

KIC 012055345

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})
012055345-01	OBS	No	0.534863	131.531757	6.2	5.117	8.5	4.2	5.40	9155	1.37	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012055345-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

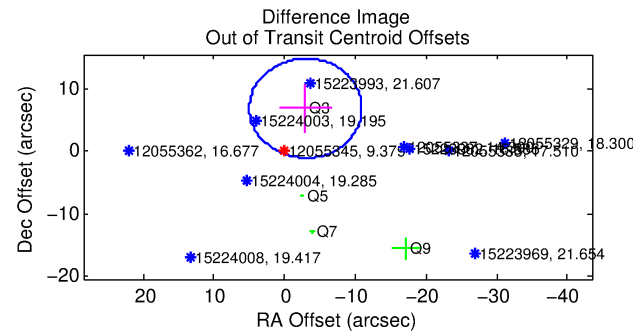
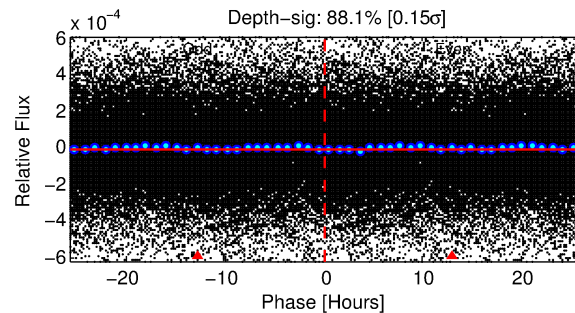
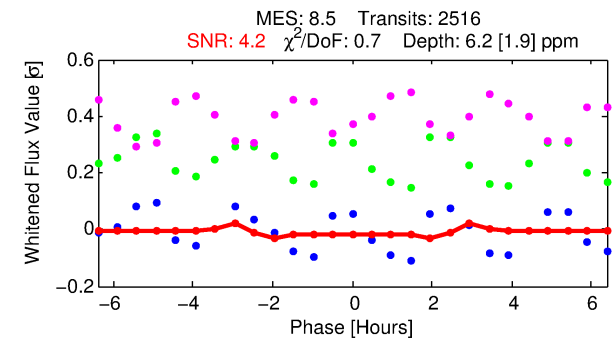
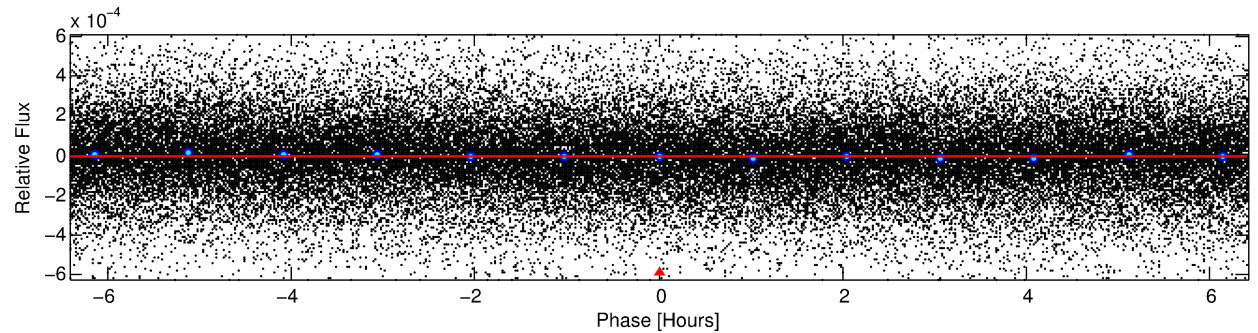
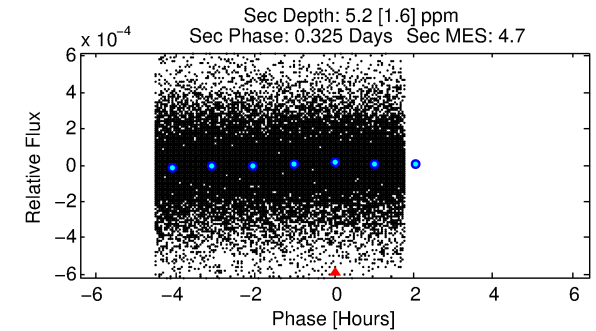
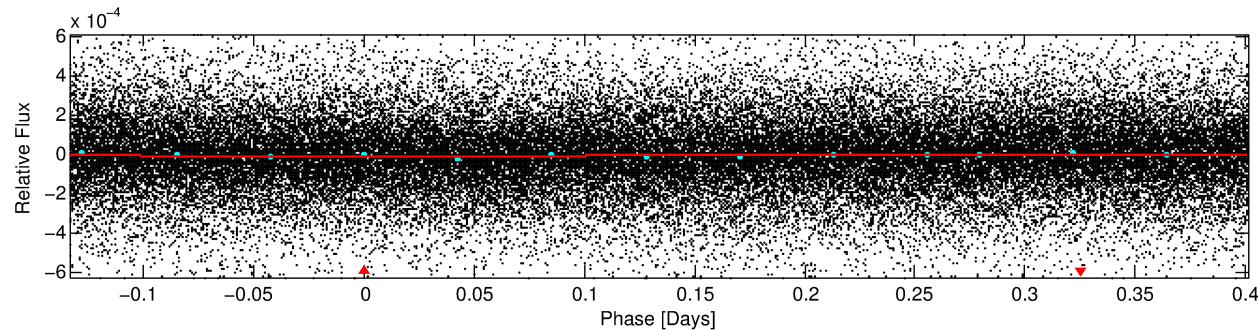
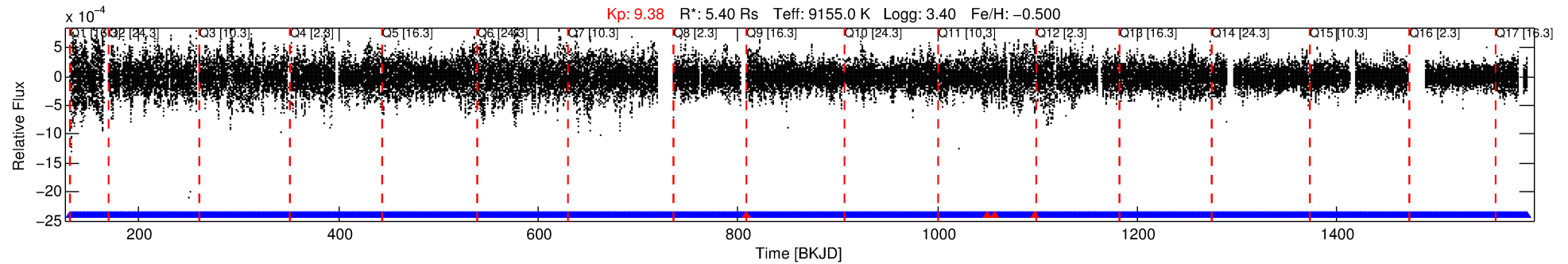
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012055345-01

No Significant Match Found

DV One-Page Summary

KIC: 12055345 Candidate: 1 of 1 Period: 0.535 d



DV Fit Results:

Period = 0.53486 [0.00002] d
Epoch = 131.5318 [0.0029] BKJD
 $R_p/R^* = 0.0023$ [0.0012]
 $a/R^* = 1.05$ [0.39]
 $b = 0.12$ [29.86]
 $\text{Seff} = \text{N/A}$
 $\text{Teq} = \text{N/A}$
 $R_p = 1.37$ [1.16] R_e
 $a = \text{N/A}$
 $\text{Ag} = \text{N/A}$
 $\text{Teffp} = \text{N/A}$

