

KIC 004649462

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})
004649462-01	OBS	No	0.945082	131.638408	14.3	3.964	8.3	9.0	1.15	6492	0.44	5295.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004649462-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

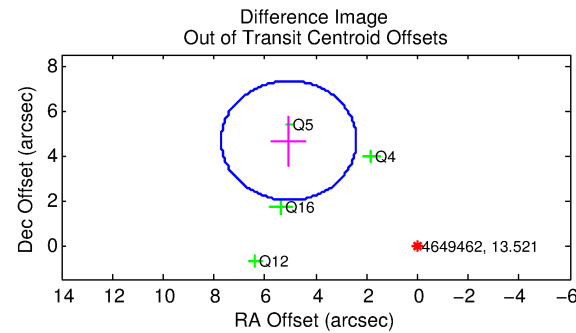
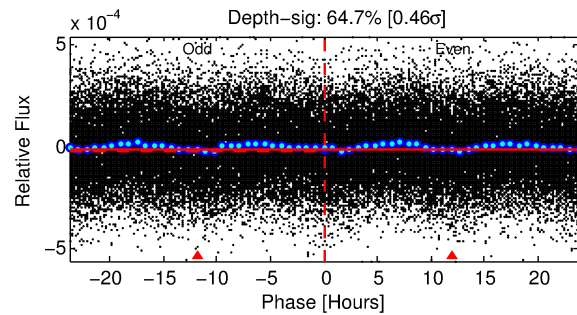
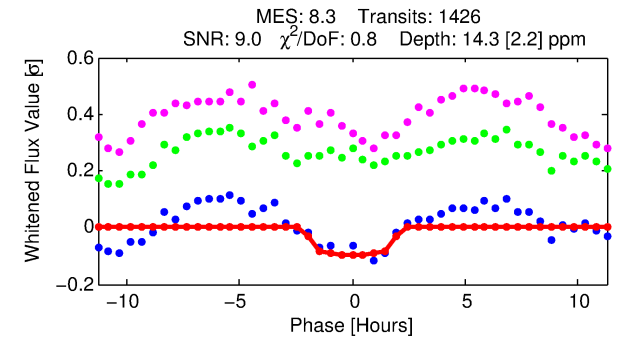
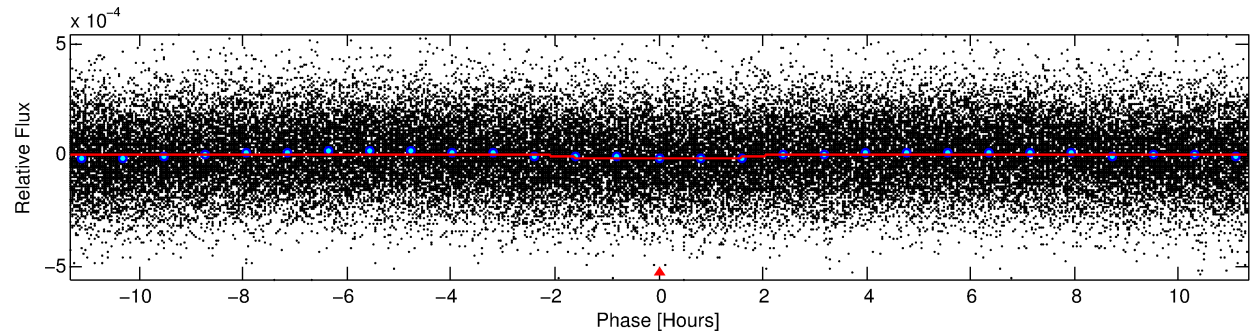
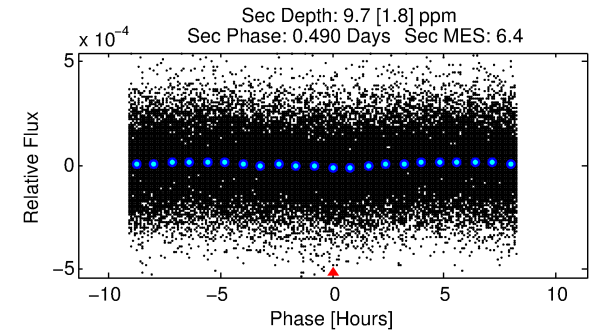
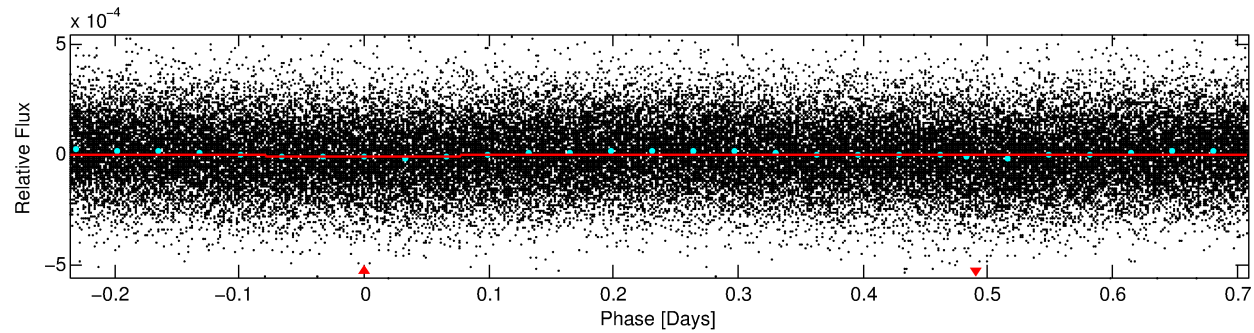
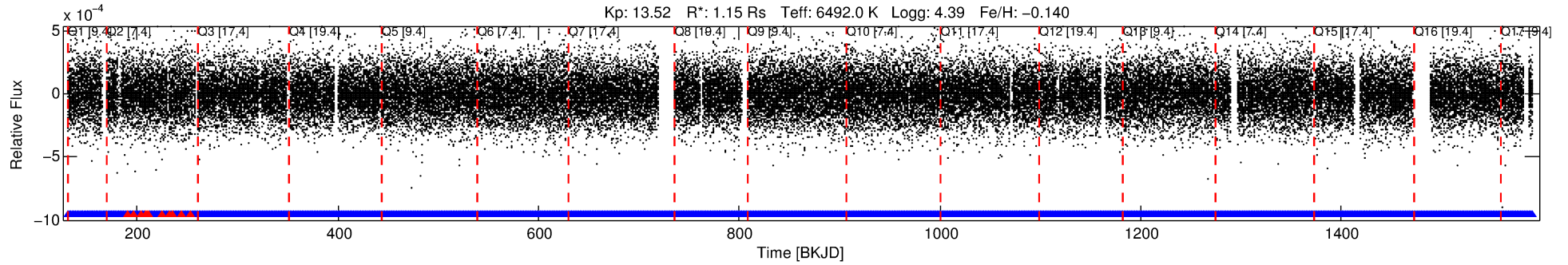
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004649462-01

No Significant Match Found

DV One-Page Summary

KIC: 4649462 Candidate: 1 of 1 Period: 0.945 d



DV Fit Results:

Period = 0.94508 [0.00001] d
Epoch = 131.6384 [0.0054] BKJD
Rp/R* = 0.0035 [0.0053]
a/R* = 1.92 [11.30]
b = 0.01 [694.35]
Seff = 5295.48 [2027.83]
Teq = 2175 [208] K
Rp = 0.44 [0.68] Re
a = 0.0199 [0.0050] AU
Ag = 11.12 [34.16] [0.30σ]
Teffp = 6142 [4687] K [0.85σ]

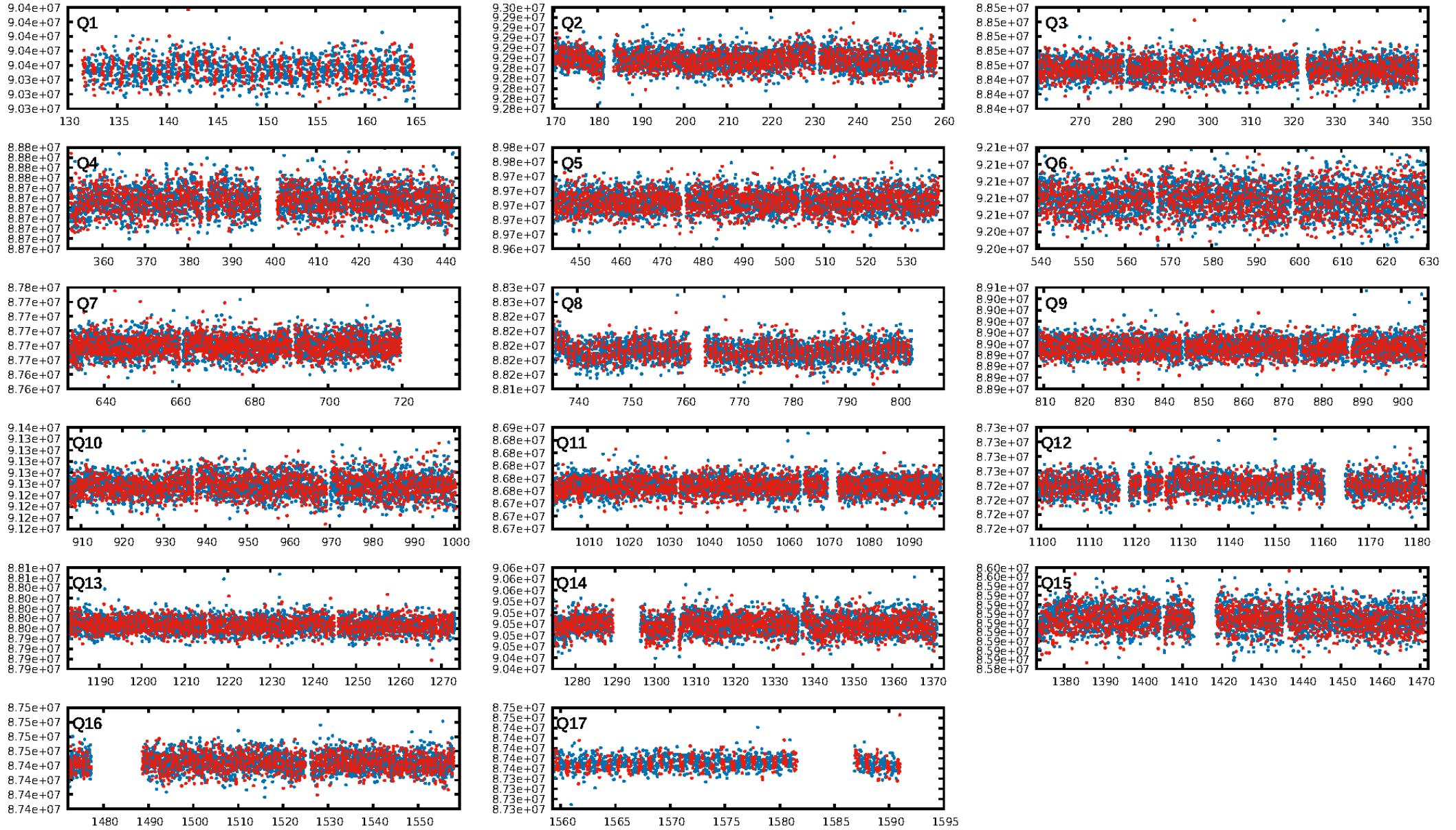
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.39e-12
RollingBand-fgt: 0.99 [1350/1361]
GhostDiagnostic-chr: 2.263
Centroid-sig: 5.6%
Centroid-so: 3.848 arcsec [2.16σ]
OotOffset-rm: 6.881 arcsec [7.77σ]
KicOffset-rm: 7.036 arcsec [7.87σ]
OotOffset-st: 0/0/3/1 [4]
KicOffset-st: 0/0/3/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [17/17]

