

KIC 003326304

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})
003326304-01	OBS	No	435.590349	515.046987	57.1	12.747	7.6	8.2	3.76	8941	3.11	35.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003326304-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

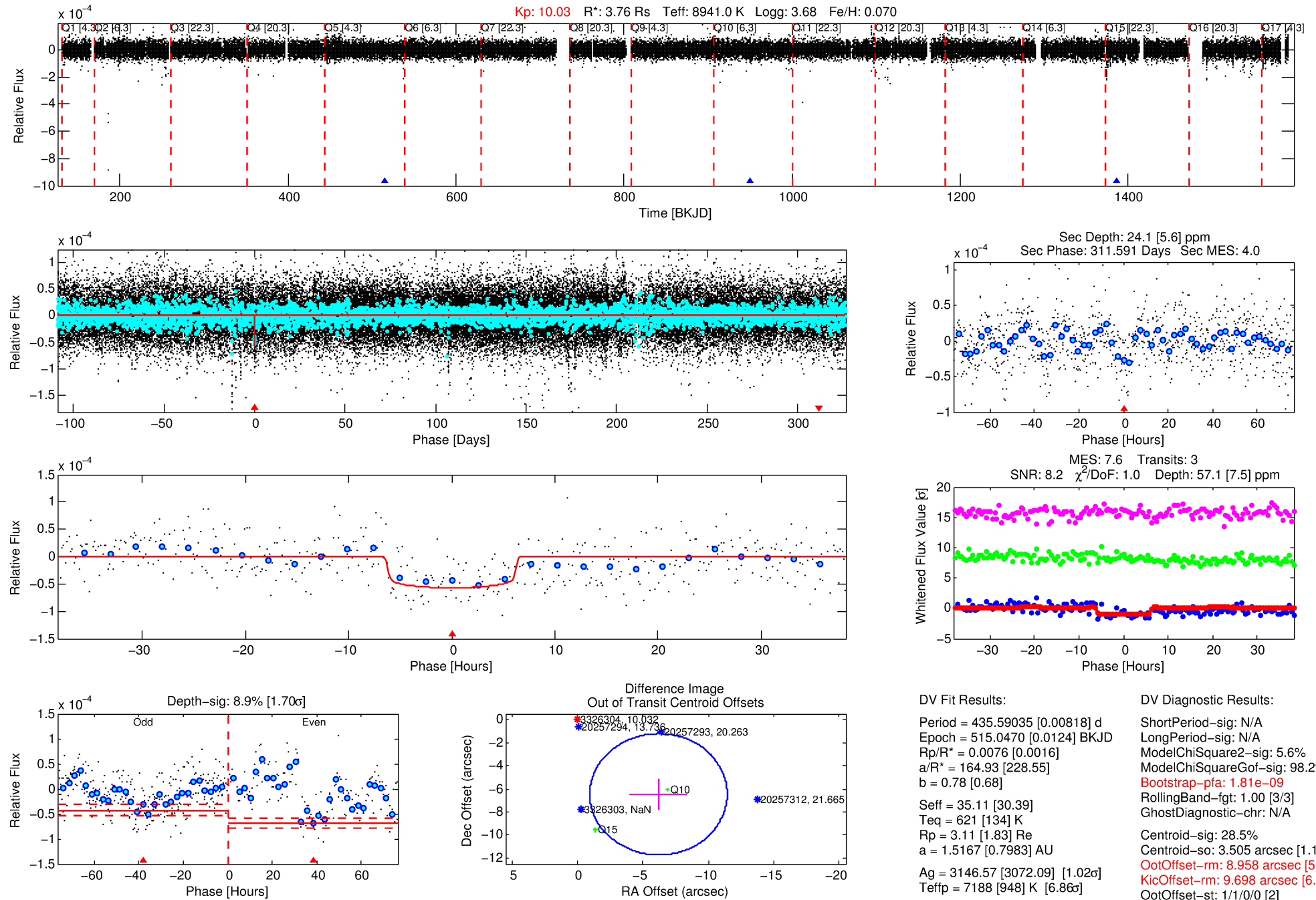
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003326304-01

No Significant Match Found

DV One-Page Summary

KIC: 3326304 Candidate: 1 of 1 Period: 435.590 d



DV Fit Results:

Period = 435.59035 [0.00818] d
Epoch = 515.0470 [0.0124] BKJD
 $R_p/R^* = 0.0076$ [0.0016]
 $a/R^* = 164.93$ [228.55]
 $b = 0.78$ [0.68]
 $\text{Seff} = 35.11$ [30.39]
 $T_{\text{eq}} = 621$ [134] K
 $R_p = 3.11$ [1.83] R_e
 $a = 1.5167$ [0.7983] AU
 $A_g = 3146.57$ [3072.09] [1.02 σ]
 $T_{\text{eff}} = 7188$ [948] K [6.86 σ]

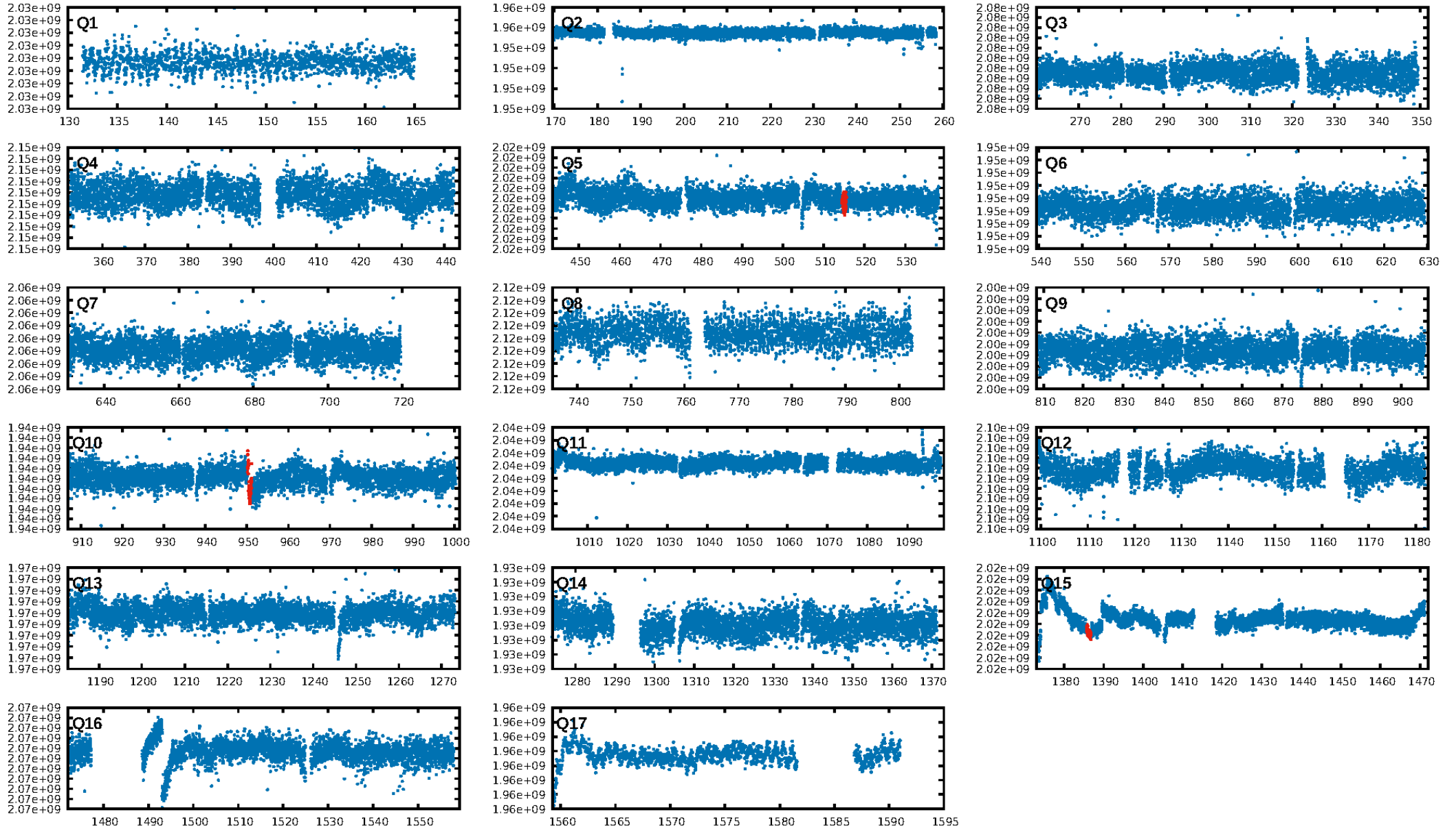
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.6%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 1.81e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 28.5%
Centroid-so: 3.505 arcsec [1.11 σ]
OotOffset-rm: 8.958 arcsec [5.12 σ]
KicOffset-rm: 9.698 arcsec [6.36 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

