

KIC 009945280

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})
009945280-01	OBS	7261.01	0.651729	131.754326	16687.1	2.375	2799.5	1447.6	1.47	5791	25.62	10891.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009945280-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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 009945280-01

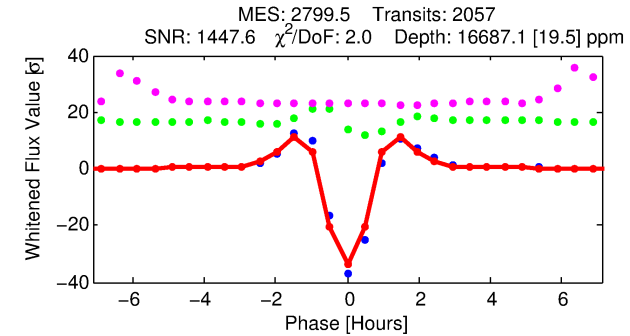
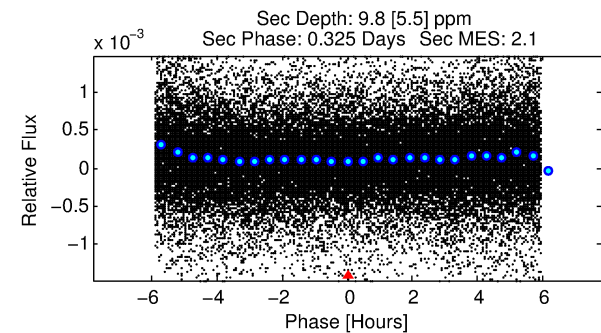
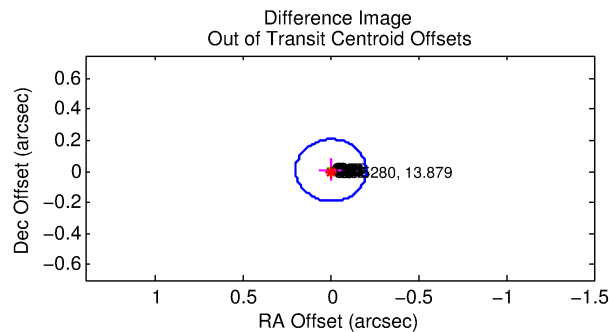
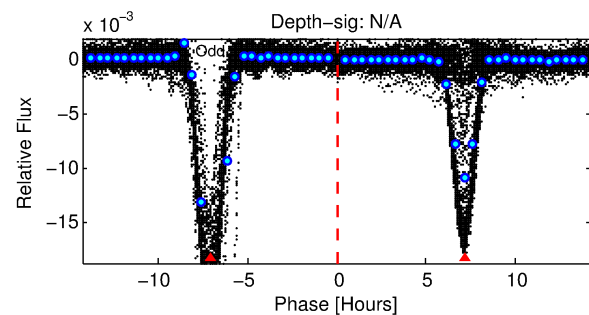
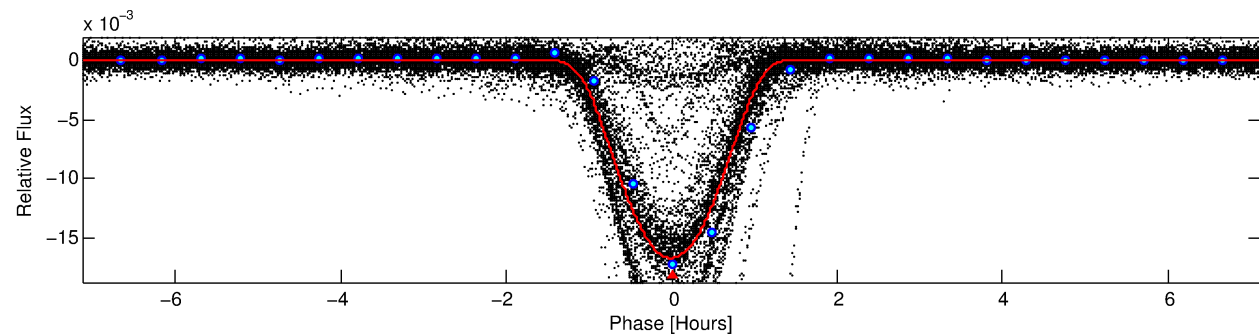
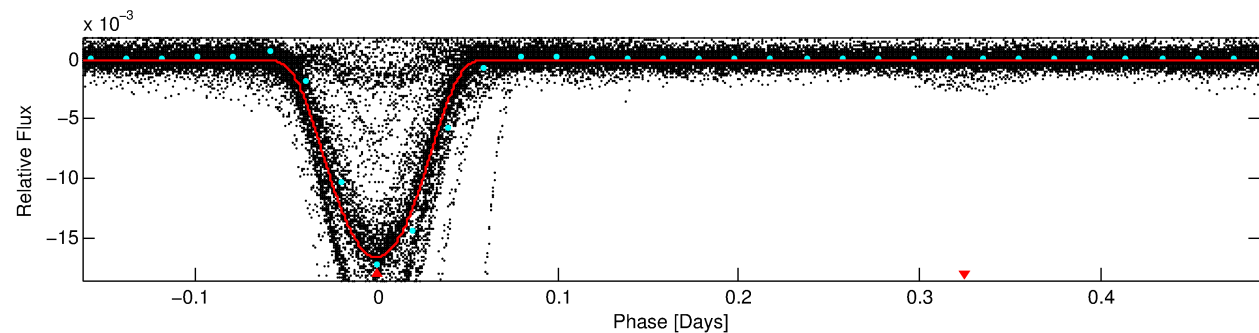
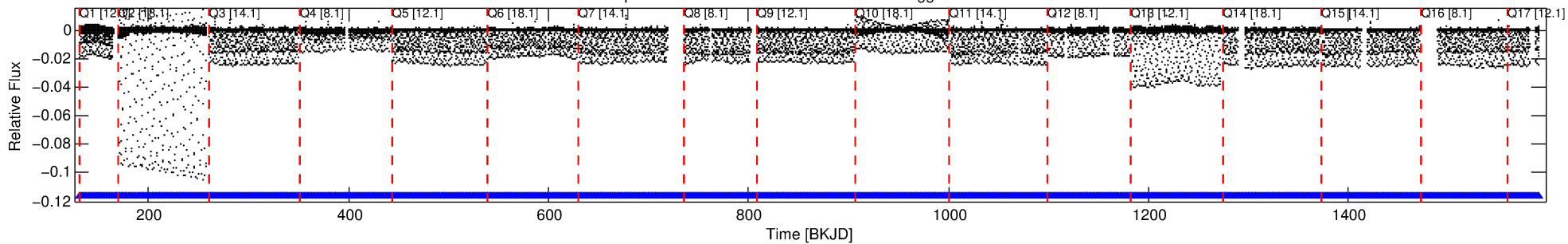
No Significant Match Found

DV One-Page Summary

KIC: 9945280 Candidate: 1 of 1 Period: 0.652 d

KOI: K07261.01 Corr: 0.981

Kp: 13.88 R*: 1.47 Rs Teff: 5791.0 K Logg: 4.05 Fe/H: -0.380



DV Fit Results:

Period = 0.65173 [0.00000] d
Epoch = 131.7543 [0.0000] BKJD
Rp/R* = 0.1595 [0.0015]
a/R* = 1.80 [0.00]
b = 0.92 [0.00]
Seff = 10891.58 [8225.65]
Teff = 2605 [492] K
Rp = 25.62 [9.75] Re
a = 0.0142 [0.0061] AU
Ag = 0.00 [0.00] [-649.40σ]
Teffp = 810 [117] K [-3.55σ]

