

KIC 003343281

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})
003343281-01	OBS	4860.01	21.866164	138.515564	331.3	2.041	8.4	9.6	1.08	6309	2.22	67.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003343281-01	OBS	FP	0.27	0	0	1	0	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.

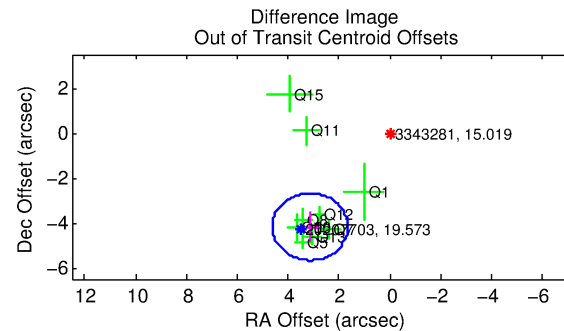
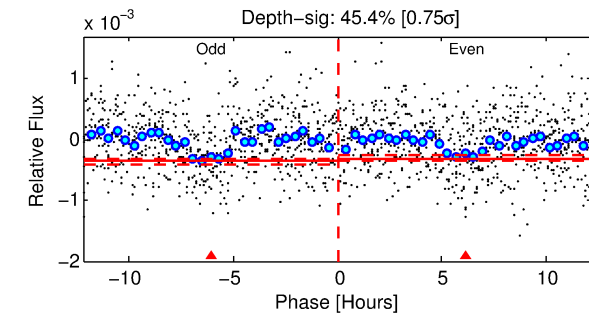
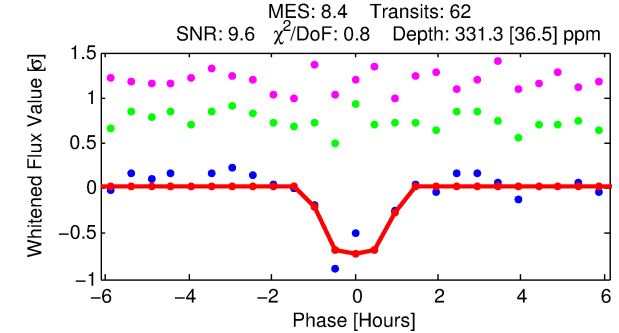
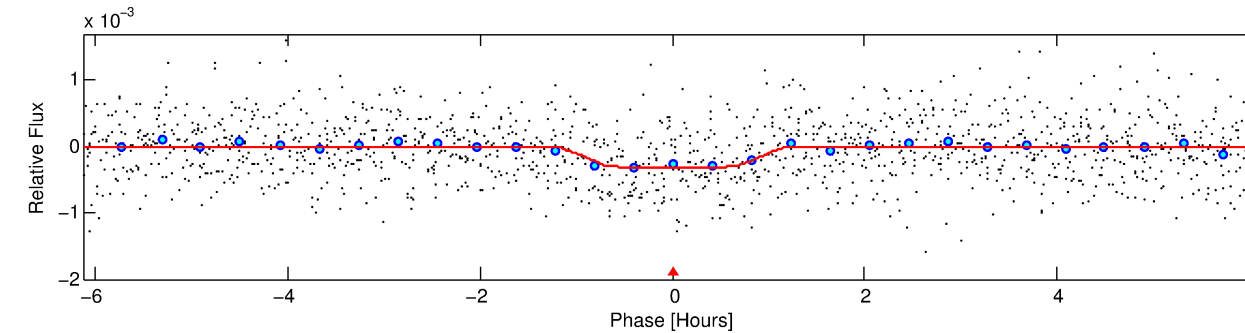
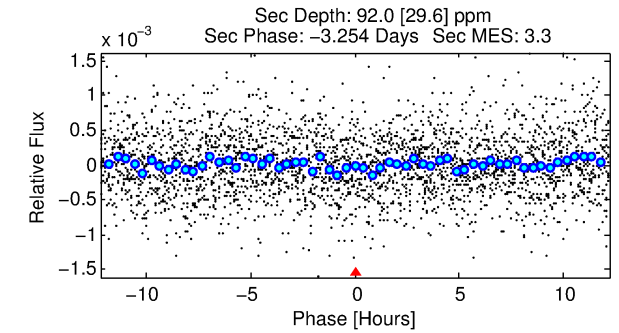
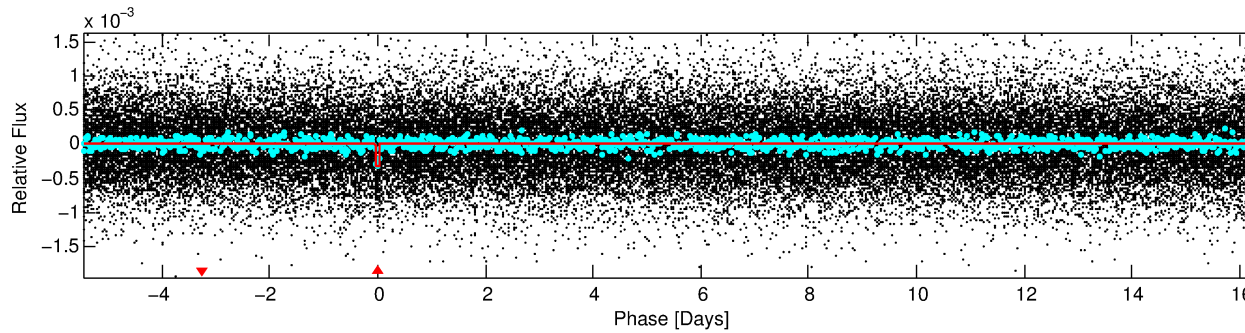
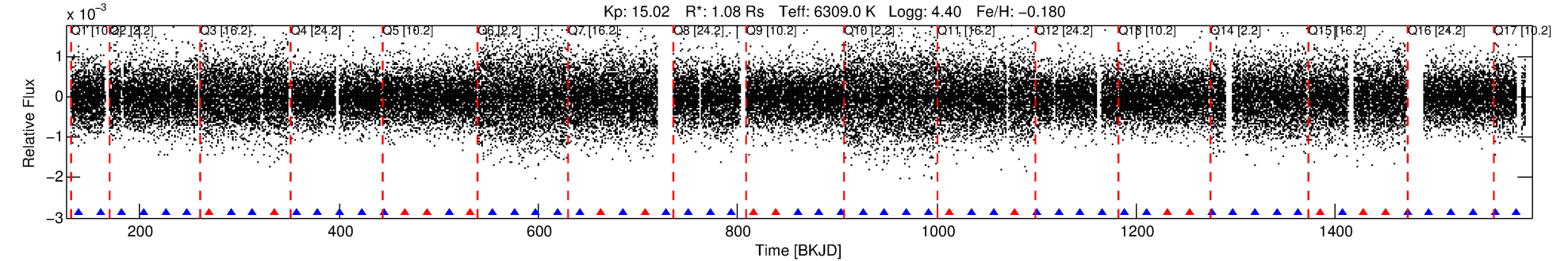
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003343281-01

No Significant Match Found

DV One-Page Summary

KIC: 3343281 Candidate: 1 of 1 Period: 21.866 d
KOI: K04860.01 Corr: 0.977



DV Fit Results:

Period = 21.86616 [0.00014] d
Epoch = 138.5156 [0.0055] BKJD
Rp/R* = 0.0189 [0.0136]
a/R* = 45.95 [176.66]
b = 0.85 [1.27]
Seff = 67.27 [27.50]
Teq = 730 [75] K
Rp = 2.22 [1.77] Re
a = 0.1564 [0.0429] AU
Ag = 250.29 [380.98] [0.65σ]
Teffp = 4491 [1661] K [2.26σ]

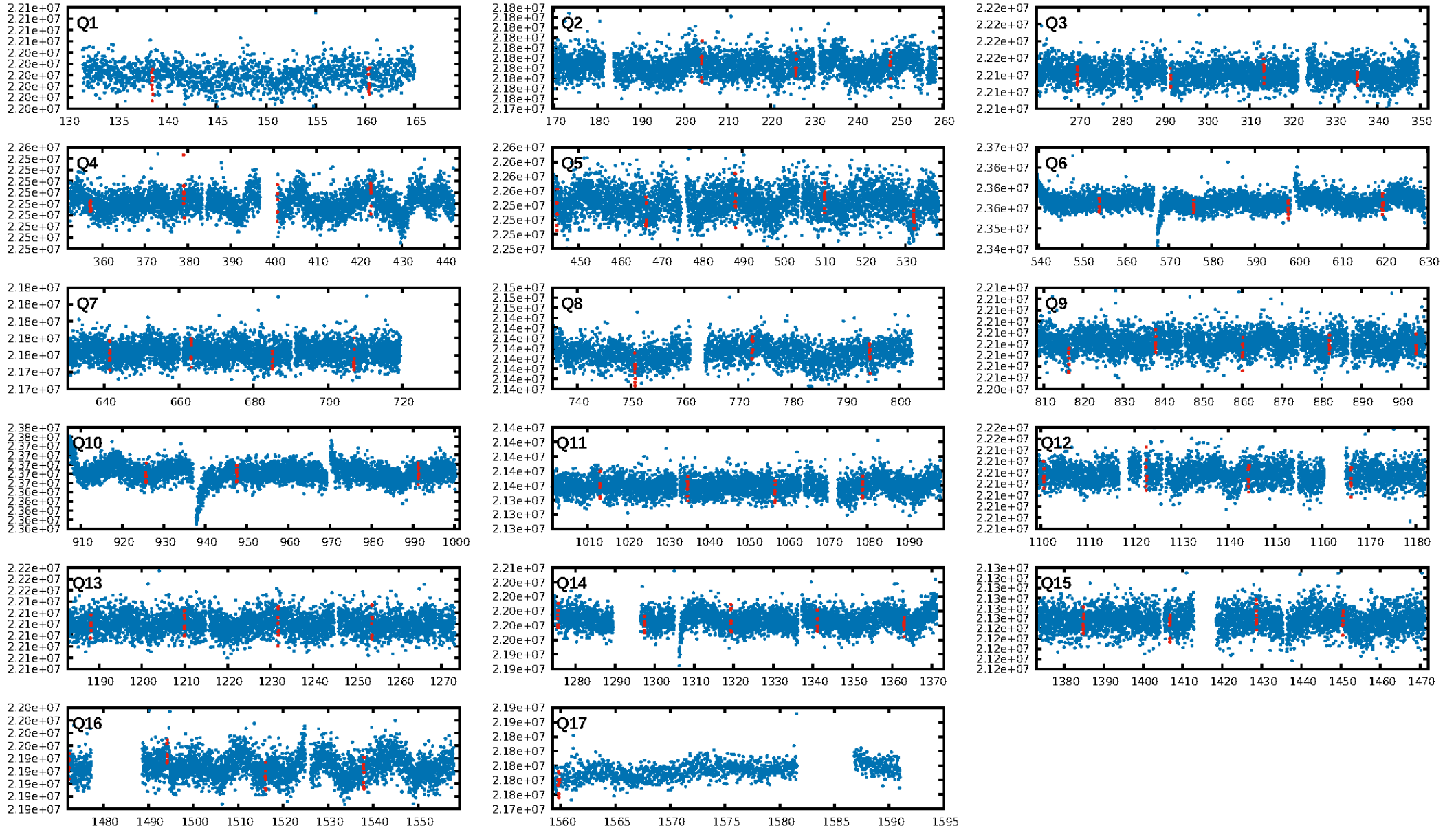
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 57.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.40e-17
RollingBand-fgt: 0.73 [43/59]
GhostDiagnostic-chr: 0.3772
Centroid-sig: 0.0%
Centroid-so: 9.551 arcsec [6.71σ]
OotOffset-rm: 5.228 arcsec [10.52σ]
KicOffset-rm: 5.375 arcsec [9.31σ]
OotOffset-st: 0/3/3/4 [10]
KicOffset-st: 0/3/3/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [16/16]

