

KIC 009899483

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})
009899483-01	OBS	1719.01	1.332522	132.071244	79.9	4.051	27.5	29.7	1.60	6468	1.98	6351.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009899483-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_RESOLVED_OFFSET—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 009899483-01

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
009899483-01	9899483	BR-Cyg-pri	9899416	1:1	105.9	-4	26	10.03	13.62	8360.90	Direct-PRF	0	2.62	1.54

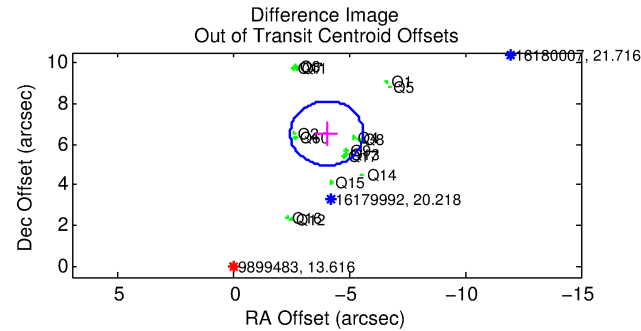
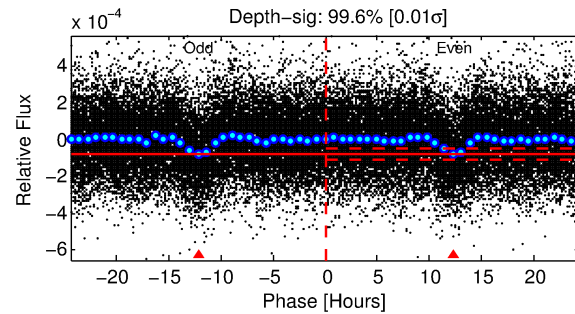
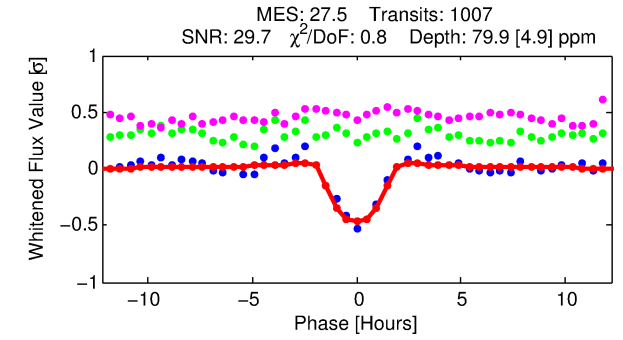
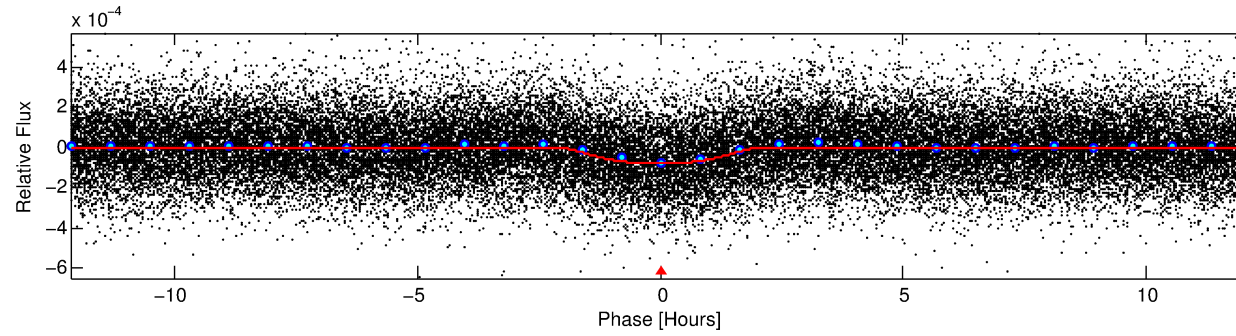
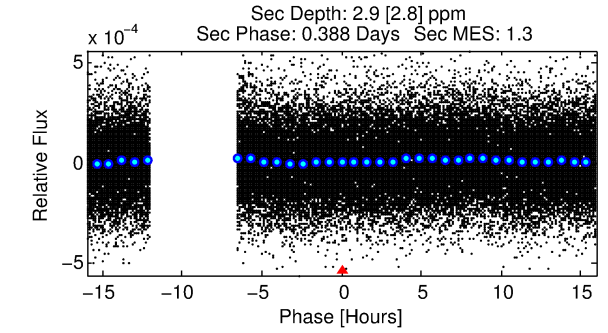
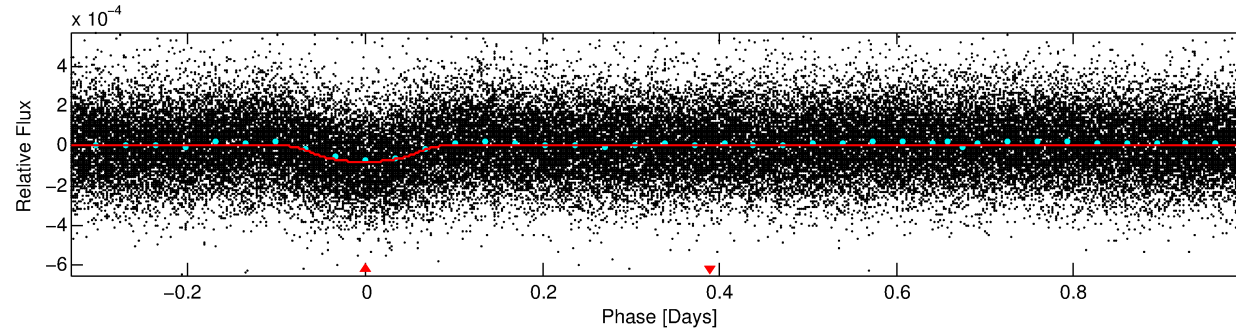
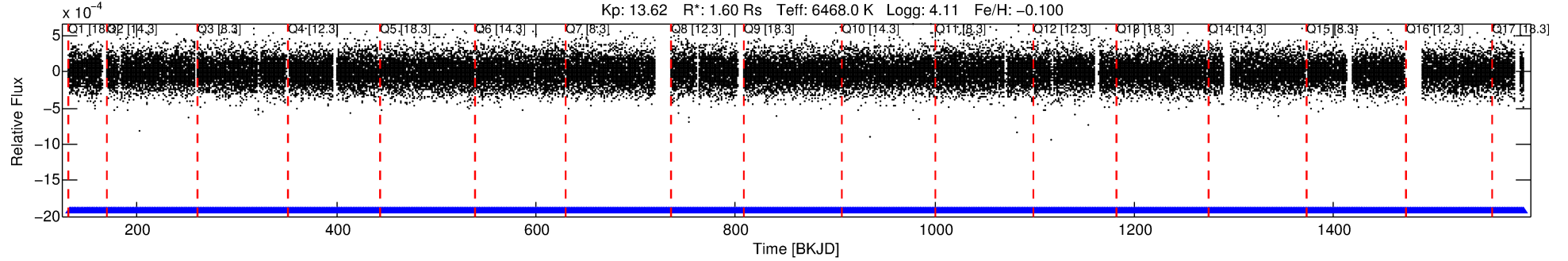
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 9899483 Candidate: 1 of 1 Period: 1.333 d

KOI: K01719.01 Corr: 0.824

Kp: 13.62 R*: 1.60 Rs Teff: 6468.0 K Logg: 4.11 Fe/H: -0.100



DV Fit Results:

Period = 1.33252 [0.00000] d
Epoch = 132.0712 [0.0019] BKJD
Rp/R* = 0.0113 [0.0004]
a/R* = 1.13 [0.02]
b = 0.99 [0.00]
Seff = 6351.12 [1870.41]
Teq = 2276 [168] K
Rp = 1.98 [0.40] Re
a = 0.0252 [0.0047] AU
Ag = 0.26 [0.26] [-2.86σ]
Teffp = 2518 [592] K [0.39σ]

