

KIC 009899141

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})
009899141-01	OBS	3254.01	1.332542	132.067536	19.0	3.631	14.6	15.4	1.00	5655	0.47	1646.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009899141-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_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.

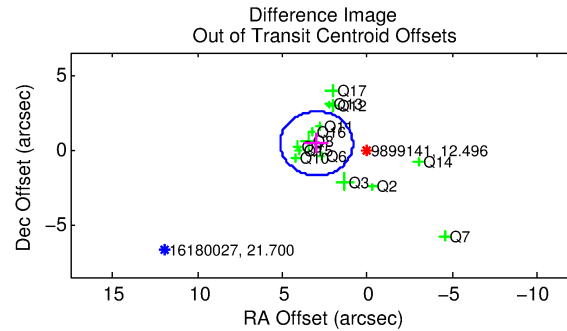
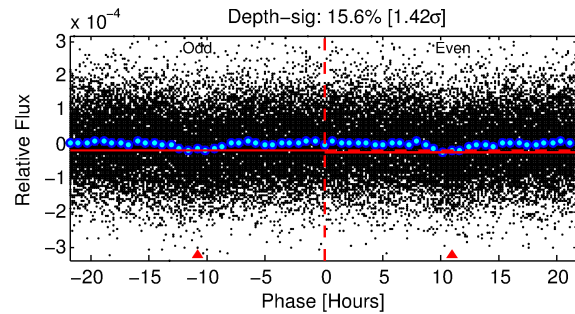
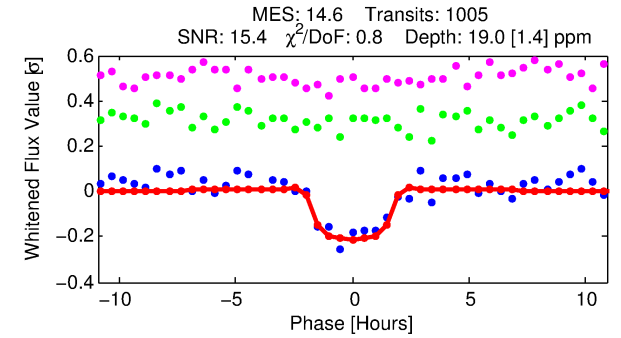
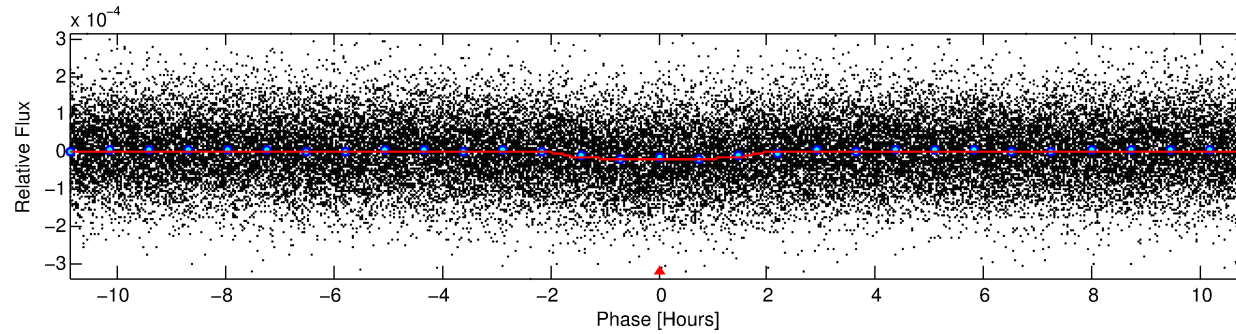
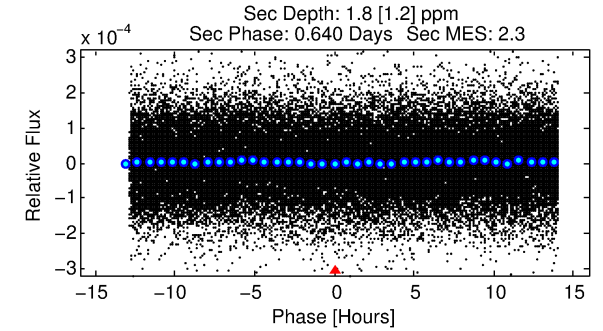
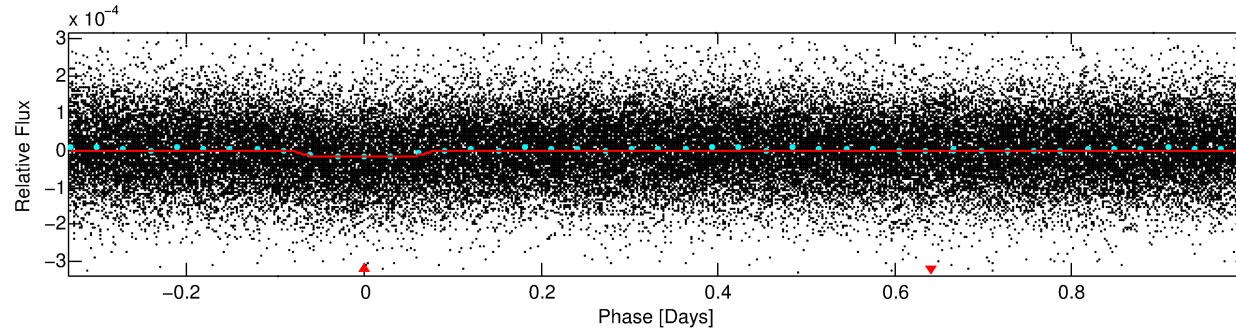
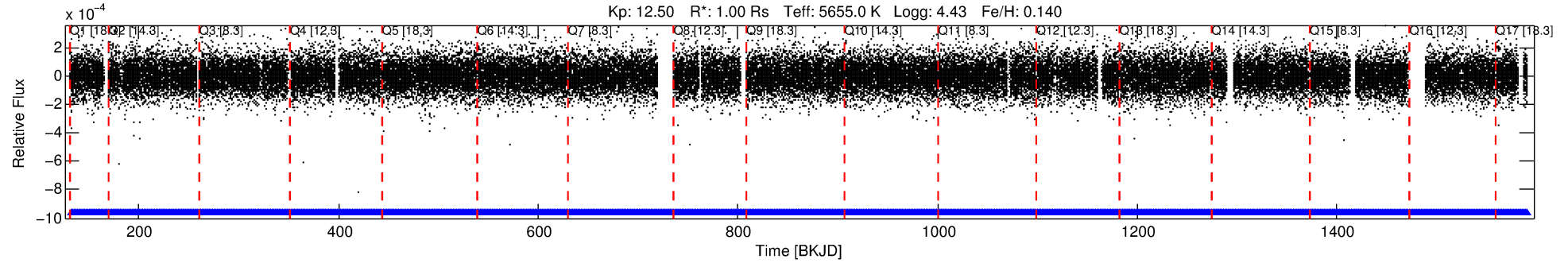
Ephemeris Match Information For 009899141-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (η)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009899141-01	9899141	BR-Cyg-pri	9899416	1:1	236.5	57	-17	10.03	12.50	35204.00	Direct-PRF	0	1.33	1.24

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: 9899141 Candidate: 1 of 1 Period: 1.333 d
KOI: K03254.01 Corr: 0.930



DV Fit Results:

Period = 1.33254 [0.00001] d
Epoch = 132.0675 [0.0030] BKJD
Rp/R* = 0.0043 [0.0008]
a/R* = 2.13 [1.29]
b = 0.72 [0.52]
Seff = 1646.15 [430.40]
Teq = 1624 [106] K
Rp = 0.47 [0.12] Re
a = 0.0235 [0.0038] AU
Ag = 2.58 [2.05] [0.77σ]
Teffp = 3182 [609] K [2.52σ]

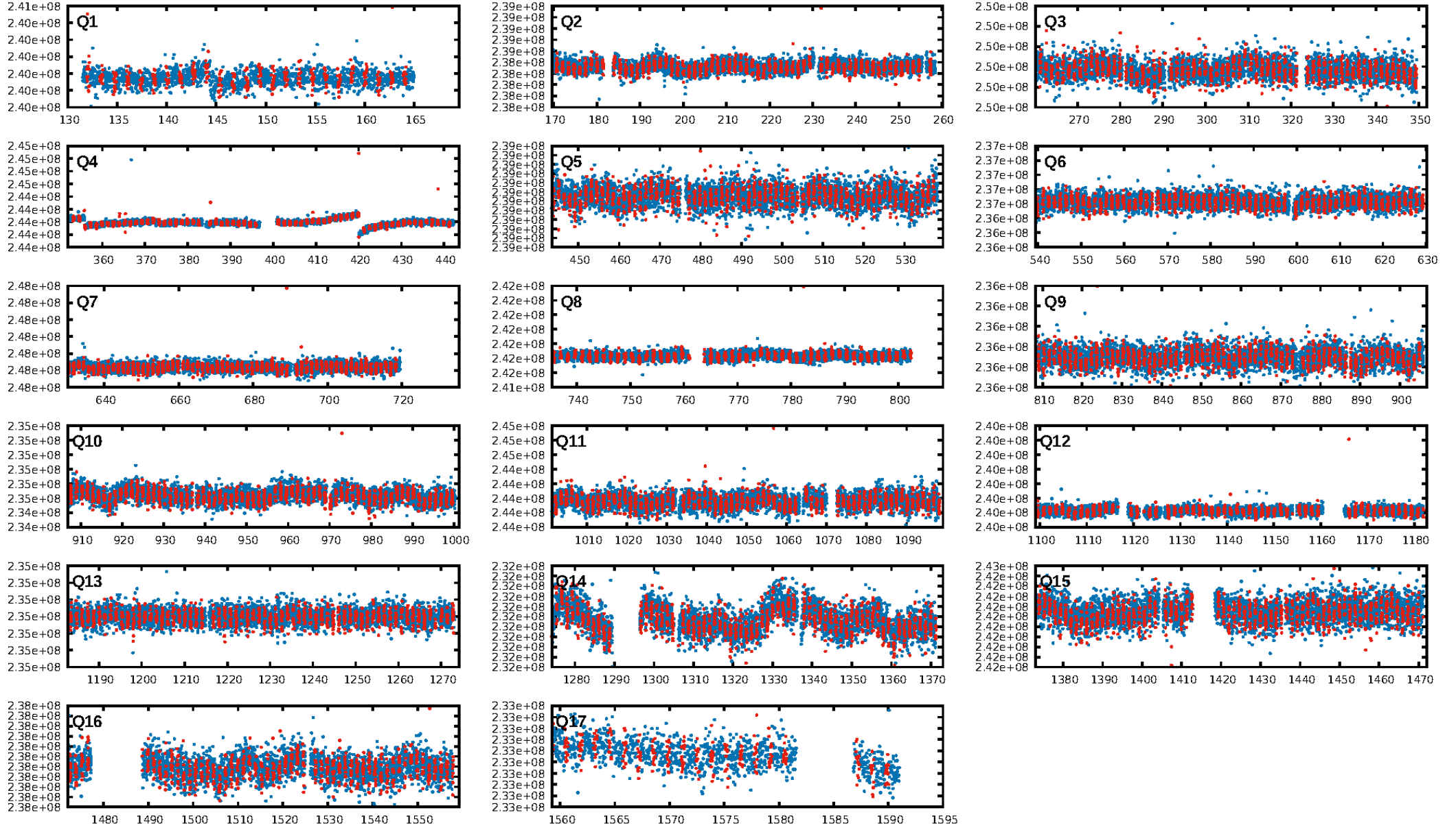
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.58e-44
RollingBand-fgt: 1.00 [960/960]
GhostDiagnostic-chr: -0.04165
Centroid-sig: 0.0%
Centroid-so: 2.239 arcsec [3.04σ]
OotOffset-rm: 3.009 arcsec [4.21σ]
KicOffset-rm: 2.889 arcsec [4.19σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.21 [3/14]
DiffImageOverlap-fno: 1.00 [17/17]

