

KIC 001028018

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})
001028018-01	OBS	No	0.615074	131.684511	141.2	4.725	9.4	8.0	1.38	5543	1.77	8397.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001028018-01	OBS	FP	0.00	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.

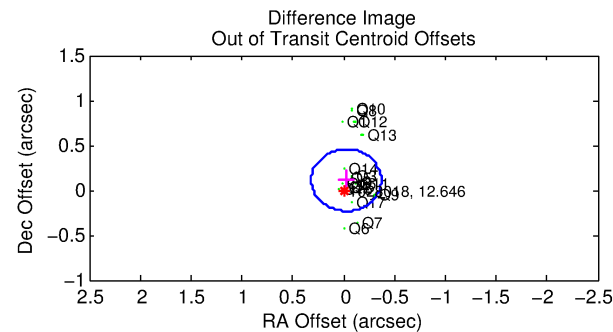
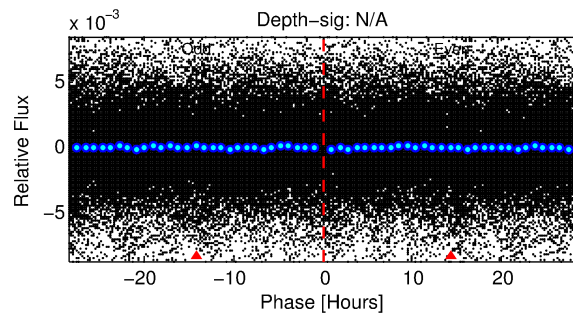
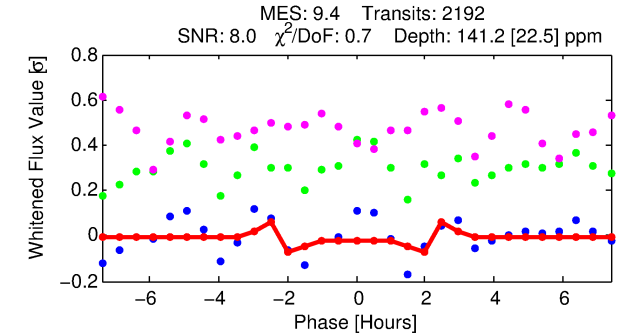
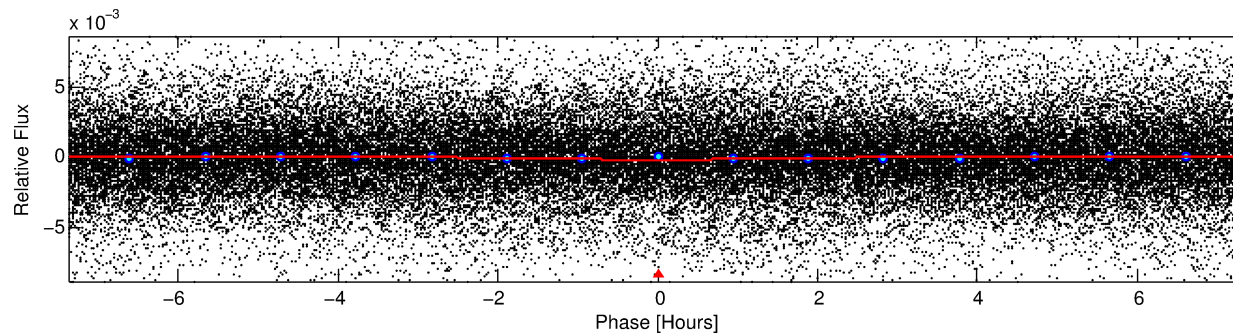
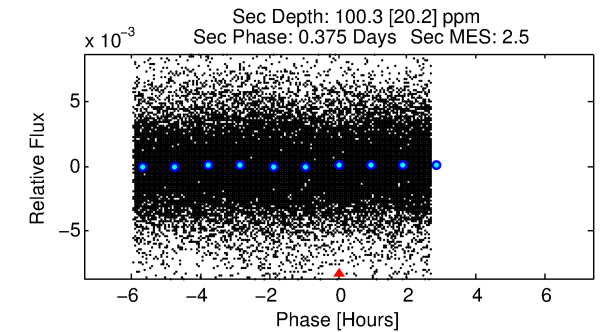
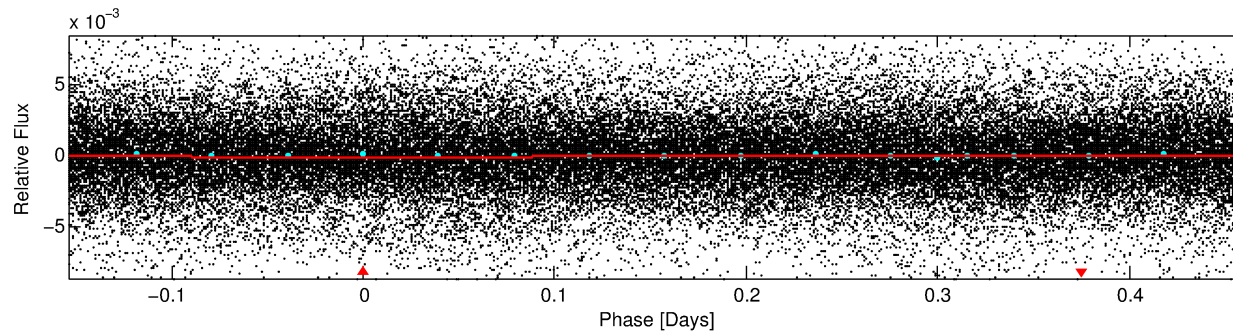
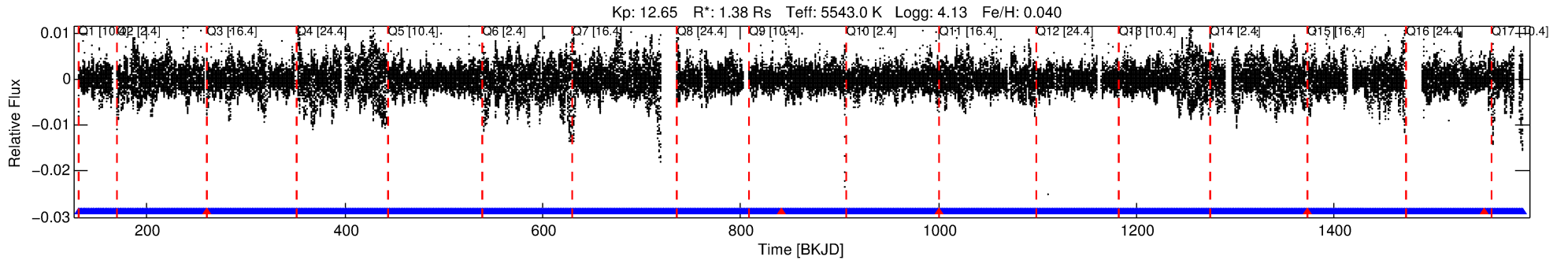
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001028018-01

No Significant Match Found

DV One-Page Summary

KIC: 1028018 Candidate: 1 of 1 Period: 0.615 d



DV Fit Results:

Period = 0.61507 [0.00001] d
Epoch = 131.6845 [0.0014] BKJD
Rp/R* = 0.0118 [0.0032]
a/R* = 1.10 [0.23]
b = 0.74 [0.72]
Seff = 8397.24 [3222.95]
Teff = 2441 [234] K
Rp = 1.77 [0.65] Re
a = 0.0138 [0.0032] AU
Ag = 3.35 [2.34] [1.01σ]
Teffp = 5107 [749] K [3.40σ]

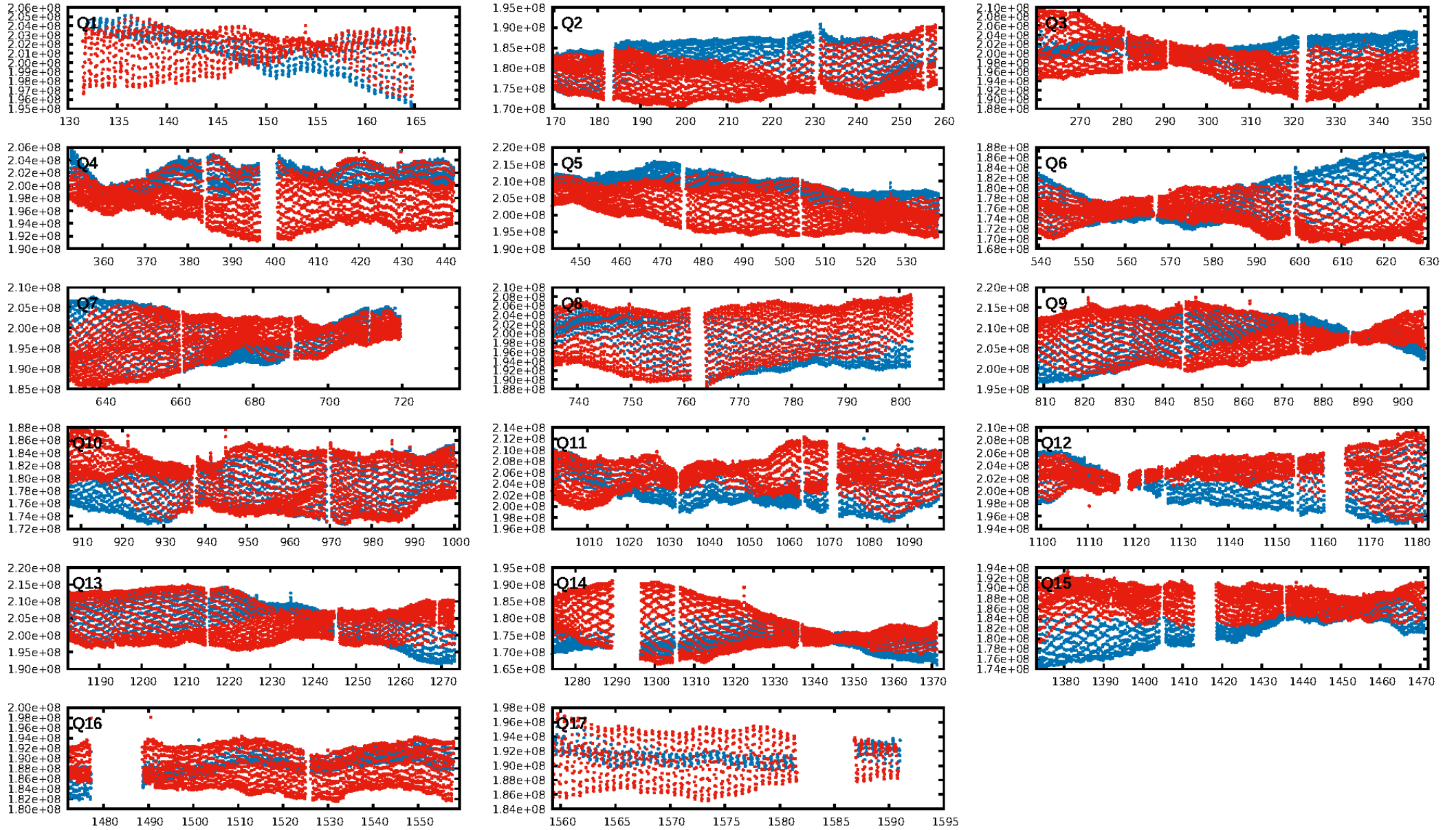
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2088/2093]
GhostDiagnostic-chr: 0.8659
Centroid-sig: 0.0%
Centroid-so: 0.320 arcsec [2.76σ]
OotOffset-rm: 0.113 arcsec [0.99σ]
KicOffset-rm: 0.207 arcsec [1.81σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

