

KIC 007382099

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})
007382099-01	OBS	No	0.592404	131.654362	9.5	3.082	7.6	6.2	2.41	7666	0.86	61641.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007382099-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

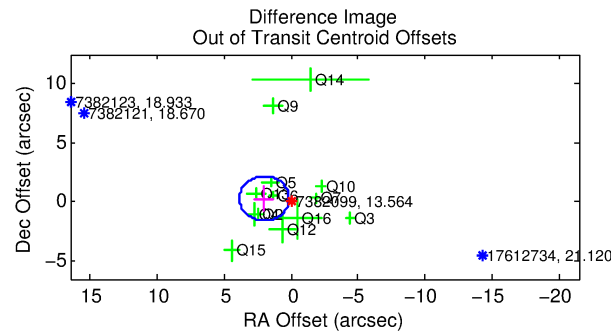
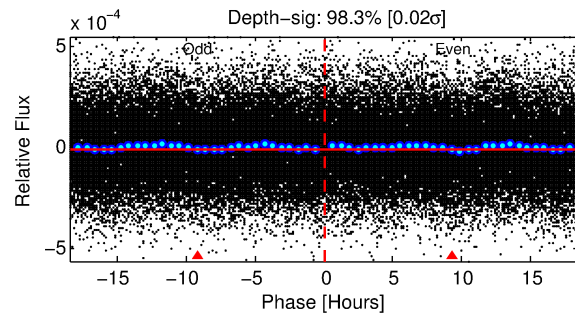
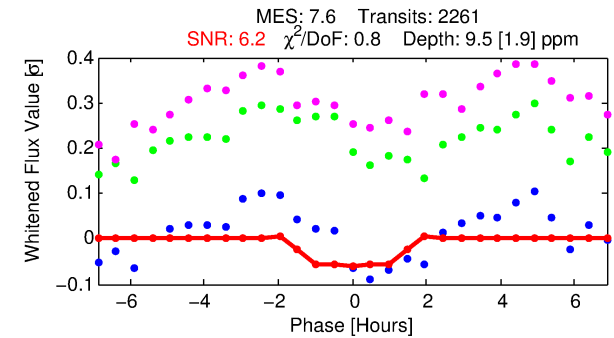
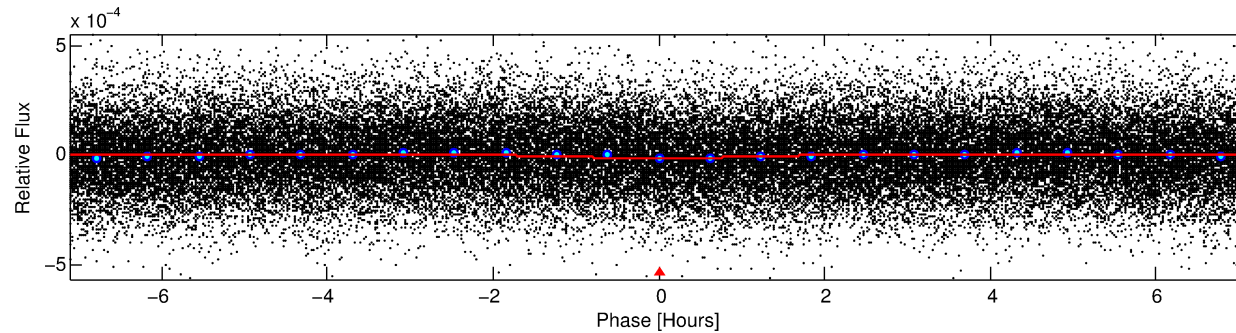
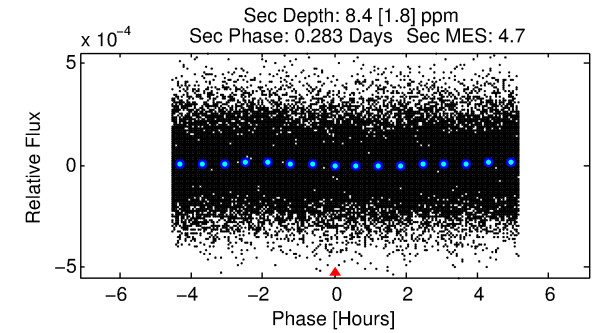
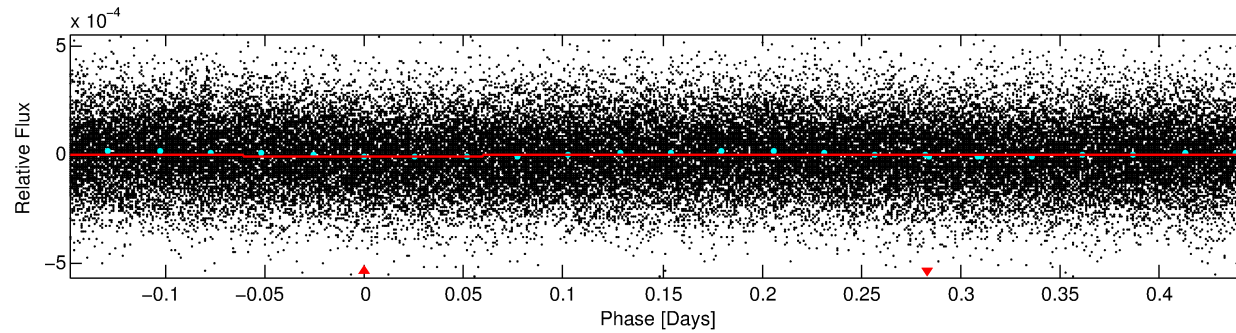
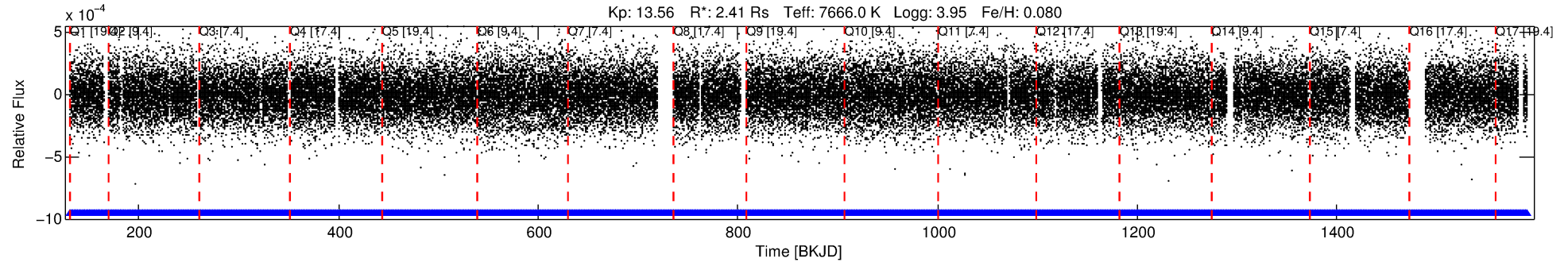
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007382099-01

No Significant Match Found

DV One-Page Summary

KIC: 7382099 Candidate: 1 of 1 Period: 0.592 d



DV Fit Results:

Period = 0.59240 [0.00002] d
Epoch = 131.6544 [0.0057] BKJD
Rp/R* = 0.0033 [0.0019]
a/R* = 1.14 [0.99]
b = 0.90 [0.79]
Seff = 61641.87 [26061.28]
Teq = 4018 [425] K
Rp = 0.86 [0.56] Re
a = 0.0170 [0.0044] AU
Ag = 1.82 [2.23] [0.37σ]
Teffp = 7217 [2121] K [1.48σ]

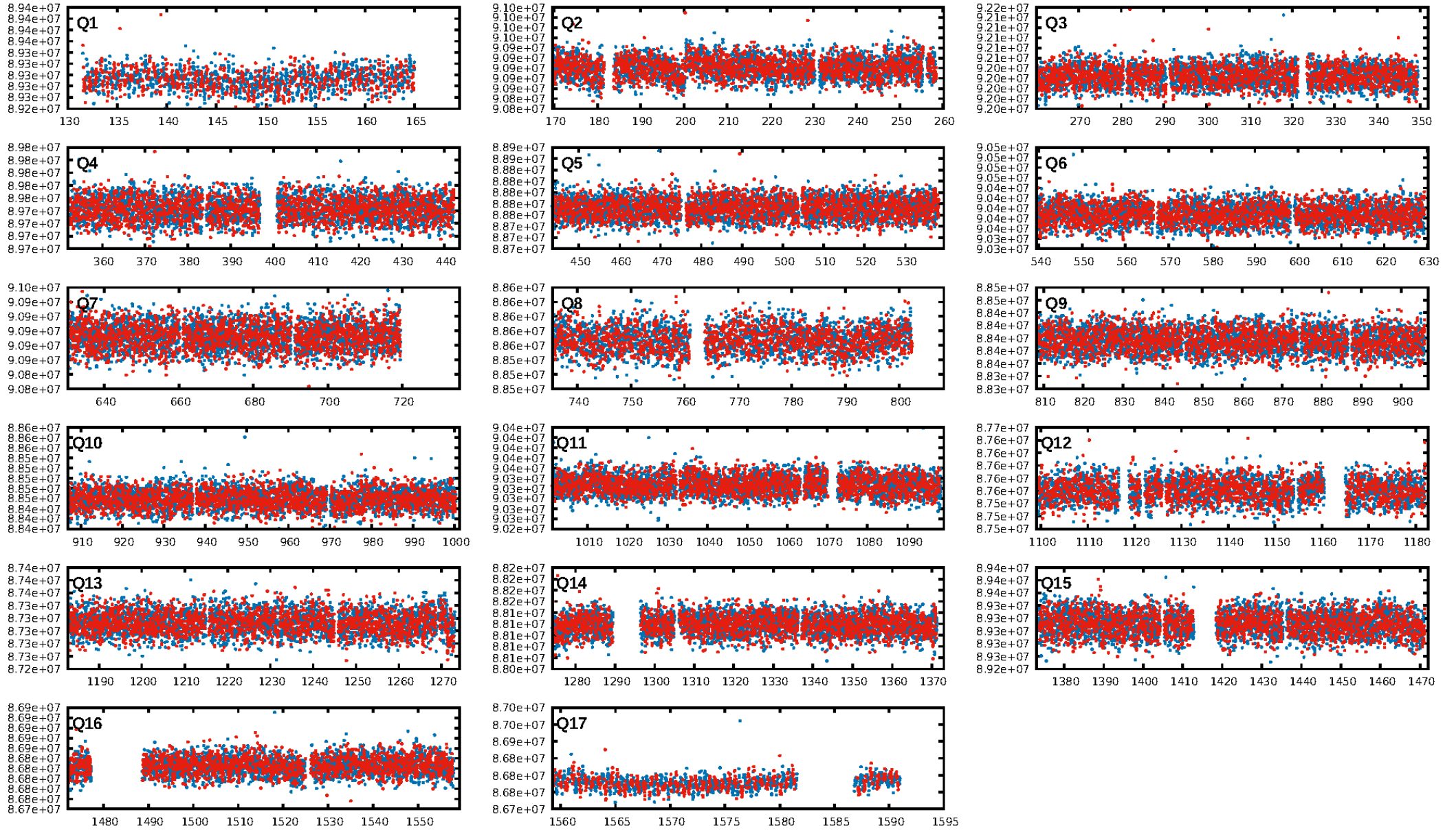
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.30e-11
RollingBand-fgt: 1.00 [2159/2159]
GhostDiagnostic-chr: 0.4053
Centroid-sig: 4.5%
Centroid-so: 3.291 arcsec [1.91σ]
OotOffset-rm: 2.054 arcsec [3.31σ]
KicOffset-rm: 2.152 arcsec [3.07σ]
OotOffset-st: 4/3/3/3 [13]
KicOffset-st: 4/3/3/3 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [17/17]

