

KIC 011046458

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})
011046458-01	OBS	0214.01	3.311869	131.741736	5928.8	1.467	436.3	453.4	0.94	5461	9.73	367.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011046458-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

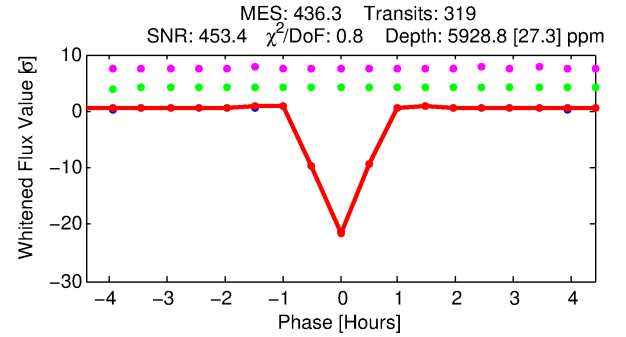
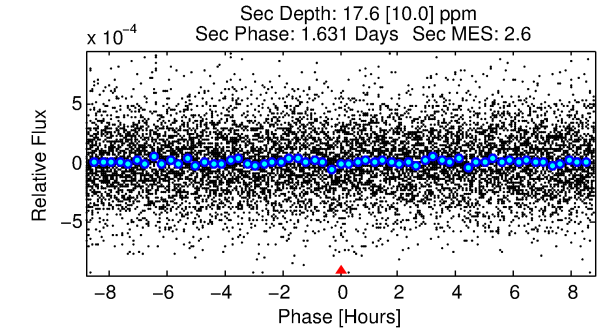
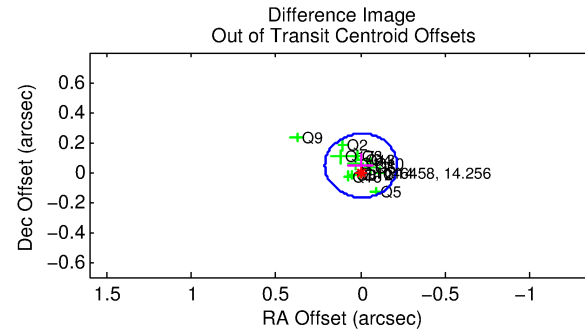
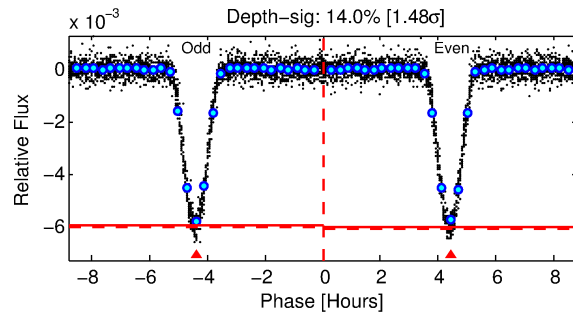
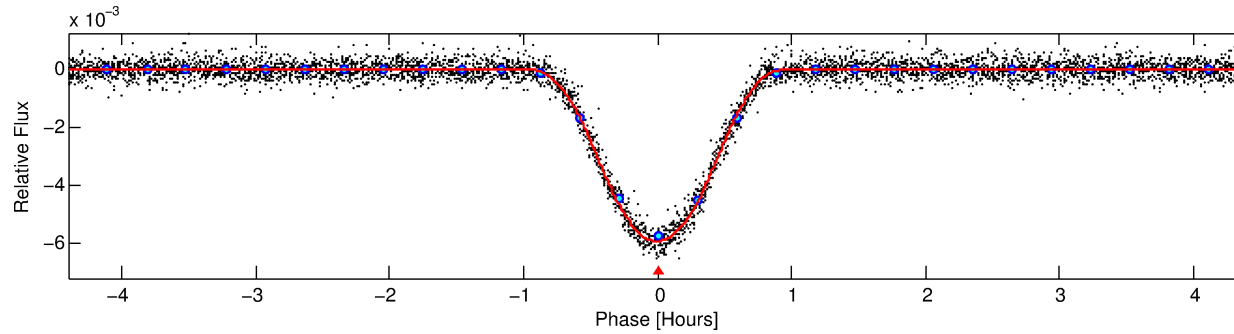
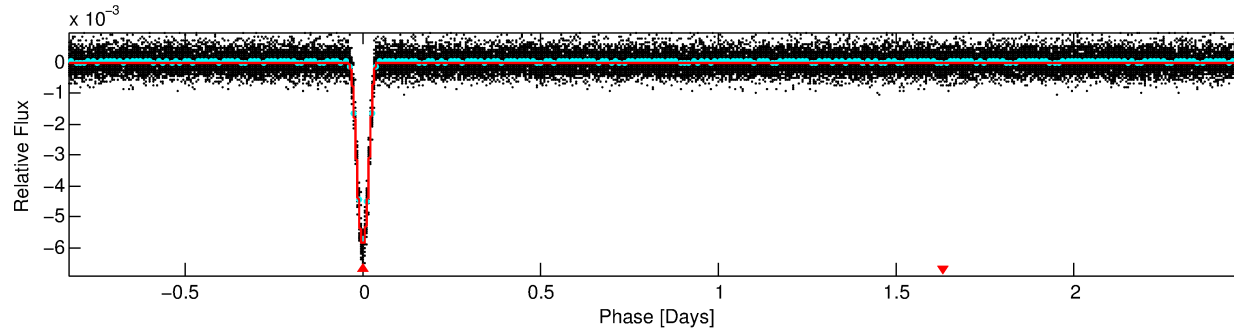
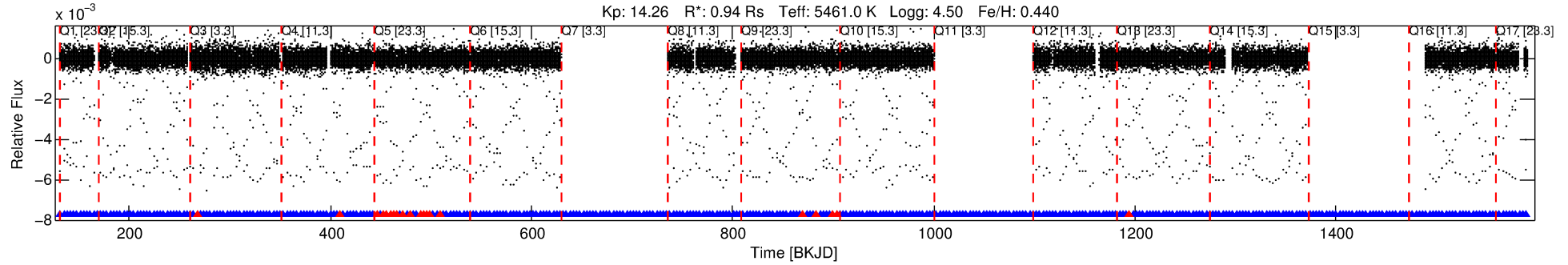
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011046458-01

No Significant Match Found

DV One-Page Summary

KIC: 11046458 Candidate: 1 of 1 Period: 3.312 d
KOI: K00214.01 Name: Kepler-424b Corr: 0.975



DV Fit Results:

Period = 3.31187 [0.00000] d
Epoch = 131.7417 [0.0001] BKJD
Rp/R* = 0.0951 [0.0038]
a/R* = 10.03 [0.20]
b = 0.93 [0.01]
Seff = 367.32 [77.77]
Teff = 1116 [59] K
Rp = 9.73 [1.30] Re
a = 0.0436 [0.0055] AU
Ag = 0.20 [0.12] [-6.79 σ]
Teffp = 1147 [165] K [0.17 σ]