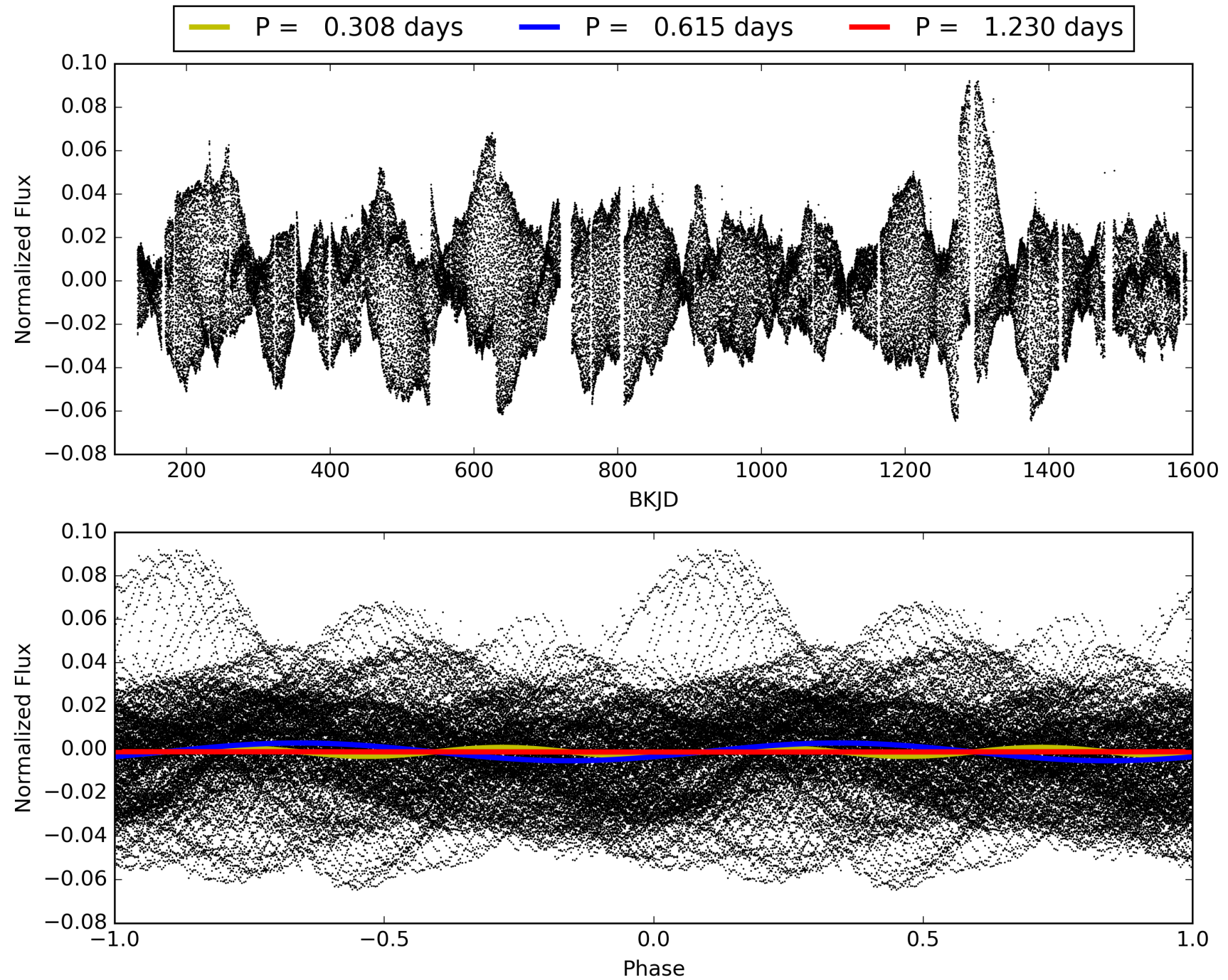
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:29:05 Z

