

KIC 002580613

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})
002580613-01	OBS	No	6.012302	137.321866	13.7	23.932	7.7	5.8	3.07	7500	1.34	4026.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580613-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

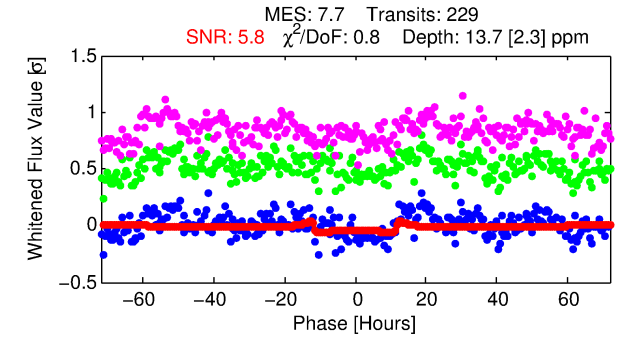
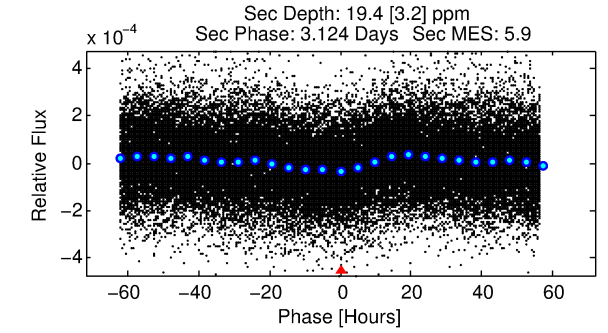
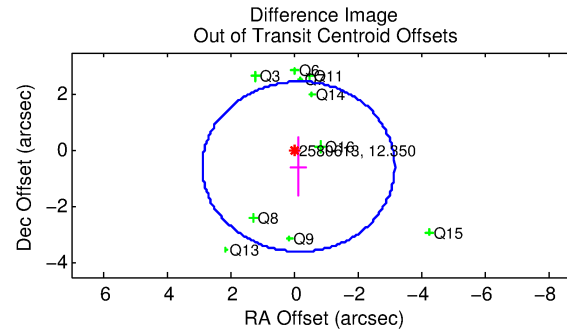
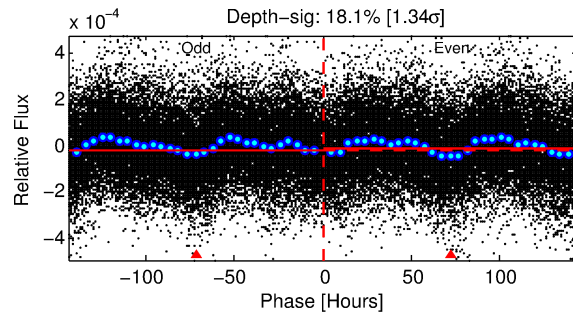
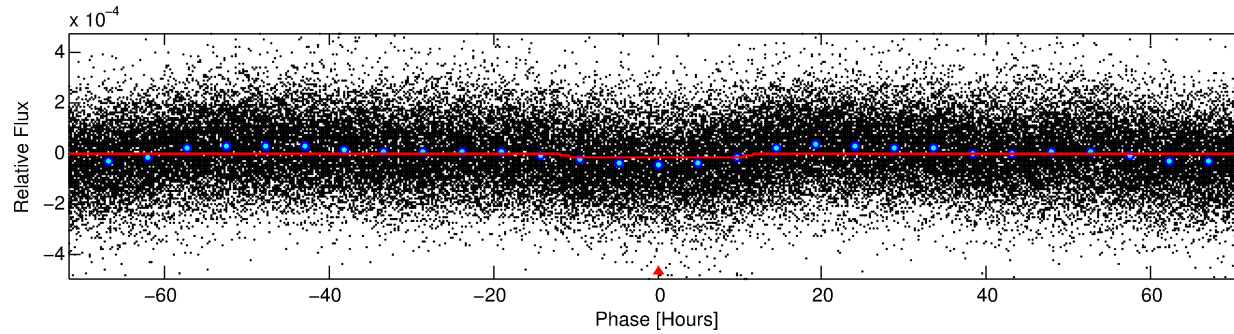
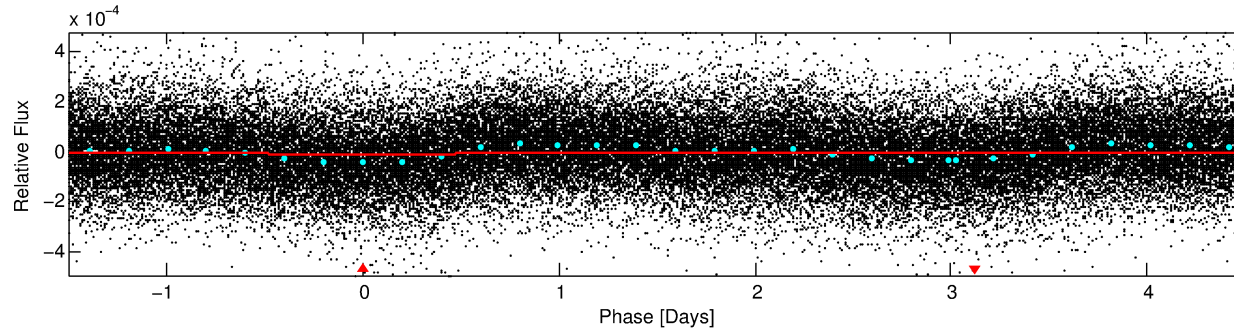
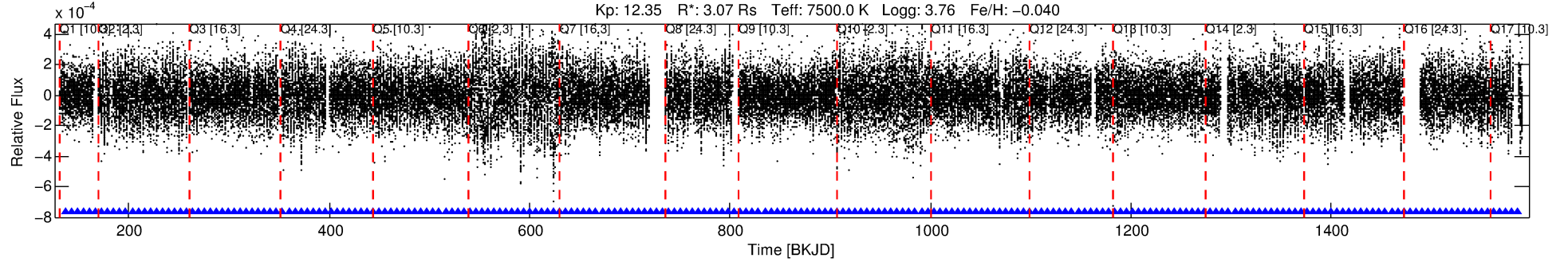
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002580613-01

No Significant Match Found

DV One-Page Summary

KIC: 2580613 Candidate: 1 of 1 Period: 6.012 d



DV Fit Results:

Period = 6.01230 [0.00017] d
Epoch = 137.3219 [0.0209] BKJD
Rp/R* = 0.0040 [0.0005]
a/R* = 1.22 [0.22]
b = 0.92 [0.09]
Seff = 4026.19 [2773.93]
Teq = 2031 [350] K
Rp = 1.34 [0.64] Re
a = 0.0814 [0.0346] AU
Ag = 39.20 [28.53] [1.34 σ]
Teffp = 7858 [682] K [7.60 σ]

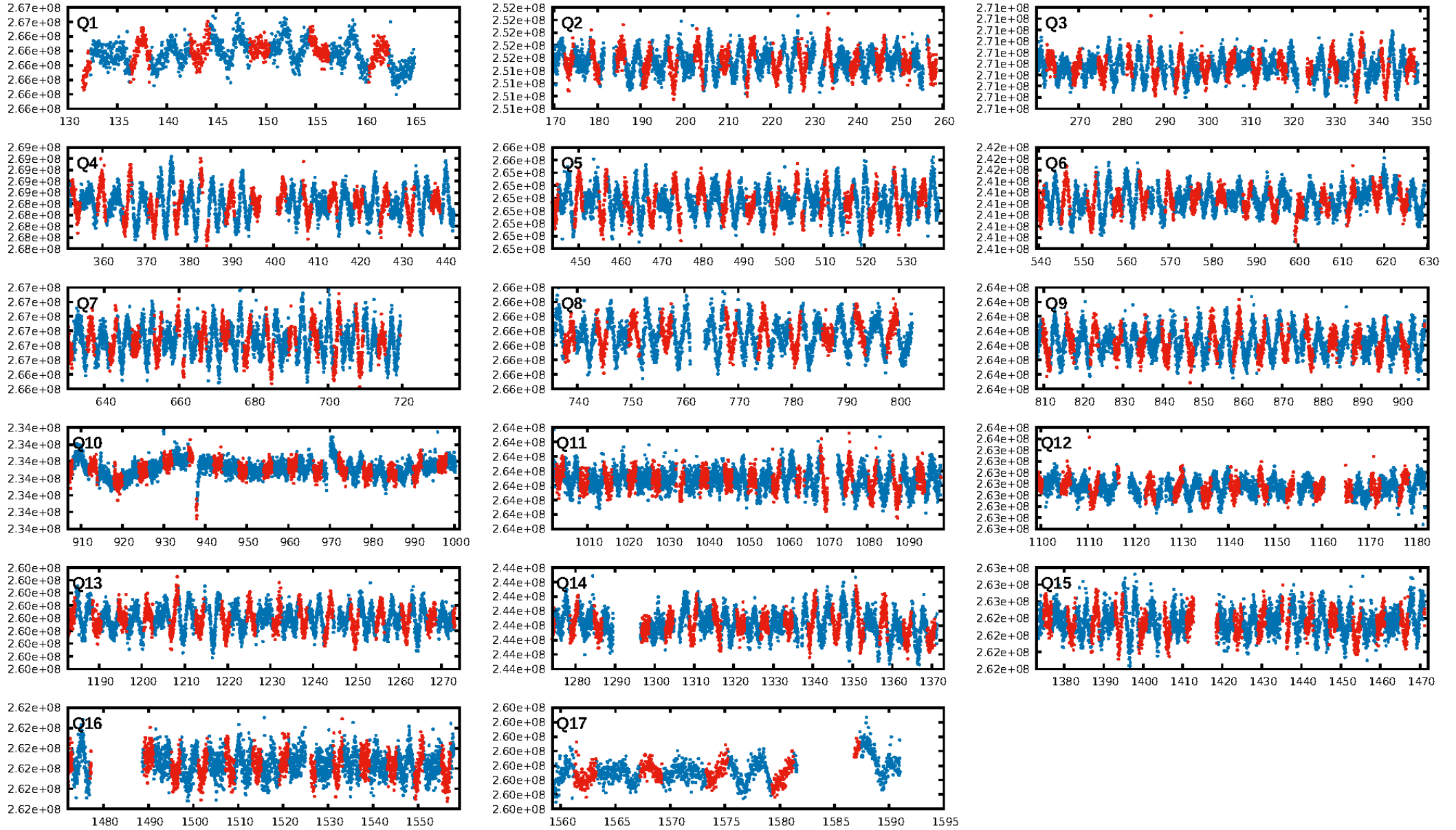
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGo-sig: N/A
Bootstrap-pfa: 7.19e-14
RollingBand-fgt: 1.00 [219/219]
GhostDiagnostic-chr: 9.578
Centroid-sig: 28.8%
Centroid-so: 1.546 arcsec [1.10 σ]
OotOffset-rm: 0.591 arcsec [0.59 σ]
KicOffset-rm: 0.738 arcsec [0.75 σ]
OotOffset-st: 2/4/2/2 [10]
KicOffset-st: 2/4/2/2 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [17/17]