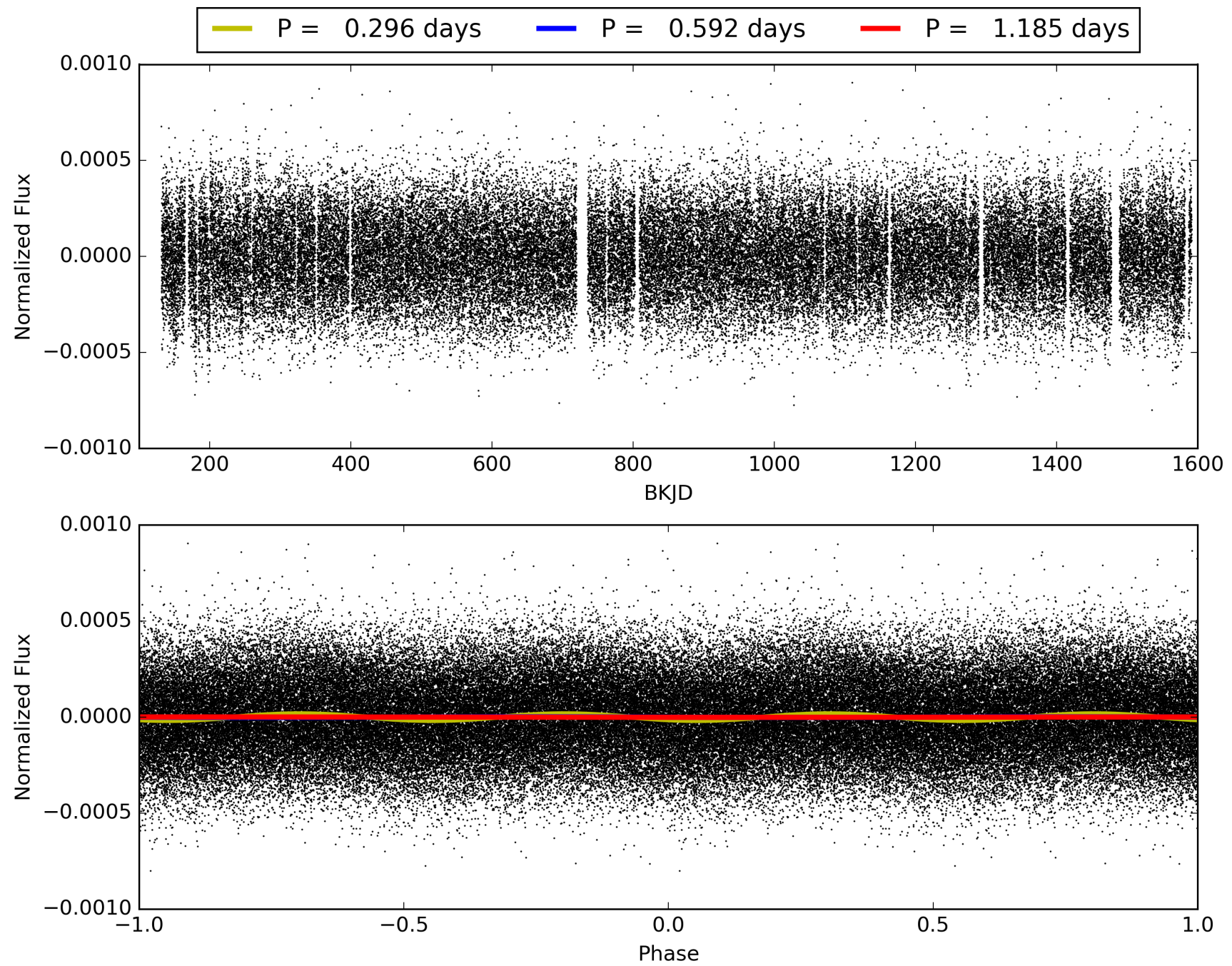
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:42:12 Z

