

KIC 002302997

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})
002302997-01	OBS	7630.01	16.298261	134.740202	196.0	2.592	7.4	8.2	0.52	3905	0.86	5.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002302997-01	OBS	PC	0.96	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.

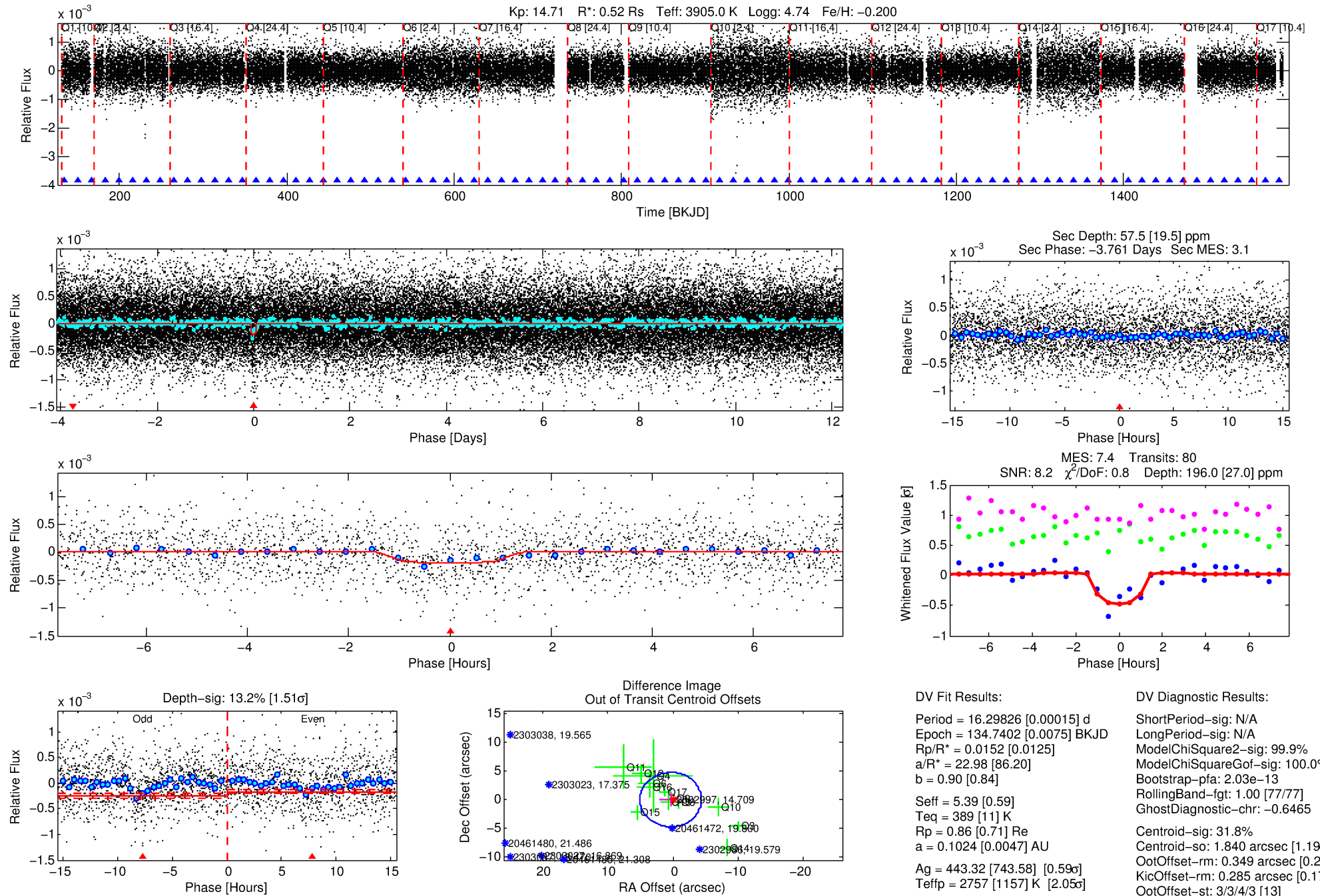
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002302997-01

No Significant Match Found

DV One-Page Summary

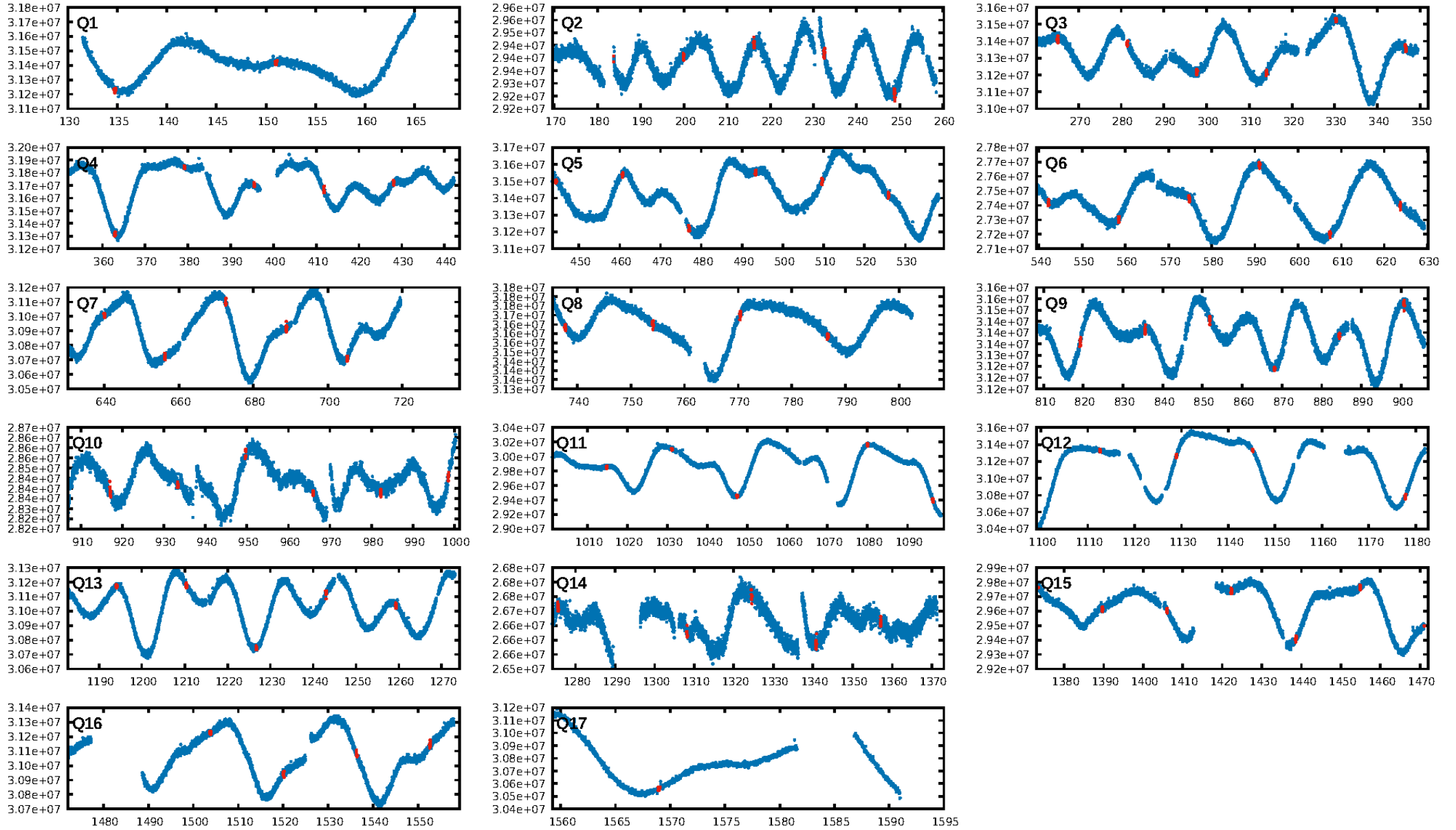
KIC: 2302997 Candidate: 1 of 1 Period: 16.298 d



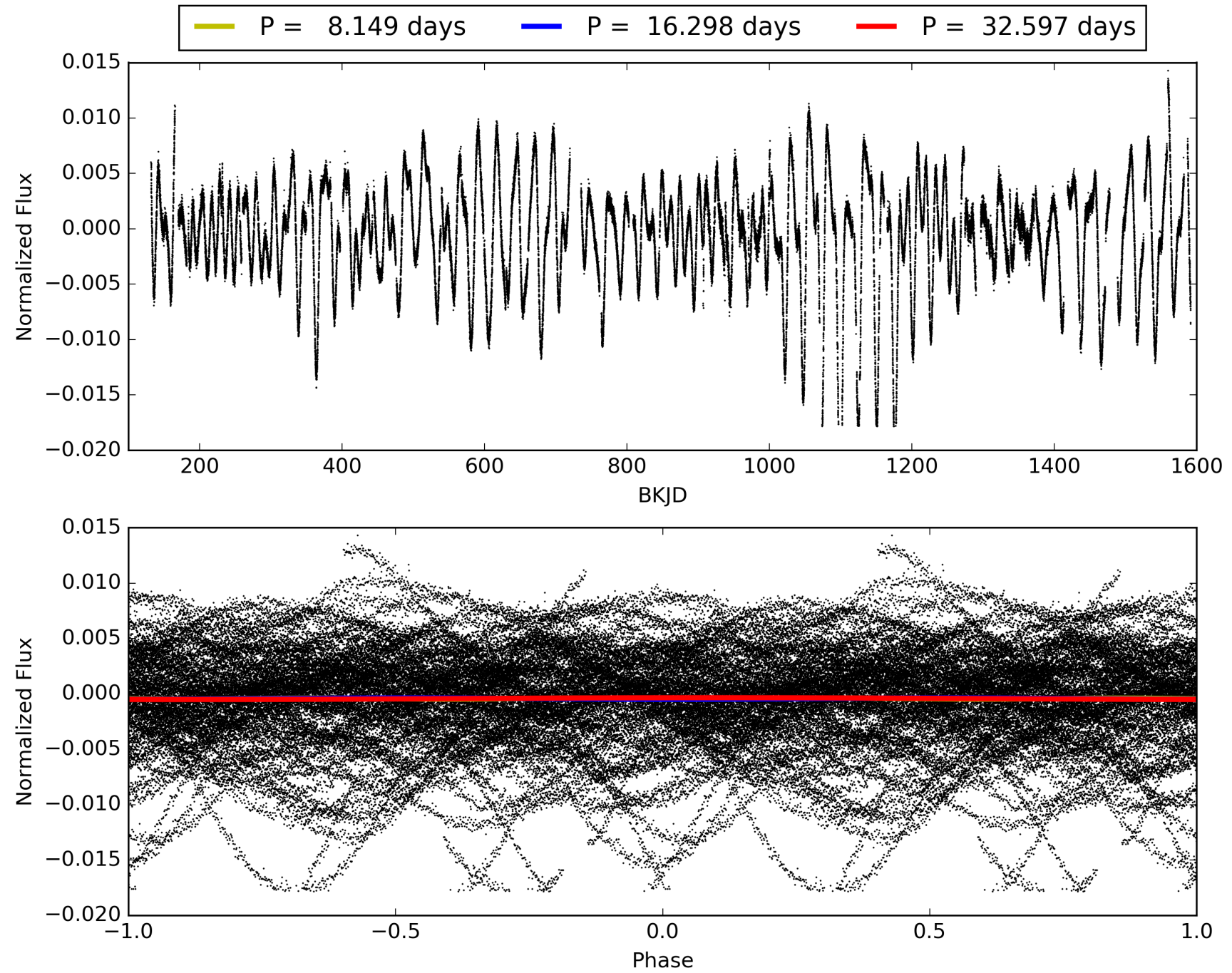
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:55:45 Z