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

TCE 001028018-01, PDC Light Curves

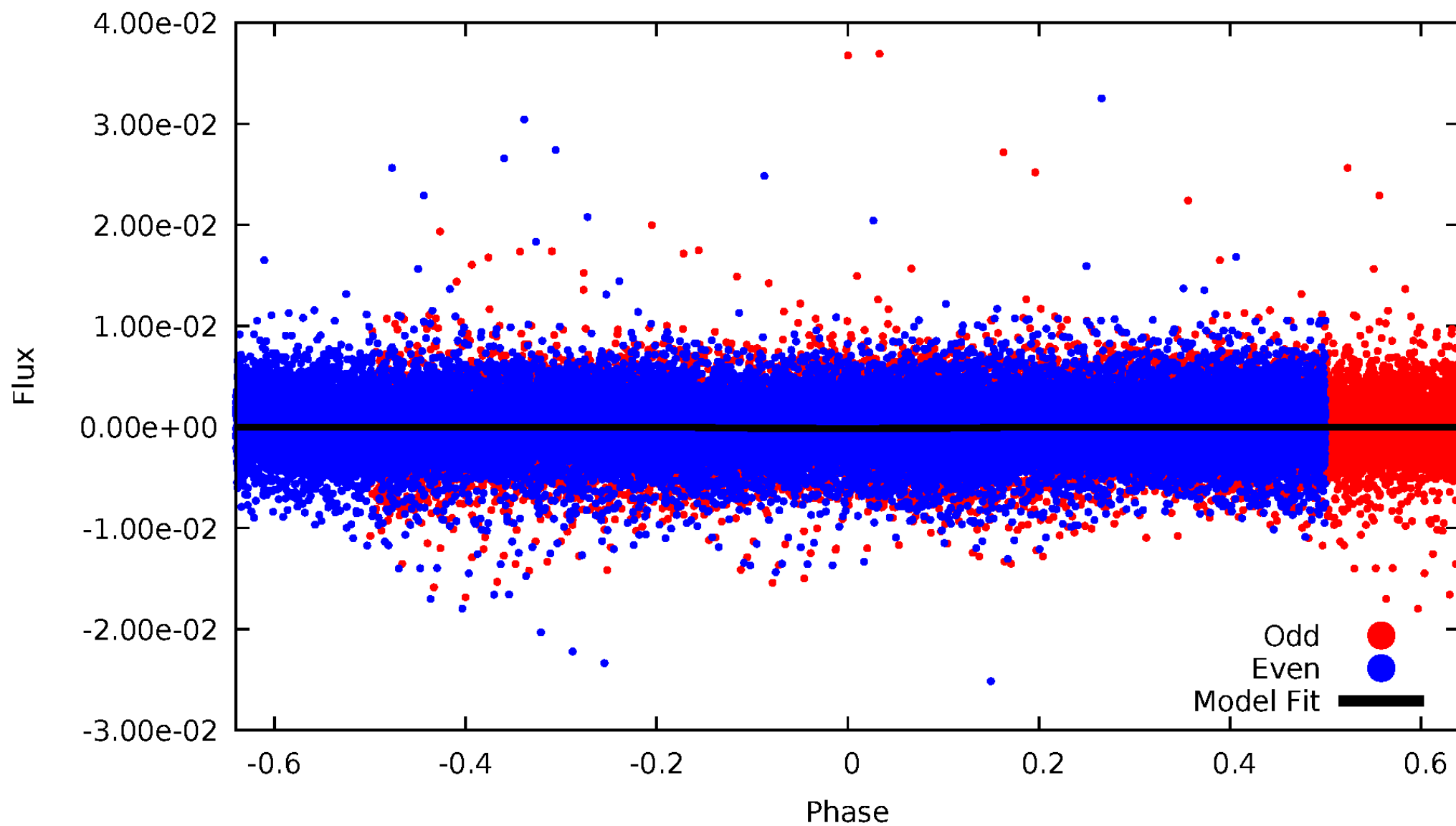


TCE 001028018-01



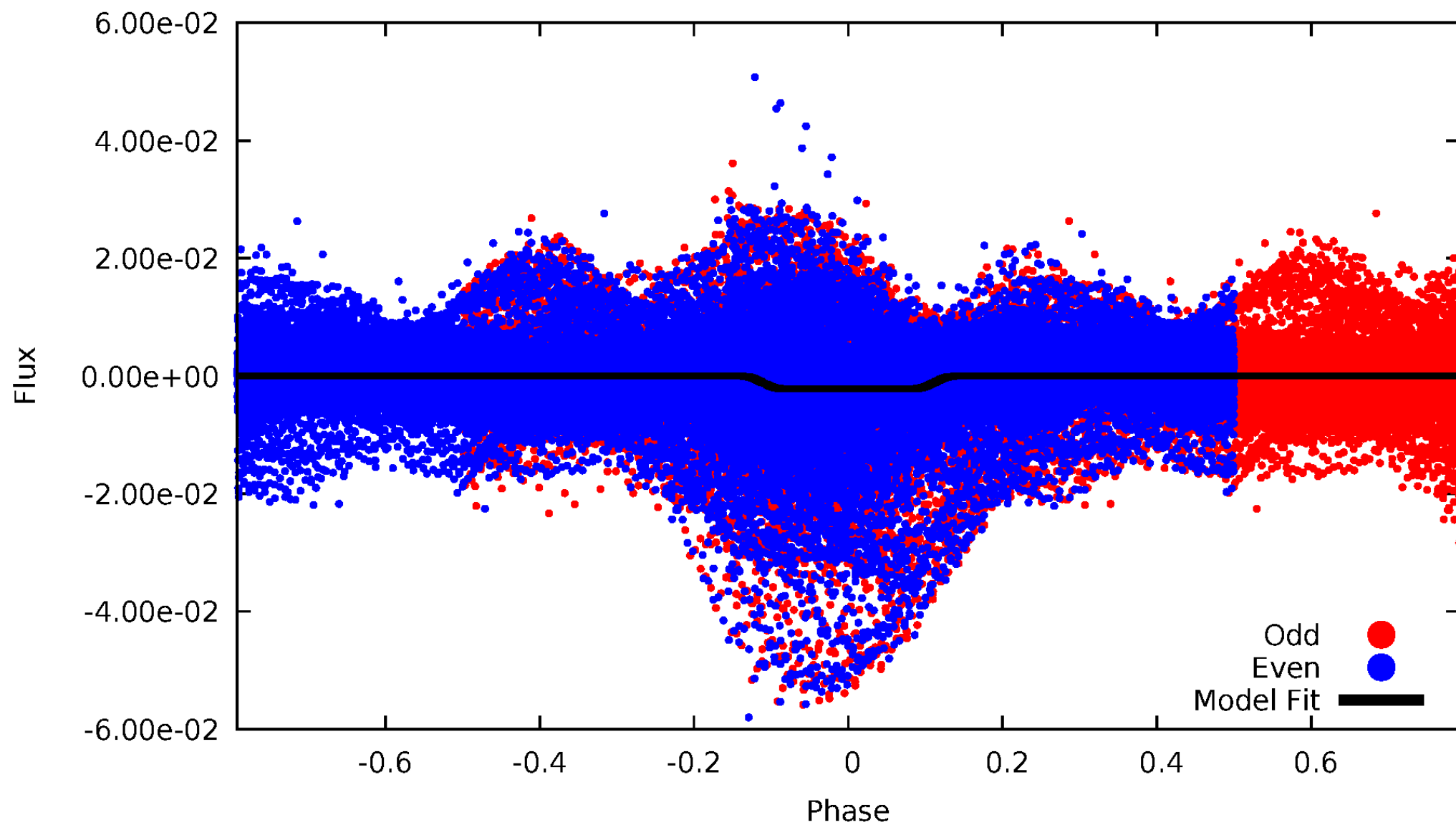
DV Odd/Even

TCE 001028018-01



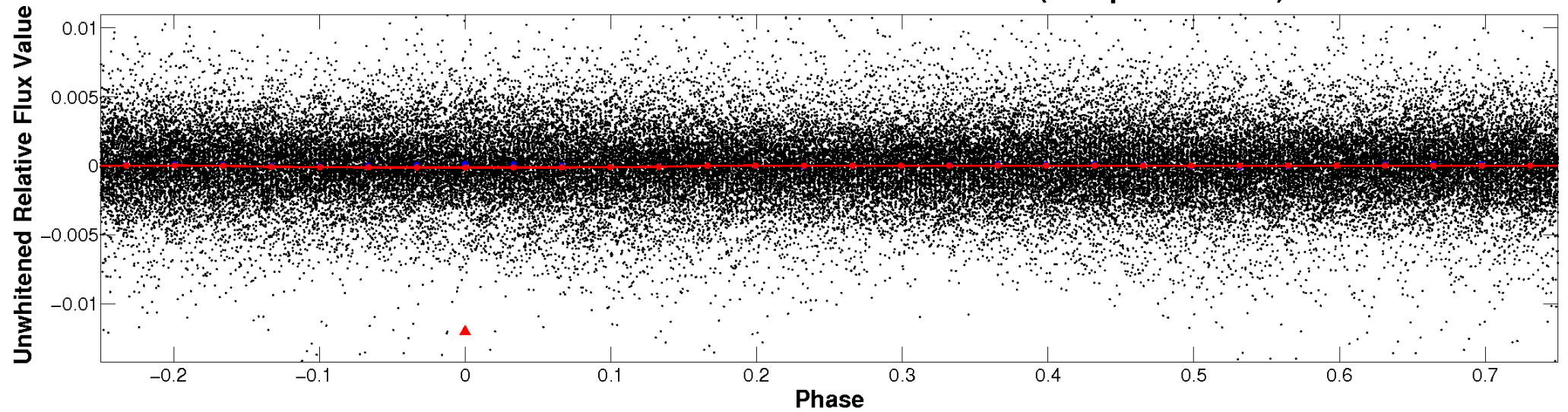
ALT Odd/Even

TCE 001028018-01

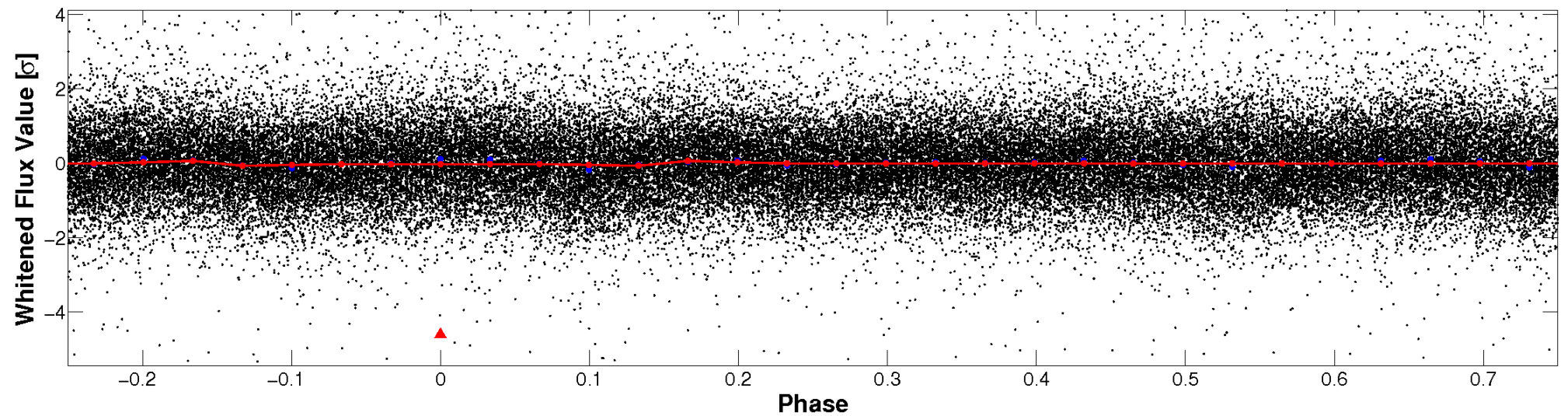


Non-Whitened Vs. Whitened Light Curve

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

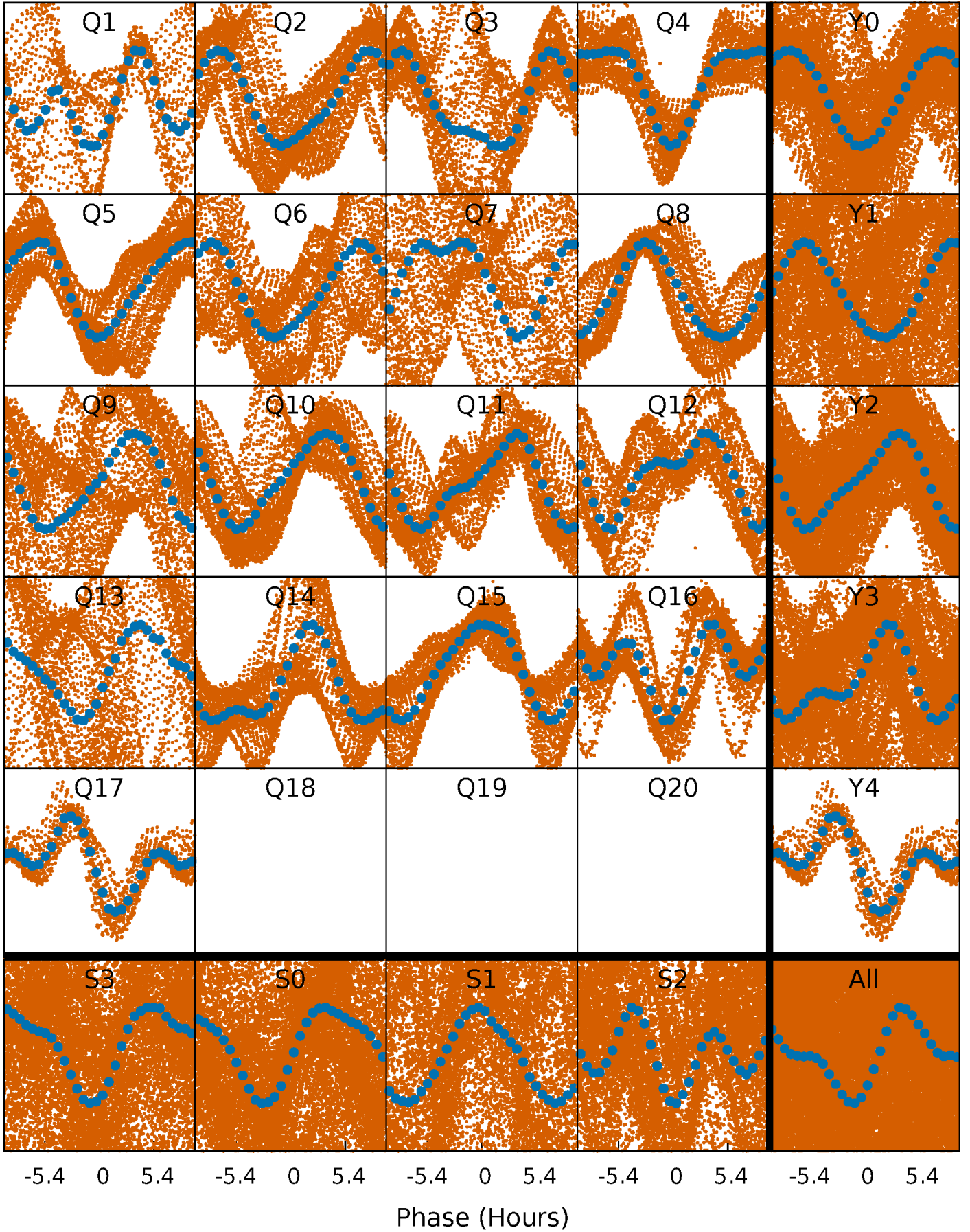


