

KIC 011455716

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})
011455716-01	OBS	No	539.256111	483.019479	384.4	9.510	9.0	6.5	0.99	6014	2.07	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011455716-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—CENT_FEW_DIFFS

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

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

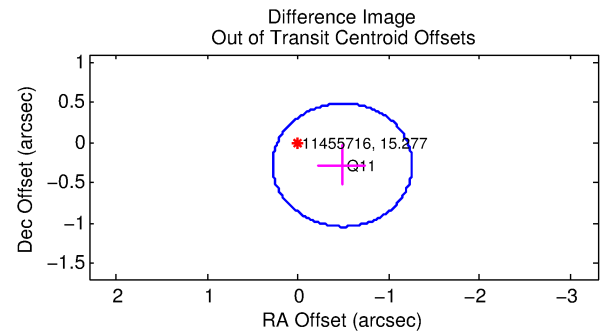
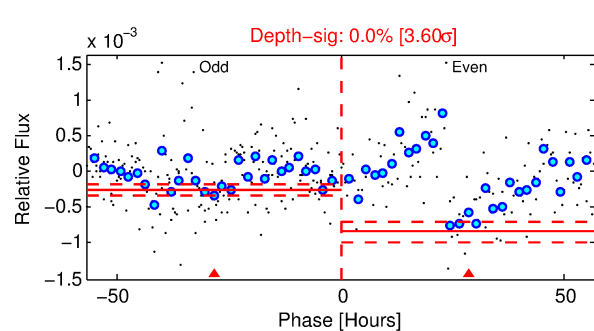
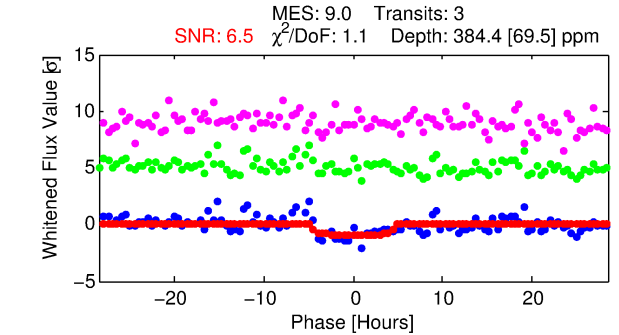
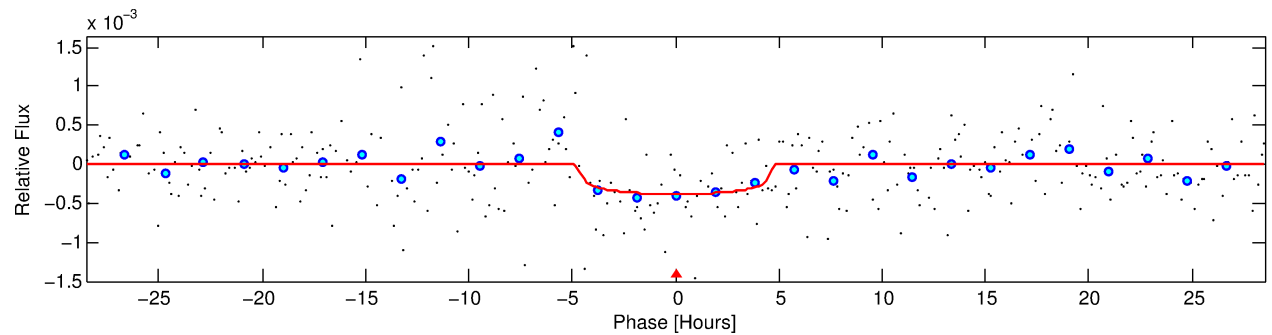
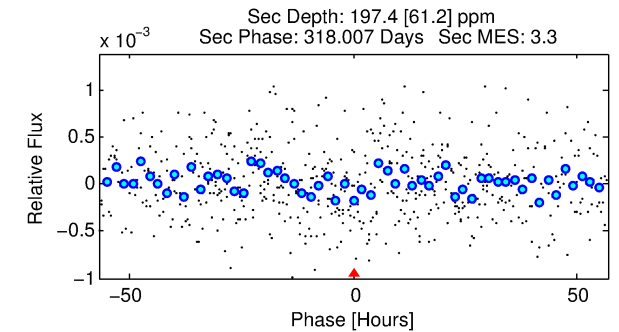
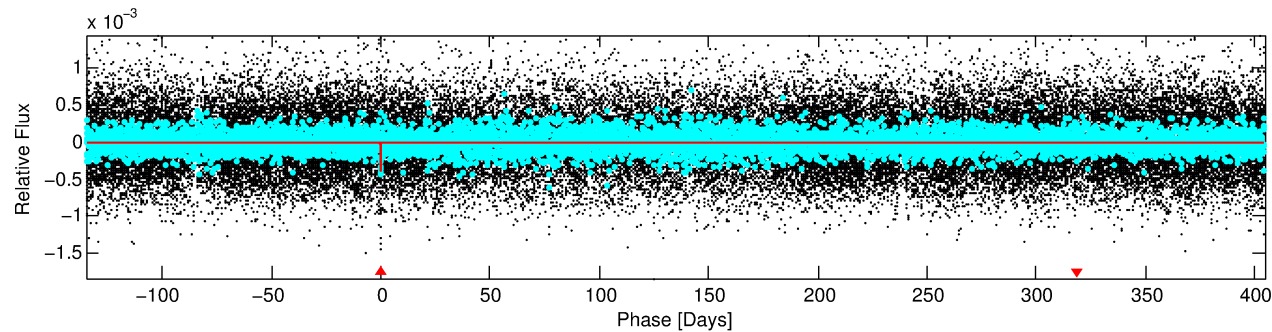
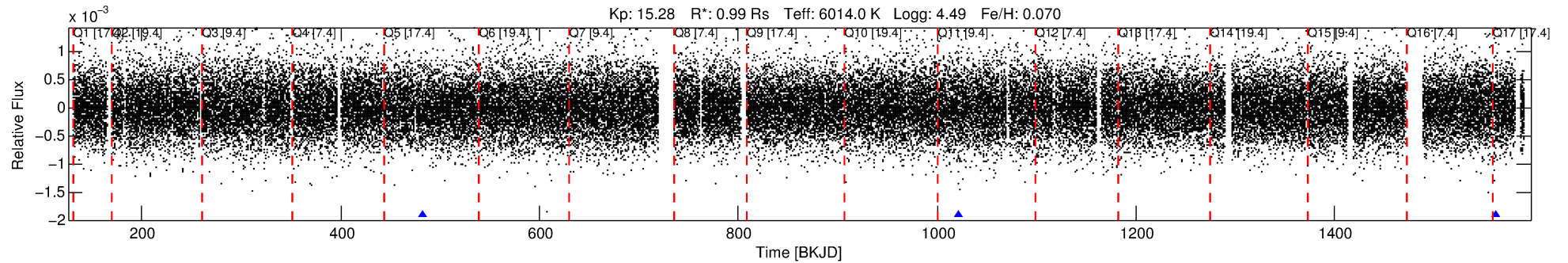
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011455716-01

