

KIC 009051902

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})
009051902-01	OBS	No	1.201833	131.837788	17.7	11.295	11.7	13.6	9.78	6862	4.16	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009051902-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

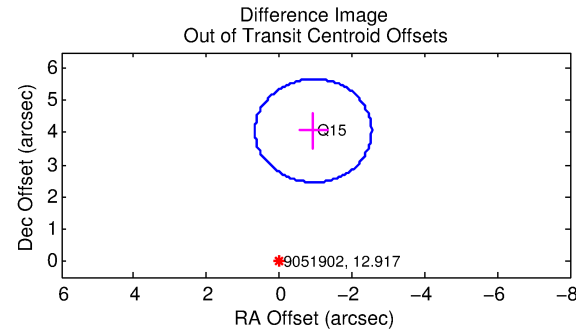
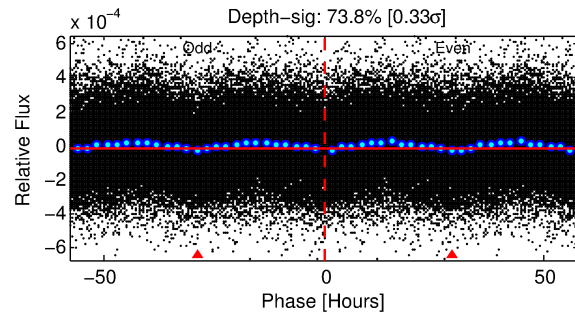
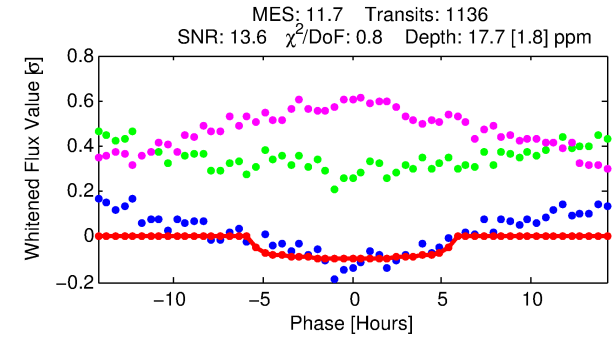
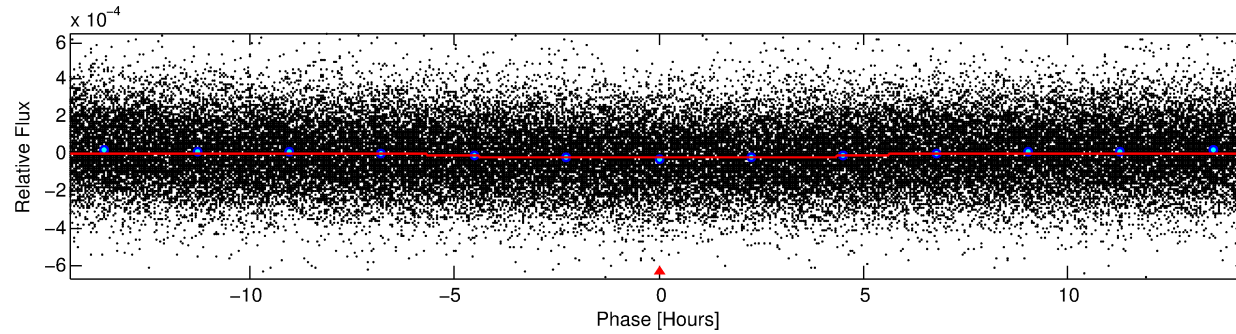
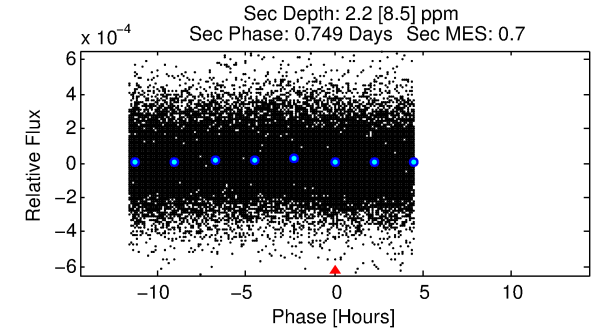
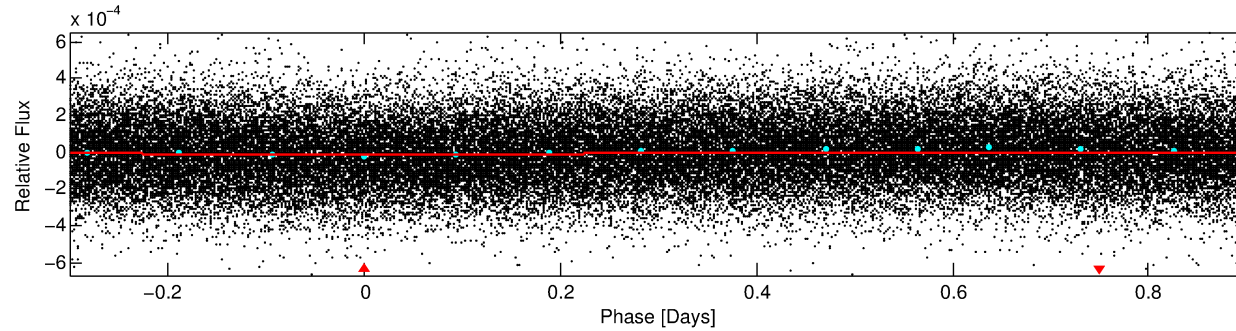
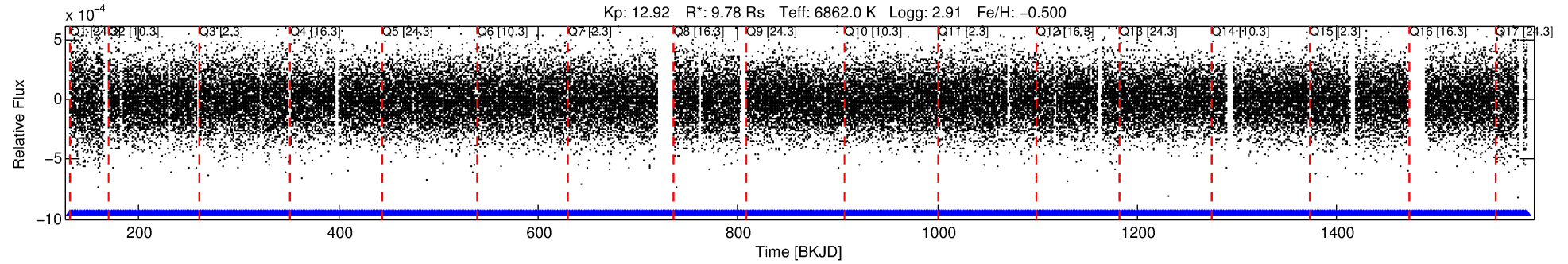
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009051902-01

No Significant Match Found

DV One-Page Summary

KIC: 9051902 Candidate: 1 of 1 Period: 1.202 d



DV Fit Results:

Period = 1.20183 [0.00002] d
Epoch = 131.8378 [0.0076] BKJD
Rp/R* = 0.0039 [0.0019]
a/R* = 1.06 [0.31]
b = 0.15 [16.58]
Seff = N/A
Teq = N/A
Rp = 4.16 [3.15] Re
a = N/A
Ag = N/A
Teffp = N/A

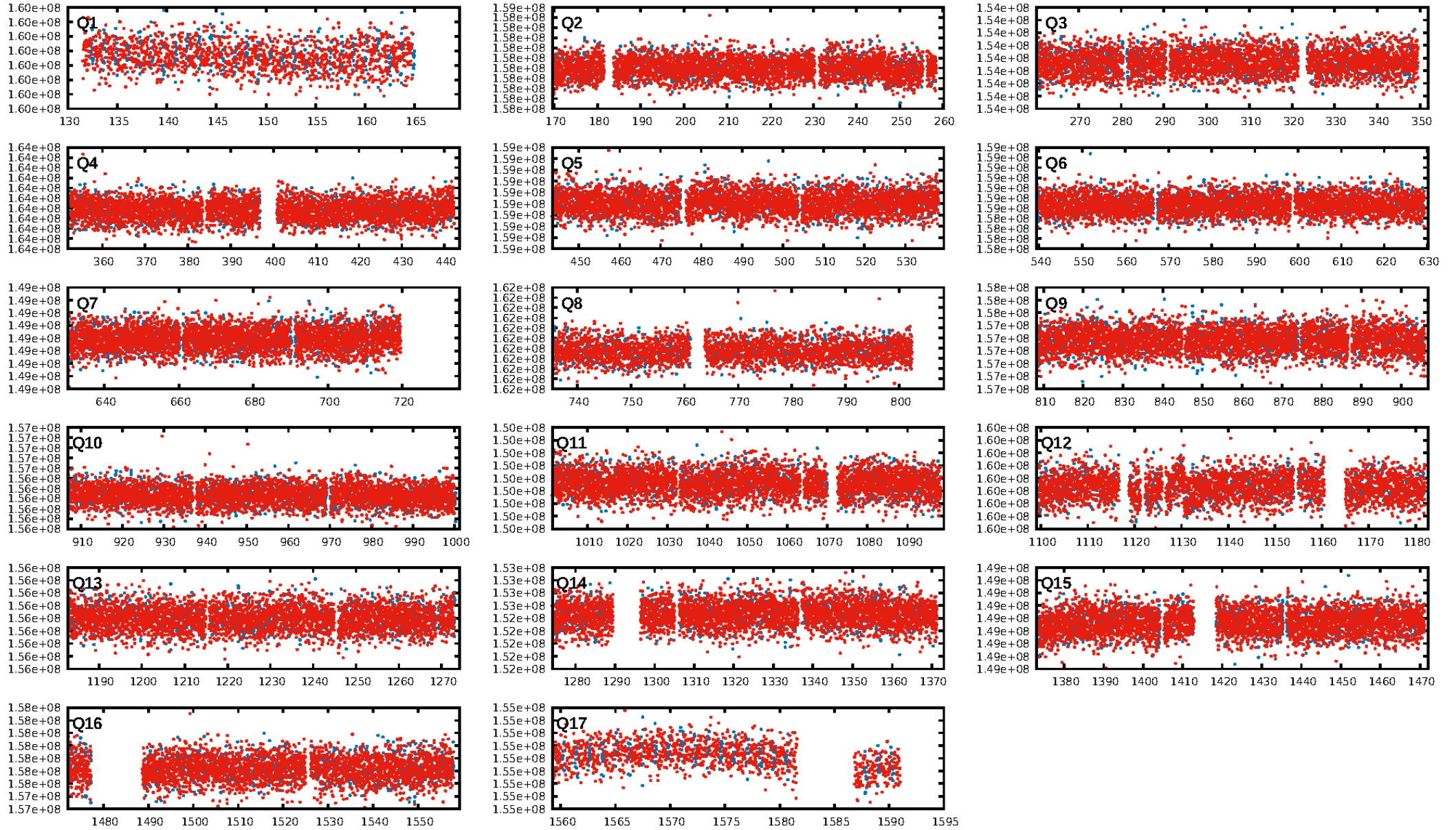
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1085/1085]
GhostDiagnostic-chr: 2.386
Centroid-sig: 0.0%
Centroid-so: 2.891 arcsec [3.50σ]
OotOffset-rm: 4.163 arcsec [7.77σ]
KicOffset-rm: 4.035 arcsec [7.58σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

