

KIC 007755636

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})
007755636-01	OBS	1921.01	16.004904	135.256465	381.2	6.816	35.0	39.3	1.90	6384	4.22	277.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007755636-01	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.

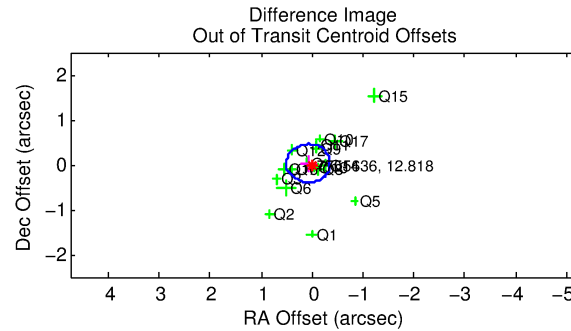
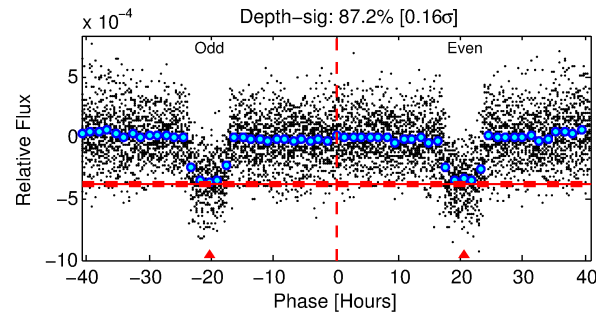
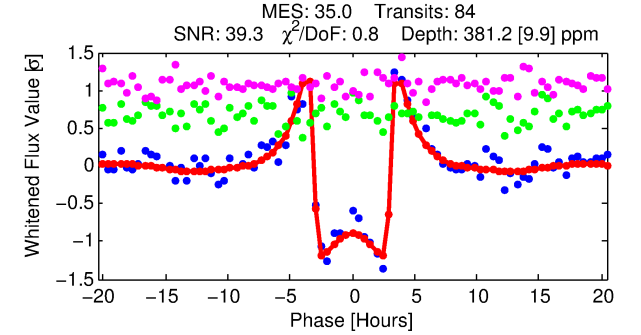
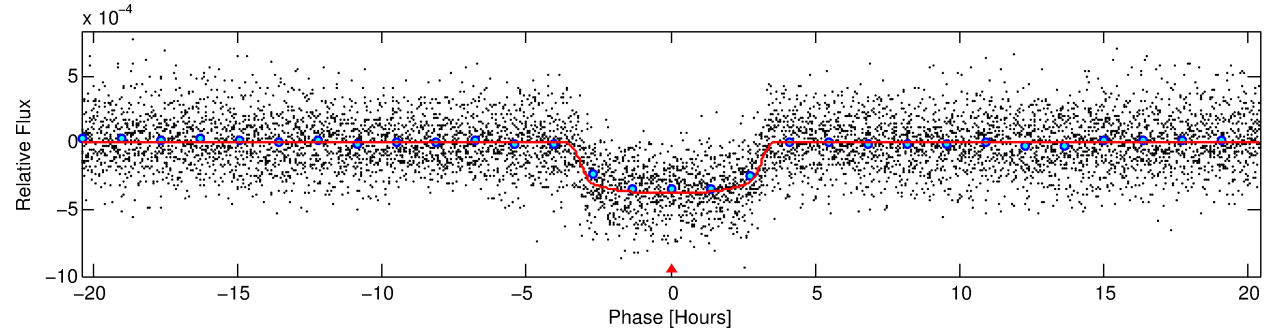
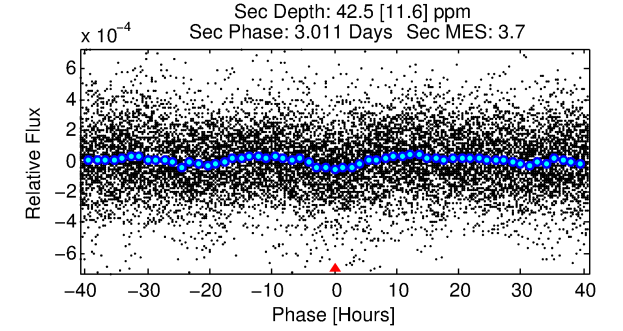
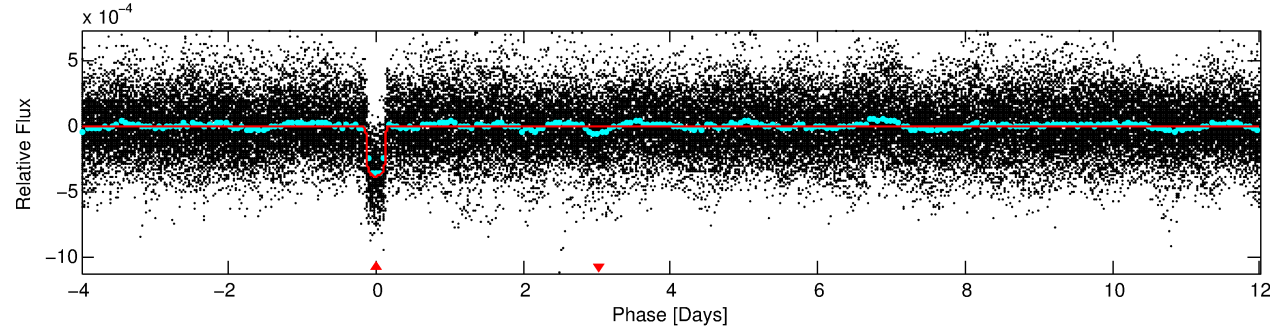
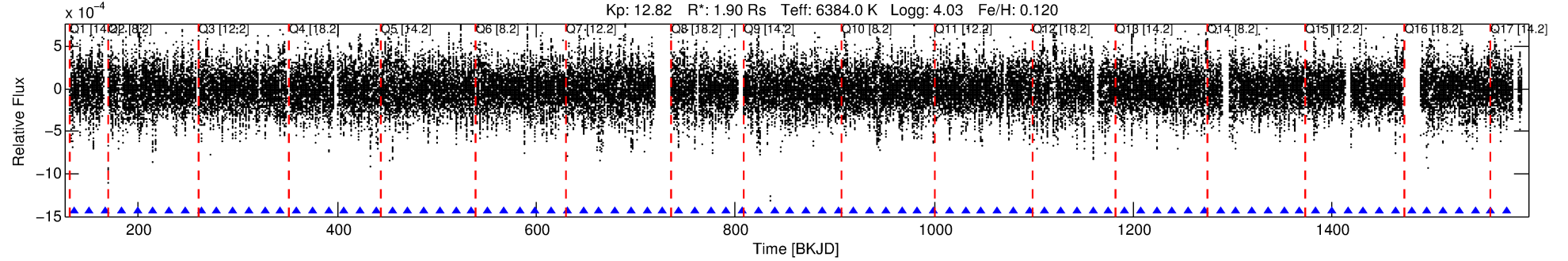
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007755636-01

No Significant Match Found

DV One-Page Summary

KIC: 7755636 Candidate: 1 of 1 Period: 16.005 d
KOI: K01921.01 Corr: 0.974



DV Fit Results:

Period = 16.00490 [0.00003] d
Epoch = 135.2565 [0.0014] BKJD
Rp/R* = 0.0203 [0.0006]
a/R* = 10.07 [1.32]
b = 0.85 [0.04]
Seff = 277.14 [115.54]
Teq = 1040 [108] K
Rp = 4.22 [1.19] Re
a = 0.1395 [0.0366] AU
Ag = 25.56 [12.76] [1.93σ]
Teffp = 3617 [258] K [9.20σ]

