

KIC 005558845

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})
005558845-01	OBS	No	1.318236	131.757392	31.4	5.702	7.6	8.1	0.78	5025	0.48	761.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005558845-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET

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

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

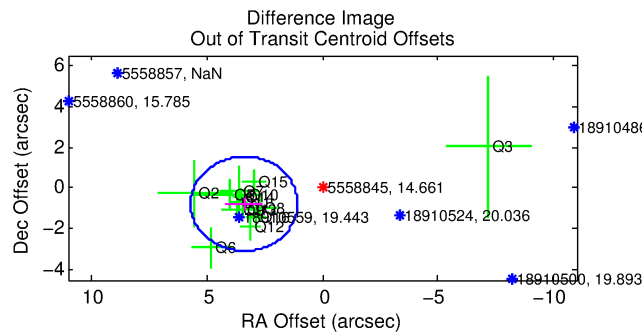
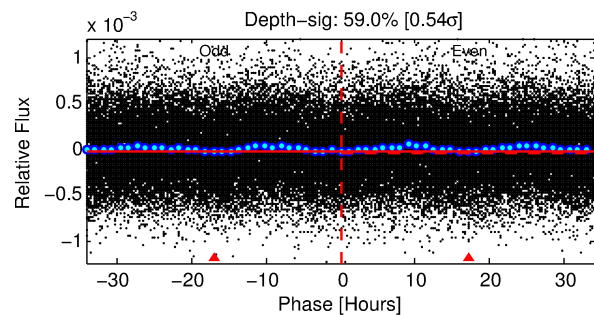
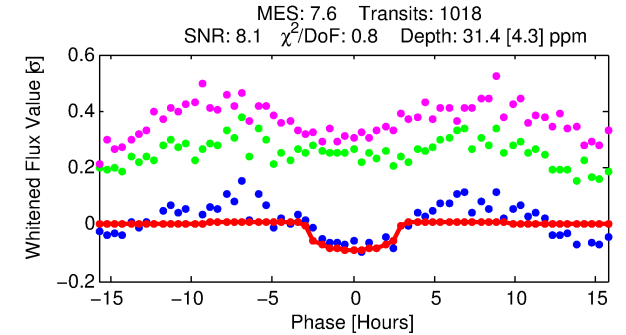
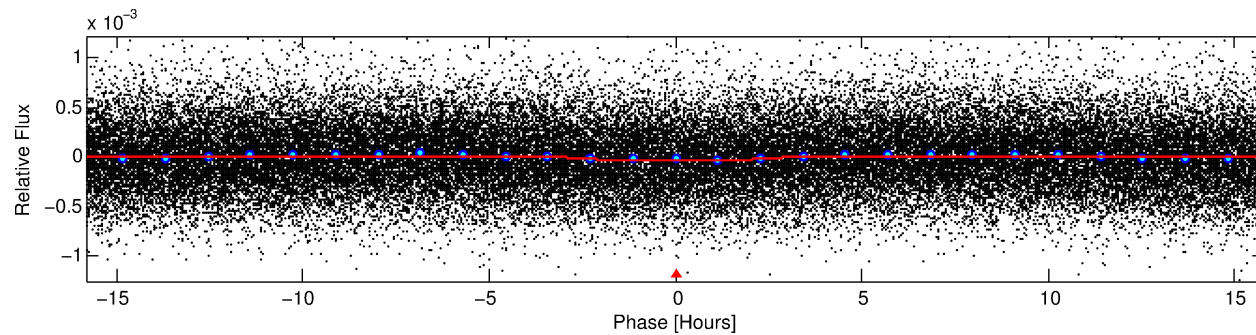
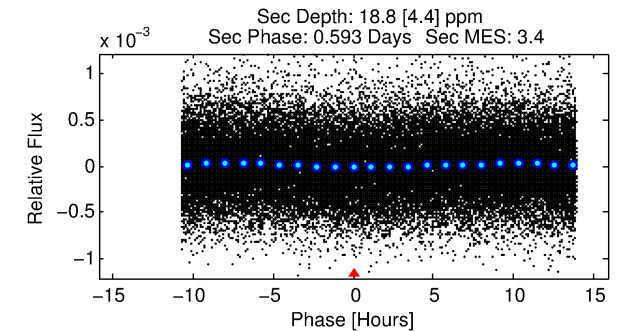
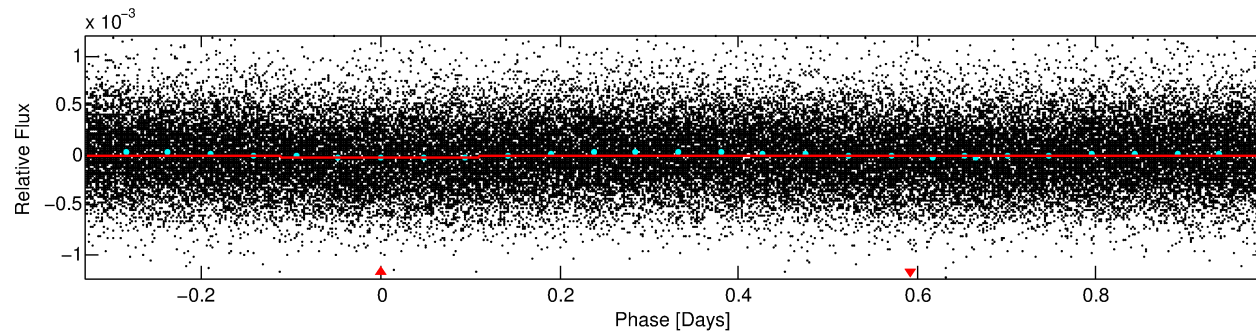
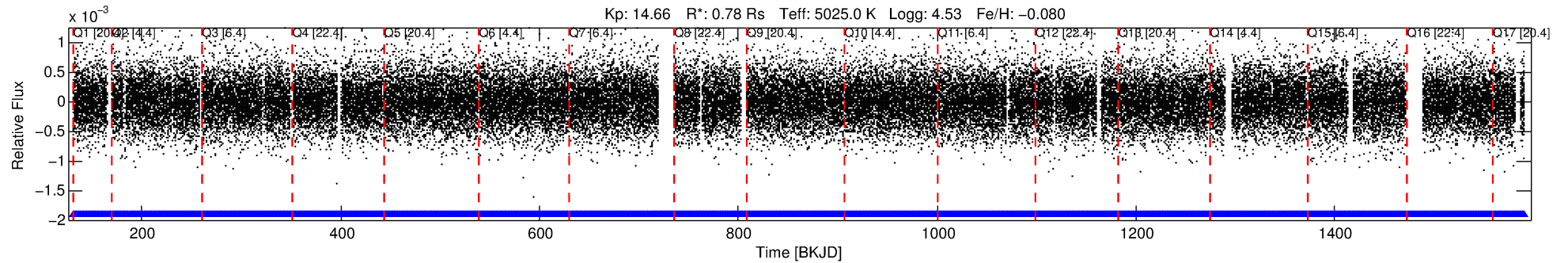
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005558845-01

No Significant Match Found

DV One-Page Summary

KIC: 5558845 Candidate: 1 of 1 Period: 1.318 d



DV Fit Results:

Period = 1.31824 [0.00002] d
Epoch = 131.7574 [0.0081] BKJD
Rp/R* = 0.0056 [0.0041]
a/R* = 1.44 [1.97]
b = 0.76 [1.48]
Seff = 761.22 [139.00]
Teq = 1339 [61] K
Rp = 0.48 [0.35] Re
a = 0.0214 [0.0019] AU
Ag = 20.54 [30.32] [0.64σ]
Teffp = 4409 [1625] K [1.89σ]

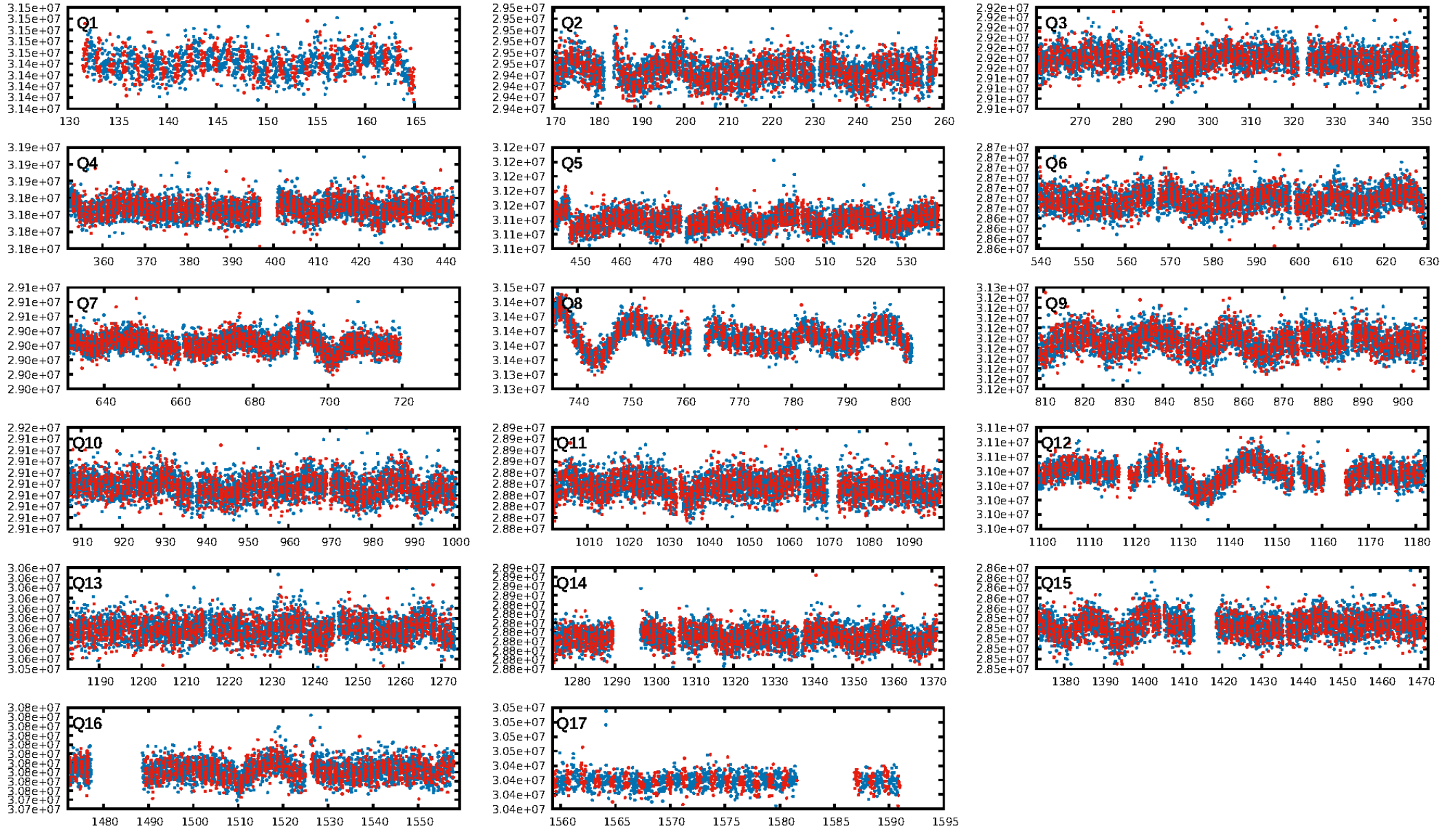
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.43e-15
RollingBand-fgt: 1.00 [971/971]
GhostDiagnostic-chr: 1.47
Centroid-sig: 12.4%
Centroid-so: 2.101 arcsec [1.40σ]
OotOffset-rm: 3.475 arcsec [4.51σ]
KicOffset-rm: 3.493 arcsec [4.43σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

