

KIC 010815050

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})
010815050-01	OBS	No	439.438953	455.394734	538.7	18.233	10.1	9.6	1.12	5629	2.79	0.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010815050-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

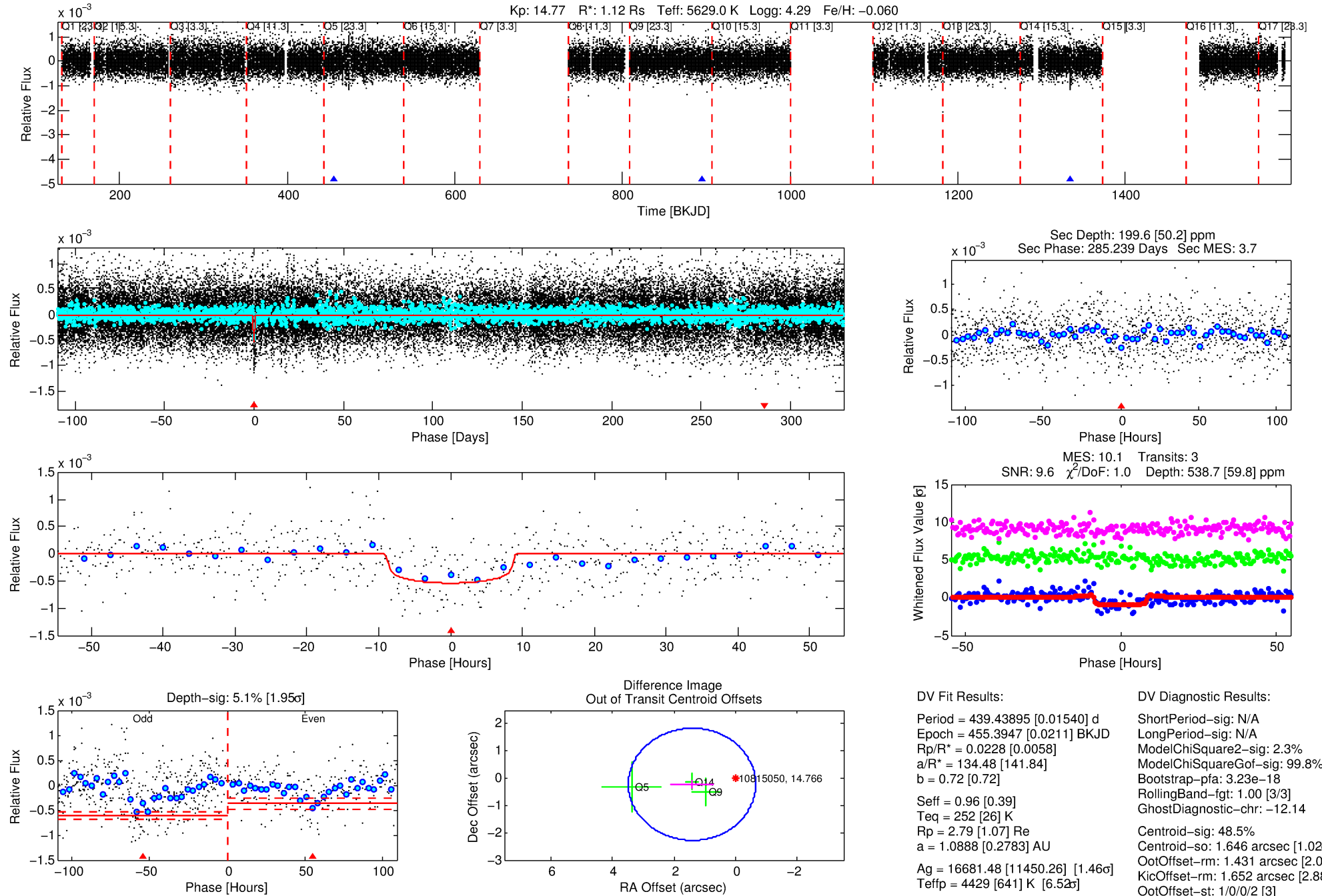
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010815050-01

No Significant Match Found

DV One-Page Summary

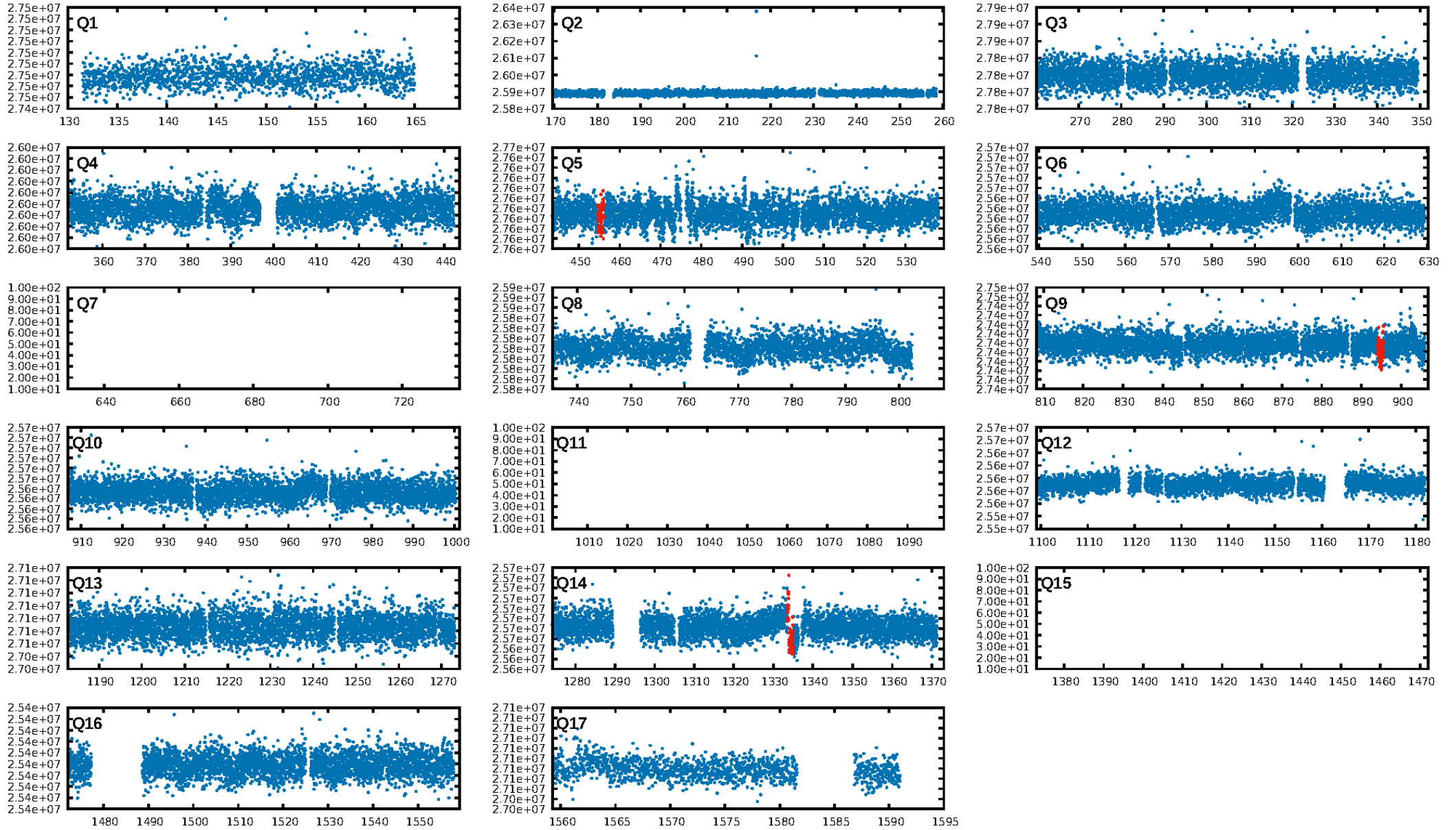
KIC: 10815050 Candidate: 1 of 1 Period: 439.439 d



