

KIC 005218835

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})
005218835-01	OBS	No	2.265024	133.306845	8.4	5.715	7.9	7.0	1.99	7237	0.68	6302.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005218835-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

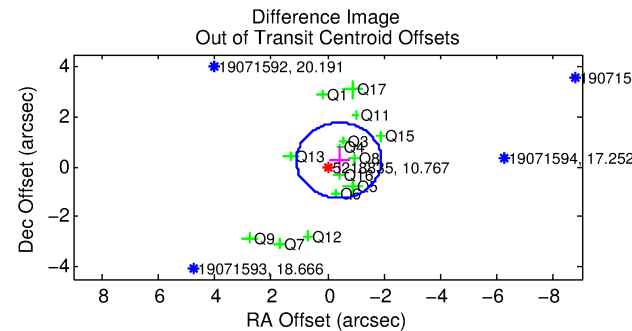
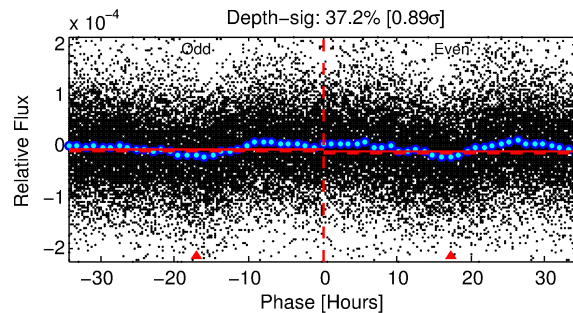
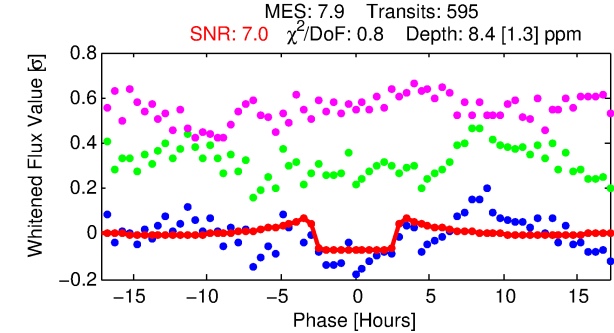
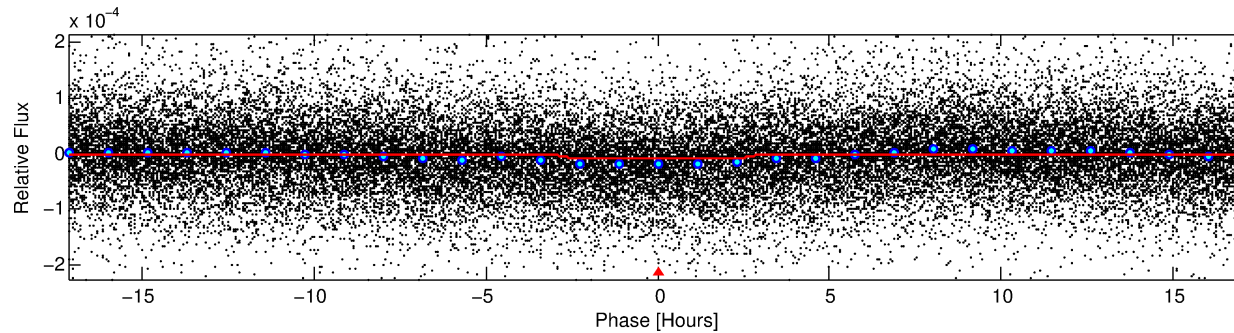
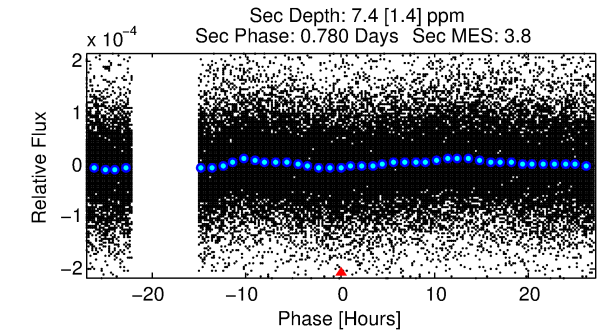
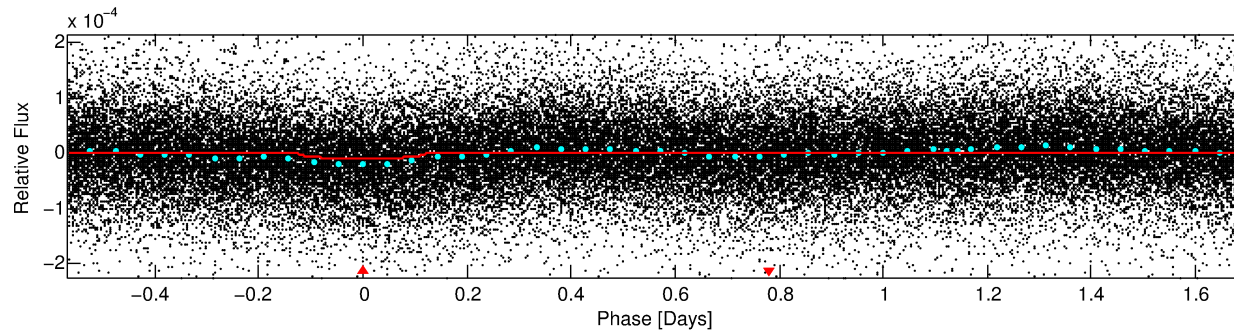
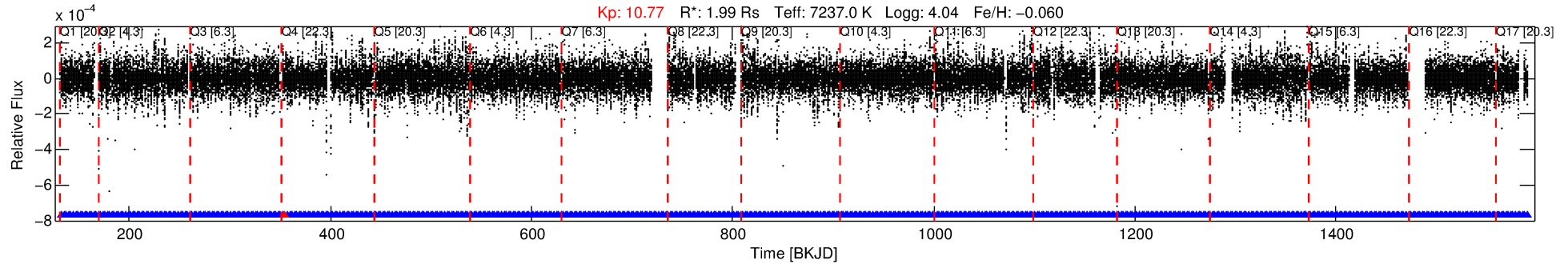
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005218835-01

No Significant Match Found

DV One-Page Summary

KIC: 5218835 Candidate: 1 of 1 Period: 2.265 d



DV Fit Results:

Period = 2.26502 [0.00002] d
Epoch = 133.3068 [0.0048] BKJD
Rp/R* = 0.0031 [0.0005]
a/R* = 1.54 [0.85]
b = 0.92 [0.16]
Seff = 6302.53 [2475.06]
Teq = 2272 [223] K
Rp = 0.68 [0.22] Re
a = 0.0394 [0.0094] AU
Ag = 13.71 [7.25] [1.75 σ]
Teffp = 6759 [701] K [6.10 σ]

