

KIC 008879351

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})
008879351-01	OBS	No	391.369648	165.547868	1162.6	36.237	8.3	9.9	0.75	5136	4.87	0.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008879351-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

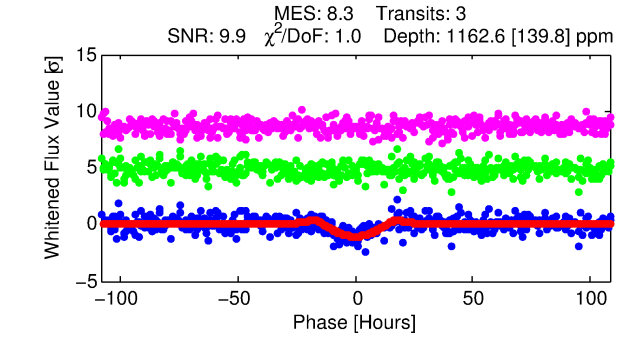
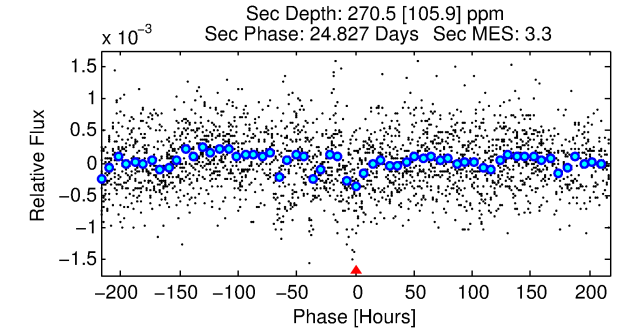
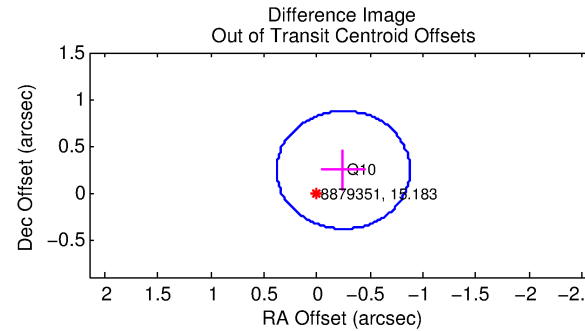
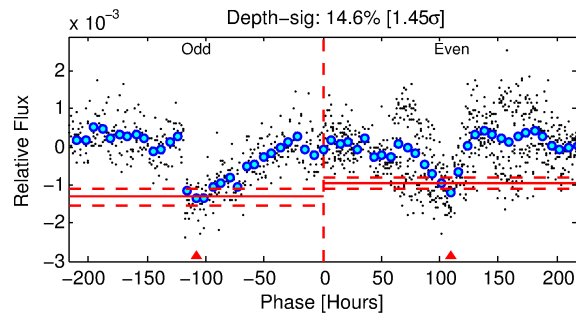
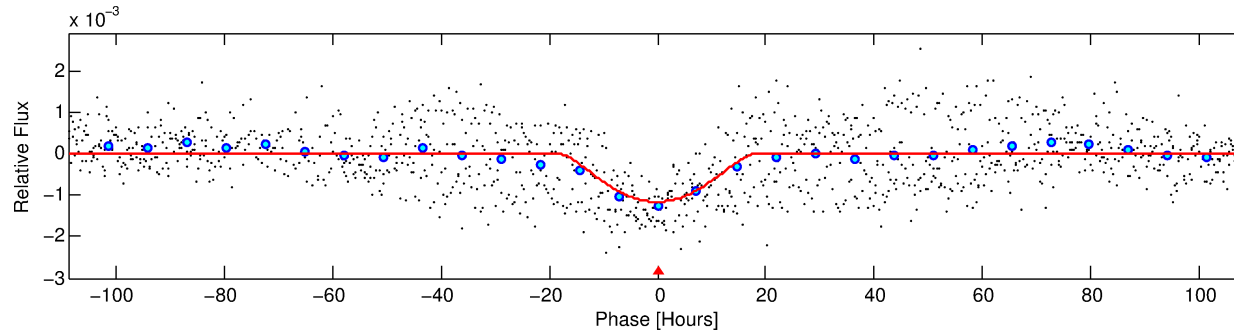
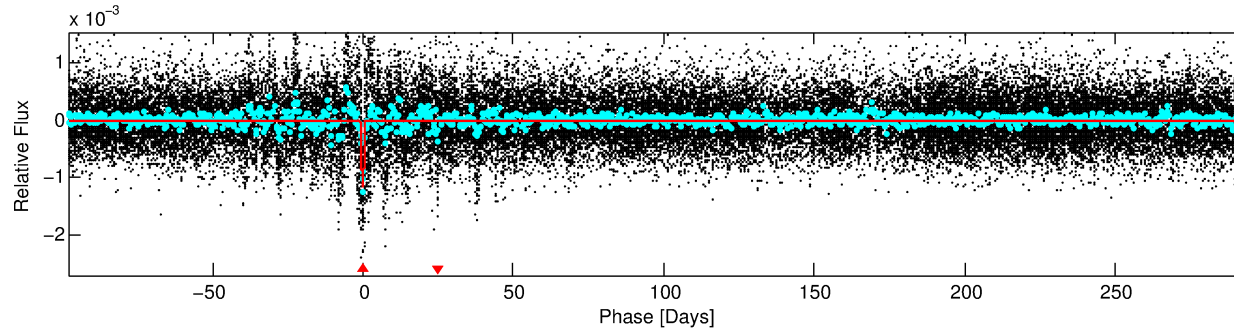
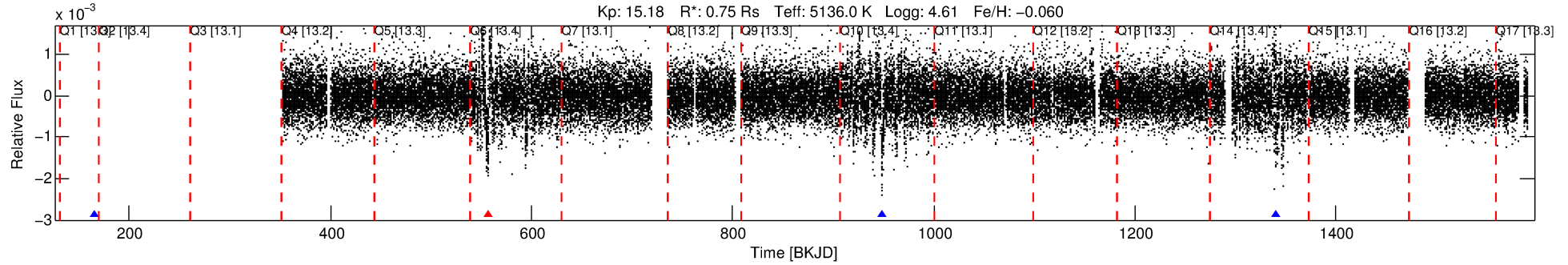
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008879351-01

No Significant Match Found

DV One-Page Summary

KIC: 8879351 Candidate: 1 of 1 Period: 391.370 d



DV Fit Results:

Period = 391.36965 [0.04079] d
Epoch = 165.5479 [0.0909] BKJD
Rp/R* = 0.0592 [0.1066]
a/R* = 30.01 [13.24]
b = 0.99 [0.16]
Seff = 0.36 [0.08]
Teq = 198 [11] K
Rp = 4.87 [8.79] Re
a = 0.9854 [0.1132] AU
Ag = 6104.97 [22142.17] [0.28 σ]
Teffp = 2707 [2454] K [1.02 σ]

