

KIC 008161808

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})
008161808-01	OBS	No	2.202604	132.184009	45.0	1.282	9.4	4.0	0.92	5771	0.71	753.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008161808-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—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.

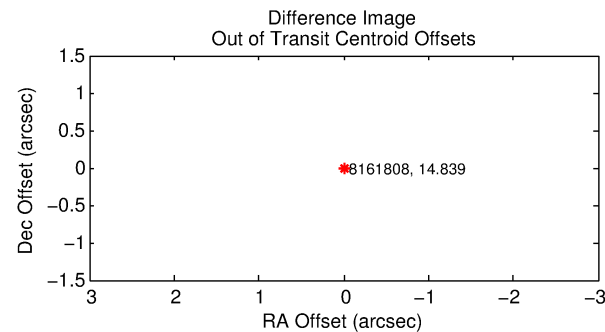
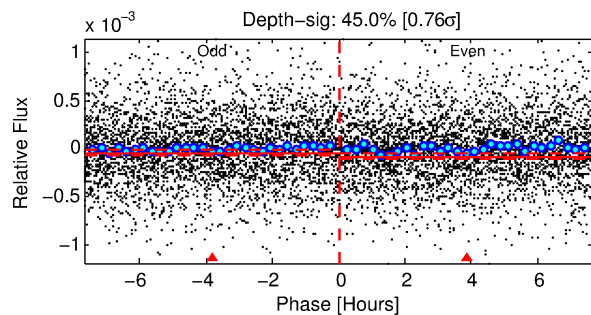
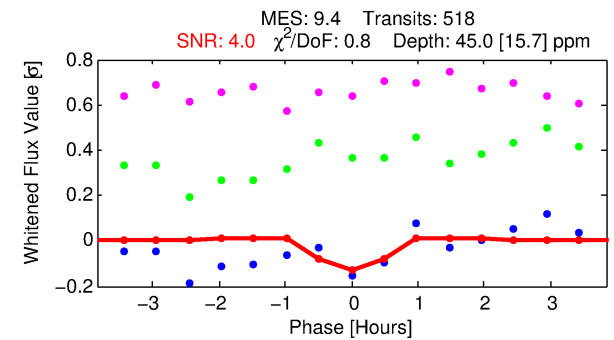
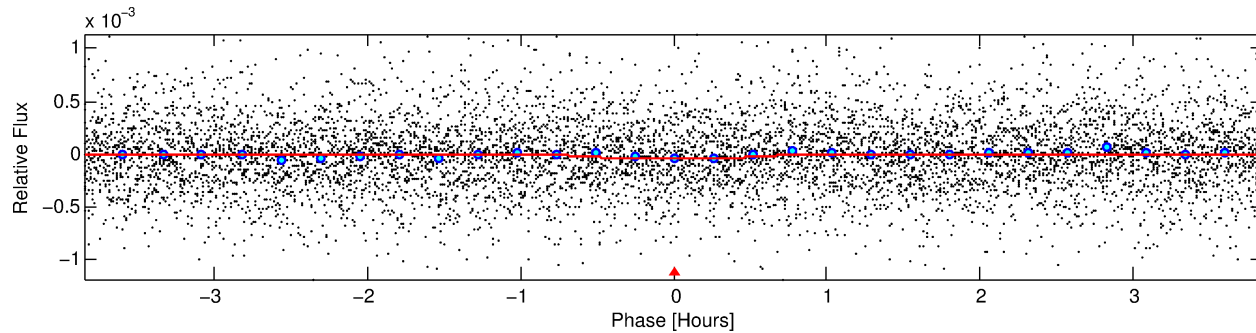
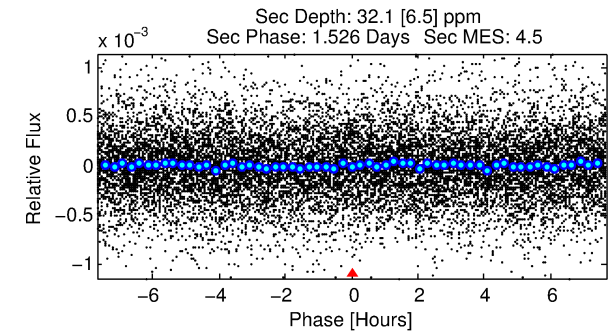
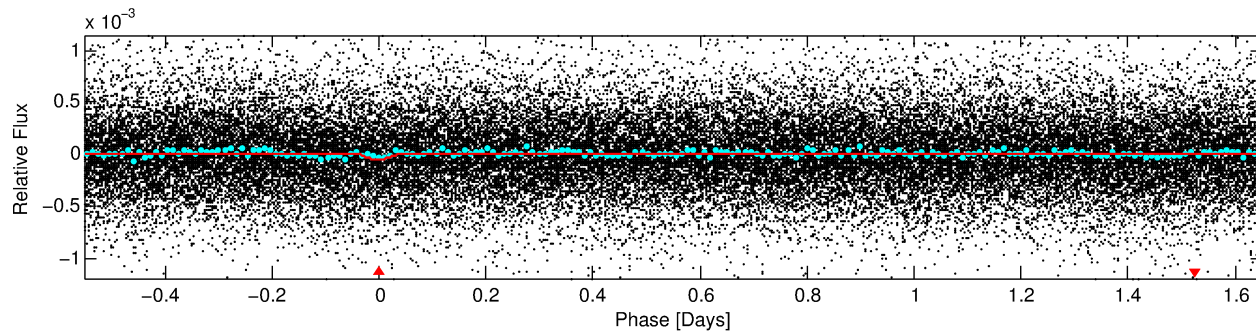
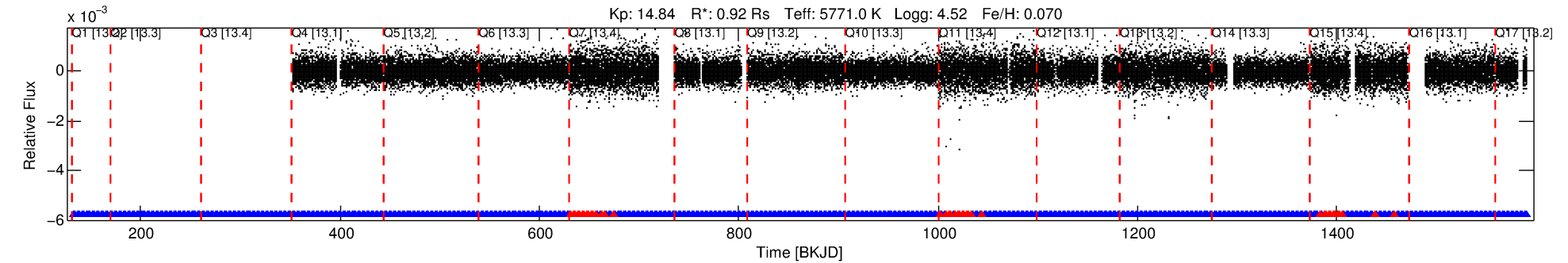
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008161808-01

No Significant Match Found

DV One-Page Summary

KIC: 8161808 Candidate: 1 of 1 Period: 2.203 d



DV Fit Results:

Period = 2.20260 [0.00003] d
Epoch = 132.1840 [0.0057] BKJD
Rp/R* = 0.0071 [0.0058]
a/R* = 6.93 [24.77]
b = 0.86 [1.12]
Seff = 753.11 [319.30]
Teq = 1336 [142] K
Rp = 0.71 [0.62] Re
a = 0.0334 [0.0091] AU
Ag = 38.72 [65.00] [0.58σ]
Teffp = 5152 [2108] K [1.81σ]

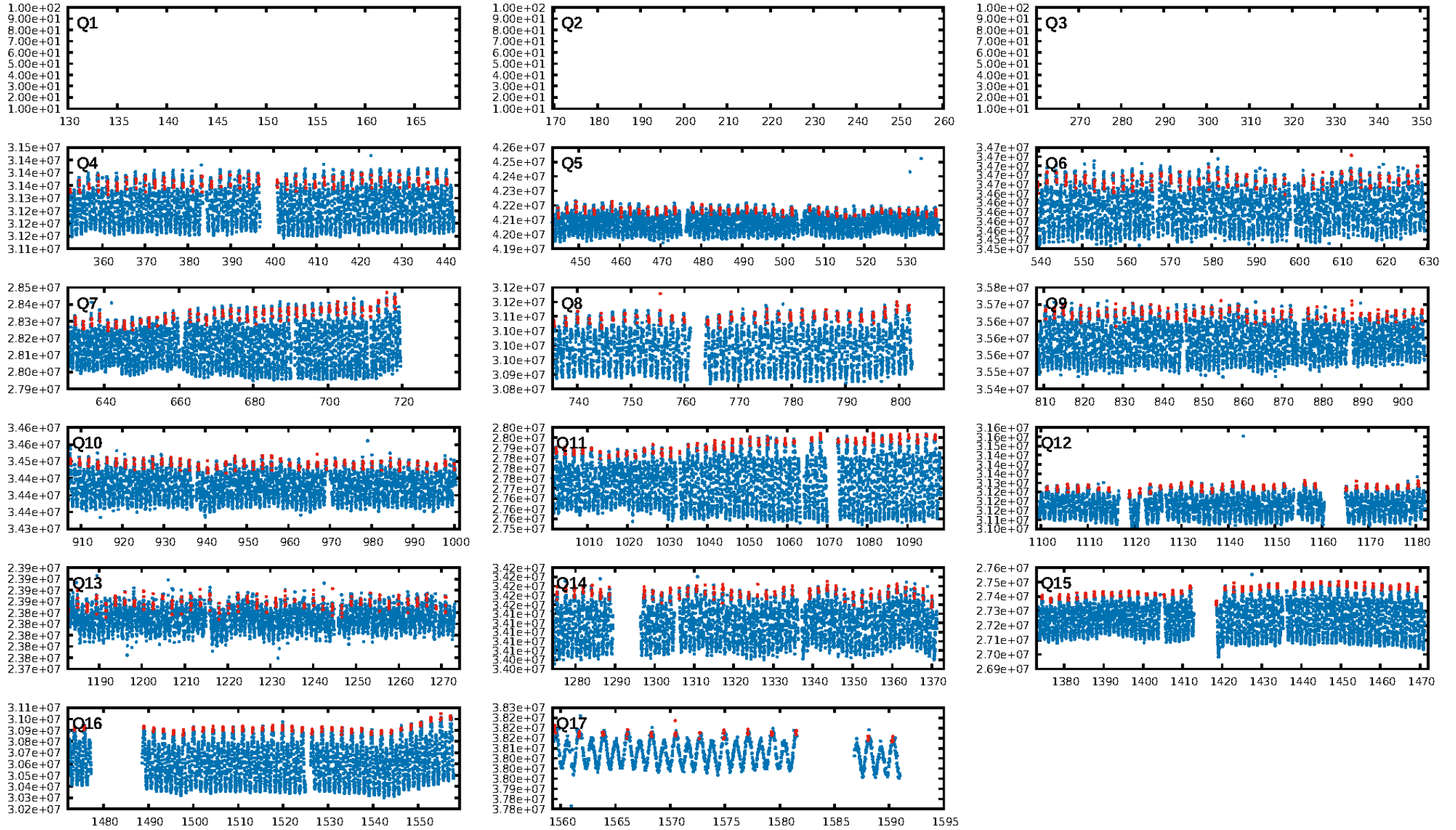
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.98e-21
RollingBand-fgt: 0.92 [465/505]
GhostDiagnostic-chr: 0.8193
Centroid-sig: 35.1%
Centroid-so: 8.424 arcsec [0.69σ]
OotOffset-rm: N/A
KicOffset-rm: 8.173 arcsec [94.21σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/3/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [14/14]

