

KIC 009347494

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})
009347494-01	OBS	No	0.931480	132.148638	19.5	7.972	9.2	8.0	1.97	7353	0.90	22171.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009347494-01	OBS	FP	0.00	1	0	0	0	LPP_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

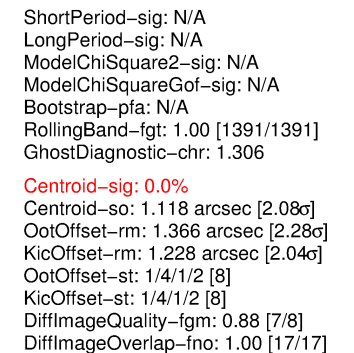
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

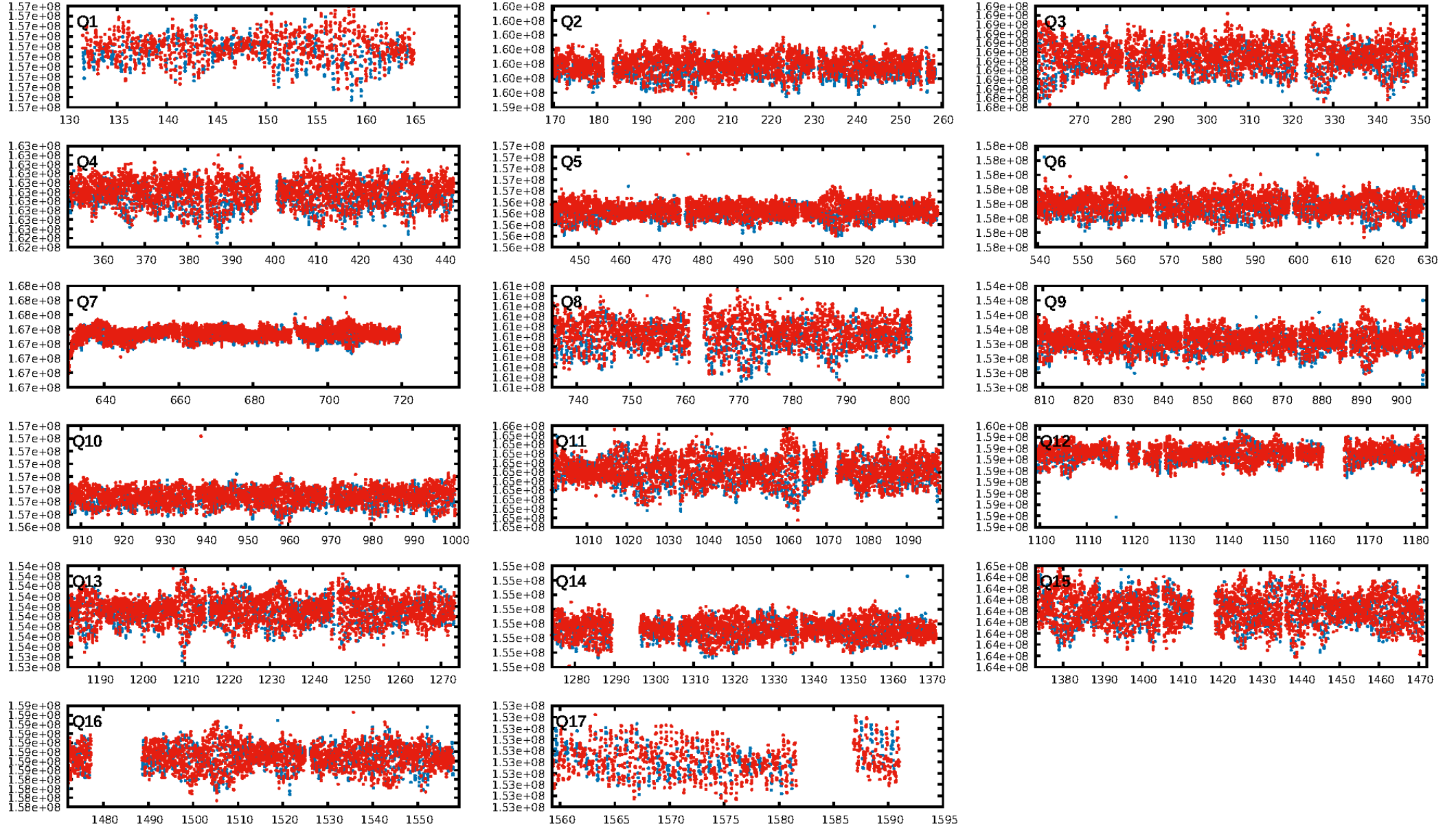
Ephemeris Match Information For 009347494-01

No Significant Match Found

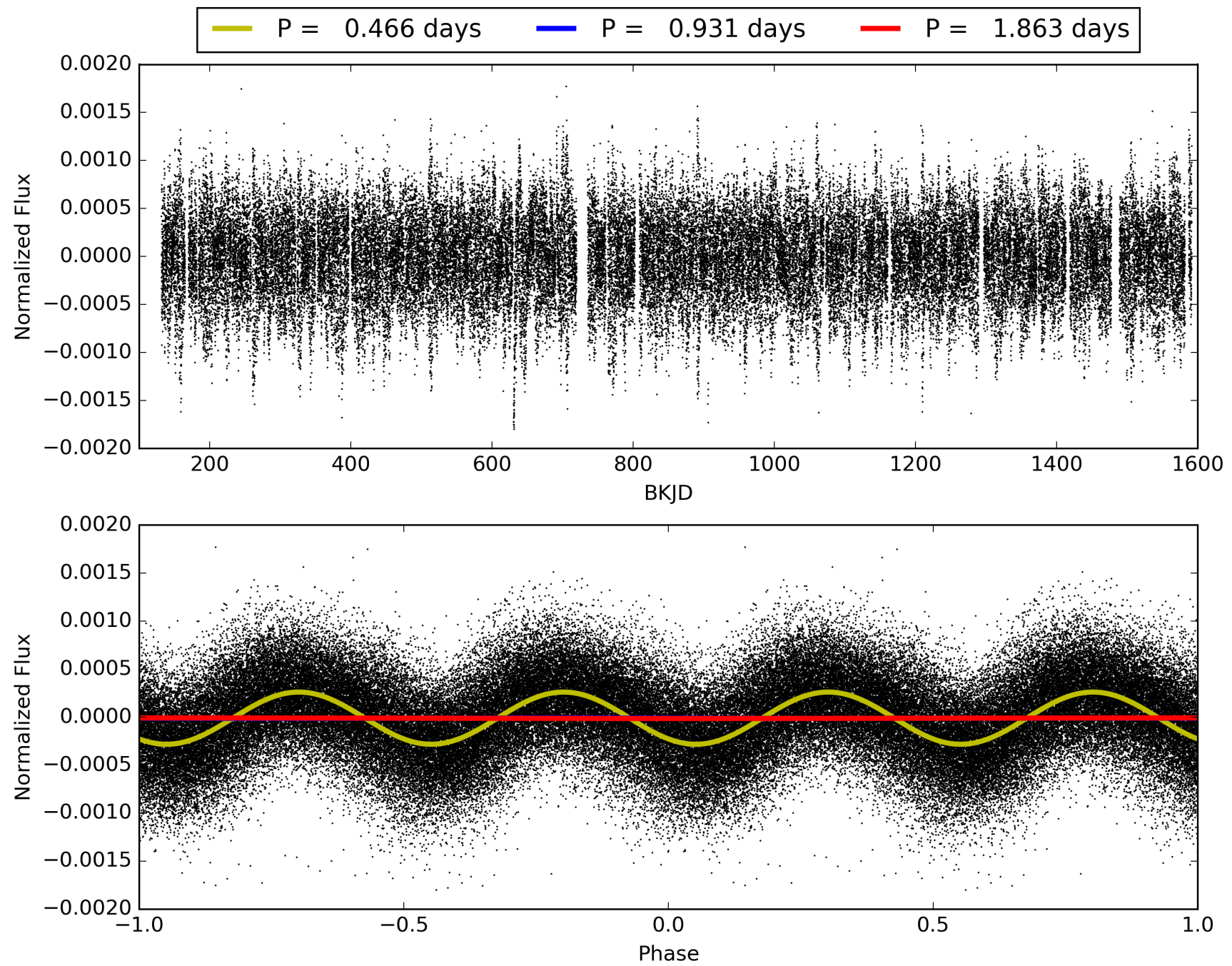
KIC: 9347494 Candidate: 1 of 1 Period: 0.931 d



