

KIC 009652302

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})
009652302-01	OBS	No	0.835224	131.541055	20.0	4.687	9.8	4.5	1.61	7282	0.77	17467.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009652302-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

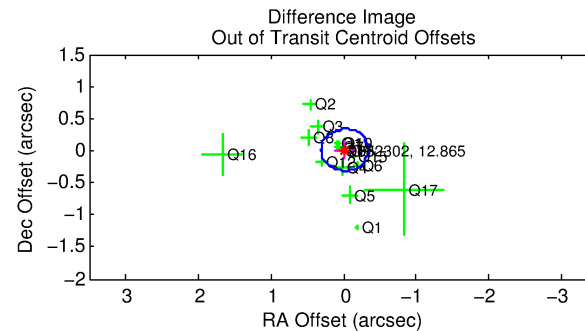
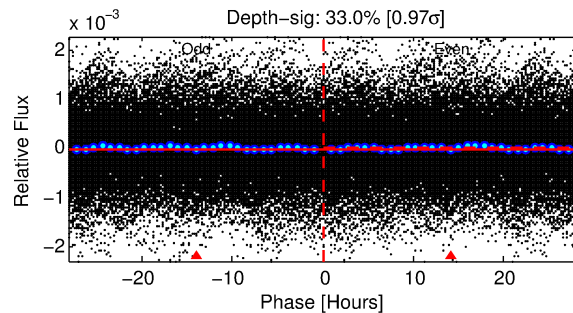
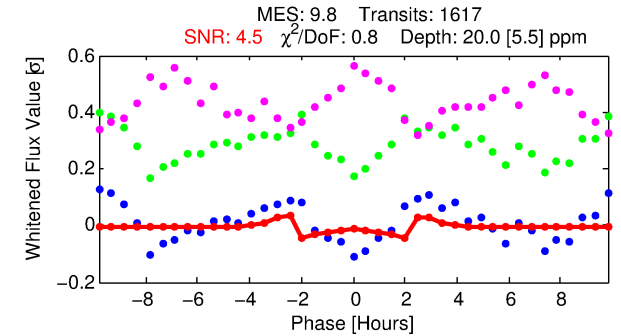
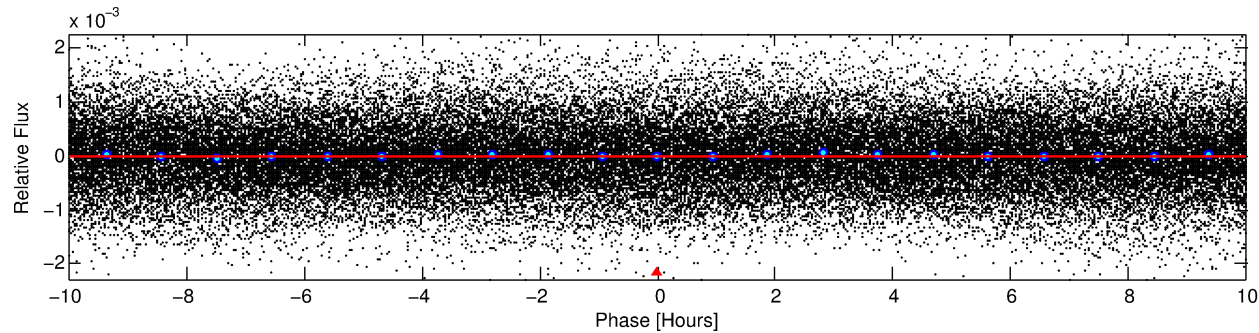
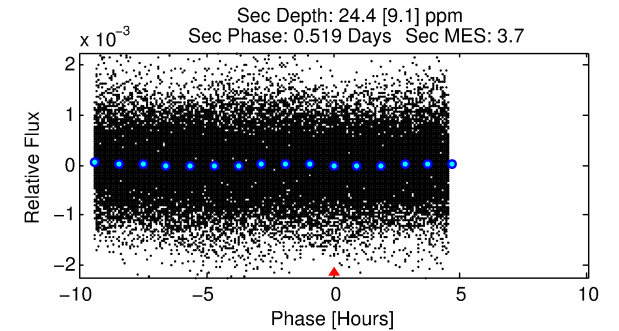
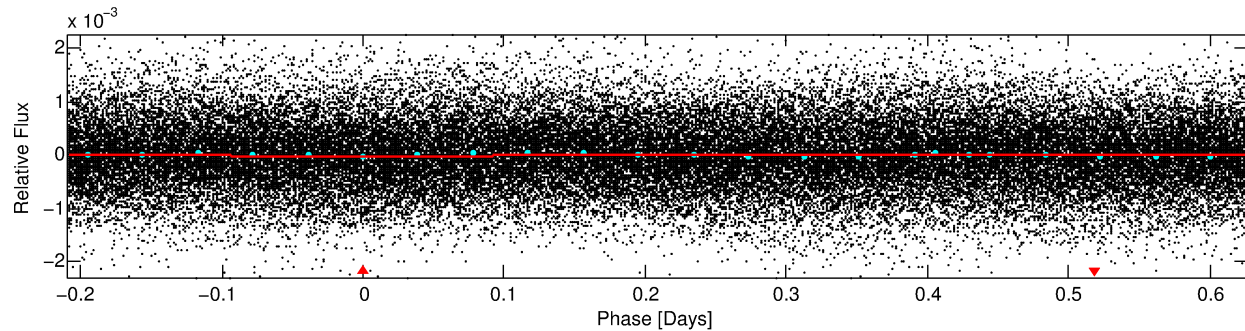
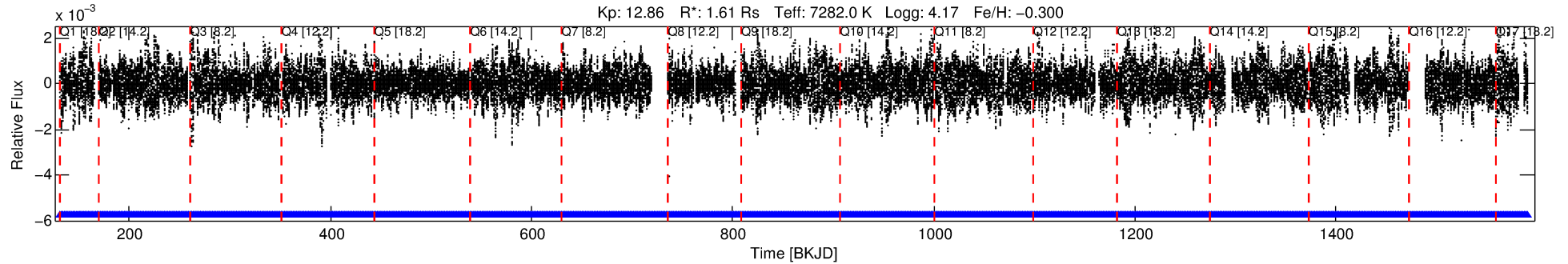
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009652302-01

No Significant Match Found

DV One-Page Summary

KIC: 9652302 Candidate: 1 of 1 Period: 0.835 d



DV Fit Results:

Period = 0.83522 [0.00002] d
Epoch = 131.5411 [0.0032] BKJD
Rp/R* = 0.0044 [0.0014]
a/R* = 1.27 [0.93]
b = 0.72 [1.31]
Seff = 17467.22 [6633.18]
Teq = 2931 [278] K
Rp = 0.77 [0.34] Re
a = 0.0193 [0.0047] AU
Ag = 8.38 [6.95] [1.06σ]
Teffp = 7712 [1491] K [3.15σ]

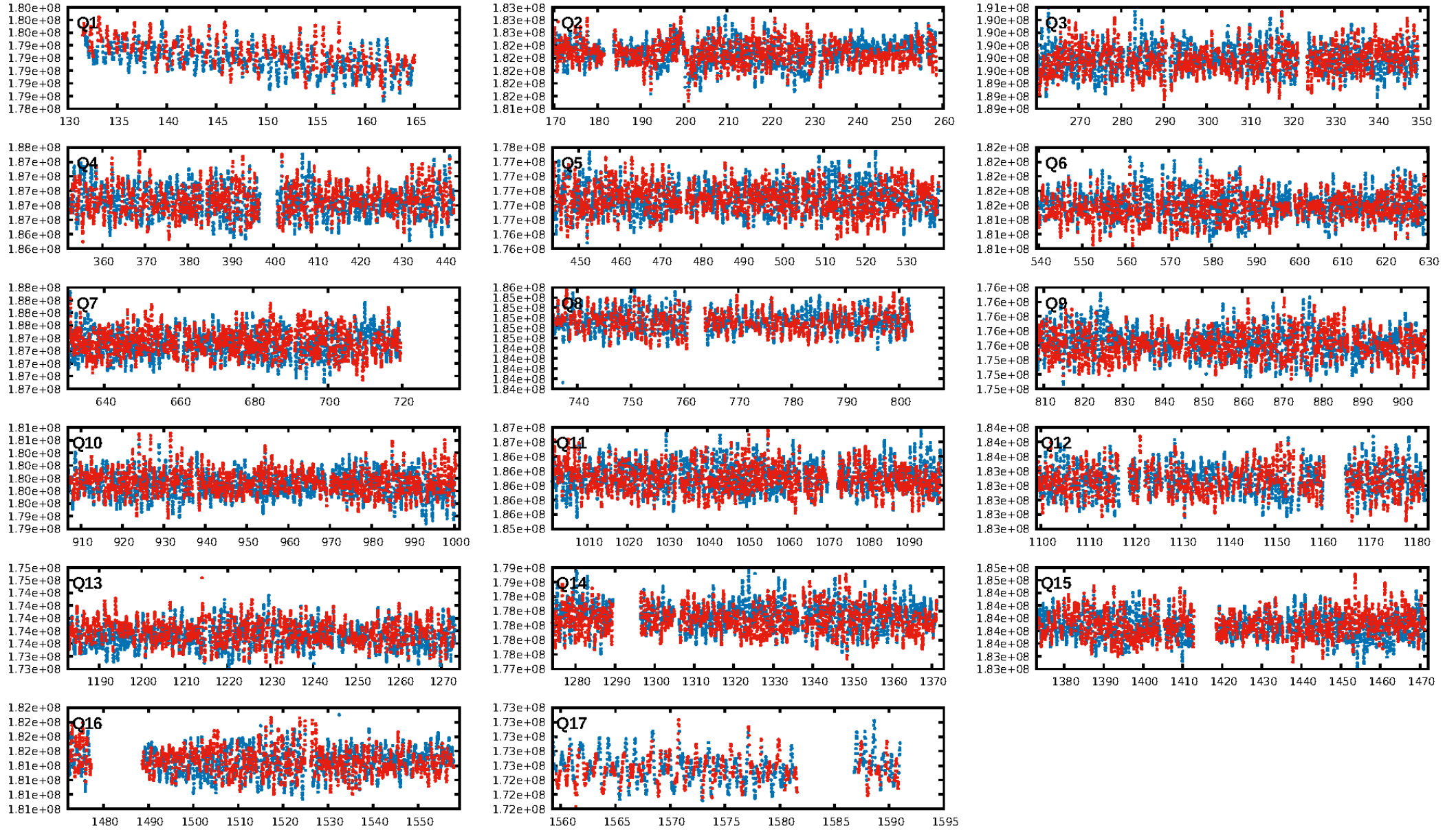
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.73e-18
RollingBand-fgm: 1.00 [1544/1544]
GhostDiagnostic-chr: 0.3899
Centroid-sig: 8.7%
Centroid-so: 1.207 arcsec [2.09σ]
OotOffset-rm: 0.020 arcsec [0.18σ]
KicOffset-rm: 0.108 arcsec [0.76σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 1.00 [17/17]