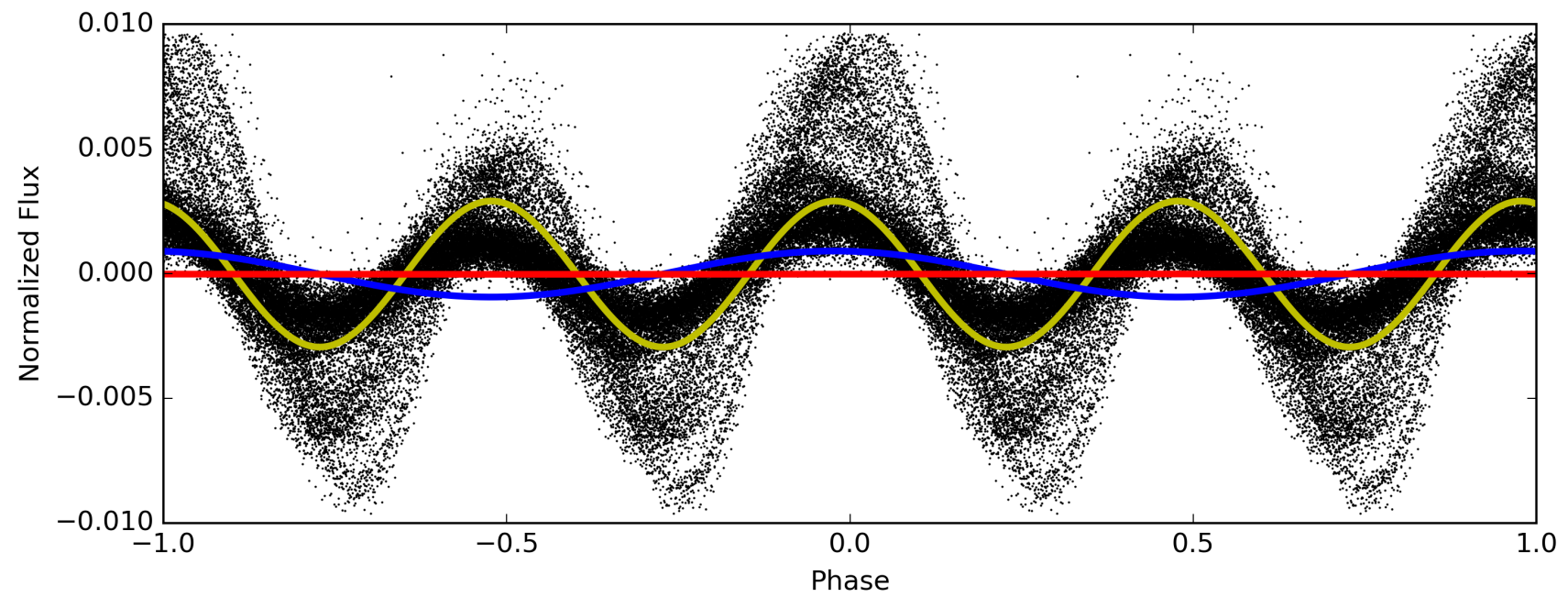
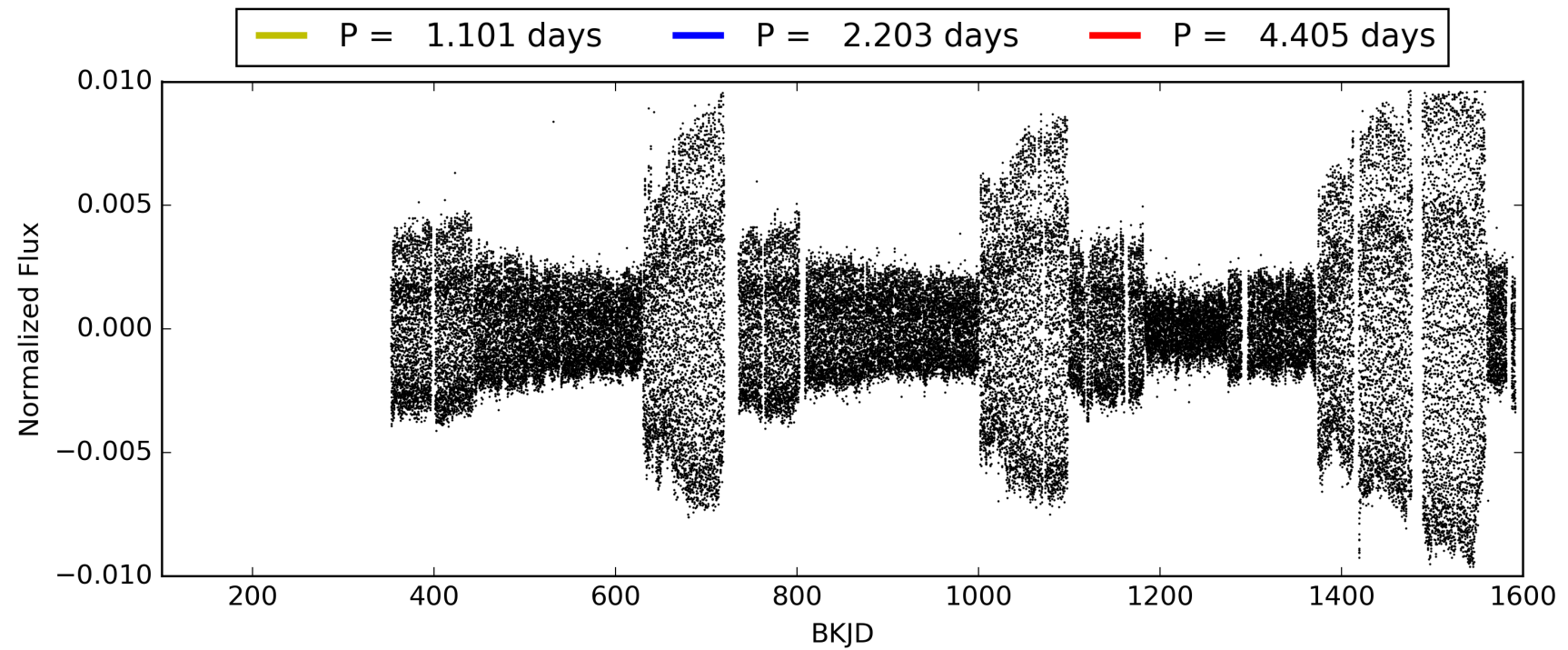
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:04:25 Z

