

KIC 007204233

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})
007204233-01	OBS	5371.01	33.304033	149.455298	302.9	2.916	8.2	9.5	0.71	4899	1.47	7.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007204233-01	OBS	FP	0.05	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.

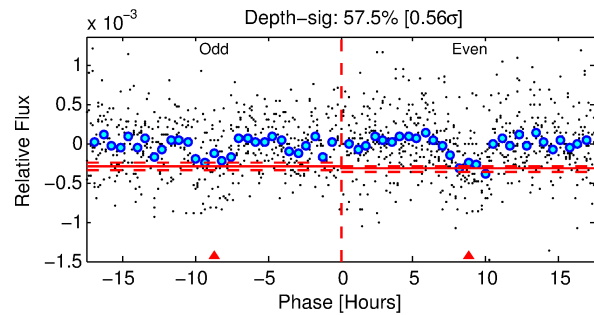
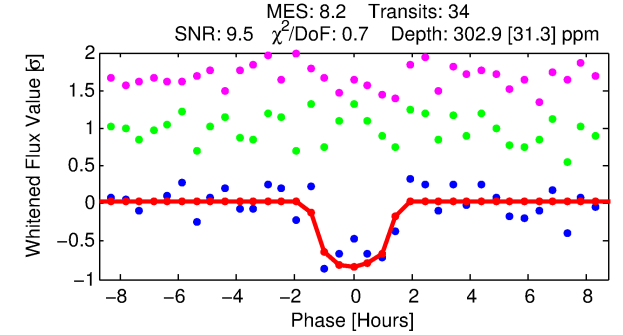
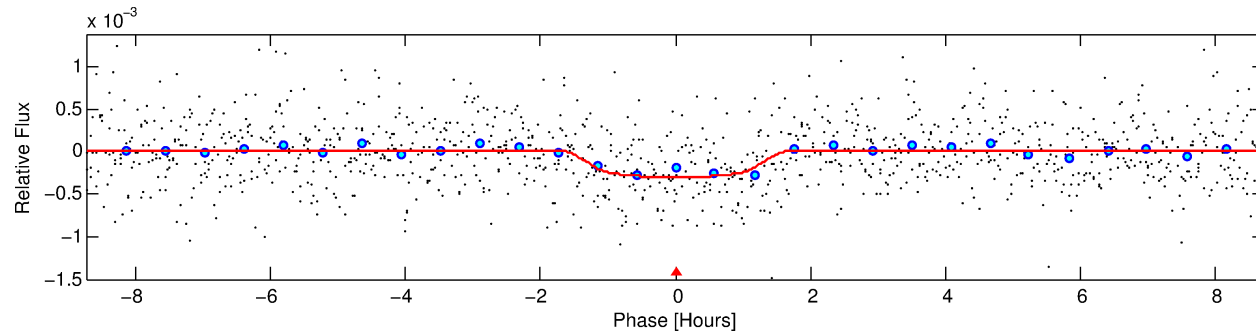
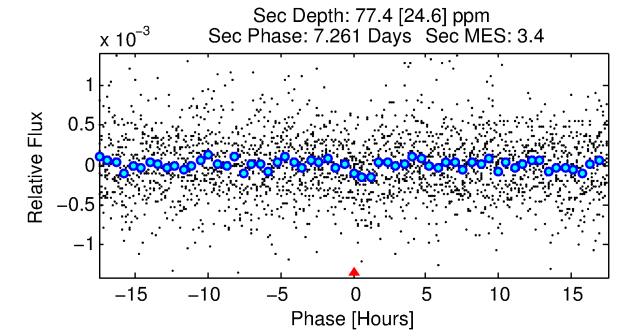
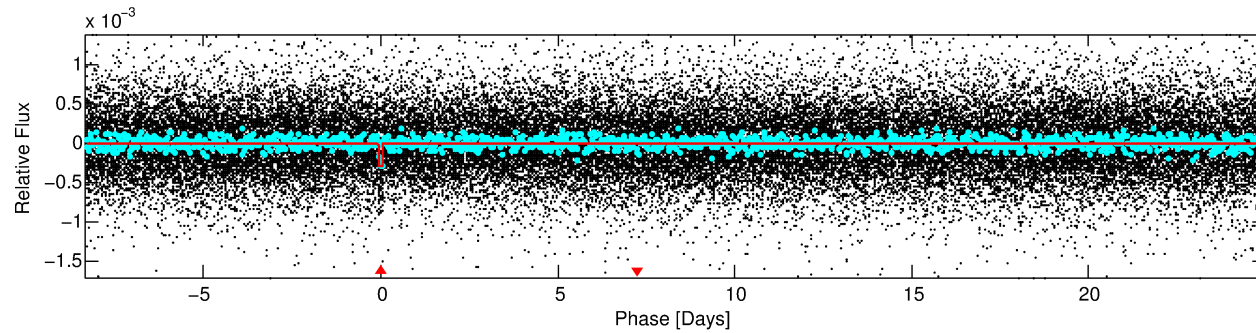
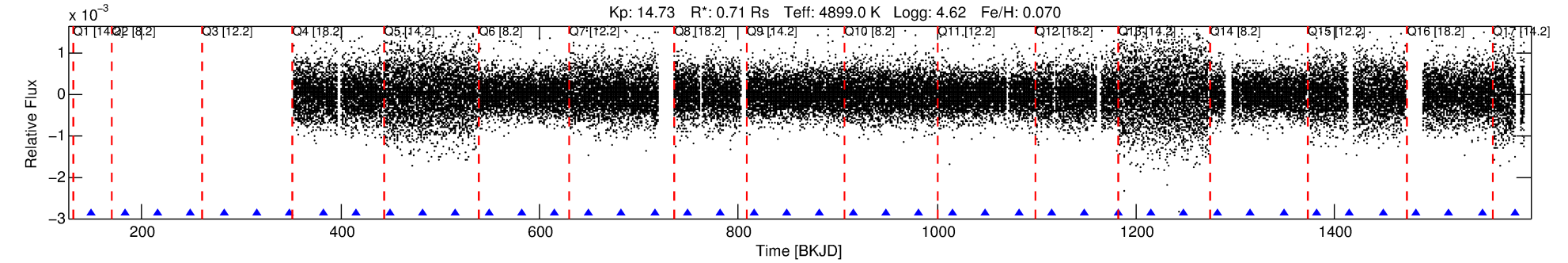
Ephemeris Match Information For 007204233-01

No Significant Match Found

DV One-Page Summary

KIC: 7204233 Candidate: 1 of 1 Period: 33.304 d

KOI: K05371.01 Corr: 0.967



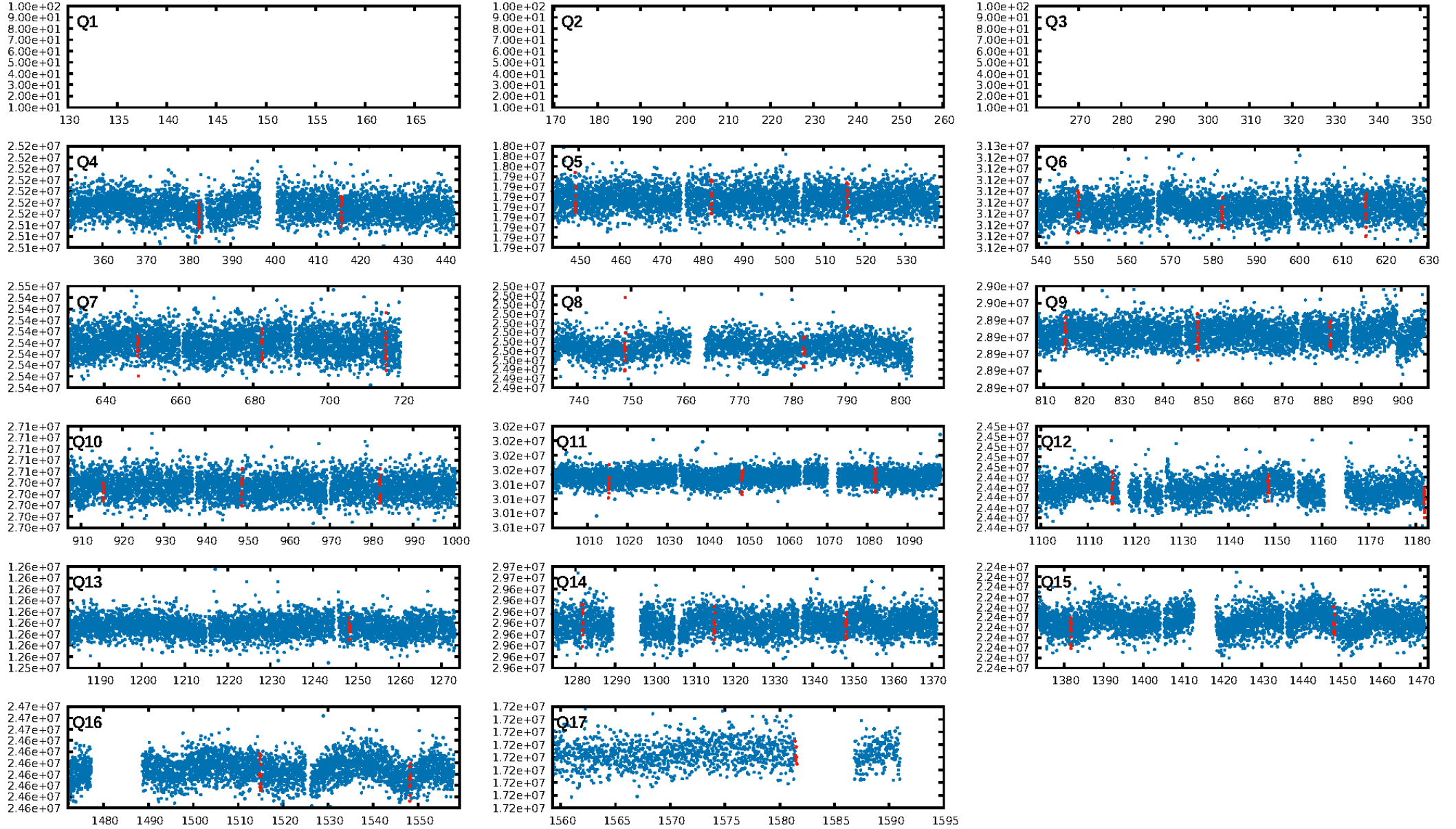
DV Fit Results:

Period = 33.30403 [0.00035] d
Epoch = 149.4553 [0.0091] BKJD
Rp/R* = 0.0189 [0.0158]
a/R* = 45.99 [143.55]
b = 0.87 [0.88]
Seff = 7.54 [1.50]
Teq = 423 [21] K
Rp = 1.47 [1.24] Re
a = 0.1865 [0.0189] AU
Ag = 682.41 [1161.12] [0.59σ]
Teffp = 3339 [1421] K [2.05σ]

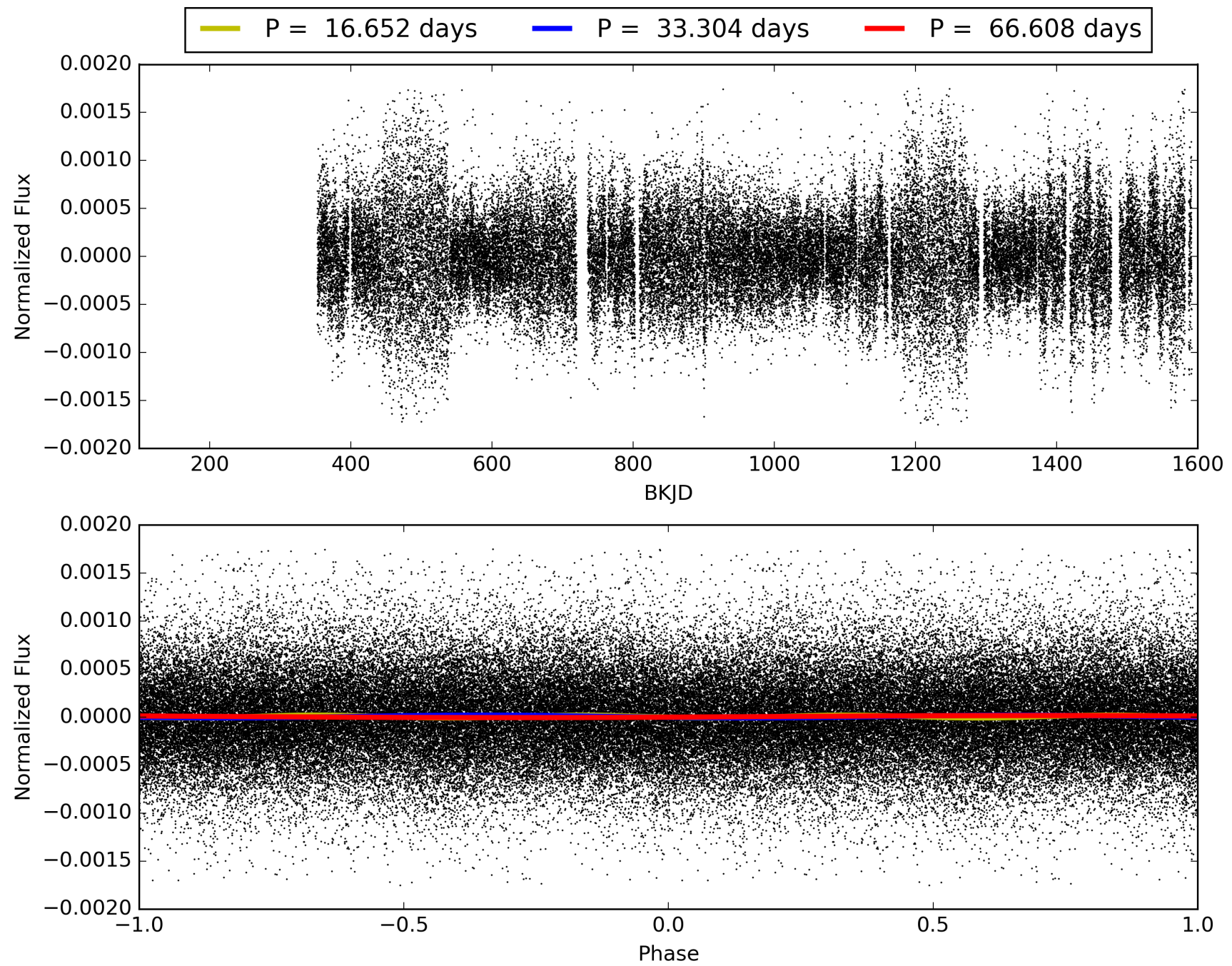
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.14e-17
RollingBand-fgt: 1.00 [33/33]
GhostDiagnostic-chr: 3.025
Centroid-sig: N/A
Centroid-so: 2.656 arcsec [1.84σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [13/13]

