

KIC 008758161

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})
008758161-01	OBS	7087.01	0.998235	131.804497	88455.6	3.899	12755.8	7733.5	1.75	6980	71.33	14460.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008758161-01	OBS	FP	0.00	0	1	0	0	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.

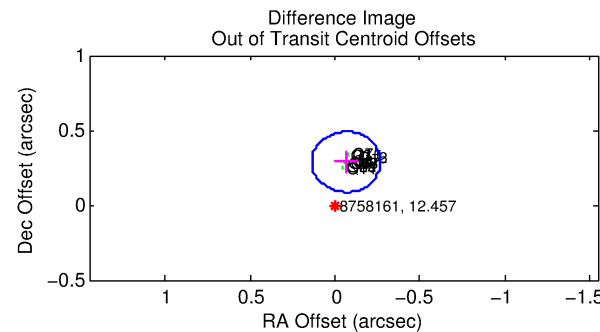
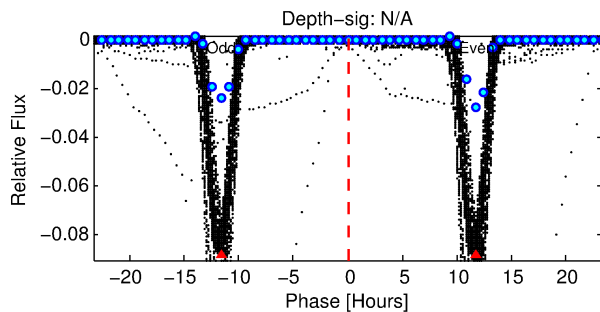
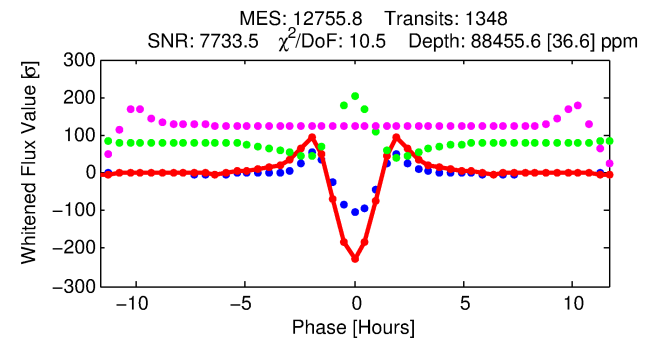
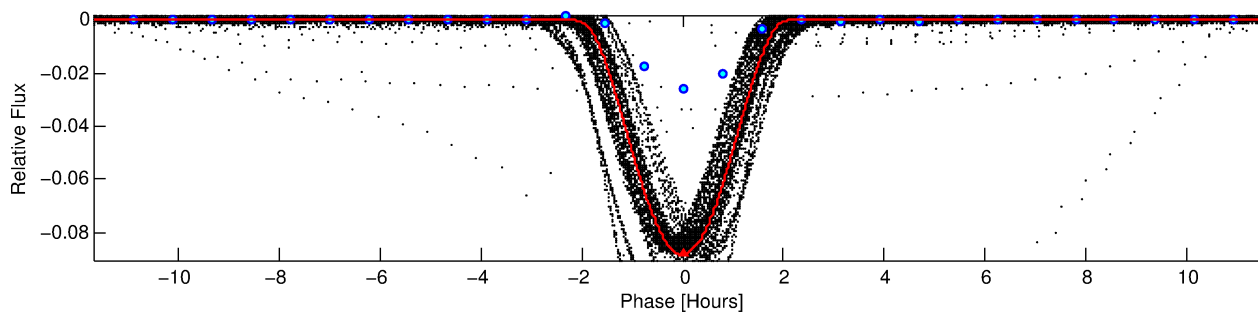
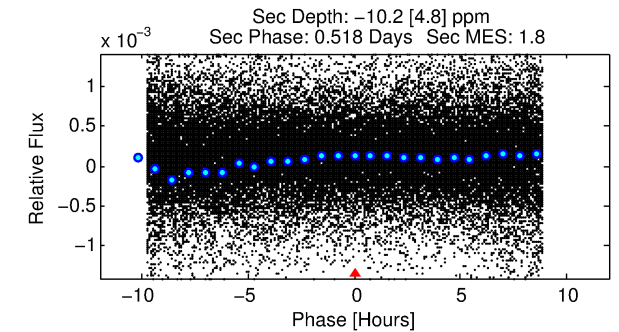
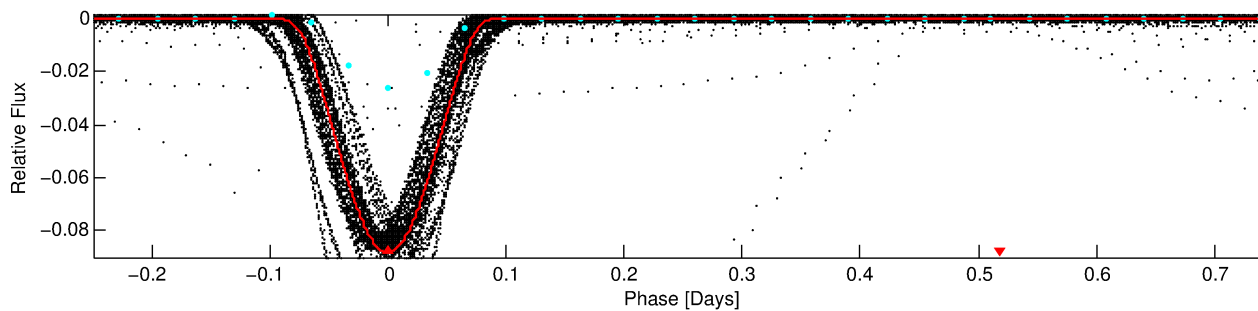
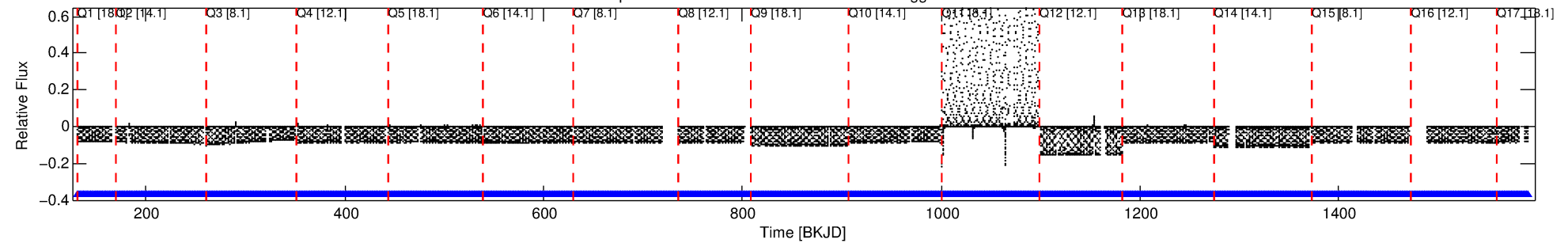
Ephemeris Match Information For 008758161-01

No Significant Match Found

DV One-Page Summary

KIC: 8758161 Candidate: 1 of 1 Period: 0.998 d
KOI: K07087.01 Corr: 0.960

Kp: 12.46 R*: 1.75 Rs Teff: 6980.0 K Logg: 4.06 Fe/H: -0.380



DV Fit Results:

Period = 0.99823 [0.00000] d
Epoch = 131.8045 [0.0000] BKJD
Rp/R* = 0.3725 [0.0025]
a/R* = 2.34 [0.00]
b = 0.87 [0.00]
Seff = 14460.74 [6411.71]
Teff = 2796 [310] K
Rp = 71.33 [20.86] Re
a = 0.0213 [0.0057] AU
Ag = N/A
Teffp = N/A

