

KIC 008429756

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})
008429756-01	OBS	No	0.526820	131.750224	16.2	4.020	15.5	17.9	1.25	6558	0.59	13682.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008429756-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED

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

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

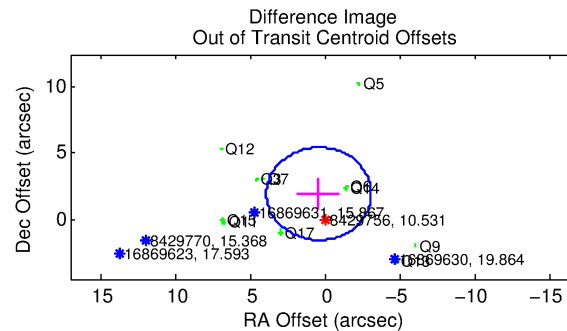
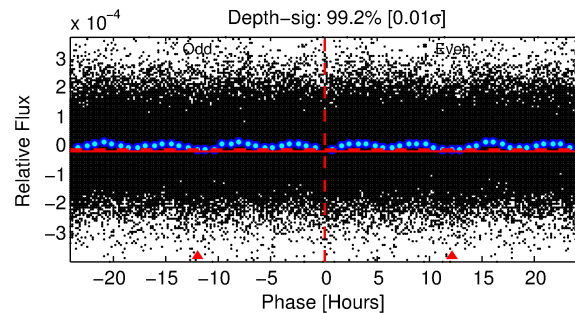
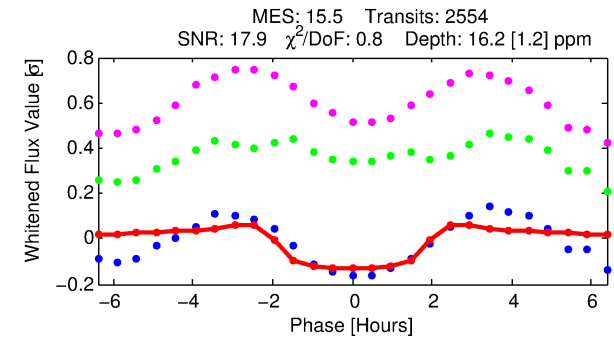
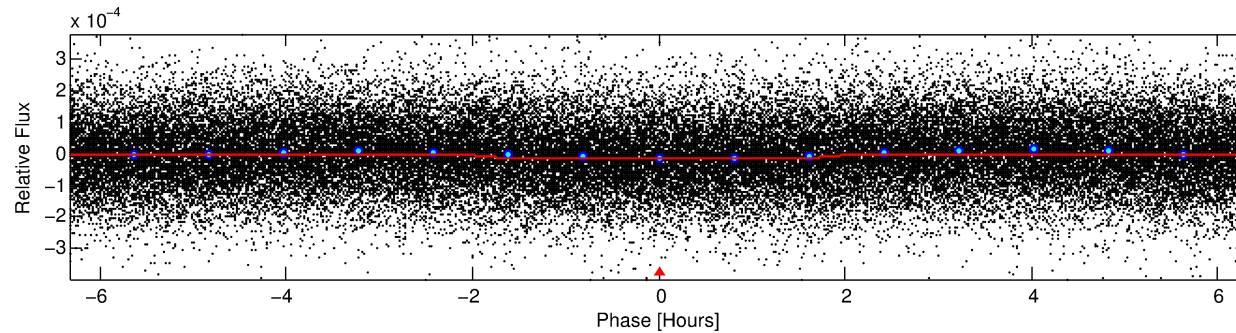
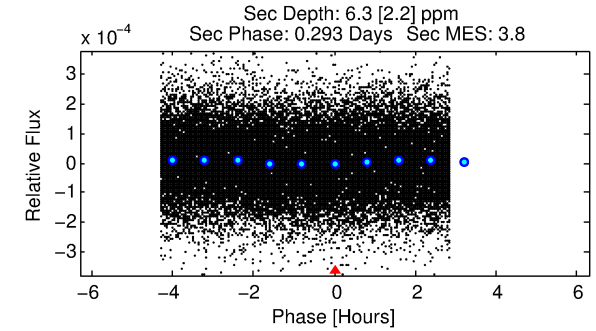
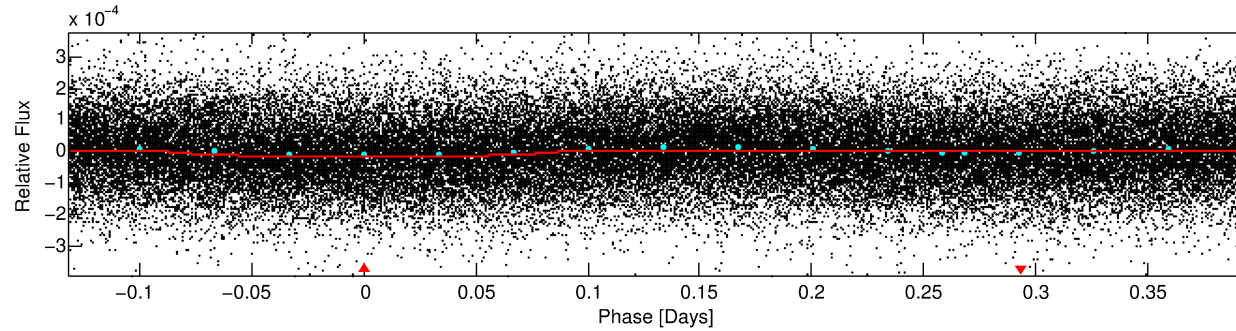
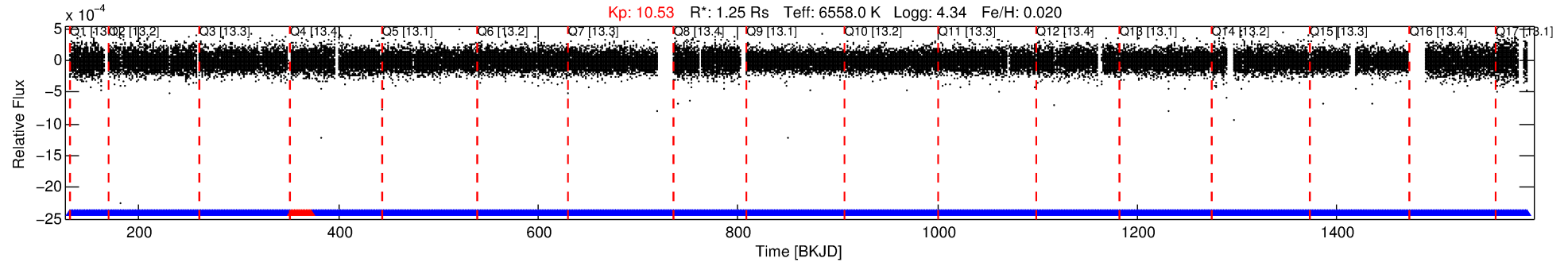
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008429756-01

No Significant Match Found

DV One-Page Summary

KIC: 8429756 Candidate: 1 of 1 Period: 0.527 d



DV Fit Results:

Period = 0.52682 [0.00001] d
Epoch = 131.7502 [0.0021] BKJD
Rp/R* = 0.0043 [0.0017]
a/R* = 1.04 [0.20]
b = 0.90 [0.50]
Seff = 13682.54 [2735.69]
Teq = 2758 [138] K
Rp = 0.59 [0.25] Re
a = 0.0138 [0.0018] AU
Ag = 1.91 [1.69] [0.54σ]
Teff = 5010 [1088] K [2.05σ]

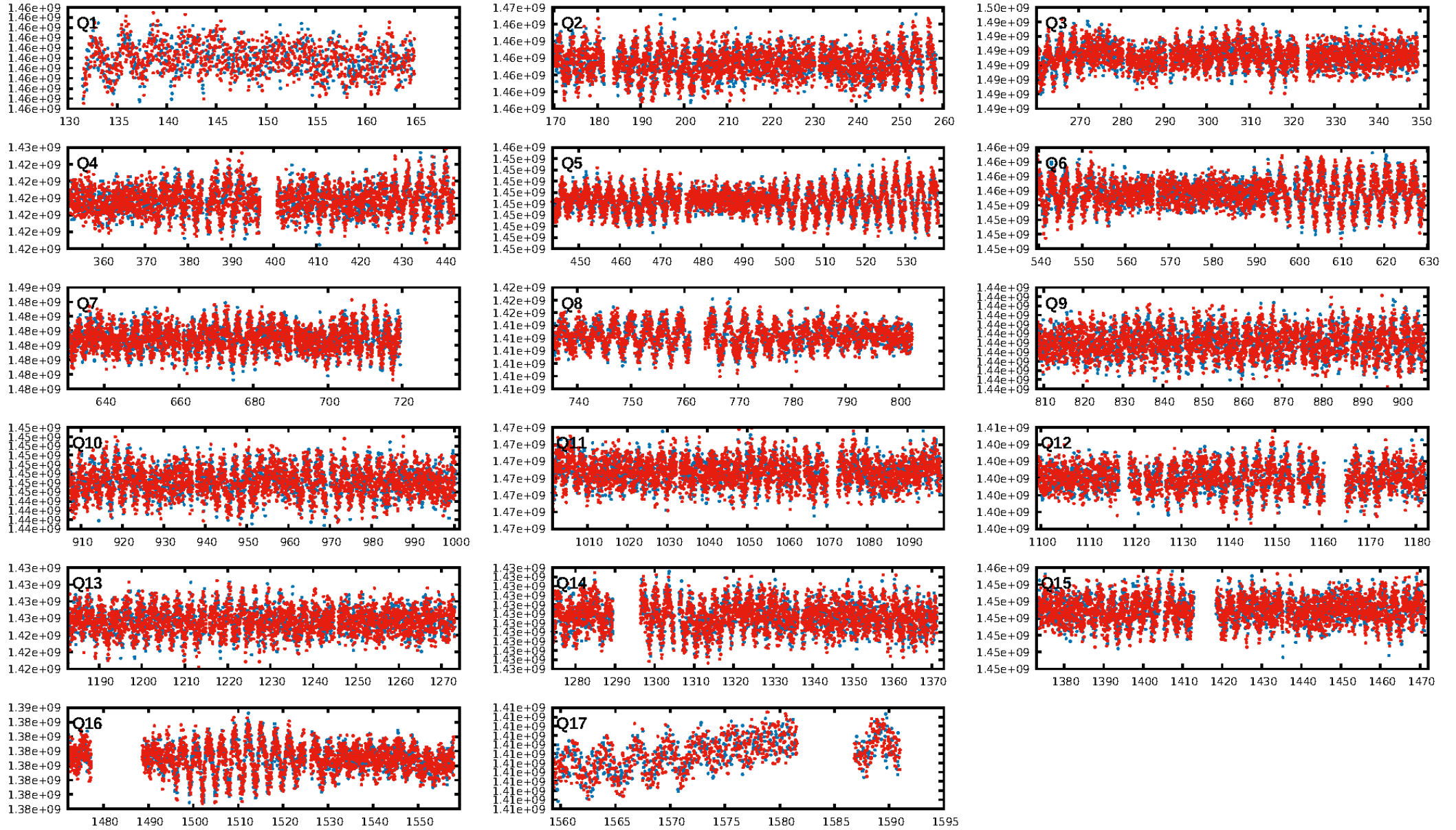
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [2402/2438]
GhostDiagnostic-chr: -32.87
Centroid-sig: 21.5%
Centroid-so: 0.429 arcsec [1.47σ]
OotOffset-rm: 1.987 arcsec [1.70σ]
OotOffset-st: 2/4/1/4 [11]
KicOffset-rm: 2.435 arcsec [2.06σ]
KicOffset-st: 2/4/1/4 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 1.00 [17/17]

