

KIC 009713213

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})
009713213-01	OBS	No	9.277022	132.456257	14.8	57.292	8.2	10.3	1.20	6285	0.47	250.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009713213-01	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.

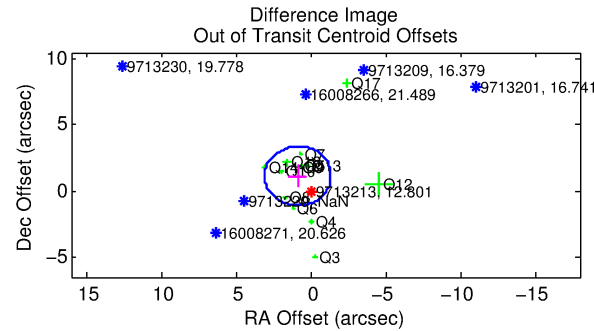
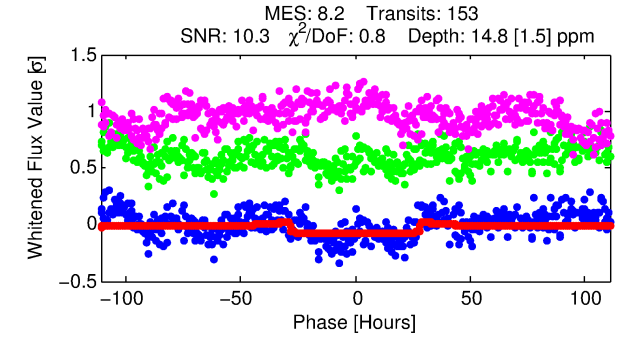
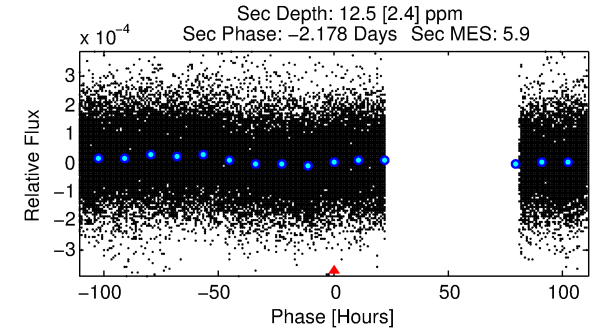
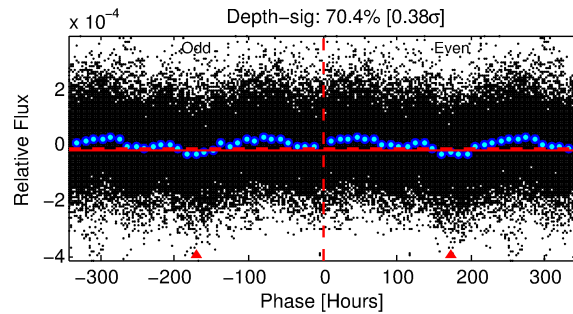
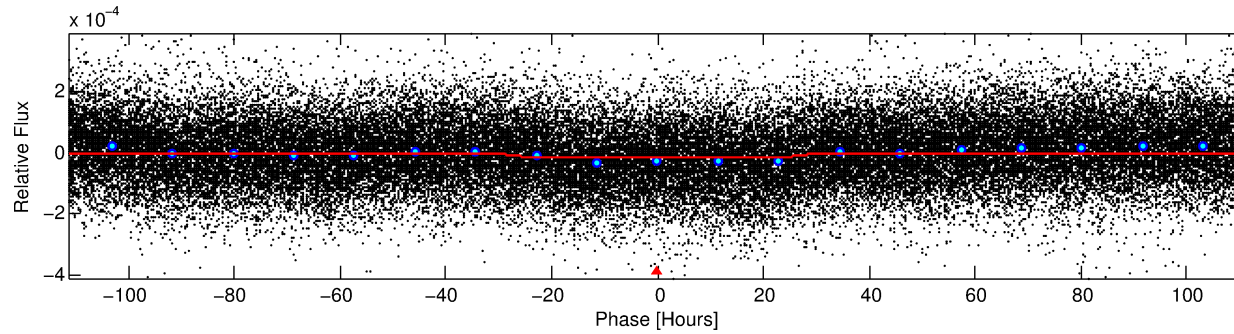
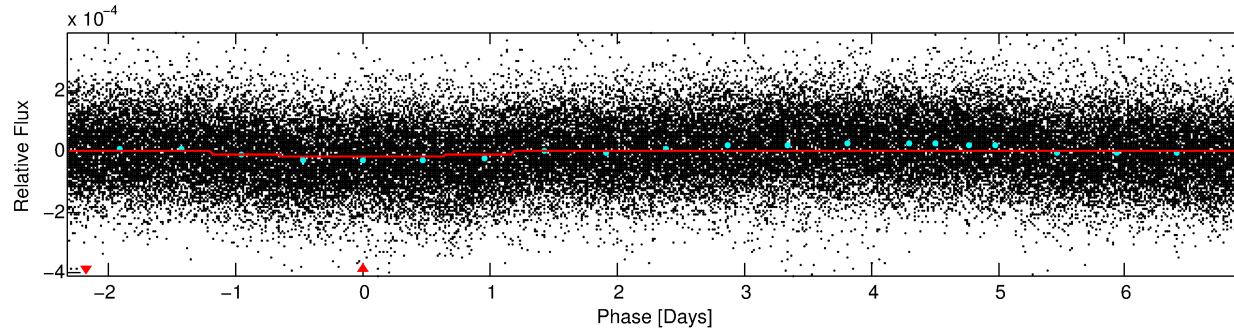
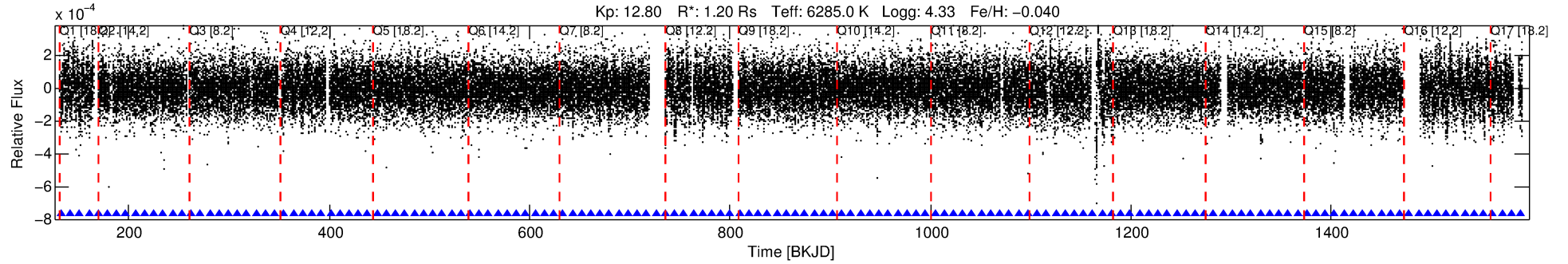
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009713213-01

No Significant Match Found

DV One-Page Summary

KIC: 9713213 Candidate: 1 of 1 Period: 9.277 d



DV Fit Results:

Period = 9.27702 [0.00036] d
Epoch = 132.4563 [0.0309] BKJD
Rp/R* = 0.0036 [0.0026]
a/R* = 1.37 [2.36]
b = 0.24 [14.87]
Seff = 250.24 [72.48]
Teq = 1014 [73] K
Rp = 0.47 [0.35] Re
a = 0.0897 [0.0163] AU
Ag = 255.36 [376.57] [0.68 σ]
Teffp = 6268 [2281] K [2.30 σ]

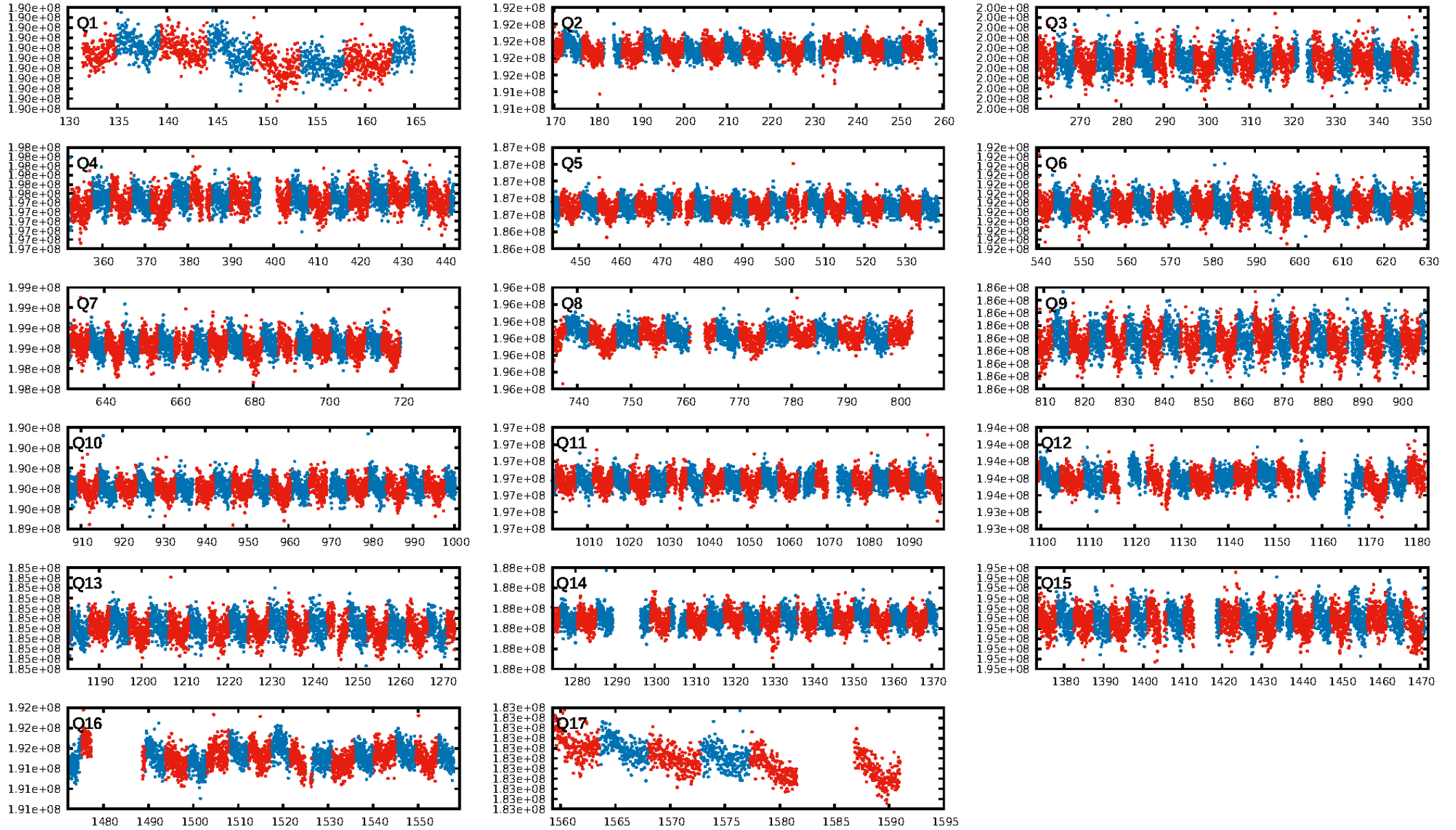
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.84e-18
RollingBand-fgt: 1.00 [145/145]
GhostDiagnostic-chr: 31.22
Centroid-sig: 0.0%
Centroid-so: 4.530 arcsec [3.35 σ]
OotOffset-rm: 1.430 arcsec [1.92 σ]
KicOffset-rm: 1.363 arcsec [2.01 σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