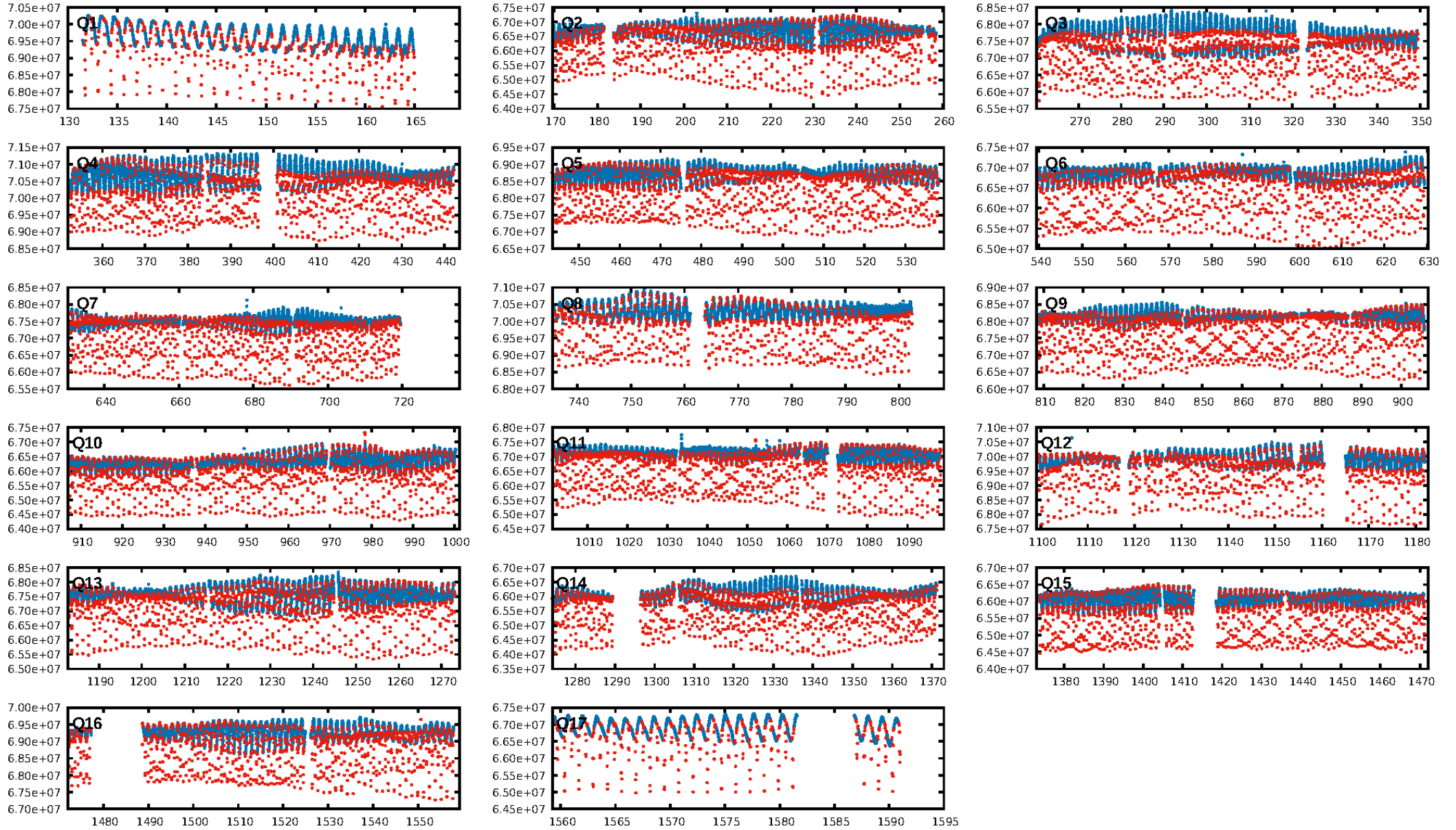
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1964/1964]
GhostDiagnostic-chr: 3.123
Centroid-sig: 0.0%
Centroid-so: 0.179 arcsec [78.01σ]
OotOffset-rm: 0.008 arcsec [0.12σ]
KicOffset-rm: 0.059 arcsec [0.88σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

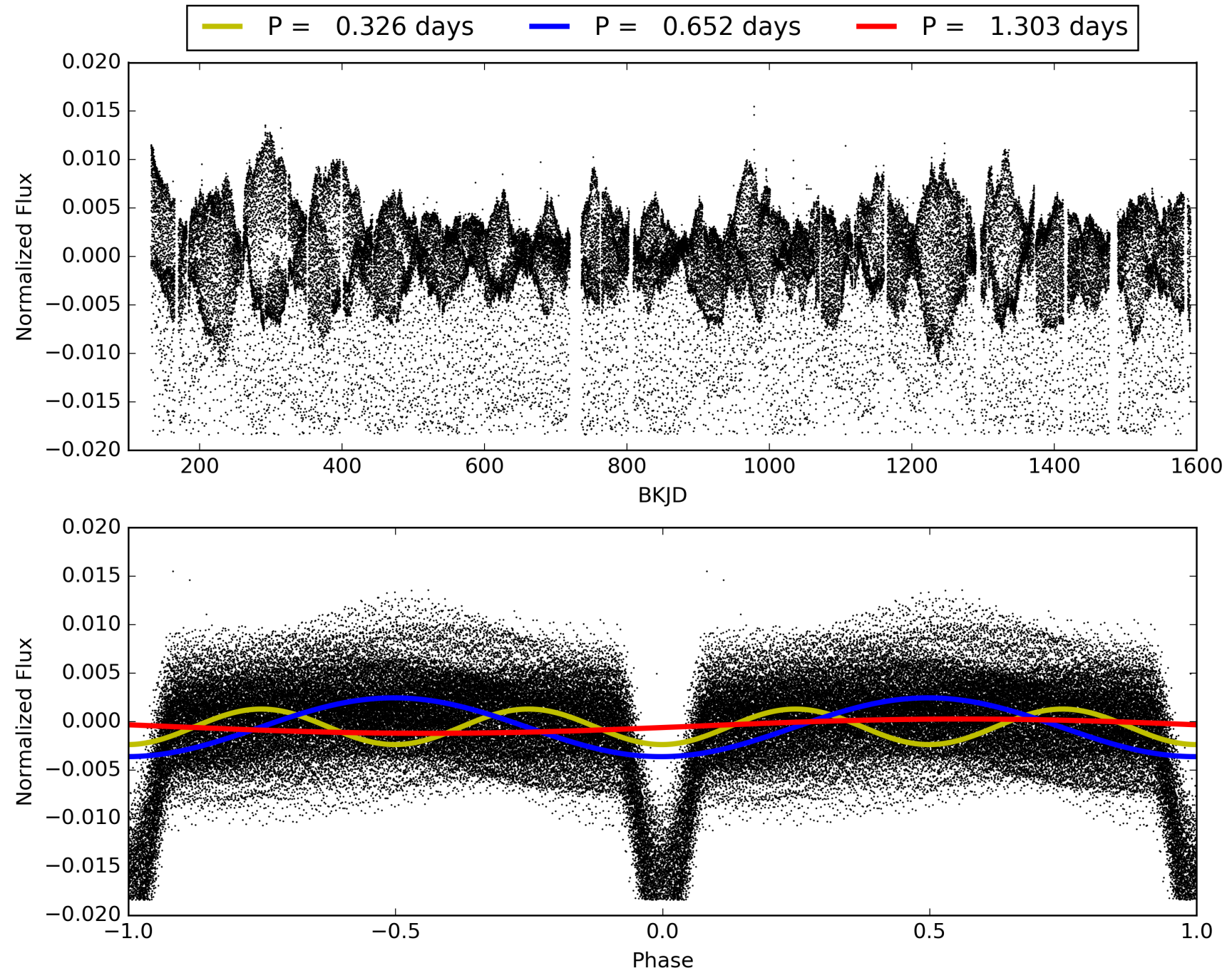
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:35:55 Z