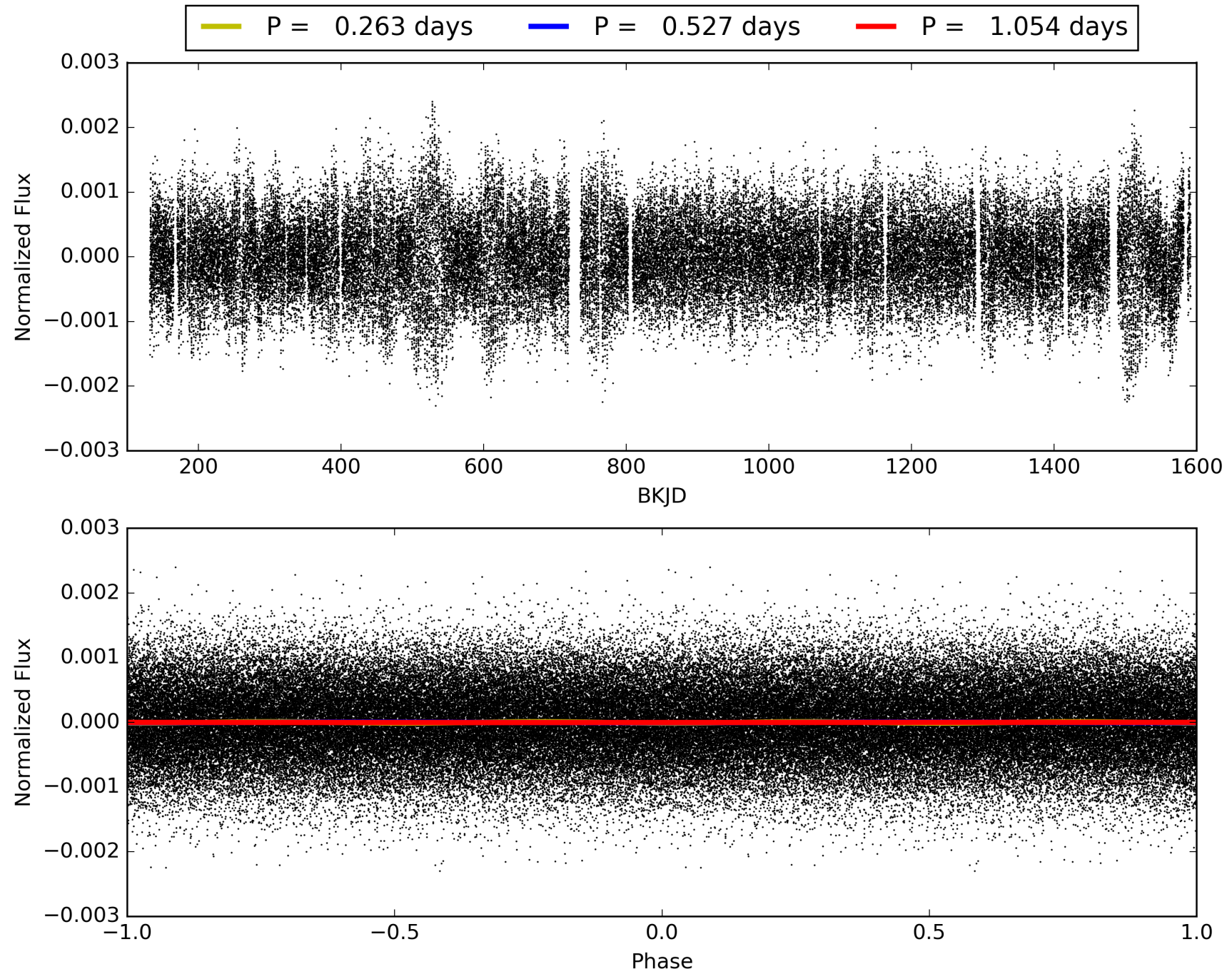
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:59:51 Z