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

TCE 008161808-01, PDC Light Curves

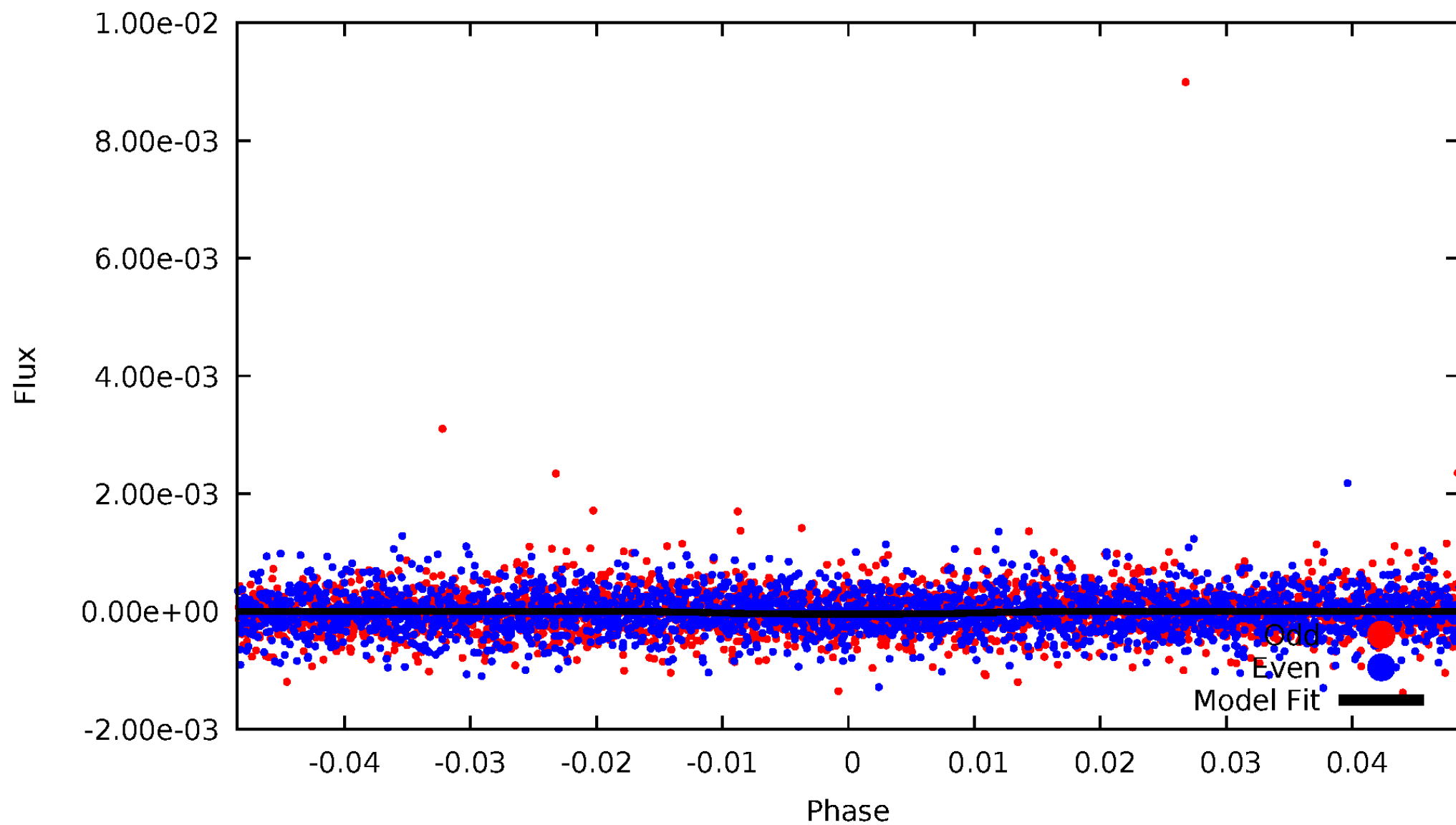


TCE 008161808-01



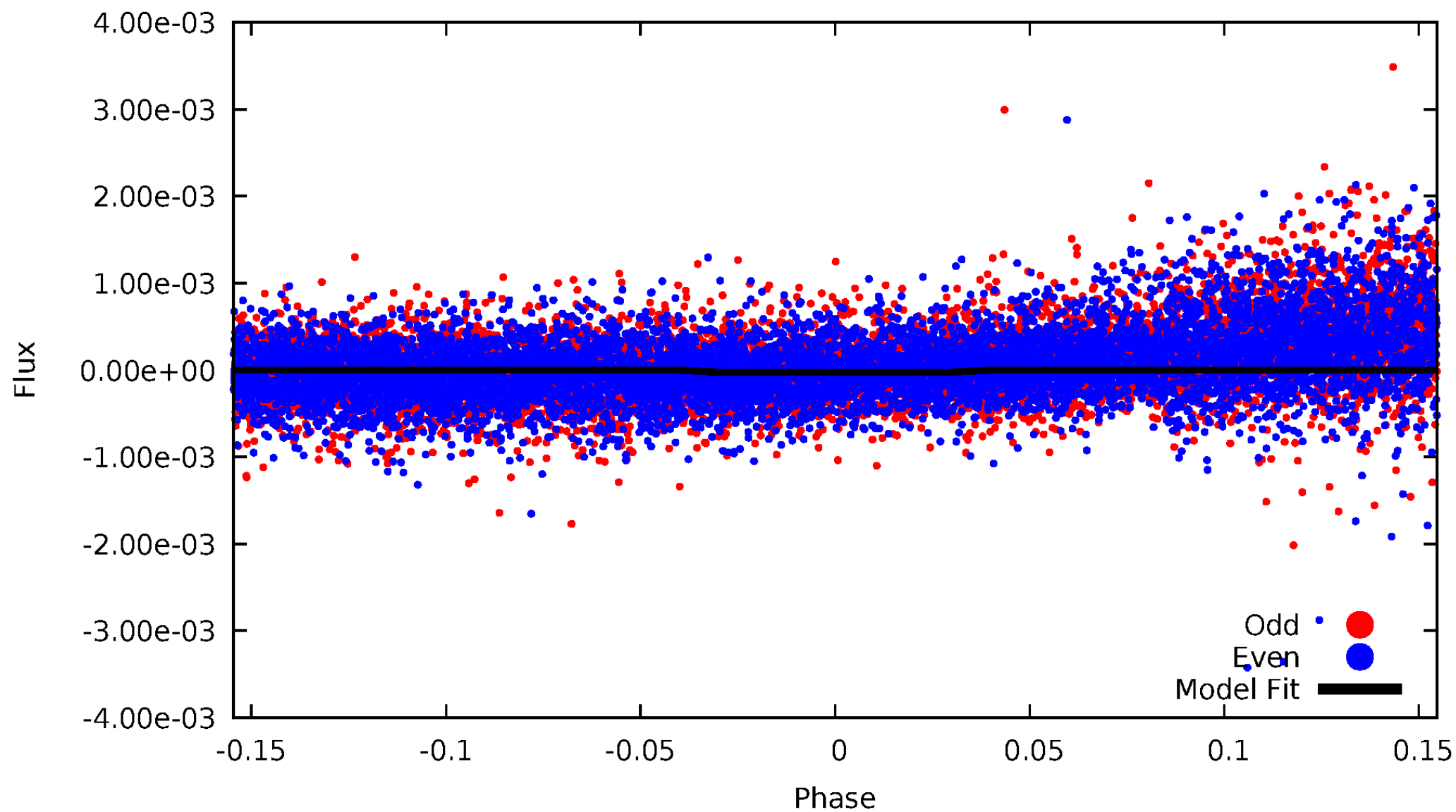
DV Odd/Even

TCE 008161808-01

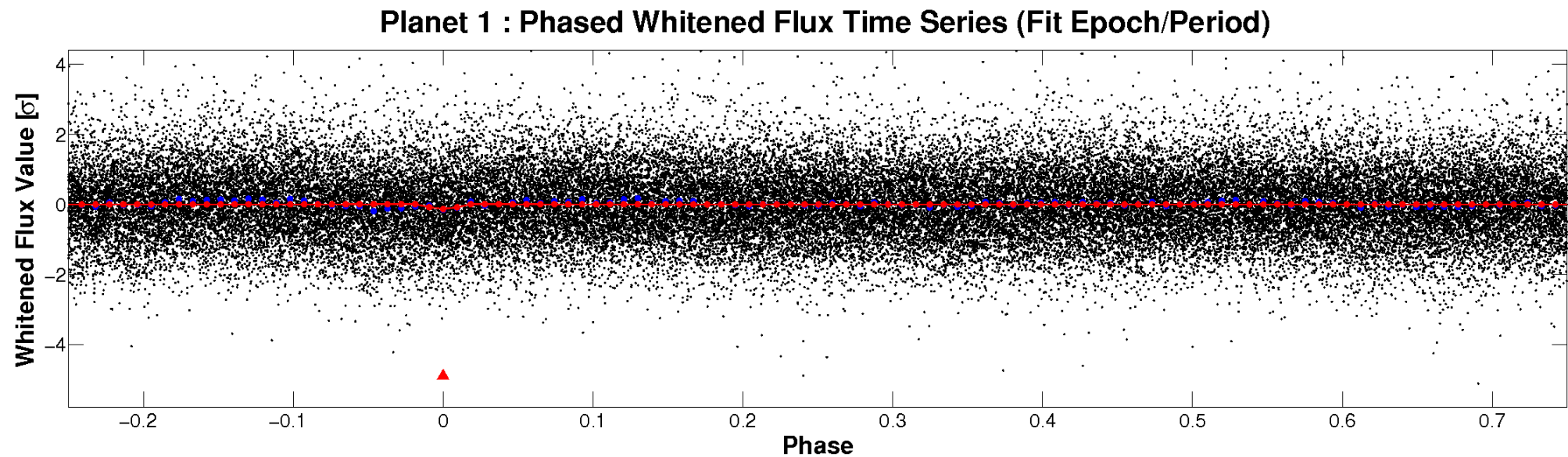
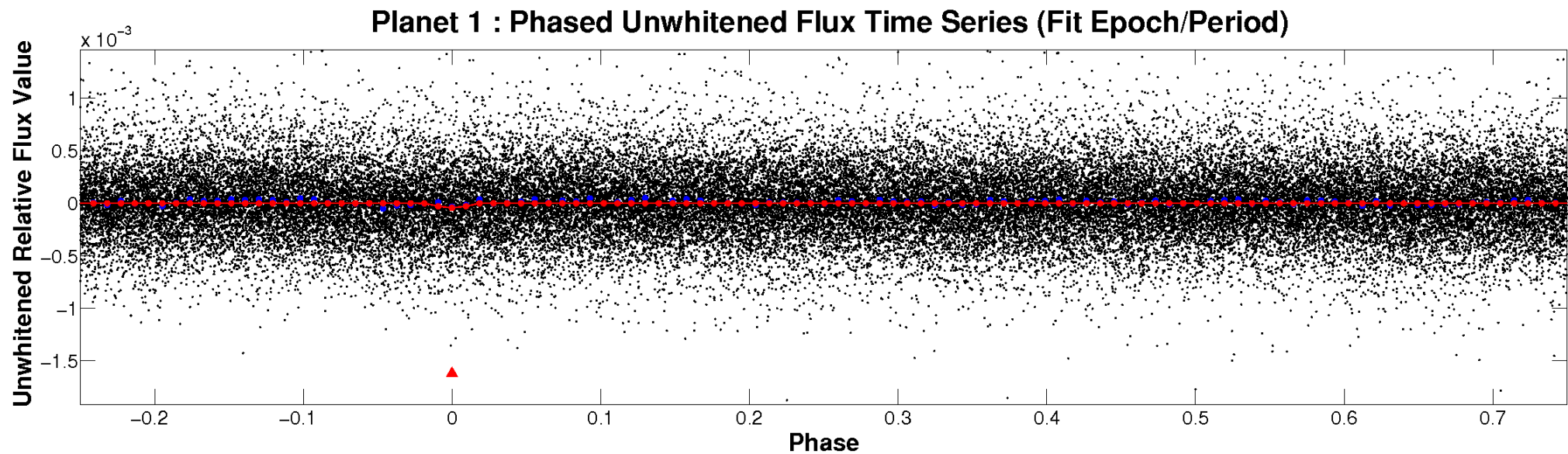


