

KIC 005040003

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})
005040003-01	OBS	No	5.239758	133.698203	37.1	4.817	7.6	7.7	3.48	5198	2.51	1767.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005040003-01	OBS	FP	0.04	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.

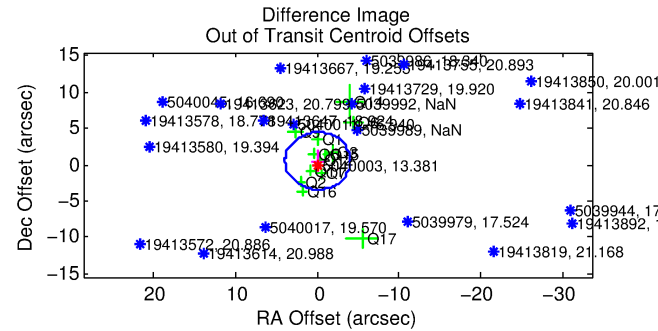
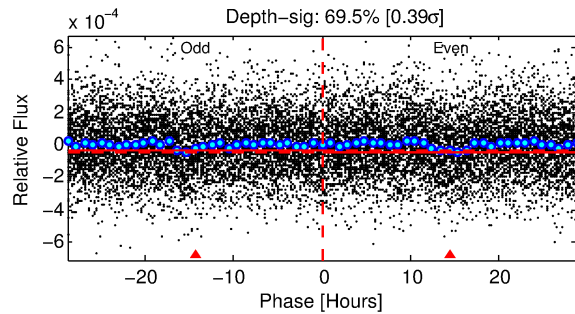
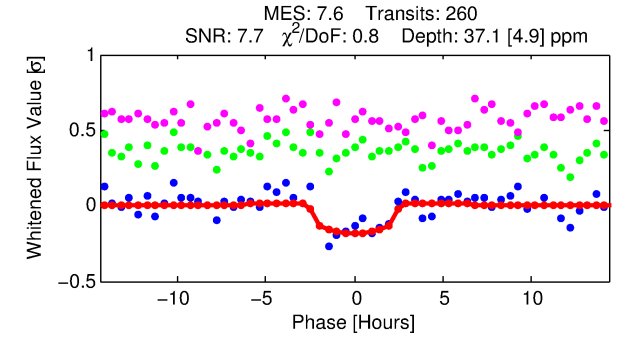
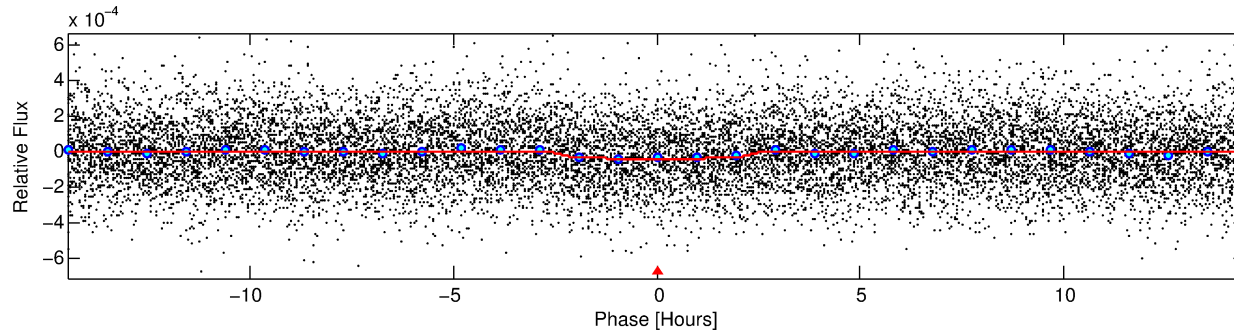
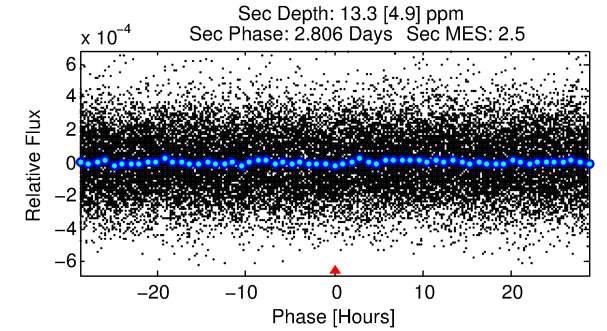
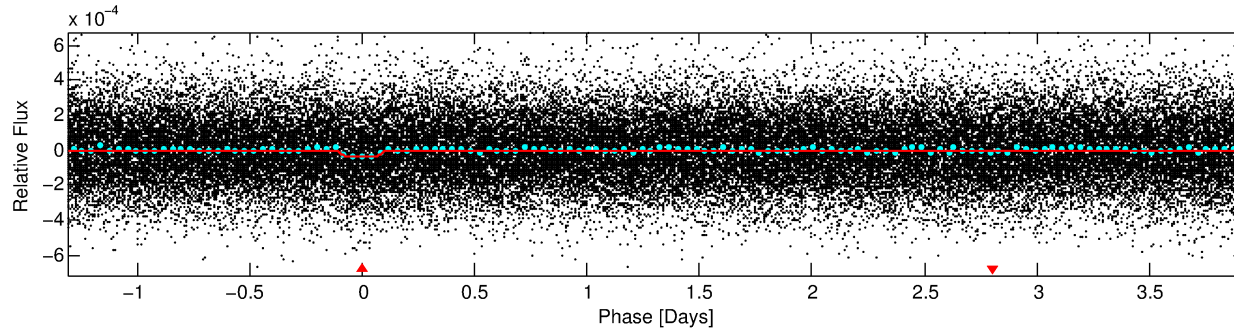
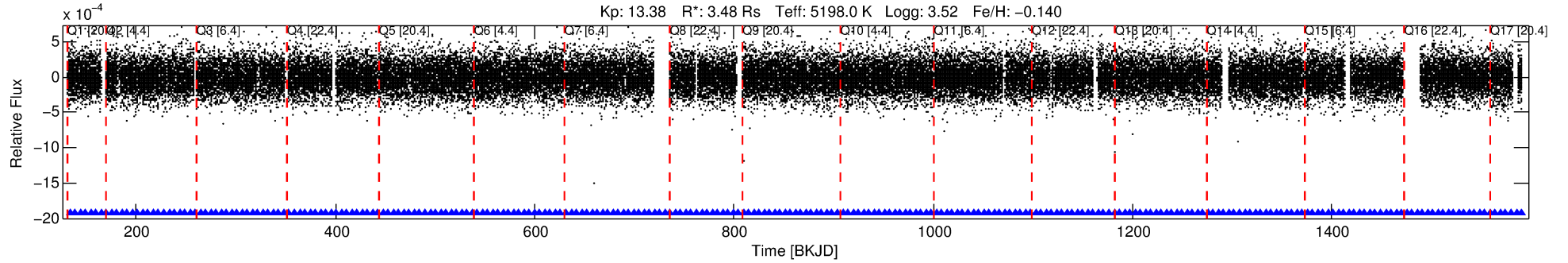
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005040003-01

No Significant Match Found

DV One-Page Summary

KIC: 5040003 Candidate: 1 of 1 Period: 5.240 d



DV Fit Results:

Period = 5.23976 [0.00006] d
Epoch = 133.6982 [0.0090] BKJD
Rp/R* = 0.0066 [0.0042]
a/R* = 4.10 [10.51]
b = 0.88 [0.68]
Seff = 1767.91 [2549.30]
Teq = 1653 [596] K
Rp = 2.51 [2.33] Re
a = 0.0669 [0.0546] AU
Ag = 5.19 [10.13] [0.41σ]
Teffp = 3858 [1285] K [1.56σ]

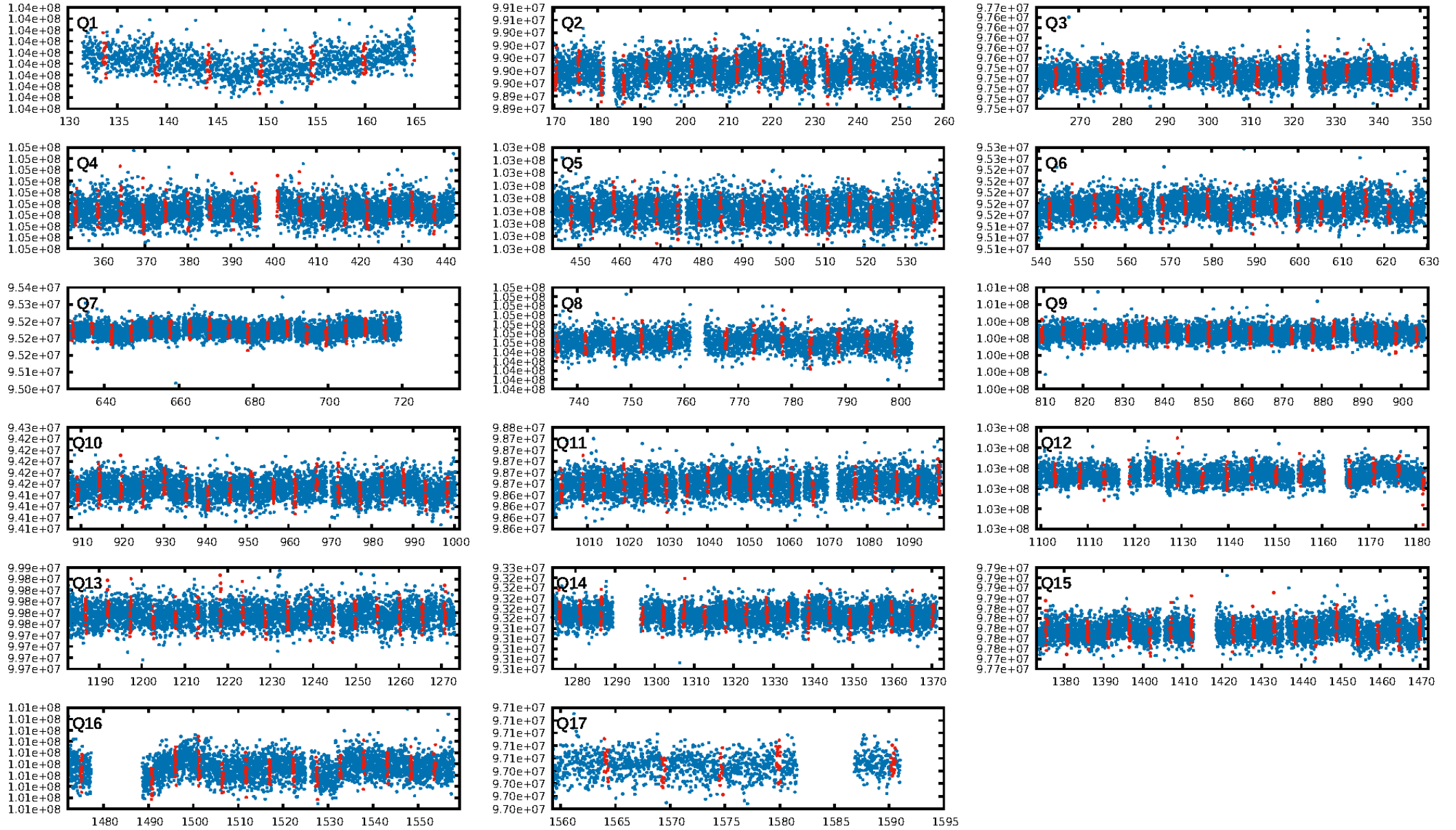
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.49e-14
RollingBand-fgt: 1.00 [249/249]
GhostDiagnostic-chr: -2.778
Centroid-sig: 17.4%
Centroid-so: 1.526 arcsec [1.04σ]
OotOffset-rm: 0.513 arcsec [0.39σ]
KicOffset-rm: 0.651 arcsec [0.50σ]
OotOffset-st: 3/4/2/4 [13]
KicOffset-st: 3/4/2/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

