

KIC 002854795

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})
002854795-01	OBS	No	526.761338	272.204268	71.9	12.439	7.7	6.8	1.95	7196	1.91	4.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002854795-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

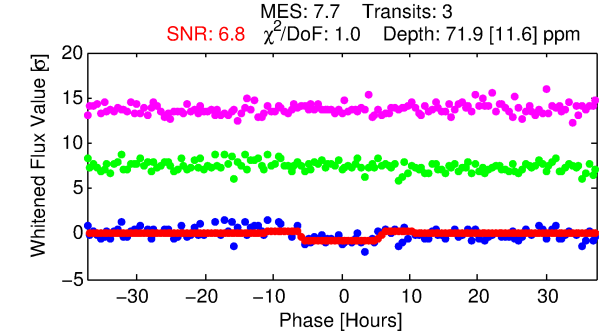
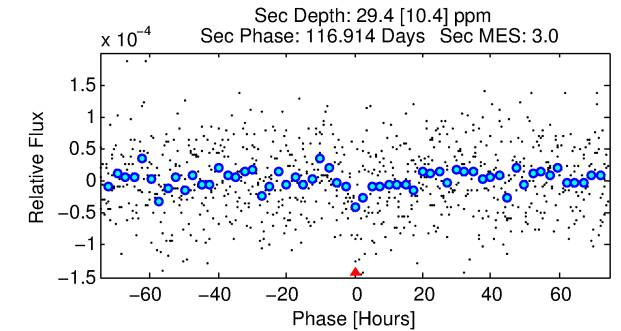
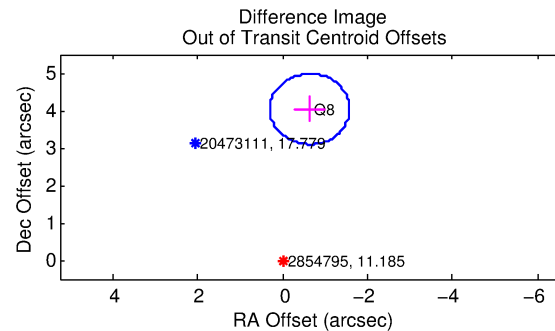
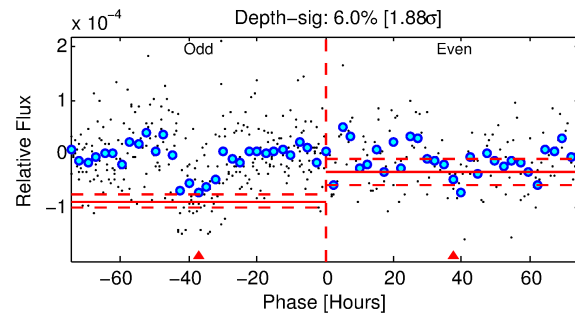
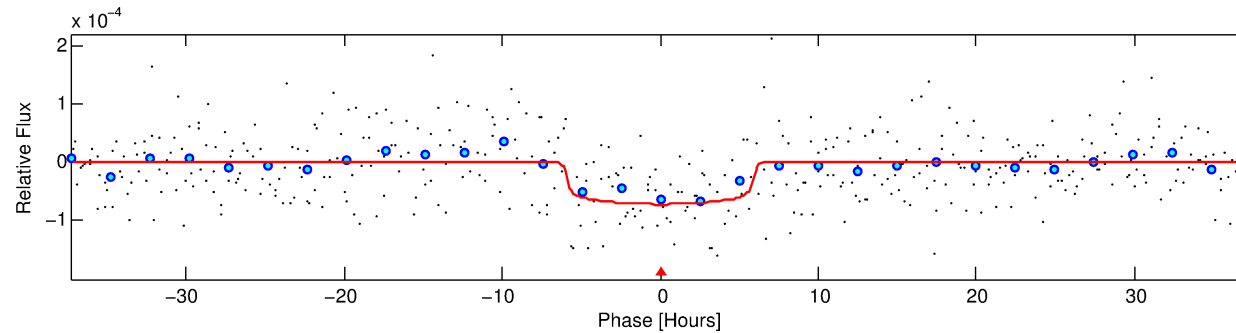
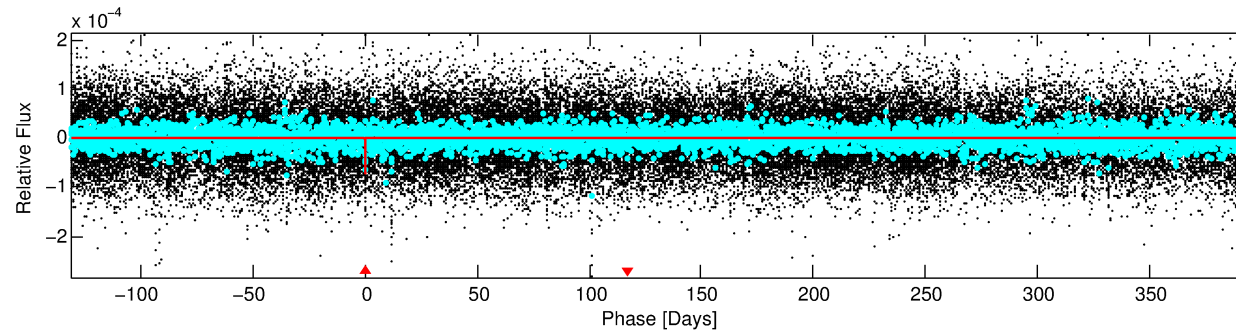
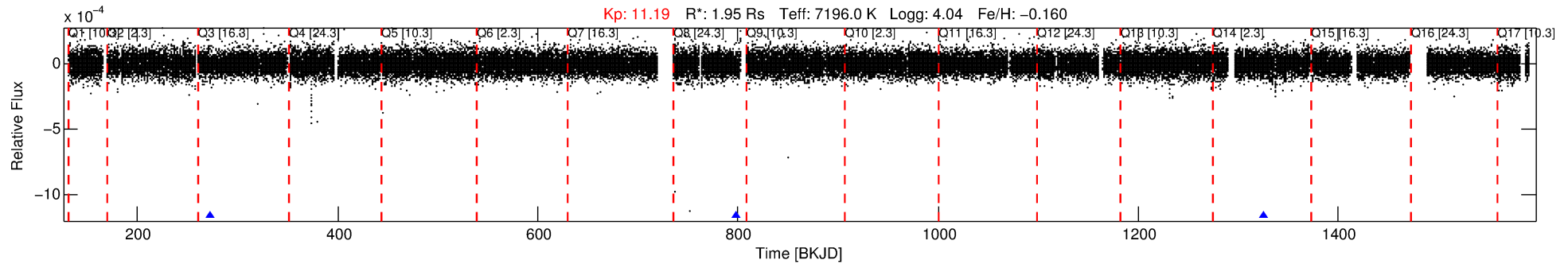
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002854795-01

No Significant Match Found

DV One-Page Summary

KIC: 2854795 Candidate: 1 of 1 Period: 526.761 d



DV Fit Results:

Period = 526.76134 [0.01602] d
Epoch = 272.2043 [0.0195] BKJD
Rp/R* = 0.0090 [0.0016]
a/R* = 148.20 [141.14]
b = 0.90 [0.21]
Seff = 4.24 [1.81]
Teq = 366 [39] K
Rp = 1.91 [0.68] Re
a = 1.4666 [0.3843] AU
Ag = 9497.17 [6034.88] [1.57 σ]
Teffp = 5586 [748] K [6.97 σ]

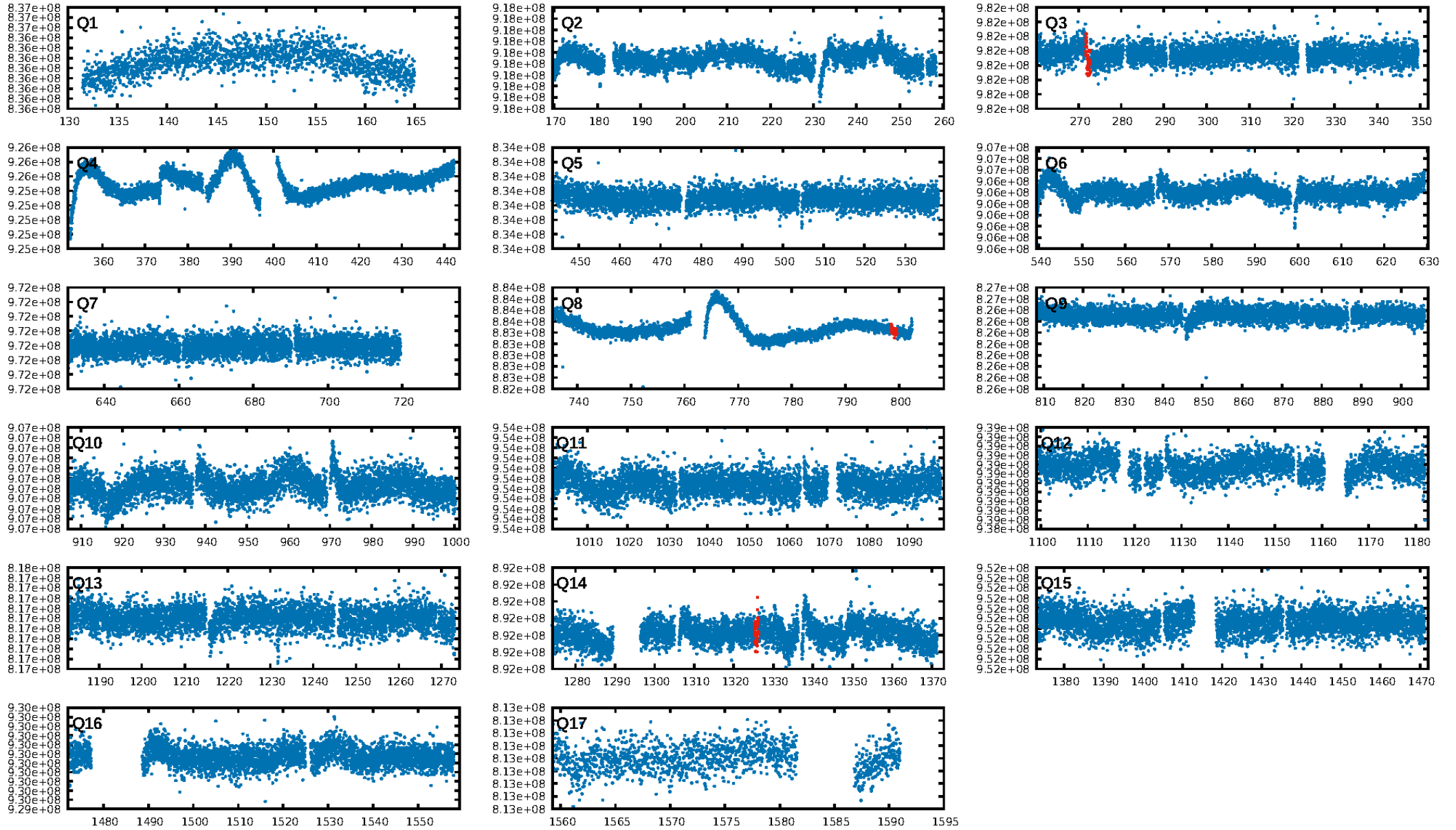
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.03e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.508
Centroid-sig: 0.2%
Centroid-so: 5.011 arcsec [1.89 σ]
OotOffset-rm: 4.088 arcsec [13.03 σ]
KicOffset-rm: 3.493 arcsec [11.15 σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

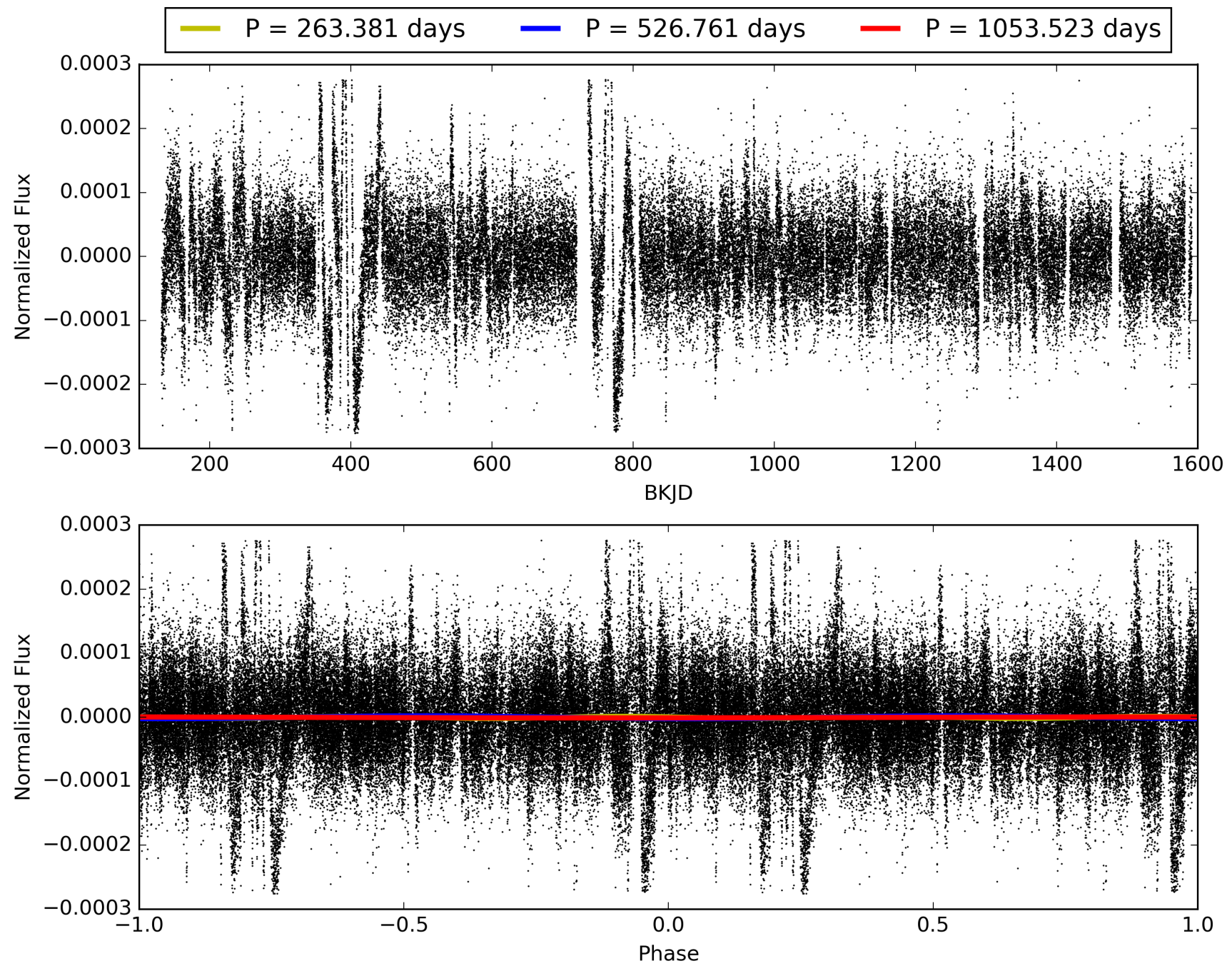
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:55:01 Z