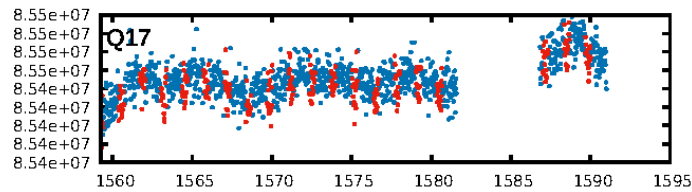
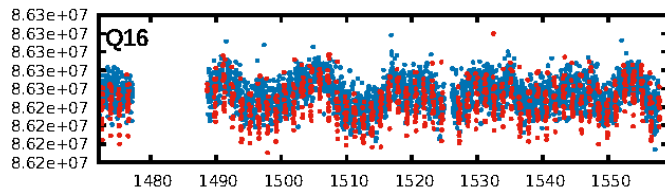
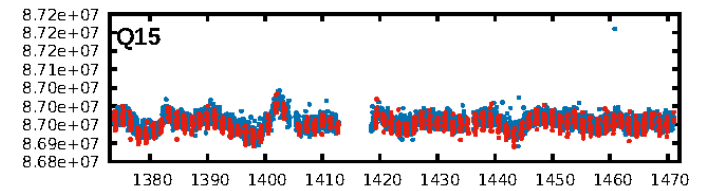
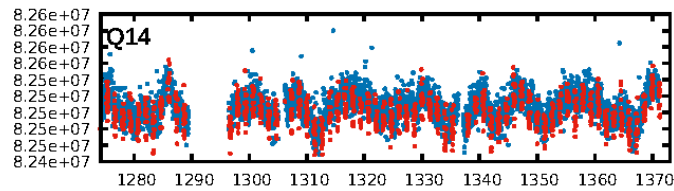
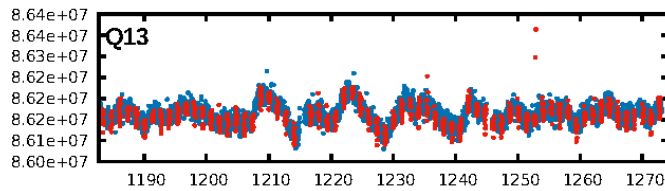
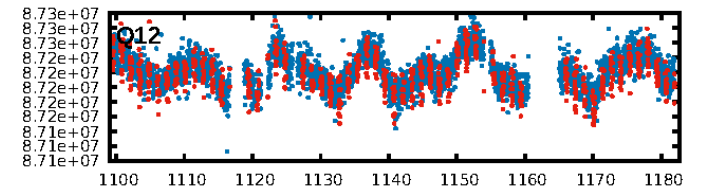
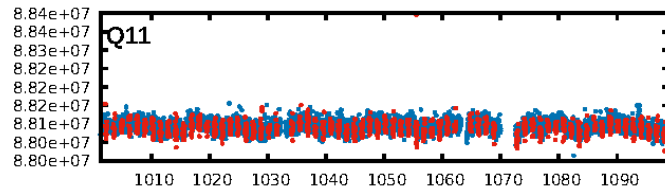
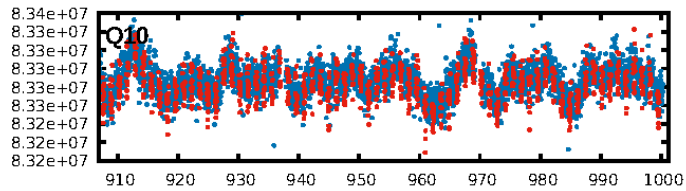
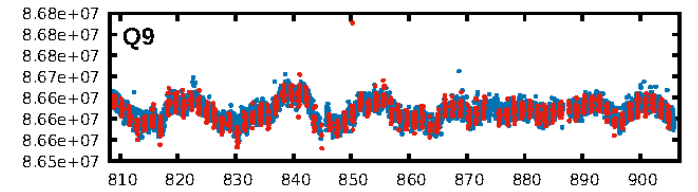
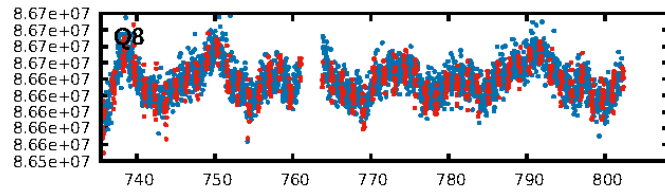
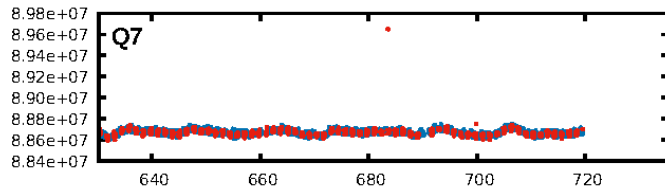
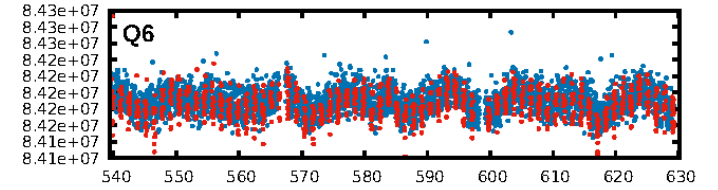
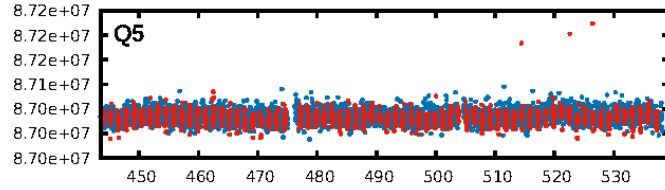
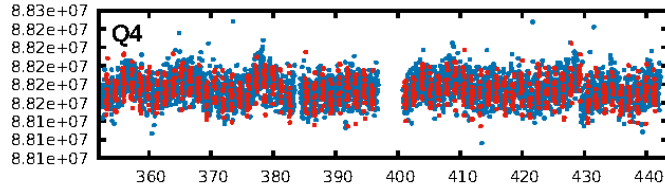
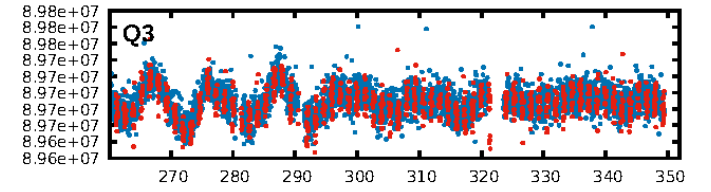
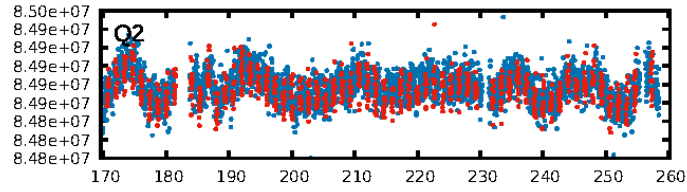
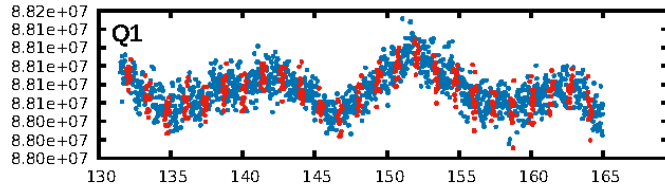
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-146
RollingBand-fgt: 1.00 [962/962]
GhostDiagnostic-chr: 0.5367
Centroid-sig: 0.0%
Centroid-so: 4.343 arcsec [11.95σ]
OotOffset-rm: 7.672 arcsec [14.61σ]
KicOffset-rm: 7.617 arcsec [14.04σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.06 [1/17]
DiffImageOverlap-fno: 1.00 [17/17]

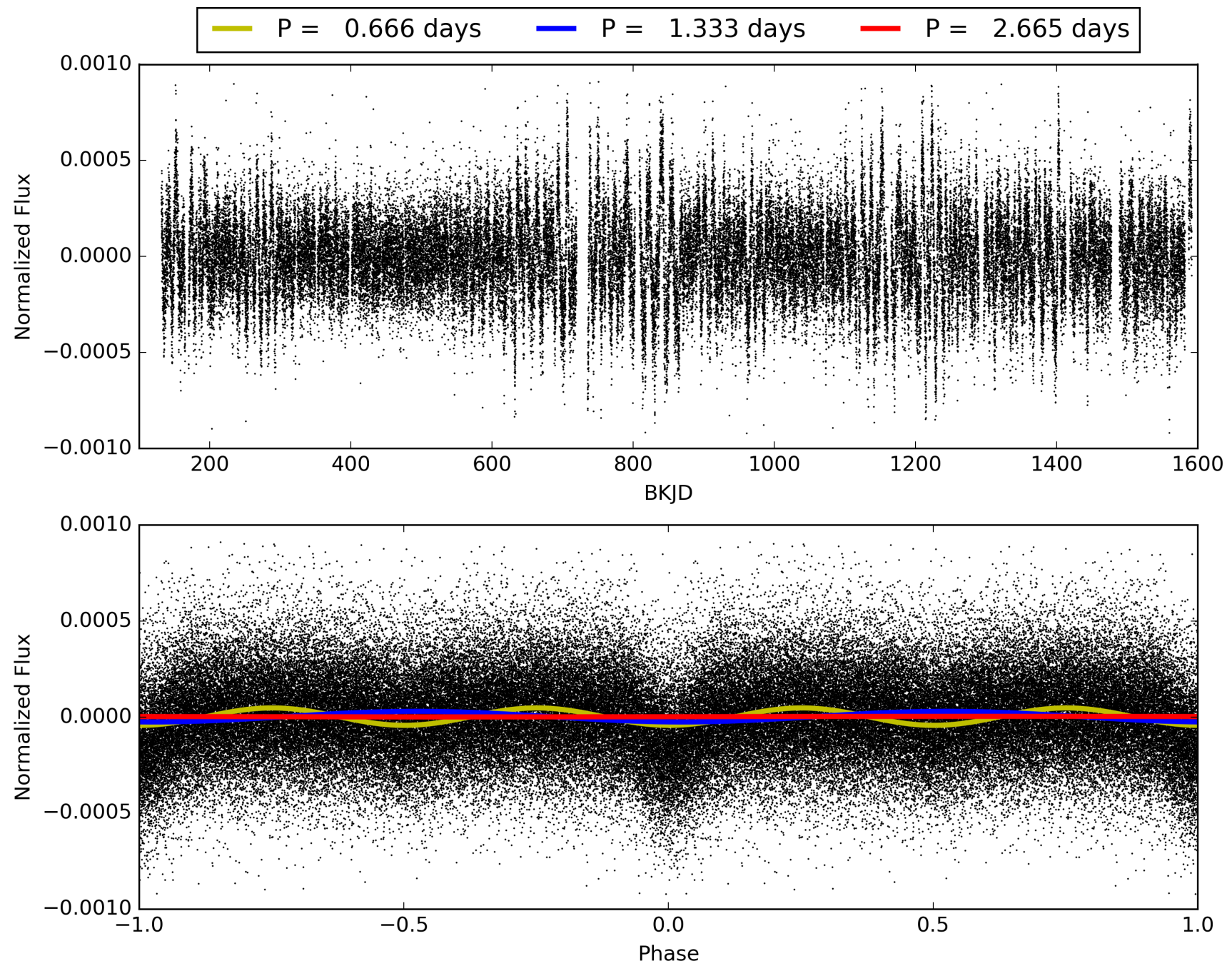
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:29:15 Z

