

KIC 010593759

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})
010593759-01	OBS	0025.01	3.132607	132.877200	9898.6	3.604	1487.8	1279.5	1.18	6248	20.95	1028.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010593759-01	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.

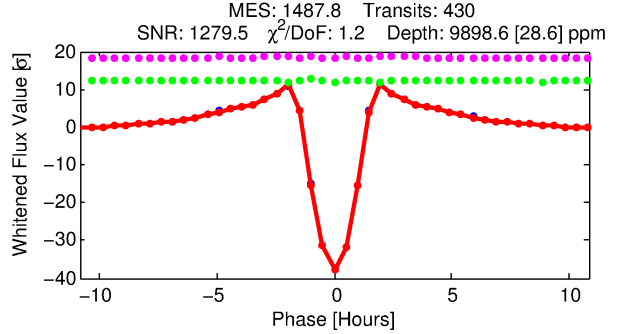
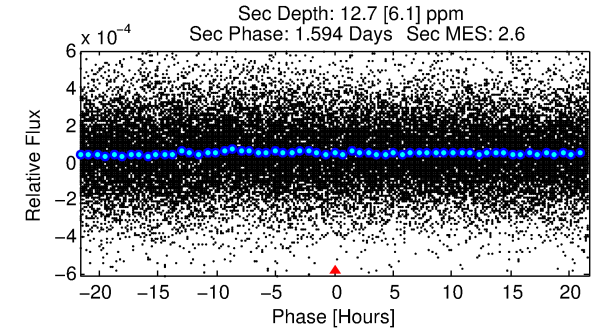
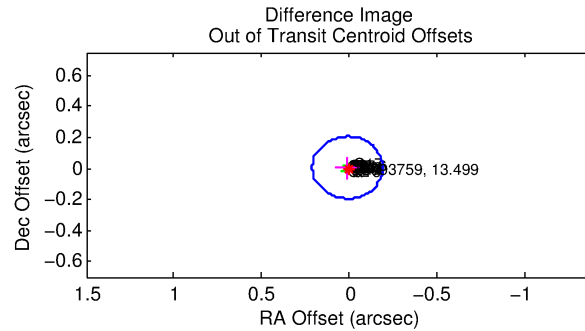
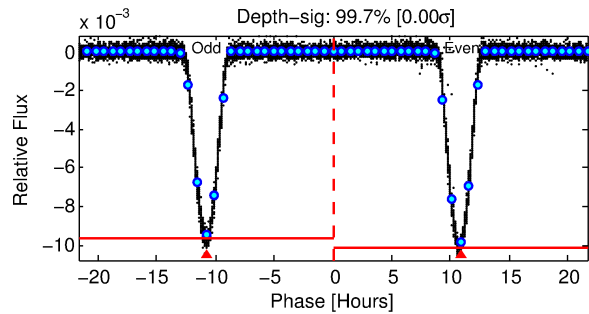
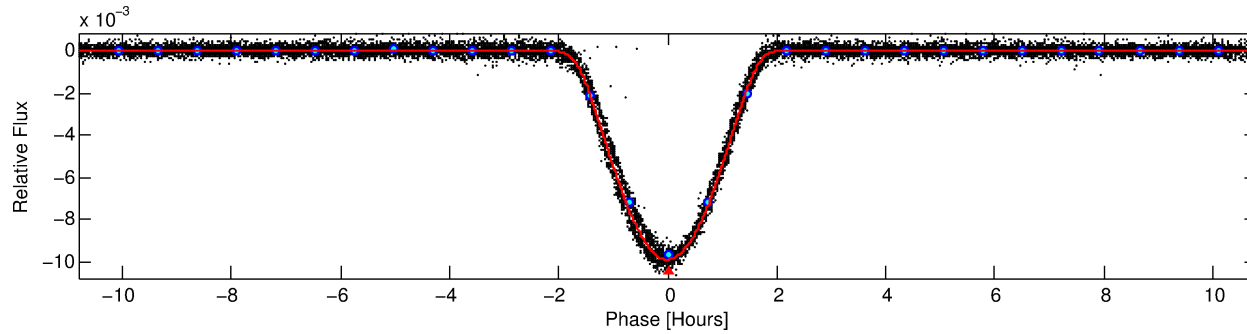
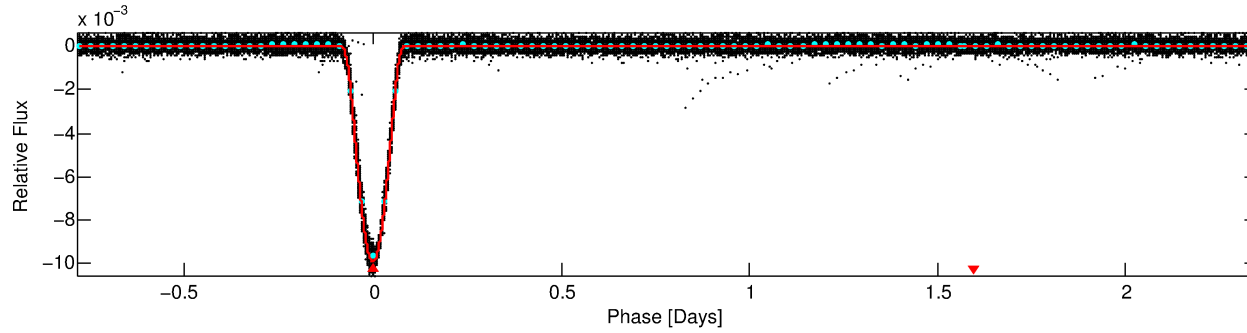
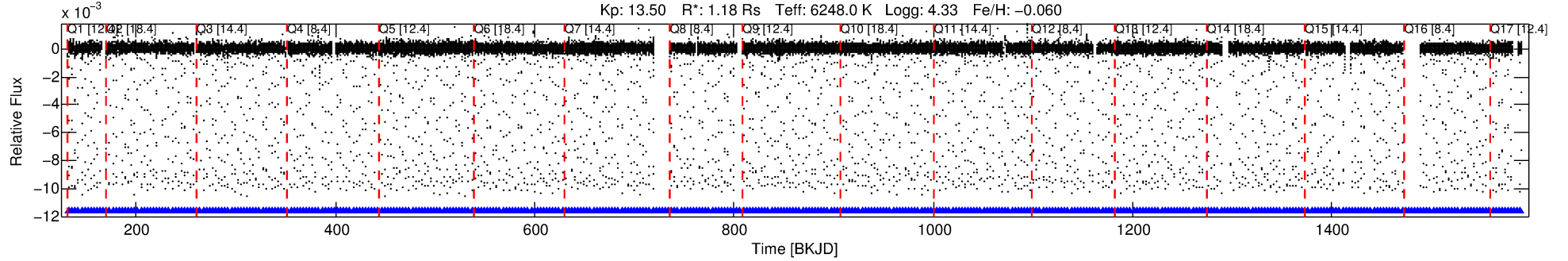
Ephemeris Match Information For 010593759-01

No Significant Match Found

DV One-Page Summary

KIC: 10593759 Candidate: 1 of 1 Period: 3.133 d
KOI: K00025.01 Corr: 0.997

Kp: 13.50 R*: 1.18 Rs Teff: 6248.0 K Logg: 4.33 Fe/H: -0.060



DV Fit Results:

Period = 3.13261 [0.00000] d
Epoch = 132.8772 [0.0000] BKJD
Rp/R* = 0.1626 [0.0053]
a/R* = 4.08 [0.02]
b = 1.00 [0.01]
Seff = 1028.37 [417.01]
Teq = 1444 [146] K
Rp = 20.95 [7.20] Re
a = 0.0430 [0.0118] AU
Ag = 0.03 [0.02] [-53.20σ]
Teffp = 925 [117] K [-2.78σ]