TCE 007204233-01, PDC Light Curves

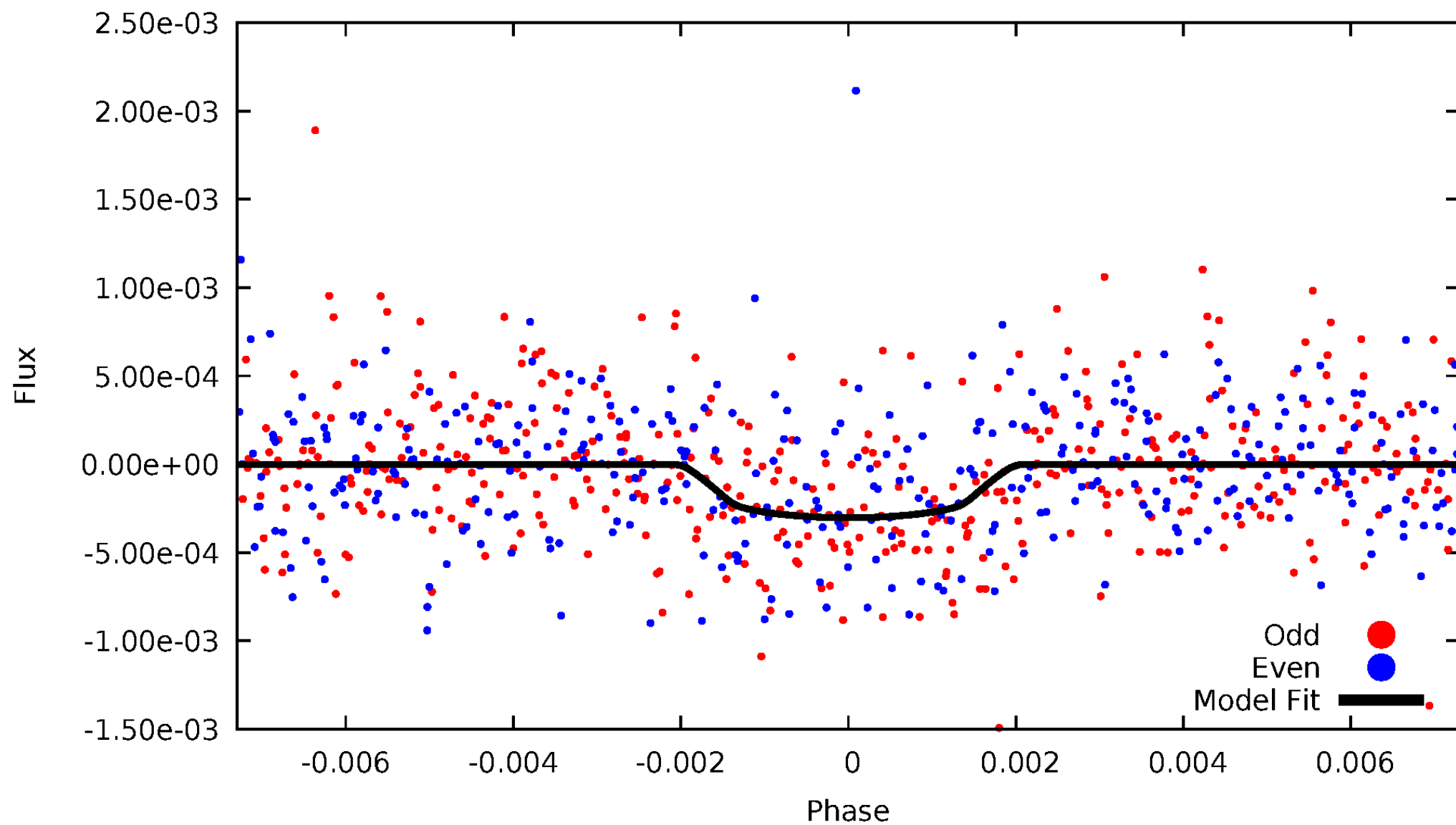


TCE 007204233-01



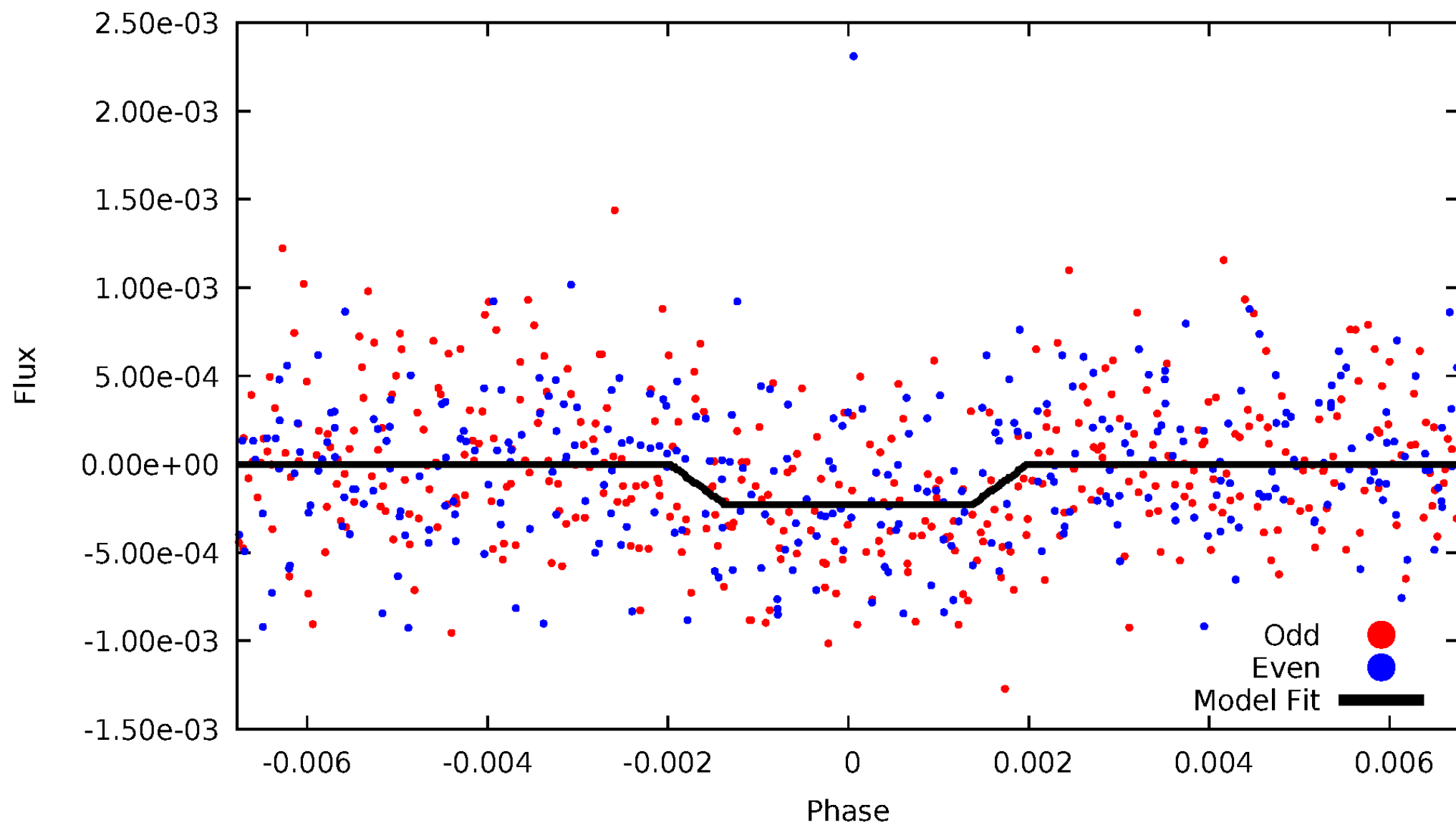
DV Odd/Even

TCE 007204233-01



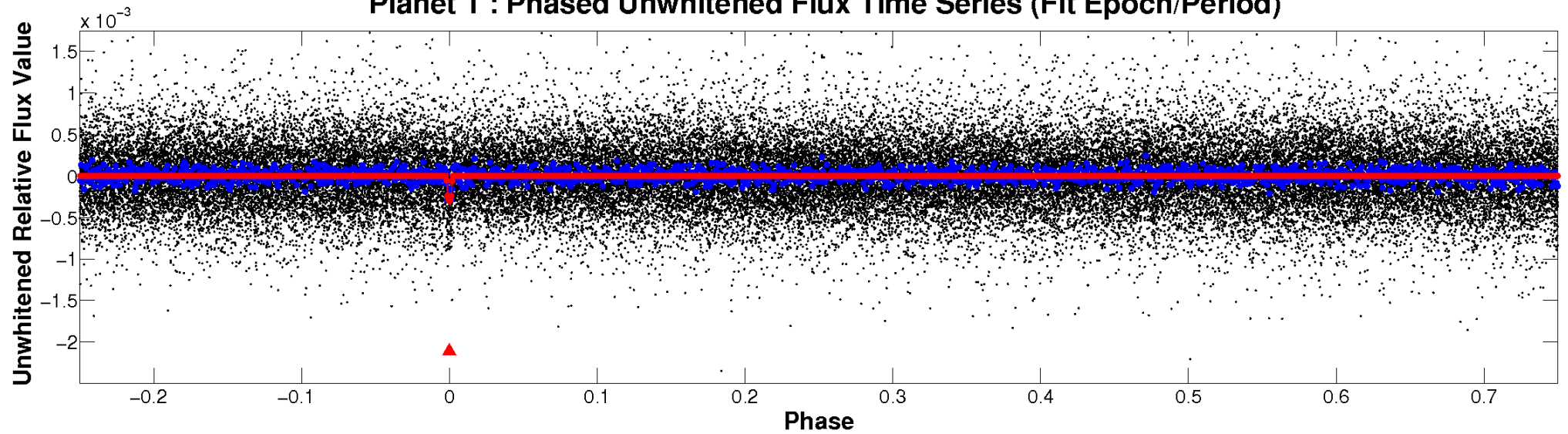
ALT Odd/Even

TCE 007204233-01

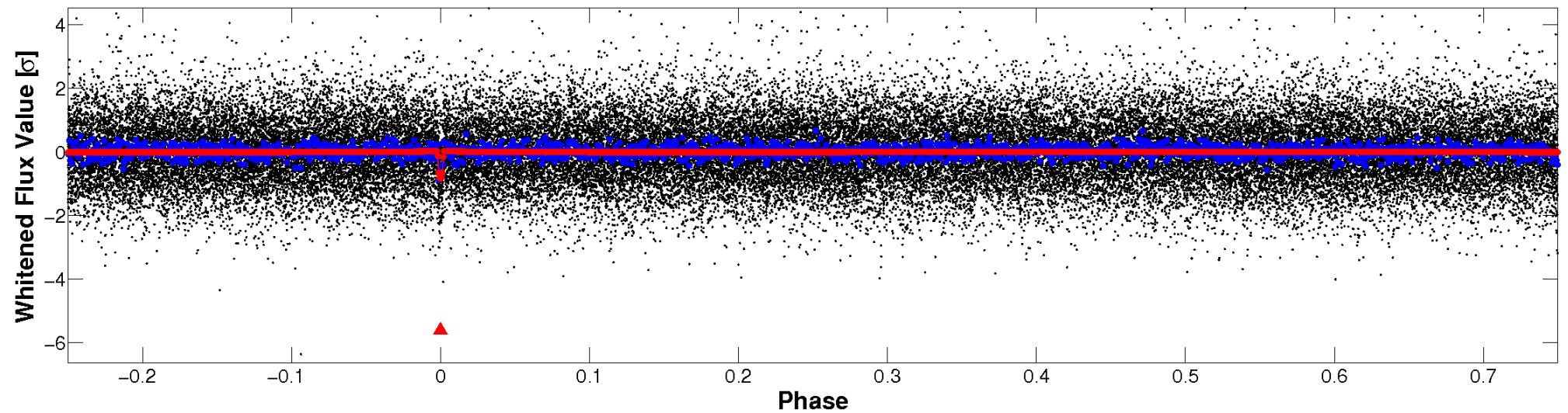


Non-Whitened Vs. Whitened Light Curve

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

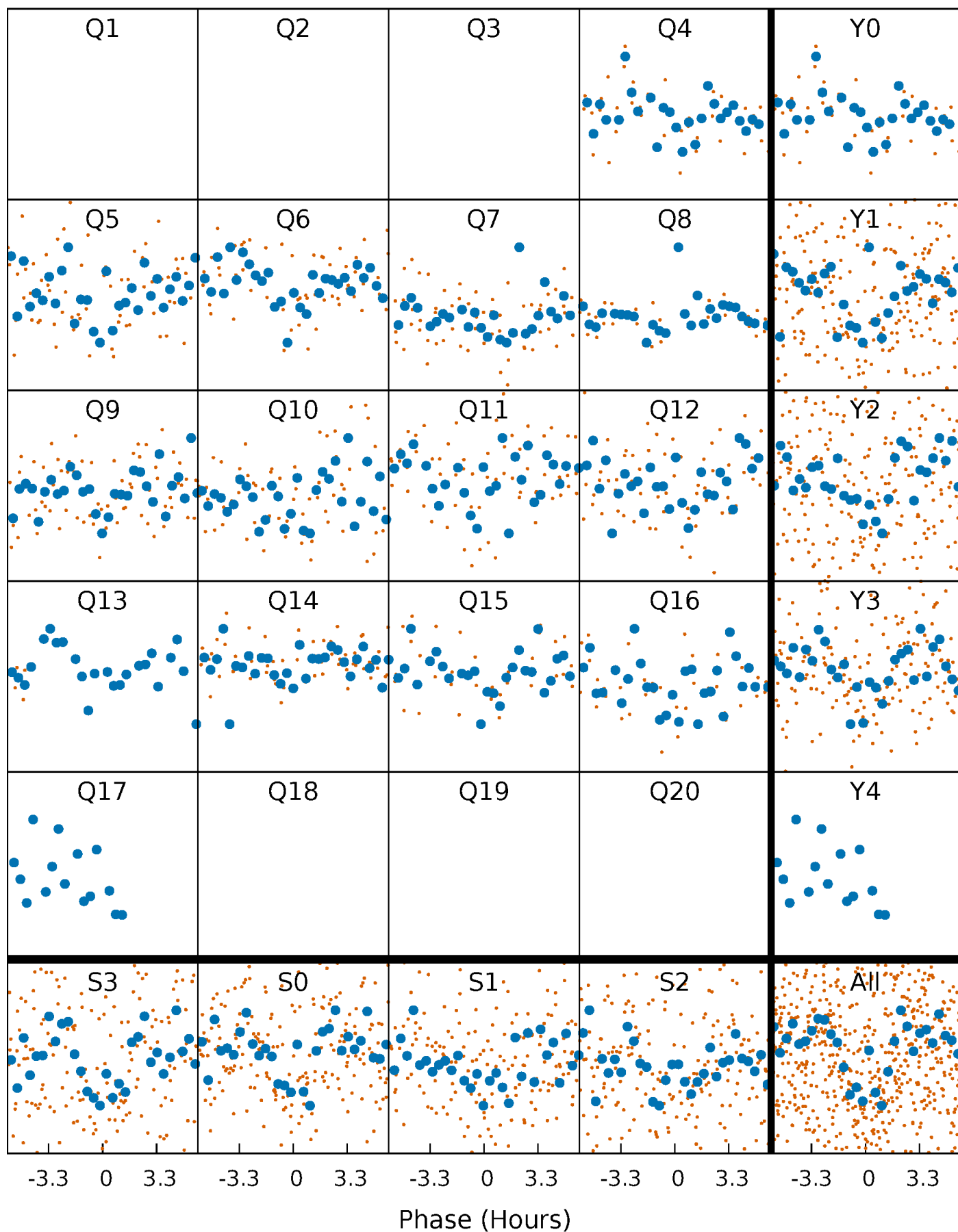