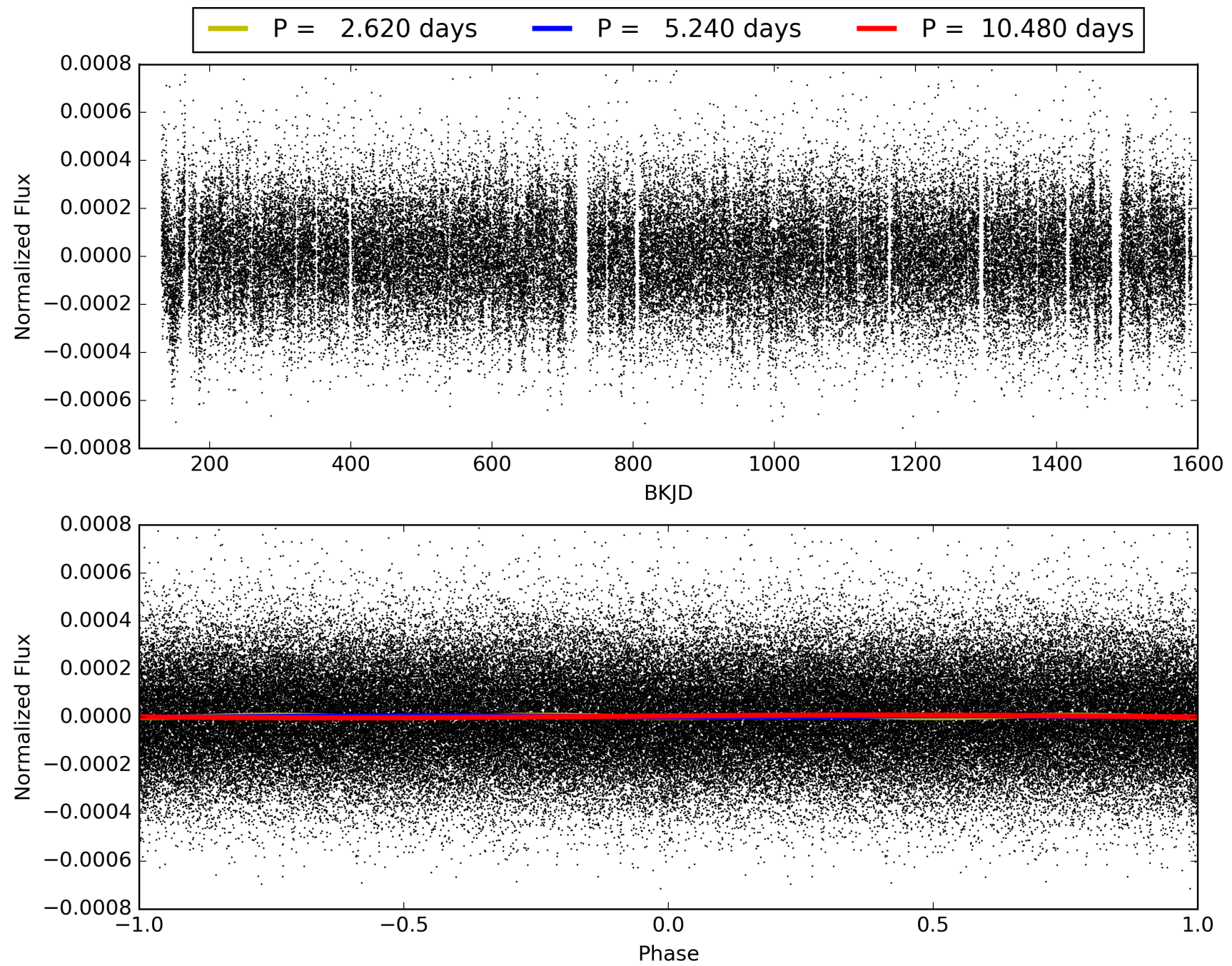
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:17:28 Z