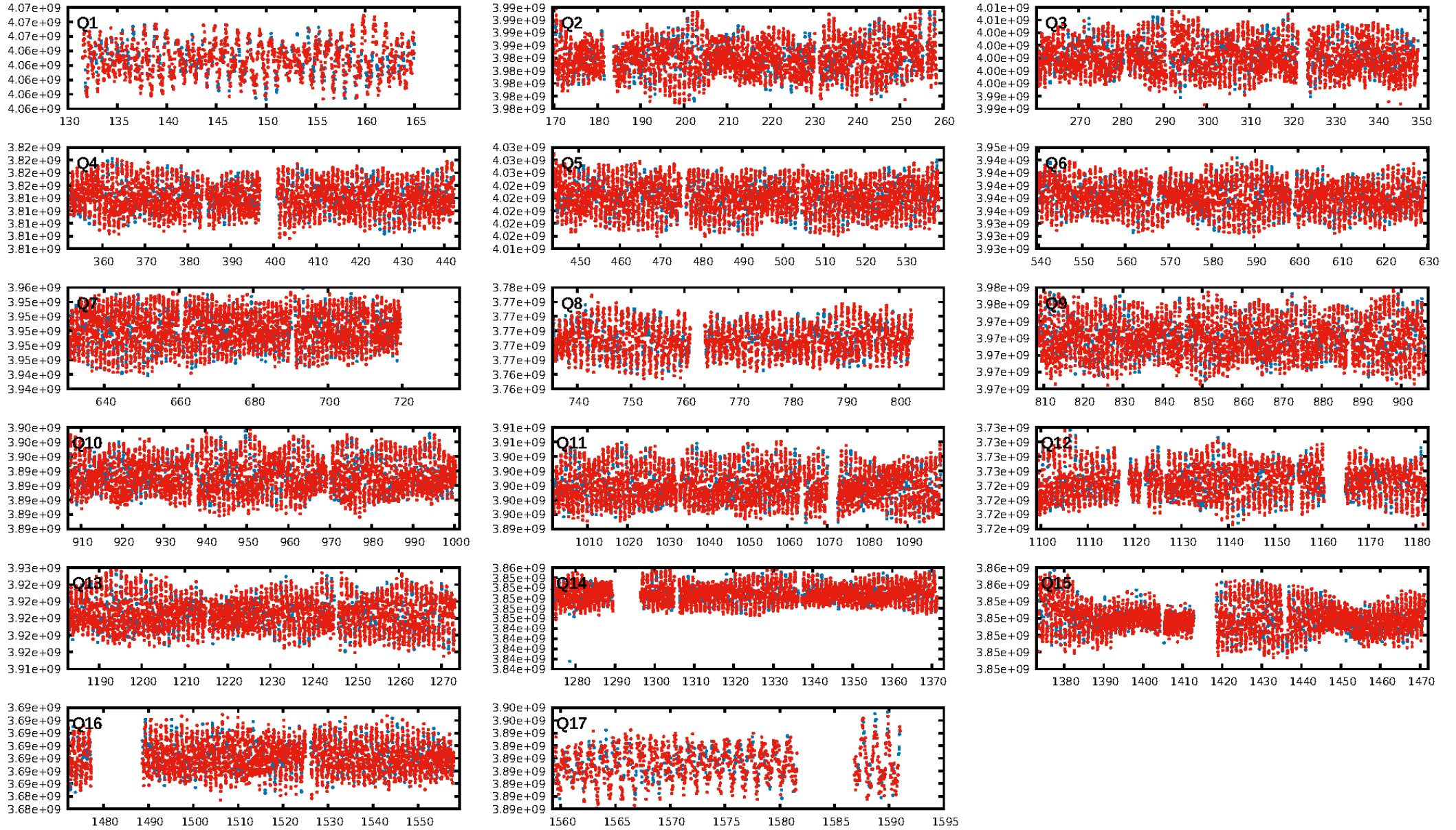
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2399/2403]
GhostDiagnostic-chr: N/A
Centroid-sig: 62.8%
Centroid-so: 0.498 arcsec [0.41 σ]
OotOffset-rm: 7.473 arcsec [2.82 σ]
OotOffset-st: 0/2/0/2 [4]
KicOffset-rm: 7.447 arcsec [2.67 σ]
KicOffset-st: 0/2/0/2 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [17/17]

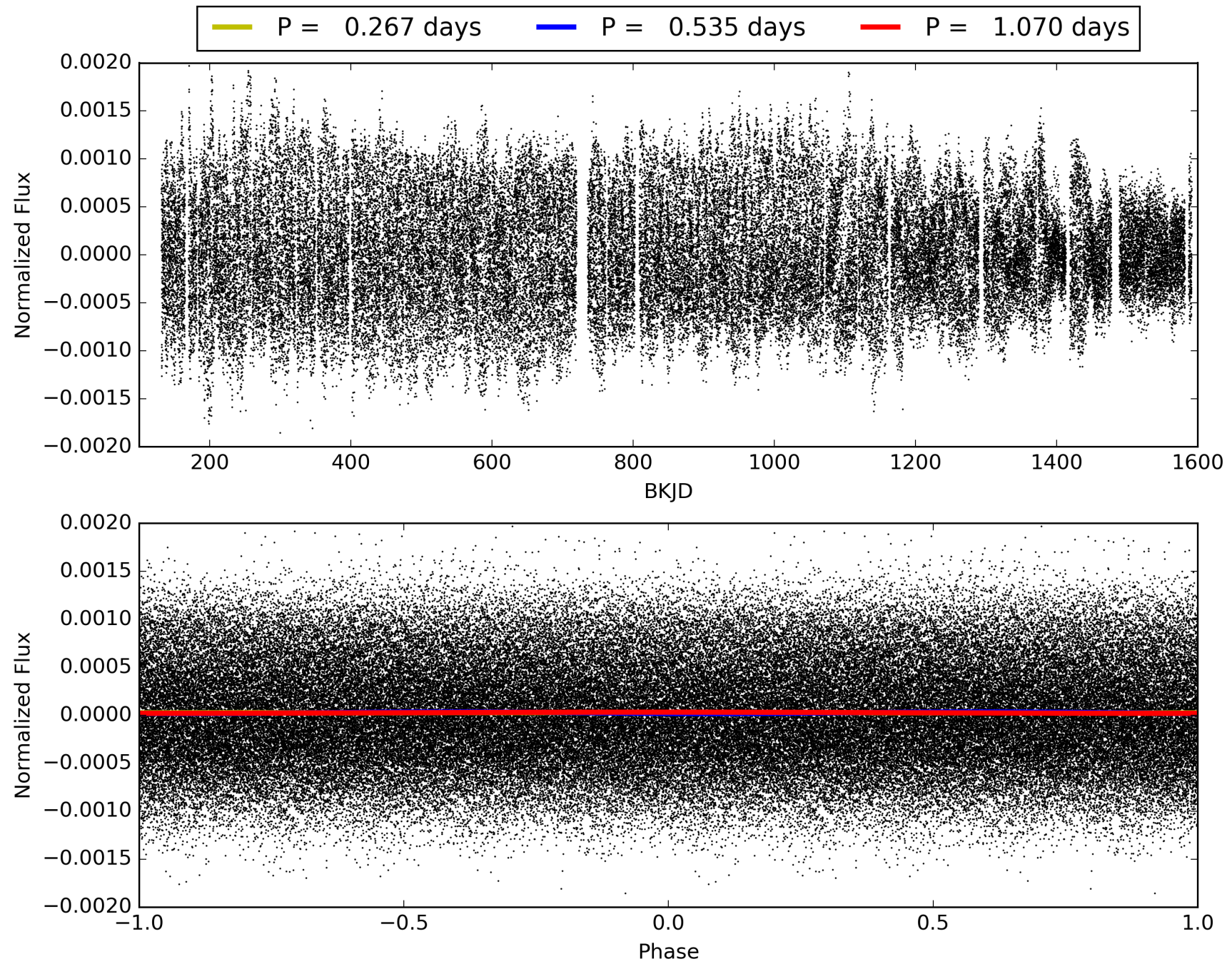
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:05:01 Z