No Significant Match Found

DV One-Page Summary

KIC: 11455716 Candidate: 1 of 1 Period: 539.256 d



DV Fit Results:

Period = 539.25611 [0.01770] d
Epoch = 483.0195 [0.0216] BKJD
Rp/R* = 0.0191 [0.0234]
a/R* = 325.90 [1867.17]
b = 0.69 [4.43]
Seff = 0.64 [0.27]
Teq = 228 [24] K
Rp = 2.07 [2.61] Re
a = 1.3392 [0.3540] AU
Ag = 45373.62 [113186.11] [0.40 σ]
Teffp = 5155 [3180] K [1.55 σ]

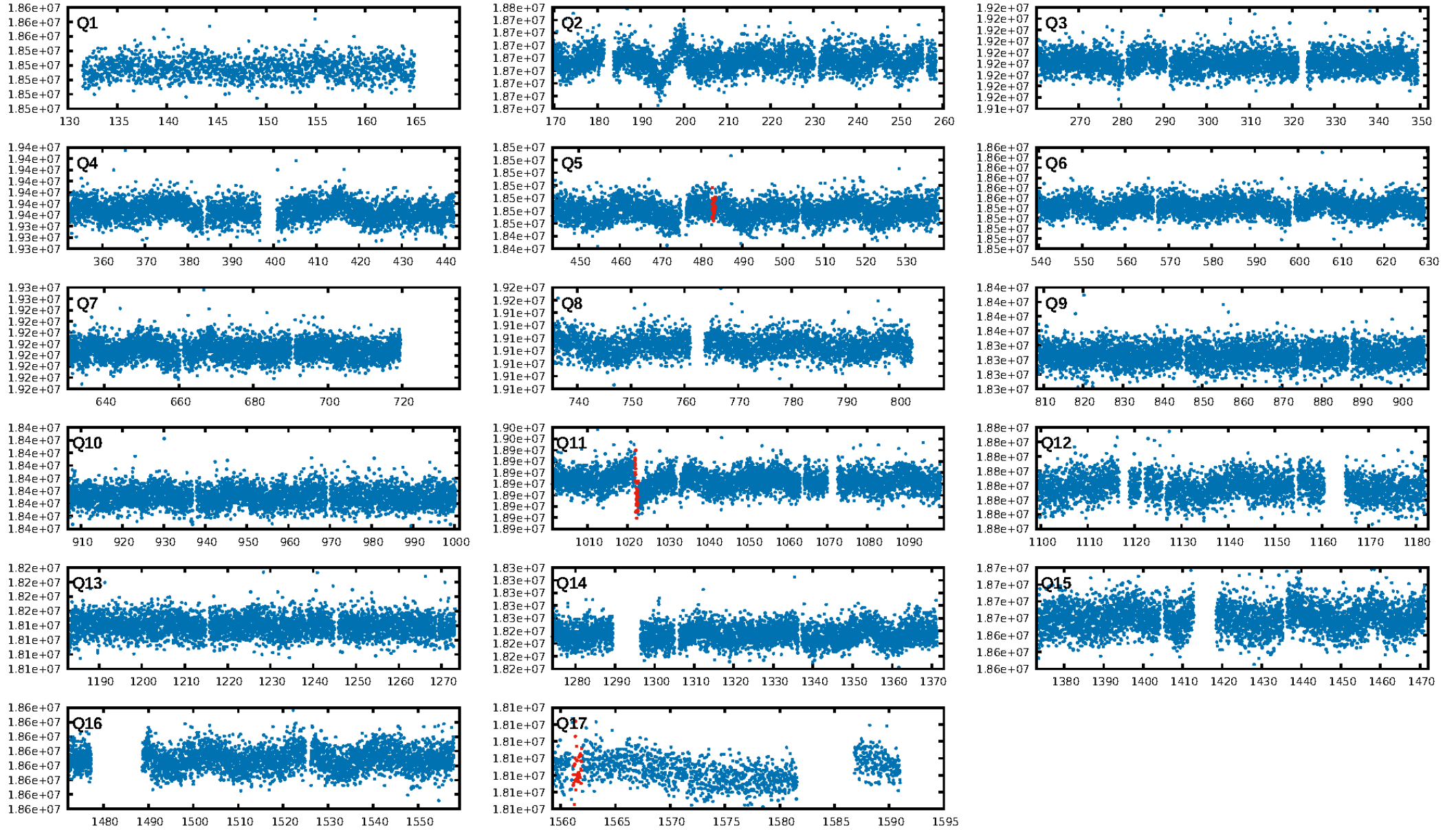
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 8.60e-17
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 5.455
Centroid-sig: 91.6%
Centroid-so: 0.359 arcsec [0.16 σ]
OotOffset-rm: 0.563 arcsec [2.20 σ]
KicOffset-rm: 0.612 arcsec [2.38 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