ALT Odd/Even

TCE 008161808-01

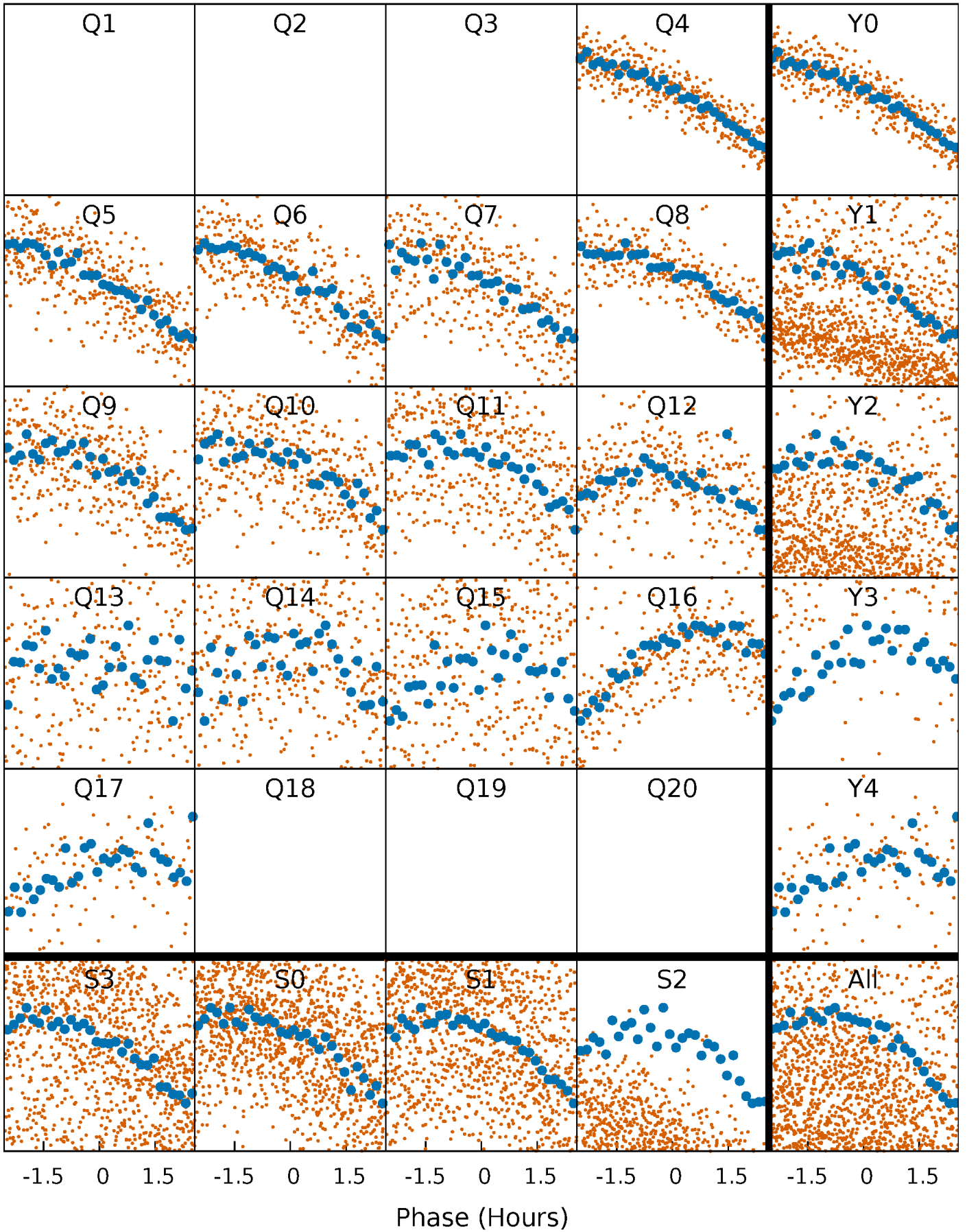


Non-Whitened Vs. Whitened Light Curve



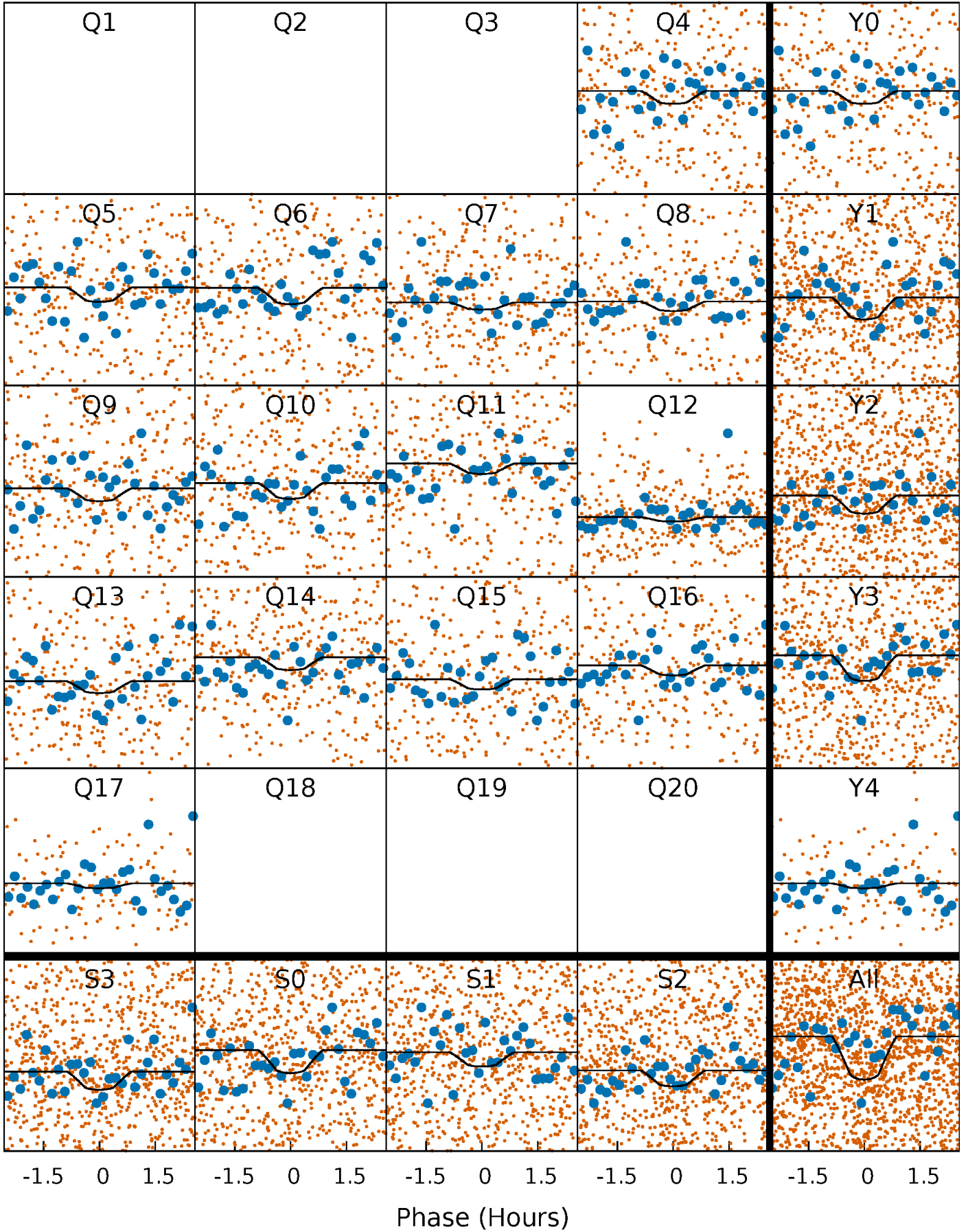
PDC Quarter-Phased Transit Curves

TCE 008161808-01 P= 2.202604 Days $T_0=132.184009$ (BKJD)



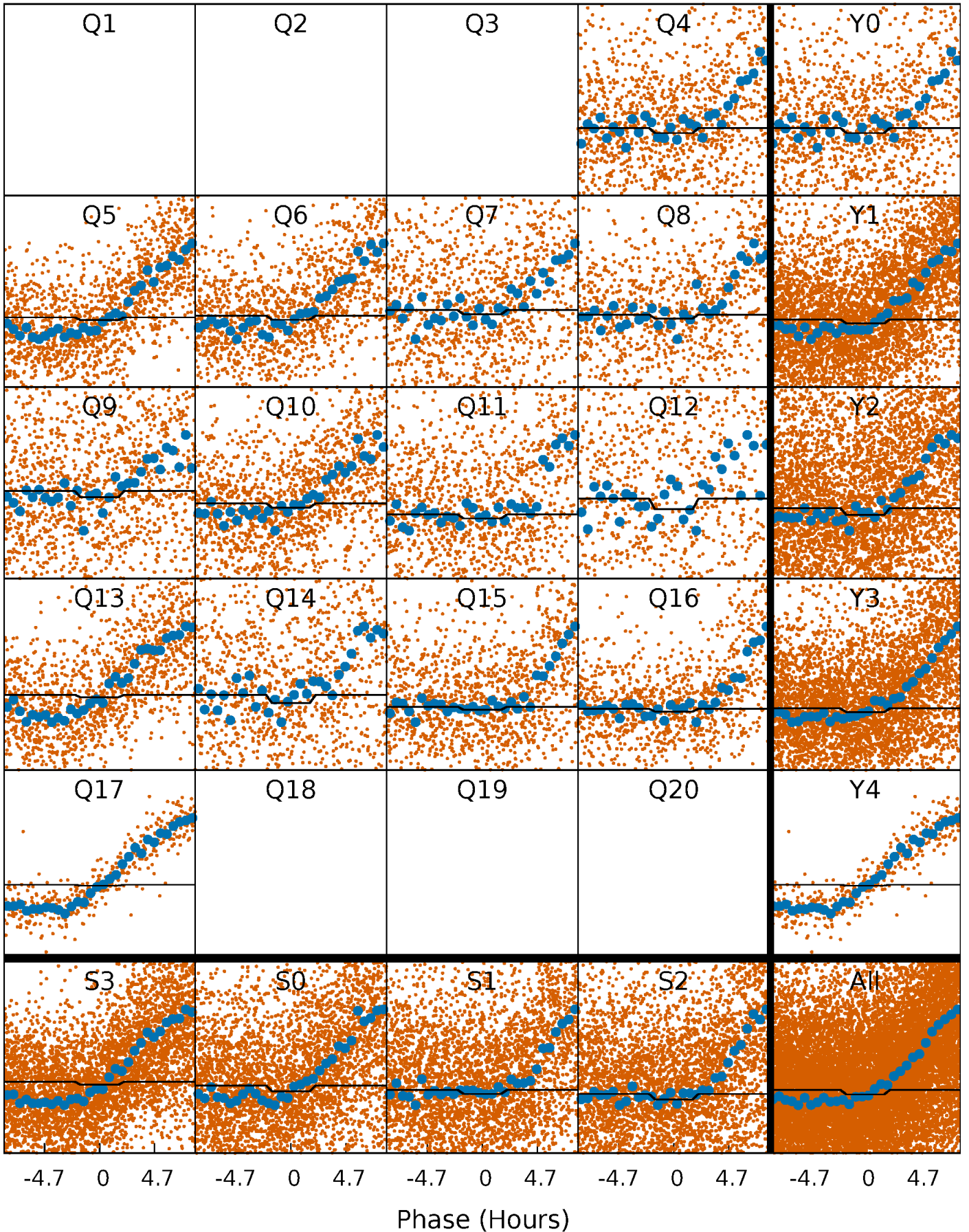
DV Quarter-Phased Transit Curves

TCE 008161808-01 P= 2.202604 Days $T_0=132.184009$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

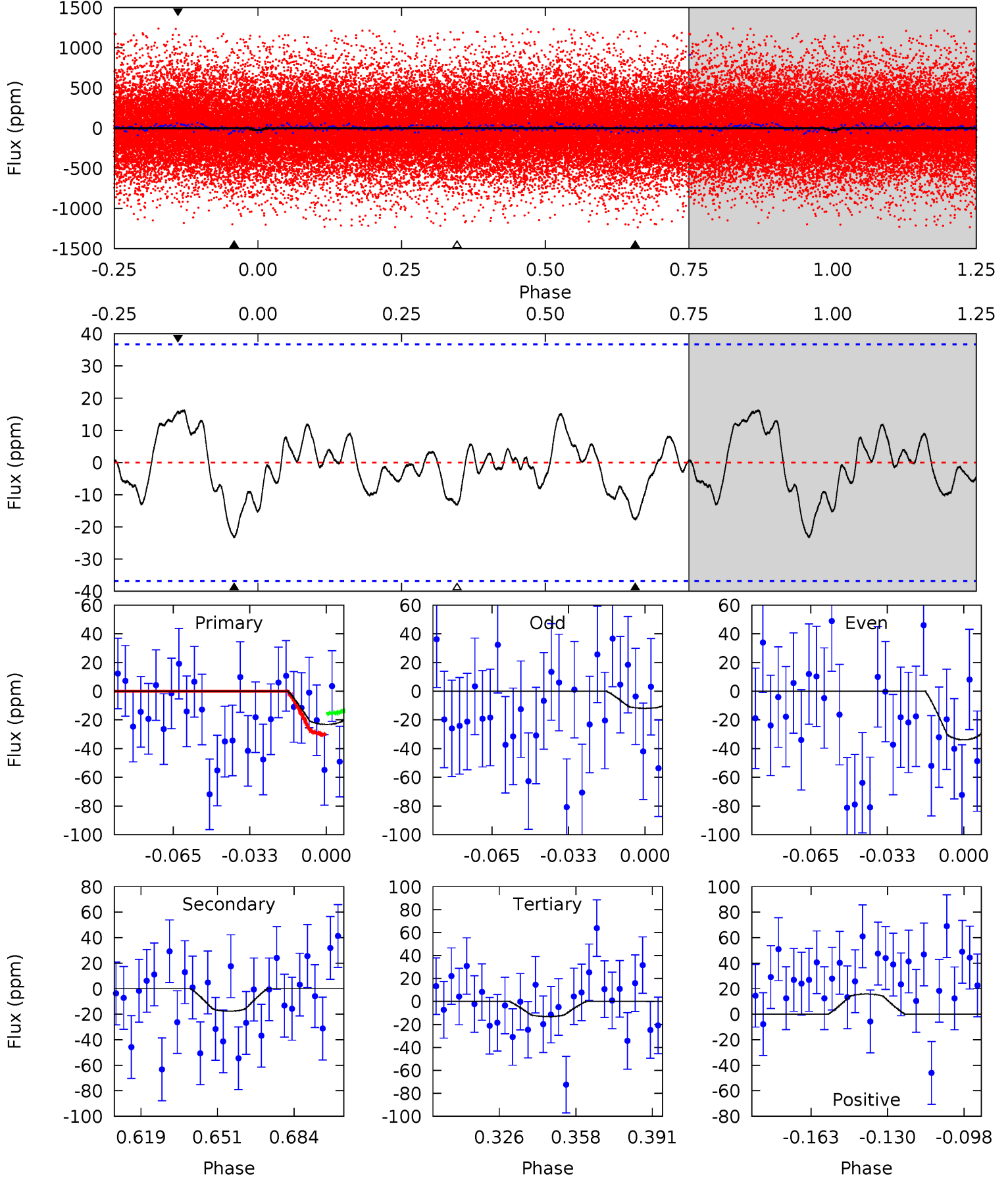
TCE 008161808-01 P= 2.202973 Days $T_0=131.607376$ (BKJD)