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

TCE 009899483-01, PDC Light Curves

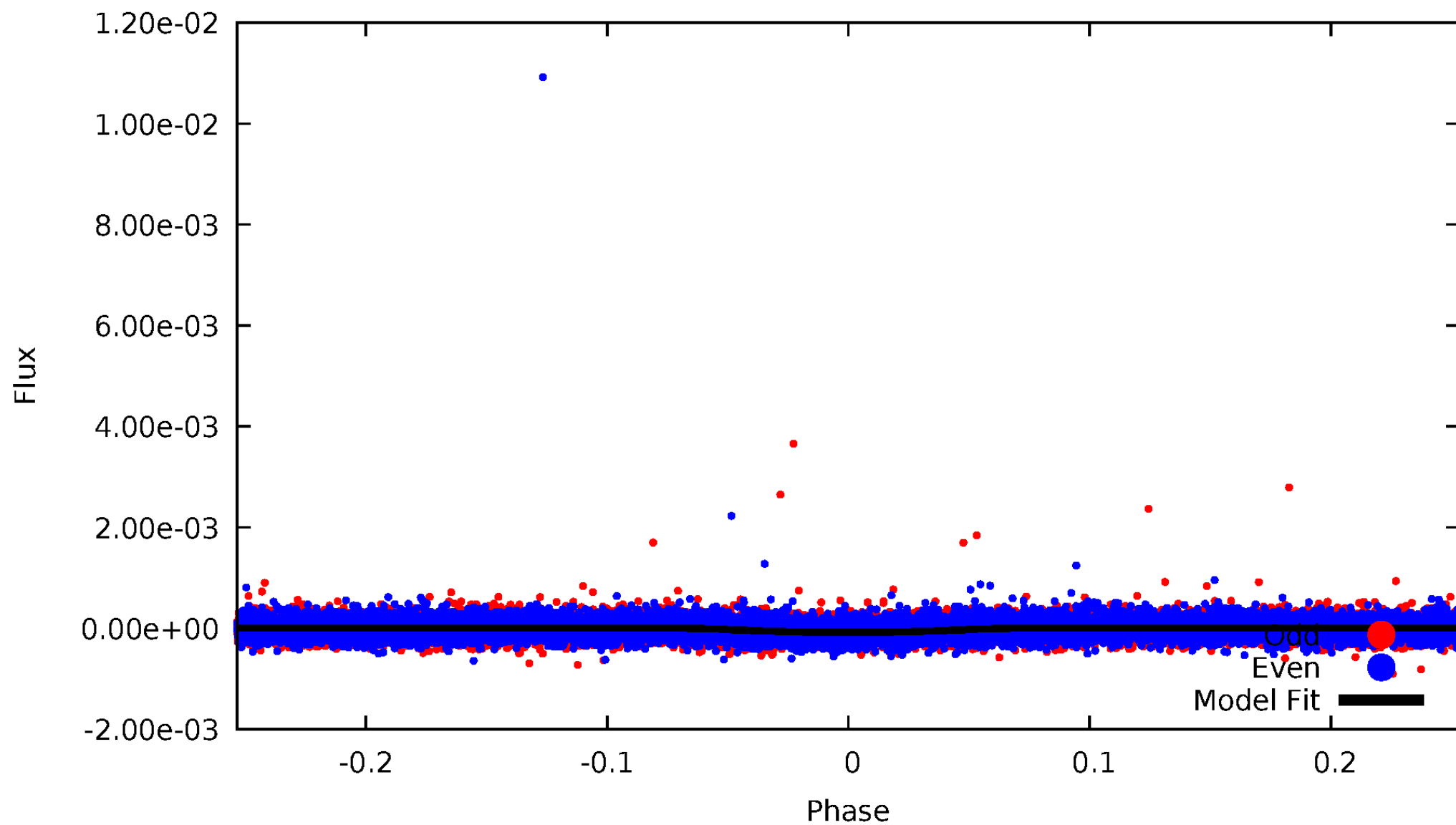


TCE 009899483-01



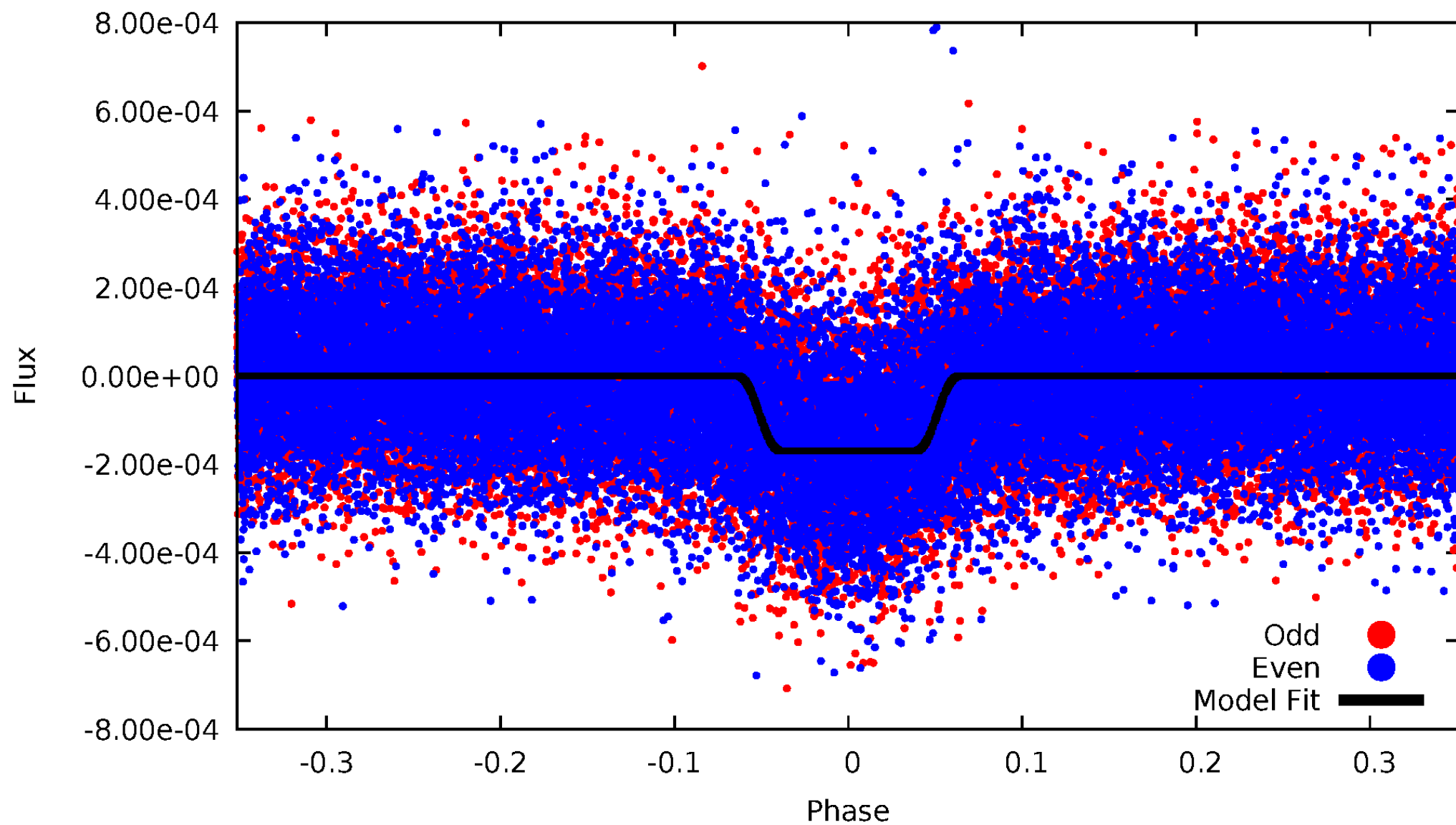
DV Odd/Even

TCE 009899483-01



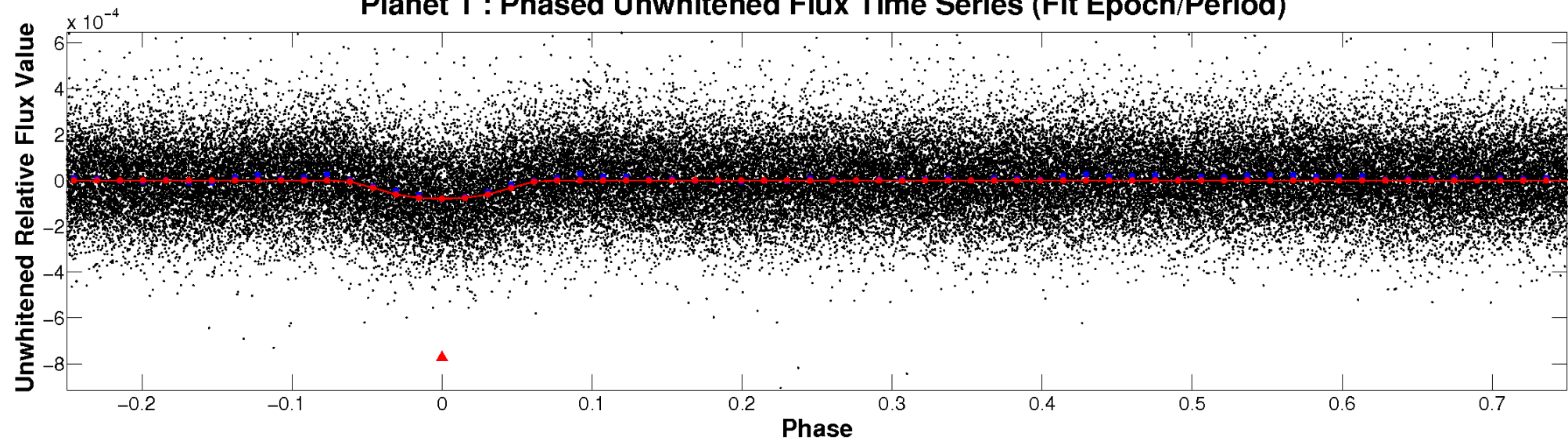
ALT Odd/Even

TCE 009899483-01

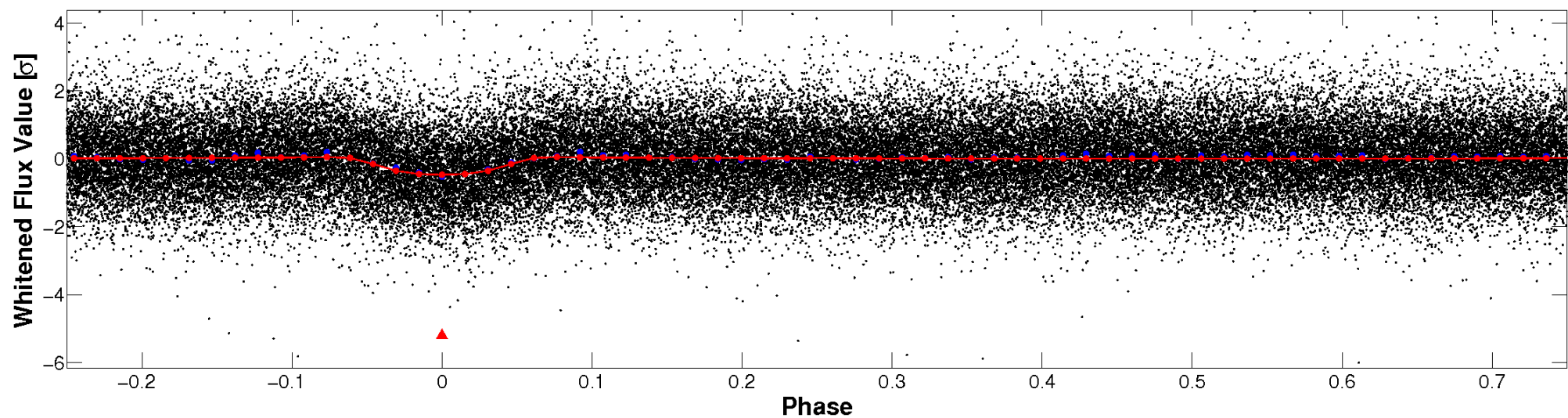


Non-Whitened Vs. Whitened Light Curve

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