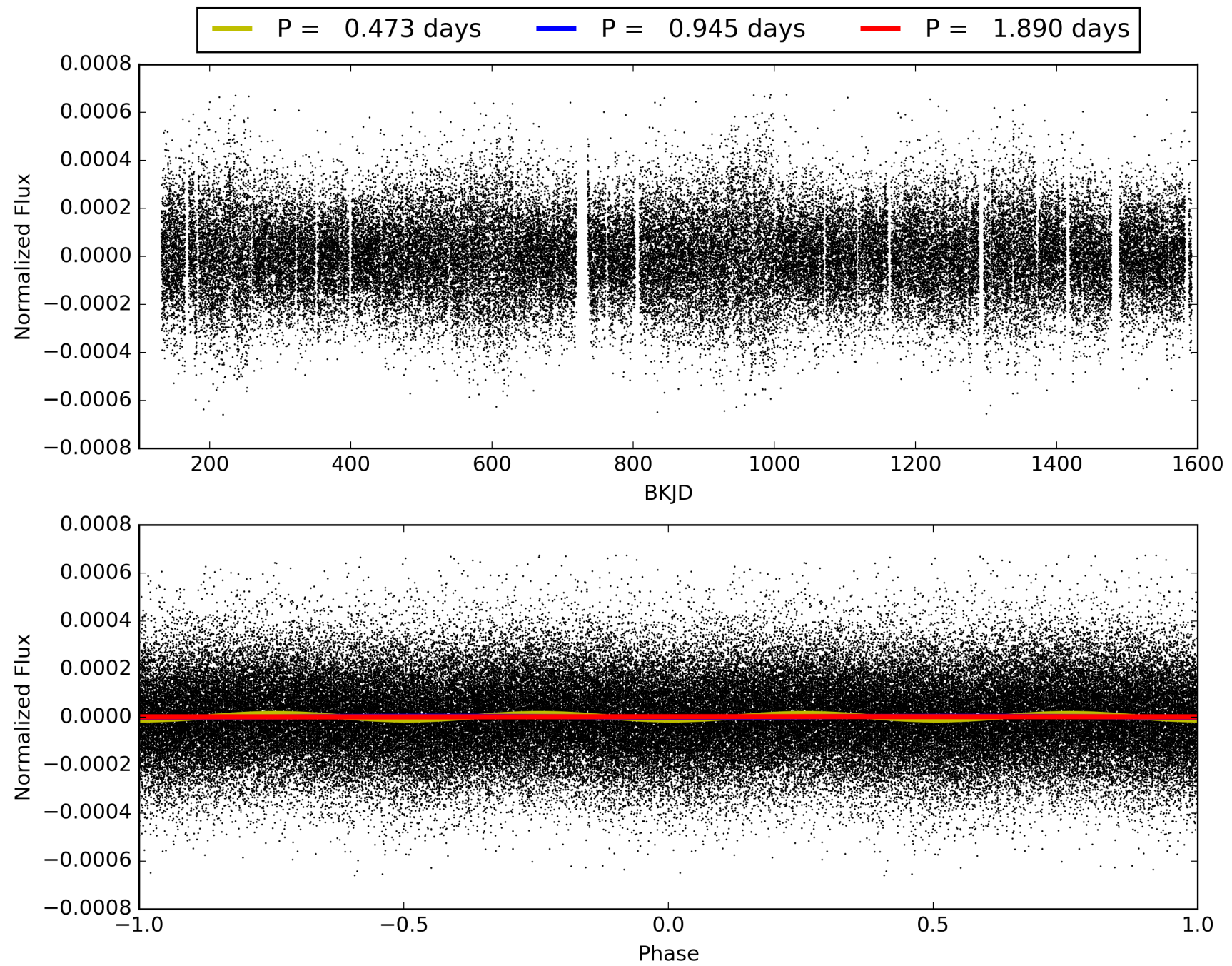
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:19:52 Z