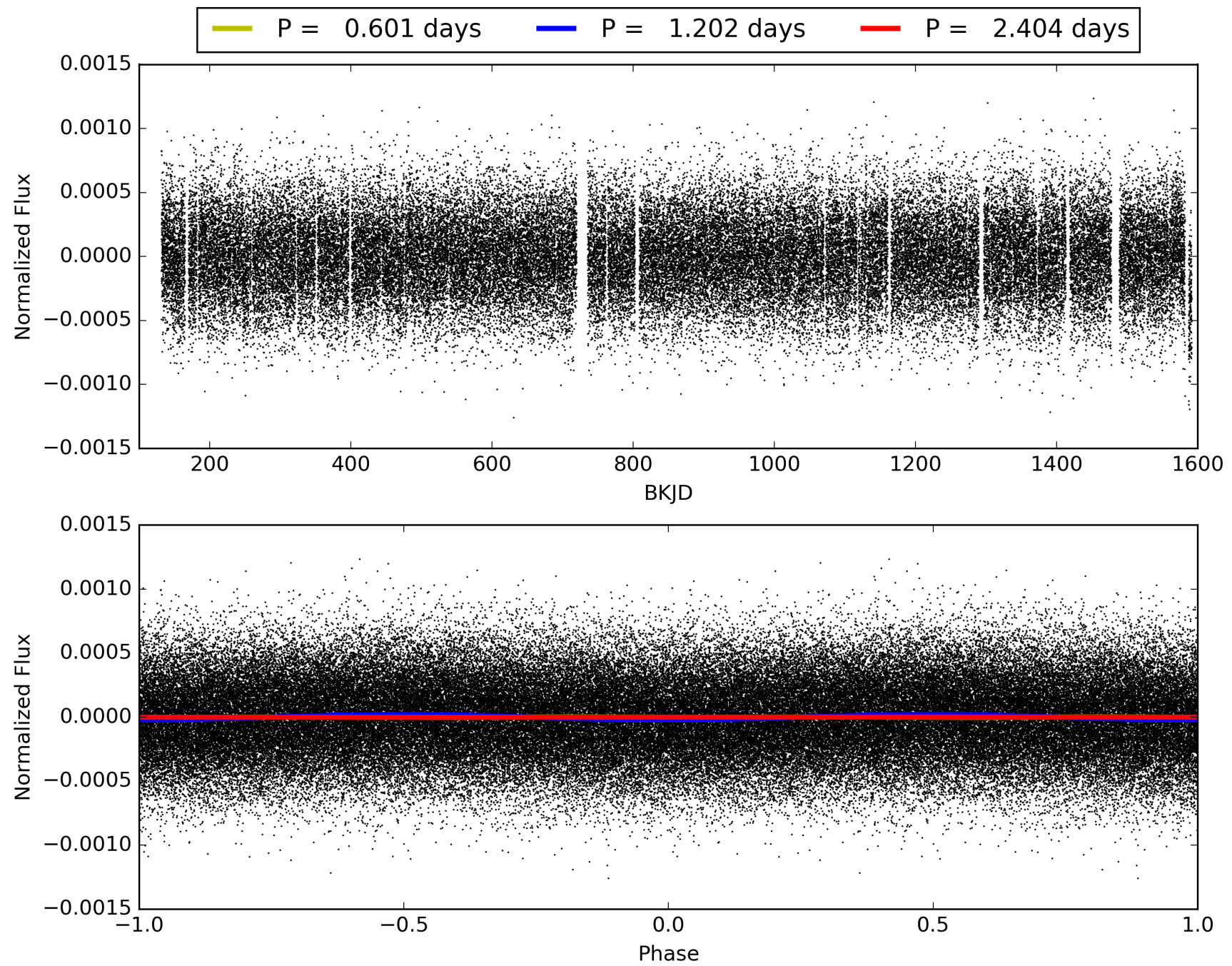
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:48:28 Z