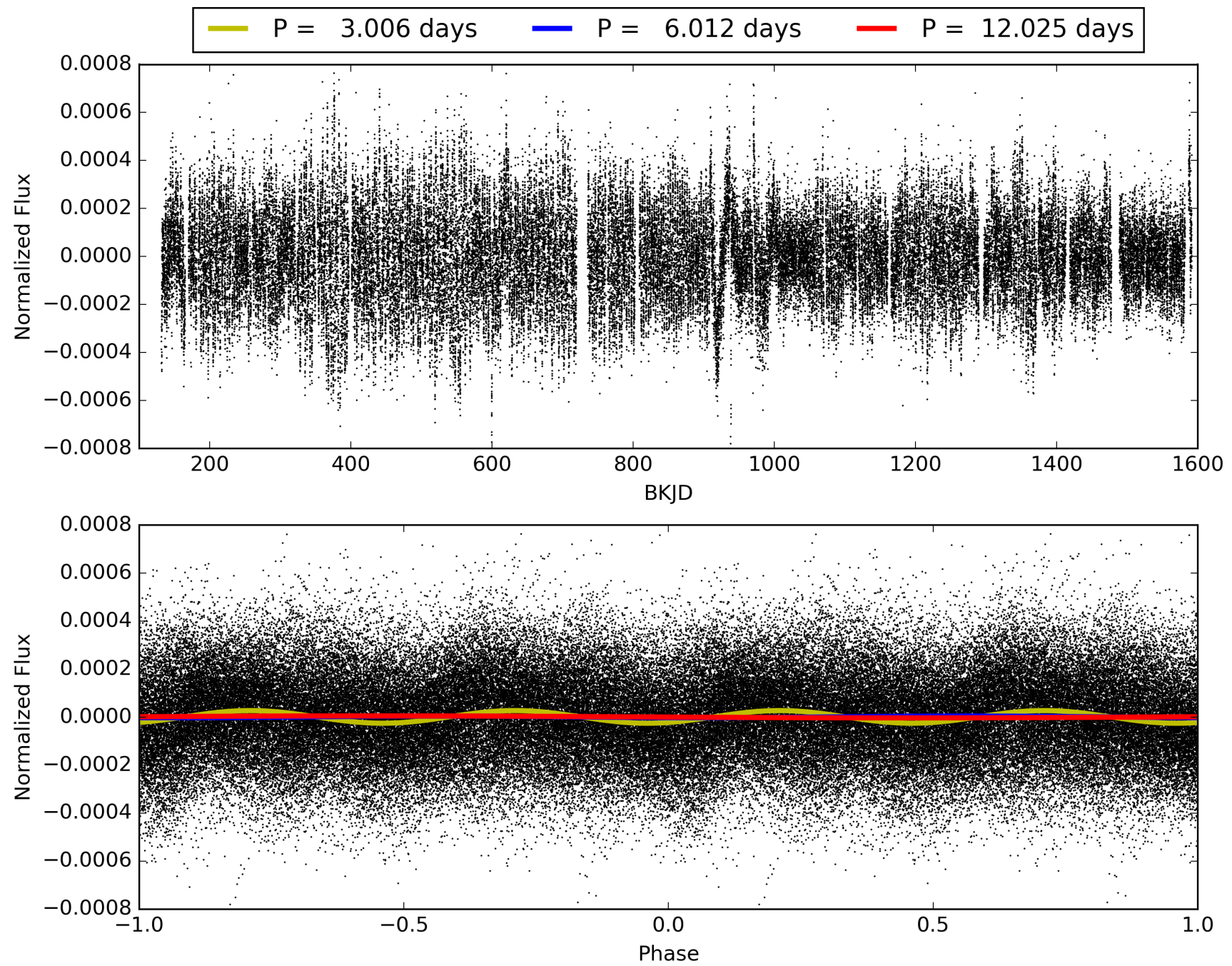
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:19:04 Z