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

TCE 002854795-01, PDC Light Curves

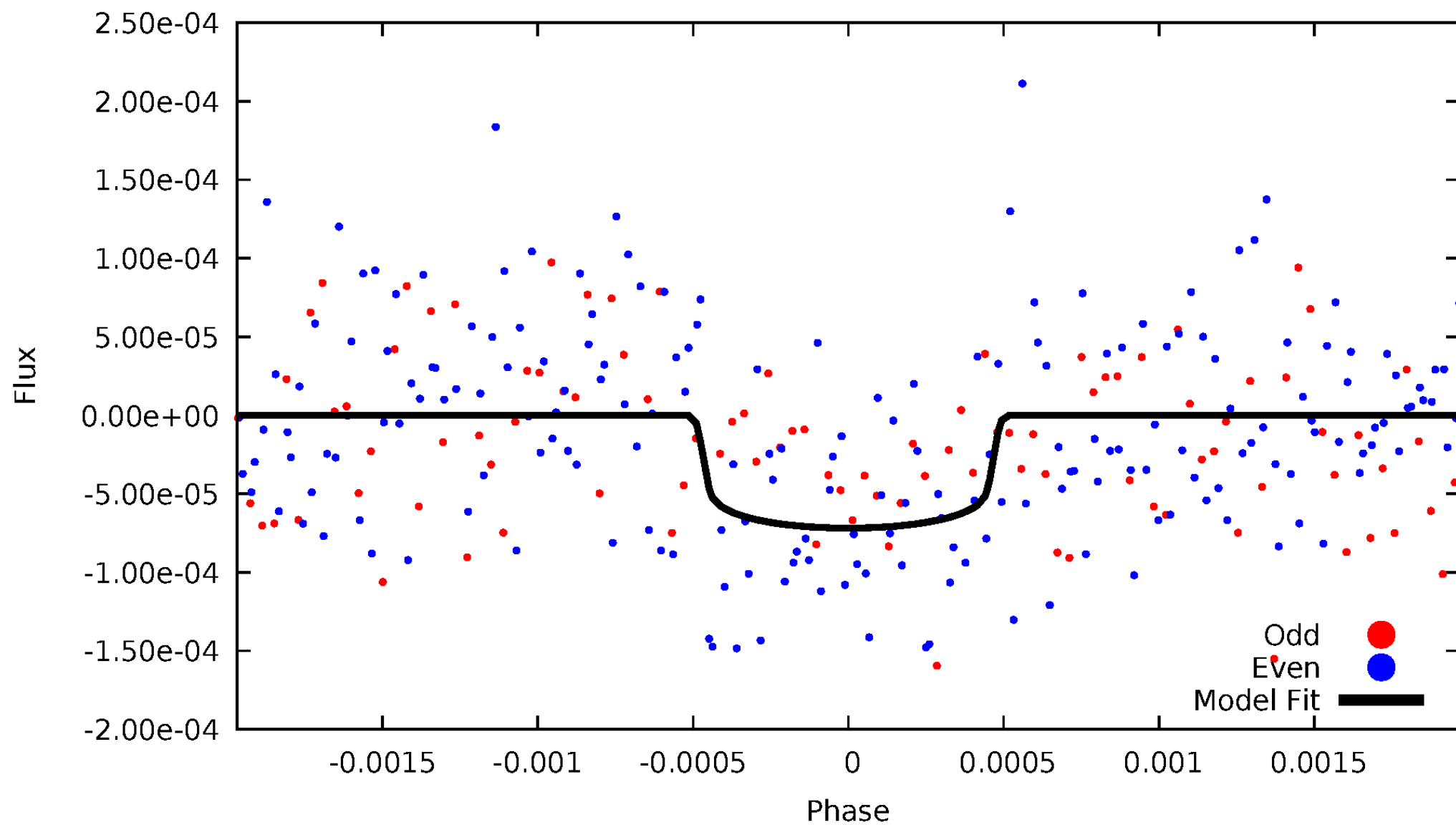


TCE 002854795-01



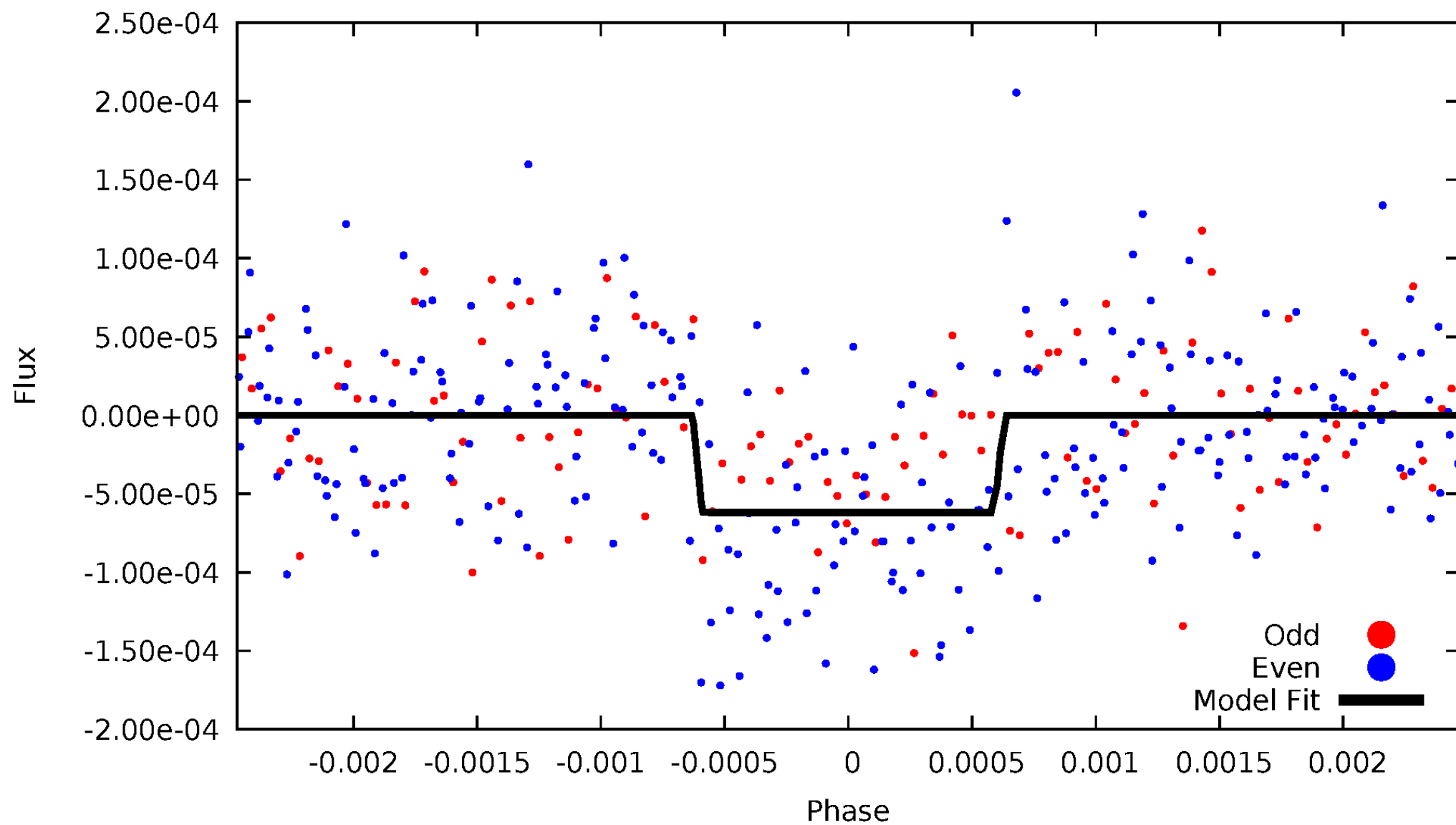
DV Odd/Even

TCE 002854795-01



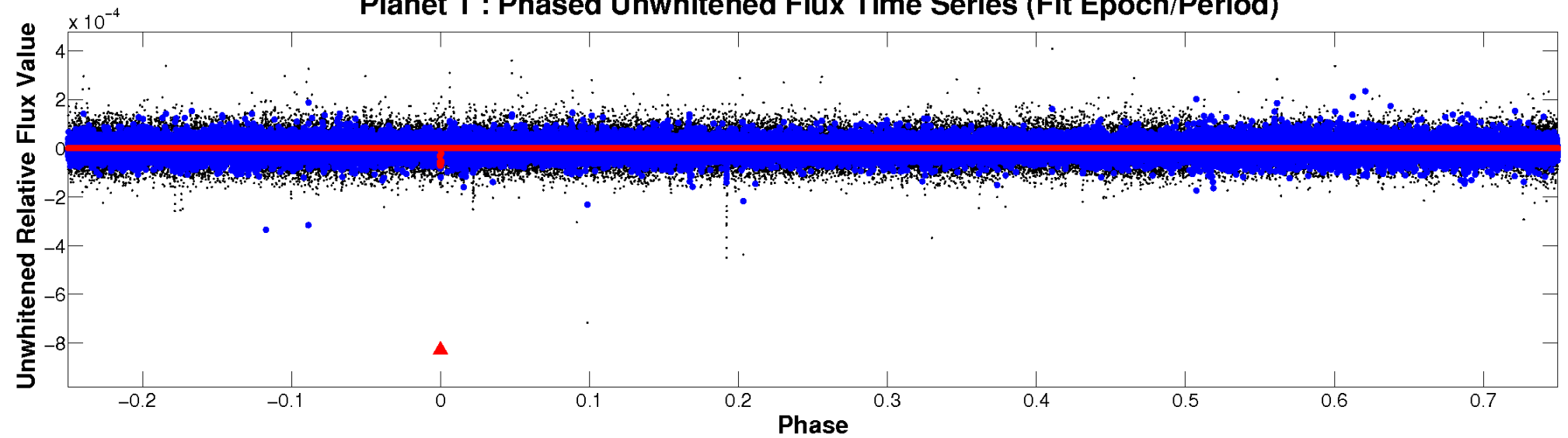
ALT Odd/Even

TCE 002854795-01