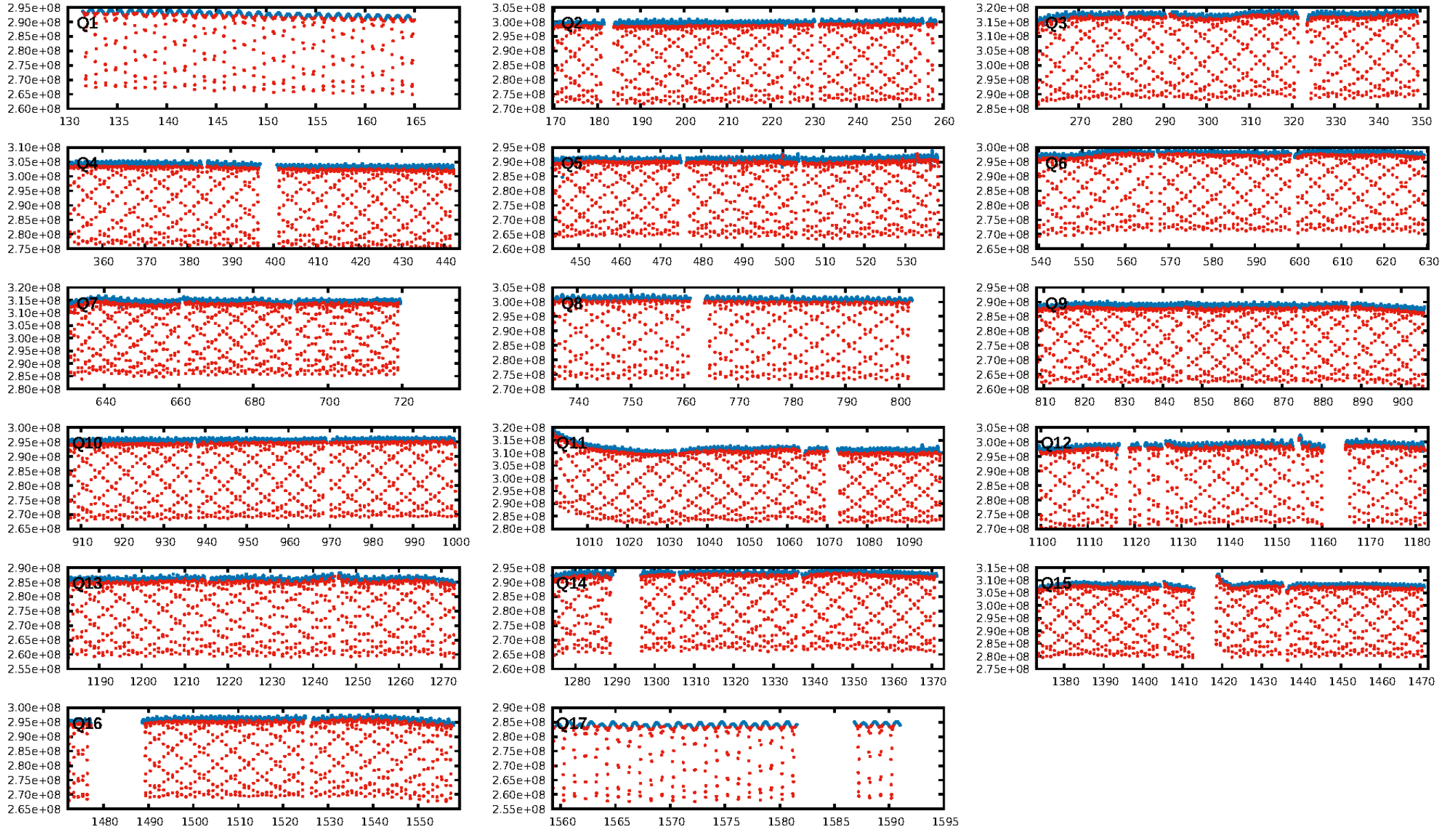
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1287/1287]
GhostDiagnostic-chr: 2.823
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.295 arcsec [4.38σ]
KicOffset-rm: 0.124 arcsec [1.85σ]
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]

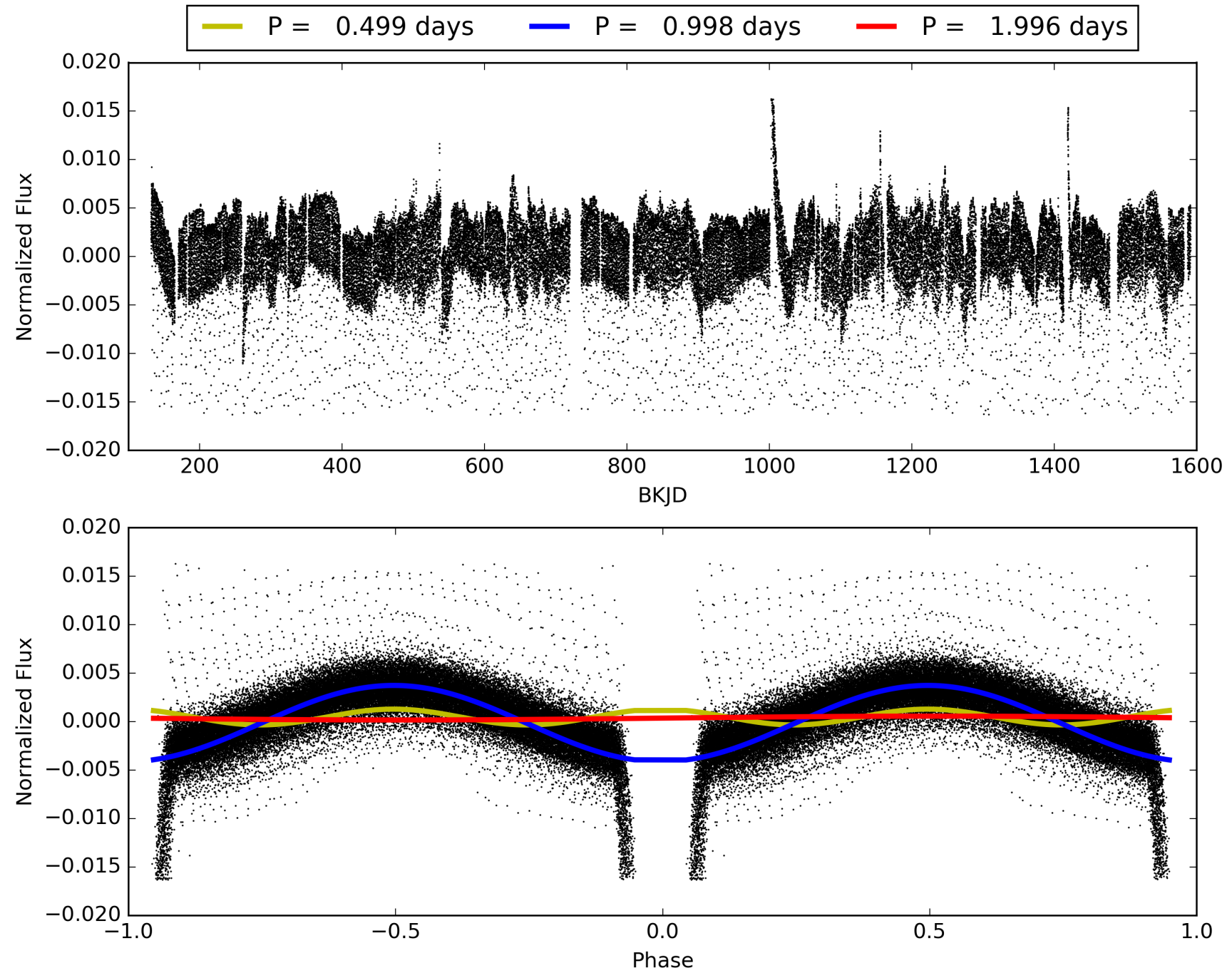
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:40:07 Z