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

TCE 005040003-01, PDC Light Curves

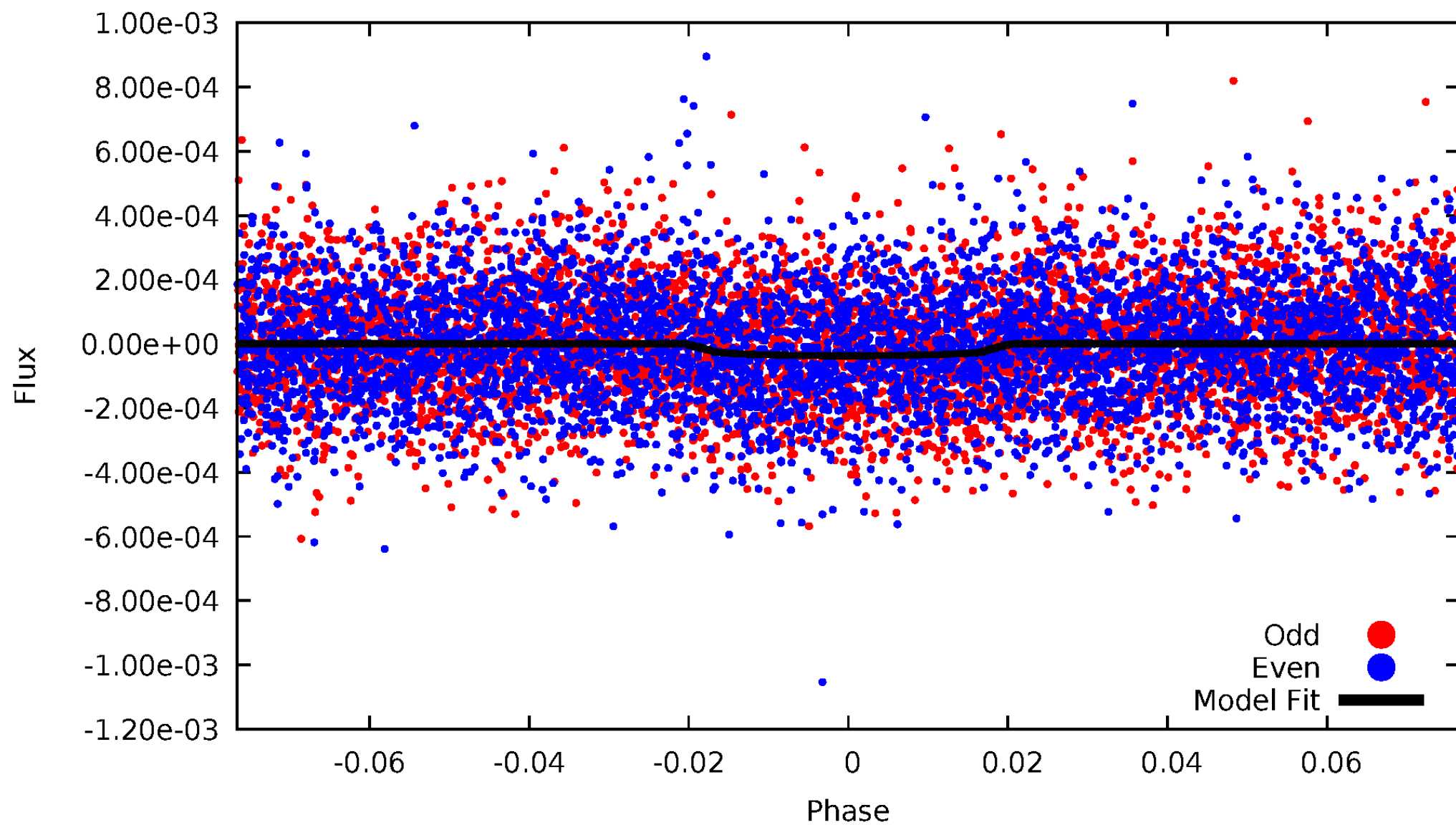


TCE 005040003-01



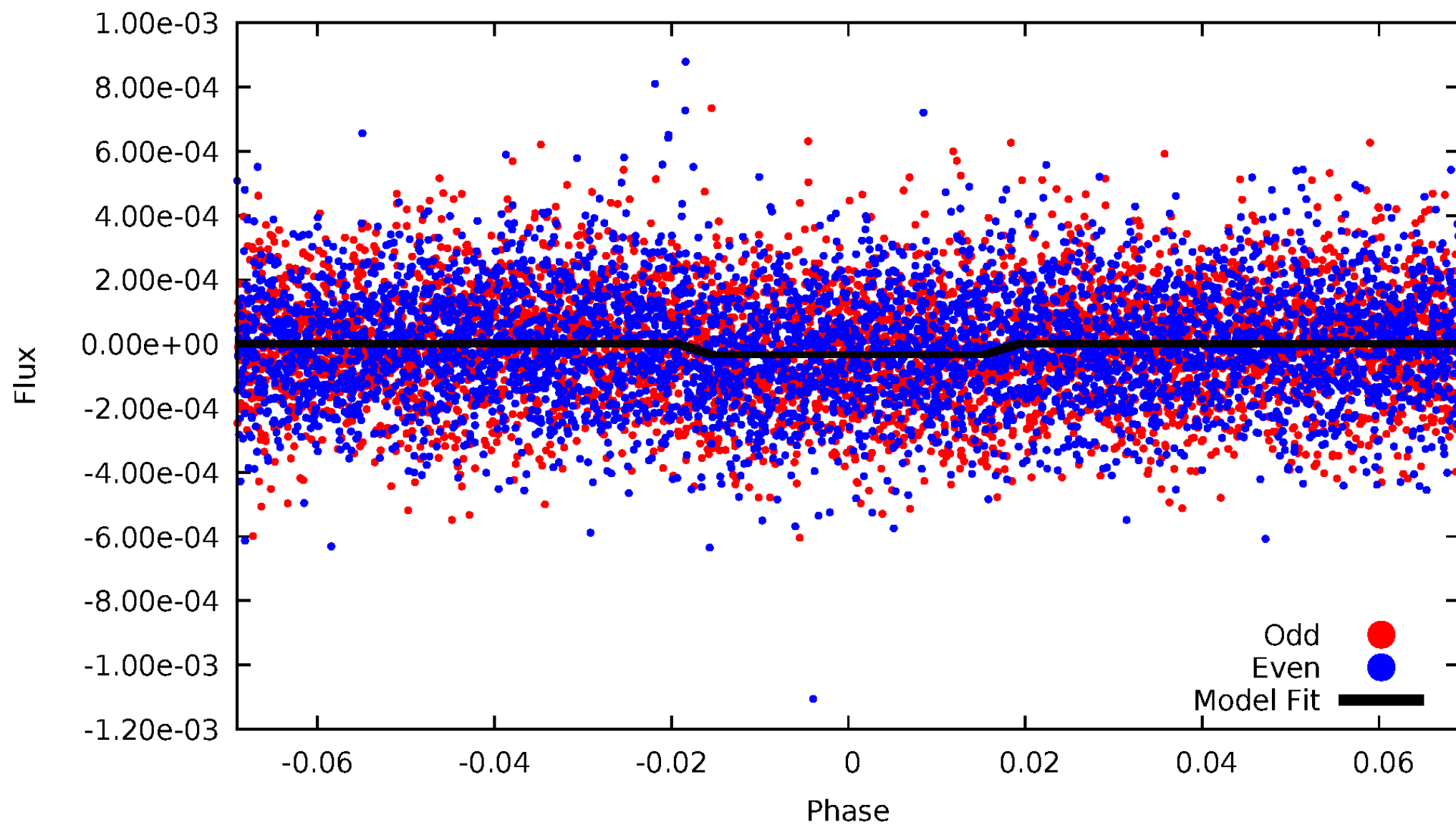
DV Odd/Even

TCE 005040003-01



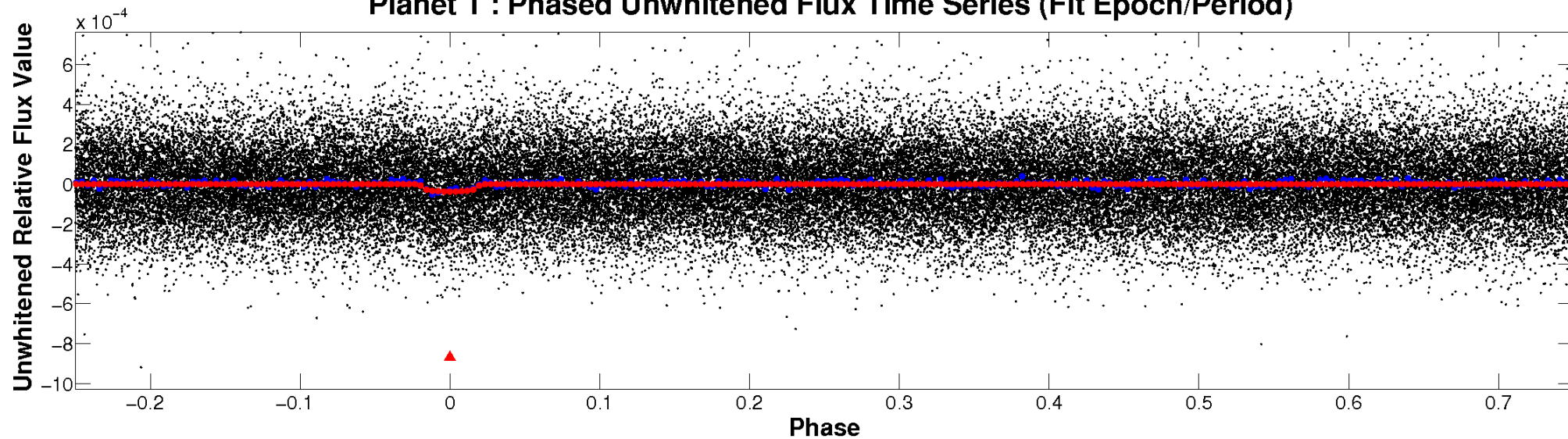
ALT Odd/Even

TCE 005040003-01

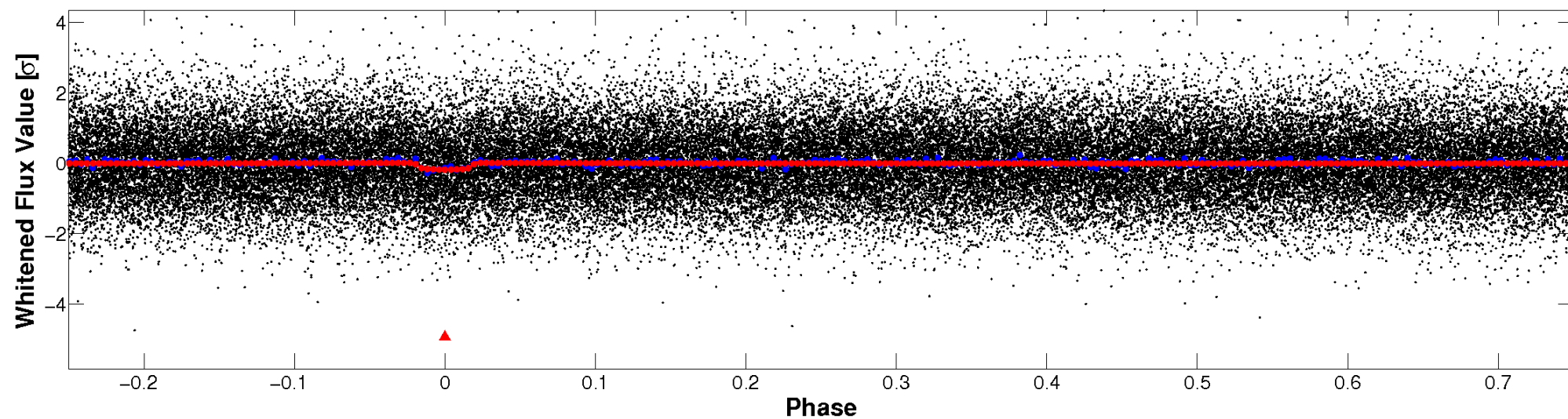


Non-Whitened Vs. Whitened Light Curve

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

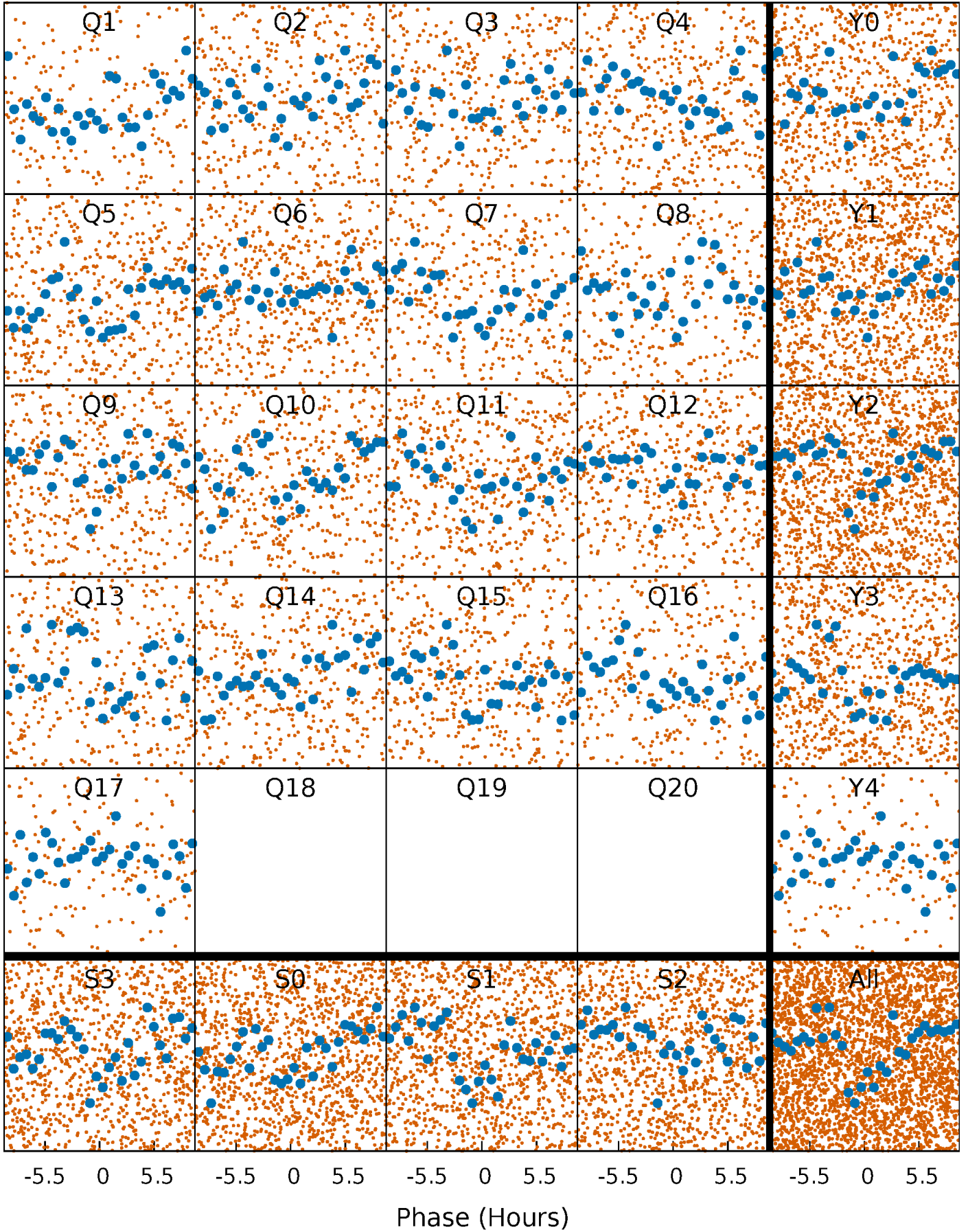


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



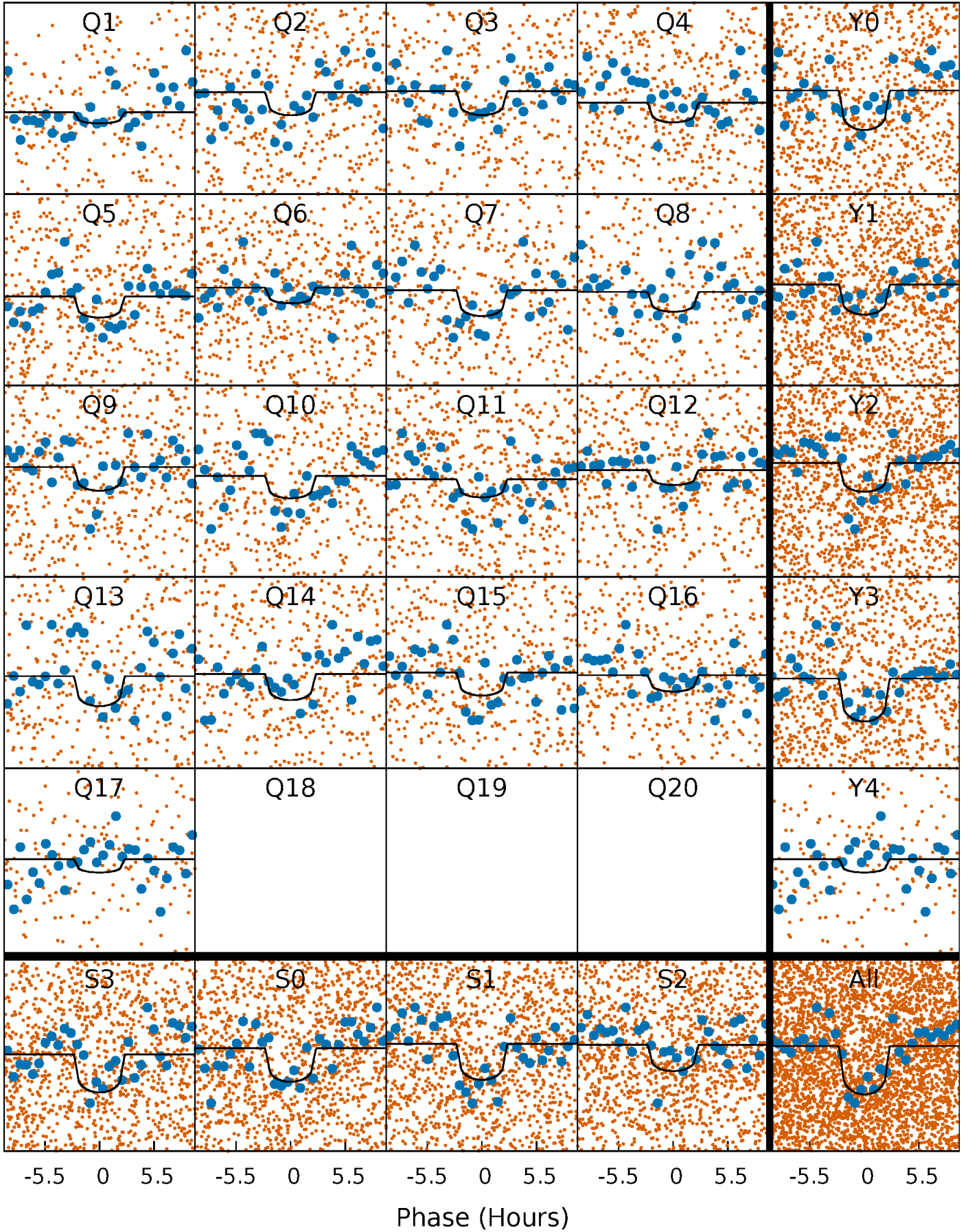
PDC Quarter-Phased Transit Curves

TCE 005040003-01 P= 5.239758 Days $T_0=133.698203$ (BKJD)