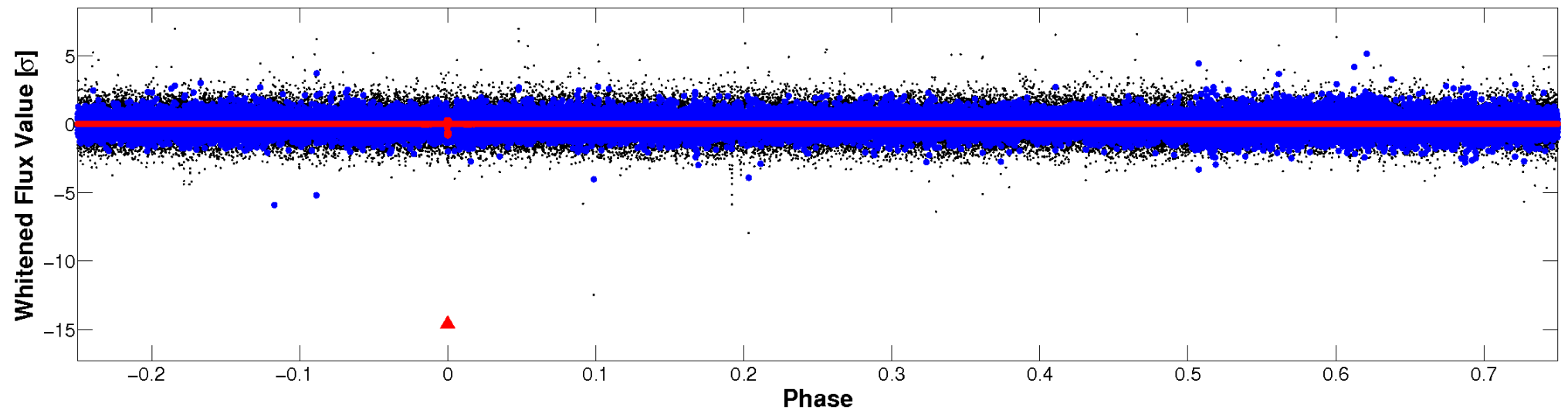


Non-Whitened Vs. Whitened Light Curve

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



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



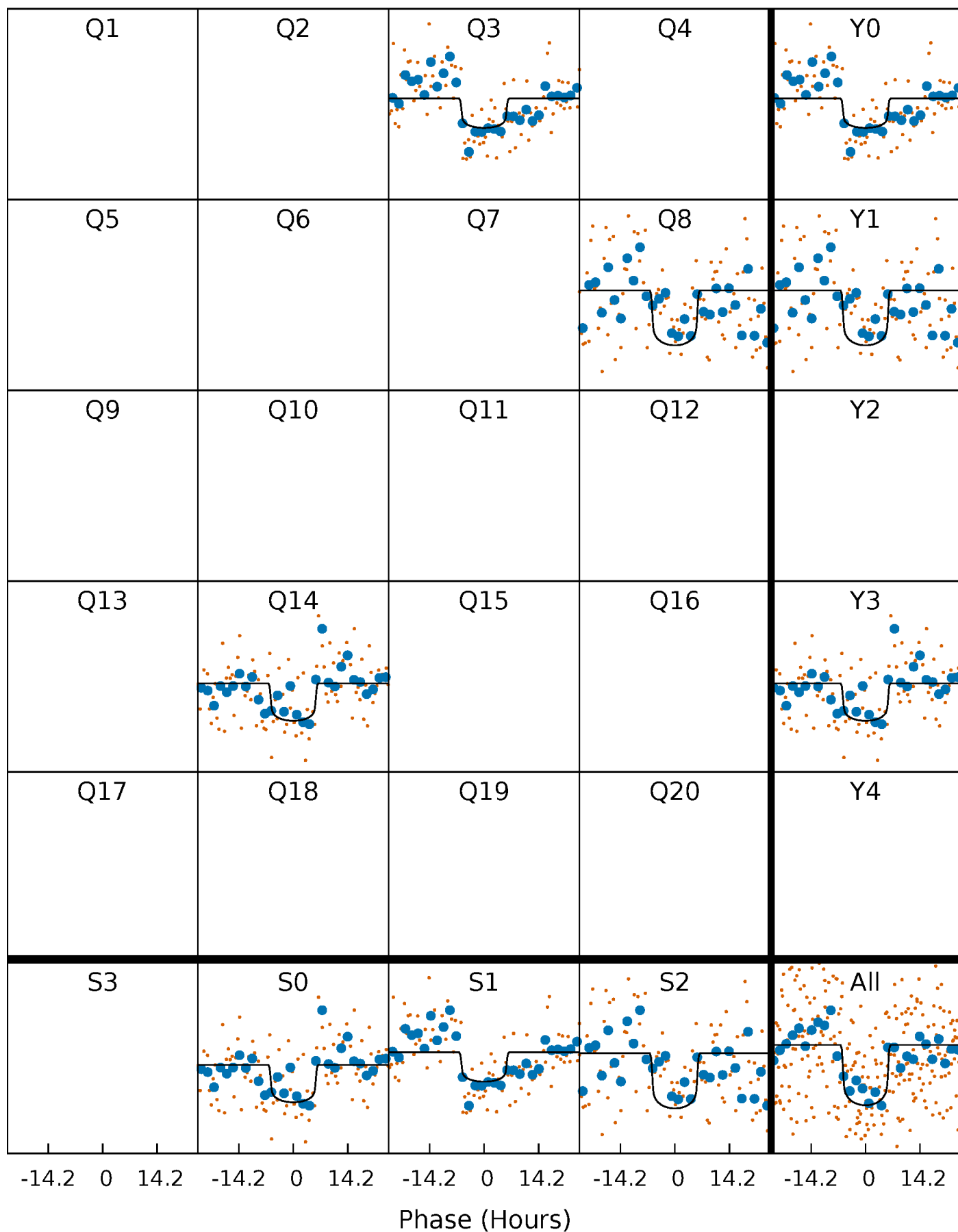
PDC Quarter-Phased Transit Curves

