

KIC 007596240

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})
007596240-01	OBS	4295.01	13.399726	131.846877	166.7	3.493	11.5	12.4	1.15	6401	1.74	145.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007596240-01	OBS	PC	1.00	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.

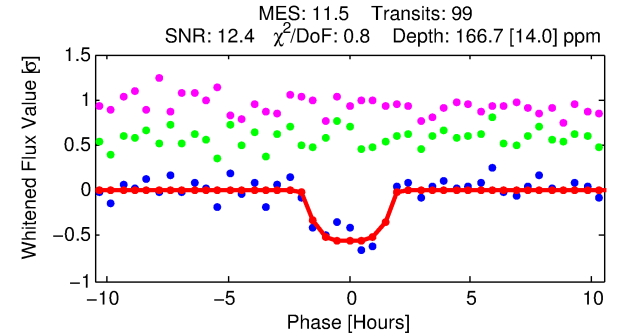
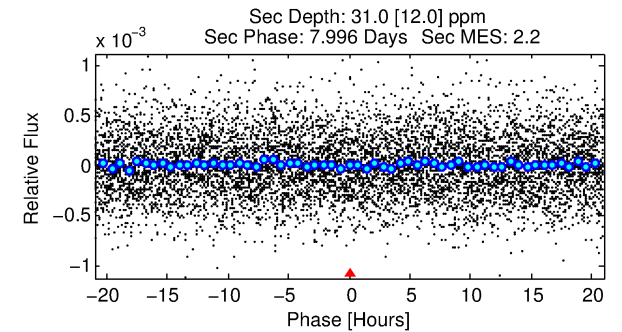
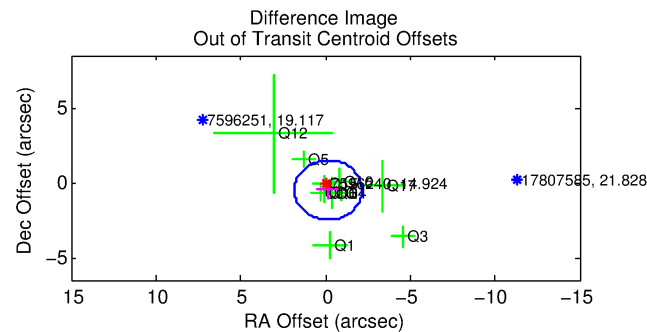
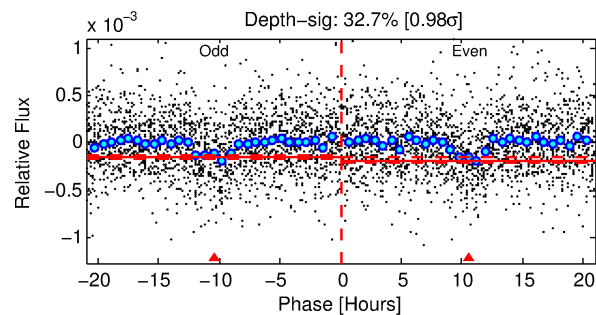
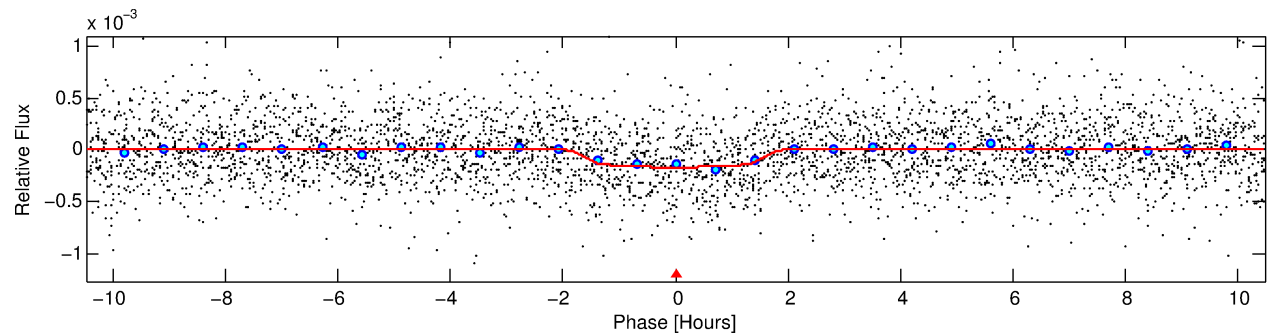
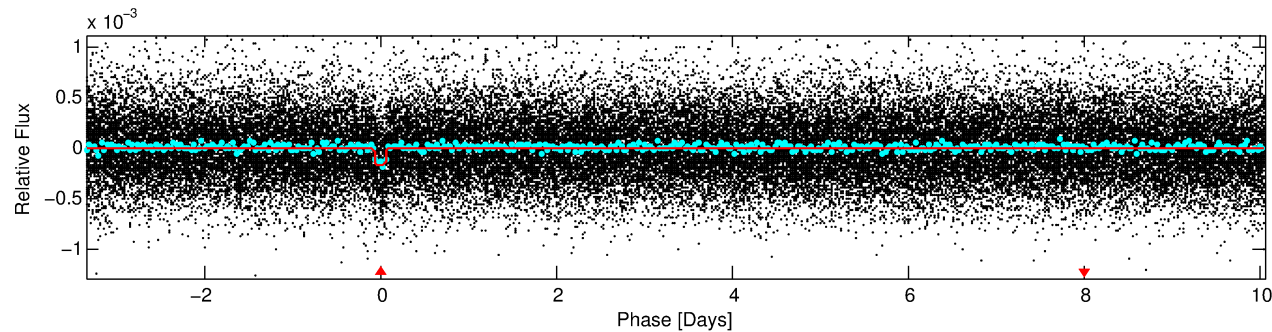
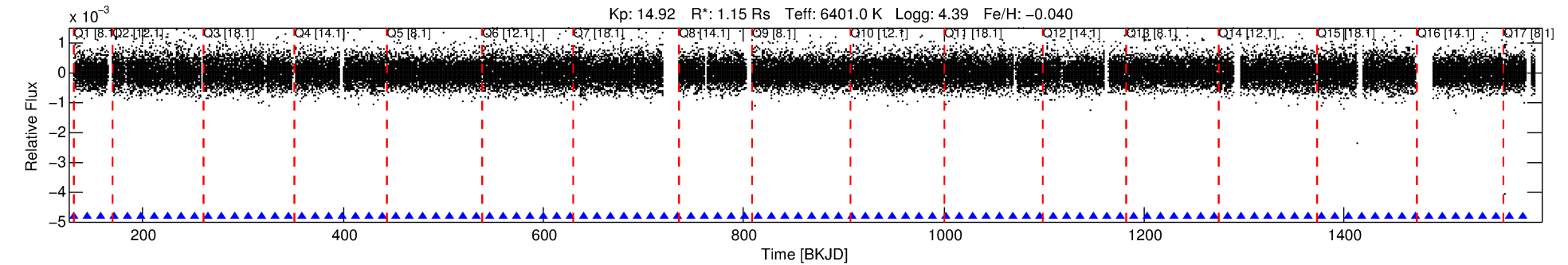
Ephemeris Match Information For 007596240-01

No Significant Match Found

DV One-Page Summary

KIC: 7596240 Candidate: 1 of 1 Period: 13.400 d

KOI: K04295.01 Corr: 0.994



DV Fit Results:

Period = 13.39973 [0.00010] d
Epoch = 131.8469 [0.0062] BKJD
Rp/R* = 0.0139 [0.0050]
a/R* = 13.70 [27.16]
b = 0.90 [0.43]
Seff = 145.96 [54.97]
Teff = 886 [83] K
Rp = 1.74 [0.82] Re
a = 0.1167 [0.0291] AU
Ag = 76.88 [68.38] [1.11 σ]
Teffp = 4058 [839] K [3.76 σ]

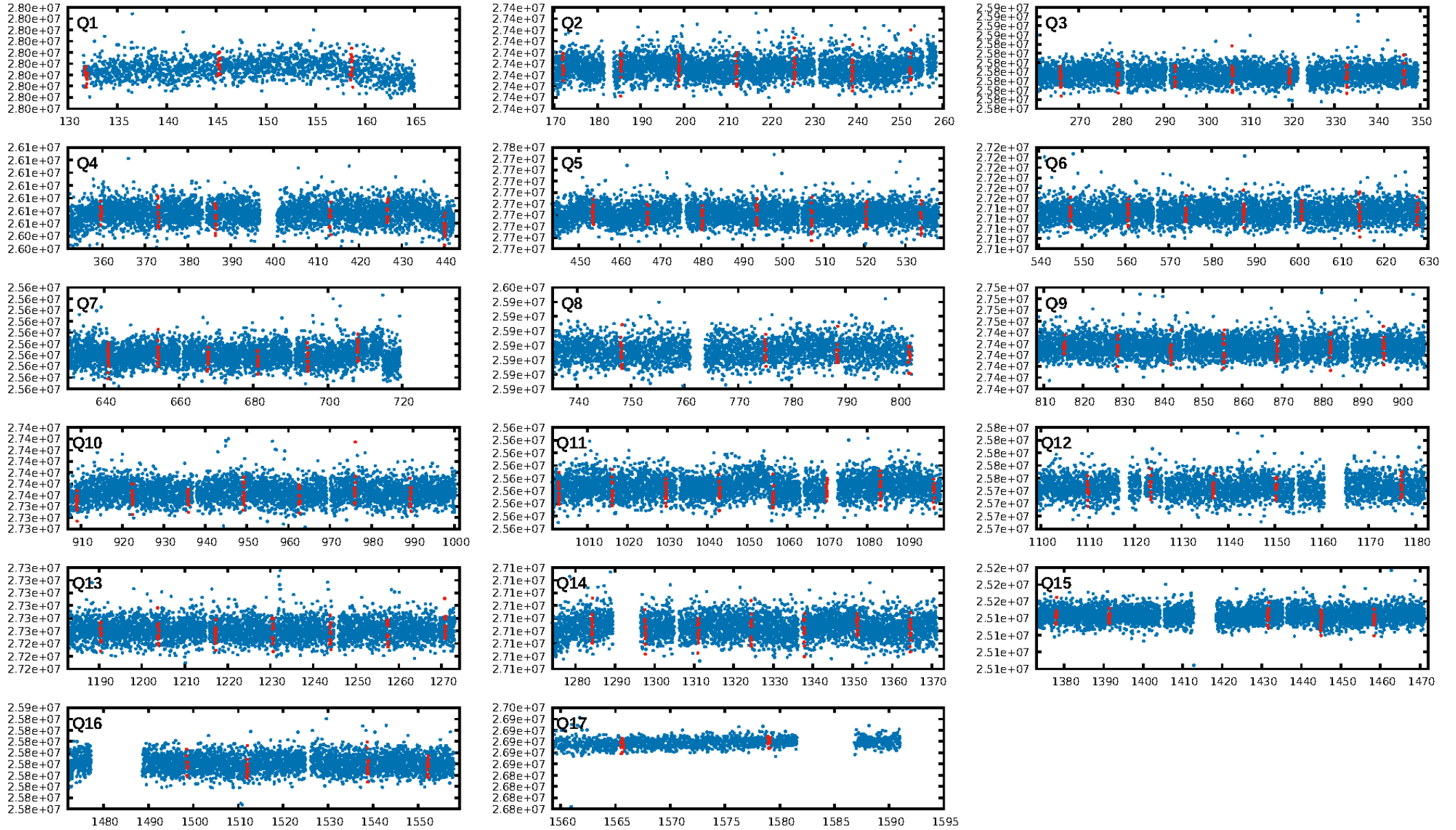
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.69e-30
RollingBand-fgt: 1.00 [94/94]
GhostDiagnostic-chr: 4.194
Centroid-sig: 2.7%
Centroid-so: 1.648 arcsec [1.57 σ]
OotOffset-rm: 0.517 arcsec [0.78 σ]
KicOffset-rm: 0.512 arcsec [0.71 σ]
OotOffset-st: 2/2/3/4 [11]
KicOffset-st: 2/2/3/4 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