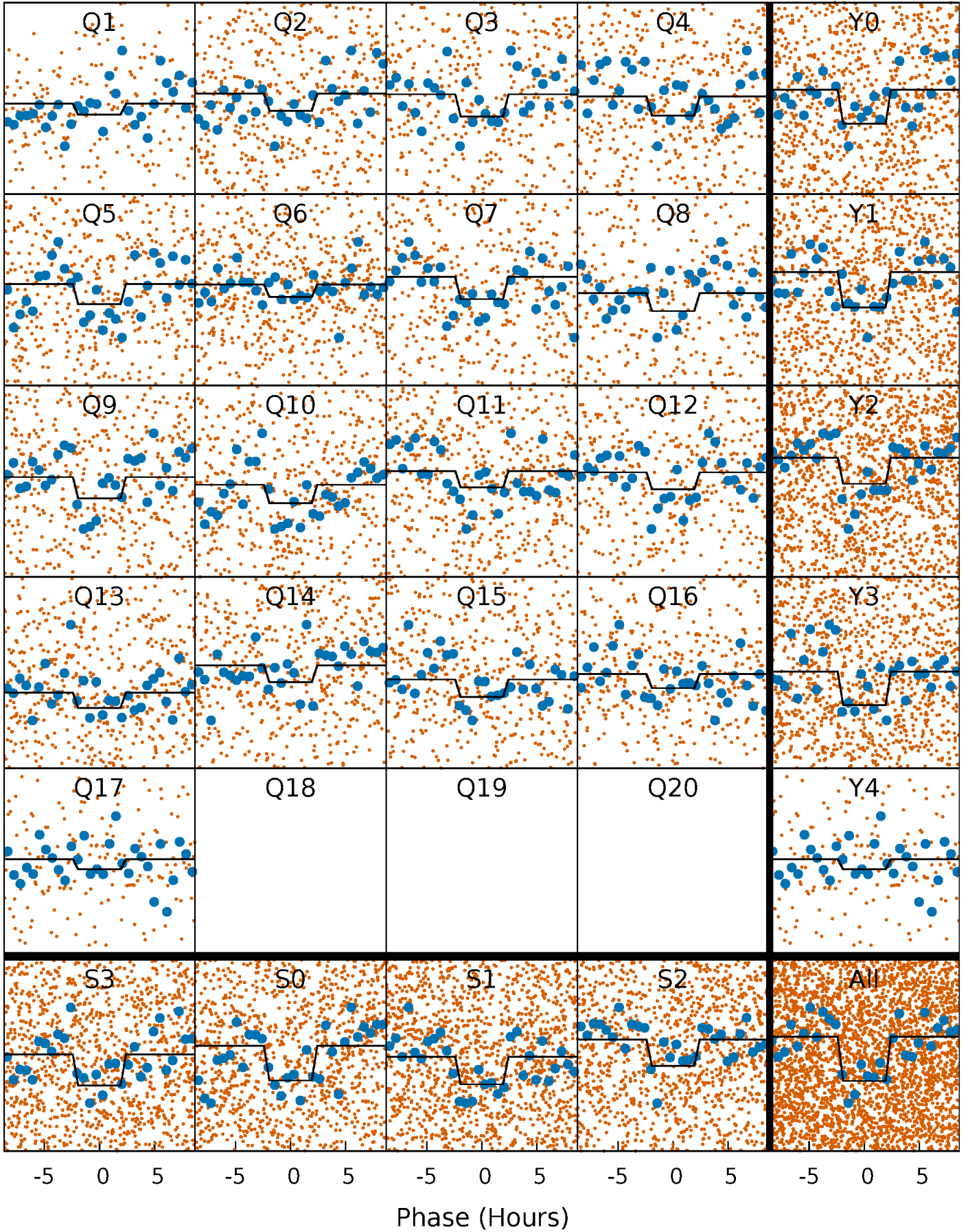
DV Quarter-Phased Transit Curves

TCE 005040003-01 P= 5.239758 Days $T_0=133.698203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

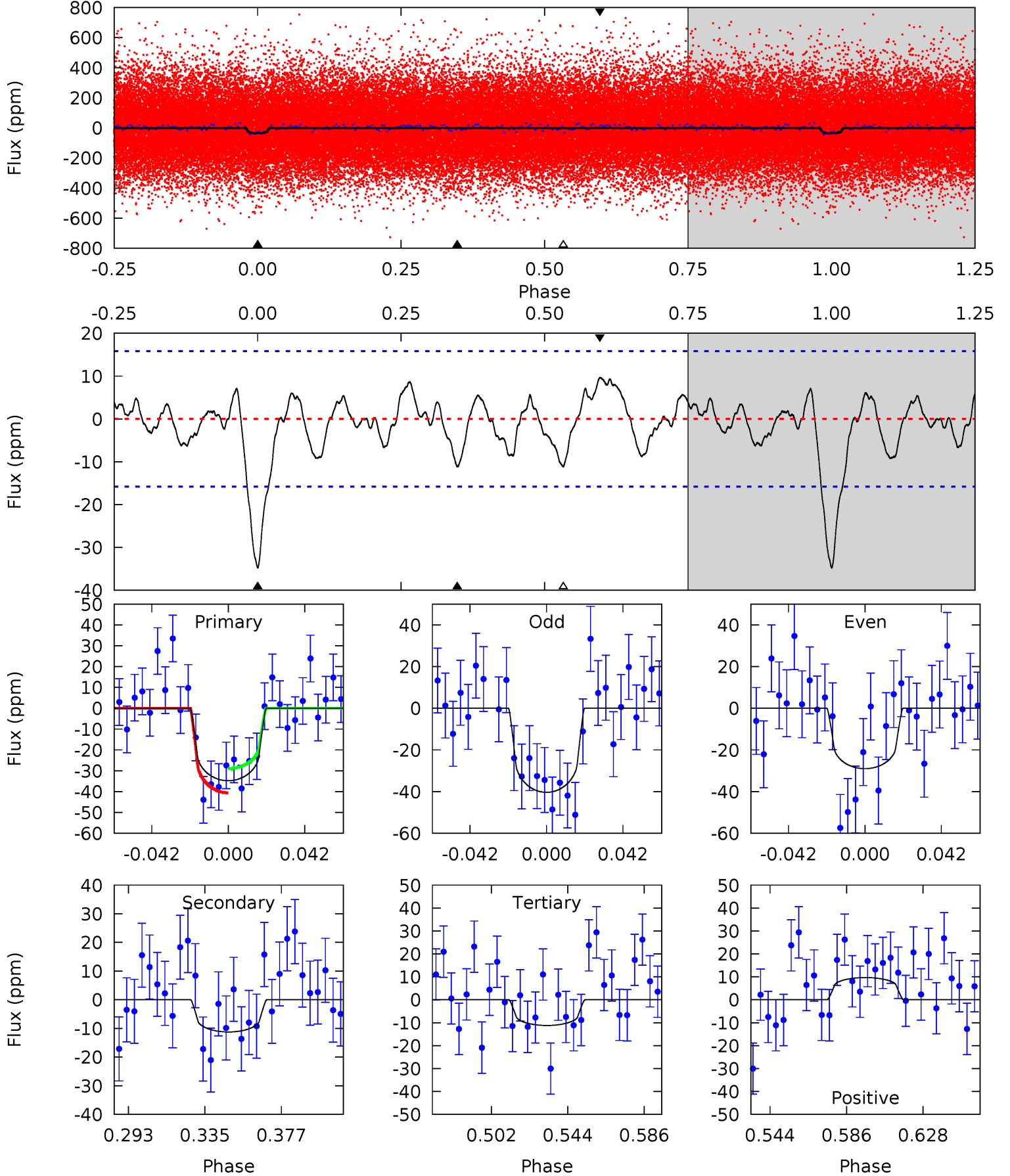
TCE 005040003-01 P= 5.239814 Days $T_0=133.690765$ (BKJD)



DV Model-Shift Uniqueness Test

005040003-01, P = 5.239758 Days, E = 128.458445 Days

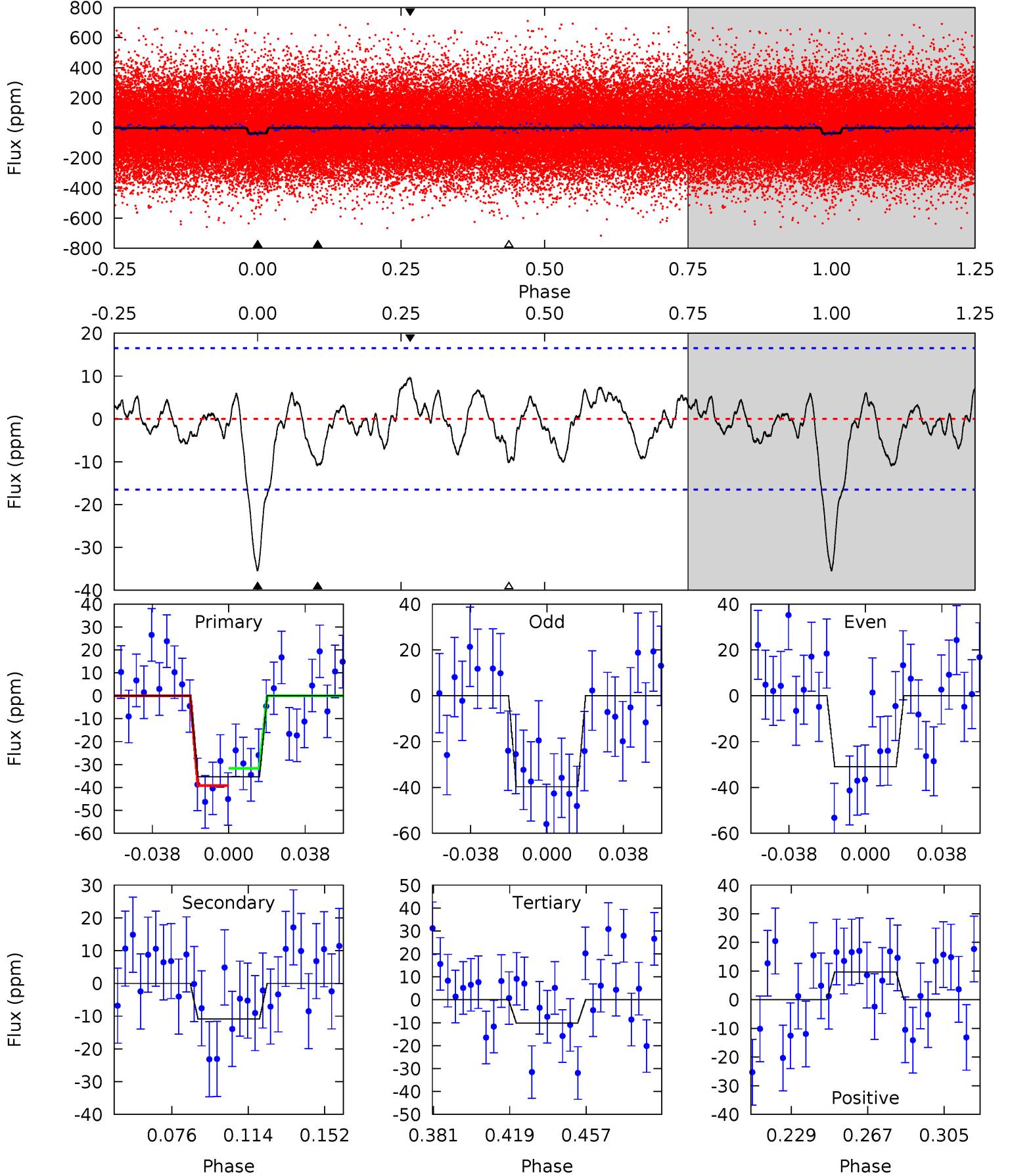
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	3.37	3.36	2.90	4.74	2.04	1.37	7.06	7.52	0.01	0.47	1.70	0.99	0.22	1.75



