

KIC 004458346

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})
004458346-01	OBS	No	0.813770	132.186744	76.1	8.718	10.5	12.6	0.84	5071	0.71	1674.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004458346-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

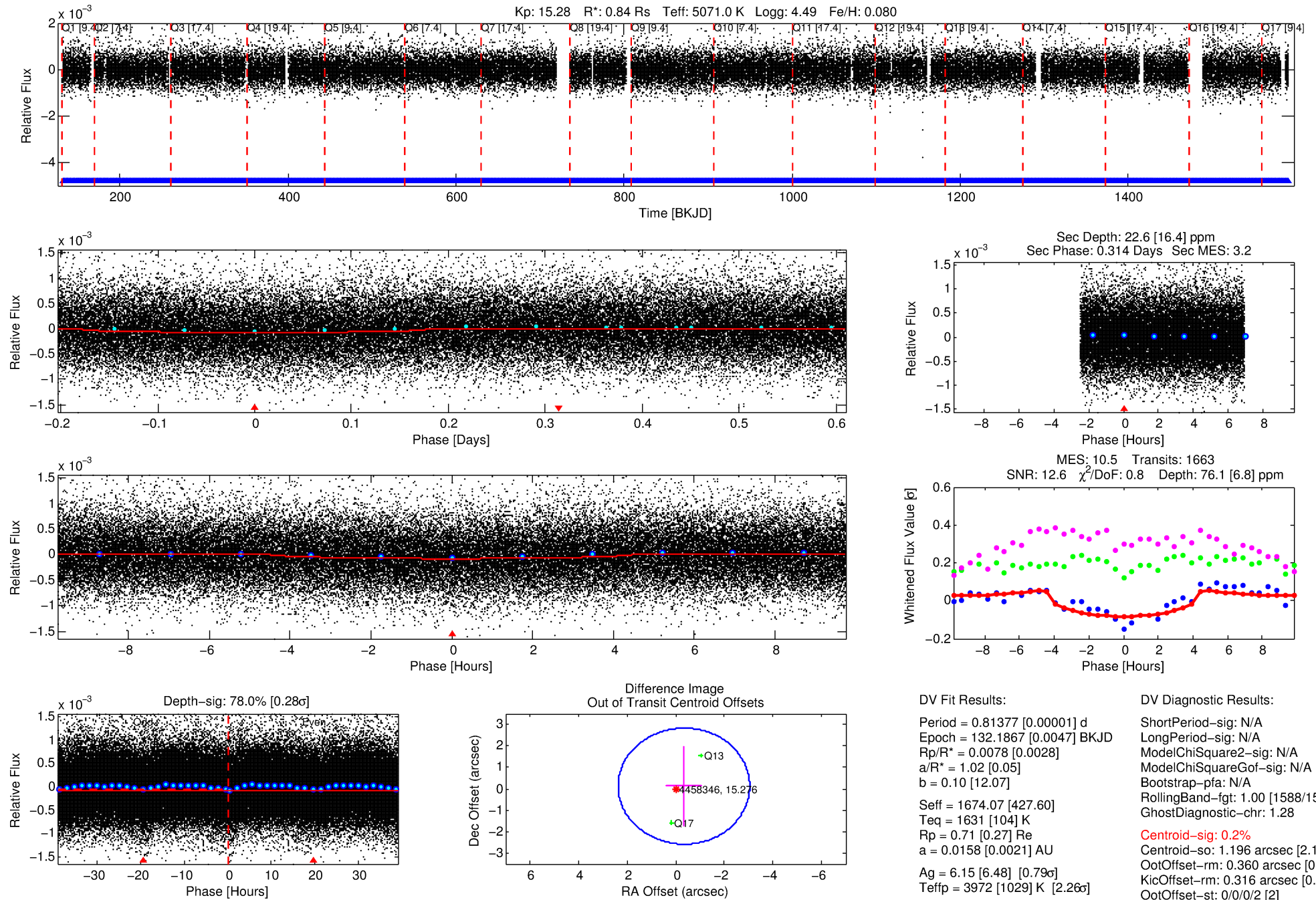
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004458346-01

No Significant Match Found

DV One-Page Summary

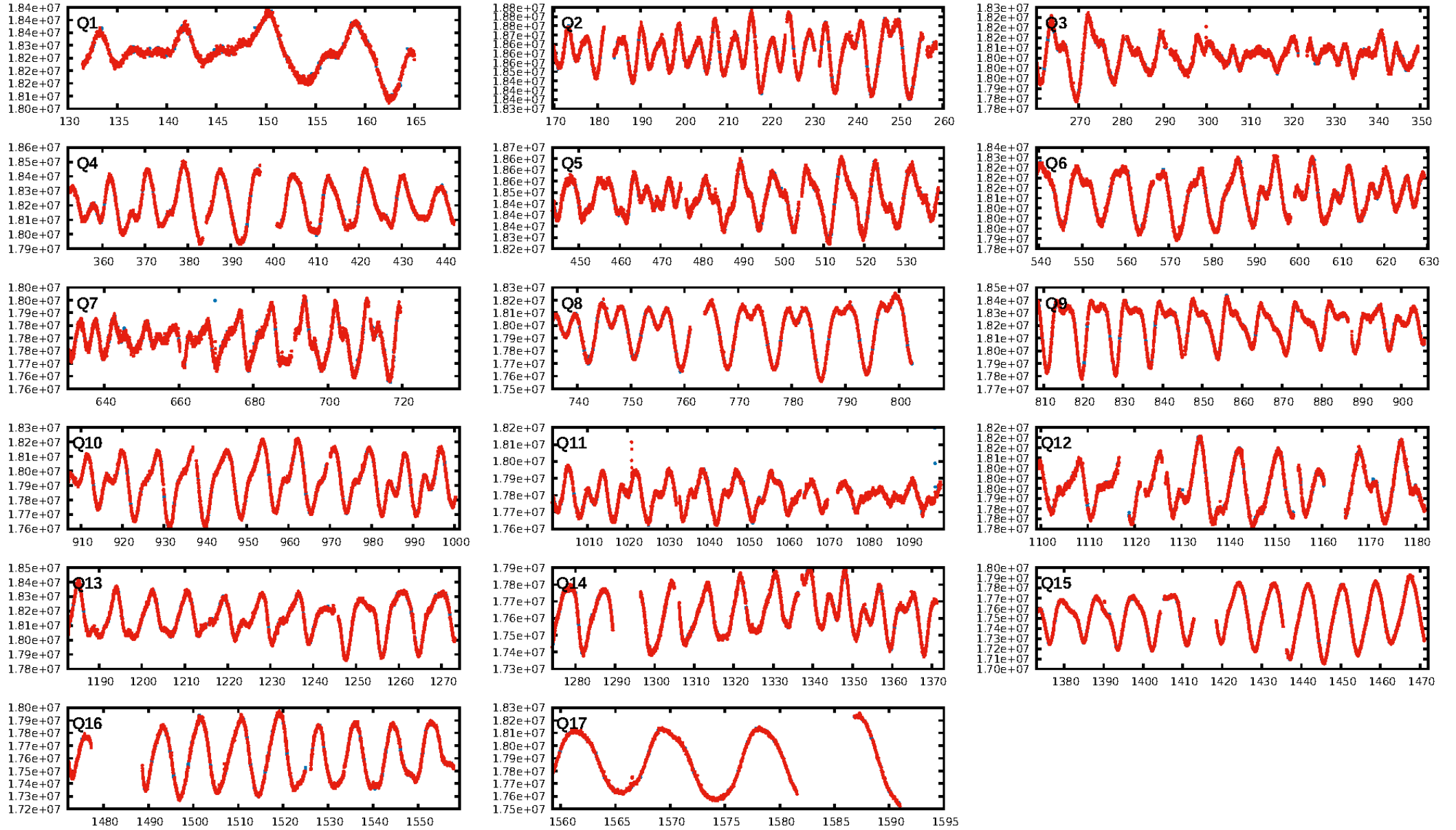
KIC: 4458346 Candidate: 1 of 1 Period: 0.814 d



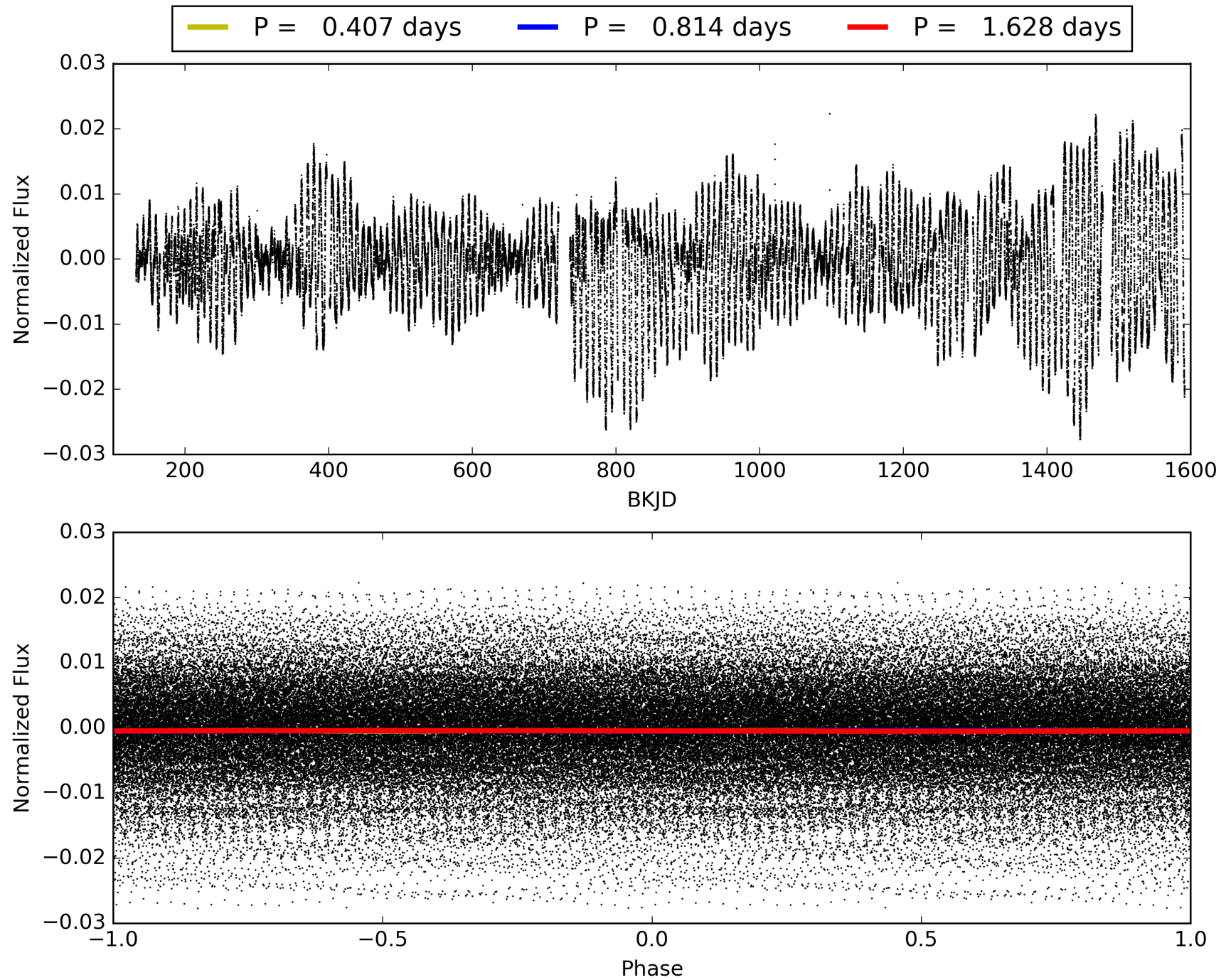
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:06:19 Z

