

KIC 005688997

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})
005688997-01	OBS	3784.01	23.870423	136.966163	6325.7	3.439	106.9	101.4	1.17	6022	14.99	60.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005688997-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEEP_V_SHAPED—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.

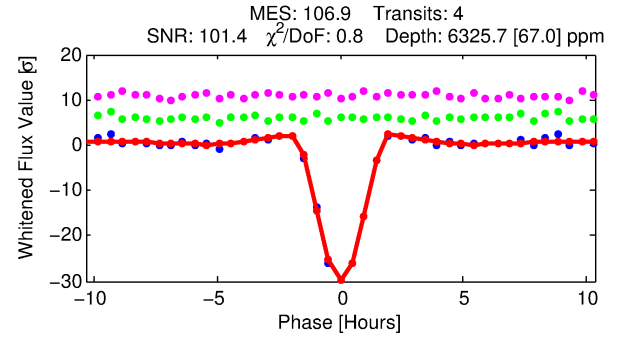
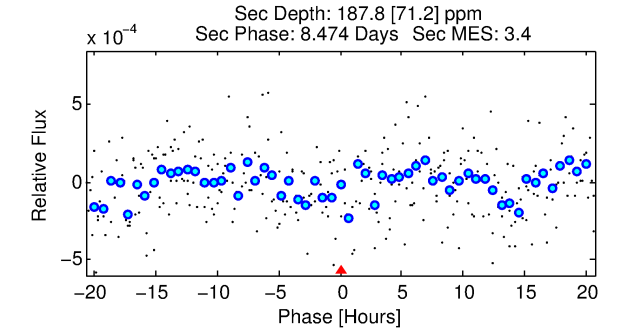
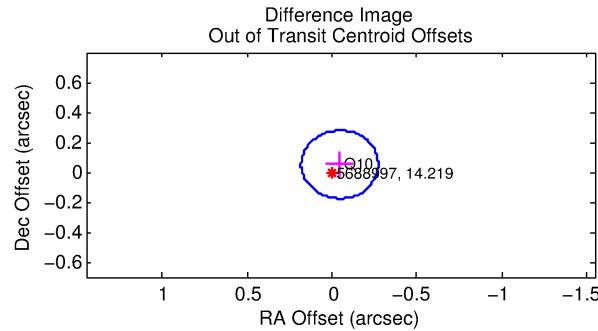
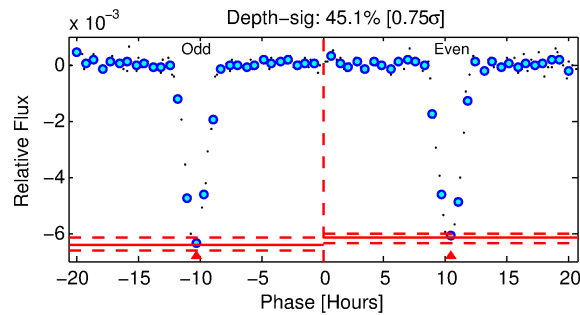
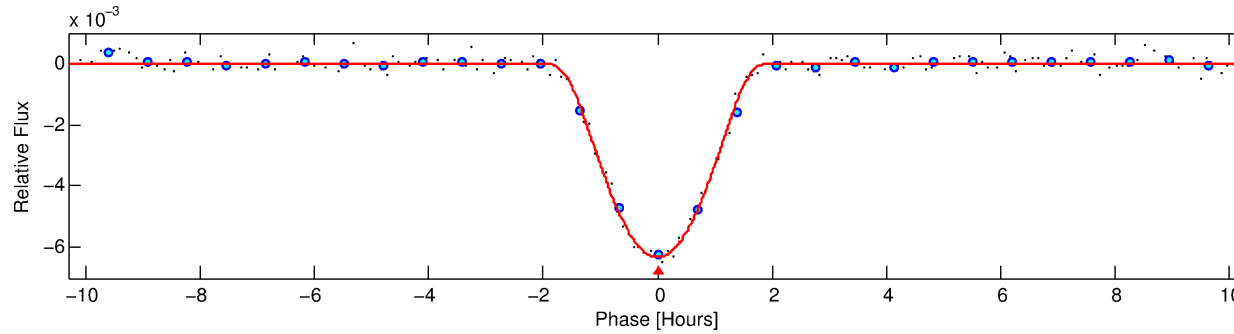
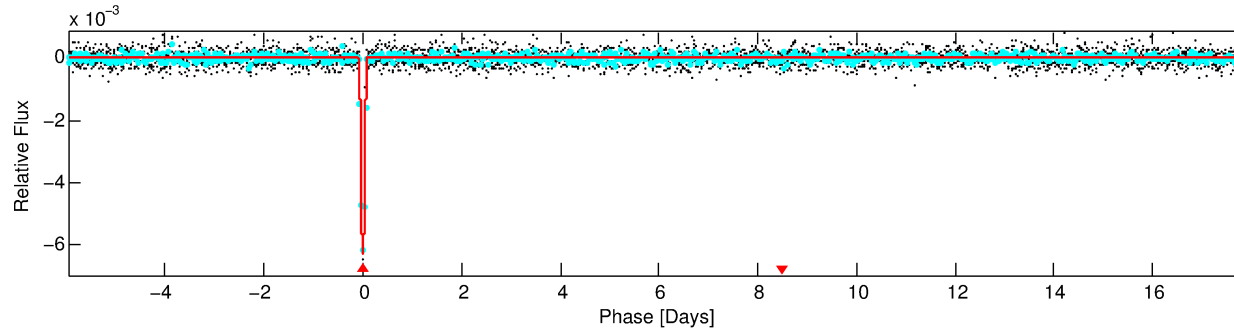
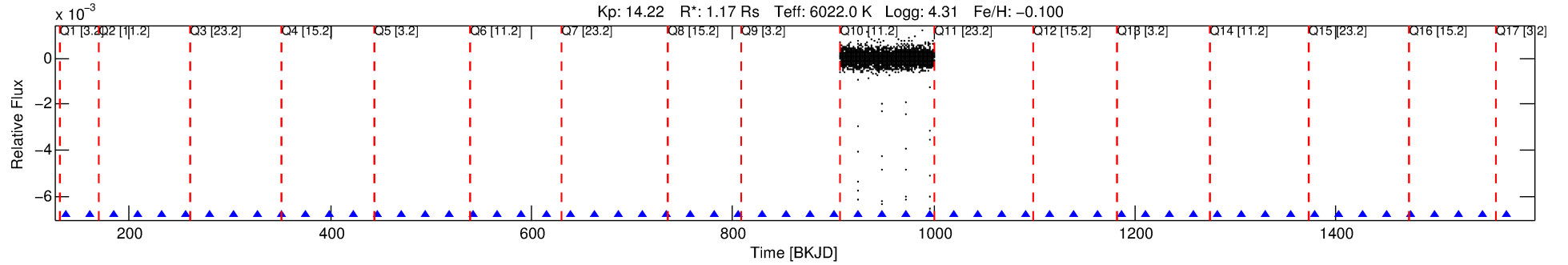
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005688997-01

No Significant Match Found

DV One-Page Summary

KIC: 5688997 Candidate: 1 of 1 Period: 23.870 d
KOI: K03784.01 Corr: 0.974



DV Fit Results:

Period = 23.87042 [0.00034] d
Epoch = 136.9662 [0.0118] BKJD
Rp/R* = 0.1178 [0.0394]
a/R* = 28.76 [2.20]
b = 0.98 [0.06]
Seff = 60.51 [23.31]
Teff = 711 [68] K
Rp = 14.99 [6.62] Re
a = 0.1627 [0.0395] AU
Ag = 12.18 [10.31] [1.08 σ]
Teffp = 2054 [403] K [3.29 σ]

