

KIC 007987425

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})
007987425-01	OBS	No	477.381176	390.584243	659.1	12.305	8.9	9.0	0.90	5353	2.53	0.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007987425-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

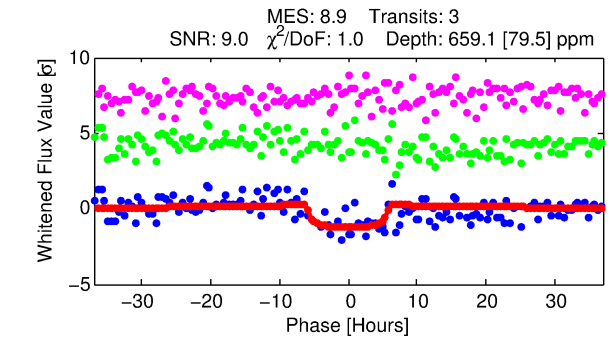
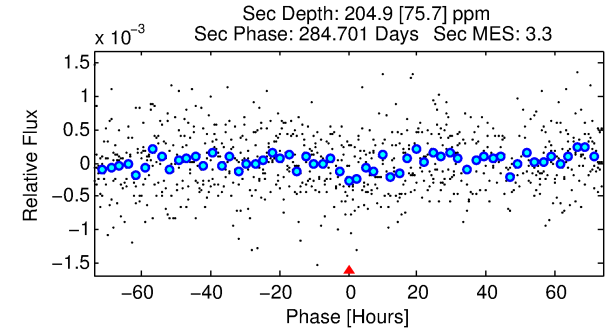
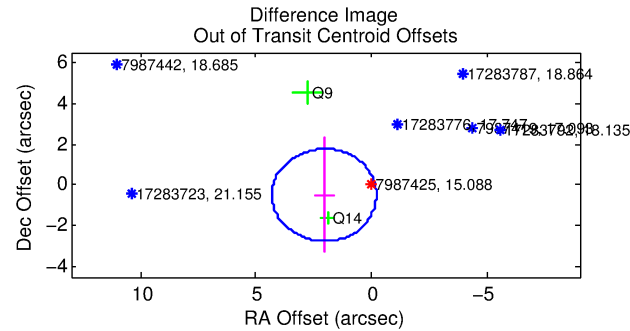
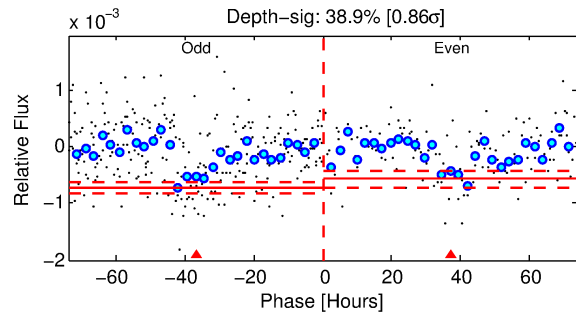
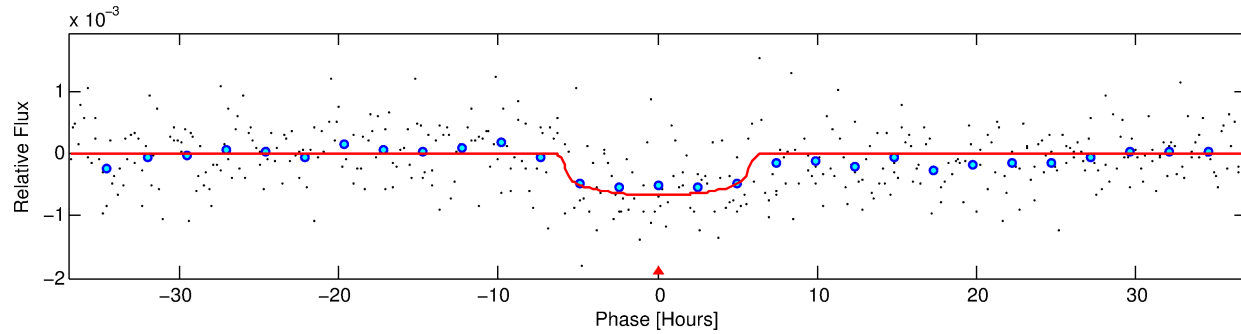
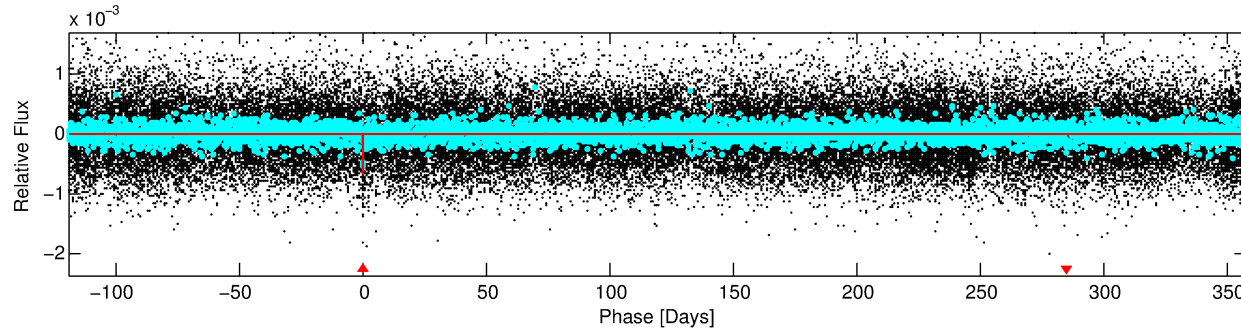
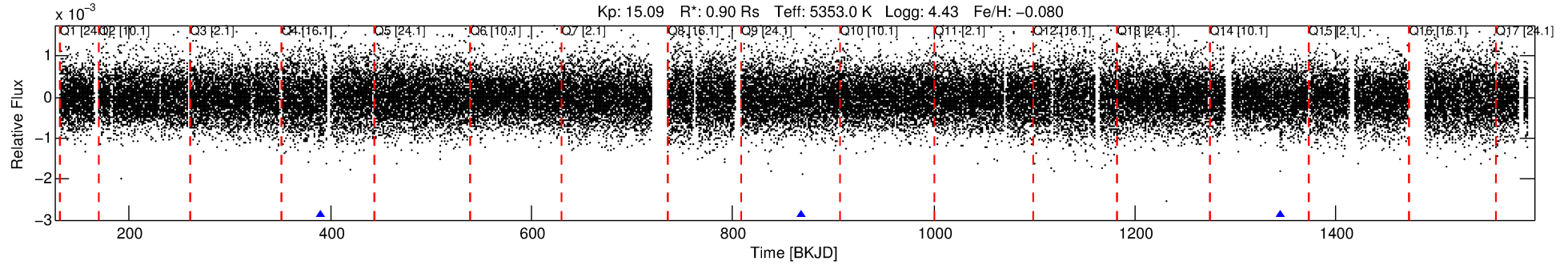
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007987425-01

No Significant Match Found

DV One-Page Summary

KIC: 7987425 Candidate: 1 of 1 Period: 477.381 d



DV Fit Results:

Period = 477.38118 [0.01464] d
Epoch = 390.5842 [0.0198] BKJD
Rp/R* = 0.0257 [0.0098]
a/R* = 204.40 [304.43]
b = 0.76 [0.84]
Seff = 0.49 [0.16]
Teq = 213 [17] K
Rp = 2.53 [1.10] Re
a = 1.1127 [0.2124] AU
Ag = 21732.69 [19514.27] [1.11σ]
Teffp = 3996 [857] K [4.42σ]

