

KIC 005942300

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})
005942300-01	OBS	No	0.716923	131.771373	14.5	6.674	9.2	7.1	1.56	6334	0.60	14413.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005942300-01	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.

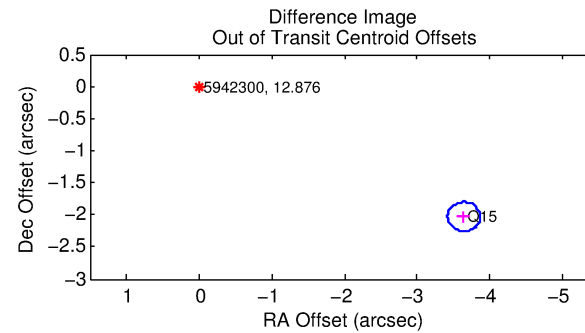
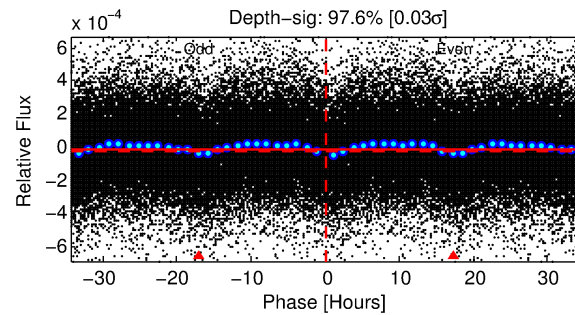
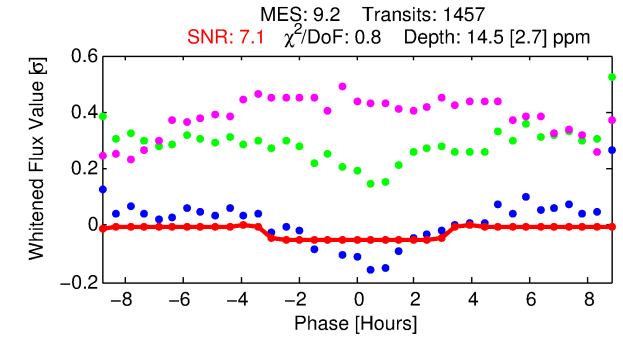
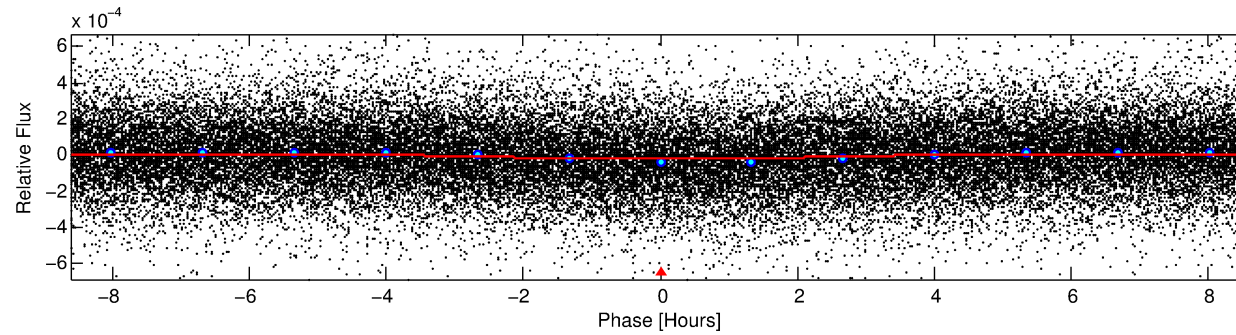
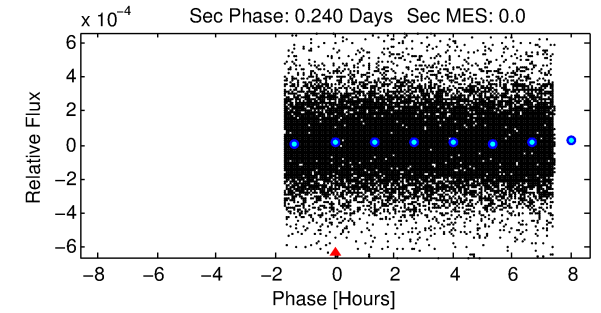
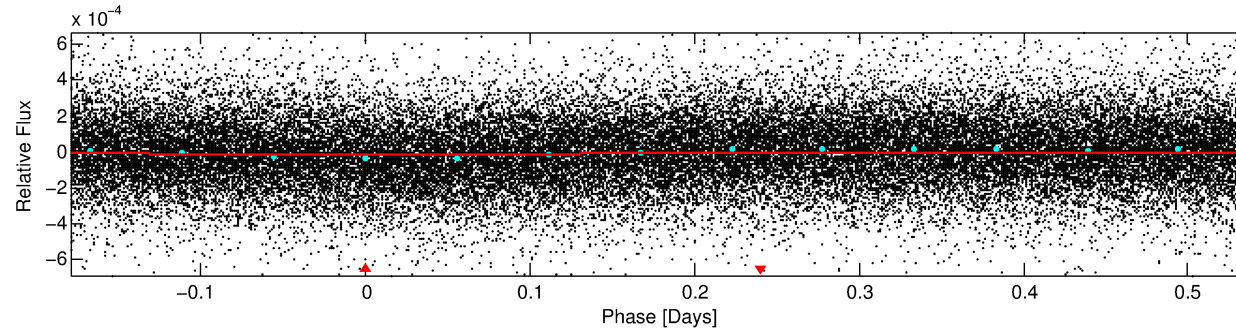
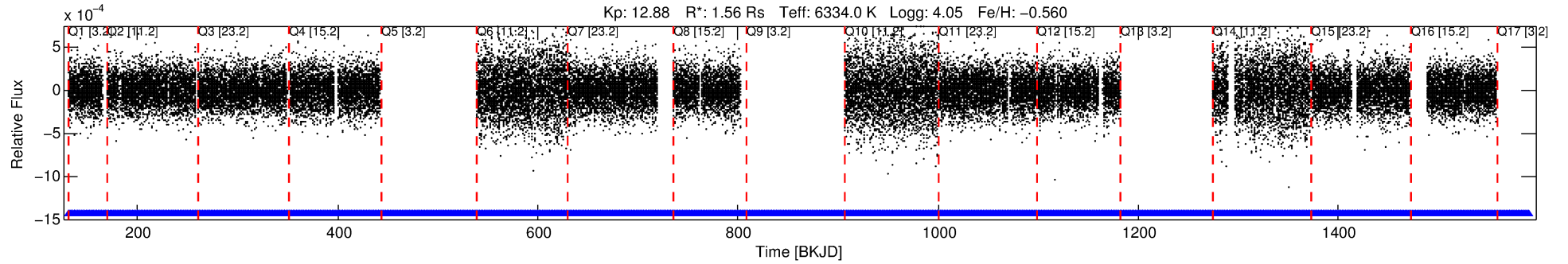
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005942300-01

No Significant Match Found

DV One-Page Summary

KIC: 5942300 Candidate: 1 of 1 Period: 0.717 d



DV Fit Results:

Period = 0.71692 [0.00002] d
Epoch = 131.7714 [0.0069] BKJD
Rp/R* = 0.0035 [0.0037]
a/R* = 1.07 [0.71]
b = 0.20 [27.44]
Seff = 14413.32 [9106.12]
Teq = 2794 [441] K
Rp = 0.60 [0.66] Re
a = 0.0156 [0.0059] AU
Ag = N/A
Teffp = N/A

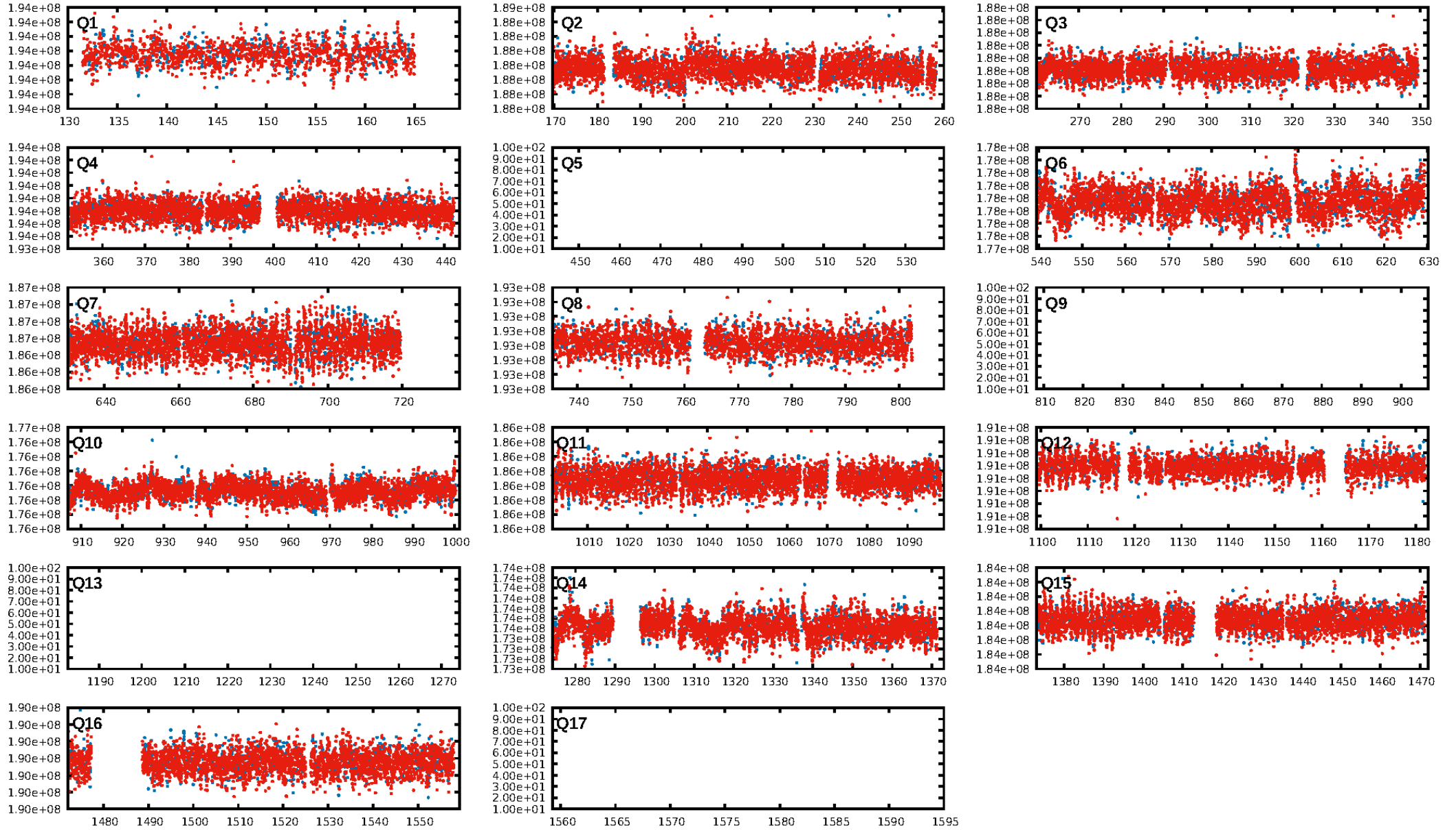
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1410/1410]
GhostDiagnostic-chr: 1.943
Centroid-sig: 0.0%
Centroid-so: 1.686 arcsec [2.40σ]
OotOffset-rm: 4.166 arcsec [55.36σ]
KicOffset-rm: 4.049 arcsec [53.78σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [13/13]