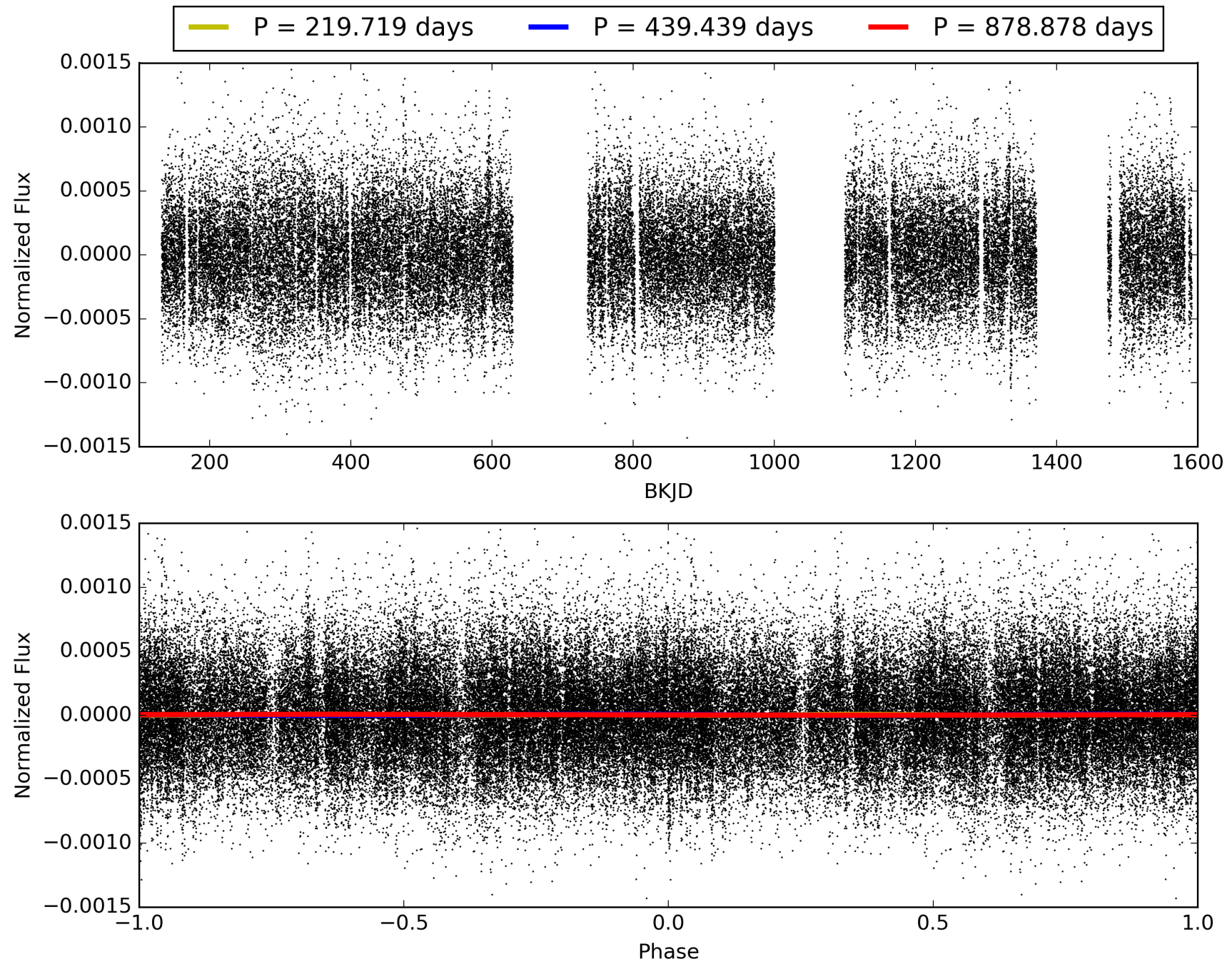
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:26:05 Z