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



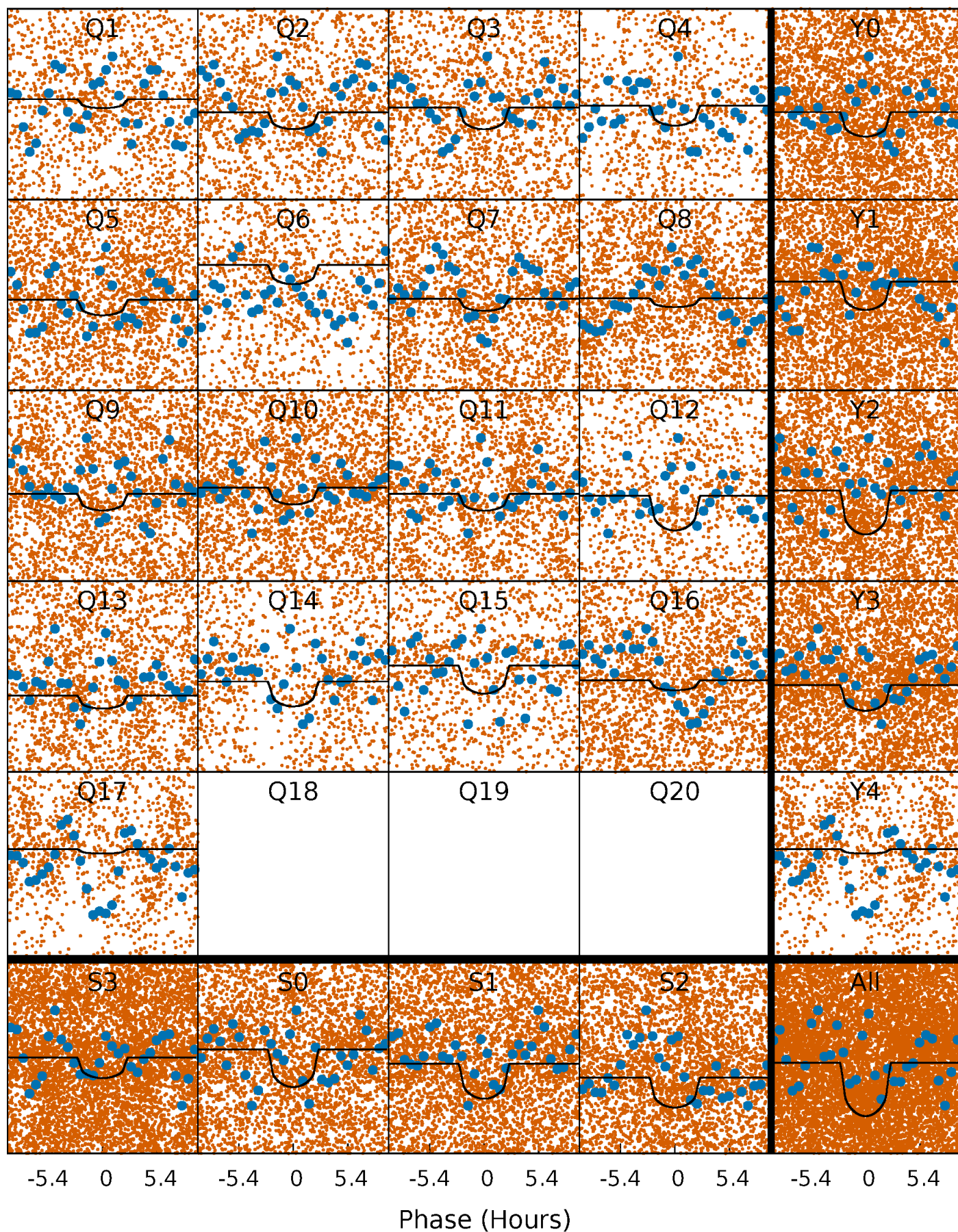
PDC Quarter-Phased Transit Curves

TCE 001028018-01 P= 0.615074 Days $T_0=131.684511$ (BKJD)



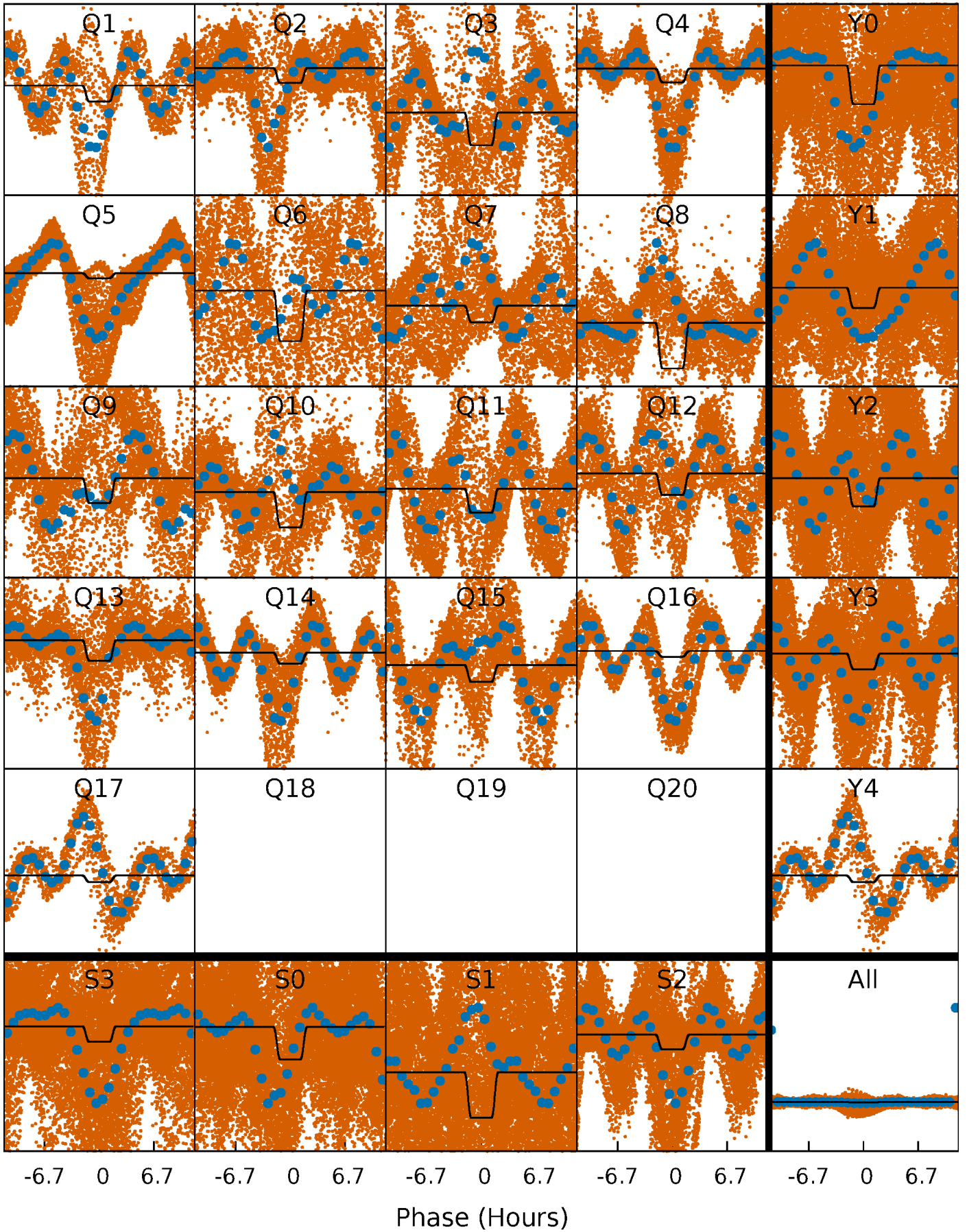
DV Quarter-Phased Transit Curves

TCE 001028018-01 P= 0.615074 Days $T_0=131.684511$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

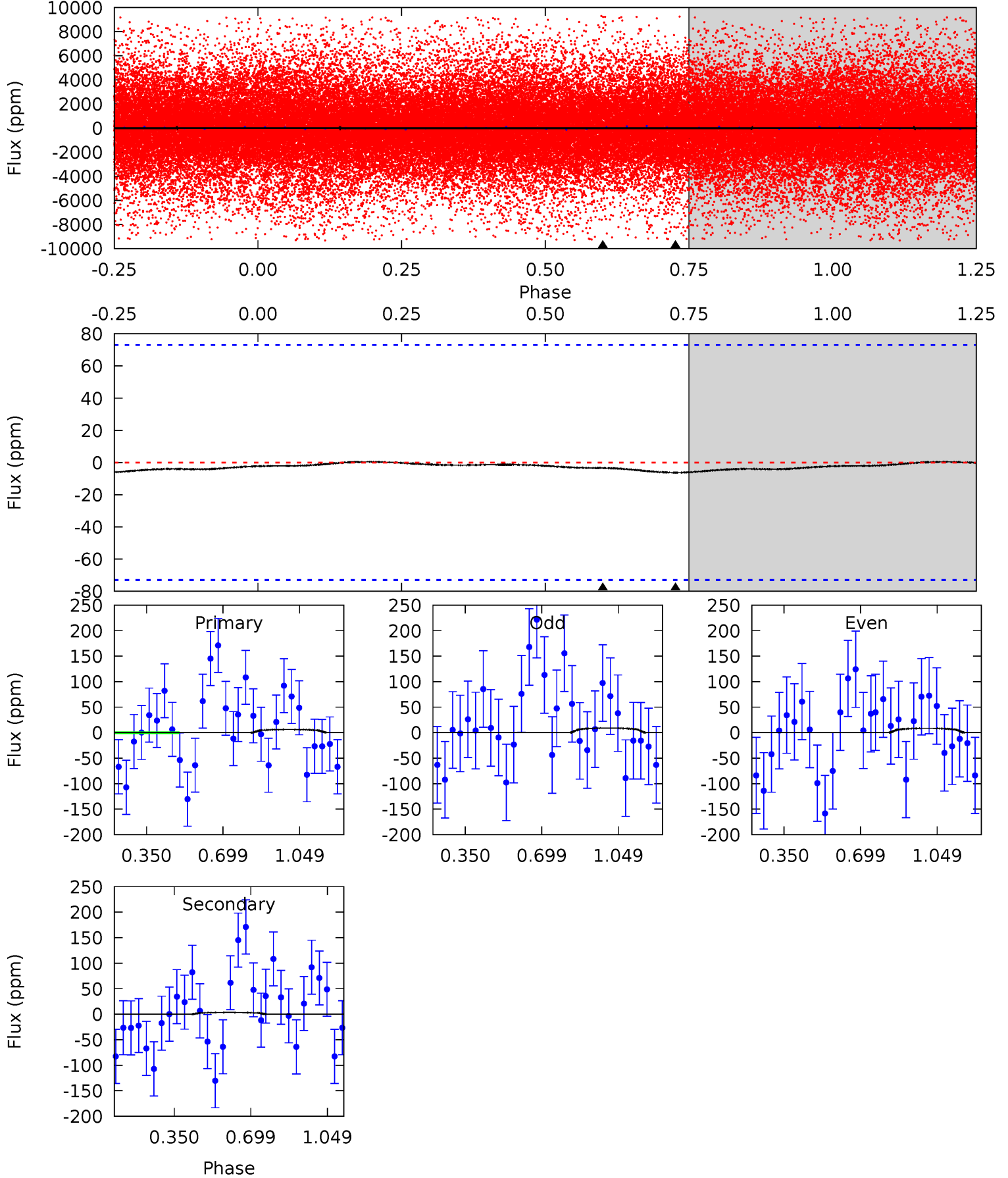
TCE 001028018-01 P= 0.615060 Days $T_0=131.689422$ (BKJD)