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

TCE 004649462-01, PDC Light Curves

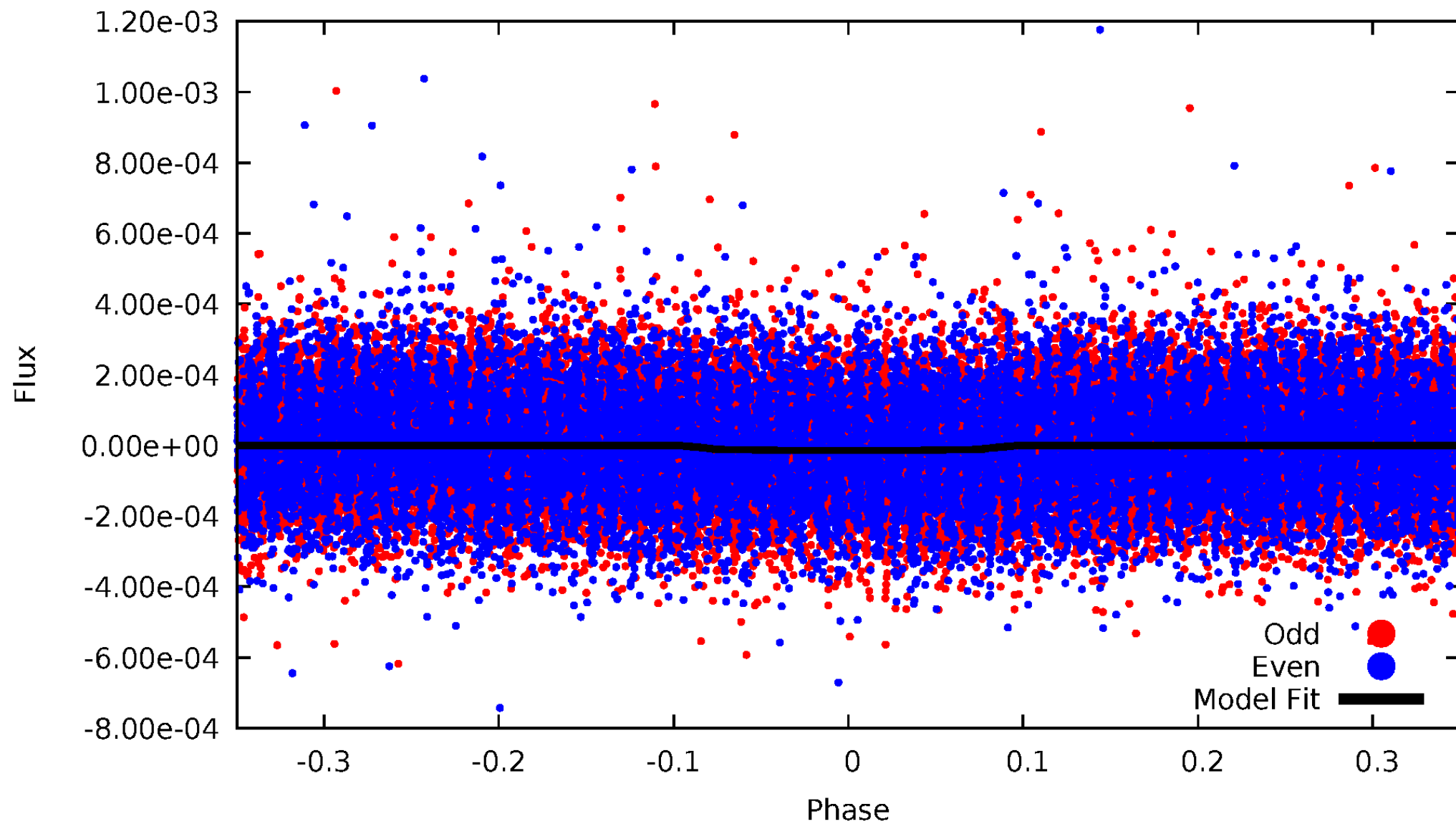


TCE 004649462-01



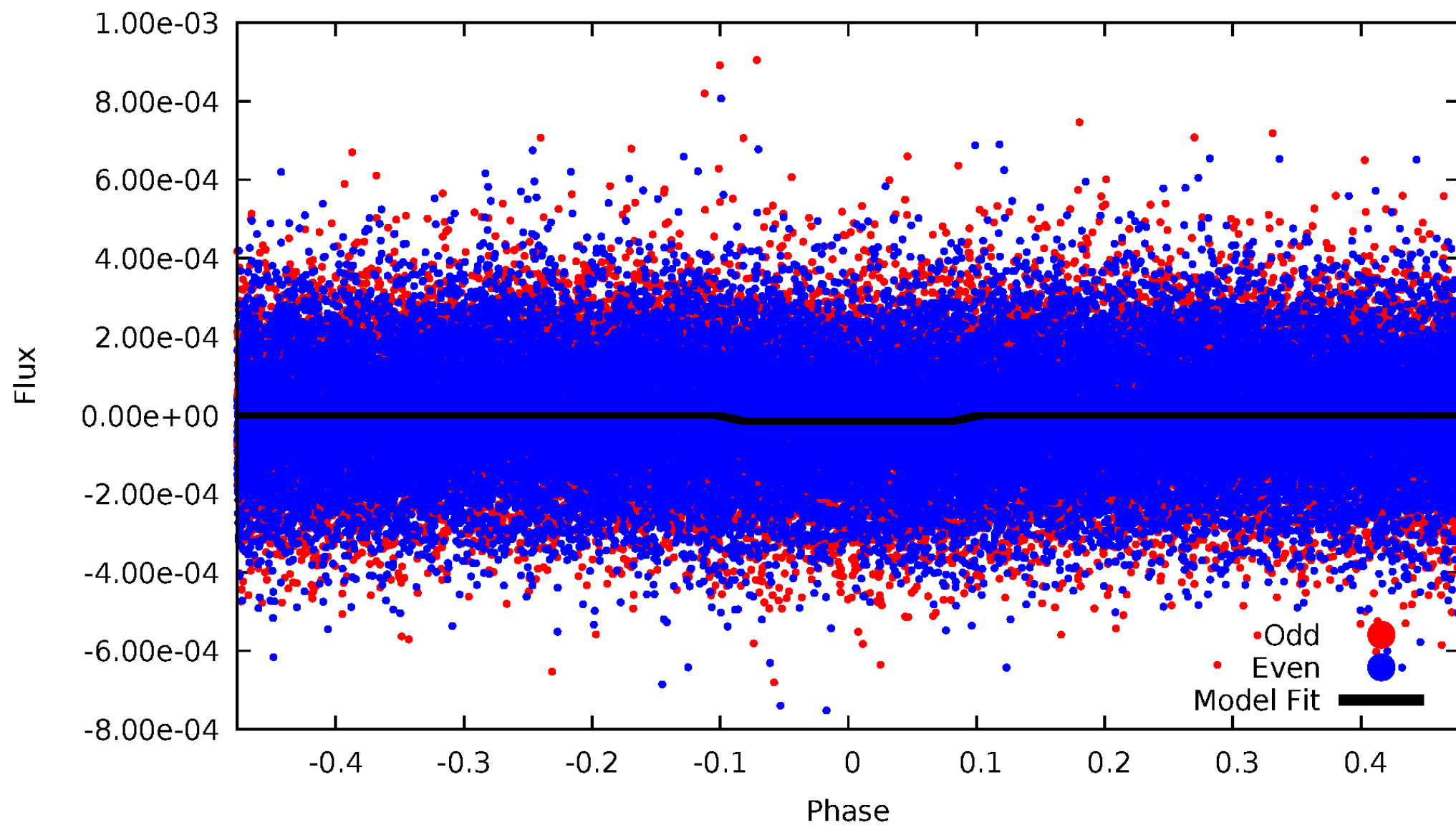
DV Odd/Even

TCE 004649462-01



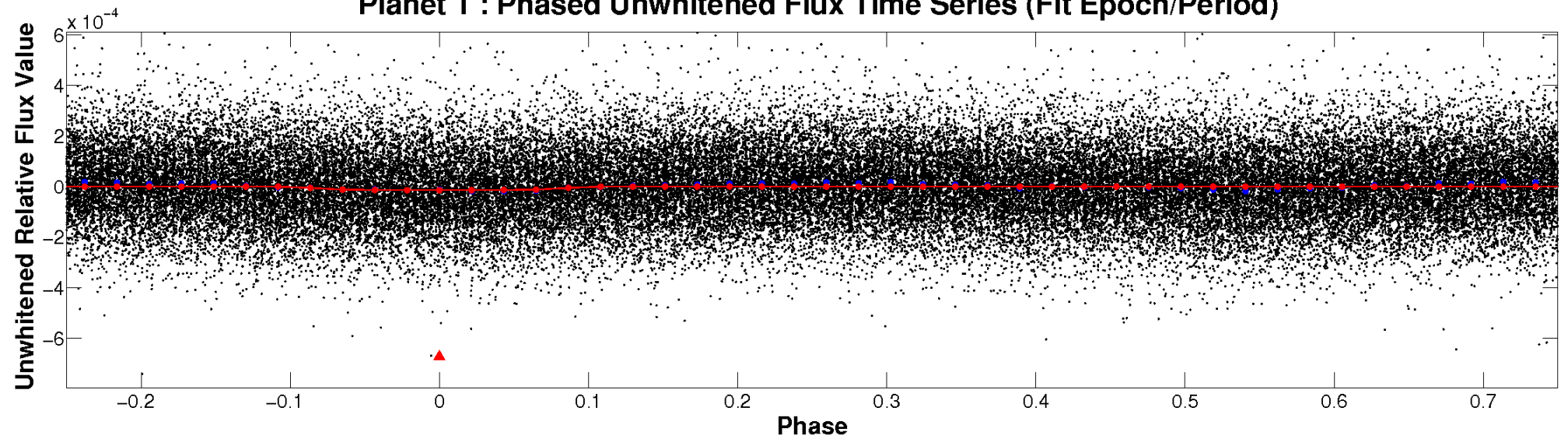
ALT Odd/Even

TCE 004649462-01

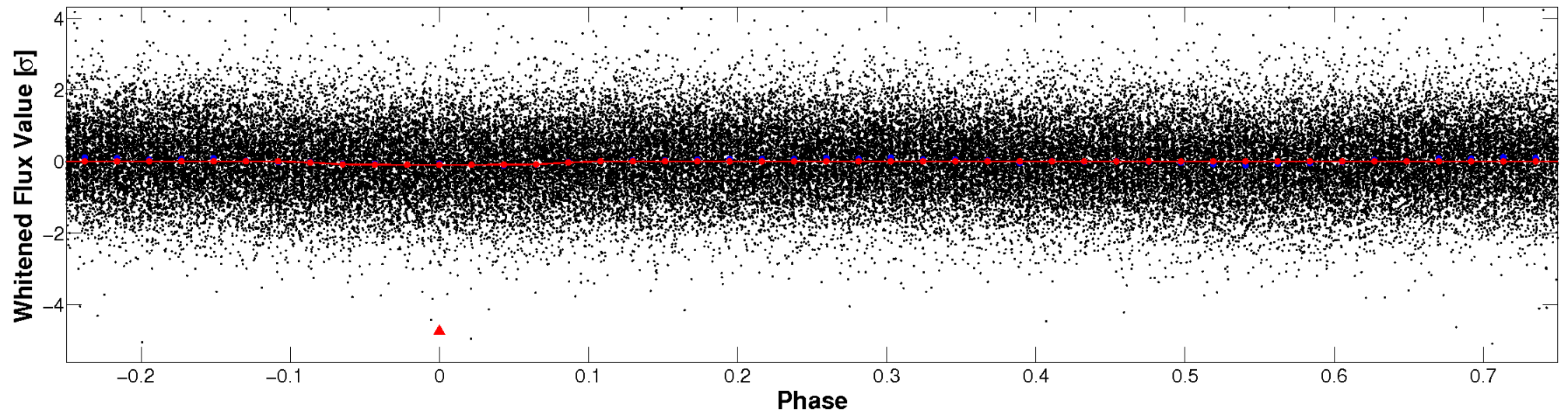


Non-Whitened Vs. Whitened Light Curve

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

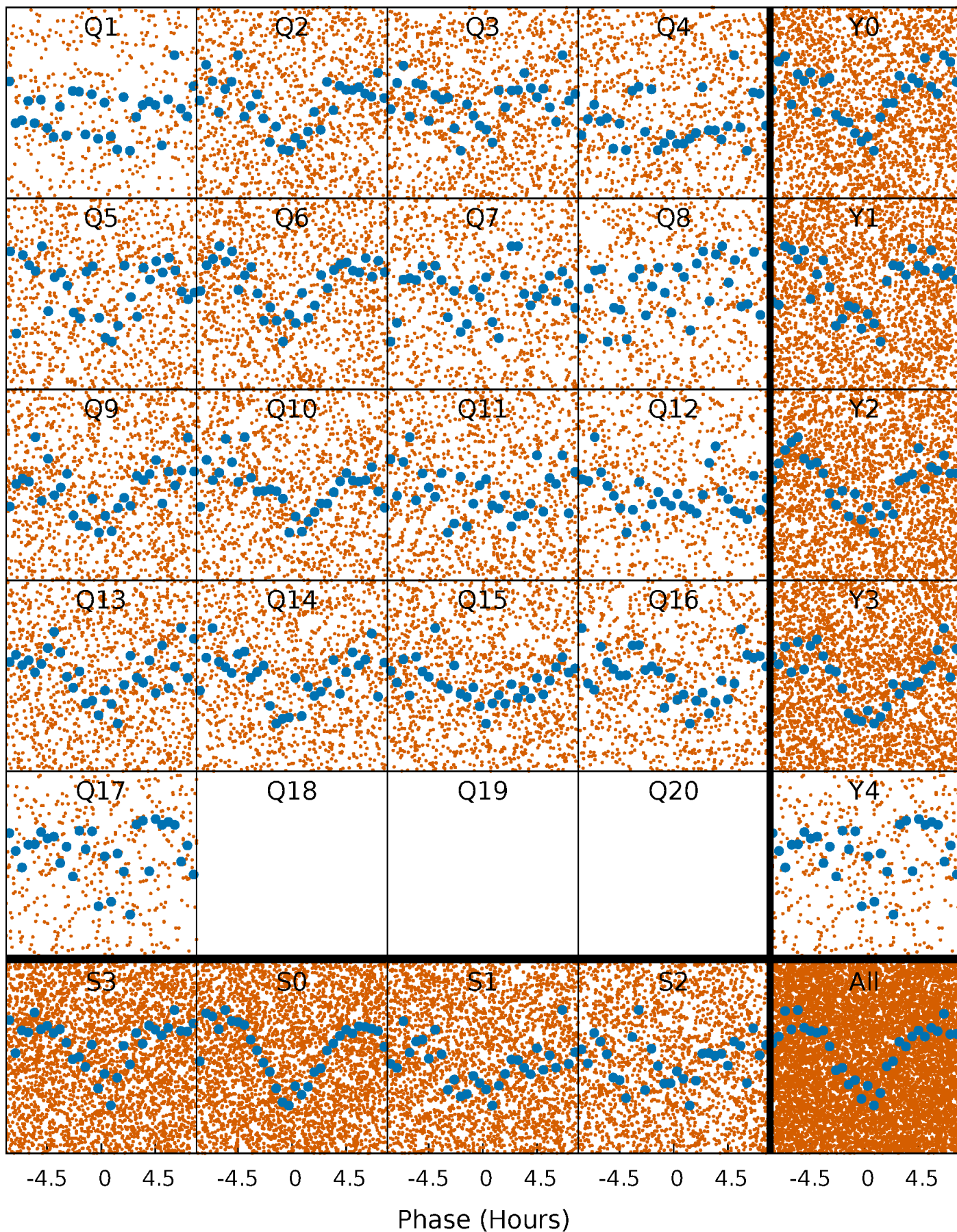


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



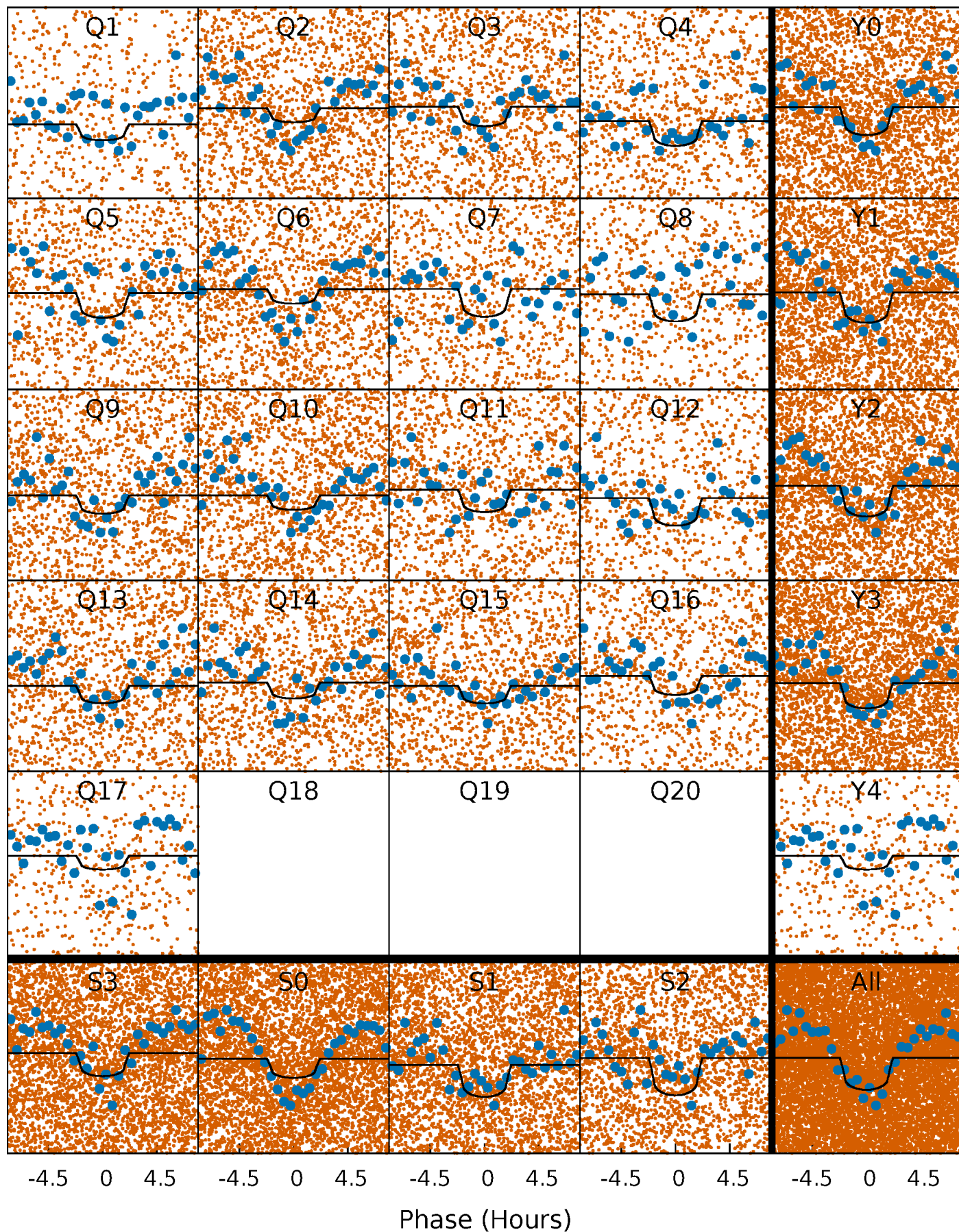
PDC Quarter-Phased Transit Curves

TCE 004649462-01 P= 0.945082 Days $T_0=131.638408$ (BKJD)