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

TCE 009945280-01, PDC Light Curves

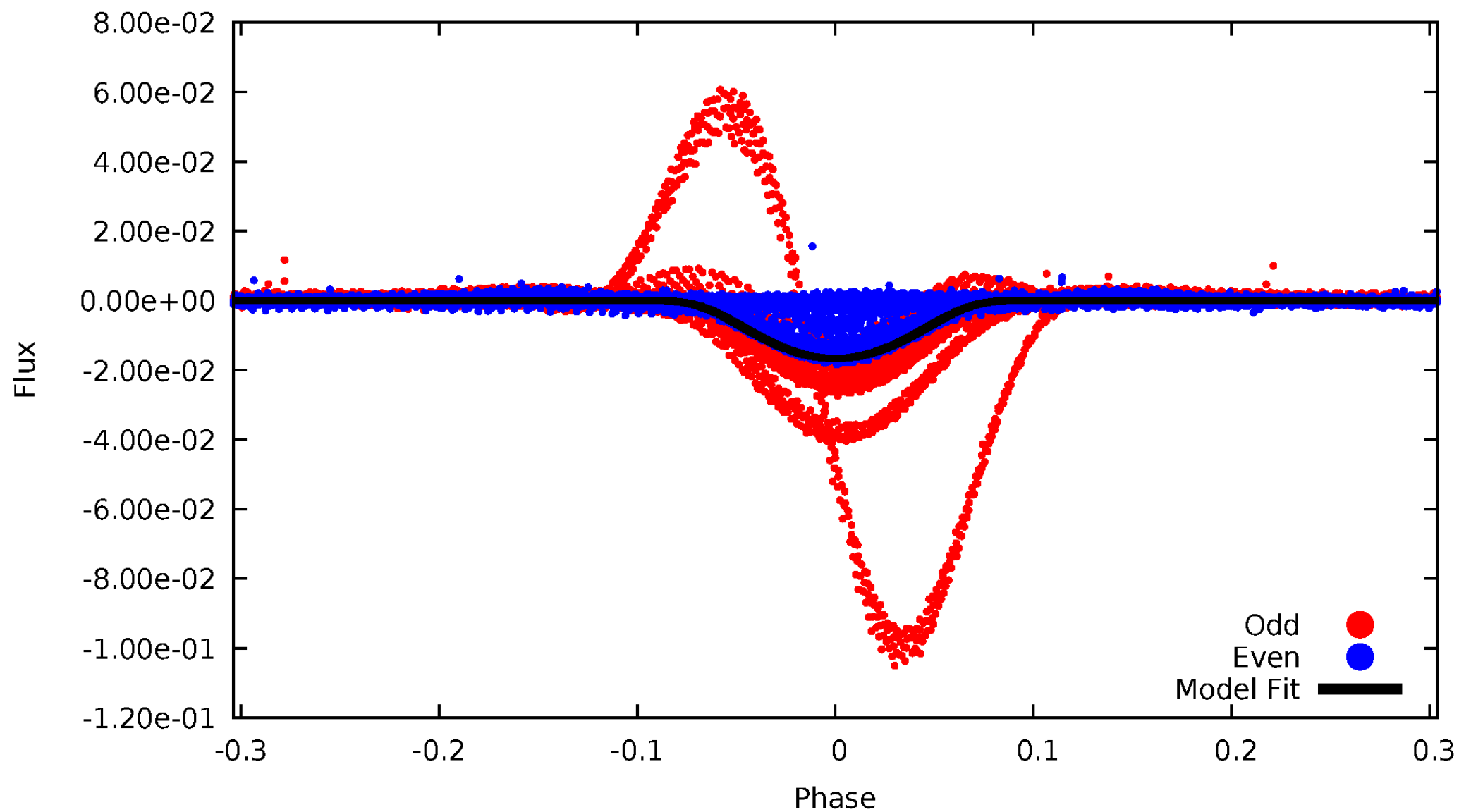


TCE 009945280-01



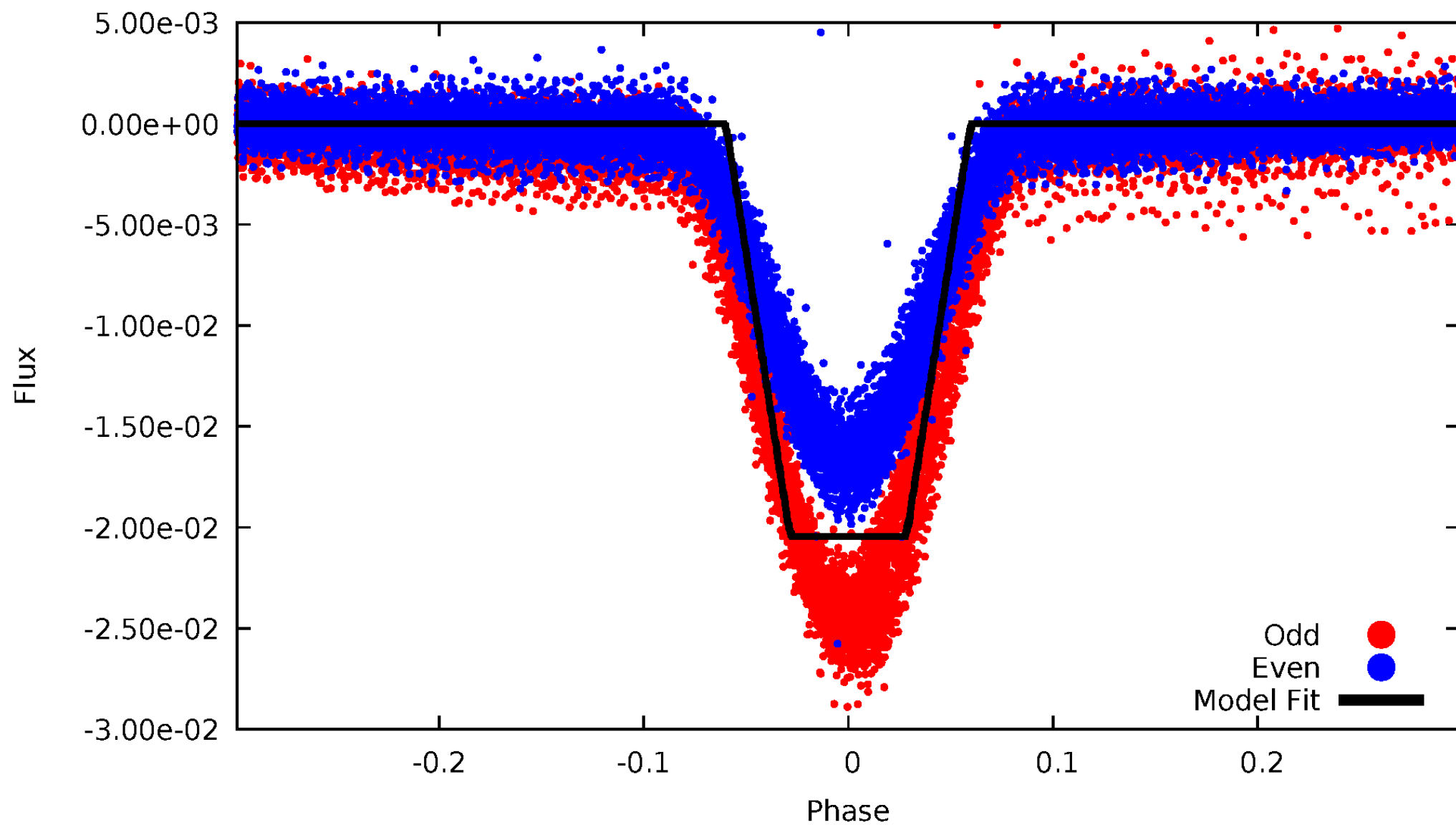
DV Odd/Even

TCE 009945280-01



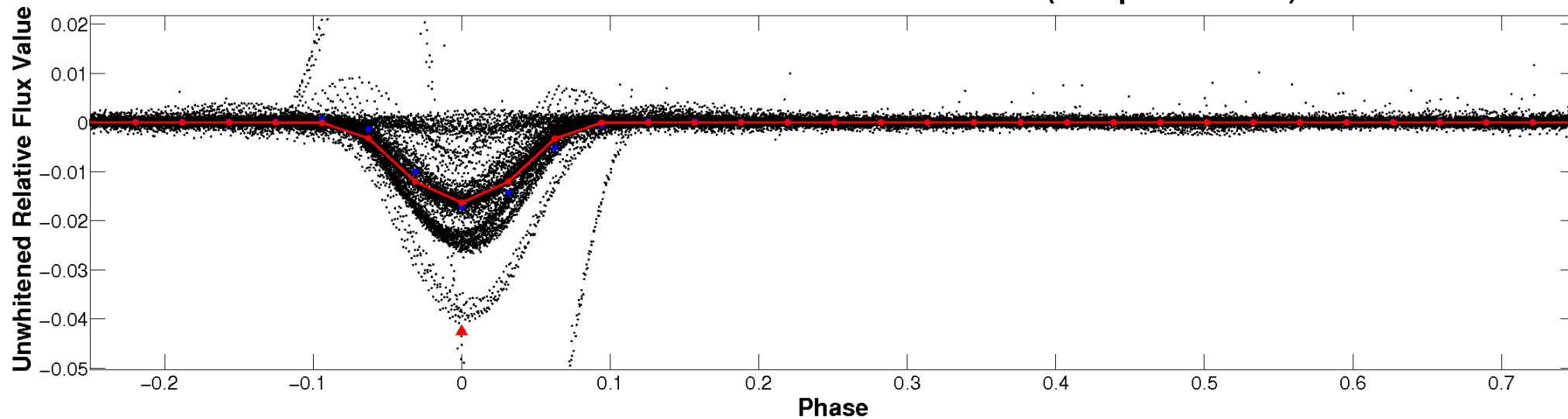
ALT Odd/Even

TCE 009945280-01

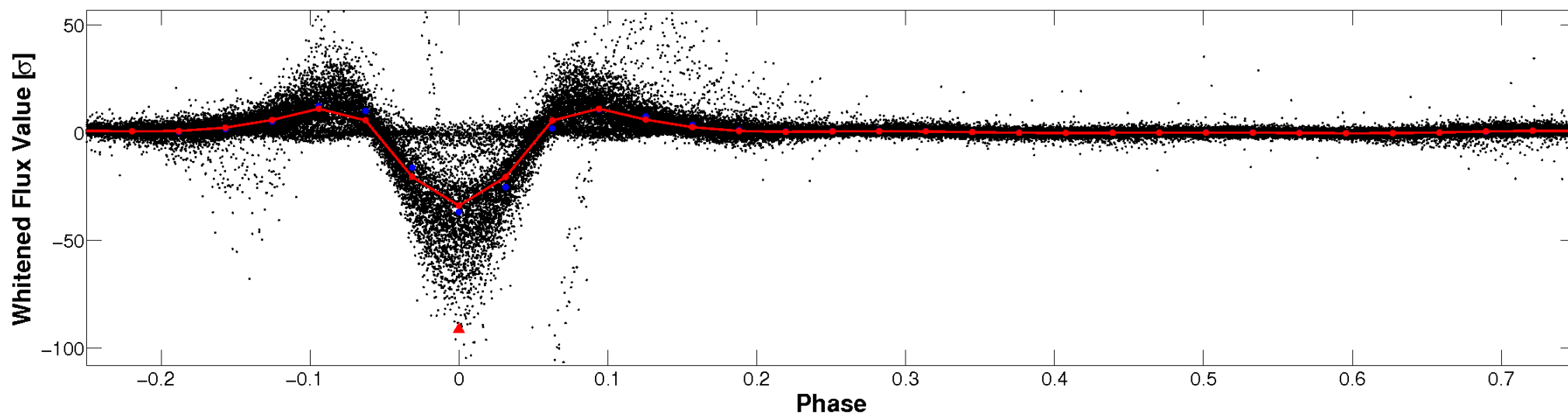