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

TCE 009051902-01, PDC Light Curves

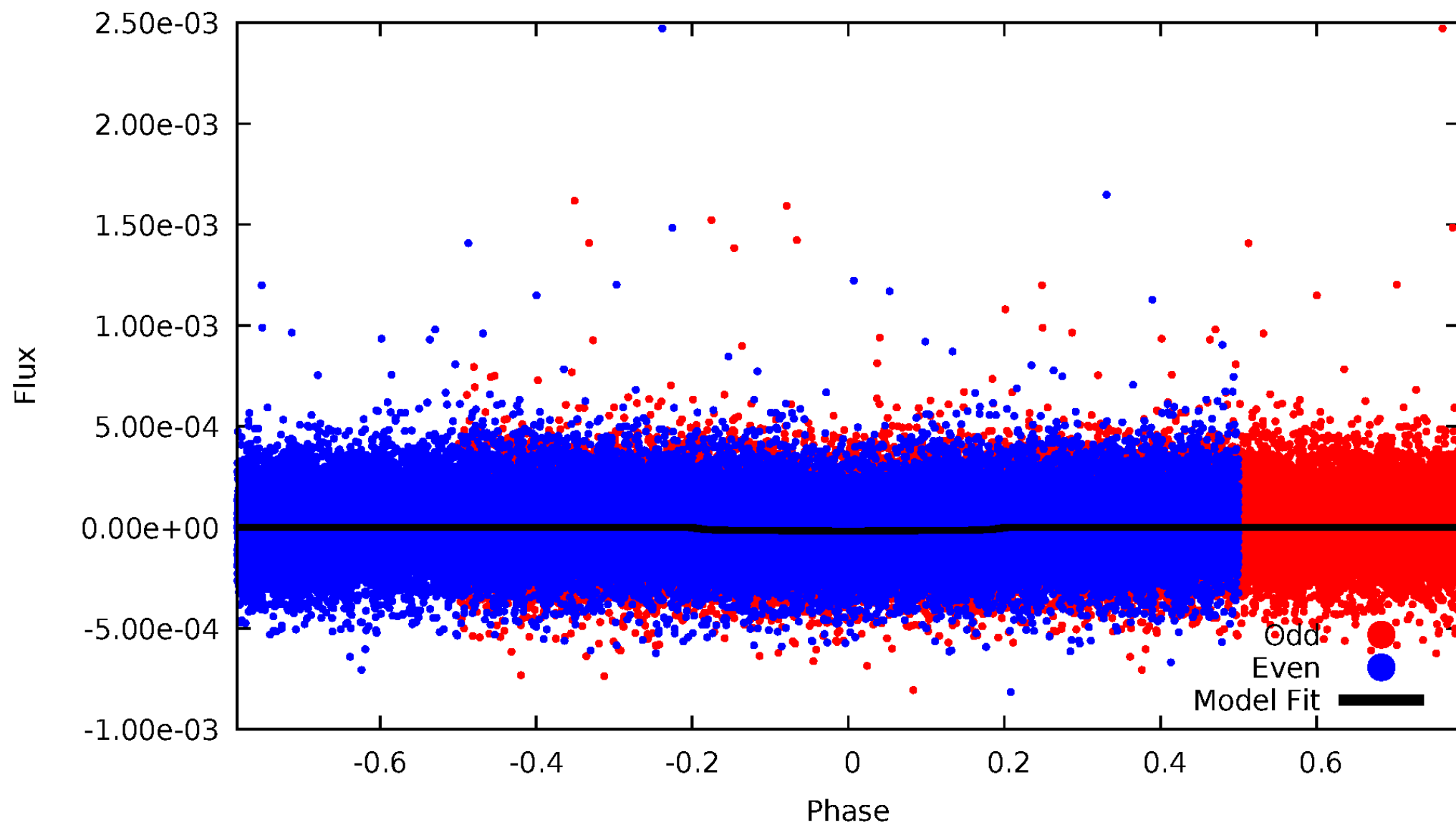


TCE 009051902-01



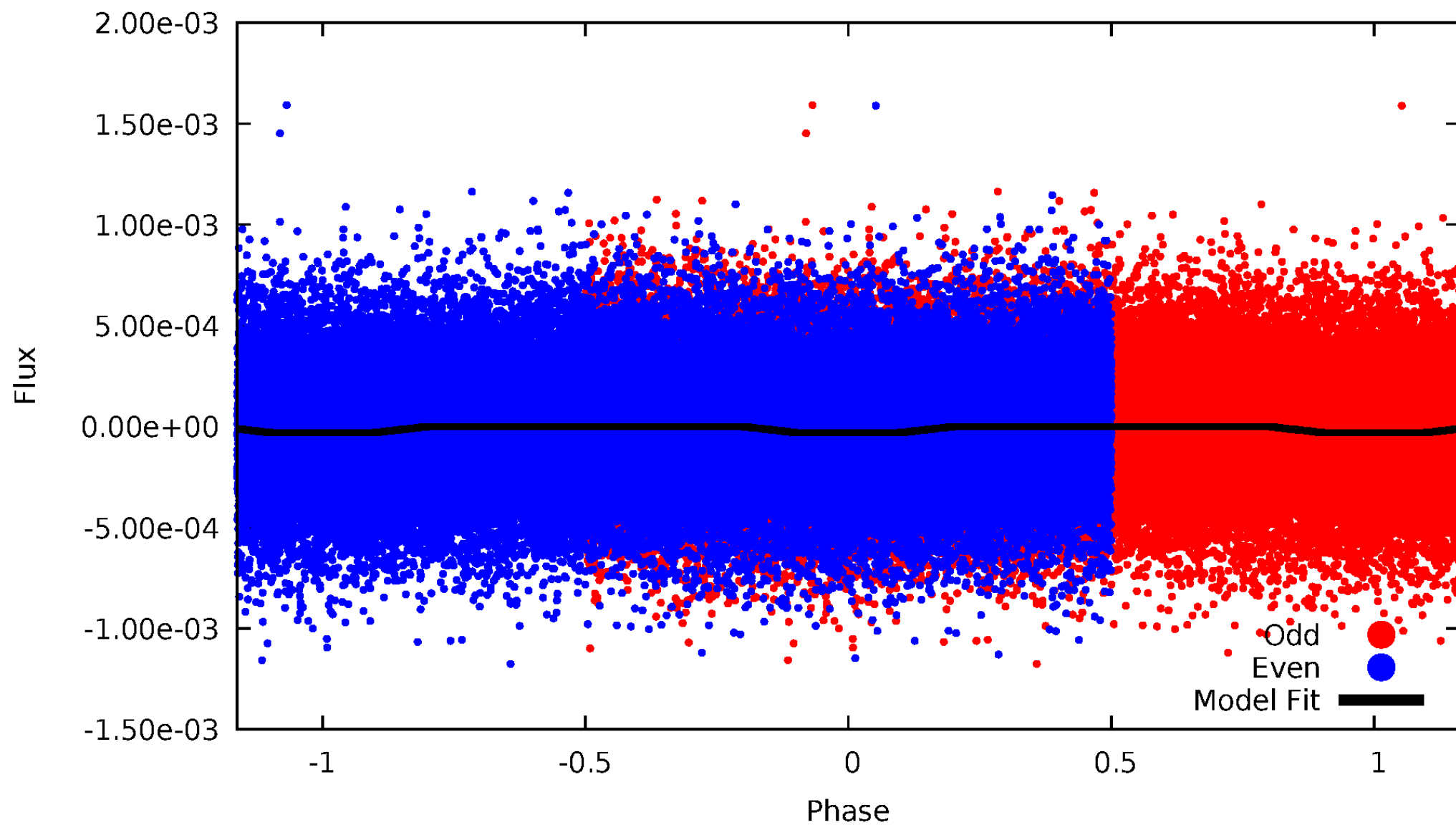
DV Odd/Even

TCE 009051902-01

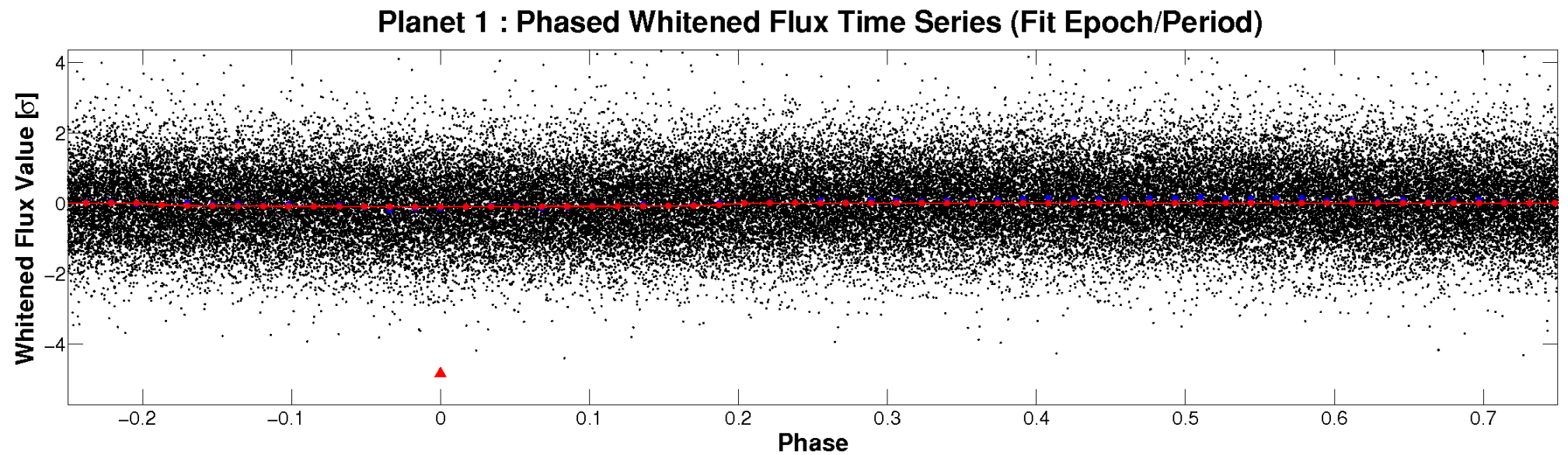
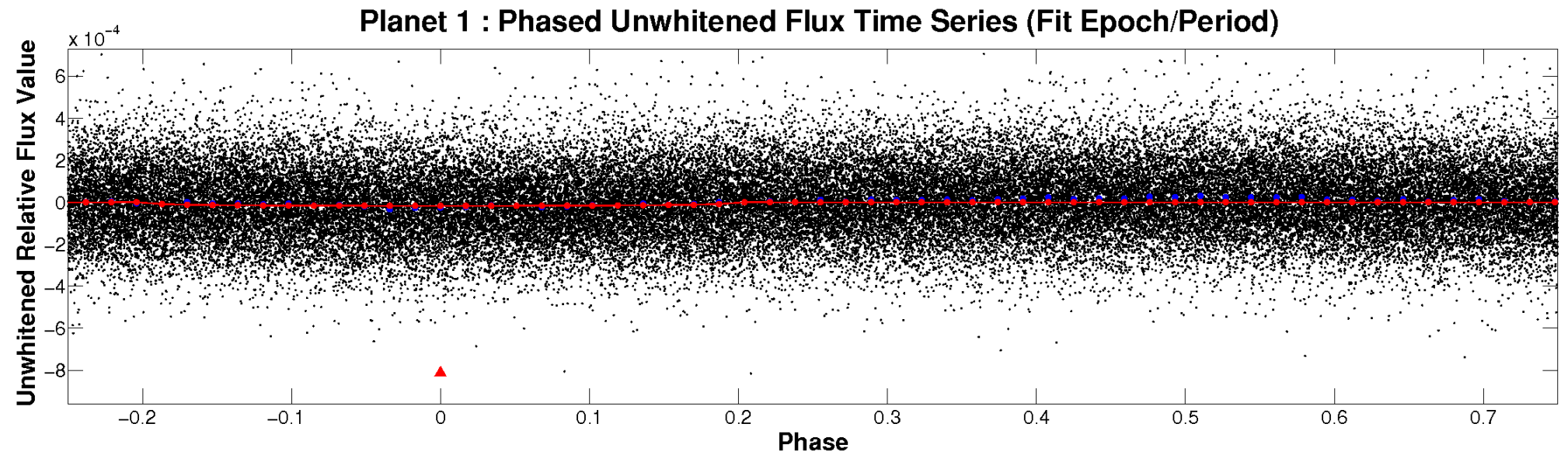


ALT Odd/Even

TCE 009051902-01

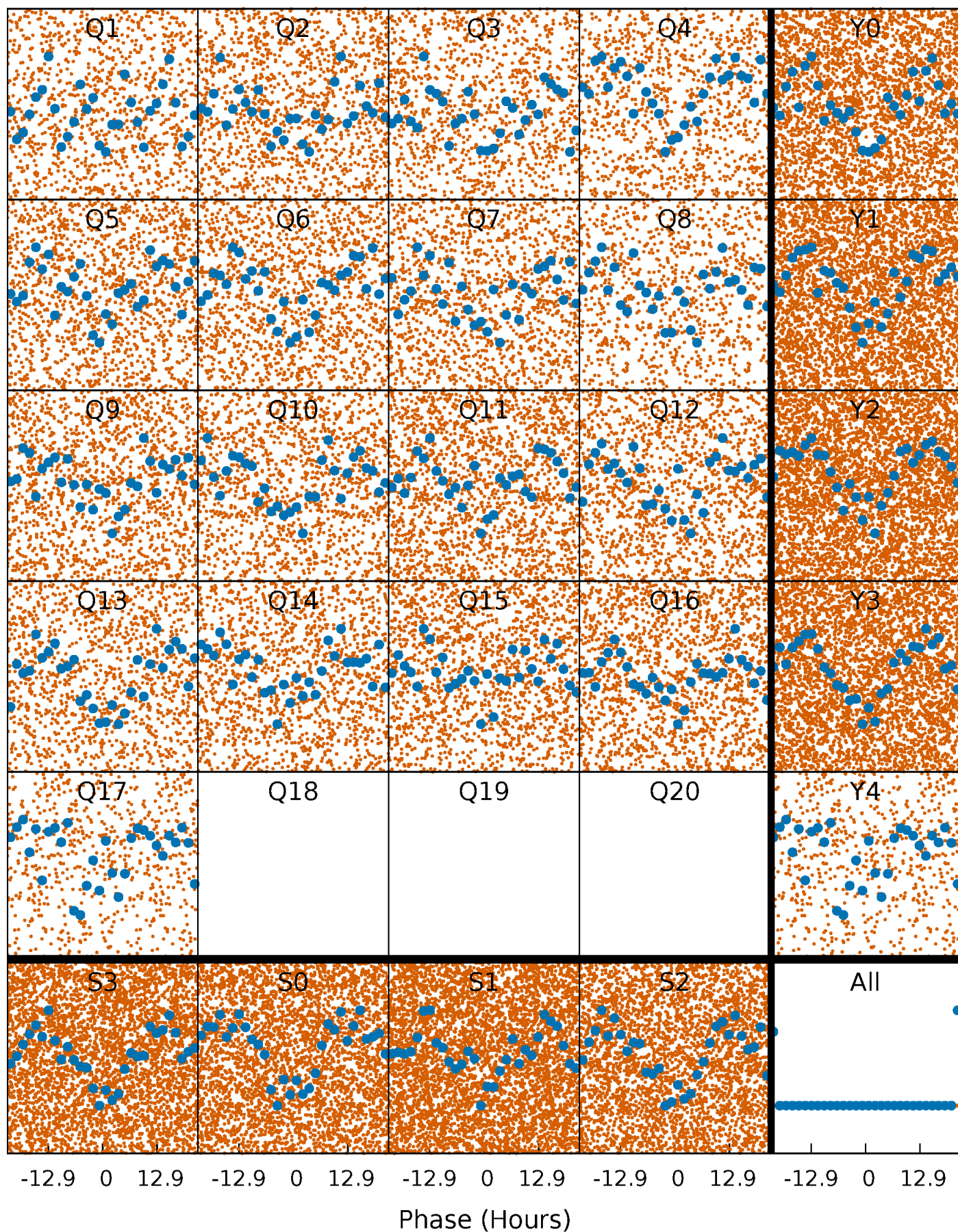


Non-Whitened Vs. Whitened Light Curve



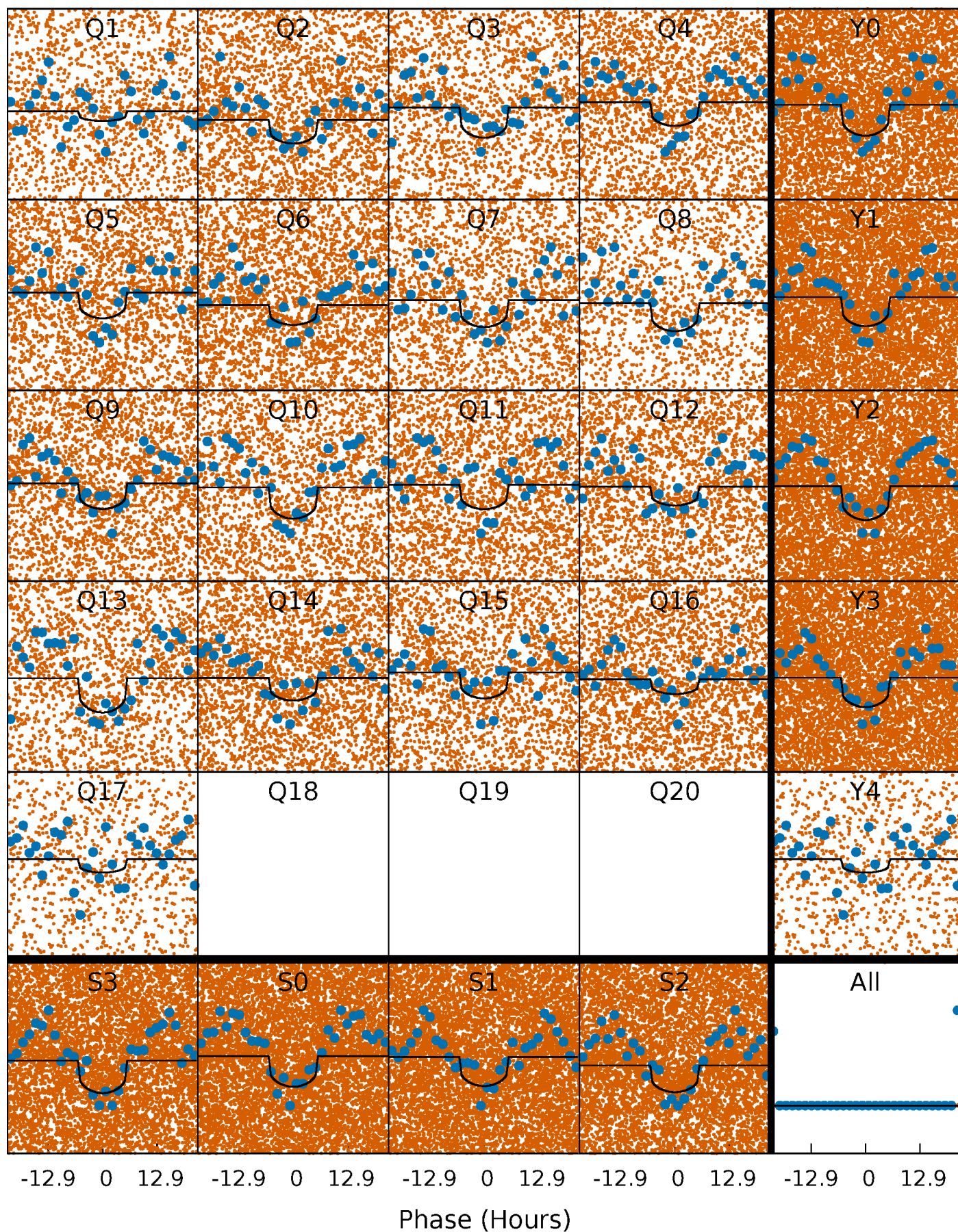
PDC Quarter-Phased Transit Curves

TCE 009051902-01 P= 1.201833 Days $T_0=131.837787$ (BKJD)