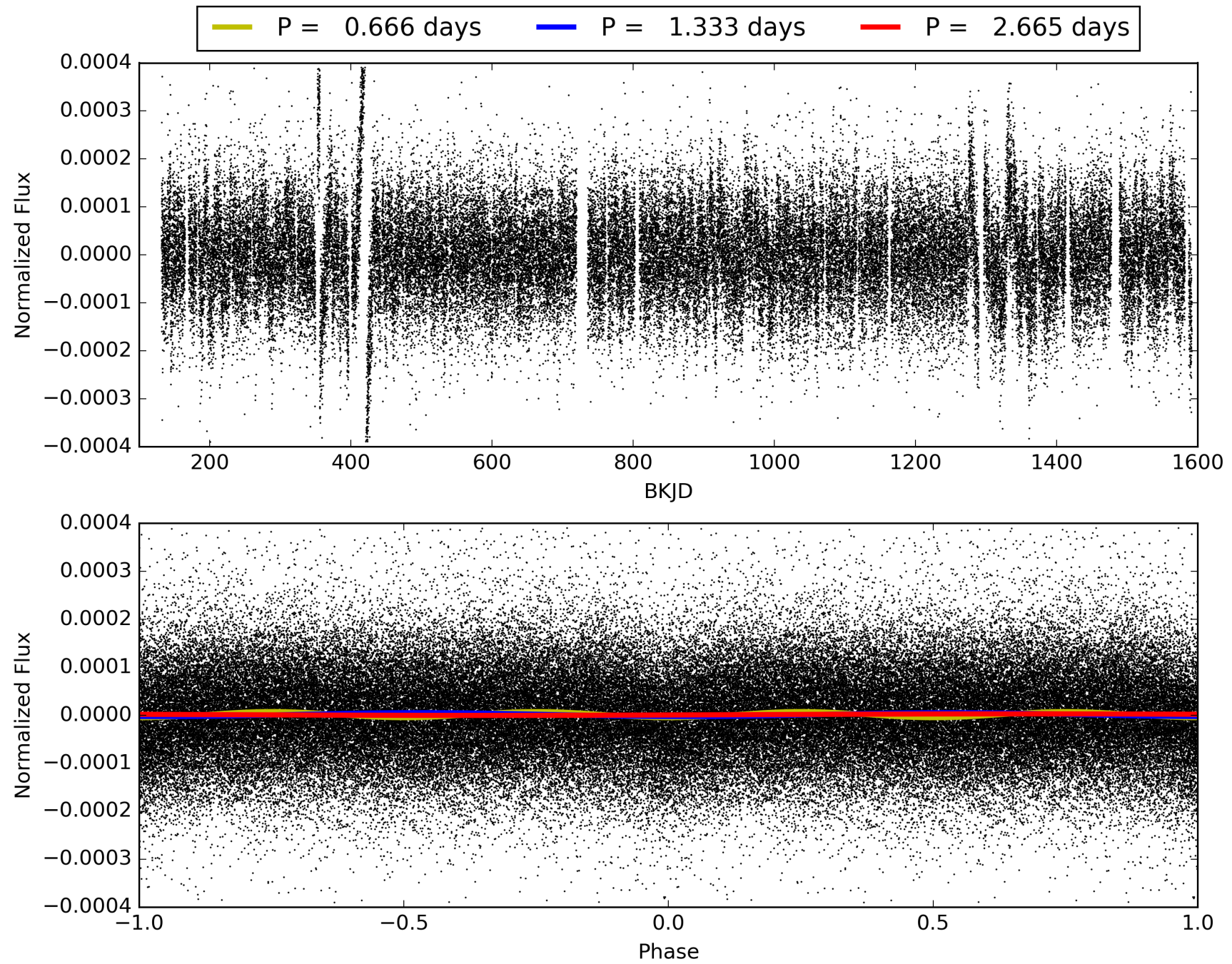
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:20:40 Z

