

KIC 010535926

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})
010535926-01	OBS	8023.01	0.933714	132.465937	24.1	3.519	7.8	6.3	0.95	6028	0.55	3112.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010535926-01	OBS	FP	0.00	1	0	1	1	LPP_DV—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.

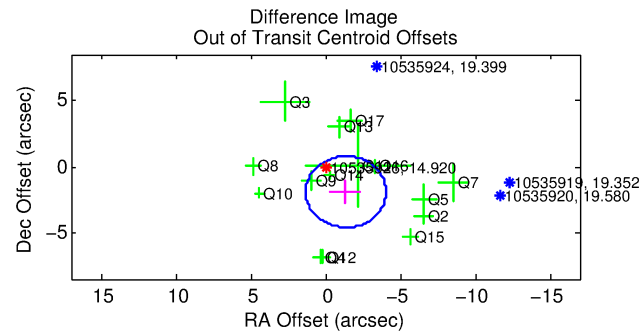
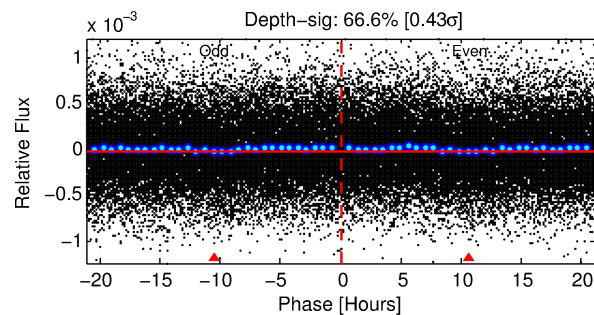
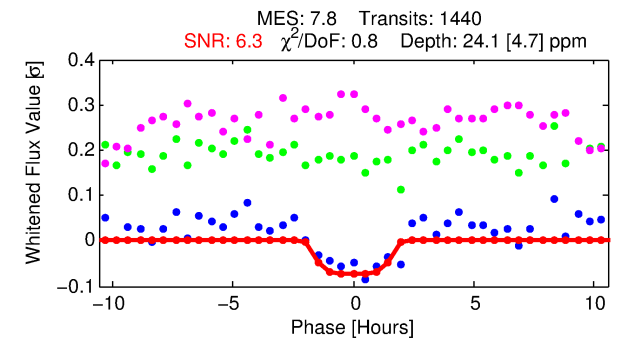
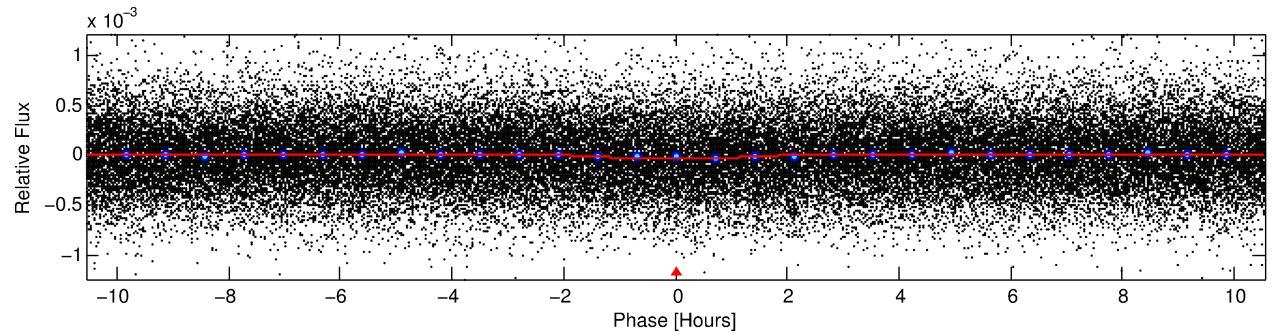
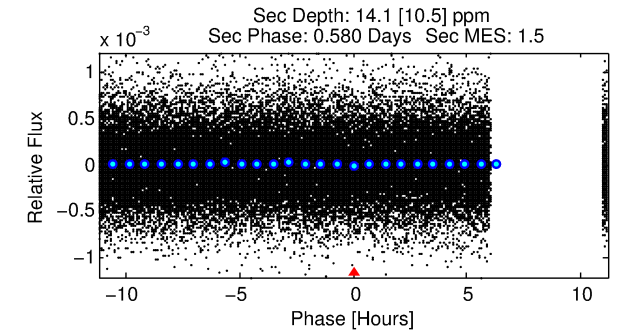
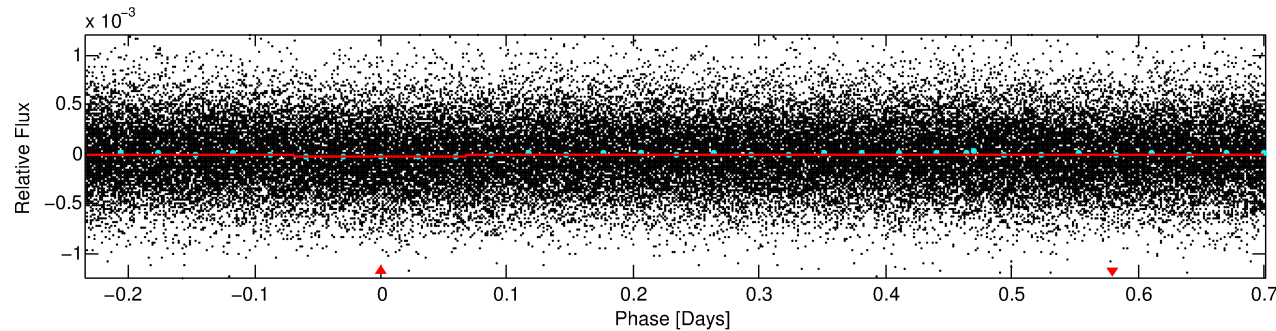
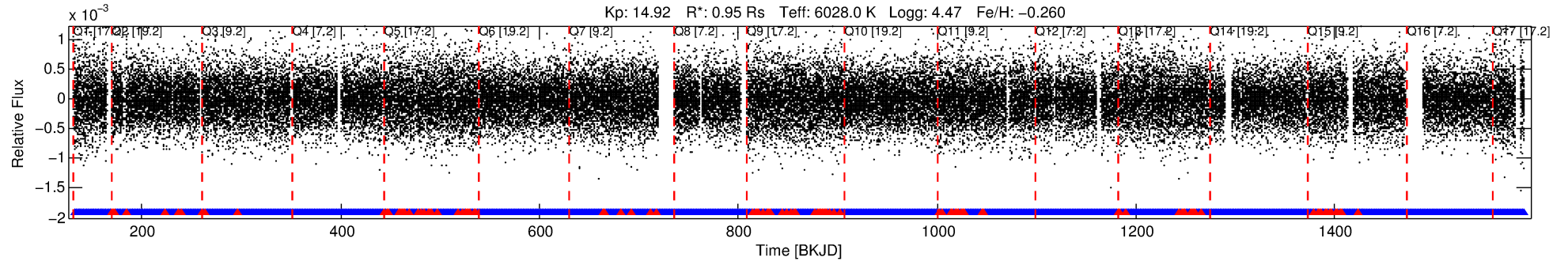
Ephemeris Match Information For 010535926-01

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
010535926-01	10535926	010535886-01	10535886	1:1	71.4	7	16	15.45	14.92	2.42	Direct-PRF	1	4.18	1.40

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: 10535926 Candidate: 1 of 1 Period: 0.934 d



DV Fit Results:

Period = 0.93371 [0.00002] d
Epoch = 132.4659 [0.0068] BKJD
Rp/R* = 0.0053 [0.0048]
a/R* = 1.31 [2.69]
b = 0.90 [1.08]
Seff = 3112.56 [1226.56]
Teff = 1905 [188] K
Rp = 0.55 [0.53] Re
a = 0.0185 [0.0047] AU
Ag = 8.90 [17.89] [0.44σ]
Teffp = 5086 [2519] K [1.26σ]

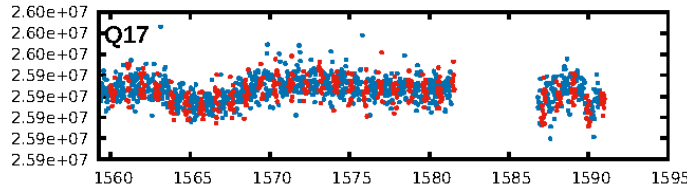
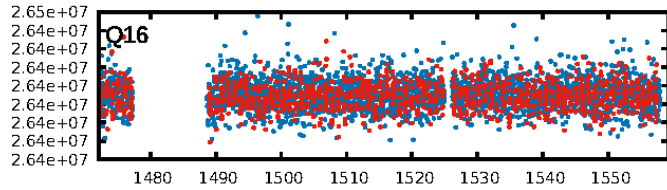
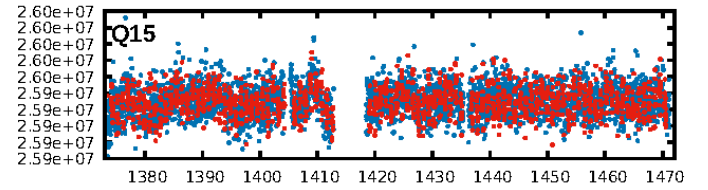
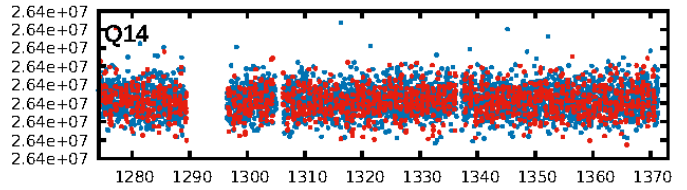
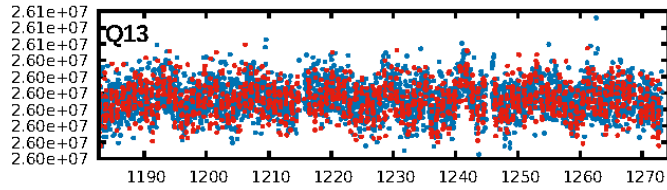
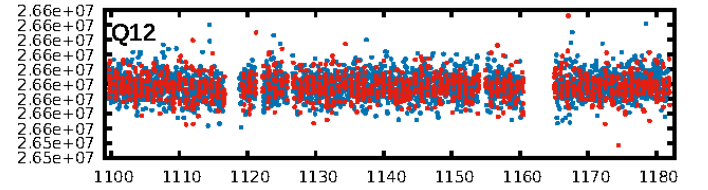
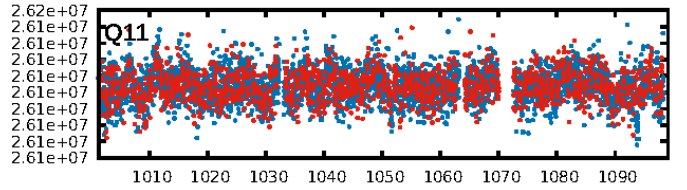
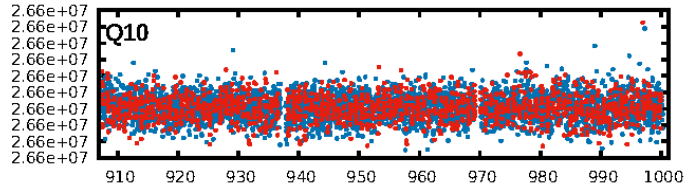
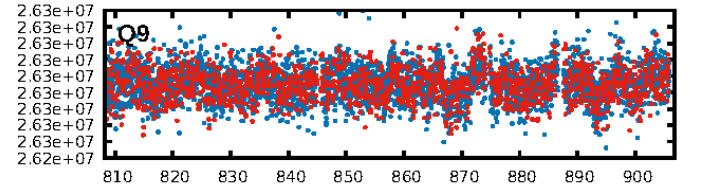
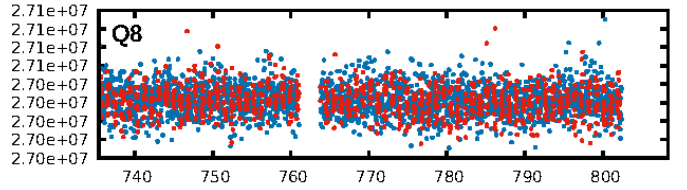
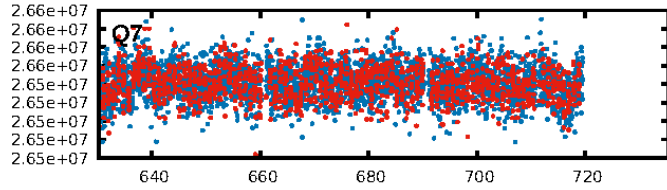
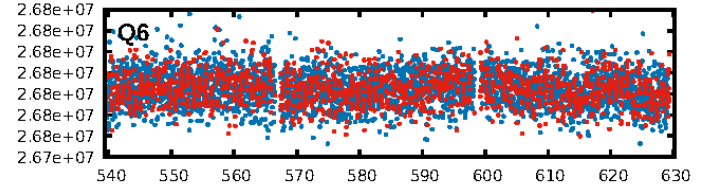
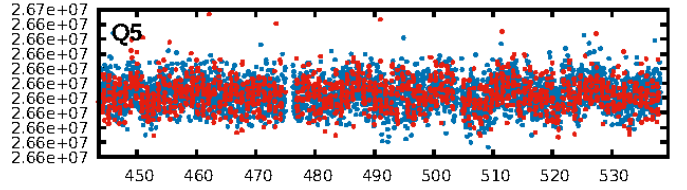
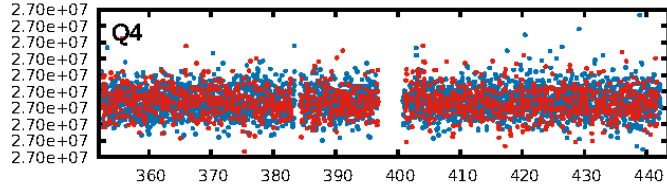
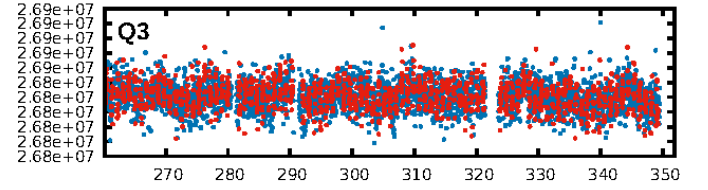
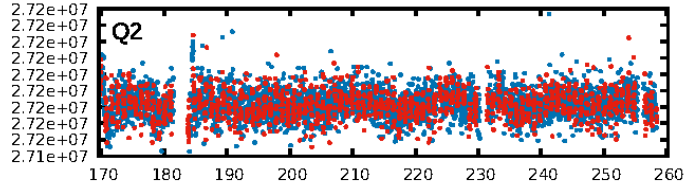
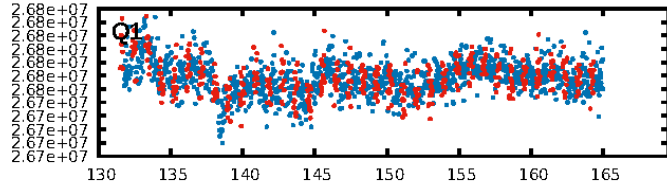
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.92e-15
RollingBand-fgt: 0.91 [1256/1374]
GhostDiagnostic-chr: 0.04383
Centroid-sig: 15.9%
Centroid-so: 3.455 arcsec [1.40σ]
OotOffset-rm: 2.343 arcsec [2.61σ]
KicOffset-rm: 2.411 arcsec [2.30σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.13 [2/15]
DiffImageOverlap-fno: 1.00 [17/17]