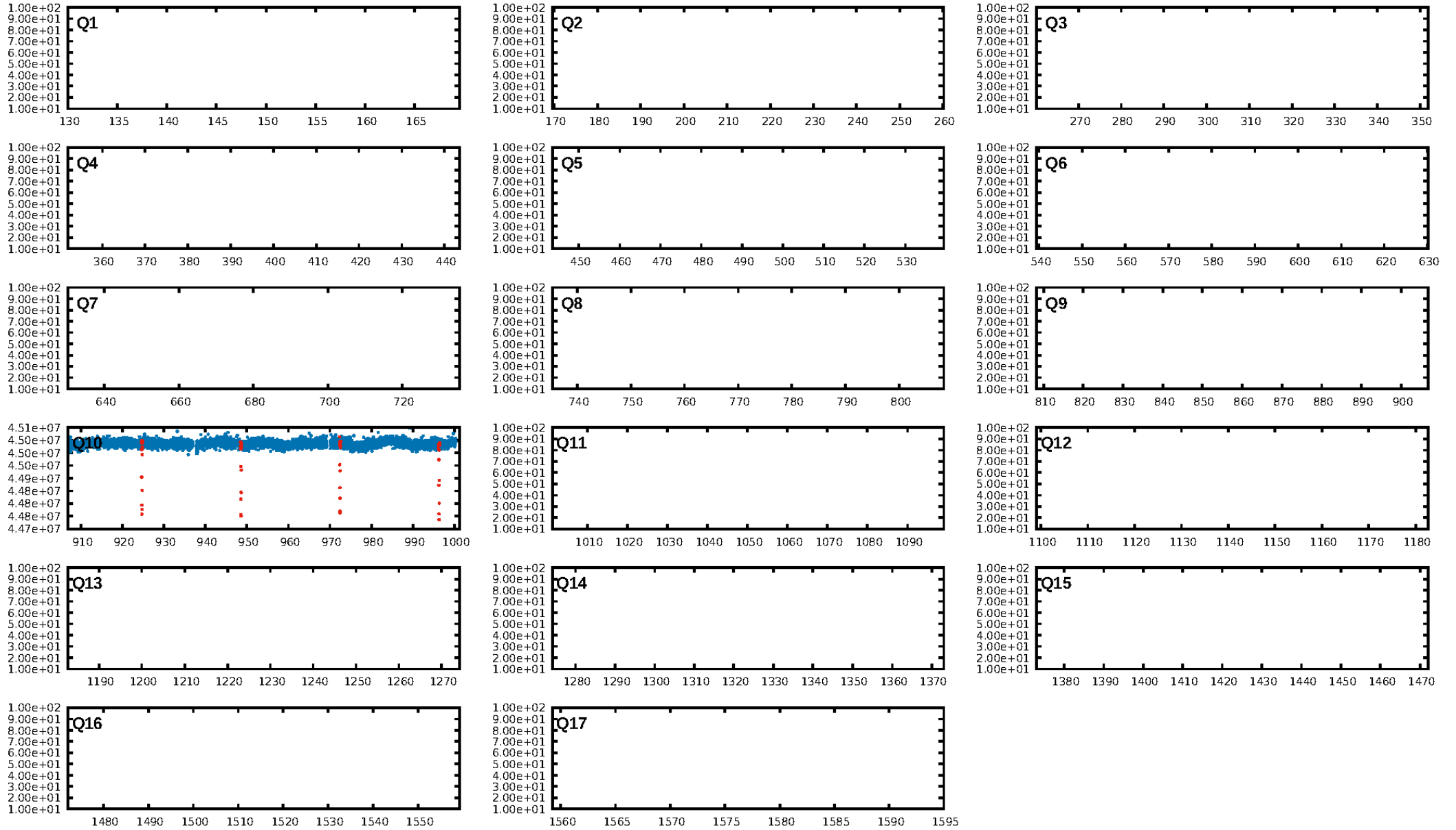
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.7%
ModelChiSquareGof-sig: 89.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.261
Centroid-sig: 77.5%
Centroid-so: 0.287 arcsec [1.26 σ]
OotOffset-rm: 0.068 arcsec [0.90 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-rm: 0.184 arcsec [2.44 σ]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

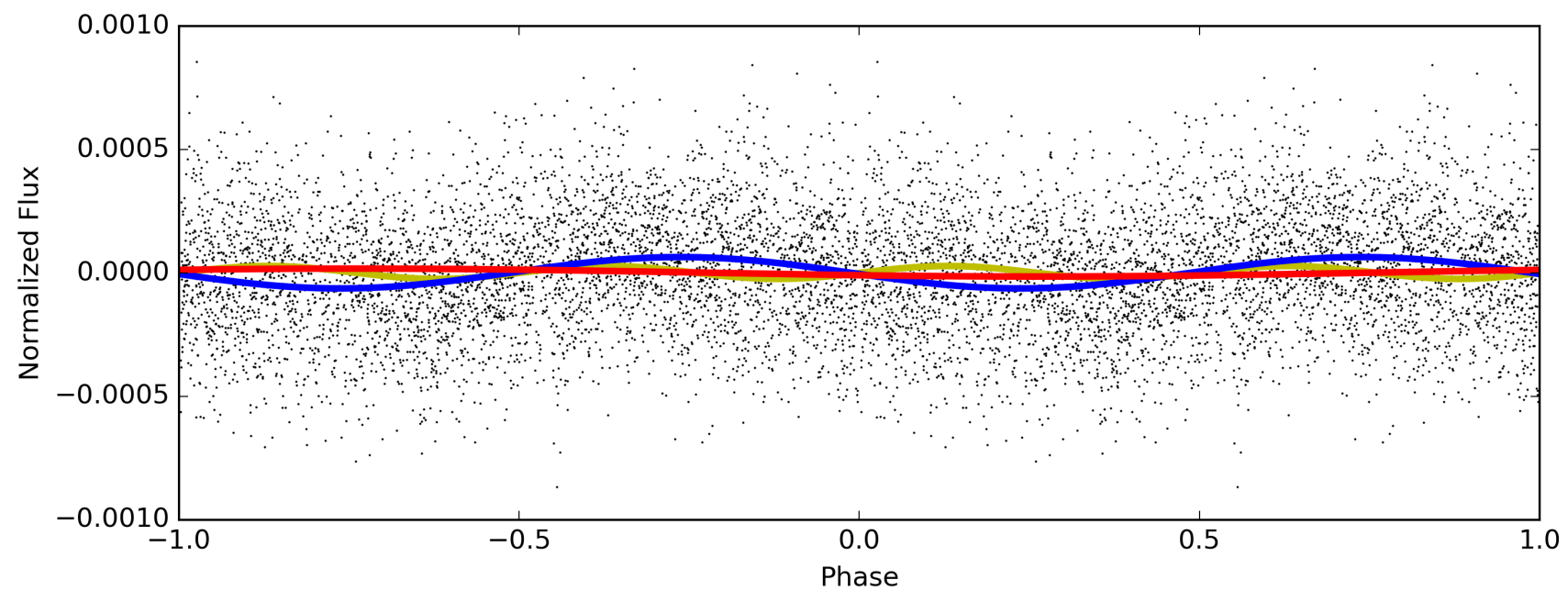
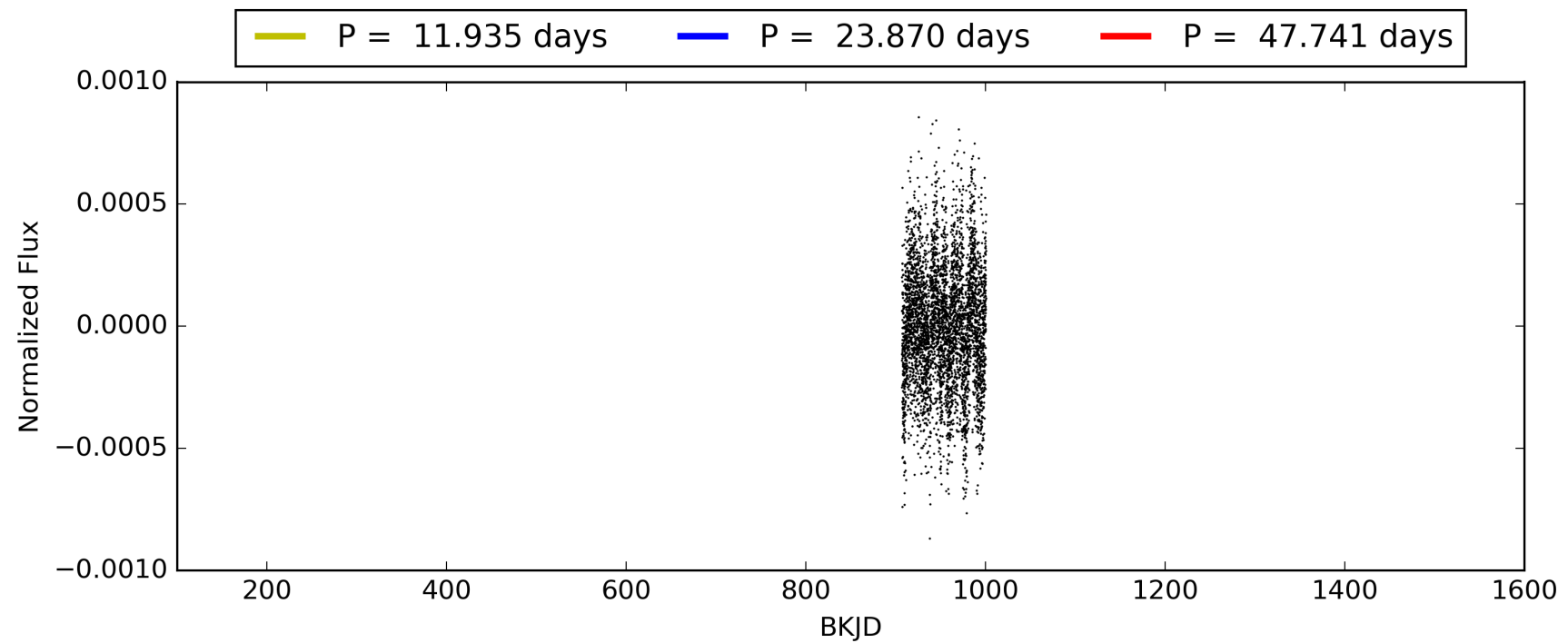
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:11:34 Z

