

KIC 003241647

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
003241647-01	OBS	7650.01	0.851676	131.624118	56.3	1.973	7.5	7.6	1.03	5403	0.91	2712.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003241647-01	OBS	FP	0.00	0	0	1	1	HALO_GHOST—EPHEM_MATCH

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

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

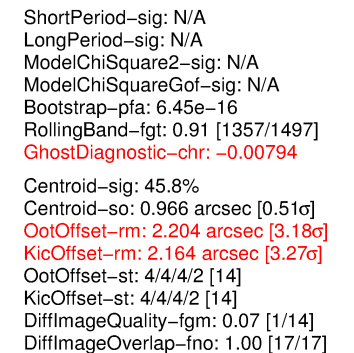
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003241647-01

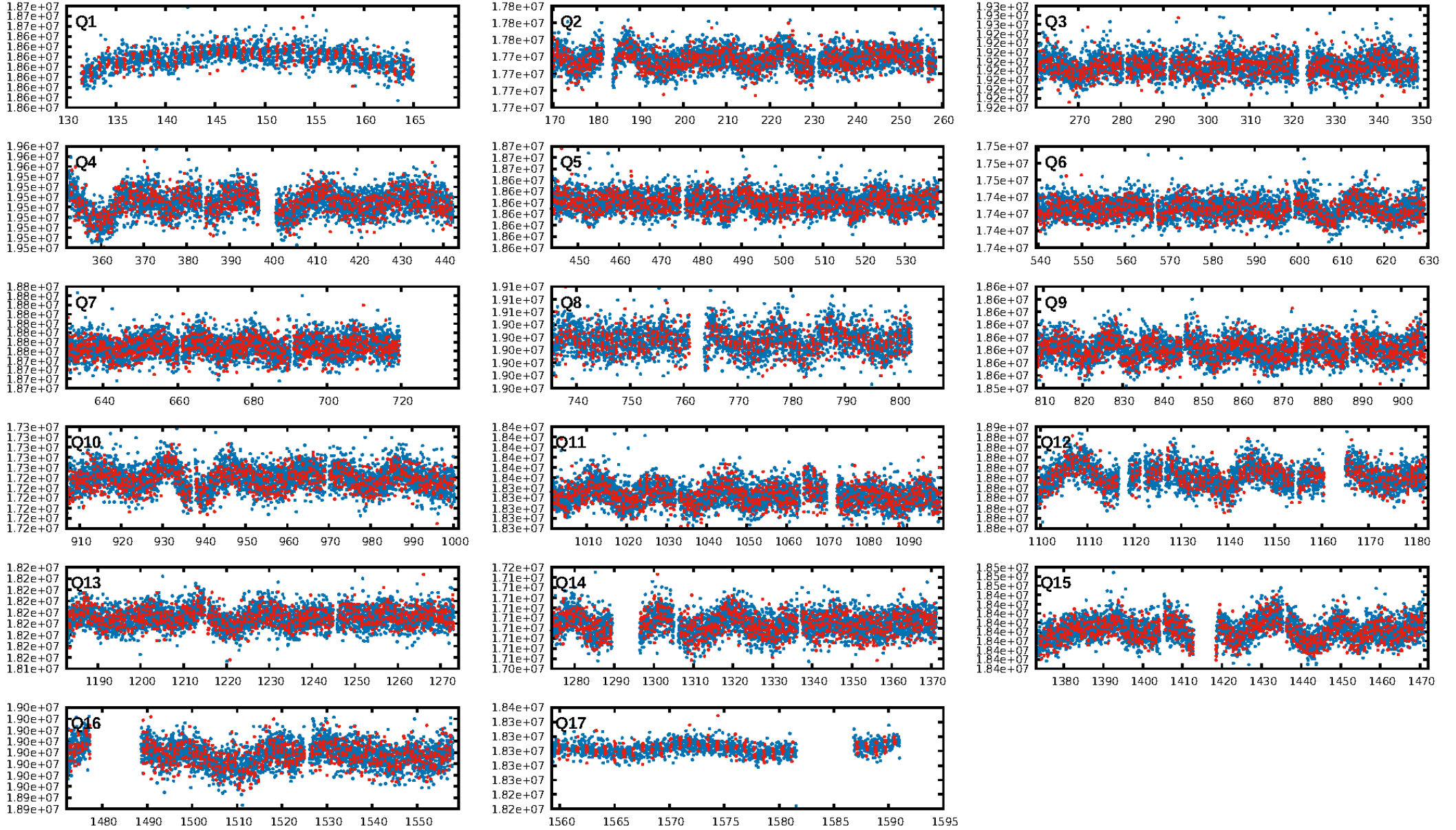
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
003241647-01	3241647	6312.01	3241619	1:2	76.6	-18	6	12.52	15.25	9109.10	Direct-PRF	0	0.53	0.60

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

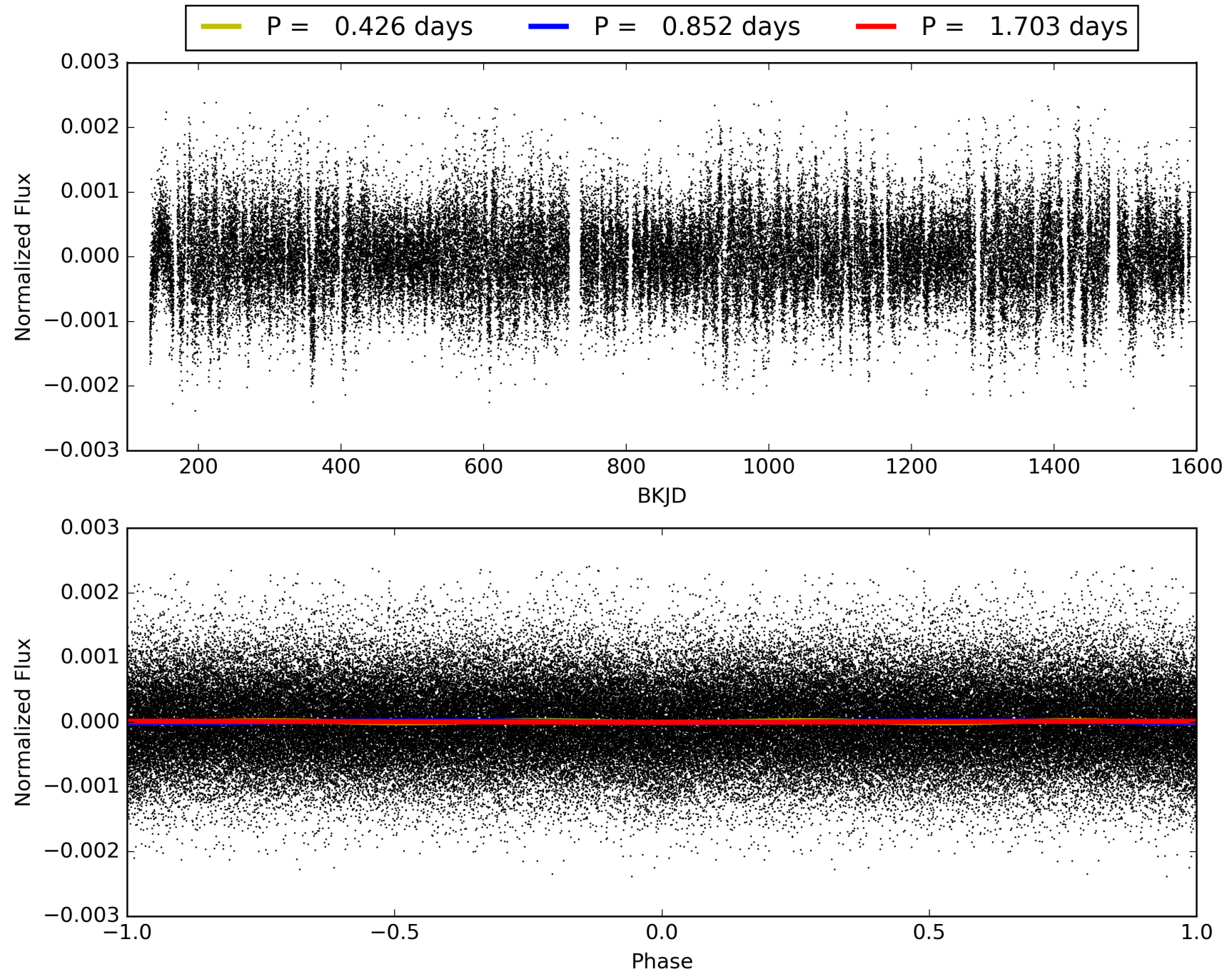
KIC: 3241647 Candidate: 1 of 1 Period: 0.852 d