TCE 009347494-01, PDC Light Curves

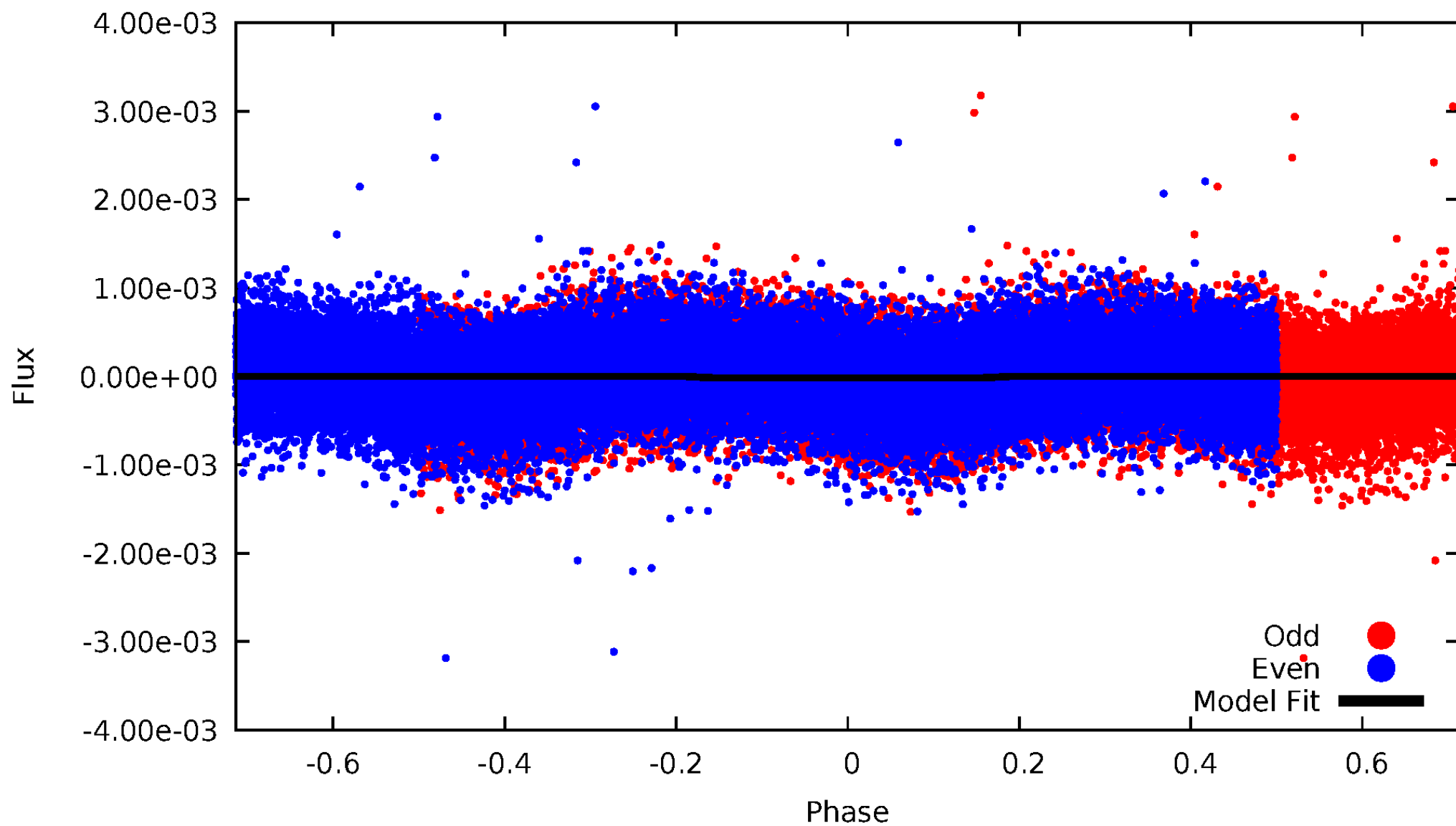


TCE 009347494-01



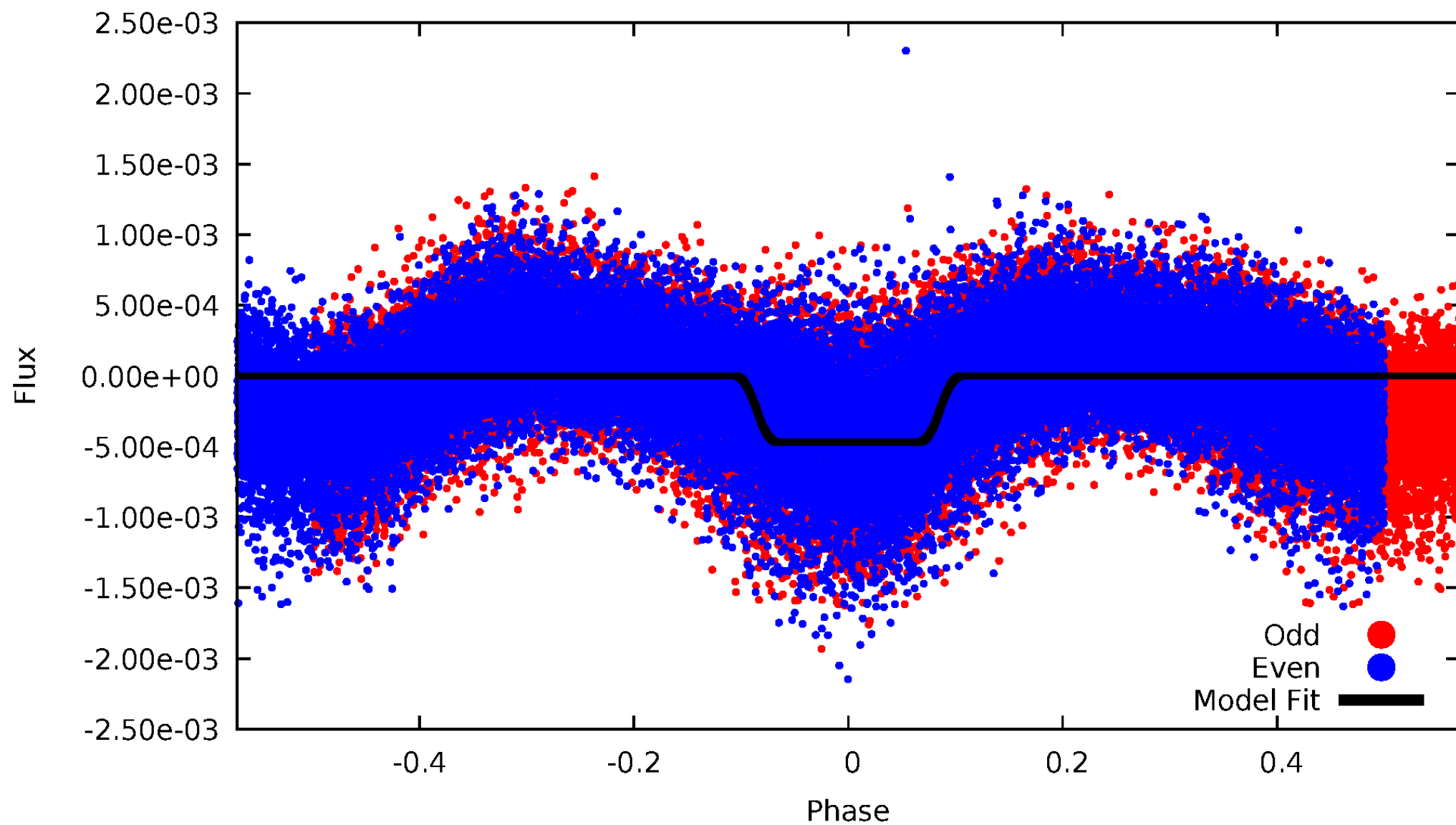
DV Odd/Even

TCE 009347494-01



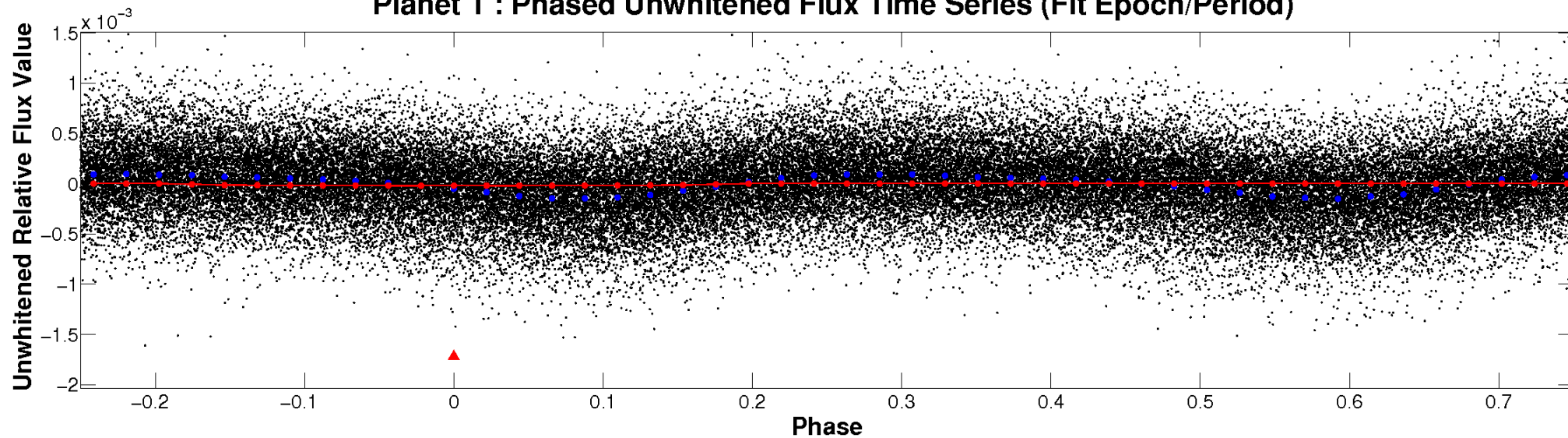
ALT Odd/Even

TCE 009347494-01

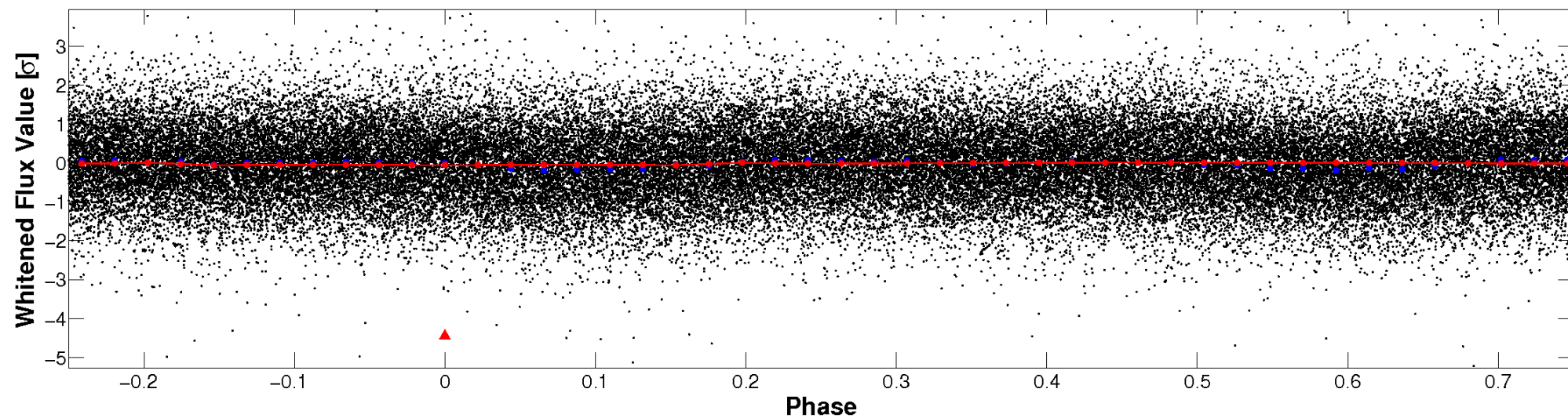


Non-Whitened Vs. Whitened Light Curve

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