DV Model-Shift Uniqueness Test

008161808-01, P = 2.202604 Days, E = 132.184009 Days

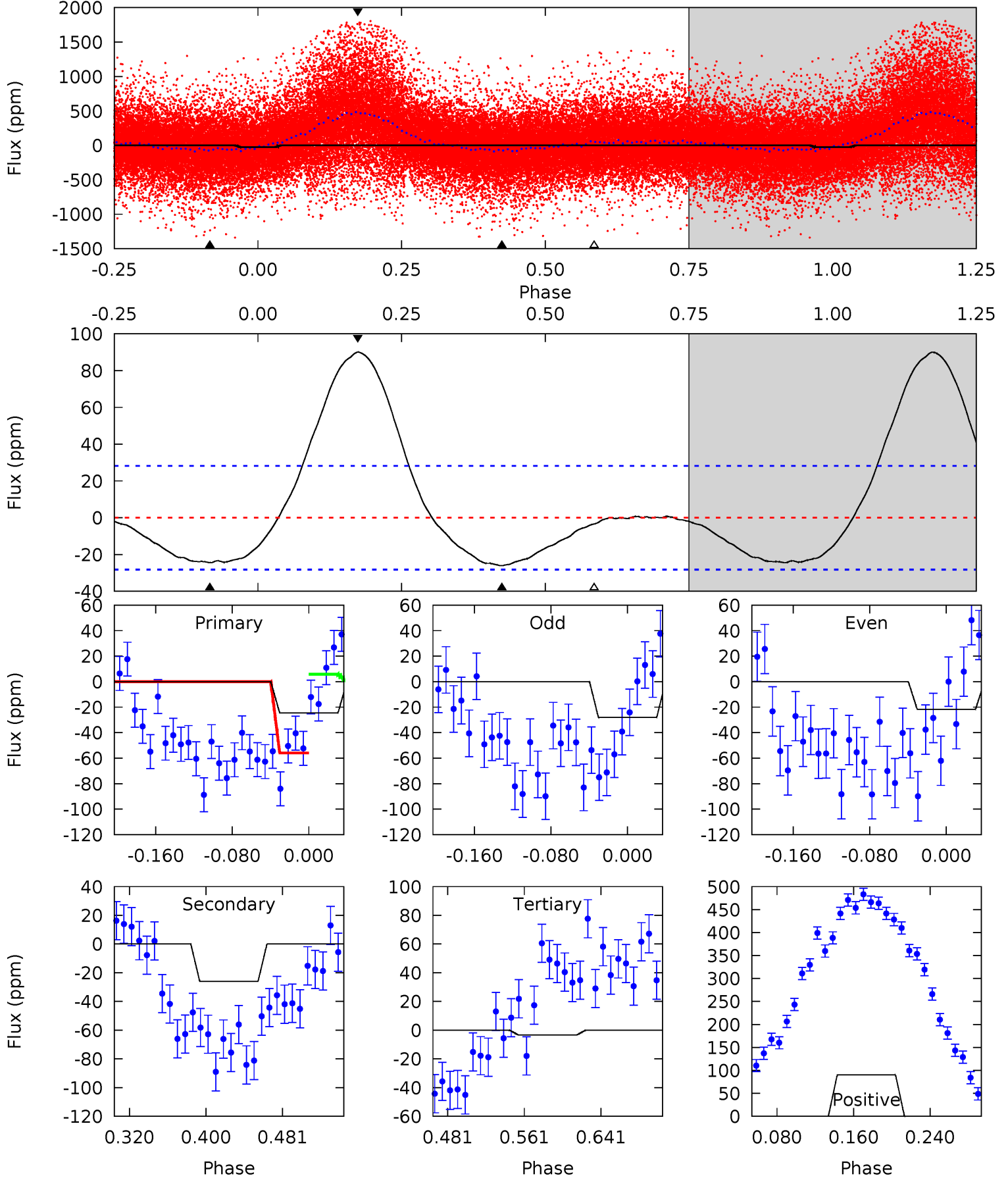
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.02	2.30	1.71	2.06	4.79	2.14	0.92	1.31	0.96	0.59	0.24	1.44	1.31	0.41	0.97



Alt Model-Shift Uniqueness Test

008161808-01, P = 2.202973 Days, E = 131.607376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.01	4.26	0.55	14.7	4.61	1.75	5.40	3.45	-10.7	3.71	-10.5	0.52	1.11	0.78	5.20



Stellar Parameters For KIC 008161808

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5771^{+162}_{-203}	$4.521^{+0.039}_{-0.221}$	$0.070^{+0.250}_{-0.300}$	$0.919^{+0.292}_{-0.091}$	$1.022^{+0.113}_{-0.136}$	$1.855^{+0.378}_{-0.964}$
	+3%/-4%	+1%/-5%	+357%/-429%	+32%/-10%	+11%/-13%	+20%/-52%
Source	KIC0	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 008161808-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 8	$0.84^{+0.61}_{-0.48}$	1907^{+148}_{-88}	4364^{+1936}_{-850}	14^{+69}_{-10}
Alt.	-26 ± 6	$0.69^{+0.58}_{-0.43}$	1912^{+139}_{-95}	5062^{+3665}_{-1074}	31^{+198}_{-22}

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

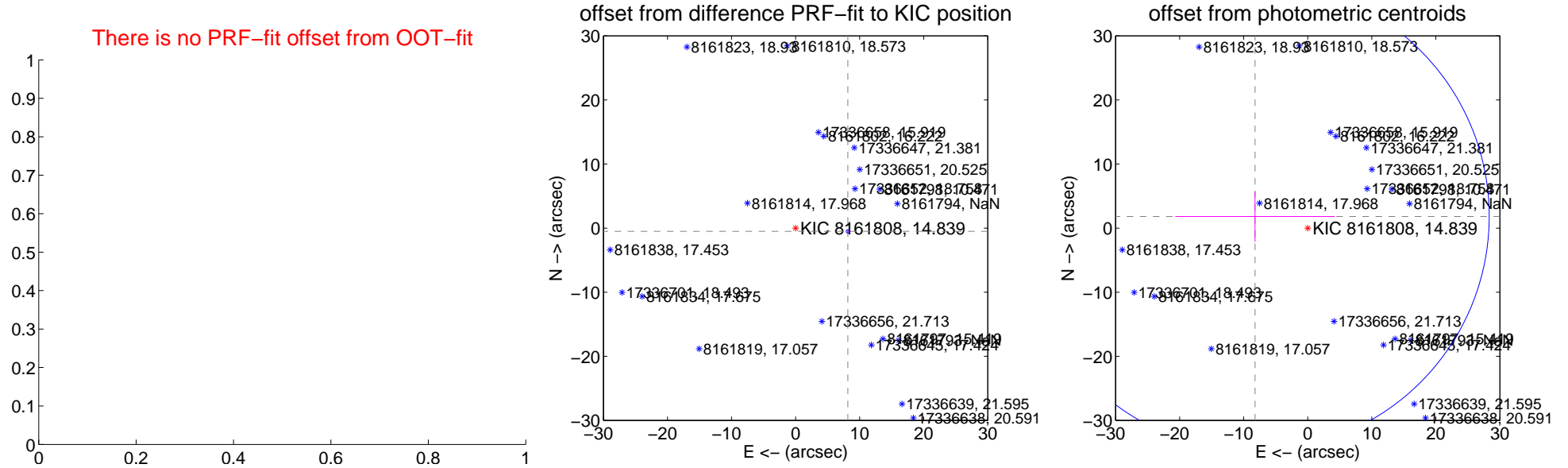
DV Centroid Data

Supplemental centroid analysis for 008161808-01. Kepler magnitude: 14.84. Transit SNR 4.04