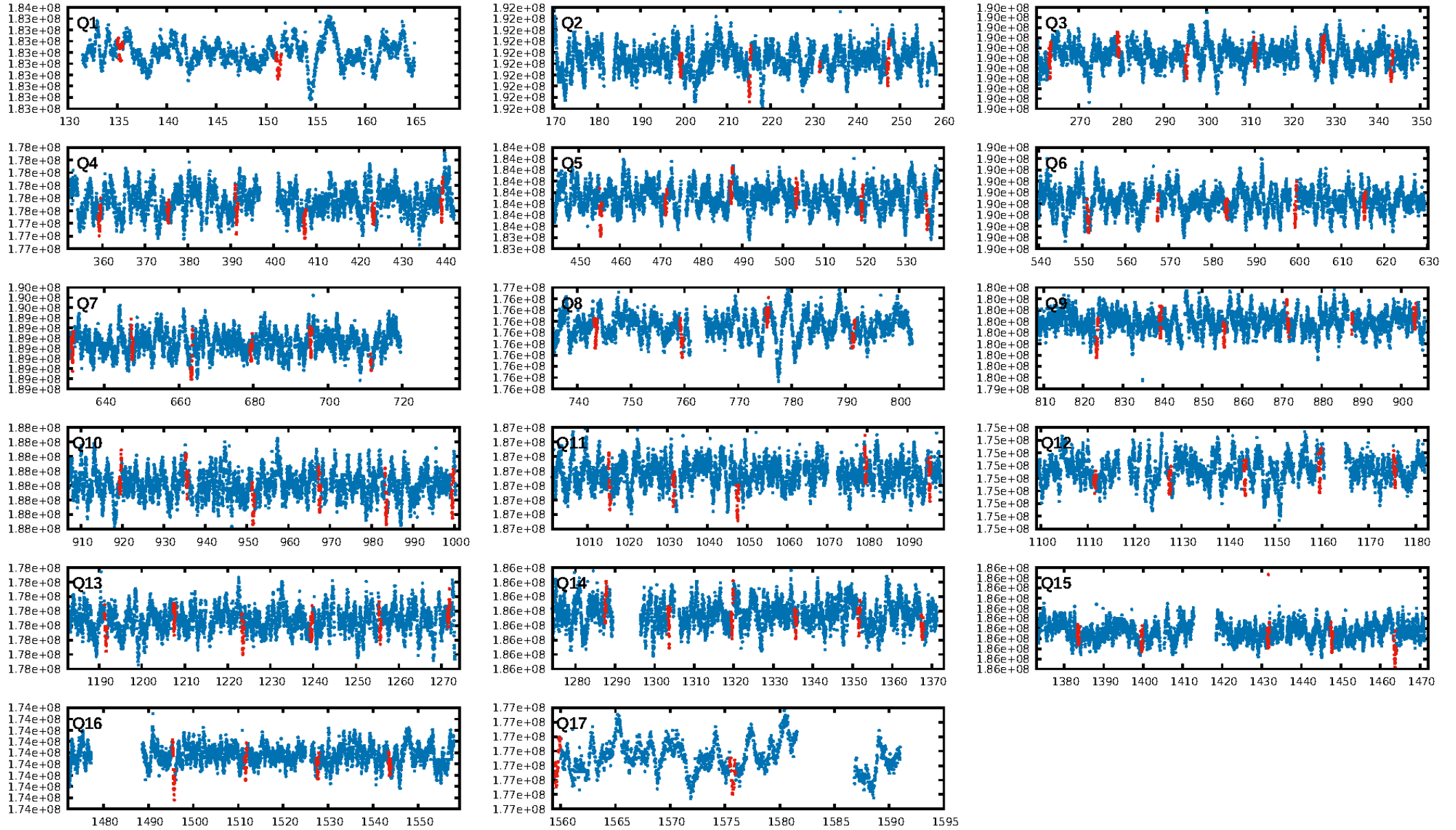
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.24e-256
RollingBand-fgt: 1.00 [80/80]
GhostDiagnostic-chr: 3.805
Centroid-sig: 10.1%
Centroid-so: 0.314 arcsec [2.56σ]
OotOffset-rm: 0.079 arcsec [0.55σ]
KicOffset-rm: 0.231 arcsec [1.19σ]
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]

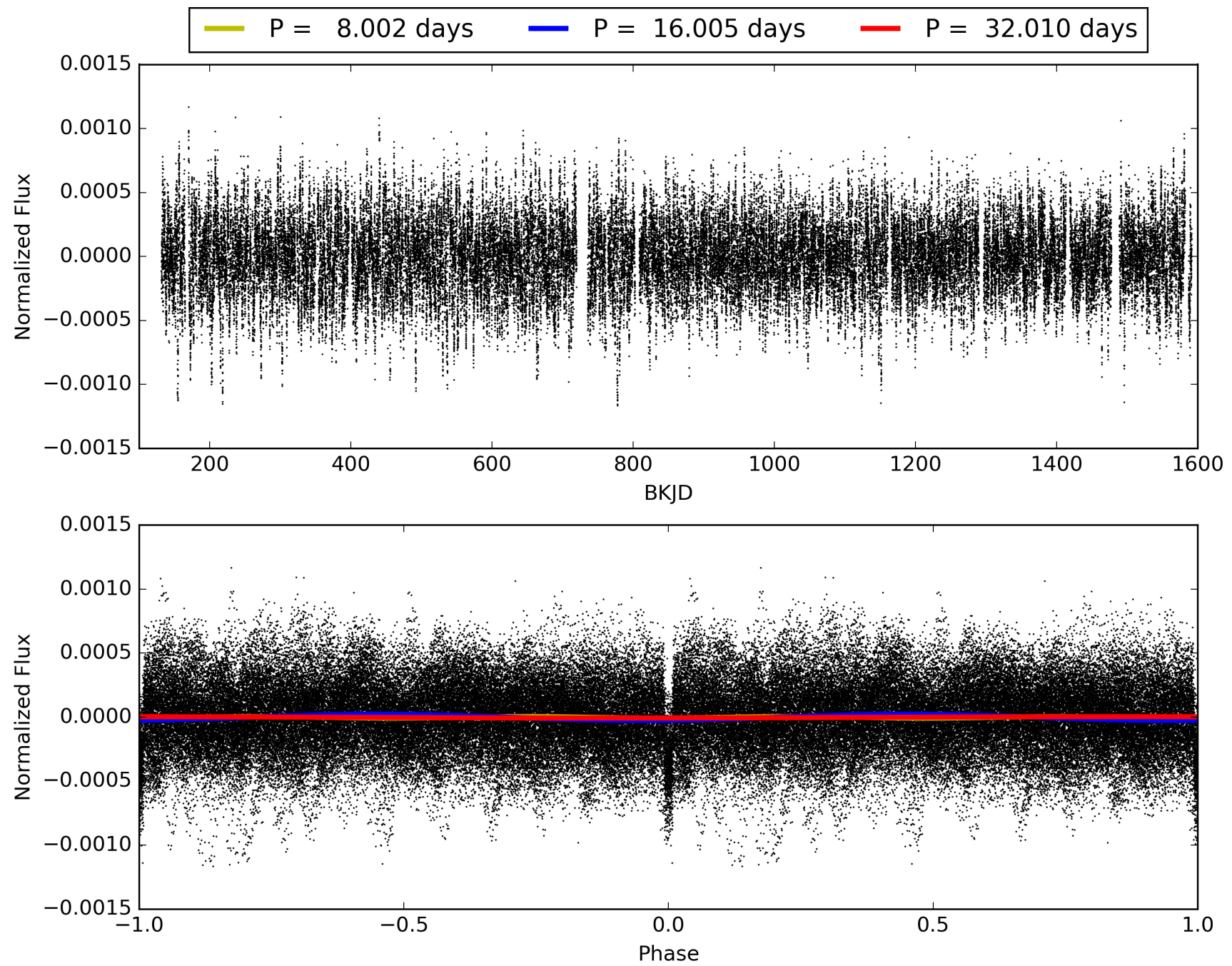
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:32:07 Z

