

KIC 010140274

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})
010140274-01	OBS	4334.01	2.442292	133.542259	188.7	2.053	12.6	12.0	0.74	4849	1.09	265.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010140274-01	OBS	PC	0.75	0	0	0	0	NO_COMMENT

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

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

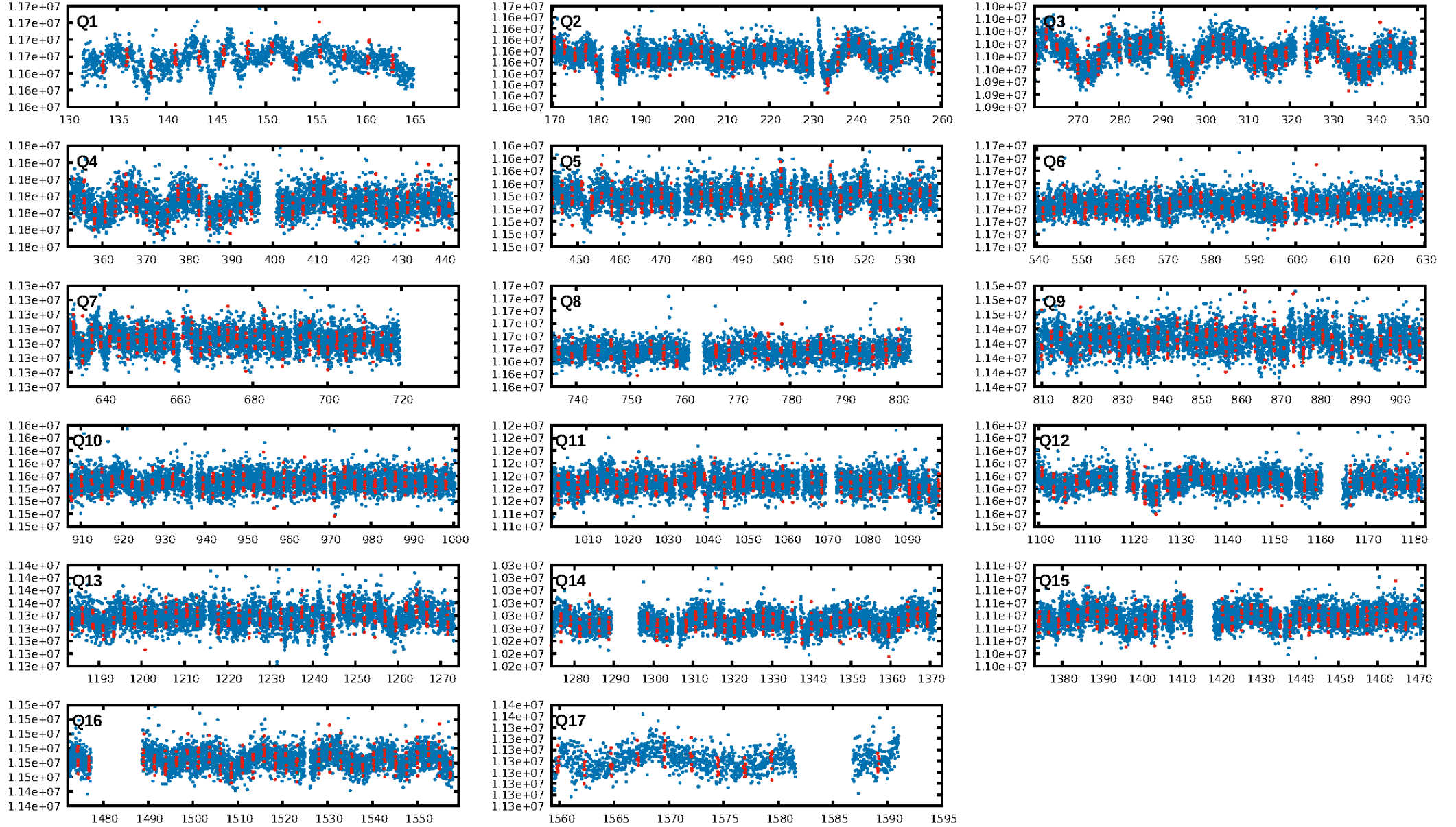
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010140274-01

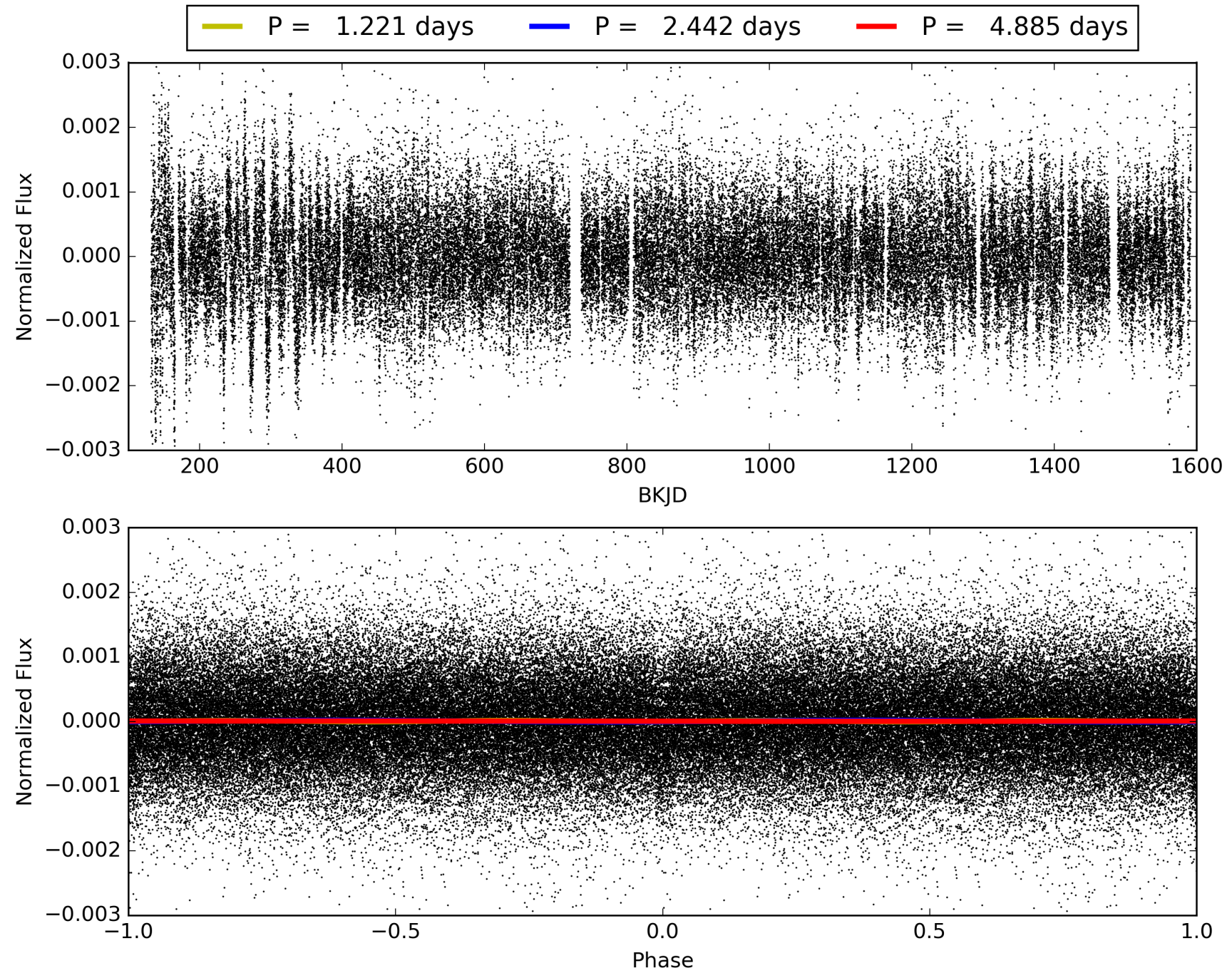
No Significant Match Found

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010140274-01, PDC Light Curves