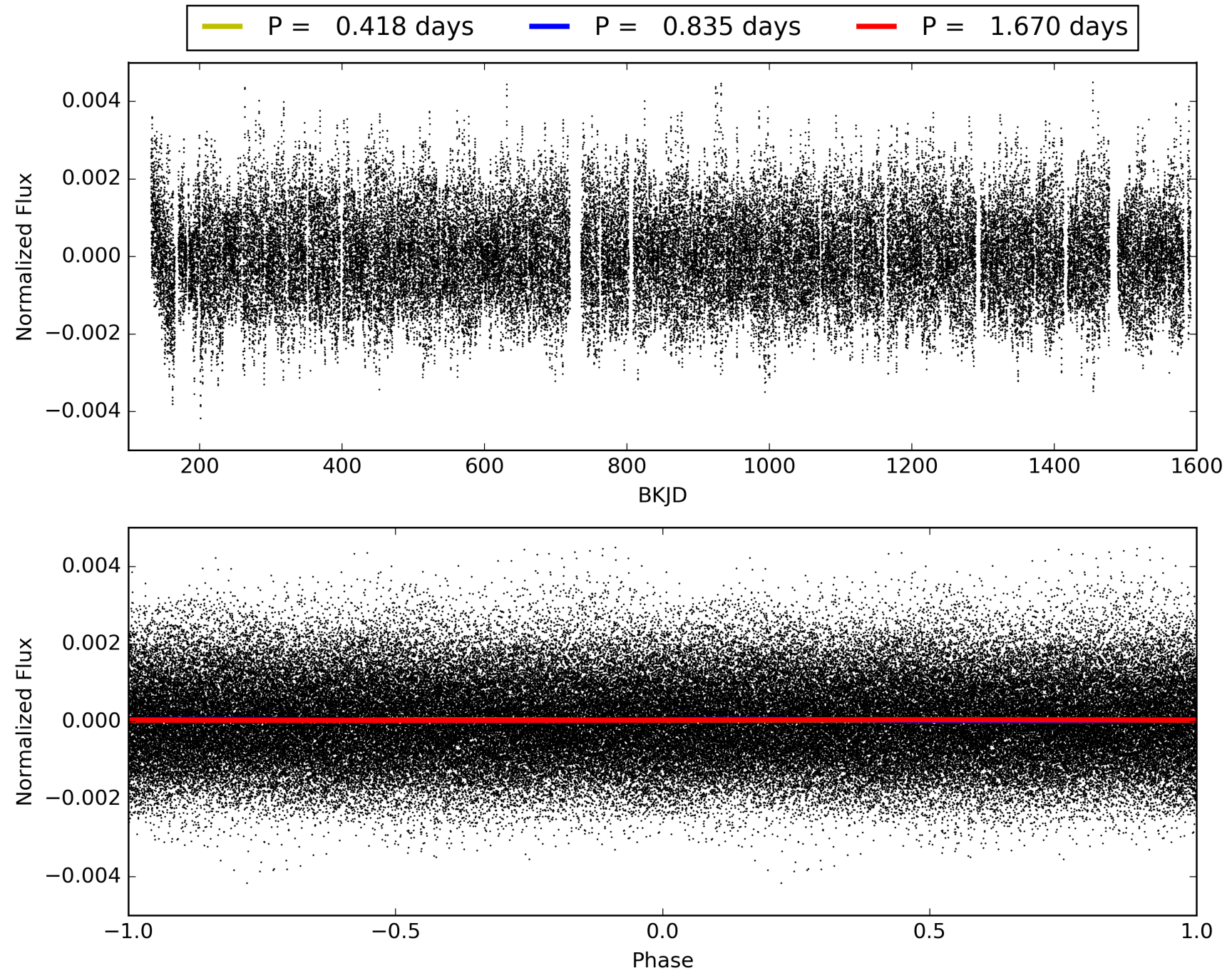
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 22:02:37 Z