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

TCE 008429756-01, PDC Light Curves

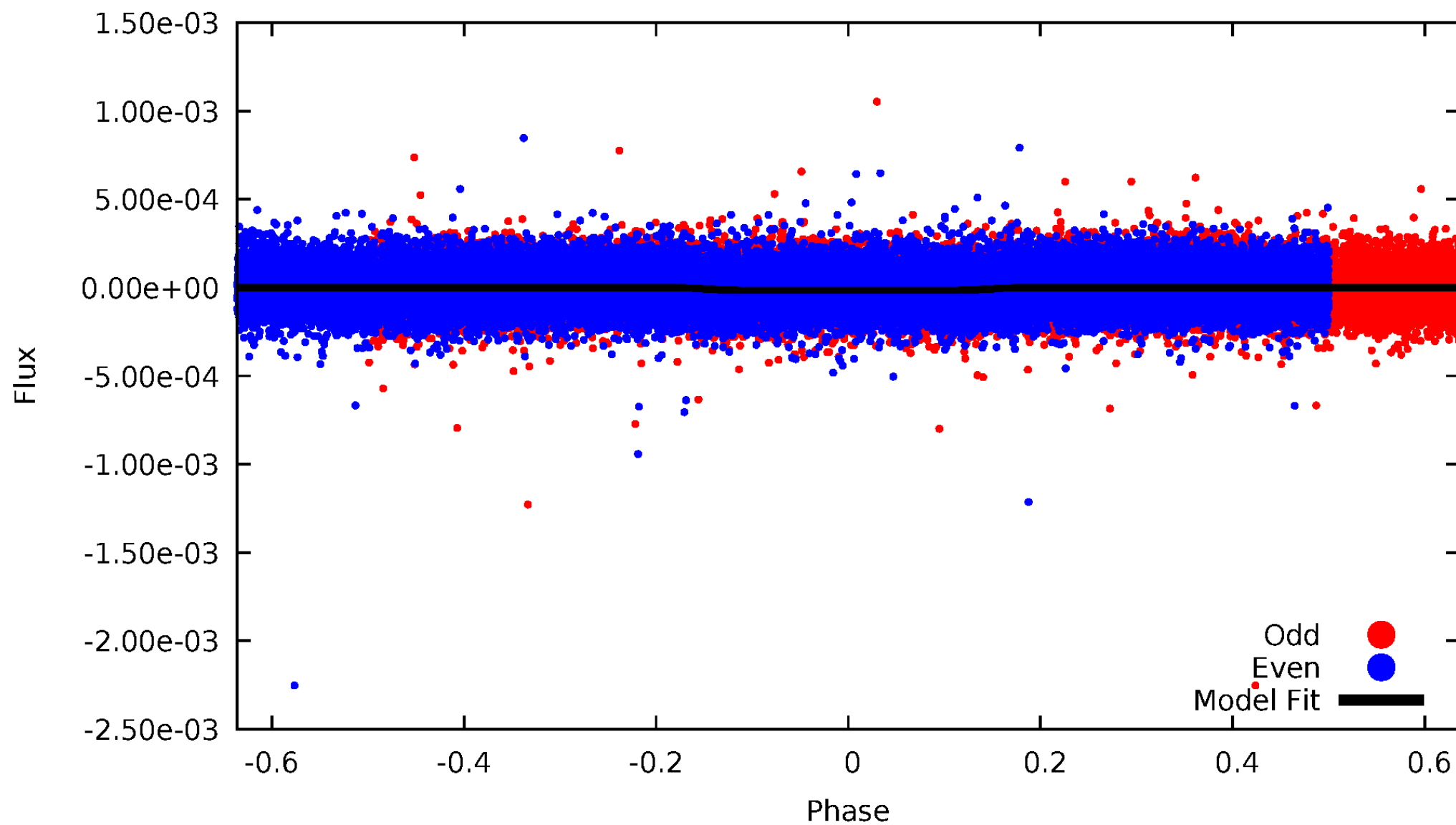


TCE 008429756-01



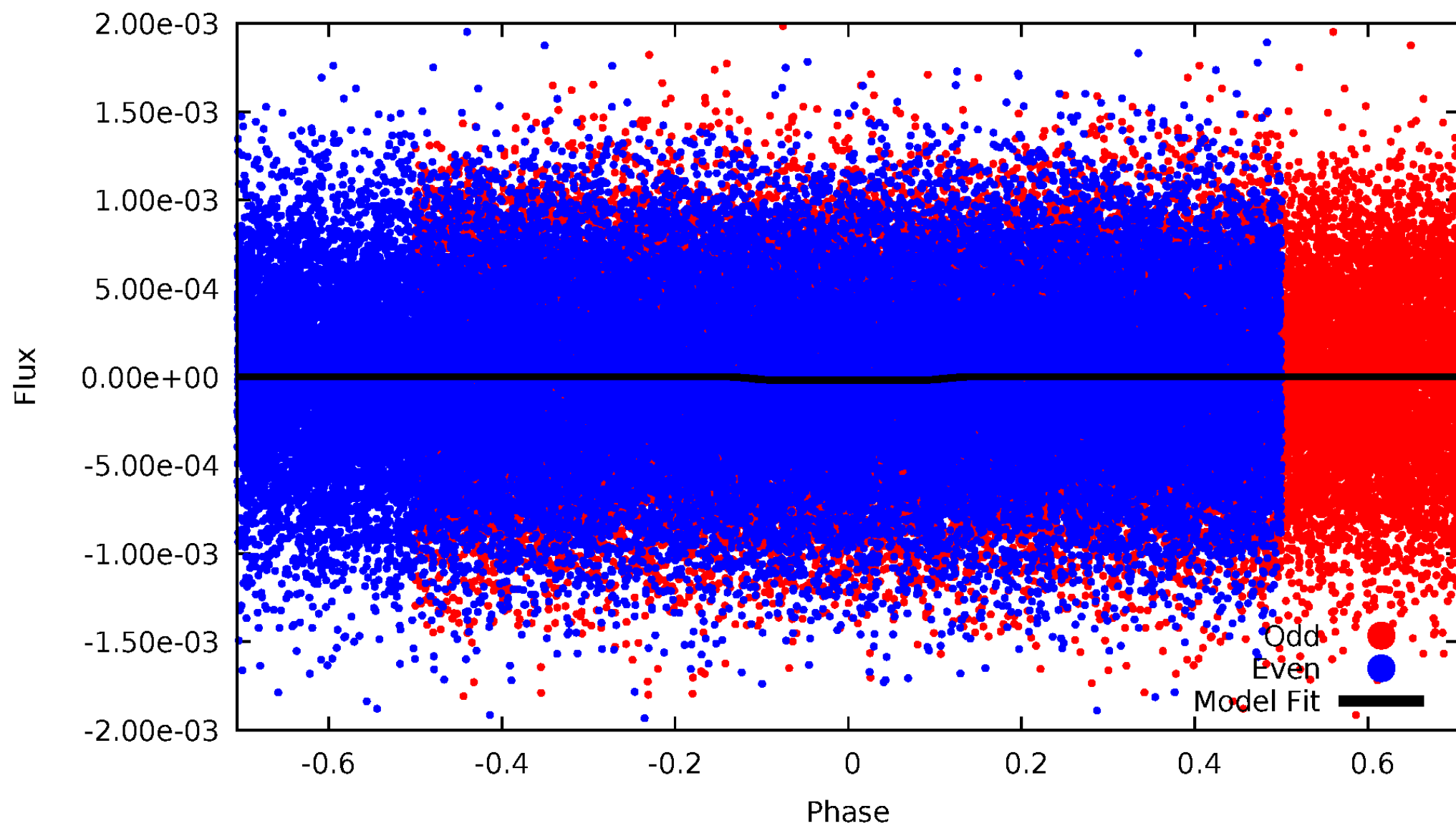
DV Odd/Even

TCE 008429756-01



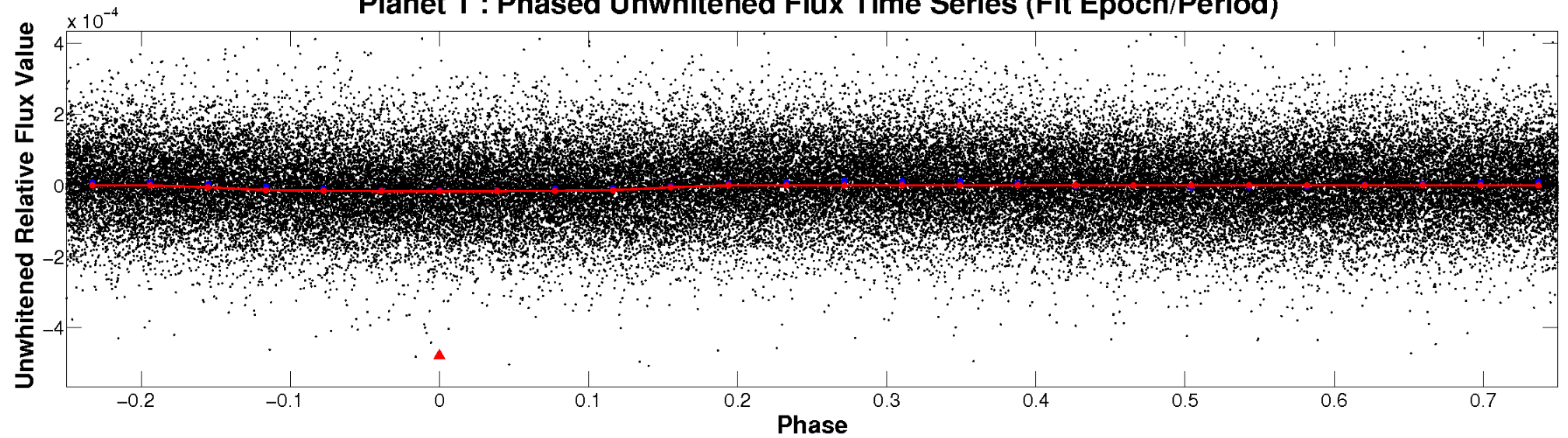
ALT Odd/Even

TCE 008429756-01

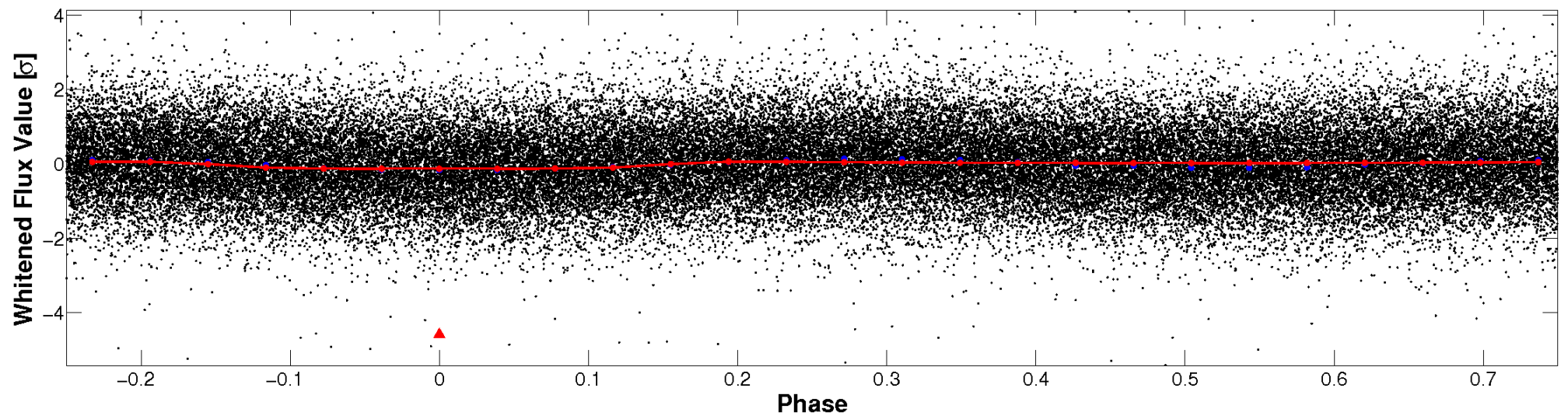


Non-Whitened Vs. Whitened Light Curve

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