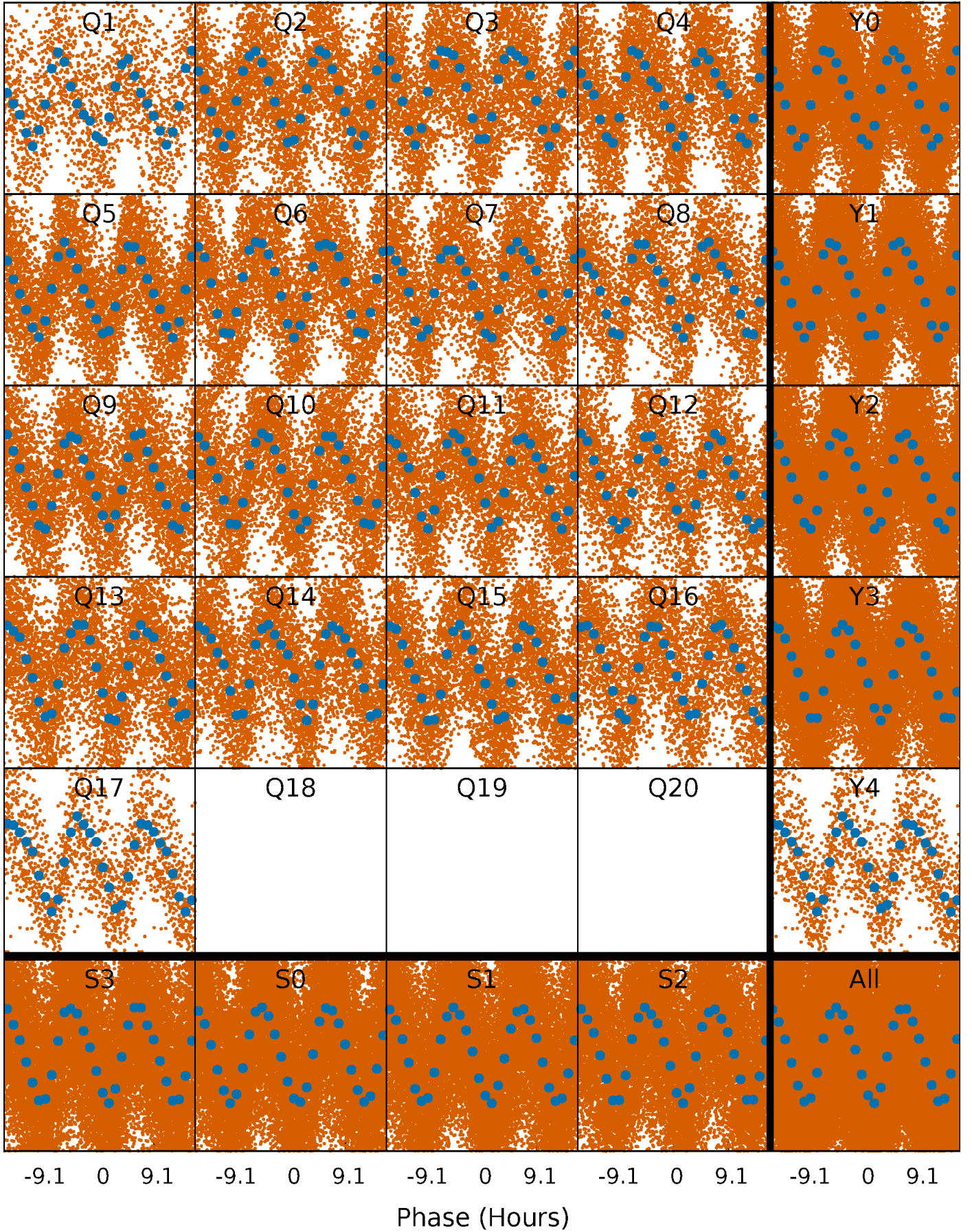


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



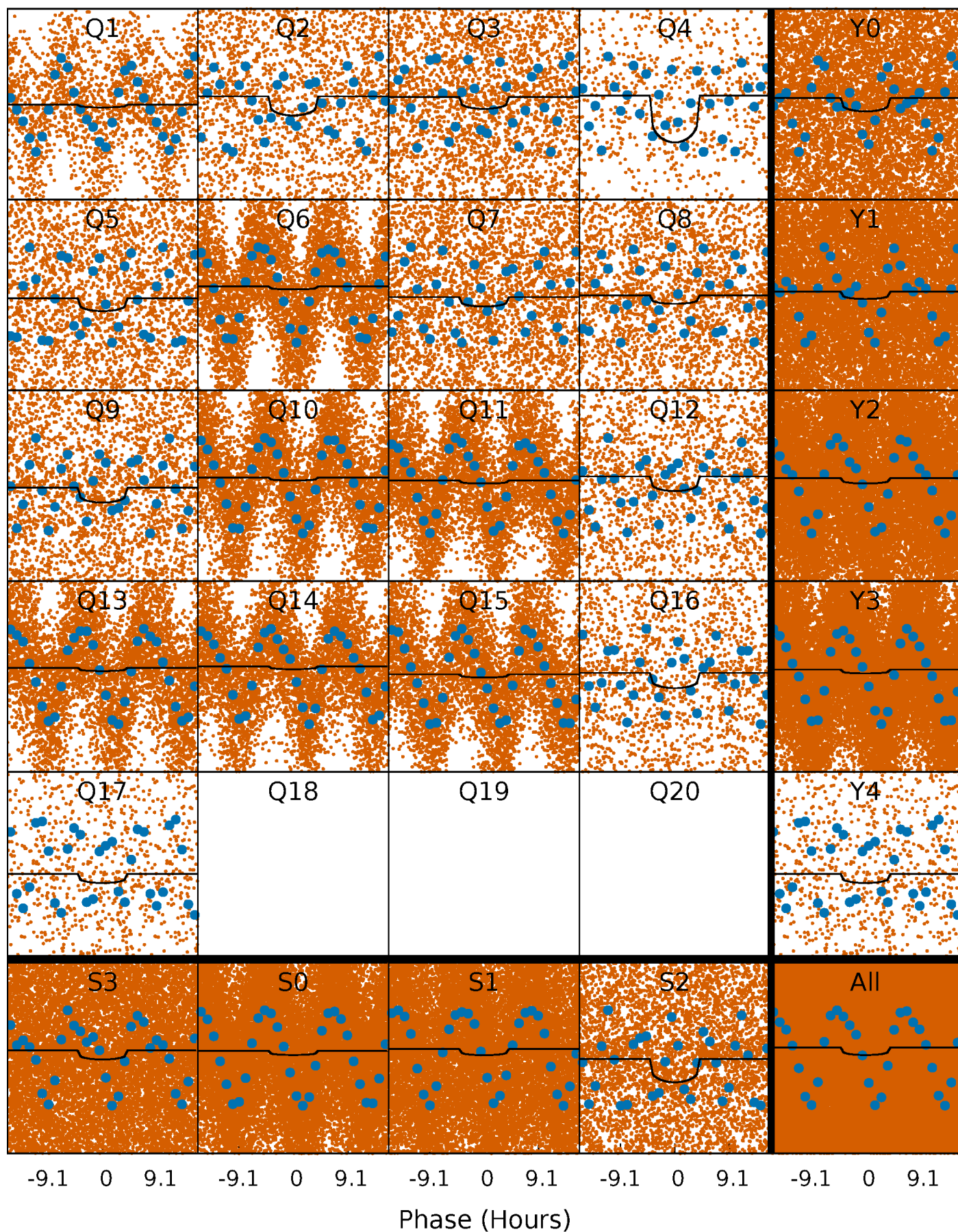
PDC Quarter-Phased Transit Curves

TCE 009347494-01 P= 0.931480 Days $T_0=132.148638$ (BKJD)



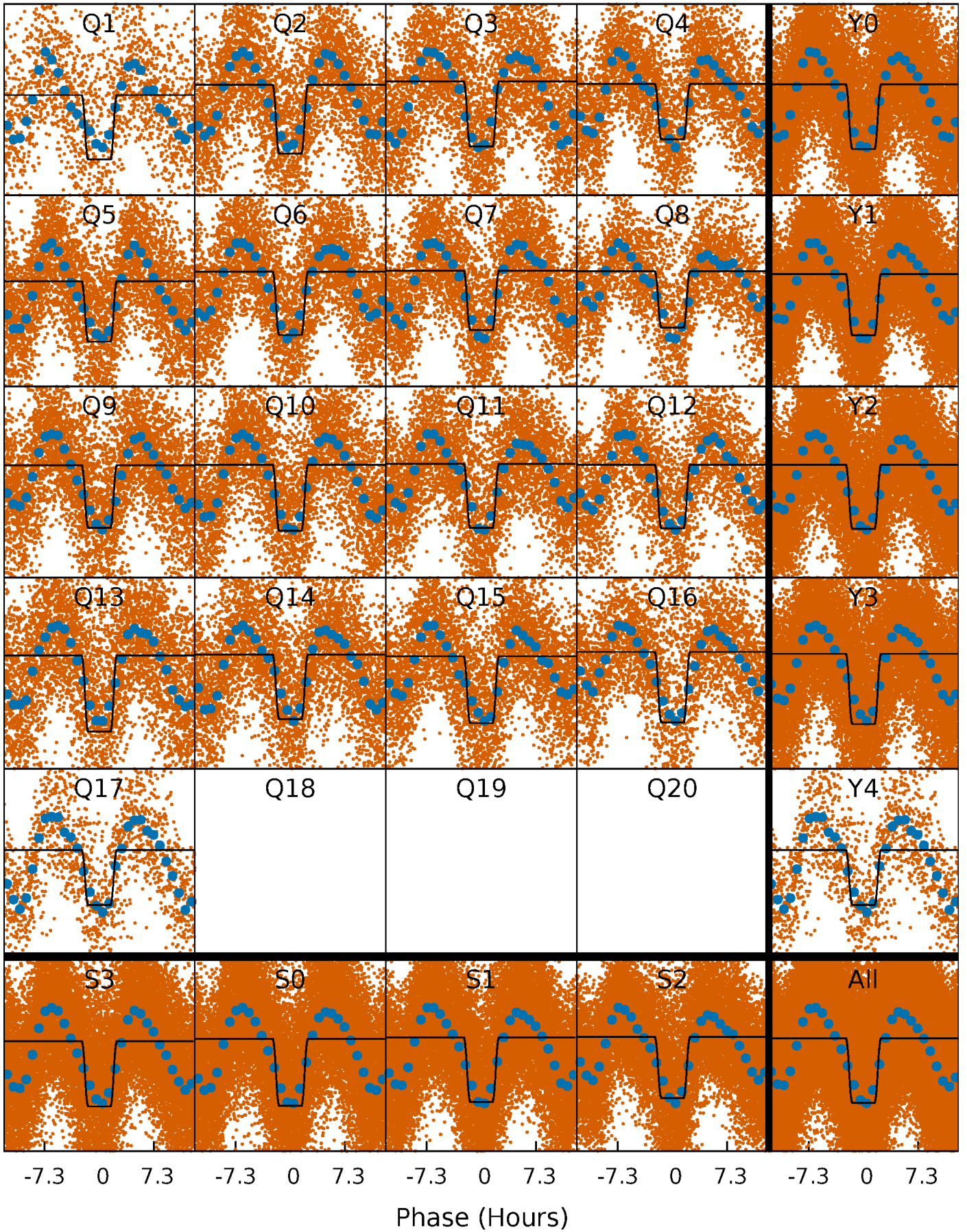
DV Quarter-Phased Transit Curves

TCE 009347494-01 P= 0.931480 Days $T_0=132.148638$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