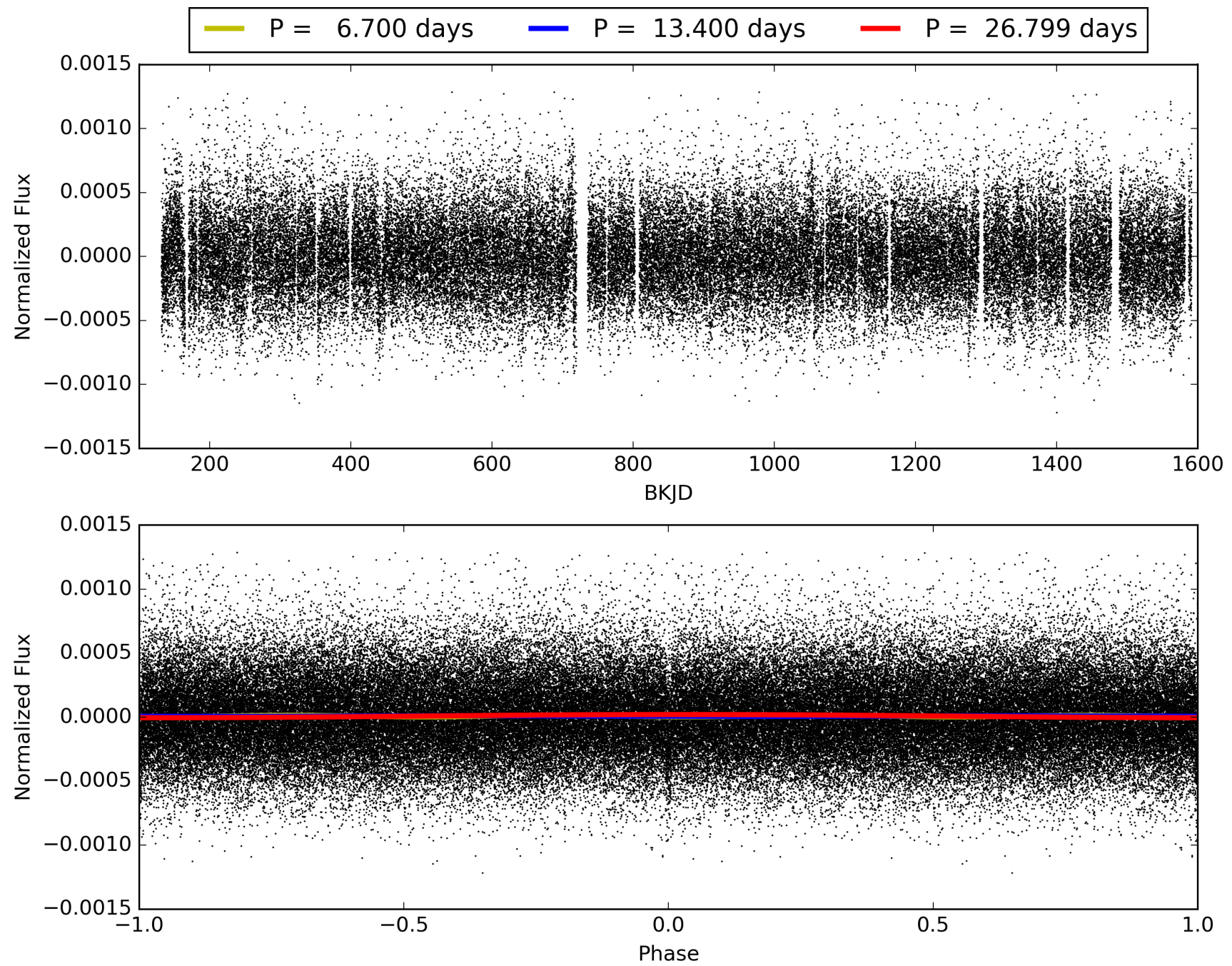
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:26:51 Z