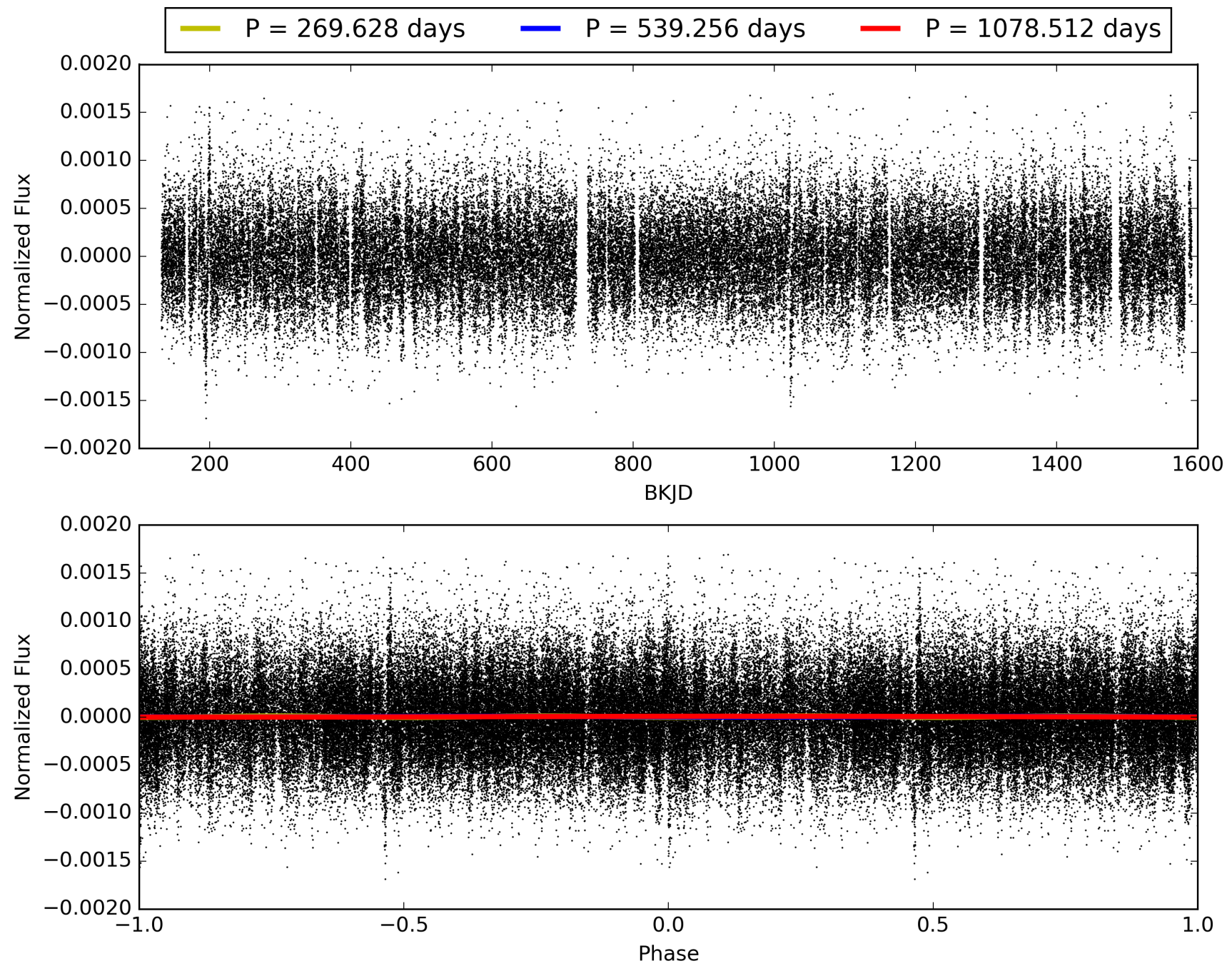
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:22:46 Z