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

TCE 010815050-01, PDC Light Curves

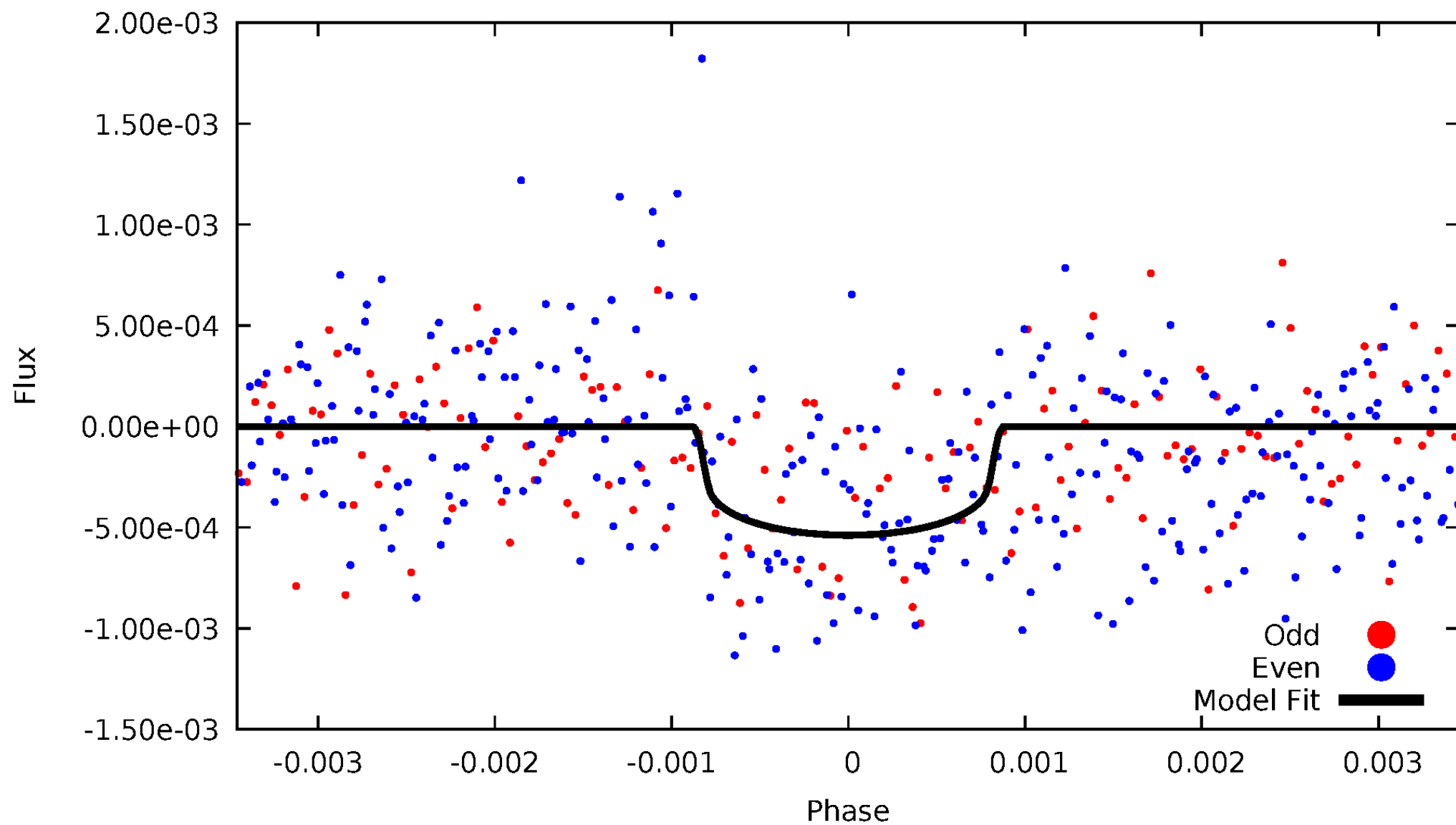


TCE 010815050-01



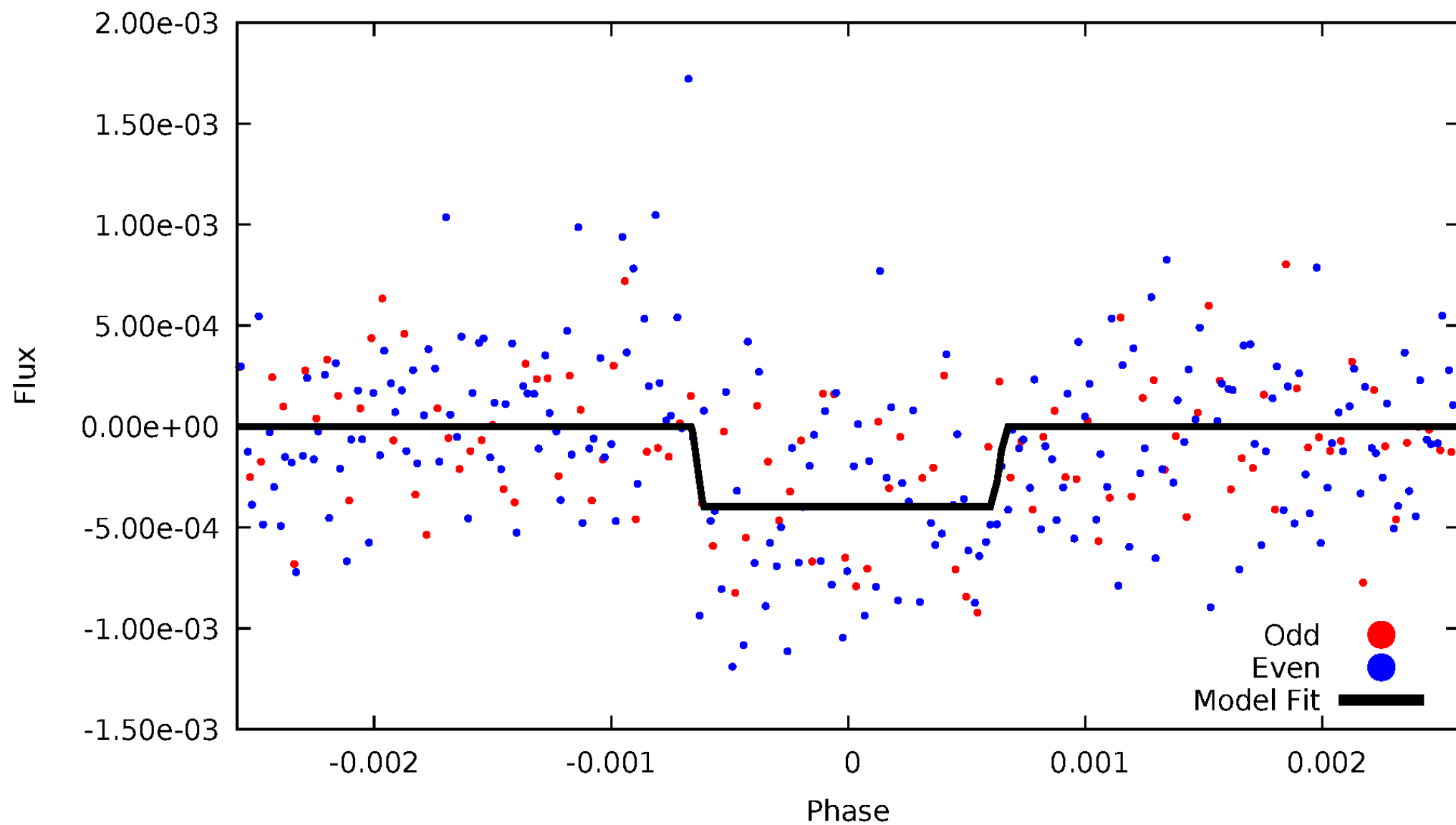
DV Odd/Even

TCE 010815050-01

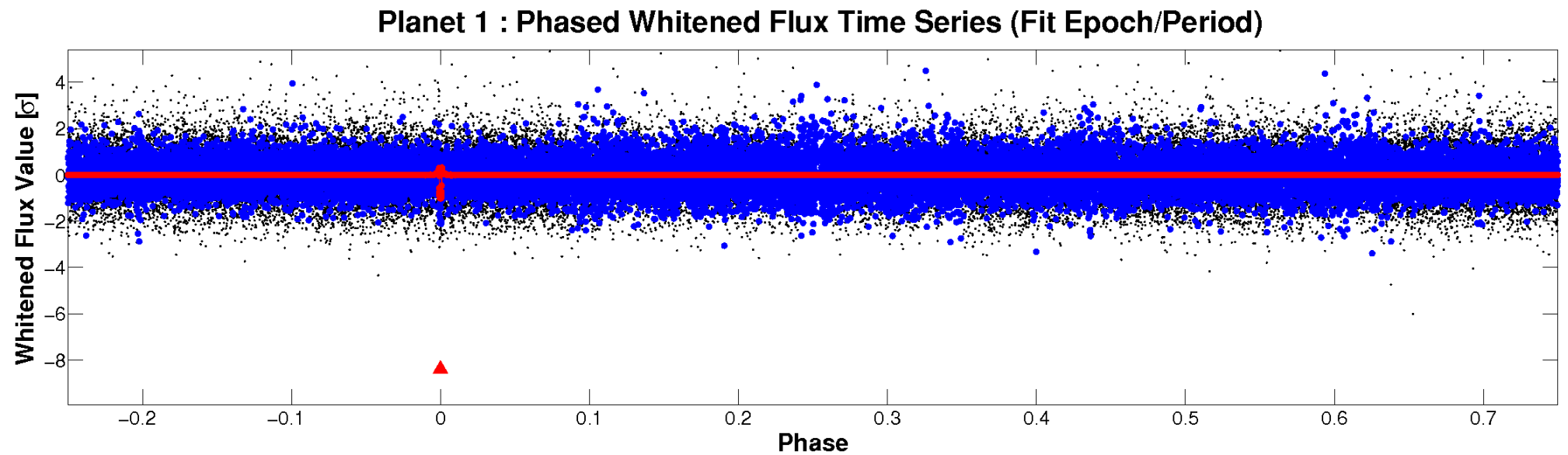
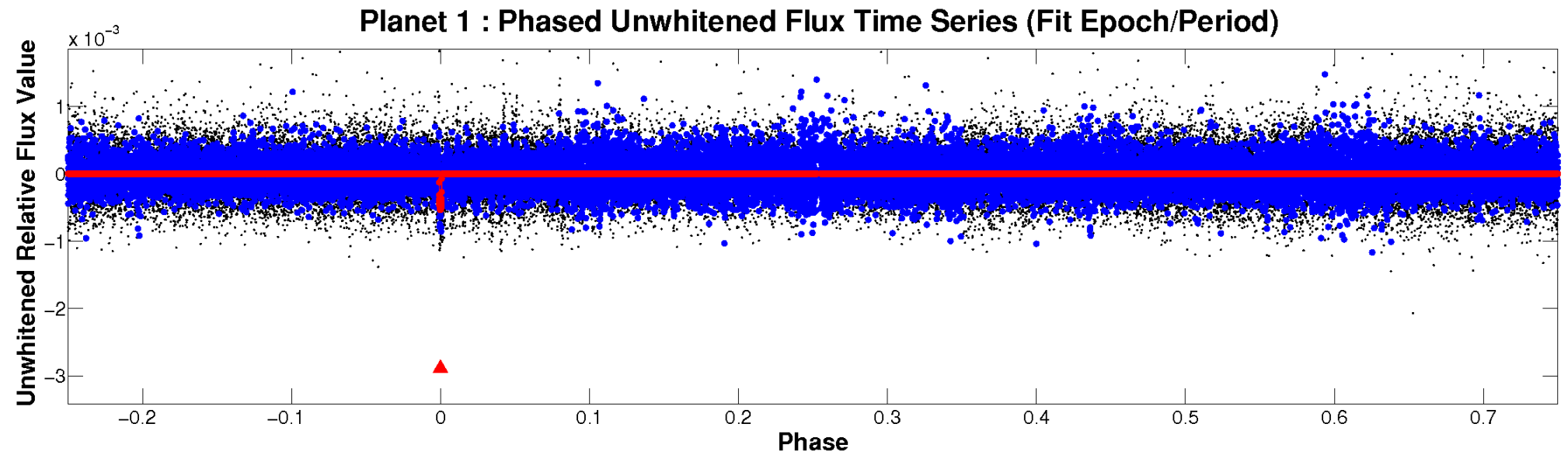


ALT Odd/Even

TCE 010815050-01



Non-Whitened Vs. Whitened Light Curve



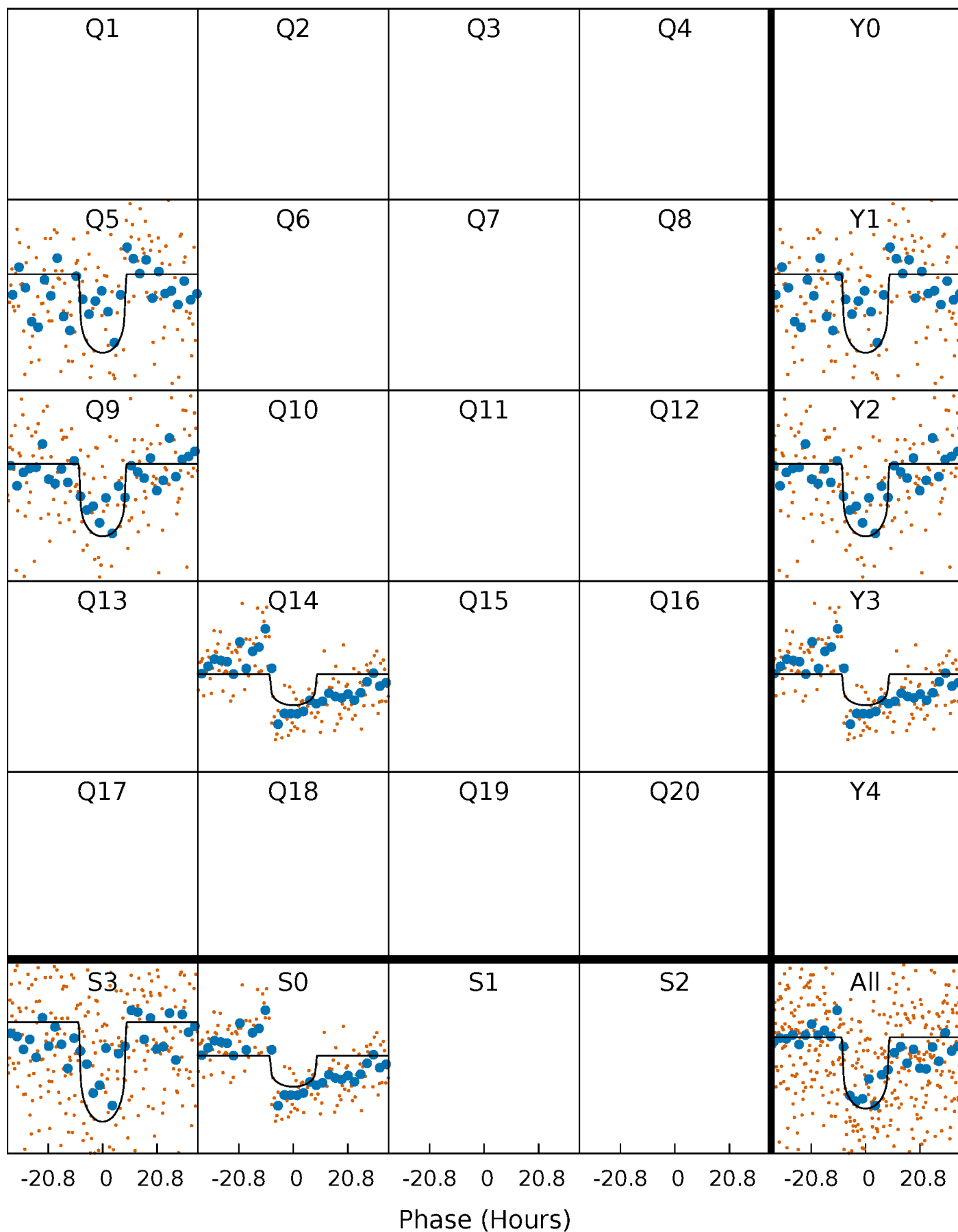
PDC Quarter-Phased Transit Curves

TCE 010815050-01 P=439.438953 Days $T_0=455.394734$ (BKJD)