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



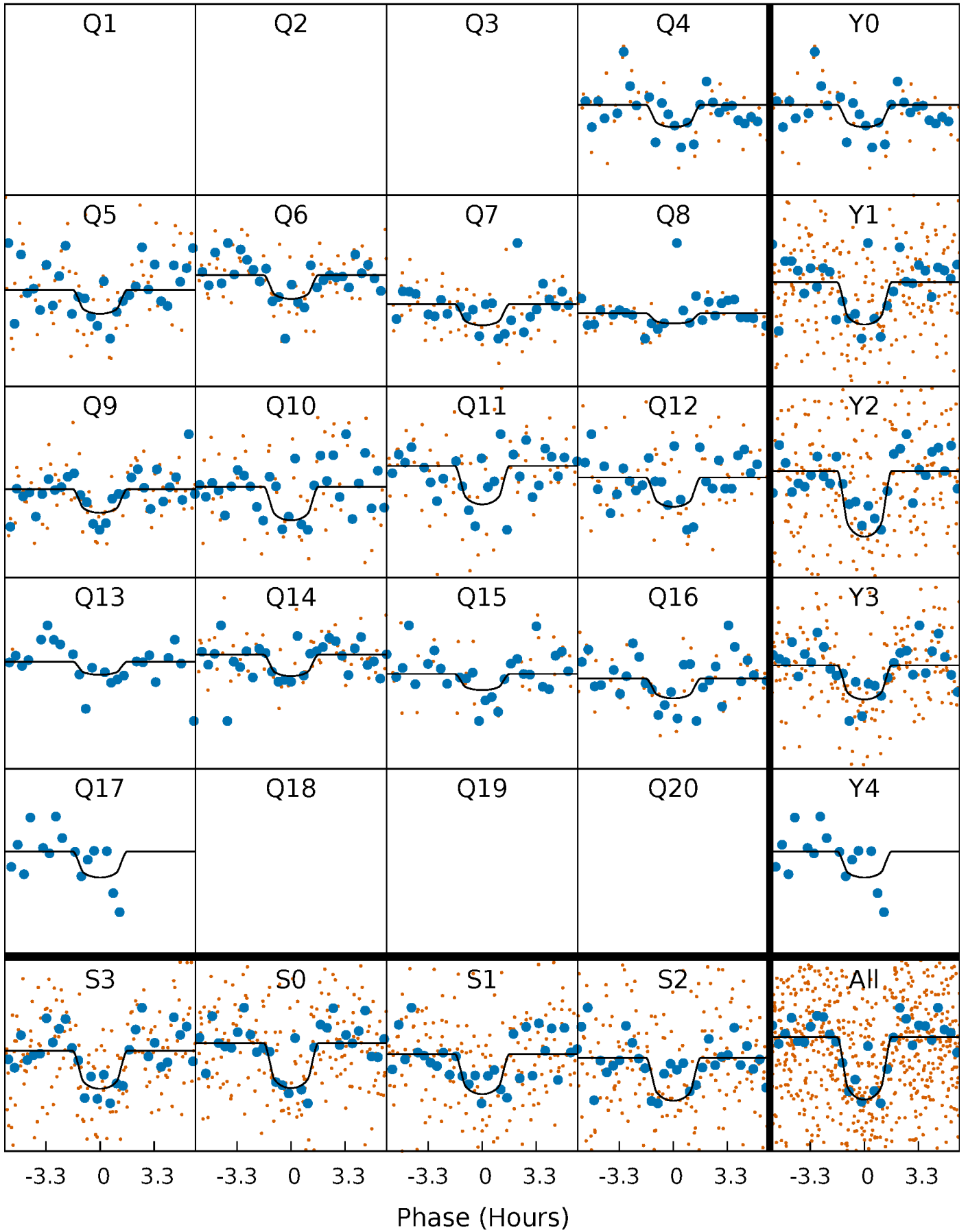
PDC Quarter-Phased Transit Curves

TCE 007204233-01 P= 33.304033 Days $T_0=149.455298$ (BKJD)



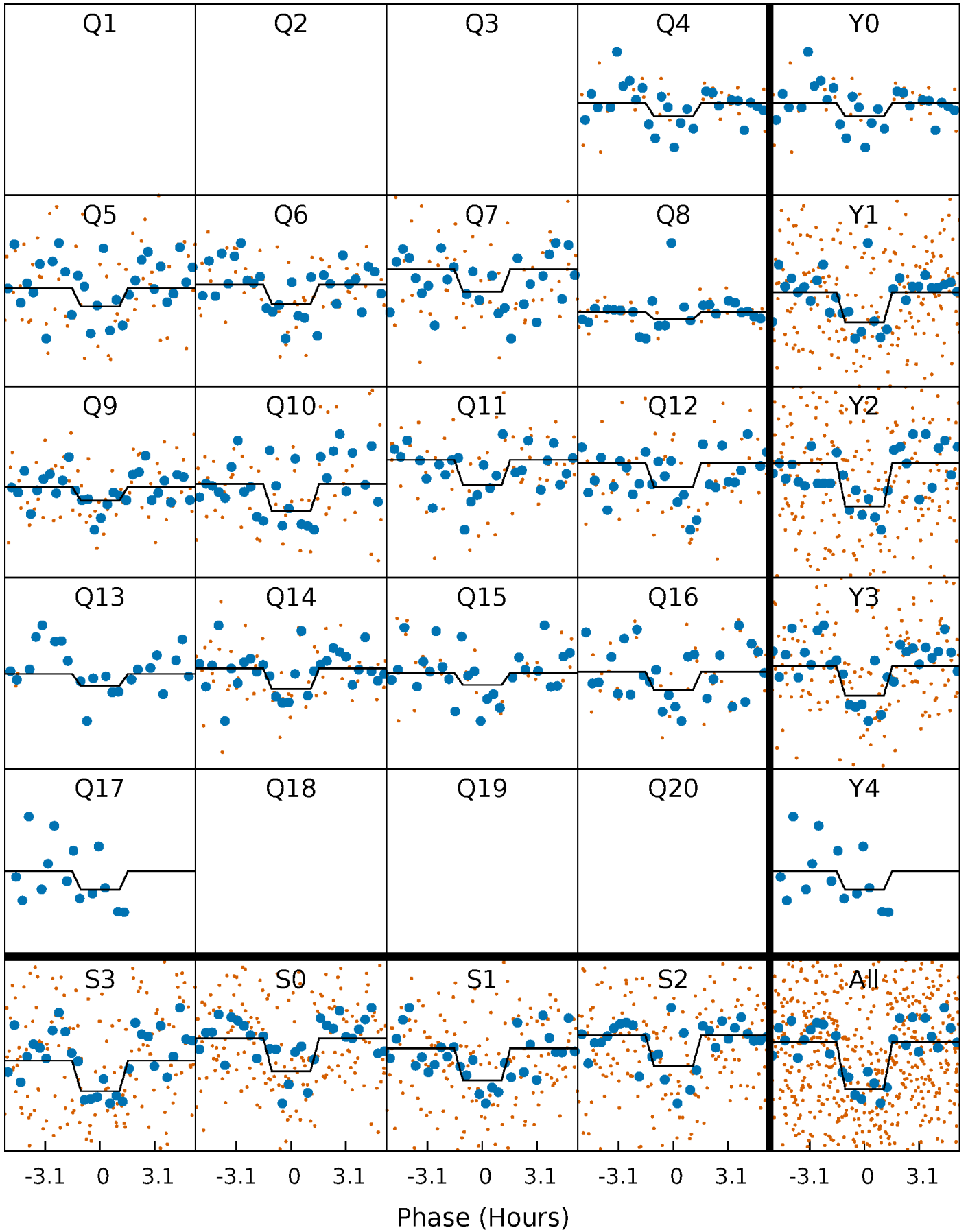
DV Quarter-Phased Transit Curves

TCE 007204233-01 P= 33.304033 Days $T_0=149.455298$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

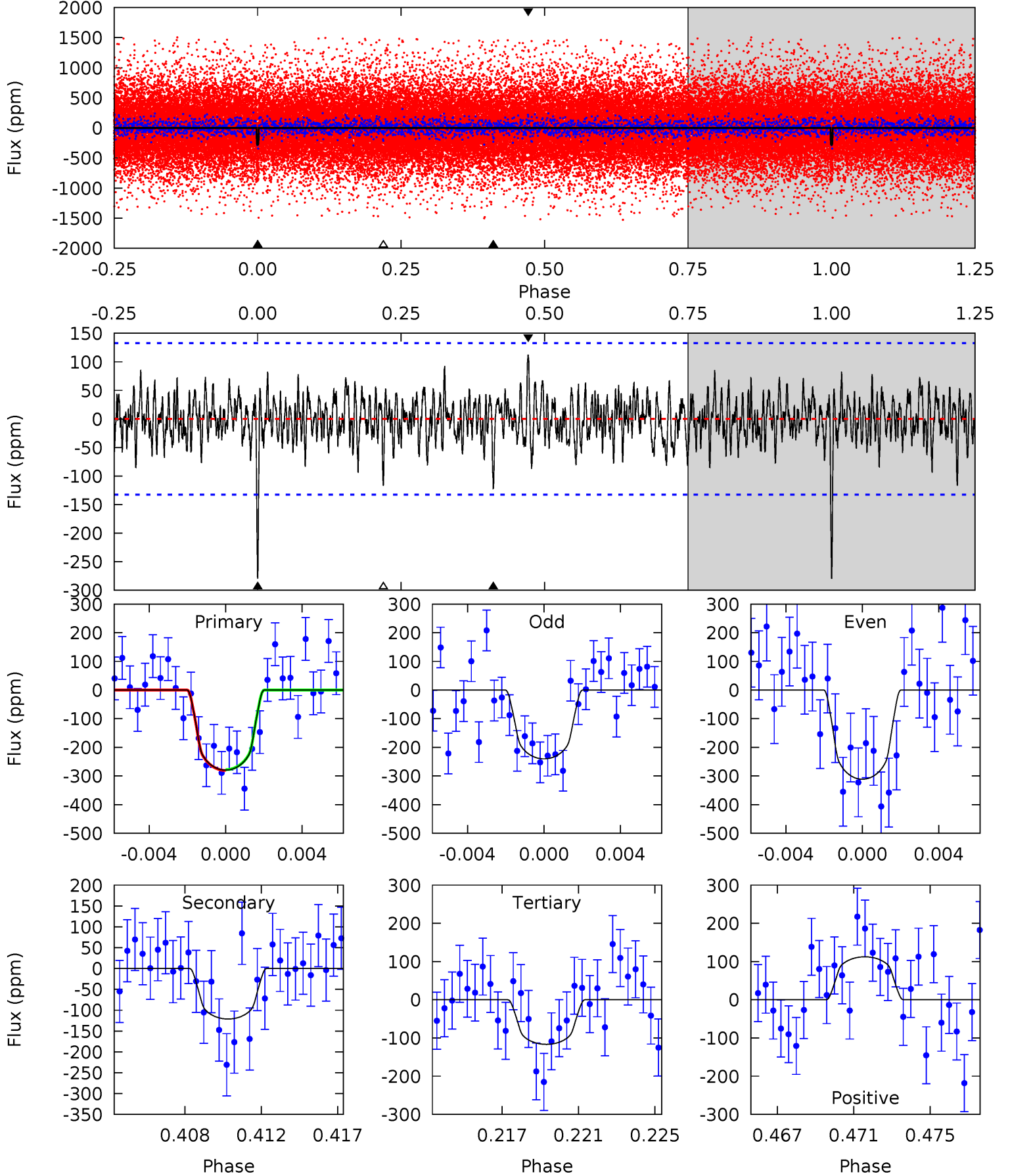
TCE 007204233-01 P= 33.303689 Days $T_0=149.462567$ (BKJD)