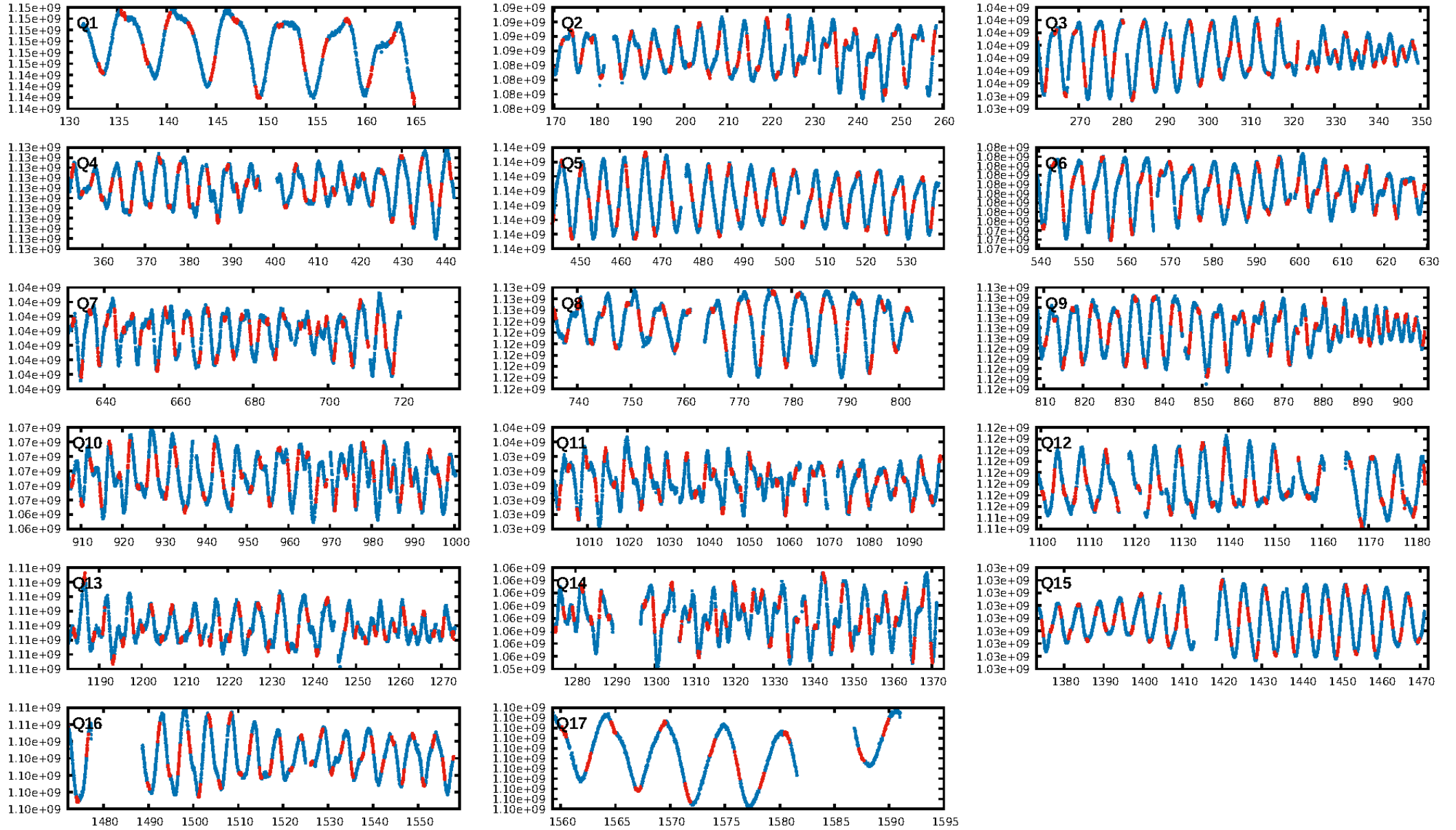
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.57e-14
RollingBand-fgt: 1.00 [567/568]
GhostDiagnostic-chr: 0.3508
Centroid-sig: 67.9%
Centroid-so: 0.971 arcsec [0.50 σ]
OotOffset-rm: 0.471 arcsec [0.94 σ]
KicOffset-rm: 0.542 arcsec [1.12 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

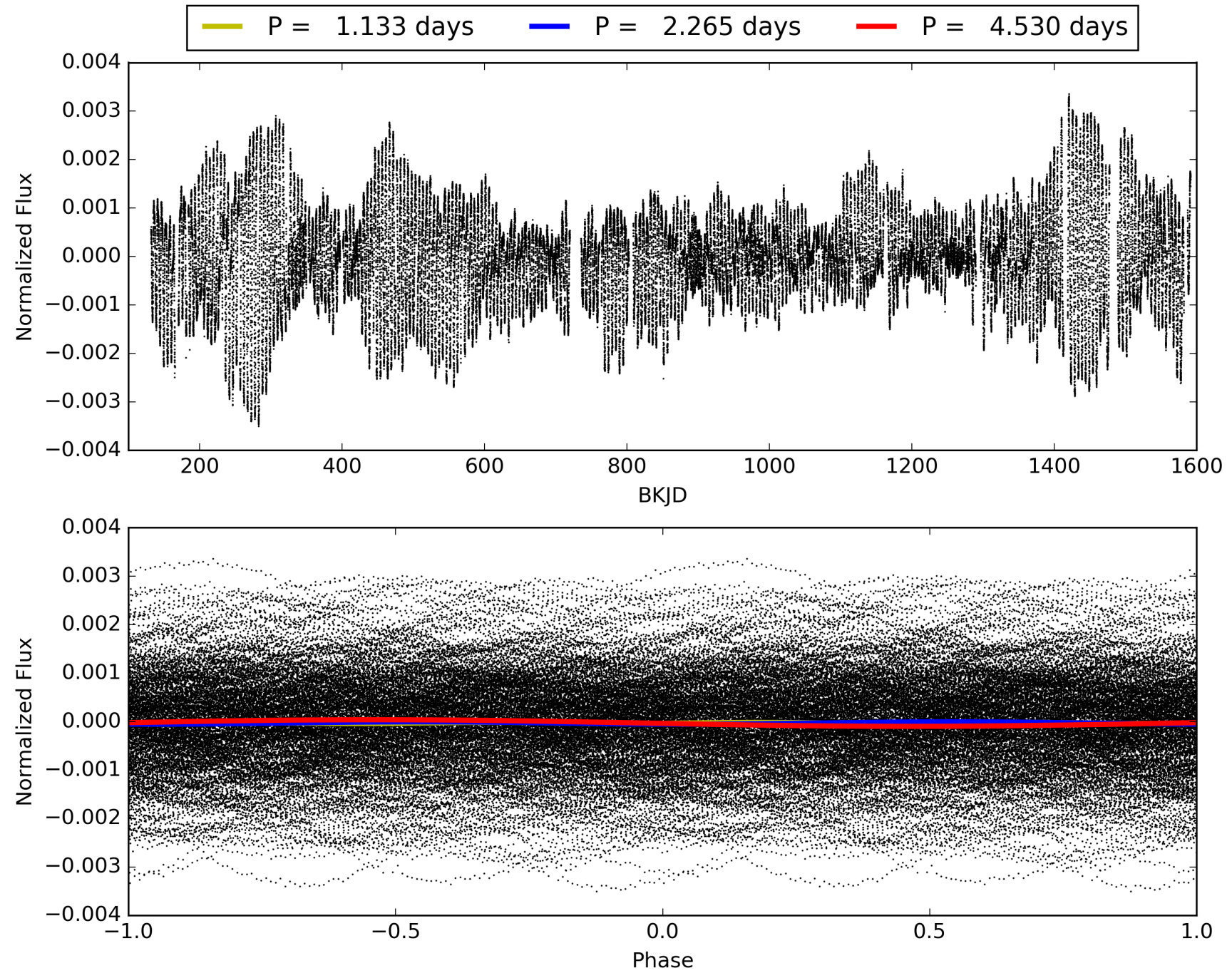
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:24:50 Z

