

KIC 010535867

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})
010535867-01	OBS	No	0.933708	132.479900	28.8	3.787	8.3	5.2	1.02	5953	0.65	3347.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010535867-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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.

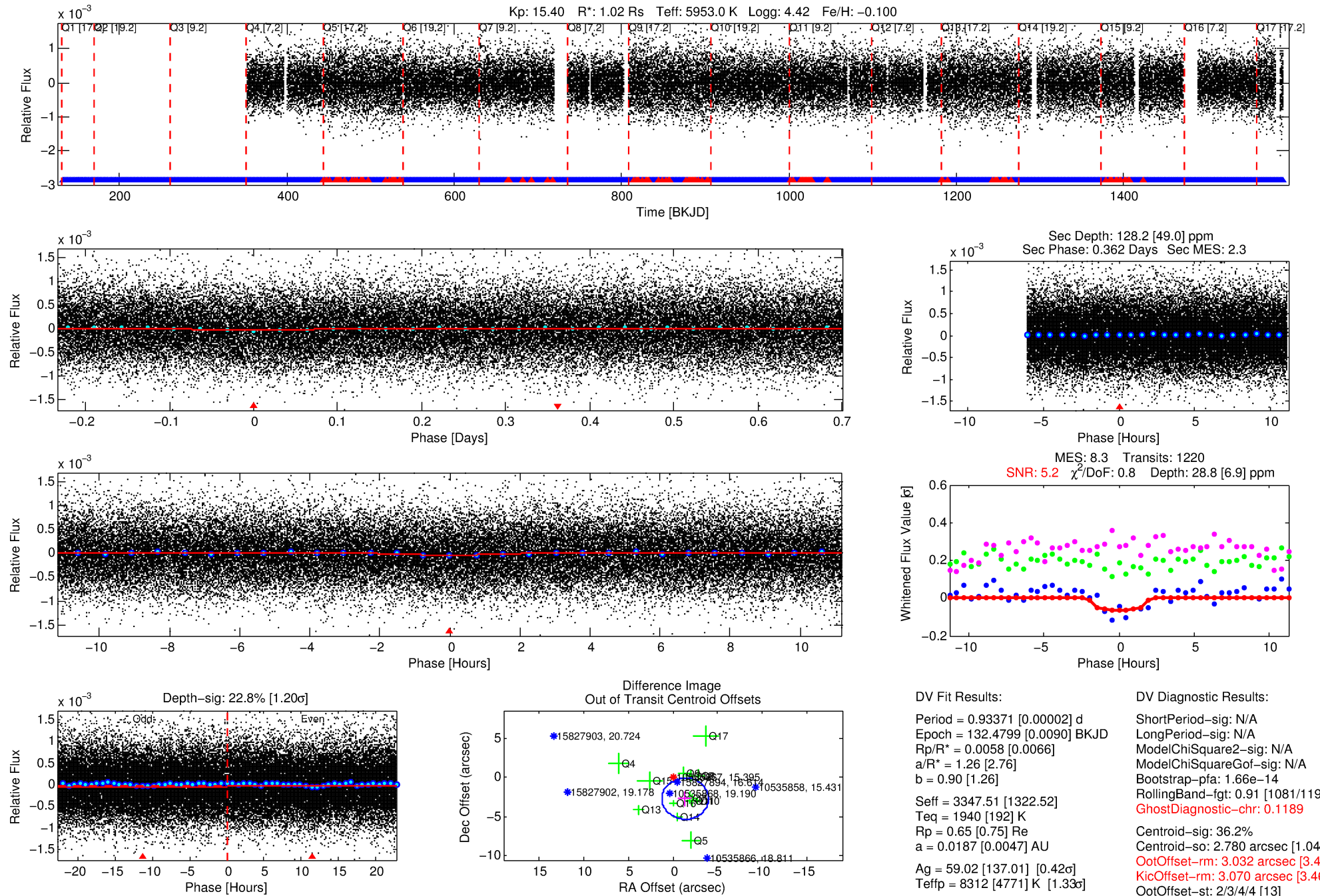
Ephemeris Match Information For 010535867-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010535867-01	10535867	7338.01	10535858	1:1	9.3	-1	2	15.43	15.39	2.28	Direct-PRF	0	0.10	2.07

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10535867 Candidate: 1 of 1 Period: 0.934 d



DV Fit Results:

Period = 0.93371 [0.00002] d
Epoch = 132.4799 [0.0090] BKJD
Rp/R* = 0.0058 [0.0066]
a/R* = 1.26 [2.76]
b = 0.90 [1.26]
Seff = 3347.51 [1322.52]
Teq = 1940 [192] K
Rp = 0.65 [0.75] Re
a = 0.0187 [0.0047] AU
Ag = 59.02 [137.01] [0.42 σ]
Teffp = 8312 [4771] K [1.33 σ]

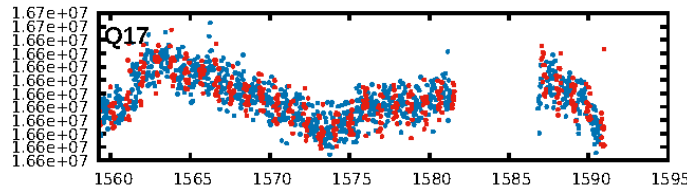
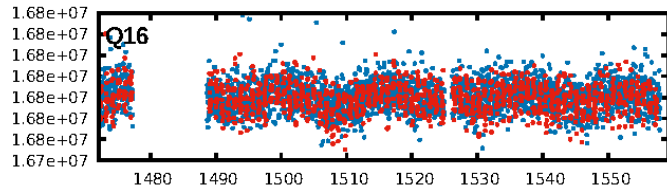
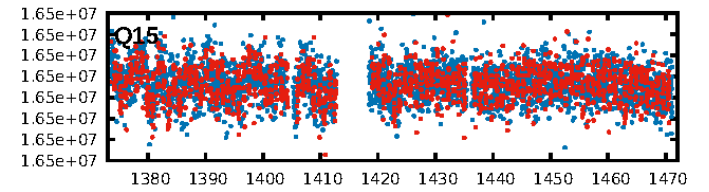
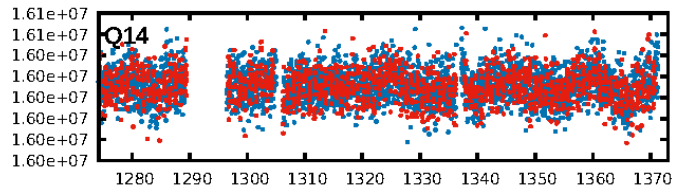
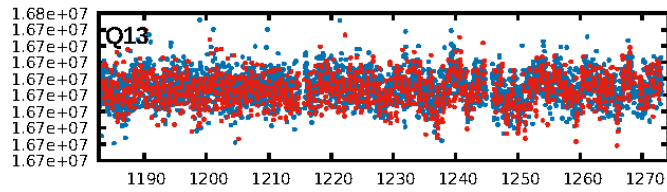
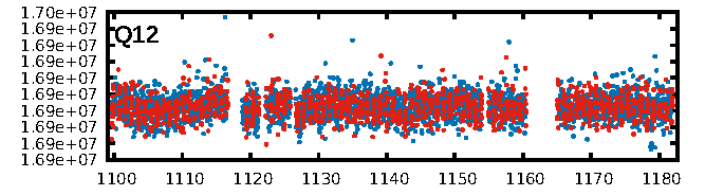
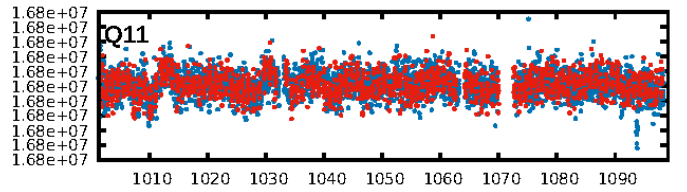
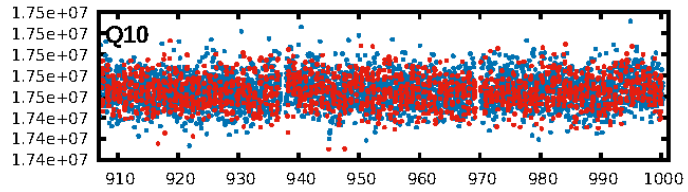
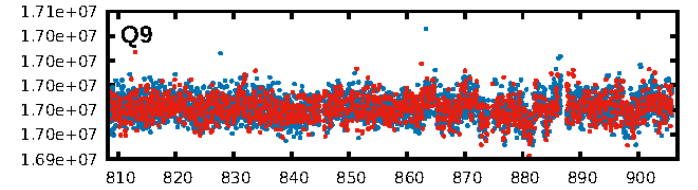
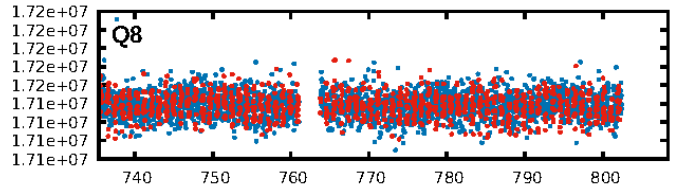
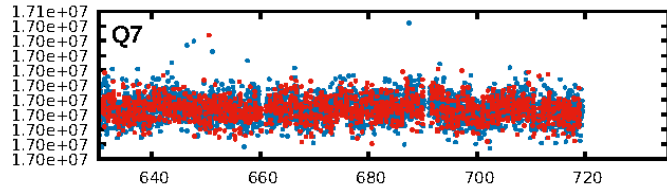
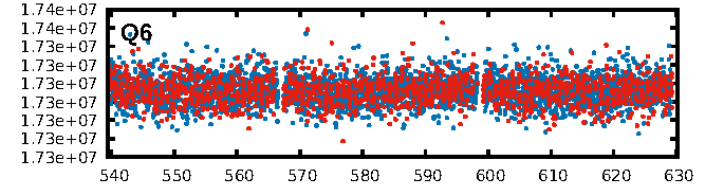
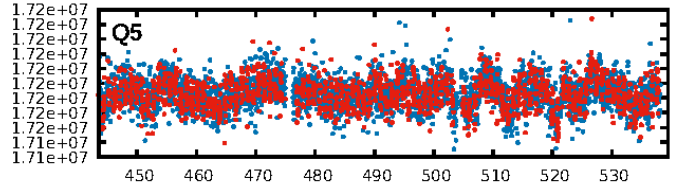
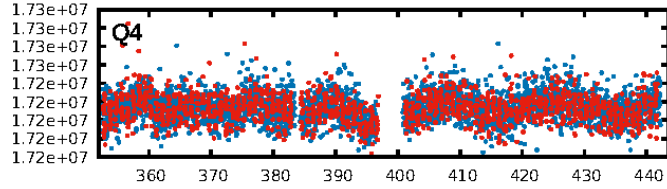
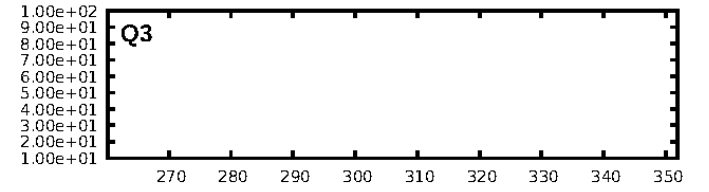
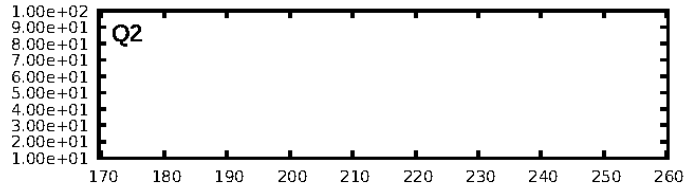
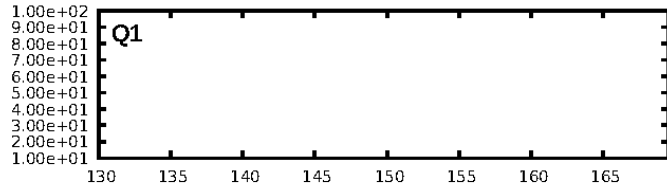
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.66e-14
RollingBand-fgt: 0.91 [1081/1190]
GhostDiagnostic-chr: 0.1189
Centroid-sig: 36.2%
Centroid-so: 2.780 arcsec [1.04 σ]
OotOffset-rm: 3.032 arcsec [3.48 σ]
KicOffset-rm: 3.070 arcsec [3.46 σ]
OotOffset-st: 2/3/4/4 [13]
KicOffset-st: 2/3/4/4 [13]
DiffImageQuality-fgm: 0.00 [0/13]
DiffImageOverlap-fno: 1.00 [14/14]