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

TCE 007382099-01, PDC Light Curves

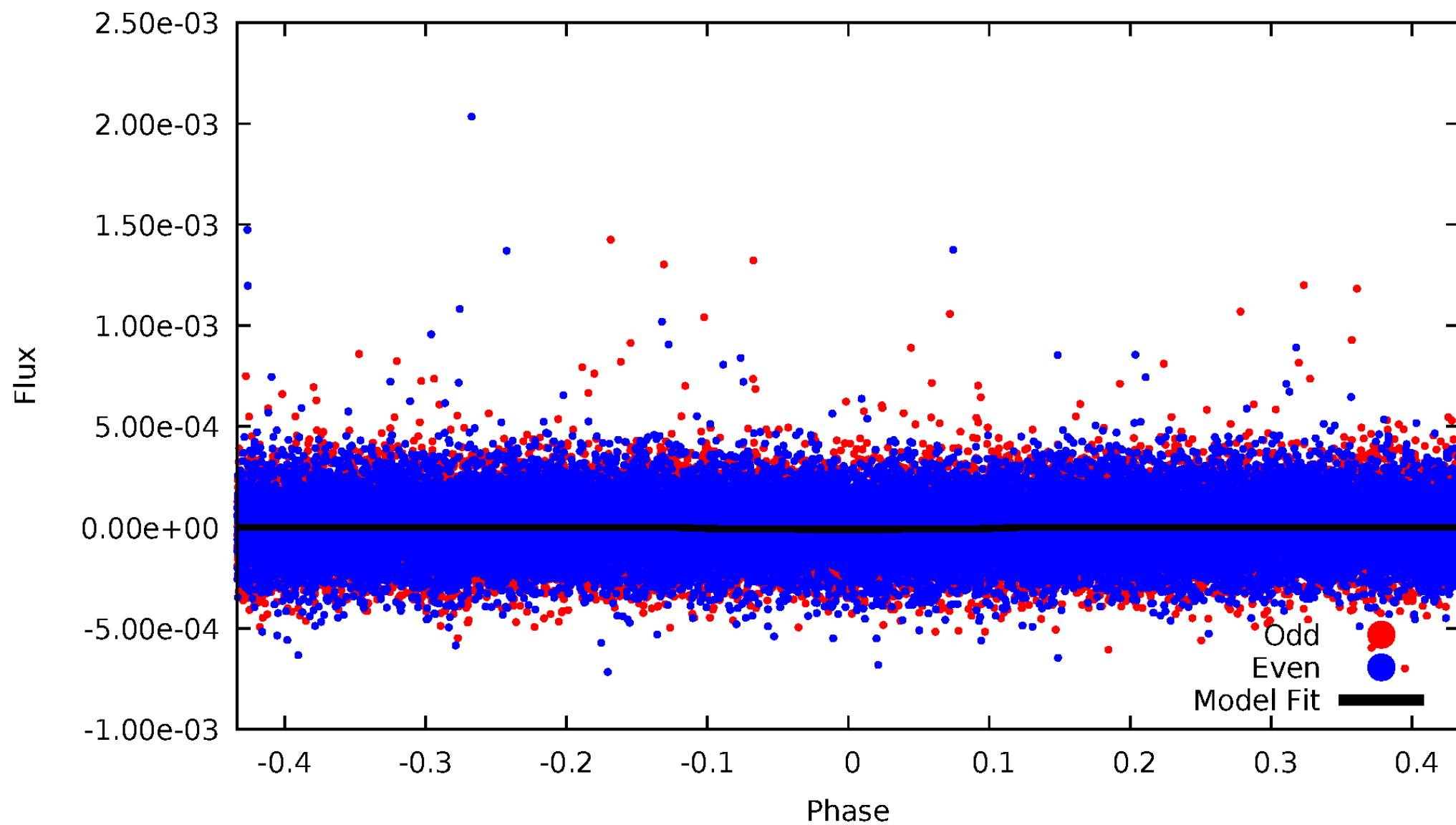


TCE 007382099-01



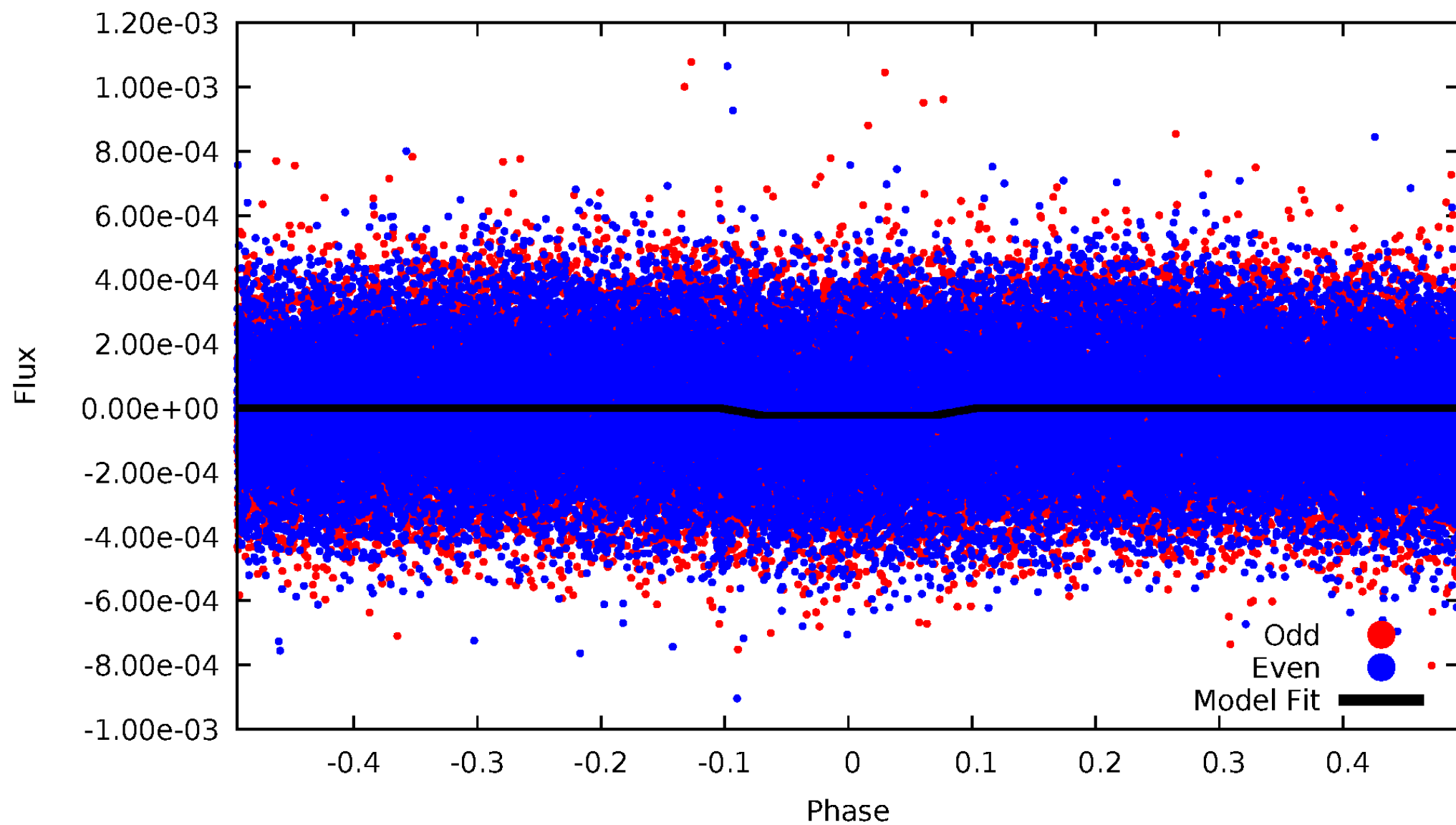
DV Odd/Even

TCE 007382099-01



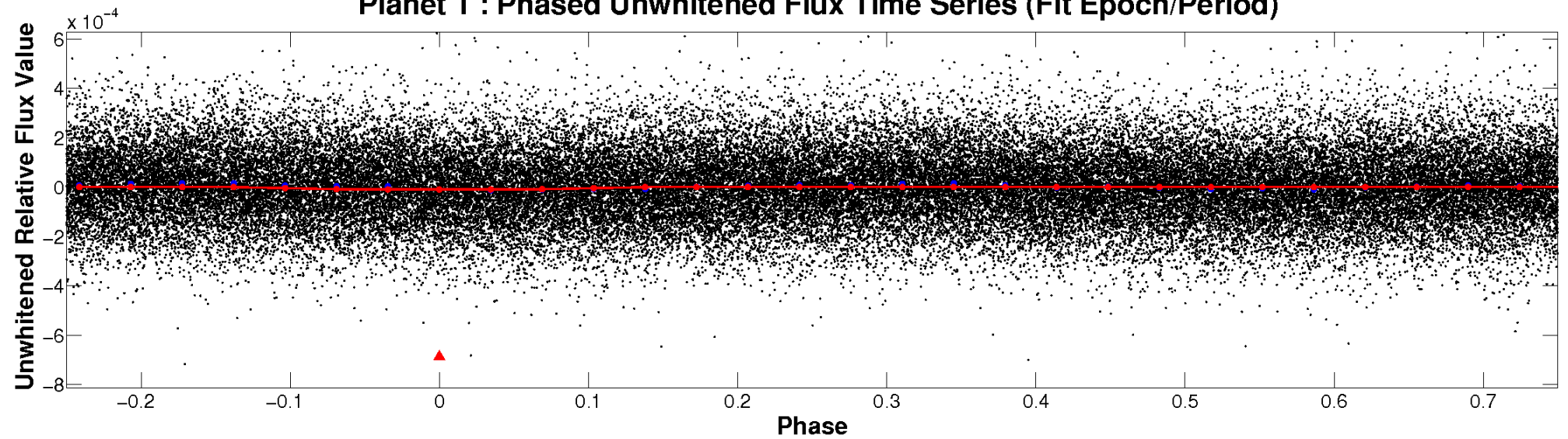
ALT Odd/Even

TCE 007382099-01

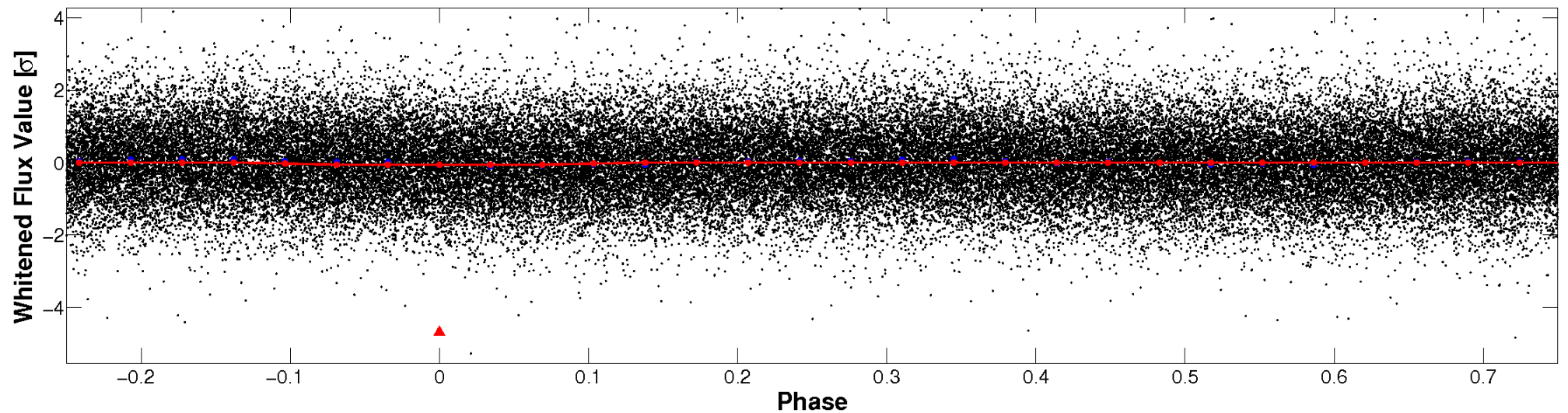


Non-Whitened Vs. Whitened Light Curve

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

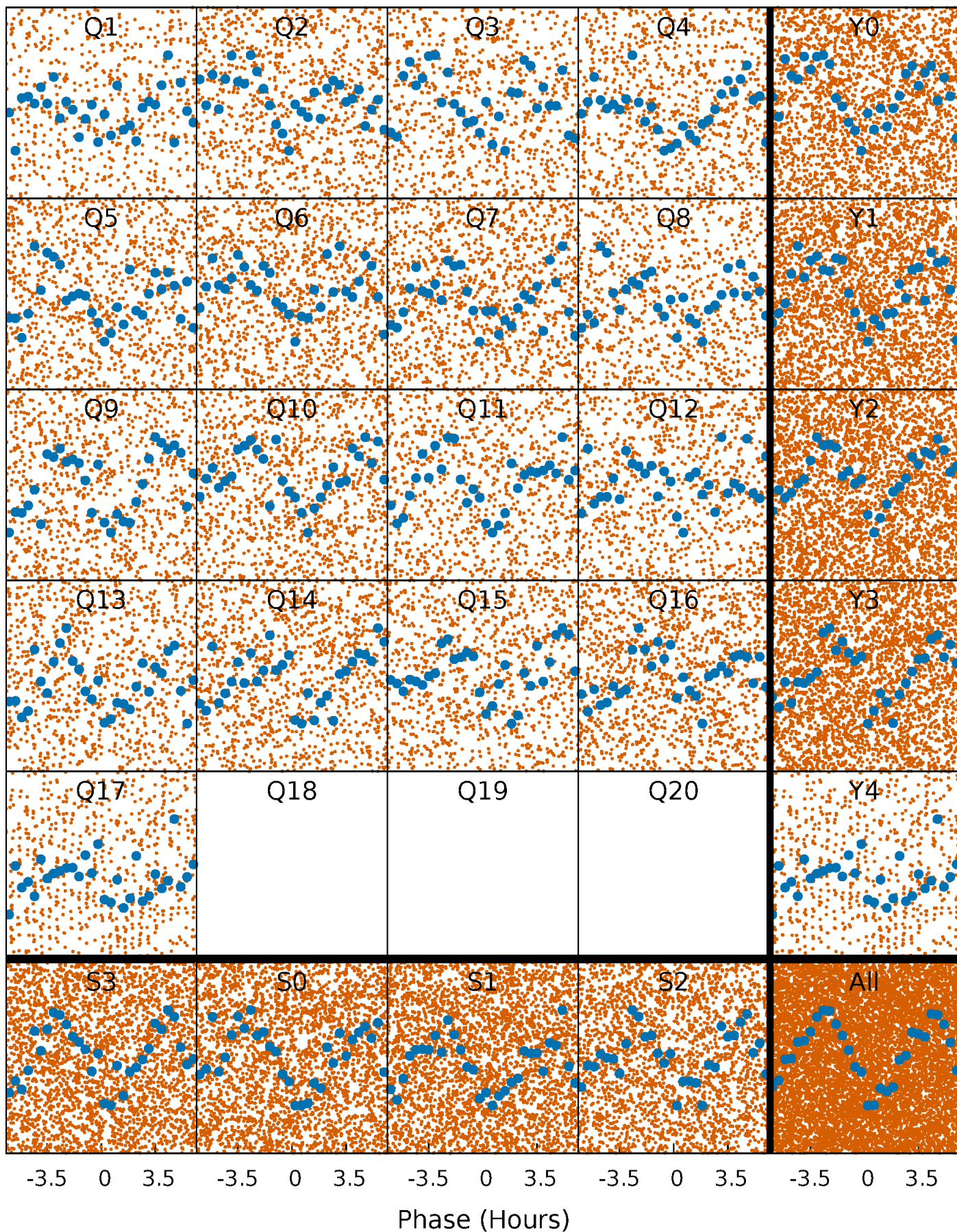


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



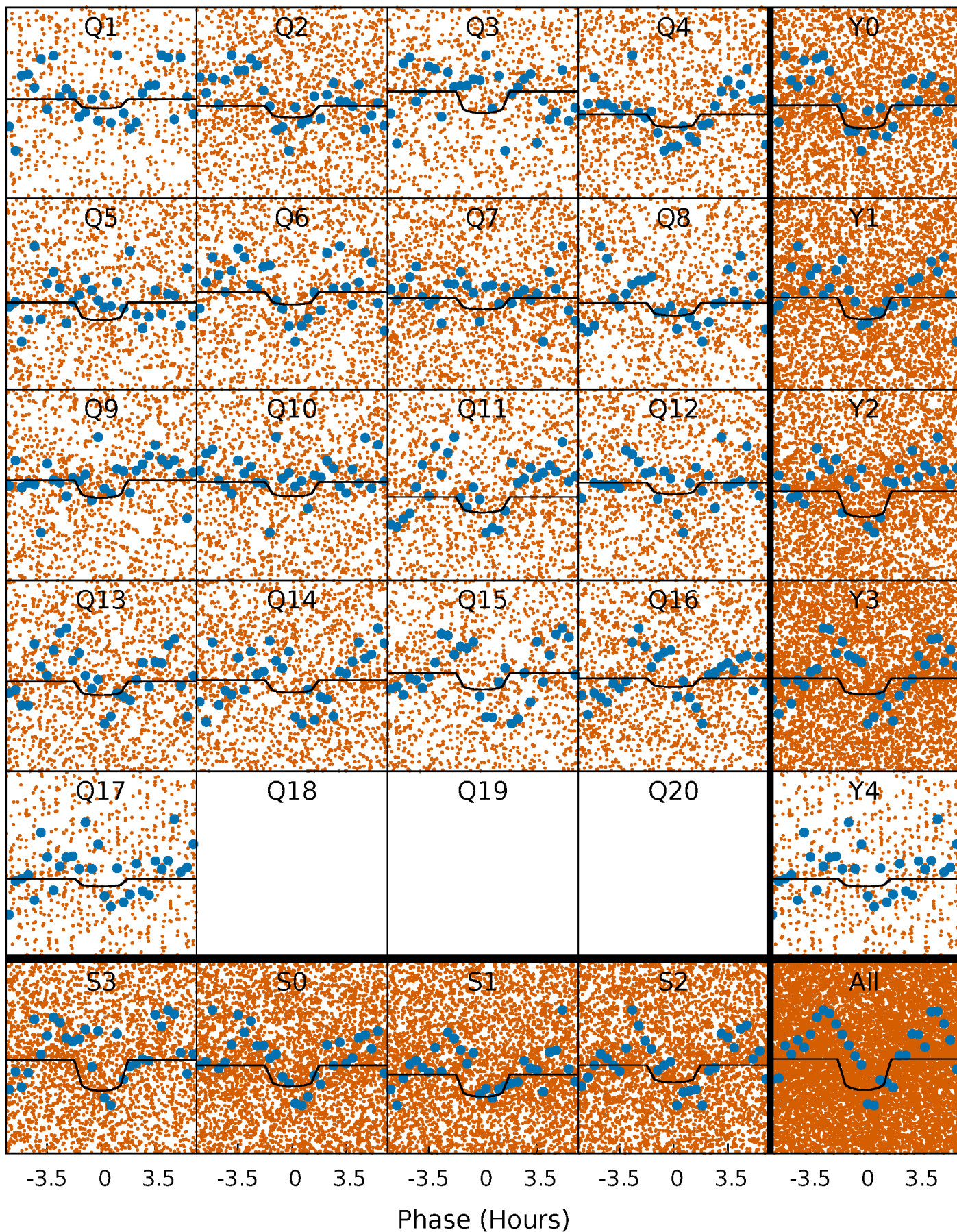
PDC Quarter-Phased Transit Curves

TCE 007382099-01 P= 0.592404 Days $T_0=131.654362$ (BKJD)