Non-Whitened Vs. Whitened Light Curve

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

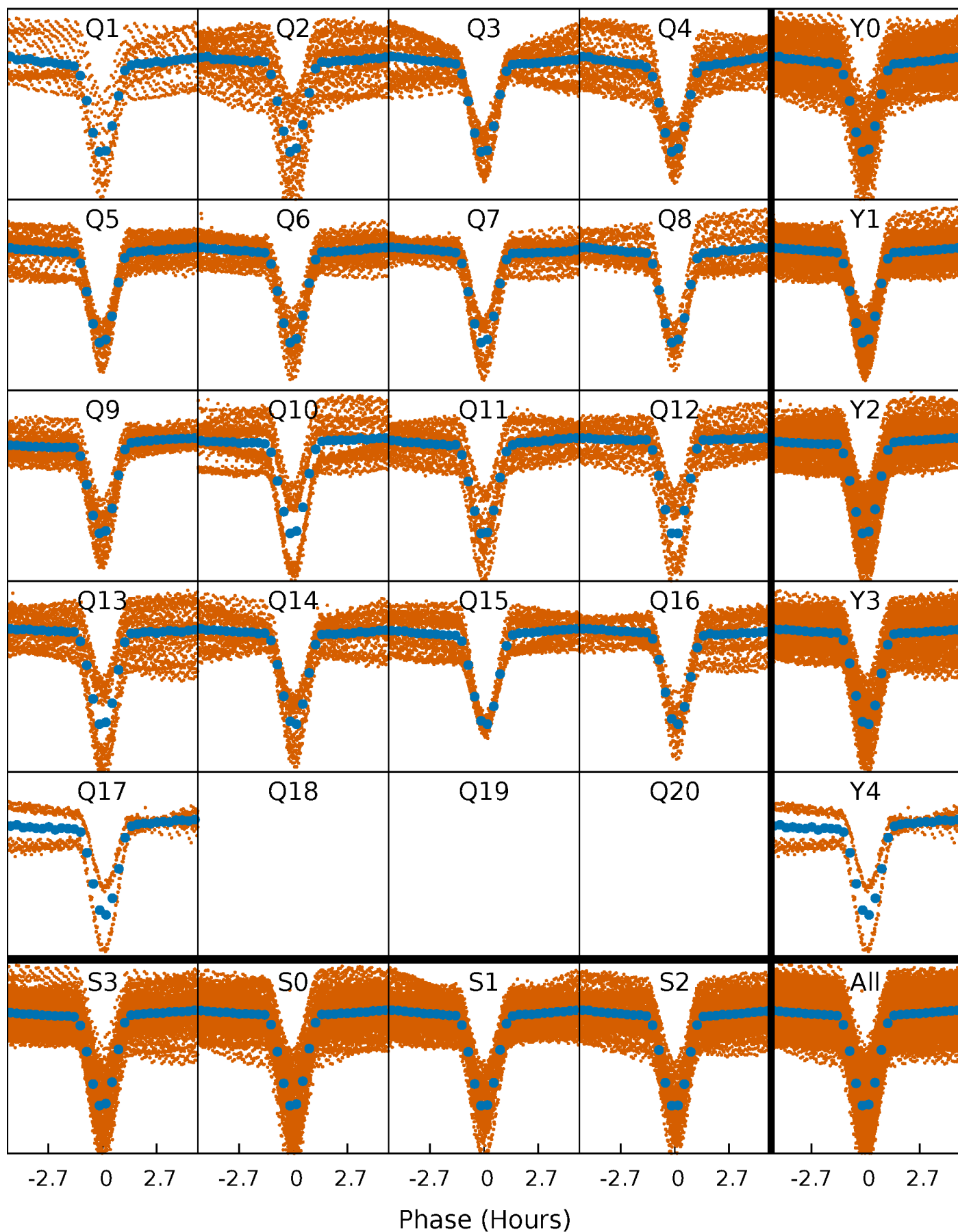


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



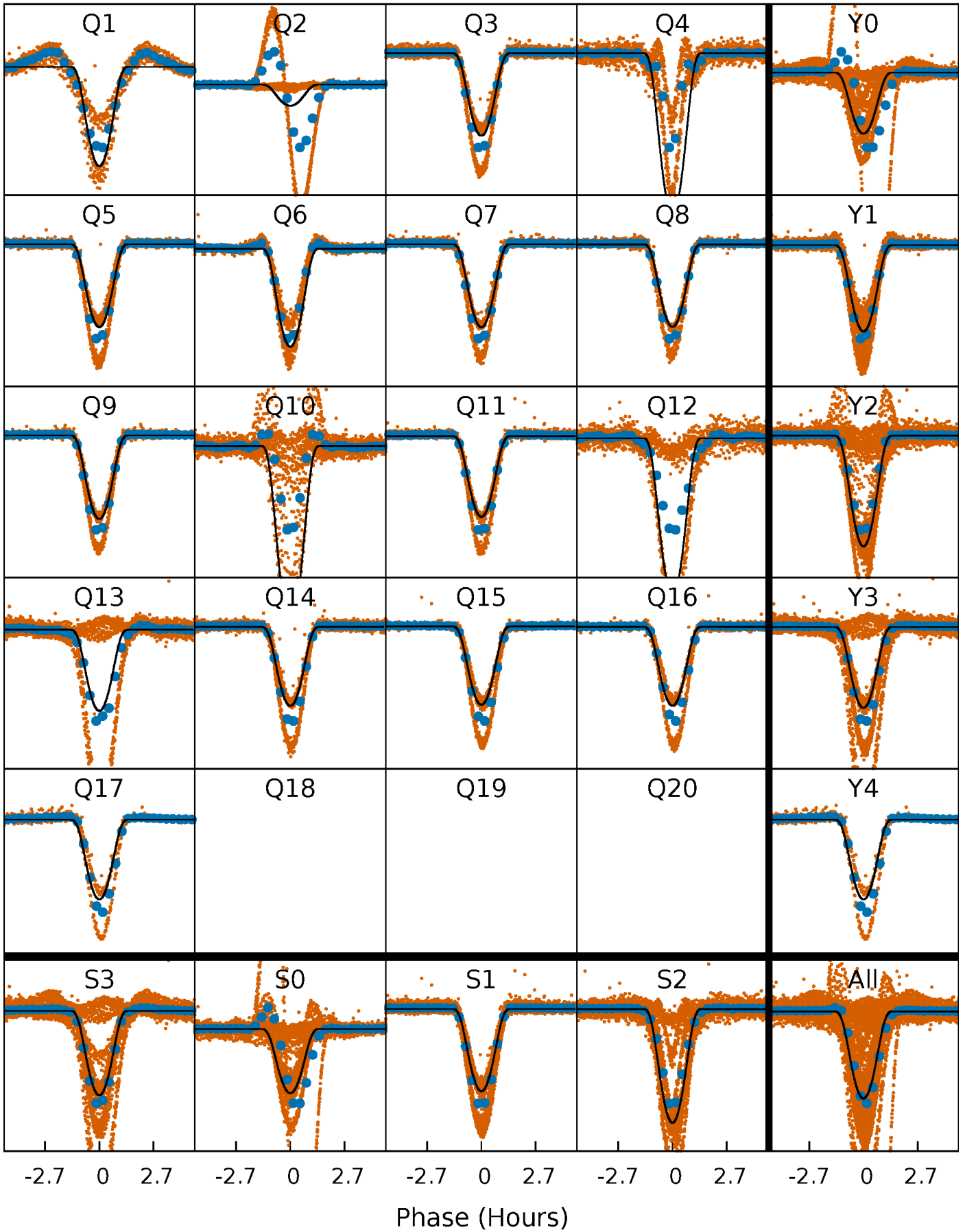
PDC Quarter-Phased Transit Curves

TCE 009945280-01 P= 0.651729 Days $T_0=131.754326$ (BKJD)



