

KIC 010275050

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})
010275050-01	OBS	No	474.486504	281.136398	1820.4	9.998	10.8	13.9	1.06	6260	4.72	1.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275050-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—INCONSISTENT_TRANS—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.

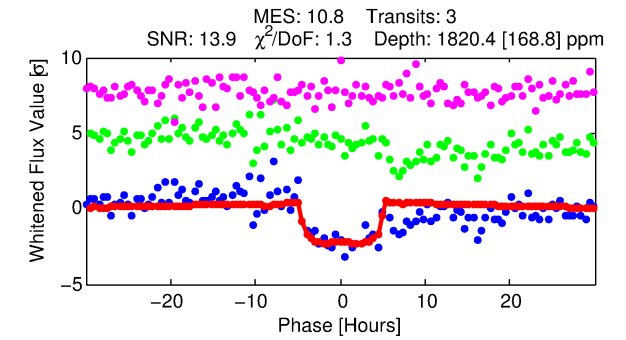
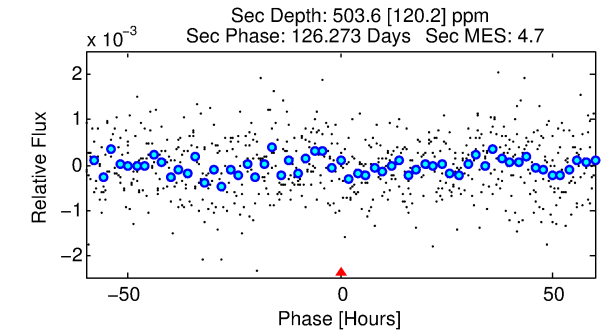
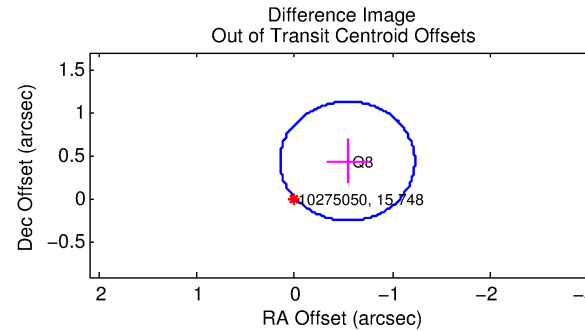
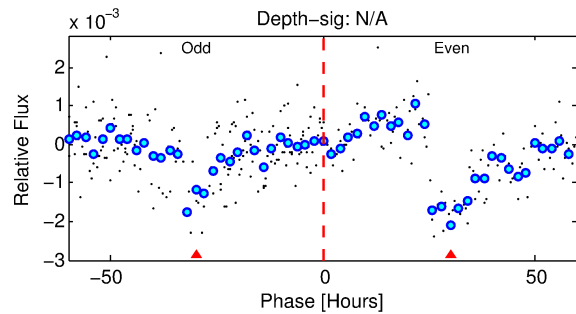
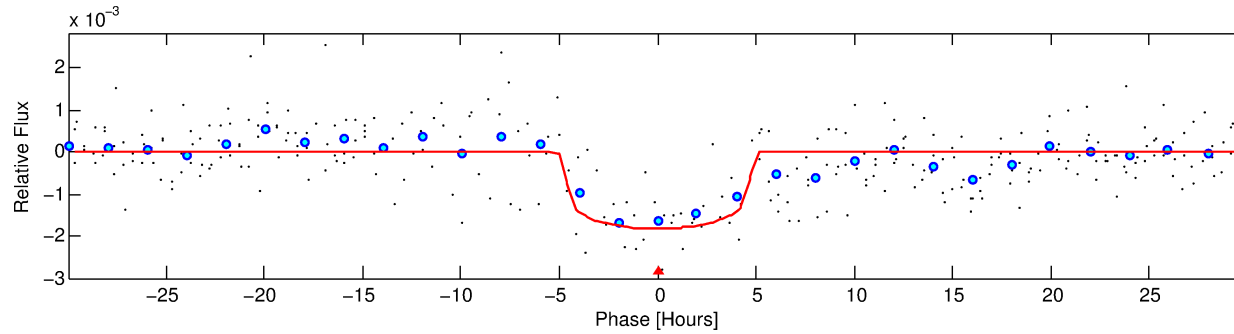
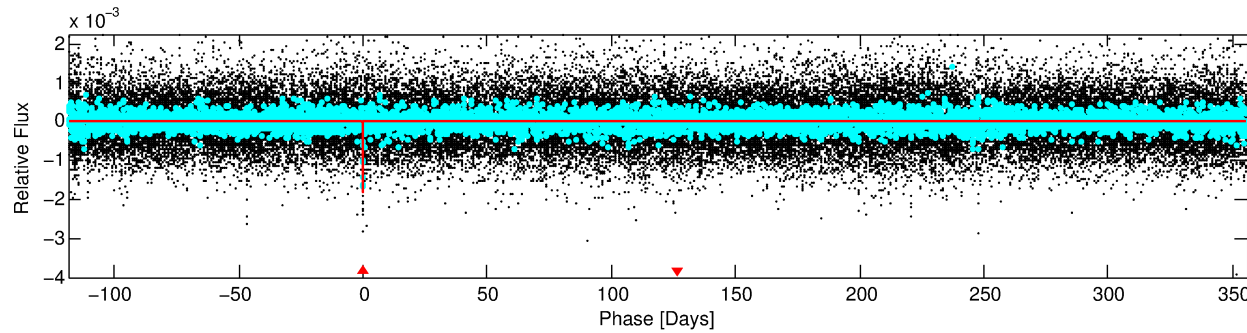
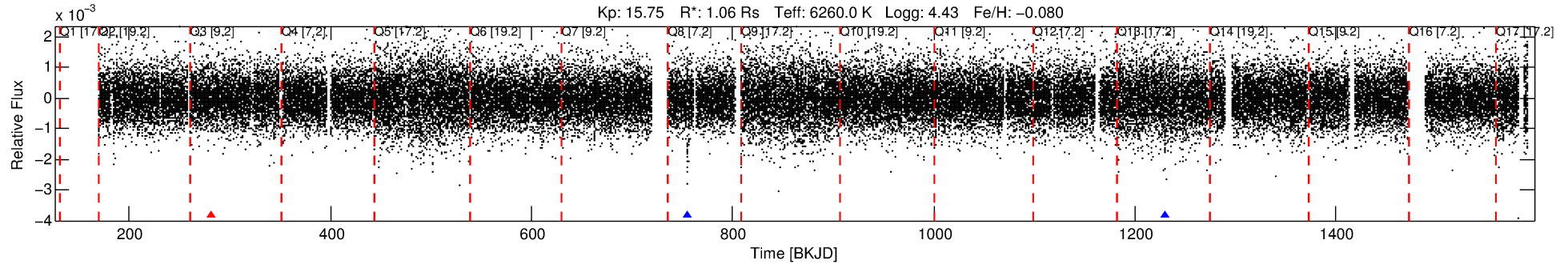
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010275050-01

No Significant Match Found

DV One-Page Summary

KIC: 10275050 Candidate: 1 of 1 Period: 474.487 d



DV Fit Results:

Period = 474.48650 [0.01676] d
Epoch = 281.1364 [0.0229] BKJD
Rp/R* = 0.0407 [0.0180]
a/R* = 314.25 [697.78]
b = 0.58 [2.58]
Seff = 1.02 [0.43]
Teq = 256 [27] K
Rp = 4.72 [2.61] Re
a = 1.2356 [0.3417] AU
Ag = 18956.77 [18928.53] [1.00σ]
Teffp = 4647 [1078] K [4.07σ]