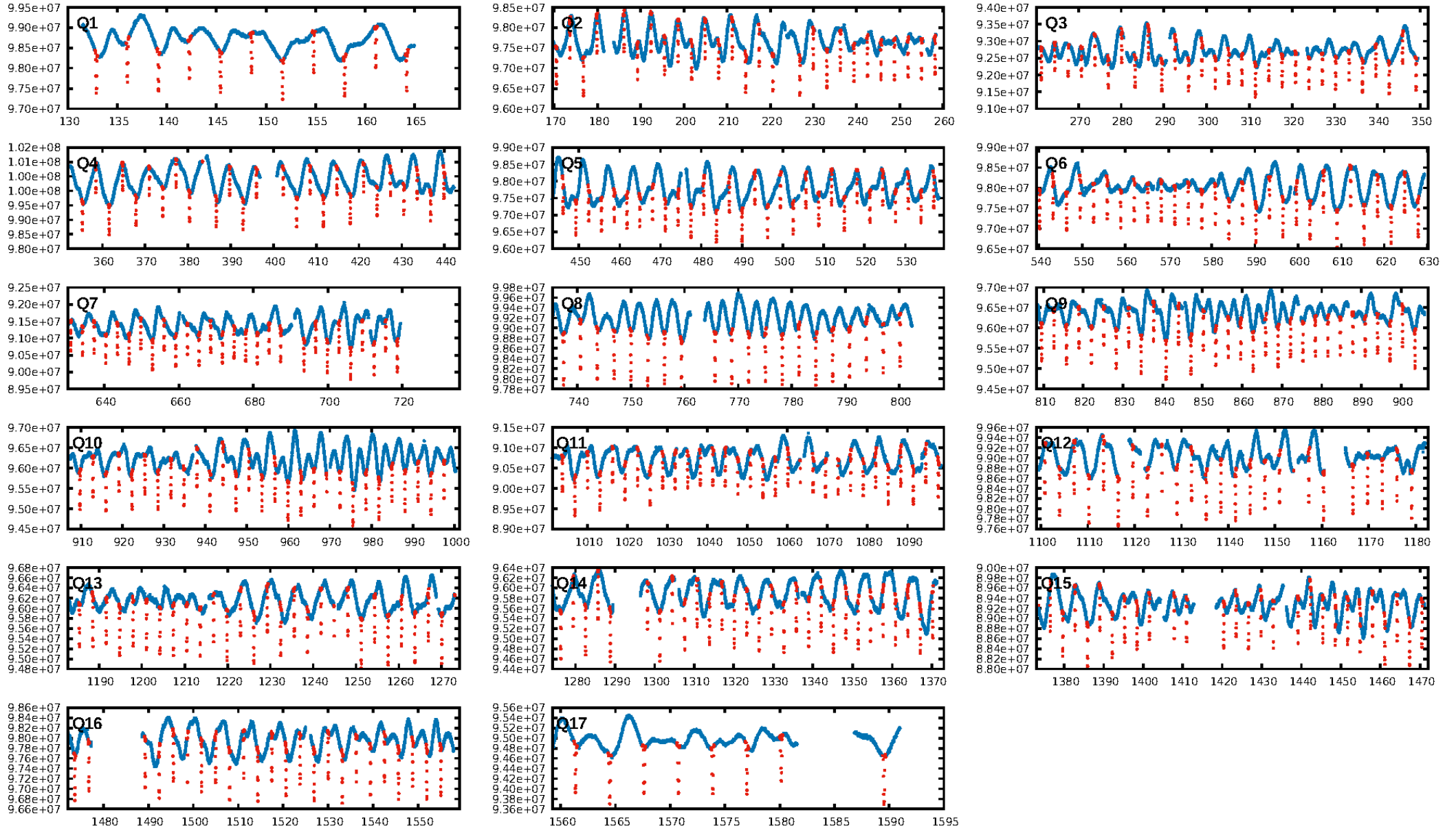
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [411/411]
GhostDiagnostic-chr: 2.891
Centroid-sig: 0.4%
Centroid-so: 0.158 arcsec [32.54σ]
OotOffset-rm: 0.012 arcsec [0.19σ]
KicOffset-rm: 0.099 arcsec [1.48σ]
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]

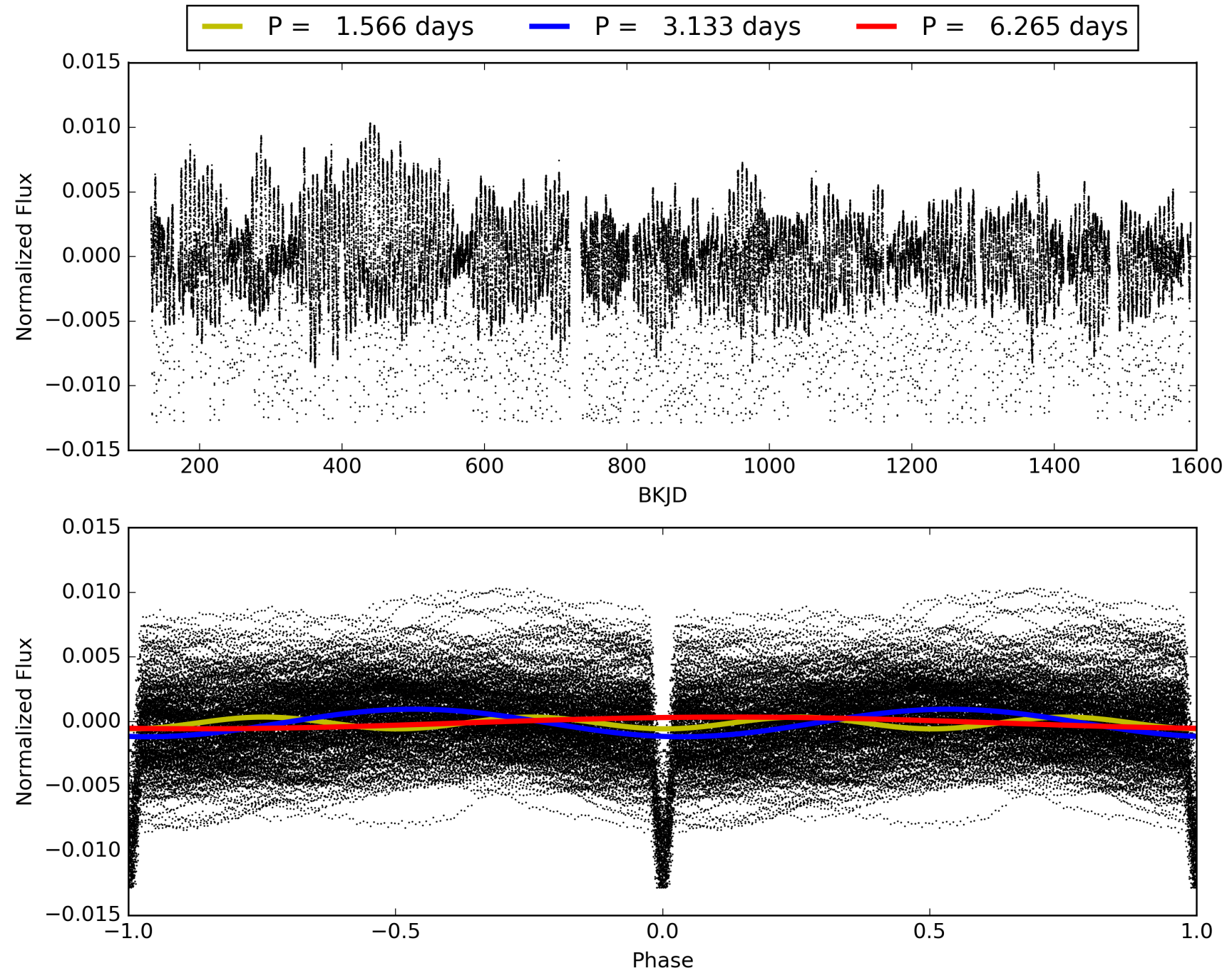
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:09:34 Z

