

KIC 011554435

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})
011554435-01	OBS	0063.01	9.434156	140.106244	4056.0	2.891	674.3	595.5	0.89	5578	6.02	92.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011554435-01	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.

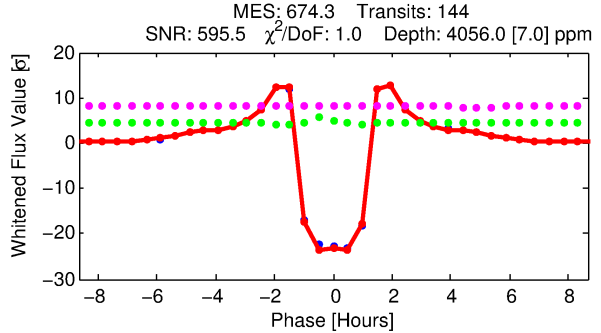
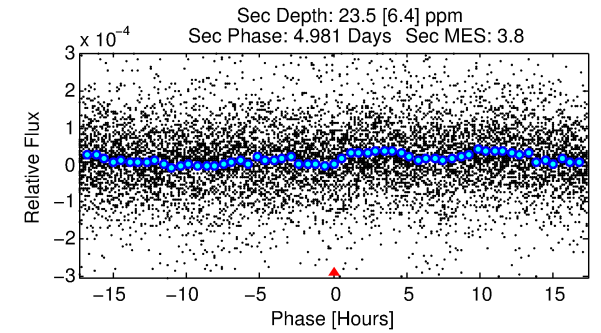
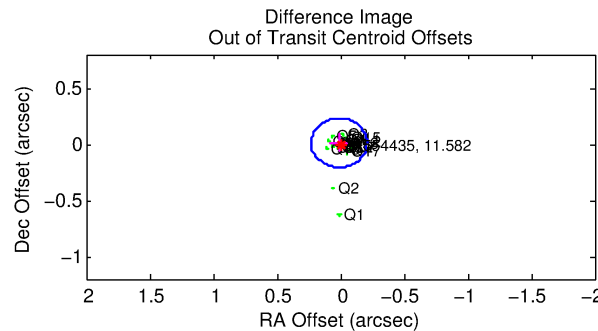
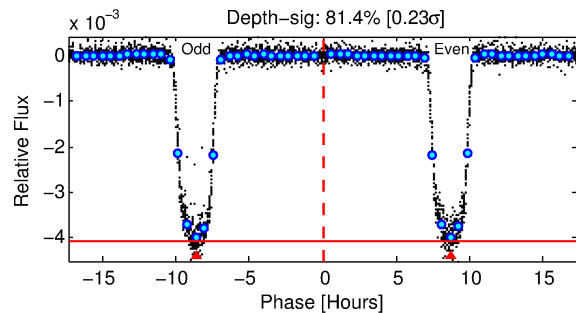
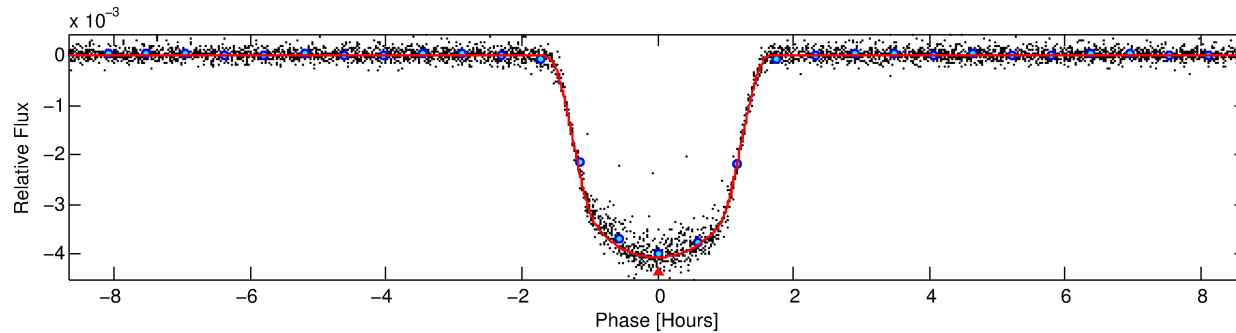
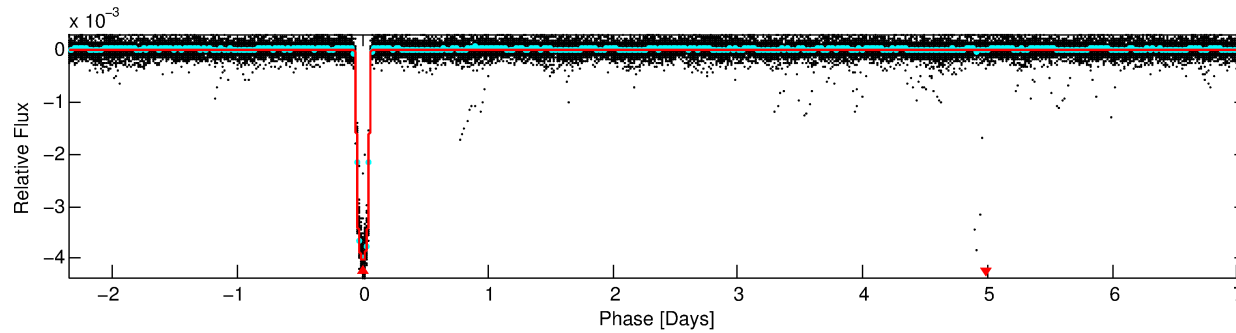
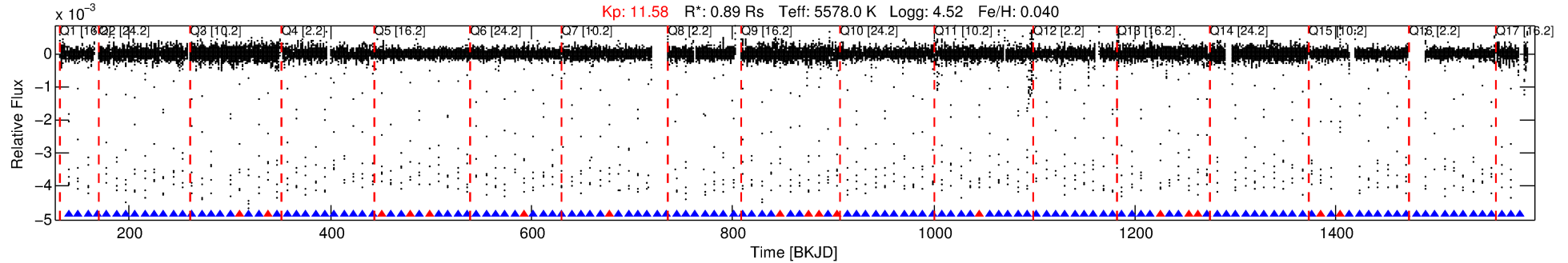
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011554435-01

No Significant Match Found

DV One-Page Summary

KIC: 11554435 Candidate: 1 of 1 Period: 9.434 d
KOI: K00063.01 Name: Kepler-63b Corr: 0.982