TCE 003241647-01, PDC Light Curves

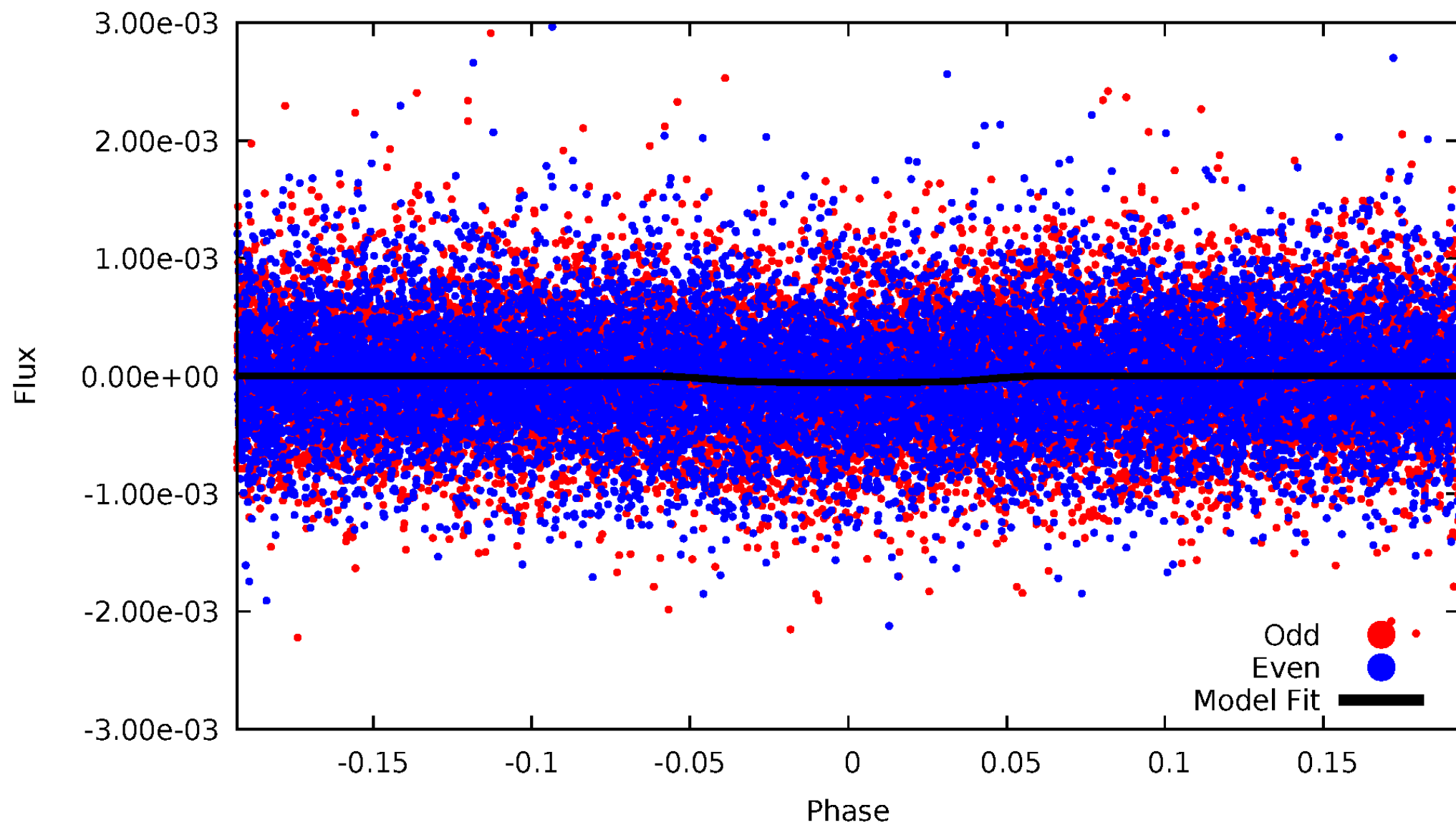


TCE 003241647-01



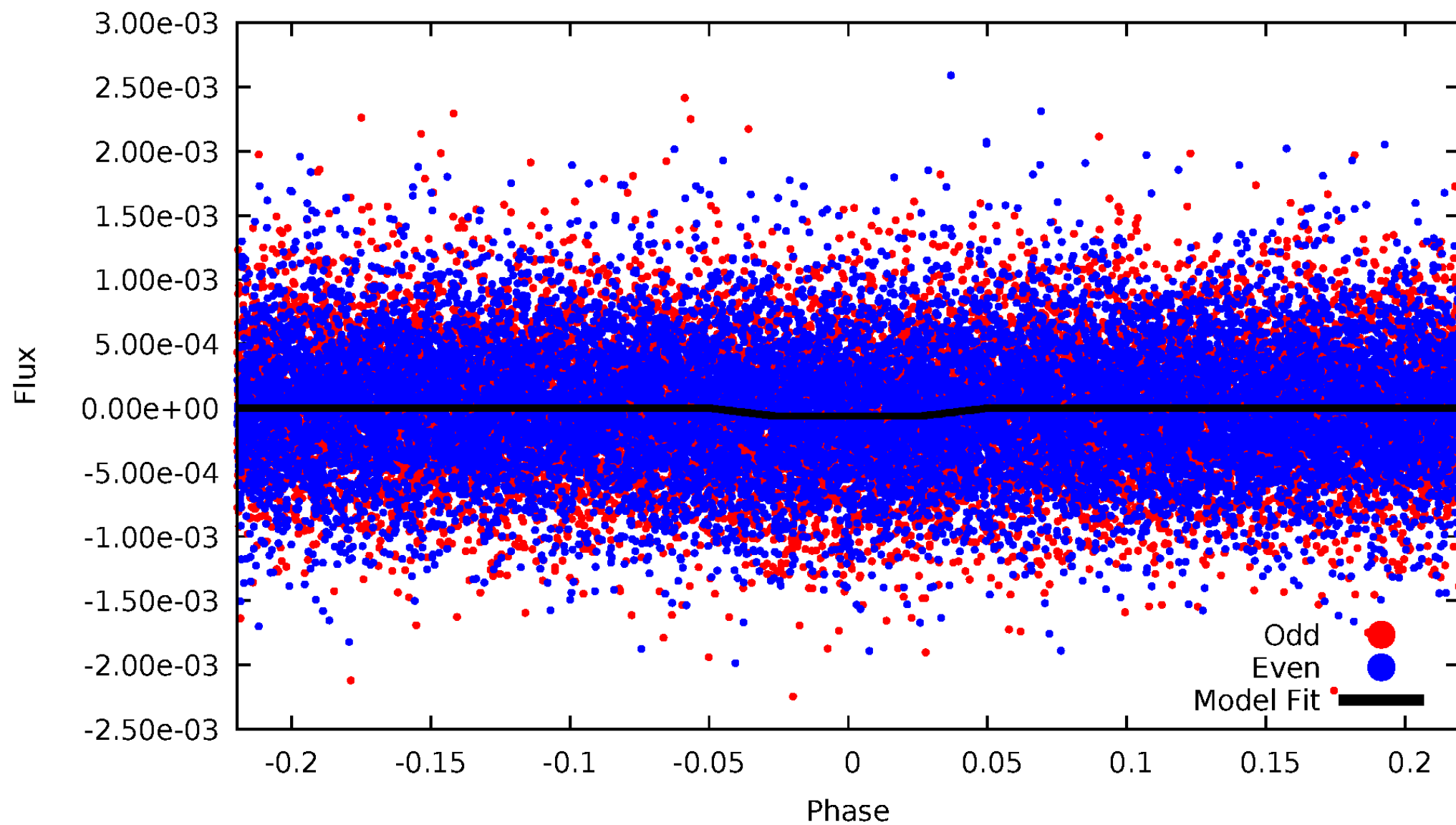
DV Odd/Even

TCE 003241647-01



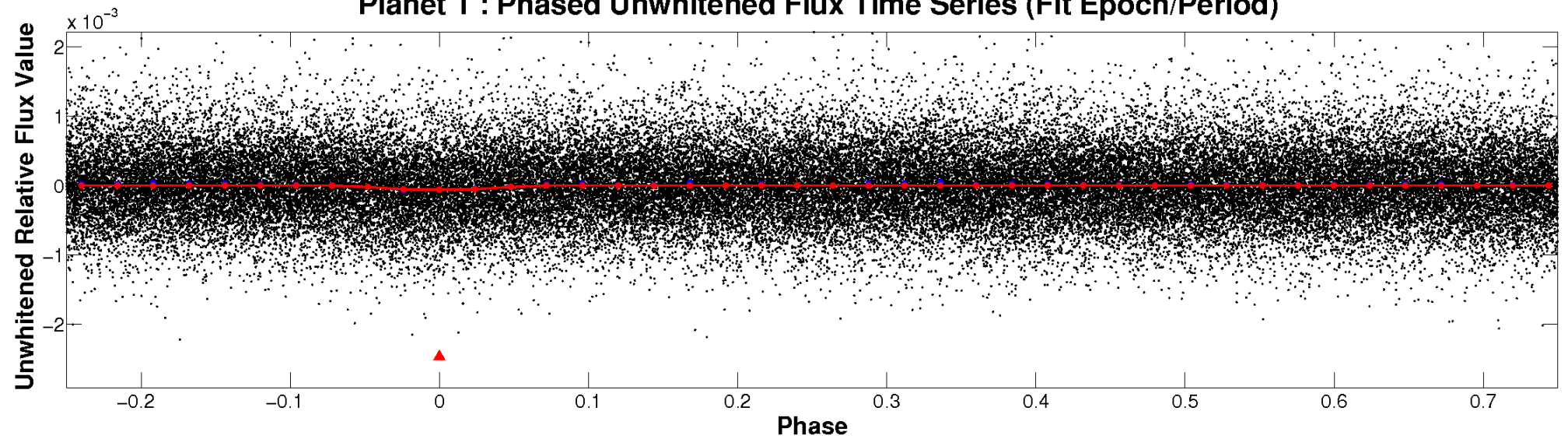
ALT Odd/Even

TCE 003241647-01

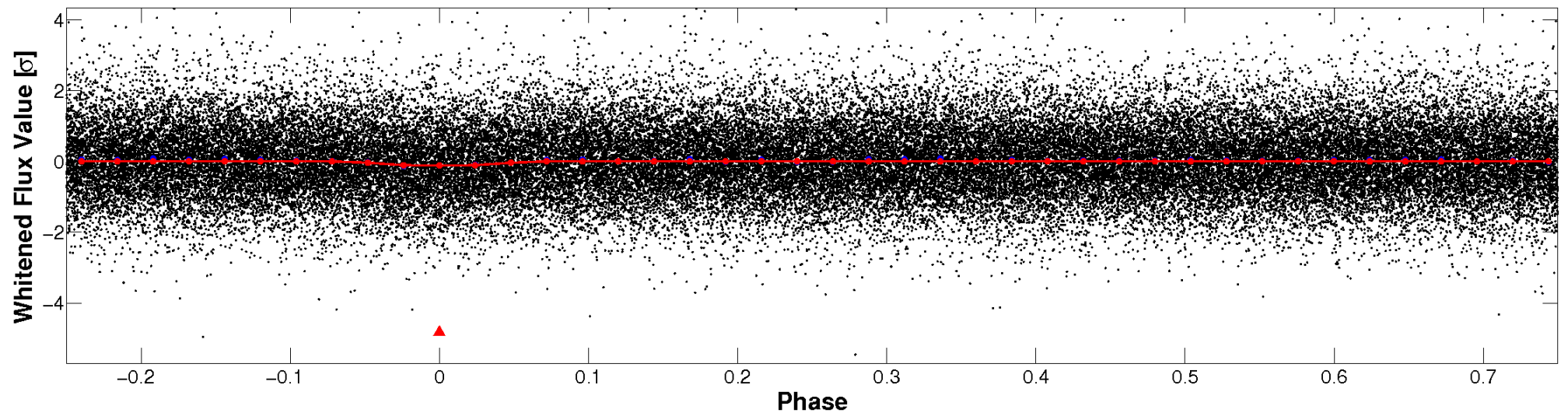


Non-Whitened Vs. Whitened Light Curve

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