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

TCE 009899141-01, PDC Light Curves

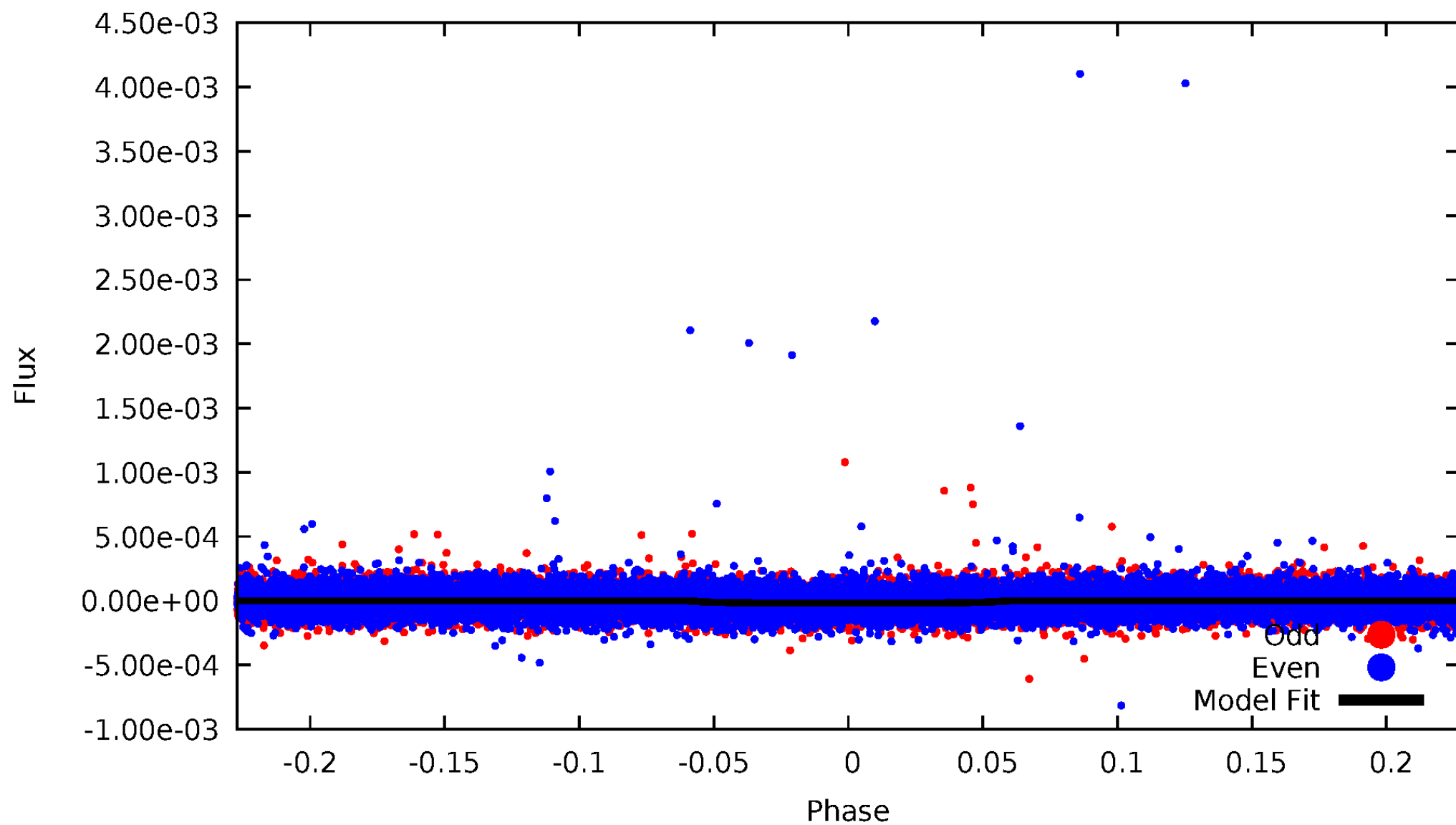


TCE 009899141-01



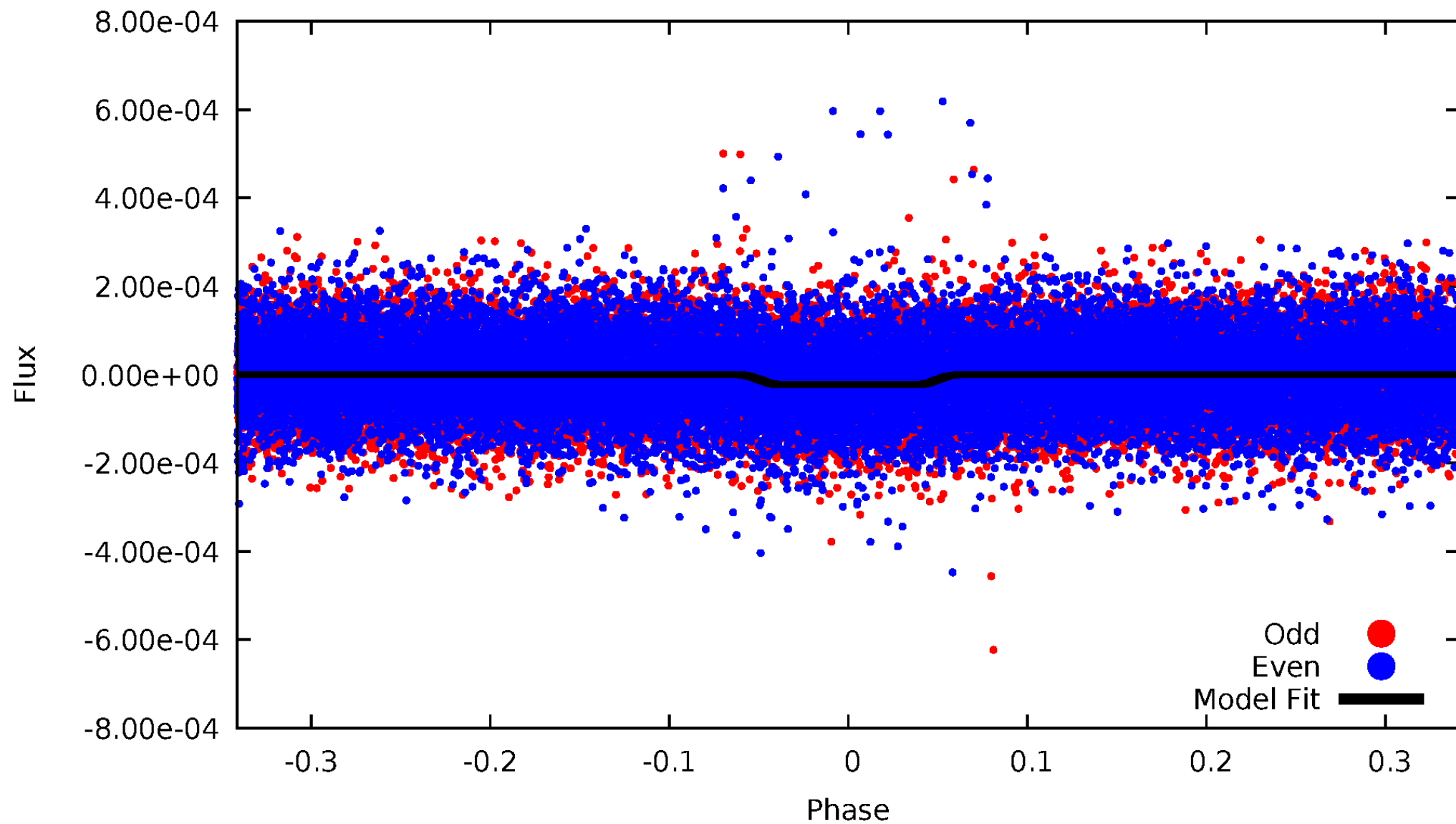
DV Odd/Even

TCE 009899141-01



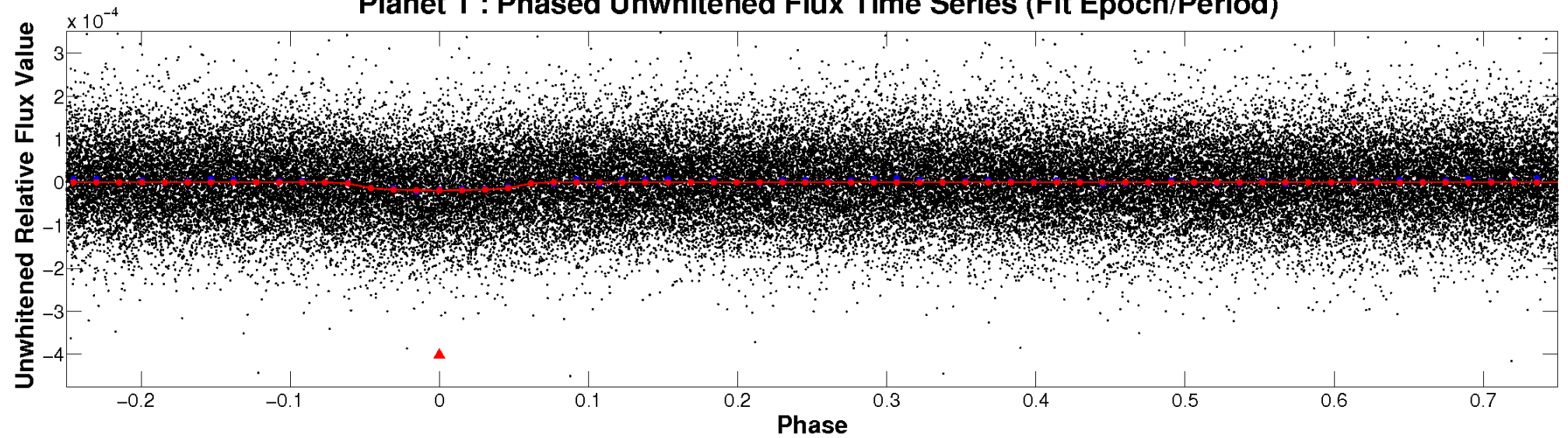
ALT Odd/Even

TCE 009899141-01

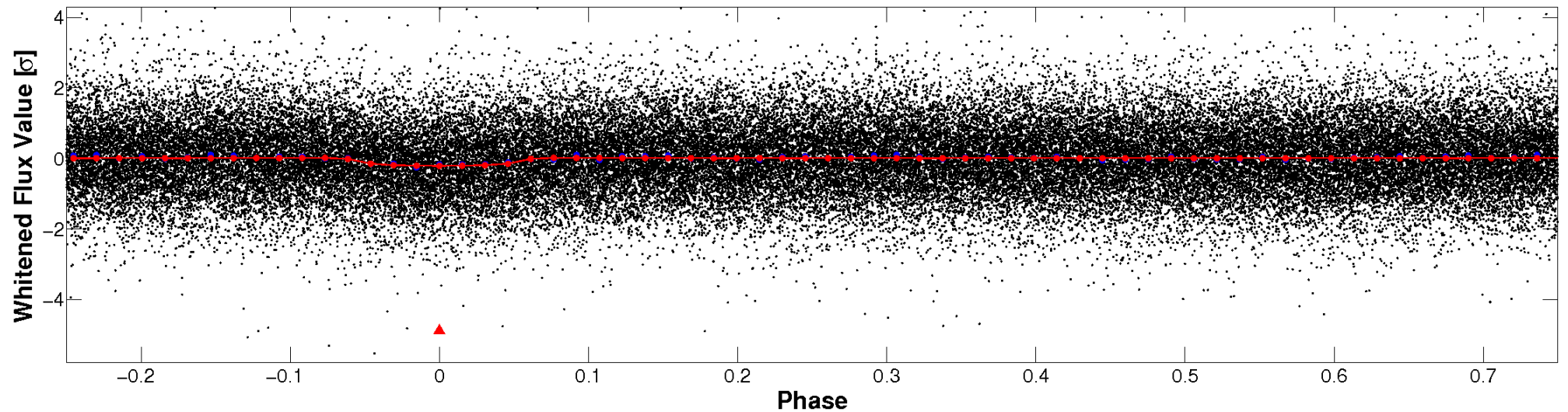


Non-Whitened Vs. Whitened Light Curve

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

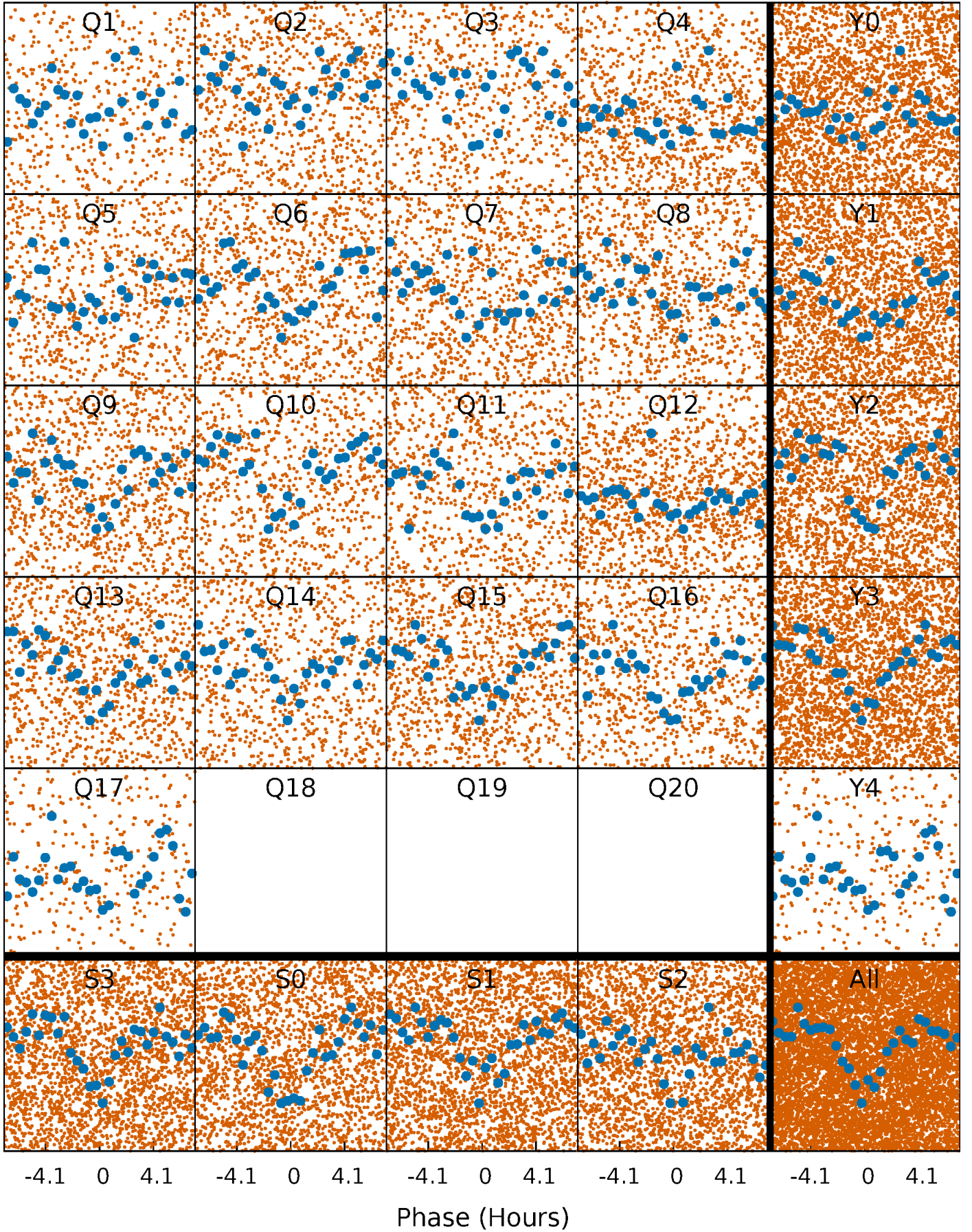


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



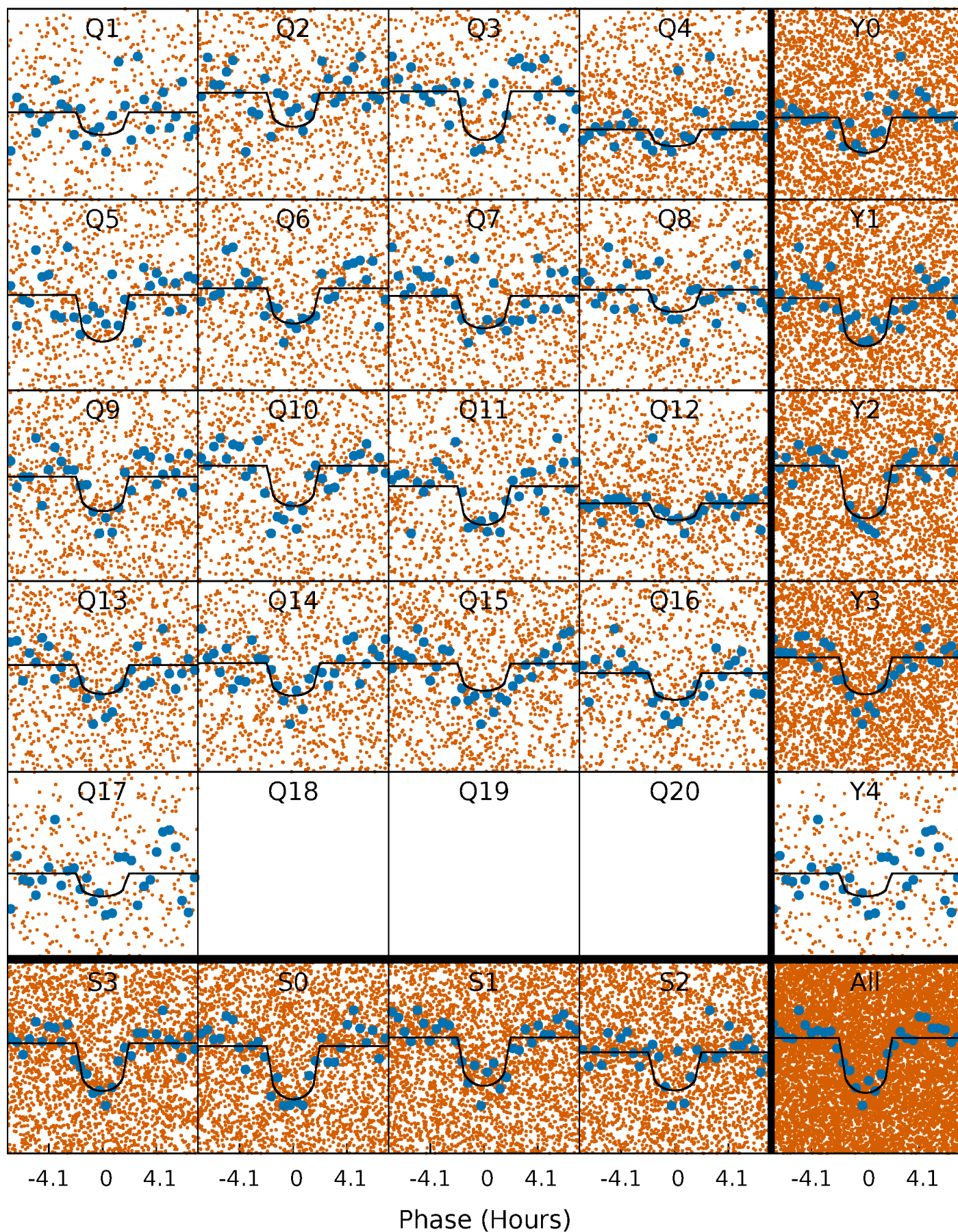
PDC Quarter-Phased Transit Curves

TCE 009899141-01 P= 1.332542 Days $T_0=132.067536$ (BKJD)