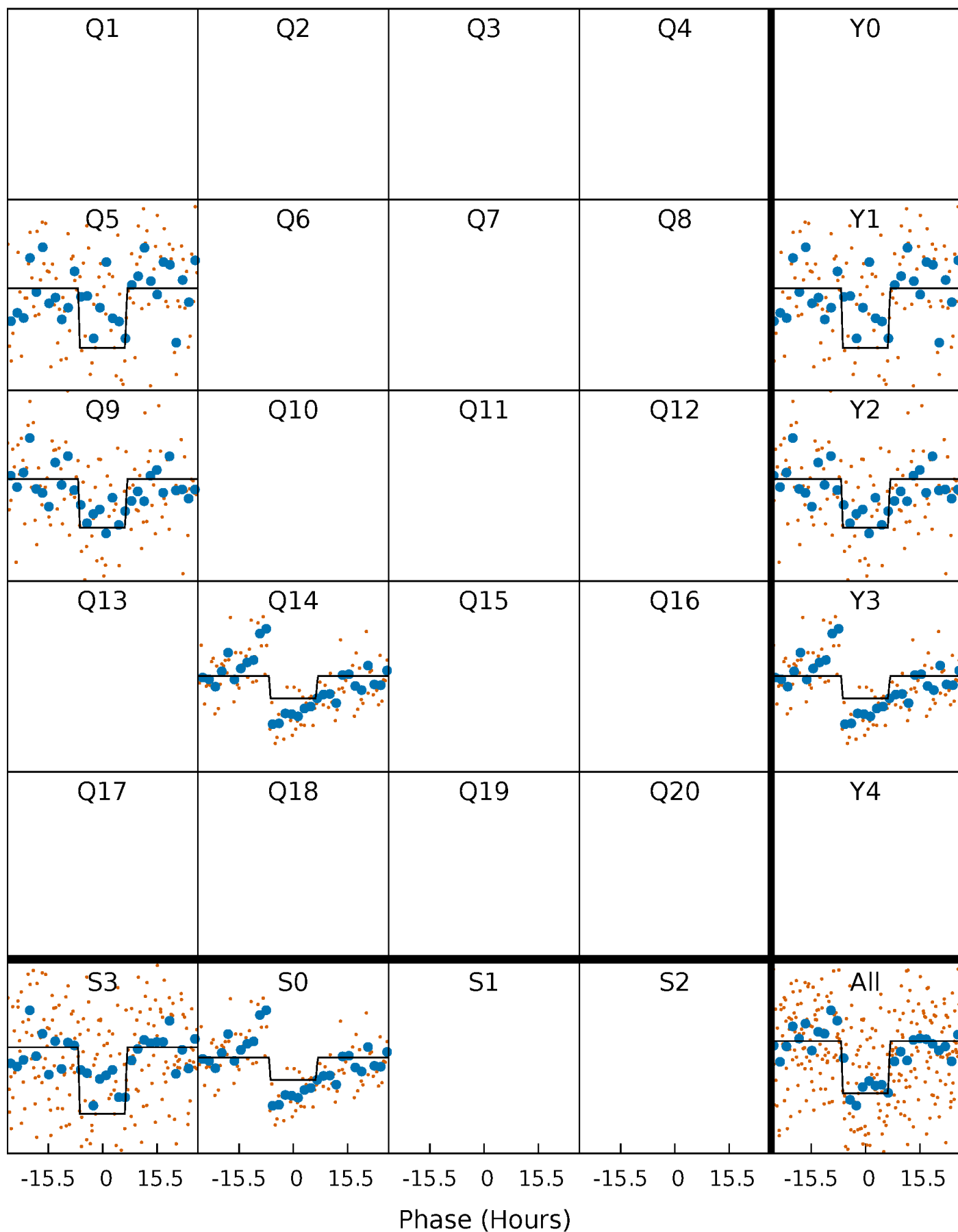
DV Quarter-Phased Transit Curves

TCE 010815050-01 $P=439.438953$ Days $T_0=455.394734$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

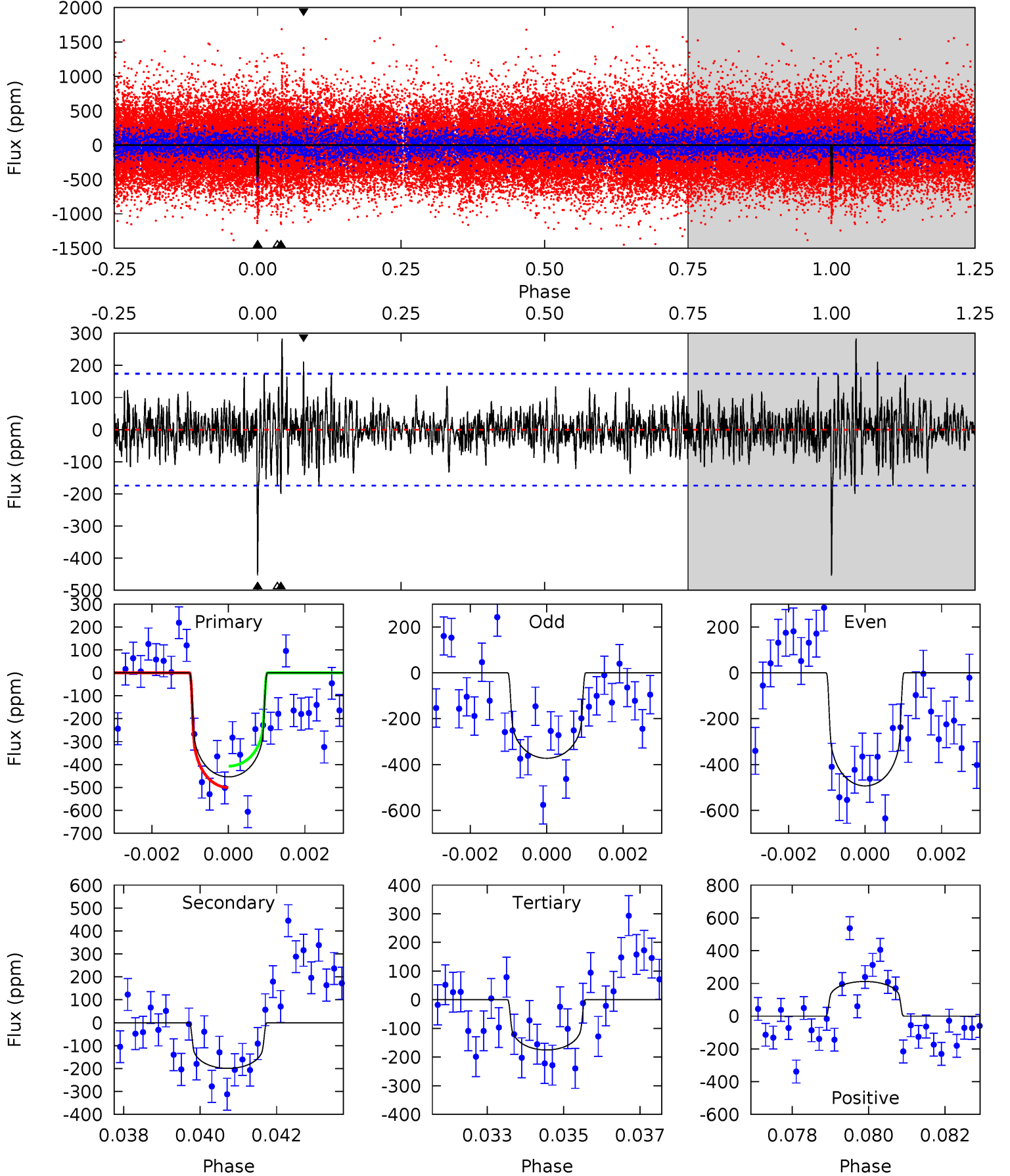
TCE 010815050-01 P=439.430519 Days $T_0=455.344104$ (BKJD)