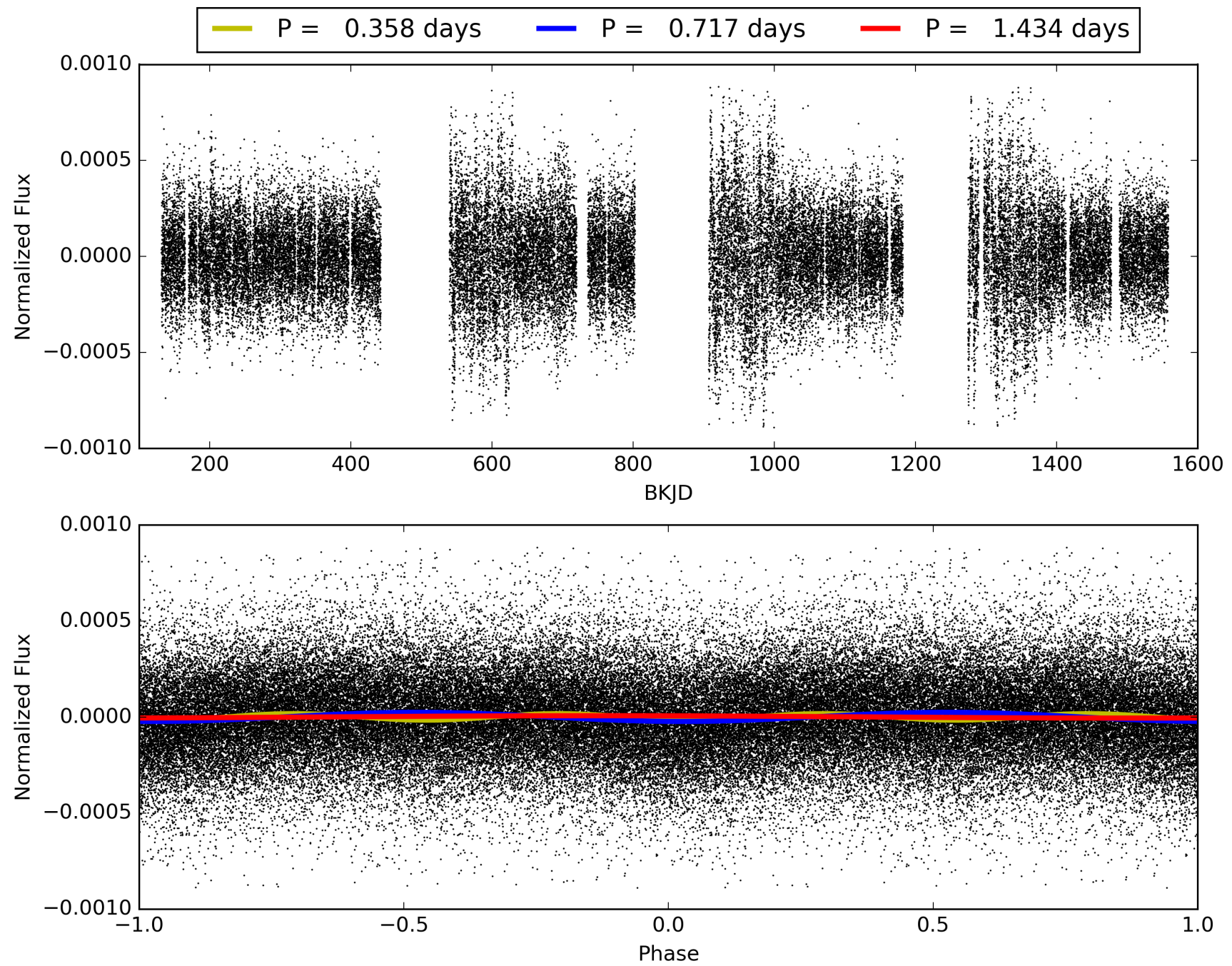
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:38:47 Z