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

TCE 009652302-01, PDC Light Curves

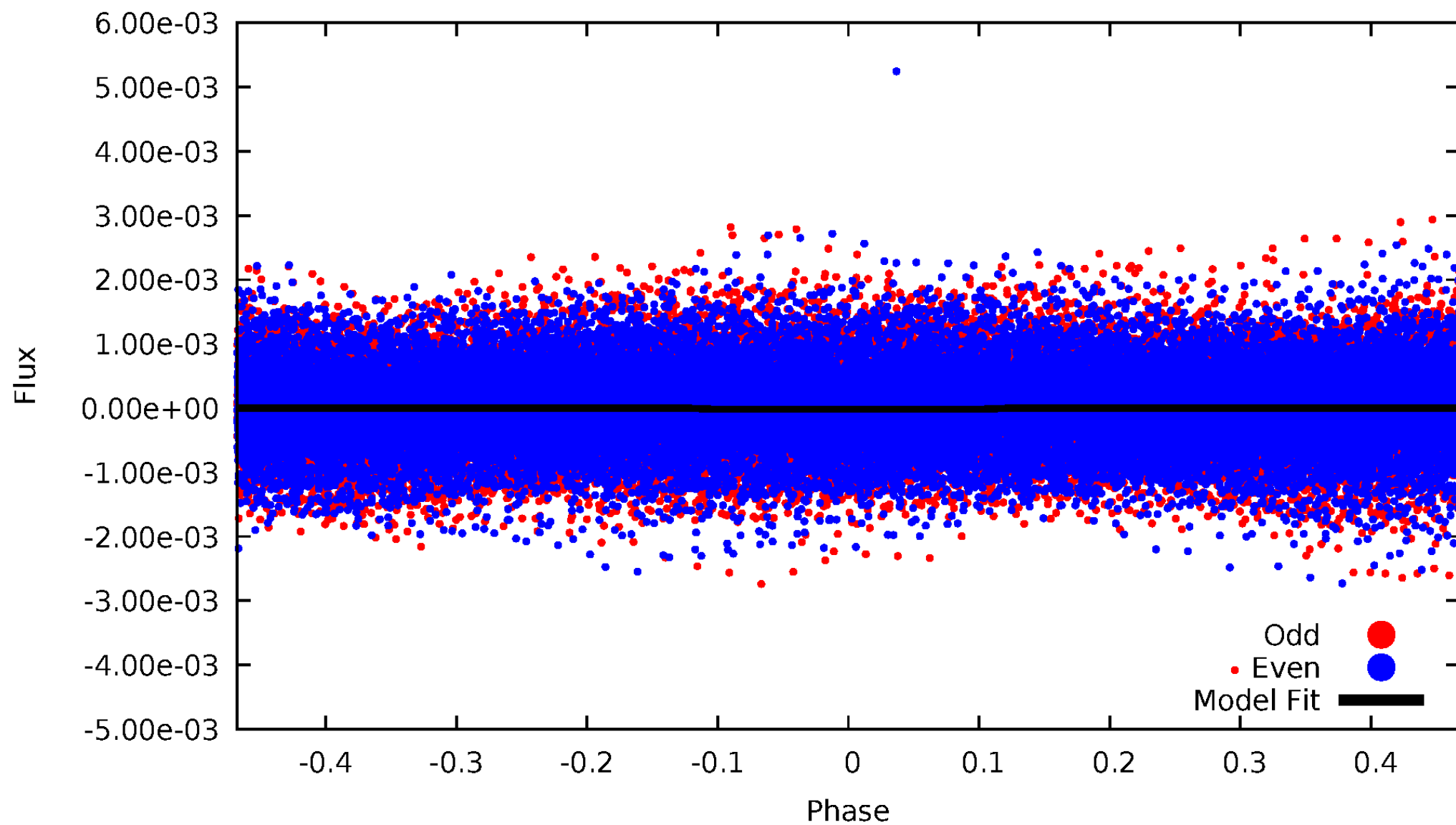


TCE 009652302-01



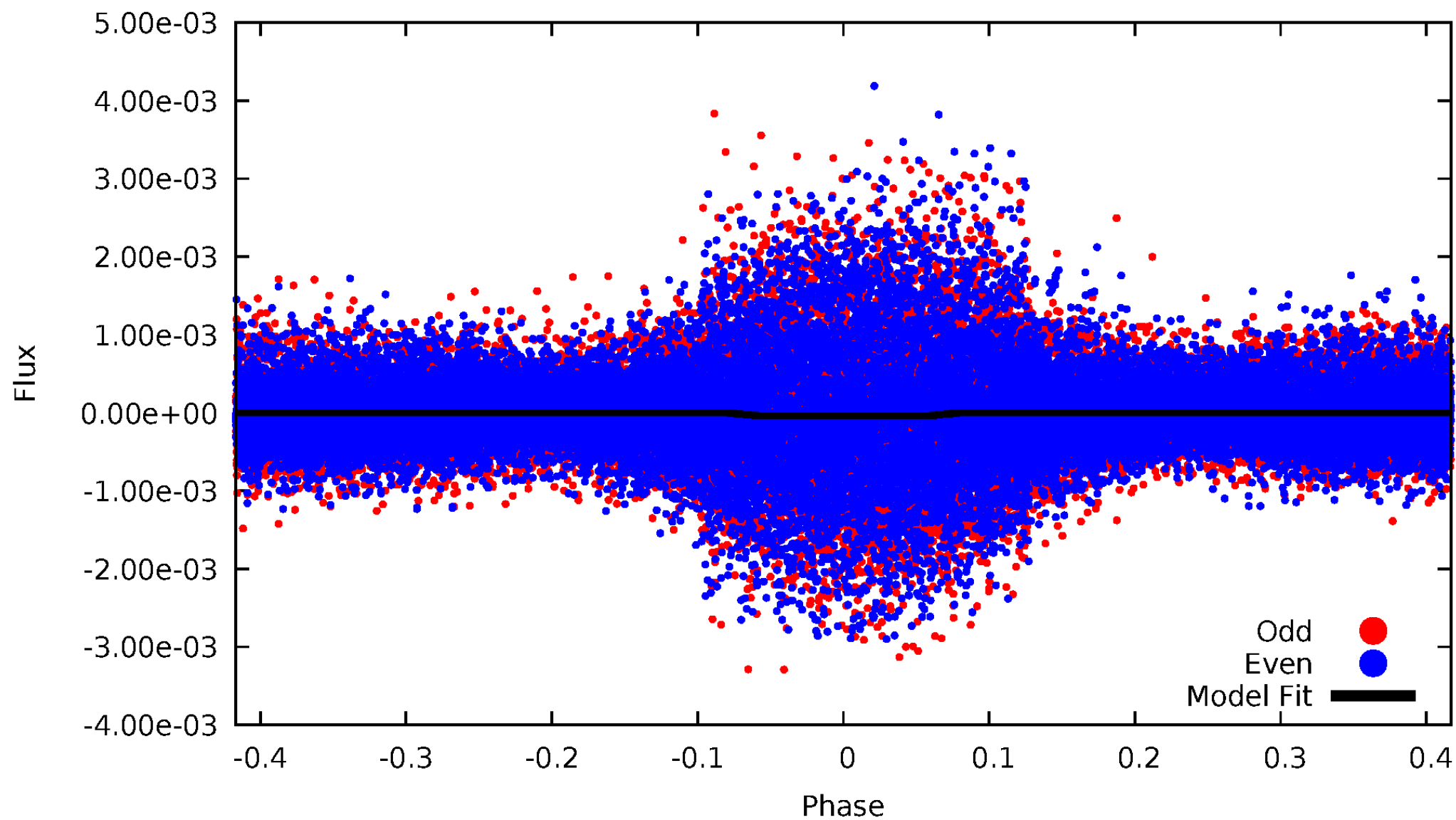
DV Odd/Even

TCE 009652302-01

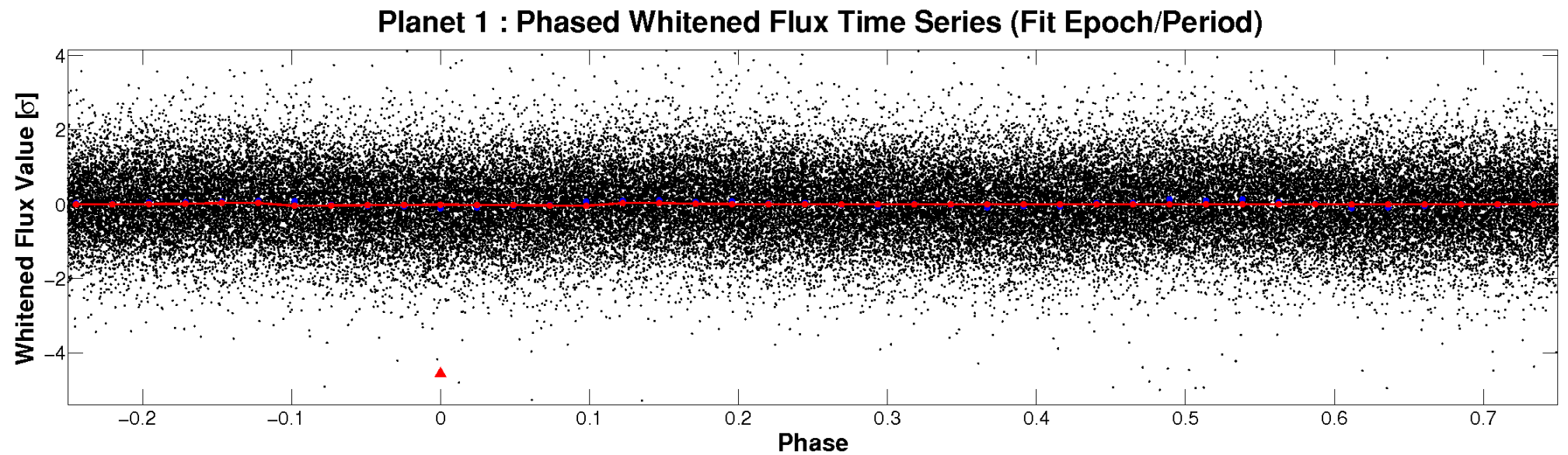
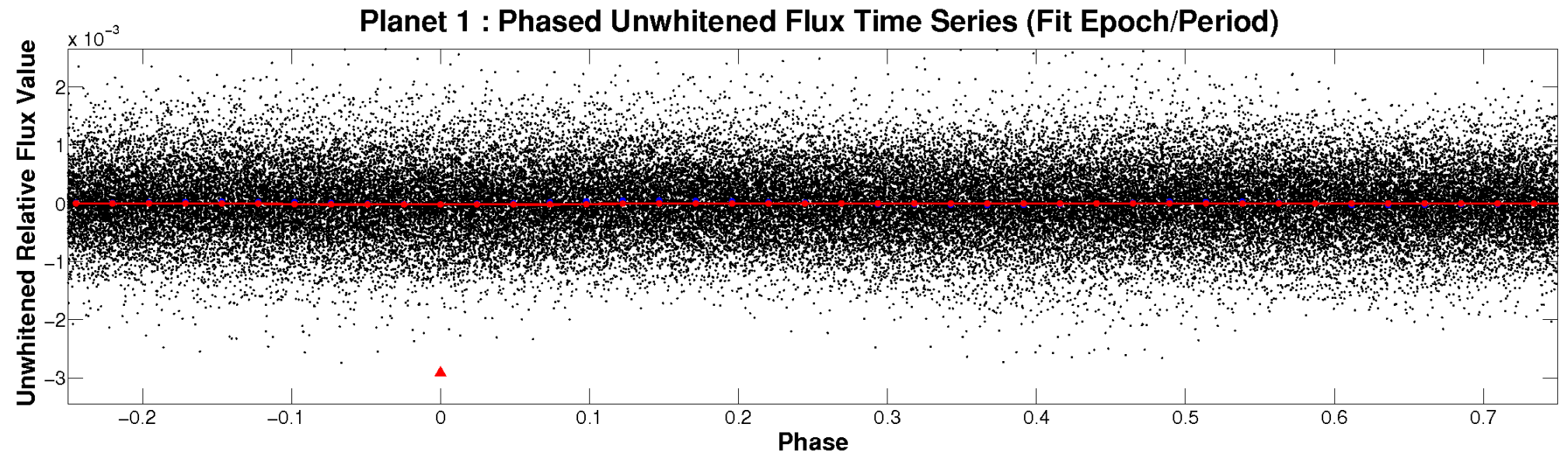


ALT Odd/Even

TCE 009652302-01

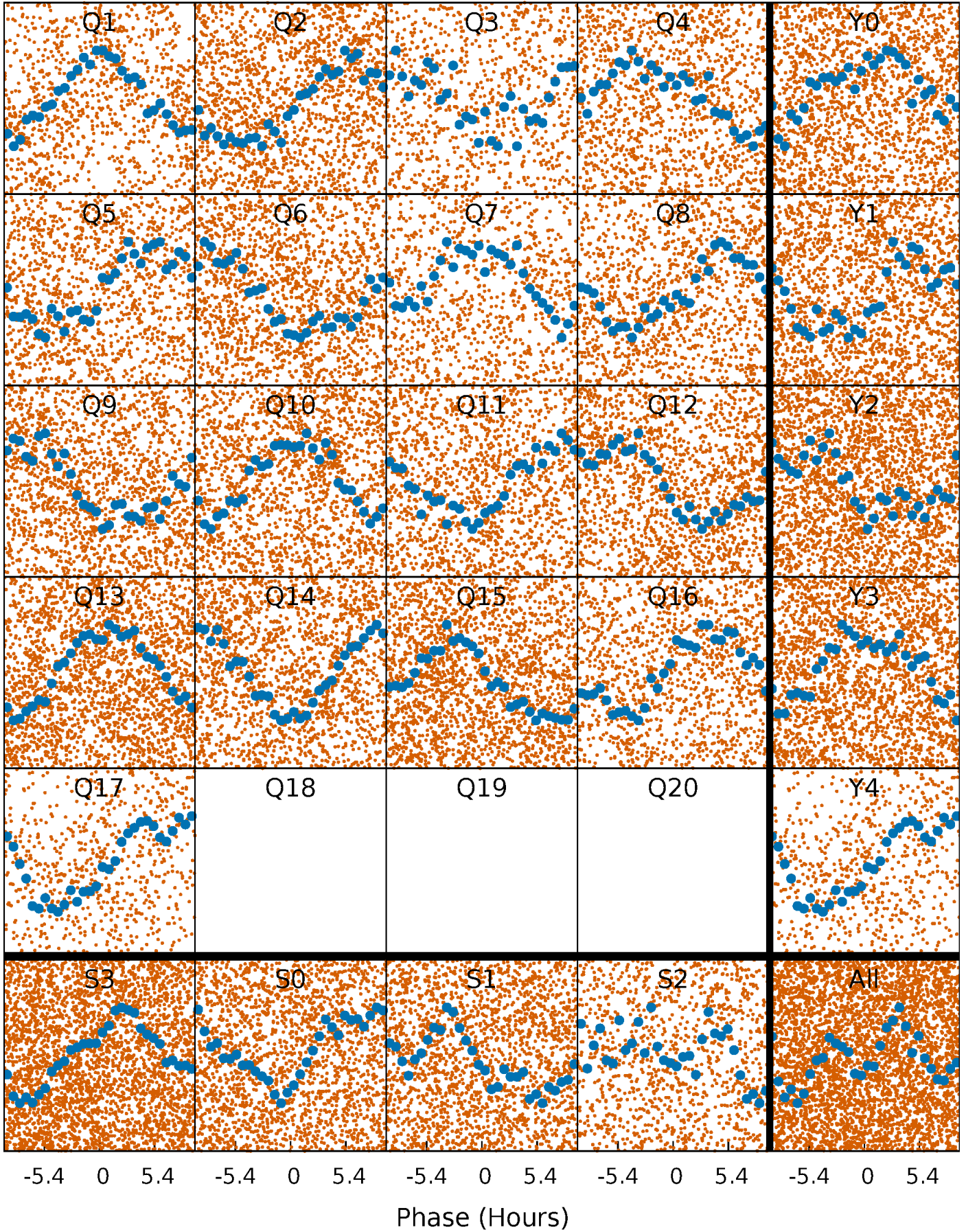


Non-Whitened Vs. Whitened Light Curve



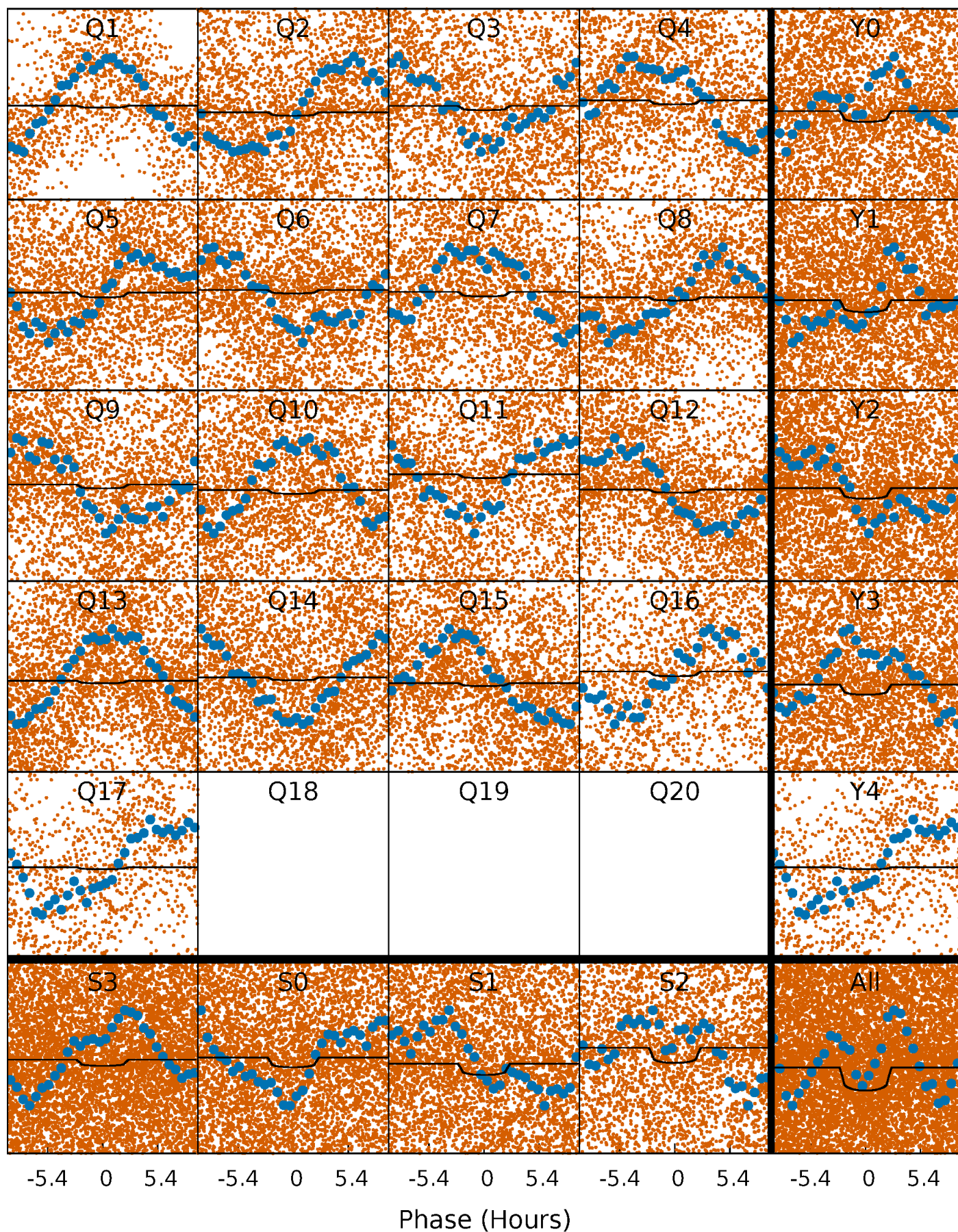
PDC Quarter-Phased Transit Curves

TCE 009652302-01 P= 0.835224 Days $T_0=131.541055$ (BKJD)