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

TCE 008758161-01, PDC Light Curves

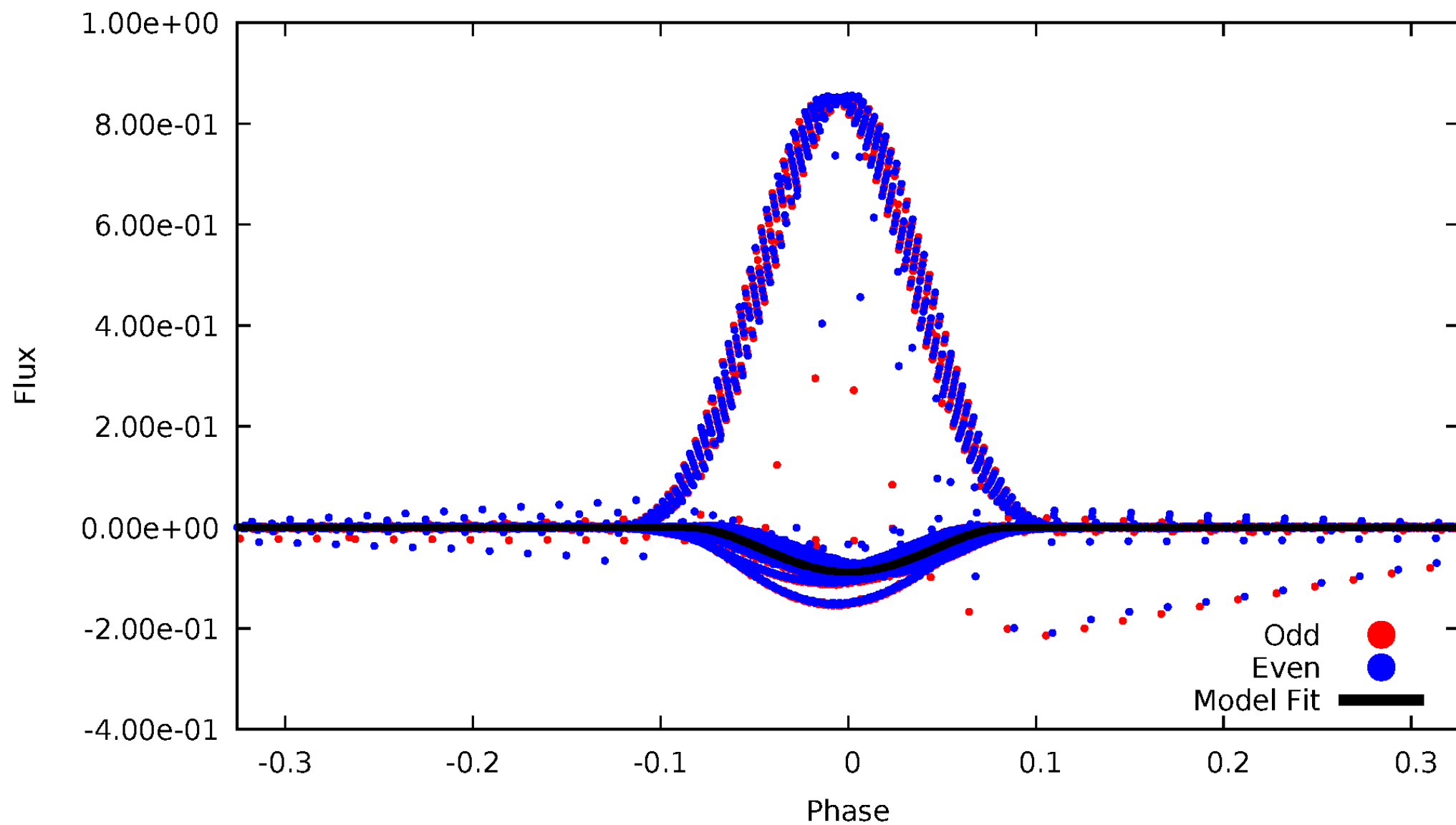


TCE 008758161-01



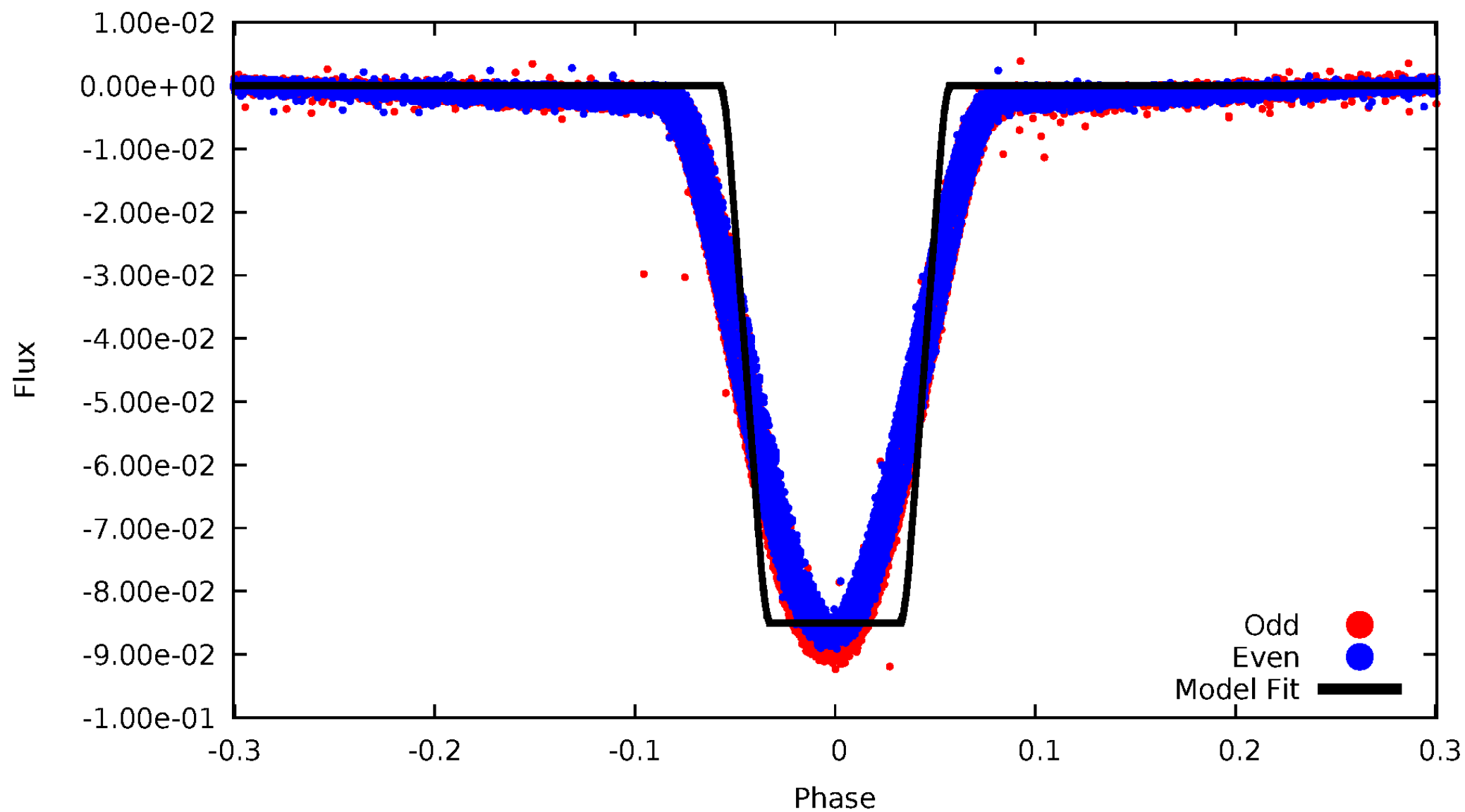
DV Odd/Even

TCE 008758161-01



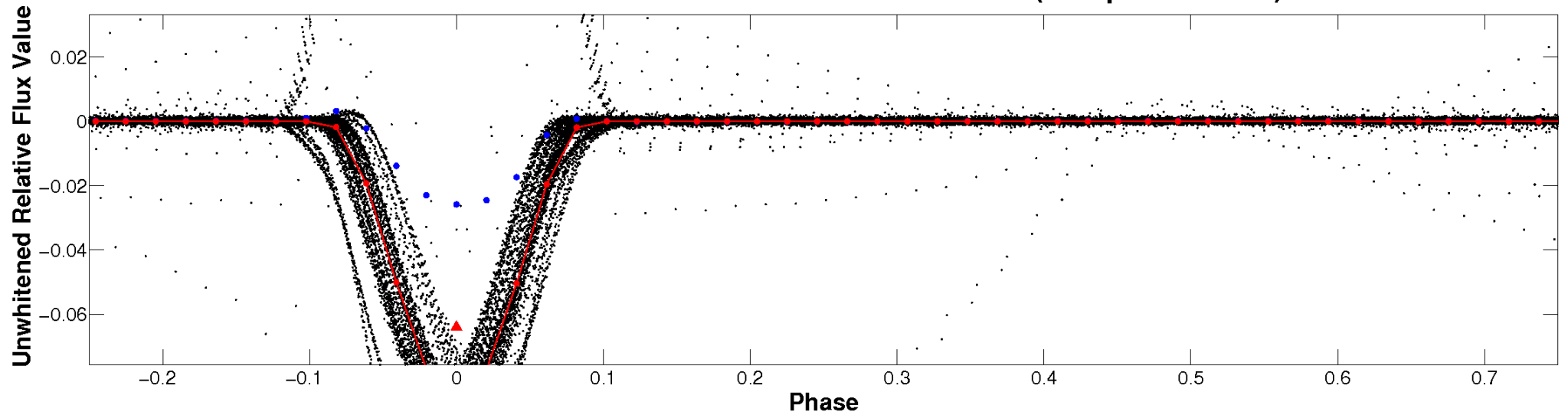
ALT Odd/Even

TCE 008758161-01

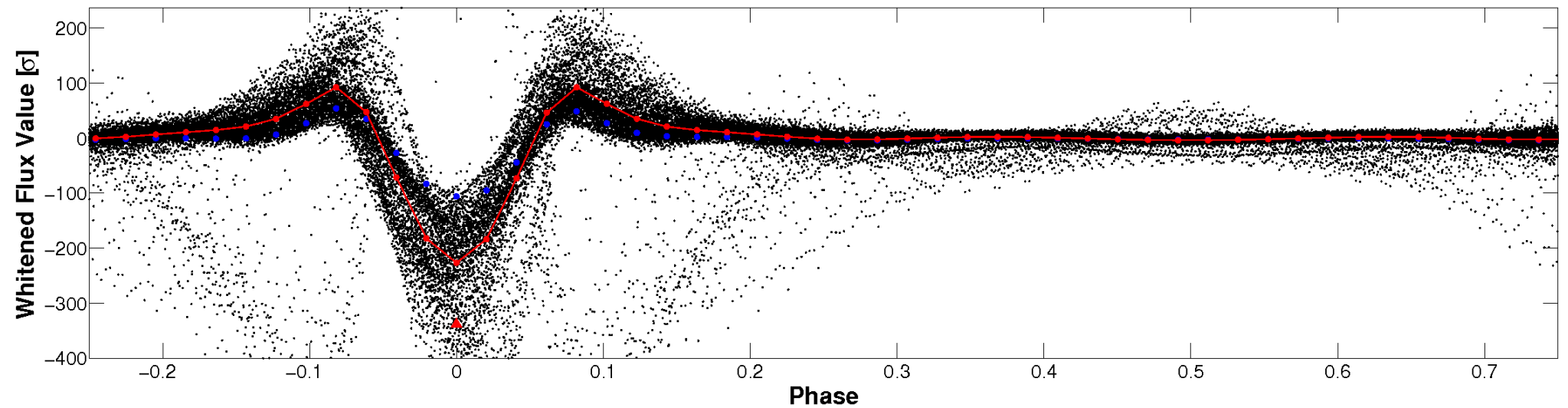


