

KIC 009282853

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})
009282853-01	OBS	5651.01	83.502366	163.500276	475.6	15.828	11.9	12.4	0.77	5141	1.94	3.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009282853-01	OBS	PC	0.64	0	0	0	0	NO_COMMENT

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 009282853-01

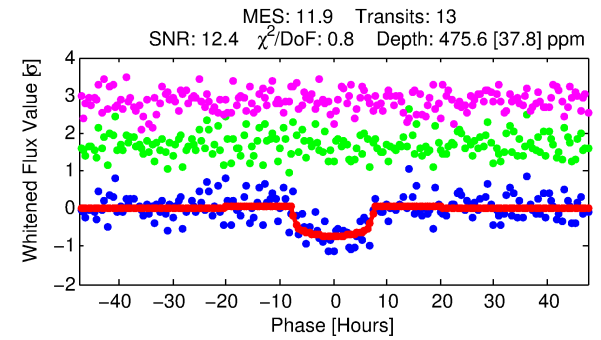
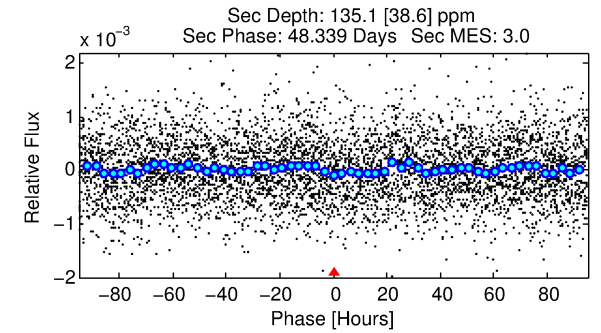
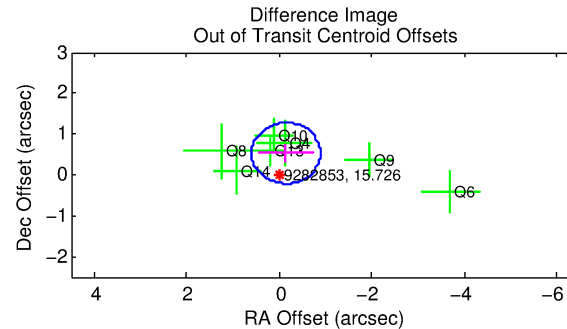
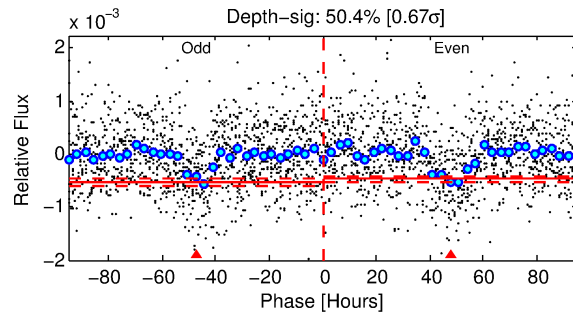
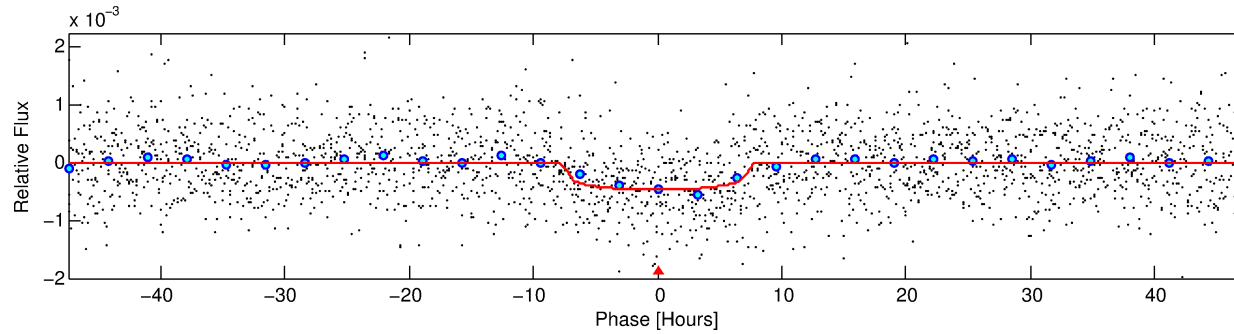
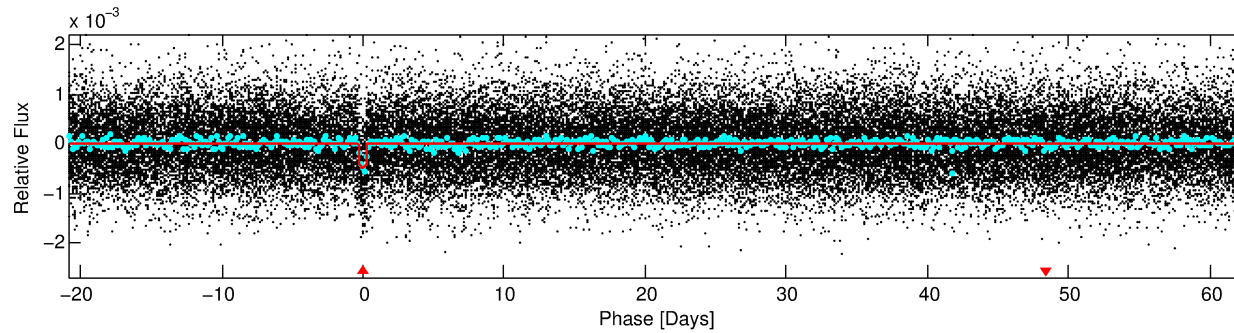
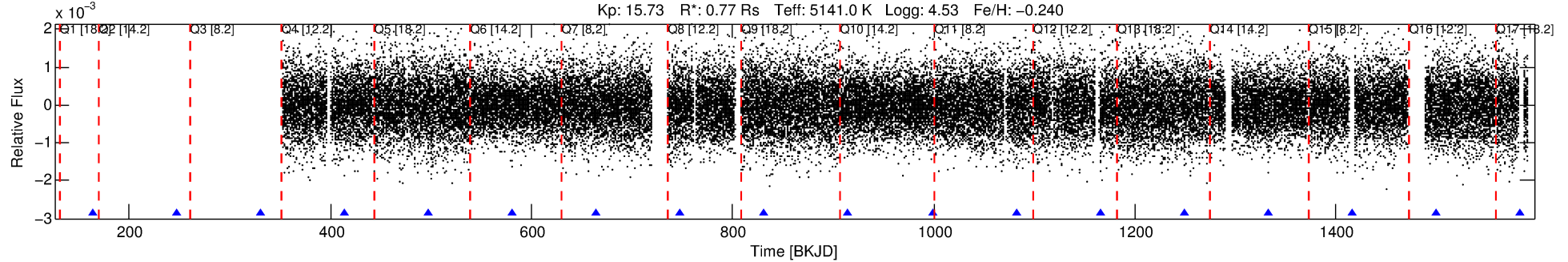
No Significant Match Found