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

TCE 012055345-01, PDC Light Curves

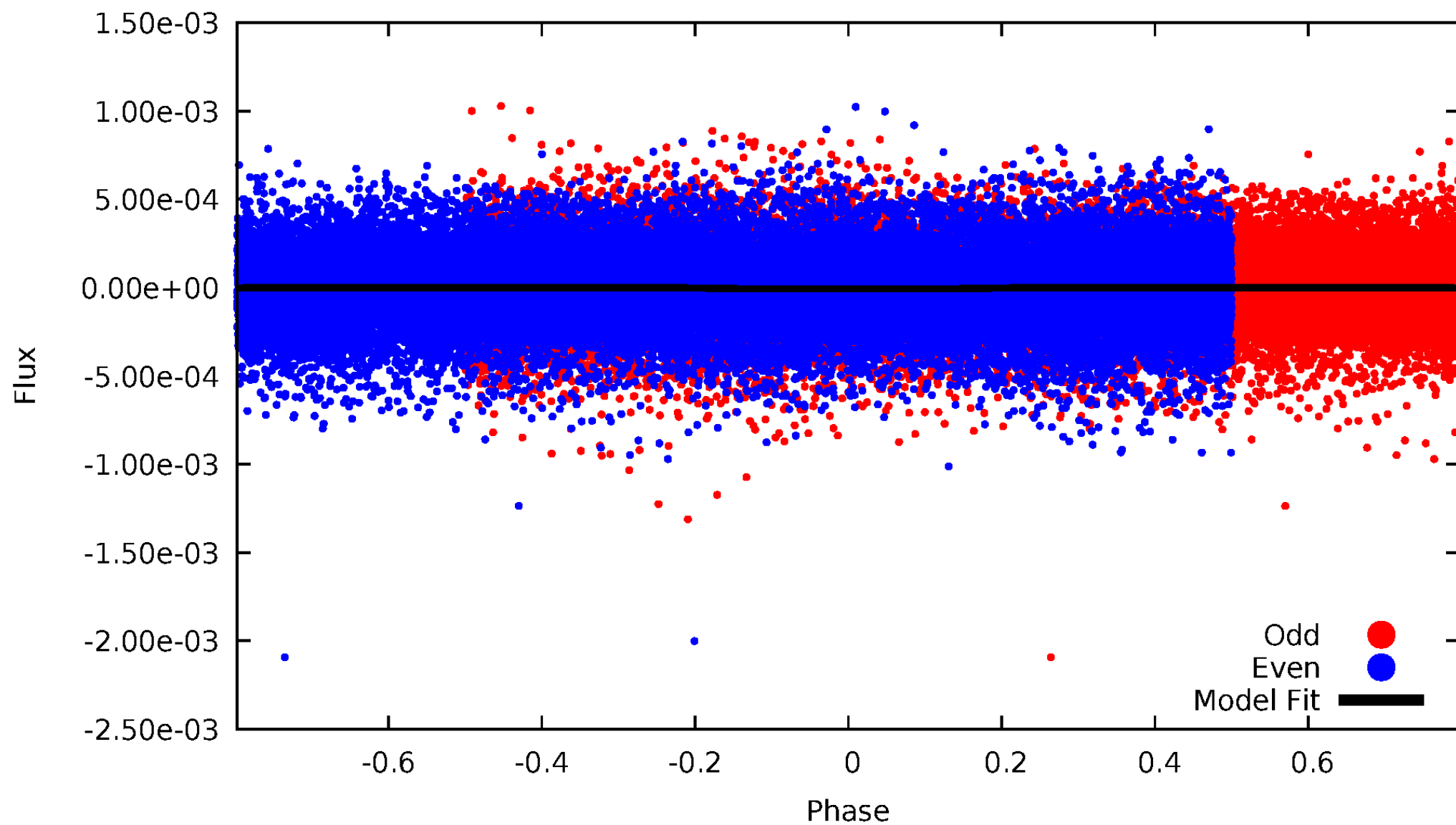


TCE 012055345-01



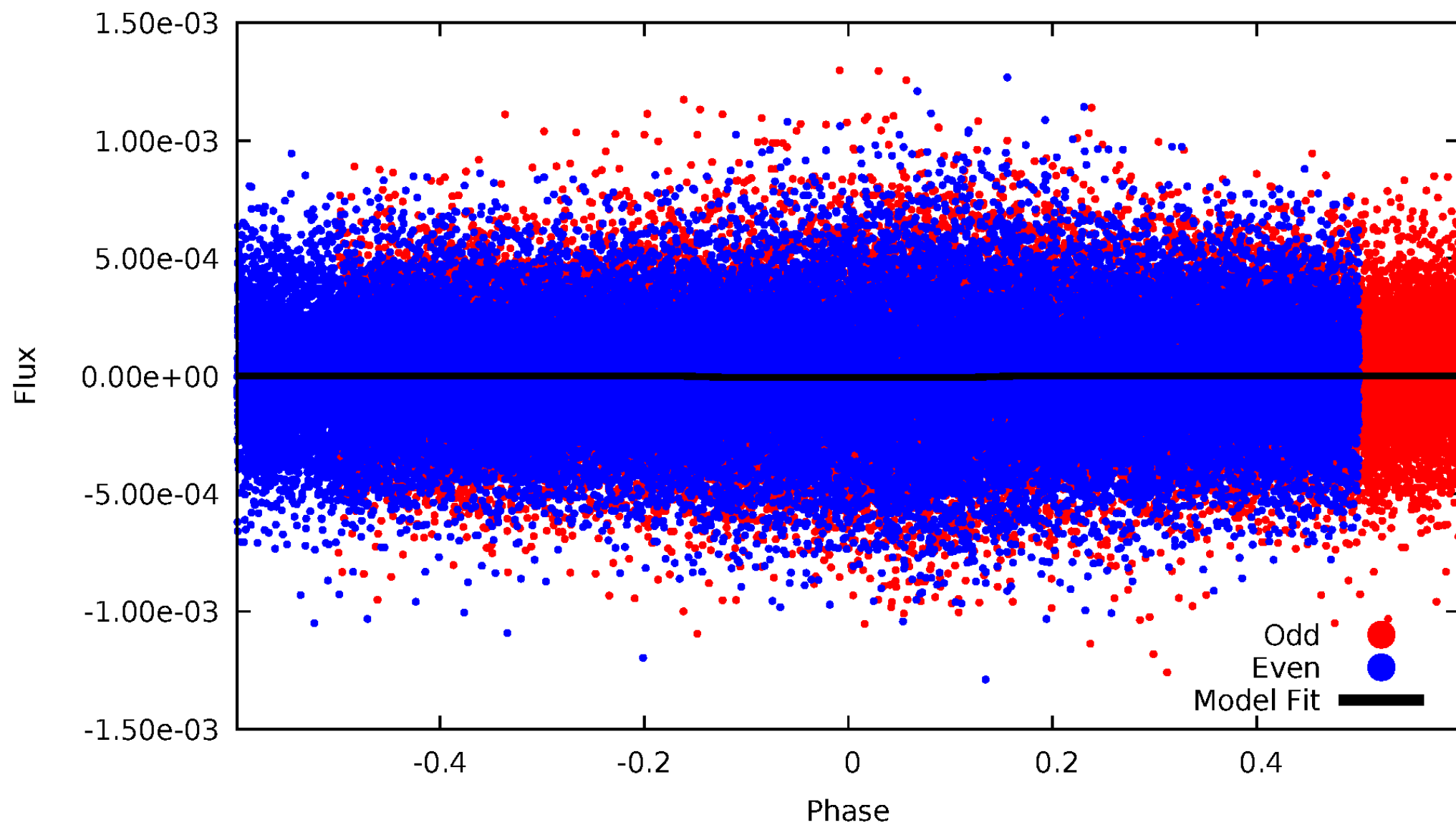
DV Odd/Even

TCE 012055345-01



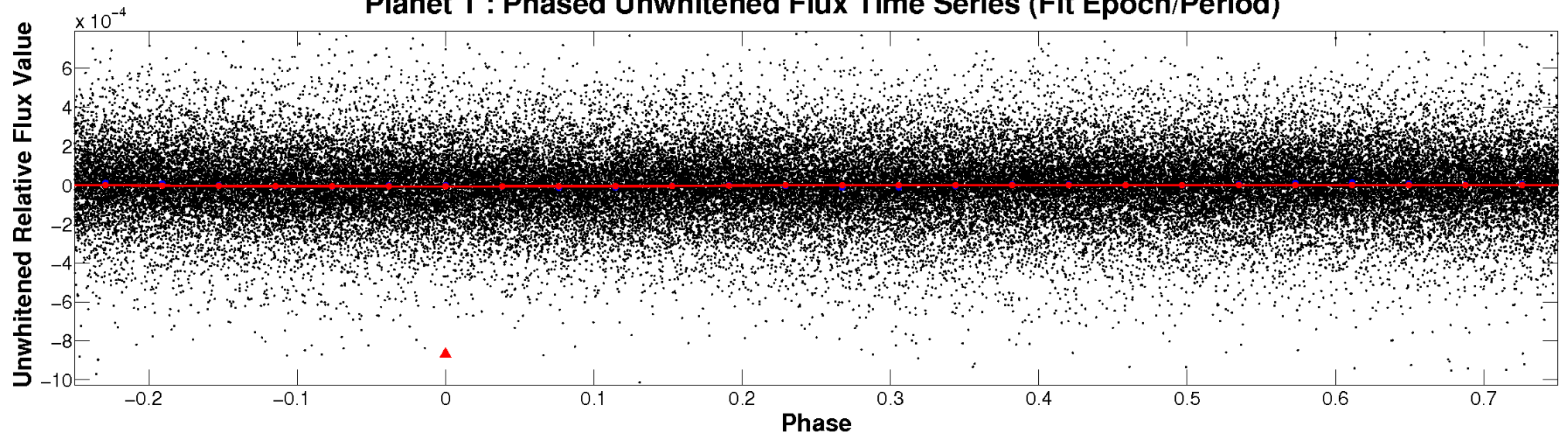
ALT Odd/Even

TCE 012055345-01