DV Model-Shift Uniqueness Test

001028018-01, P = 0.615074 Days, E = 131.069437 Days

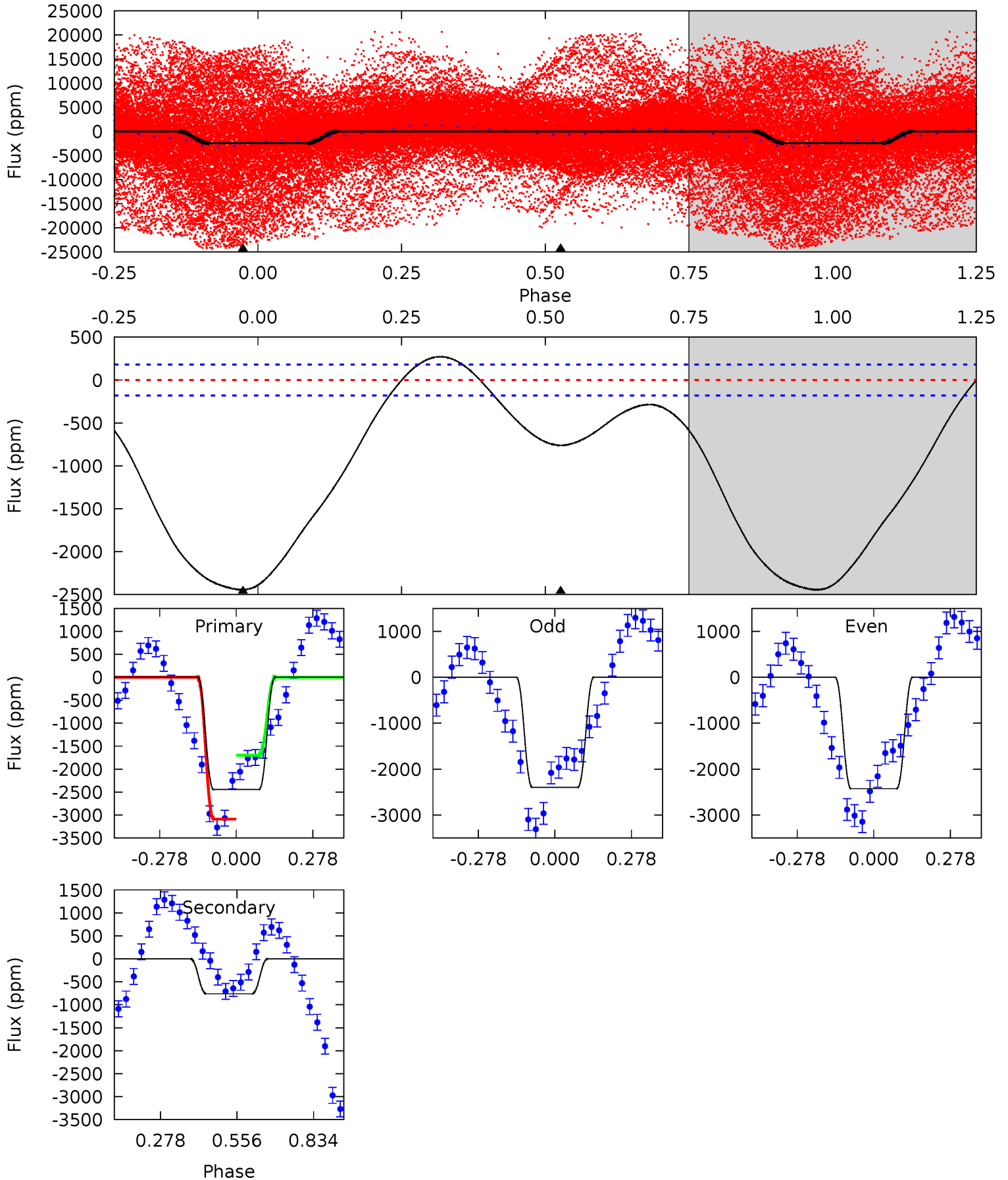
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.37	0.20	0	0	4.29	0.94	0.04	0.37	0.37	0.20	0.20	0.02	0.00	0.07	0.19



Alt Model-Shift Uniqueness Test

001028018-01, P = 0.615060 Days, E = 131.074362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.7	18.3	0	0	4.35	1.09	5.03	58.7	58.7	18.3	18.3	0.36	1.66	0.10	0



Stellar Parameters For KIC 001028018

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5543^{+83}_{-66}	$4.129^{+0.224}_{-0.112}$	$0.040^{+0.150}_{-0.100}$	$1.378^{+0.220}_{-0.330}$	$0.930^{+0.073}_{-0.049}$	$0.501^{+0.578}_{-0.148}$
	+1%/-1%	+5%/-3%	+375%/-250%	+16%/-24%	+8%/-5%	+115%/-30%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 001028018-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 17	$1.74^{+0.54}_{-0.53}$	3384^{+177}_{-215}	-3100^{+6659}_{-770}	$0.108^{+0.676}_{-0.585}$
Alt.	-761 ± 42	$6.87^{+0.96}_{-0.95}$	3382^{+179}_{-214}	4295^{+158}_{-162}	$1.701^{+0.585}_{-0.386}$

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 $A_{obs} \gg 1.0$

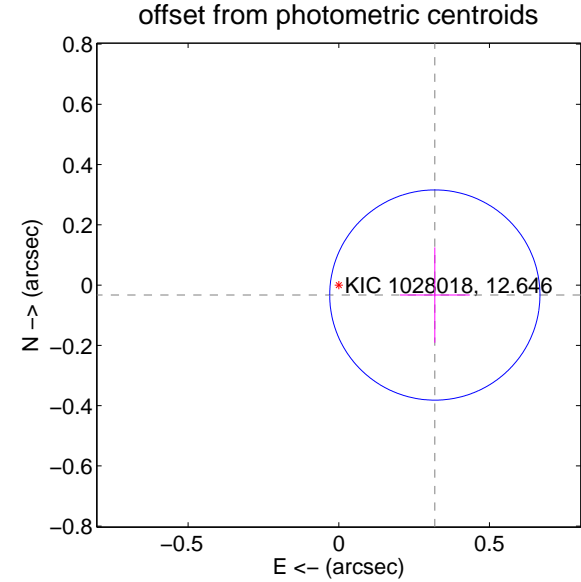
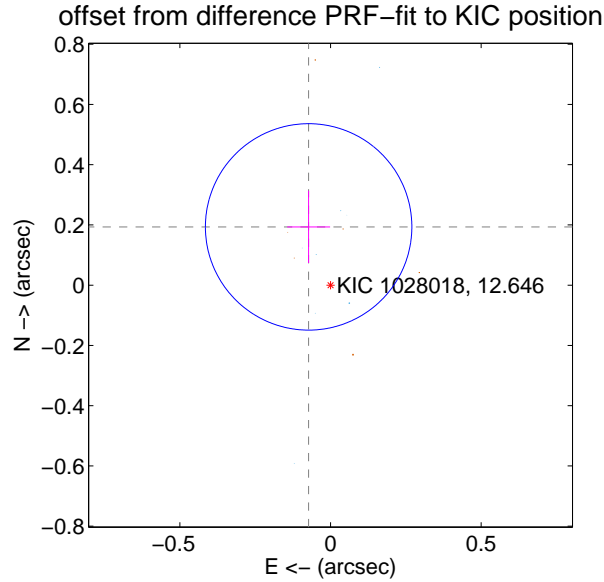
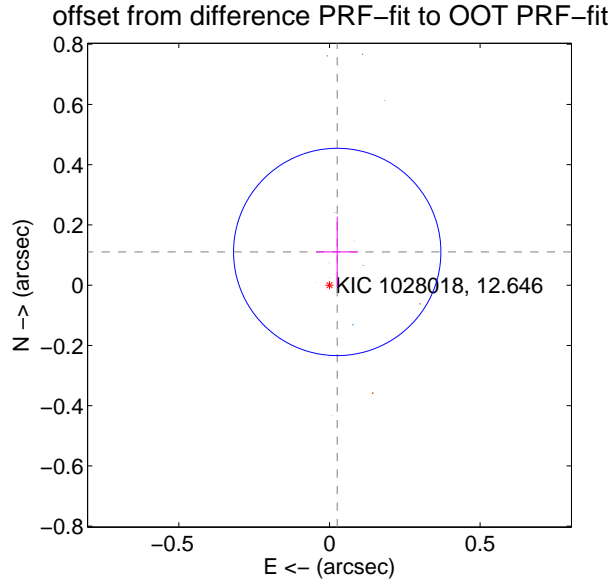
DV Centroid Data

