

KIC 010297233

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})
010297233-01	OBS	No	0.613919	131.651662	12.8	5.553	9.8	15.2	2.36	7689	0.89	57357.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010297233-01	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.

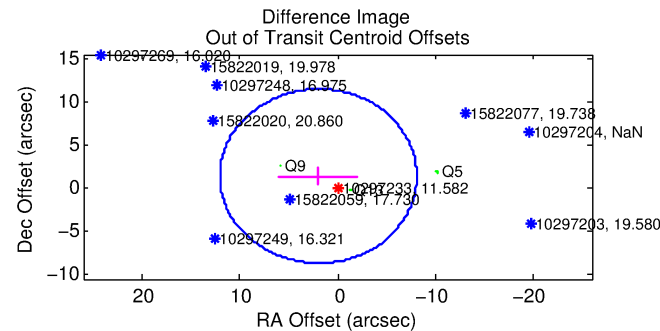
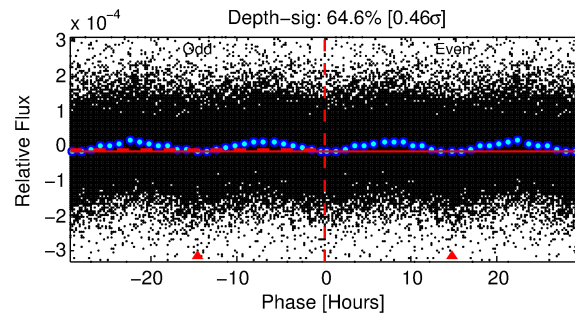
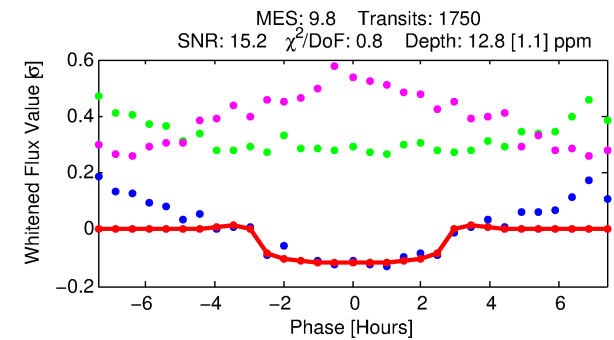
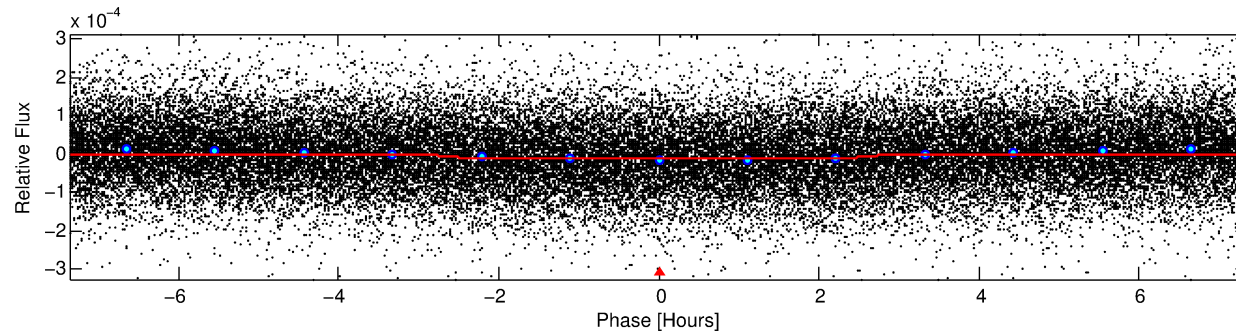
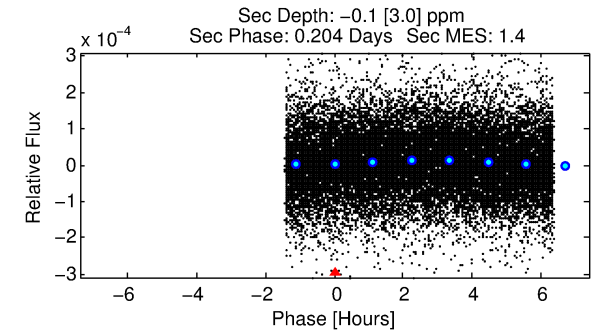
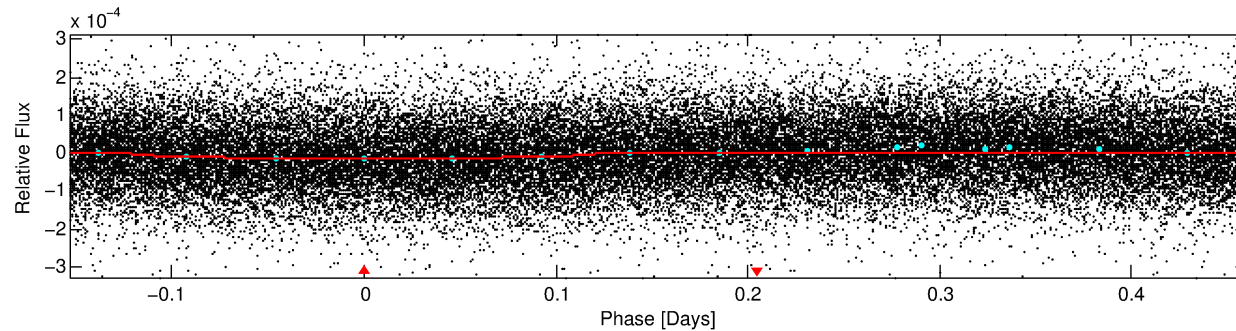
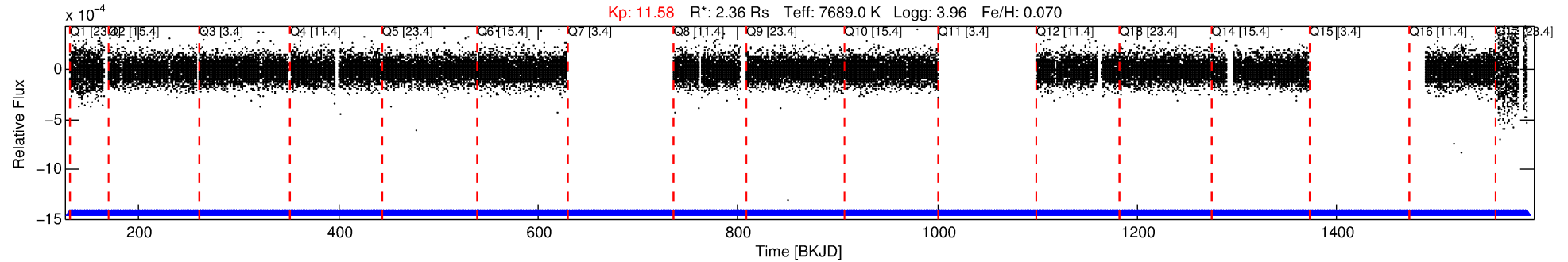
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010297233-01

No Significant Match Found

DV One-Page Summary

KIC: 10297233 Candidate: 1 of 1 Period: 0.614 d



DV Fit Results:

Period = 0.61392 [0.00001] d
Epoch = 131.6517 [0.0032] BKJD
Rp/R* = 0.0035 [0.0022]
a/R* = 1.05 [0.40]
b = 0.62 [3.90]
Seff = 57357.18 [23613.08]
Teff = 3946 [406] K
Rp = 0.89 [0.62] Re
a = 0.0174 [0.0044] AU
Ag = N/A
Teffp = N/A

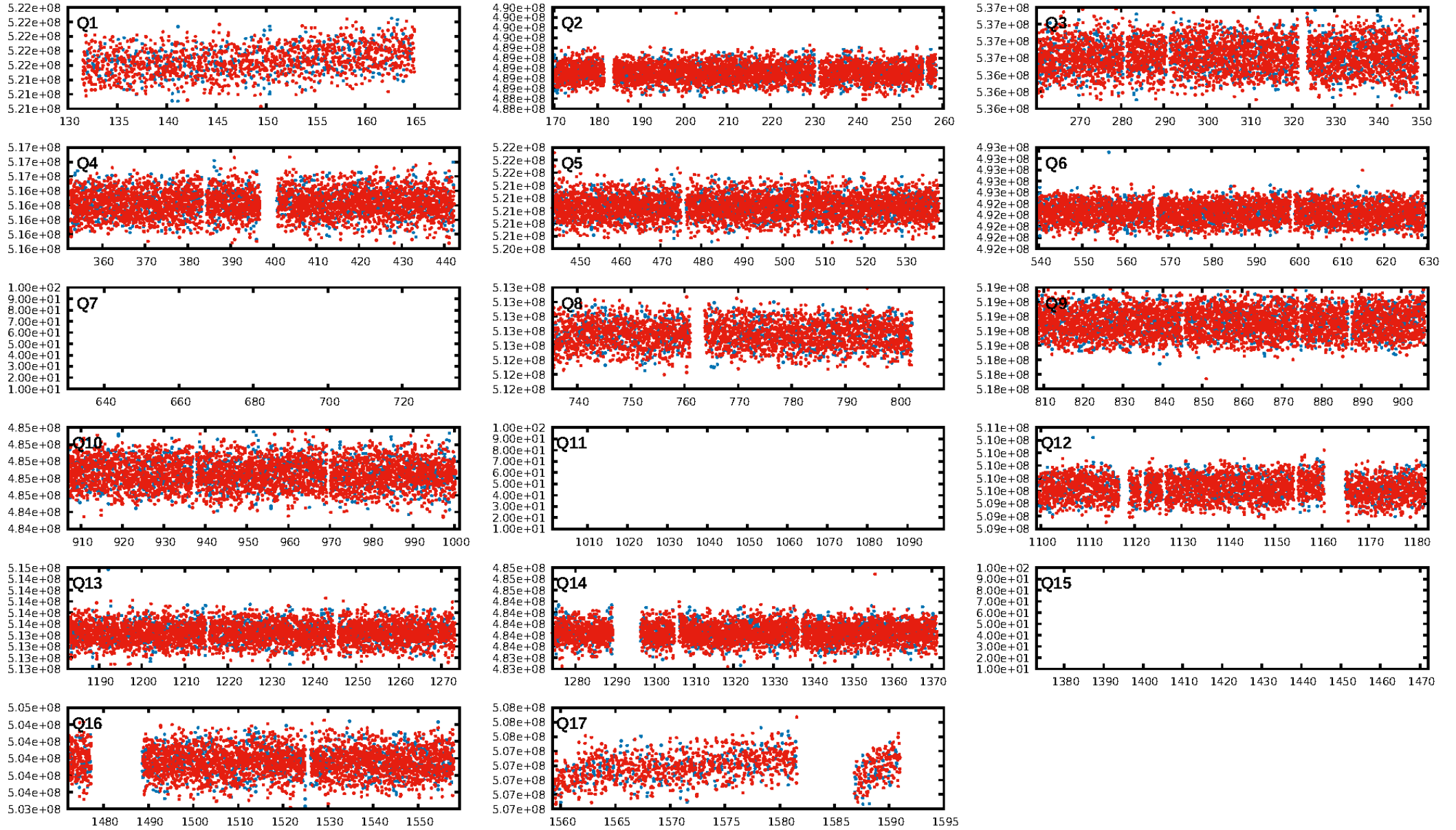
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1652/1652]
GhostDiagnostic-chr: 4.235
Centroid-sig: 6.6%
Centroid-so: 1.375 arcsec [1.89σ]
OotOffset-rm: 2.421 arcsec [0.72σ]
KicOffset-rm: 2.396 arcsec [0.71σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [14/14]