Alt Model-Shift Uniqueness Test

005040003-01, P = 5.239814 Days, E = 128.450951 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.13	2.92	2.79	4.76	2.07	1.22	7.29	7.42	0.21	0.34	1.25	1.05	0.21	1.09



Stellar Parameters For KIC 005040003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+182}_{-164}	$3.518^{+0.888}_{-0.222}$	$-0.140^{+0.300}_{-0.300}$	$3.479^{+1.004}_{-2.343}$	$1.455^{+0.223}_{-0.521}$	$0.049^{+1.053}_{-0.026}$
	+4%/-3%	+25%/-6%	+214%/-214%	+29%/-67%	+15%/-36%	+2164%/-53%
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 005040003-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11 ± 3	$2.21^{+1.78}_{-1.27}$	2266^{+240}_{-420}	3848^{+1519}_{-664}	$5.350^{+25.303}_{-3.836}$
Alt.	-11 ± 3	$2.06^{+1.78}_{-1.30}$	2248^{+253}_{-438}	4006^{+1520}_{-764}	$6.379^{+38.459}_{-4.696}$

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

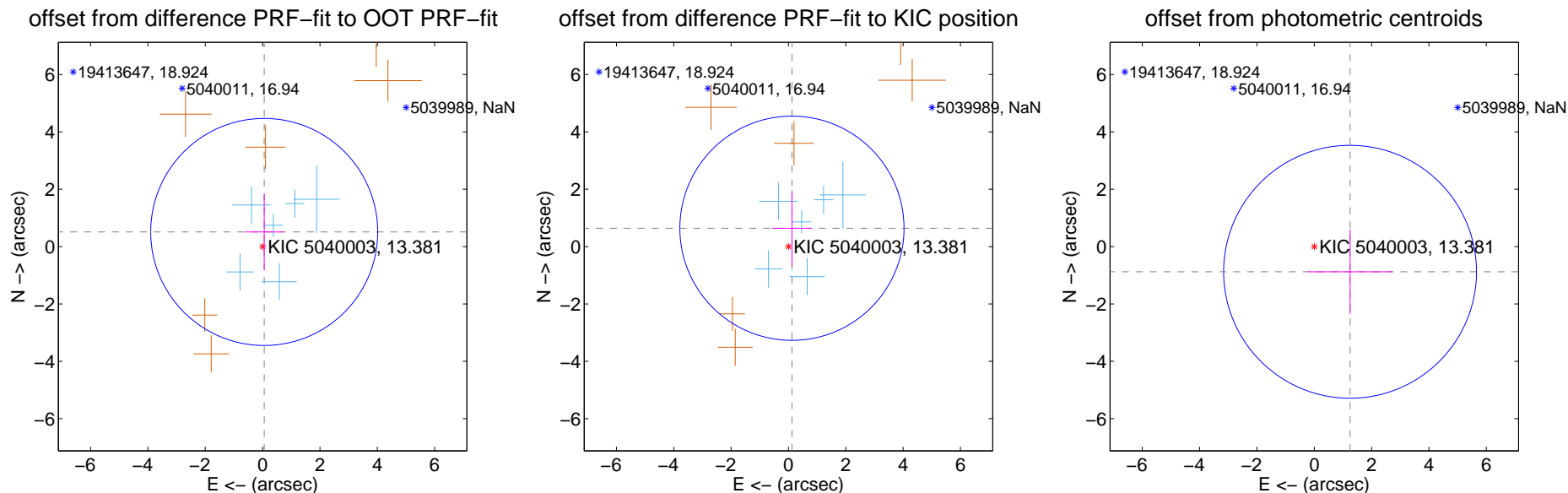
DV Centroid Data

Supplemental centroid analysis for 005040003-01. Kepler magnitude: 13.38. Transit SNR 7.72

There are 6 quarters with good PRF difference image offsets

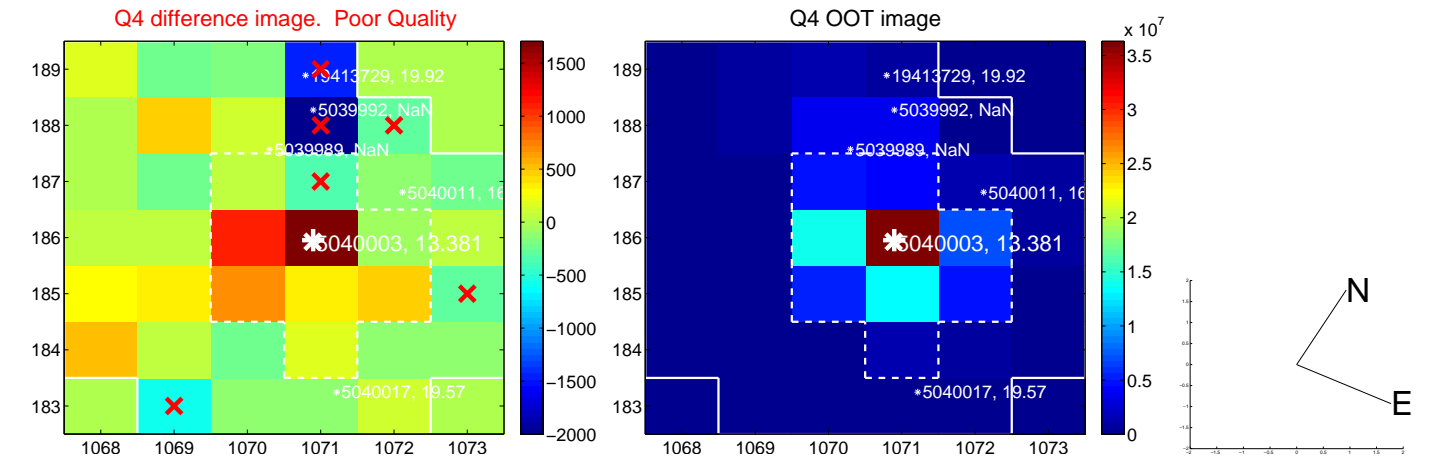
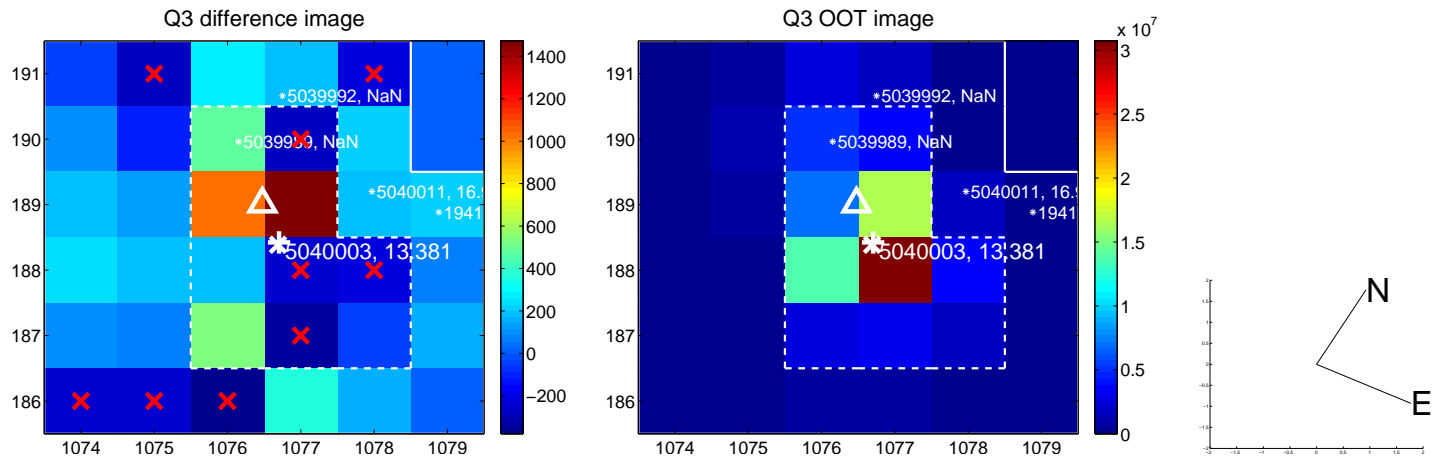
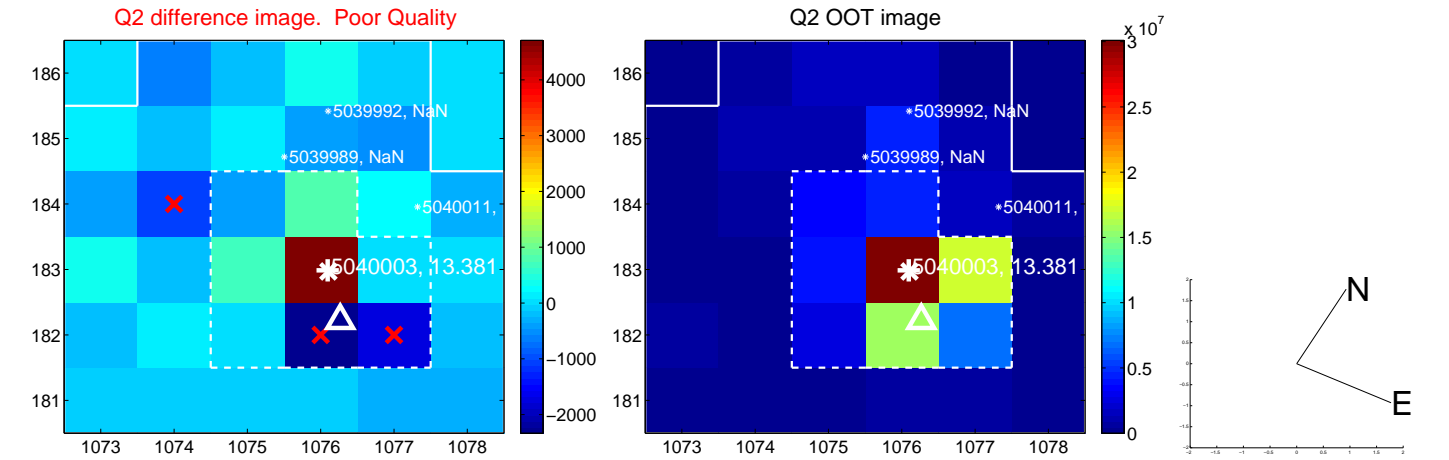
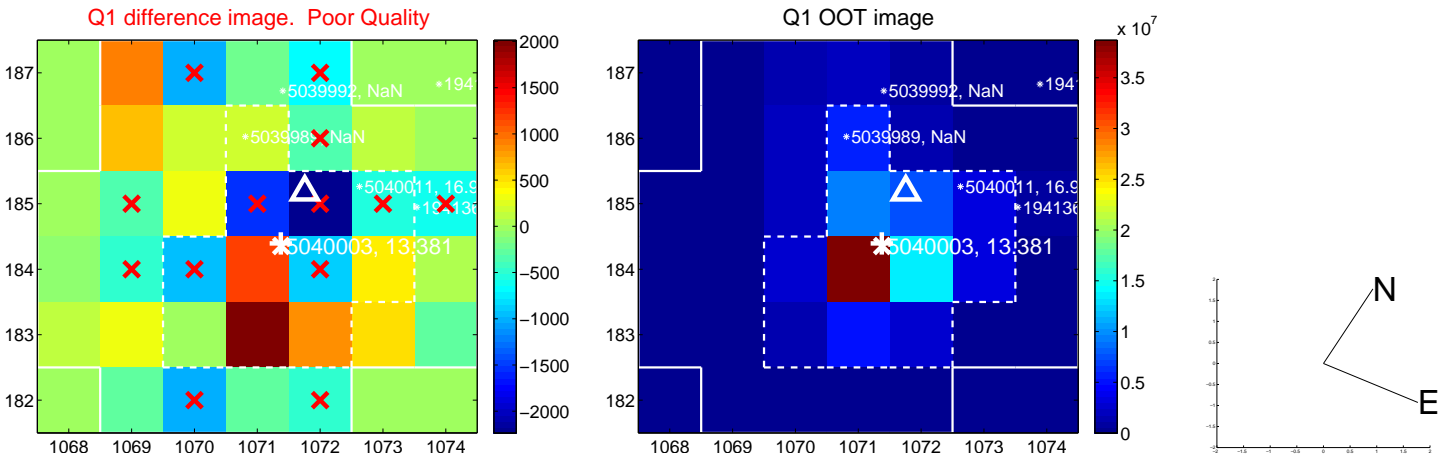
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.513 ± 1.319	0.39	-0.055 ± 0.669	0.510 ± 1.331
PRF-fit source offset from KIC position	0.651 ± 1.303	0.50	-0.122 ± 0.703	0.640 ± 1.315
photometric centroid source offset	1.53 ± 1.47	1.04	-1.25 ± 1.47	-0.88 ± 1.47