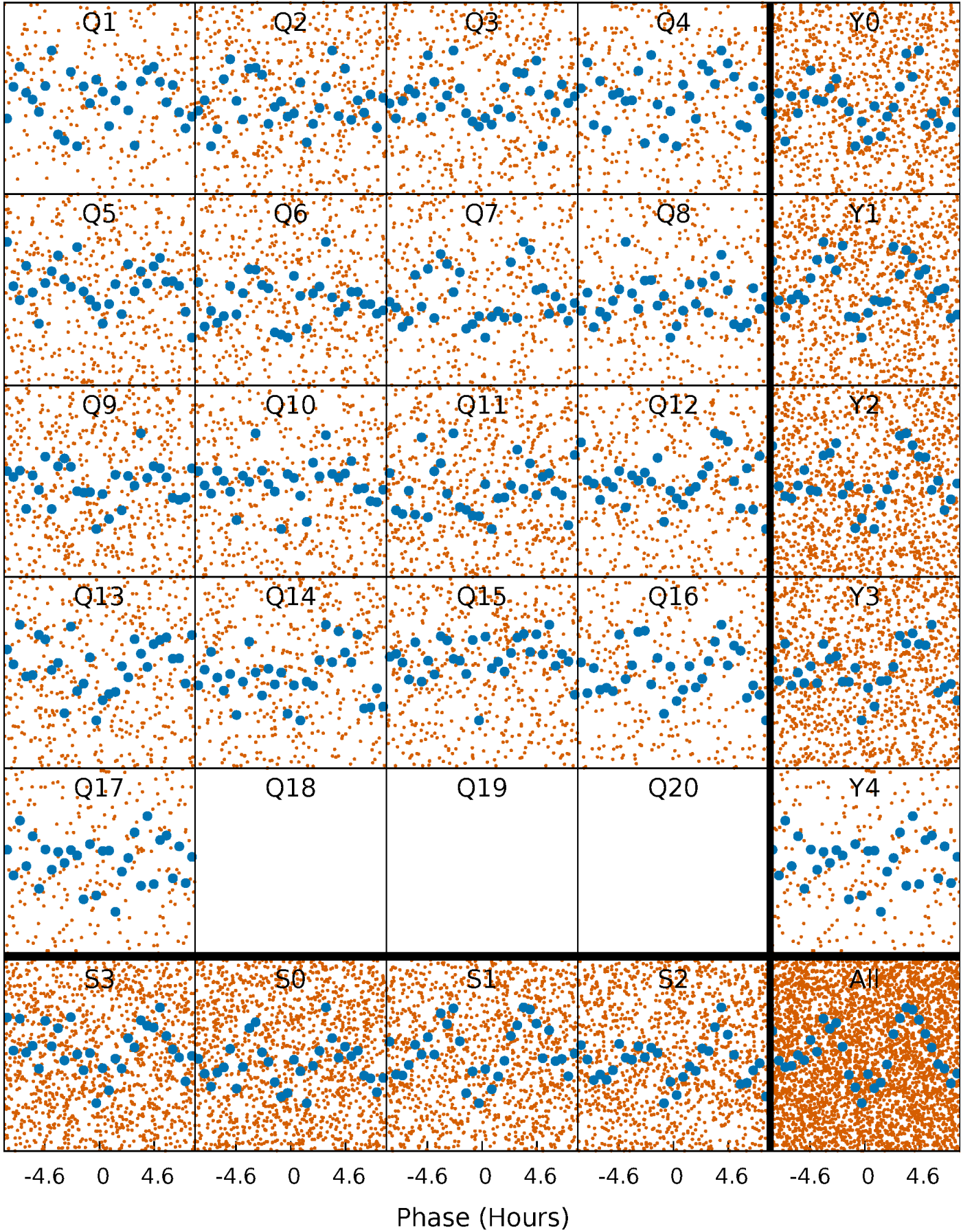


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



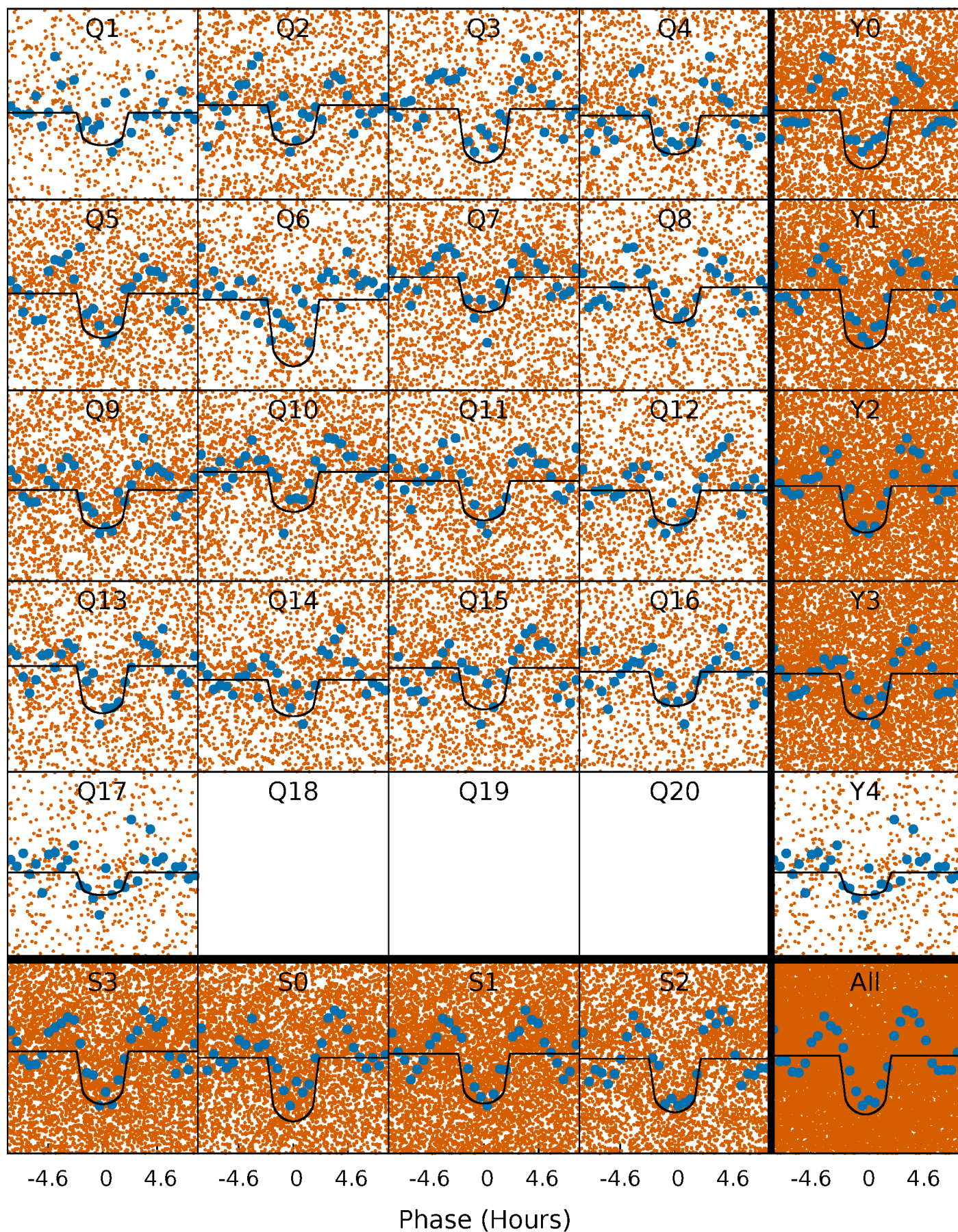
PDC Quarter-Phased Transit Curves

TCE 008429756-01 P= 0.526820 Days $T_0=131.750224$ (BKJD)



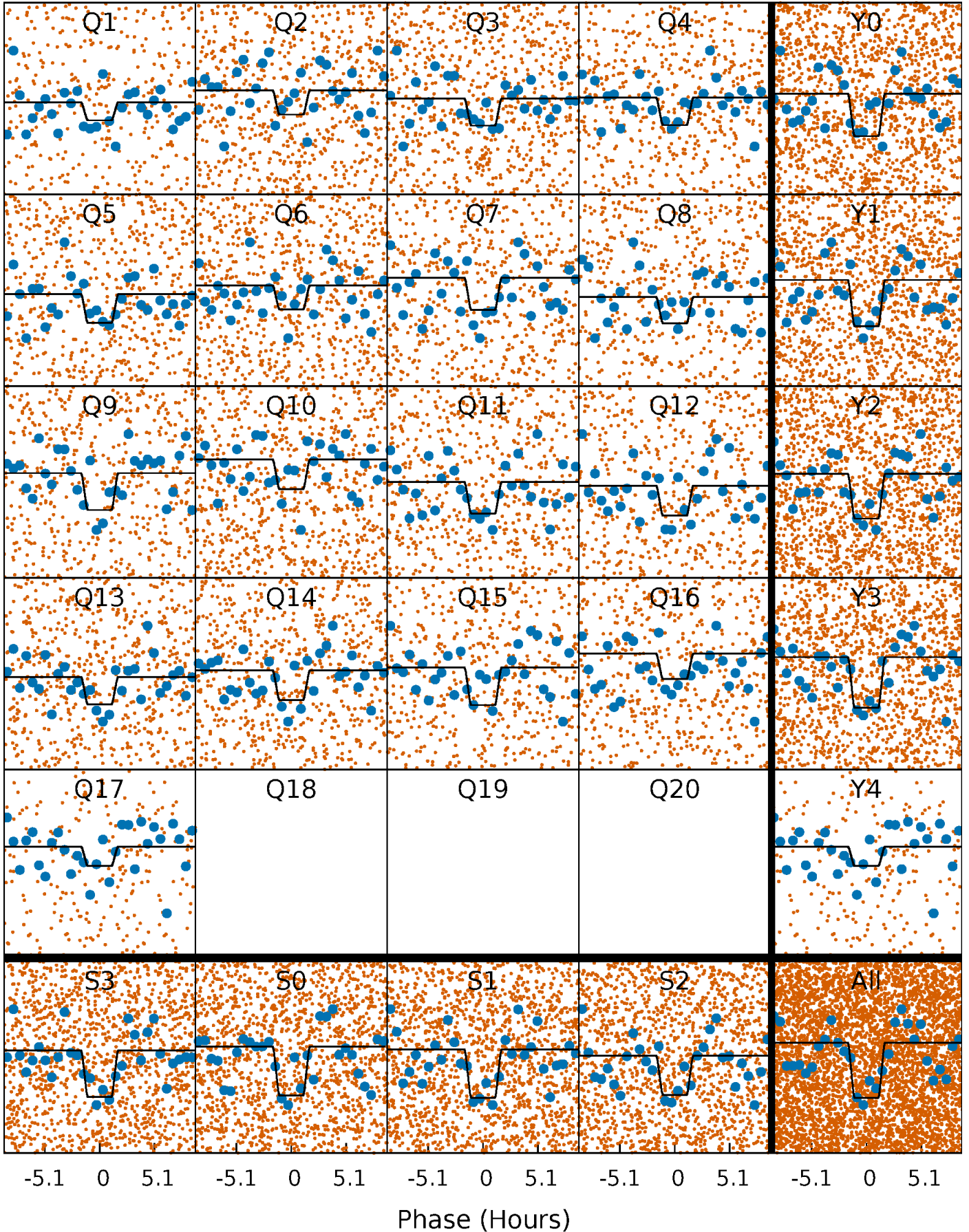
DV Quarter-Phased Transit Curves

TCE 008429756-01 P= 0.526820 Days $T_0=131.750224$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