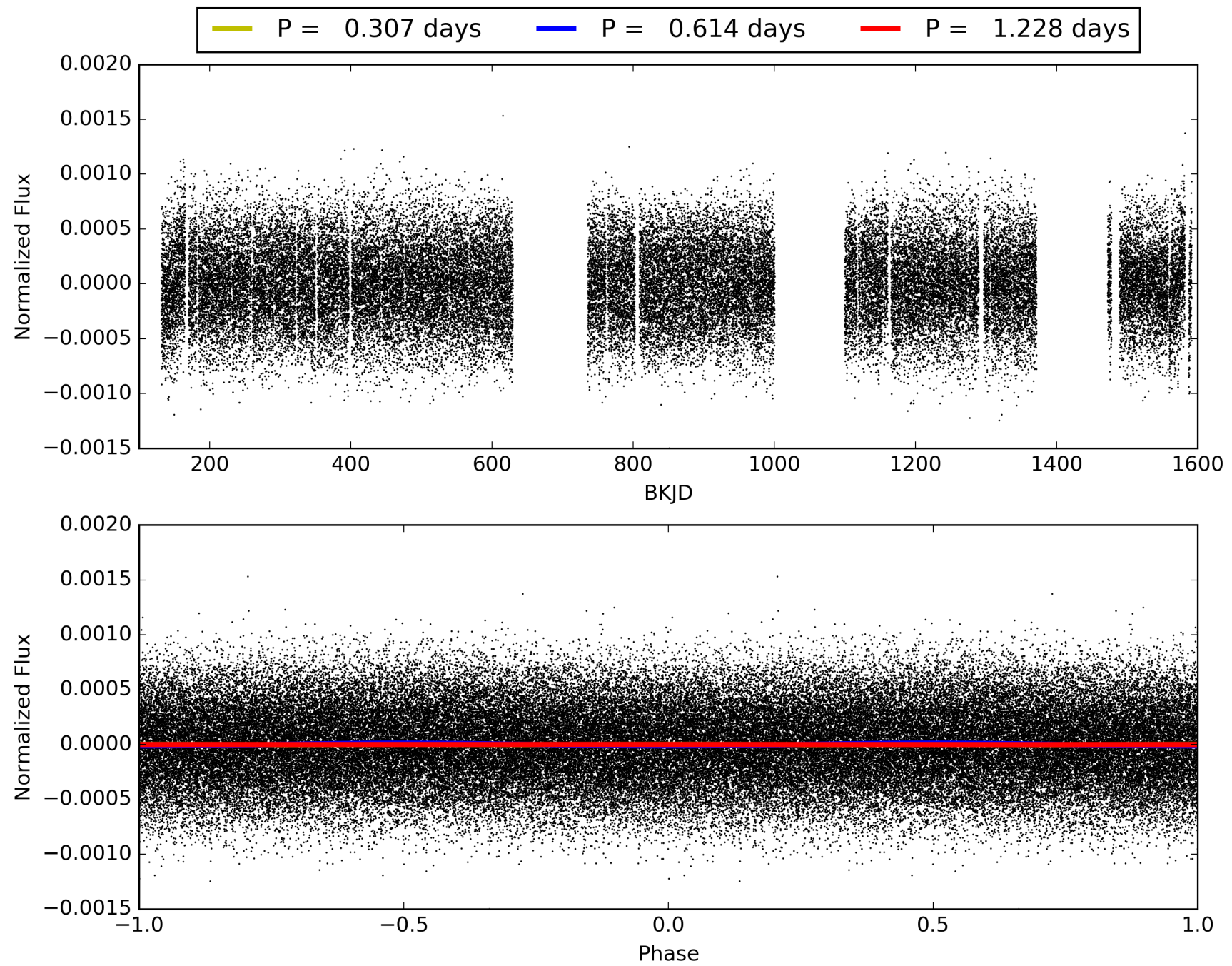
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:06:32 Z