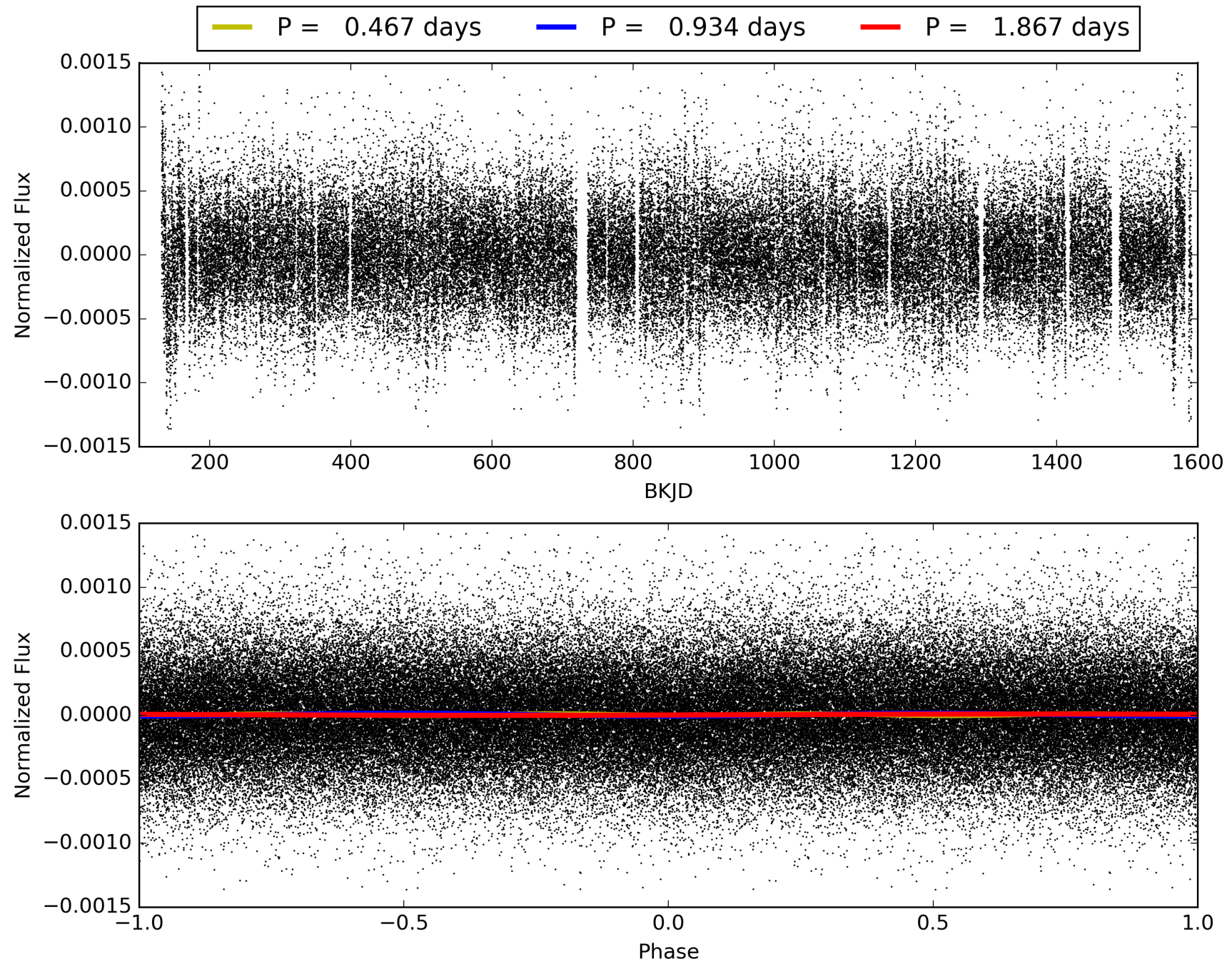
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:33:31 Z