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

TCE 002580613-01, PDC Light Curves

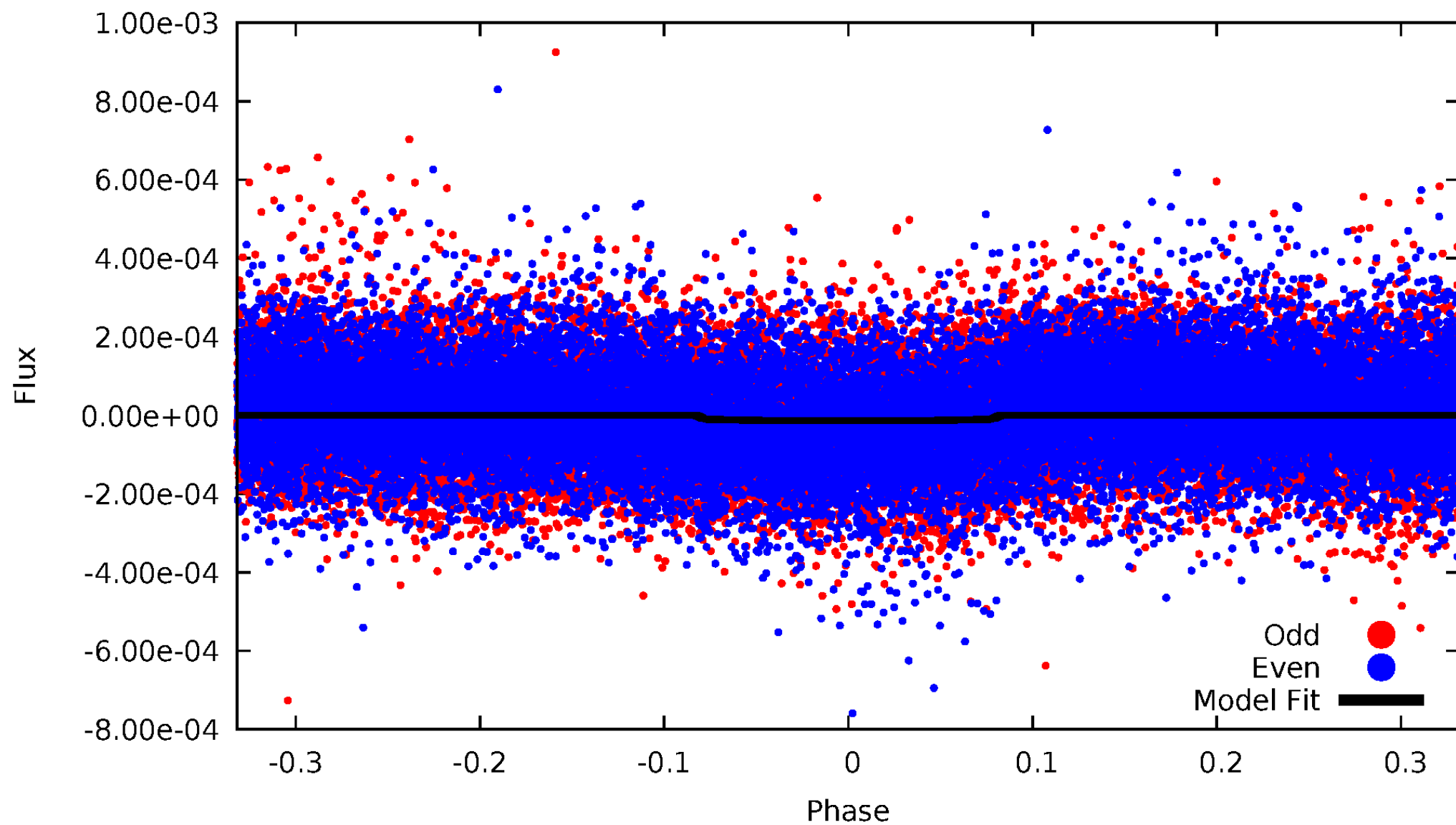


TCE 002580613-01



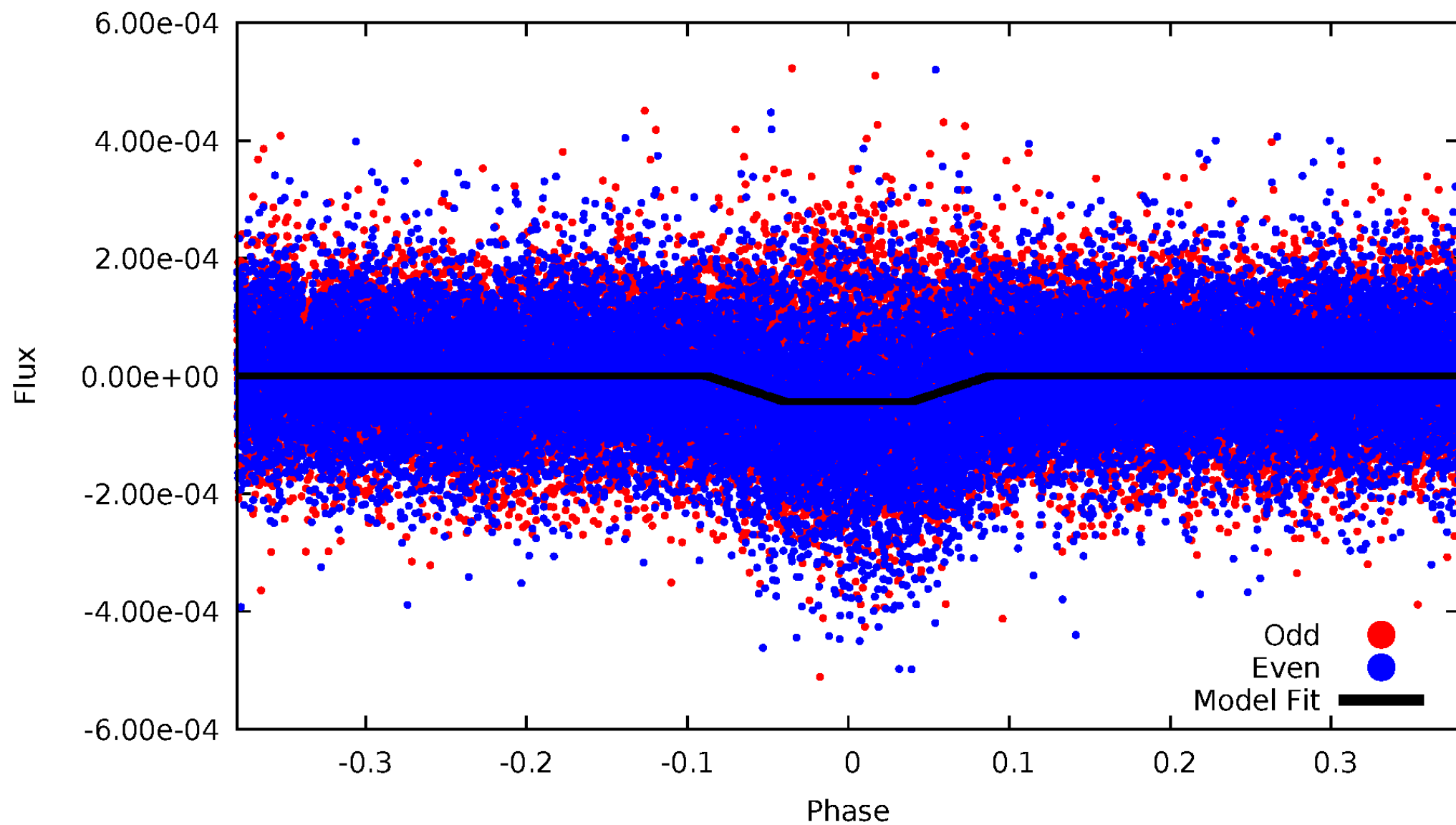
DV Odd/Even

TCE 002580613-01



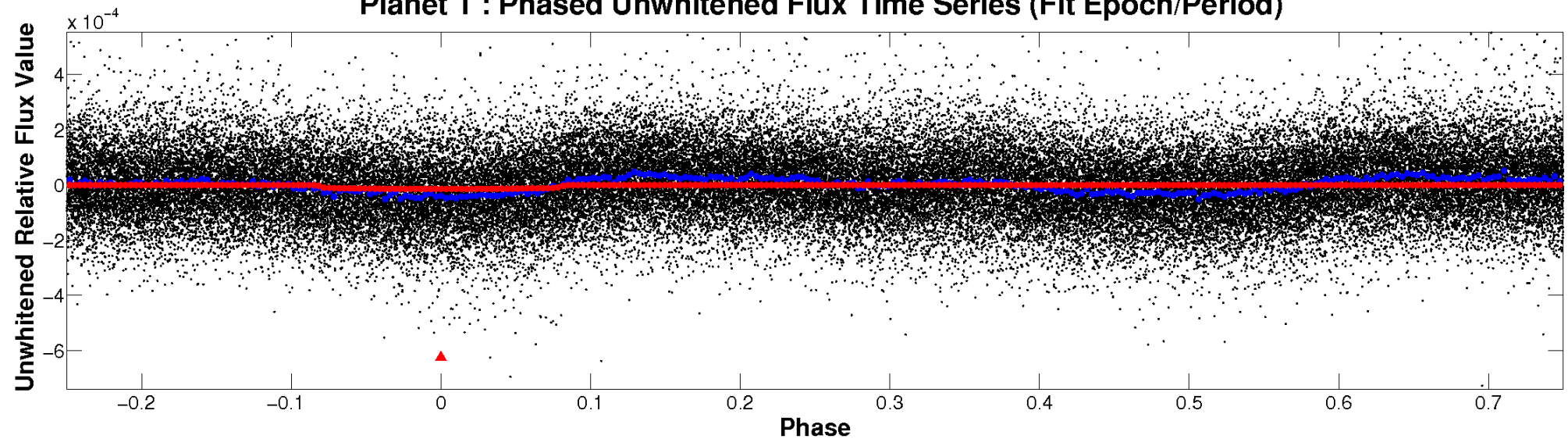
ALT Odd/Even

TCE 002580613-01

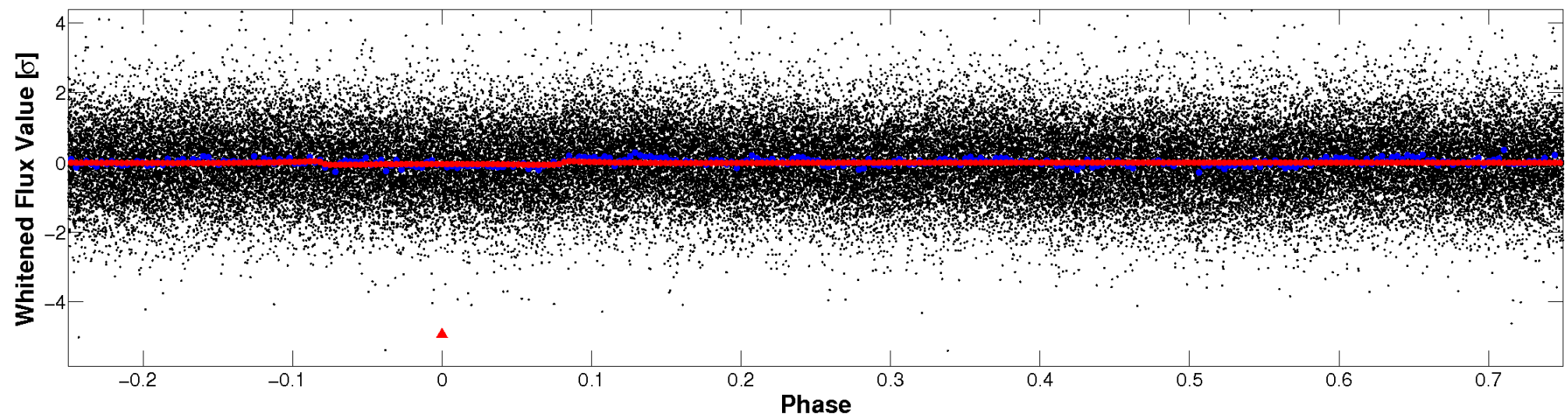


Non-Whitened Vs. Whitened Light Curve

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

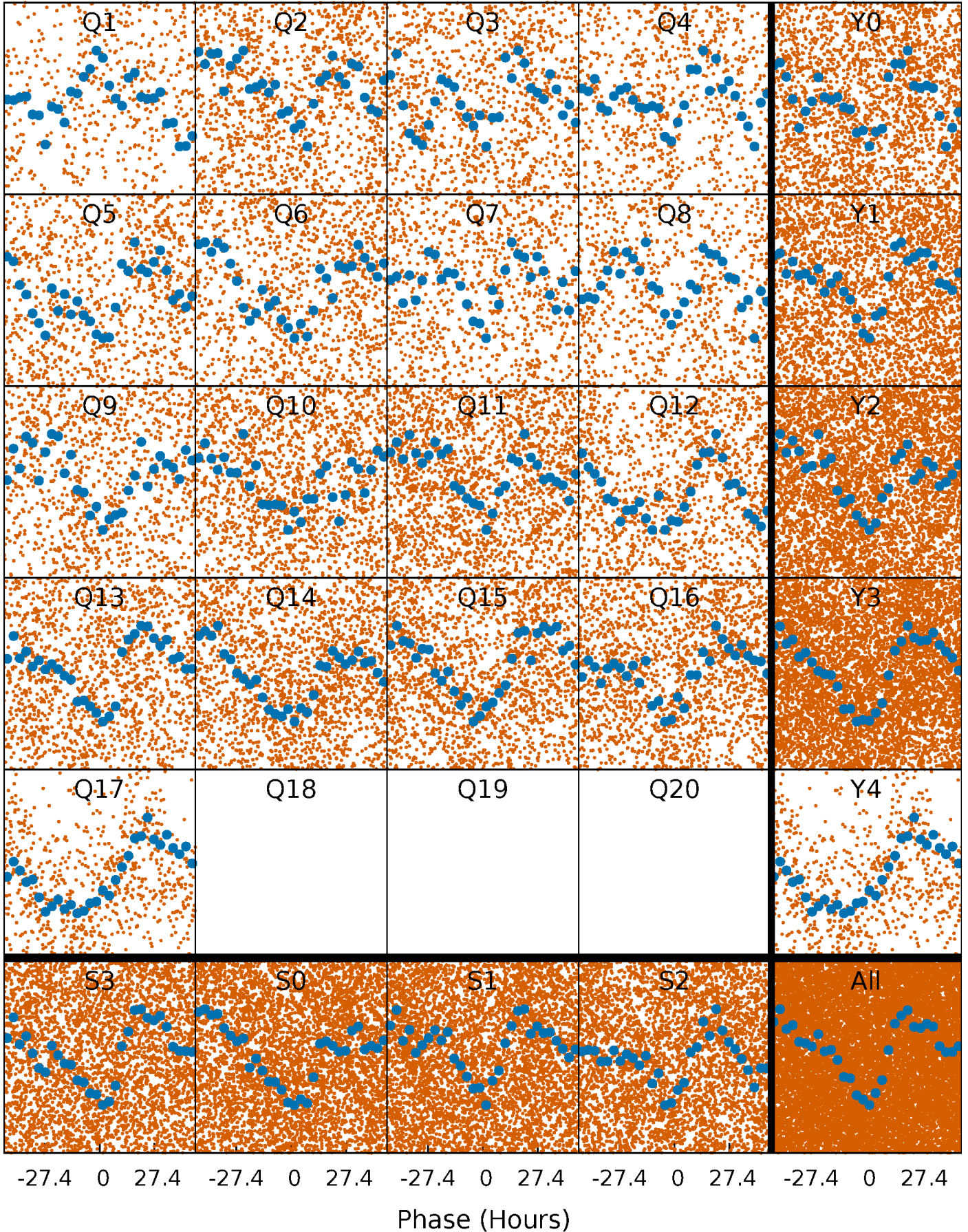


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



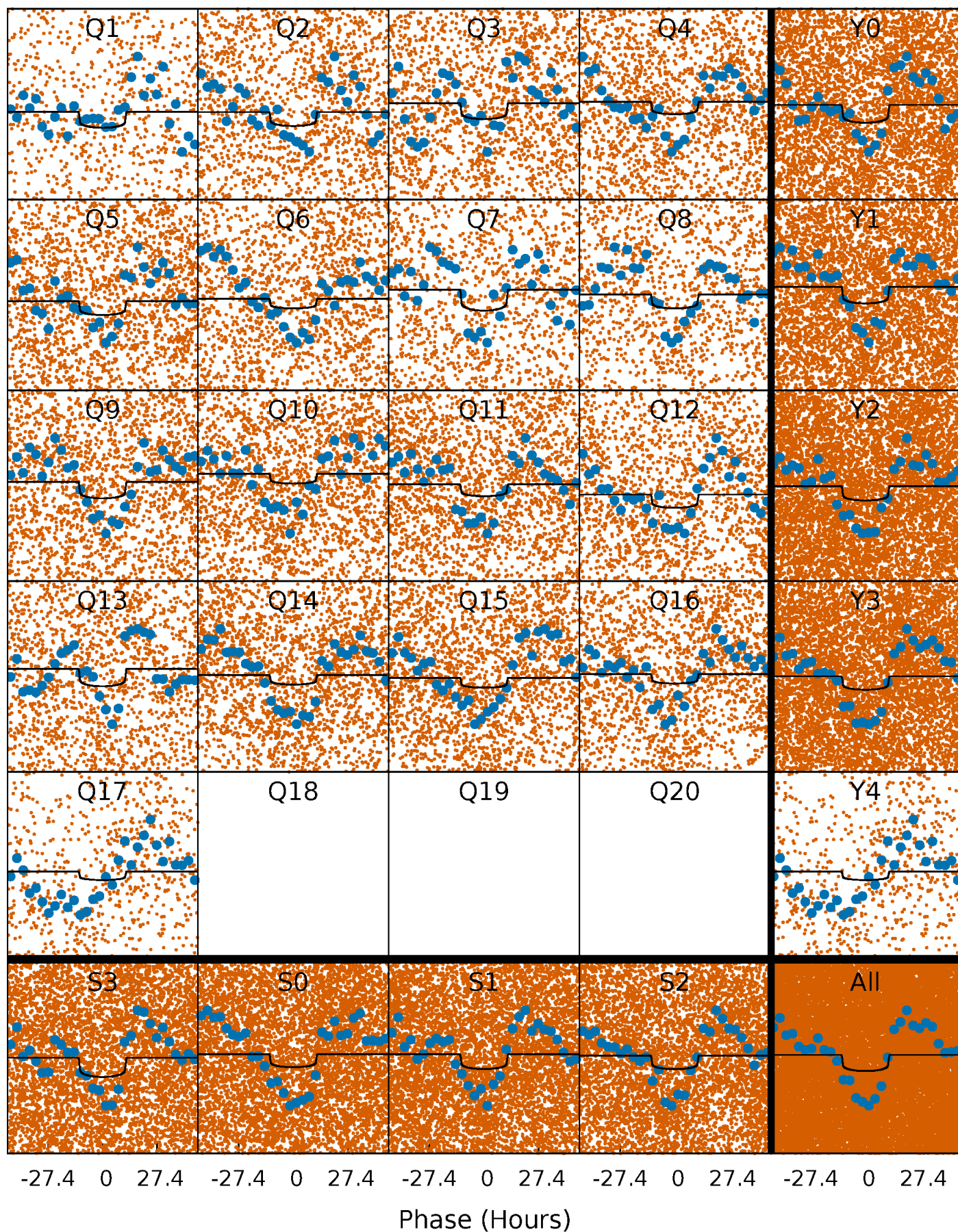
PDC Quarter-Phased Transit Curves

TCE 002580613-01 P= 6.012302 Days $T_0=137.321866$ (BKJD)