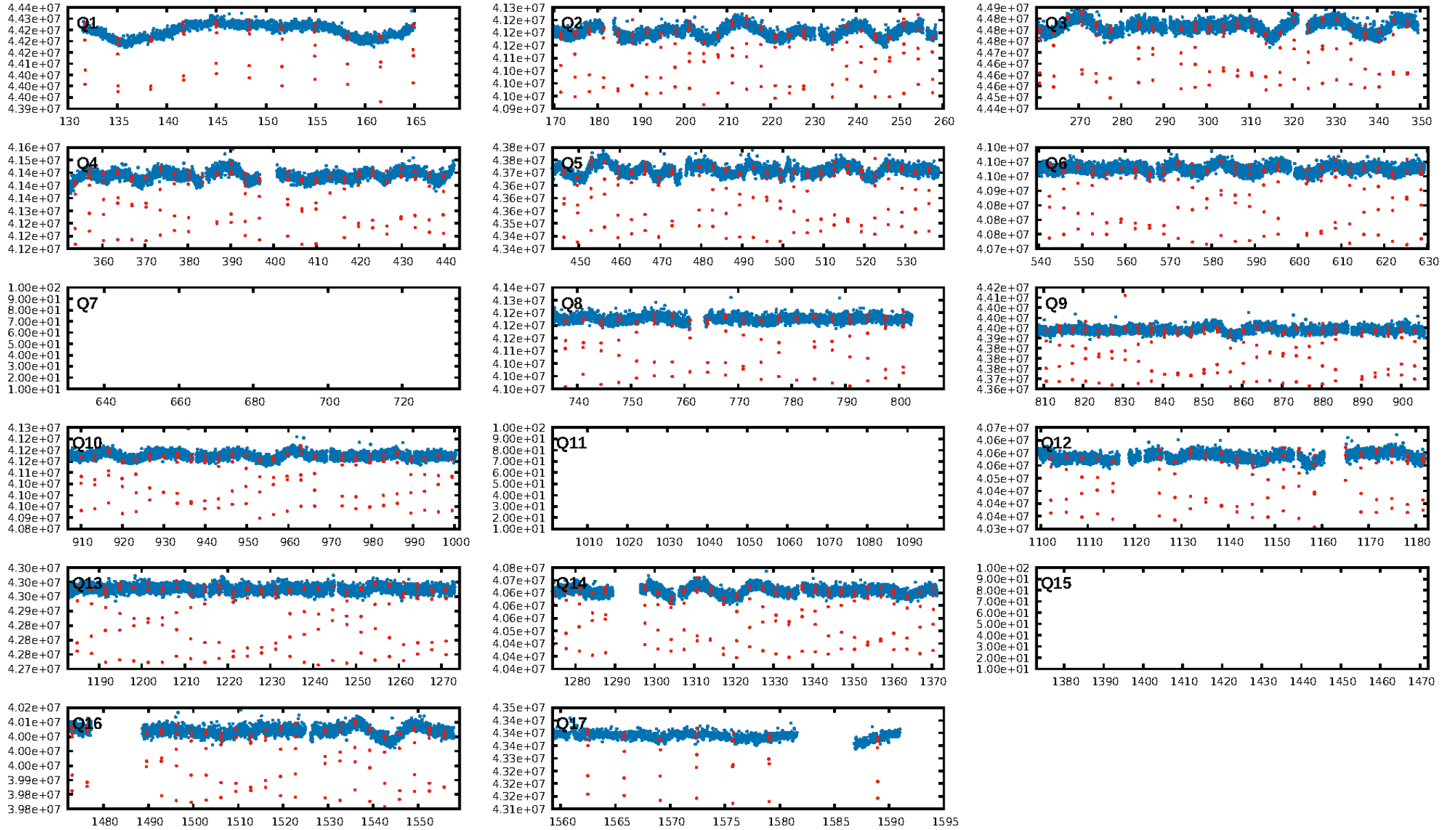
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.93 [281/301]
GhostDiagnostic-chr: 4.914
Centroid-sig: 0.0%
Centroid-so: 0.264 arcsec [8.39 σ]
OotOffset-rm: 0.044 arcsec [0.62 σ]
KicOffset-rm: 0.241 arcsec [3.24 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

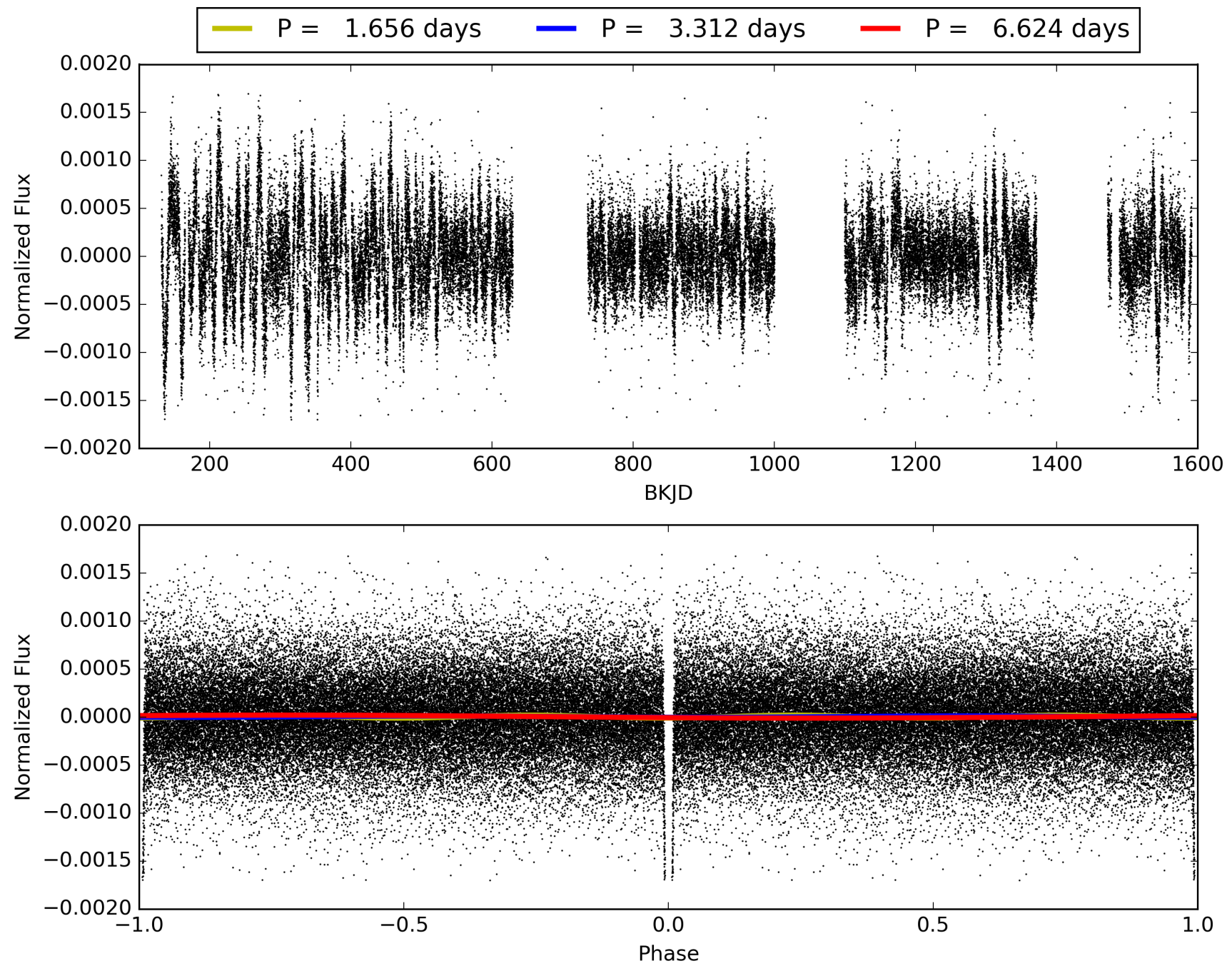
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:32:24 Z

