

KIC 004458918

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})
004458918-01	OBS	No	4.118412	134.907771	0.0	23.288	7.9	0.0	1.82	6311	0.01	1805.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004458918-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

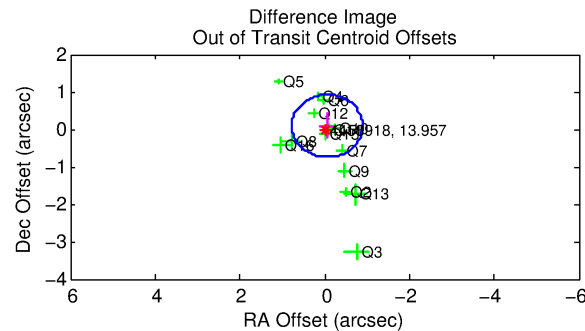
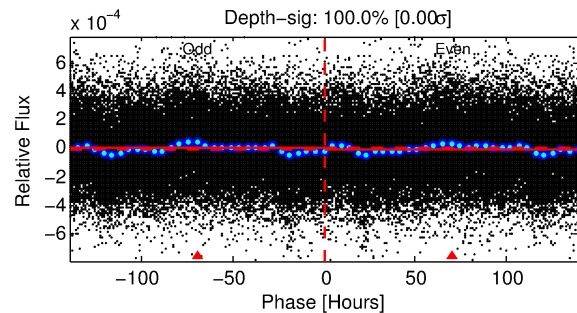
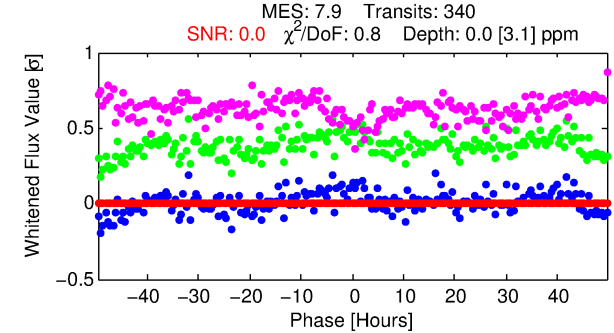
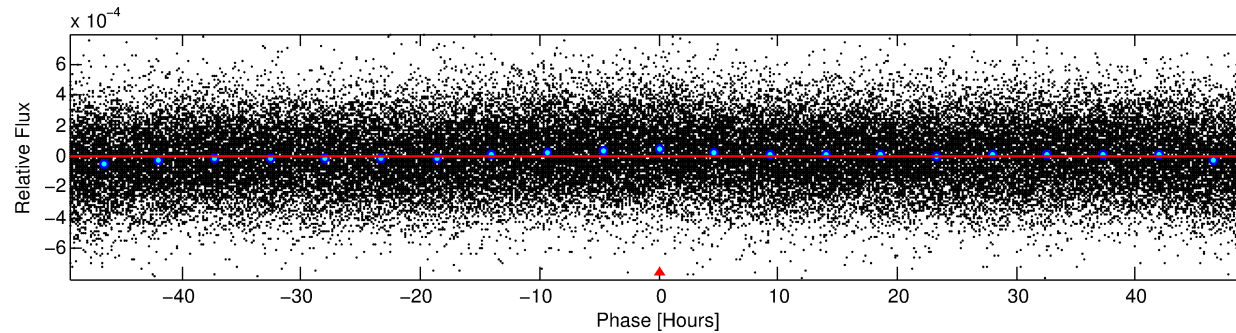
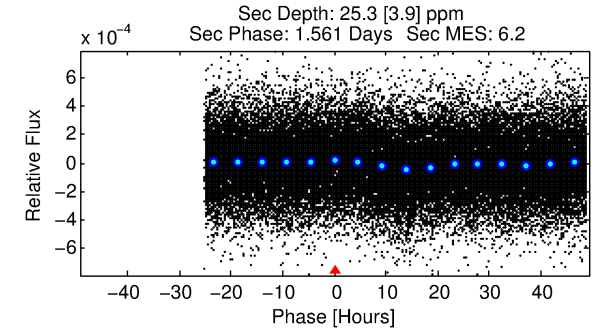
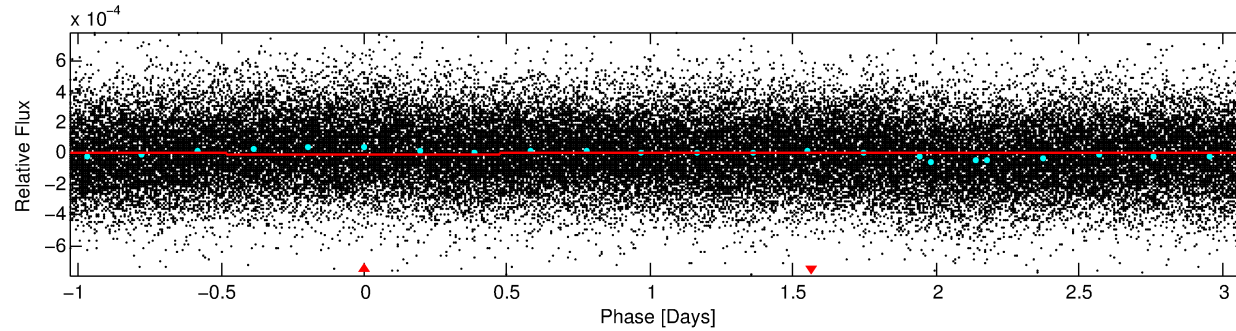
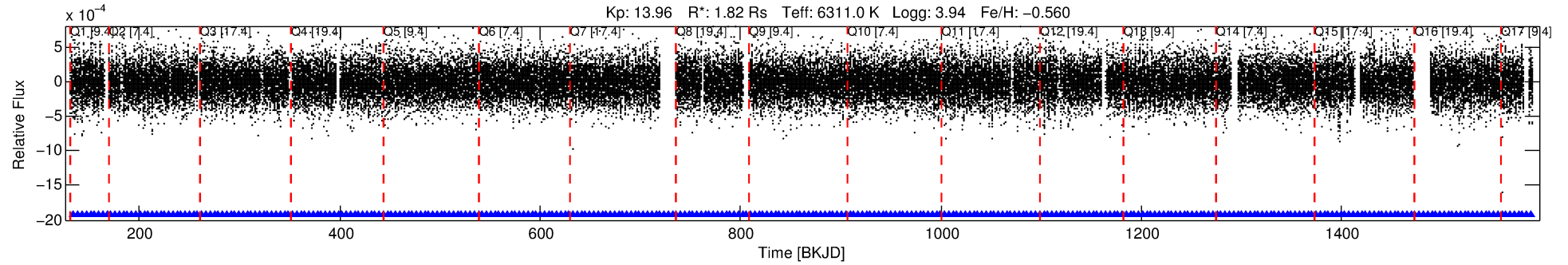
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004458918-01

No Significant Match Found

DV One-Page Summary

KIC: 4458918 Candidate: 1 of 1 Period: 4.118 d



DV Fit Results:

Period = 4.11841 [0.85210] d
Epoch = 134.9078 [136.5412] BKJD
Rp/R* = 0.0000 [0.0308]
a/R* = 1.26 [48.57]
b = 0.71 [119.61]
Seff = 1805.97 [814.75]
Teq = 1662 [187] K
Rp = 0.01 [6.11] Re
a = 0.0510 [0.0137] AU
Ag = 378584.80 [473290649.53] [0.00σ]
Teffp = 63751 [19925073] K [0.00σ]

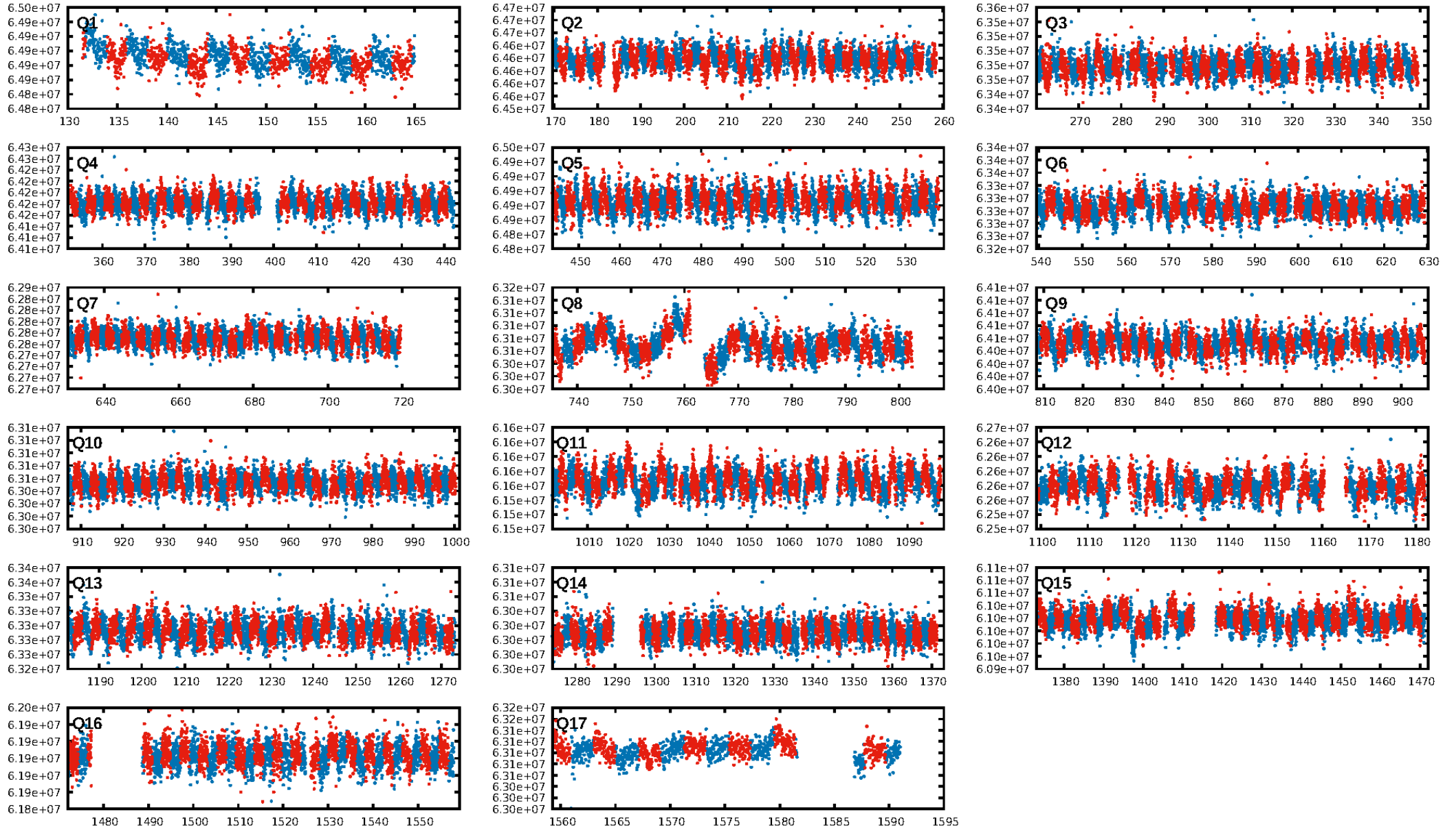
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.20e-13
RollingBand-fgt: 1.00 [325/325]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.103 arcsec [0.37σ]
KicOffset-rm: 0.146 arcsec [0.67σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [17/17]