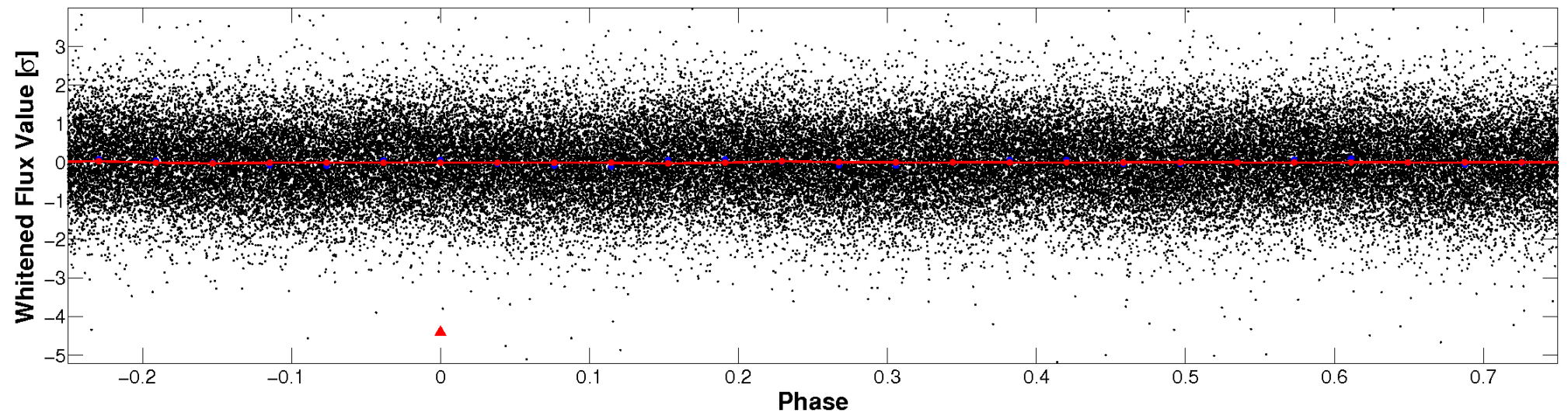


Non-Whitened Vs. Whitened Light Curve

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

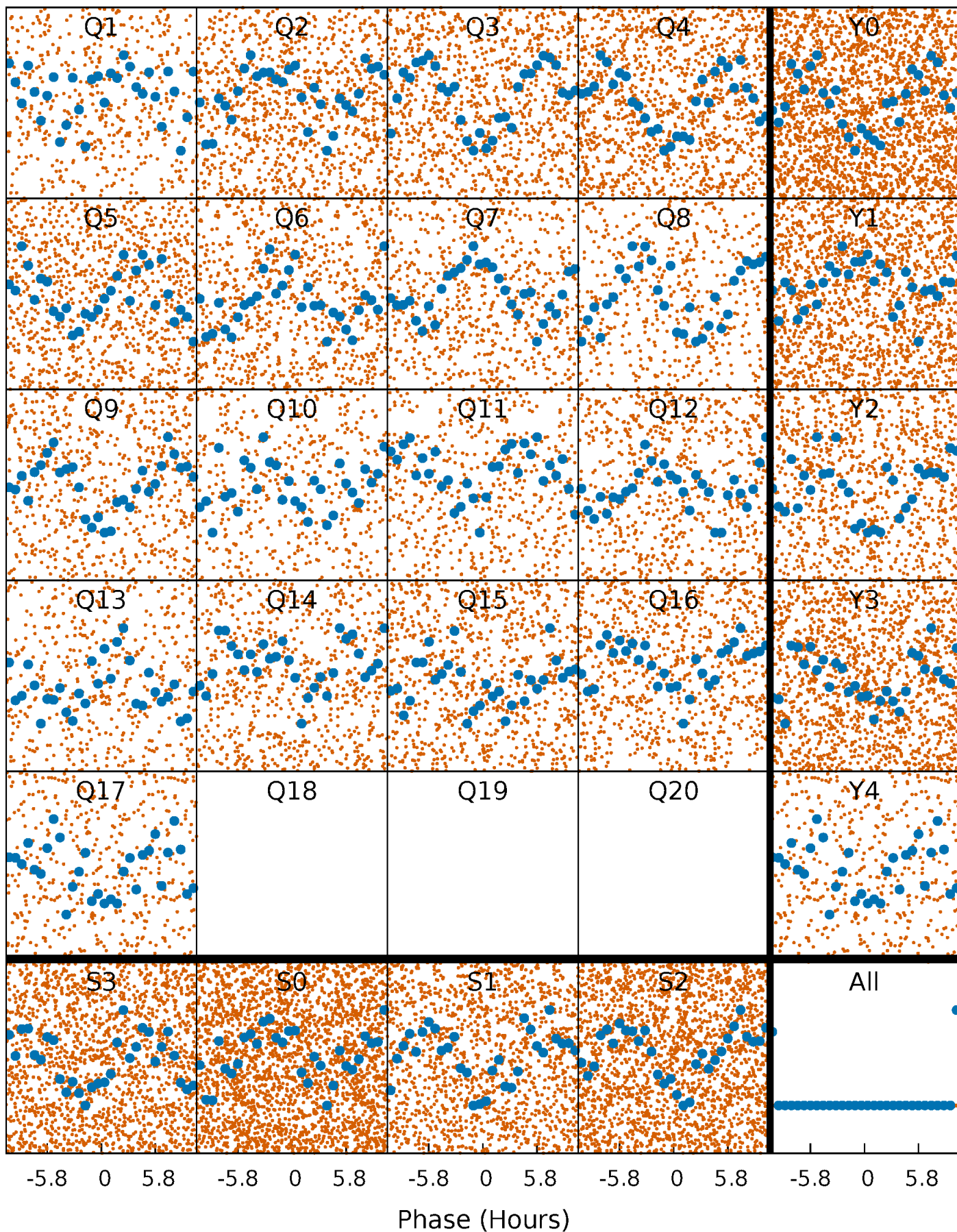


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



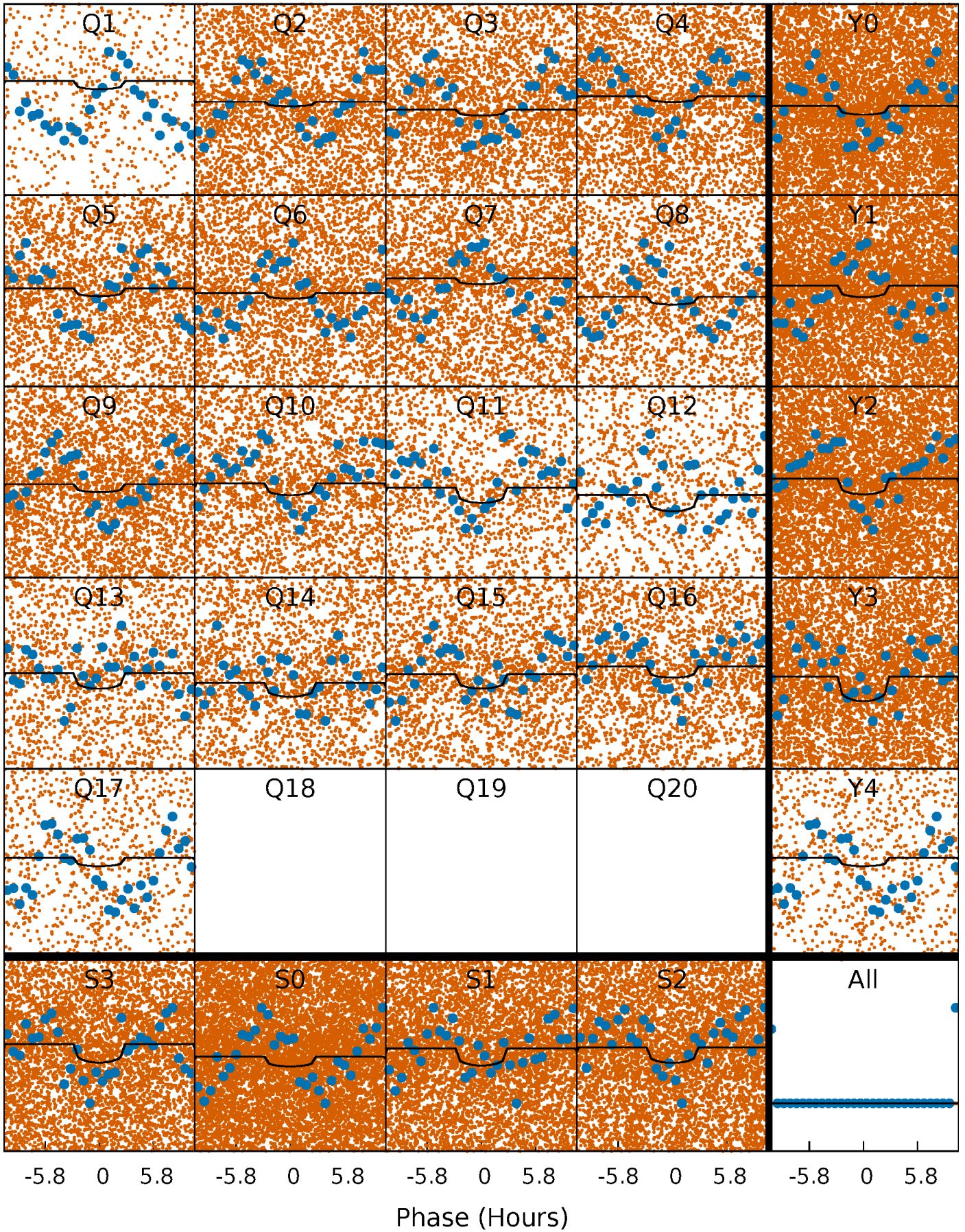
PDC Quarter-Phased Transit Curves