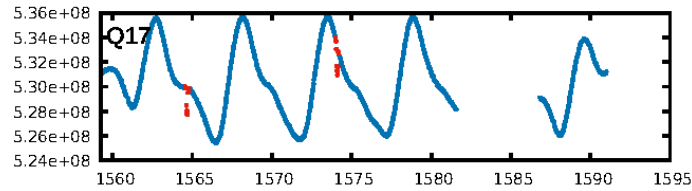
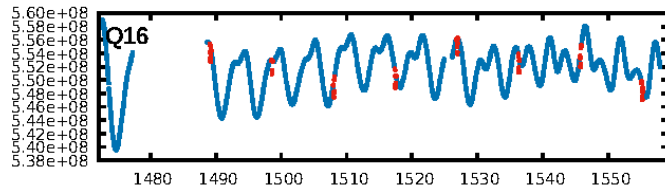
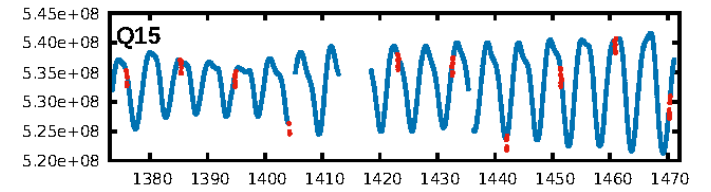
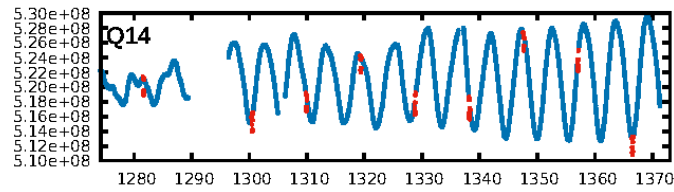
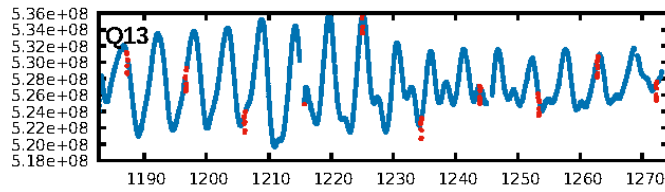
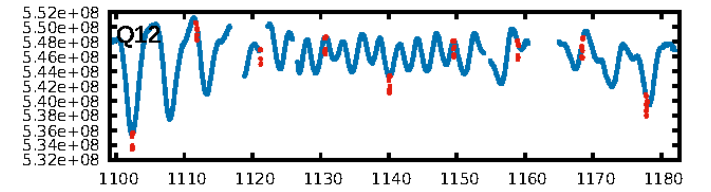
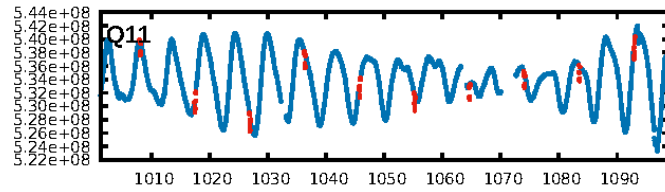
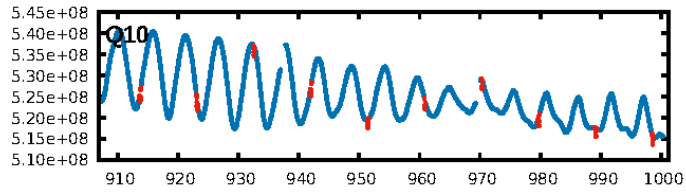
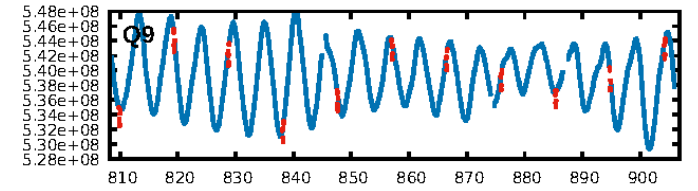
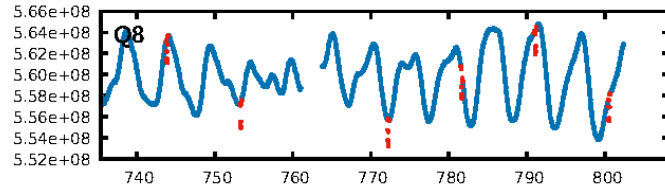
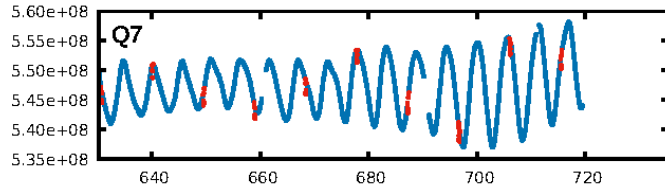
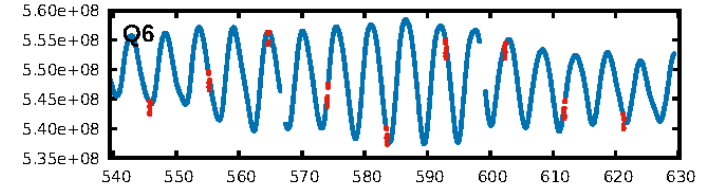
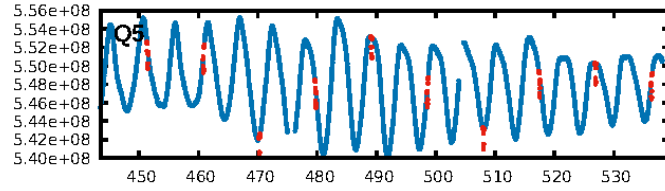
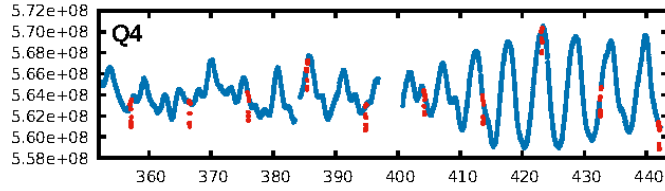
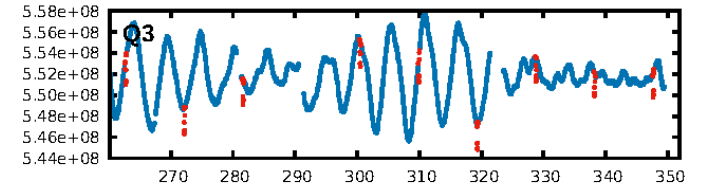
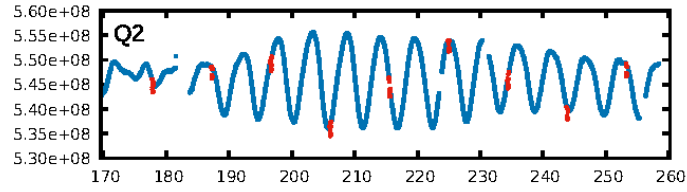
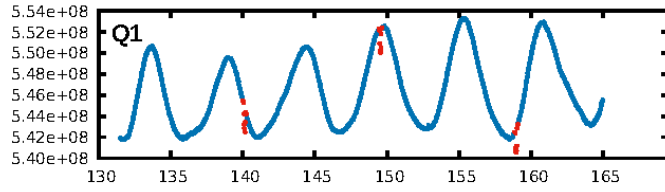
DV Fit Results:

Period = 9.43416 [0.00000] d
Epoch = 140.1062 [0.0001] BKJD
Rp/R* = 0.0623 [0.0003]
a/R* = 20.06 [0.34]
b = 0.69 [0.01]
Seff = 92.65 [18.64]
Teq = 791 [40] K
Rp = 6.02 [0.82] Re
a = 0.0857 [0.0104] AU
Ag = 2.62 [0.86] [1.88σ]
Teffp = 1557 [110] K [6.53σ]

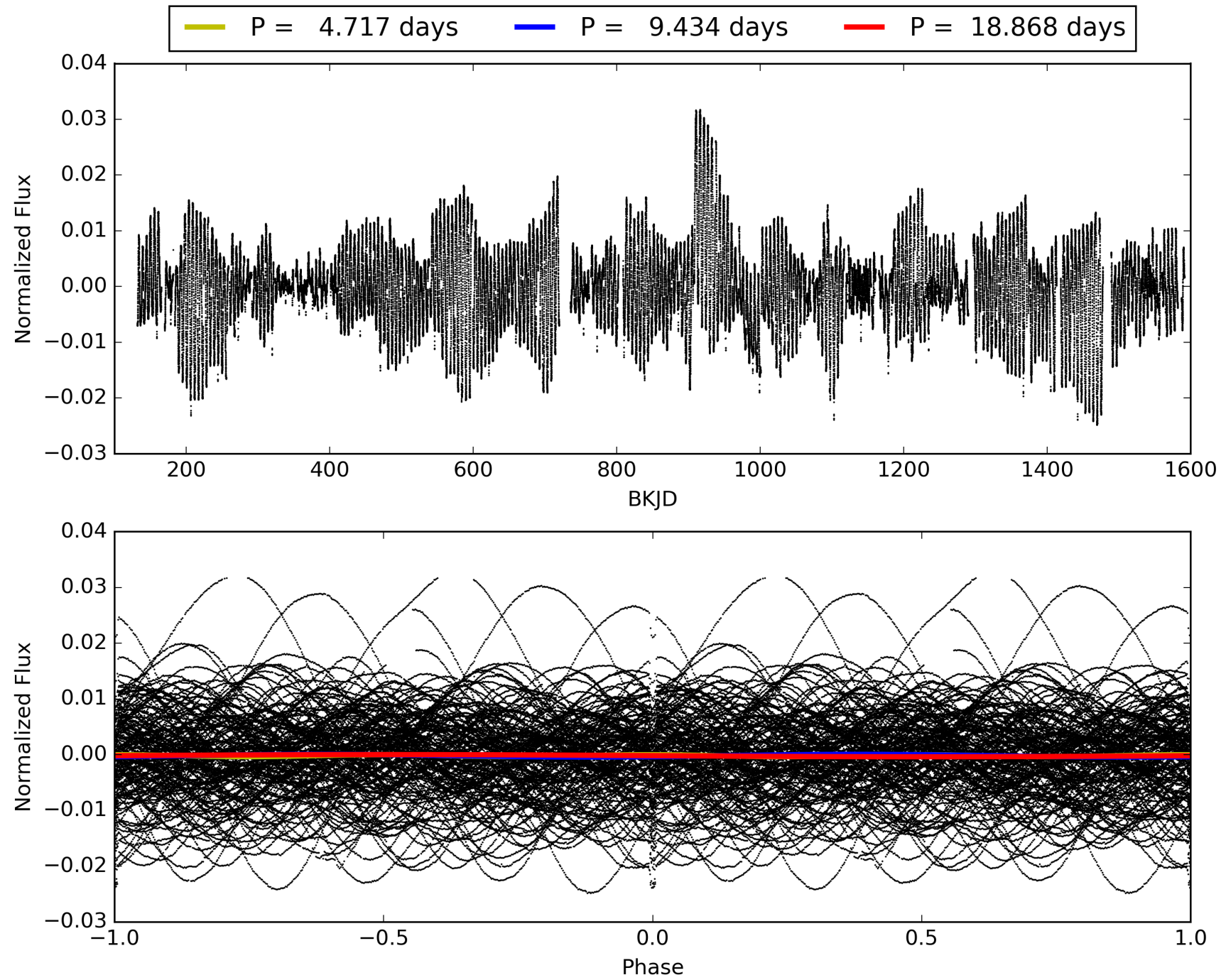
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.88 [122/139]
GhostDiagnostic-chr: 2.162
Centroid-sig: 0.0%
Centroid-so: 0.352 arcsec [37.54σ]
OotOffset-rm: 0.017 arcsec [0.24σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.263 arcsec [3.25σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011554435-01, PDC Light Curves