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

TCE 010593759-01, PDC Light Curves

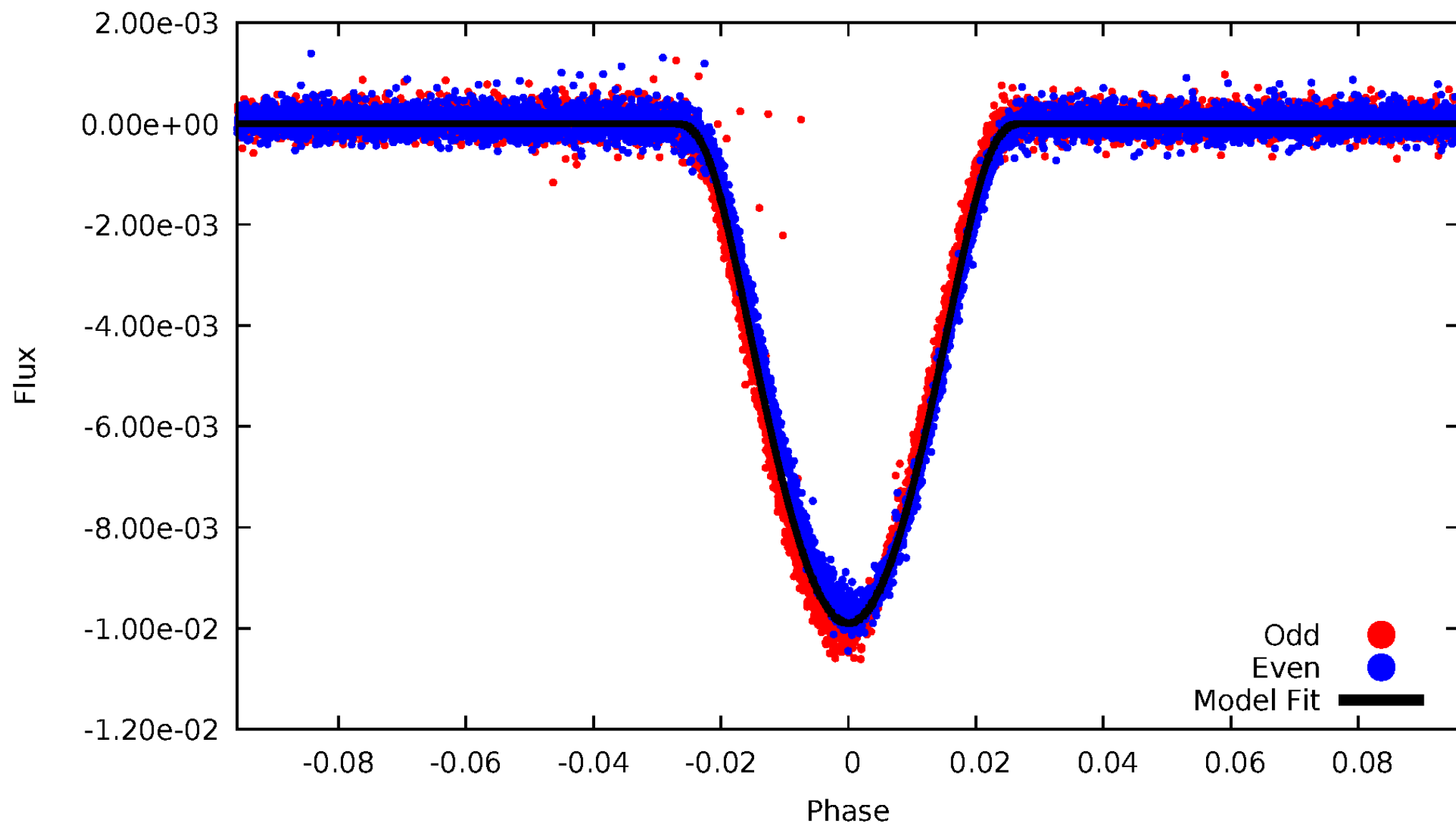


TCE 010593759-01



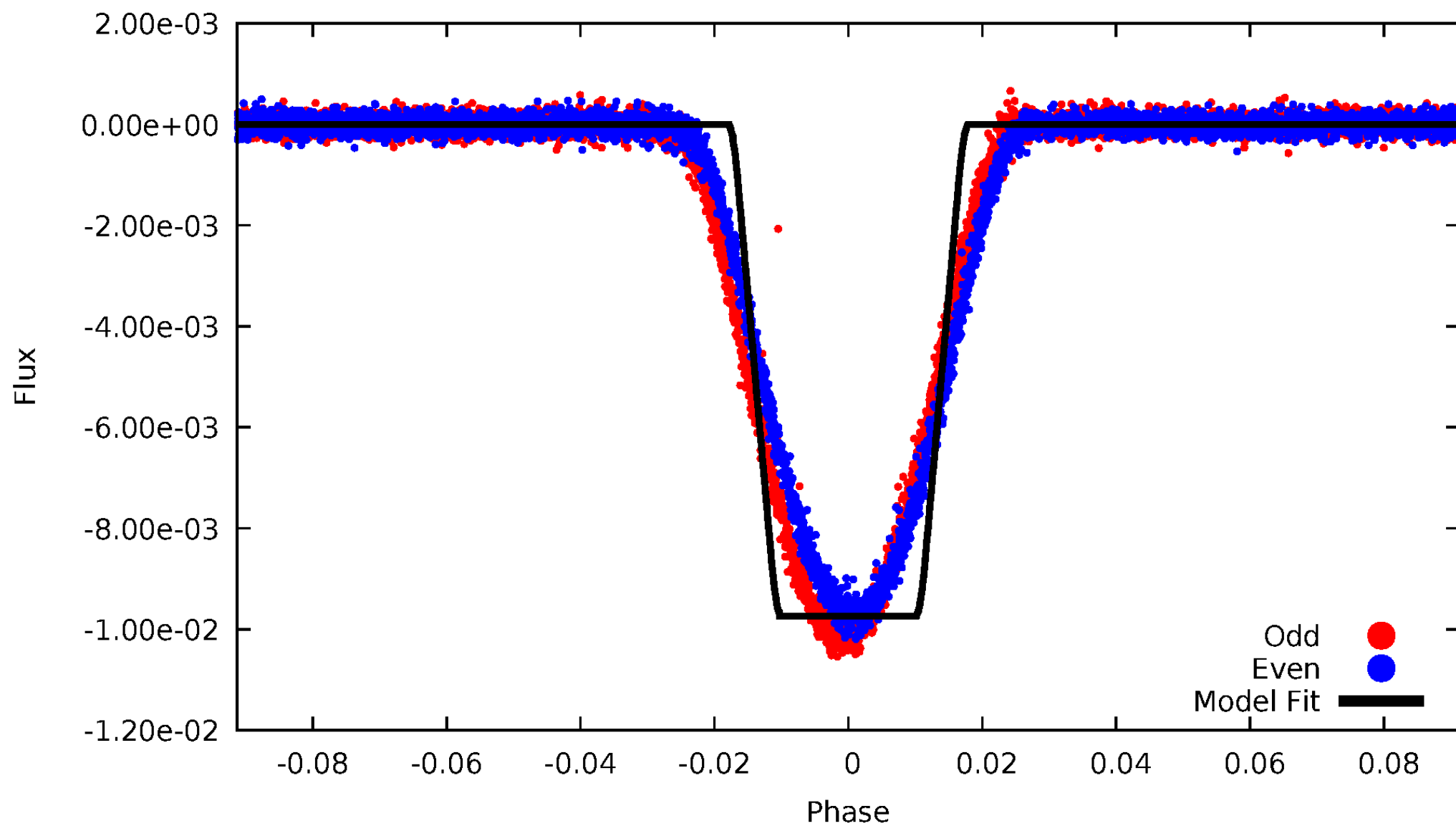
DV Odd/Even

TCE 010593759-01



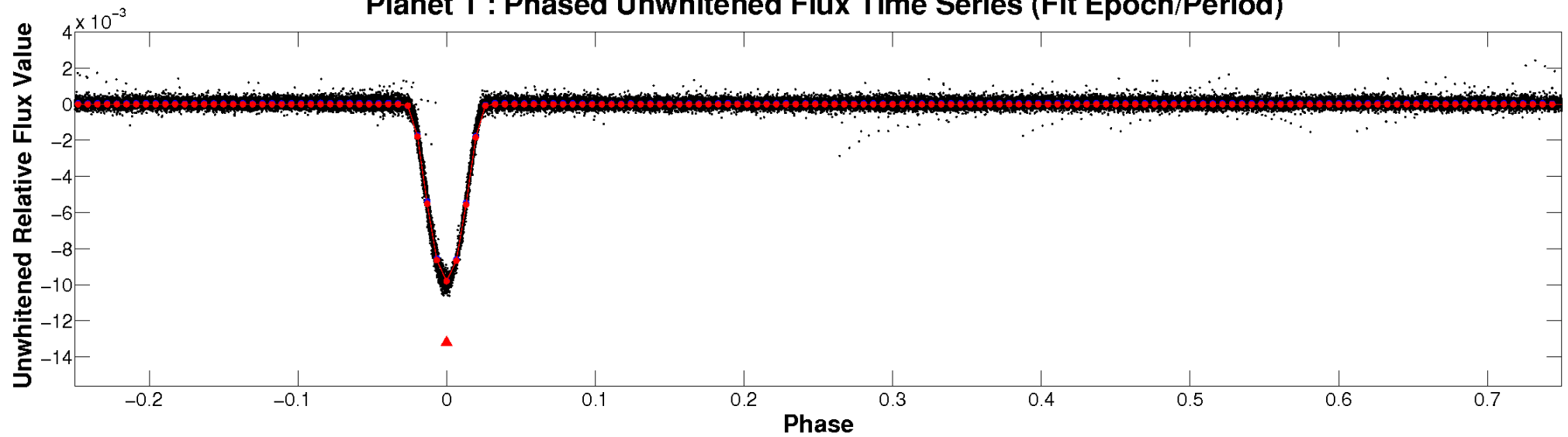
ALT Odd/Even

TCE 010593759-01

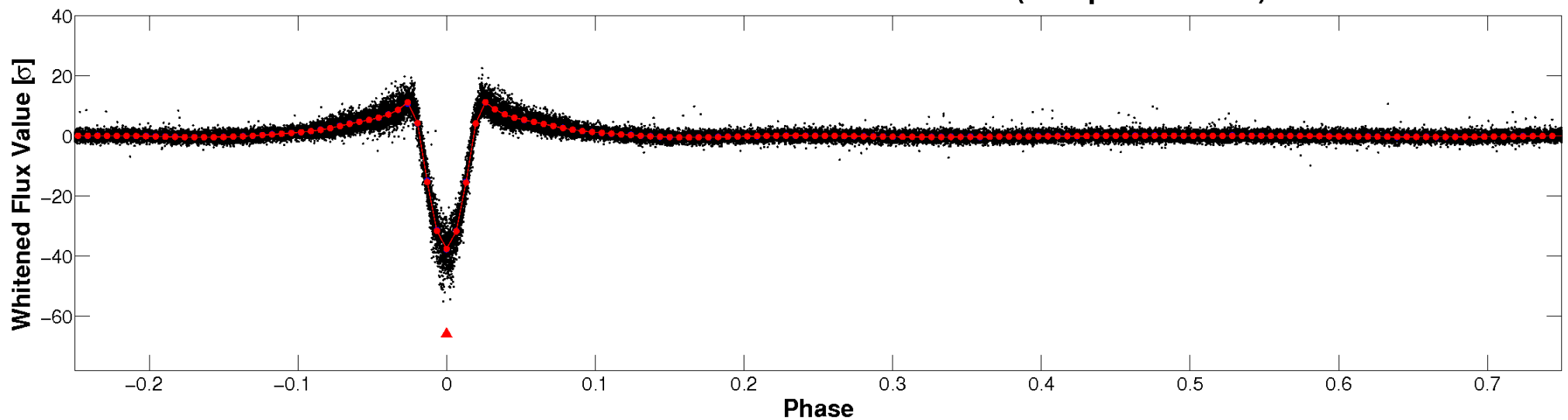