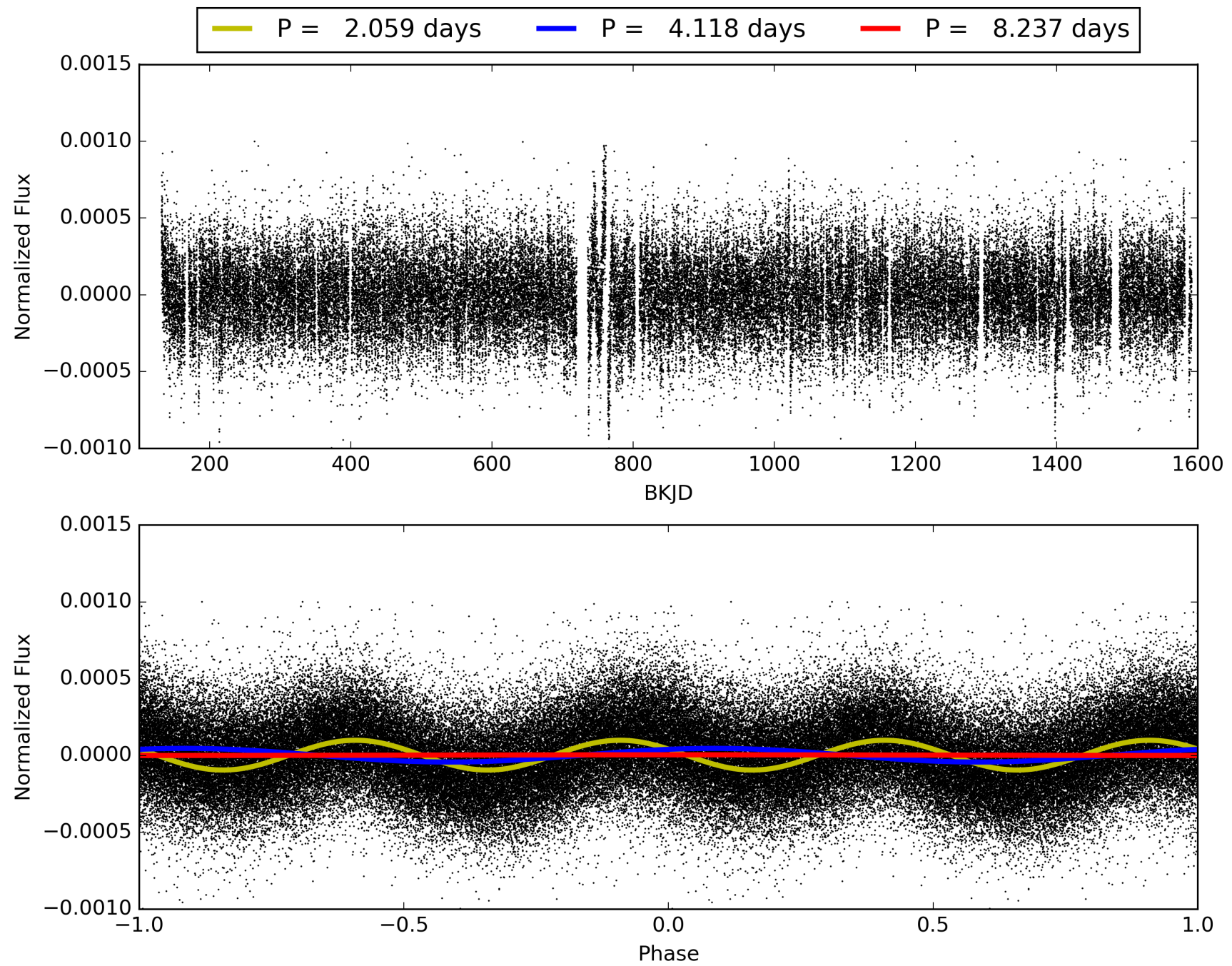
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:07:22 Z