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

TCE 007755636-01, PDC Light Curves

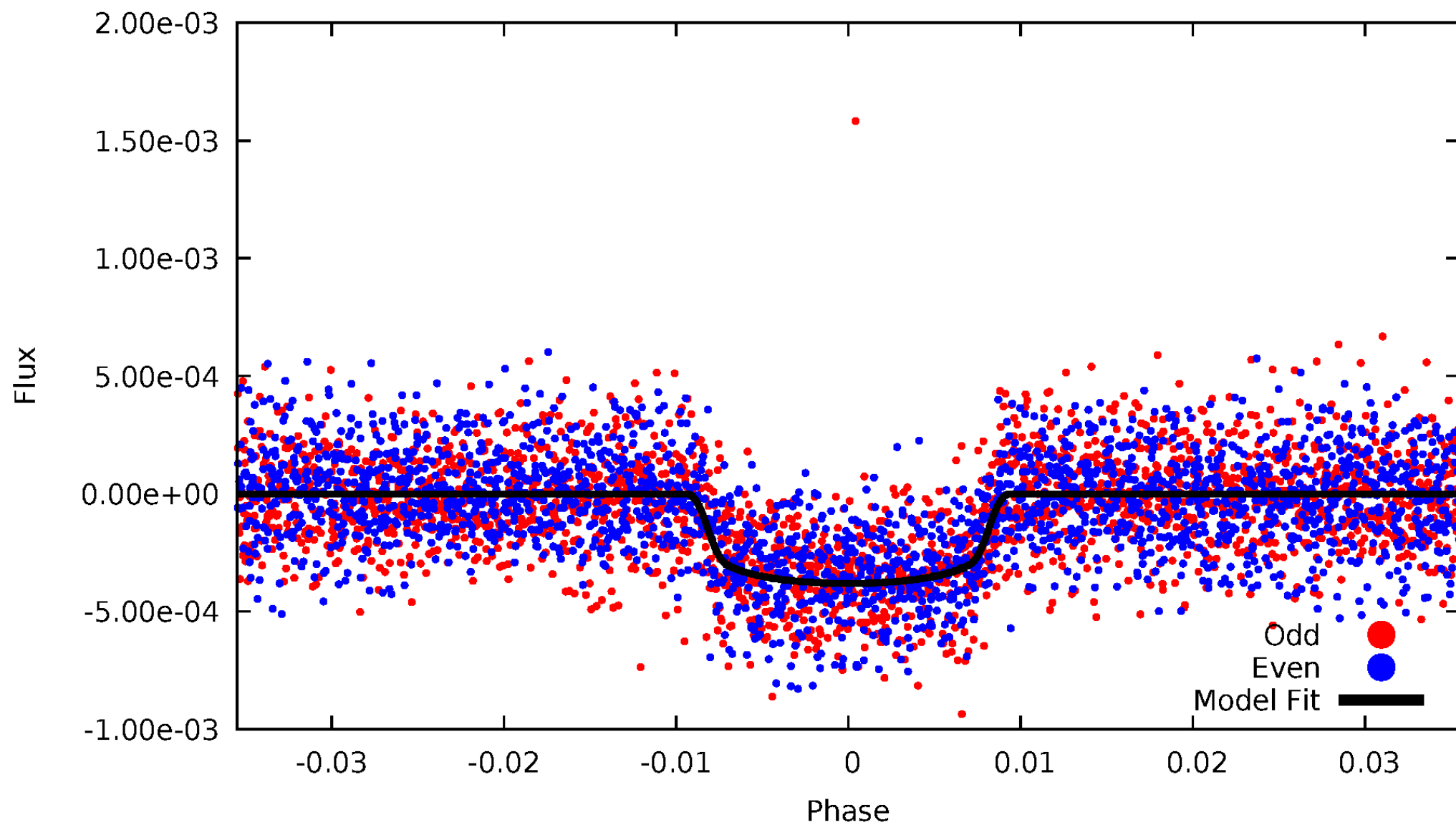


TCE 007755636-01



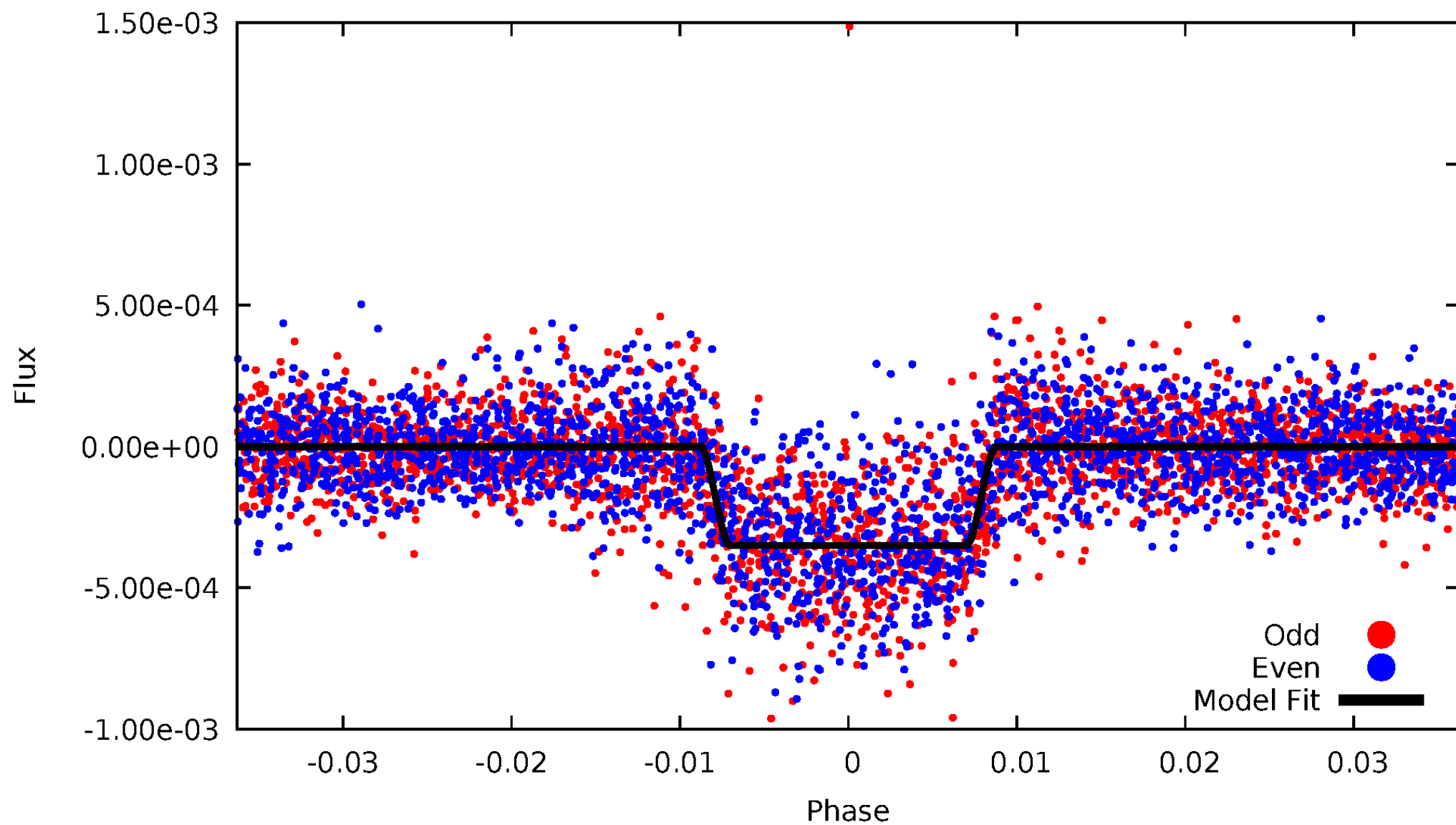
DV Odd/Even

TCE 007755636-01

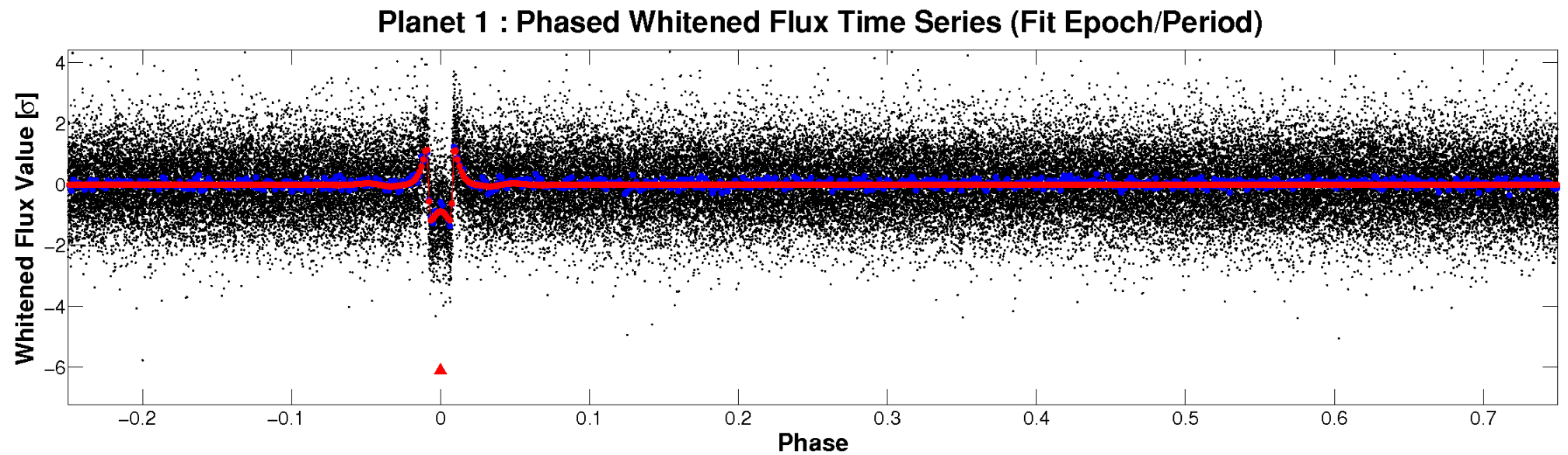
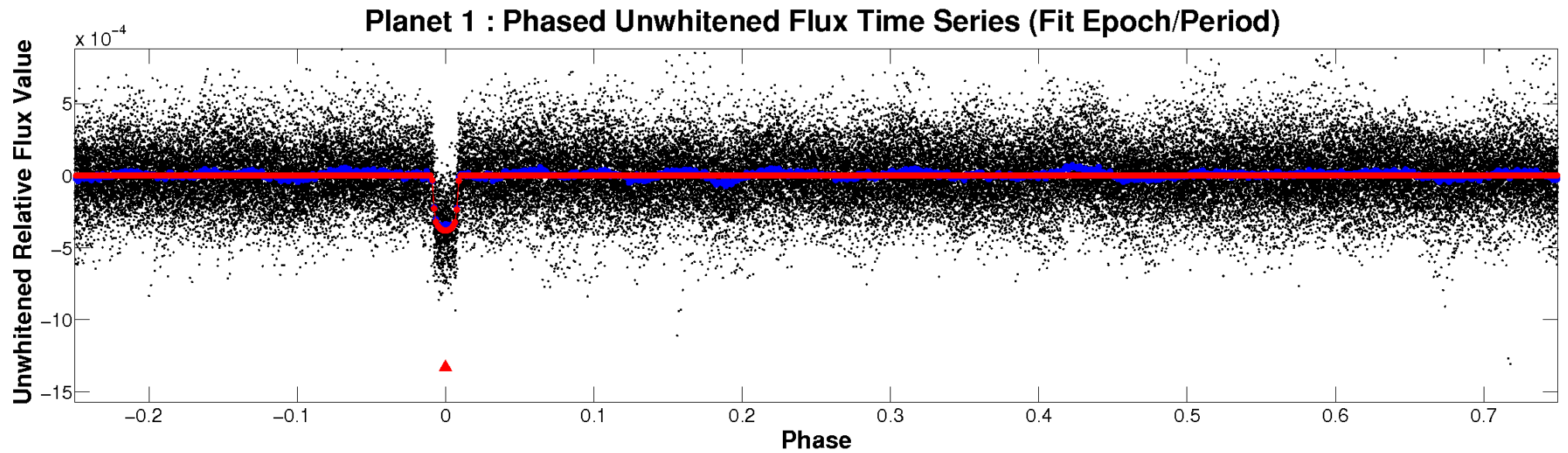