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

TCE 011455716-01, PDC Light Curves

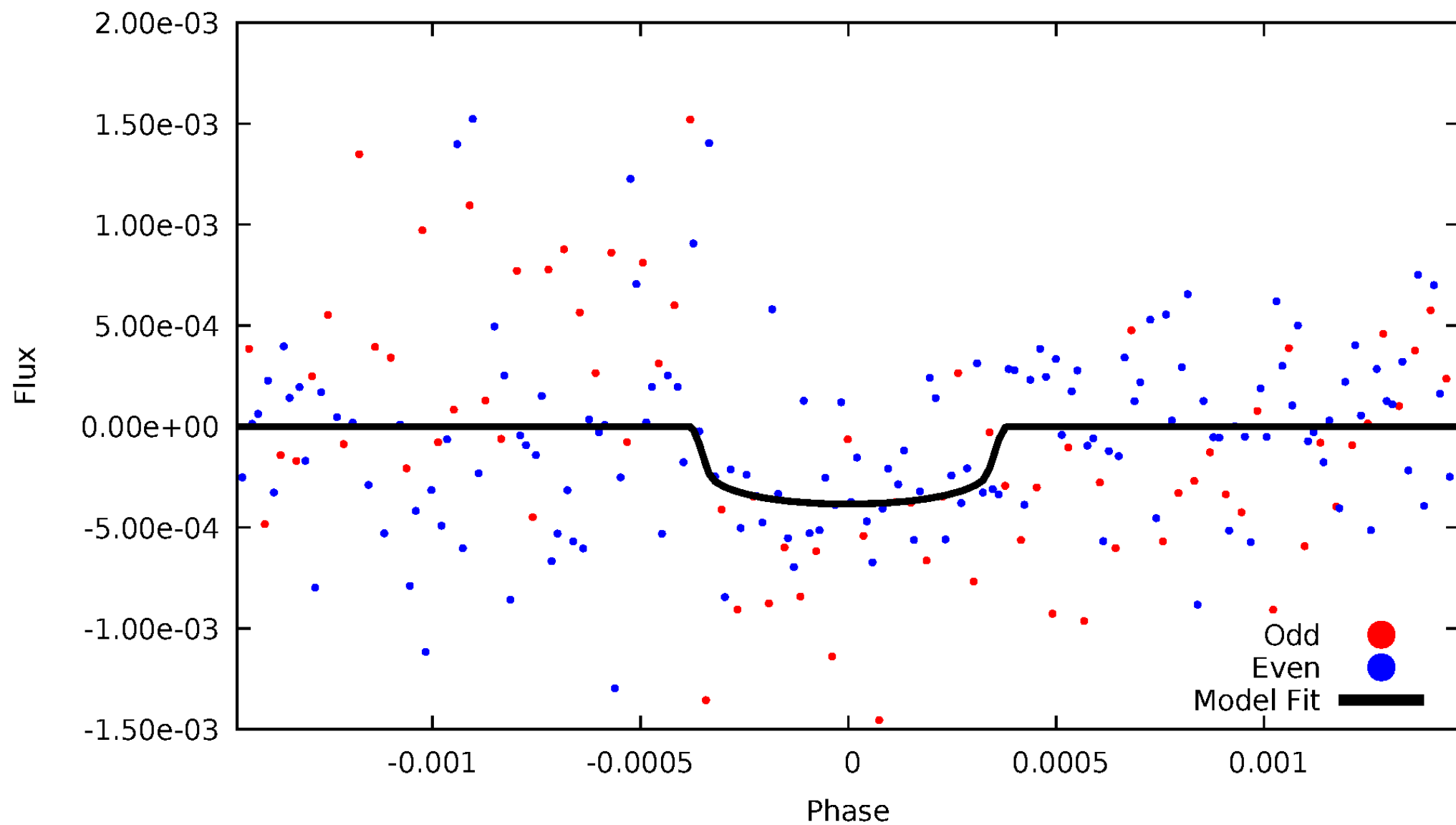


TCE 011455716-01



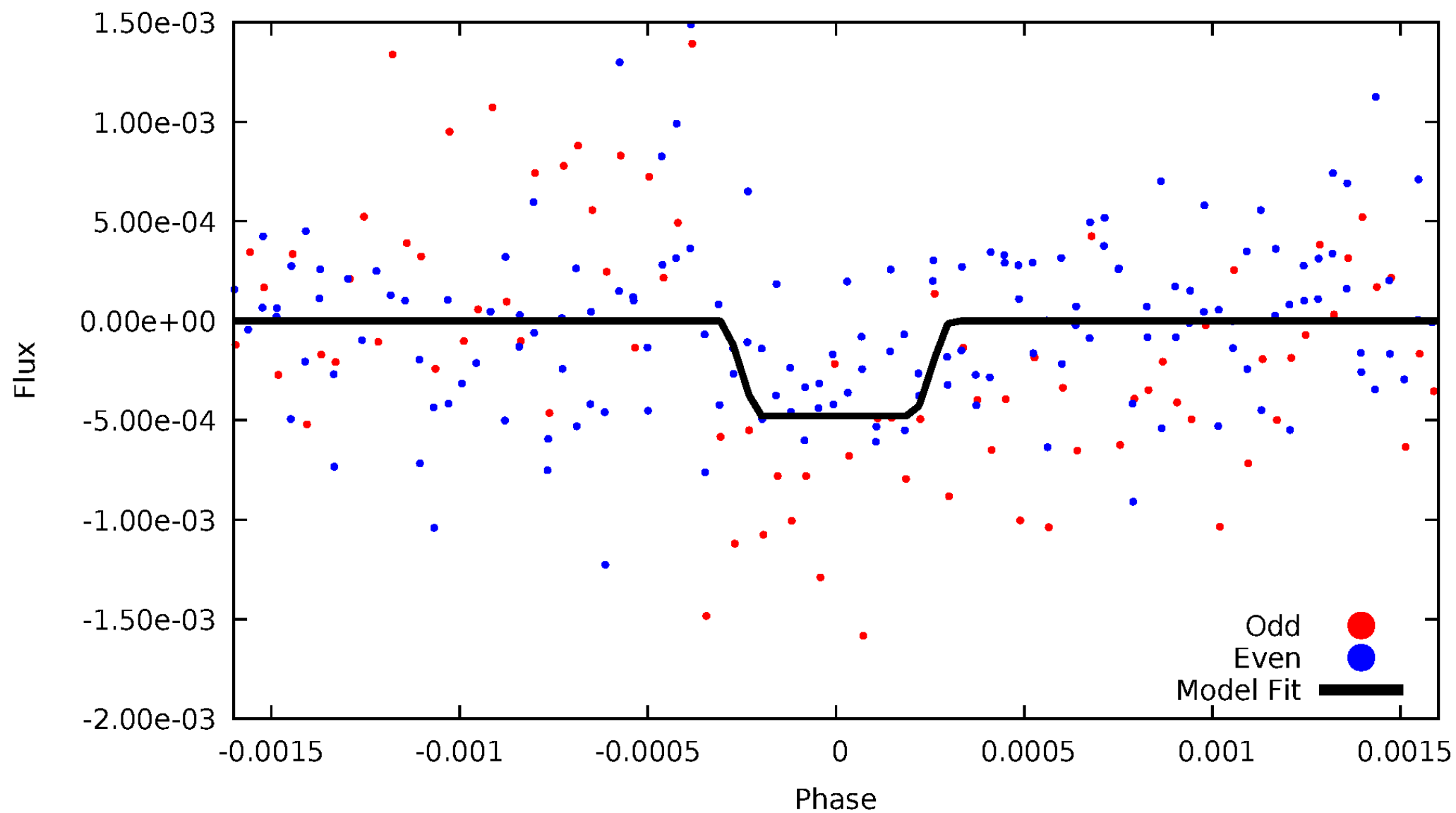
DV Odd/Even

TCE 011455716-01

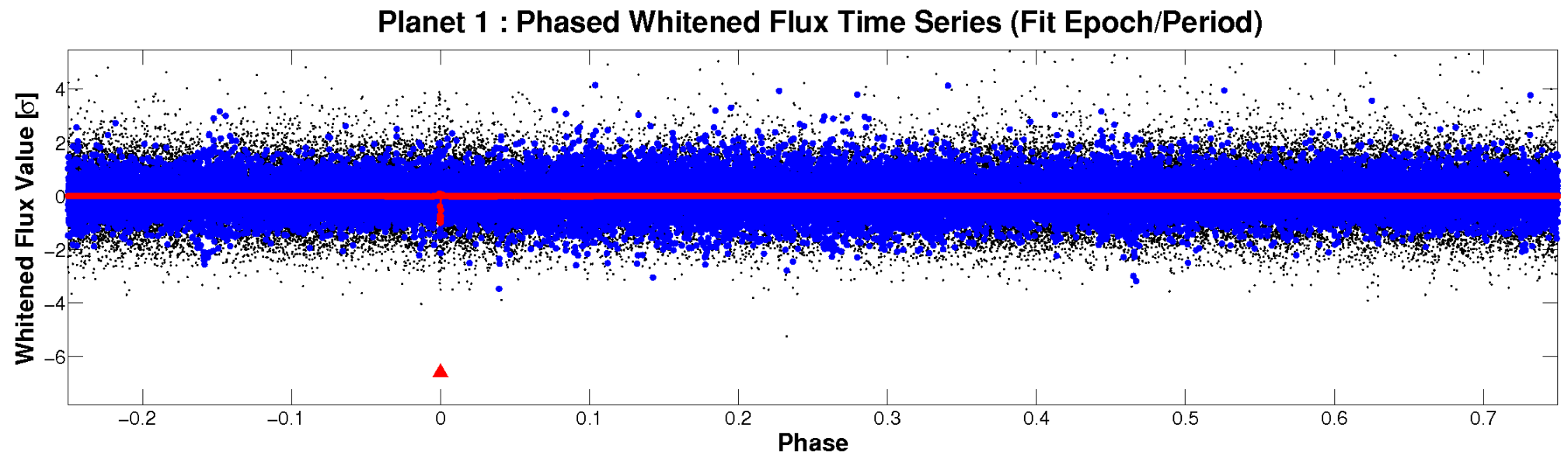
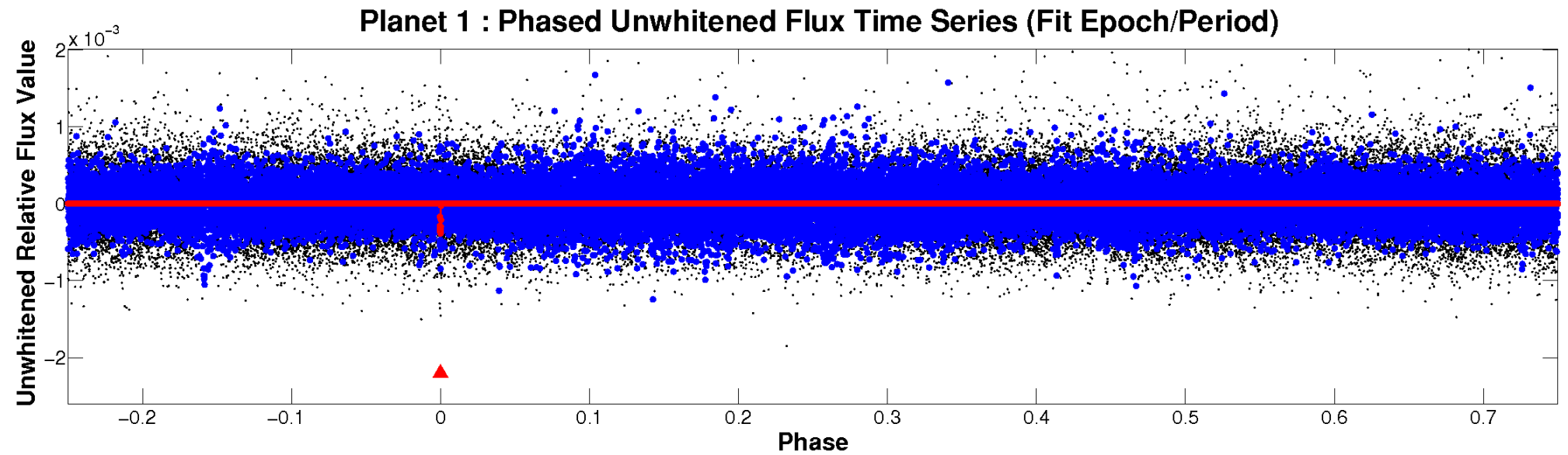