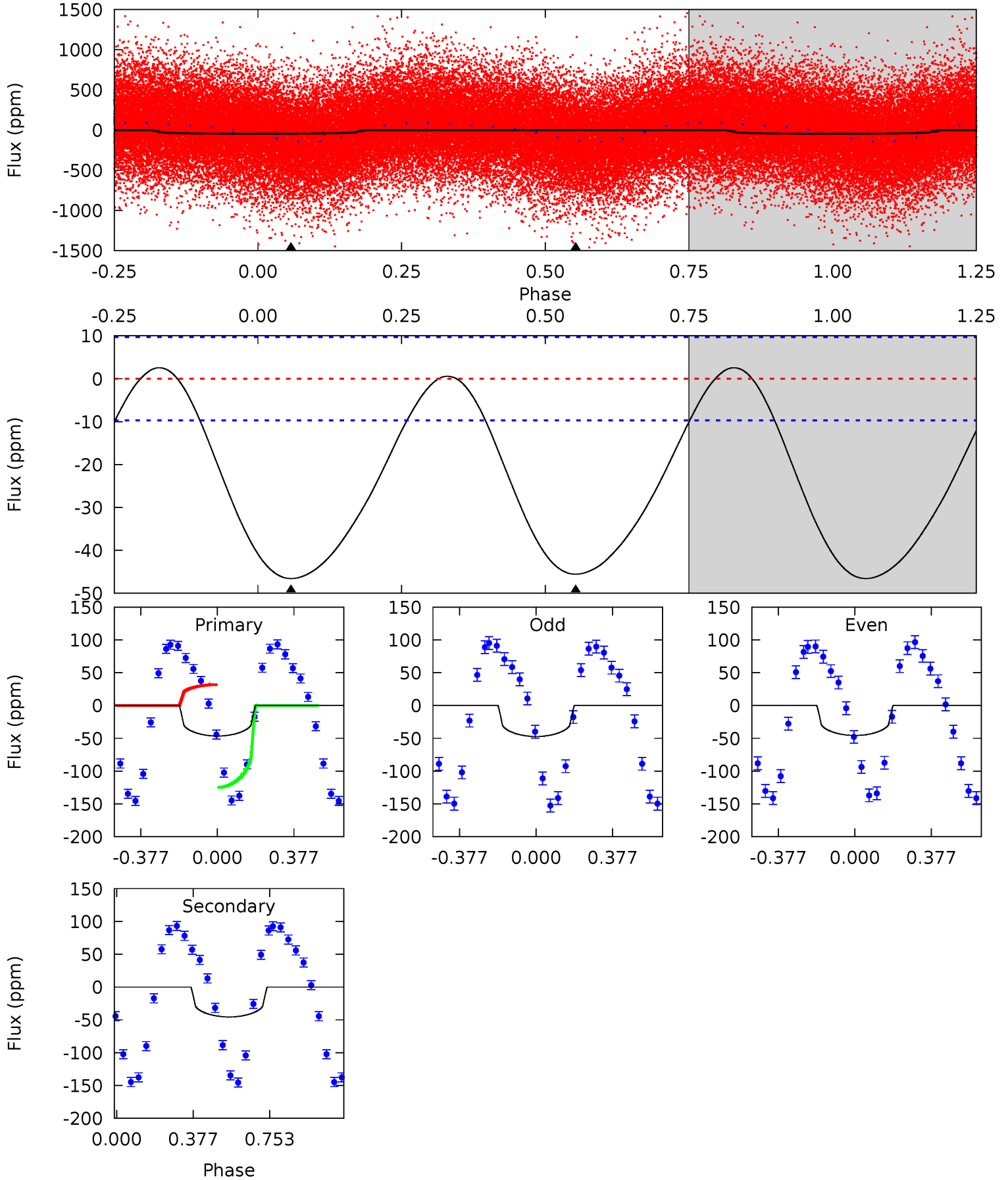
TCE 009347494-01 P= 0.931558 Days $T_0=132.147211$ (BKJD)



DV Model-Shift Uniqueness Test

009347494-01, P = 0.931480 Days, E = 131.217158 Days

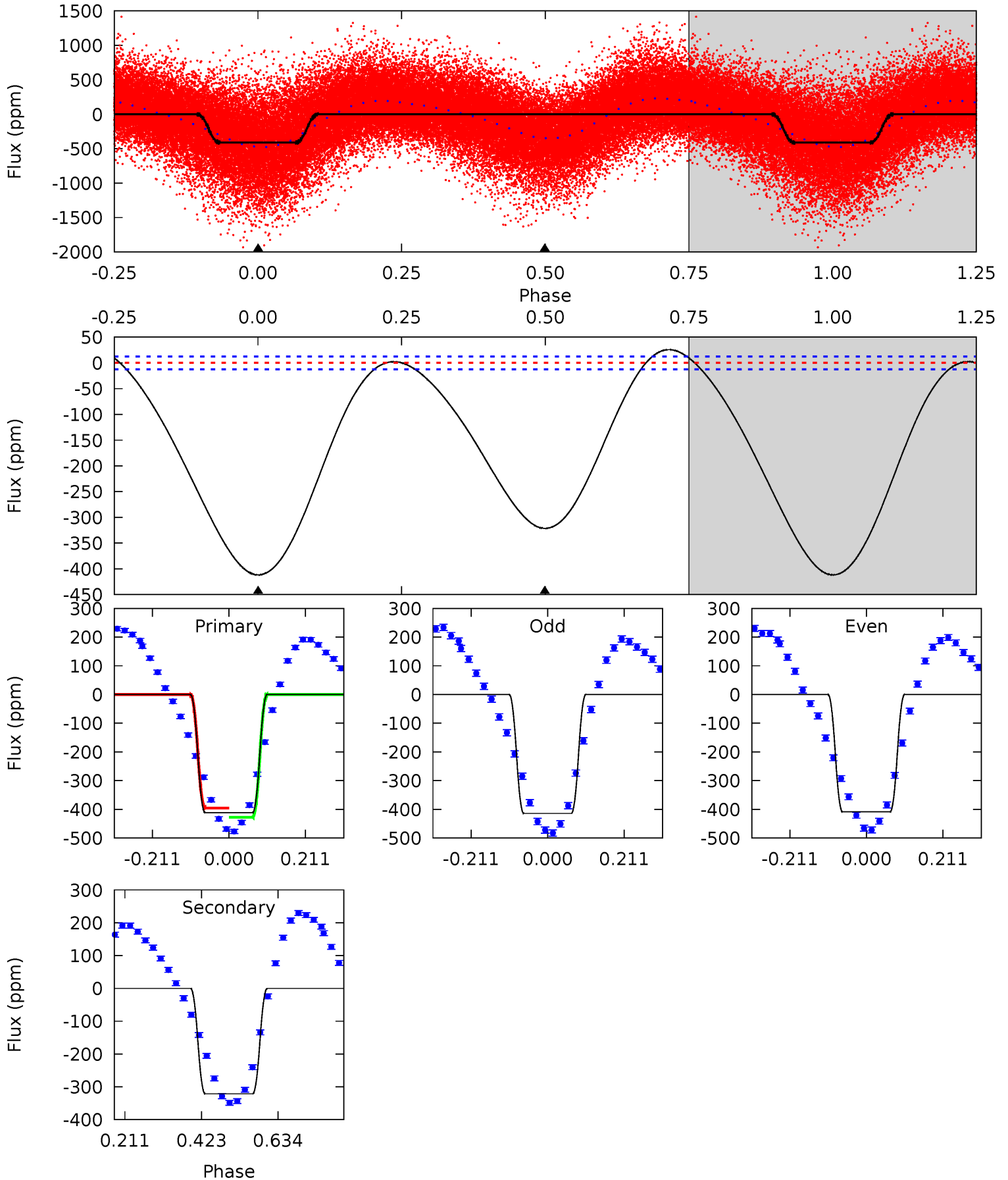
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	20.1	0	0	4.28	0.88	0.87	20.5	20.5	20.1	20.1	0.35	1.05	0.05	21.4



Alt Model-Shift Uniqueness Test

009347494-01, P = 0.931558 Days, E = 131.215653 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
145.6	113.7	0	0	4.41	1.25	5.42	145.6	145.6	113.7	113.7	0.98	1.03	0.06	5.78



Stellar Parameters For KIC 009347494

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7353^{+232}_{-310}	$4.028^{+0.214}_{-0.156}$	$-0.260^{+0.250}_{-0.350}$	$1.972^{+0.510}_{-0.567}$	$1.512^{+0.220}_{-0.269}$	$0.278^{+0.390}_{-0.122}$
	+3%/-4%	+5%/-4%	+96%/-135%	+26%/-29%	+15%/-18%	+141%/-44%
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 009347494-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-46 ± 2	$0.96^{+0.82}_{-0.54}$	4313^{+356}_{-311}	9163^{+10231}_{-2714}	12^{+56}_{-8}
Alt.	-321 ± 3	$4.57^{+1.15}_{-1.00}$	4320^{+326}_{-335}	6447^{+791}_{-536}	$3.832^{+2.321}_{-1.302}$