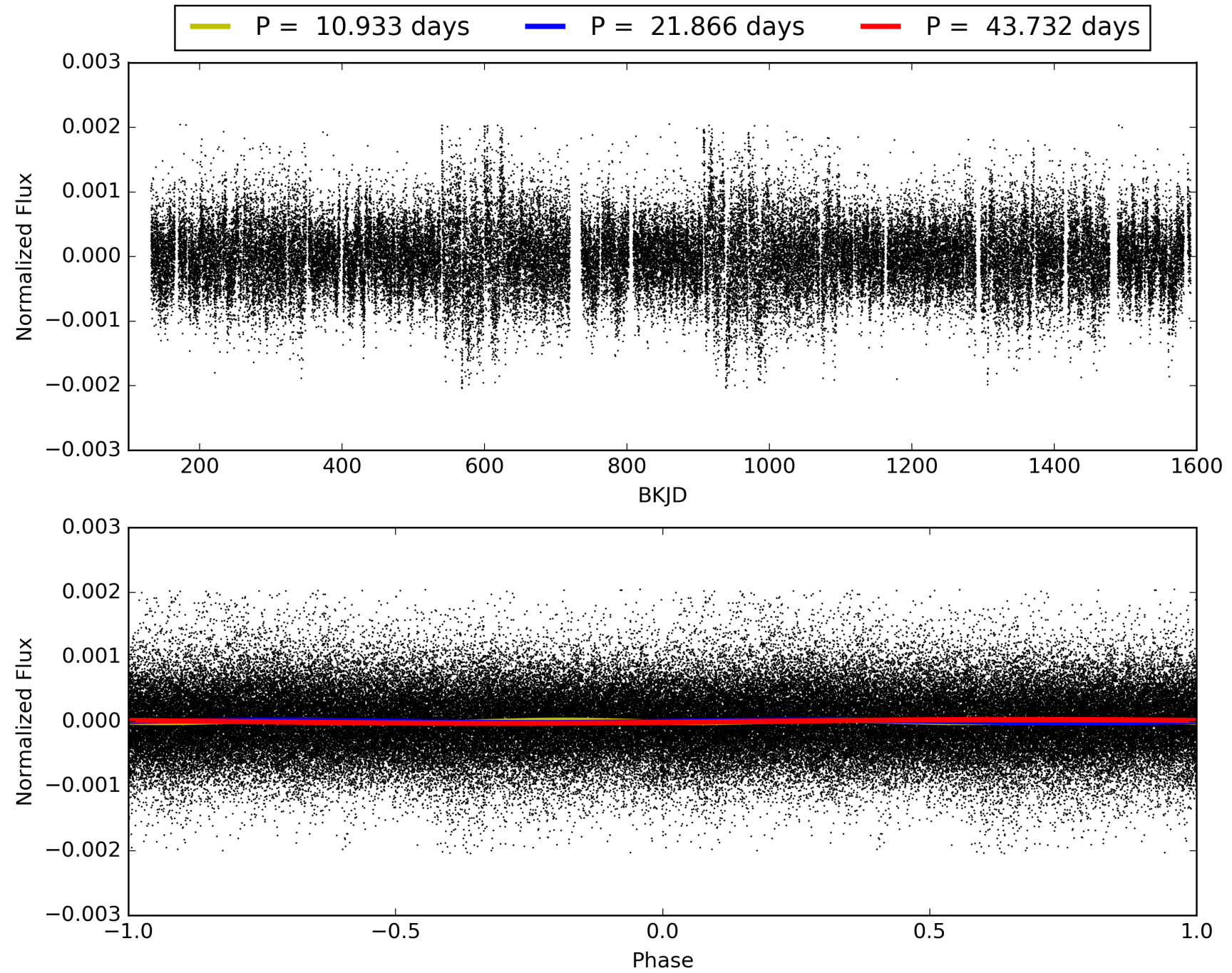
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 19:34:25 Z