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

TCE 010297233-01, PDC Light Curves

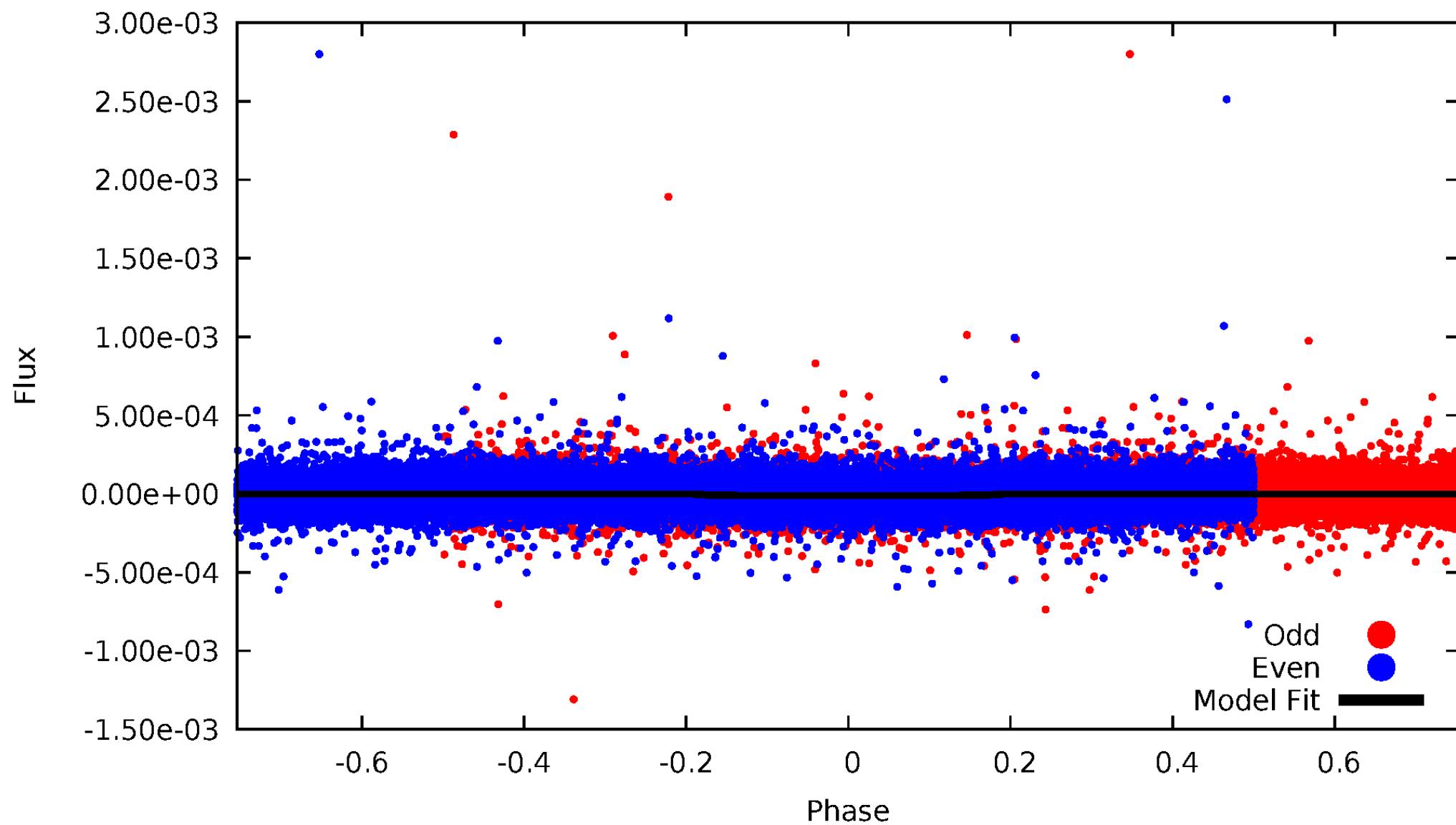


TCE 010297233-01



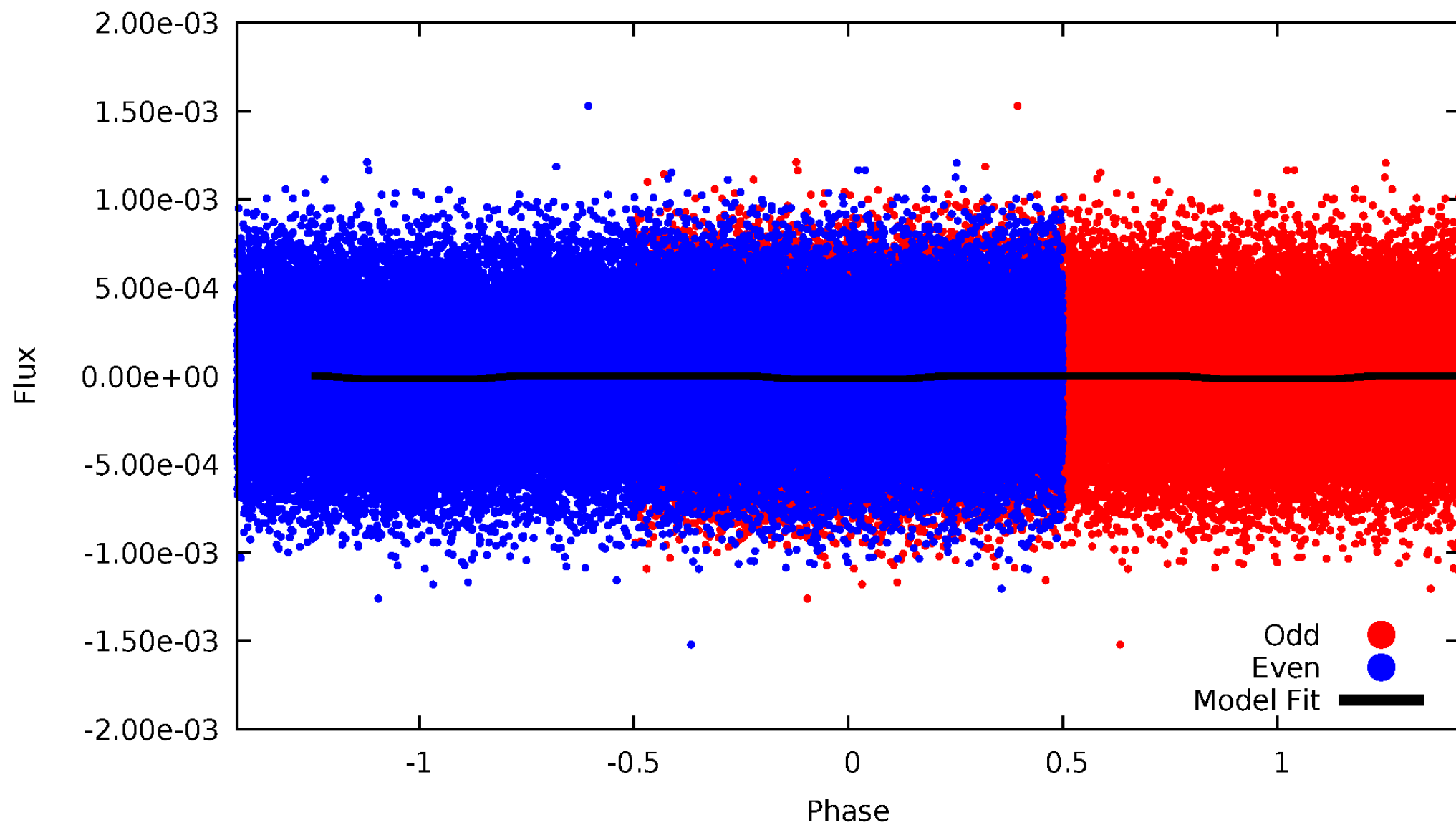
DV Odd/Even

TCE 010297233-01



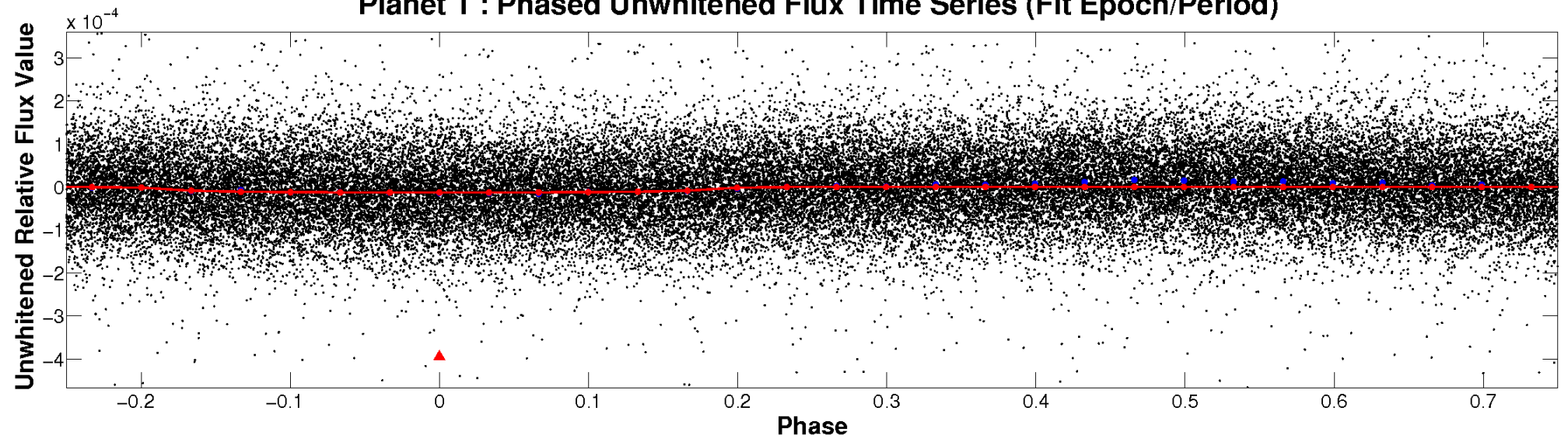
ALT Odd/Even

TCE 010297233-01

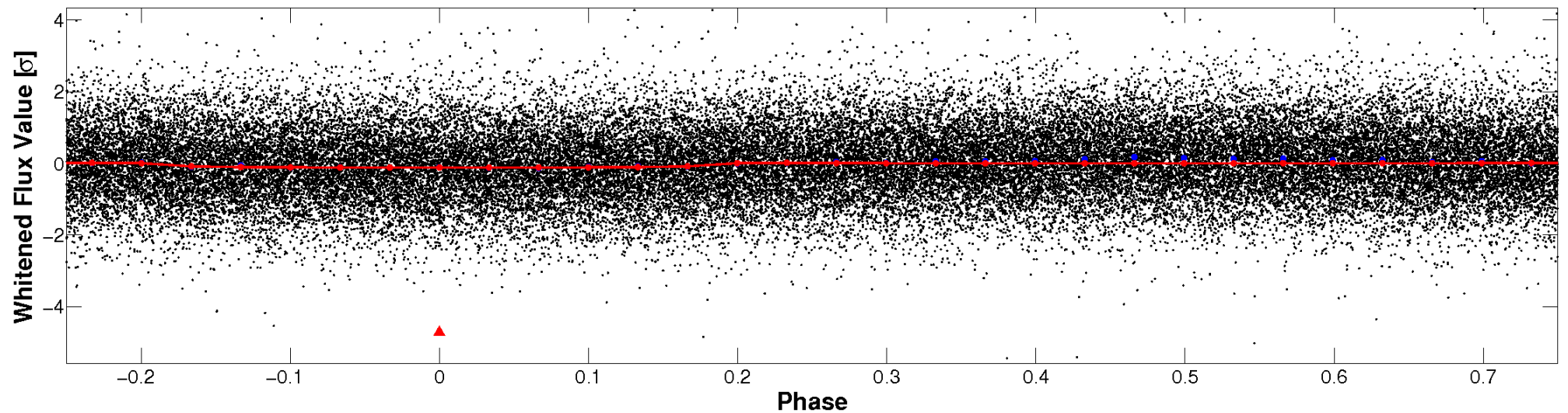


Non-Whitened Vs. Whitened Light Curve

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

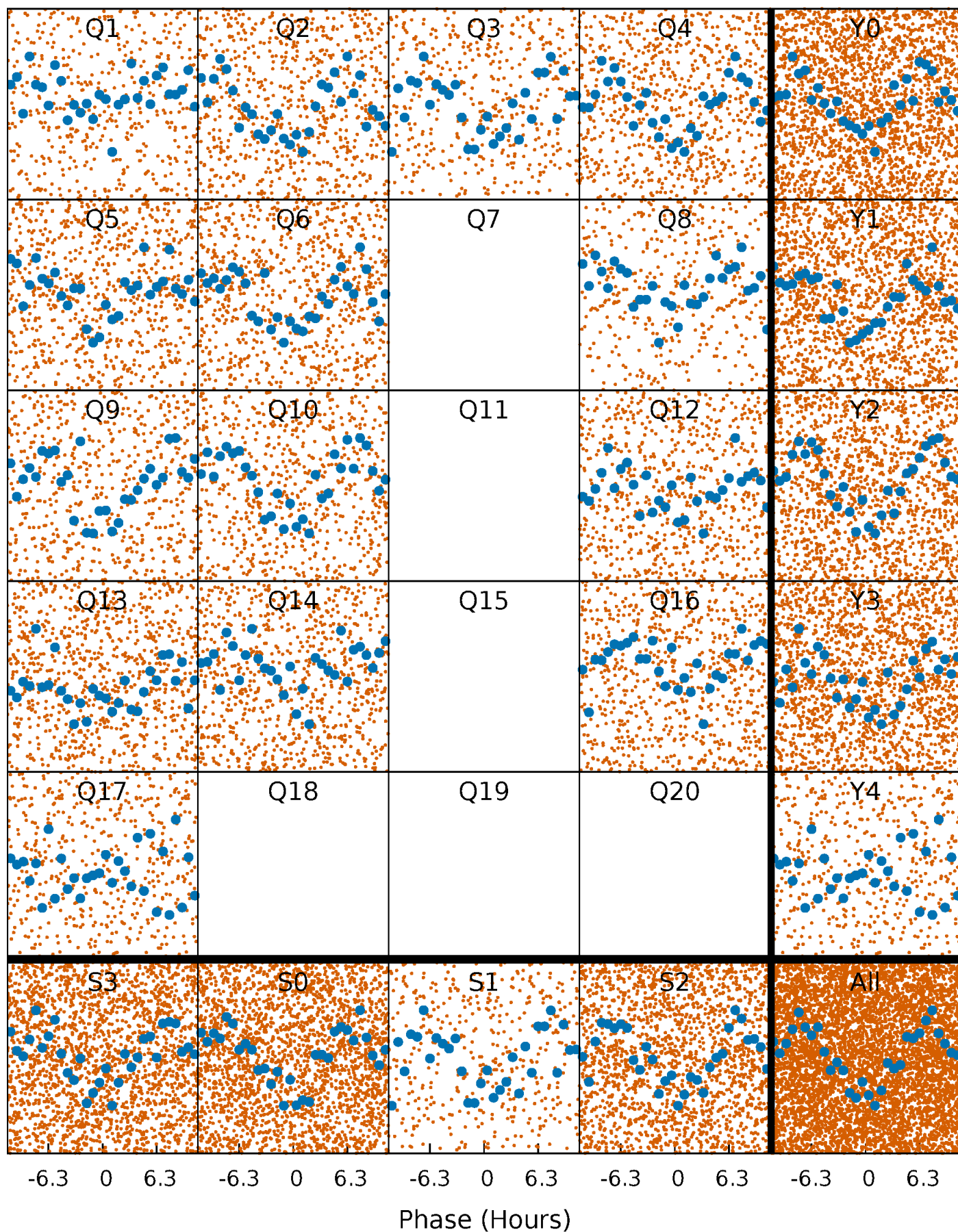