Supplemental centroid analysis for 001028018-01. Kepler magnitude: 12.65. Transit SNR 7.99

There are 9 quarters with good PRF difference image offsets

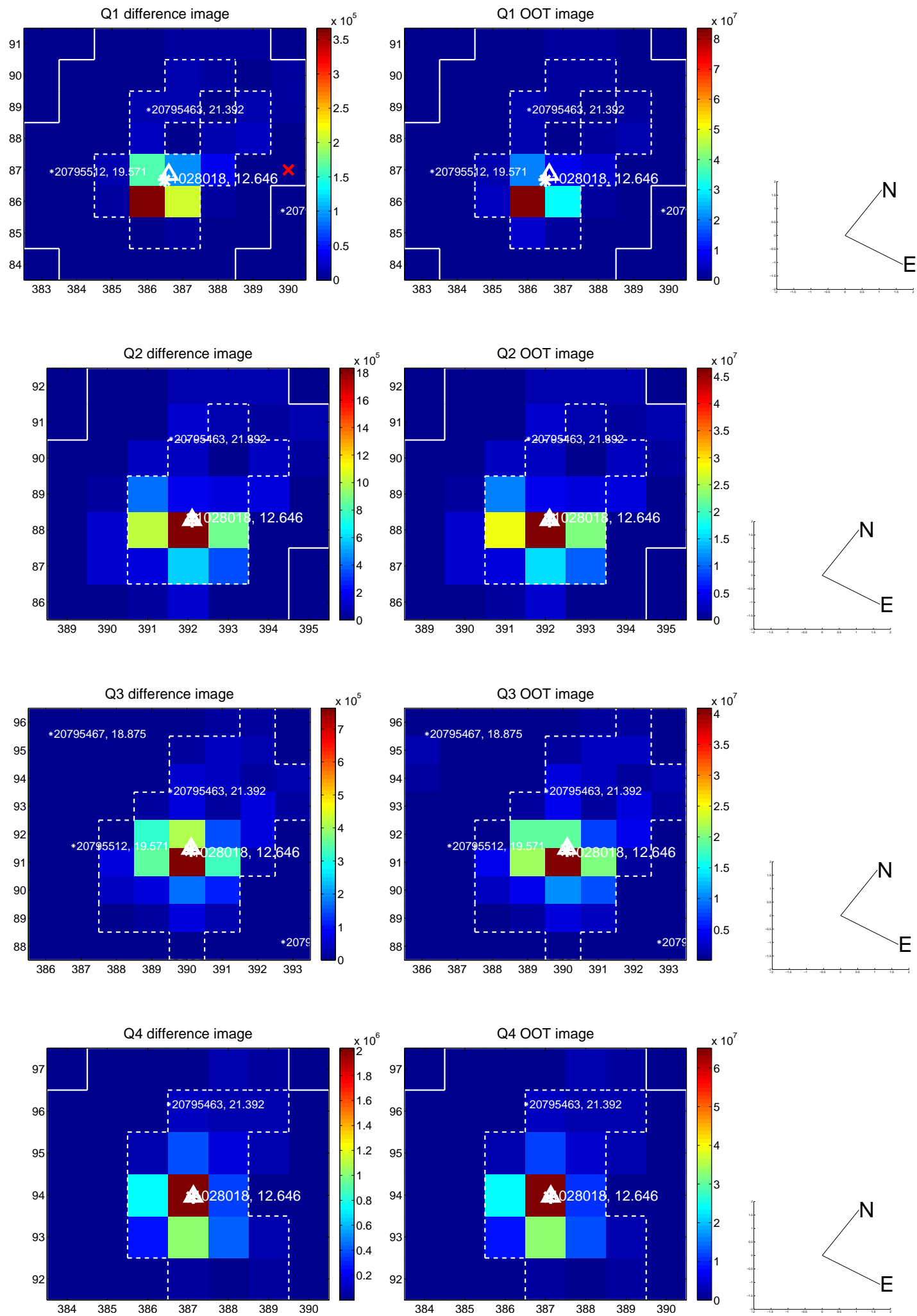
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.115	0.99	-0.026 ± 0.070	0.110 ± 0.117
PRF-fit source offset from KIC position	0.207 ± 0.114	1.81	0.073 ± 0.071	0.193 ± 0.120
photometric centroid source offset	0.32 ± 0.12	2.76	-0.32 ± 0.12	-0.03 ± 0.16