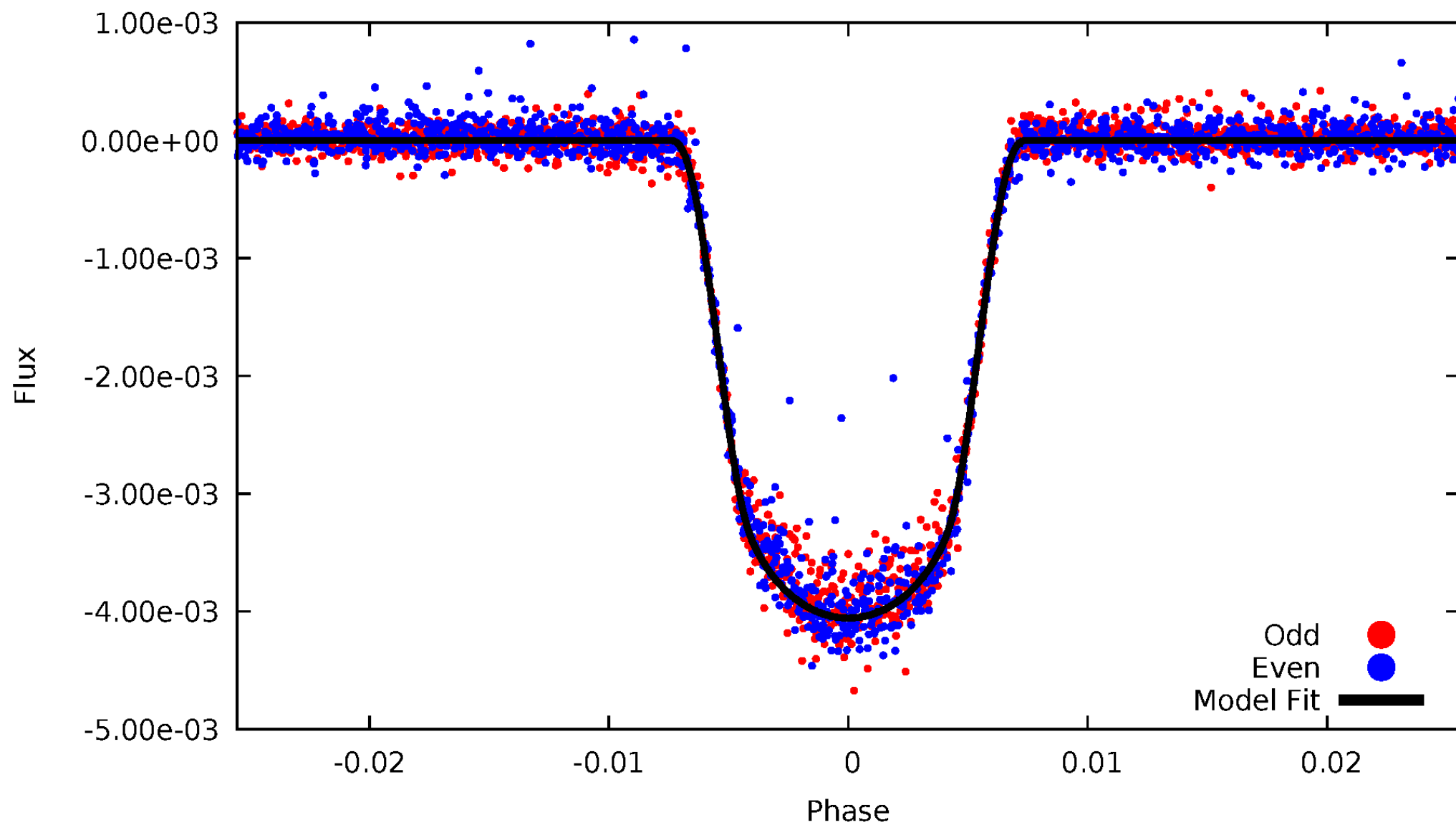


TCE 011554435-01



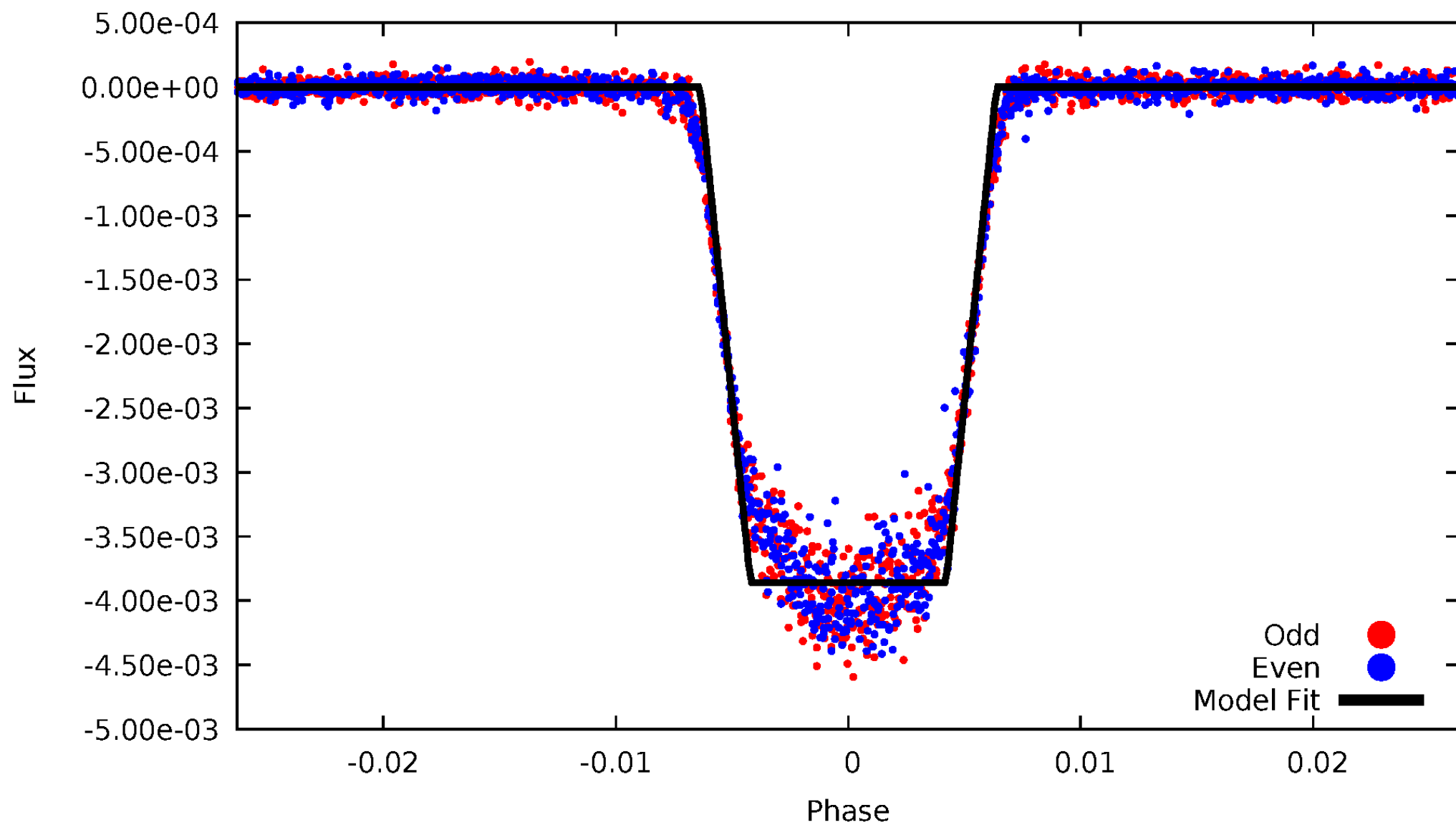
DV Odd/Even

TCE 011554435-01



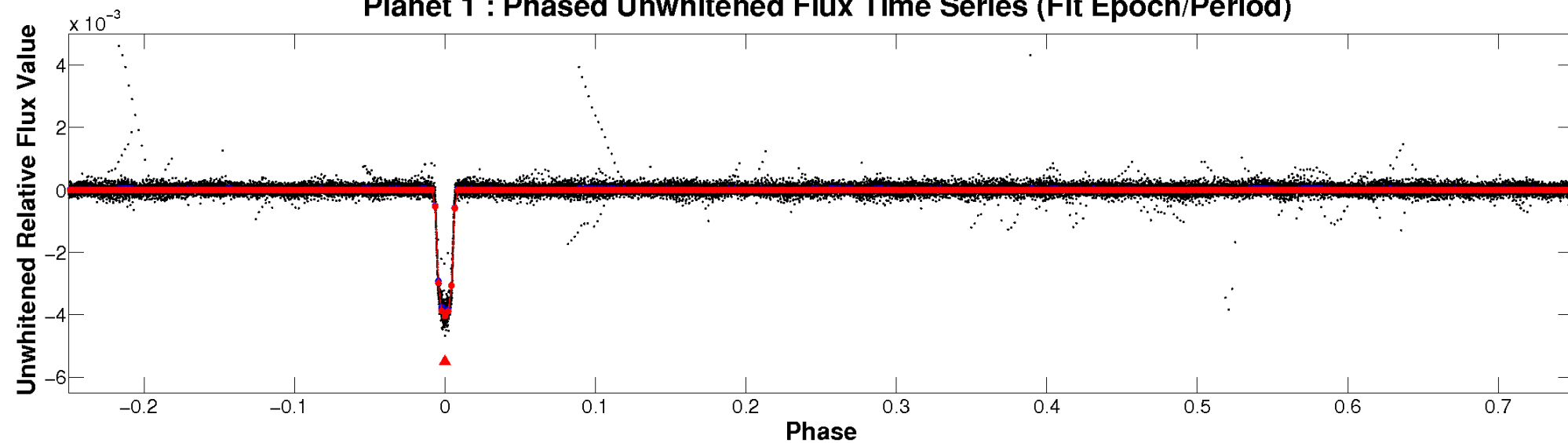
ALT Odd/Even

TCE 011554435-01

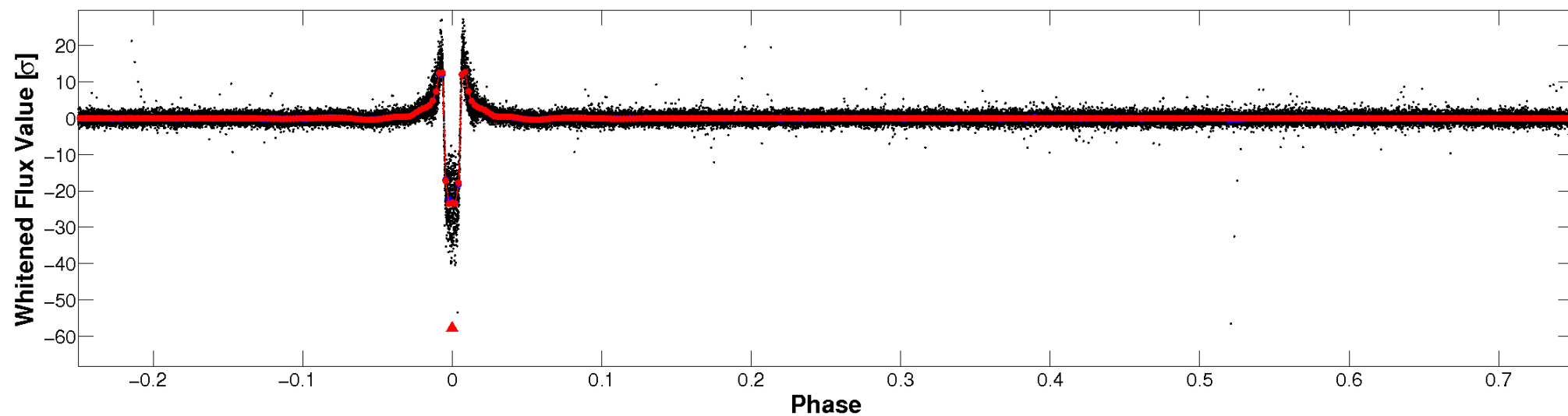


Non-Whitened Vs. Whitened Light Curve

