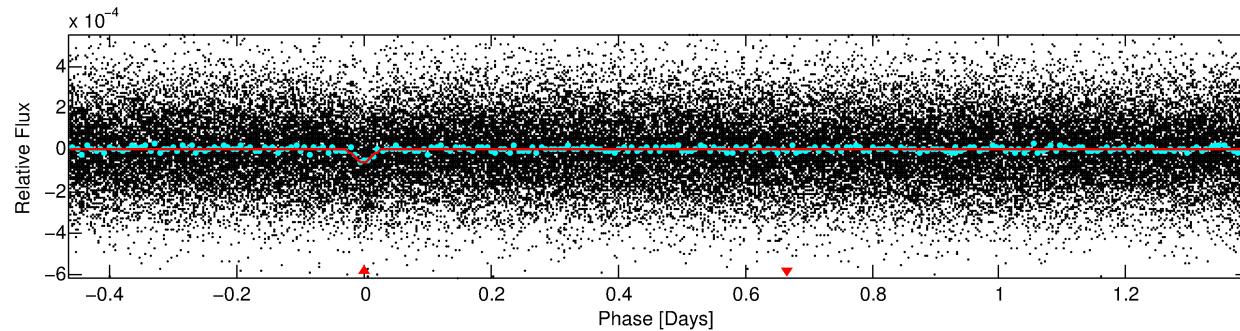
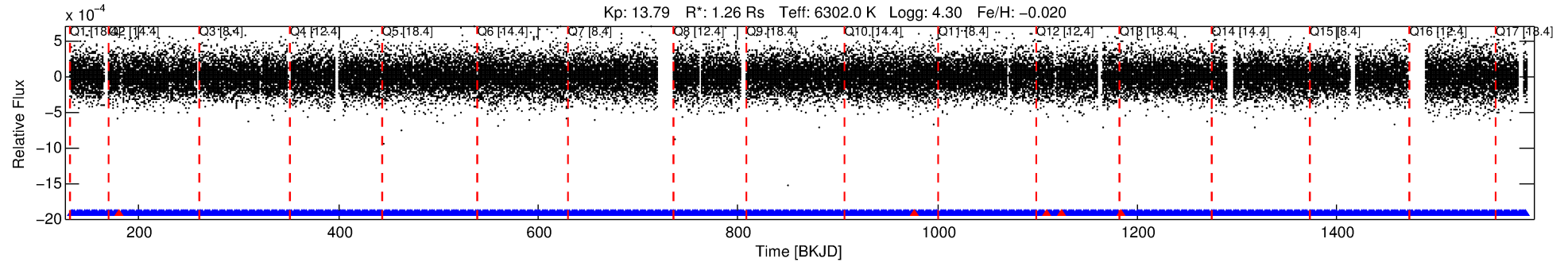
Ephemeris Match Information For 009536048-01

No Significant Match Found

DV One-Page Summary

KIC: 9536048 Candidate: 1 of 1 Period: 1.856 d

KOI: K07186 Corr: No Ephemeris Match



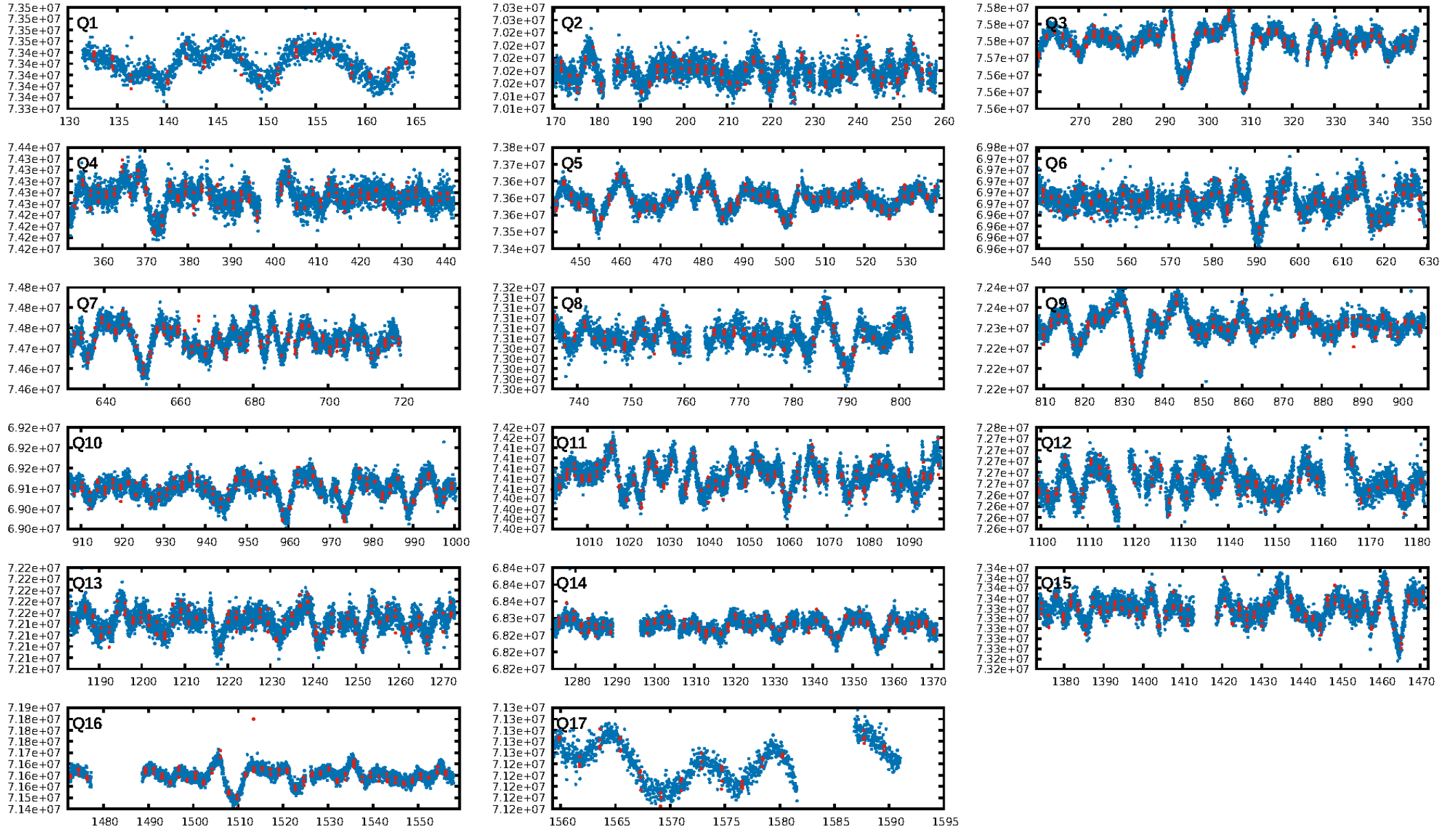
DV Fit Results:

Period = 1.85594 [0.00001] d
Epoch = 132.6448 [0.0015] BKJD
Rp/R* = 0.0084 [0.0025]
a/R* = 7.49 [11.58]
b = 0.90 [0.33]
Seff = 2332.62 [948.13]
Teq = 1772 [180] K
Rp = 1.15 [0.50] Re
a = 0.0310 [0.0083] AU
Ag = 5.07 [3.96] [1.03σ]
Teffp = 4110 [712] K [3.19σ]

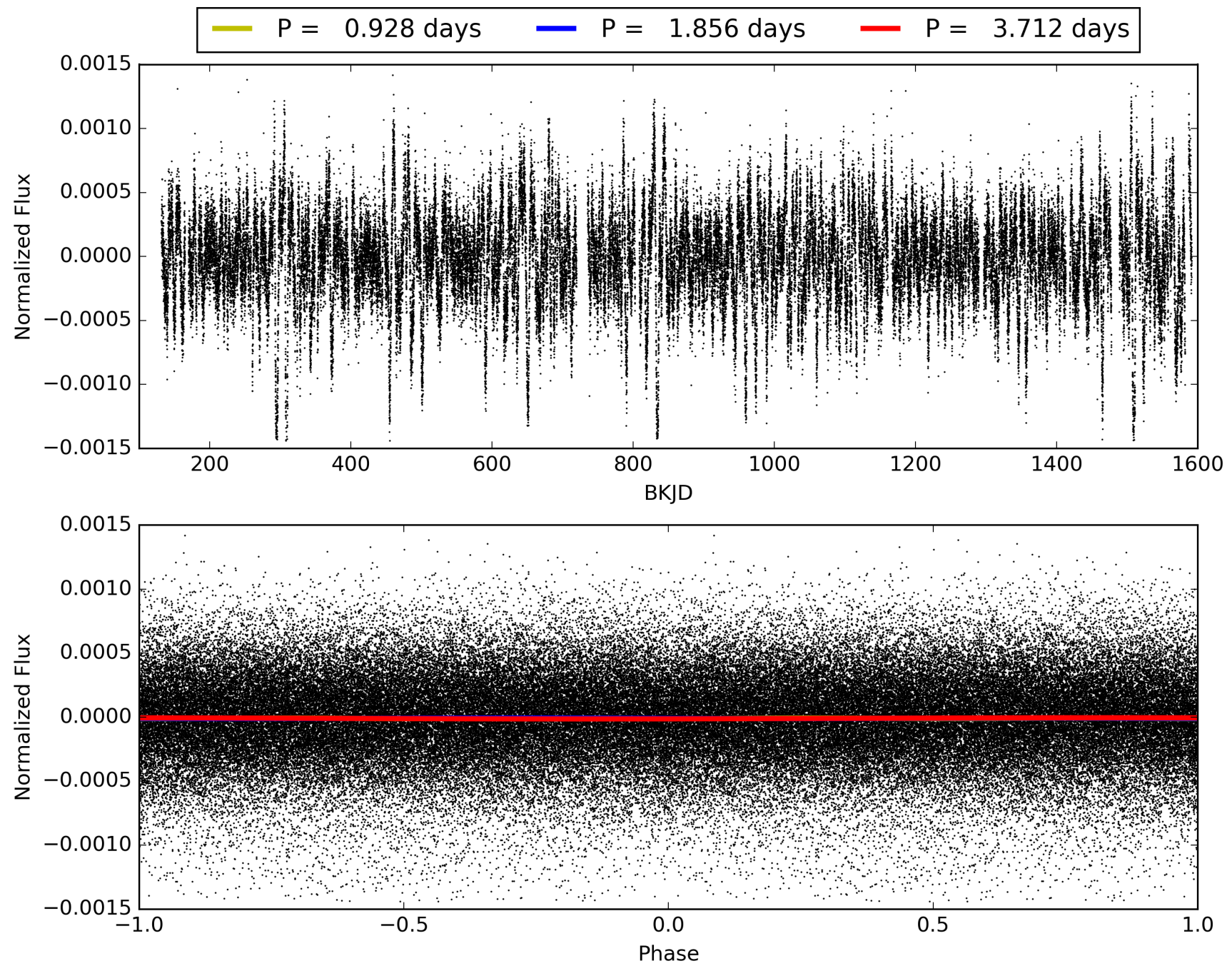
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.46e-14
RollingBand-fgt: 0.99 [681/686]
GhostDiagnostic-chr: 1.947
Centroid-sig: 0.0%
Centroid-so: 8.418 arcsec [6.56σ]
OotOffset-rm: 4.690 arcsec [6.23σ]
KicOffset-rm: 4.677 arcsec [7.46σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009536048-01, PDC Light Curves