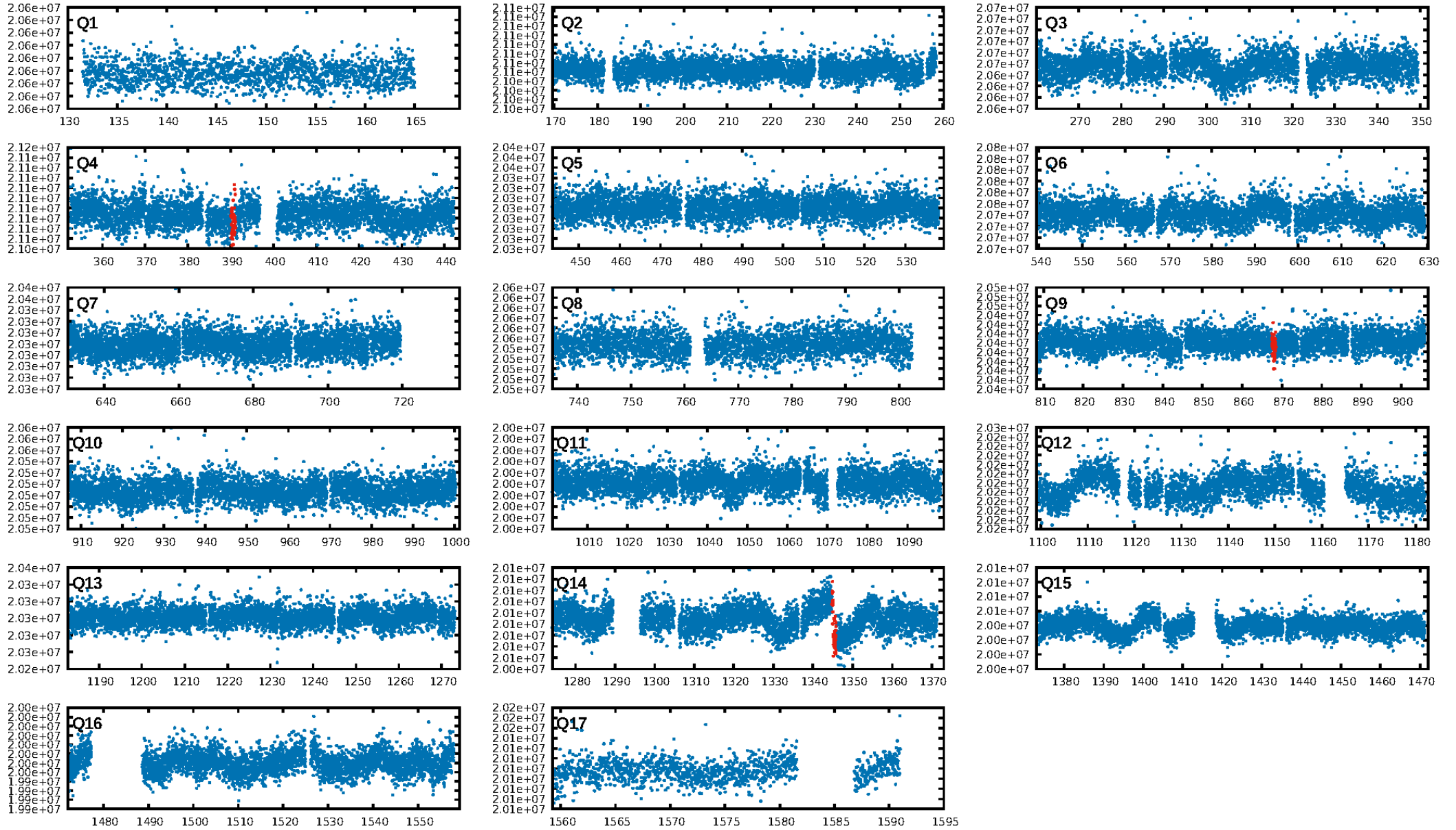
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 8.10e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.462
Centroid-sig: 0.2%
Centroid-so: 2.936 arcsec [1.90σ]
OotOffset-rm: 2.117 arcsec [2.81σ]
KicOffset-rm: 1.783 arcsec [2.46σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

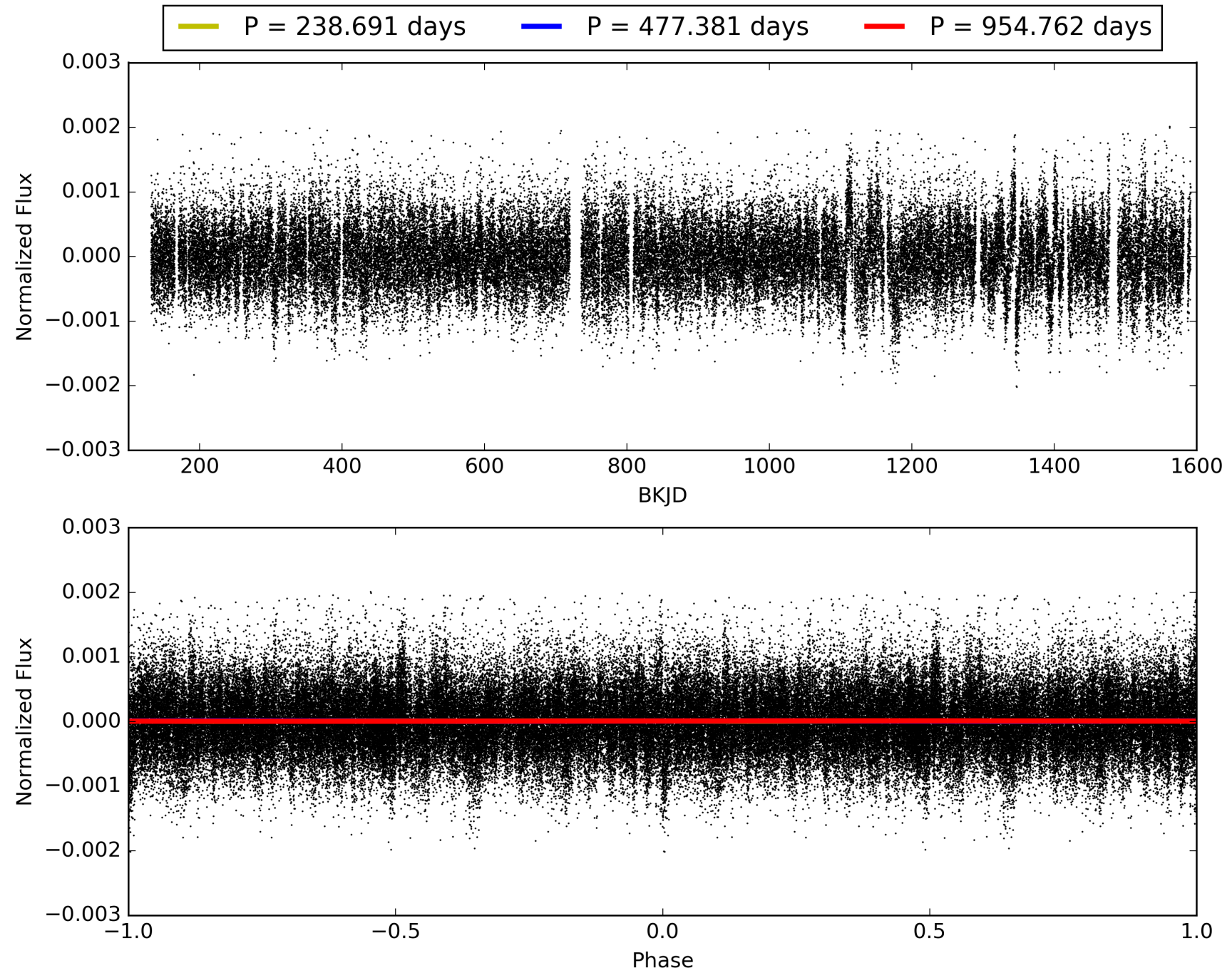
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:29:25 Z