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

TCE 004458918-01, PDC Light Curves

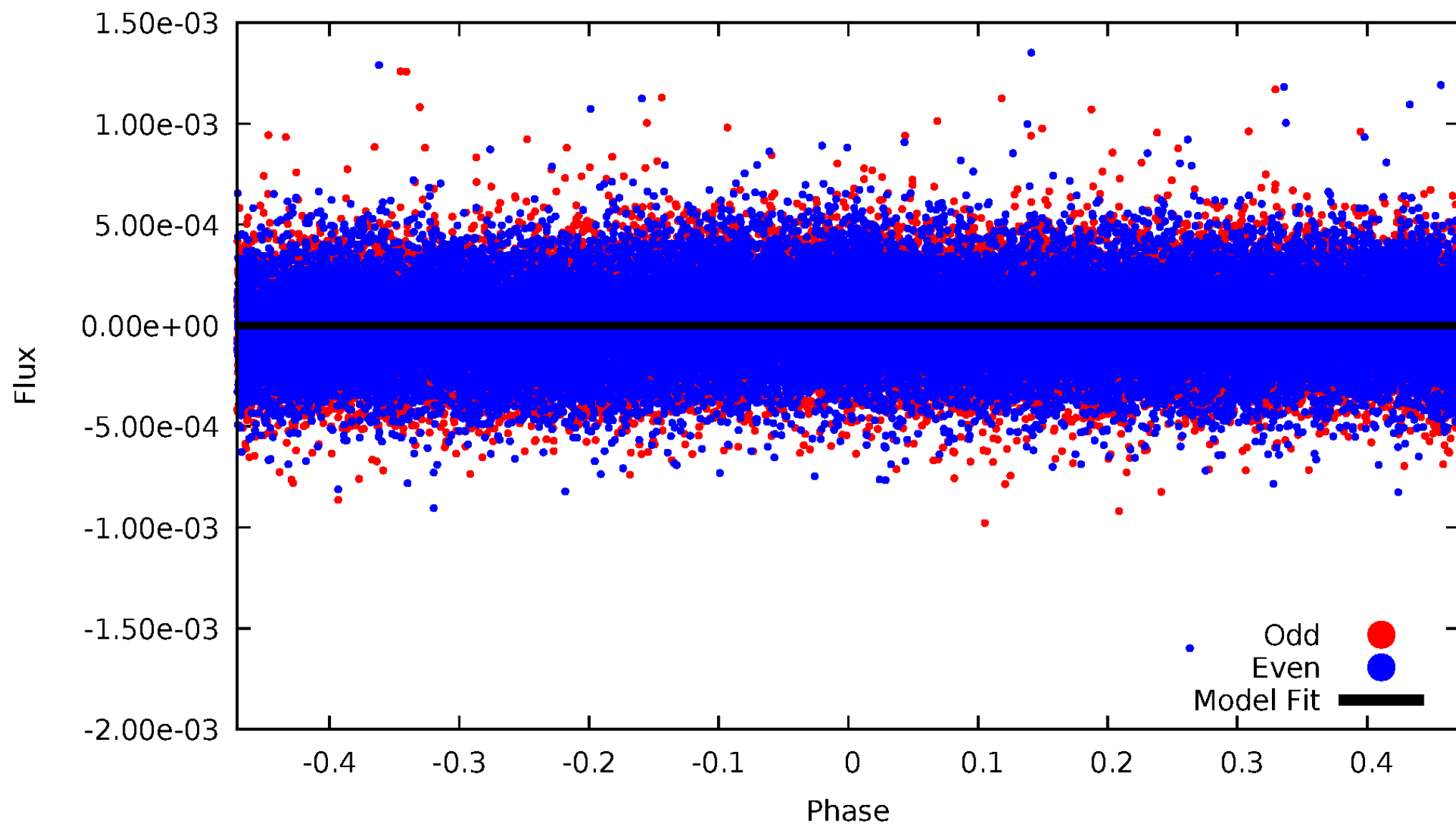


TCE 004458918-01



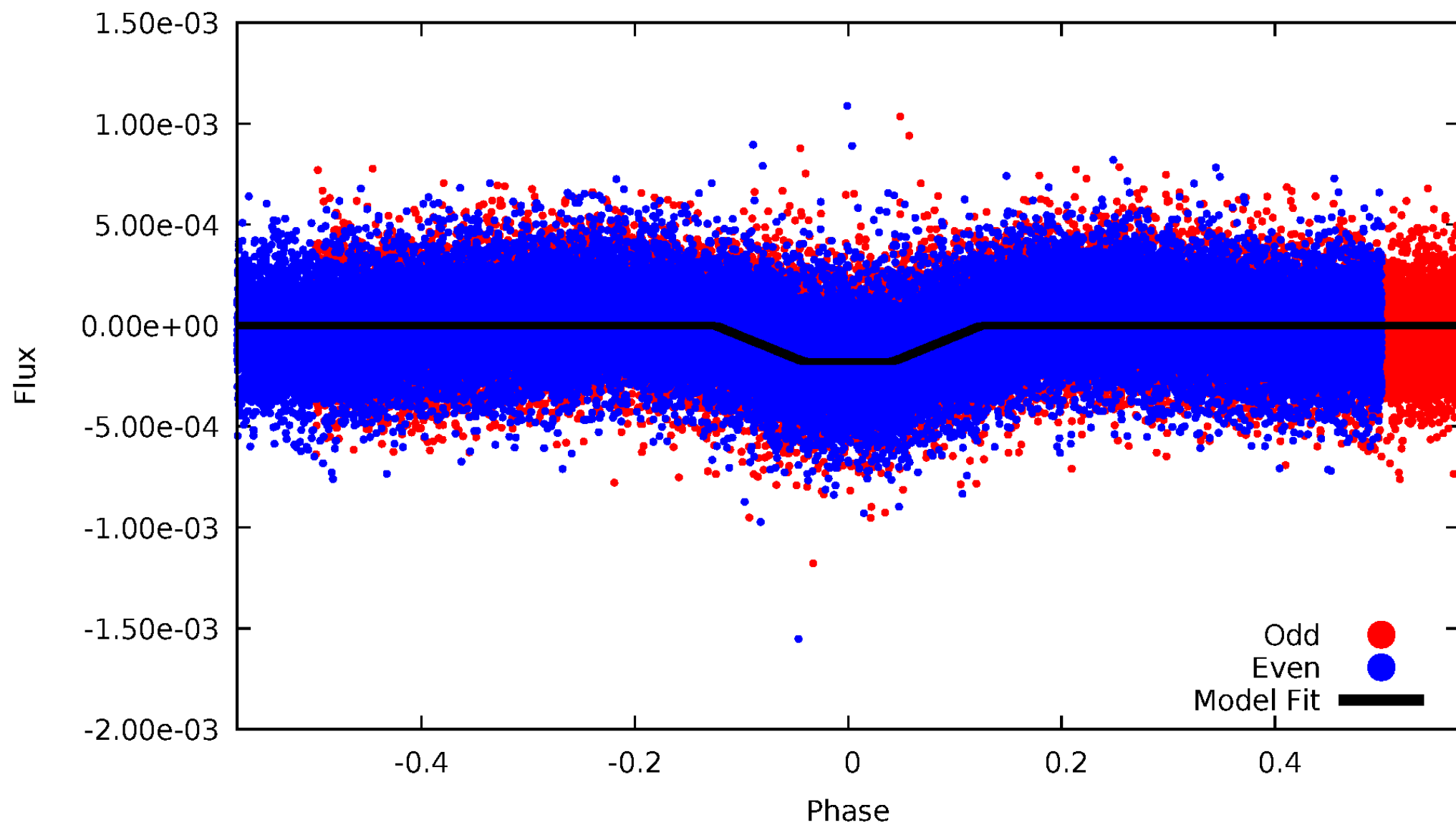
DV Odd/Even

TCE 004458918-01

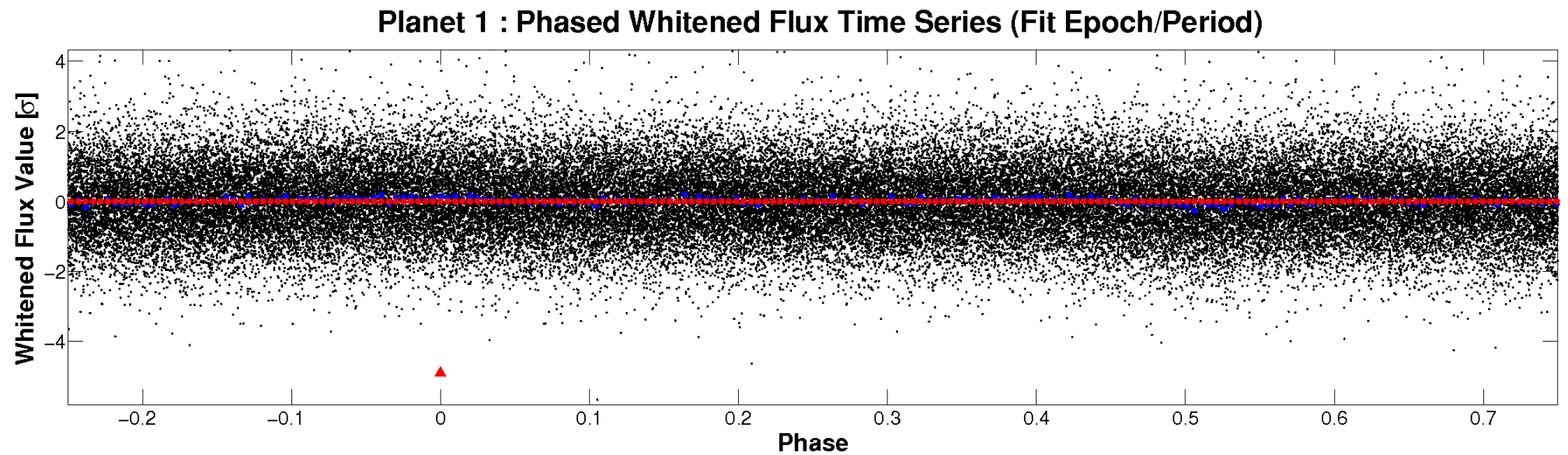
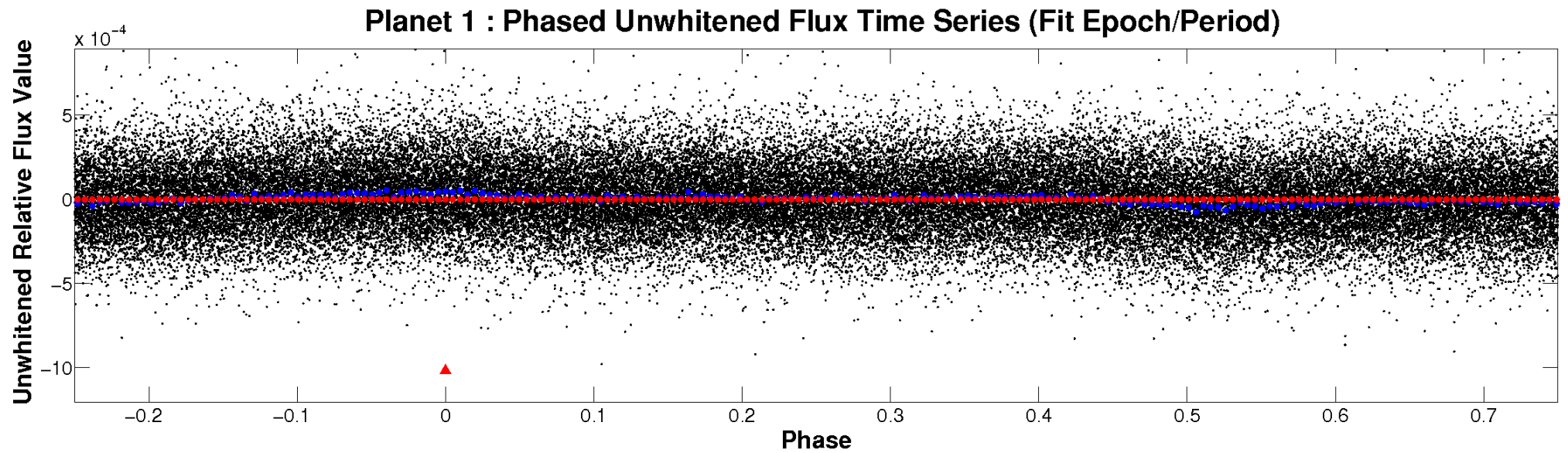