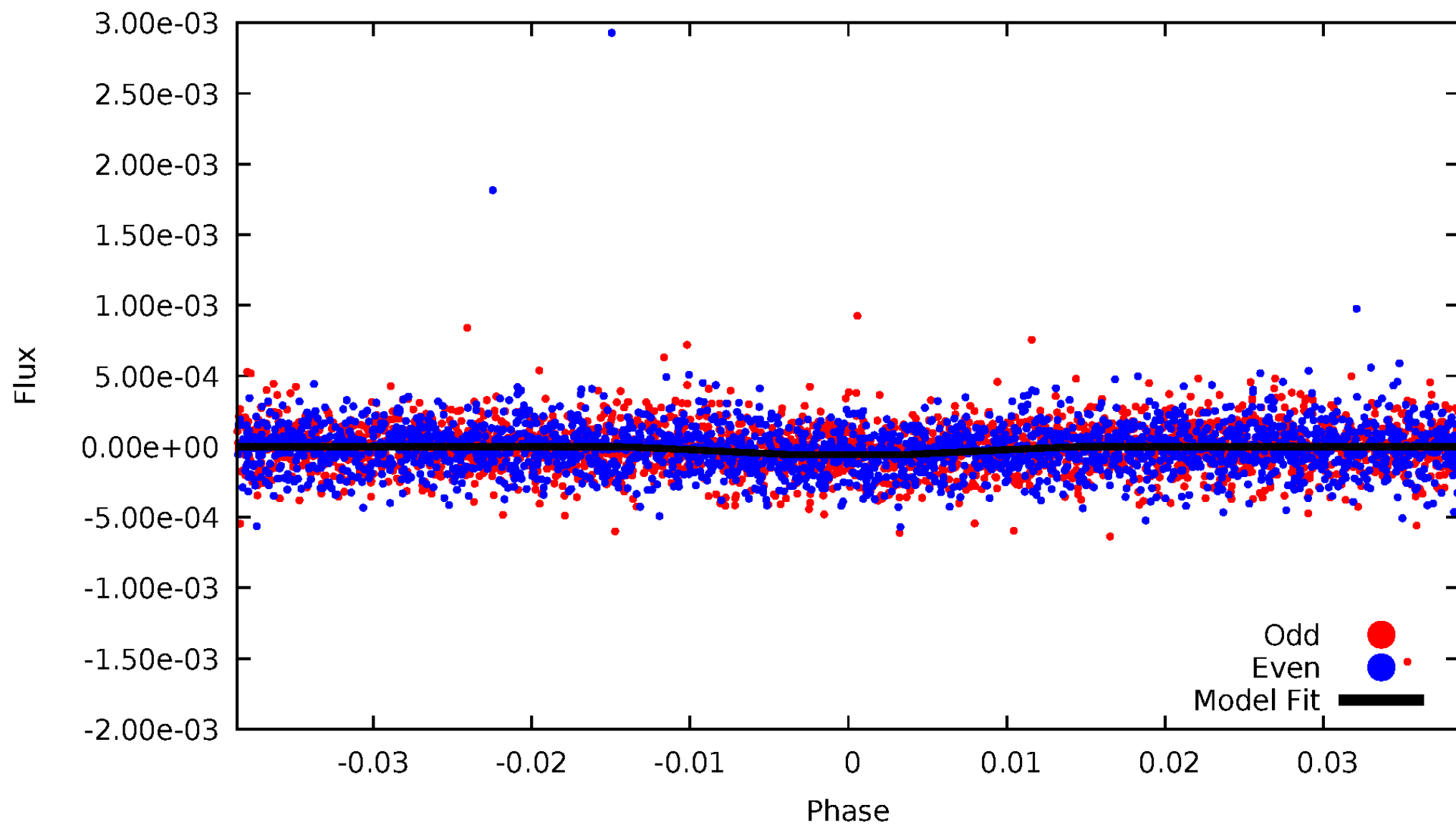


TCE 009536048-01



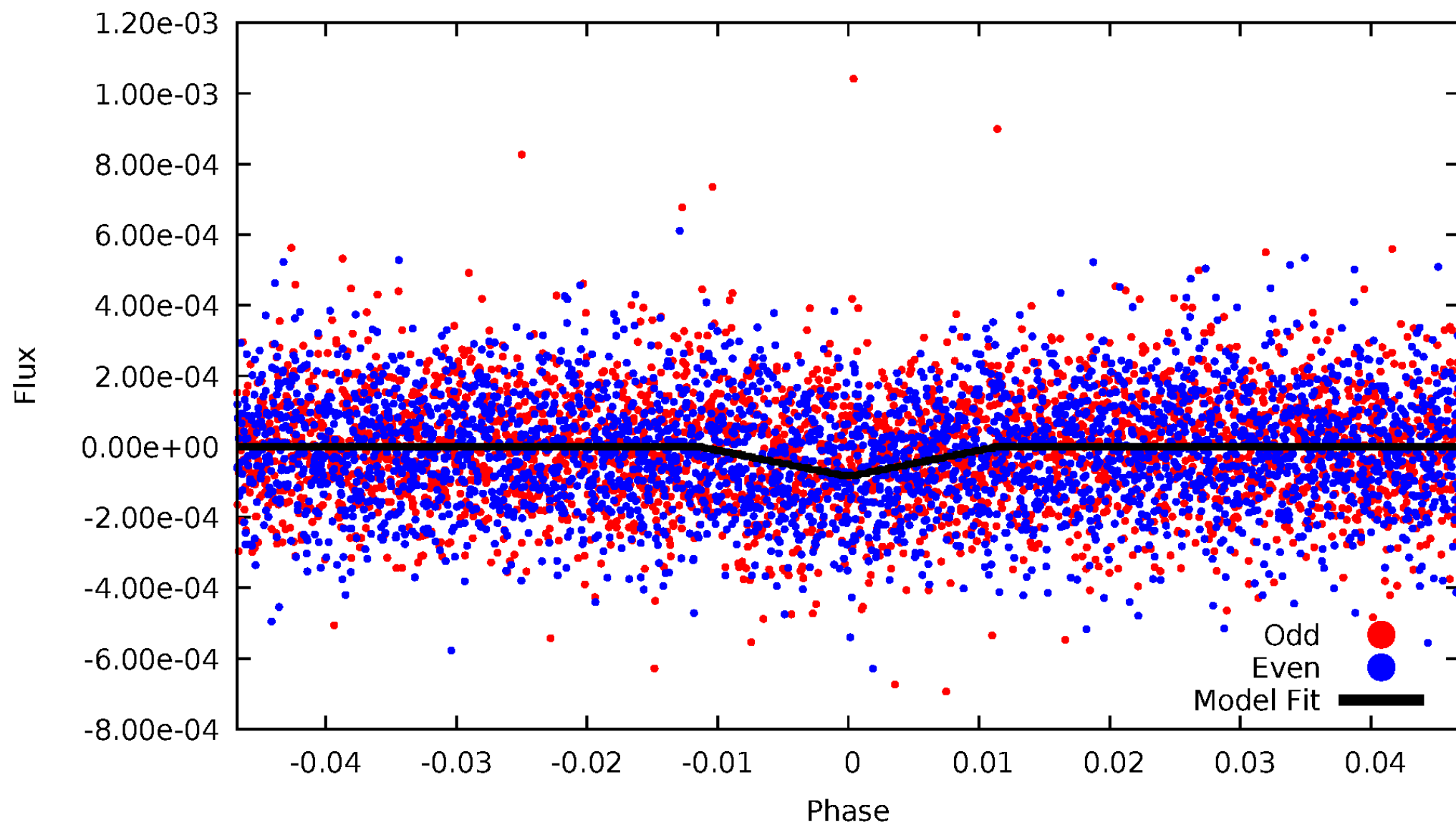
DV Odd/Even

TCE 009536048-01



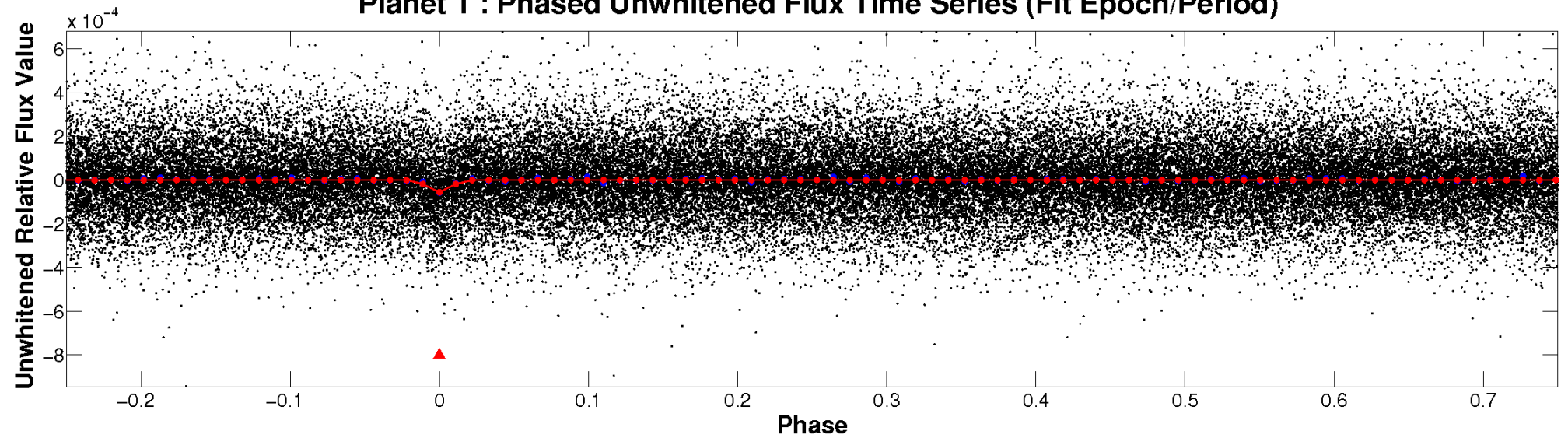
ALT Odd/Even

TCE 009536048-01

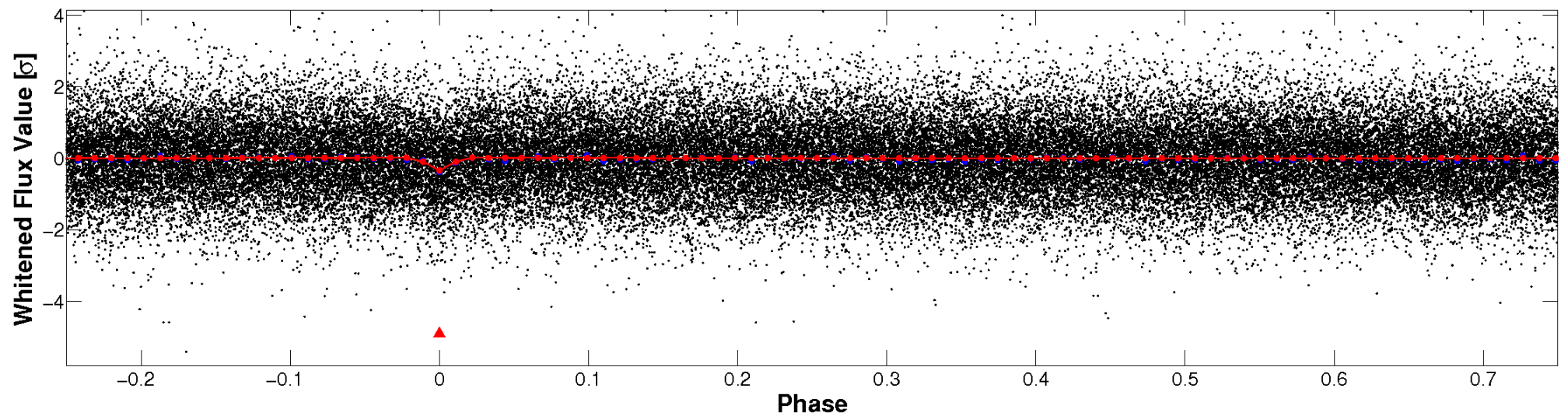


Non-Whitened Vs. Whitened Light Curve