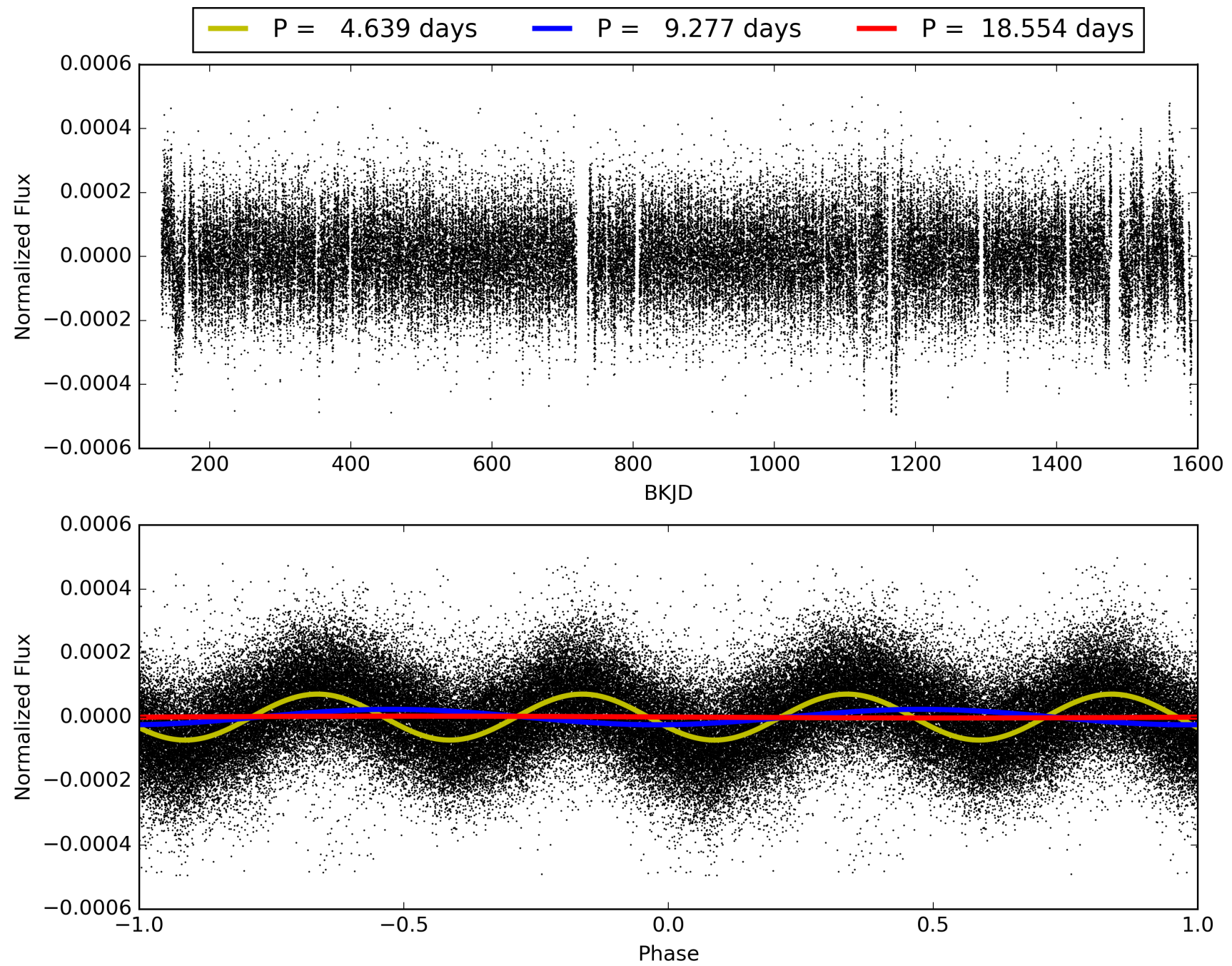
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:53:22 Z