ALT Odd/Even

TCE 004458918-01

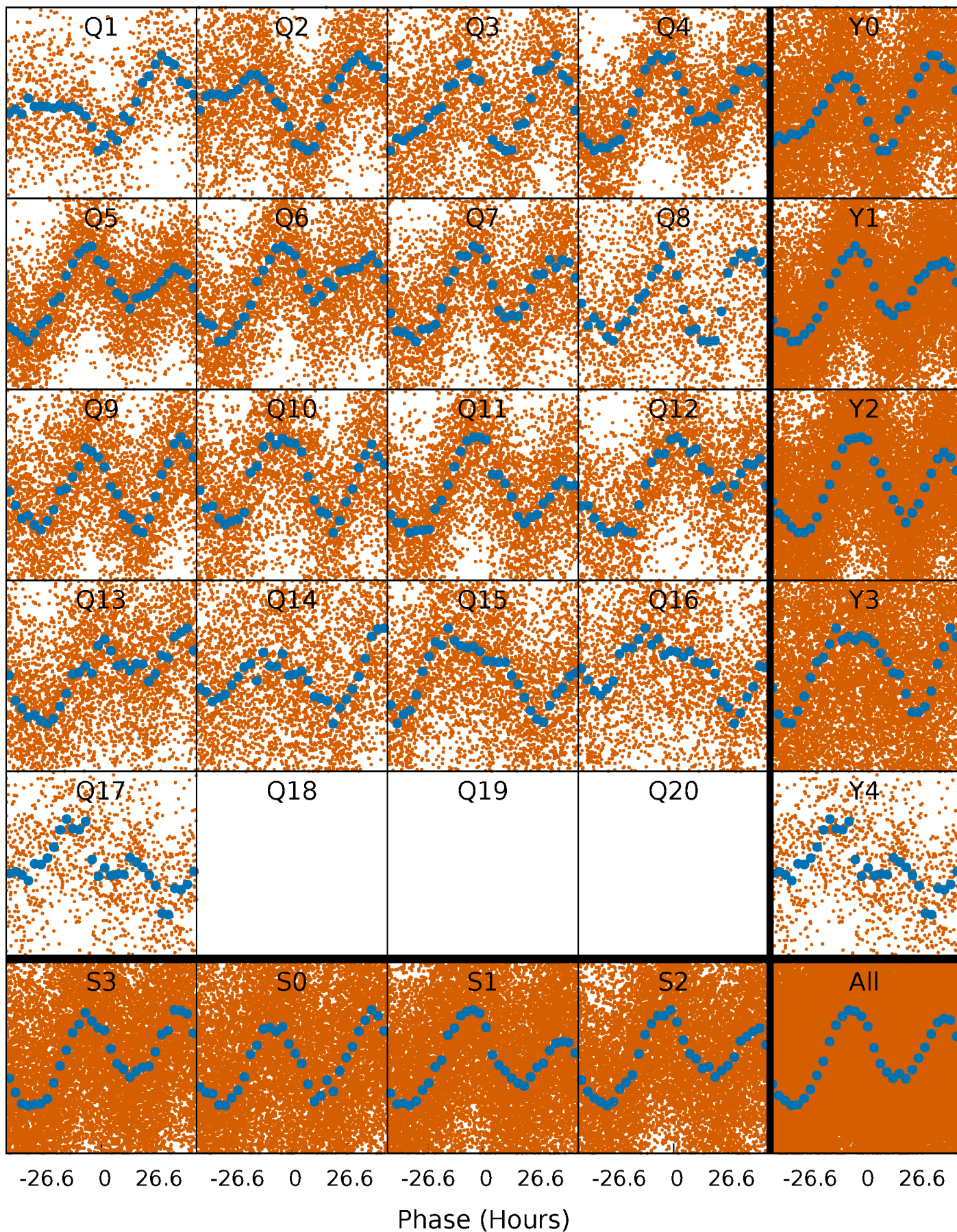


Non-Whitened Vs. Whitened Light Curve



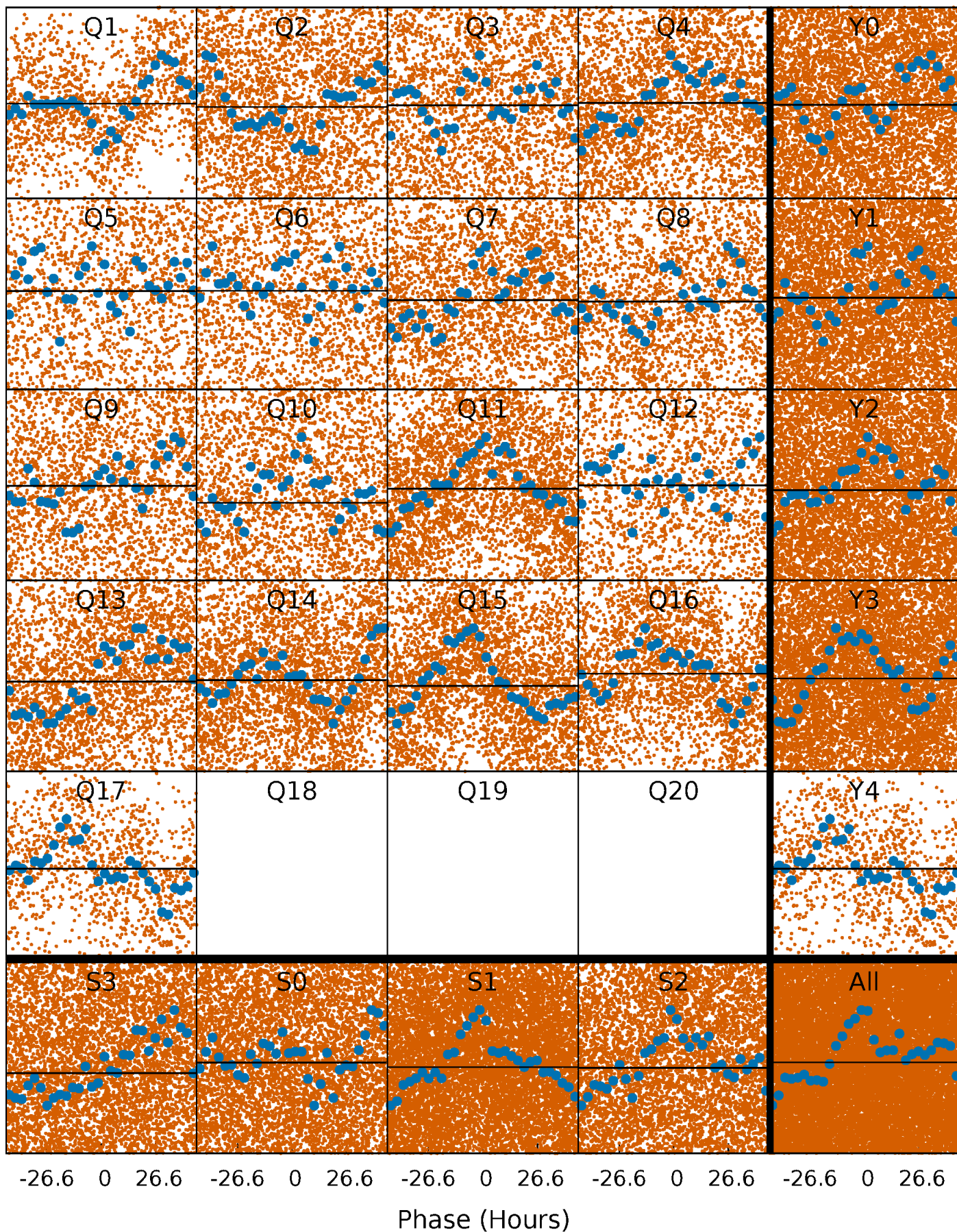
PDC Quarter-Phased Transit Curves

TCE 004458918-01 P= 4.118412 Days $T_0=134.907771$ (BKJD)



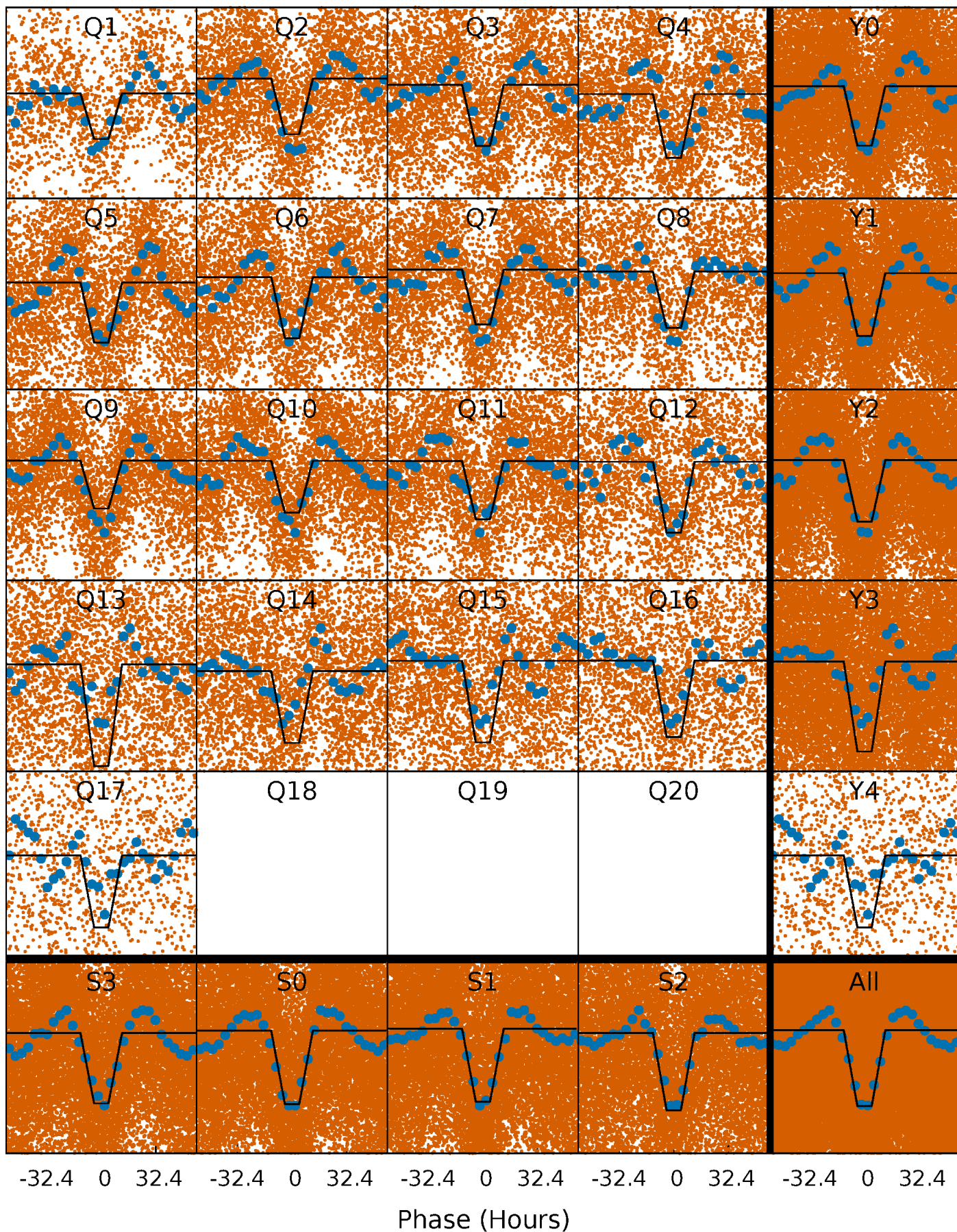
DV Quarter-Phased Transit Curves

TCE 004458918-01 P= 4.118412 Days $T_0=134.907771$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

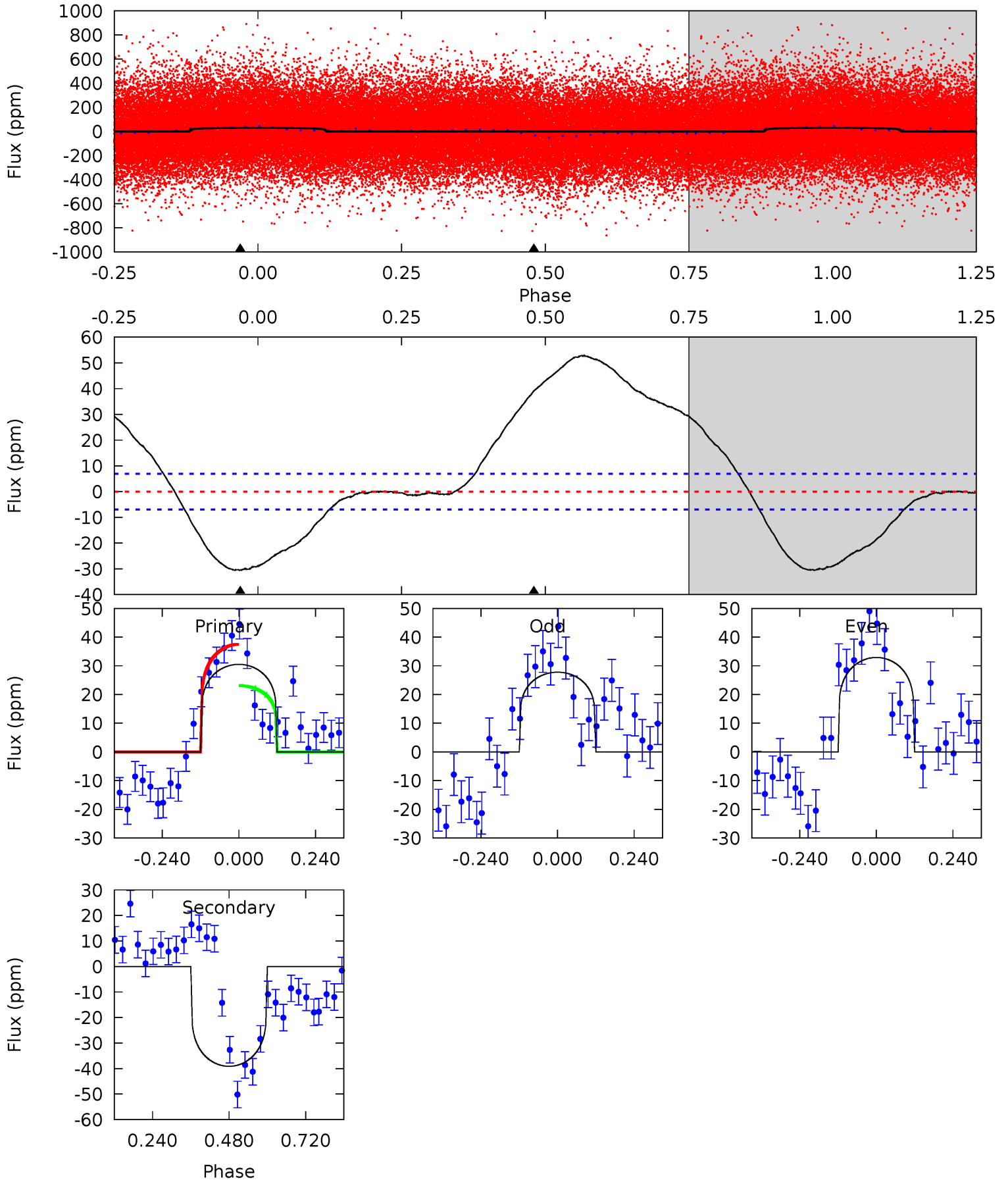
TCE 004458918-01 P= 4.121560 Days $T_0=135.095859$ (BKJD)