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

TCE 011046458-01, PDC Light Curves

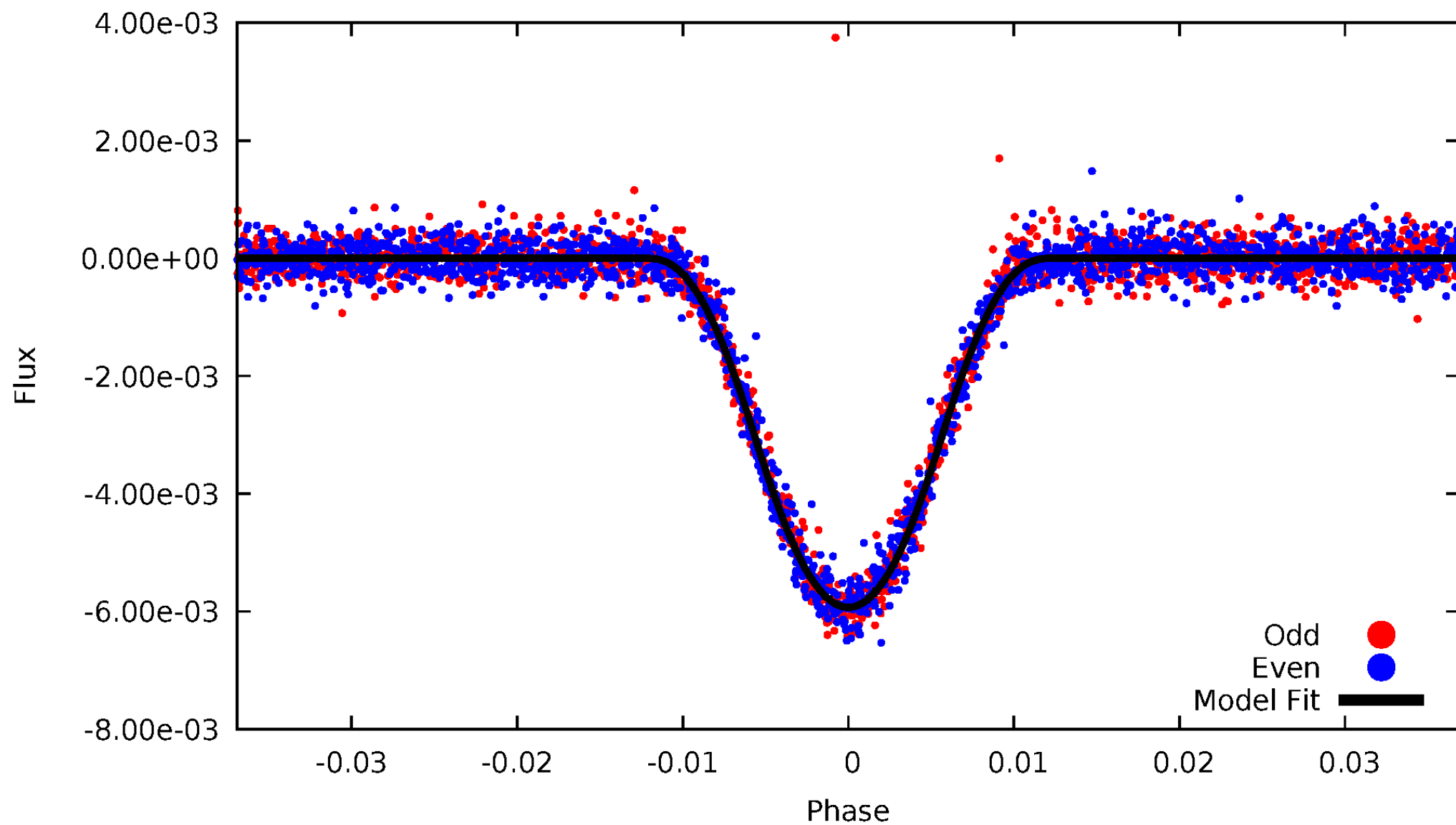


TCE 011046458-01



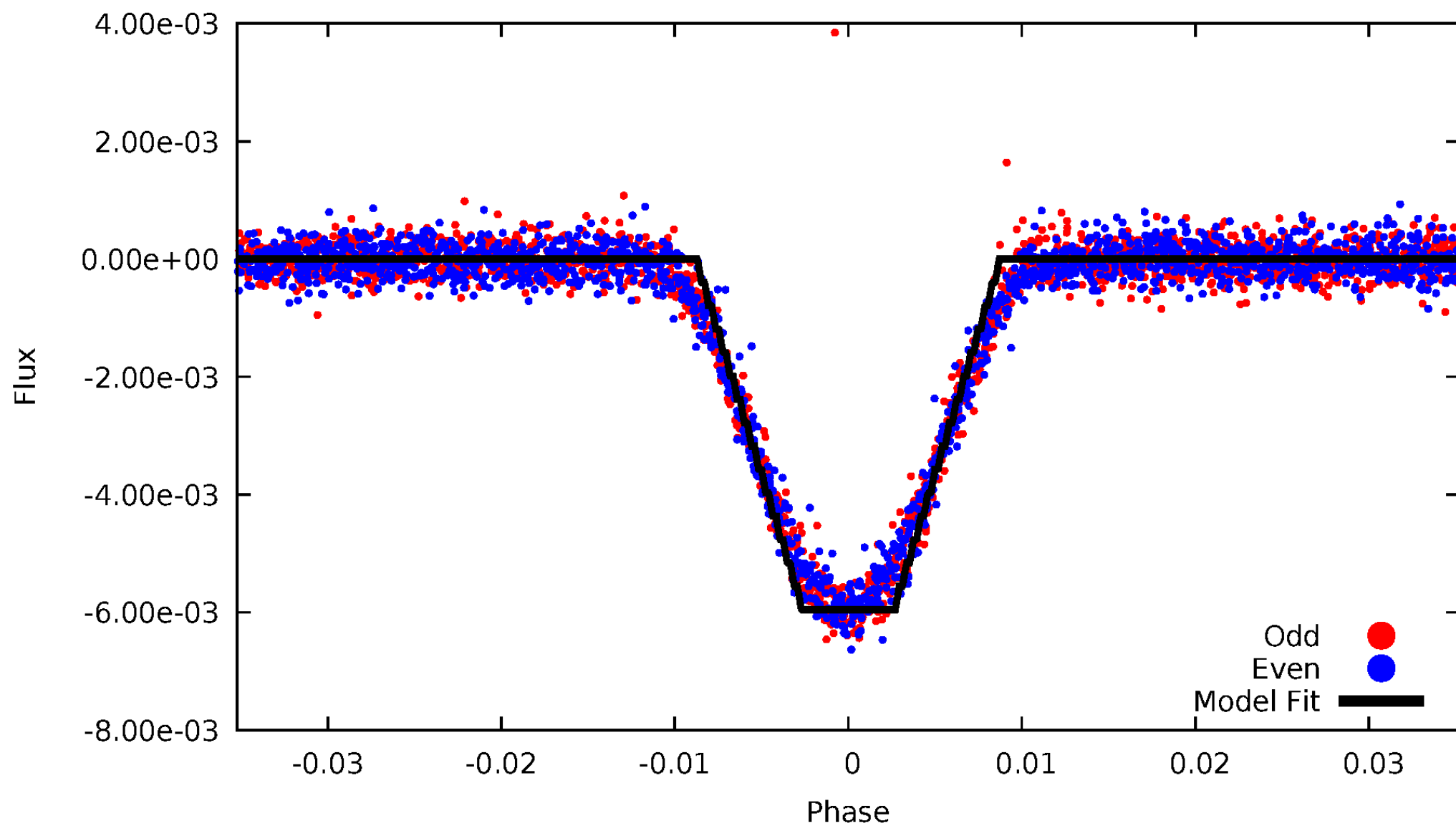
DV Odd/Even

TCE 011046458-01



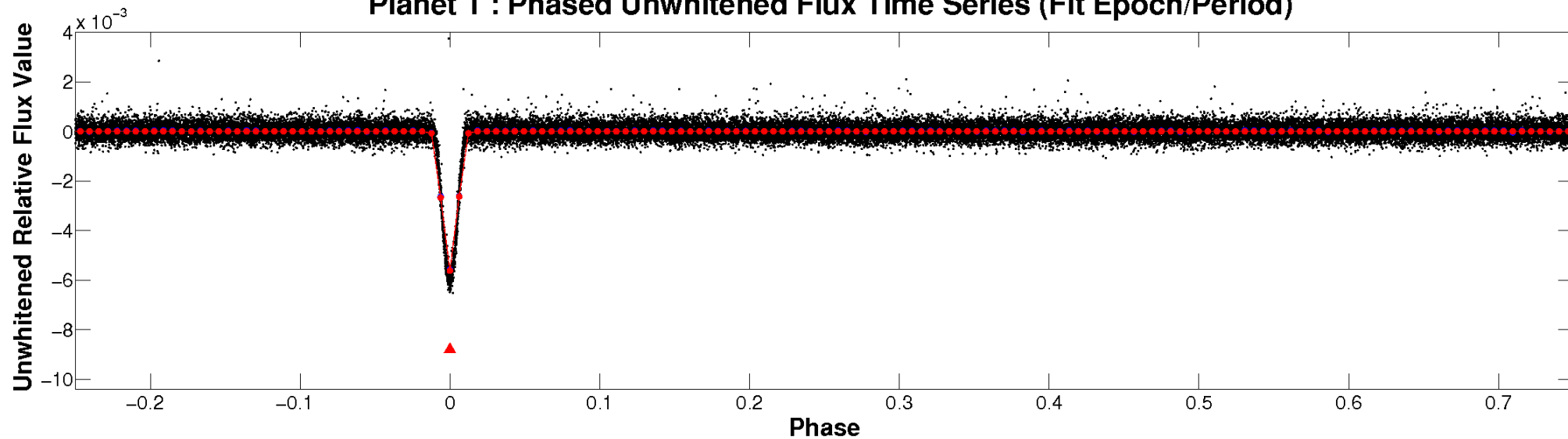
ALT Odd/Even

TCE 011046458-01

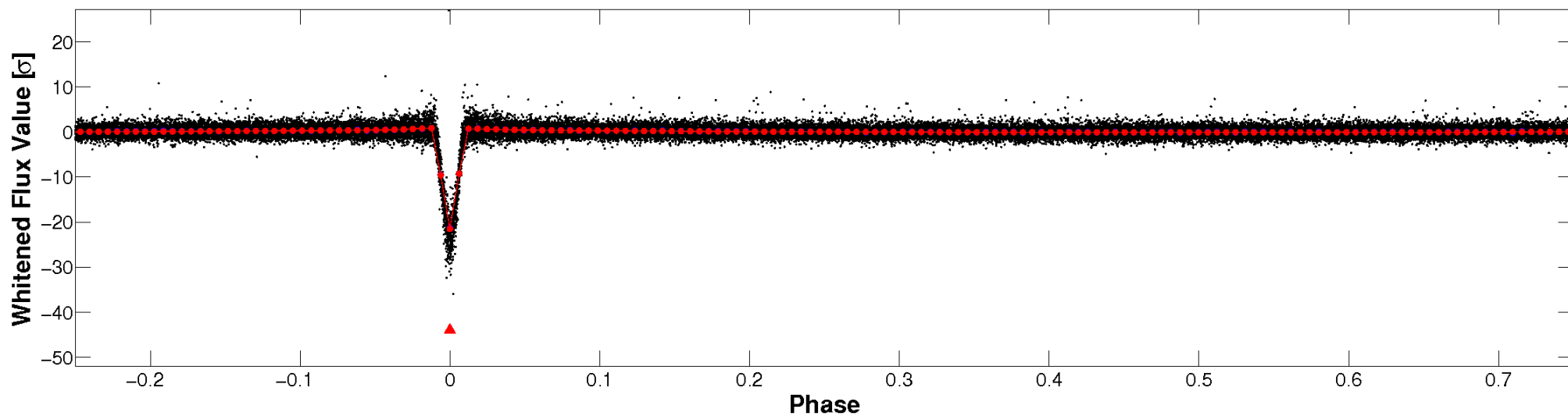