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

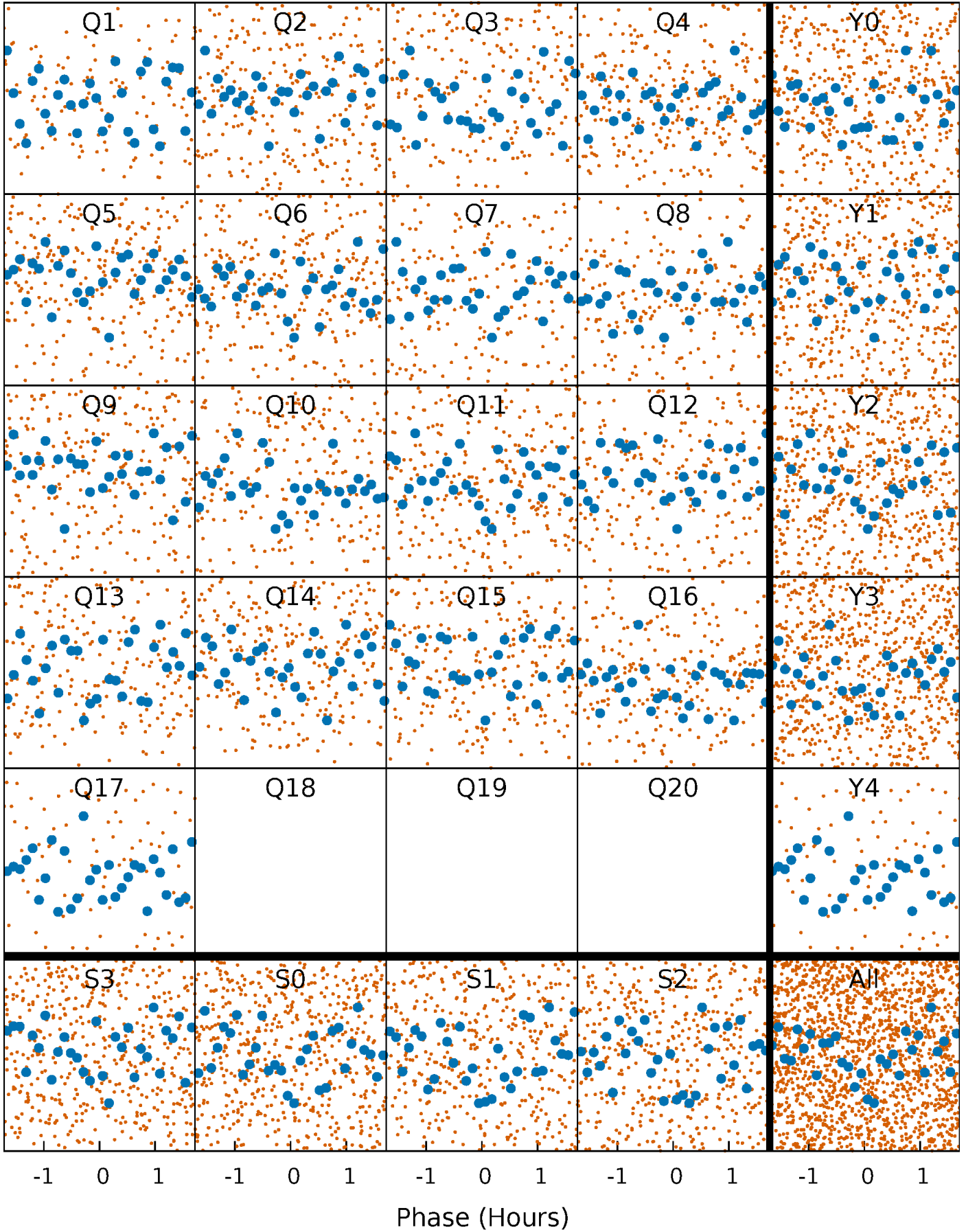


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



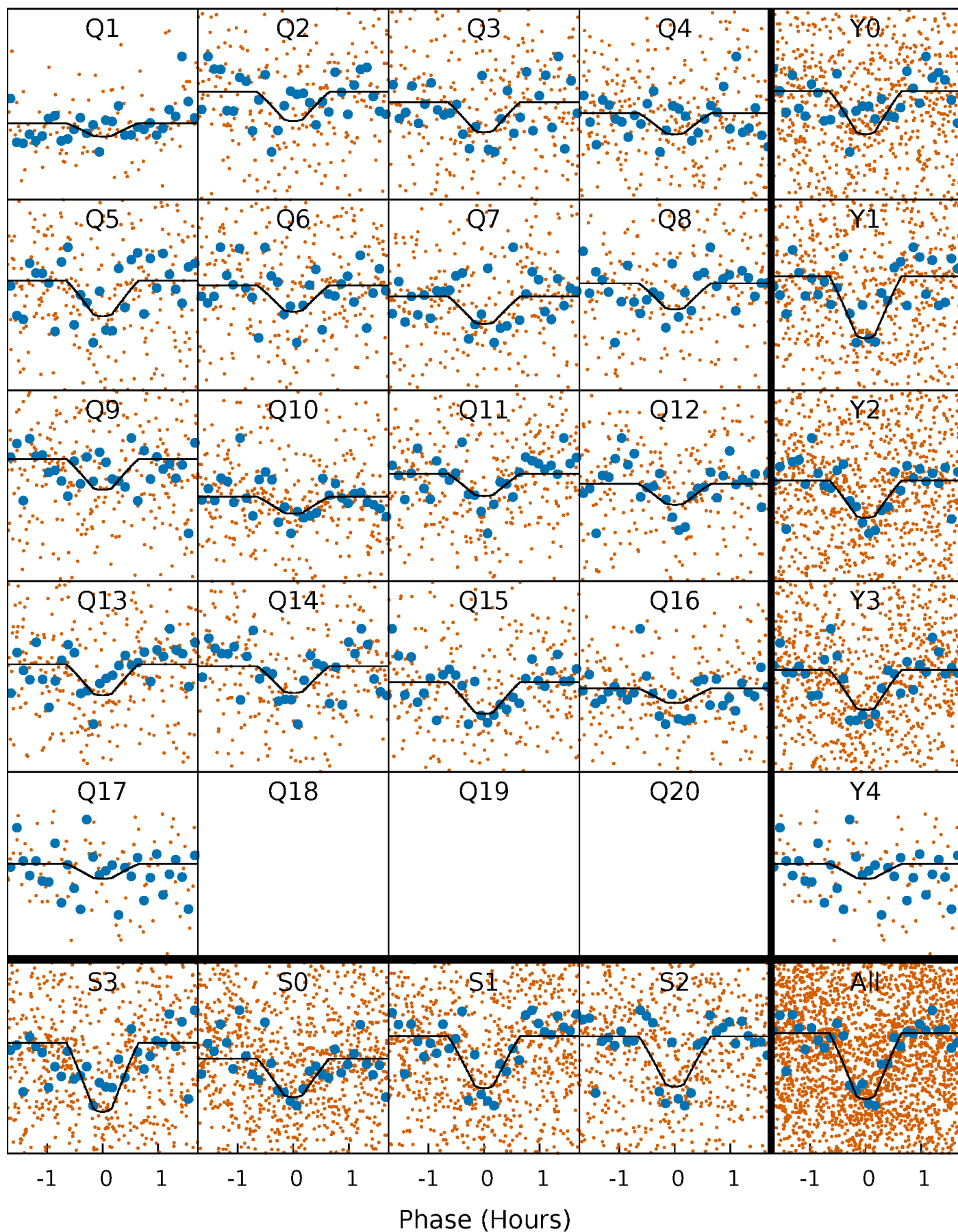
PDC Quarter-Phased Transit Curves

TCE 009536048-01 P= 1.855936 Days $T_0=132.644777$ (BKJD)