DV Model-Shift Uniqueness Test

004458918-01, P = 4.118412 Days, E = 130.789359 Days

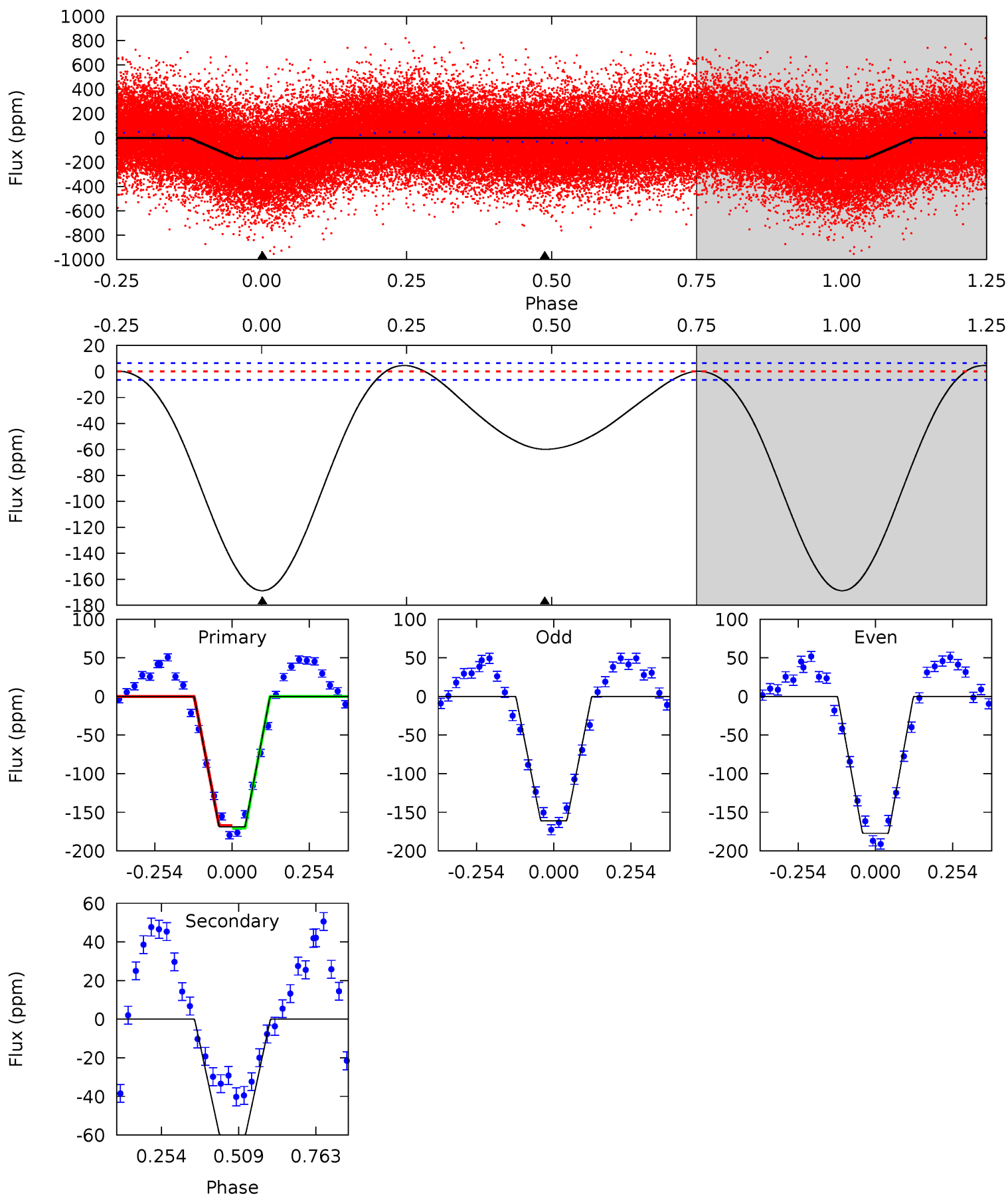
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	-24.6	0	0	4.38	1.17	9.90	19.2	19.2	-24.6	-24.6	1.61	0.96	0.63	4.52



Alt Model-Shift Uniqueness Test

004458918-01, P = 4.121560 Days, E = 130.974299 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
113.9	40.4	0	0	4.36	1.14	1.96	113.9	113.9	40.4	40.4	5.42	1.06	0.03	1.16



Stellar Parameters For KIC 004458918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6311^{+82}_{-82}	$3.937^{+0.202}_{-0.109}$	$-0.560^{+0.150}_{-0.150}$	$1.818^{+0.307}_{-0.461}$	$1.044^{+0.097}_{-0.097}$	$0.244^{+0.271}_{-0.081}$
	+1%/-1%	+5%/-3%	+27%/-27%	+17%/-25%	+9%/-9%	+111%/-33%
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 004458918-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	39 ± 2	$4.05^{+4.74}_{-2.92}$	2307^{+215}_{-195}	-3884^{+696}_{-2535}	$-3.372^{+2.625}_{-38.759}$
Alt.	-60 ± 1	$5.28^{+5.06}_{-3.64}$	2299^{+216}_{-169}	3690^{+2337}_{-864}	$3.060^{+28.751}_{-2.350}$

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 $A_{obs} \gg 1.0$

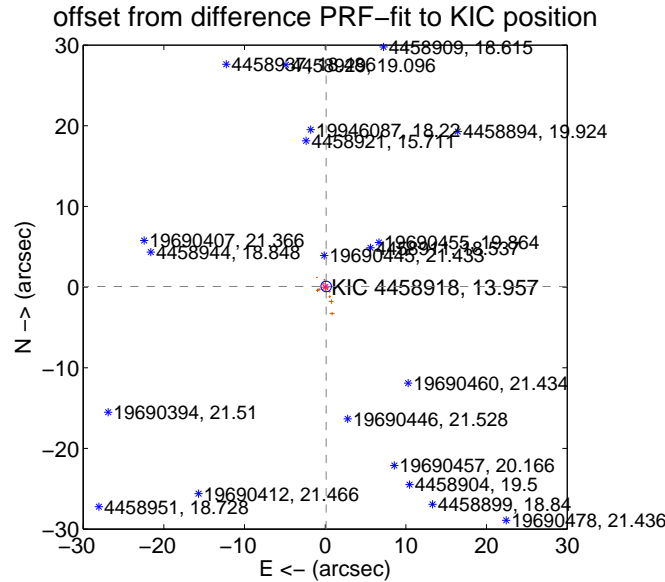
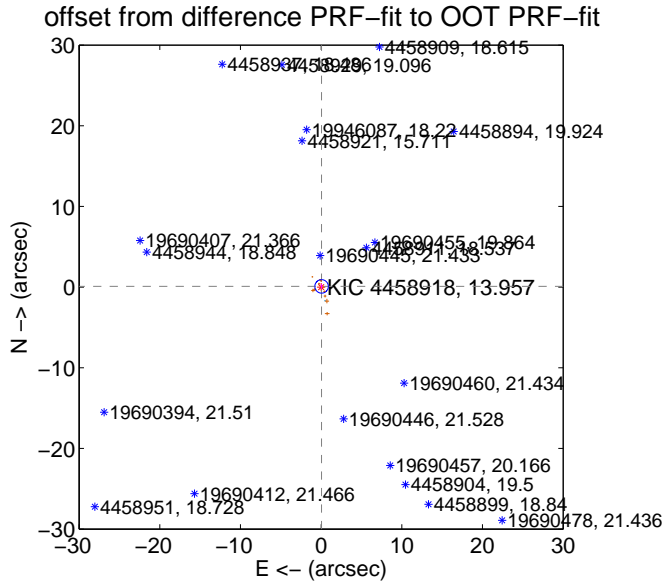
DV Centroid Data

Supplemental centroid analysis for 004458918-01. Kepler magnitude: 13.96. Transit SNR 0.00

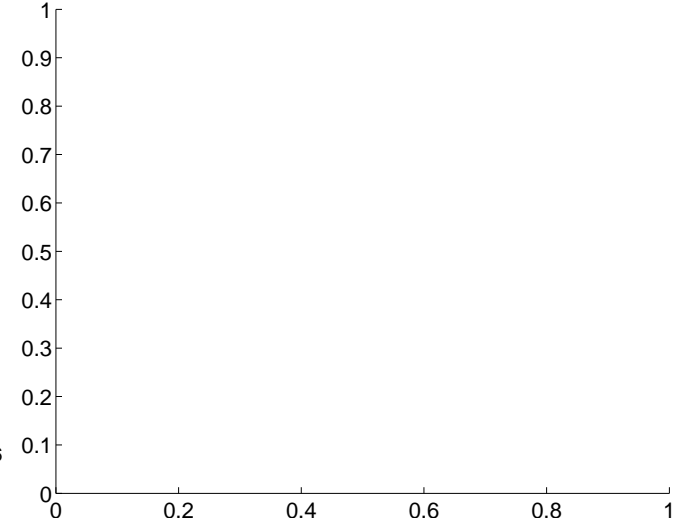
There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.103 ± 0.279	0.37	-0.056 ± 0.144	0.086 ± 0.319
PRF-fit source offset from KIC position	0.146 ± 0.218	0.67	-0.120 ± 0.148	0.083 ± 0.318
photometric centroid source offset	—	—	—	—