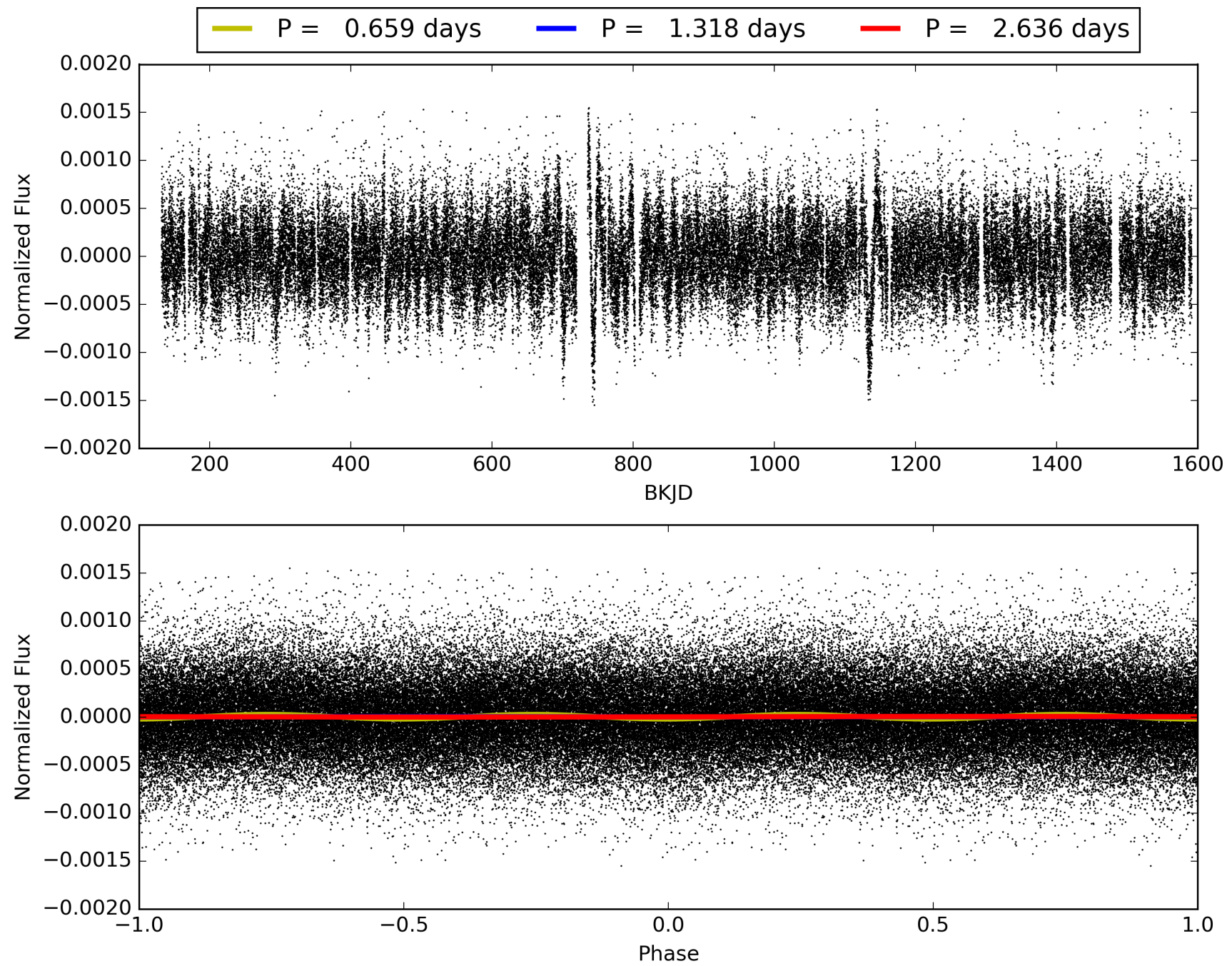
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:23:14 Z