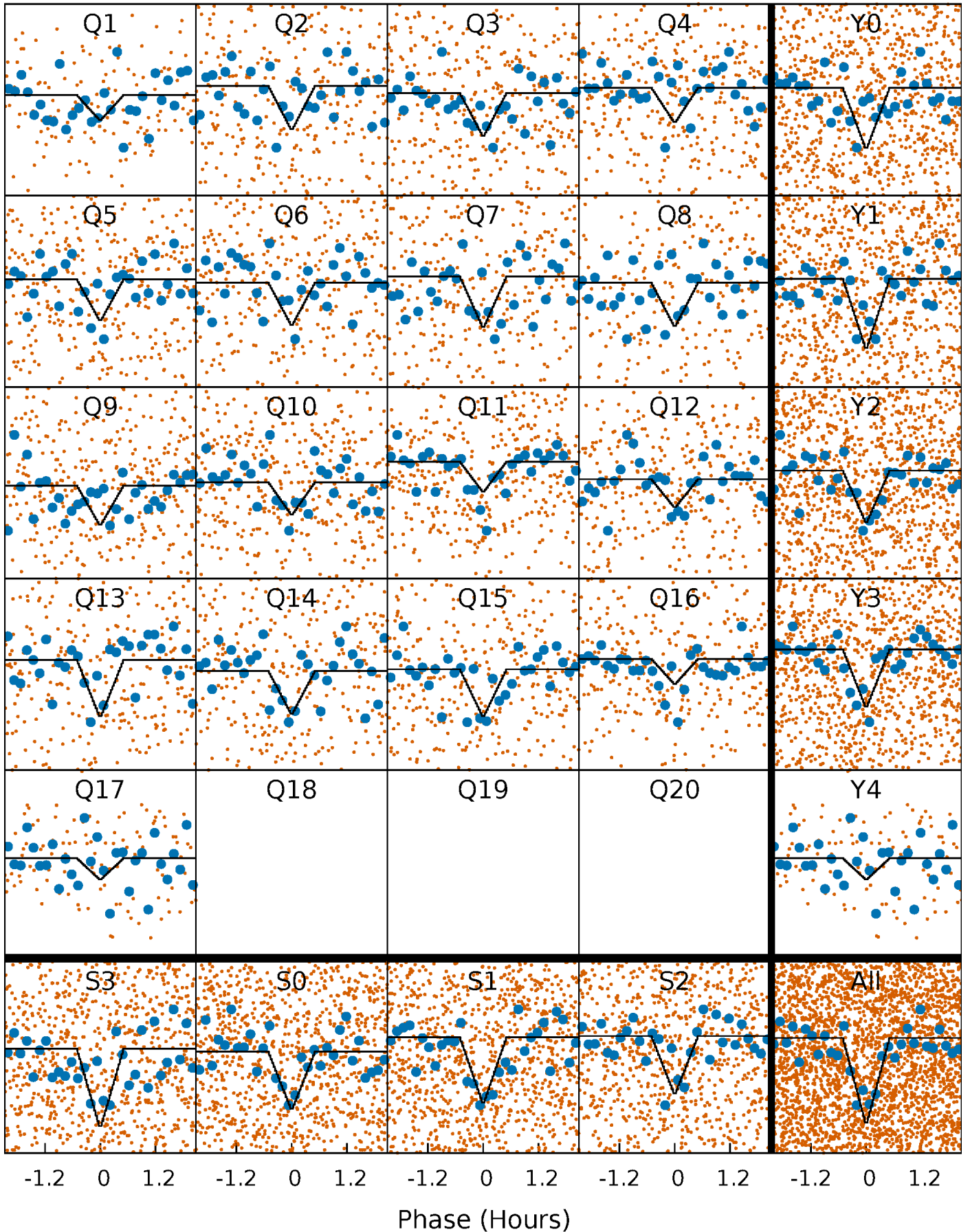
DV Quarter-Phased Transit Curves

TCE 009536048-01 P= 1.855936 Days $T_0=132.644777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

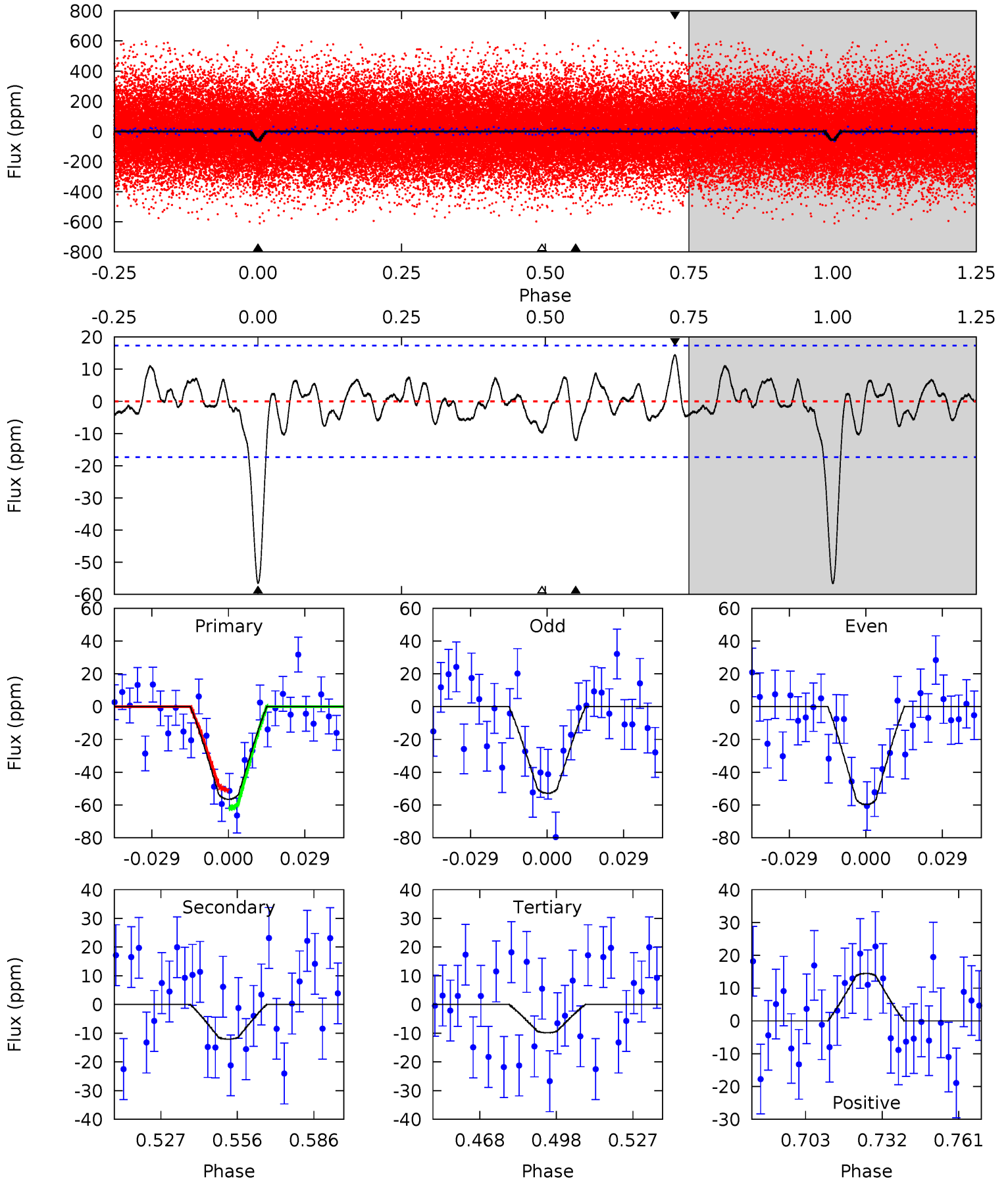
TCE 009536048-01 P= 1.855941 Days $T_0=132.643619$ (BKJD)



DV Model-Shift Uniqueness Test

009536048-01, P = 1.855936 Days, E = 130.788841 Days

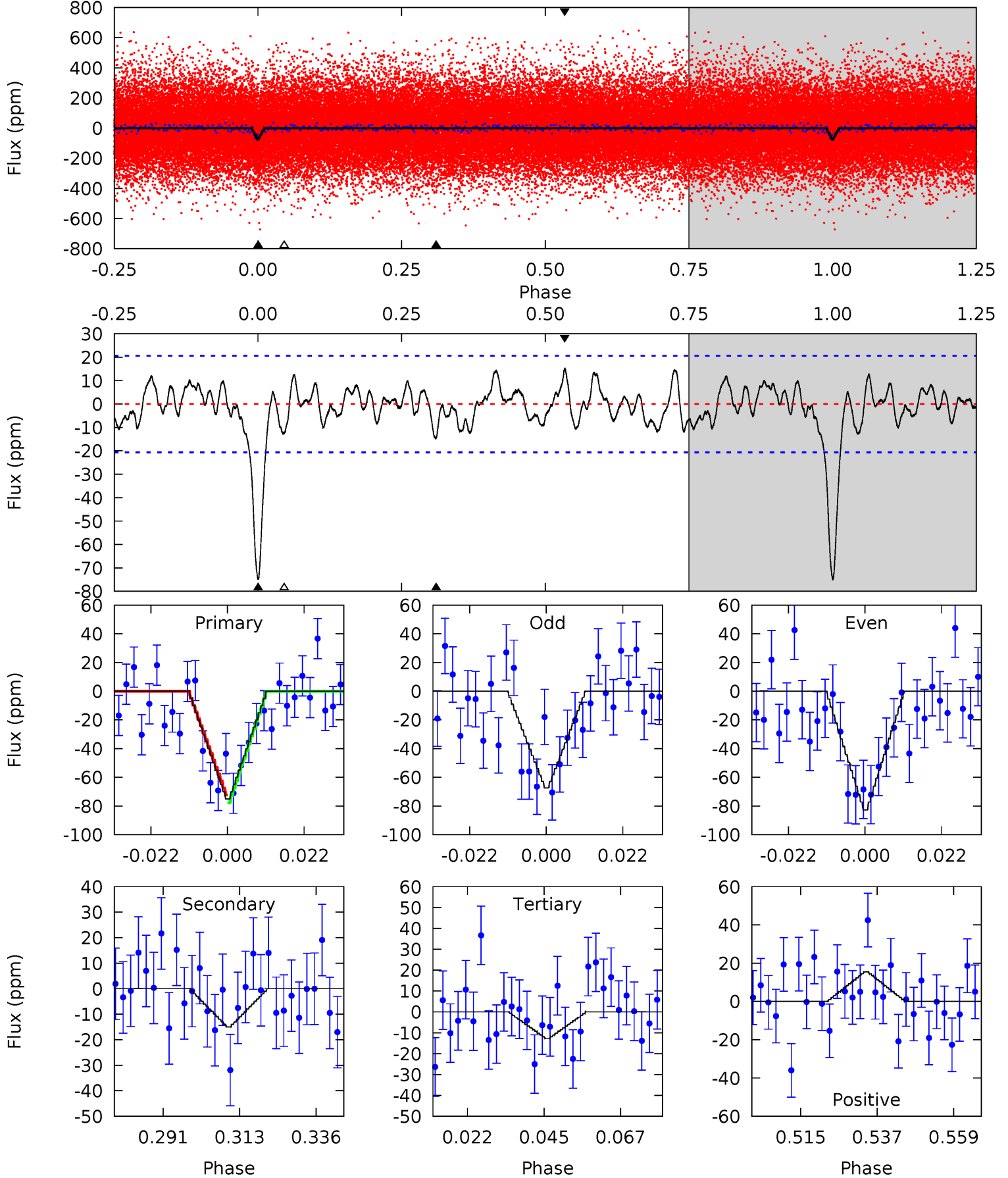
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.35	2.72	4.01	4.82	2.18	1.25	13.0	11.7	0.63	-0.66	0.95	0.92	0.20	1.53