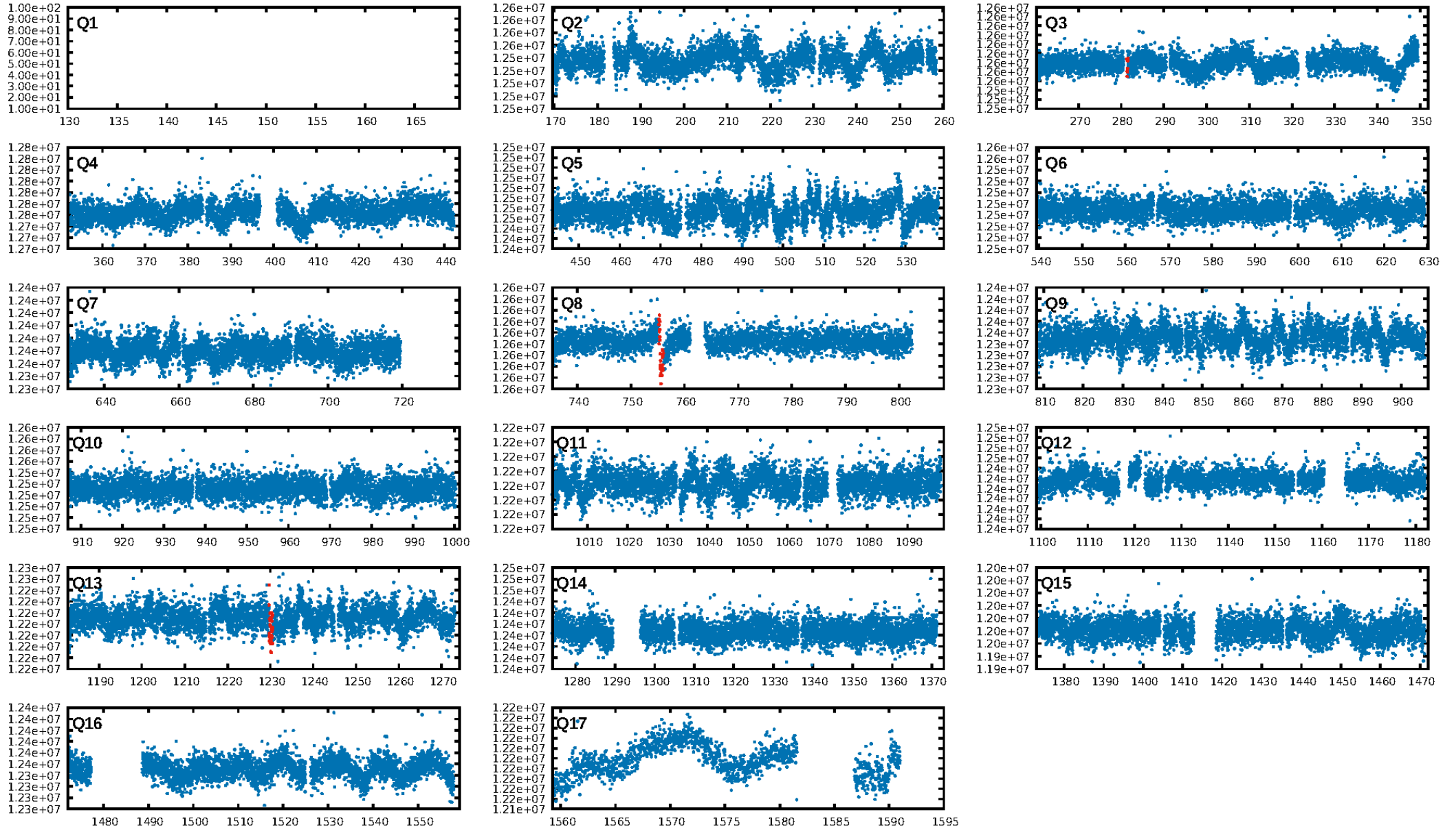
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.63e-20
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 23.29
Centroid-sig: 60.9%
Centroid-so: 0.568 arcsec [0.65σ]
OotOffset-rm: 0.697 arcsec [3.04σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-rm: 0.673 arcsec [2.94σ]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

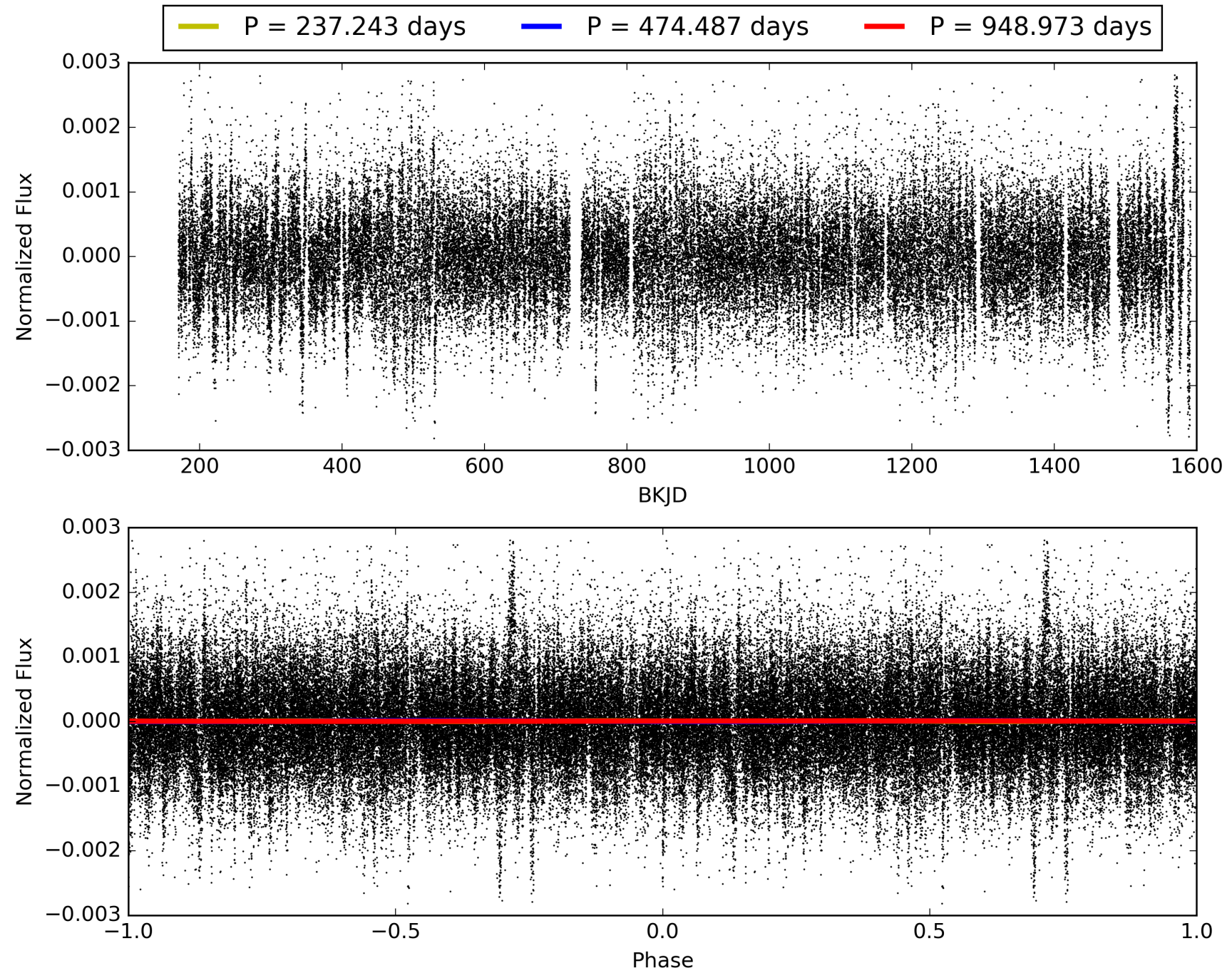
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:49:35 Z