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

TCE 004458346-01, PDC Light Curves

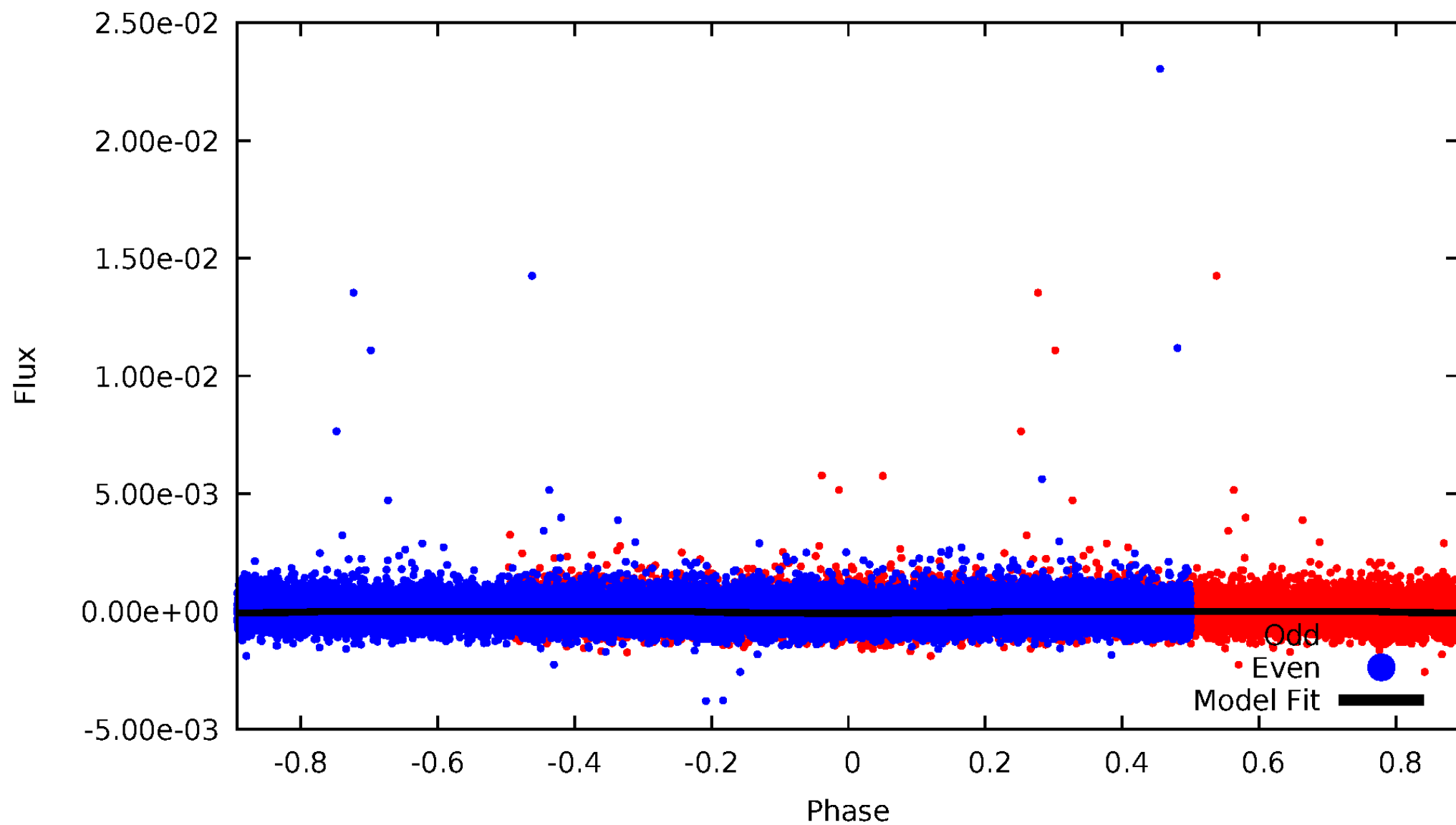


TCE 004458346-01



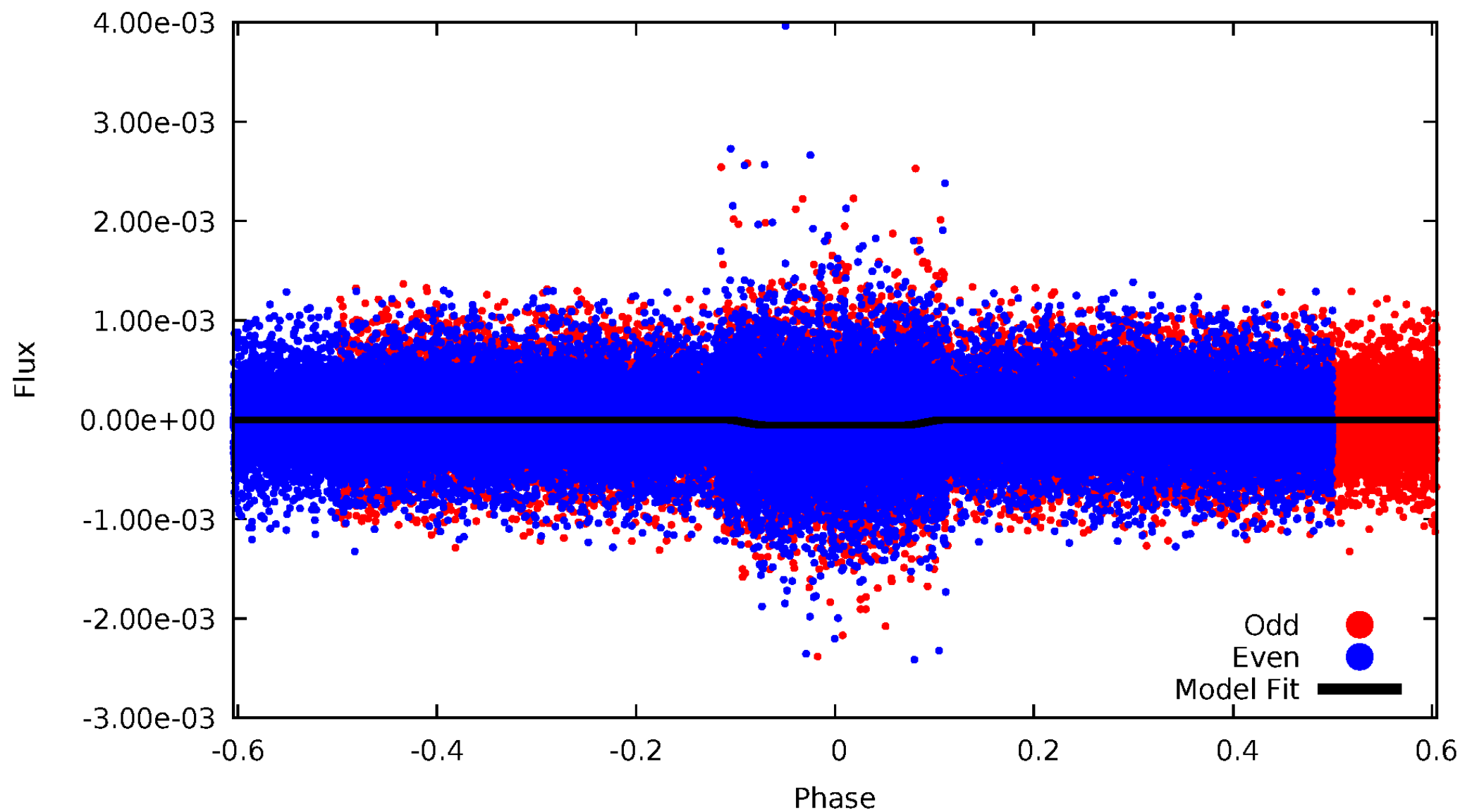
DV Odd/Even

TCE 004458346-01



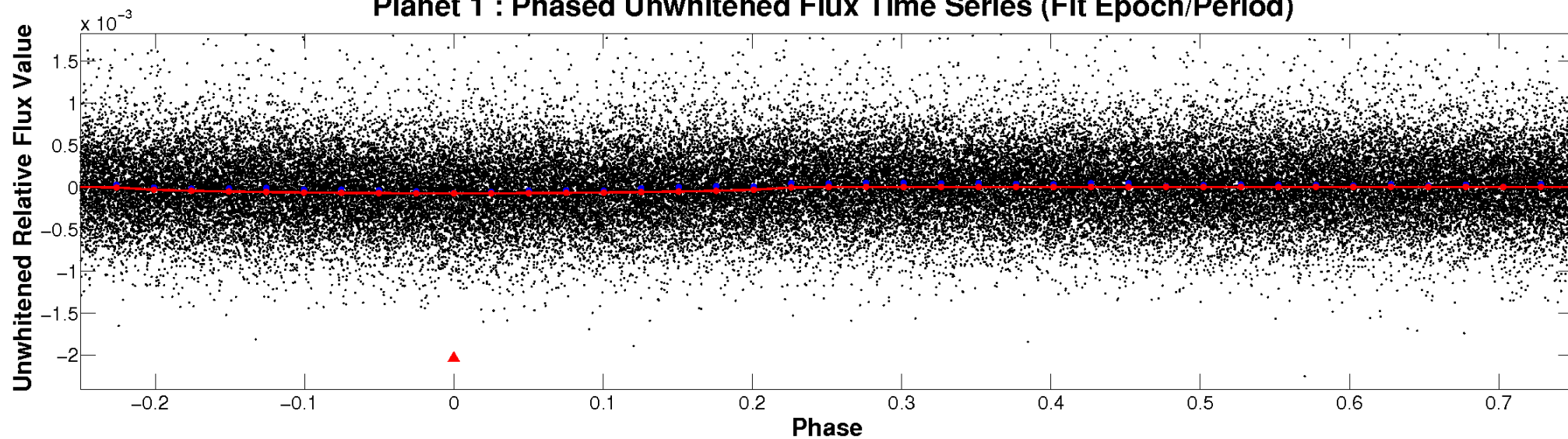
ALT Odd/Even

TCE 004458346-01

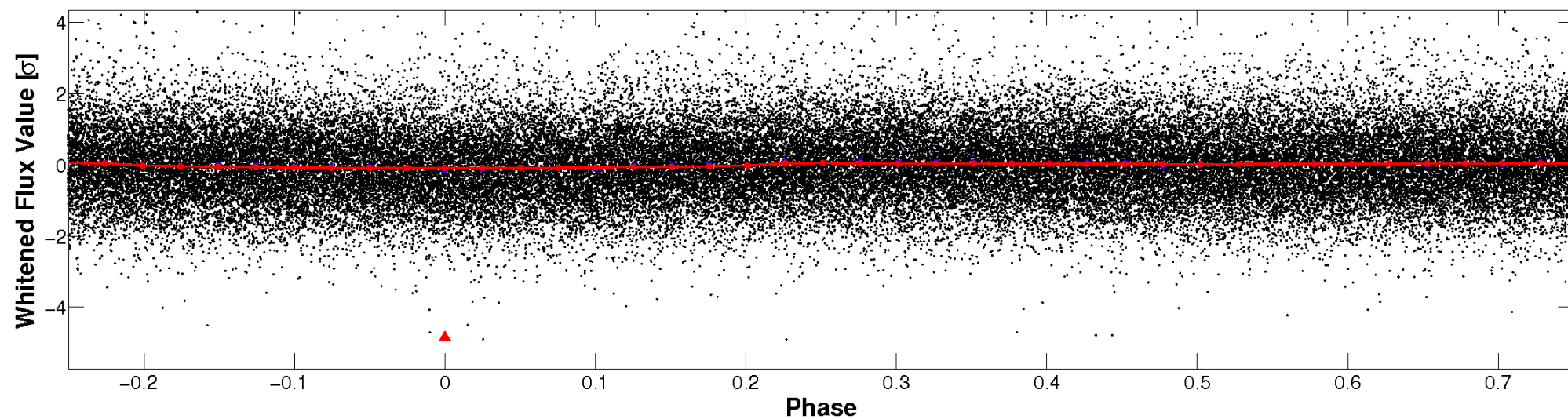