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

TCE 002302997-01, PDC Light Curves

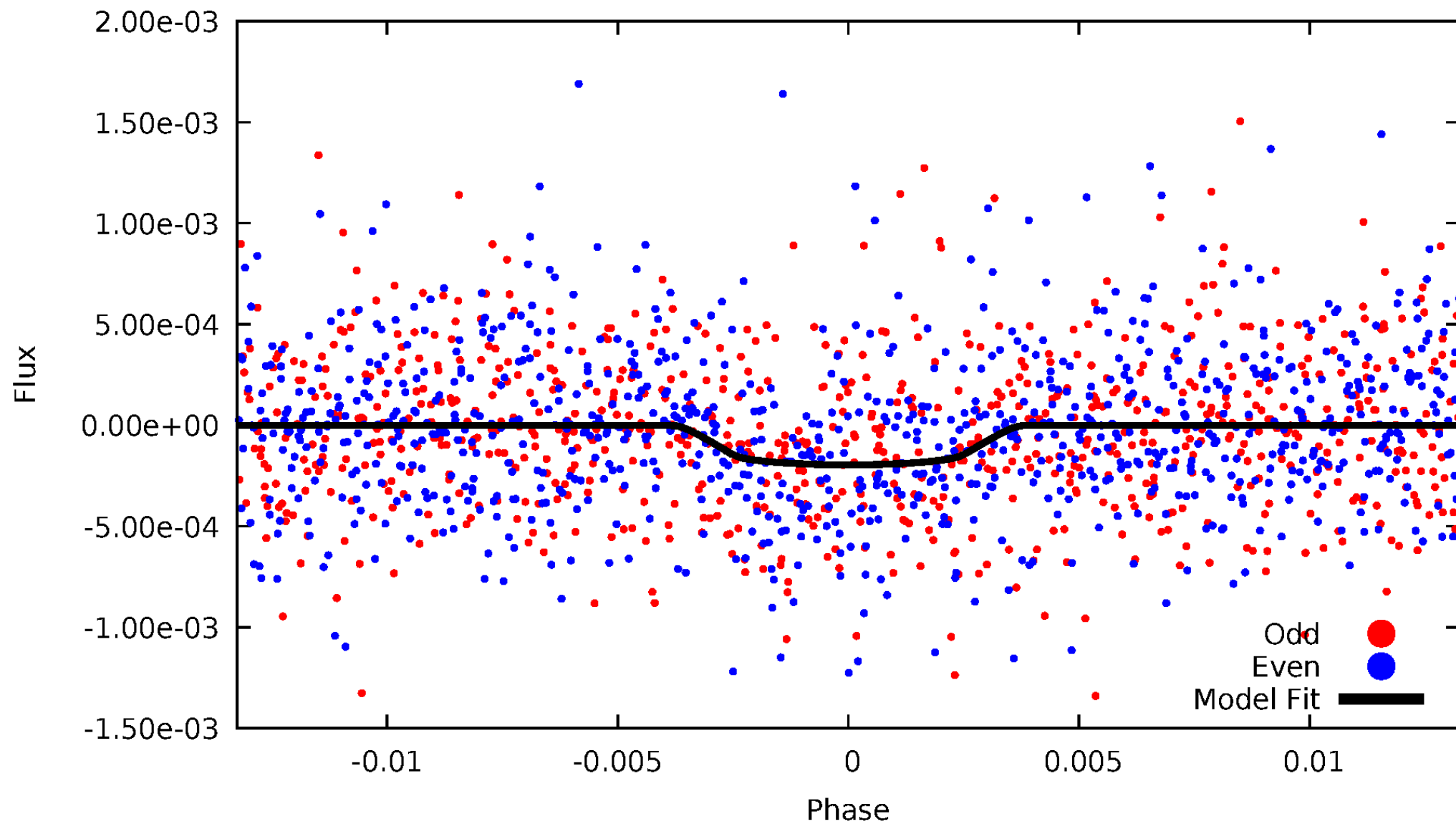


TCE 002302997-01



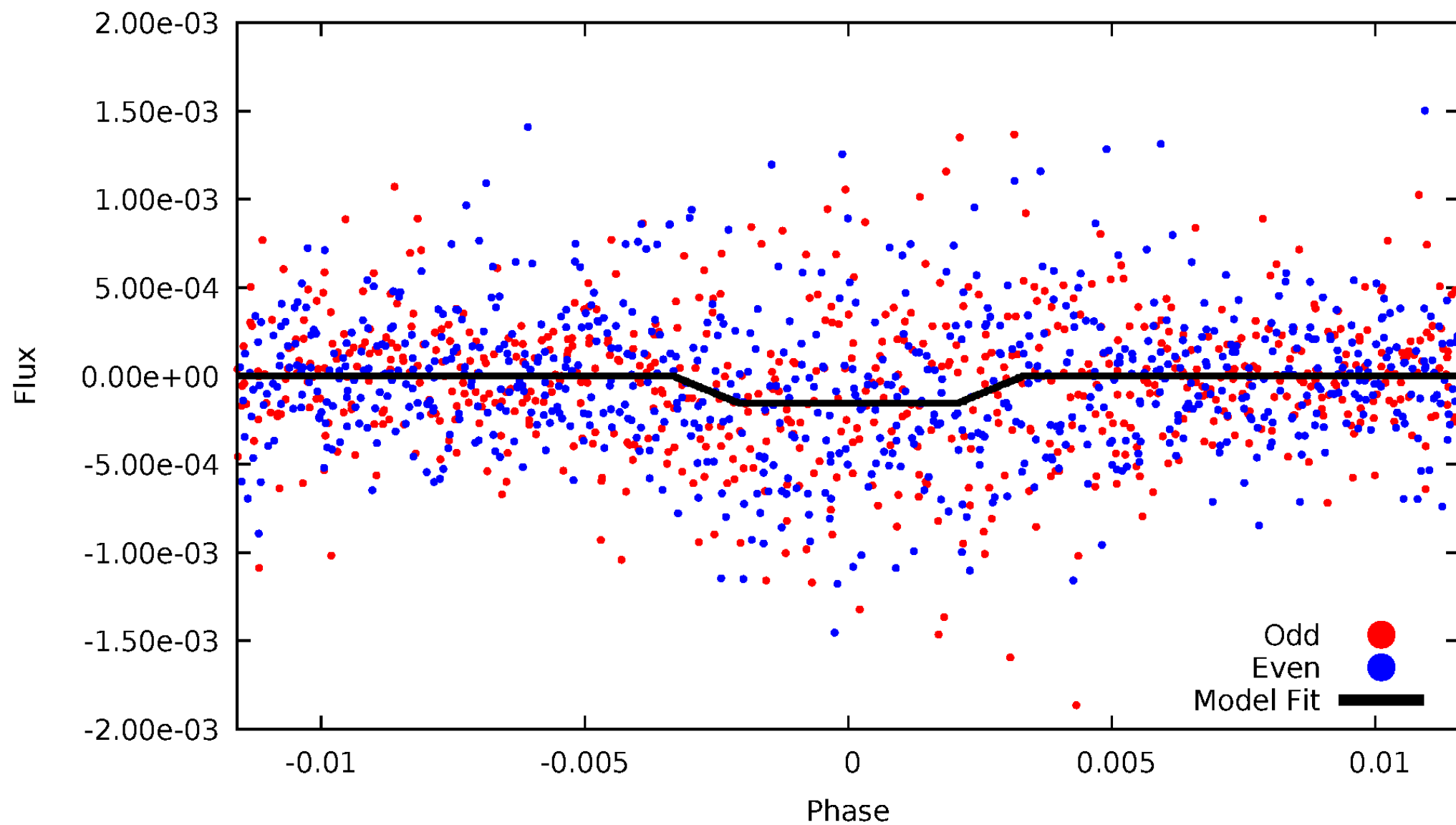
DV Odd/Even

TCE 002302997-01



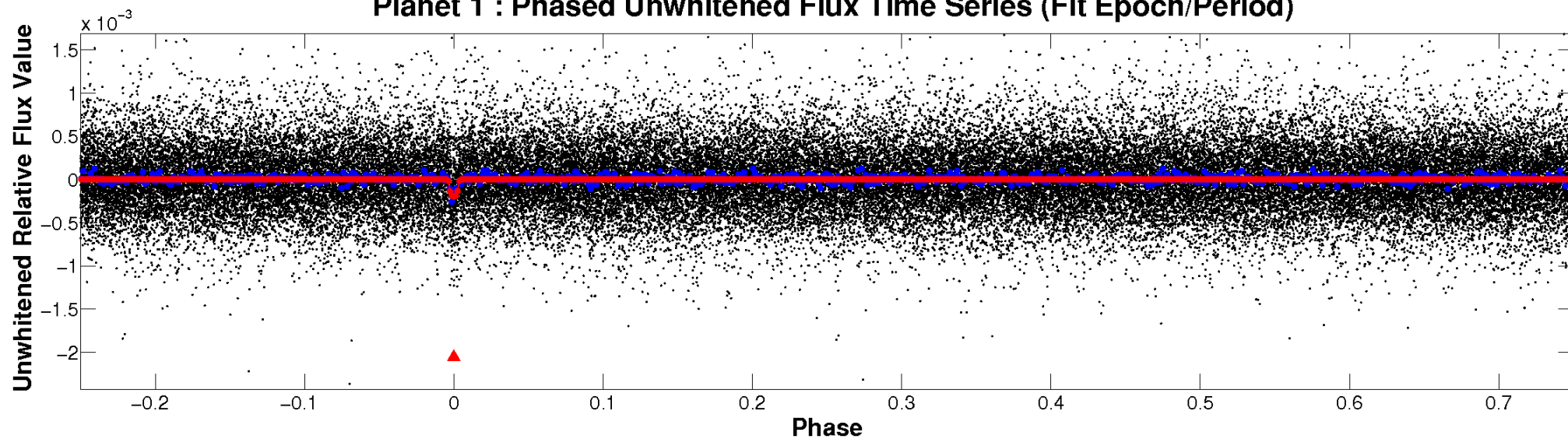
ALT Odd/Even

TCE 002302997-01

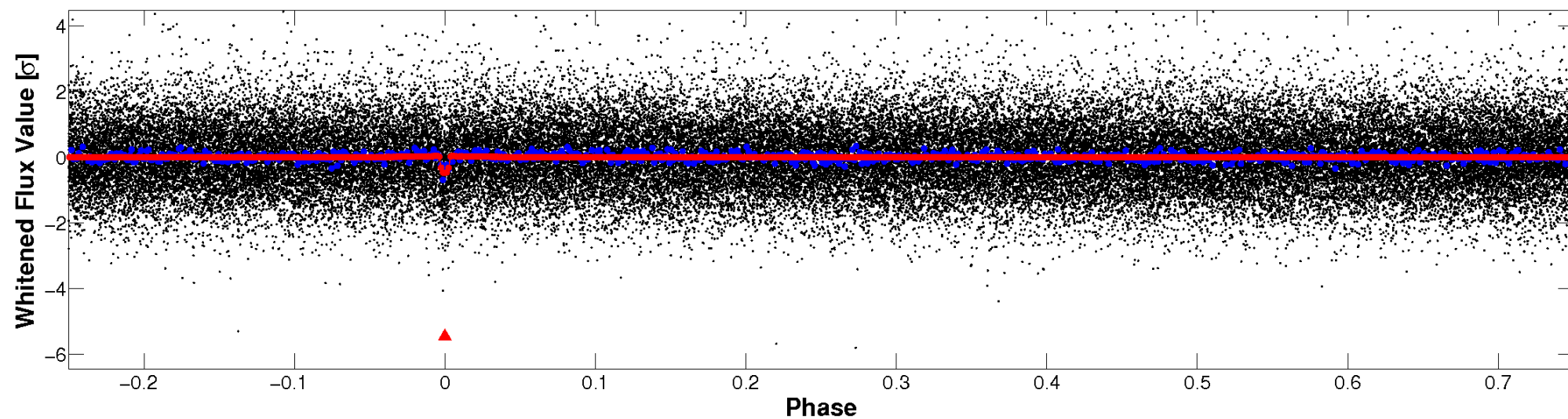