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

TCE 005218835-01, PDC Light Curves

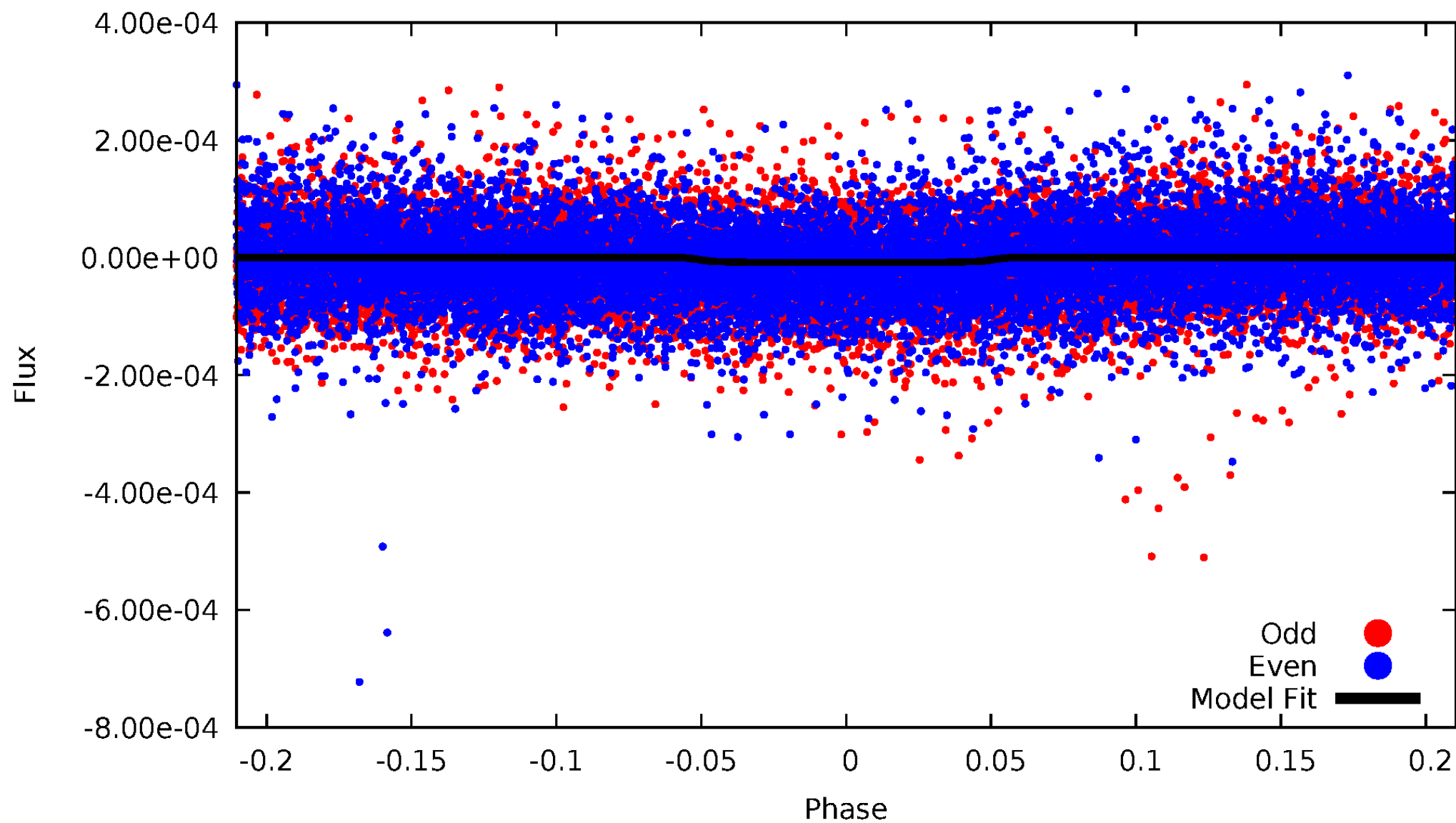


TCE 005218835-01



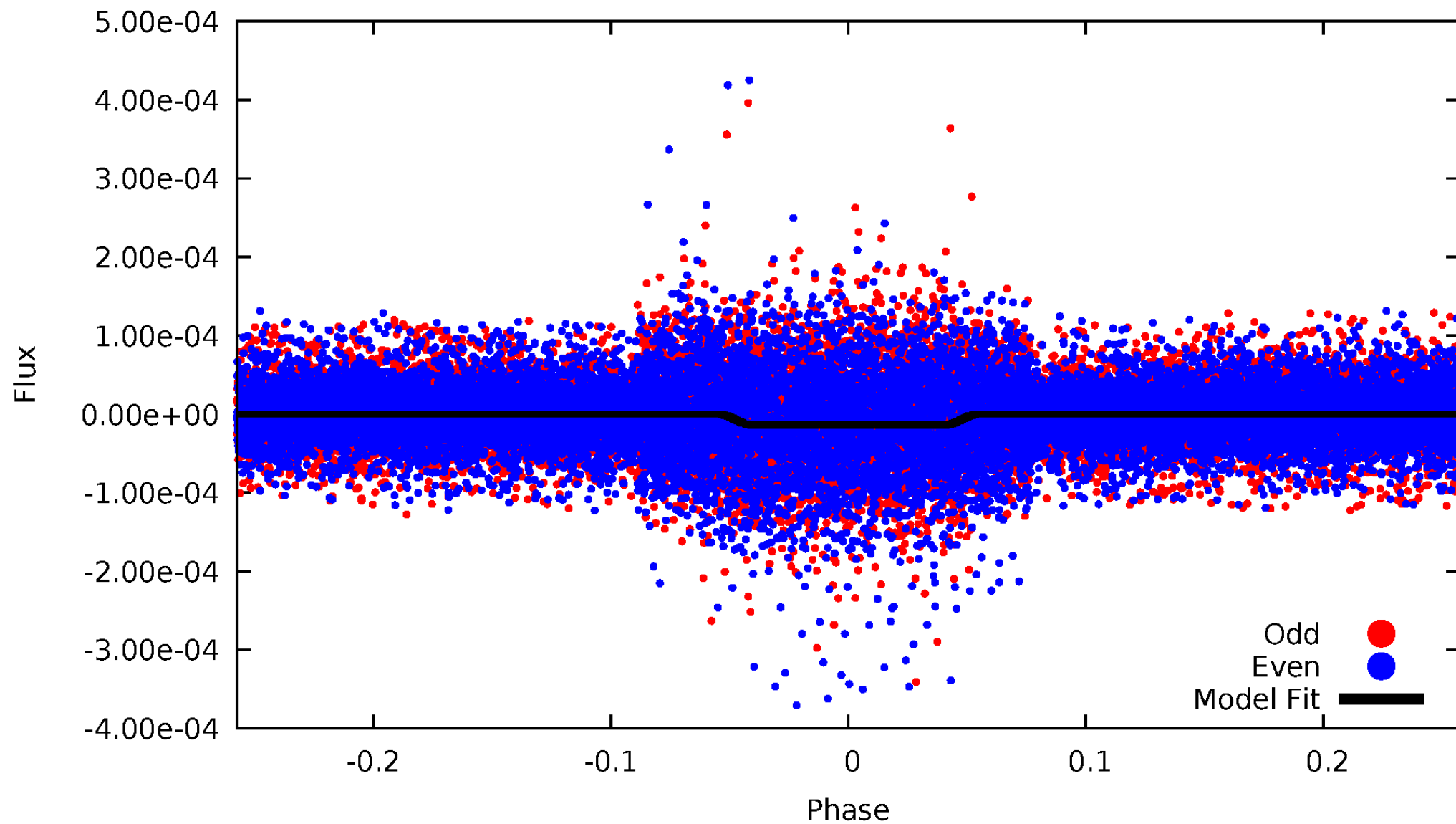
DV Odd/Even

TCE 005218835-01



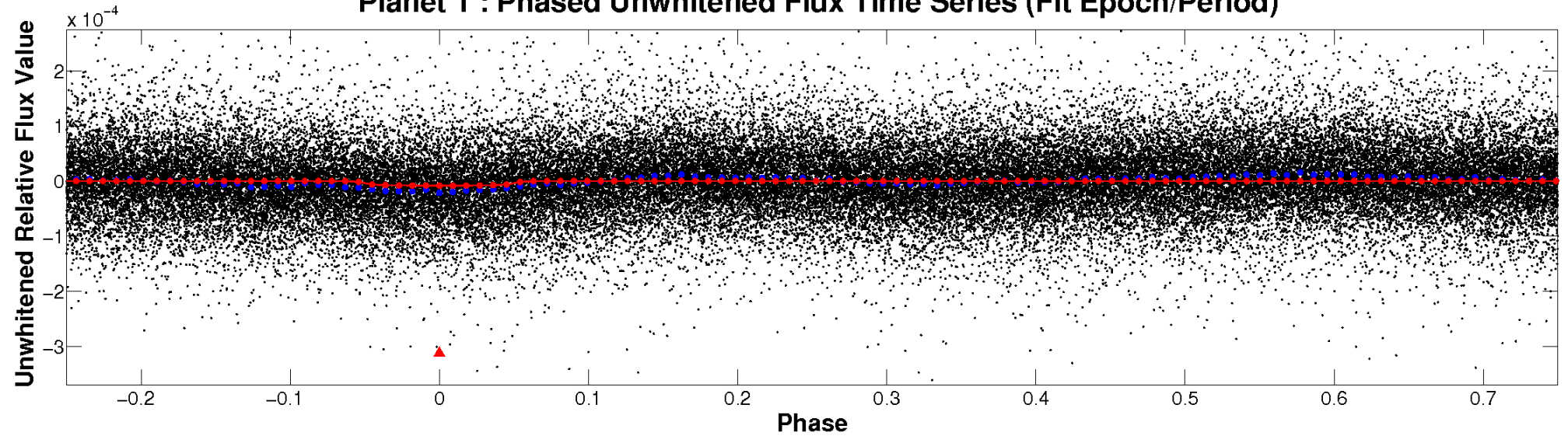
ALT Odd/Even

TCE 005218835-01

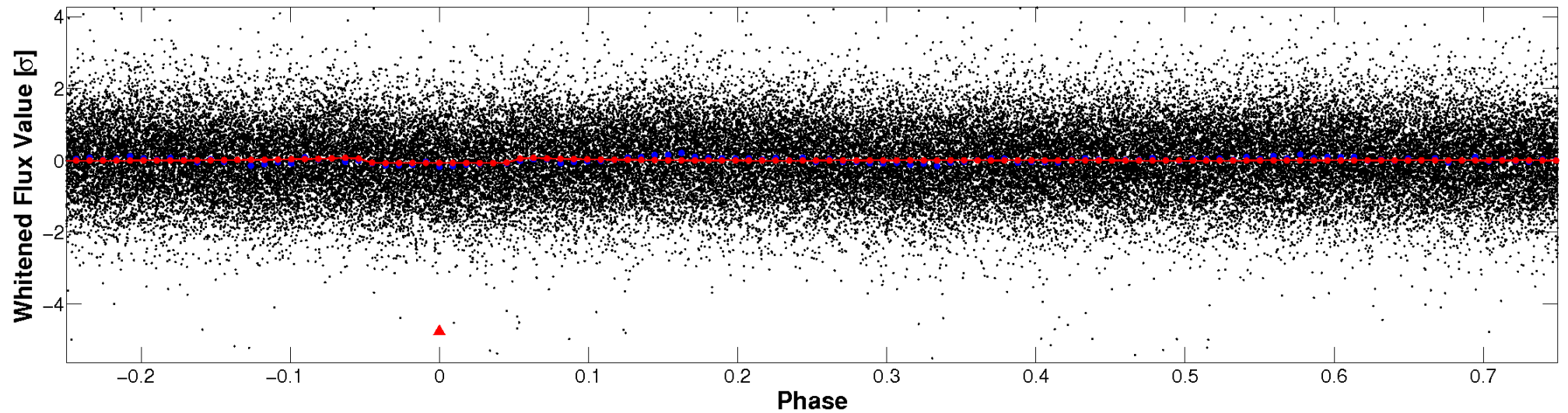