TCE 002854795-01 P=526.761338 Days $T_0=272.204268$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 002854795-01 P=526.761338 Days $T_0=272.204268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

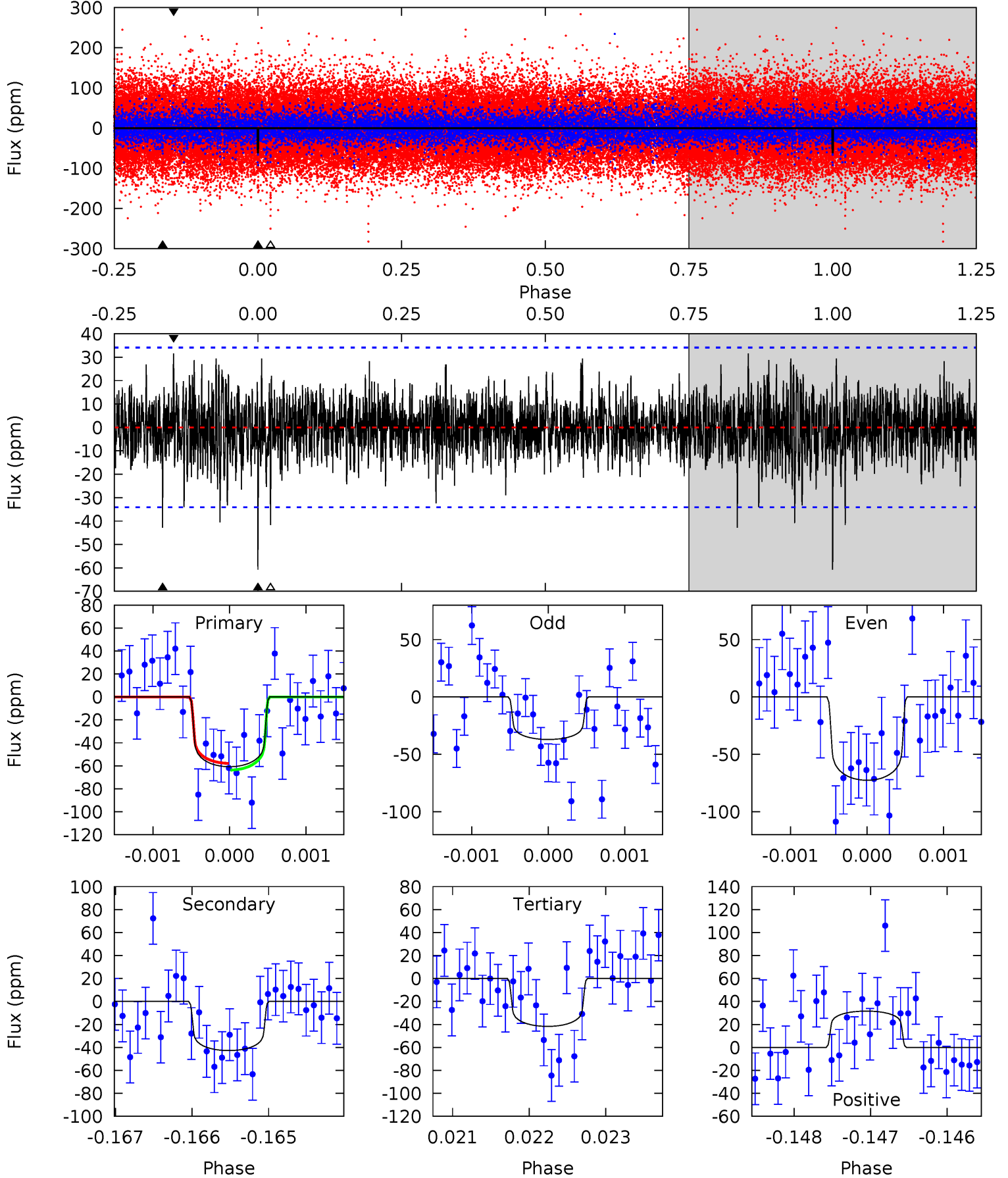
TCE 002854795-01 P=526.688631 Days $T_0=272.287246$ (BKJD)