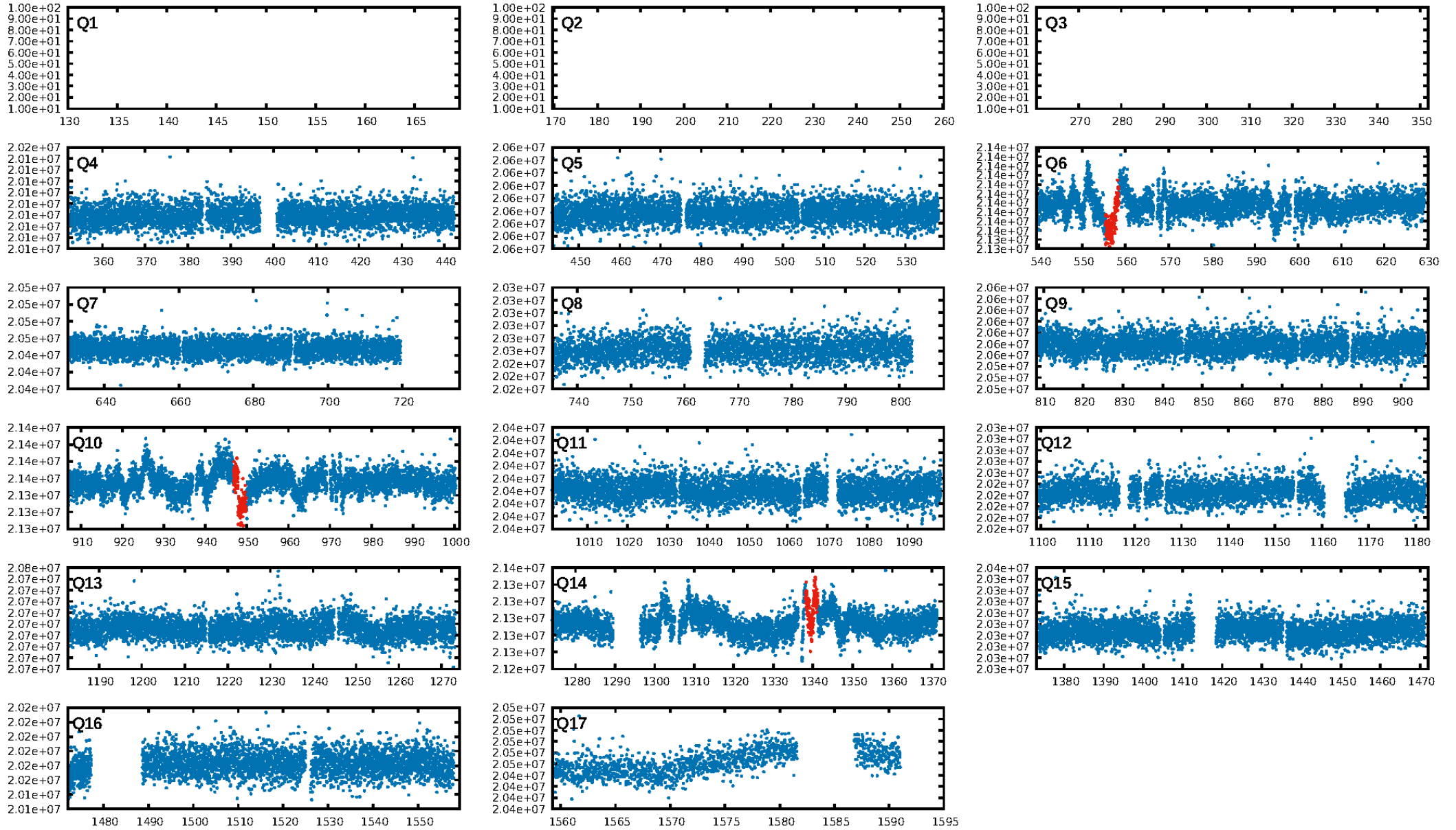
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.3%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.09e-10
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.8347
Centroid-sig: 35.1%
Centroid-so: 1.916 arcsec [1.04 σ]
OotOffset-rm: 0.347 arcsec [1.65 σ]
KicOffset-rm: 0.354 arcsec [1.68 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

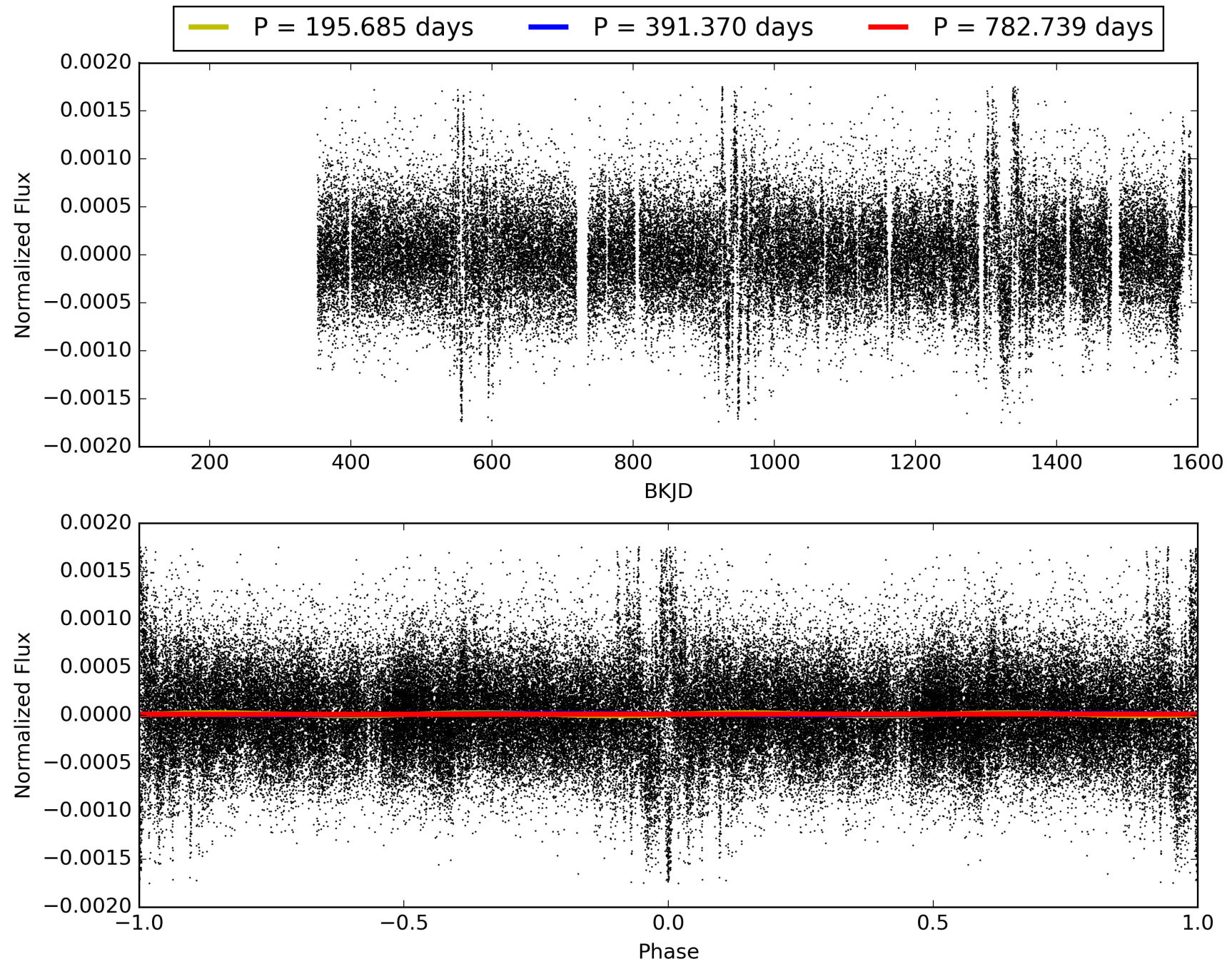
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:57:21 Z