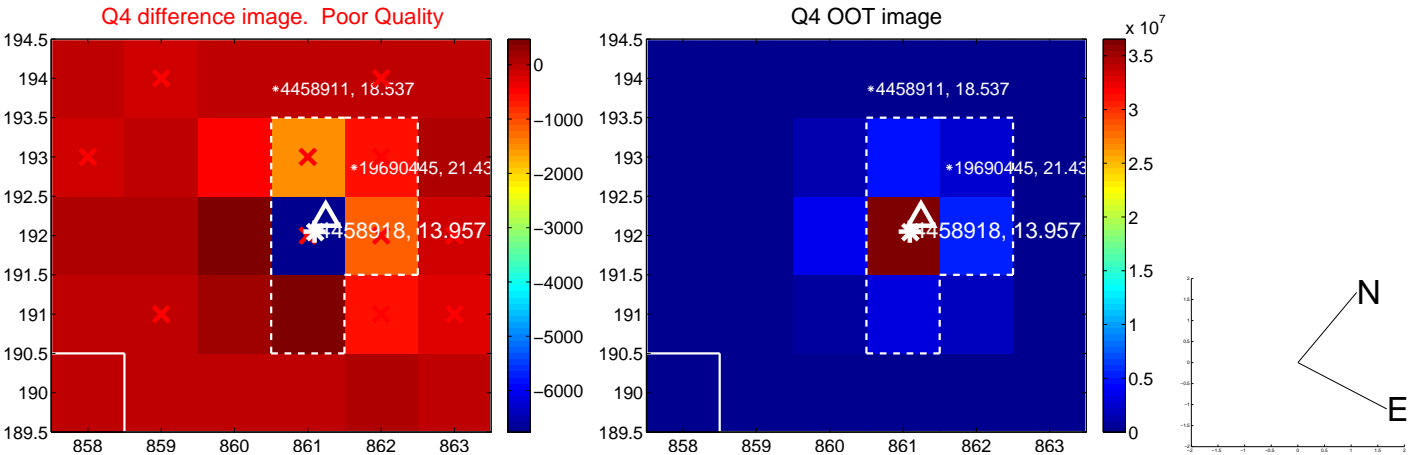
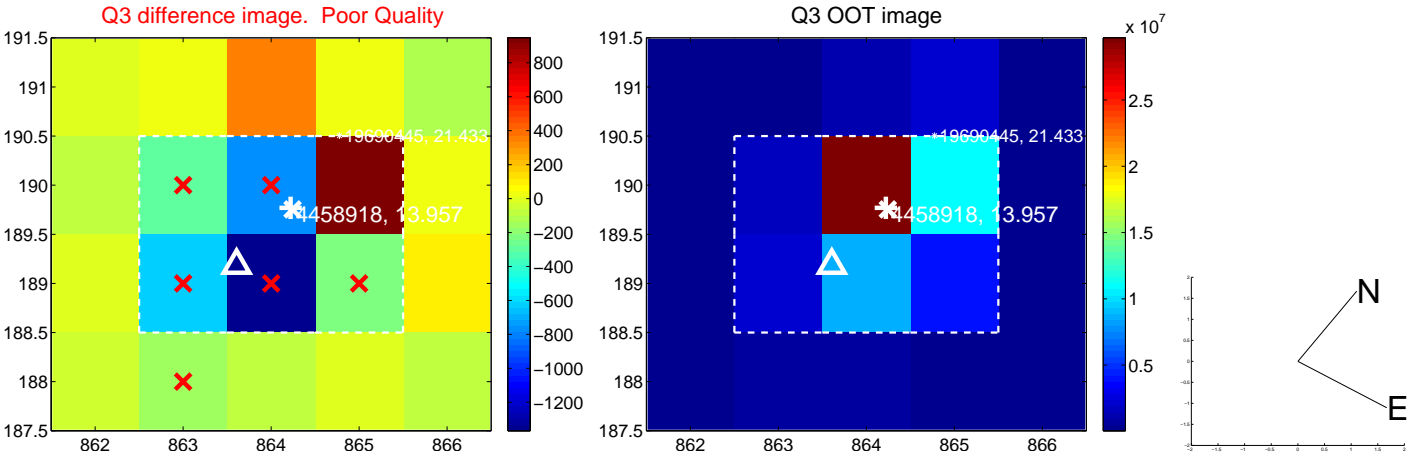
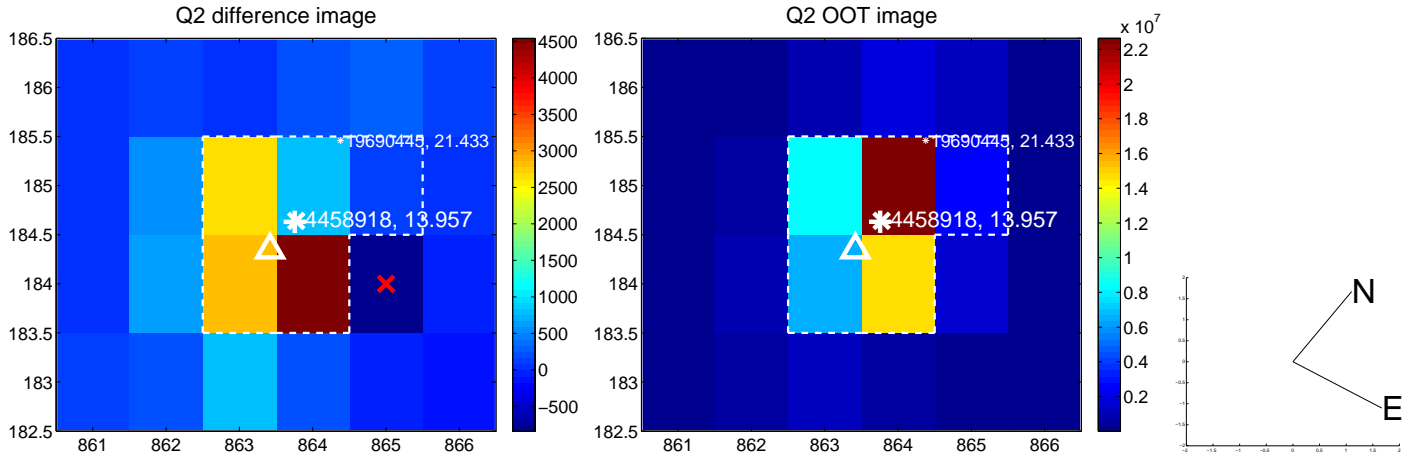
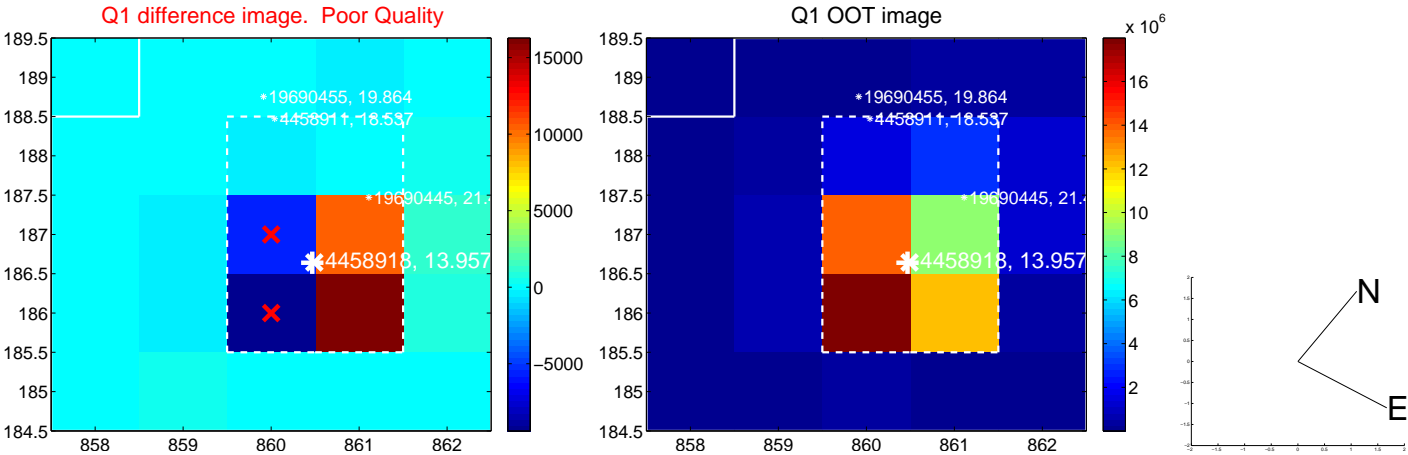


There are no photometric centroids

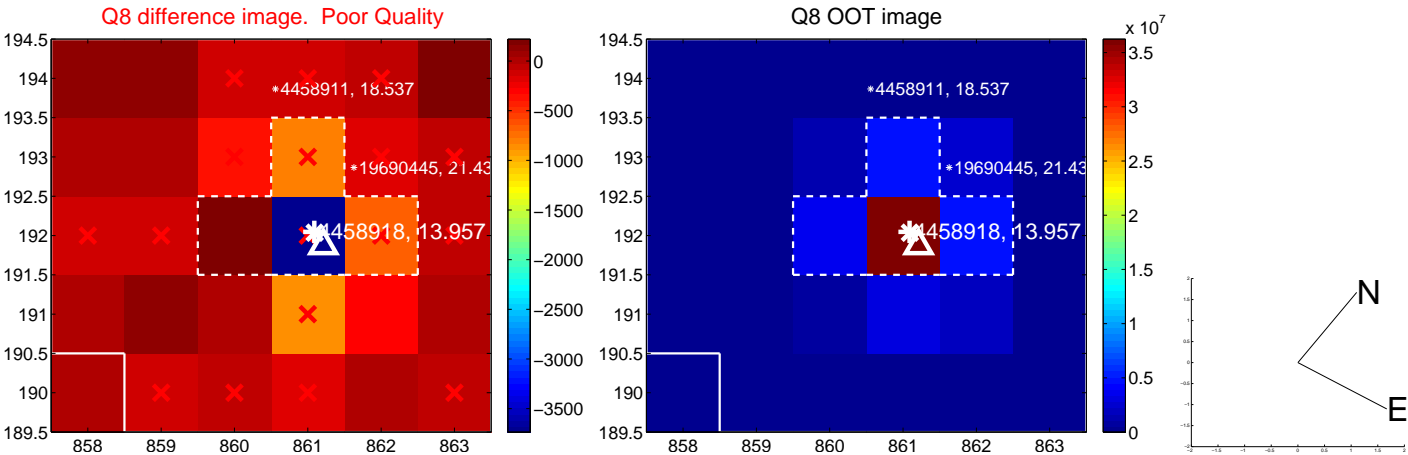
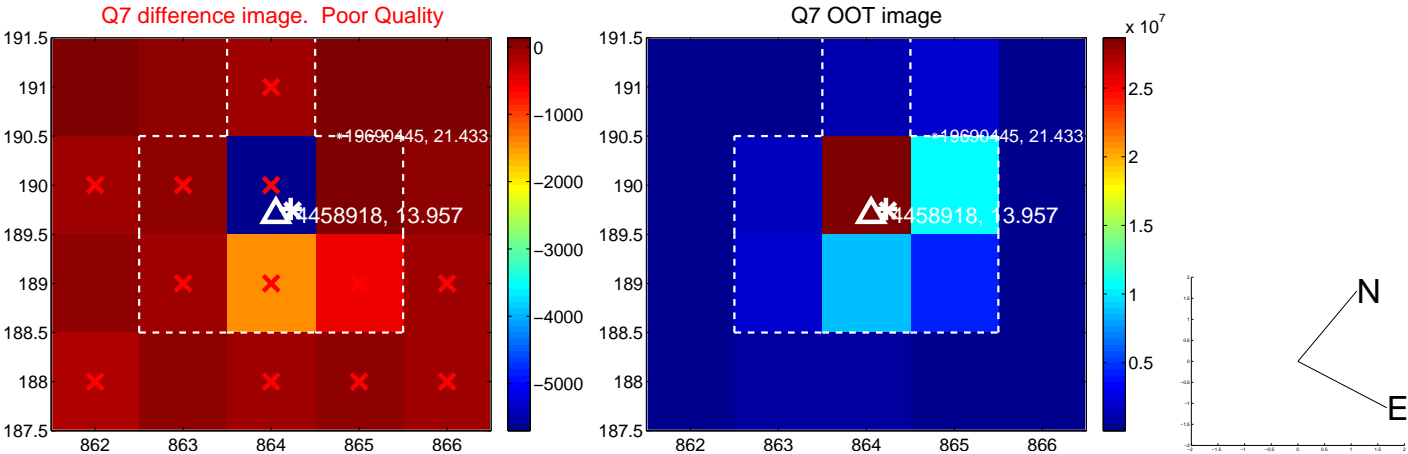
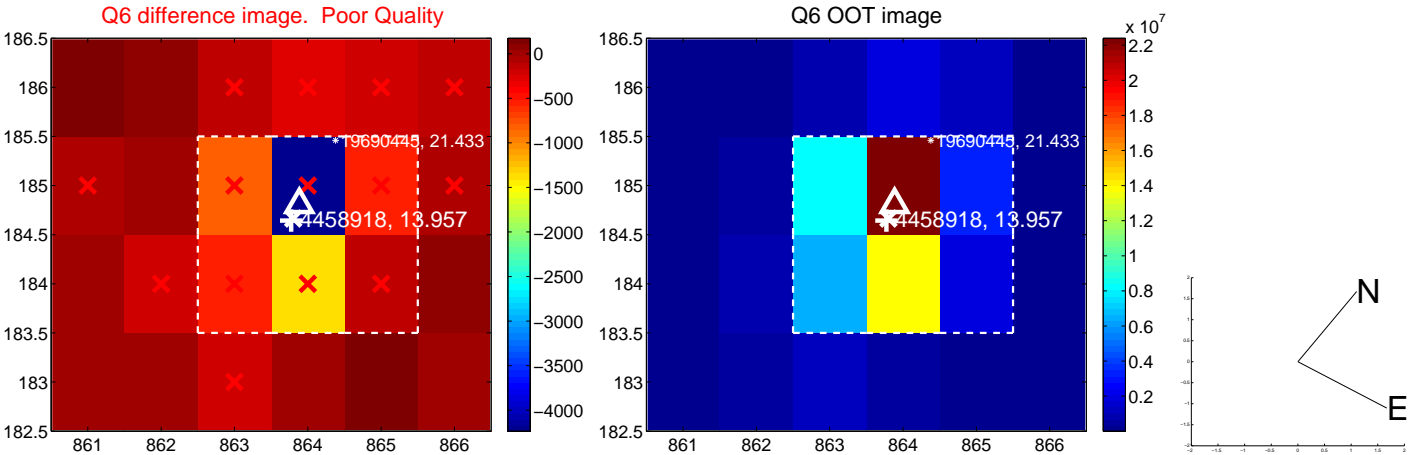
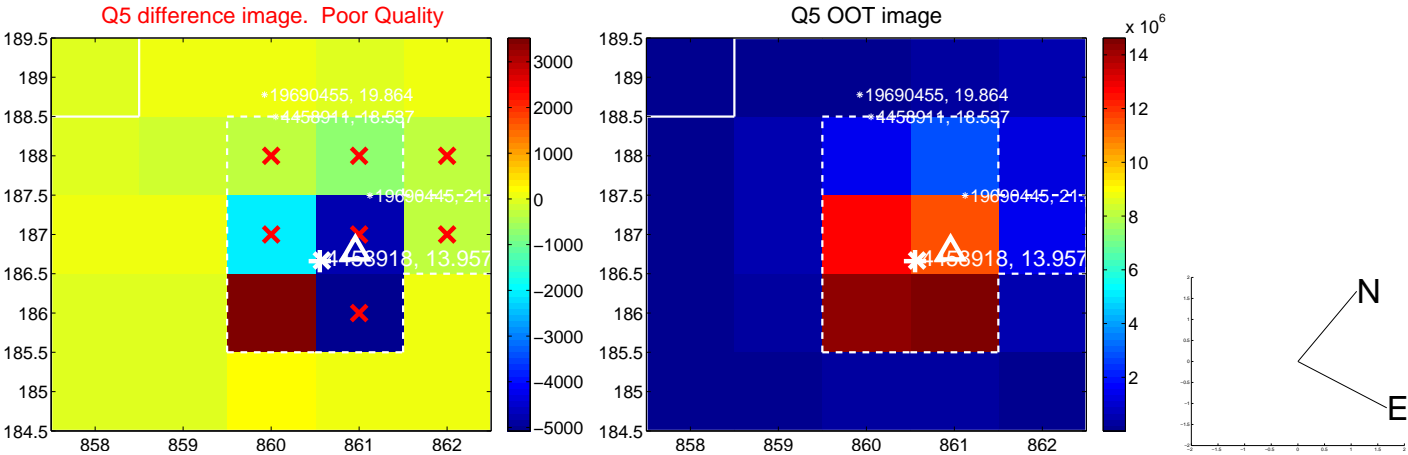