Non-Whitened Vs. Whitened Light Curve

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

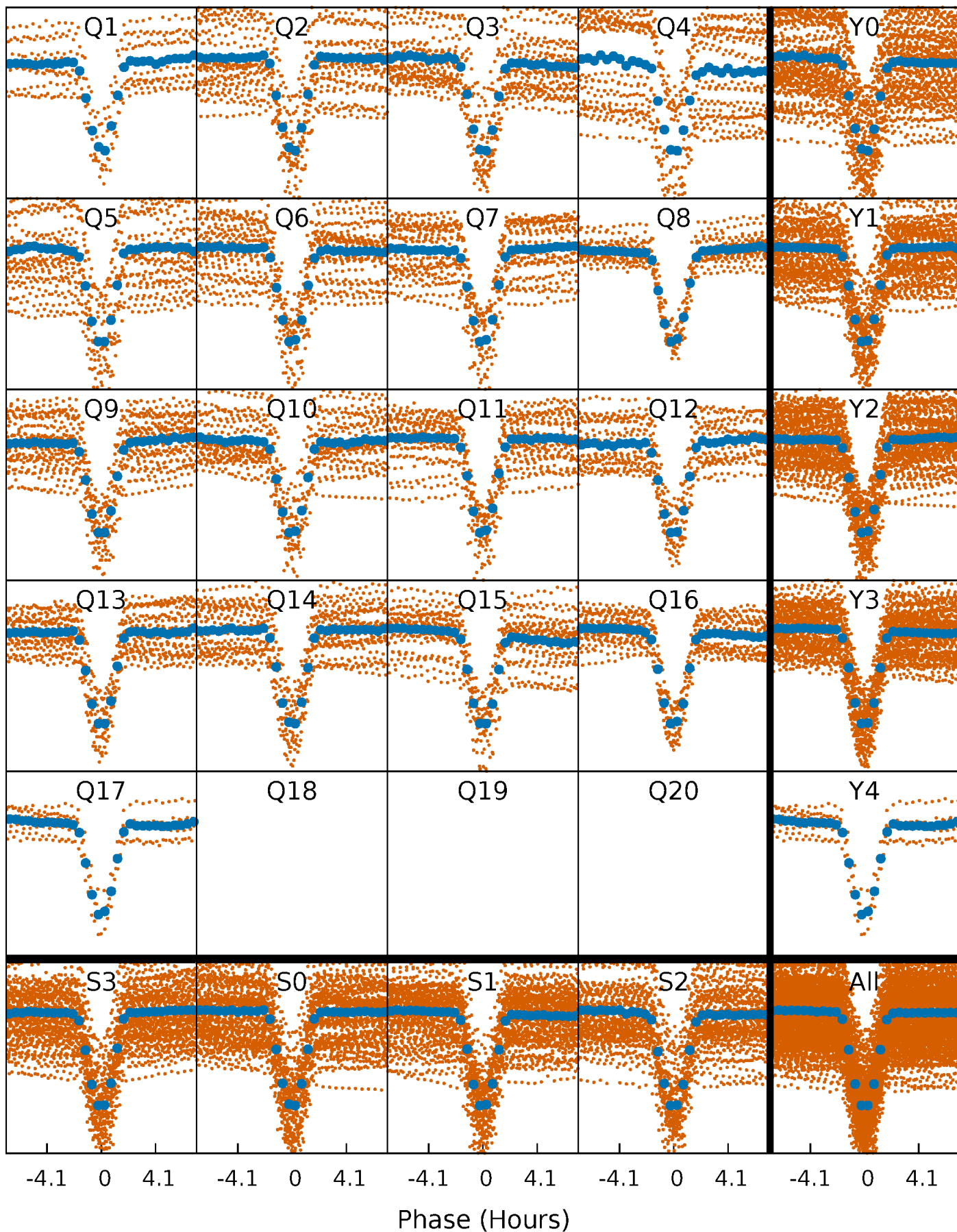


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



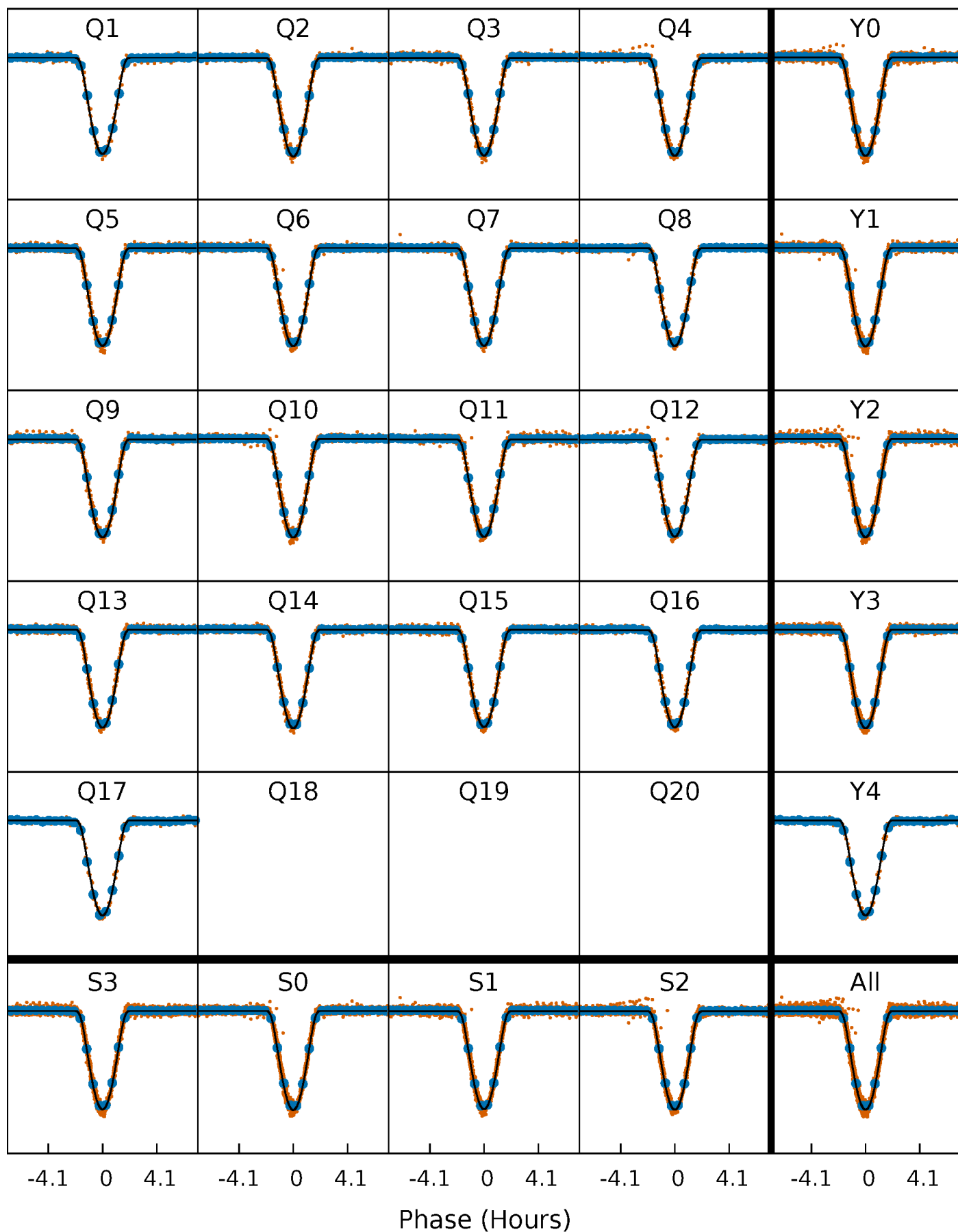
PDC Quarter-Phased Transit Curves

TCE 010593759-01 P= 3.132607 Days $T_0=132.877200$ (BKJD)