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

TCE 008879351-01, PDC Light Curves

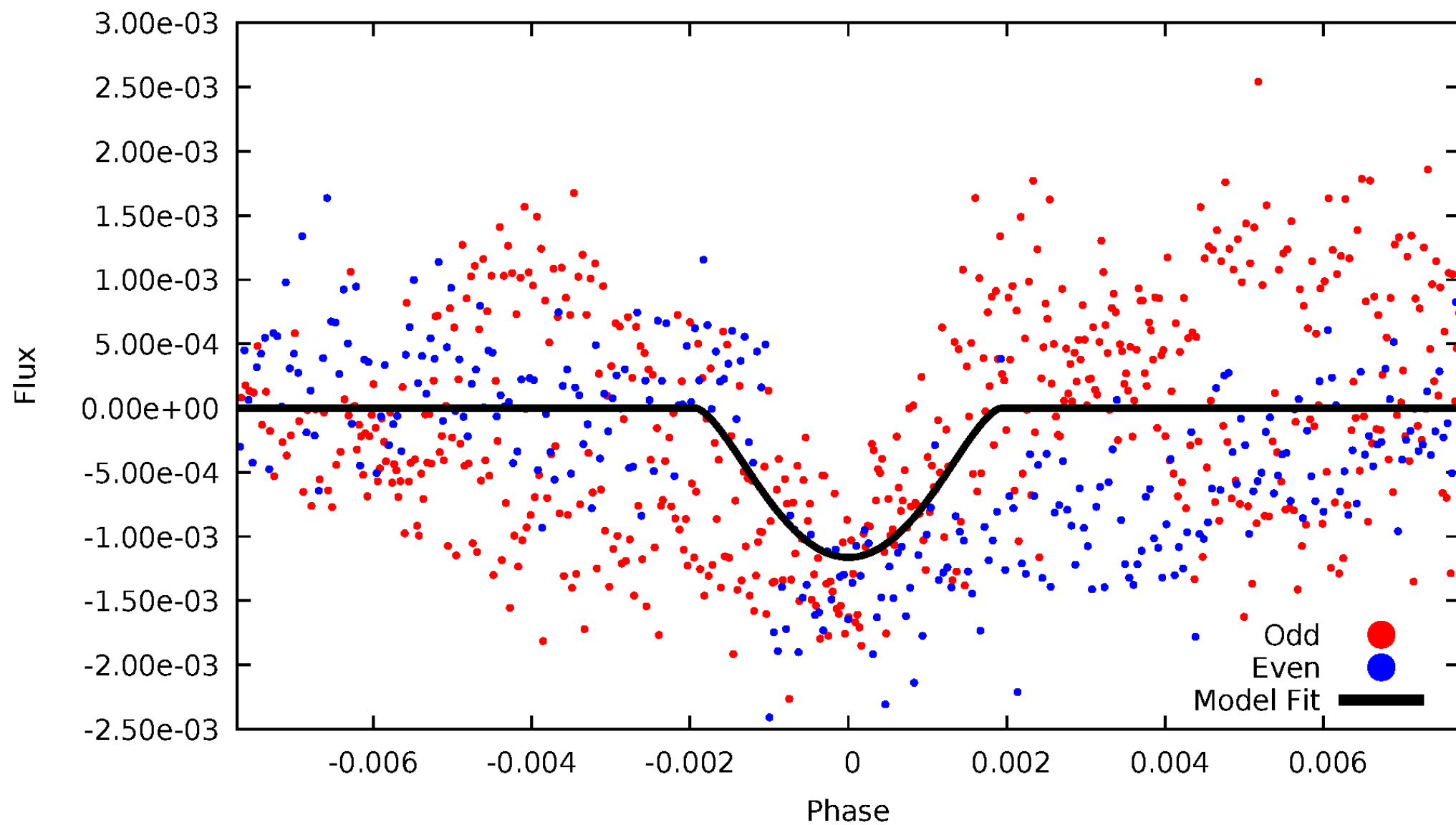


TCE 008879351-01