There are 0 quarters with good PRF difference image offsets

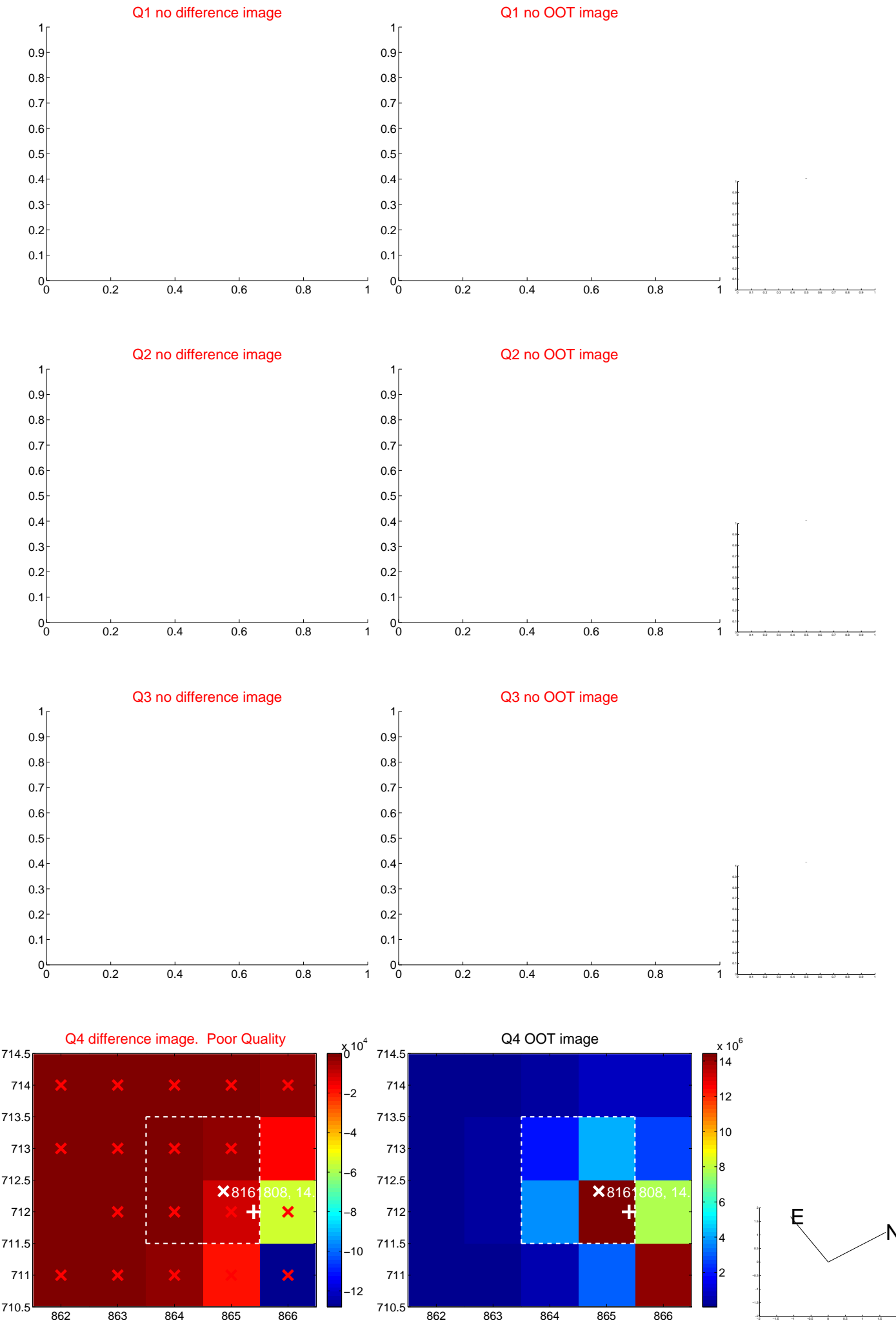
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	8.173 ± 0.087	94.21	-8.157 ± 0.087	-0.506 ± 0.106
photometric centroid source offset	8.42 ± 12.19	0.69	8.23 ± 12.45	1.81 ± 3.94

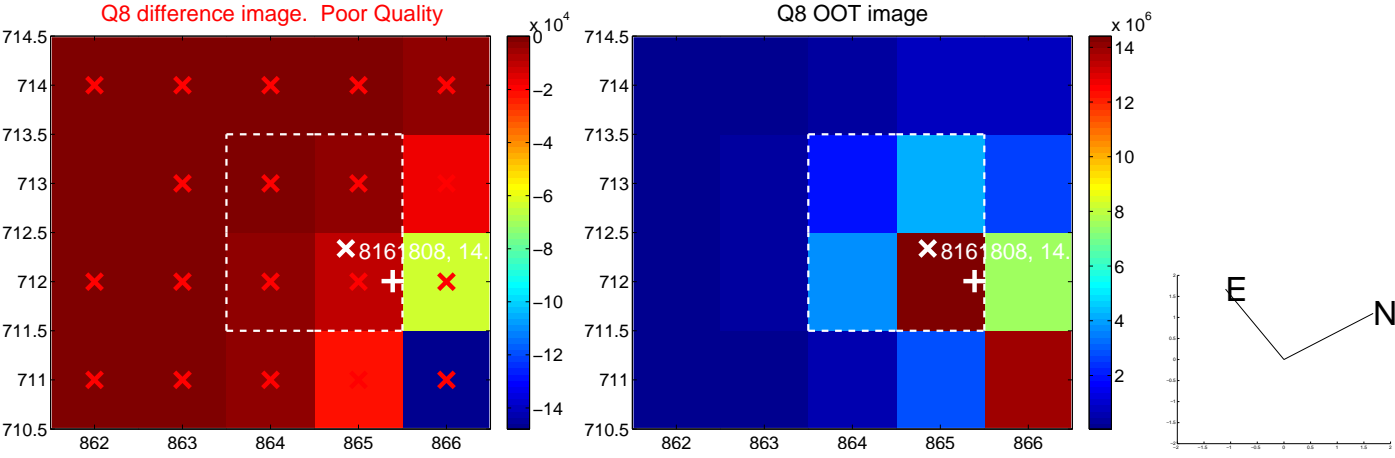
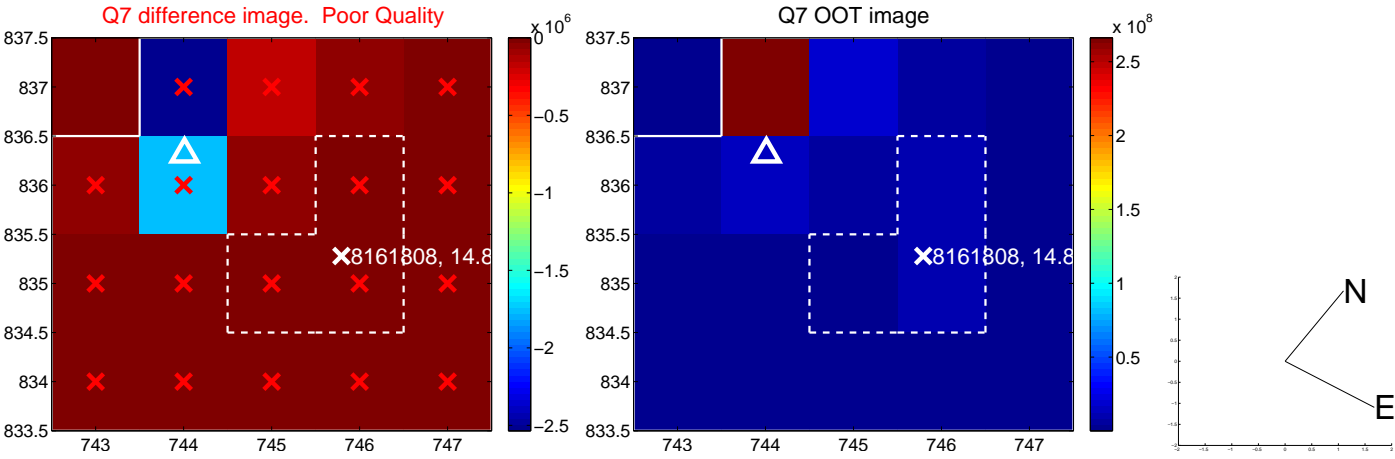
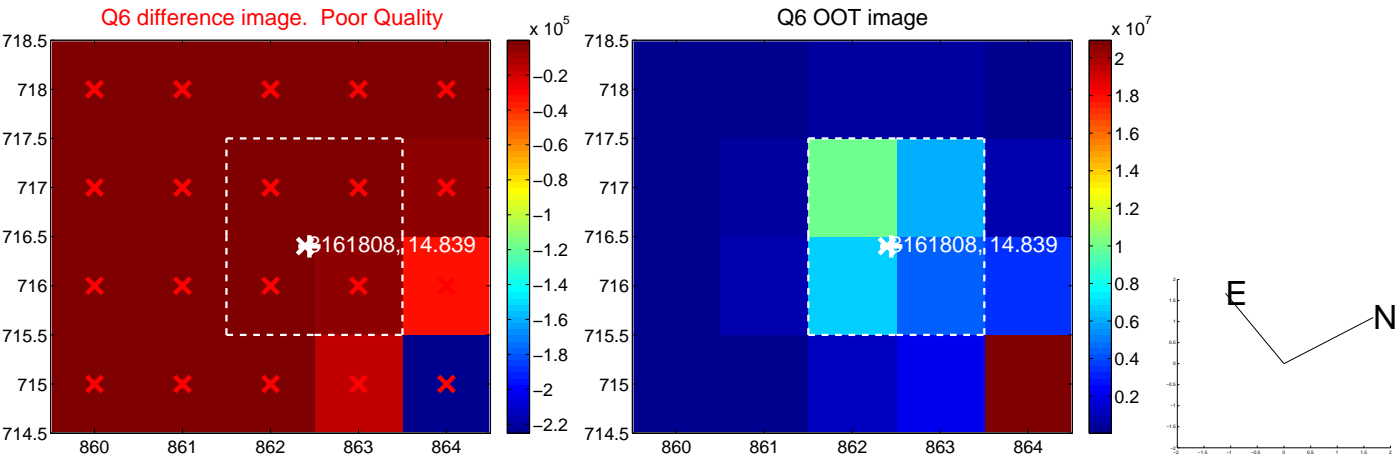
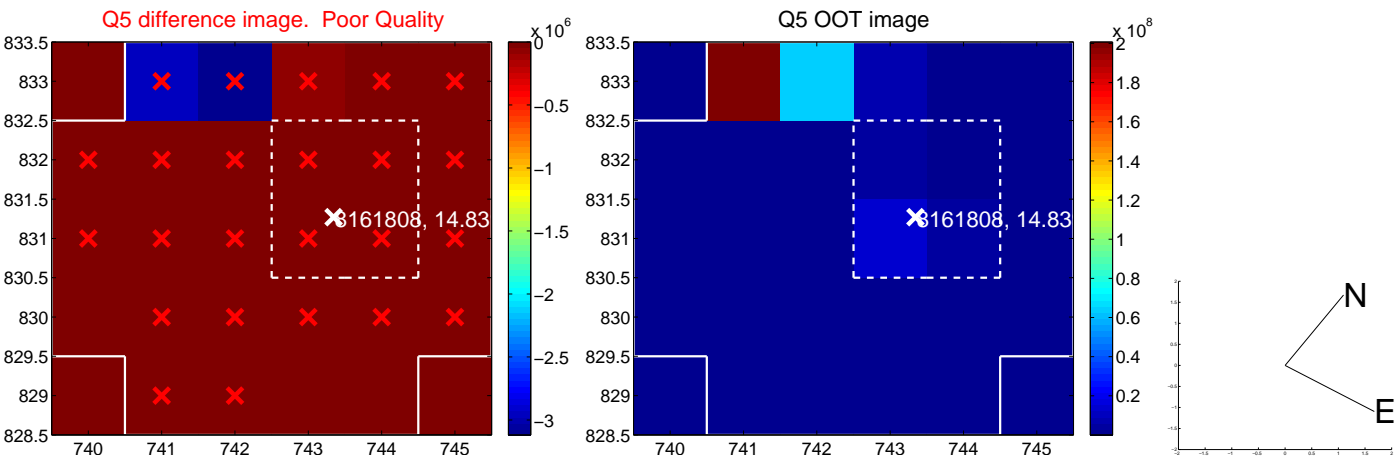