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

TCE 005688997-01, PDC Light Curves

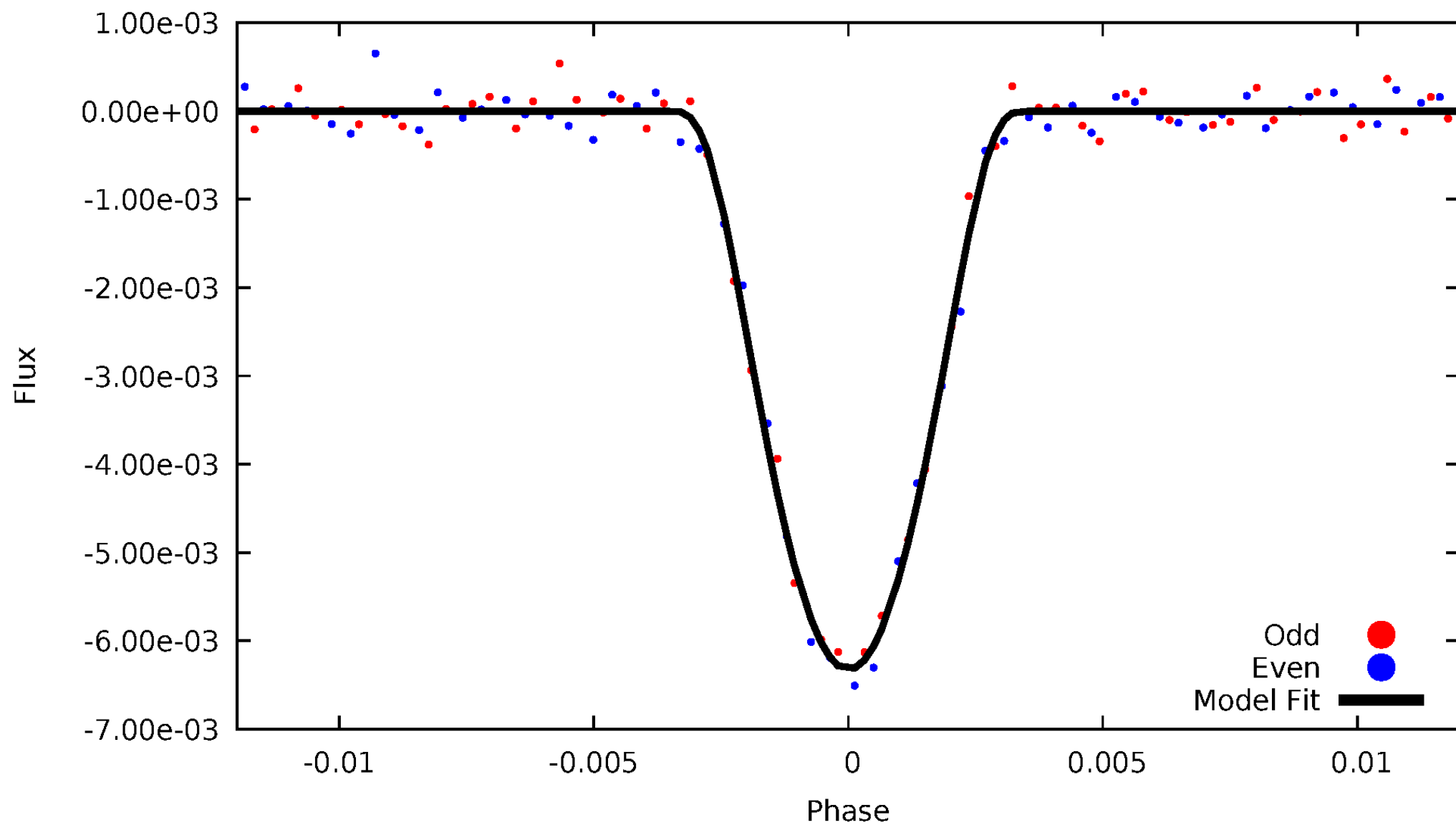


TCE 005688997-01