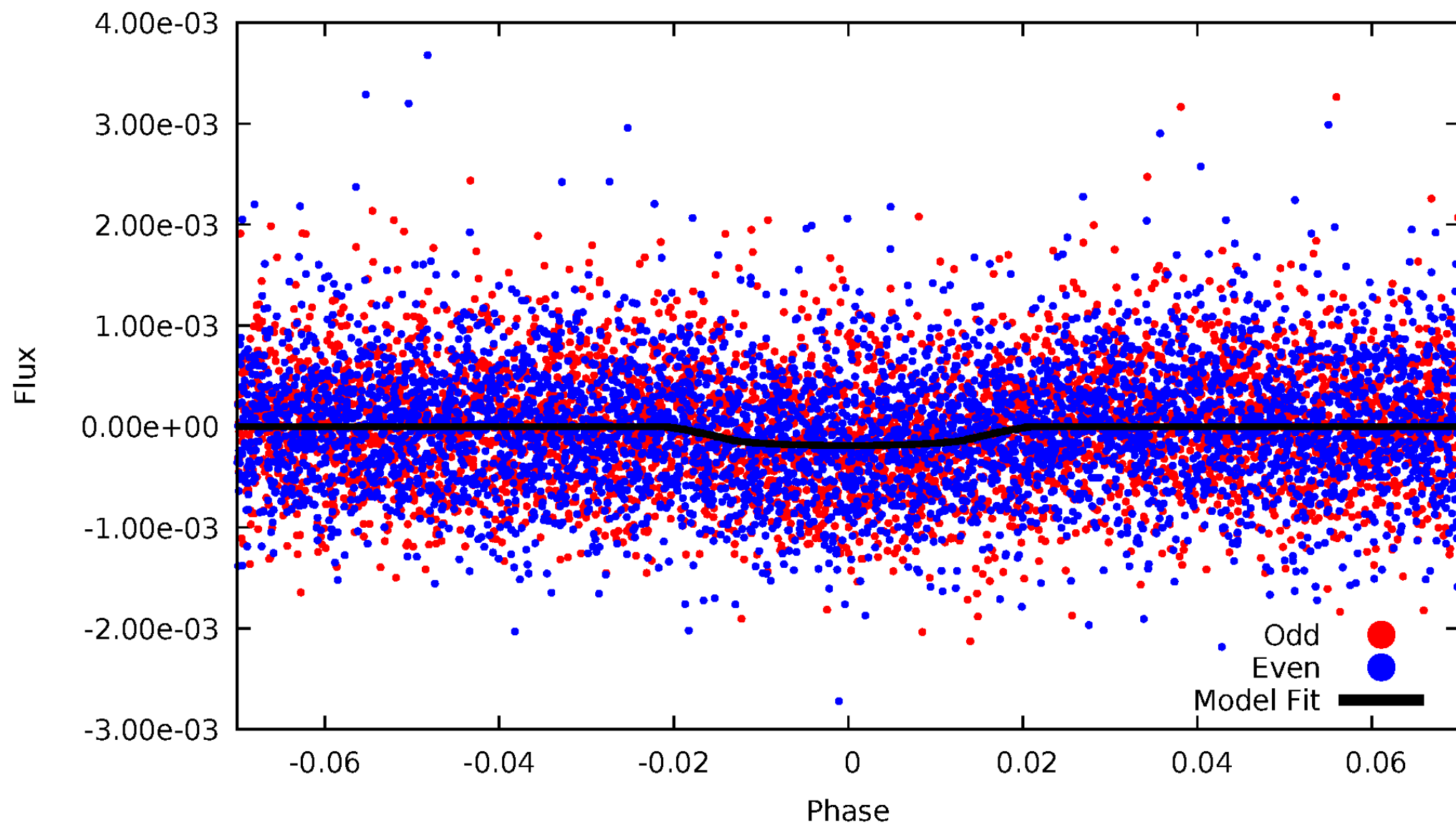


TCE 010140274-01



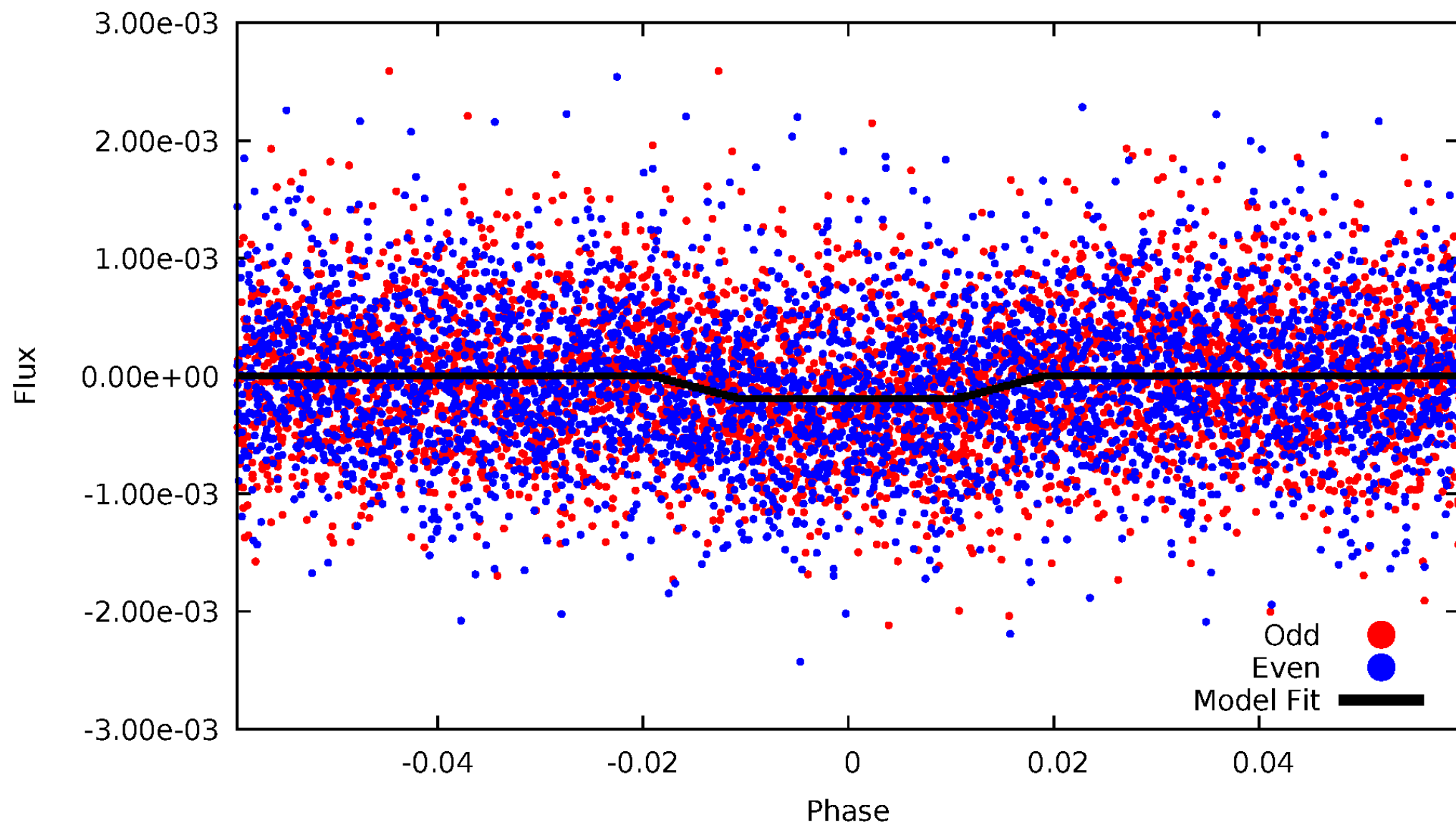
DV Odd/Even

TCE 010140274-01



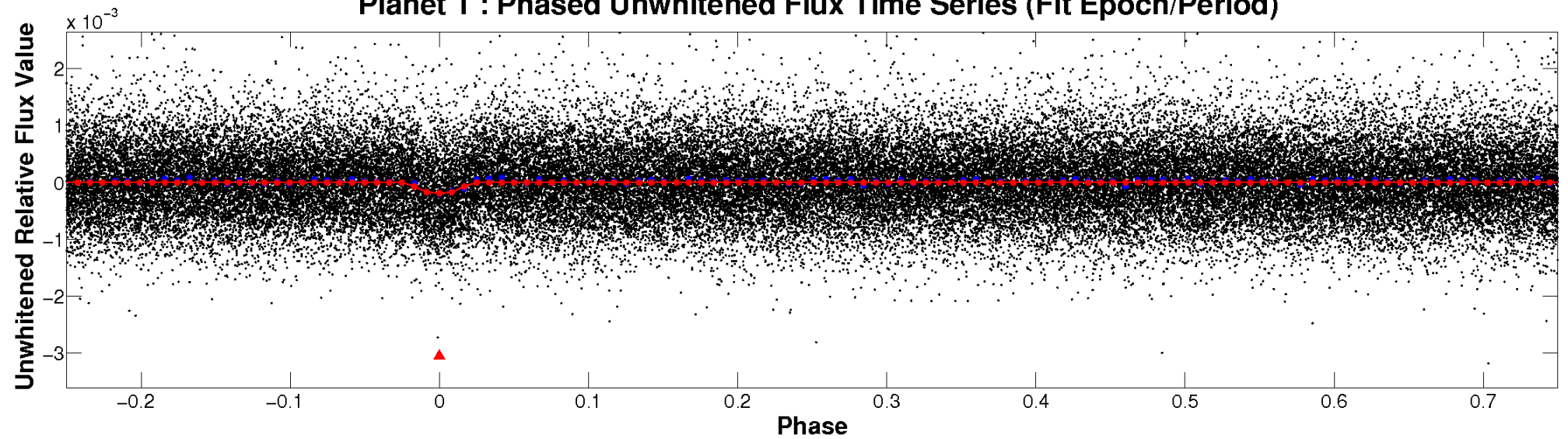
ALT Odd/Even

TCE 010140274-01

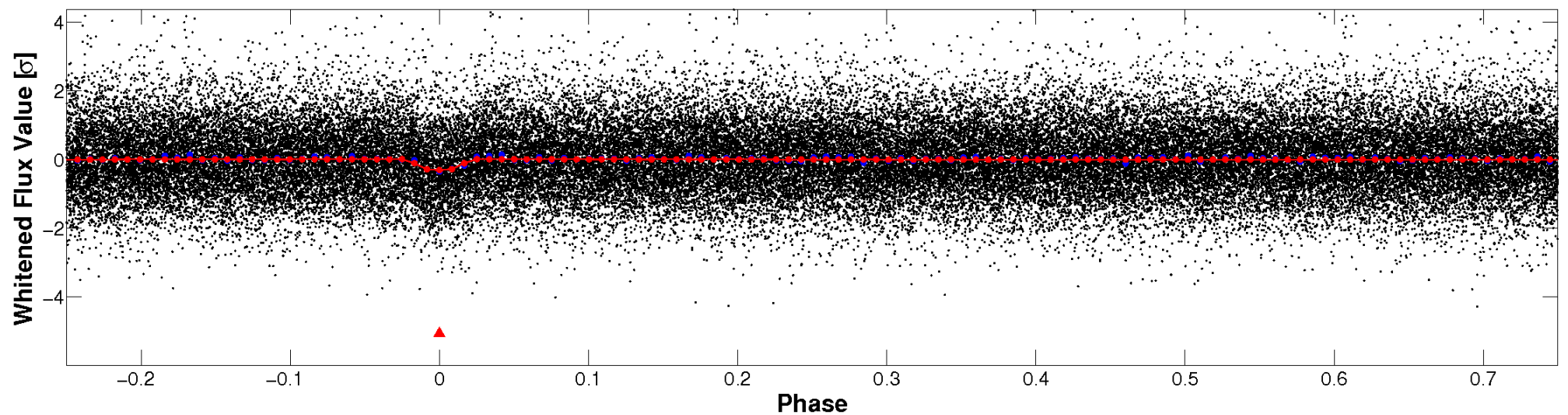


Non-Whitened Vs. Whitened Light Curve