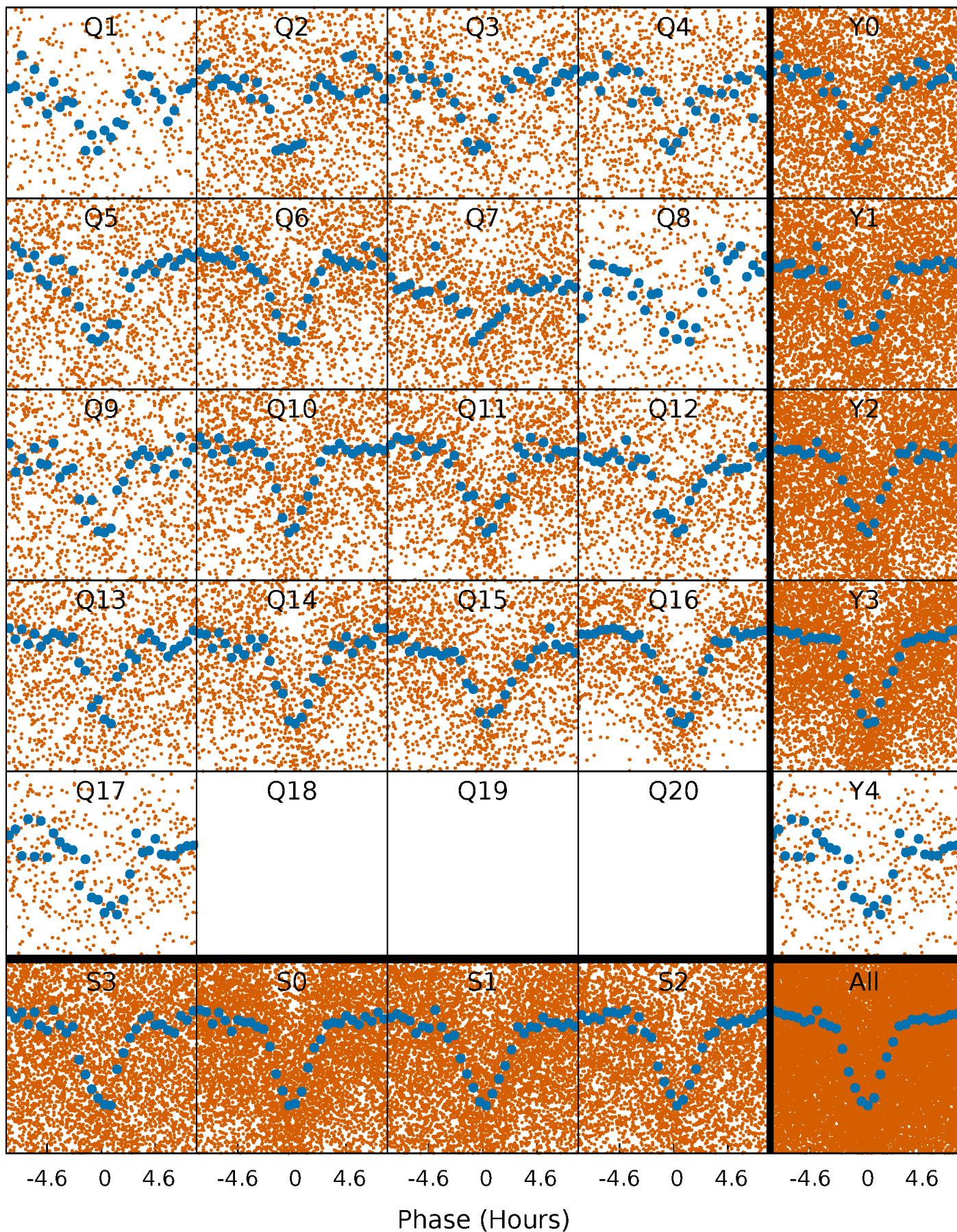


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



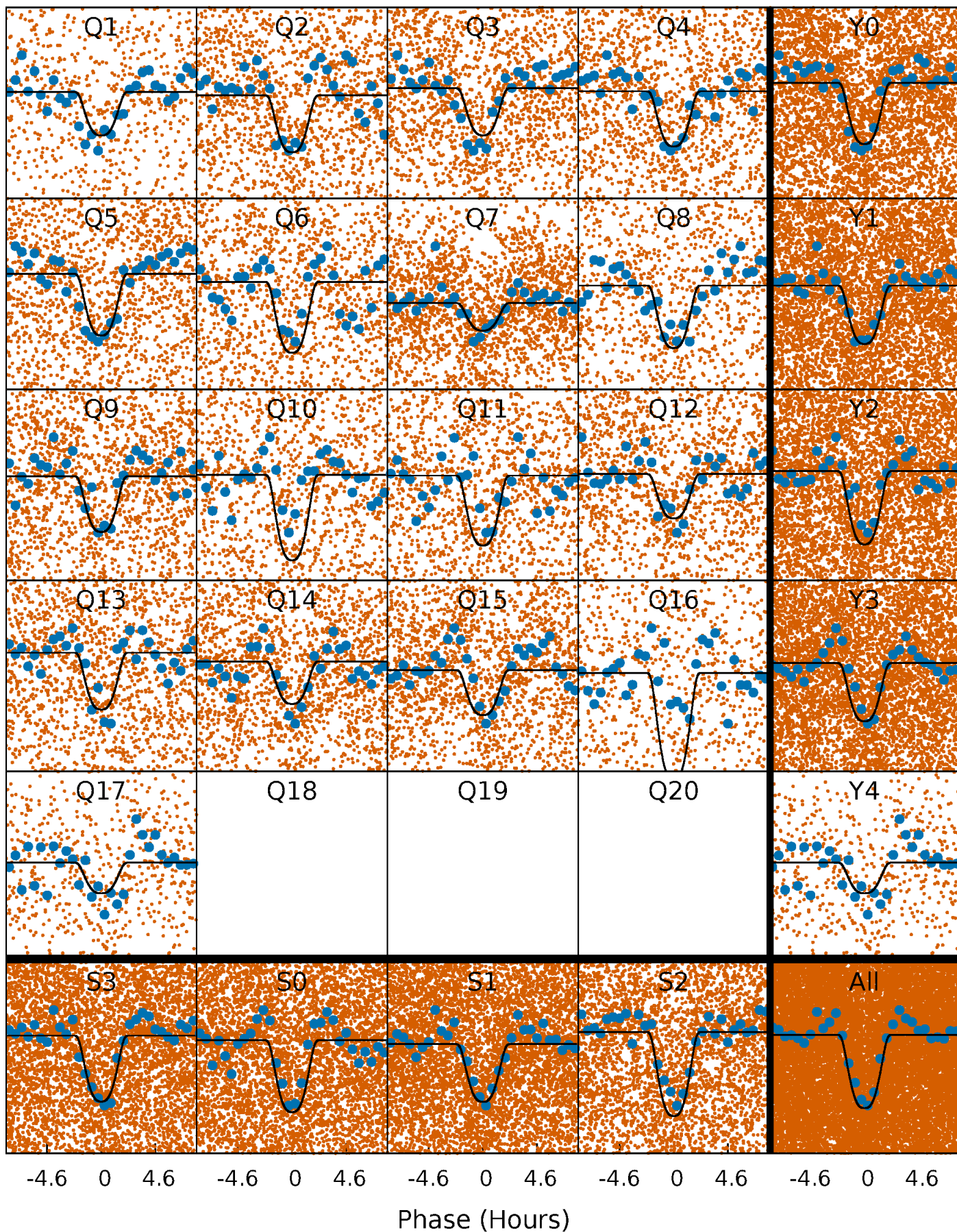
PDC Quarter-Phased Transit Curves

TCE 009899483-01 P= 1.332522 Days $T_0=132.071245$ (BKJD)



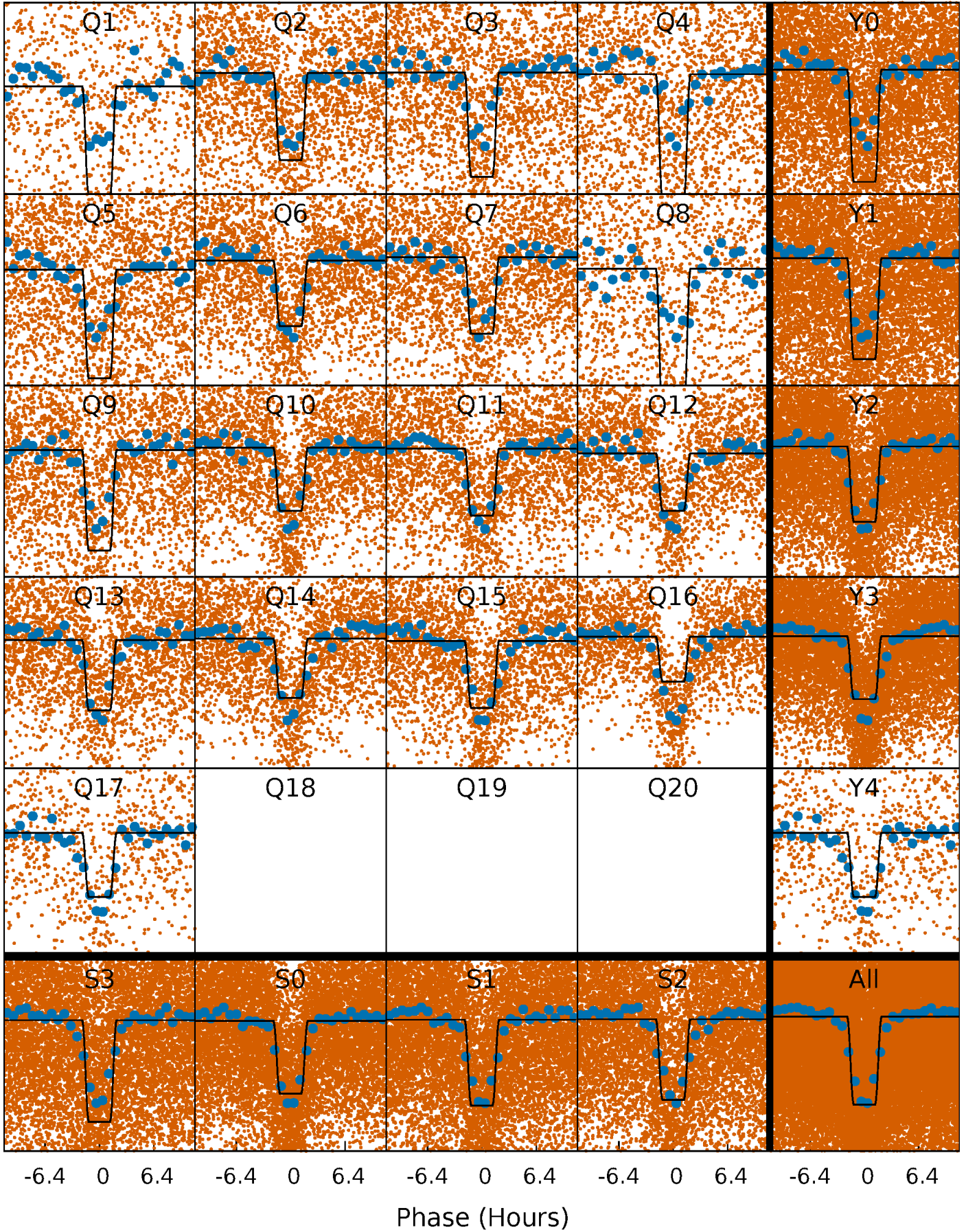
DV Quarter-Phased Transit Curves

TCE 009899483-01 P= 1.332522 Days $T_0=132.071245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