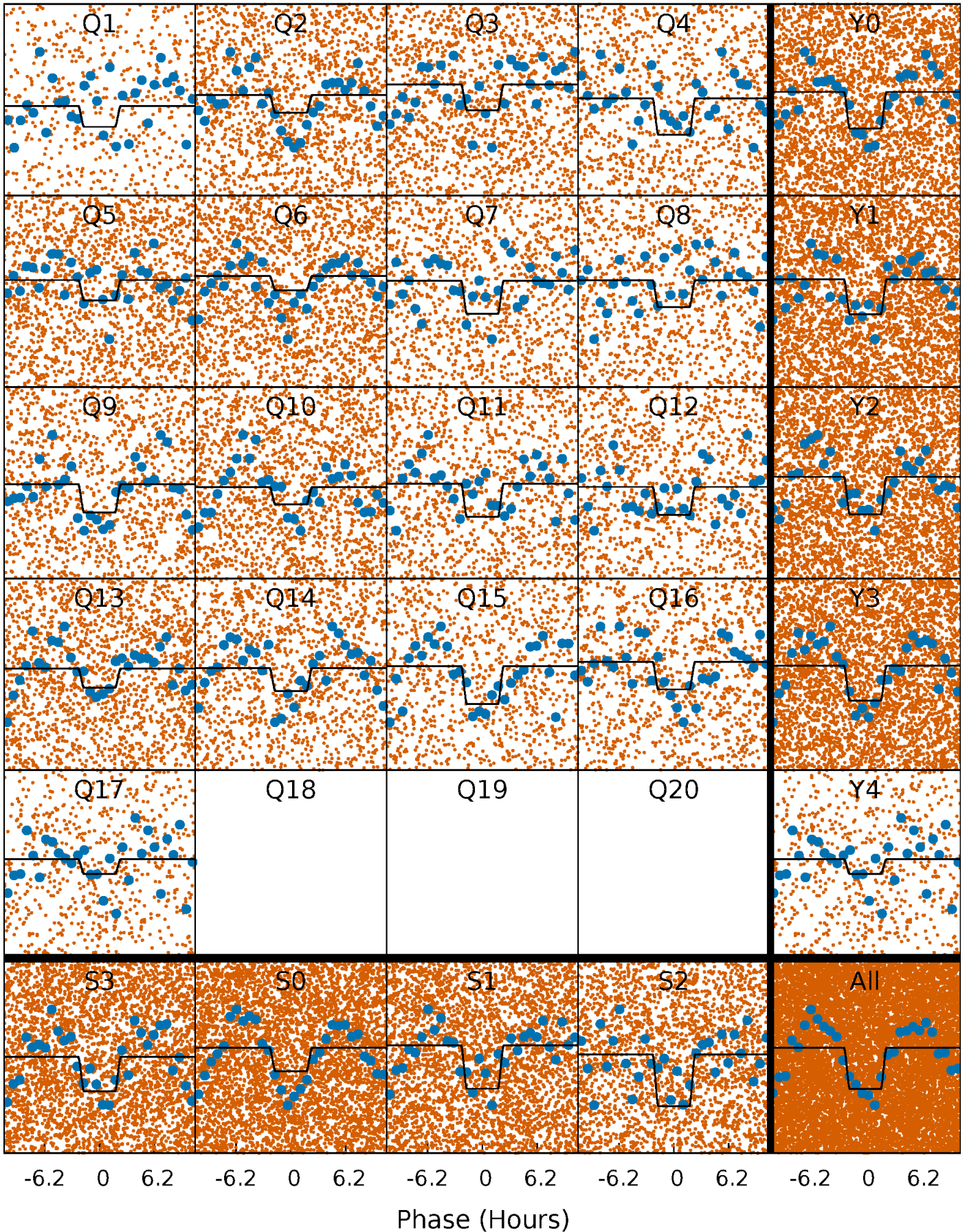
DV Quarter-Phased Transit Curves

TCE 004649462-01 P= 0.945082 Days $T_0=131.638408$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

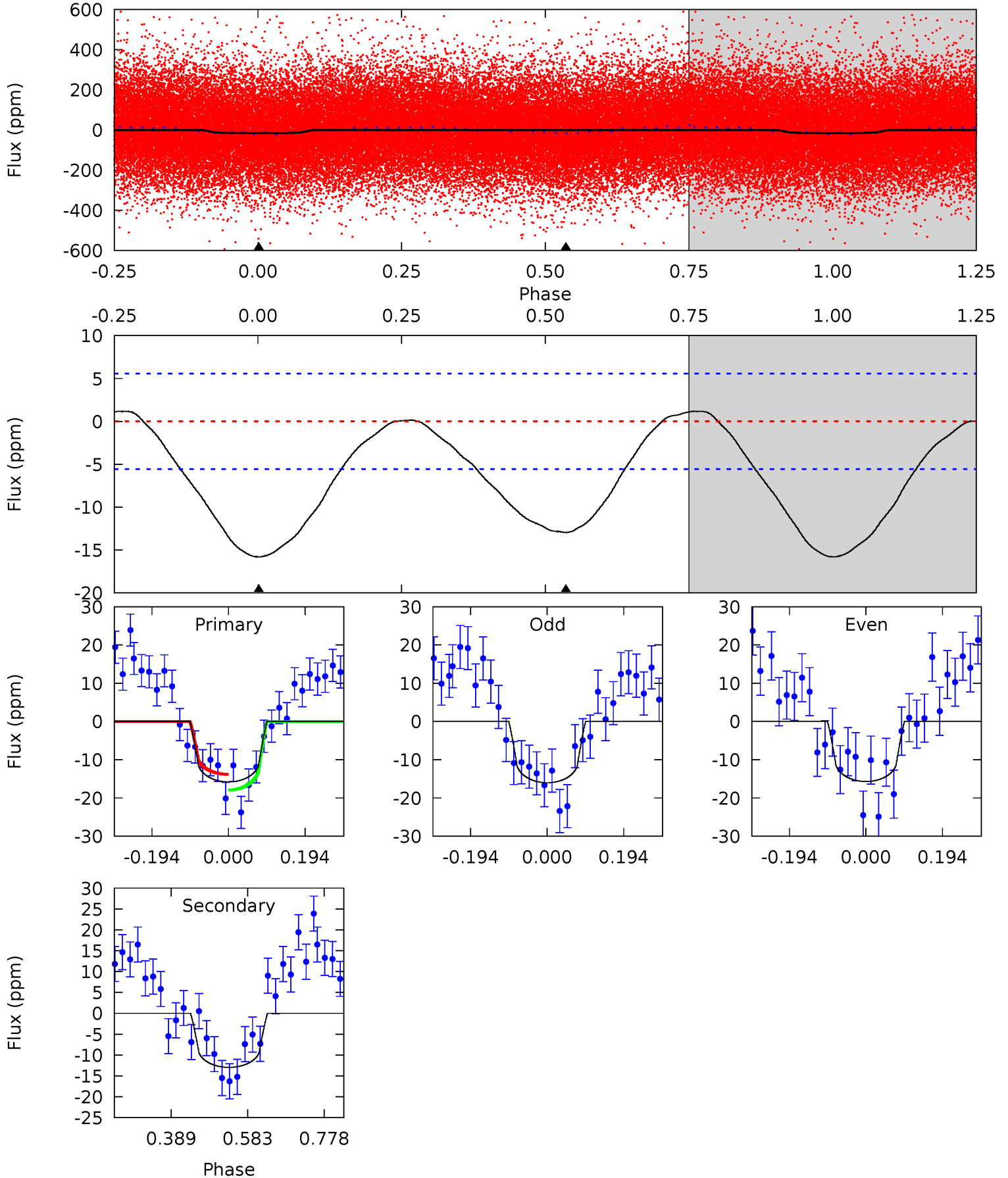
TCE 004649462-01 P= 0.945113 Days $T_0=131.611584$ (BKJD)



DV Model-Shift Uniqueness Test

004649462-01, P = 0.945082 Days, E = 130.693326 Days

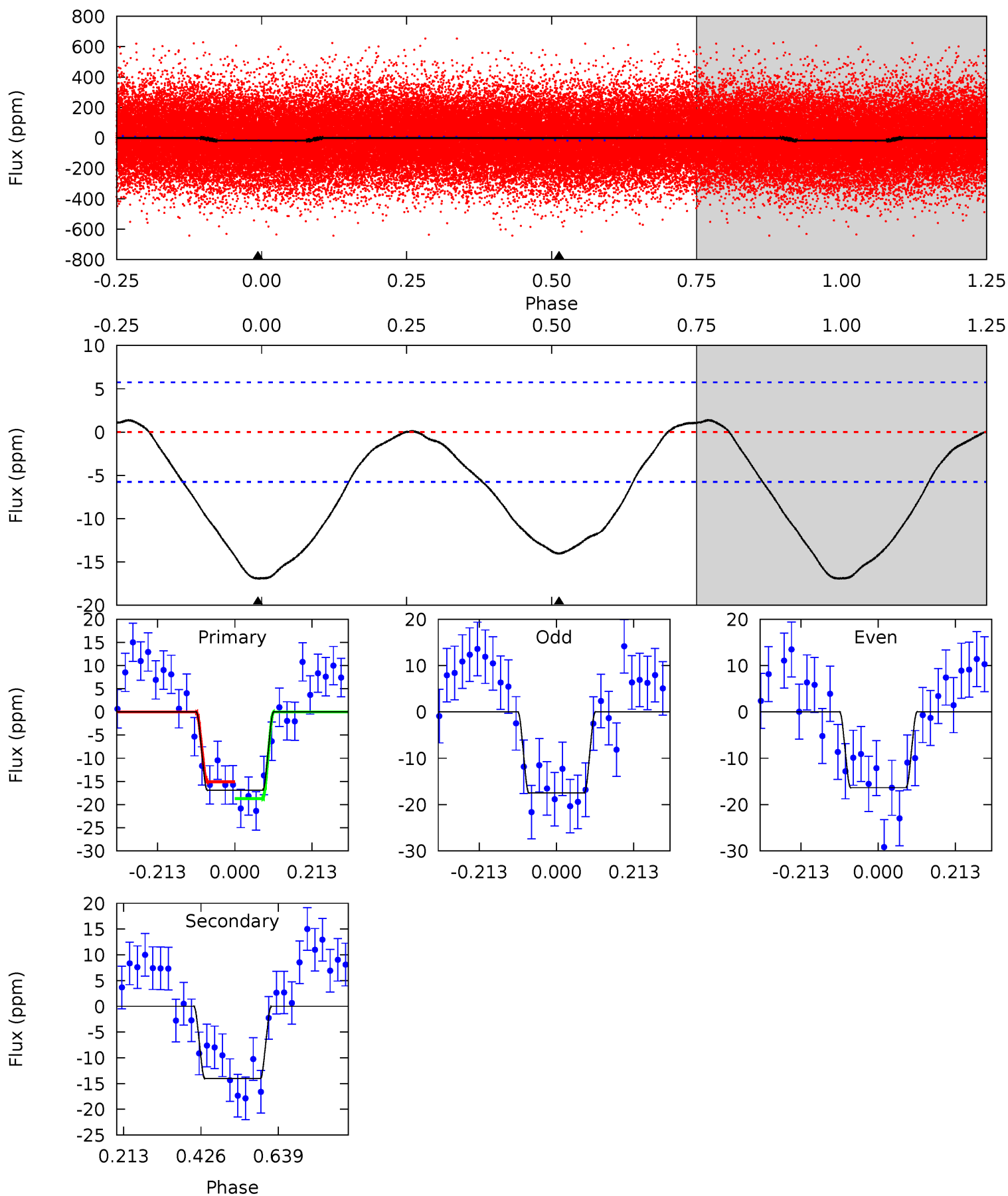
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	10.3	0	0	4.42	1.30	0.91	12.6	12.6	10.3	10.3	0.13	1.03	0.07	1.62