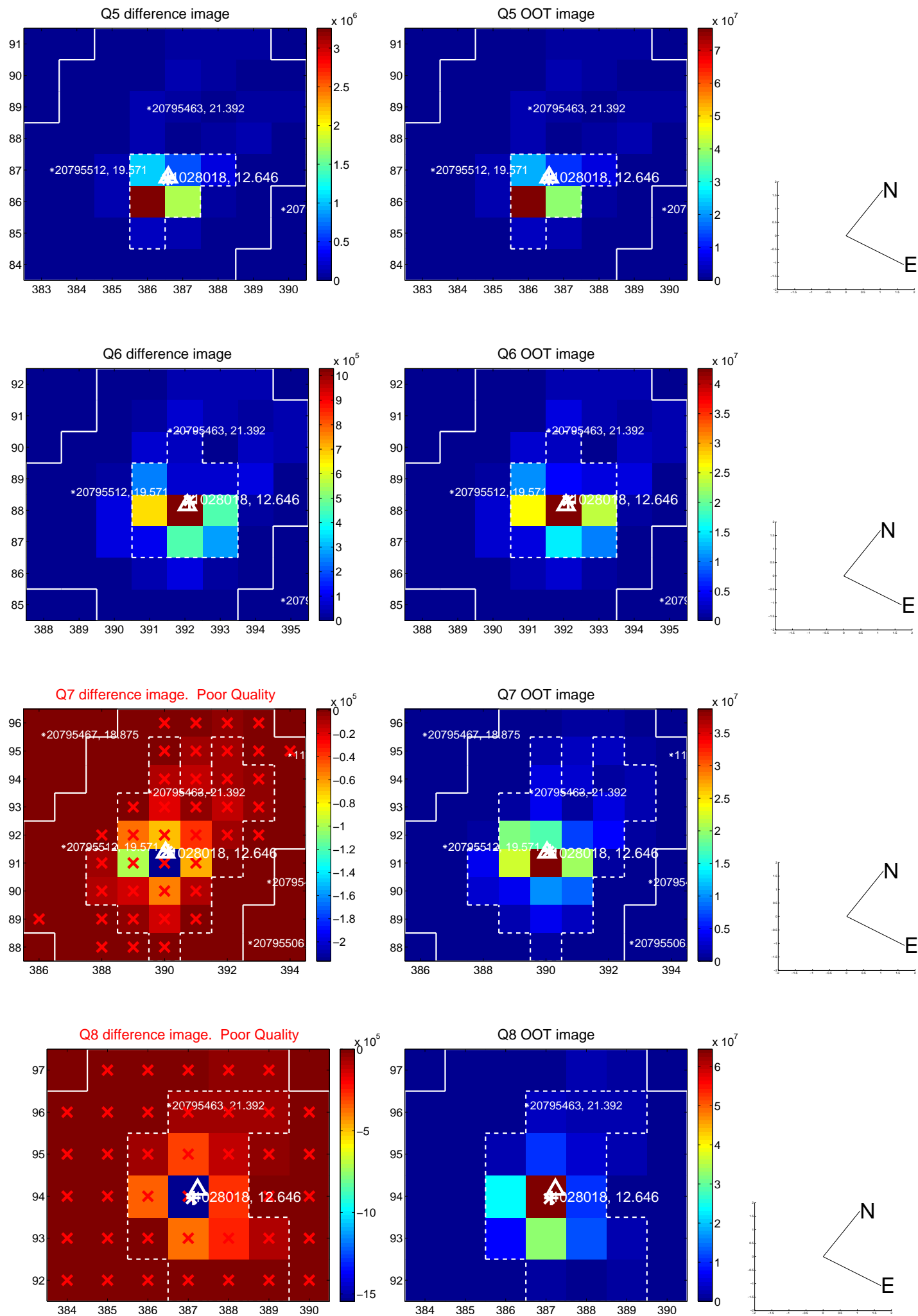


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

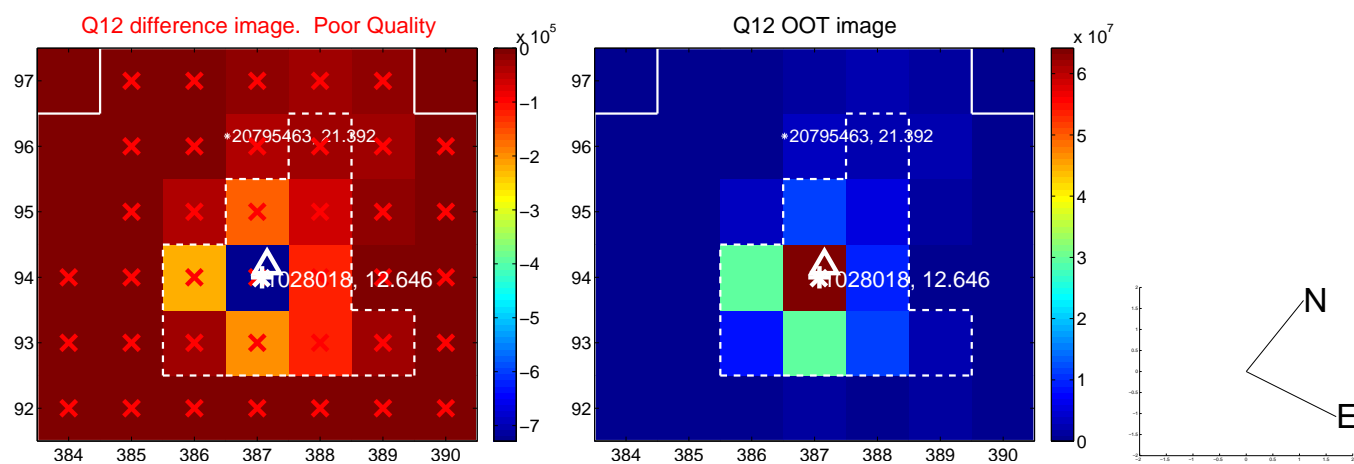
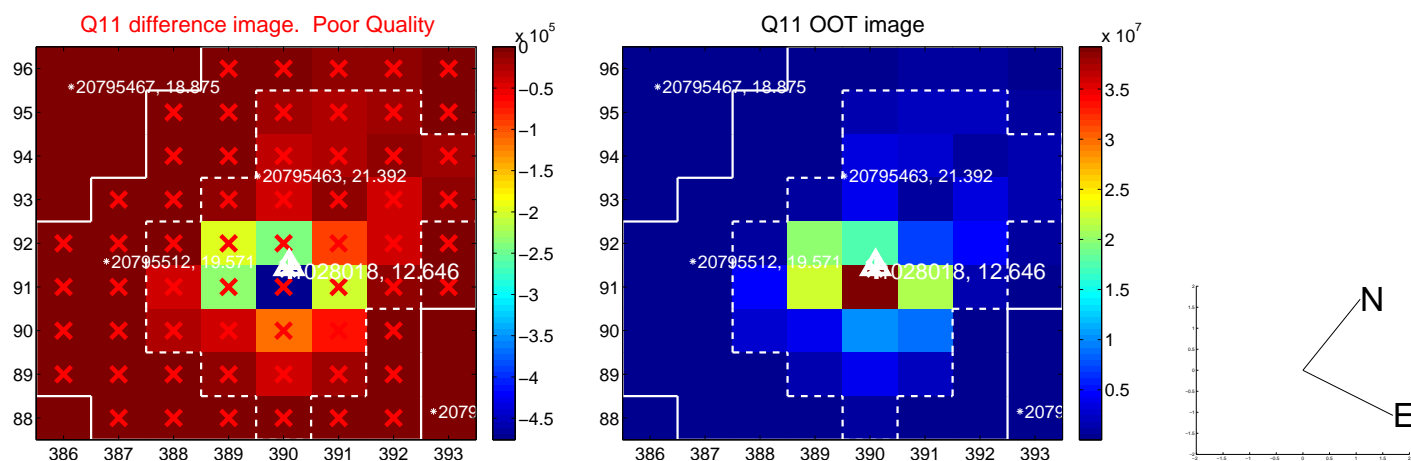
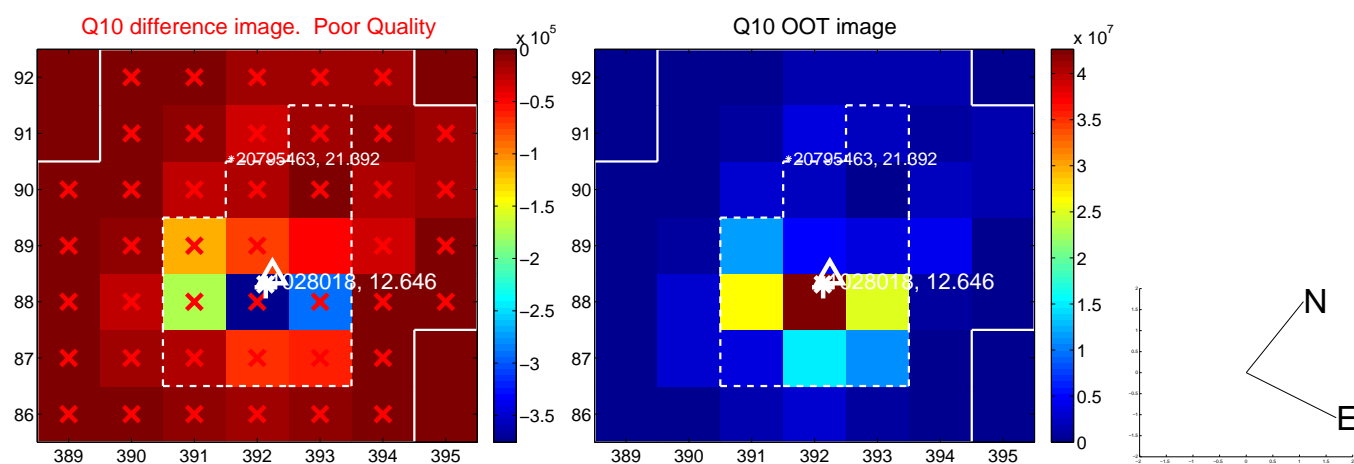
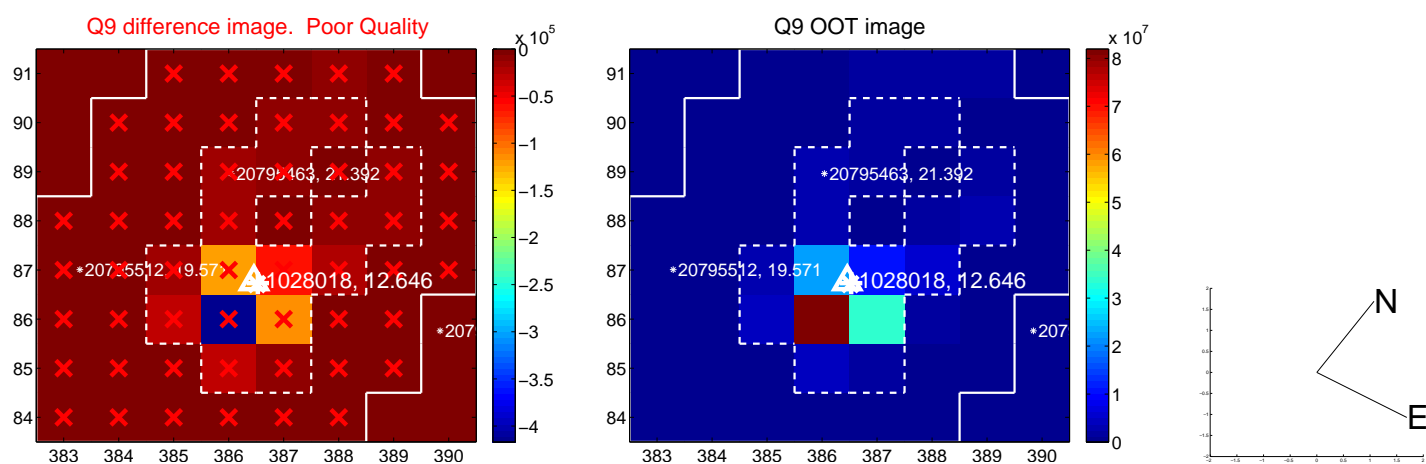
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