Non-Whitened Vs. Whitened Light Curve

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

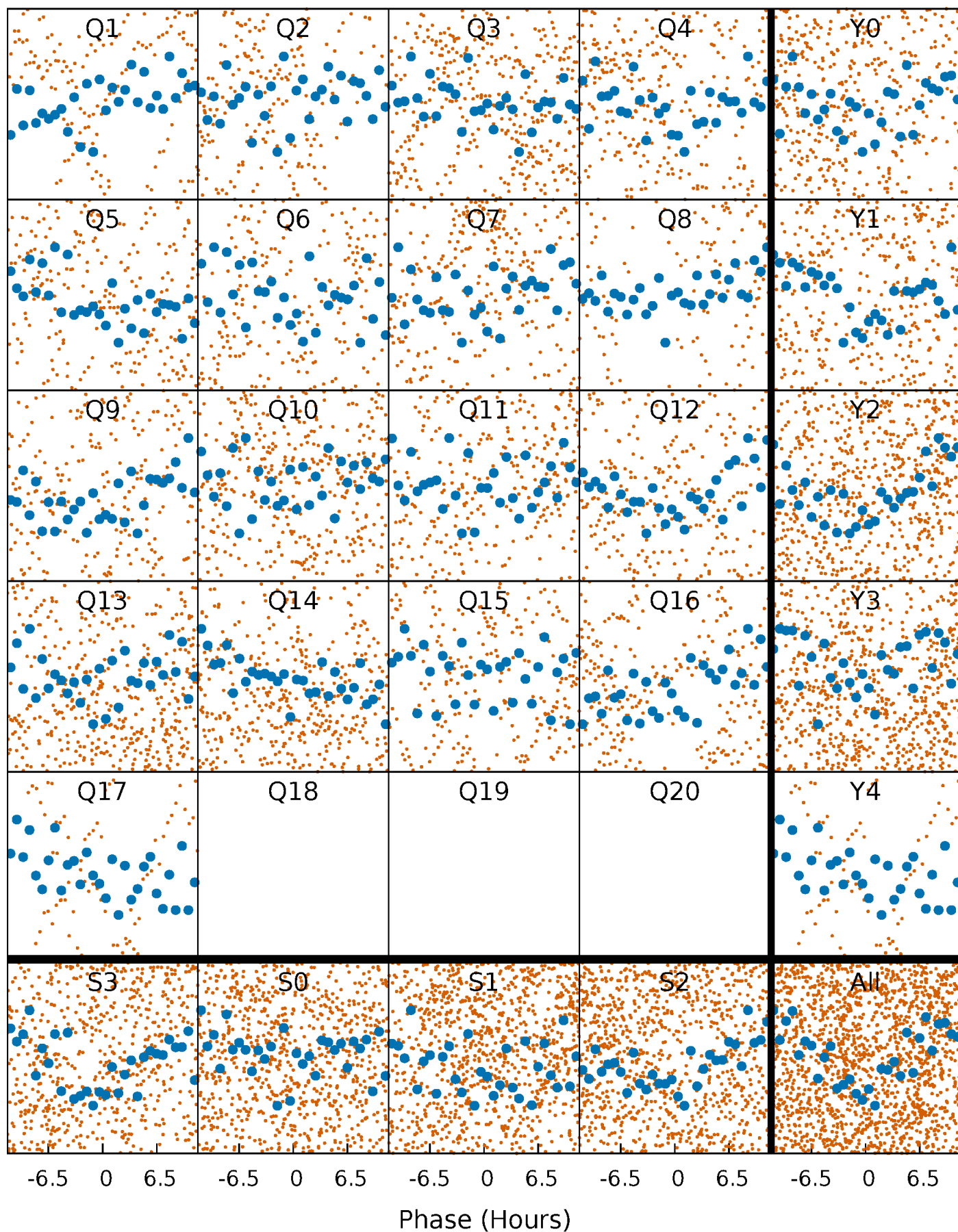


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



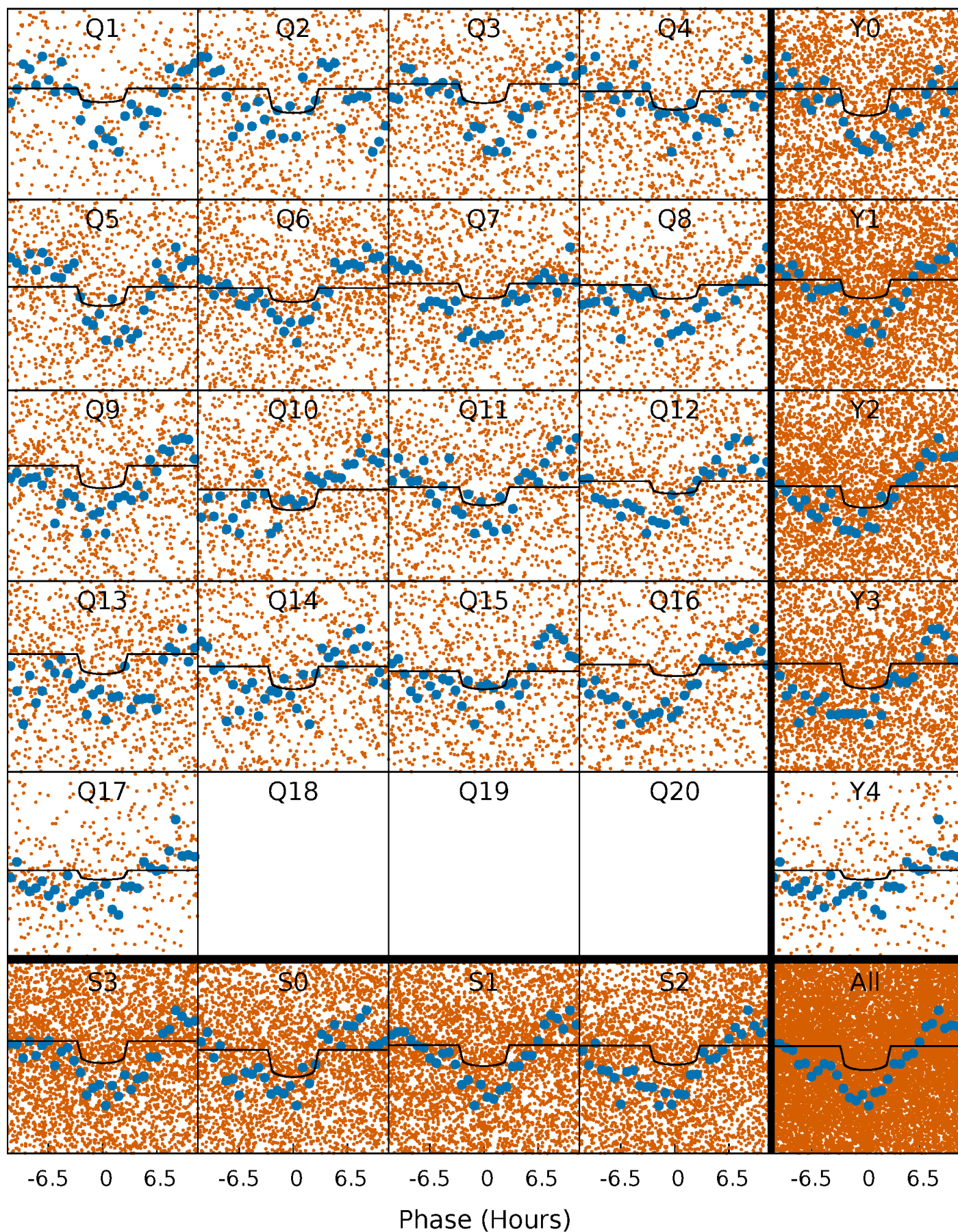
PDC Quarter-Phased Transit Curves

TCE 005218835-01 P= 2.265024 Days $T_0=133.306845$ (BKJD)