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

TCE 010535926-01, PDC Light Curves

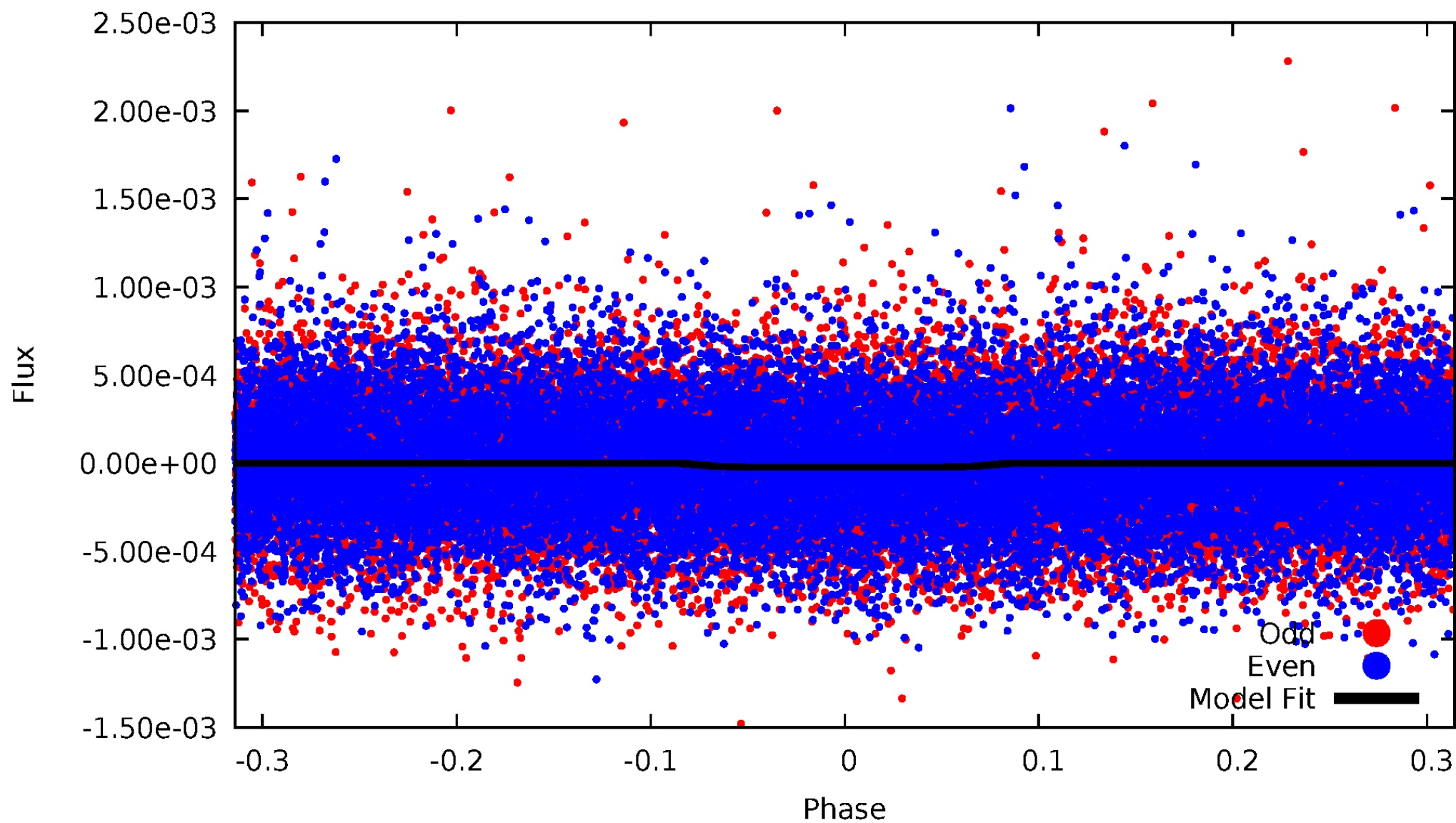


TCE 010535926-01



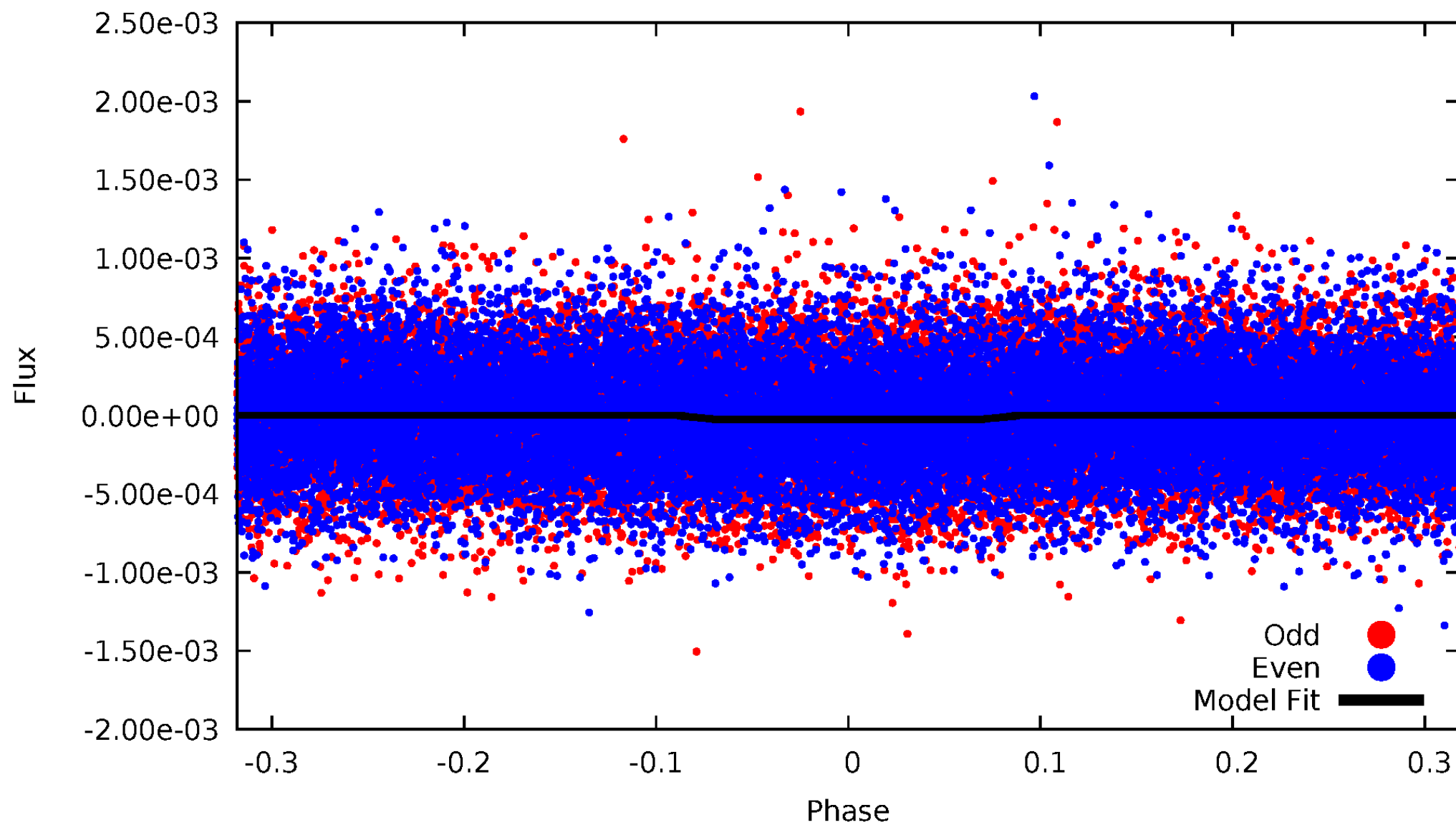
DV Odd/Even

TCE 010535926-01



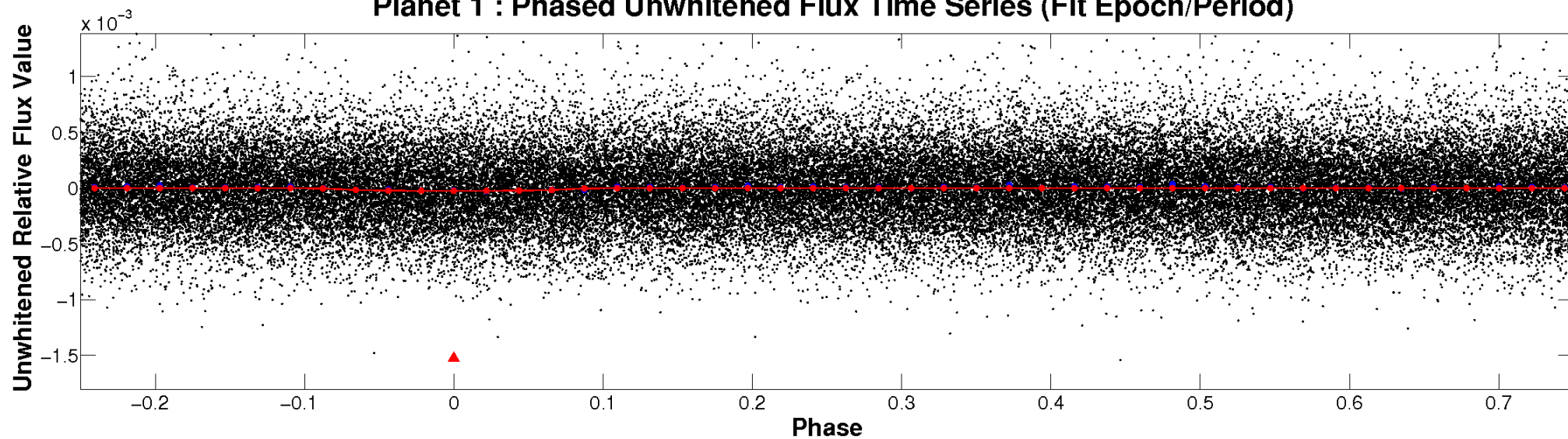
ALT Odd/Even

TCE 010535926-01

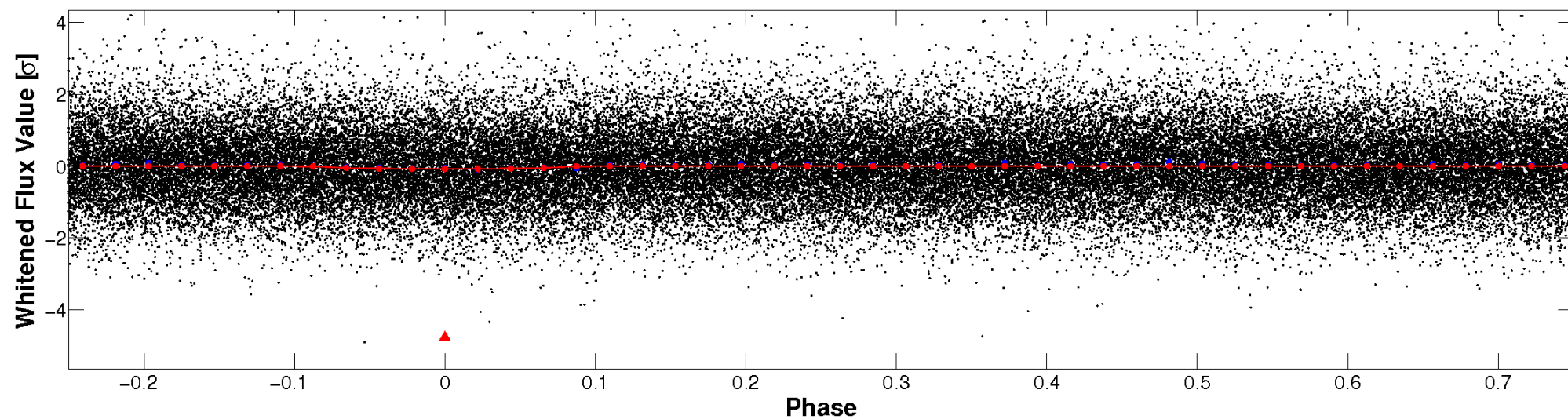


Non-Whitened Vs. Whitened Light Curve

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

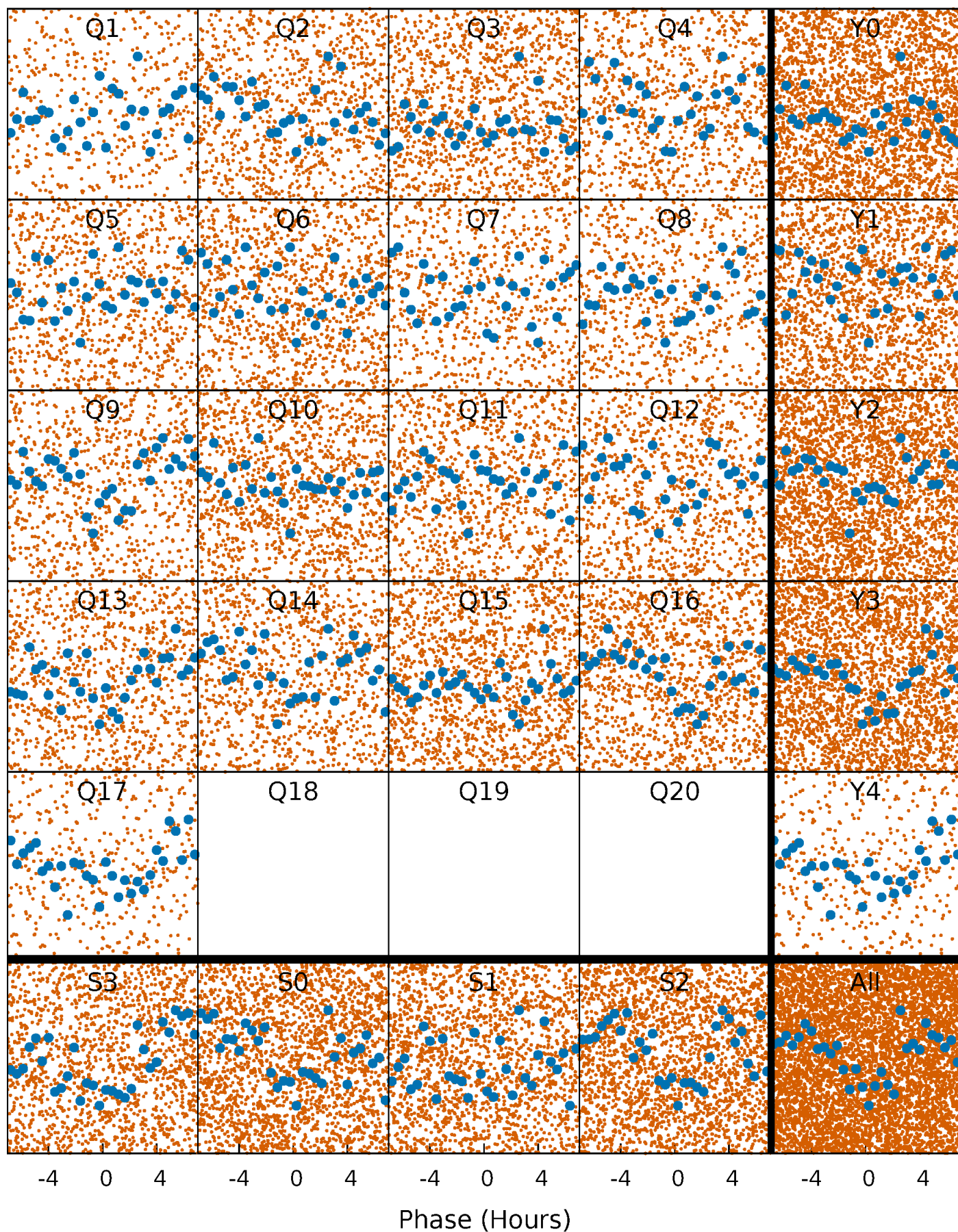