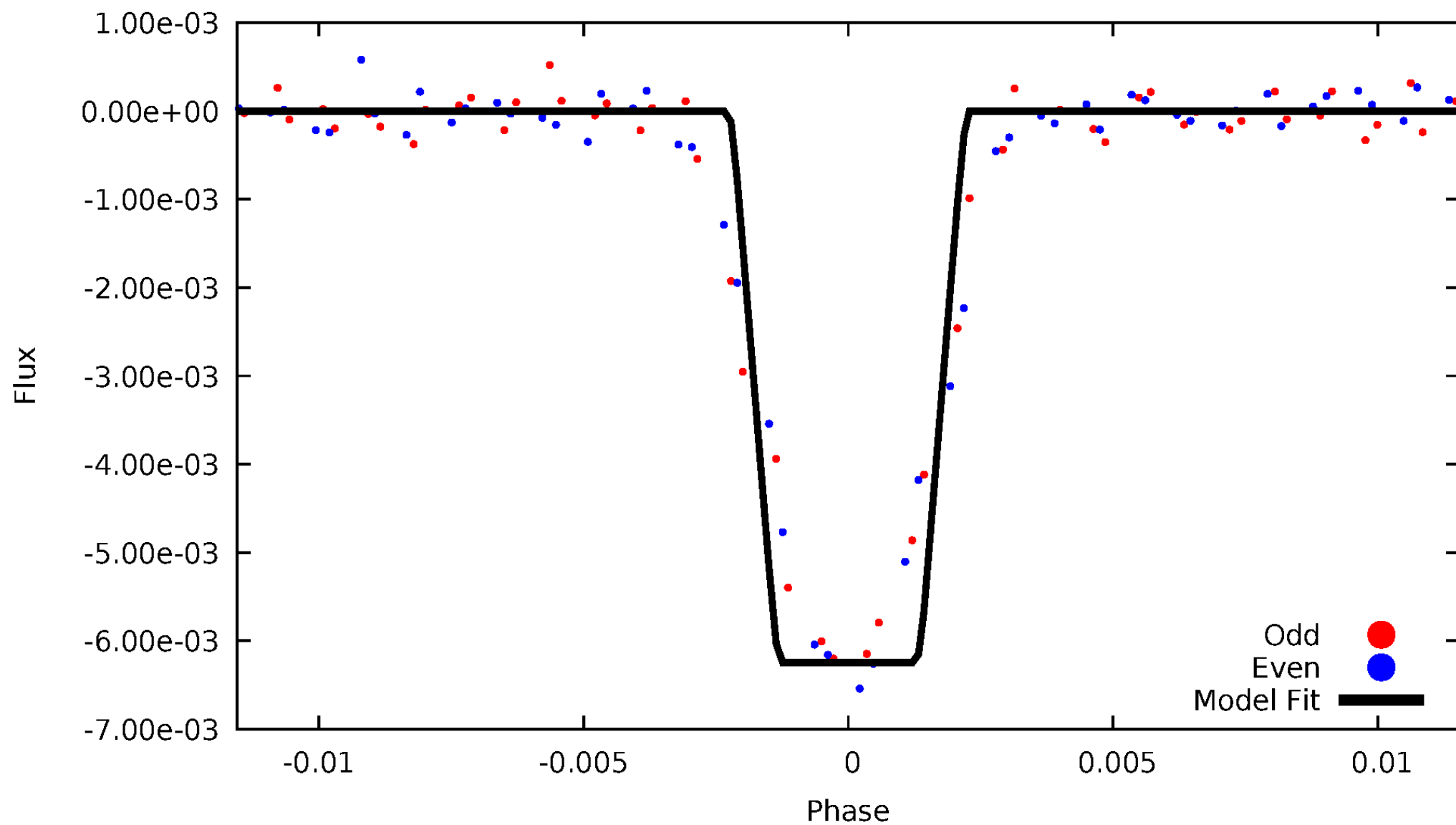
DV Odd/Even

TCE 005688997-01

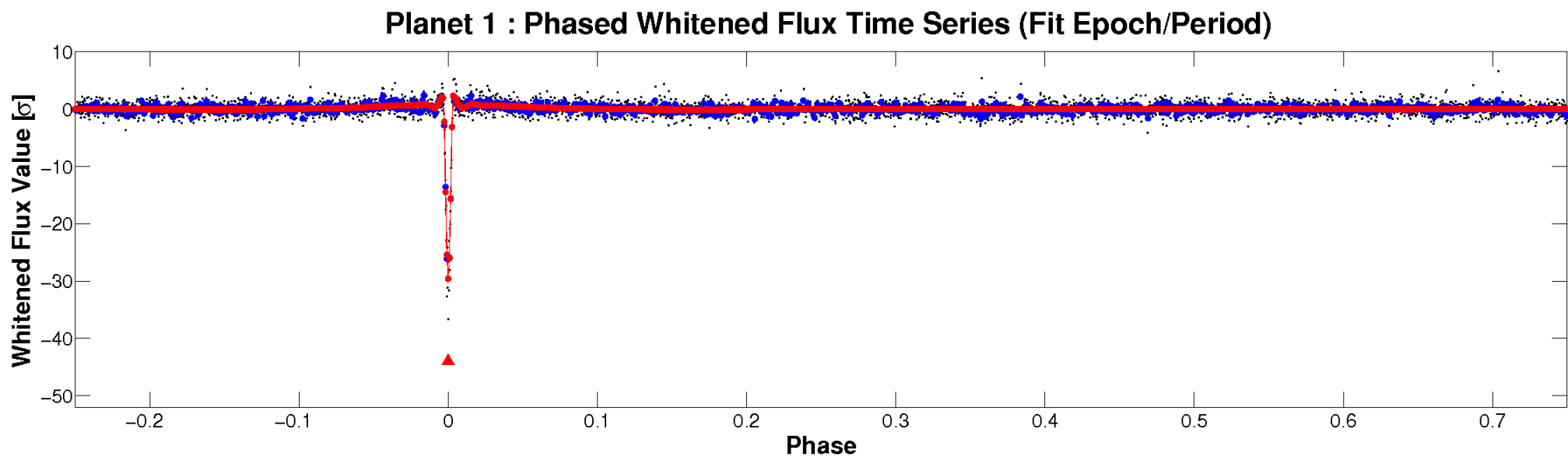
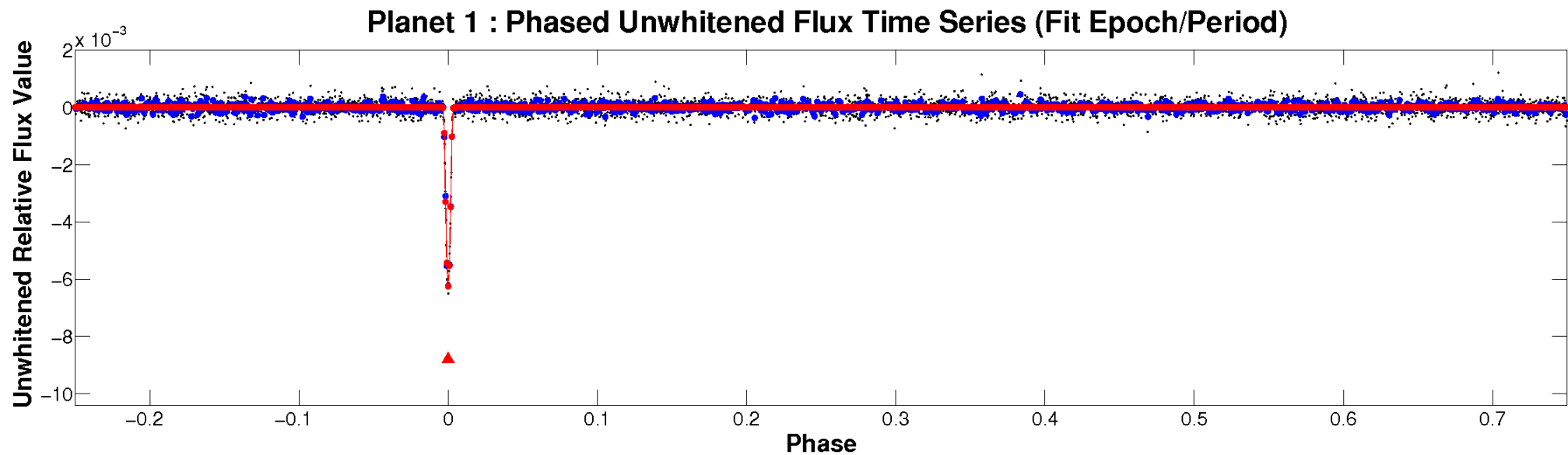