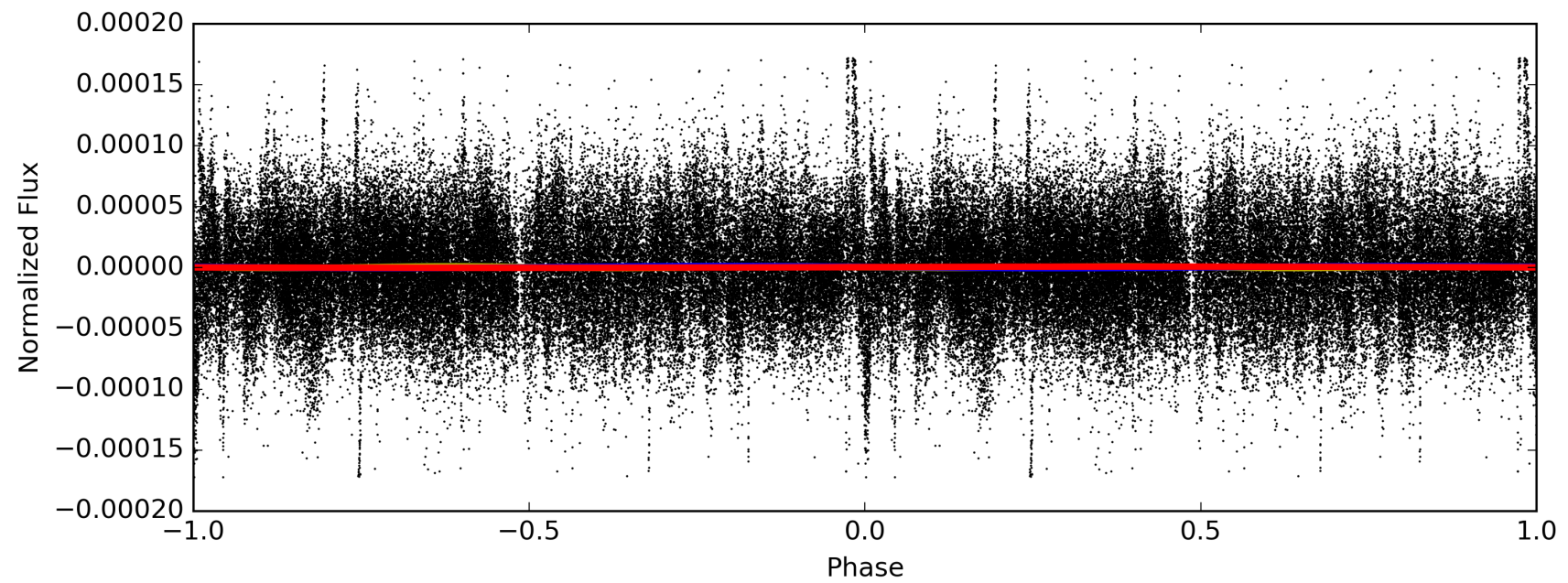
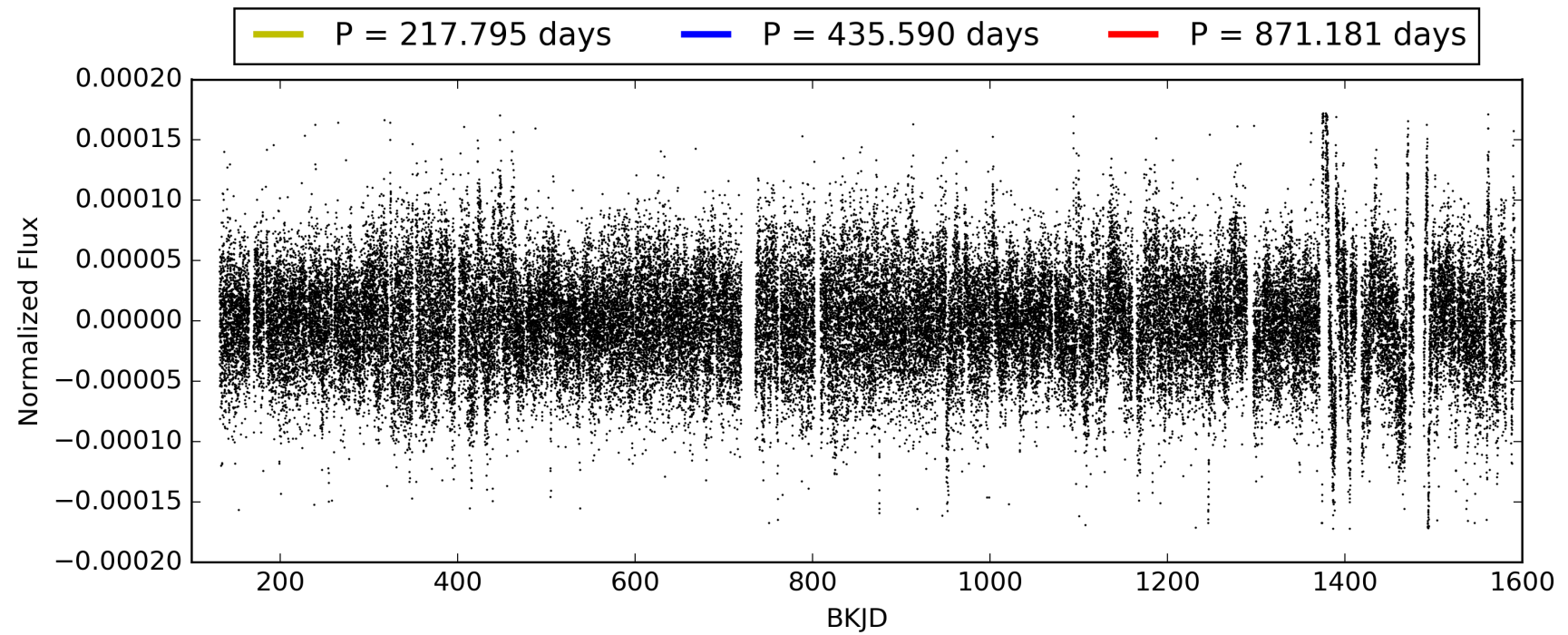
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:46:53 Z