DV One-Page Summary

KIC: 9282853 Candidate: 1 of 1 Period: 83.502 d

KOI: K05651.01 Corr: 0.955

Kp: 15.73 R*: 0.77 Rs Teff: 5141.0 K Logg: 4.53 Fe/H: -0.240



DV Fit Results:

Period = 83.50237 [0.00284] d
Epoch = 163.5003 [0.0279] BKJD
Rp/R* = 0.0229 [0.0036]
a/R* = 23.33 [13.91]
b = 0.84 [0.21]
Seff = 3.29 [0.70]
Teq = 344 [18] K
Rp = 1.94 [0.37] Re
a = 0.3370 [0.0332] AU
Ag = 2251.87 [1010.54] [2.23σ]
Teffp = 3659 [412] K [8.04σ]

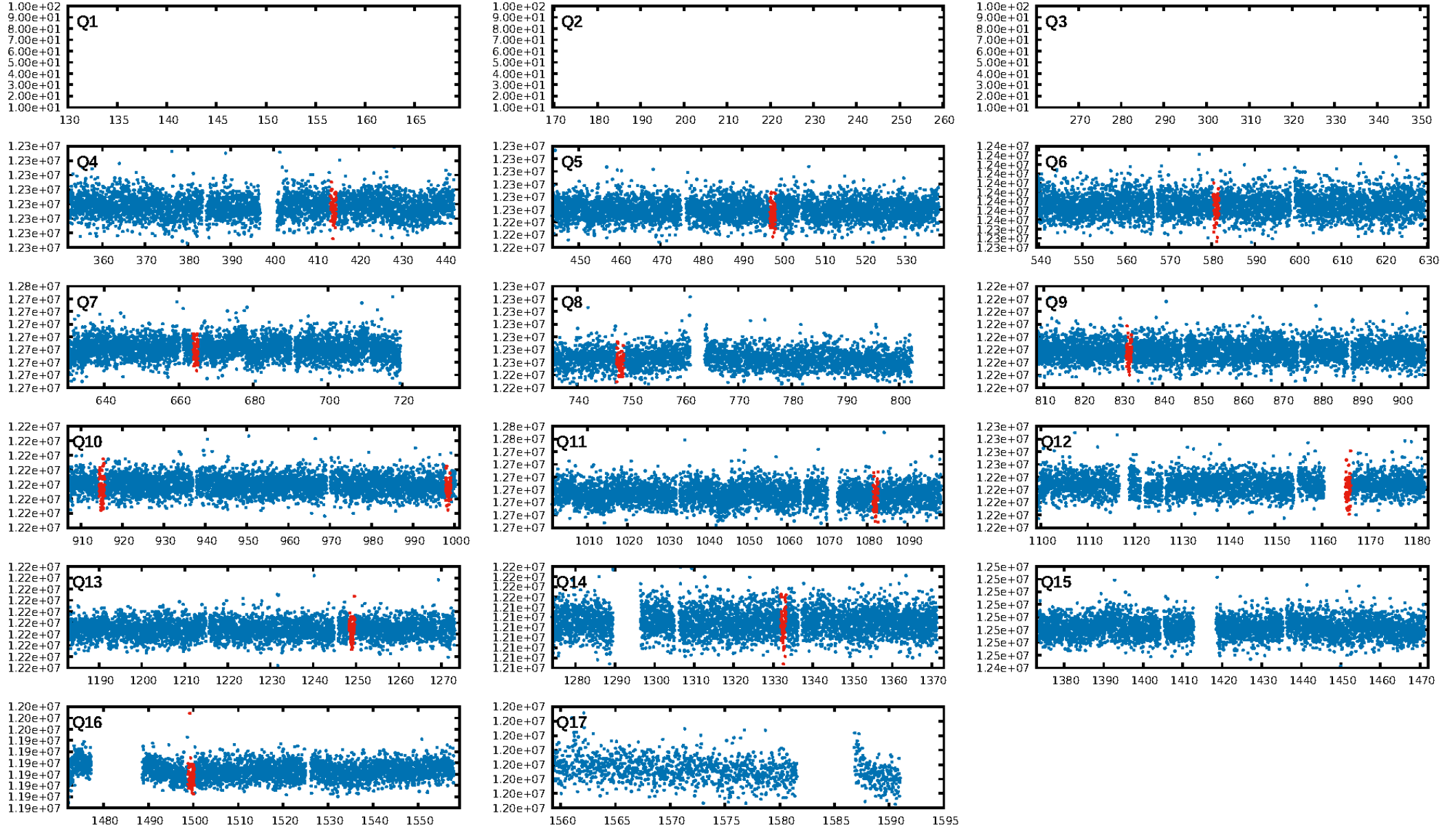
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.33e-30
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 3.229
Centroid-sig: 5.4%
Centroid-so: 1.590 arcsec [1.99σ]
OotOffset-rm: 0.549 arcsec [2.21σ]
KicOffset-rm: 0.499 arcsec [1.27σ]
OotOffset-st: 3/0/2/2 [7]
KicOffset-st: 3/0/2/2 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [9/9]