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

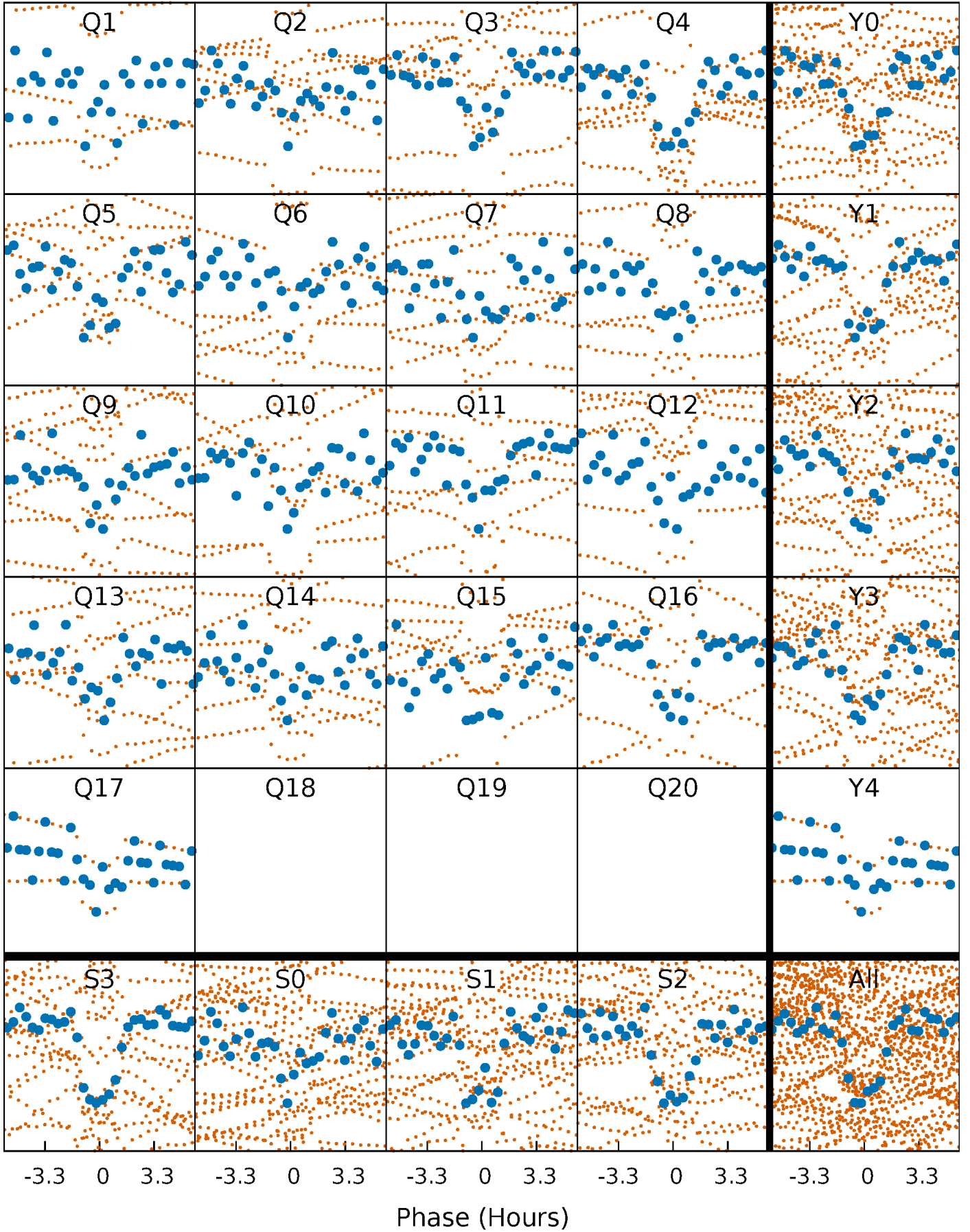


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



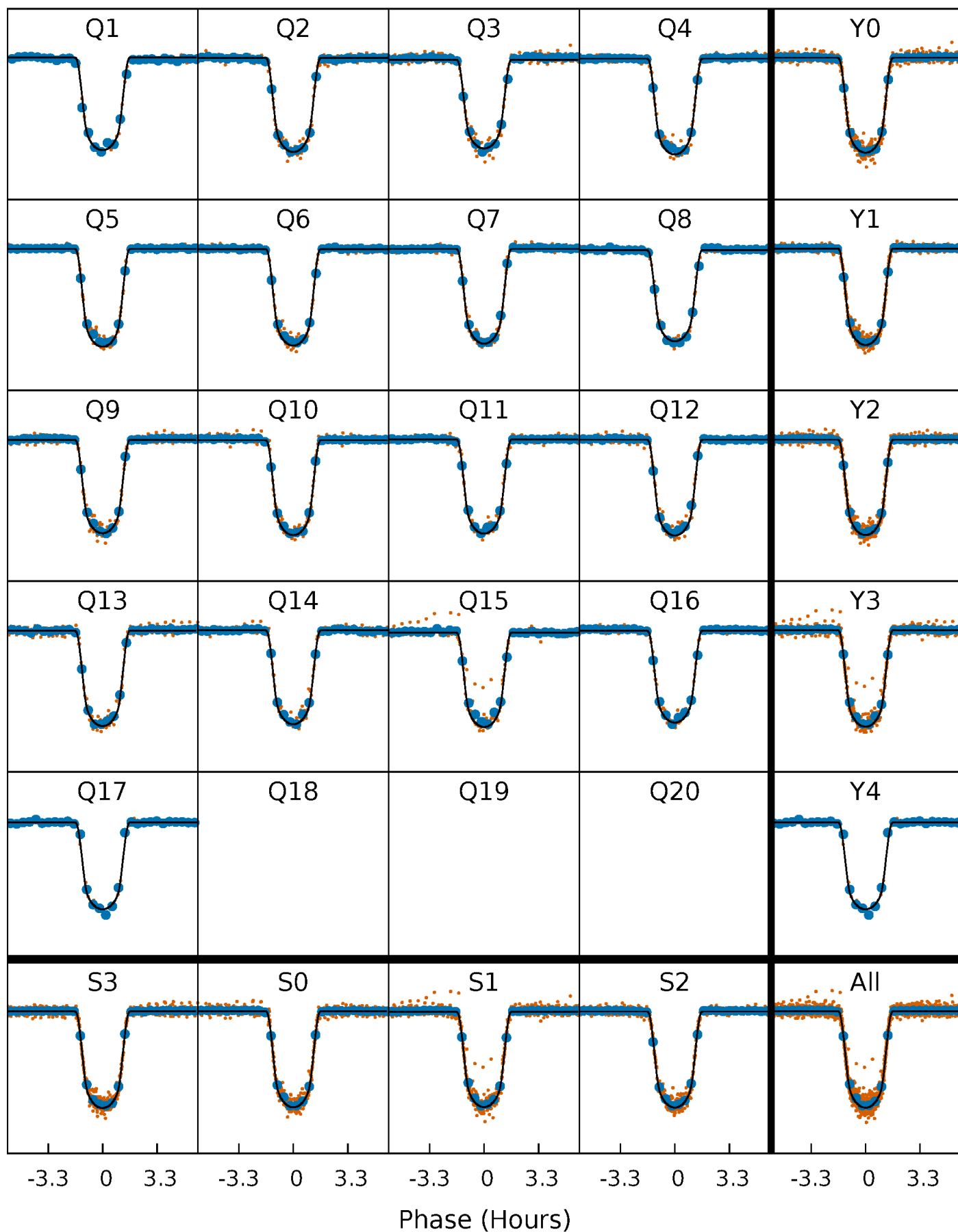
PDC Quarter-Phased Transit Curves

TCE 011554435-01 P= 9.434156 Days $T_0=140.106244$ (BKJD)