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

TCE 003326304-01, PDC Light Curves

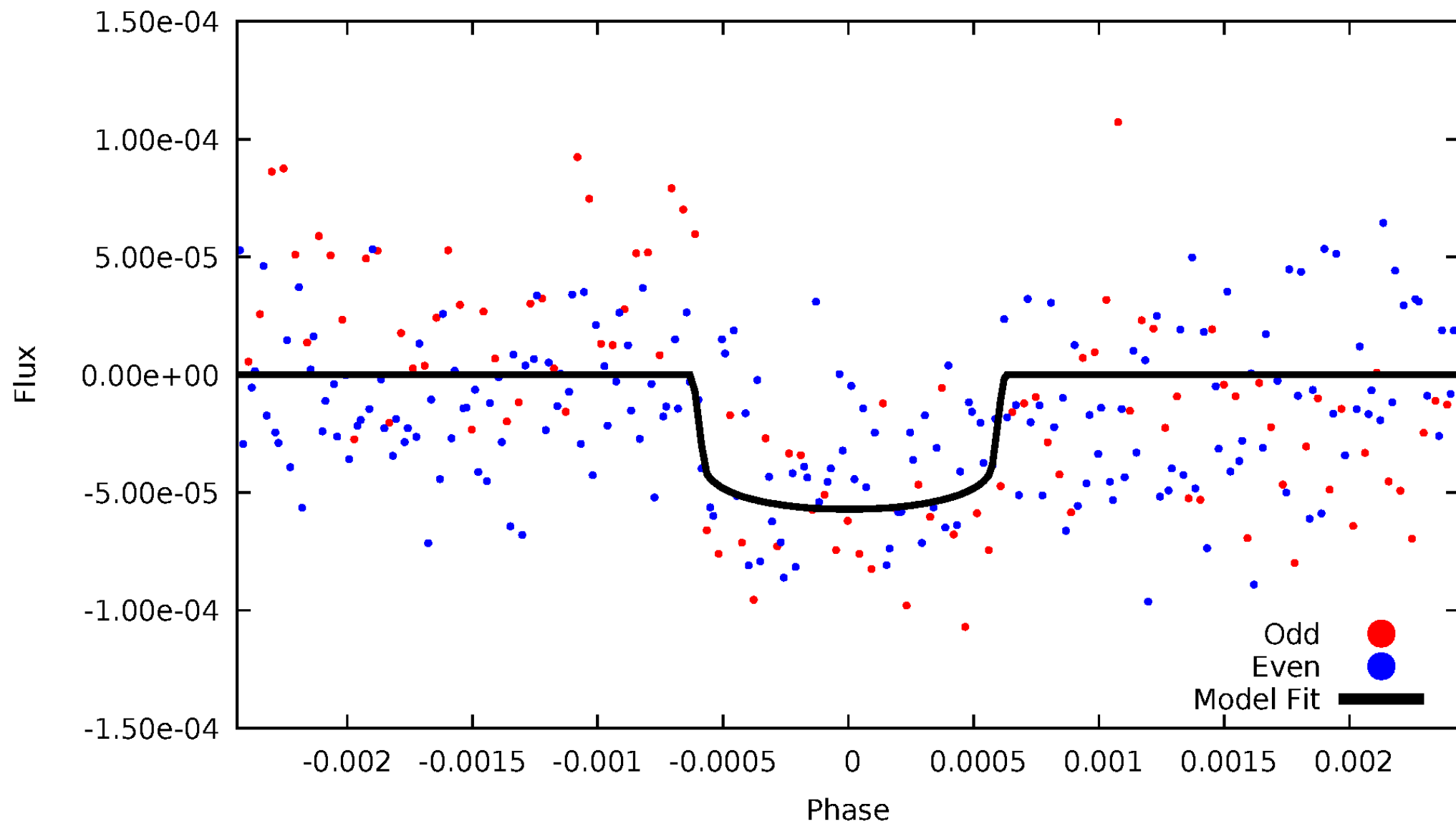


TCE 003326304-01



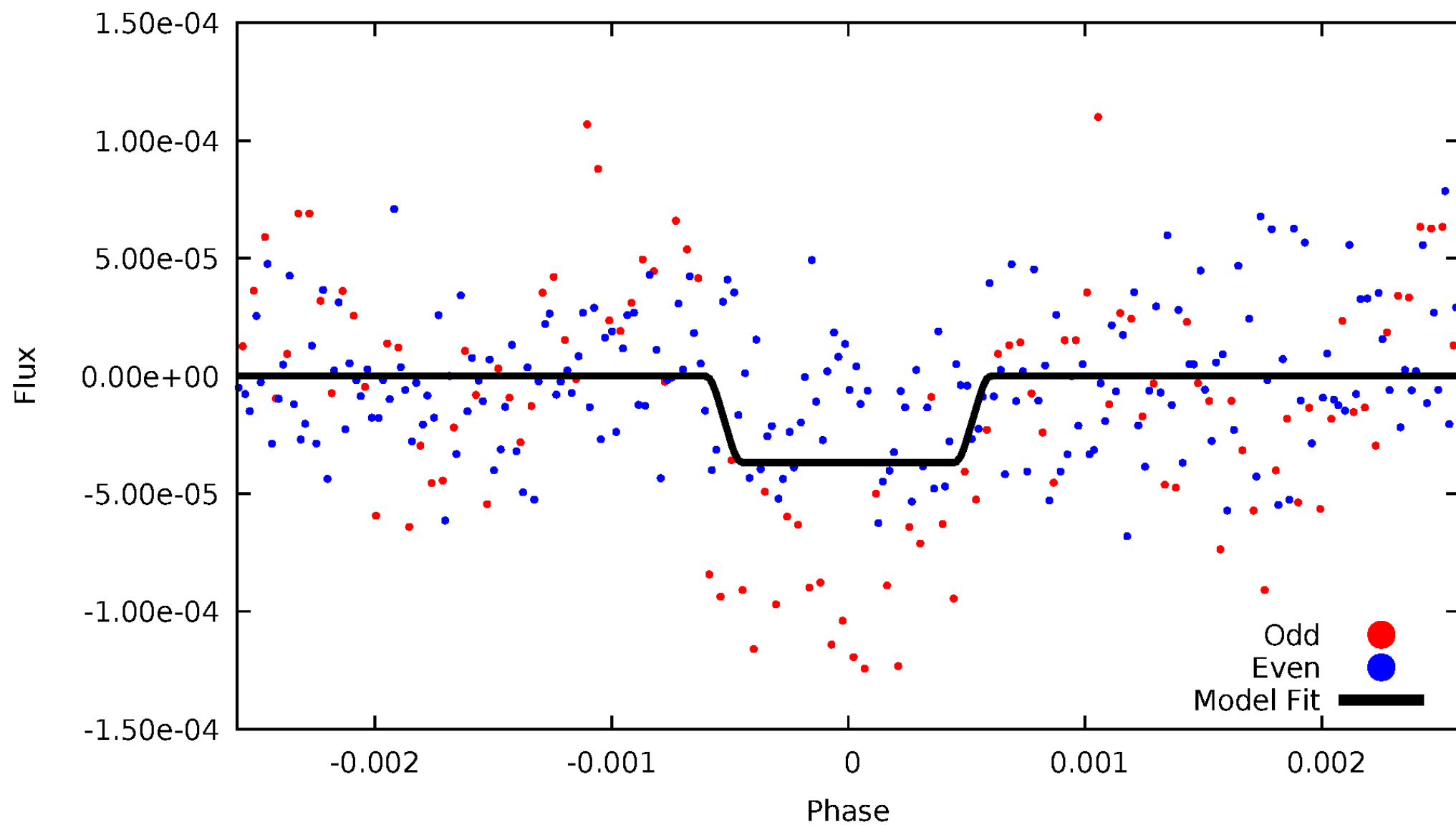
DV Odd/Even

TCE 003326304-01



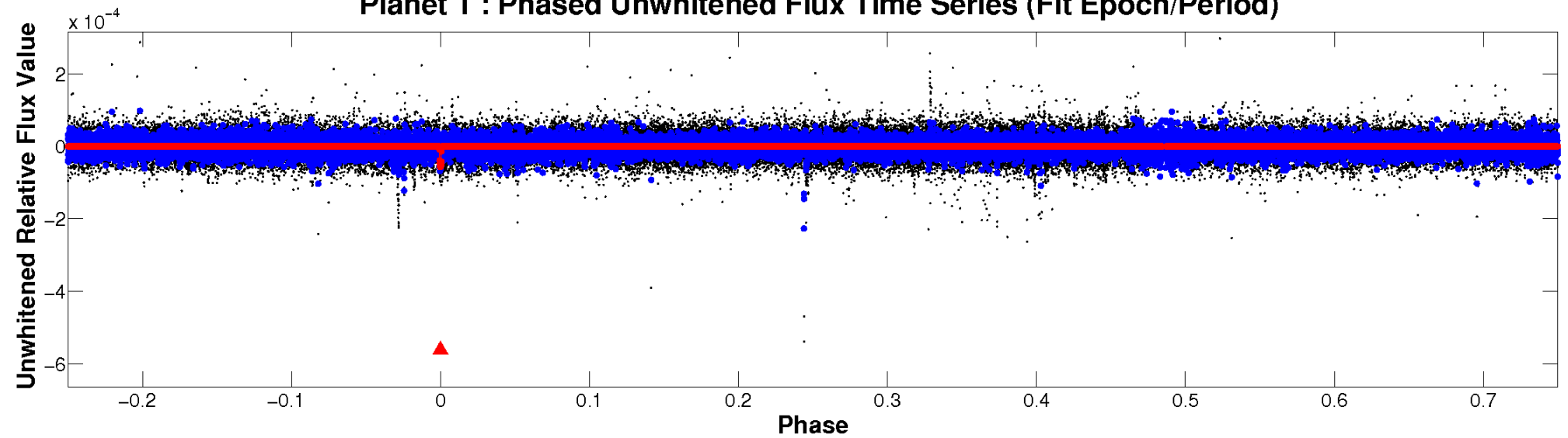
ALT Odd/Even

TCE 003326304-01

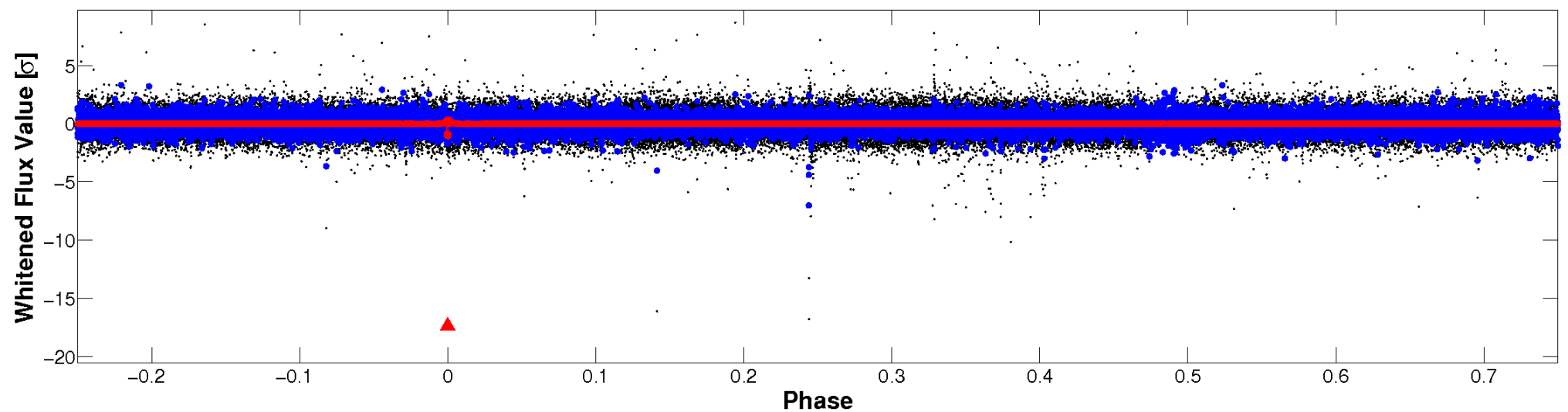


Non-Whitened Vs. Whitened Light Curve