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

TCE 005942300-01, PDC Light Curves

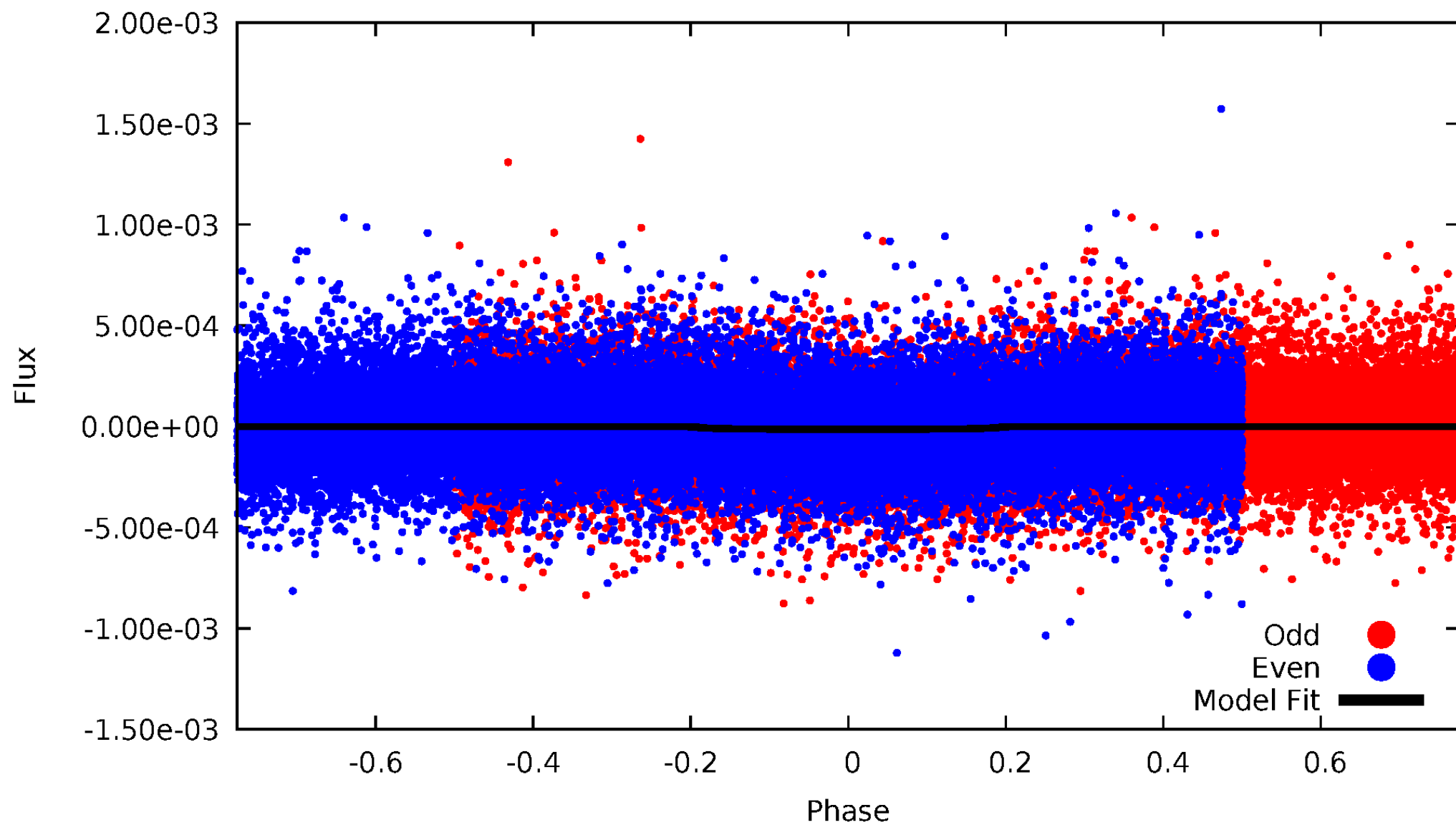


TCE 005942300-01



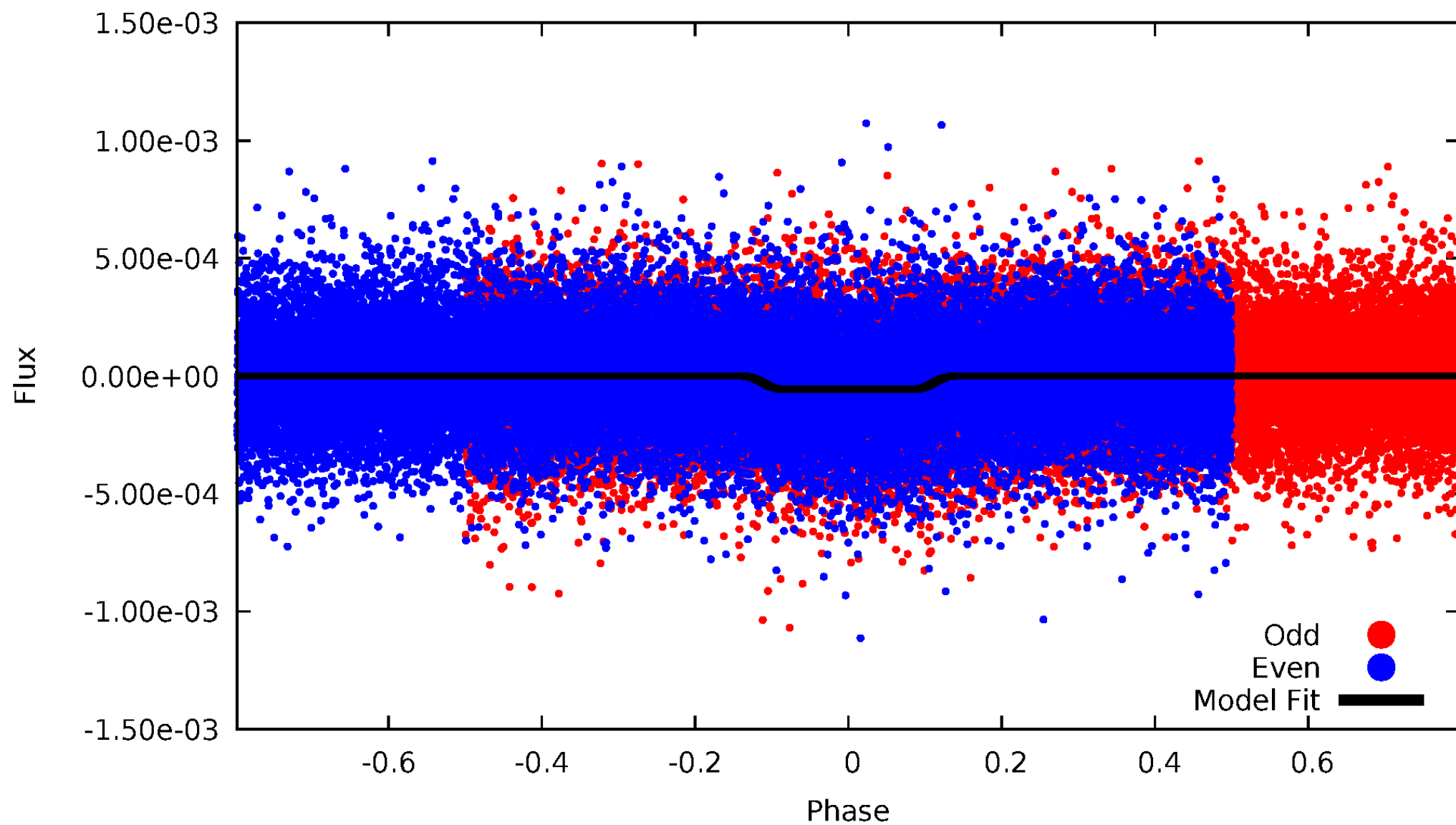
DV Odd/Even

TCE 005942300-01

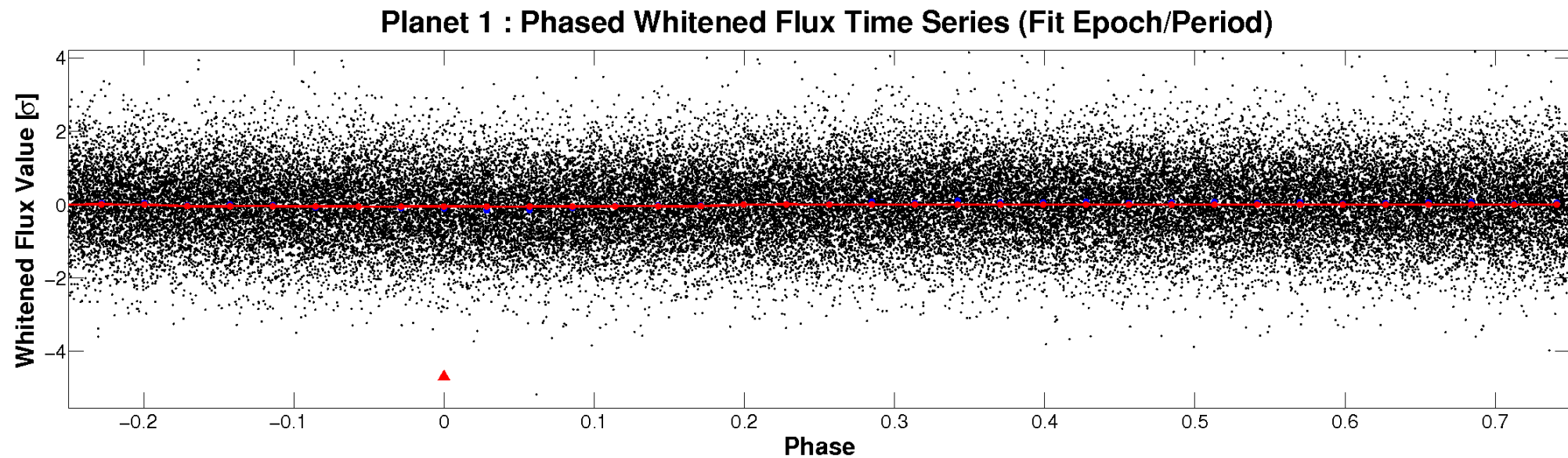
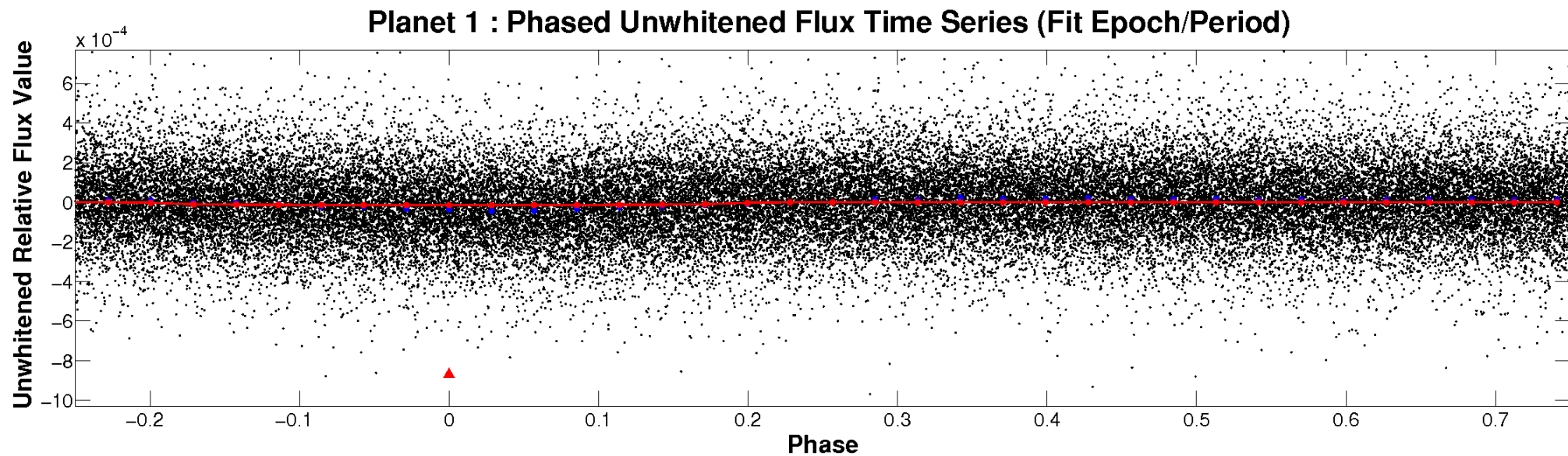