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

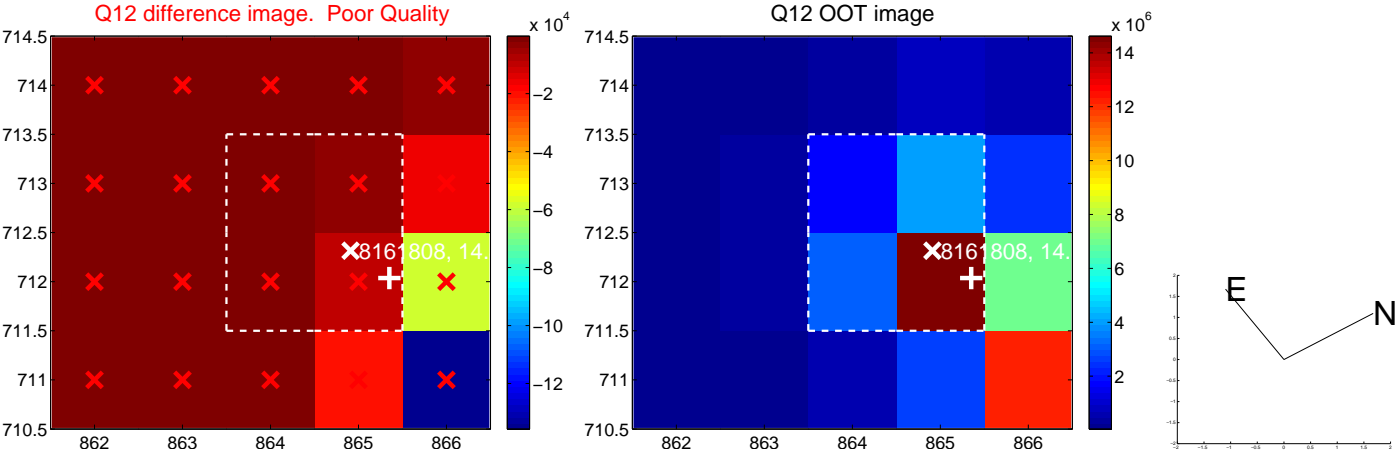
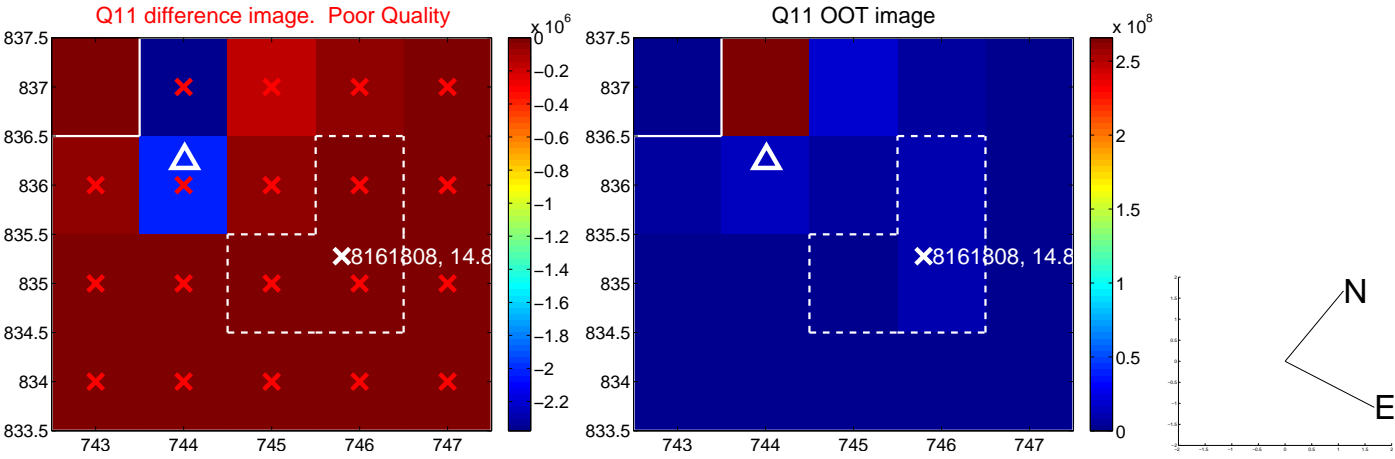
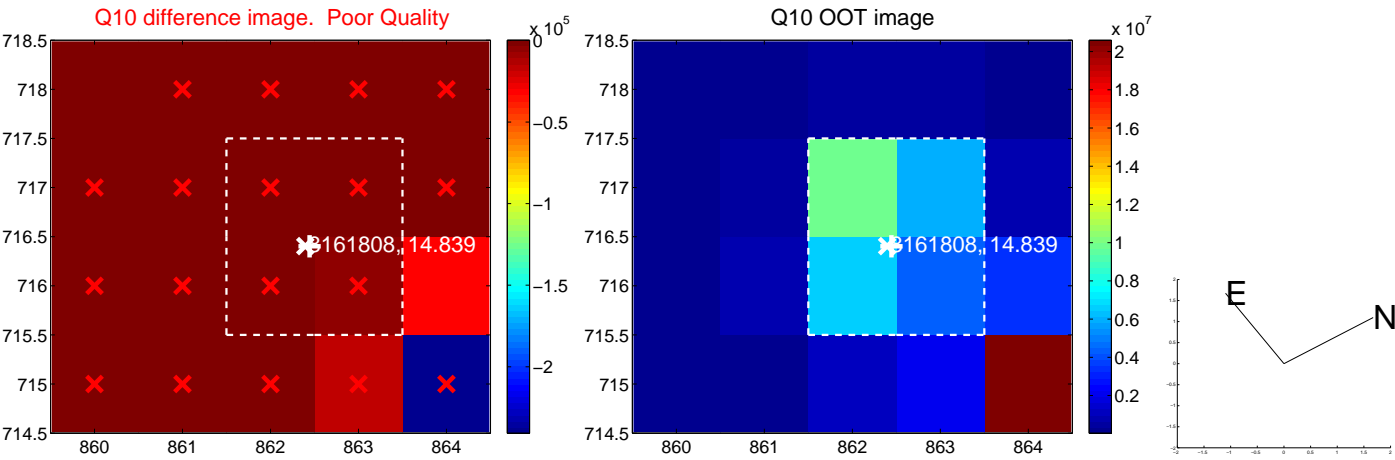
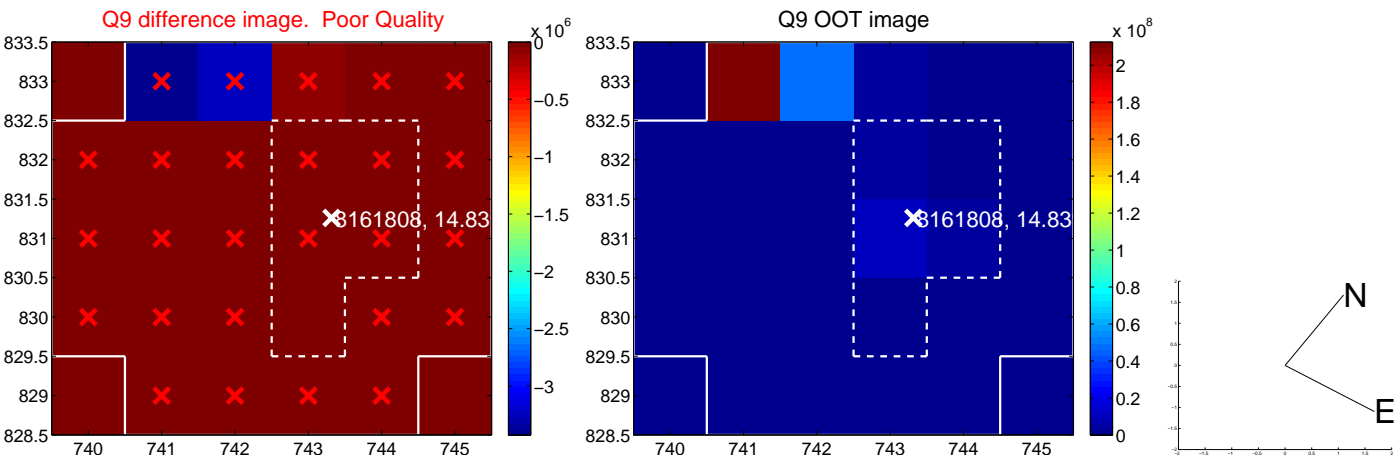
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