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

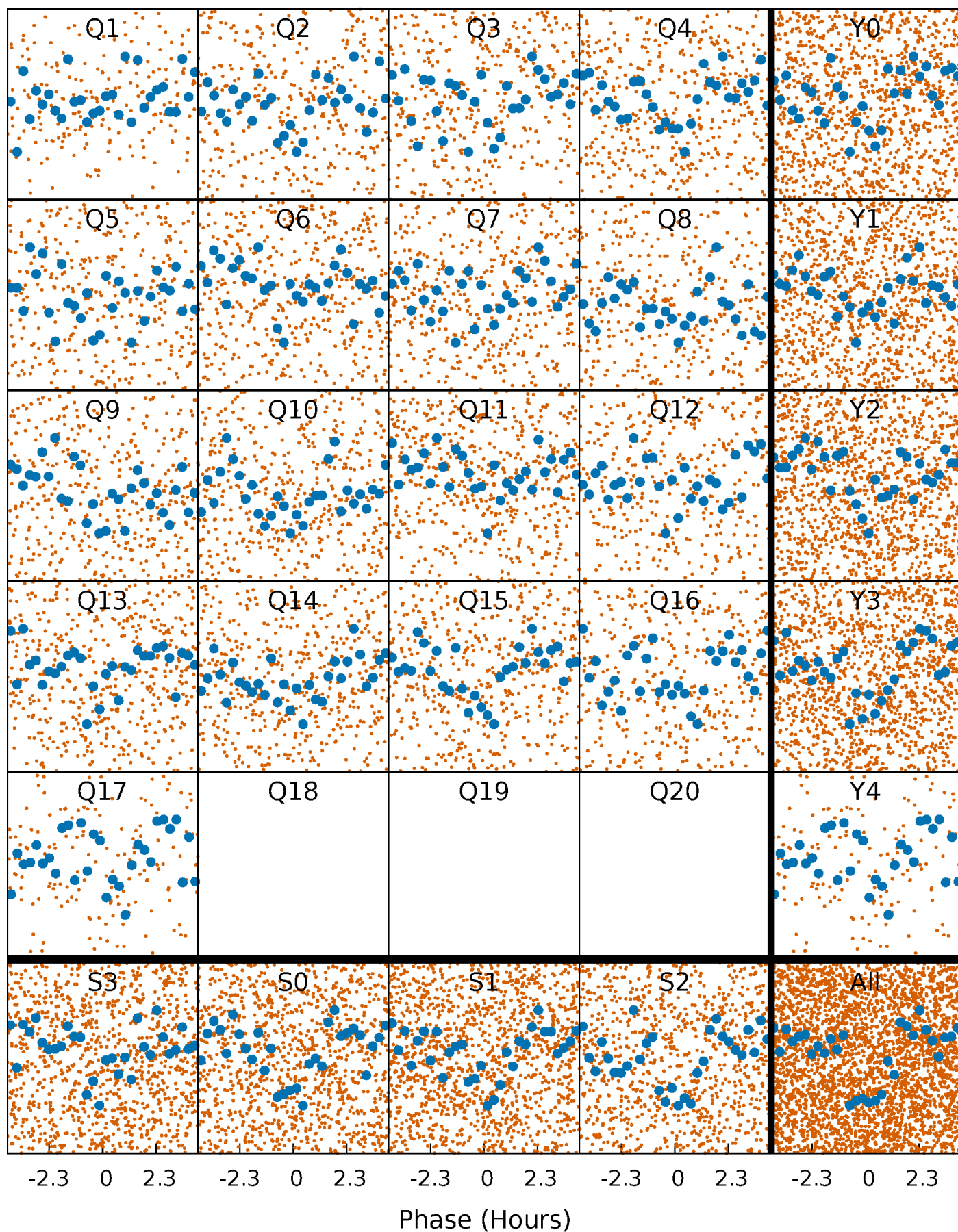


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



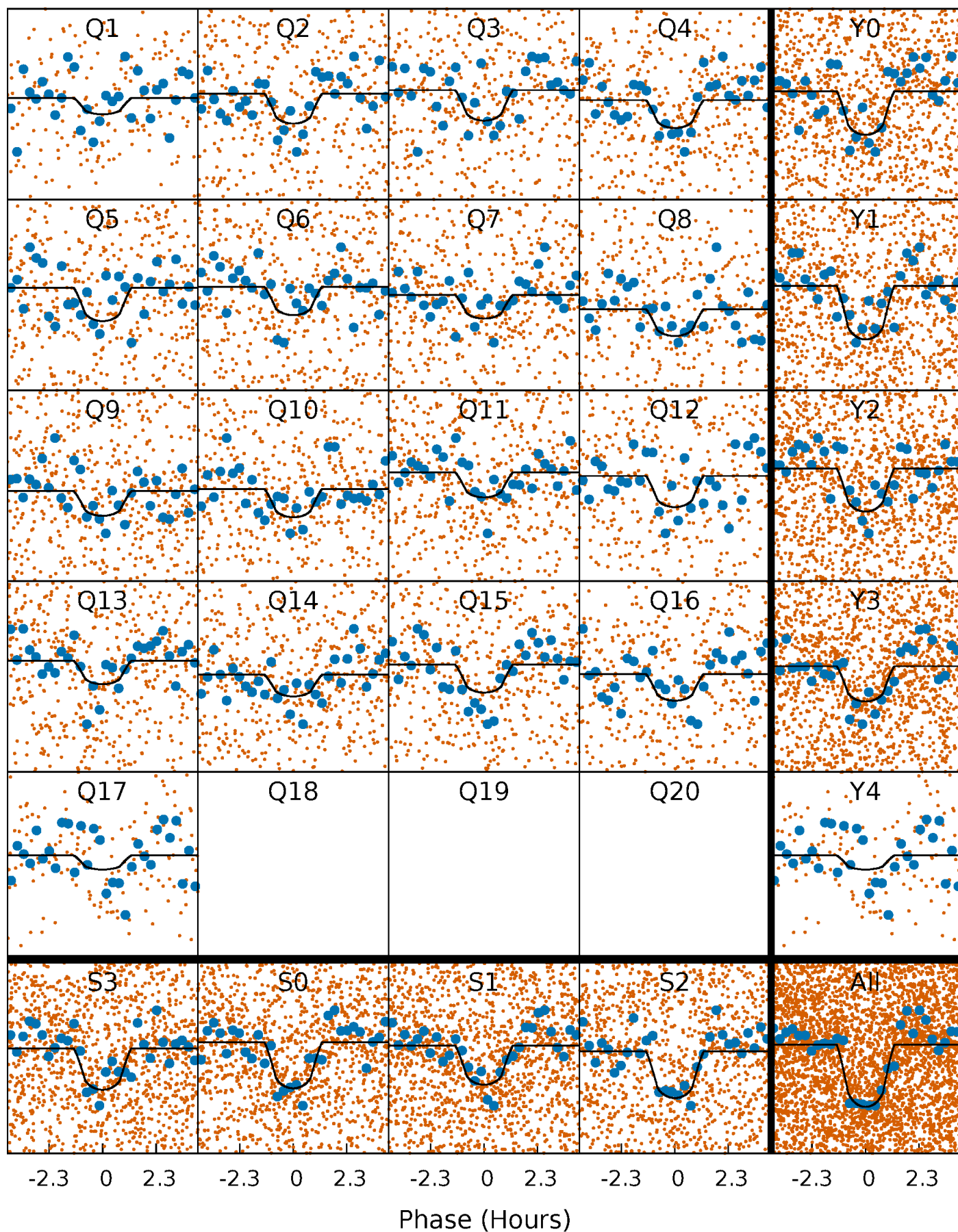
PDC Quarter-Phased Transit Curves

TCE 010140274-01 P= 2.442292 Days $T_0=133.542259$ (BKJD)