Non-Whitened Vs. Whitened Light Curve

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

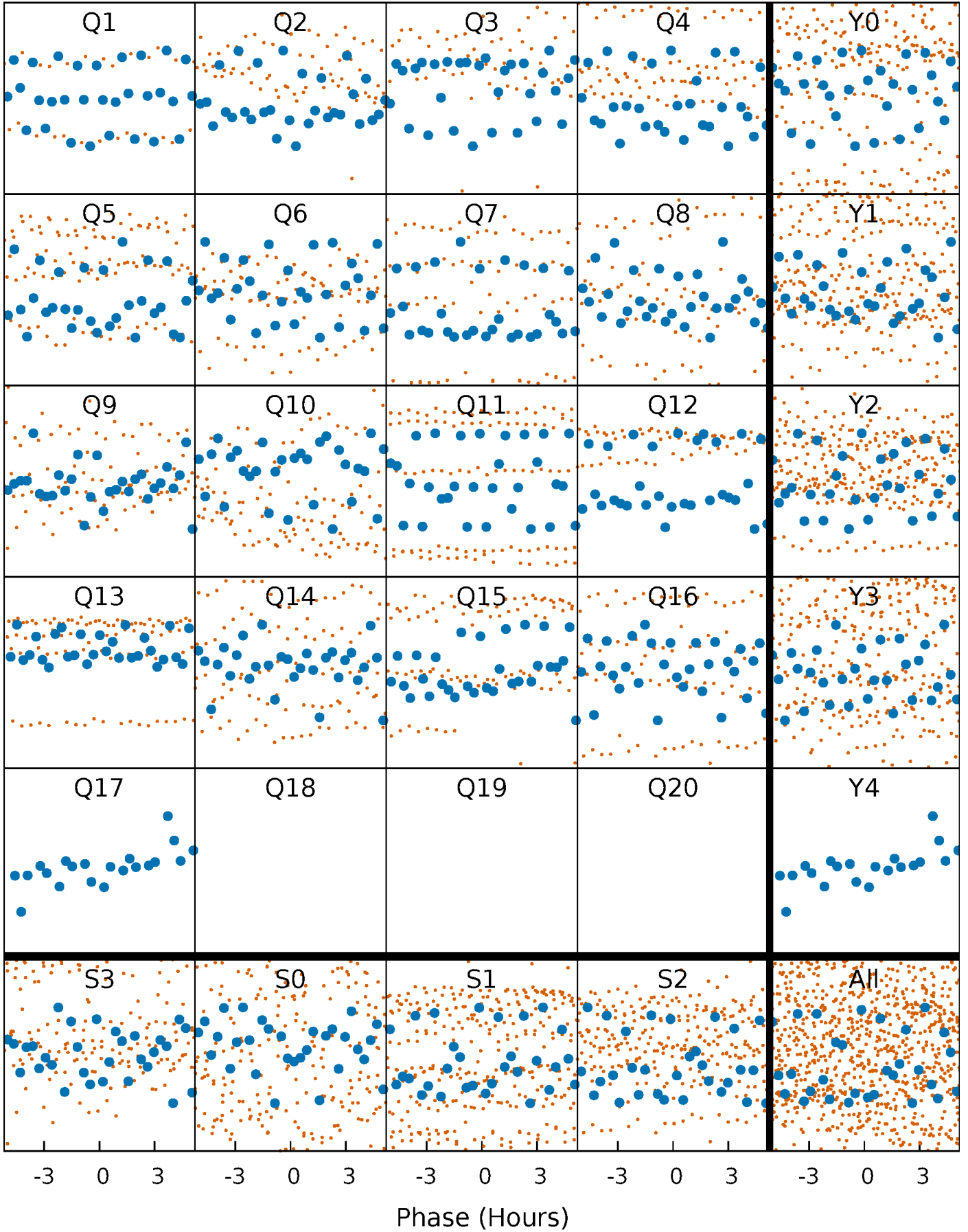


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



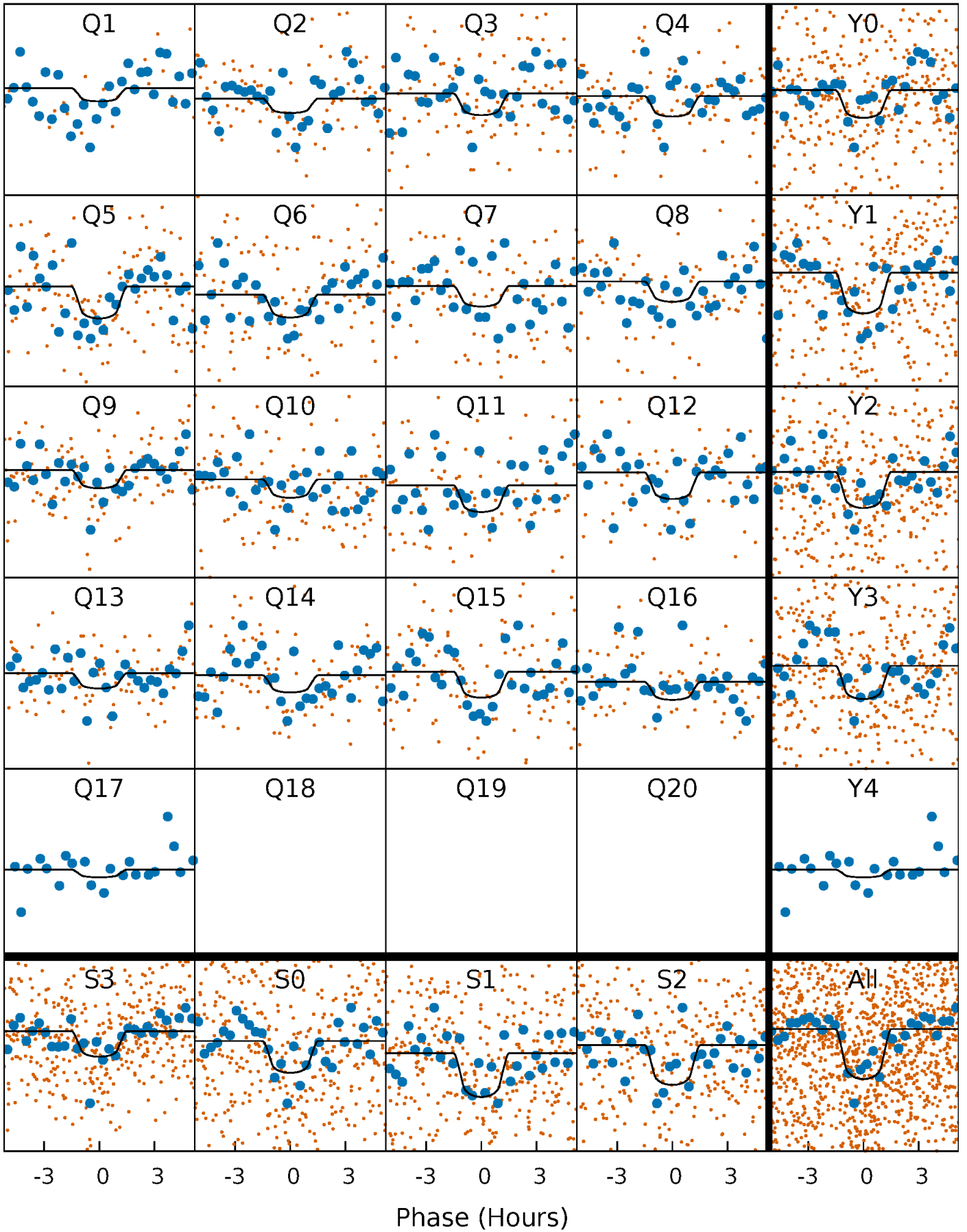
PDC Quarter-Phased Transit Curves

TCE 002302997-01 P= 16.298261 Days $T_0=134.740202$ (BKJD)