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

TCE 003343281-01, PDC Light Curves

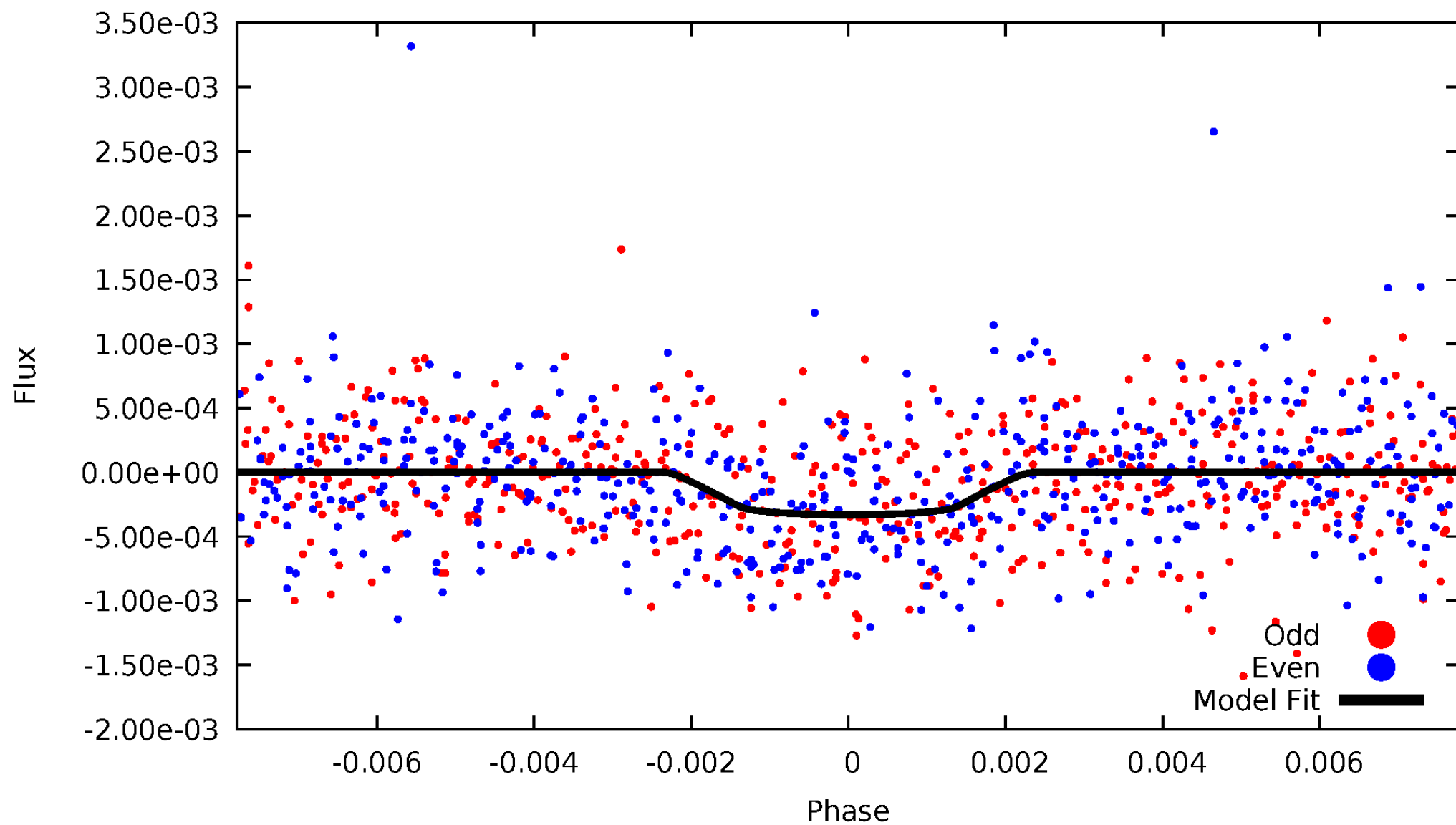


TCE 003343281-01



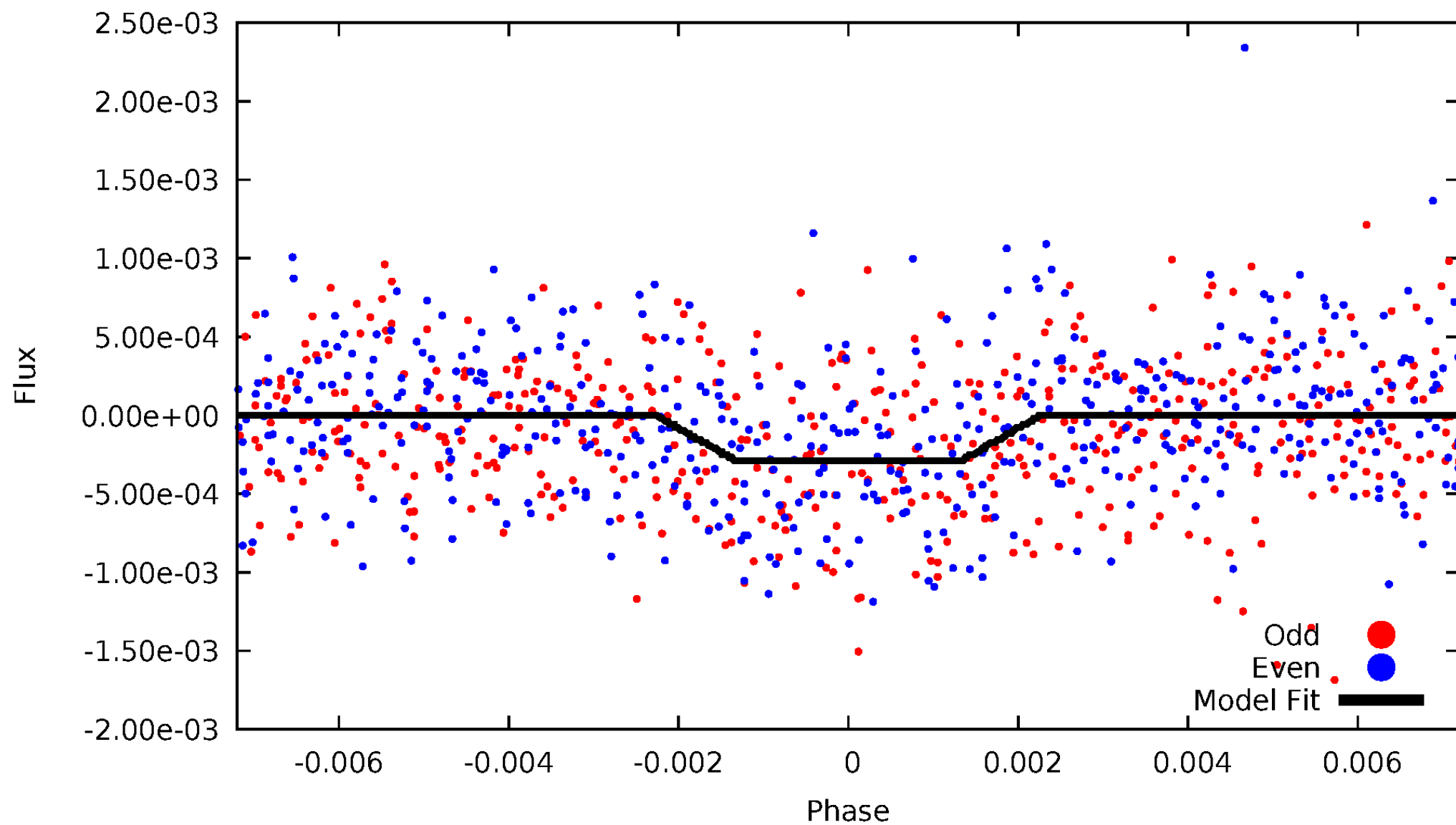
DV Odd/Even

TCE 003343281-01



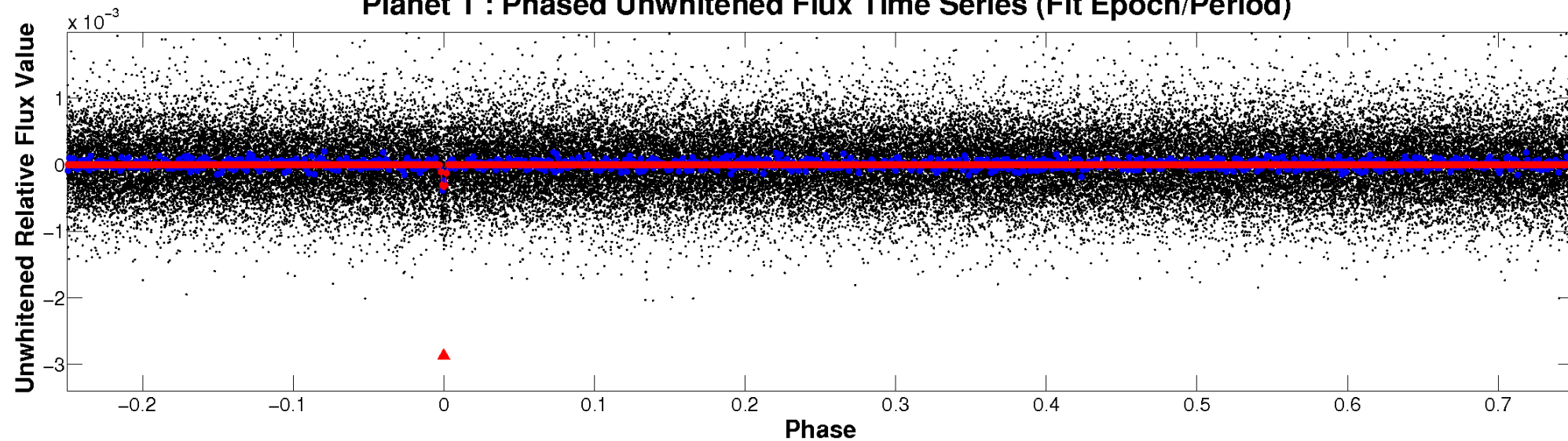
ALT Odd/Even

TCE 003343281-01

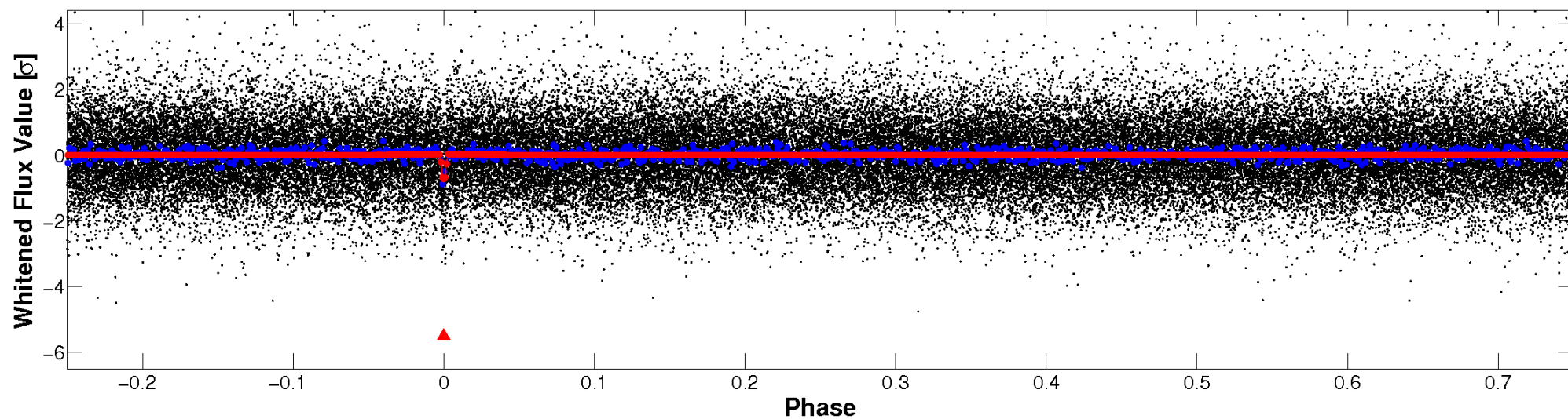


Non-Whitened Vs. Whitened Light Curve

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