ALT Odd/Even

TCE 007755636-01

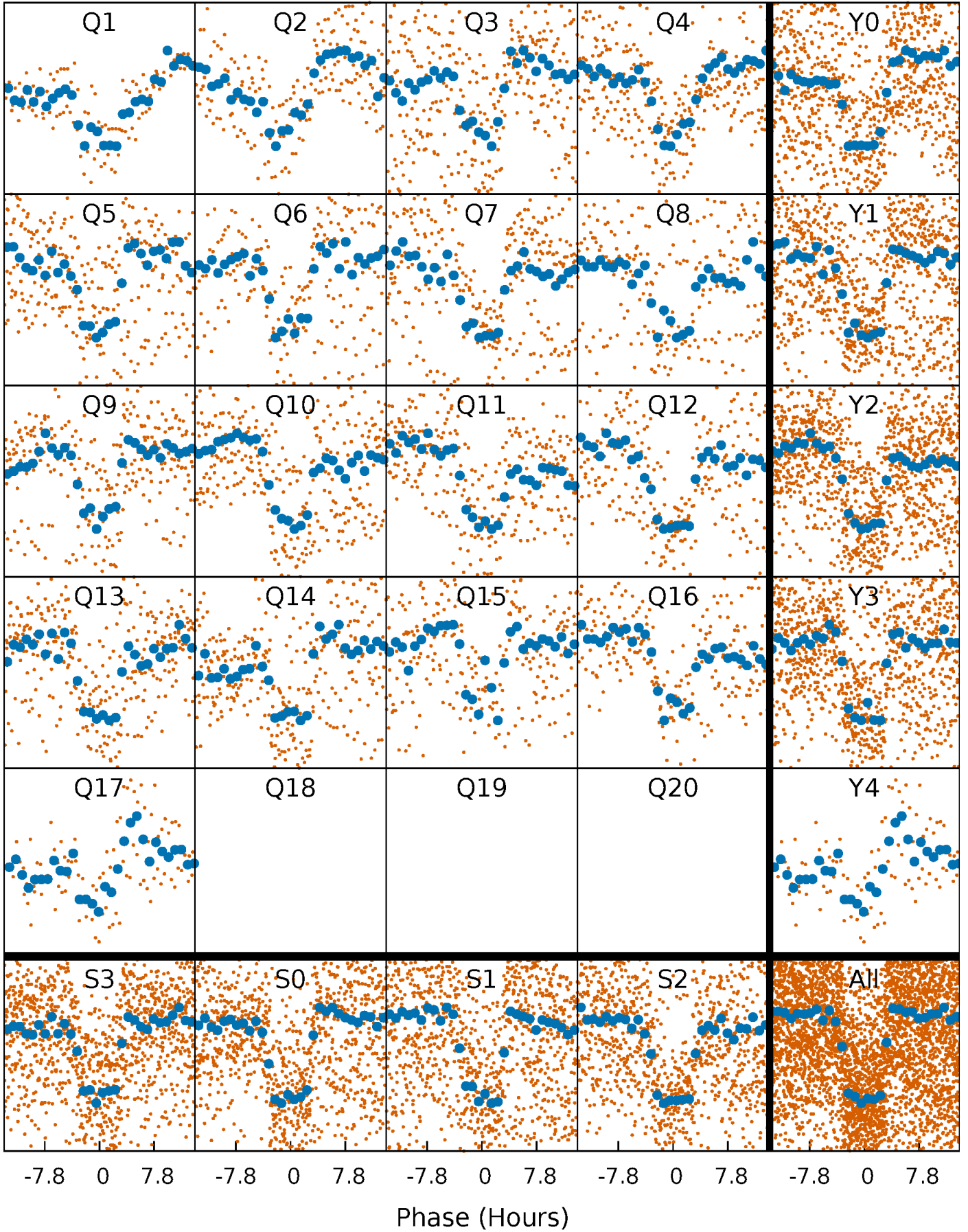


Non-Whitened Vs. Whitened Light Curve



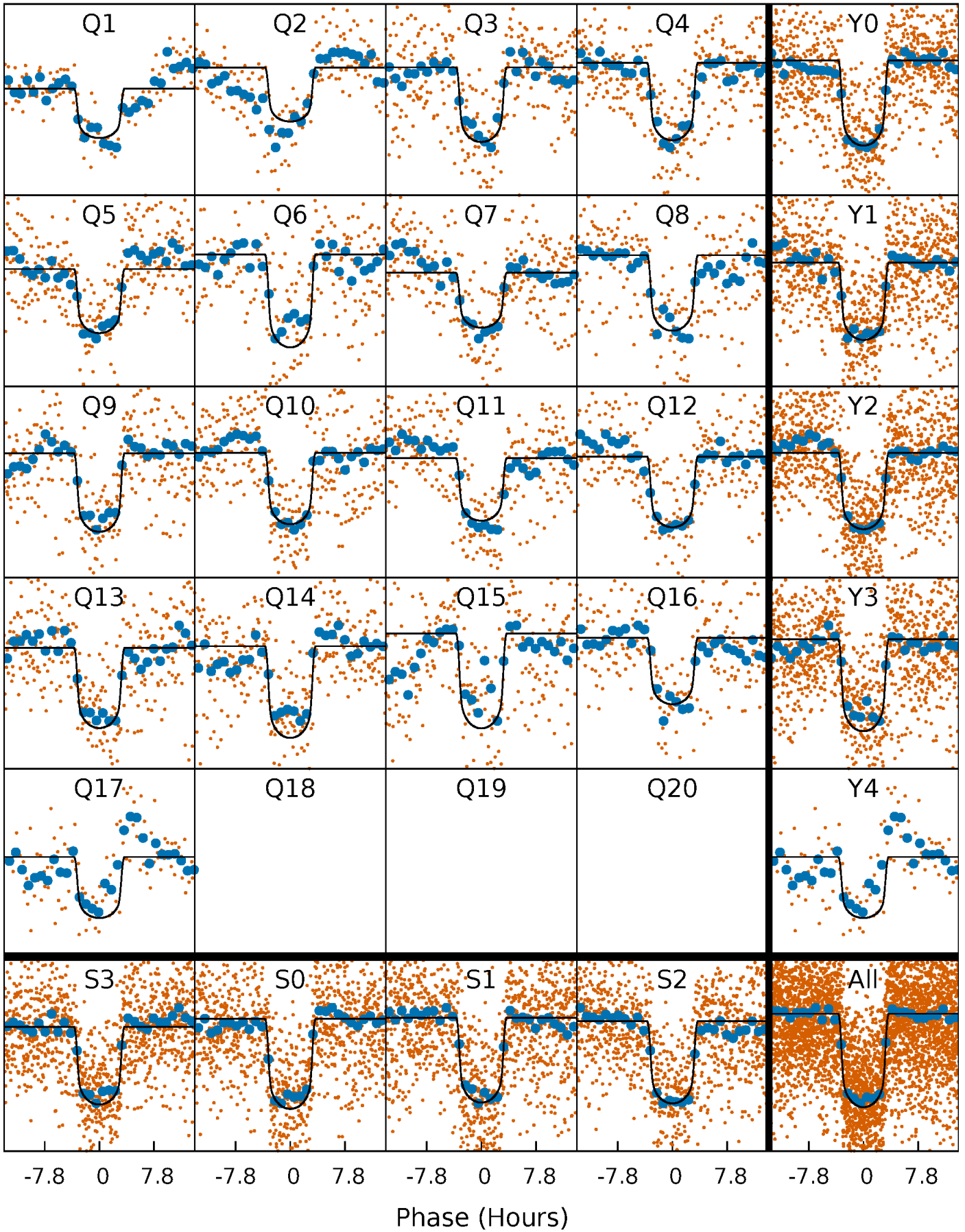
PDC Quarter-Phased Transit Curves

TCE 007755636-01 P= 16.004904 Days $T_0=135.256465$ (BKJD)