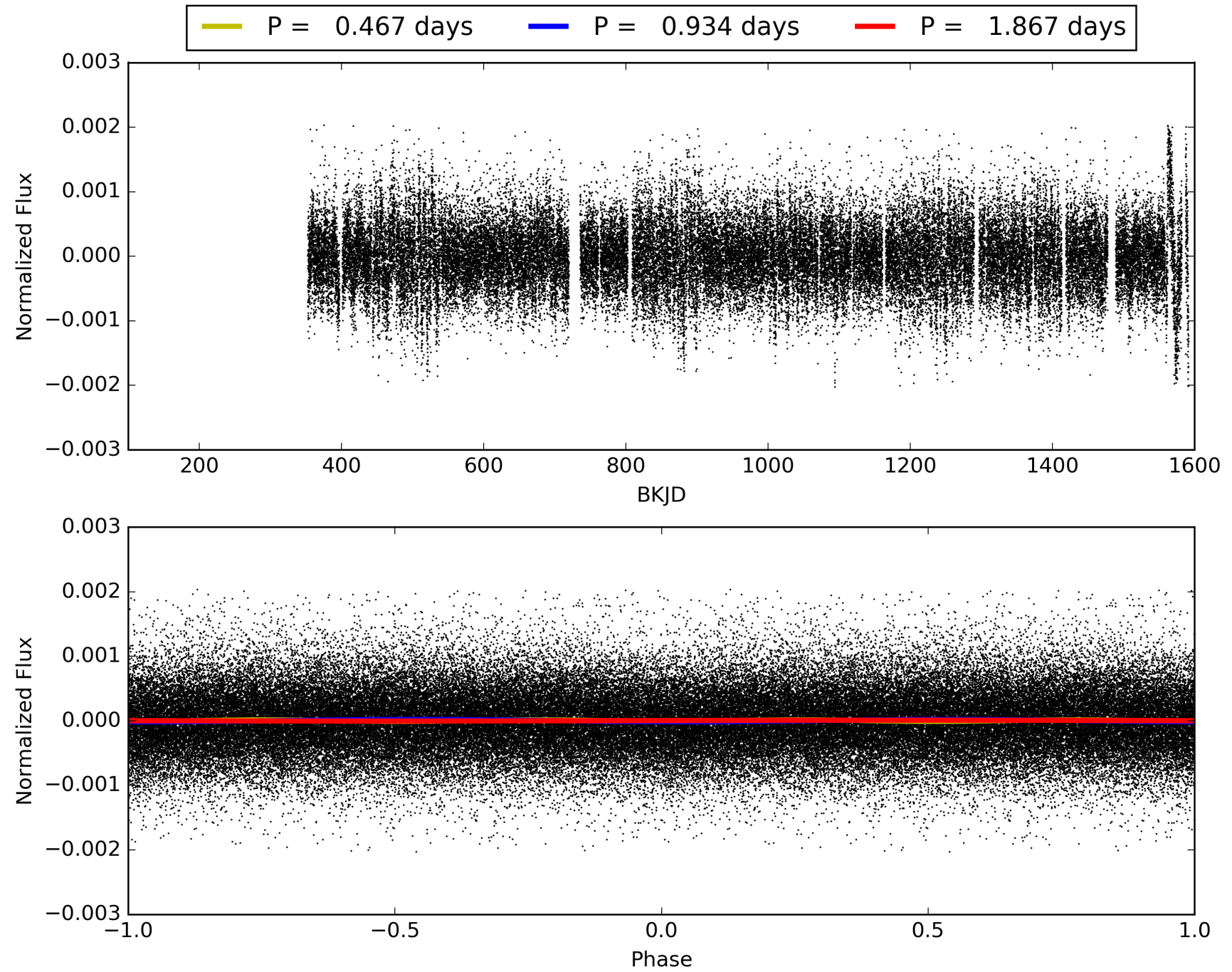
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:49:46 Z