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



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



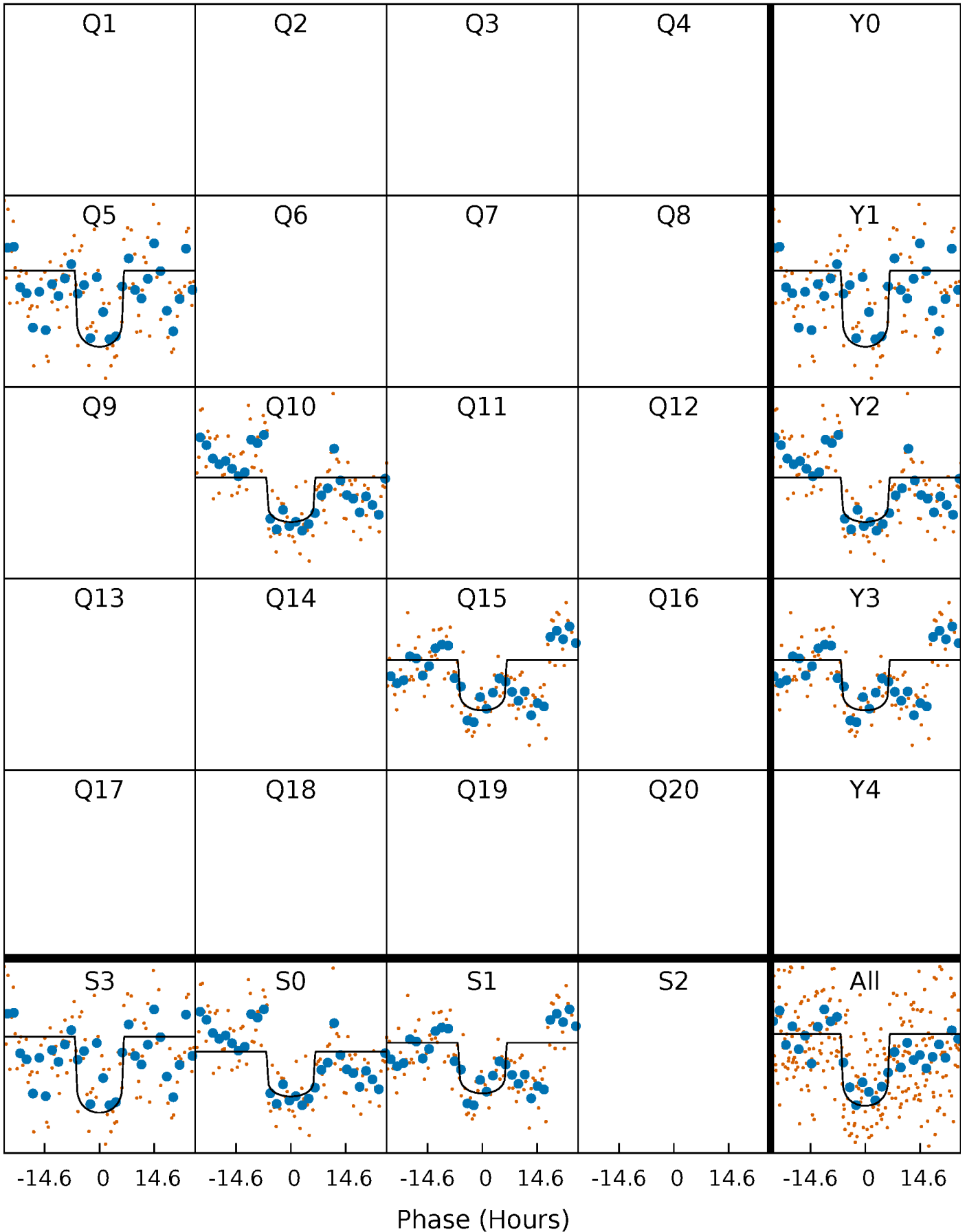
PDC Quarter-Phased Transit Curves

TCE 003326304-01 P=435.590349 Days $T_0=515.046987$ (BKJD)



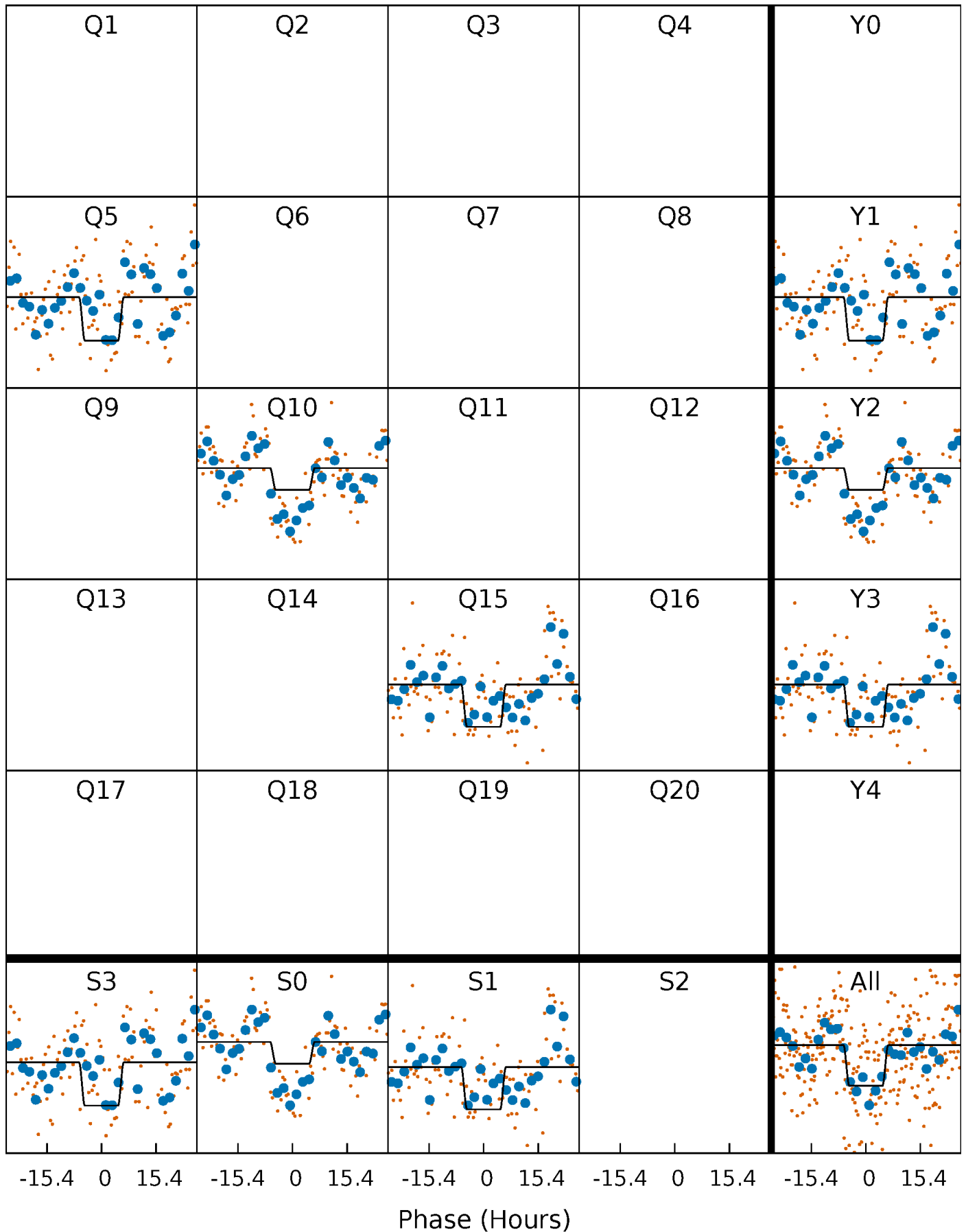
DV Quarter-Phased Transit Curves

TCE 003326304-01 P=435.590349 Days $T_0=515.046987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