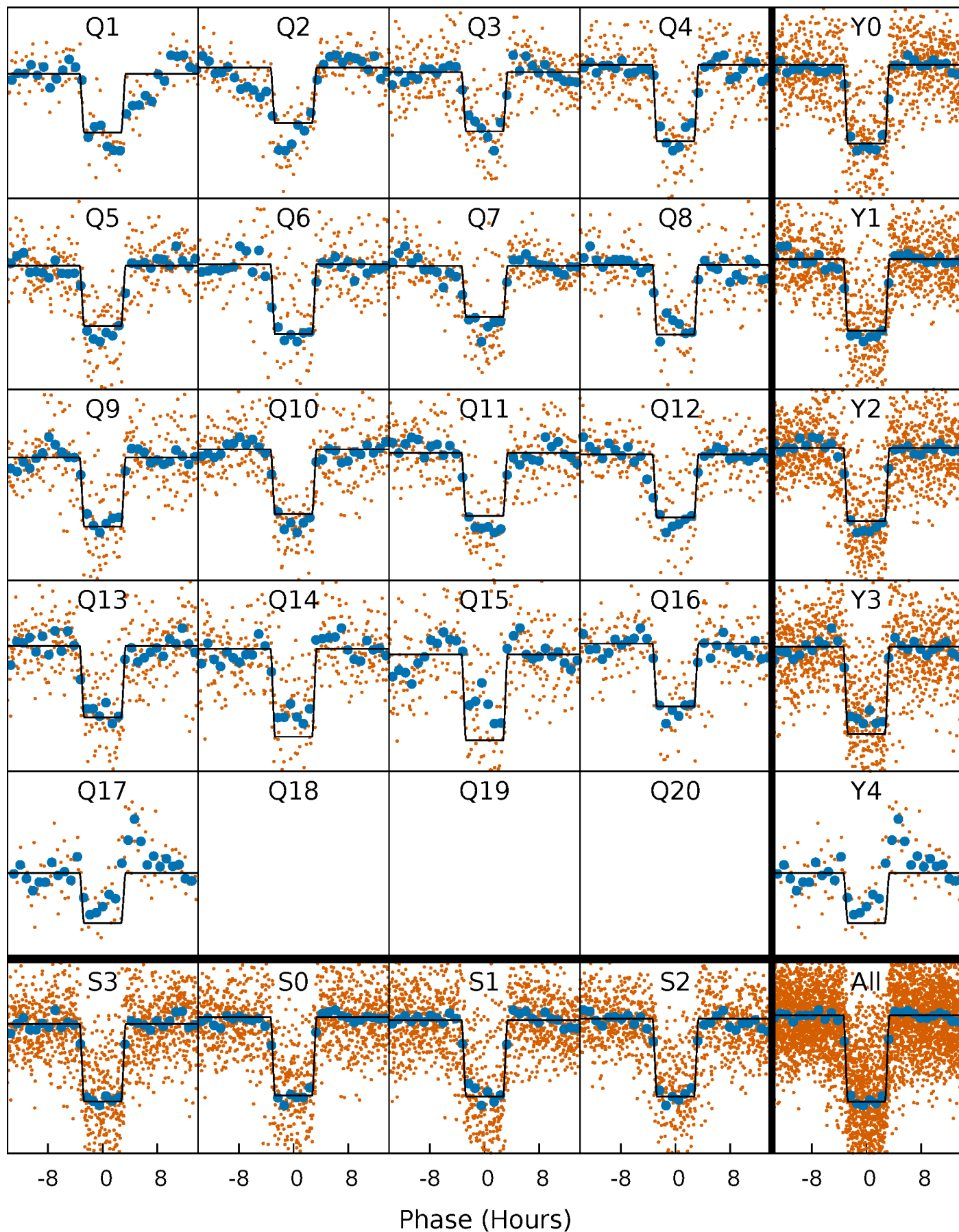
DV Quarter-Phased Transit Curves

TCE 007755636-01 P= 16.004904 Days $T_0=135.256465$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

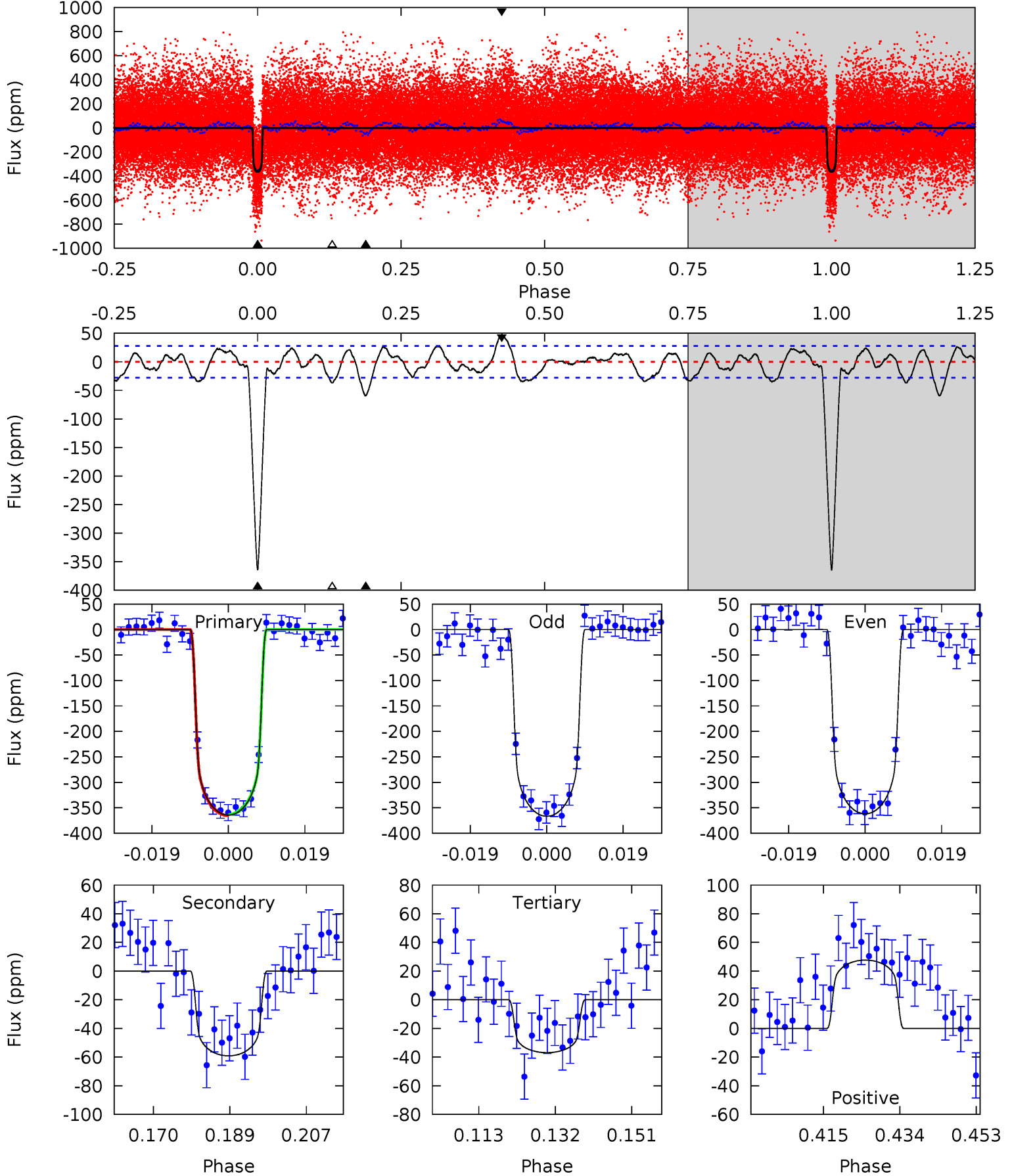
TCE 007755636-01 P= 16.005094 Days $T_0=135.246646$ (BKJD)