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 $A_{\text{obs}} \gg 1.0$

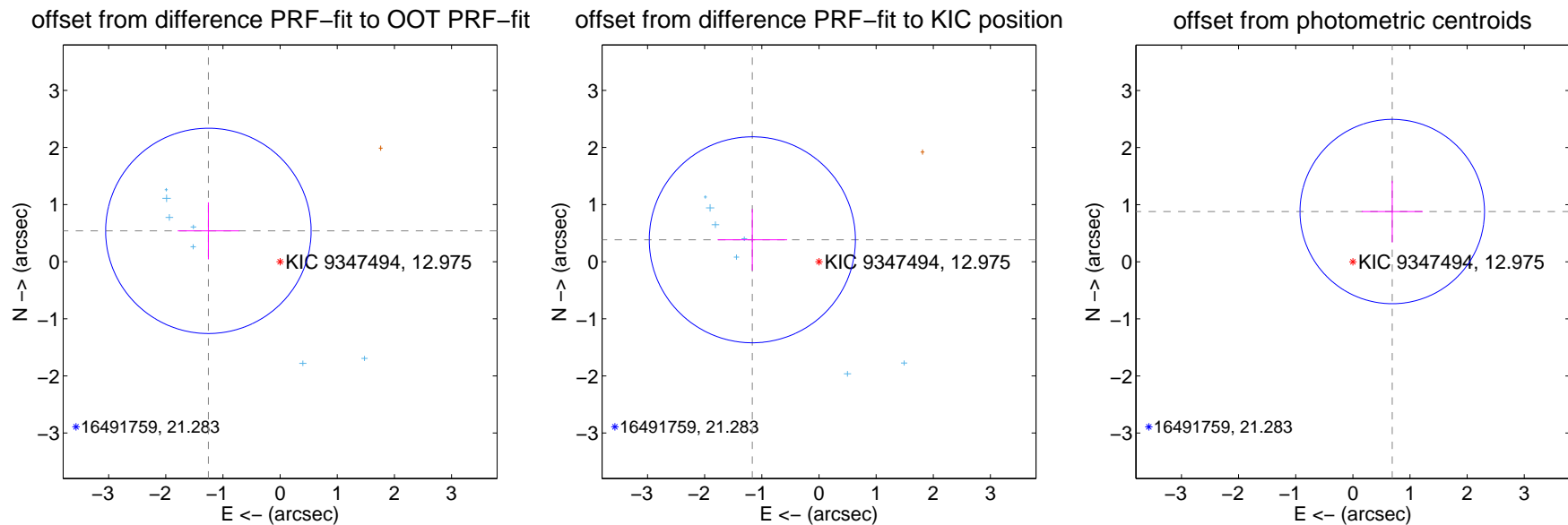
DV Centroid Data

Supplemental centroid analysis for 009347494-01. Kepler magnitude: 12.97. Transit SNR 7.96

There are 7 quarters with good PRF difference image offsets

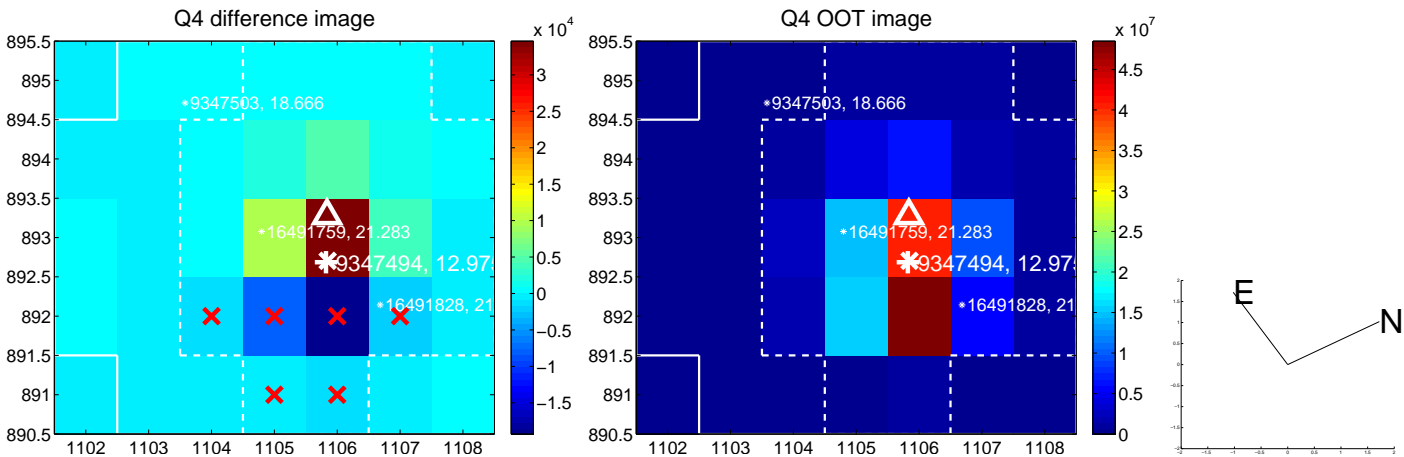
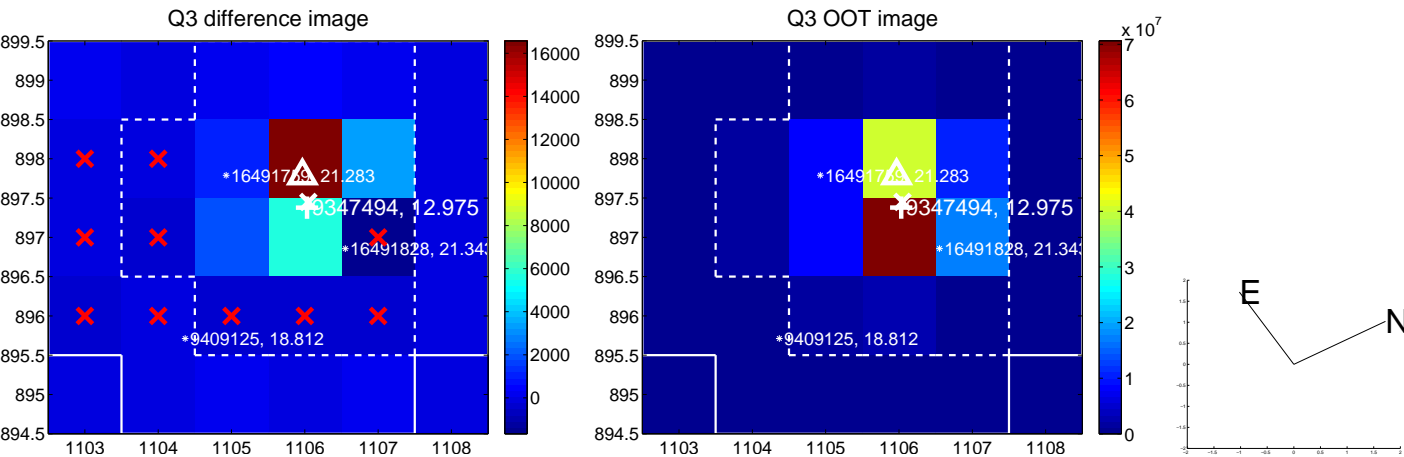
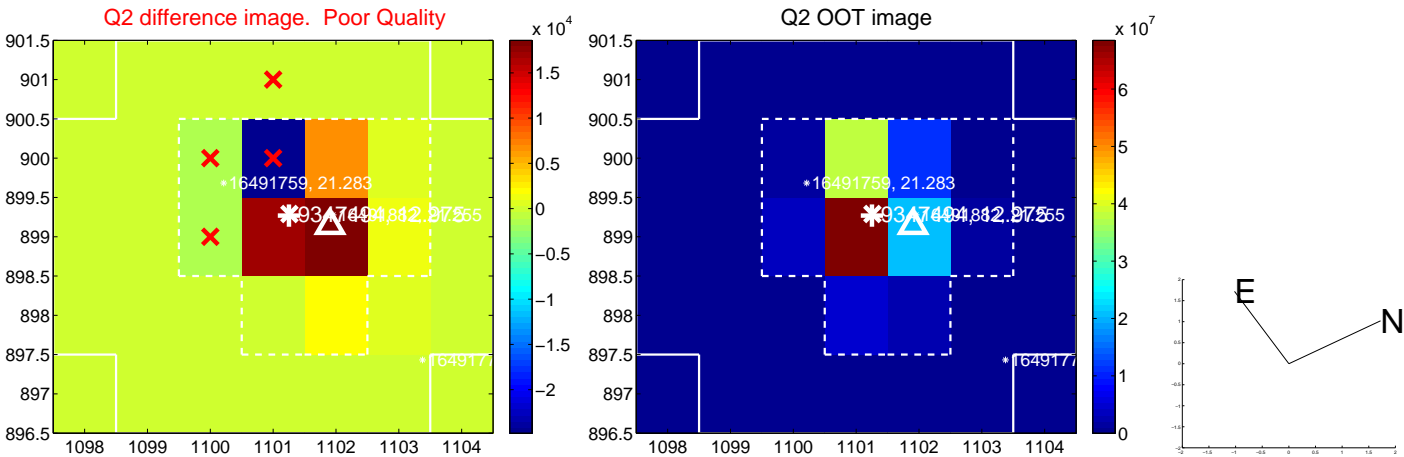
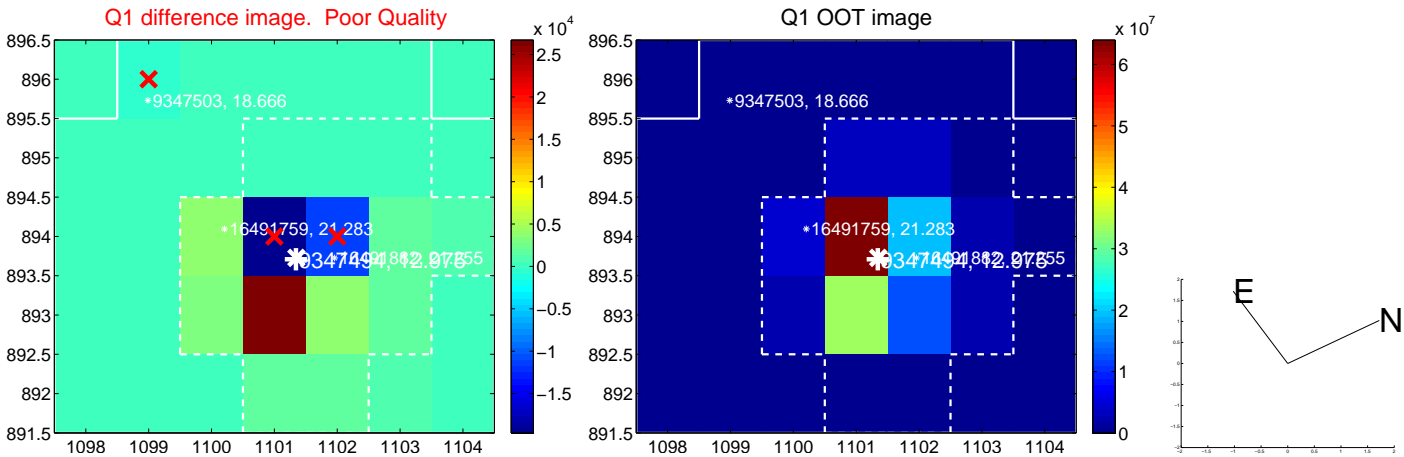
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.366 ± 0.599	2.28	1.255 ± 0.537	0.540 ± 0.499
PRF-fit source offset from KIC position	1.228 ± 0.601	2.04	1.166 ± 0.607	0.383 ± 0.539
photometric centroid source offset	1.12 ± 0.54	2.08	-0.69 ± 0.54	0.88 ± 0.54