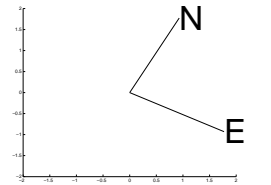
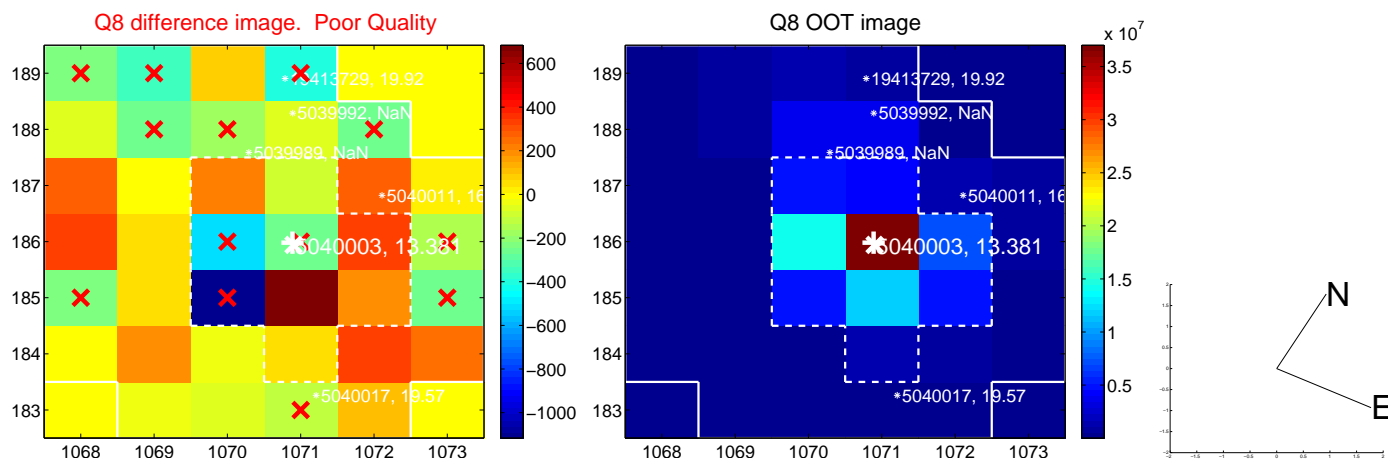
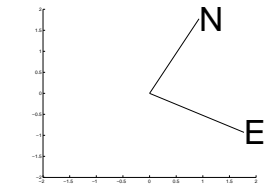
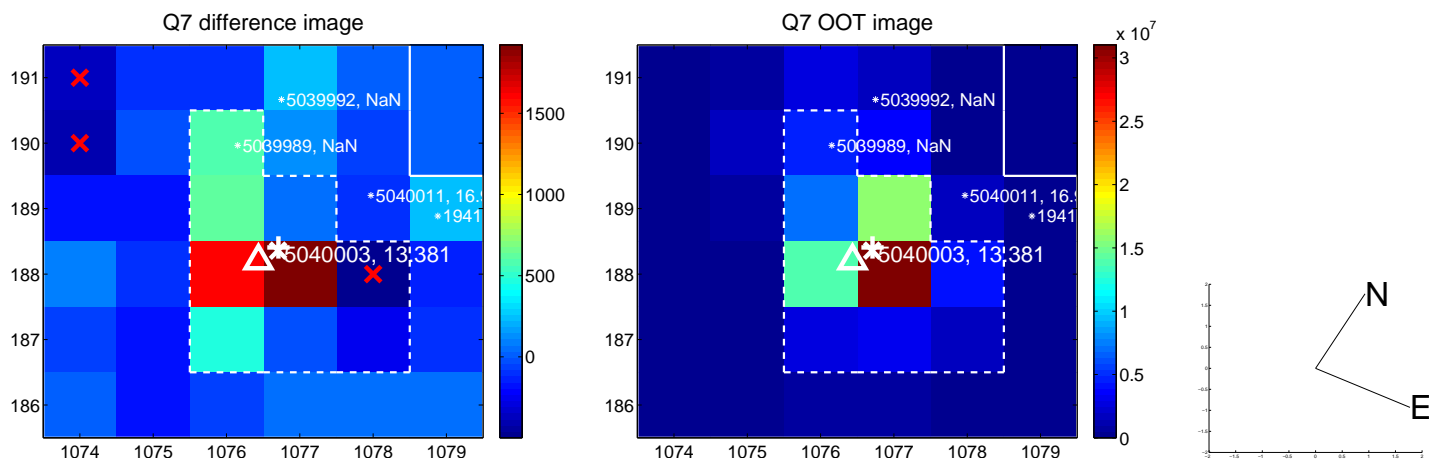
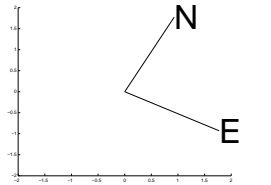
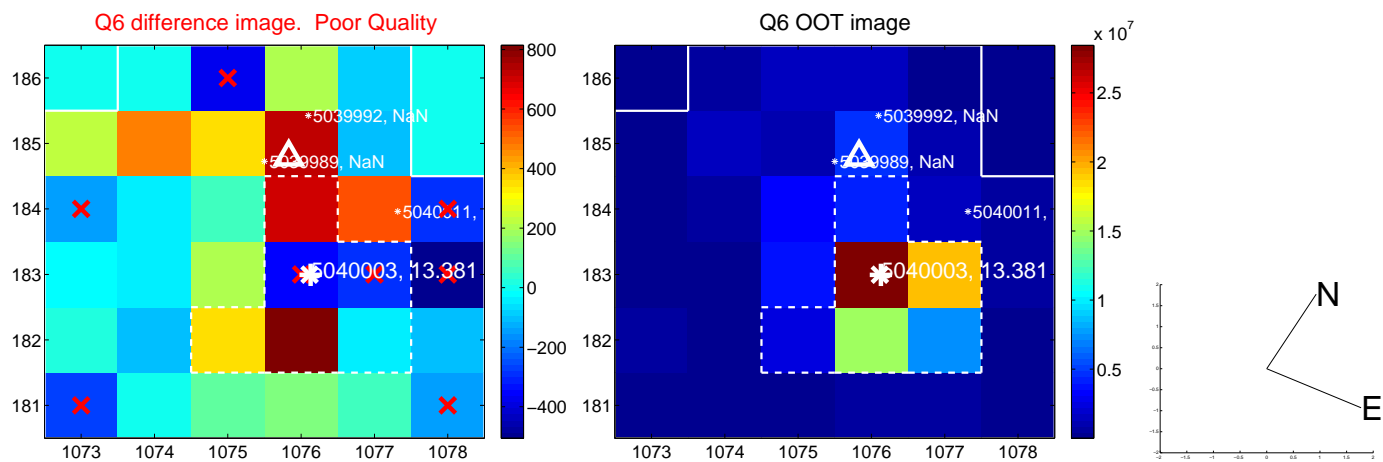
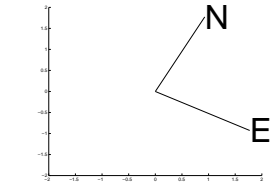
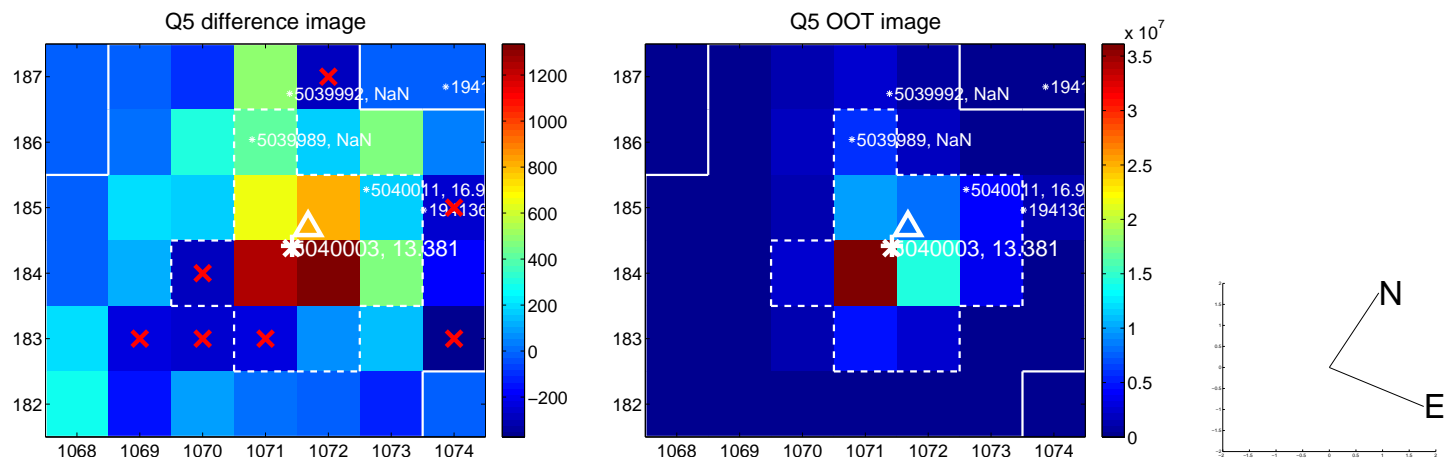