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



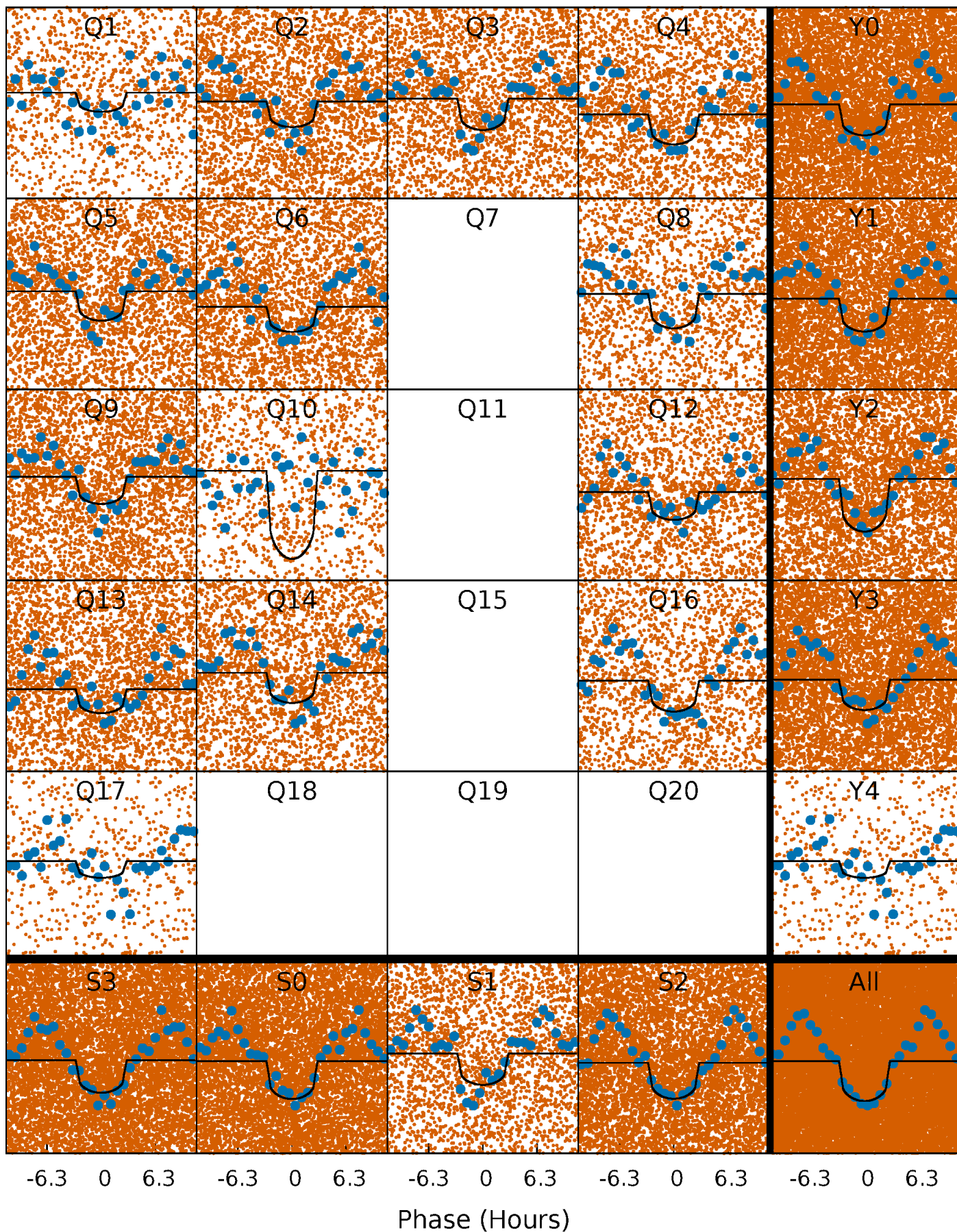
PDC Quarter-Phased Transit Curves

TCE 010297233-01 P= 0.613919 Days $T_0=131.651661$ (BKJD)



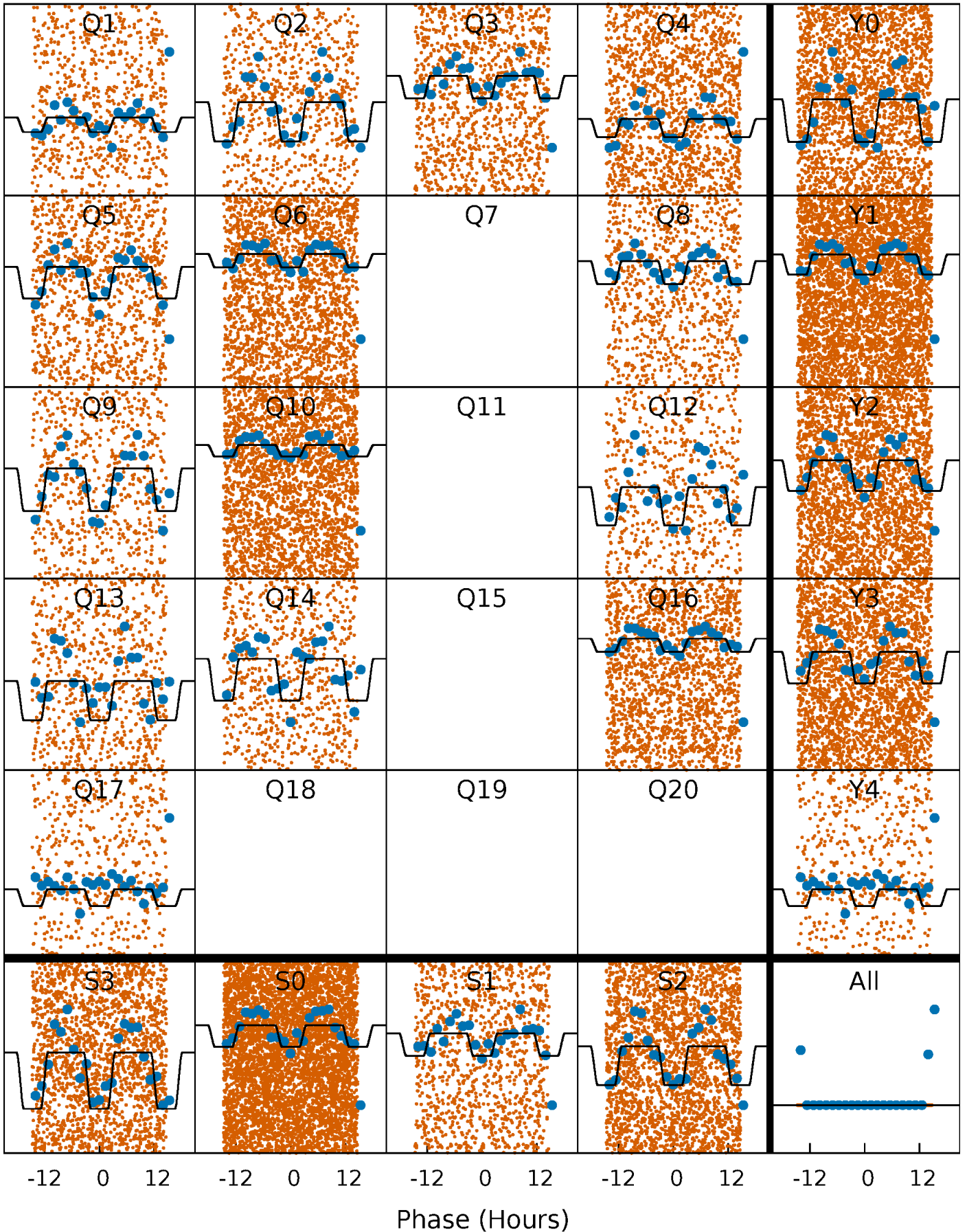
DV Quarter-Phased Transit Curves

TCE 010297233-01 P= 0.613919 Days $T_0=131.651661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

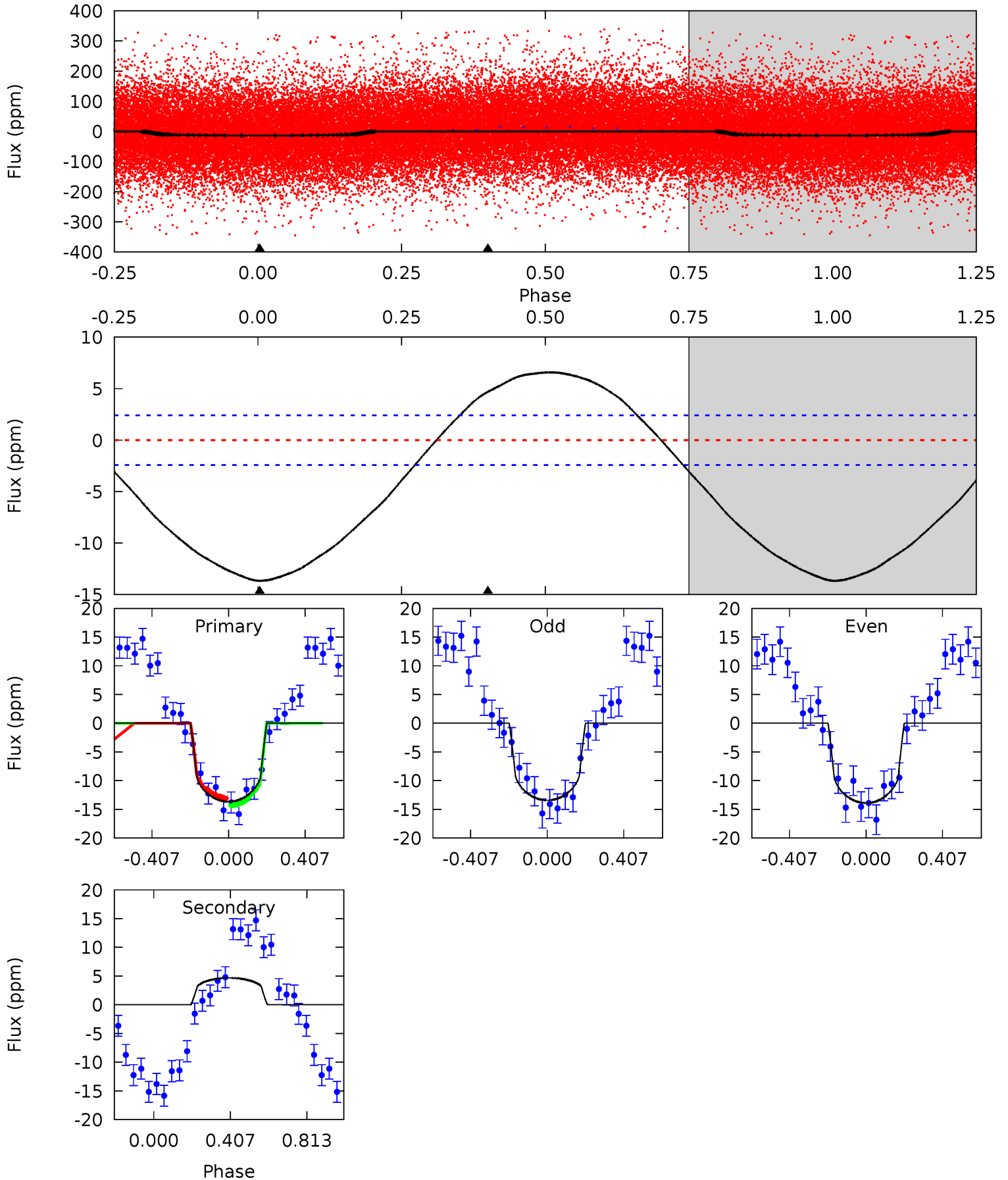
TCE 010297233-01 P= 0.613980 Days $T_0=131.598033$ (BKJD)