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

TCE 007596240-01, PDC Light Curves

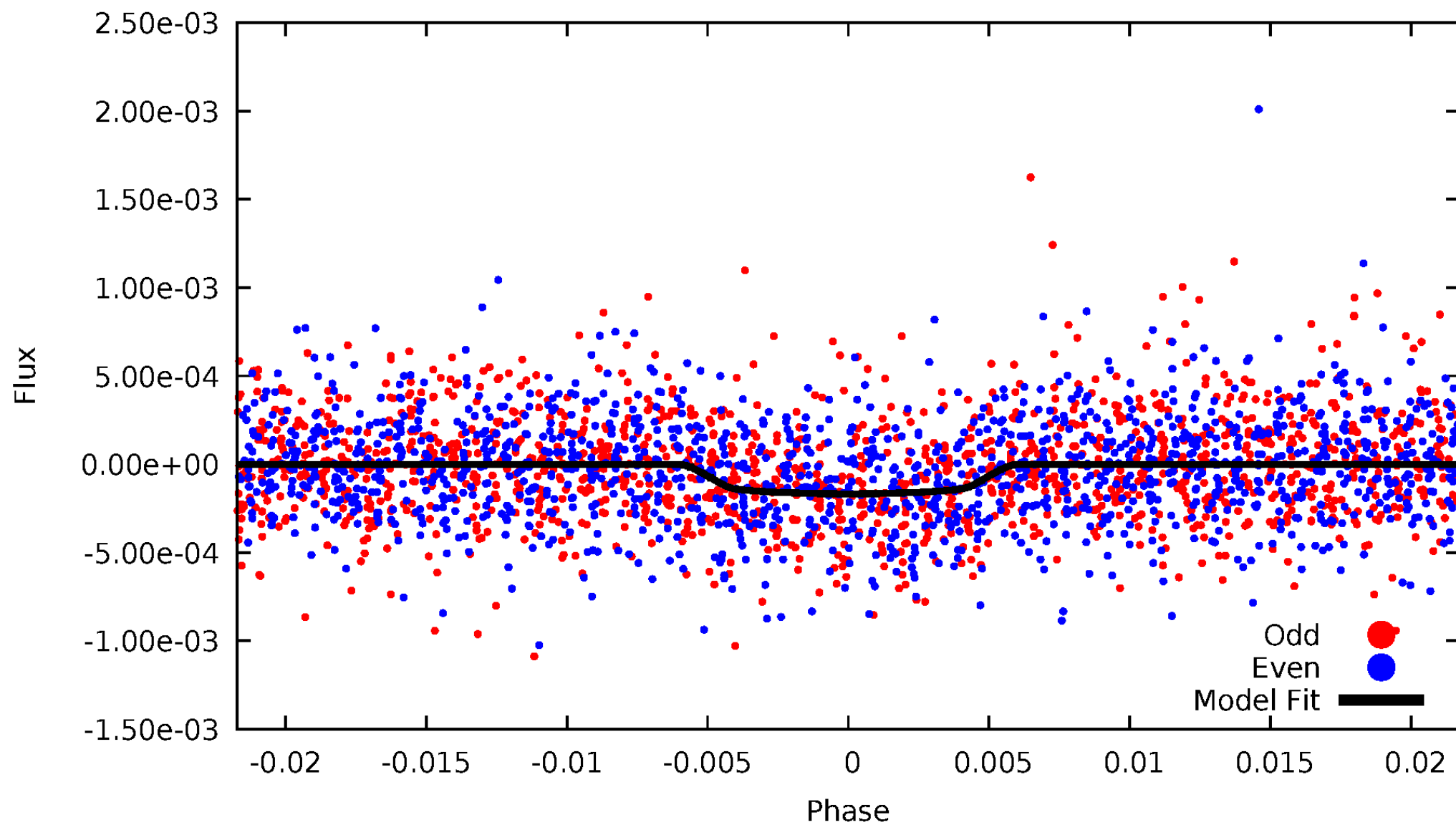


TCE 007596240-01



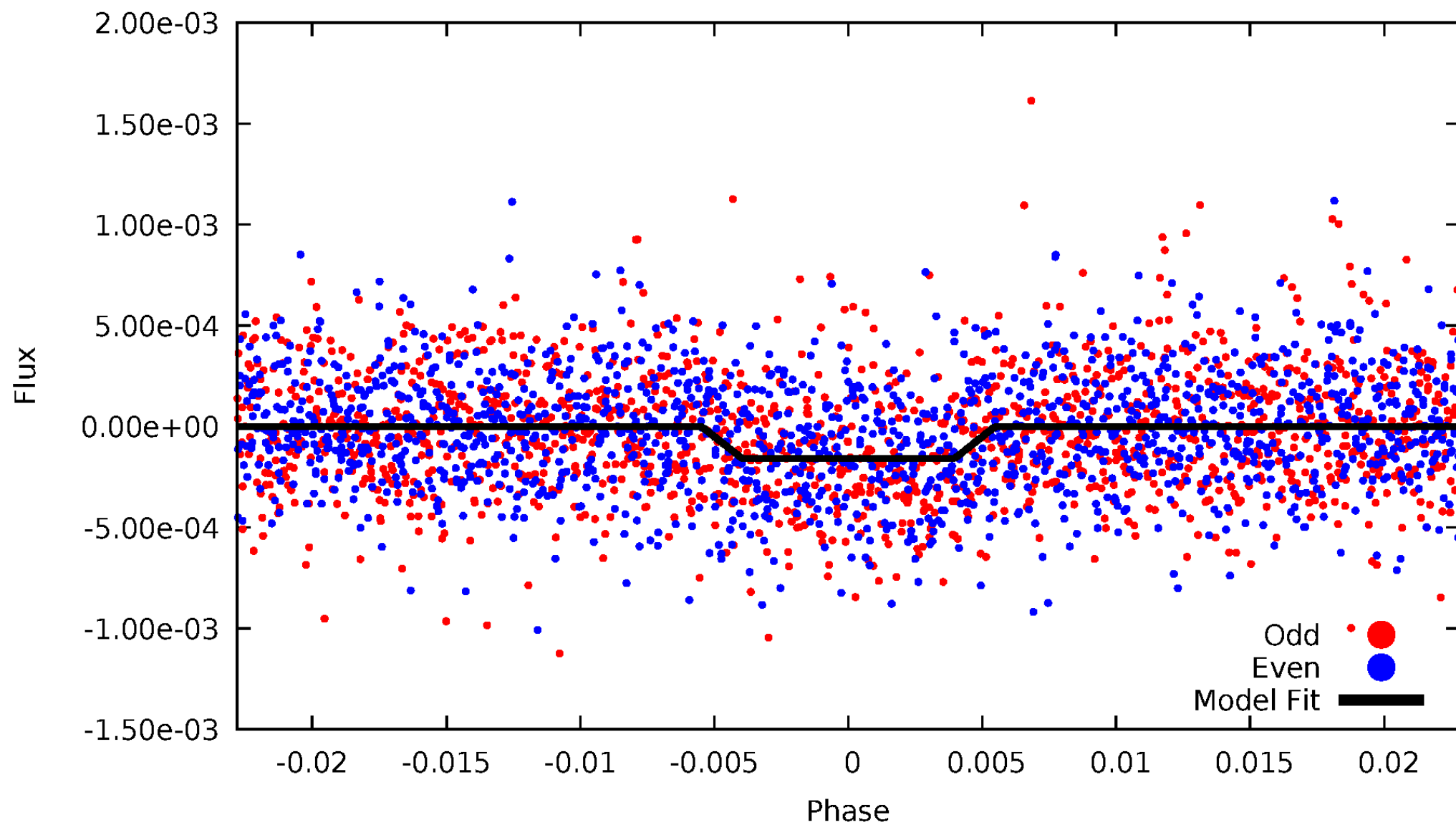
DV Odd/Even

TCE 007596240-01



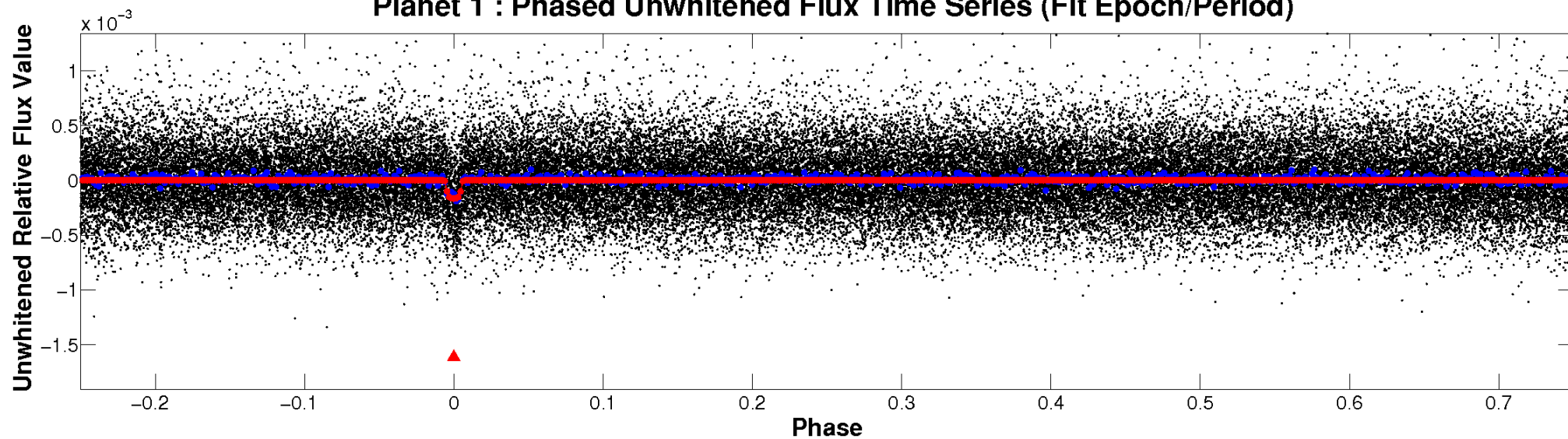
ALT Odd/Even

TCE 007596240-01

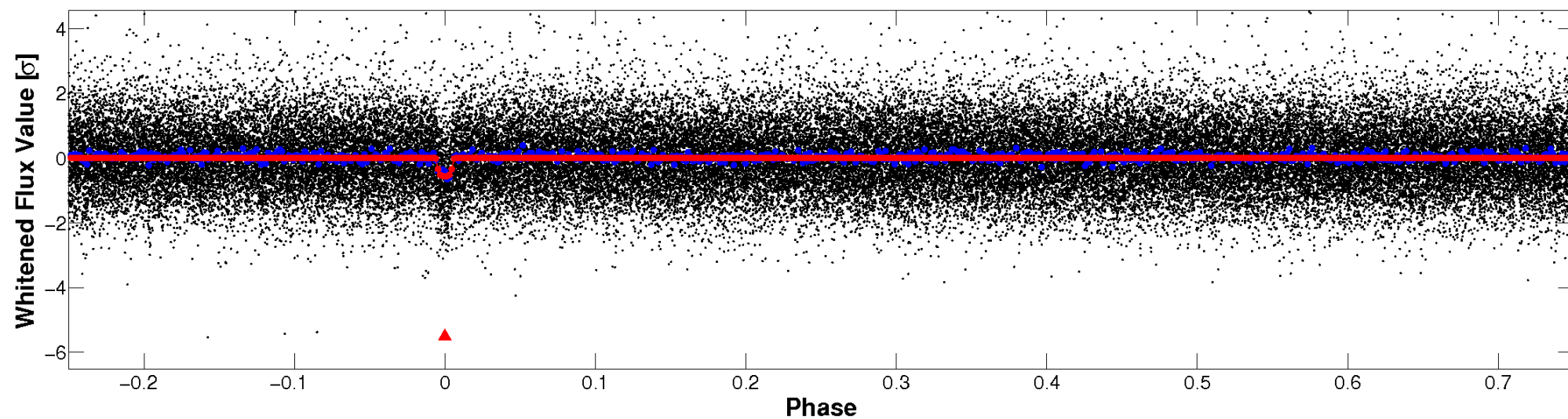


Non-Whitened Vs. Whitened Light Curve

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

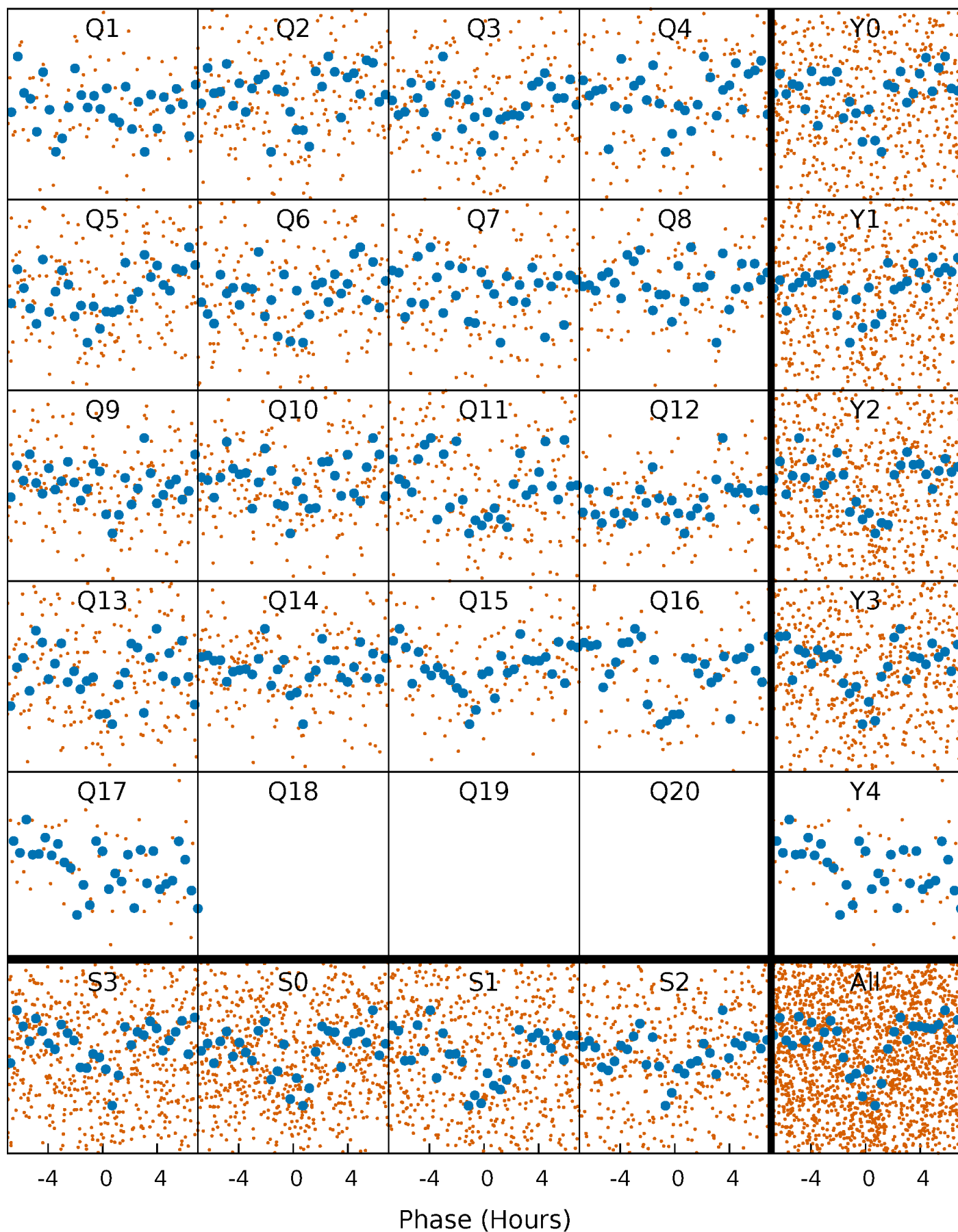


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



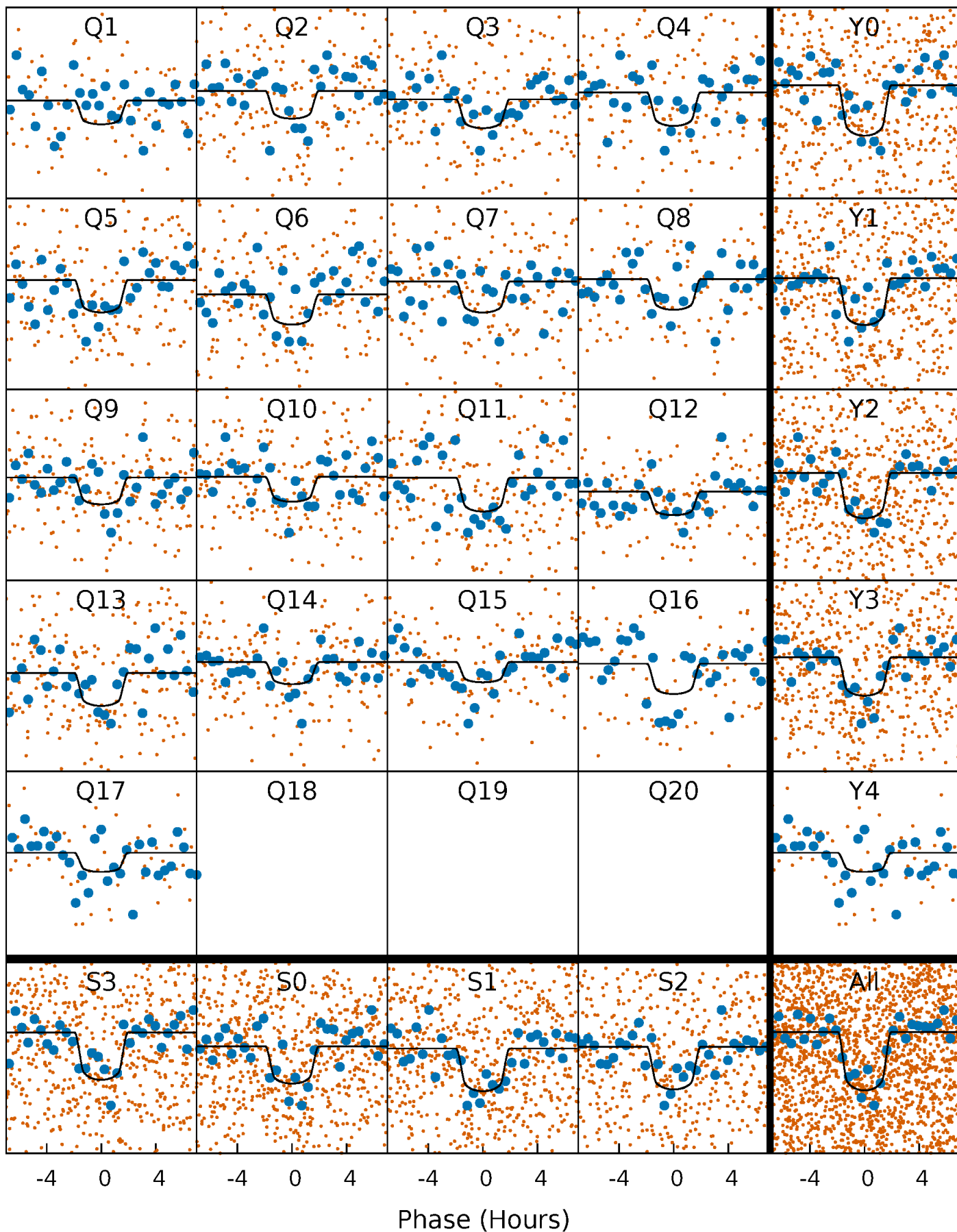
PDC Quarter-Phased Transit Curves

TCE 007596240-01 P= 13.399726 Days $T_0=131.846877$ (BKJD)