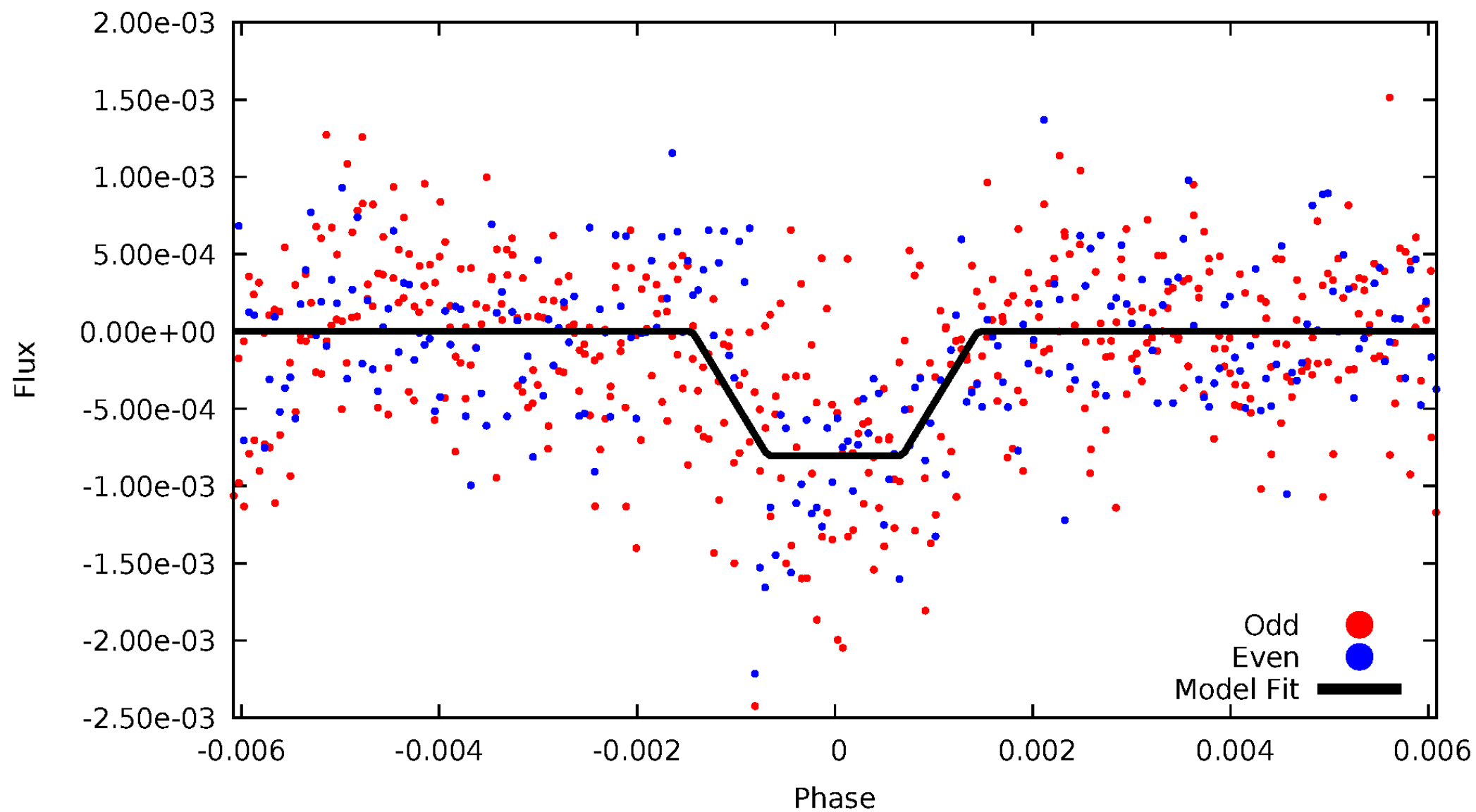
DV Odd/Even

TCE 008879351-01

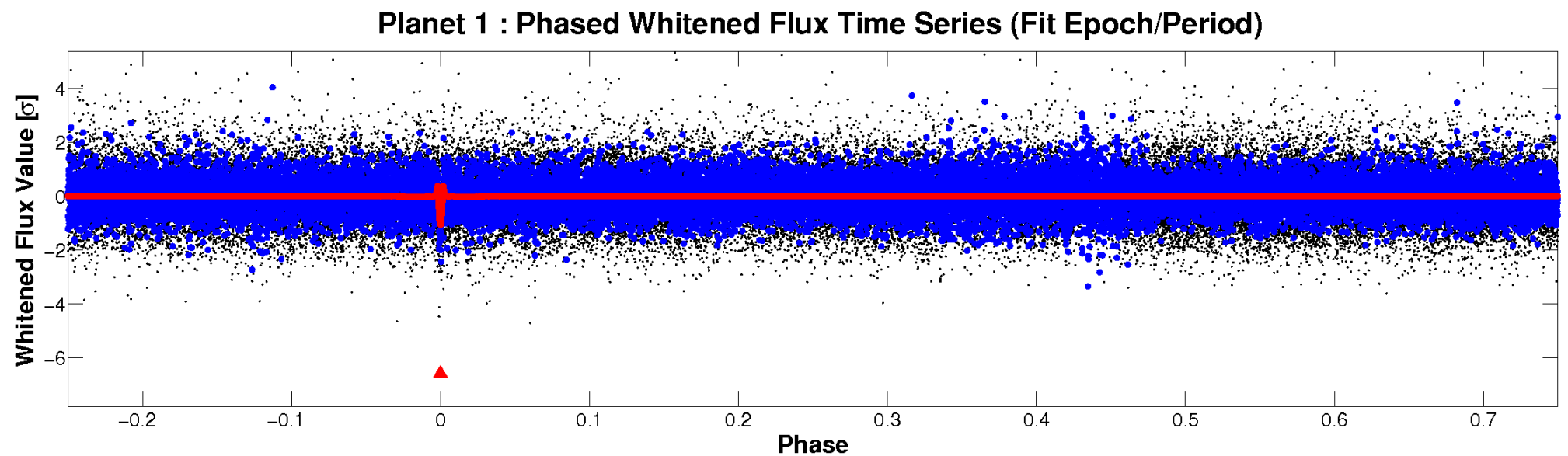
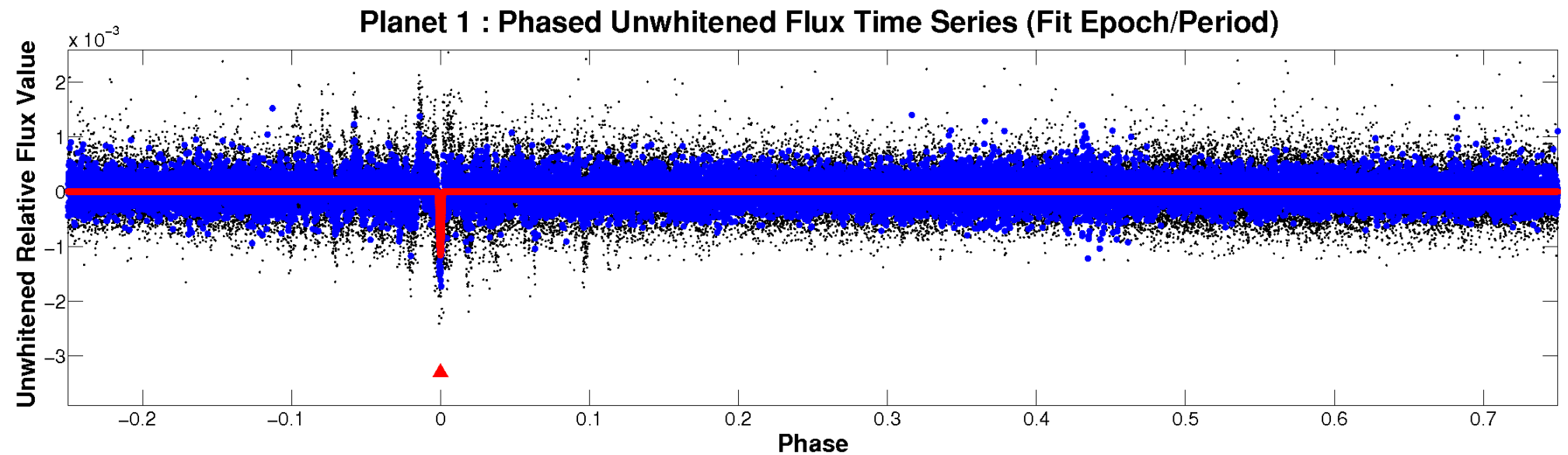