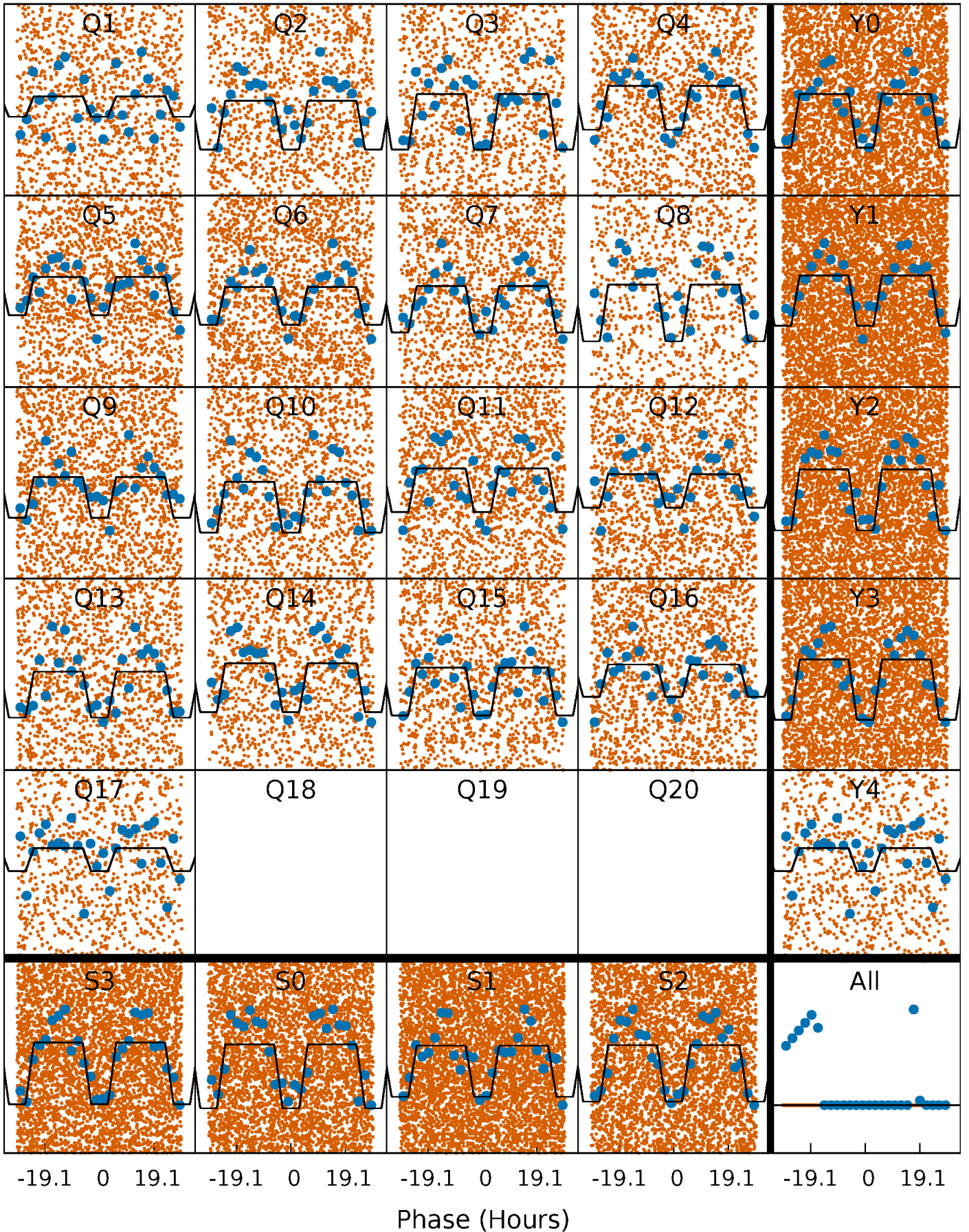
DV Quarter-Phased Transit Curves

TCE 009051902-01 P= 1.201833 Days $T_0=131.837787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

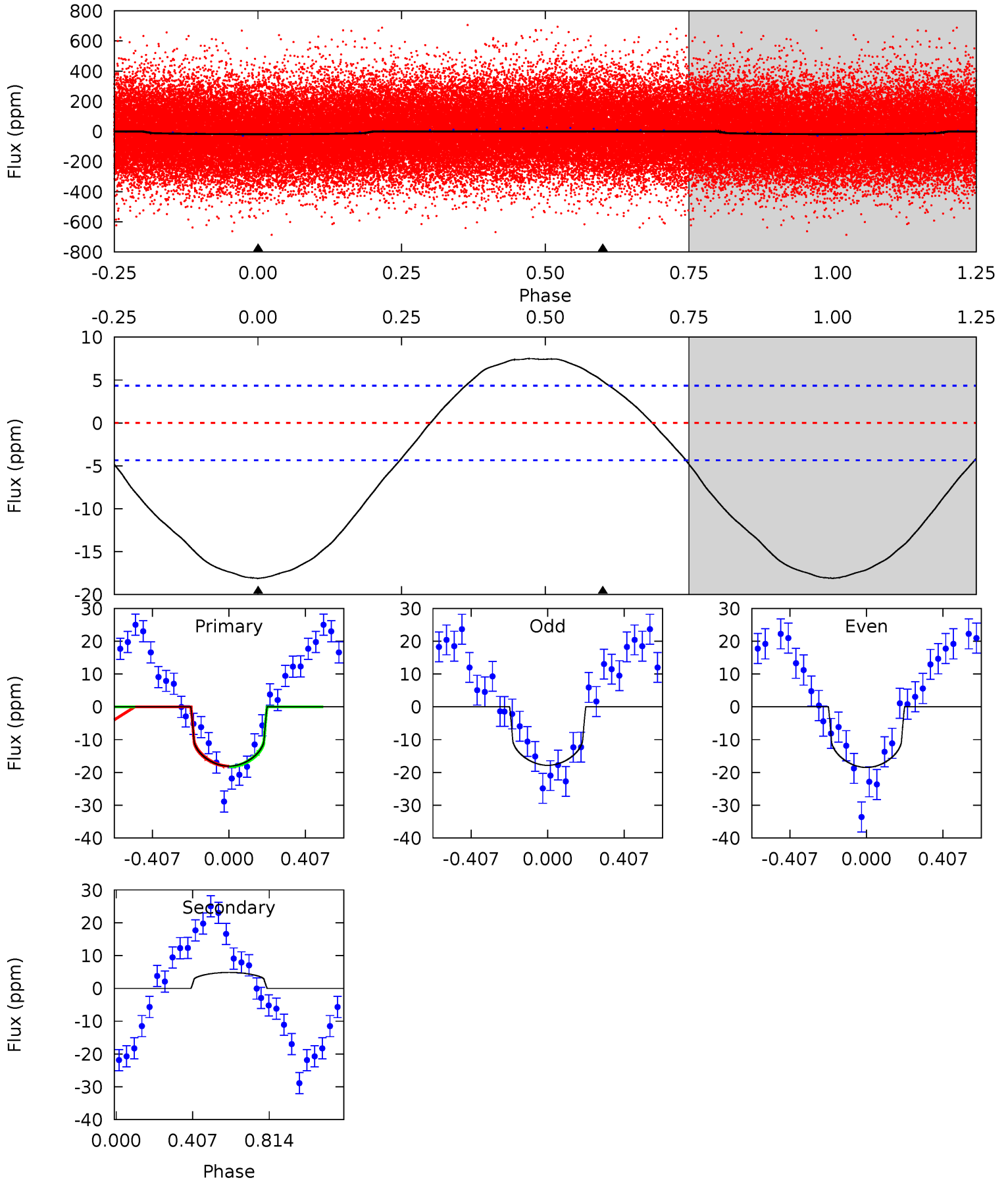
TCE 009051902-01 P= 1.201837 Days $T_0=131.837400$ (BKJD)



DV Model-Shift Uniqueness Test

009051902-01, P = 1.201833 Days, E = 130.635954 Days

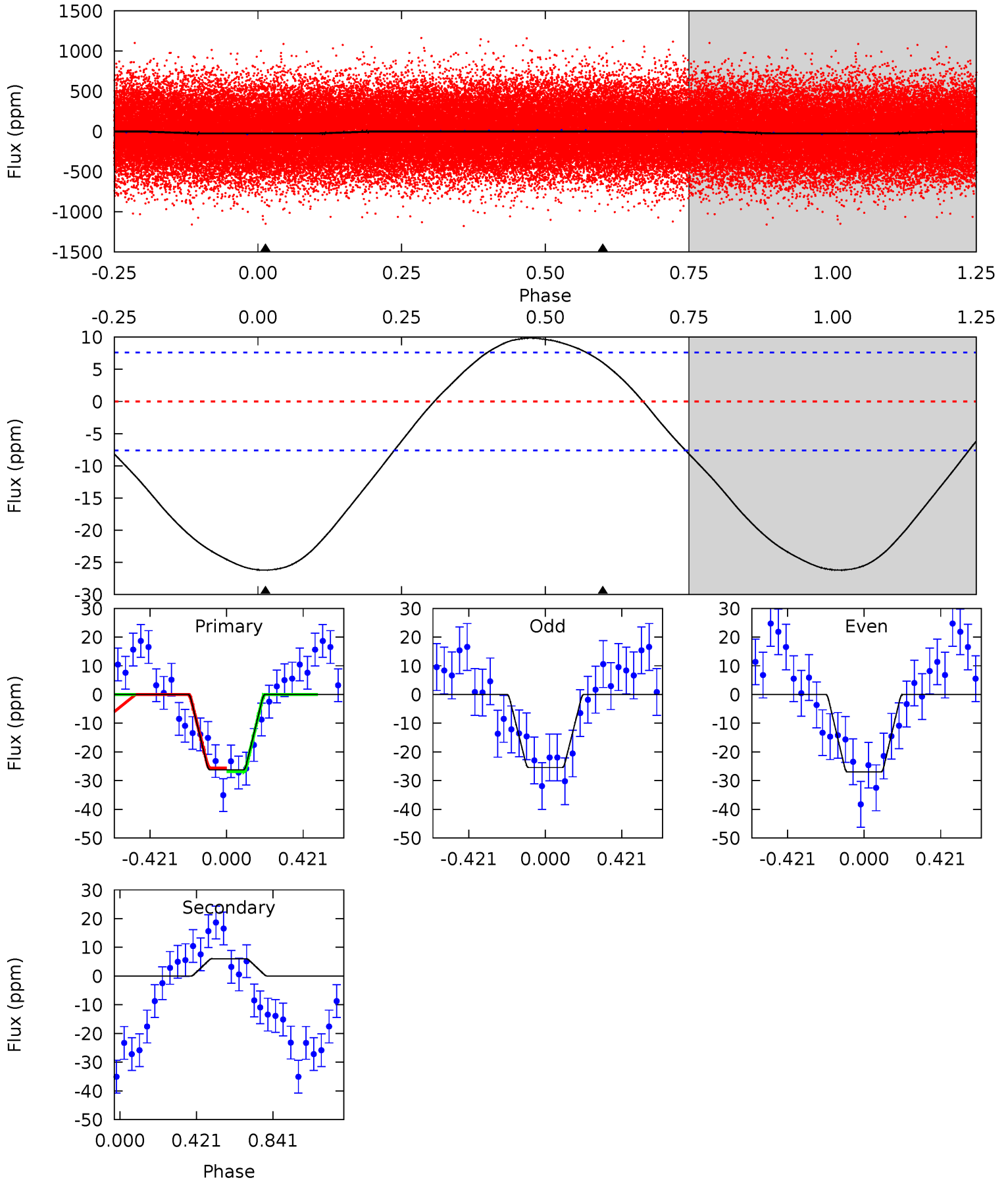
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	-4.77	0	0	4.26	0.83	2.29	17.8	17.8	-4.77	-4.77	0.32	0.94	0.29	0.09