Non-Whitened Vs. Whitened Light Curve

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

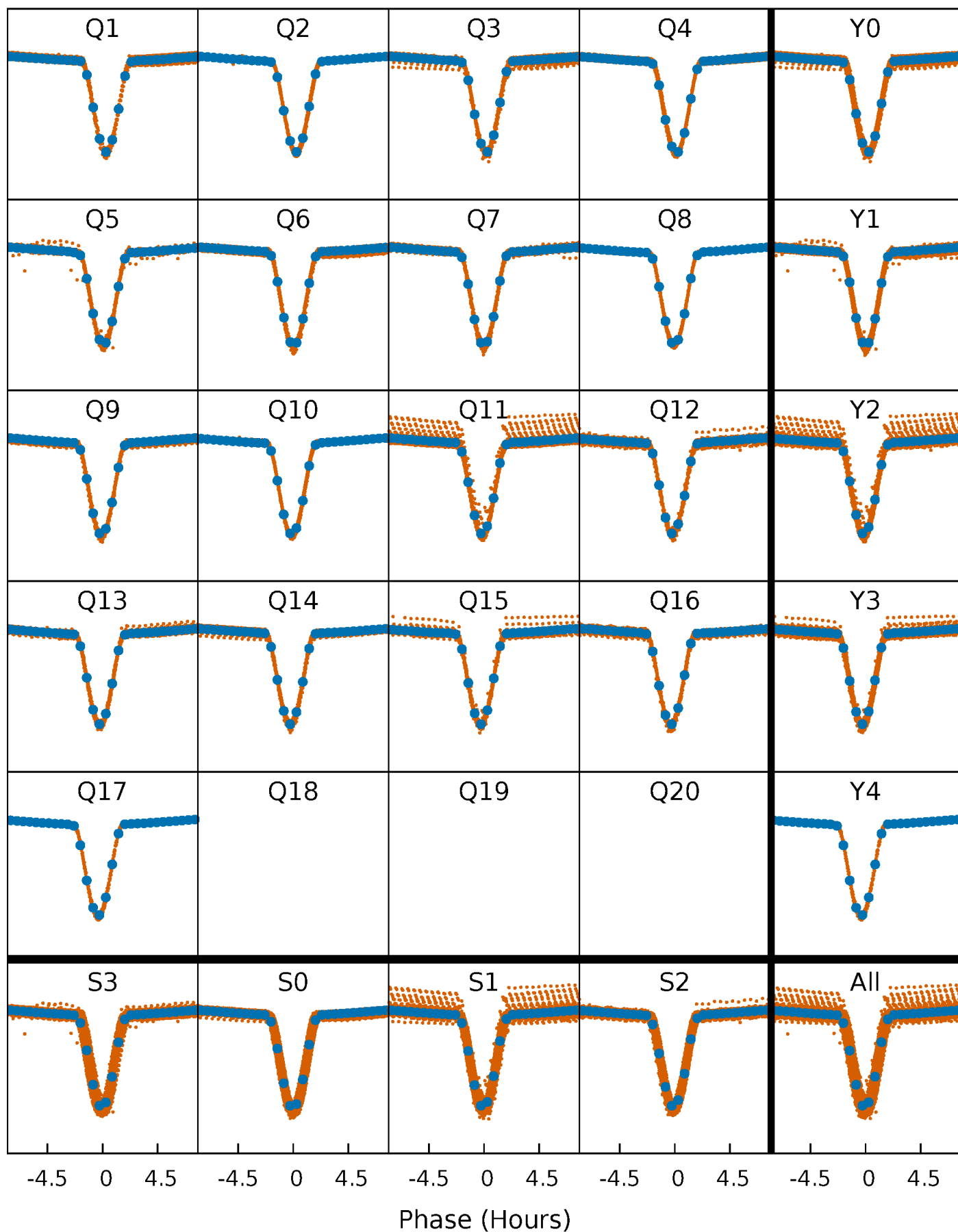


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



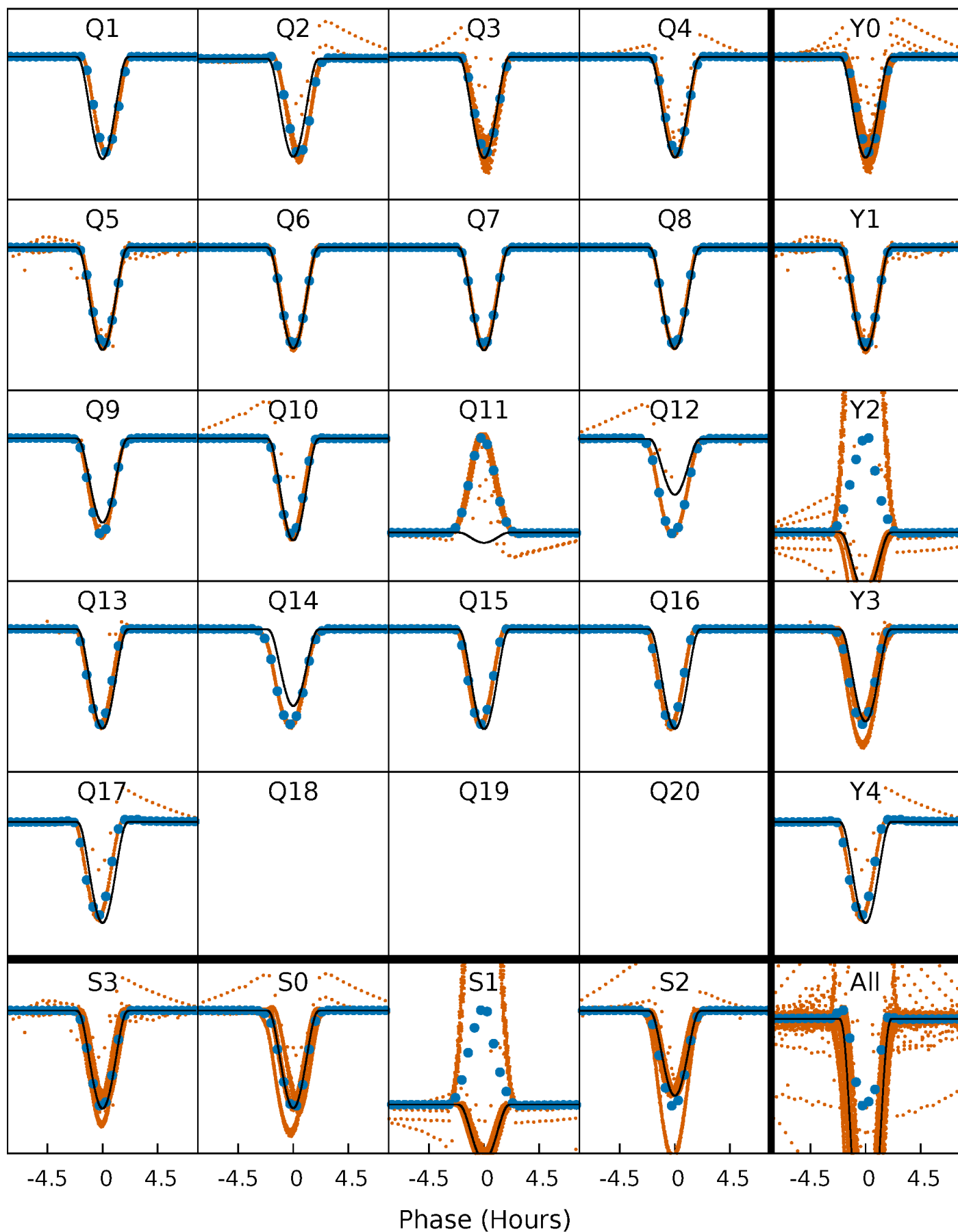
PDC Quarter-Phased Transit Curves

TCE 008758161-01 P= 0.998235 Days $T_0=131.804497$ (BKJD)