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

TCE 009713213-01, PDC Light Curves

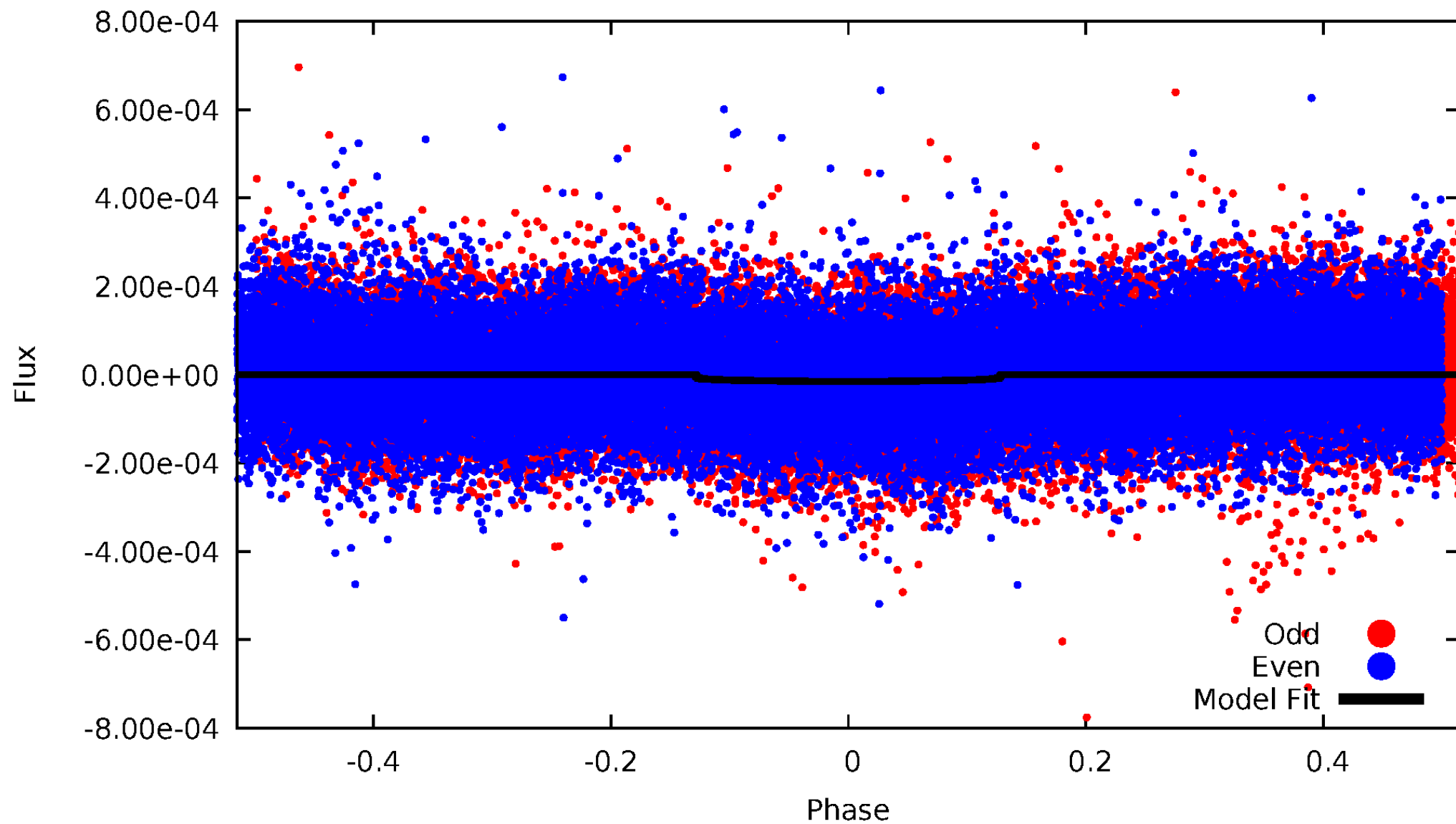


TCE 009713213-01



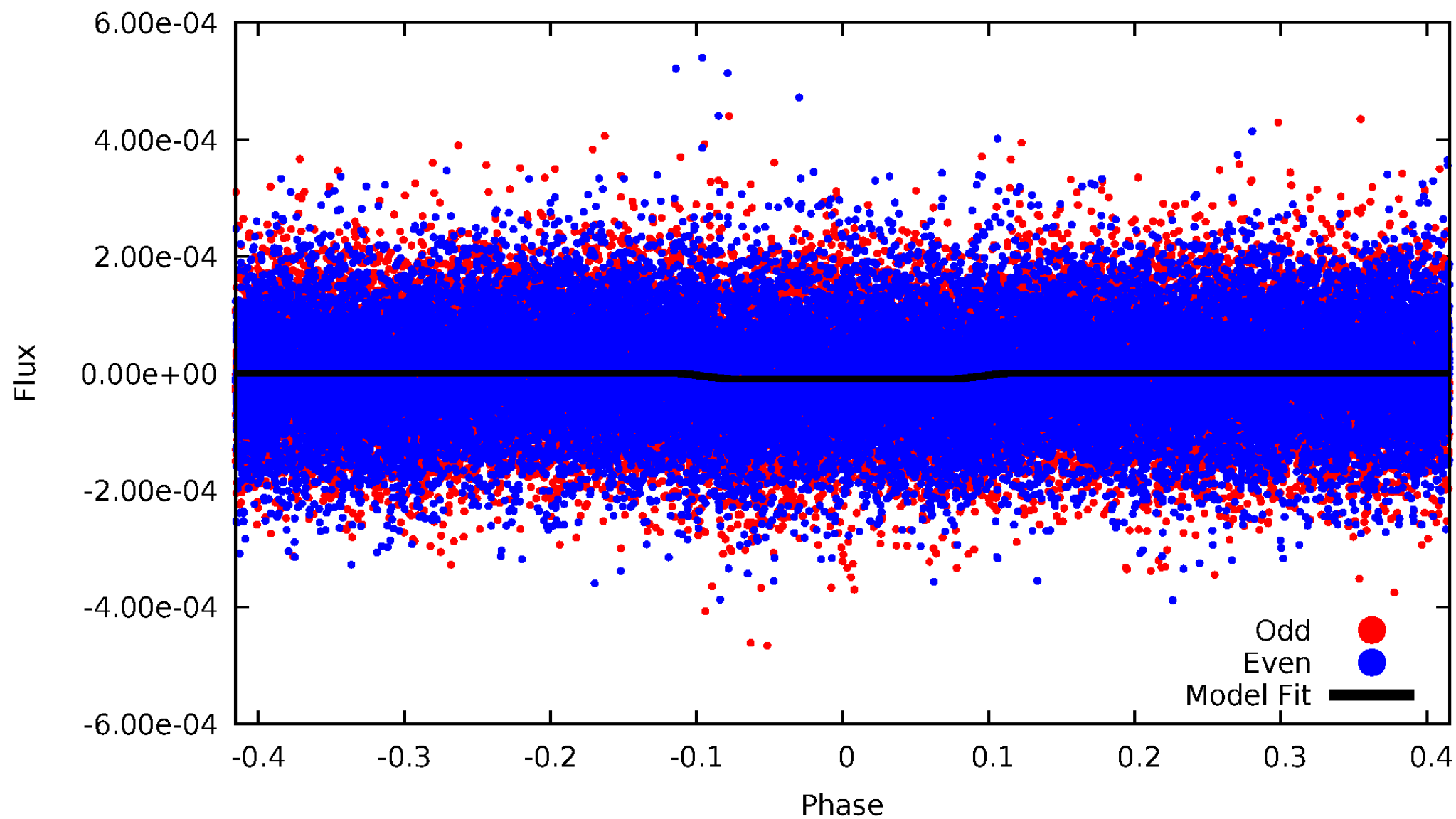
DV Odd/Even

TCE 009713213-01

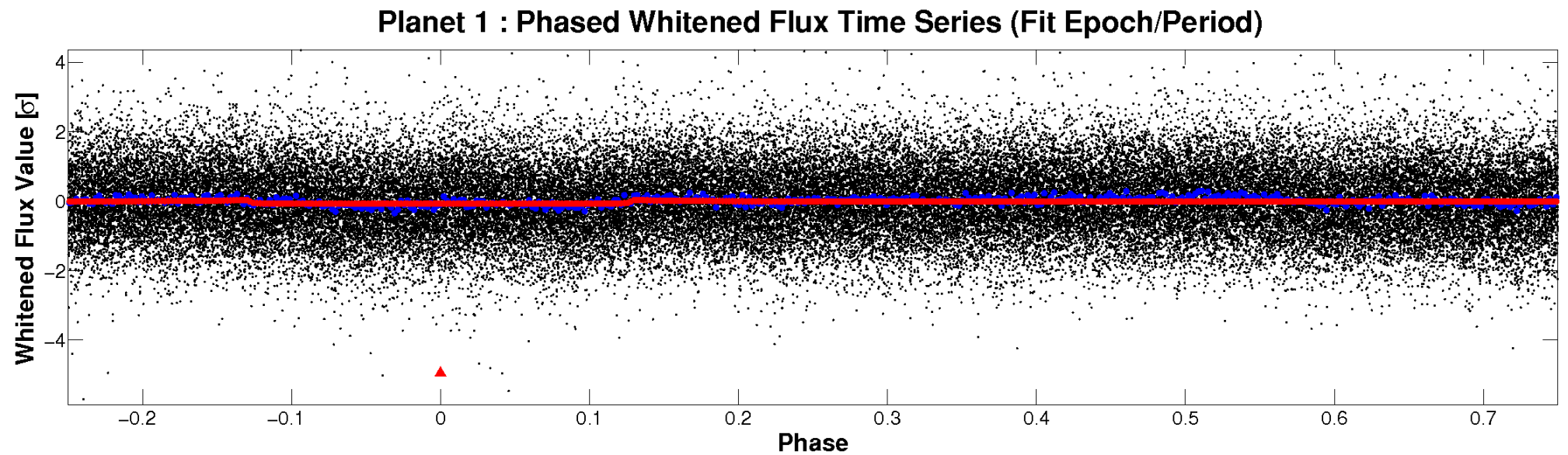
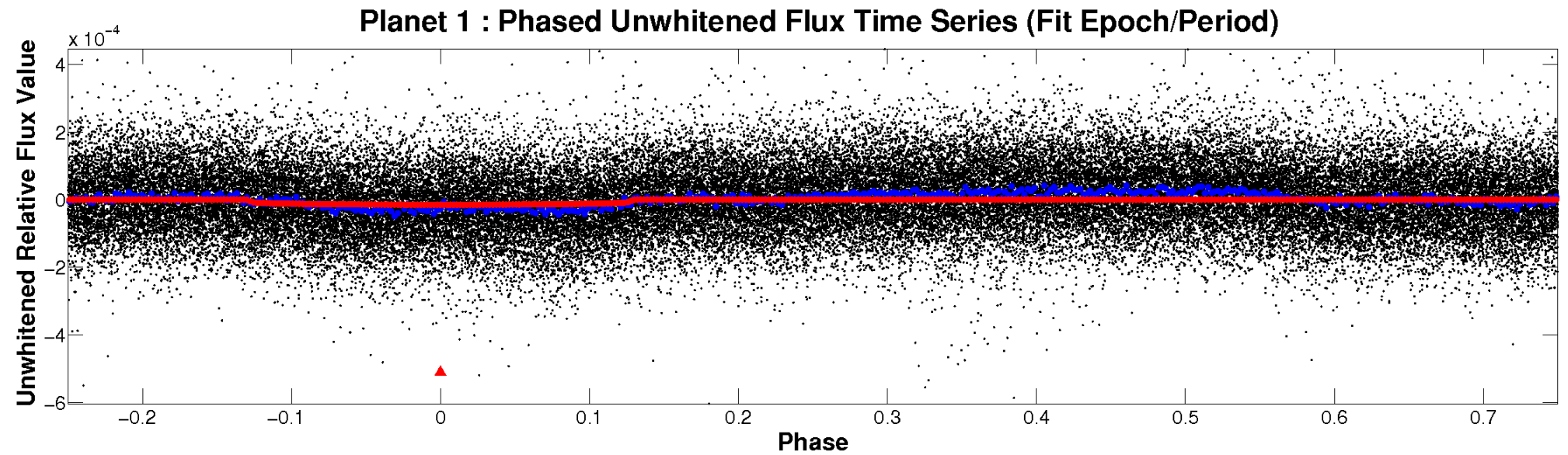


ALT Odd/Even

TCE 009713213-01

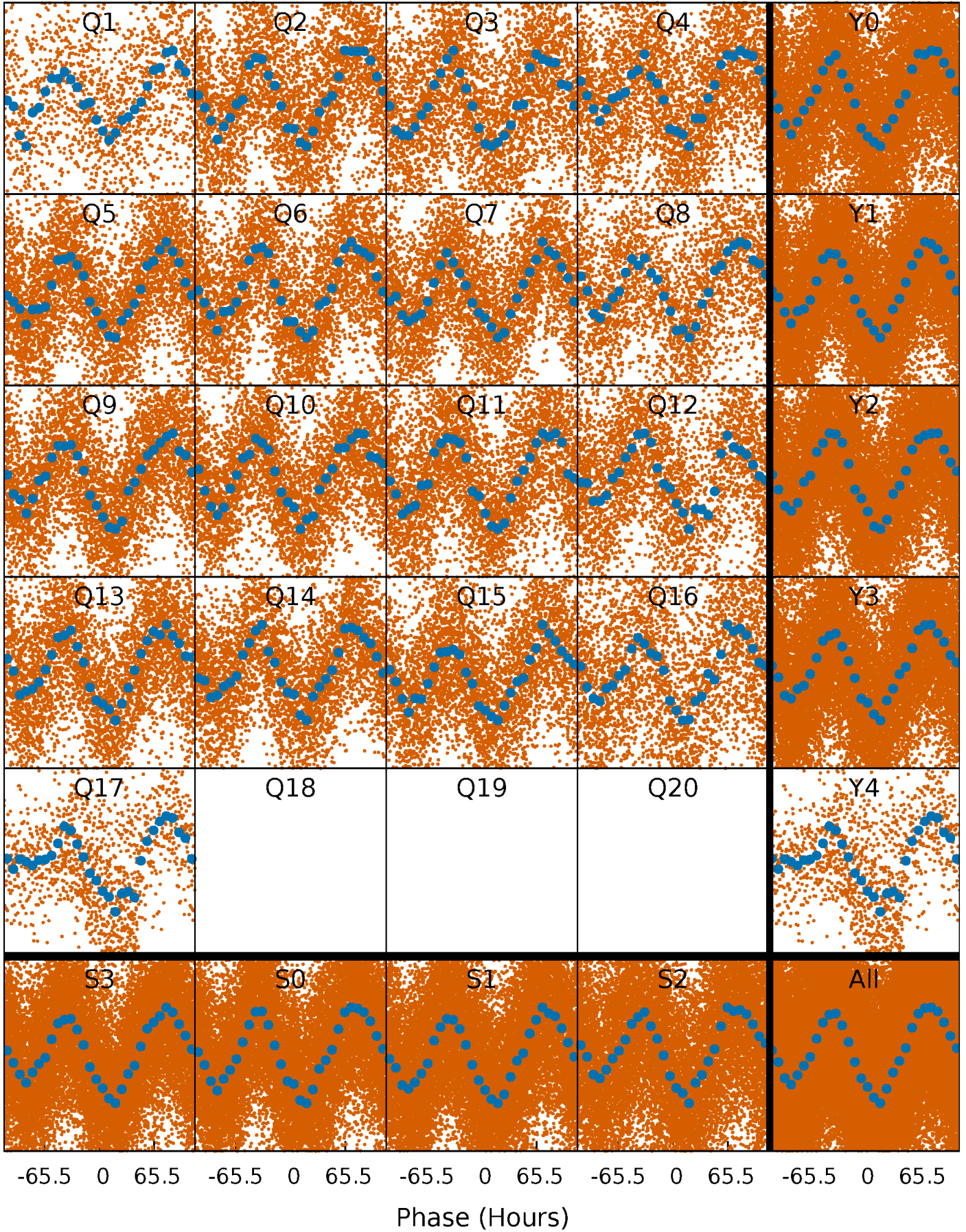


Non-Whitened Vs. Whitened Light Curve



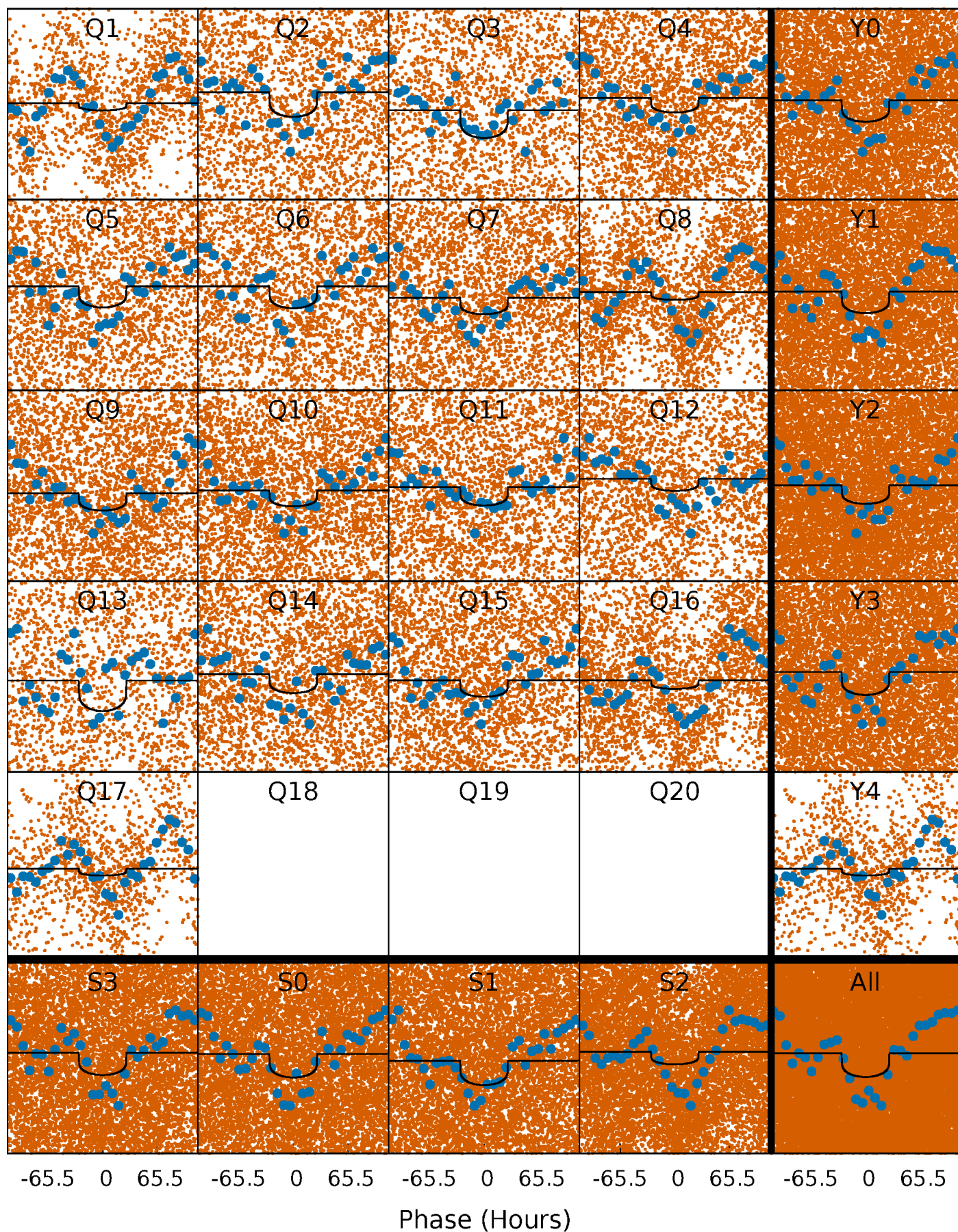
PDC Quarter-Phased Transit Curves

TCE 009713213-01 P= 9.277022 Days $T_0=132.456257$ (BKJD)