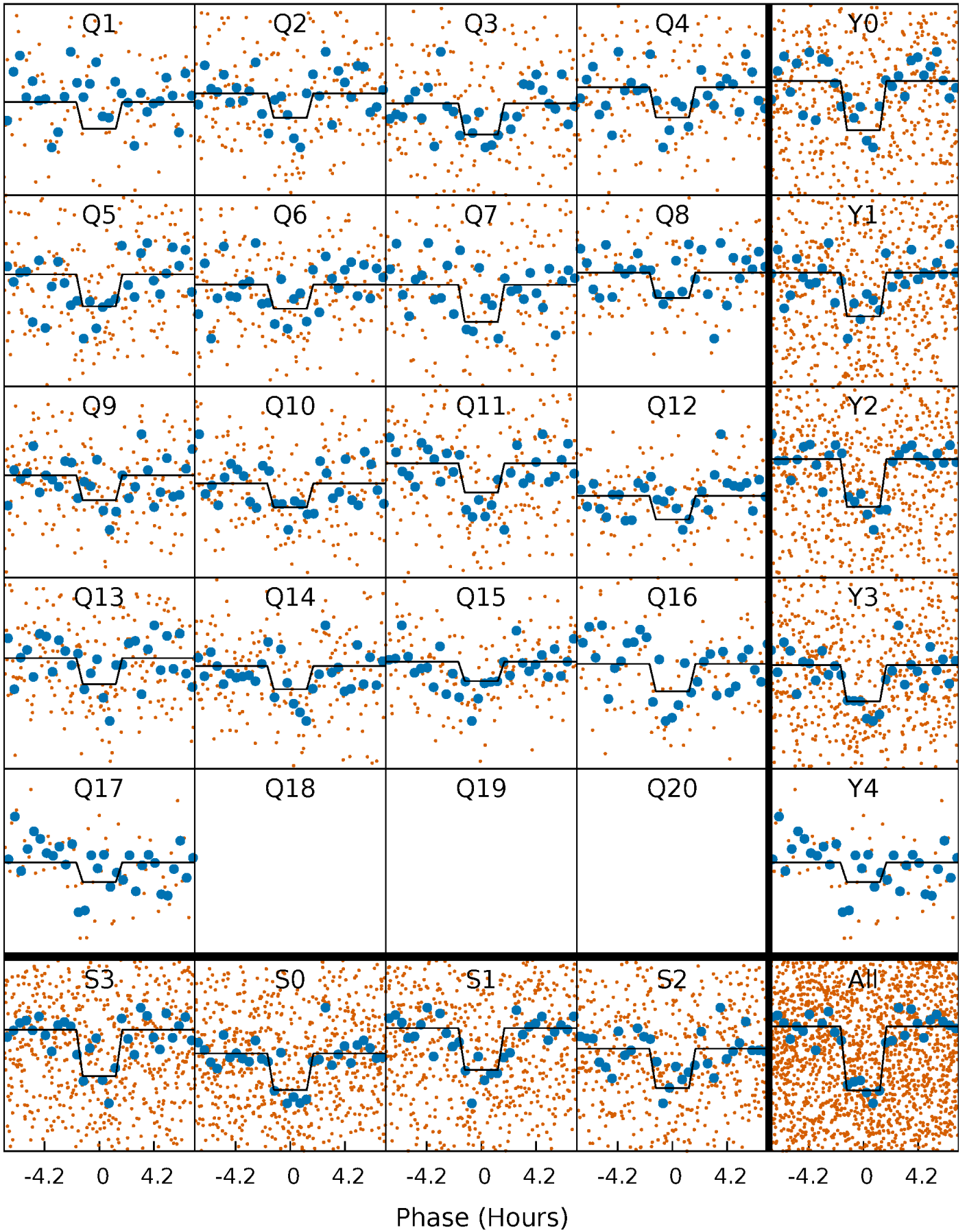
DV Quarter-Phased Transit Curves

TCE 007596240-01 P= 13.399726 Days $T_0=131.846877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

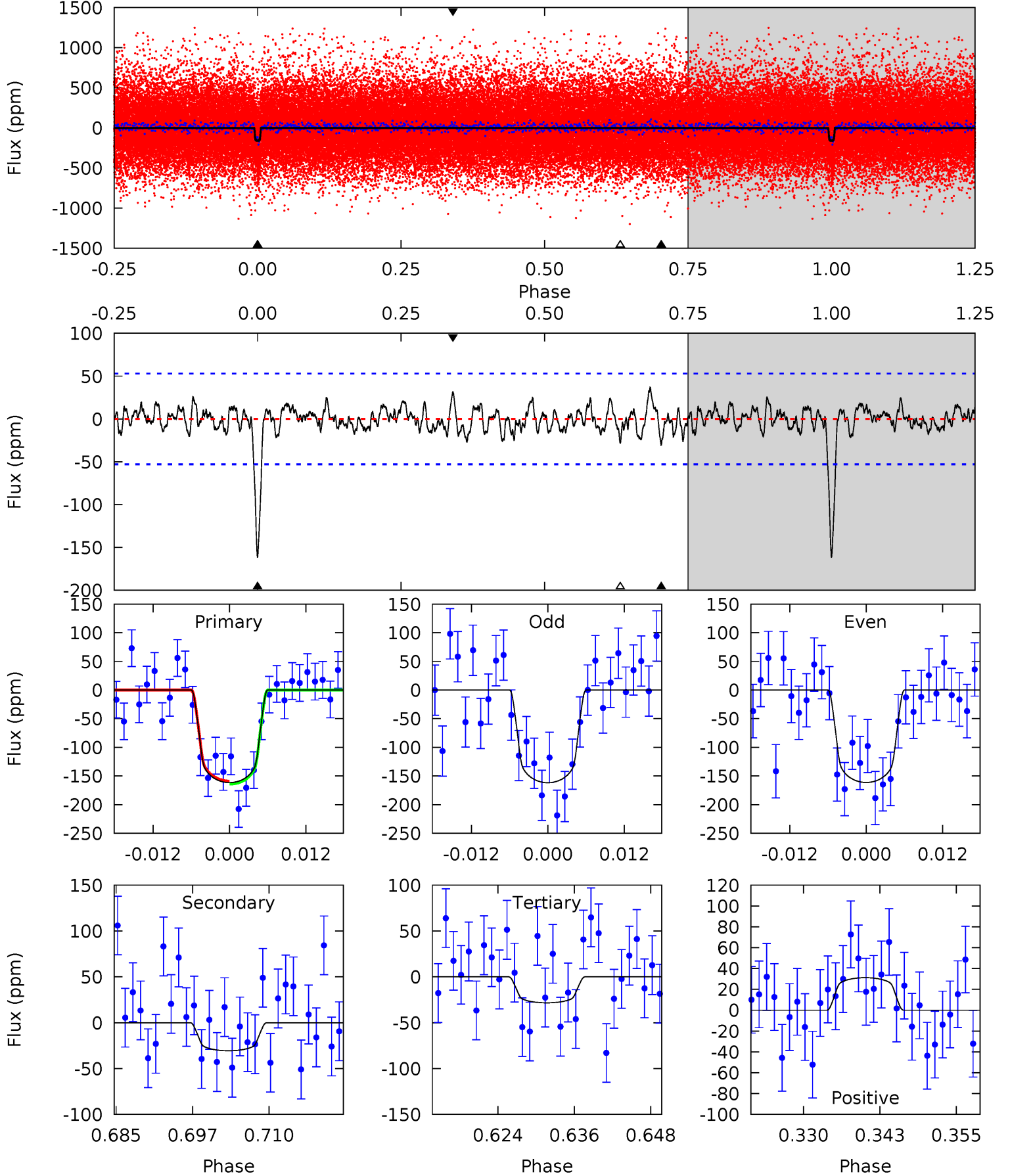
TCE 007596240-01 P= 13.399465 Days $T_0=131.858680$ (BKJD)



DV Model-Shift Uniqueness Test

007596240-01, P = 13.399726 Days, E = 118.447151 Days

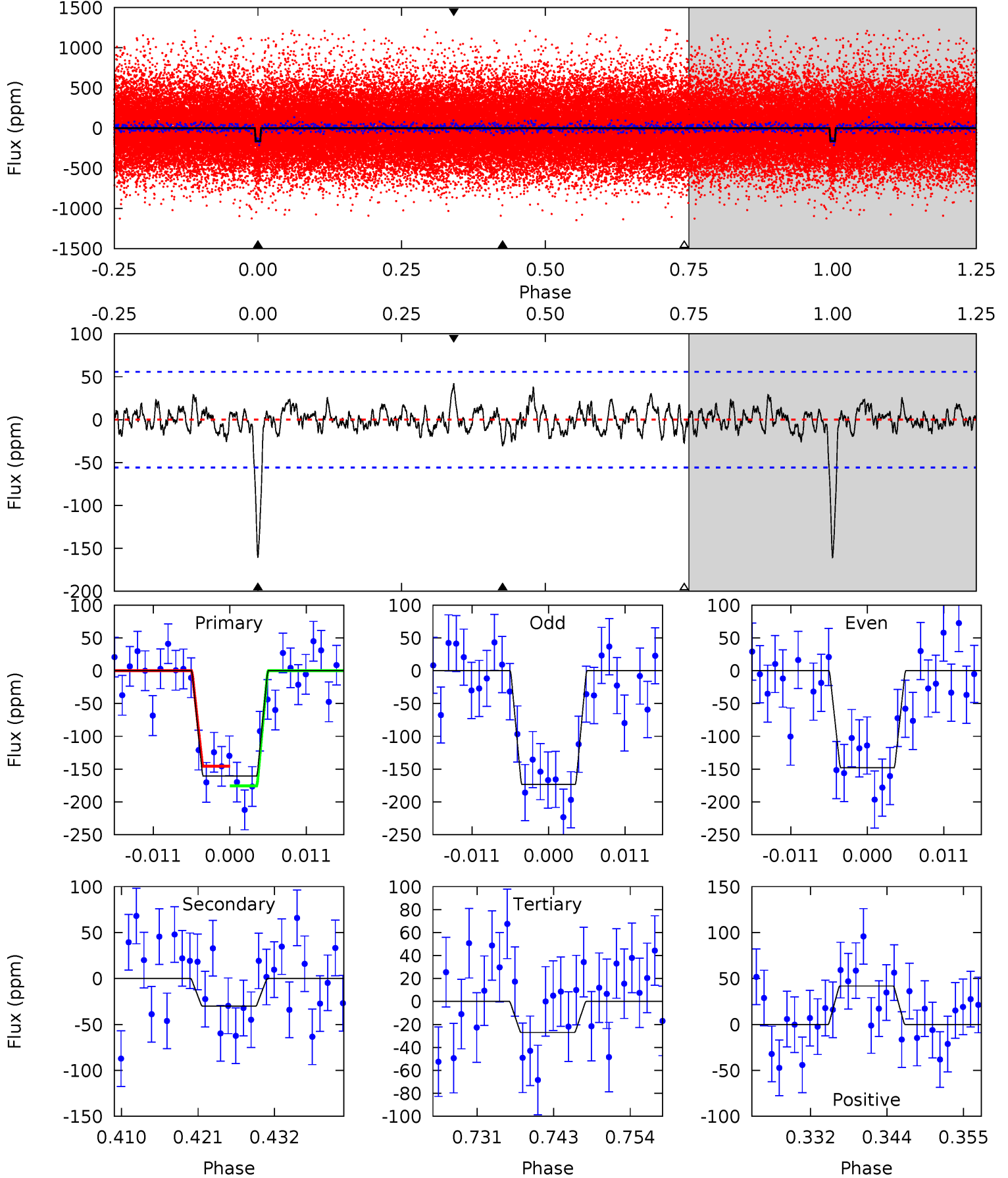
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	2.88	2.67	2.93	4.99	2.51	1.06	12.5	12.3	0.21	-0.06	0.02	1.01	0.19	0.25