DV Model-Shift Uniqueness Test

007755636-01, P = 16.004904 Days, E = 119.251561 Days

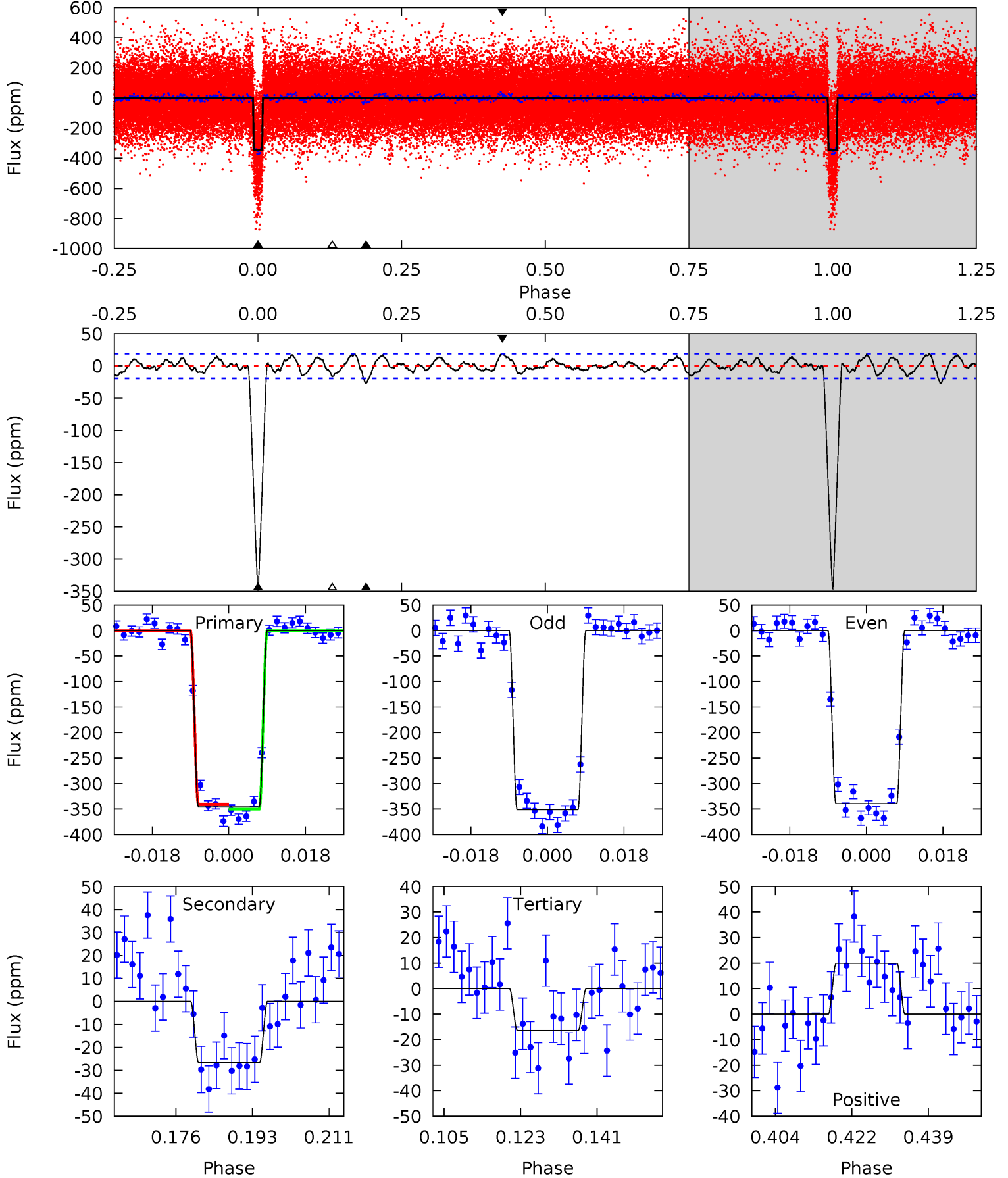
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.0	10.4	6.48	8.37	4.90	2.35	3.00	57.5	55.6	3.90	2.01	0.42	1.03	0.12	0.18



Alt Model-Shift Uniqueness Test

007755636-01, P = 16.005094 Days, E = 119.241552 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
88.9	6.85	4.20	5.12	4.92	2.37	1.90	84.7	83.8	2.65	1.73	1.59	0.94	0.05	1.30



Stellar Parameters For KIC 007755636

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6384^{+70}_{-89}	$4.029^{+0.240}_{-0.129}$	$0.120^{+0.150}_{-0.200}$	$1.904^{+0.388}_{-0.534}$	$1.412^{+0.134}_{-0.201}$	$0.288^{+0.410}_{-0.109}$
	+1%/-1%	+6%/-3%	+125%/-167%	+20%/-28%	+9%/-14%	+142%/-38%
Source	SPE90	FLK73	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007755636-01 / KOI 1921.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-59 ± 6	$4.16^{+0.53}_{-0.63}$	1442^{+90}_{-107}	4181^{+97}_{-97}	37^{+13}_{-9}
Alt.	-27 ± 4	$3.85^{+0.50}_{-0.62}$	1446^{+85}_{-110}	3730^{+116}_{-102}	19^{+8}_{-5}

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

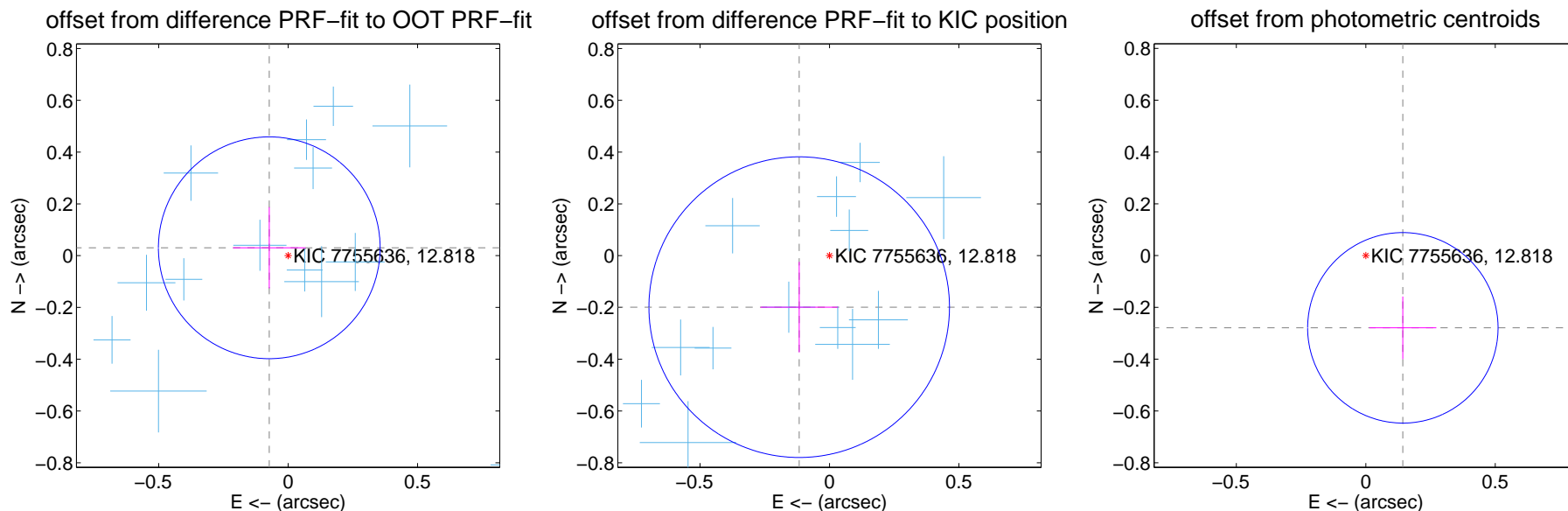
DV Centroid Data

Supplemental centroid analysis for 007755636-01. Kepler magnitude: 12.82. Transit SNR 39.33