Non-Whitened Vs. Whitened Light Curve

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

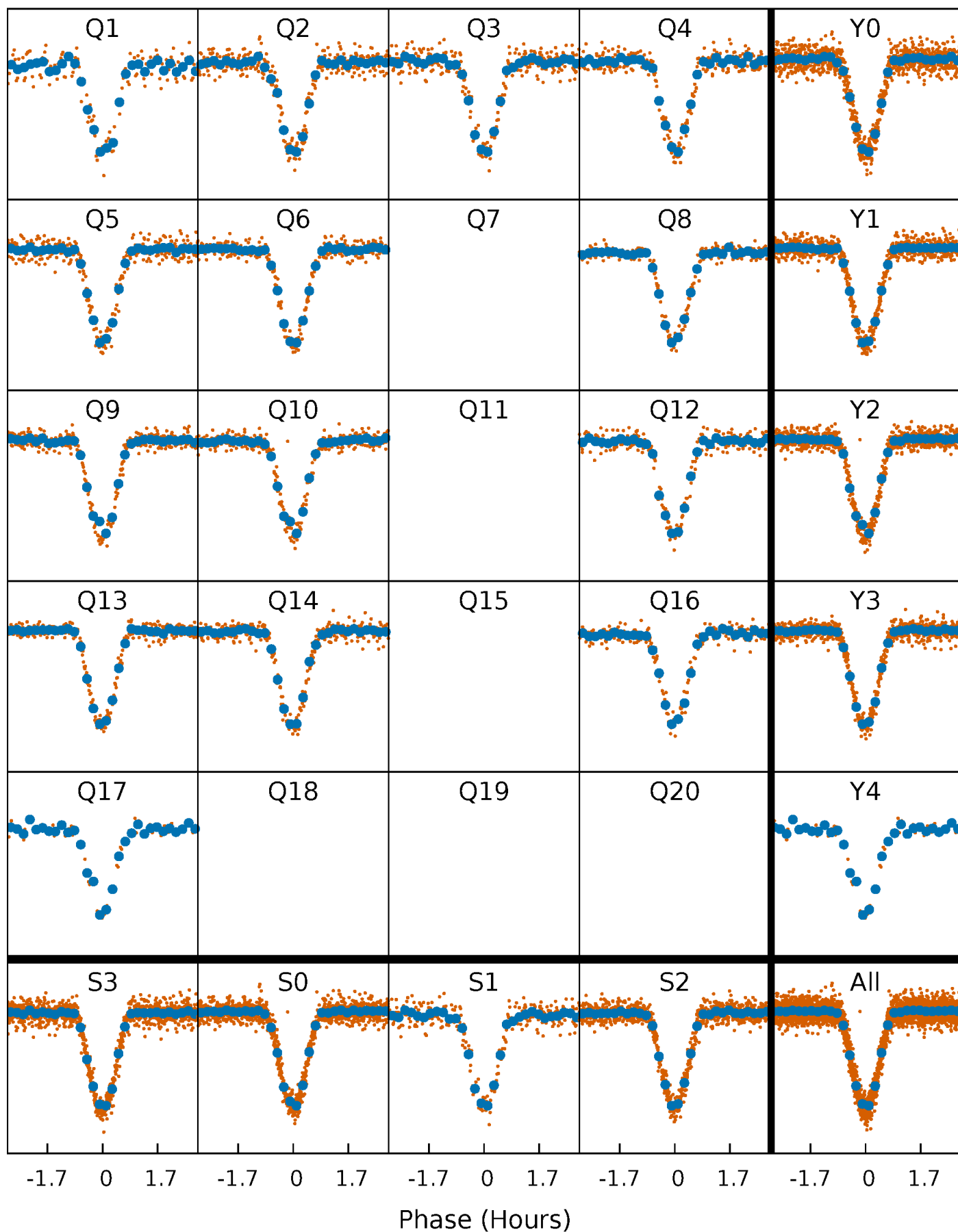


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



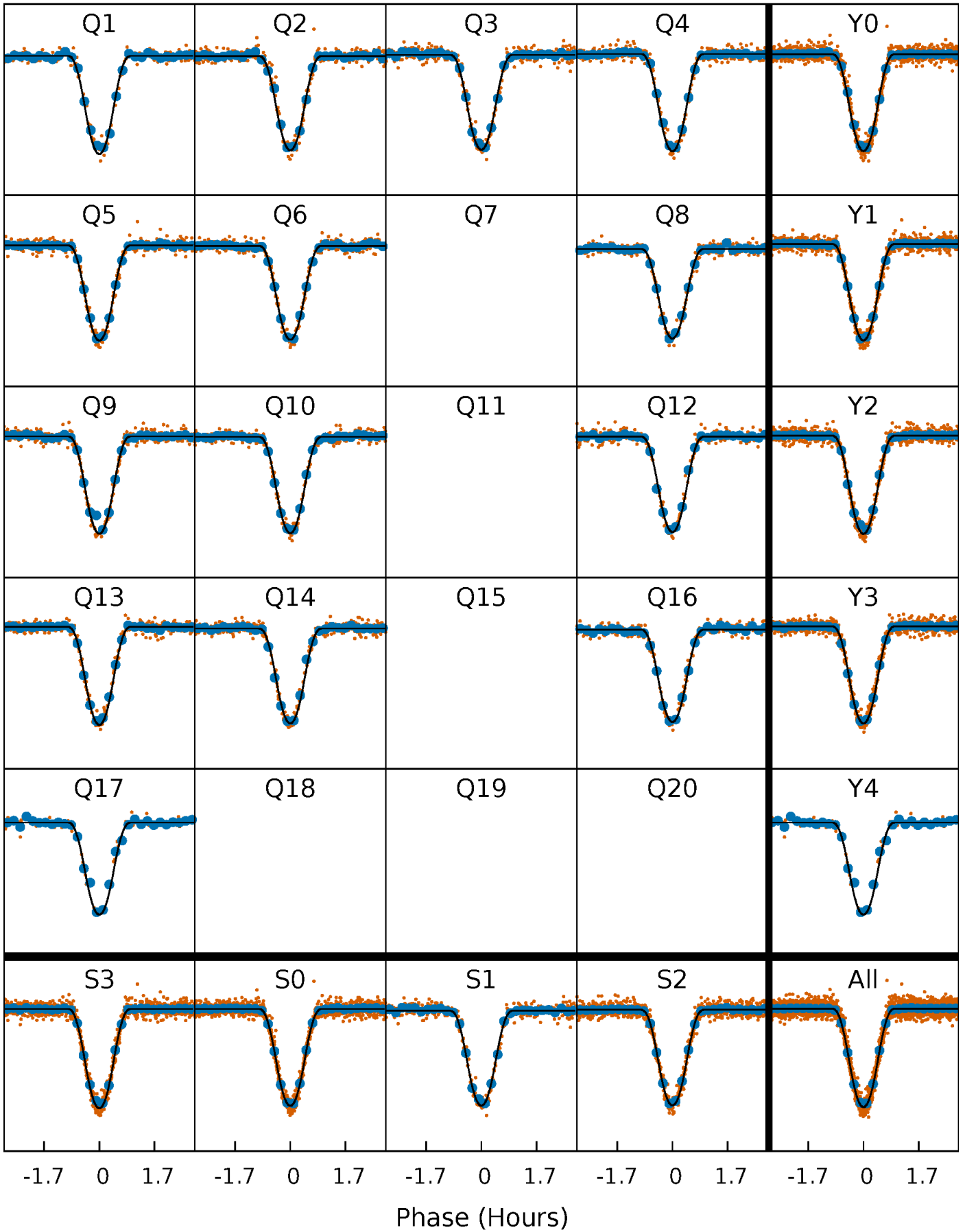
PDC Quarter-Phased Transit Curves

TCE 011046458-01 P= 3.311869 Days $T_0=131.741736$ (BKJD)