TCE 012055345-01 P= 0.534863 Days $T_0=131.531757$ (BKJD)



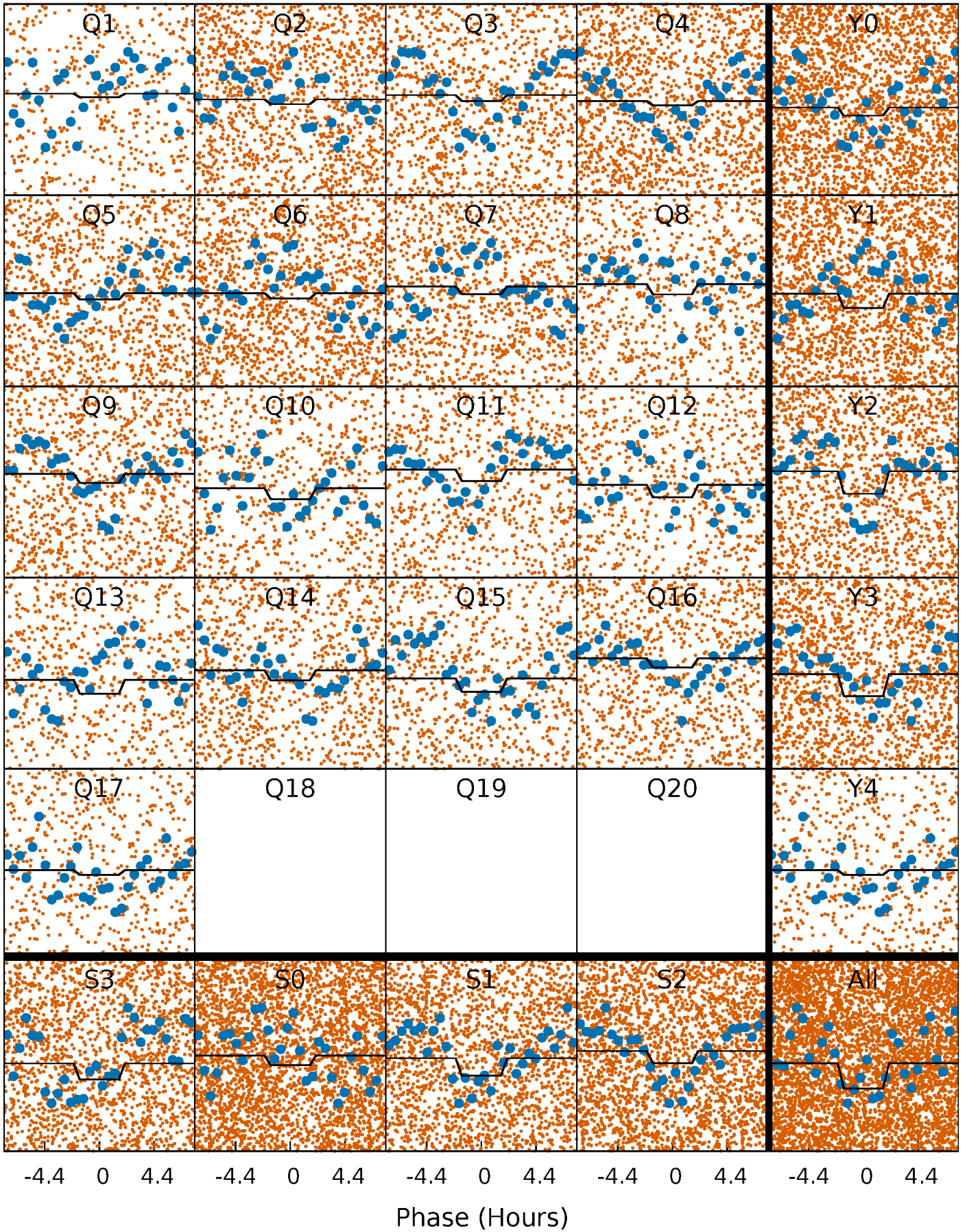
DV Quarter-Phased Transit Curves

TCE 012055345-01 P= 0.534863 Days $T_0=131.531757$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

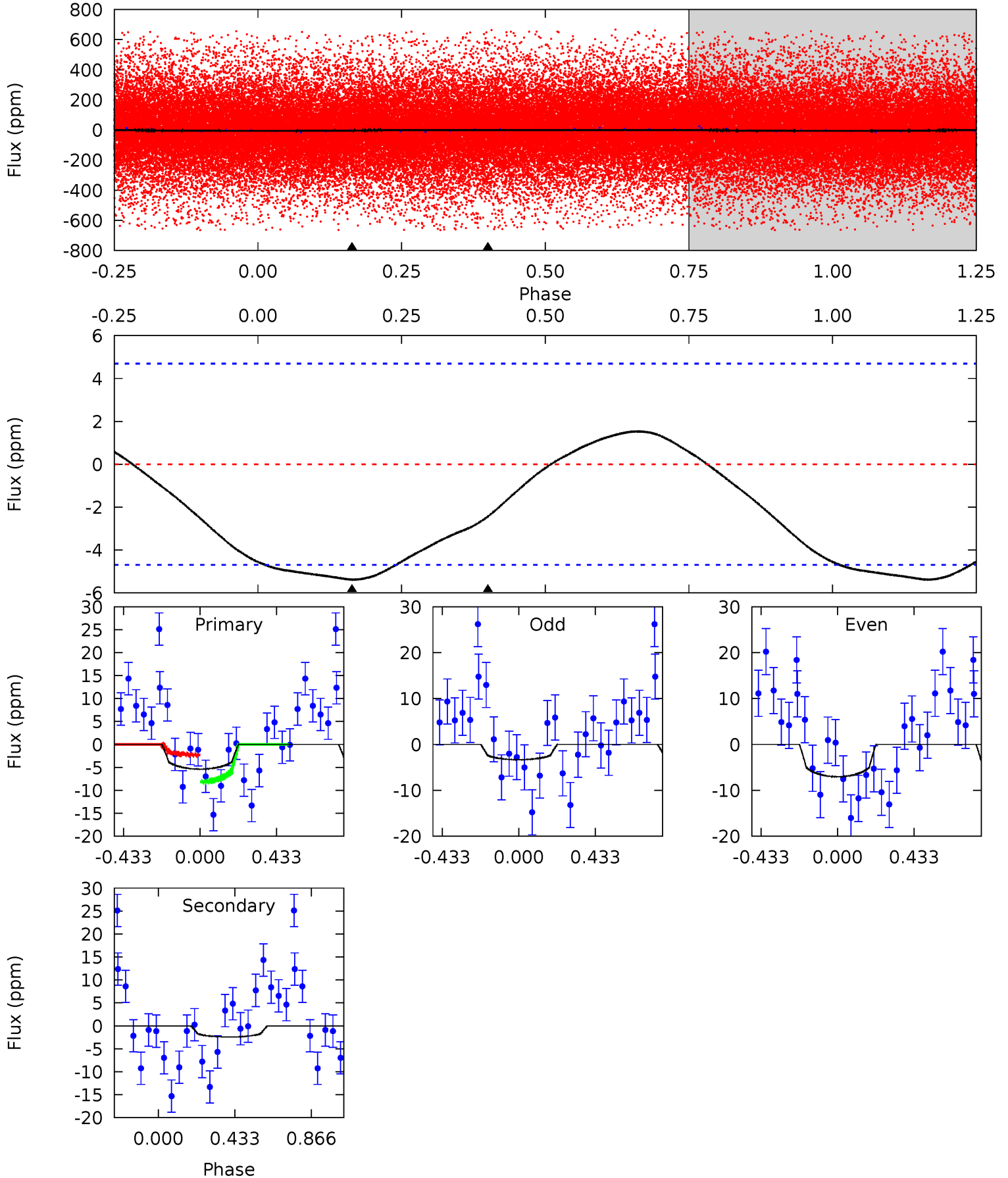
TCE 012055345-01 P= 0.534861 Days $T_0=131.531705$ (BKJD)