DV Model-Shift Uniqueness Test

007204233-01, P = 33.304033 Days, E = 149.455298 Days

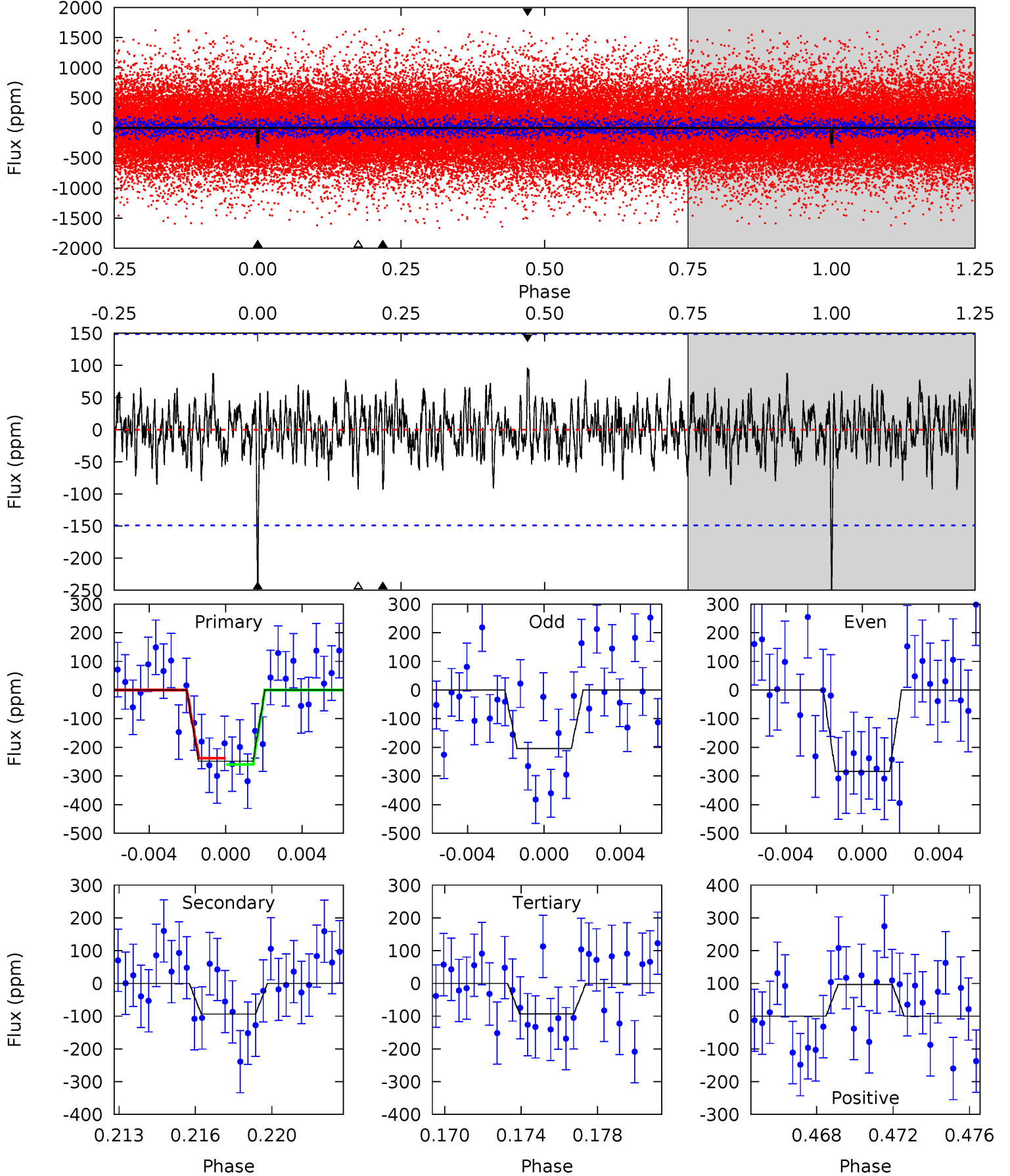
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	4.74	4.57	4.40	5.19	2.87	1.26	6.37	6.54	0.17	0.35	1.40	1.07	0.29	0.05



Alt Model-Shift Uniqueness Test

007204233-01, P = 33.303689 Days, E = 149.462567 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.68	3.27	3.25	3.36	5.21	2.89	1.04	5.43	5.32	0.02	-0.10	1.40	0.95	0.28	0.38



Stellar Parameters For KIC 007204233

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4899^{+174}_{-174}	$4.624^{+0.023}_{-0.072}$	$0.070^{+0.300}_{-0.300}$	$0.713^{+0.091}_{-0.042}$	$0.818^{+0.048}_{-0.083}$	$3.178^{+0.347}_{-0.849}$
	+4%/-4%	+0%/-2%	+429%/-429%	+13%/-6%	+6%/-10%	+11%/-27%
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 007204233-01 / KOI 5371.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-121 ± 26	$1.75^{+1.10}_{-1.06}$	599^{+25}_{-23}	3796^{+1633}_{-565}	752^{+3893}_{-474}
Alt.	-94 ± 29	$1.48^{+1.13}_{-0.97}$	599^{+24}_{-24}	3879^{+2052}_{-709}	854^{+6007}_{-605}

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 007204233-01. Kepler magnitude: 14.73. Transit SNR 9.53

There are 0 quarters with good PRF difference image offsets

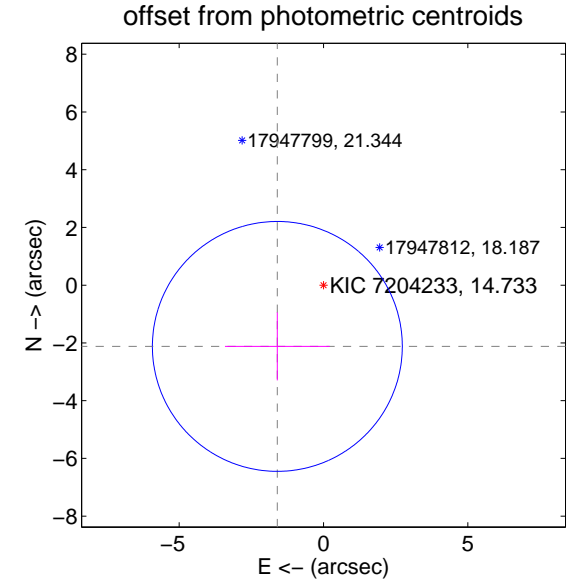
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.66 ± 1.44	1.84	1.60 ± 1.82	-2.12 ± 1.18