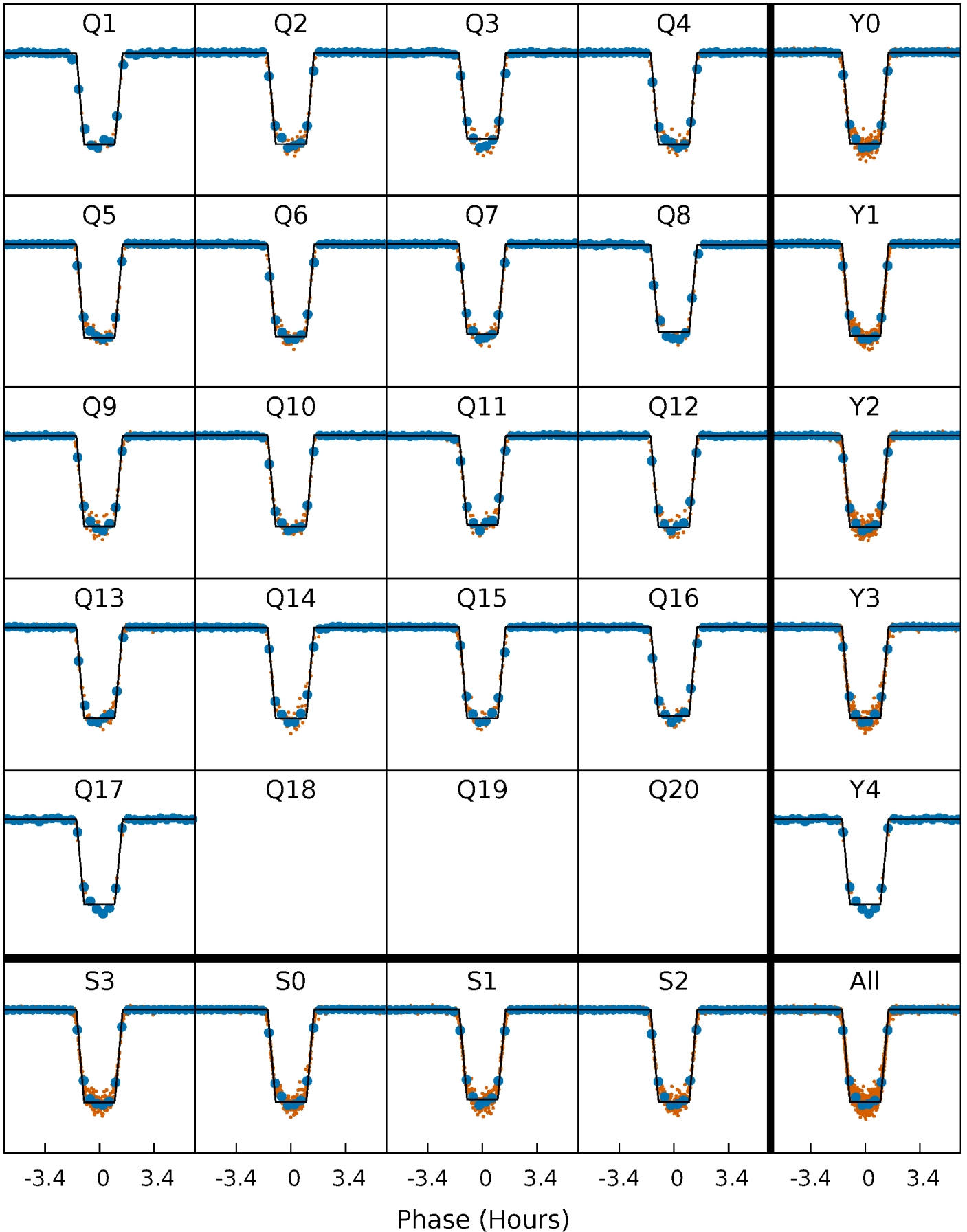
DV Quarter-Phased Transit Curves

TCE 011554435-01 P= 9.434156 Days $T_0=140.106244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

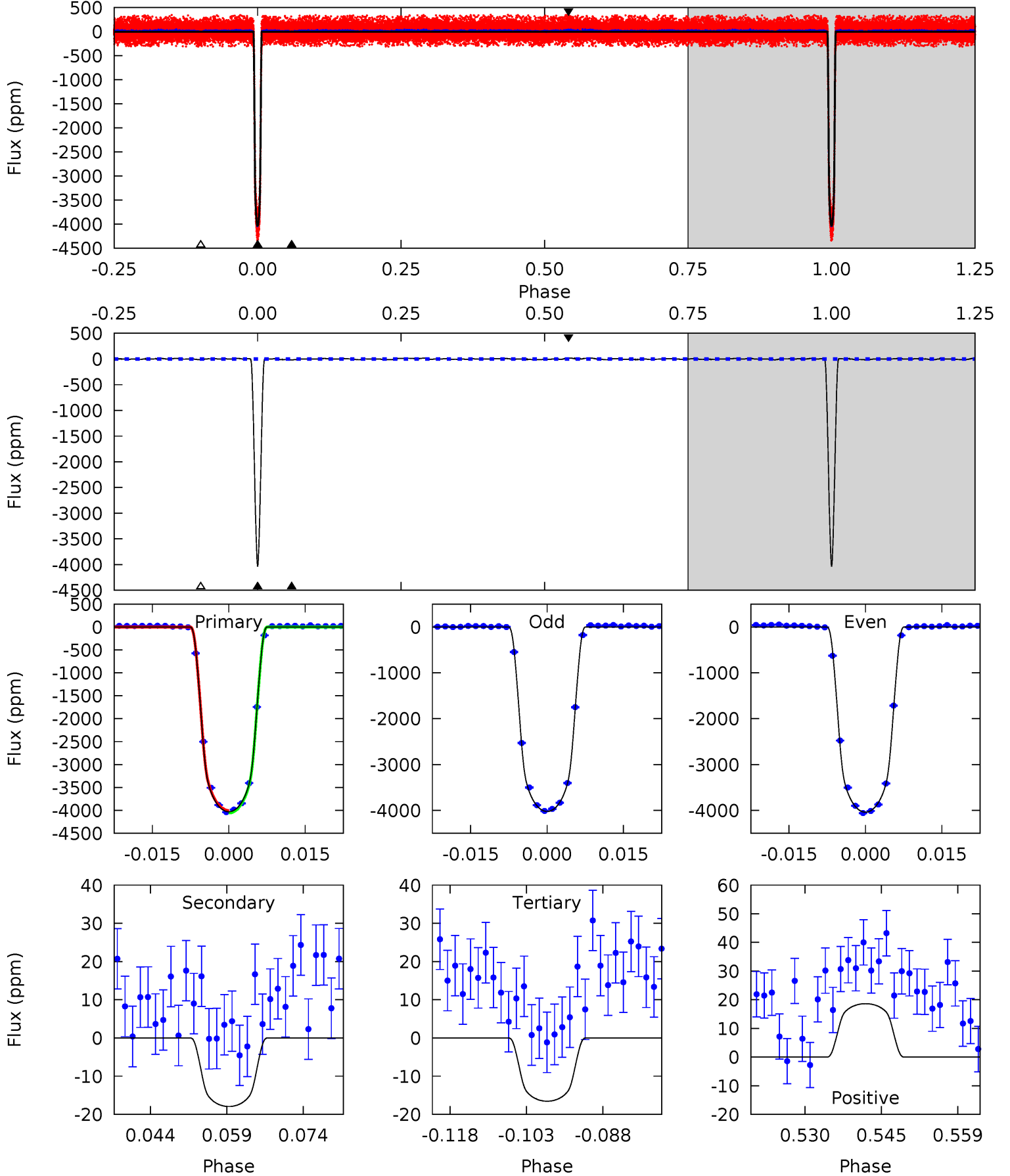
TCE 011554435-01 P= 9.434153 Days $T_0=140.106515$ (BKJD)