ALT Odd/Even

TCE 008879351-01

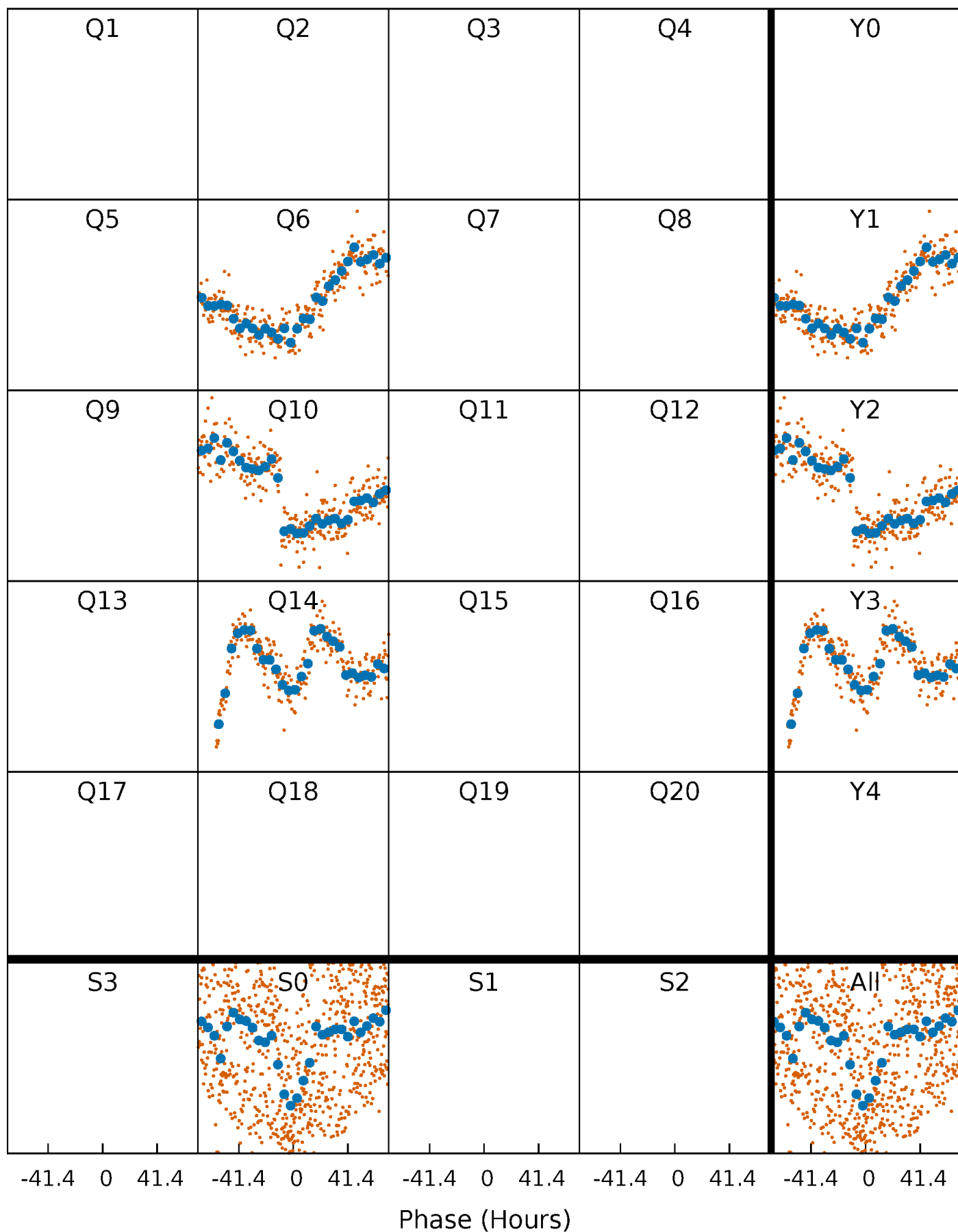


Non-Whitened Vs. Whitened Light Curve



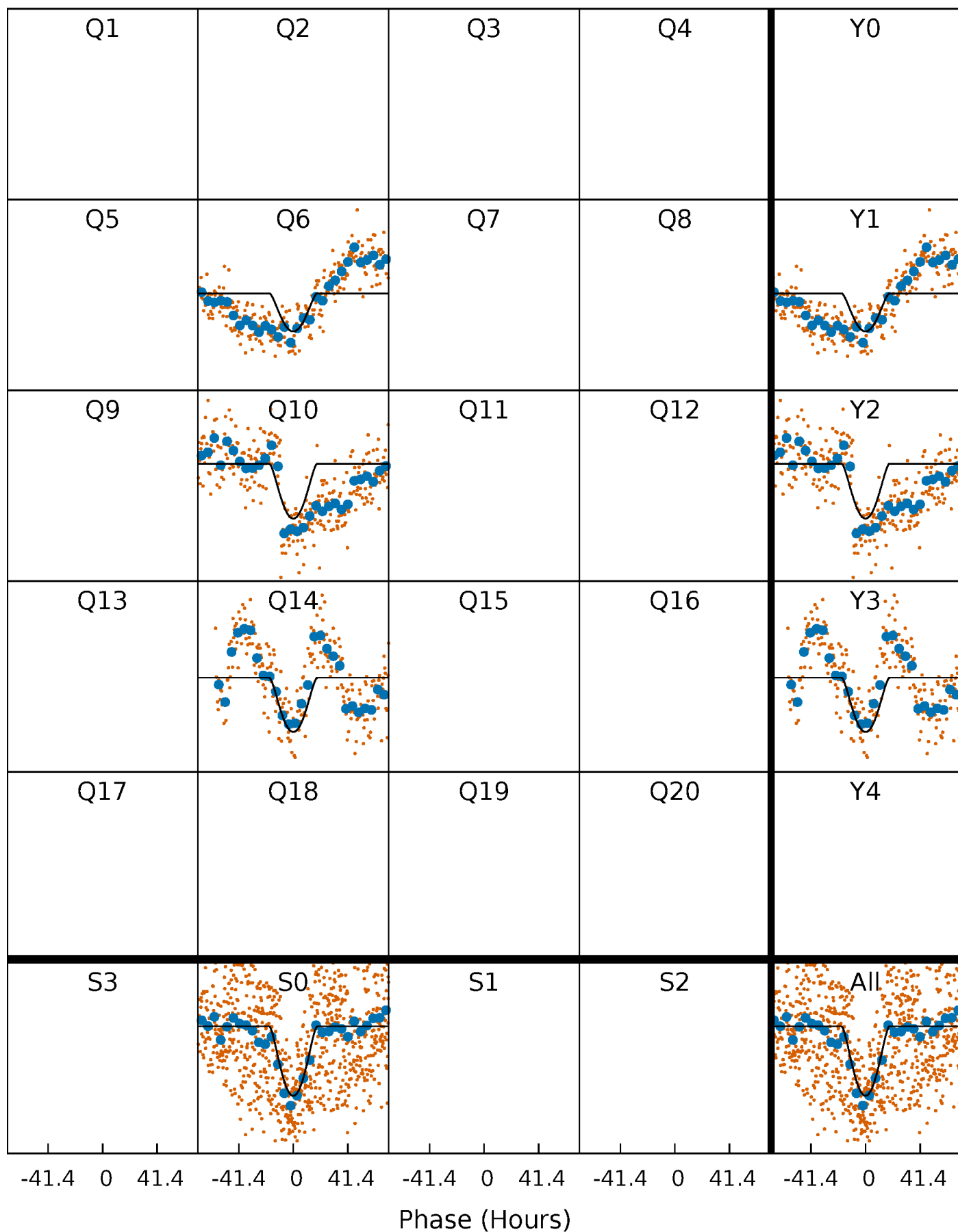
PDC Quarter-Phased Transit Curves

TCE 008879351-01 P=391.369648 Days $T_0=165.547868$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008879351-01 P=391.369648 Days $T_0=165.547868$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