There are 17 quarters with good PRF difference image offsets

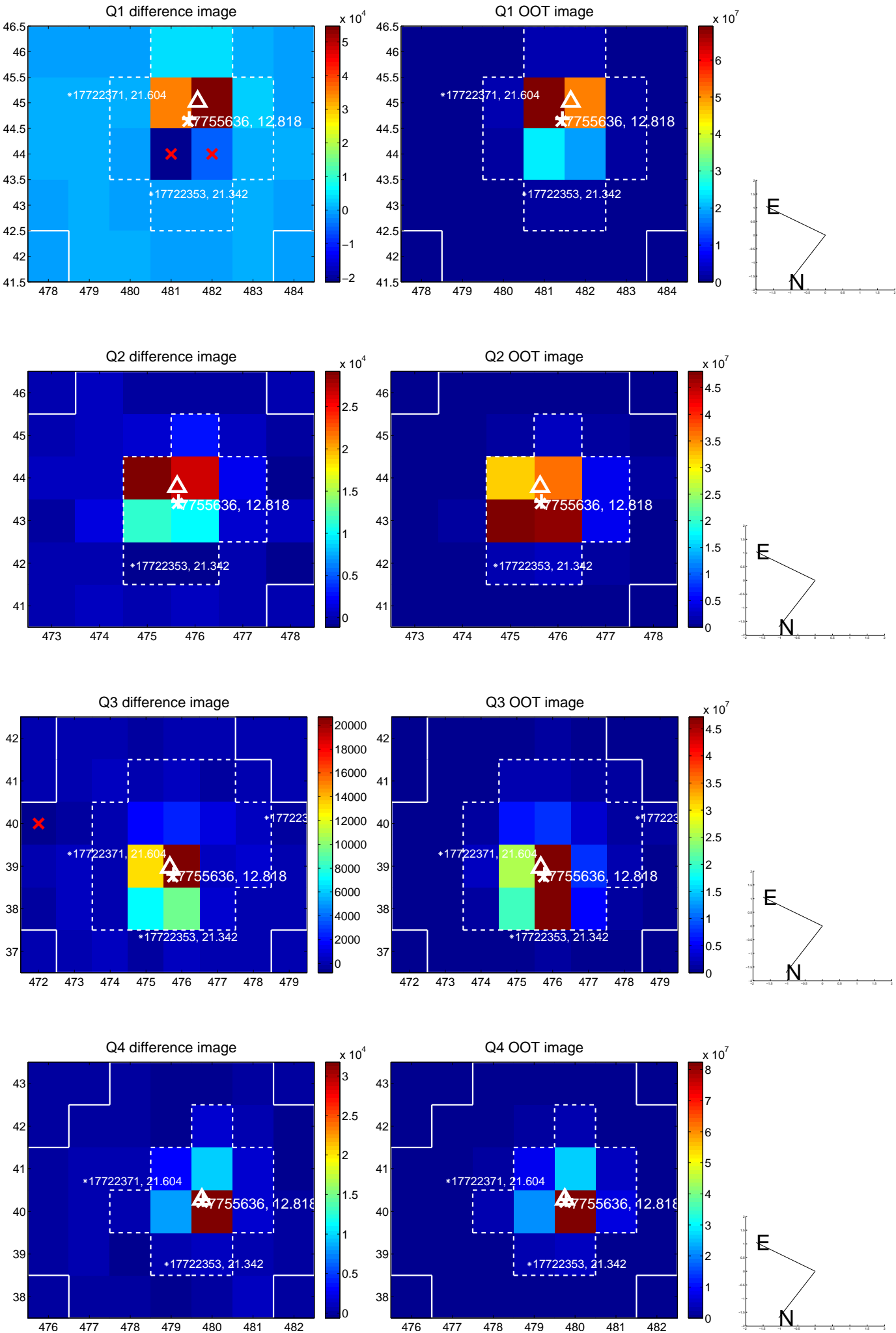
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 0.143	0.55	0.073 ± 0.140	0.030 ± 0.157
PRF-fit source offset from KIC position	0.231 ± 0.194	1.19	0.117 ± 0.150	-0.199 ± 0.175
photometric centroid source offset	0.31 ± 0.12	2.56	-0.14 ± 0.13	-0.28 ± 0.12

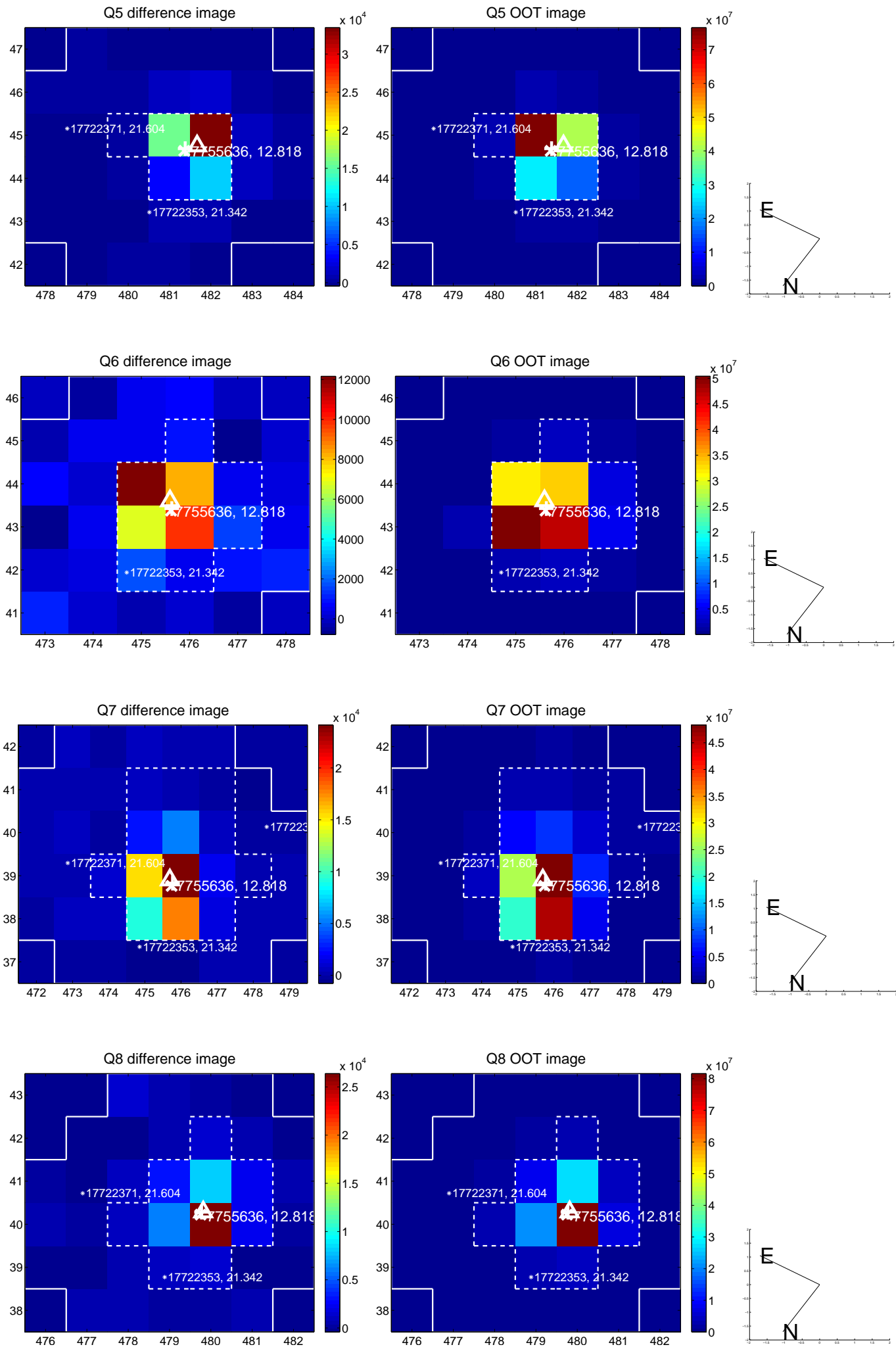


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

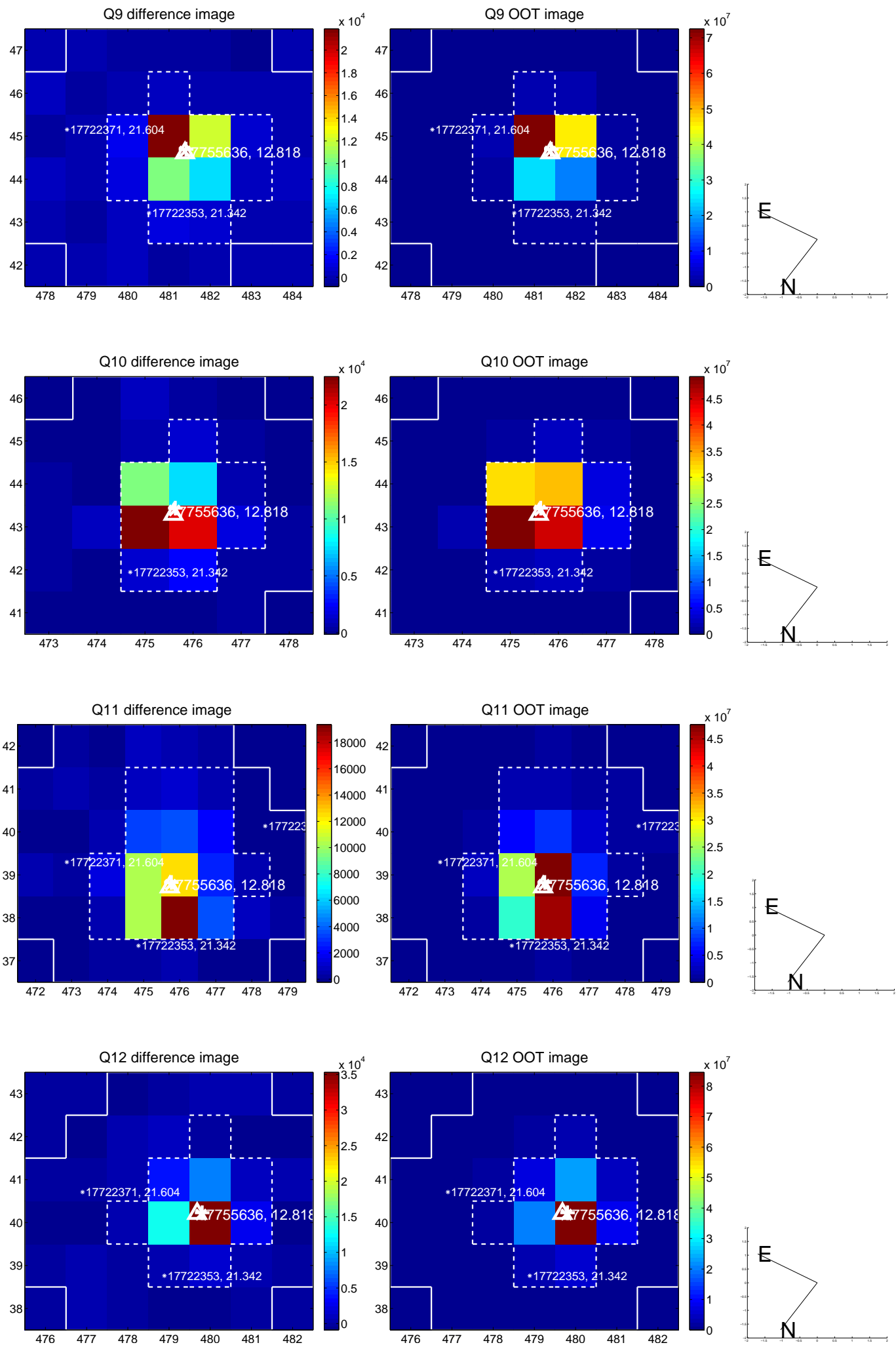
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



