

KIC 005724810

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})
005724810-01	OBS	No	0.682582	132.117369	69.3	3.249	14.7	17.0	2.39	7645	2.31	49084.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005724810-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

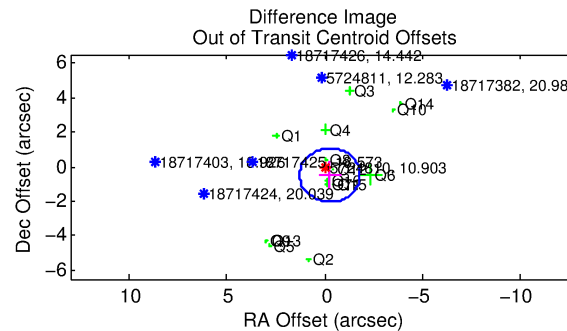
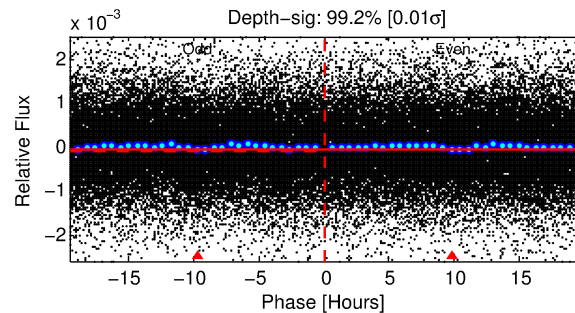
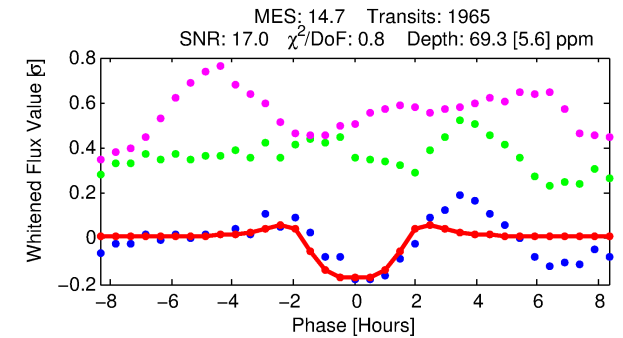
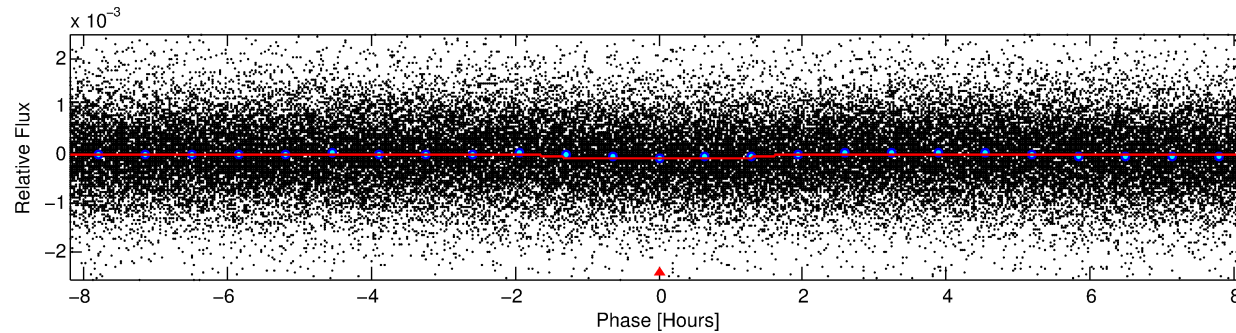
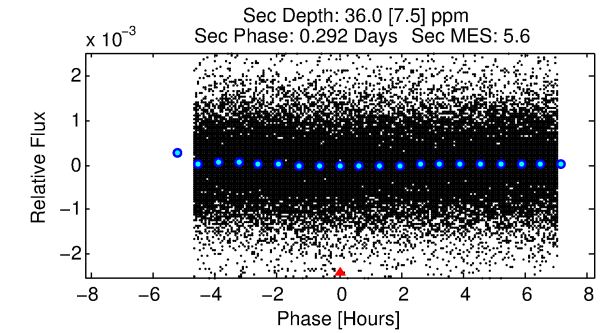
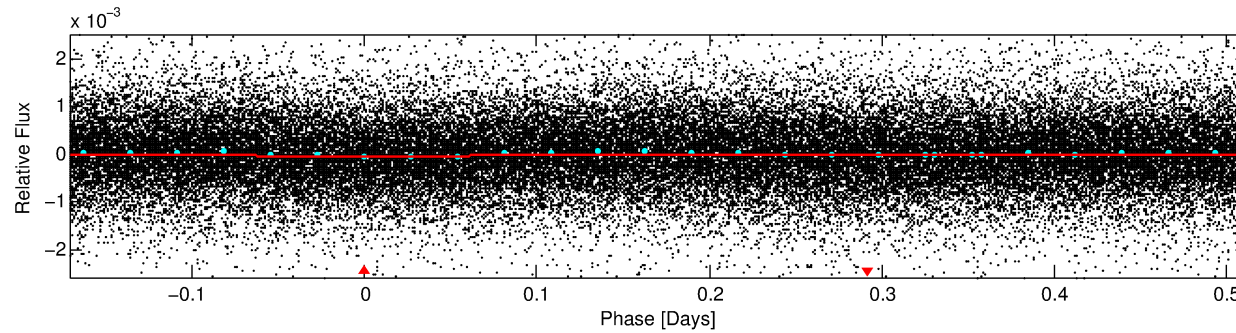
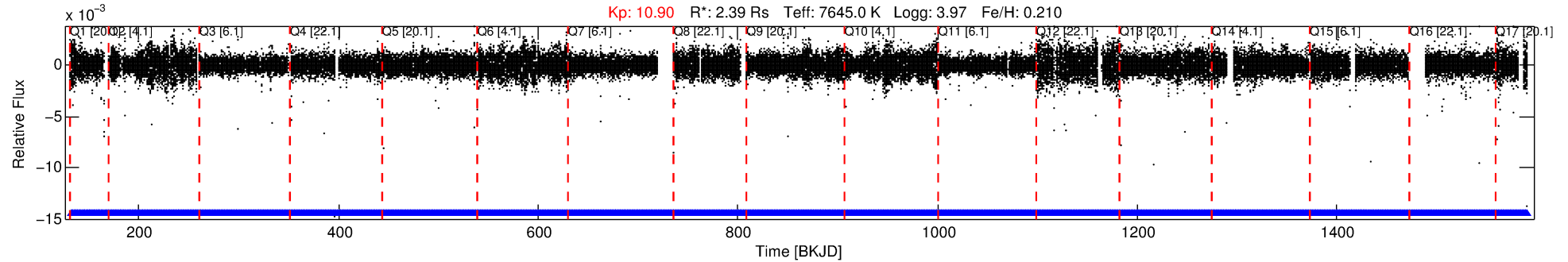
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005724810-01

No Significant Match Found

DV One-Page Summary

KIC: 5724810 Candidate: 1 of 1 Period: 0.683 d



DV Fit Results:

Period = 0.68258 [0.00001] d
Epoch = 132.1174 [0.0021] BKJD
Rp/R* = 0.0088 [0.0036]
a/R* = 1.19 [0.92]
b = 0.90 [0.56]
Seff = 49084.87 [11574.13]
Teq = 3795 [224] K
Rp = 2.31 [1.02] Re
a = 0.0189 [0.0029] AU
Ag = 1.33 [1.16] [0.28σ]
Teffp = 6299 [1325] K [1.86σ]

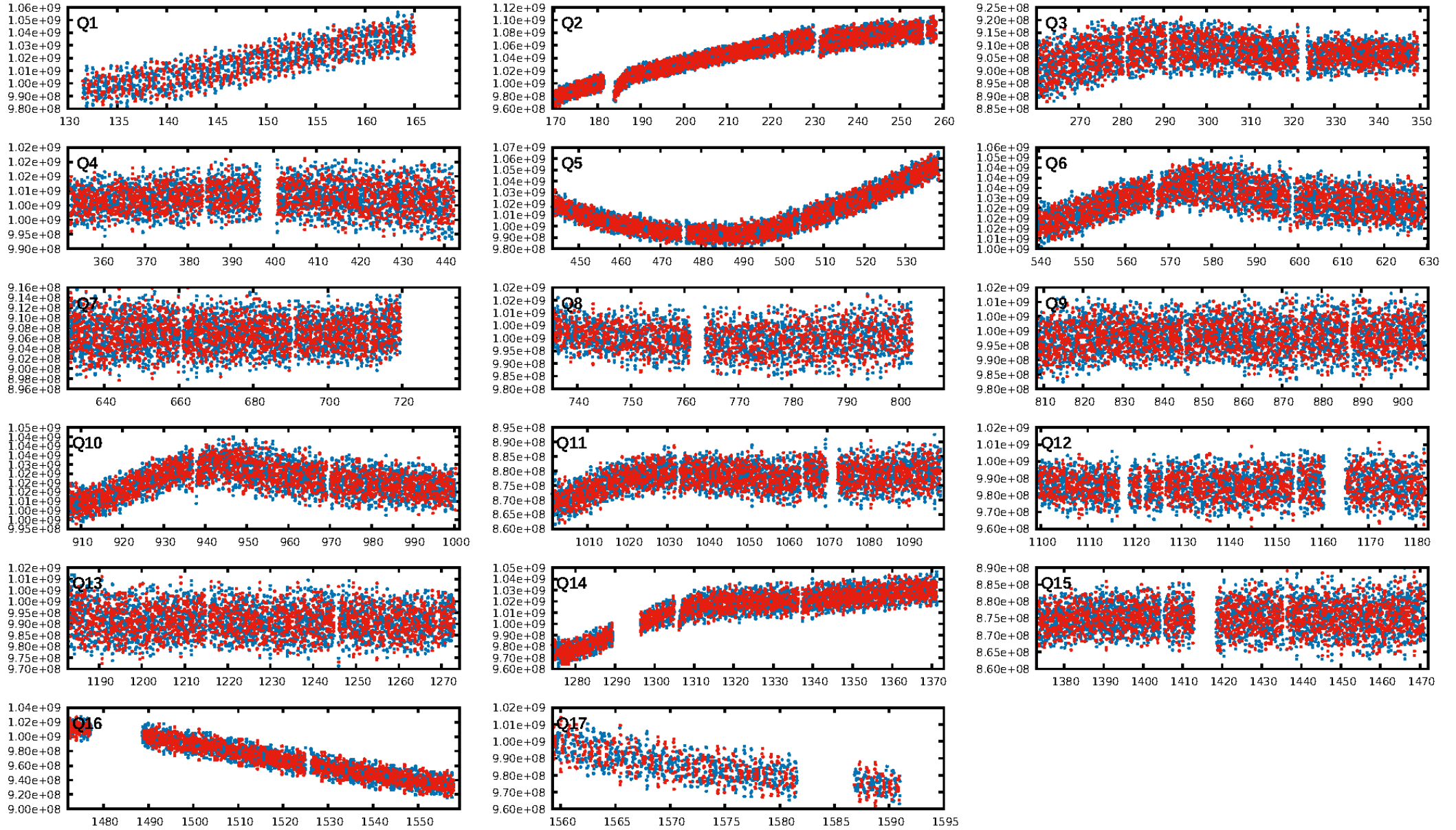
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.79e-43
RollingBand-fgt: 1.00 [1876/1876]
GhostDiagnostic-chr: 2.308e+13
Centroid-sig: 0.0%
Centroid-so: 1.005 arcsec [6.00σ]
OotOffset-rm: 0.559 arcsec [1.08σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-rm: 0.716 arcsec [1.17σ]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 1.00 [17/17]