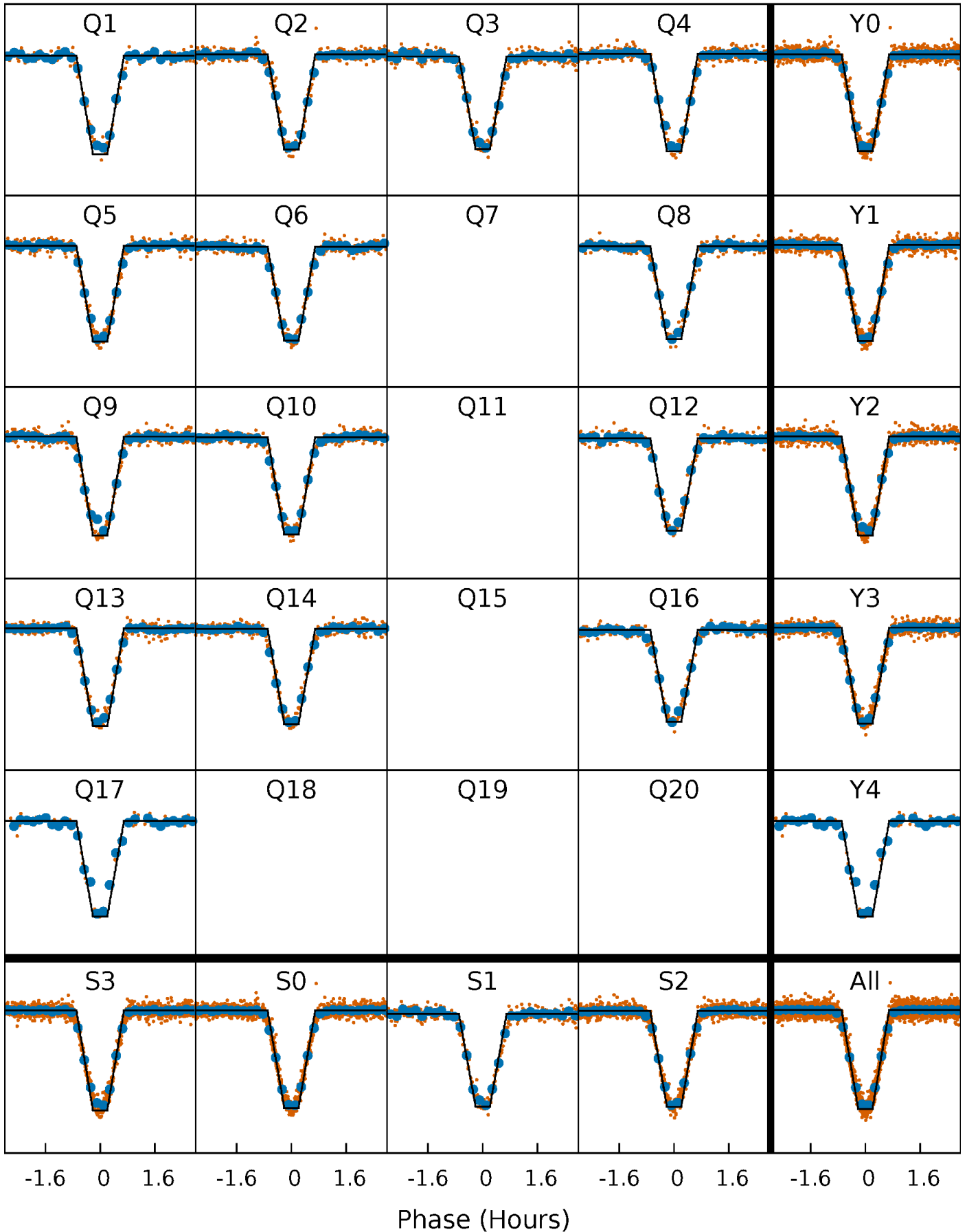
DV Quarter-Phased Transit Curves

TCE 011046458-01 P= 3.311869 Days $T_0=131.741736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

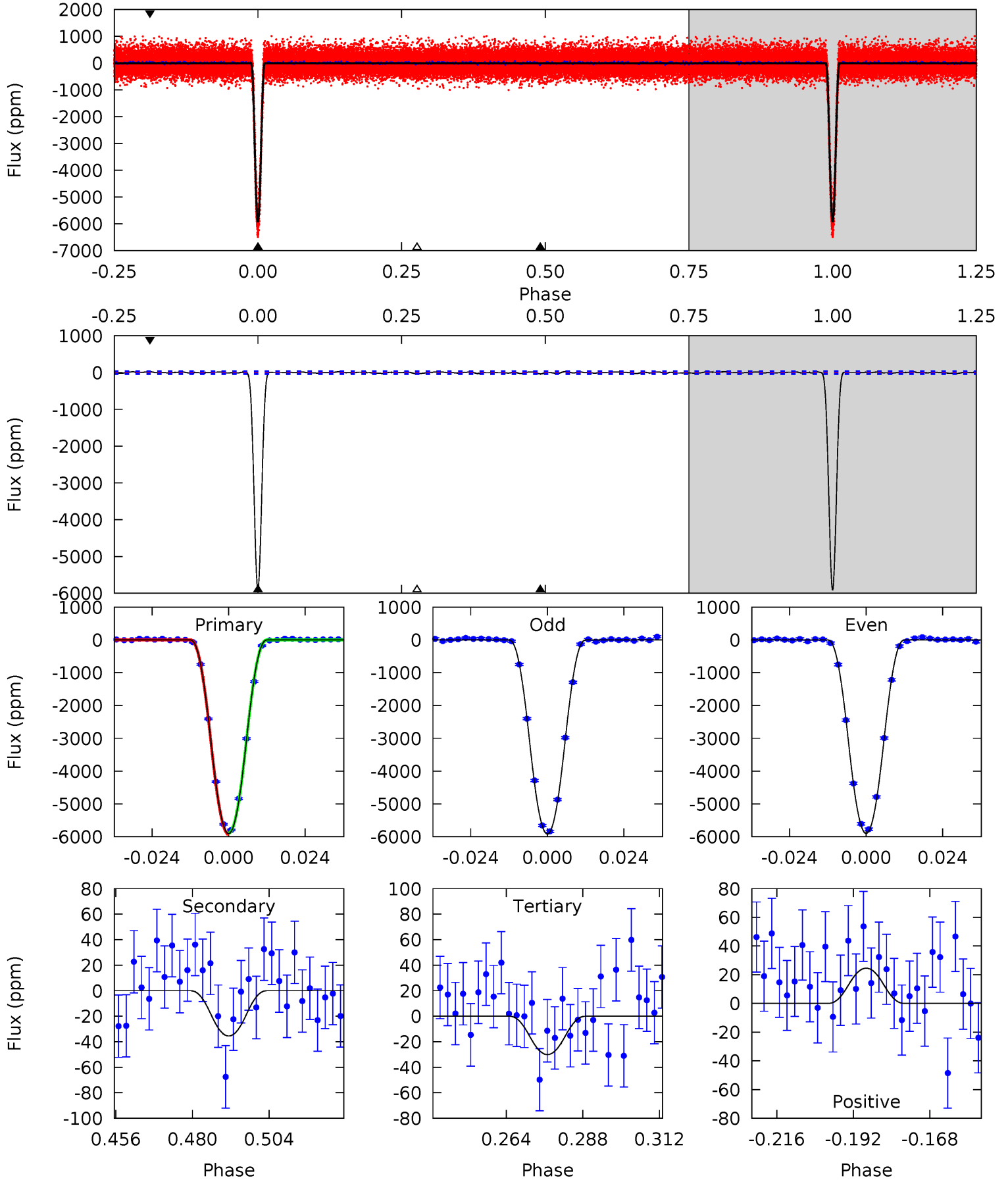
TCE 011046458-01 P= 3.311869 Days $T_0=131.741749$ (BKJD)