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

TCE 005558845-01, PDC Light Curves

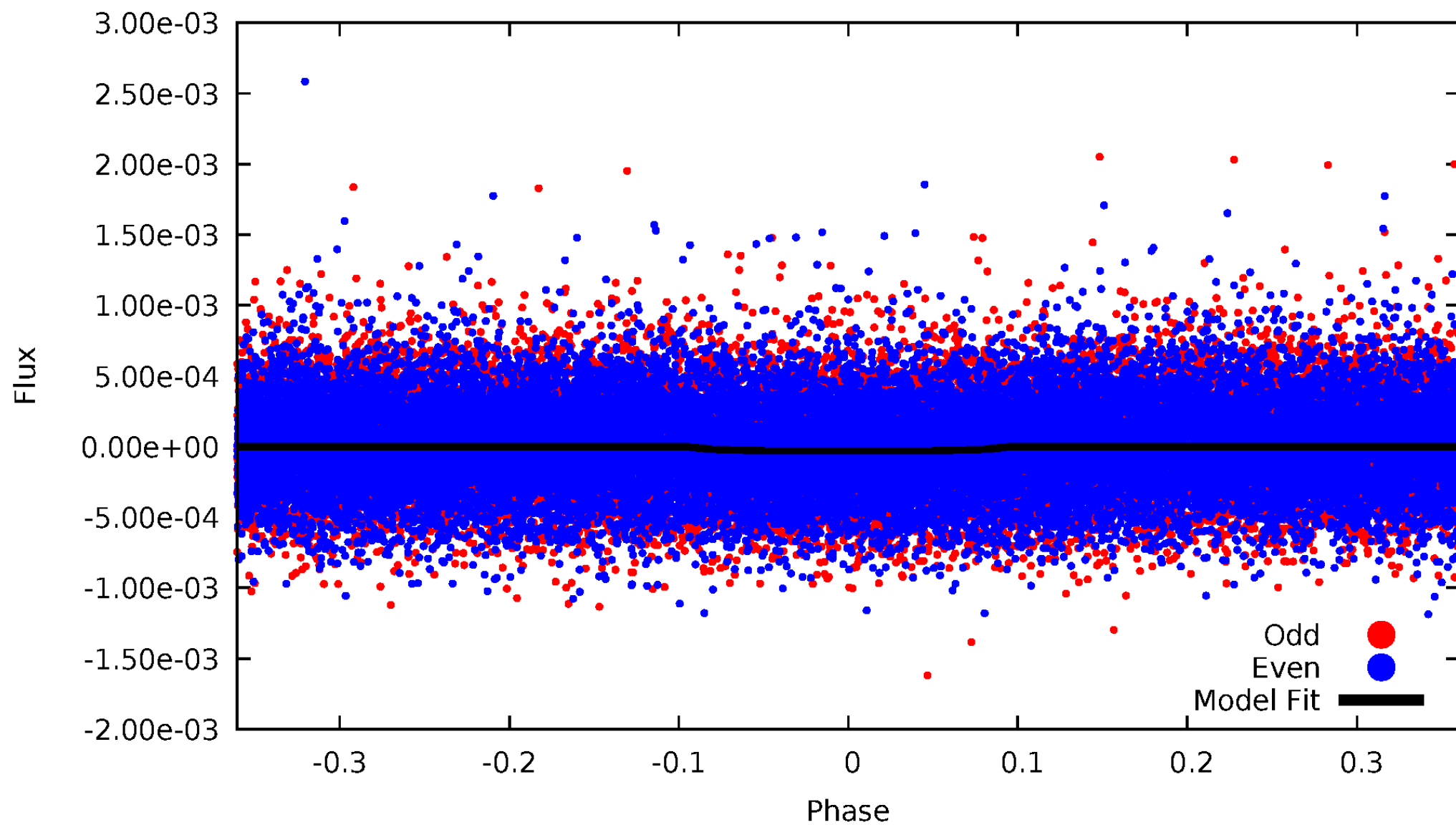


TCE 005558845-01



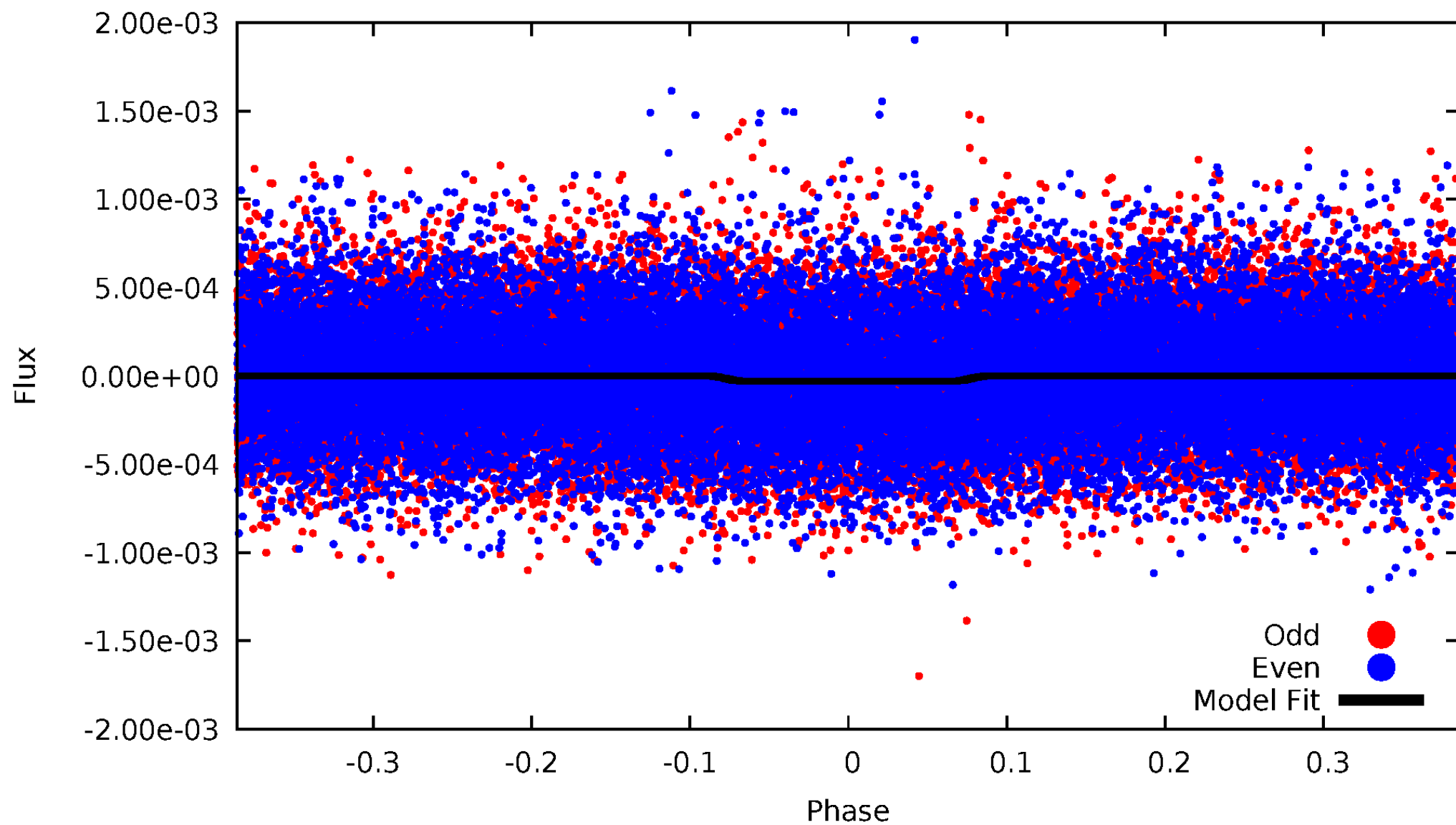
DV Odd/Even

TCE 005558845-01



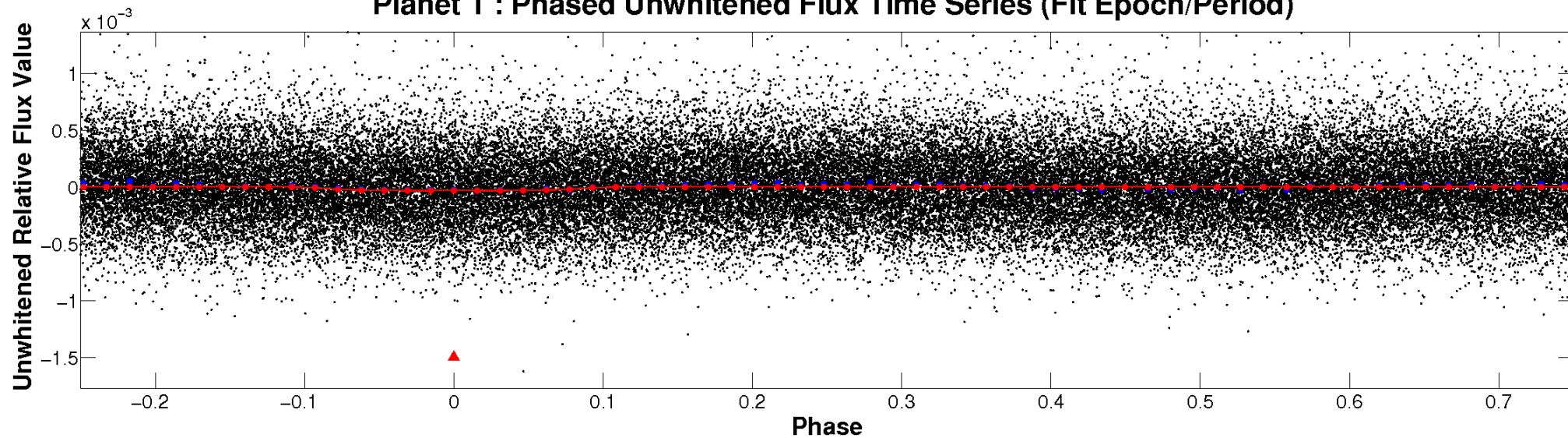
ALT Odd/Even

TCE 005558845-01

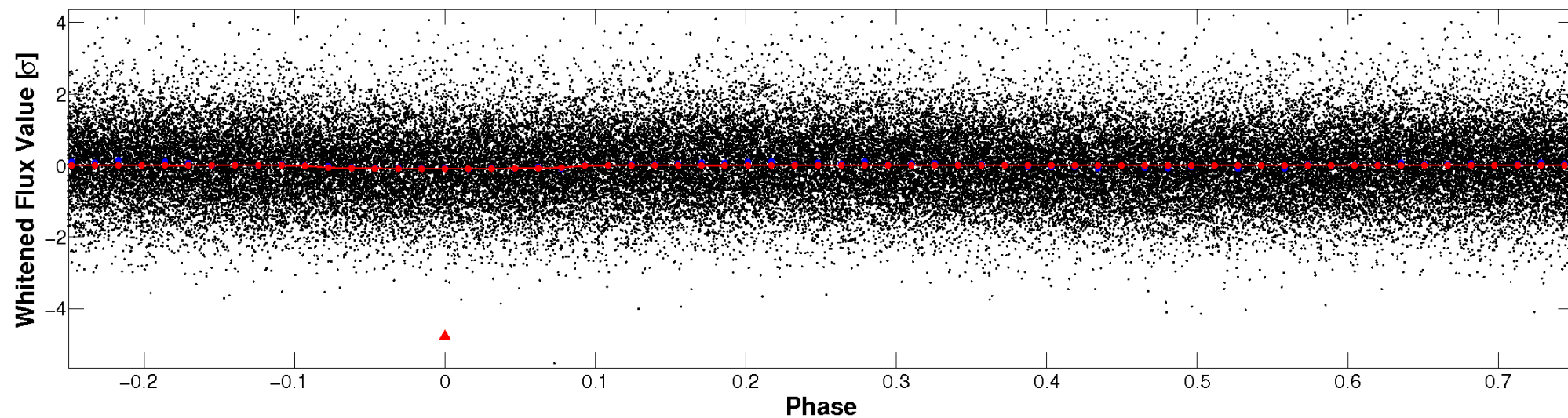


Non-Whitened Vs. Whitened Light Curve

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