There is no PRF-fit offset from OOT-fit

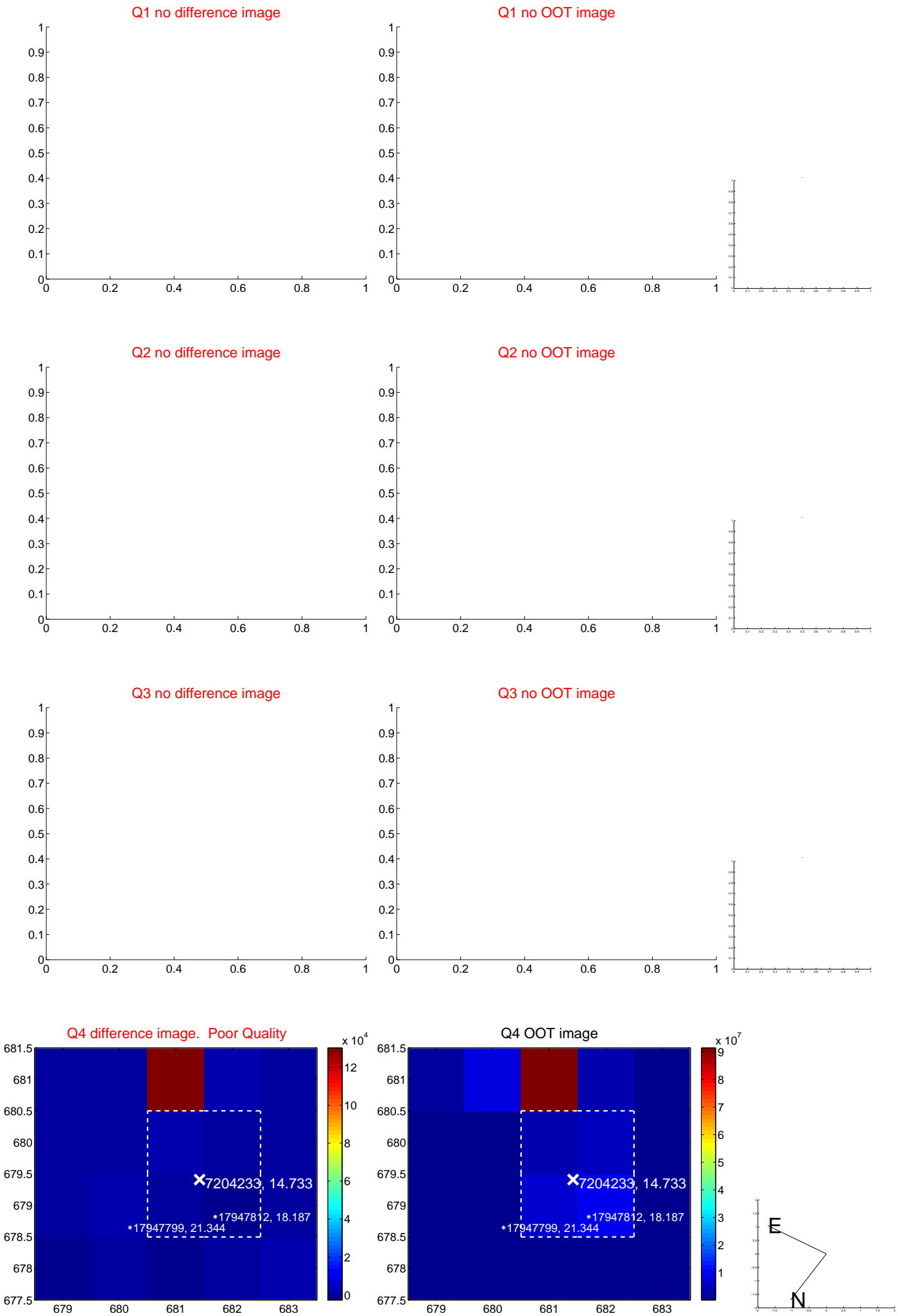


There is no PRF-fit offset from KIC

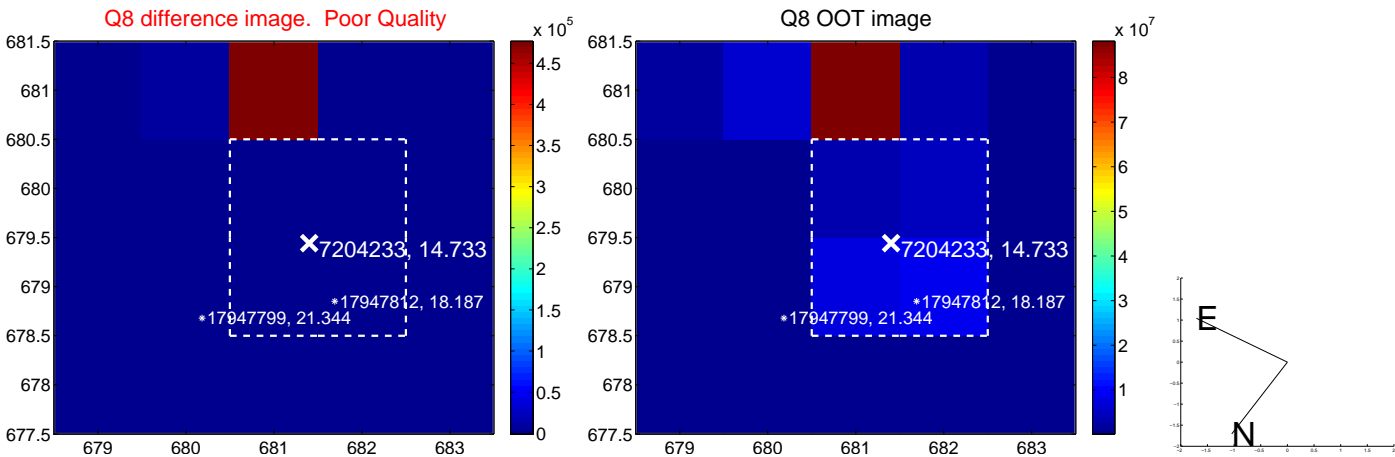
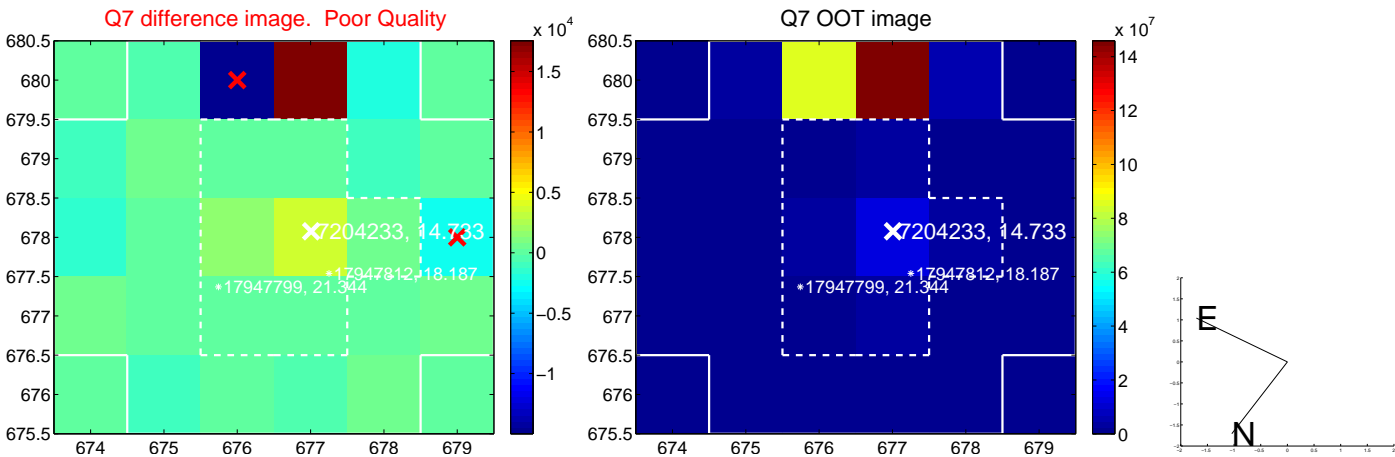
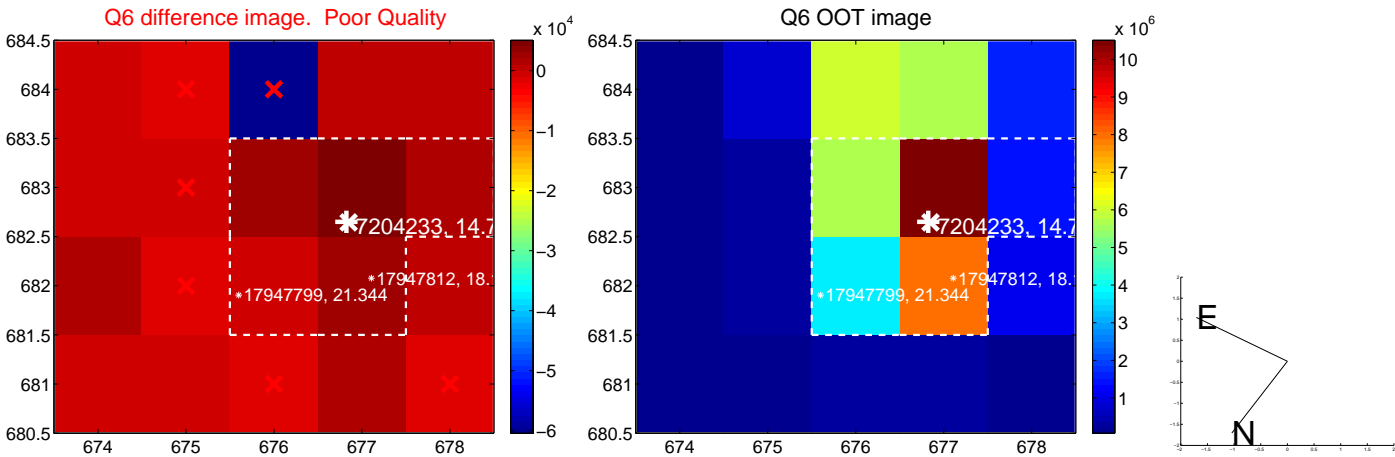
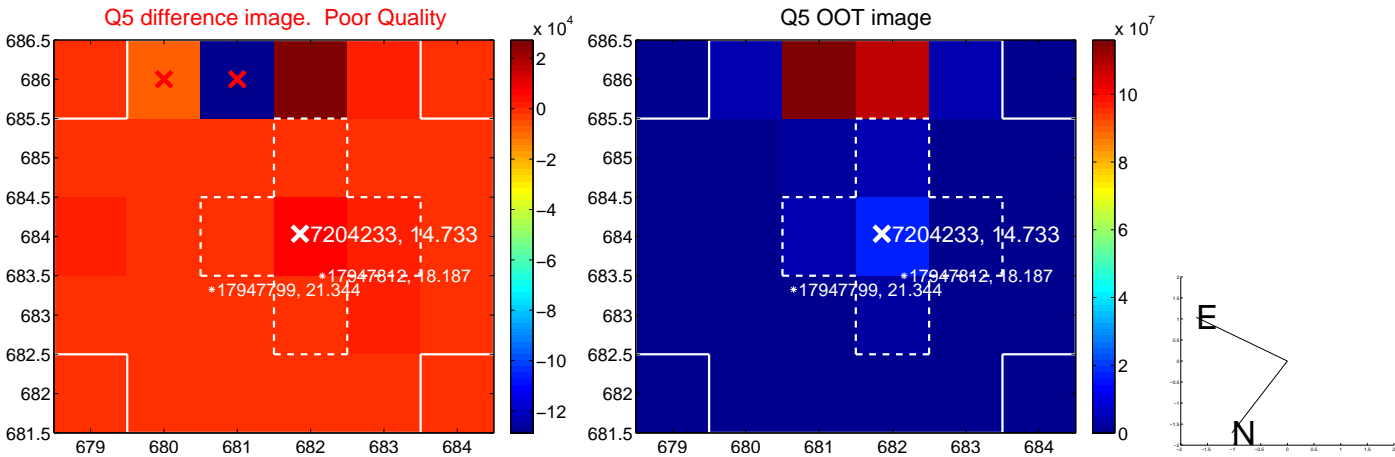