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

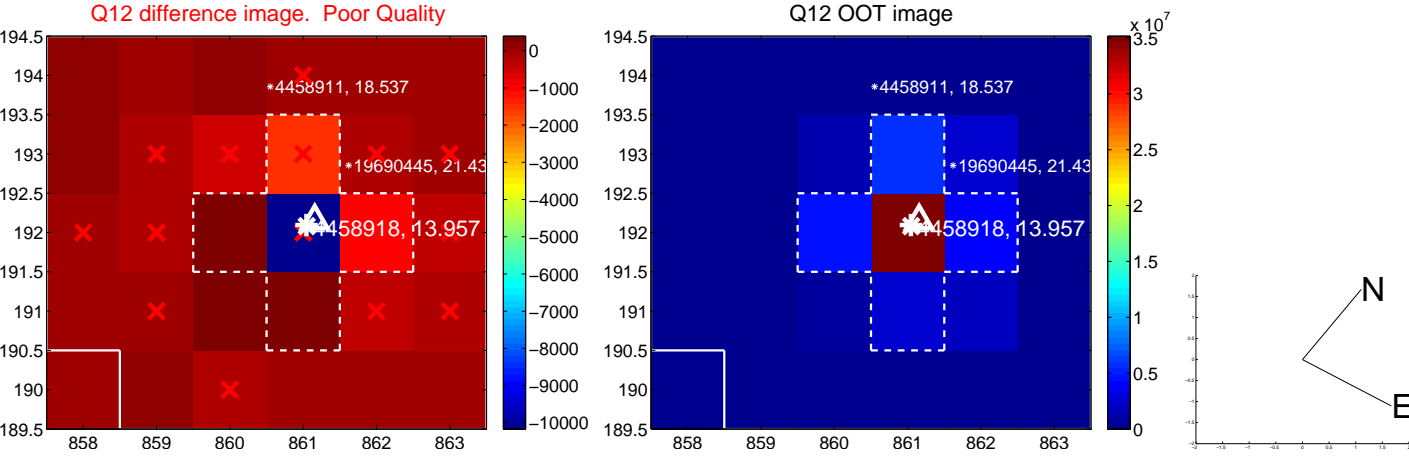
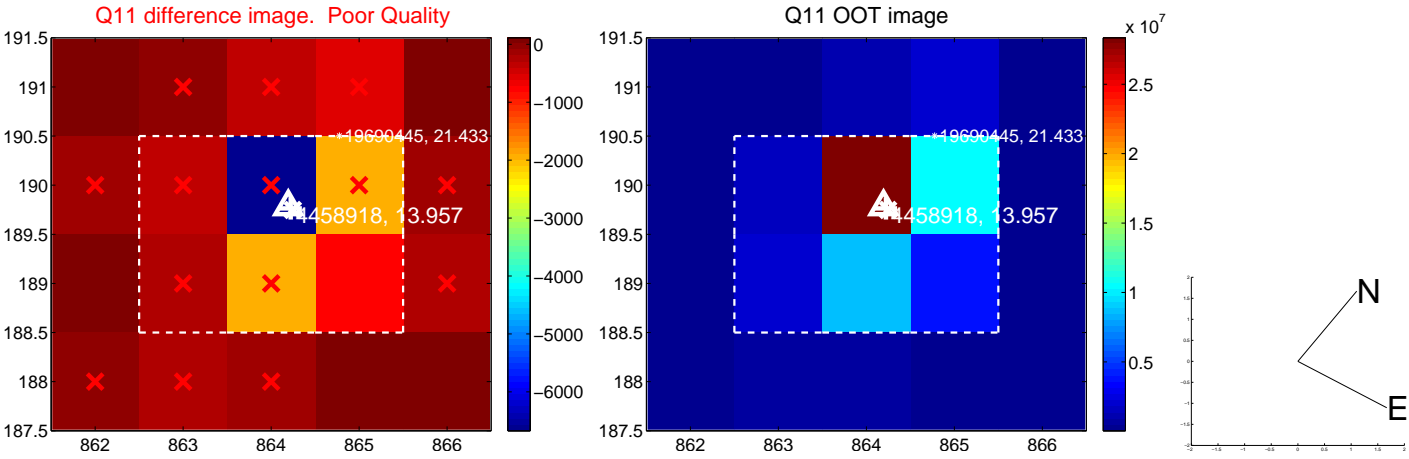
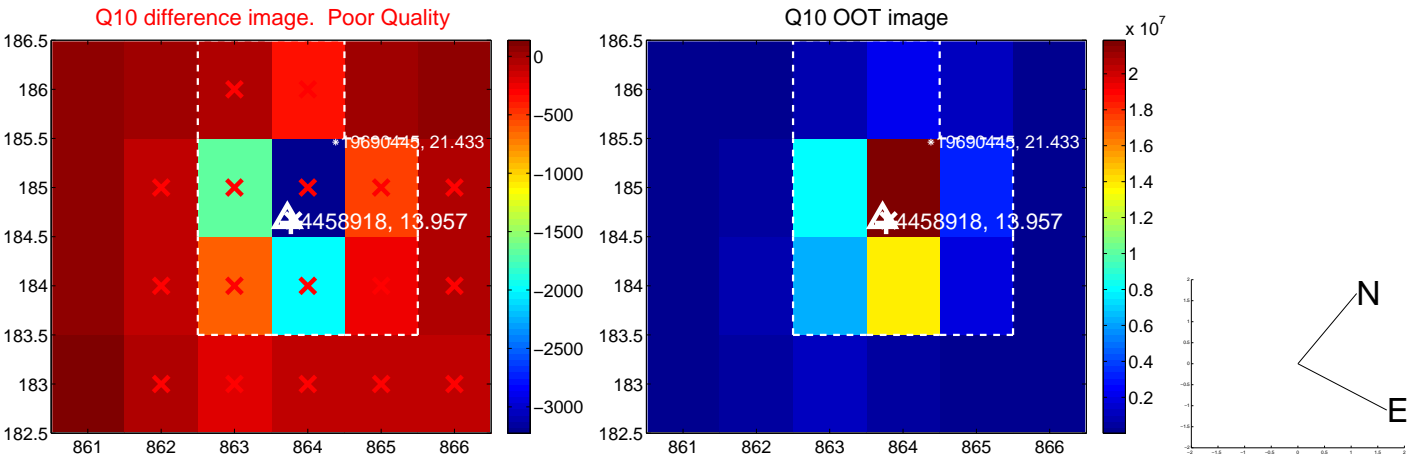
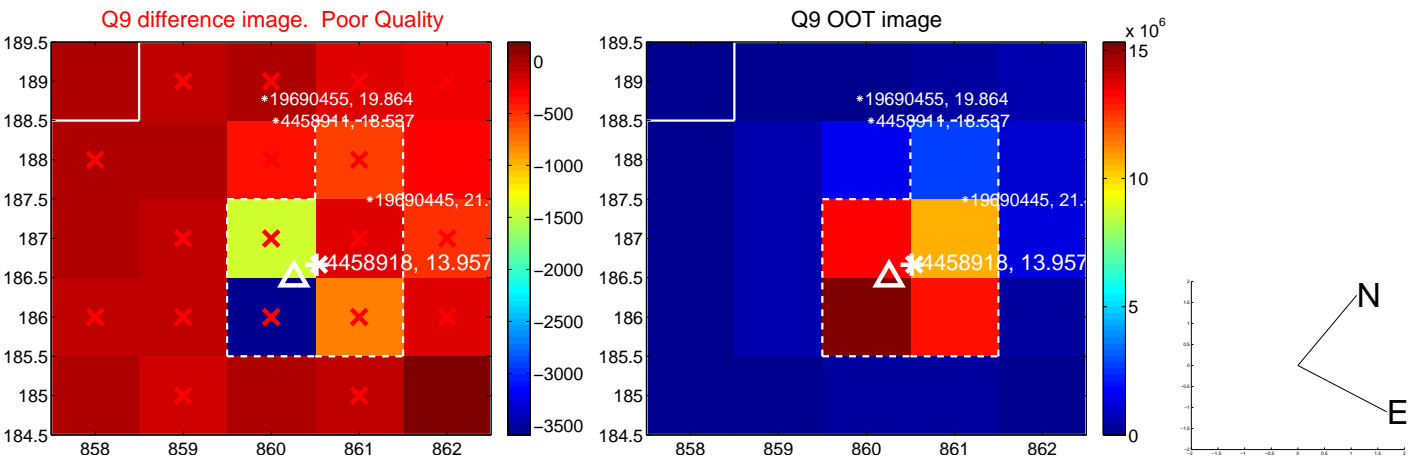
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