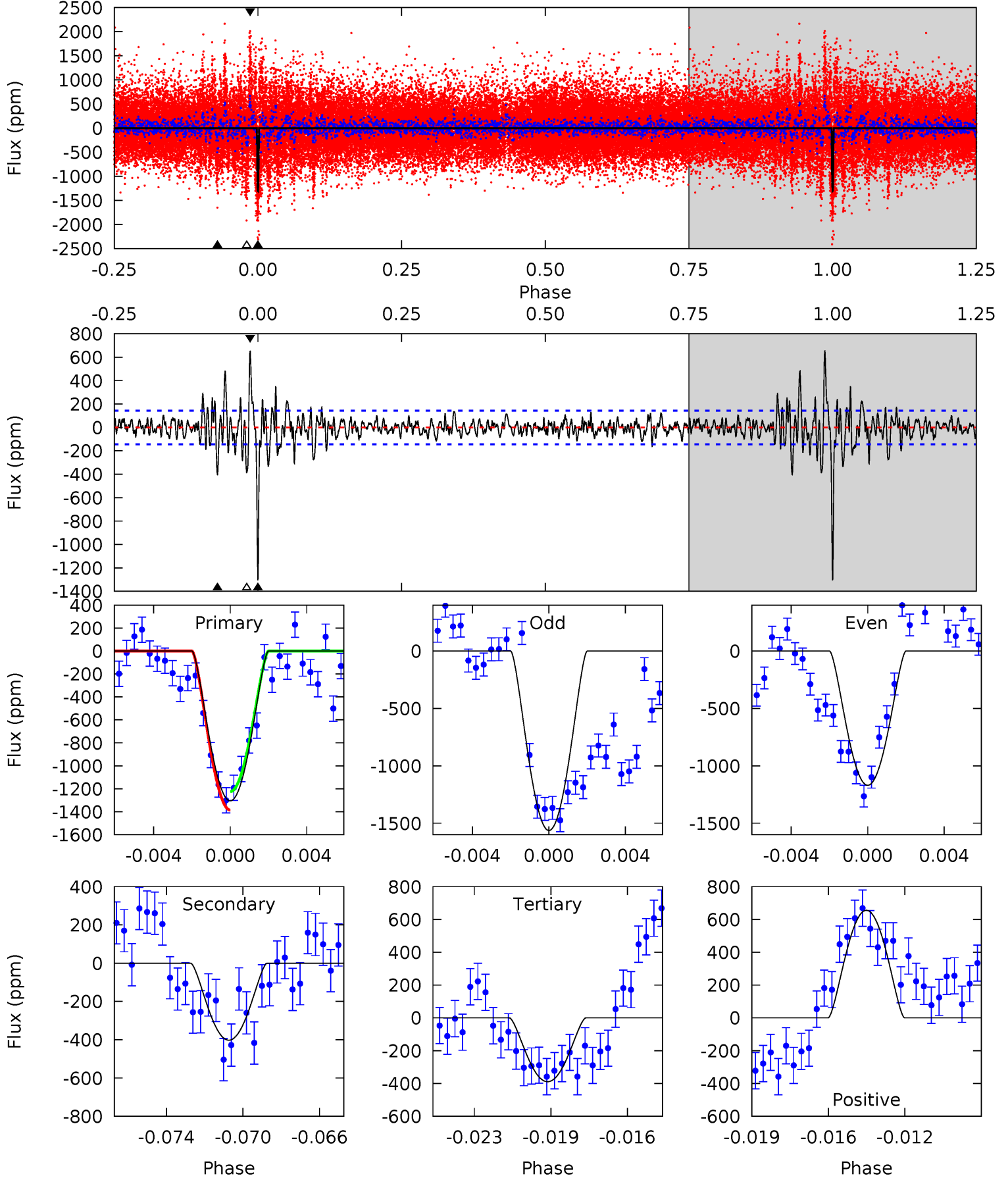
TCE 008879351-01 P=391.466142 Days $T_0=165.282219$ (BKJD)



DV Model-Shift Uniqueness Test

008879351-01, P = 391.369648 Days, E = 165.547868 Days

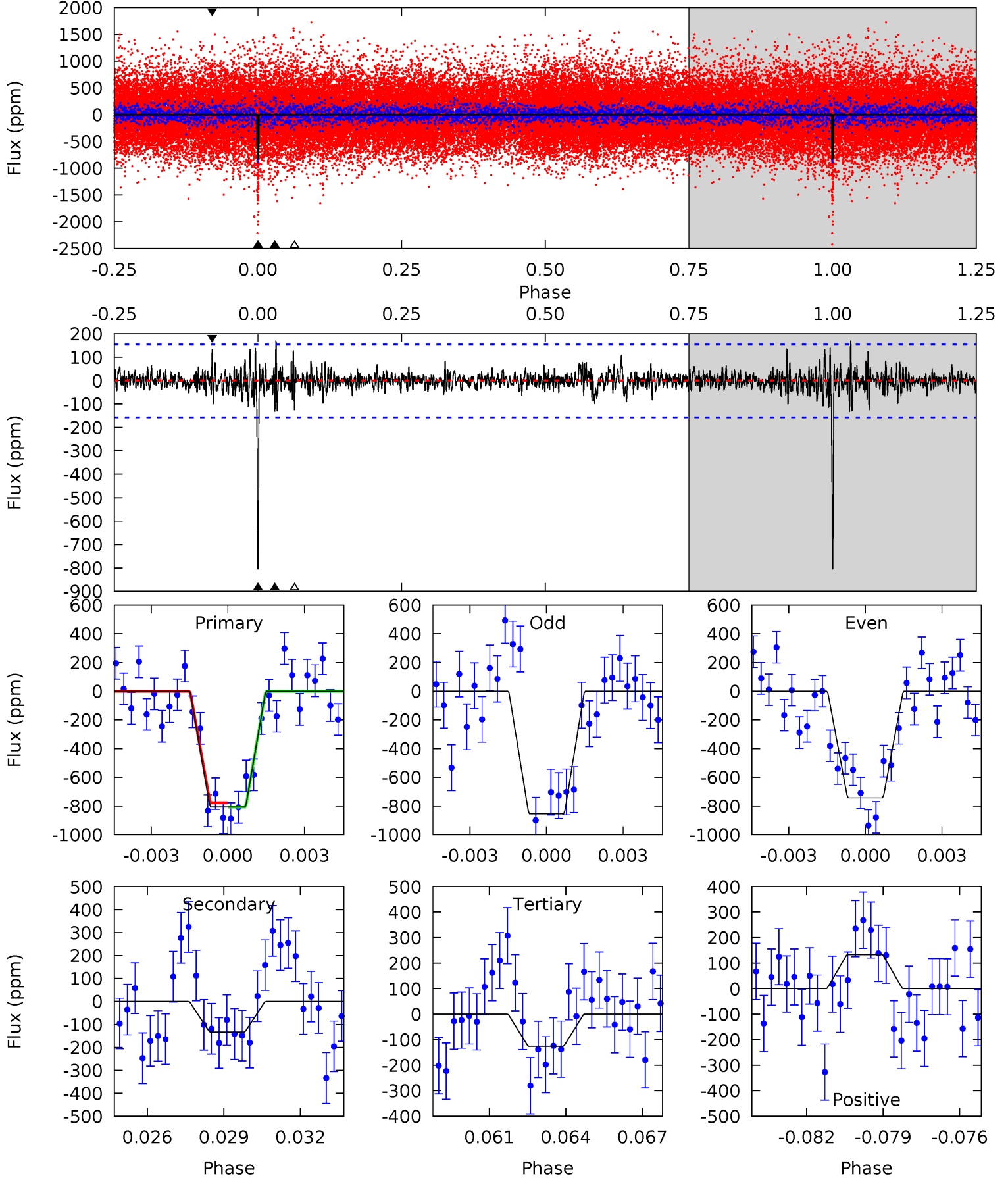
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	14.6	14.1	23.7	5.21	2.89	3.21	33.2	23.5	0.48	-9.17	6.75	0.91	0.33	2.91



Alt Model-Shift Uniqueness Test

008879351-01, $P = 391.466142$ Days, $E = 165.282219$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	4.44	4.22	4.50	5.26	2.98	0.98	22.8	22.6	0.22	-0.06	1.77	0.93	0.17	0.49



Stellar Parameters For KIC 008879351

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5136^{+179}_{-179}	$4.605^{+0.033}_{-0.088}$	$-0.060^{+0.300}_{-0.300}$	$0.753^{+0.105}_{-0.065}$	$0.841^{+0.065}_{-0.098}$	$2.774^{+0.415}_{-0.772}$
	+3%/-3%	+1%/-2%	+500%/-500%	+14%/-9%	+8%/-12%	+15%/-28%
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 008879351-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-402 ± 28	$8.82^{+7.23}_{-5.94}$	280^{+12}_{-11}	2935^{+1231}_{-450}	2755^{+23779}_{-1942}
Alt.	-132 ± 30	$7.20^{+7.18}_{-4.76}$	281^{+13}_{-12}	2653^{+971}_{-420}	1308^{+10713}_{-989}