Alt Model-Shift Uniqueness Test

009536048-01, P = 1.855941 Days, E = 130.787678 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	3.54	3.01	3.65	4.87	2.28	1.48	14.7	14.1	0.54	-0.11	1.82	0.95	0.17	0.65



Stellar Parameters For KIC 009536048

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R \text{ (R}_{\odot})$	$M(\text{M}_{\odot})$	$p_{\star} \text{ (g}\cdot\text{cm}^{-3})$
	6302^{+170}_{-208}	$4.299^{+0.112}_{-0.208}$	$-0.020^{+0.250}_{-0.300}$	$1.258^{+0.404}_{-0.218}$	$1.150^{+0.181}_{-0.148}$	$0.814^{+0.419}_{-0.440}$
	+3%/-3%	+3%/-5%	+1250%/-1500%	+32%/-17%	+16%/-13%	+51%/-54%
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 009536048-01 / KOI 7186.01

Detrend	Depth (ppm)	$R_p \text{ (R}_{\oplus})$	$T_{\text{max}} \text{ (K)}$	$T_{\text{obs}} \text{ (K)}$	A_{obs}
DV	-12 ± 4	$1.18^{+0.44}_{-0.38}$	2515^{+188}_{-163}	4227^{+762}_{-521}	$4.523^{+5.338}_{-2.366}$
Alt.	-15 ± 4	$1.26^{+0.46}_{-0.36}$	2502^{+215}_{-139}	4291^{+692}_{-490}	$4.825^{+5.302}_{-2.417}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

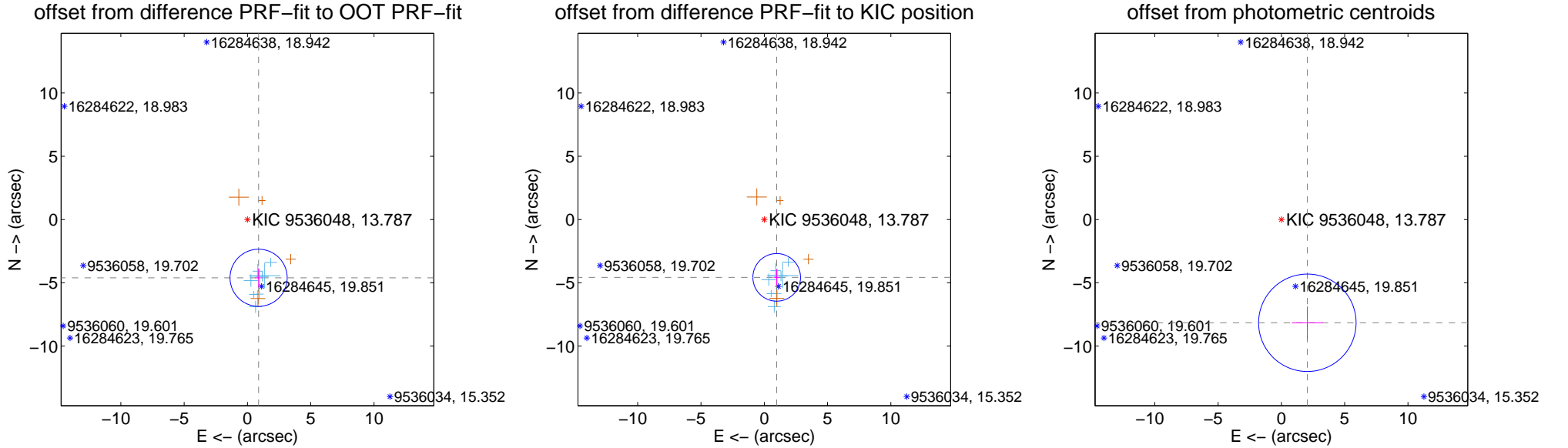
DV Centroid Data

Supplemental centroid analysis for 009536048-01. Kepler magnitude: 13.79. Transit SNR 10.25

There are 9 quarters with good PRF difference image offsets

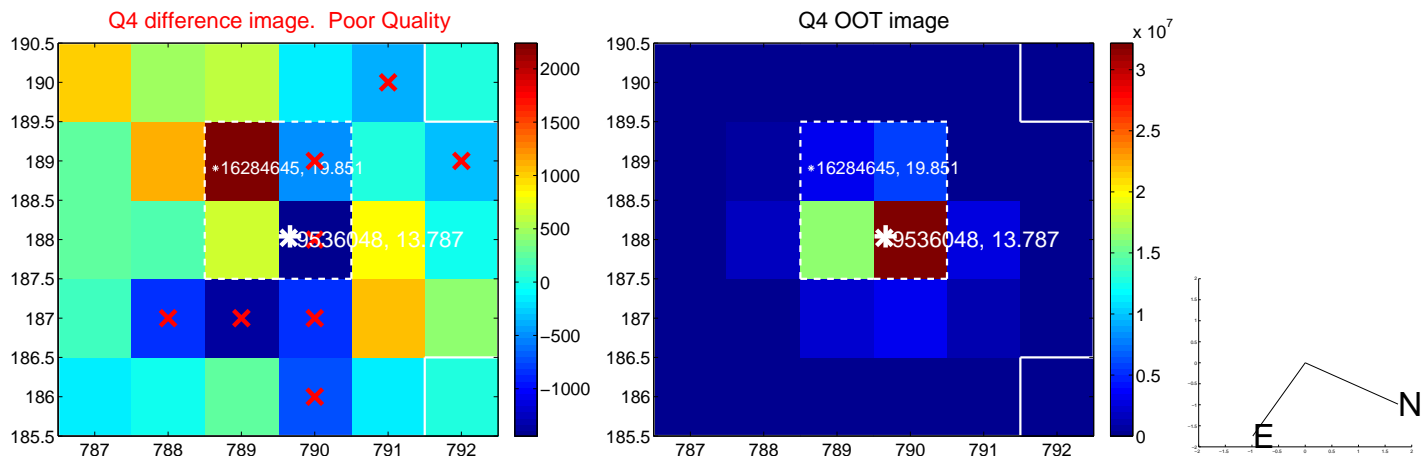
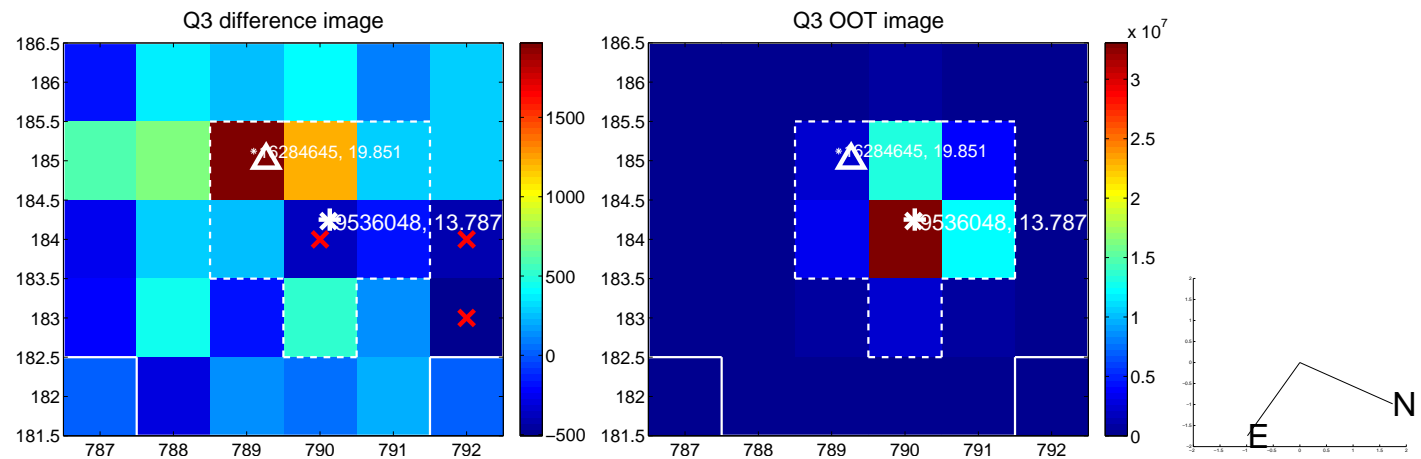
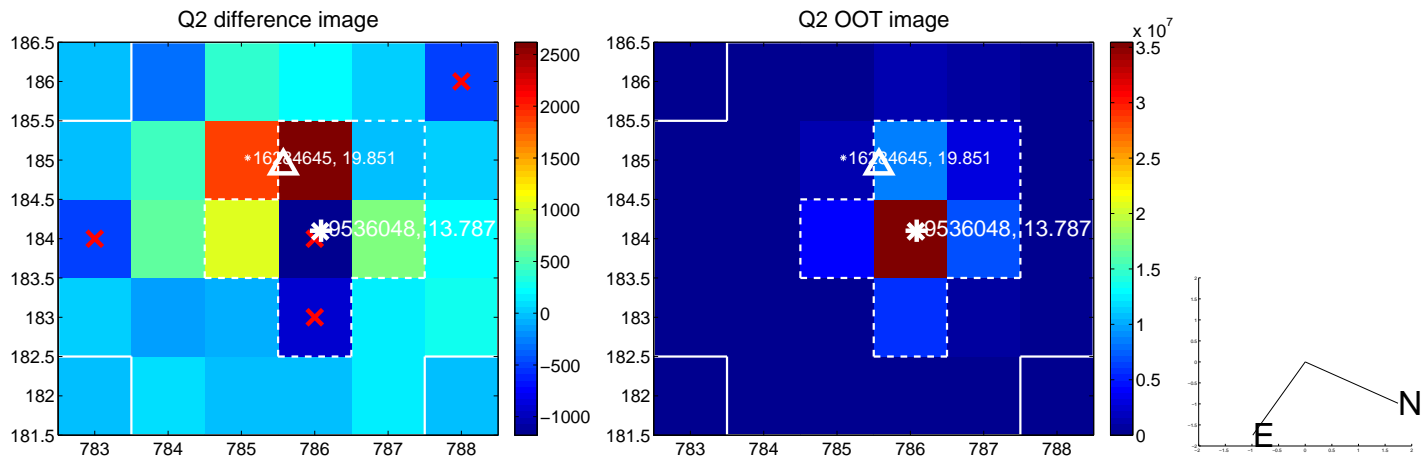
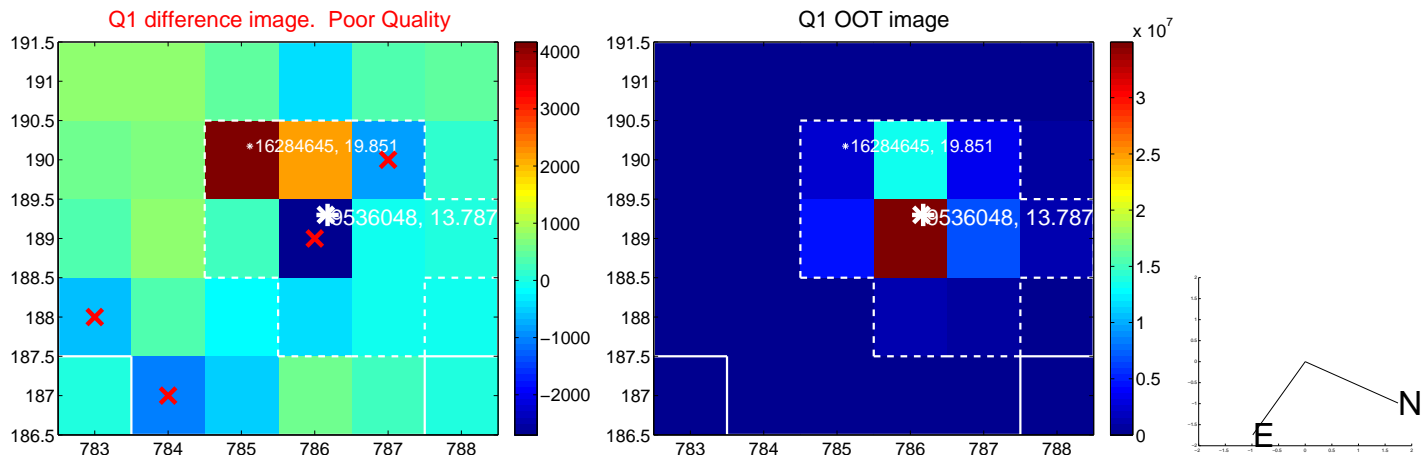
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.690 ± 0.753	6.23	-0.882 ± 0.275	-4.607 ± 0.752
PRF-fit source offset from KIC position	4.677 ± 0.627	7.46	-0.982 ± 0.237	-4.573 ± 0.634
photometric centroid source offset	8.42 ± 1.28	6.56	-2.05 ± 1.23	-8.16 ± 1.29