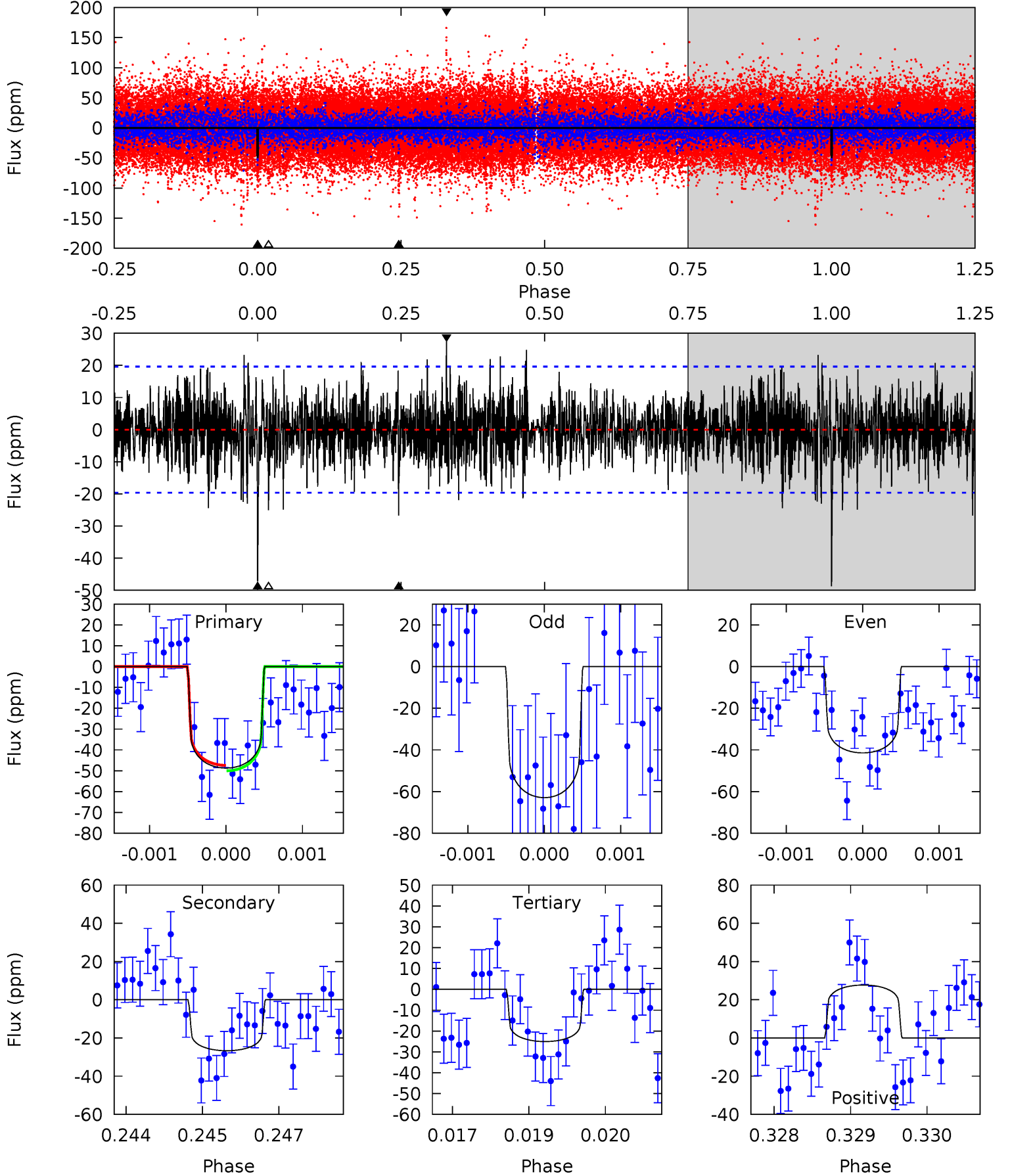
TCE 003326304-01 P=435.589010 Days $T_0=515.057962$ (BKJD)



DV Model-Shift Uniqueness Test

003326304-01, $P = 435.590349$ Days, $E = 79.456638$ Days

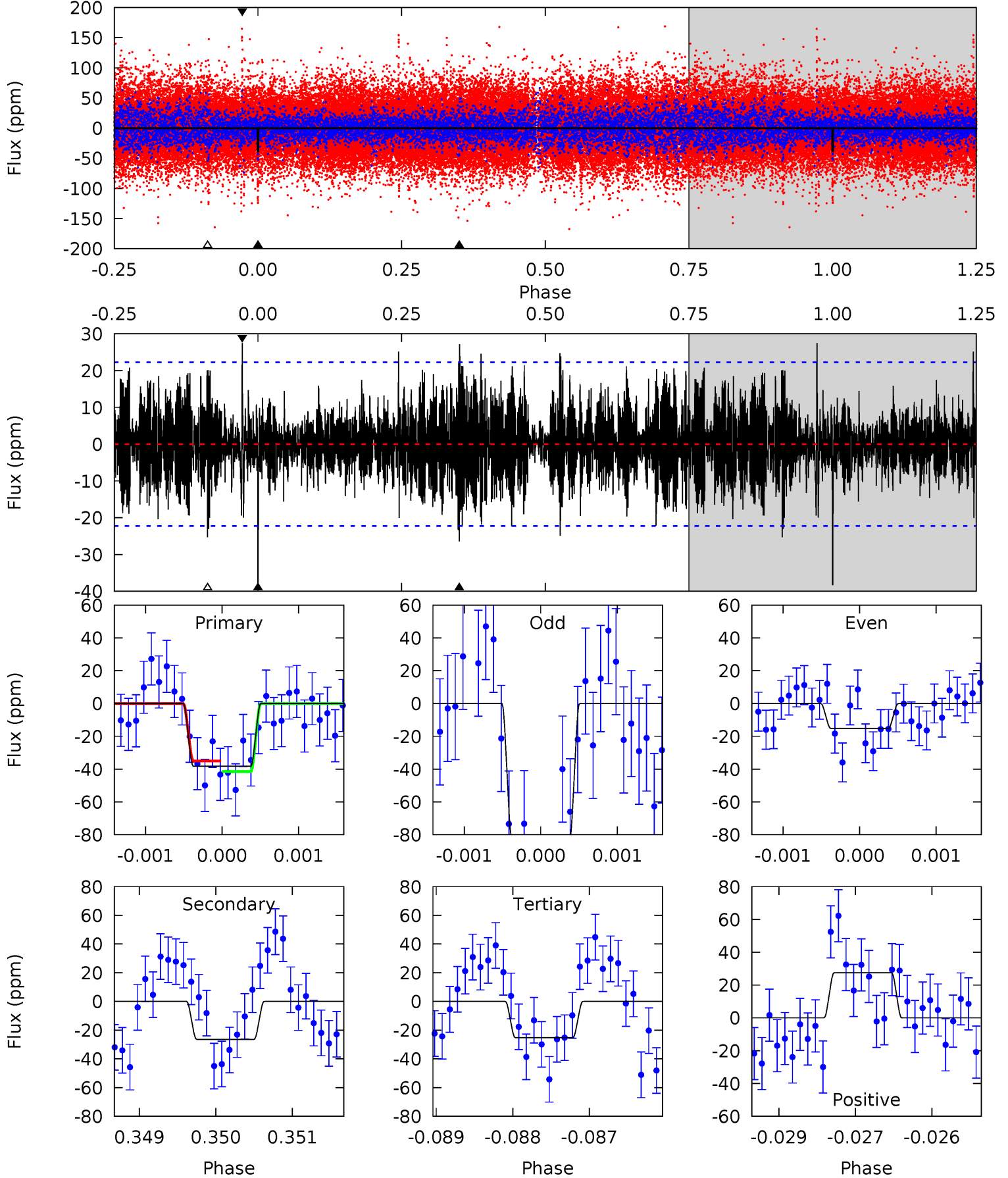
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	7.35	6.90	7.63	5.41	3.23	1.83	6.52	5.79	0.45	-0.28	2.81	0.98	0.36	0.36



Alt Model-Shift Uniqueness Test

003326304-01, P = 435.589010 Days, E = 79.468952 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	6.43	6.15	6.69	5.42	3.24	1.83	3.17	2.63	0.27	-0.26	7.87	2.35	0.42	0.78



Stellar Parameters For KIC 003326304

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8941^{+251}_{-430}	$3.678^{+0.496}_{-0.124}$	$0.070^{+0.200}_{-0.650}$	$3.756^{+0.878}_{-2.048}$	$2.450^{+0.359}_{-0.778}$	$0.065^{+0.388}_{-0.025}$
	+3%/-5%	+13%/-3%	+286%/-929%	+23%/-55%	+15%/-32%	+596%/-39%
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 003326304-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-27 ± 4	$2.89^{+0.90}_{-0.87}$	836^{+72}_{-105}	6946^{+1107}_{-761}	4078^{+3752}_{-1780}
Alt.	-26 ± 4	$2.23^{+0.91}_{-0.75}$	838^{+70}_{-119}	7957^{+1770}_{-1123}	6505^{+8350}_{-3192}

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

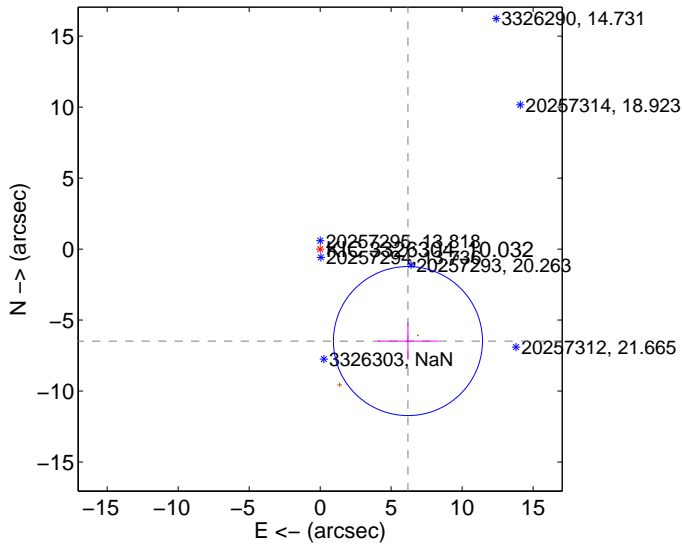
Supplemental centroid analysis for 003326304-01. **Kepler magnitude: 10.03.** Transit SNR 8.19