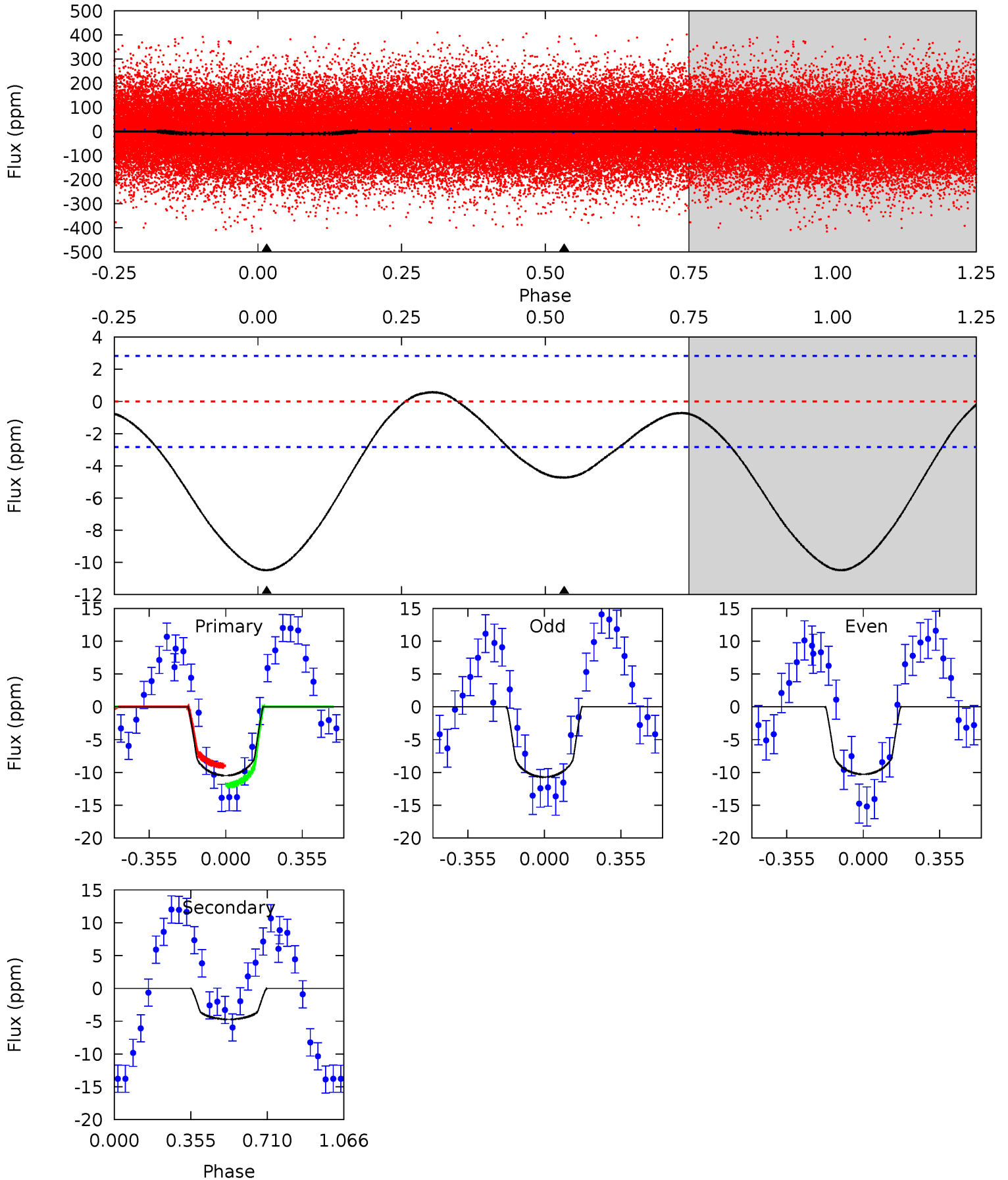
TCE 008429756-01 P= 0.526826 Days $T_0=131.744454$ (BKJD)



DV Model-Shift Uniqueness Test

008429756-01, P = 0.526820 Days, E = 131.223404 Days

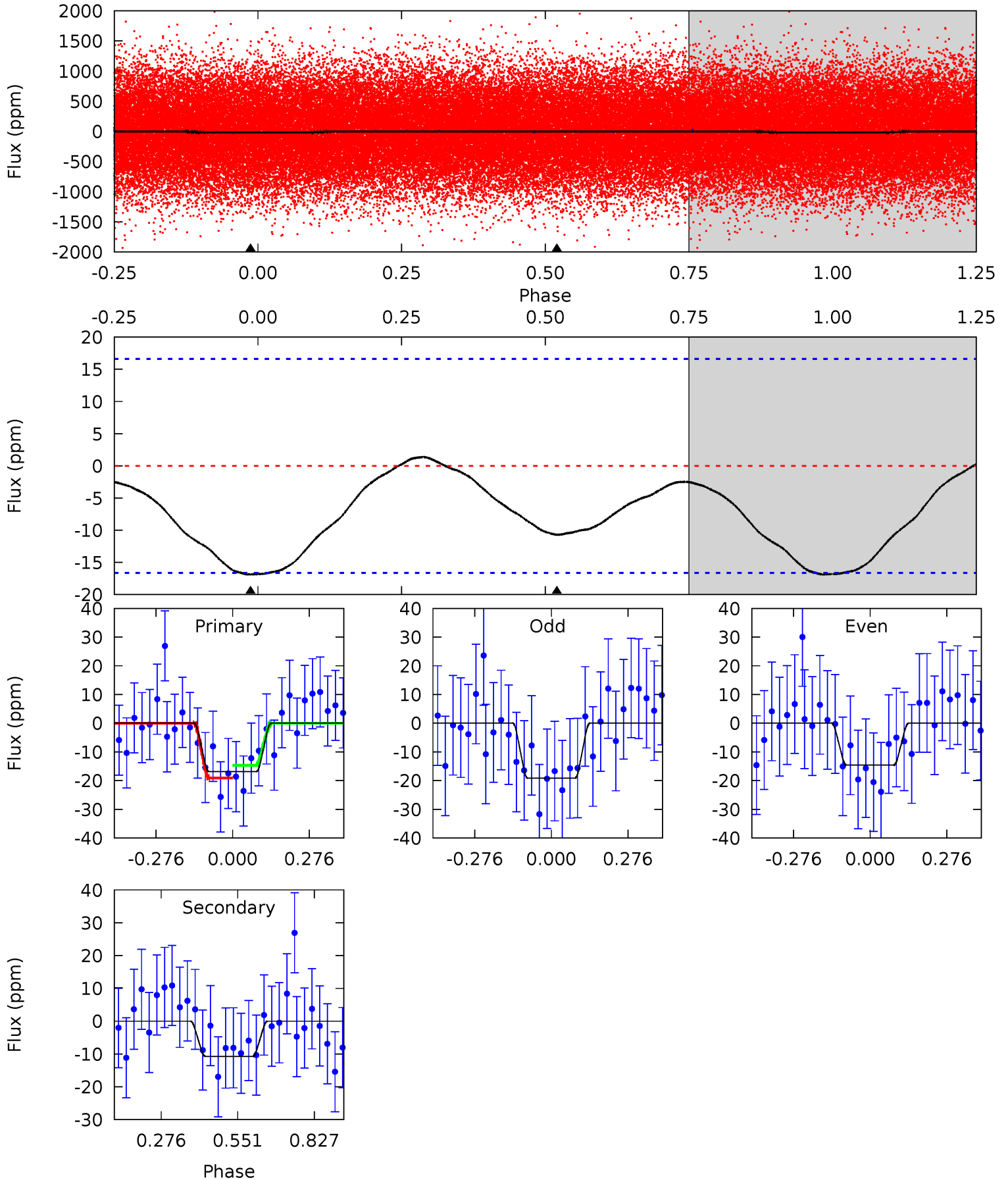
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	7.15	0	0	4.29	0.92	1.13	15.9	15.9	7.15	7.15	0.33	0.98	0.05	2.26



Alt Model-Shift Uniqueness Test

008429756-01, P = 0.526826 Days, E = 131.217628 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.41	2.80	0	0	4.35	1.09	0.37	4.41	4.41	2.80	2.80	0.59	1.73	0.08	0.57



Stellar Parameters For KIC 008429756

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6558^{+68}_{-88}	$4.342^{+0.028}_{-0.105}$	$0.020^{+0.150}_{-0.200}$	$1.252^{+0.198}_{-0.071}$	$1.261^{+0.080}_{-0.089}$	$0.905^{+0.122}_{-0.285}$
	+1%/-1%	+1%/-2%	+750%/-1000%	+16%/-6%	+6%/-7%	+13%/-32%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 008429756-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$0.62^{+0.24}_{-0.25}$	3890^{+127}_{-86}	4499^{+1334}_{-775}	$1.291^{+2.301}_{-0.655}$
Alt.	-11 ± 4	$0.60^{+0.24}_{-0.24}$	3890^{+140}_{-89}	5561^{+1813}_{-1023}	$2.976^{+5.341}_{-1.616}$