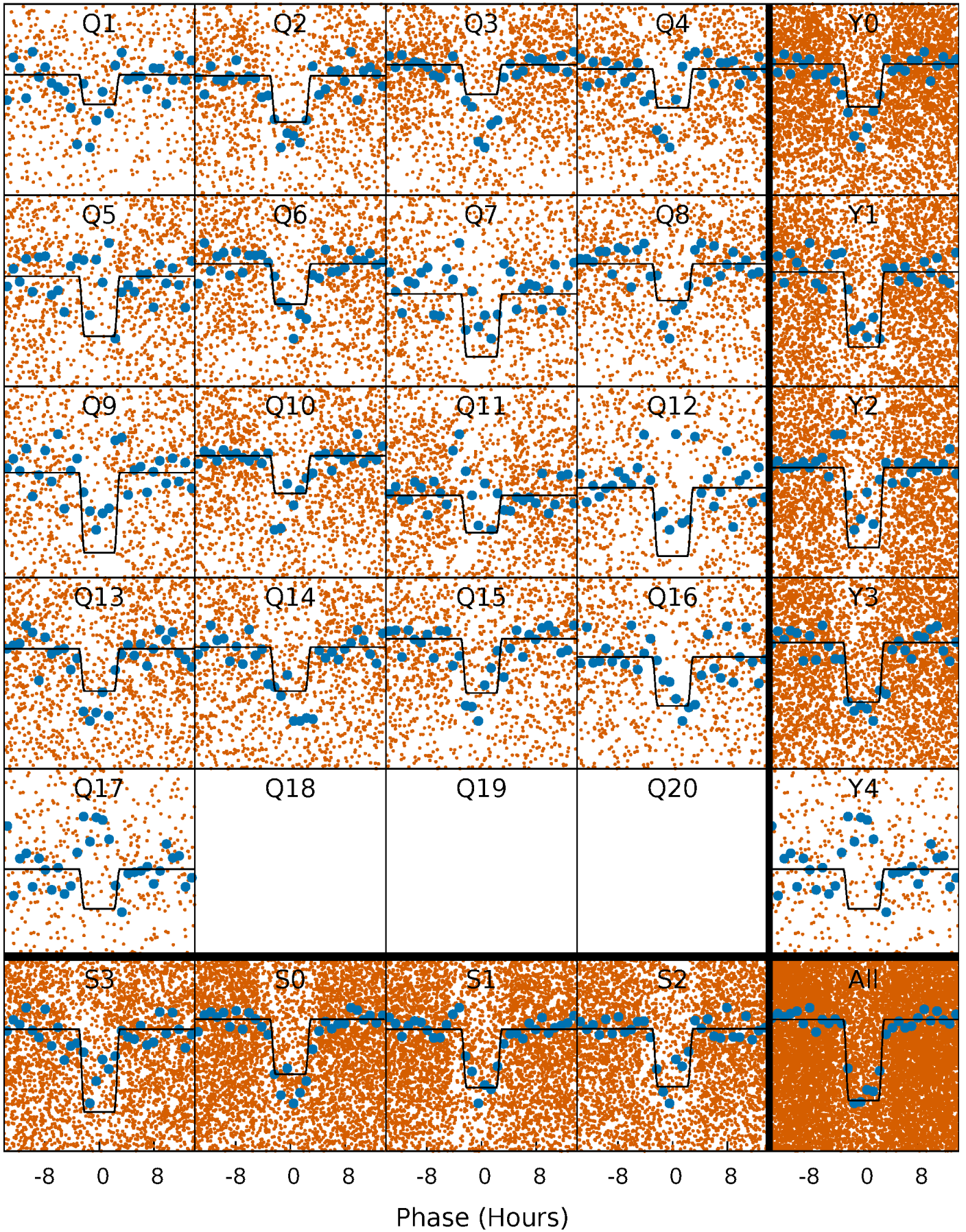
DV Quarter-Phased Transit Curves

TCE 005218835-01 P= 2.265024 Days $T_0=133.306845$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

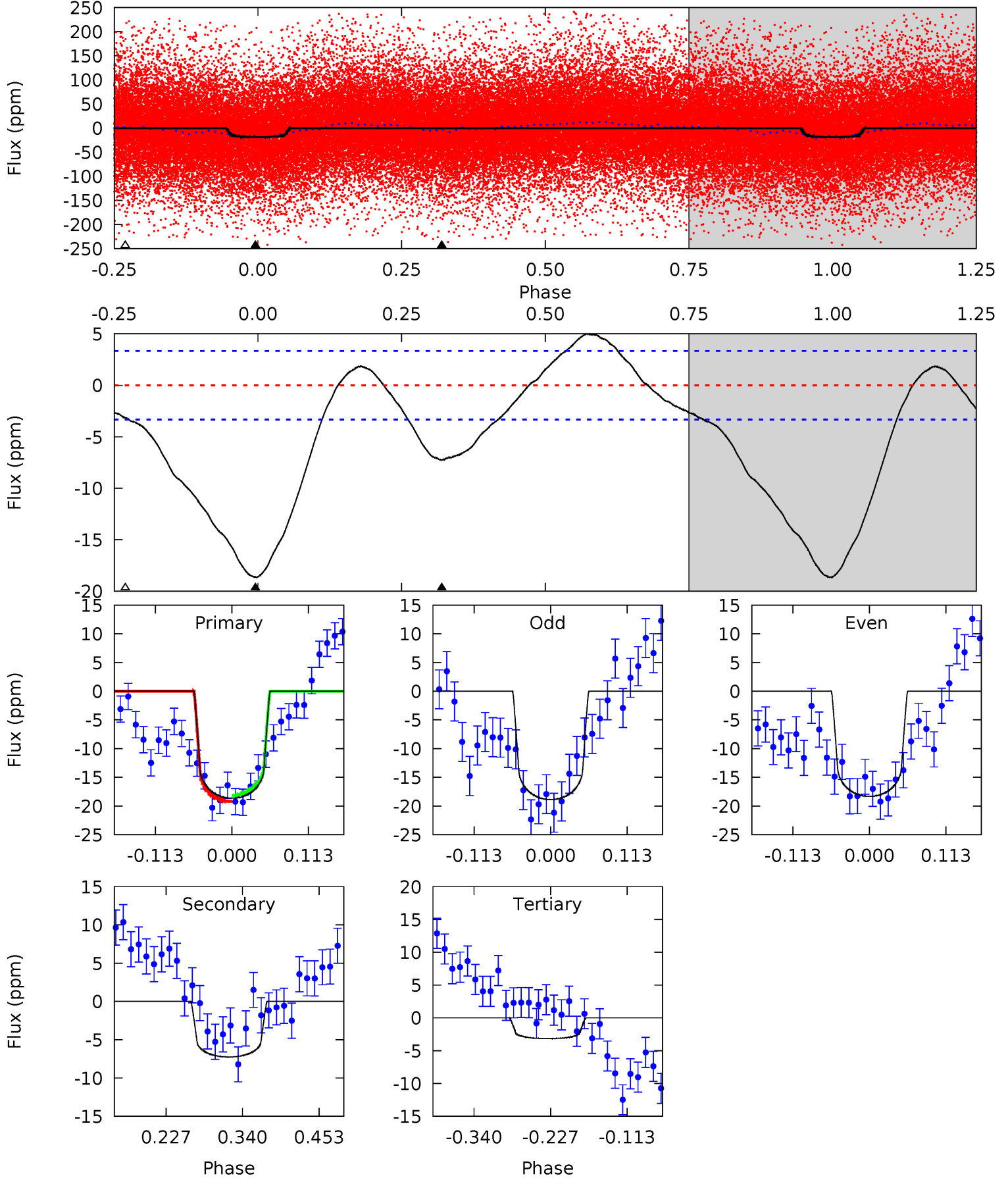
TCE 005218835-01 P= 2.264911 Days $T_0=133.323901$ (BKJD)



DV Model-Shift Uniqueness Test

005218835-01, P = 2.265024 Days, E = 131.041821 Days

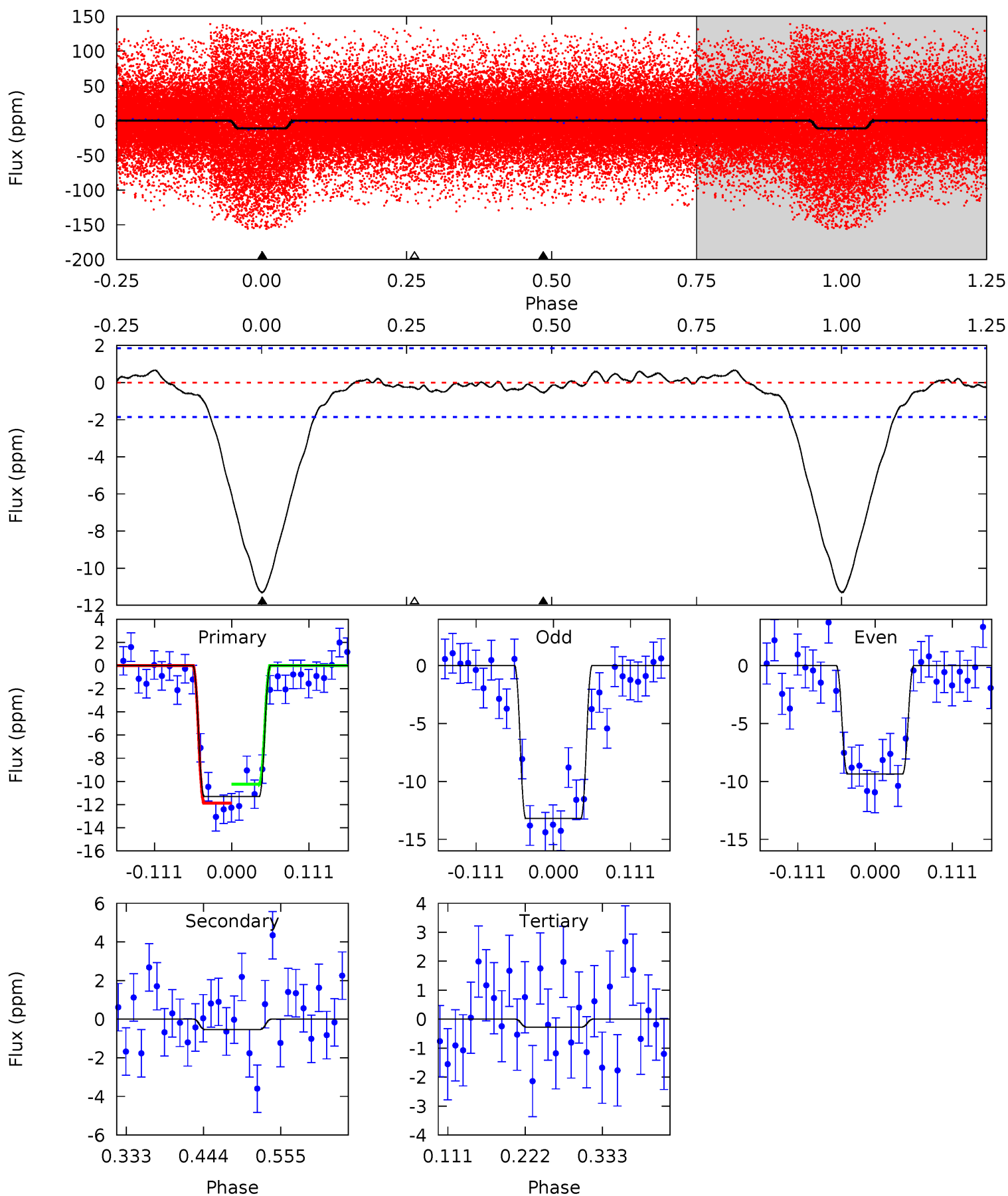
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	9.89	4.33	0	4.54	1.58	5.15	21.1	25.4	5.56	9.89	0.39	1.17	0.21	0.74