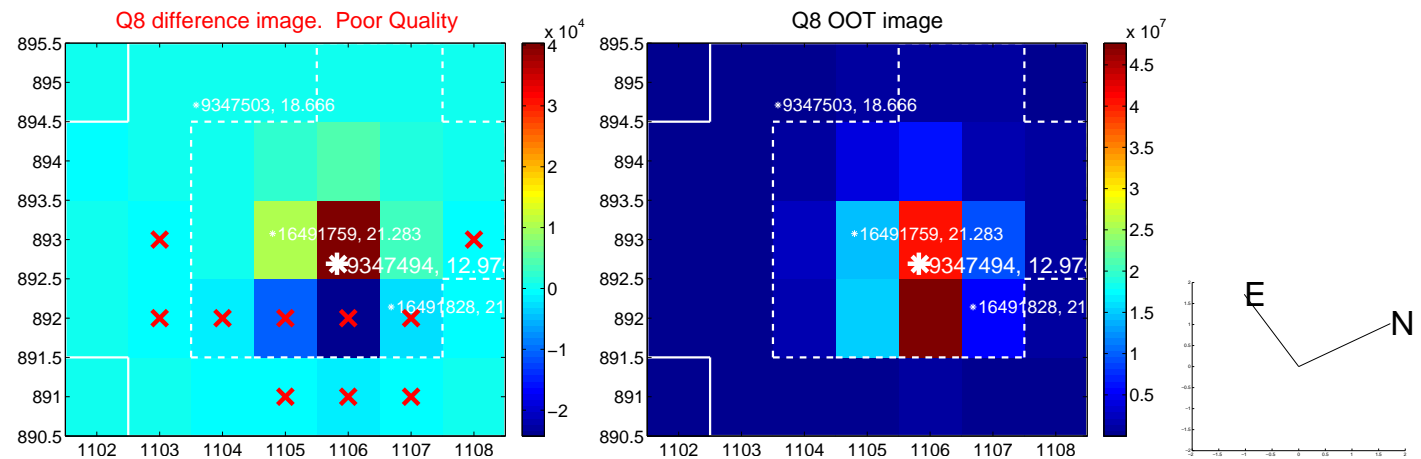
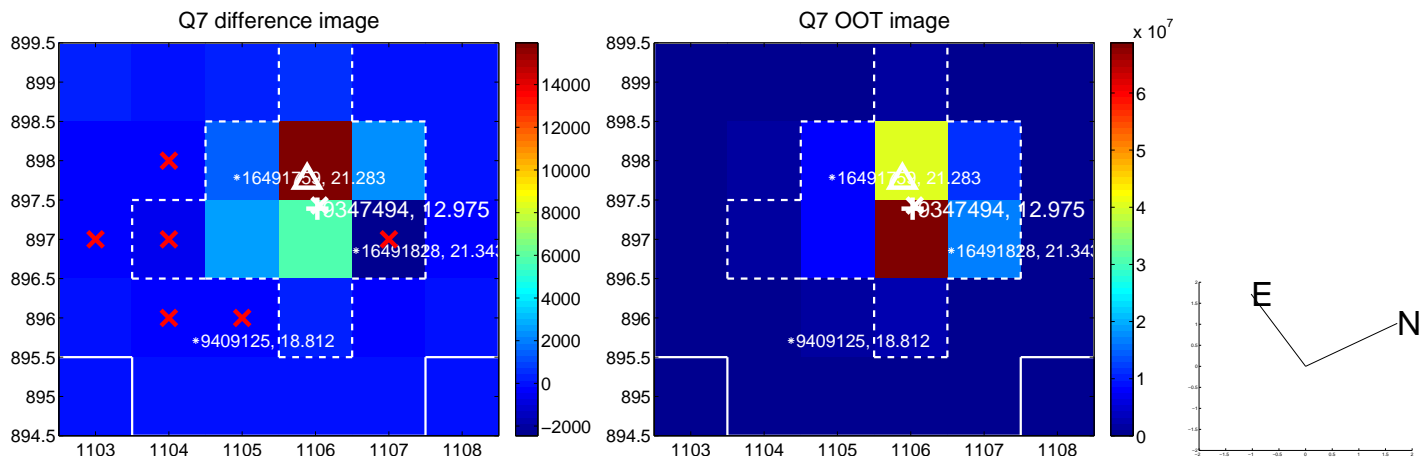
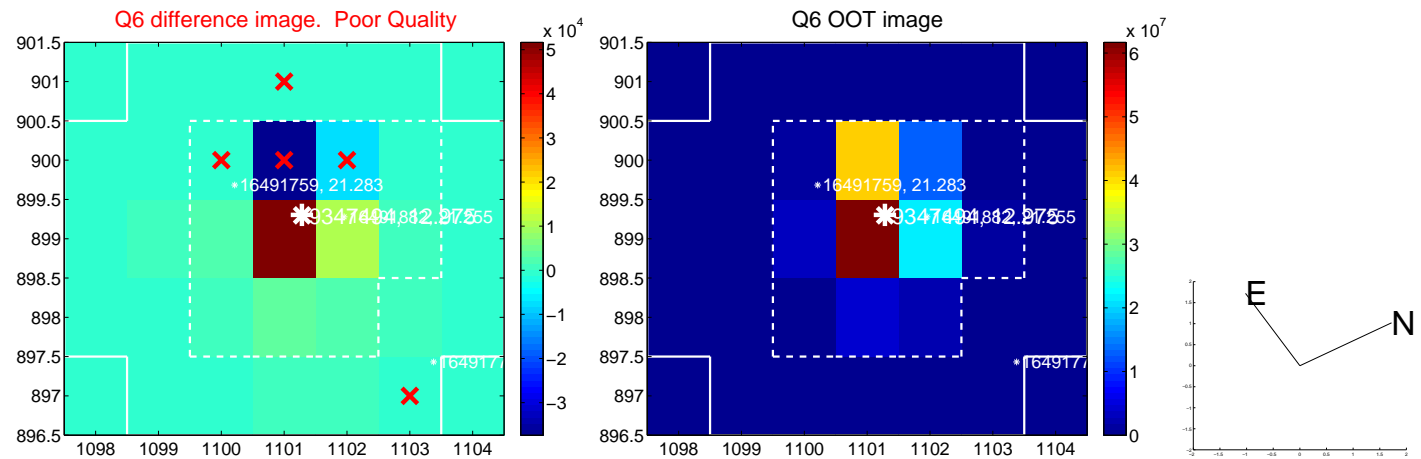
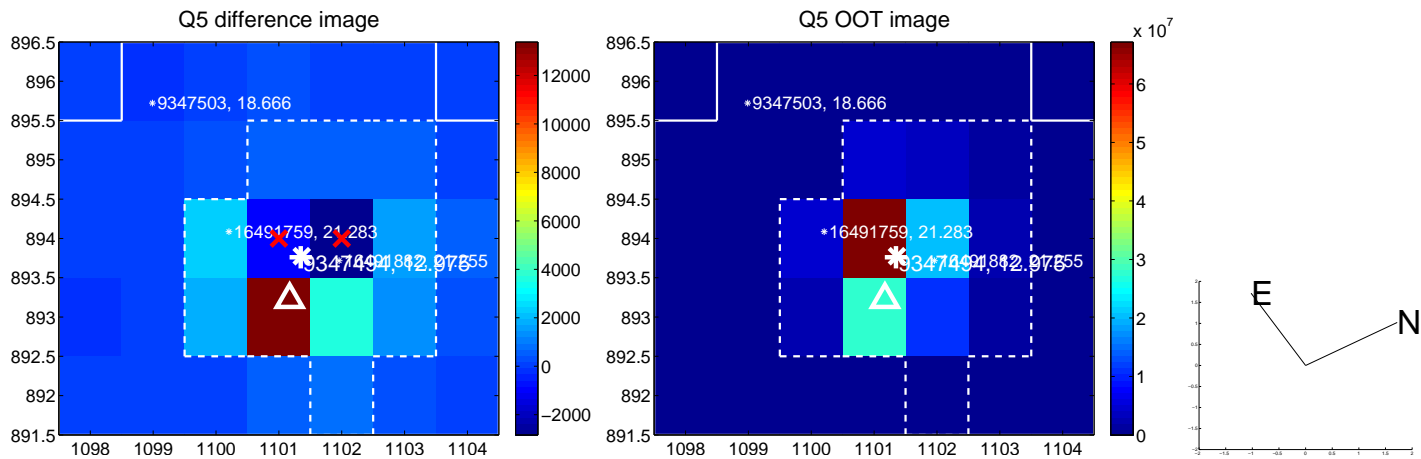