Non-Whitened Vs. Whitened Light Curve

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

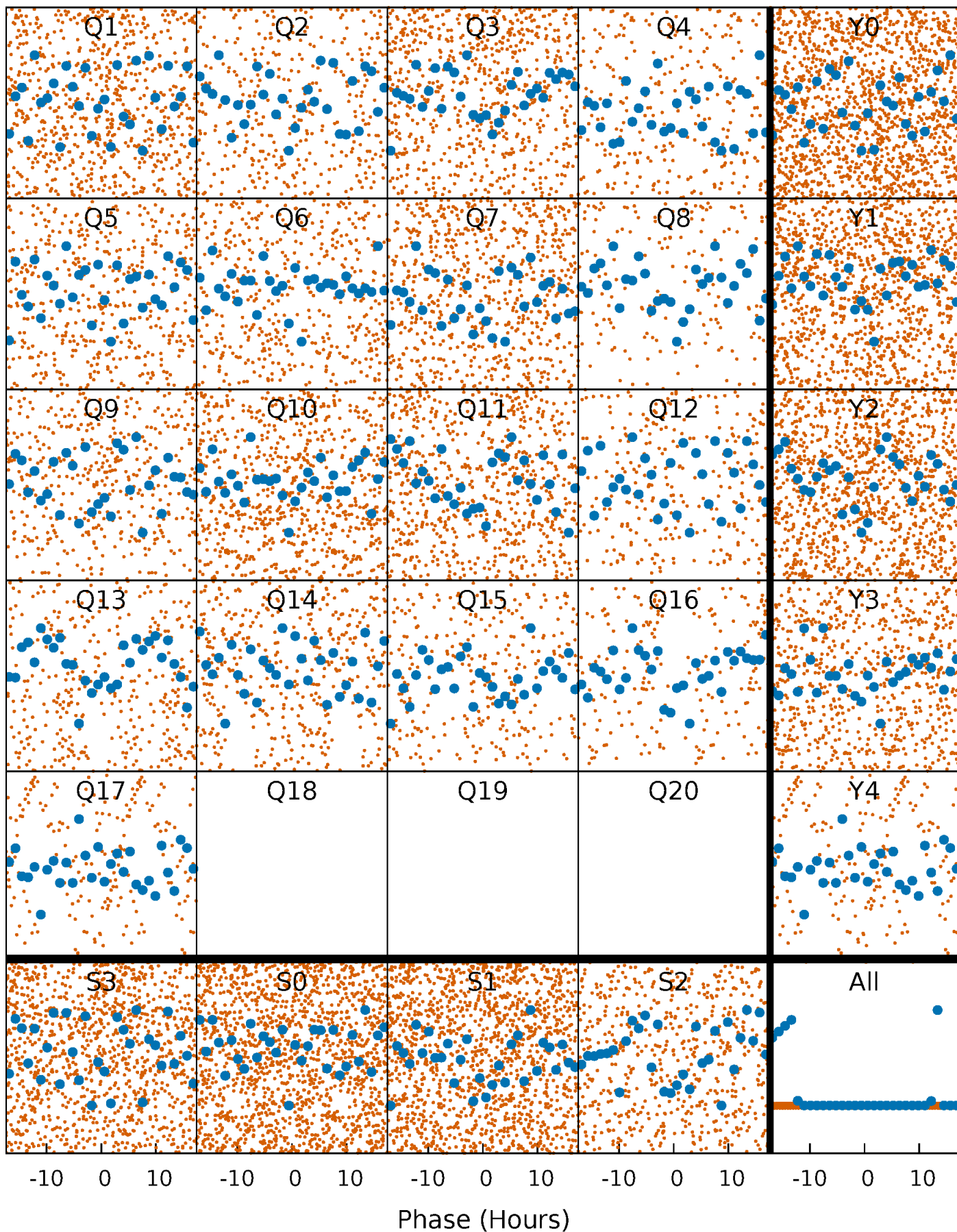


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



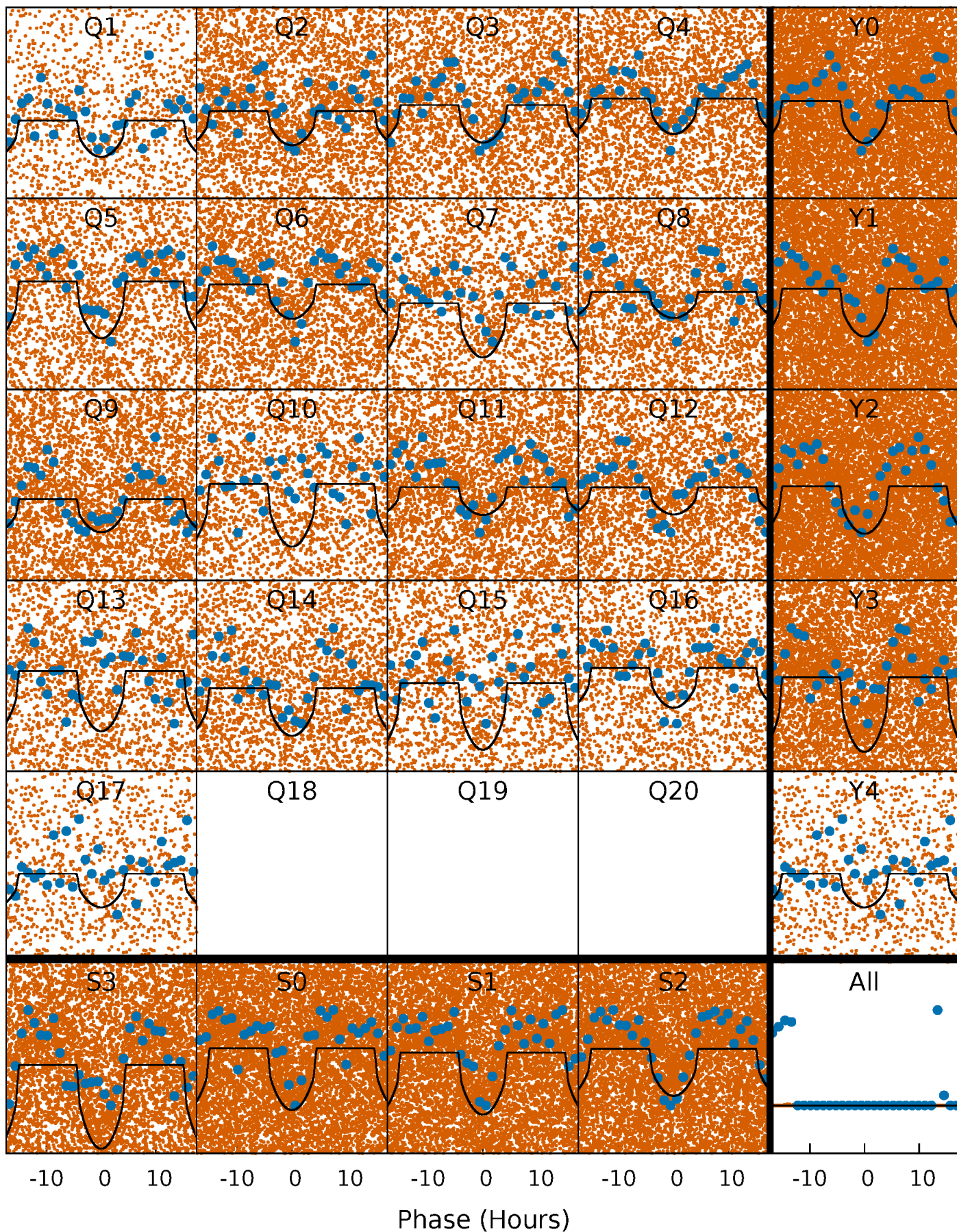
PDC Quarter-Phased Transit Curves

TCE 004458346-01 P= 0.813770 Days $T_0=132.186744$ (BKJD)