Alt Model-Shift Uniqueness Test

007596240-01, P = 13.399465 Days, E = 118.459215 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	2.70	2.42	3.75	5.01	2.54	1.02	12.0	10.6	0.28	-1.05	1.14	0.97	0.21	1.34



Stellar Parameters For KIC 007596240

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6401^{+153}_{-211}	$4.389^{+0.062}_{-0.188}$	$-0.040^{+0.250}_{-0.300}$	$1.150^{+0.350}_{-0.140}$	$1.183^{+0.169}_{-0.152}$	$1.096^{+0.366}_{-0.568}$
	+2%/-3%	+1%/-4%	+625%/-750%	+30%/-12%	+14%/-13%	+33%/-52%
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 007596240-01 / KOI 4295.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 11	$1.82^{+0.72}_{-0.71}$	1259^{+85}_{-64}	4235^{+1025}_{-522}	67^{+118}_{-37}
Alt.	-30 ± 11	$1.70^{+0.63}_{-0.67}$	1255^{+97}_{-63}	4356^{+998}_{-558}	74^{+132}_{-40}

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

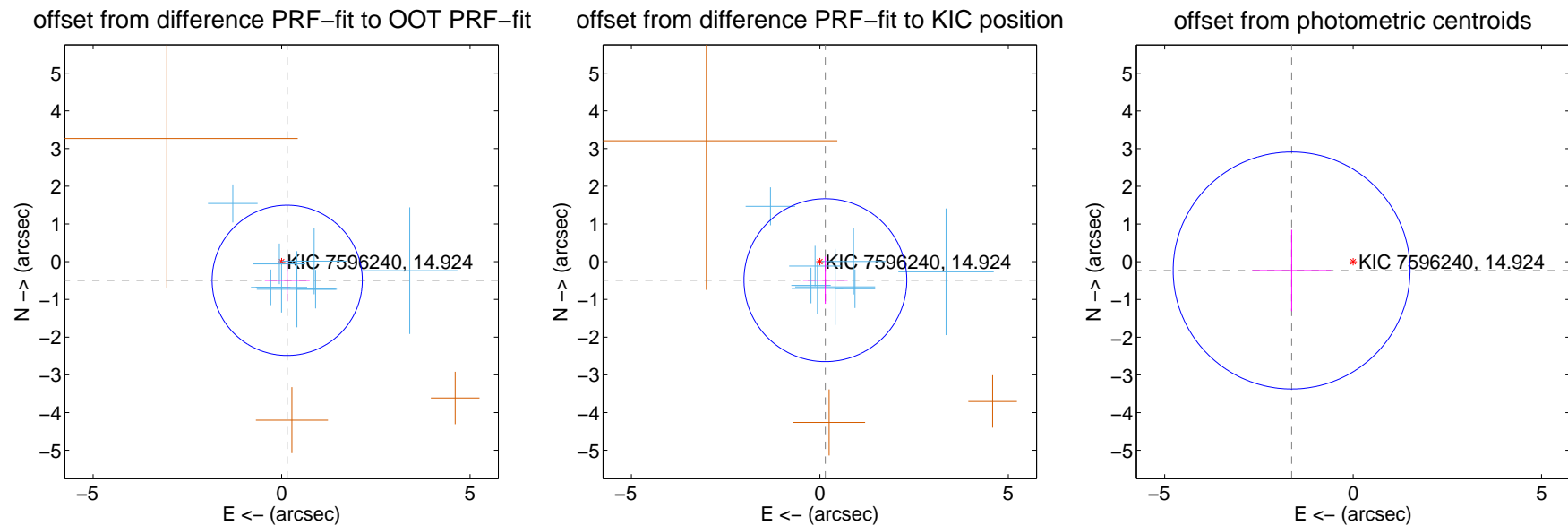
DV Centroid Data

Supplemental centroid analysis for 007596240-01. Kepler magnitude: 14.92. Transit SNR 12.44

There are 8 quarters with good PRF difference image offsets

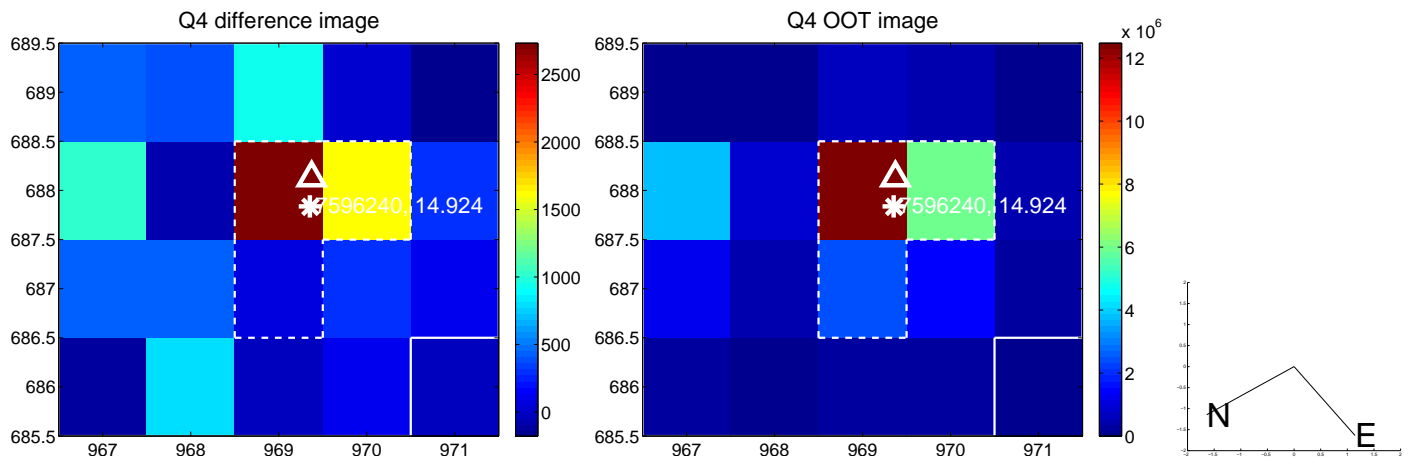
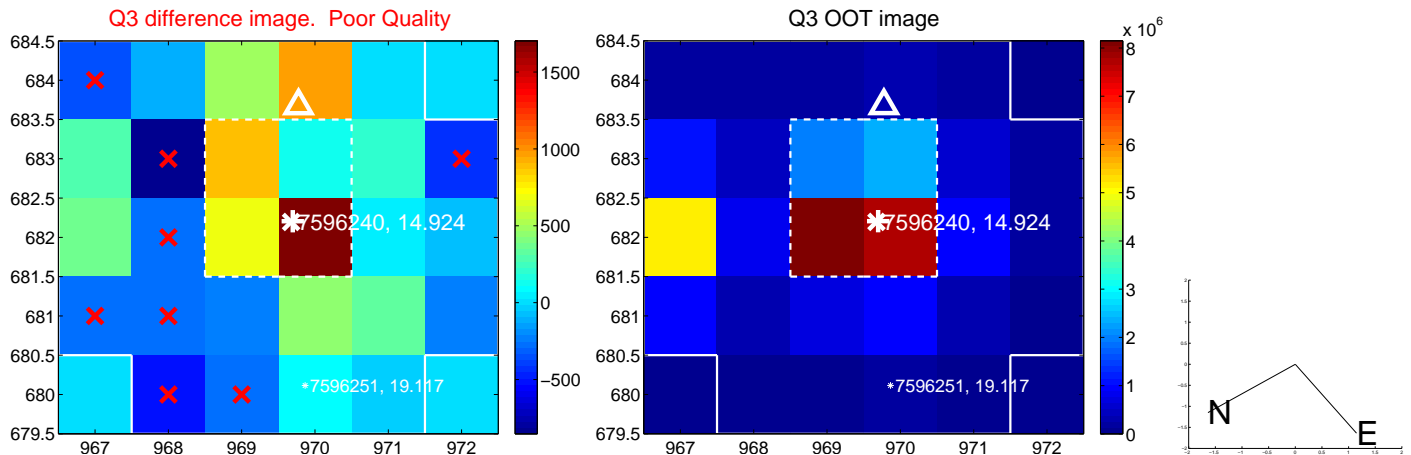
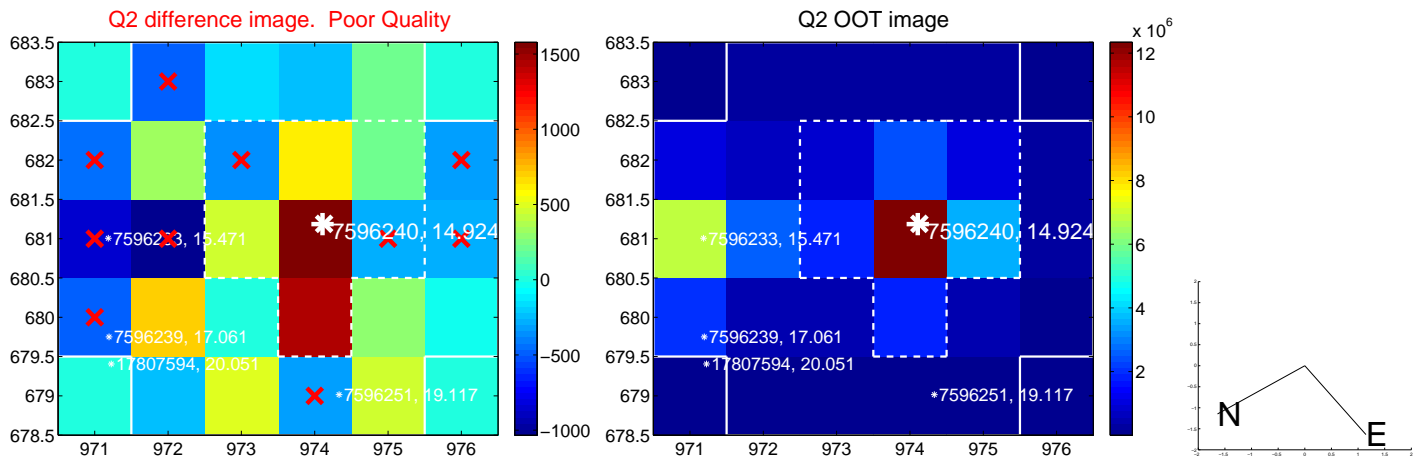
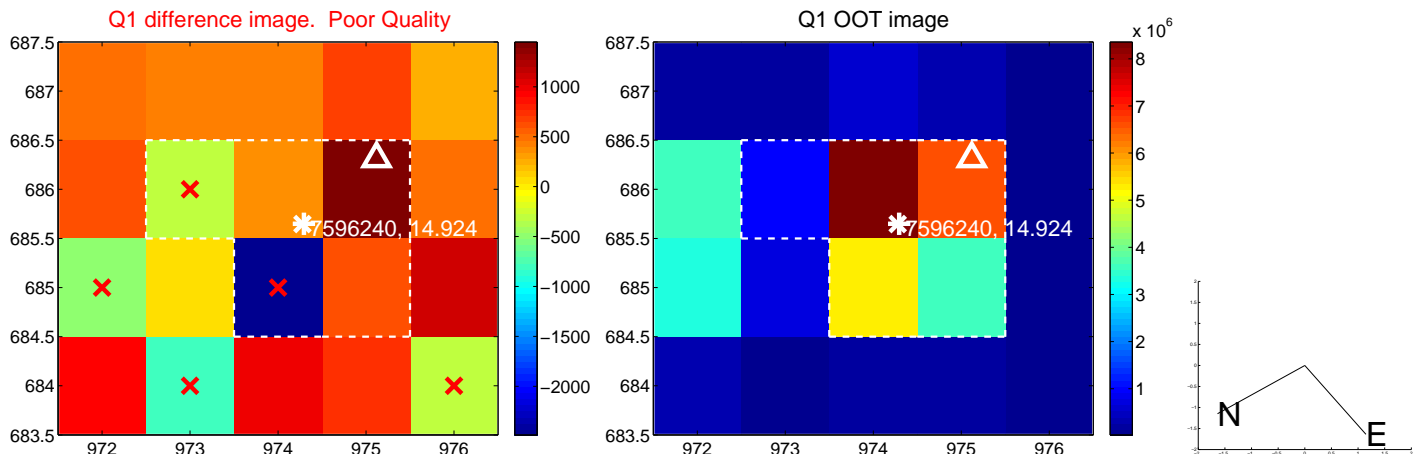
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.517 ± 0.664	0.78	-0.149 ± 0.593	-0.495 ± 0.556
PRF-fit source offset from KIC position	0.512 ± 0.720	0.71	-0.147 ± 0.591	-0.491 ± 0.626
photometric centroid source offset	1.65 ± 1.05	1.57	1.63 ± 1.05	-0.23 ± 1.08