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

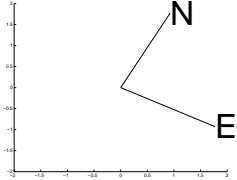
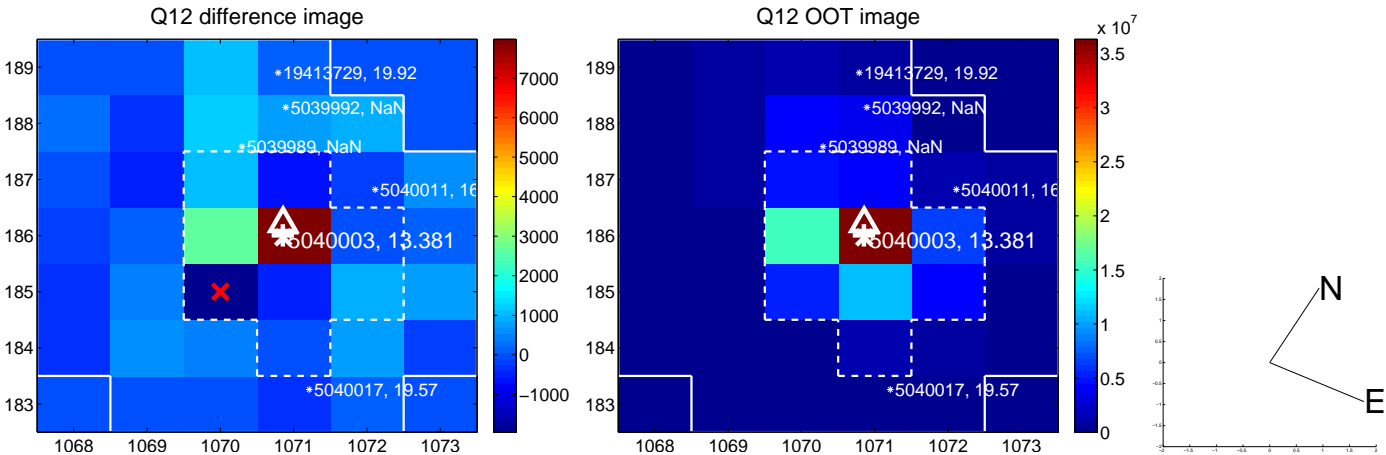
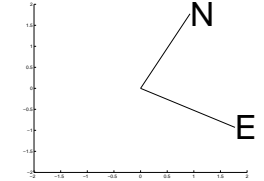
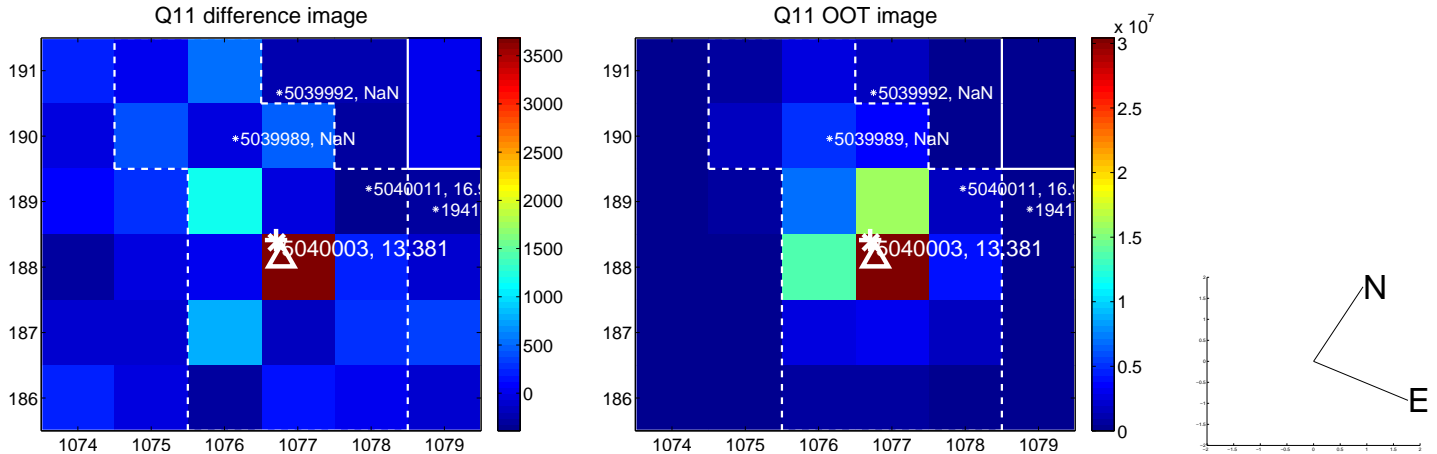
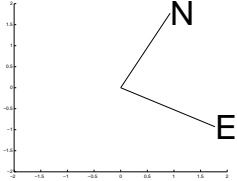
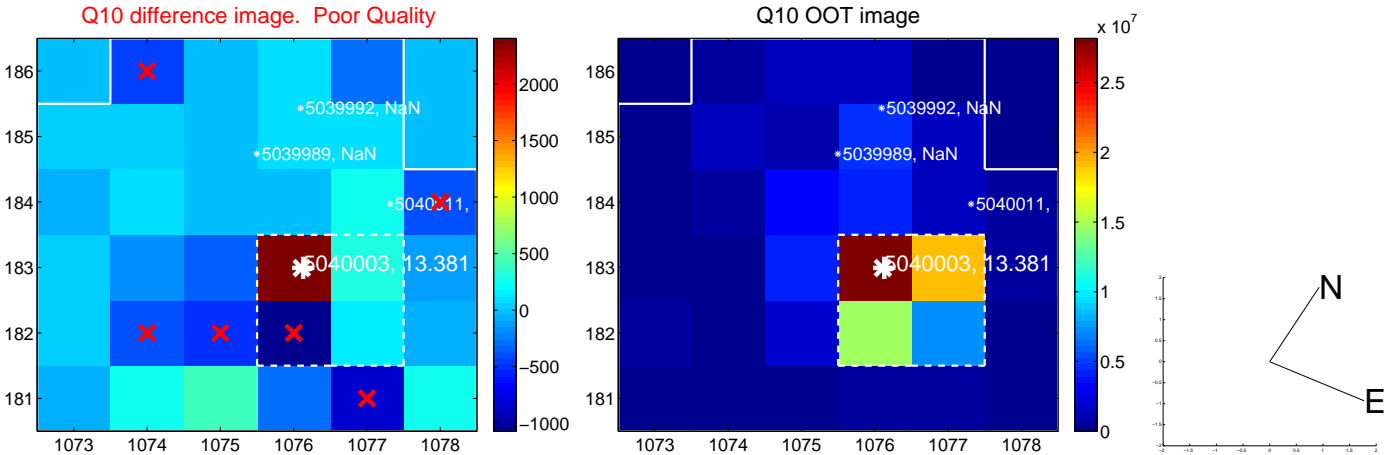
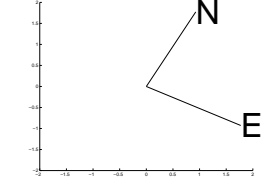
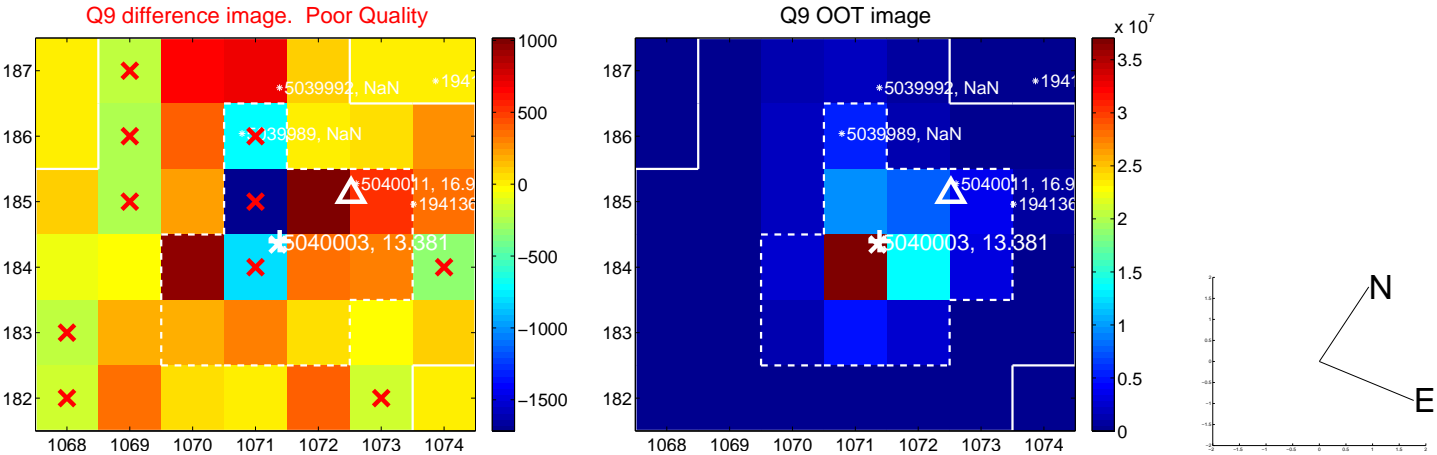
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