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

TCE 010275050-01, PDC Light Curves

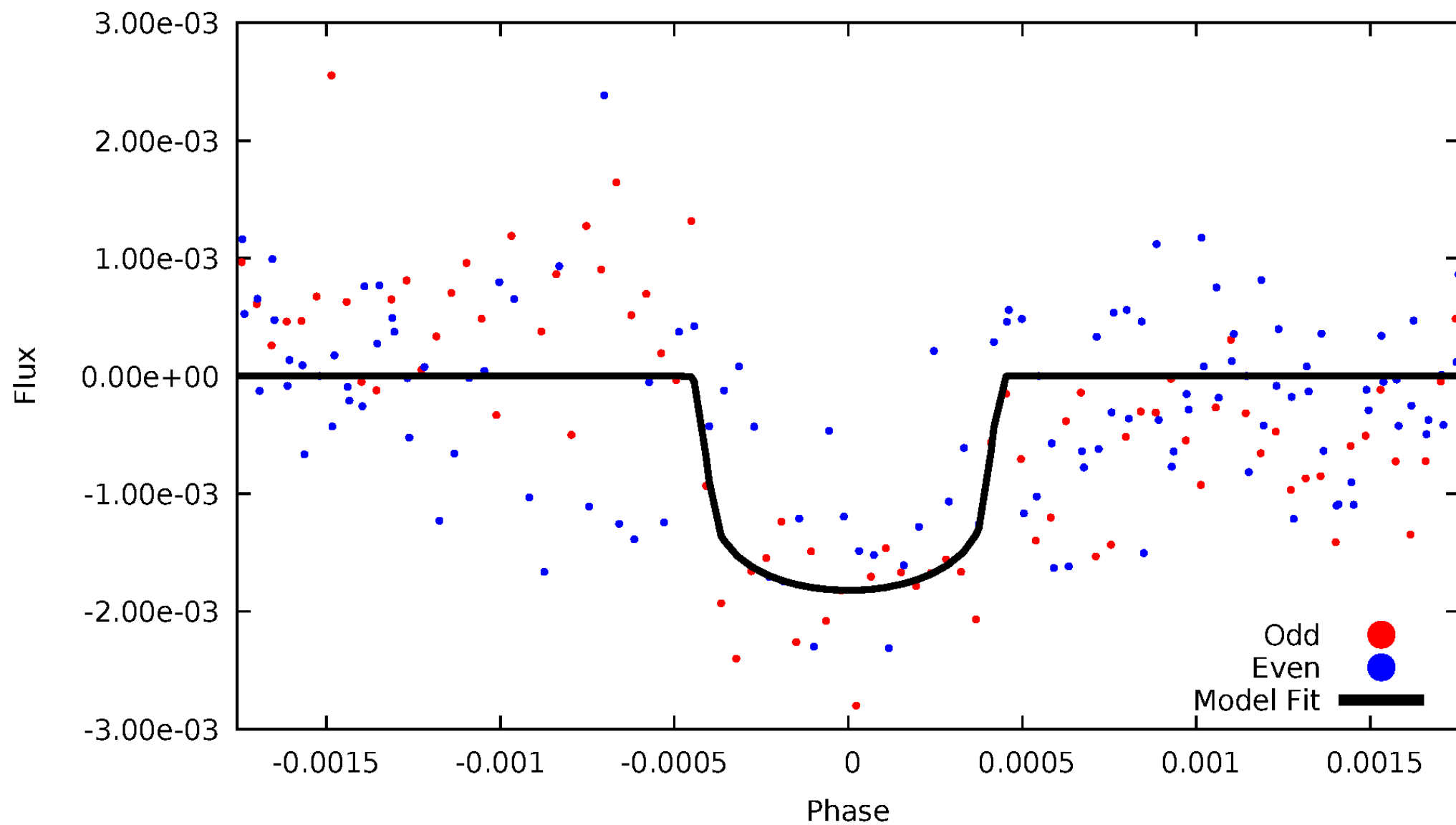


TCE 010275050-01



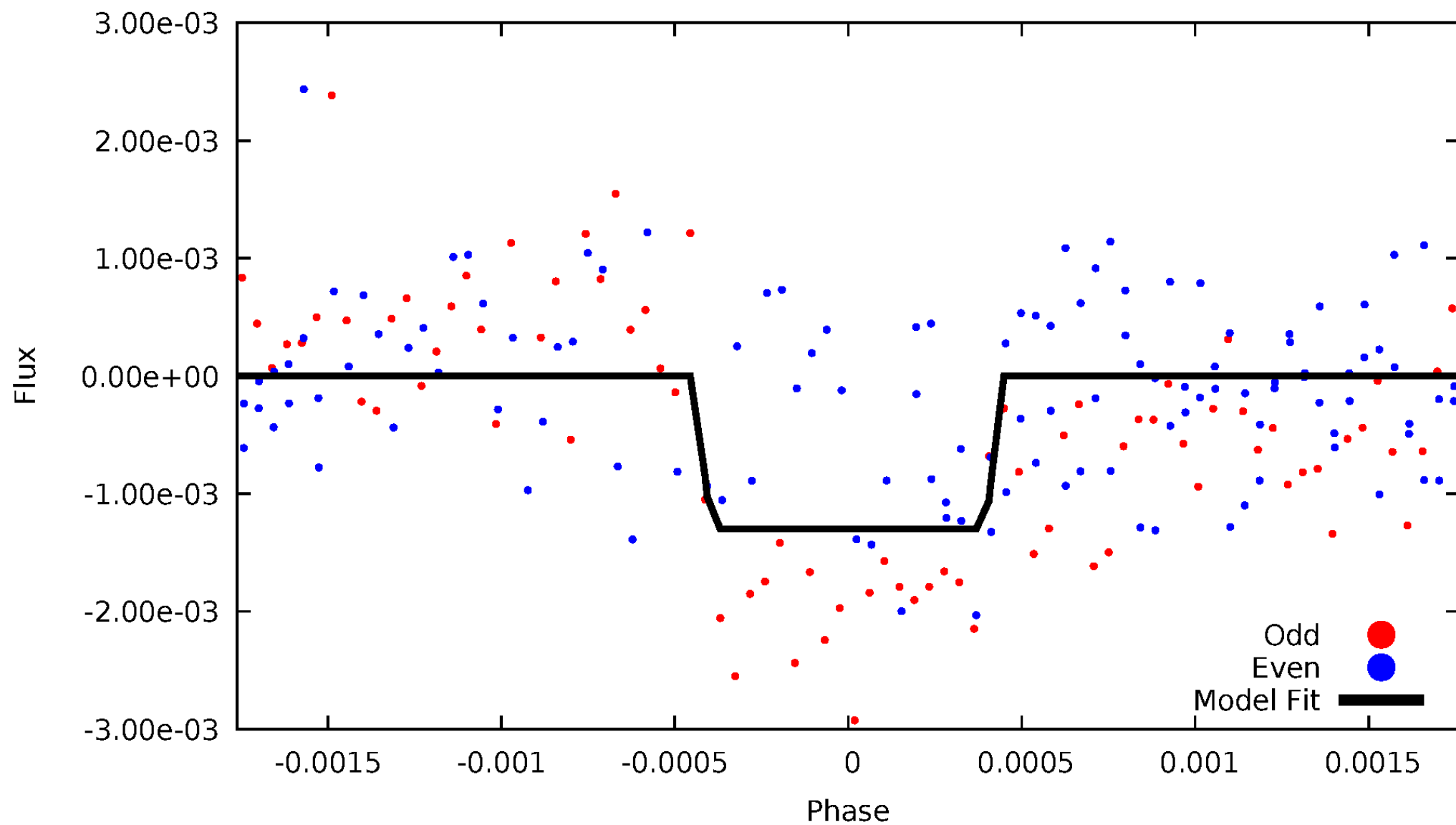
DV Odd/Even

TCE 010275050-01



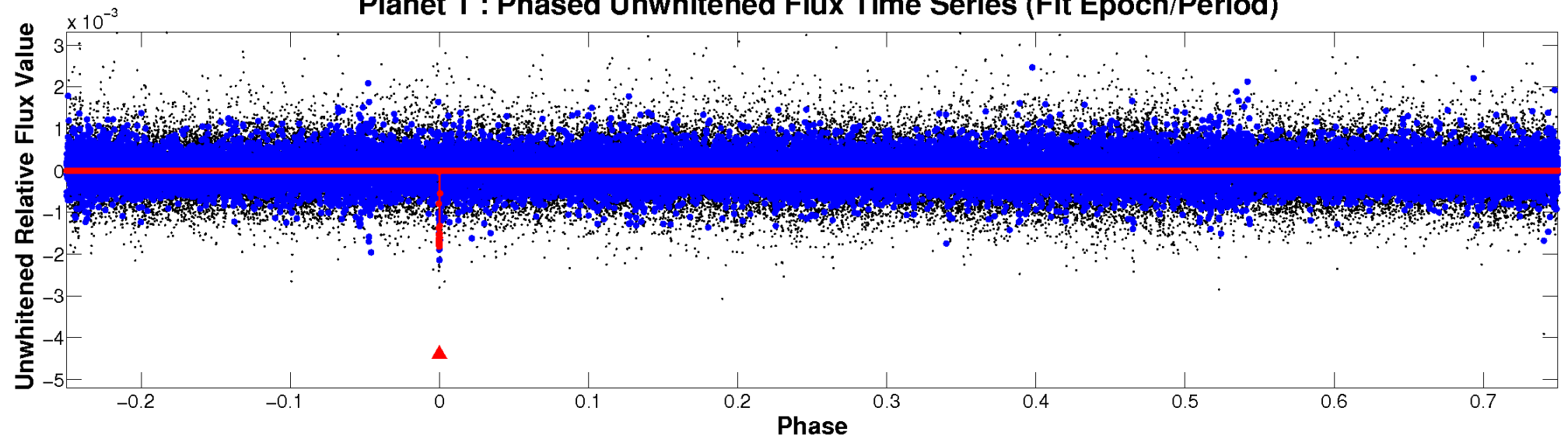
ALT Odd/Even

TCE 010275050-01

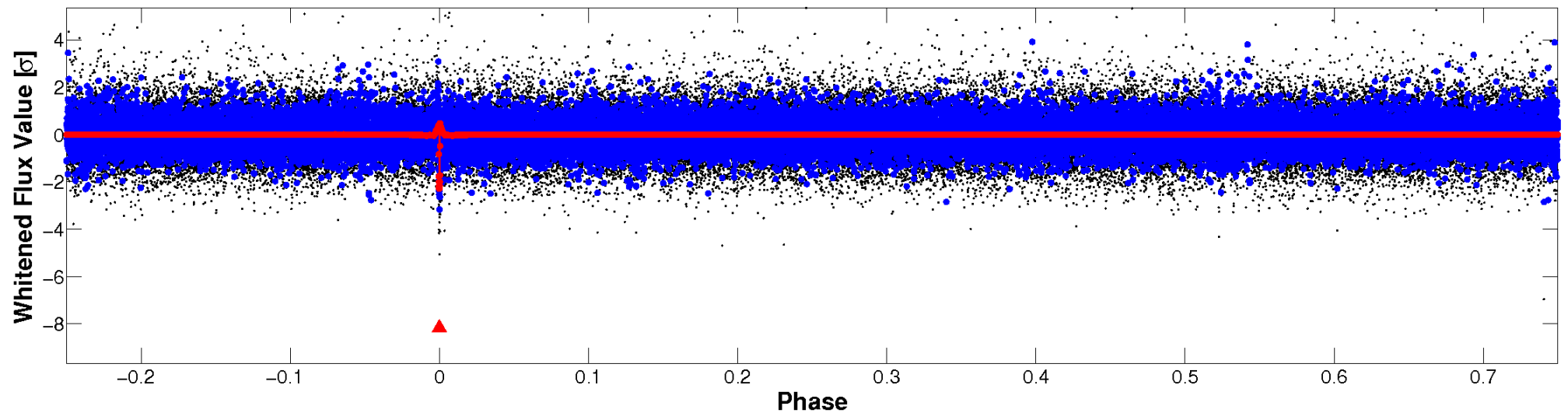