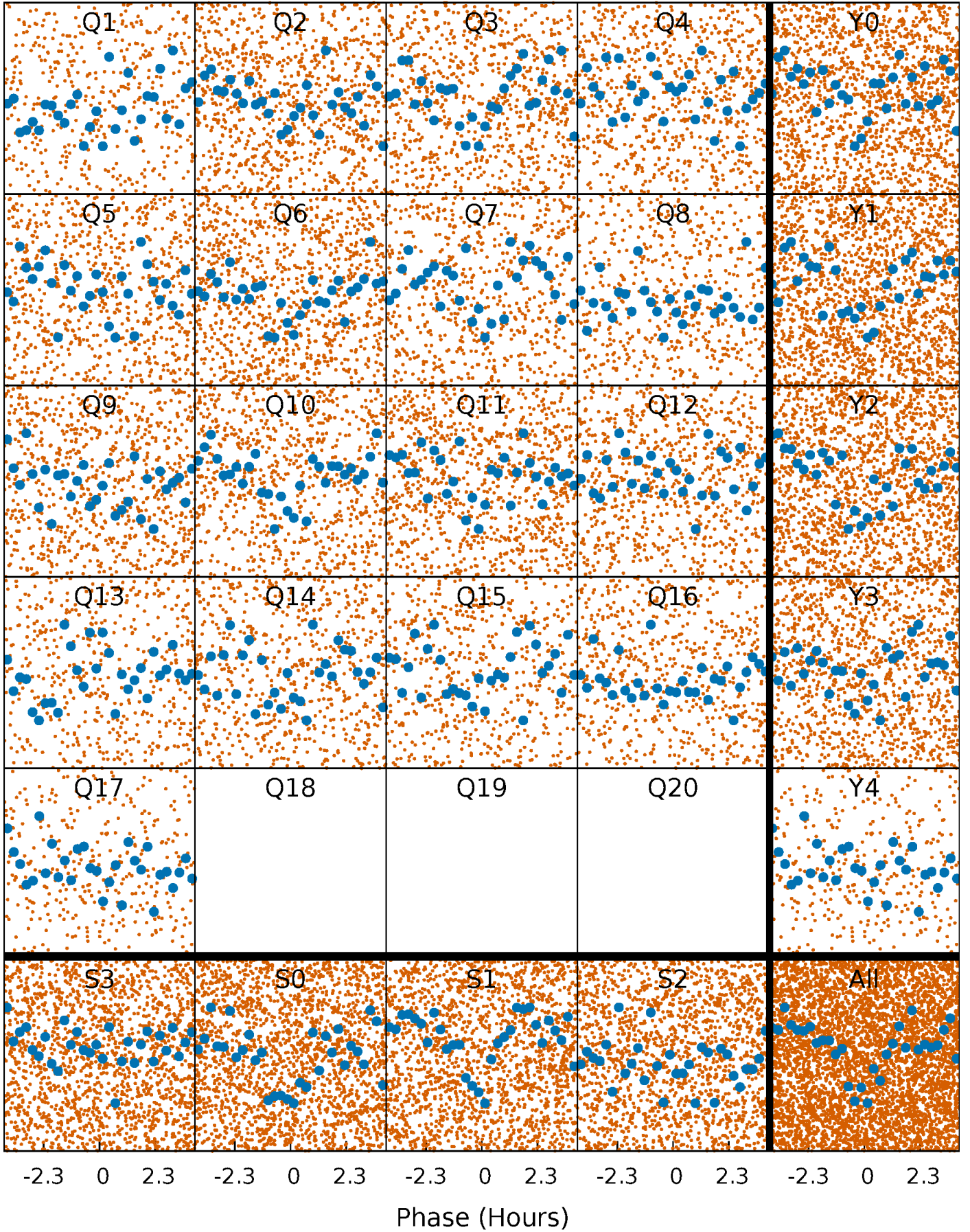


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



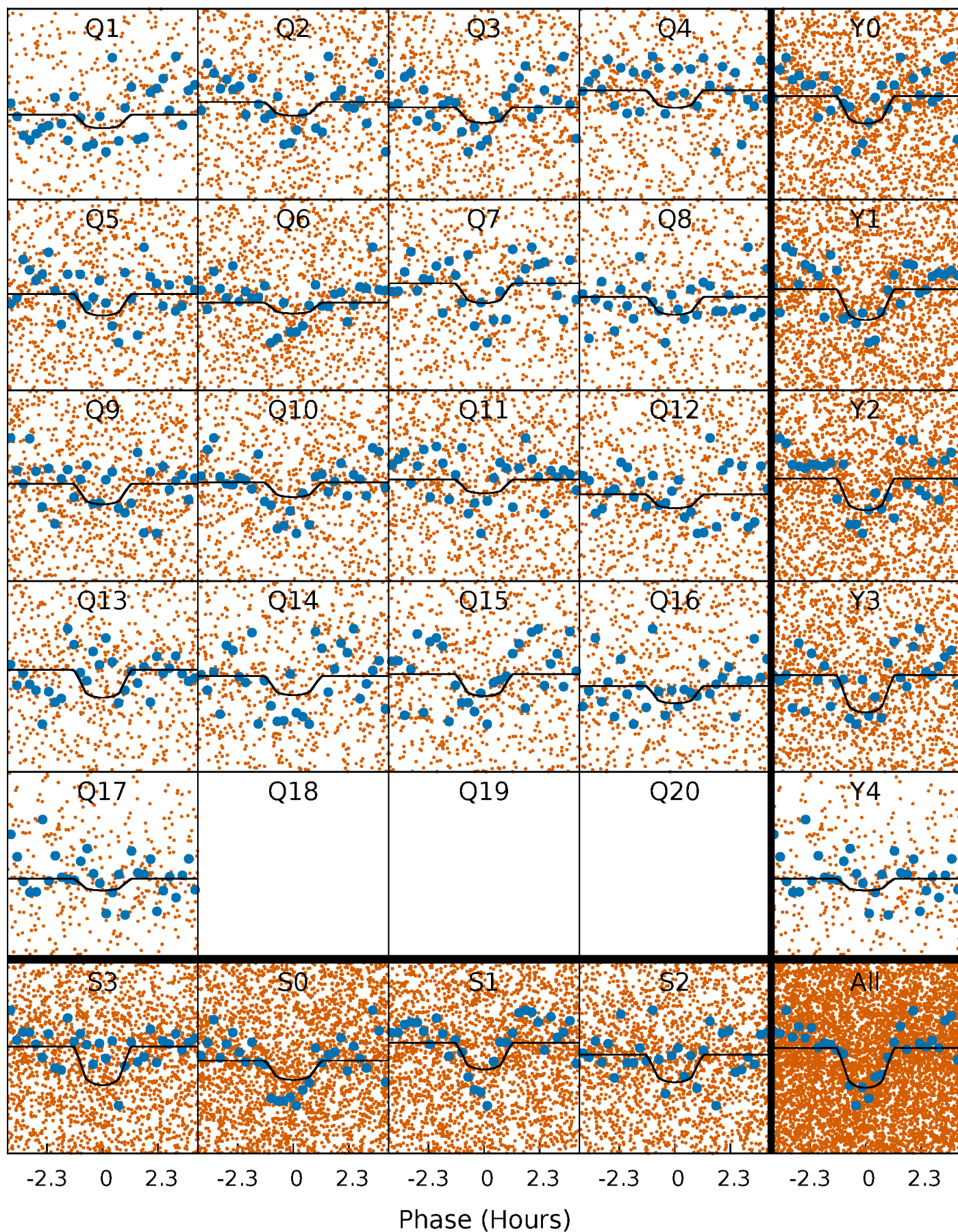
PDC Quarter-Phased Transit Curves

TCE 003241647-01 P= 0.851676 Days $T_0=131.624118$ (BKJD)



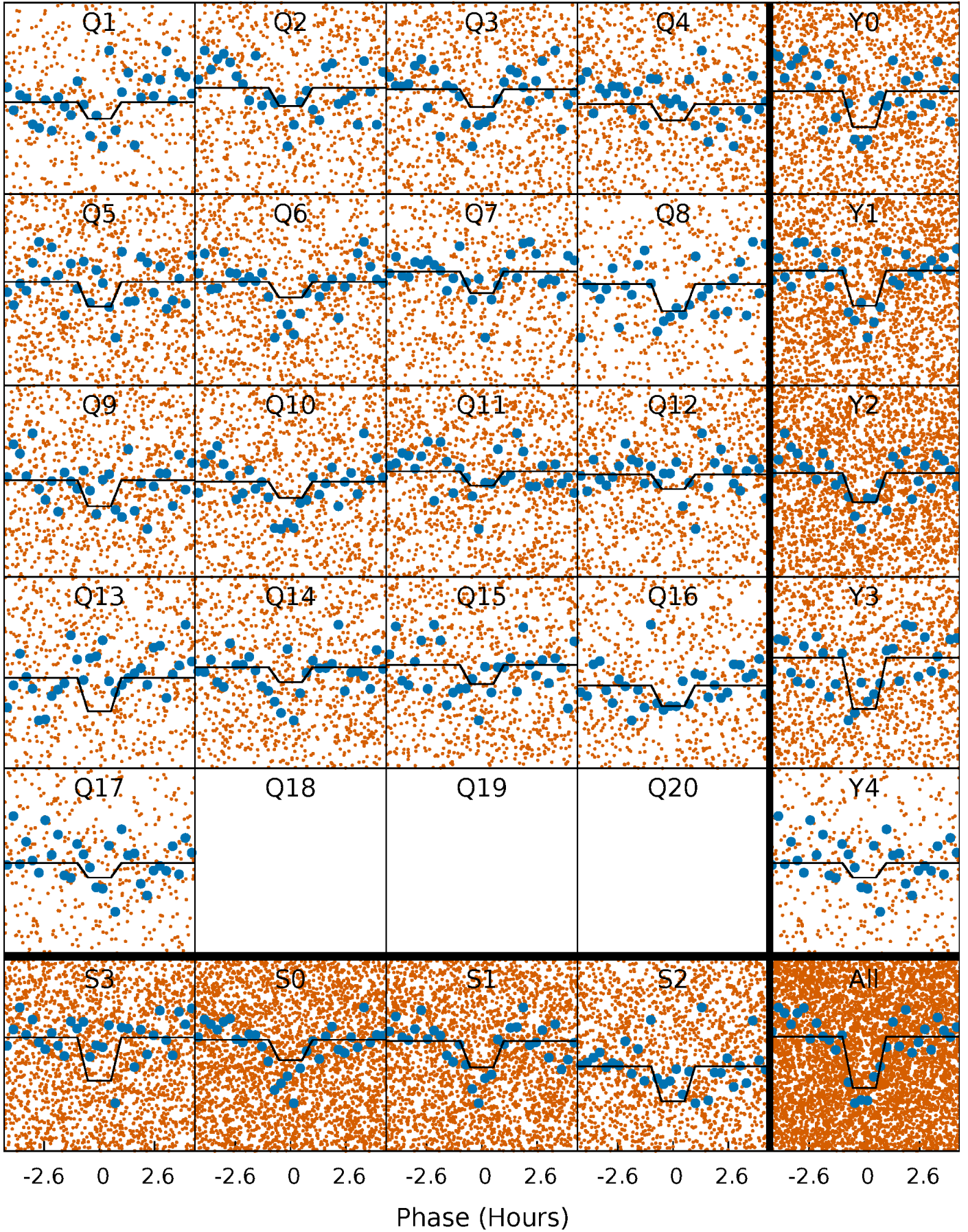
DV Quarter-Phased Transit Curves

TCE 003241647-01 P= 0.851676 Days $T_0=131.624118$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