ALT Odd/Even

TCE 011455716-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 011455716-01 P=539.256111 Days $T_0=483.019479$ (BKJD)



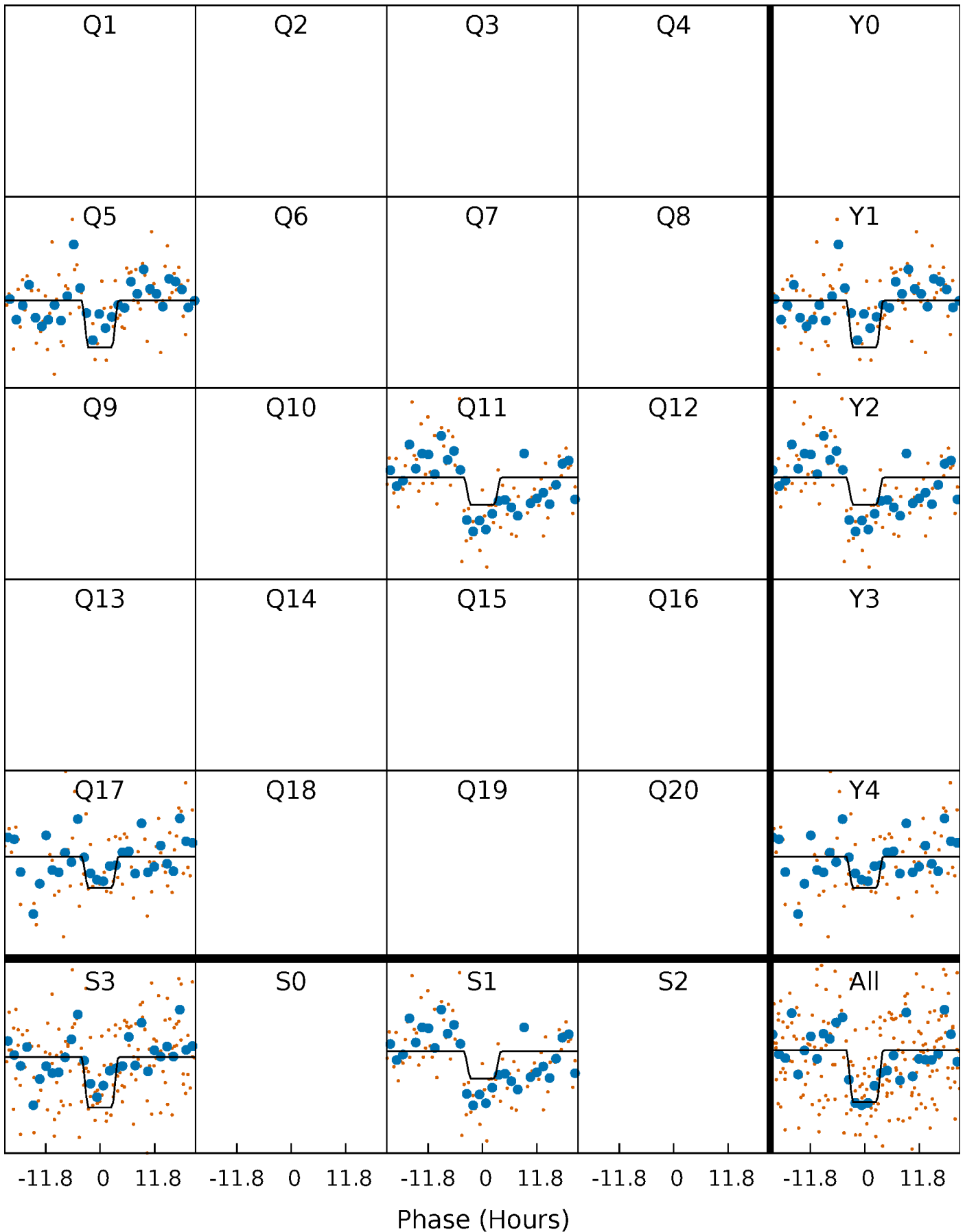
DV Quarter-Phased Transit Curves

TCE 011455716-01 P=539.256111 Days $T_0=483.019479$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