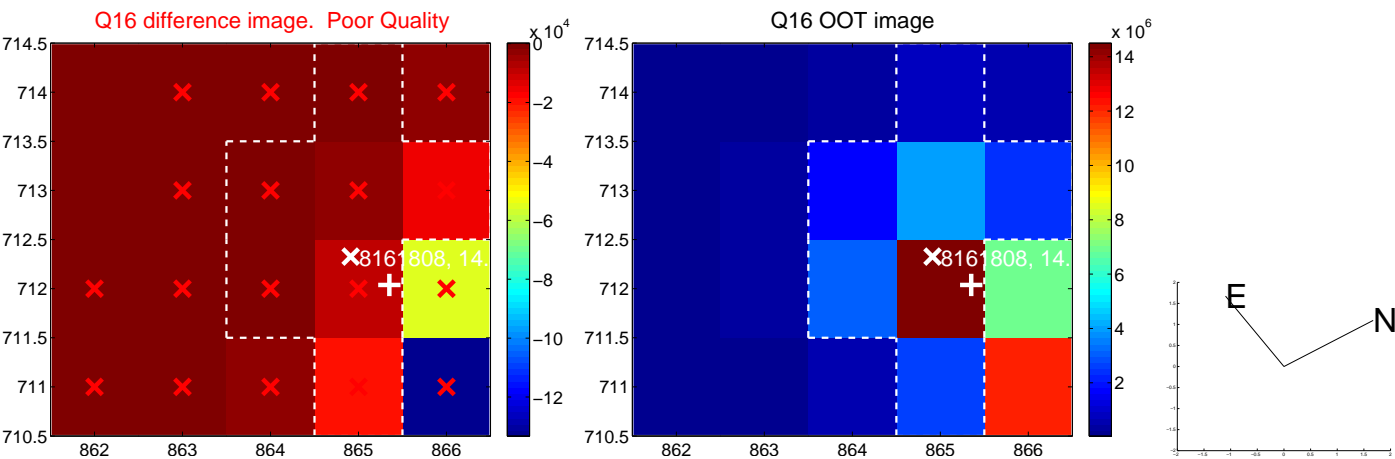
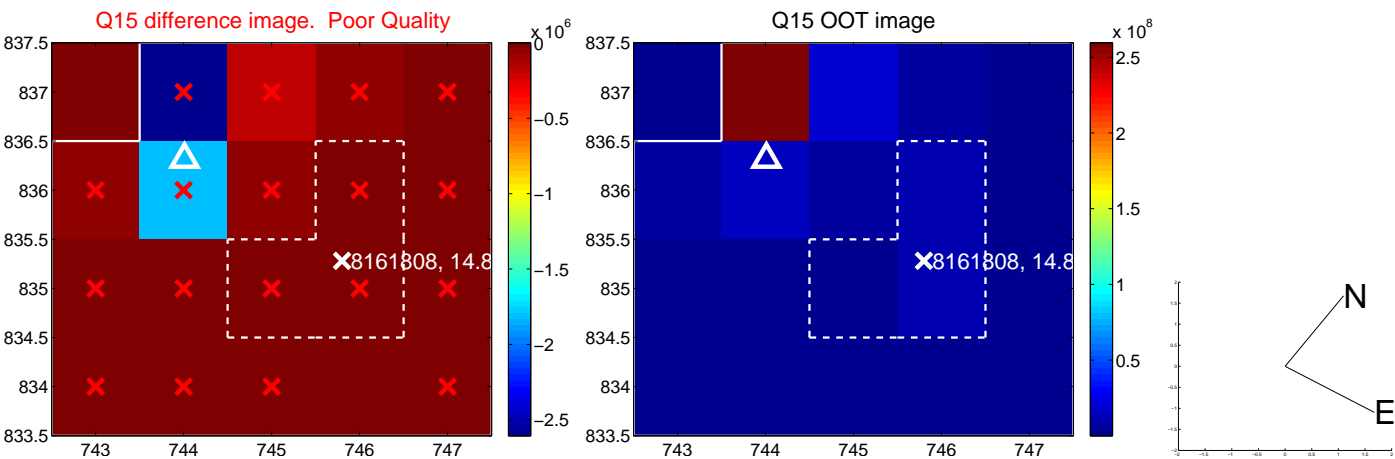
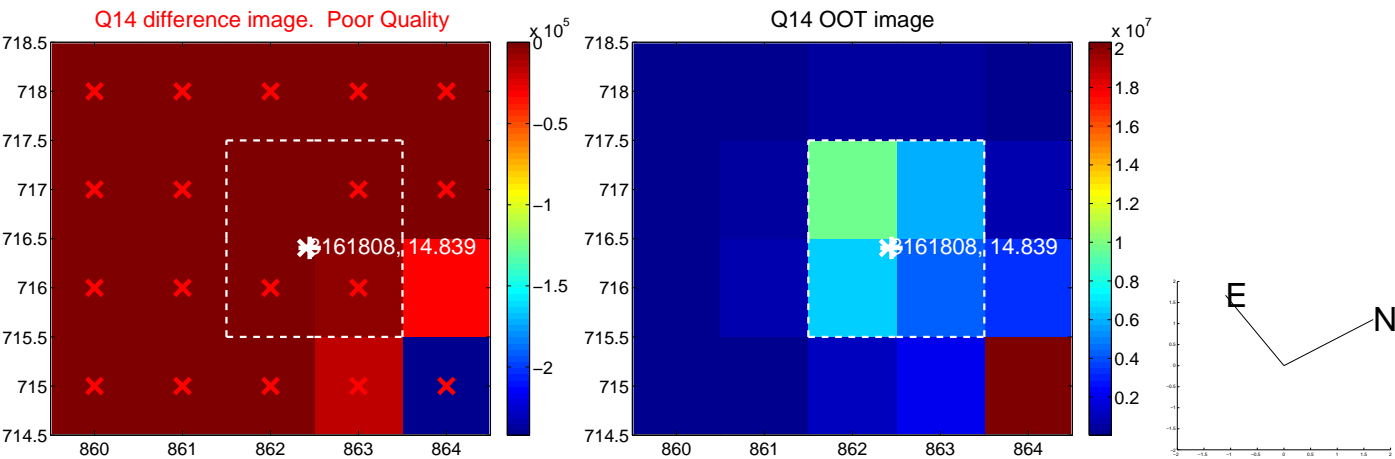
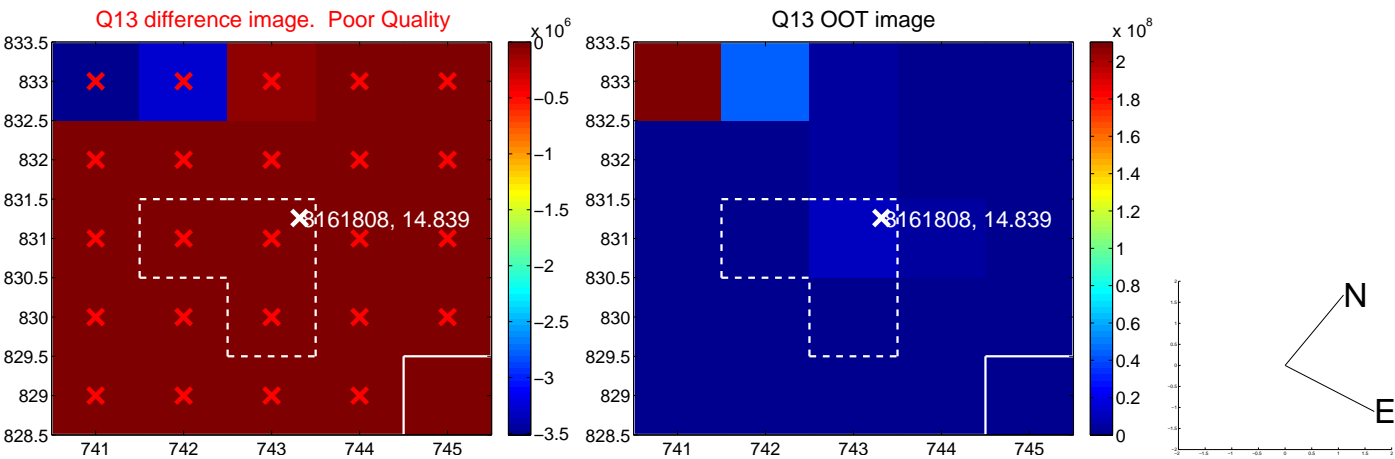
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



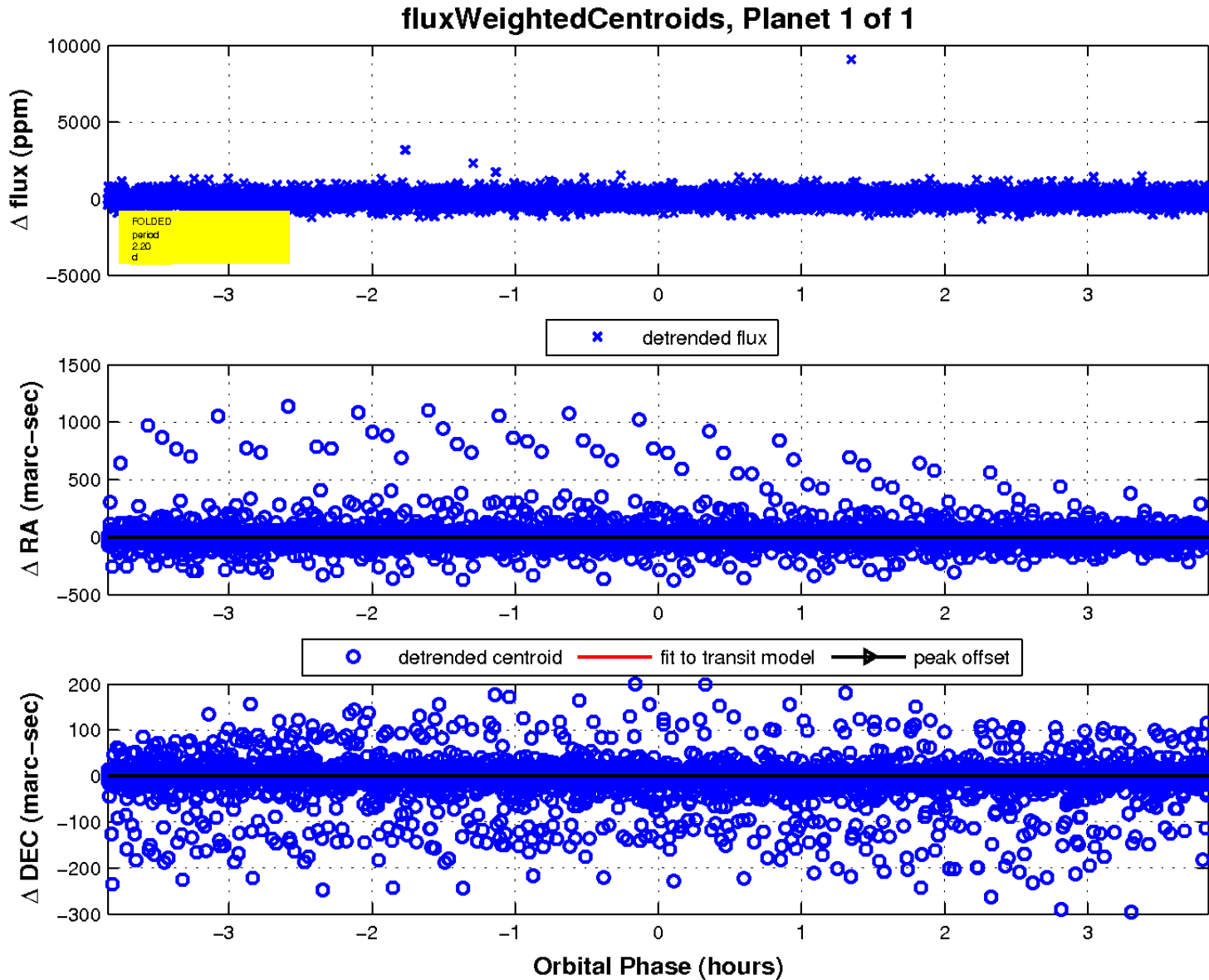
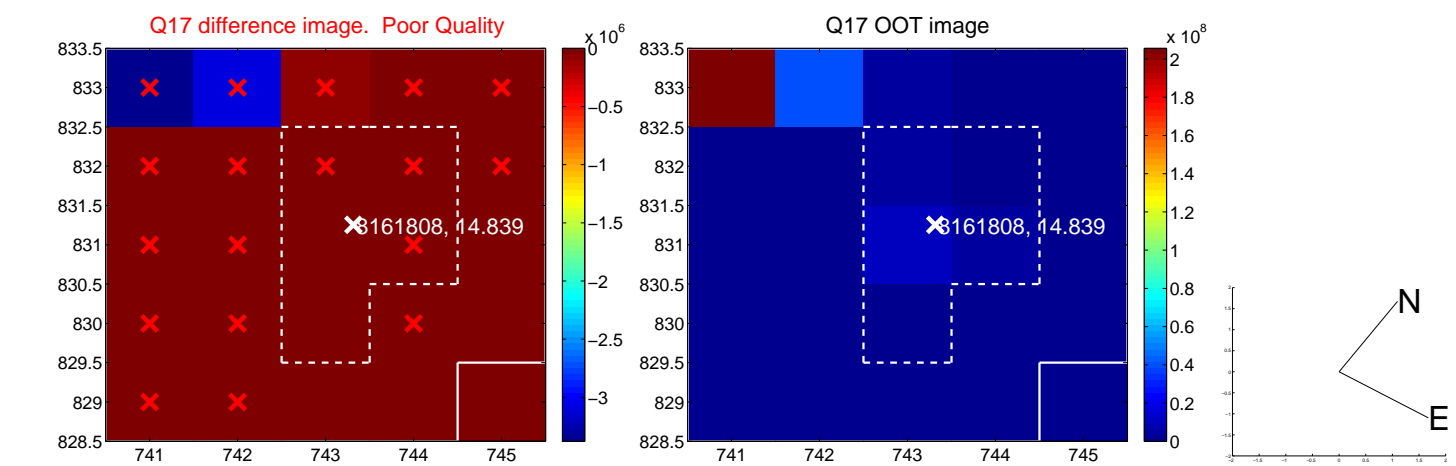
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination