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



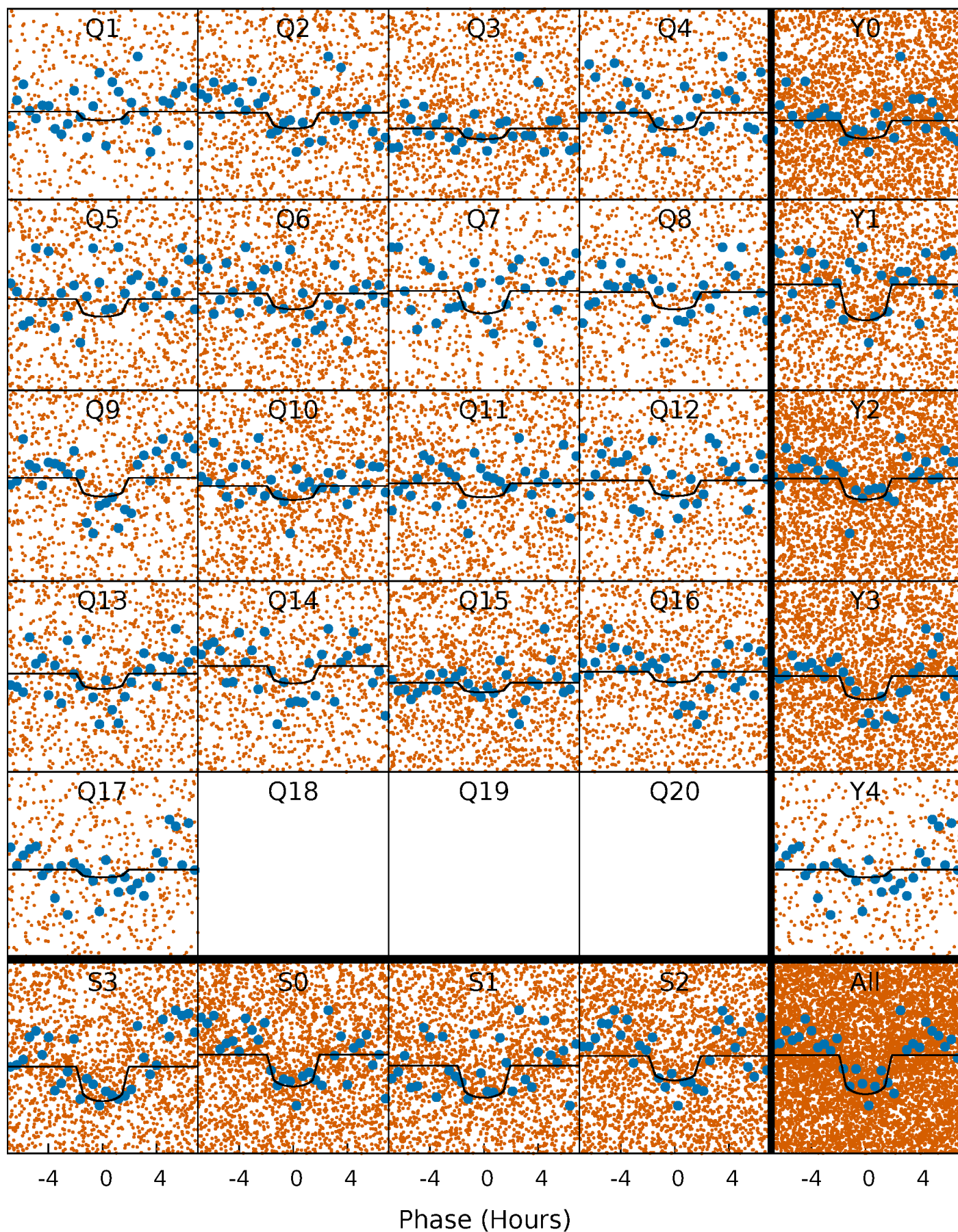
PDC Quarter-Phased Transit Curves

TCE 010535926-01 P= 0.933714 Days $T_0=132.465936$ (BKJD)



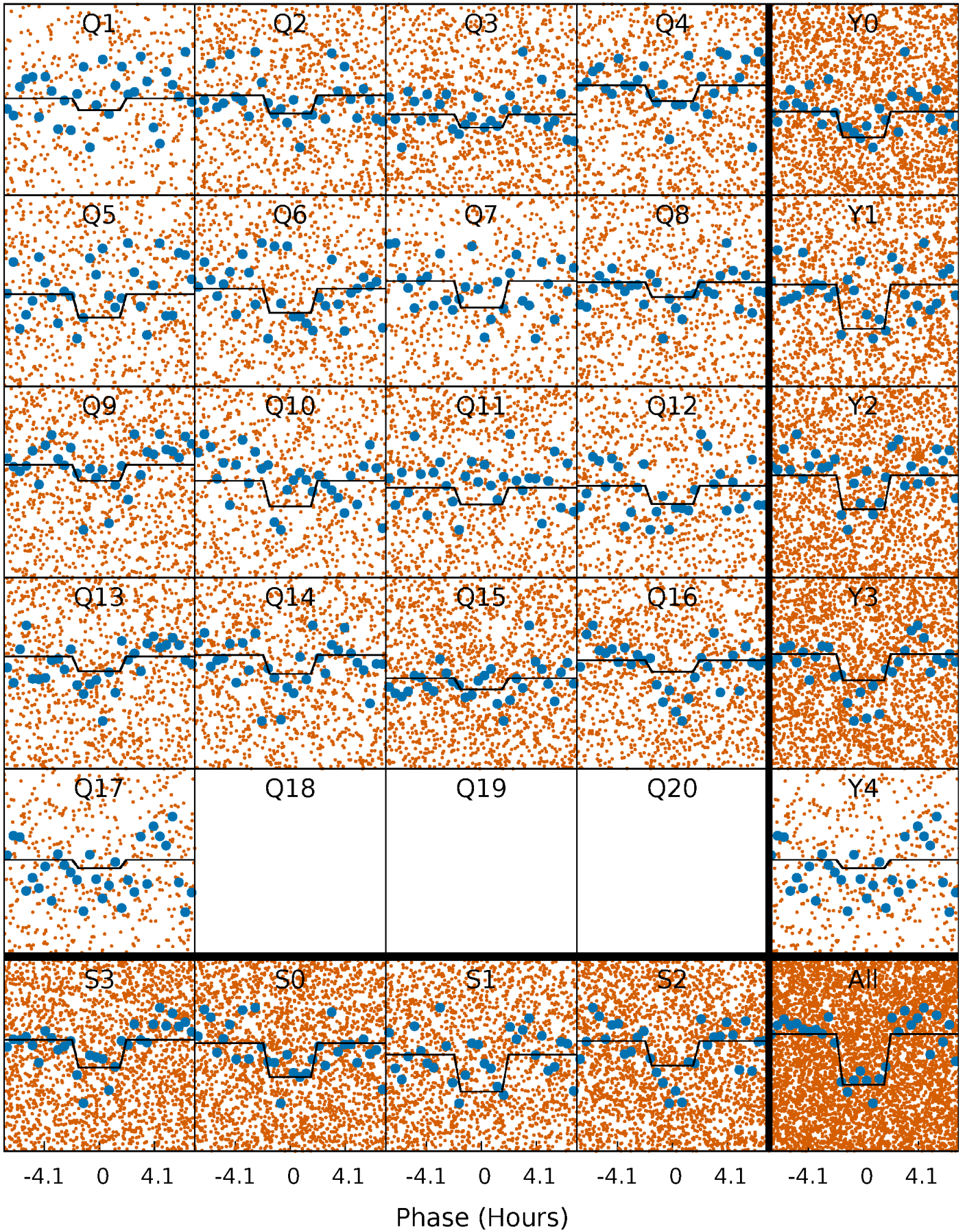
DV Quarter-Phased Transit Curves

TCE 010535926-01 P= 0.933714 Days $T_0=132.465936$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

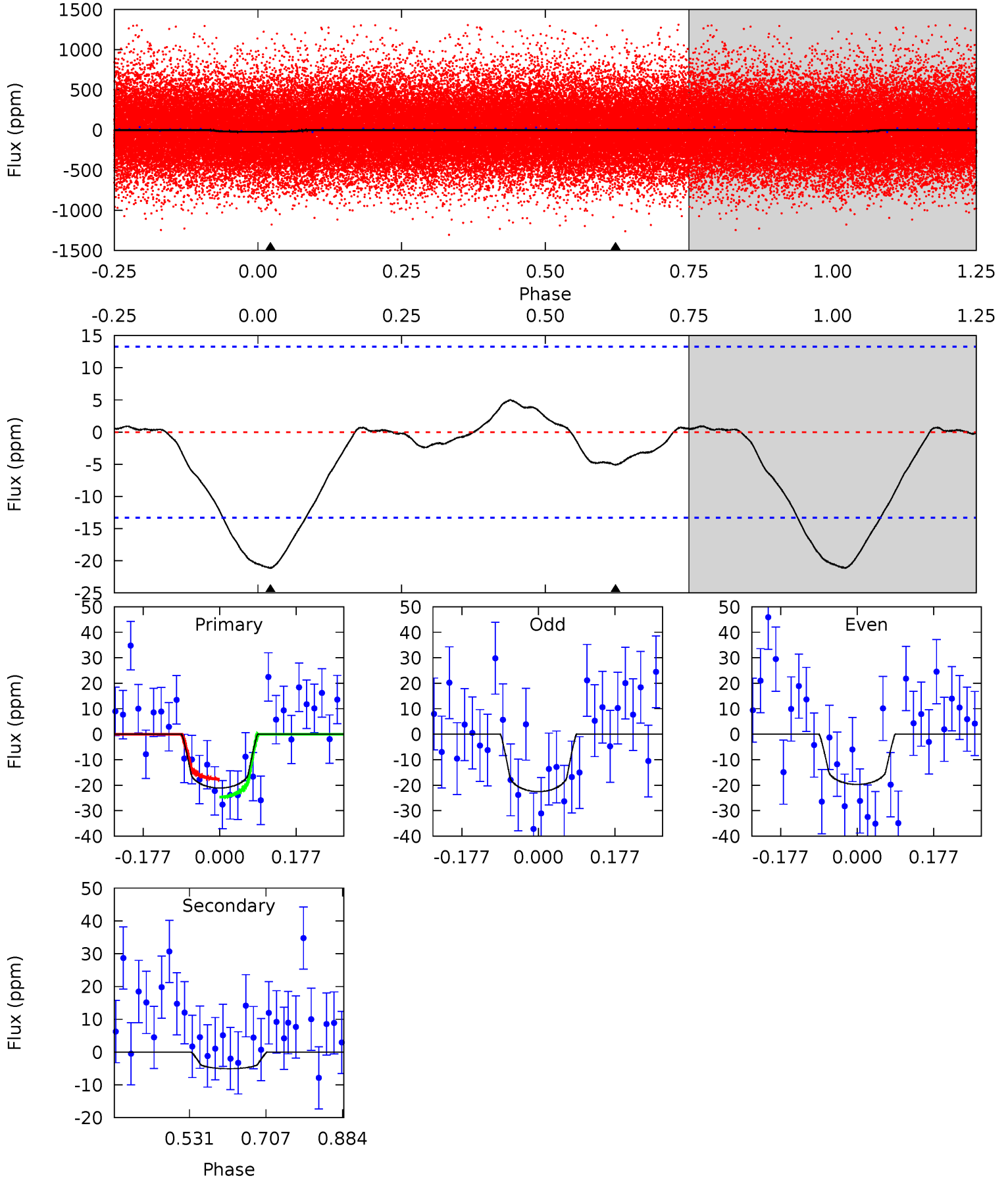
TCE 010535926-01 P= 0.933759 Days $T_0=132.439285$ (BKJD)