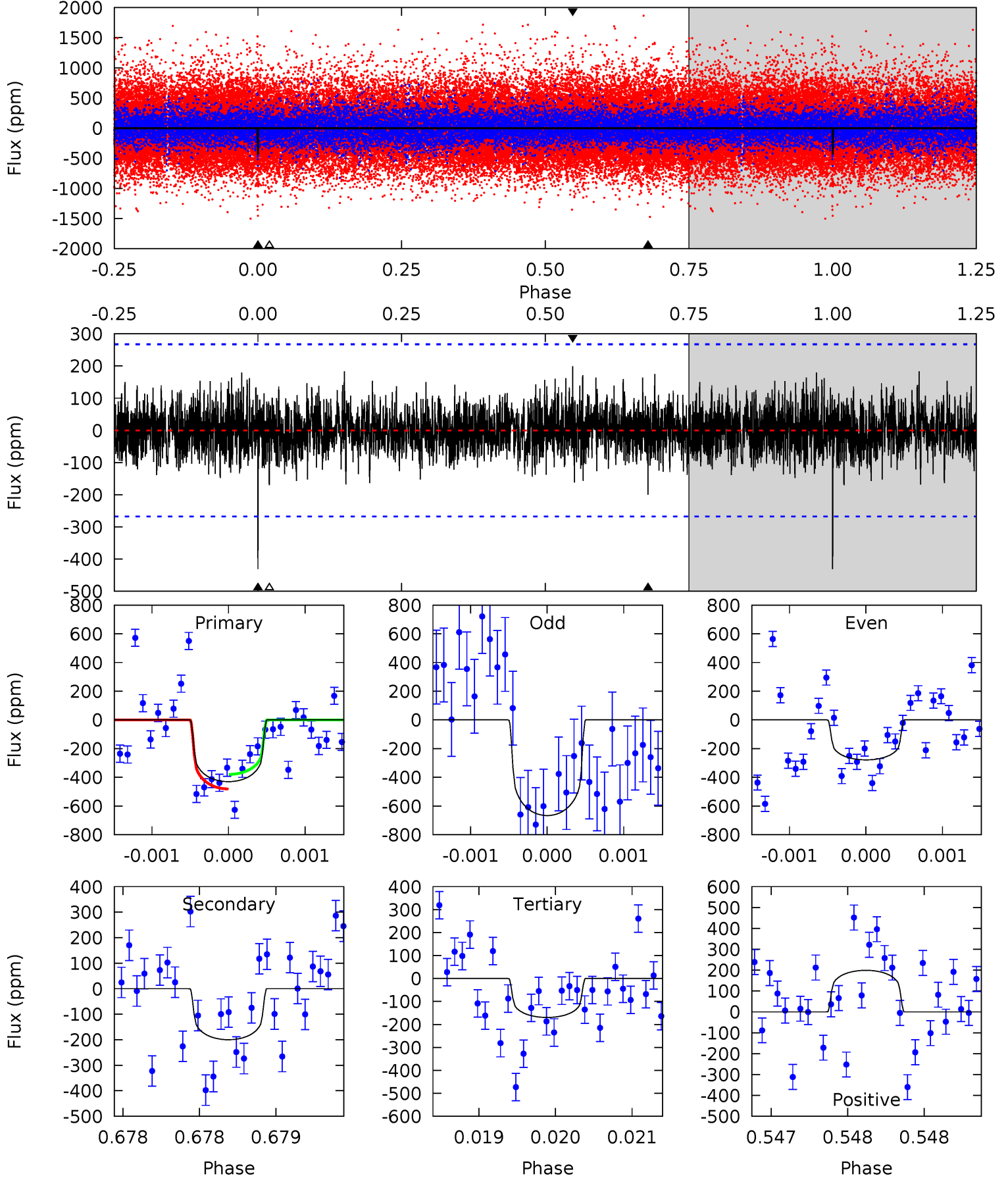
TCE 011455716-01 P=539.282516 Days $T_0=482.994053$ (BKJD)



DV Model-Shift Uniqueness Test

011455716-01, P = 539.256111 Days, E = 483.019479 Days

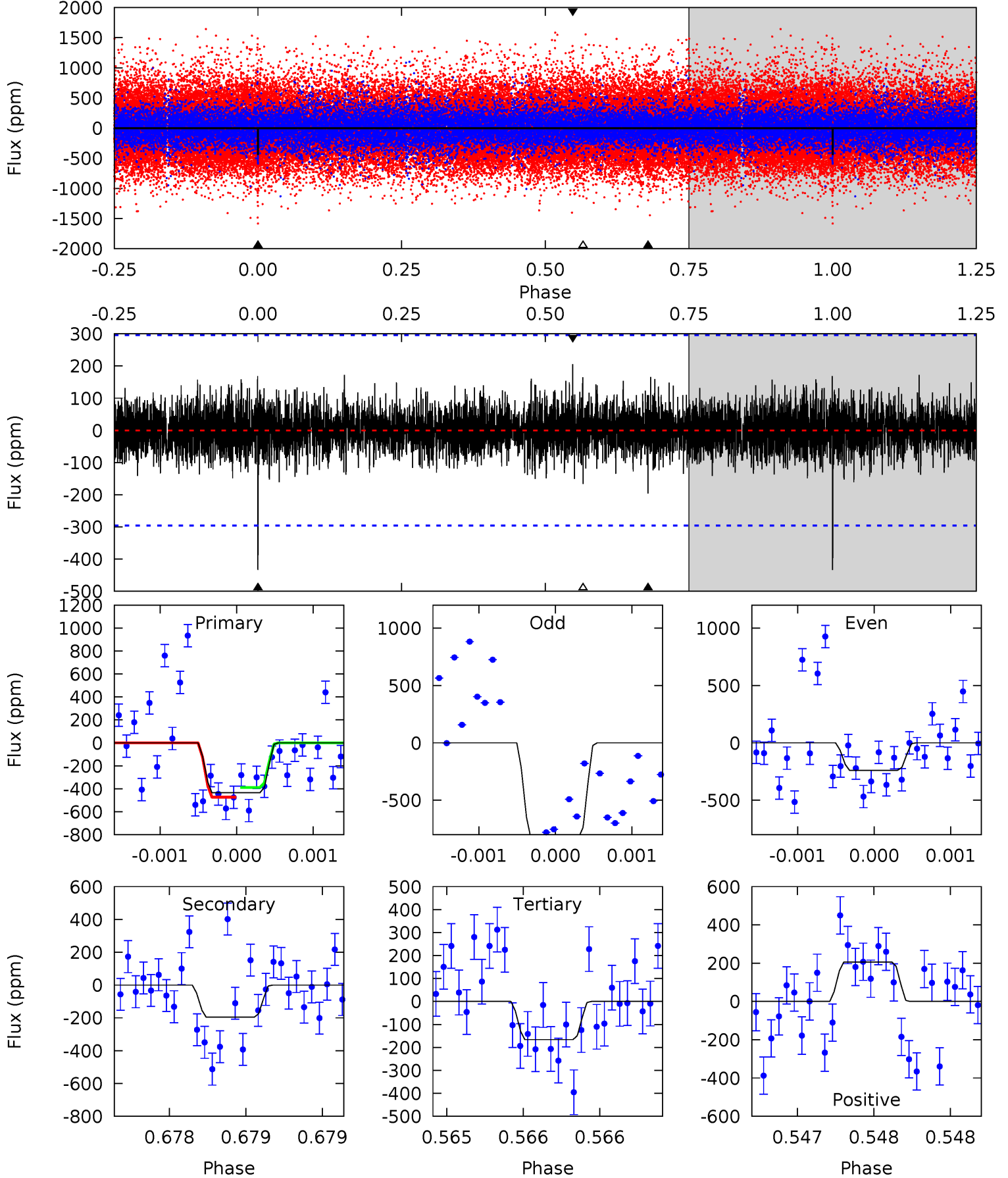
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.84	4.11	3.48	4.09	5.50	3.36	1.07	5.36	4.75	0.62	0.02	3.82	1.33	0.32	1.04



Alt Model-Shift Uniqueness Test

011455716-01, P = 539.282516 Days, E = 482.994053 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.11	3.66	3.11	3.85	5.54	3.43	0.90	5.00	4.26	0.55	-0.19	5.18	1.78	0.32	0.79



Stellar Parameters For KIC 011455716

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6014^{+169}_{-211}	$4.486^{+0.052}_{-0.221}$	$0.070^{+0.200}_{-0.350}$	$0.993^{+0.302}_{-0.101}$	$1.101^{+0.116}_{-0.159}$	$1.584^{+0.346}_{-0.872}$
	+3%/-4%	+1%/-5%	+286%/-500%	+30%/-10%	+11%/-14%	+22%/-55%
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 011455716-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-200 ± 49	$2.79^{+2.55}_{-1.76}$	328^{+26}_{-16}	4662^{+2880}_{-944}	$24583^{+145868}_{-18159}$
Alt.	-196 ± 53	$3.04^{+2.53}_{-1.97}$	325^{+24}_{-15}	4436^{+2878}_{-832}	$19506^{+142876}_{-13917}$