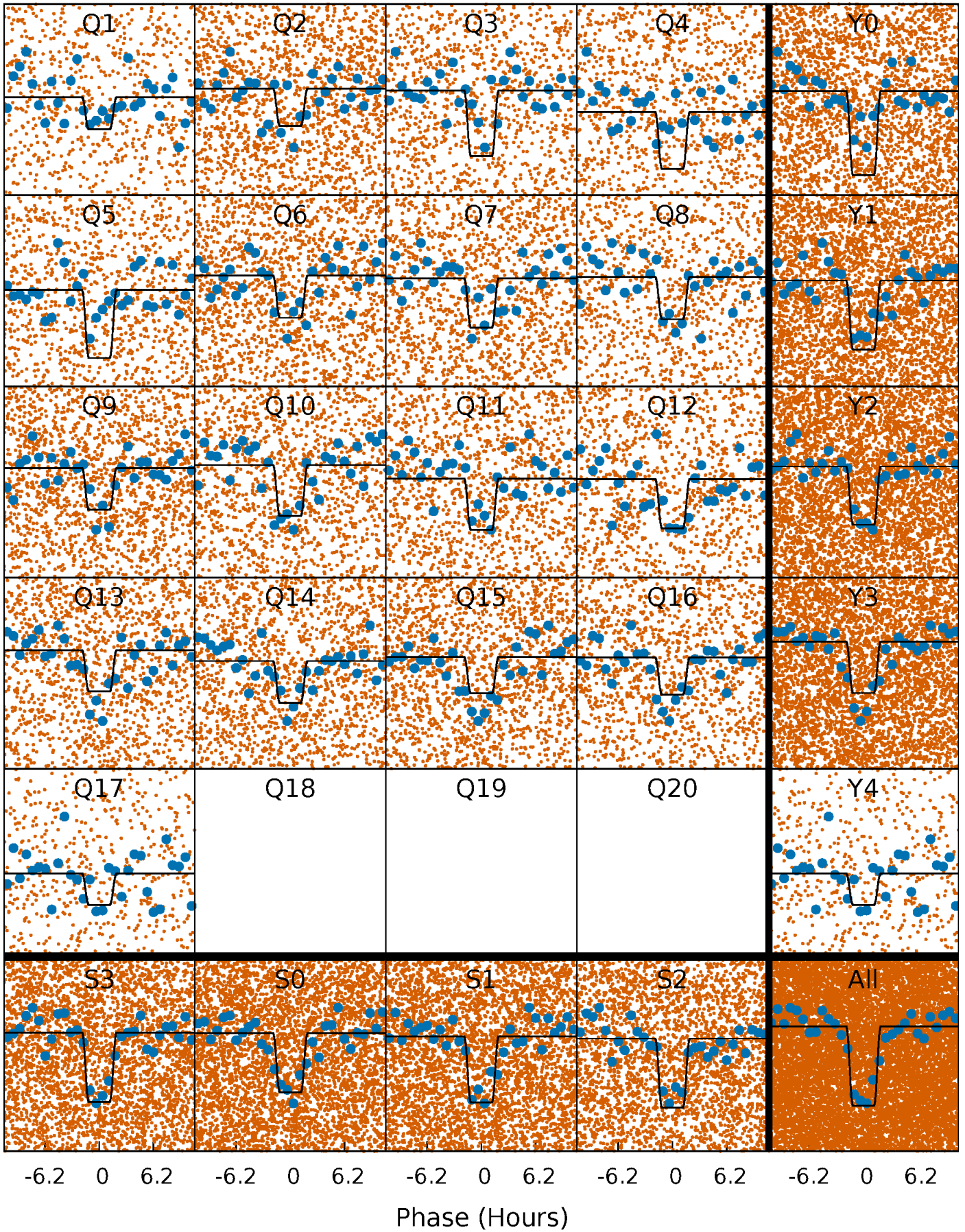
DV Quarter-Phased Transit Curves

TCE 009899141-01 P= 1.332542 Days $T_0=132.067536$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

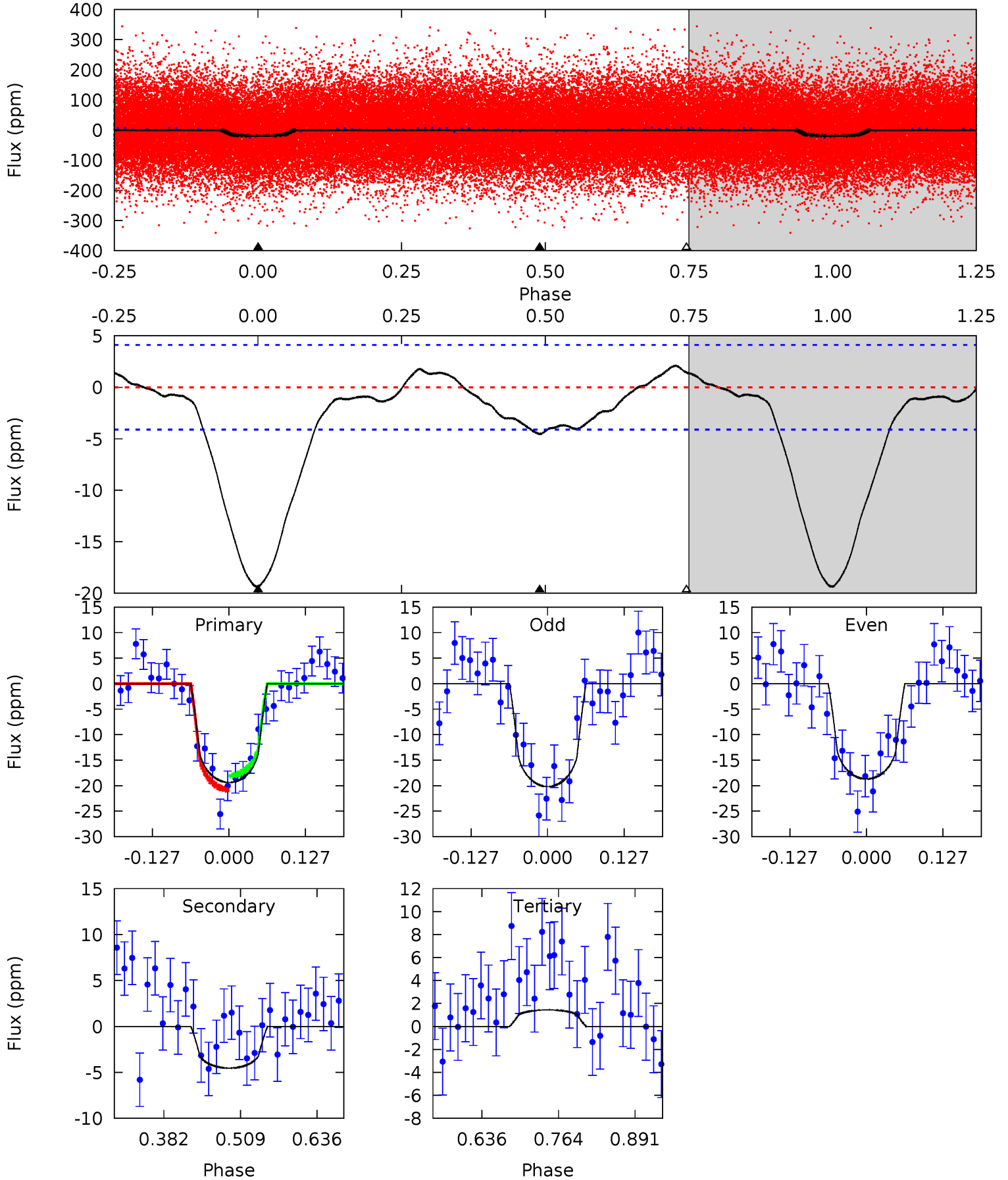
TCE 009899141-01 P= 1.332579 Days $T_0=132.042641$ (BKJD)



DV Model-Shift Uniqueness Test

009899141-01, P = 1.332542 Days, E = 130.734994 Days

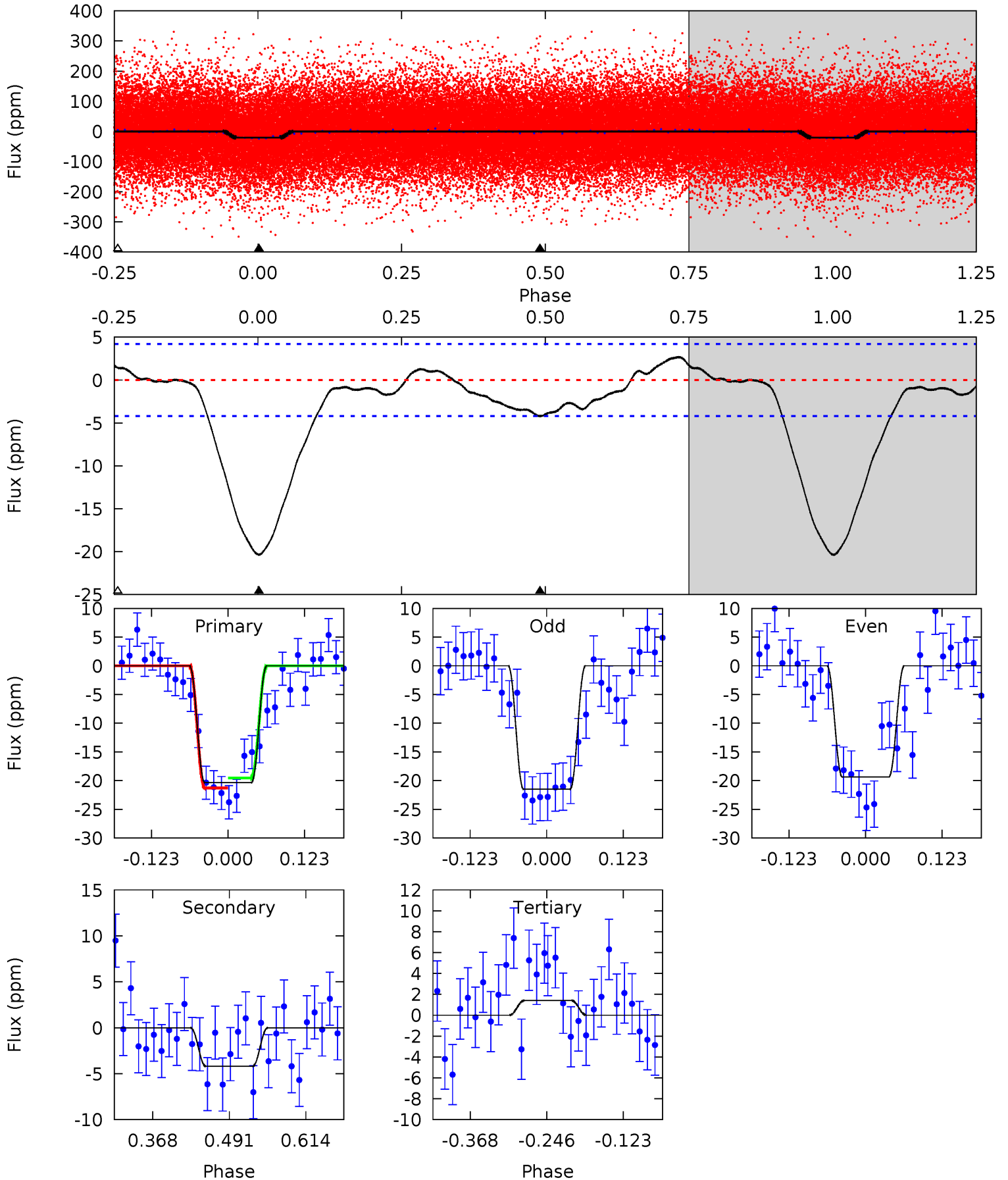
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	4.98	-1.58	0	4.51	1.52	1.19	22.8	21.2	6.56	4.98	0.81	0.96	0.10	1.49