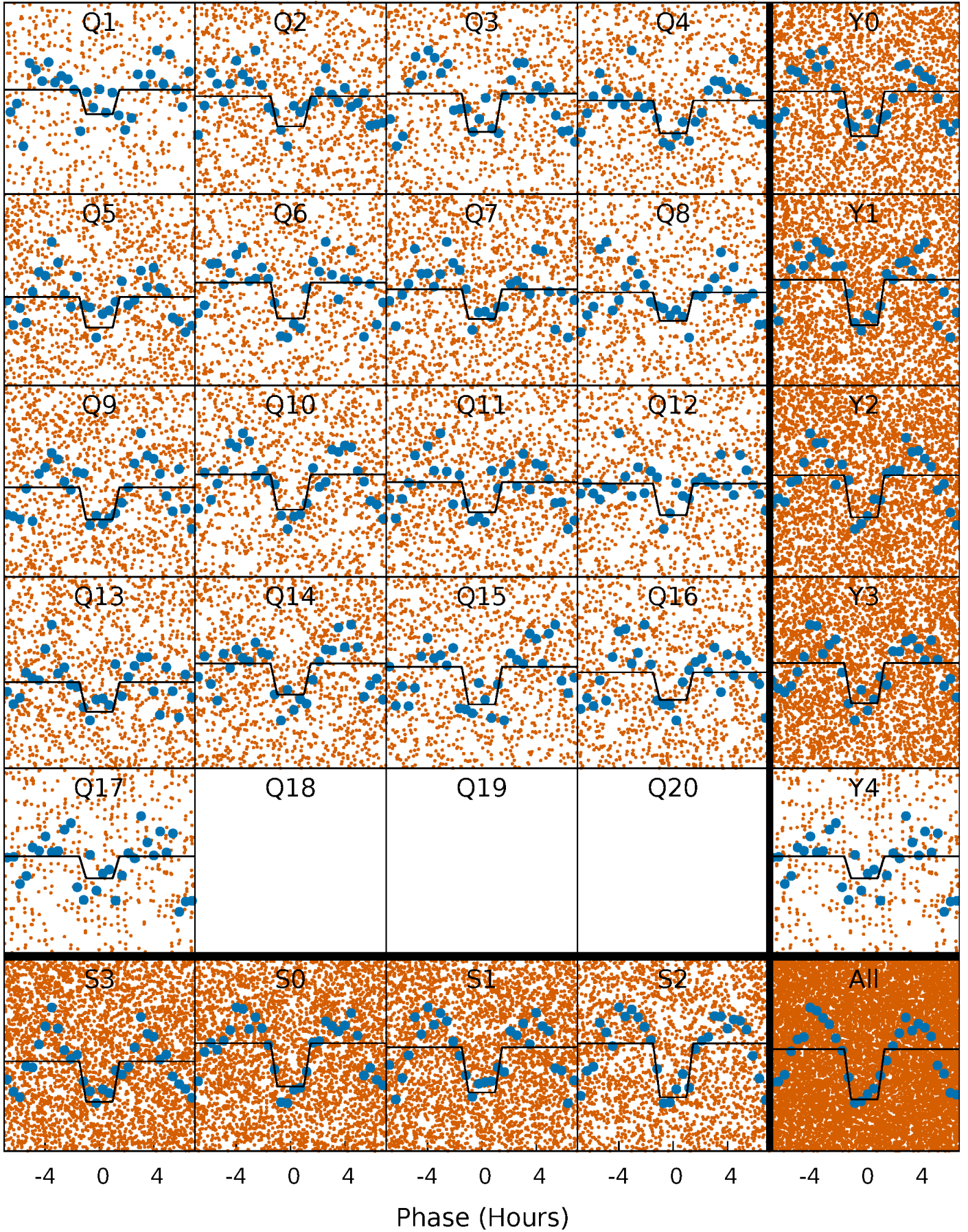
DV Quarter-Phased Transit Curves

TCE 007382099-01 P= 0.592404 Days $T_0=131.654362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

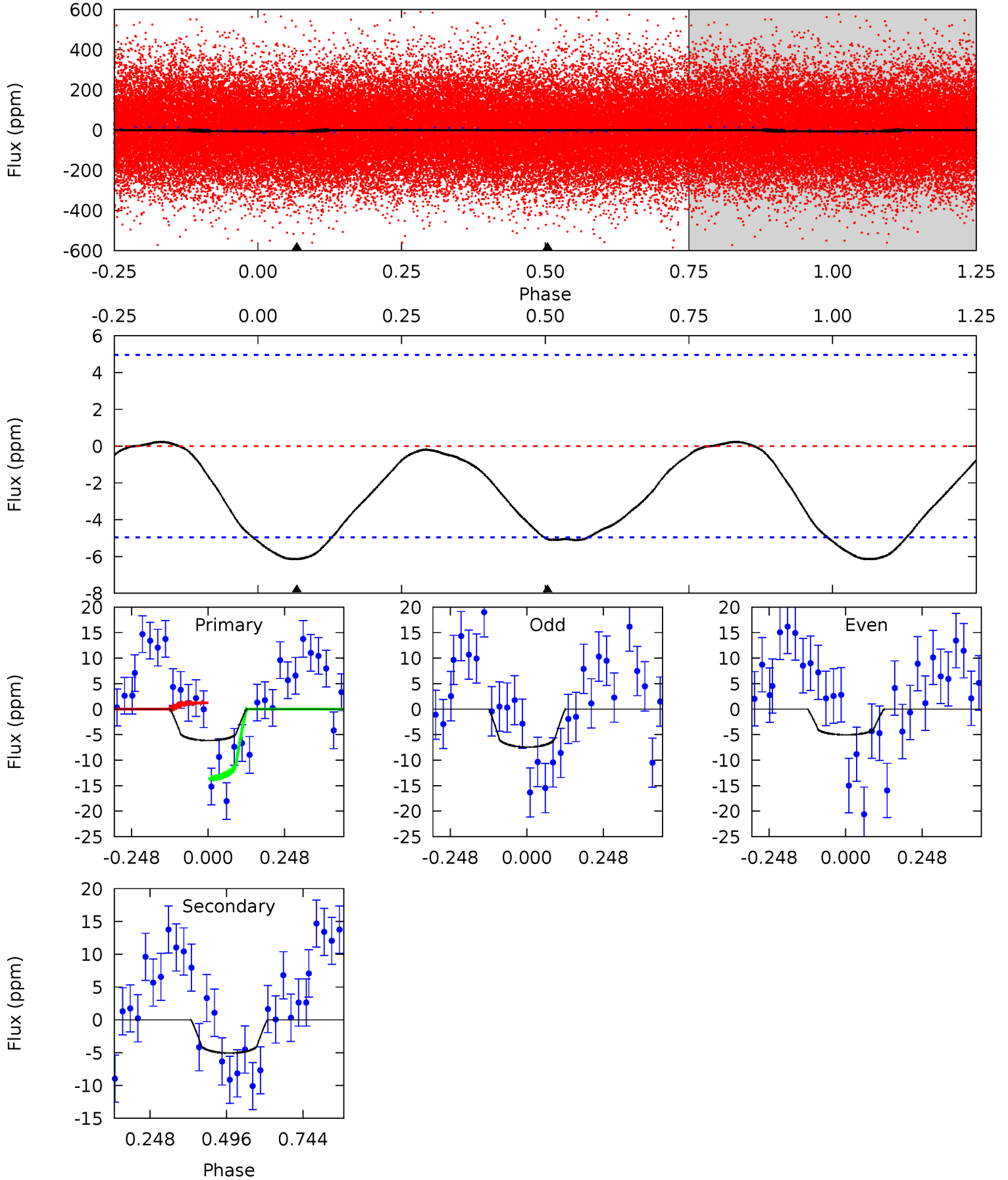
TCE 007382099-01 P= 0.592433 Days $T_0=131.651391$ (BKJD)



DV Model-Shift Uniqueness Test

007382099-01, P = 0.592404 Days, E = 131.061958 Days

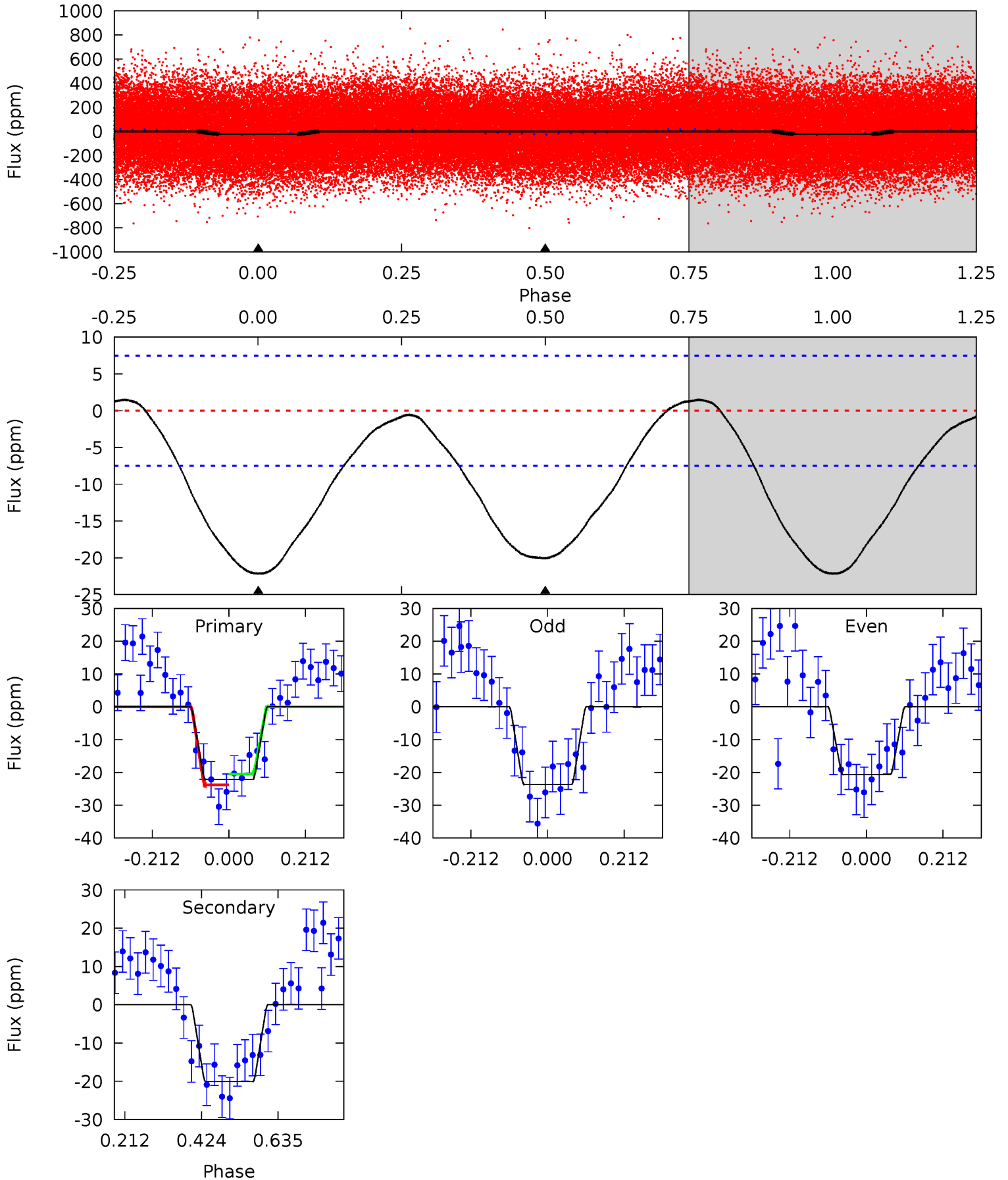
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	4.46	0	0	4.37	1.16	0.25	5.41	5.41	4.46	4.46	1.06	1.23	0.04	5.34