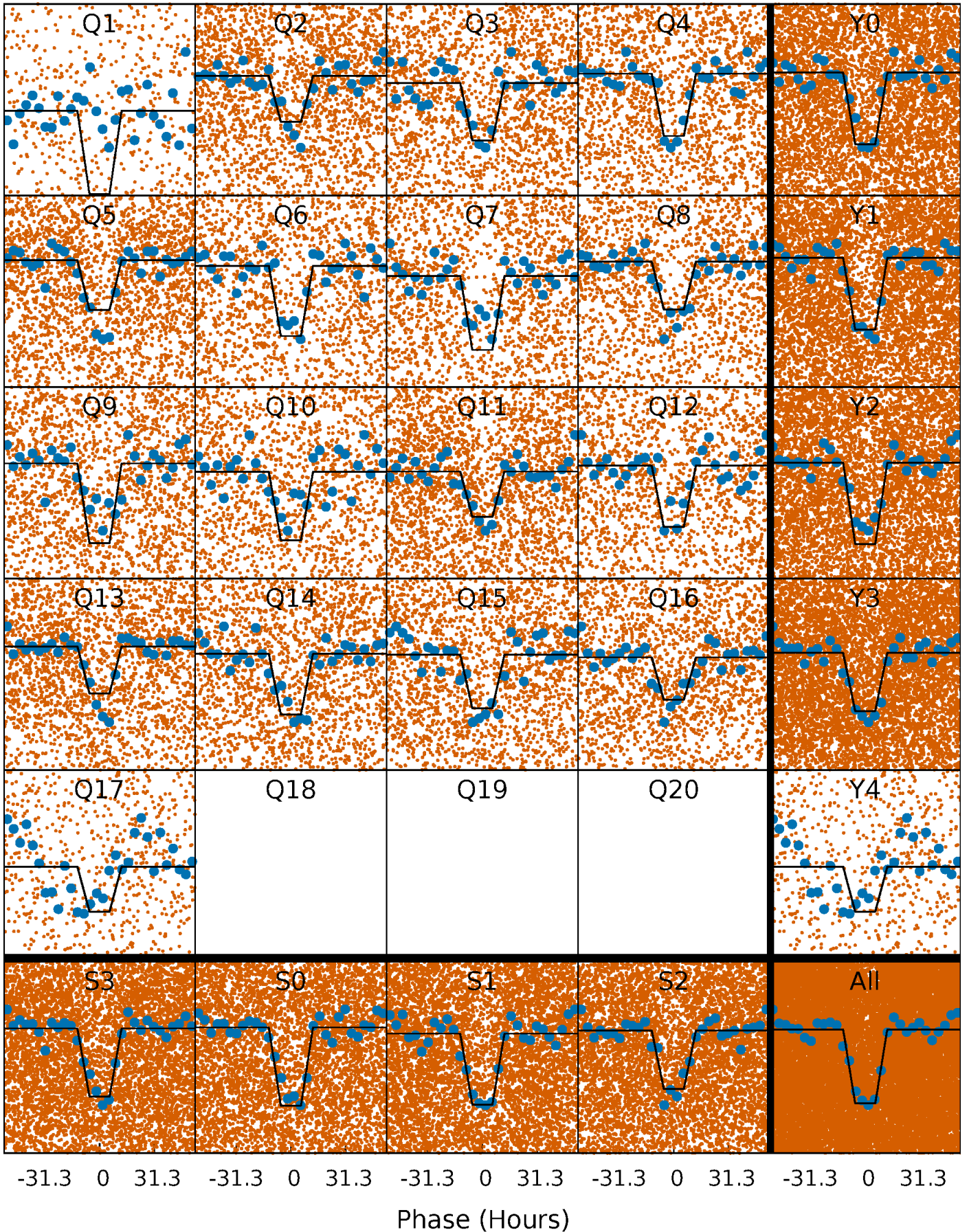
DV Quarter-Phased Transit Curves

TCE 002580613-01 P= 6.012302 Days $T_0=137.321866$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

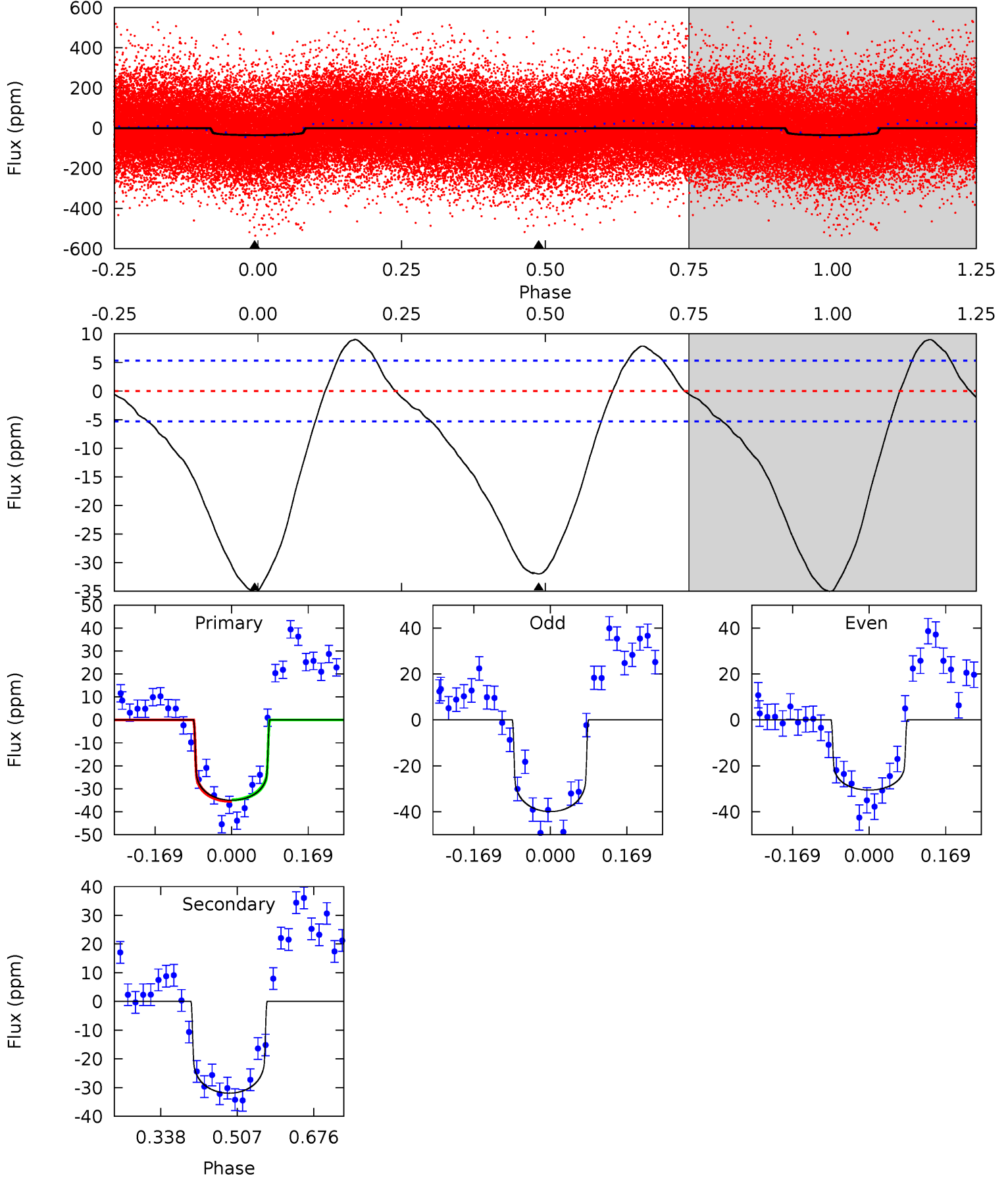
TCE 002580613-01 P= 6.011939 Days $T_0=137.436190$ (BKJD)



DV Model-Shift Uniqueness Test

002580613-01, P = 6.012302 Days, E = 131.309564 Days

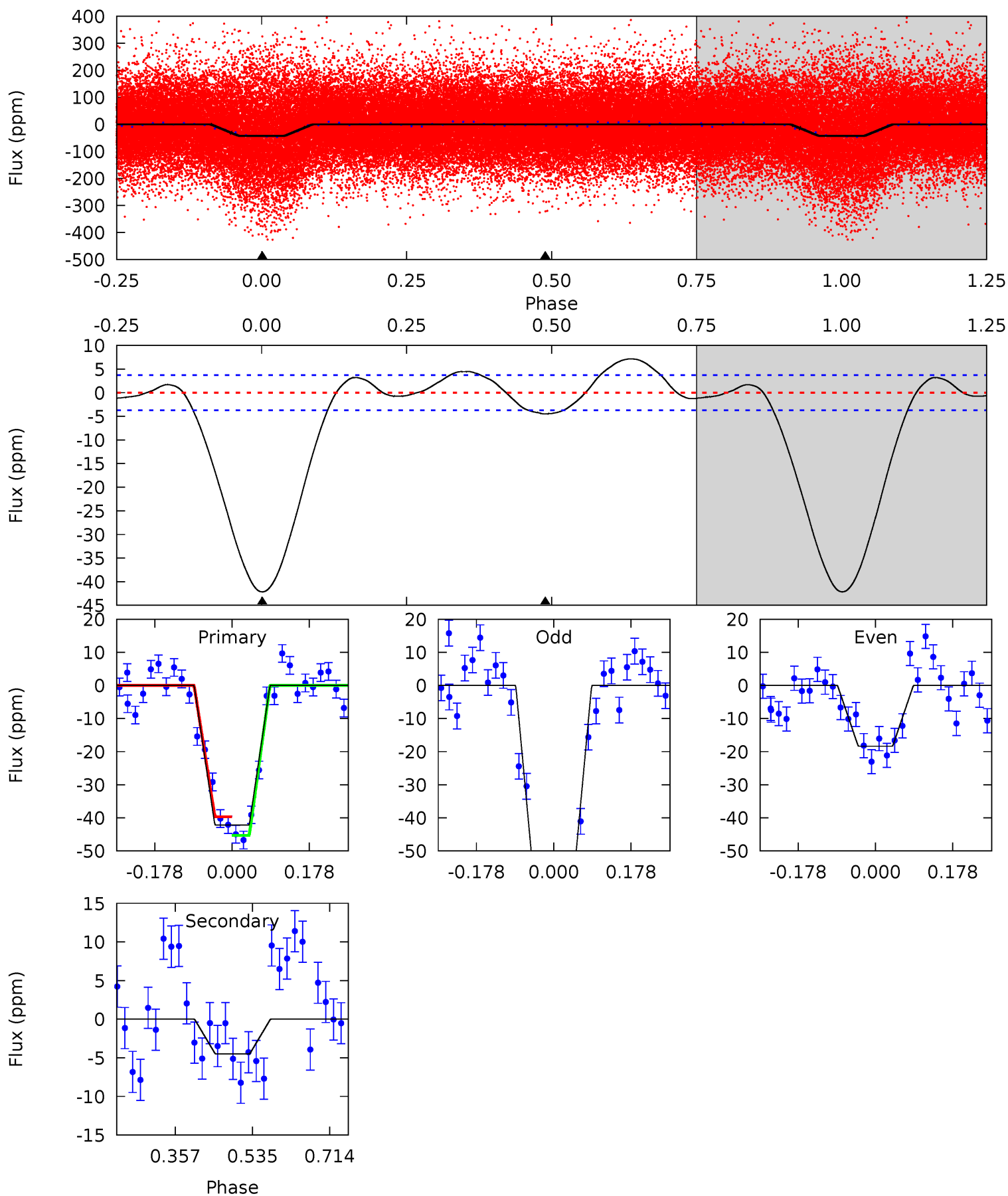
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.4	26.9	0	0	4.45	1.38	4.14	29.4	29.4	26.9	26.9	3.94	1.09	0.20	0.27