There are 0 quarters with good PRF difference image offsets

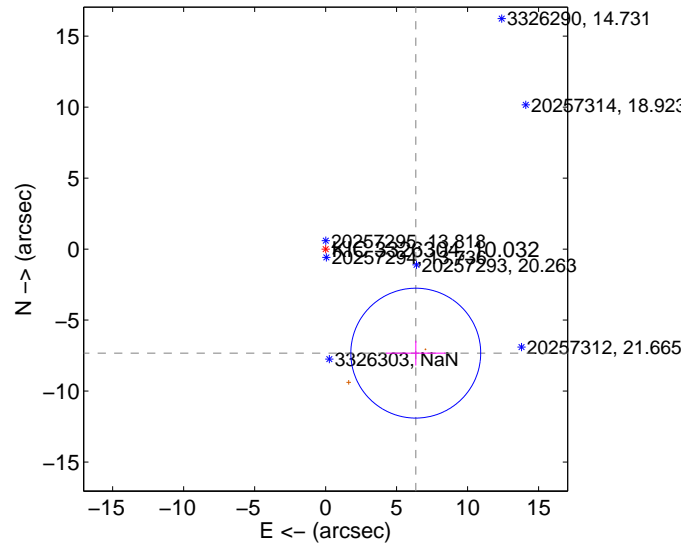
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.958 ± 1.750	5.12	-6.186 ± 2.137	-6.479 ± 1.300
PRF-fit source offset from KIC position	9.698 ± 1.525	6.36	-6.350 ± 2.101	-7.330 ± 0.870
photometric centroid source offset	3.51 ± 3.15	1.11	-3.18 ± 3.05	1.48 ± 3.59

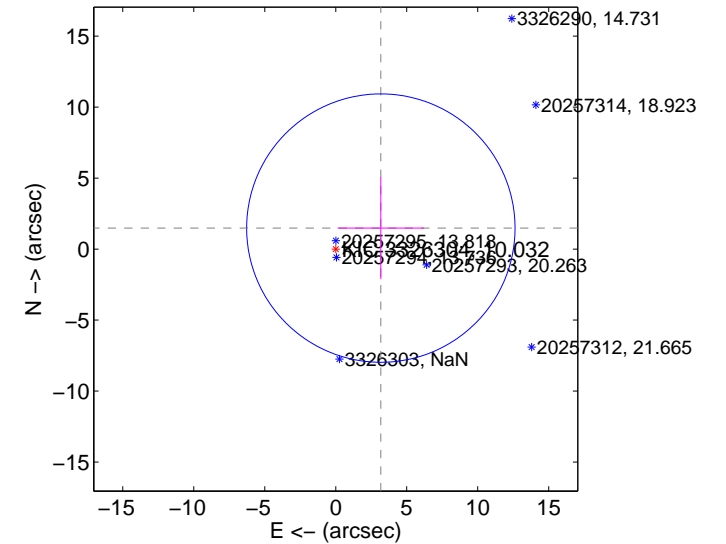
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

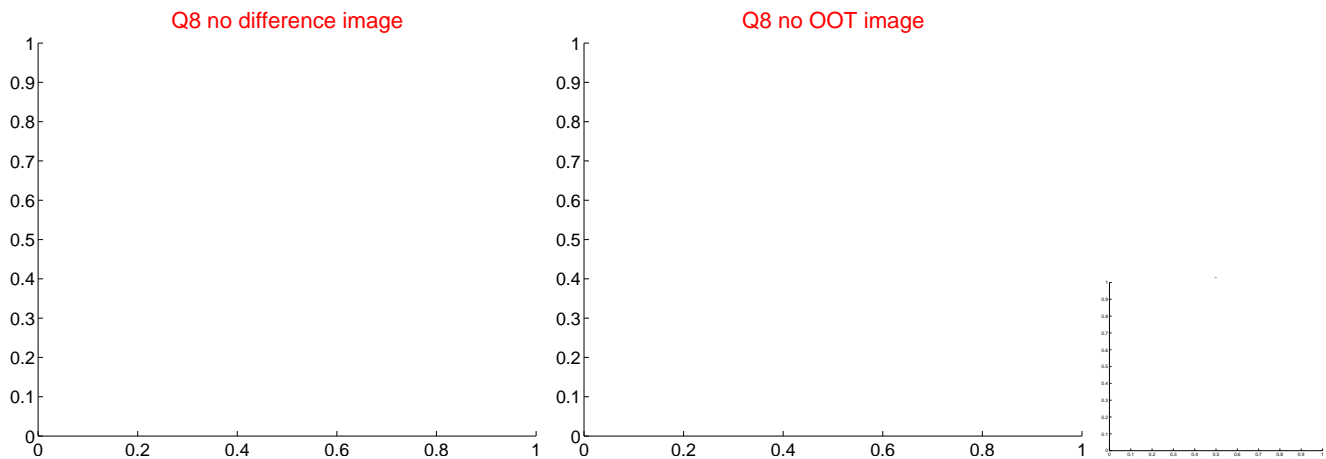
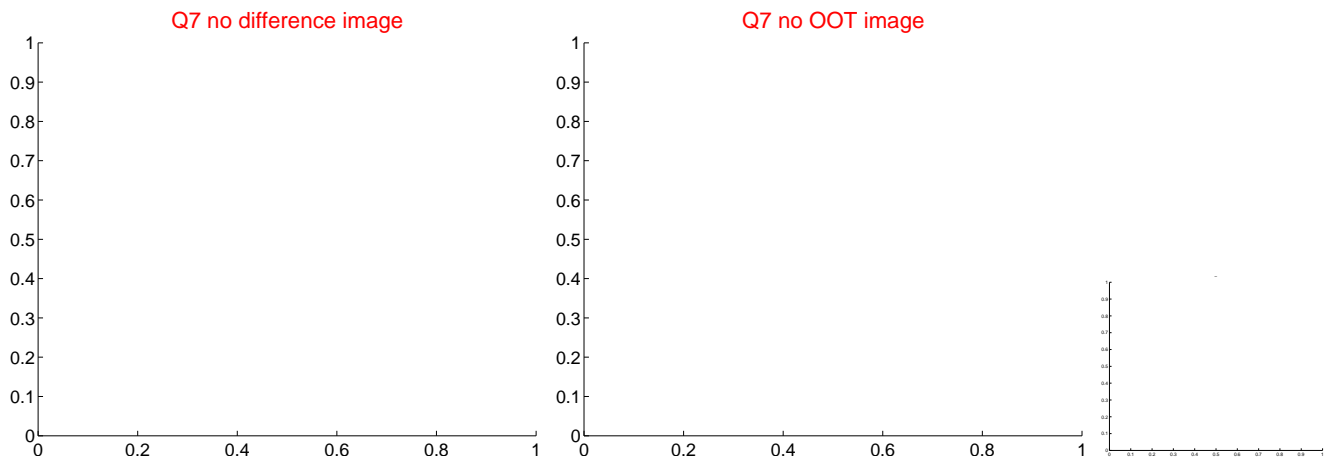
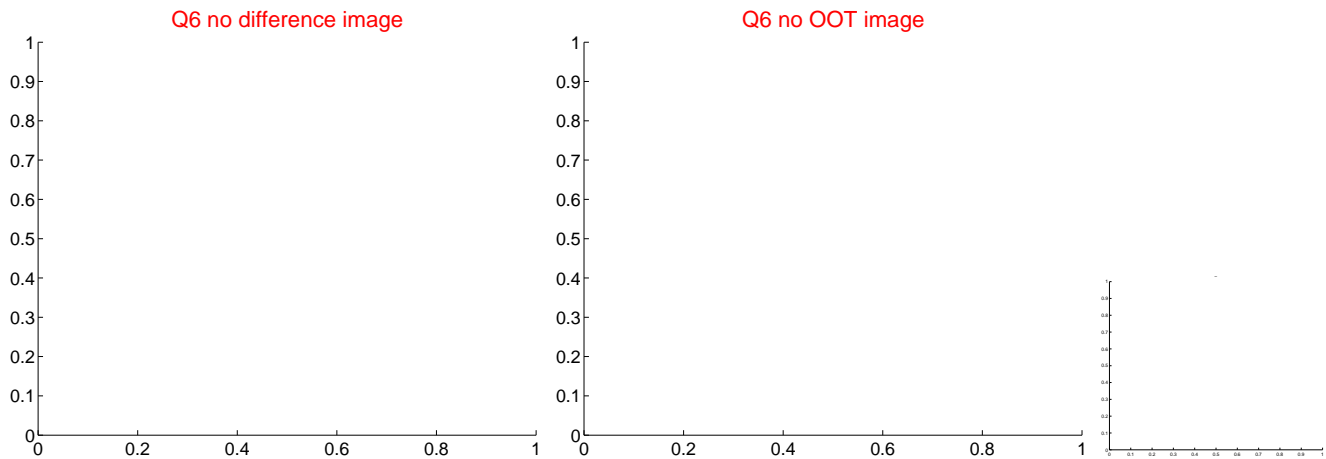
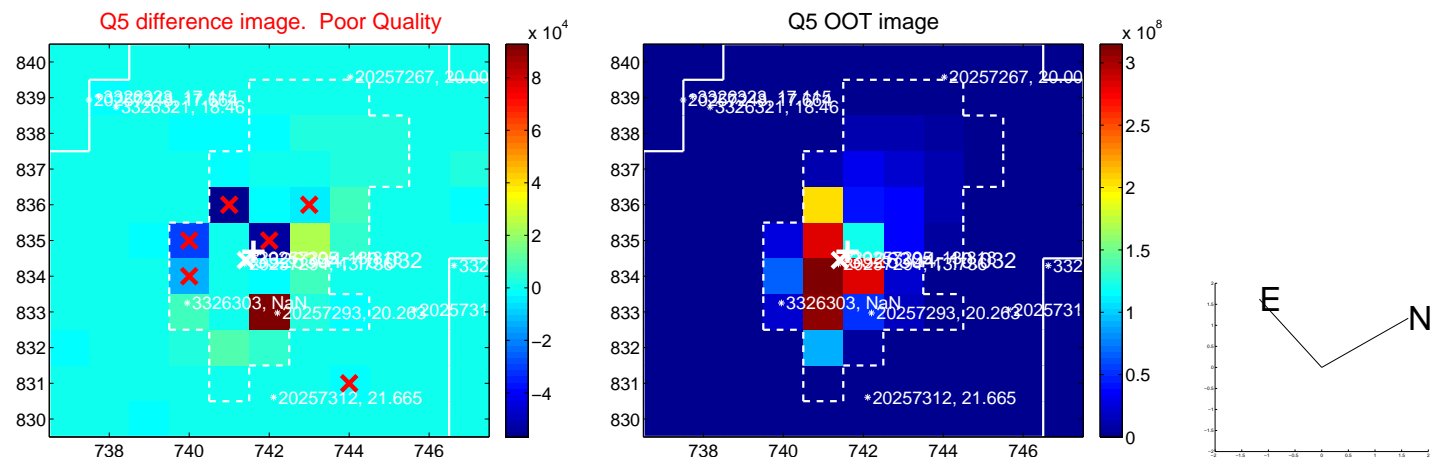