Alt Model-Shift Uniqueness Test

007382099-01, P = 0.592433 Days, E = 131.058958 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	11.8	0	0	4.40	1.25	0.70	13.0	13.0	11.8	11.8	0.89	1.06	0.06	0.95



Stellar Parameters For KIC 007382099

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7666^{+214}_{-322}	$3.950^{+0.216}_{-0.144}$	$0.080^{+0.200}_{-0.350}$	$2.406^{+0.484}_{-0.727}$	$1.883^{+0.121}_{-0.363}$	$0.190^{+0.245}_{-0.082}$
	+3%/-4%	+5%/-4%	+250%/-438%	+20%/-30%	+6%/-19%	+129%/-43%
Source	KIC0	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 007382099-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$0.82^{+0.56}_{-0.43}$	5582^{+386}_{-448}	5717^{+3898}_{-1928}	$1.108^{+4.211}_{-0.708}$
Alt.	-20 ± 2	$1.23^{+0.53}_{-0.48}$	5581^{+385}_{-438}	6981^{+2879}_{-1365}	$2.067^{+3.704}_{-1.041}$

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 $A_{obs} \gg 1.0$

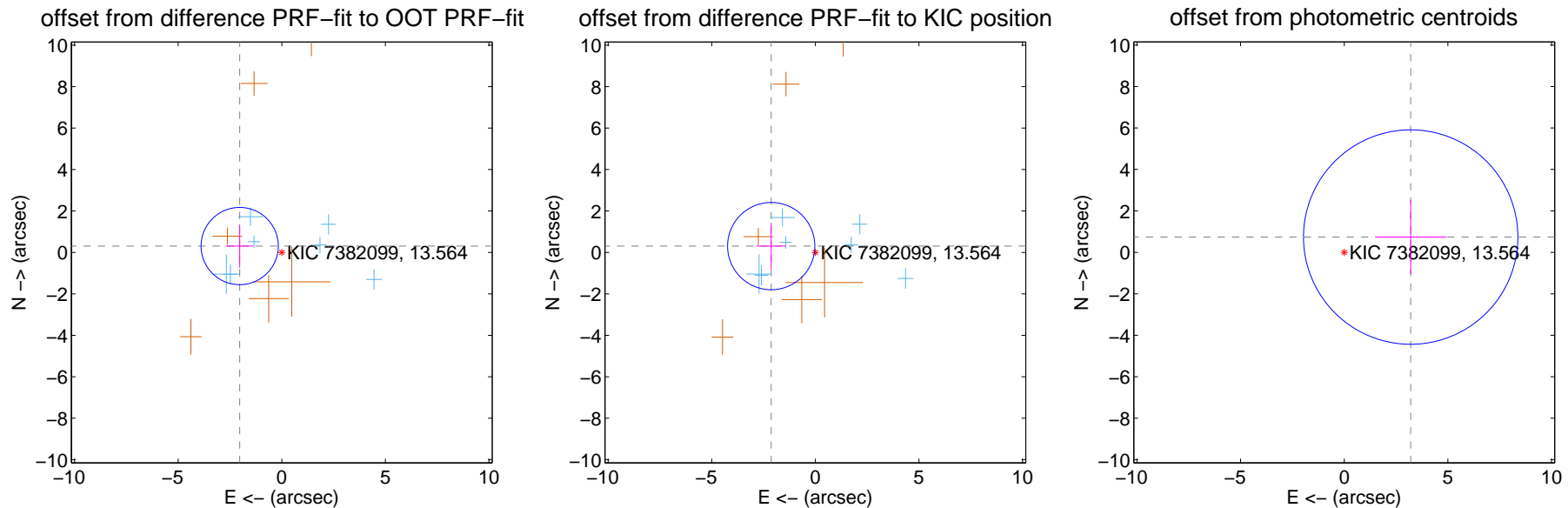
DV Centroid Data

Supplemental centroid analysis for 007382099-01. Kepler magnitude: 13.56. Transit SNR 6.16

There are 7 quarters with good PRF difference image offsets

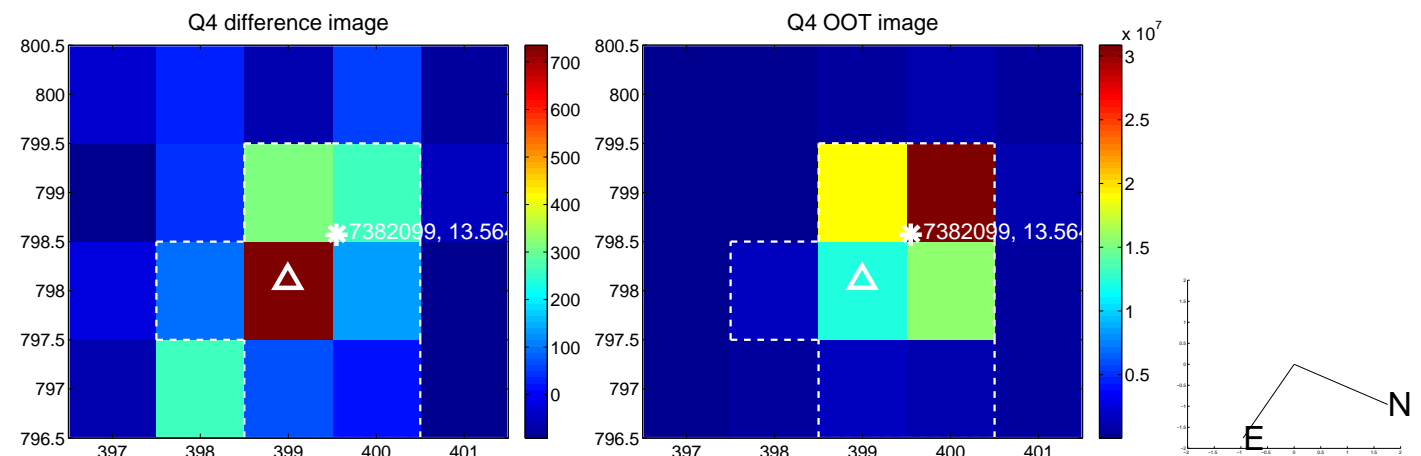
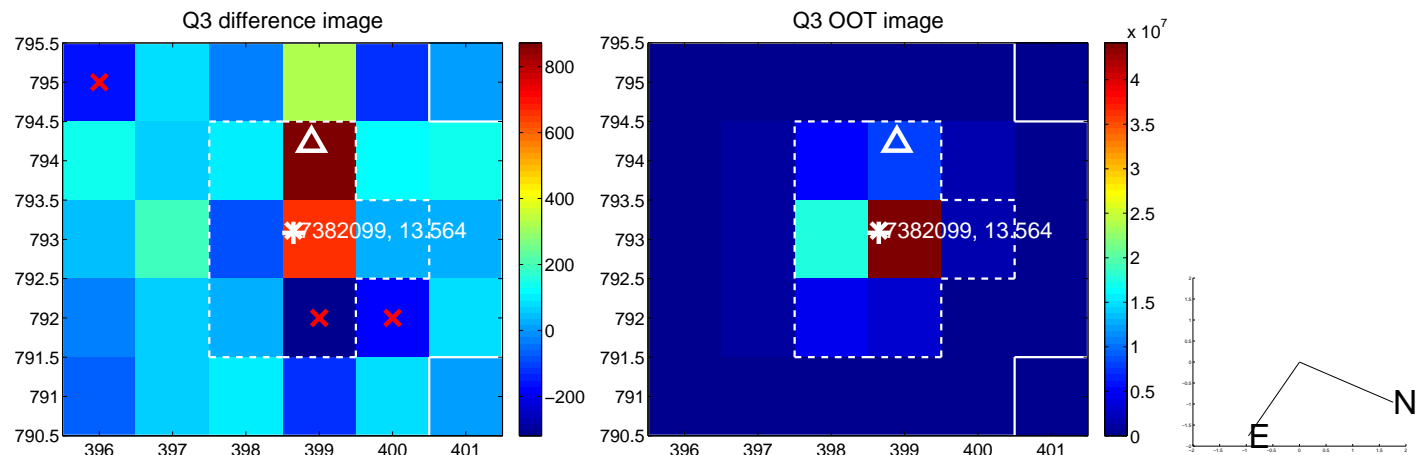
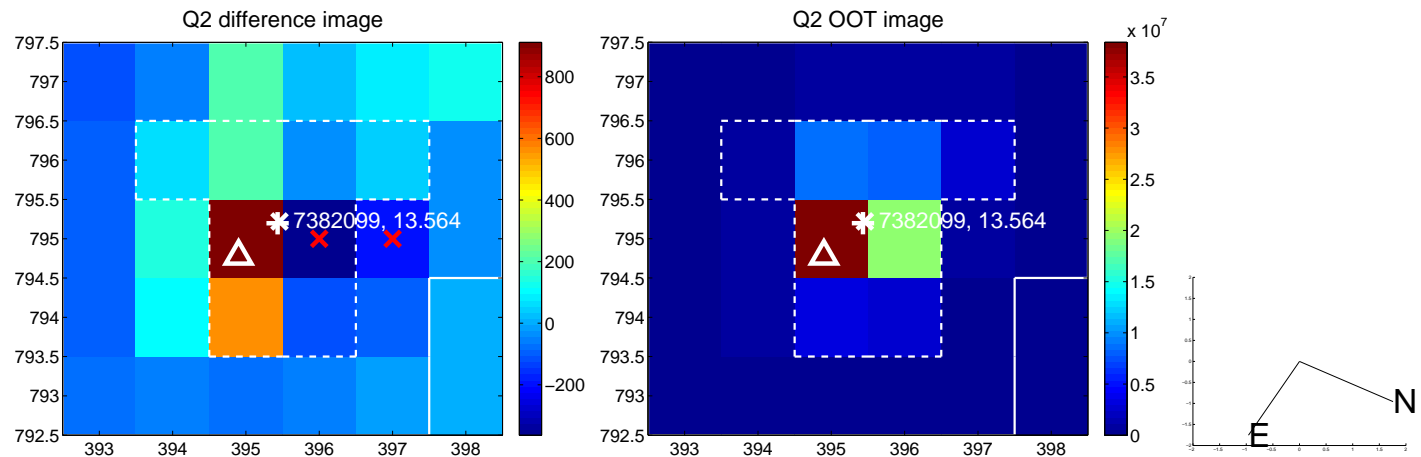
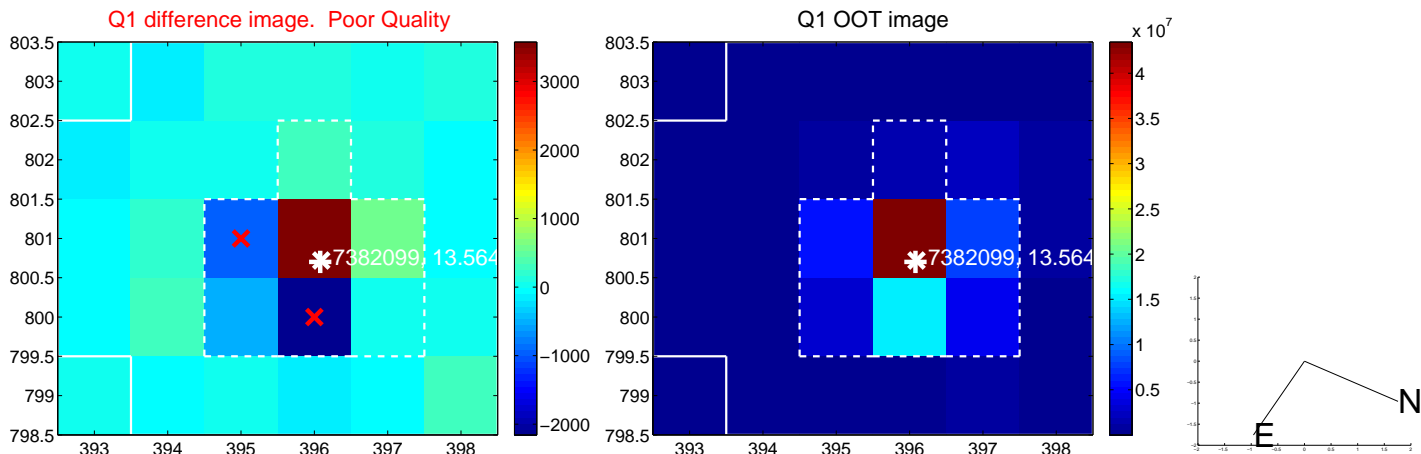
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.054 ± 0.621	3.31	2.031 ± 0.661	0.307 ± 1.041
PRF-fit source offset from KIC position	2.152 ± 0.702	3.07	2.130 ± 0.715	0.305 ± 1.122
photometric centroid source offset	3.29 ± 1.72	1.91	-3.21 ± 1.72	0.74 ± 1.78