Alt Model-Shift Uniqueness Test

009899141-01, P = 1.332579 Days, E = 130.710062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	4.54	-1.53	0	4.52	1.54	1.26	23.5	22.0	6.07	4.54	1.15	1.05	0.12	0.94



Stellar Parameters For KIC 009899141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5655^{+137}_{-154}	$4.431^{+0.088}_{-0.132}$	$0.140^{+0.200}_{-0.300}$	$0.998^{+0.186}_{-0.124}$	$0.979^{+0.089}_{-0.097}$	$1.386^{+0.516}_{-0.526}$
	+2%/-3%	+2%/-3%	+143%/-214%	+19%/-12%	+9%/-10%	+37%/-38%
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 009899141-01 / KOI 3254.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$0.47^{+0.10}_{-0.09}$	2279^{+128}_{-103}	4163^{+400}_{-305}	$6.094^{+3.409}_{-2.206}$
Alt.	-4 ± 1	$0.52^{+0.10}_{-0.10}$	2285^{+111}_{-101}	3991^{+314}_{-317}	$4.700^{+2.726}_{-1.681}$

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 $A_{obs} \gg 1.0$

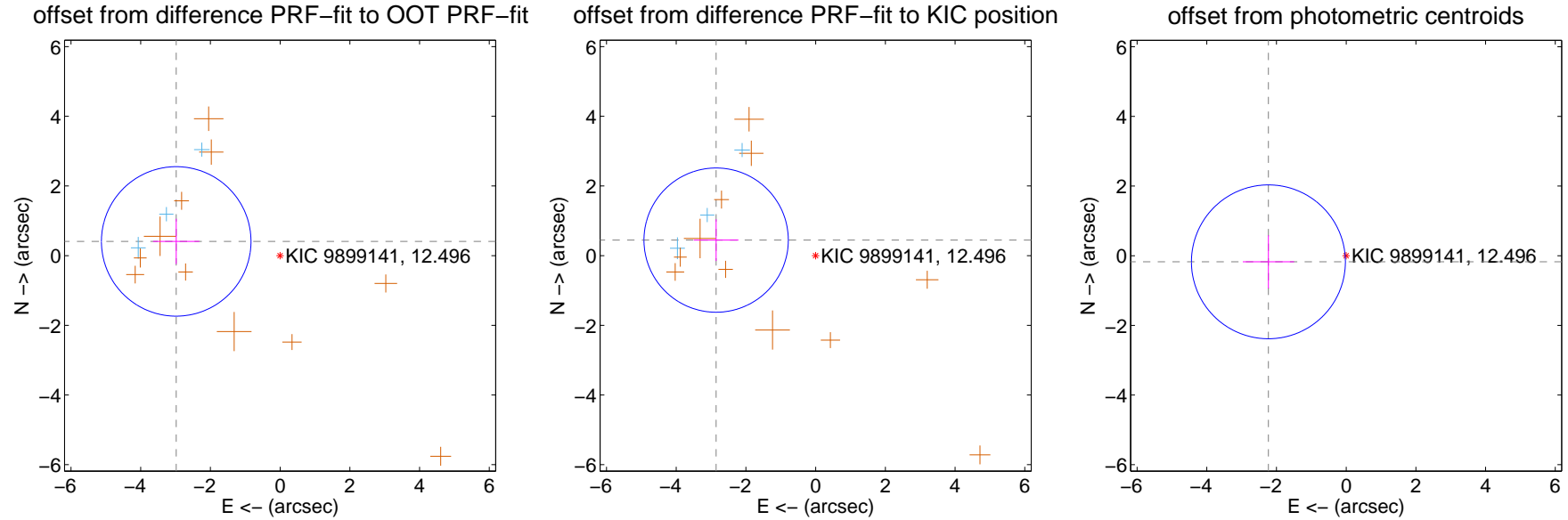
DV Centroid Data

Supplemental centroid analysis for 009899141-01. Kepler magnitude: 12.50. Transit SNR 15.37

There are 3 quarters with good PRF difference image offsets

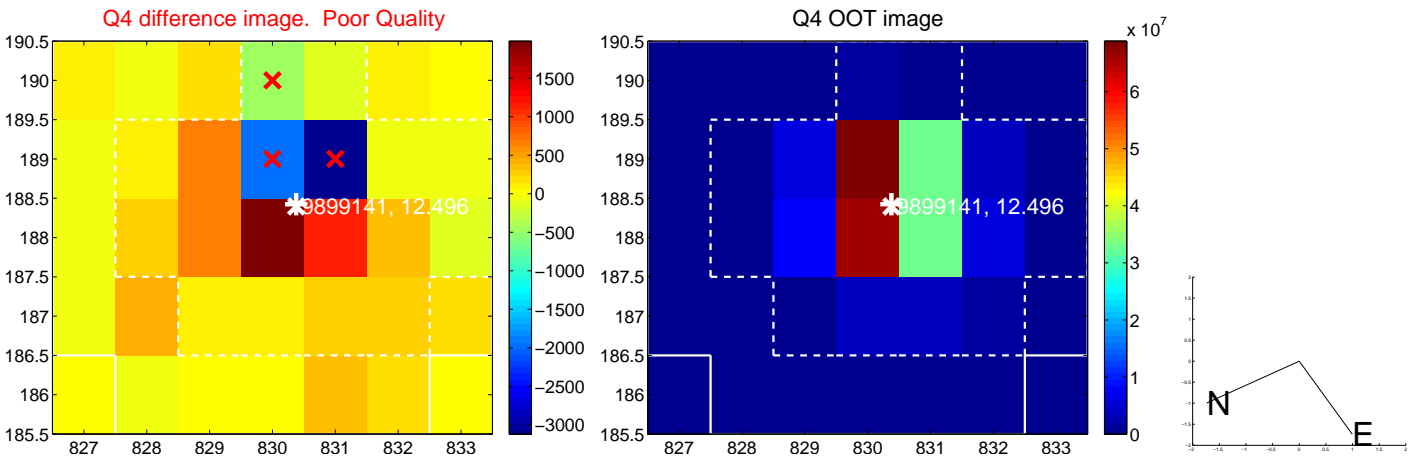
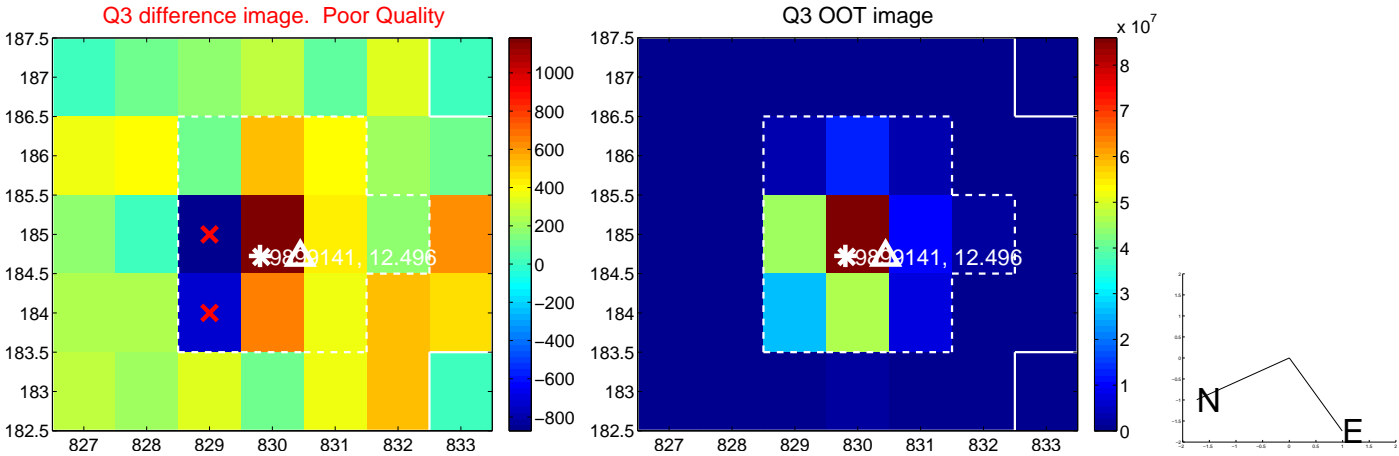
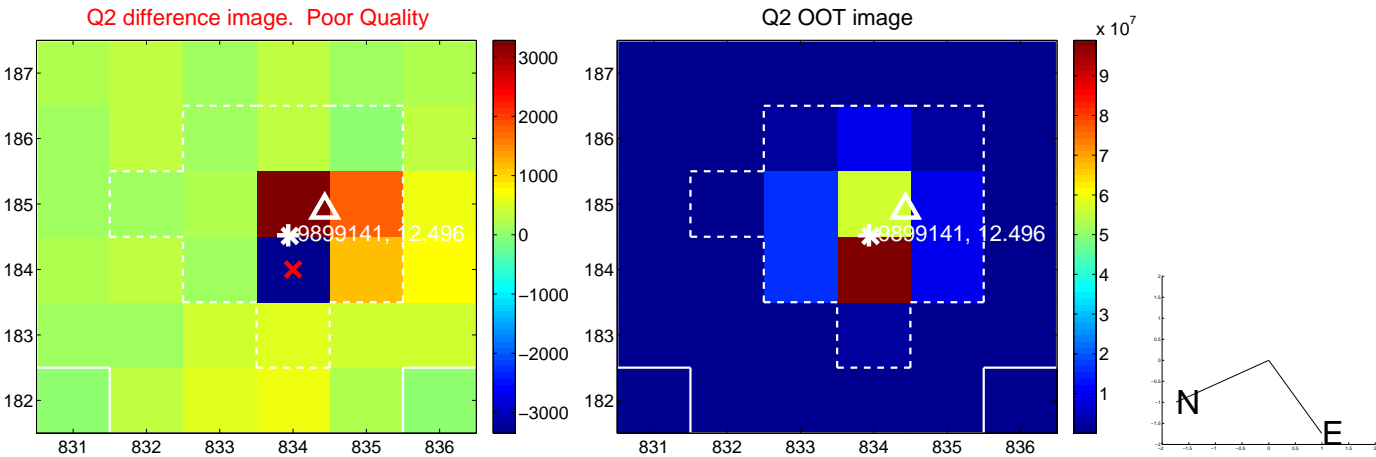
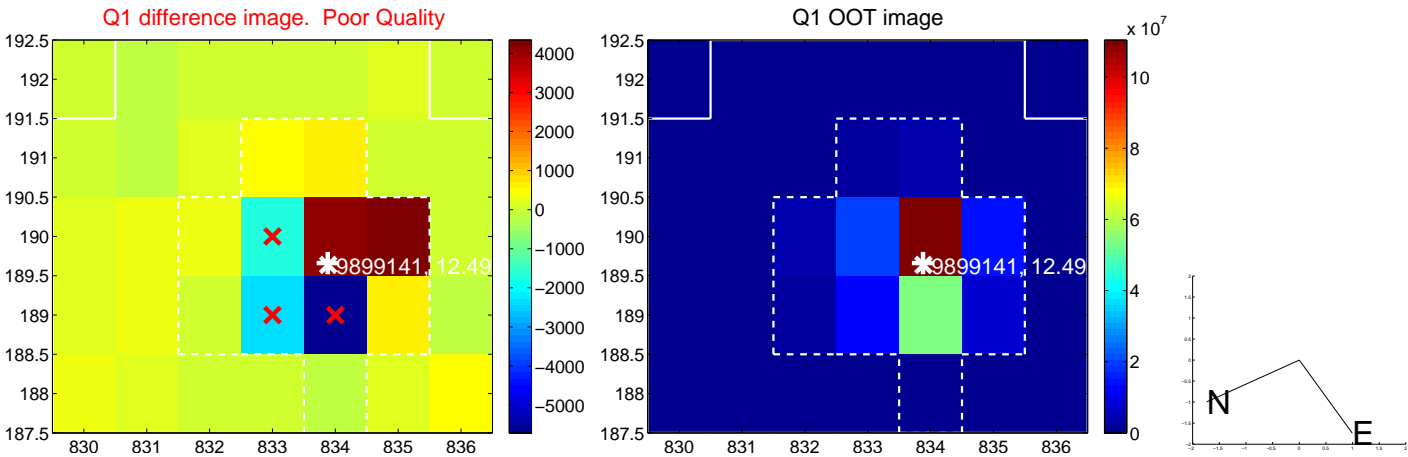
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.009 ± 0.715	4.21	2.981 ± 0.665	0.408 ± 0.650
PRF-fit source offset from KIC position	2.889 ± 0.690	4.19	2.855 ± 0.641	0.446 ± 0.598
photometric centroid source offset	2.24 ± 0.74	3.04	2.23 ± 0.74	-0.18 ± 0.76