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

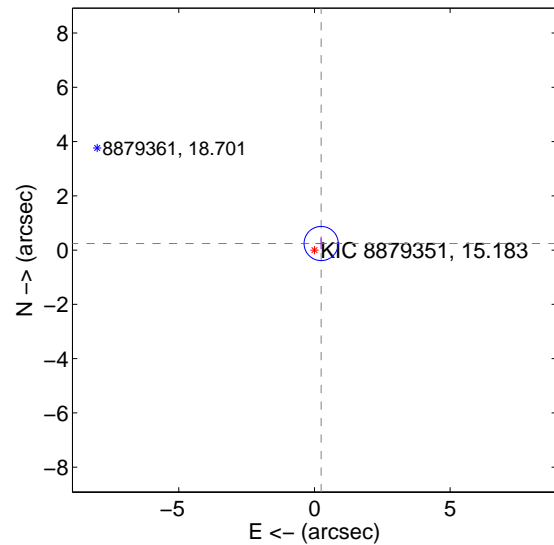
Supplemental centroid analysis for 008879351-01. Kepler magnitude: 15.18. Transit SNR 9.88

There are 1 quarters with good PRF difference image offsets

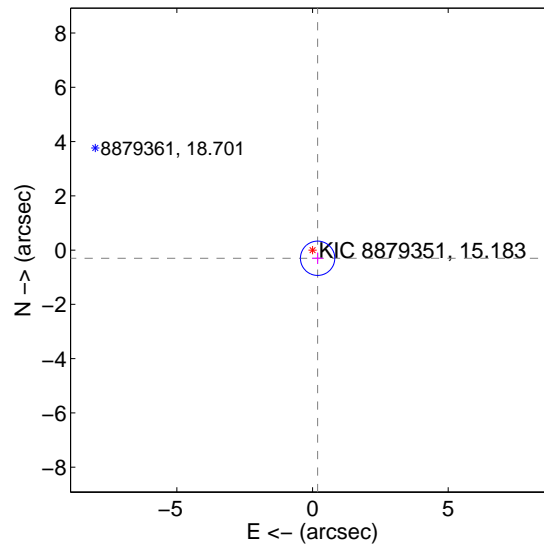
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.347 ± 0.210	1.65	-0.248 ± 0.208	0.243 ± 0.212
PRF-fit source offset from KIC position	0.354 ± 0.211	1.68	-0.187 ± 0.208	-0.301 ± 0.212
photometric centroid source offset	1.92 ± 1.84	1.04	-1.01 ± 1.82	-1.63 ± 1.85

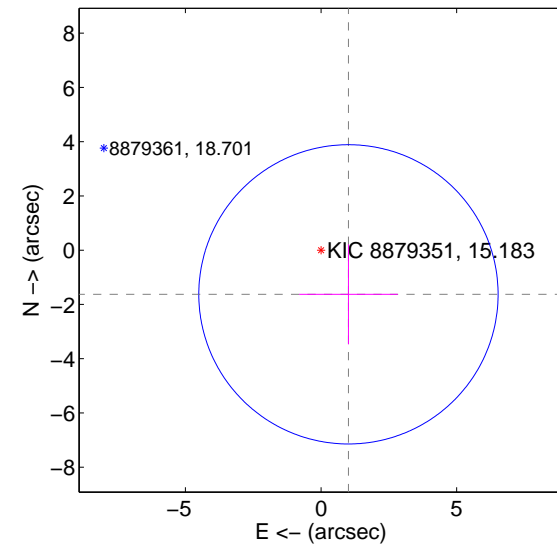
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