Alt Model-Shift Uniqueness Test

002580613-01, P = 6.011939 Days, E = 131.424251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	5.37	0	0	4.44	1.35	1.97	50.3	50.3	5.37	5.37	29.2	1.01	0.15	3.35



Stellar Parameters For KIC 002580613

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7500^{+209}_{-340}	$3.763^{+0.384}_{-0.096}$	$-0.040^{+0.200}_{-0.350}$	$3.067^{+0.353}_{-1.413}$	$1.987^{+0.093}_{-0.525}$	$0.097^{+0.317}_{-0.029}$
	+3%/-5%	+10%/-3%	+500%/-875%	+12%/-46%	+5%/-26%	+326%/-30%
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 002580613-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-32 ± 1	$1.25^{+0.26}_{-0.30}$	2759^{+192}_{-331}	9247^{+961}_{-788}	73^{+45}_{-22}
Alt.	-4 ± 1	$2.12^{+0.31}_{-0.46}$	2775^{+182}_{-285}	4295^{+253}_{-235}	$3.600^{+2.111}_{-1.027}$

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

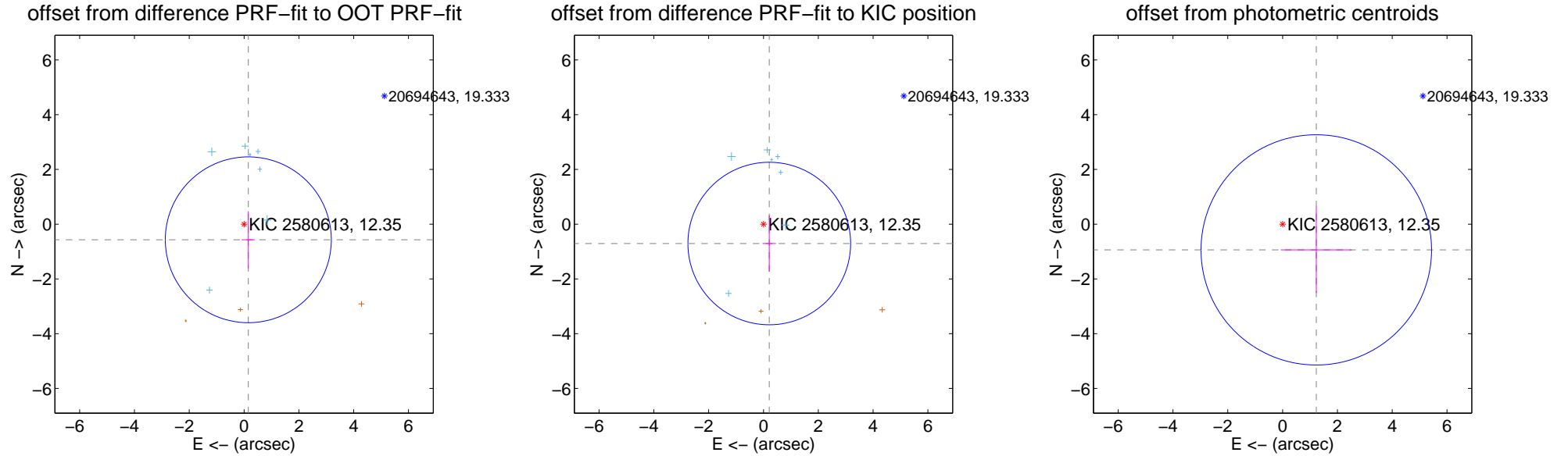
DV Centroid Data

Supplemental centroid analysis for 002580613-01. Kepler magnitude: 12.35. Transit SNR 5.80

There are 7 quarters with good PRF difference image offsets

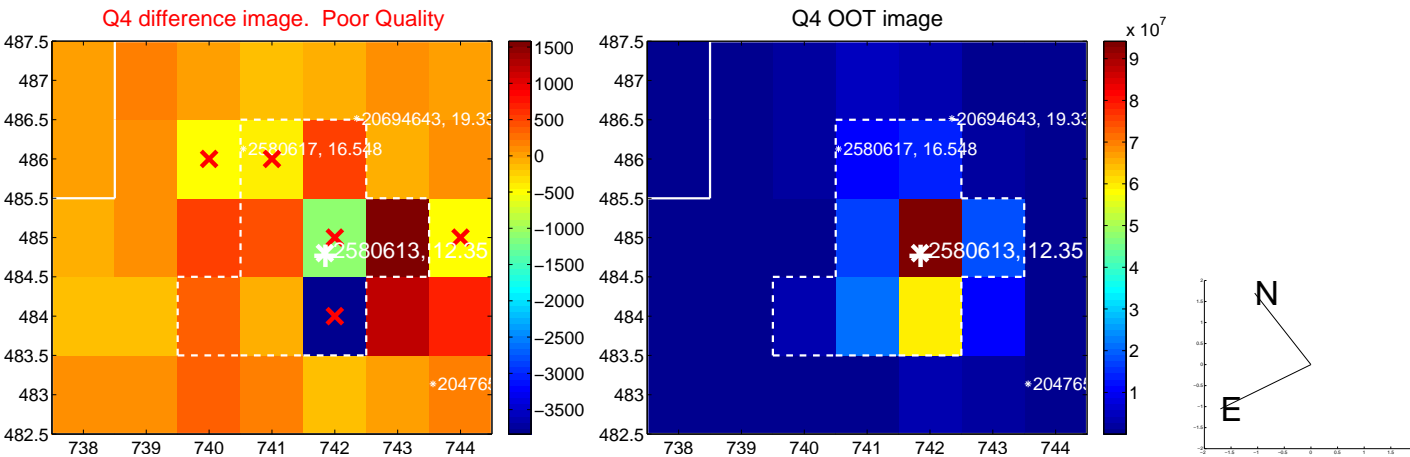
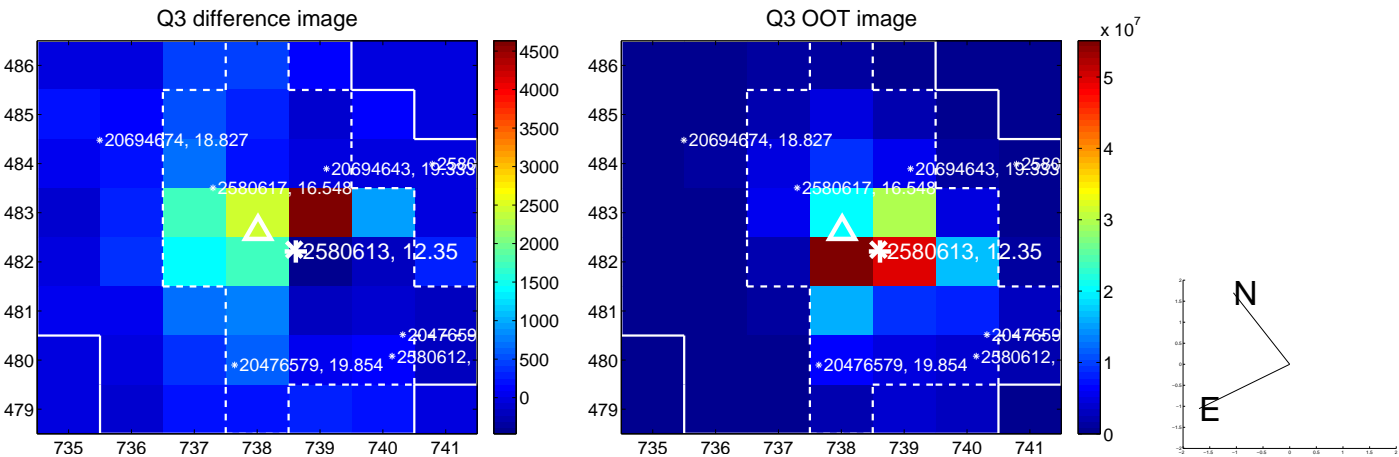
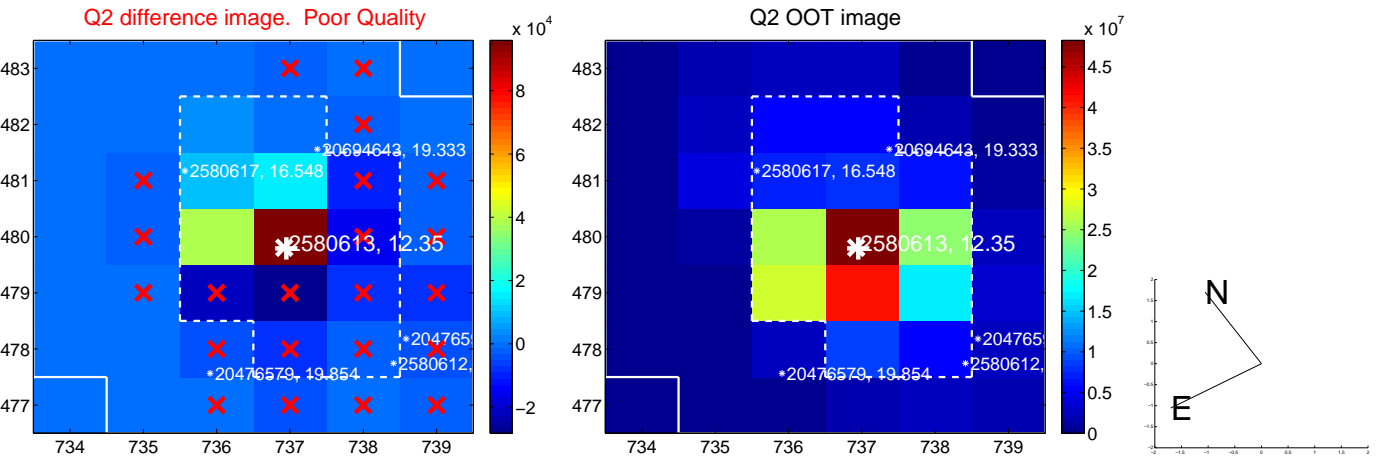
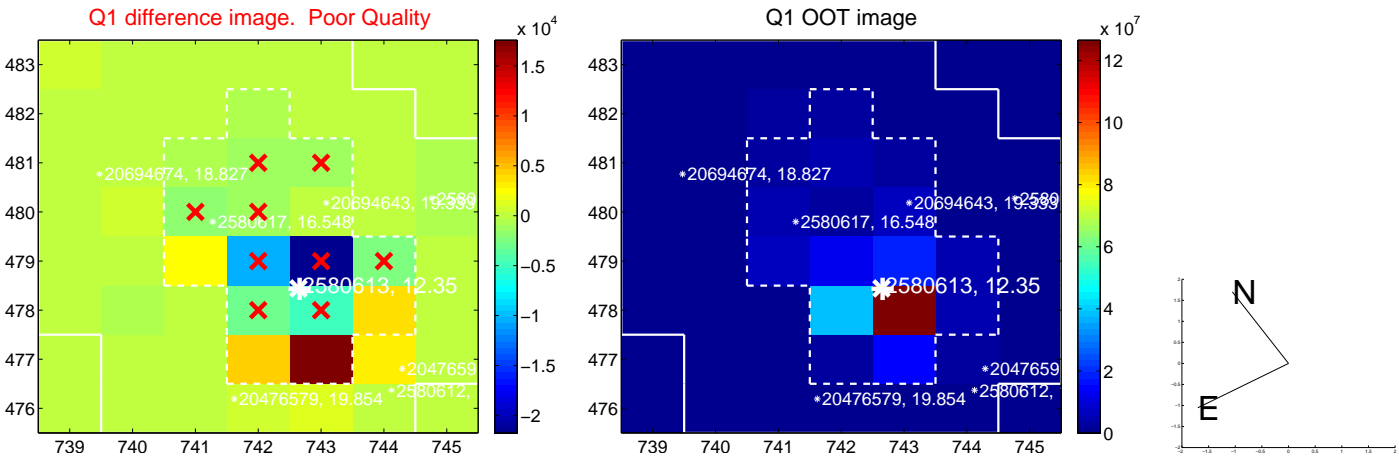
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.591 ± 1.009	0.59	-0.154 ± 0.241	-0.570 ± 1.044
PRF-fit source offset from KIC position	0.738 ± 0.989	0.75	-0.211 ± 0.244	-0.707 ± 1.030
photometric centroid source offset	1.55 ± 1.40	1.10	-1.23 ± 1.29	-0.94 ± 1.57