DV Model-Shift Uniqueness Test

011554435-01, P = 9.434156 Days, E = 130.672088 Days

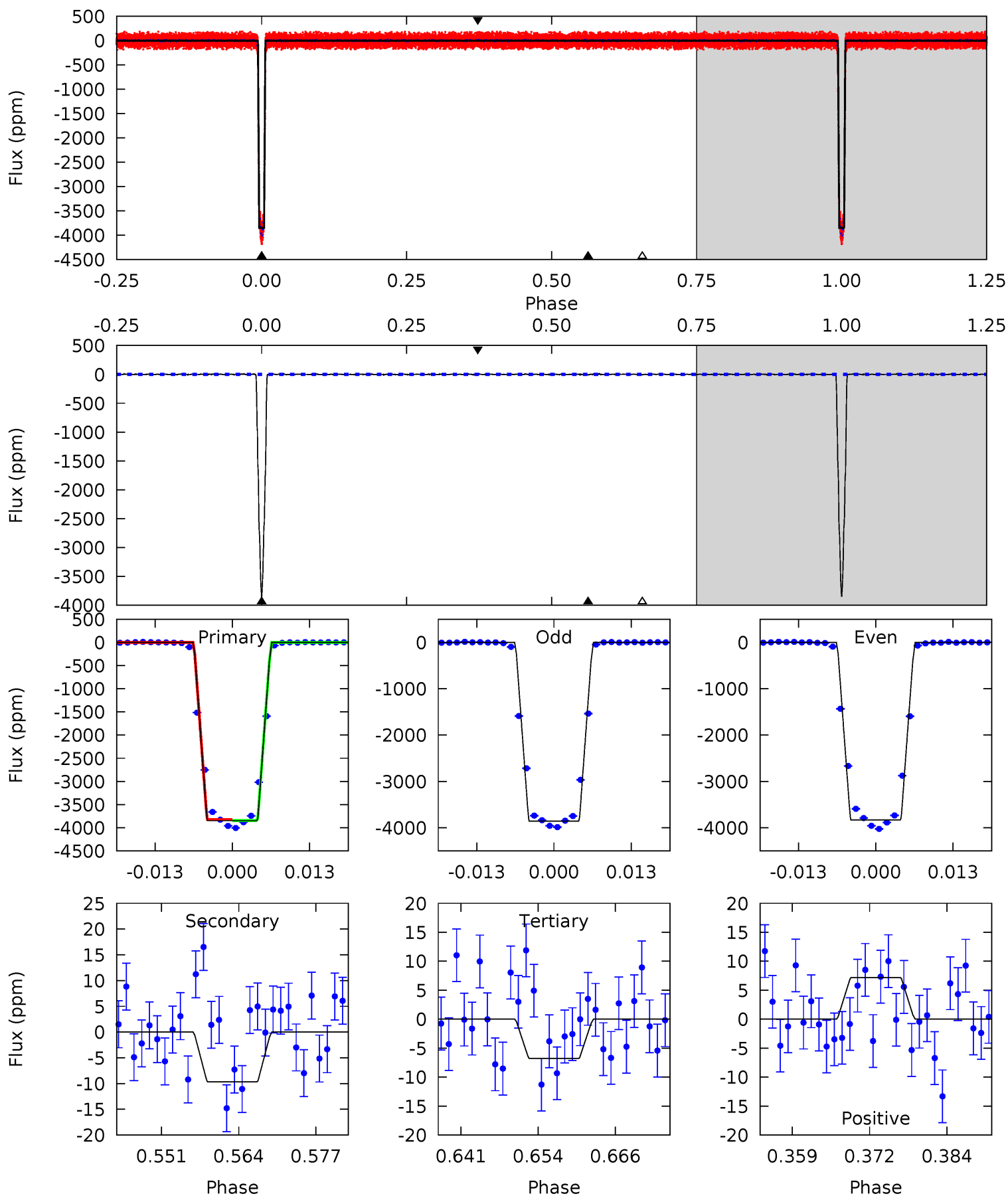
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1318	5.87	5.42	6.10	4.95	2.44	2.19	1313	1312	0.45	-0.23	2.62	1.00	0.00	0



Alt Model-Shift Uniqueness Test

011554435-01, P = 9.434153 Days, E = 130.672362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1602	4.02	2.82	2.99	4.98	2.49	1.00	1599	1599	1.20	1.03	4.95	1.01	0.00	4.40



Stellar Parameters For KIC 011554435

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5578^{+100}_{-111}	$4.518^{+0.035}_{-0.105}$	$0.040^{+0.150}_{-0.150}$	$0.886^{+0.120}_{-0.051}$	$0.943^{+0.051}_{-0.069}$	$1.911^{+0.247}_{-0.584}$
	+2%/-2%	+1%/-2%	+375%/-375%	+14%/-6%	+5%/-7%	+13%/-31%
Source	SPE63	SPE63	SPE63	DSEP		

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

Secondary Eclipse Parameters for KIC 011554435-01 / KOI 0063.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$6.05^{+0.48}_{-0.23}$	1115^{+39}_{-31}	2307^{+57}_{-63}	$1.917^{+0.377}_{-0.387}$
Alt.	-10 ± 2	$6.09^{+0.46}_{-0.27}$	1116^{+40}_{-32}	2107^{+83}_{-92}	$1.007^{+0.294}_{-0.265}$

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 $A_{obs} \gg 1.0$

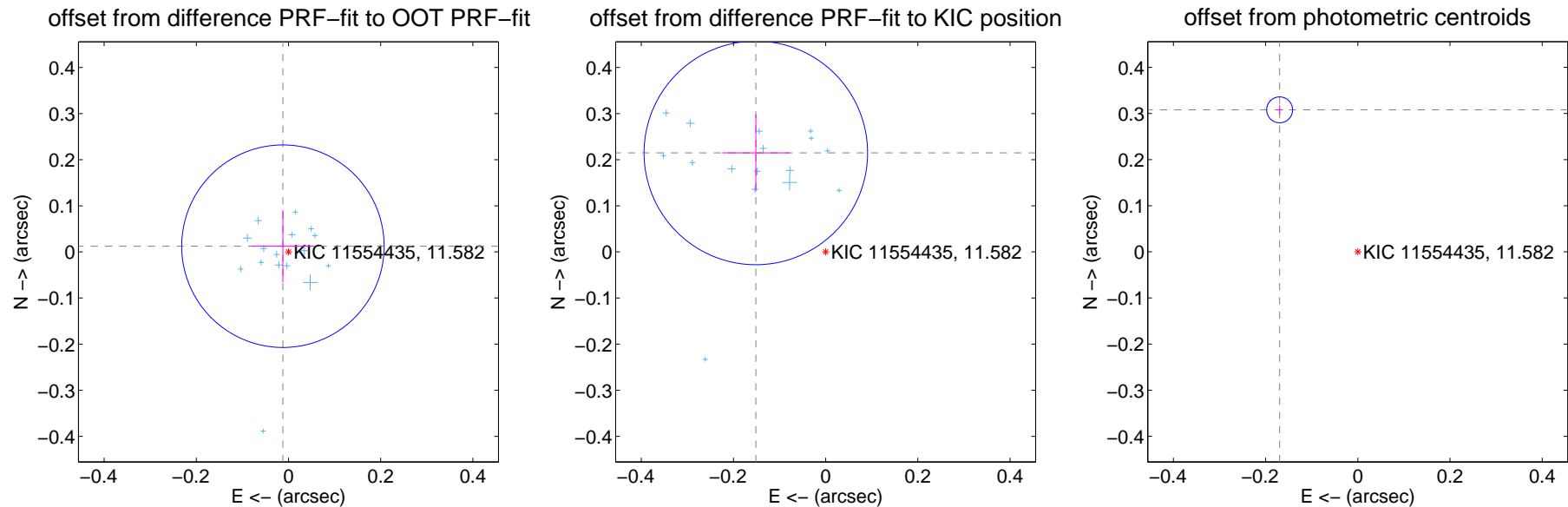
DV Centroid Data

Supplemental centroid analysis for 011554435-01. **Kepler magnitude: 11.58.** Transit SNR 595.54