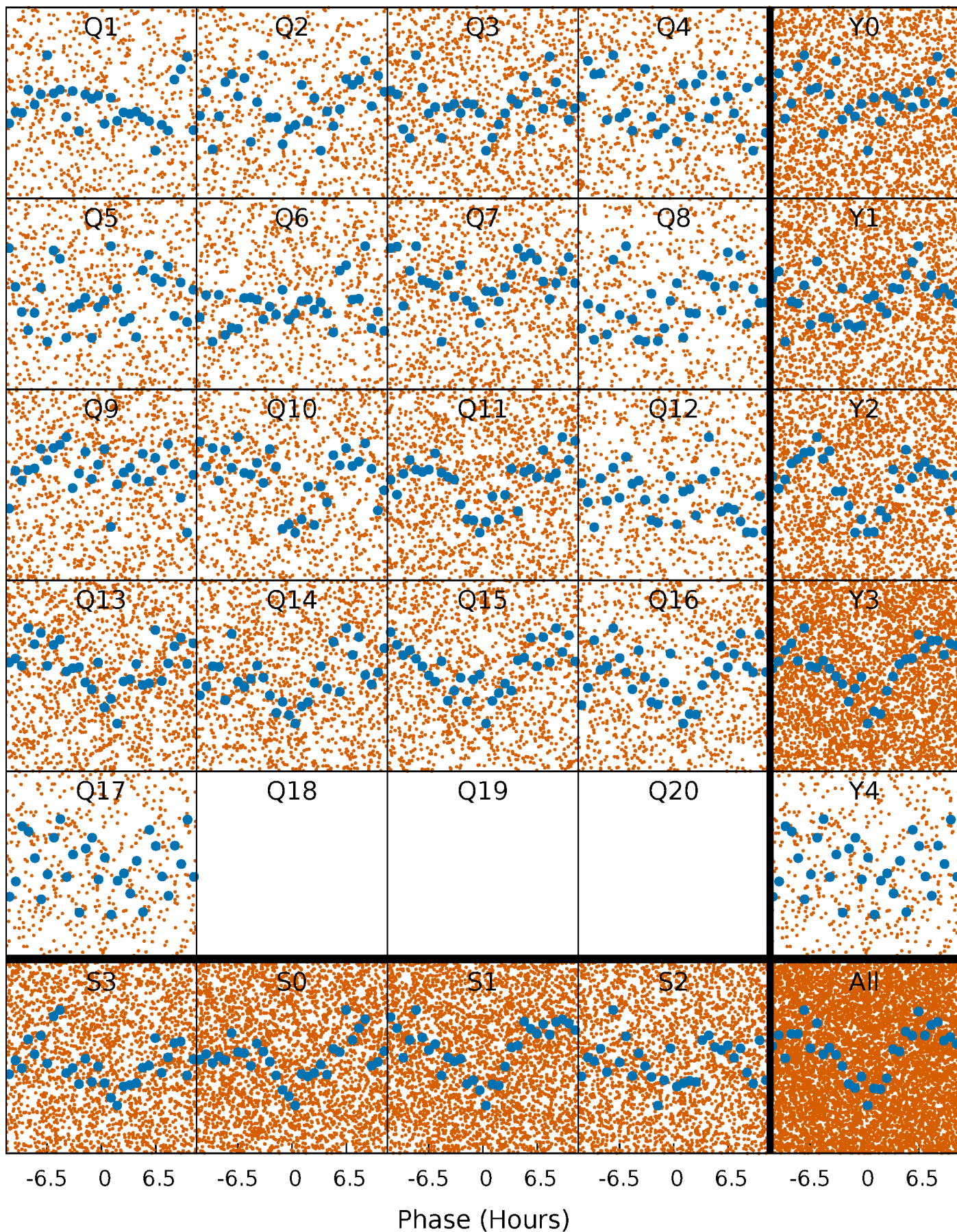


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



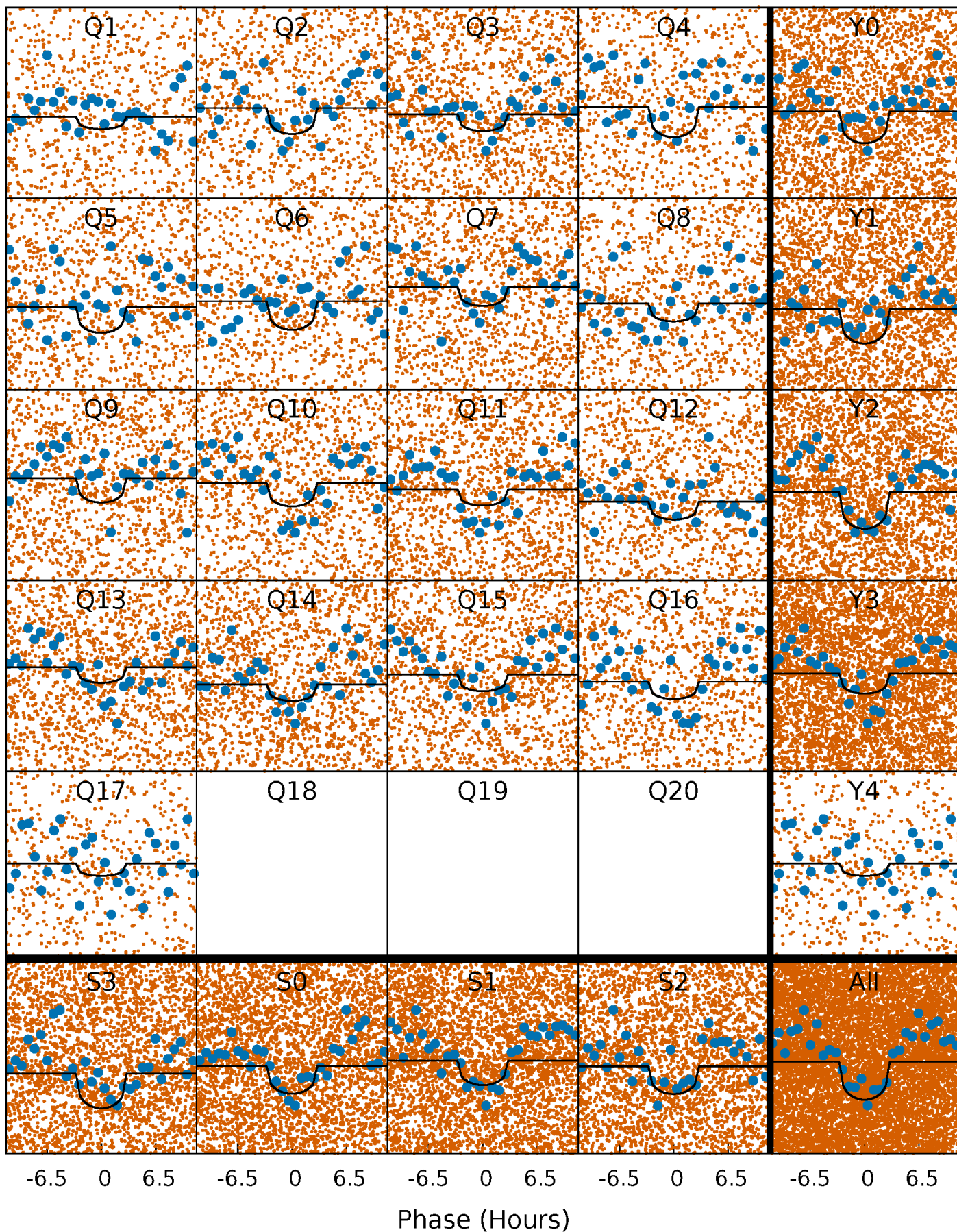
PDC Quarter-Phased Transit Curves

TCE 005558845-01 P= 1.318236 Days $T_0=131.757392$ (BKJD)



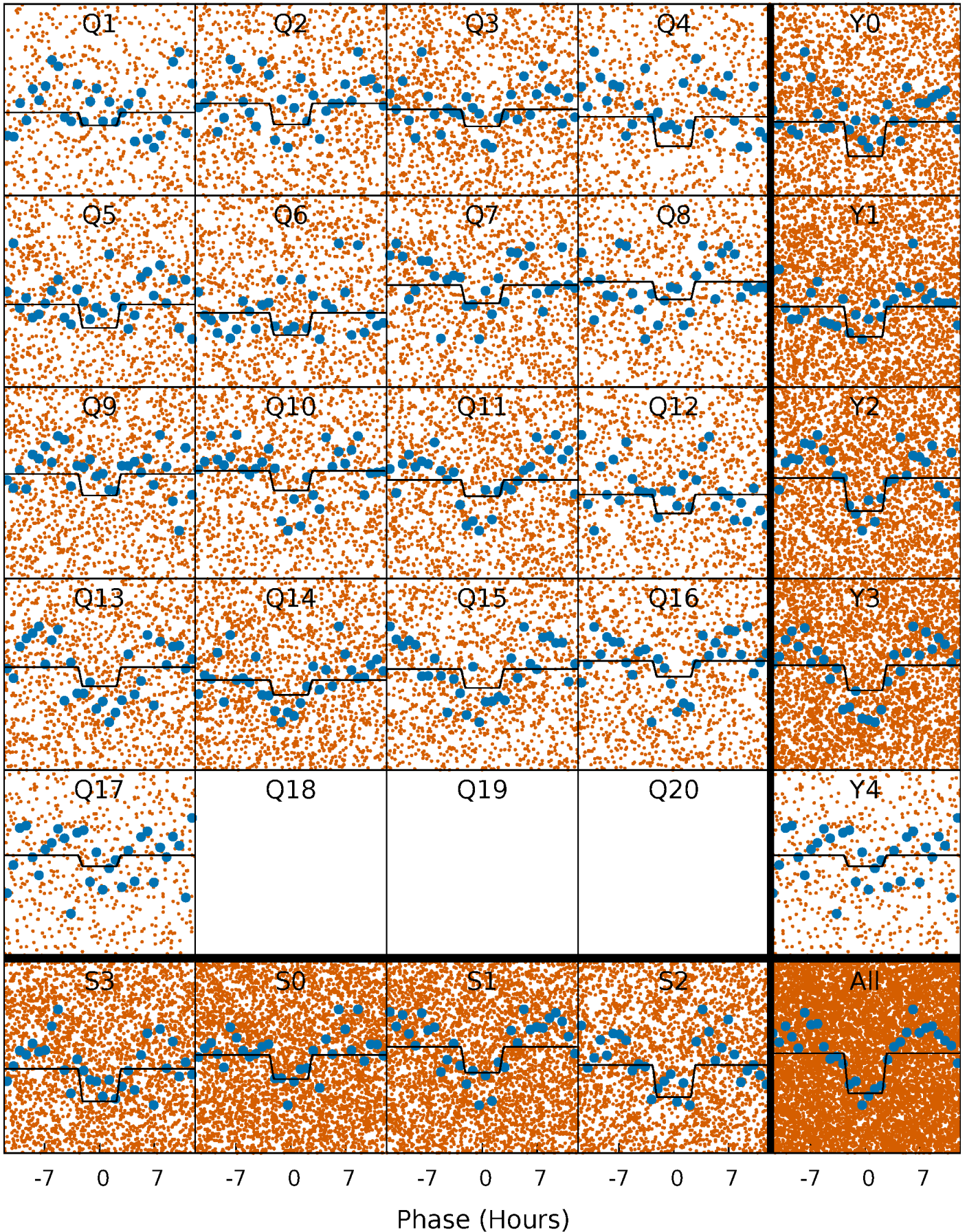
DV Quarter-Phased Transit Curves

TCE 005558845-01 P= 1.318236 Days $T_0=131.757392$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