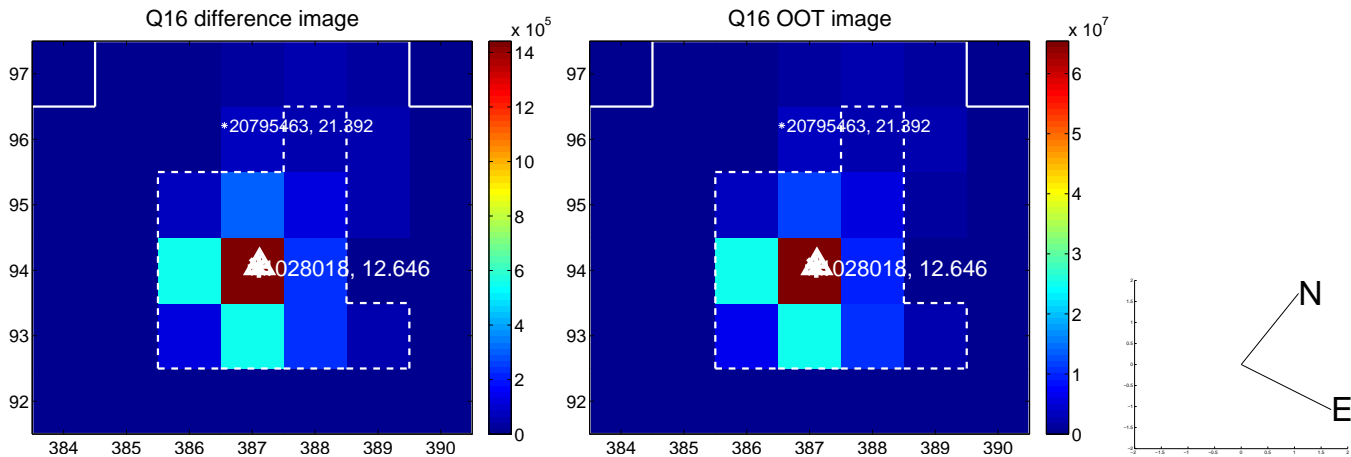
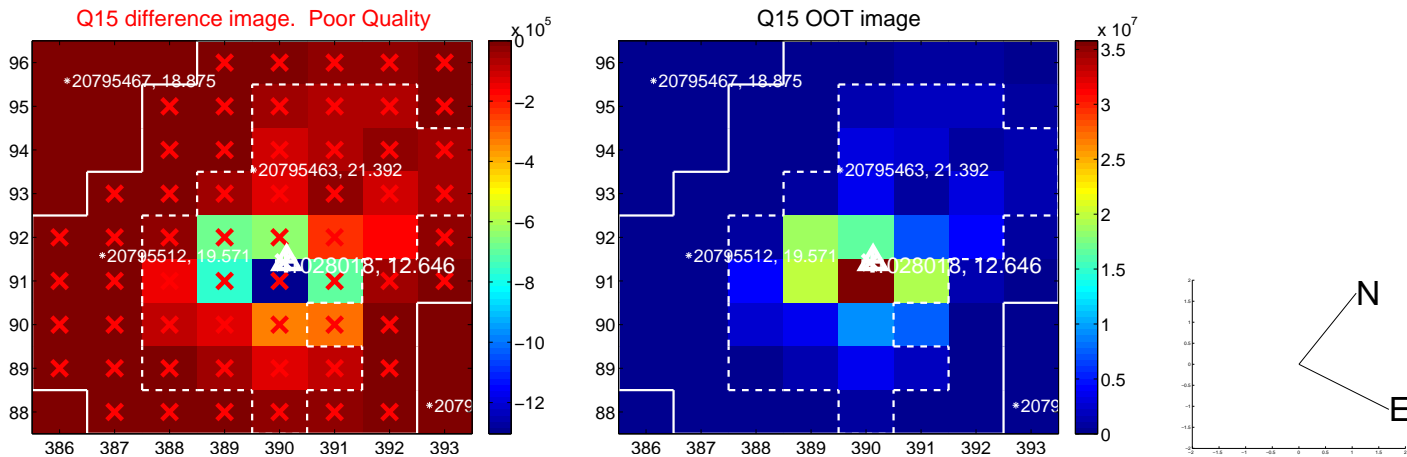
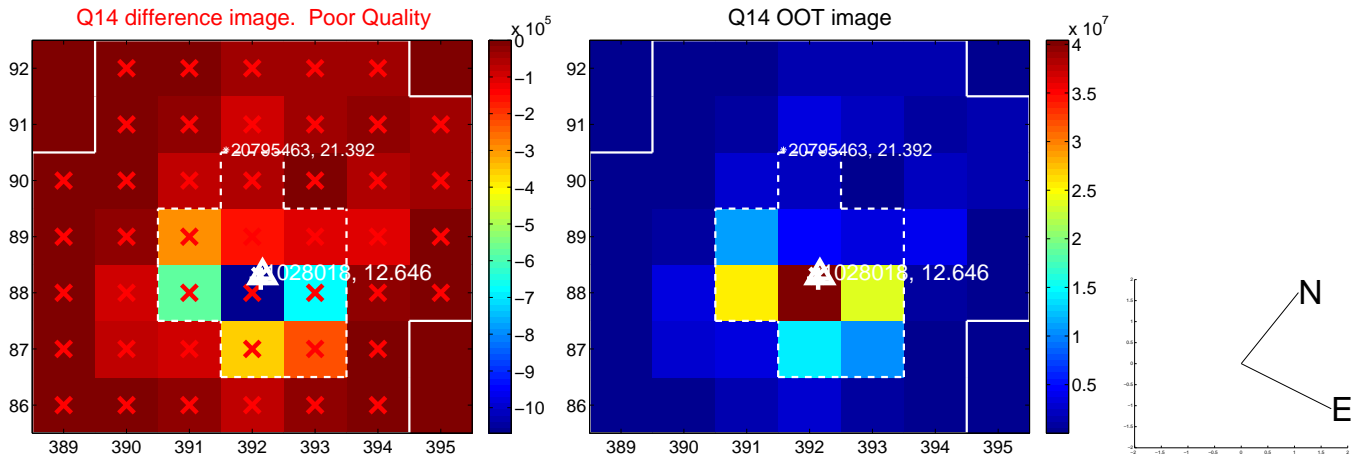
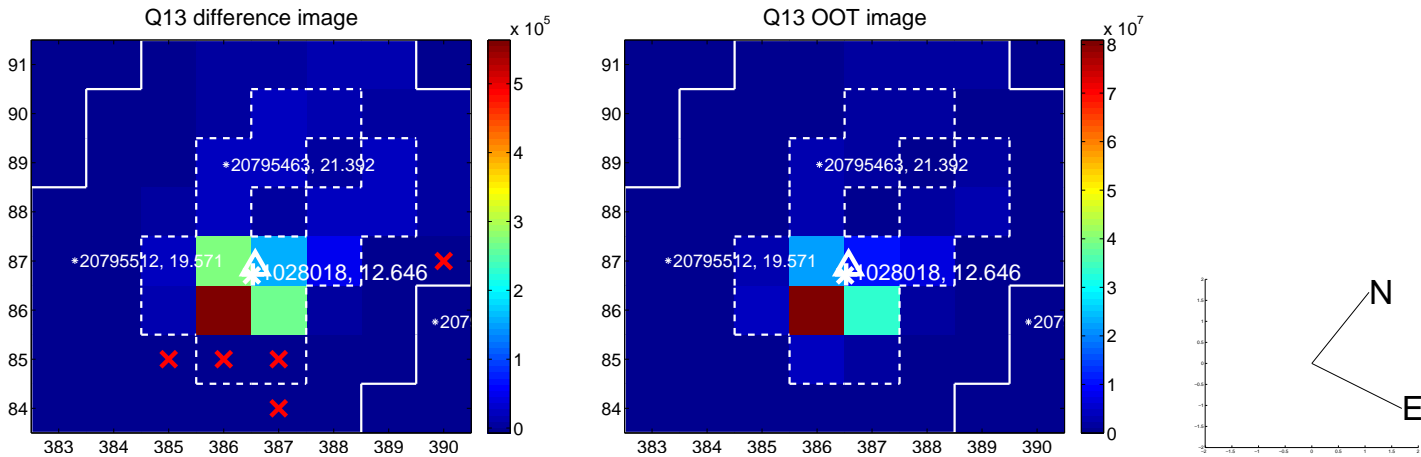
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



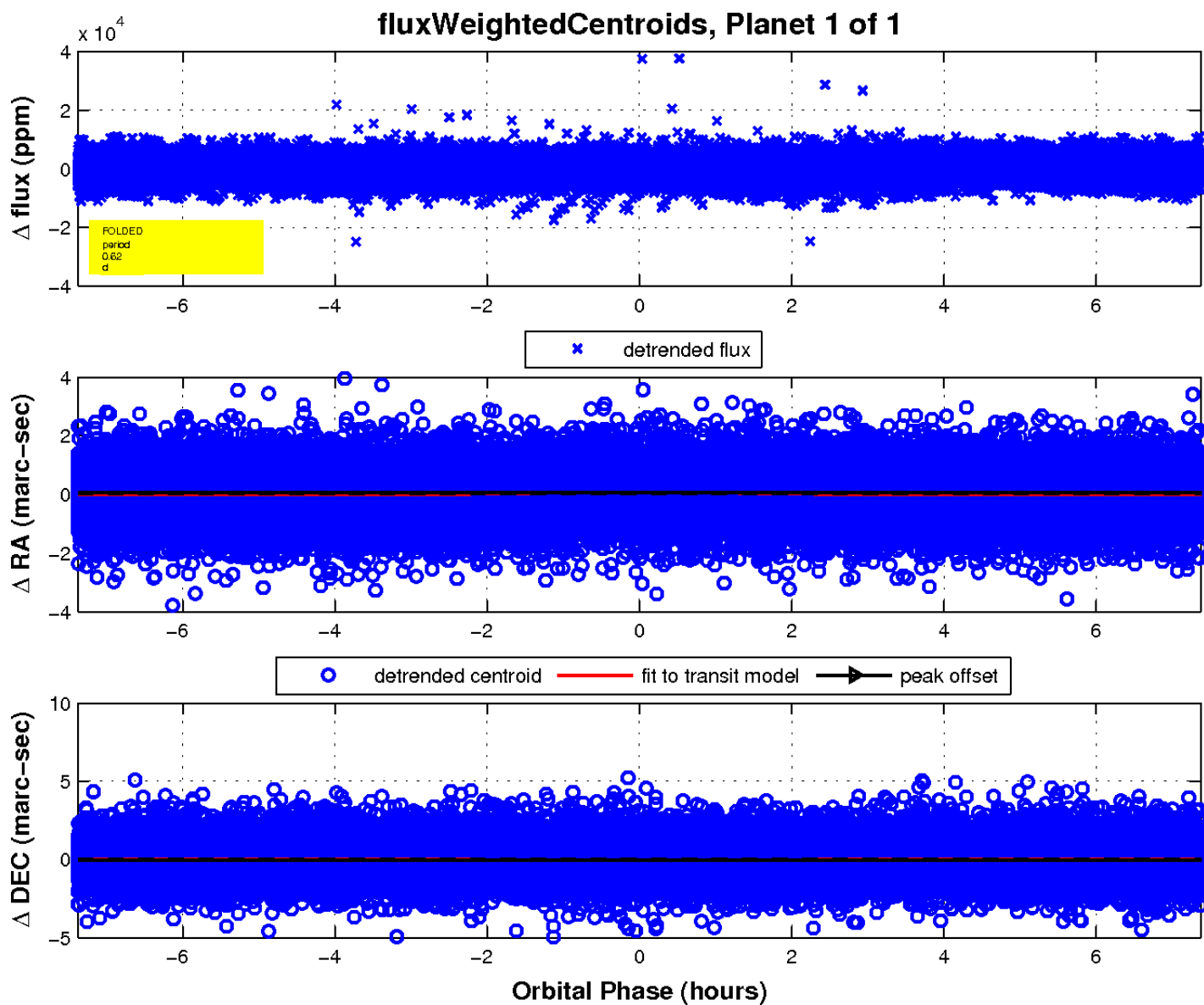
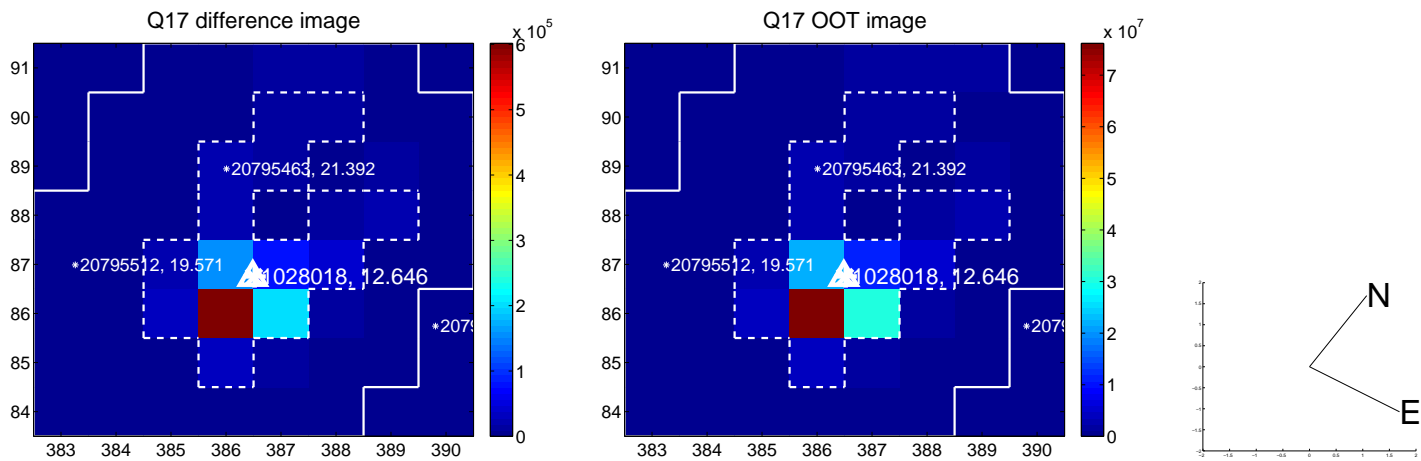
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UKIRT Image

Declination