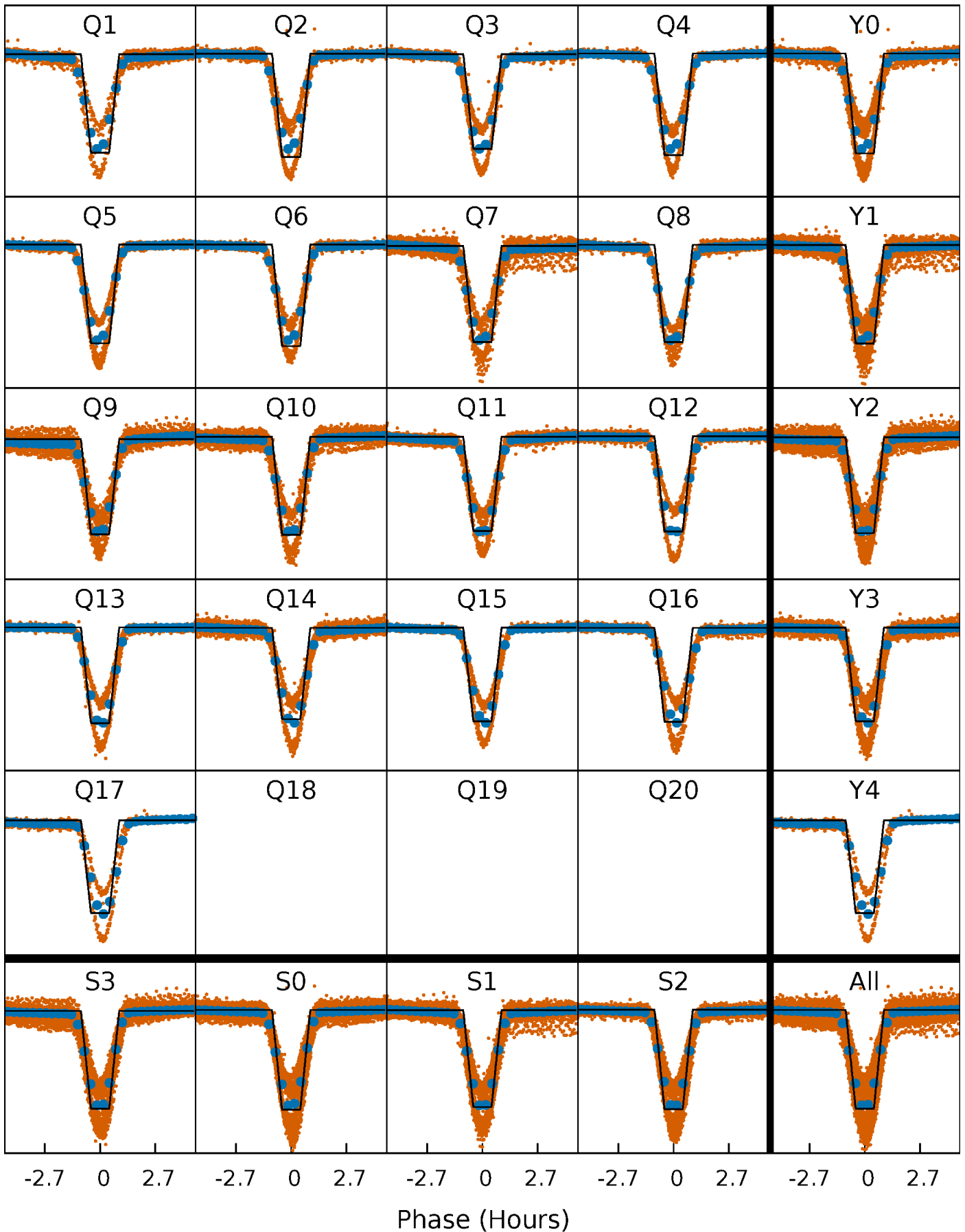
DV Quarter-Phased Transit Curves

TCE 009945280-01 P= 0.651729 Days $T_0=131.754326$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

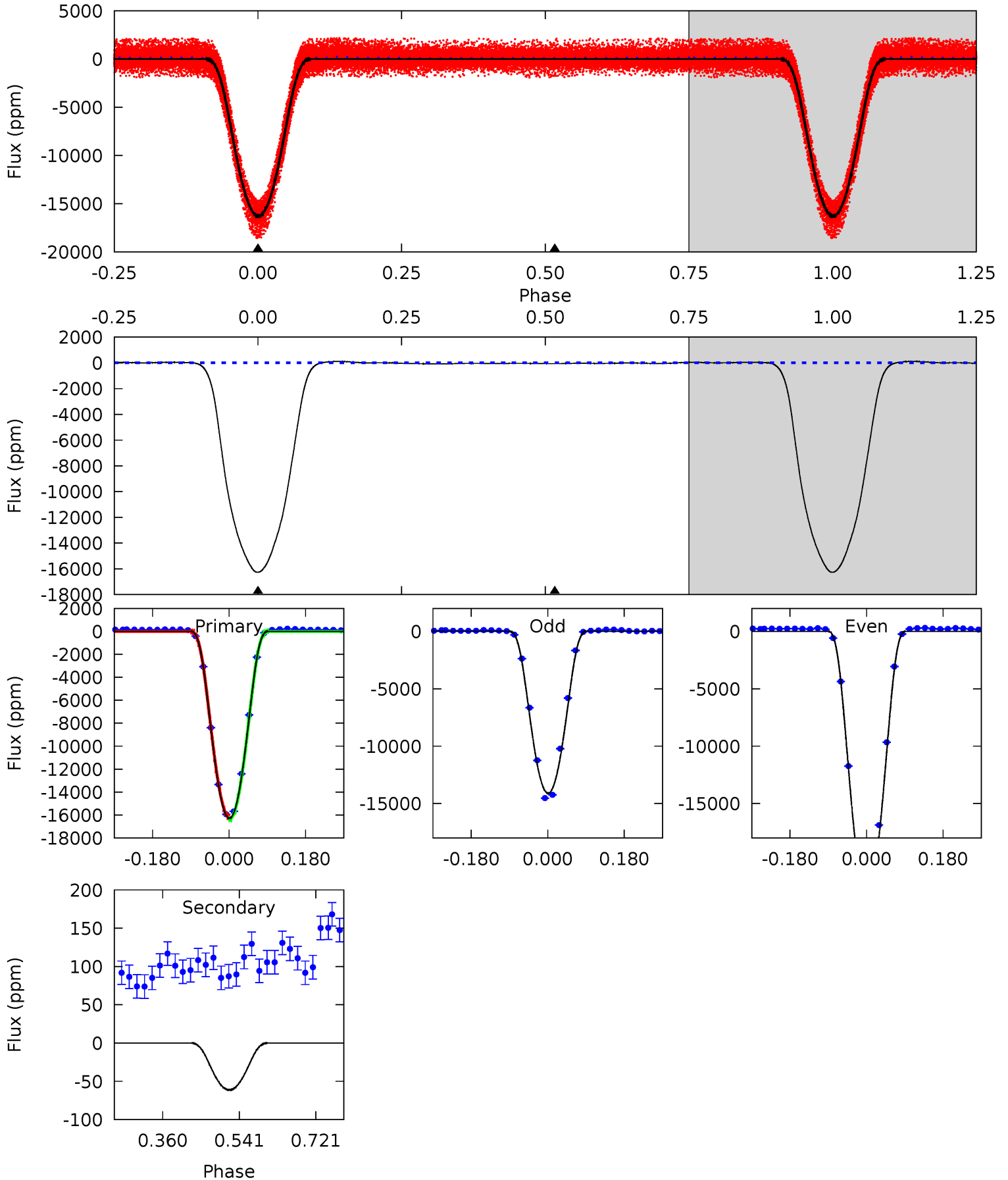
TCE 009945280-01 P= 0.651728 Days $T_0=131.755686$ (BKJD)