Alt Model-Shift Uniqueness Test

005218835-01, P = 2.264911 Days, E = 131.058990 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	1.31	0.67	0	4.54	1.59	0.84	27.0	27.6	0.64	1.31	4.67	1.05	0.06	1.98



Stellar Parameters For KIC 005218835

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7237^{+201}_{-277}	$4.039^{+0.204}_{-0.167}$	$-0.060^{+0.200}_{-0.400}$	$1.994^{+0.541}_{-0.541}$	$1.585^{+0.200}_{-0.300}$	$0.281^{+0.332}_{-0.133}$
	+3%/-4%	+5%/-4%	+333%/-667%	+27%/-27%	+13%/-19%	+118%/-47%
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 005218835-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7 ± 1	$0.67^{+0.16}_{-0.14}$	3168^{+224}_{-243}	6596^{+845}_{-608}	14^{+8}_{-5}
Alt.	-1 ± 0	$0.82^{+0.17}_{-0.17}$	3155^{+234}_{-231}	3210^{+590}_{-6218}	$0.622^{+0.744}_{-0.505}$

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

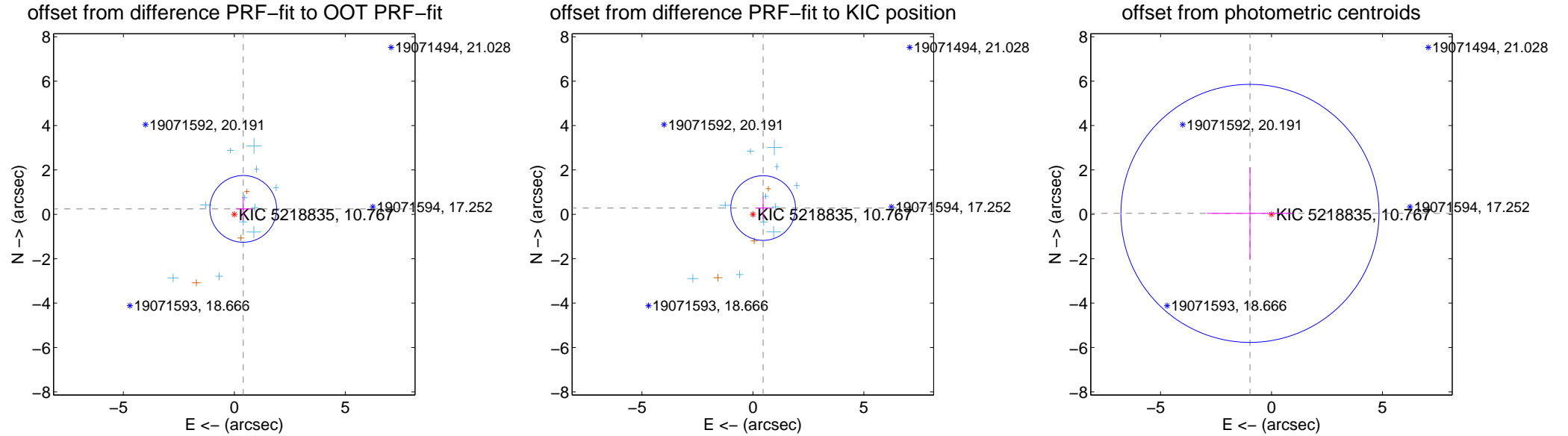
DV Centroid Data

Supplemental centroid analysis for 005218835-01. **Kepler magnitude: 10.77.** Transit SNR 6.96

There are 11 quarters with good PRF difference image offsets

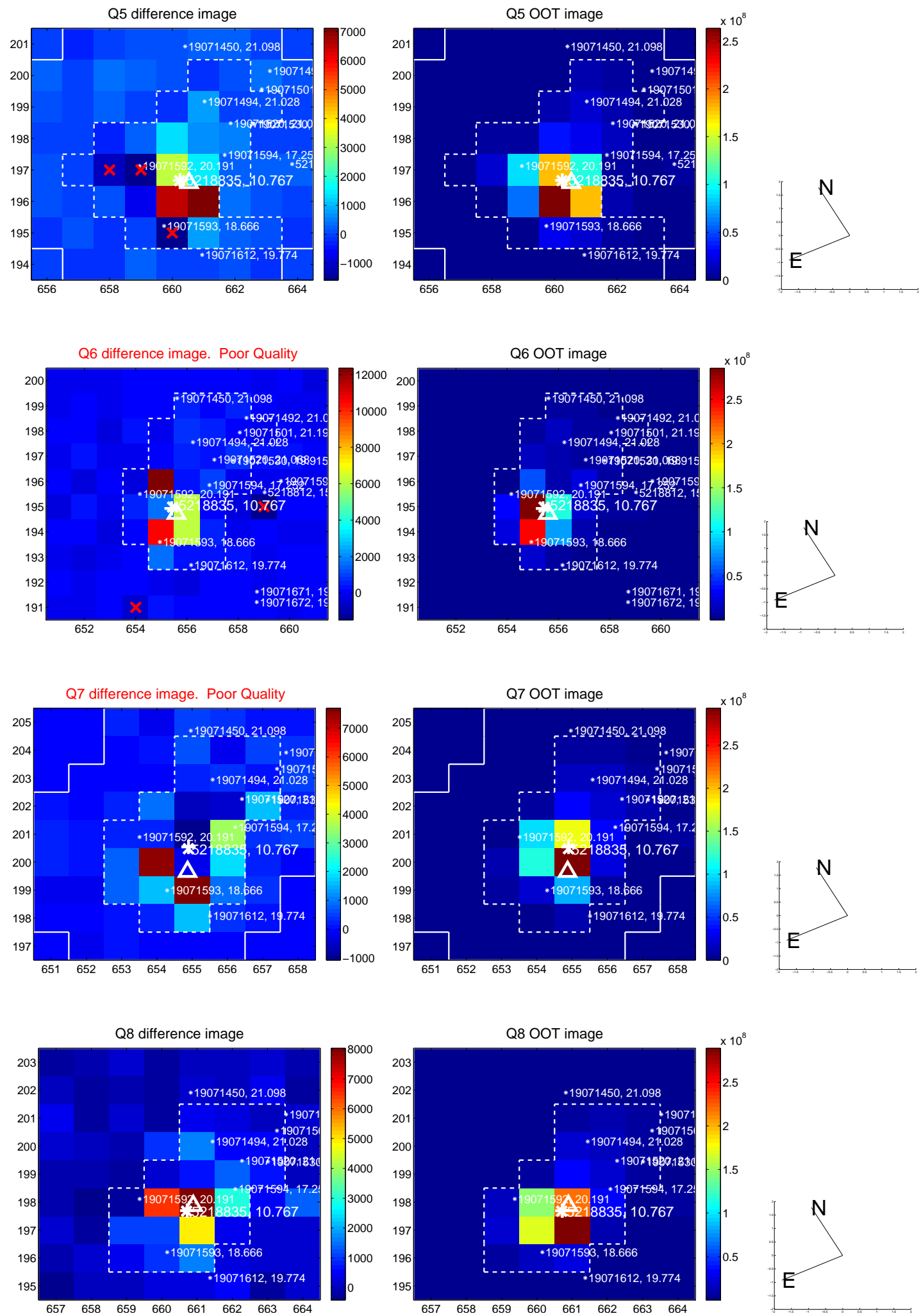
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.471 ± 0.501	0.94	-0.402 ± 0.327	0.246 ± 0.530
PRF-fit source offset from KIC position	0.542 ± 0.486	1.12	-0.461 ± 0.324	0.284 ± 0.502
photometric centroid source offset	0.97 ± 1.94	0.50	0.97 ± 1.94	0.04 ± 2.08