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

TCE 007987425-01, PDC Light Curves

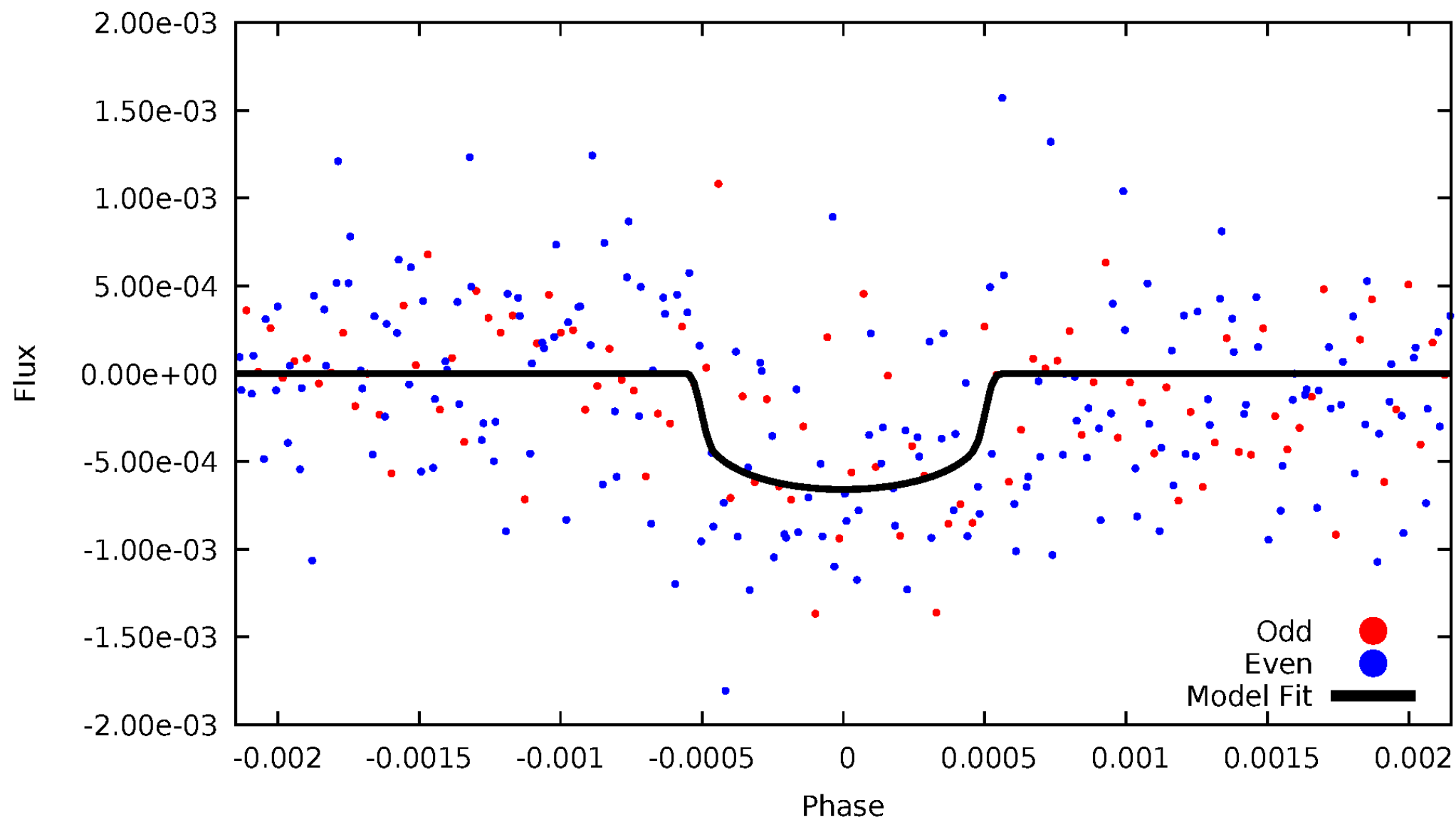


TCE 007987425-01