Alt Model-Shift Uniqueness Test

004649462-01, P = 0.945113 Days, E = 130.666471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	10.7	0	0	4.40	1.25	0.66	12.9	12.9	10.7	10.7	0.43	1.03	0.08	1.38



Stellar Parameters For KIC 004649462

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6492^{+155}_{-213}	$4.388^{+0.065}_{-0.195}$	$-0.140^{+0.250}_{-0.300}$	$1.146^{+0.343}_{-0.147}$	$1.173^{+0.162}_{-0.162}$	$1.096^{+0.378}_{-0.546}$
	+2%/-3%	+1%/-4%	+179%/-214%	+30%/-13%	+14%/-14%	+34%/-50%
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 004649462-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 1	$0.66^{+0.58}_{-0.43}$	3088^{+225}_{-144}	5456^{+4309}_{-1351}	$6.489^{+44.077}_{-4.704}$
Alt.	-14 ± 1	$0.71^{+0.58}_{-0.48}$	3090^{+220}_{-154}	5325^{+4861}_{-1240}	$5.863^{+48.726}_{-4.054}$

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

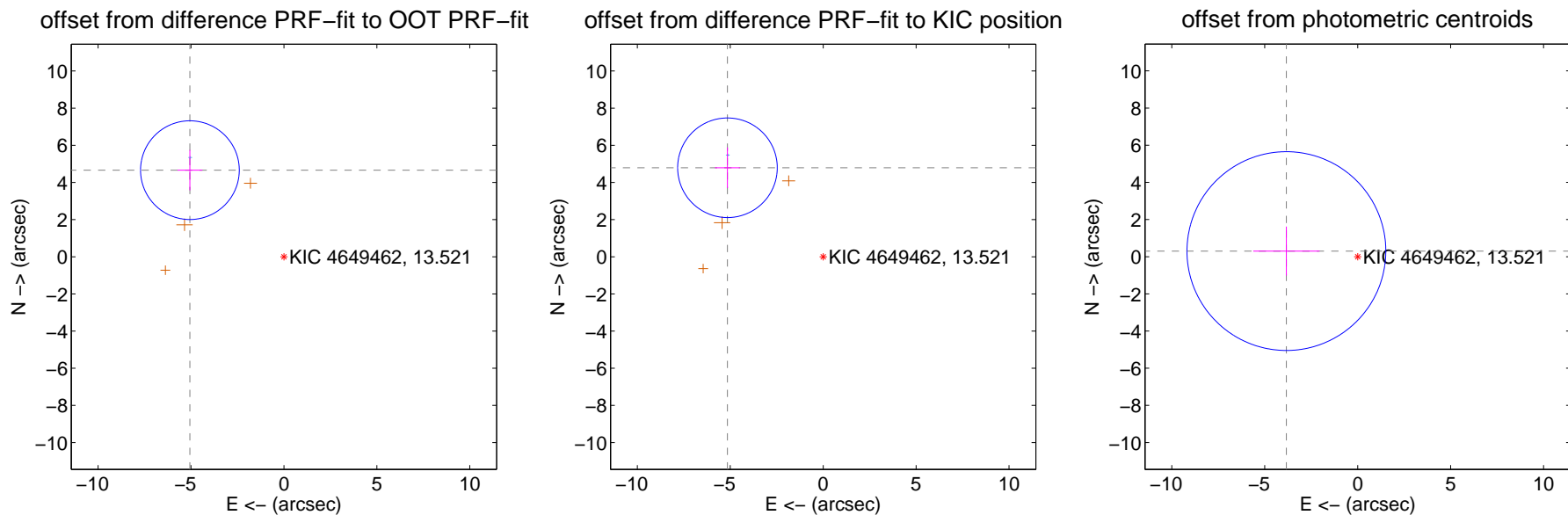
DV Centroid Data

Supplemental centroid analysis for 004649462-01. Kepler magnitude: 13.52. Transit SNR 8.99

There are 1 quarters with good PRF difference image offsets

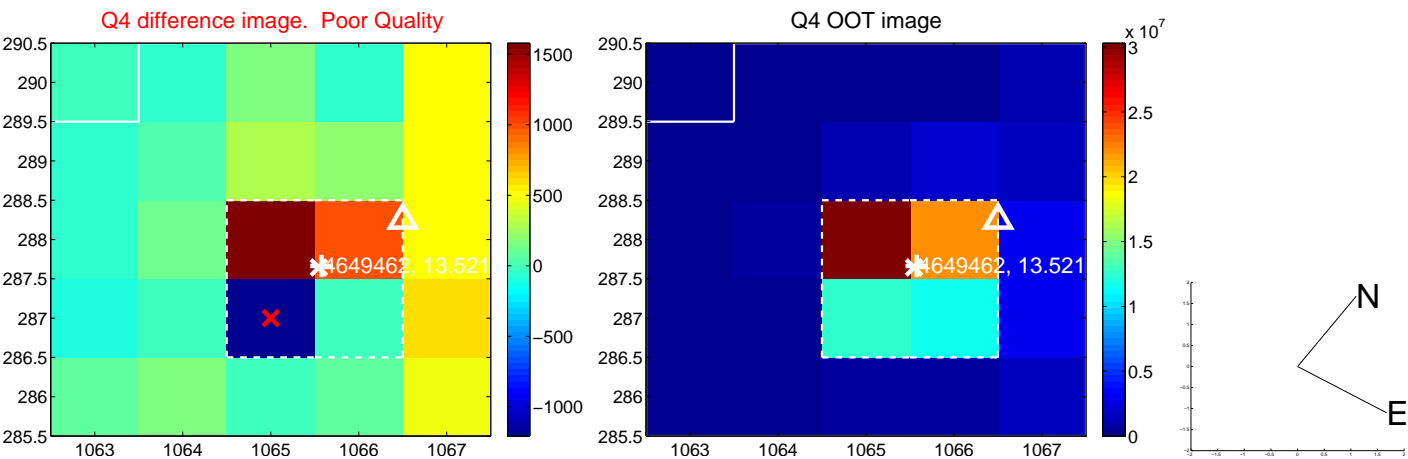
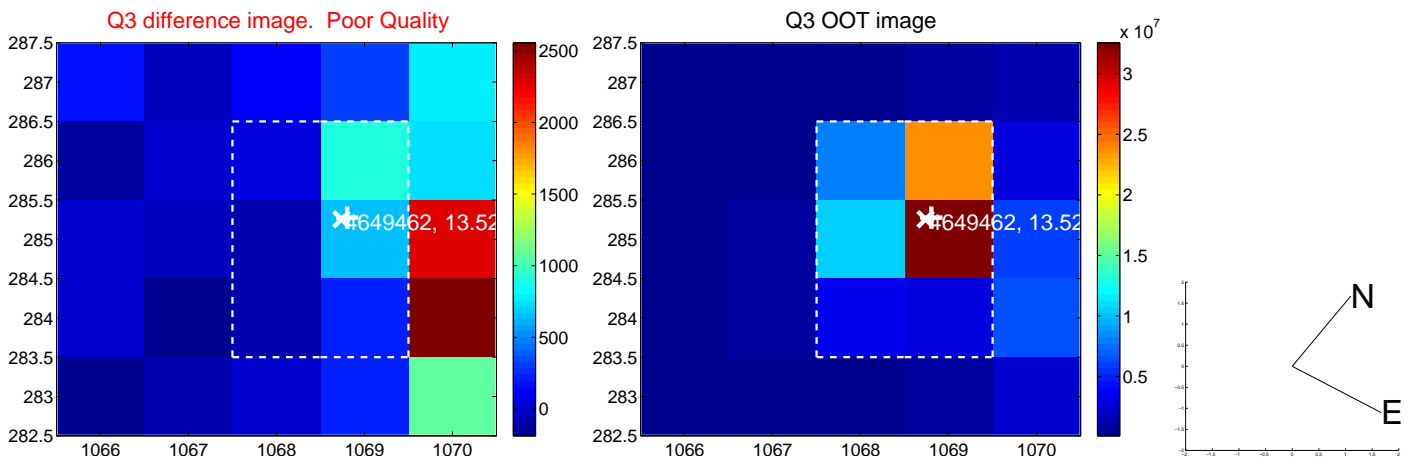
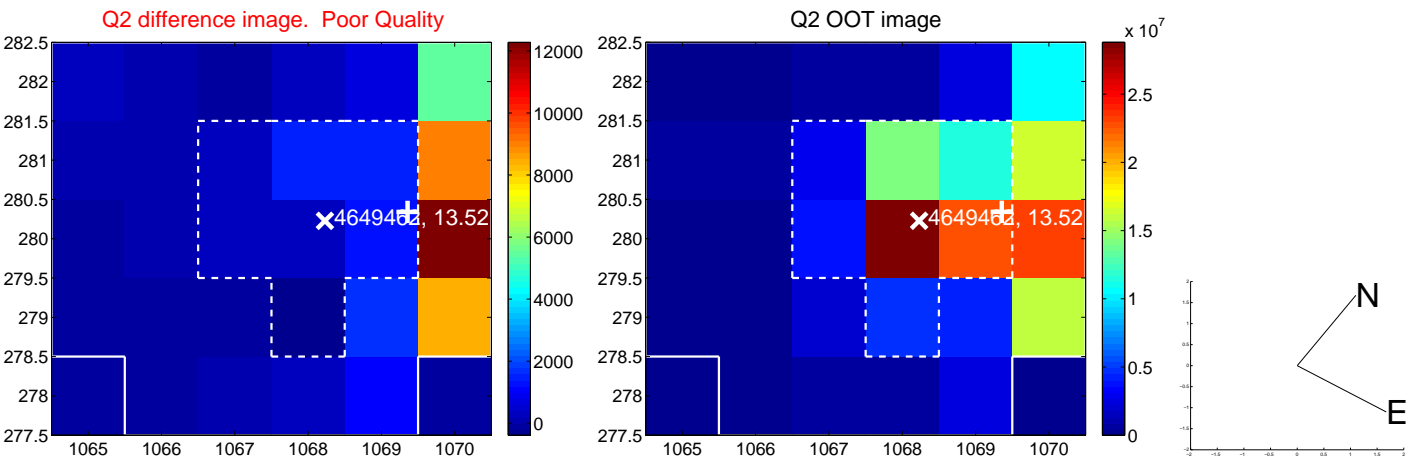
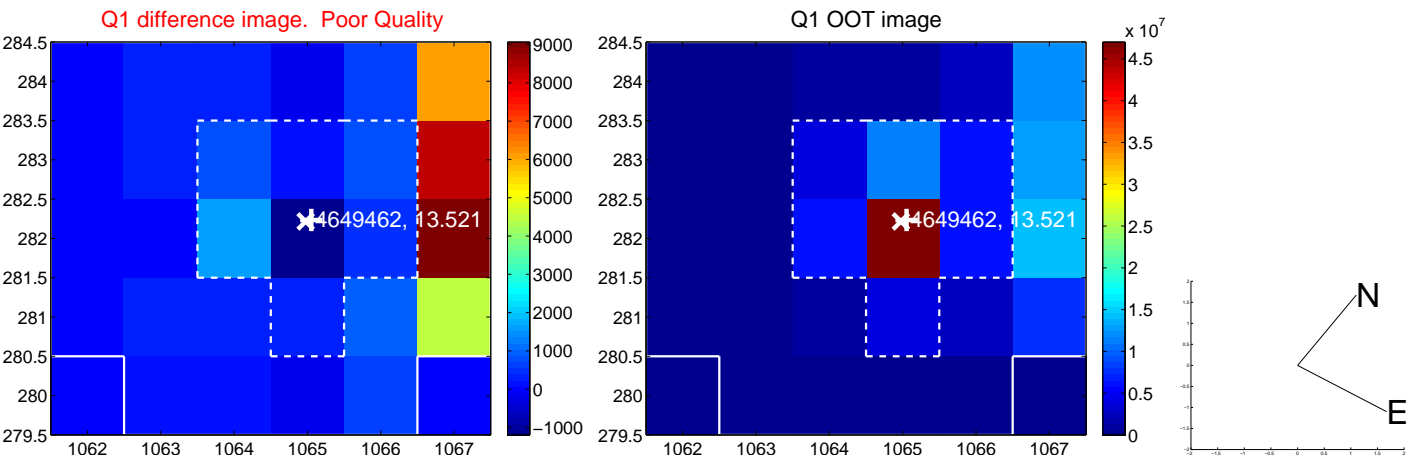
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.881 ± 0.886	7.77	5.060 ± 0.670	4.663 ± 1.086
PRF-fit source offset from KIC position	7.036 ± 0.894	7.87	5.152 ± 0.674	4.792 ± 1.094
photometric centroid source offset	3.85 ± 1.78	2.16	3.84 ± 1.79	0.30 ± 1.32