ALT Odd/Even

TCE 005942300-01

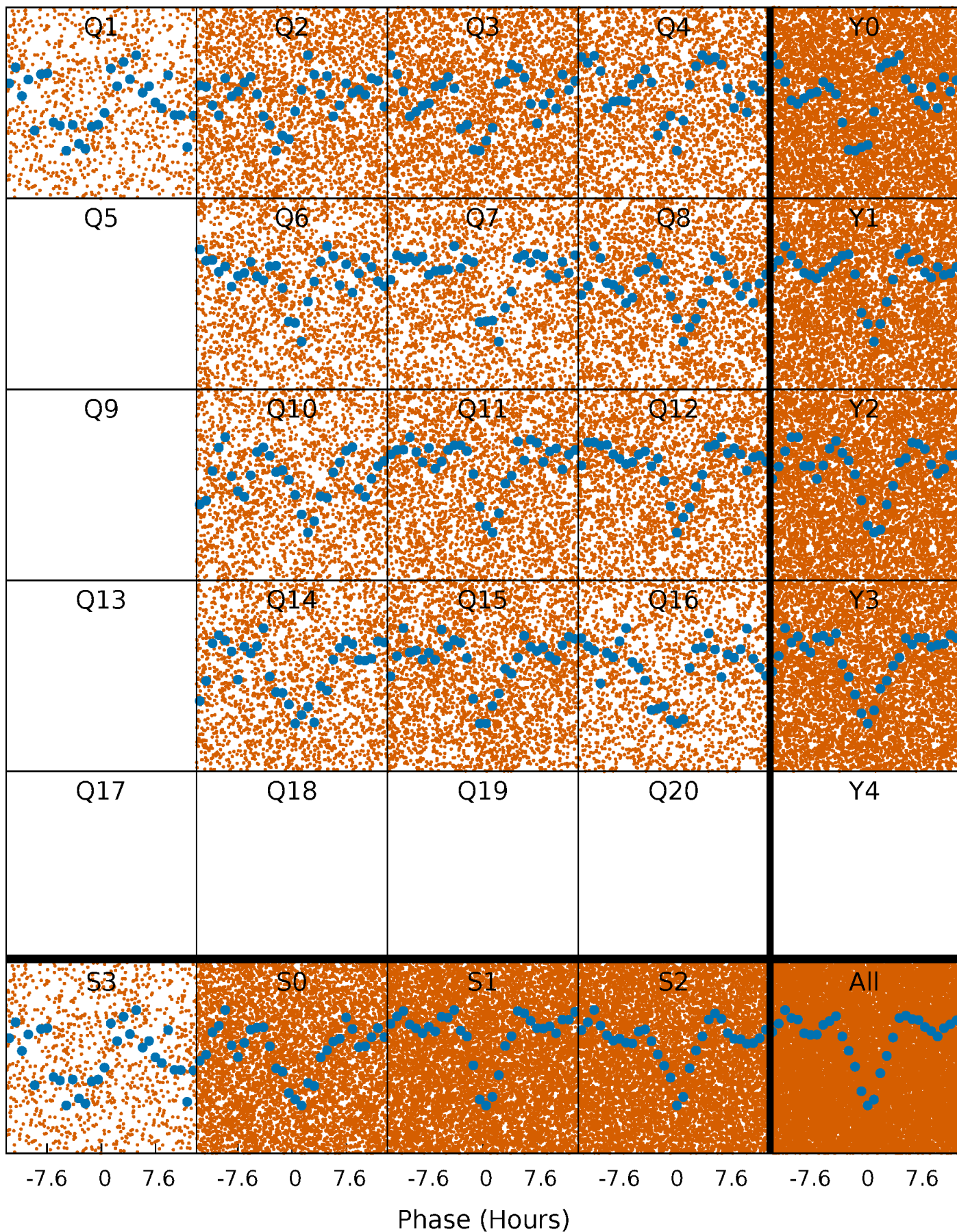


Non-Whitened Vs. Whitened Light Curve



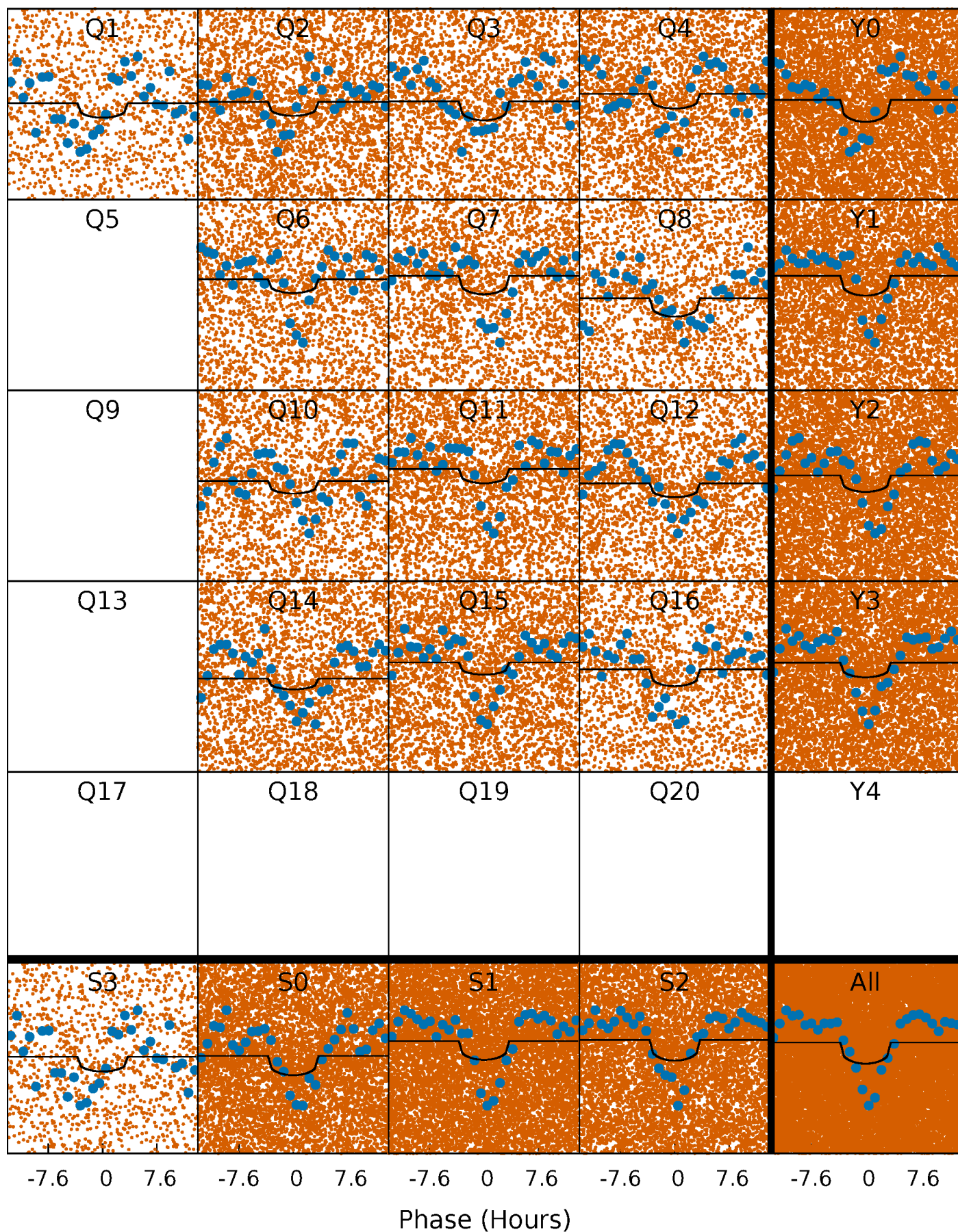
PDC Quarter-Phased Transit Curves

TCE 005942300-01 P= 0.716923 Days $T_0=131.771373$ (BKJD)



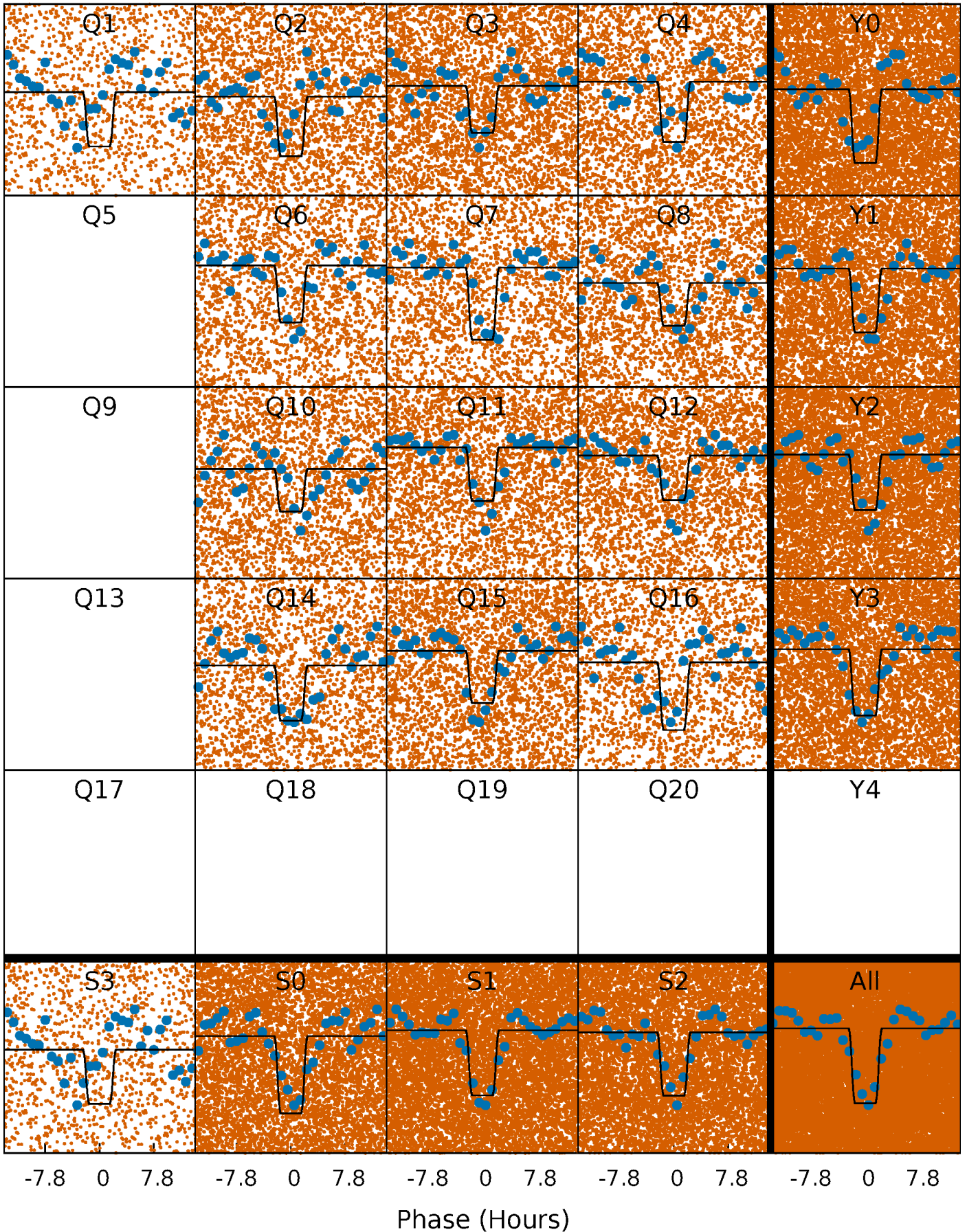
DV Quarter-Phased Transit Curves

TCE 005942300-01 P= 0.716923 Days $T_0=131.771373$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