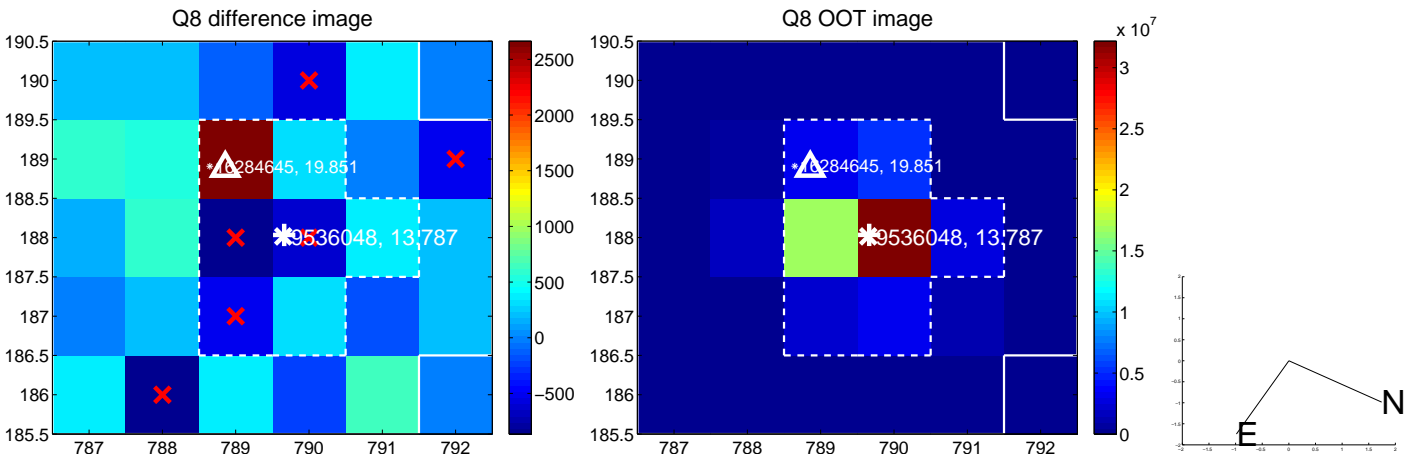
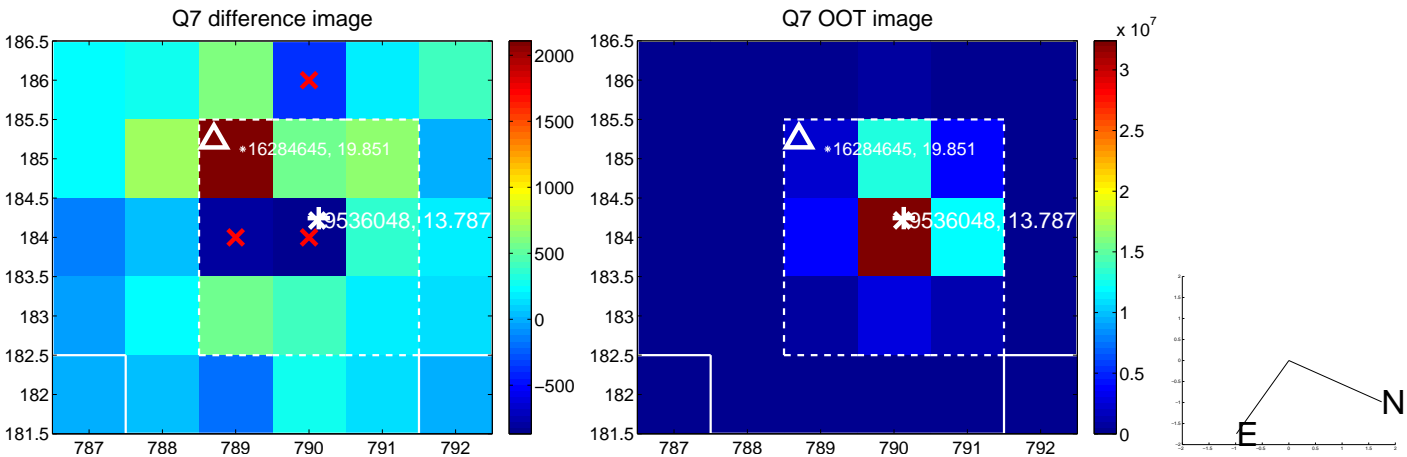
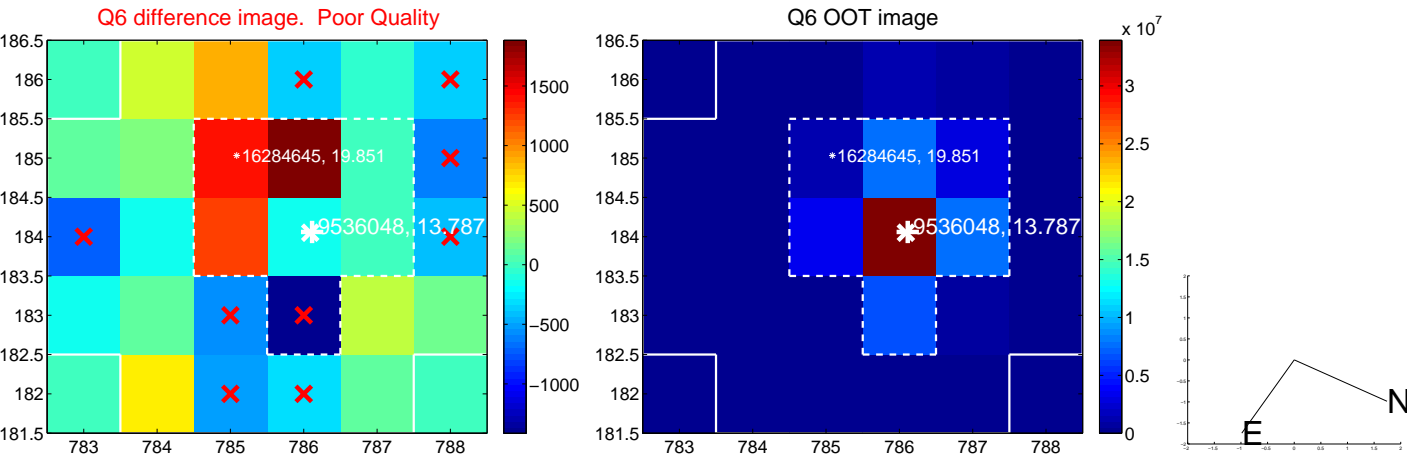
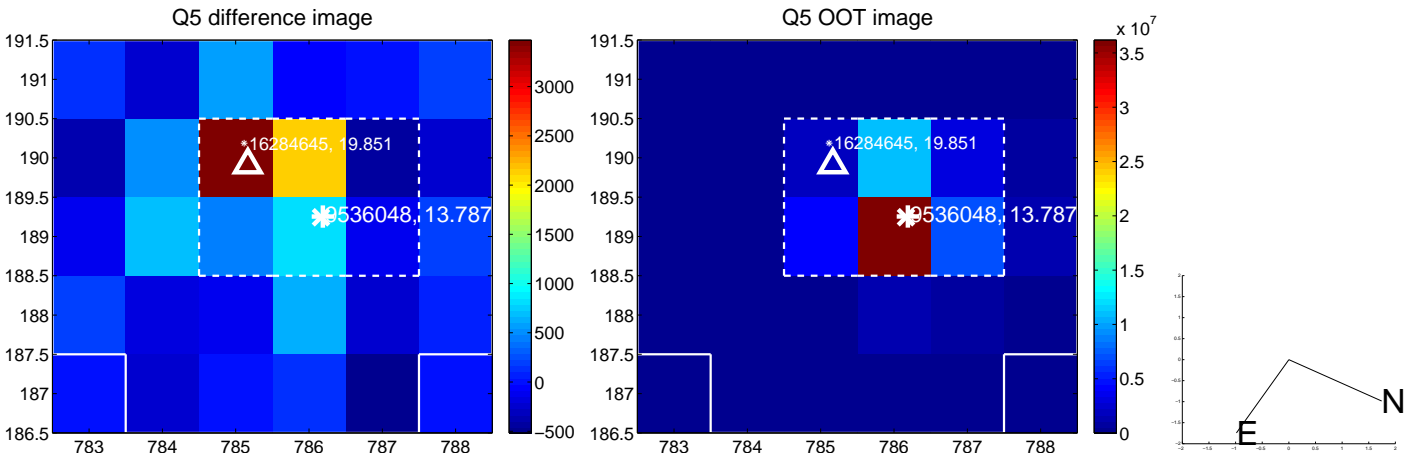