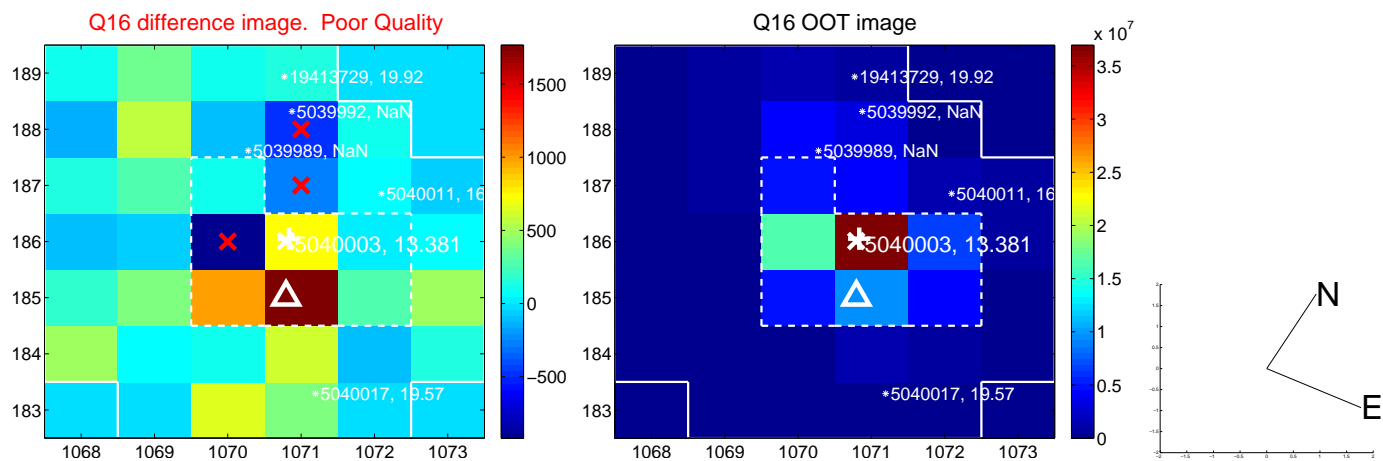
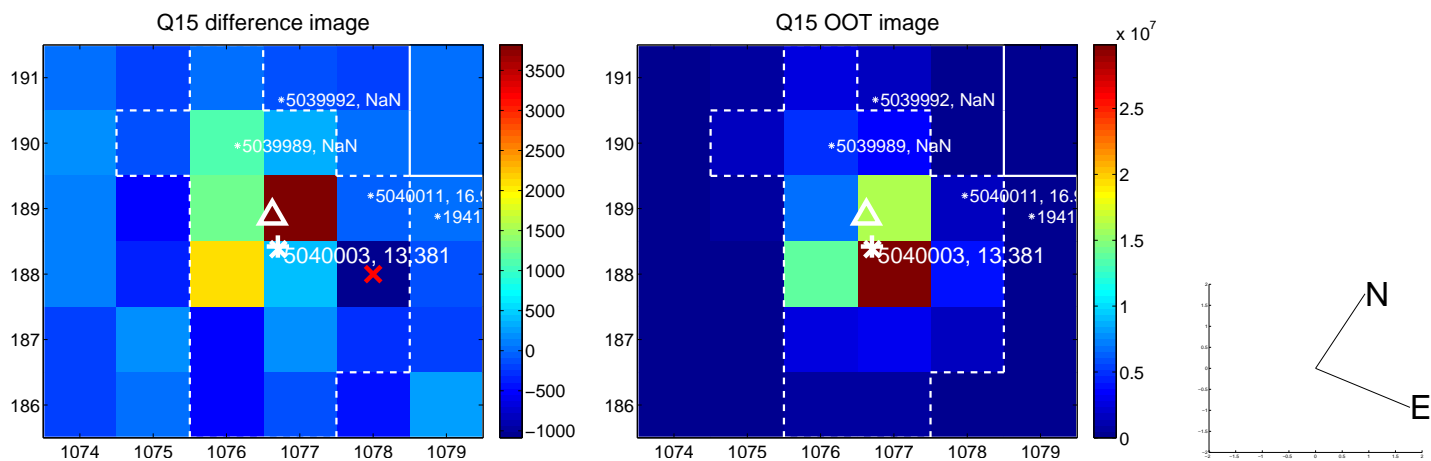
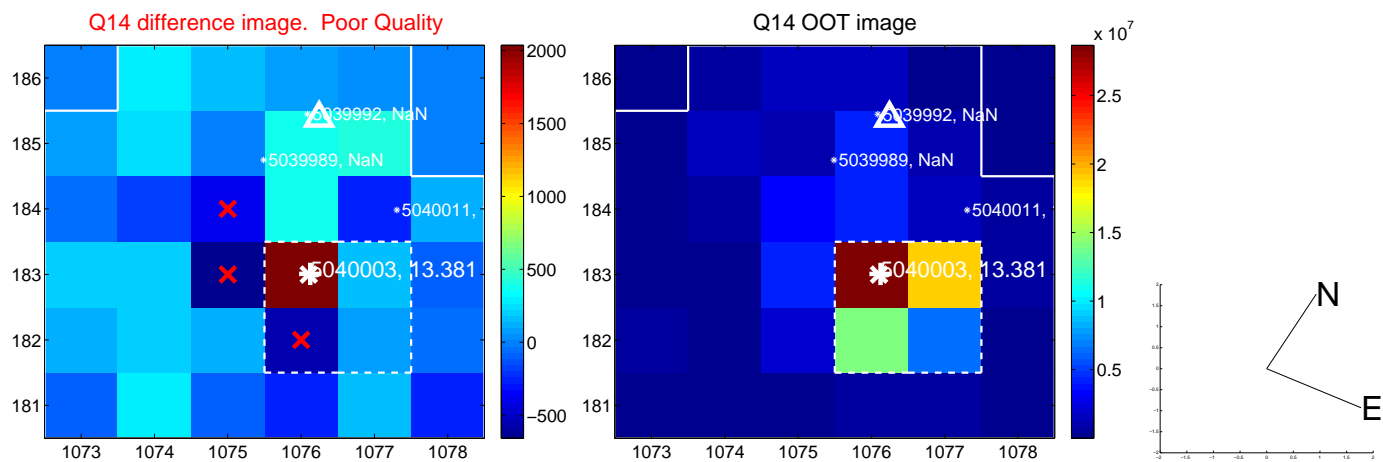
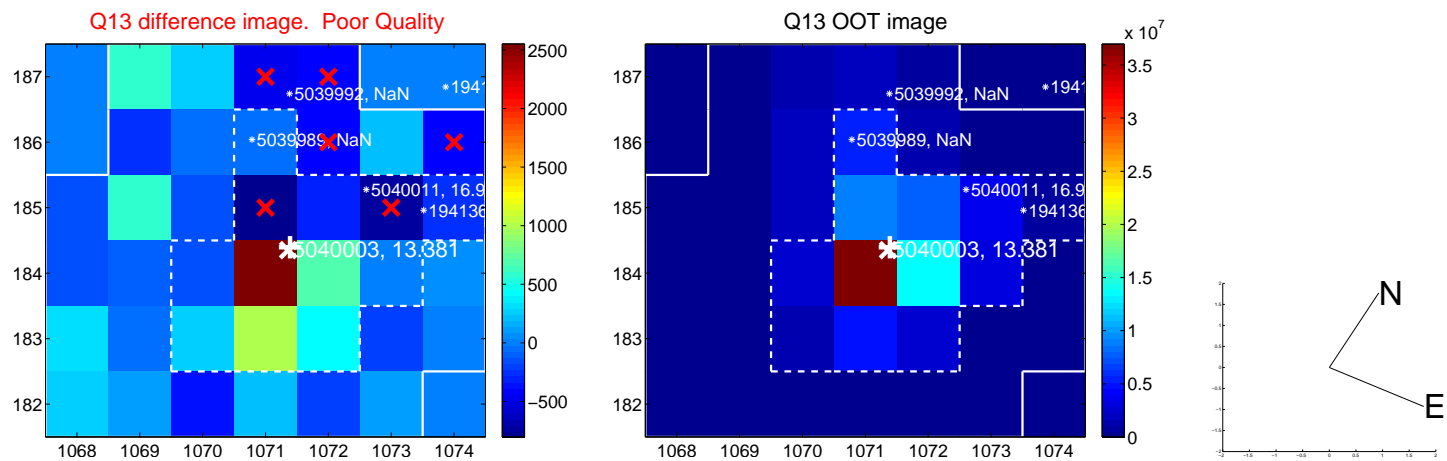
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



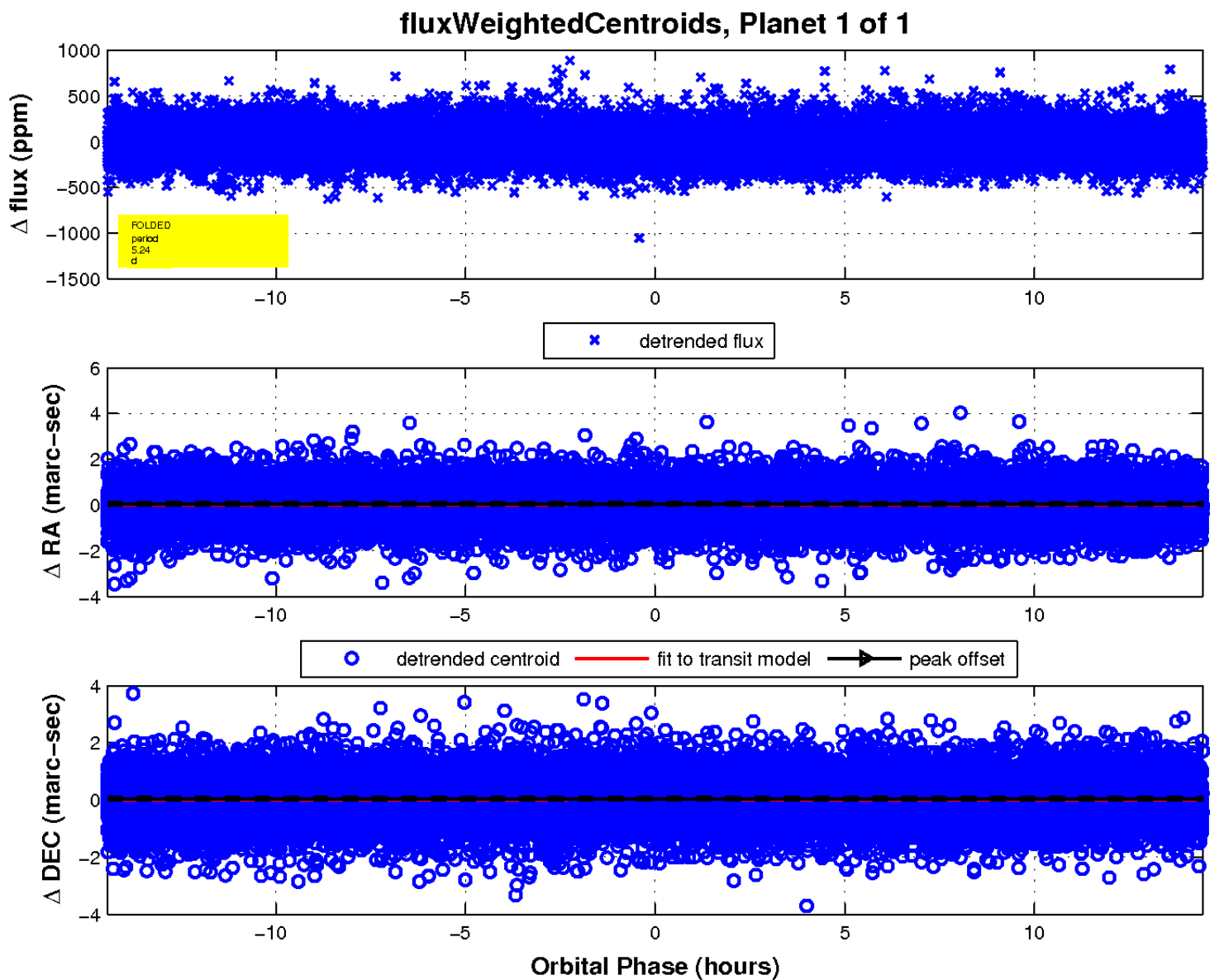
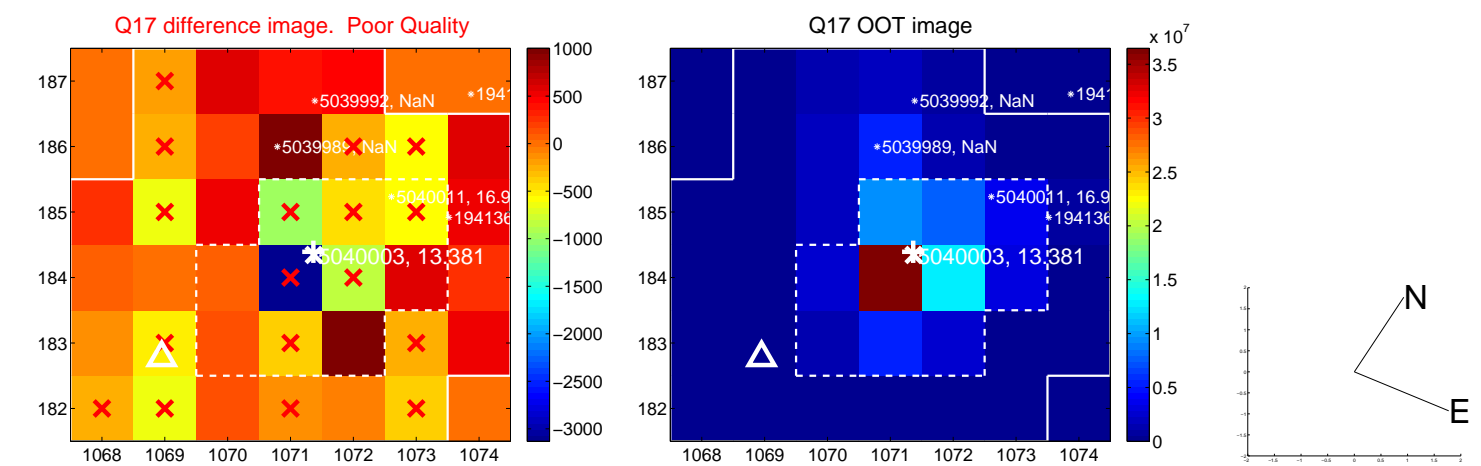
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UKIRT Image

Declination