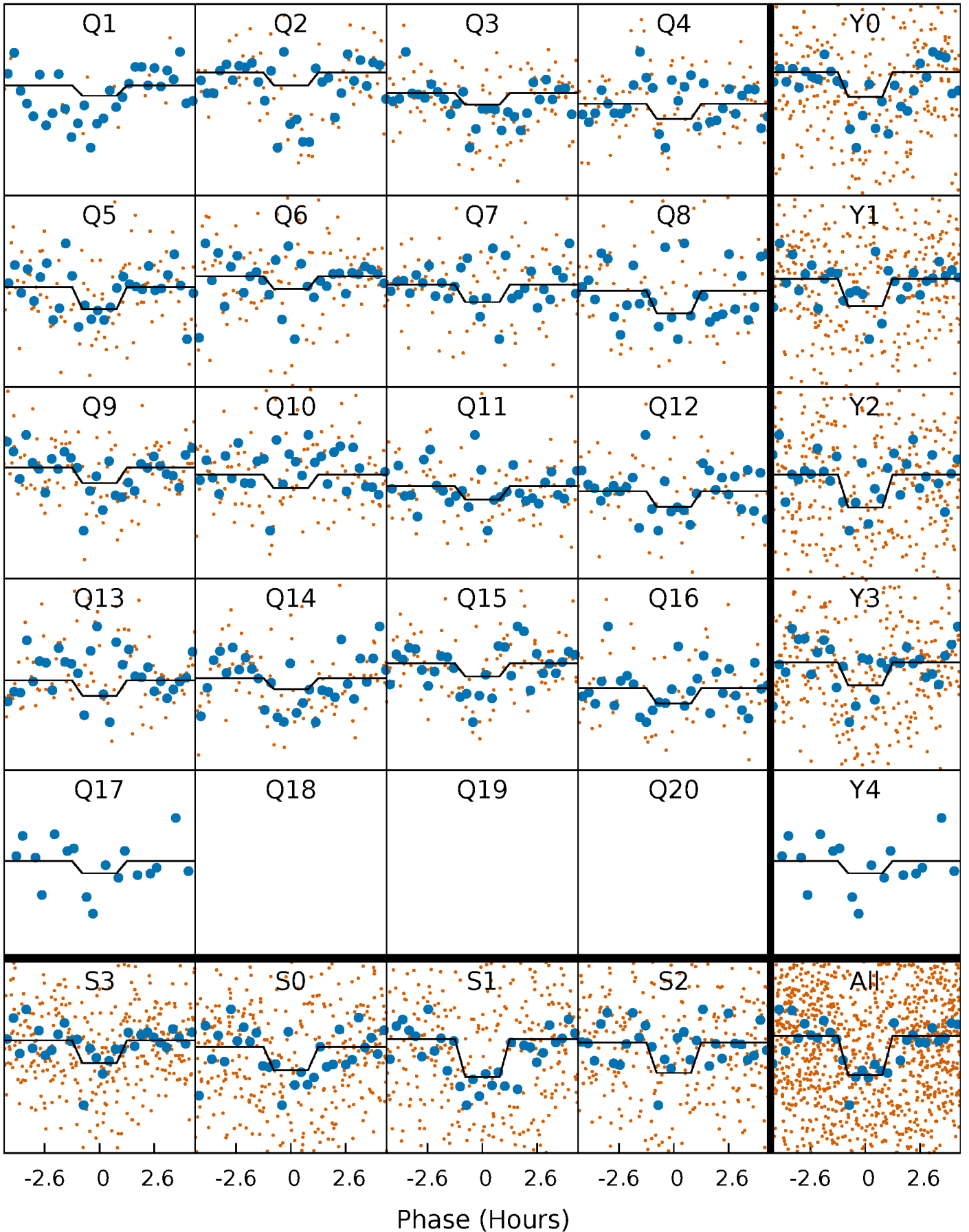
DV Quarter-Phased Transit Curves

TCE 002302997-01 P= 16.298261 Days $T_0=134.740202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

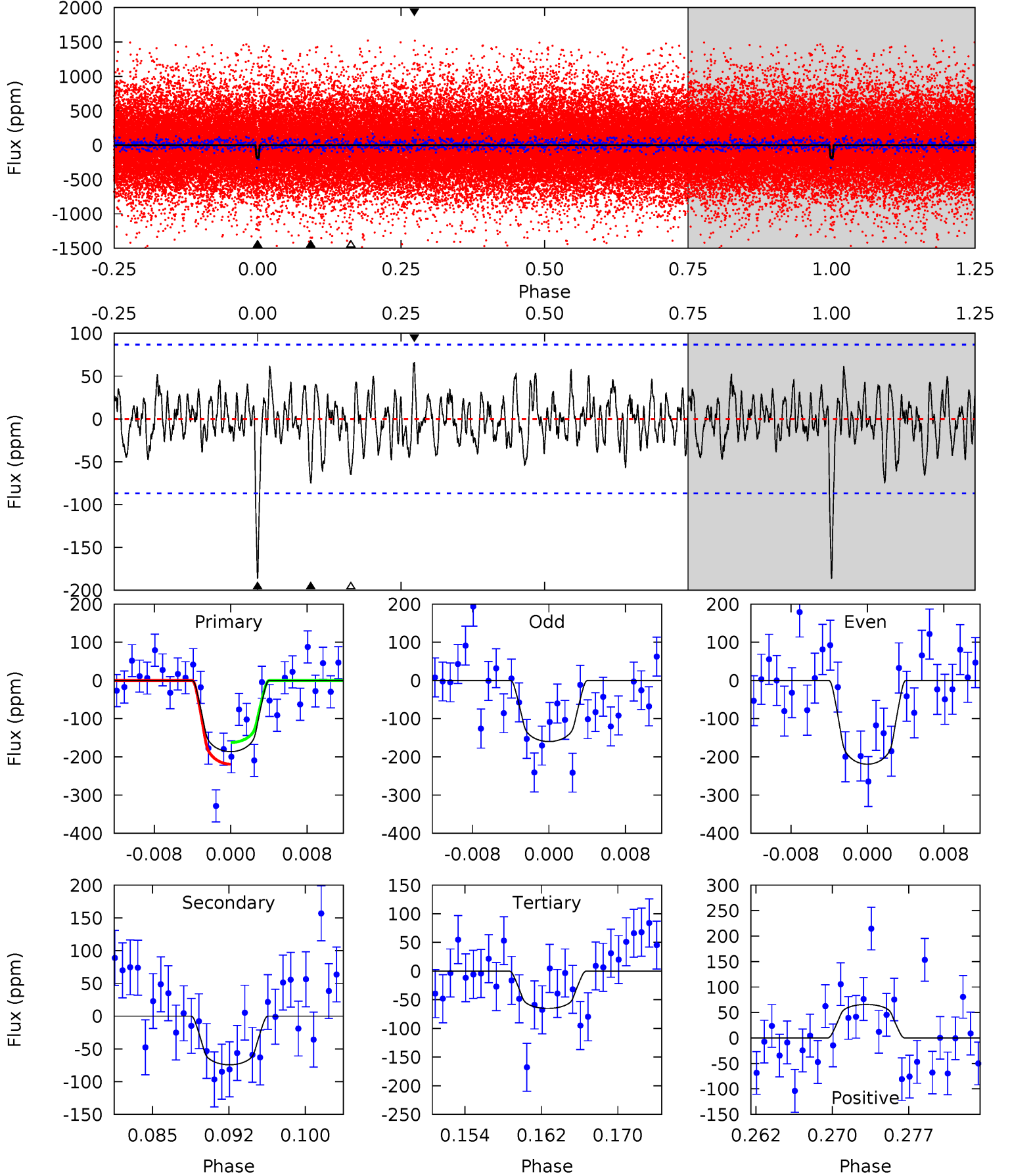
TCE 002302997-01 $P = 16.298498$ Days $T_0 = 134.732696$ (BKJD)



DV Model-Shift Uniqueness Test

002302997-01, P = 16.298261 Days, E = 118.441941 Days

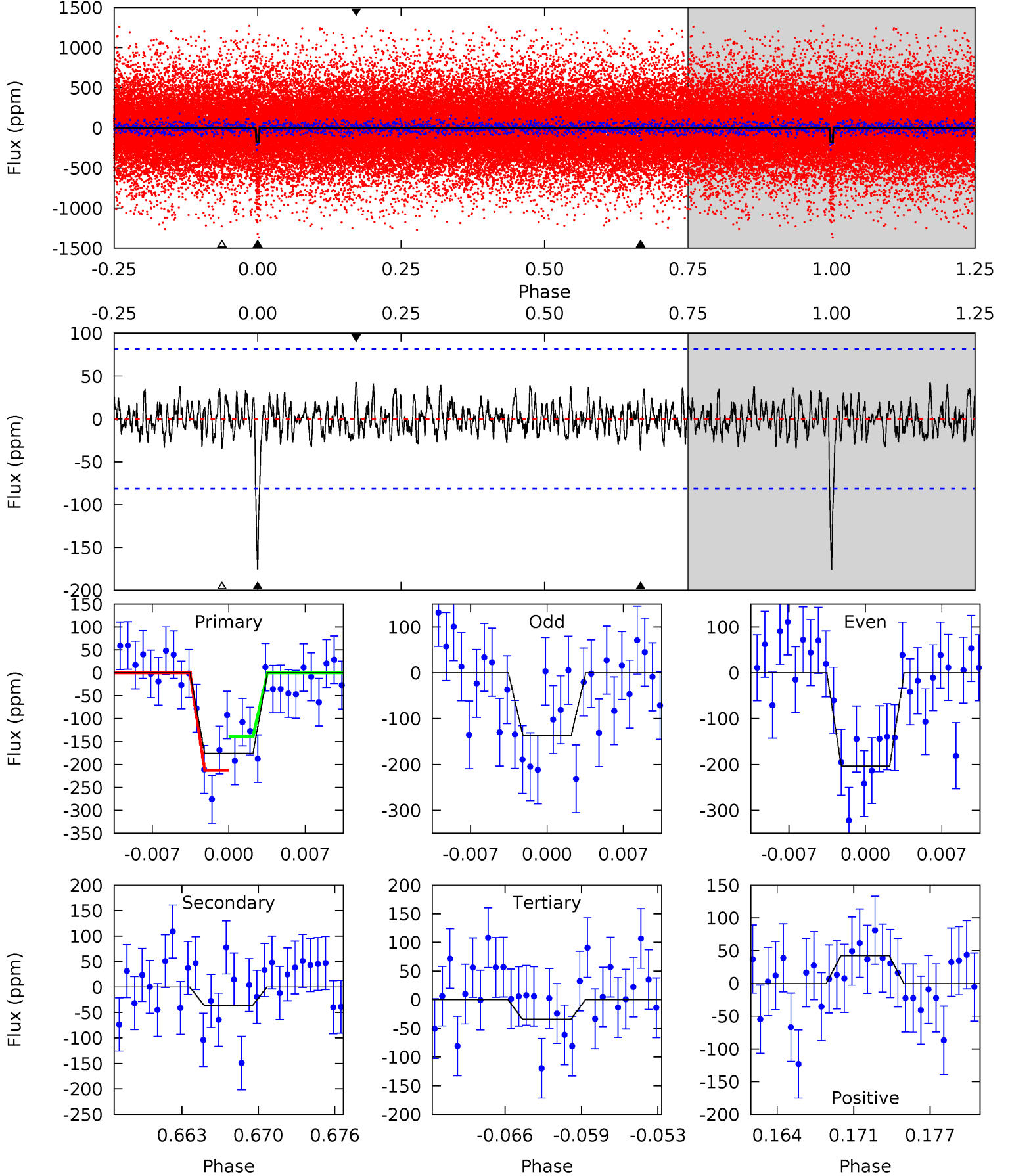
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	4.34	3.81	3.85	5.08	2.66	1.33	7.09	7.05	0.53	0.49	1.74	0.90	0.26	1.67



Alt Model-Shift Uniqueness Test

002302997-01, $P = 16.298498$ Days, $E = 118.434198$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	2.27	2.14	2.65	5.11	2.72	0.90	8.84	8.34	0.13	-0.38	2.09	0.92	0.19	2.32