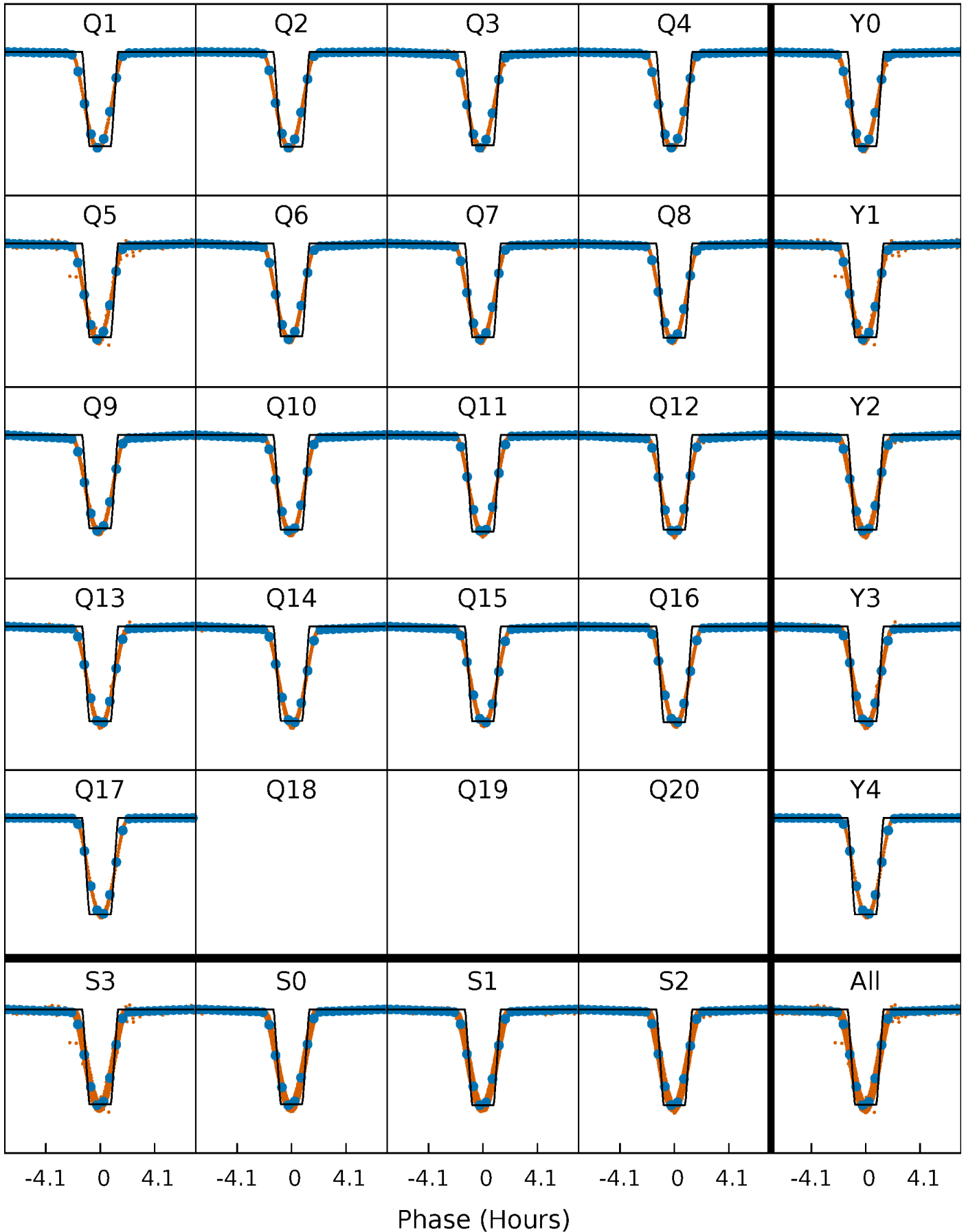
DV Quarter-Phased Transit Curves

TCE 008758161-01 P= 0.998235 Days $T_0=131.804497$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

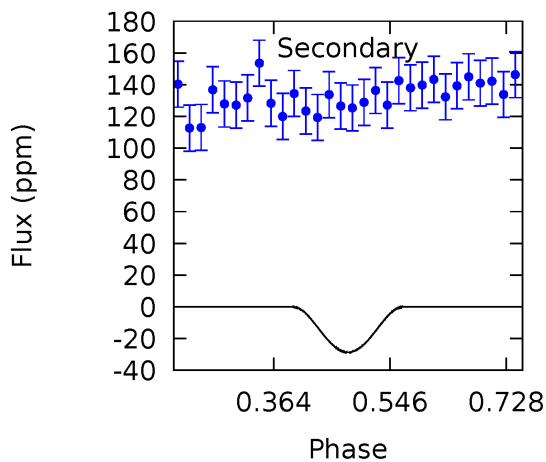
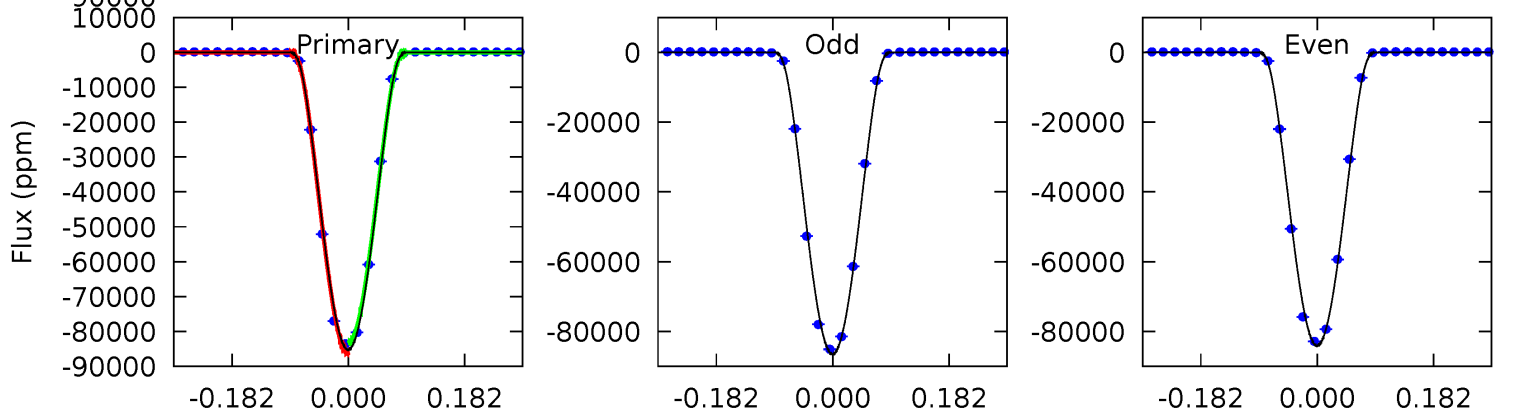
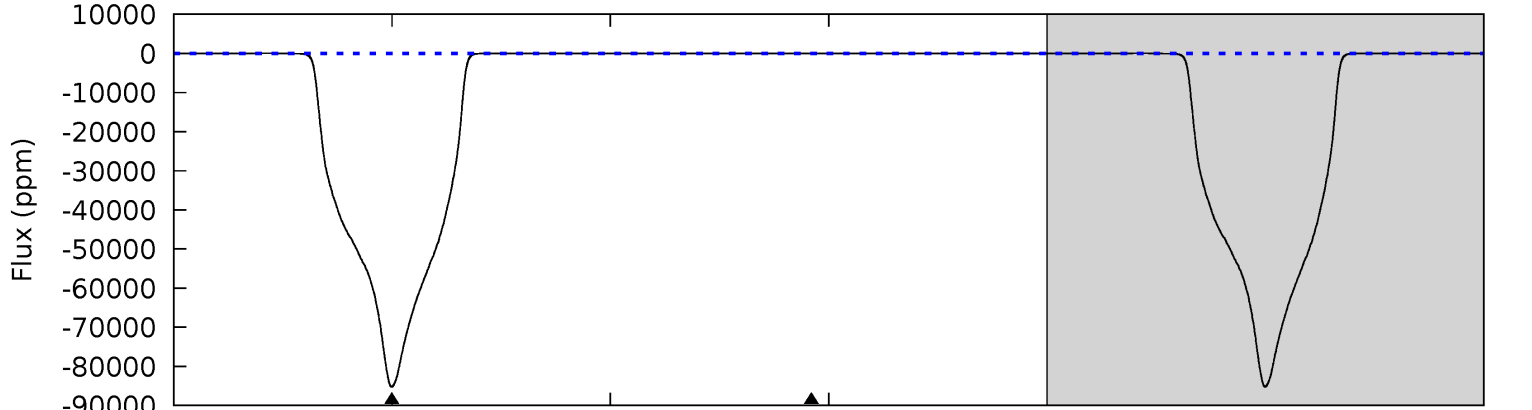
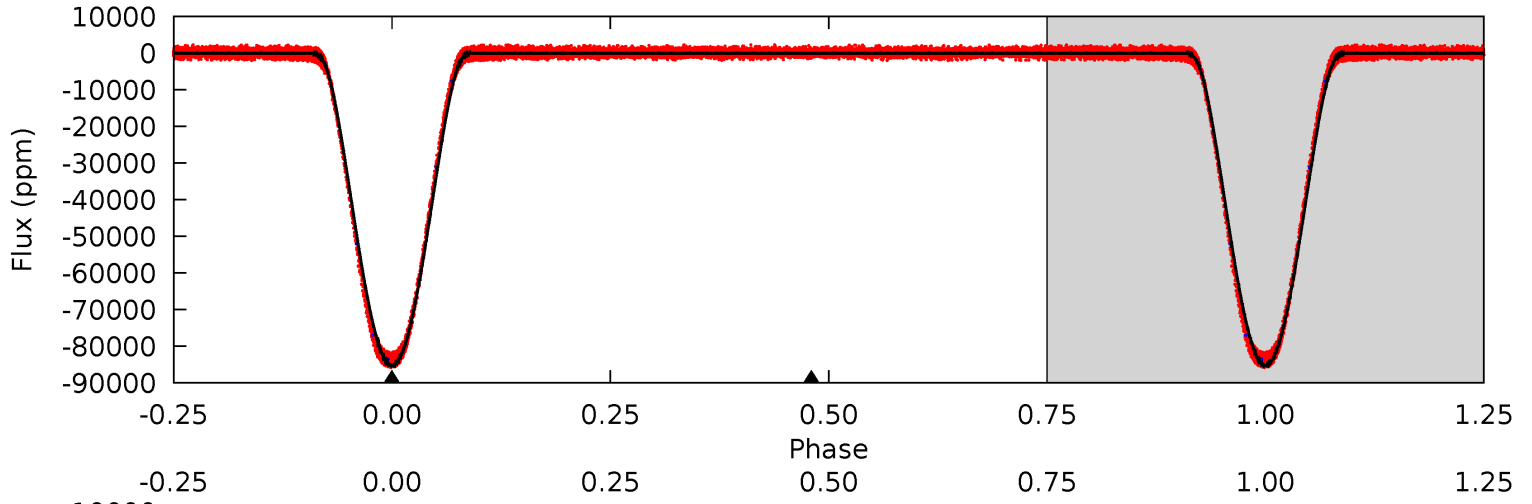
TCE 008758161-01 P= 0.998208 Days $T_0=131.823627$ (BKJD)