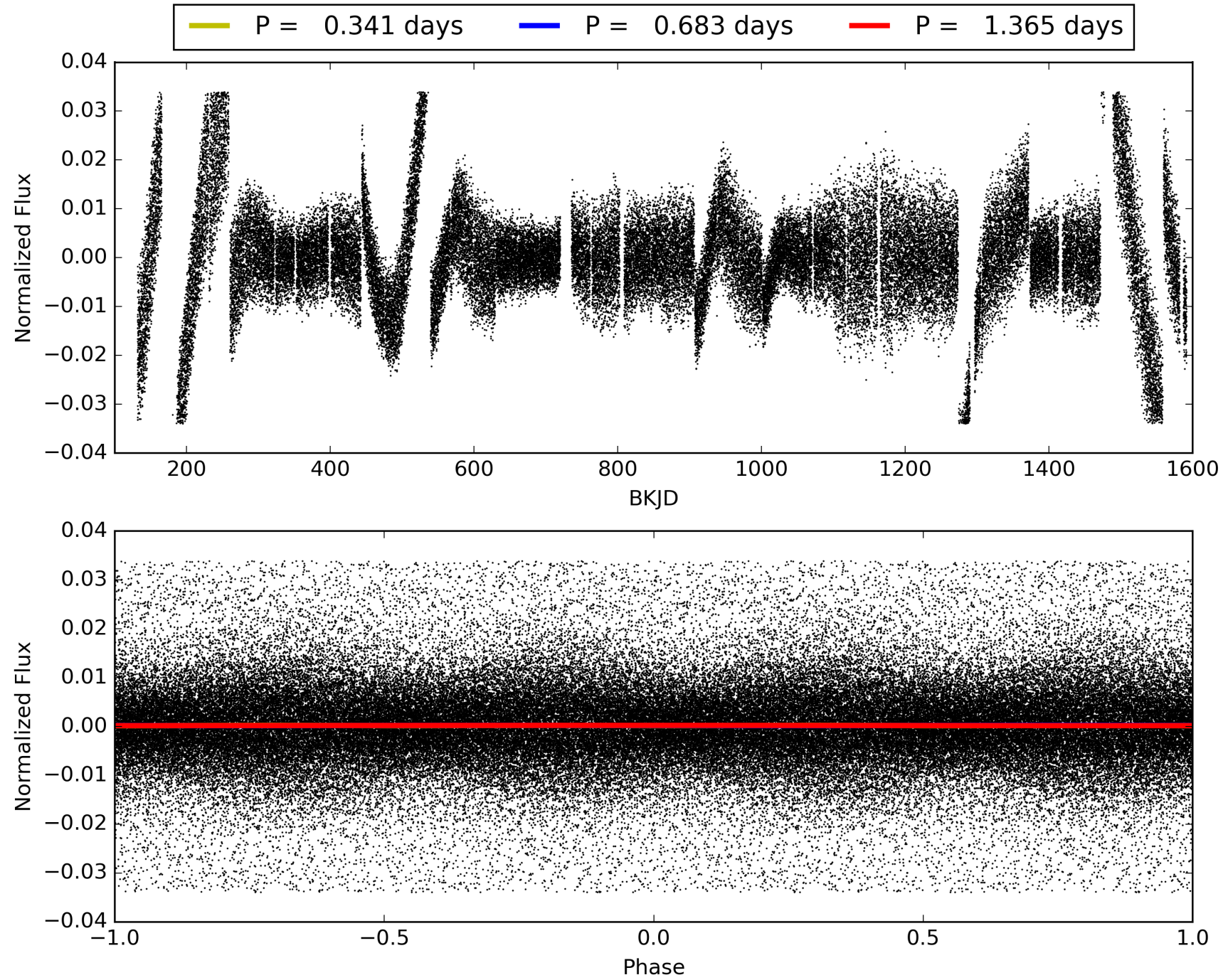
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:23:37 Z