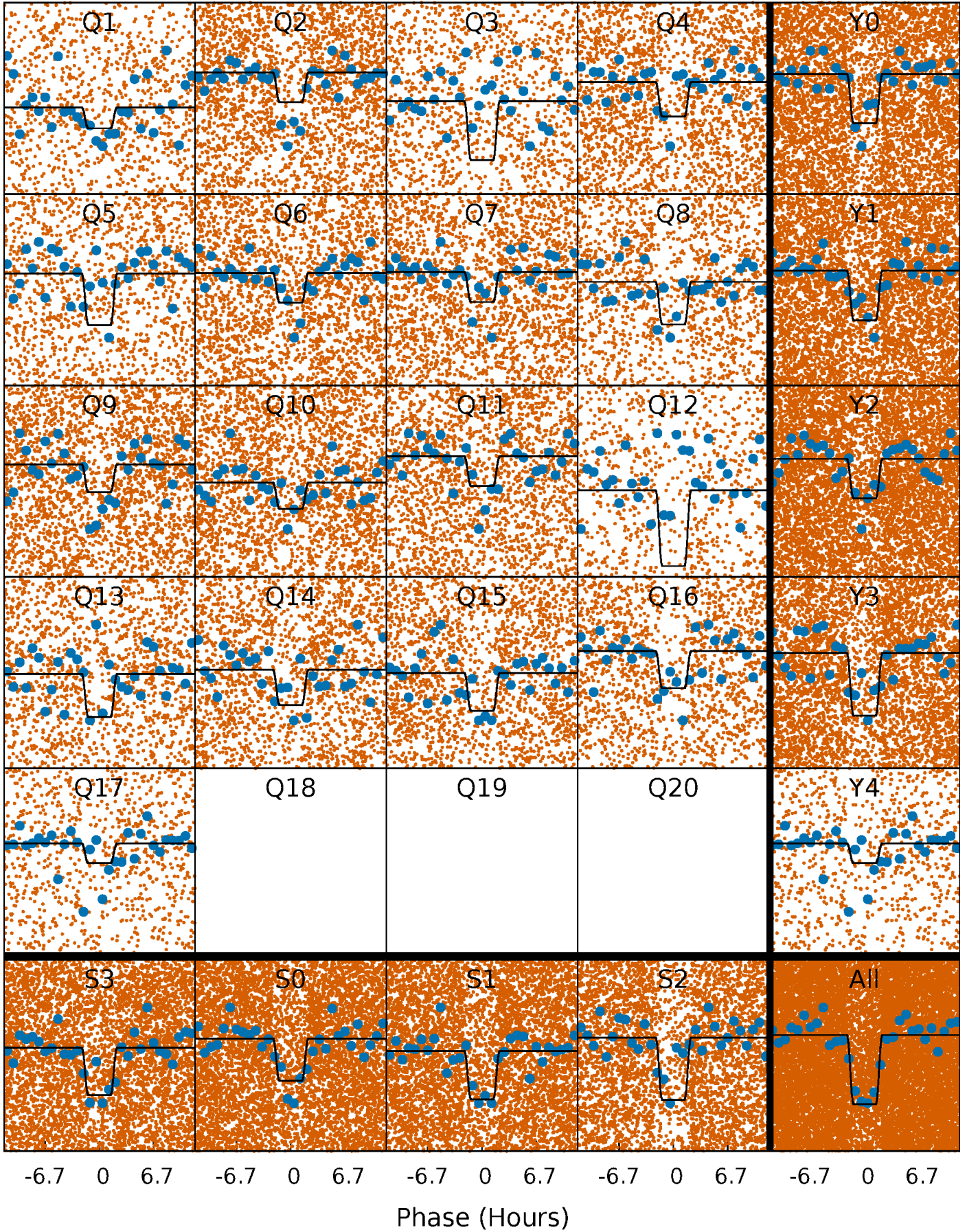
DV Quarter-Phased Transit Curves

TCE 004458346-01 P= 0.813770 Days $T_0=132.186744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

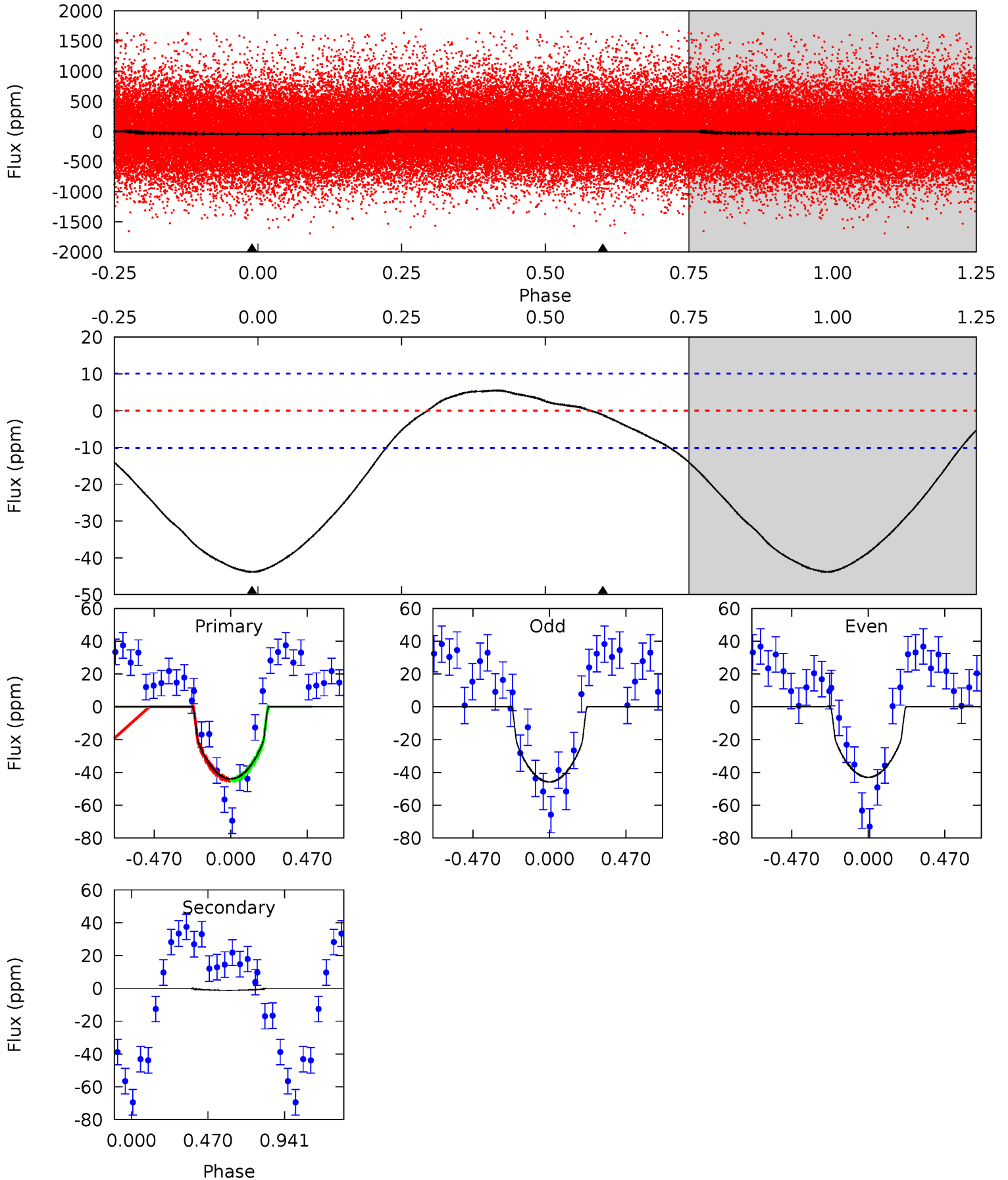
TCE 004458346-01 P= 0.813748 Days $T_0=132.210591$ (BKJD)



DV Model-Shift Uniqueness Test

004458346-01, $P = 0.813770$ Days, $E = 131.372974$ Days

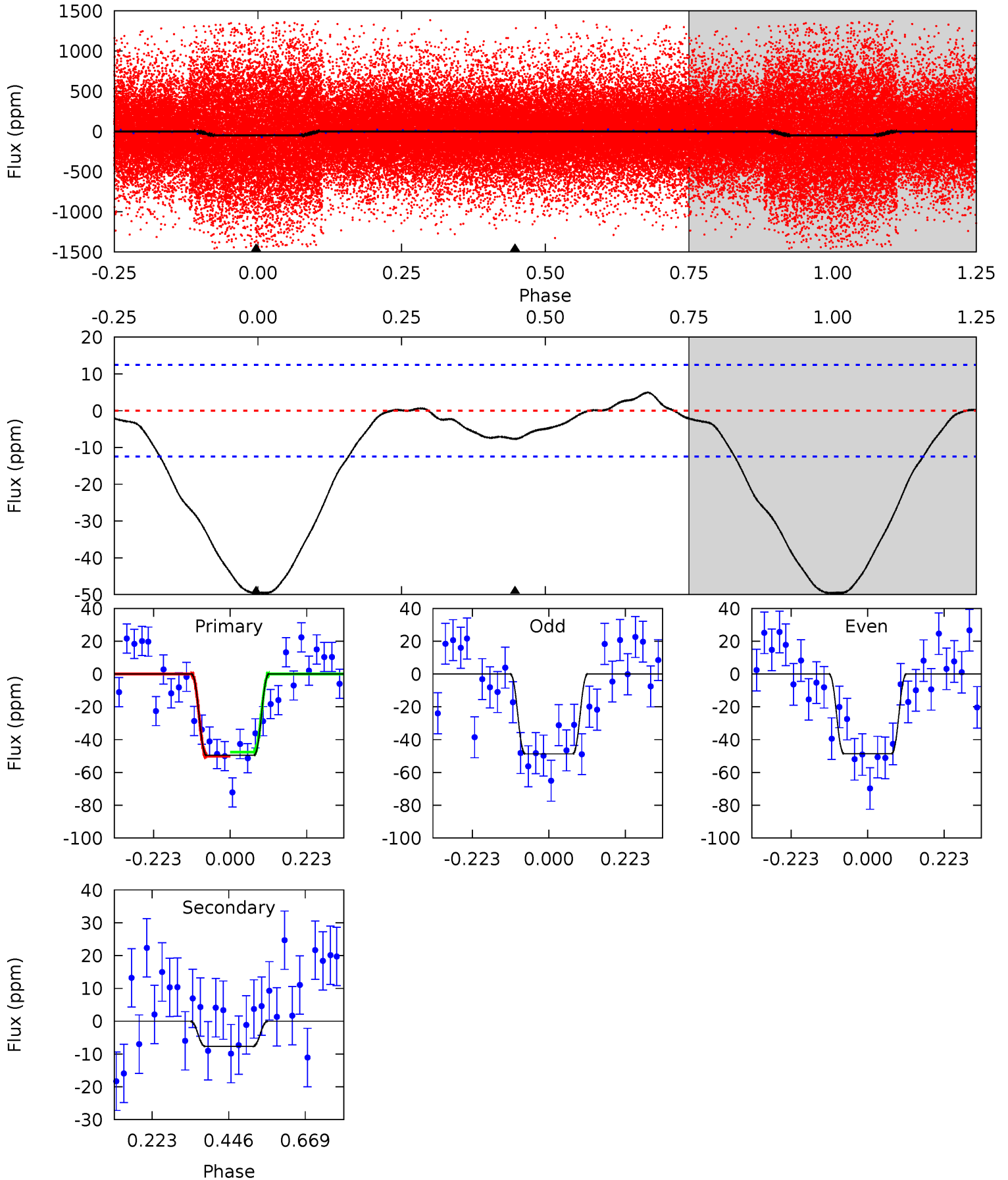
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	0.49	0	0	4.23	0.72	1.30	18.4	18.4	0.49	0.49	0.59	1.04	0.11	0.03



Alt Model-Shift Uniqueness Test

004458346-01, P = 0.813748 Days, E = 131.396843 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	2.71	0	0	4.39	1.22	0.92	17.5	17.5	2.71	2.71	0.02	1.22	0.09	0.42