Alt Model-Shift Uniqueness Test

009051902-01, P = 1.201837 Days, E = 130.635563 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	-3.37	0	0	4.25	0.81	1.64	14.6	14.6	-3.37	-3.37	0.43	0.84	0.27	0.37



Stellar Parameters For KIC 009051902

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6862^{+212}_{-212}	$2.910^{+0.552}_{-0.065}$	$-0.500^{+0.500}_{-0.200}$	$9.781^{+1.438}_{-5.752}$	$2.837^{+0.331}_{-0.994}$	$0.004^{+0.037}_{-0.001}$
	+3%/-3%	+19%/-2%	+100%/-40%	+15%/-59%	+12%/-35%	+855%/-22%
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 009051902-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	5 ± 1	$3.53^{+2.12}_{-1.64}$	7176^{+518}_{-1030}	-6636^{+713}_{-1184}	$-0.200^{+0.121}_{-0.490}$
Alt.	6 ± 2	$5.06^{+2.39}_{-2.09}$	7196^{+465}_{-1039}	-6392^{+666}_{-577}	$-0.119^{+0.063}_{-0.229}$

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

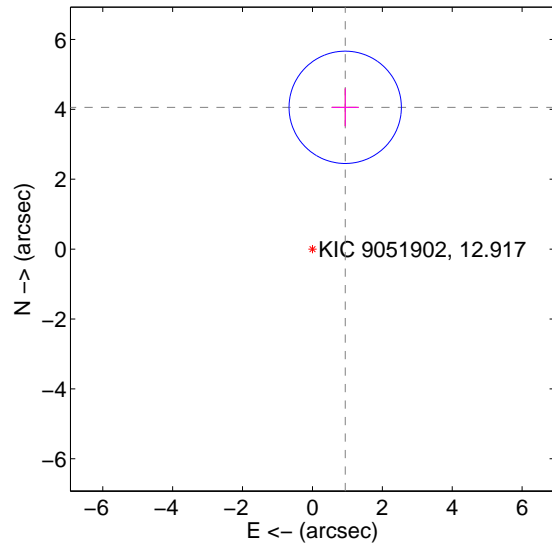
Supplemental centroid analysis for 009051902-01. Kepler magnitude: 12.92. Transit SNR 13.62

There are 0 quarters with good PRF difference image offsets

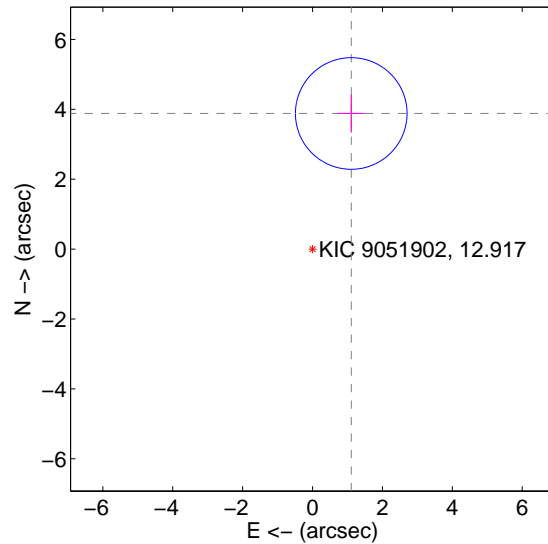
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.163 ± 0.536	7.77	-0.938 ± 0.390	4.057 ± 0.542
PRF-fit source offset from KIC position	4.035 ± 0.532	7.58	-1.108 ± 0.390	3.880 ± 0.542
photometric centroid source offset	2.89 ± 0.83	3.50	-0.70 ± 0.92	-2.80 ± 0.82

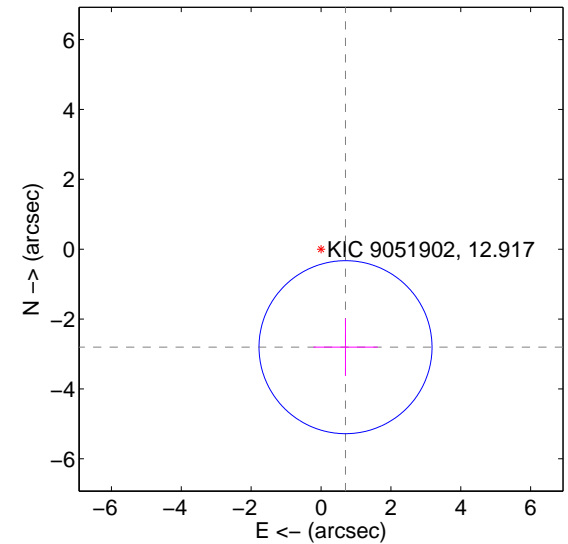
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

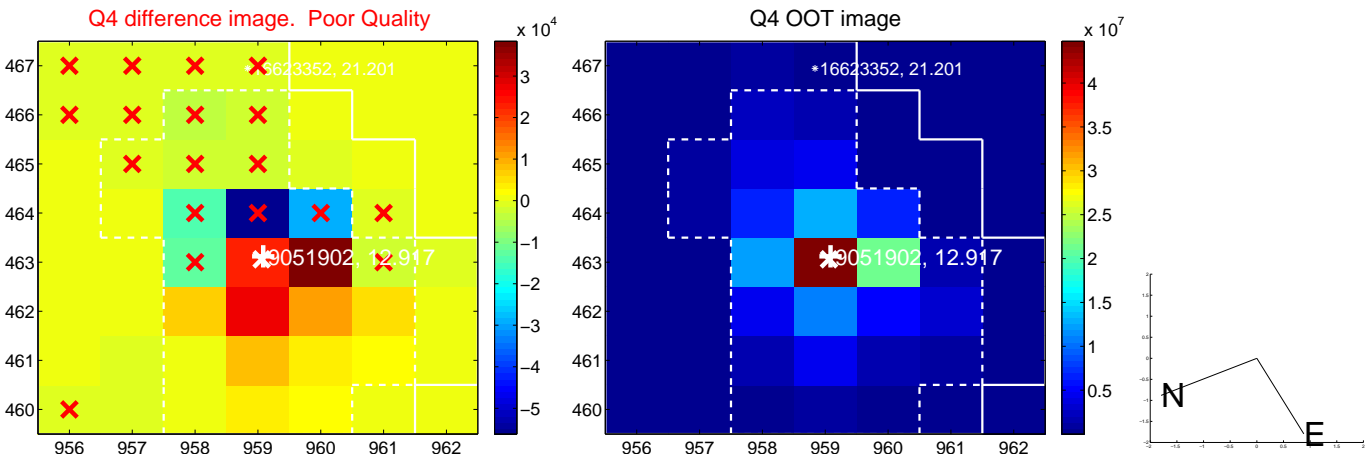
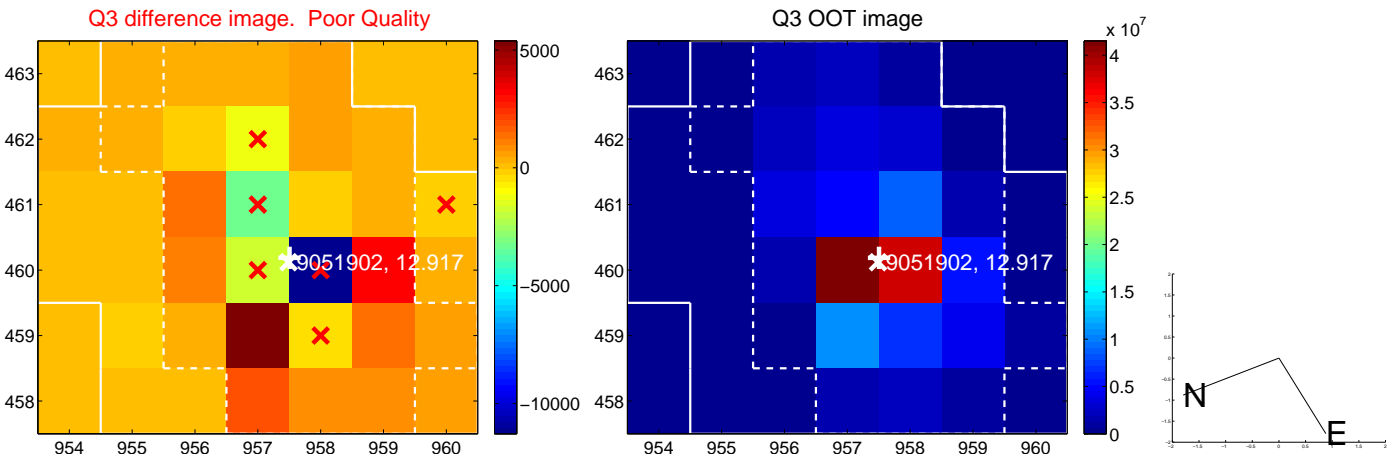
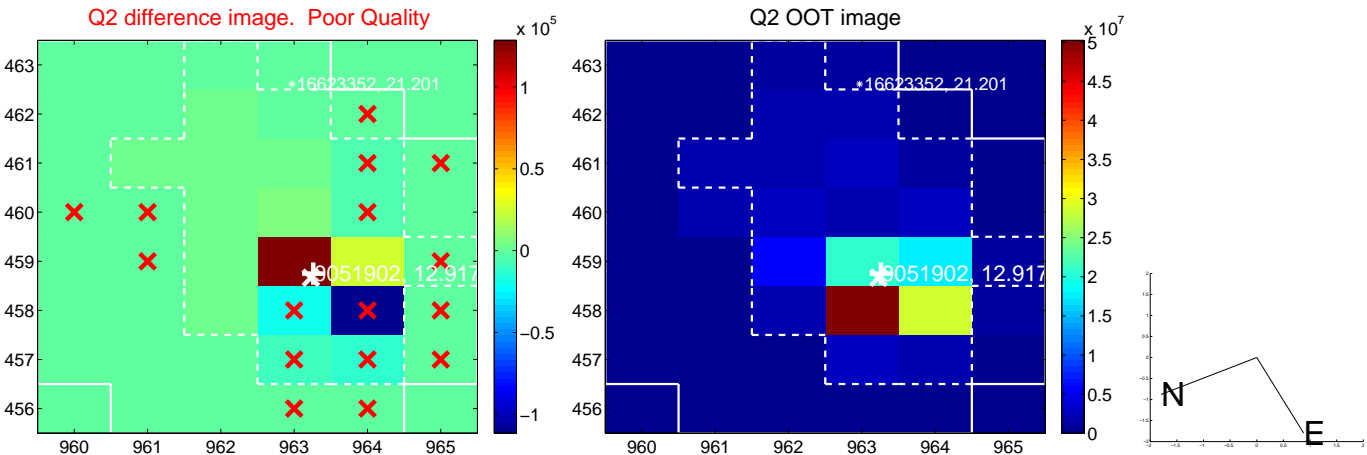
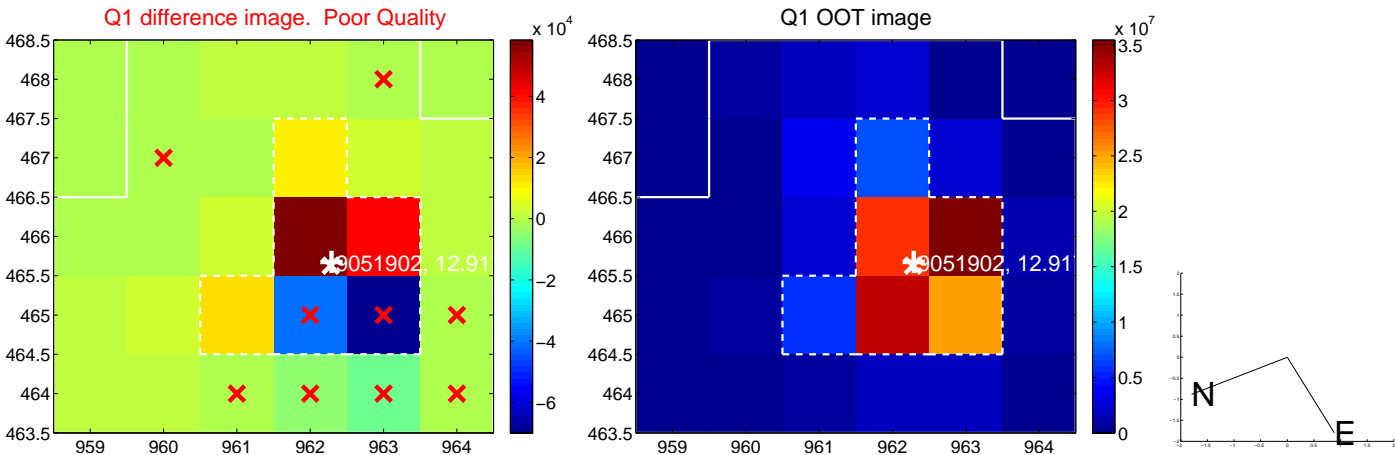