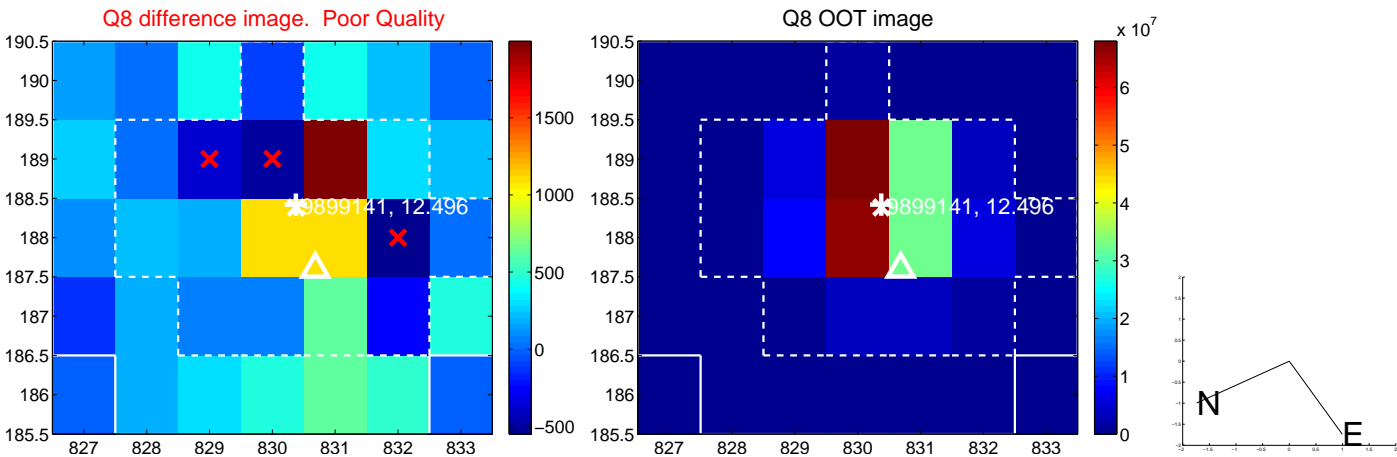
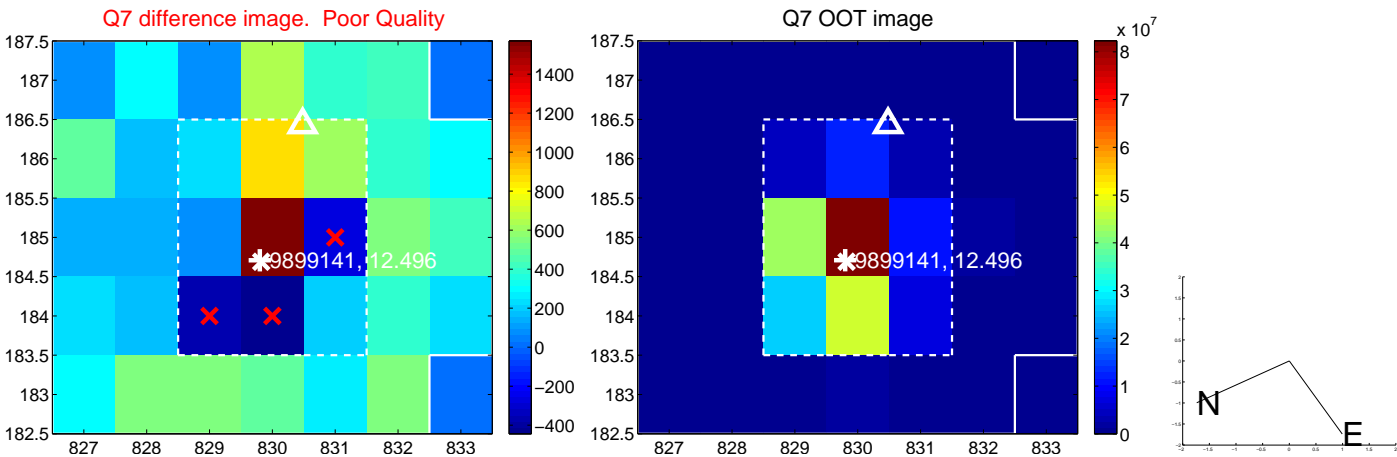
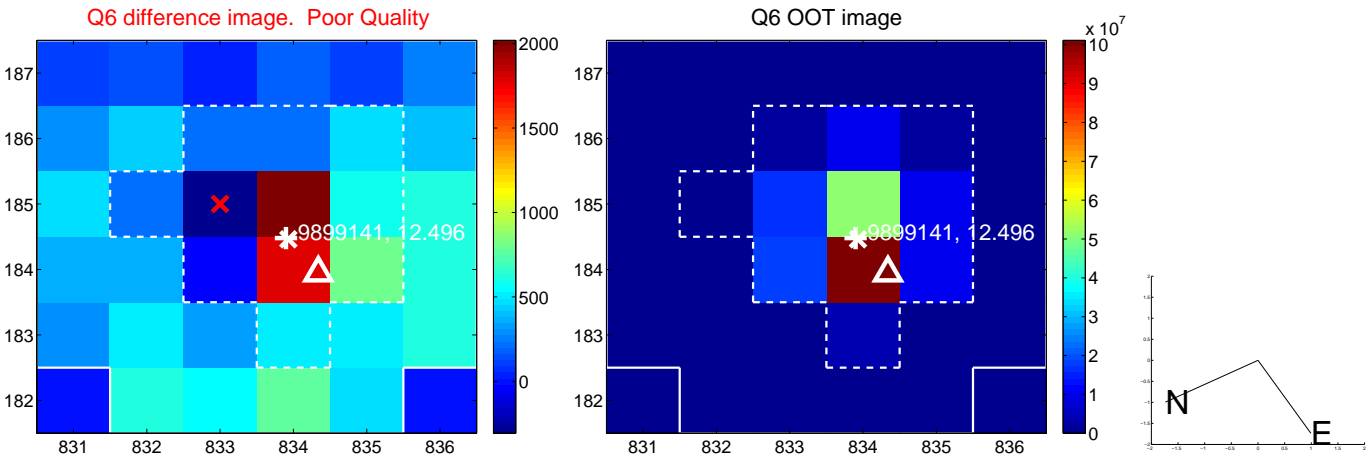
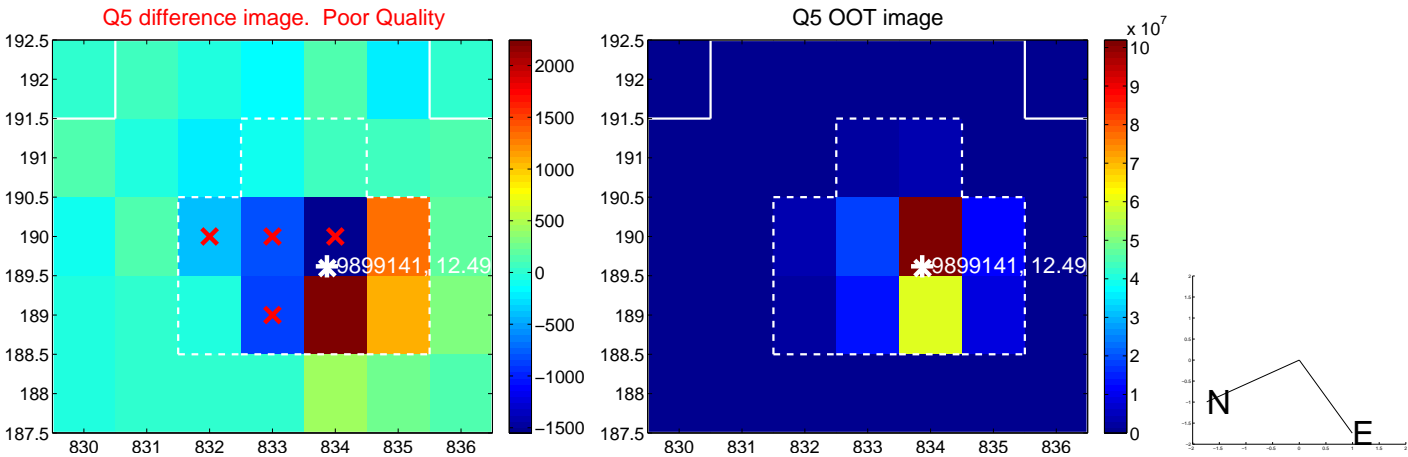