Non-Whitened Vs. Whitened Light Curve

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

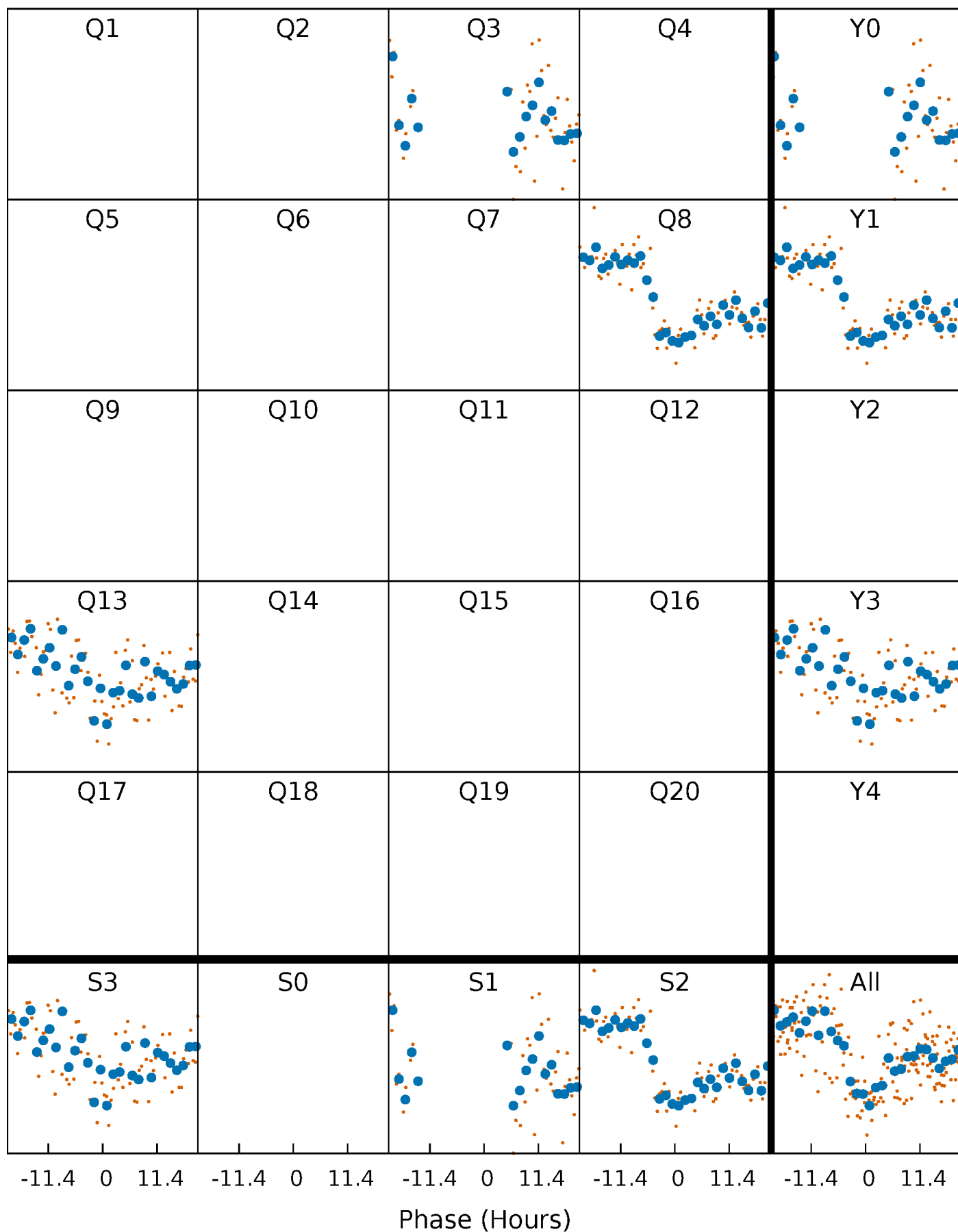


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



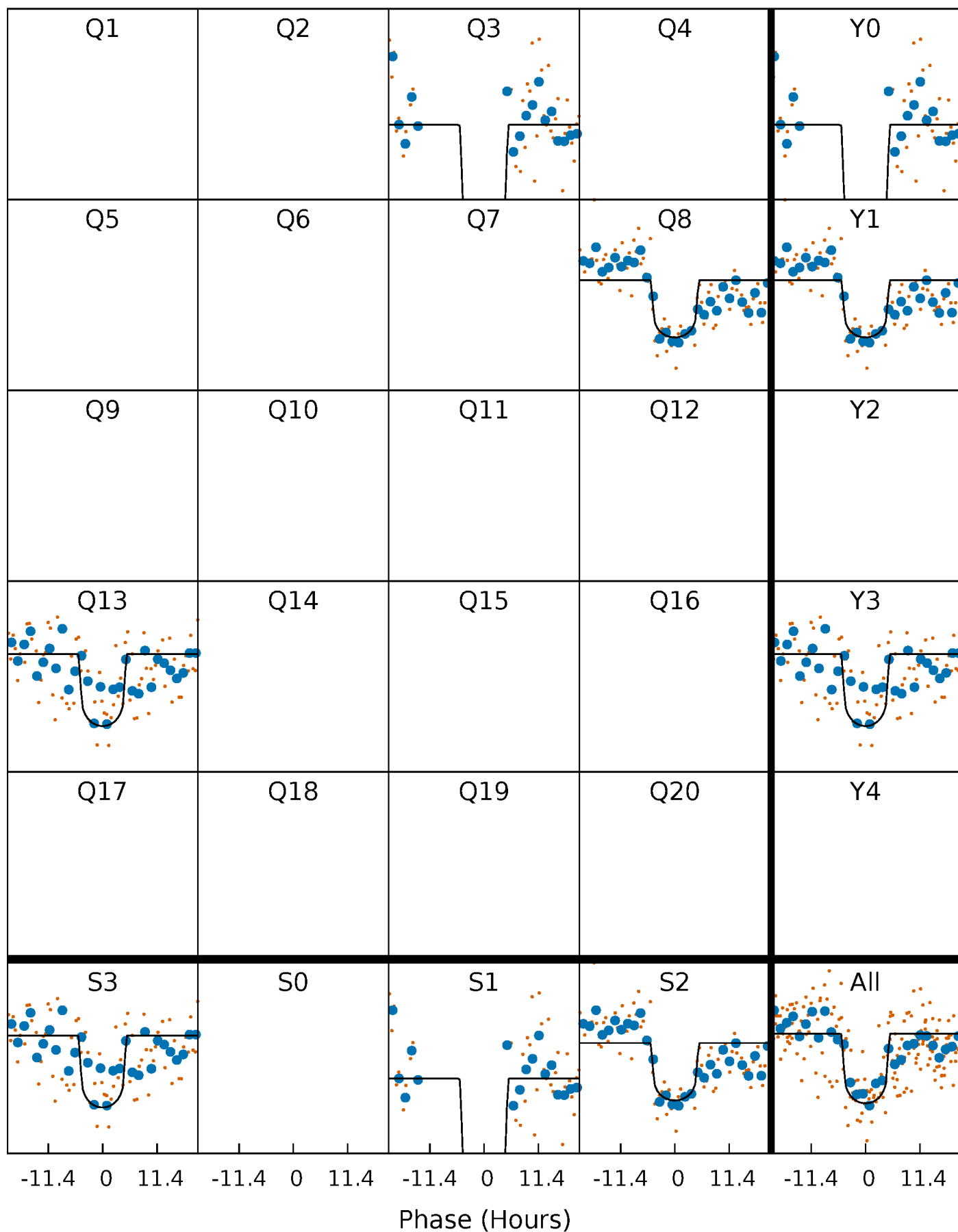
PDC Quarter-Phased Transit Curves

TCE 010275050-01 P=474.486504 Days $T_0=281.136398$ (BKJD)