DV Model-Shift Uniqueness Test

010535926-01, P = 0.933714 Days, E = 130.598508 Days

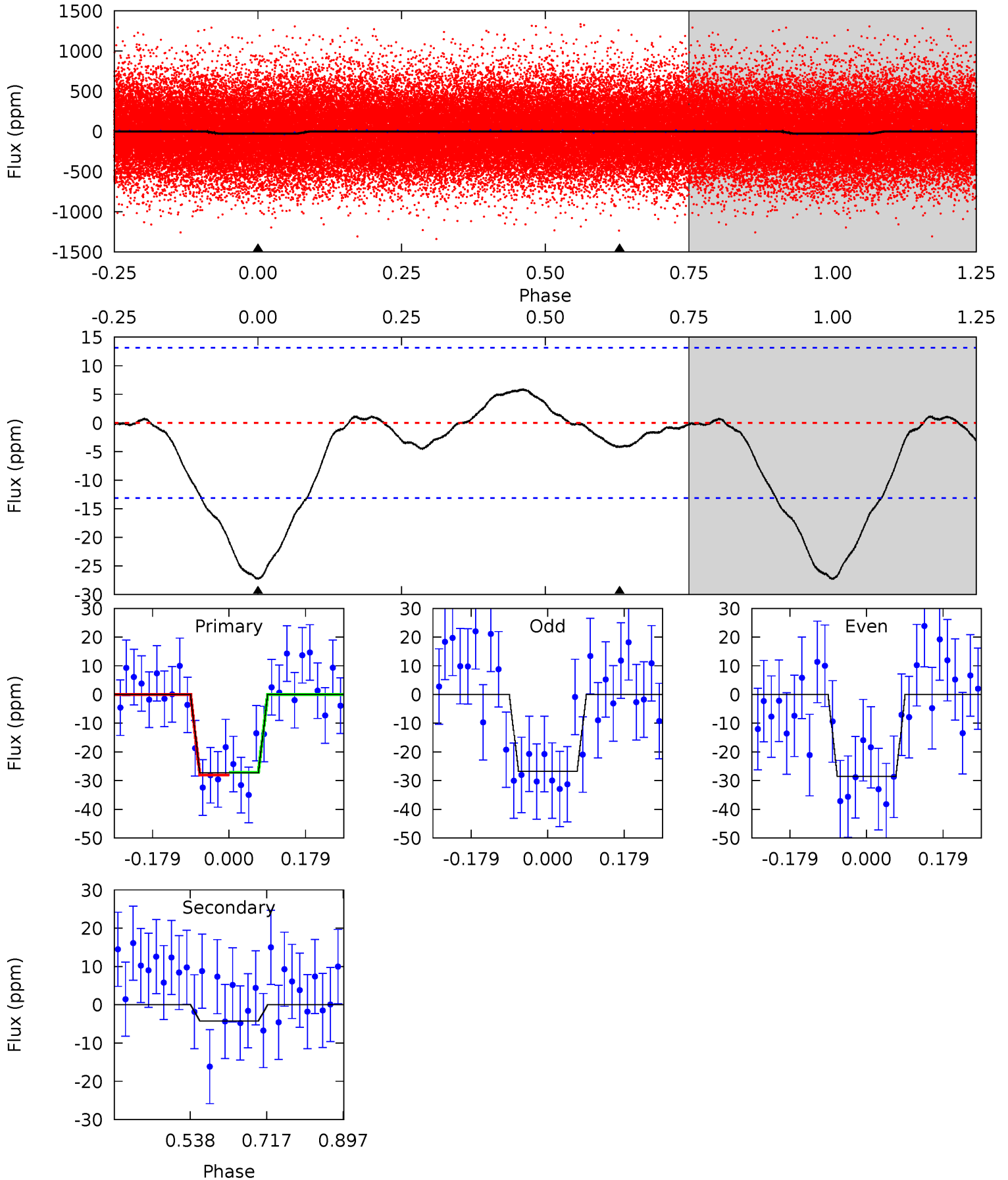
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.06	1.70	0	0	4.44	1.35	0.61	7.06	7.06	1.70	1.70	0.47	0.92	0.19	1.17



Alt Model-Shift Uniqueness Test

010535926-01, P = 0.933759 Days, E = 131.505526 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.23	1.43	0	0	4.44	1.34	1.00	9.23	9.23	1.43	1.43	0.30	0.95	0.18	0.15



Stellar Parameters For KIC 010535926

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6028^{+163}_{-199}	$4.470^{+0.067}_{-0.202}$	$-0.260^{+0.300}_{-0.300}$	$0.950^{+0.291}_{-0.116}$	$0.969^{+0.130}_{-0.117}$	$1.593^{+0.559}_{-0.799}$
	+3%/-3%	+1%/-5%	+115%/-115%	+31%/-12%	+13%/-12%	+35%/-50%
Source	PHO1	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 010535926-01 / KOI 8023.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 3	$0.67^{+0.53}_{-0.38}$	2701^{+210}_{-135}	3748^{+1698}_{-1089}	$1.778^{+8.924}_{-1.348}$
Alt.	-4 ± 3	$0.67^{+0.46}_{-0.40}$	2713^{+186}_{-143}	3595^{+1661}_{-5697}	$1.462^{+8.189}_{-1.186}$

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 $A_{obs} \gg 1.0$

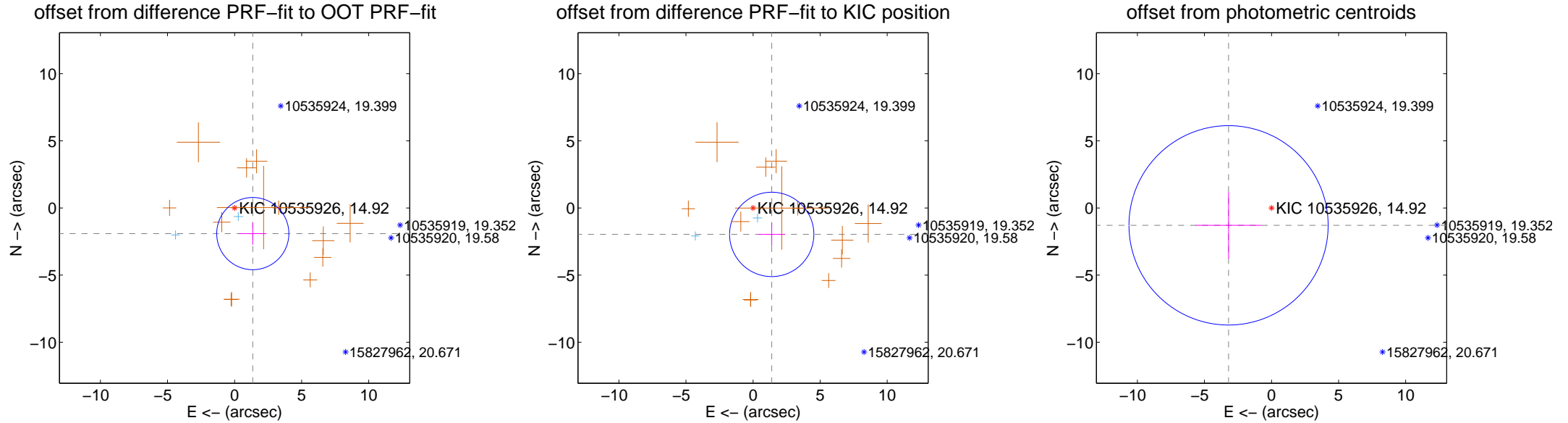
DV Centroid Data

Supplemental centroid analysis for 010535926-01. Kepler magnitude: 14.92. Transit SNR 6.31