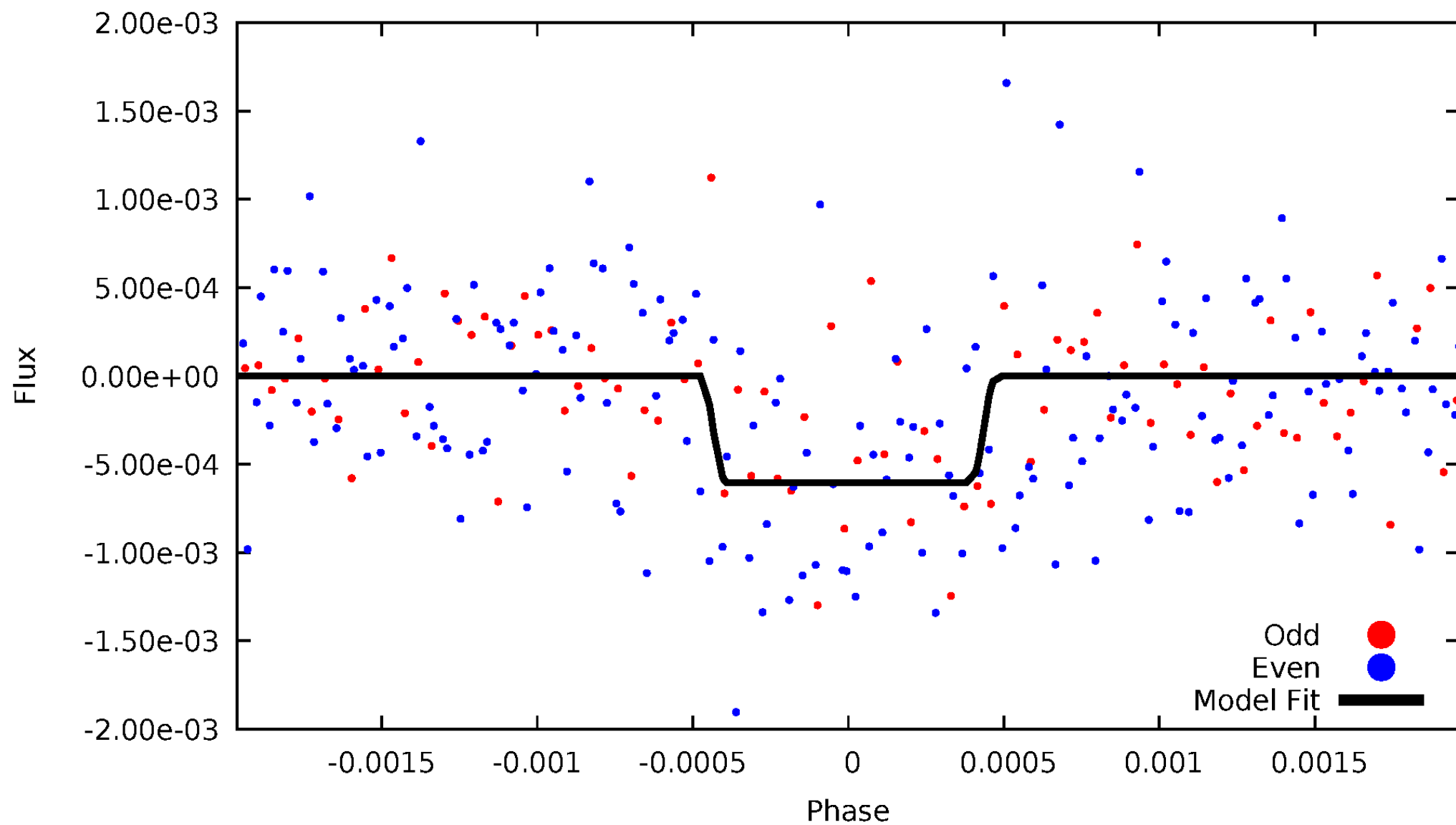
DV Odd/Even

TCE 007987425-01

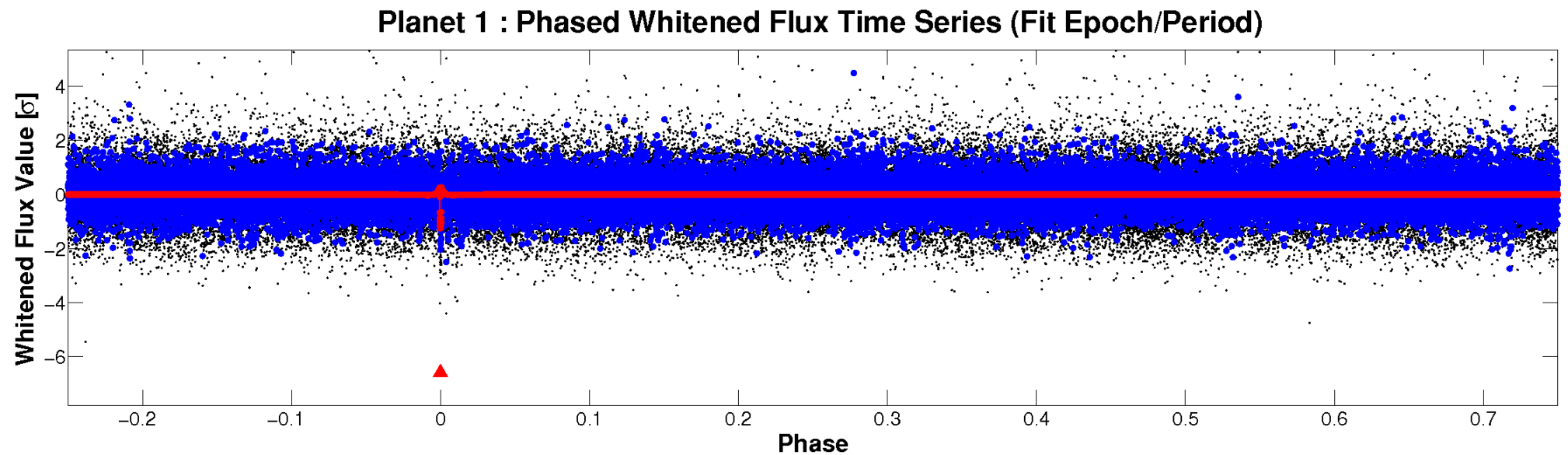
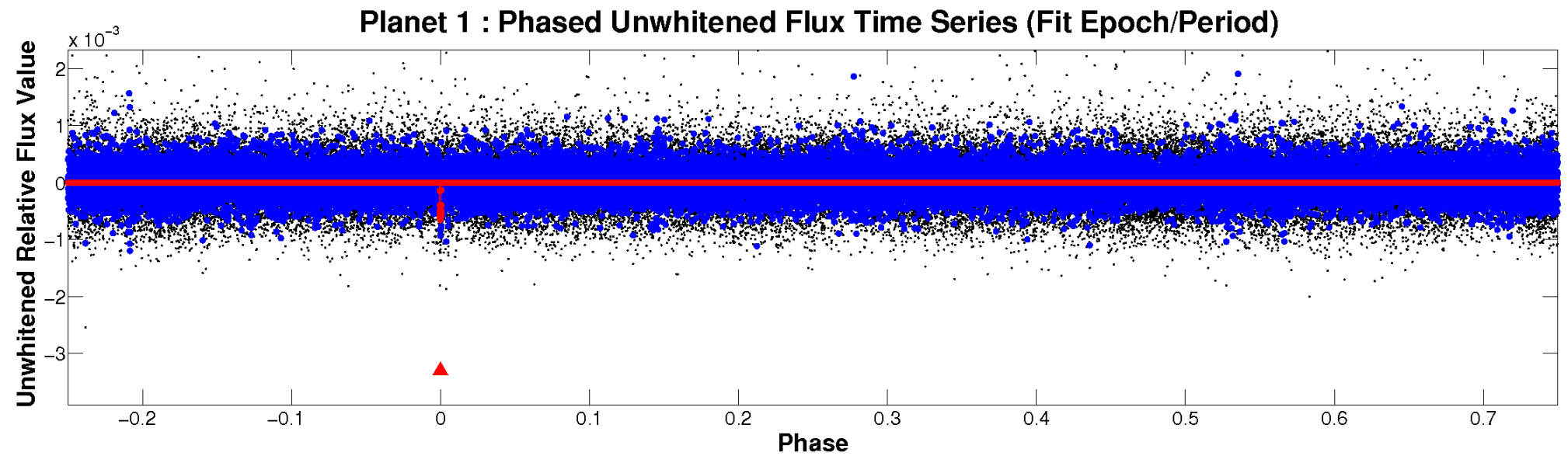