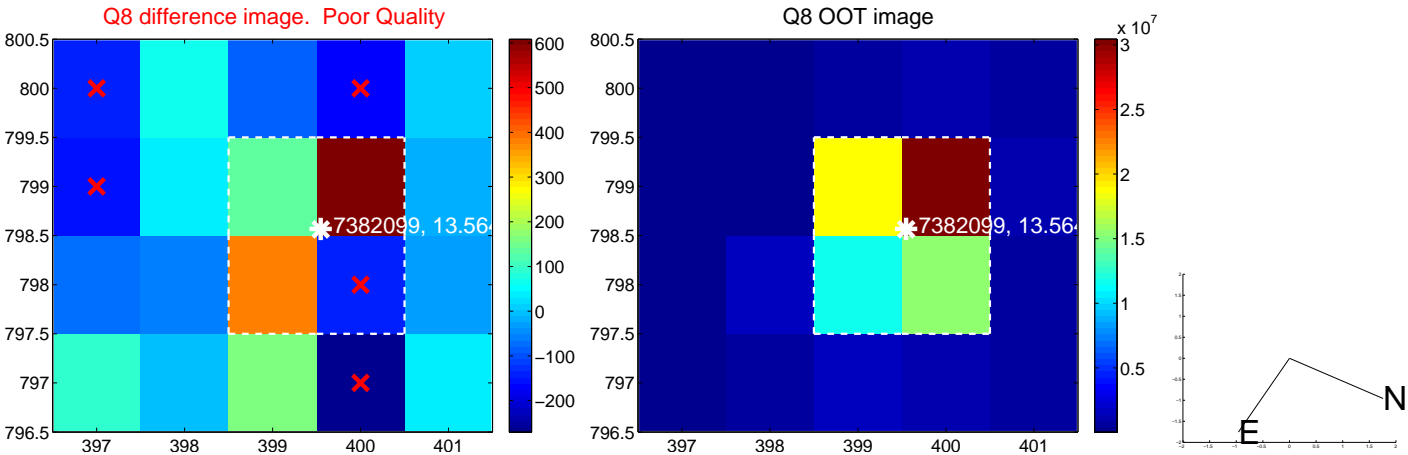
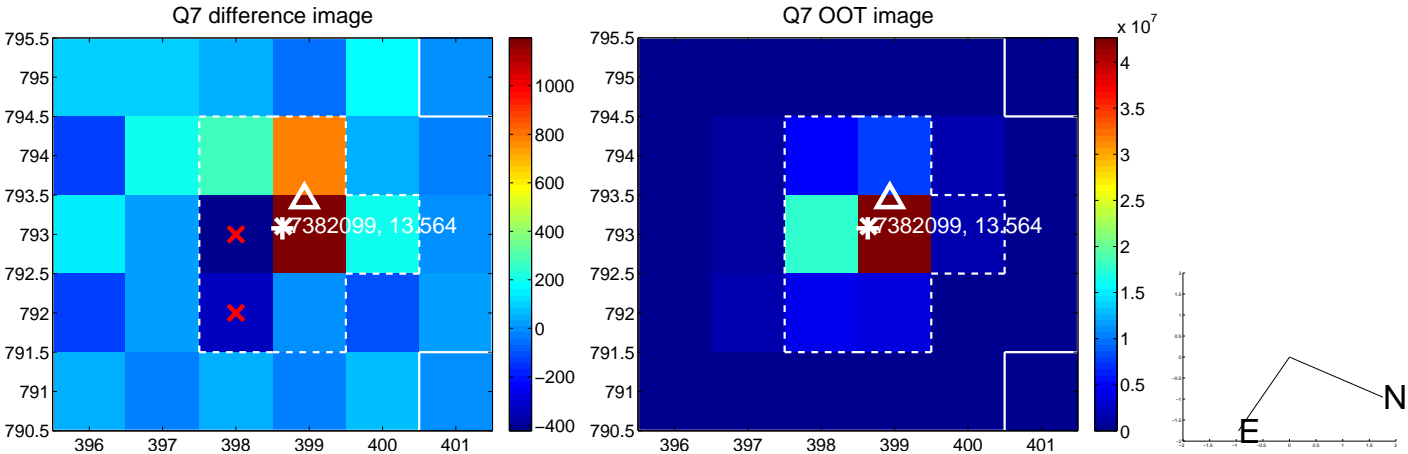
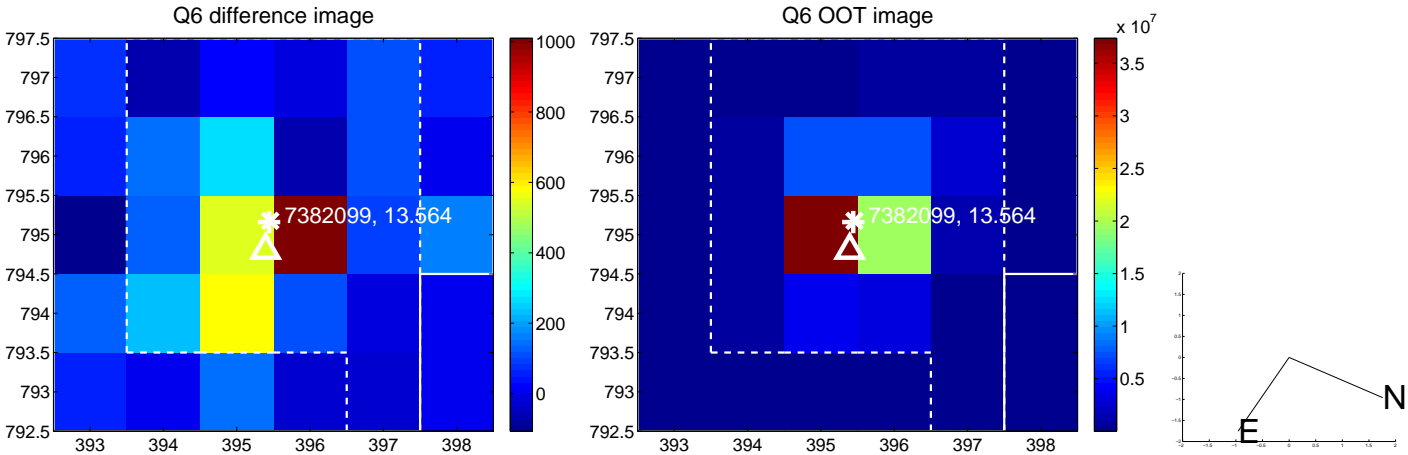
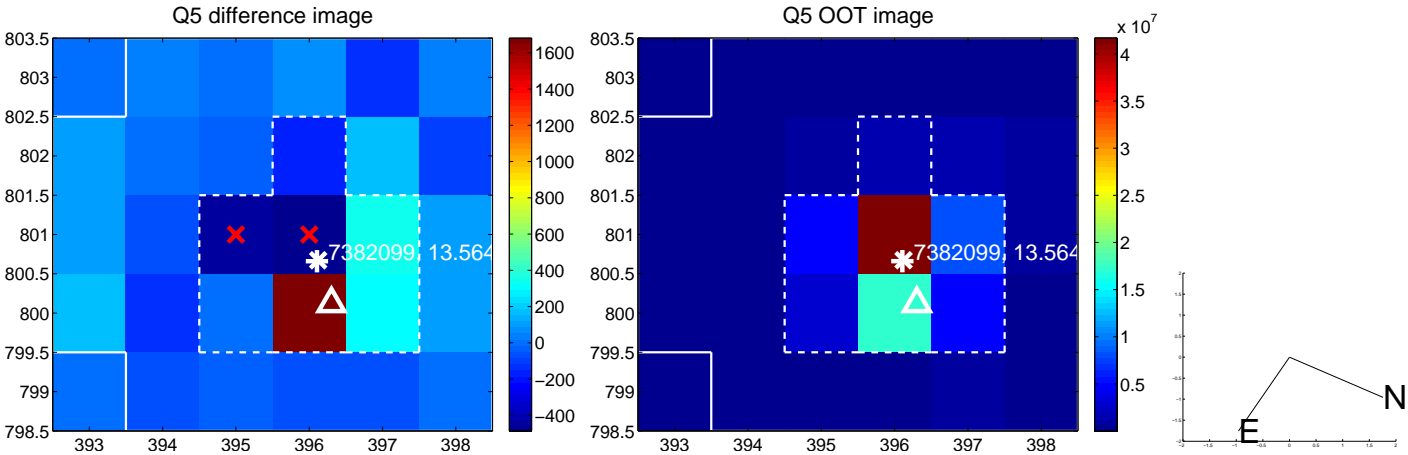