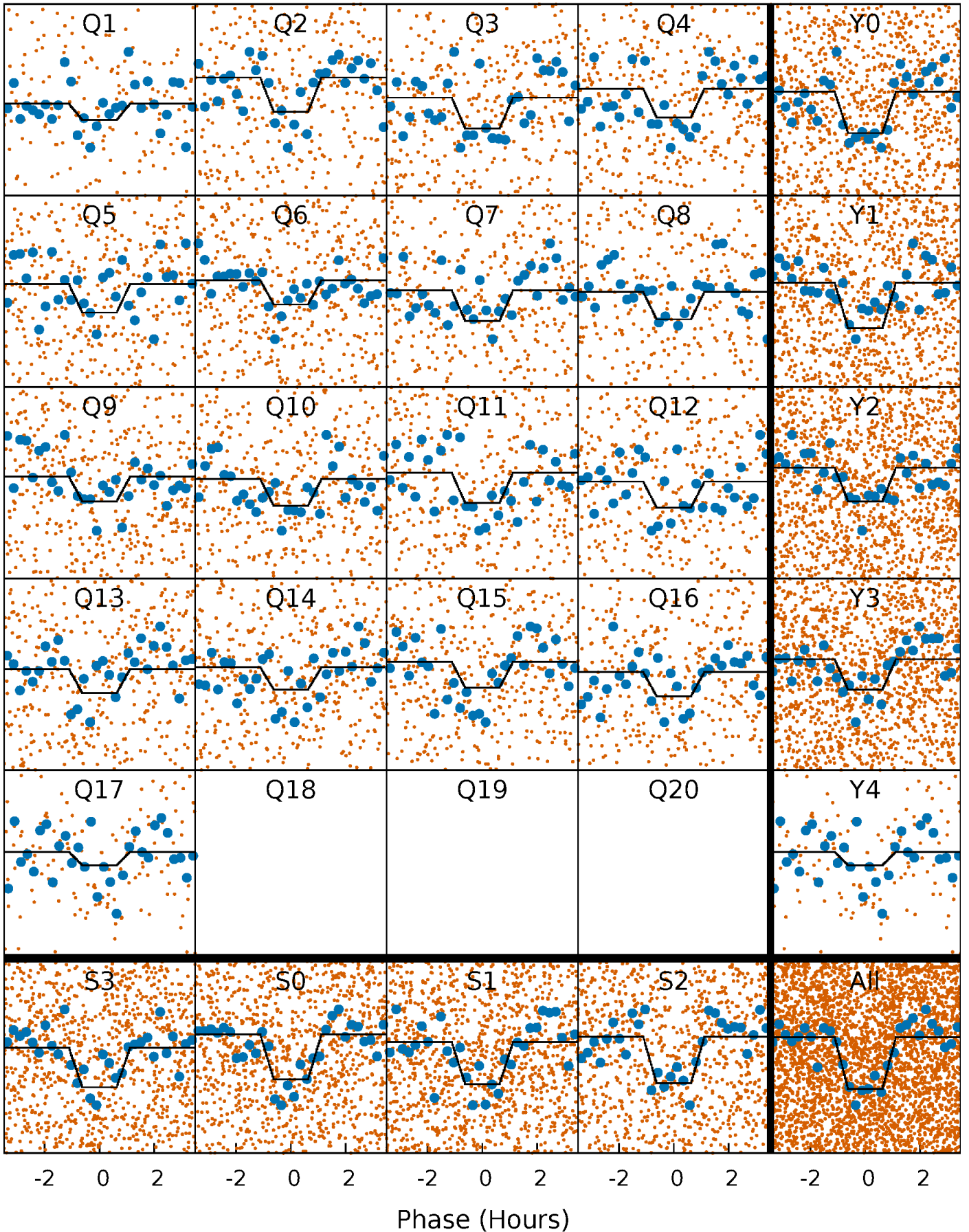
DV Quarter-Phased Transit Curves

TCE 010140274-01 P= 2.442292 Days $T_0=133.542259$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

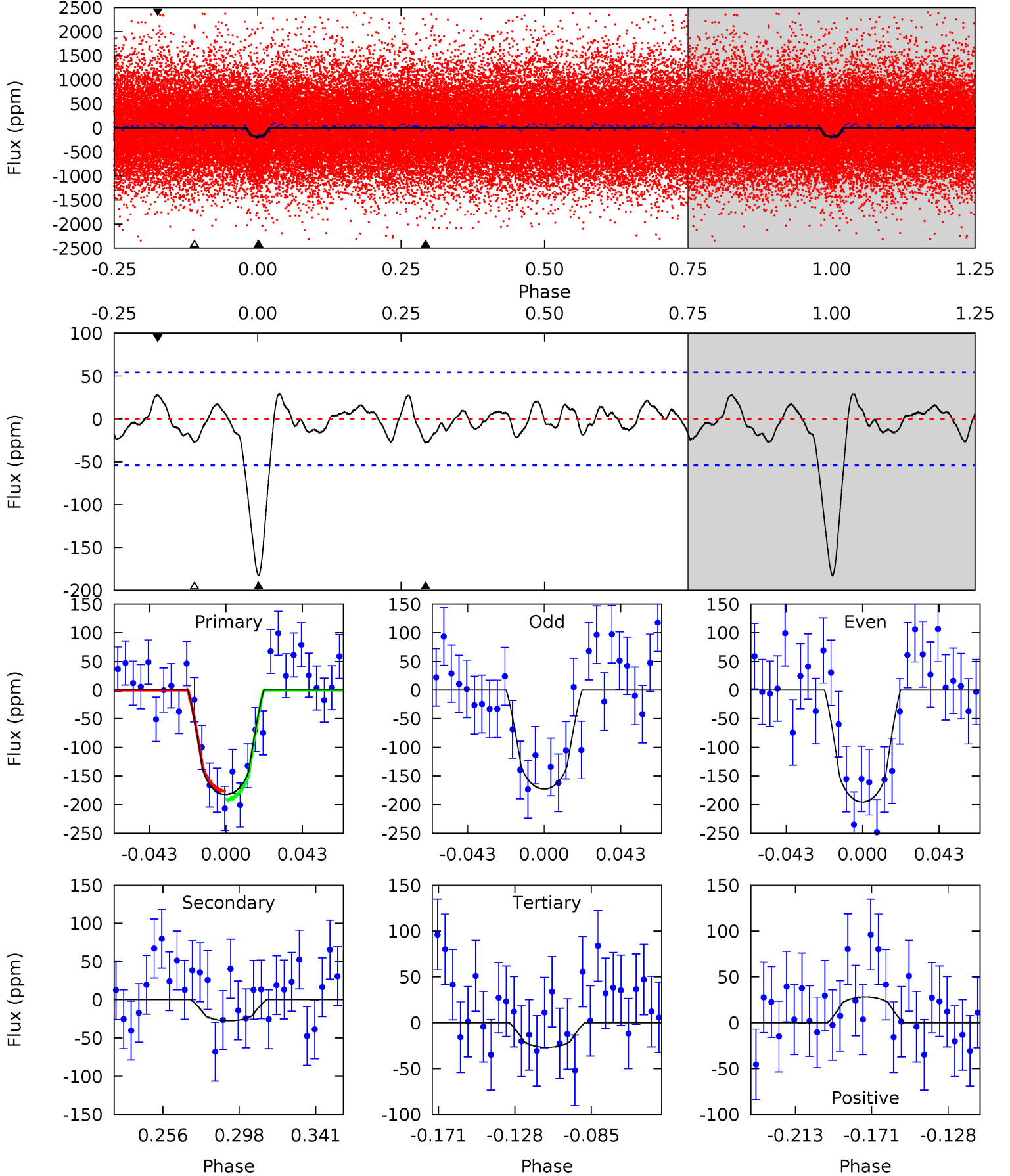
TCE 010140274-01 P= 2.442328 Days $T_0=133.535188$ (BKJD)



DV Model-Shift Uniqueness Test

010140274-01, P = 2.442292 Days, E = 131.099967 Days

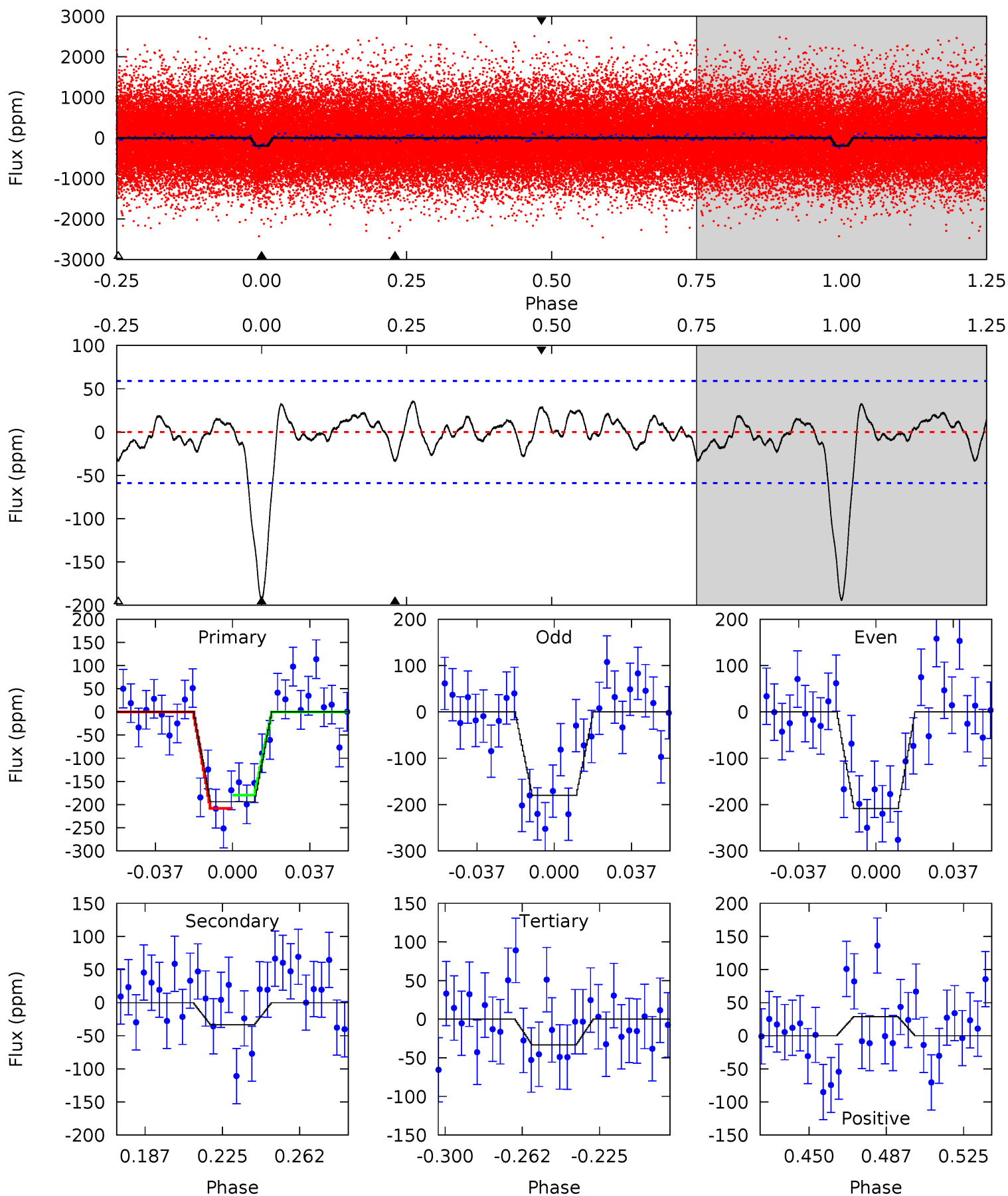
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	2.40	2.34	2.45	4.74	2.03	1.04	13.6	13.5	0.06	-0.04	1.00	0.87	0.14	0.63