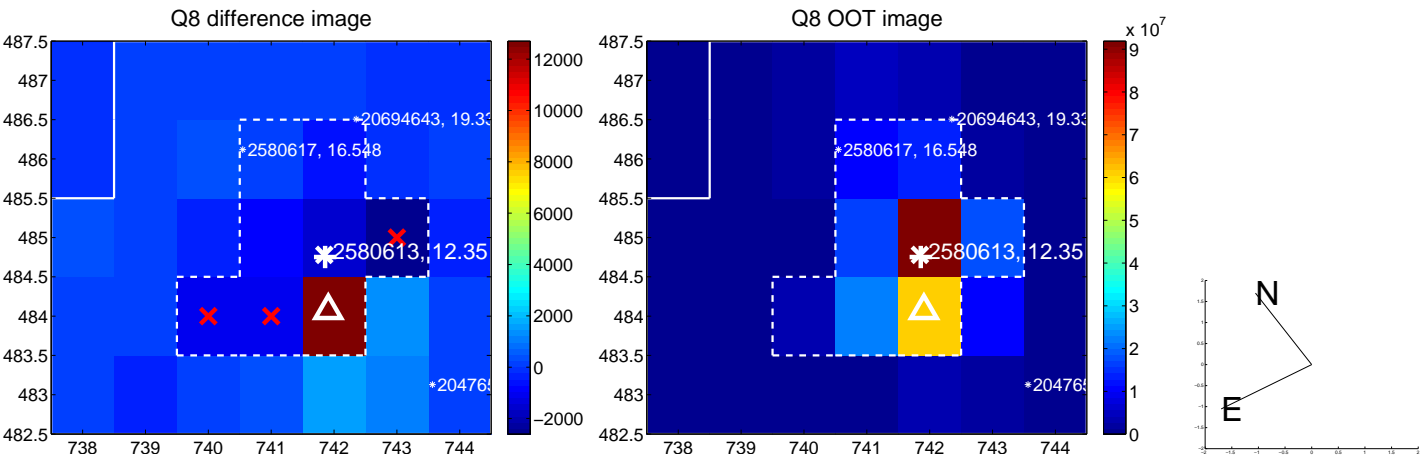
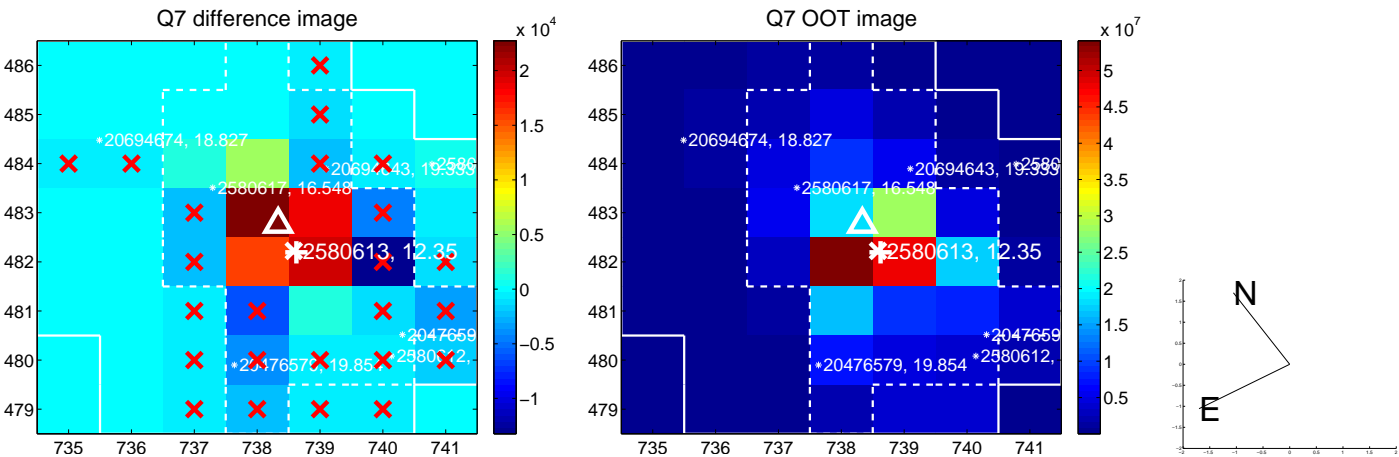
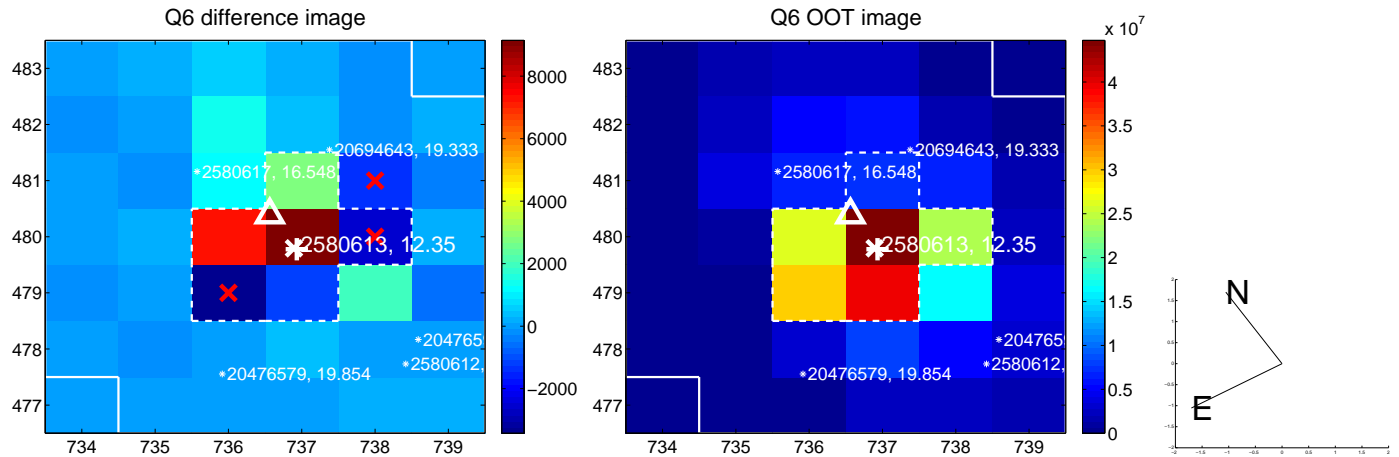
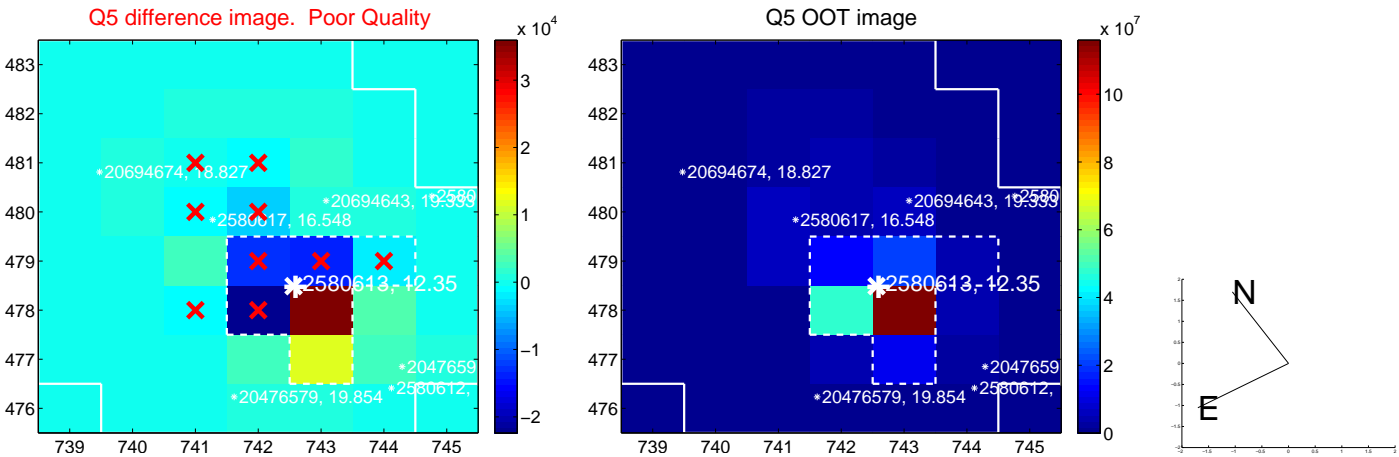