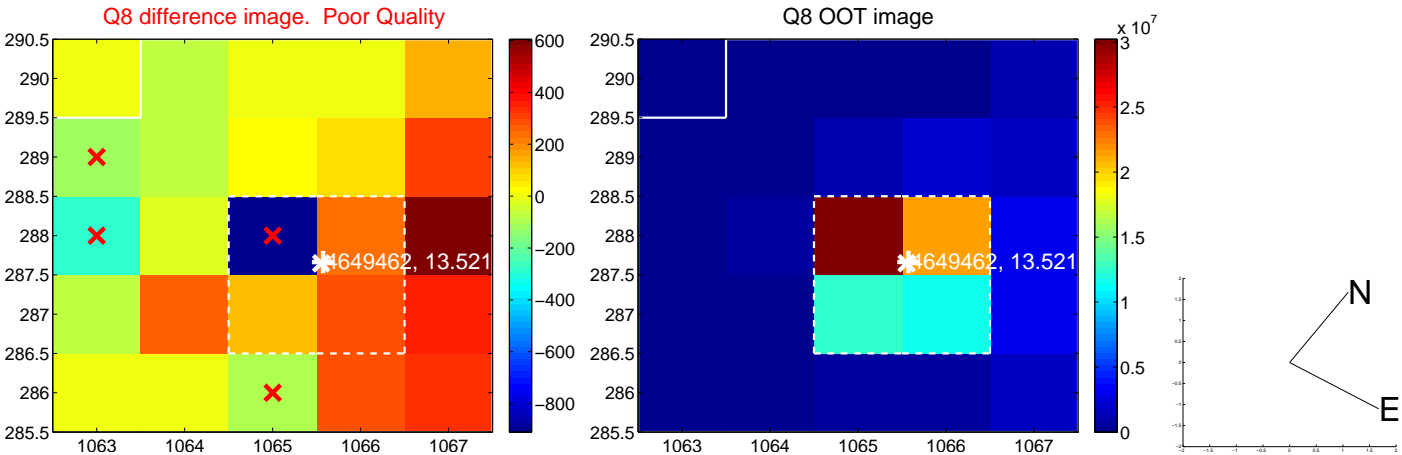
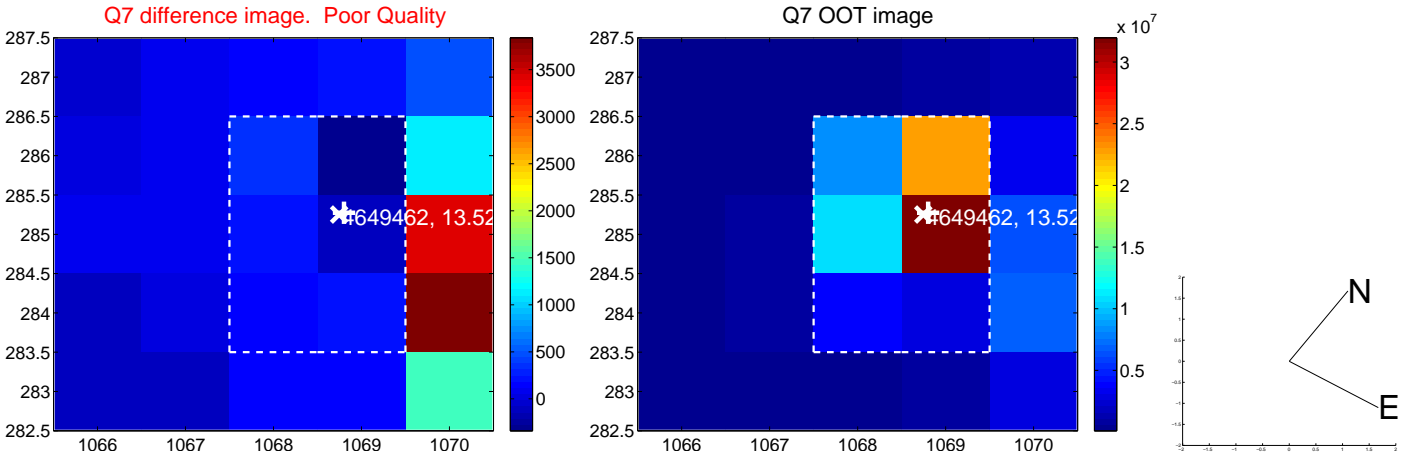
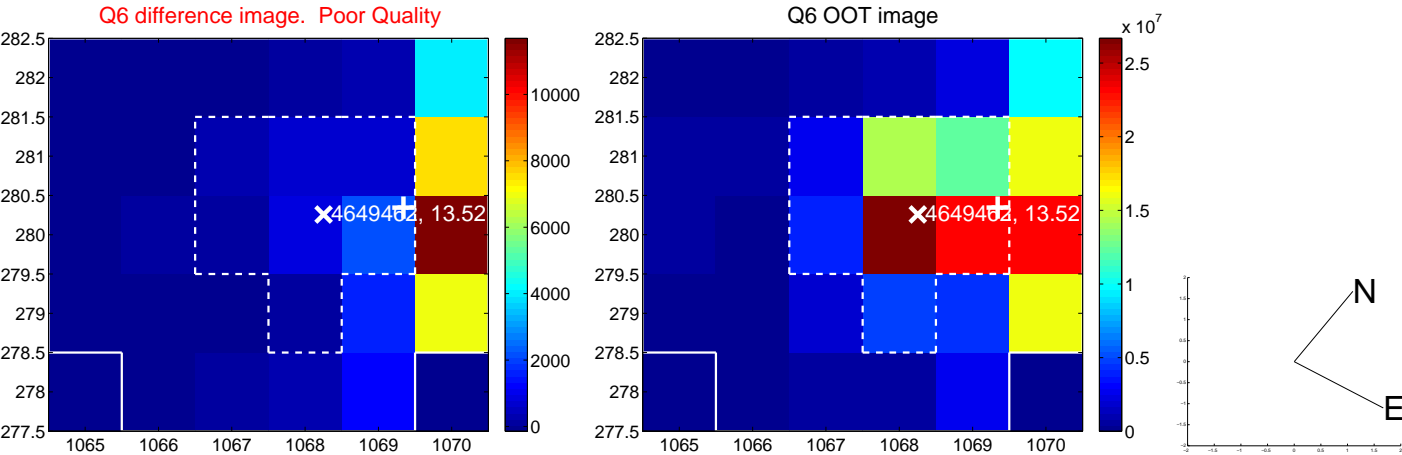
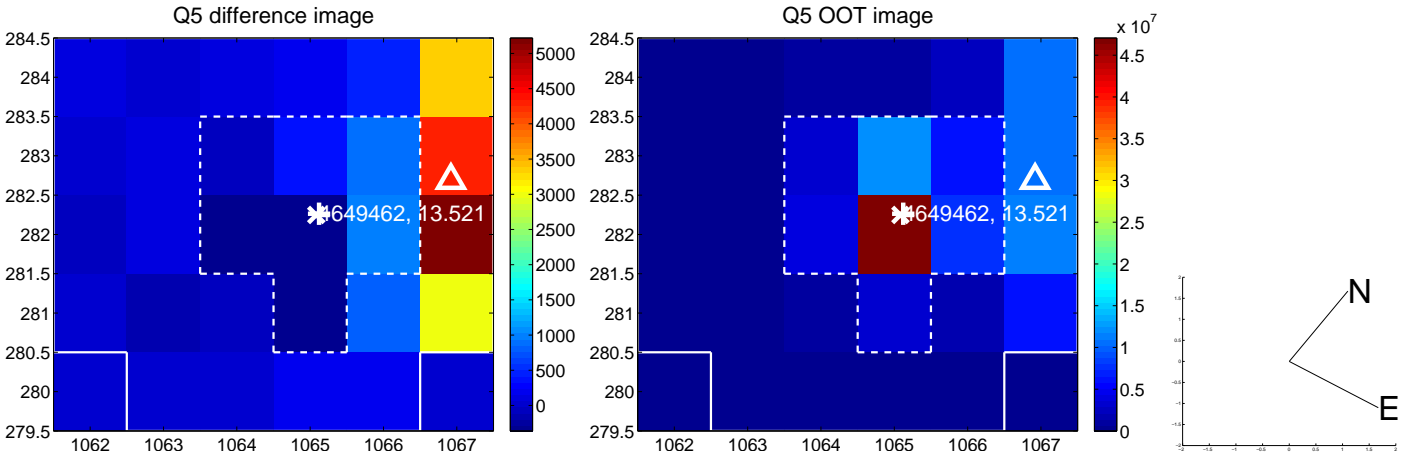