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

TCE 005724810-01, PDC Light Curves

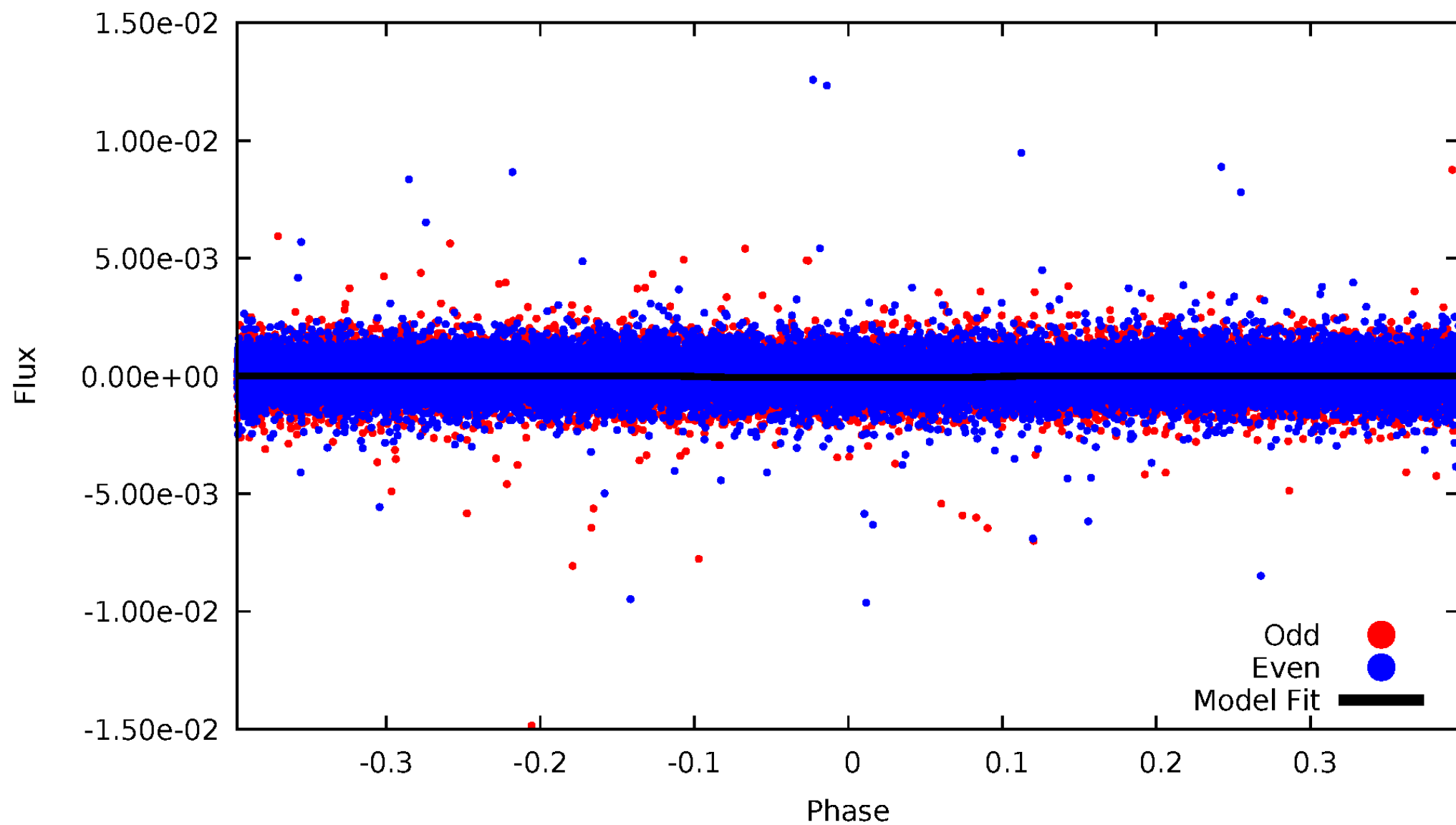


TCE 005724810-01



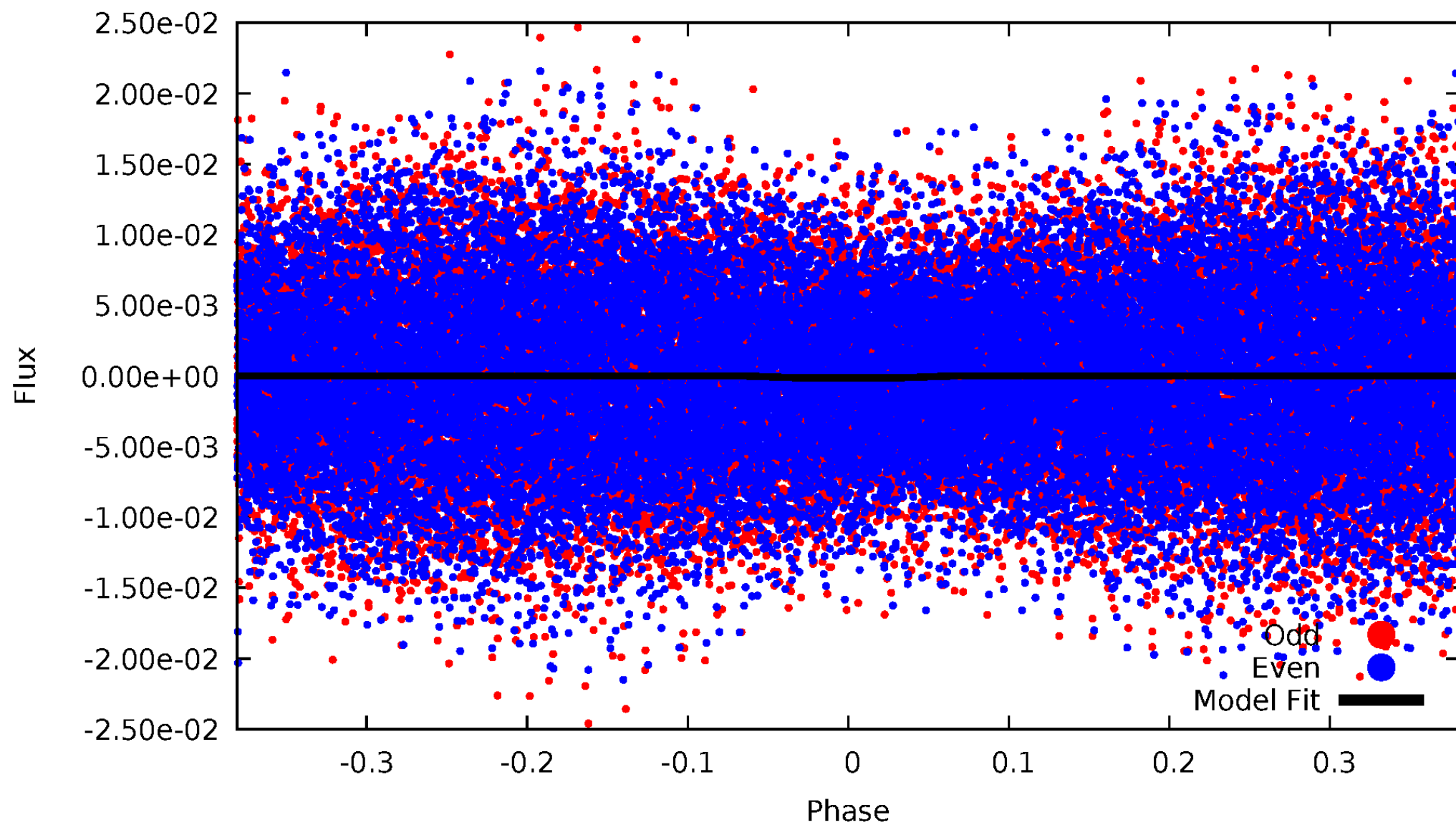
DV Odd/Even

TCE 005724810-01



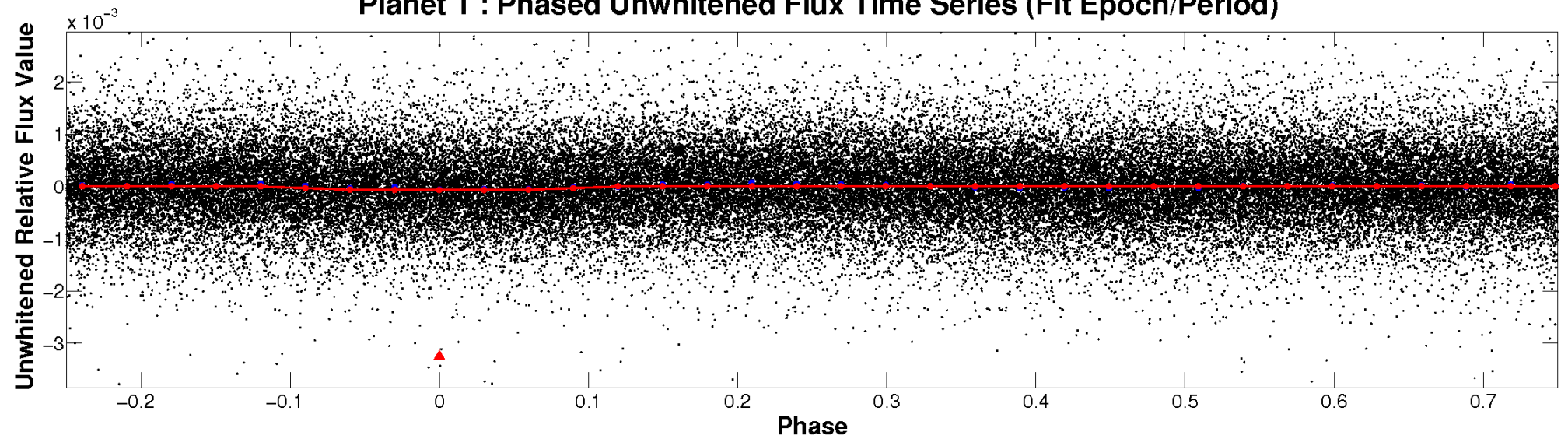
ALT Odd/Even

TCE 005724810-01

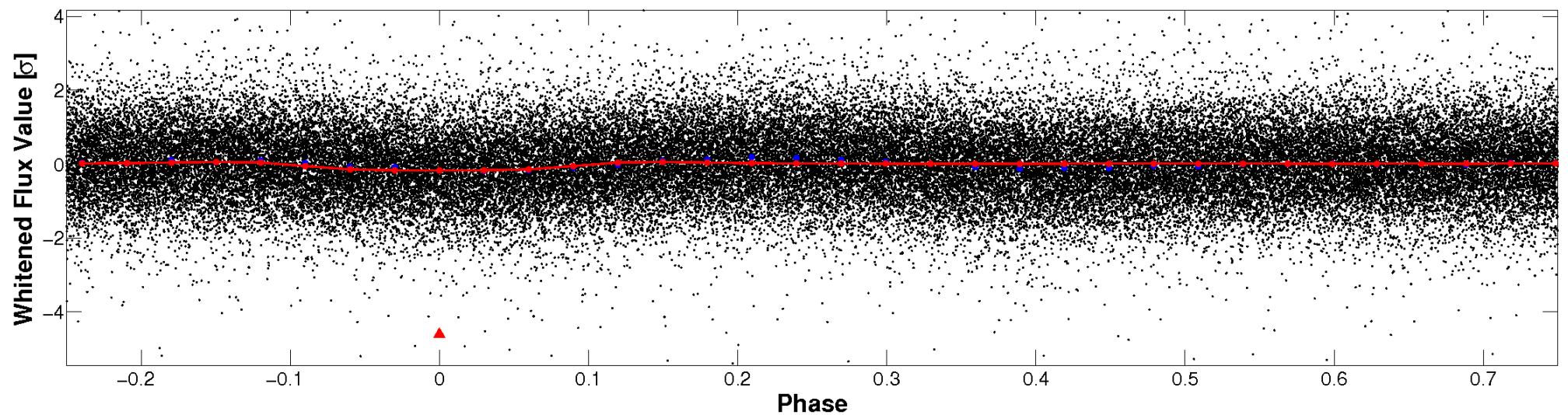


Non-Whitened Vs. Whitened Light Curve

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

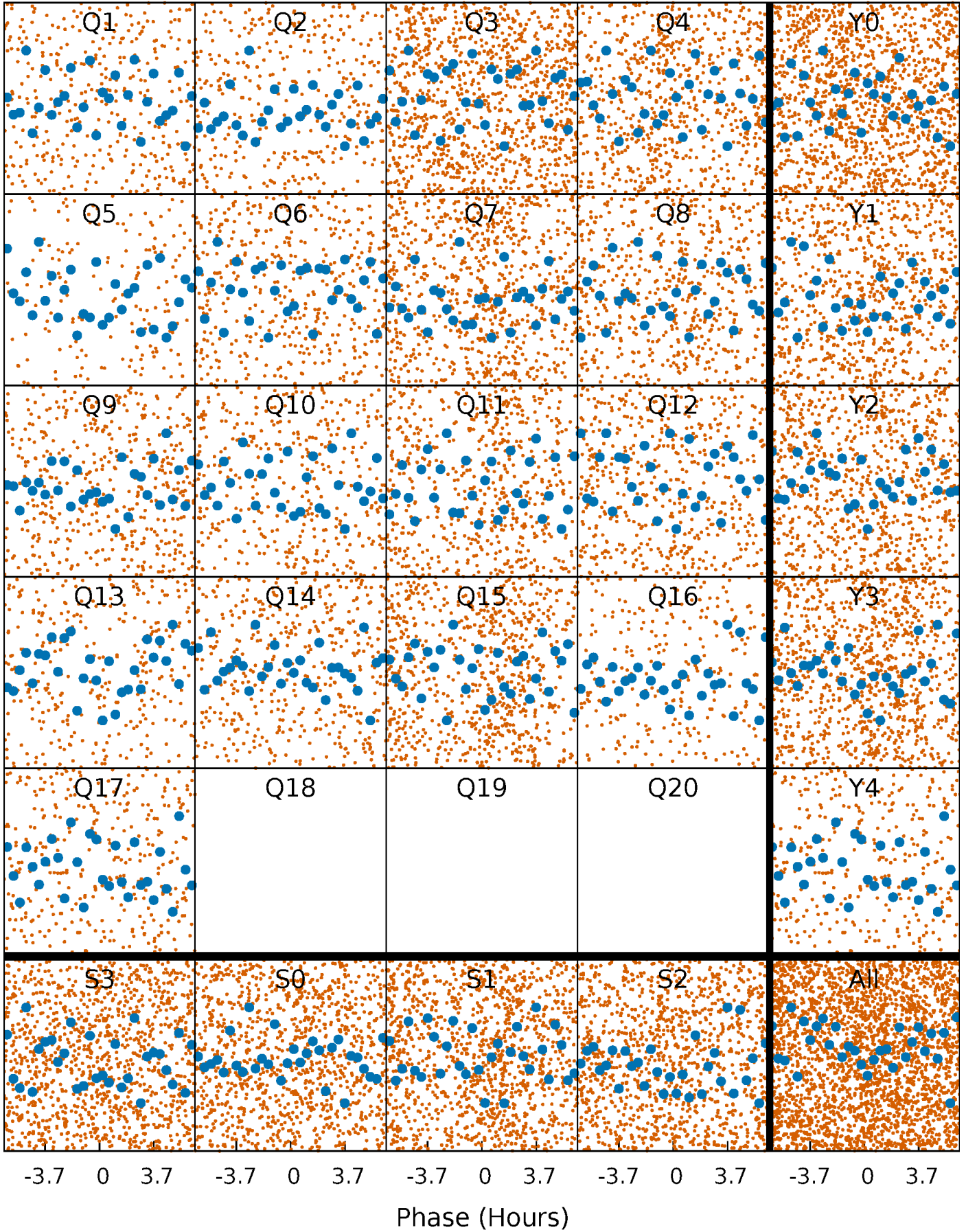