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

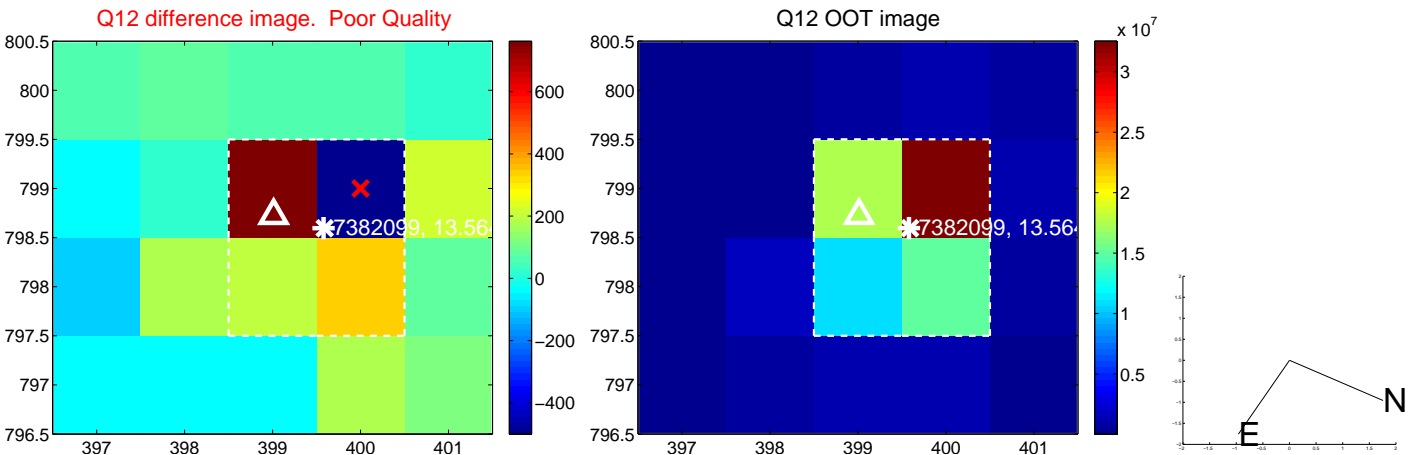
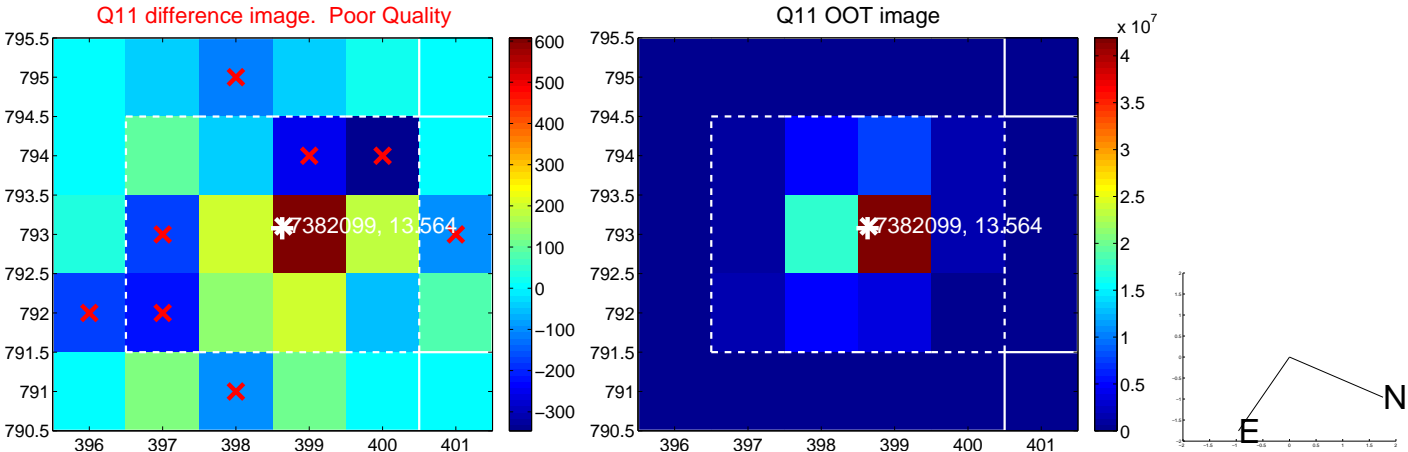
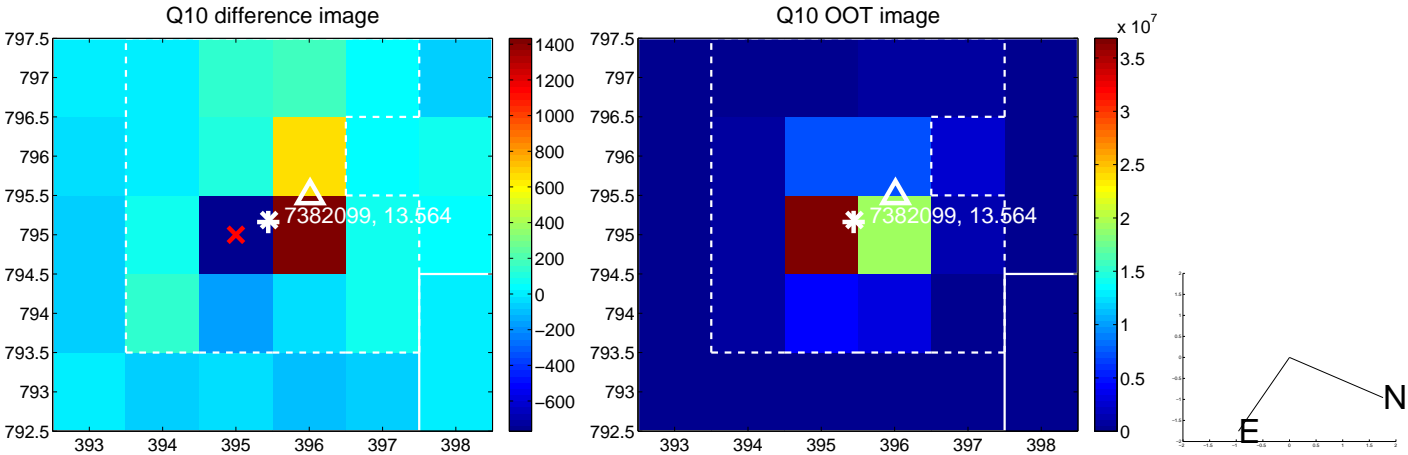
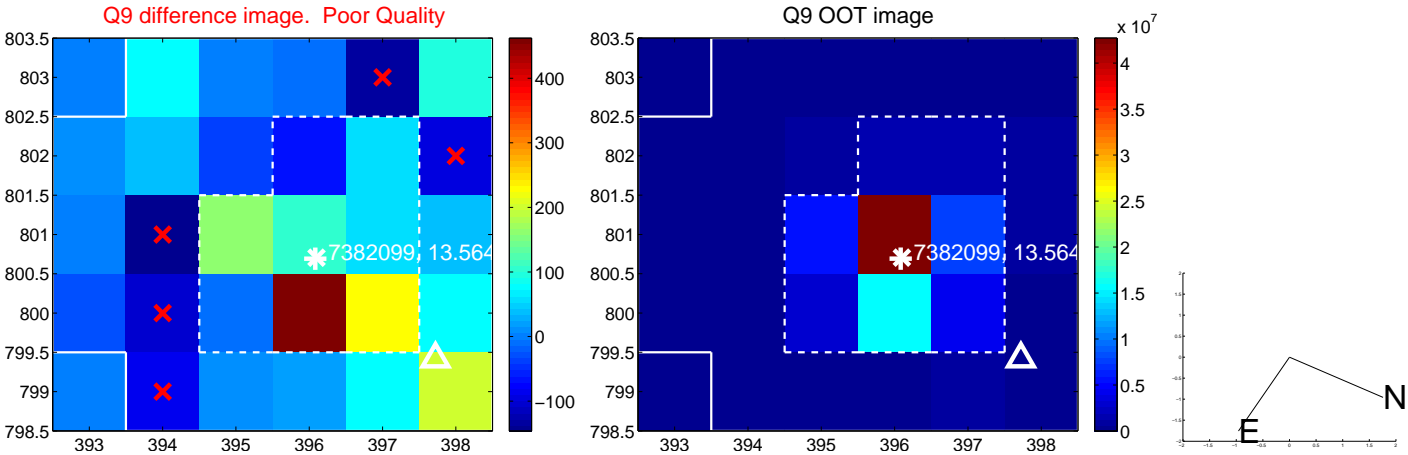
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