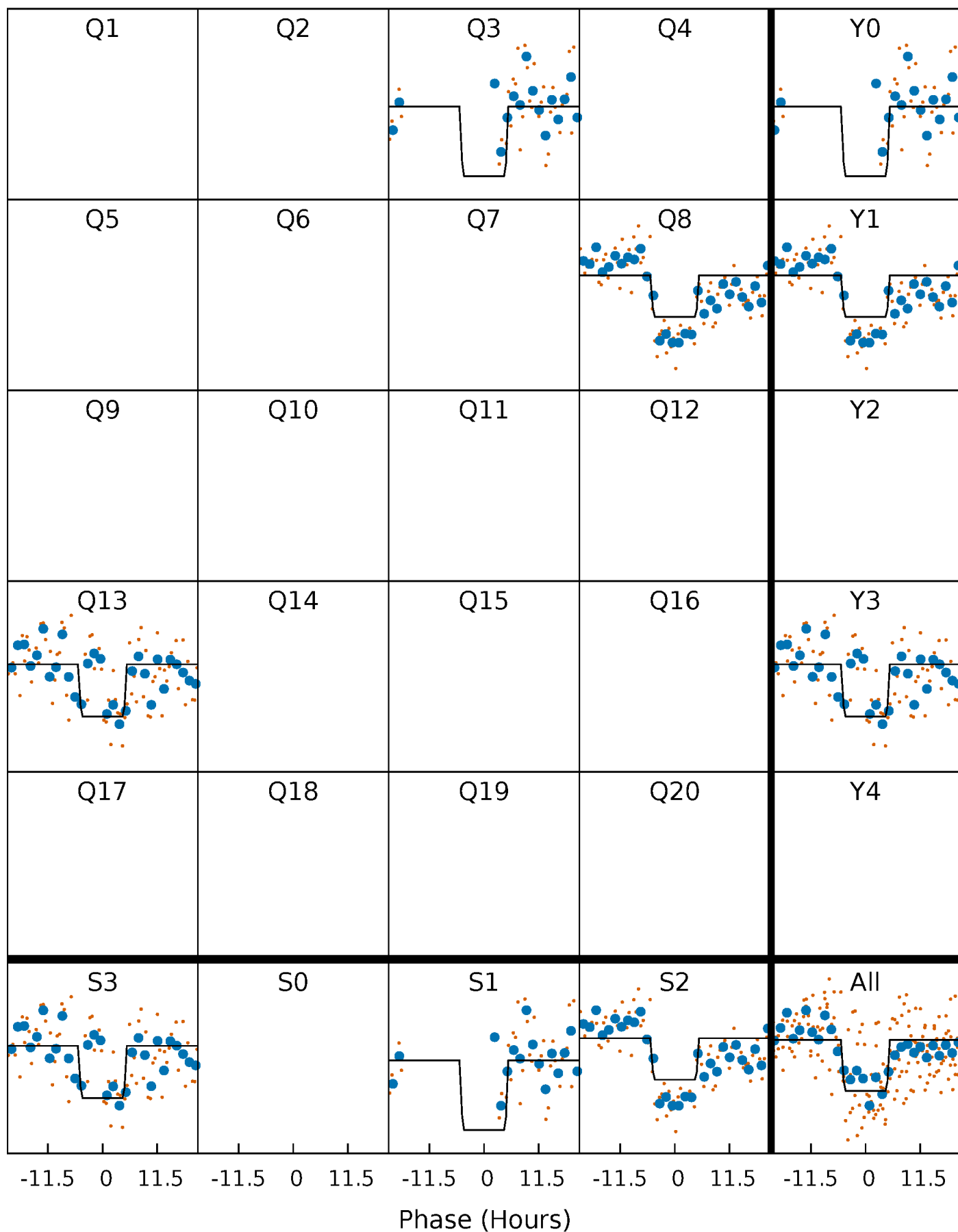
DV Quarter-Phased Transit Curves

TCE 010275050-01 $P=474.486504$ Days $T_0=281.136398$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

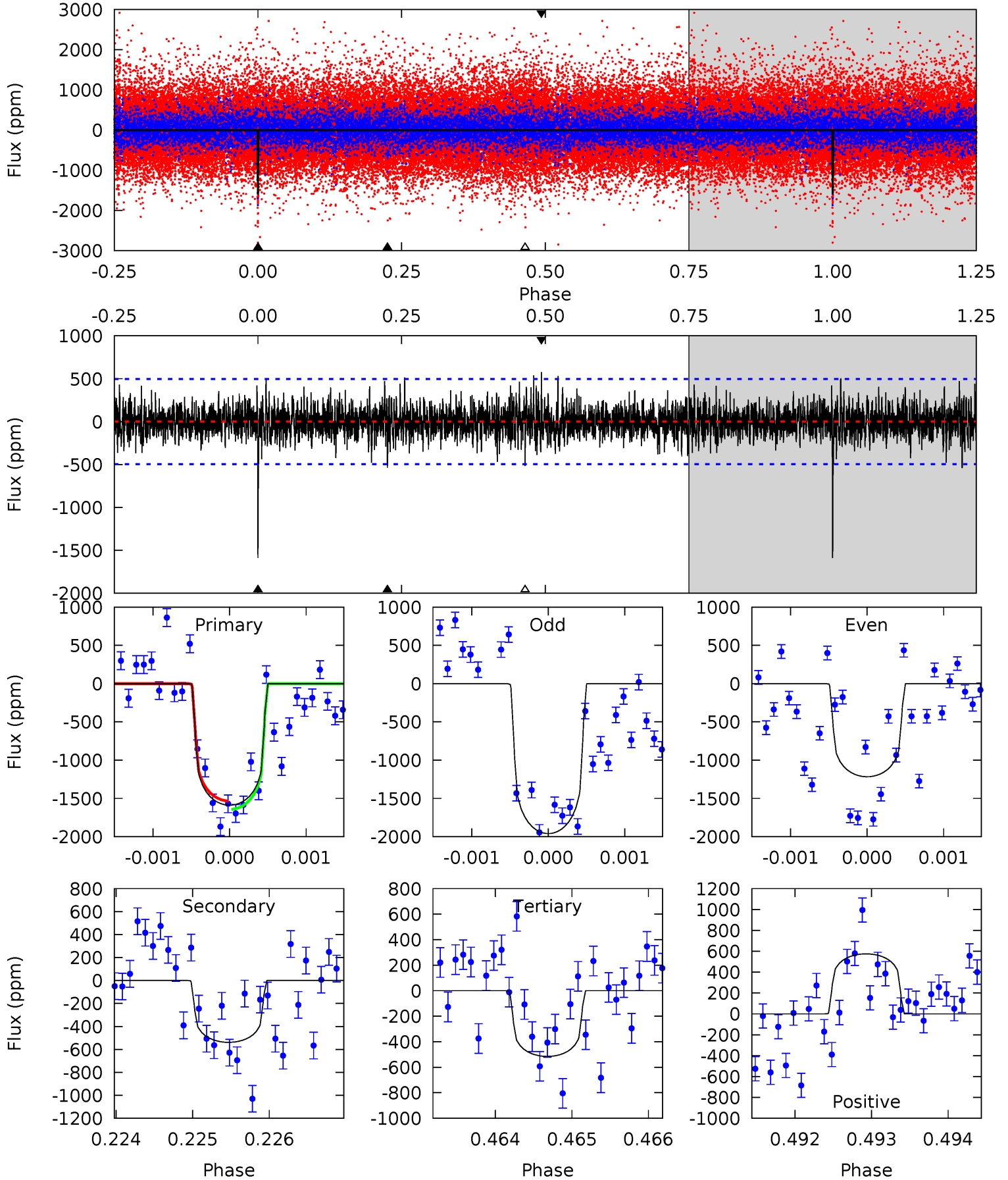
TCE 010275050-01 P=474.365095 Days $T_0=281.259784$ (BKJD)



DV Model-Shift Uniqueness Test

010275050-01, P = 474.486504 Days, E = 281.136398 Days

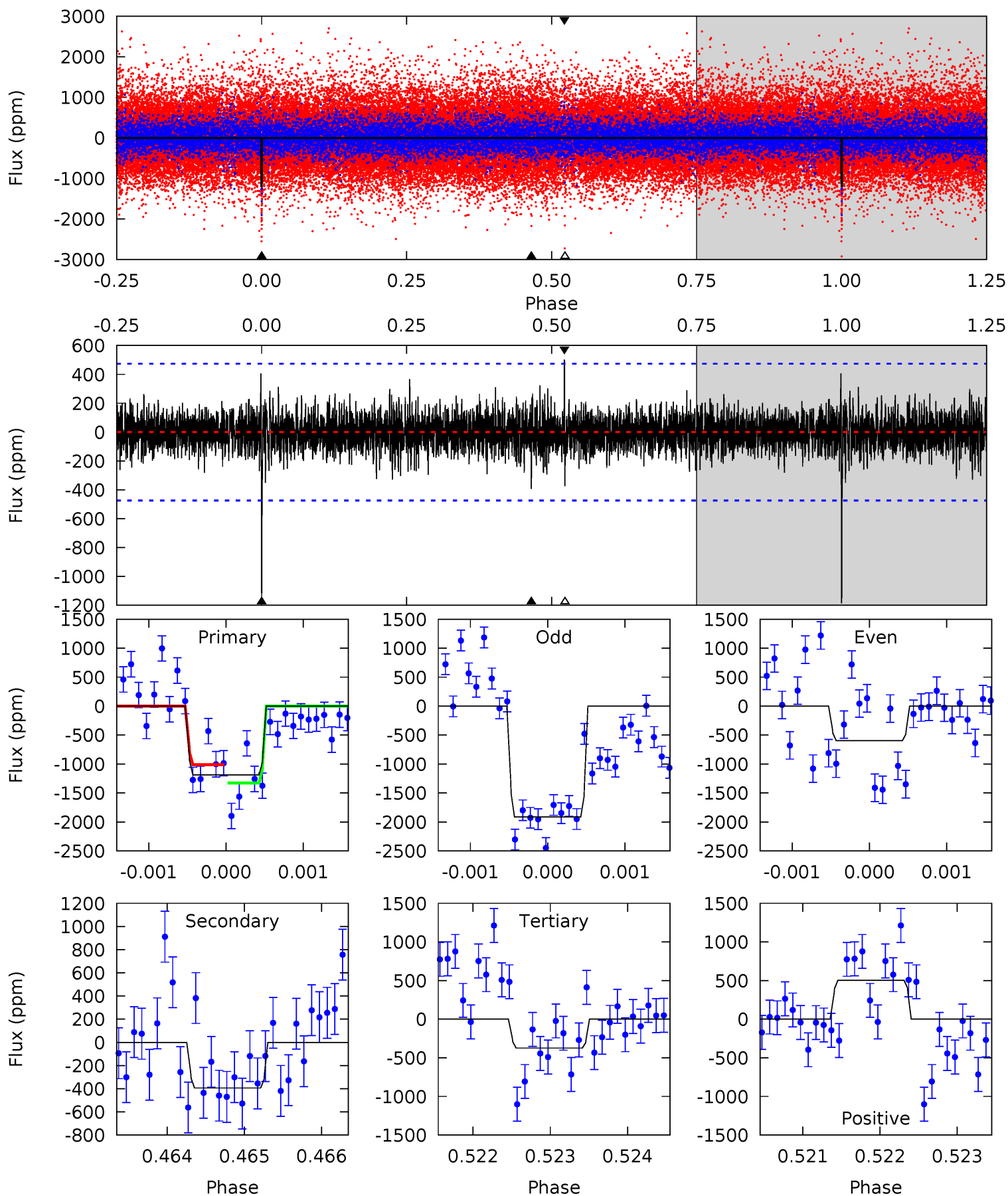
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	5.93	5.68	6.34	5.47	3.32	1.46	11.8	11.2	0.26	-0.40	4.09	1.00	0.27	0.60