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

TCE 010535867-01, PDC Light Curves

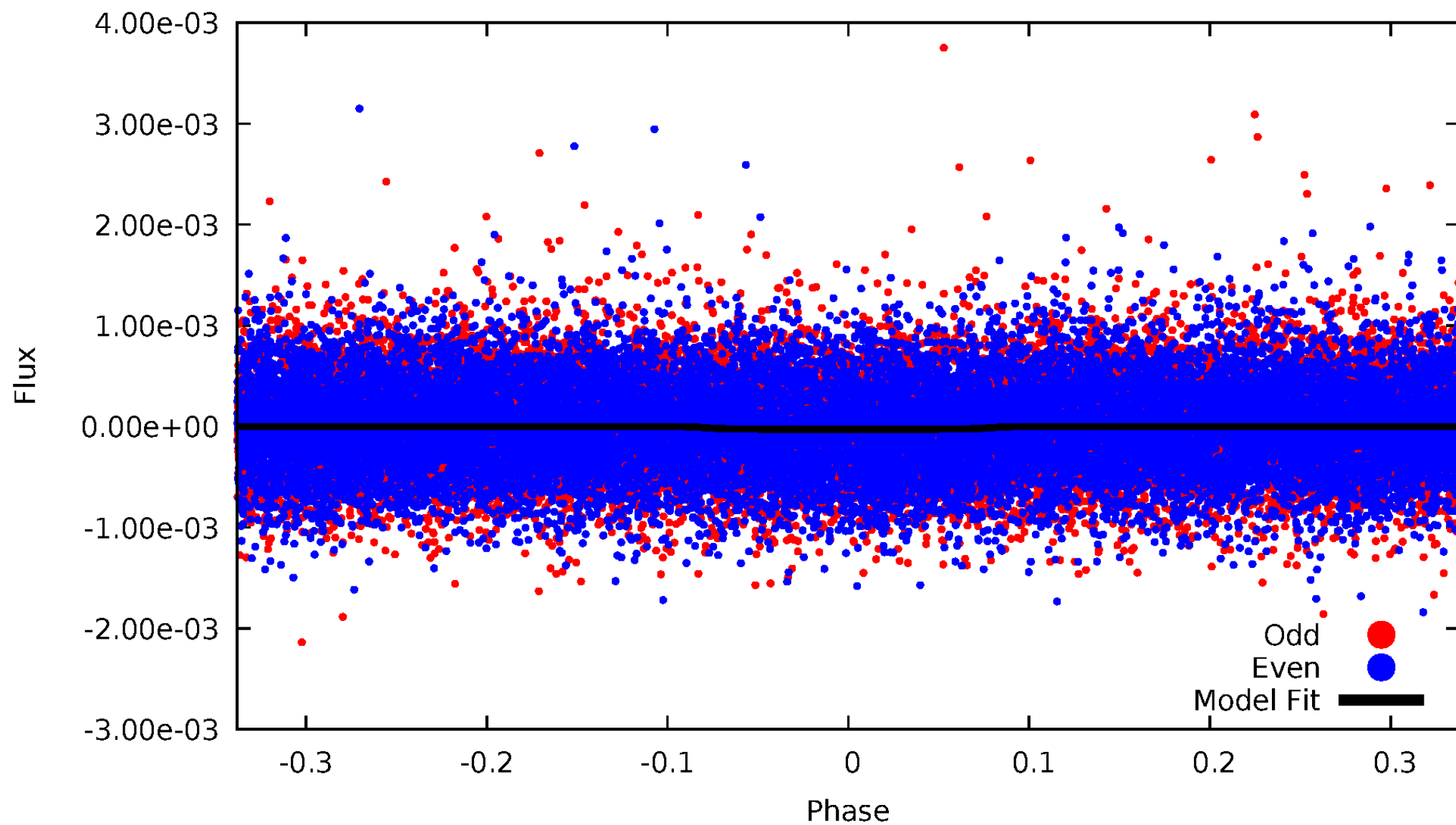


TCE 010535867-01



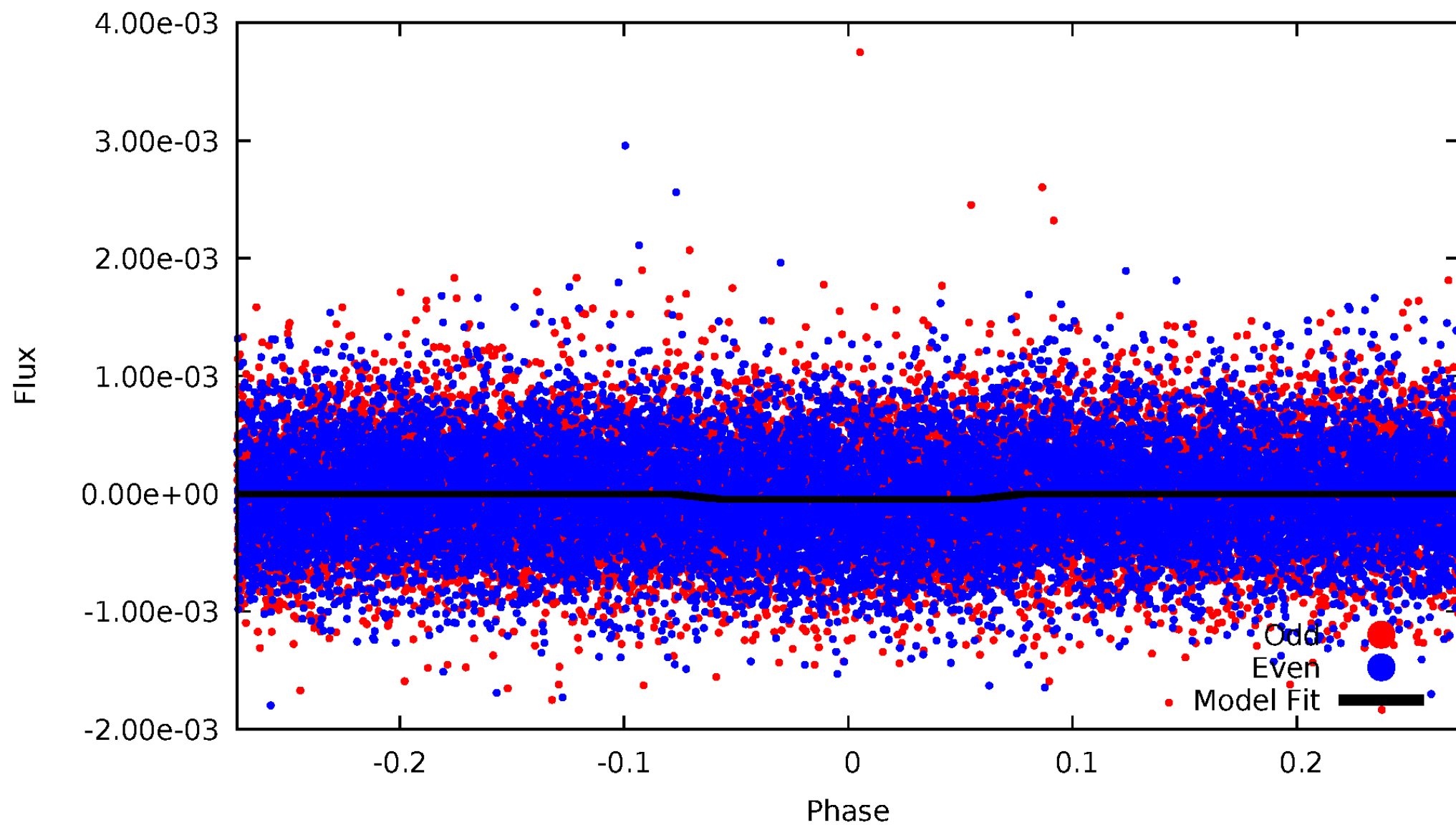
DV Odd/Even

TCE 010535867-01



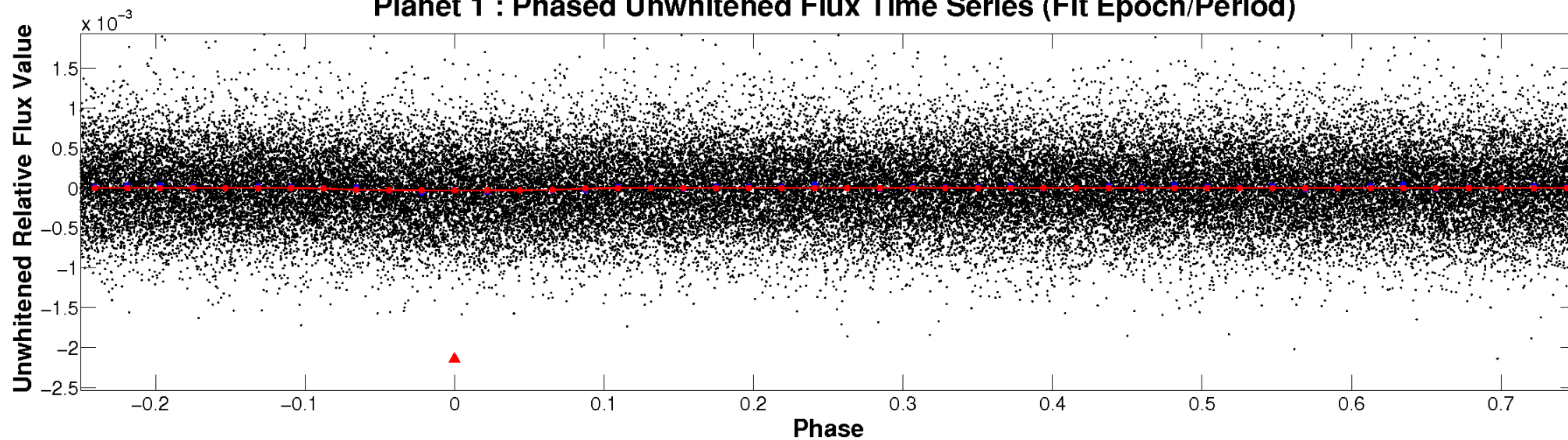
ALT Odd/Even

TCE 010535867-01

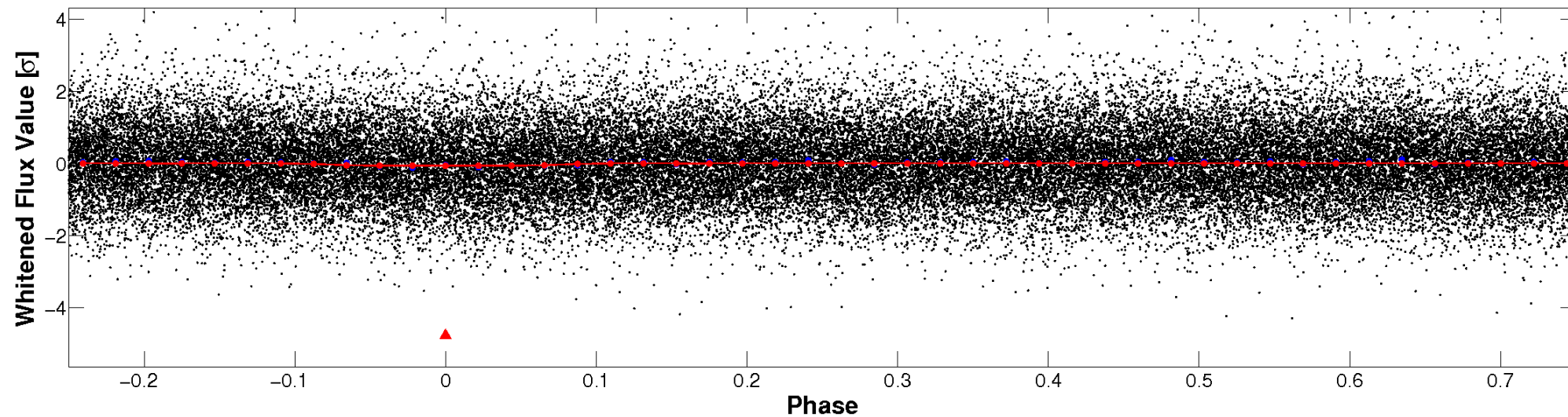


Non-Whitened Vs. Whitened Light Curve

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

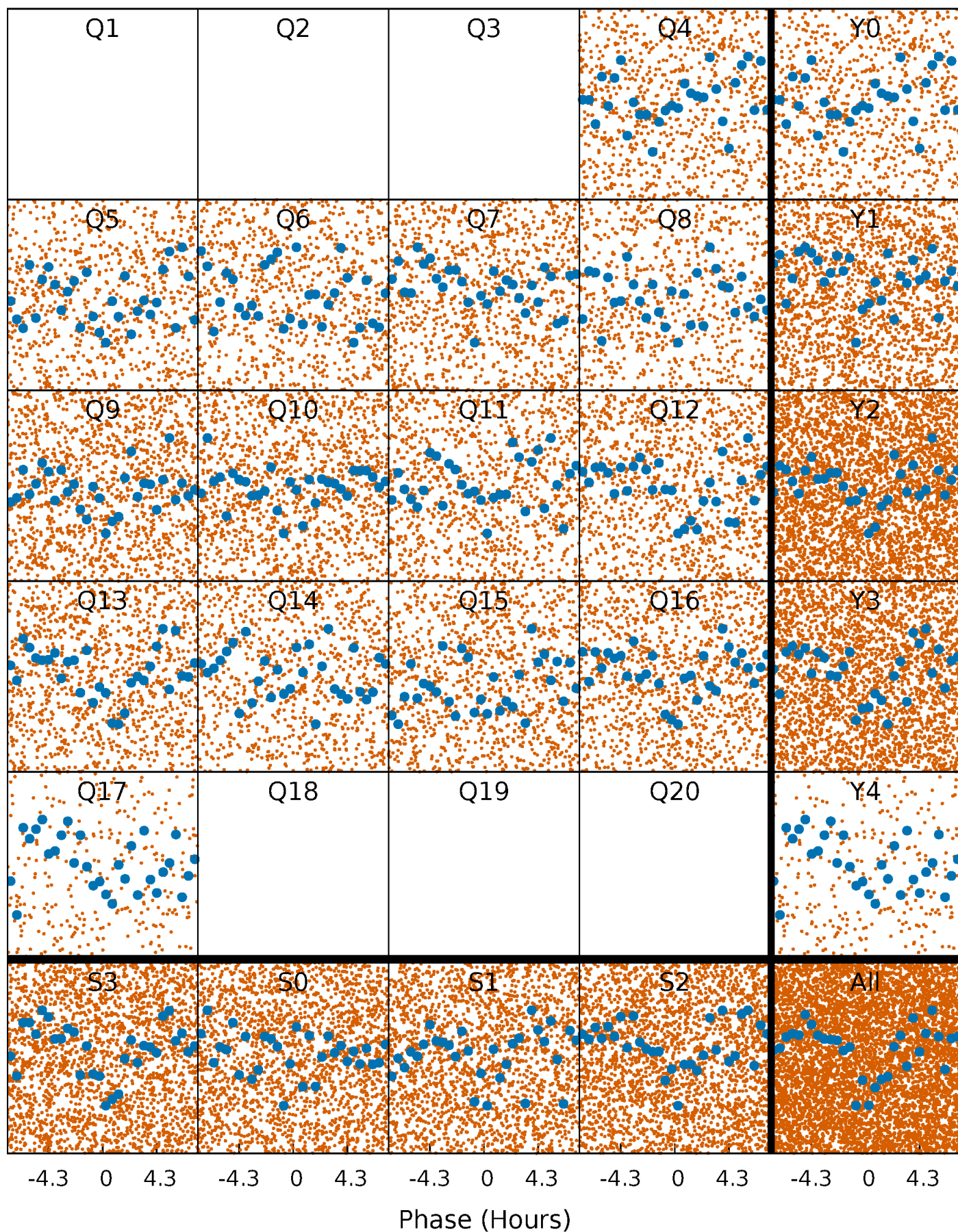