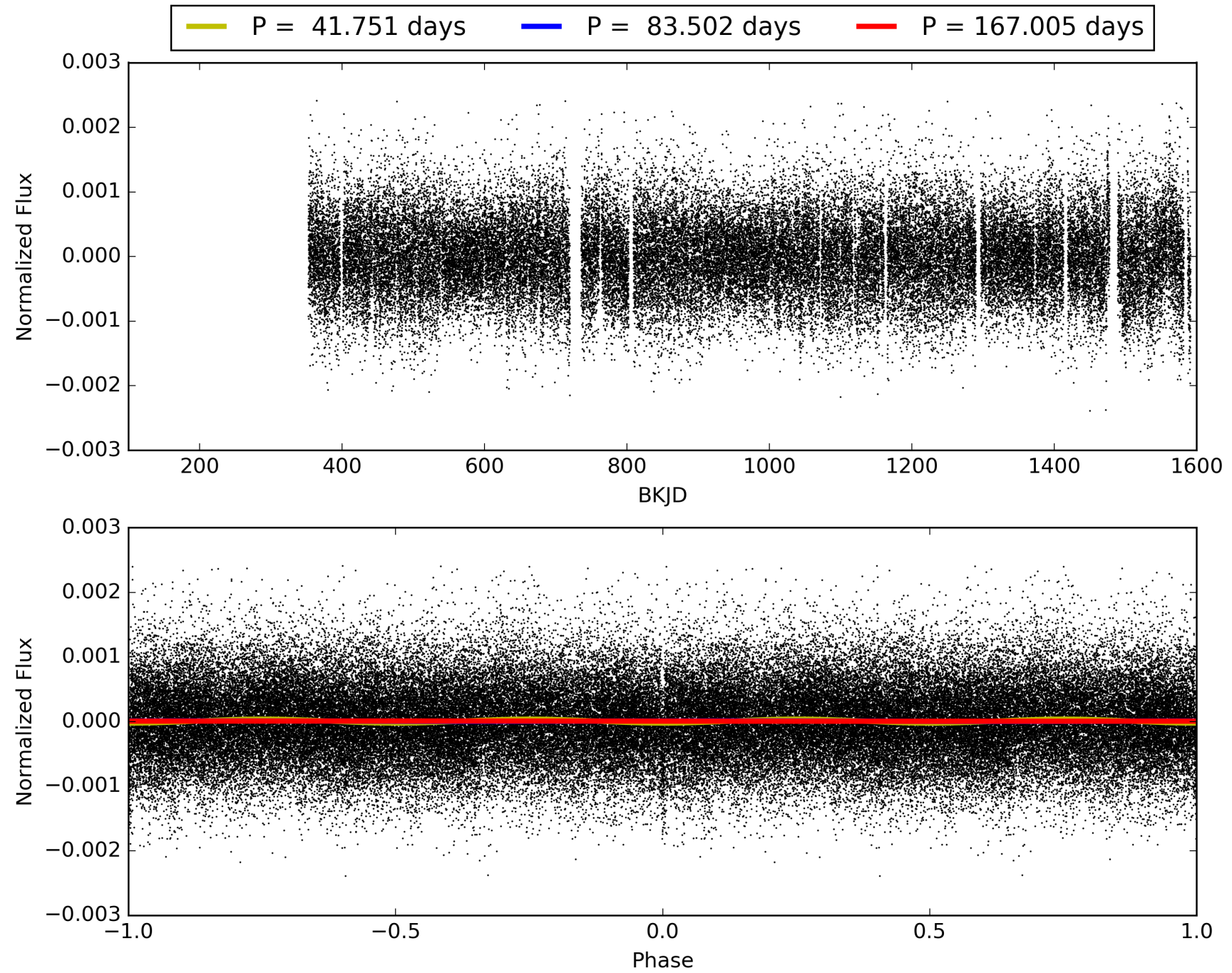
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:34:16 Z