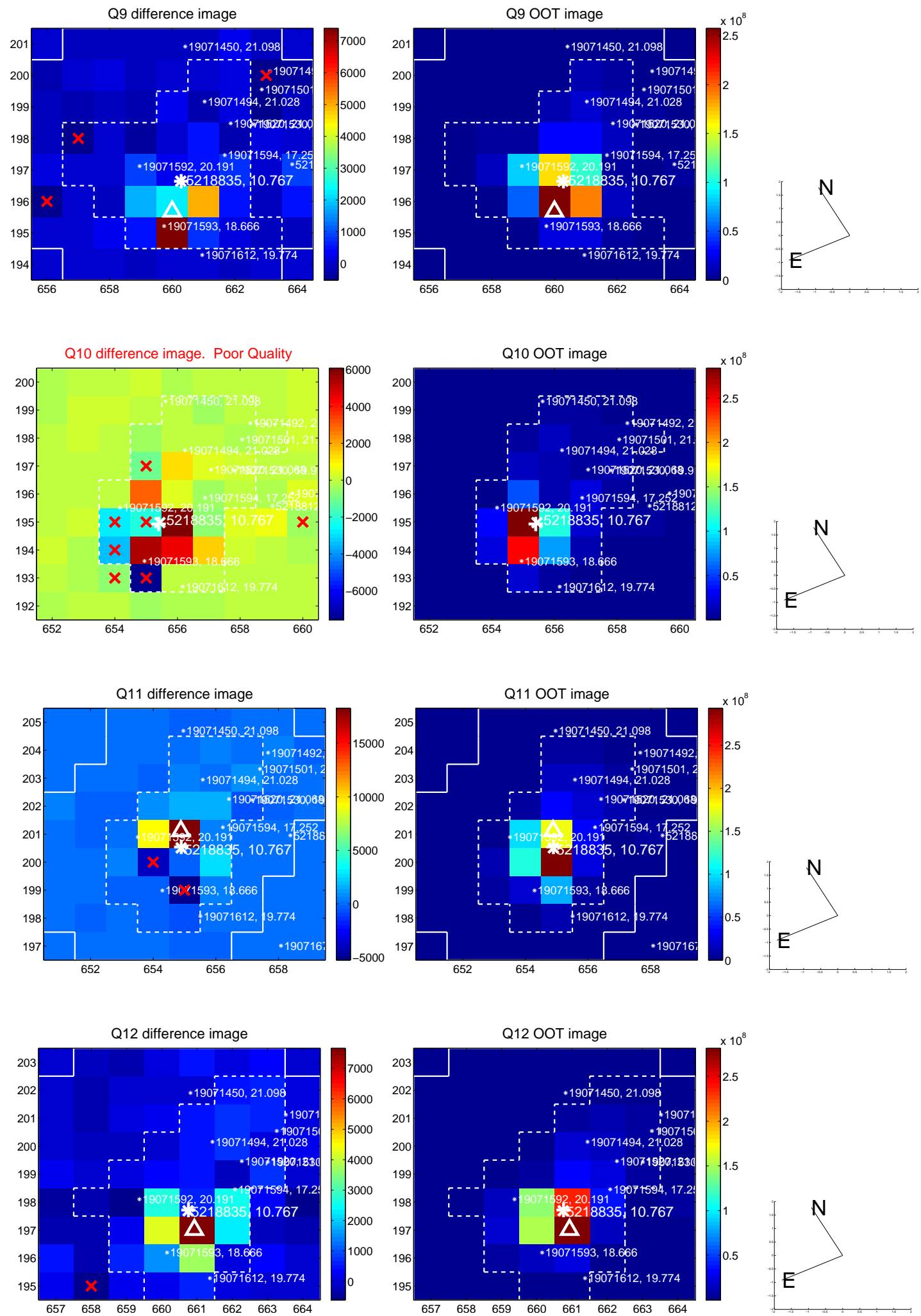


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

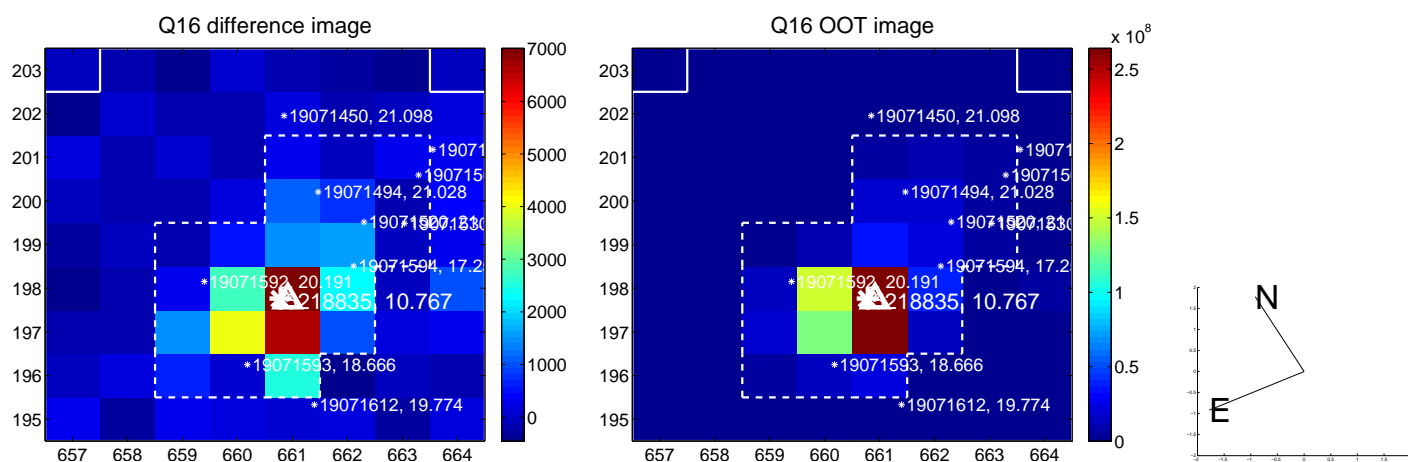
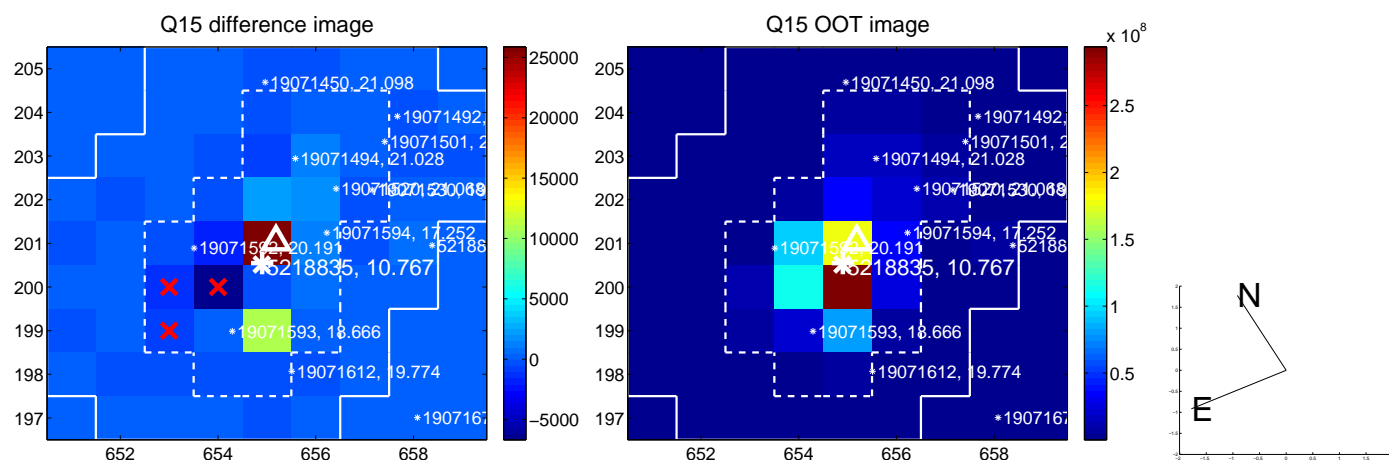
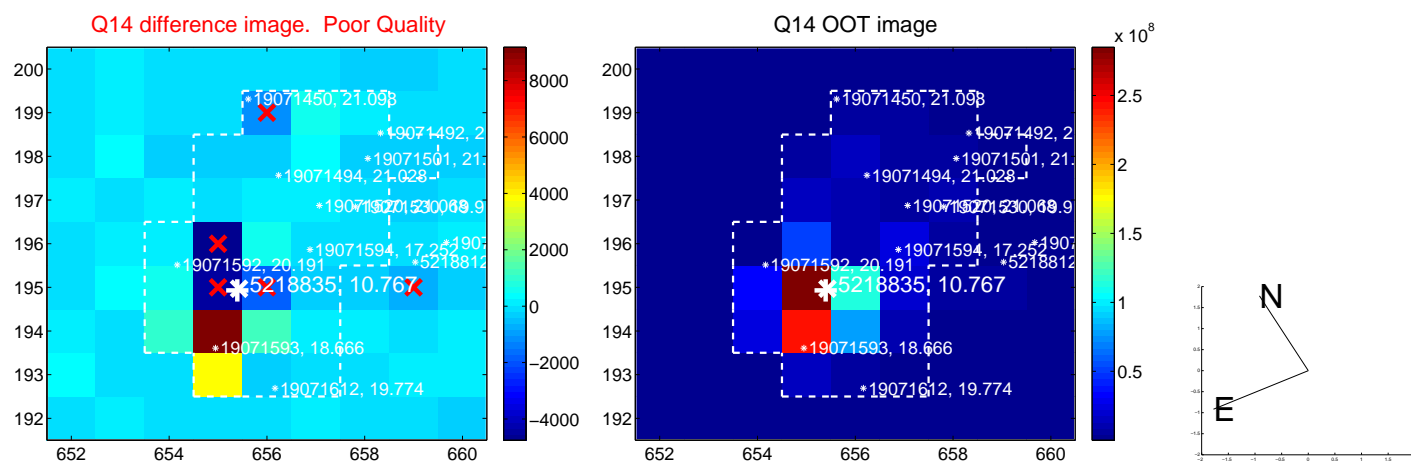
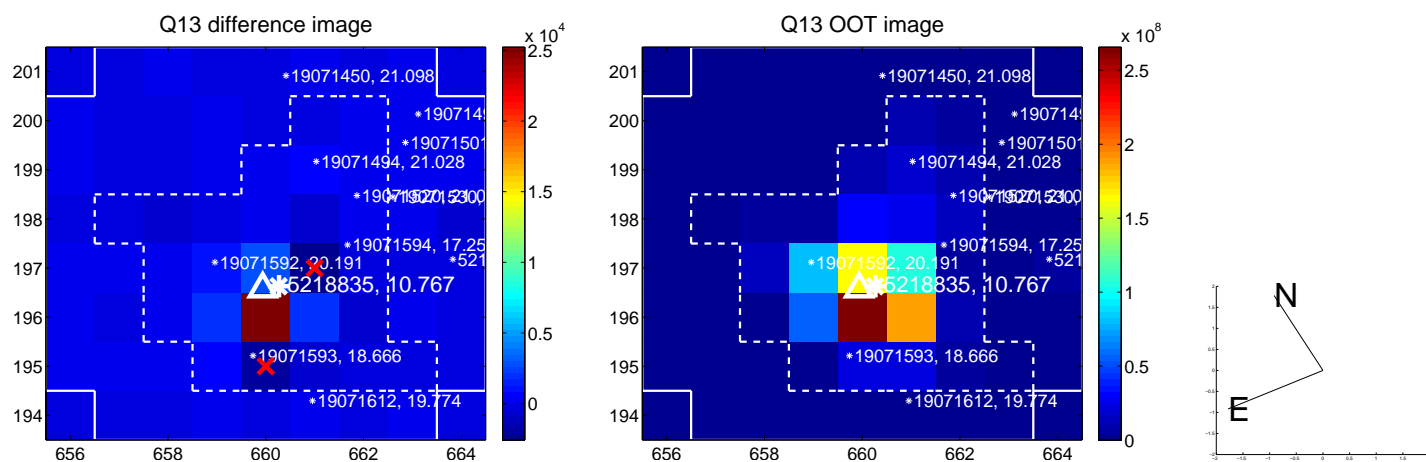
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