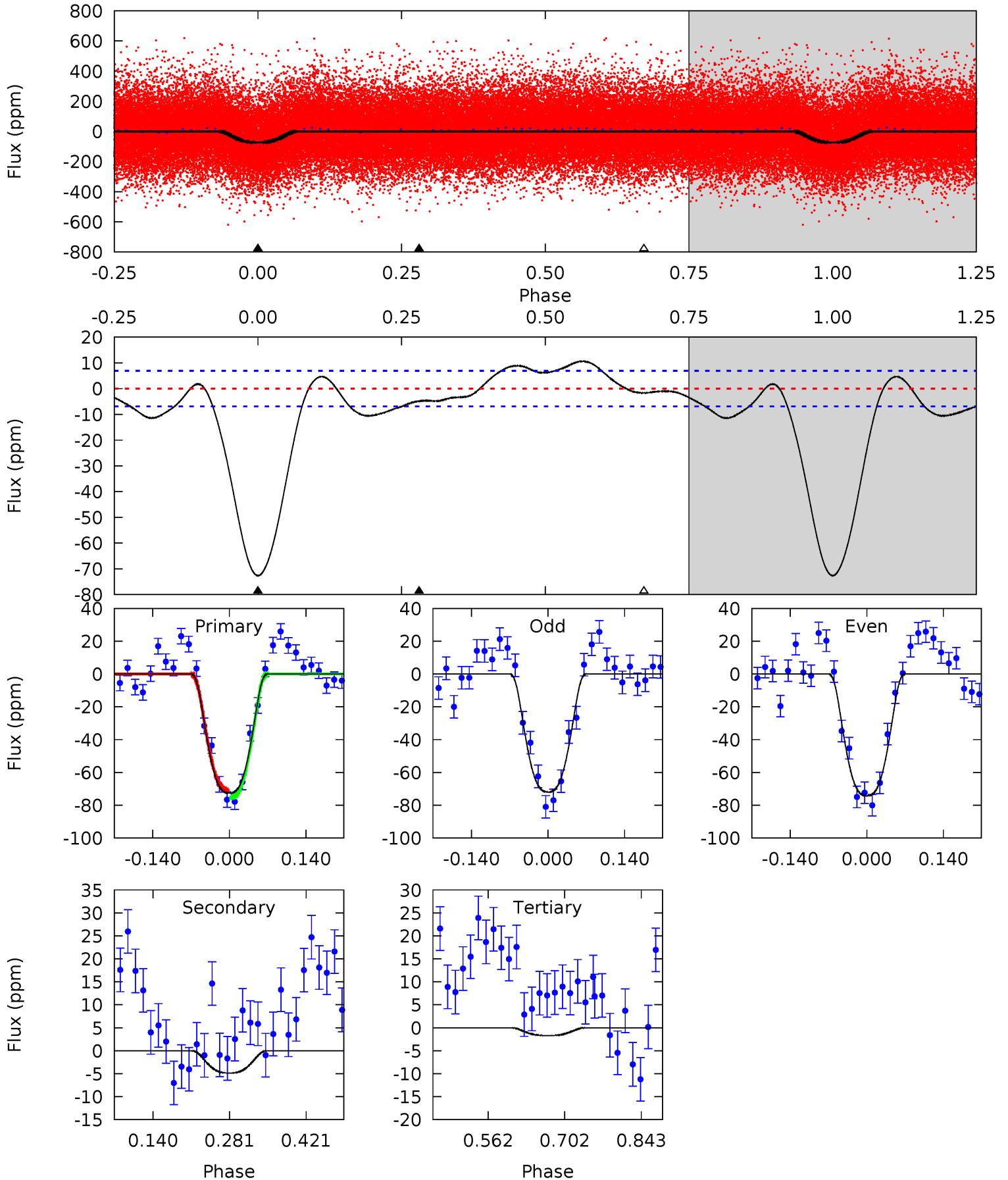
TCE 009899483-01 P= 1.332553 Days $T_0=132.056324$ (BKJD)



DV Model-Shift Uniqueness Test

009899483-01, P = 1.332522 Days, E = 130.738723 Days

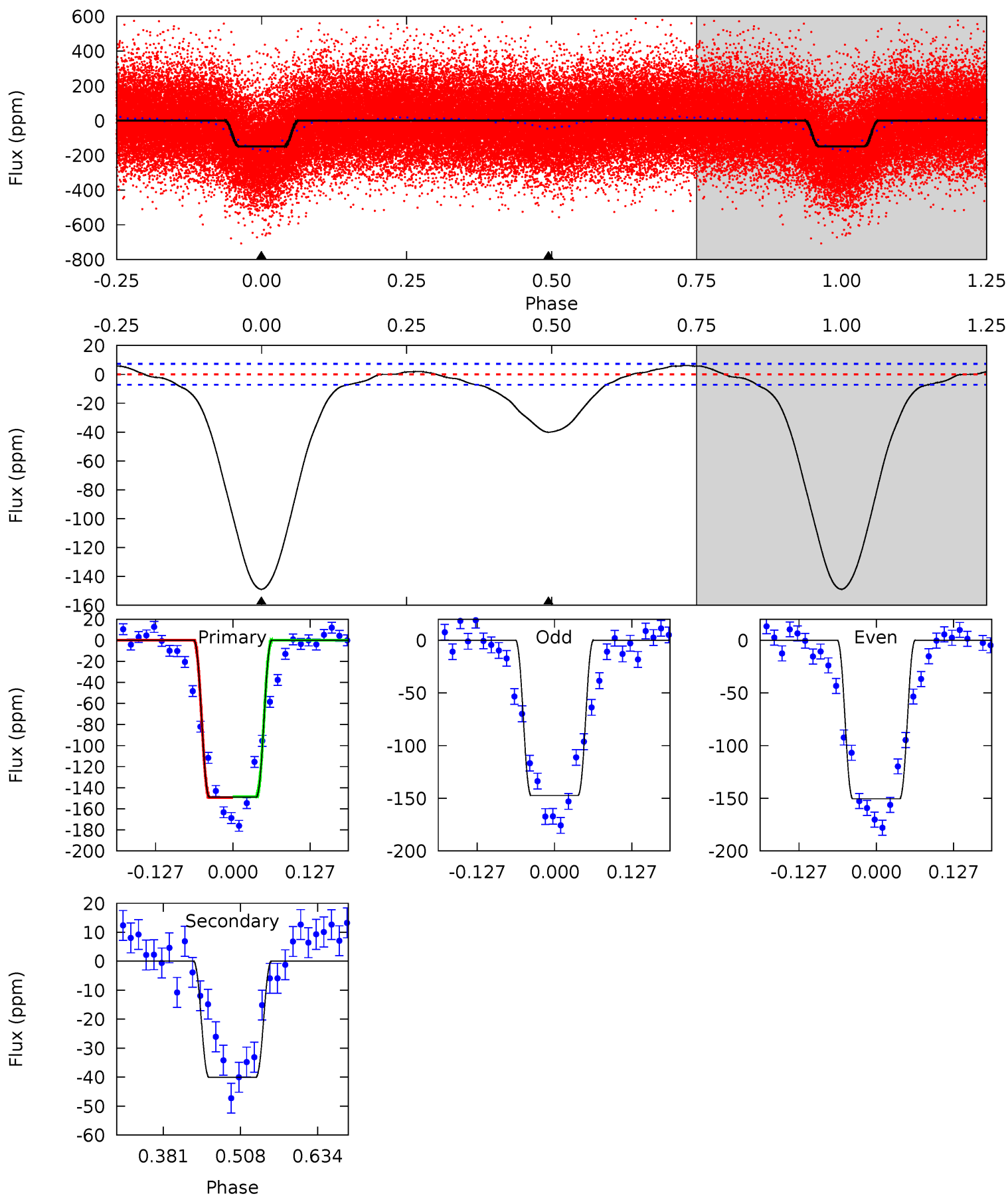
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	3.17	1.11	0	4.49	1.47	4.48	46.2	47.3	2.05	3.17	0.75	0.96	0.13	1.38



Alt Model-Shift Uniqueness Test

009899483-01, P = 1.332553 Days, E = 130.723771 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
93.3	25.1	0	0	4.51	1.53	2.70	93.3	93.3	25.1	25.1	1.01	1.00	0.04	0.29



Stellar Parameters For KIC 009899483

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6468^{+71}_{-77}	$4.107^{+0.168}_{-0.112}$	$-0.100^{+0.150}_{-0.150}$	$1.602^{+0.293}_{-0.322}$	$1.195^{+0.139}_{-0.086}$	$0.410^{+0.354}_{-0.139}$
	+1%/-1%	+4%/-3%	+150%/-150%	+18%/-20%	+12%/-7%	+86%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 009899483-01 / KOI 1719.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 2	$1.96^{+0.22}_{-0.22}$	3165^{+141}_{-159}	2885^{+296}_{-5048}	$0.448^{+0.179}_{-0.161}$
Alt.	-40 ± 2	$2.28^{+0.24}_{-0.25}$	3164^{+163}_{-167}	4550^{+93}_{-93}	$2.736^{+0.686}_{-0.480}$

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 $A_{obs} \gg 1.0$

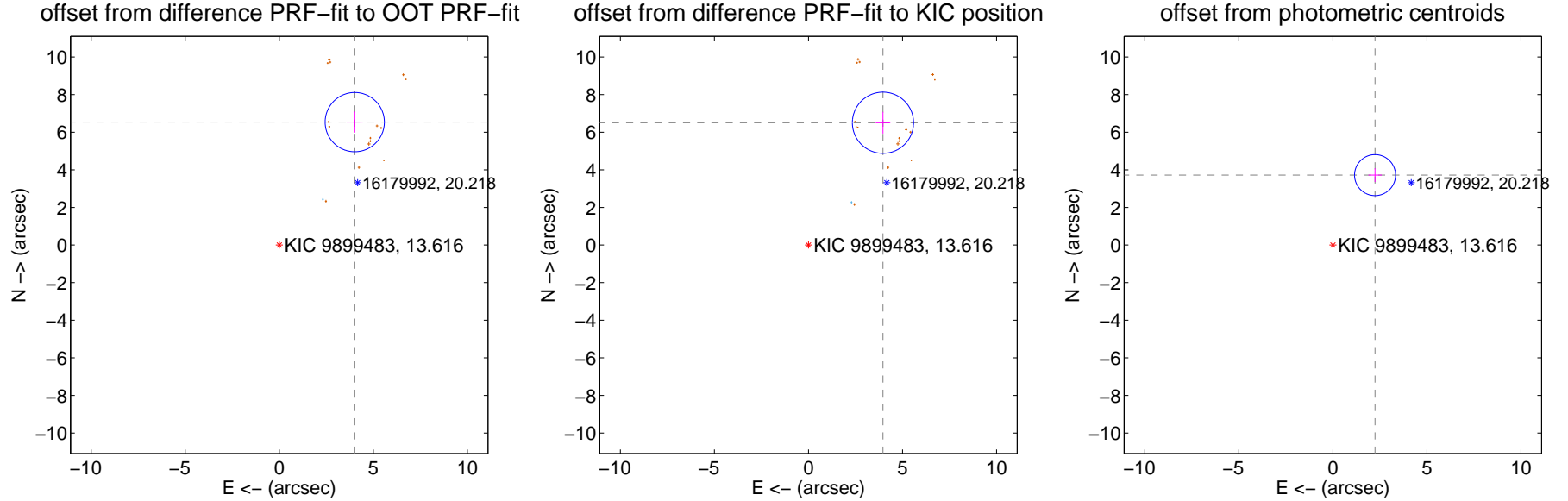
DV Centroid Data

Supplemental centroid analysis for 009899483-01. Kepler magnitude: 13.62. Transit SNR 29.67