DV Model-Shift Uniqueness Test

009945280-01, P = 0.651729 Days, E = 131.102597 Days

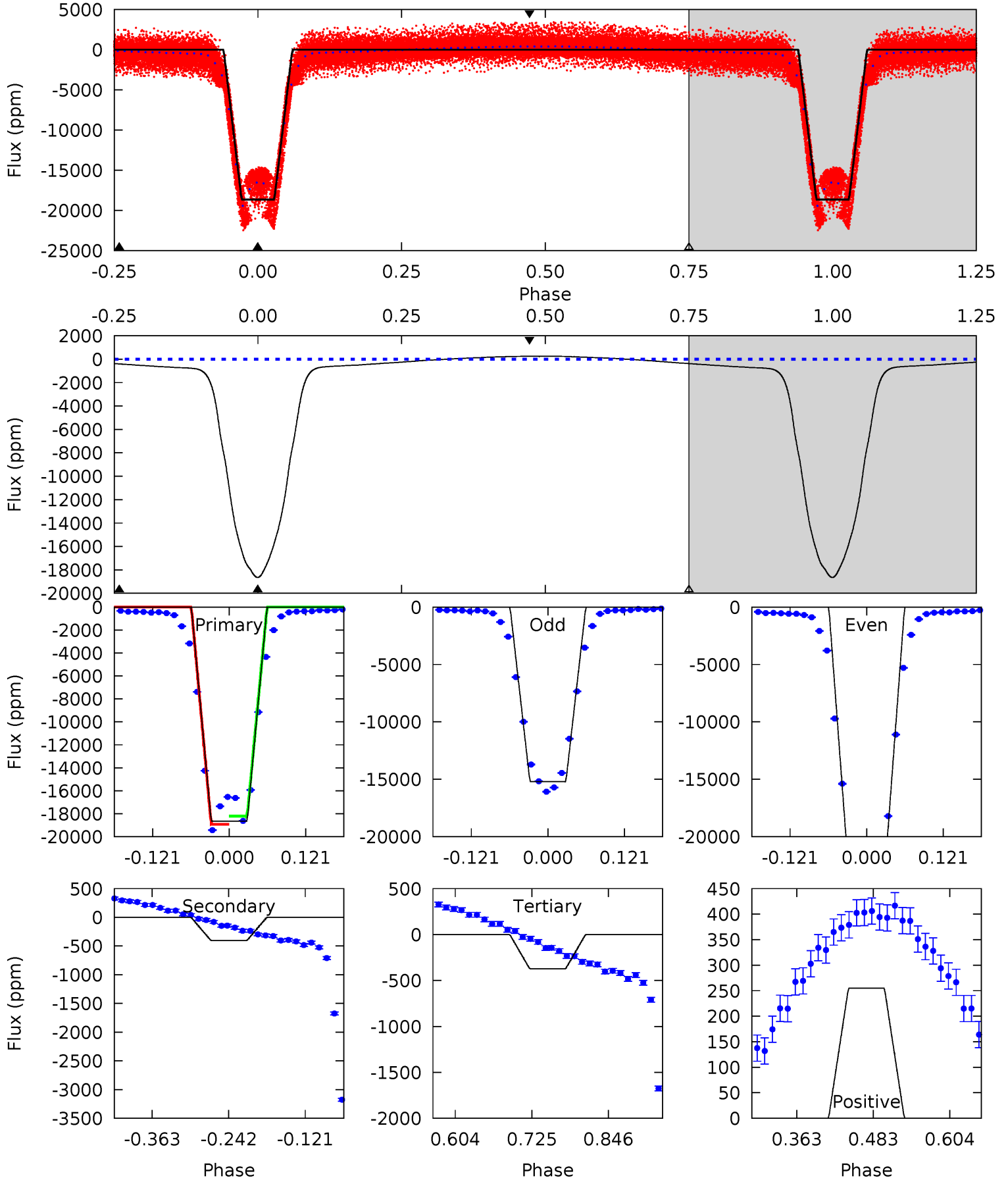
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2573	9.69	0	0	4.44	1.34	5.91	2573	2573	9.69	9.69	734.7	1.05	0.01	16.4



Alt Model-Shift Uniqueness Test

009945280-01, P = 0.651728 Days, E = 131.103958 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1646	35.7	32.8	22.5	4.52	1.55	23.0	1613	1624	2.82	13.2	431.1	1.02	0.01	30.6



Stellar Parameters For KIC 009945280

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5791^{+157}_{-157}	$4.052^{+0.458}_{-0.183}$	$-0.380^{+0.350}_{-0.250}$	$1.472^{+0.408}_{-0.560}$	$0.890^{+0.111}_{-0.090}$	$0.393^{+1.415}_{-0.188}$
	+3%/-3%	+11%/-5%	+92%/-66%	+28%/-38%	+12%/-10%	+360%/-48%
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 009945280-01 / KOI 7261.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-61 ± 6	$24.94^{+4.38}_{-5.13}$	3576^{+327}_{-384}	-3412^{+233}_{-206}	$0.011^{+0.006}_{-0.003}$
Alt.	-404 ± 11	$22.64^{+3.76}_{-5.13}$	3592^{+306}_{-430}	-3260^{+363}_{-226}	$0.088^{+0.057}_{-0.023}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

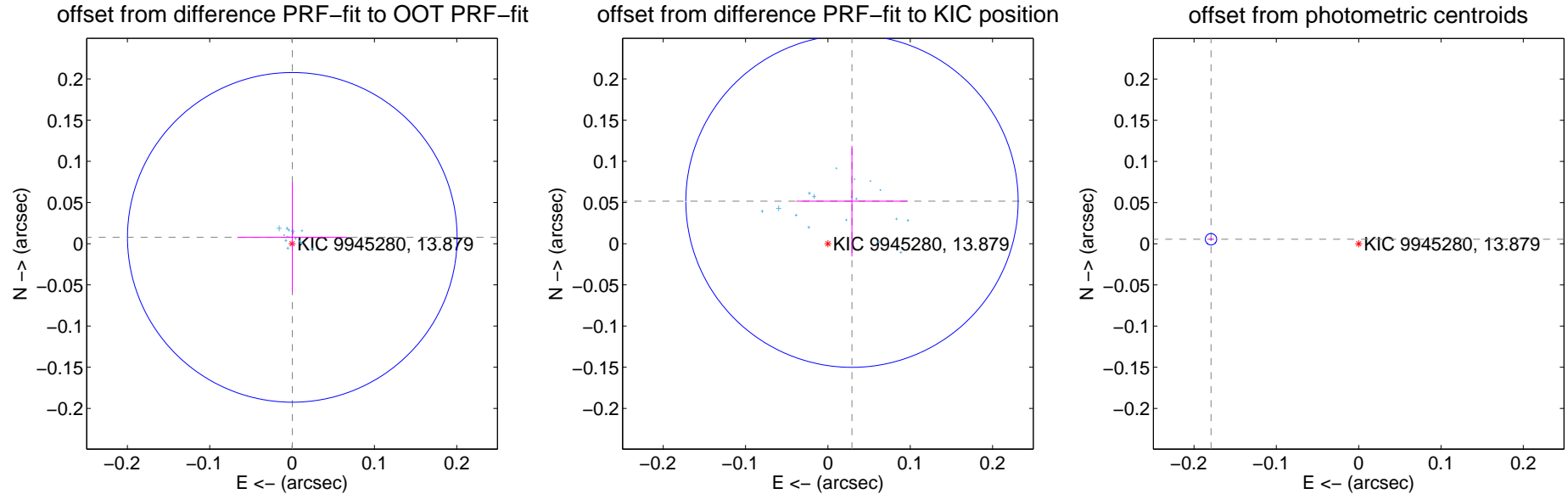
DV Centroid Data

Supplemental centroid analysis for 009945280-01. Kepler magnitude: 13.88. Transit SNR 1447.64

There are 17 quarters with good PRF difference image offsets

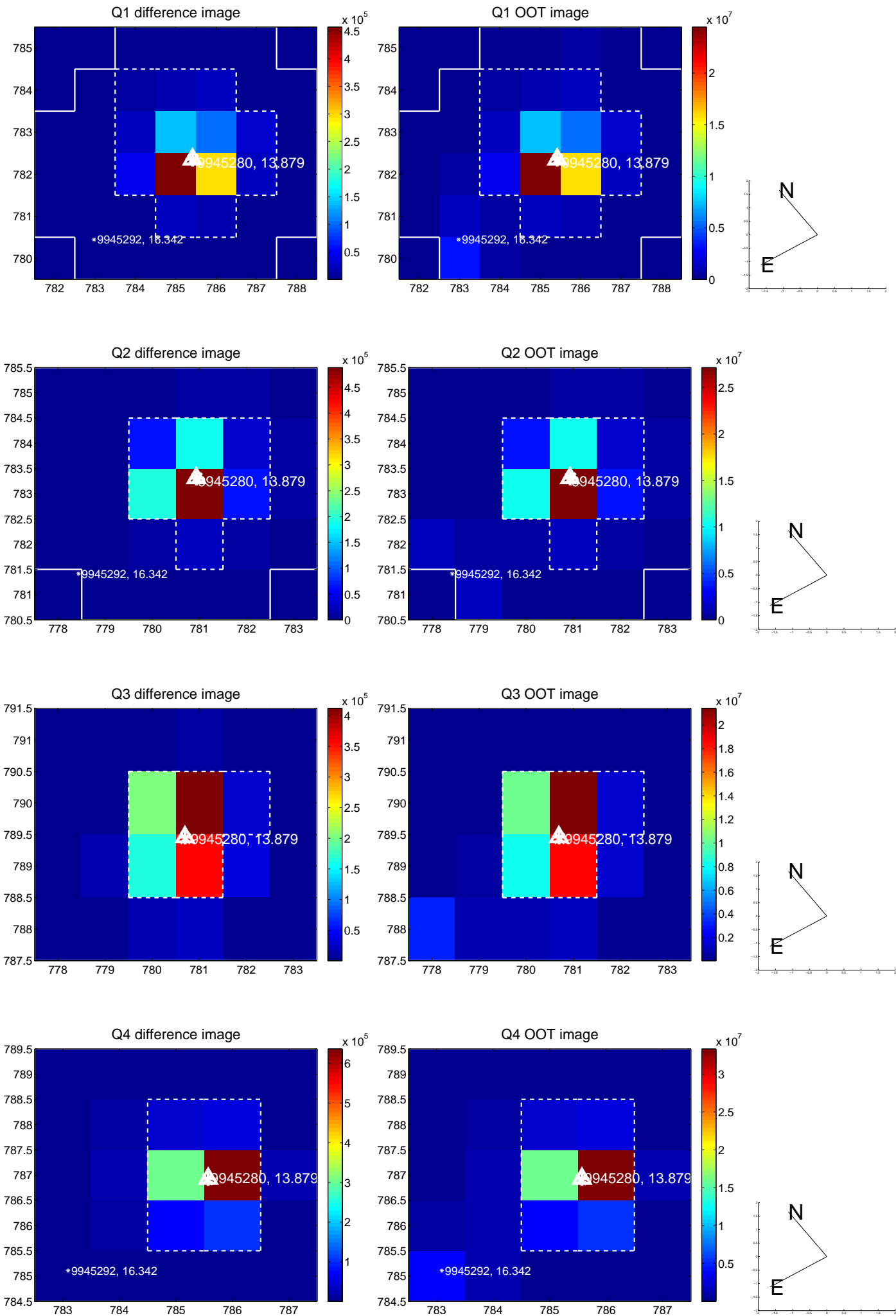
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	-0.000 ± 0.067	0.008 ± 0.067
PRF-fit source offset from KIC position	0.059 ± 0.067	0.88	-0.029 ± 0.068	0.052 ± 0.067
photometric centroid source offset	0.18 ± 0.00	78.01	0.18 ± 0.00	0.01 ± 0.00