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

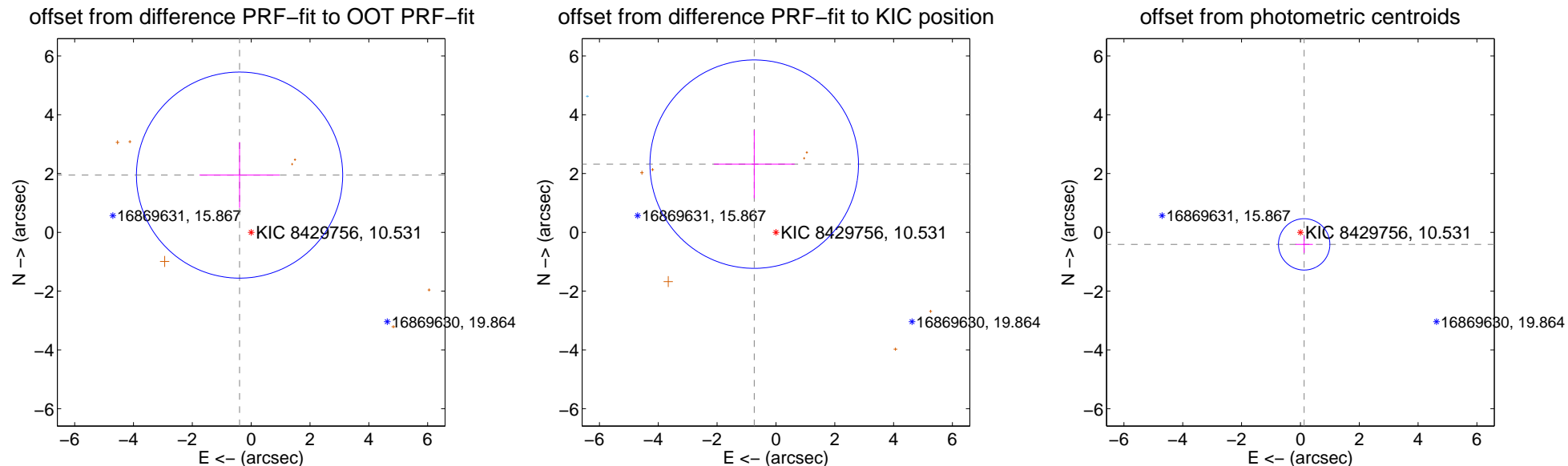
DV Centroid Data

Supplemental centroid analysis for 008429756-01. **Kepler magnitude: 10.53.** Transit SNR 17.87

There are 1 quarters with good PRF difference image offsets

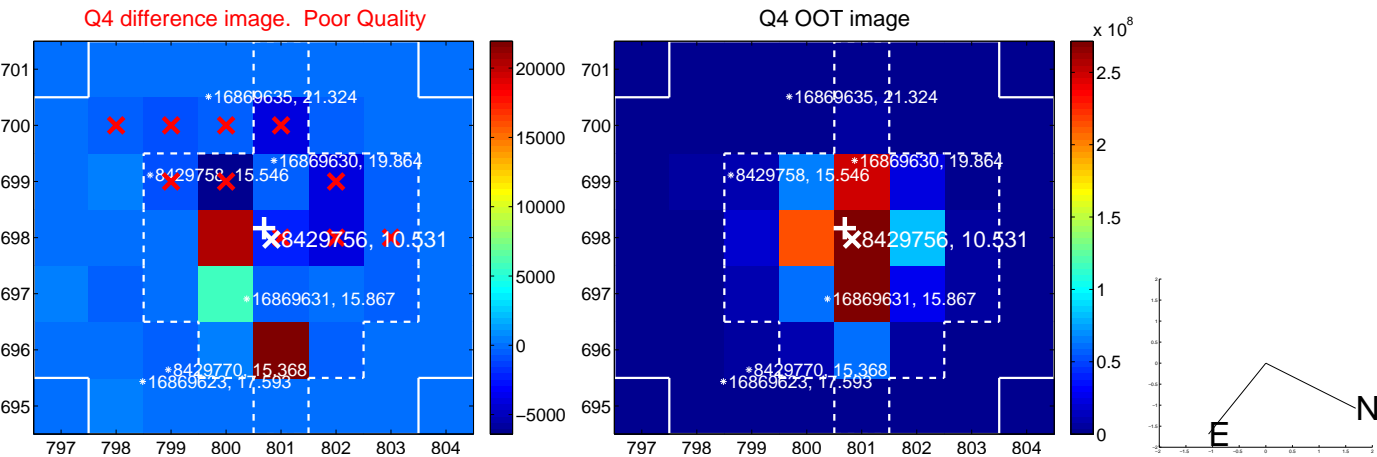
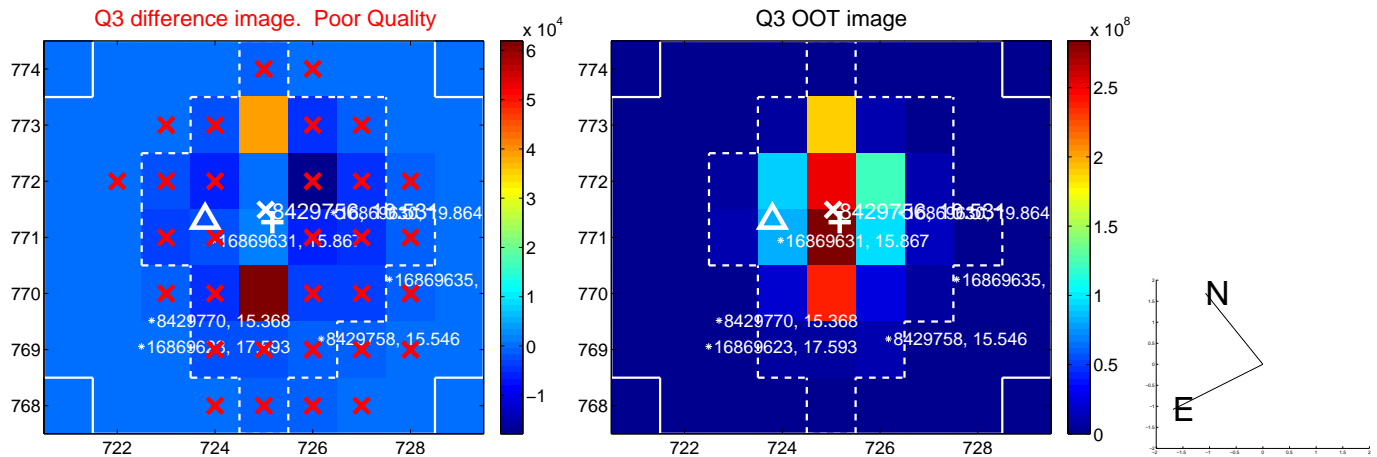
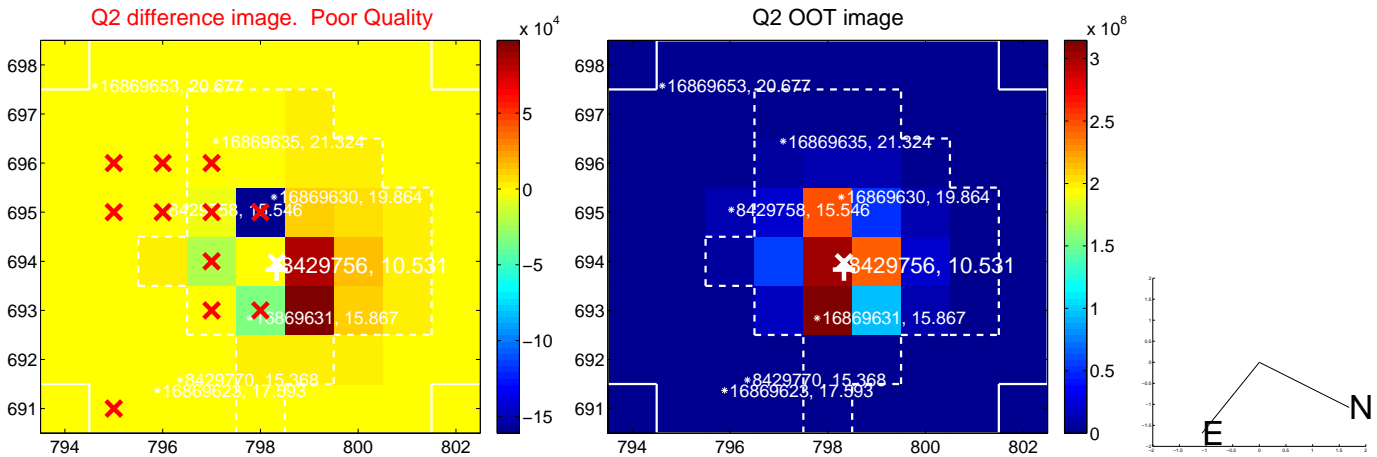
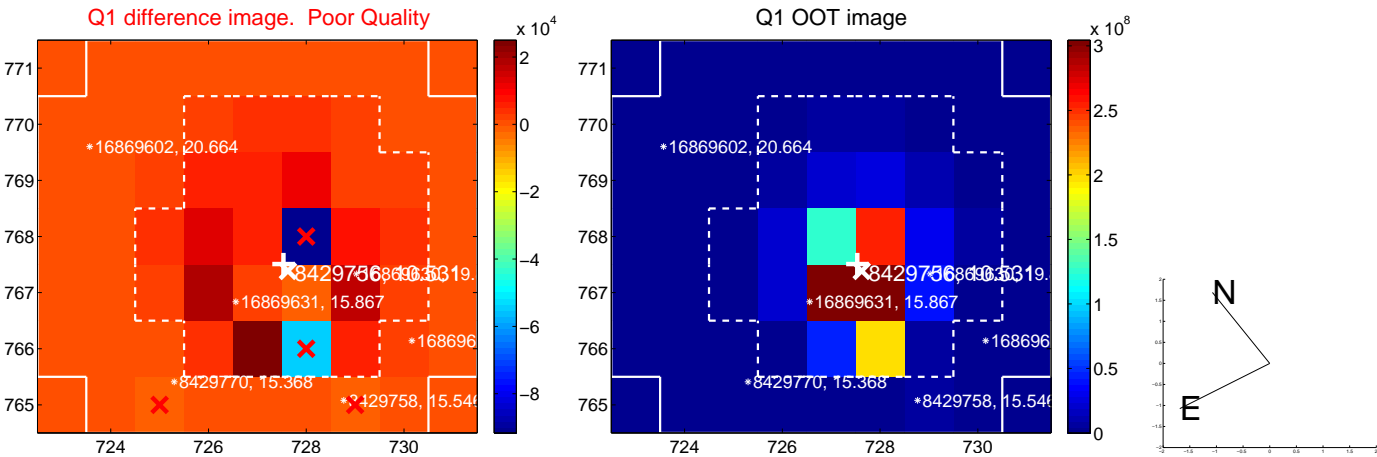
The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.987 ± 1.169	1.70	0.394 ± 1.363	1.948 ± 1.116
PRF-fit source offset from KIC position	2.435 ± 1.182	2.06	0.738 ± 1.374	2.320 ± 1.160
photometric centroid source offset	0.43 ± 0.29	1.47	-0.13 ± 0.30	-0.41 ± 0.29