DV Model-Shift Uniqueness Test

008758161-01, P = 0.998235 Days, E = 130.806262 Days

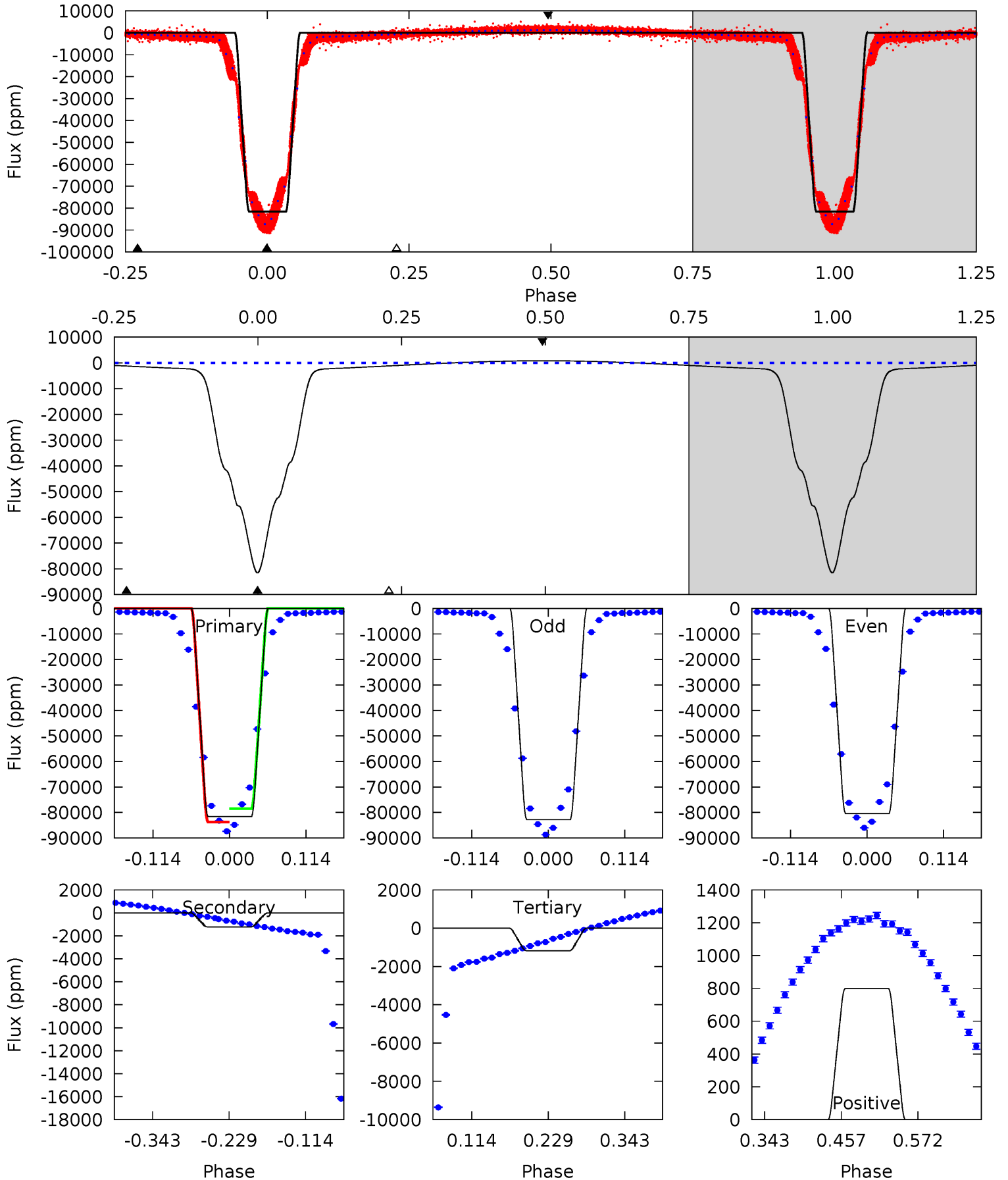
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9159	3.08	0	0	4.44	1.33	1.46	9159	9159	3.08	3.08	131.0	0.30	0.00	0



Alt Model-Shift Uniqueness Test

008758161-01, P = 0.998208 Days, E = 130.825419 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5325	79.9	76.7	52.1	4.54	1.58	59.8	5248	5273	3.16	27.8	77.7	1.00	0.01	166.5



Stellar Parameters For KIC 008758161

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6980^{+168}_{-264}	$4.060^{+0.240}_{-0.160}$	$-0.380^{+0.300}_{-0.300}$	$1.755^{+0.513}_{-0.513}$	$1.292^{+0.190}_{-0.211}$	$0.337^{+0.489}_{-0.150}$
	+2%/-4%	+6%/-4%	+79%/-79%	+29%/-29%	+15%/-16%	+145%/-44%
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 008758161-01 / KOI 7087.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 9	$69.92^{+11.19}_{-10.75}$	3856^{+288}_{-344}	-3590^{+202}_{-173}	$0.001^{+0.001}_{-0.001}$
Alt.	-1223 ± 15	$55.49^{+8.53}_{-9.35}$	3858^{+321}_{-321}	-3372^{+270}_{-232}	$0.100^{+0.039}_{-0.024}$

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 $A_{obs} \gg 1.0$

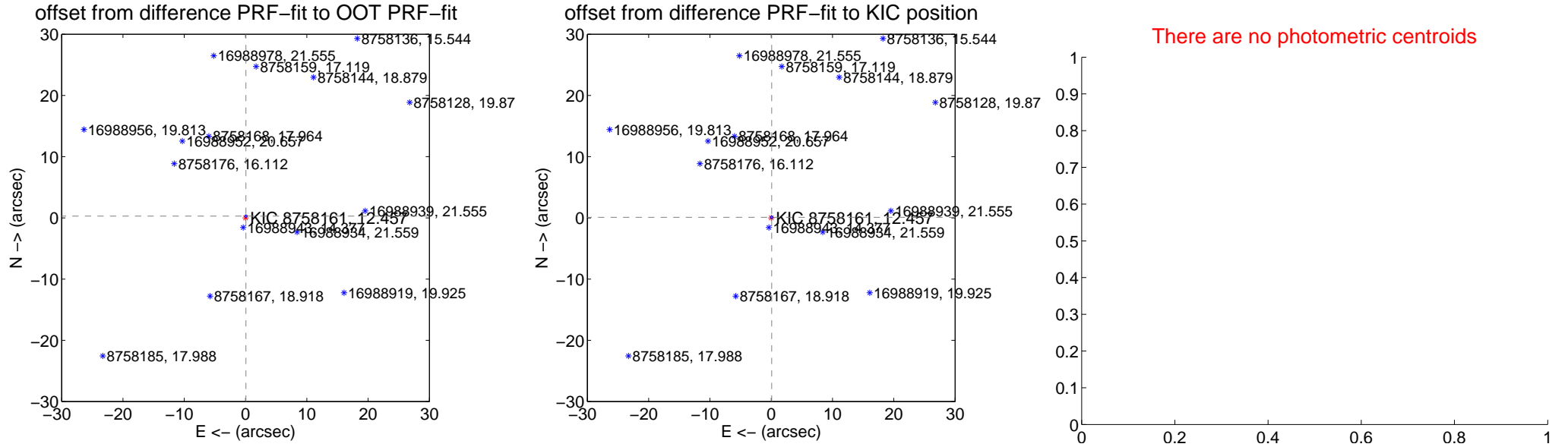
DV Centroid Data

Supplemental centroid analysis for 008758161-01. Kepler magnitude: 12.46. Transit SNR 7733.49