Alt Model-Shift Uniqueness Test

010140274-01, P = 2.442328 Days, E = 131.092860 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	2.70	2.70	2.34	4.77	2.08	1.03	13.0	13.4	0.01	0.36	1.15	0.89	0.15	1.15



Stellar Parameters For KIC 010140274

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4849^{+146}_{-146}	$4.561^{+0.061}_{-0.039}$	$-0.080^{+0.300}_{-0.300}$	$0.738^{+0.056}_{-0.074}$	$0.723^{+0.081}_{-0.054}$	$2.534^{+0.673}_{-0.368}$
	+3%/-3%	+1%/-1%	+375%/-375%	+8%/-10%	+11%/-7%	+27%/-15%
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 010140274-01 / KOI 4334.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-28 ± 11	$1.36^{+0.94}_{-0.88}$	1432^{+50}_{-50}	3152^{+1345}_{-485}	$7.676^{+51.781}_{-5.183}$
Alt.	-33 ± 12	$1.24^{+0.97}_{-0.75}$	1429^{+54}_{-53}	3319^{+1429}_{-554}	11^{+67}_{-7}

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

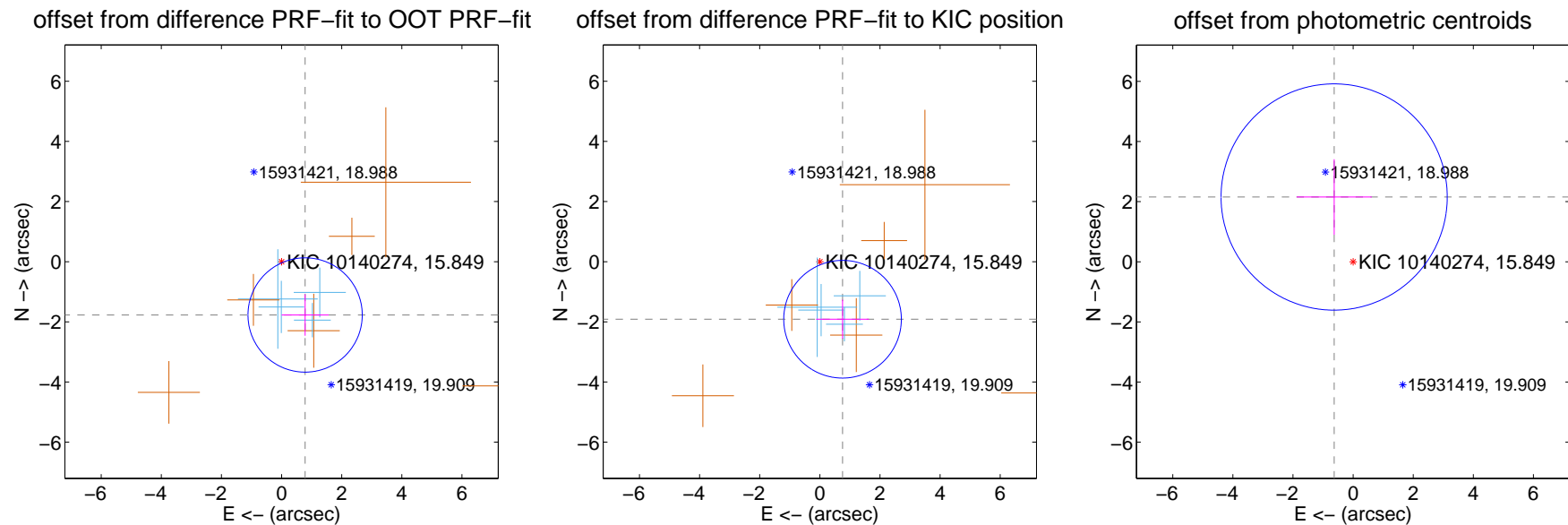
DV Centroid Data

Supplemental centroid analysis for 010140274-01. Kepler magnitude: 15.85. Transit SNR 12.01