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

TCE 009282853-01, PDC Light Curves

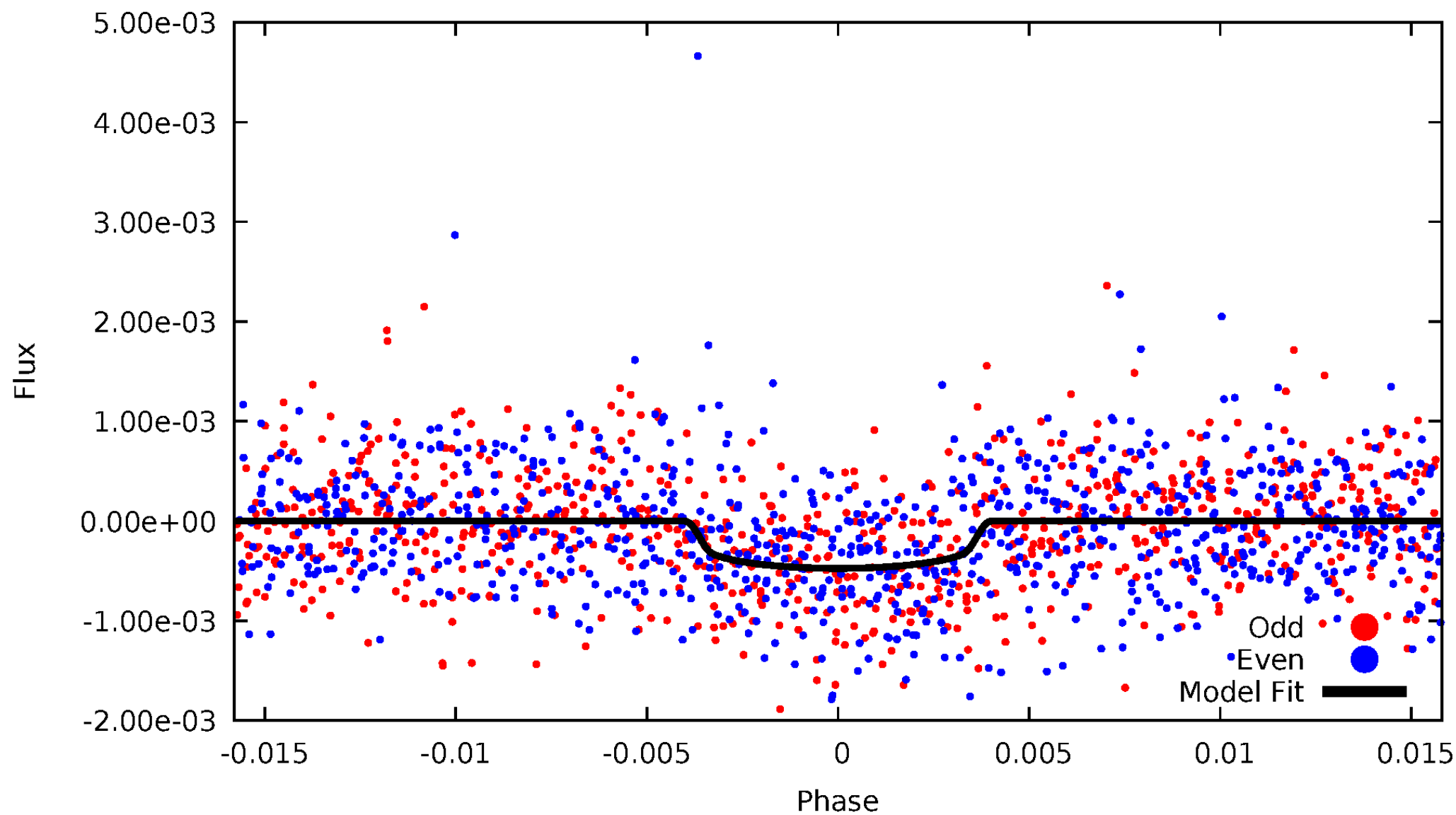


TCE 009282853-01