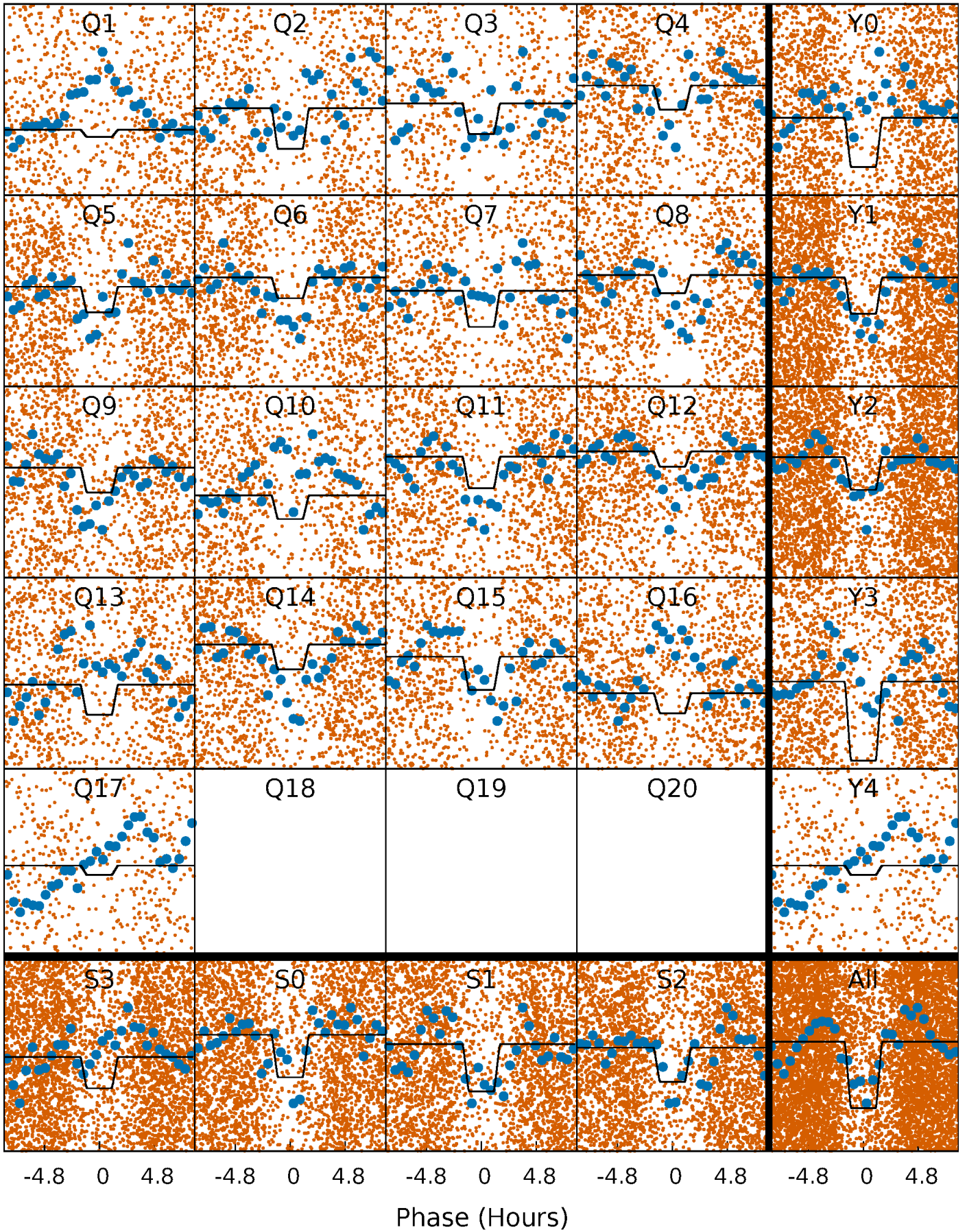
DV Quarter-Phased Transit Curves

TCE 009652302-01 P= 0.835224 Days $T_0=131.541055$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

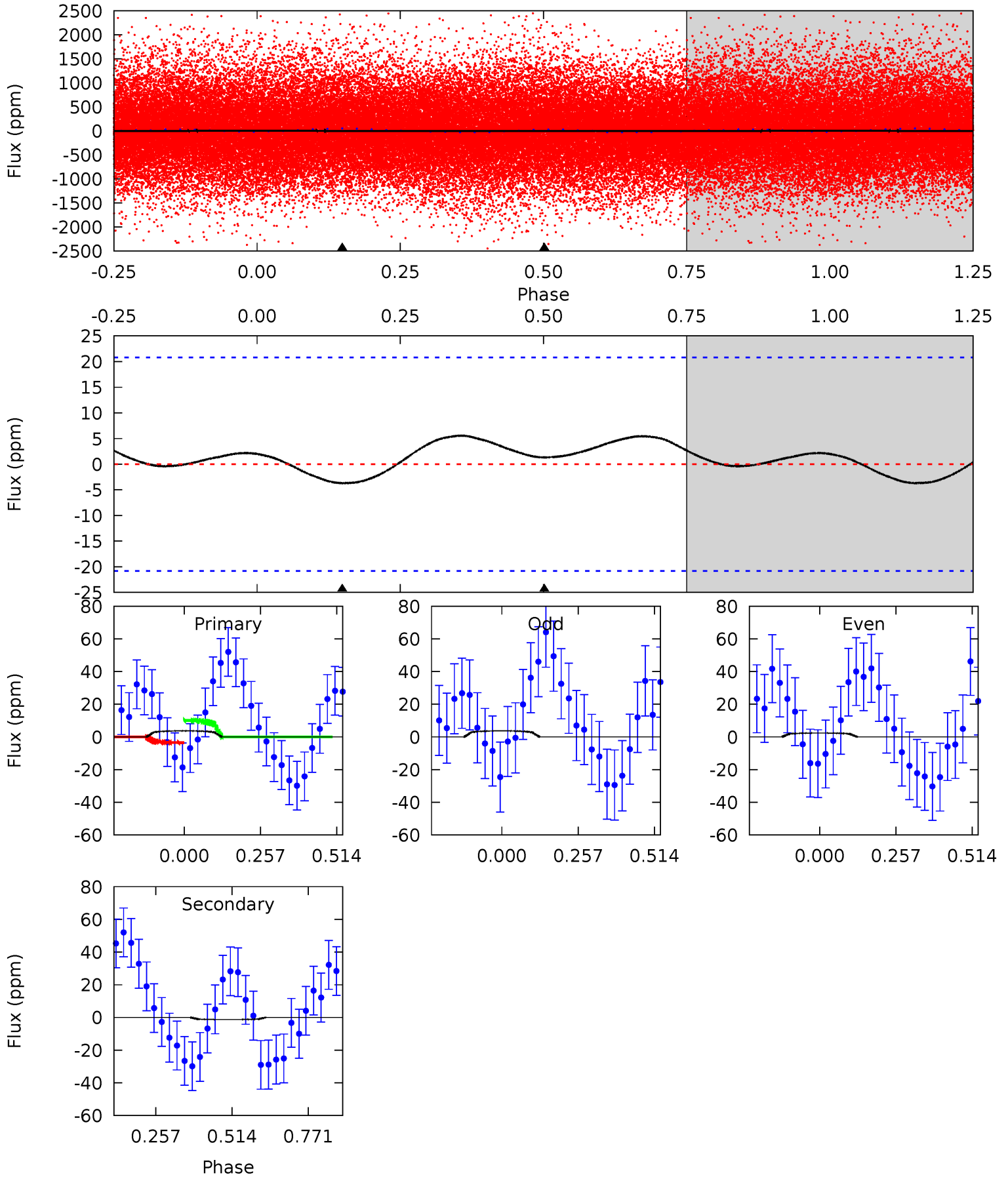
TCE 009652302-01 P= 0.835250 Days $T_0=131.520076$ (BKJD)



DV Model-Shift Uniqueness Test

009652302-01, P = 0.835224 Days, E = 130.705831 Days

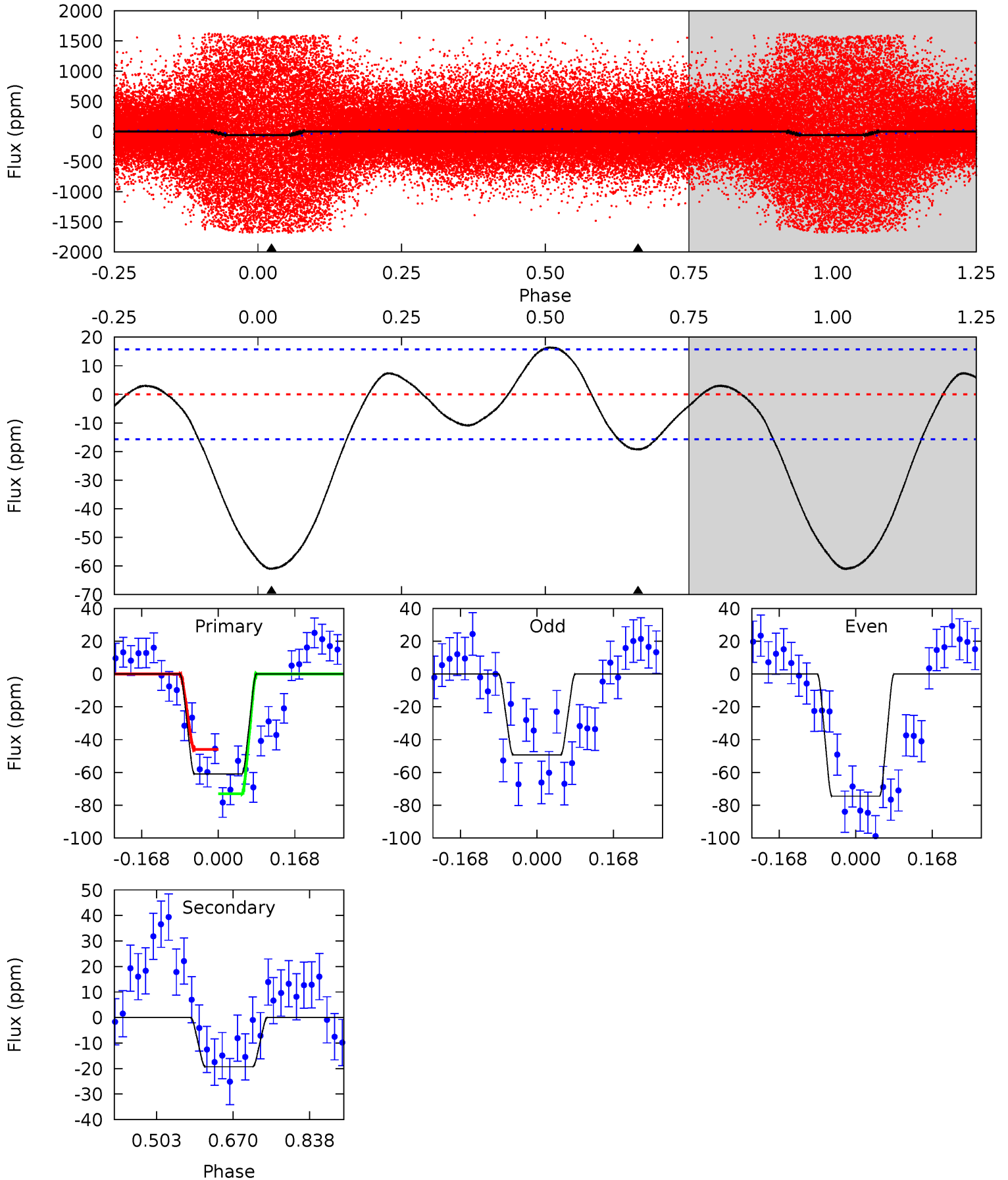
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.78	-0.27	0	0	4.36	1.13	0.15	0.78	0.78	-0.27	-0.27	0.14	0.39	0.60	0.68