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



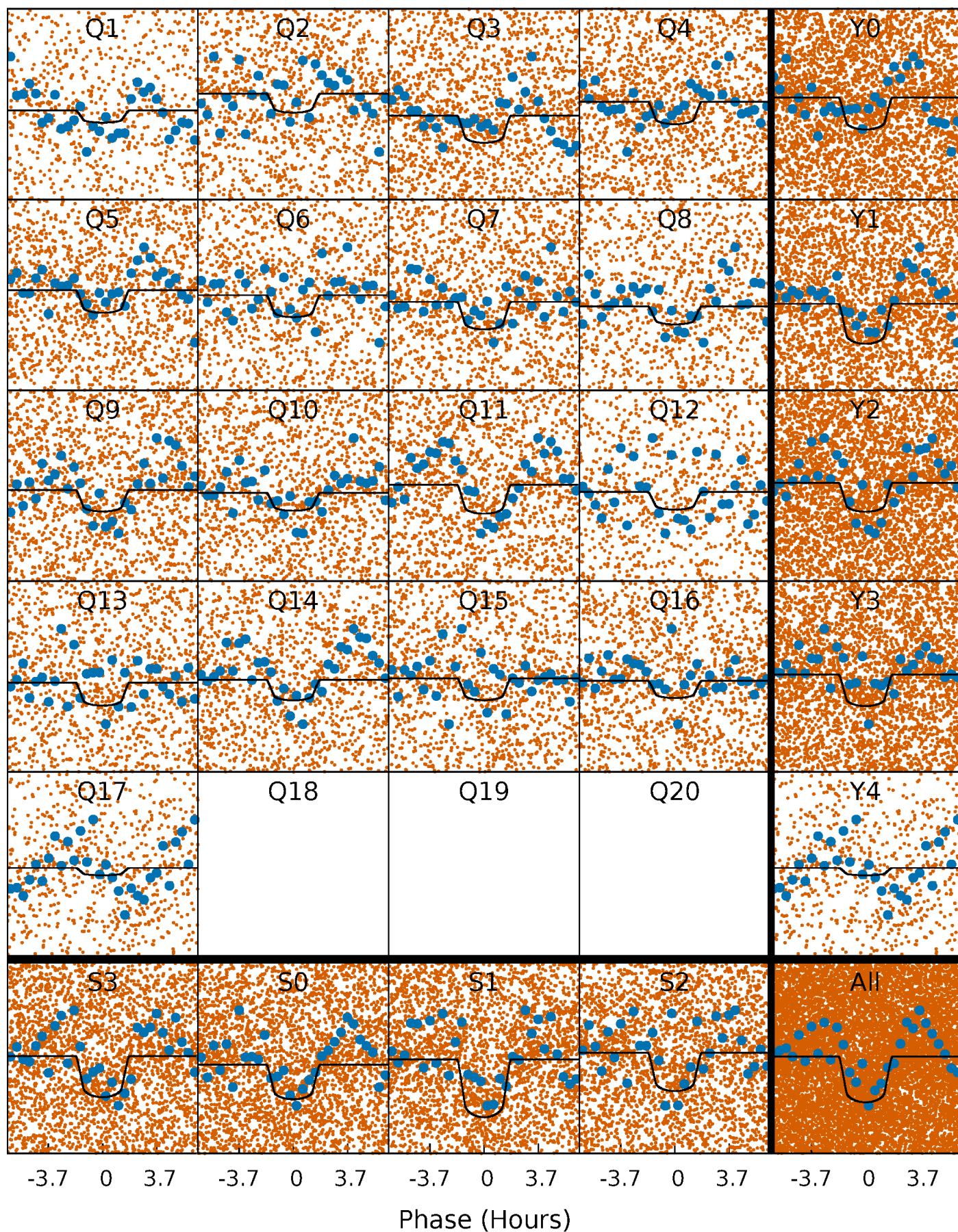
PDC Quarter-Phased Transit Curves

TCE 005724810-01 P= 0.682582 Days $T_0=132.117369$ (BKJD)



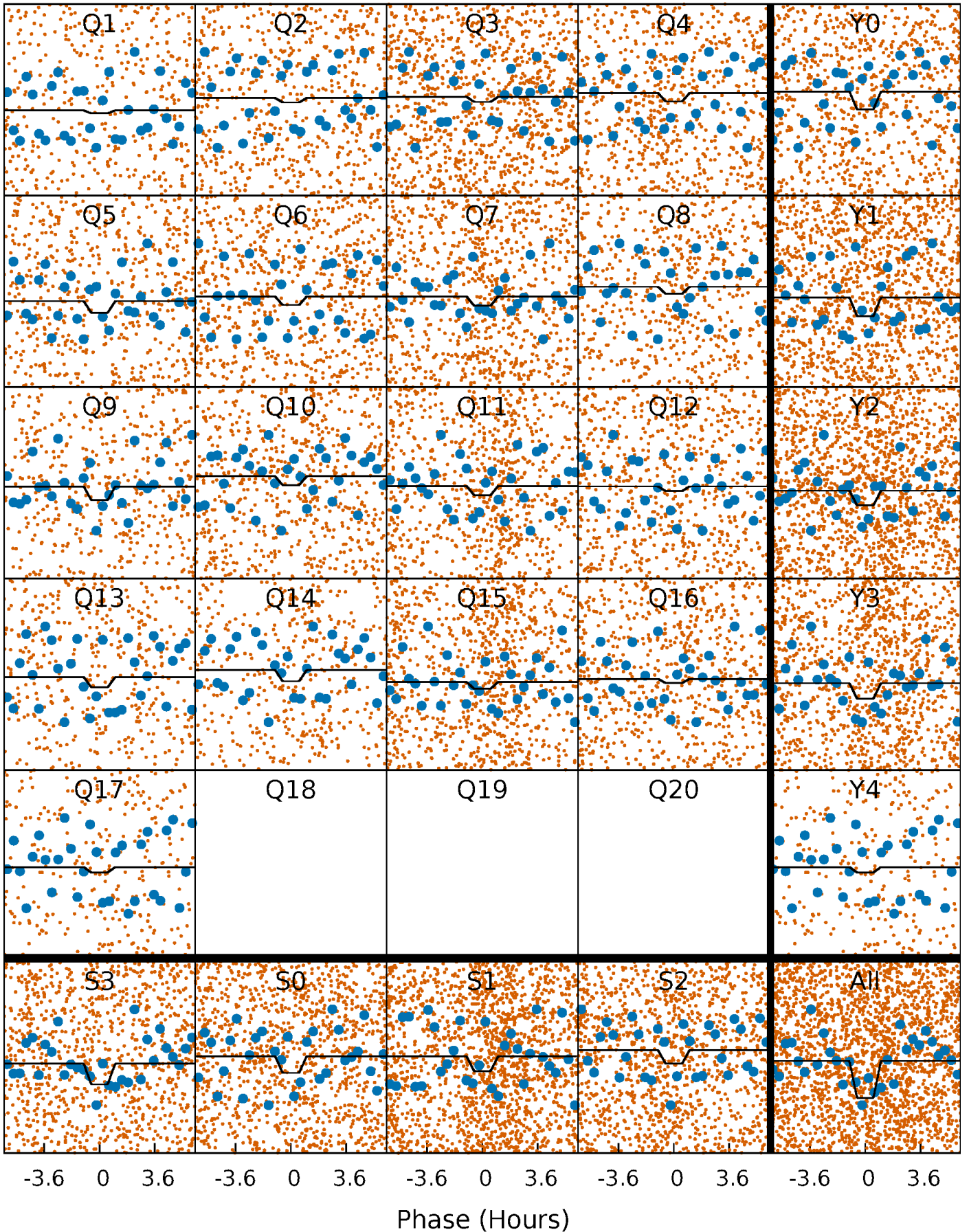
DV Quarter-Phased Transit Curves

TCE 005724810-01 P= 0.682582 Days $T_0=132.117369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

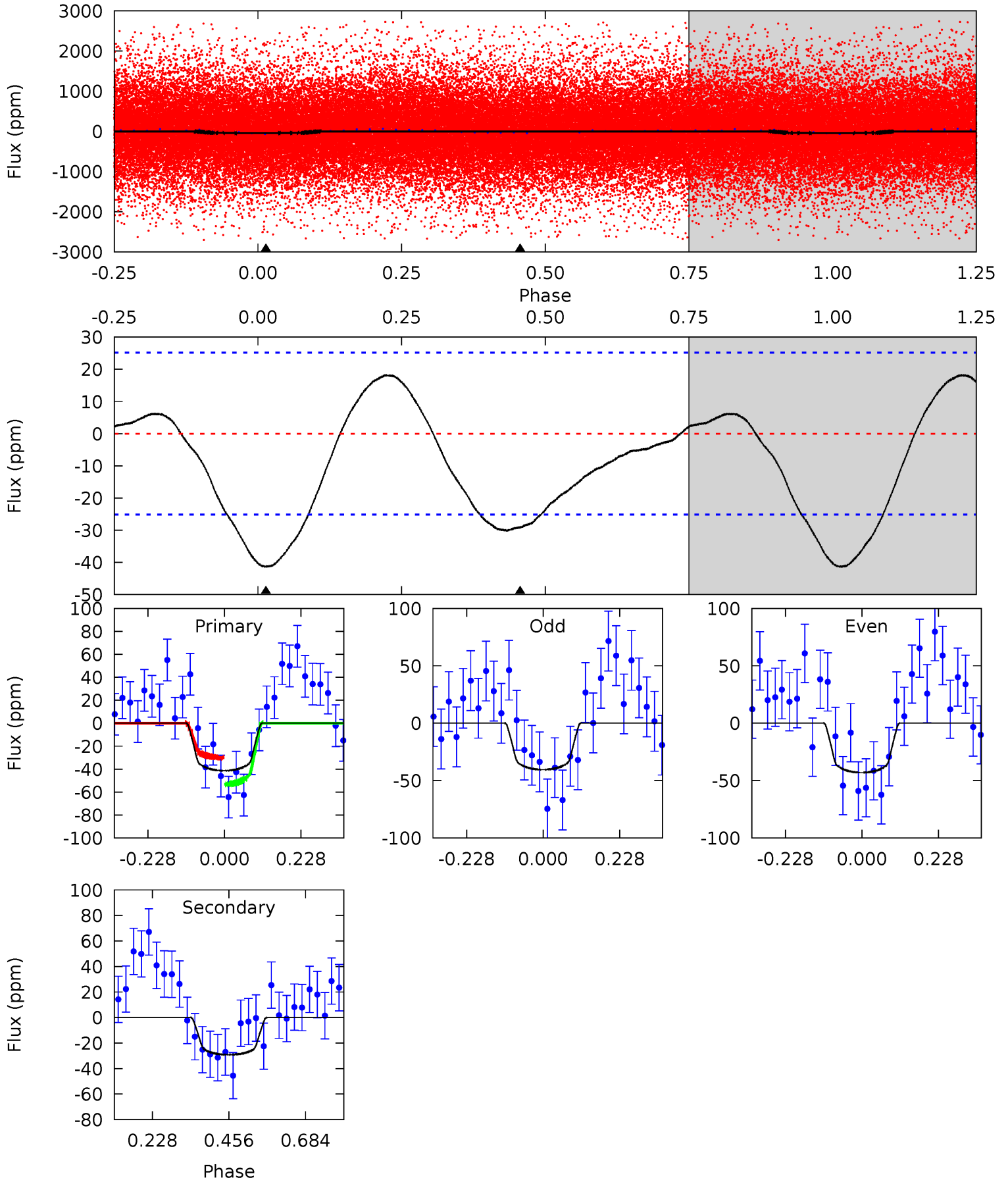
TCE 005724810-01 P= 0.682601 Days $T_0=132.105580$ (BKJD)