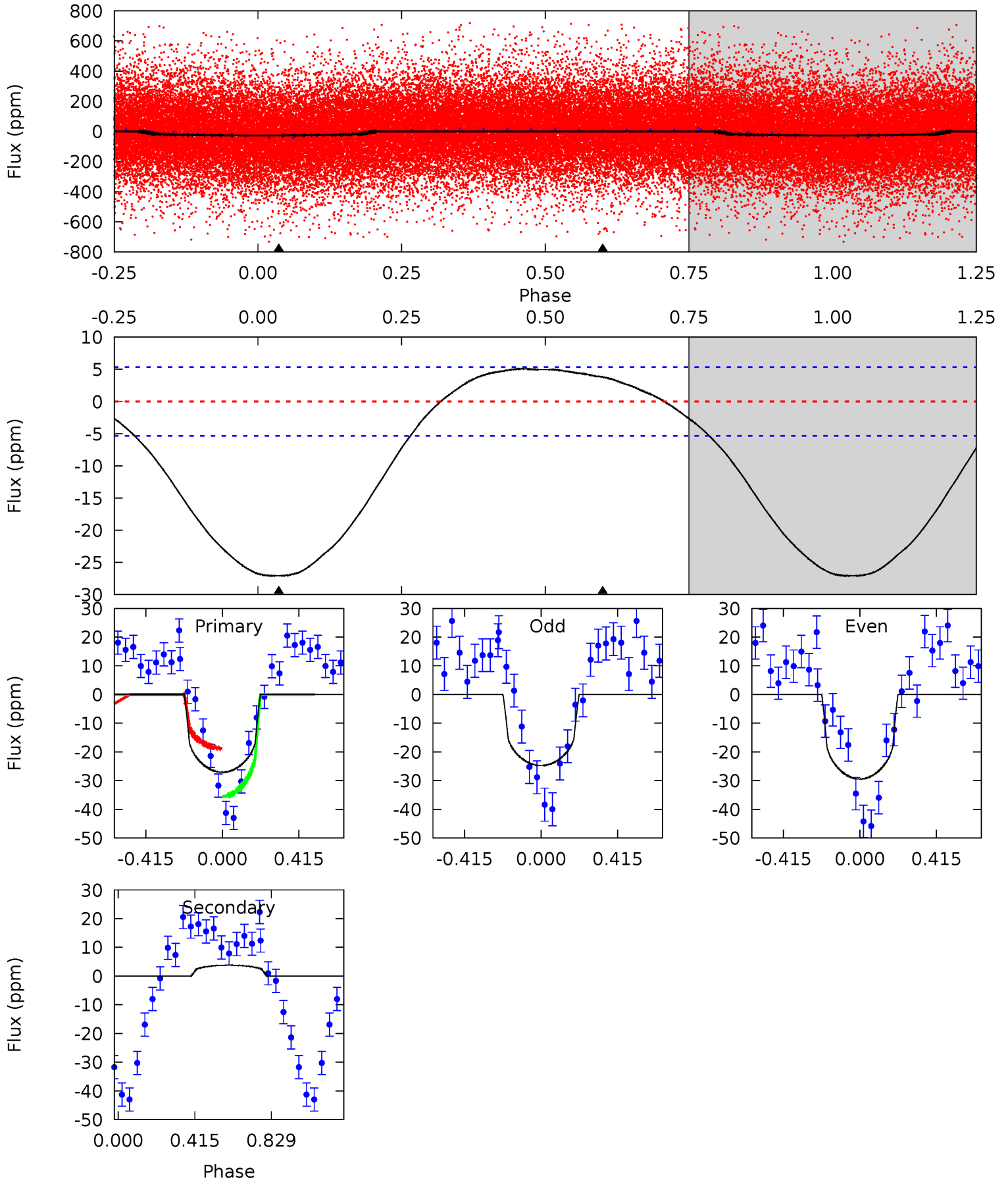
TCE 005942300-01 P= 0.716947 Days $T_0=131.763692$ (BKJD)



DV Model-Shift Uniqueness Test

005942300-01, P = 0.716923 Days, E = 131.054450 Days

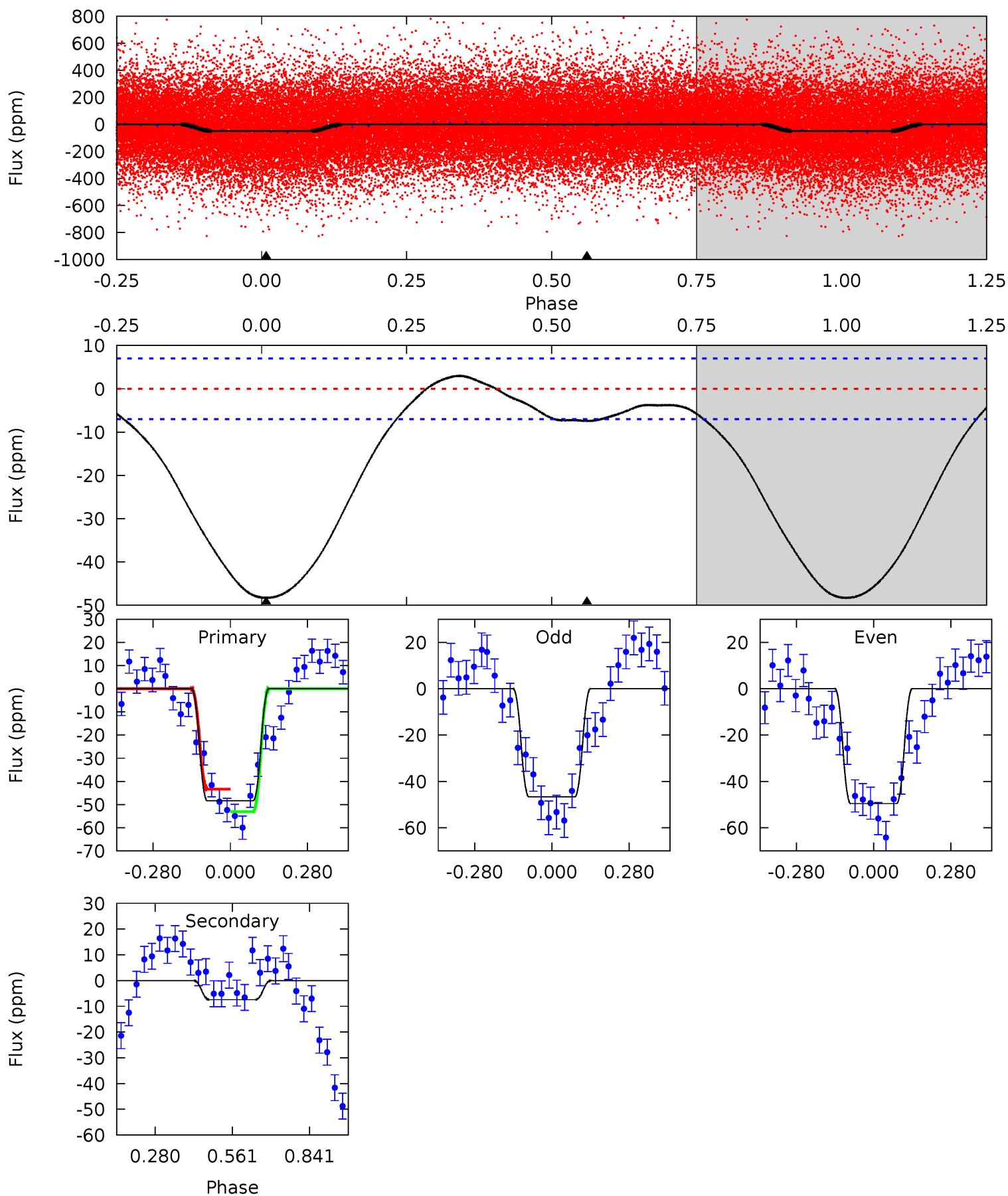
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	-3.02	0	0	4.26	0.82	1.92	21.6	21.6	-3.02	-3.02	1.88	0.98	0.16	6.68



Alt Model-Shift Uniqueness Test

005942300-01, P = 0.716947 Days, E = 131.046745 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	4.61	0	0	4.34	1.08	1.83	30.0	30.0	4.61	4.61	0.92	0.95	0.06	2.87



Stellar Parameters For KIC 005942300

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6334^{+199}_{-244}	$4.046^{+0.364}_{-0.156}$	$-0.560^{+0.300}_{-0.300}$	$1.562^{+0.392}_{-0.589}$	$0.991^{+0.142}_{-0.128}$	$0.366^{+1.035}_{-0.163}$
	+3%/-4%	+9%/-4%	+54%/-54%	+25%/-38%	+14%/-13%	+283%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005942300-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	4 ± 1	$0.68^{+0.64}_{-0.42}$	3854^{+323}_{-399}	-4636^{+616}_{-2450}	$-0.998^{+0.734}_{-6.149}$
Alt.	-7 ± 2	$1.18^{+0.67}_{-0.58}$	3845^{+303}_{-420}	3740^{+1548}_{-6305}	$0.712^{+2.184}_{-0.434}$