Alt Model-Shift Uniqueness Test

009652302-01, P = 0.835250 Days, E = 130.684826 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	5.47	0	0	4.46	1.38	2.01	17.3	17.3	5.47	5.47	3.53	1.27	0.21	3.98



Stellar Parameters For KIC 009652302

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7282^{+228}_{-304}	$4.165^{+0.148}_{-0.181}$	$-0.300^{+0.250}_{-0.350}$	$1.611^{+0.478}_{-0.347}$	$1.388^{+0.212}_{-0.212}$	$0.468^{+0.359}_{-0.234}$
	+3%/-4%	+4%/-4%	+83%/-117%	+30%/-22%	+15%/-15%	+77%/-50%
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 009652302-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	1 ± 5	$0.80^{+0.32}_{-0.29}$	4122^{+313}_{-283}	-4219^{+8865}_{-1522}	$-0.260^{+1.563}_{-2.029}$
Alt.	-19 ± 4	$1.17^{+0.32}_{-0.29}$	4114^{+308}_{-289}	5681^{+914}_{-604}	$2.889^{+2.016}_{-1.181}$

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 $A_{obs} \gg 1.0$

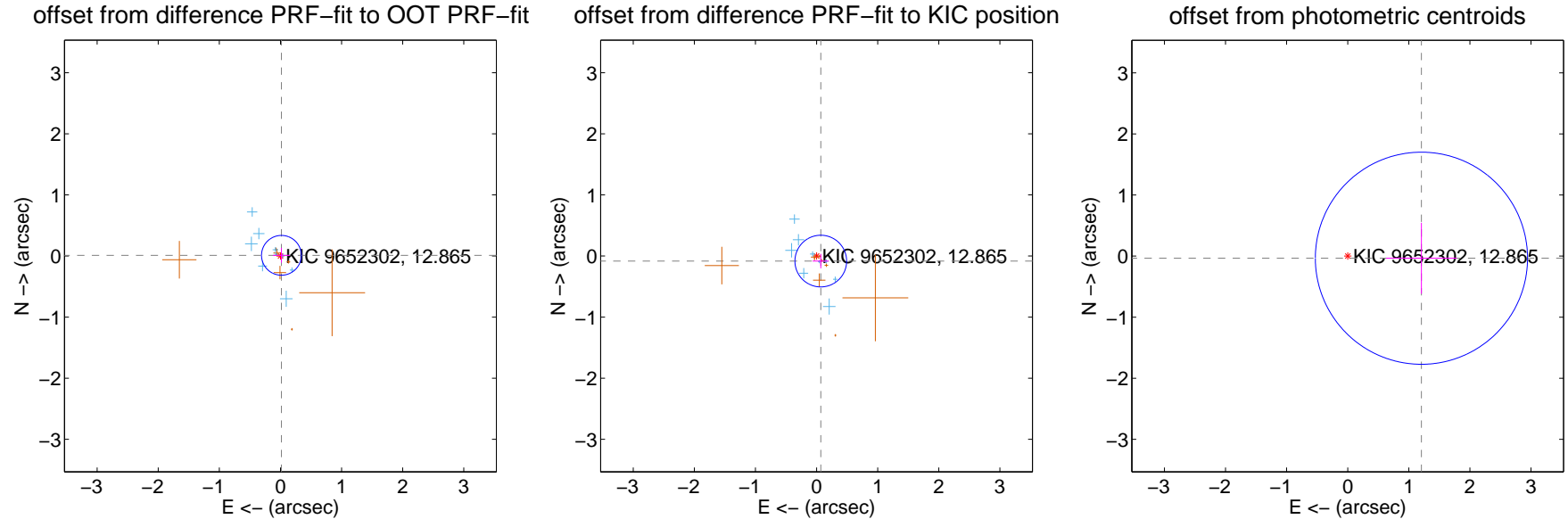
DV Centroid Data

Supplemental centroid analysis for 009652302-01. Kepler magnitude: 12.87. Transit SNR 4.54

There are 9 quarters with good PRF difference image offsets

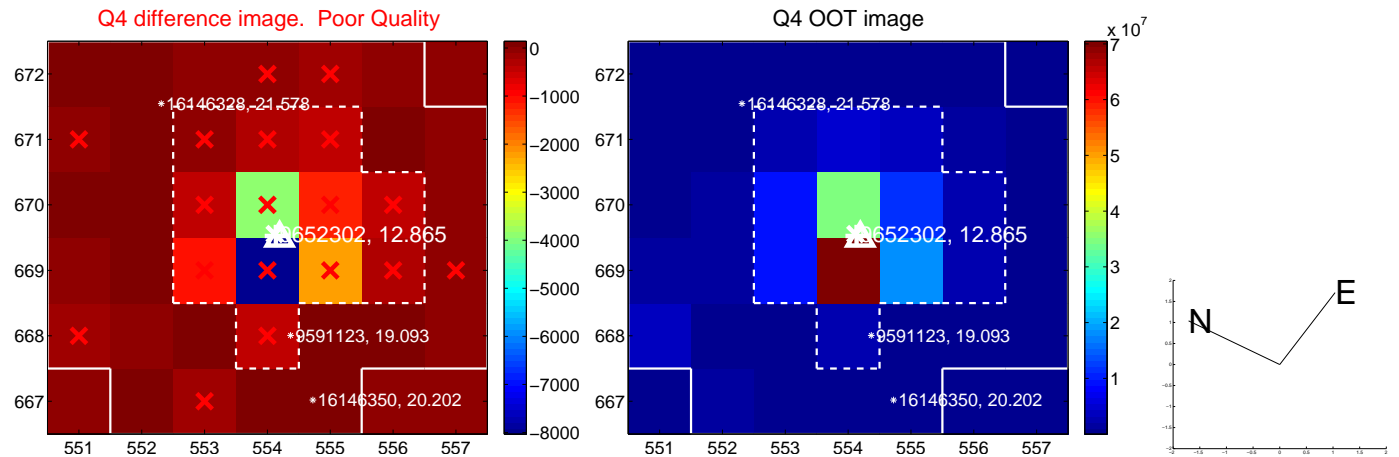
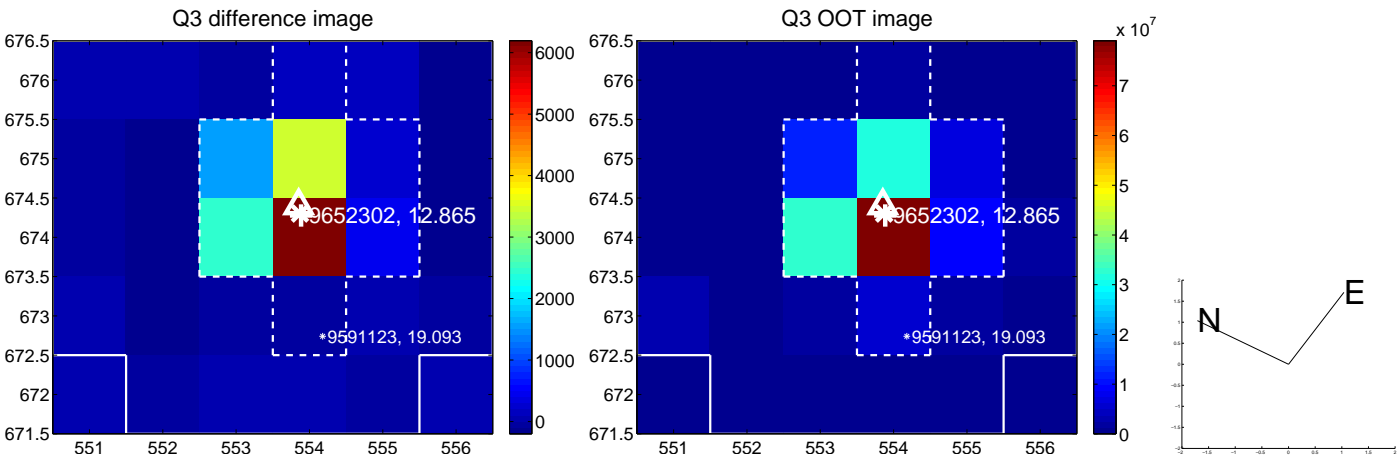
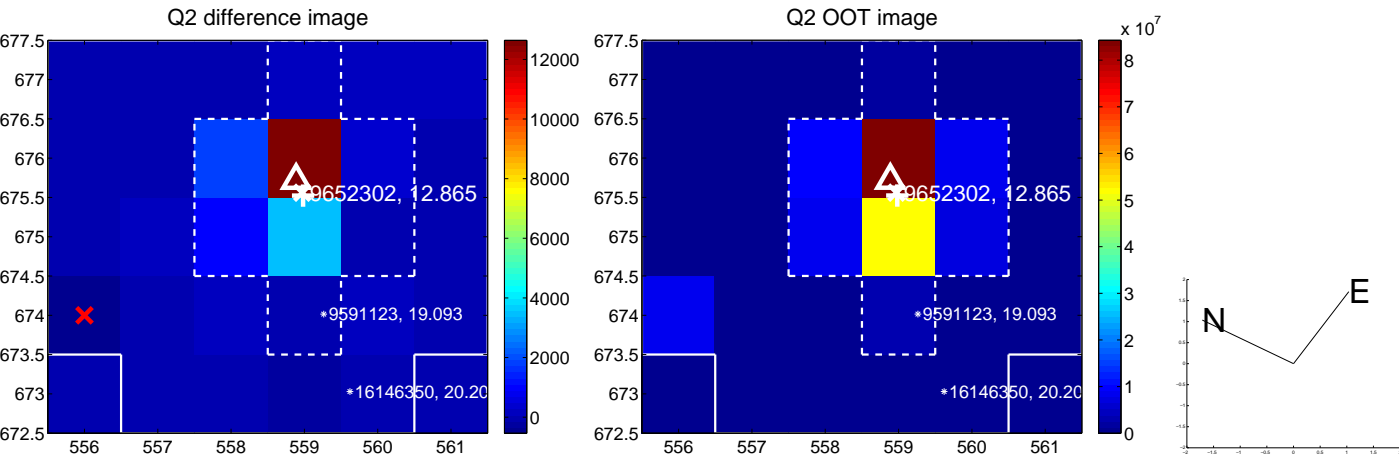
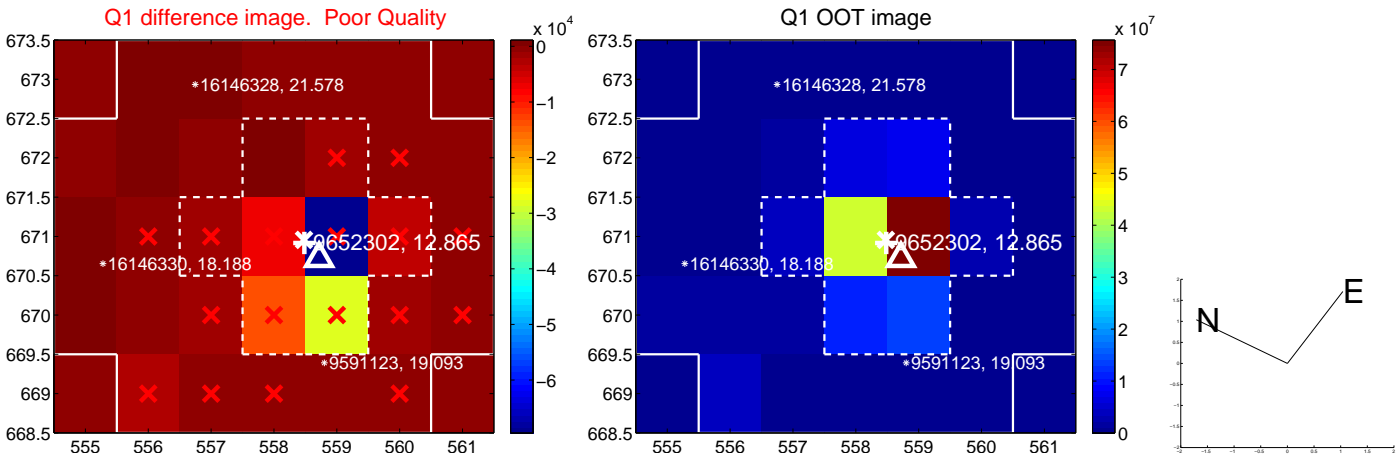
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.109	0.18	-0.016 ± 0.138	0.011 ± 0.121
PRF-fit source offset from KIC position	0.108 ± 0.141	0.76	-0.069 ± 0.133	-0.083 ± 0.119
photometric centroid source offset	1.21 ± 0.58	2.09	-1.21 ± 0.58	-0.03 ± 0.58