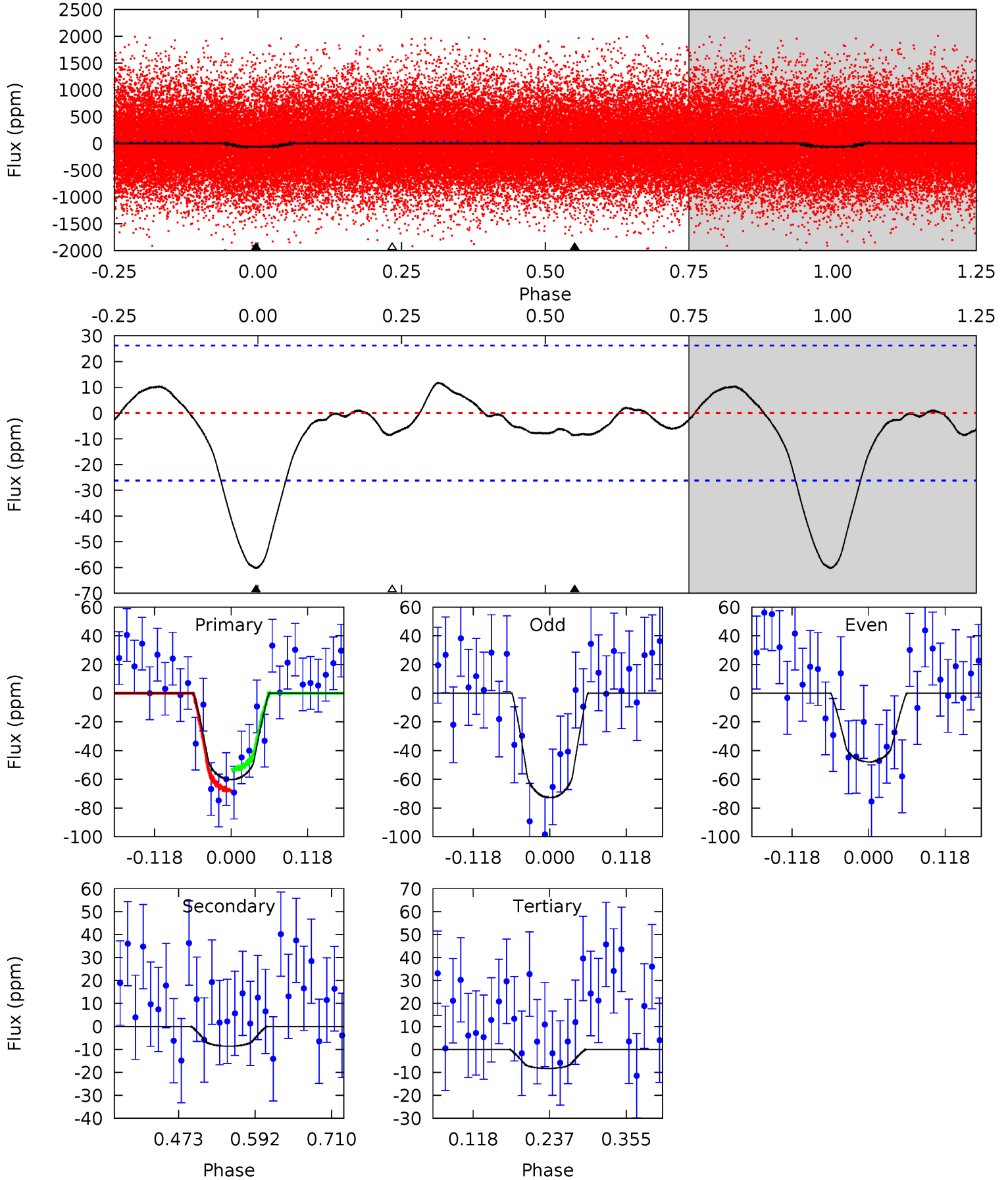
TCE 003241647-01 P= 0.851684 Days $T_0=131.617877$ (BKJD)



DV Model-Shift Uniqueness Test

003241647-01, P = 0.851676 Days, E = 130.772442 Days

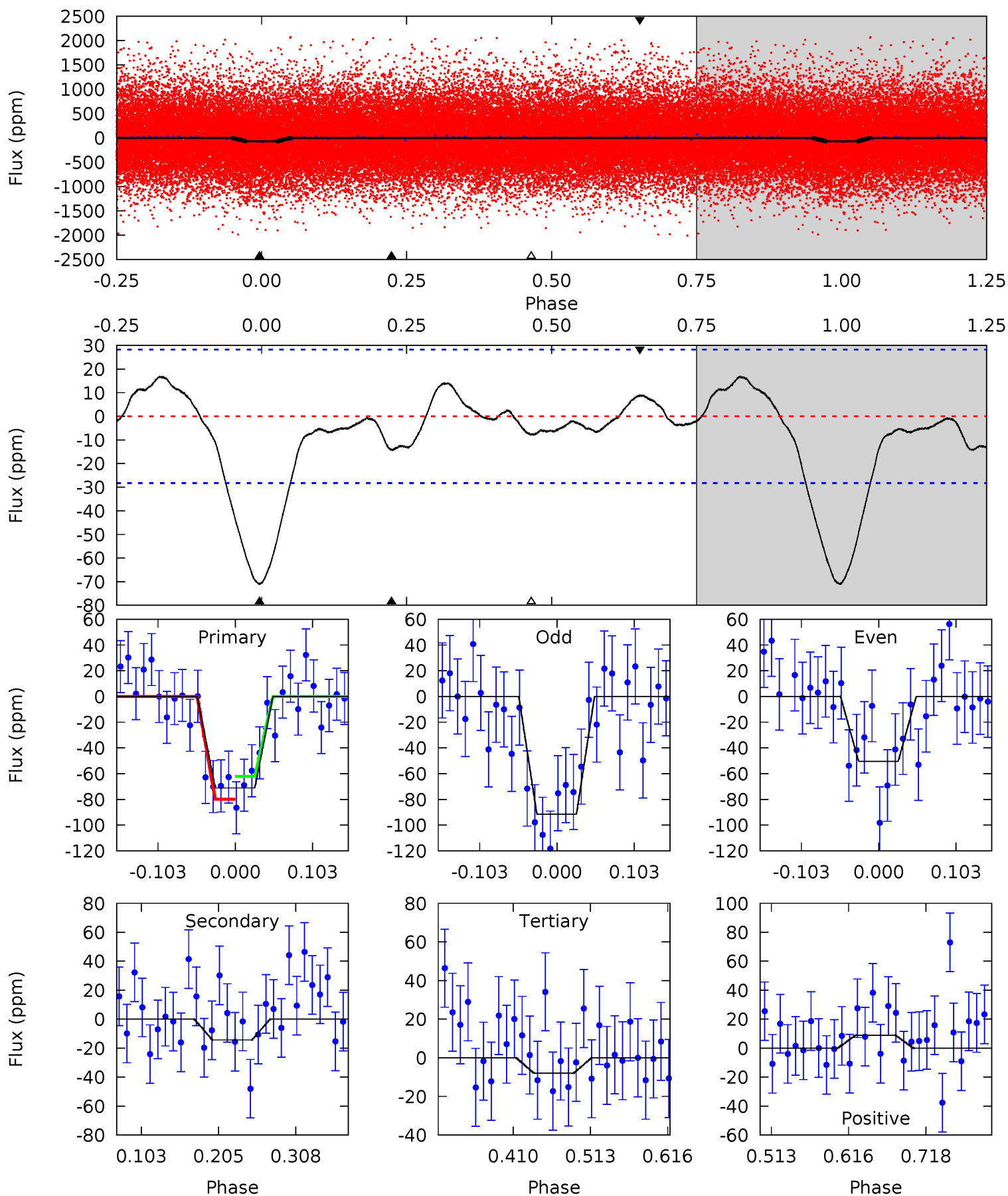
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	1.49	1.44	0	4.53	1.56	0.96	8.97	10.4	0.06	1.49	2.17	0.88	0.16	1.28



Alt Model-Shift Uniqueness Test

003241647-01, P = 0.851684 Days, E = 130.766193 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	2.32	1.27	1.45	4.56	1.63	1.08	10.2	10.0	1.04	0.87	3.33	0.93	0.19	1.43



Stellar Parameters For KIC 003241647

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5403^{+164}_{-164}	$4.389^{+0.124}_{-0.186}$	$0.340^{+0.100}_{-0.300}$	$1.029^{+0.272}_{-0.168}$	$0.945^{+0.082}_{-0.074}$	$1.222^{+0.677}_{-0.591}$
	+3%/-3%	+3%/-4%	+29%/-88%	+26%/-16%	+9%/-8%	+55%/-48%
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 003241647-01 / KOI 7650.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 6	$1.17^{+0.90}_{-0.69}$	2585^{+192}_{-145}	3126^{+1503}_{-5638}	$0.905^{+5.178}_{-0.710}$
Alt.	-14 ± 6	$1.14^{+0.92}_{-0.77}$	2589^{+202}_{-148}	3606^{+2131}_{-992}	$1.829^{+14.176}_{-1.375}$