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



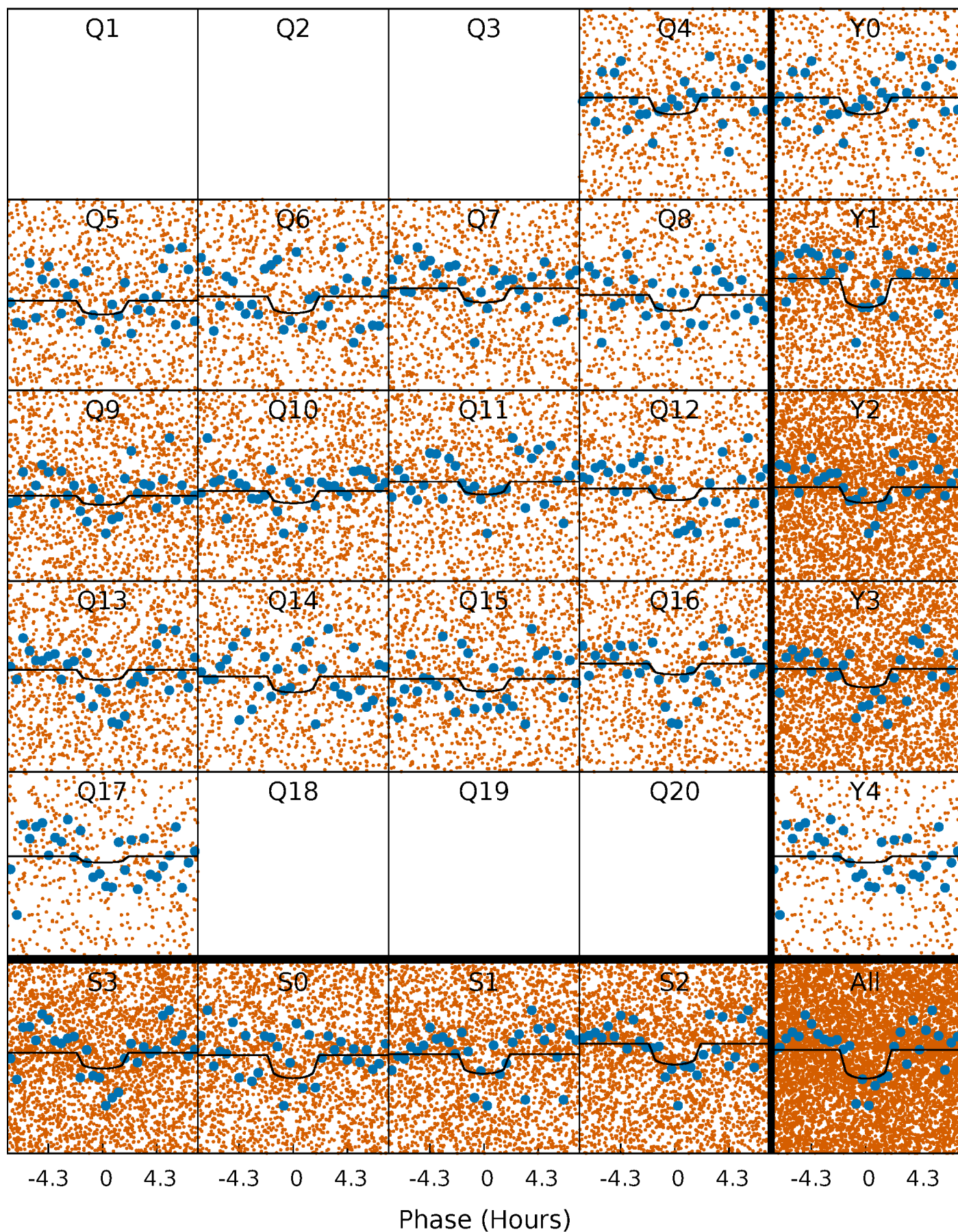
PDC Quarter-Phased Transit Curves

TCE 010535867-01 P= 0.933708 Days $T_0=132.479900$ (BKJD)



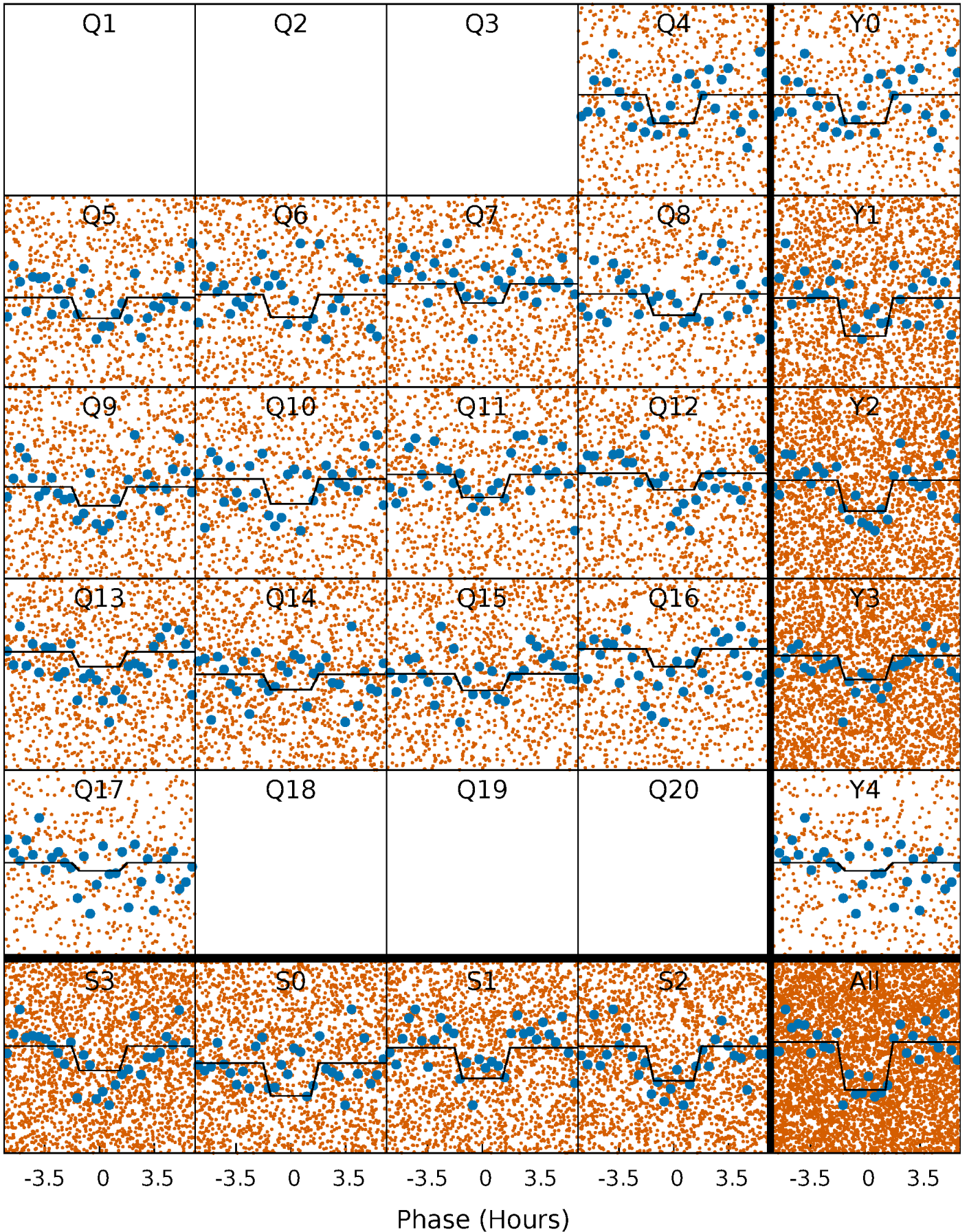
DV Quarter-Phased Transit Curves

TCE 010535867-01 P= 0.933708 Days $T_0=132.479900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

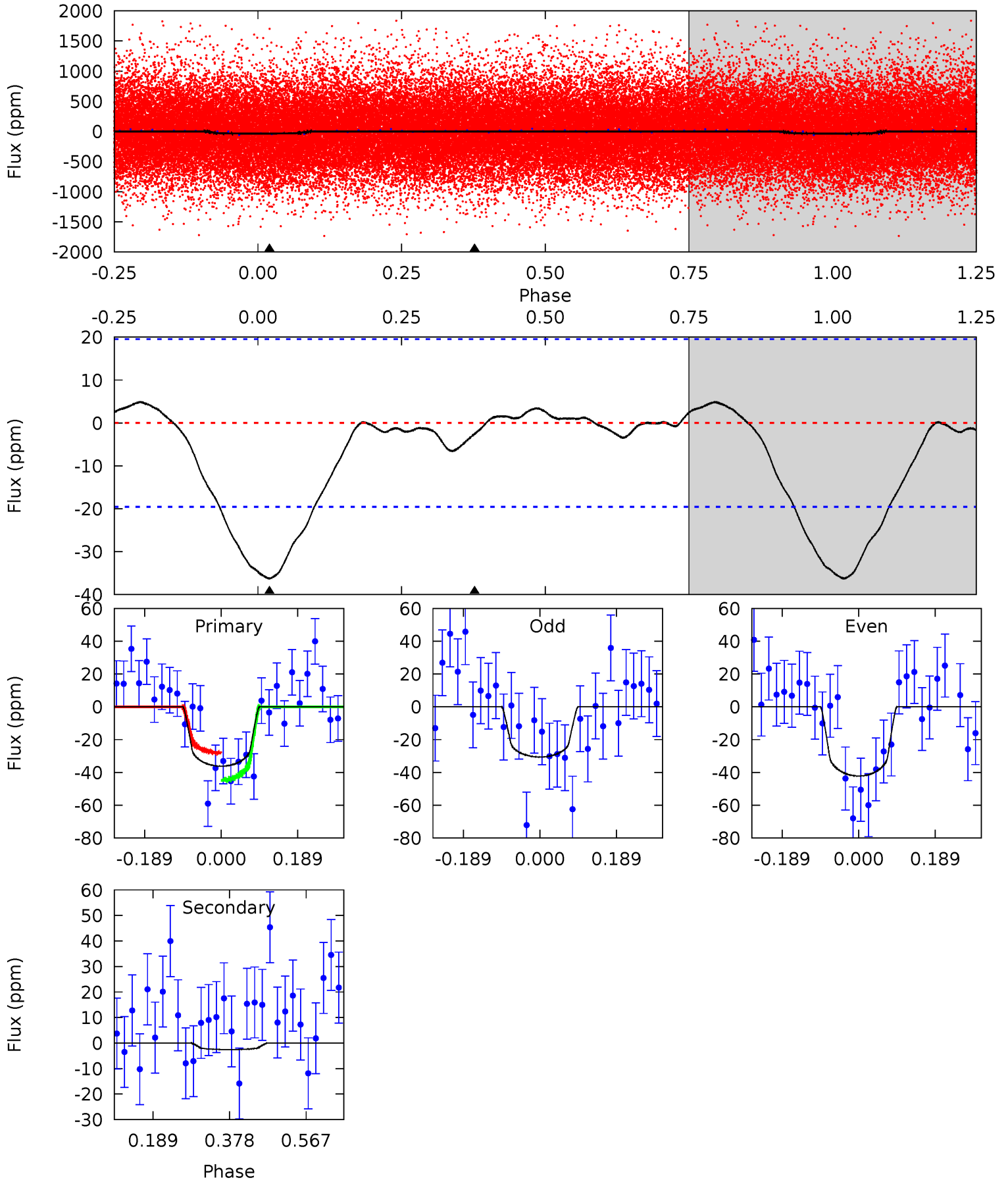
TCE 010535867-01 P= 0.933759 Days $T_0=132.444215$ (BKJD)