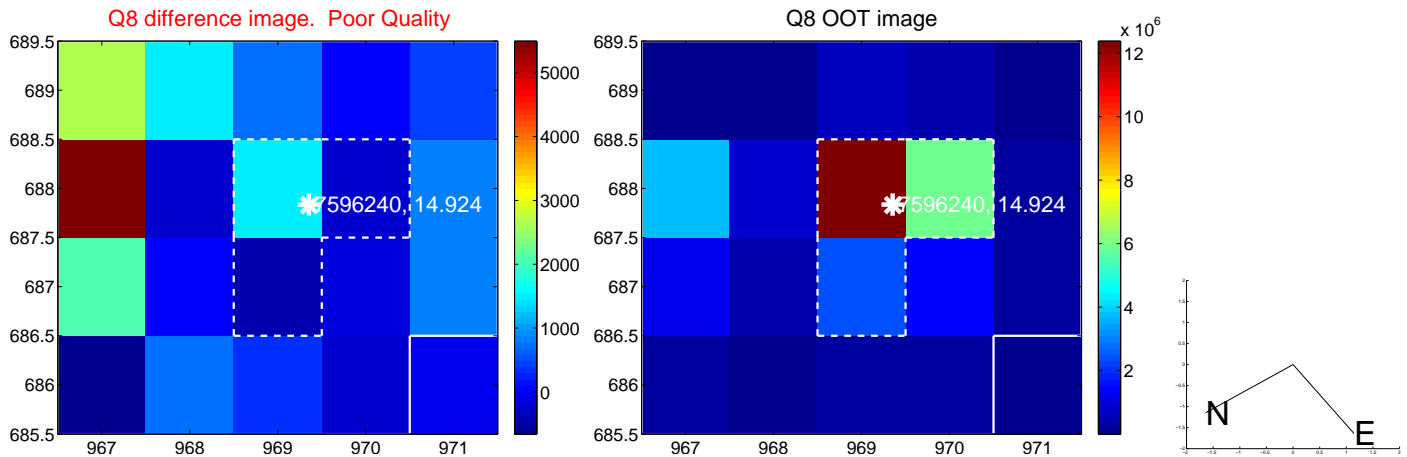
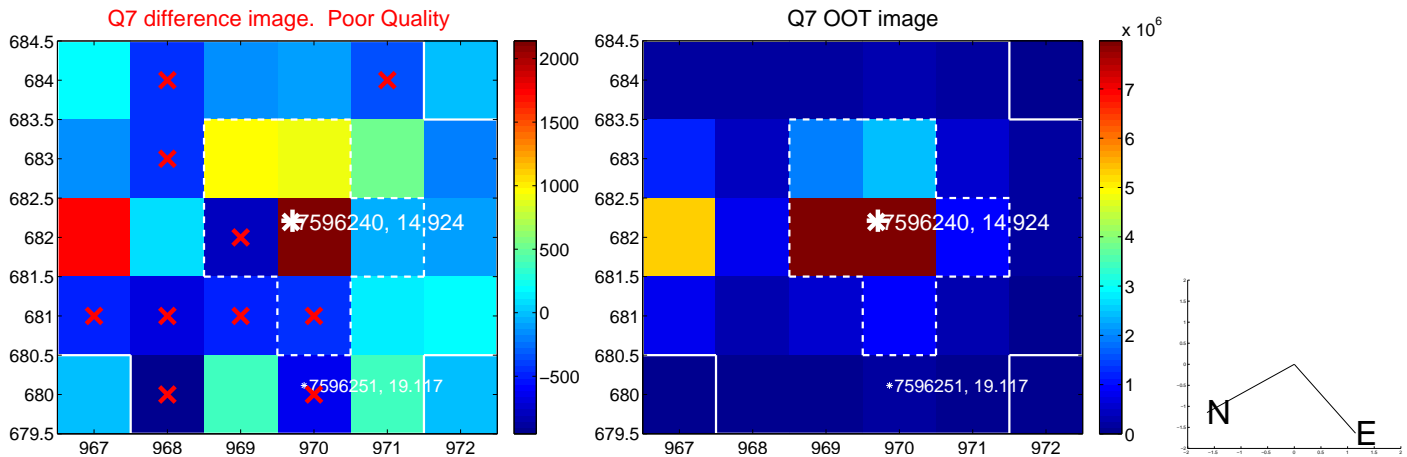
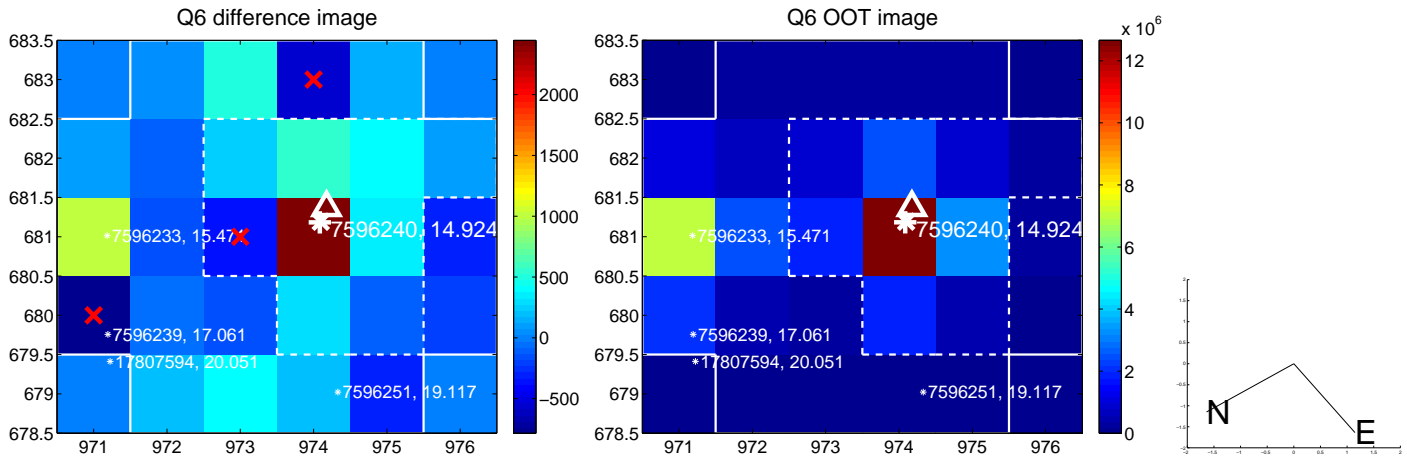
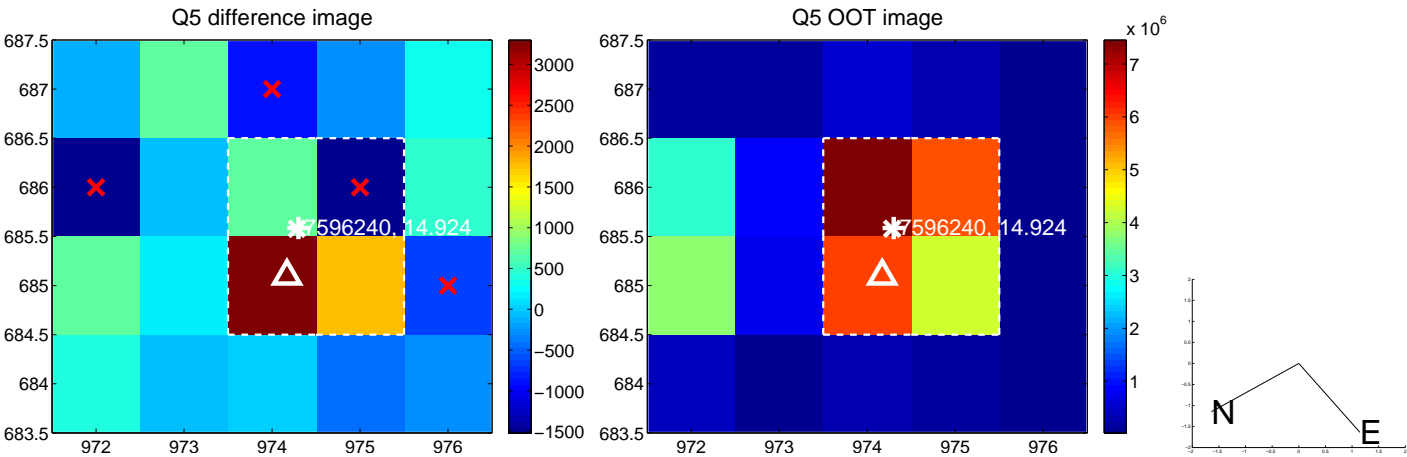