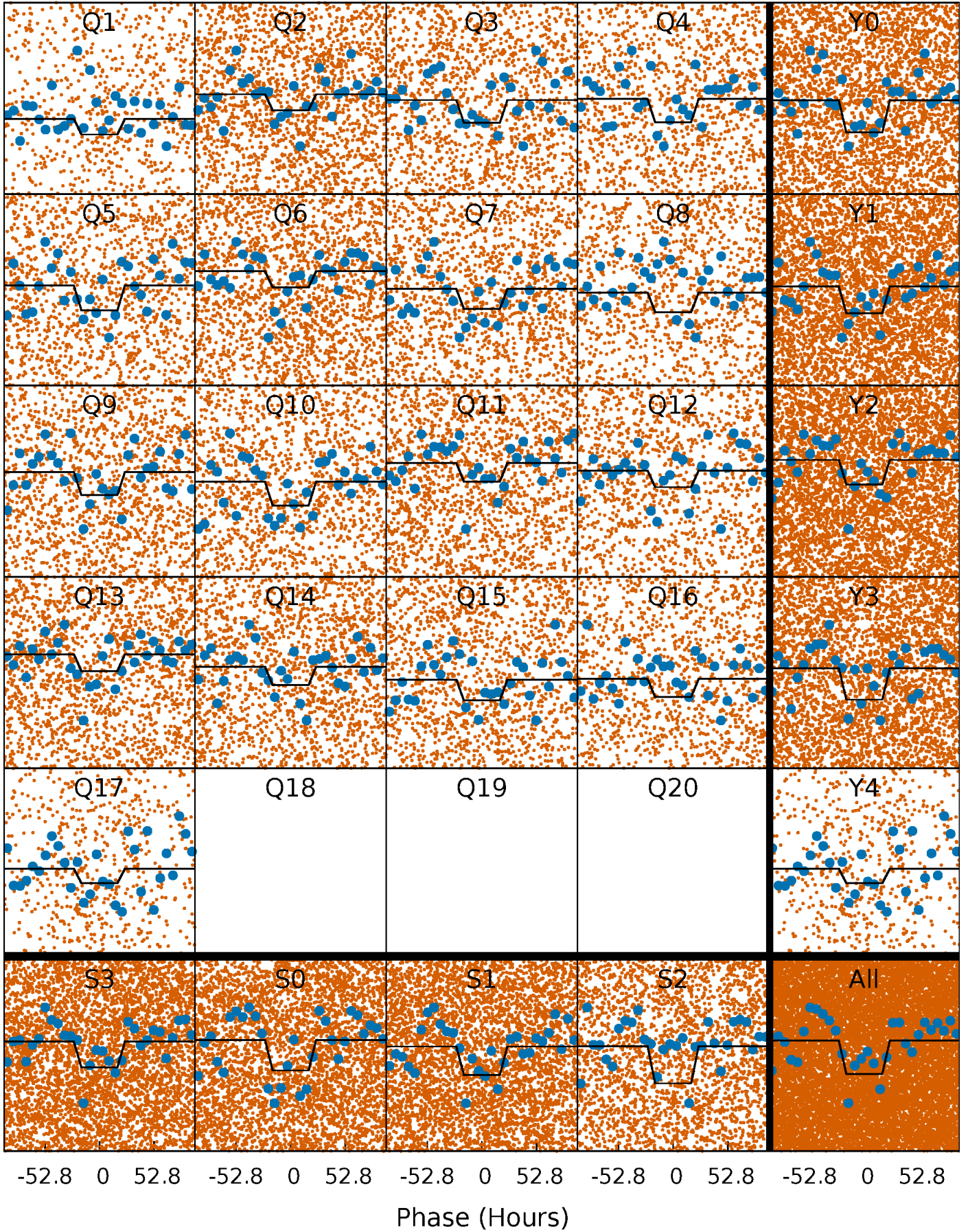
DV Quarter-Phased Transit Curves

TCE 009713213-01 P= 9.277022 Days $T_0=132.456257$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

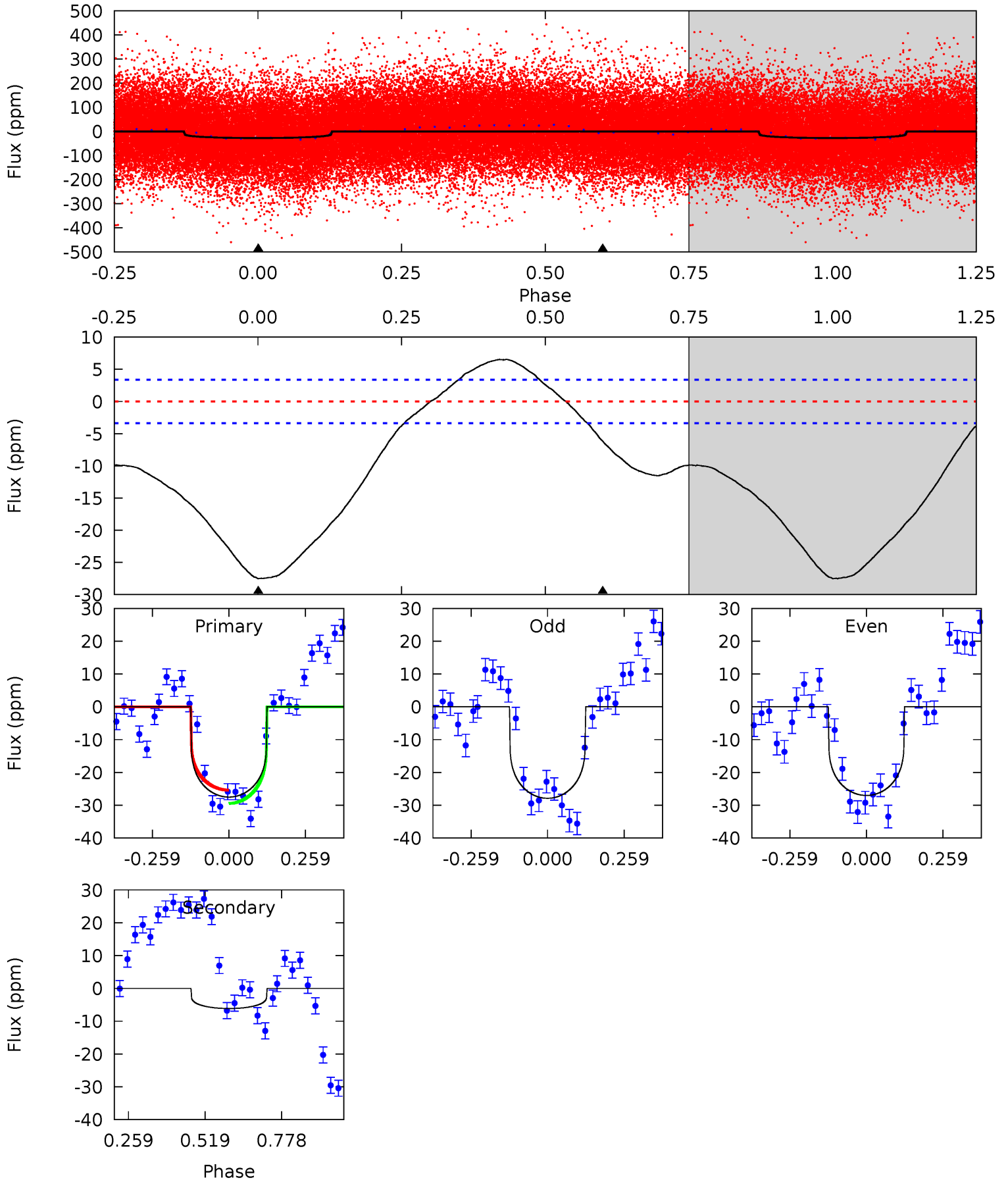
TCE 009713213-01 P= 9.275238 Days $T_0=132.742407$ (BKJD)



DV Model-Shift Uniqueness Test

009713213-01, P = 9.277022 Days, E = 123.179235 Days

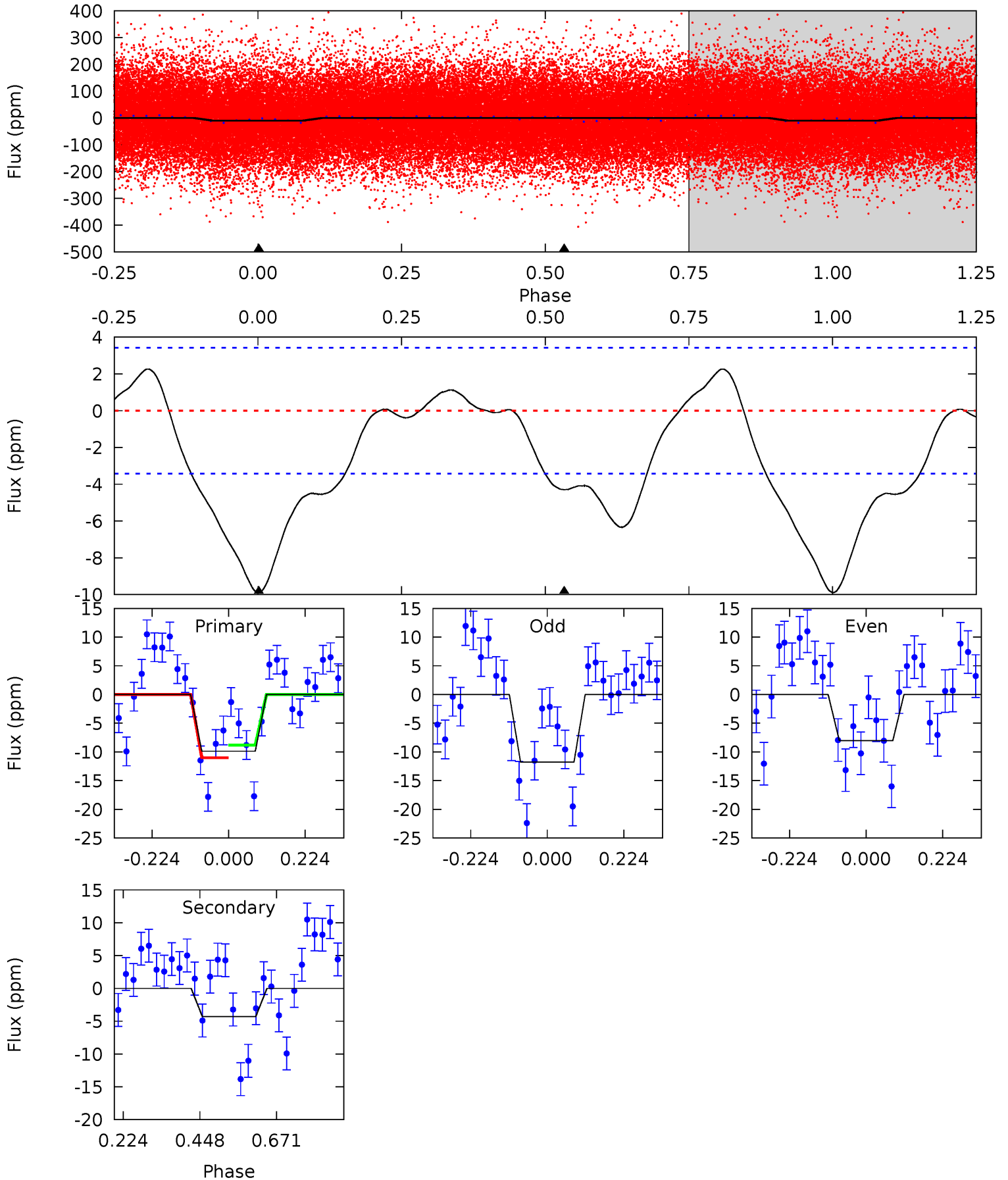
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.6	7.97	0	0	4.36	1.13	2.67	35.6	35.6	7.97	7.97	0.56	1.04	0.19	2.70