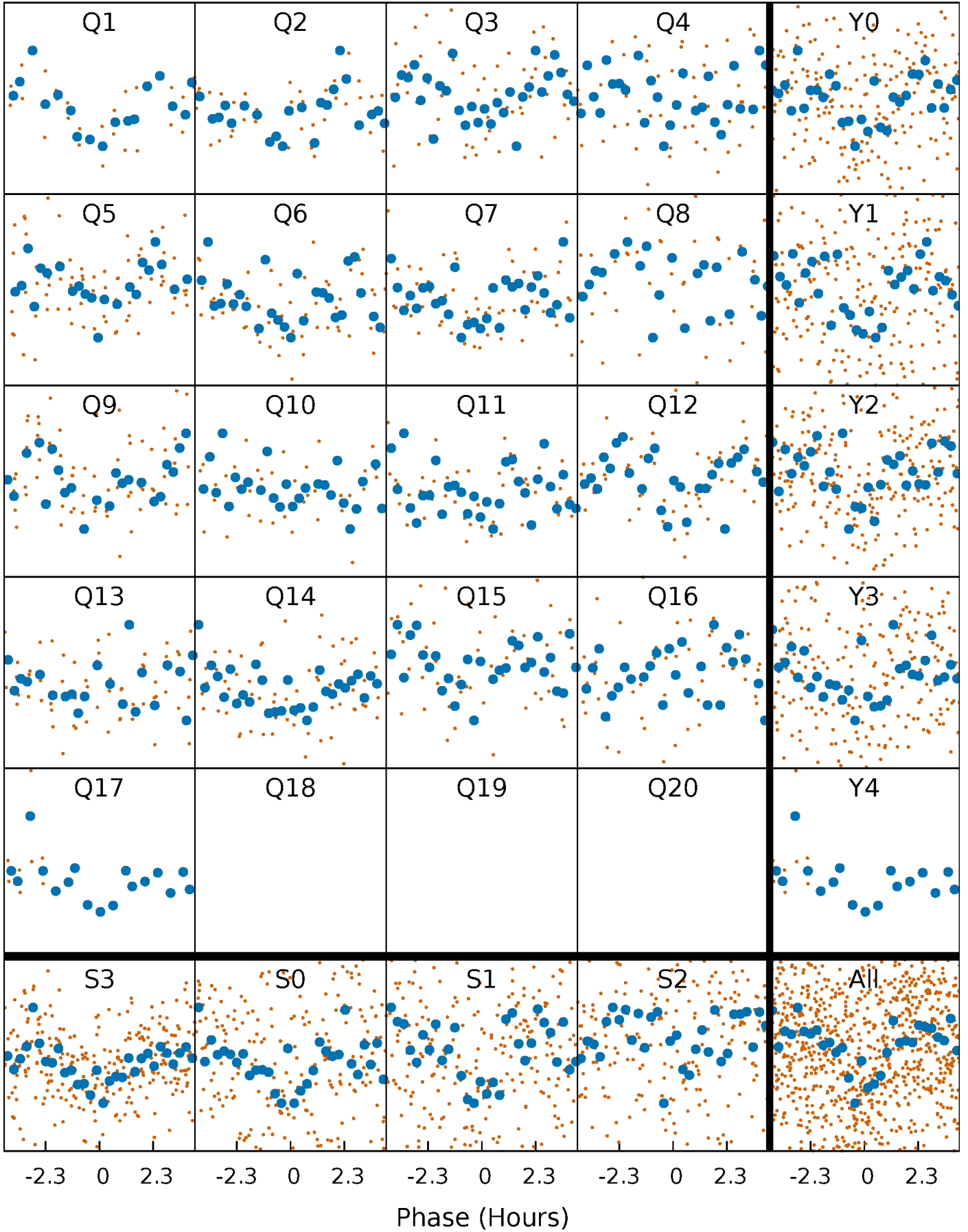


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



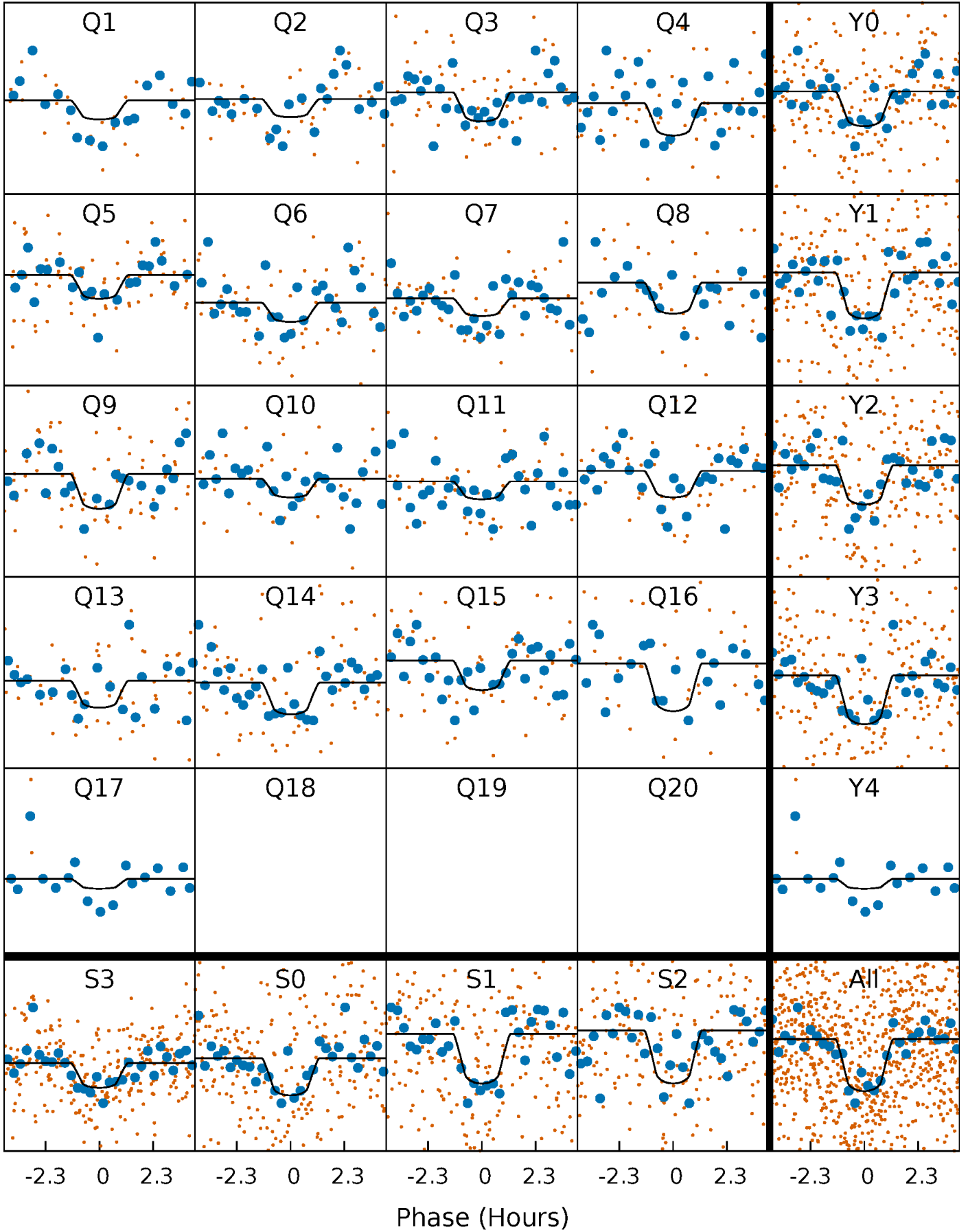
PDC Quarter-Phased Transit Curves

TCE 003343281-01 P= 21.866164 Days $T_0=138.515564$ (BKJD)



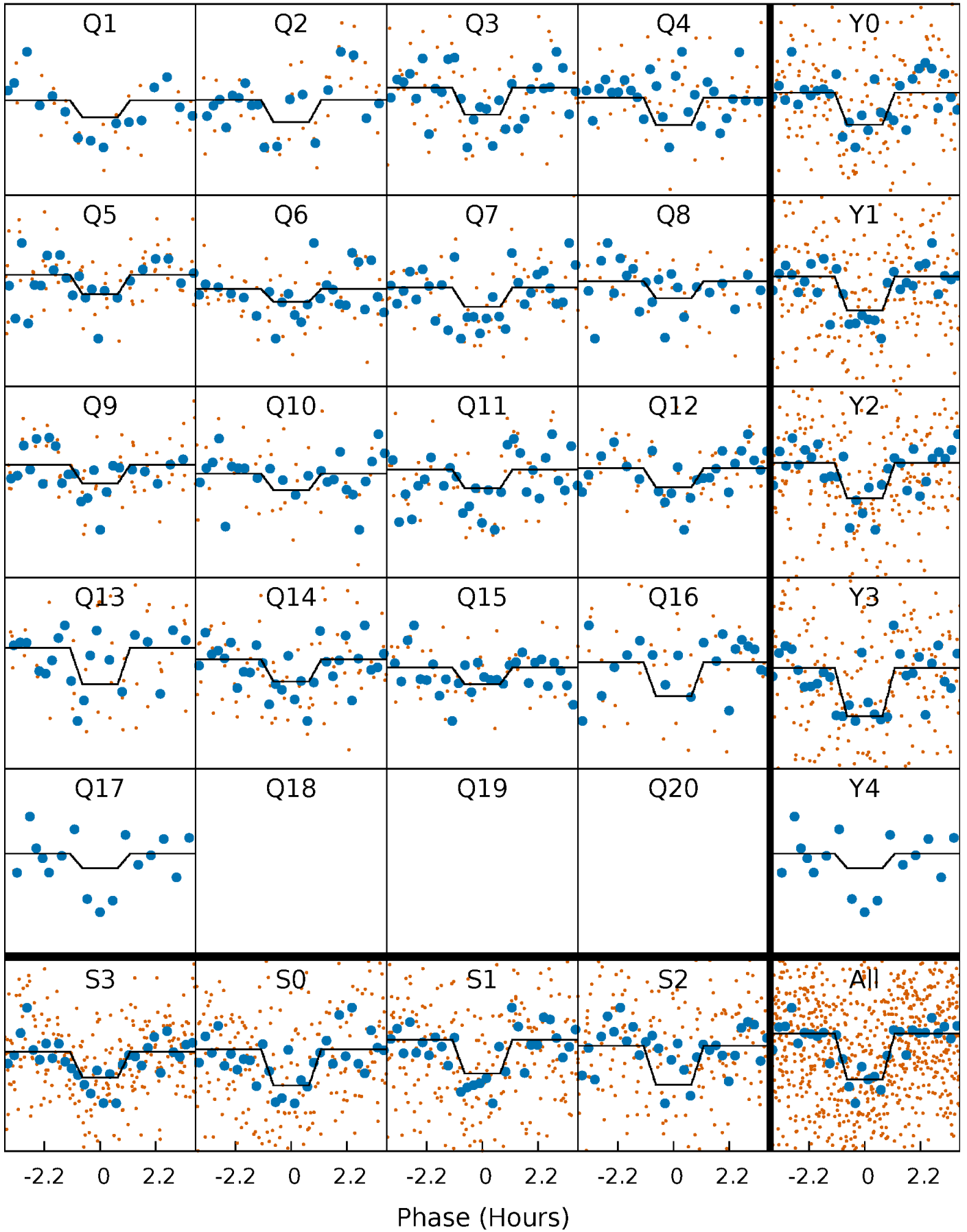
DV Quarter-Phased Transit Curves

TCE 003343281-01 P= 21.866164 Days $T_0=138.515564$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