DV Model-Shift Uniqueness Test

005724810-01, $P = 0.682582$ Days, $E = 131.434787$ Days

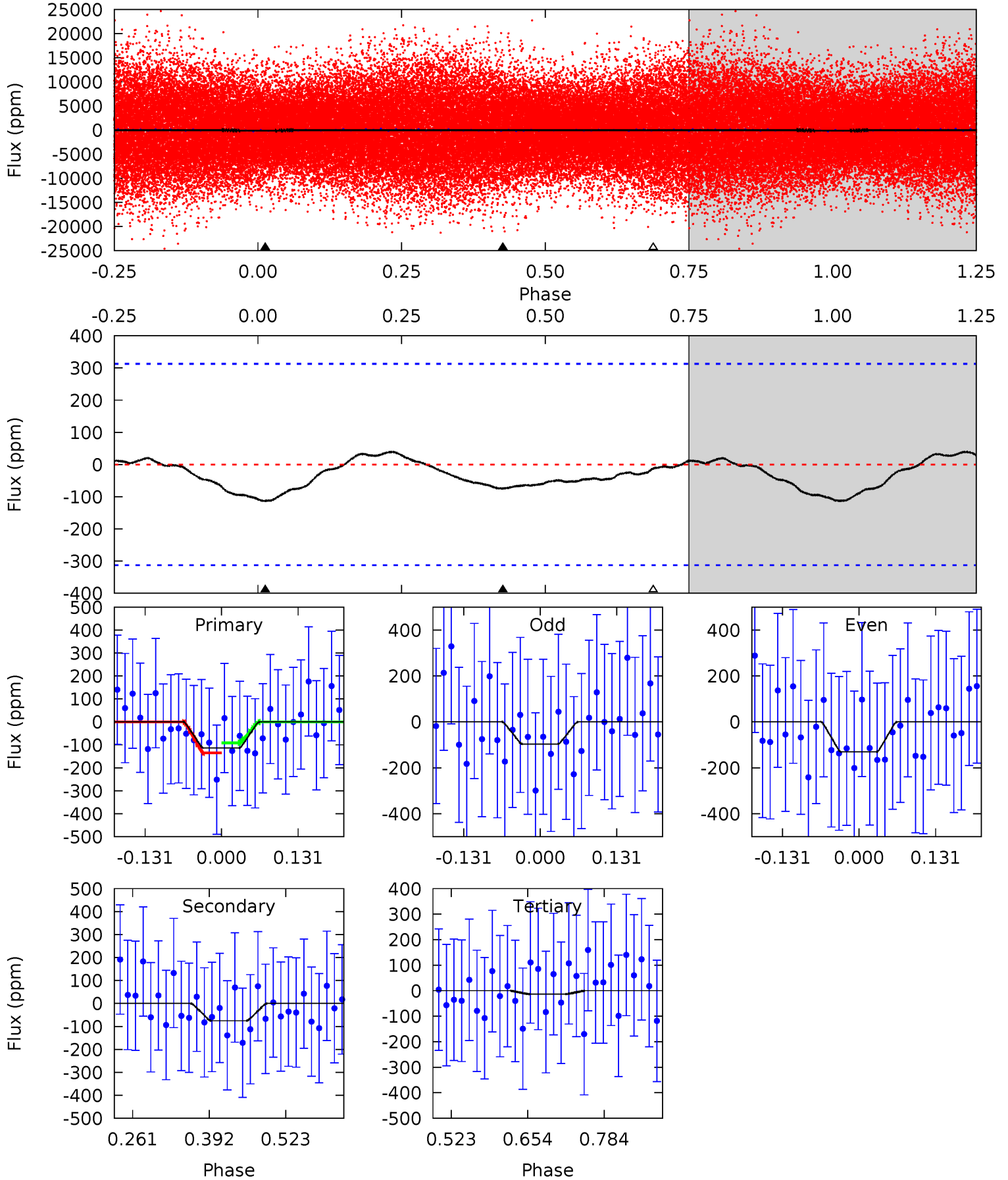
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.21	5.09	0	0	4.39	1.21	0.47	7.21	7.21	5.09	5.09	0.23	0.99	0.31	2.02



Alt Model-Shift Uniqueness Test

005724810-01, P = 0.682601 Days, E = 131.422979 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.64	1.08	0.20	0	4.51	1.51	0.36	1.44	1.64	0.89	1.08	0.25	1.44	0.26	0.31



Stellar Parameters For KIC 005724810

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7645^{+83}_{-83}	$3.966^{+0.132}_{-0.088}$	$0.210^{+0.200}_{-0.150}$	$2.394^{+0.331}_{-0.404}$	$1.930^{+0.133}_{-0.148}$	$0.198^{+0.126}_{-0.056}$
	+1%/-1%	+3%/-2%	+95%/-71%	+14%/-17%	+7%/-8%	+63%/-28%
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 005724810-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 6	$2.27^{+0.92}_{-0.90}$	5293^{+202}_{-215}	5503^{+2074}_{-1248}	$1.135^{+2.069}_{-0.597}$
Alt.	-75 ± 69	$2.86^{+1.01}_{-0.88}$	5295^{+190}_{-239}	6009^{+2694}_{-10023}	$1.531^{+3.381}_{-1.407}$

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 $A_{obs} \gg 1.0$

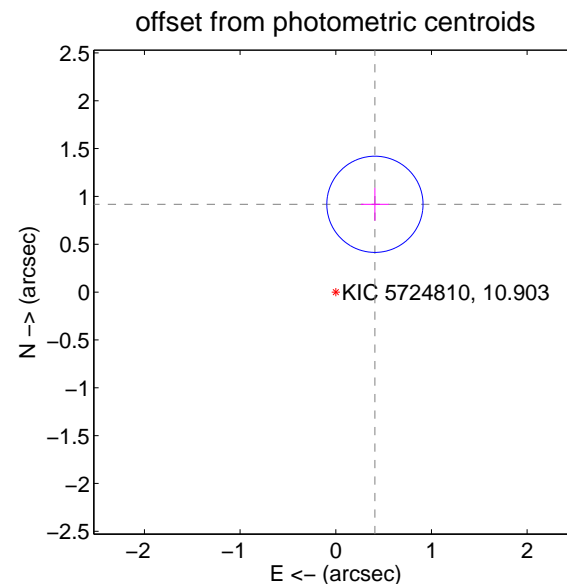
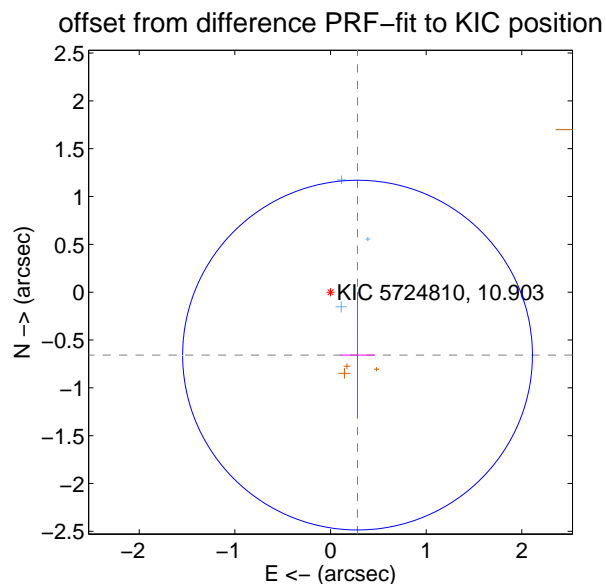
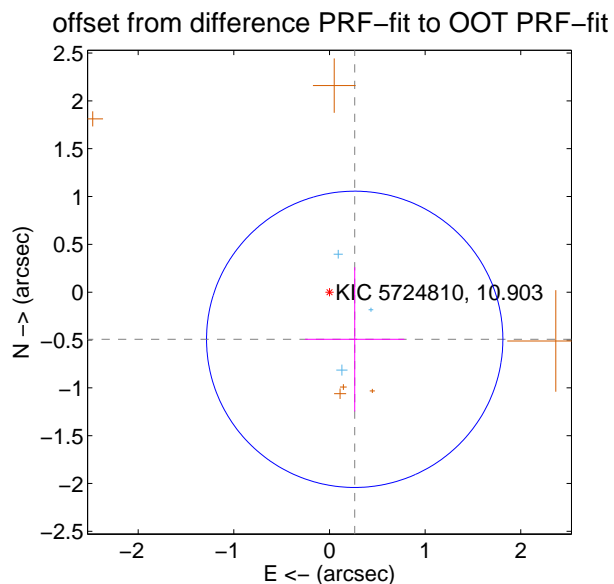
DV Centroid Data

Supplemental centroid analysis for 005724810-01. **Kepler magnitude: 10.90.** Transit SNR 16.97