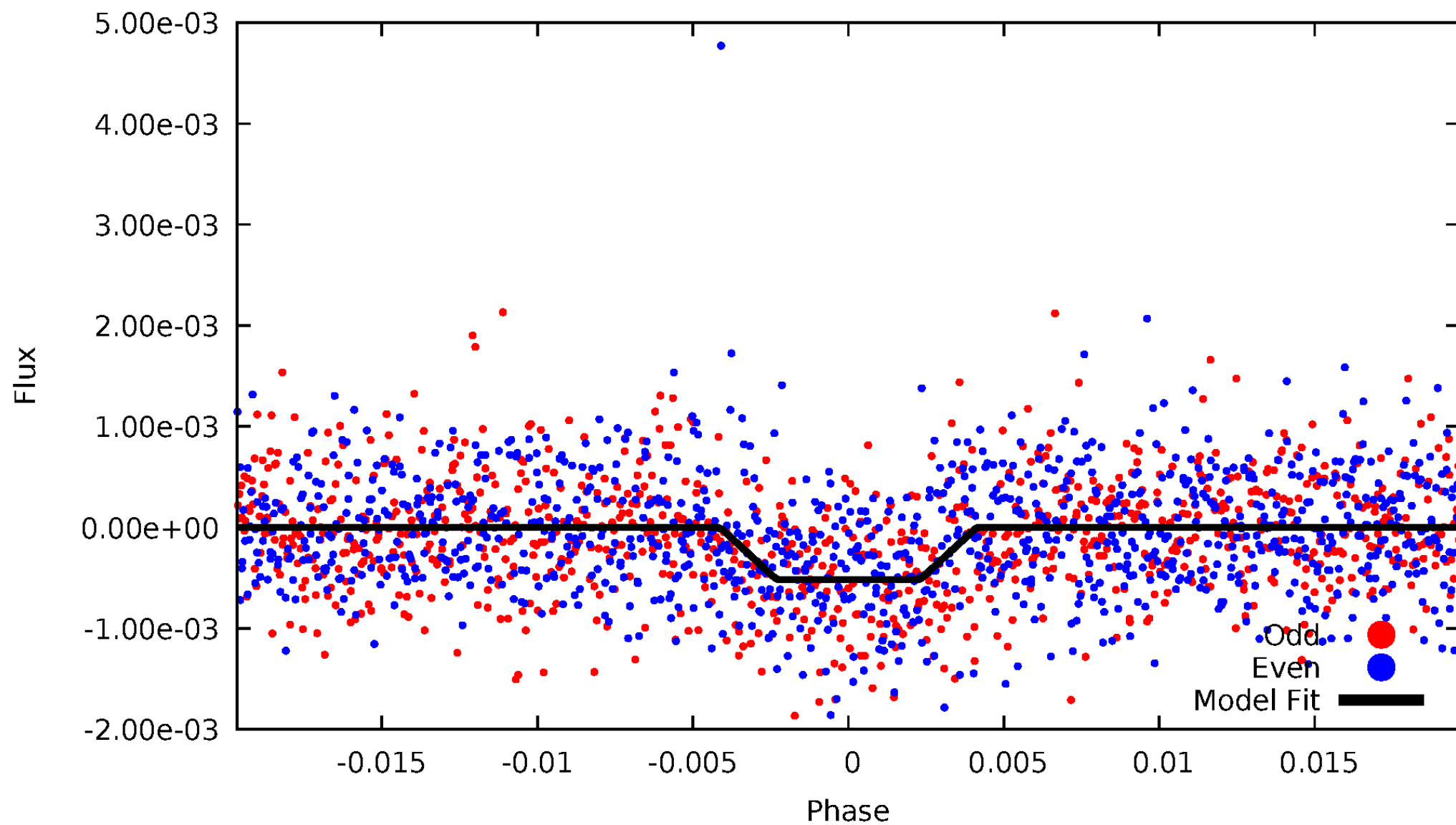
DV Odd/Even

TCE 009282853-01

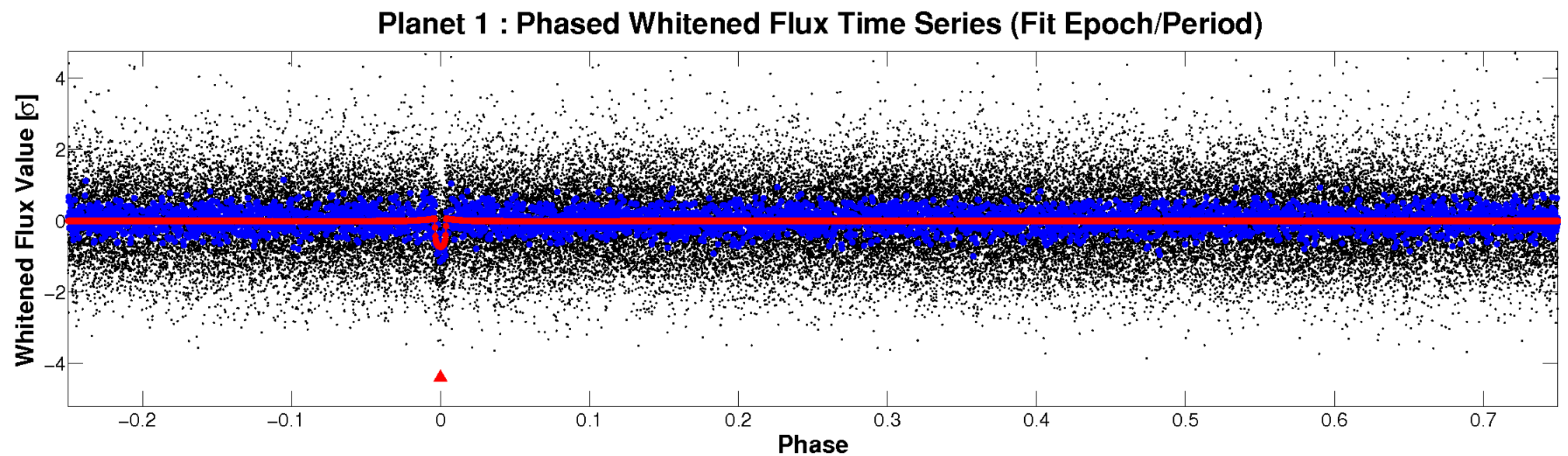
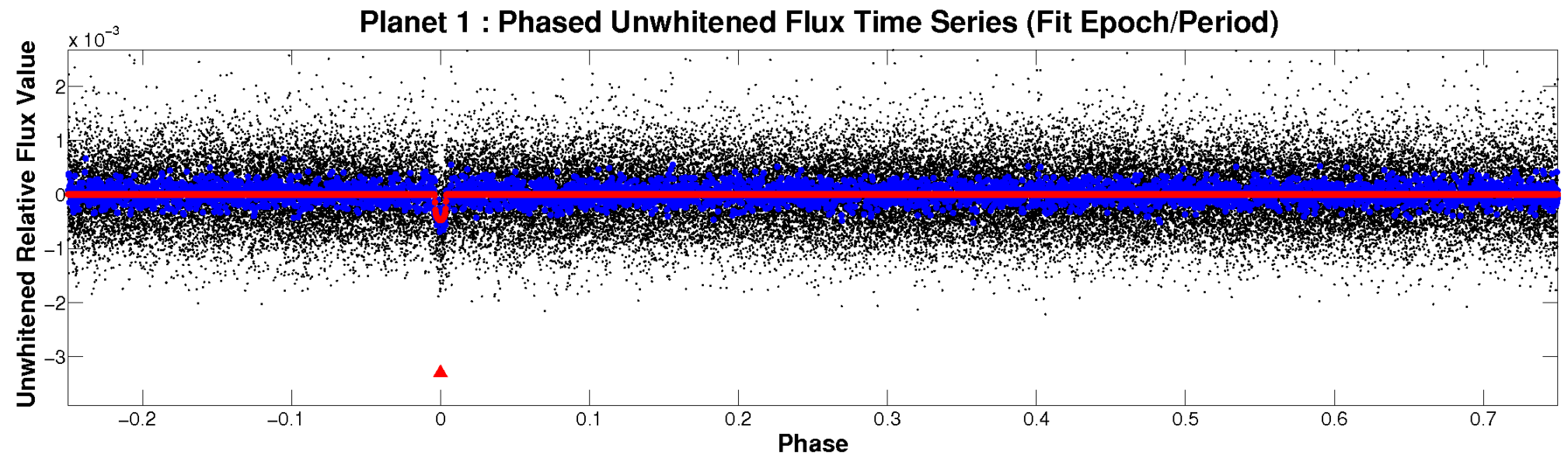