There are 2 quarters with good PRF difference image offsets

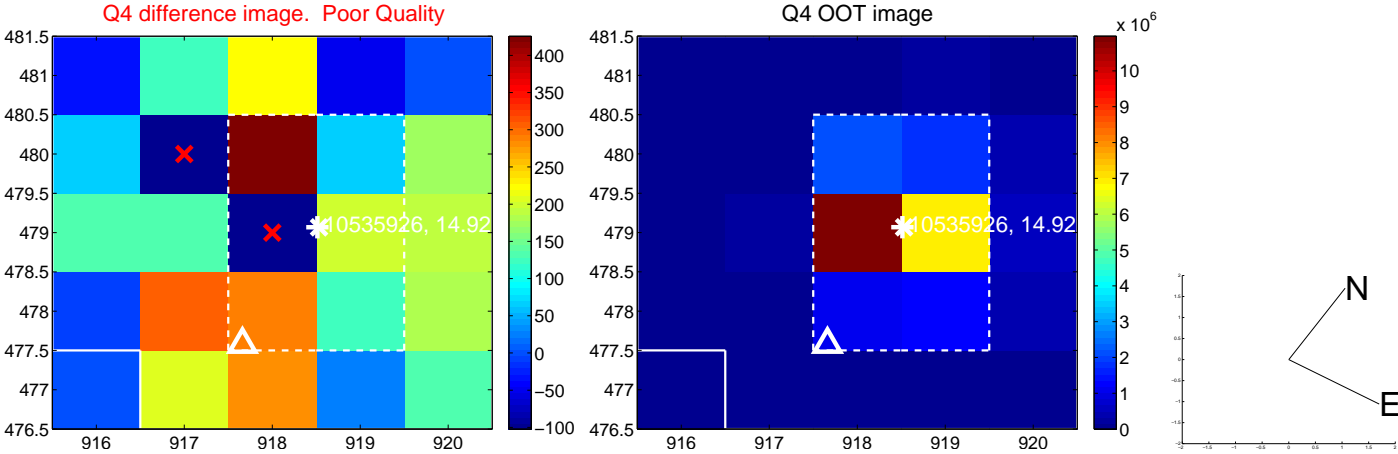
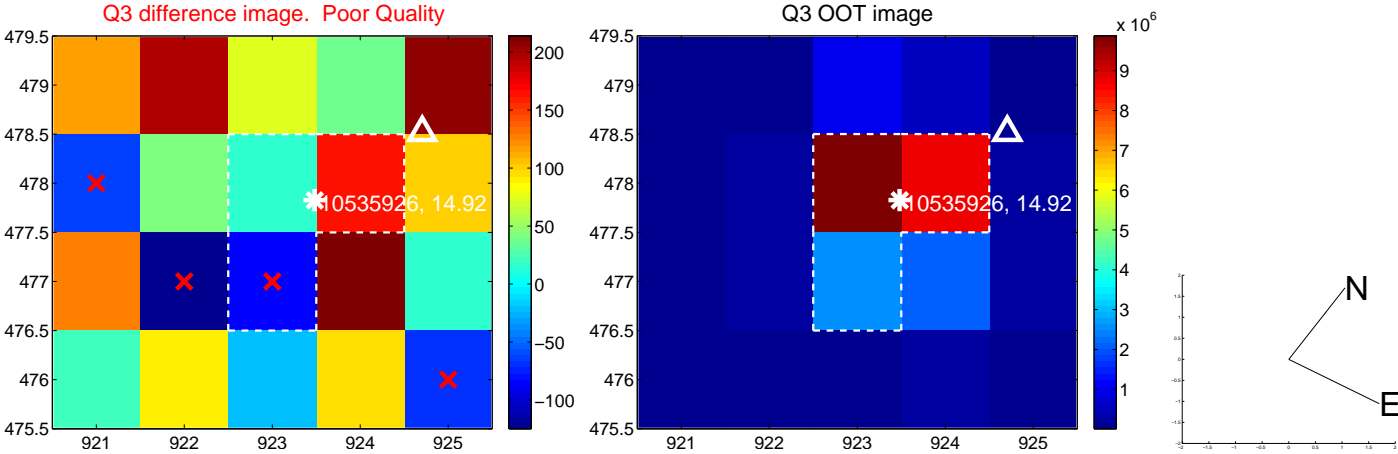
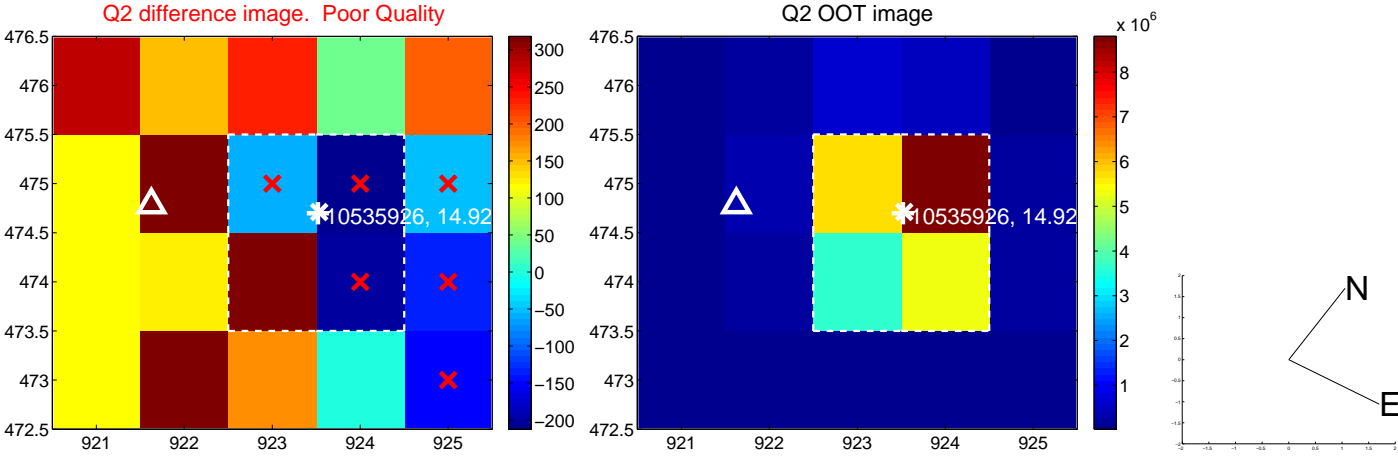
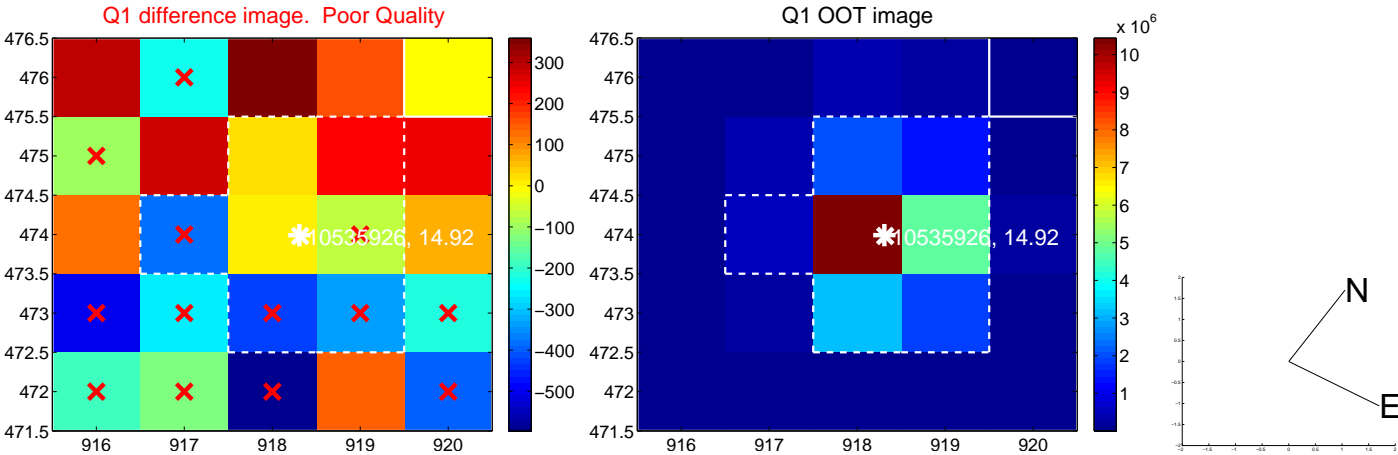
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.343 ± 0.896	2.61	-1.357 ± 1.014	-1.910 ± 0.830
PRF-fit source offset from KIC position	2.411 ± 1.047	2.30	-1.392 ± 1.014	-1.969 ± 0.847
photometric centroid source offset	3.45 ± 2.47	1.40	3.20 ± 2.47	-1.30 ± 2.47

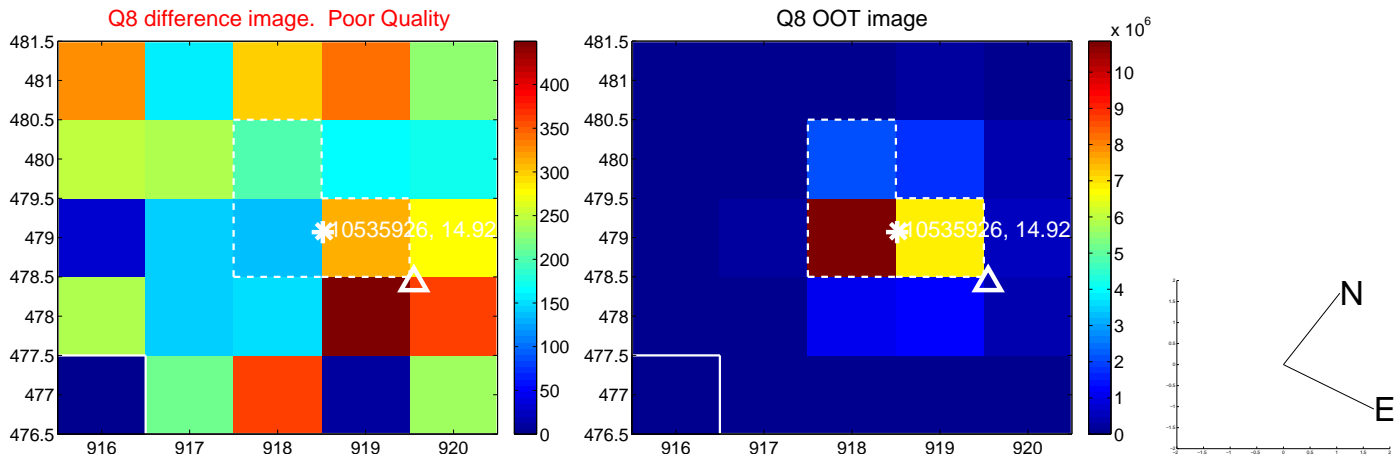
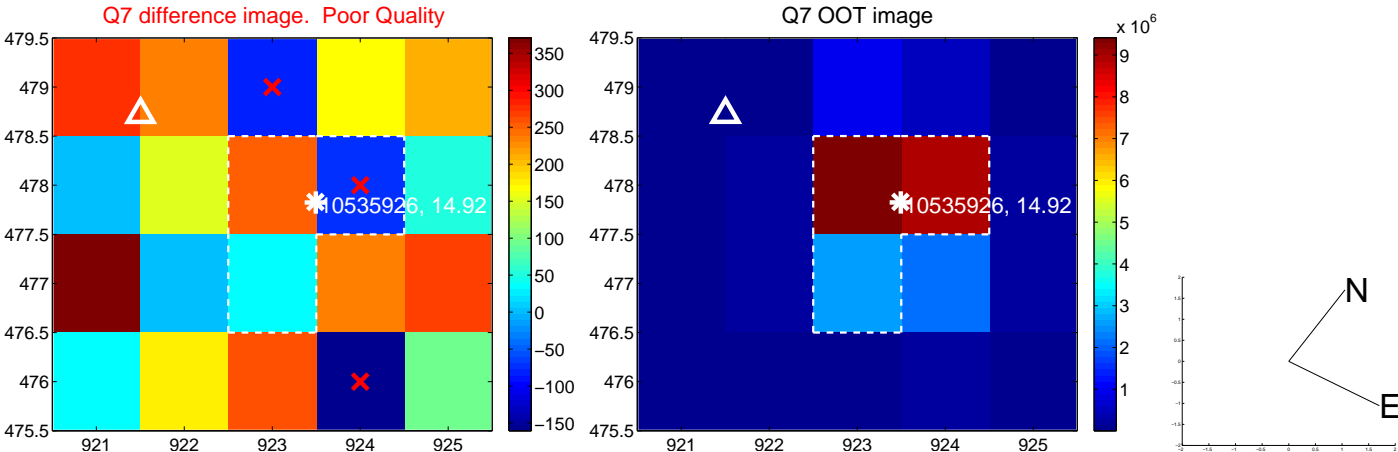
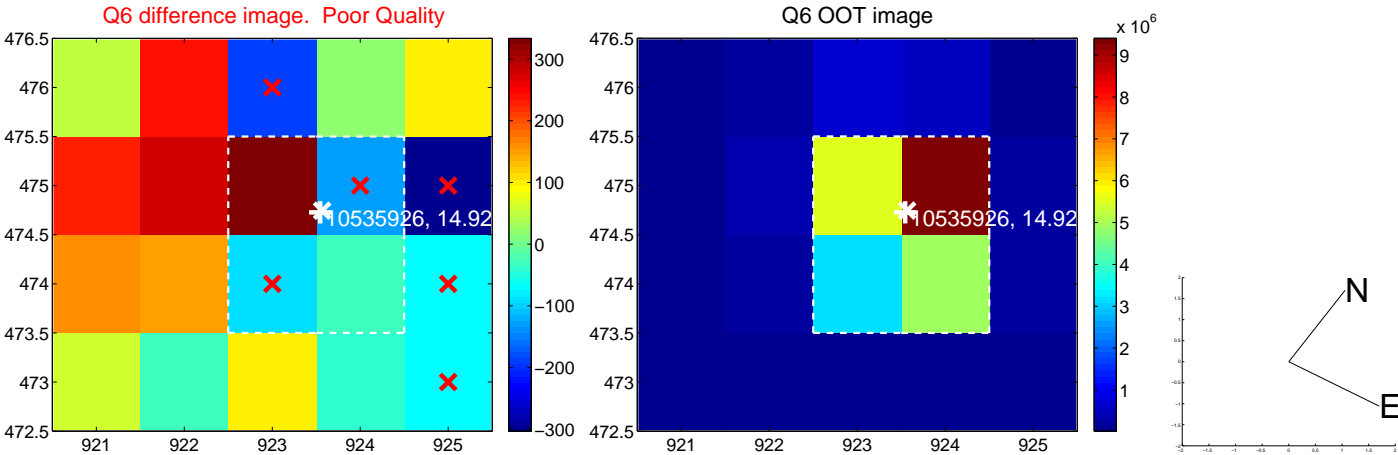
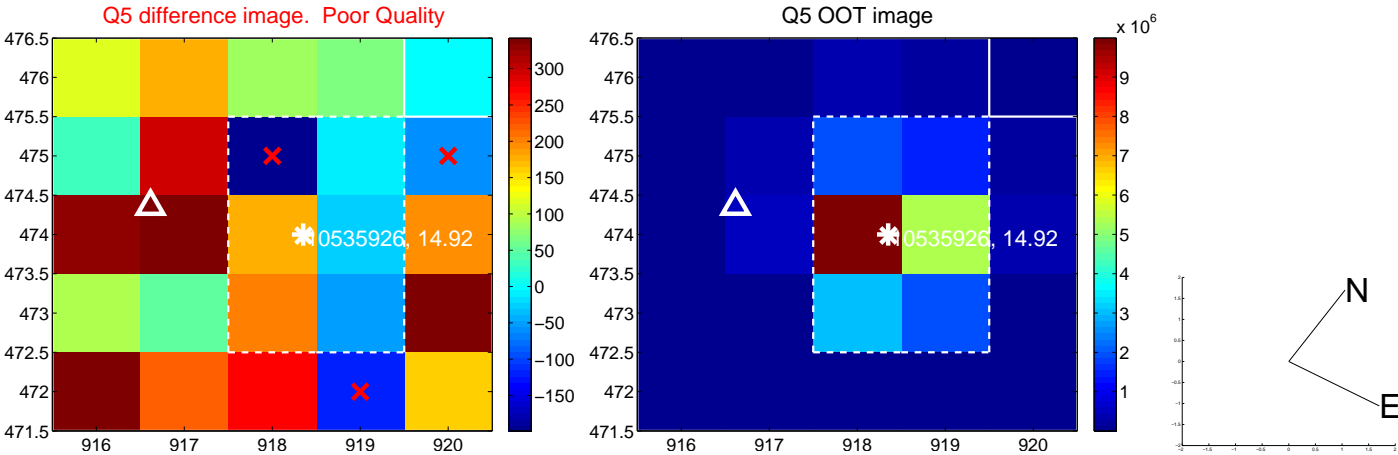