Alt Model-Shift Uniqueness Test

010275050-01, P = 474.365095 Days, E = 281.259784 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	4.55	4.32	5.81	5.48	3.33	1.04	9.40	7.90	0.24	-1.26	7.56	1.44	0.30	1.82



Stellar Parameters For KIC 010275050

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6260^{+174}_{-239}	$4.433^{+0.054}_{-0.216}$	$-0.080^{+0.250}_{-0.300}$	$1.063^{+0.353}_{-0.118}$	$1.118^{+0.157}_{-0.157}$	$1.310^{+0.368}_{-0.680}$
	+3%/-4%	+1%/-5%	+312%/-375%	+33%/-11%	+14%/-14%	+28%/-52%
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 010275050-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-538 ± 91	$5.00^{+2.26}_{-2.28}$	365^{+26}_{-19}	4782^{+1458}_{-634}	17288^{+43591}_{-9263}
Alt.	-394 ± 86	$4.39^{+2.20}_{-2.08}$	366^{+26}_{-19}	4728^{+1618}_{-650}	16345^{+41053}_{-8937}

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

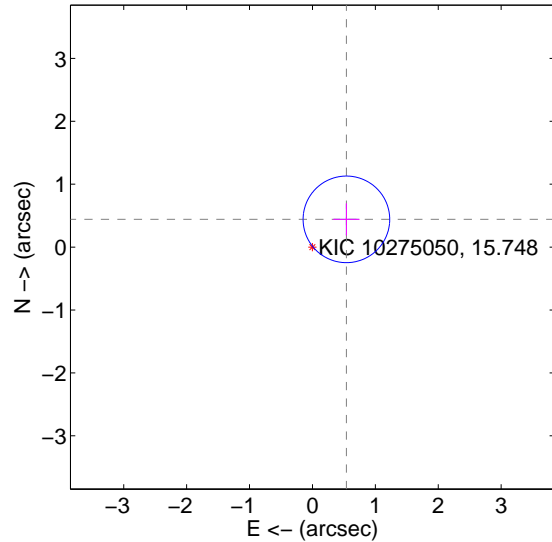
Supplemental centroid analysis for 010275050-01. Kepler magnitude: 15.75. Transit SNR 13.91

There are 1 quarters with good PRF difference image offsets

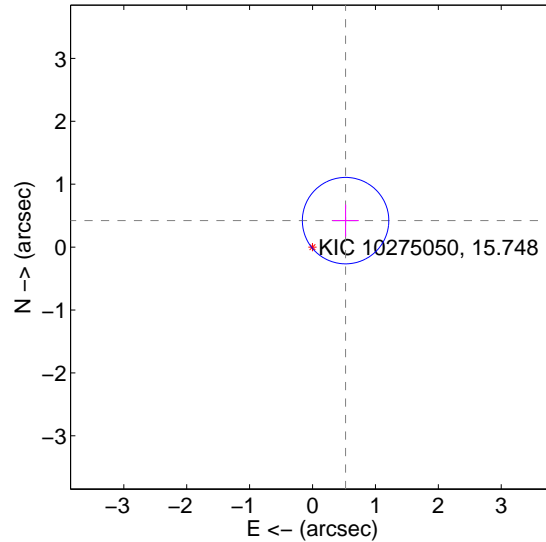
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.697 ± 0.229	3.04	-0.540 ± 0.210	0.441 ± 0.256
PRF-fit source offset from KIC position	0.673 ± 0.229	2.94	-0.526 ± 0.210	0.421 ± 0.256
photometric centroid source offset	0.57 ± 0.88	0.65	0.32 ± 0.93	-0.47 ± 0.86

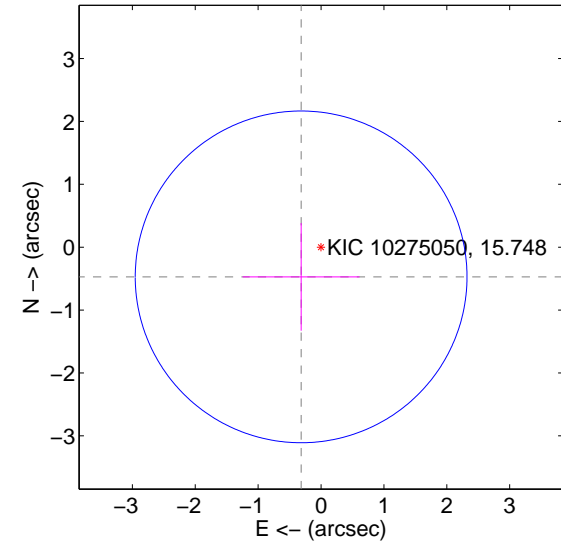
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