ALT Odd/Even

TCE 009282853-01

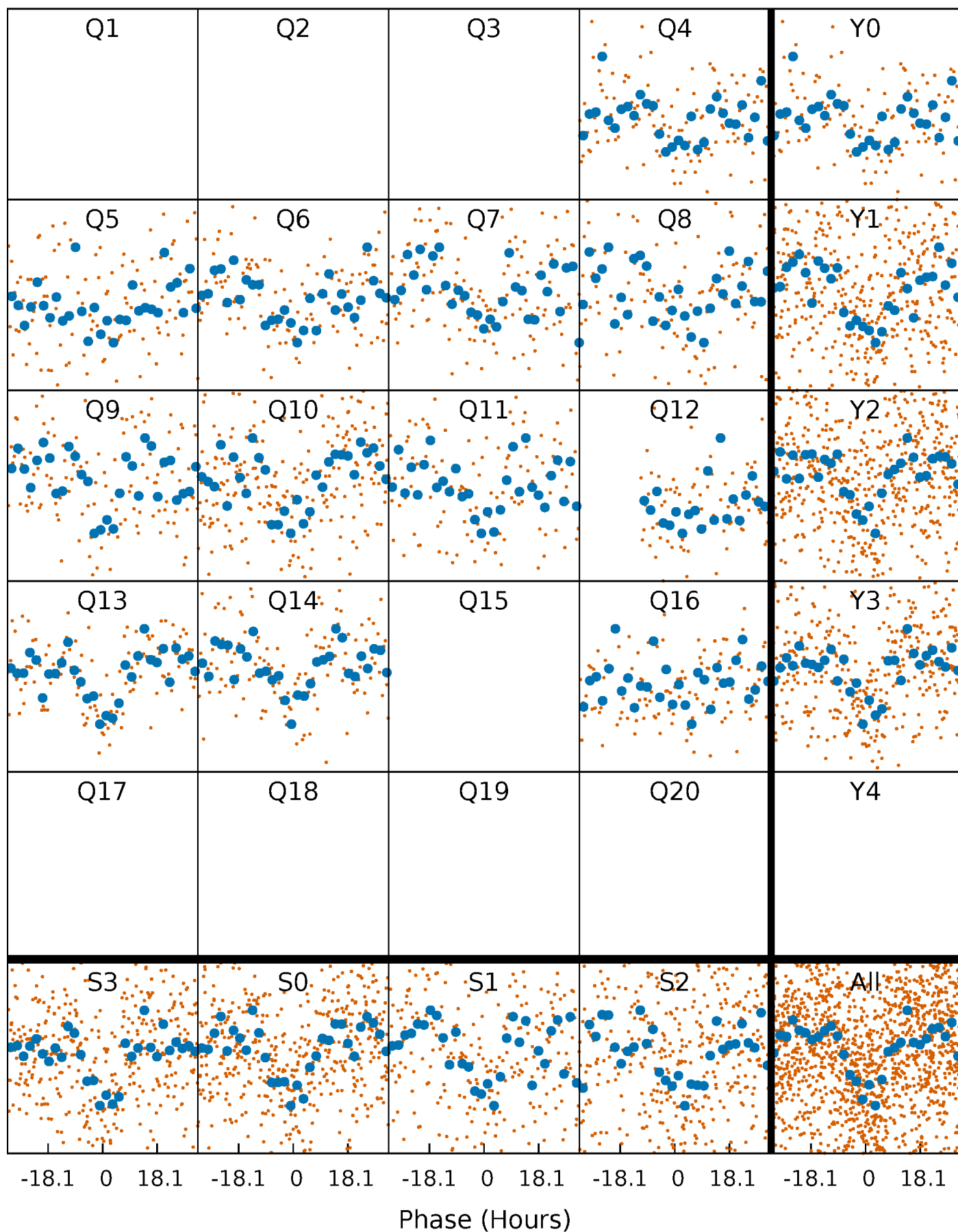


Non-Whitened Vs. Whitened Light Curve



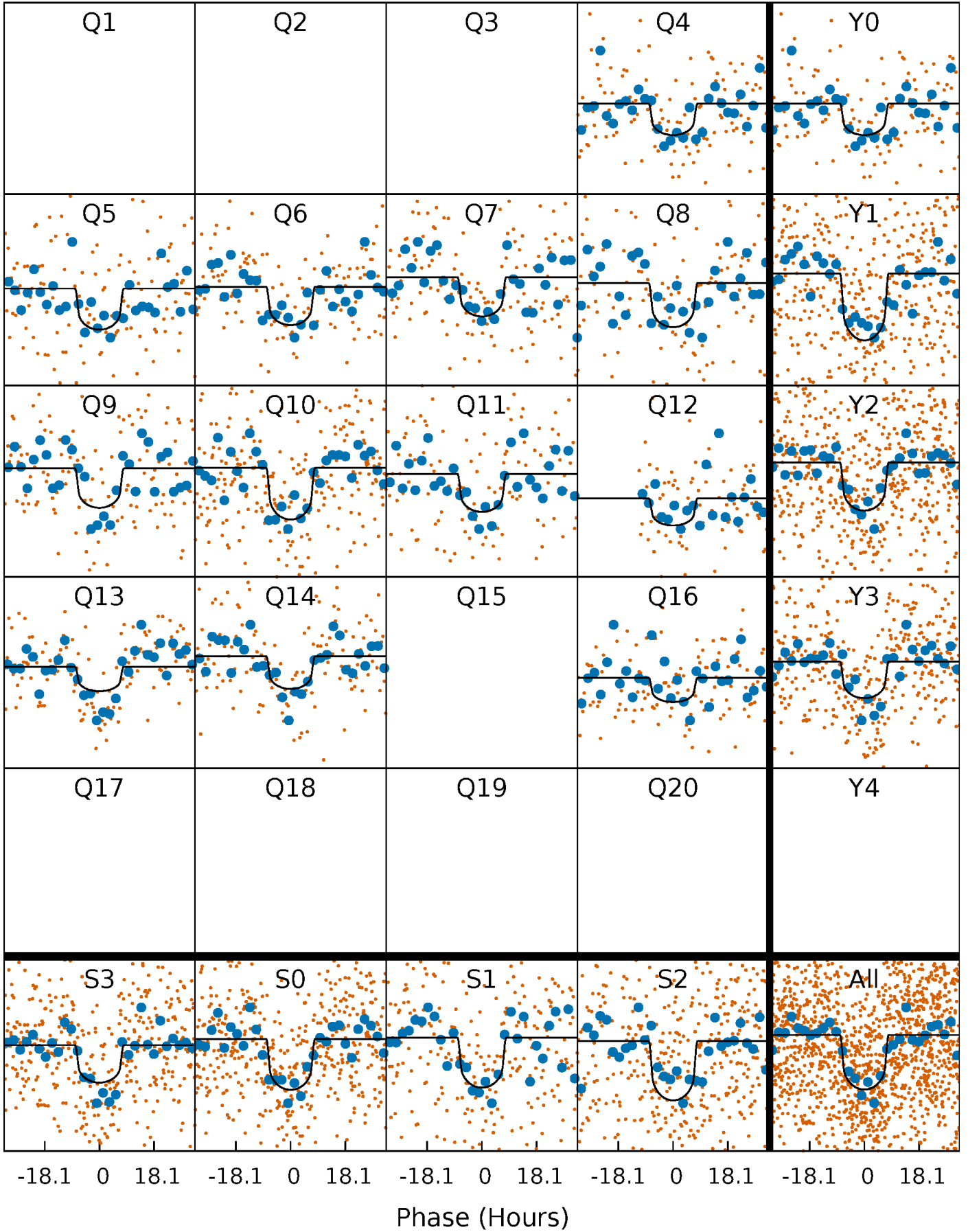
PDC Quarter-Phased Transit Curves

TCE 009282853-01 P= 83.502366 Days $T_0=163.500276$ (BKJD)