Alt Model-Shift Uniqueness Test

009713213-01, P = 9.275238 Days, E = 123.467169 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	5.51	0	0	4.39	1.22	0.68	12.7	12.7	5.51	5.51	2.41	0.97	0.19	1.42



Stellar Parameters For KIC 009713213

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6285^{+149}_{-187}	$4.328^{+0.096}_{-0.144}$	$-0.040^{+0.250}_{-0.300}$	$1.200^{+0.260}_{-0.173}$	$1.115^{+0.145}_{-0.132}$	$0.908^{+0.395}_{-0.381}$
	+2%/-3%	+2%/-3%	+625%/-750%	+22%/-14%	+13%/-12%	+44%/-42%
Source	PHO1	FLK73	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 009713213-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 1	$0.50^{+0.36}_{-0.28}$	1425^{+83}_{-71}	5189^{+2690}_{-1001}	109^{+453}_{-72}
Alt.	-4 ± 1	$0.48^{+0.33}_{-0.29}$	1421^{+82}_{-65}	4828^{+3005}_{-849}	82^{+480}_{-54}

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

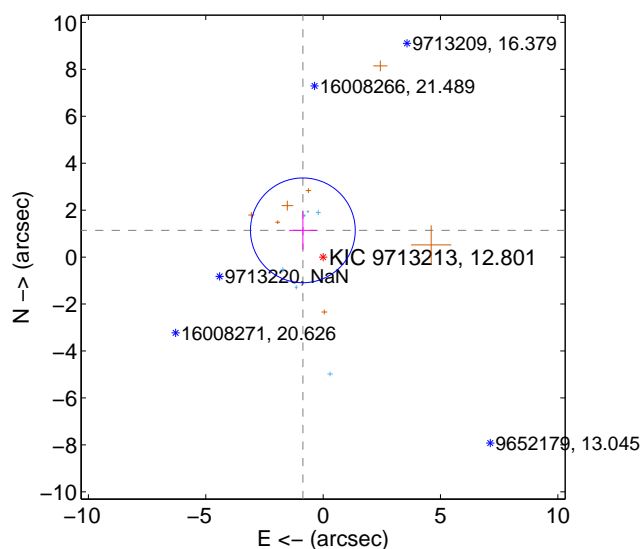
Supplemental centroid analysis for 009713213-01. Kepler magnitude: 12.80. Transit SNR 10.29

There are 6 quarters with good PRF difference image offsets

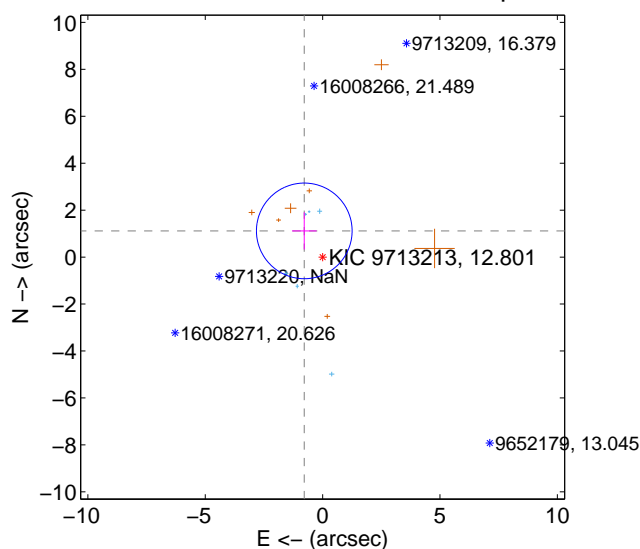
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.430 ± 0.744	1.92	0.863 ± 0.586	1.140 ± 0.819
PRF-fit source offset from KIC position	1.363 ± 0.679	2.01	0.781 ± 0.524	1.116 ± 0.790
photometric centroid source offset	4.53 ± 1.35	3.35	1.34 ± 0.99	4.33 ± 1.38

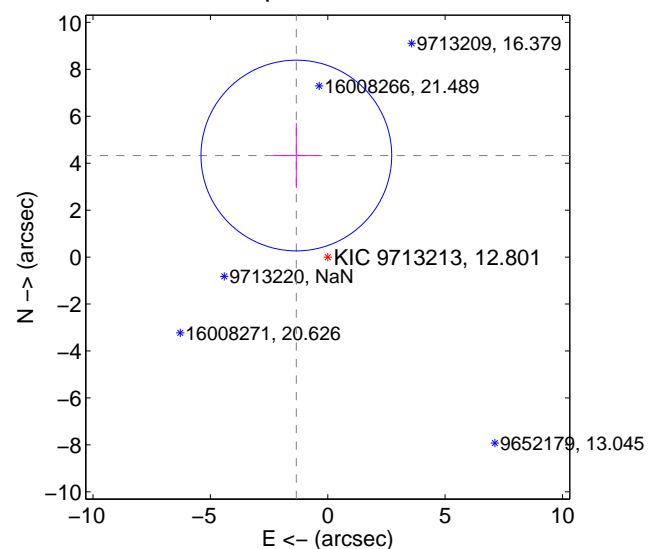
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

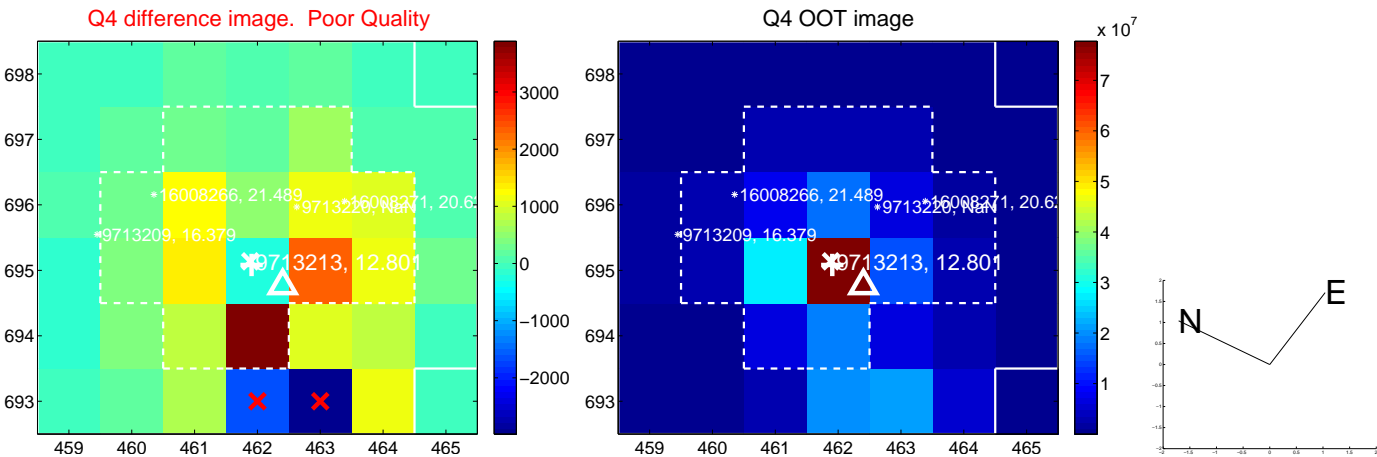
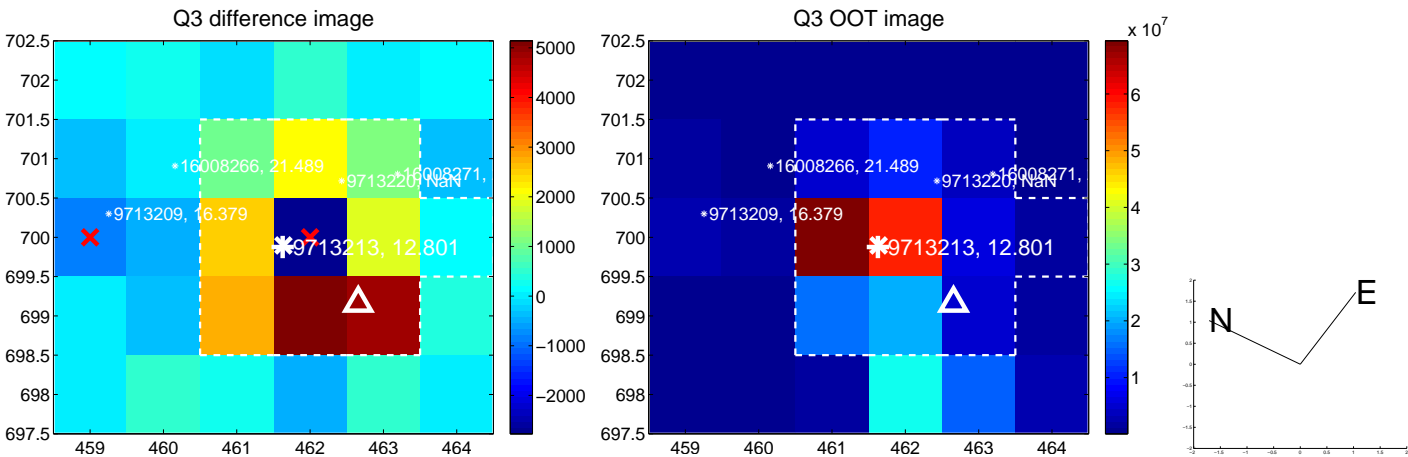
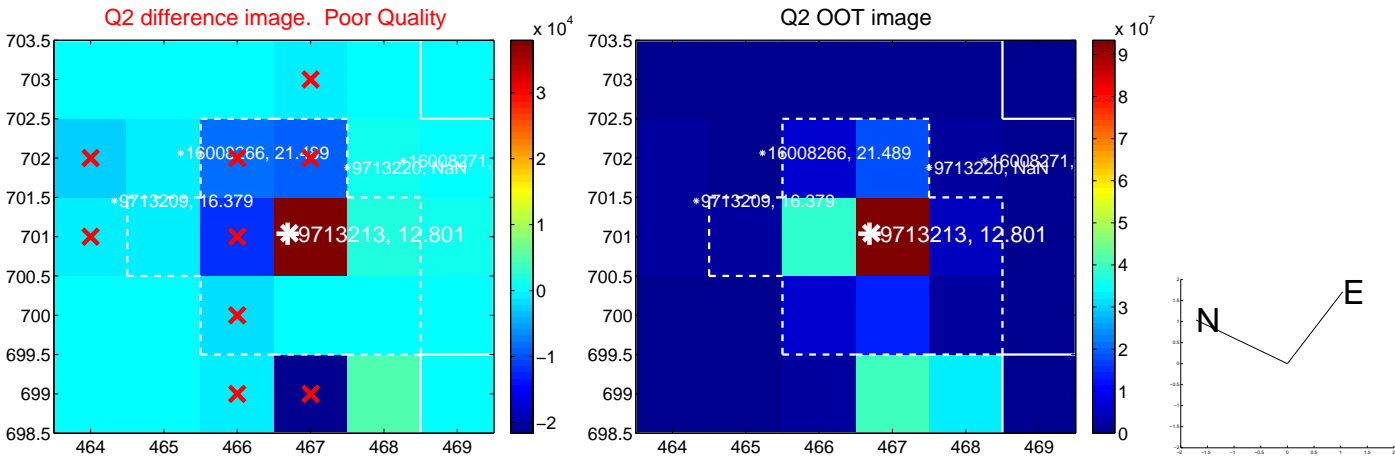
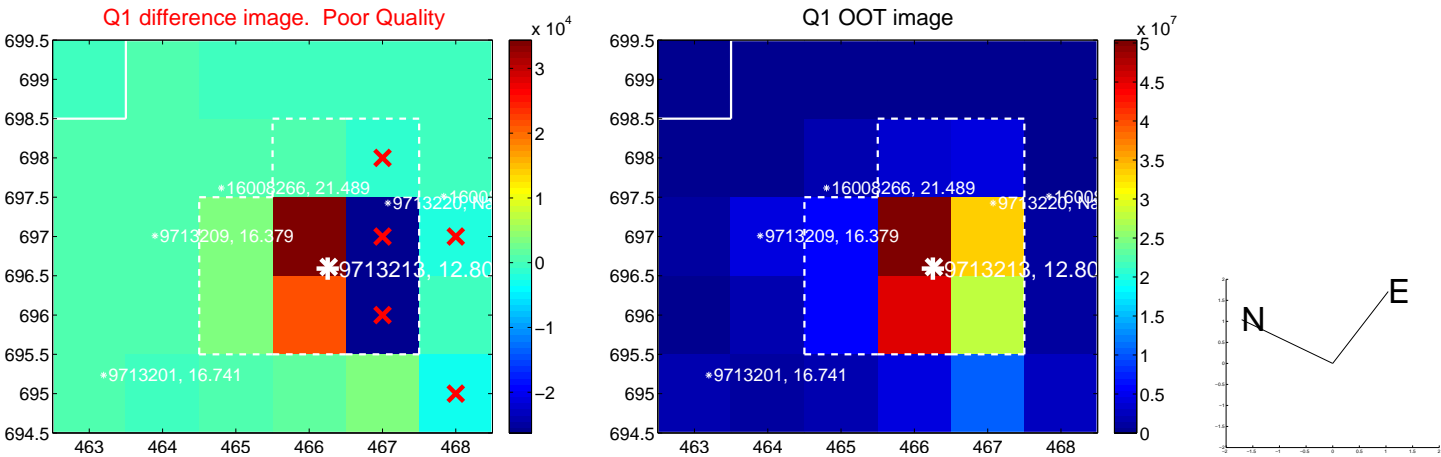