DV Model-Shift Uniqueness Test

010535867-01, P = 0.933708 Days, E = 132.479900 Days

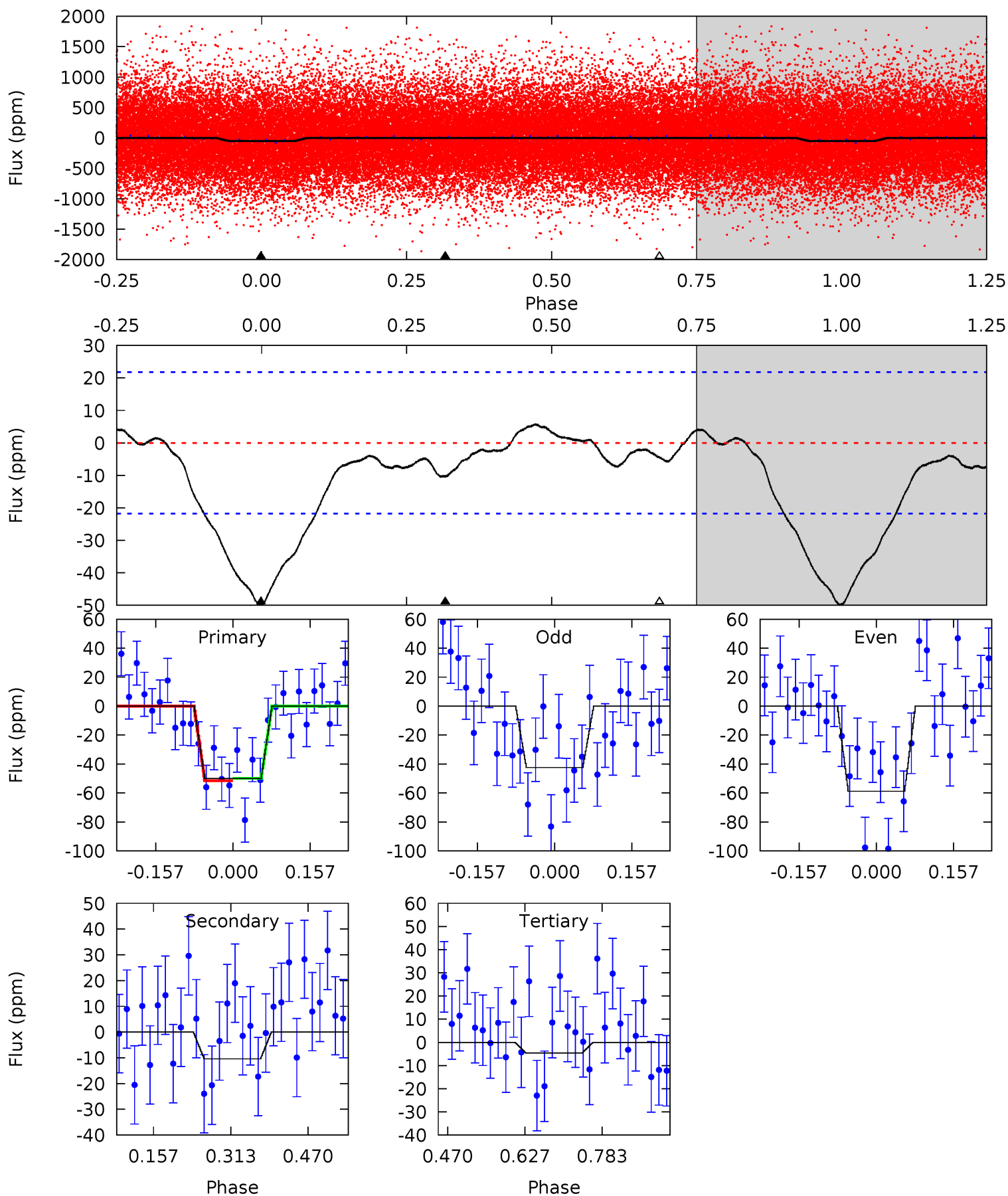
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.21	0.58	0	0	4.43	1.31	0.54	8.21	8.21	0.58	0.58	1.32	1.08	0.12	1.91



Alt Model-Shift Uniqueness Test

010535867-01, P = 0.933759 Days, E = 132.444215 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	2.14	0.94	0	4.47	1.42	0.68	9.31	10.2	1.20	2.14	1.68	1.20	0.10	0.17



Stellar Parameters For KIC 010535867

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5953^{+187}_{-207}	$4.420^{+0.087}_{-0.203}$	$-0.100^{+0.250}_{-0.300}$	$1.018^{+0.304}_{-0.140}$	$0.996^{+0.146}_{-0.119}$	$1.330^{+0.509}_{-0.713}$
	+3%/-3%	+2%/-5%	+250%/-300%	+30%/-14%	+15%/-12%	+38%/-54%
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 010535867-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 4	$0.89^{+0.69}_{-0.56}$	2751^{+211}_{-154}	2787^{+1877}_{-6064}	$0.509^{+4.398}_{-0.810}$
Alt.	-10 ± 5	$0.91^{+0.75}_{-0.54}$	2758^{+195}_{-150}	3894^{+2079}_{-948}	$2.056^{+12.567}_{-1.465}$

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 $A_{obs} \gg 1.0$

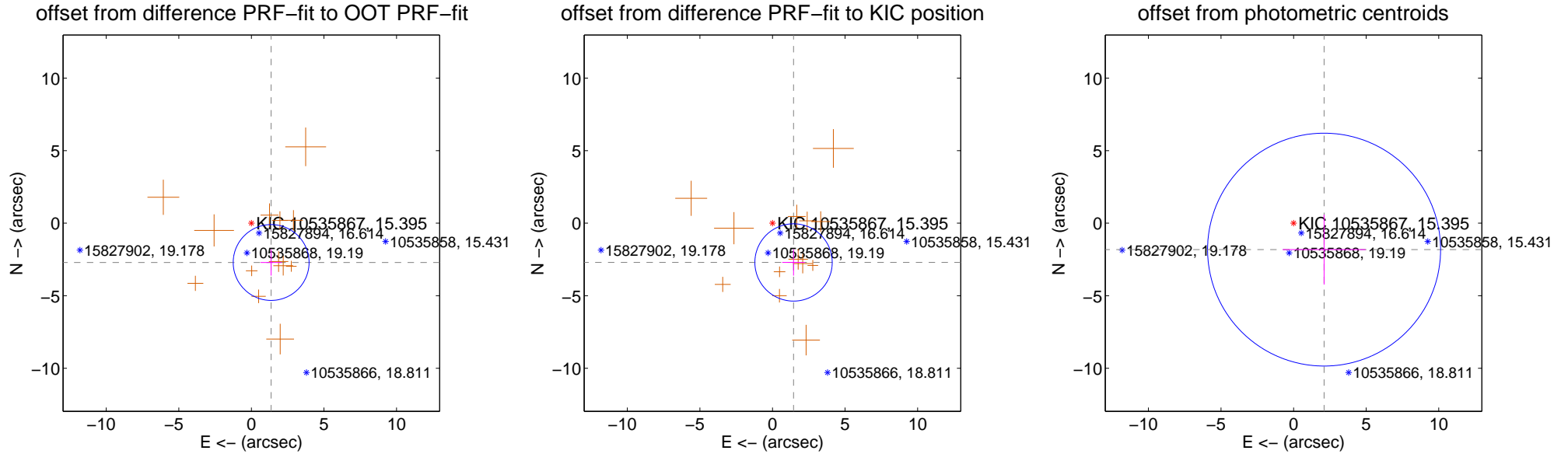
DV Centroid Data

Supplemental centroid analysis for 010535867-01. Kepler magnitude: 15.39. Transit SNR 5.18

There are 0 quarters with good PRF difference image offsets

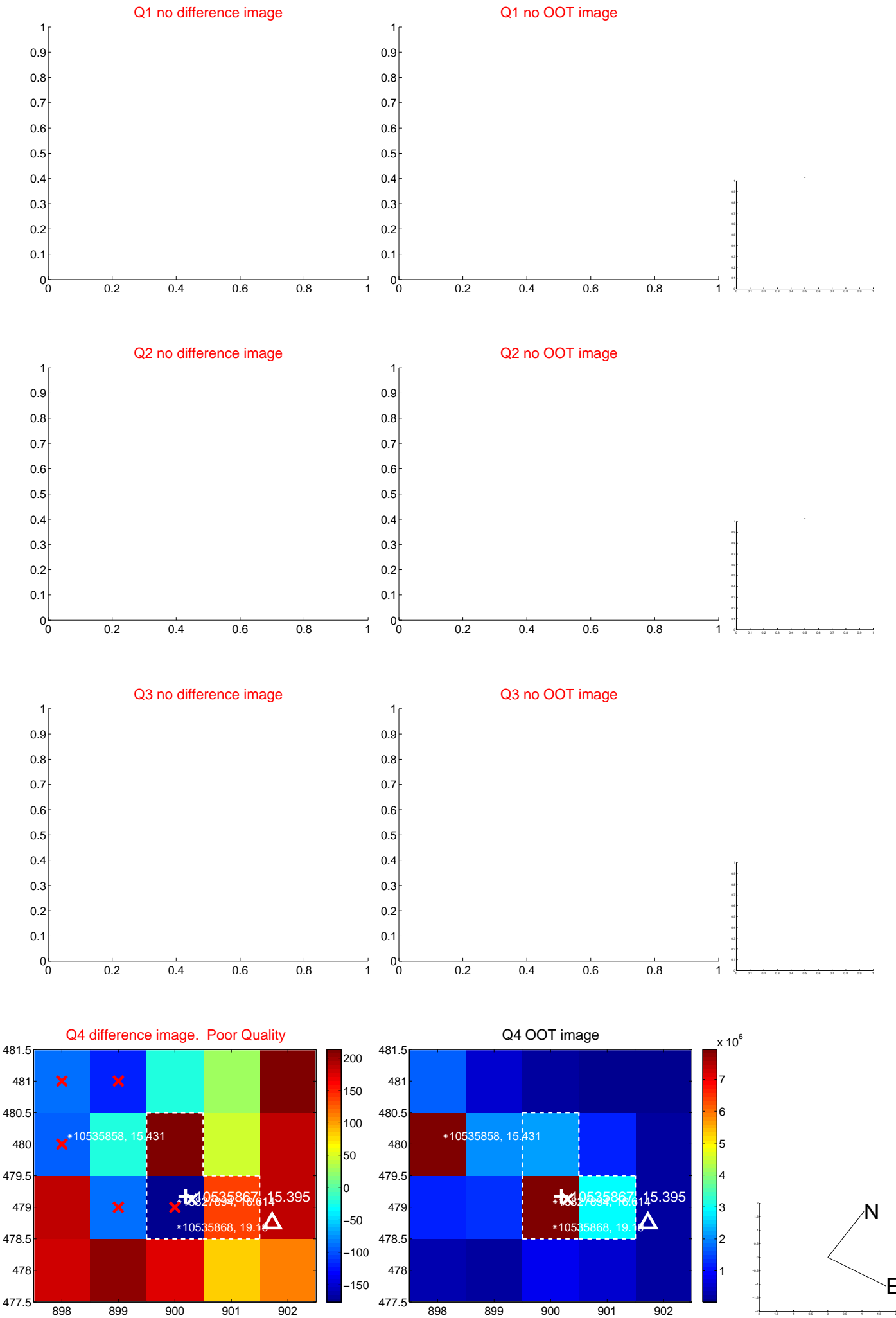
The direct PRF centroid is offset from the target star catalog position by about 0.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.032 ± 0.871	3.48	-1.361 ± 0.724	-2.709 ± 0.903
PRF-fit source offset from KIC position	3.070 ± 0.888	3.46	-1.451 ± 0.780	-2.705 ± 0.905
photometric centroid source offset	2.78 ± 2.67	1.04	-2.10 ± 2.86	-1.82 ± 2.41