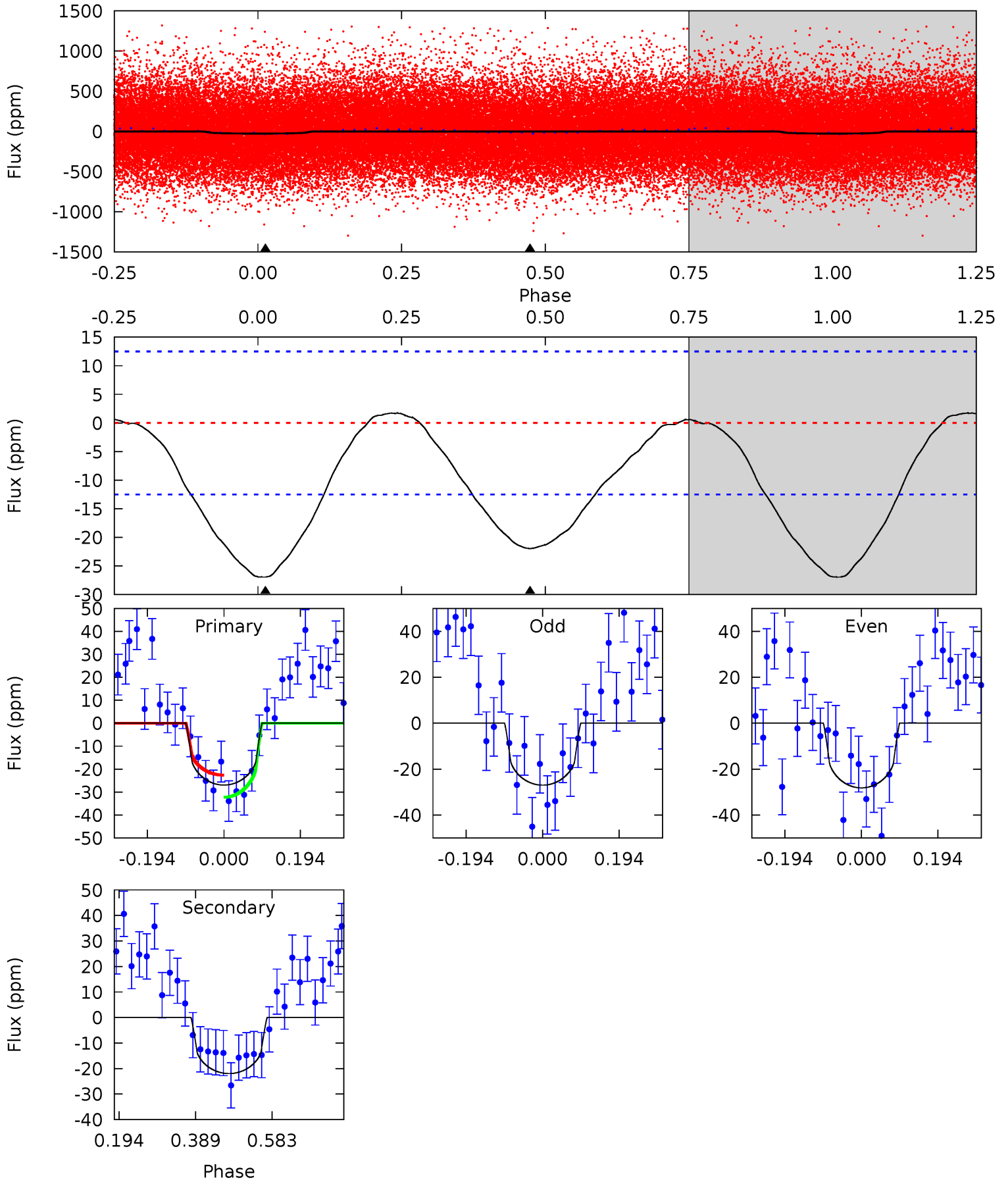
TCE 005558845-01 P= 1.318271 Days $T_0=131.747621$ (BKJD)



DV Model-Shift Uniqueness Test

005558845-01, P = 1.318236 Days, E = 130.439156 Days

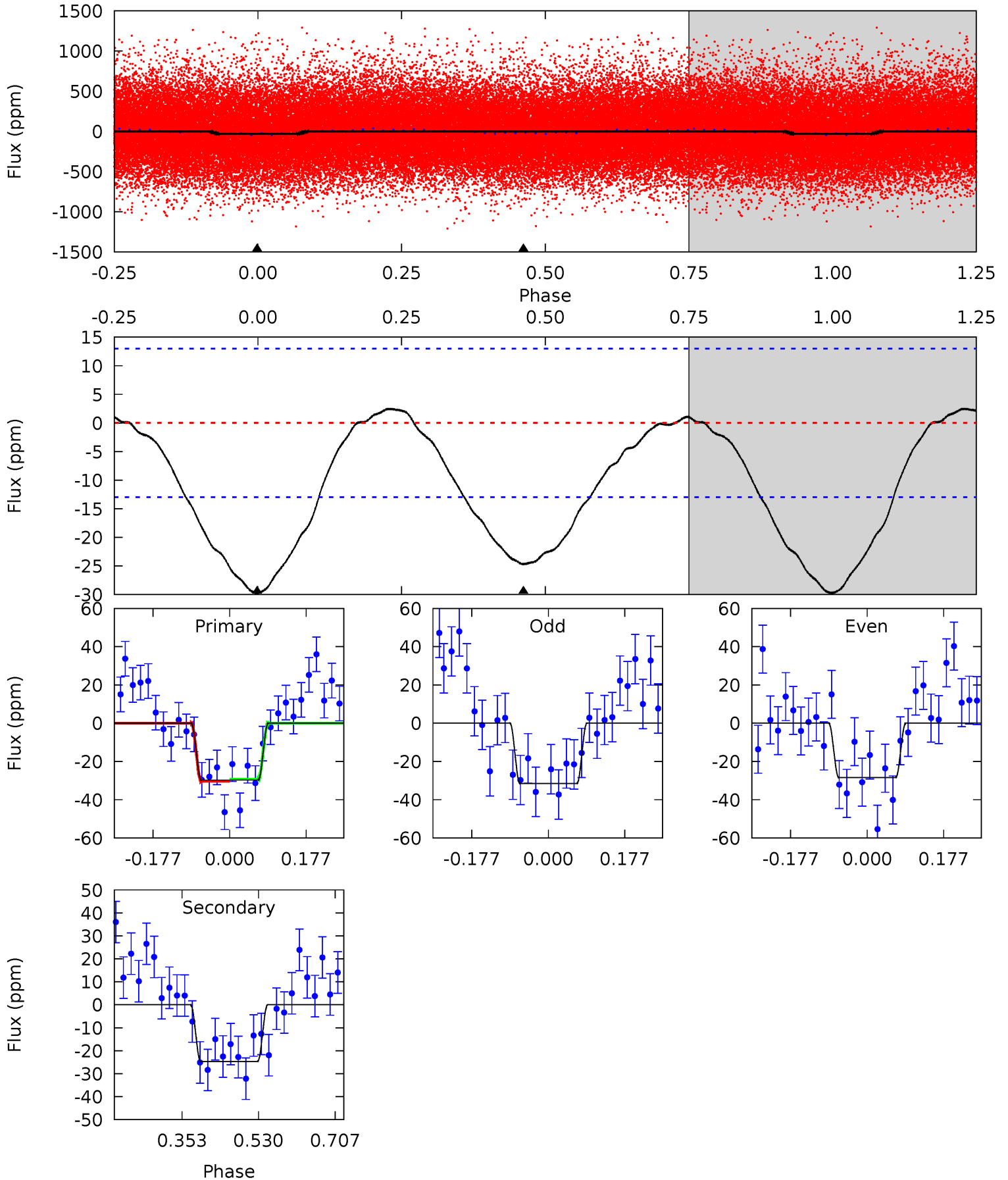
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	7.77	0	0	4.42	1.30	0.49	9.53	9.53	7.77	7.77	0.21	0.97	0.06	1.71



Alt Model-Shift Uniqueness Test

005558845-01, P = 1.318271 Days, E = 130.429350 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	8.45	0	0	4.44	1.35	0.64	10.2	10.2	8.45	8.45	0.53	0.84	0.08	0.17



Stellar Parameters For KIC 005558845

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5025^{+151}_{-136}	$4.528^{+0.078}_{-0.052}$	$-0.080^{+0.300}_{-0.300}$	$0.780^{+0.072}_{-0.079}$	$0.750^{+0.093}_{-0.057}$	$2.223^{+0.743}_{-0.388}$
	+3%/-3%	+2%/-1%	+375%/-375%	+9%/-10%	+12%/-8%	+33%/-17%
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 005558845-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 3	$0.51^{+0.33}_{-0.29}$	1868^{+67}_{-67}	4557^{+2166}_{-774}	22^{+91}_{-14}
Alt.	-25 ± 3	$0.51^{+0.31}_{-0.29}$	1867^{+67}_{-73}	4666^{+2238}_{-802}	24^{+111}_{-15}

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

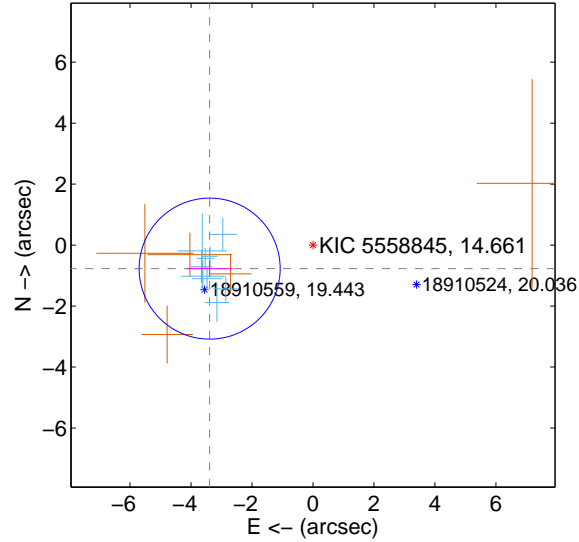
Supplemental centroid analysis for 005558845-01. Kepler magnitude: 14.66. Transit SNR 8.10

There are 9 quarters with good PRF difference image offsets

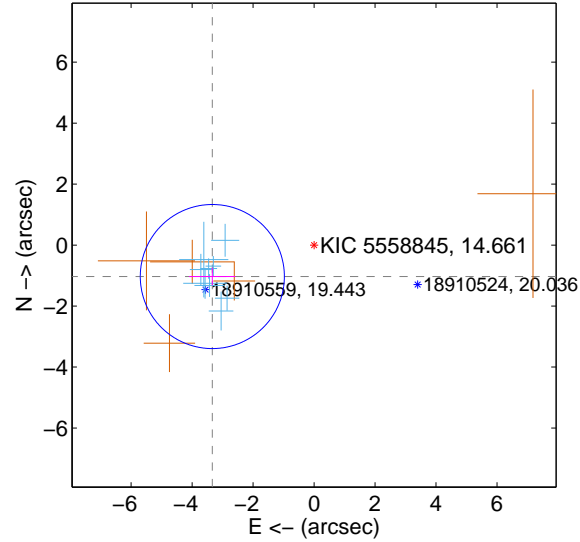
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.475 ± 0.771	4.51	3.389 ± 0.751	-0.772 ± 0.280
PRF-fit source offset from KIC position	3.493 ± 0.788	4.43	3.337 ± 0.764	-1.031 ± 0.289
photometric centroid source offset	2.10 ± 1.50	1.40	1.06 ± 1.54	-1.81 ± 1.49