Stellar Parameters For KIC 004458346

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5071^{+151}_{-151}	$4.489^{+0.095}_{-0.137}$	$0.080^{+0.250}_{-0.250}$	$0.839^{+0.104}_{-0.095}$	$0.790^{+0.092}_{-0.057}$	$1.886^{+0.719}_{-0.570}$
	+3%/-3%	+2%/-3%	+312%/-312%	+12%/-11%	+12%/-7%	+38%/-30%
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 004458346-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 2	$0.71^{+0.29}_{-0.25}$	2296^{+110}_{-105}	-1755^{+4849}_{-1170}	$0.293^{+0.932}_{-0.623}$
Alt.	-8 ± 3	$0.68^{+0.26}_{-0.28}$	2289^{+118}_{-106}	3463^{+744}_{-492}	$2.322^{+4.197}_{-1.311}$

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 $A_{obs} \gg 1.0$

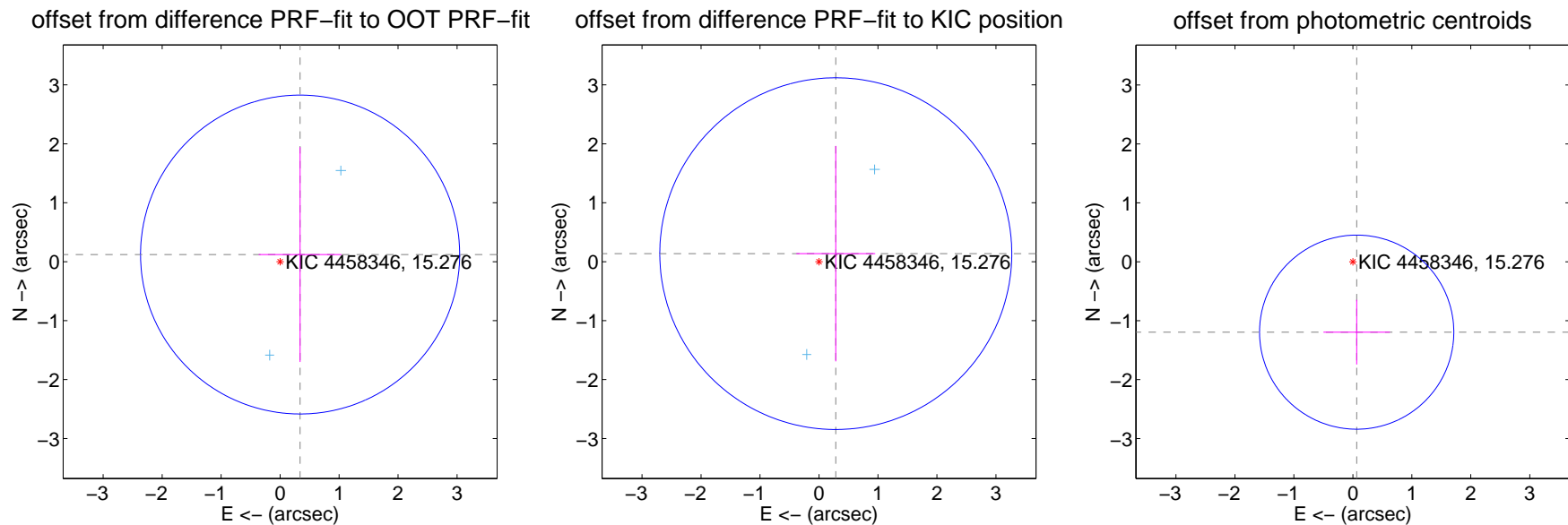
DV Centroid Data

Supplemental centroid analysis for 004458346-01. Kepler magnitude: 15.28. Transit SNR 12.62

There are 2 quarters with good PRF difference image offsets

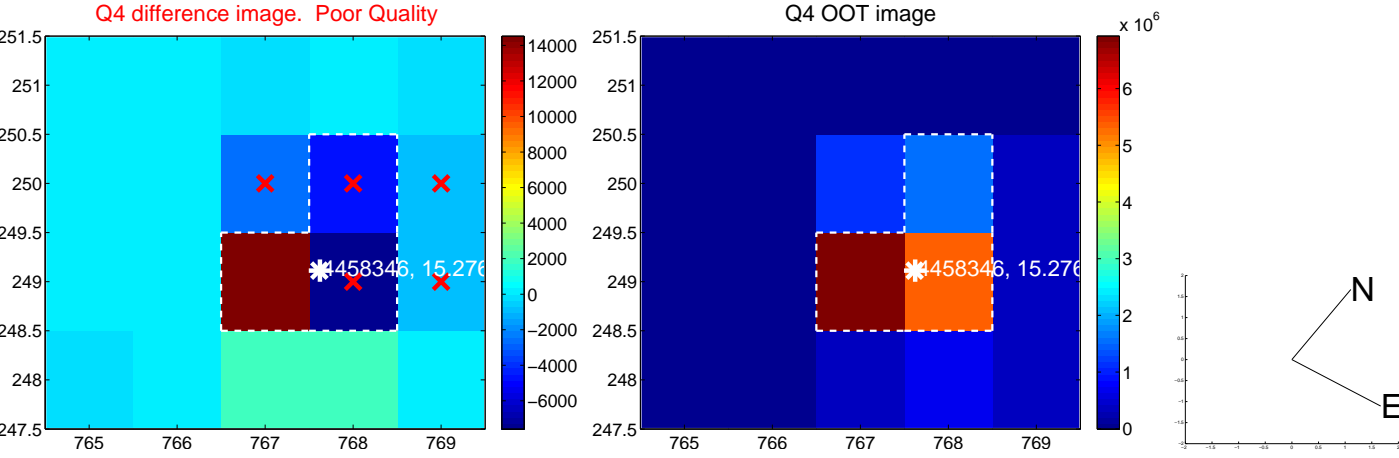
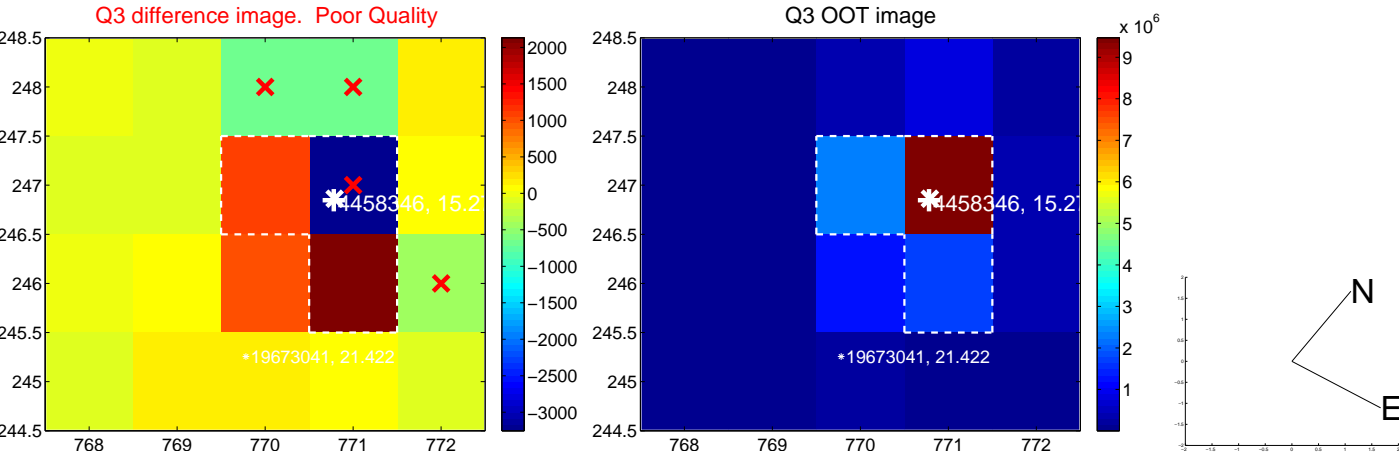
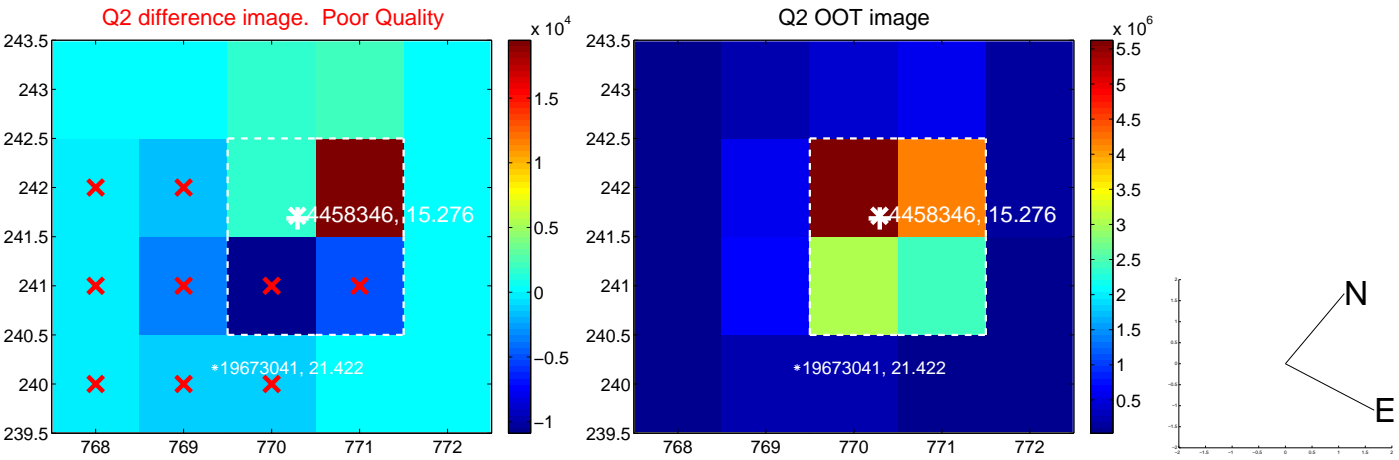
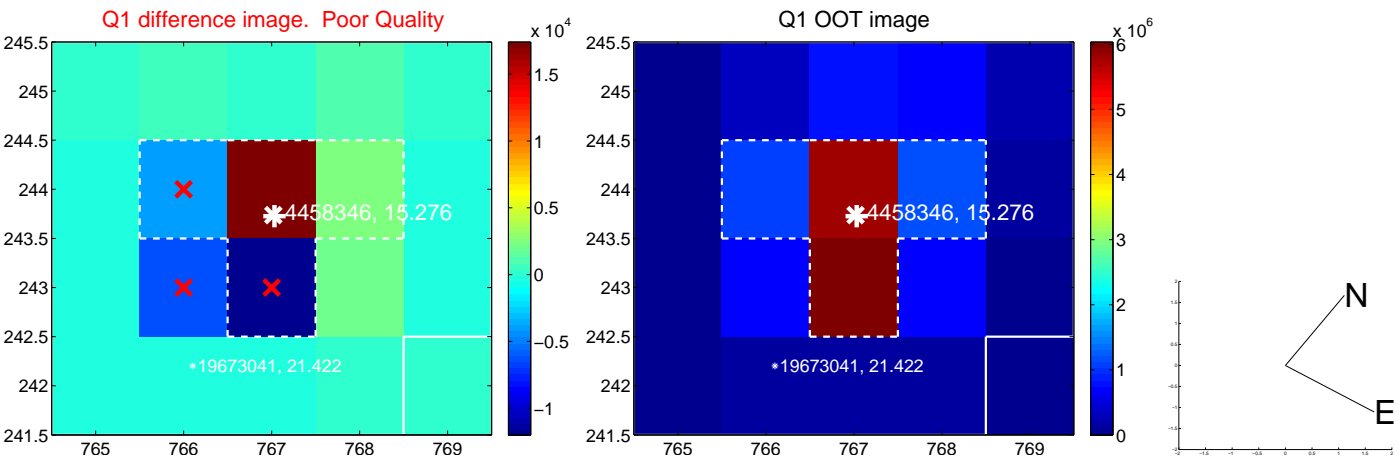
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.360 ± 0.902	0.40	-0.339 ± 0.701	0.121 ± 1.823
PRF-fit source offset from KIC position	0.316 ± 0.995	0.32	-0.285 ± 0.669	0.137 ± 1.828
photometric centroid source offset	1.20 ± 0.55	2.18	-0.06 ± 0.56	-1.19 ± 0.55