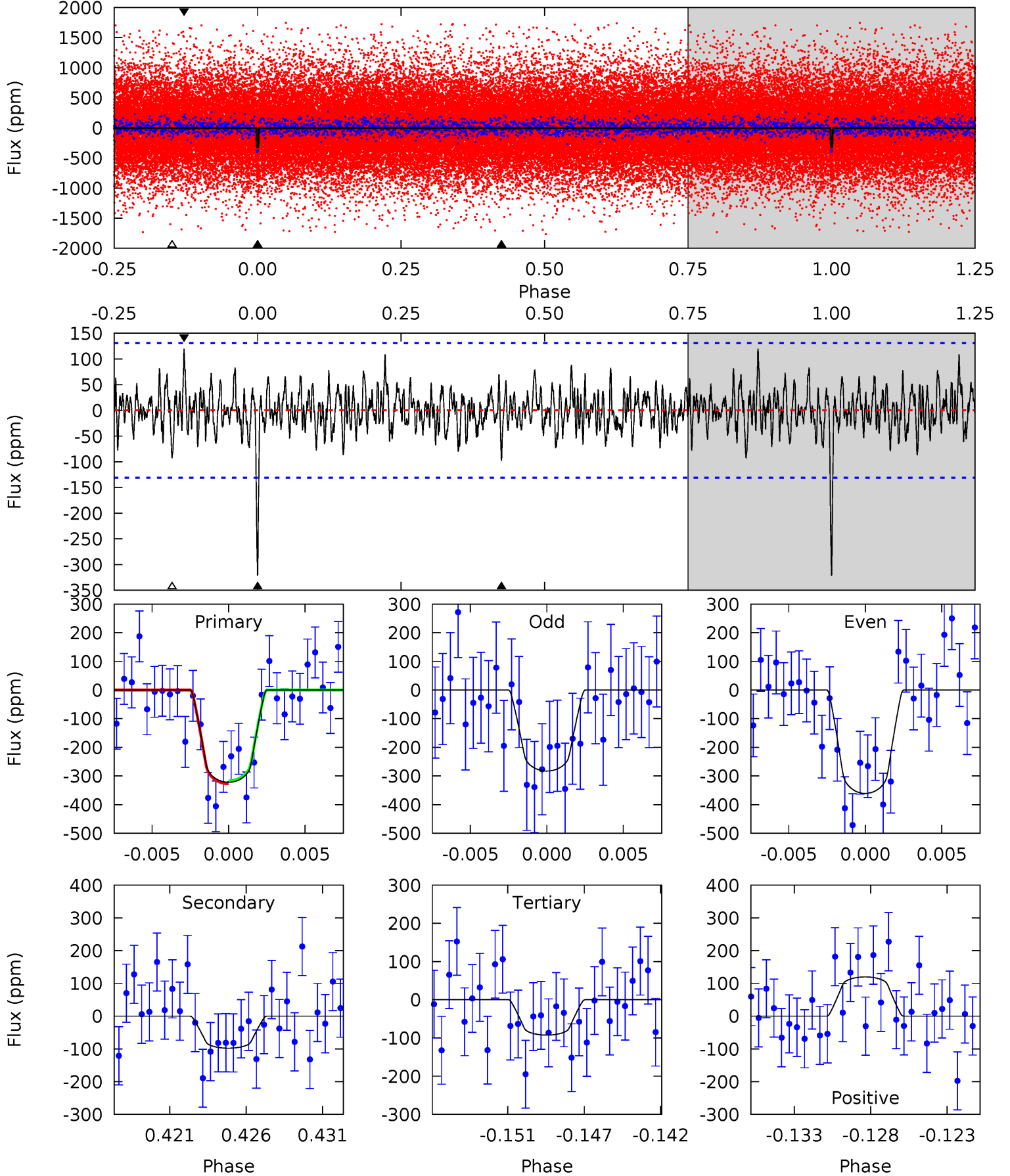
TCE 003343281-01 P= 21.866162 Days $T_0=138.515256$ (BKJD)



DV Model-Shift Uniqueness Test

003343281-01, P = 21.866164 Days, E = 116.649400 Days

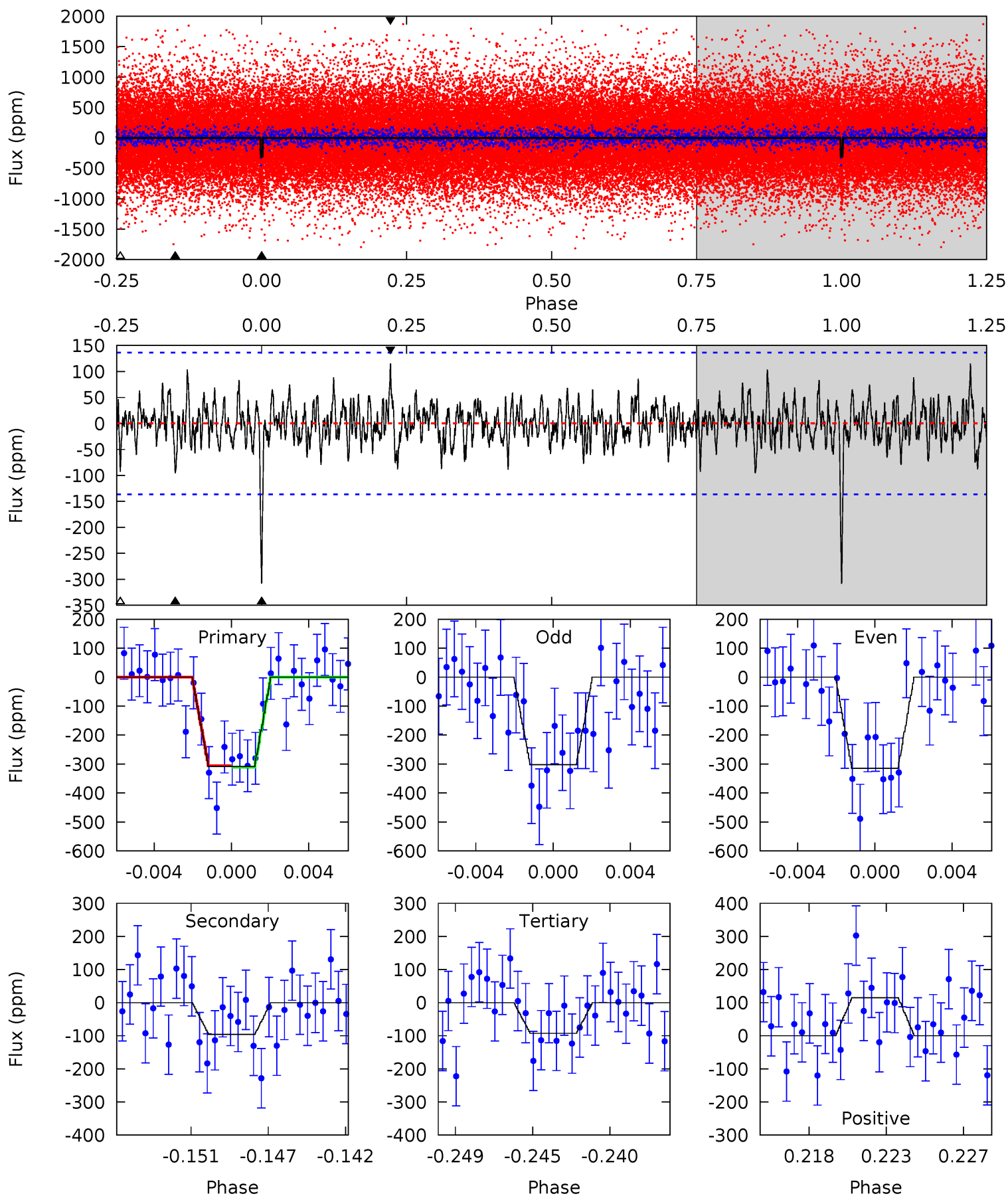
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	3.86	3.65	4.73	5.17	2.82	1.25	9.07	7.99	0.22	-0.86	1.55	1.06	0.27	0.21



Alt Model-Shift Uniqueness Test

003343281-01, P = 21.866162 Days, E = 116.649094 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.64	3.53	4.37	5.18	2.84	1.15	8.18	7.34	0.11	-0.73	0.24	0.97	0.27	0.10



Stellar Parameters For KIC 003343281

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6309^{+175}_{-219}	$4.402^{+0.072}_{-0.203}$	$-0.180^{+0.250}_{-0.300}$	$1.077^{+0.364}_{-0.145}$	$1.062^{+0.173}_{-0.129}$	$1.195^{+0.447}_{-0.619}$
	+3%/-3%	+2%/-5%	+139%/-167%	+34%/-13%	+16%/-12%	+37%/-52%
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 003343281-01 / KOI 4860.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-98 ± 25	$2.50^{+1.69}_{-1.32}$	1037^{+78}_{-54}	4531^{+1990}_{-812}	200^{+791}_{-132}
Alt.	-96 ± 26	$2.33^{+1.76}_{-1.45}$	1038^{+80}_{-51}	4637^{+2759}_{-883}	238^{+1359}_{-166}

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 $A_{obs} \gg 1.0$

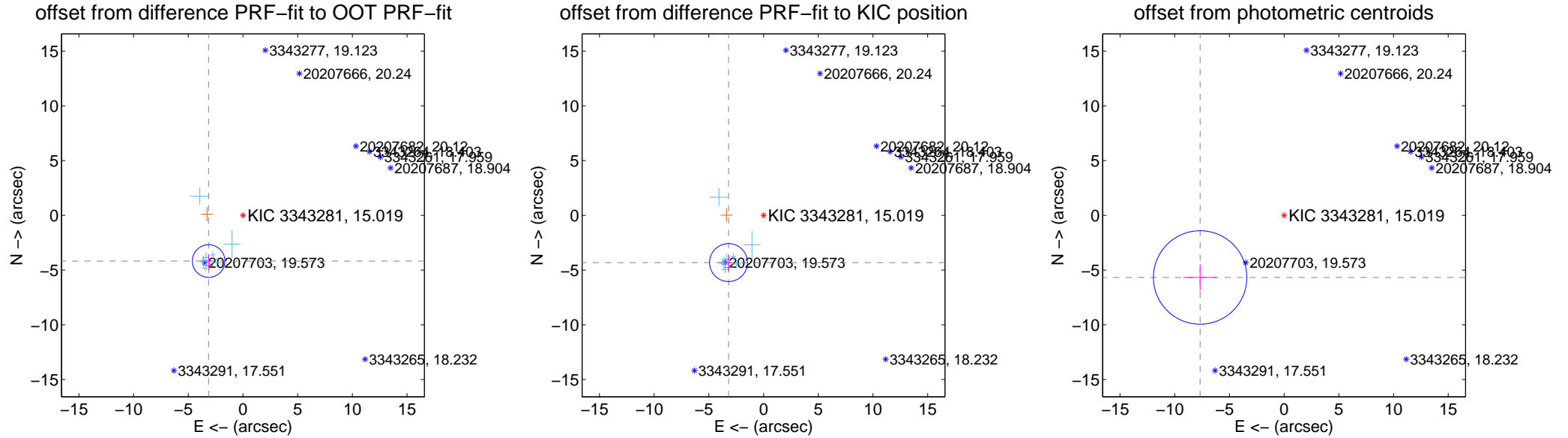
DV Centroid Data

Supplemental centroid analysis for 003343281-01. Kepler magnitude: 15.02. Transit SNR 9.63