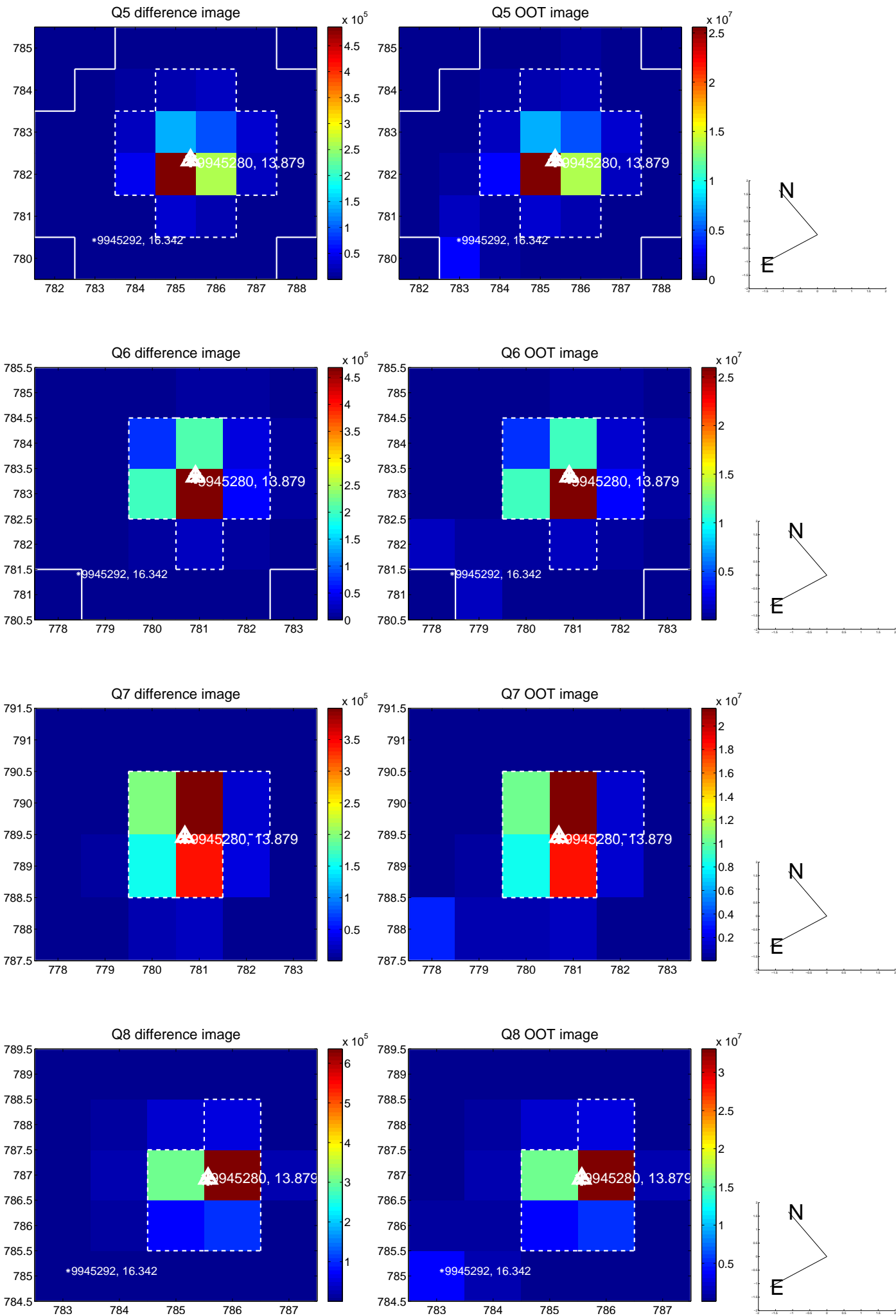


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

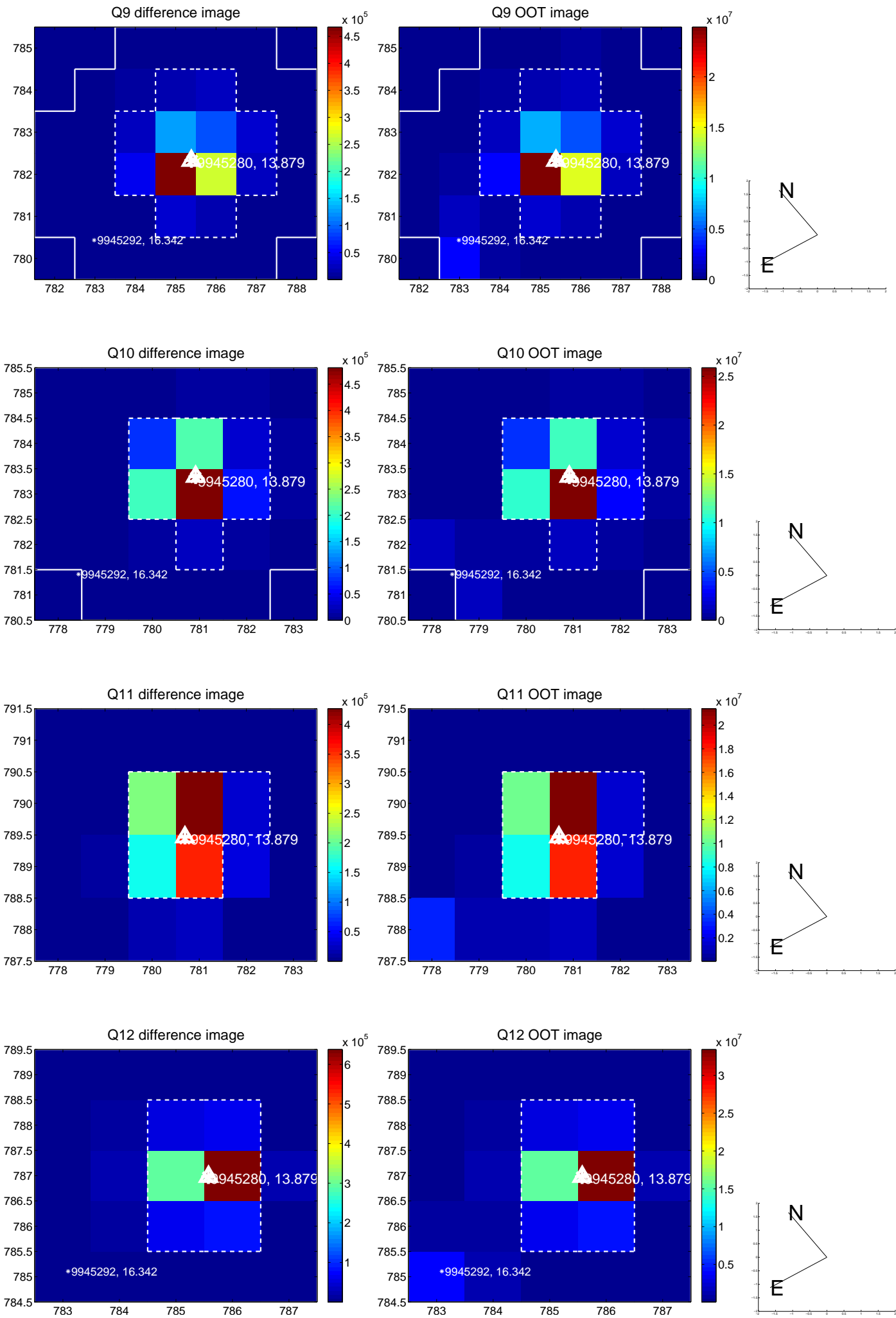
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