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

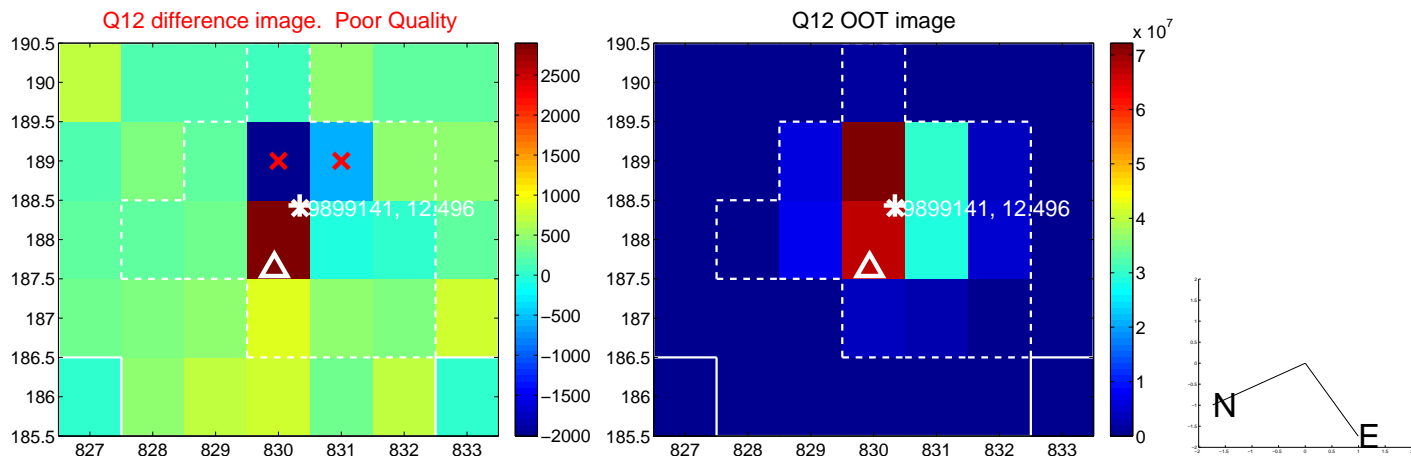
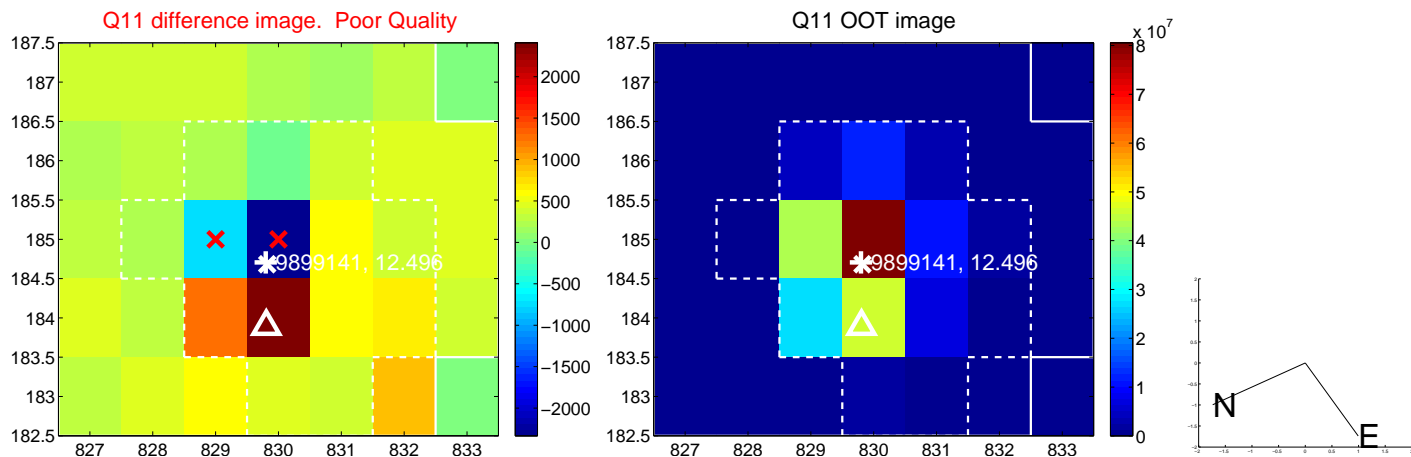
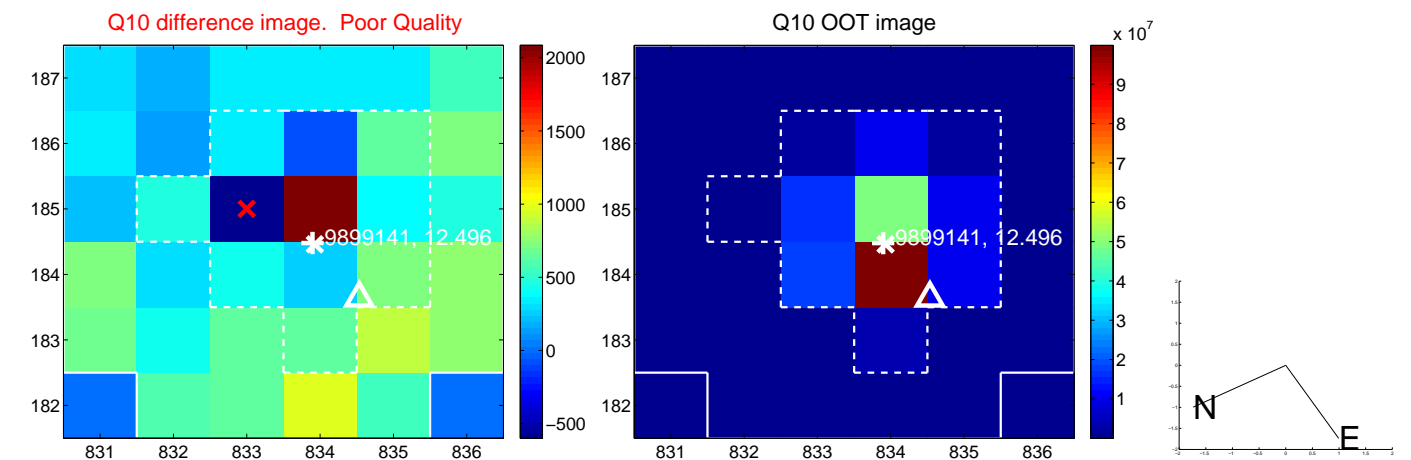
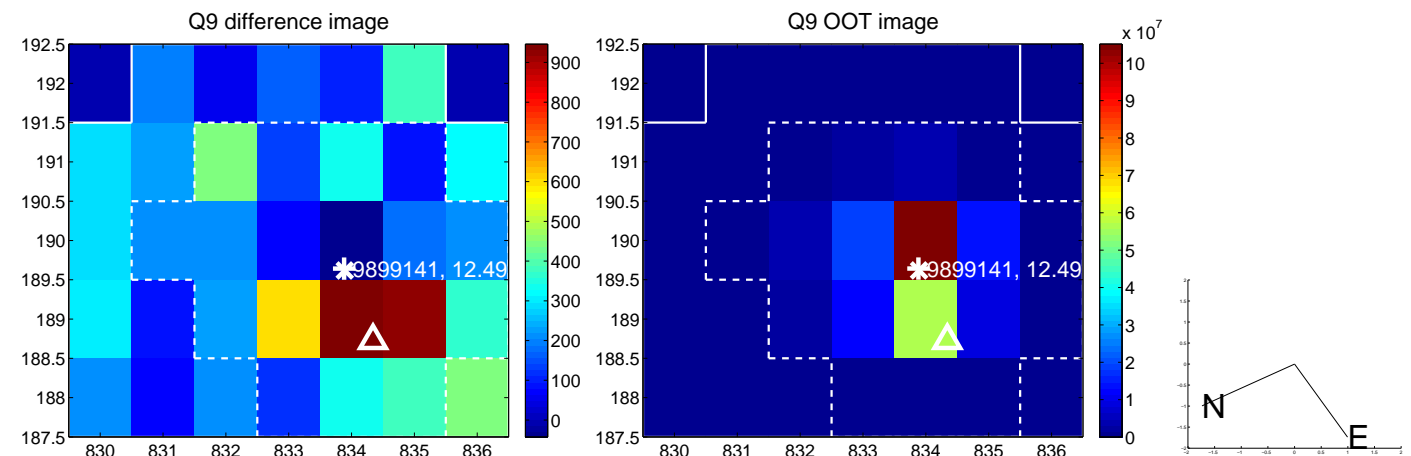
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