DV Model-Shift Uniqueness Test

010297233-01, P = 0.613919 Days, E = 131.037742 Days

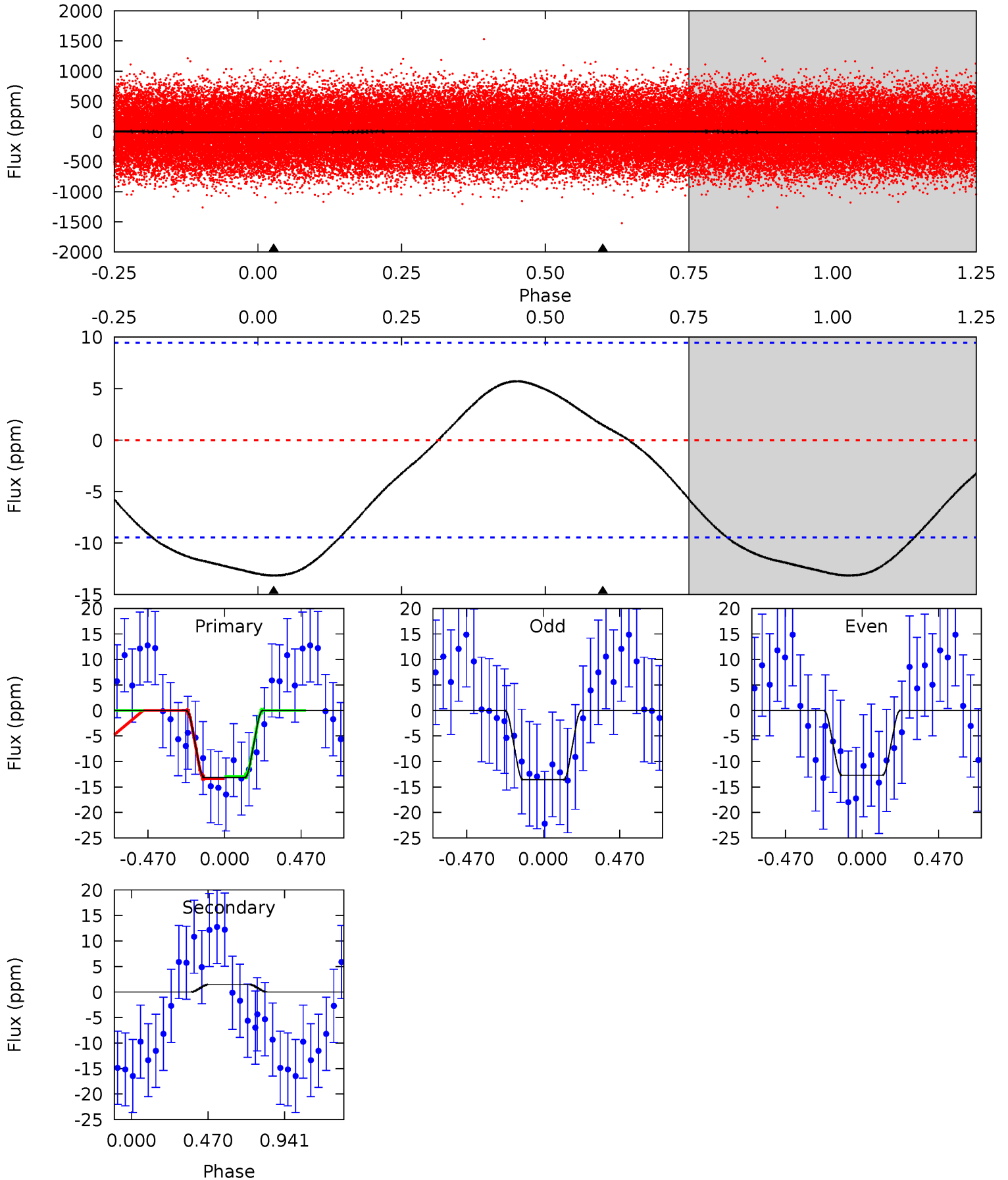
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	-8.28	0	0	4.26	0.83	3.18	24.2	24.2	-8.28	-8.28	0.43	1.02	0.33	1.07



Alt Model-Shift Uniqueness Test

010297233-01, P = 0.613980 Days, E = 130.984053 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.88	-0.65	0	0	4.23	0.72	0.73	5.88	5.88	-0.65	-0.65	0.19	1.06	0.30	0.08



Stellar Parameters For KIC 010297233

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7689^{+214}_{-322}	$3.965^{+0.210}_{-0.140}$	$0.070^{+0.200}_{-0.350}$	$2.358^{+0.514}_{-0.685}$	$1.869^{+0.121}_{-0.363}$	$0.201^{+0.242}_{-0.083}$
	+3%/-4%	+5%/-4%	+286%/-500%	+22%/-29%	+6%/-19%	+121%/-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 010297233-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	5 ± 1	$0.90^{+0.56}_{-0.50}$	5464^{+397}_{-441}	-6213^{+787}_{-3023}	$-0.927^{+0.559}_{-3.830}$
Alt.	1 ± 2	$1.02^{+0.58}_{-0.50}$	5483^{+356}_{-417}	-5018^{+968}_{-1297}	$-0.175^{+0.291}_{-0.824}$

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 $A_{obs} \gg 1.0$

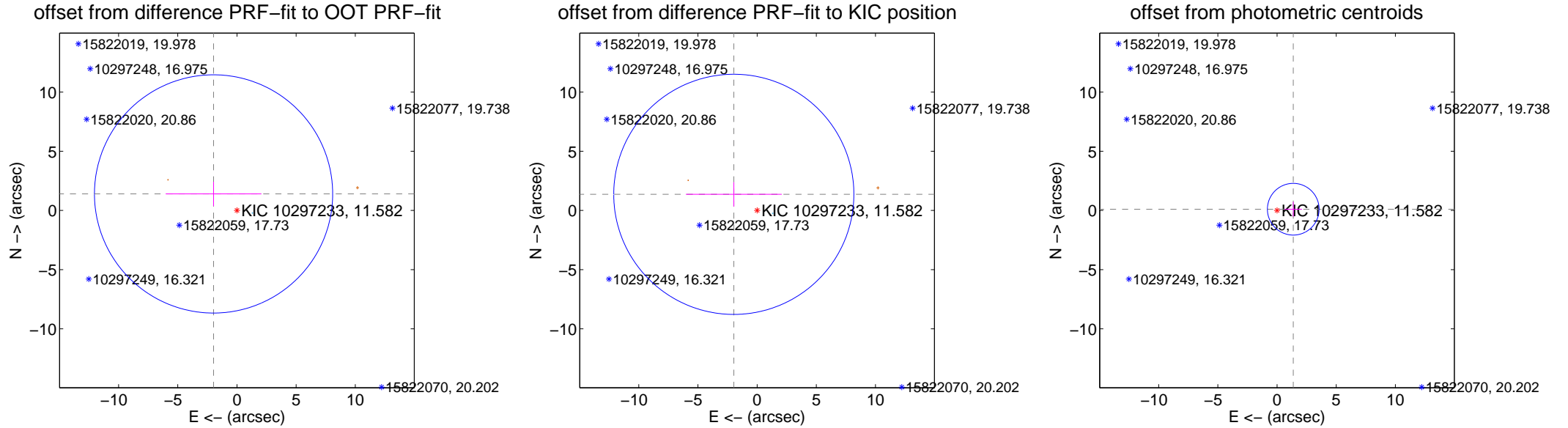
DV Centroid Data

Supplemental centroid analysis for 010297233-01. **Kepler magnitude: 11.58.** Transit SNR 15.18

There are 1 quarters with good PRF difference image offsets

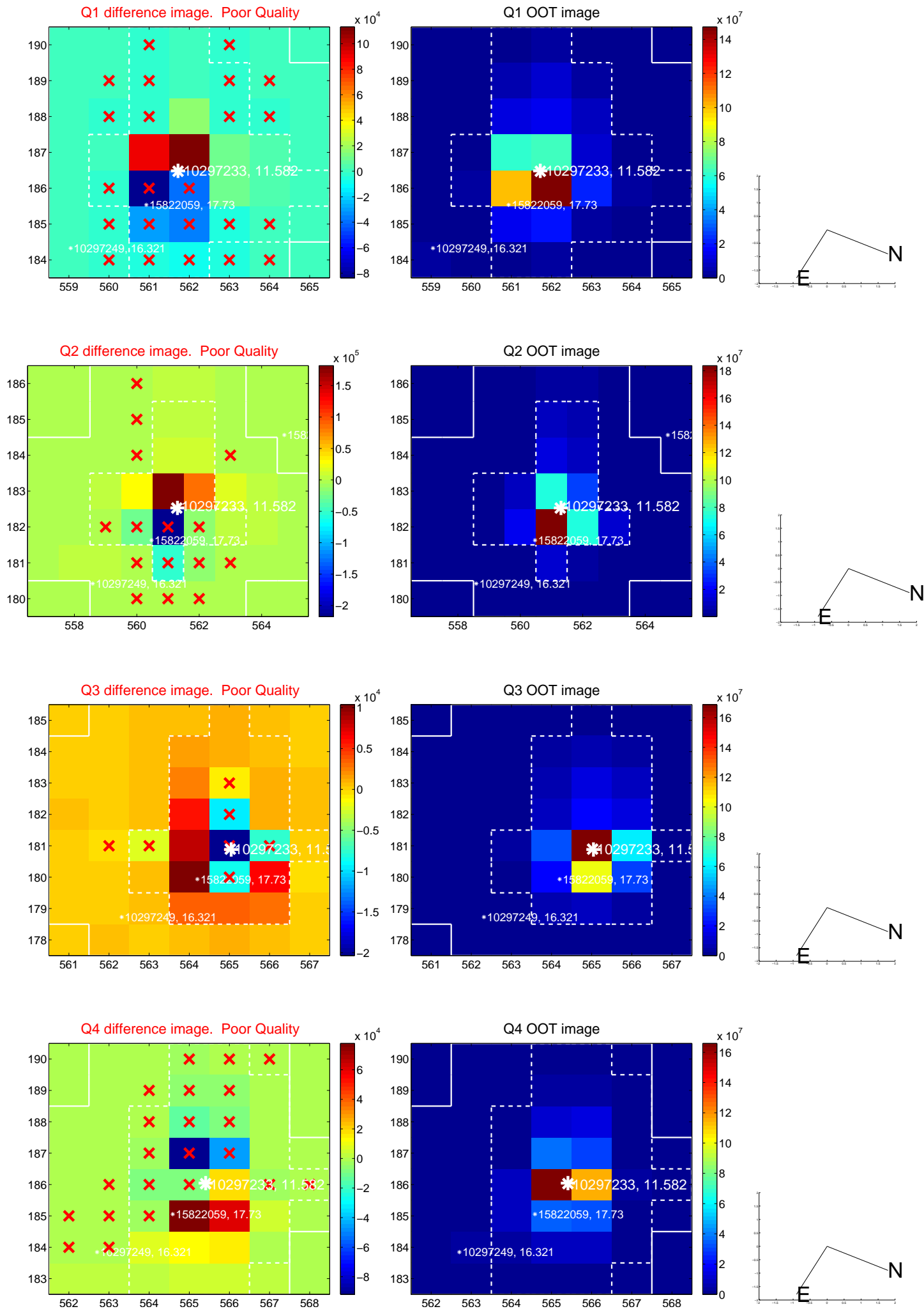
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.421 ± 3.356	0.72	1.976 ± 4.045	1.397 ± 1.028
PRF-fit source offset from KIC position	2.396 ± 3.383	0.71	1.971 ± 4.051	1.363 ± 1.025
photometric centroid source offset	1.37 ± 0.73	1.89	-1.37 ± 0.73	0.10 ± 0.63