DV Model-Shift Uniqueness Test

002854795-01, P = 526.761338 Days, E = 272.204268 Days

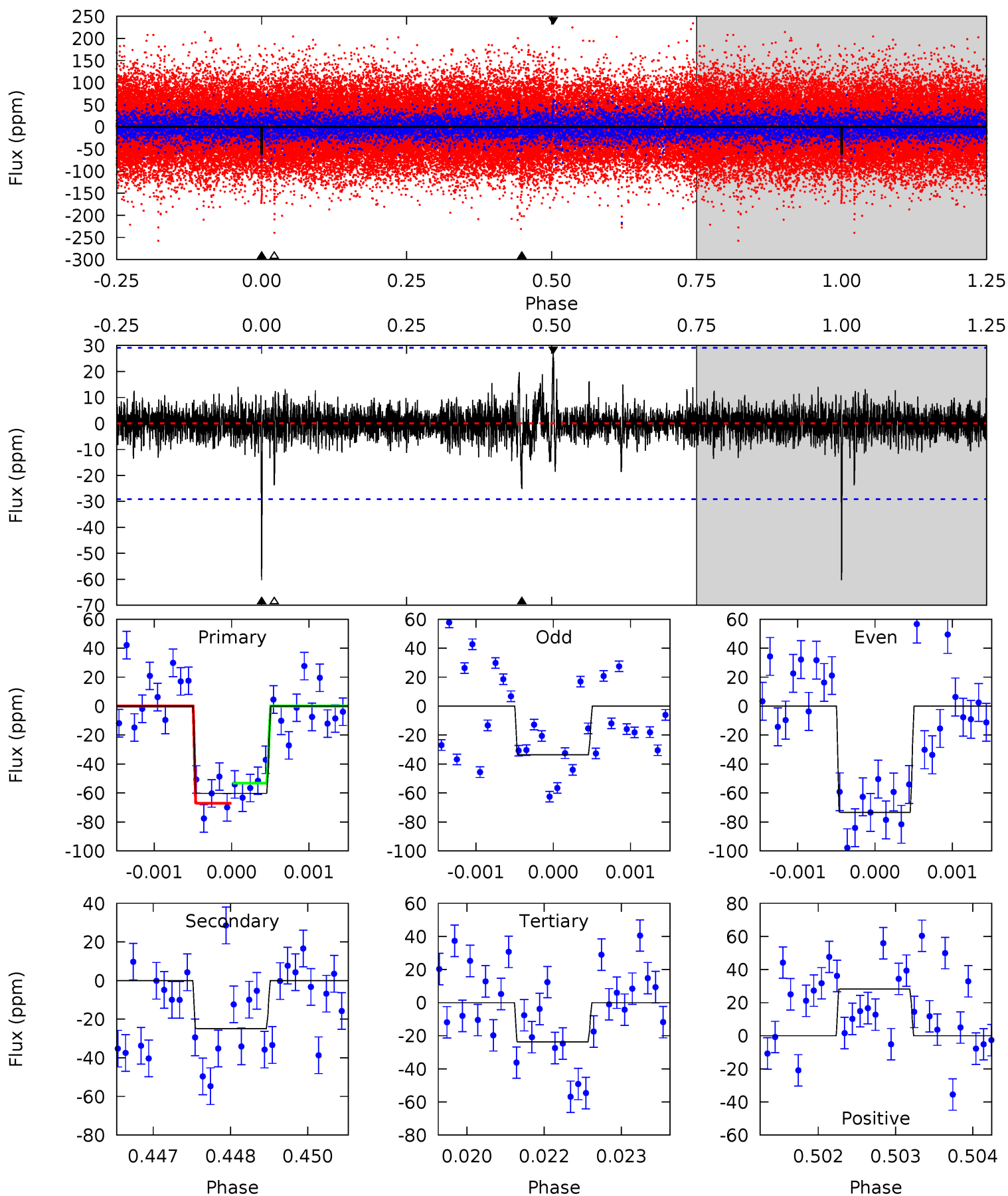
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.71	6.84	6.67	5.05	5.45	3.29	1.42	3.04	4.66	0.17	1.78	2.68	1.07	0.34	0.47



Alt Model-Shift Uniqueness Test

002854795-01, P = 526.688631 Days, E = 272.287246 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	4.62	4.41	5.23	5.41	3.22	0.81	6.78	5.95	0.21	-0.61	3.49	1.19	0.32	1.30



Stellar Parameters For KIC 002854795

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7196^{+200}_{-325}	$4.039^{+0.214}_{-0.175}$	$-0.160^{+0.250}_{-0.350}$	$1.949^{+0.543}_{-0.597}$	$1.513^{+0.197}_{-0.296}$	$0.288^{+0.403}_{-0.126}$
	+3%/-5%	+5%/-4%	+156%/-219%	+28%/-31%	+13%/-20%	+140%/-44%
Source	KIC0	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 002854795-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-43 ± 6	$1.87^{+0.48}_{-0.42}$	508^{+39}_{-45}	6059^{+647}_{-592}	14152^{+9819}_{-5399}
Alt.	-25 ± 5	$1.63^{+0.46}_{-0.40}$	508^{+39}_{-41}	5685^{+797}_{-551}	10737^{+9343}_{-4260}