There are 17 quarters with good PRF difference image offsets

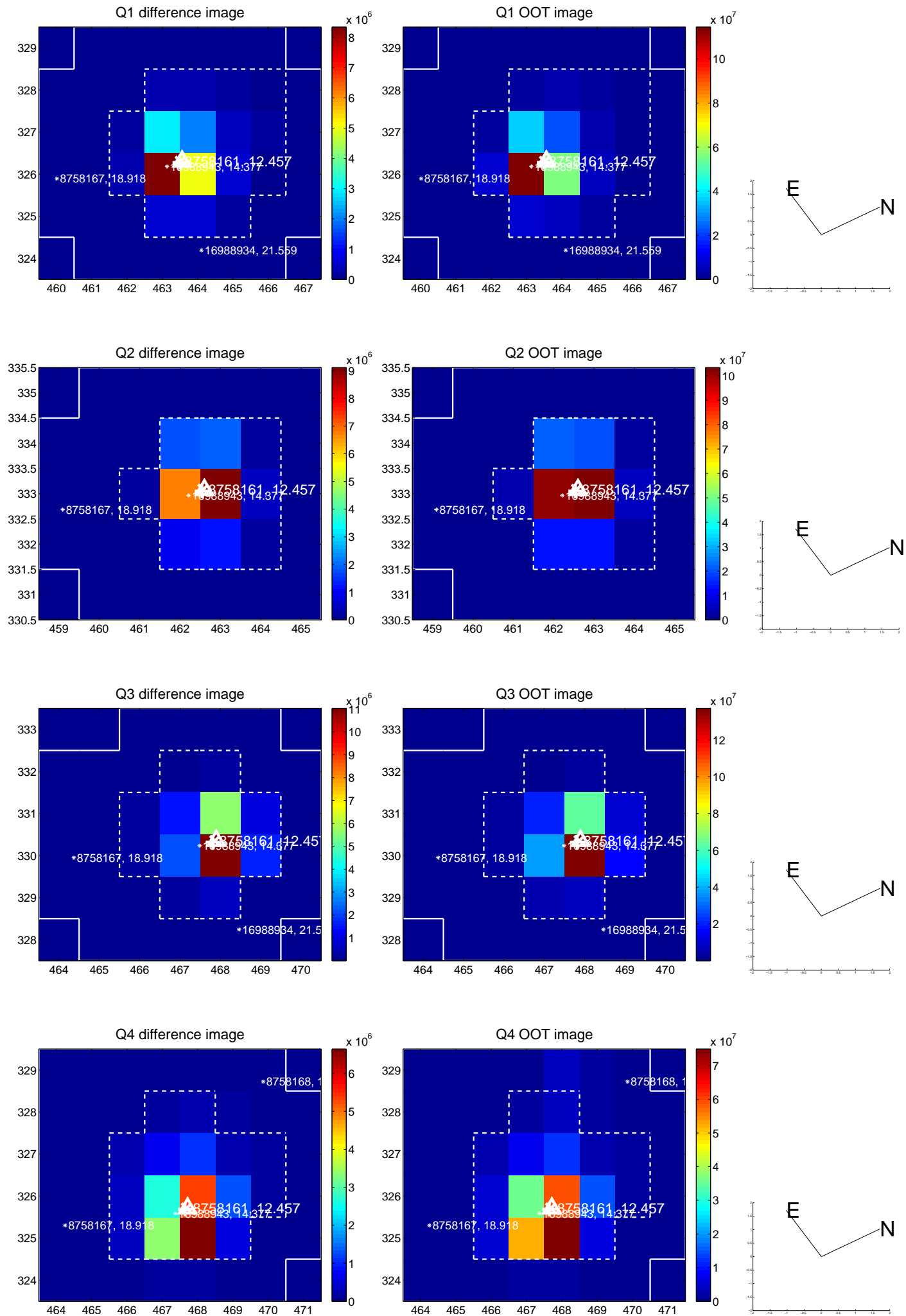
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.295 \pm 0.067	4.38	-0.065 \pm 0.067	0.288 \pm 0.067
PRF-fit source offset from KIC position	0.124 \pm 0.067	1.85	-0.080 \pm 0.067	0.095 \pm 0.067
photometric centroid source offset	—	—	—	—