There are 4 quarters with good PRF difference image offsets

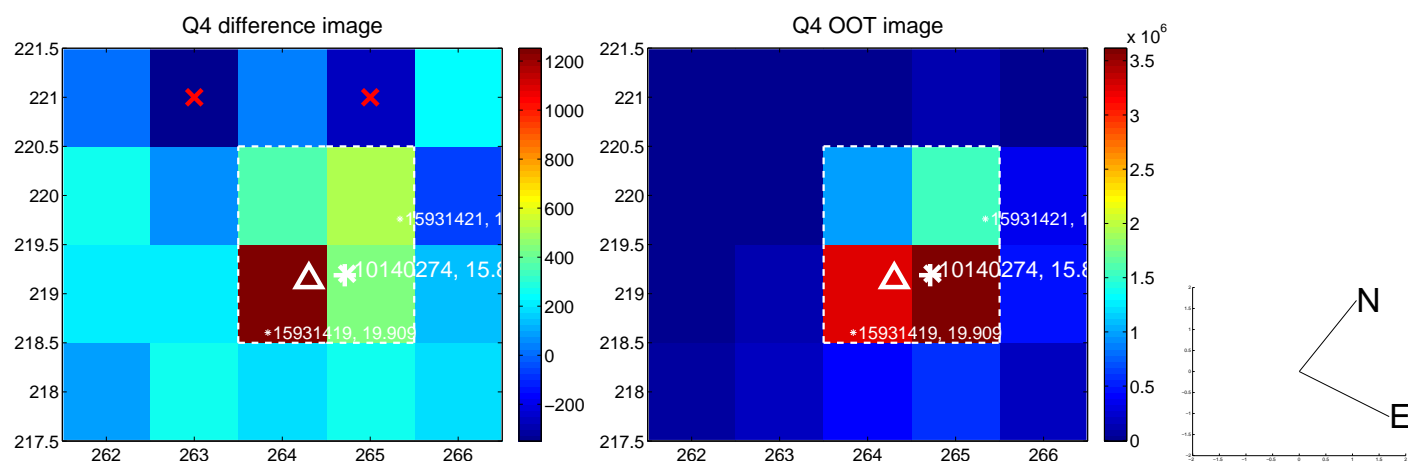
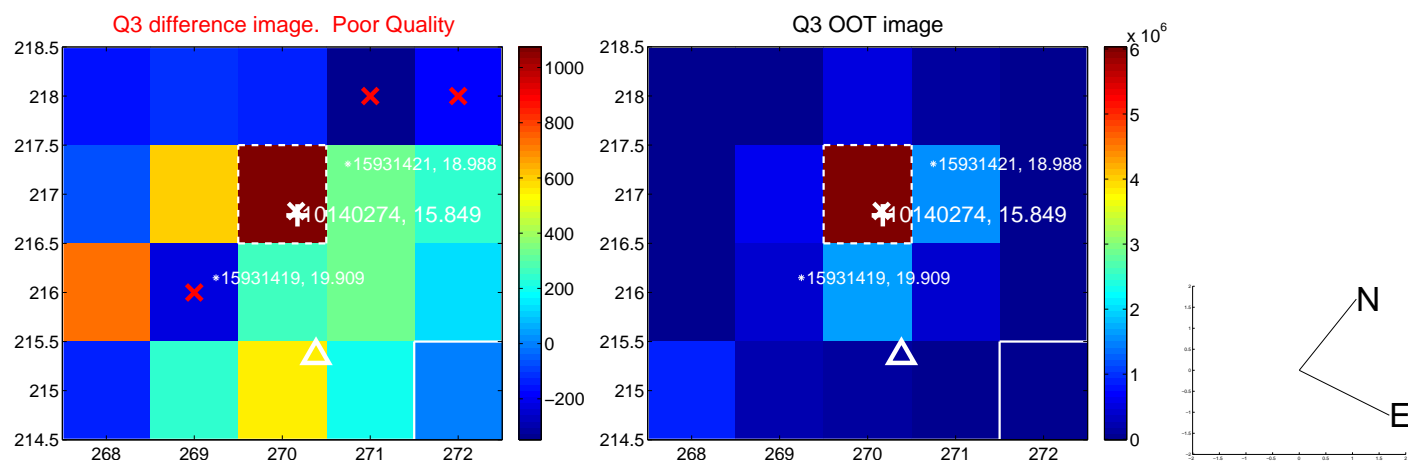
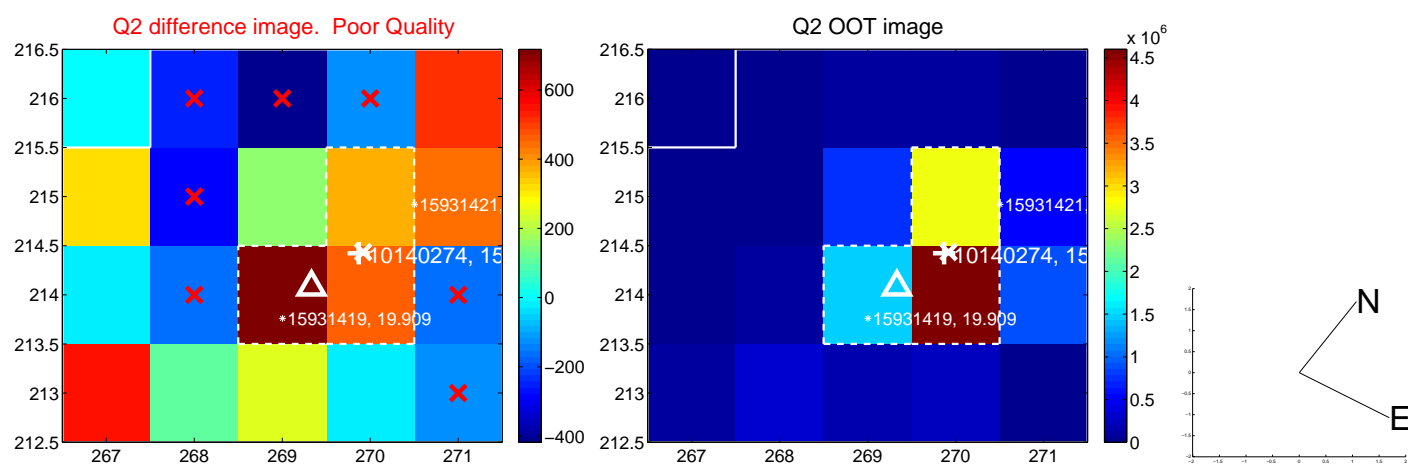
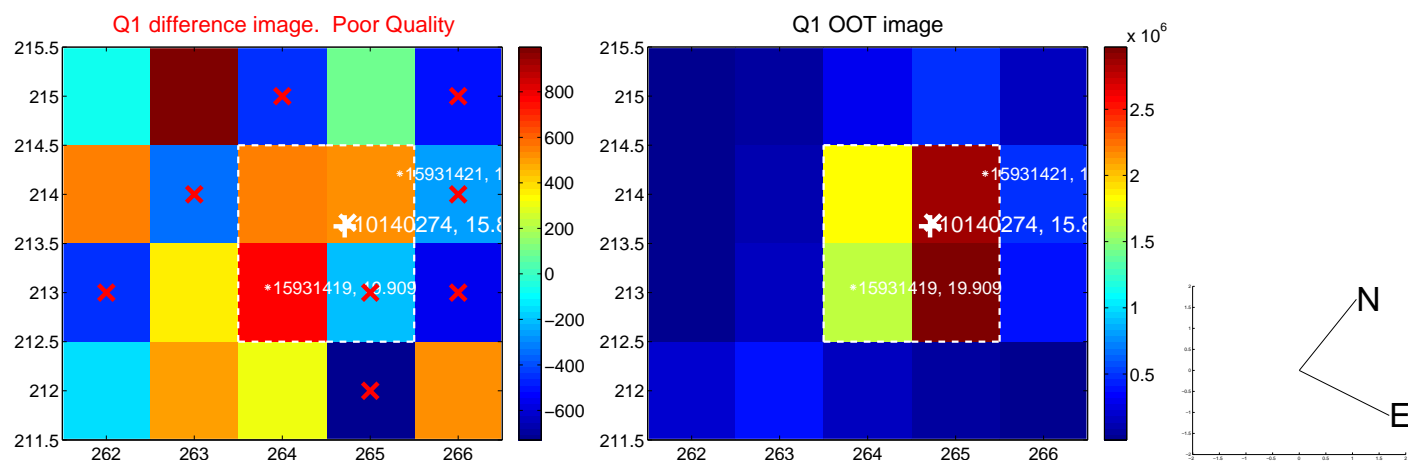
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.937 ± 0.633	3.06	-0.783 ± 0.782	-1.772 ± 0.689
PRF-fit source offset from KIC position	2.057 ± 0.652	3.15	-0.755 ± 0.880	-1.913 ± 0.648
photometric centroid source offset	2.24 ± 1.25	1.79	0.63 ± 1.25	2.15 ± 1.25