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 $A_{obs} \gg 1.0$

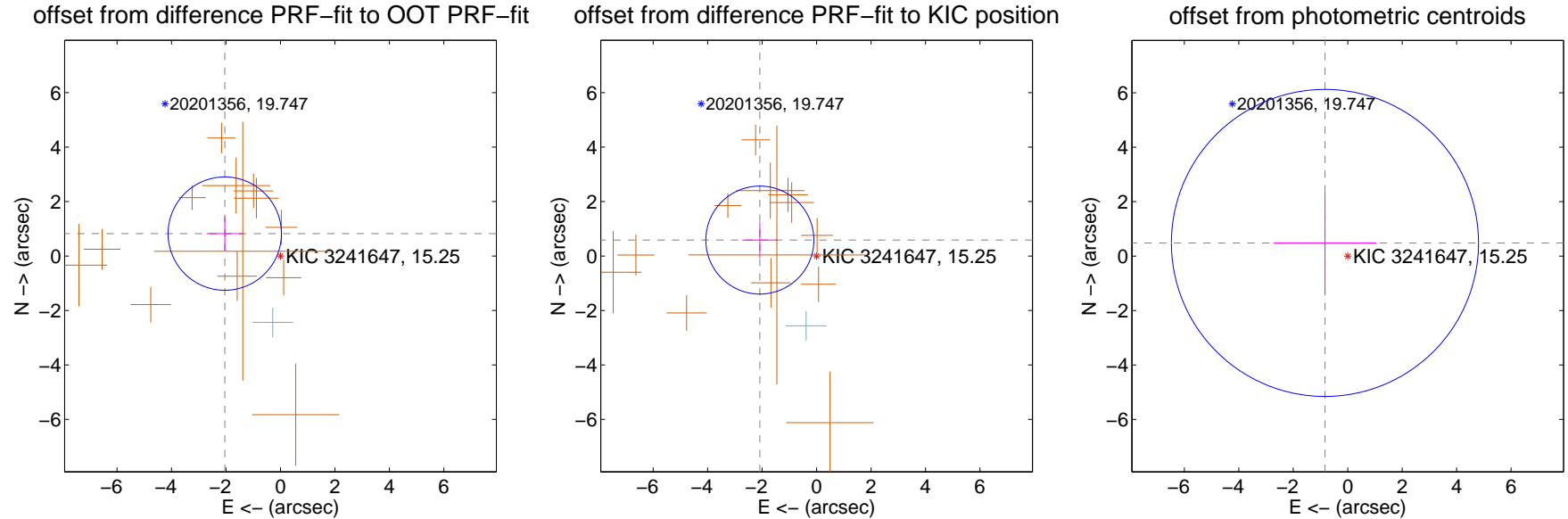
DV Centroid Data

Supplemental centroid analysis for 003241647-01. Kepler magnitude: 15.25. Transit SNR 7.56

There are 1 quarters with good PRF difference image offsets

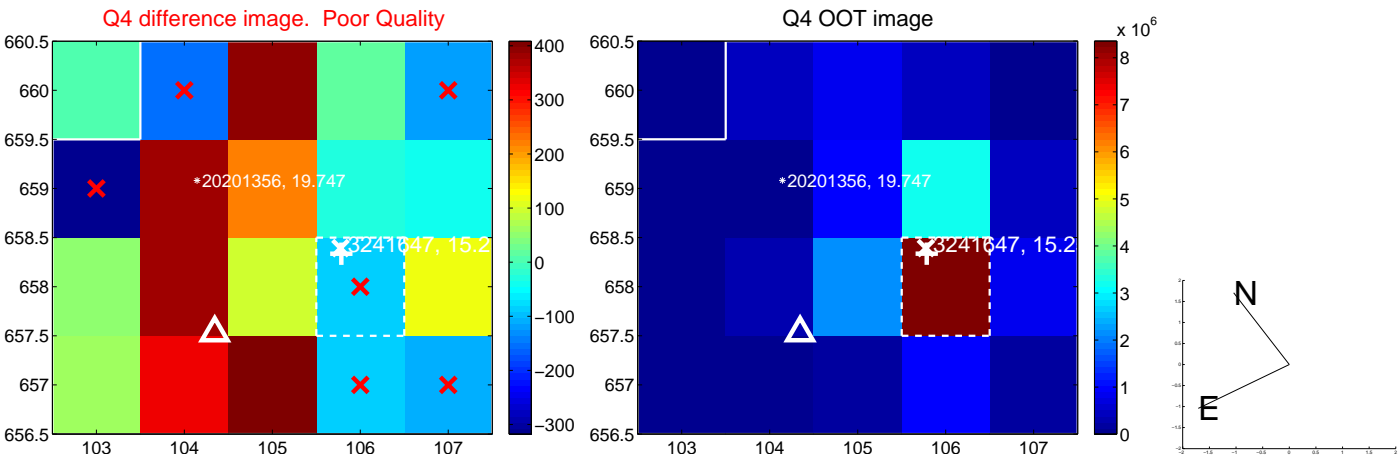
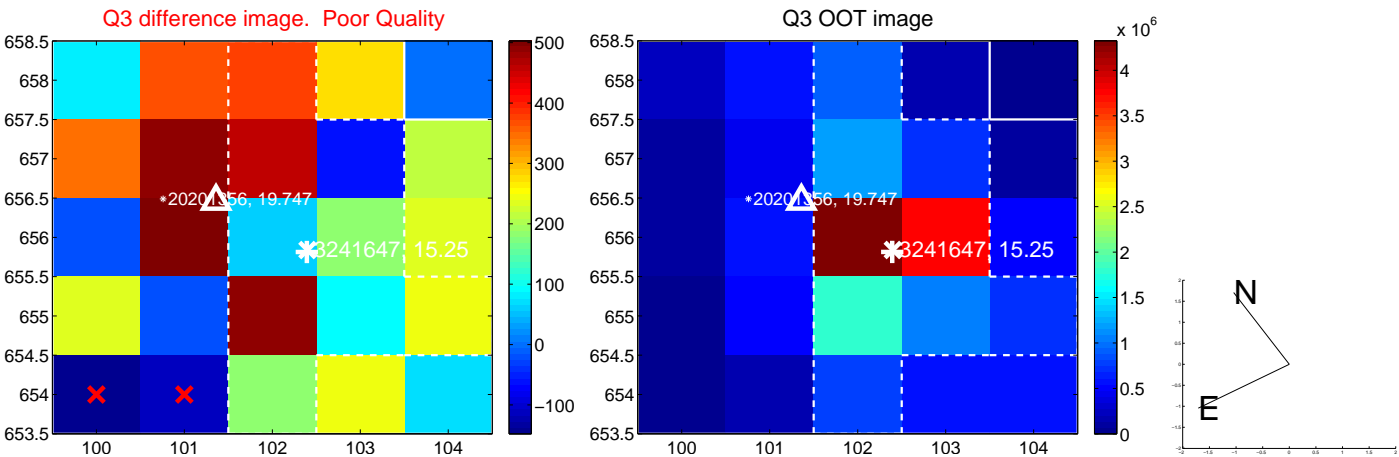
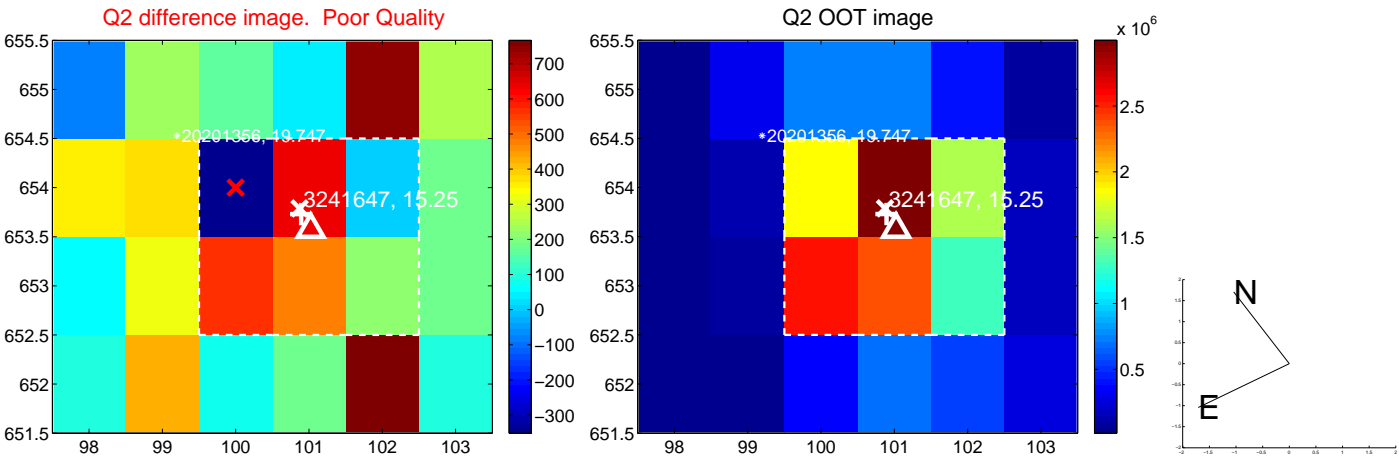
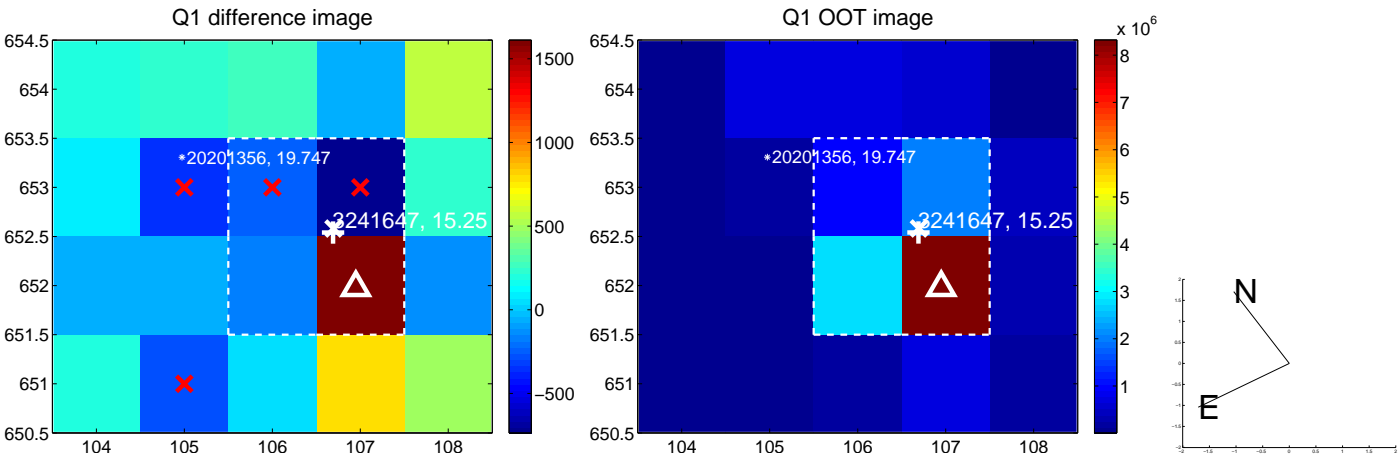
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.204 ± 0.694	3.18	2.044 ± 0.662	0.823 ± 0.628
PRF-fit source offset from KIC position	2.164 ± 0.661	3.27	2.083 ± 0.644	0.586 ± 0.655
photometric centroid source offset	0.97 ± 1.88	0.51	0.84 ± 1.88	0.48 ± 1.87