Stellar Parameters For KIC 002302997

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3905^{+78}_{-88}	$4.736^{+0.030}_{-0.030}$	$-0.200^{+0.100}_{-0.100}$	$0.521^{+0.031}_{-0.031}$	$0.538^{+0.026}_{-0.036}$	$5.375^{+0.800}_{-0.576}$
	+2%/-2%	+1%/-1%	+50%/-50%	+6%/-6%	+5%/-7%	+15%/-11%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 002302997-01 / KOI 7630.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-74 ± 17	$0.98^{+0.67}_{-0.57}$	543^{+14}_{-15}	3133^{+1051}_{-434}	451^{+2239}_{-298}
Alt.	-36 ± 16	$0.86^{+0.61}_{-0.54}$	543^{+13}_{-15}	2933^{+1066}_{-465}	285^{+1760}_{-208}

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

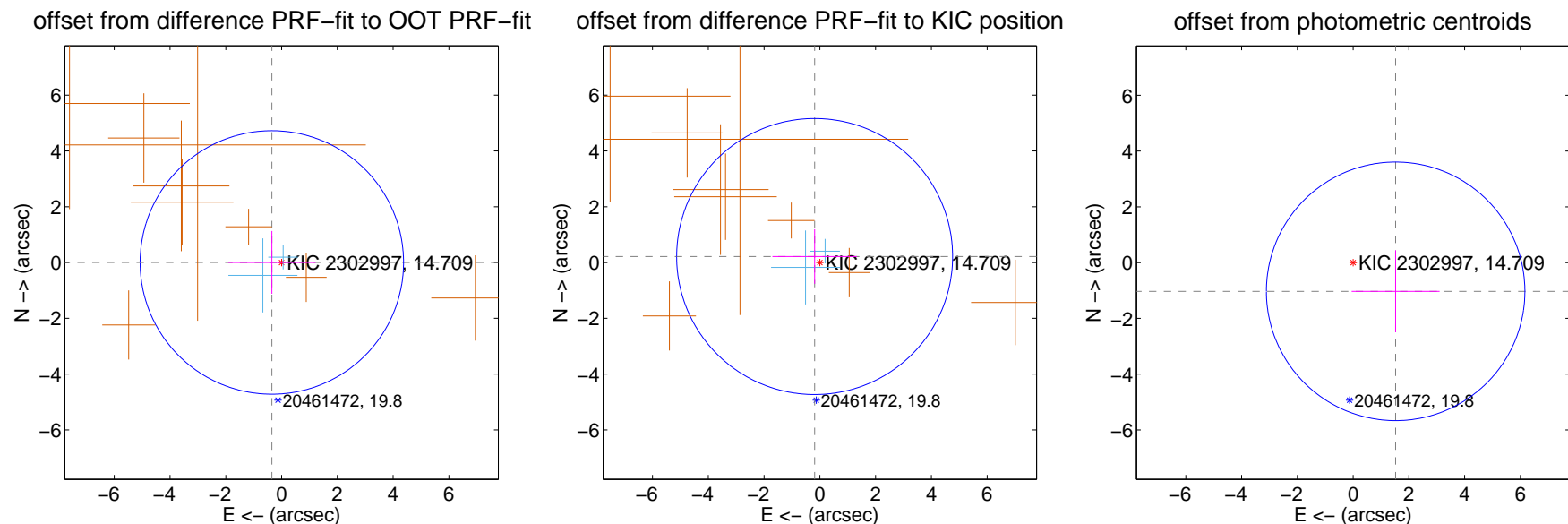
DV Centroid Data

Supplemental centroid analysis for 002302997-01. Kepler magnitude: 14.71. Transit SNR 8.15

There are 2 quarters with good PRF difference image offsets

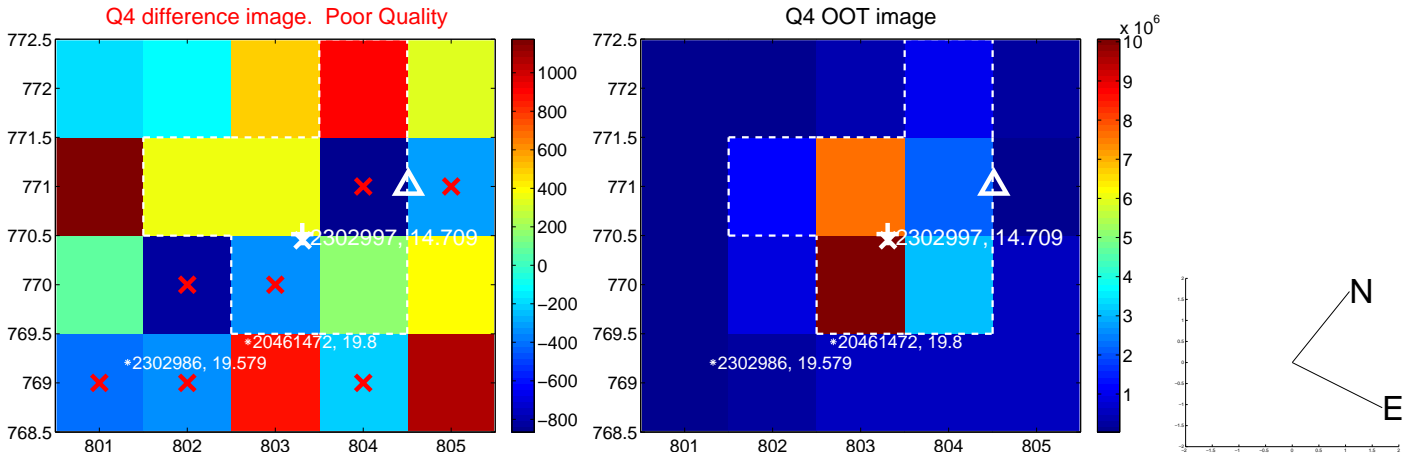
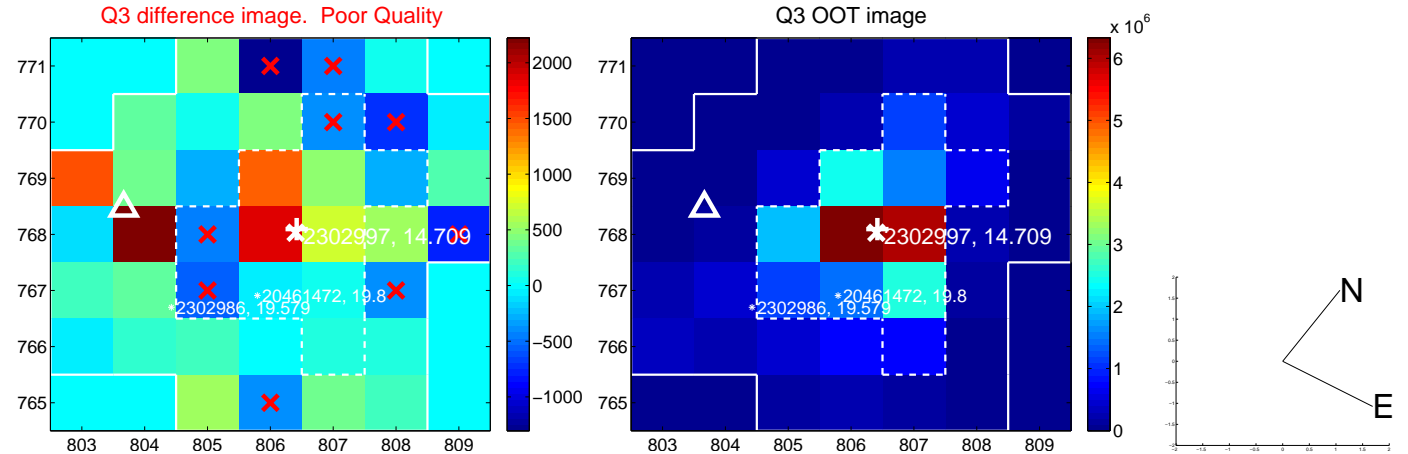
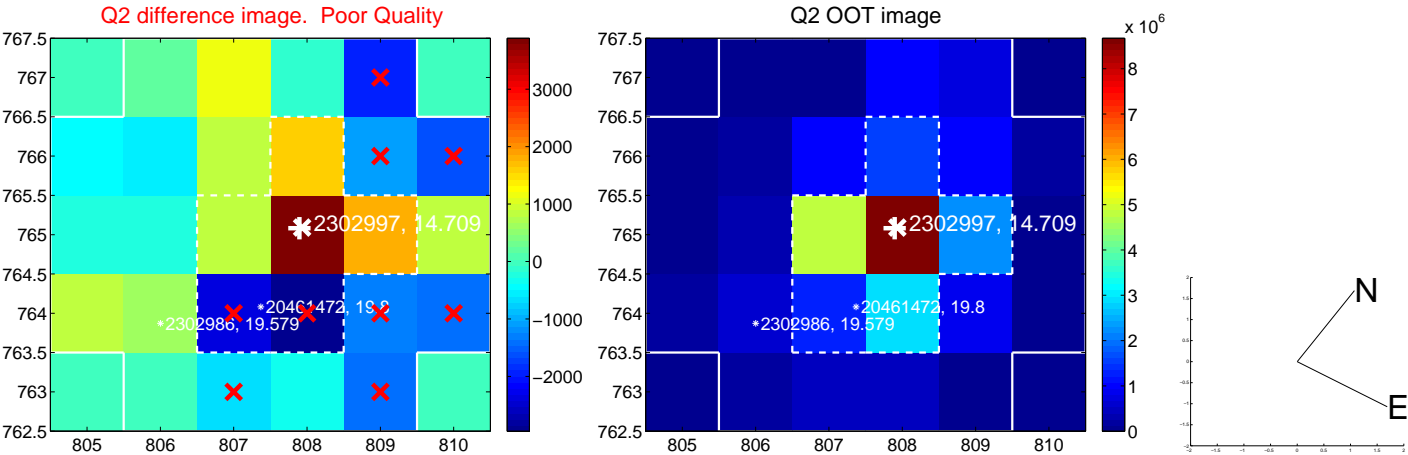
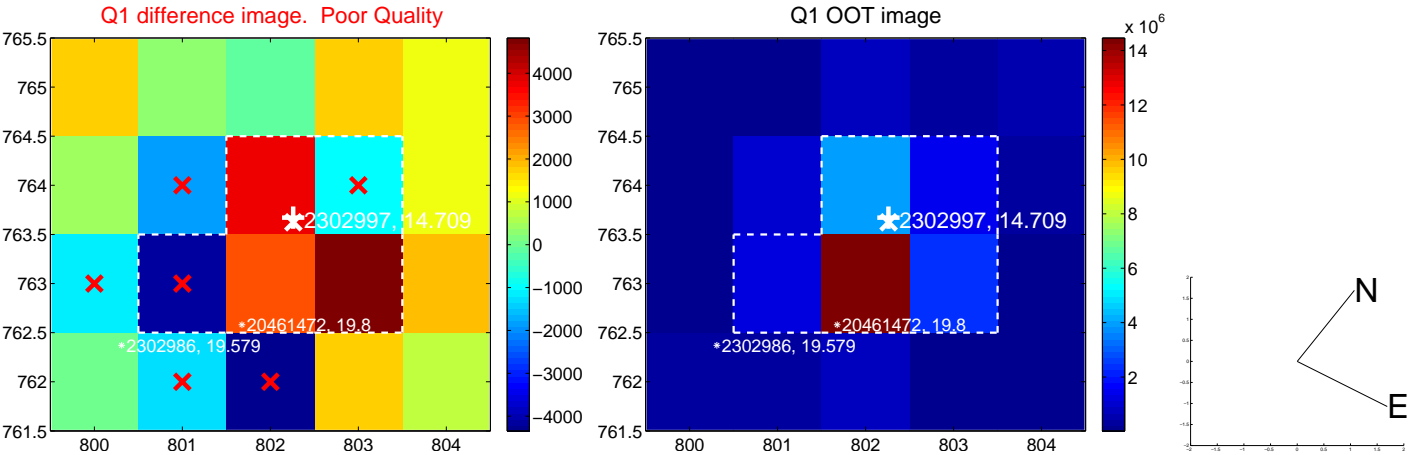
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.349 ± 1.574	0.22	0.349 ± 1.566	0.003 ± 1.127
PRF-fit source offset from KIC position	0.285 ± 1.649	0.17	0.187 ± 1.515	0.216 ± 0.977
photometric centroid source offset	1.84 ± 1.54	1.19	-1.52 ± 1.58	-1.03 ± 1.47