DV Model-Shift Uniqueness Test

012055345-01, P = 0.534863 Days, E = 130.996894 Days

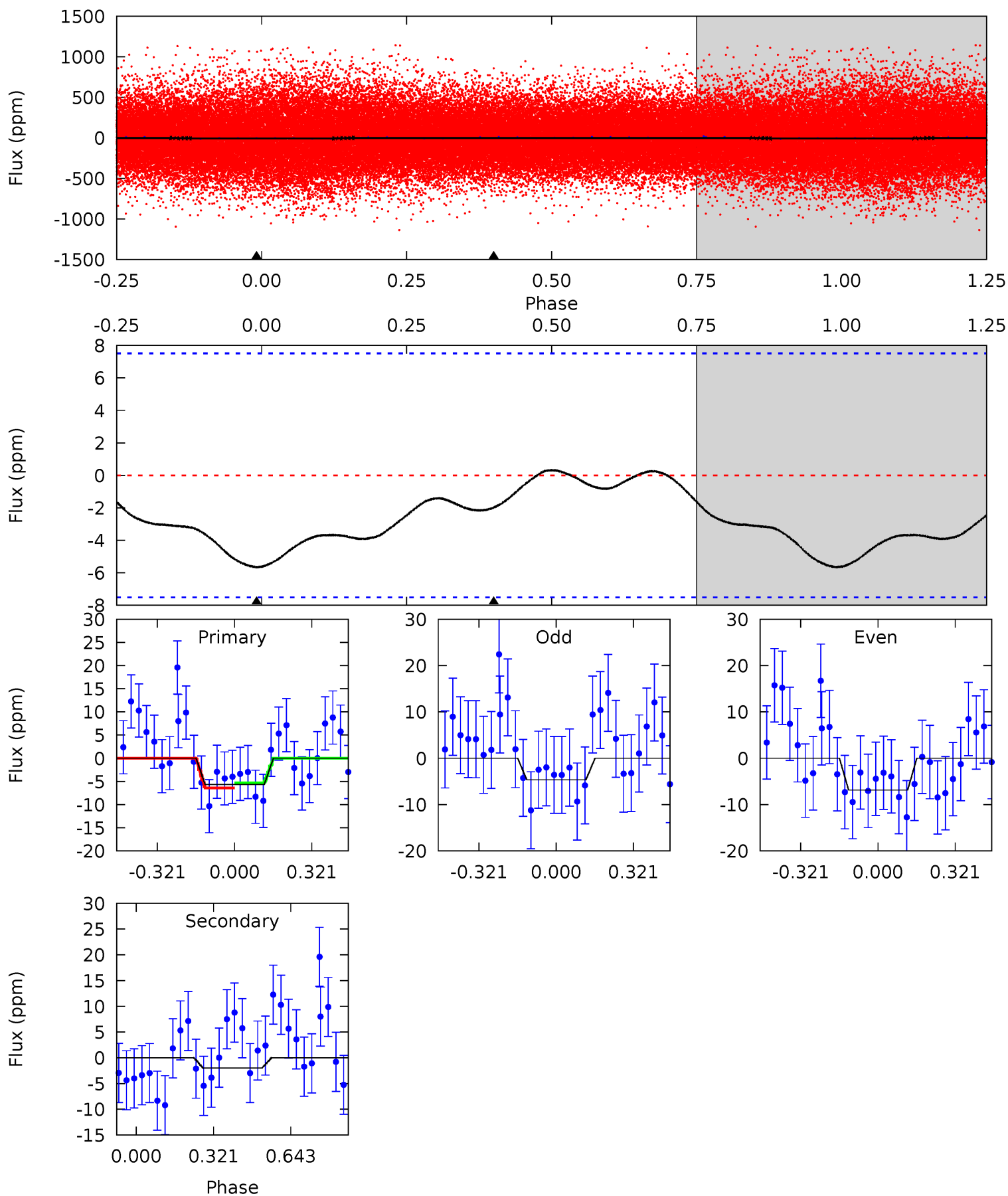
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.88	2.21	0	0	4.25	0.78	0.50	4.88	4.88	2.21	2.21	1.70	0.61	0.22	2.70



Alt Model-Shift Uniqueness Test

012055345-01, P = 0.534861 Days, E = 130.996844 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.25	1.14	0	0	4.31	0.99	0.30	3.25	3.25	1.14	1.14	0.63	0.79	0.06	0.30



Stellar Parameters For KIC 012055345

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9155^{+286}_{-430}	$3.405^{+0.765}_{-0.127}$	$-0.500^{+0.600}_{-0.250}$	$5.396^{+0.396}_{-3.562}$	$2.695^{+0.349}_{-1.047}$	$0.024^{+0.389}_{-0.010}$
	+3%/-5%	+22%/-4%	+120%/-50%	+7%/-66%	+13%/-39%	+1611%/-41%
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 012055345-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 1	$1.26^{+0.75}_{-0.70}$	9546^{+658}_{-1567}	-4178^{+13907}_{-2799}	$0.271^{+0.914}_{-0.186}$
Alt.	-2 ± 2	$1.21^{+0.77}_{-0.64}$	9480^{+691}_{-1455}	-5351^{+13717}_{-2214}	$0.192^{+0.771}_{-0.179}$

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 $A_{obs} \gg 1.0$

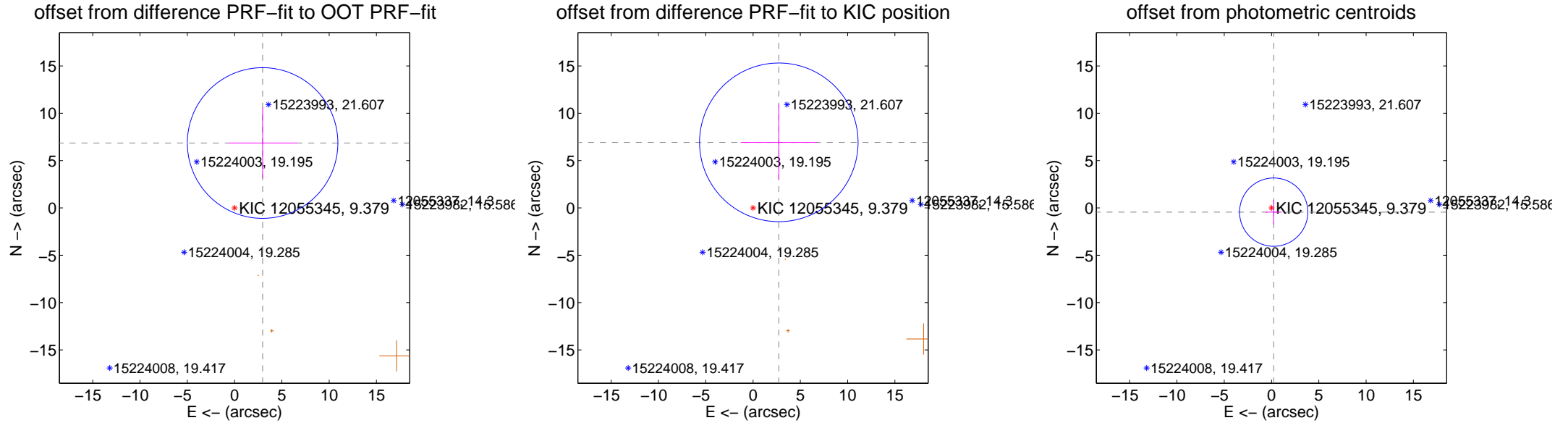
DV Centroid Data

Supplemental centroid analysis for 012055345-01. **Kepler magnitude: 9.38.** Transit SNR 4.19