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

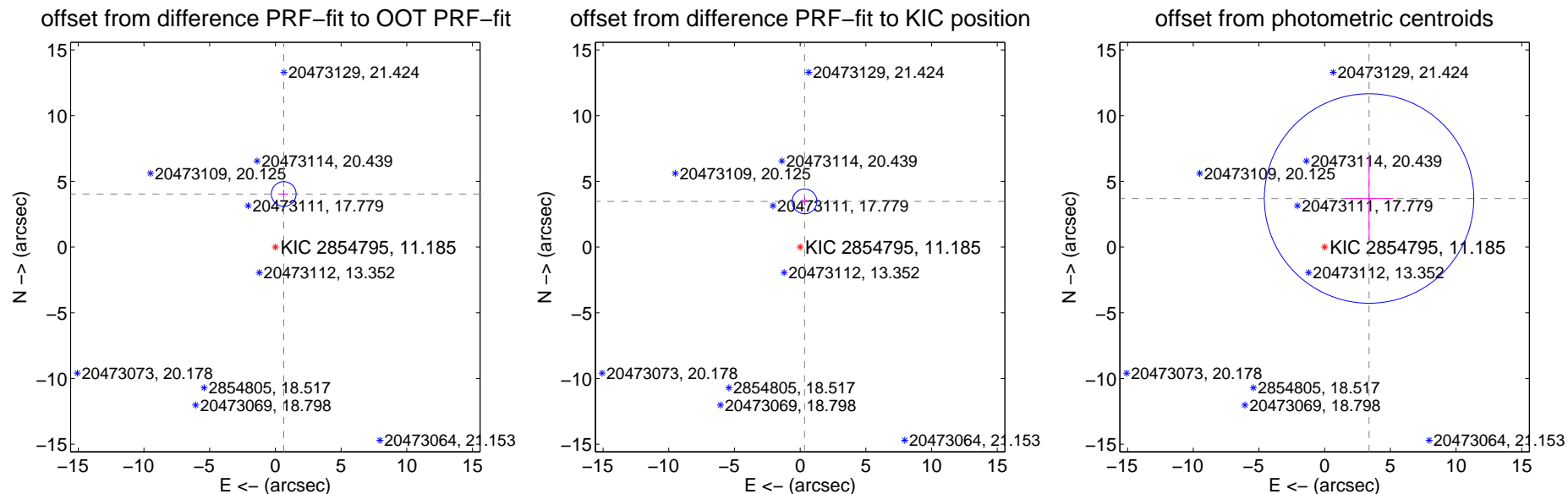
DV Centroid Data

Supplemental centroid analysis for 002854795-01. **Kepler magnitude: 11.19.** Transit SNR 6.76

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.64 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.088 ± 0.314	13.03	-0.637 ± 0.338	4.038 ± 0.313
PRF-fit source offset from KIC position	3.493 ± 0.313	11.15	-0.334 ± 0.338	3.477 ± 0.313
photometric centroid source offset	5.01 ± 2.66	1.89	-3.38 ± 1.84	3.70 ± 3.18