ALT Odd/Even

TCE 007987425-01

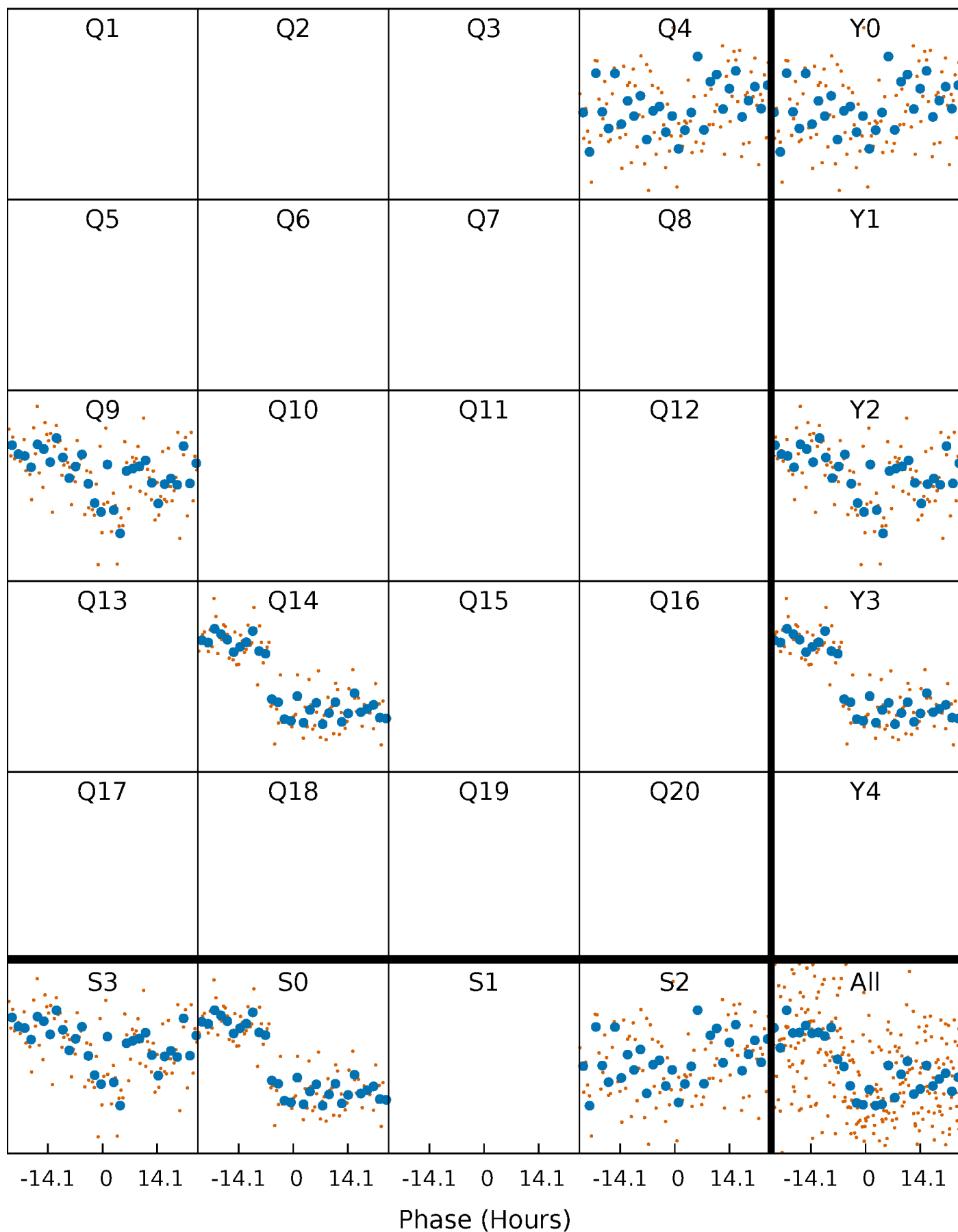


Non-Whitened Vs. Whitened Light Curve



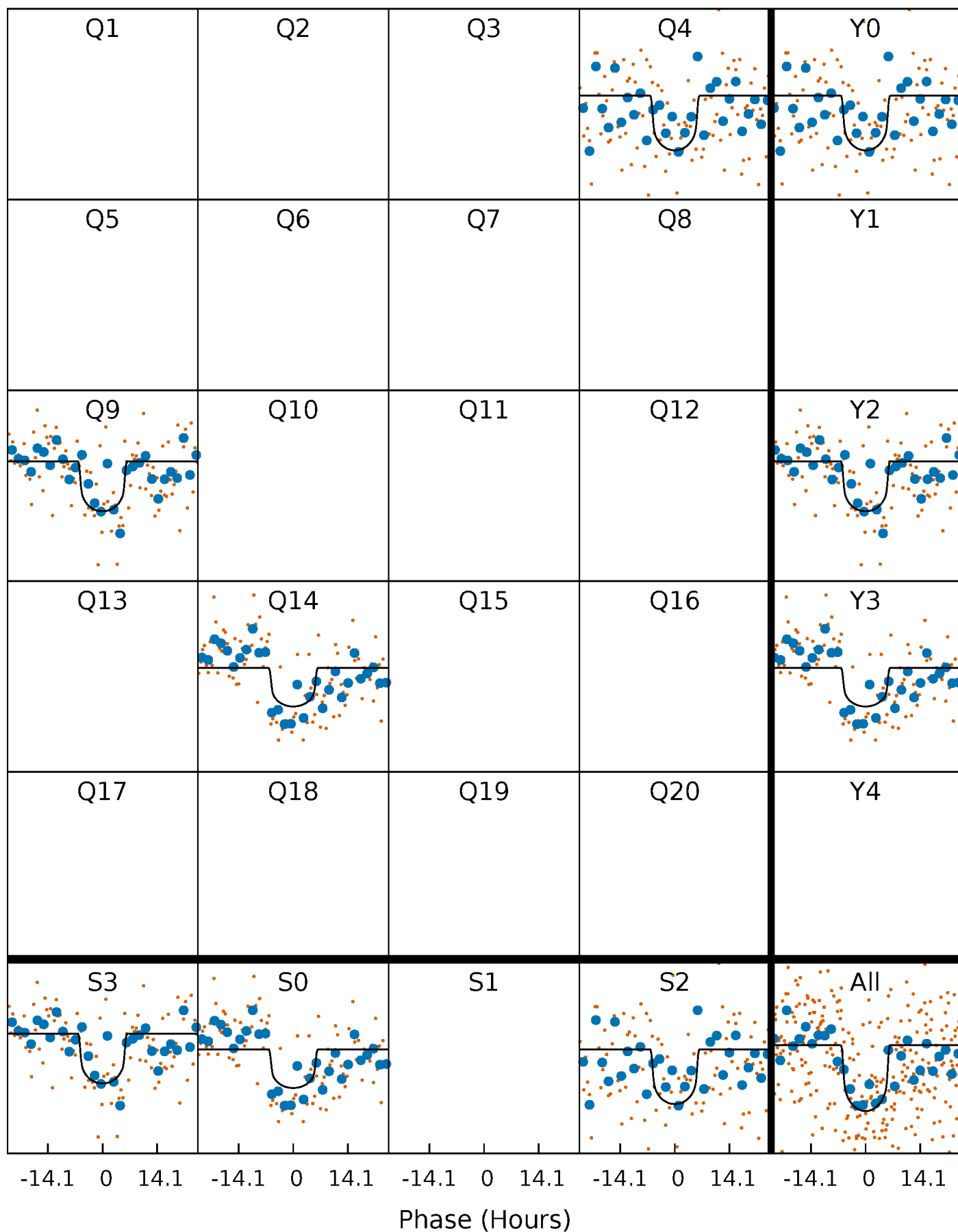
PDC Quarter-Phased Transit Curves

TCE 007987425-01 P=477.381176 Days $T_0=390.584243$ (BKJD)



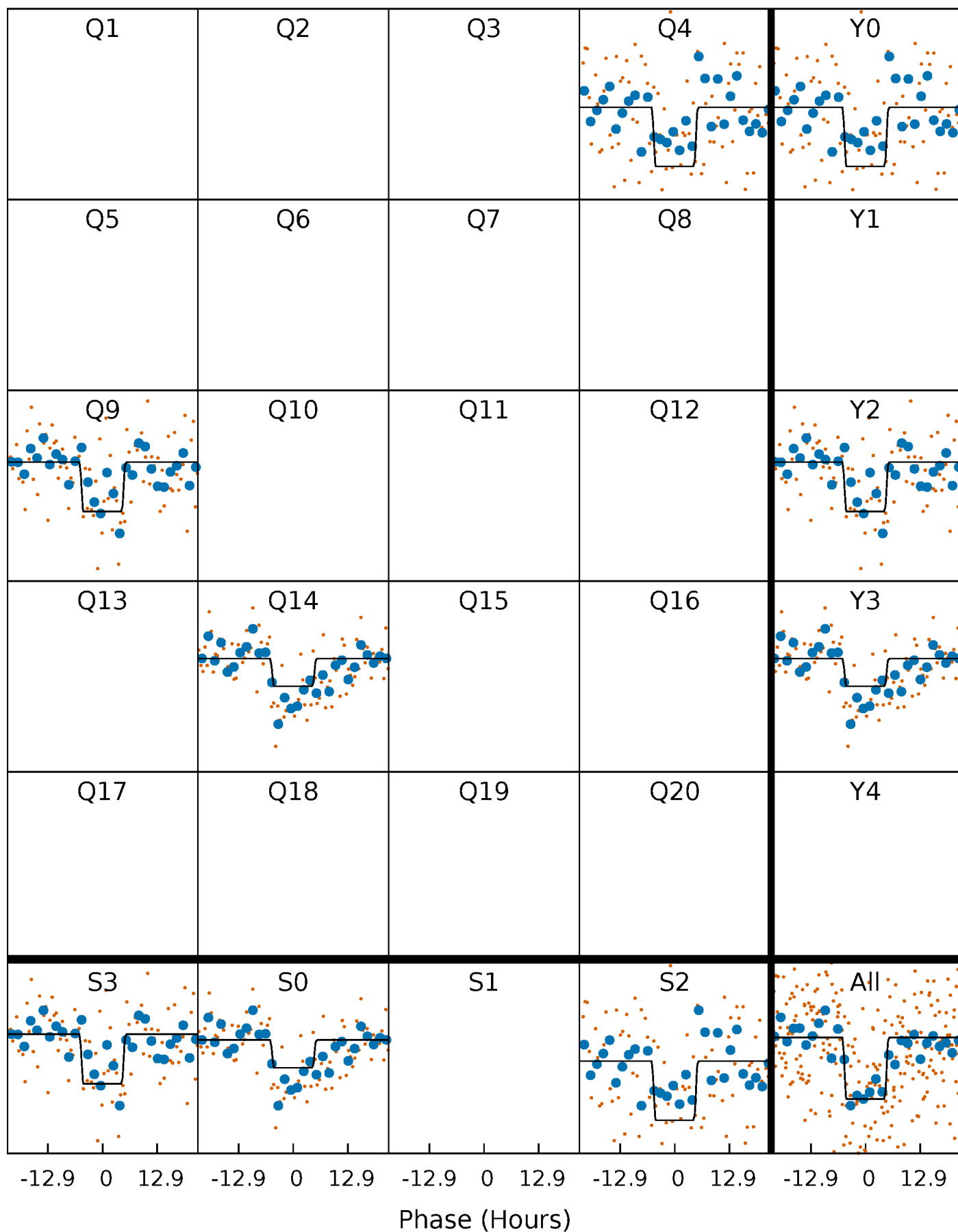
DV Quarter-Phased Transit Curves

TCE 007987425-01 P=477.381176 Days $T_0=390.584243$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