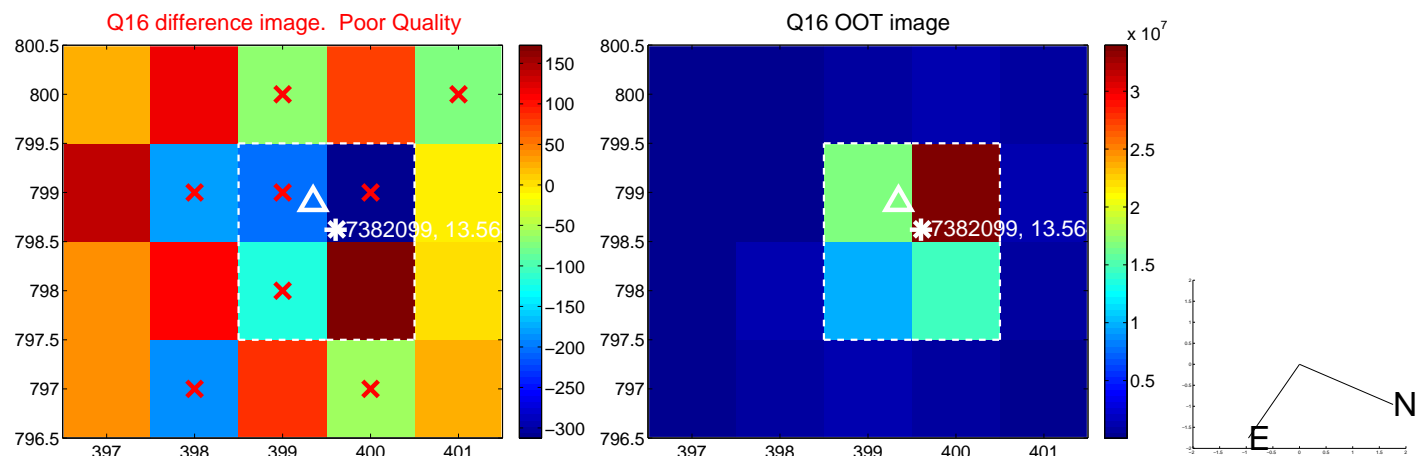
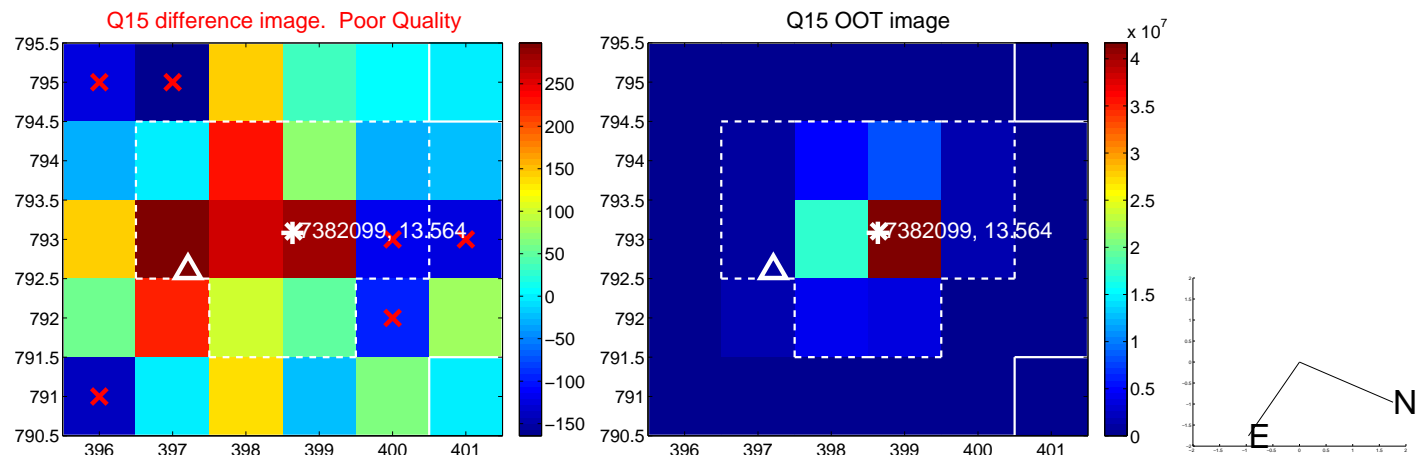
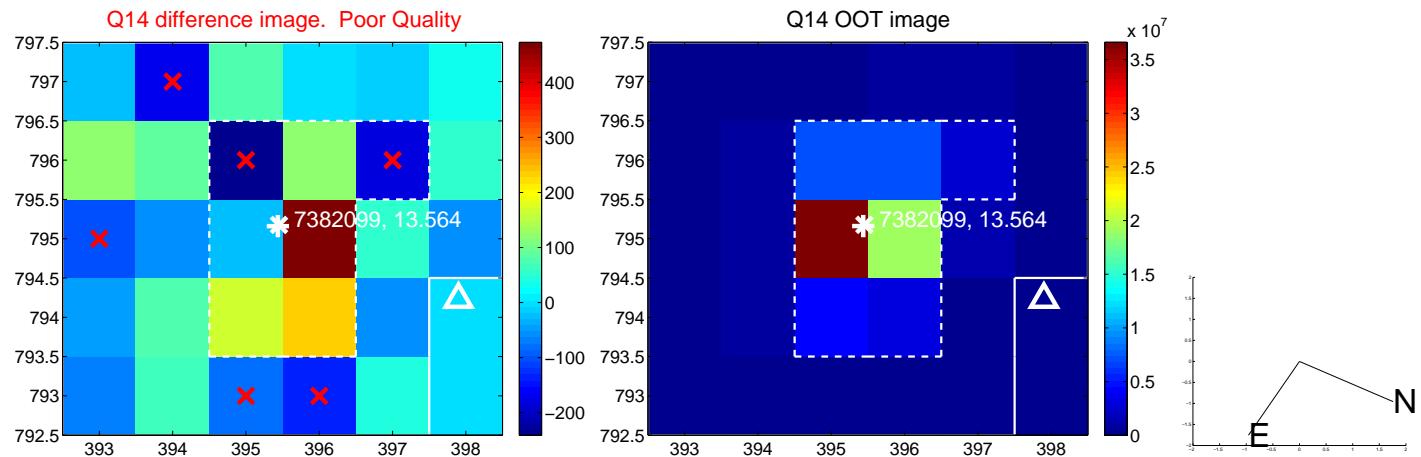
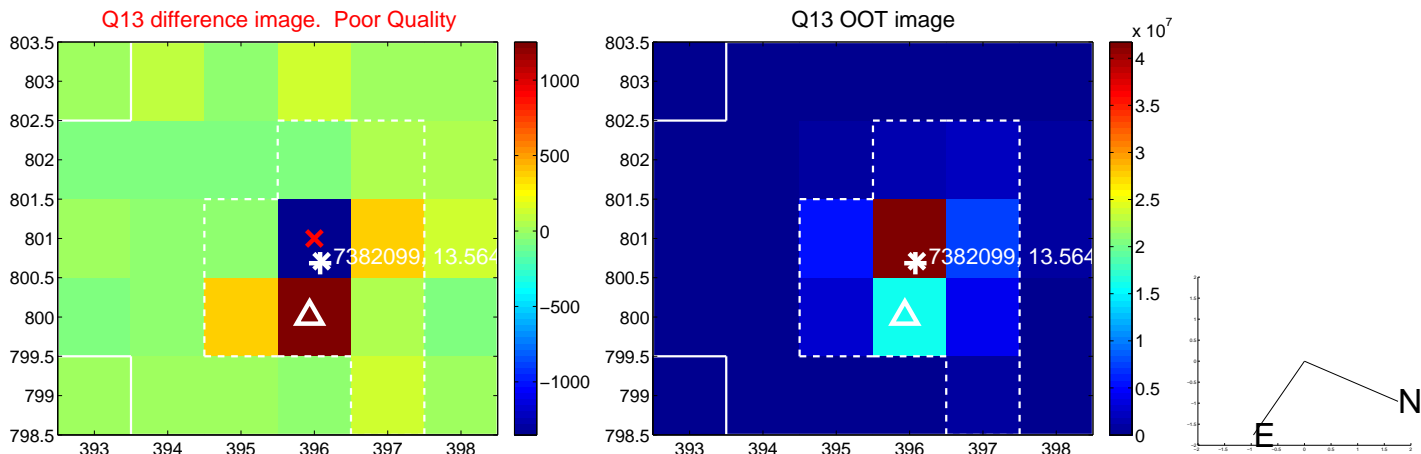
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



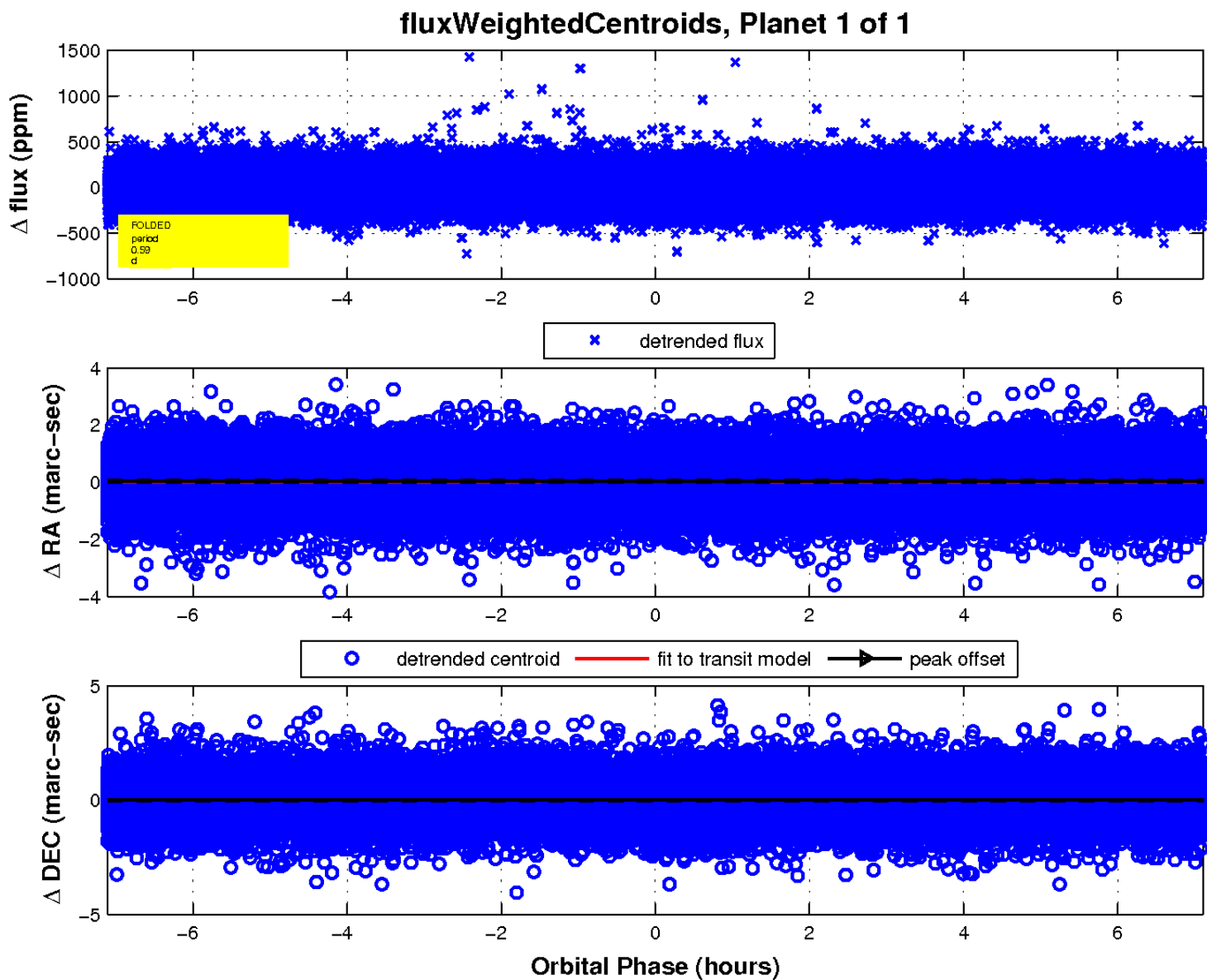
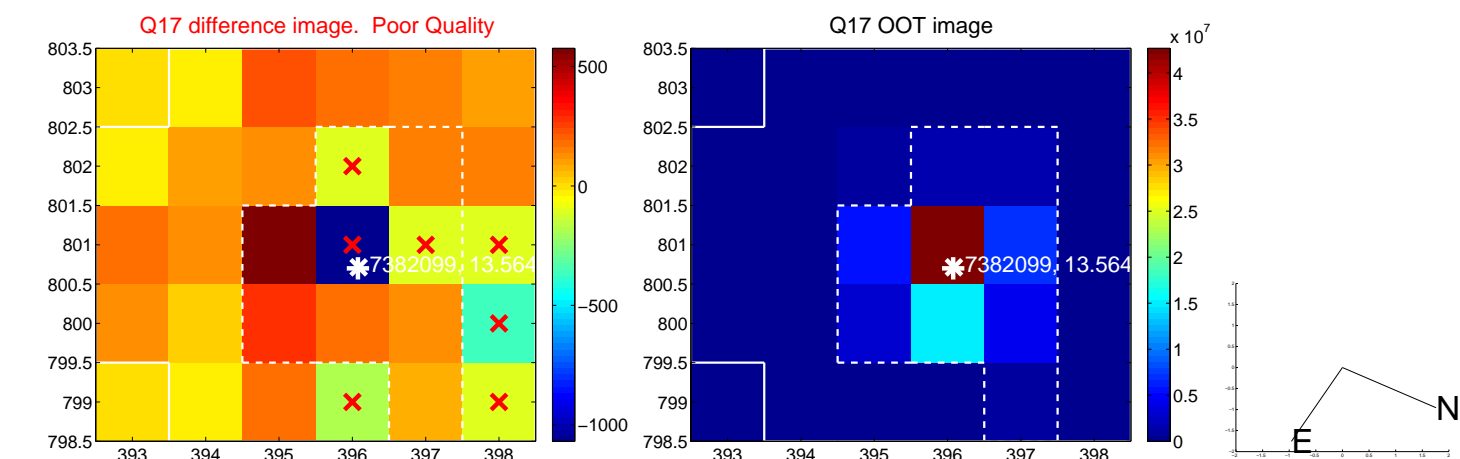
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