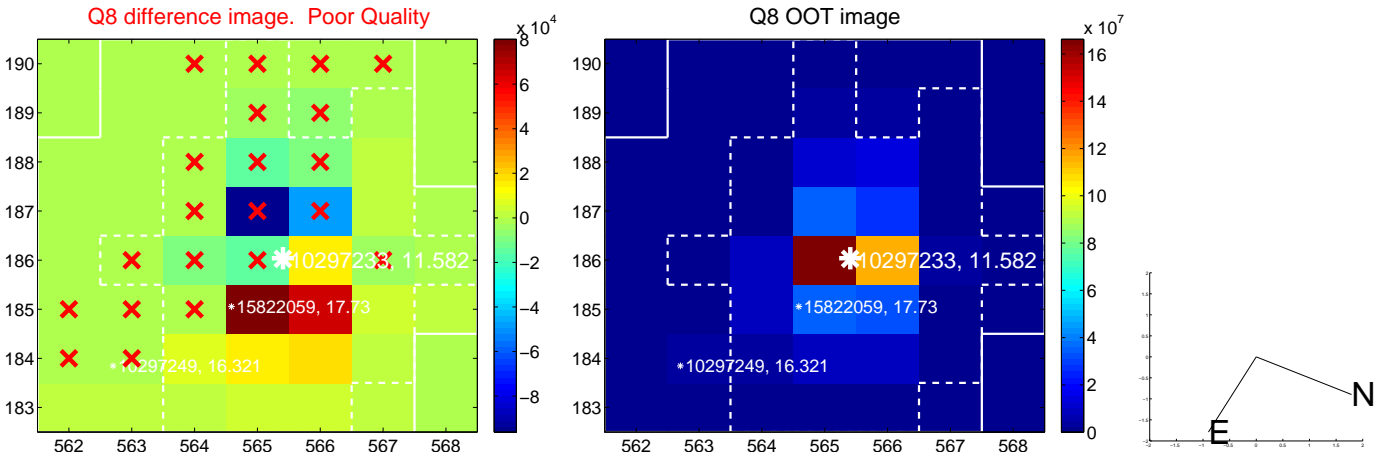
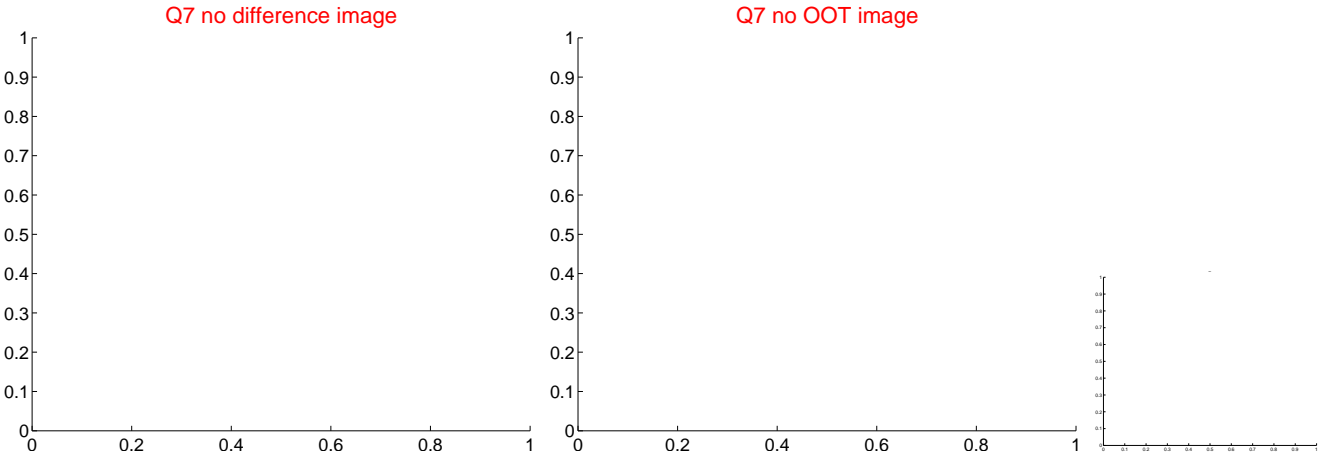
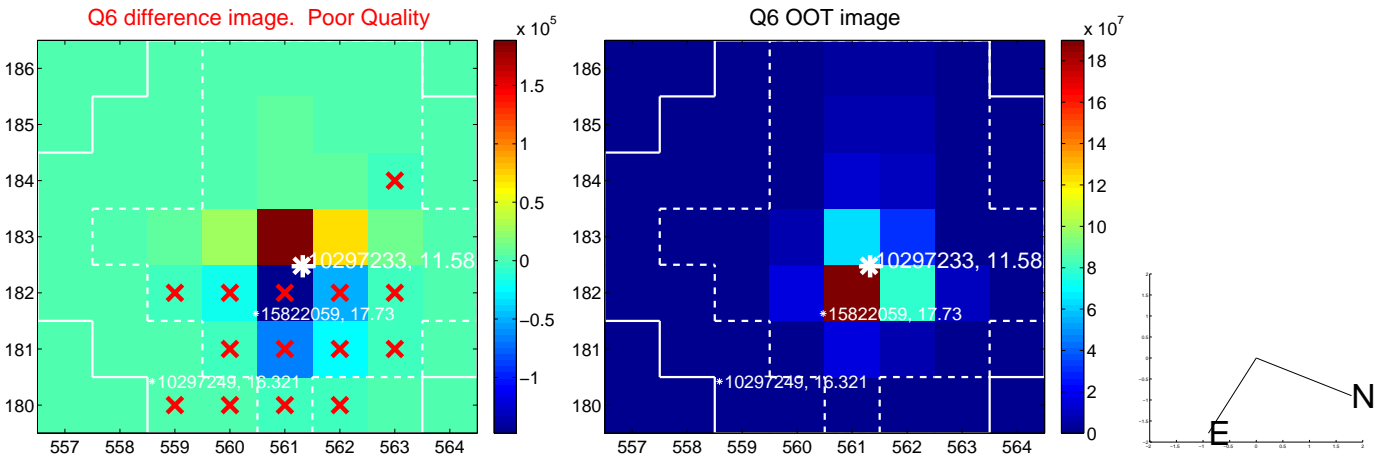
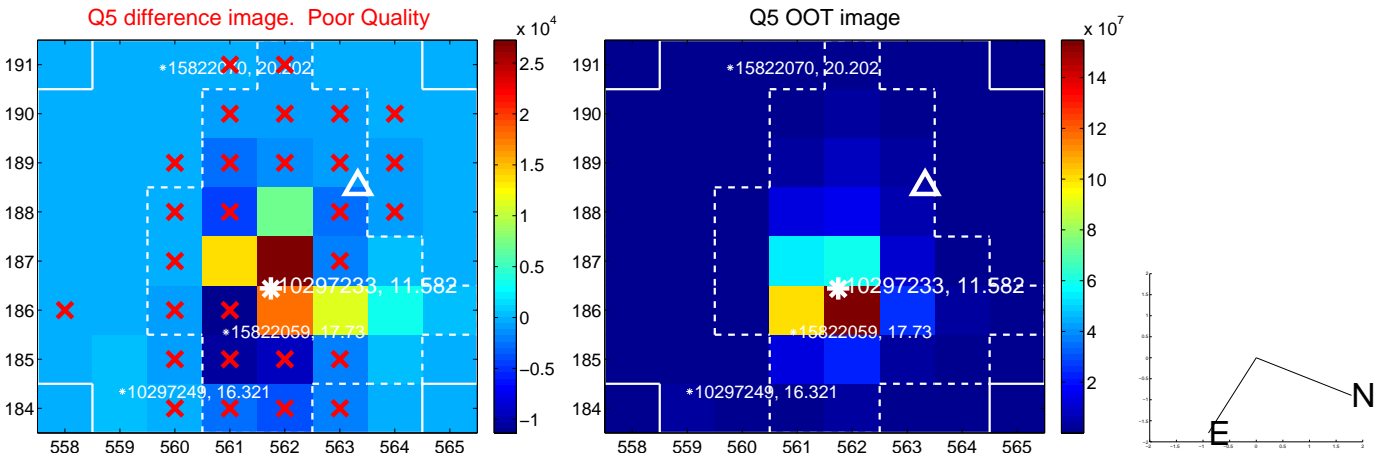