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 $A_{obs} \gg 1.0$

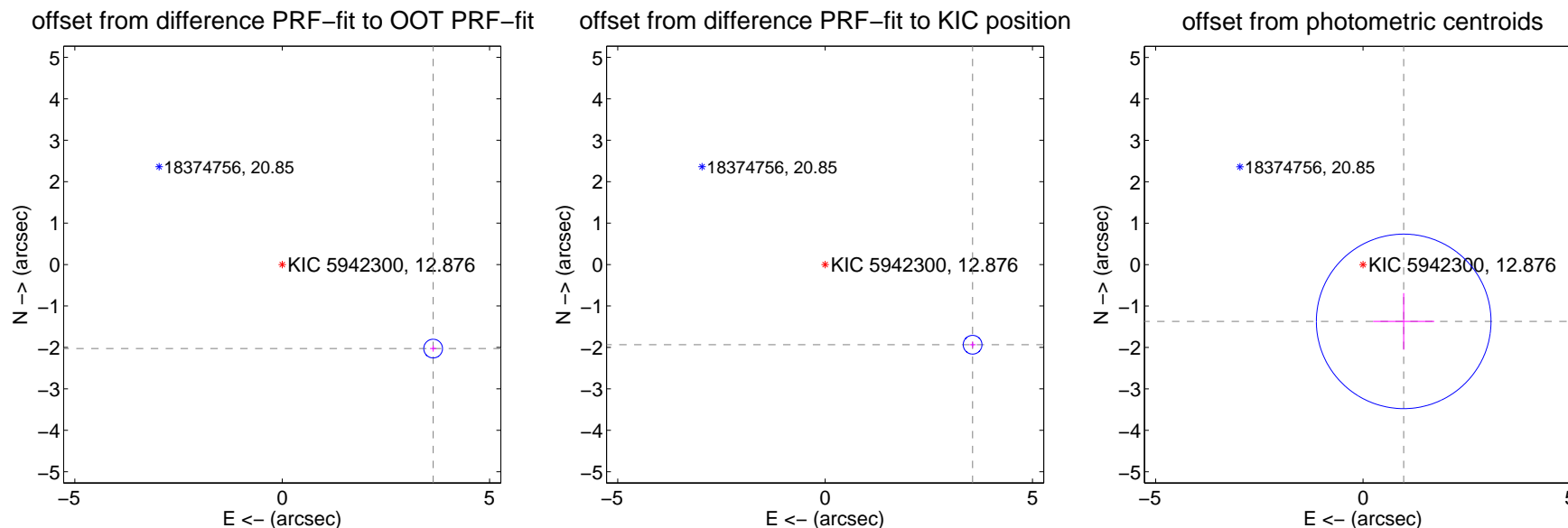
DV Centroid Data

Supplemental centroid analysis for 005942300-01. Kepler magnitude: 12.88. Transit SNR 7.09

There are 1 quarters with good PRF difference image offsets

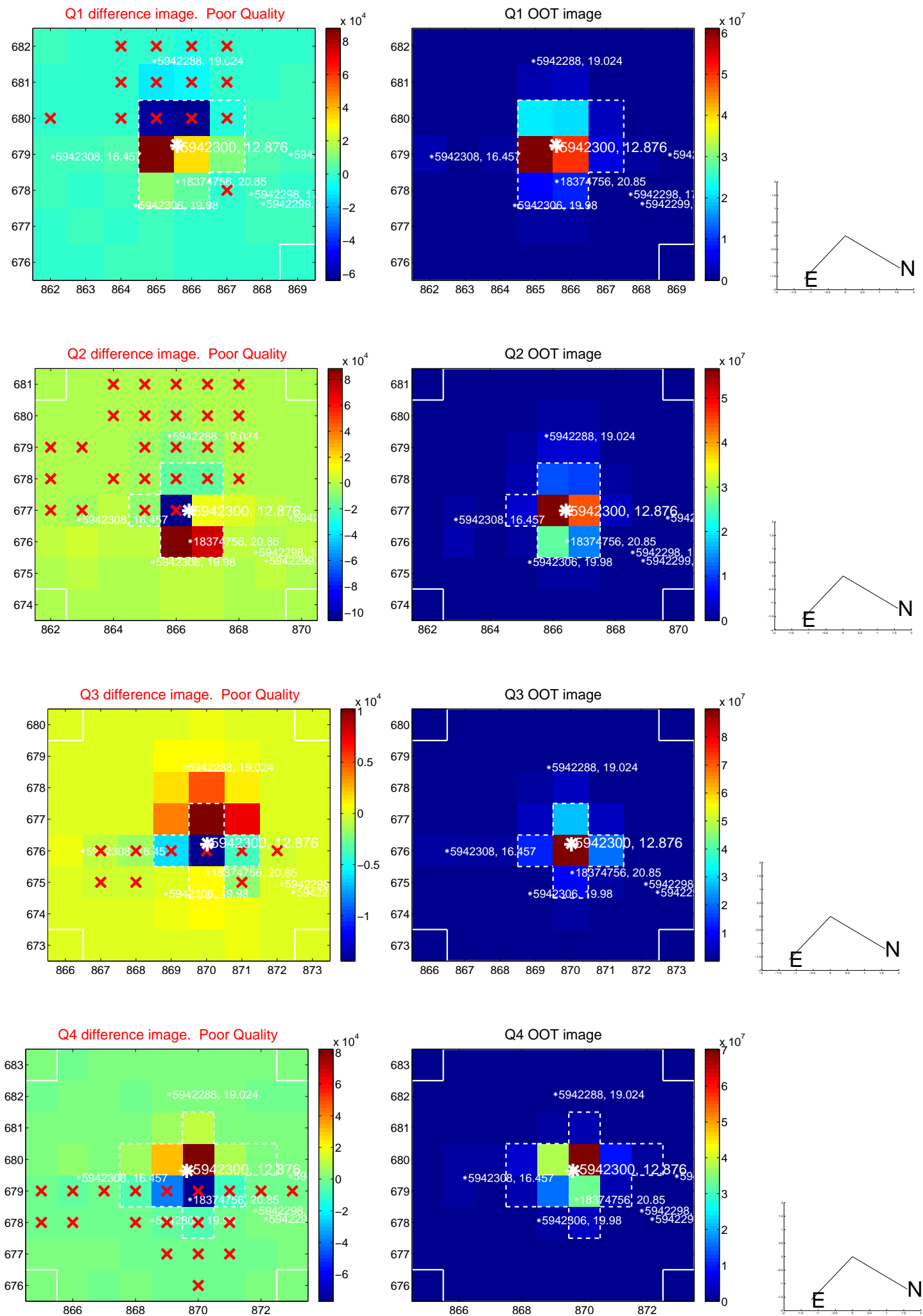
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.166 ± 0.075	55.36	-3.640 ± 0.076	-2.028 ± 0.074
PRF-fit source offset from KIC position	4.049 ± 0.075	53.78	-3.556 ± 0.076	-1.935 ± 0.074
photometric centroid source offset	1.69 ± 0.70	2.40	-0.98 ± 0.74	-1.37 ± 0.68

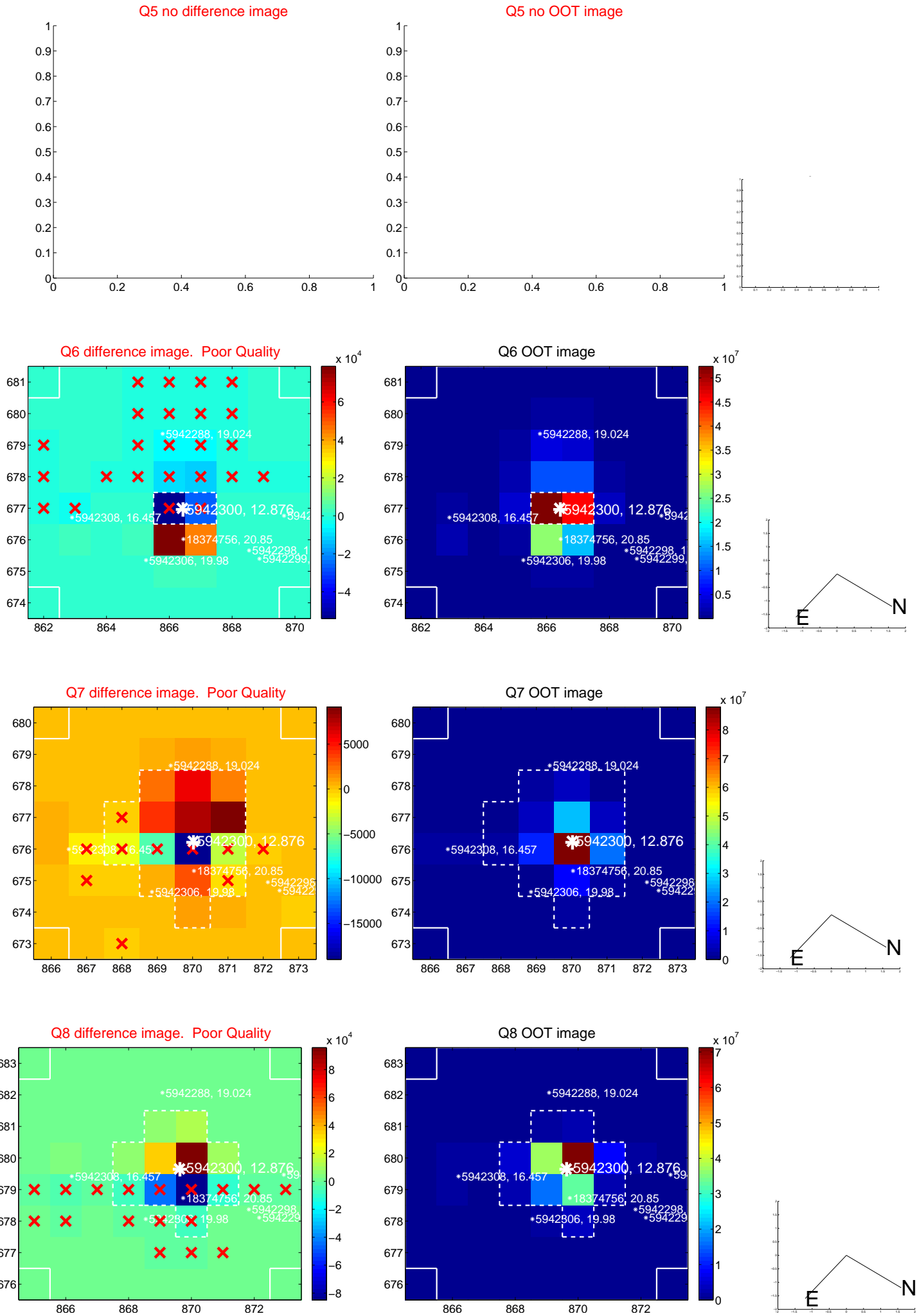


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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