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

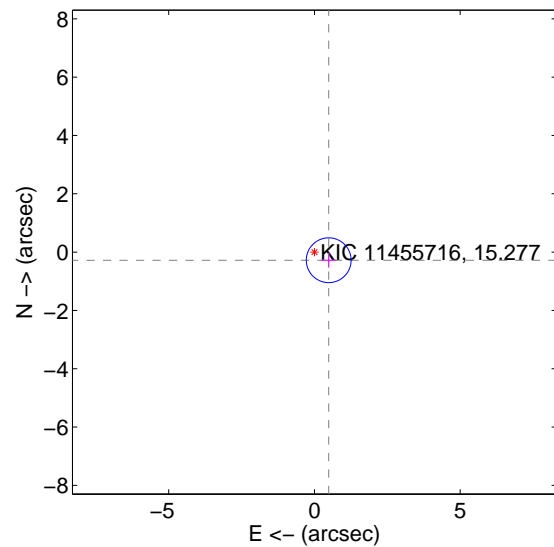
Supplemental centroid analysis for 011455716-01. Kepler magnitude: 15.28. Transit SNR 6.50

There are 1 quarters with good PRF difference image offsets

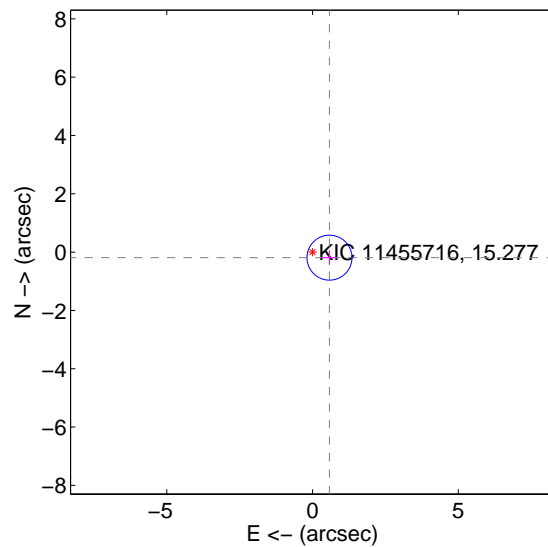
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.563 ± 0.256	2.20	-0.489 ± 0.258	-0.279 ± 0.251
PRF-fit source offset from KIC position	0.612 ± 0.257	2.38	-0.581 ± 0.258	-0.191 ± 0.251
photometric centroid source offset	0.36 ± 2.19	0.16	0.22 ± 2.18	-0.29 ± 2.19

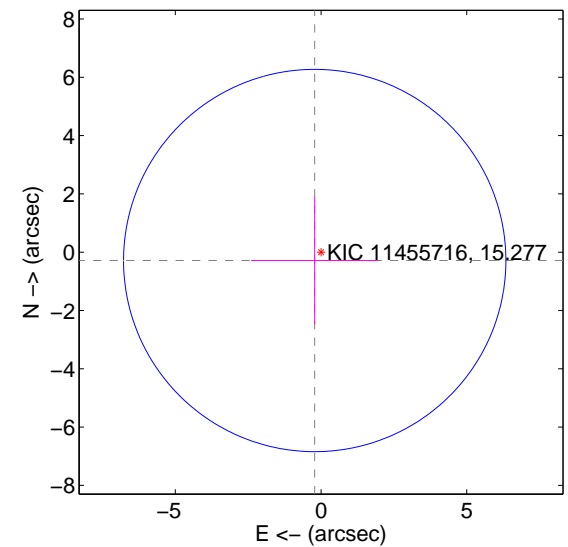
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