There are 7 quarters with good PRF difference image offsets

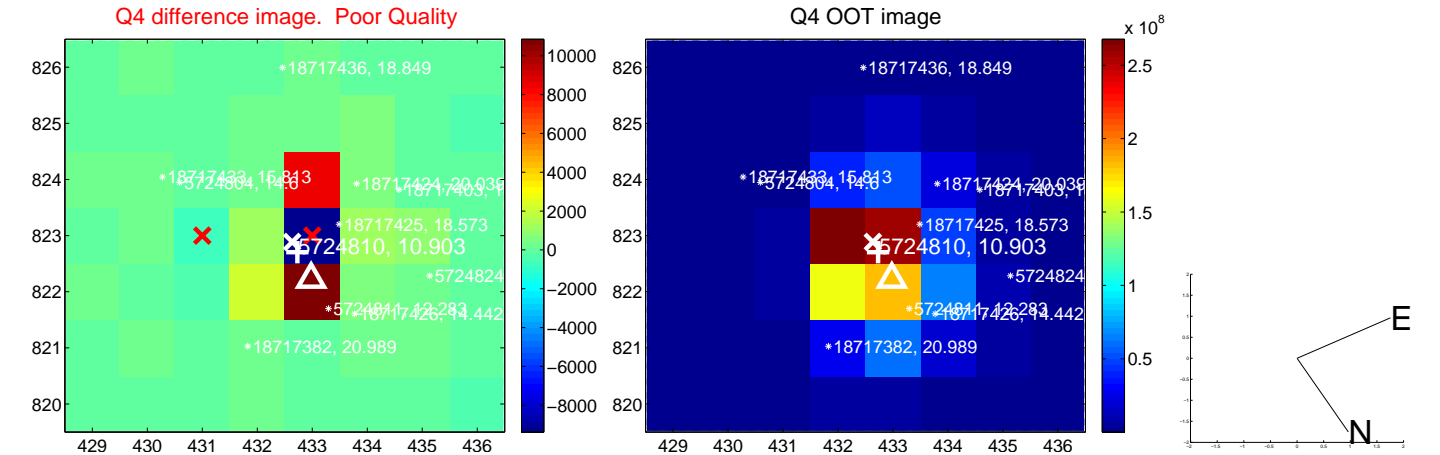
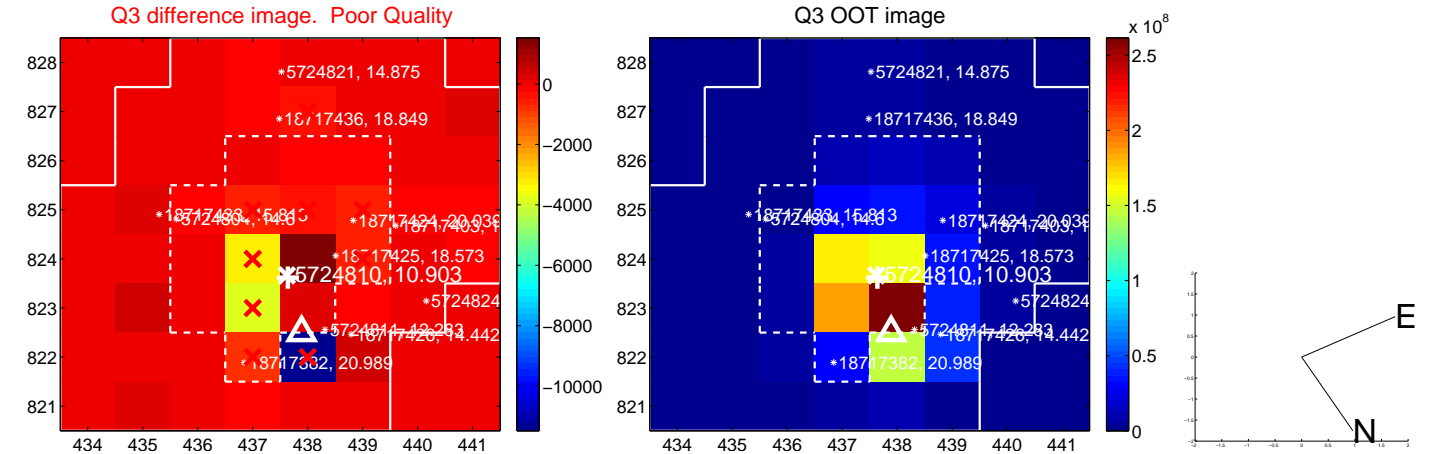
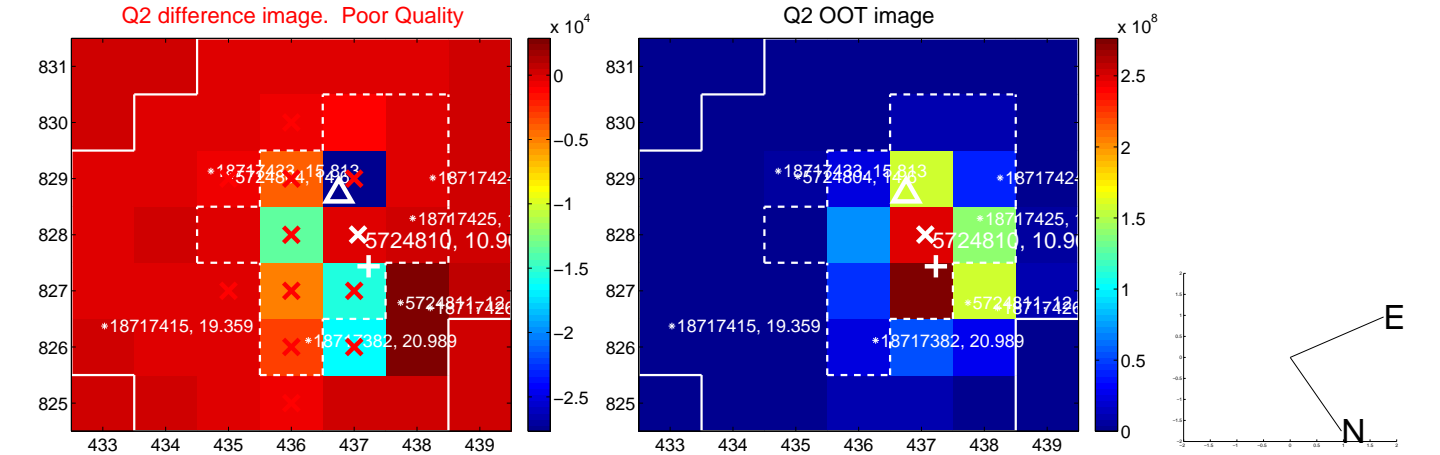
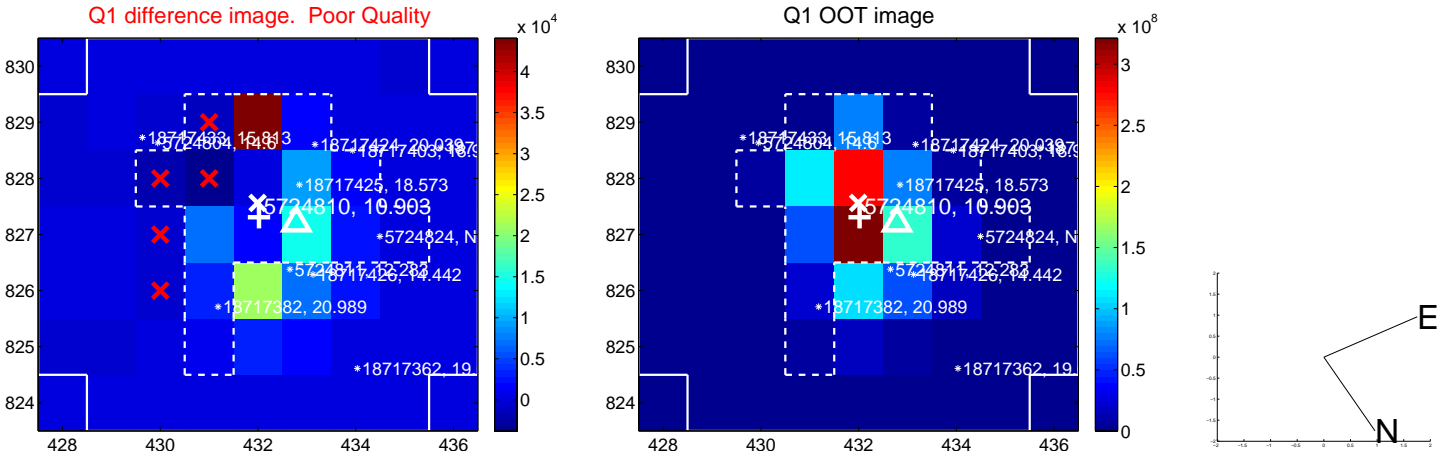
The direct PRF centroid is offset from the target star catalog position by about 0.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.559 ± 0.516	1.08	-0.264 ± 0.518	-0.493 ± 0.753
PRF-fit source offset from KIC position	0.716 ± 0.609	1.17	-0.282 ± 0.181	-0.658 ± 0.659
photometric centroid source offset	1.00 ± 0.17	6.00	-0.41 ± 0.14	0.92 ± 0.17