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

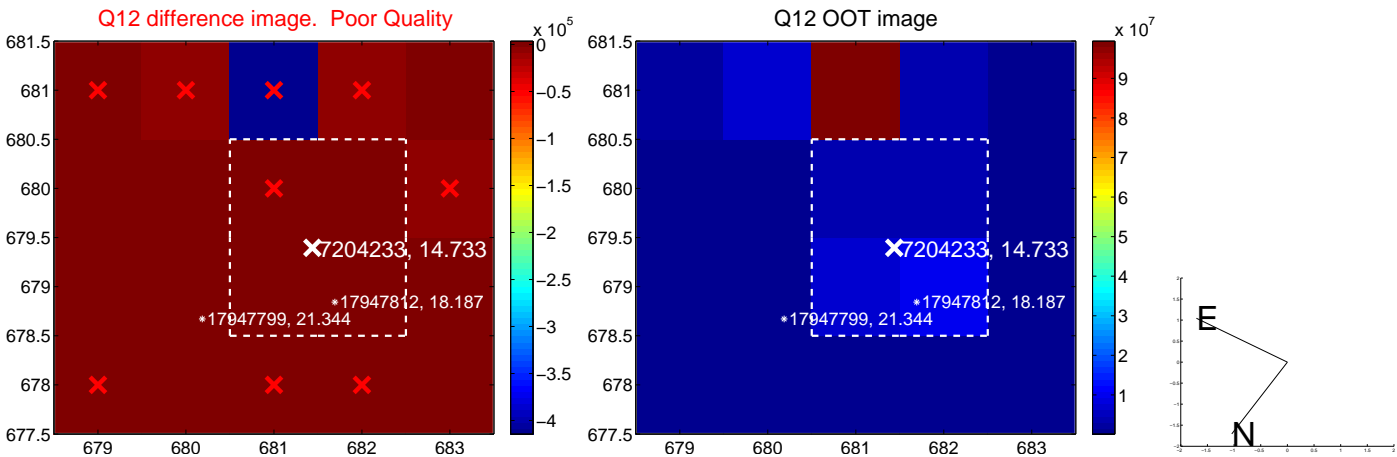
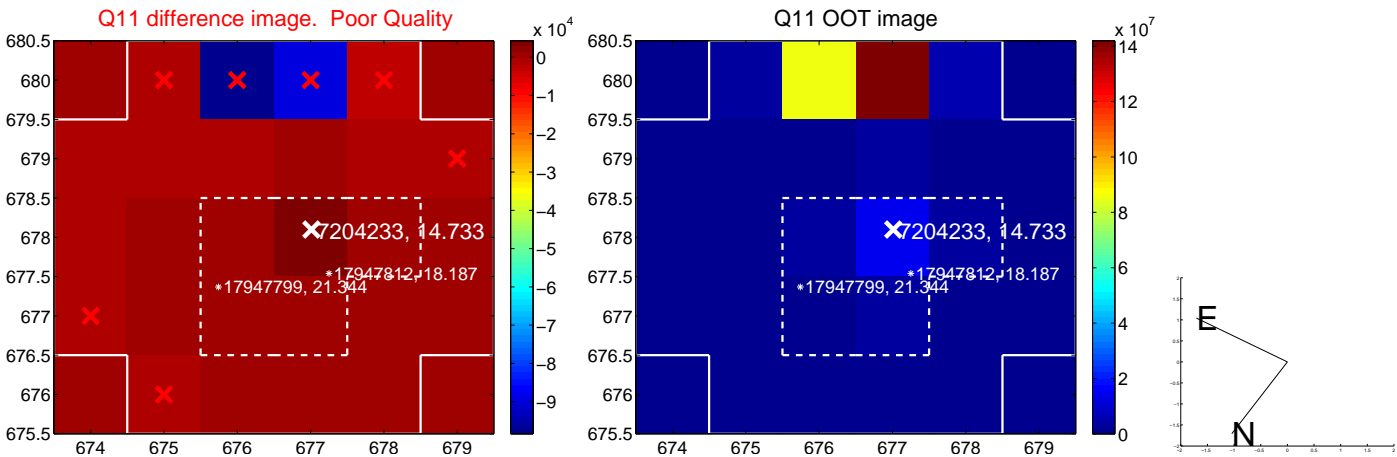
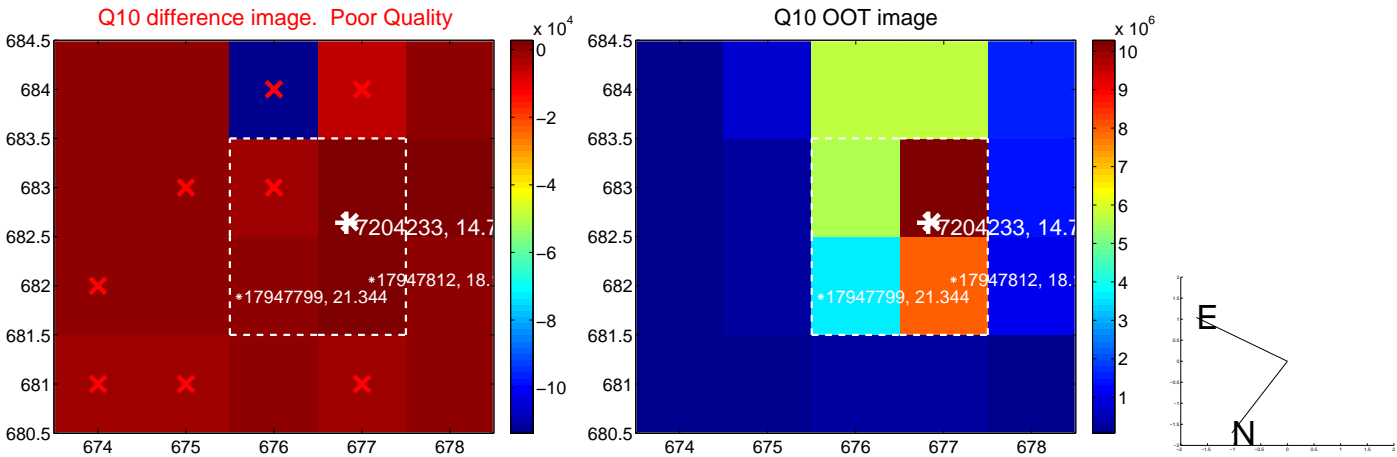
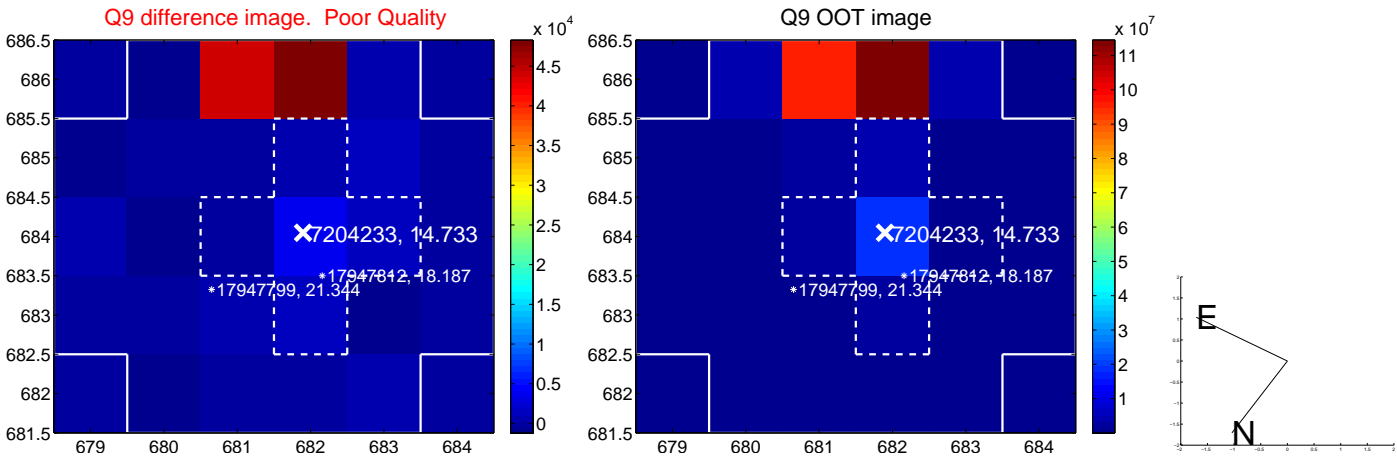
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