DV Model-Shift Uniqueness Test

010815050-01, $P = 439.438953$ Days, $E = 15.955781$ Days

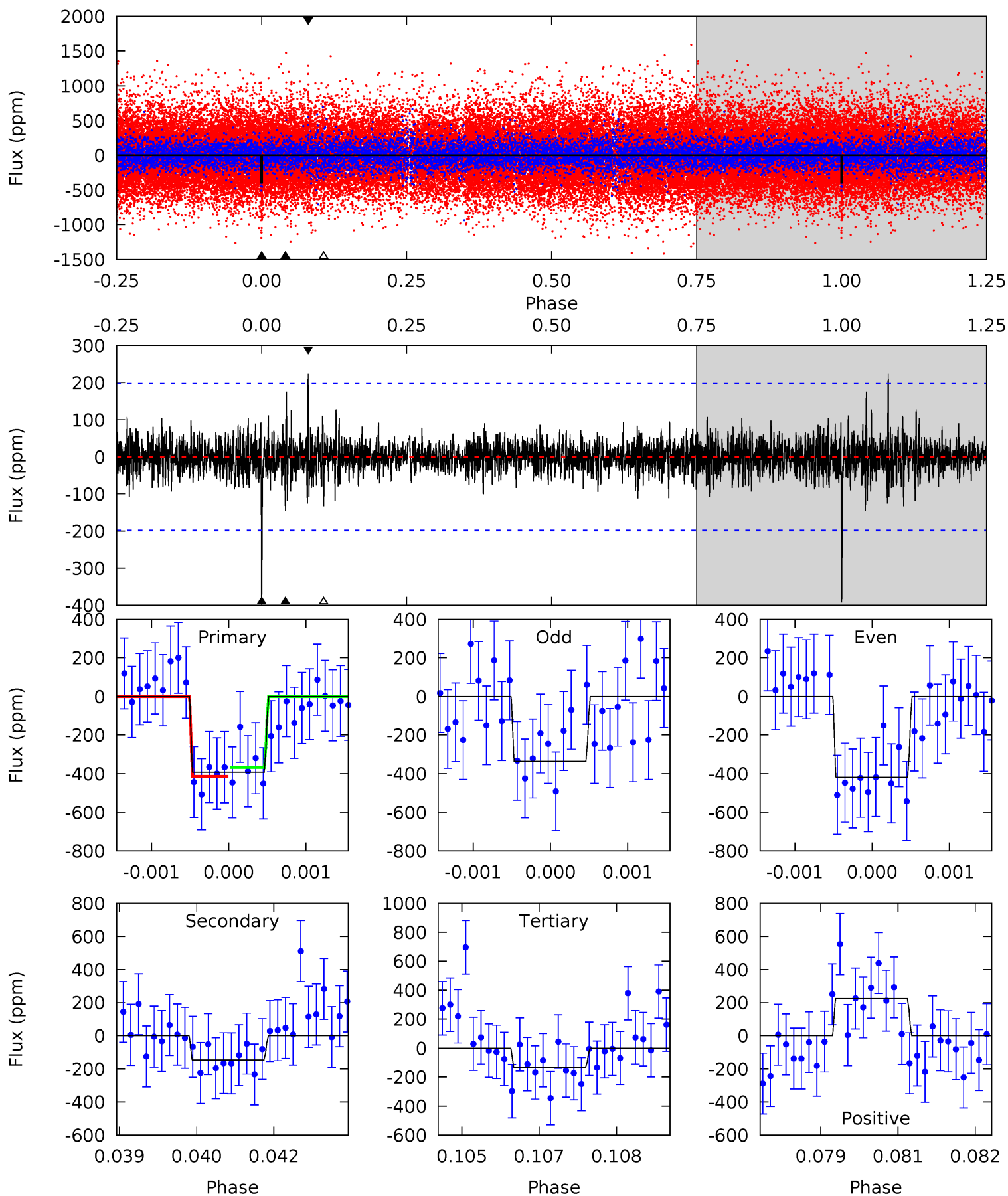
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	6.13	5.39	6.50	5.35	3.13	1.47	8.58	7.46	0.74	-0.37	1.76	1.20	0.38	1.43



Alt Model-Shift Uniqueness Test

010815050-01, $P = 439.430519$ Days, $E = 15.913585$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	3.97	3.62	6.09	5.40	3.22	0.89	7.06	4.59	0.35	-2.12	1.07	1.16	0.36	0.62



Stellar Parameters For KIC 010815050

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5629^{+169}_{-169}	$4.288^{+0.220}_{-0.180}$	$-0.060^{+0.300}_{-0.300}$	$1.122^{+0.323}_{-0.264}$	$0.890^{+0.123}_{-0.076}$	$0.888^{+0.956}_{-0.463}$
	+3%/-3%	+5%/-4%	+500%/-500%	+29%/-24%	+14%/-9%	+108%/-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 010815050-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-199 ± 33	$2.79^{+0.89}_{-0.80}$	352^{+27}_{-26}	4551^{+624}_{-392}	16577^{+15501}_{-7089}
Alt.	-146 ± 37	$2.41^{+0.90}_{-0.71}$	350^{+28}_{-26}	4527^{+737}_{-491}	15931^{+18316}_{-7423}

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

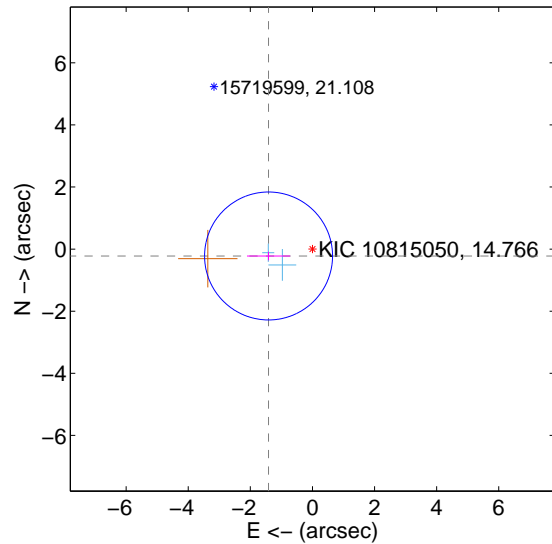
Supplemental centroid analysis for 010815050-01. Kepler magnitude: 14.77. Transit SNR 9.62

There are 2 quarters with good PRF difference image offsets

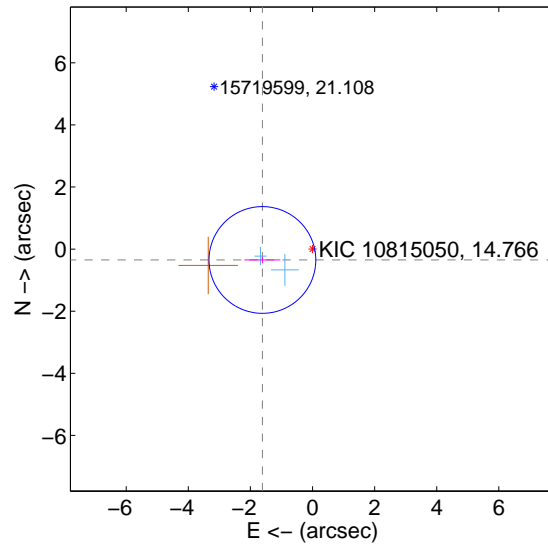
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.431 ± 0.687	2.08	1.413 ± 0.696	-0.222 ± 0.139
PRF-fit source offset from KIC position	1.652 ± 0.573	2.88	1.614 ± 0.578	-0.350 ± 0.108
photometric centroid source offset	1.65 ± 1.62	1.02	1.62 ± 1.63	0.26 ± 1.14

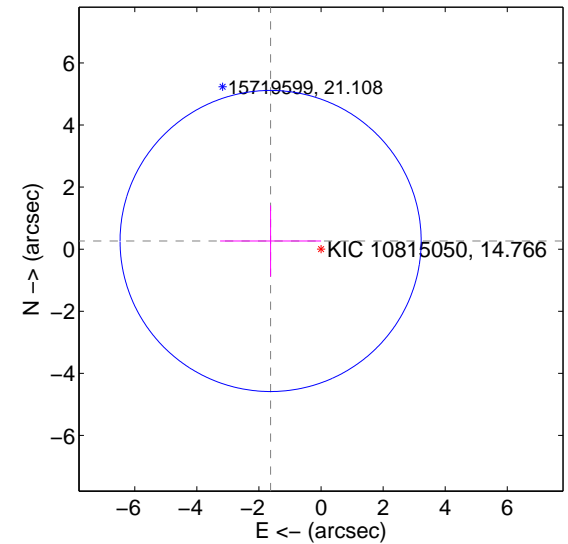
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