ALT Odd/Even

TCE 005688997-01

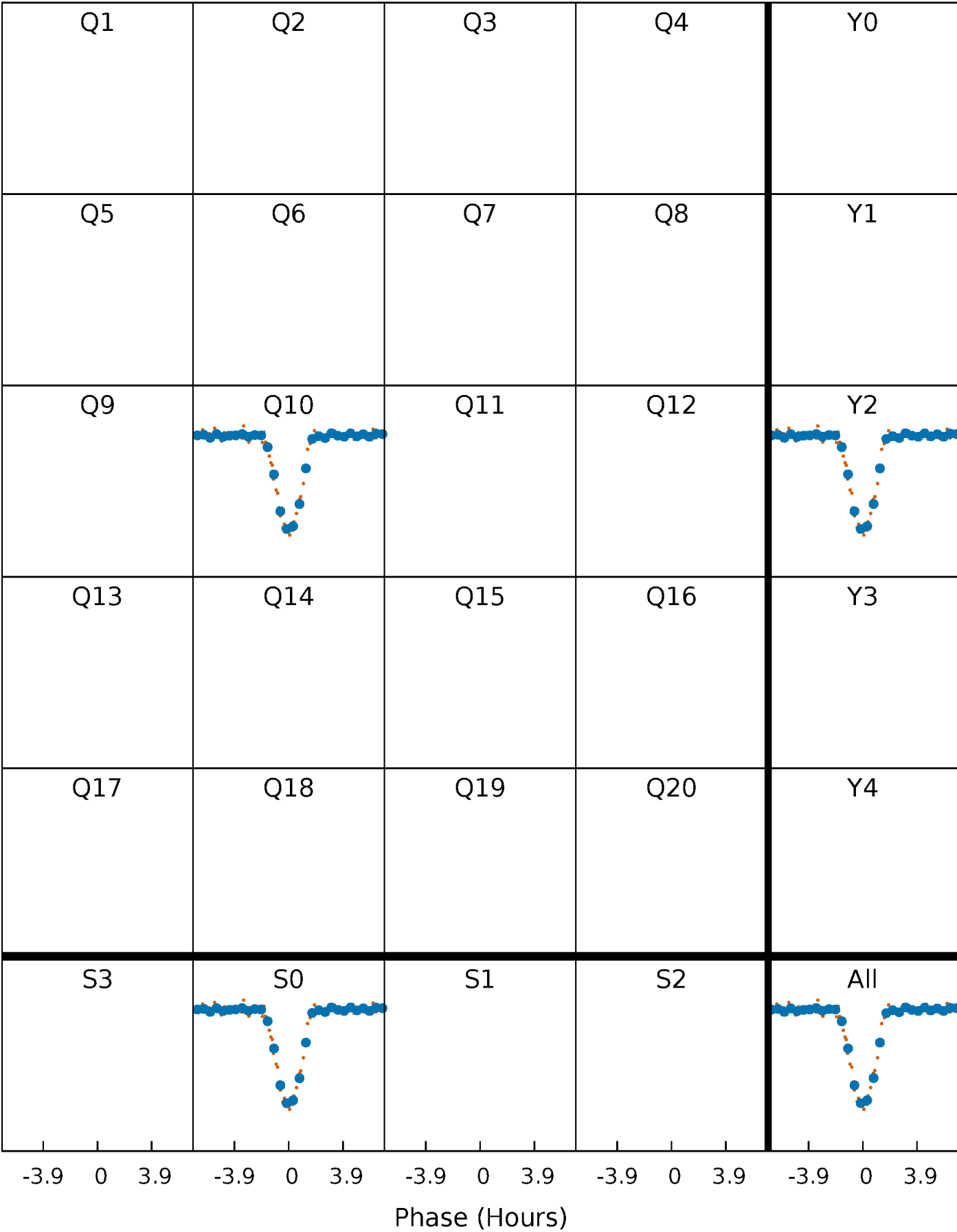


Non-Whitened Vs. Whitened Light Curve



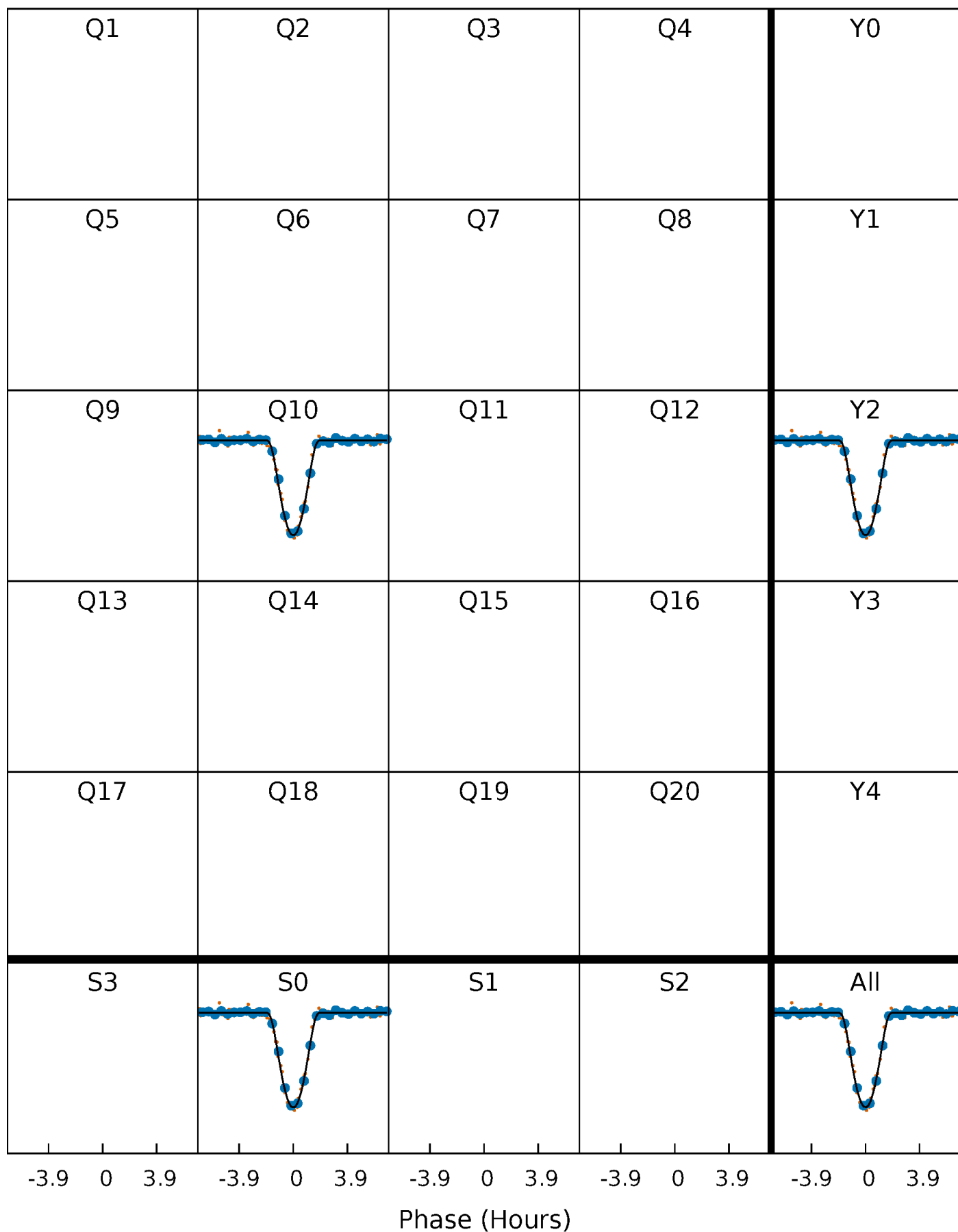
PDC Quarter-Phased Transit Curves

TCE 005688997-01 P= 23.870423 Days $T_0=136.966163$ (BKJD)