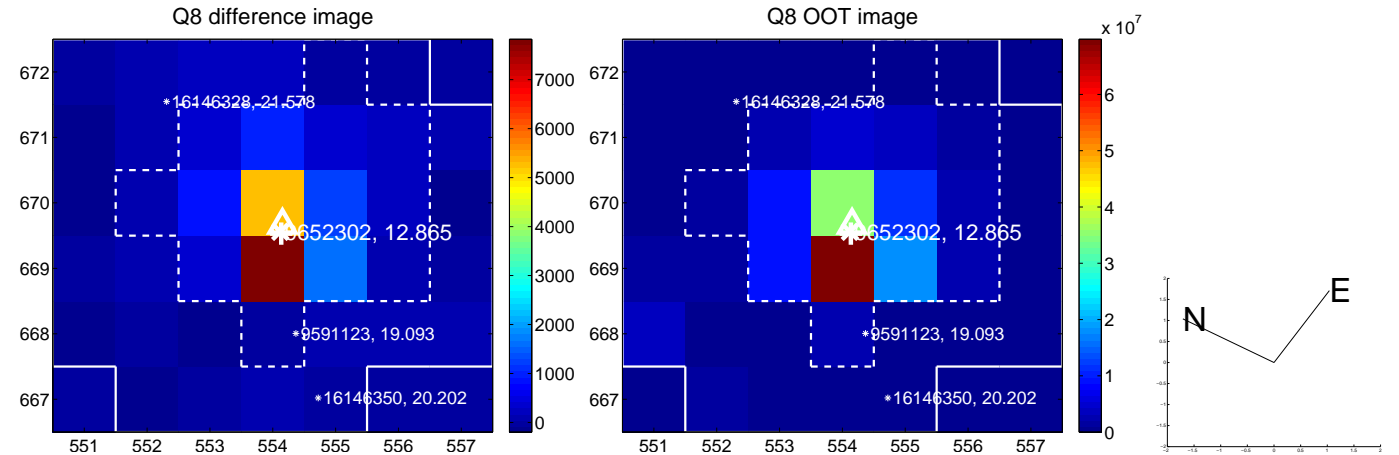
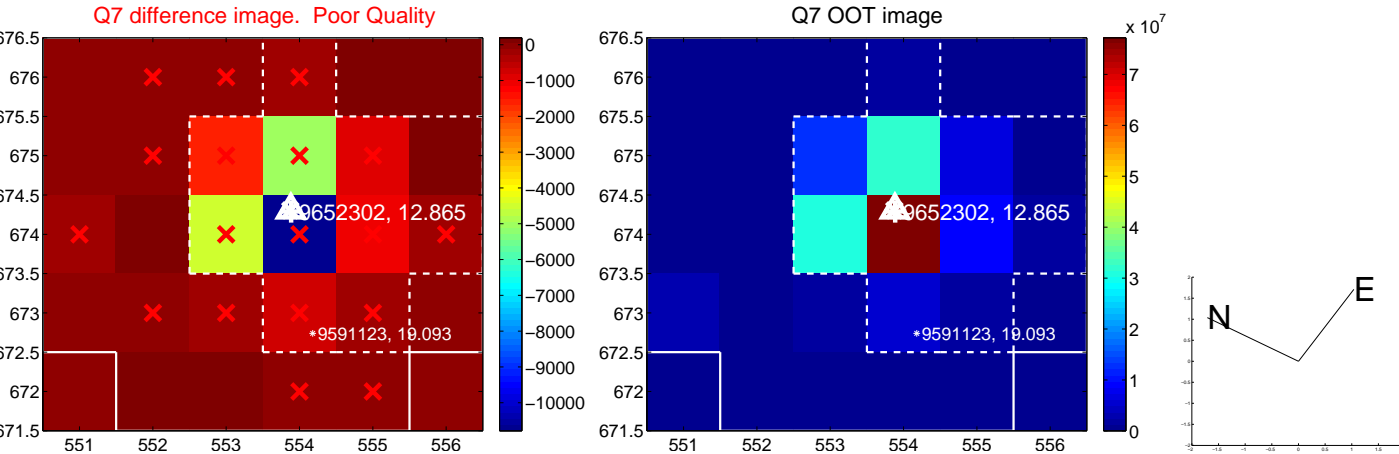
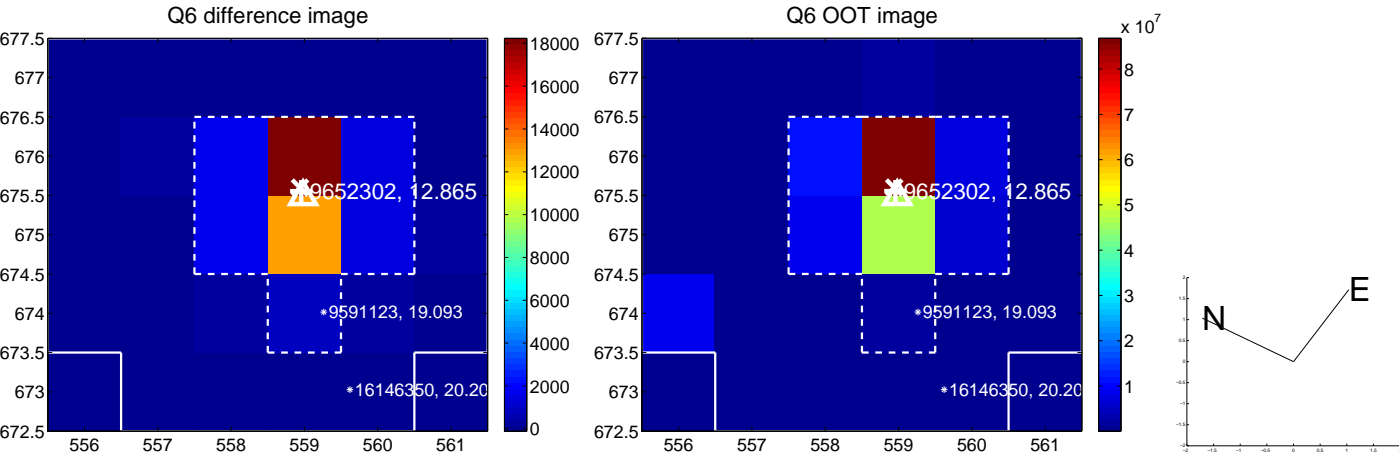
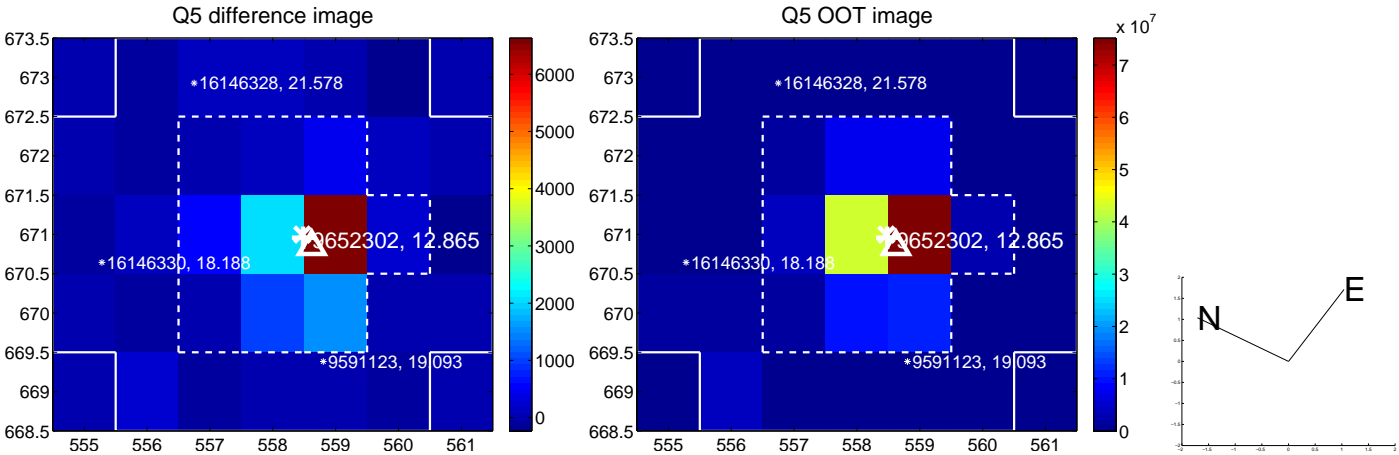