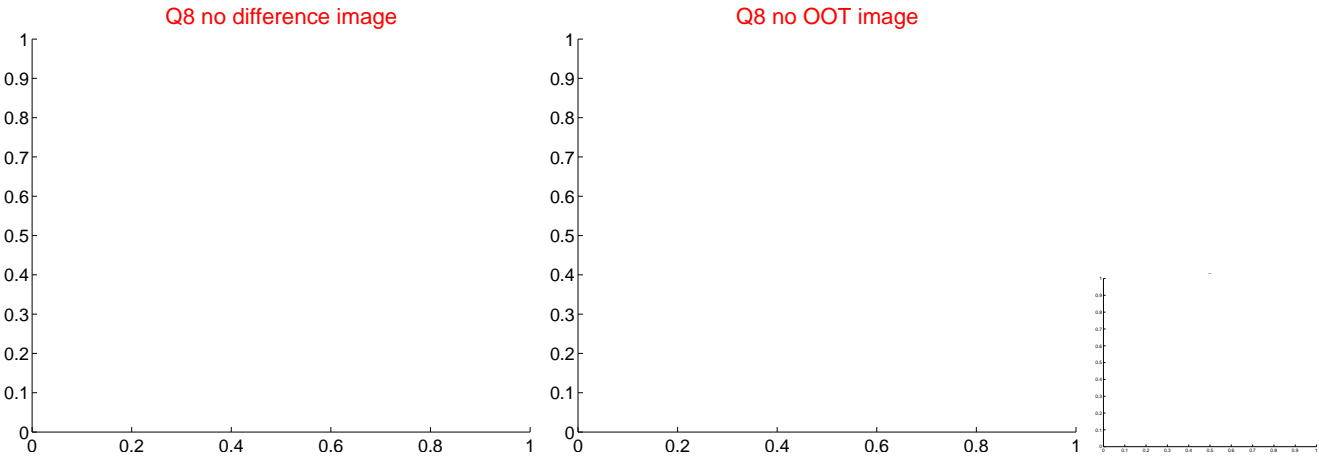
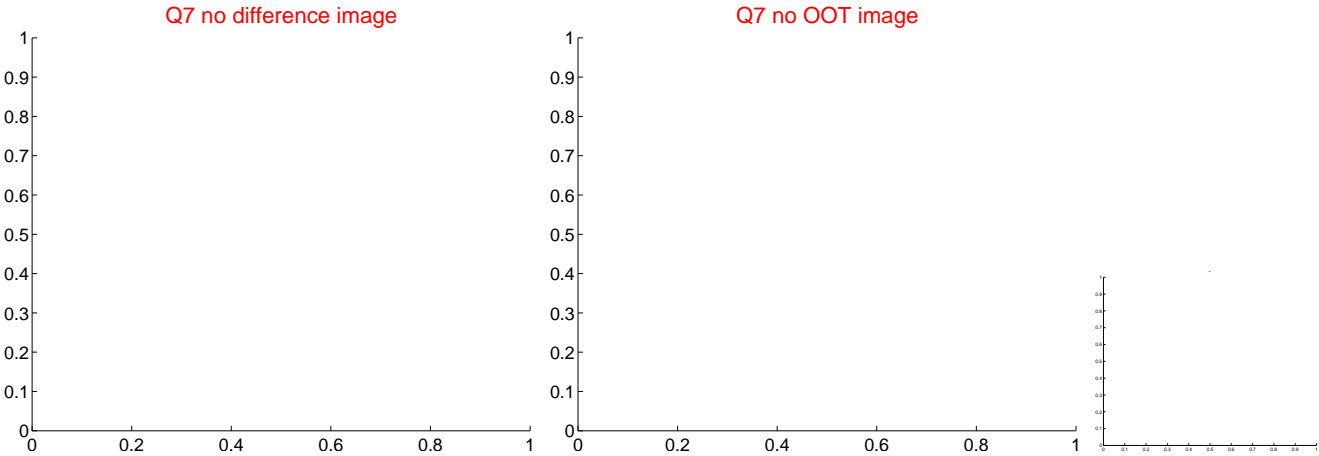
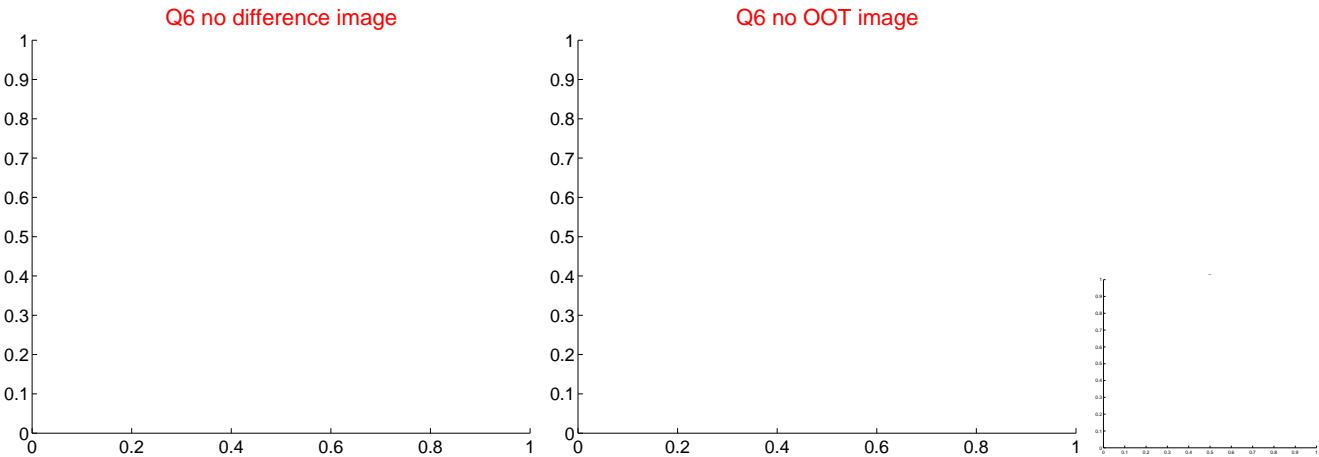
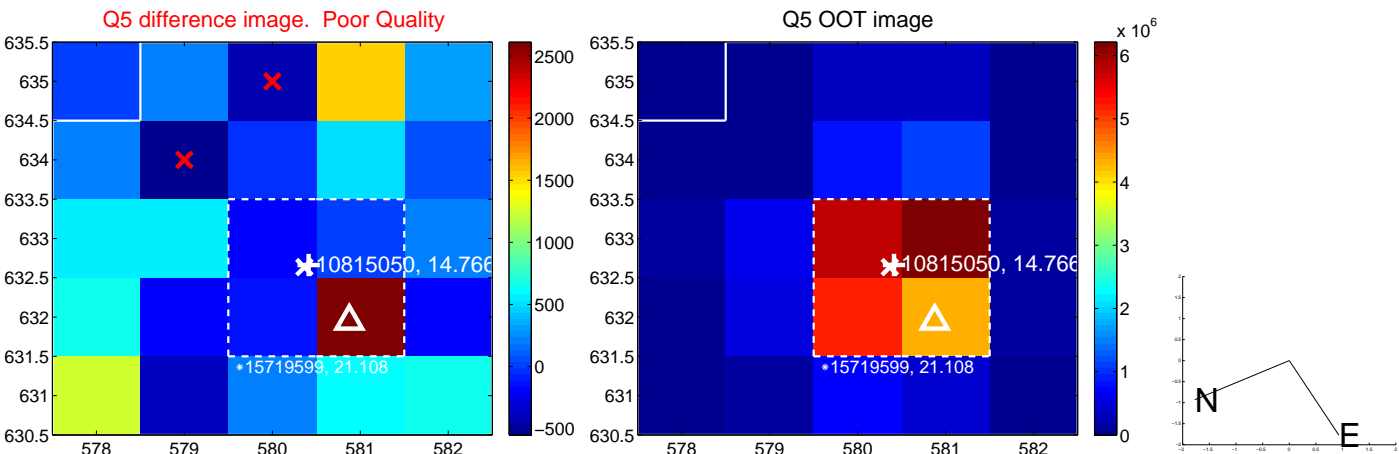