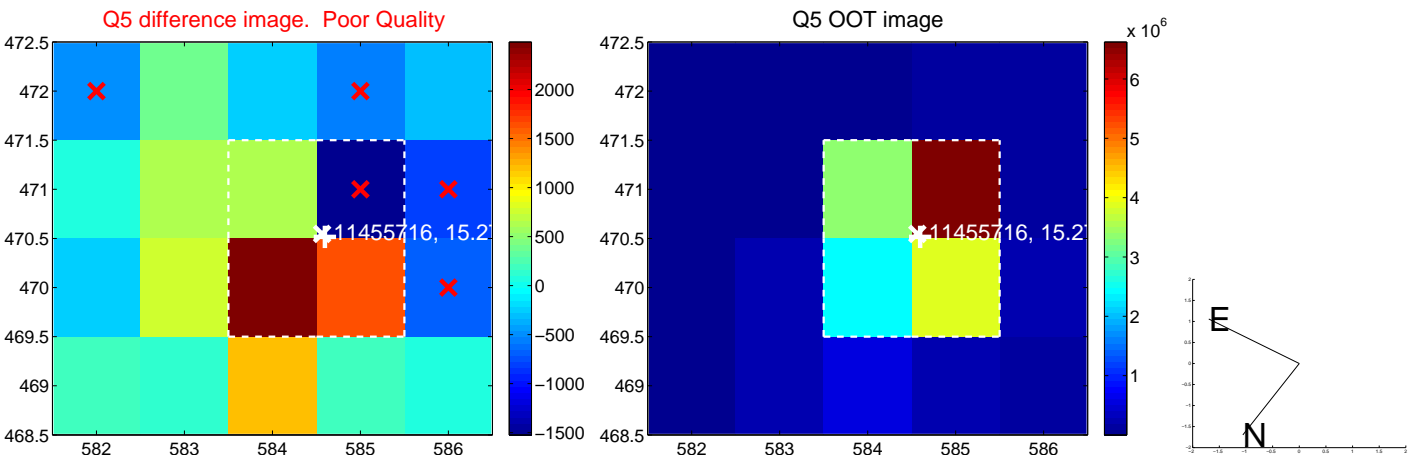


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

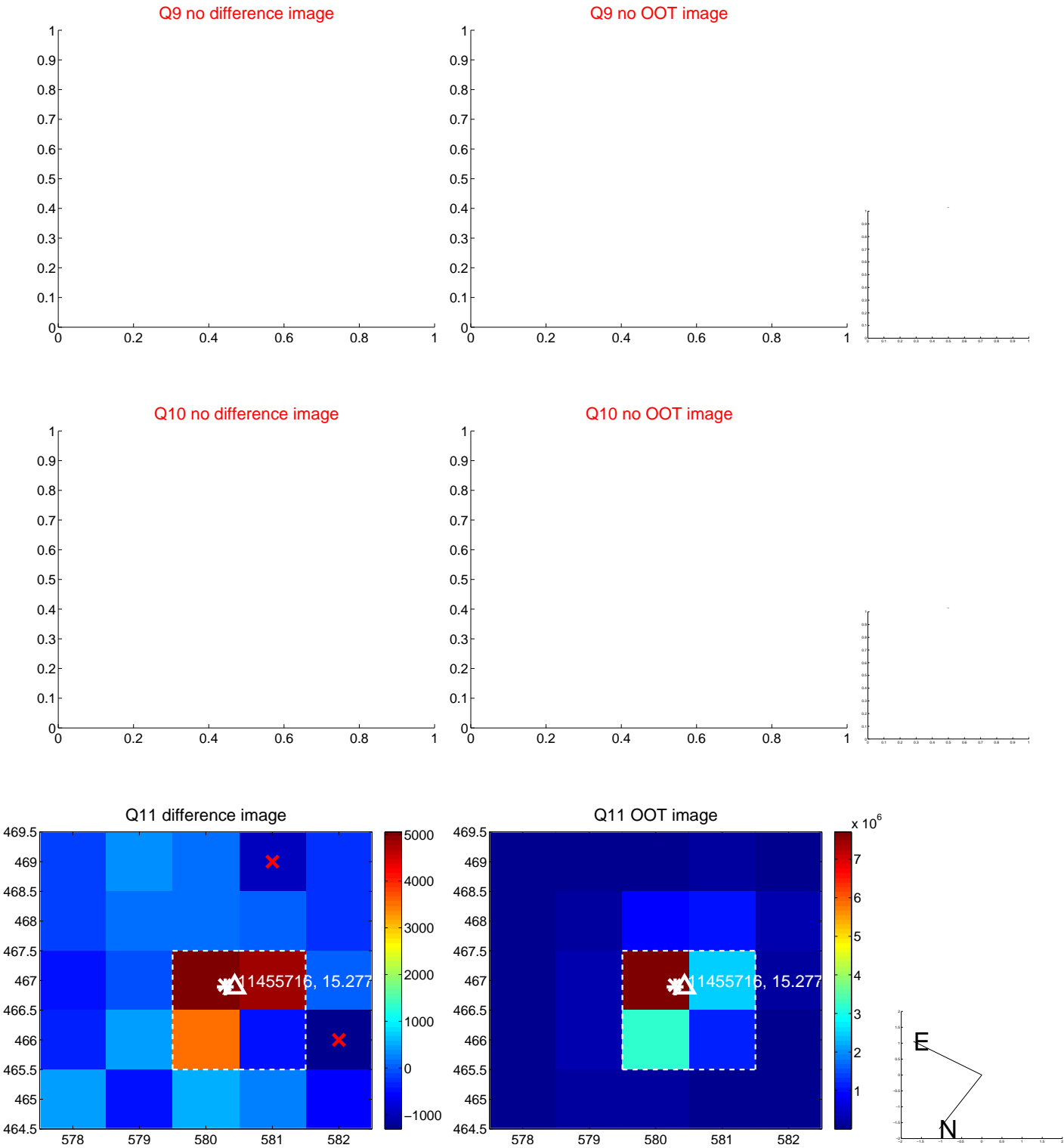
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



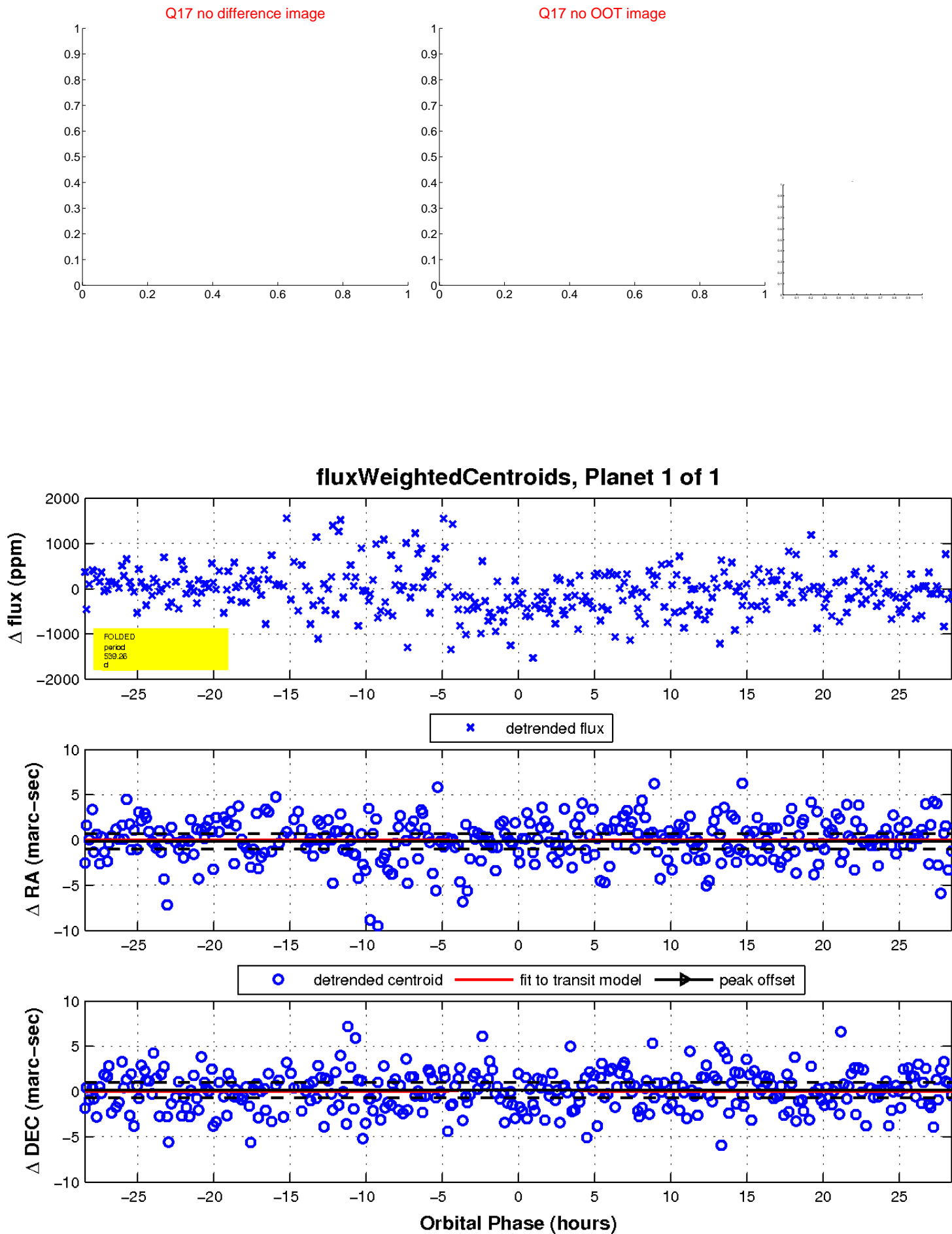
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