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

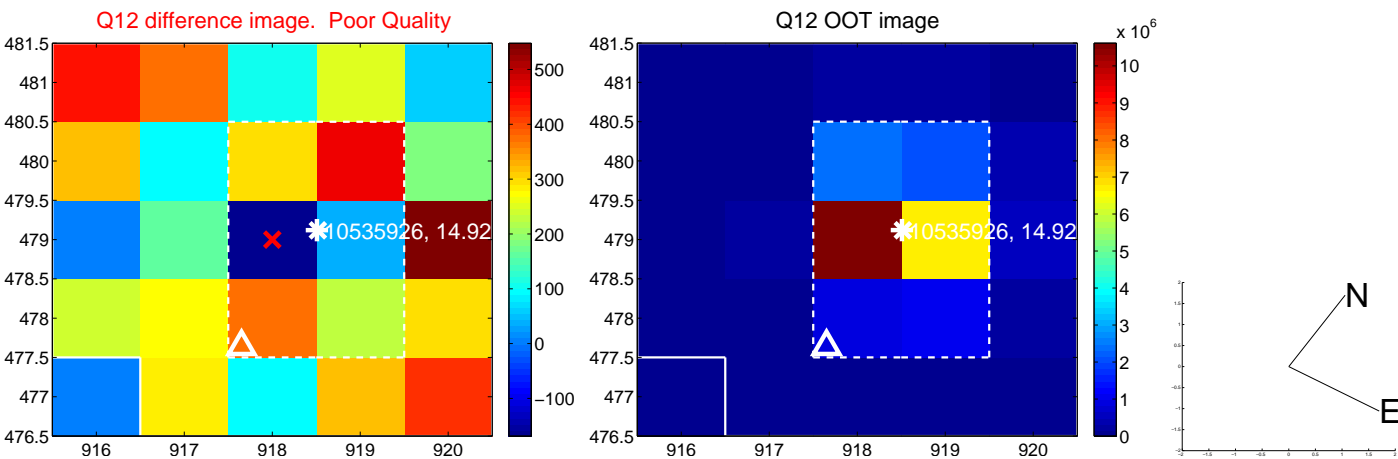
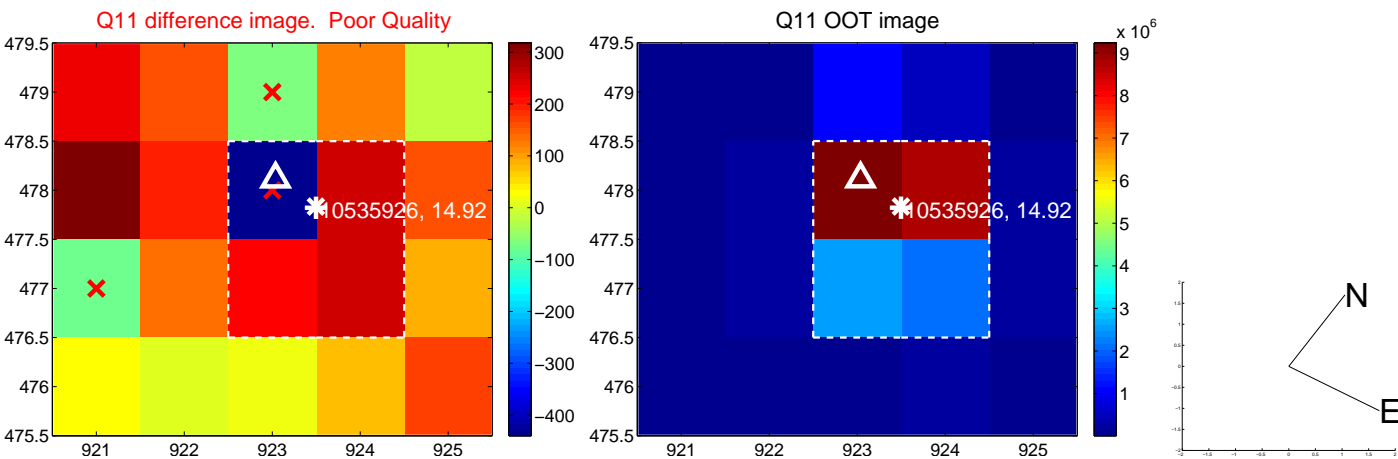
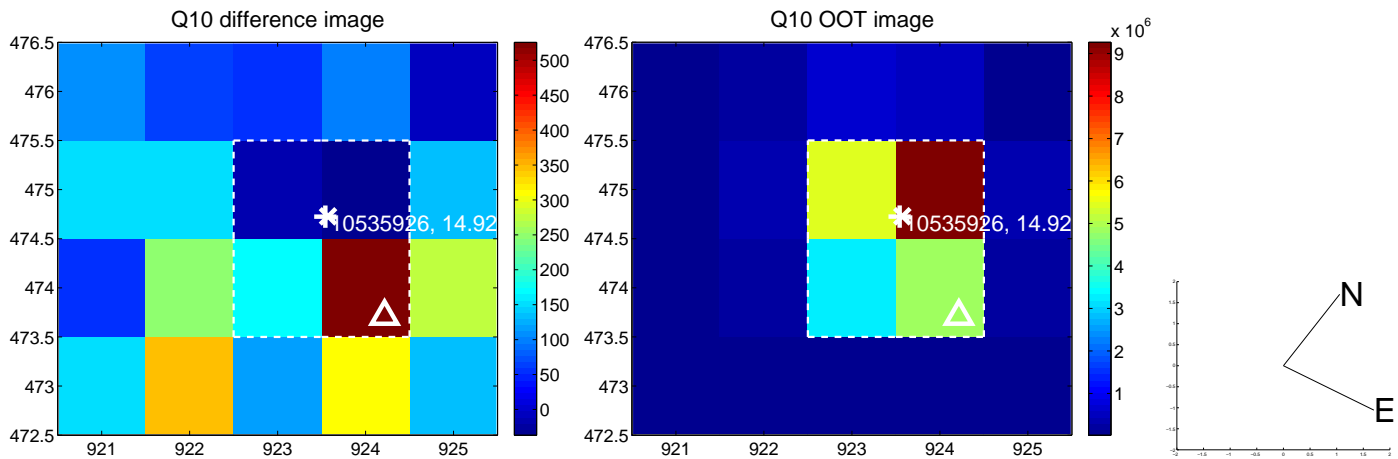
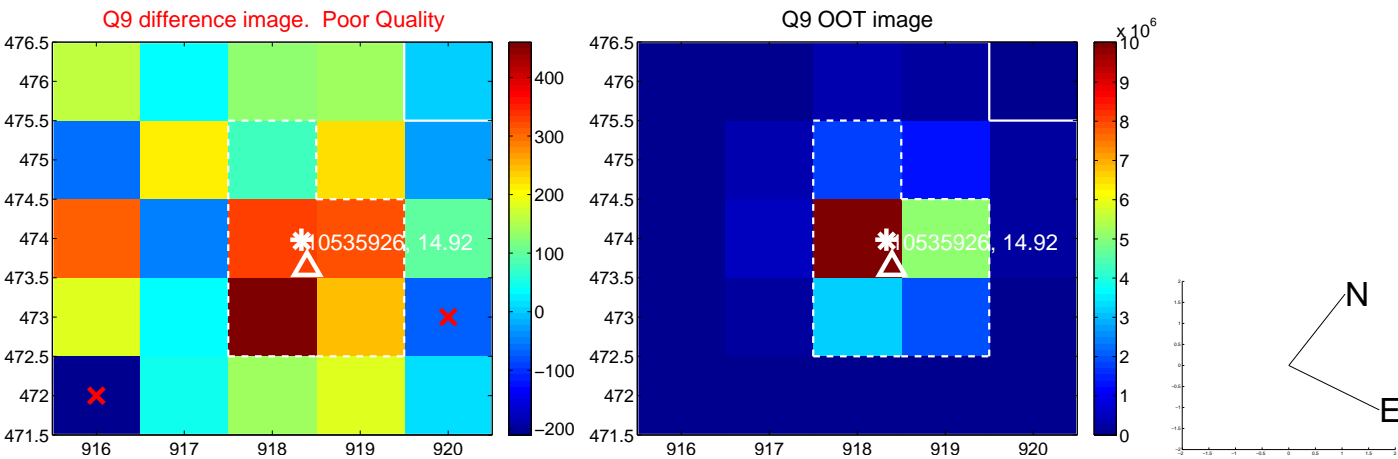
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