There are 0 quarters with good PRF difference image offsets

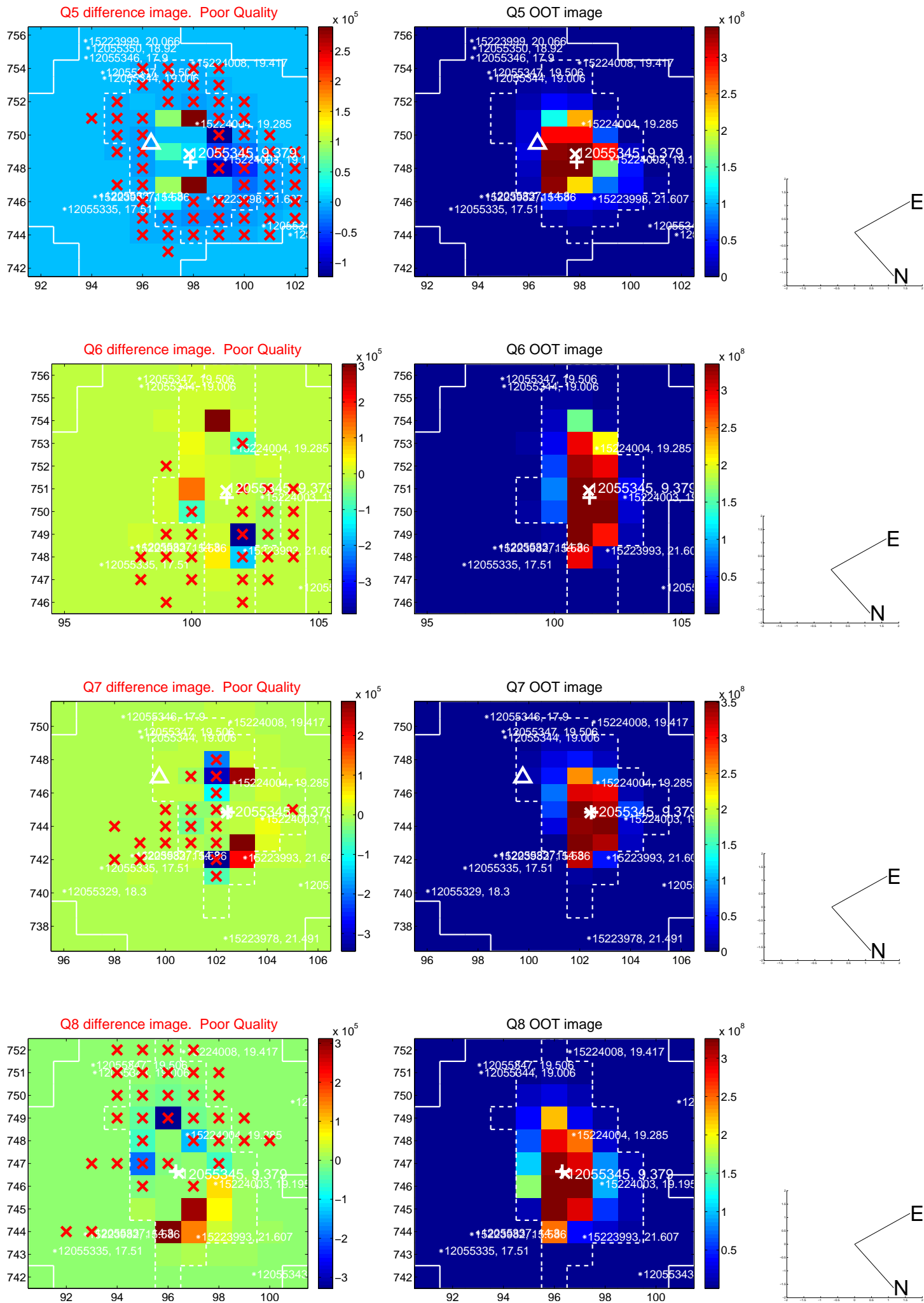
The direct PRF centroid is offset from the target star catalog position by about 1.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.473 ± 2.653	2.82	-2.964 ± 3.666	6.860 ± 3.736
PRF-fit source offset from KIC position	7.447 ± 2.794	2.67	-2.724 ± 4.041	6.931 ± 3.983
photometric centroid source offset	0.50 ± 1.20	0.41	-0.23 ± 0.86	-0.44 ± 1.28