DV Model-Shift Uniqueness Test

011046458-01, P = 3.311869 Days, E = 128.429867 Days

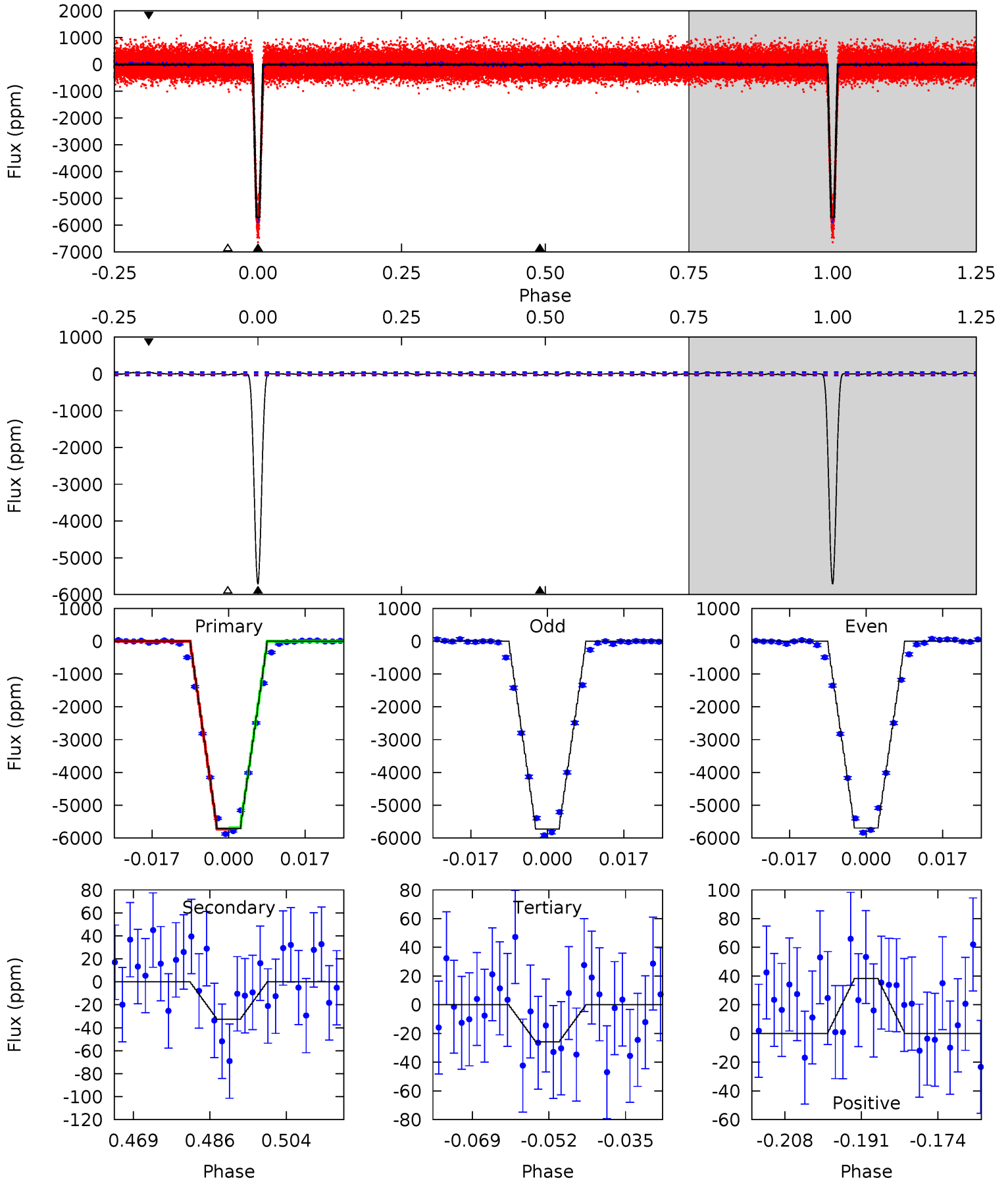
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
804.1	4.83	4.09	3.34	4.86	2.26	1.56	800.0	800.7	0.74	1.49	1.27	1.00	0.00	2.39



Alt Model-Shift Uniqueness Test

011046458-01, P = 3.311869 Days, E = 128.429880 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
648.5	3.70	2.94	4.35	4.92	2.38	1.40	645.5	644.1	0.76	-0.65	1.75	0.99	0.01	2.16



Stellar Parameters For KIC 011046458

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5461^{+73}_{-82}	$4.499^{+0.023}_{-0.120}$	$0.440^{+0.050}_{-0.150}$	$0.937^{+0.120}_{-0.034}$	$1.012^{+0.029}_{-0.057}$	$1.731^{+0.176}_{-0.556}$
	+1%/-2%	+1%/-3%	+11%/-34%	+13%/-4%	+3%/-6%	+10%/-32%
Source	SPE81	SPE81	SPE81	DSEP		

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

Secondary Eclipse Parameters for KIC 011046458-01 / KOI 0214.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 7	$9.92^{+0.74}_{-0.55}$	1576^{+54}_{-37}	1911^{+170}_{-3617}	$0.370^{+0.091}_{-0.089}$
Alt.	-33 ± 9	$8.08^{+0.69}_{-0.57}$	1577^{+60}_{-37}	2155^{+135}_{-267}	$0.516^{+0.169}_{-0.155}$

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 $A_{obs} \gg 1.0$

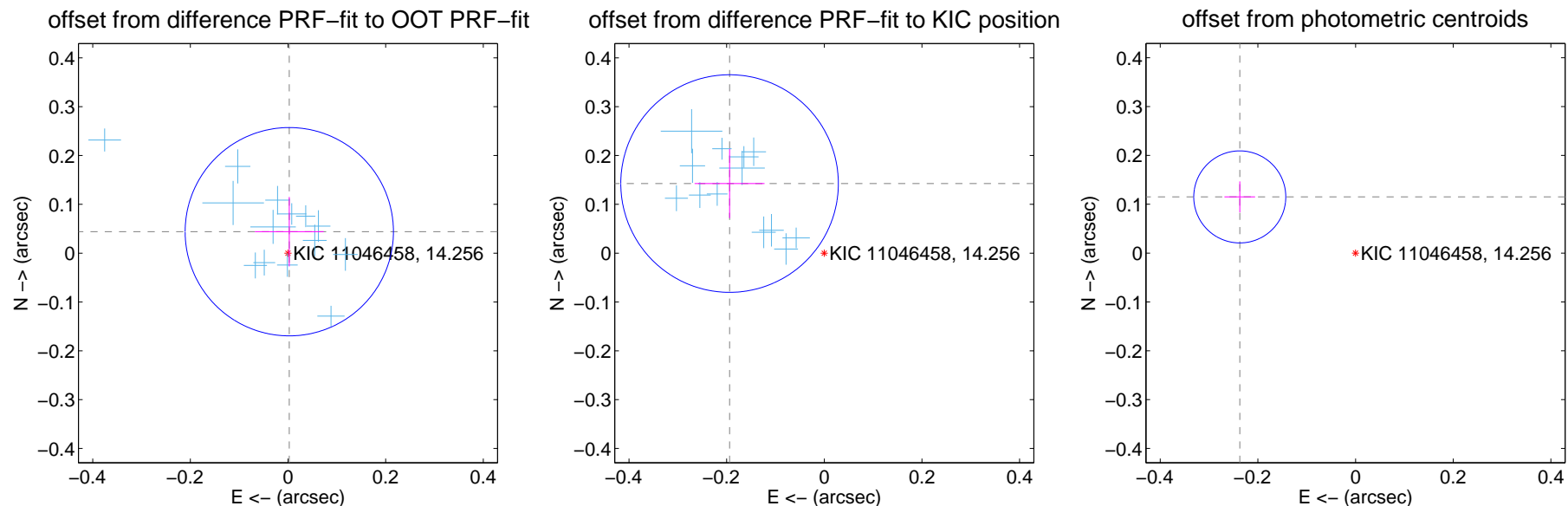
DV Centroid Data

Supplemental centroid analysis for 011046458-01. Kepler magnitude: 14.26. Transit SNR 453.39