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

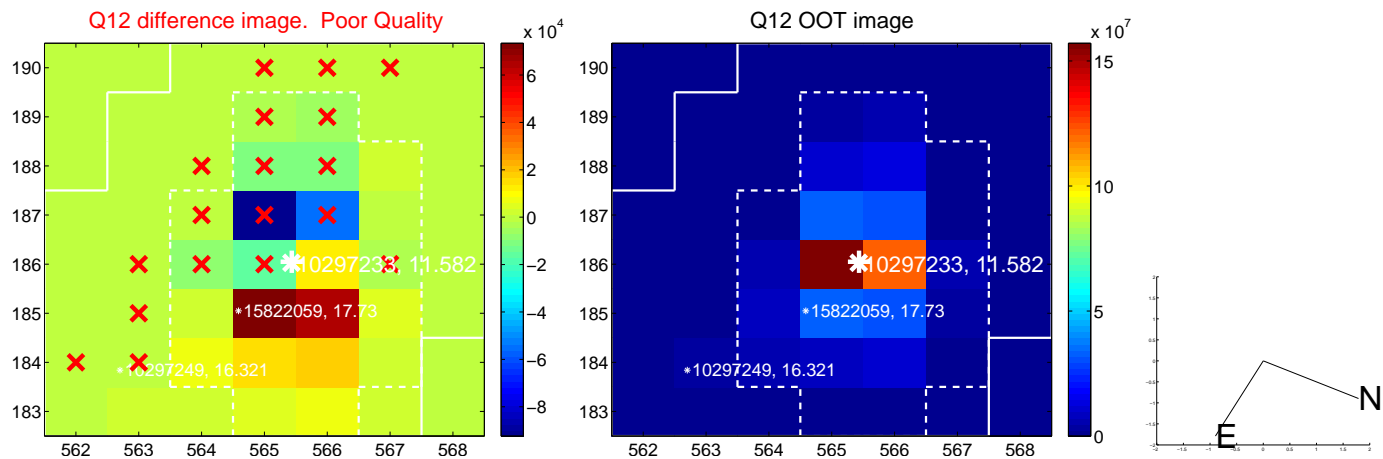
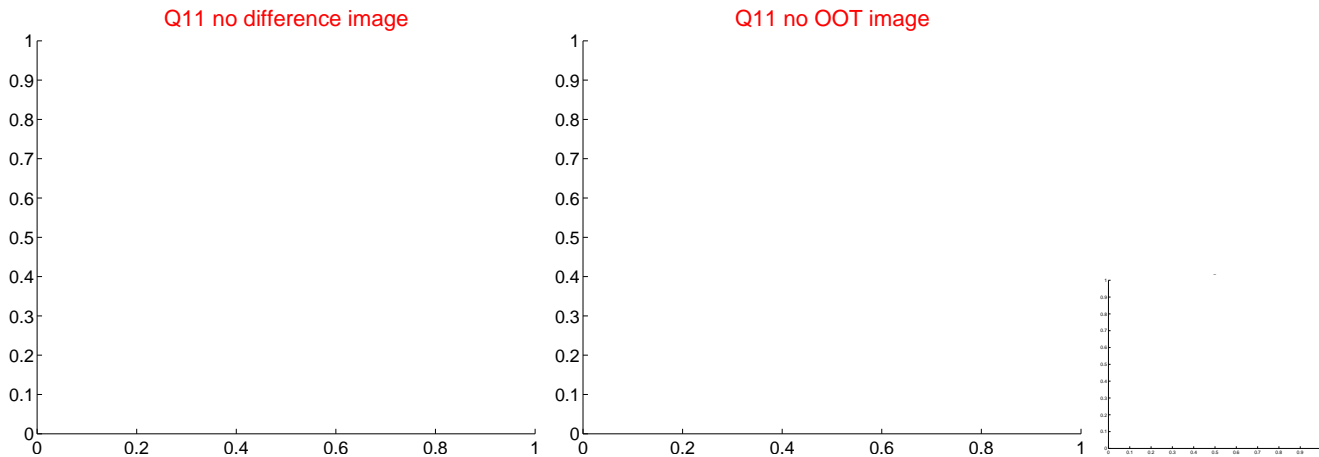
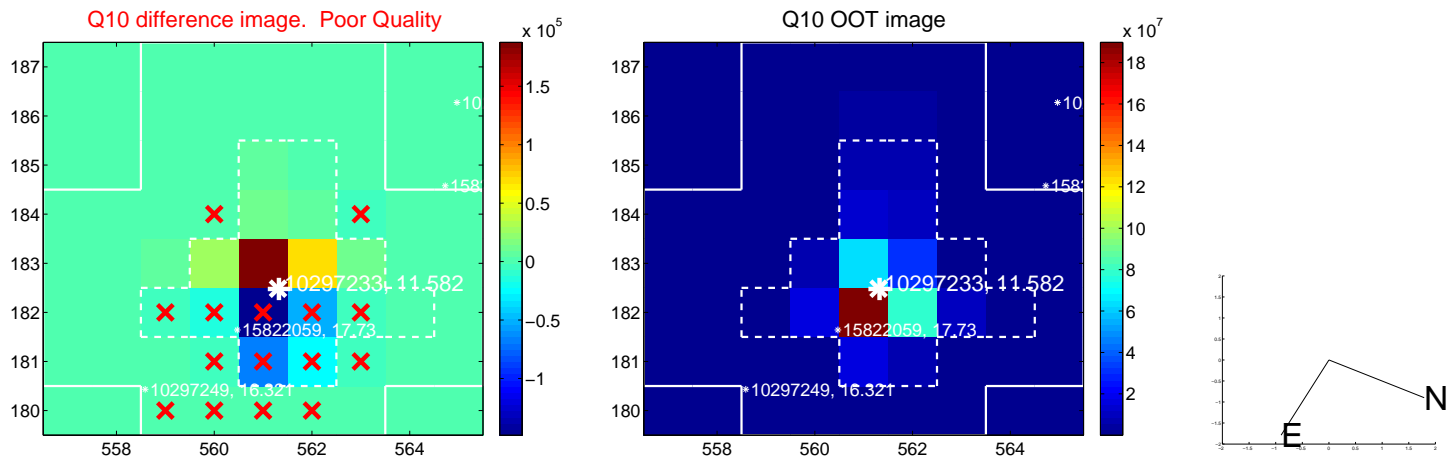
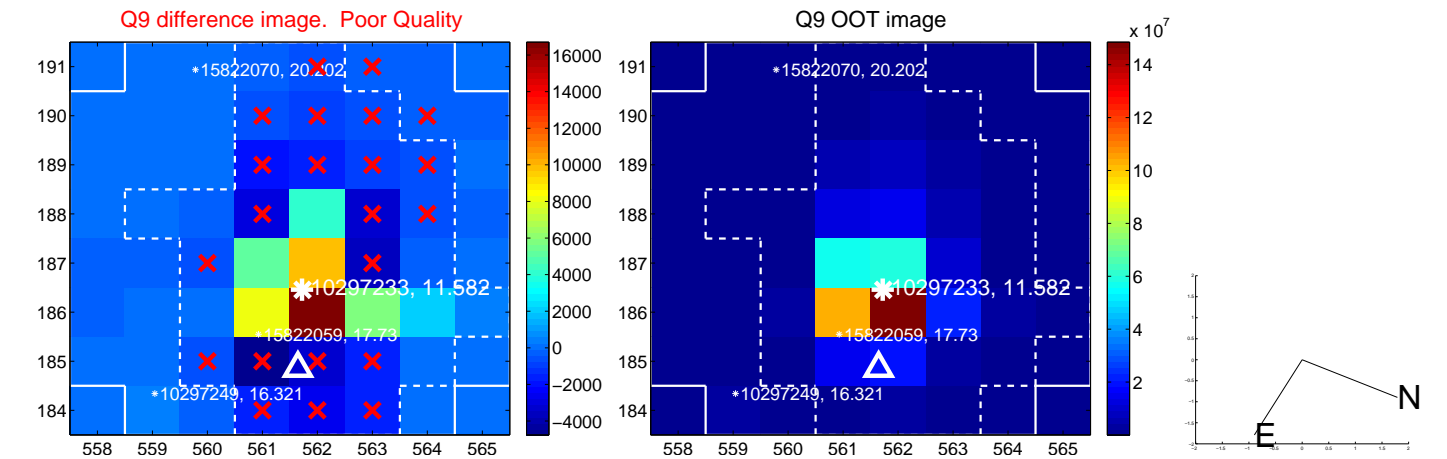
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