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

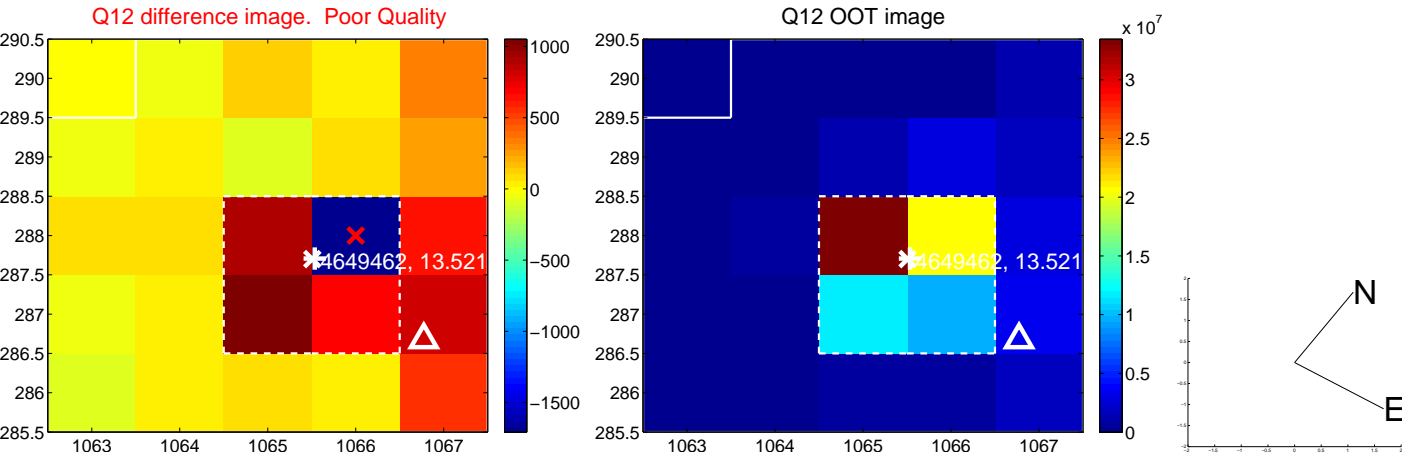
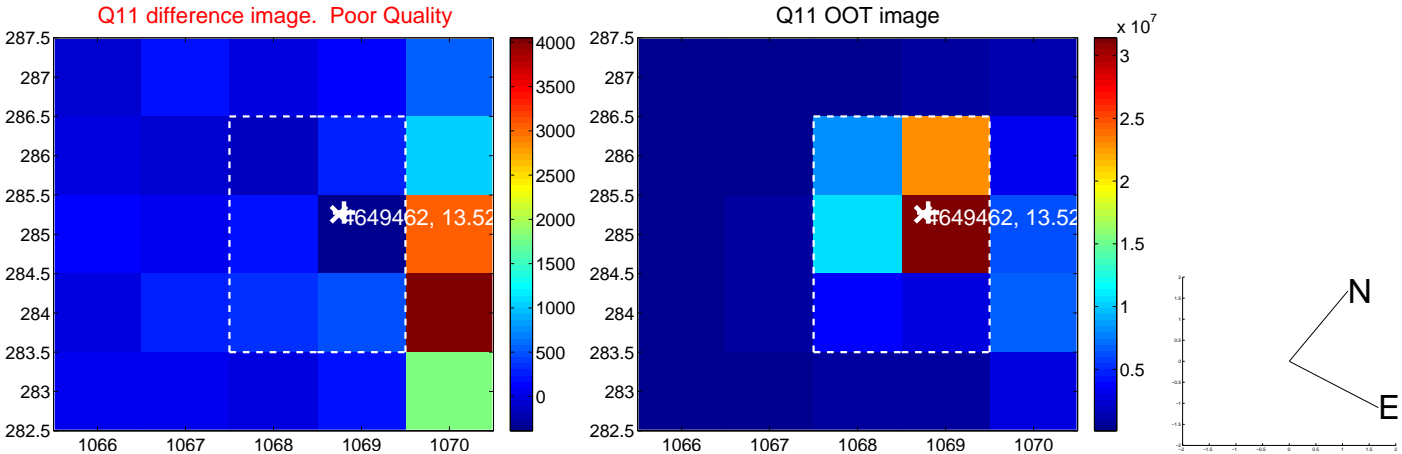
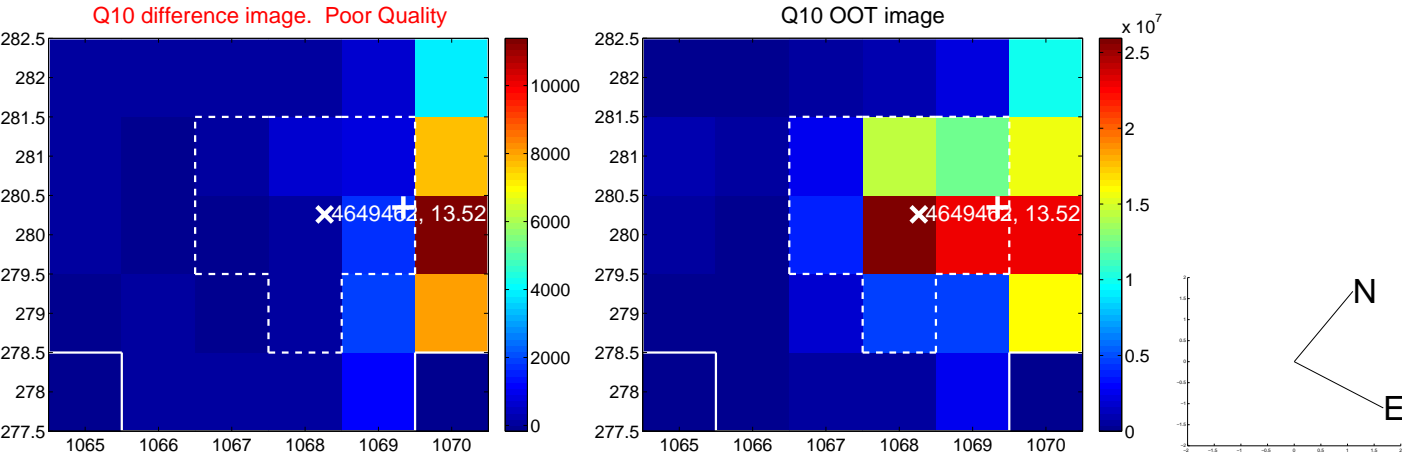
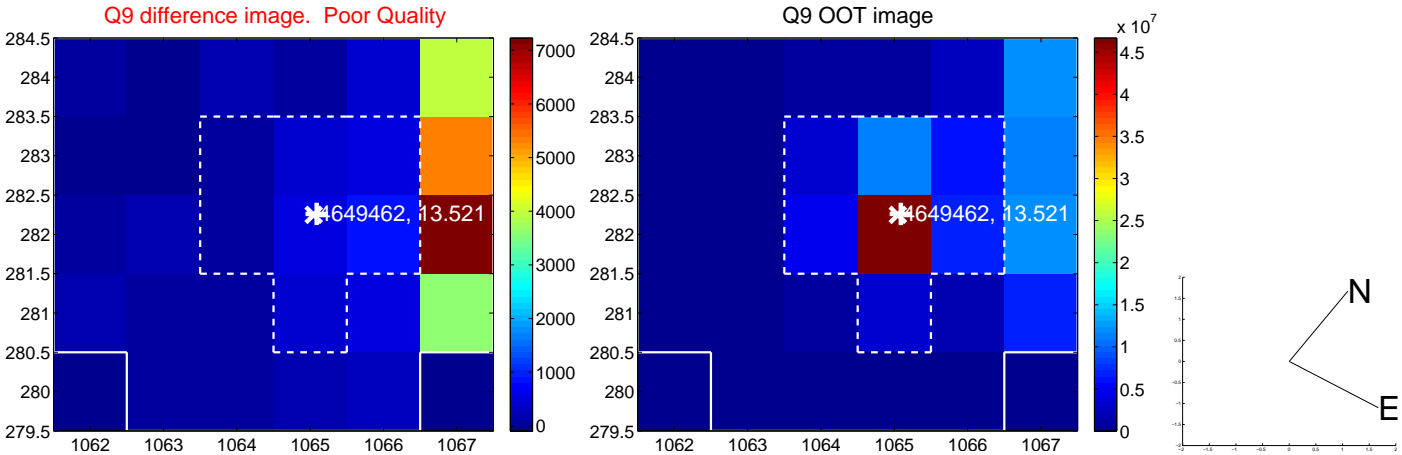
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