There are 14 quarters with good PRF difference image offsets

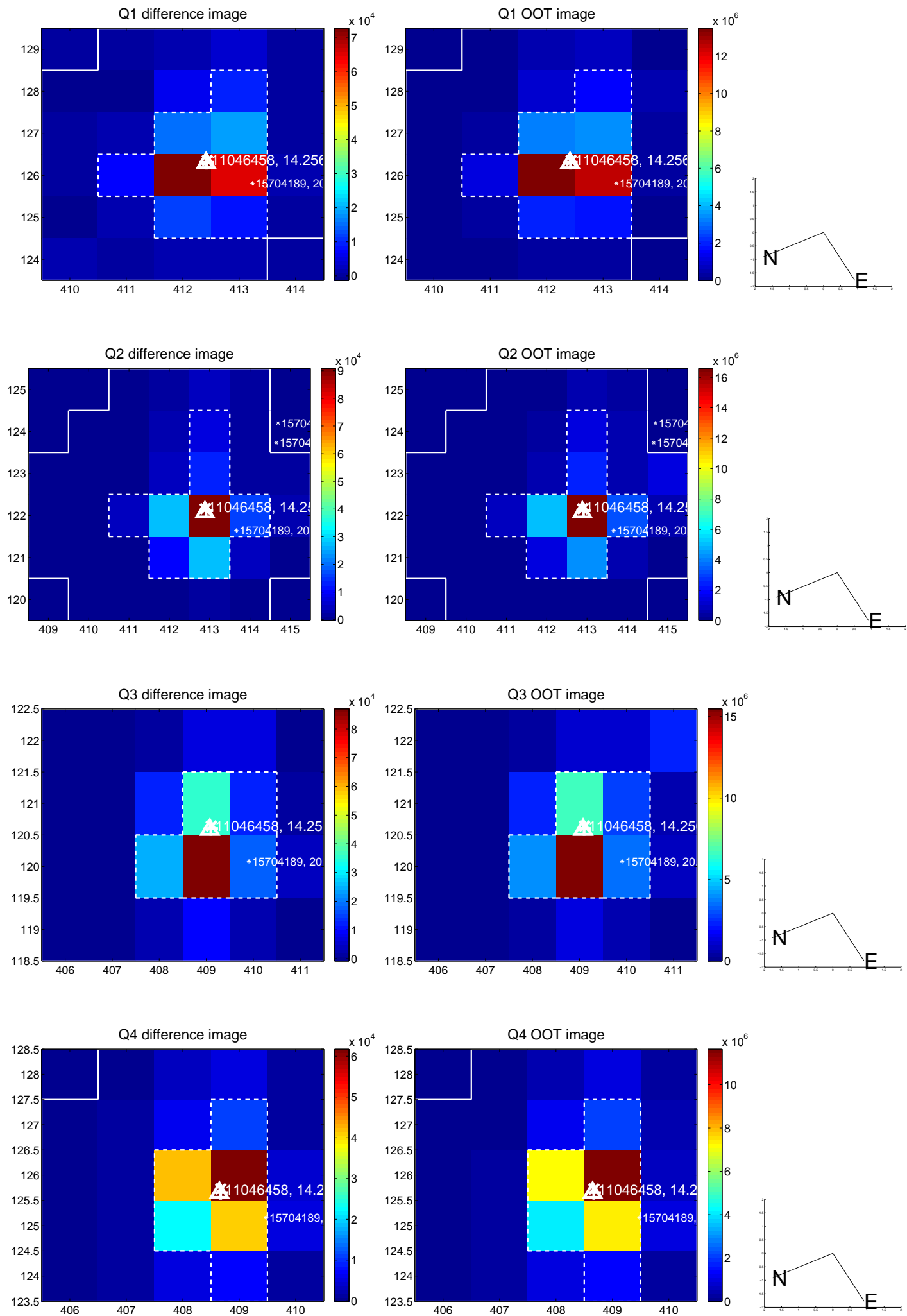
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.044 ± 0.071	0.62	-0.003 ± 0.071	0.044 ± 0.071
PRF-fit source offset from KIC position	0.241 ± 0.074	3.24	0.194 ± 0.072	0.143 ± 0.071
photometric centroid source offset	0.26 ± 0.03	8.39	0.24 ± 0.03	0.12 ± 0.03

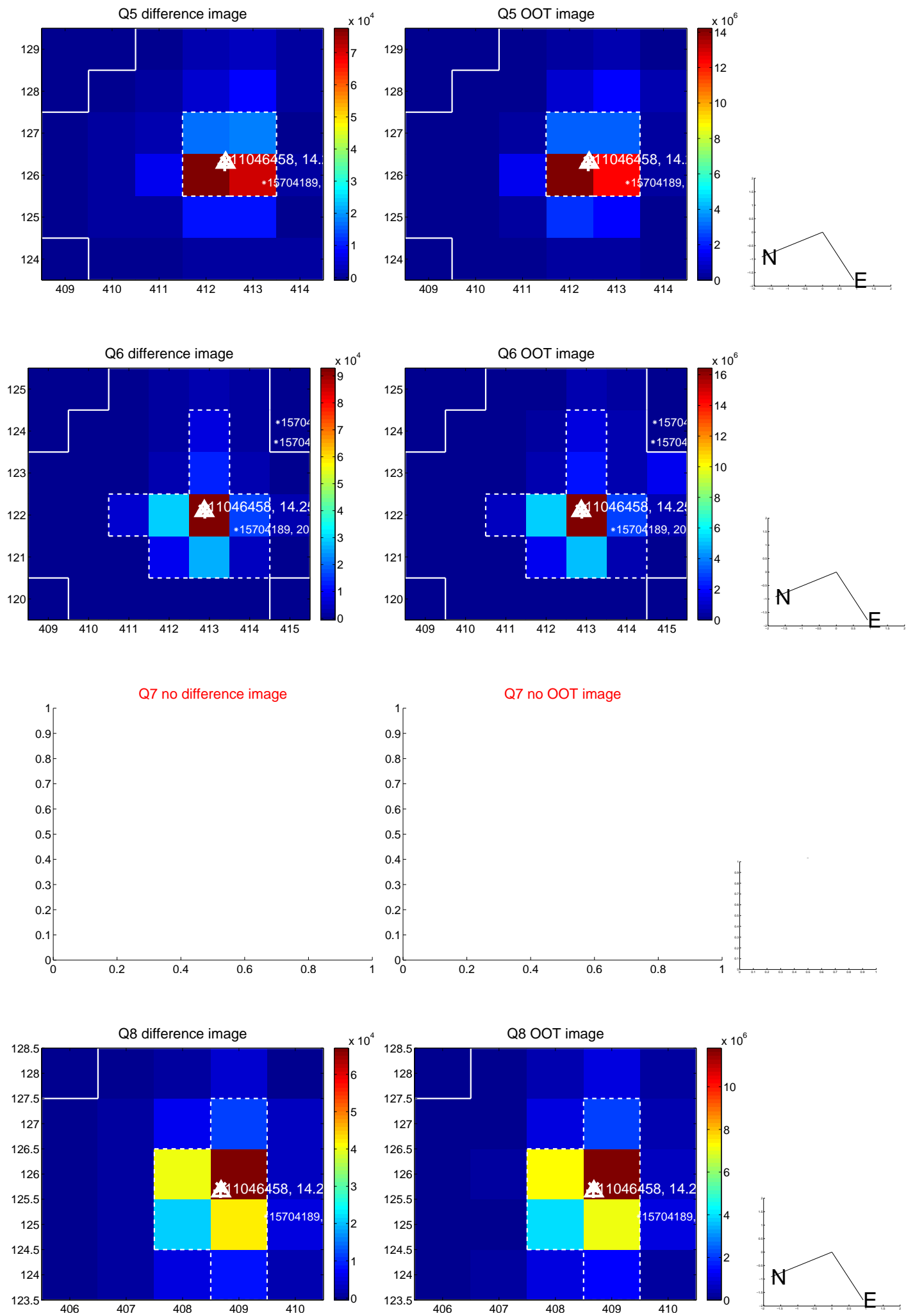


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

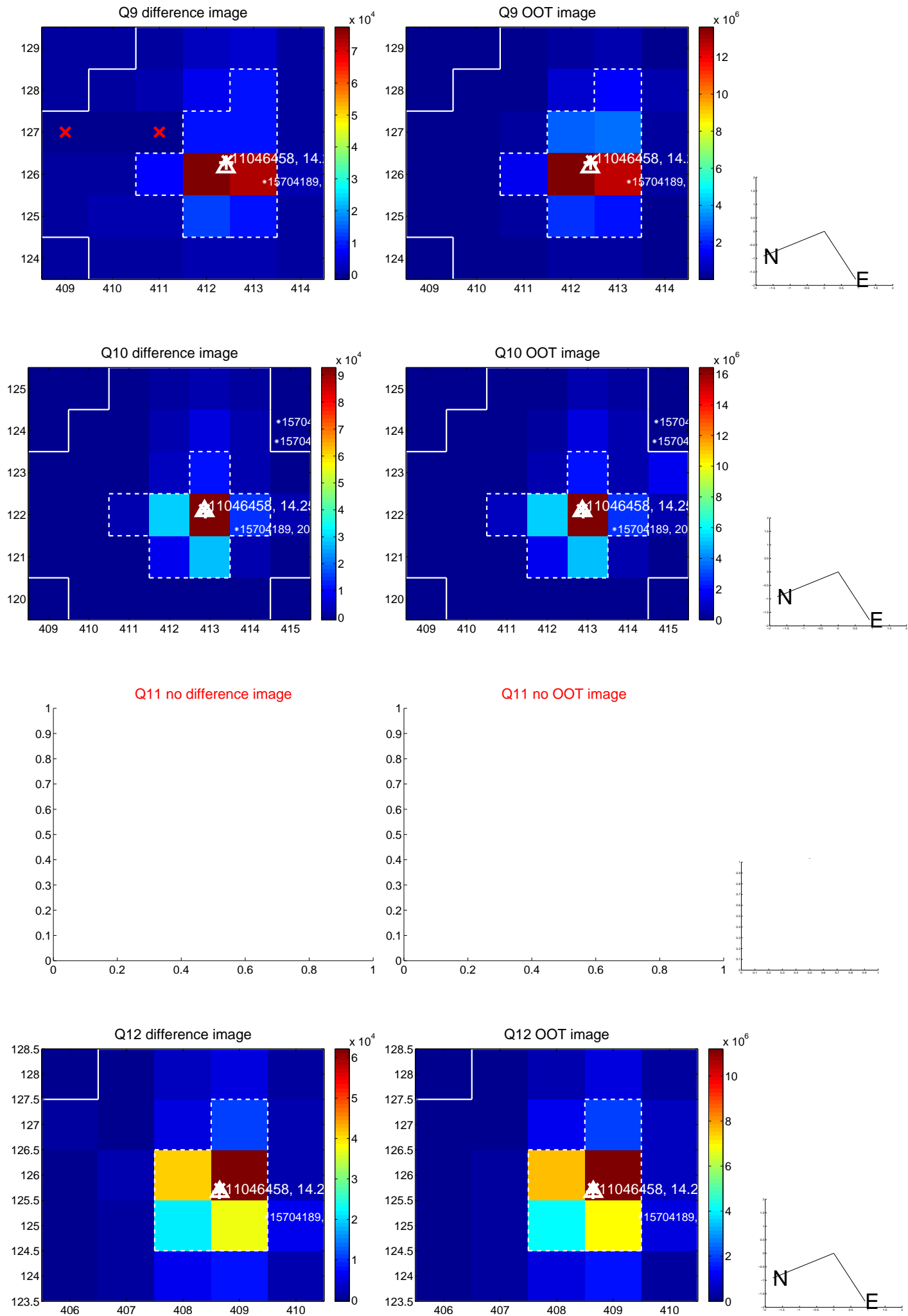
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