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

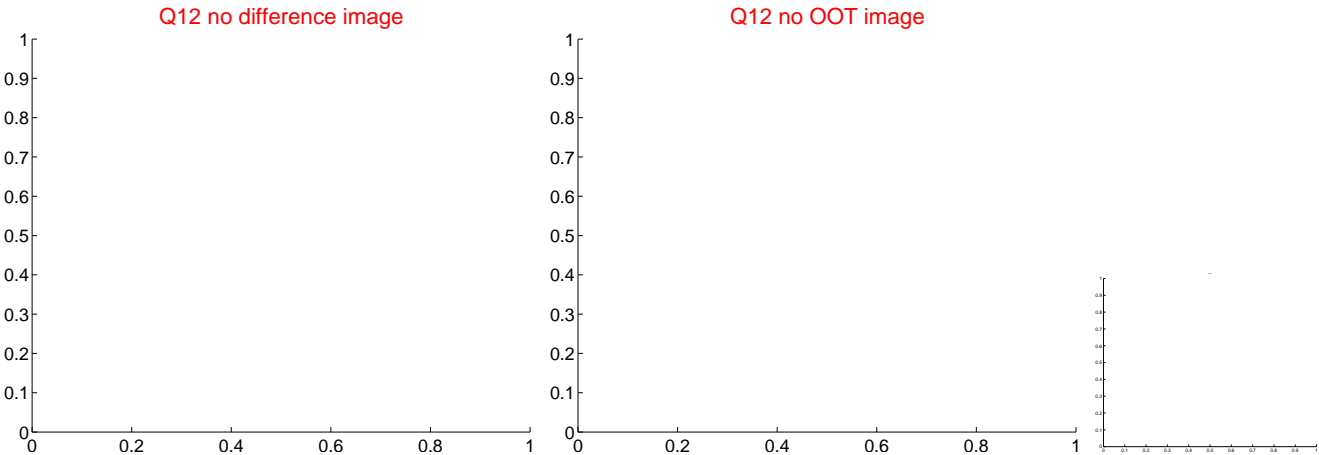
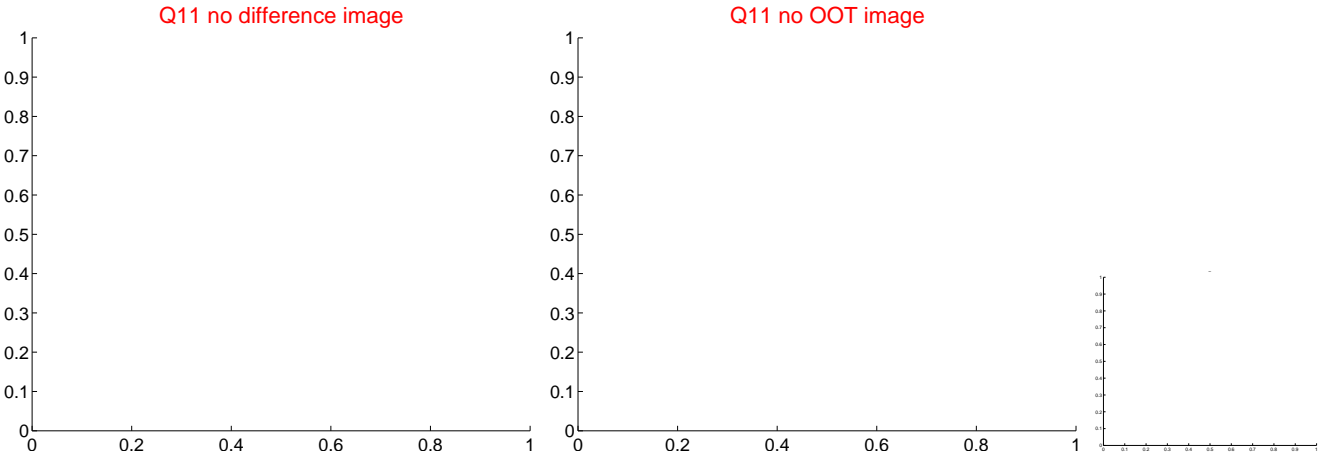
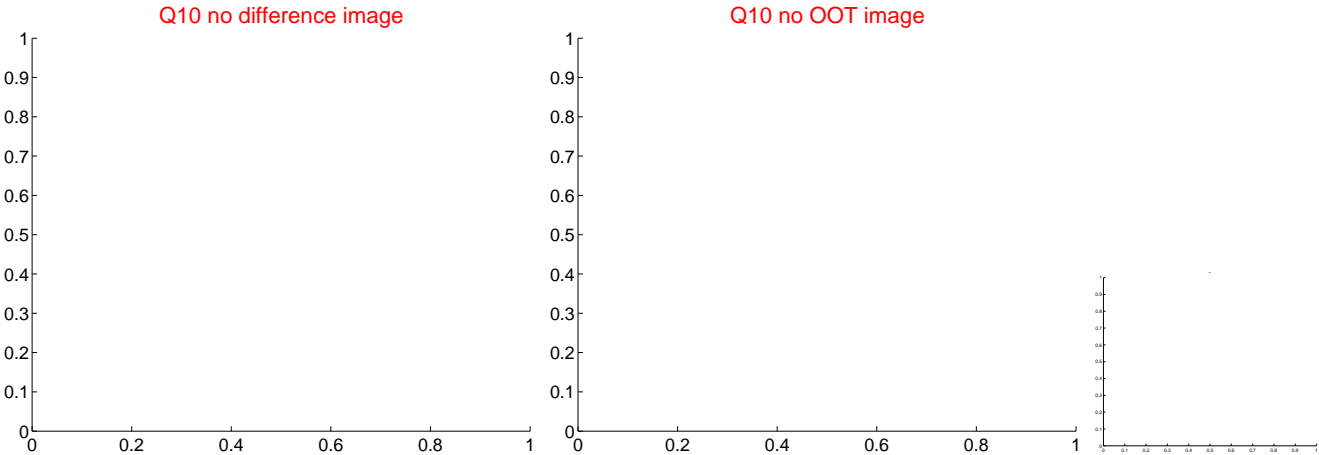
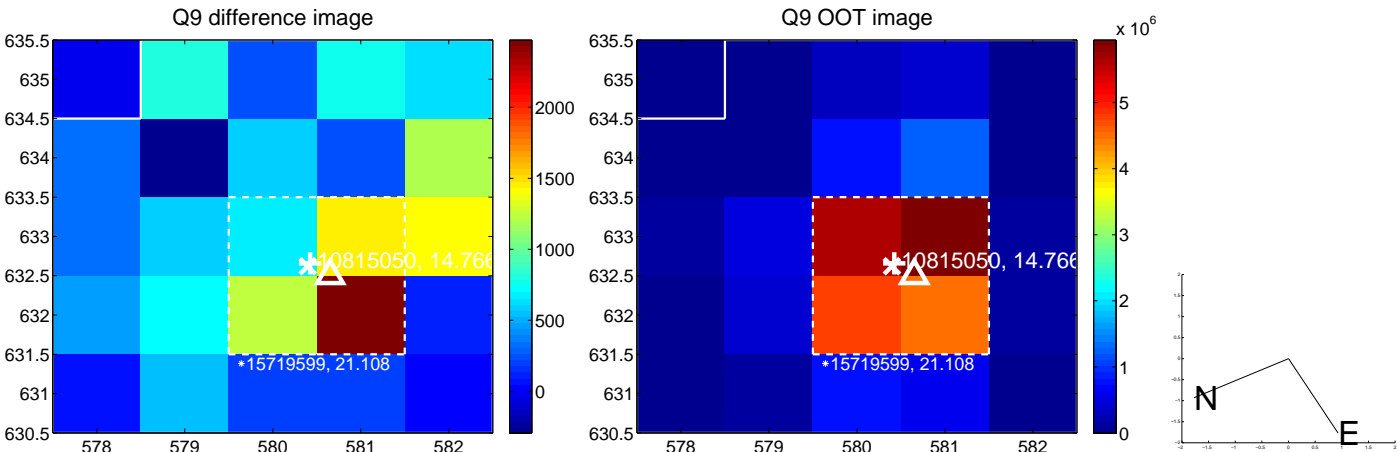
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