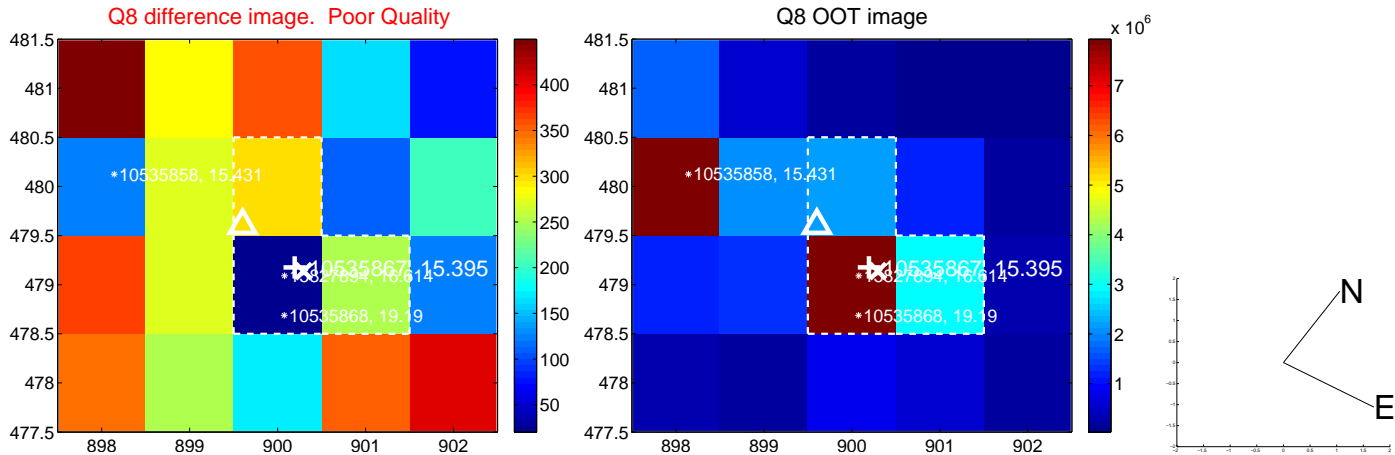
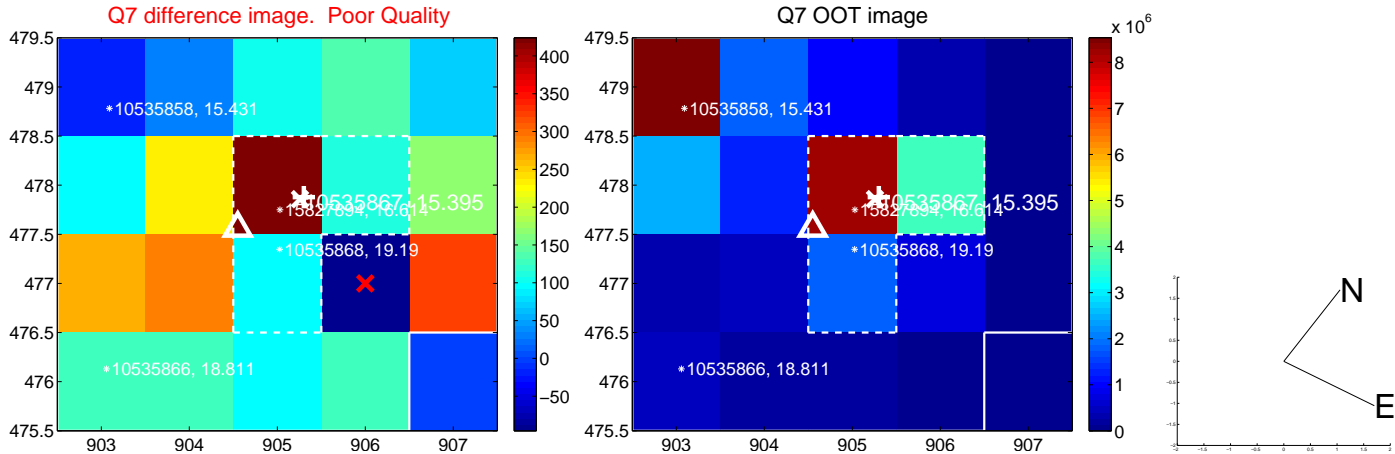
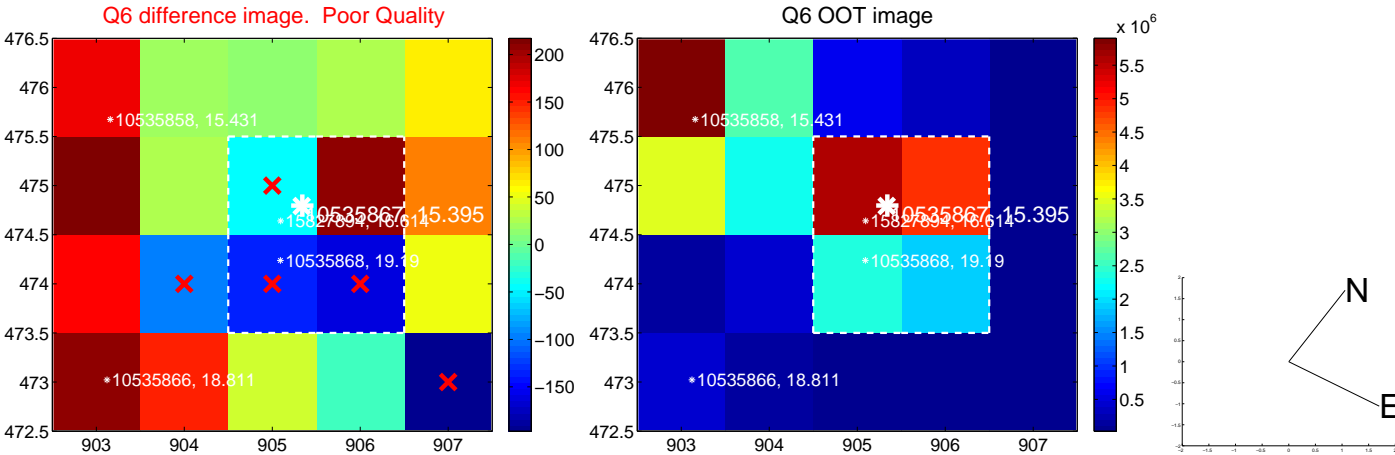
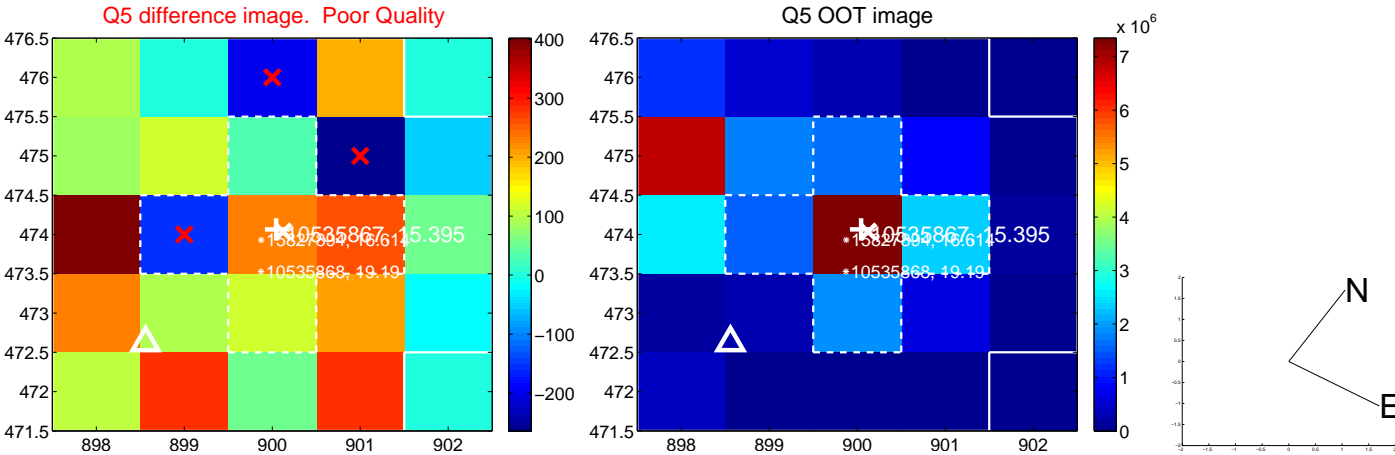