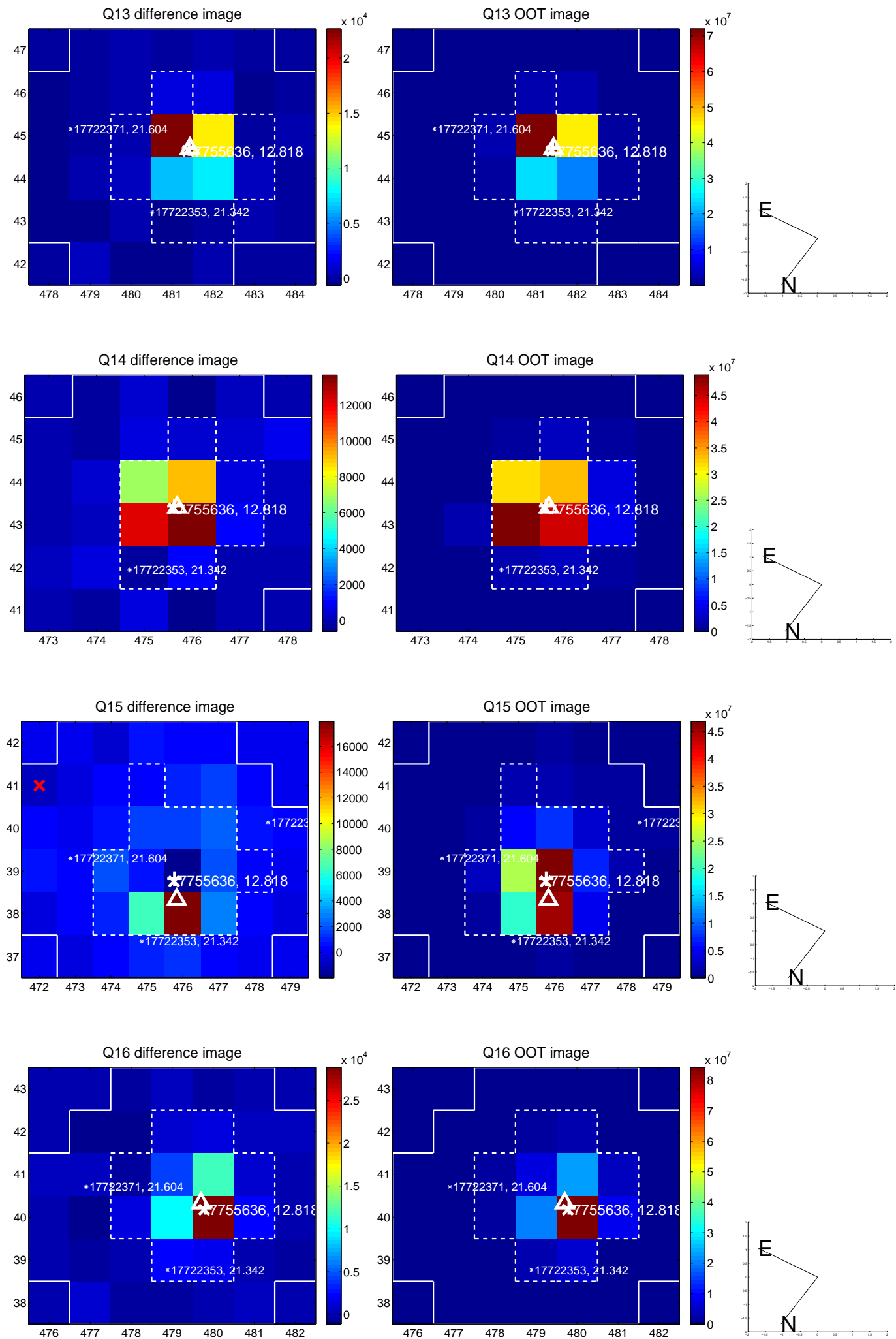
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



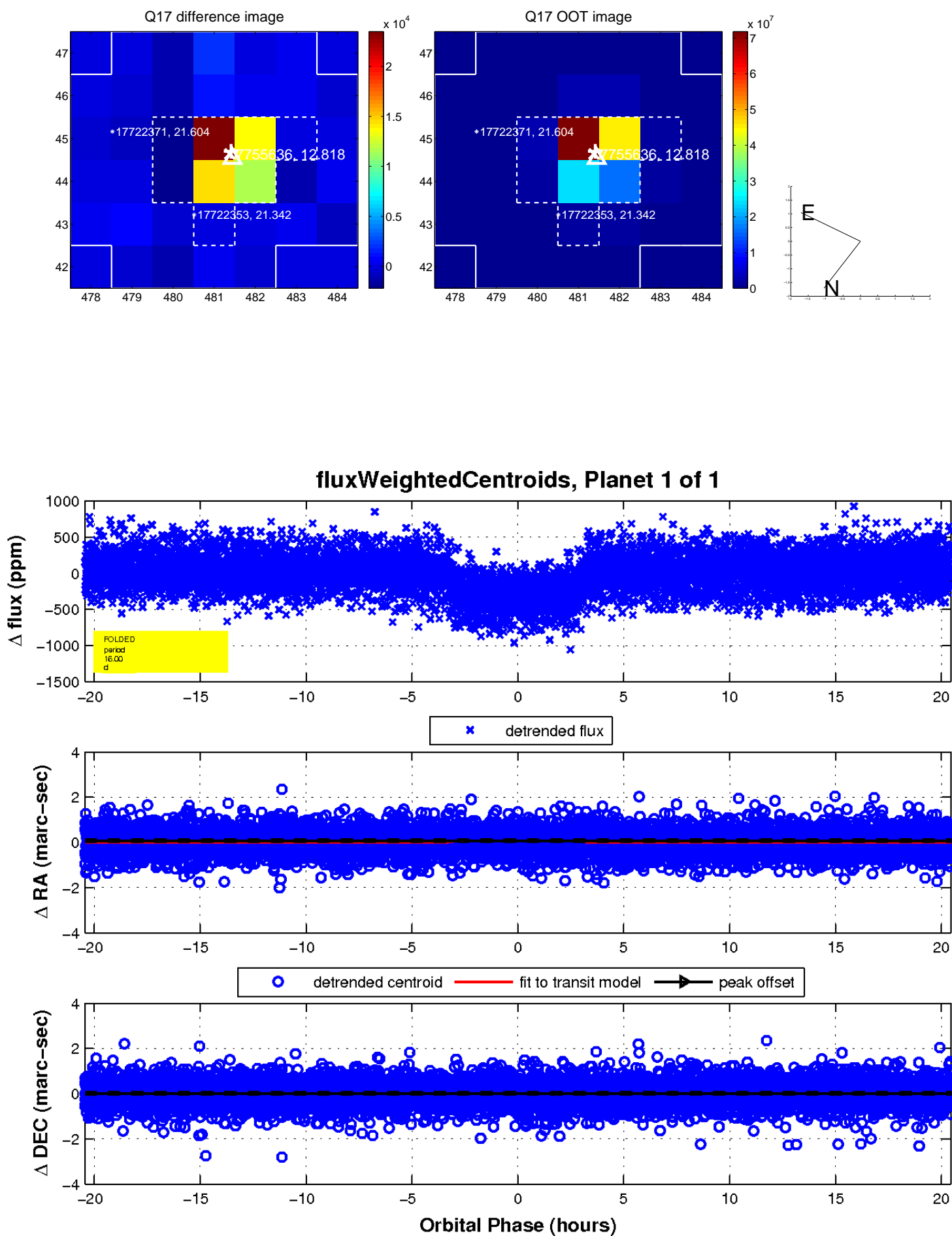
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UKIRT Image

Declination