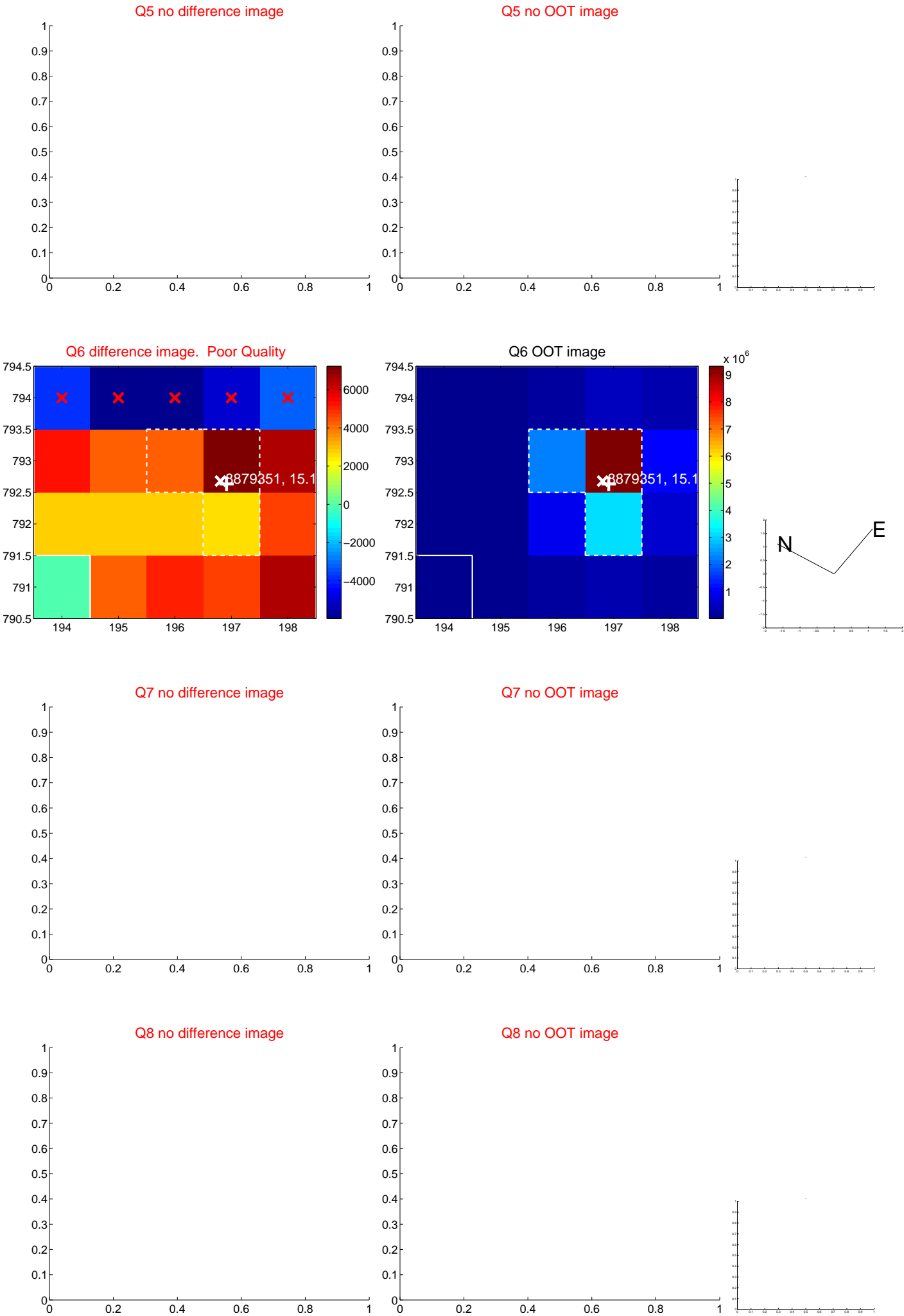


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

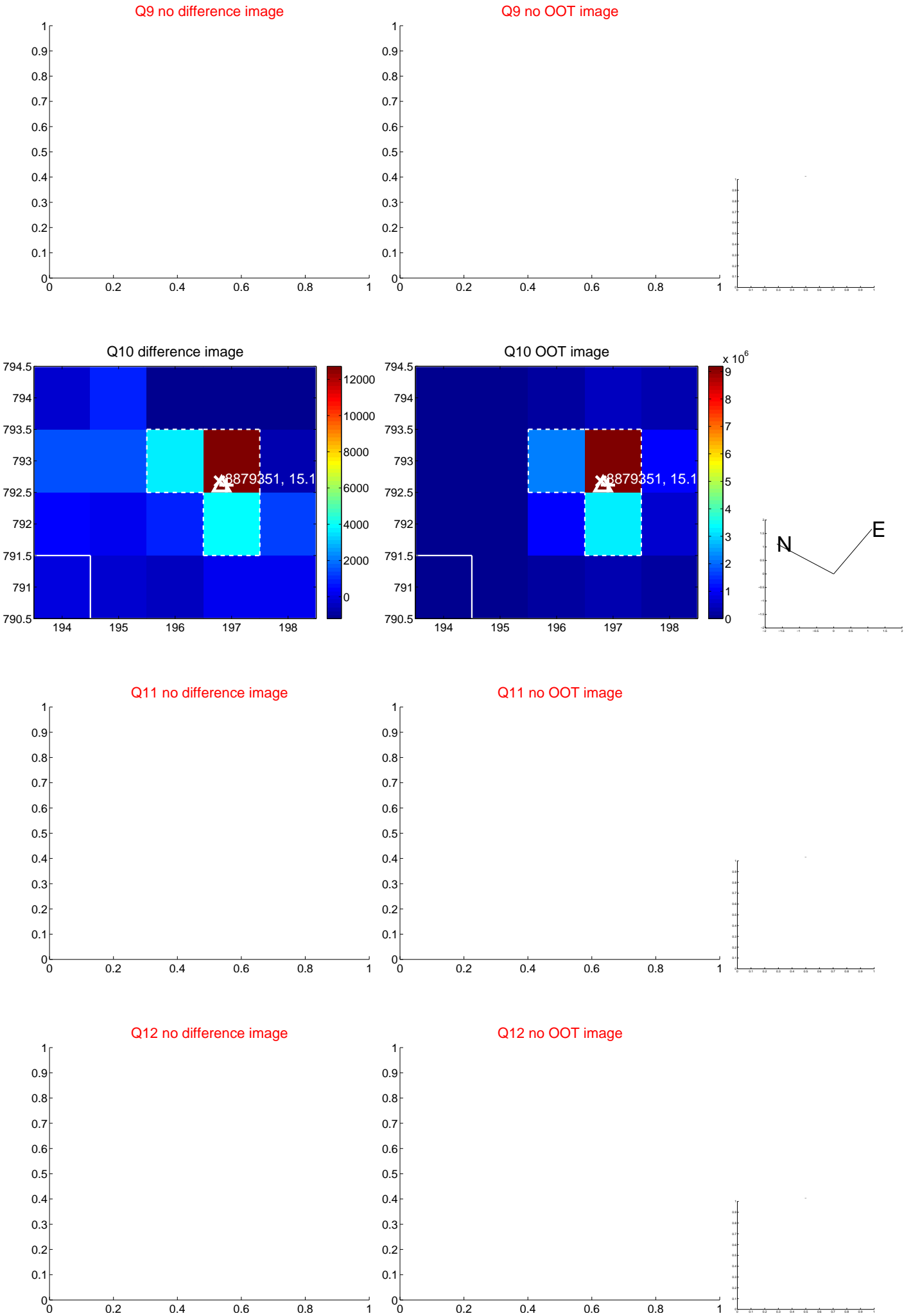
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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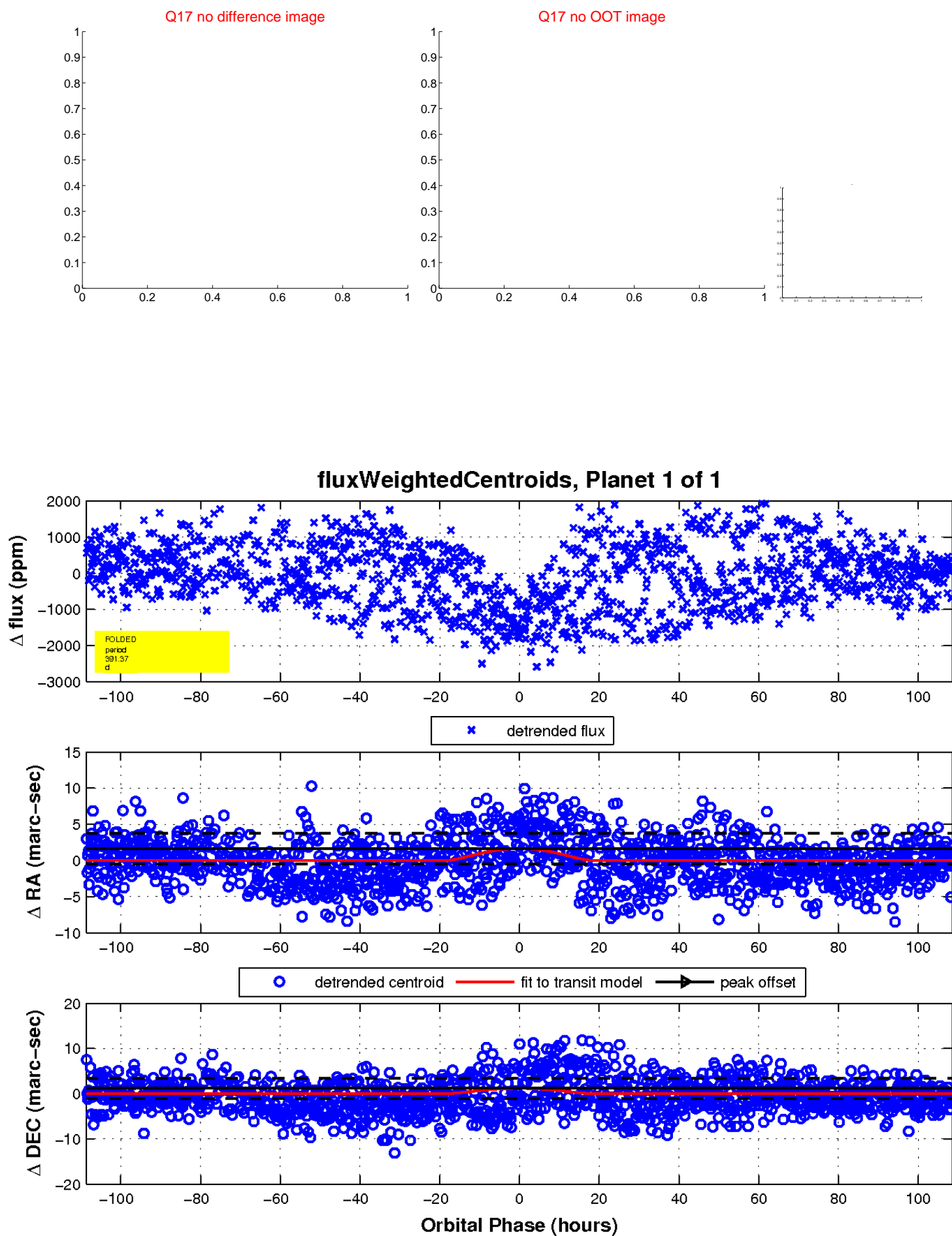
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This astronomical image shows a field of stars against a dark, noisy background. A blue grid is overlaid on the image. Green text labels provide coordinates for the grid lines. The labels are arranged in two rows: the top row shows '03.0', '02.0', '01.0', '19:18:00.0', '00.0', '17:58', and the bottom row shows '09:40.0', '50.0', '45.10:00.0', '10.0', '30.0'. The central star is the brightest and most prominent.

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