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

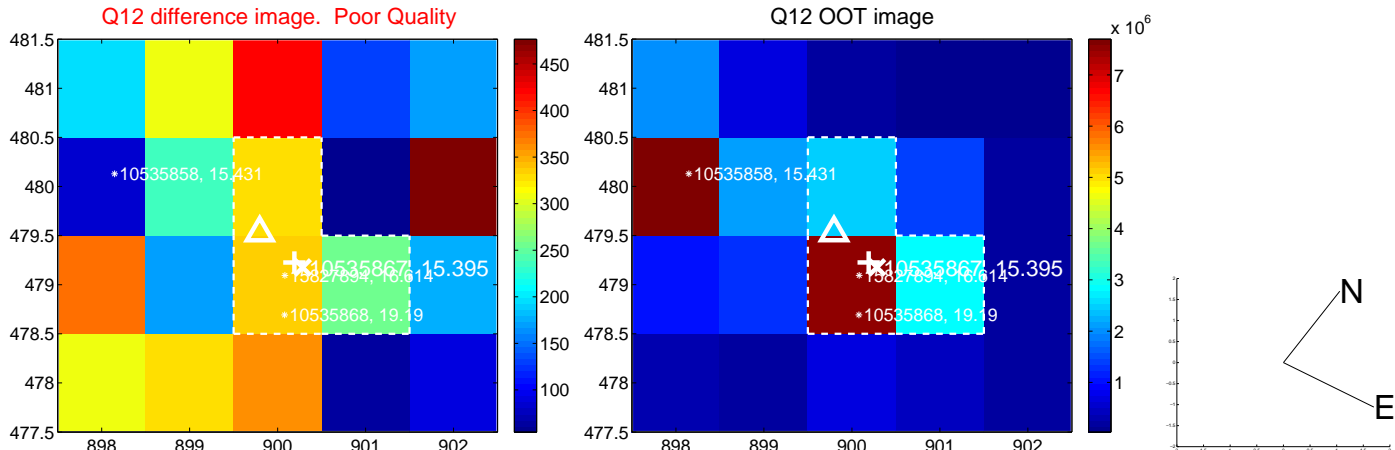
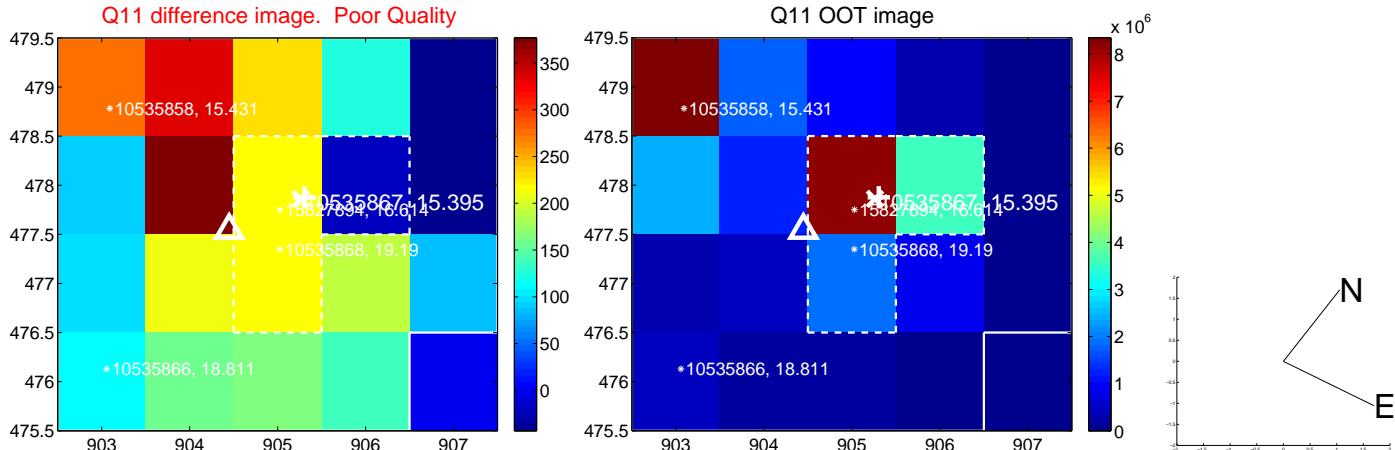
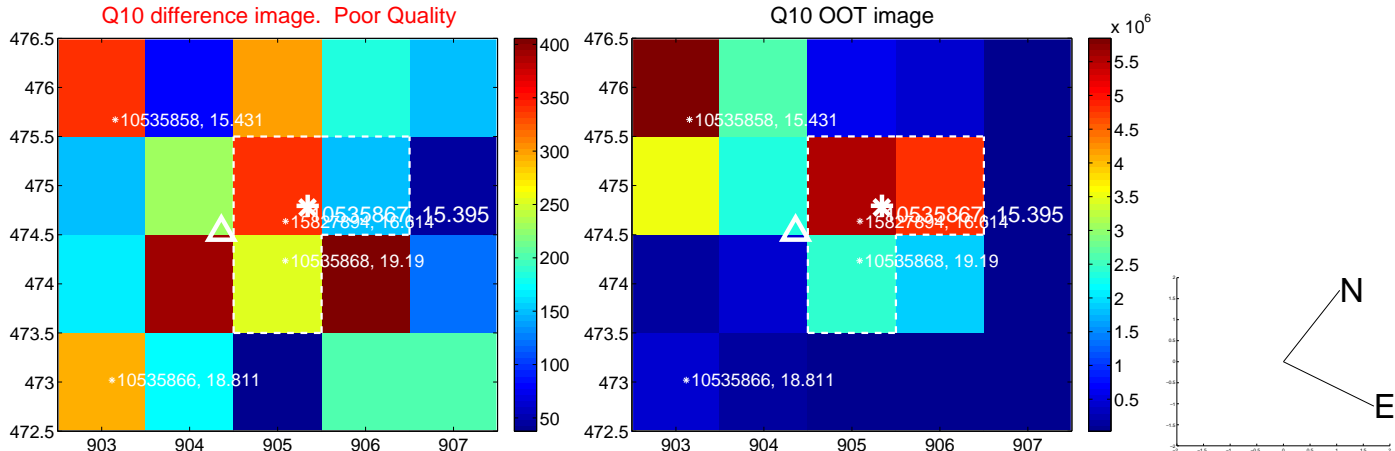
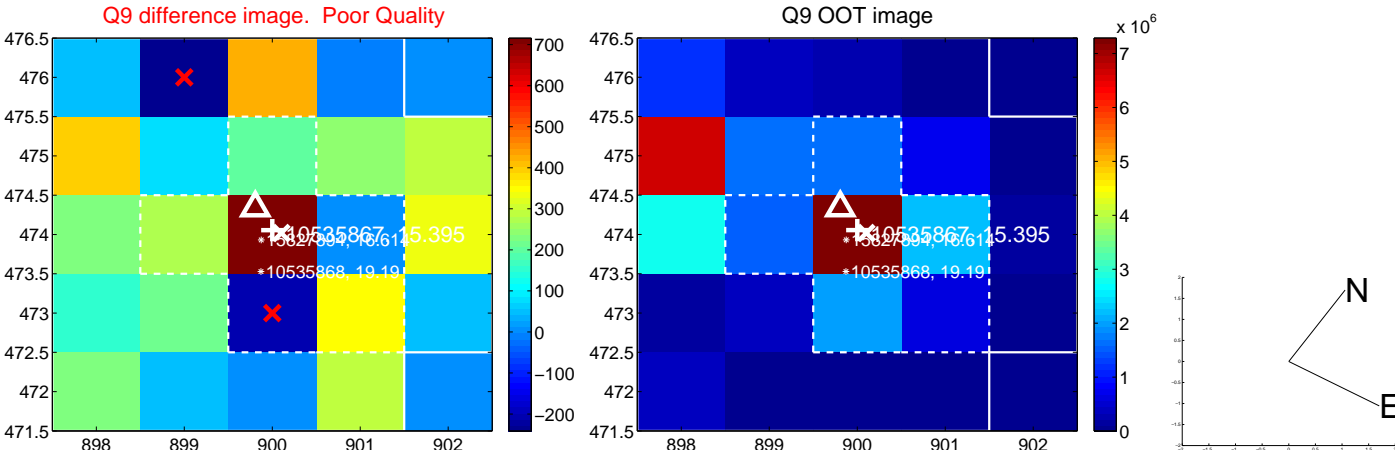
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