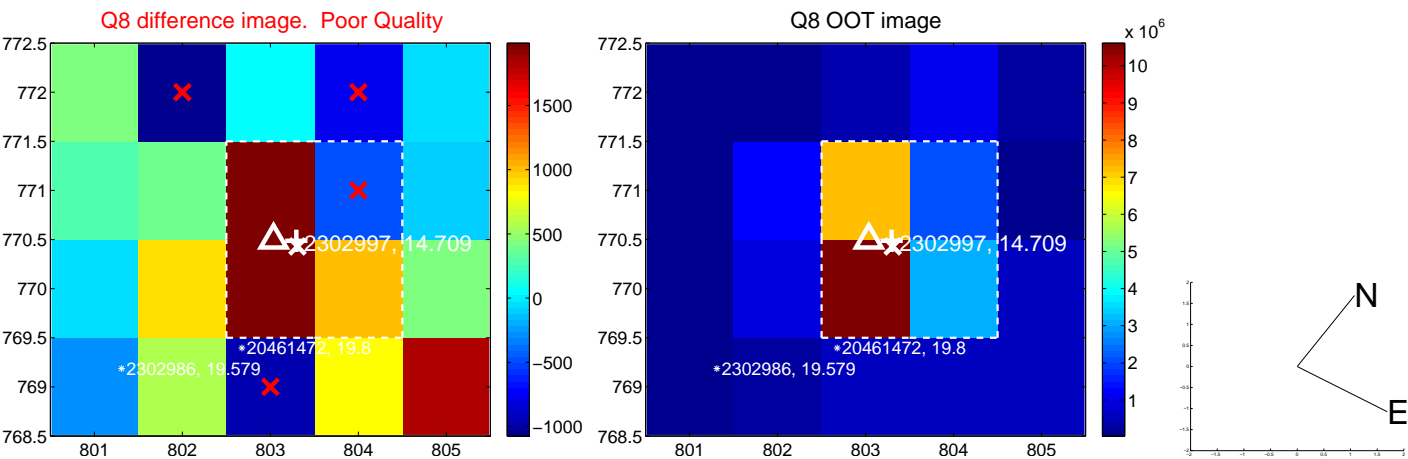
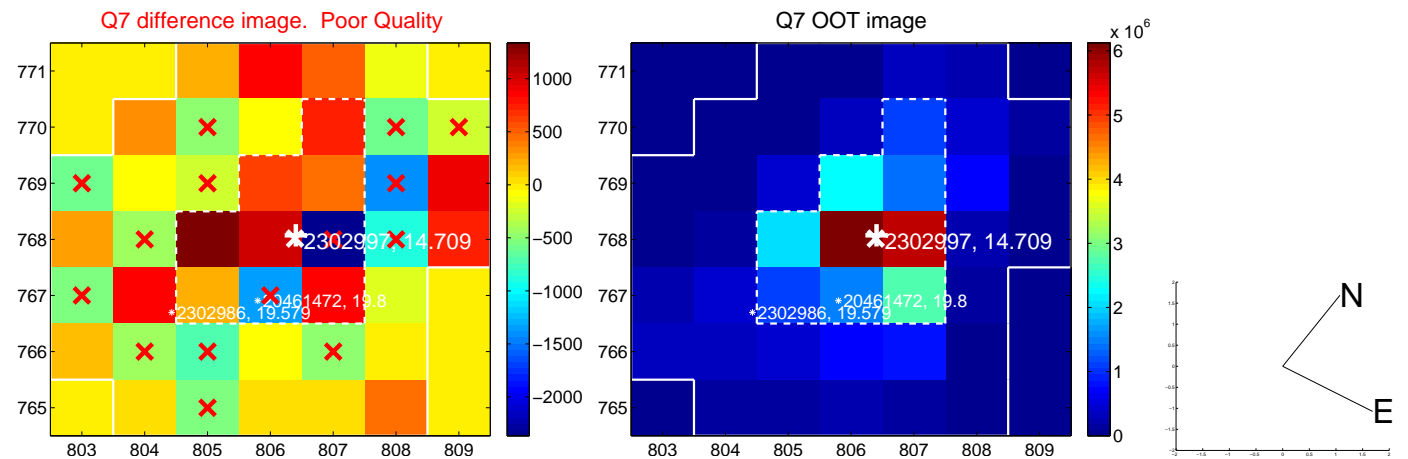
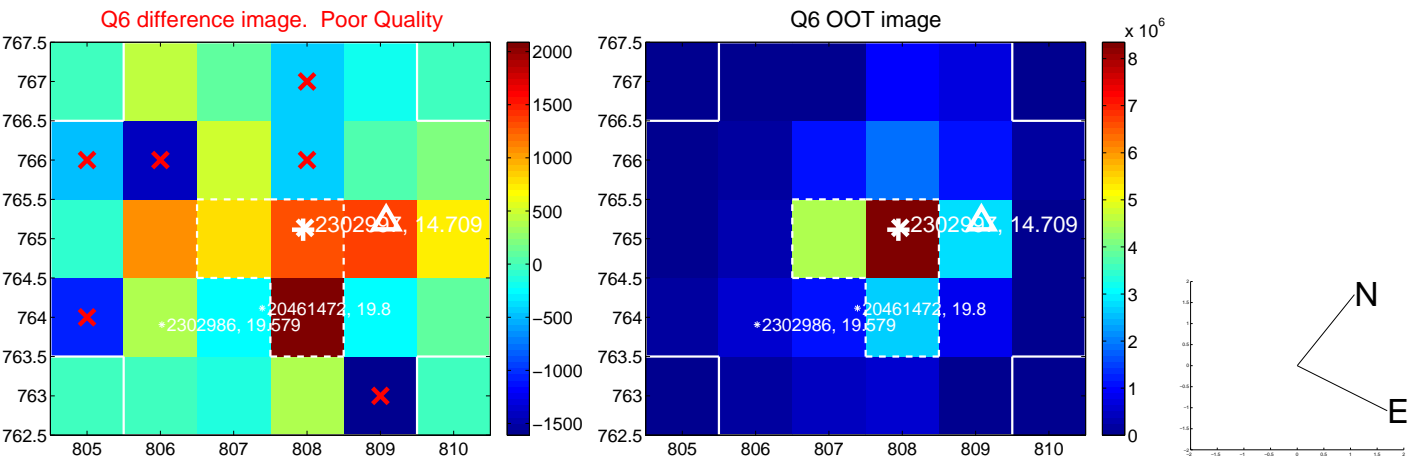
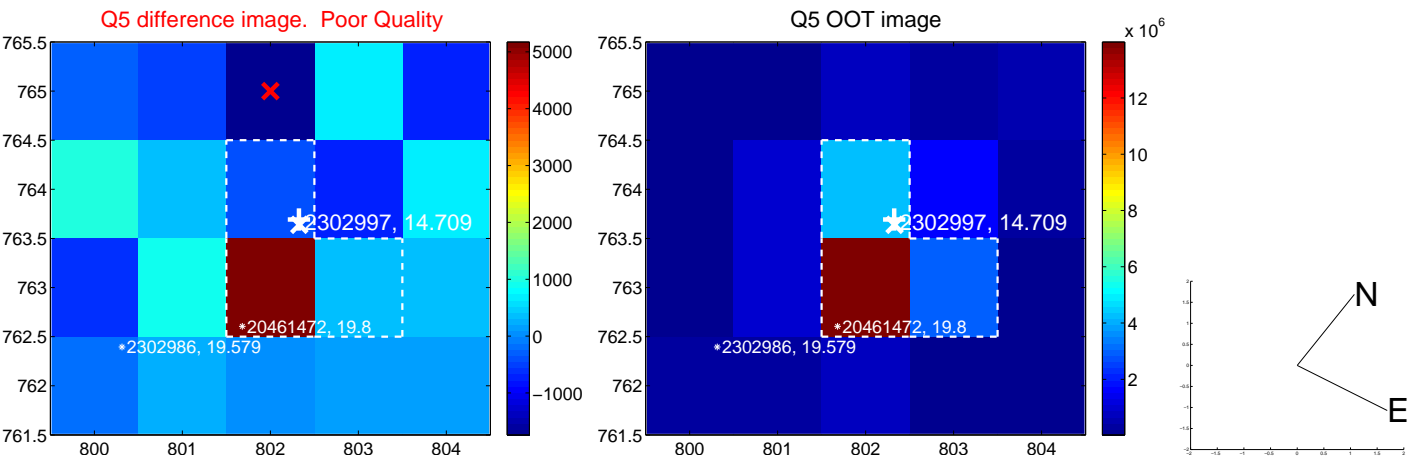