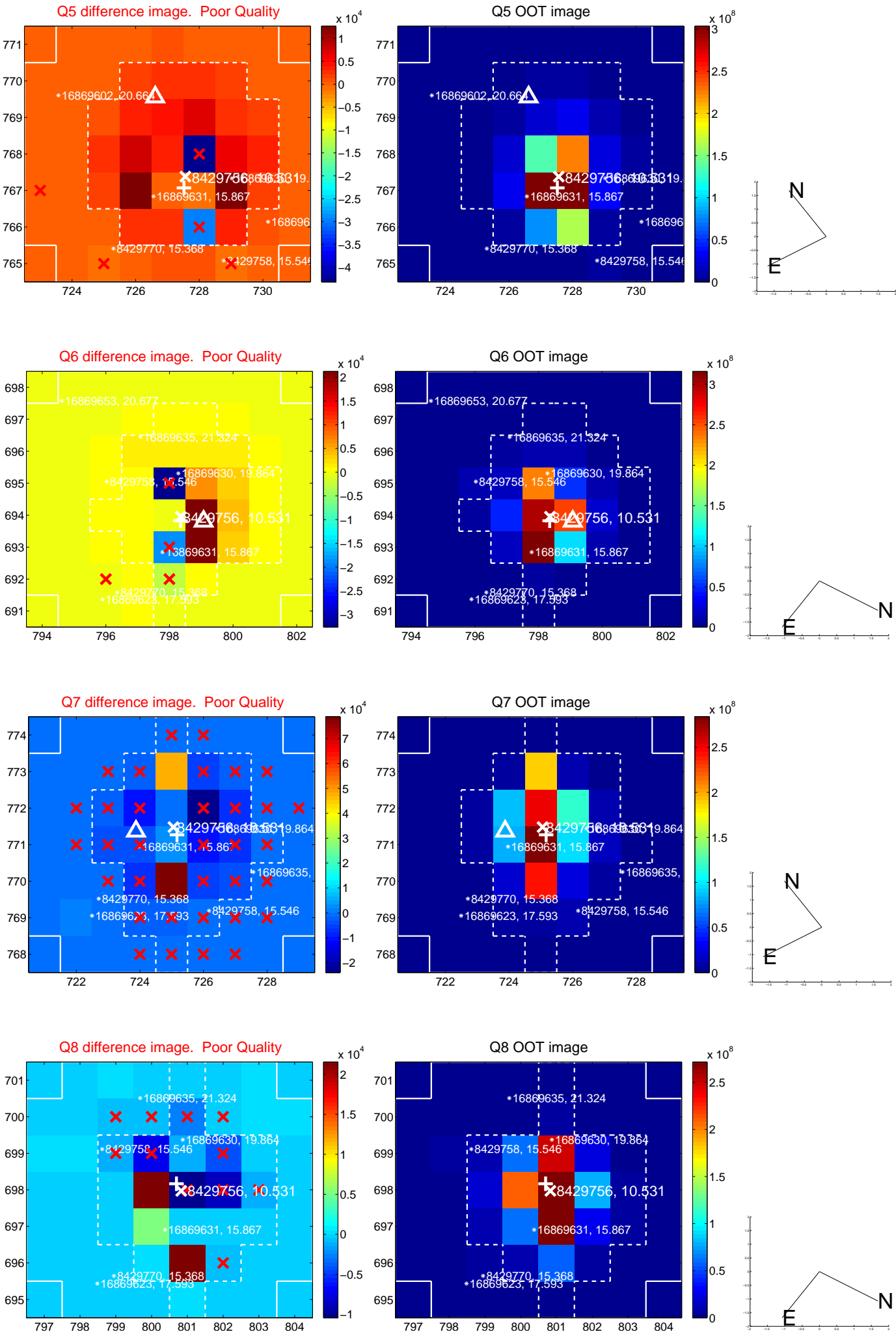


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

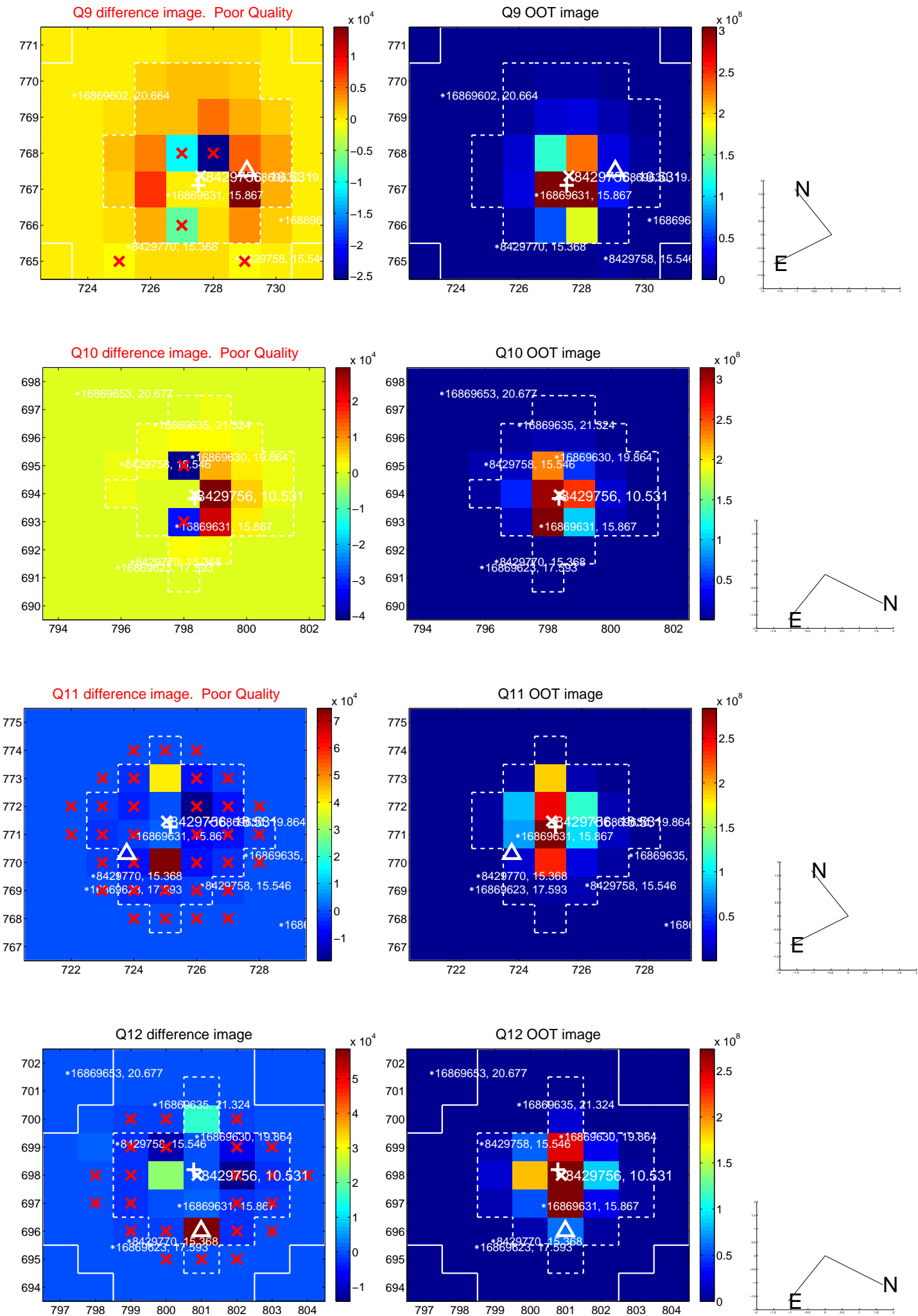
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