There are 17 quarters with good PRF difference image offsets

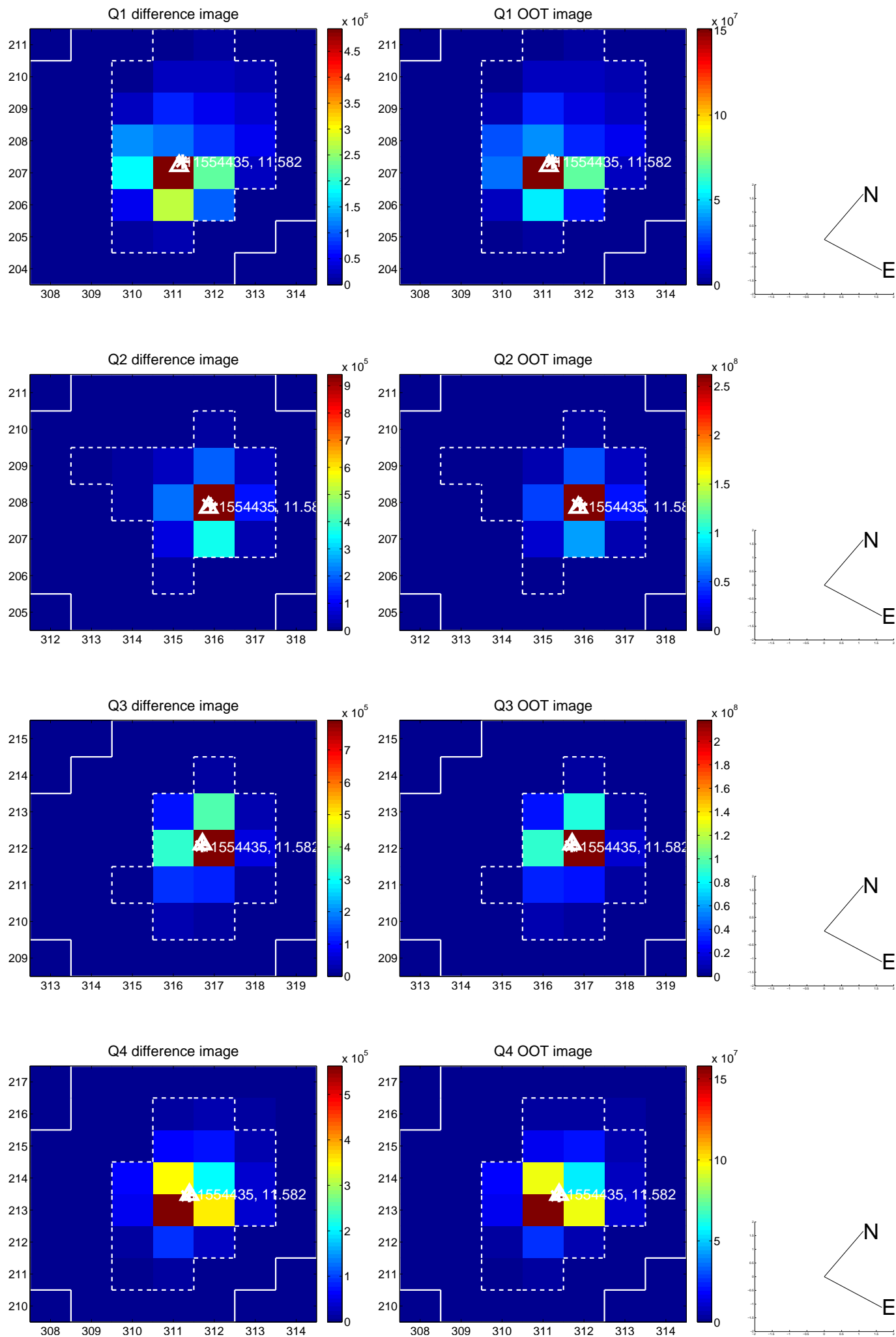
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.073	0.24	0.012 ± 0.068	0.012 ± 0.078
PRF-fit source offset from KIC position	0.263 ± 0.081	3.25	0.152 ± 0.072	0.215 ± 0.083
photometric centroid source offset	0.35 ± 0.01	37.54	0.17 ± 0.01	0.31 ± 0.01

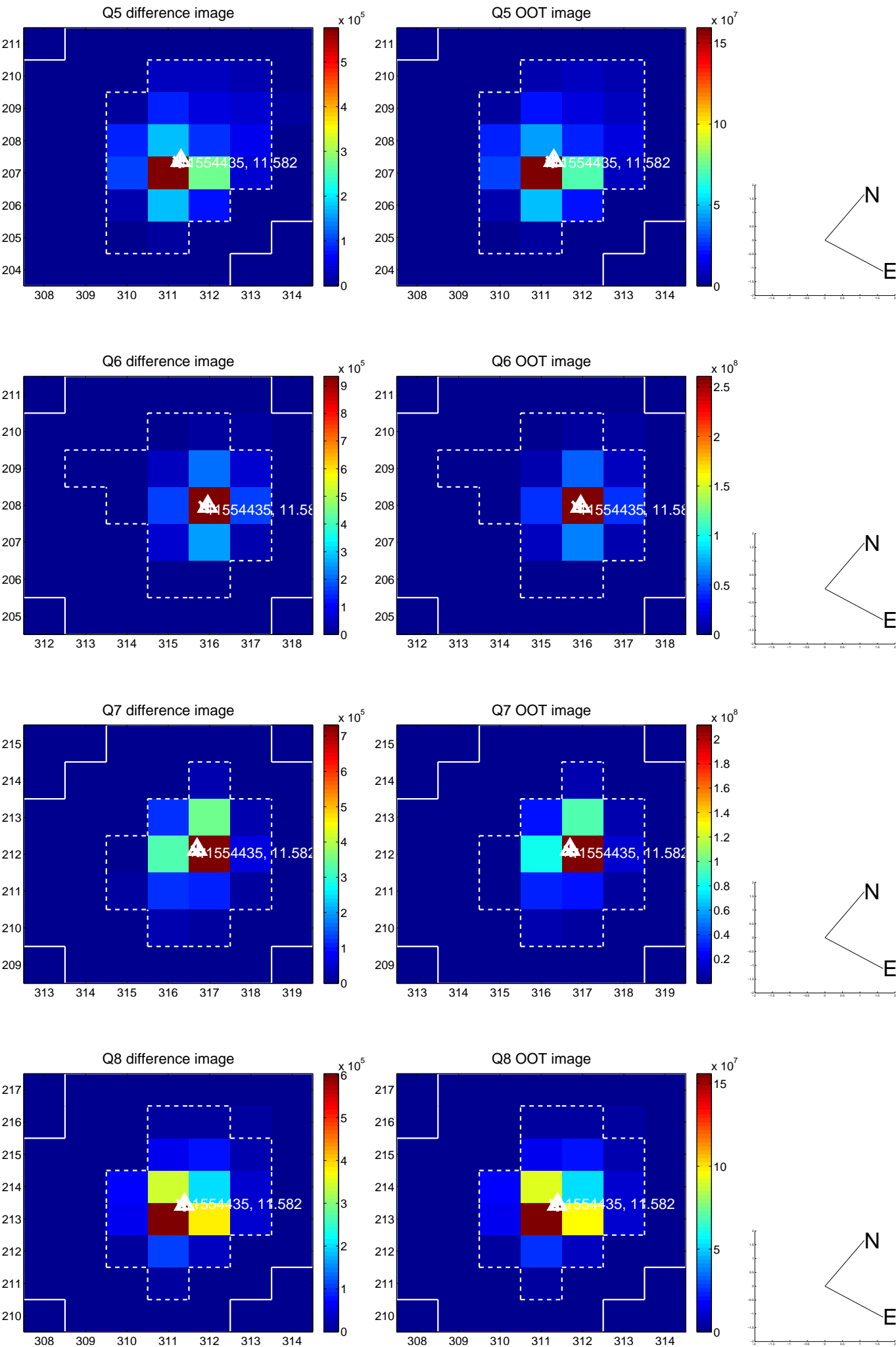


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

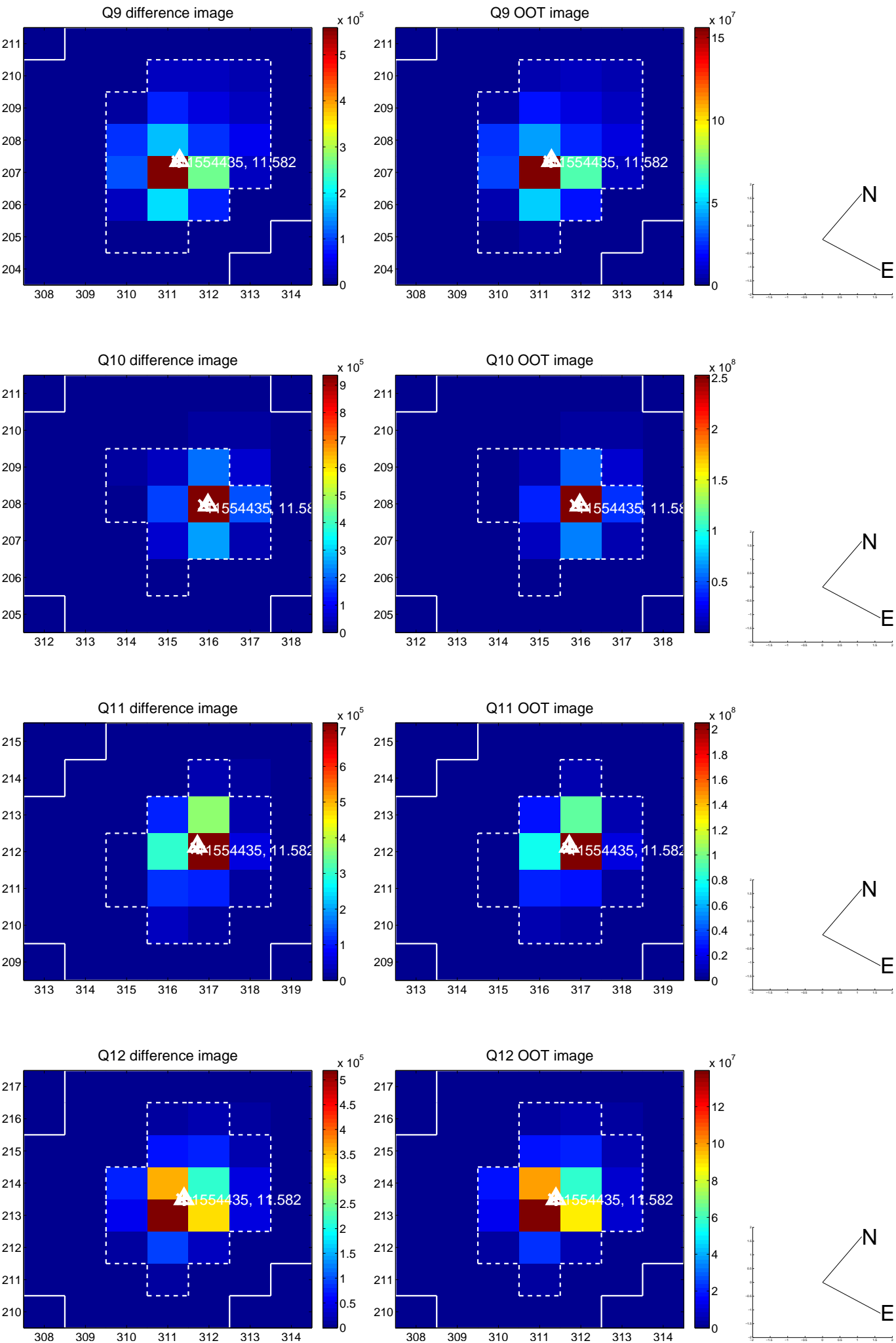
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