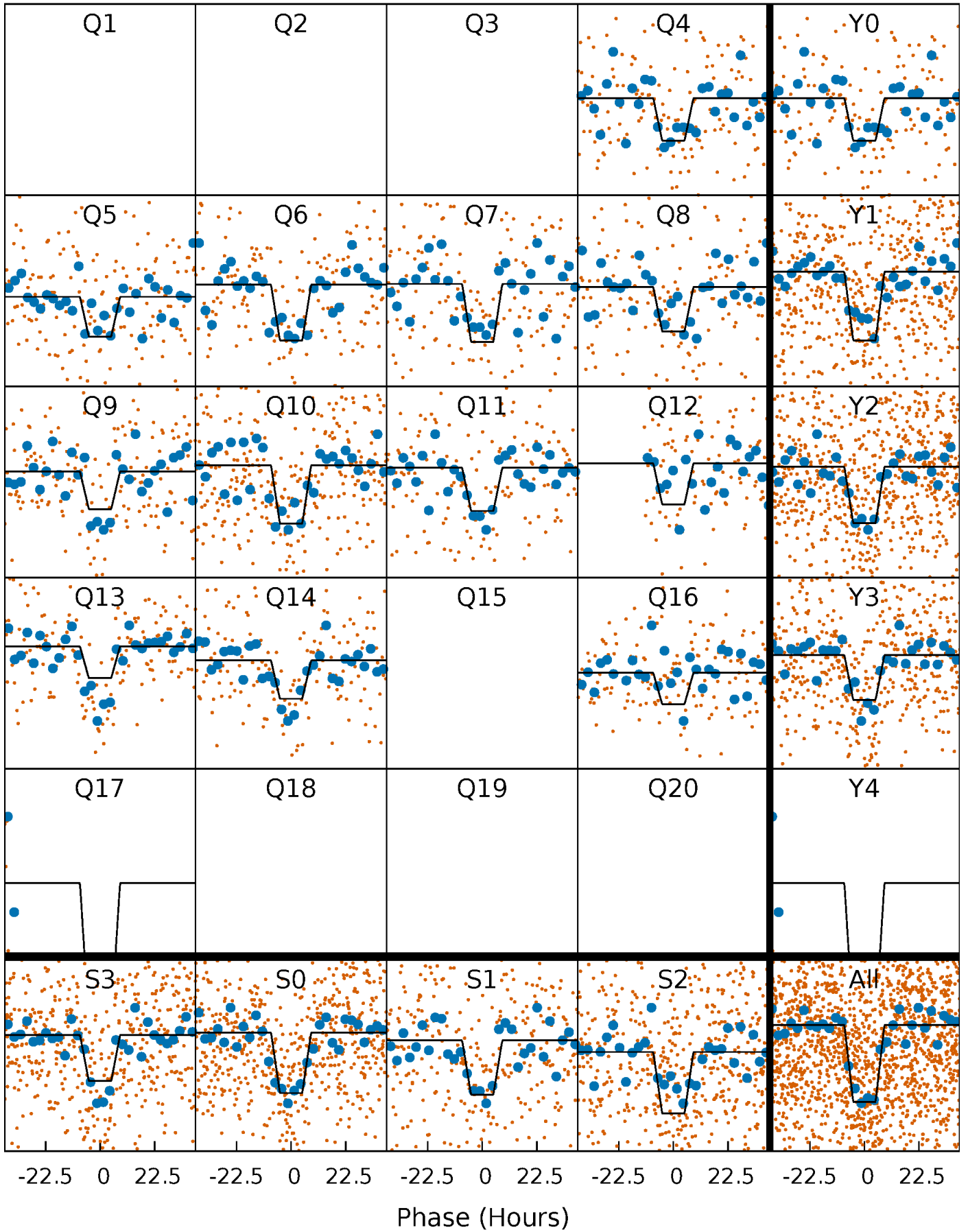
DV Quarter-Phased Transit Curves

TCE 009282853-01 P= 83.502366 Days $T_0=163.500276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