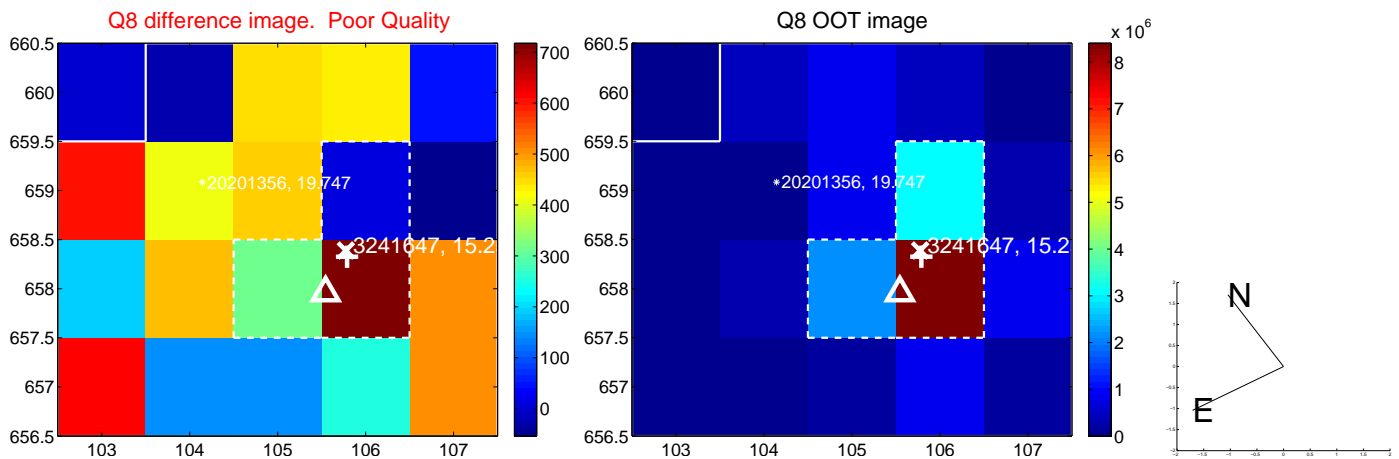
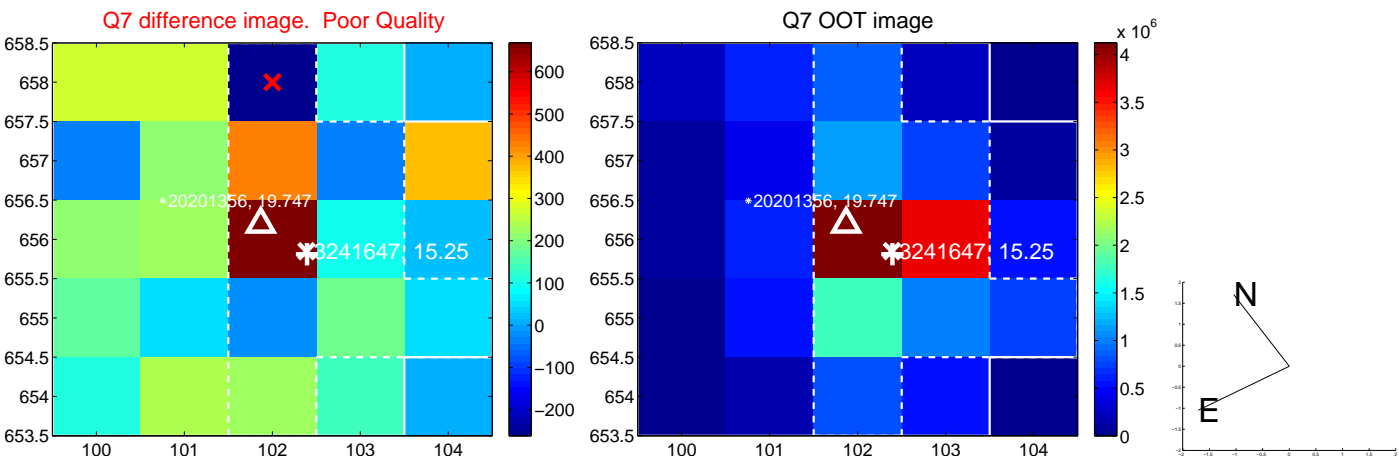
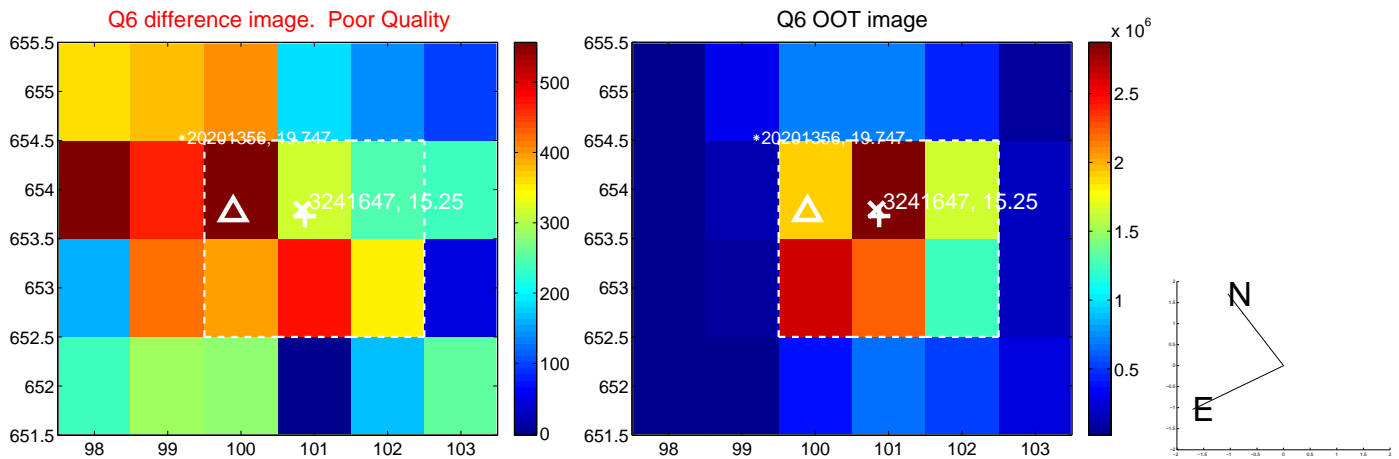
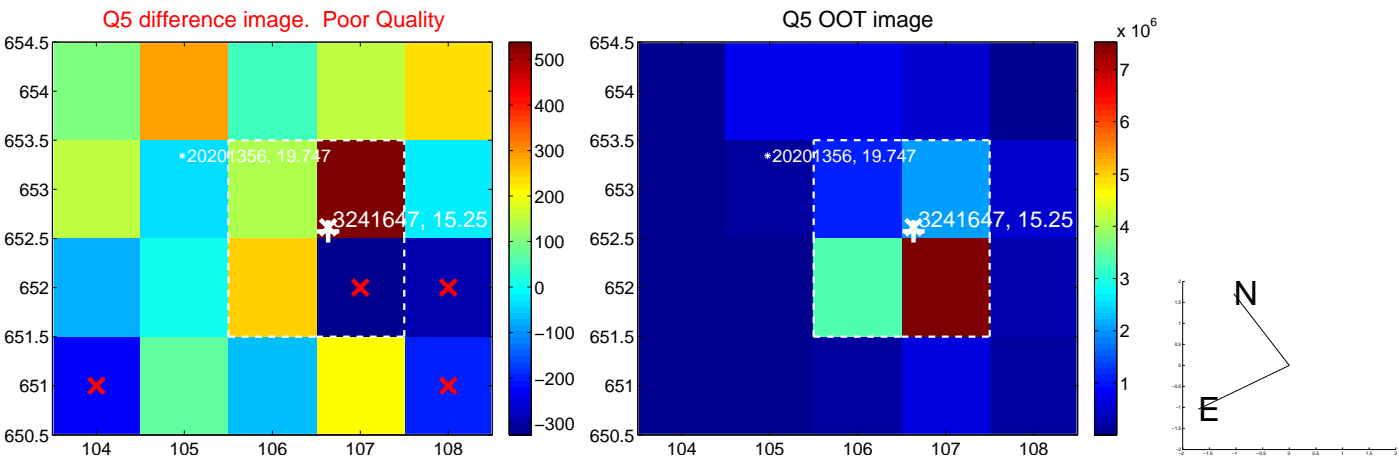