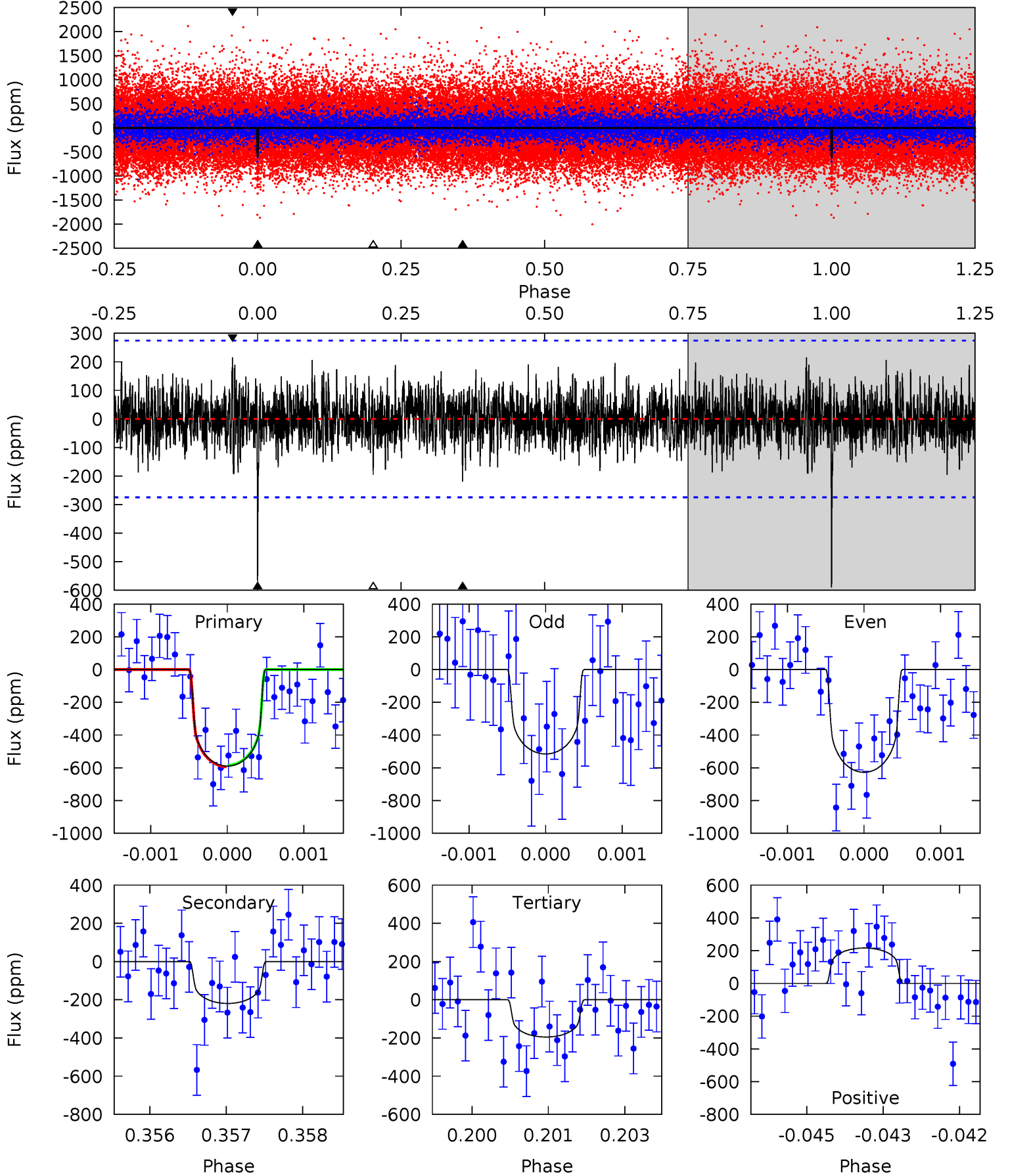
TCE 007987425-01 P=477.355206 Days $T_0=390.609723$ (BKJD)



DV Model-Shift Uniqueness Test

007987425-01, P = 477.381176 Days, E = 390.584243 Days

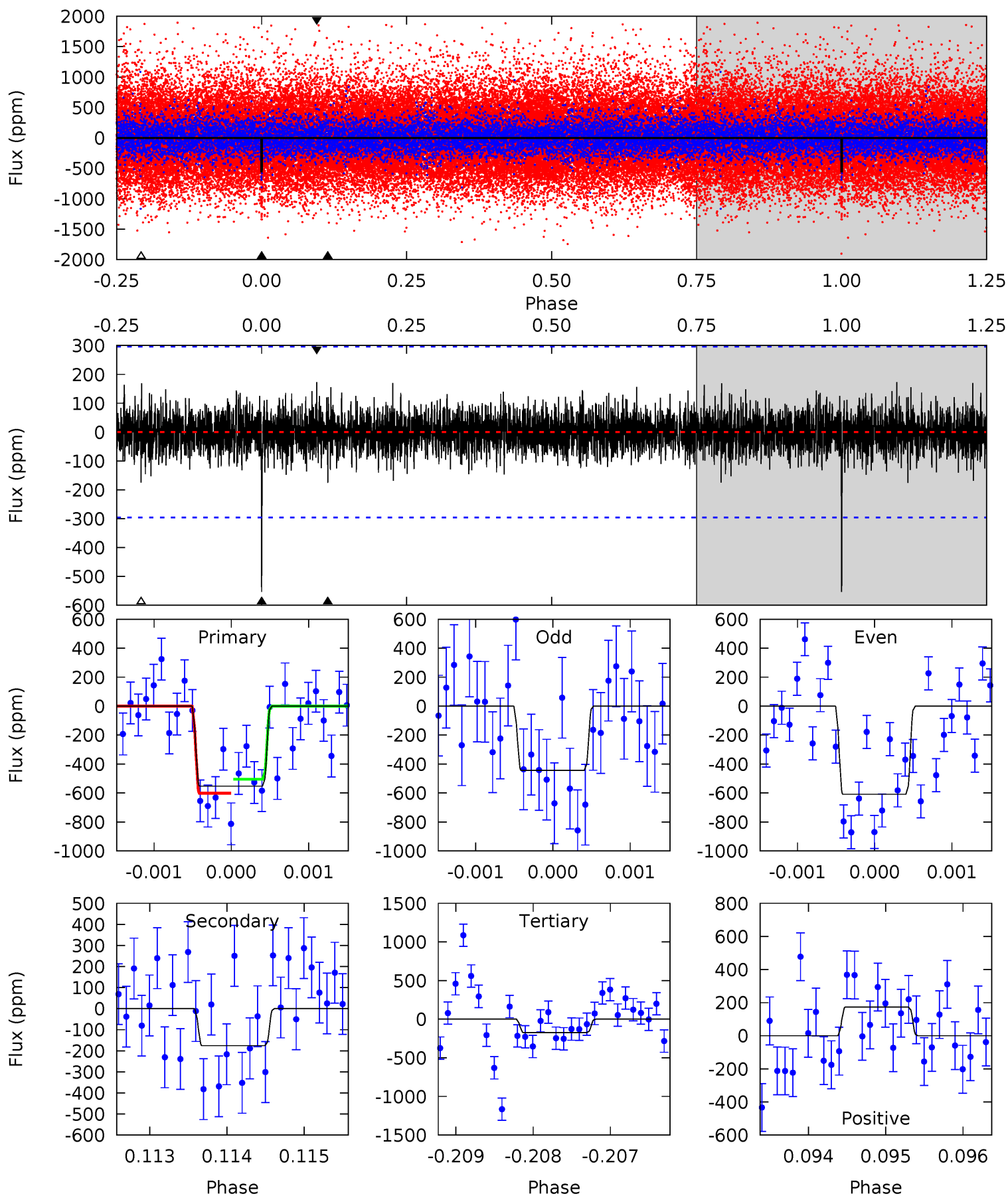
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.35	3.86	4.28	5.43	3.26	1.22	7.81	7.40	0.48	0.07	1.05	1.15	0.27	0.09



Alt Model-Shift Uniqueness Test

007987425-01, P = 477.355206 Days, E = 390.609723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.24	3.22	3.19	5.46	3.31	0.86	6.99	7.01	0.02	0.05	1.45	1.26	0.24	0.89



Stellar Parameters For KIC 007987425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5353^{+175}_{-159}	$4.432^{+0.124}_{-0.171}$	$-0.080^{+0.300}_{-0.300}$	$0.904^{+0.188}_{-0.126}$	$0.806^{+0.113}_{-0.061}$	$1.537^{+0.917}_{-0.663}$
	+3%/-3%	+3%/-4%	+375%/-375%	+21%/-14%	+14%/-8%	+60%/-43%
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 007987425-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-219 ± 50	$2.66^{+1.05}_{-1.05}$	300^{+20}_{-16}	4236^{+935}_{-490}	21602^{+36845}_{-11448}
Alt.	-176 ± 54	$2.46^{+1.16}_{-0.95}$	299^{+19}_{-17}	4153^{+949}_{-521}	19802^{+36177}_{-11274}