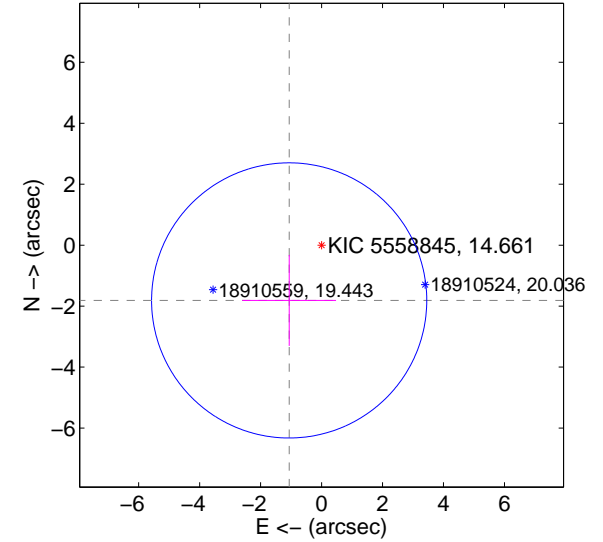
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

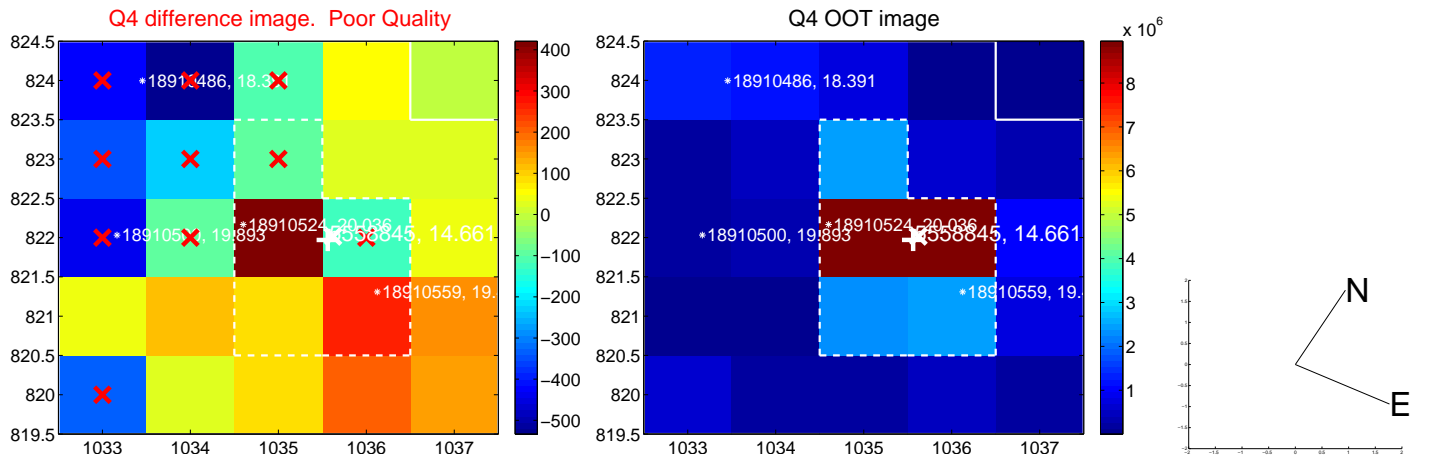
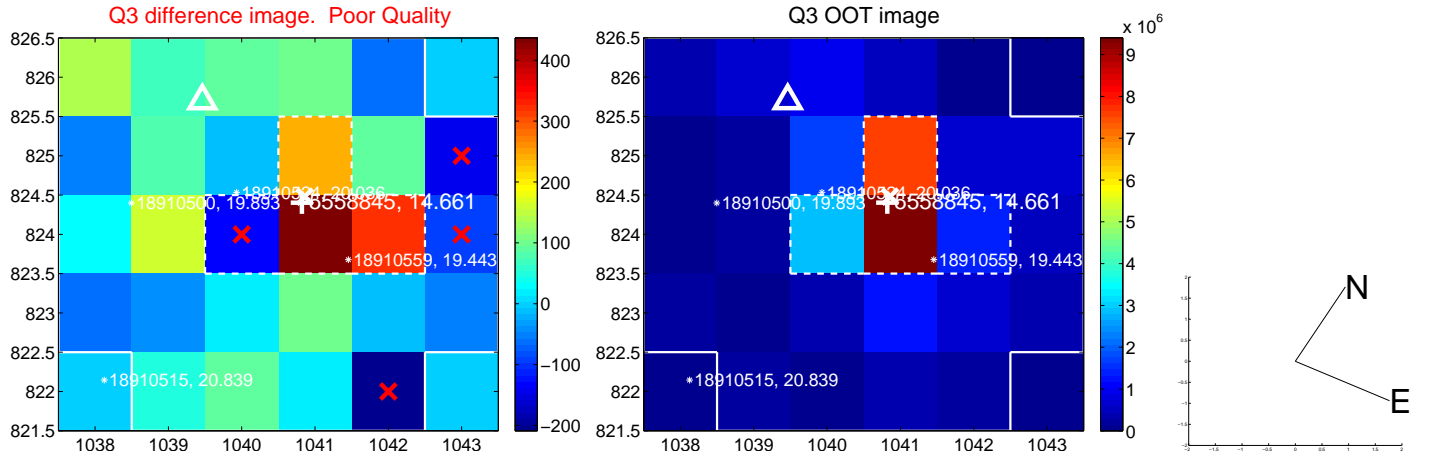
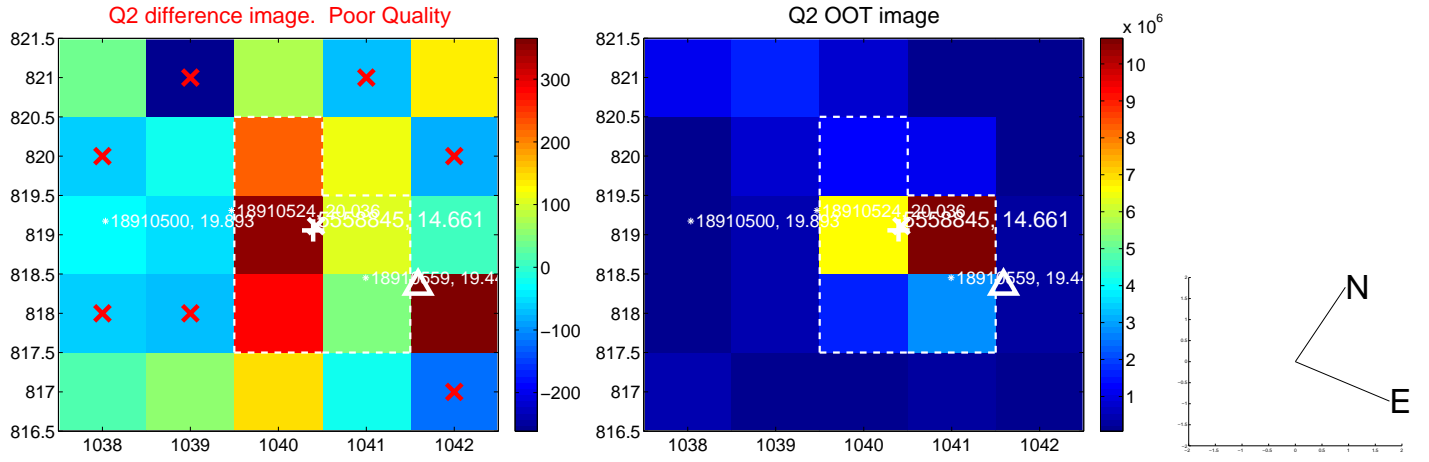
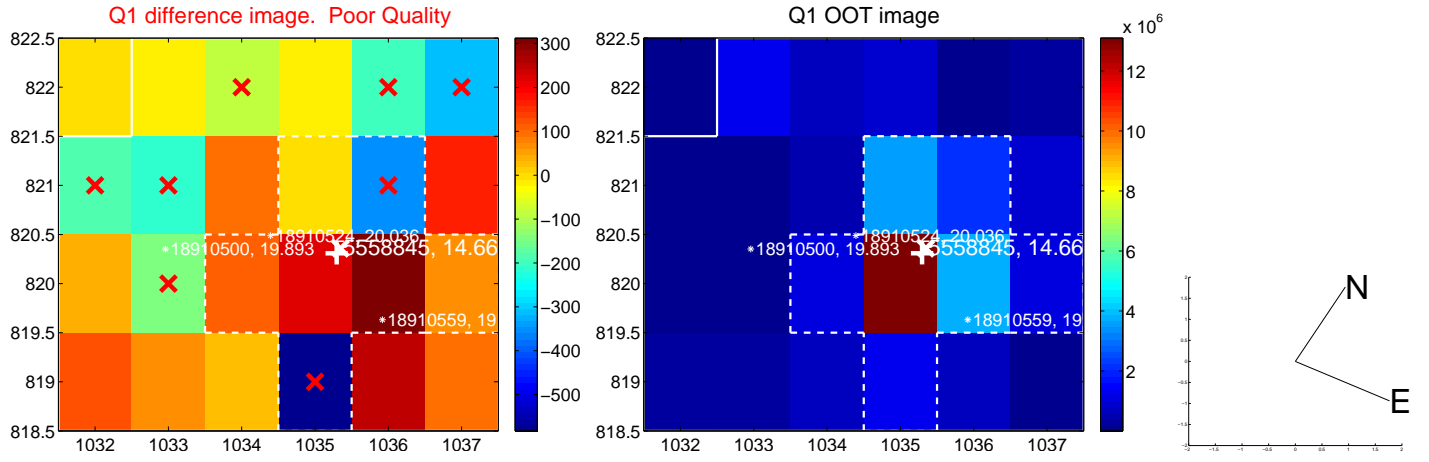