offset from photometric centroids

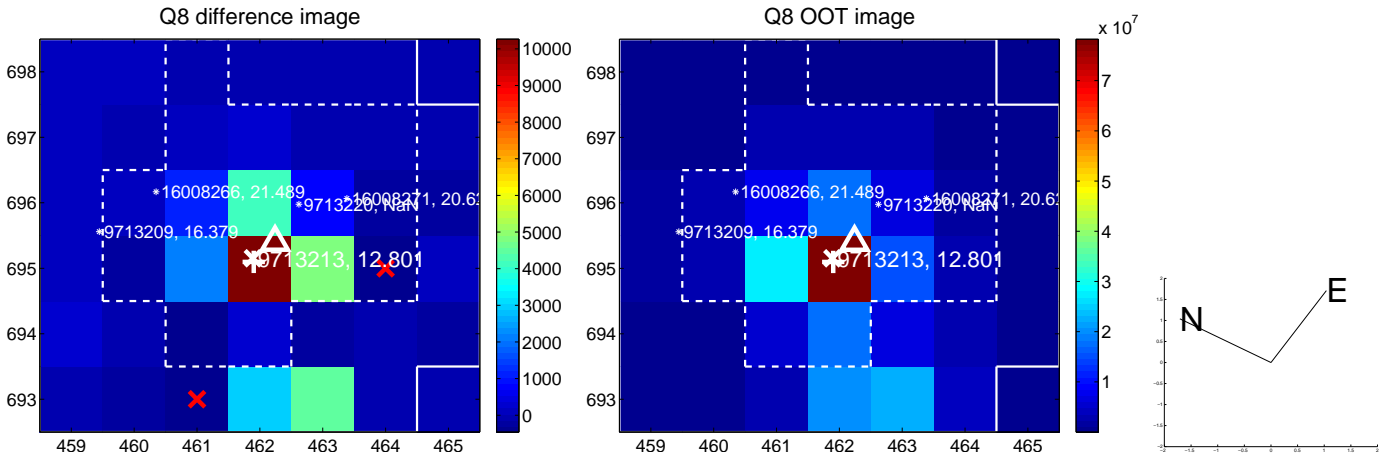
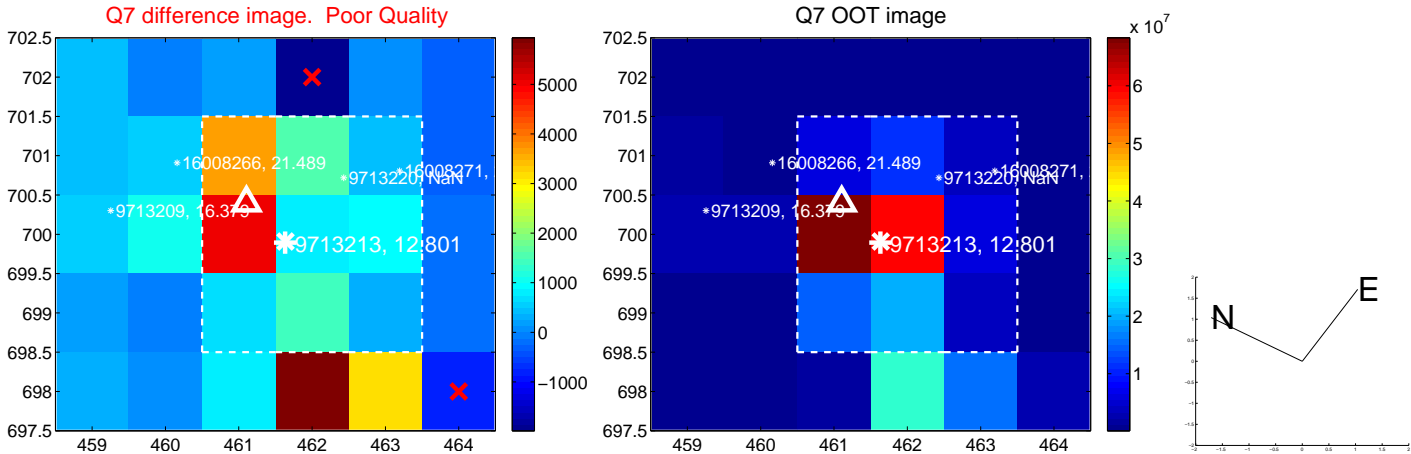
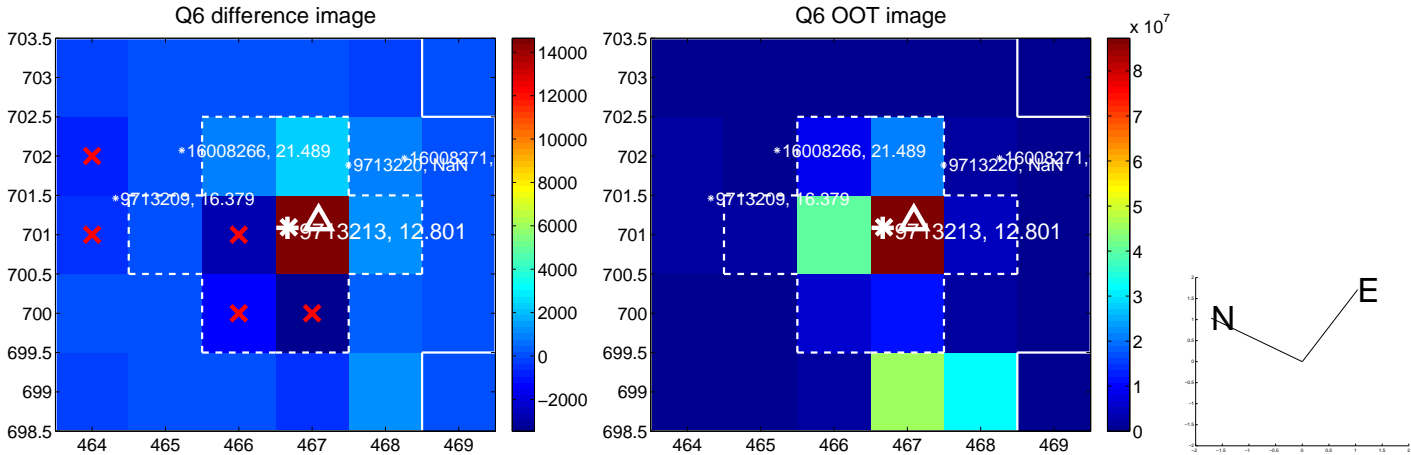
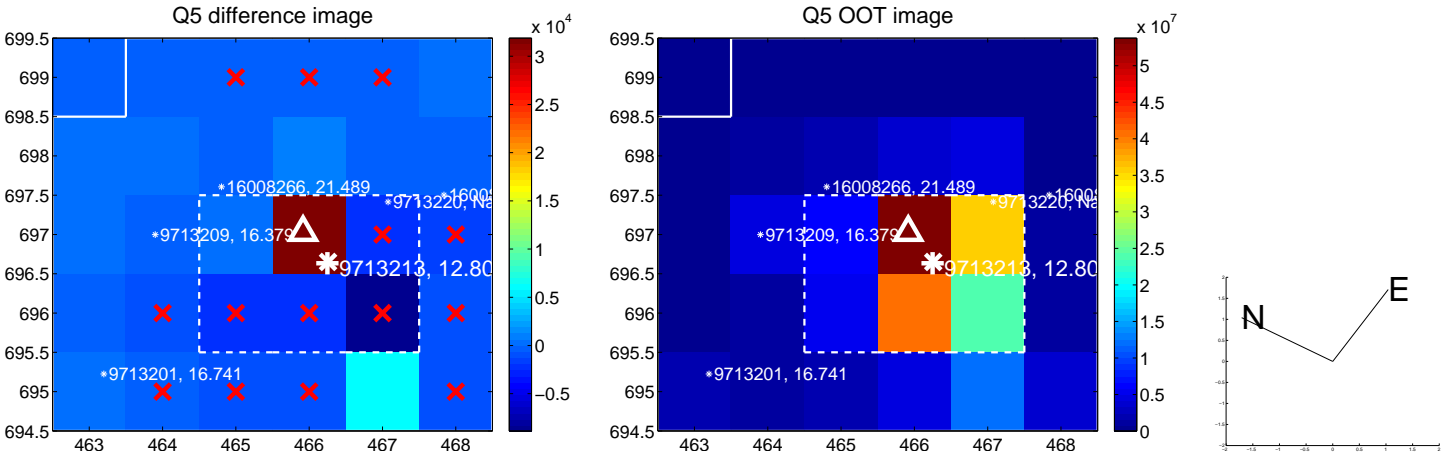