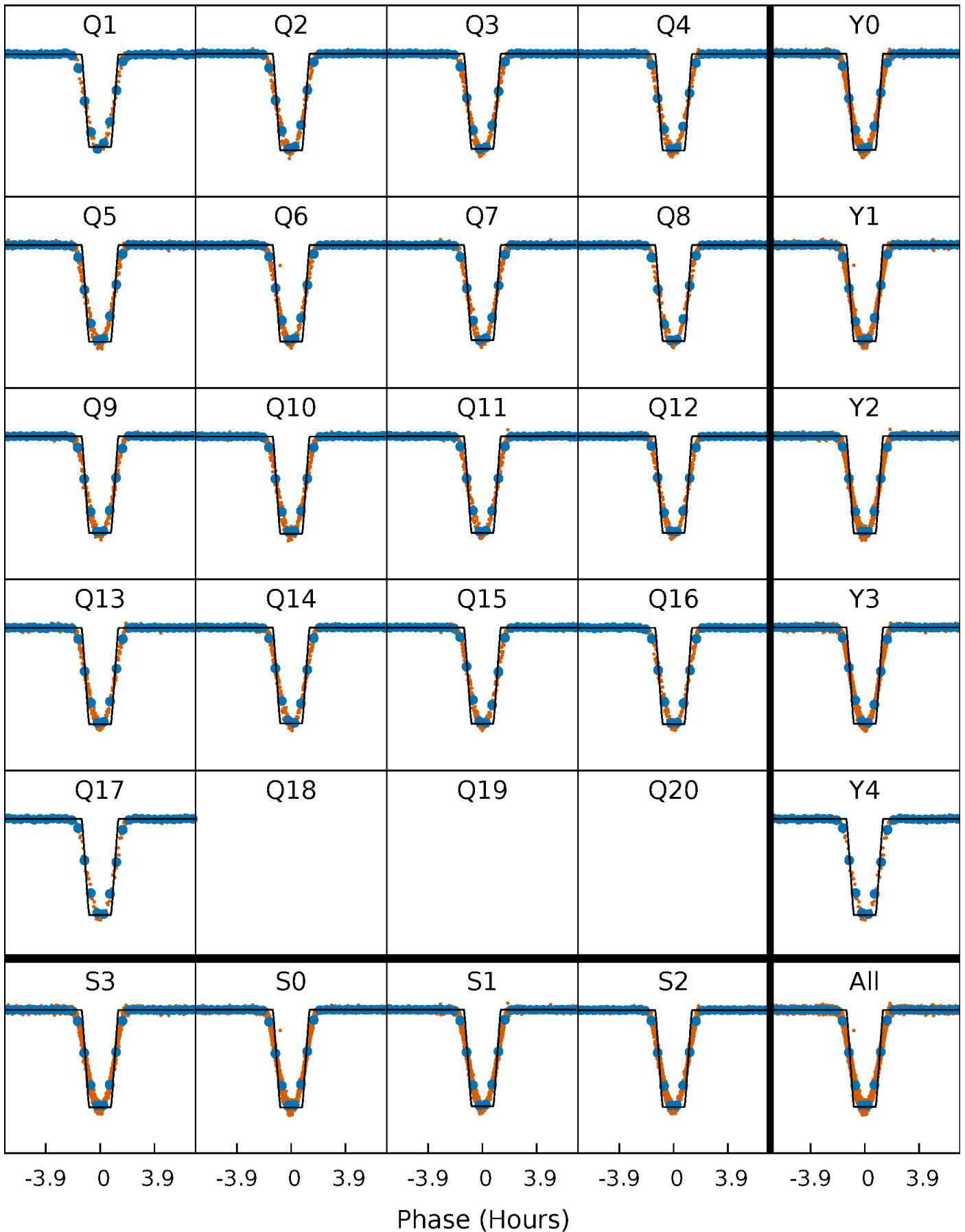
DV Quarter-Phased Transit Curves

TCE 010593759-01 P= 3.132607 Days $T_0=132.877200$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

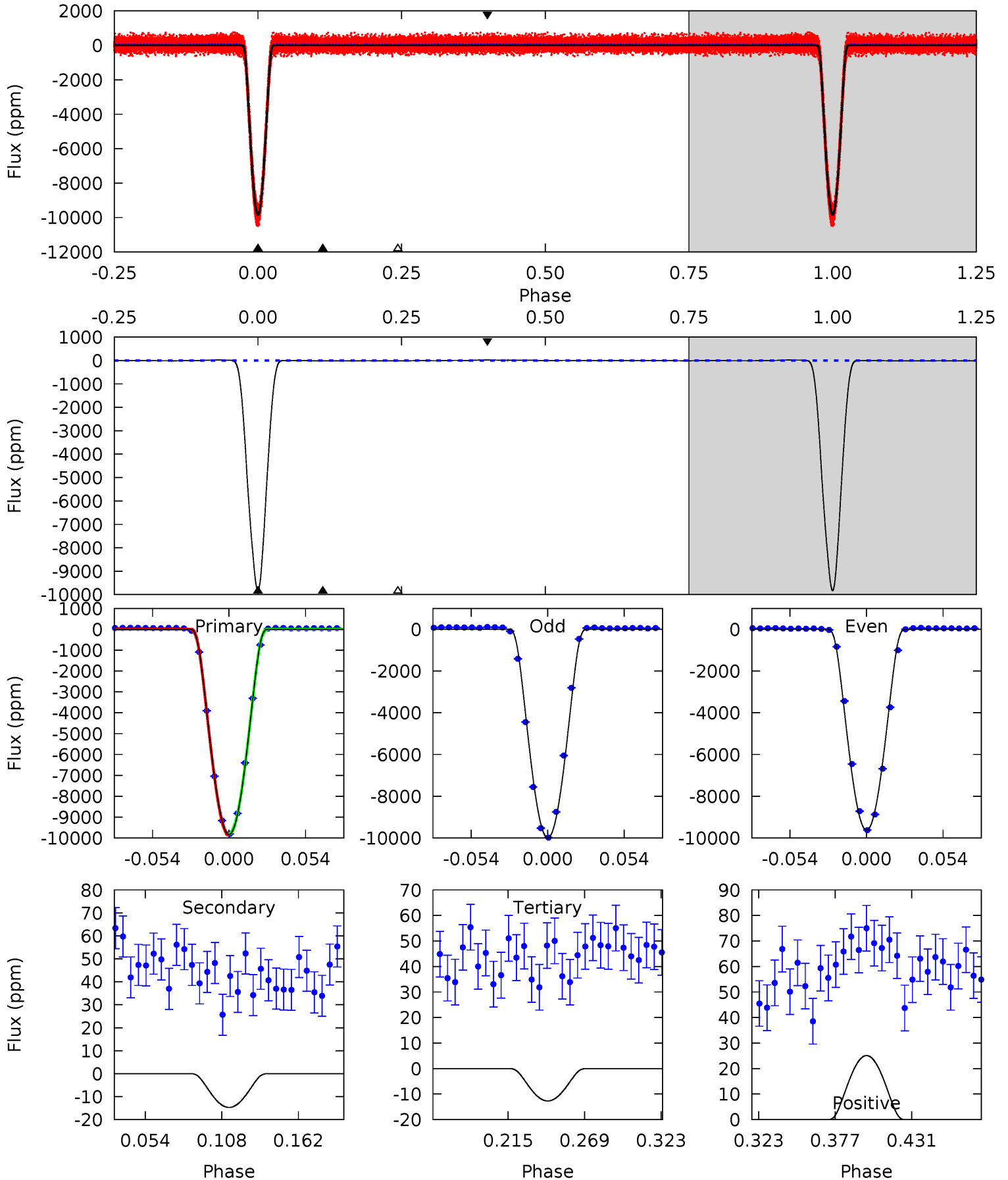
TCE 010593759-01 P= 3.132598 Days $T_0=132.879209$ (BKJD)



DV Model-Shift Uniqueness Test

010593759-01, P = 3.132607 Days, E = 129.744593 Days

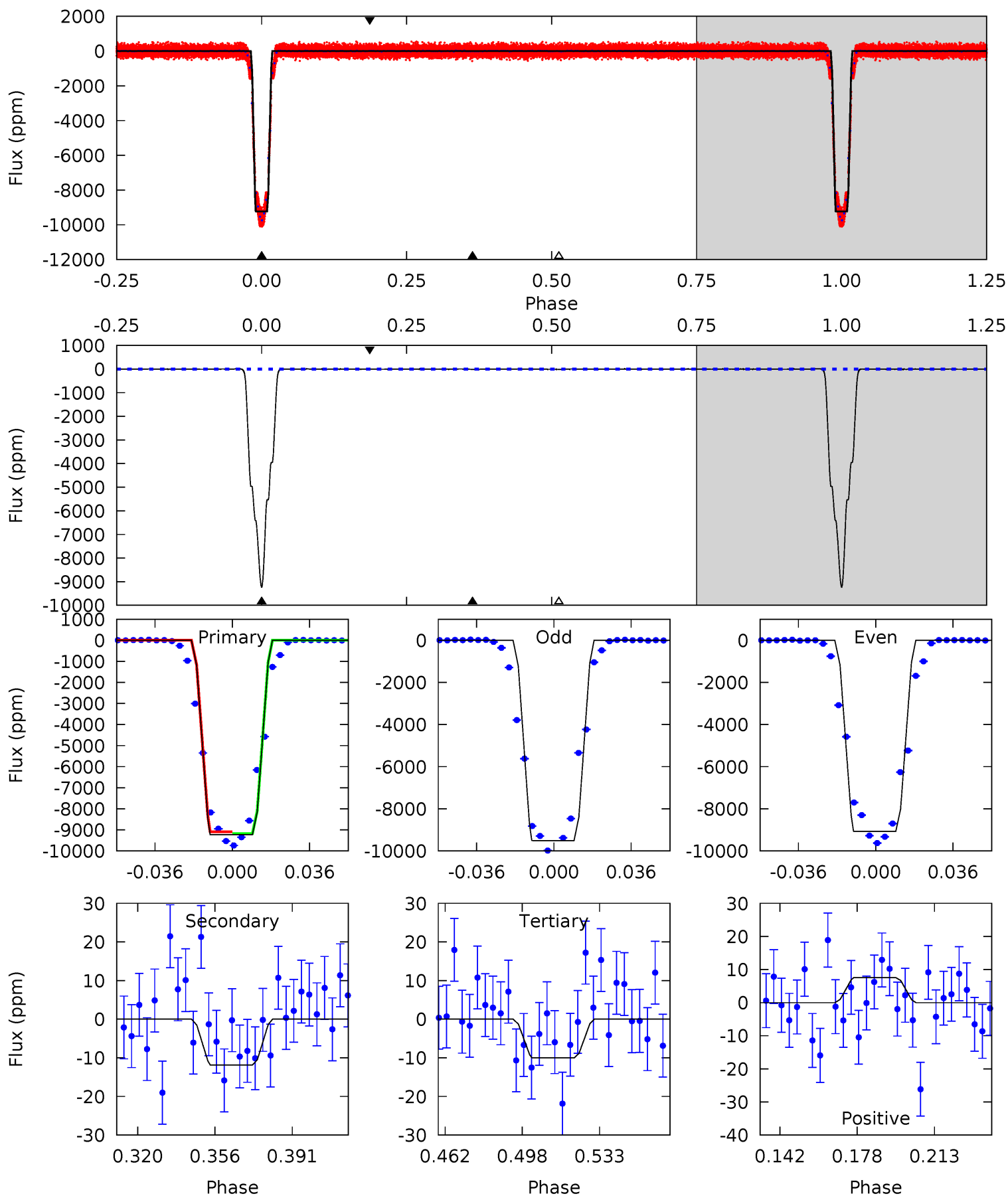
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3127	4.68	4.04	7.98	4.69	1.93	2.82	3123	3119	0.64	-3.30	60.4	0.99	0.00	8.95