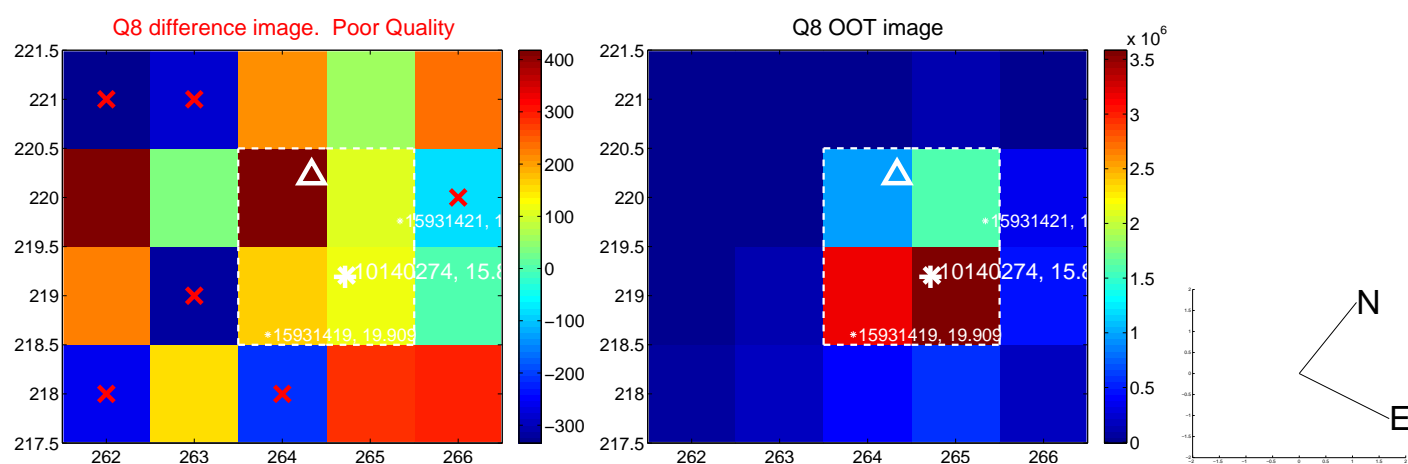
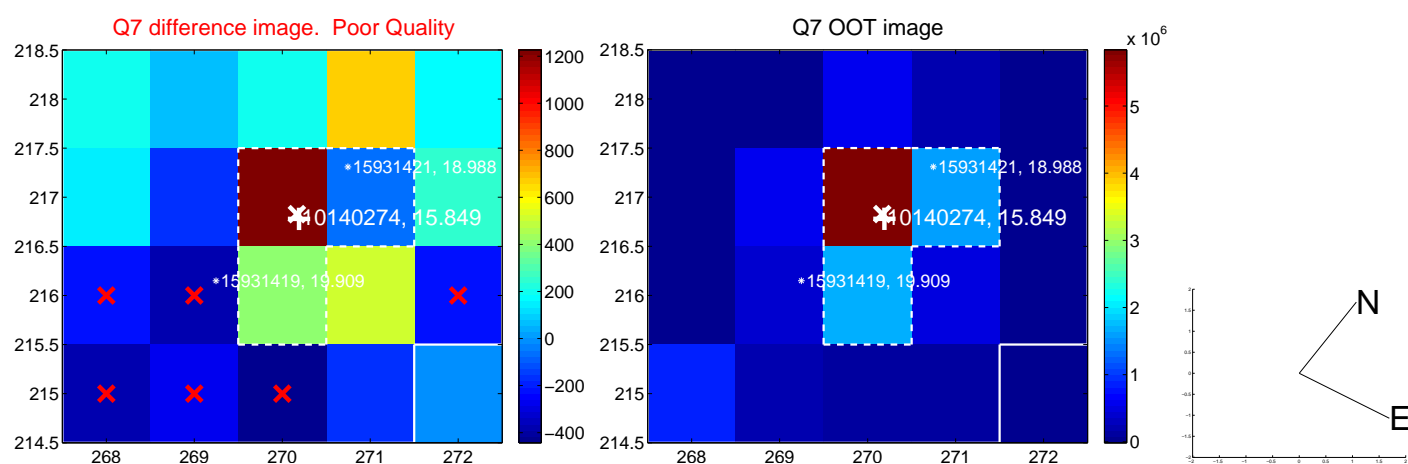
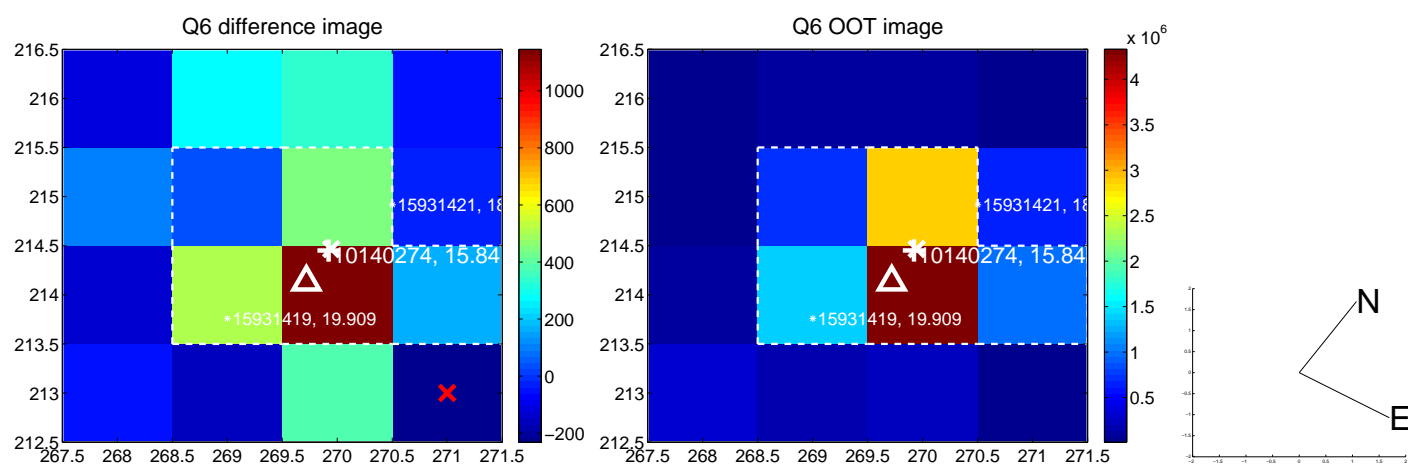
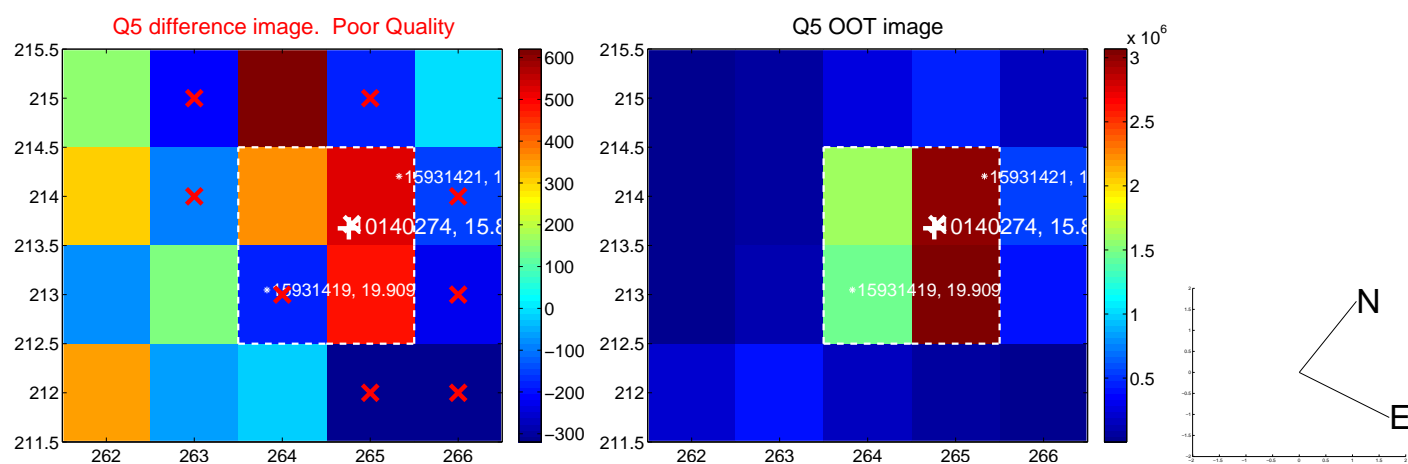


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

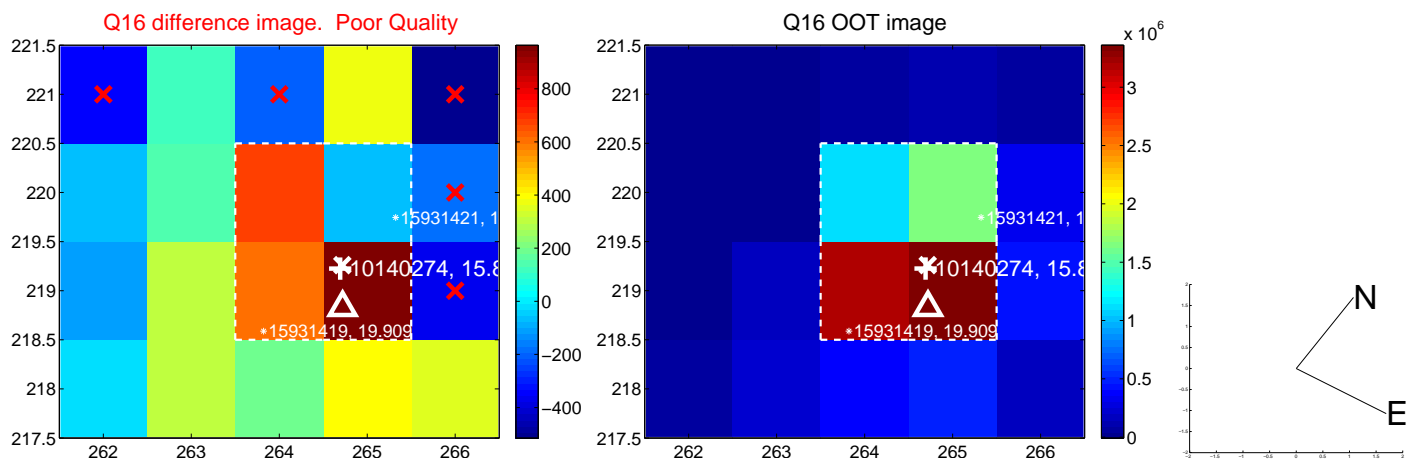
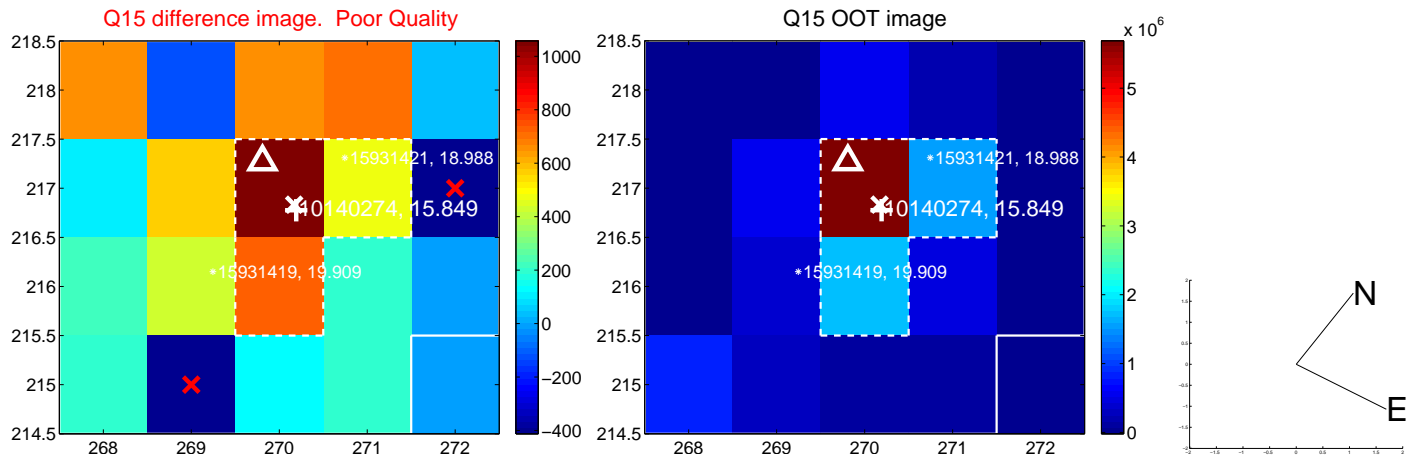
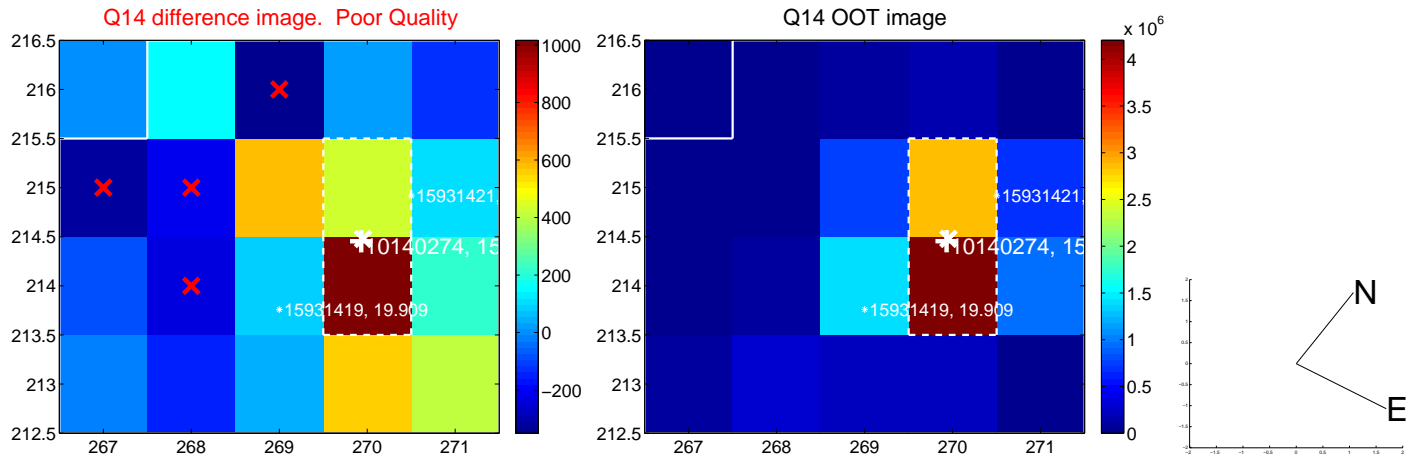
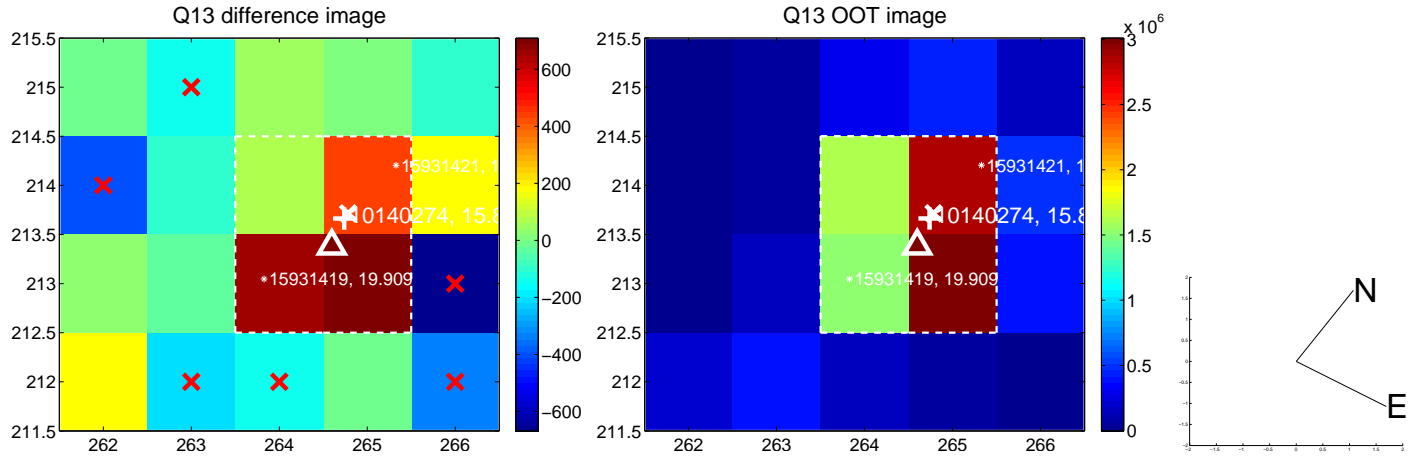
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