There are 8 quarters with good PRF difference image offsets

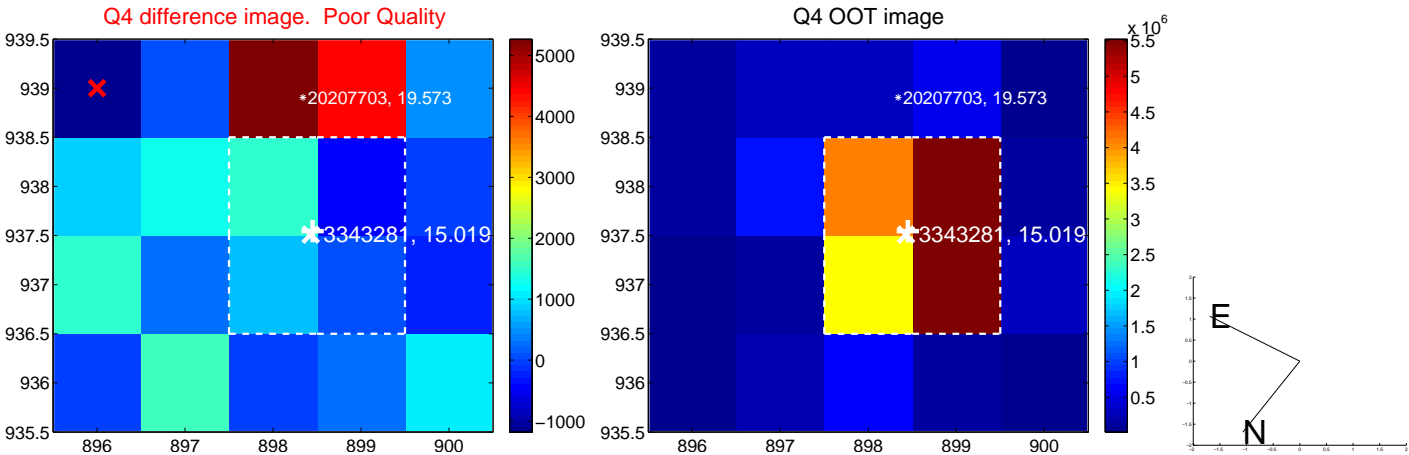
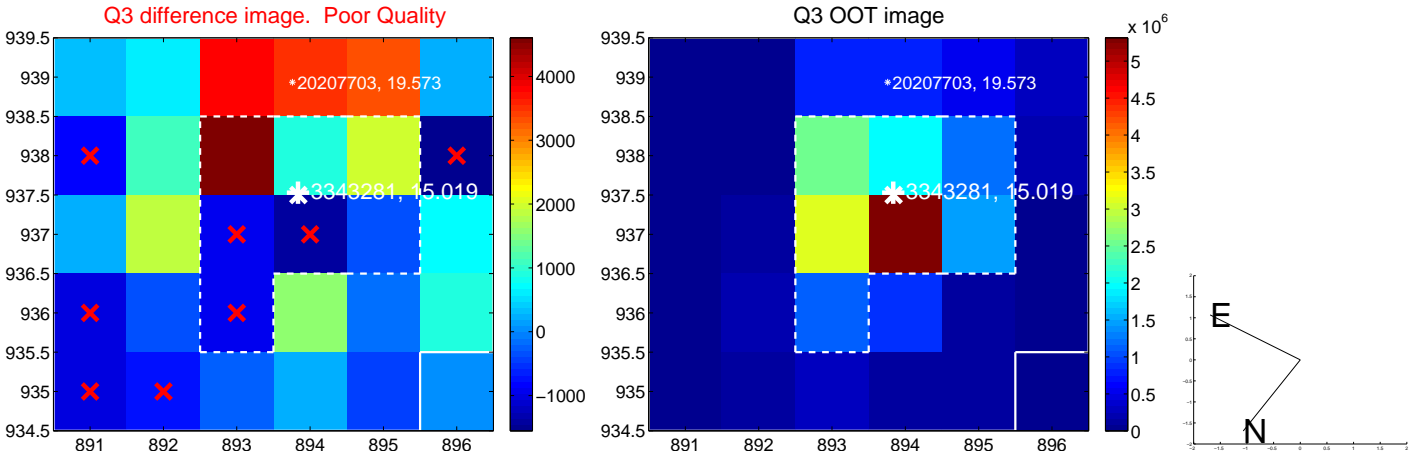
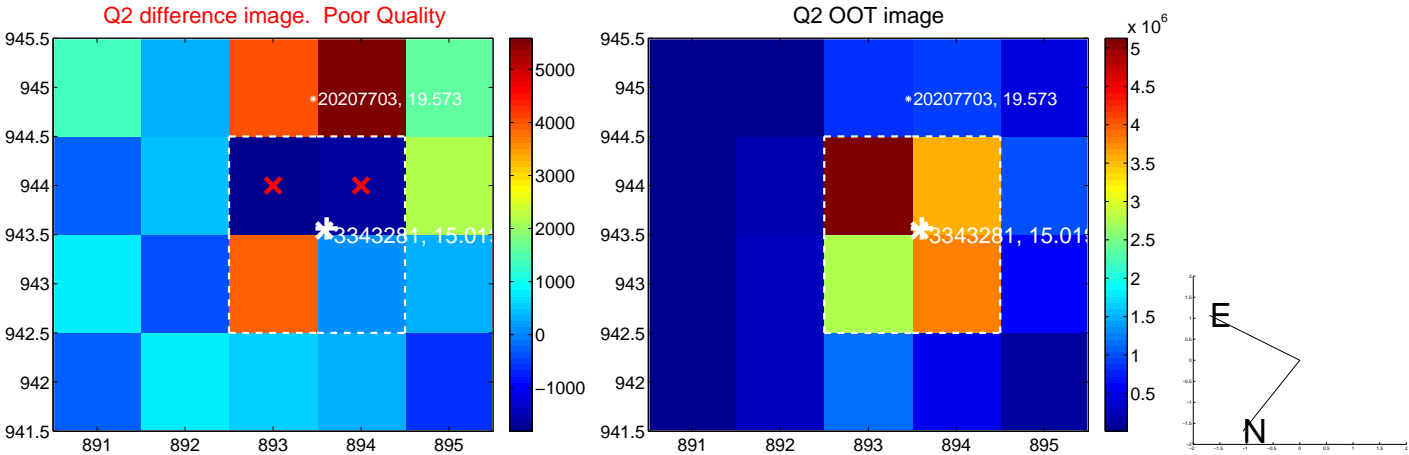
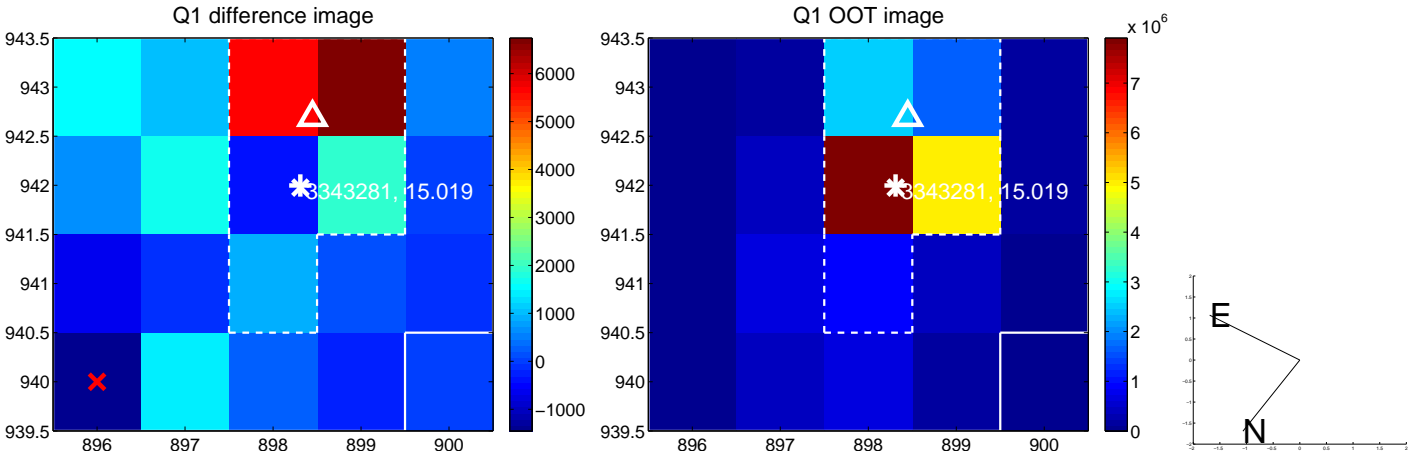
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.228 ± 0.497	10.52	3.140 ± 0.297	-4.181 ± 0.617
PRF-fit source offset from KIC position	5.375 ± 0.577	9.31	3.202 ± 0.252	-4.317 ± 0.707
photometric centroid source offset	9.55 ± 1.42	6.71	7.68 ± 1.52	-5.68 ± 1.22