Alt Model-Shift Uniqueness Test

010593759-01, P = 3.132598 Days, E = 129.746611 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2401	3.09	2.61	1.97	4.78	2.10	0.97	2399	2399	0.48	1.12	60.3	1.00	0.00	0



Stellar Parameters For KIC 010593759

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6248^{+168}_{-205}	$4.328^{+0.108}_{-0.201}$	$-0.060^{+0.250}_{-0.300}$	$1.181^{+0.404}_{-0.173}$	$1.078^{+0.187}_{-0.125}$	$0.921^{+0.472}_{-0.496}$
	+3%/-3%	+2%/-5%	+417%/-500%	+34%/-15%	+17%/-12%	+51%/-54%
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 010593759-01 / KOI 0025.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 3	$21.07^{+3.81}_{-2.04}$	2028^{+155}_{-110}	-2477^{+70}_{-102}	$0.031^{+0.012}_{-0.009}$
Alt.	-12 ± 4	$12.77^{+2.47}_{-1.35}$	2033^{+159}_{-112}	-2433^{+91}_{-123}	$0.069^{+0.032}_{-0.027}$

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 $A_{\text{obs}} \gg 1.0$

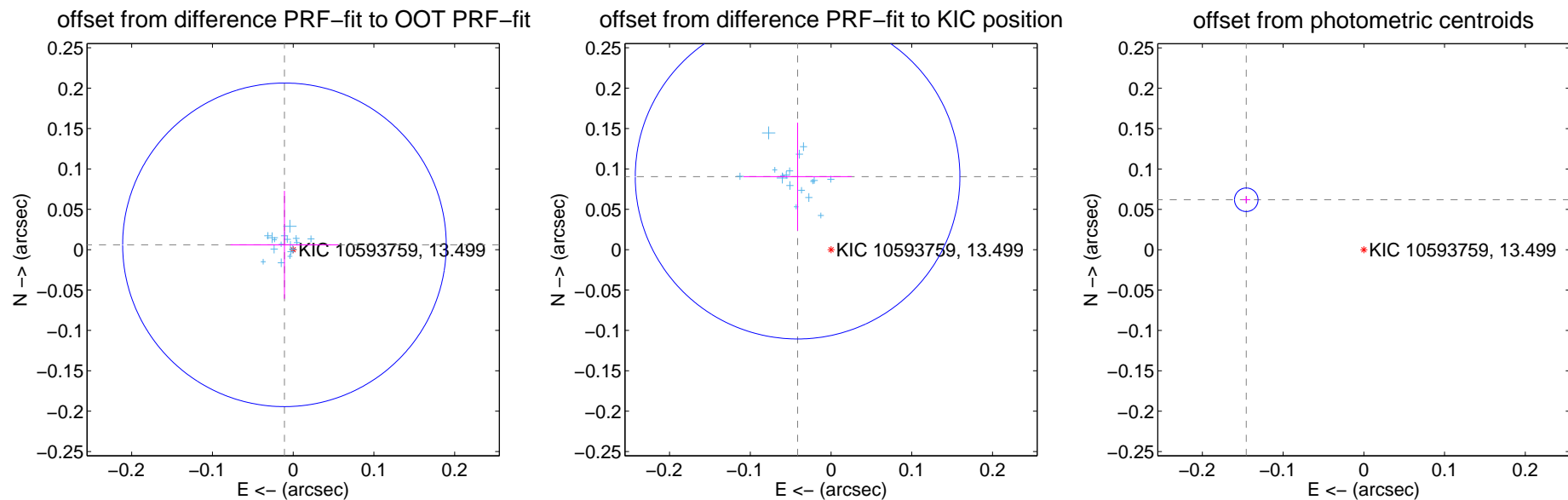
DV Centroid Data

Supplemental centroid analysis for 010593759-01. Kepler magnitude: 13.50. Transit SNR 1279.46

There are 17 quarters with good PRF difference image offsets

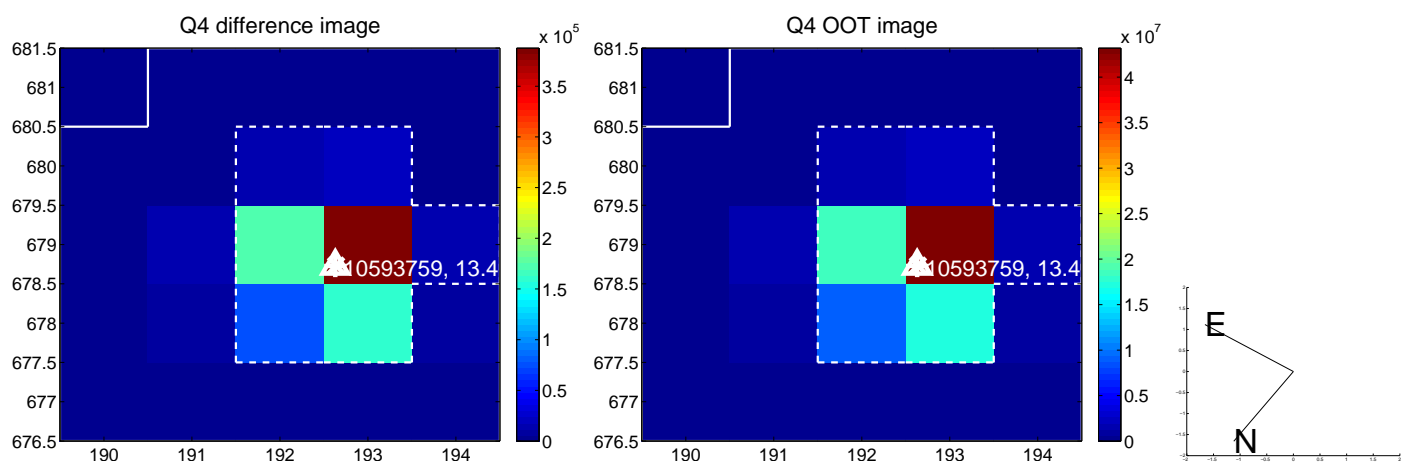
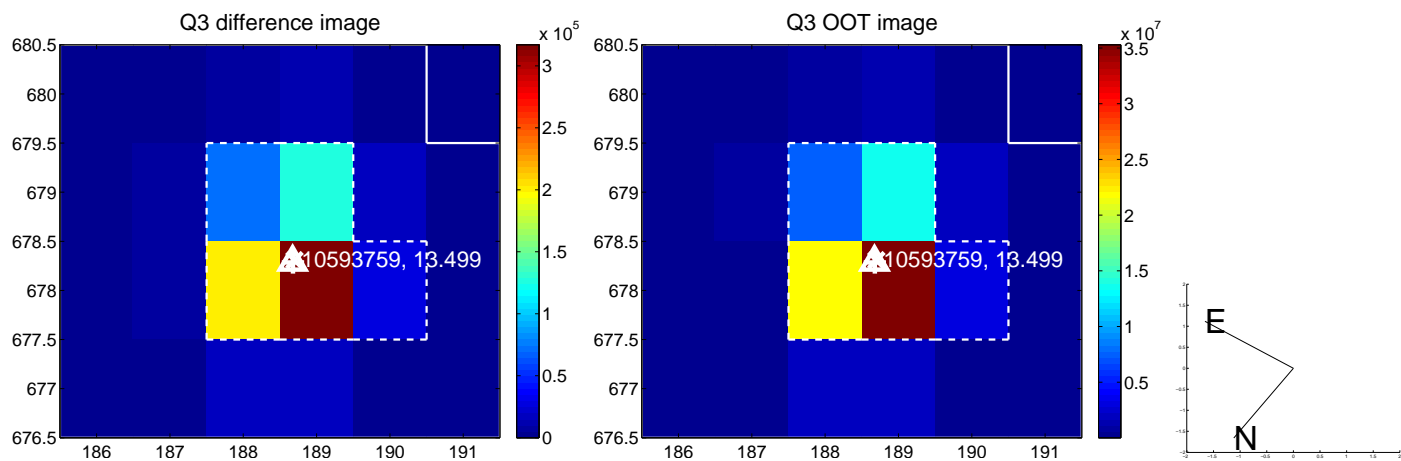
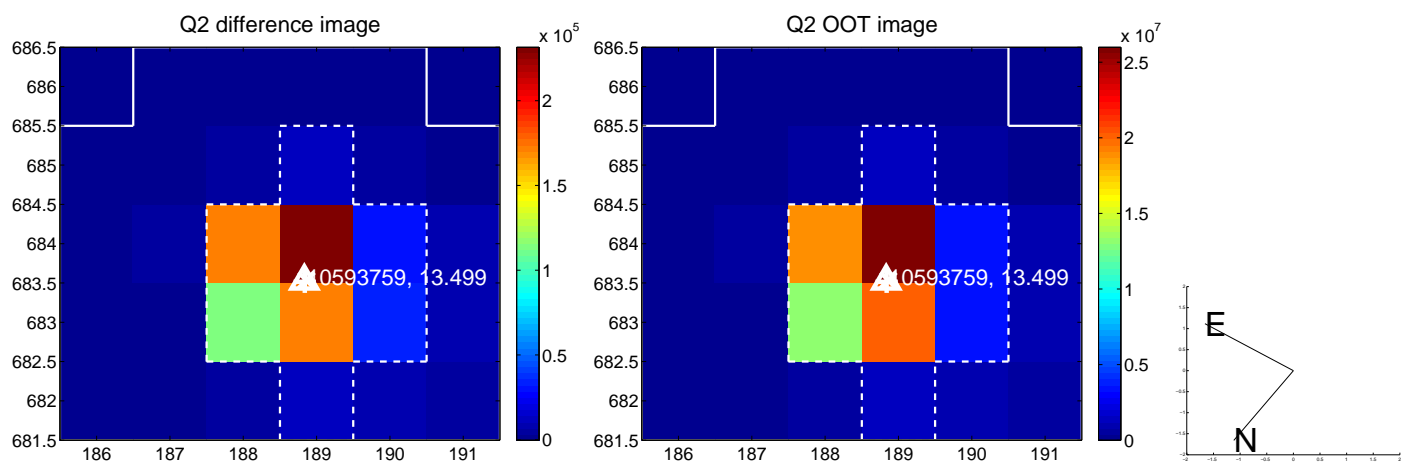
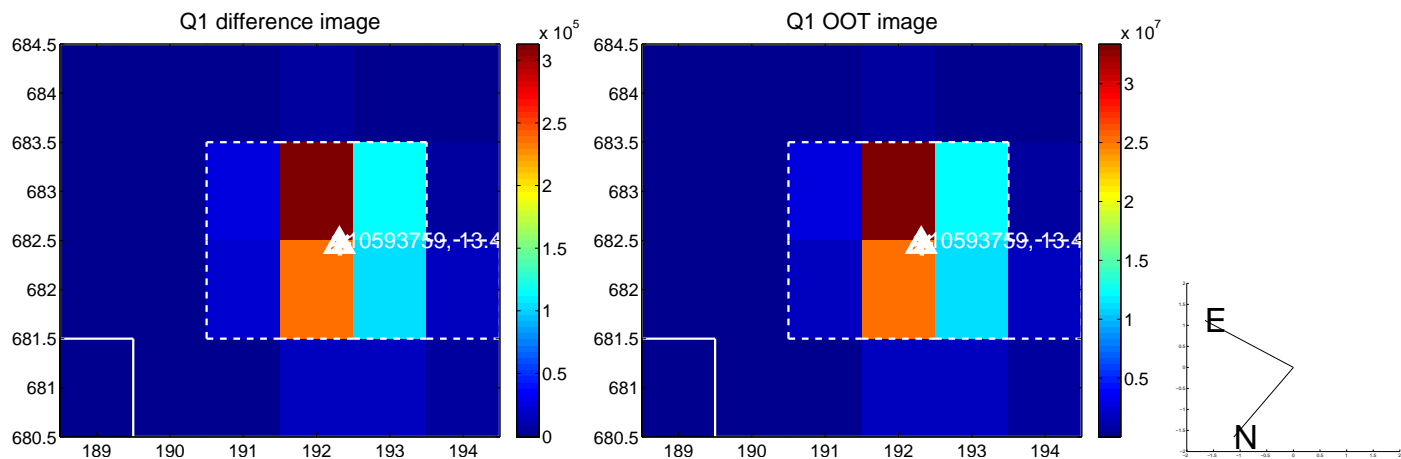
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.067	0.19	0.011 ± 0.067	0.006 ± 0.067
PRF-fit source offset from KIC position	0.099 ± 0.067	1.48	0.041 ± 0.067	0.090 ± 0.067
photometric centroid source offset	0.16 ± 0.00	32.54	0.15 ± 0.00	0.06 ± 0.00