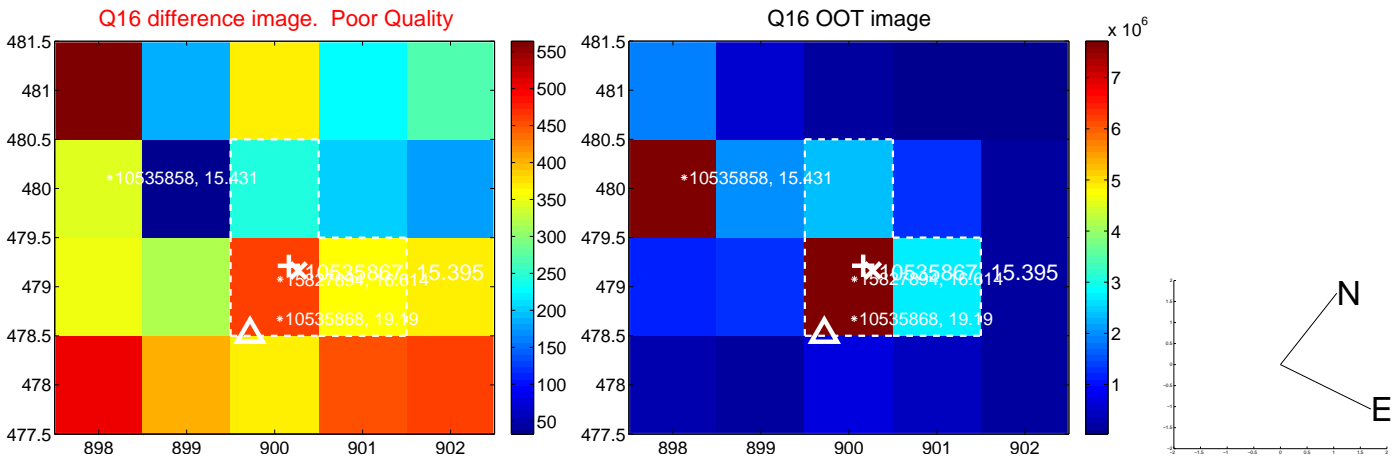
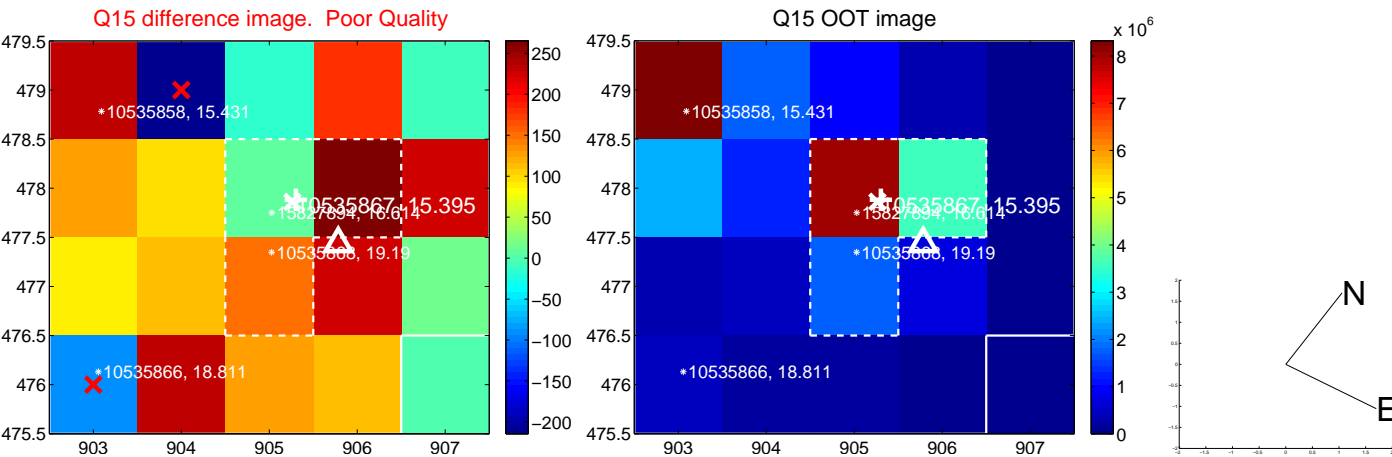
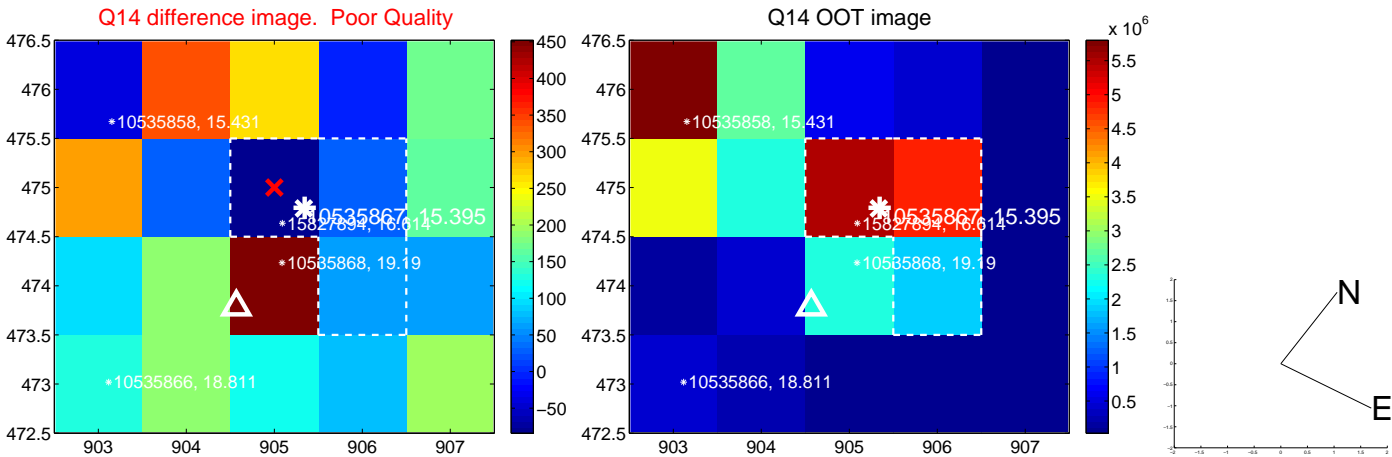
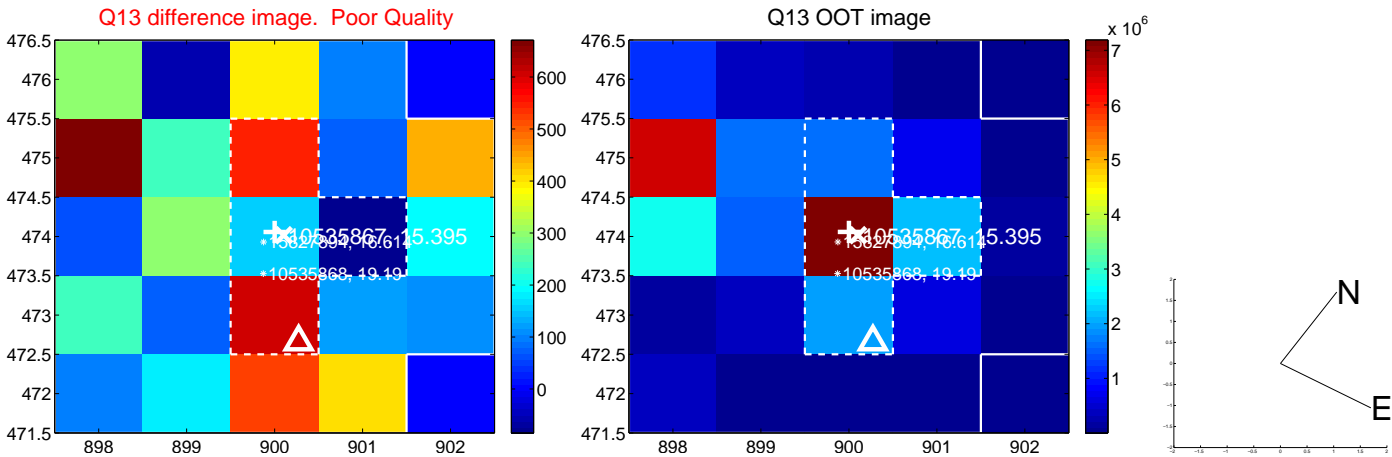
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



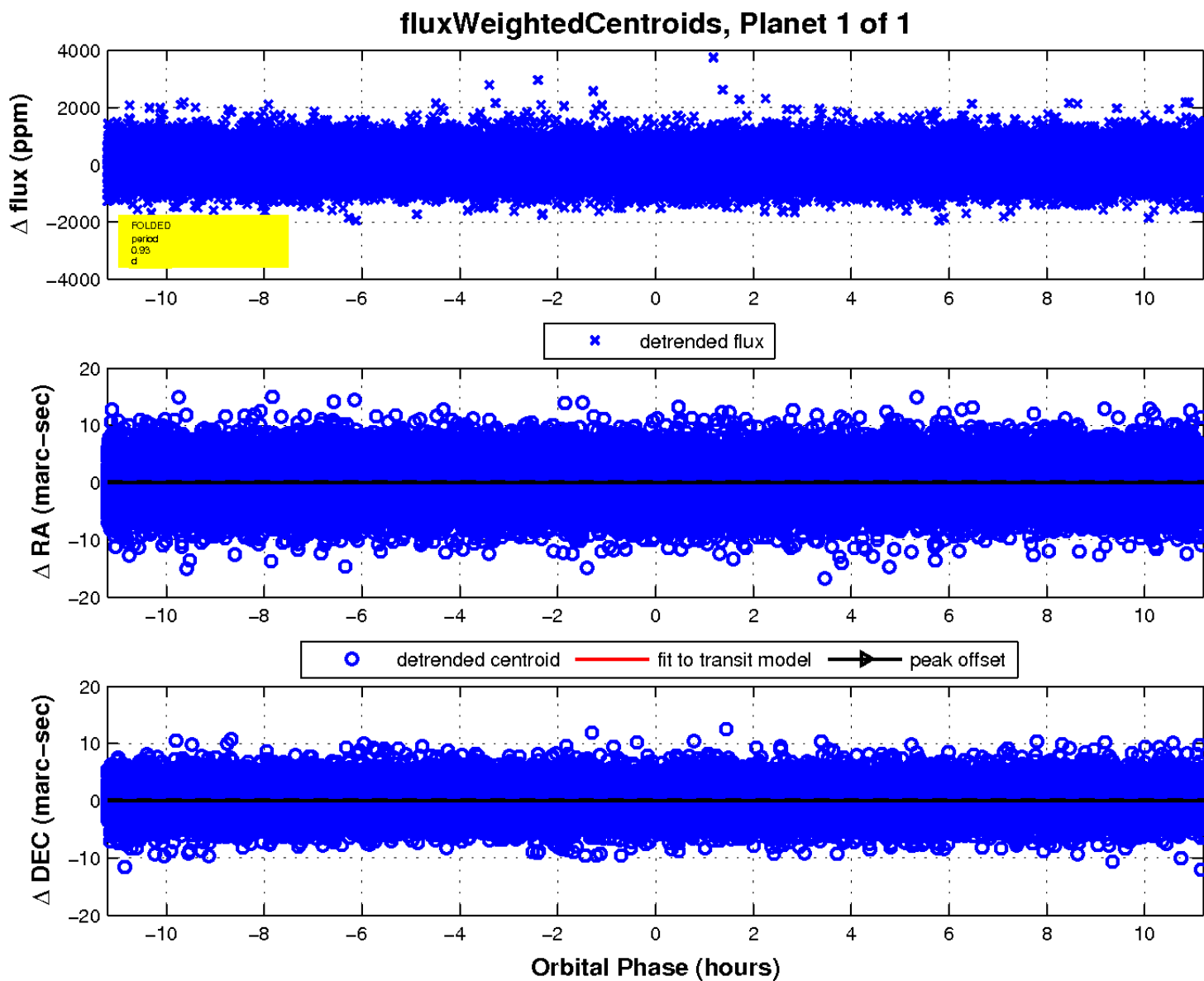
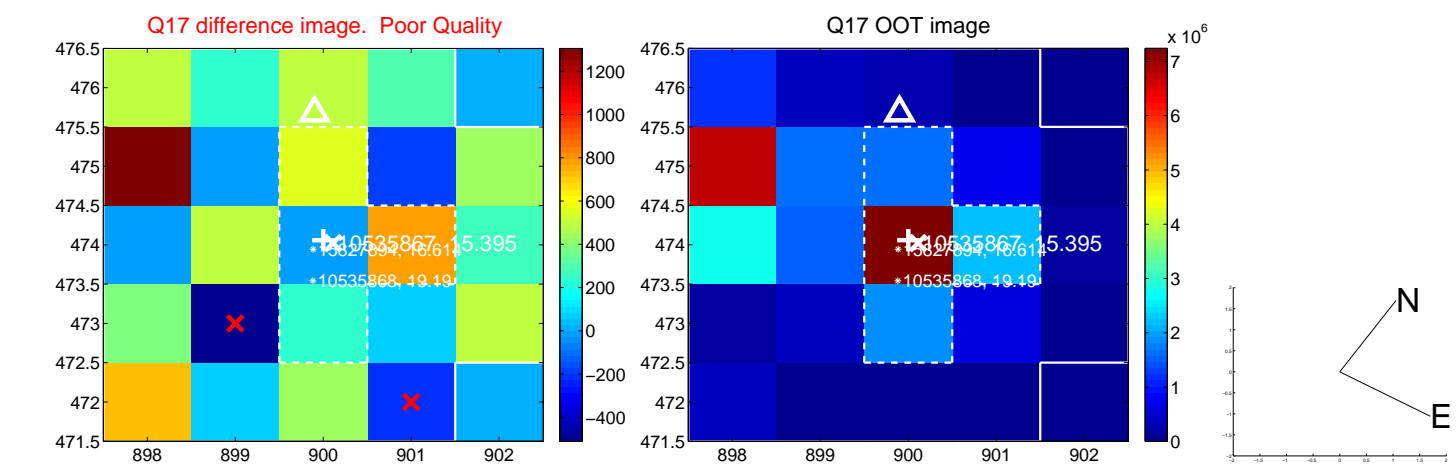
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