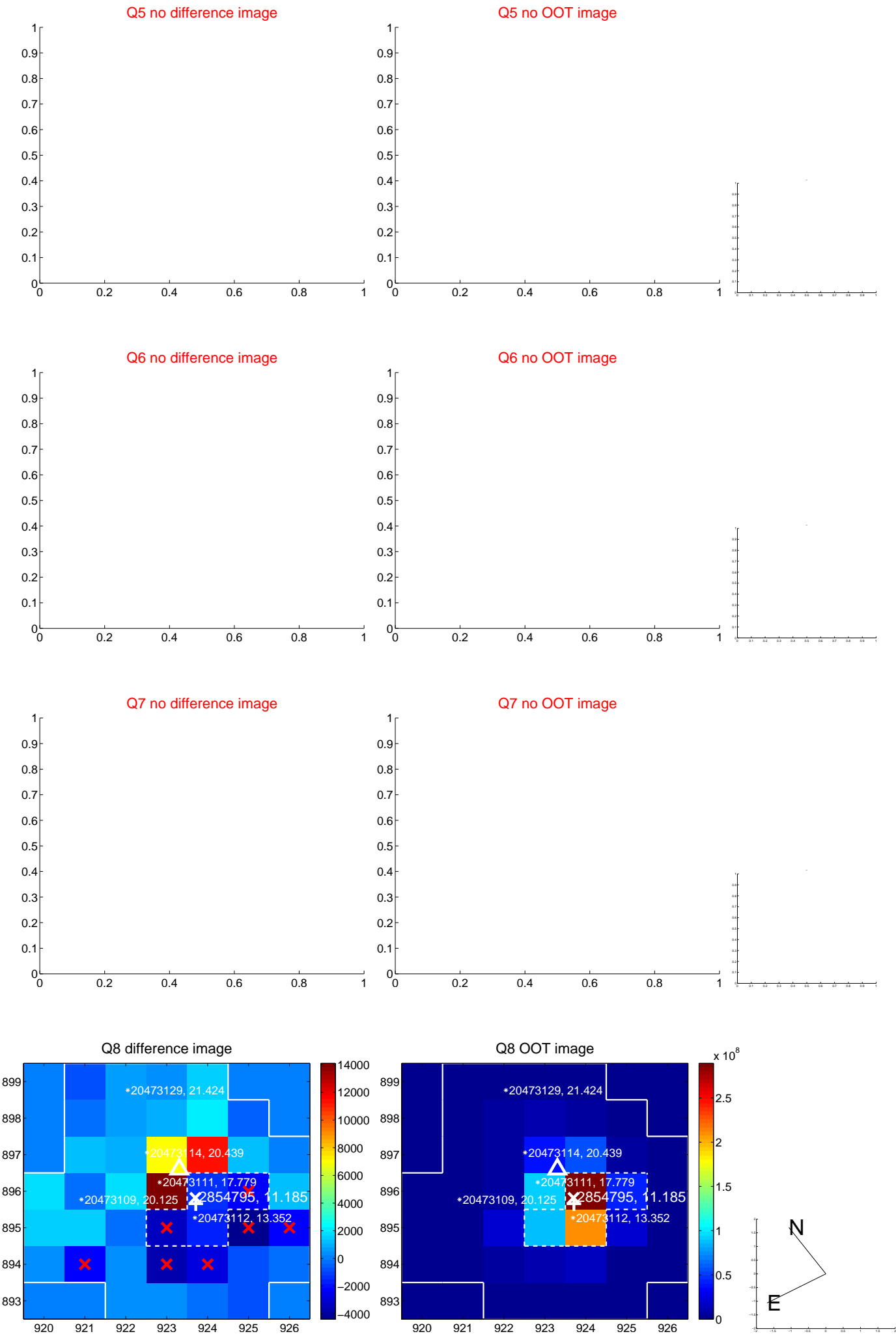


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



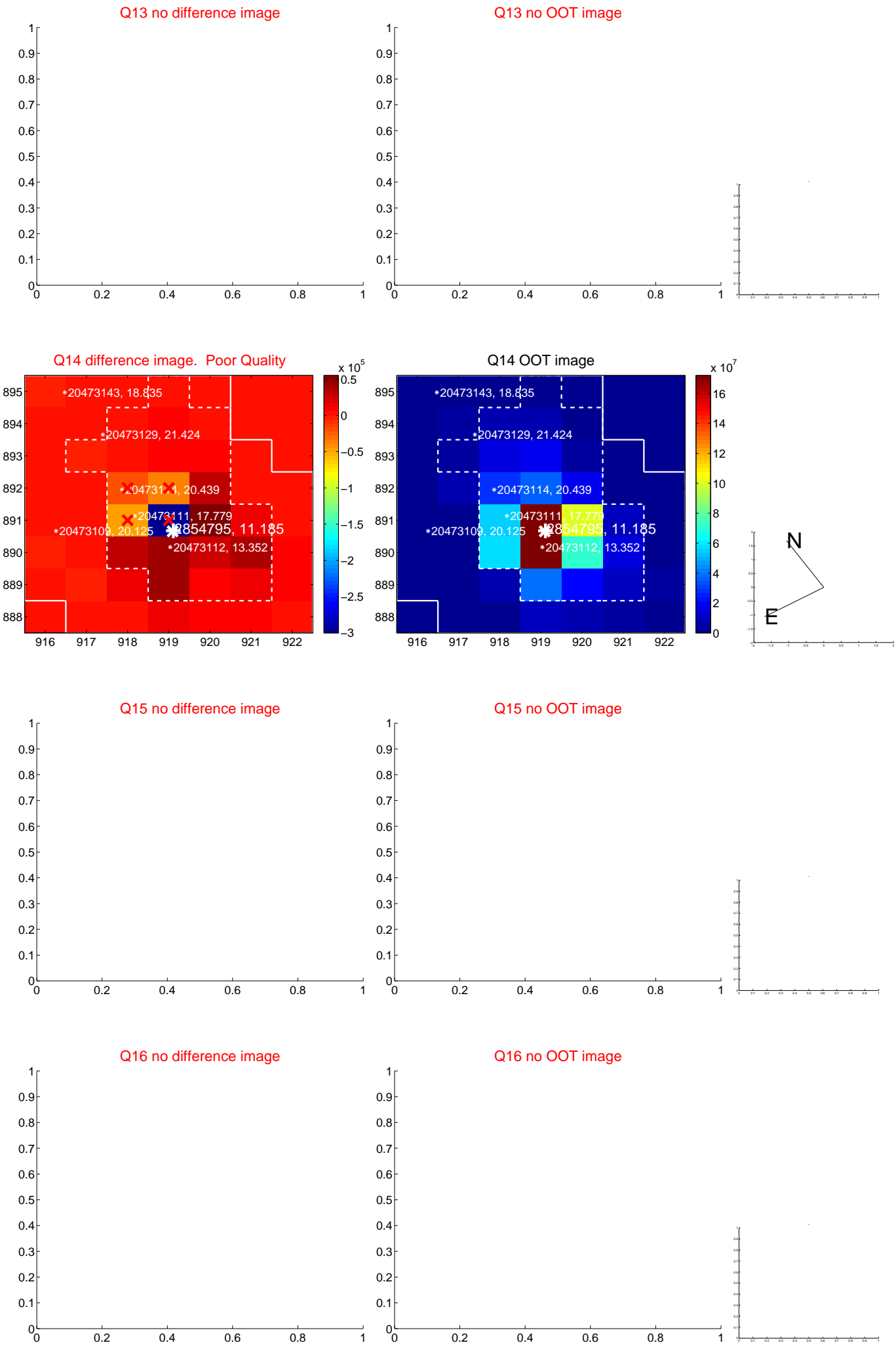
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



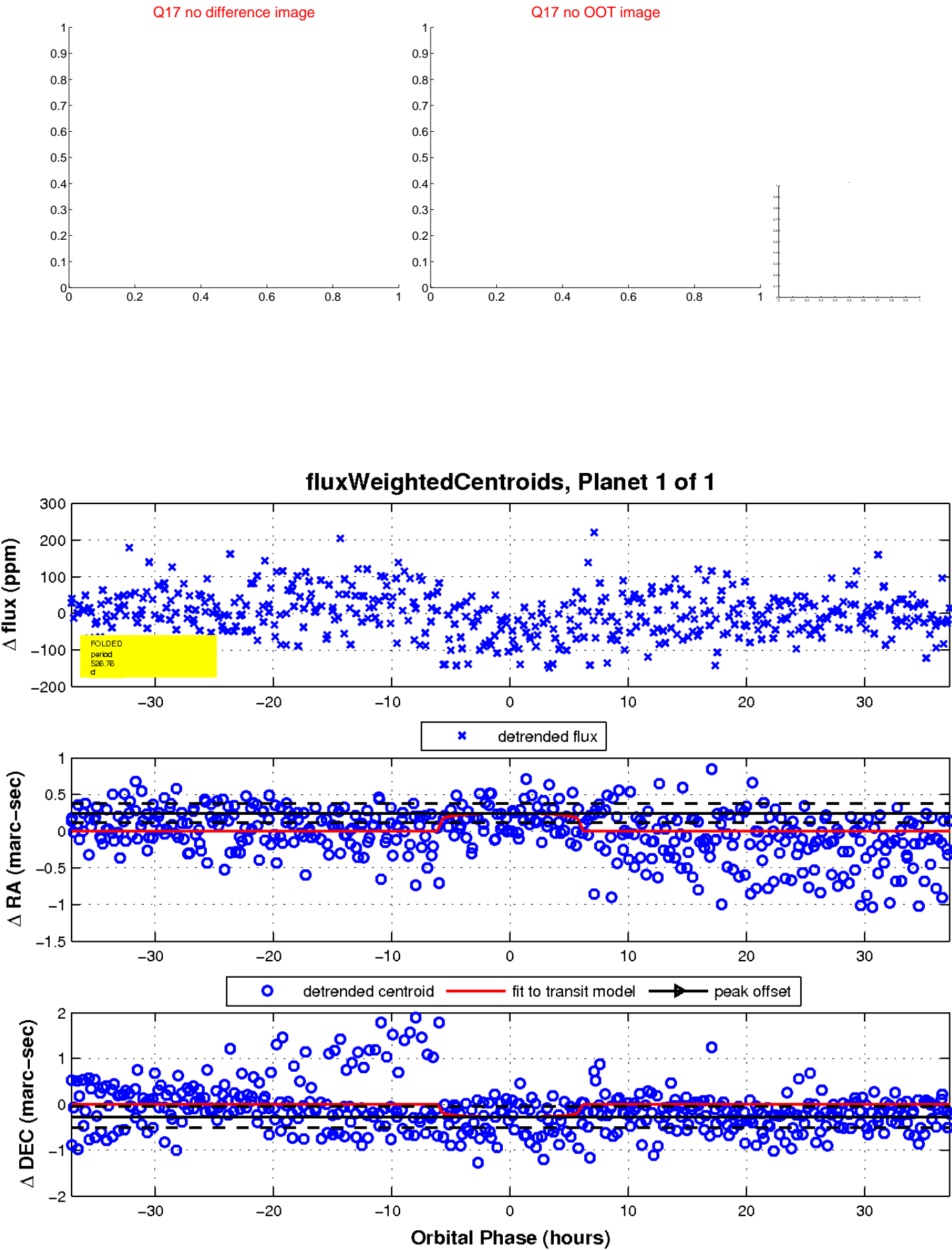
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UKIRT Image