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

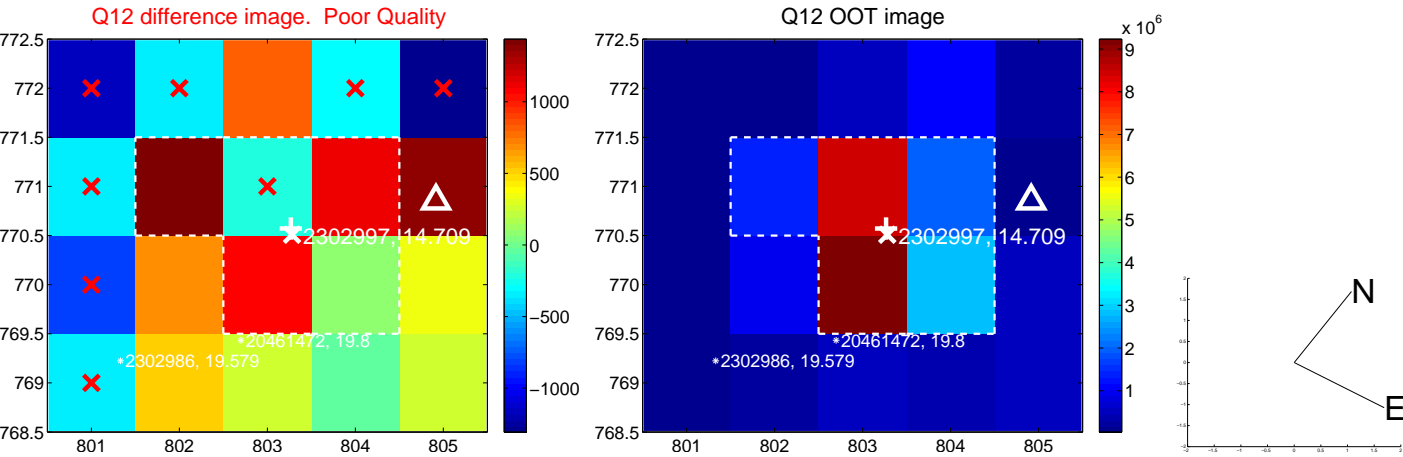
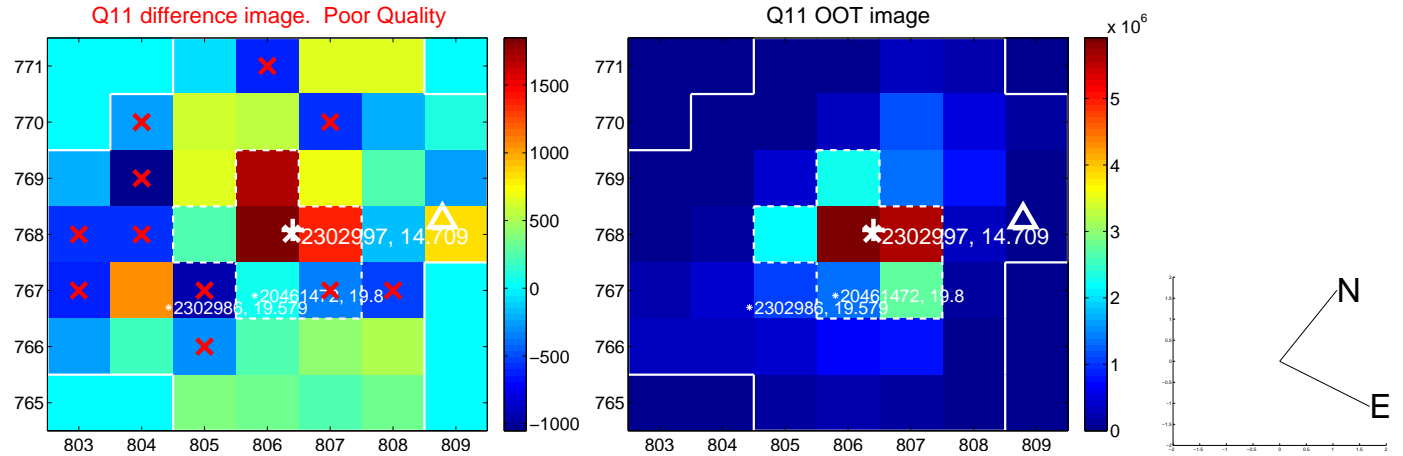
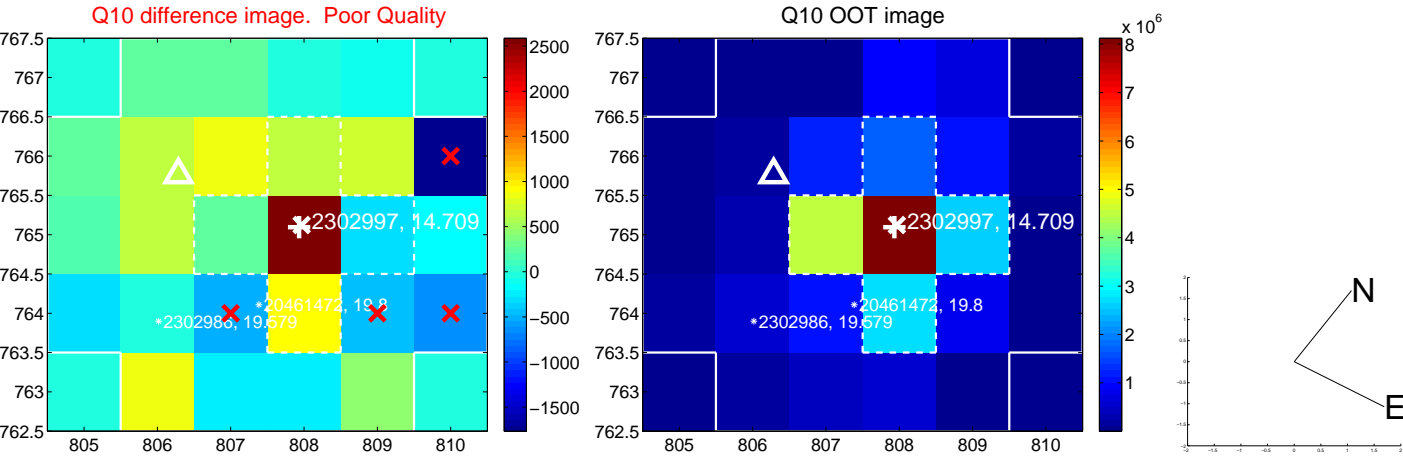
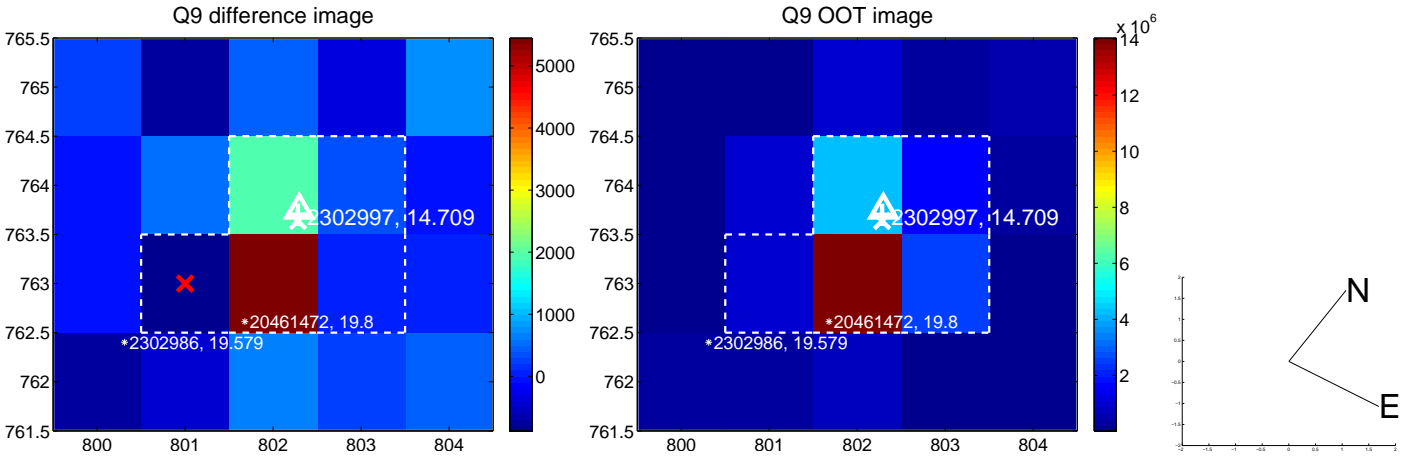
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