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

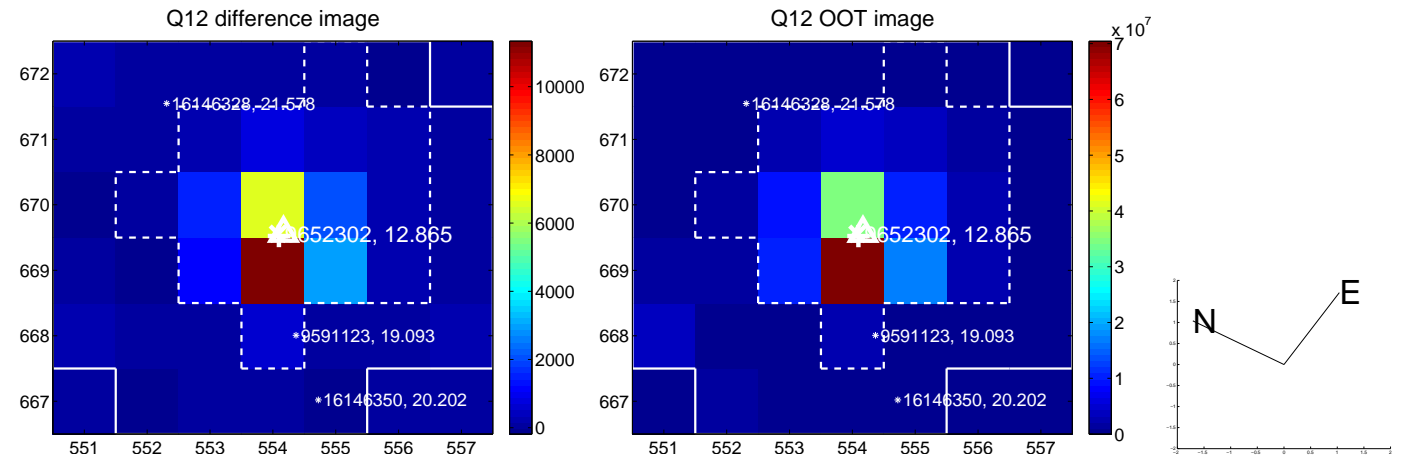
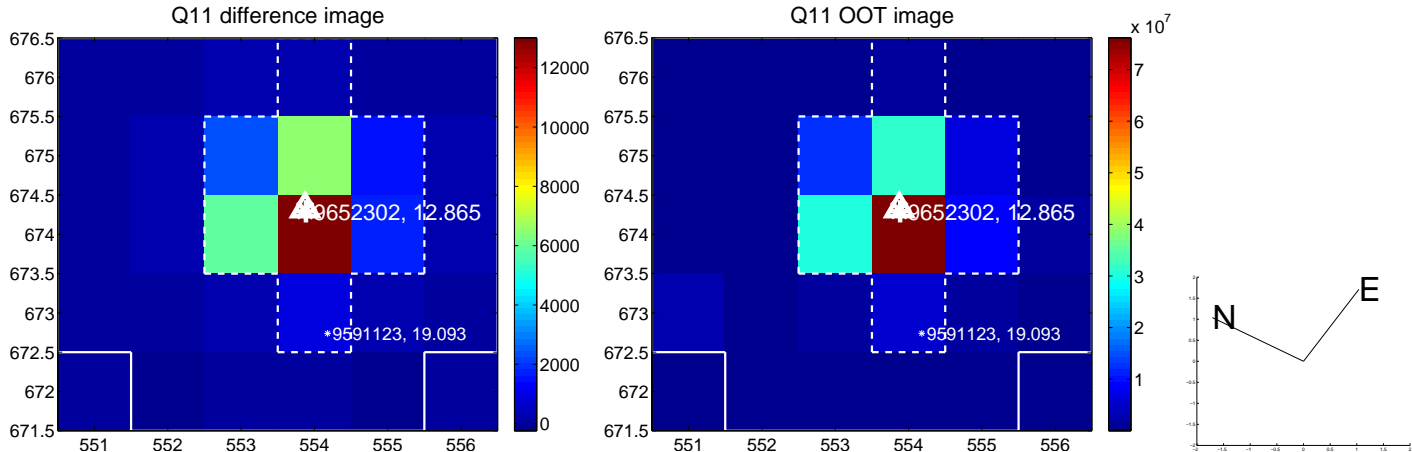
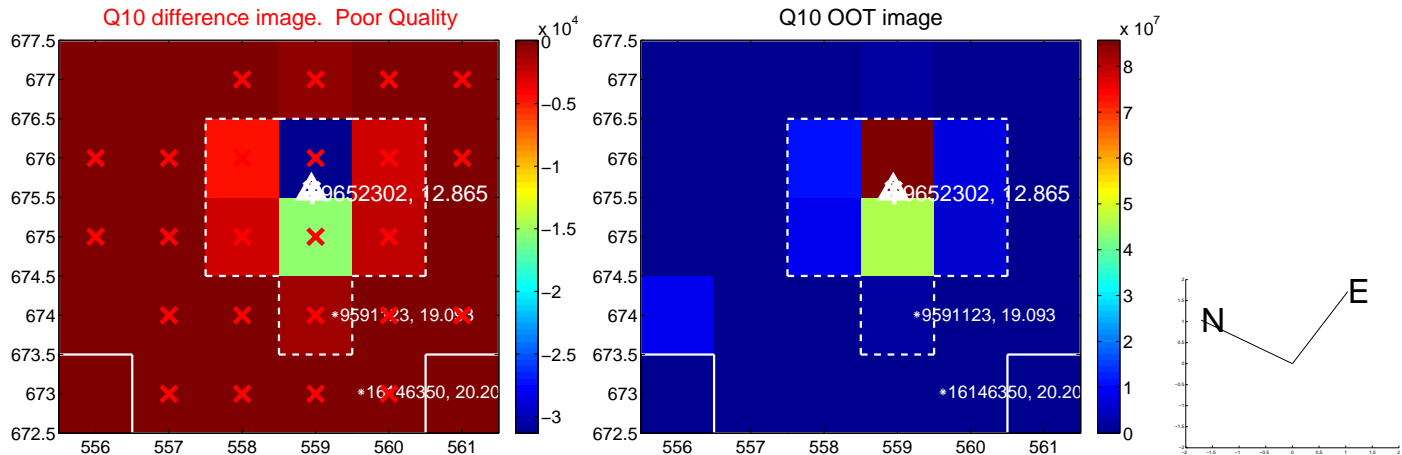
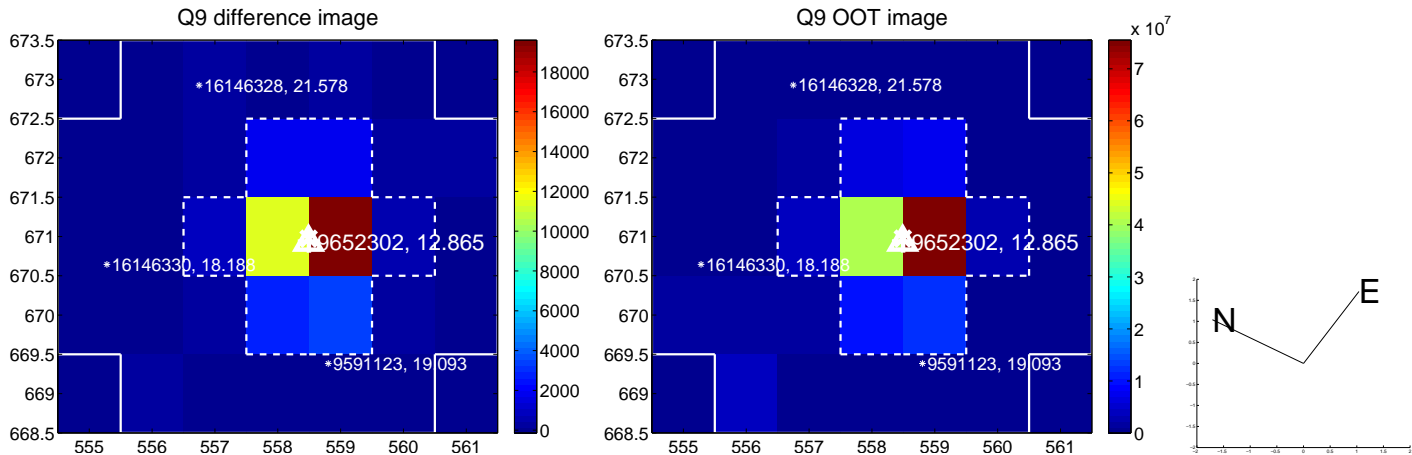
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