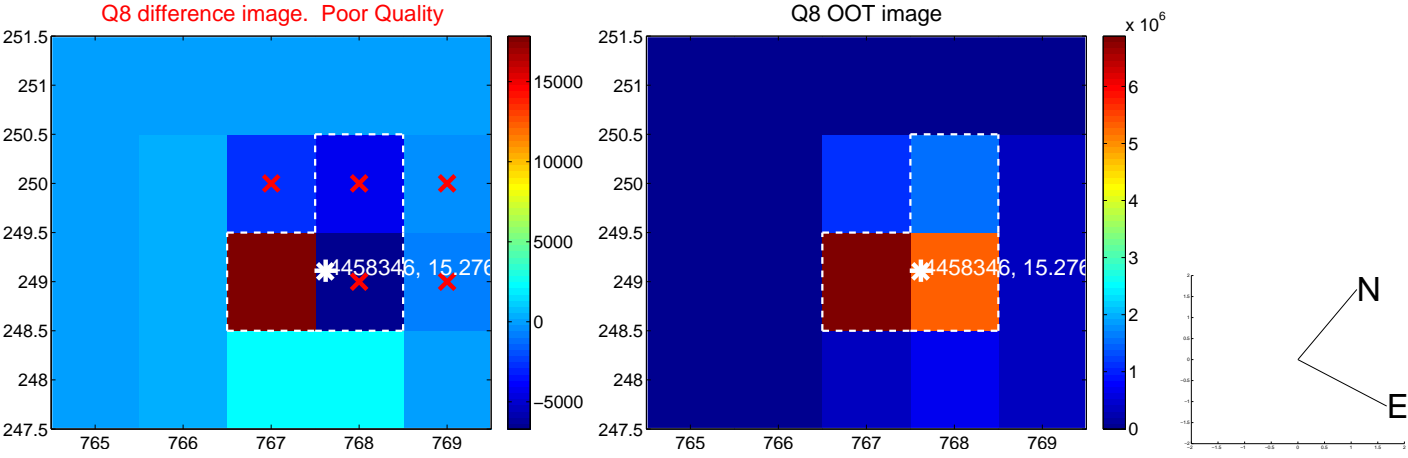
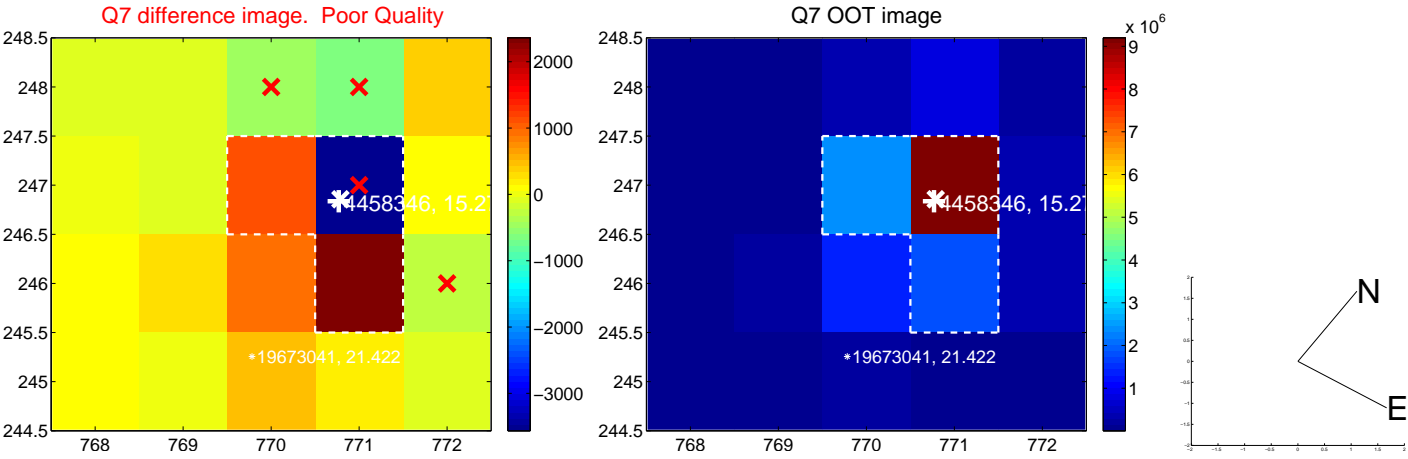
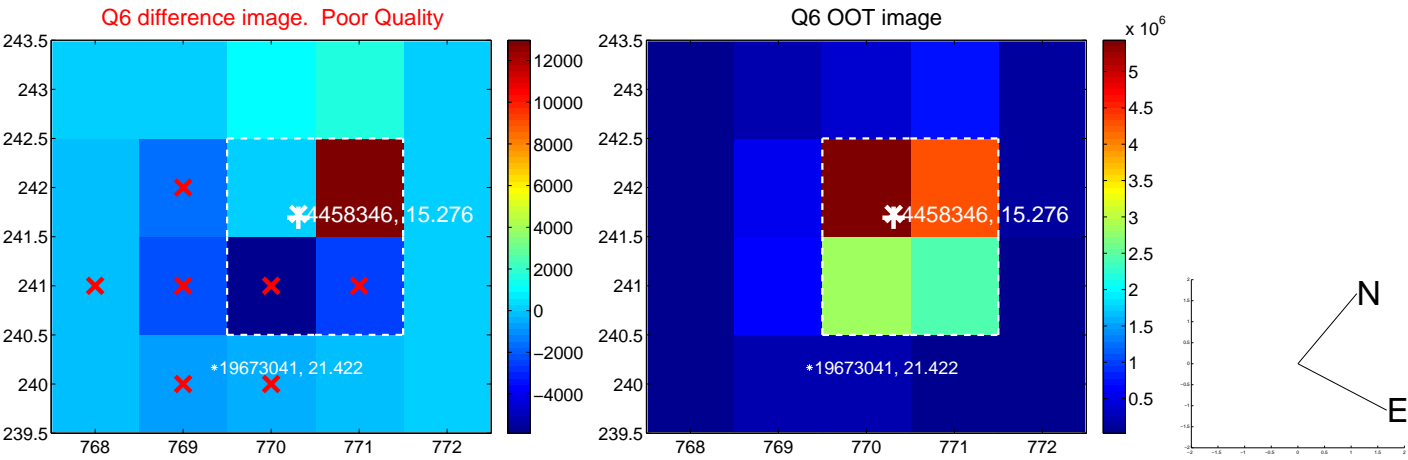
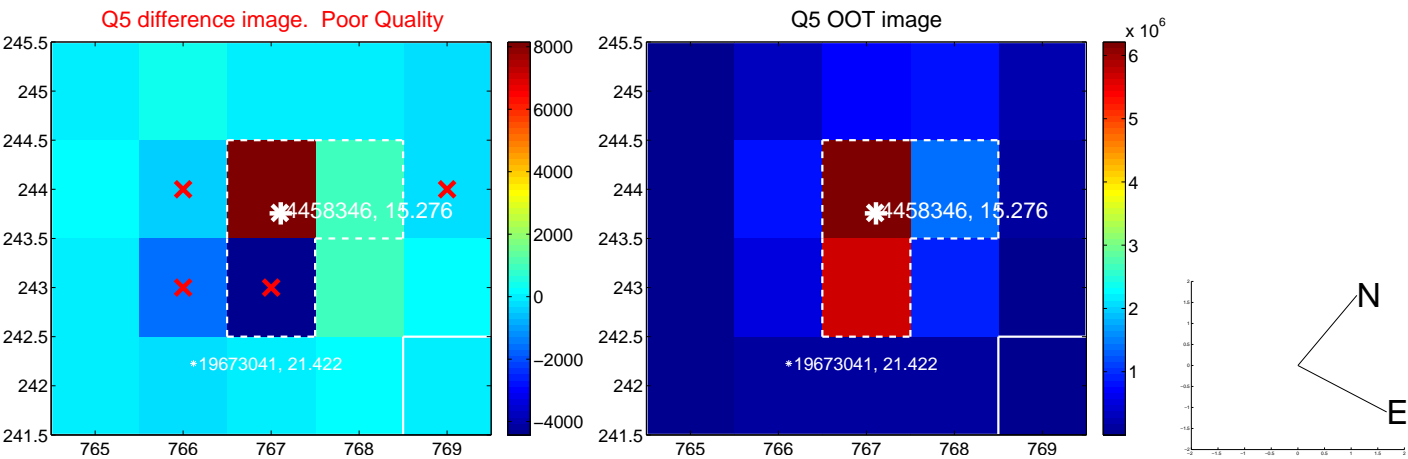