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

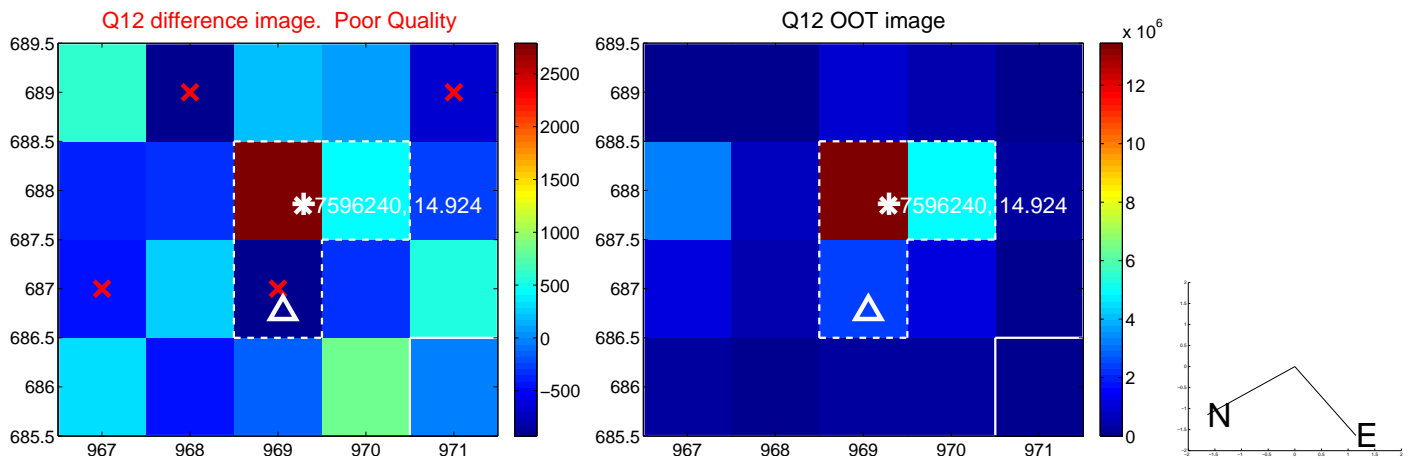
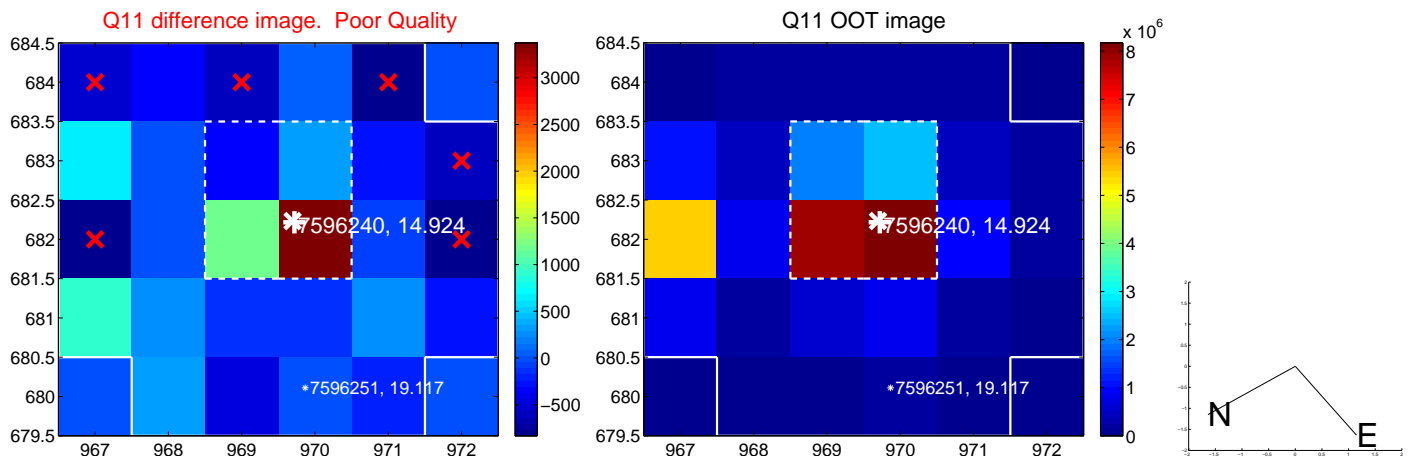
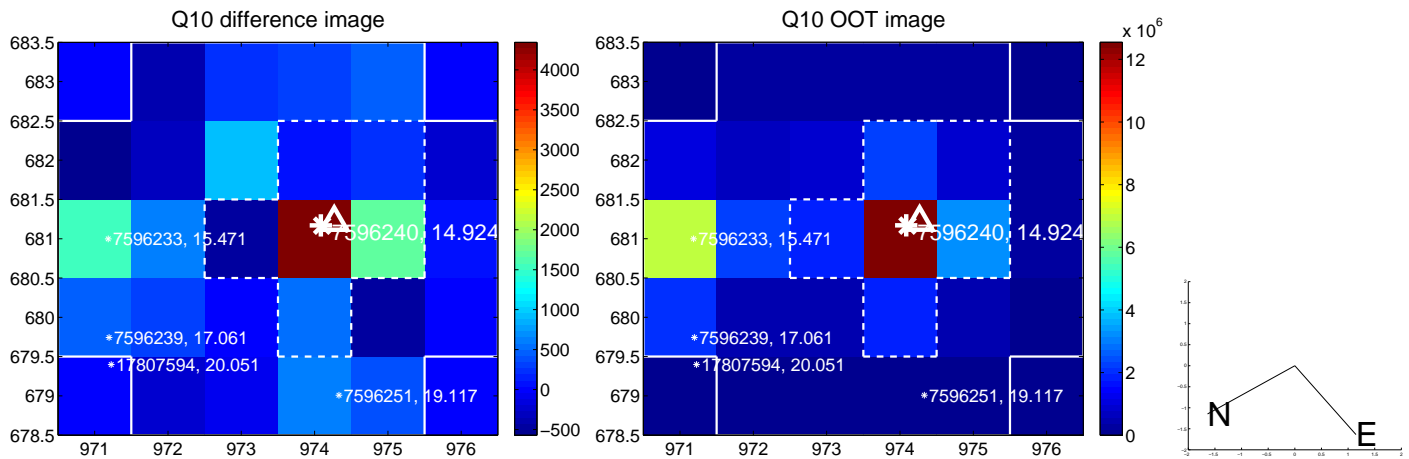
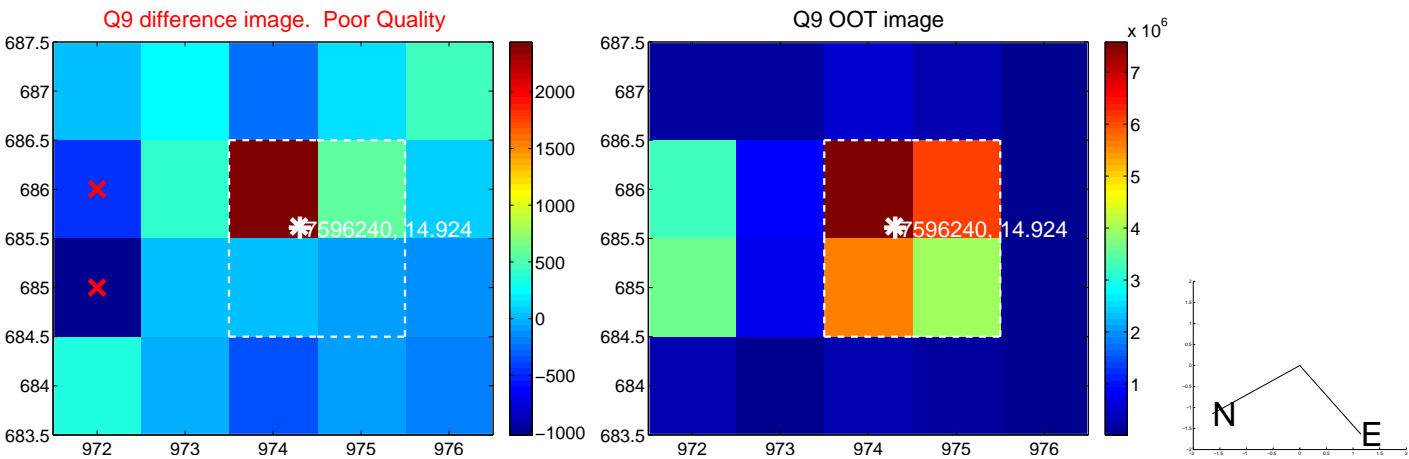
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