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

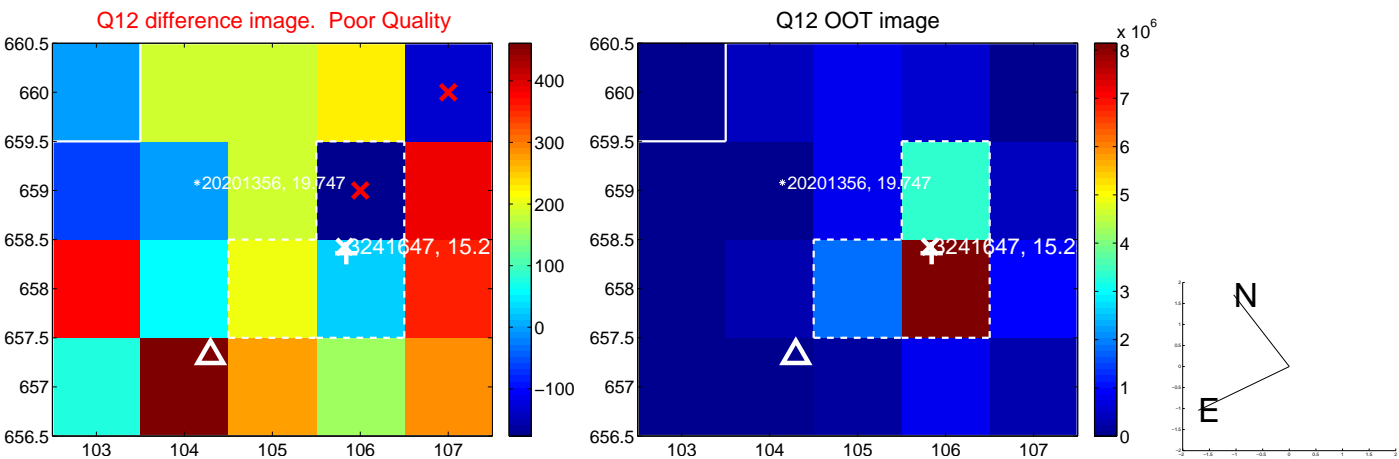
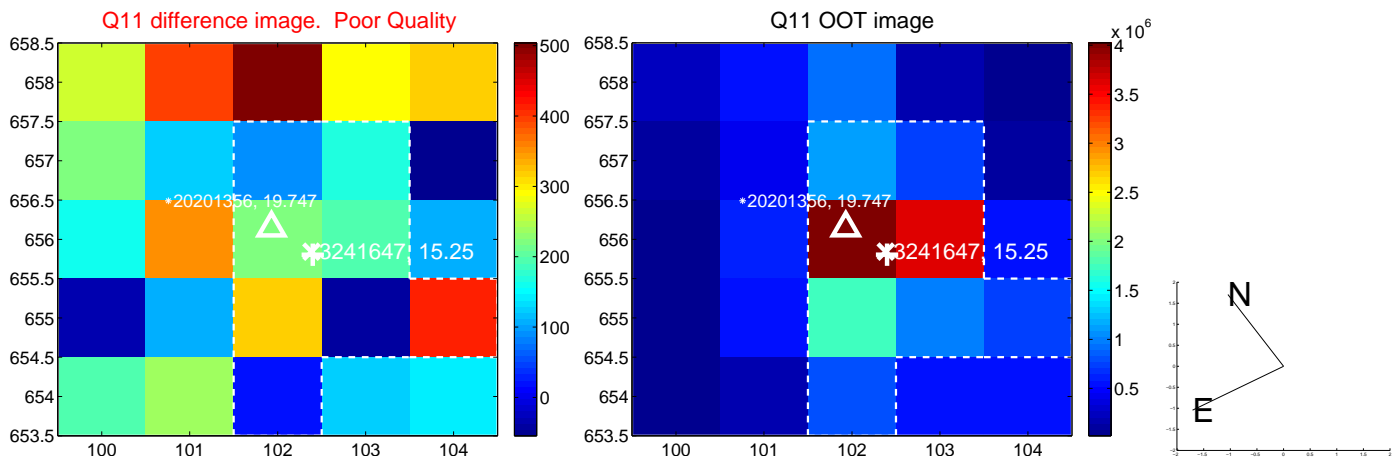
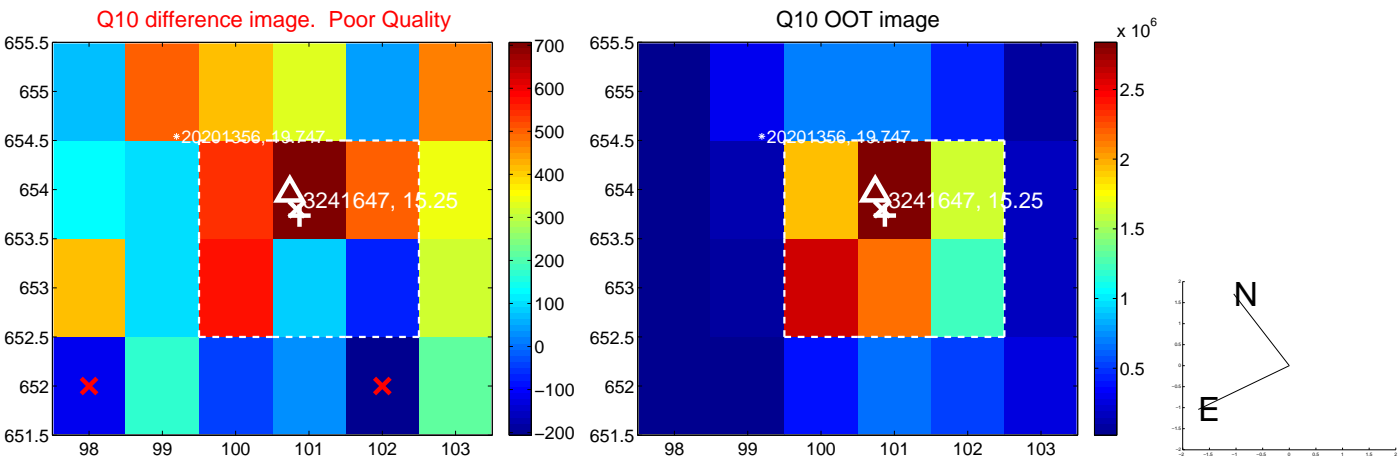
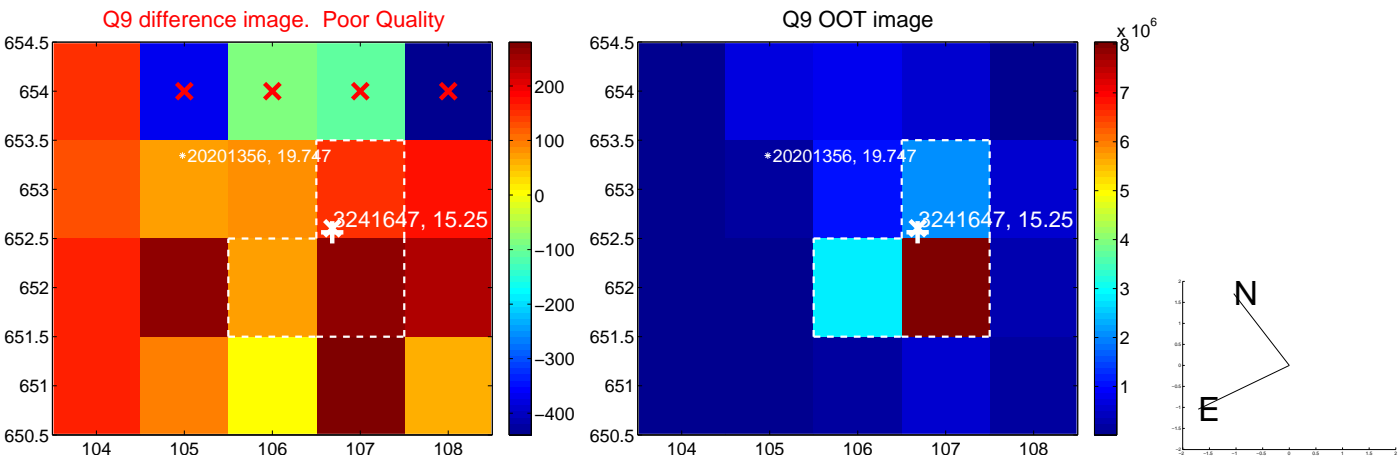
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