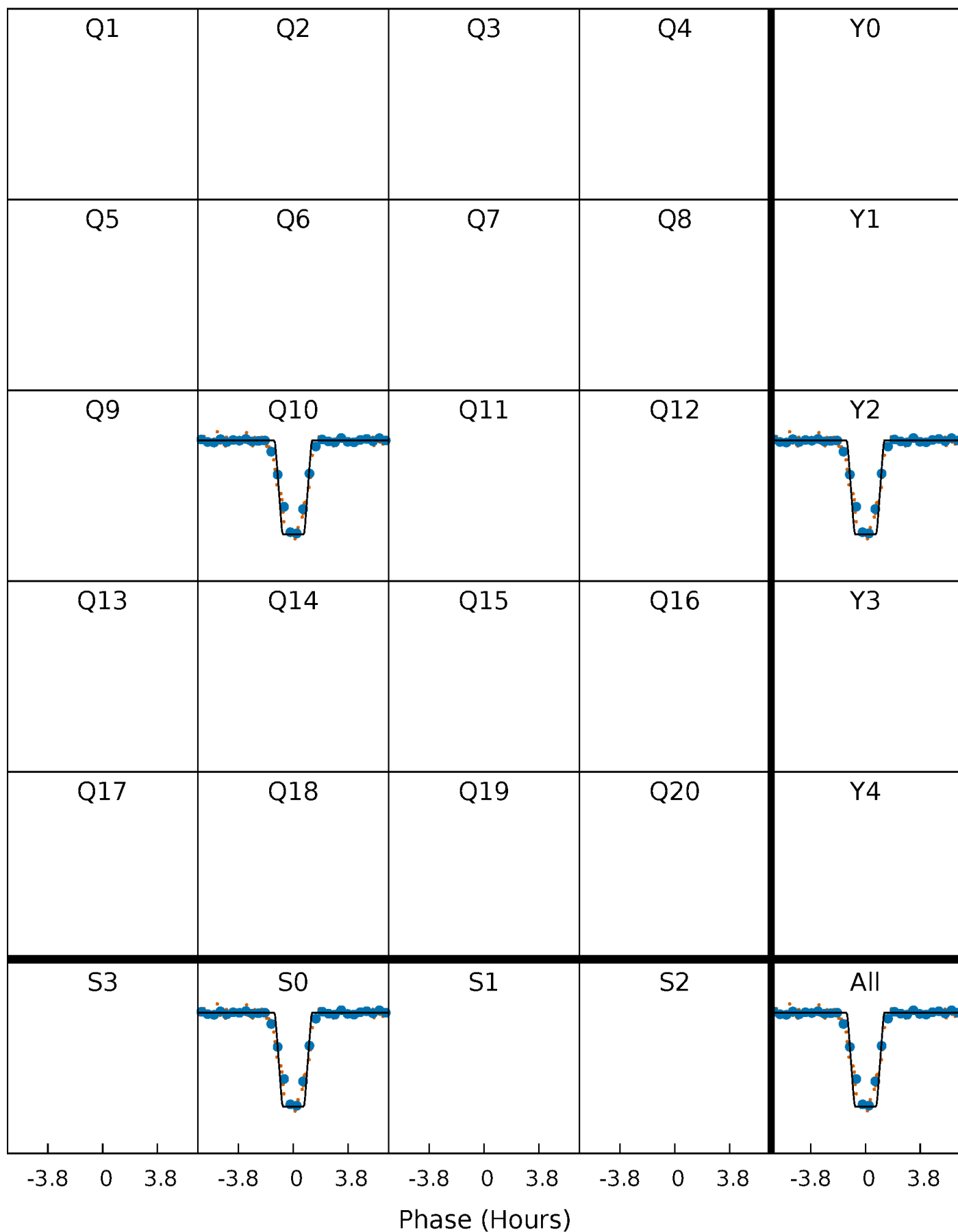
DV Quarter-Phased Transit Curves

TCE 005688997-01 P= 23.870423 Days $T_0=136.966163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

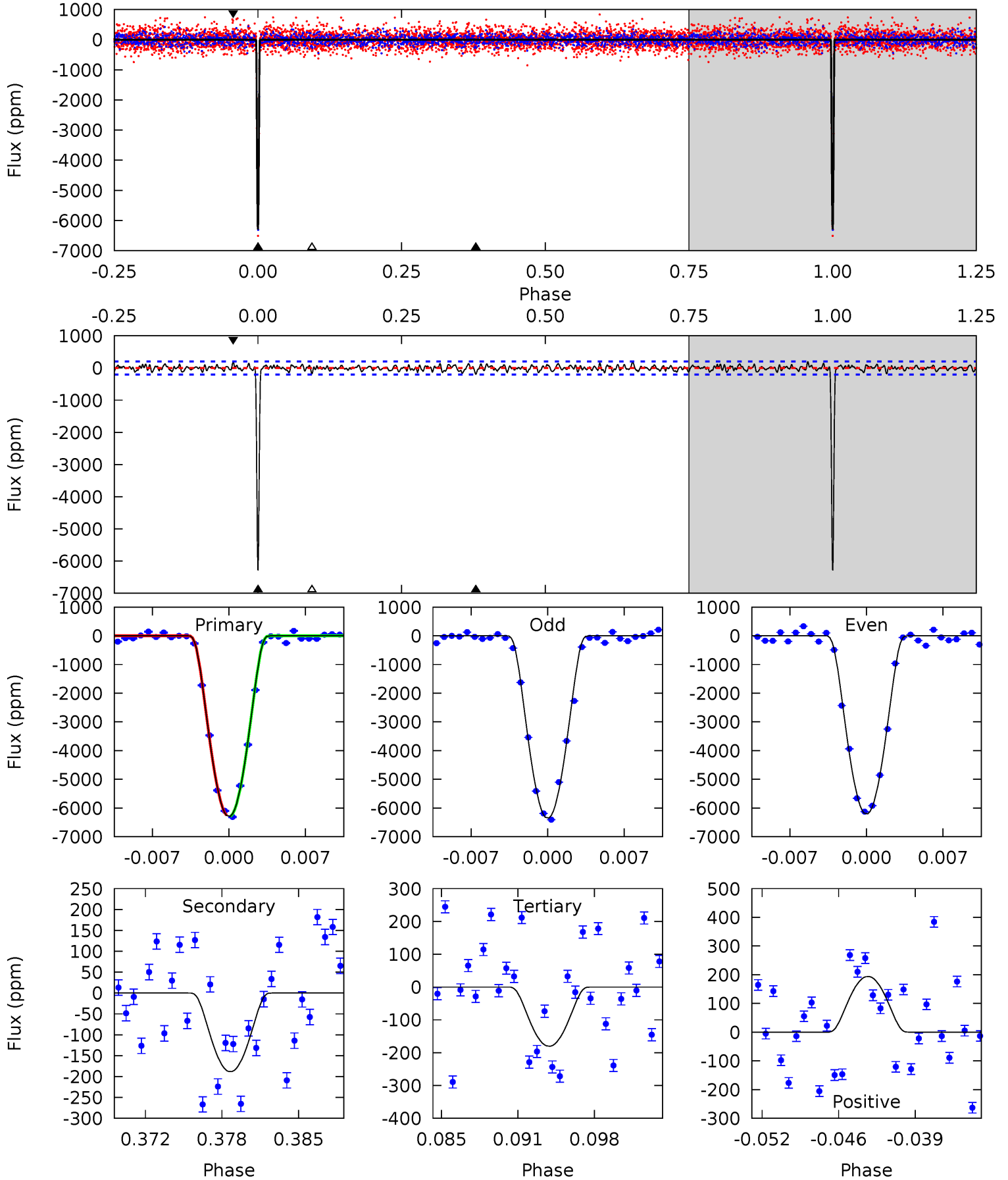
TCE 005688997-01 P= 23.869061 Days $T_0=137.013067$ (BKJD)