There are 1 quarters with good PRF difference image offsets

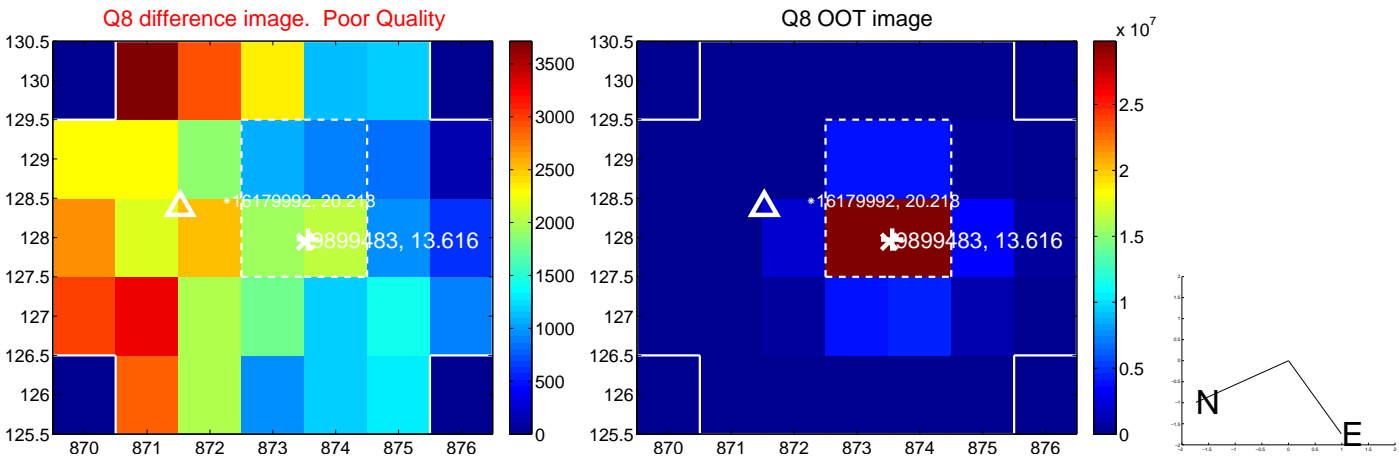
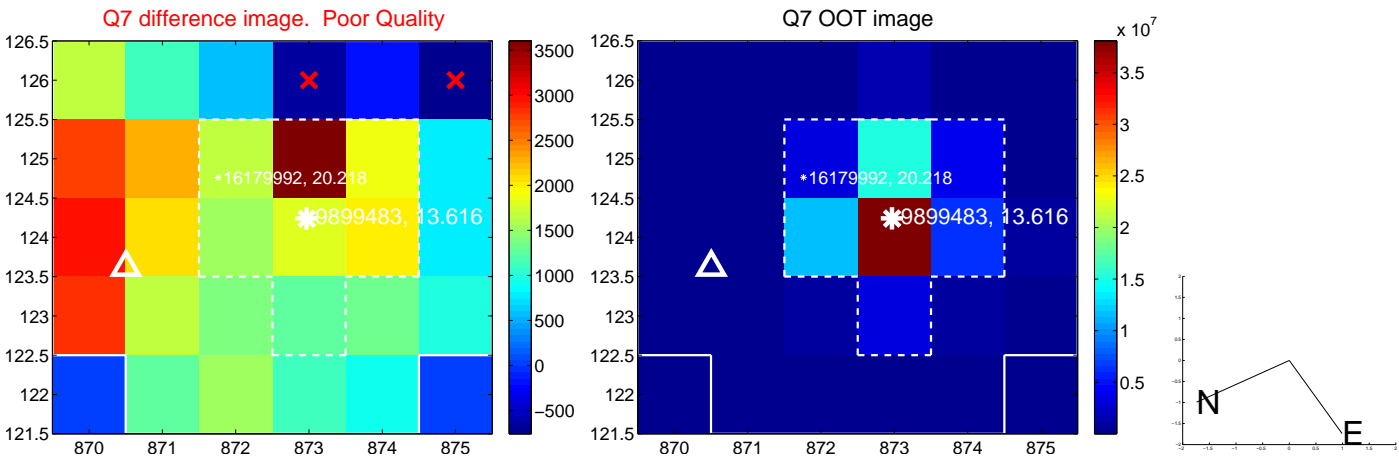
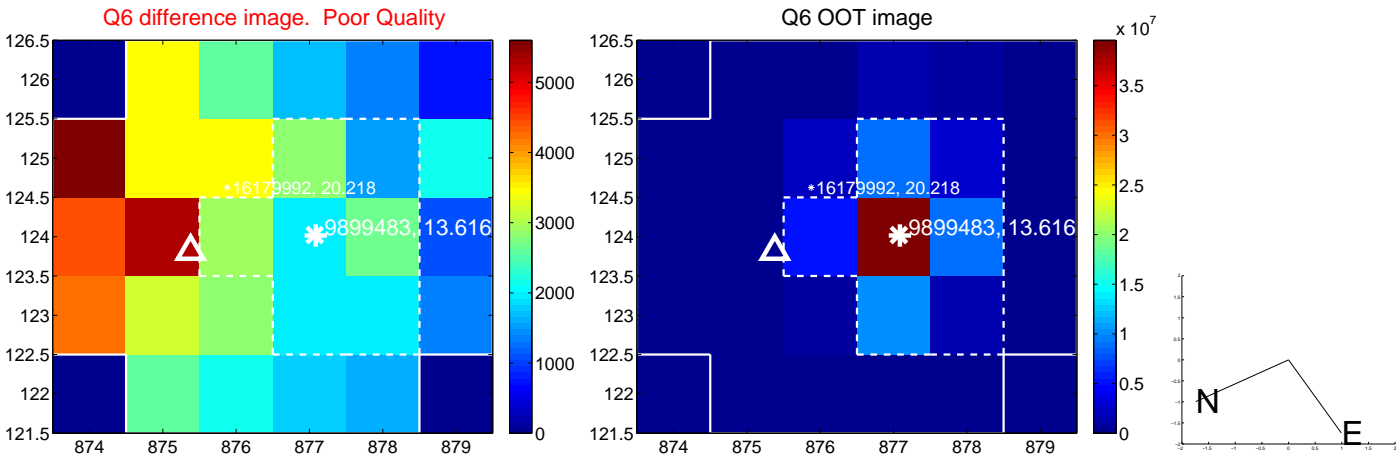
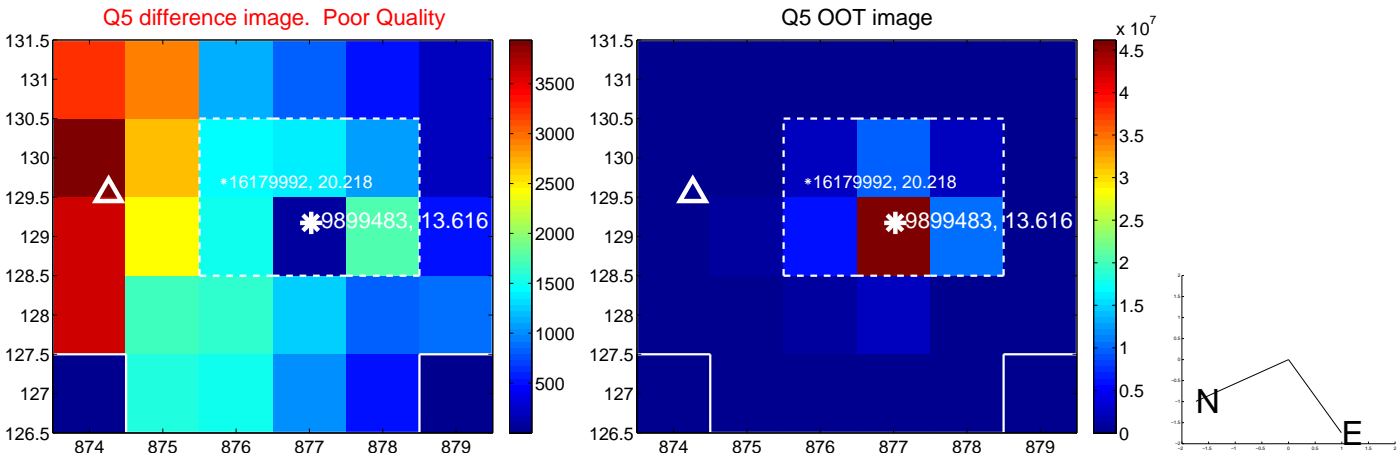
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.672 ± 0.525	14.61	-4.013 ± 0.428	6.539 ± 0.557
PRF-fit source offset from KIC position	7.617 ± 0.543	14.04	-3.962 ± 0.391	6.505 ± 0.576
photometric centroid source offset	4.34 ± 0.36	11.95	-2.24 ± 0.36	3.72 ± 0.37