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

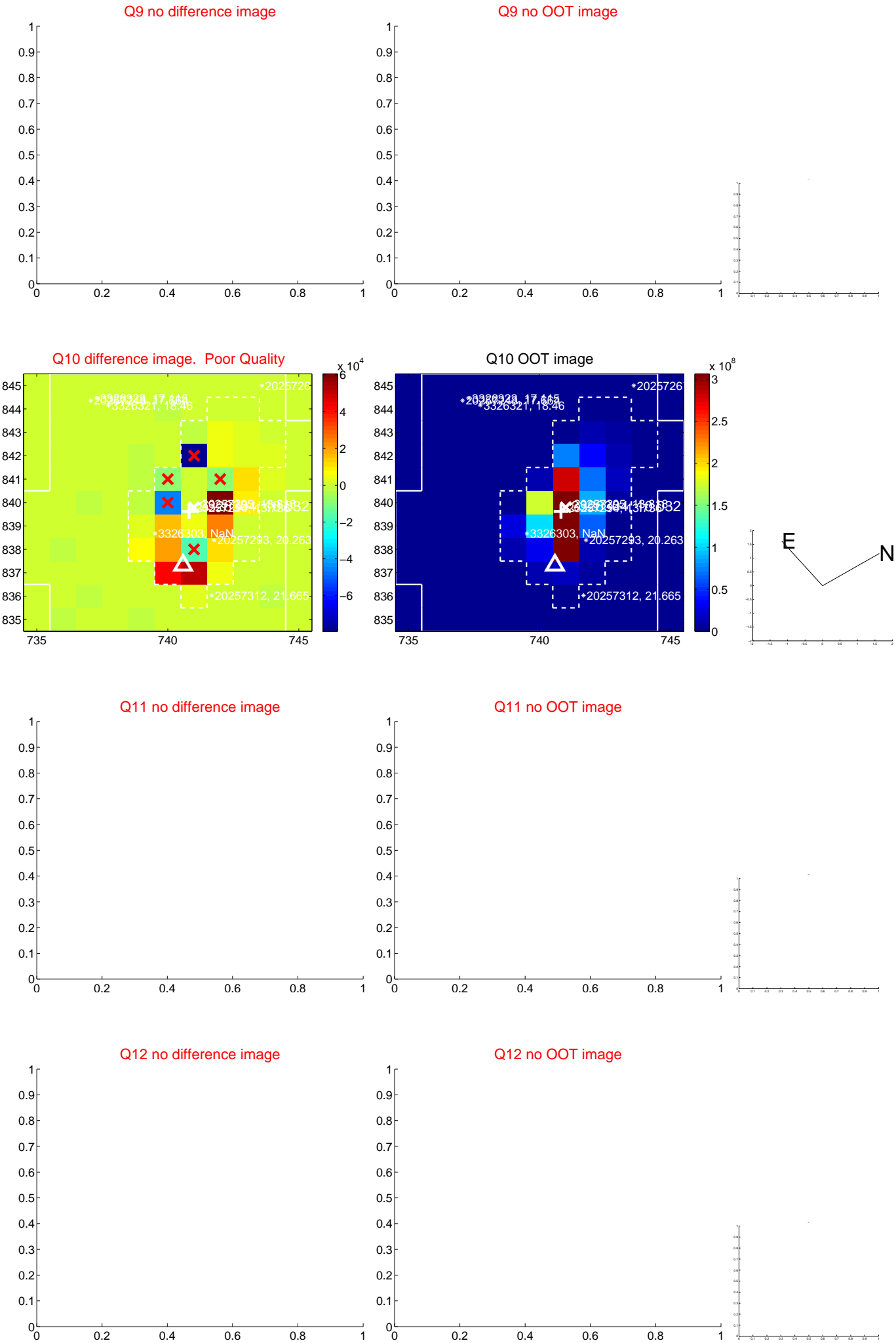
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