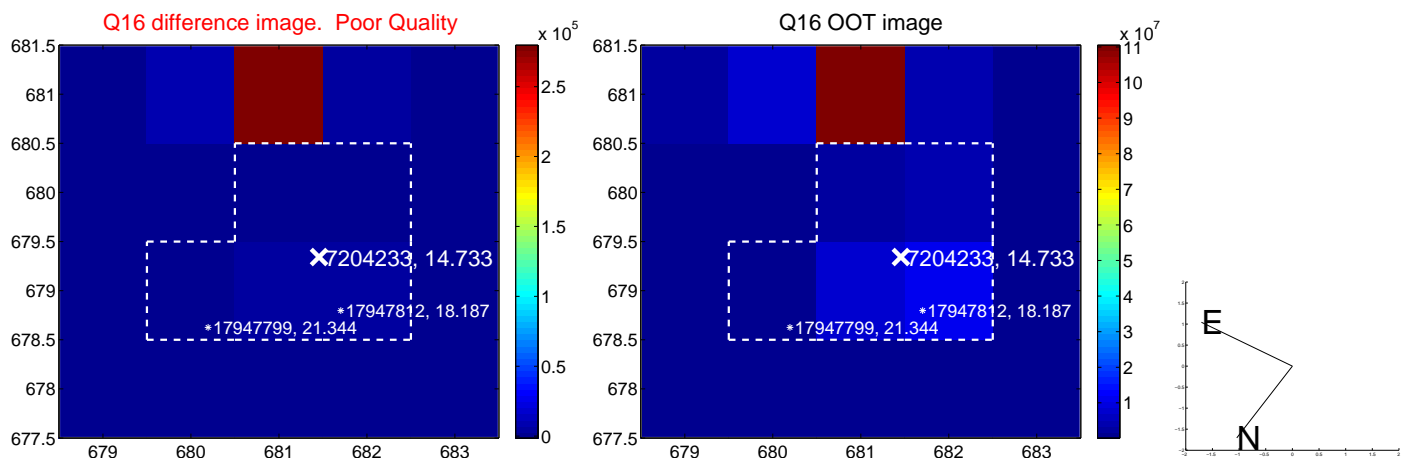
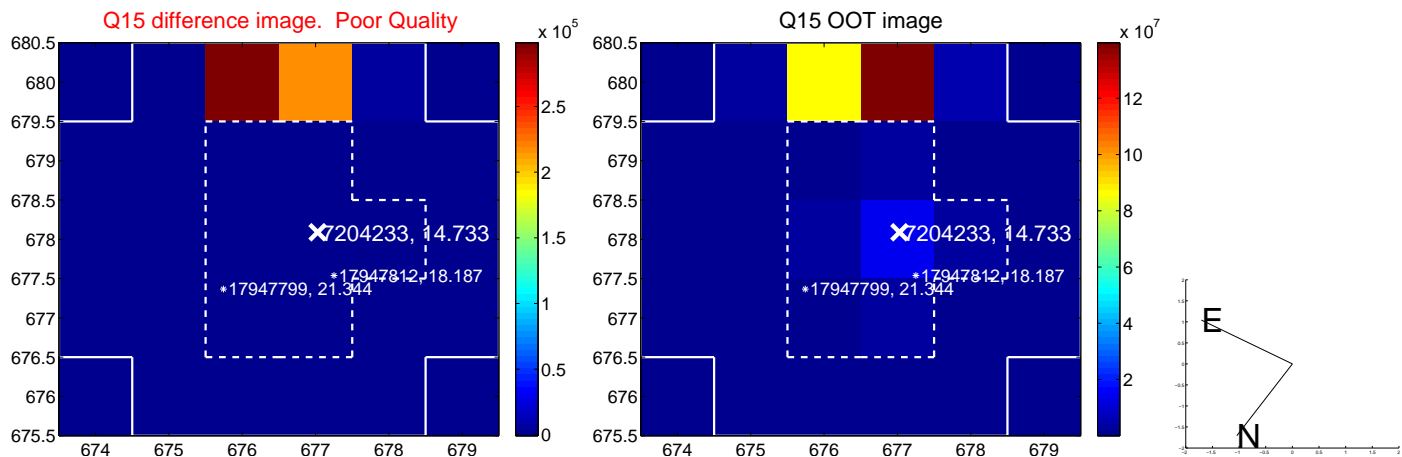
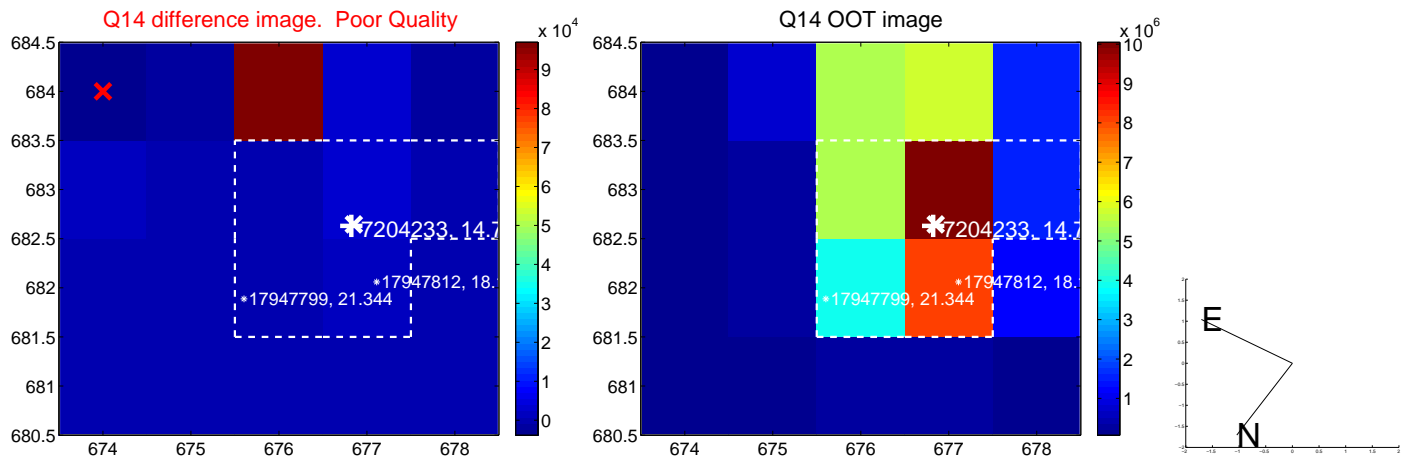
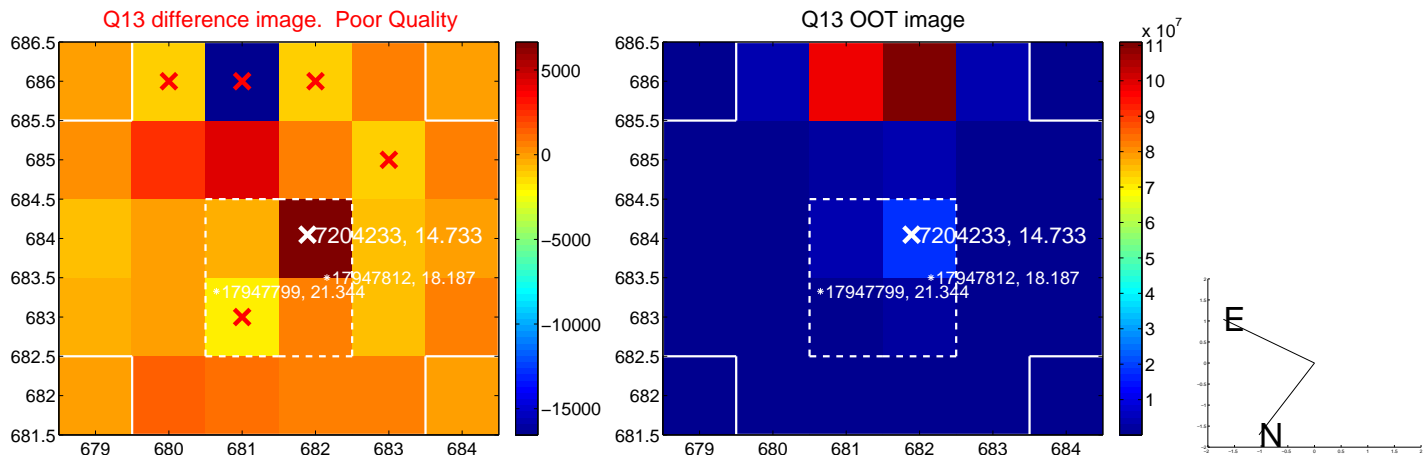
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



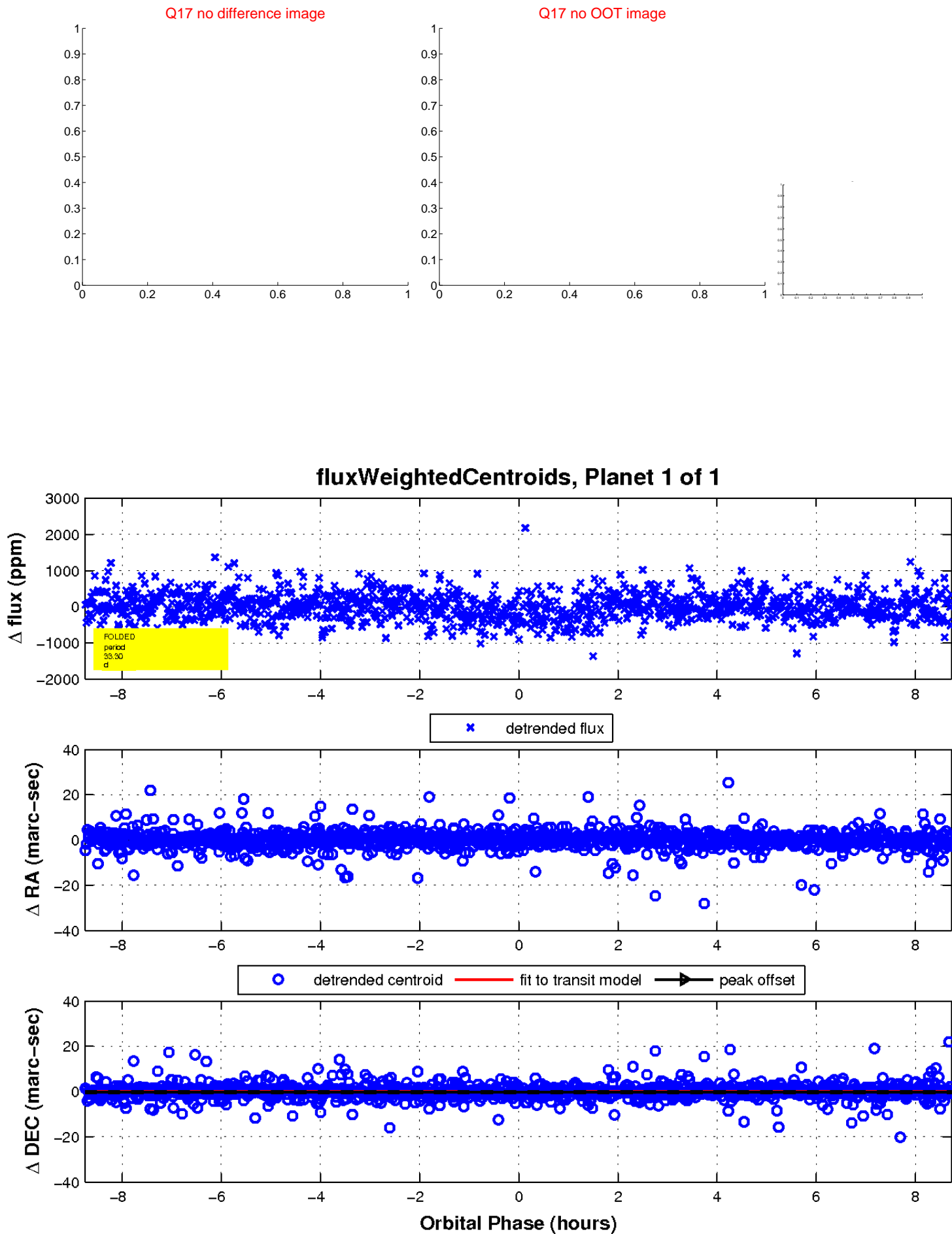
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UKIRT Image

Declination