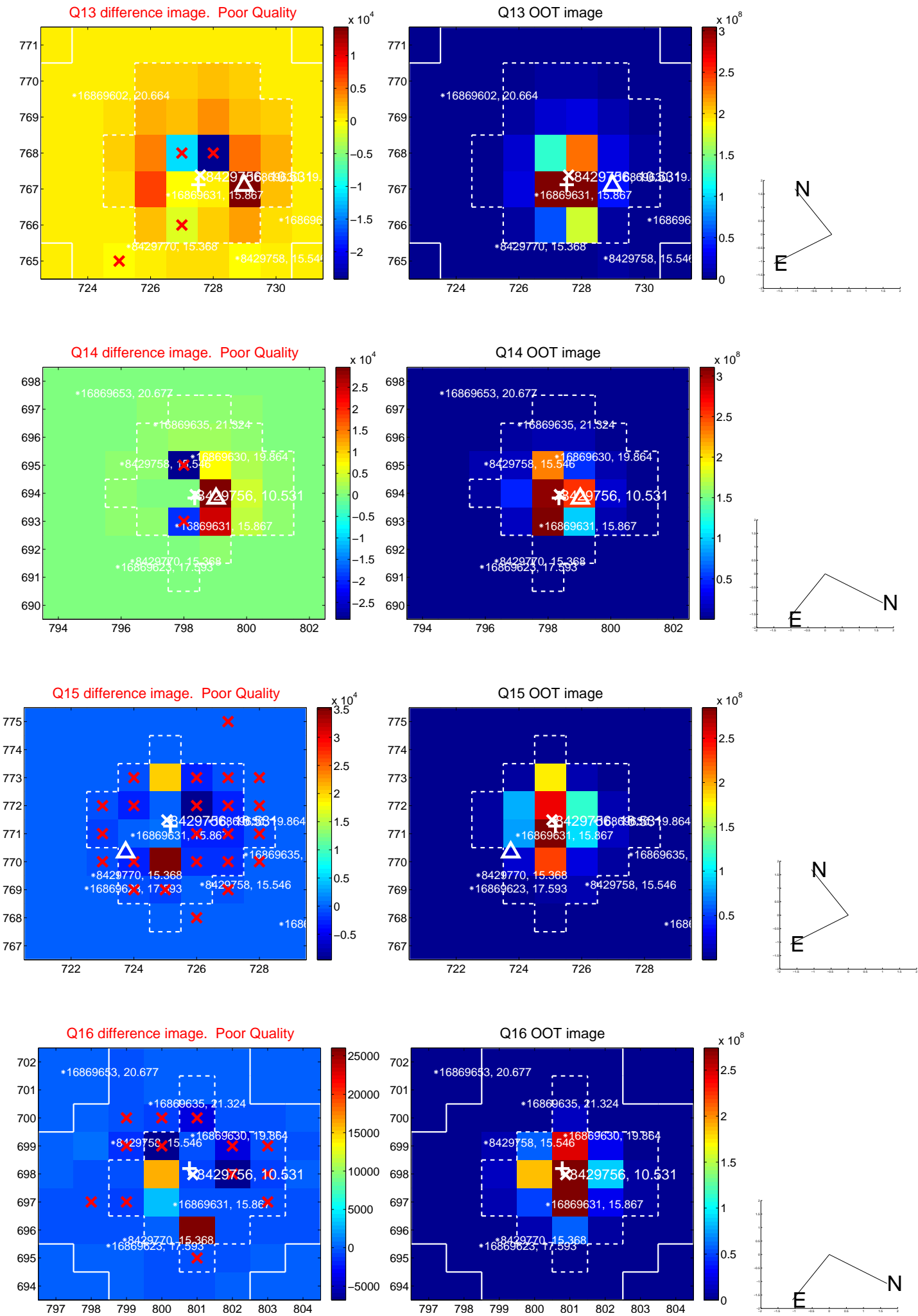
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



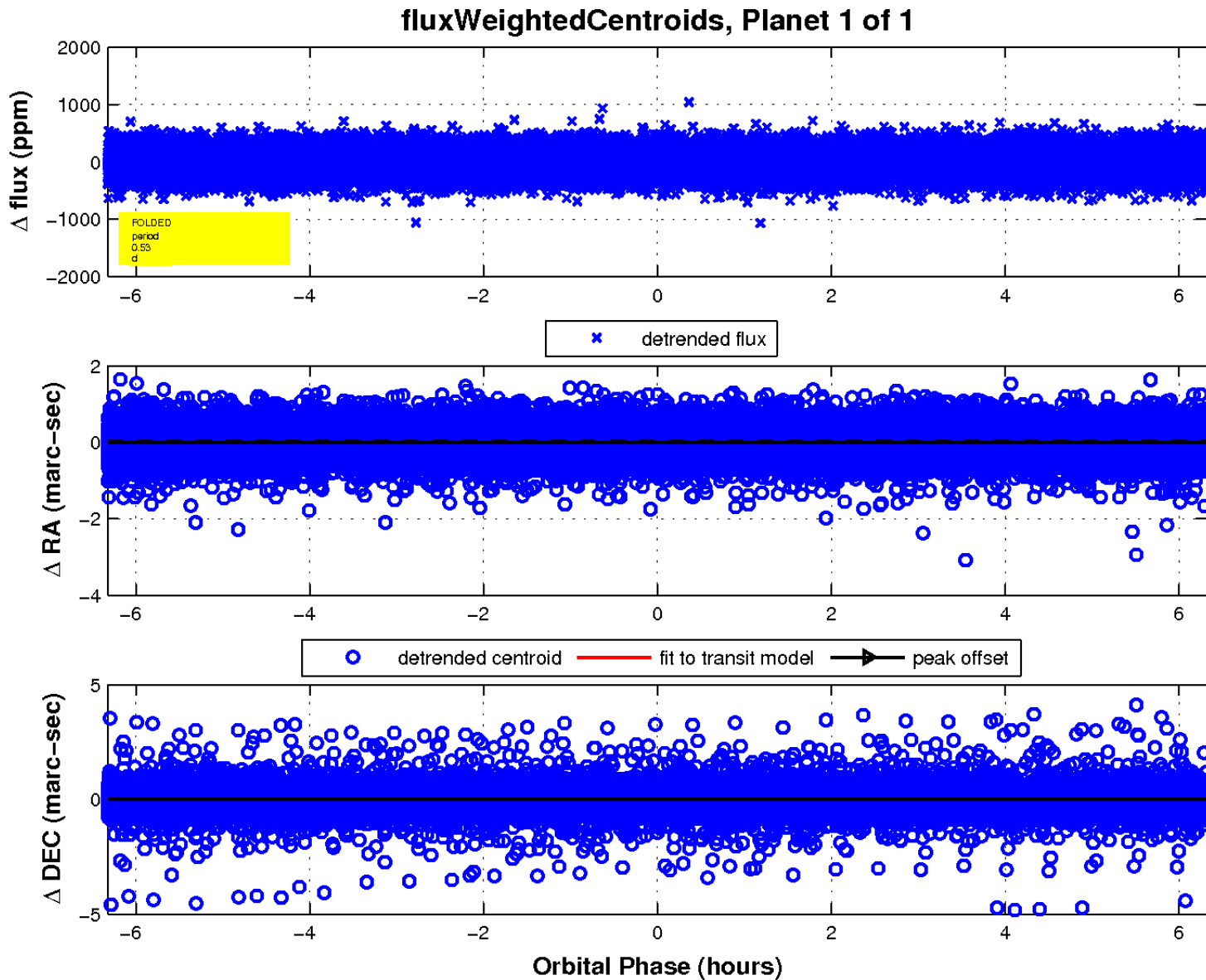
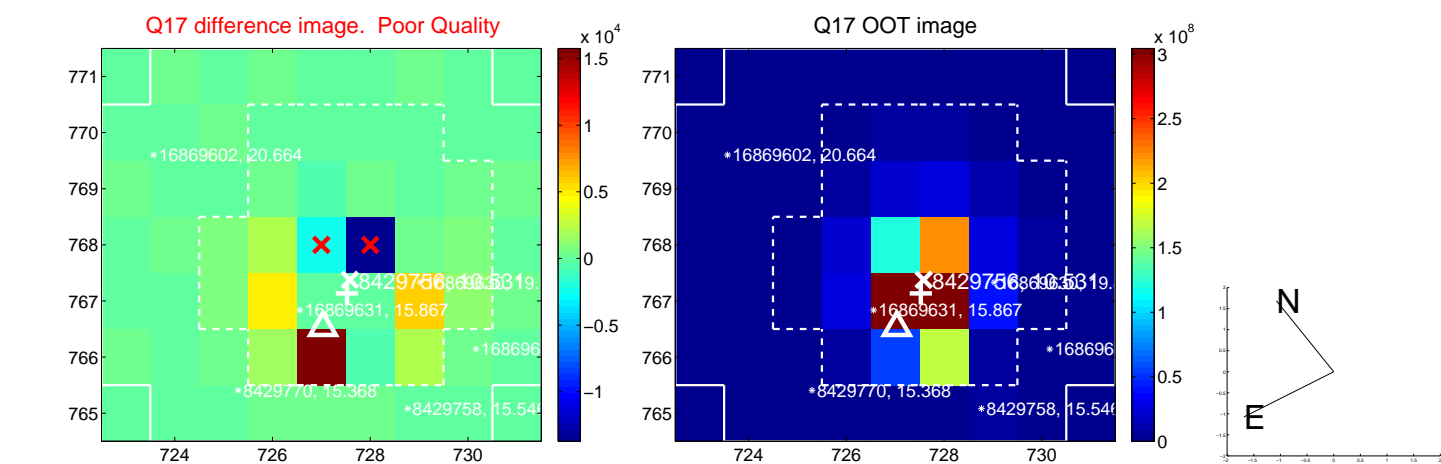
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