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

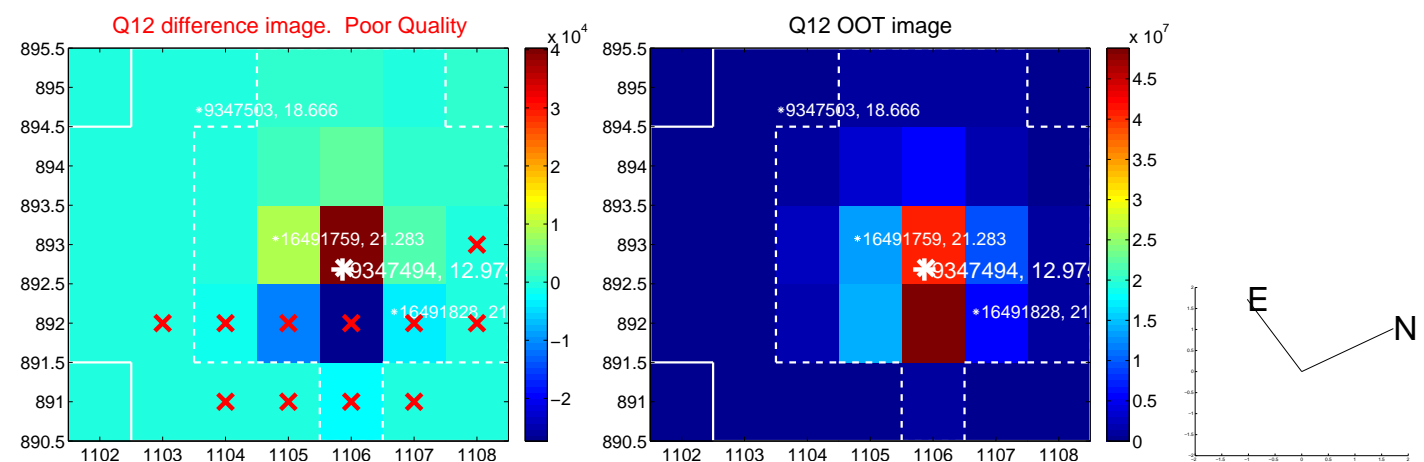
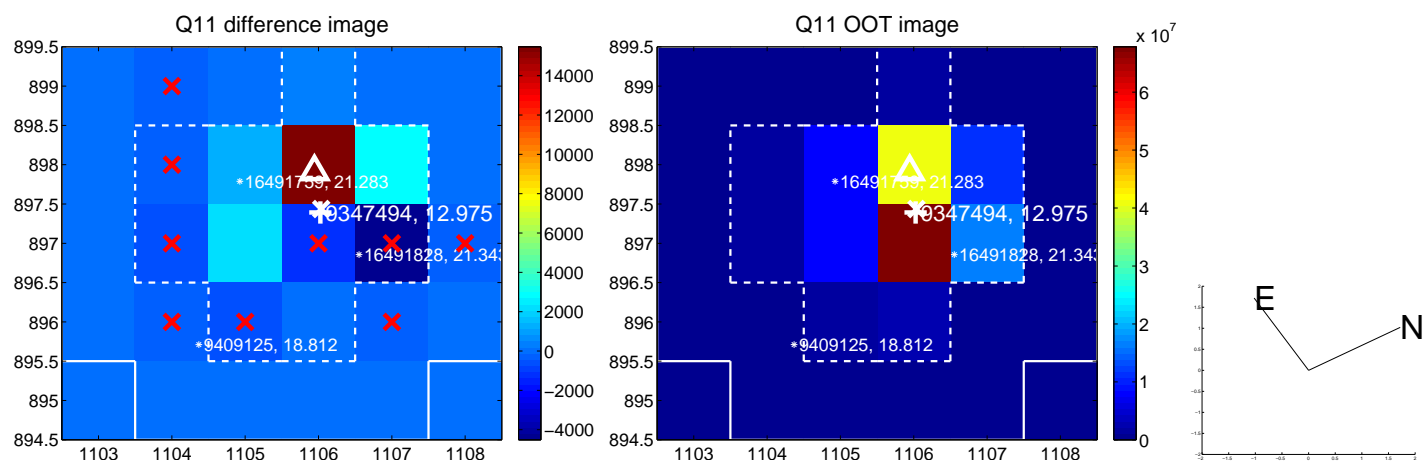
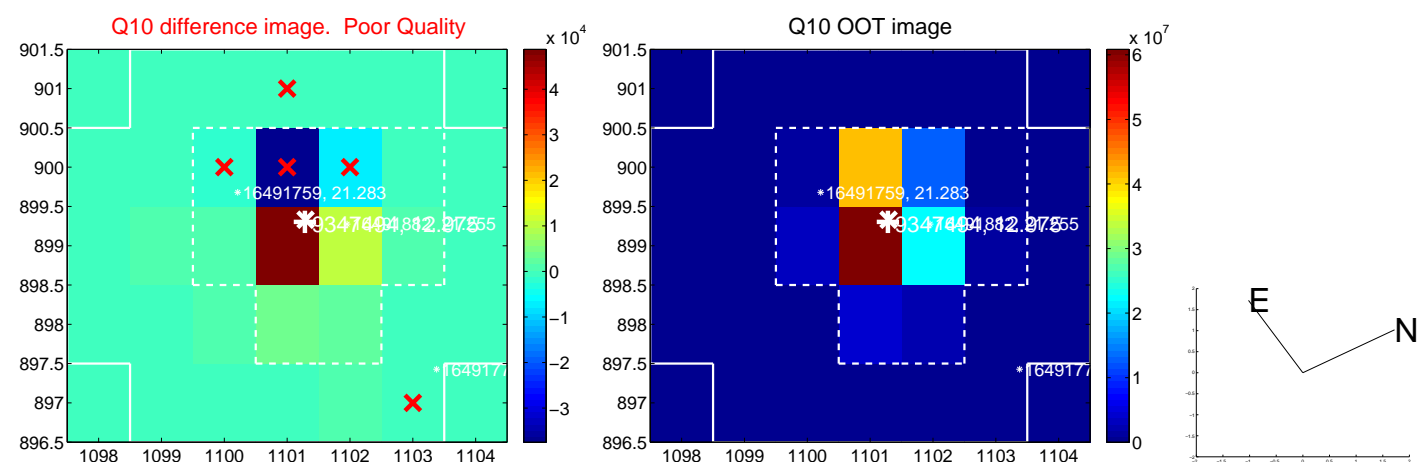
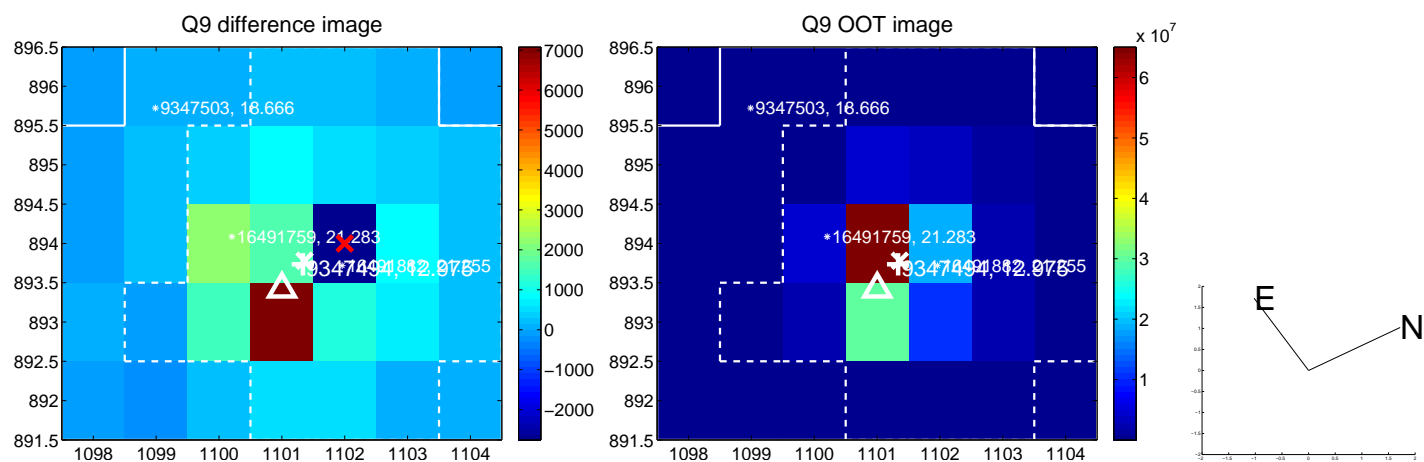
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