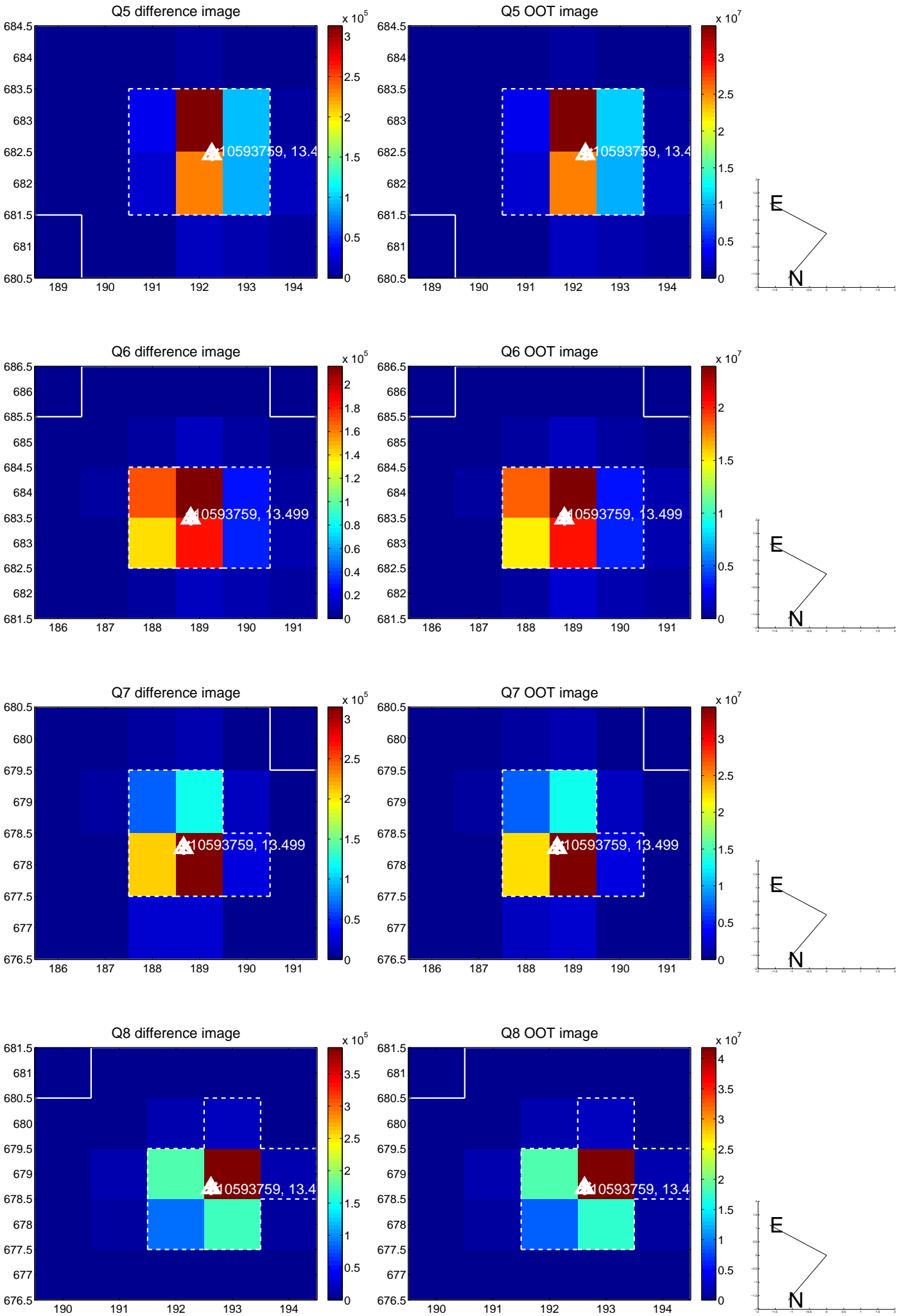


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

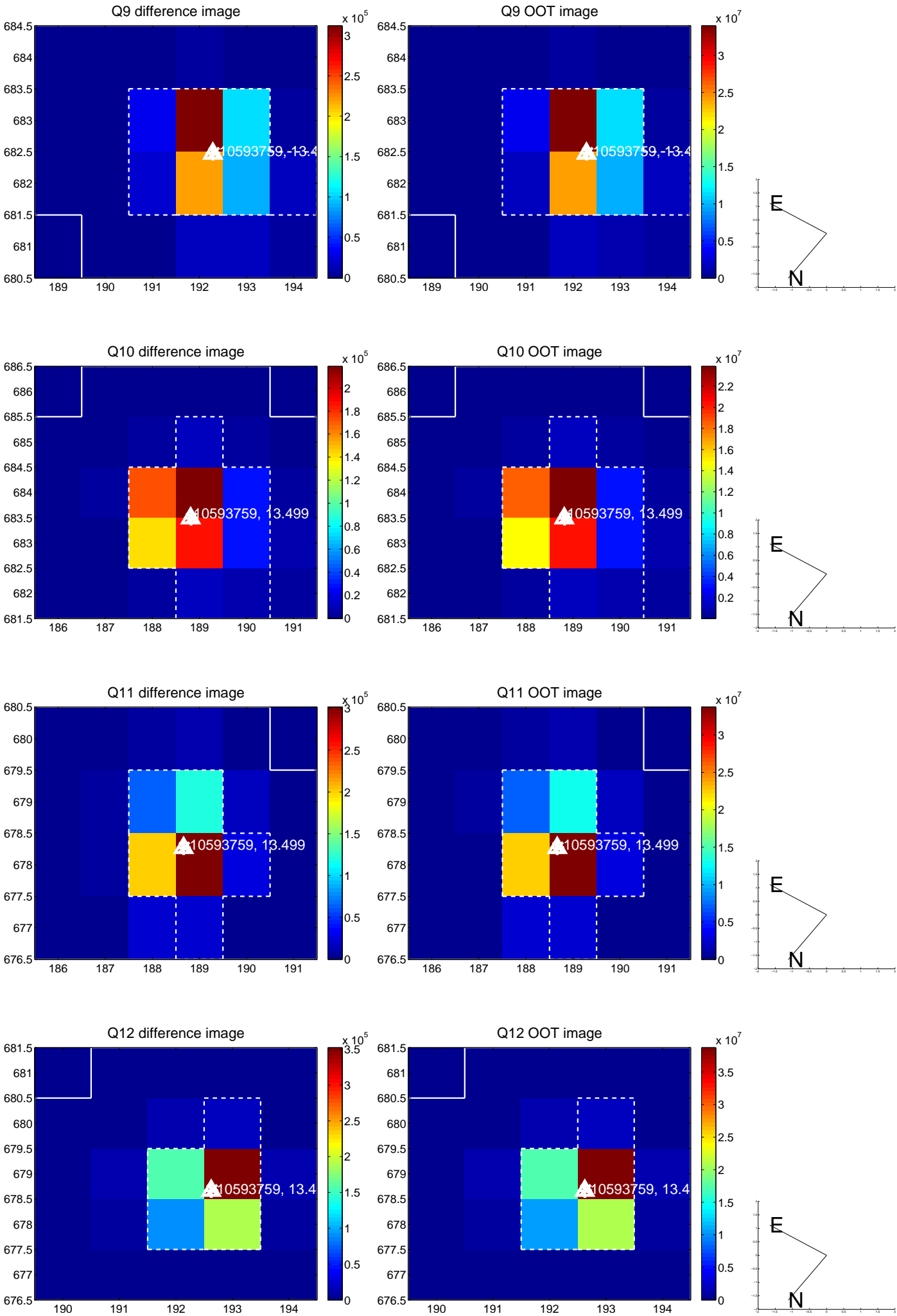
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