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

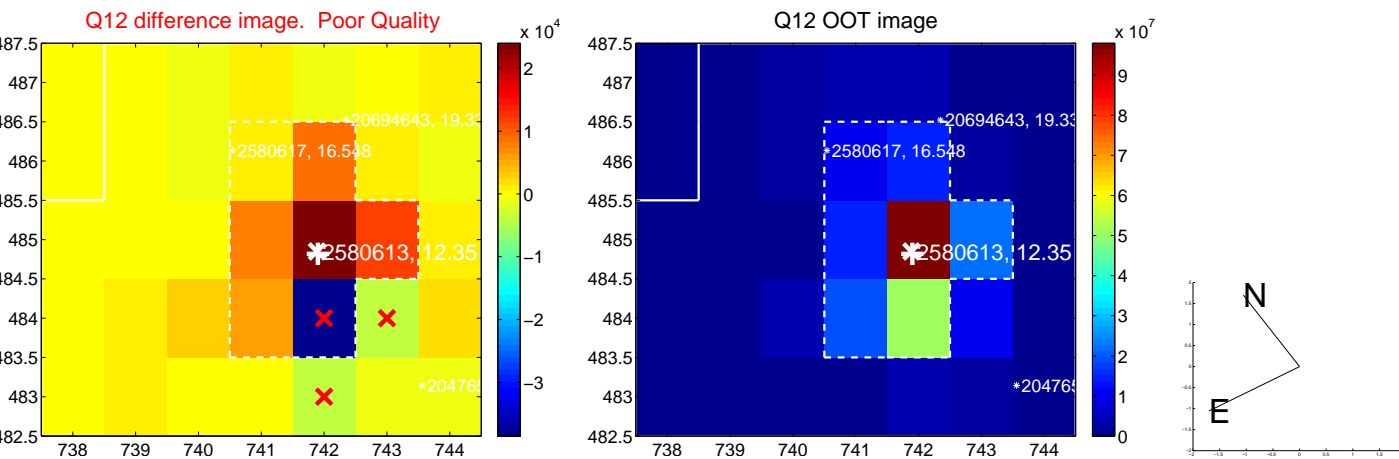
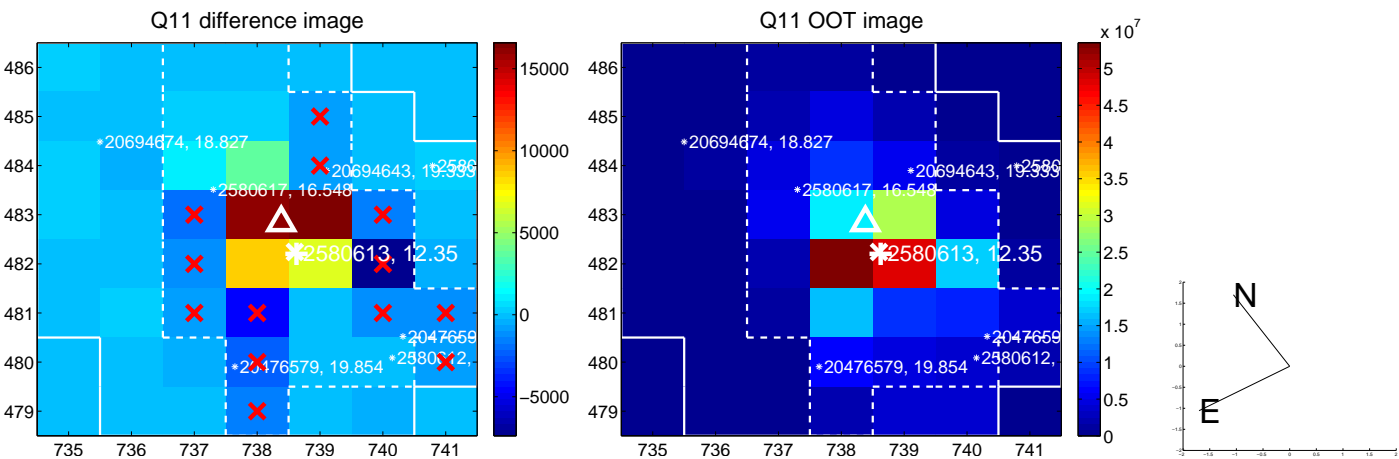
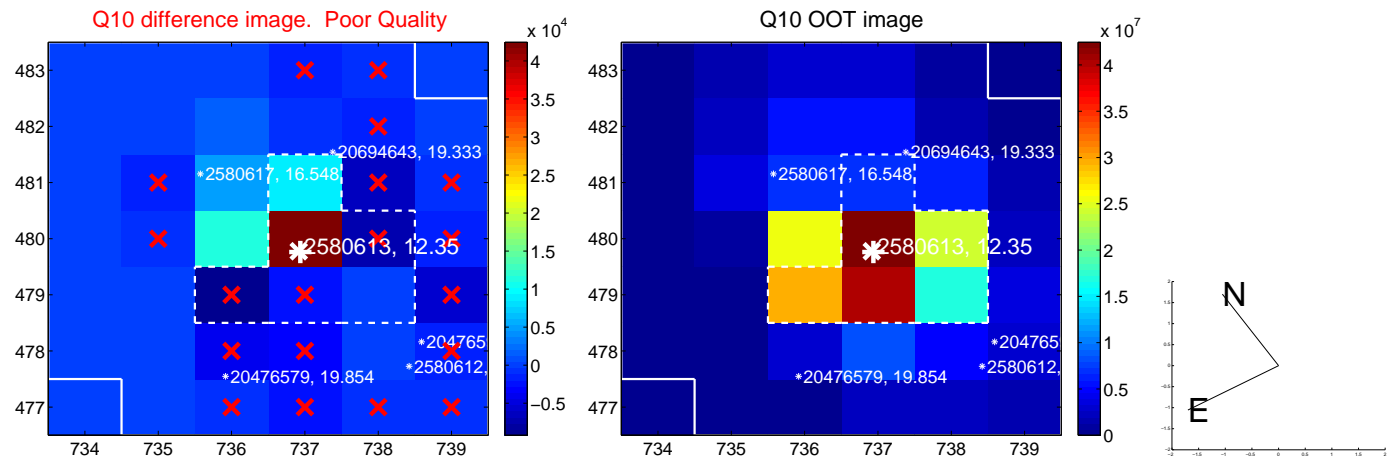
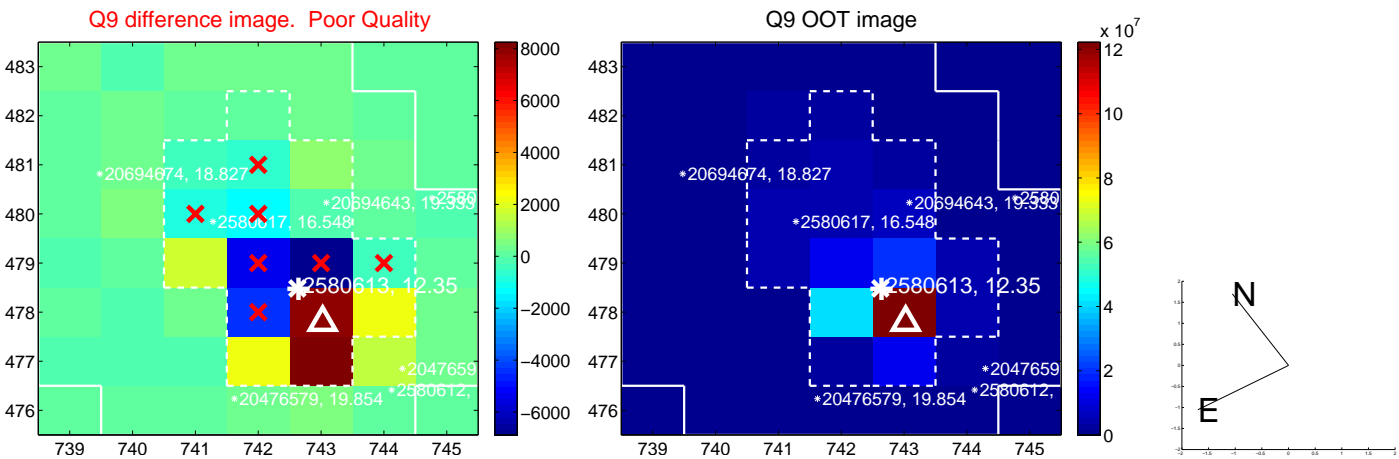
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