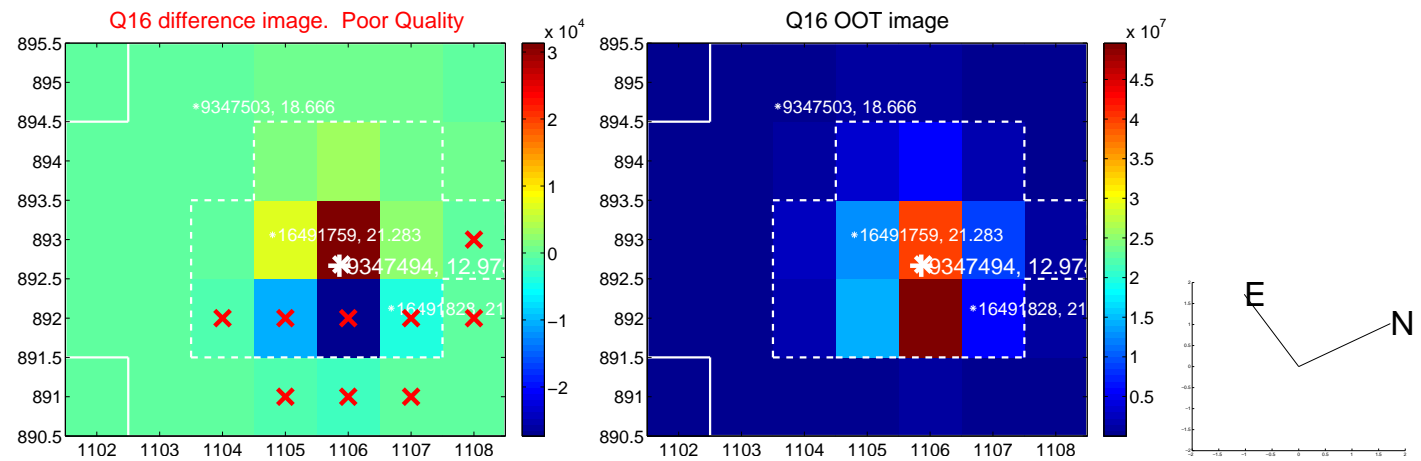
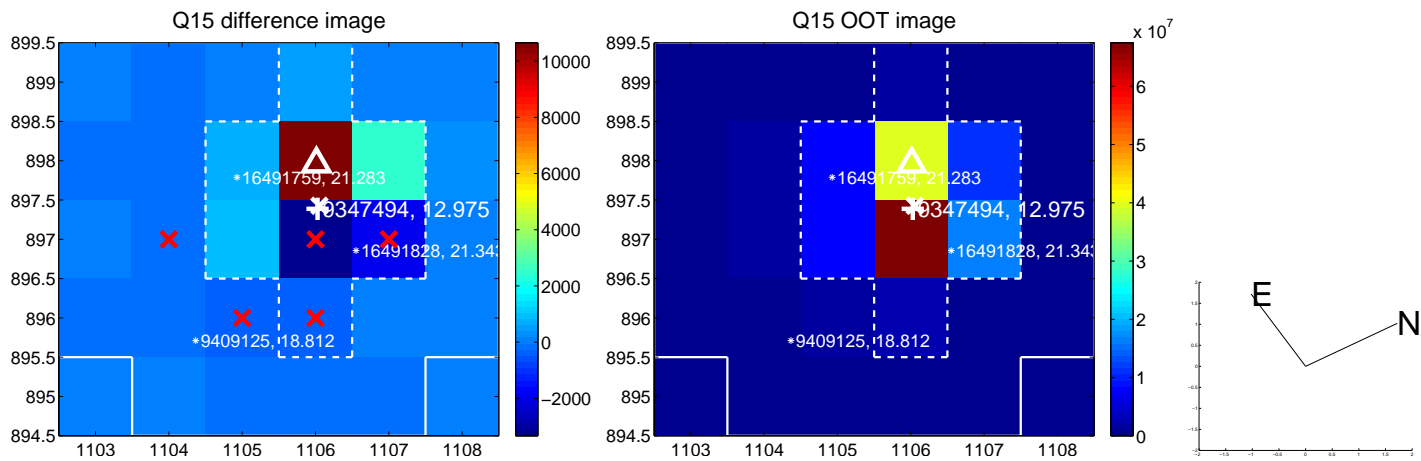
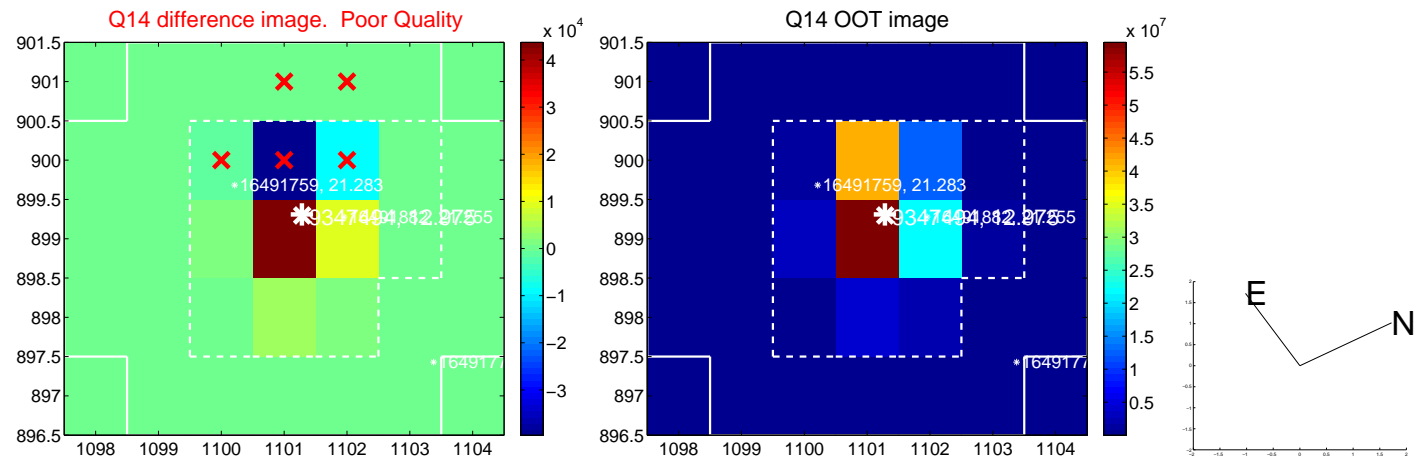
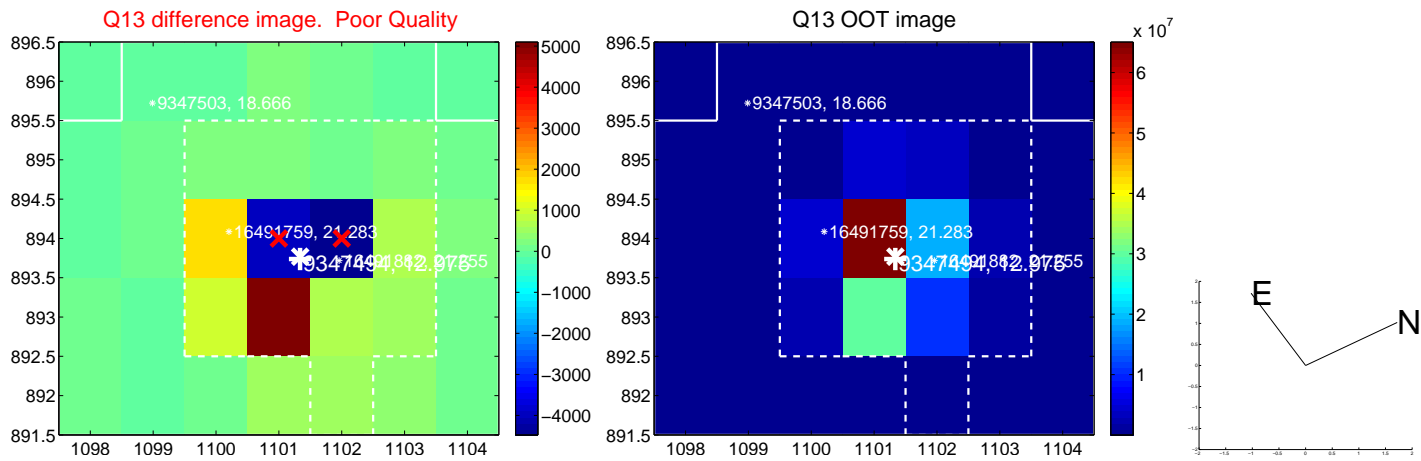
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



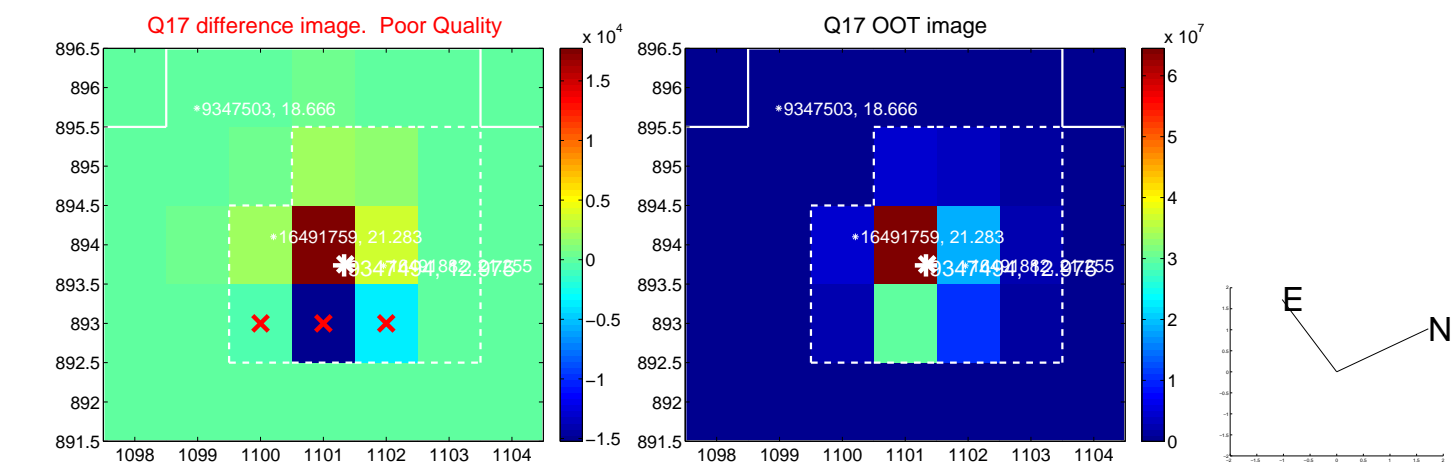
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



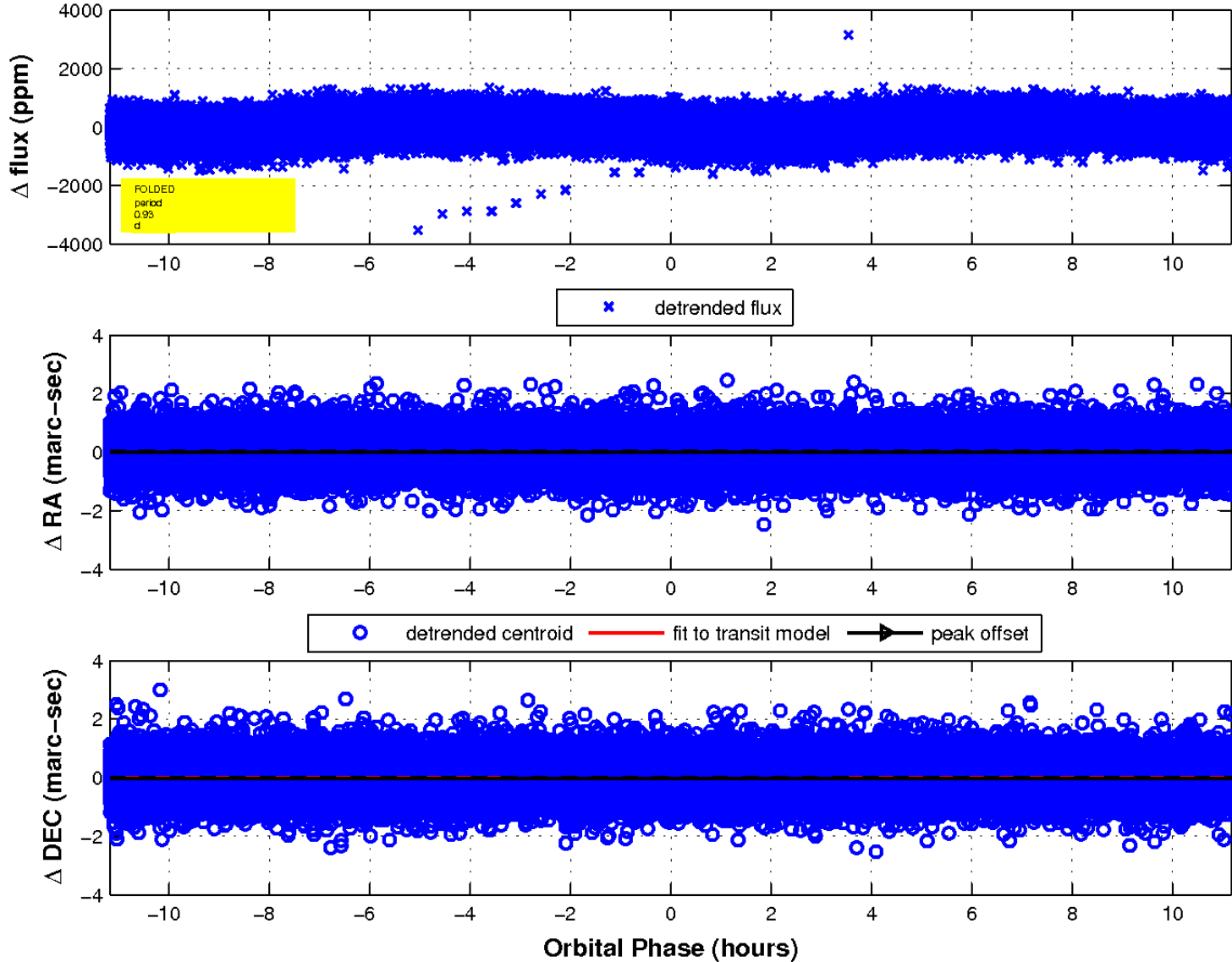
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