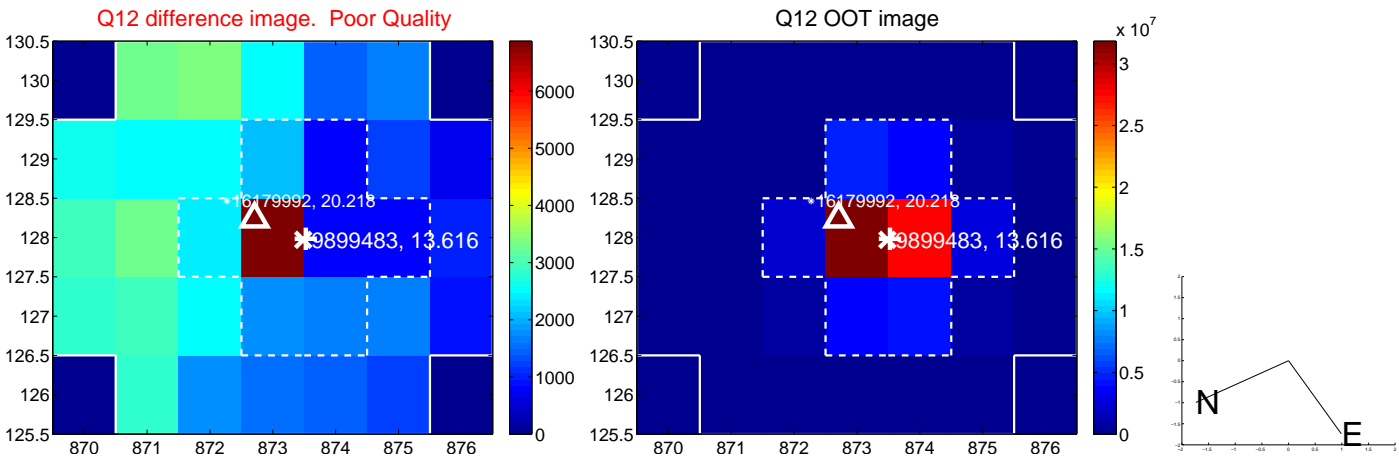
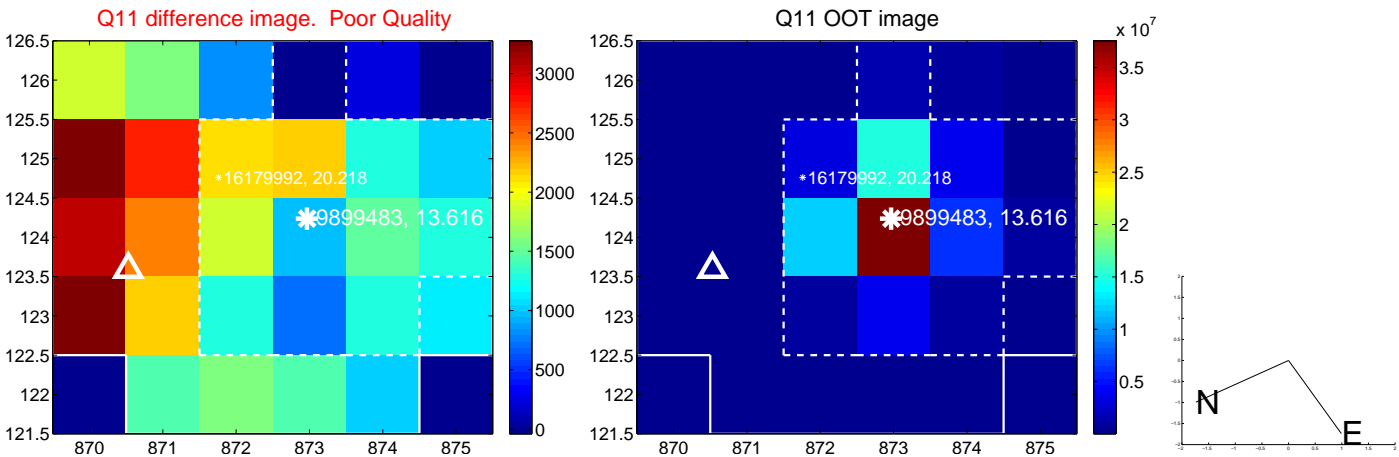
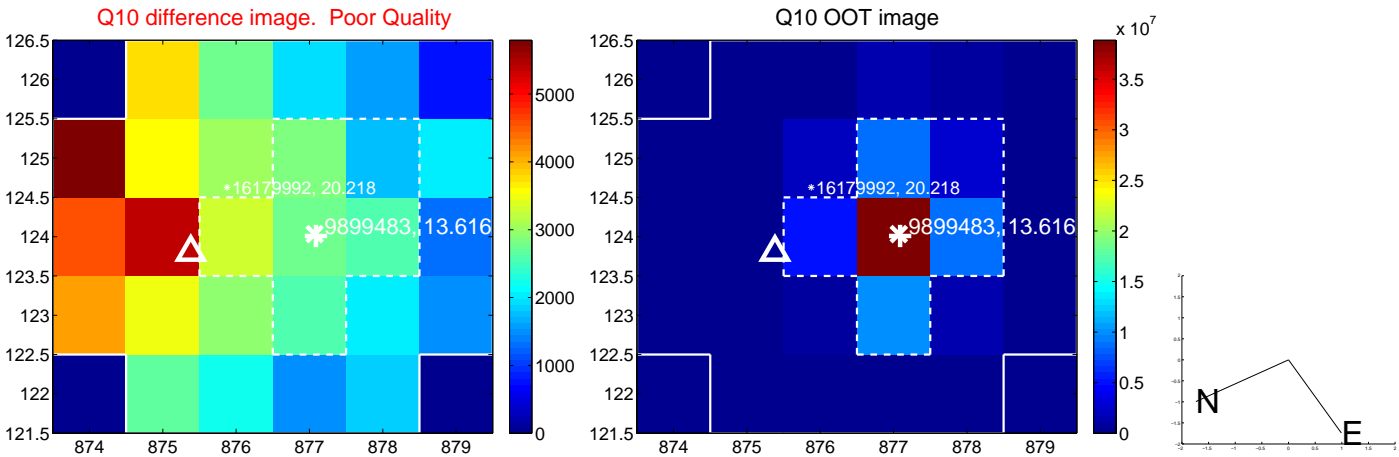
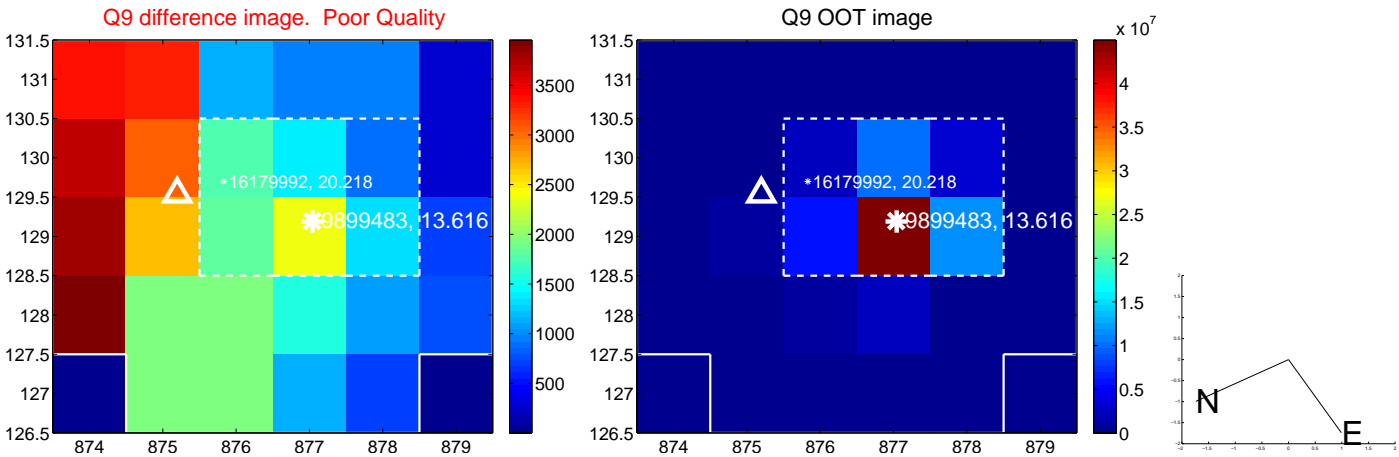