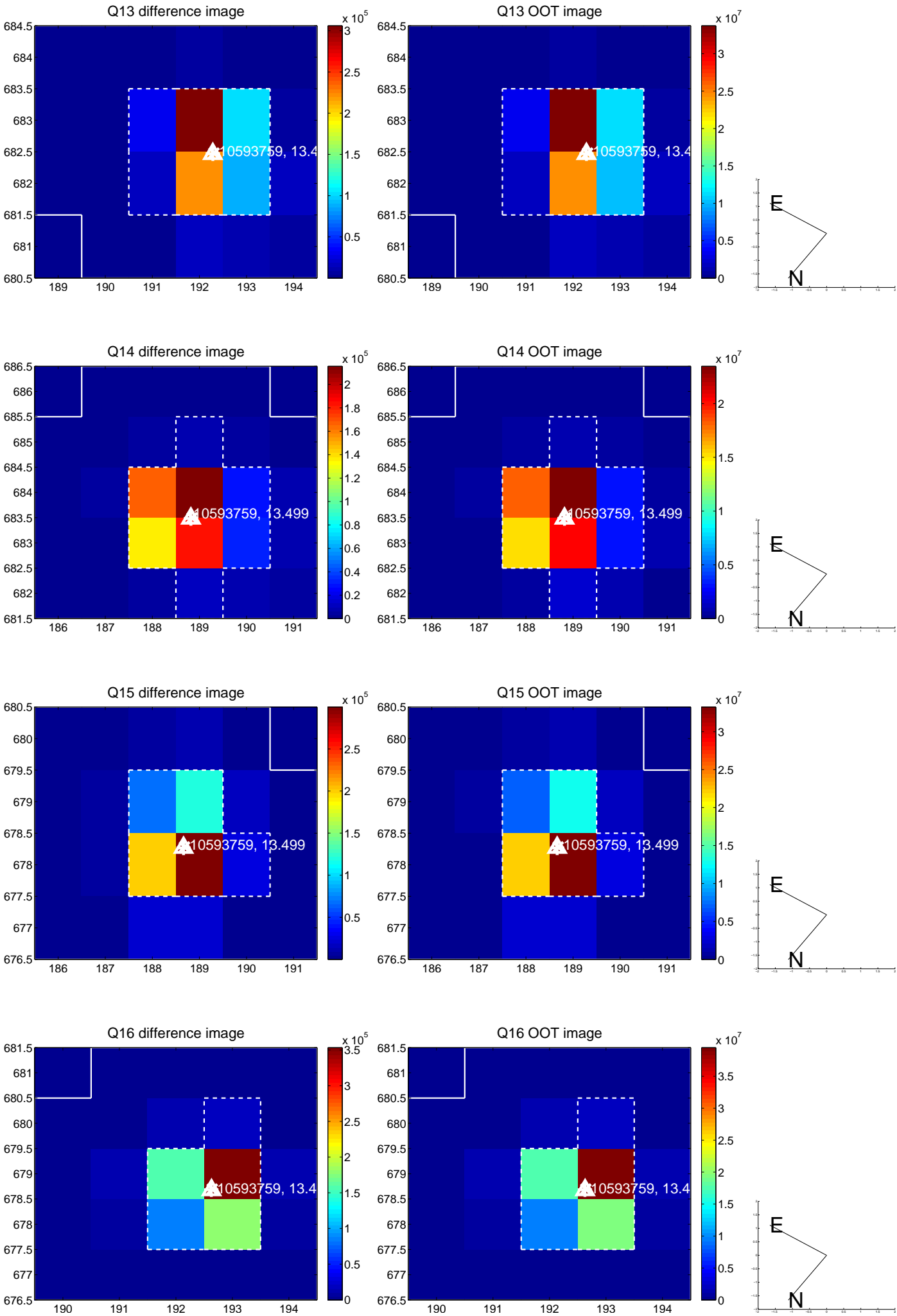
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



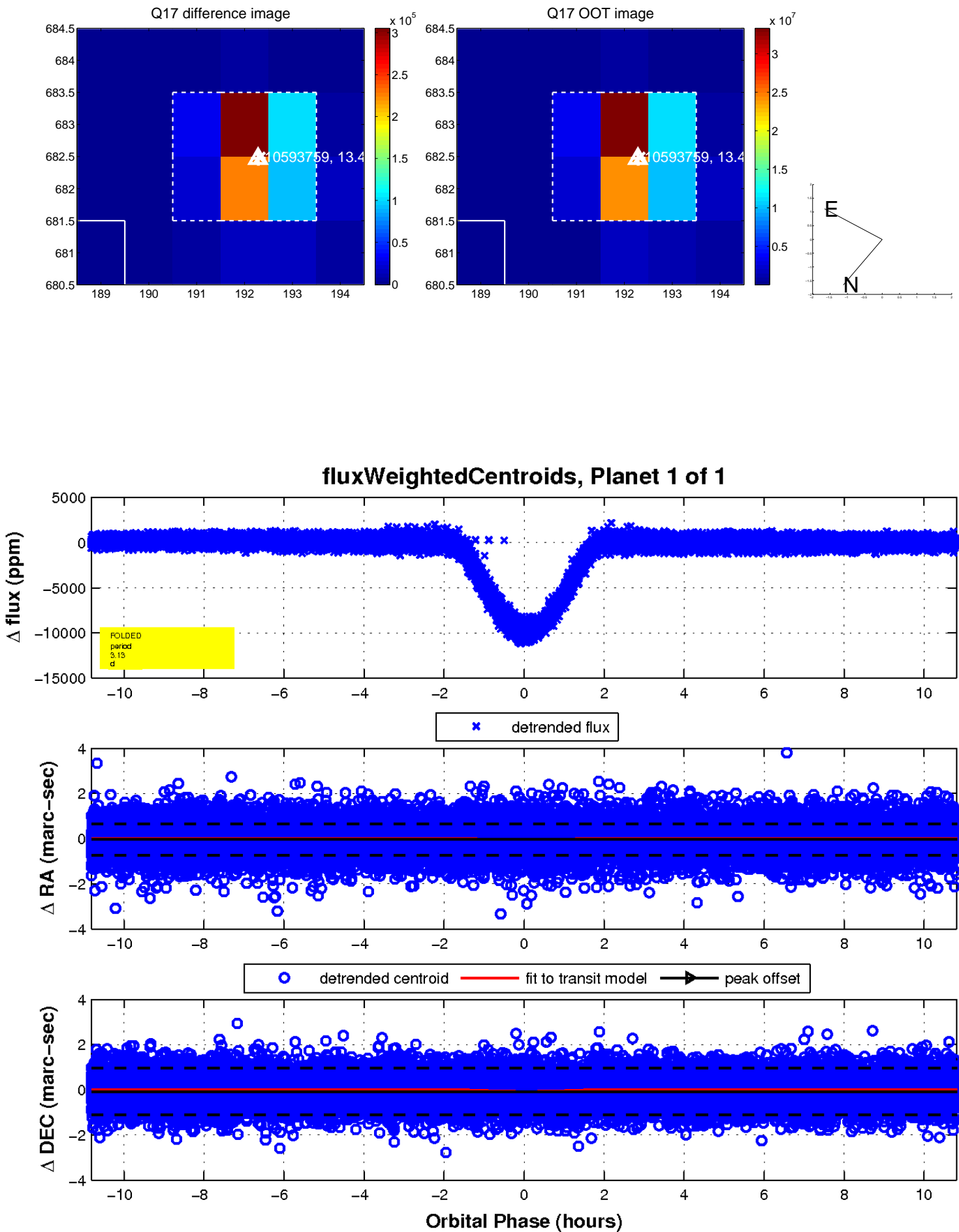
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