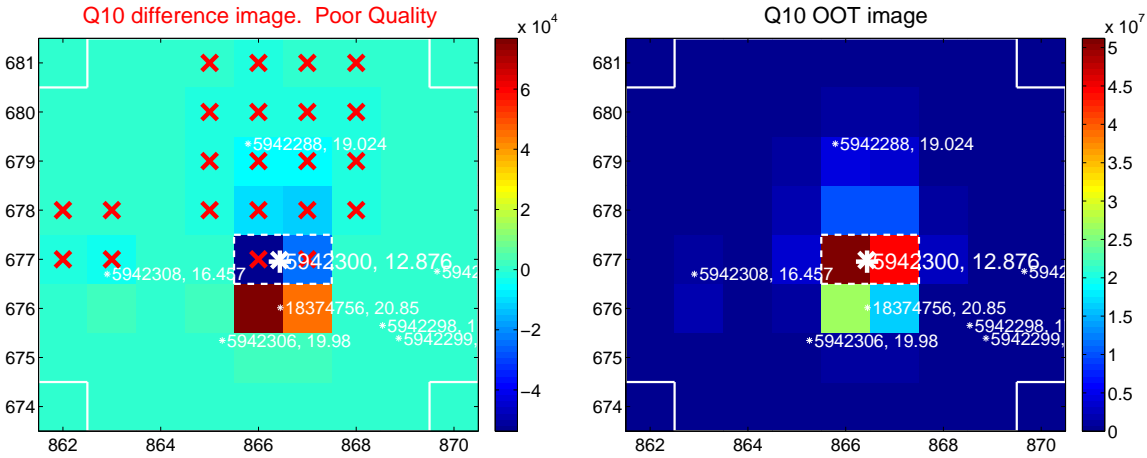
Q9 no difference image



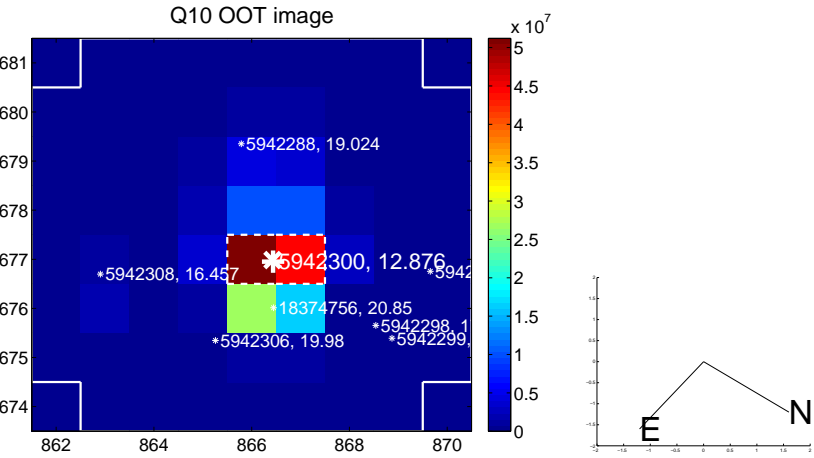
Q9 no OOT image



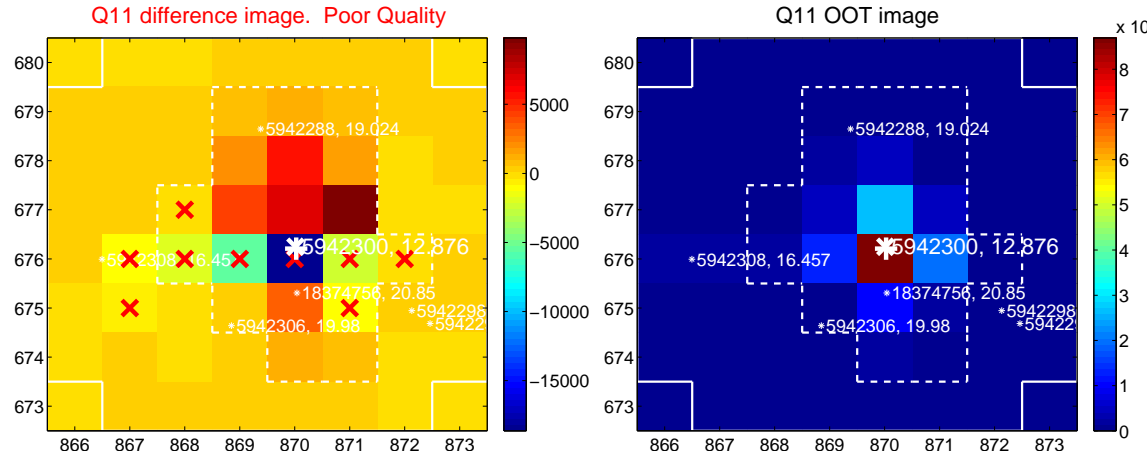
Q10 difference image. Poor Quality



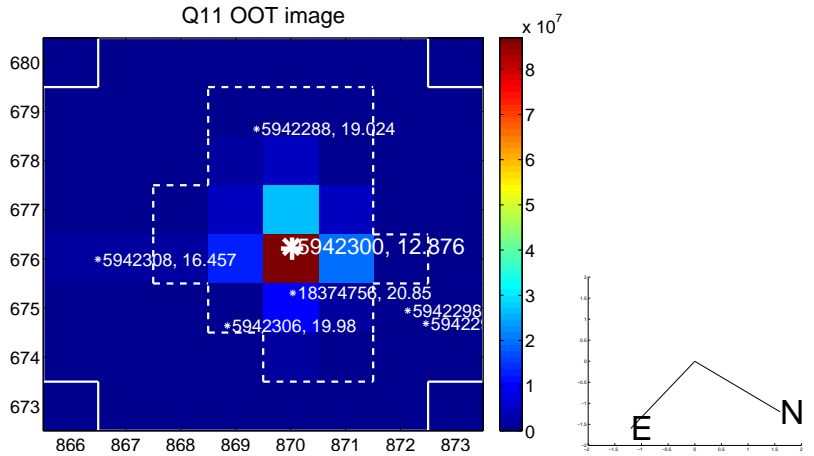
Q10 OOT image



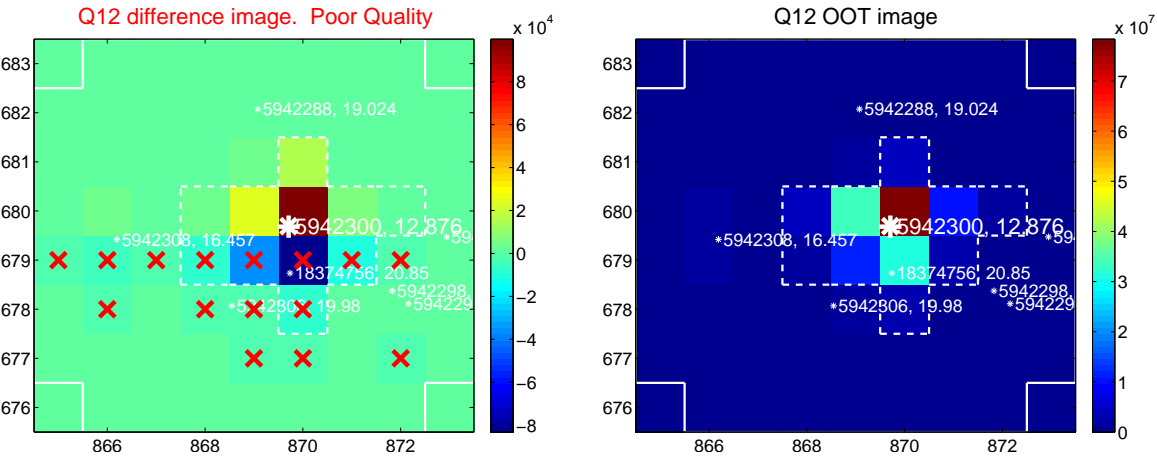
Q11 difference image. Poor Quality



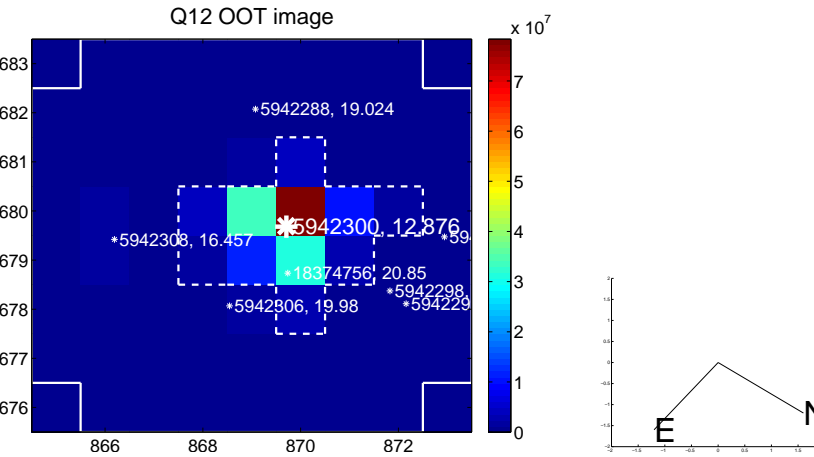
Q11 OOT image



Q12 difference image. Poor Quality



Q12 OOT image