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

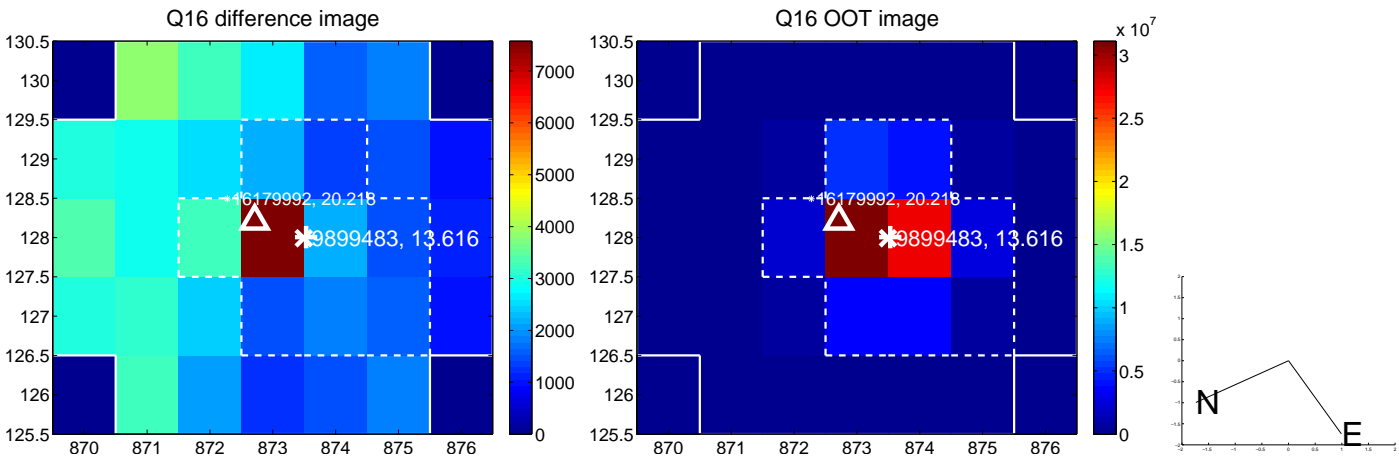
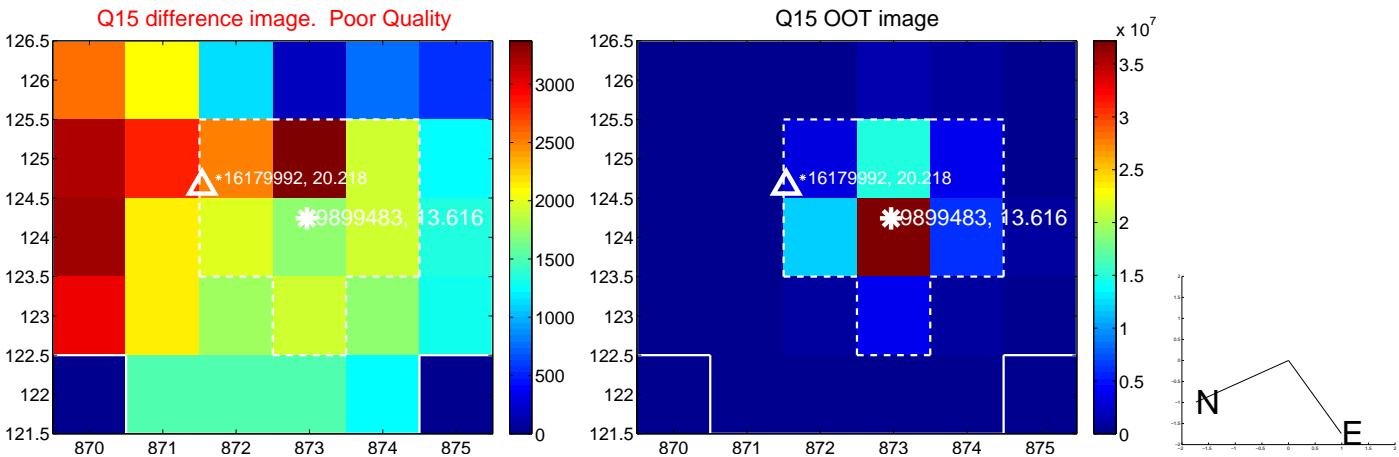
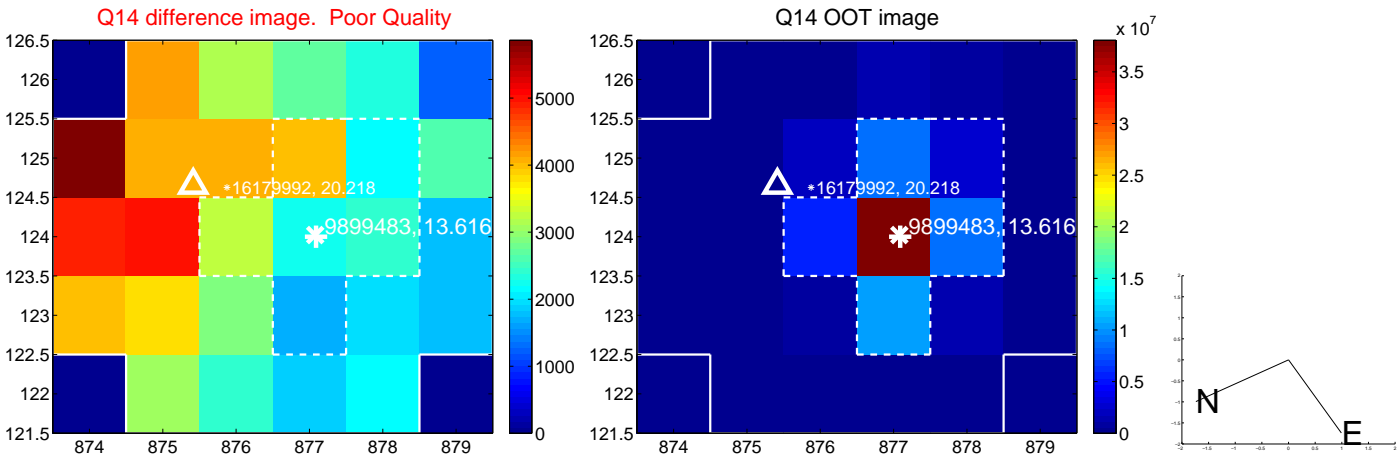
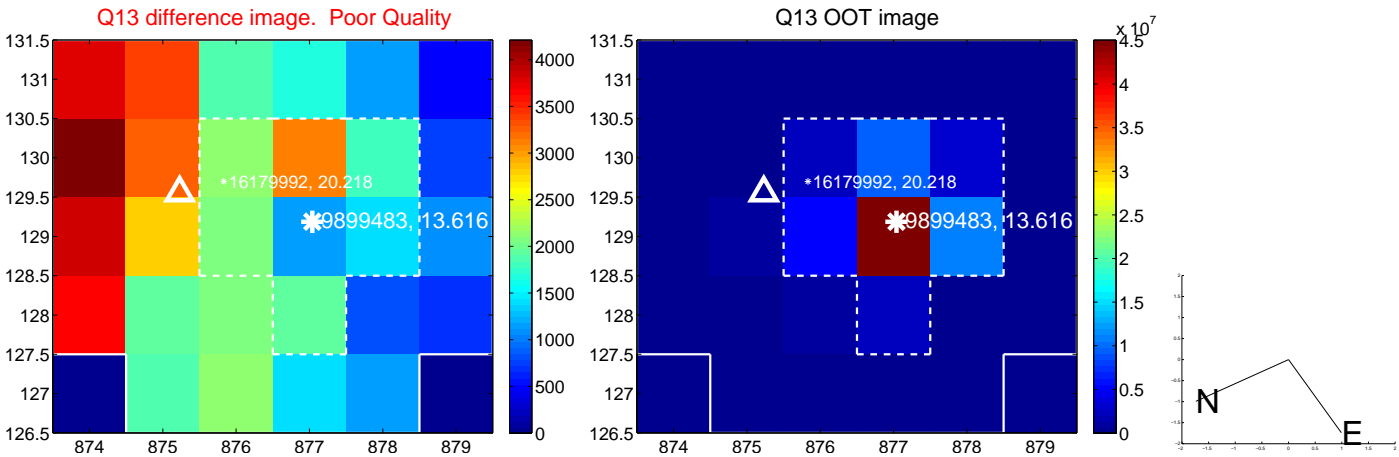
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



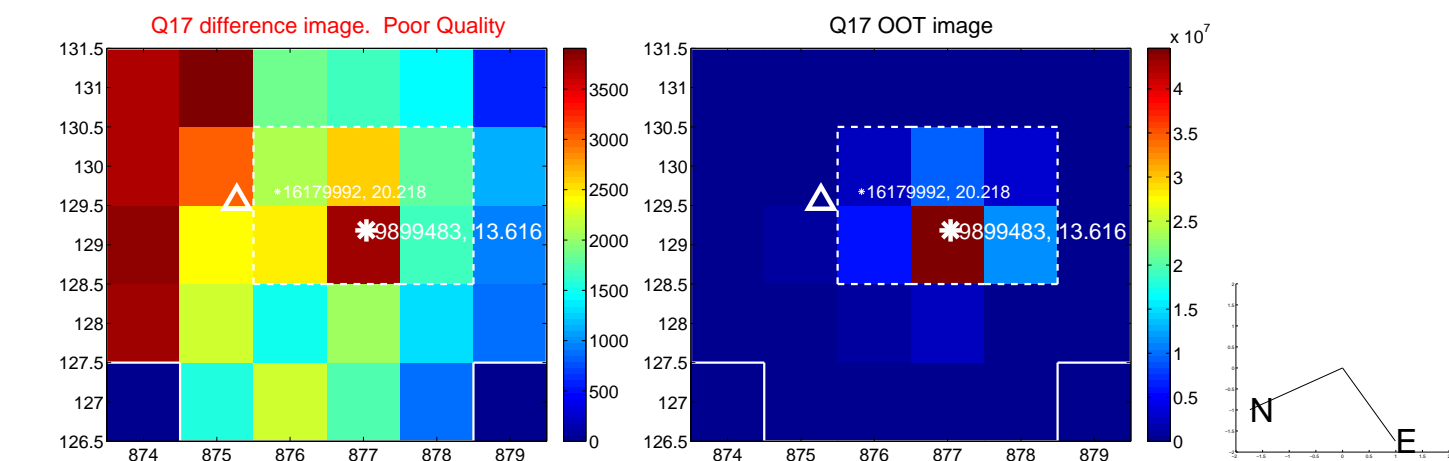
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



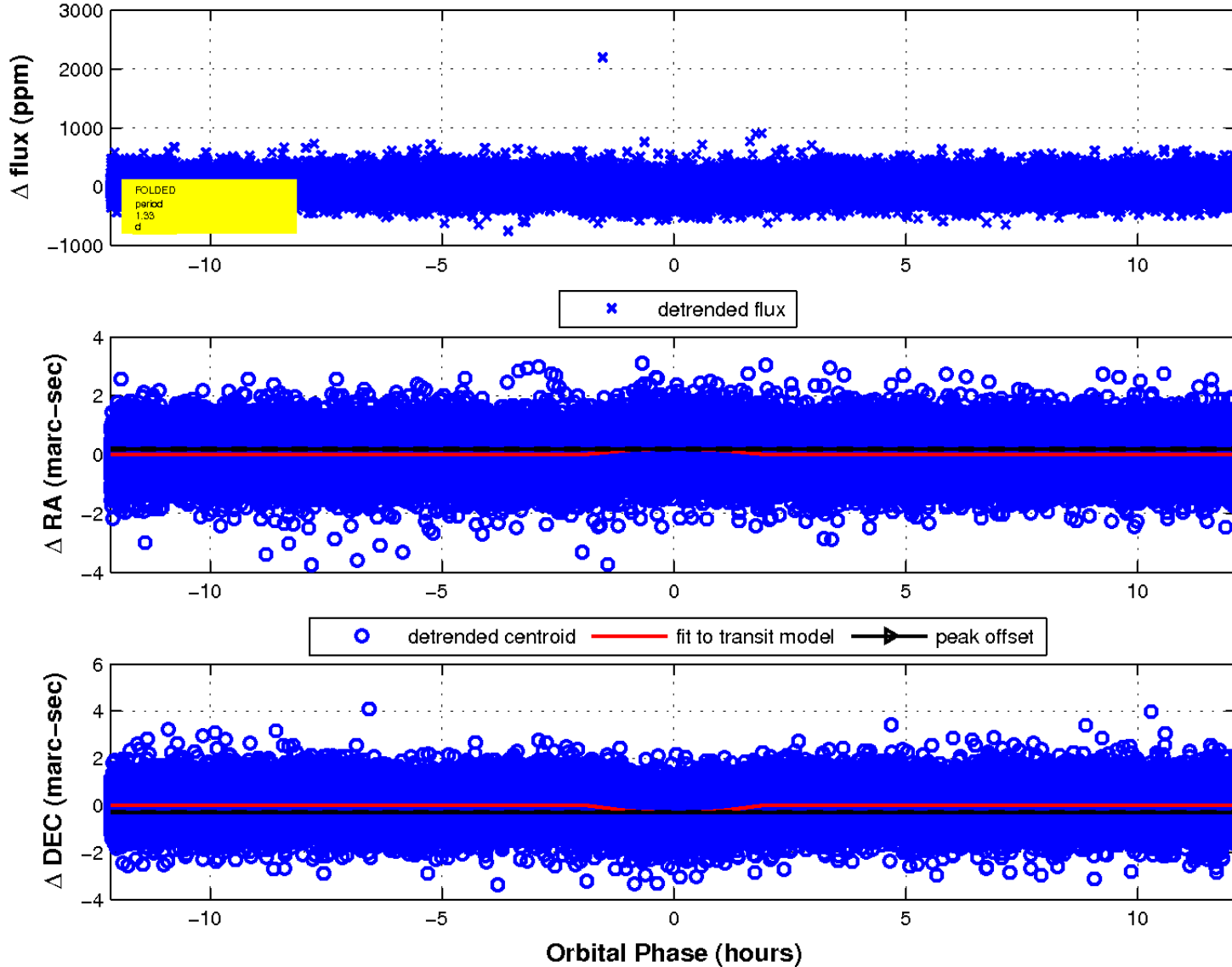
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