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

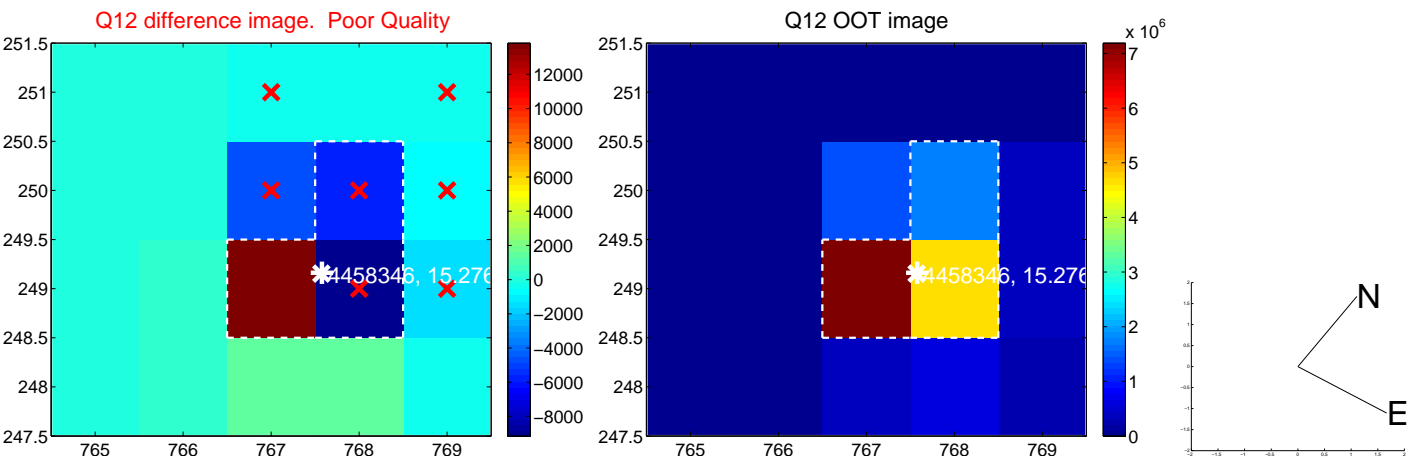
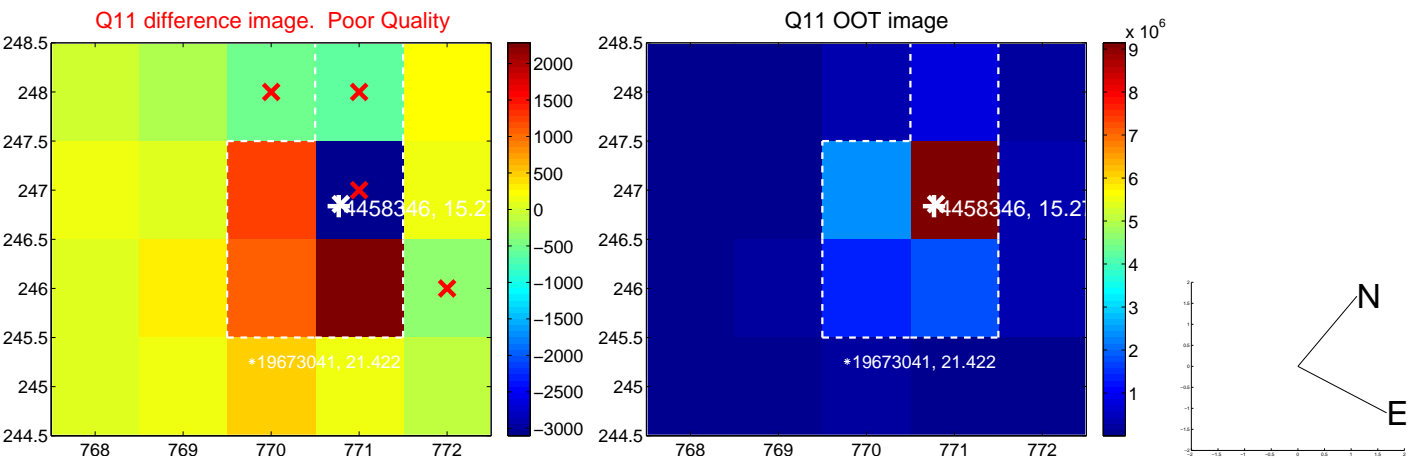
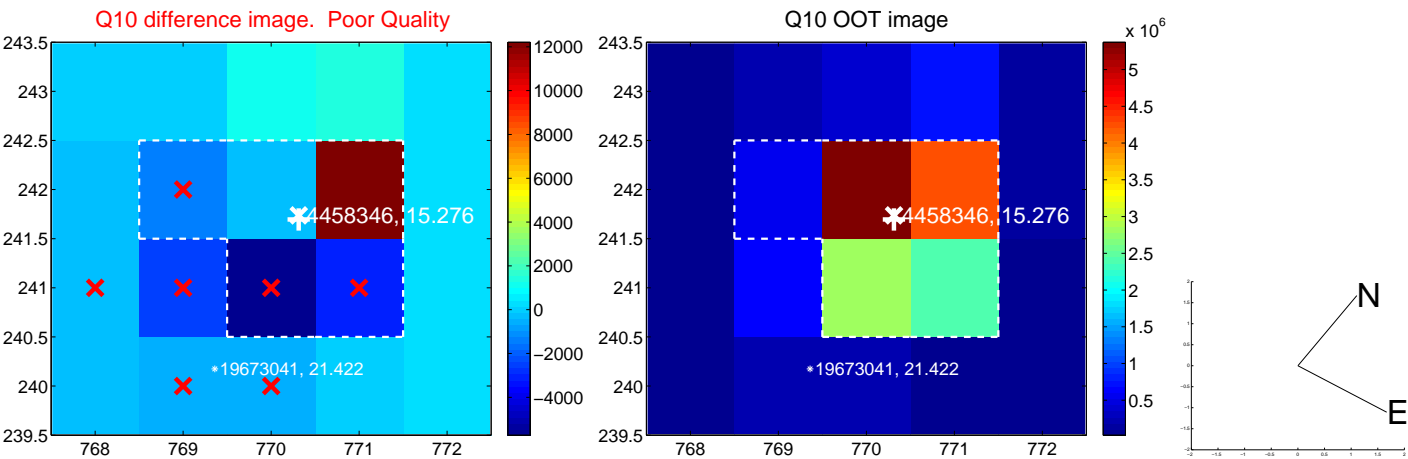
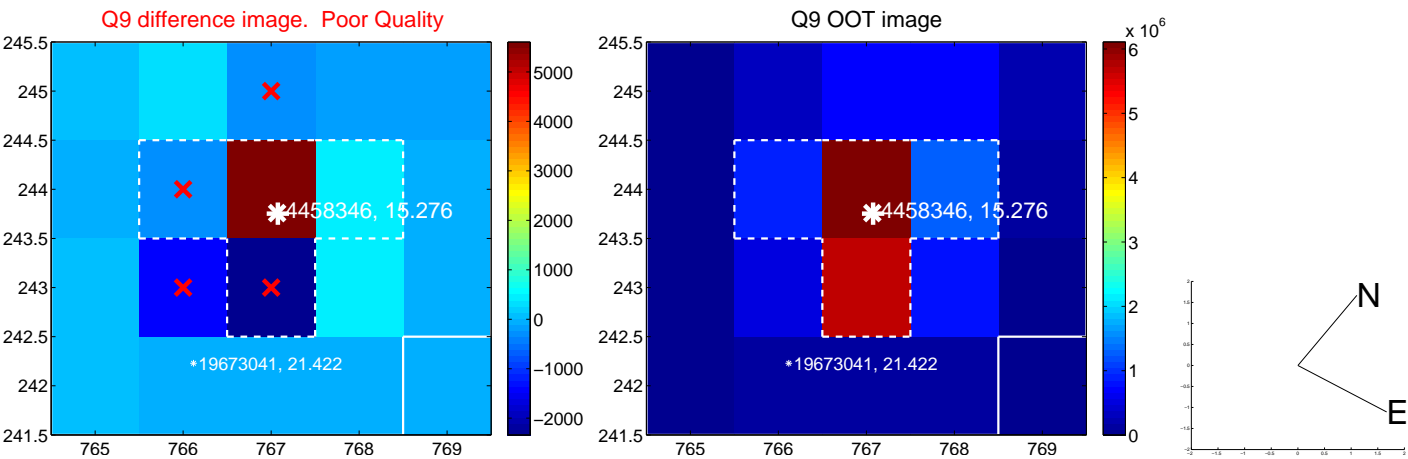
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