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

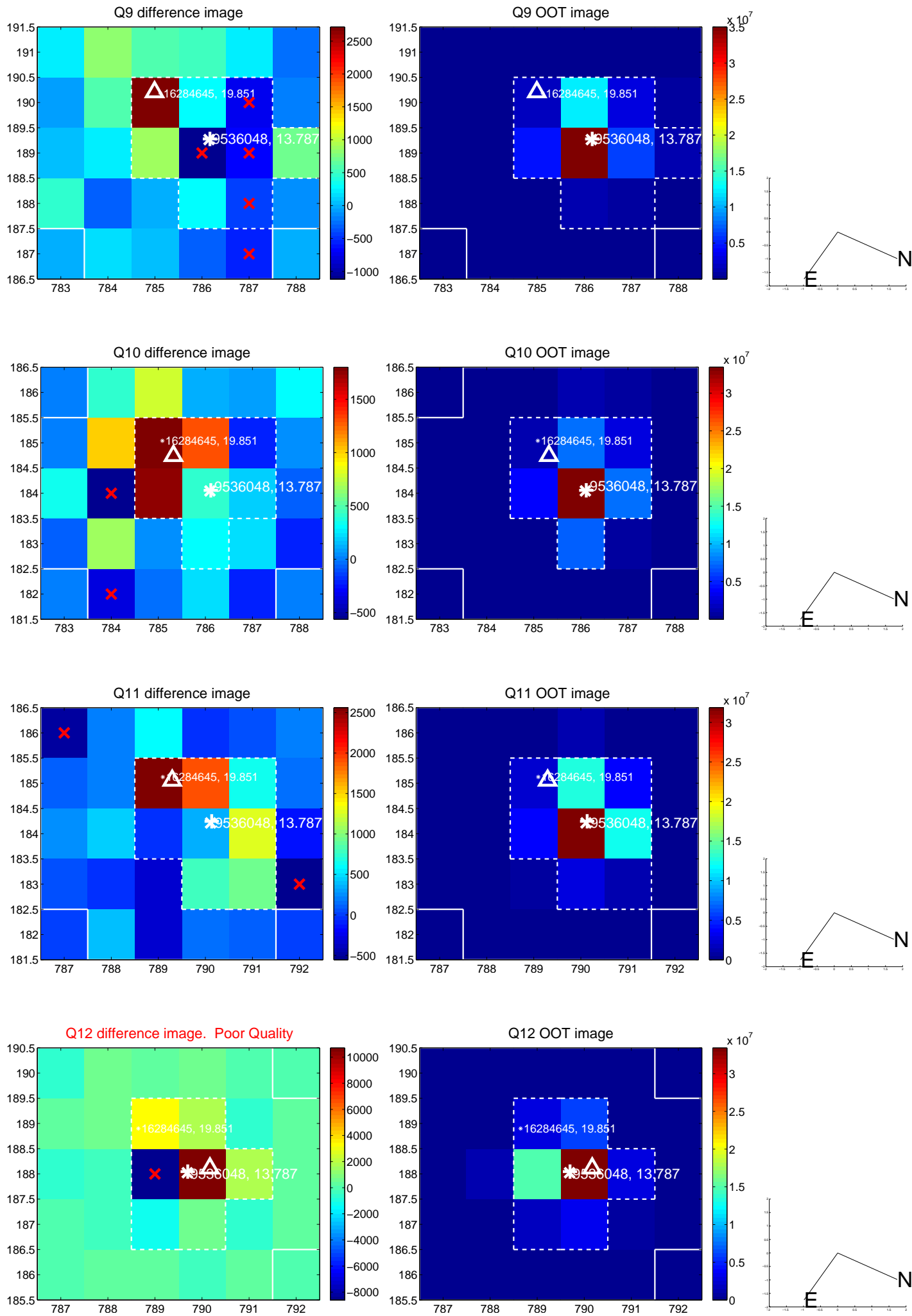
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