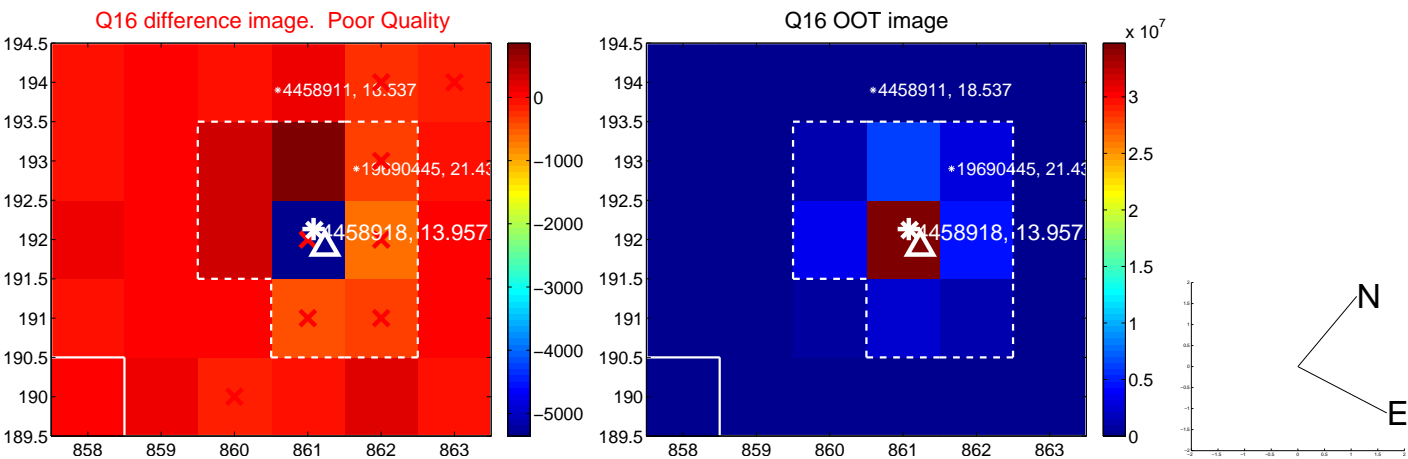
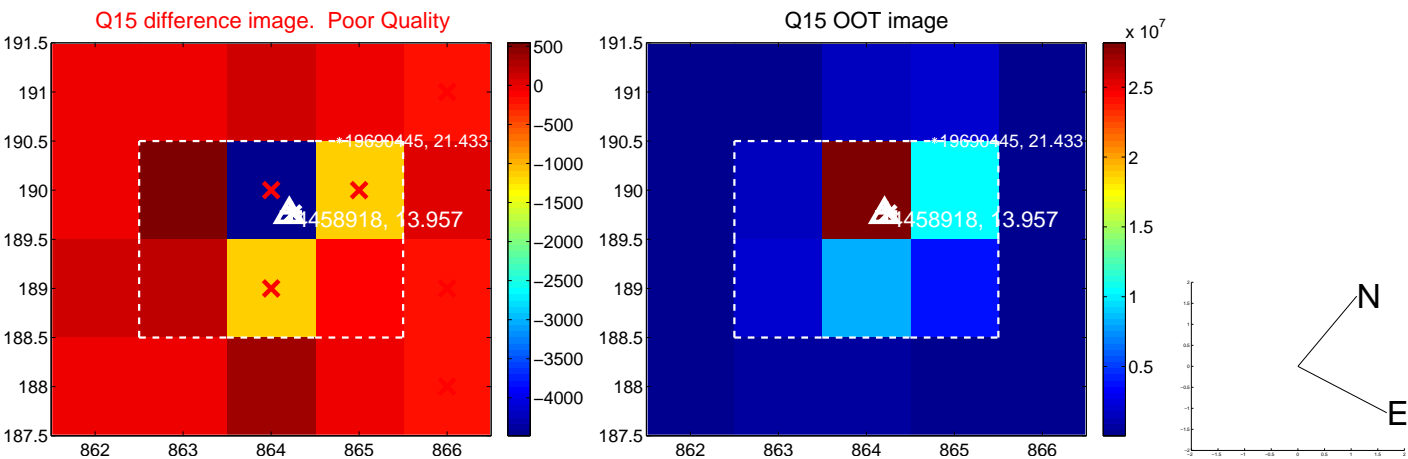
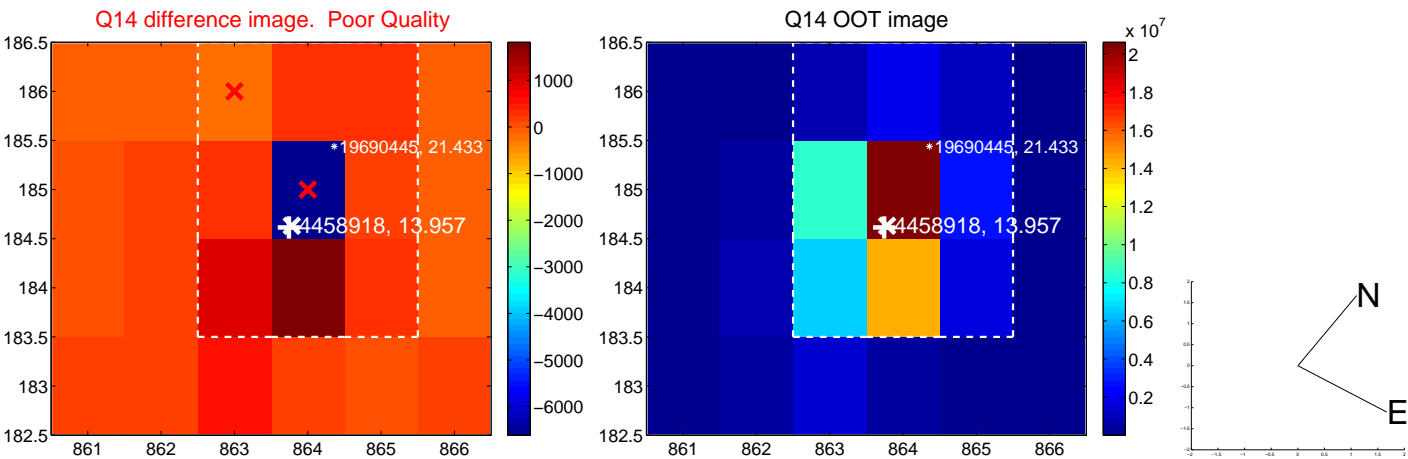
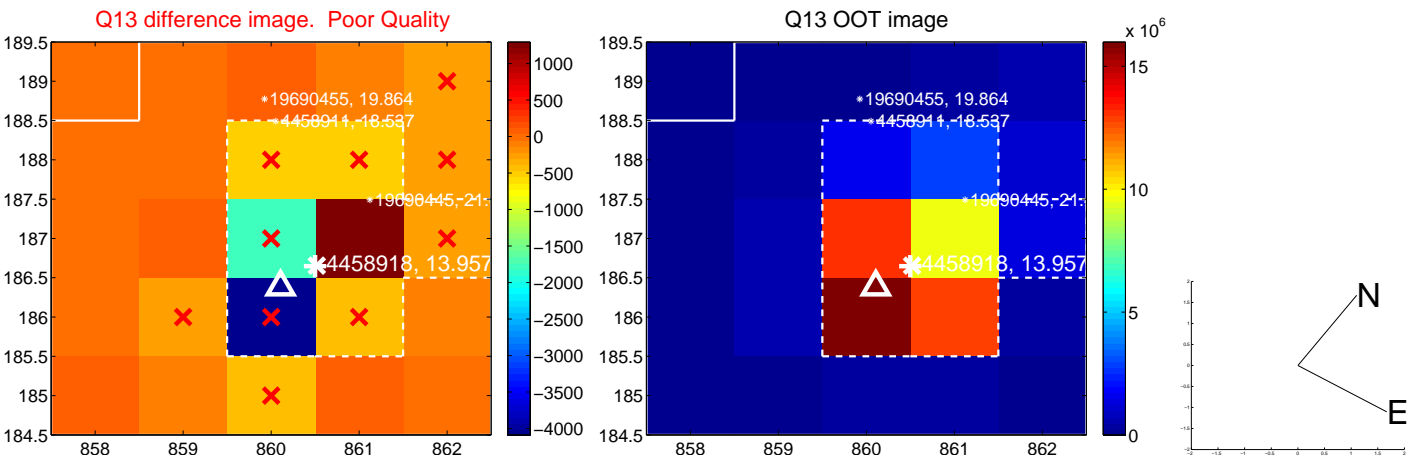
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



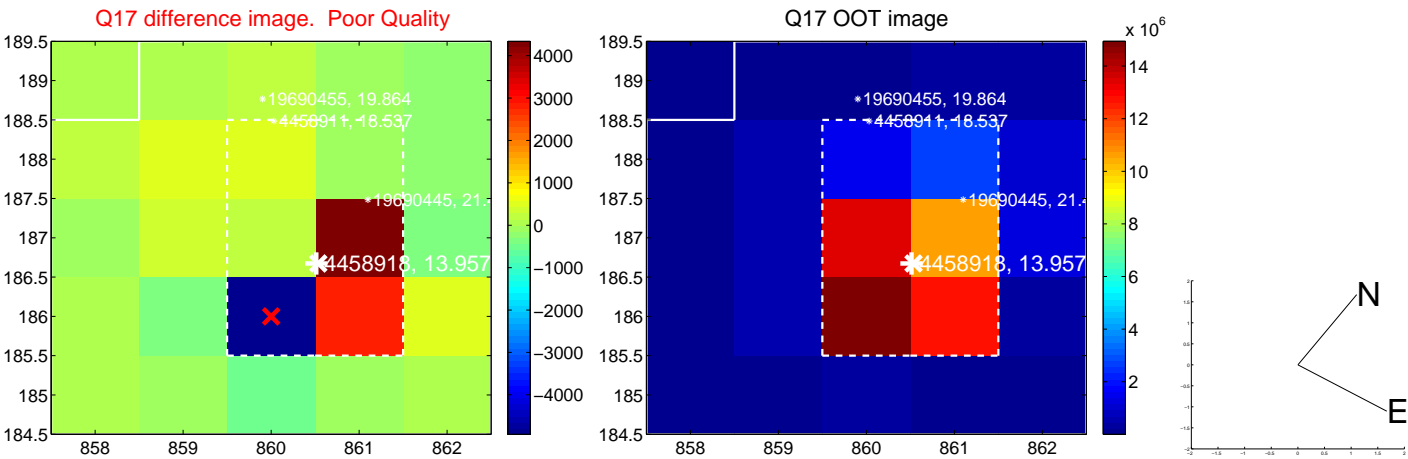
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