DV Model-Shift Uniqueness Test

005688997-01, P = 23.870423 Days, E = 136.966163 Days

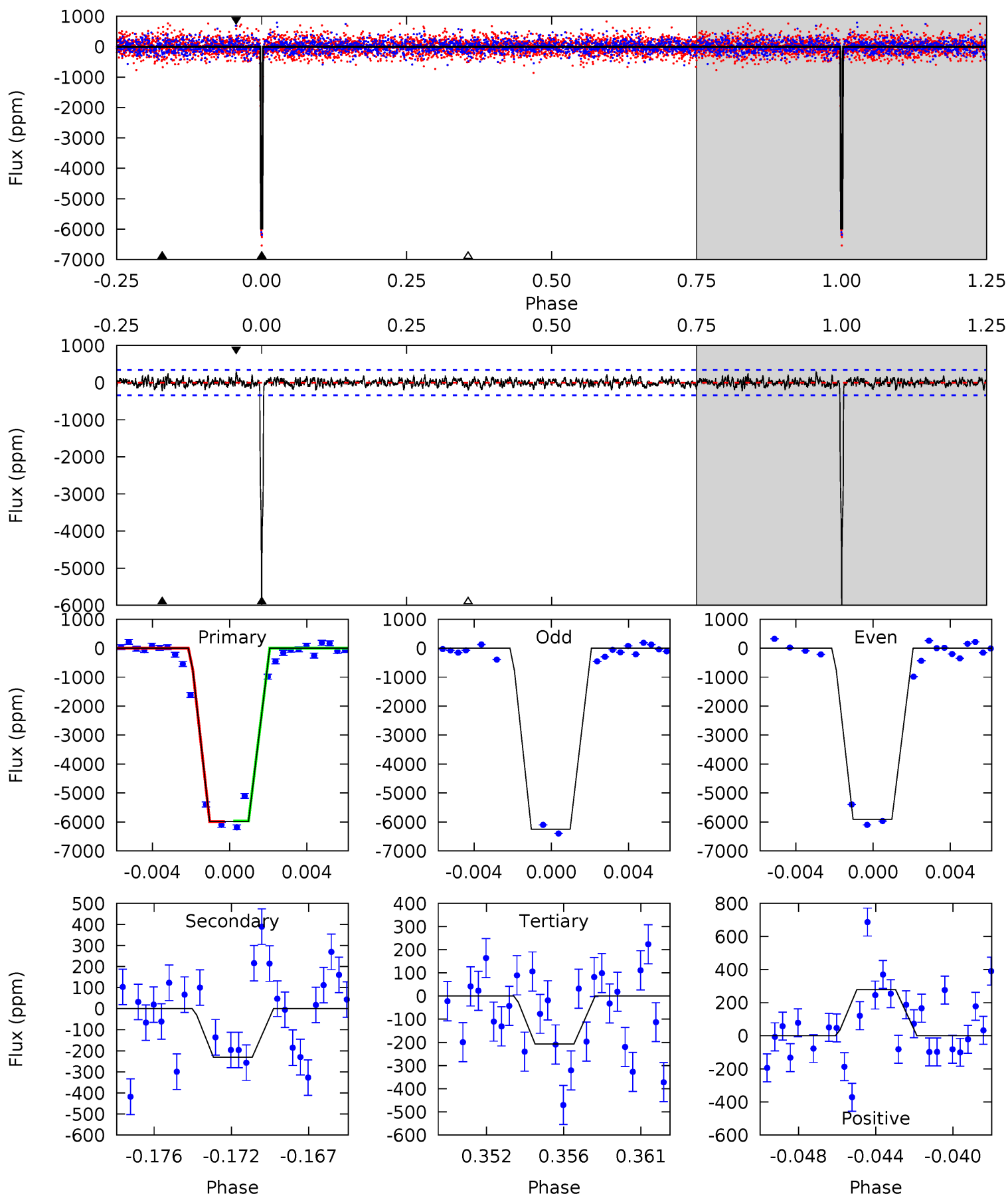
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
158.9	4.76	4.56	4.90	5.11	2.72	1.52	154.3	154.0	0.20	-0.14	1.80	1.00	0.03	0.56



Alt Model-Shift Uniqueness Test

005688997-01, P = 23.869061 Days, E = 137.013067 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
91.3	3.52	3.16	4.25	5.18	2.85	1.09	88.1	87.0	0.36	-0.73	2.35	1.00	0.04	0.17



Stellar Parameters For KIC 005688997

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6022^{+189}_{-232}	$4.308^{+0.158}_{-0.193}$	$-0.100^{+0.250}_{-0.300}$	$1.166^{+0.336}_{-0.224}$	$1.007^{+0.165}_{-0.120}$	$0.894^{+0.696}_{-0.454}$
	+3%/-4%	+4%/-4%	+250%/-300%	+29%/-19%	+16%/-12%	+78%/-51%
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 005688997-01 / KOI 3784.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-188 ± 40	$15.35^{+5.79}_{-5.38}$	997^{+75}_{-64}	2786^{+348}_{-226}	12^{+16}_{-6}
Alt.	-231 ± 66	$10.23^{+6.13}_{-4.90}$	995^{+82}_{-63}	3211^{+746}_{-385}	33^{+82}_{-21}

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 $A_{obs} \gg 1.0$

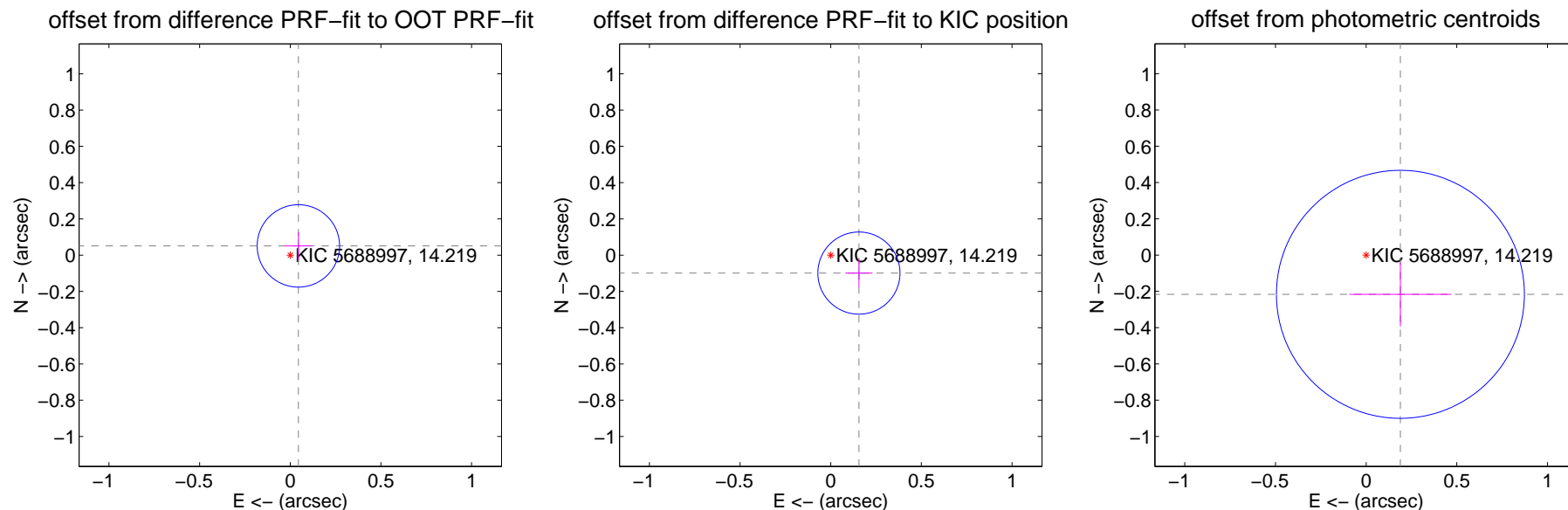
DV Centroid Data

Supplemental centroid analysis for 005688997-01. Kepler magnitude: 14.22. Transit SNR 101.40

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.068 ± 0.076	0.90	-0.045 ± 0.075	0.051 ± 0.076
PRF-fit source offset from KIC position	0.184 ± 0.076	2.44	-0.156 ± 0.075	-0.099 ± 0.076
photometric centroid source offset	0.29 ± 0.23	1.26	-0.19 ± 0.28	-0.22 ± 0.18



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.