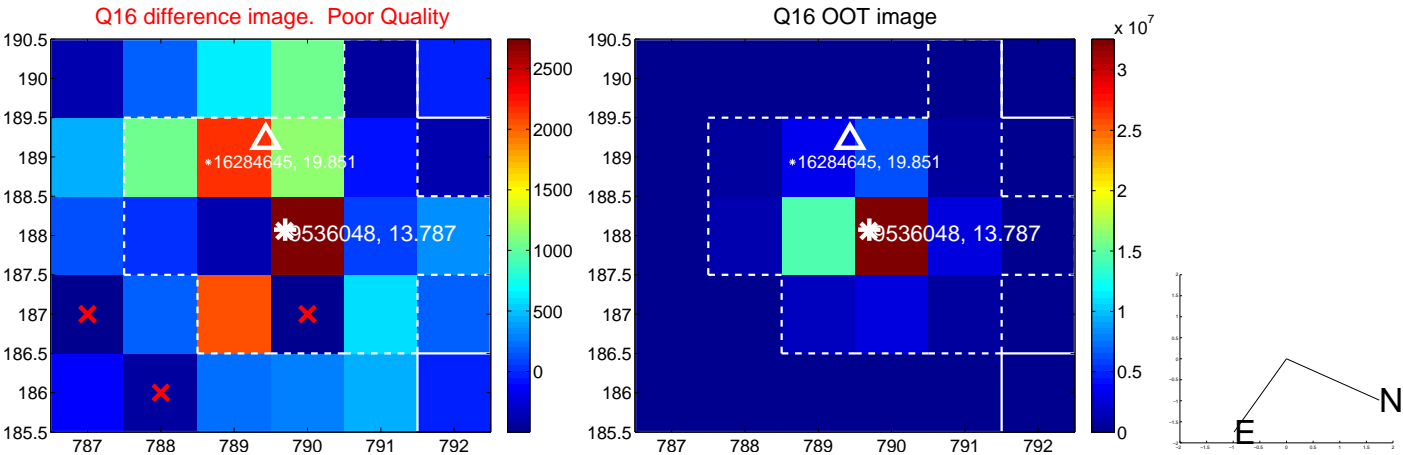
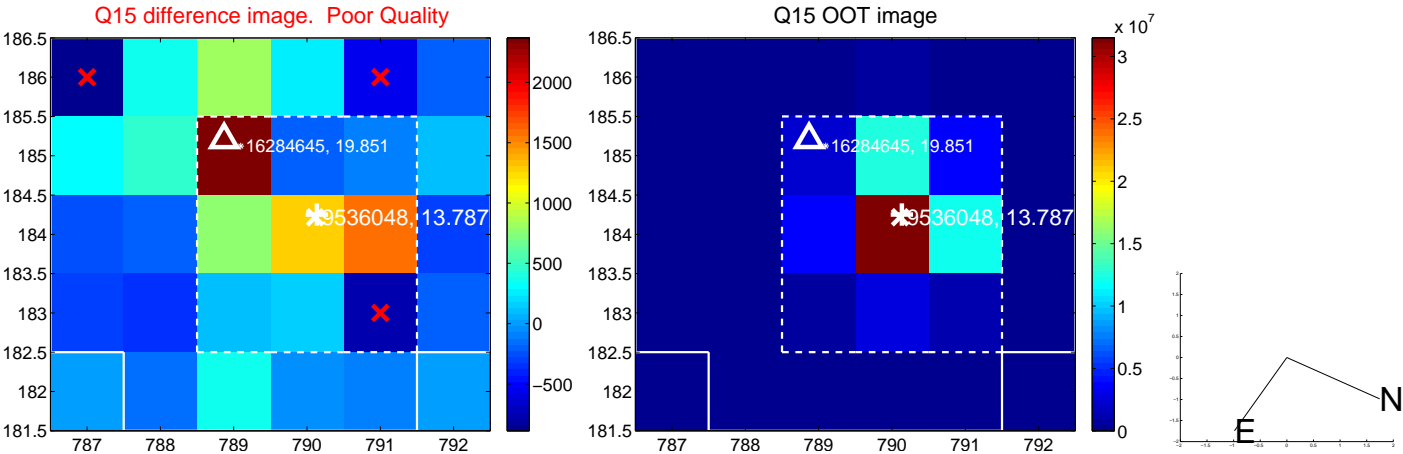
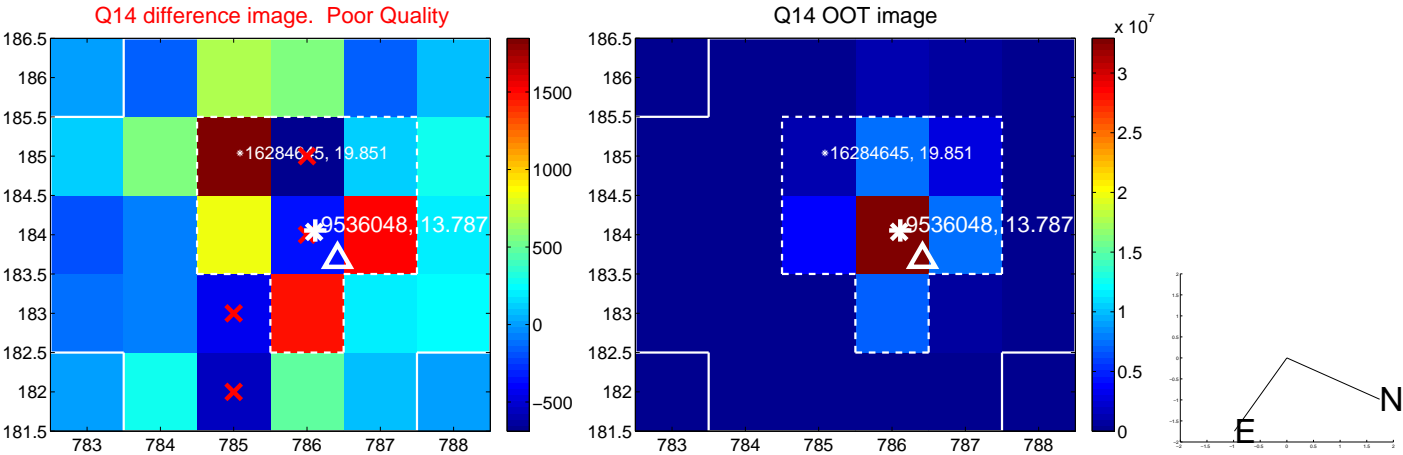
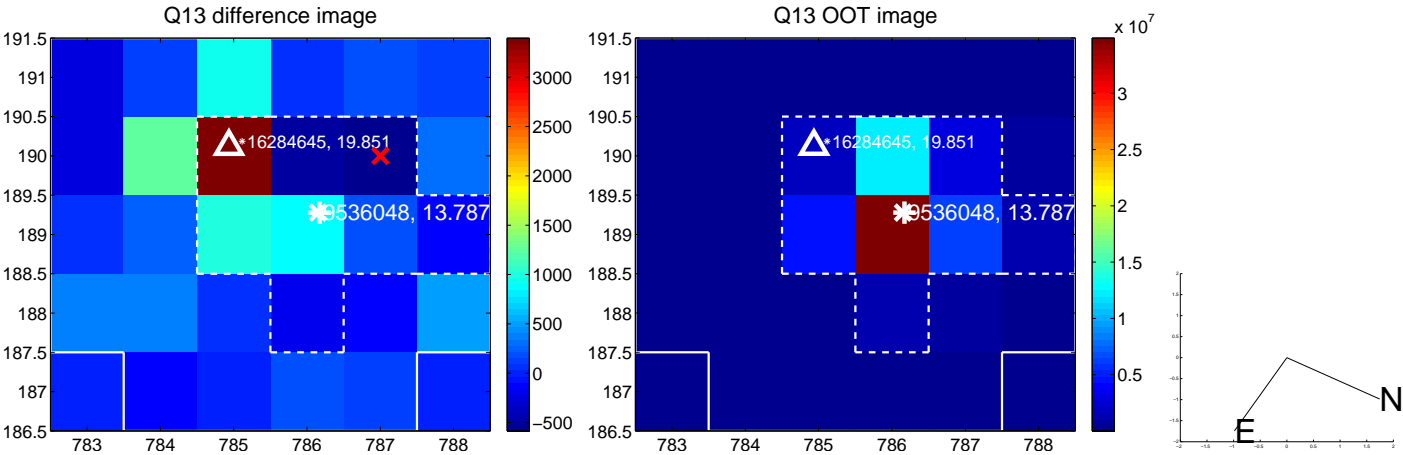
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



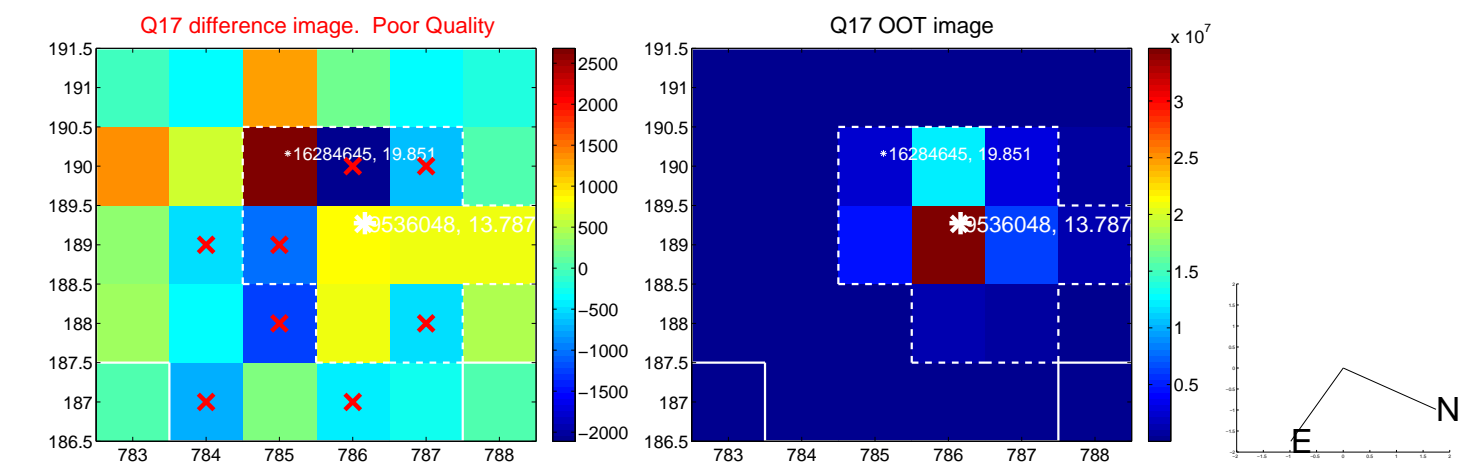
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



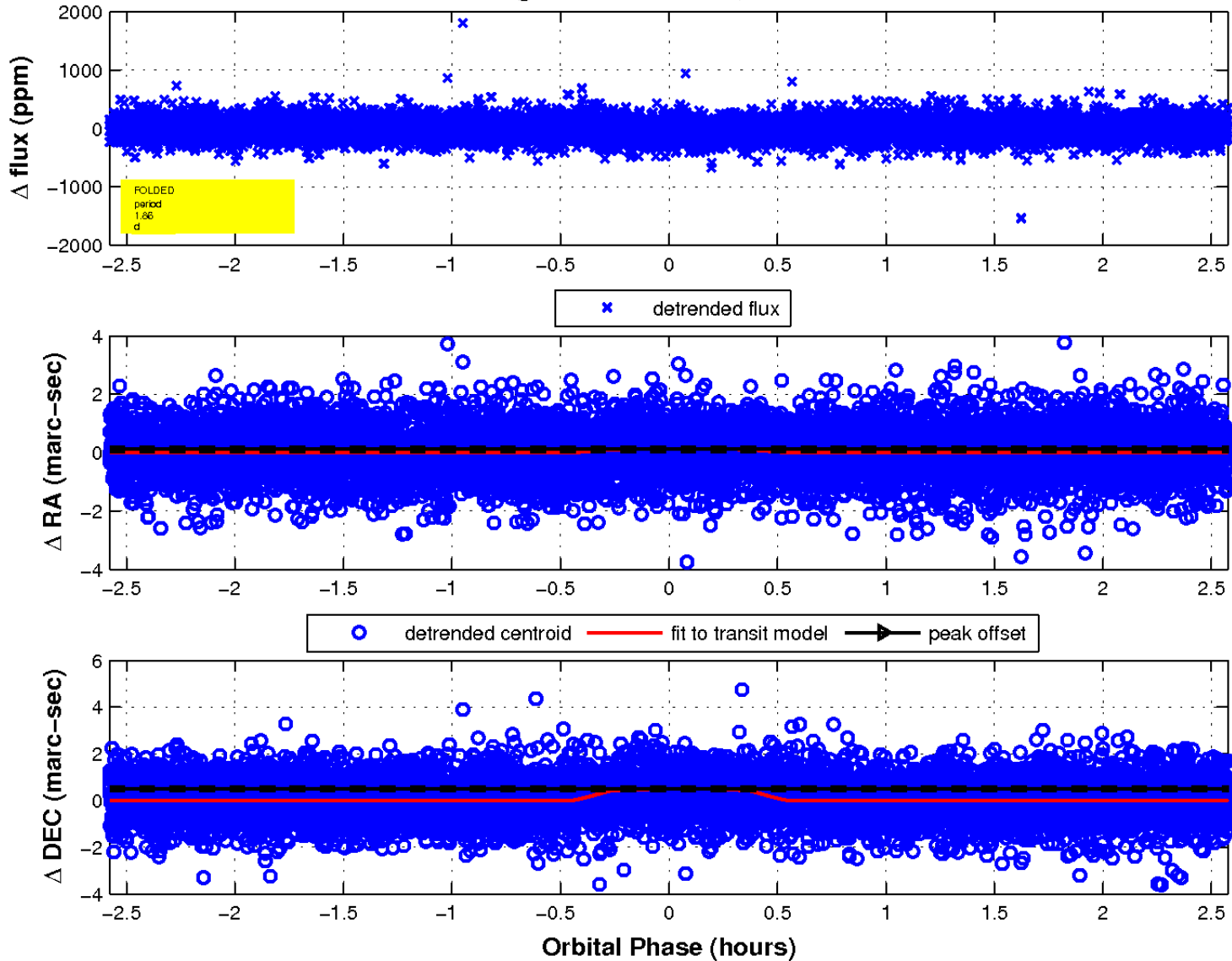
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