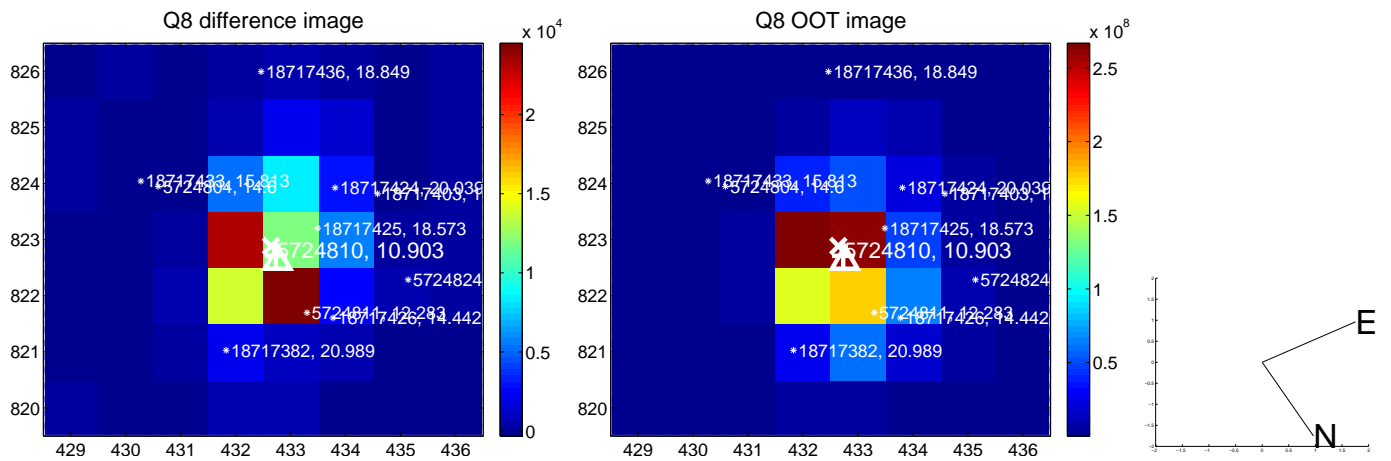
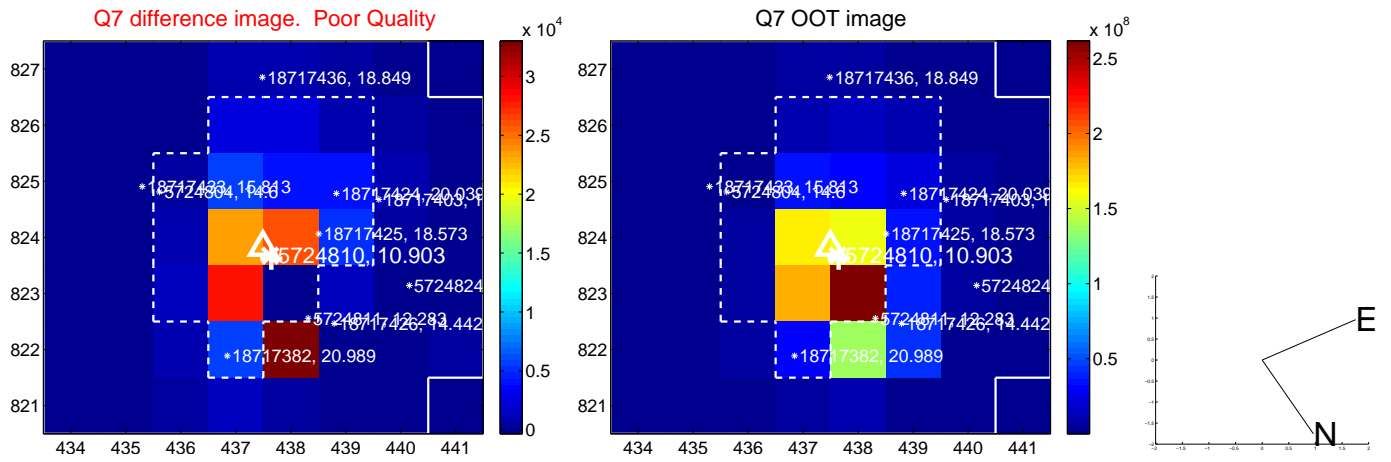
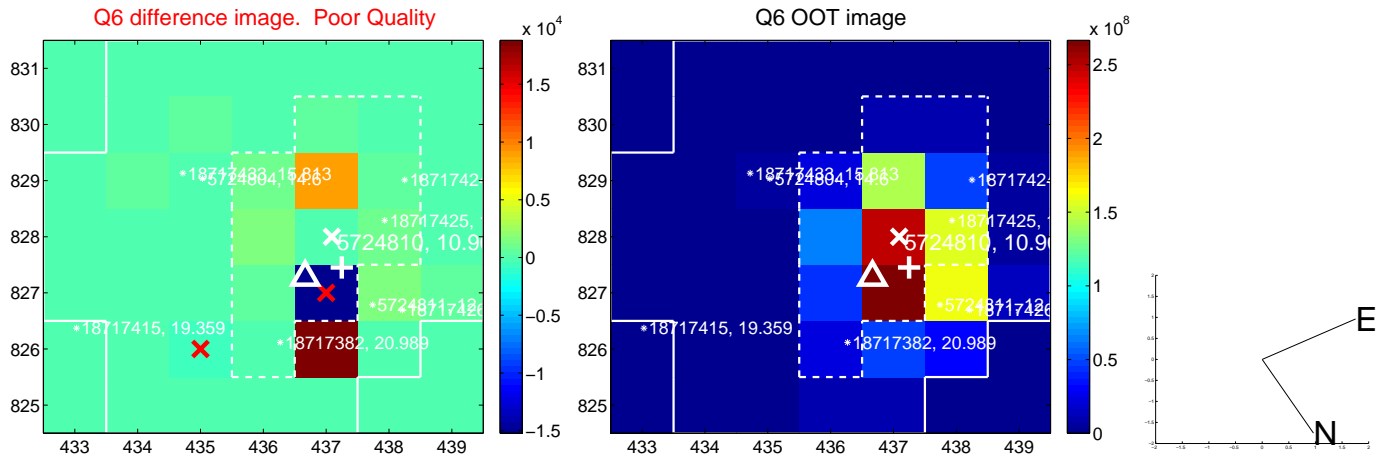
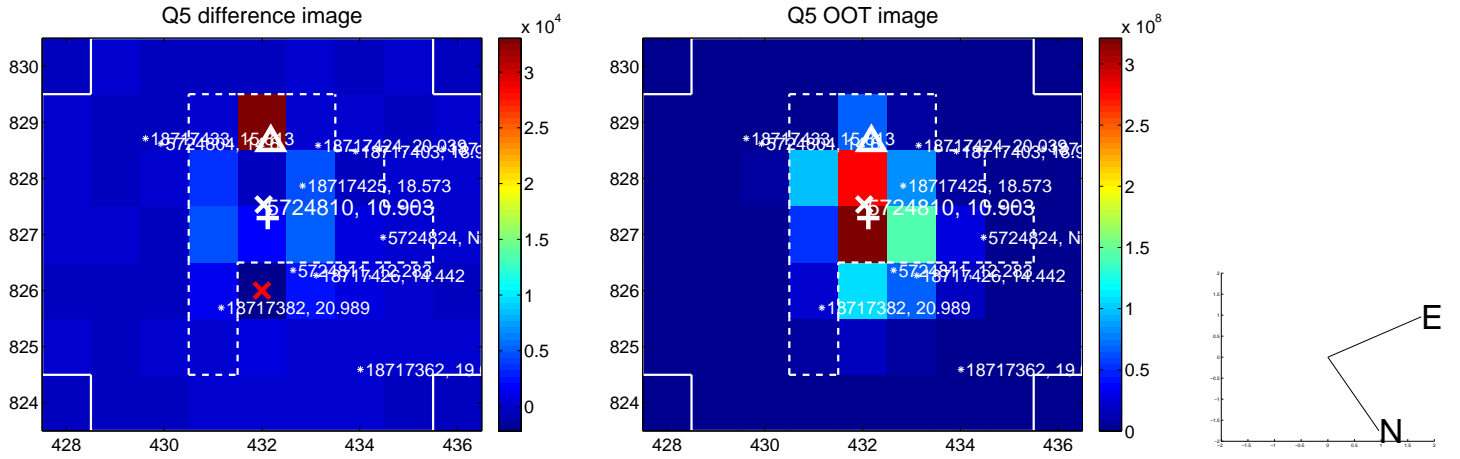


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

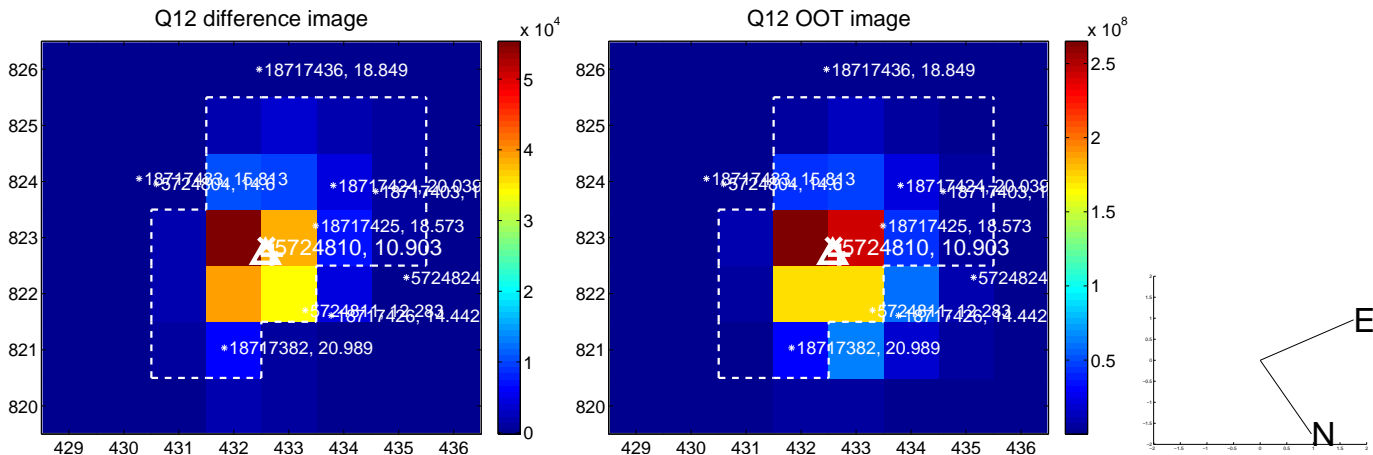
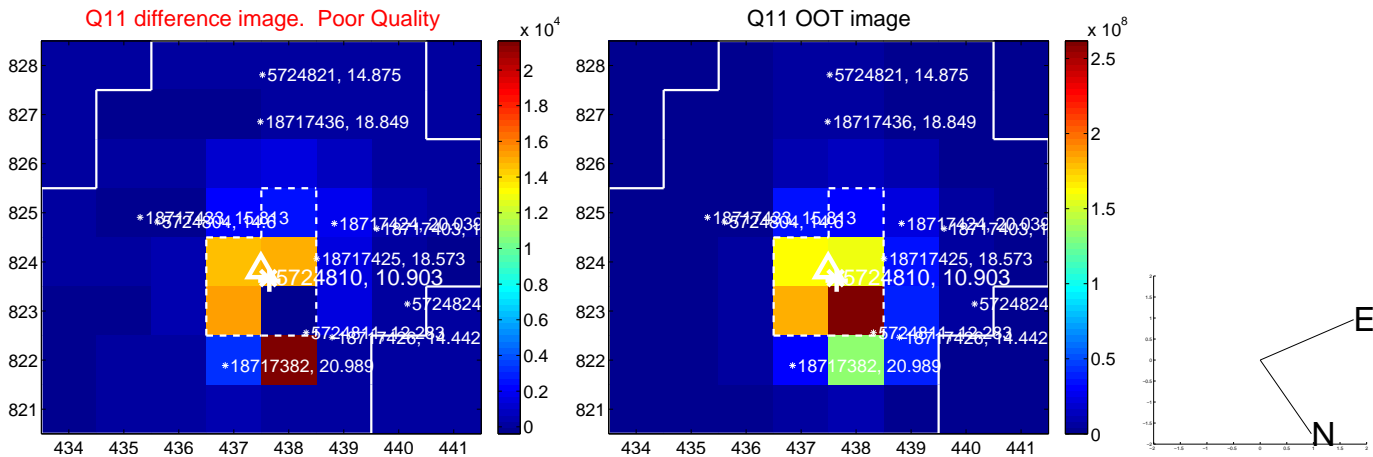
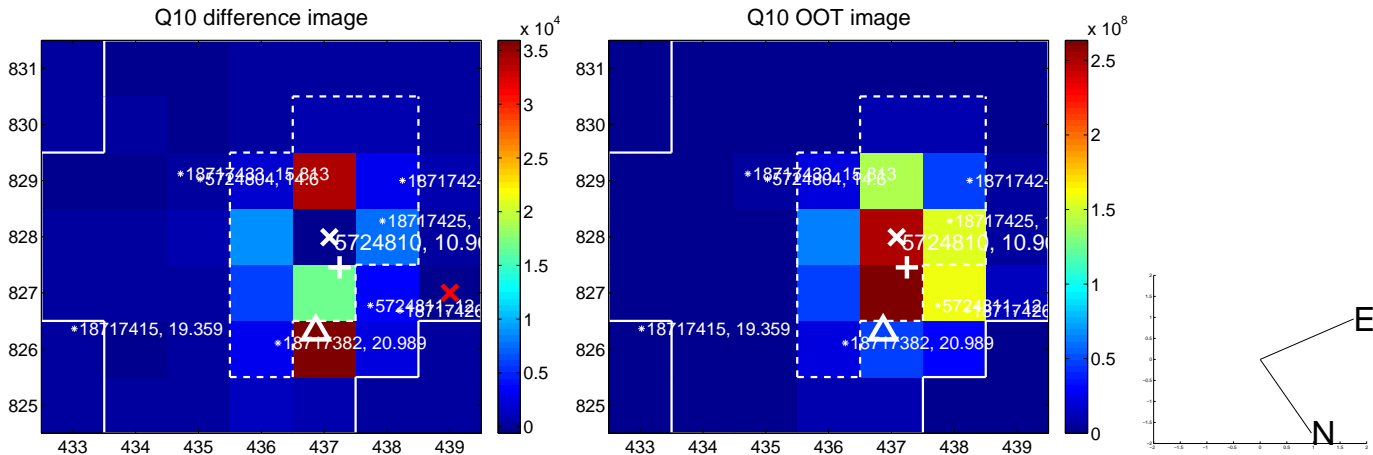
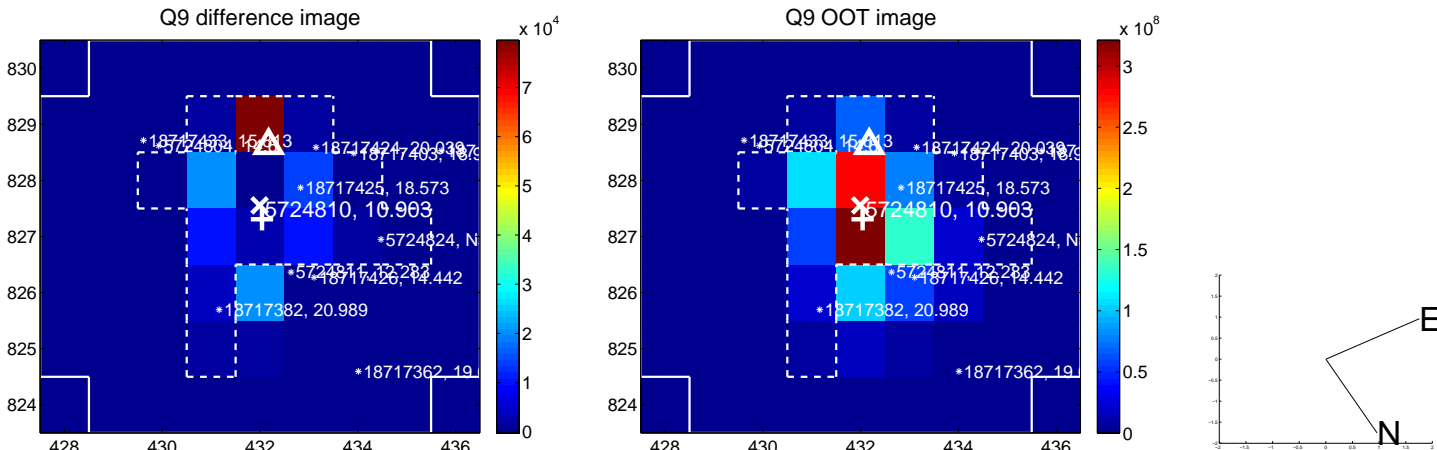
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