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

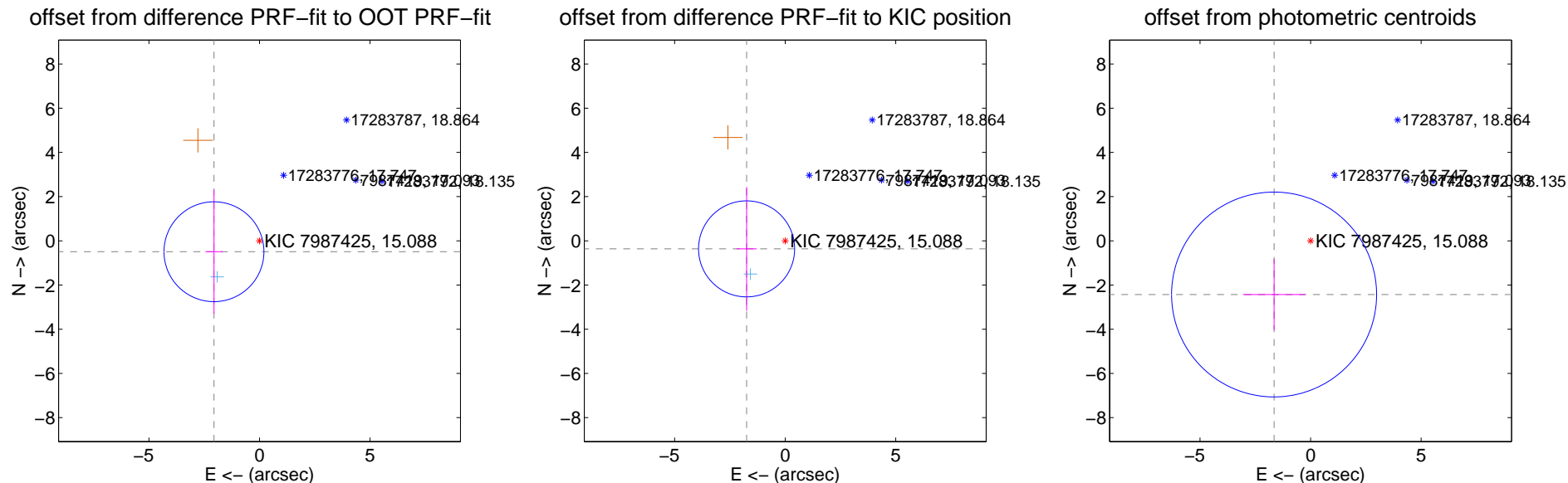
DV Centroid Data

Supplemental centroid analysis for 007987425-01. Kepler magnitude: 15.09. Transit SNR 9.01

There are 1 quarters with good PRF difference image offsets

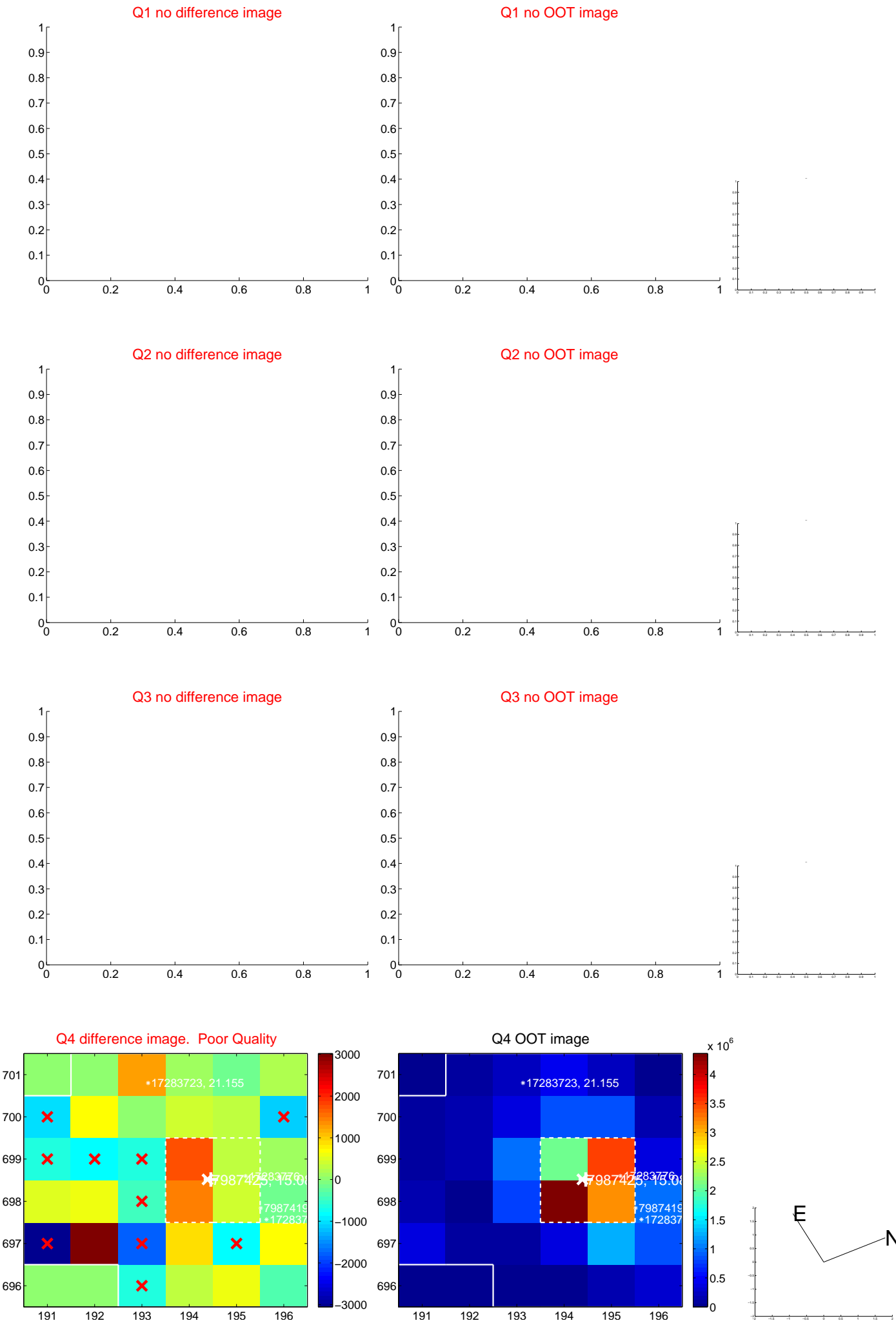
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.117 ± 0.753	2.81	2.059 ± 0.388	-0.493 ± 2.799
PRF-fit source offset from KIC position	1.783 ± 0.724	2.46	1.745 ± 0.452	-0.365 ± 2.801
photometric centroid source offset	2.94 ± 1.54	1.90	1.65 ± 1.41	-2.43 ± 1.60



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.

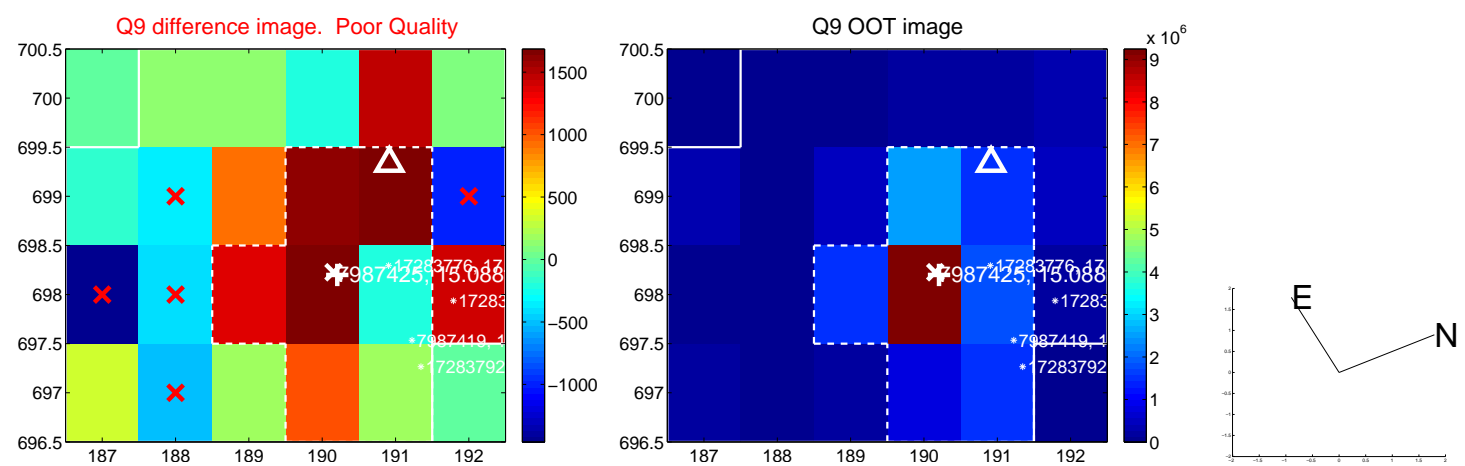
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