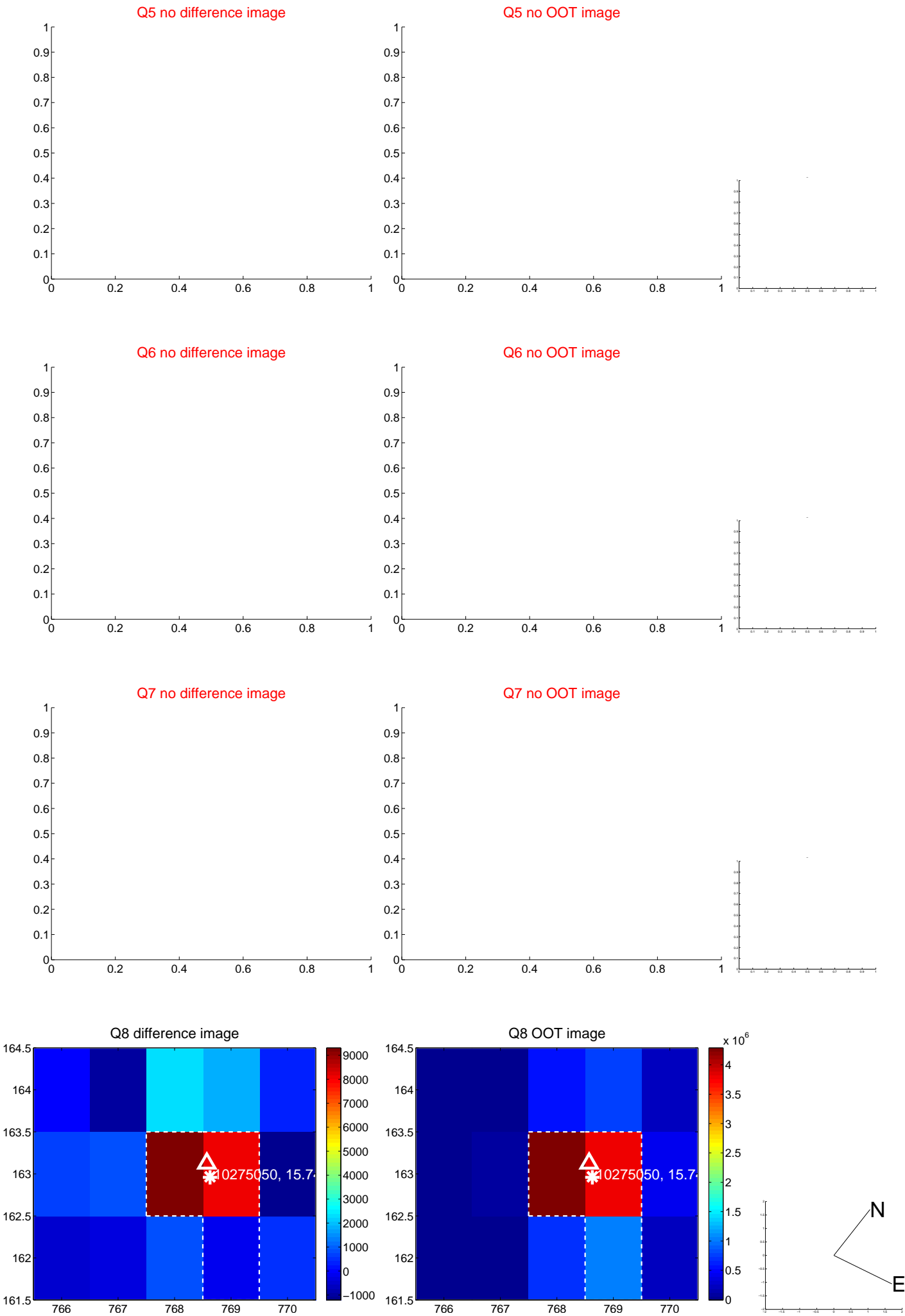


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

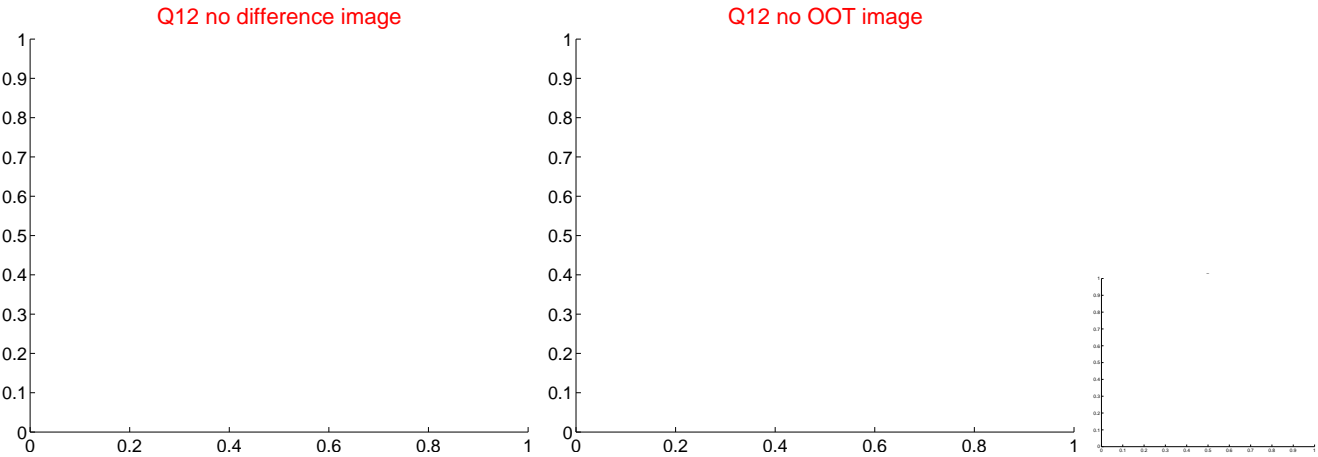
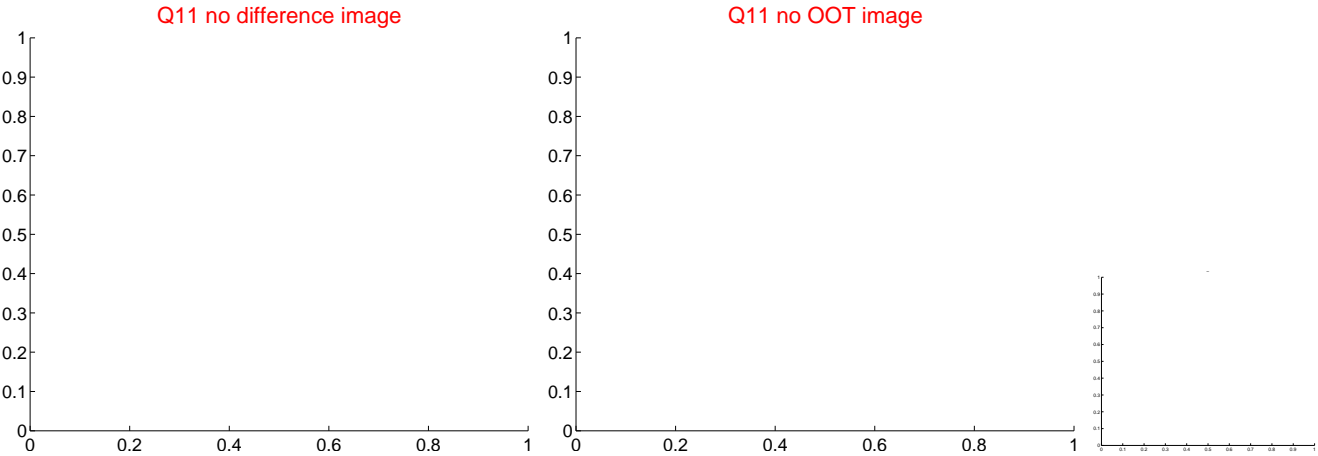
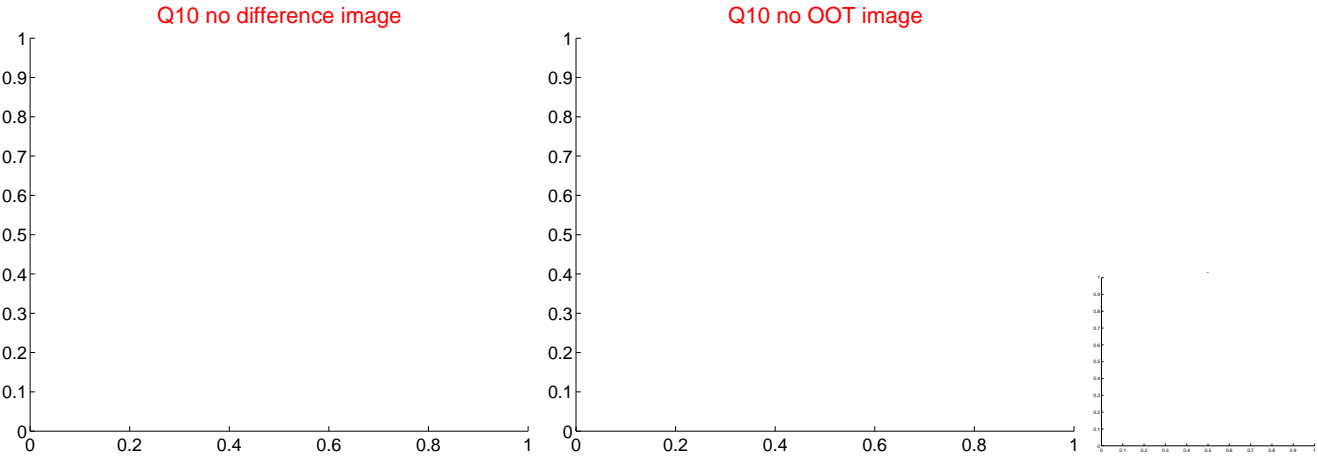
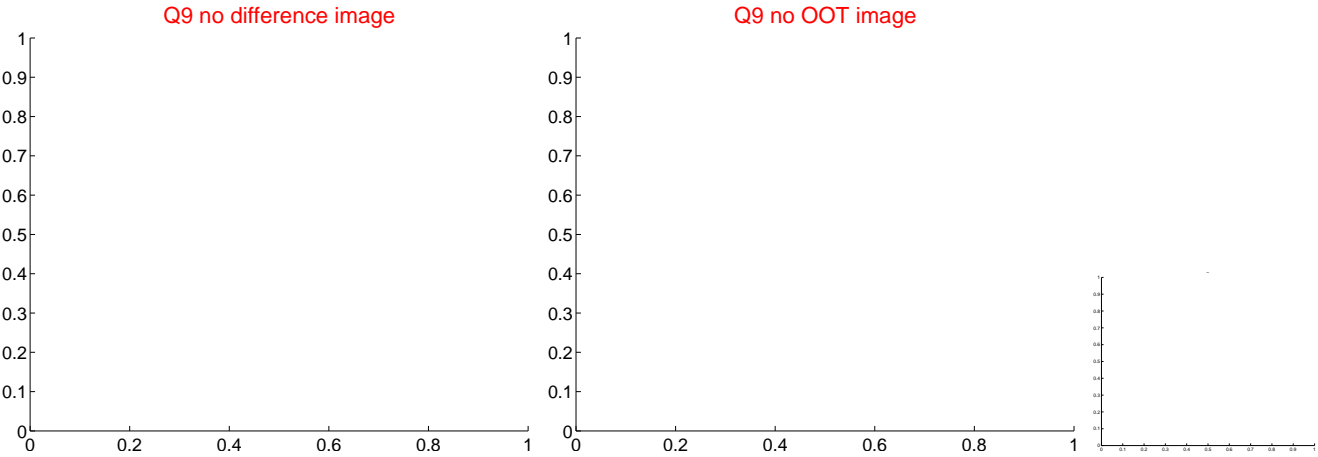
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