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

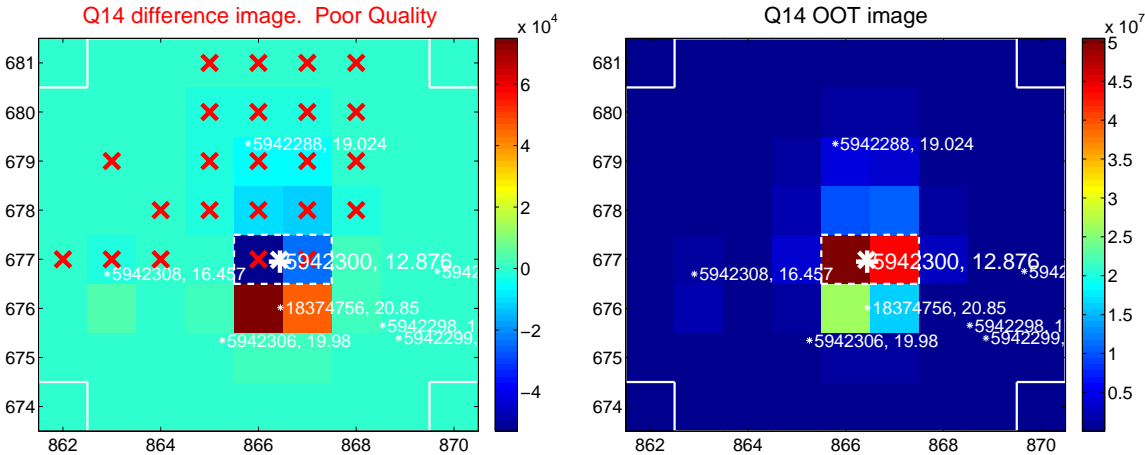
Q13 no difference image



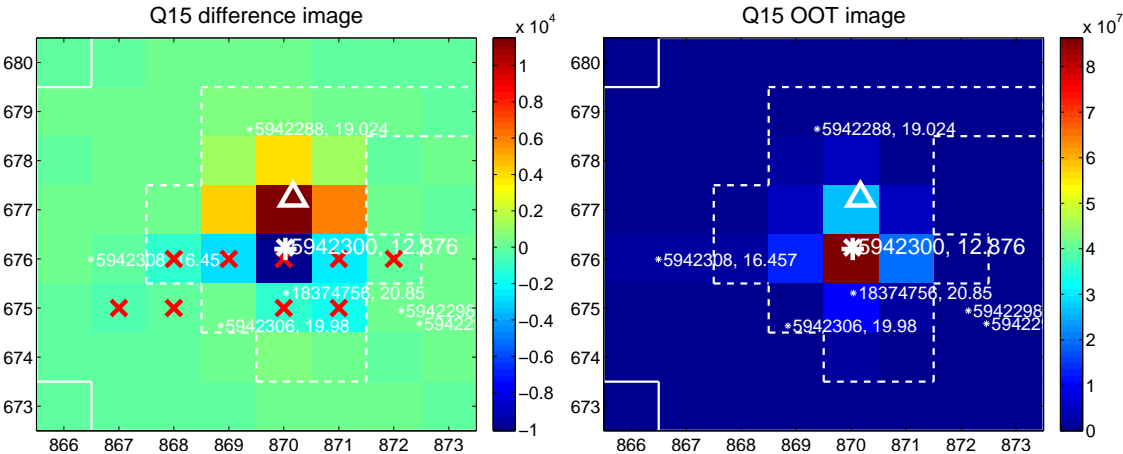
Q13 no OOT image



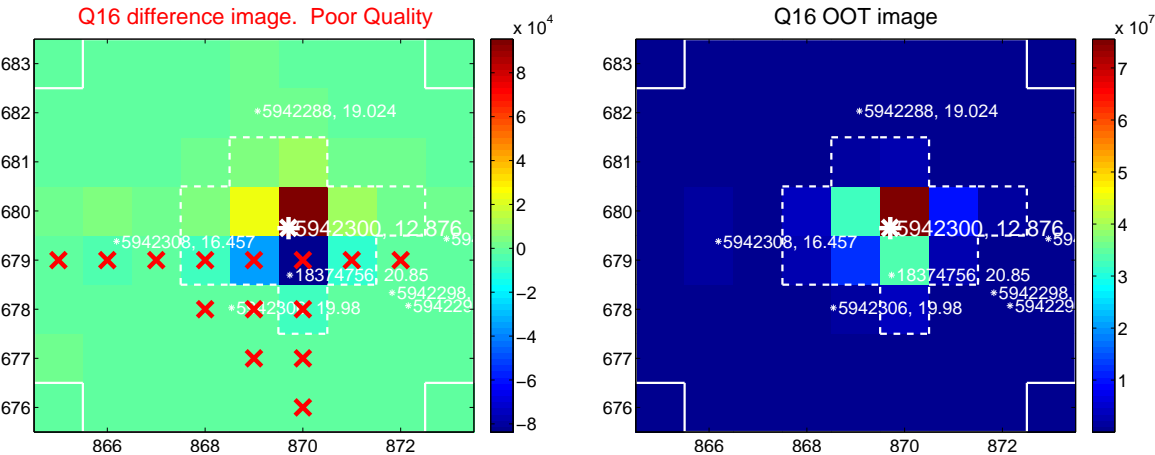
Q14 difference image. Poor Quality



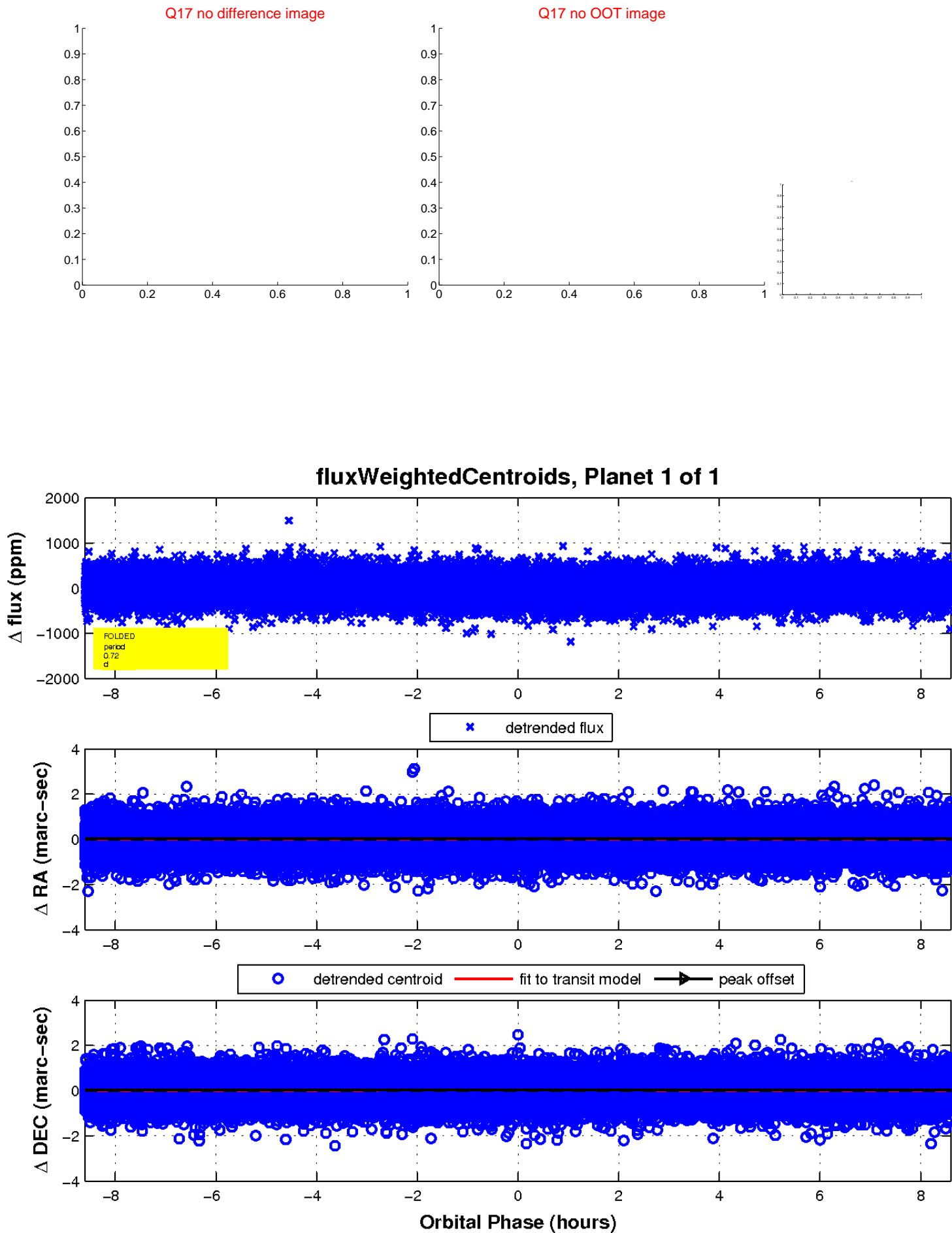
Q15 difference image



Q16 difference image. Poor Quality



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



UKIRT Image

Declination