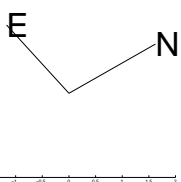
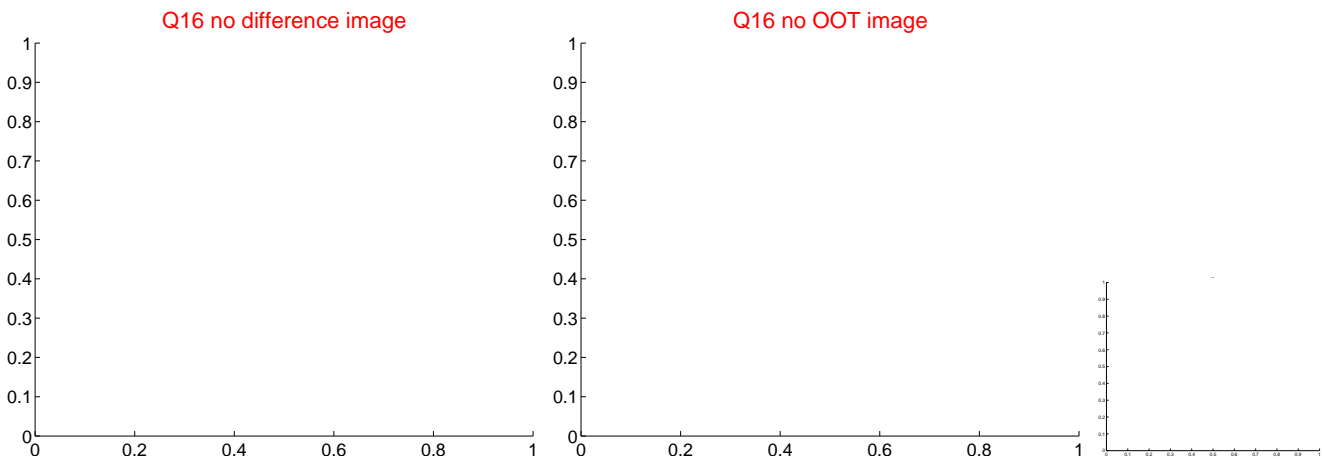
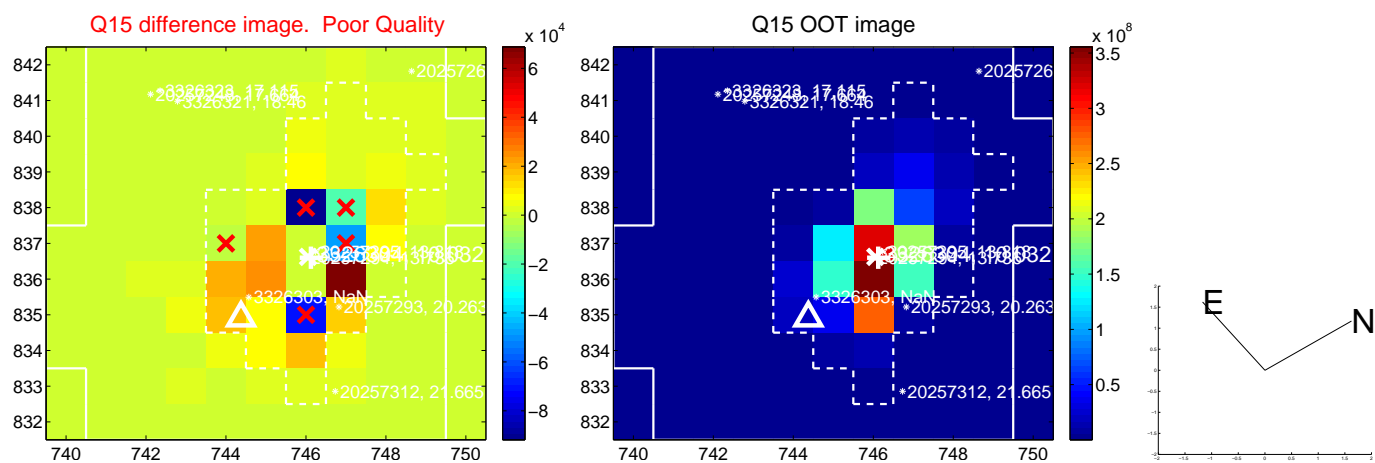
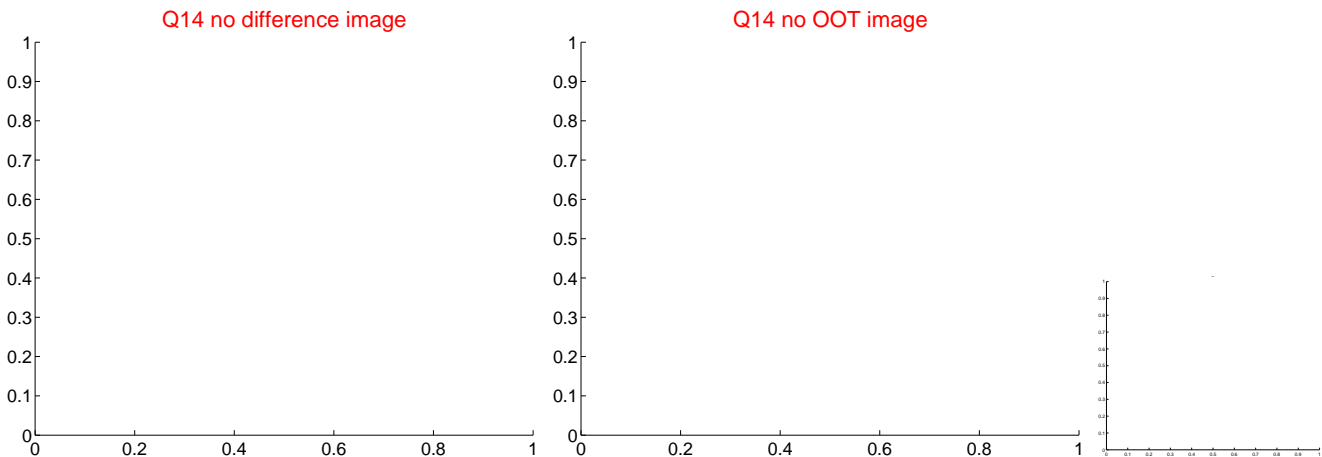
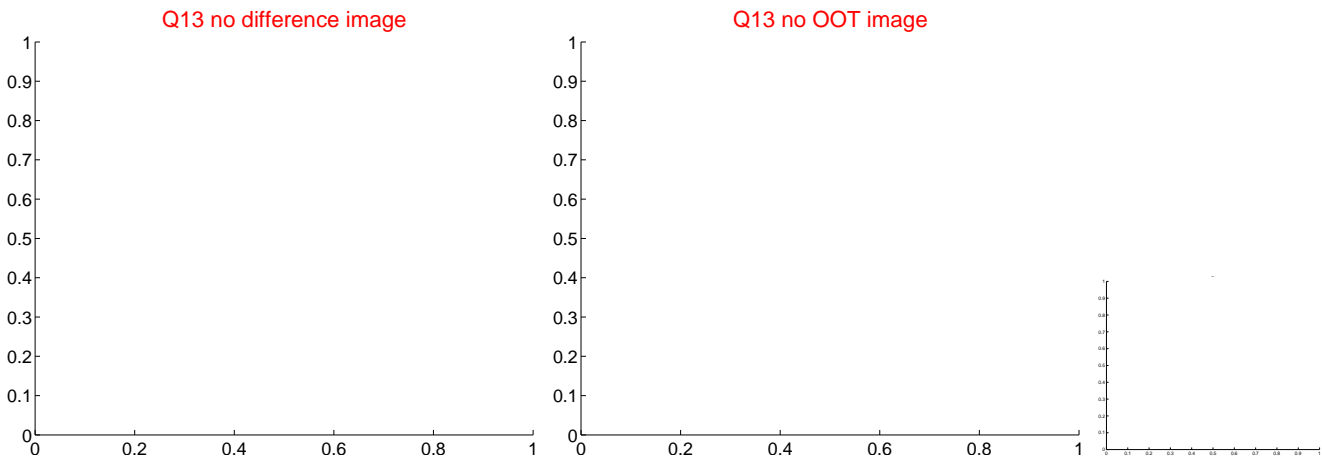
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



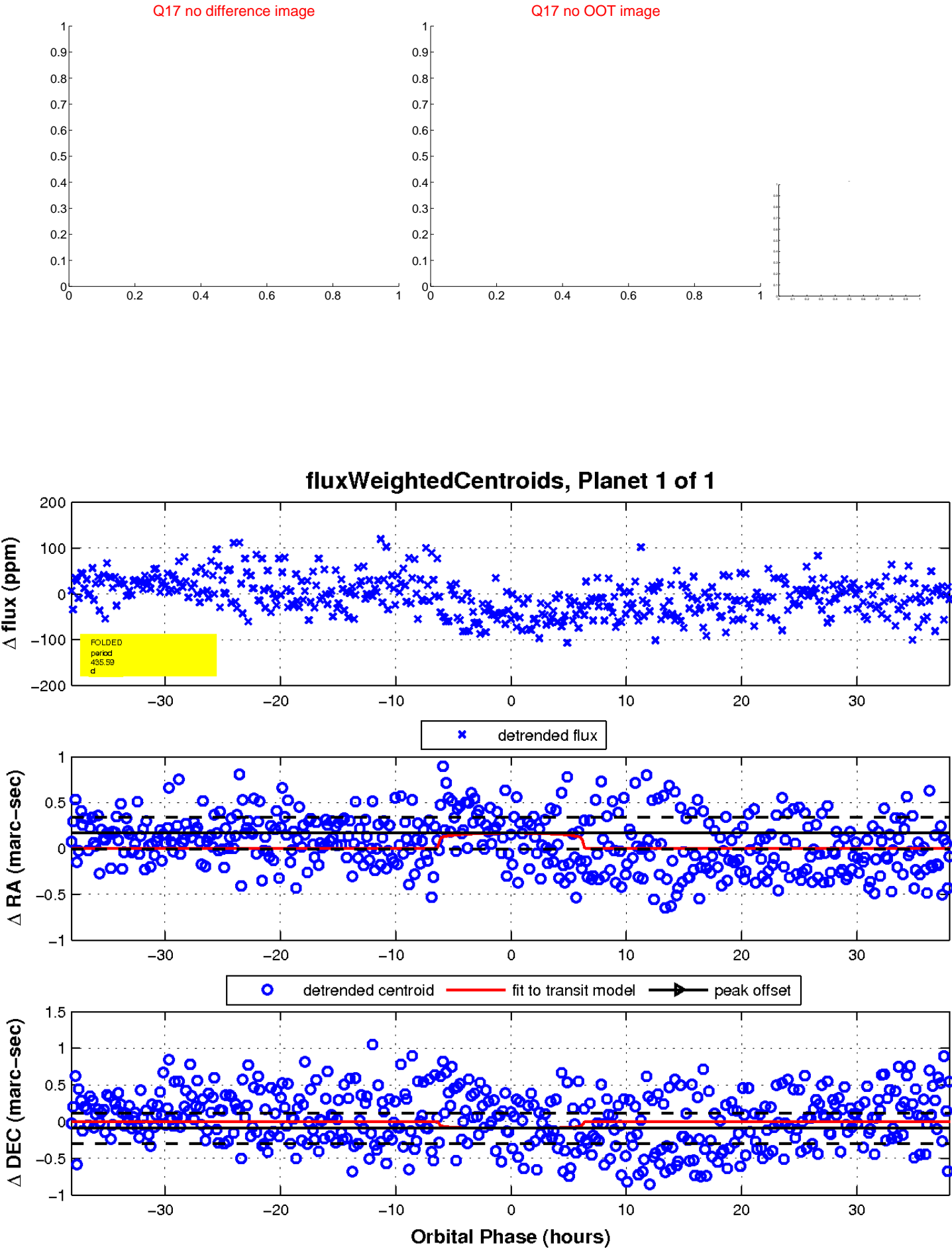
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UKIRT Image