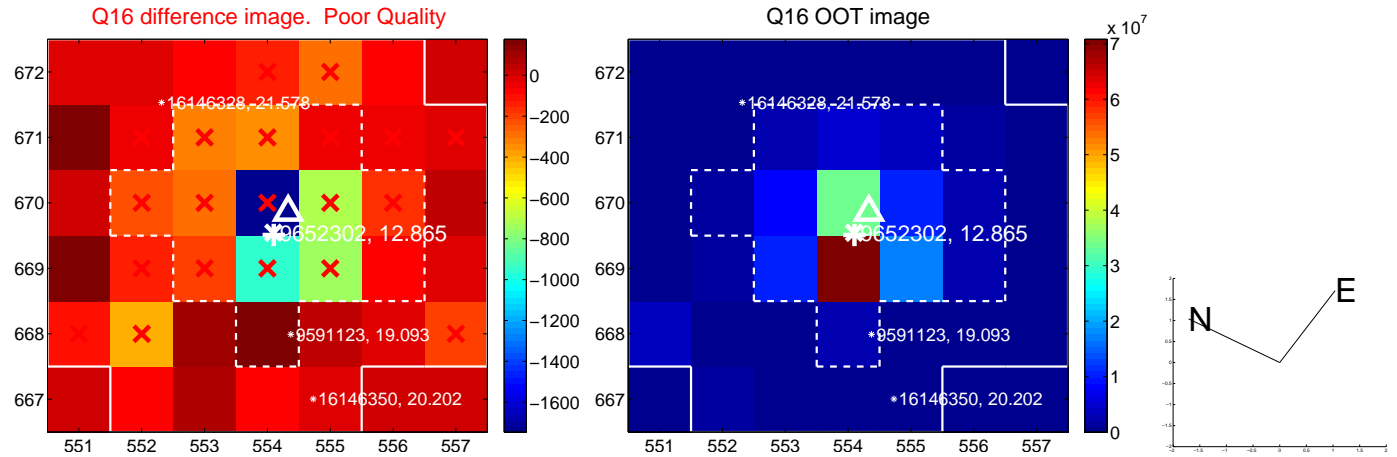
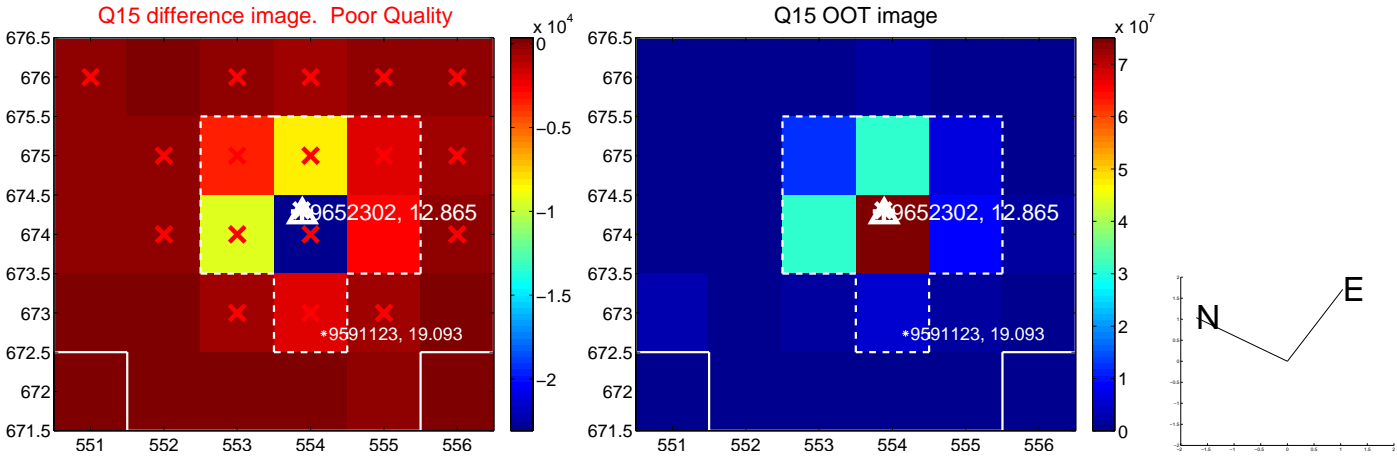
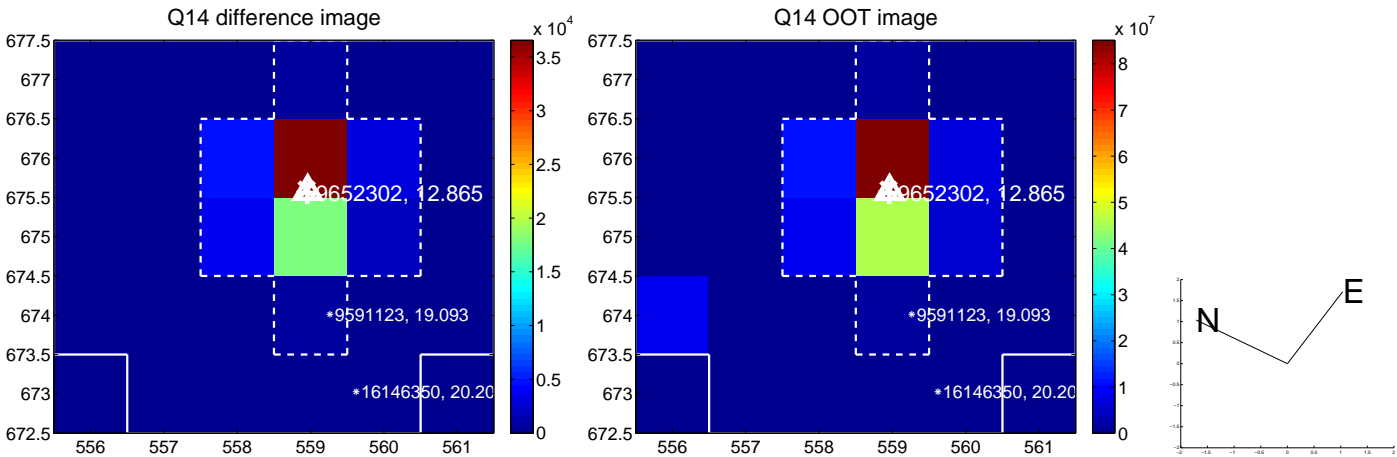
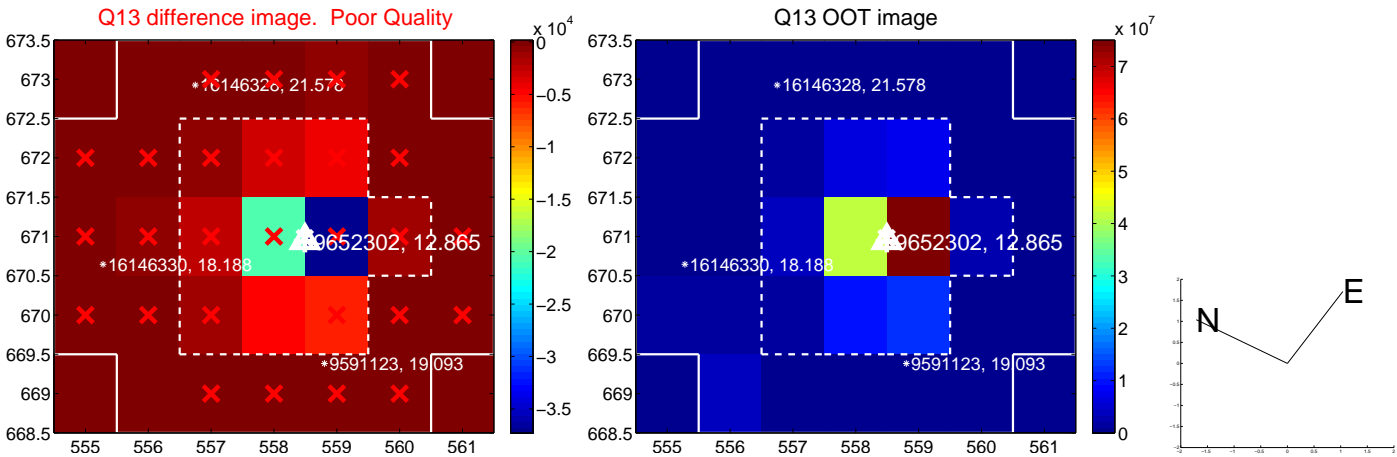
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



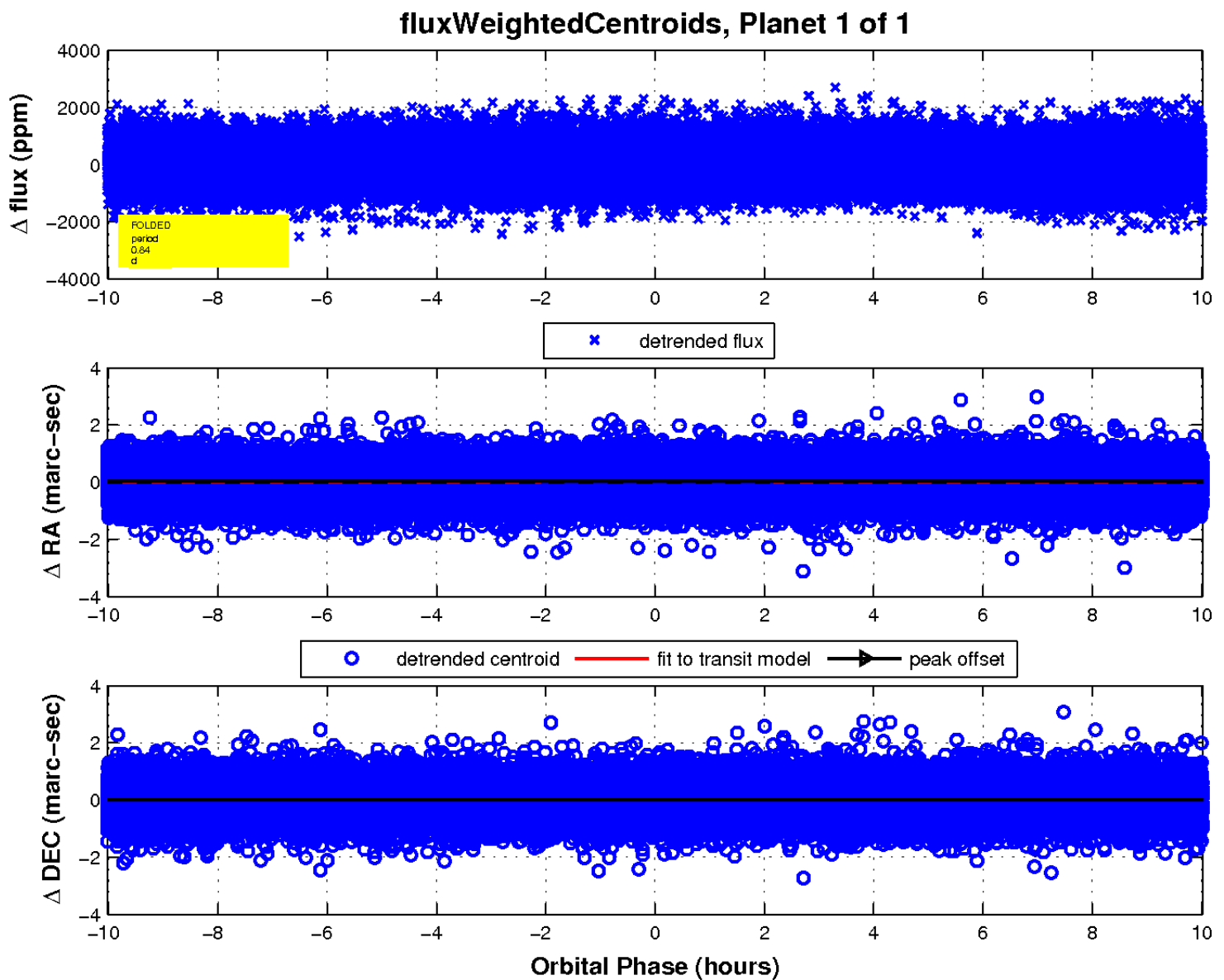
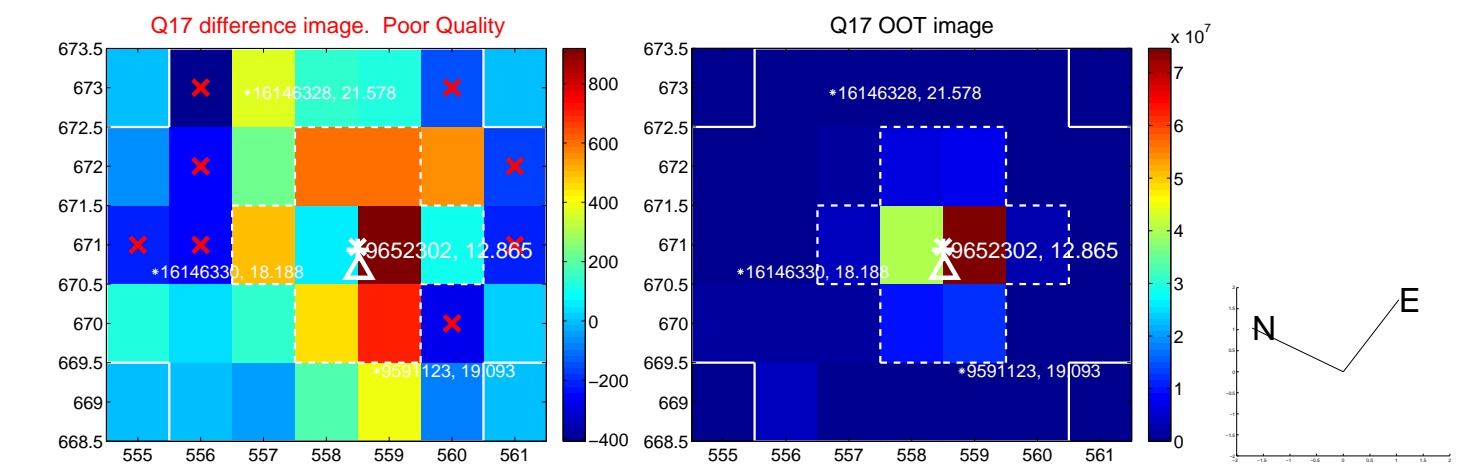
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