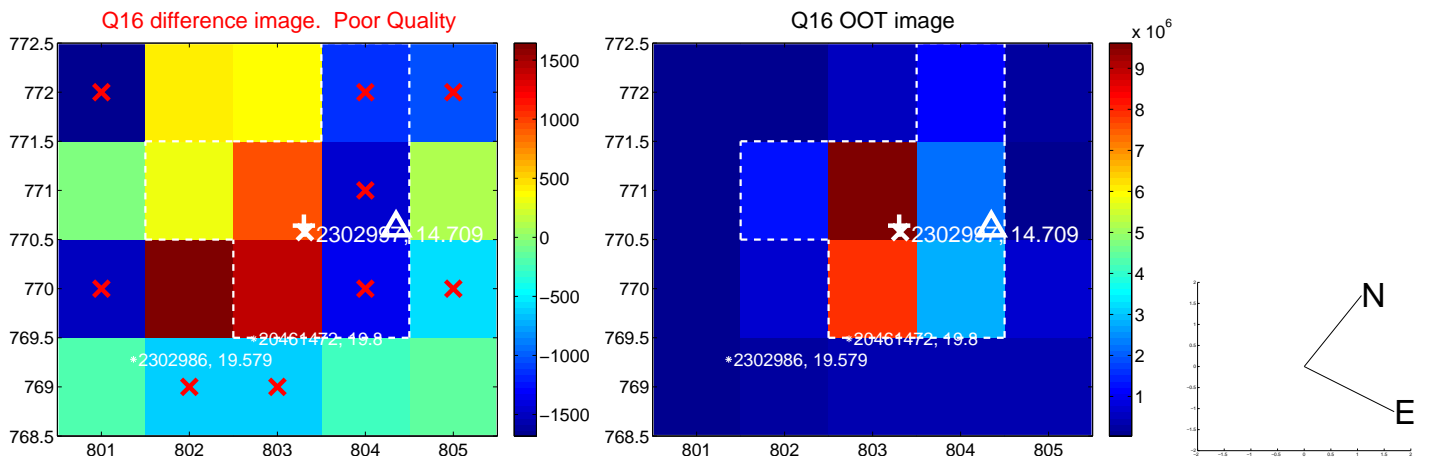
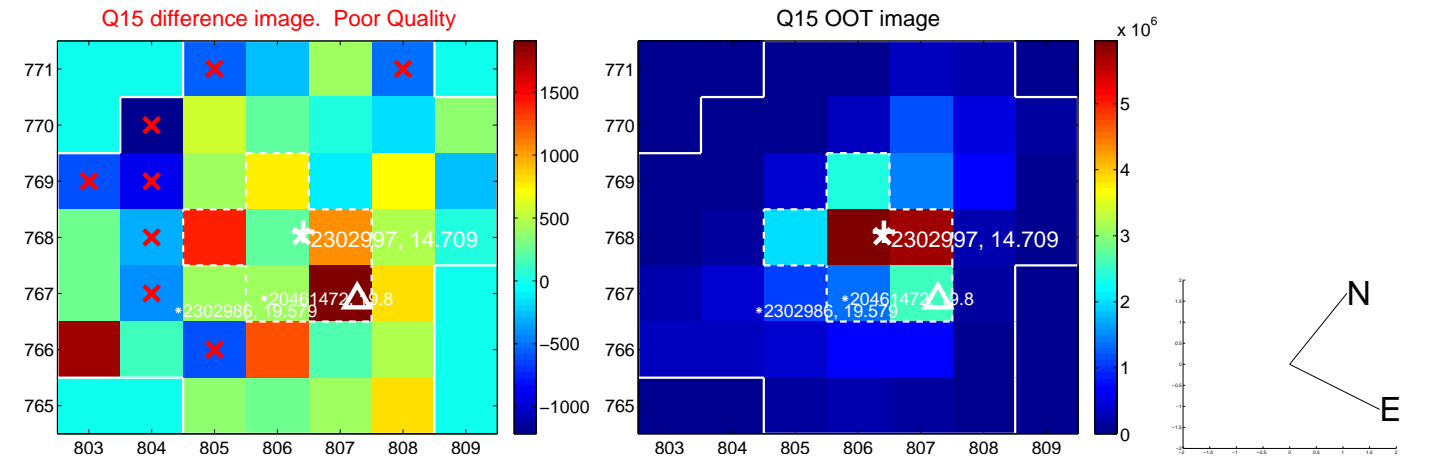
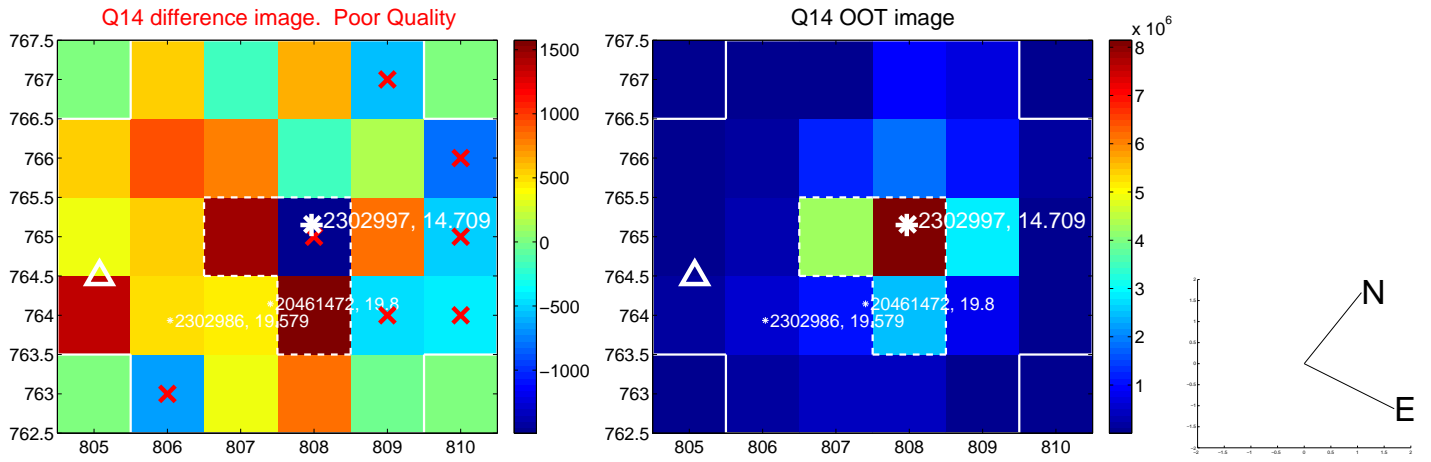
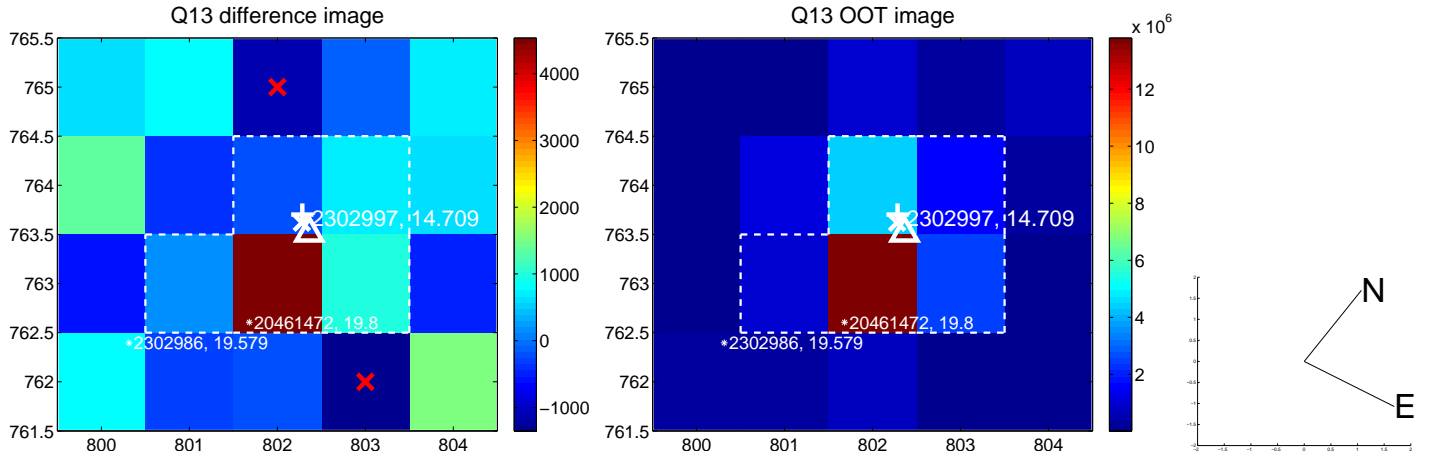
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



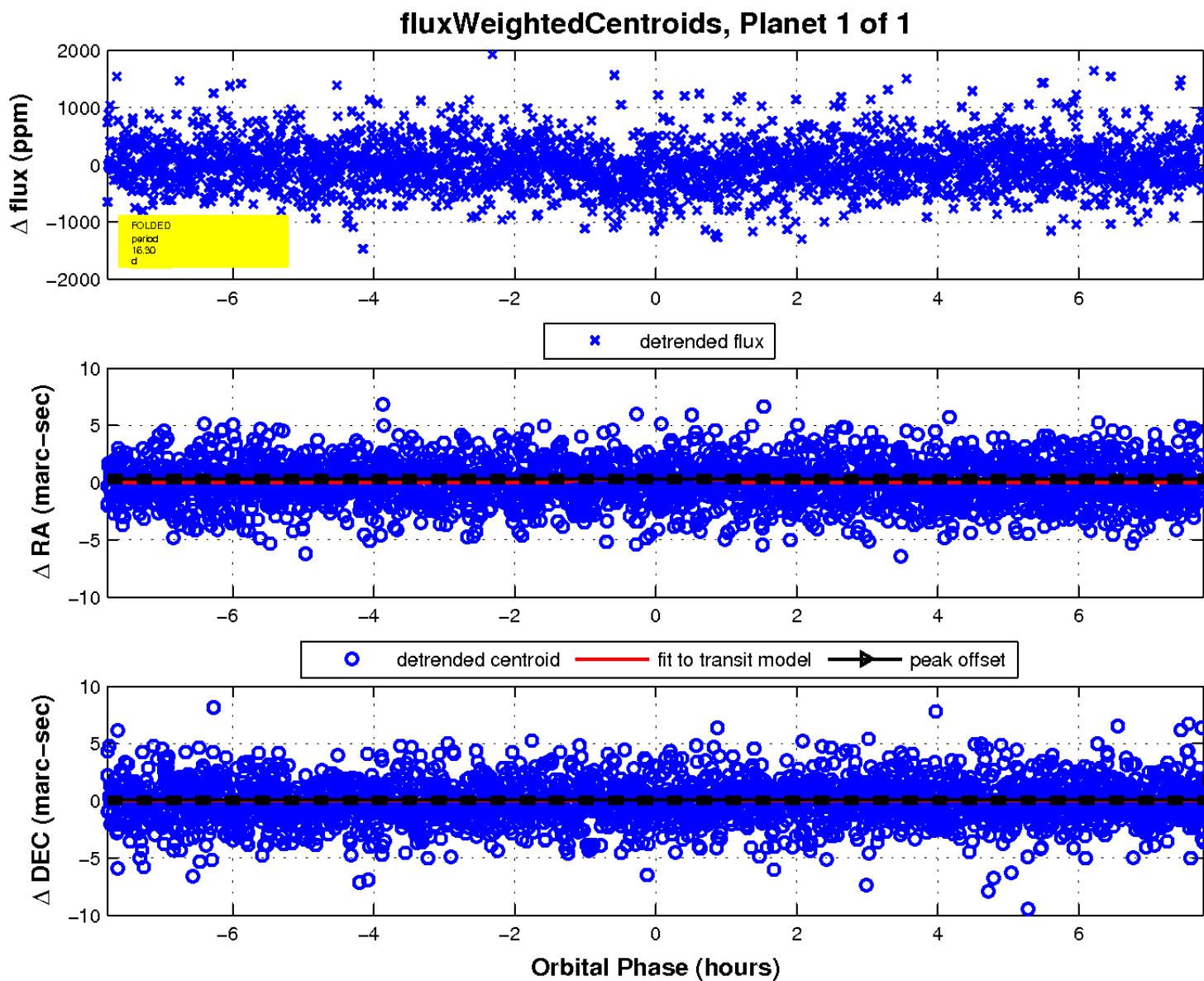
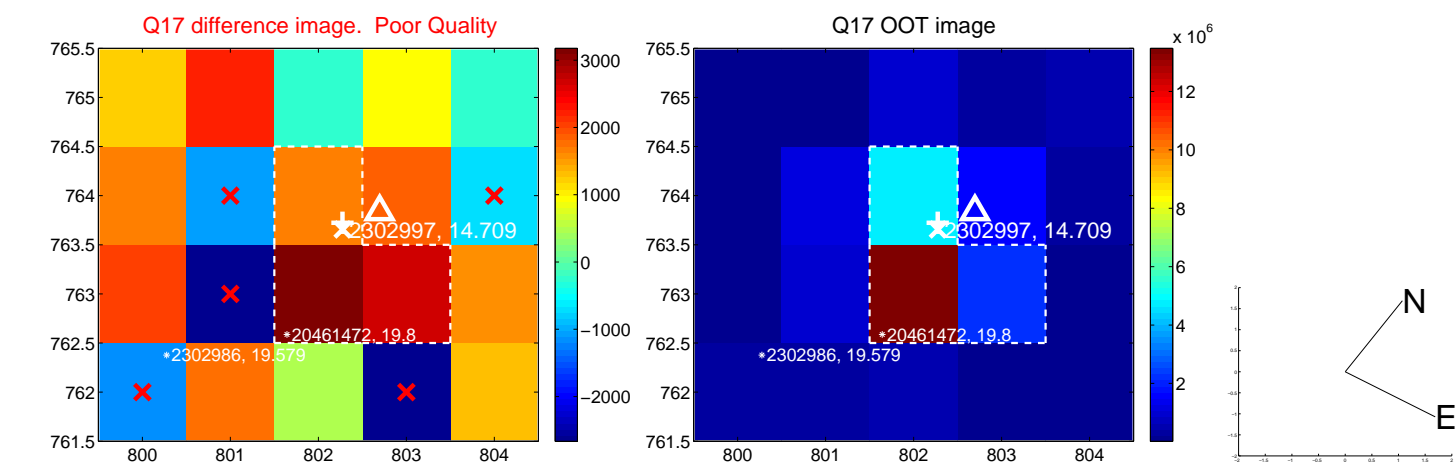
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UKIRT Image

Declination