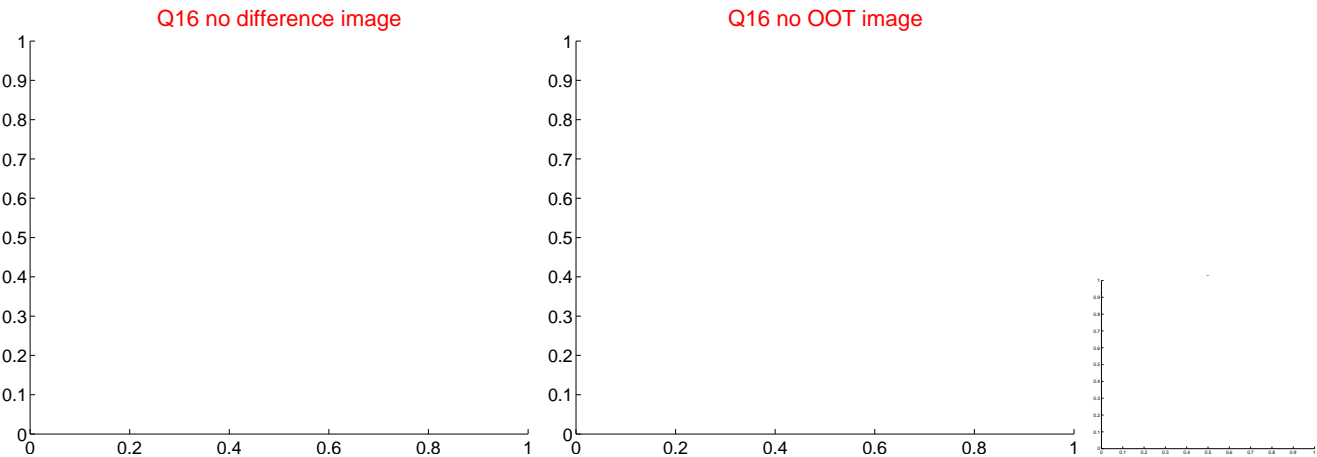
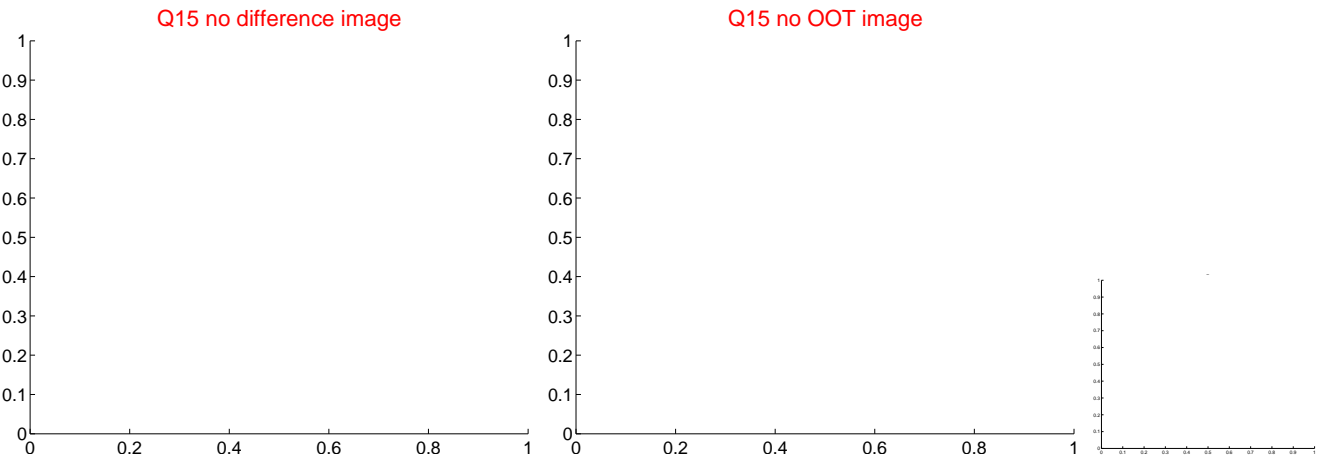
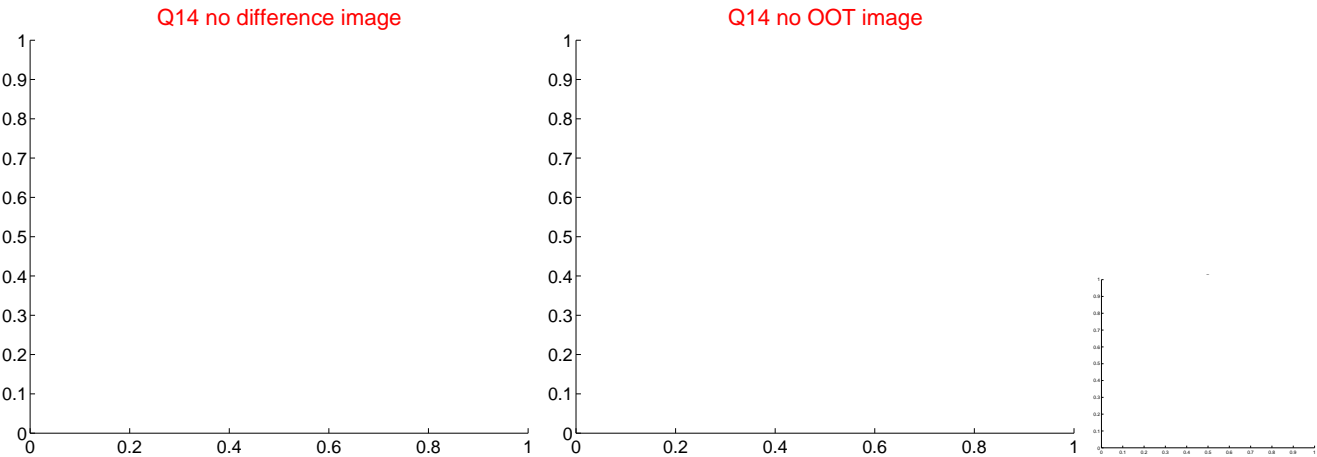
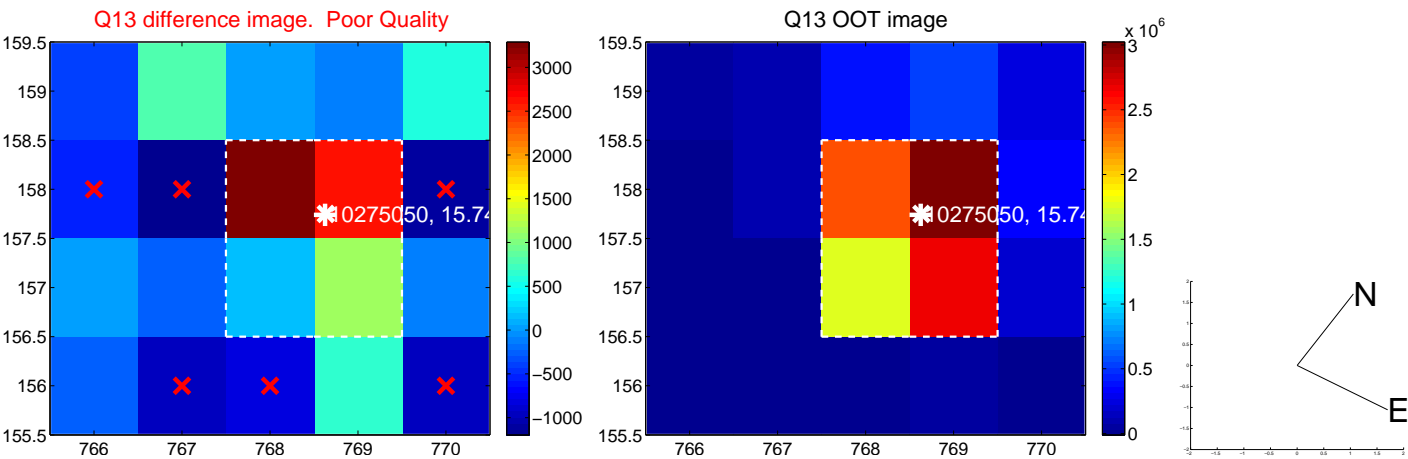
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



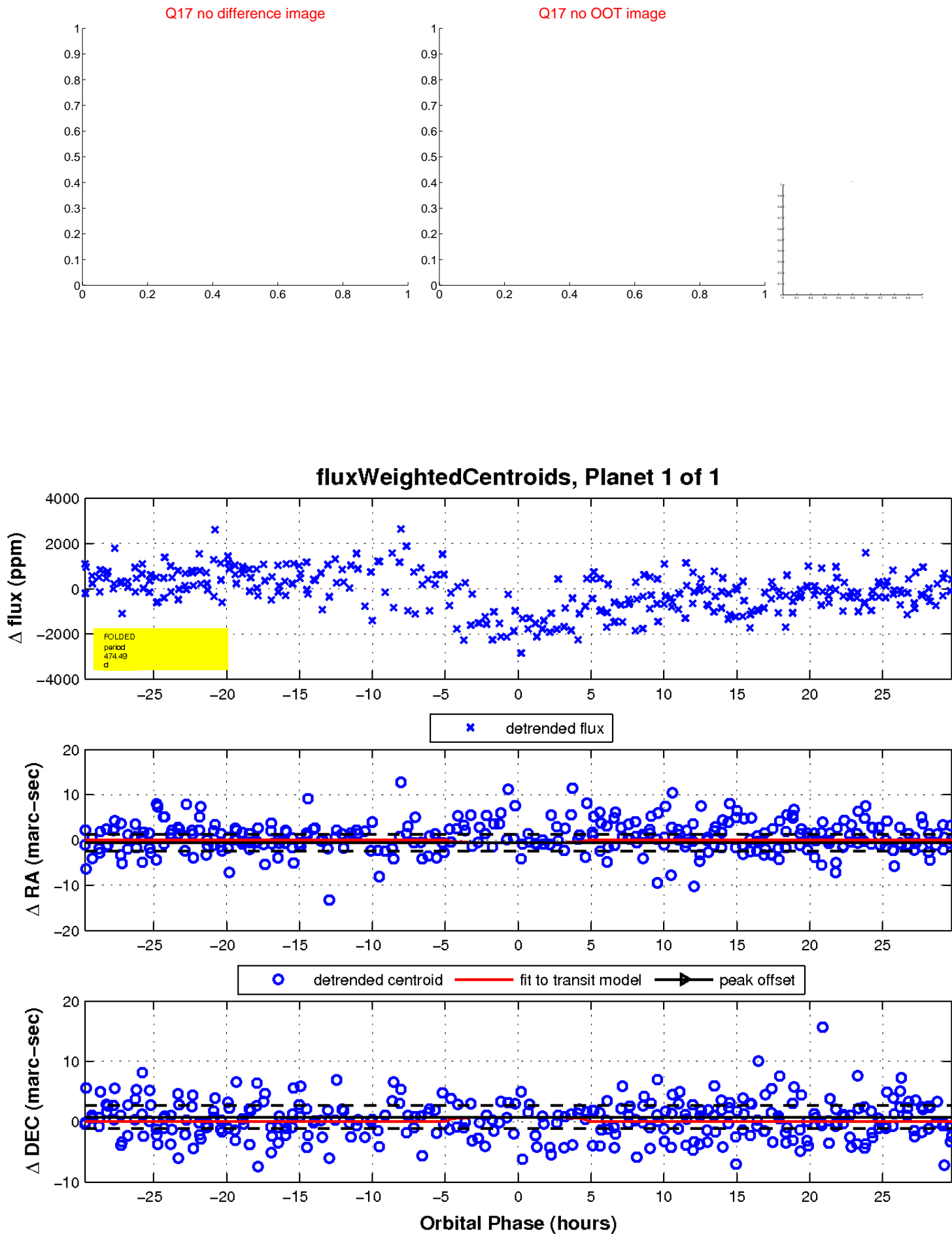
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