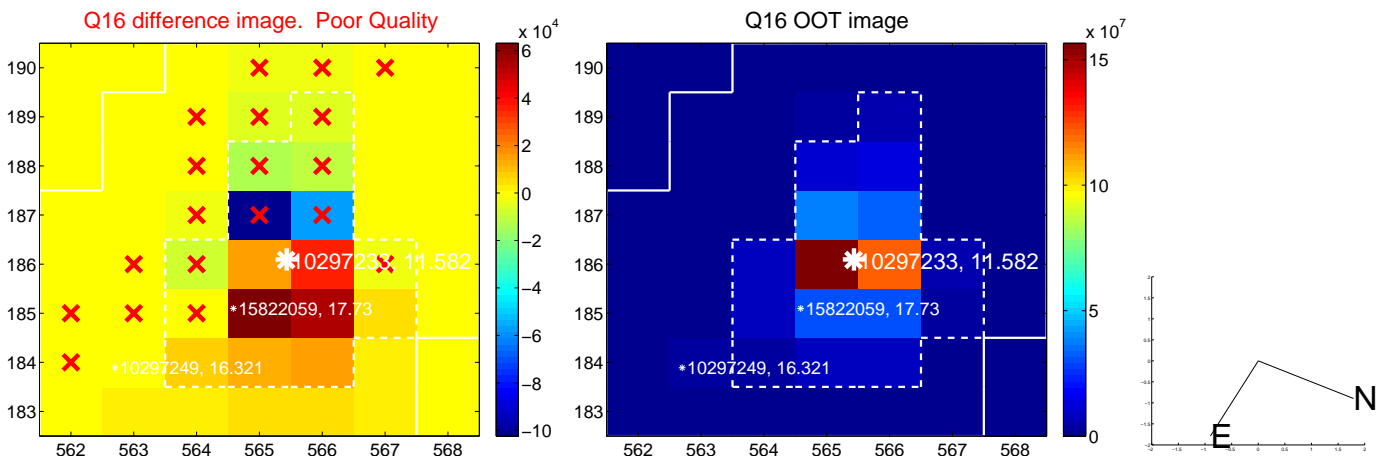
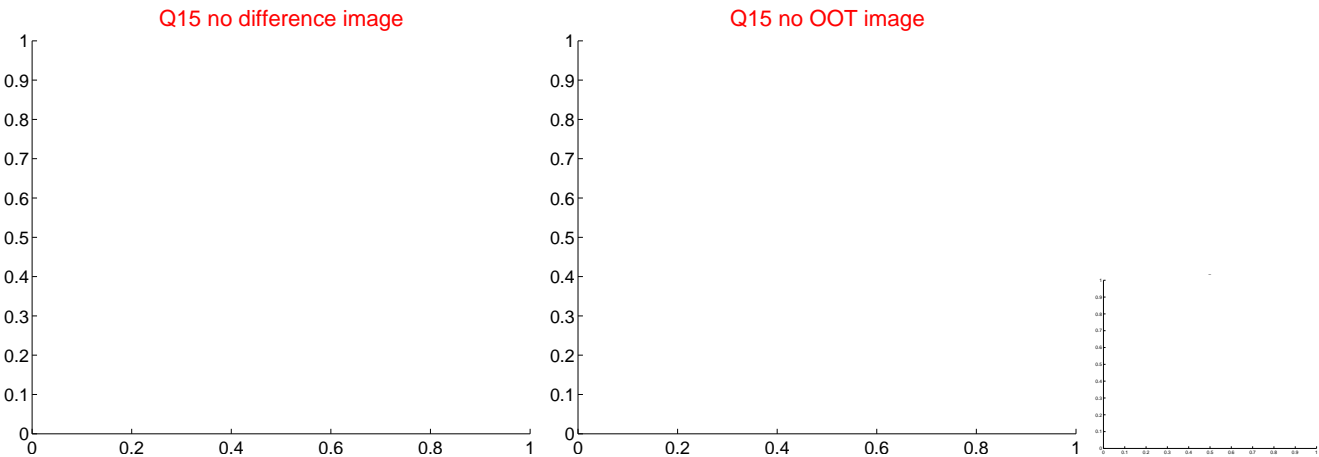
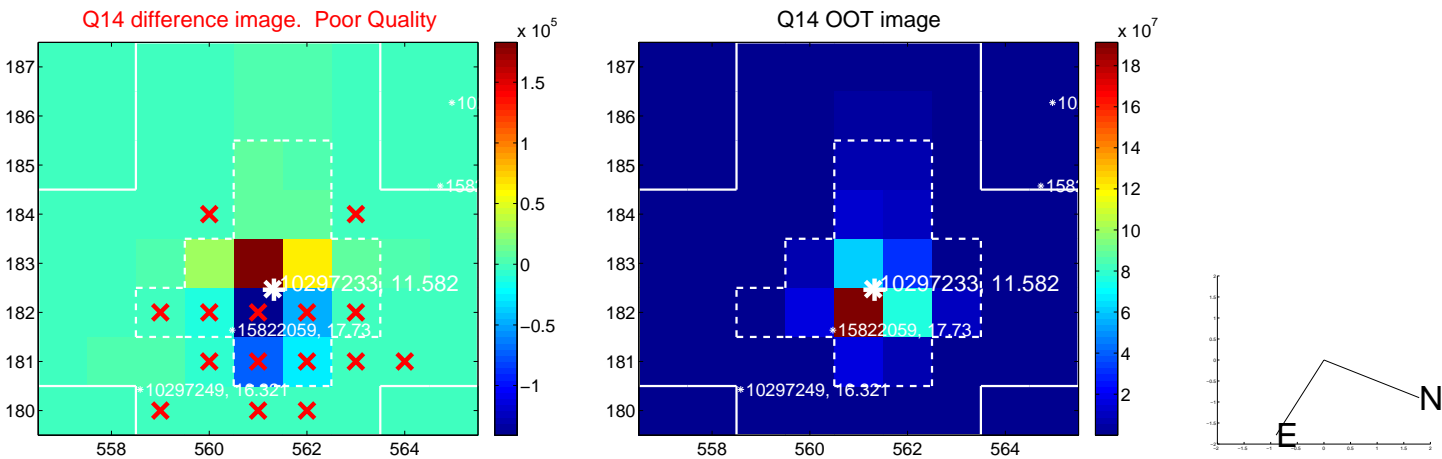
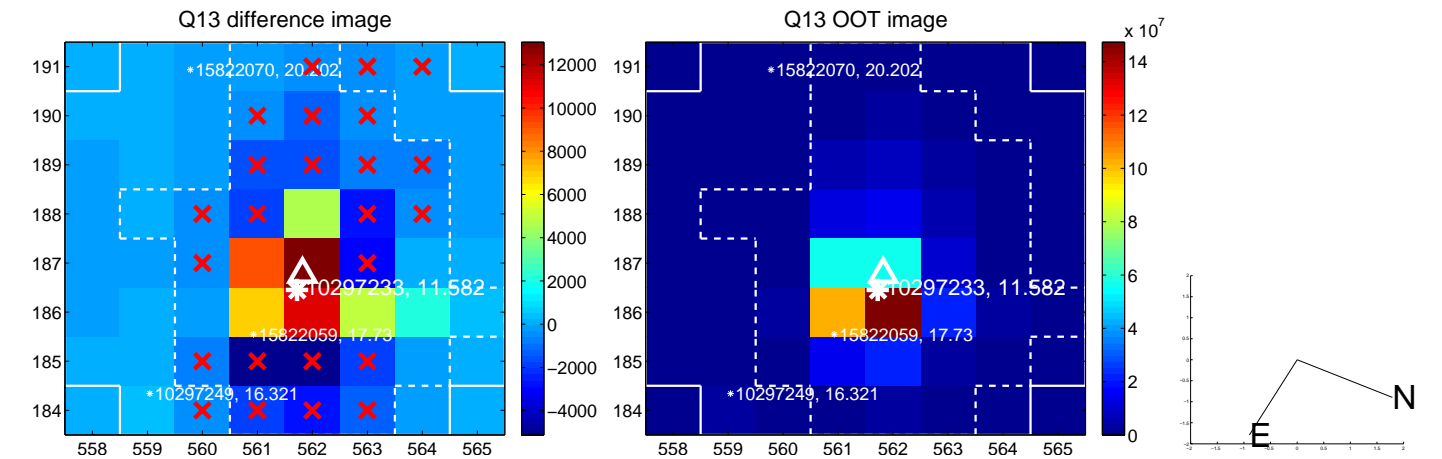
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



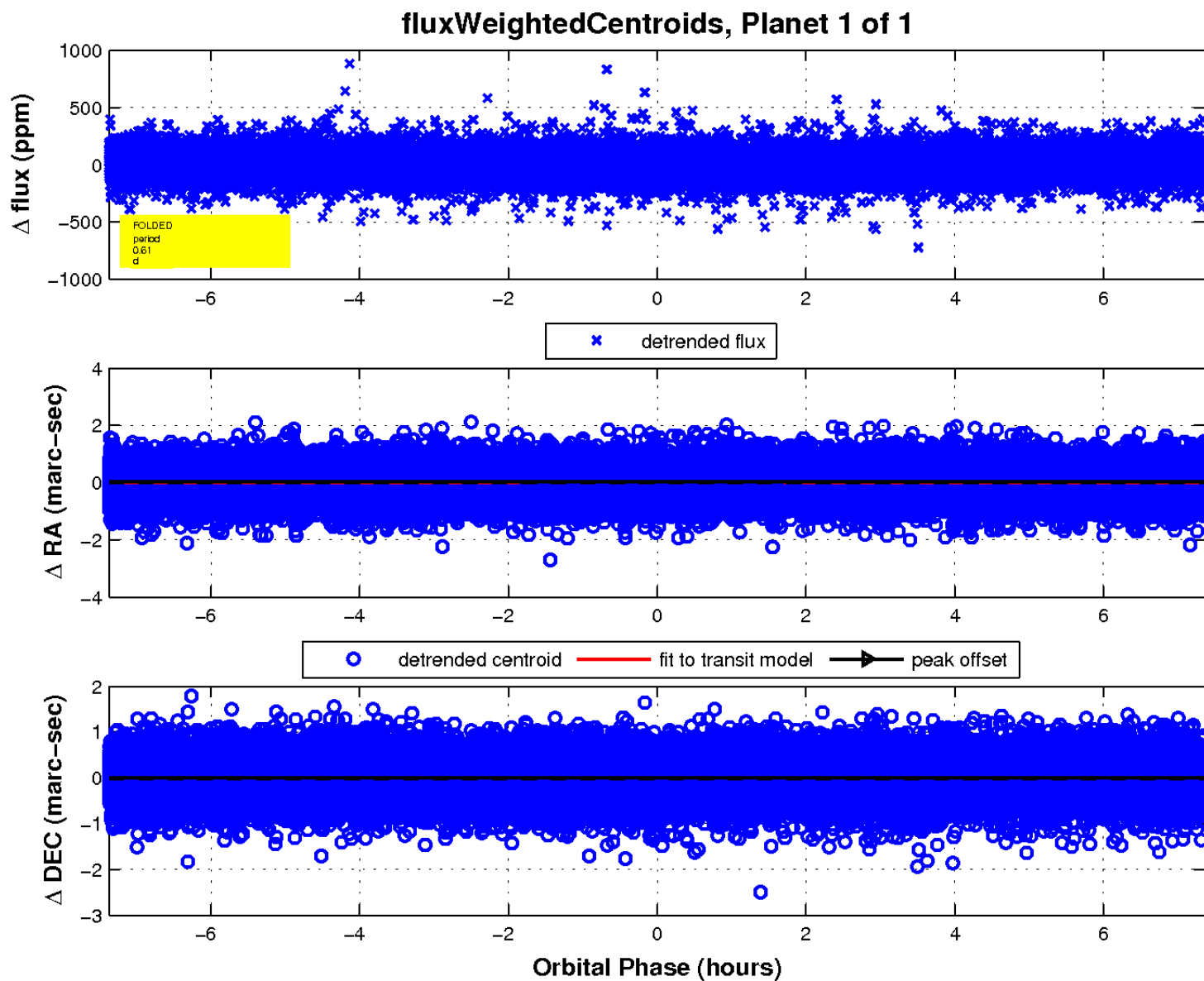
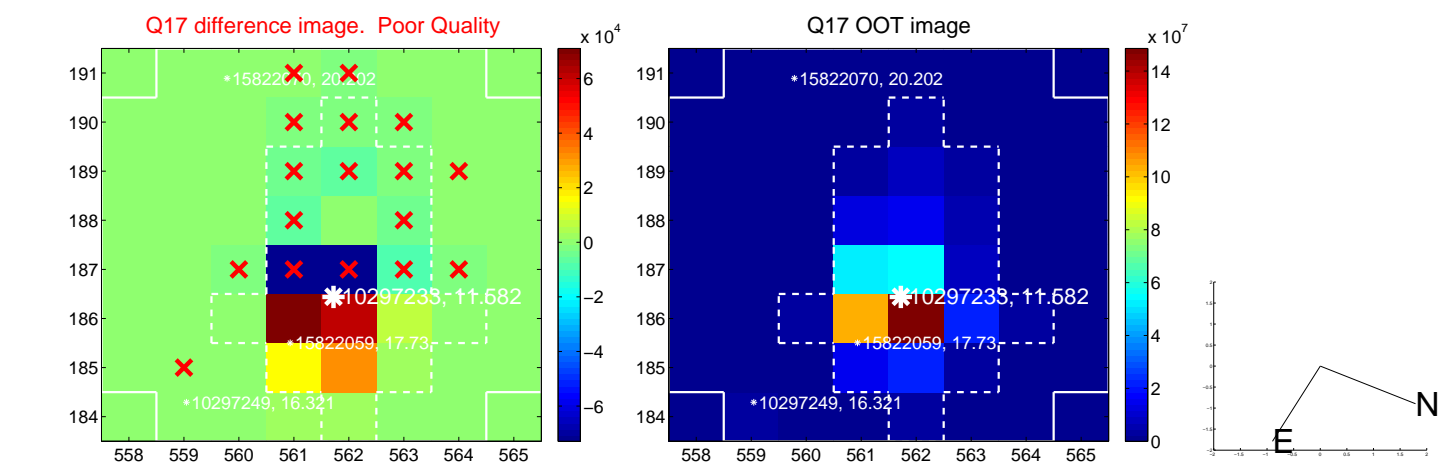
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