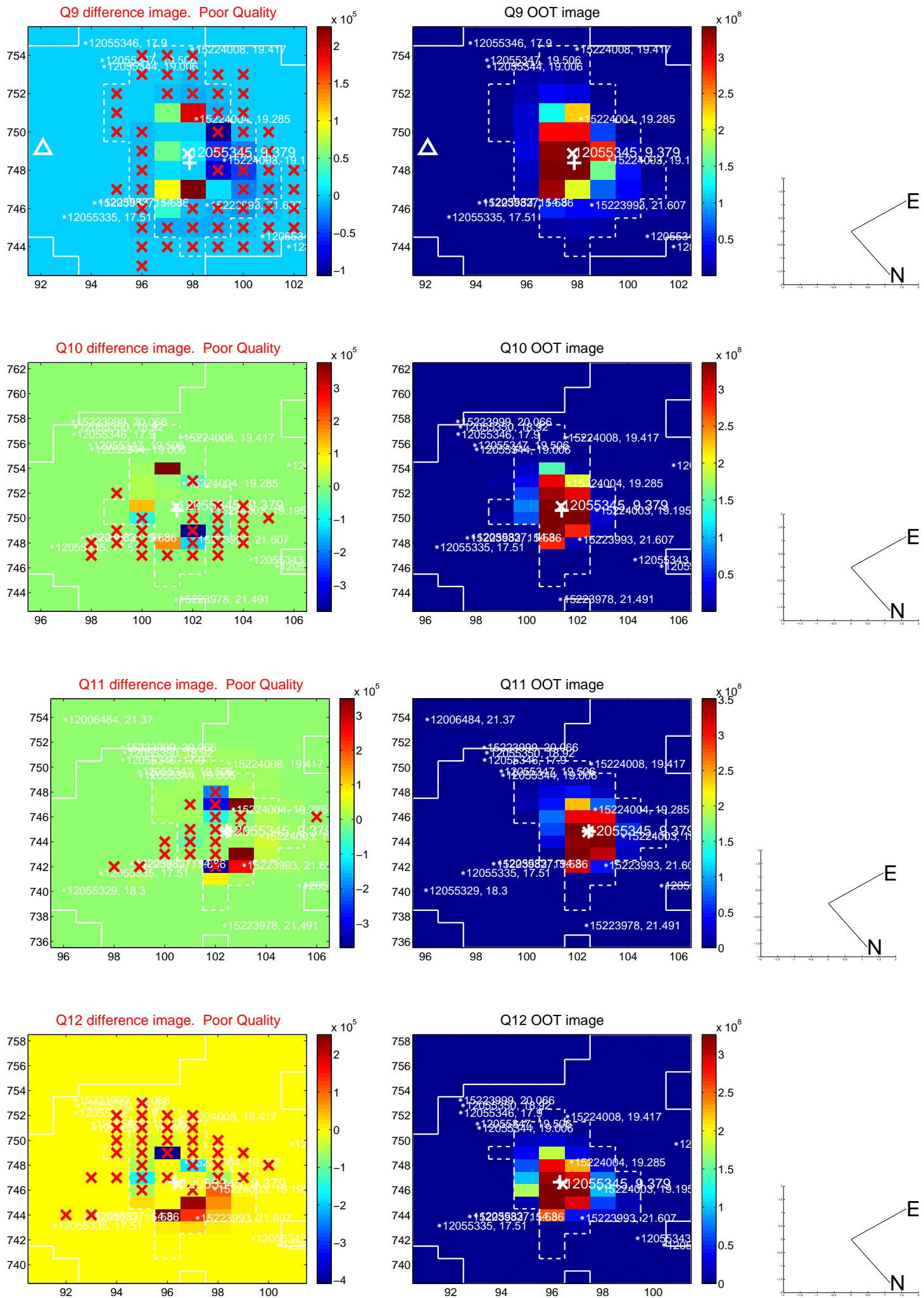


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

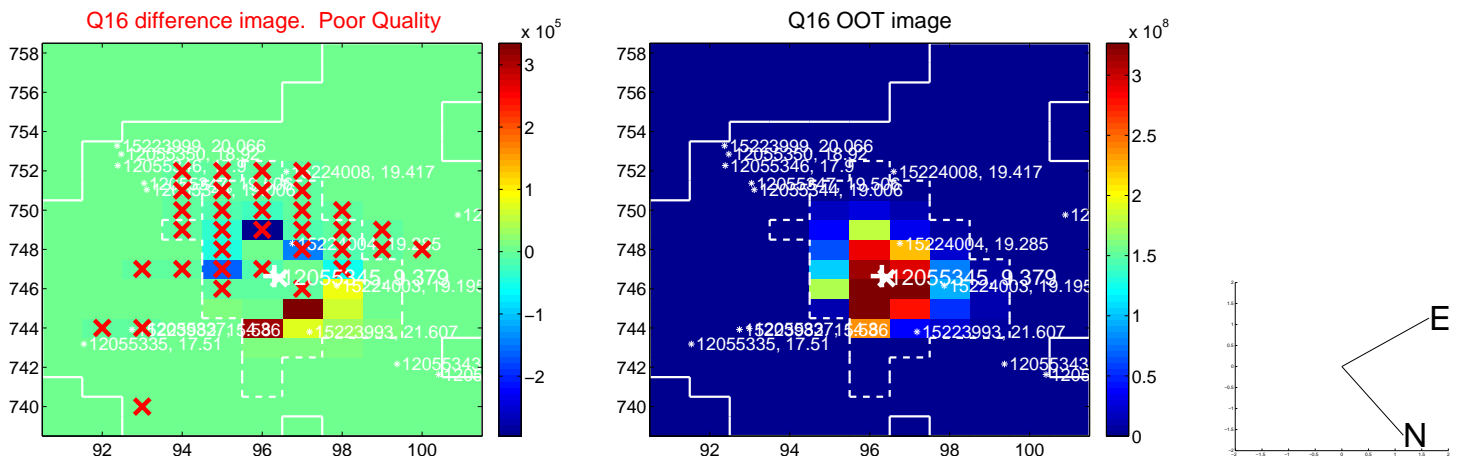
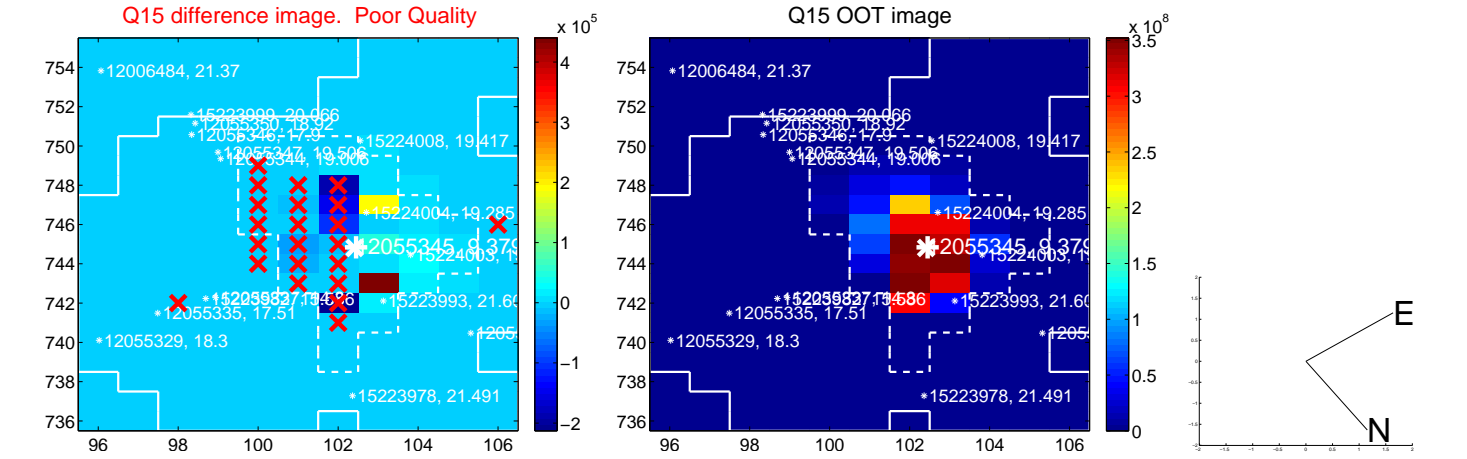
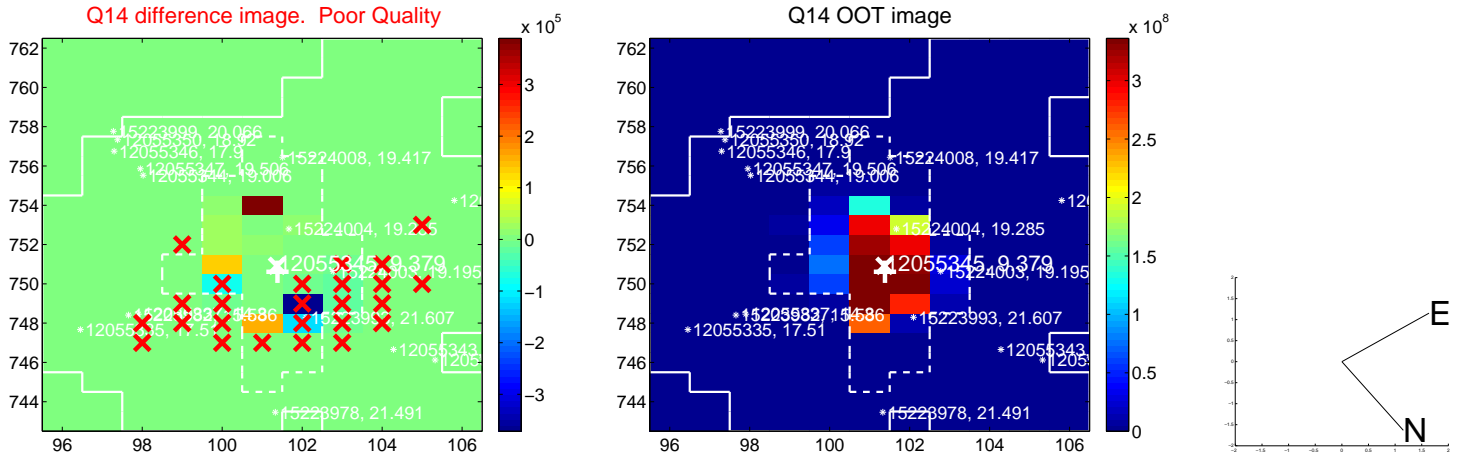
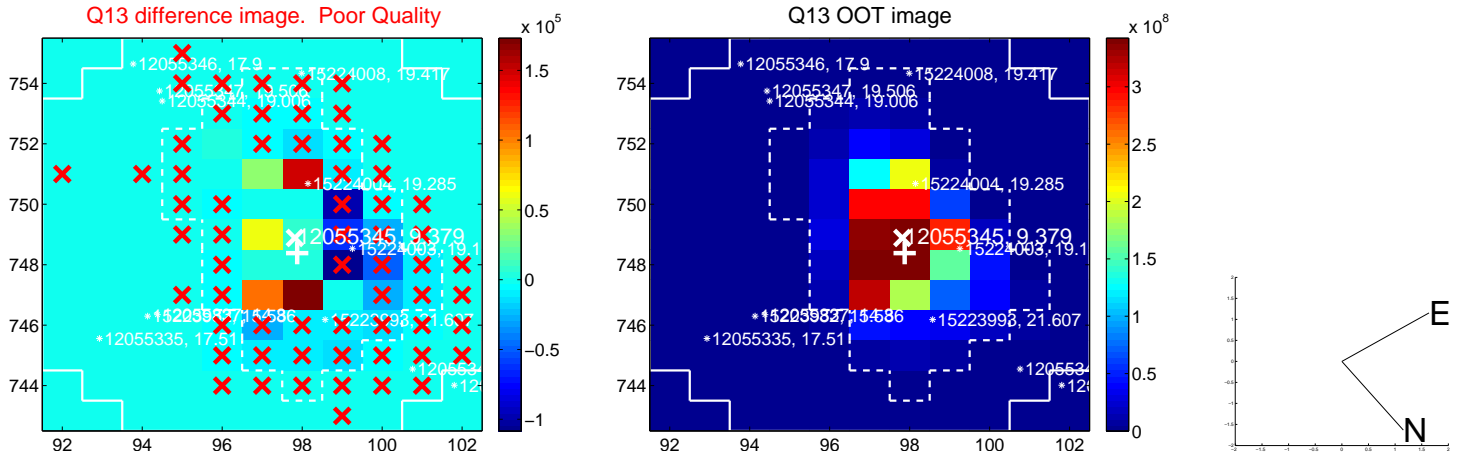
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