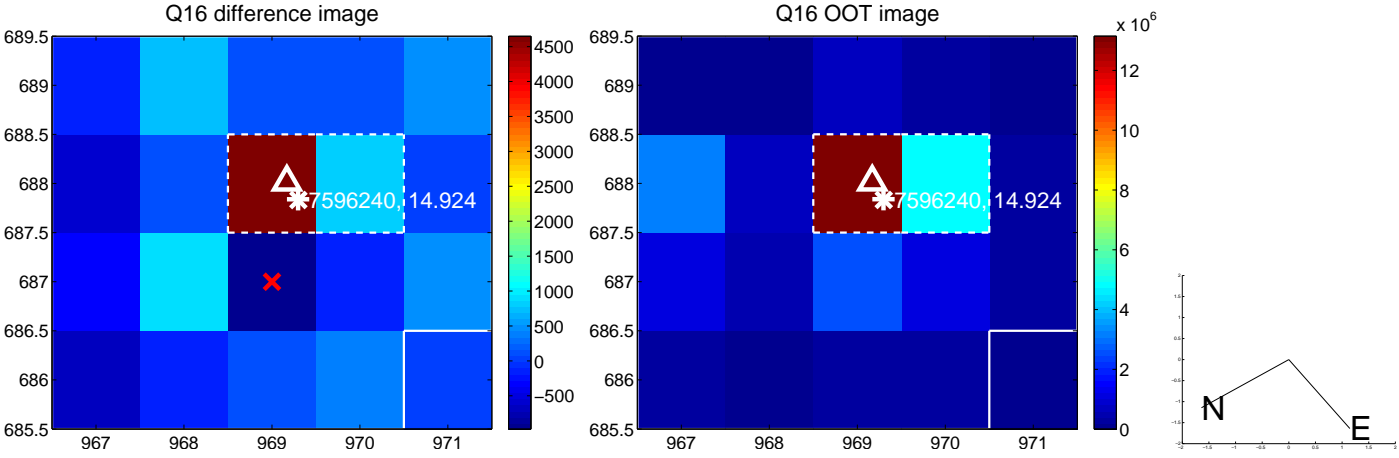
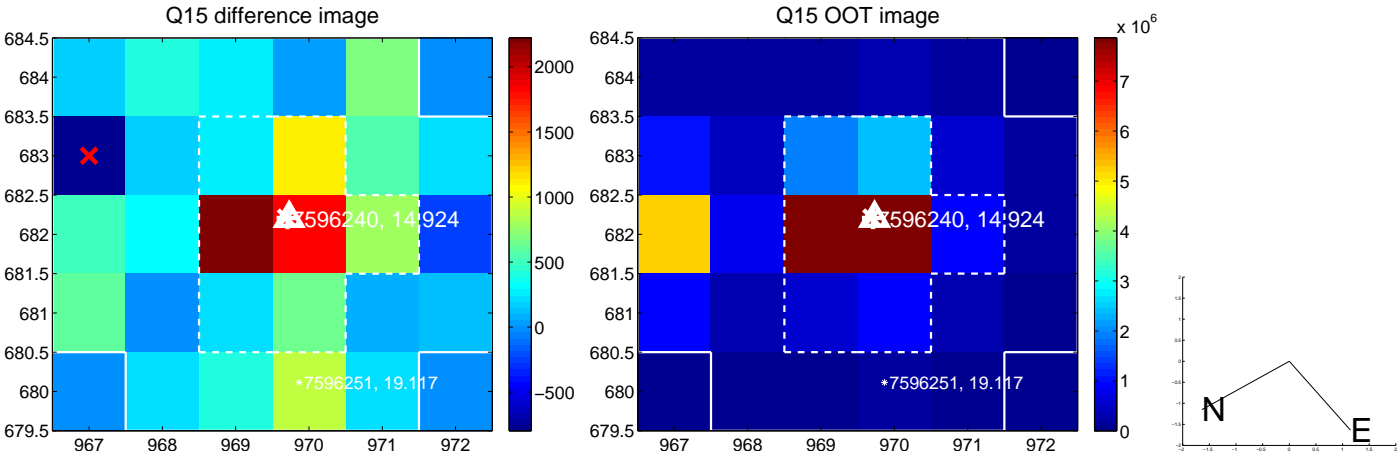
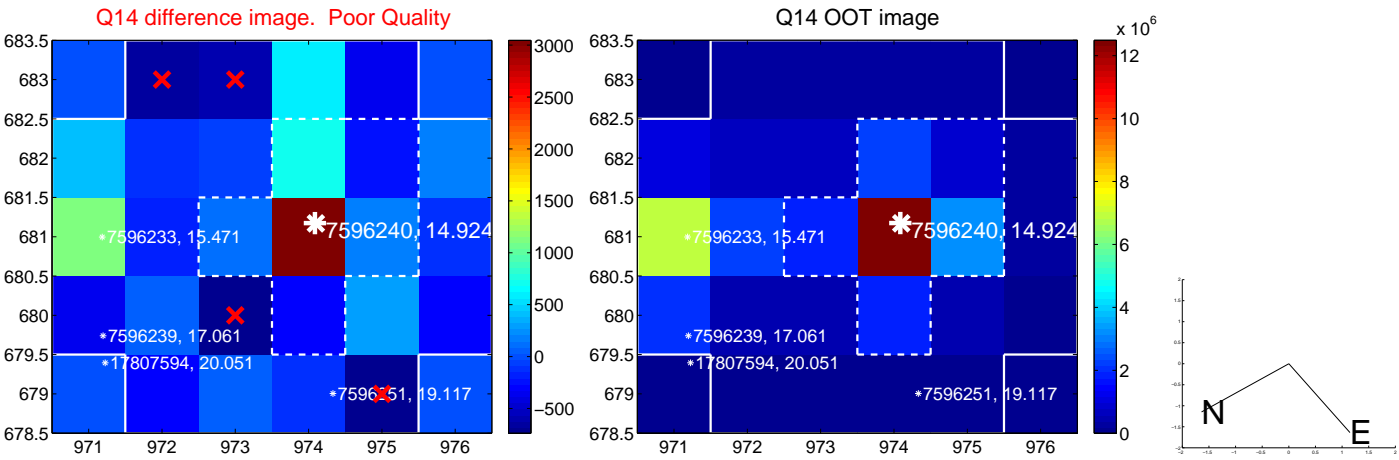
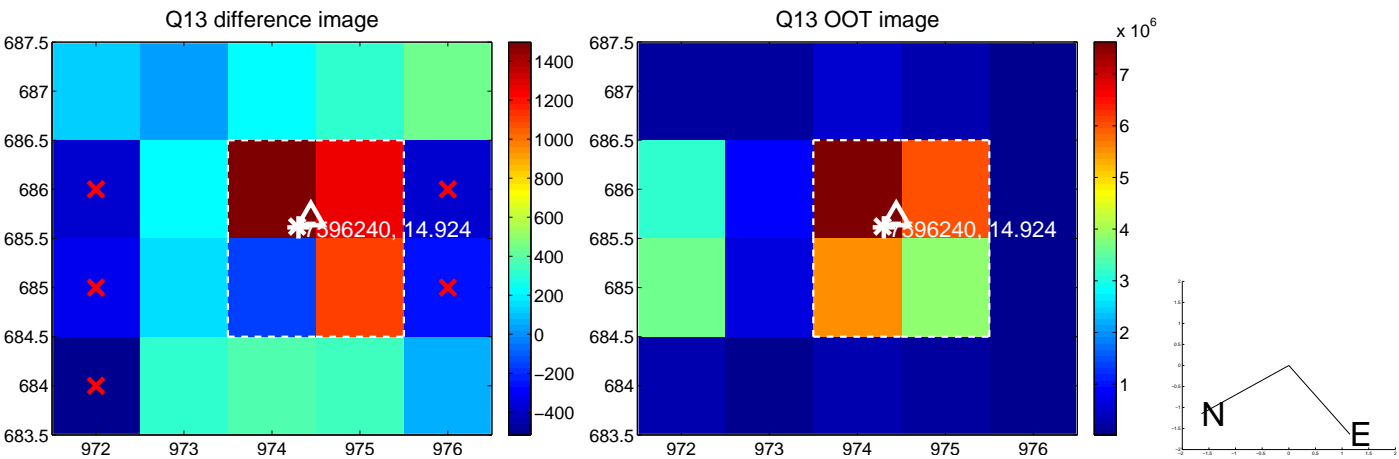
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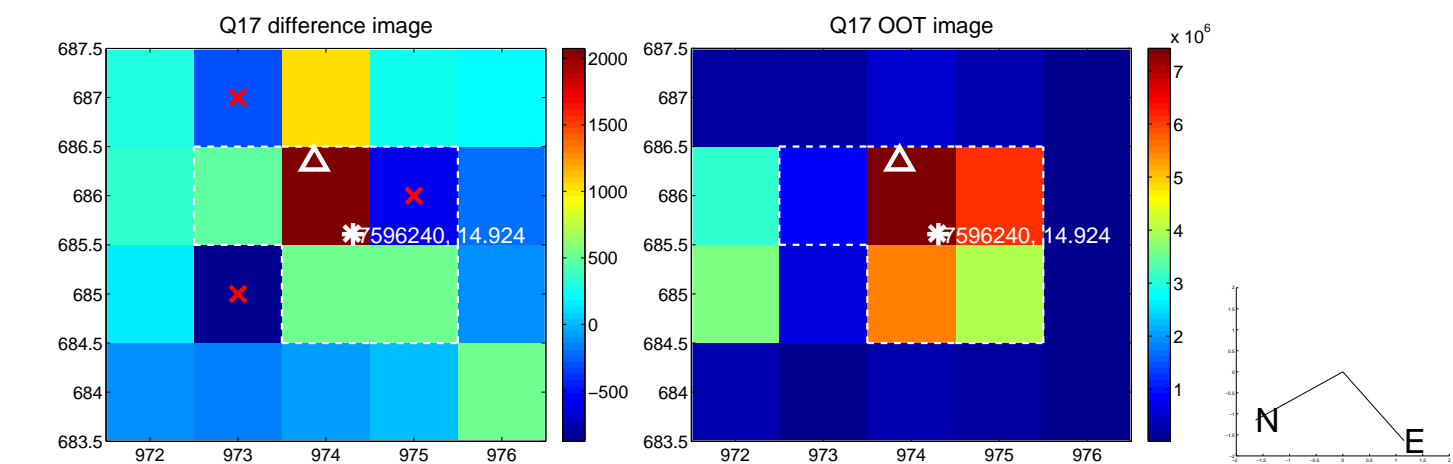
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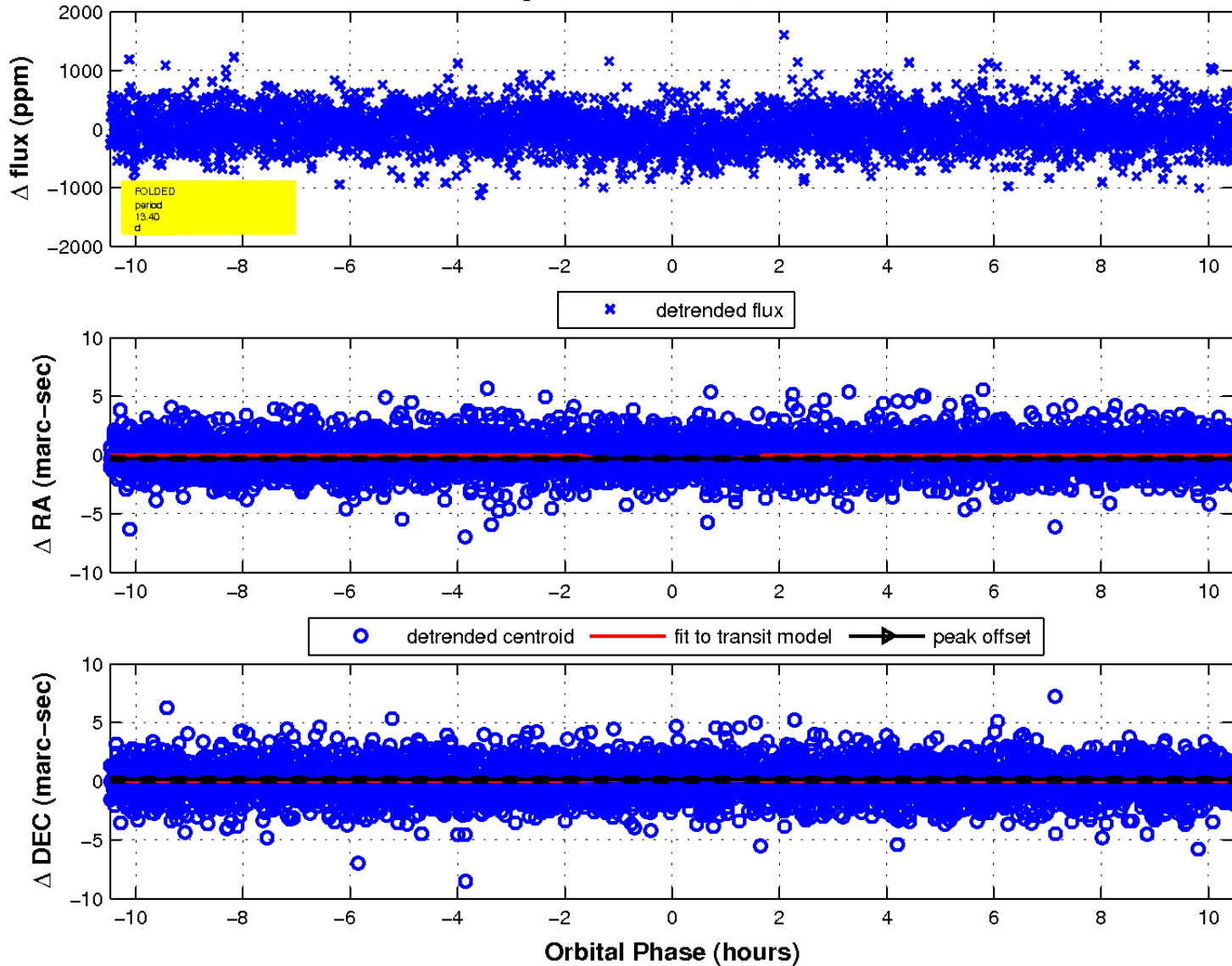
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