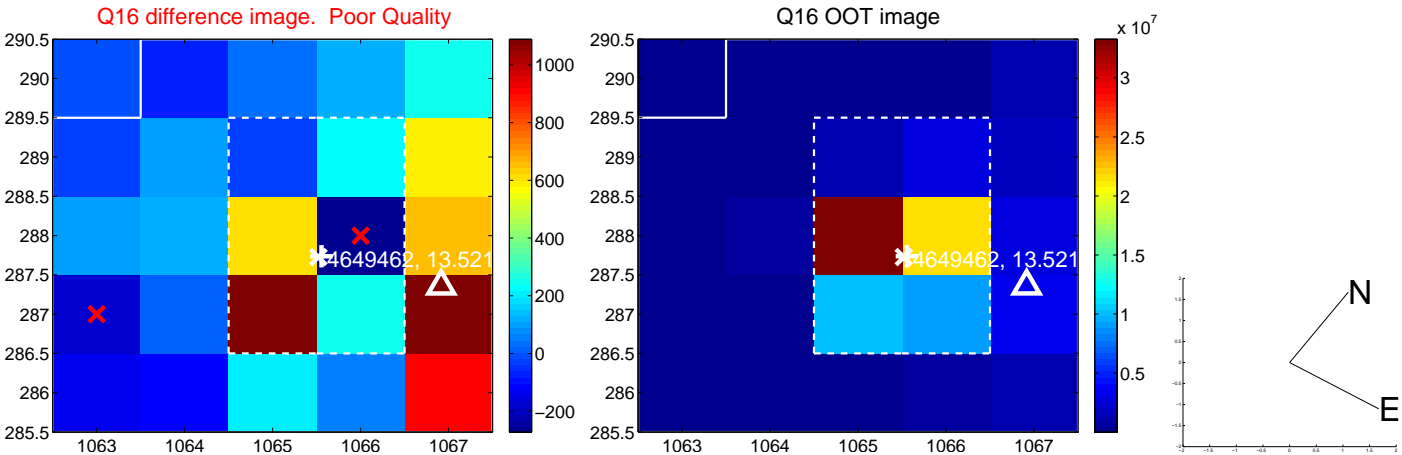
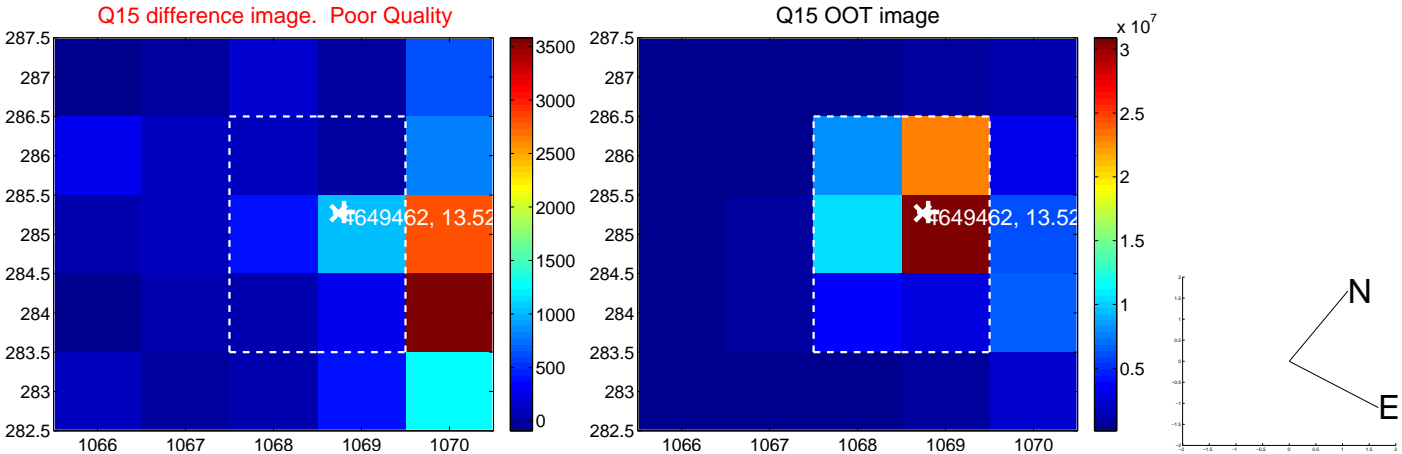
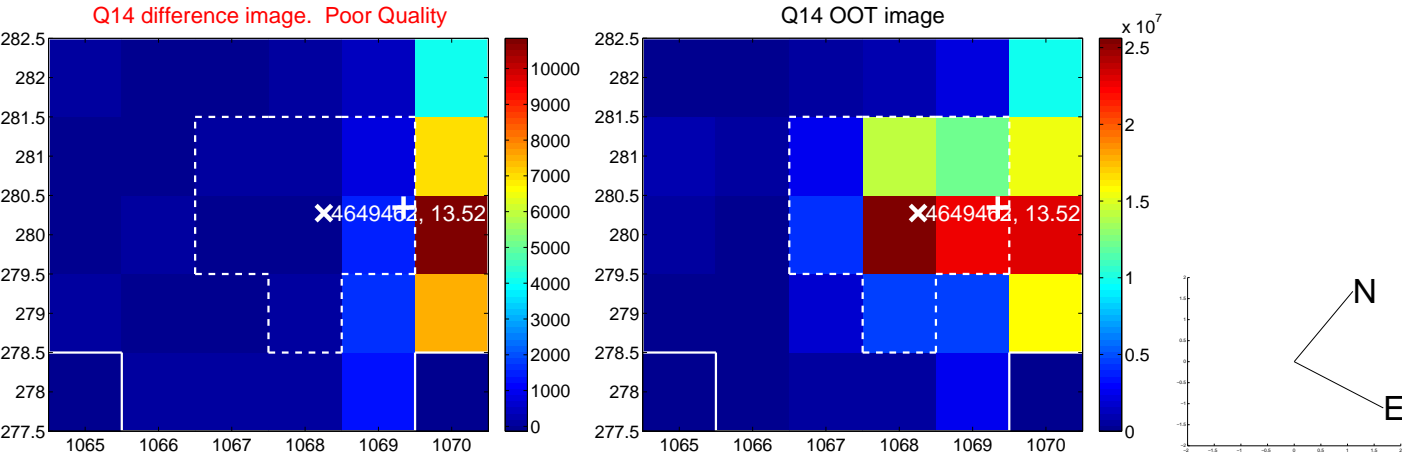
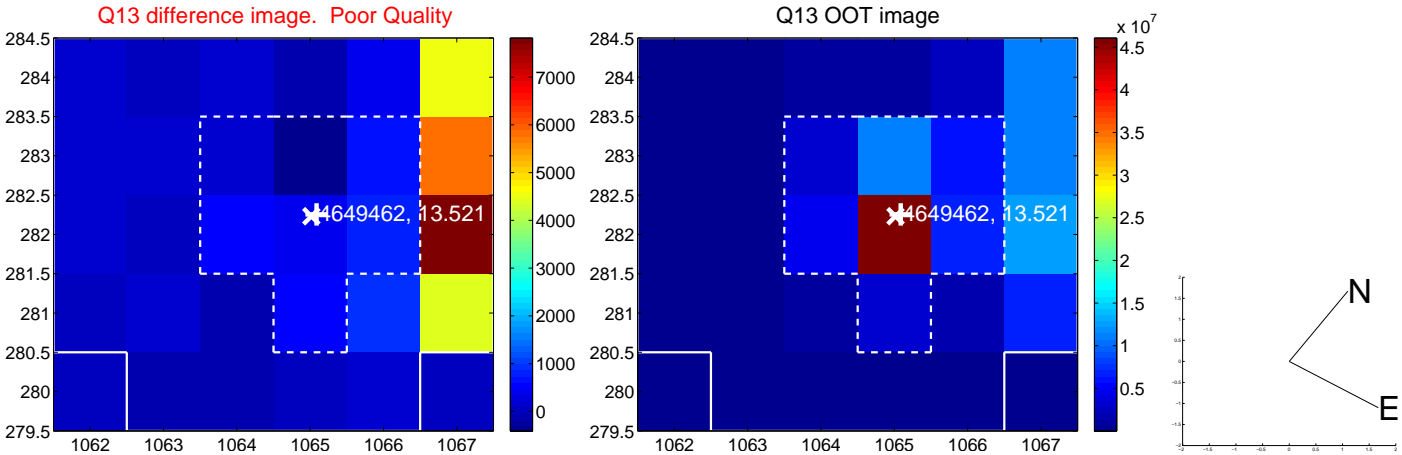
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



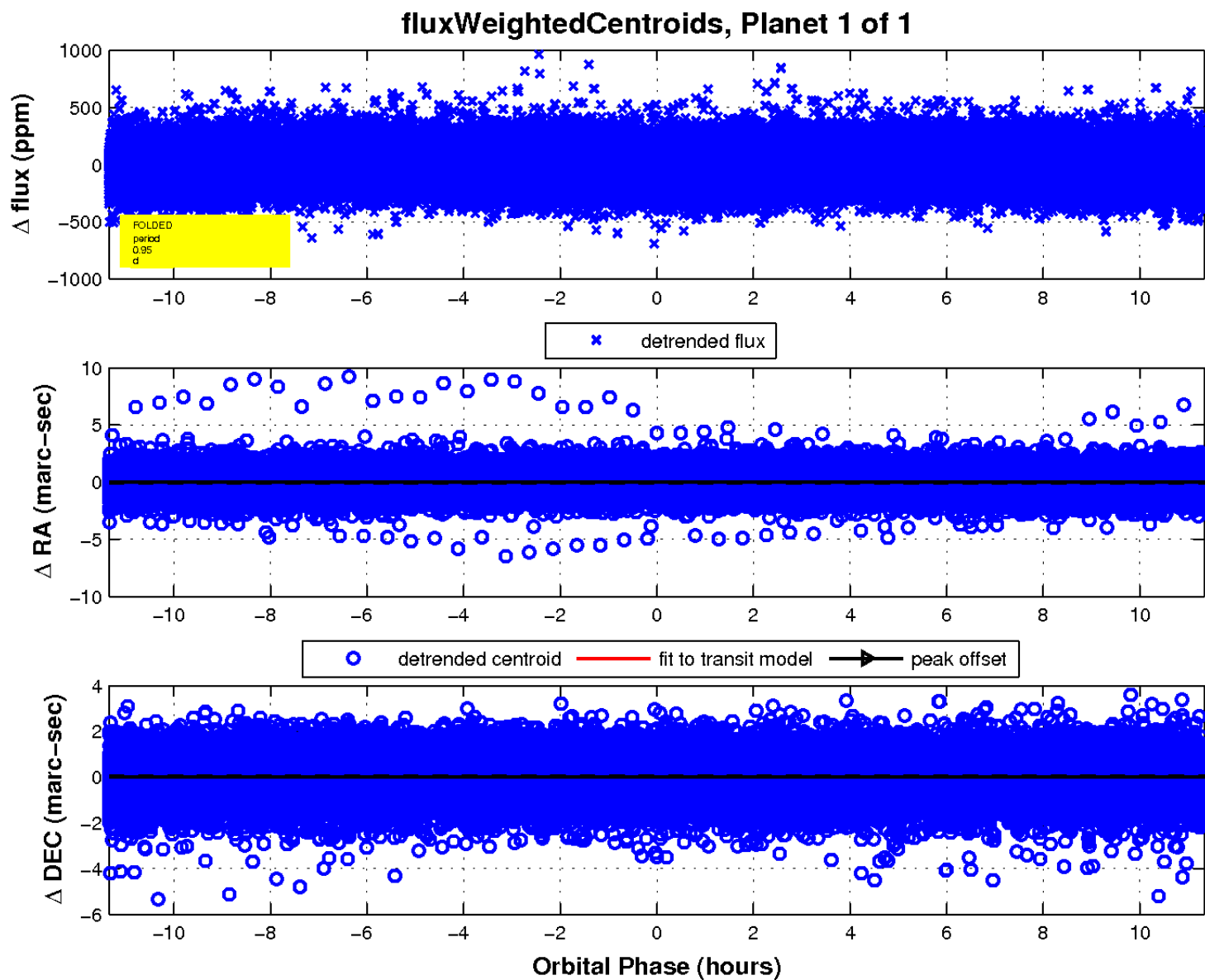
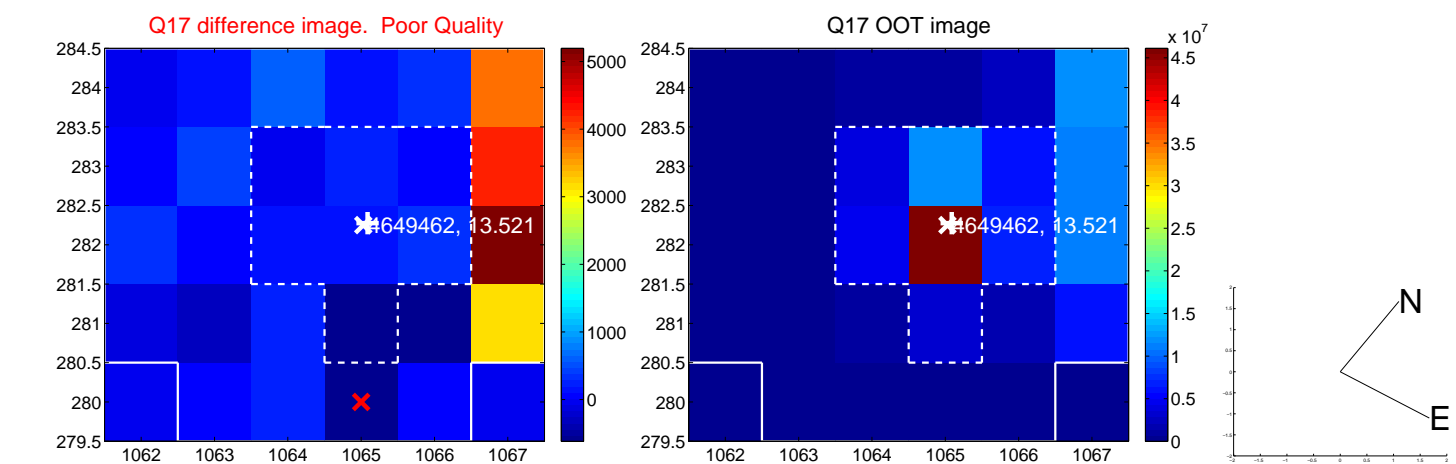
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