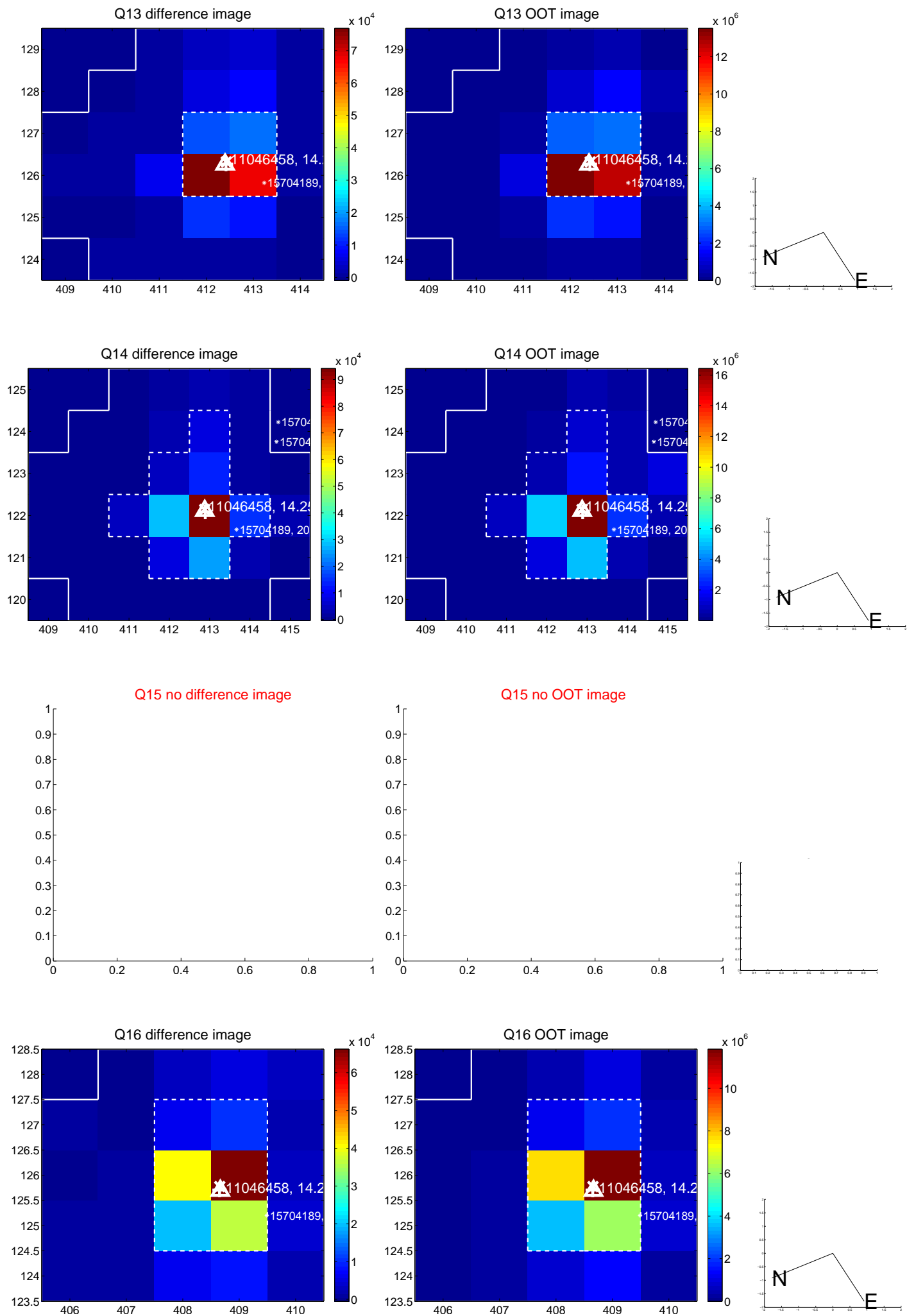
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



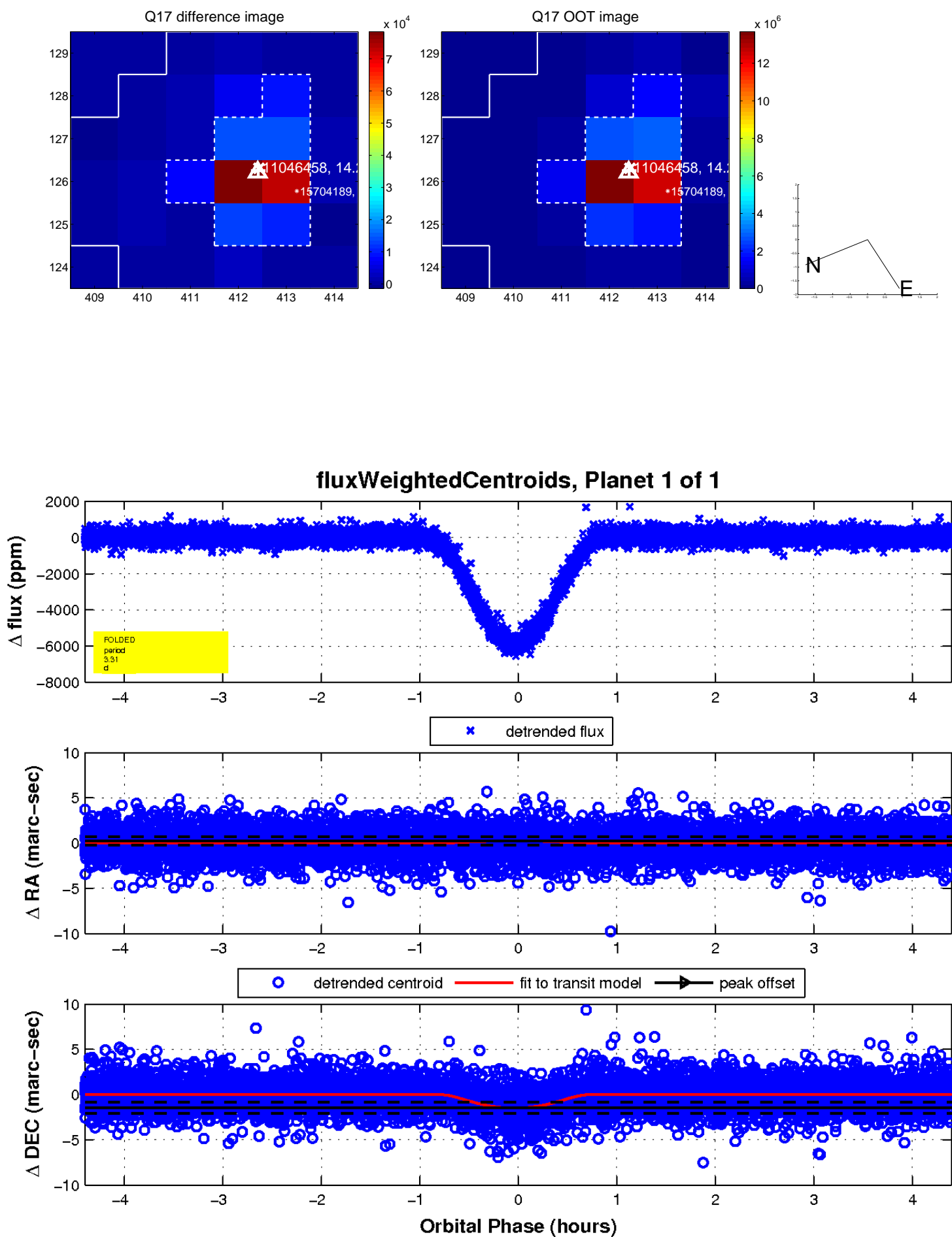
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