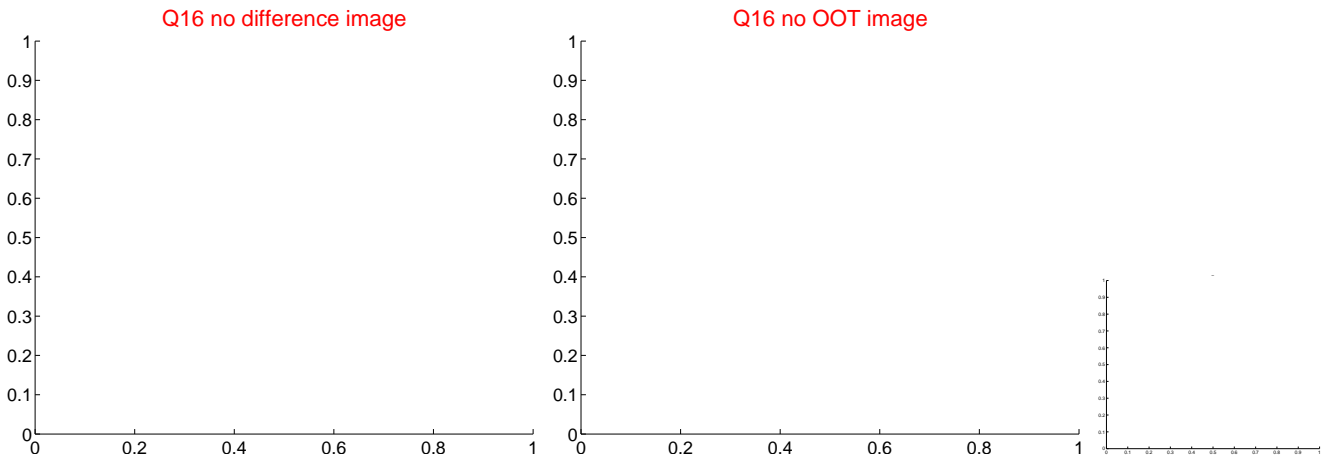
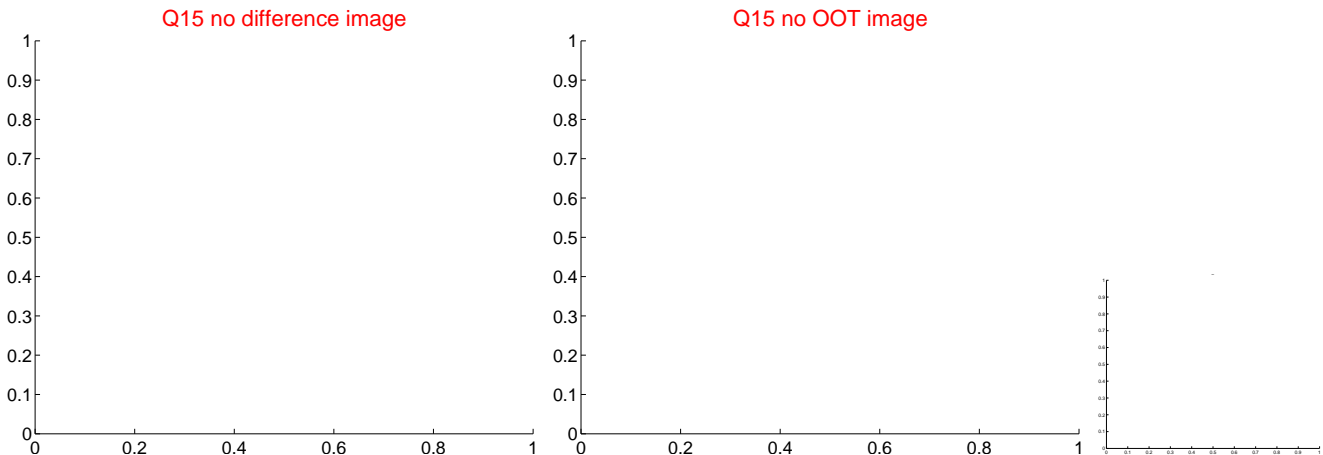
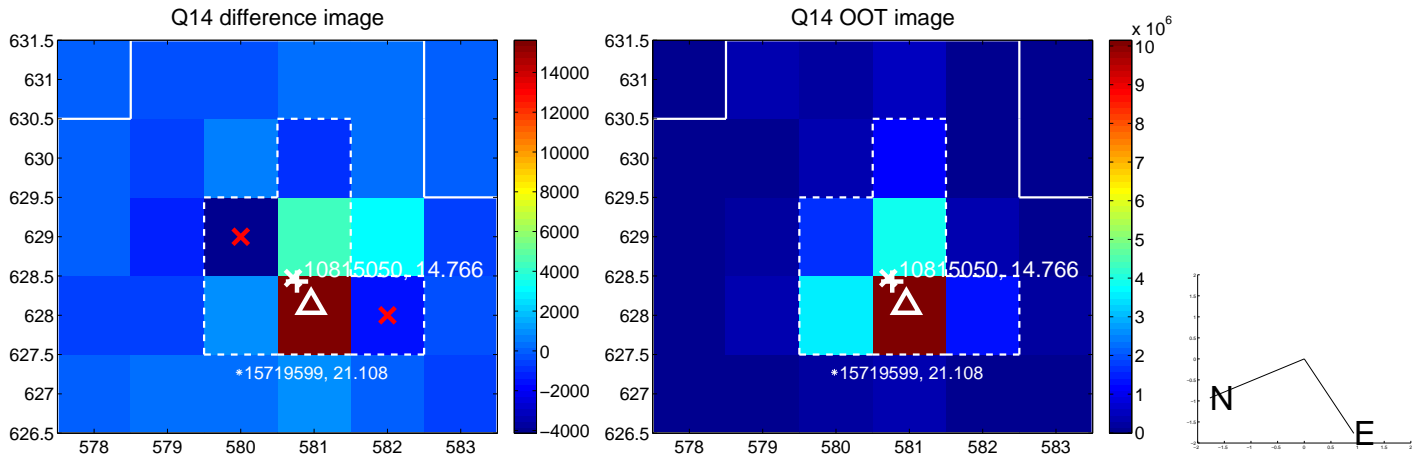
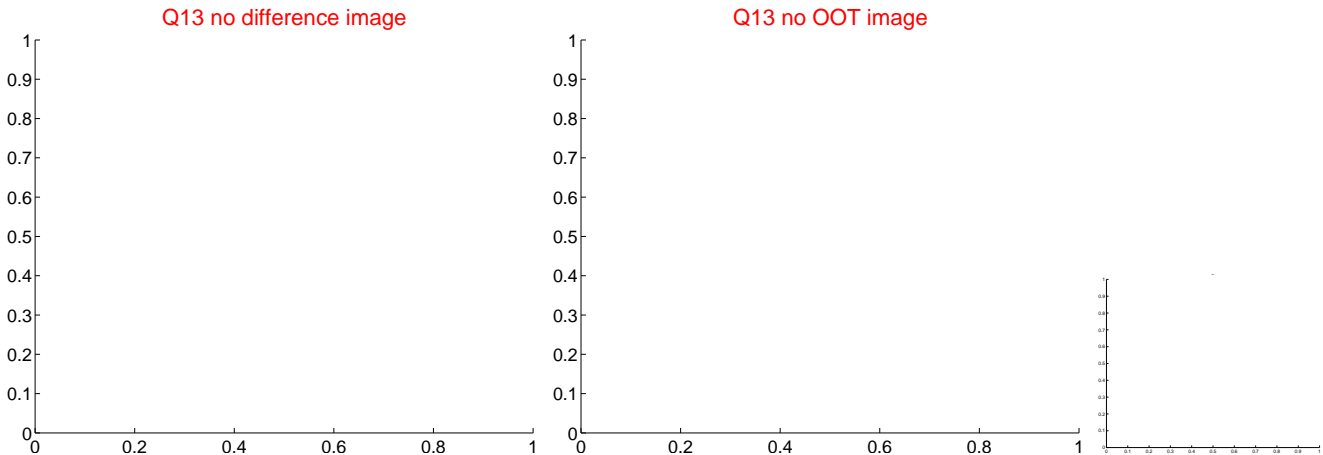
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



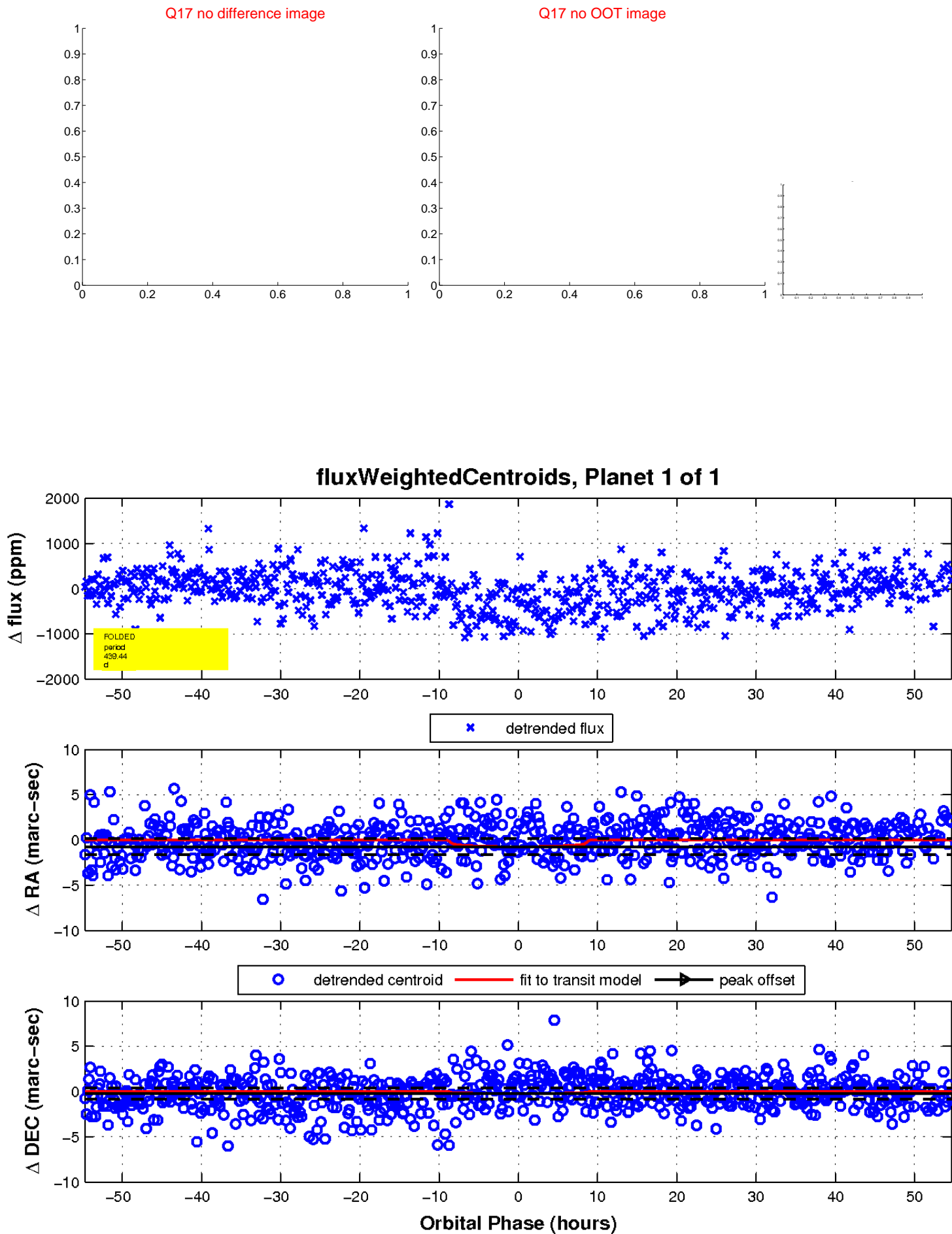
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