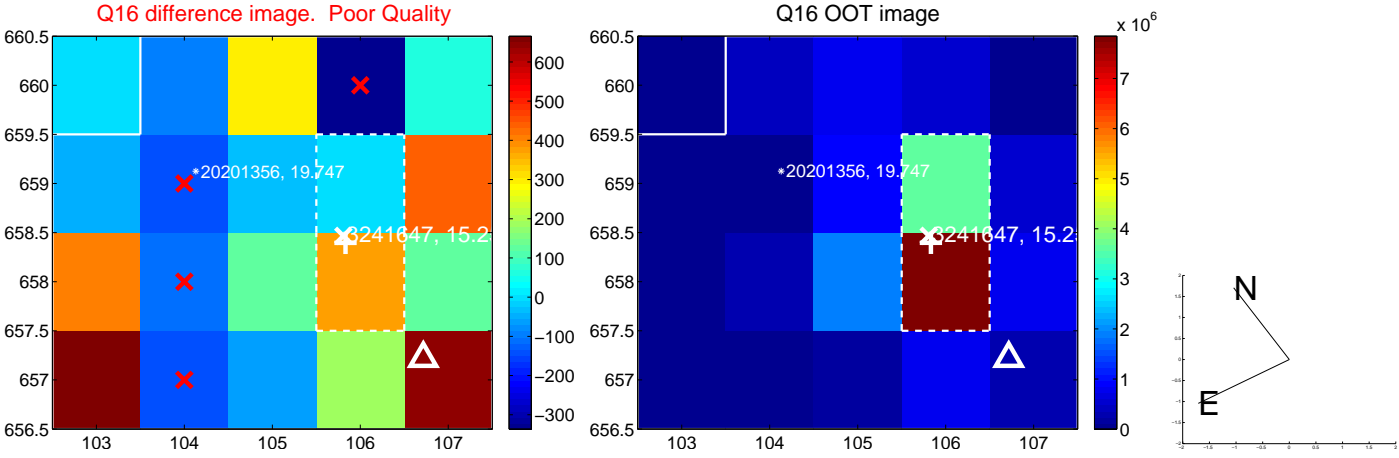
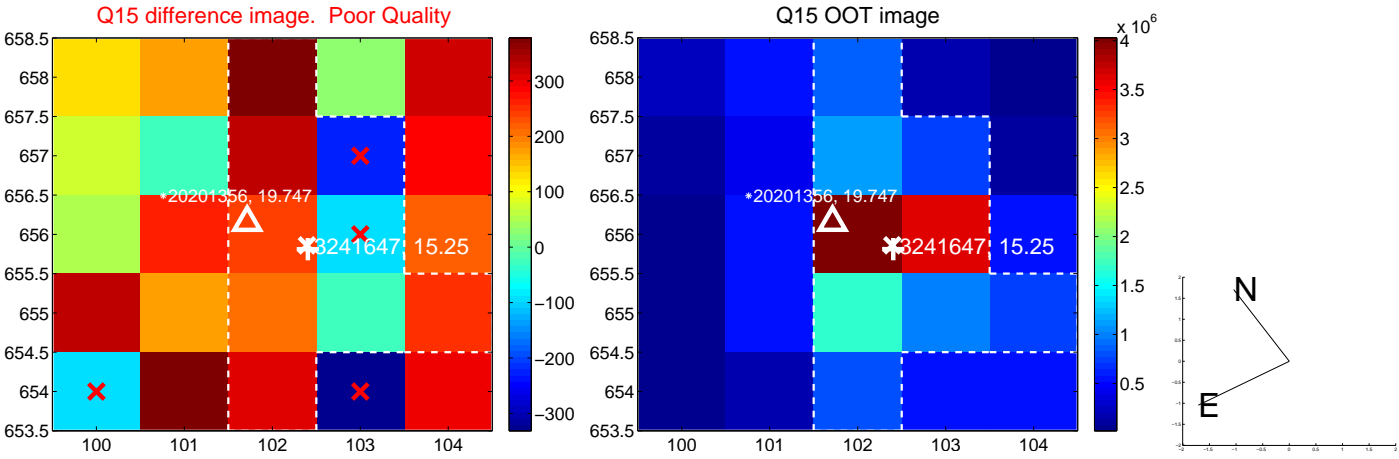
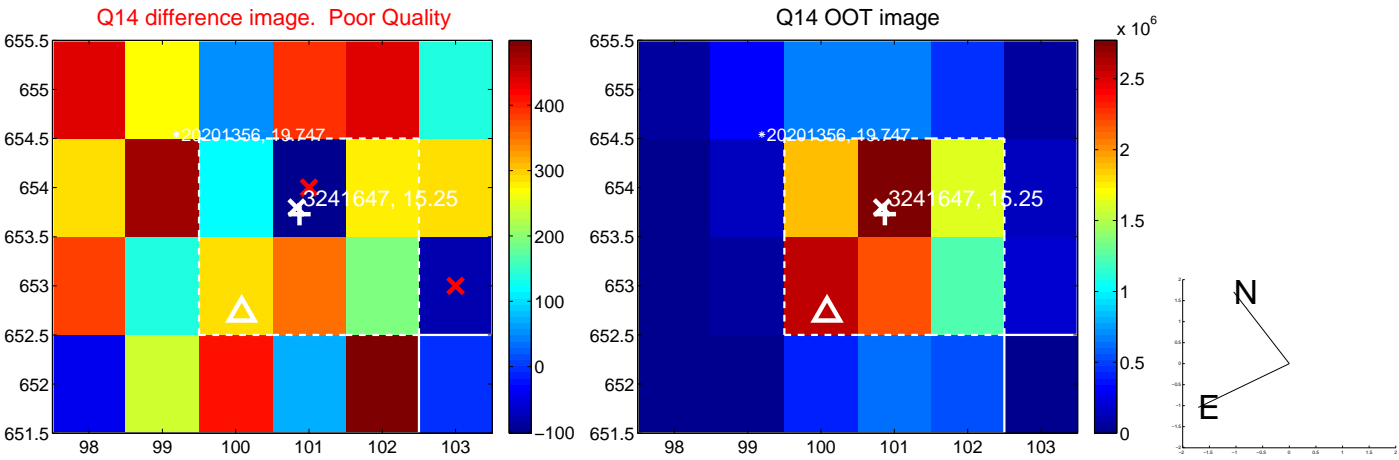
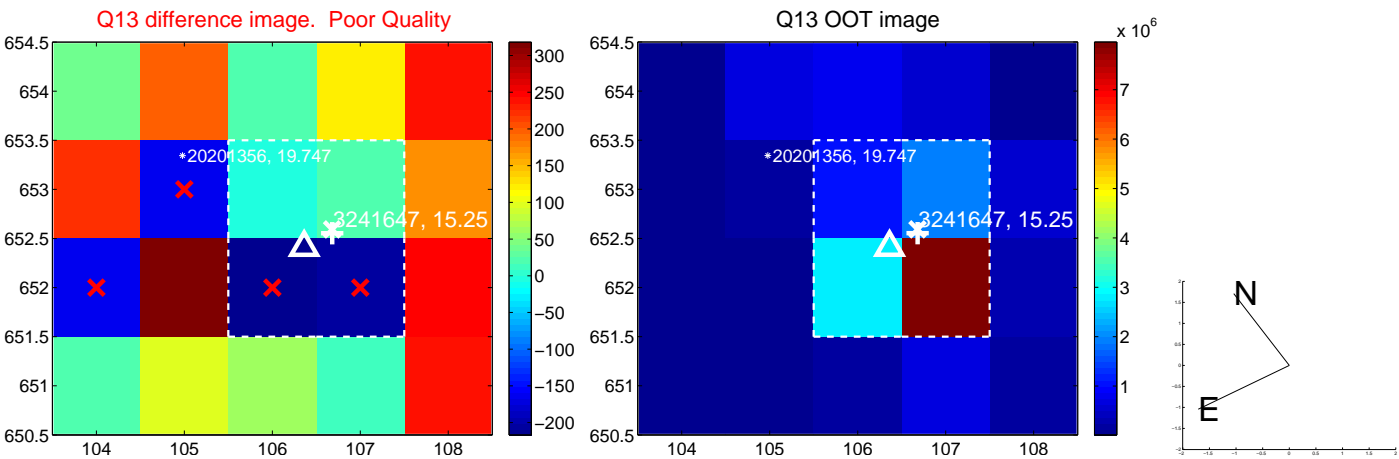
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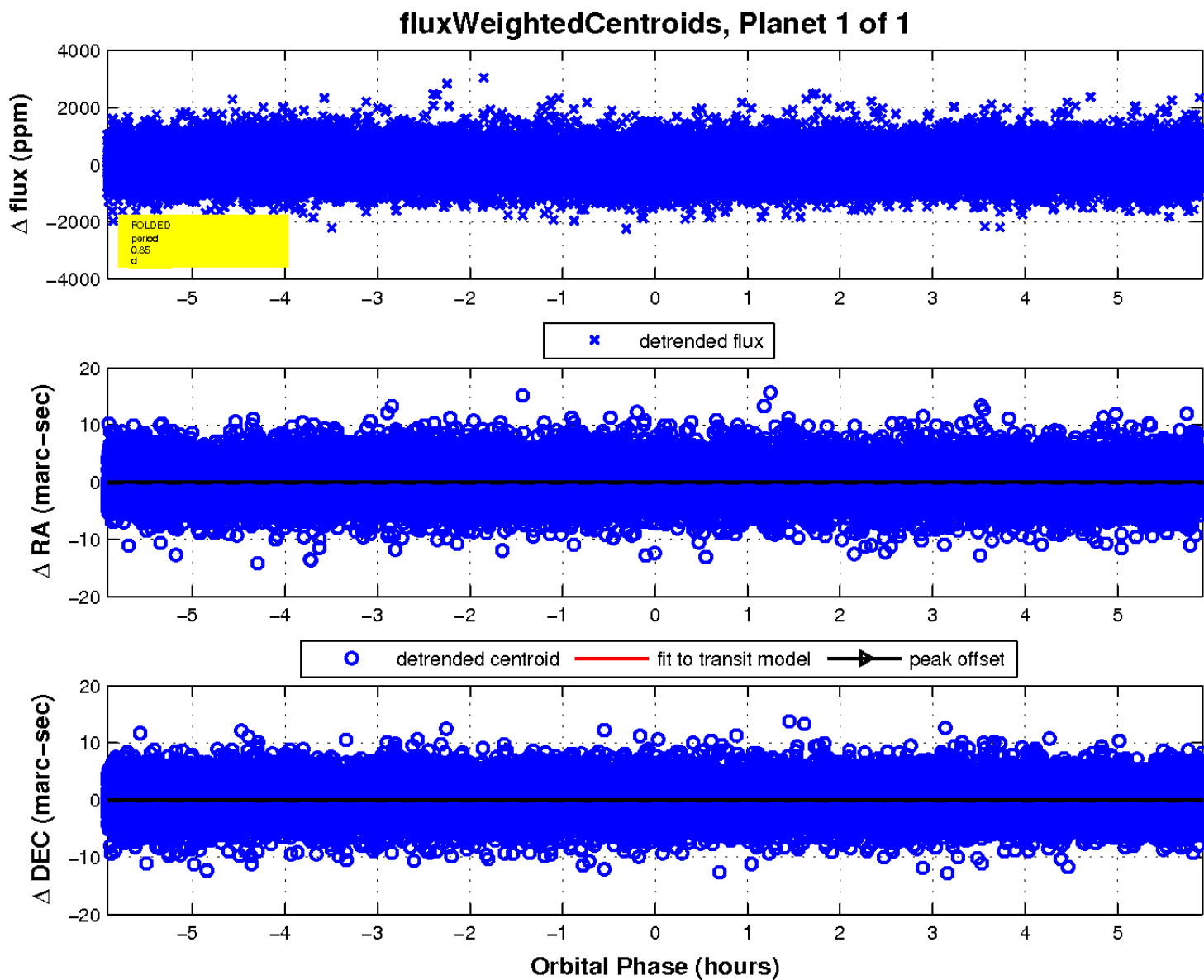
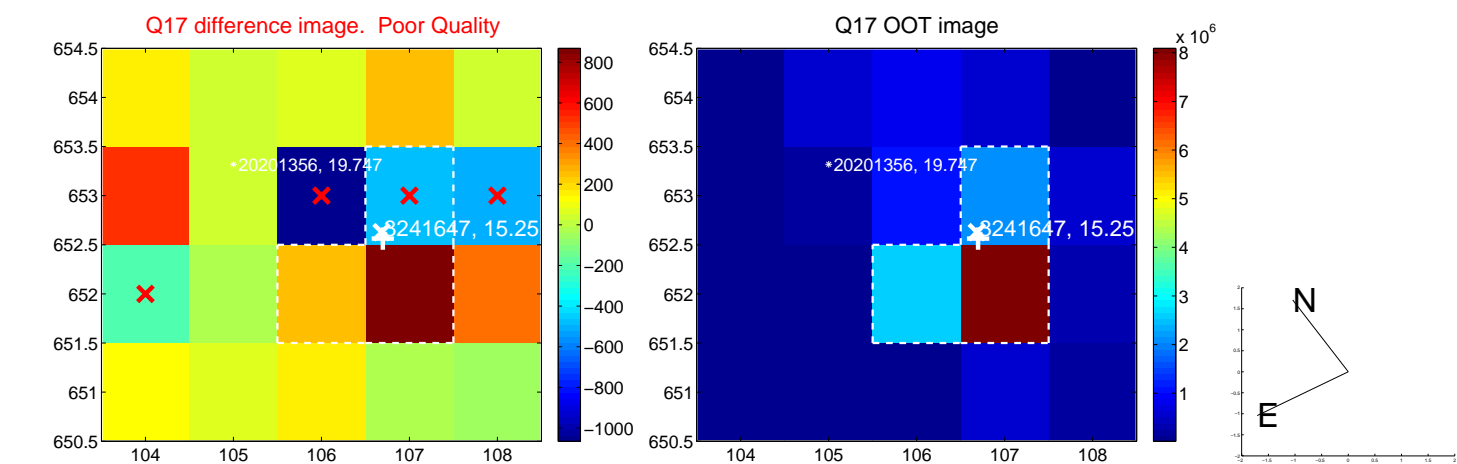
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UKIRT Image

Declination