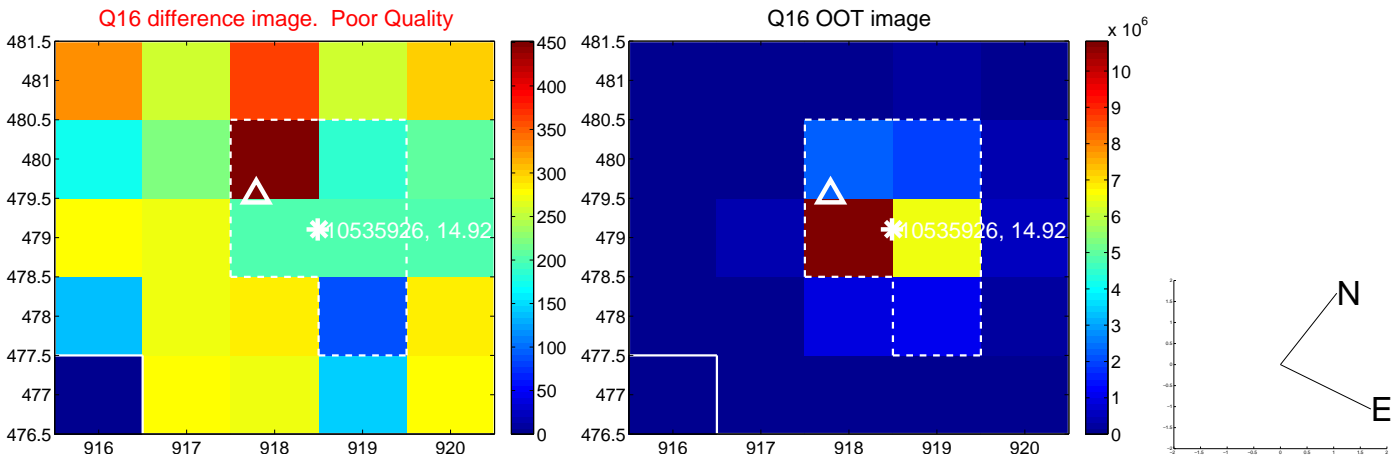
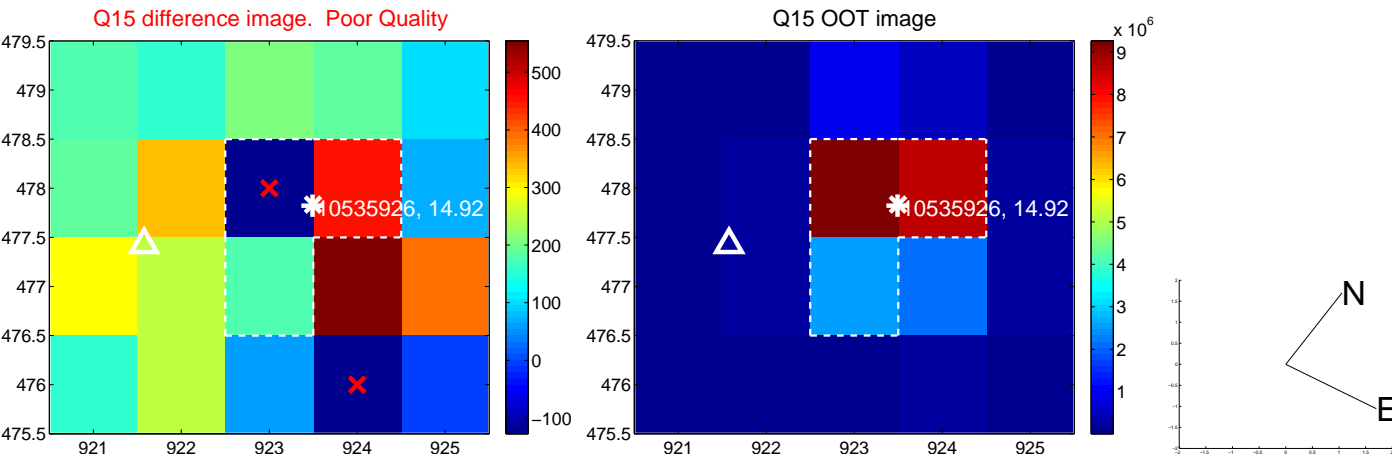
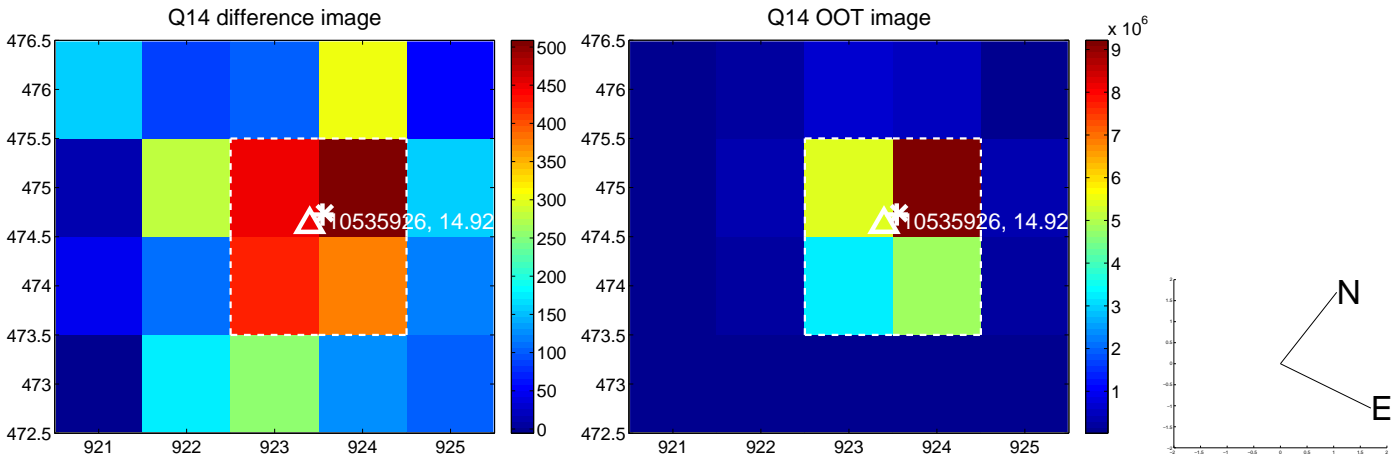
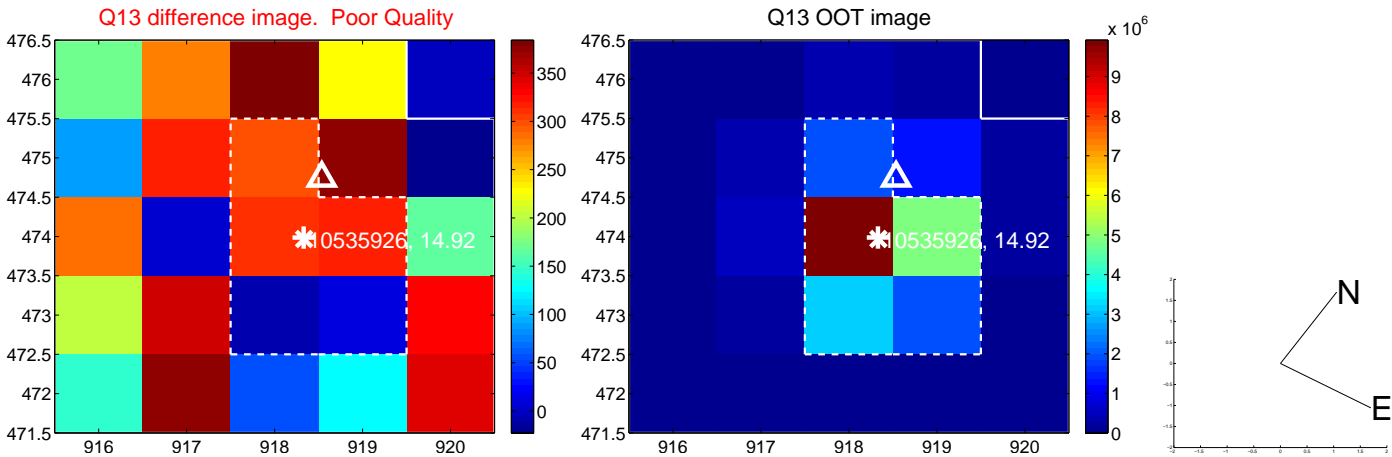
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



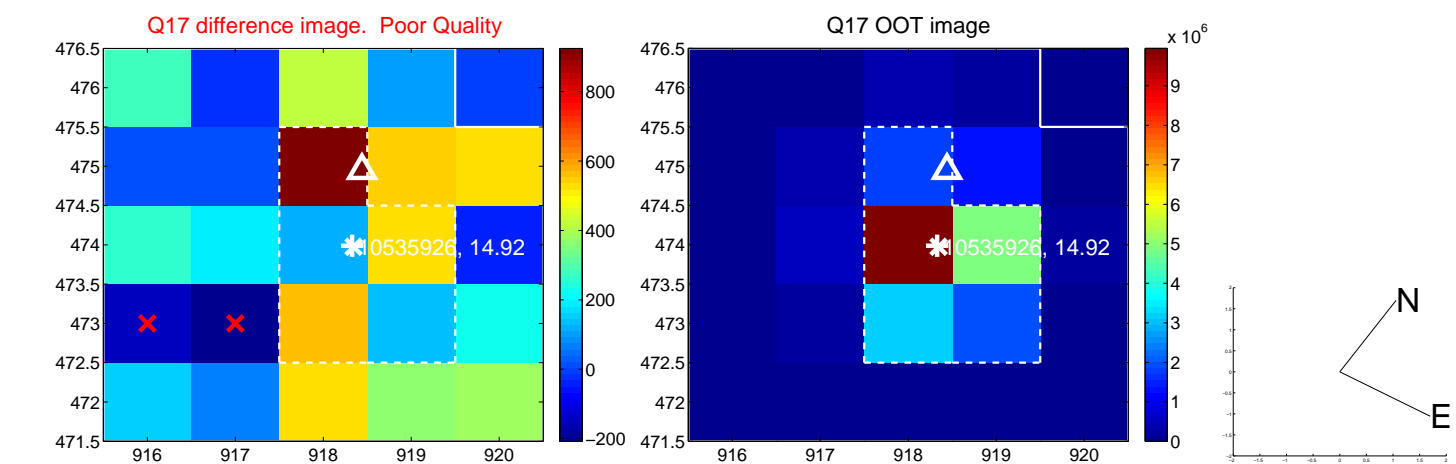
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



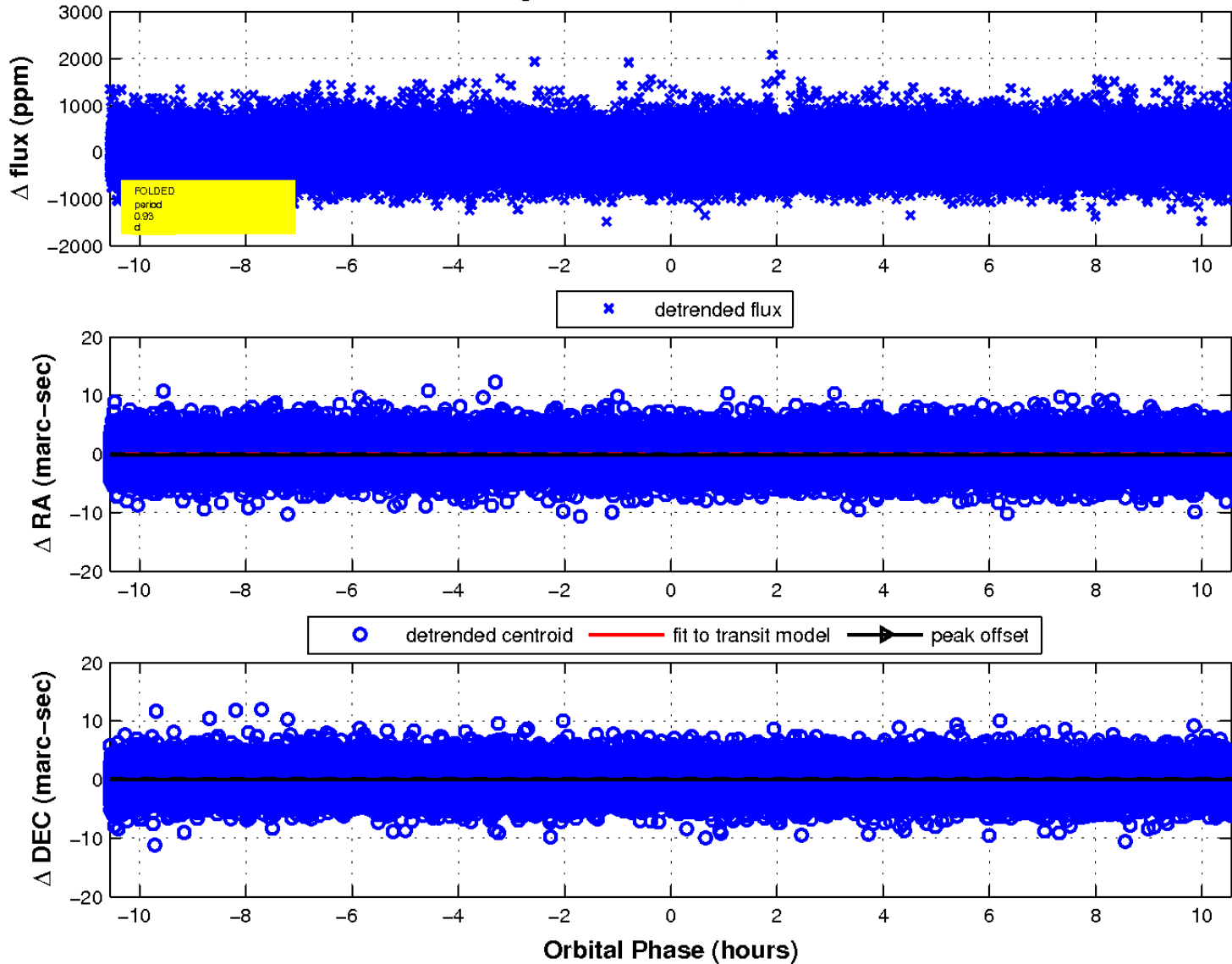
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