offset from photometric centroids

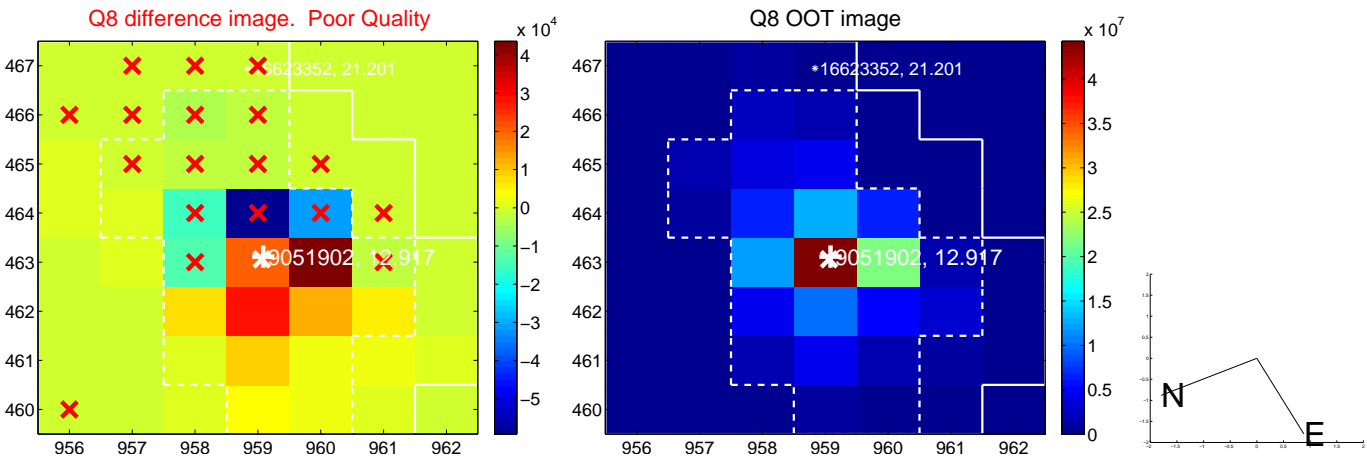
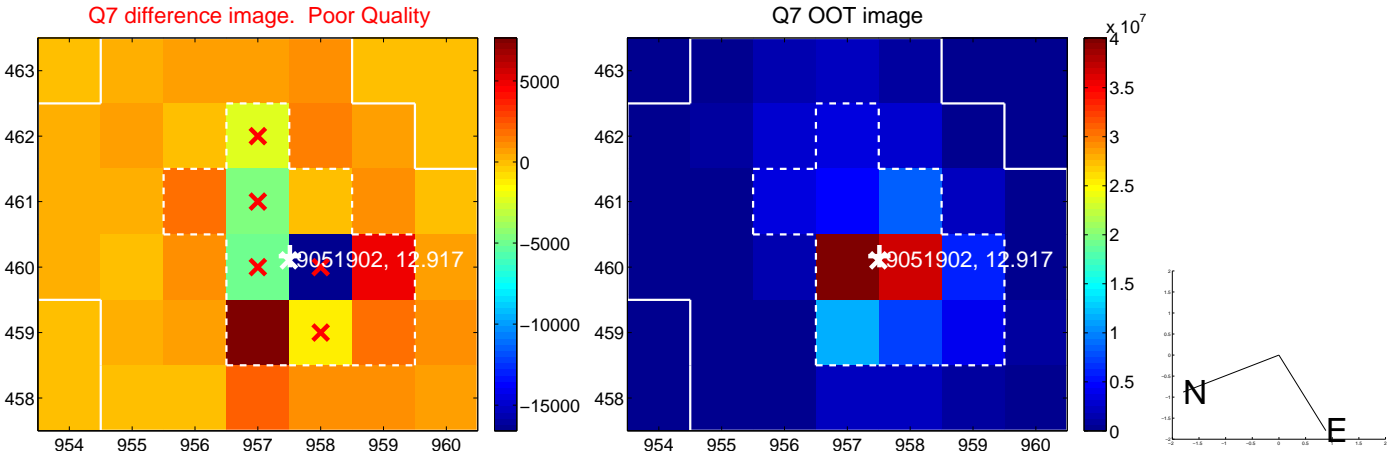
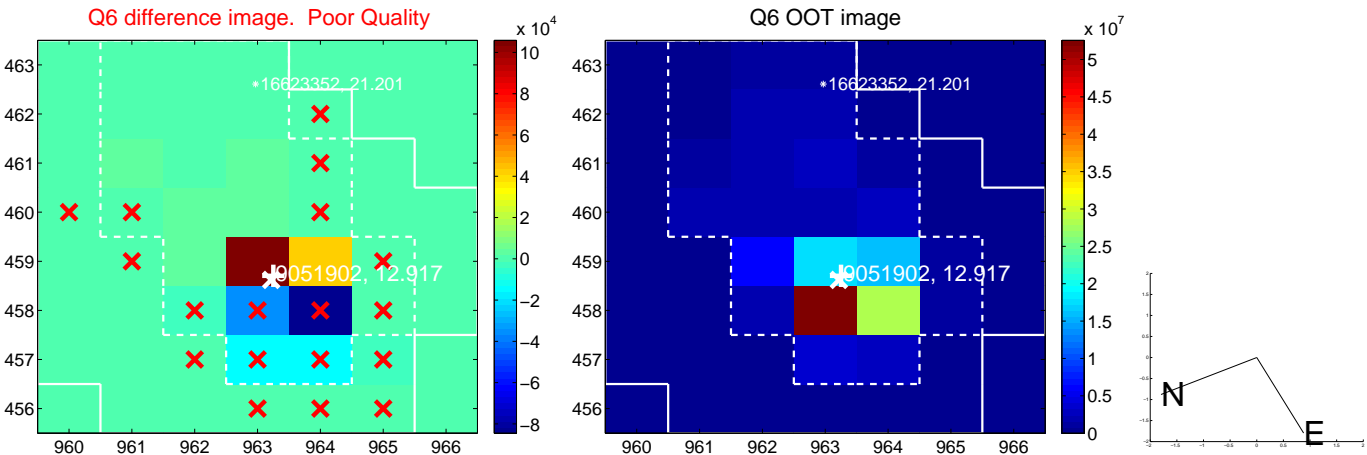
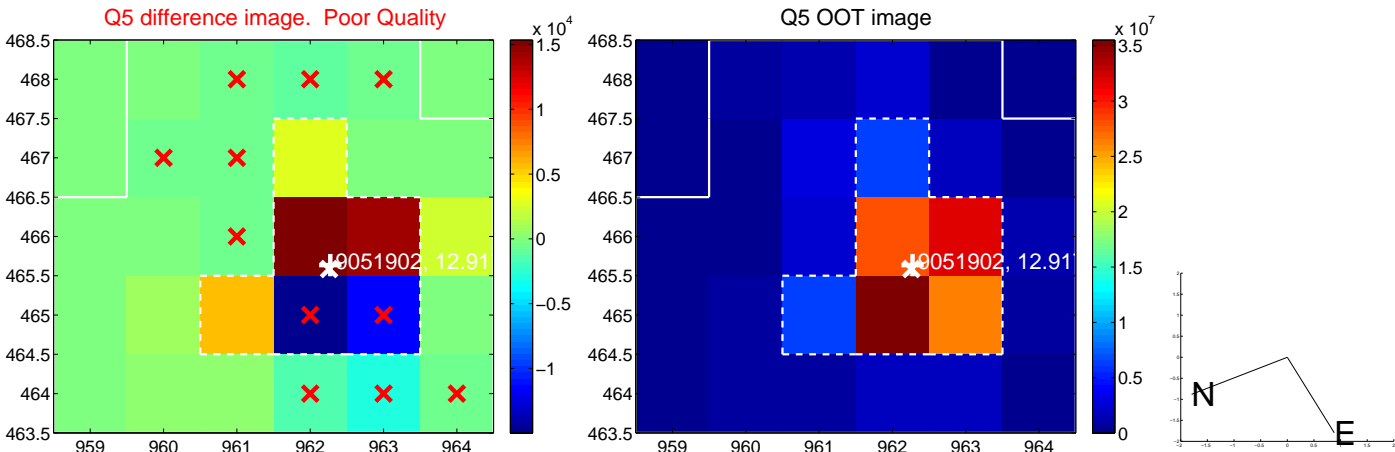