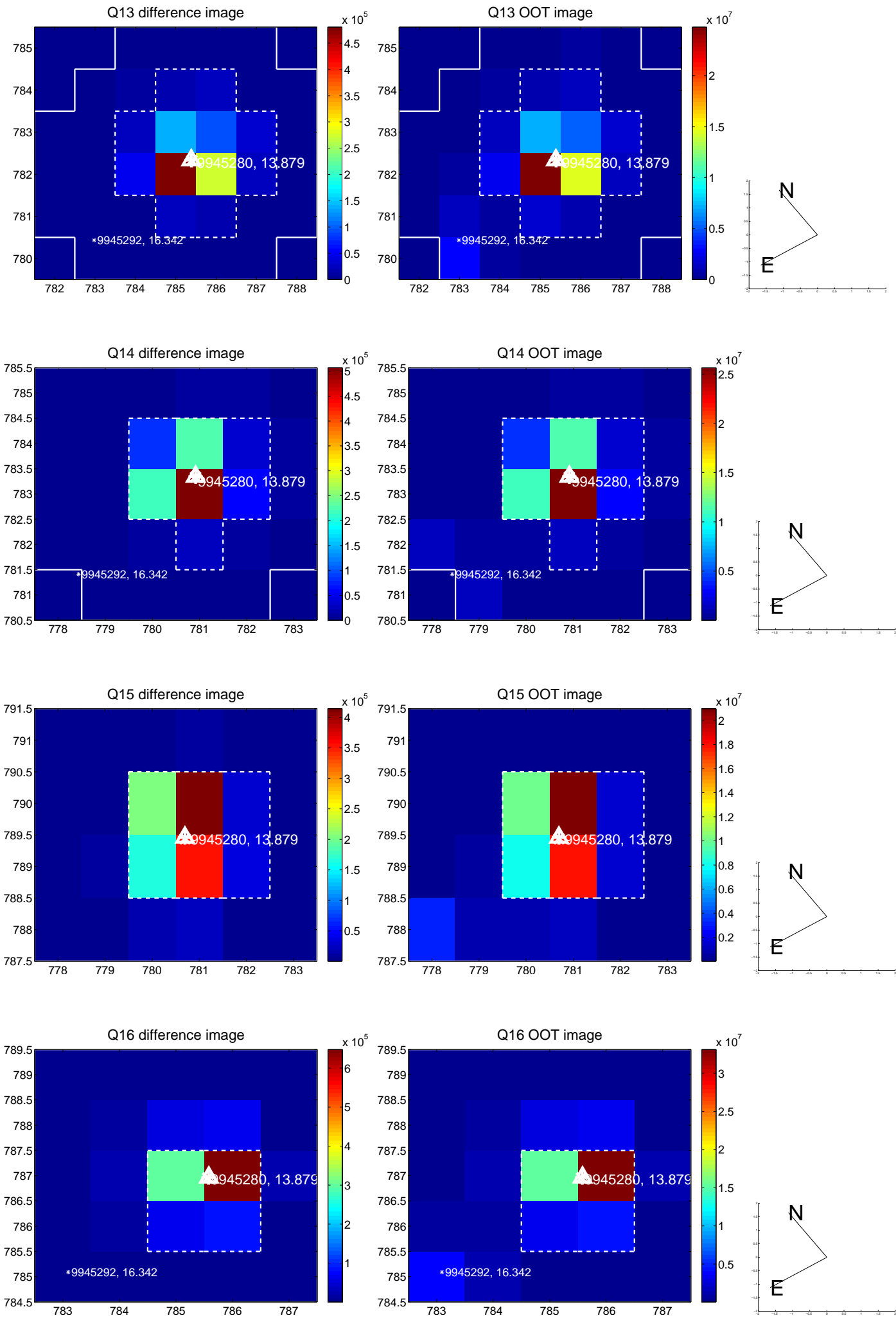
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



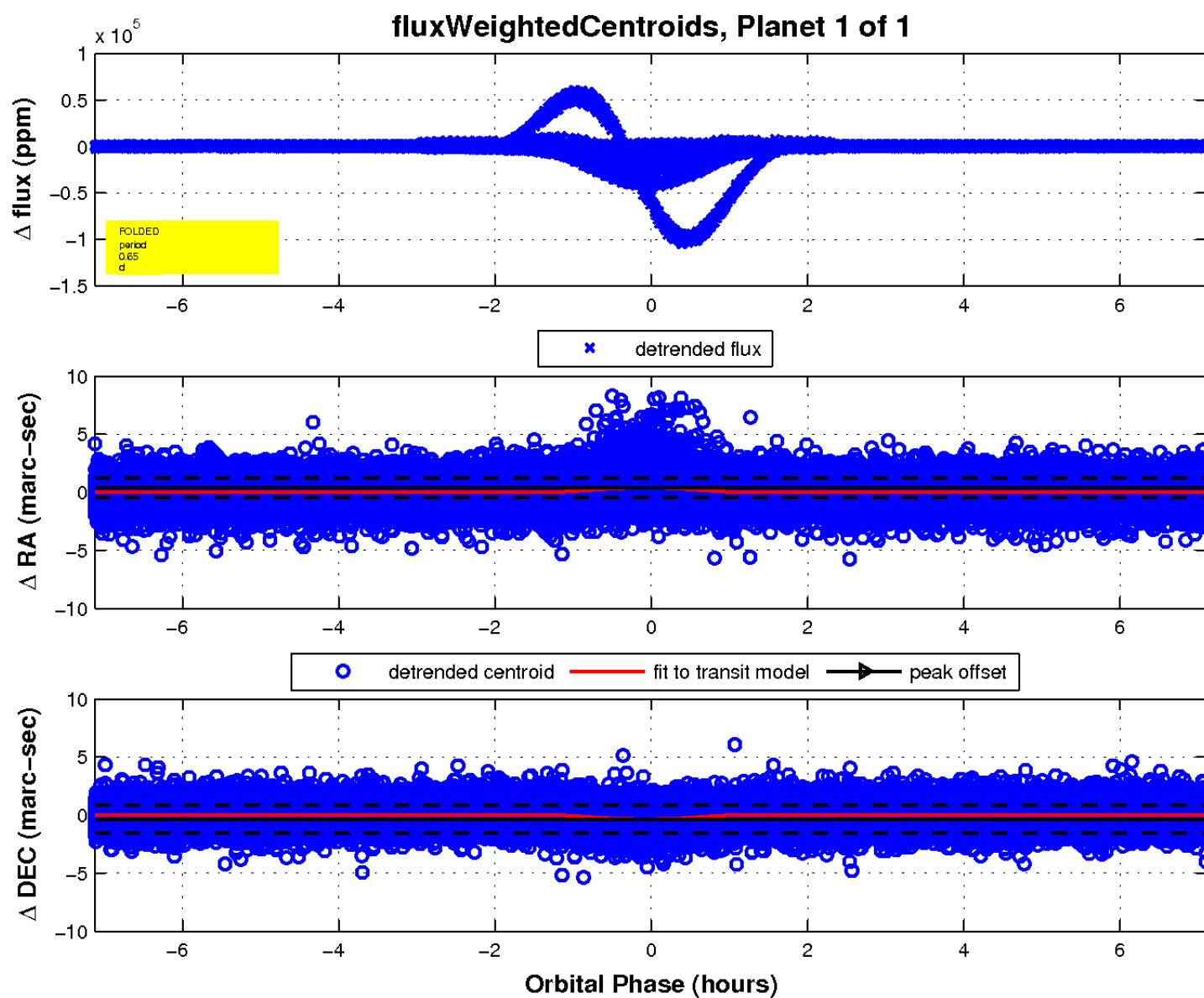
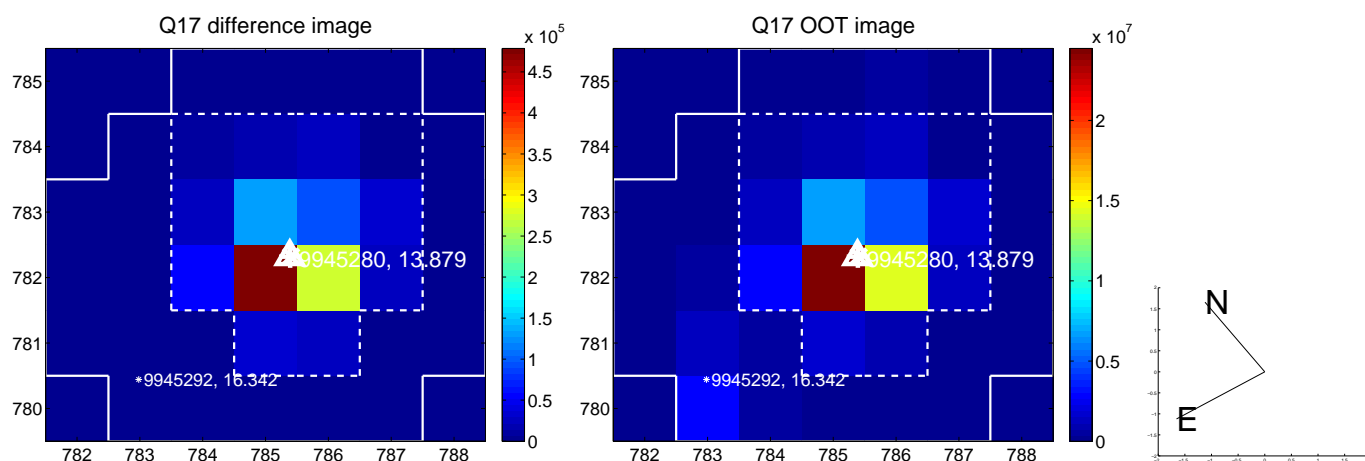
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