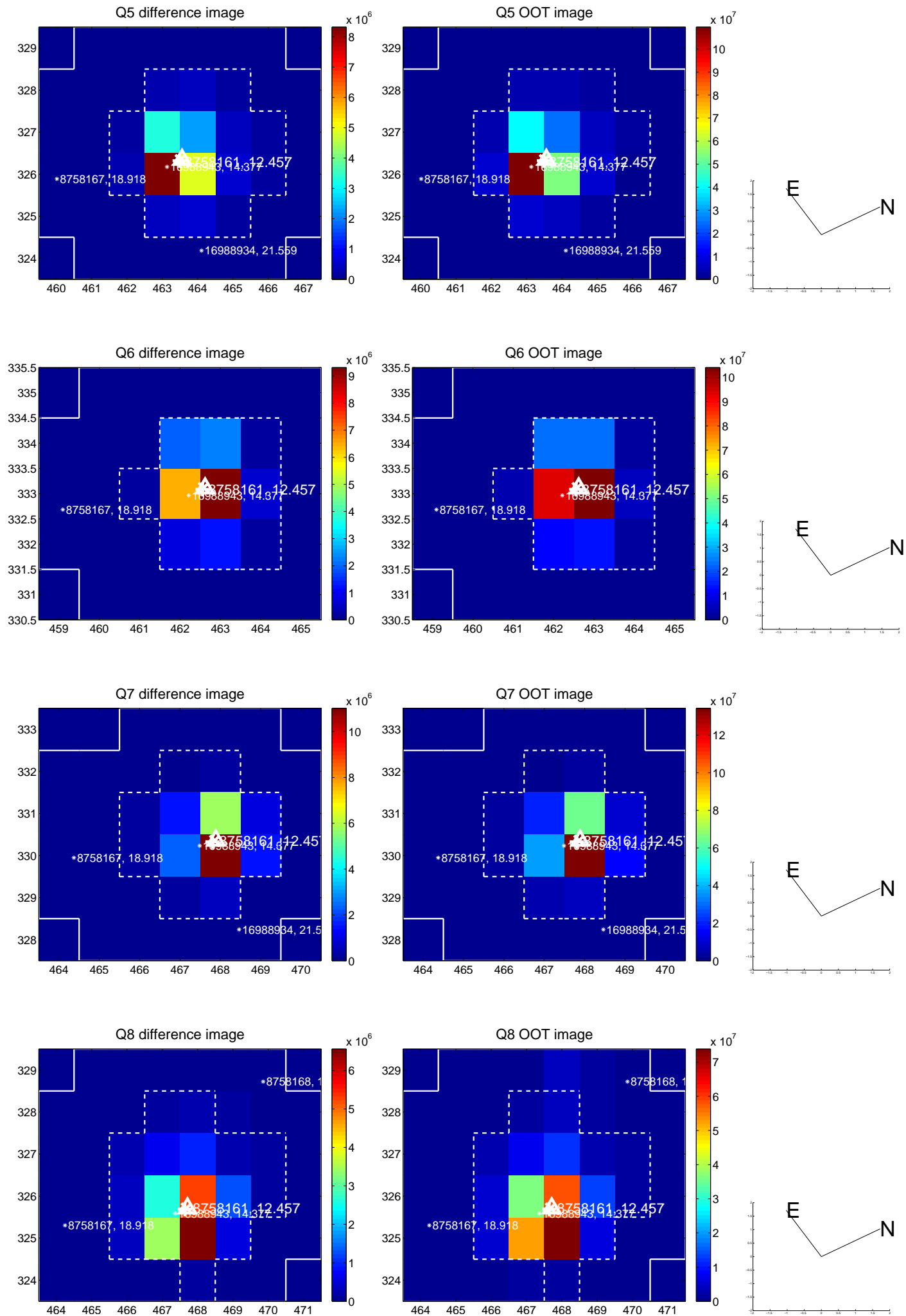


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

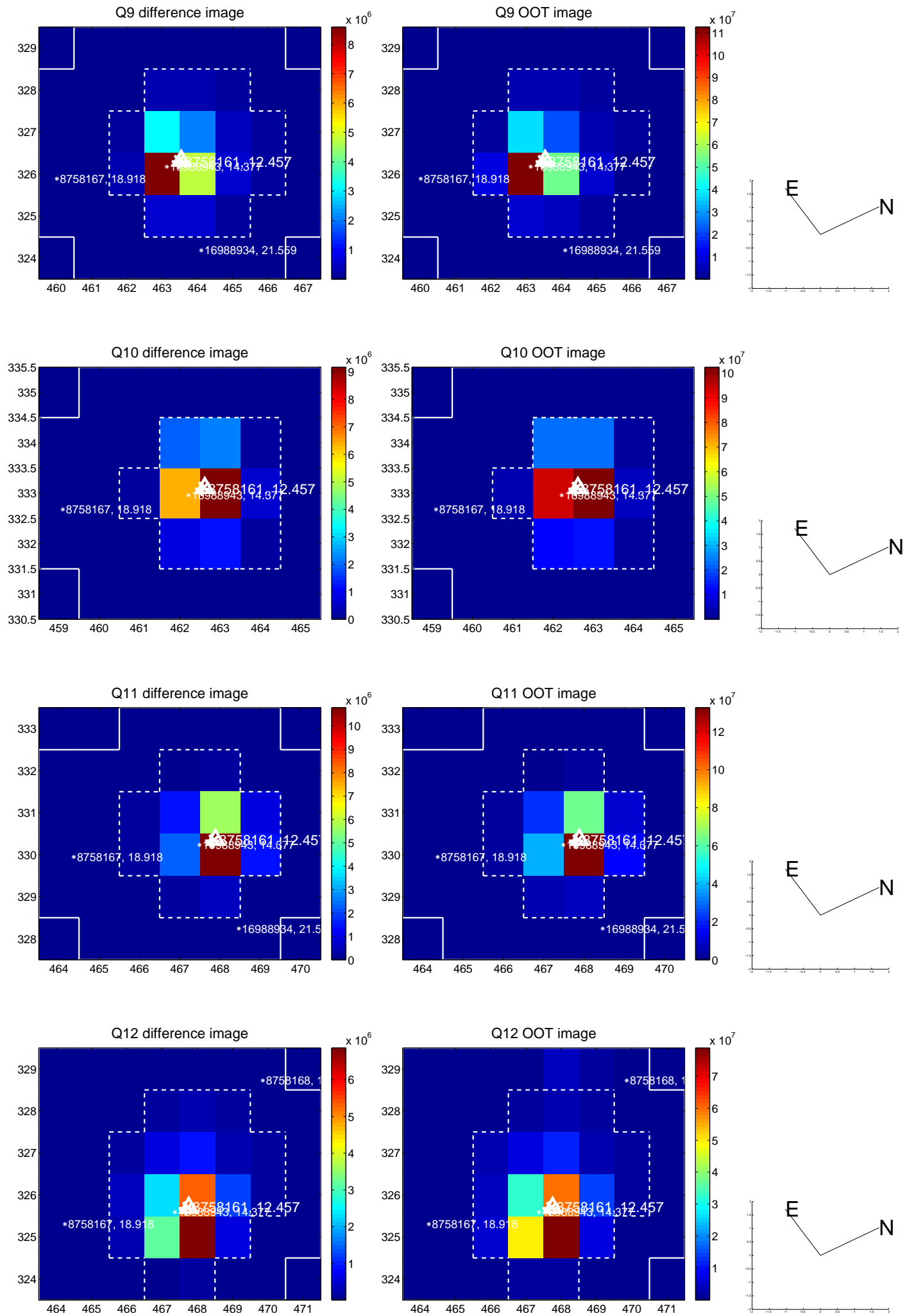
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



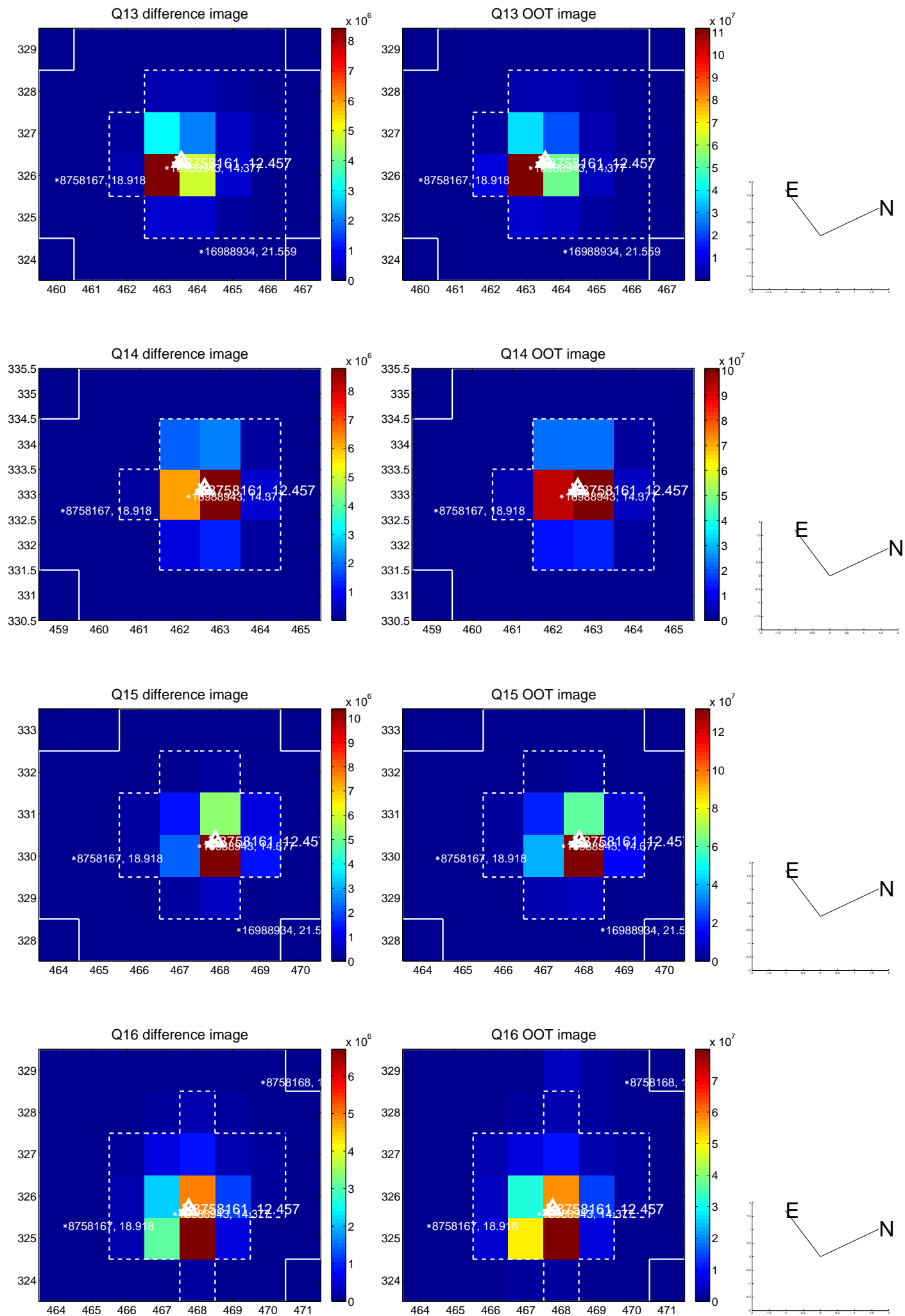
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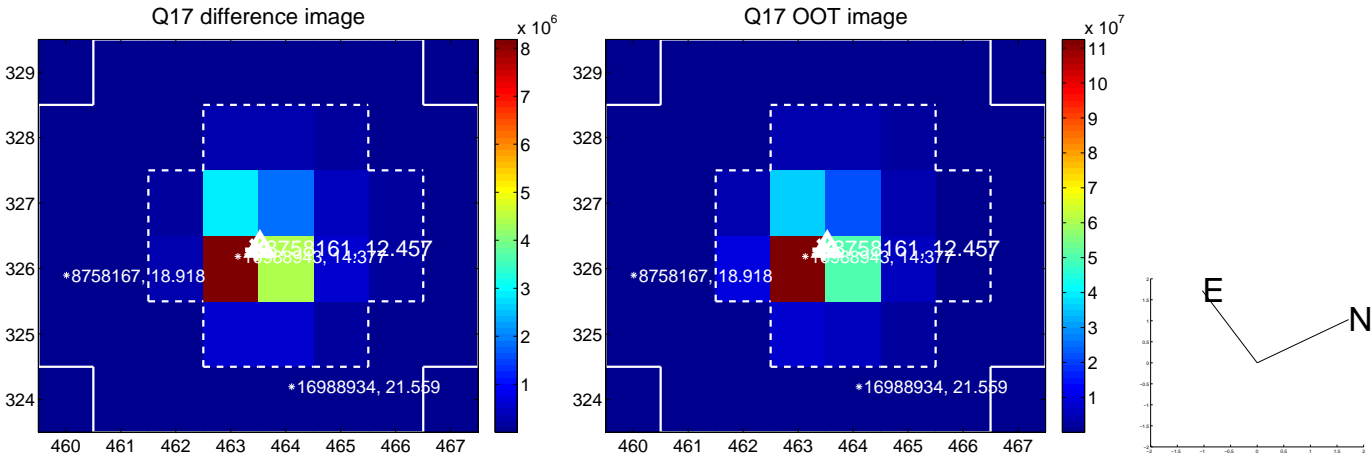
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