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

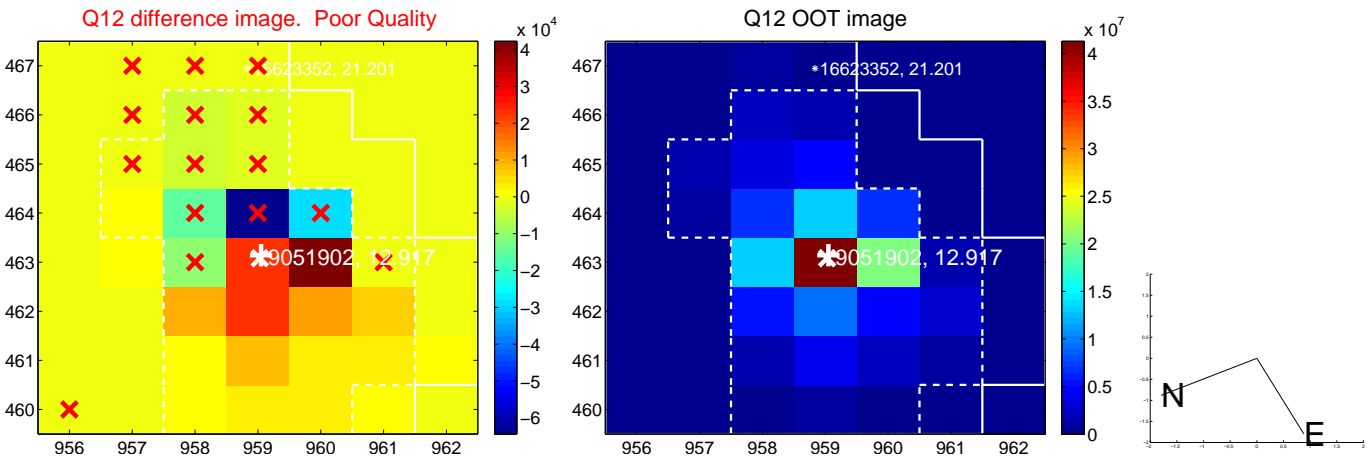
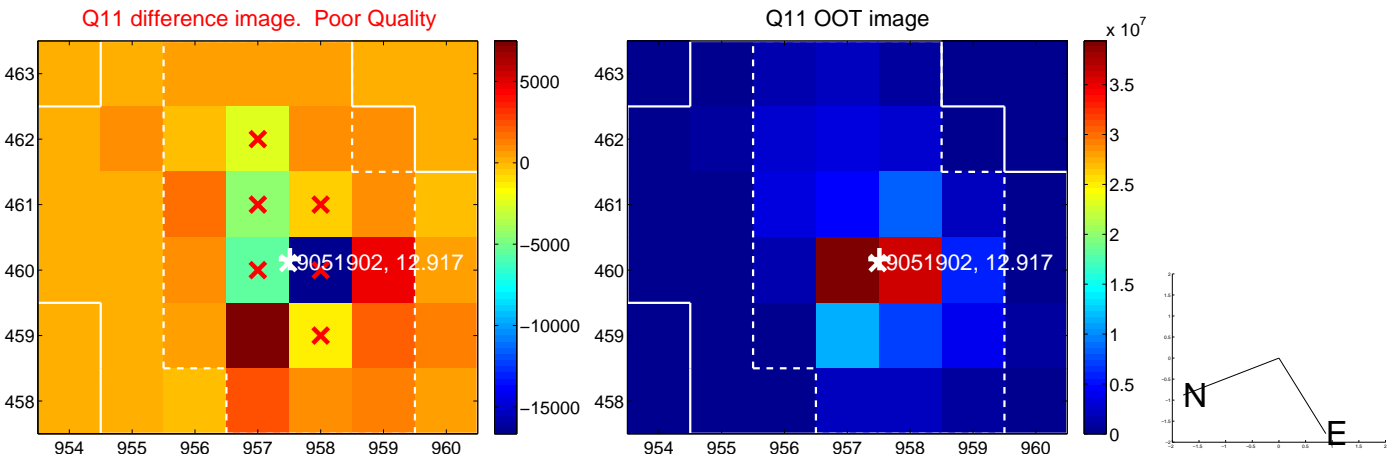
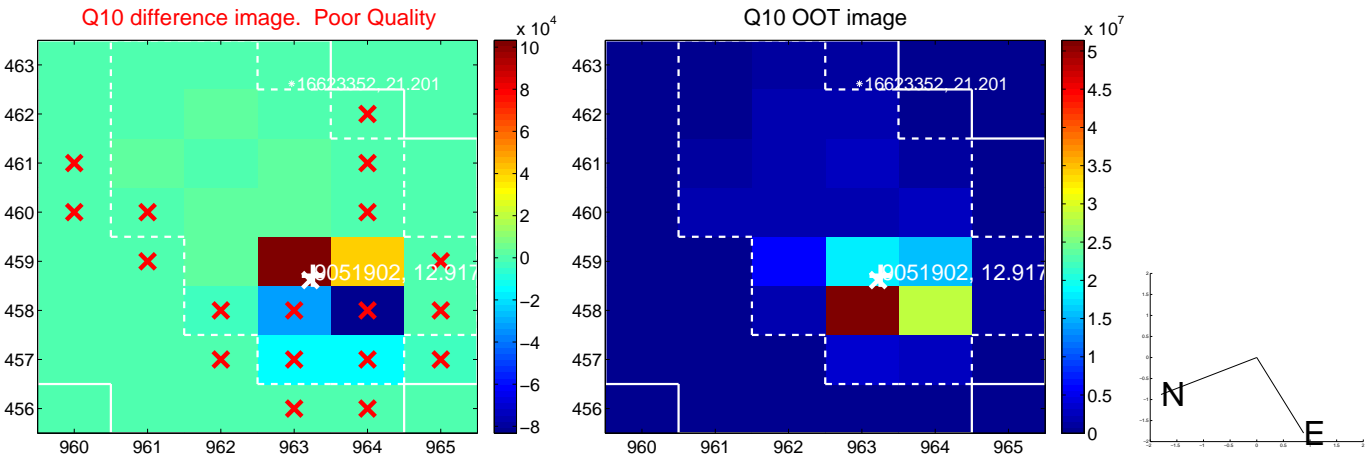
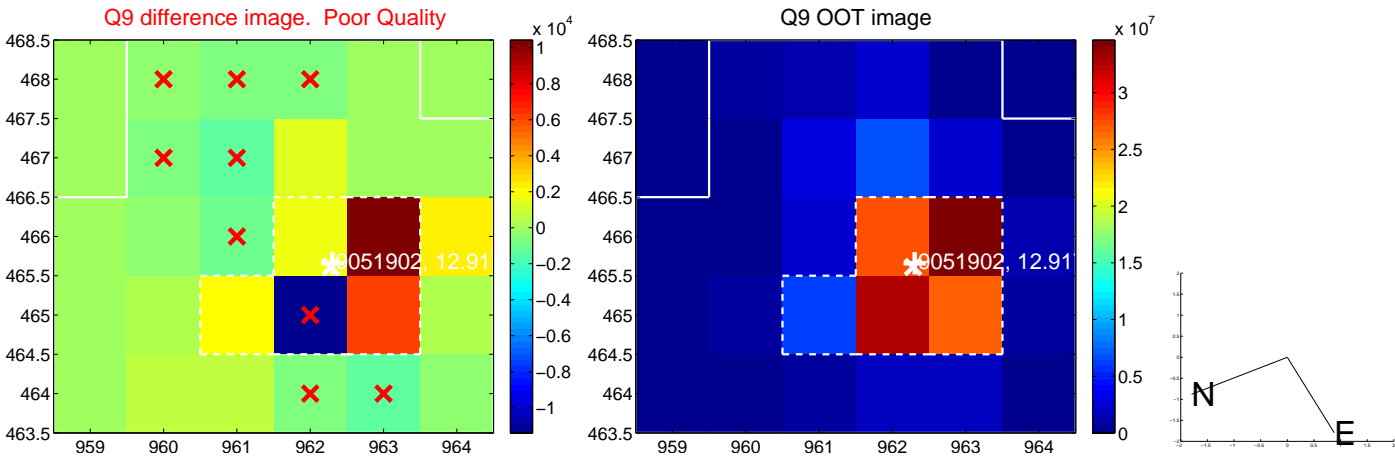
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