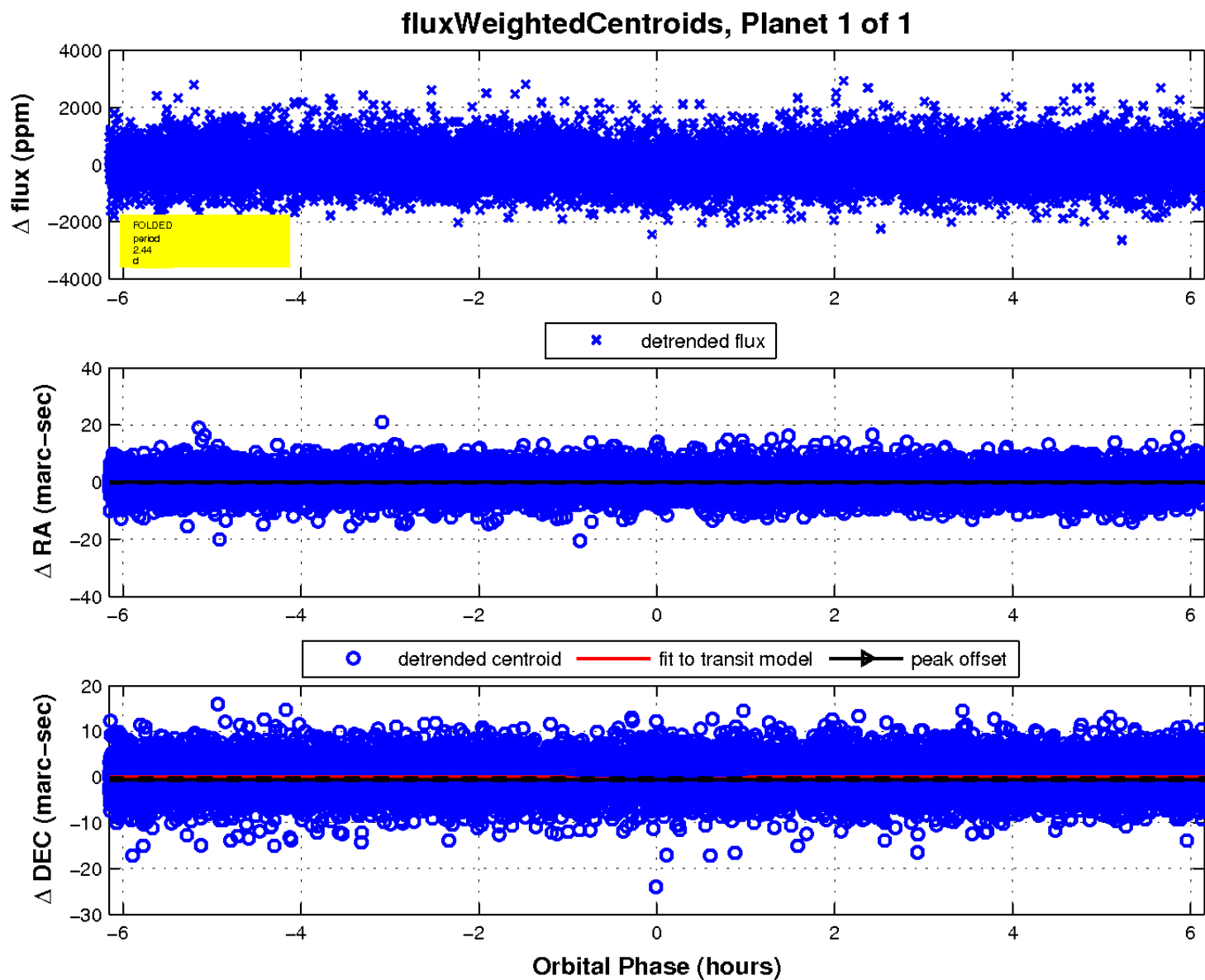
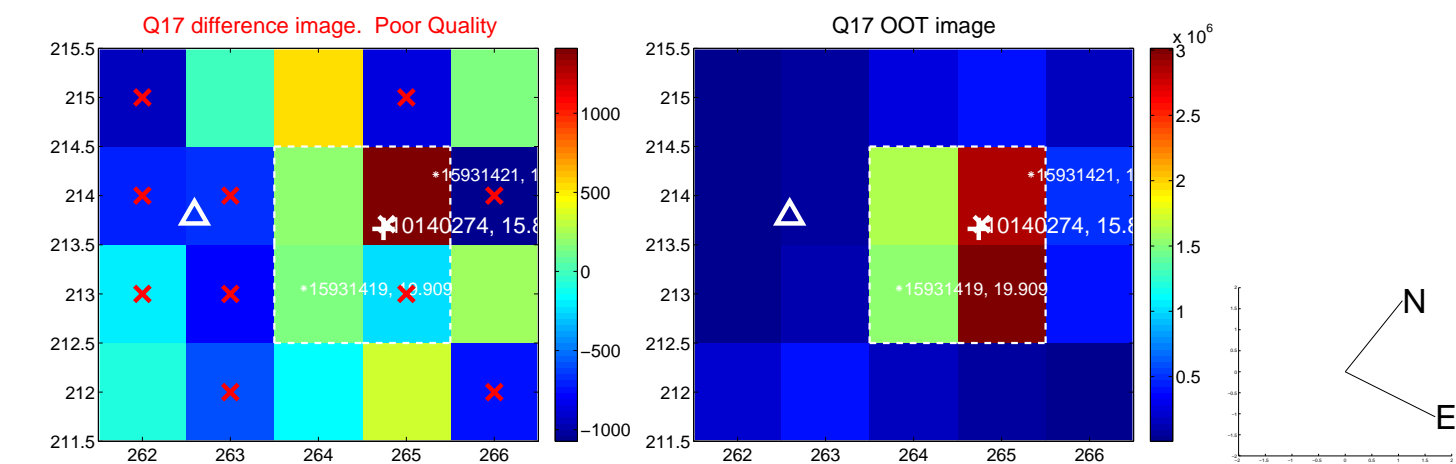
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UKIRT Image

Declination