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

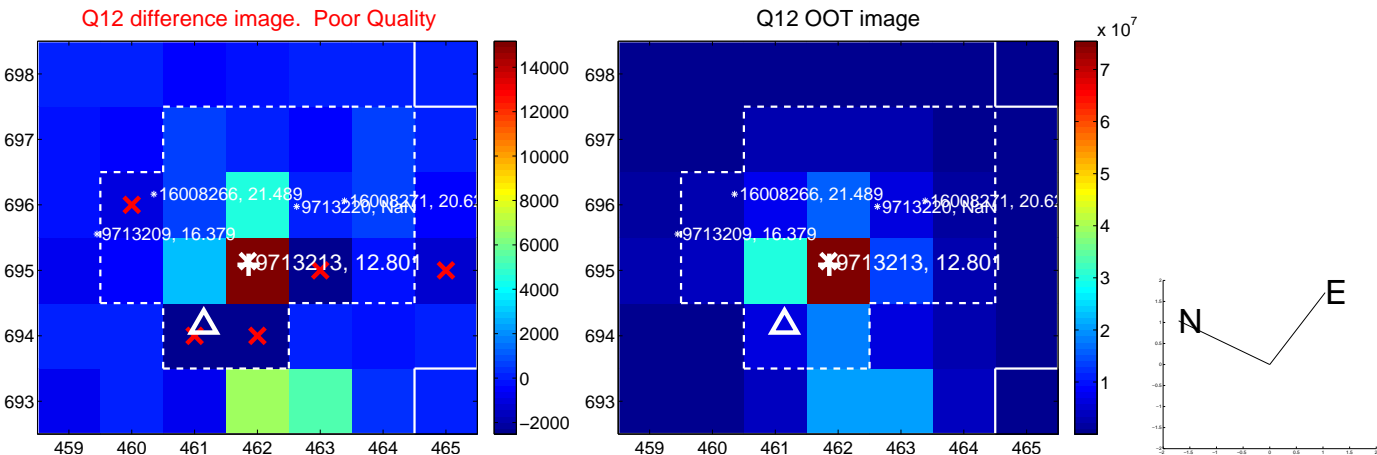
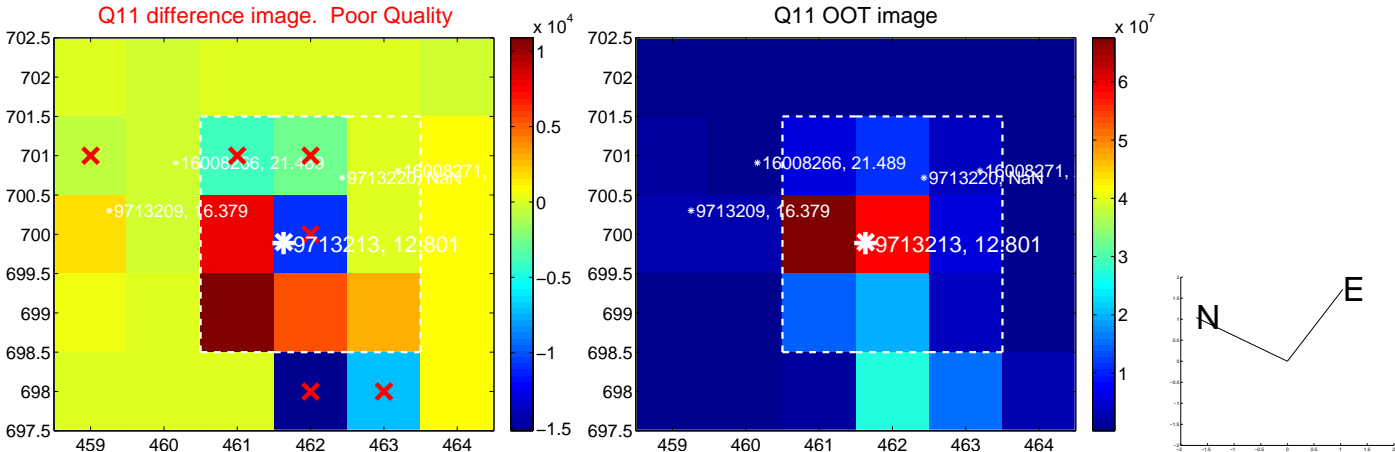
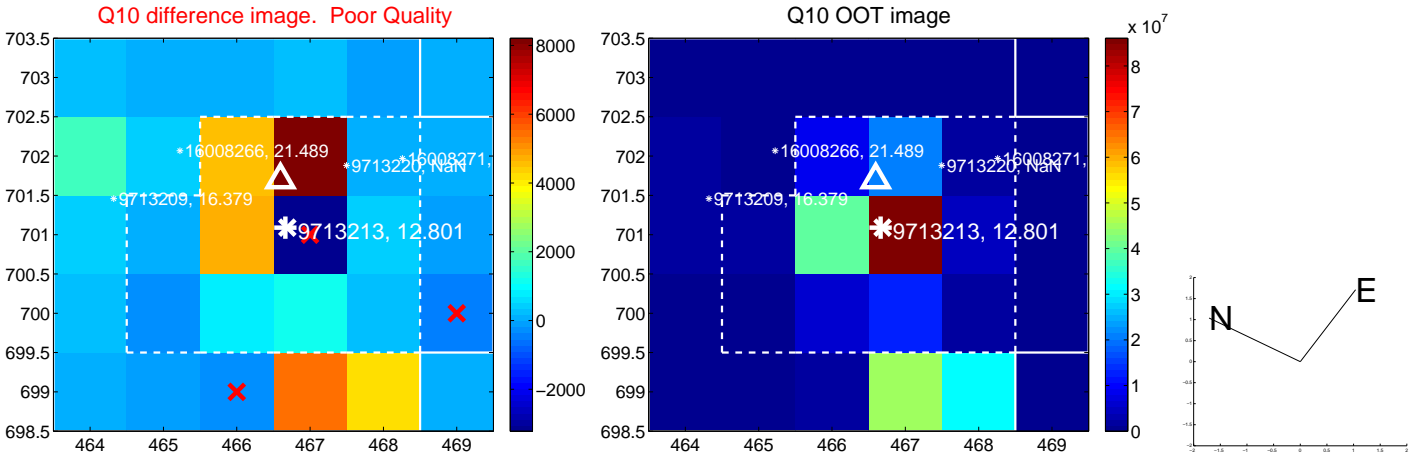
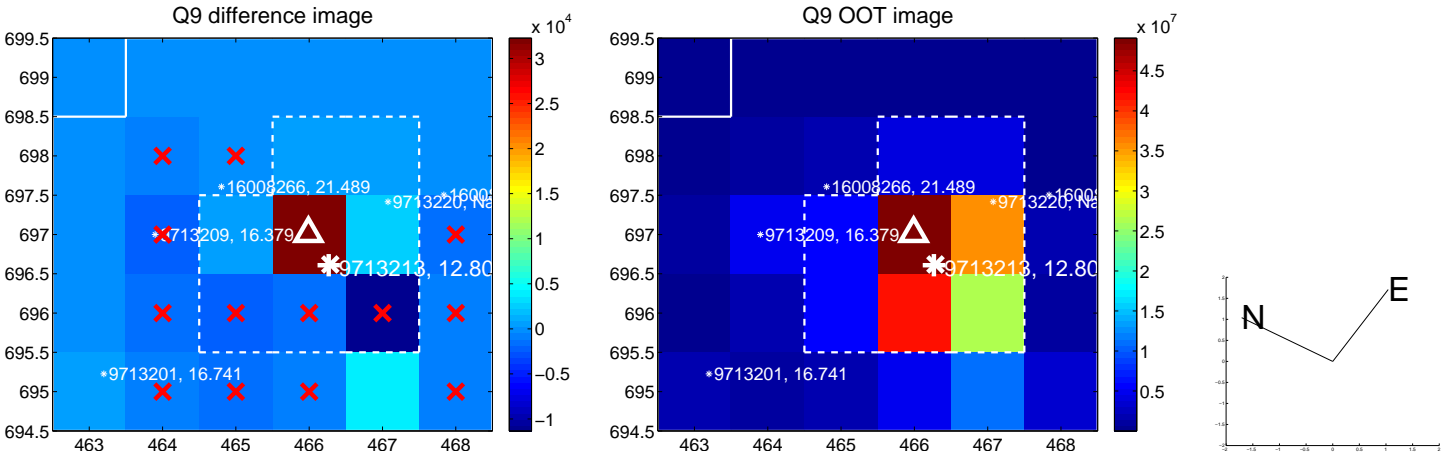
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