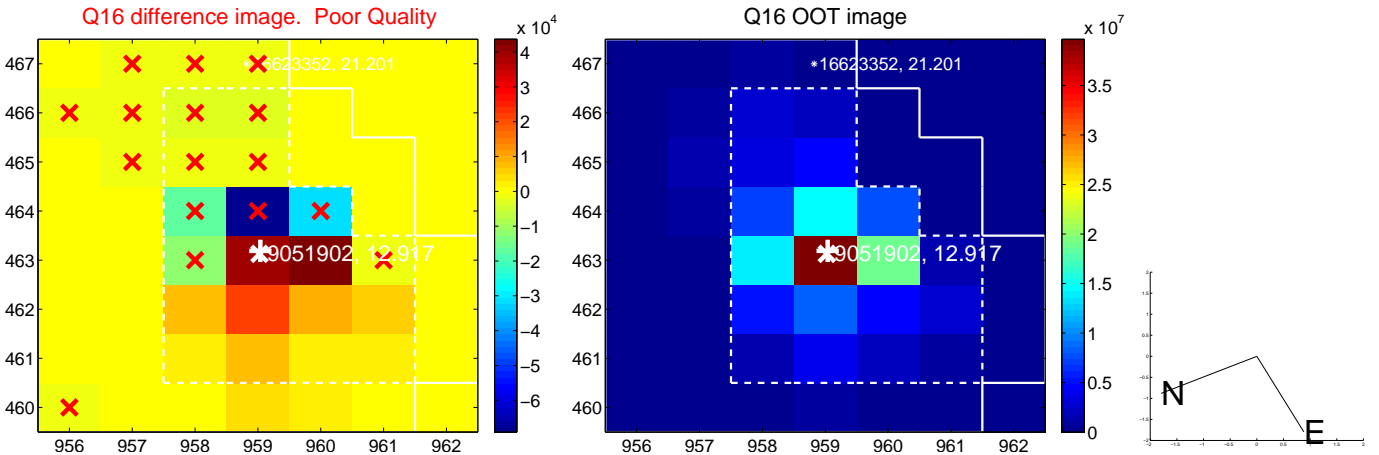
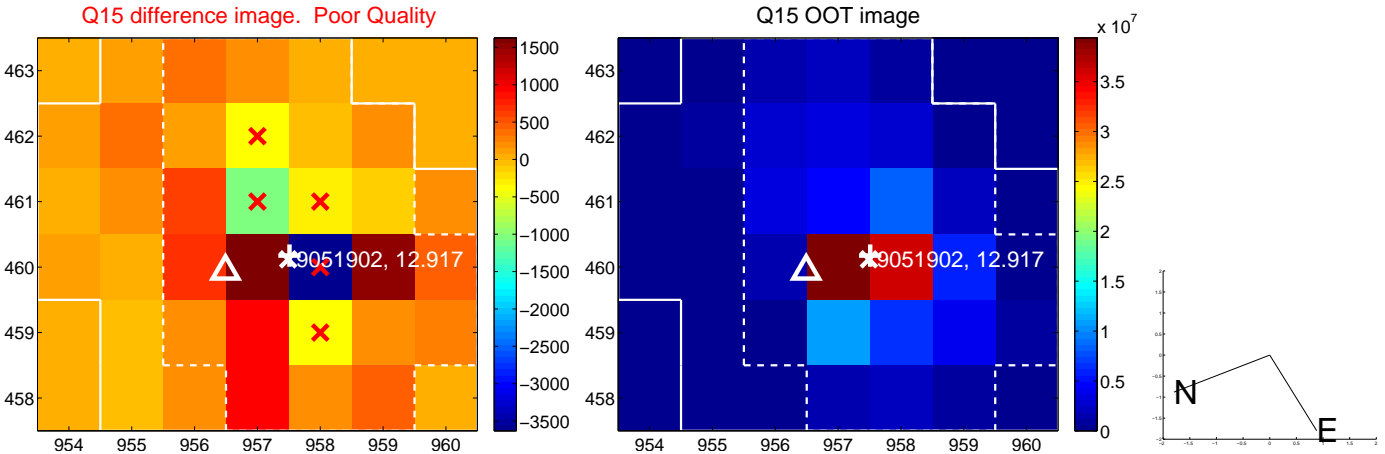
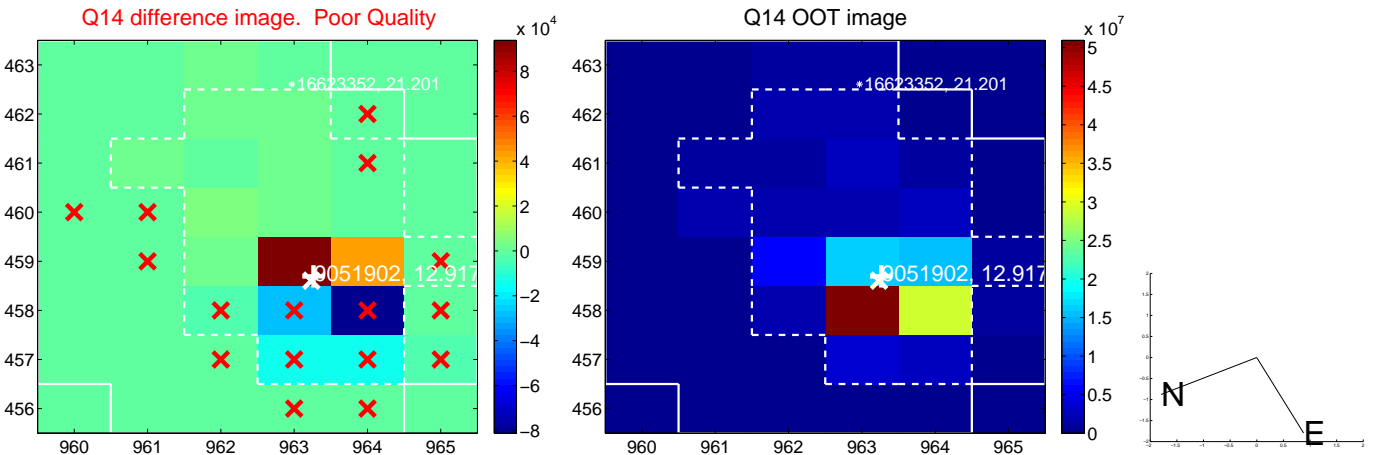
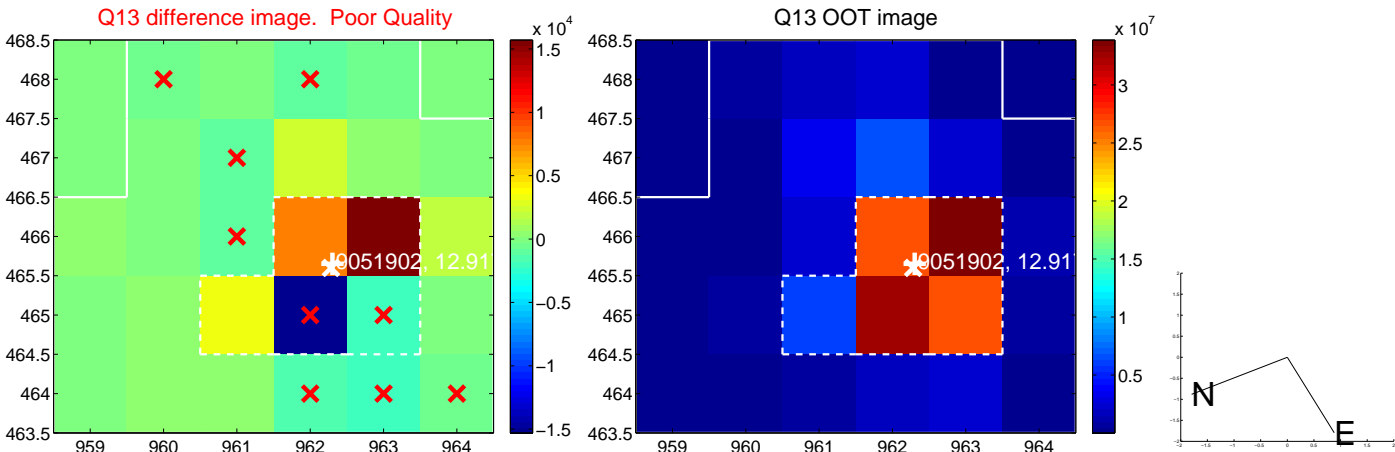
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



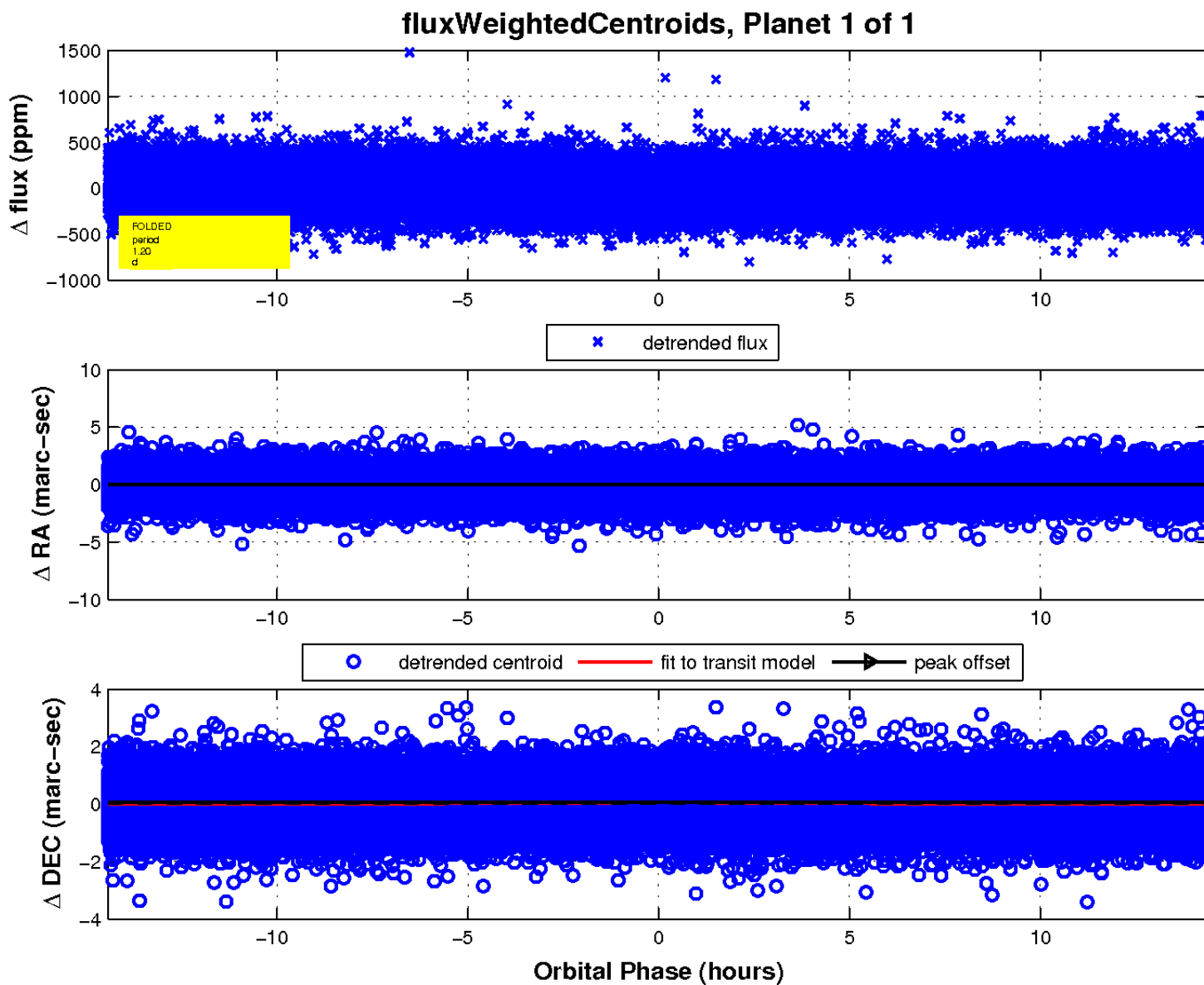
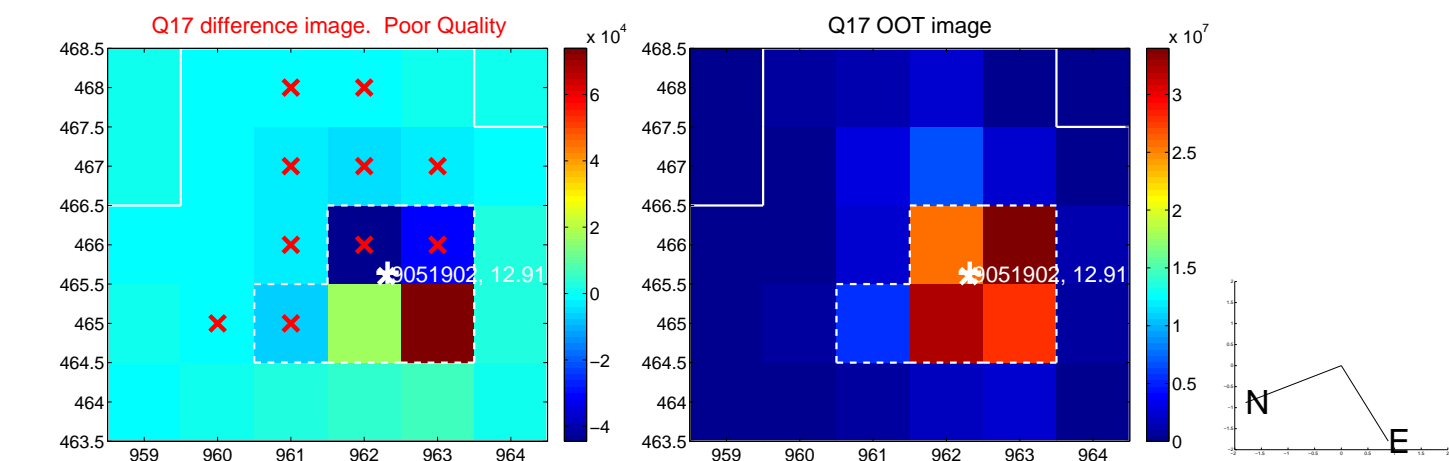
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