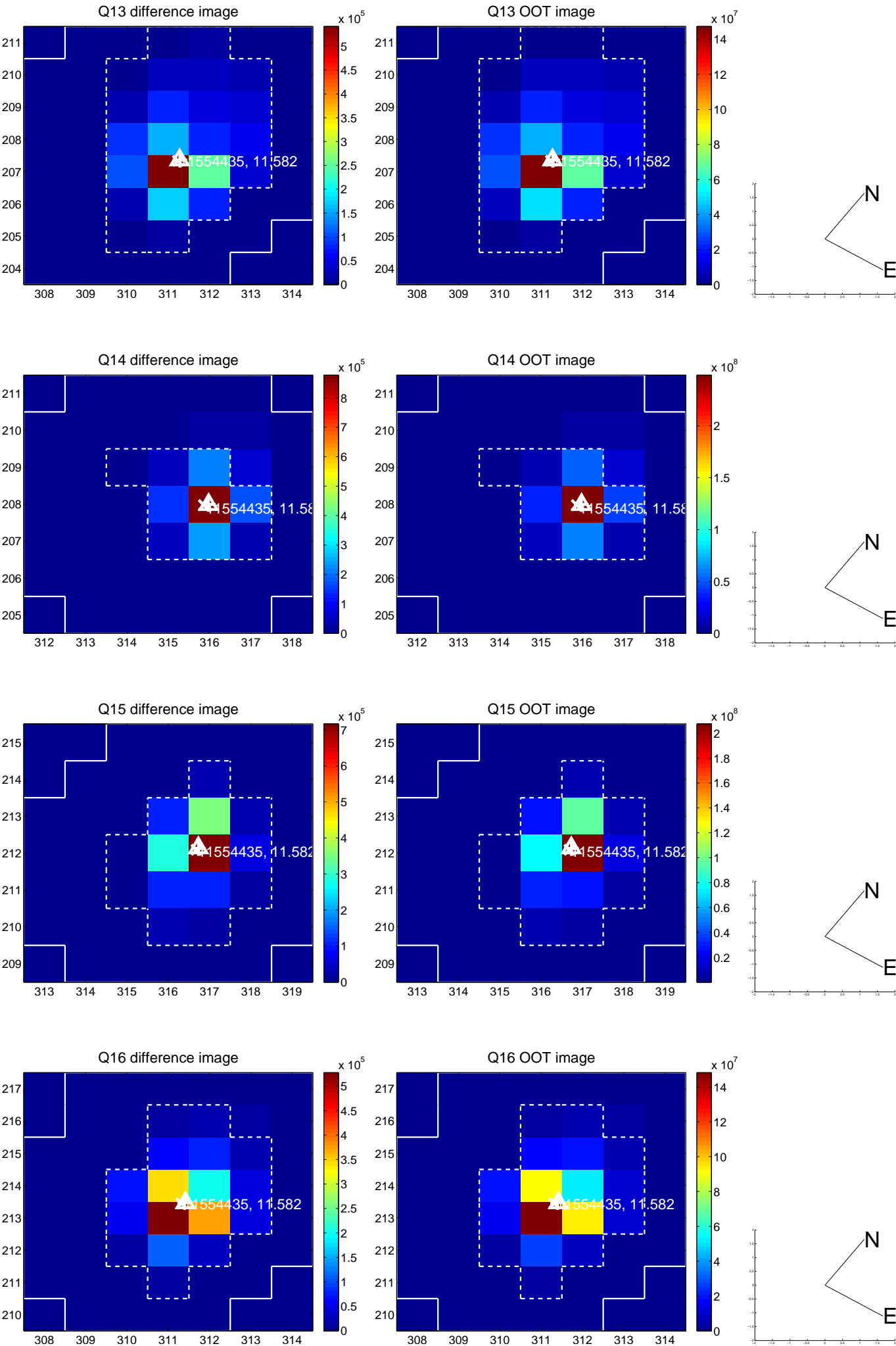
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



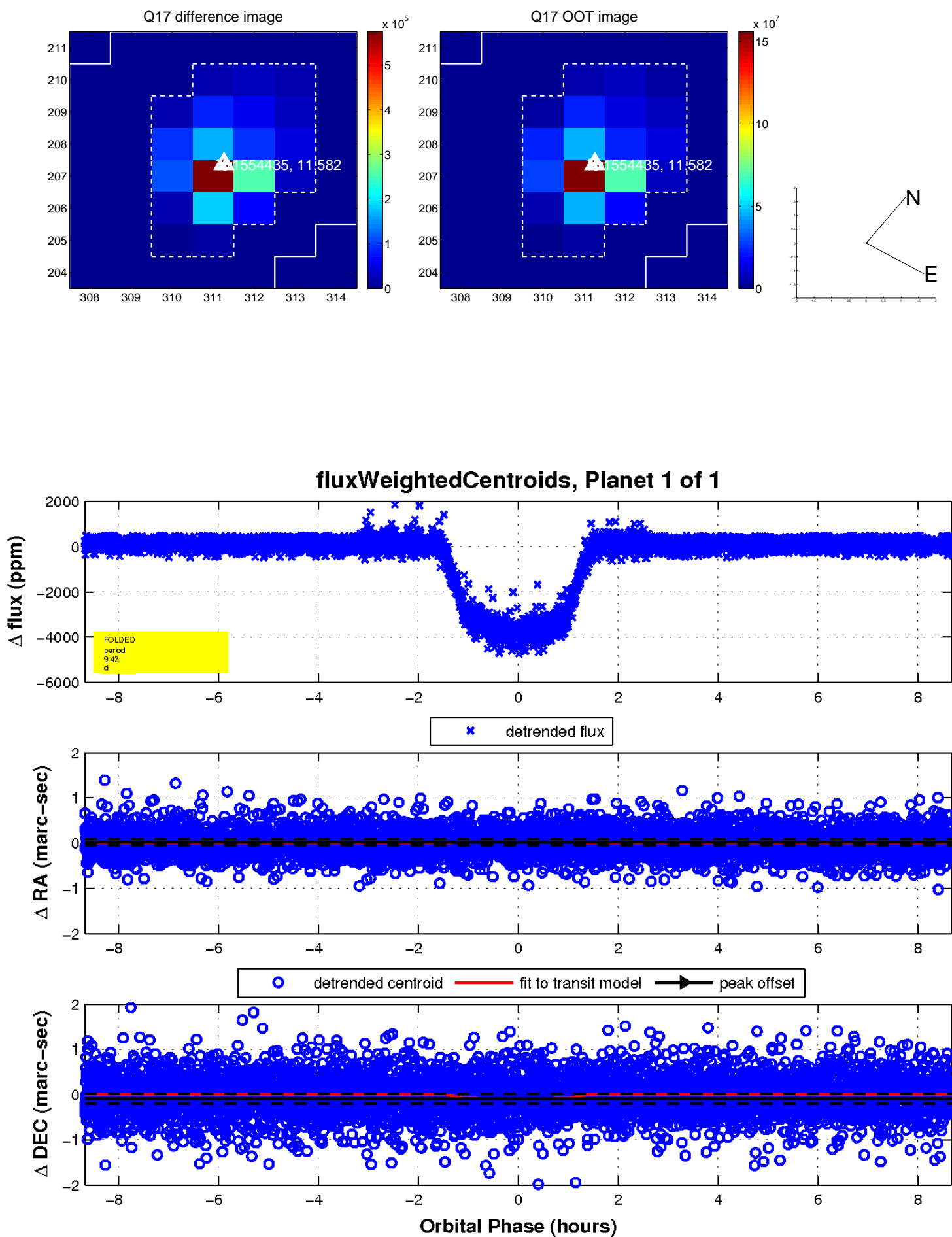
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