offset from photometric centroids

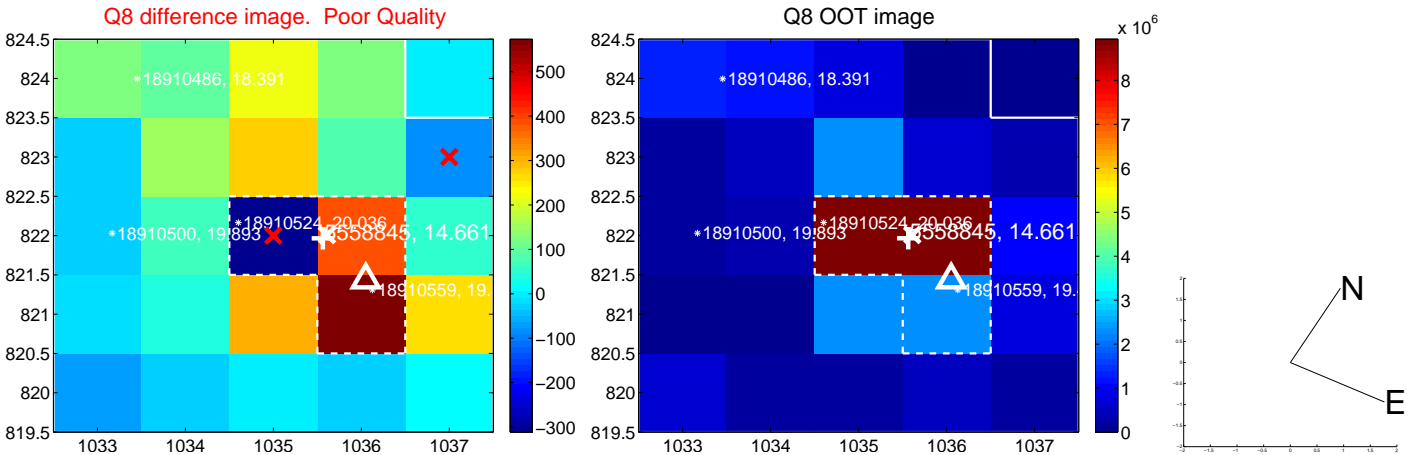
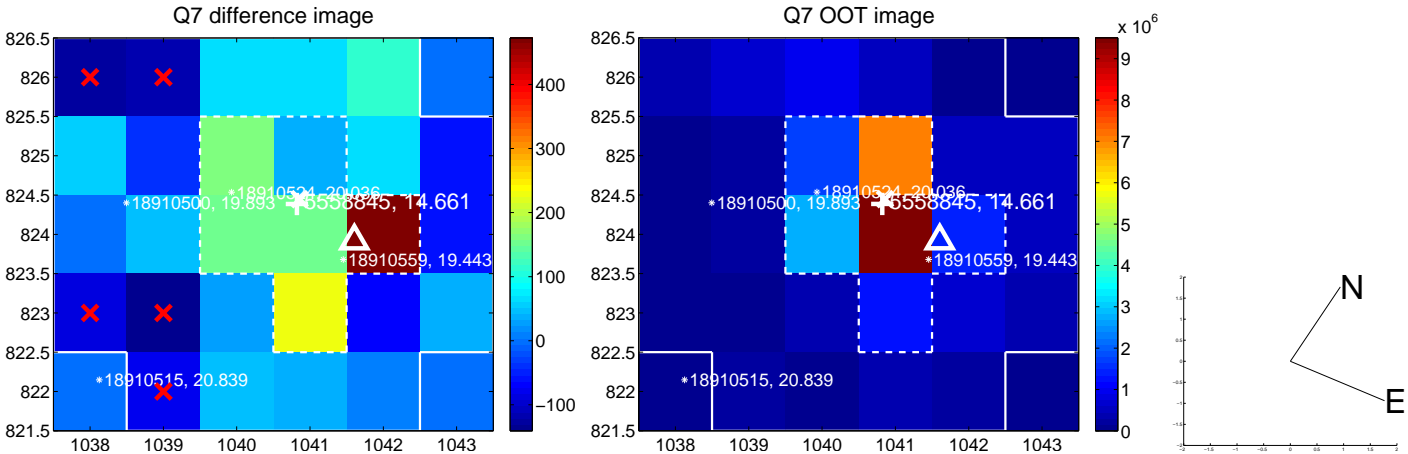
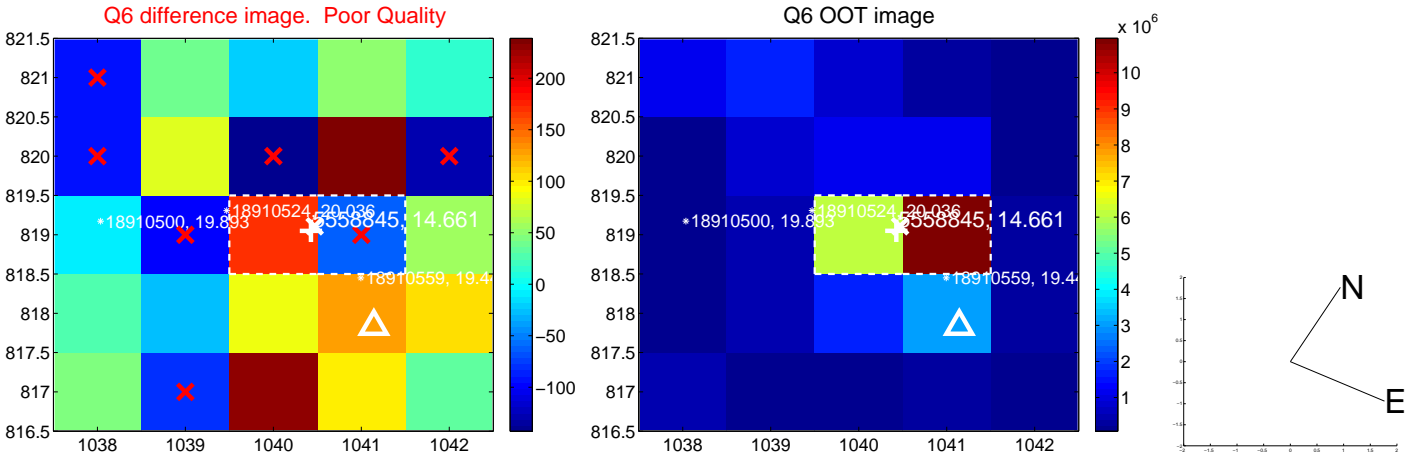
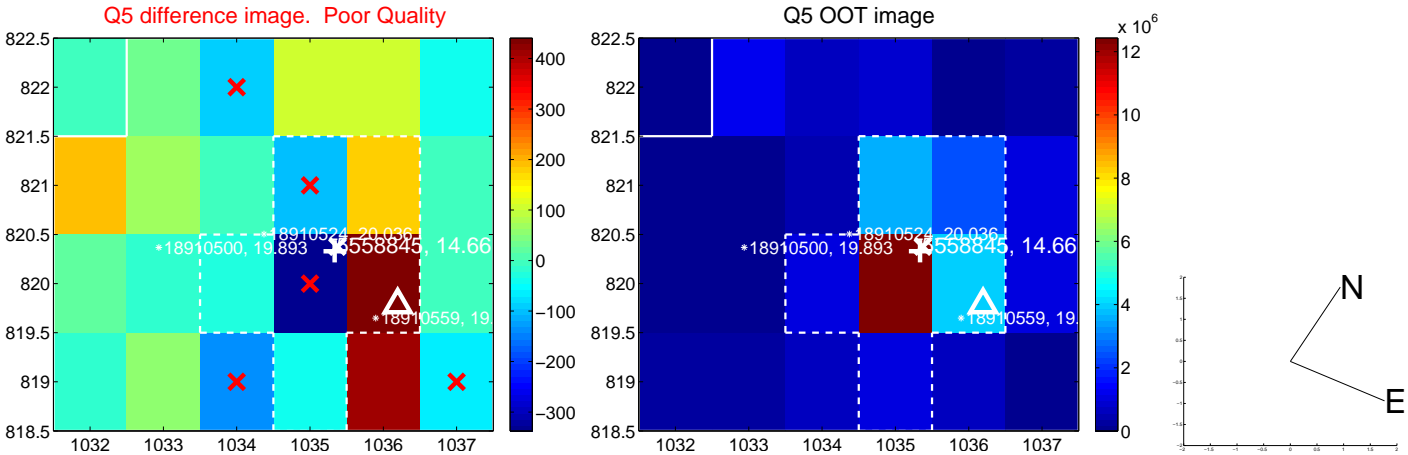


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

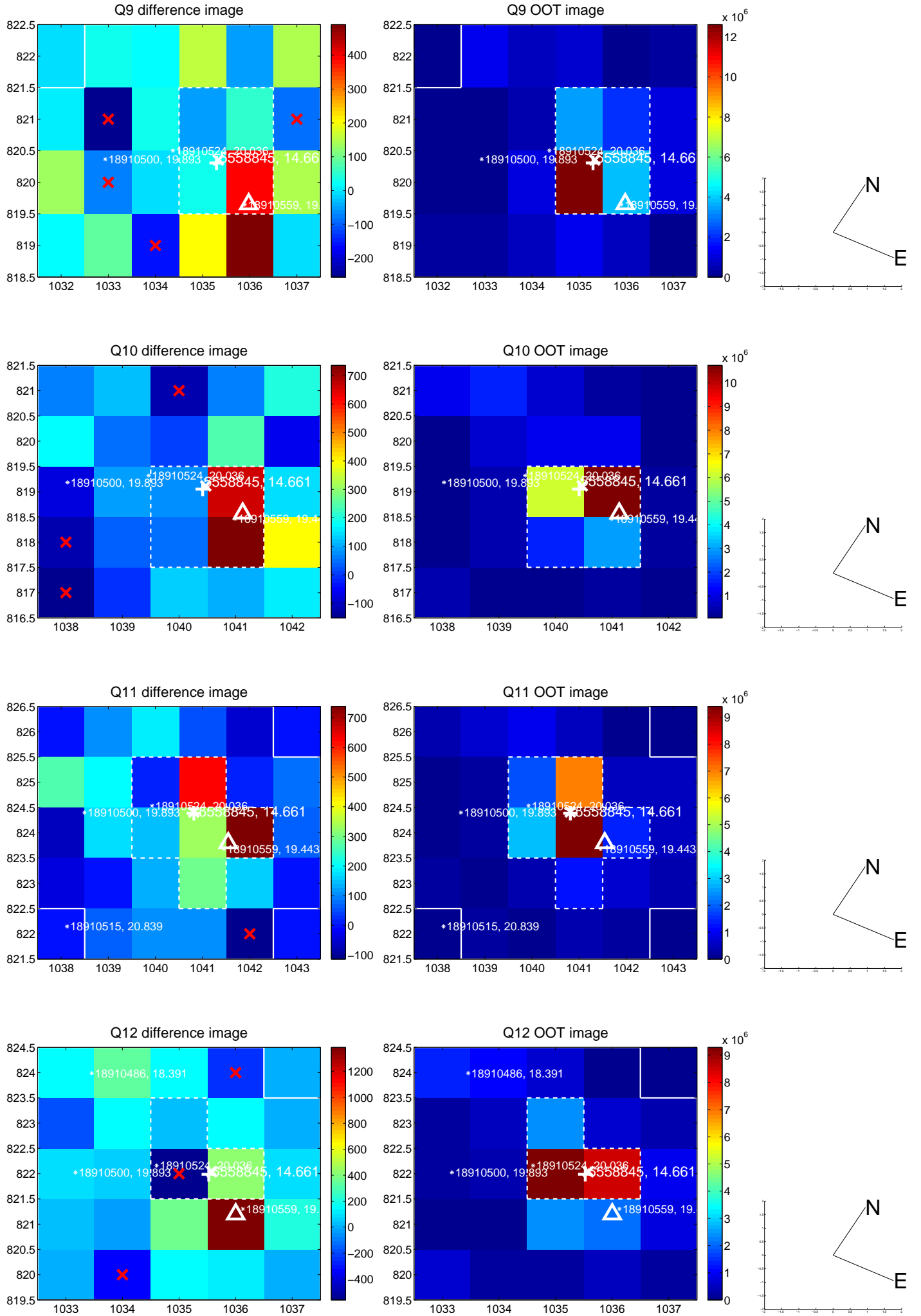
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