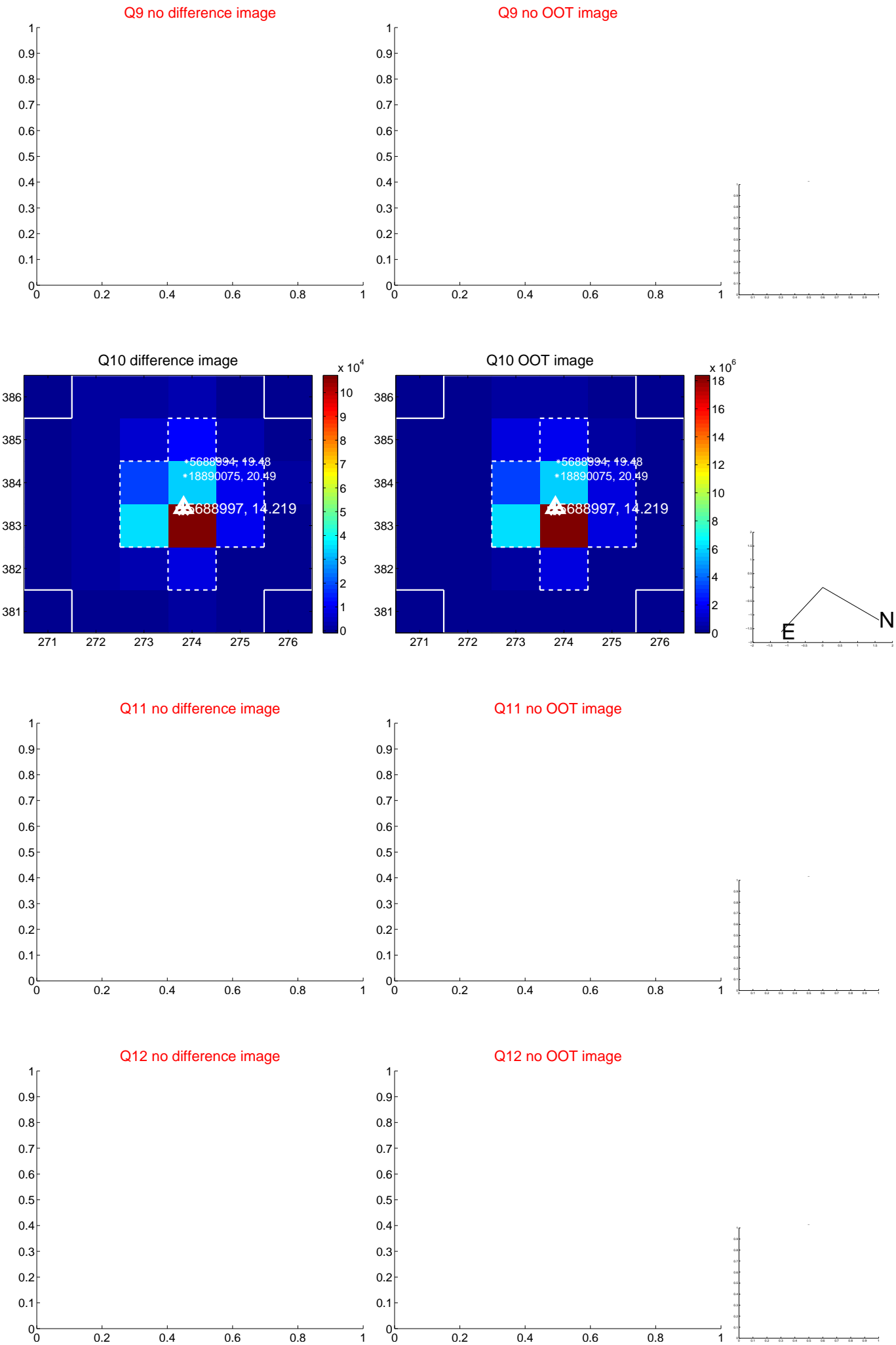
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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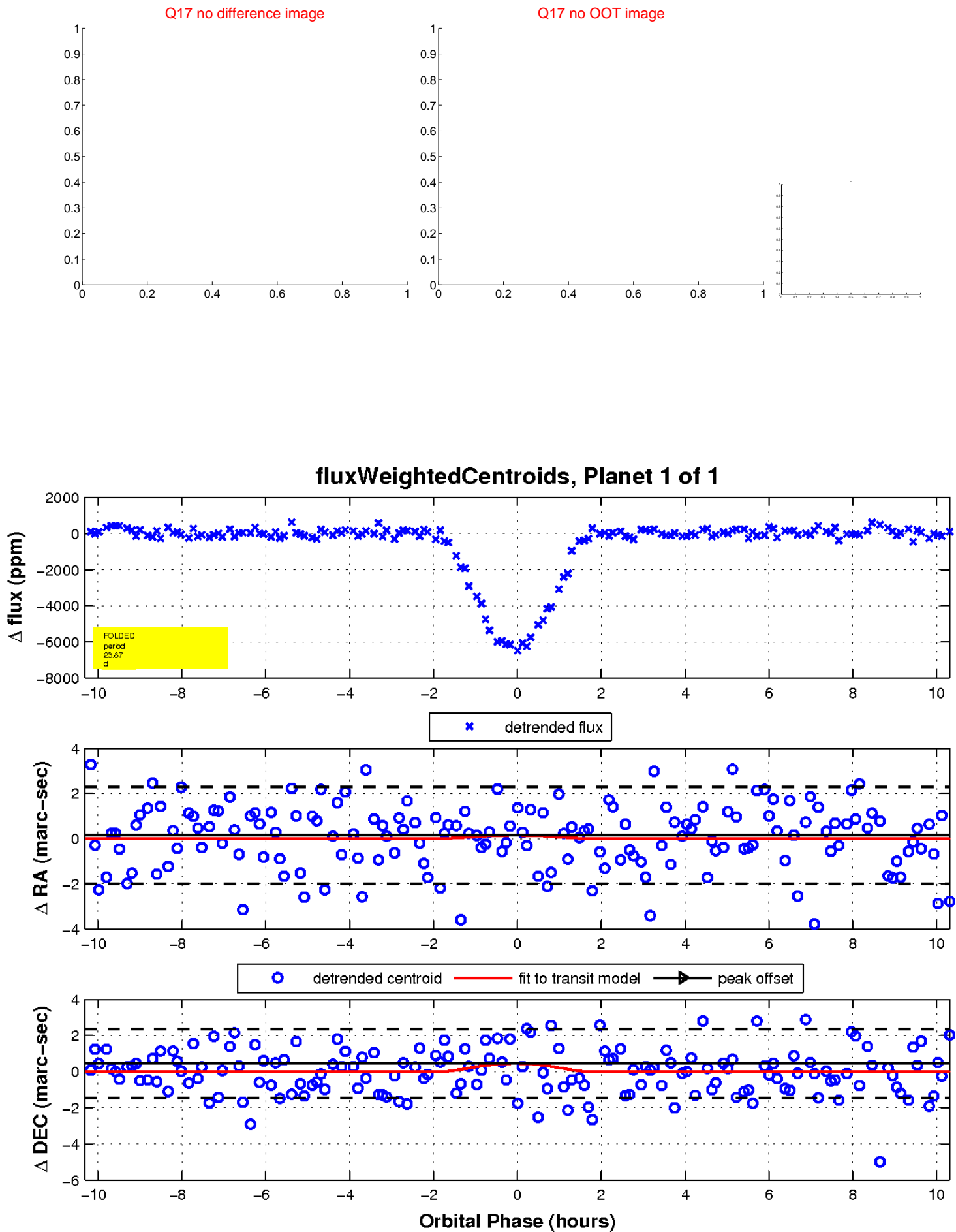
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UKIRT Image

Declination