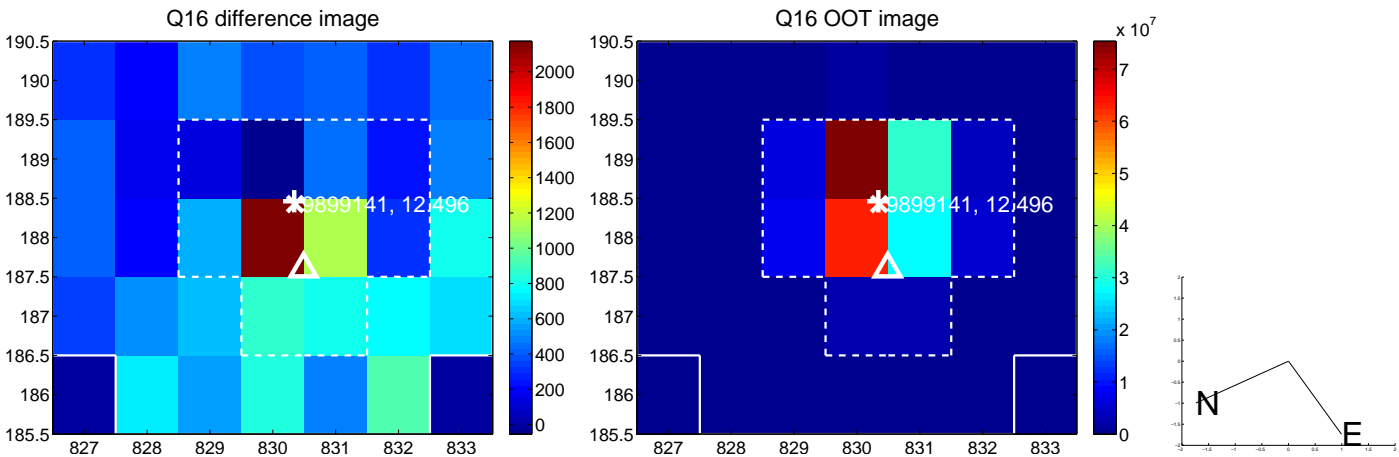
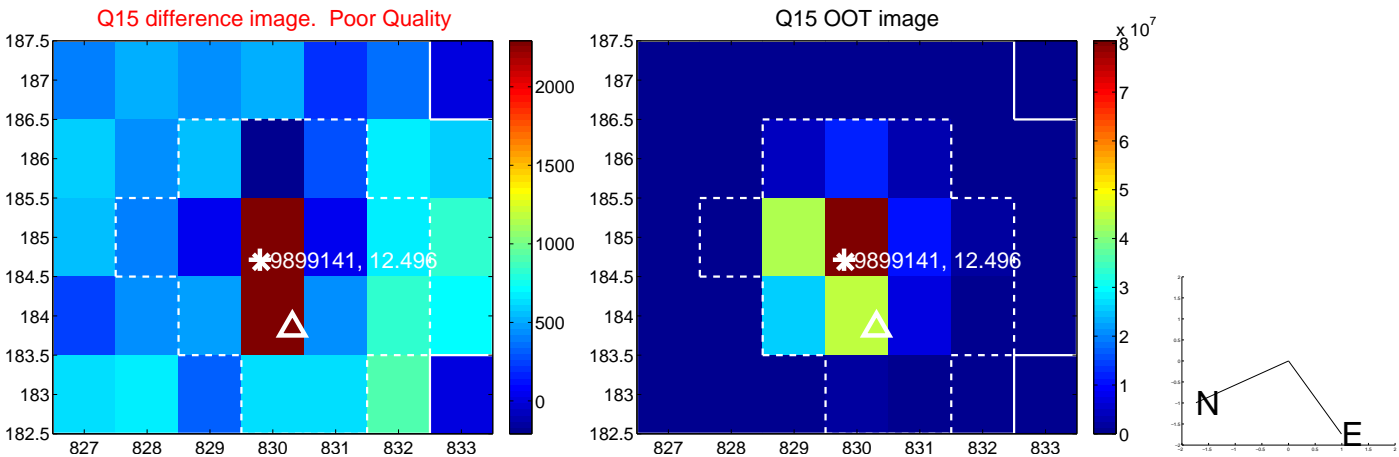
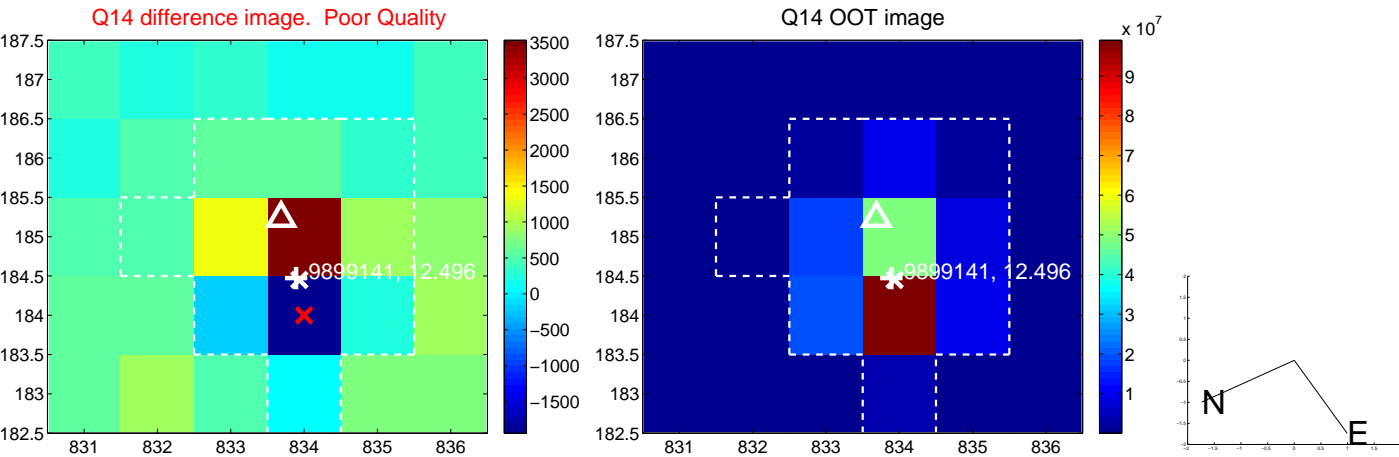
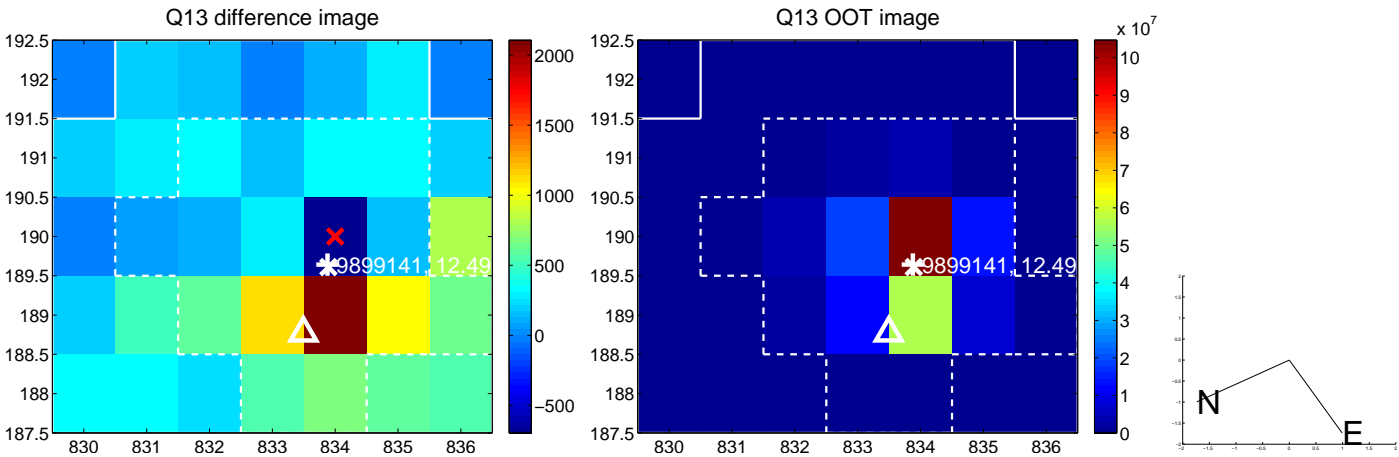
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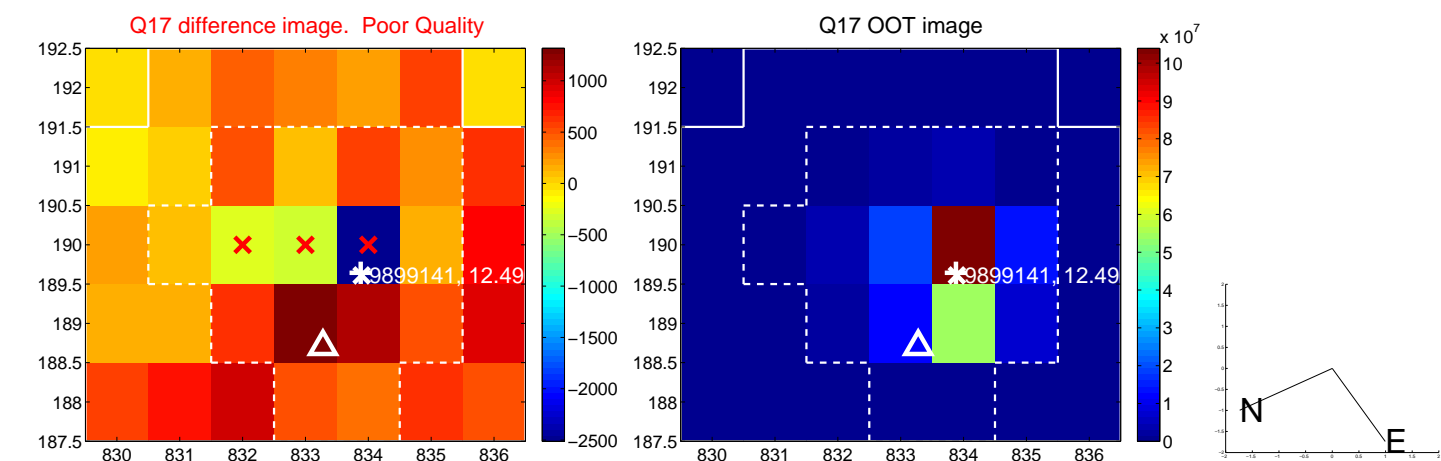
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



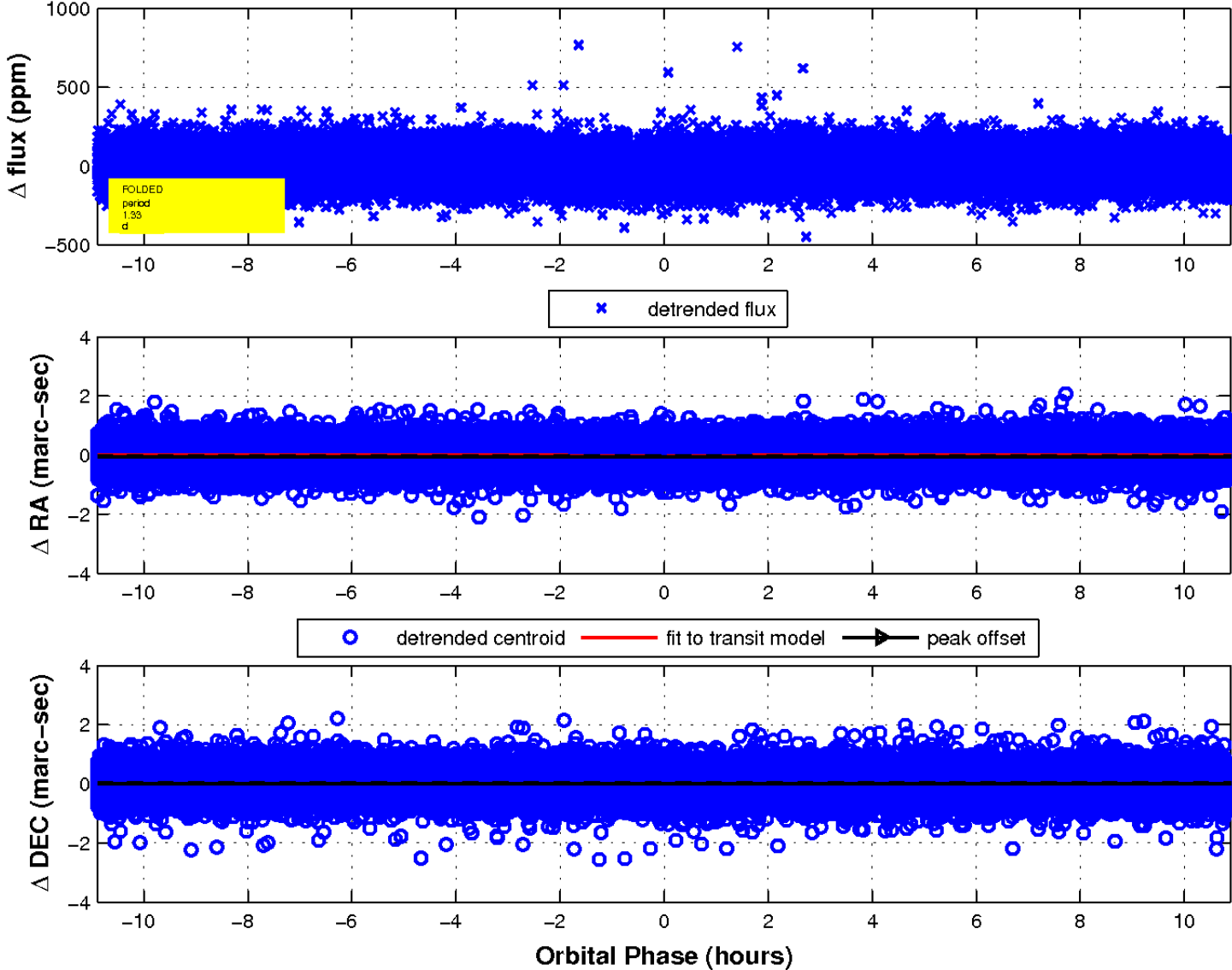
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