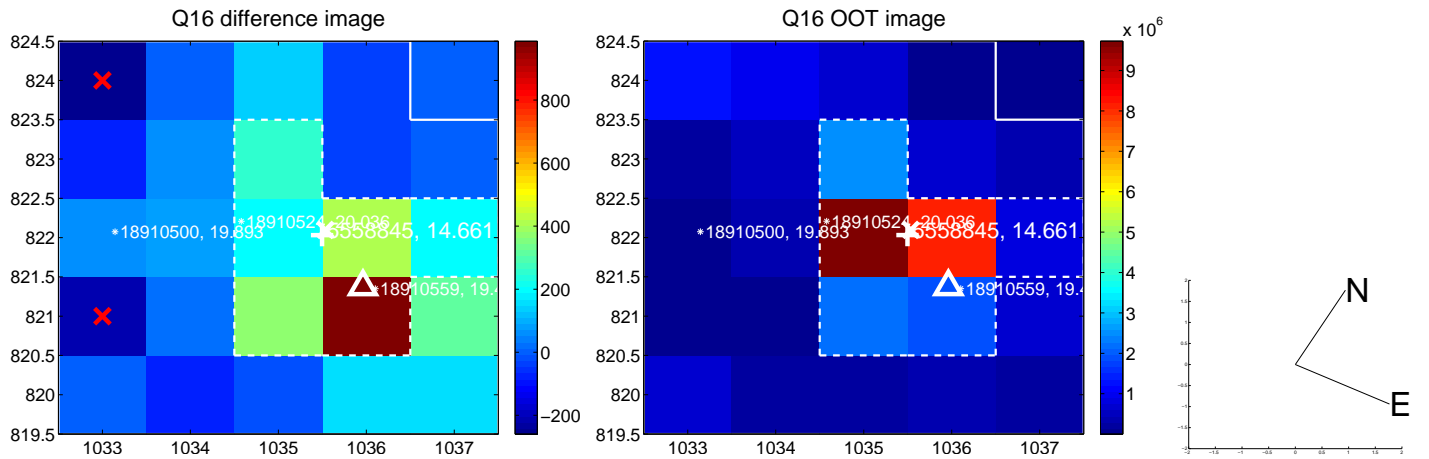
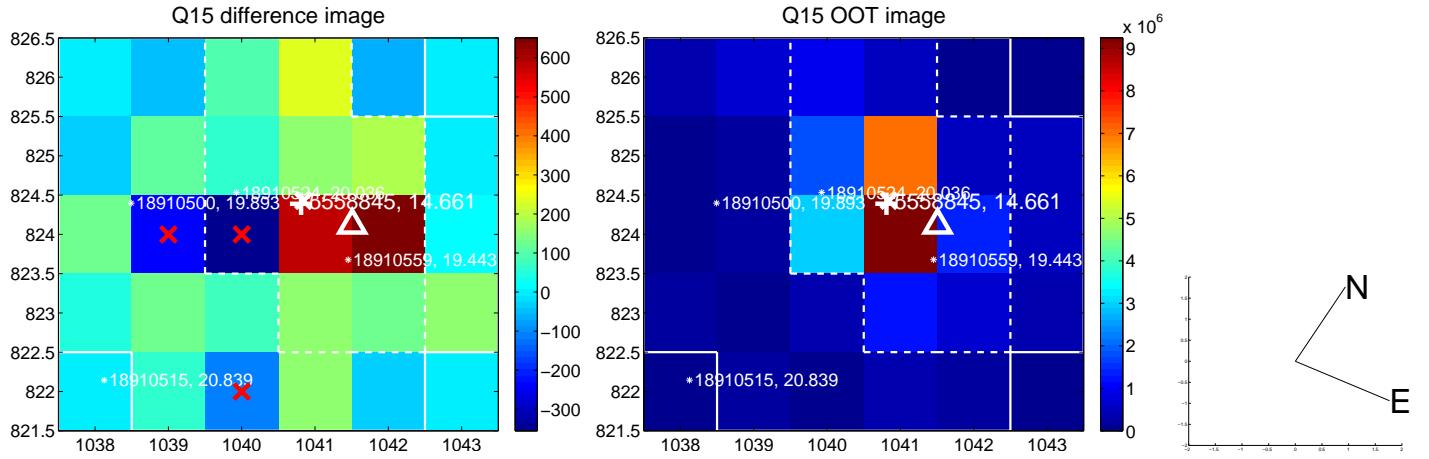
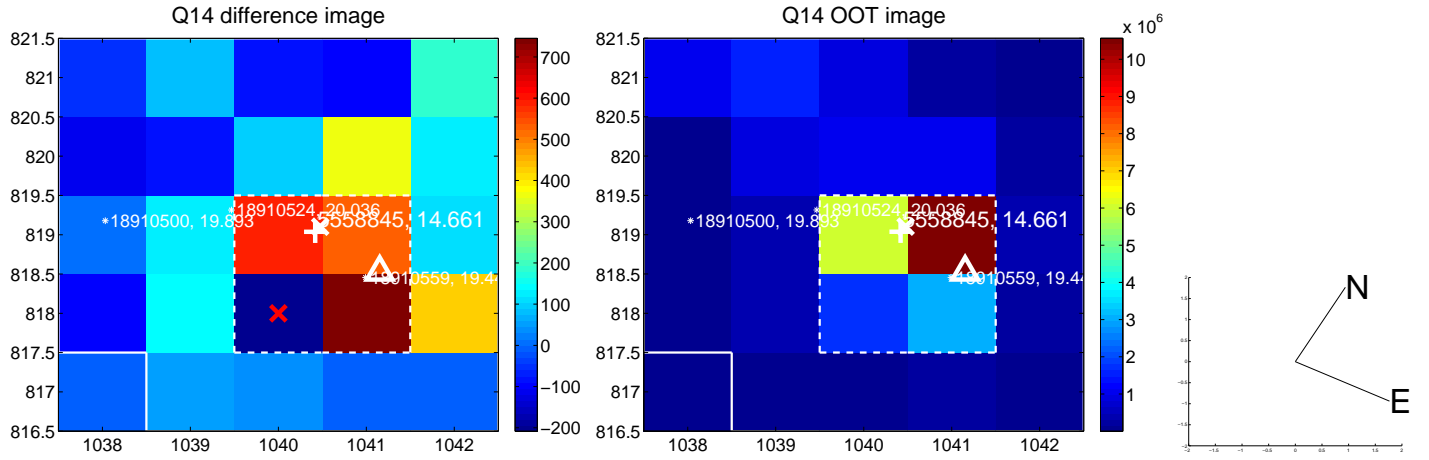
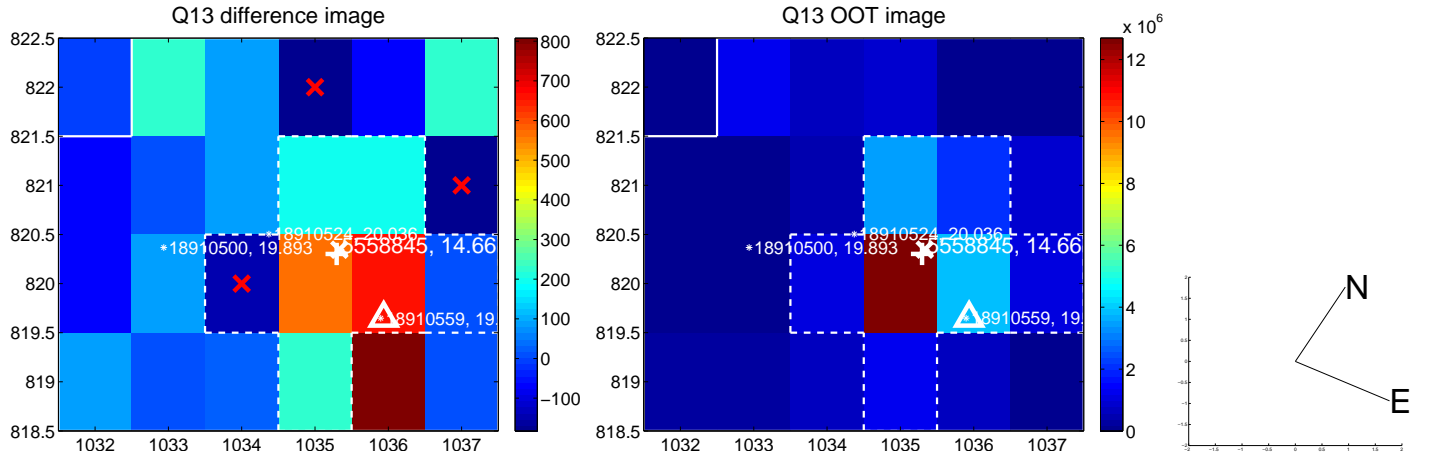
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