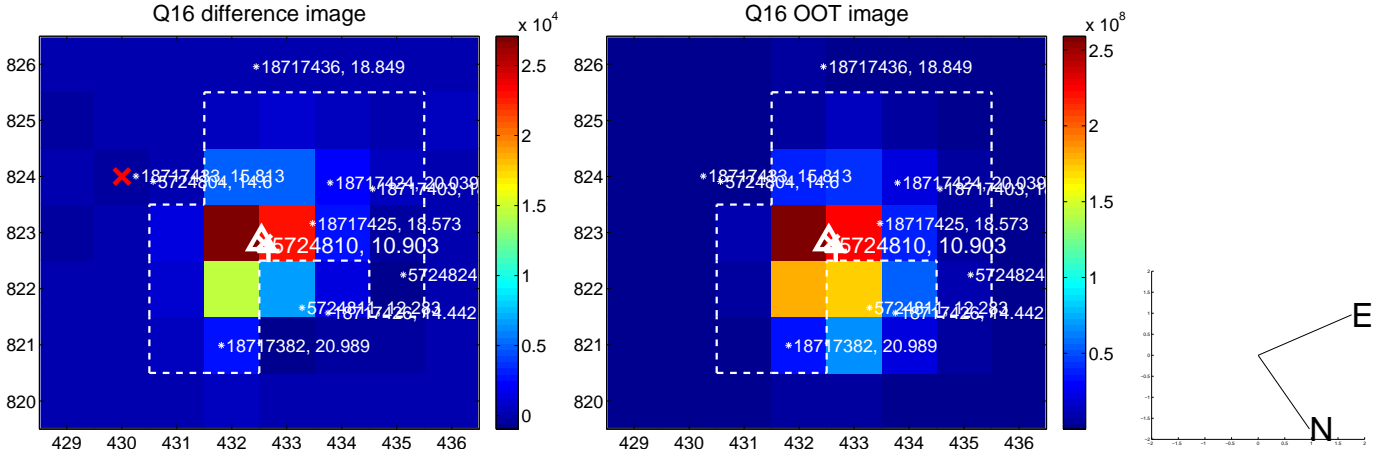
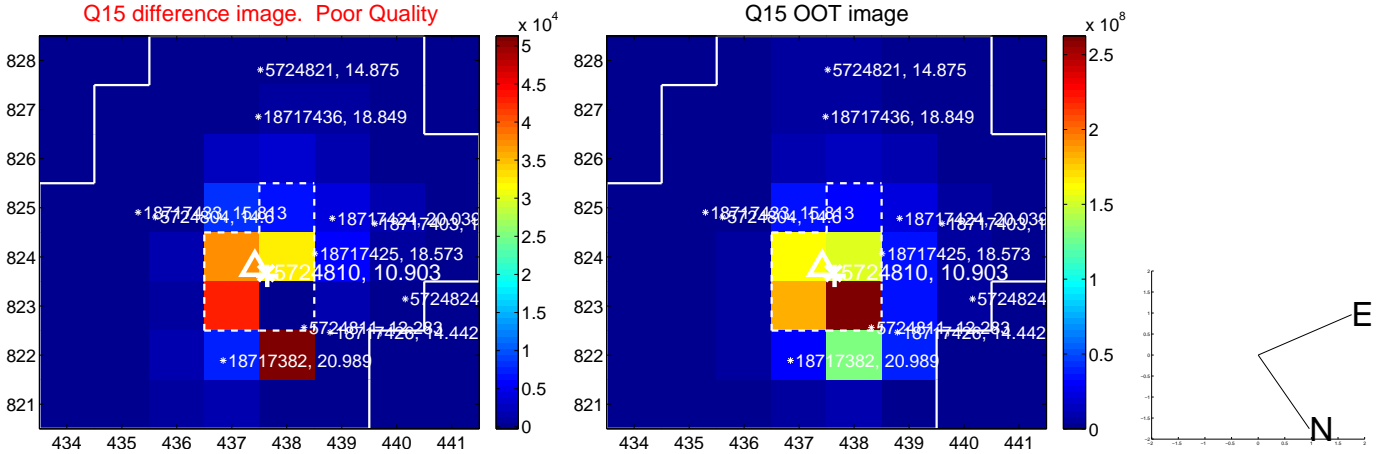
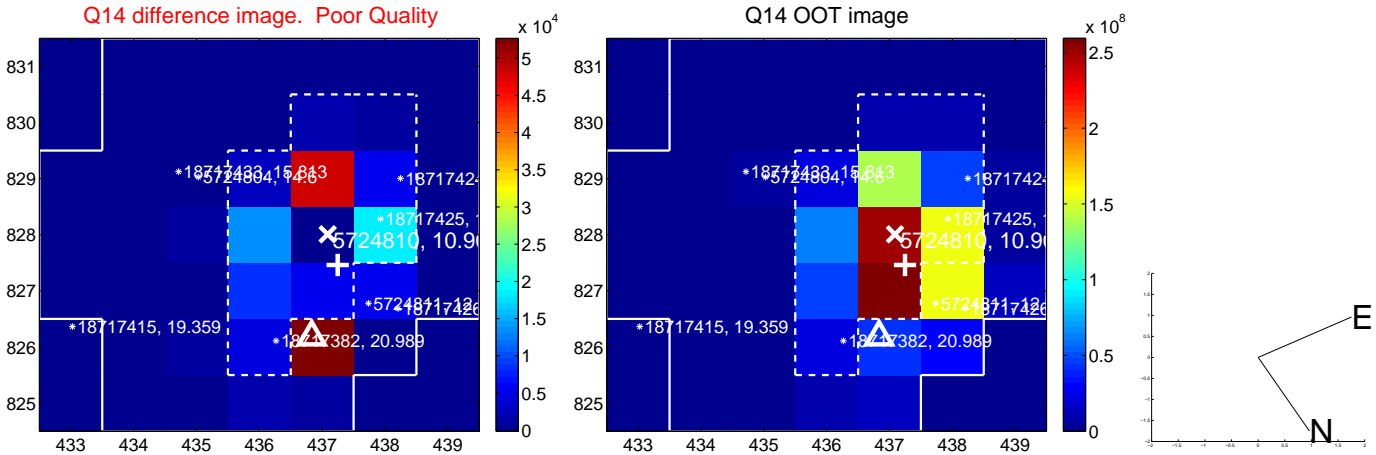
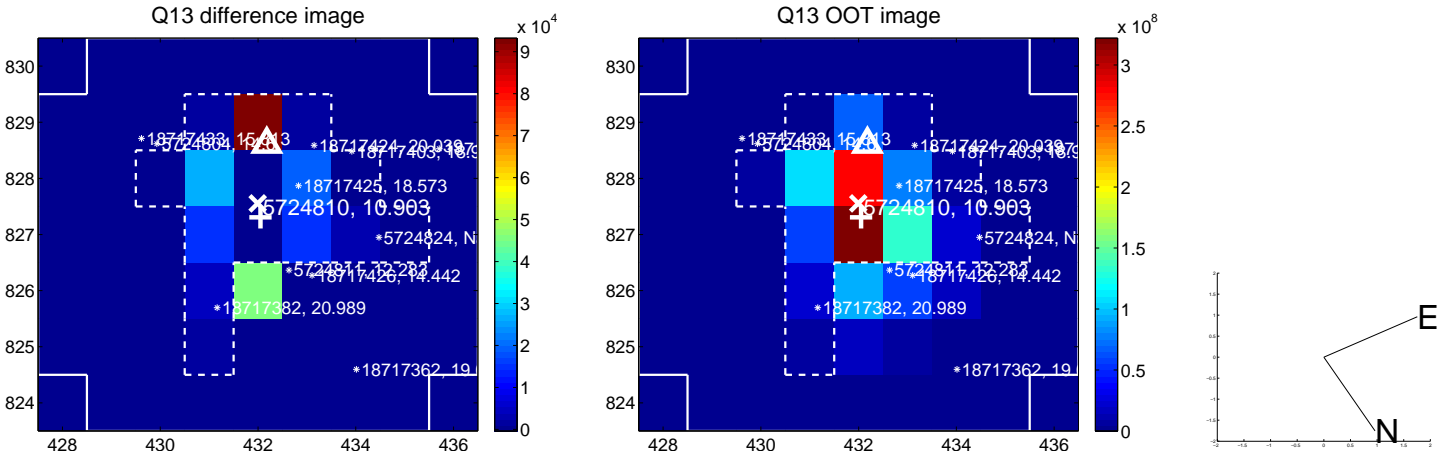
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