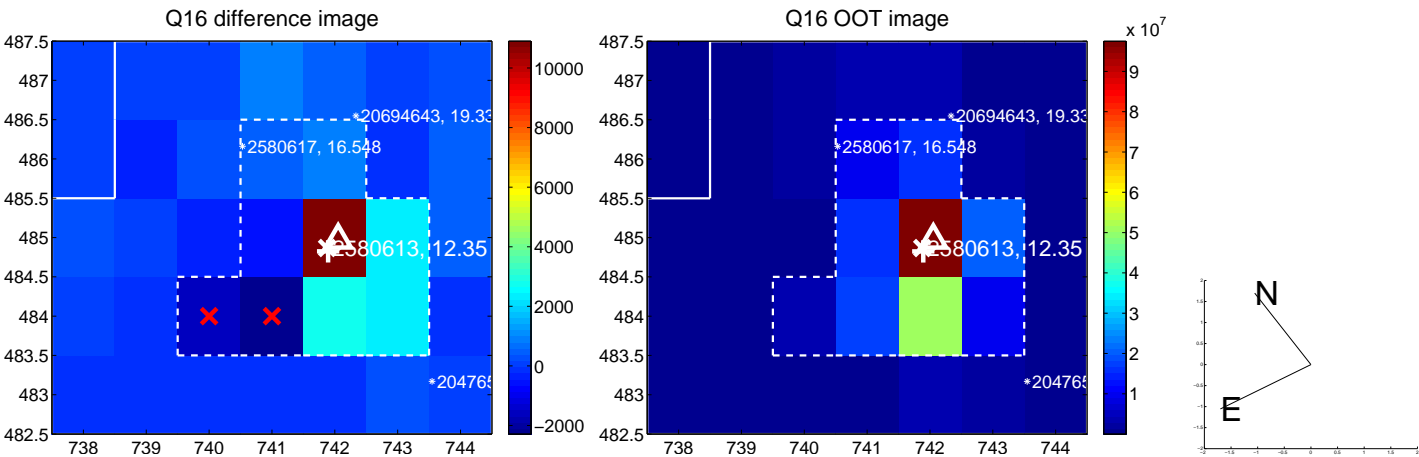
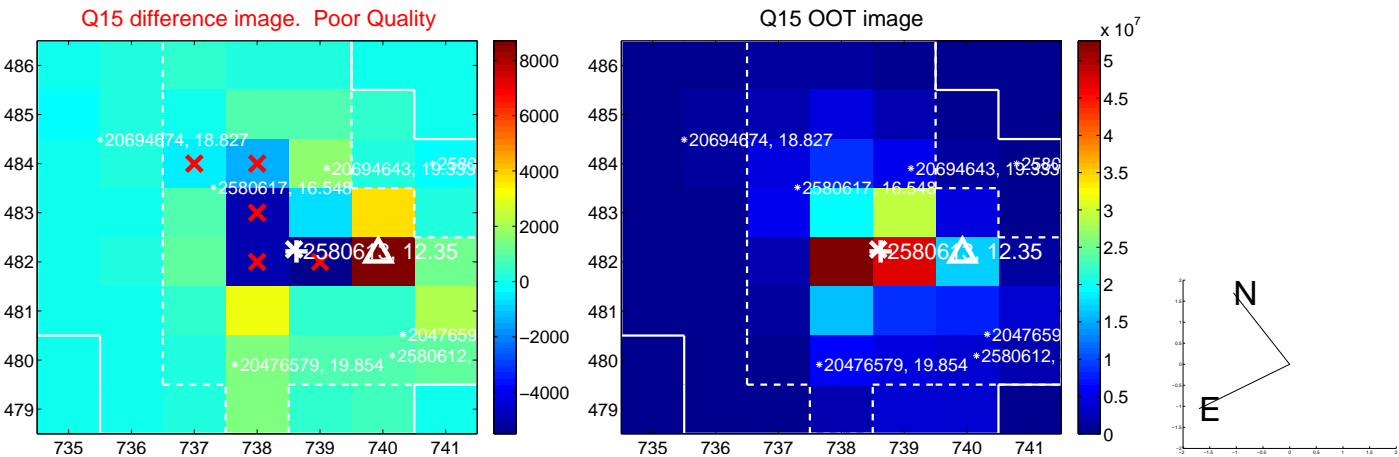
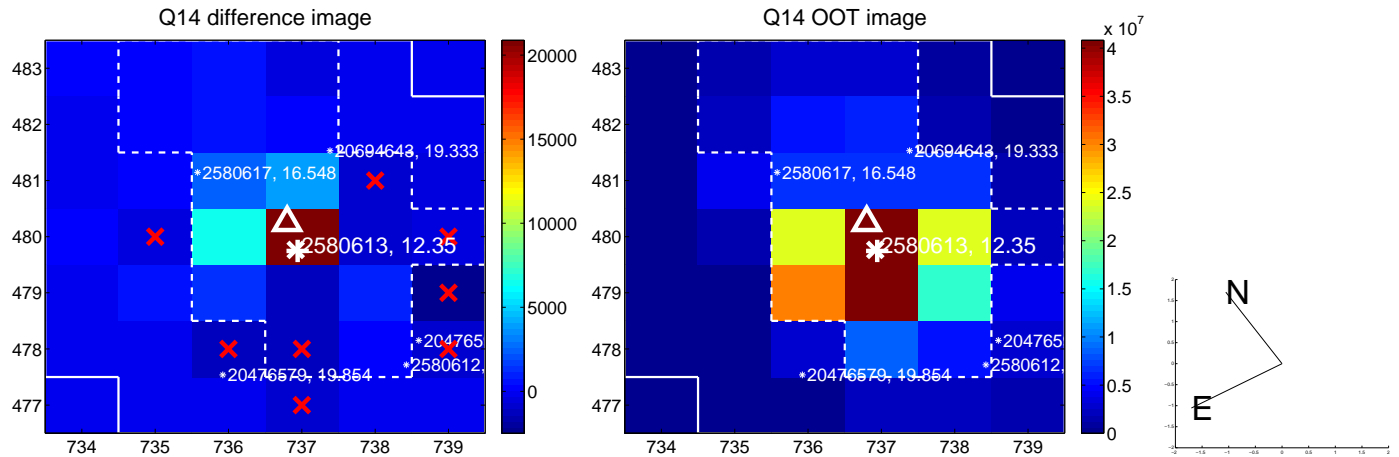
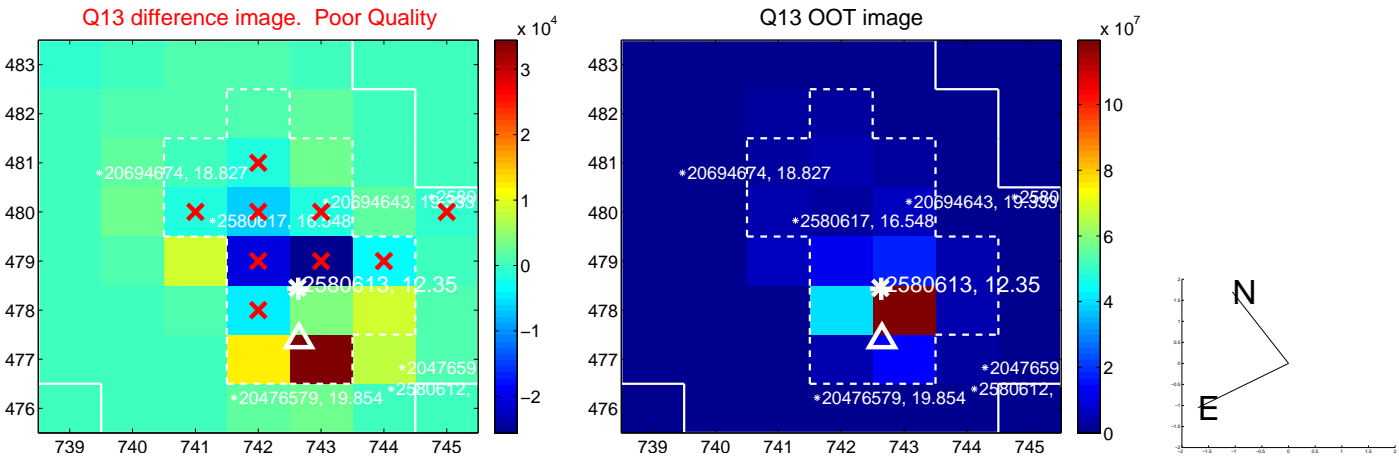
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



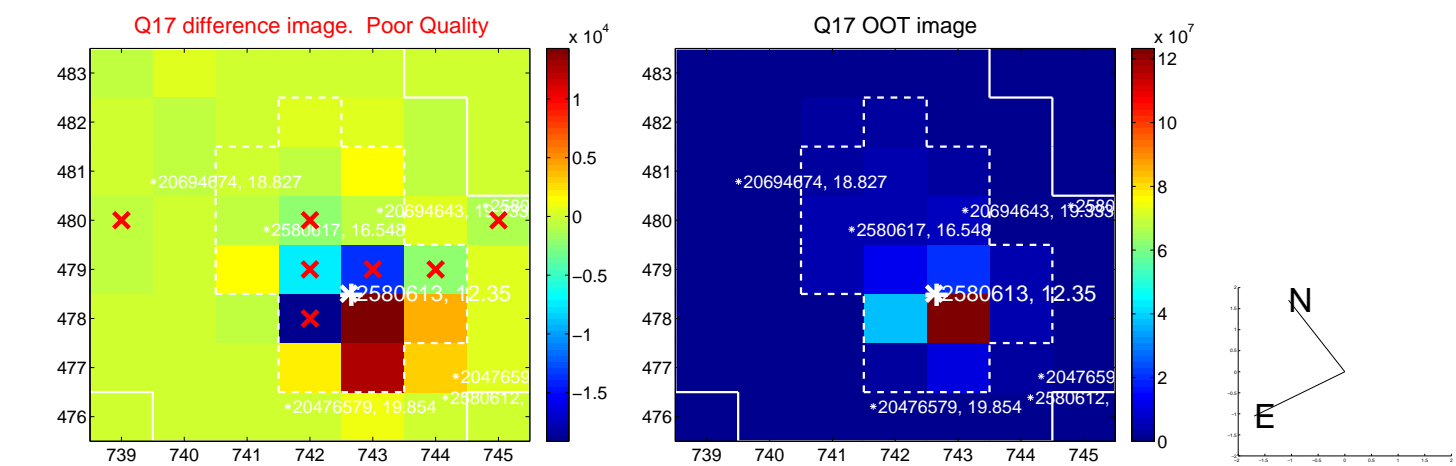
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



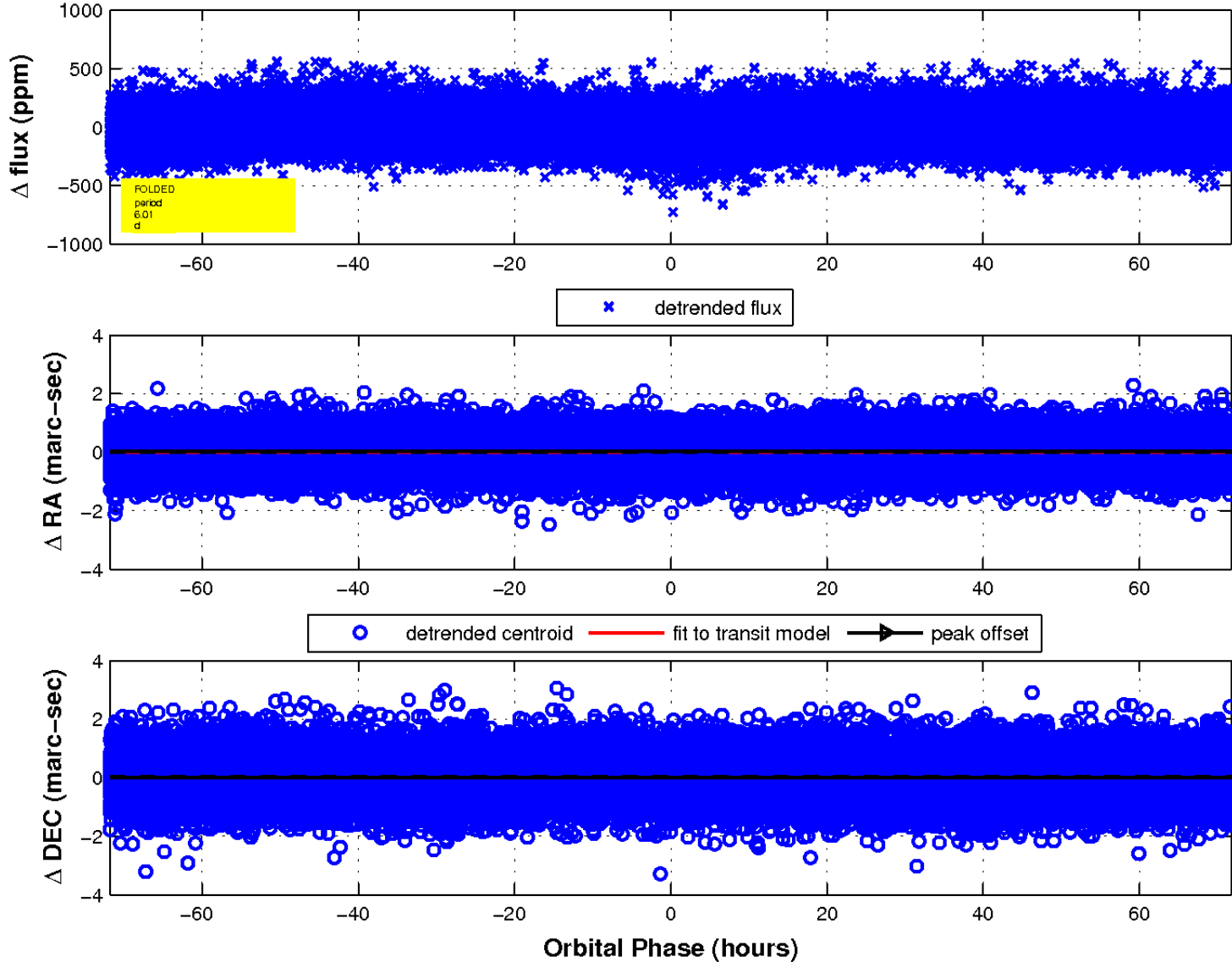
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