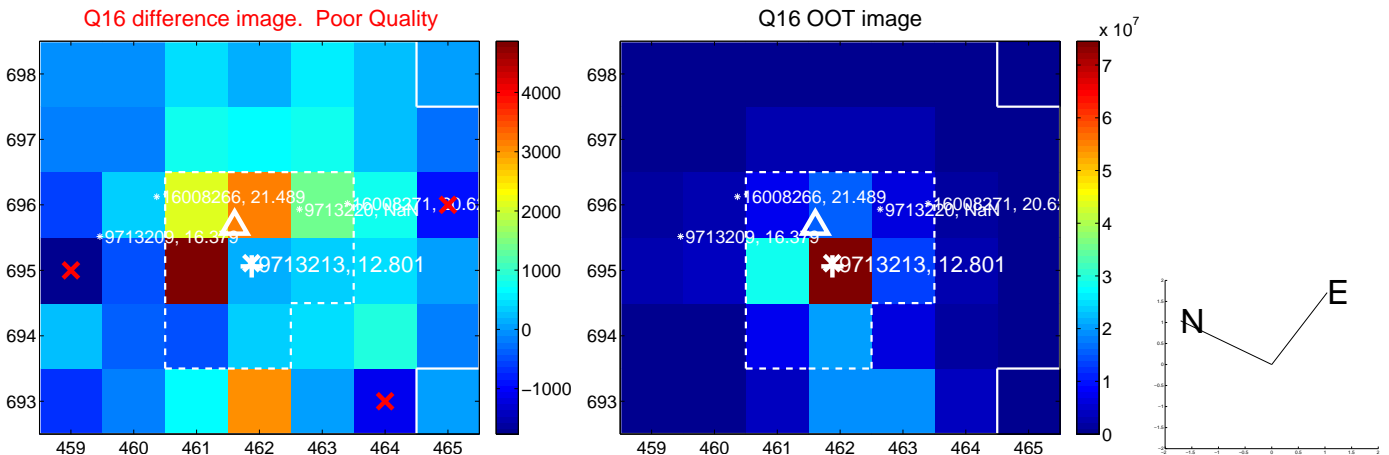
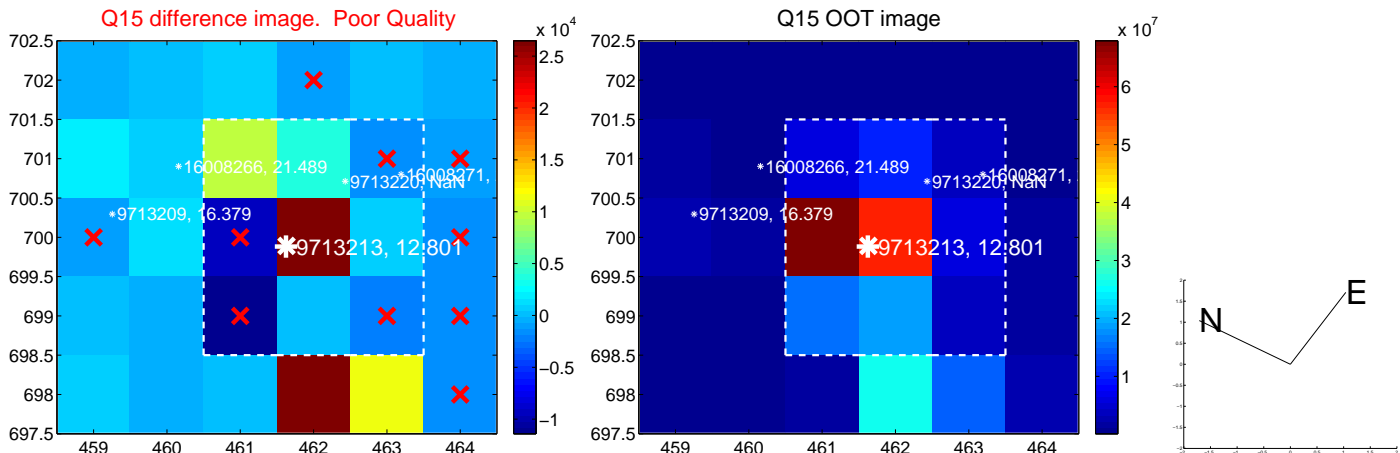
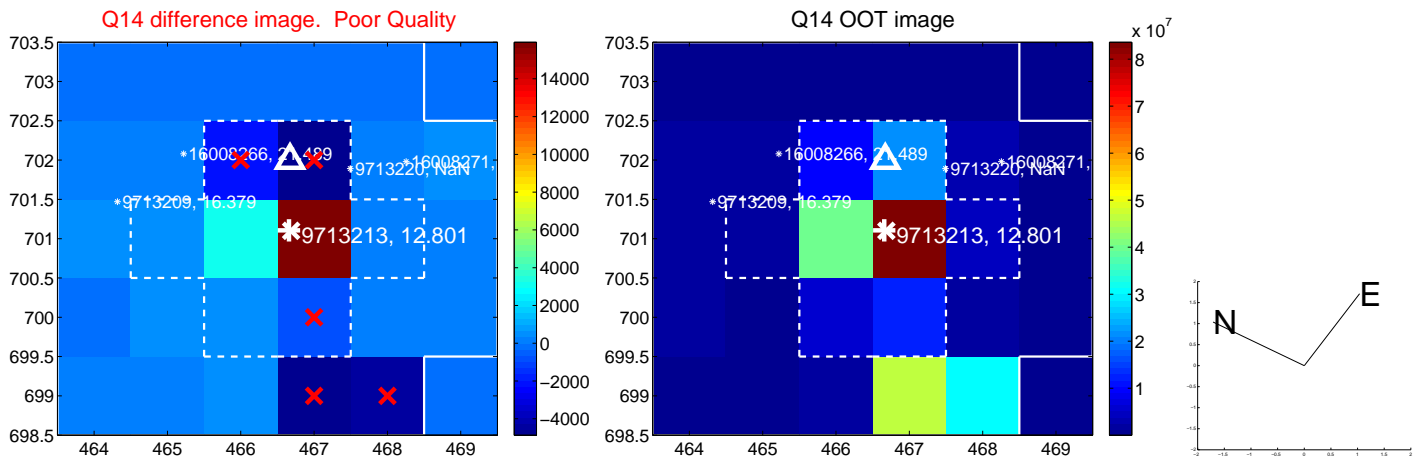
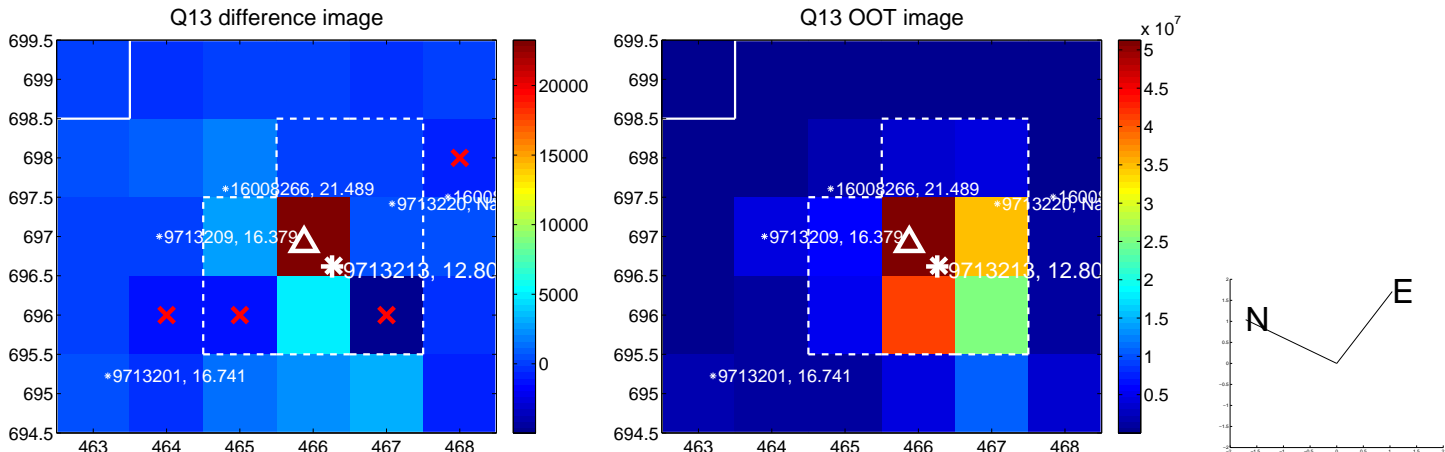
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



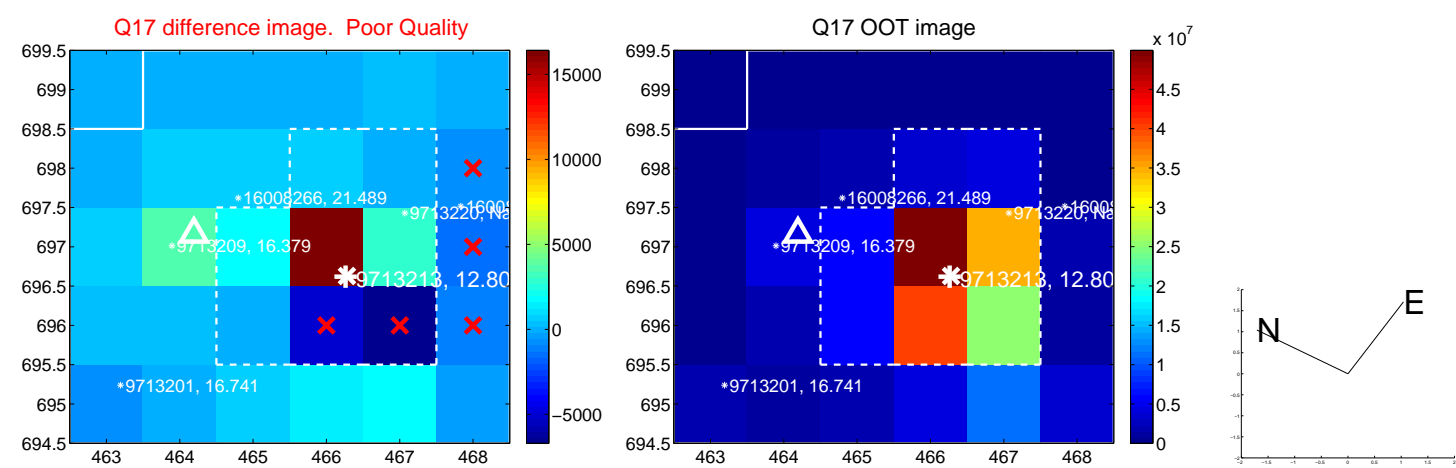
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



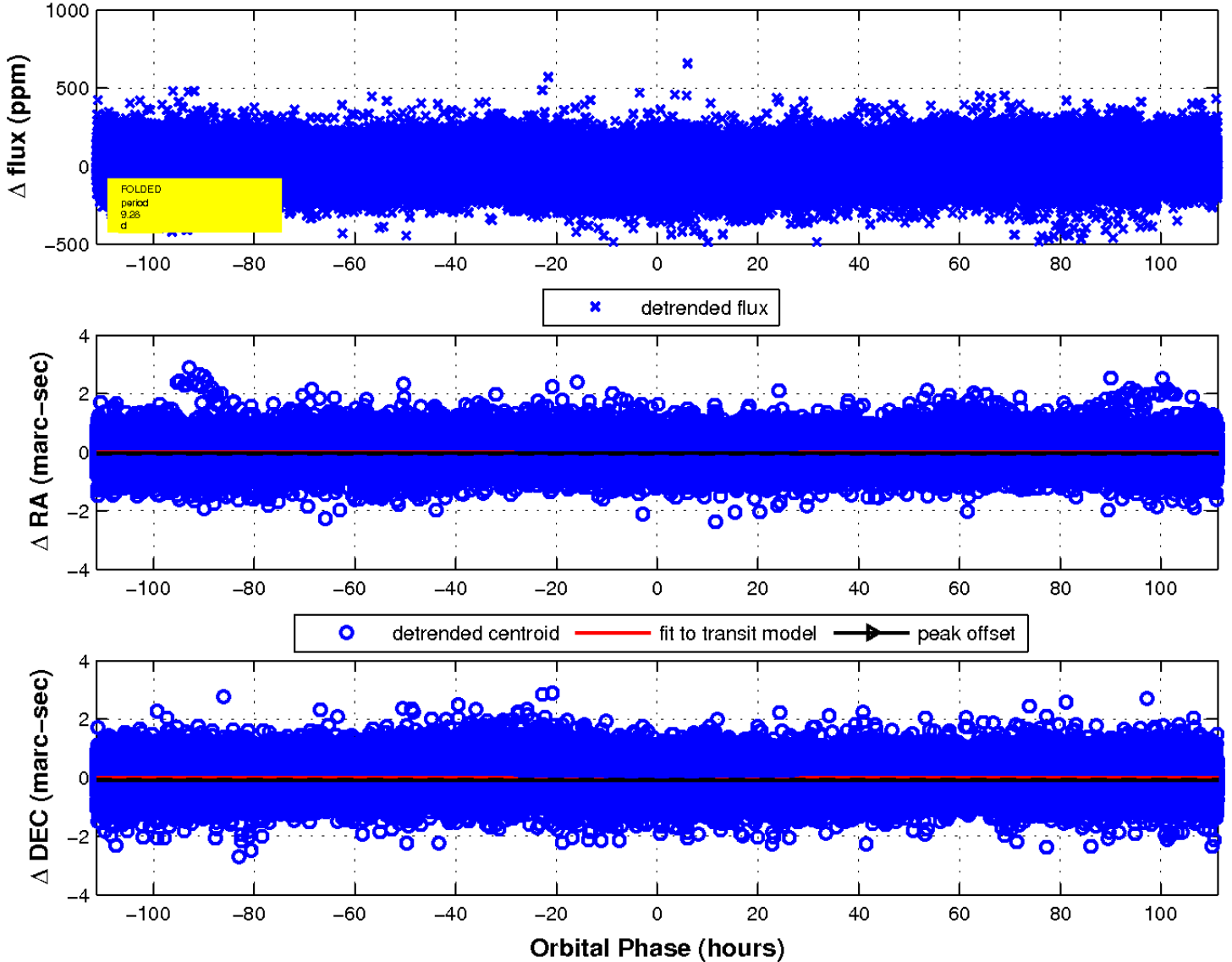
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