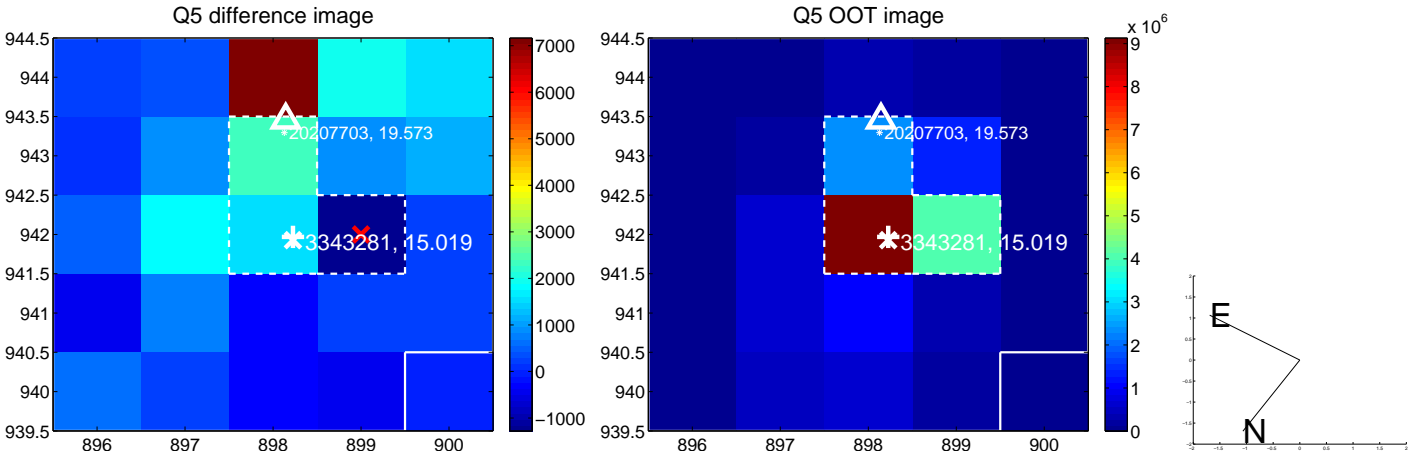


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

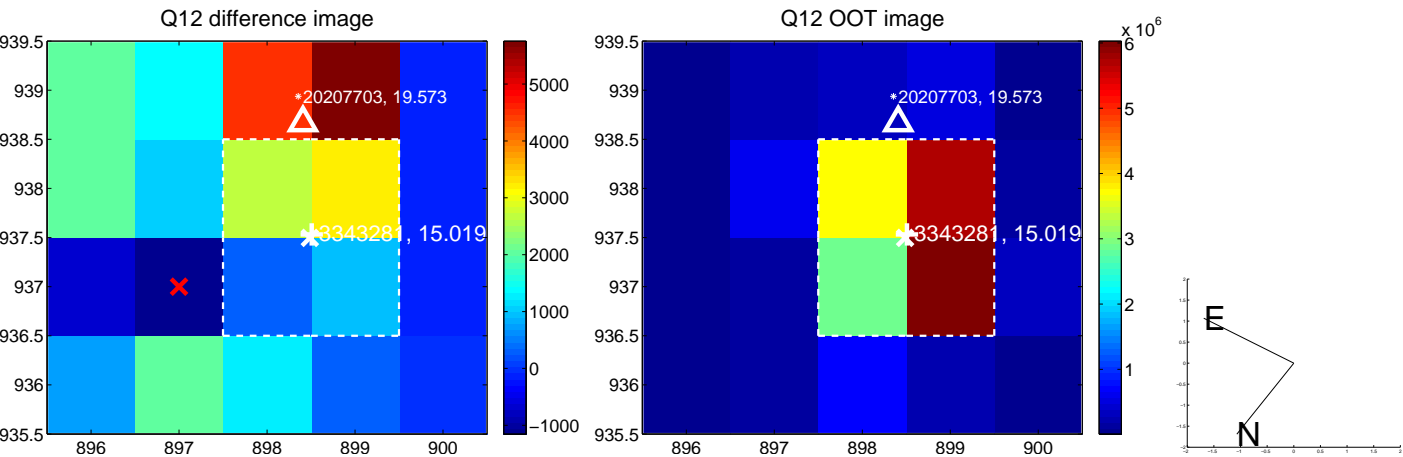
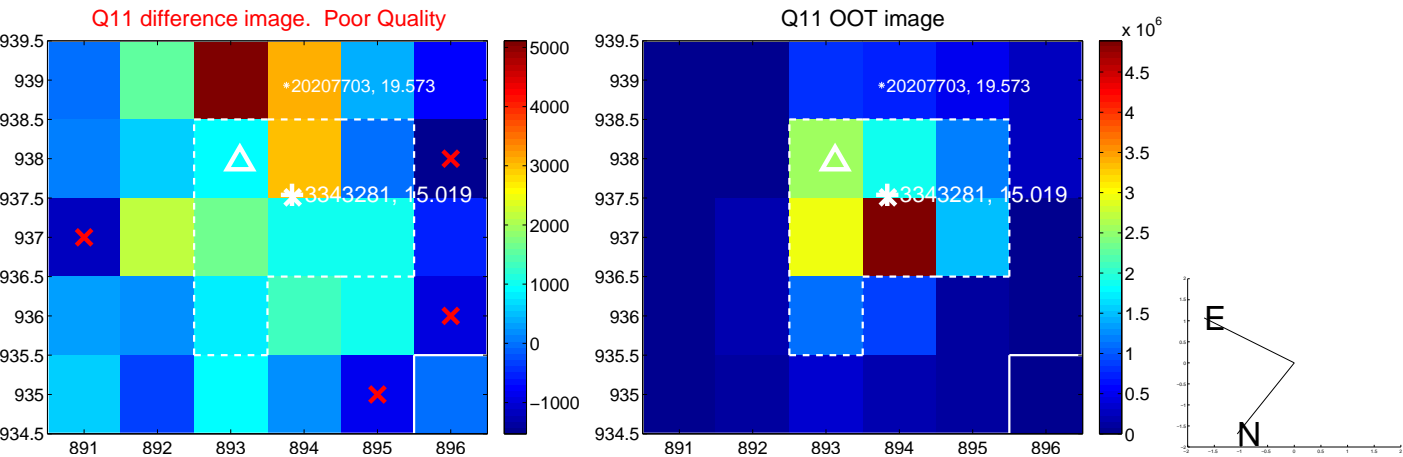
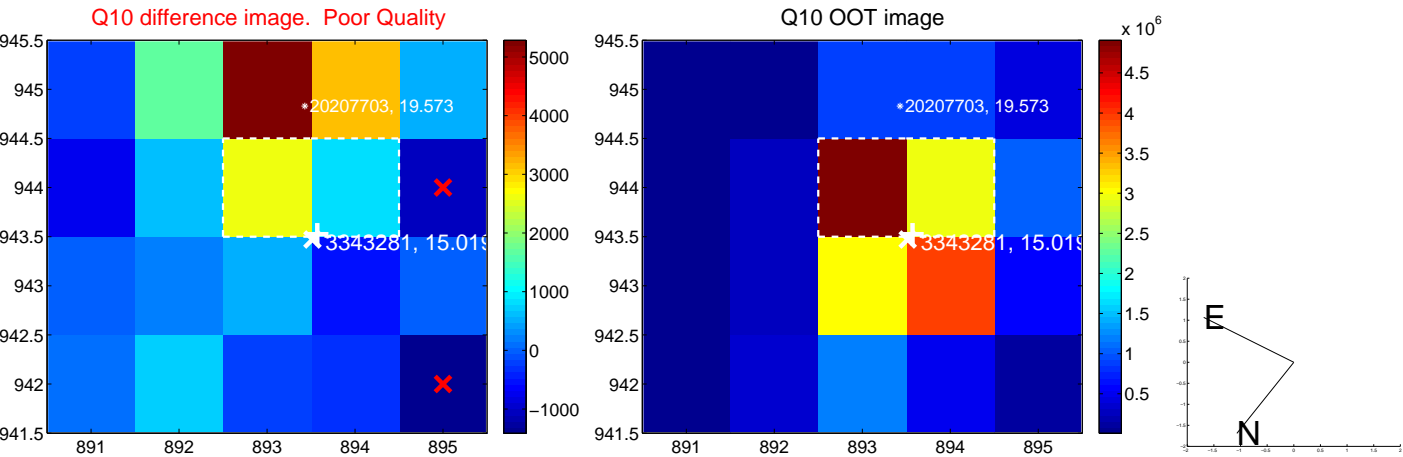
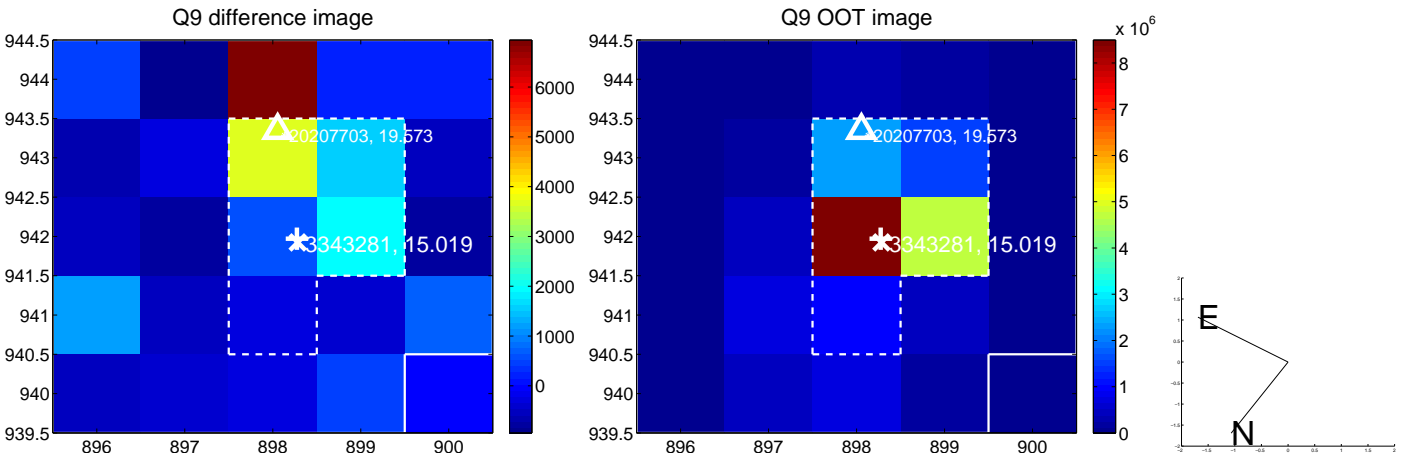
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