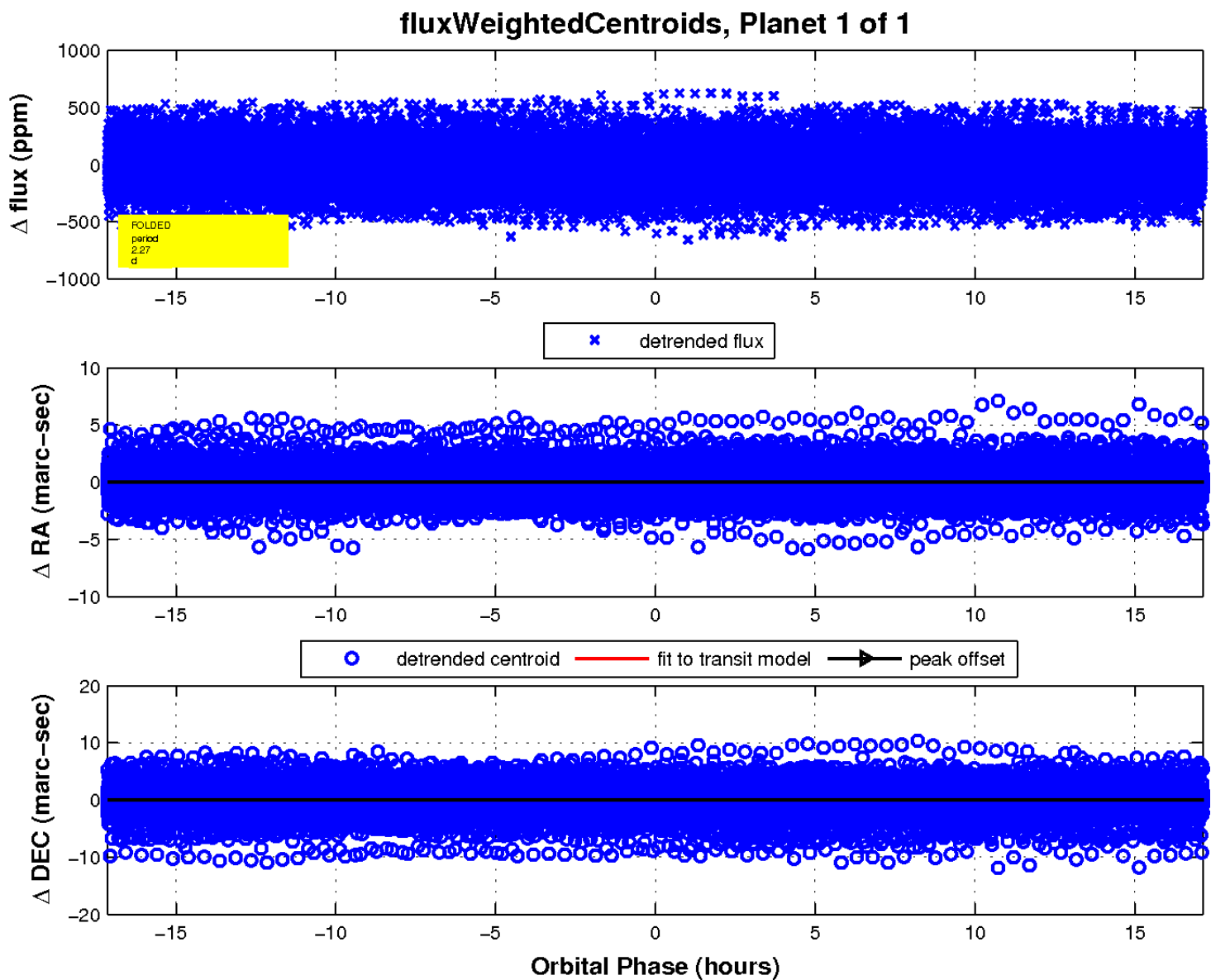
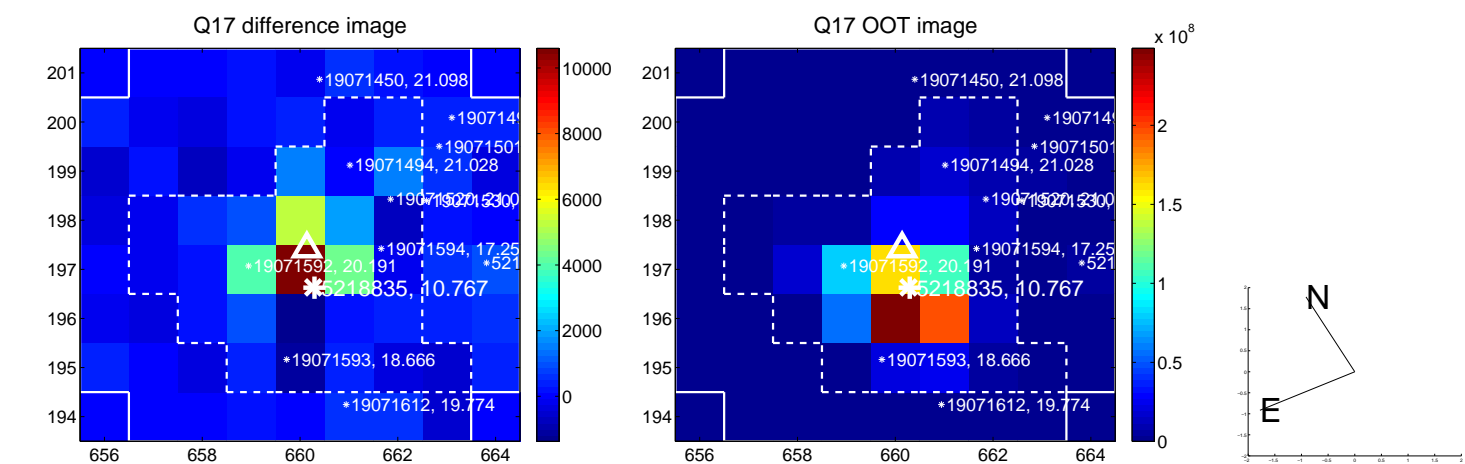
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