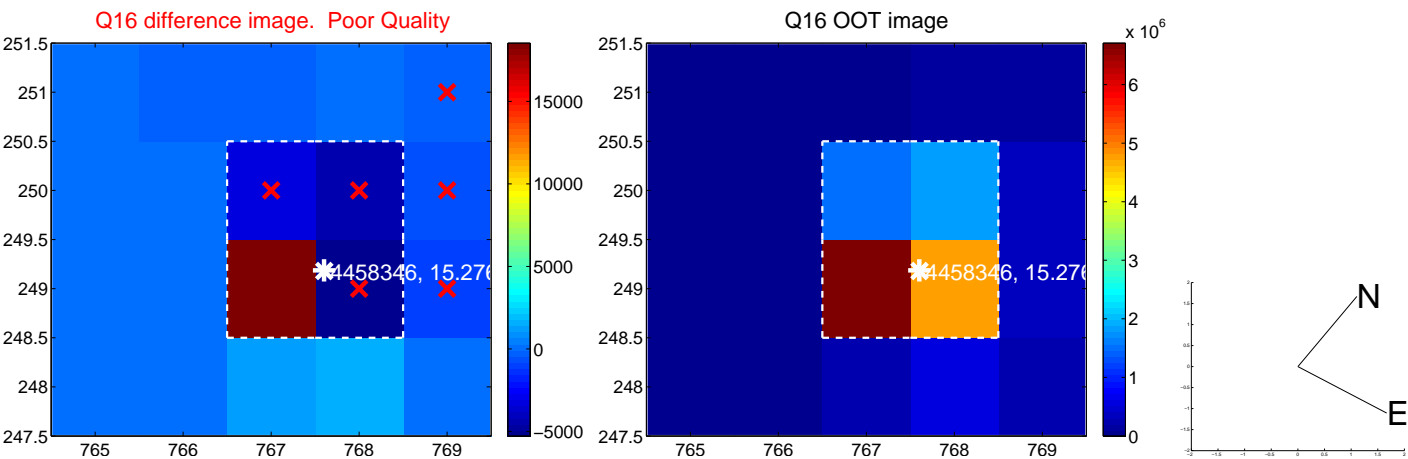
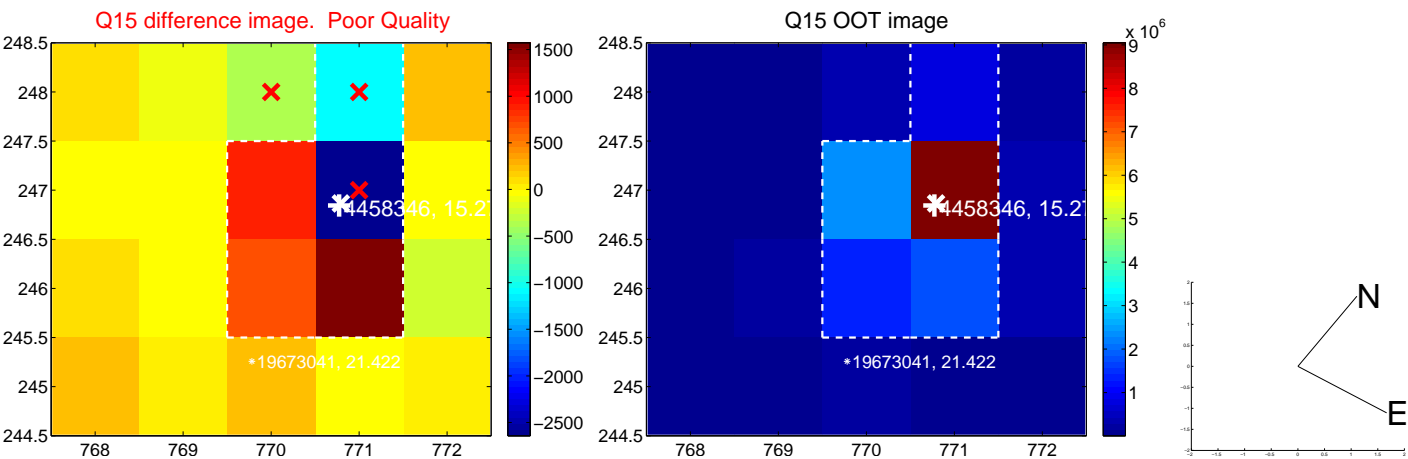
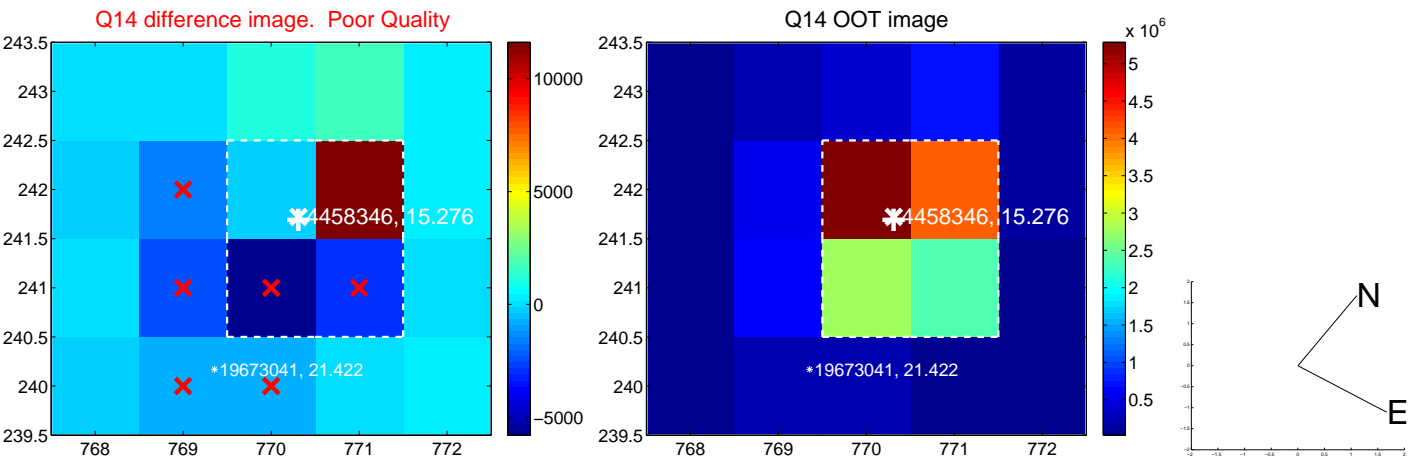
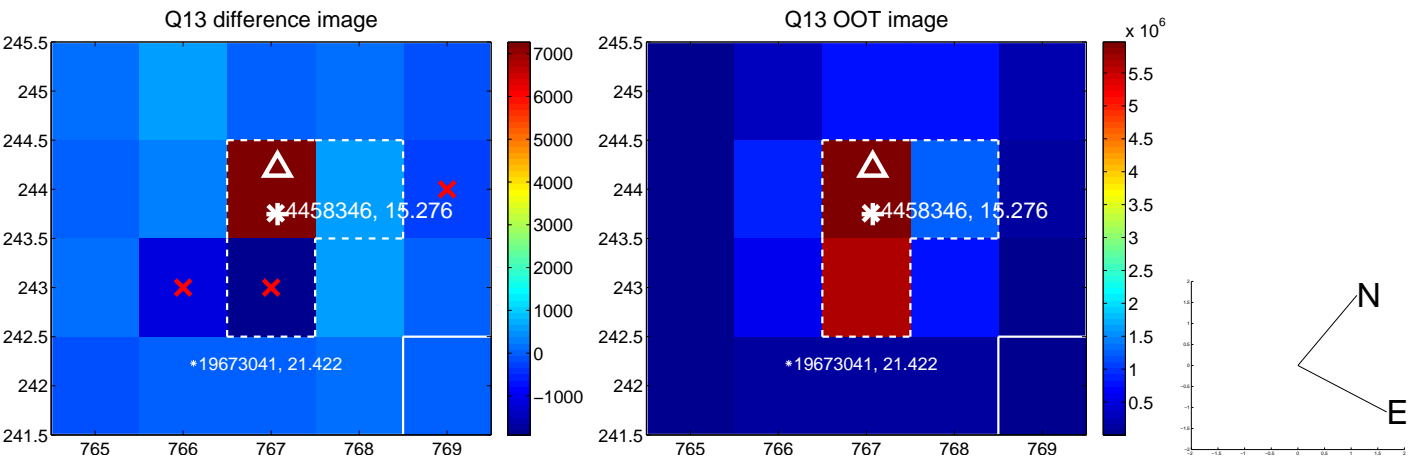
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



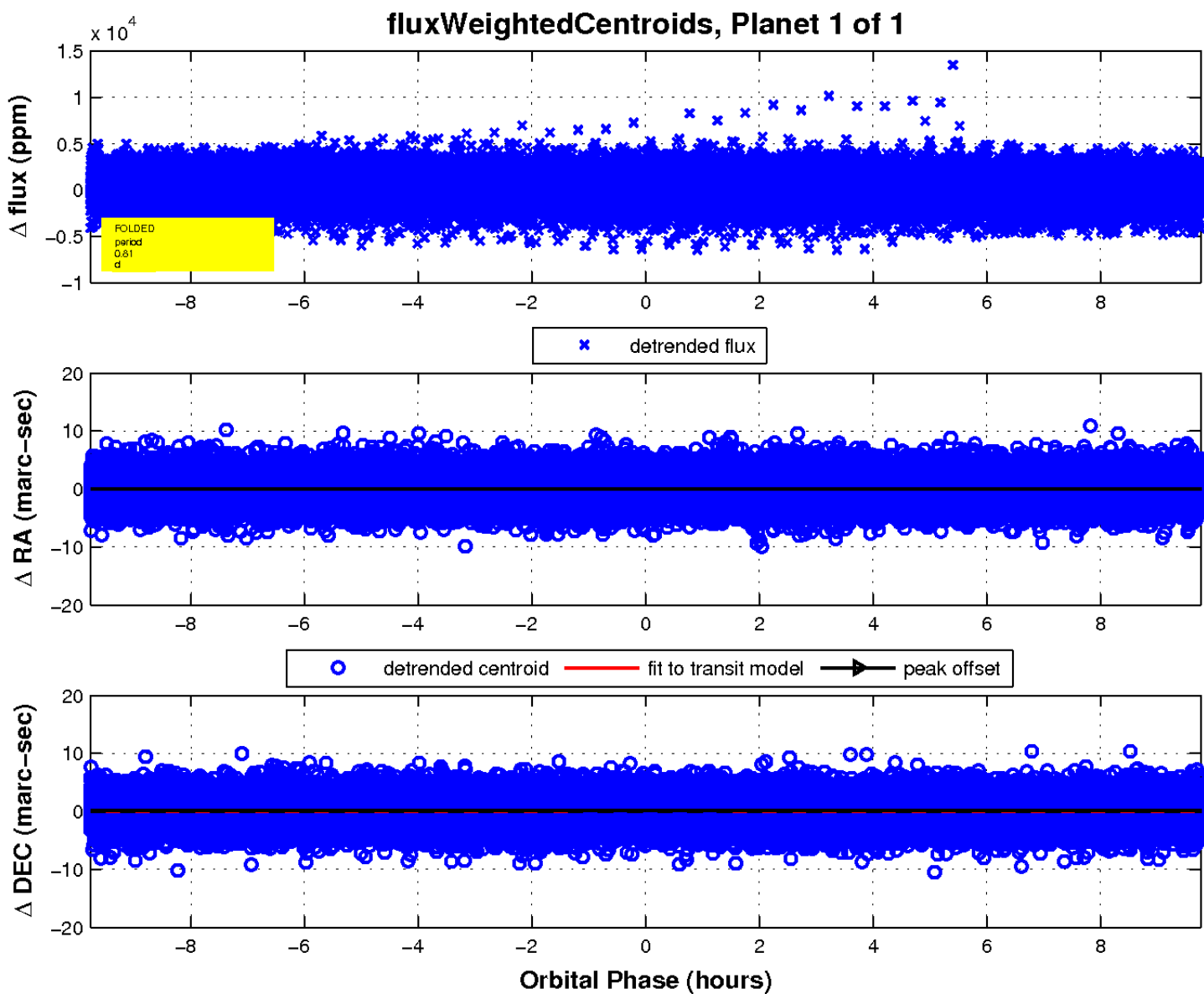
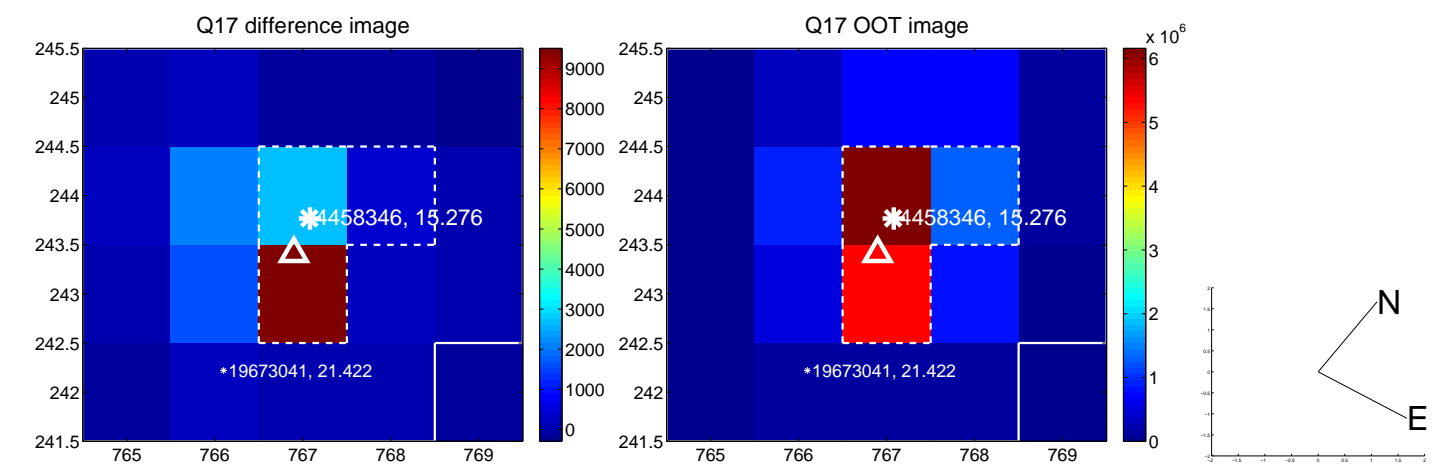
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UKIRT Image

Declination