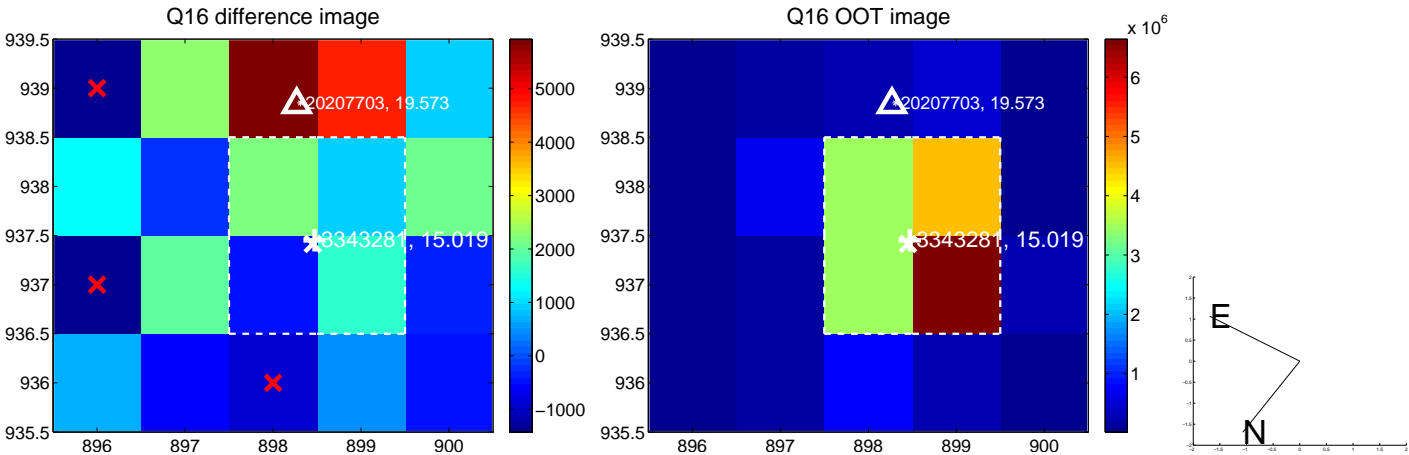
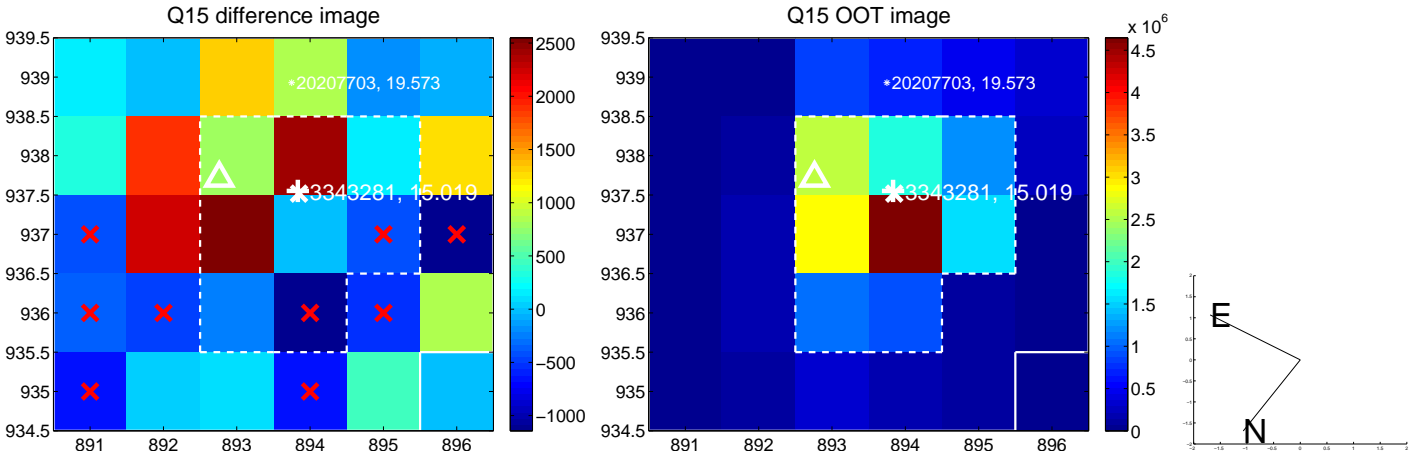
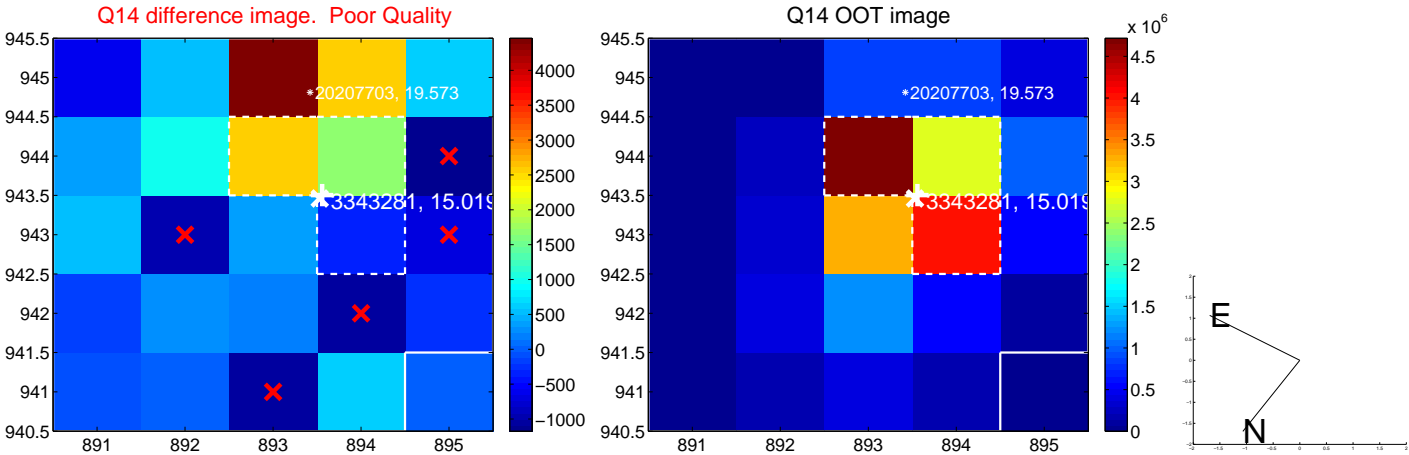
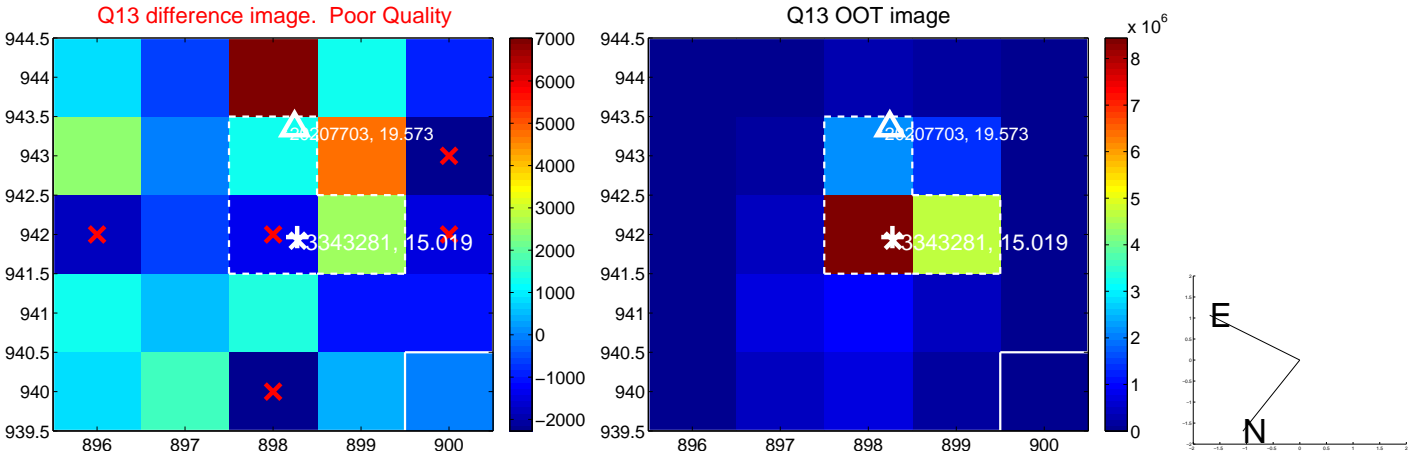
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



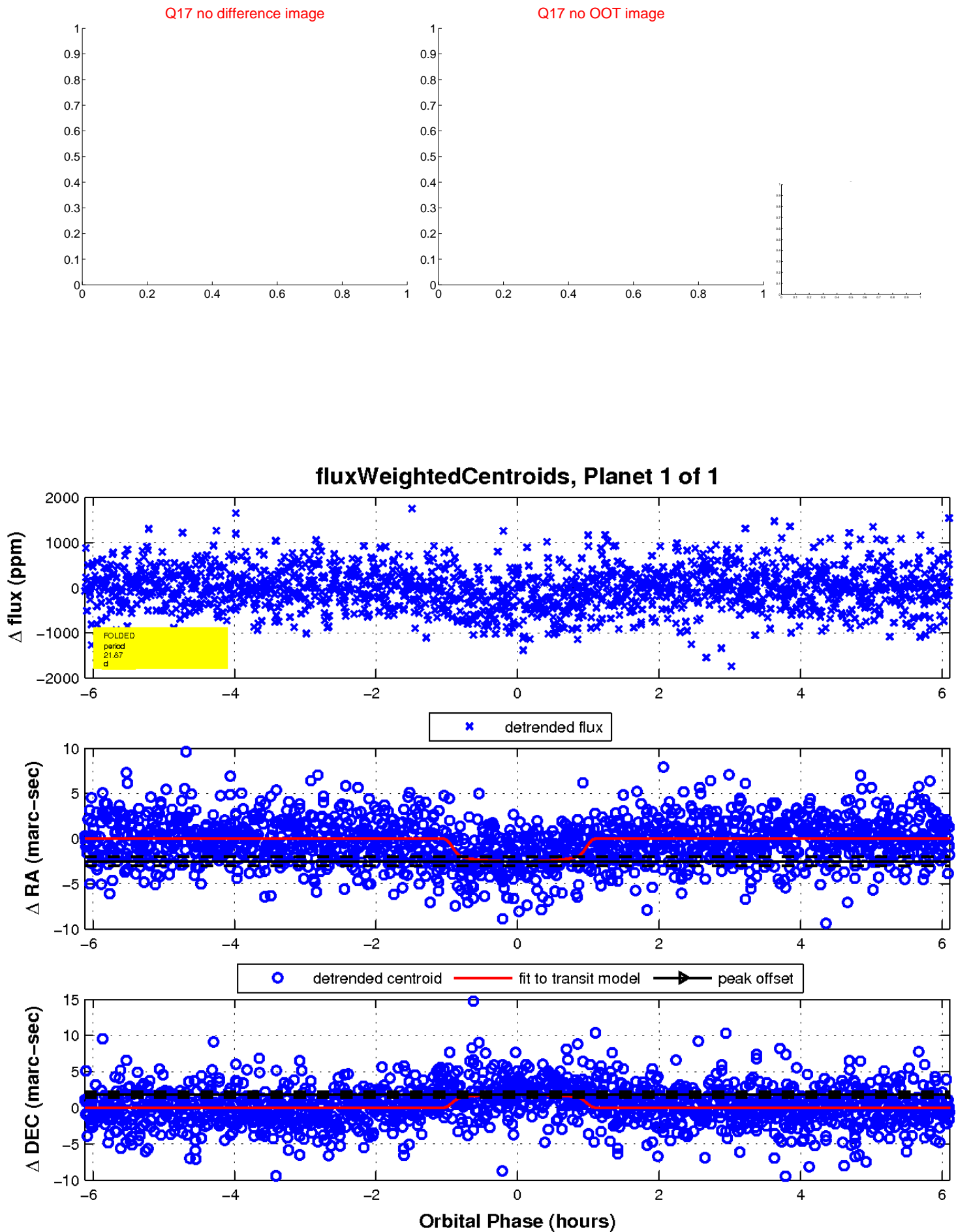
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