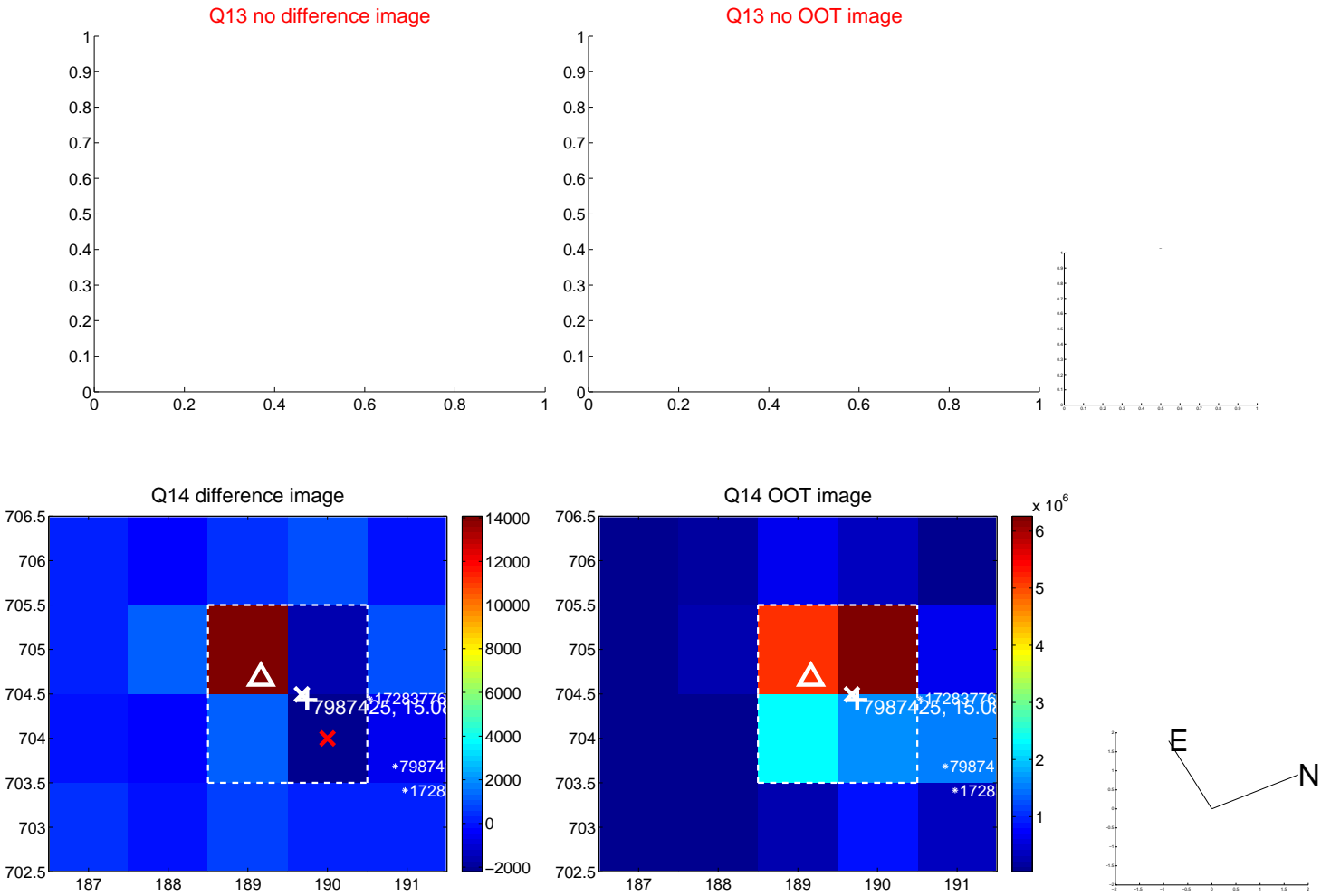
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



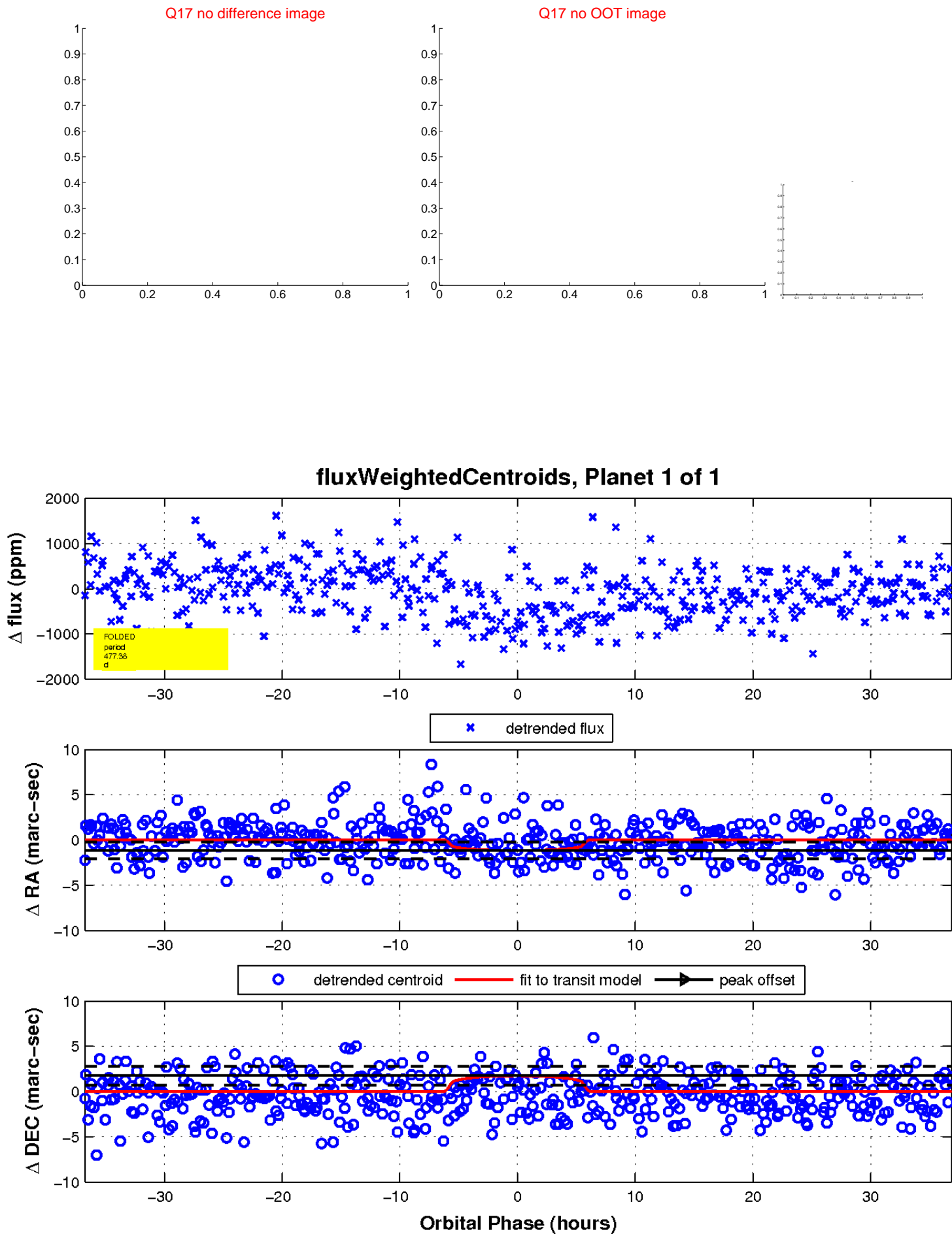
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