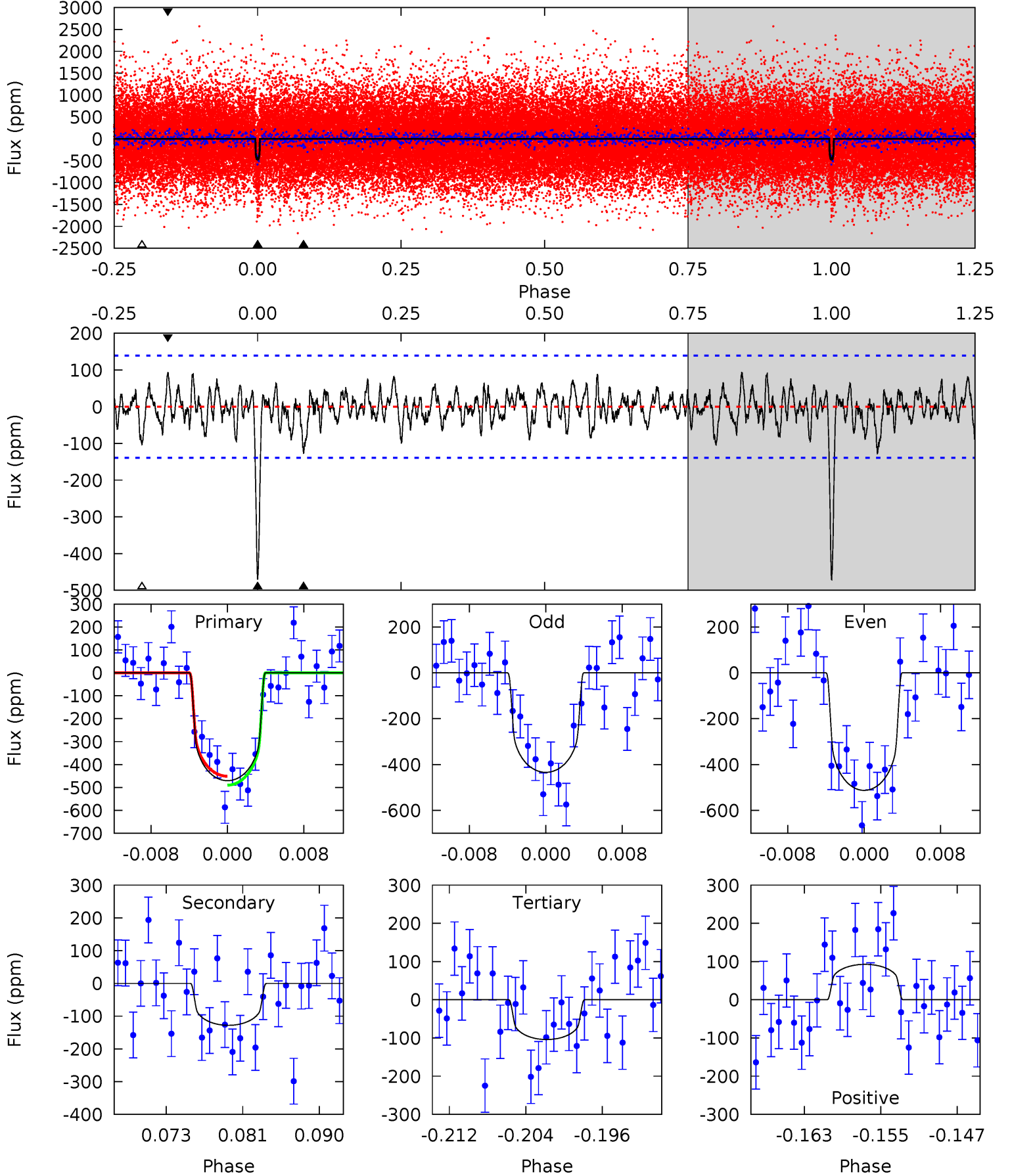
TCE 009282853-01 P= 83.503751 Days $T_0=163.514118$ (BKJD)



DV Model-Shift Uniqueness Test

009282853-01, P = 83.502366 Days, E = 163.500276 Days

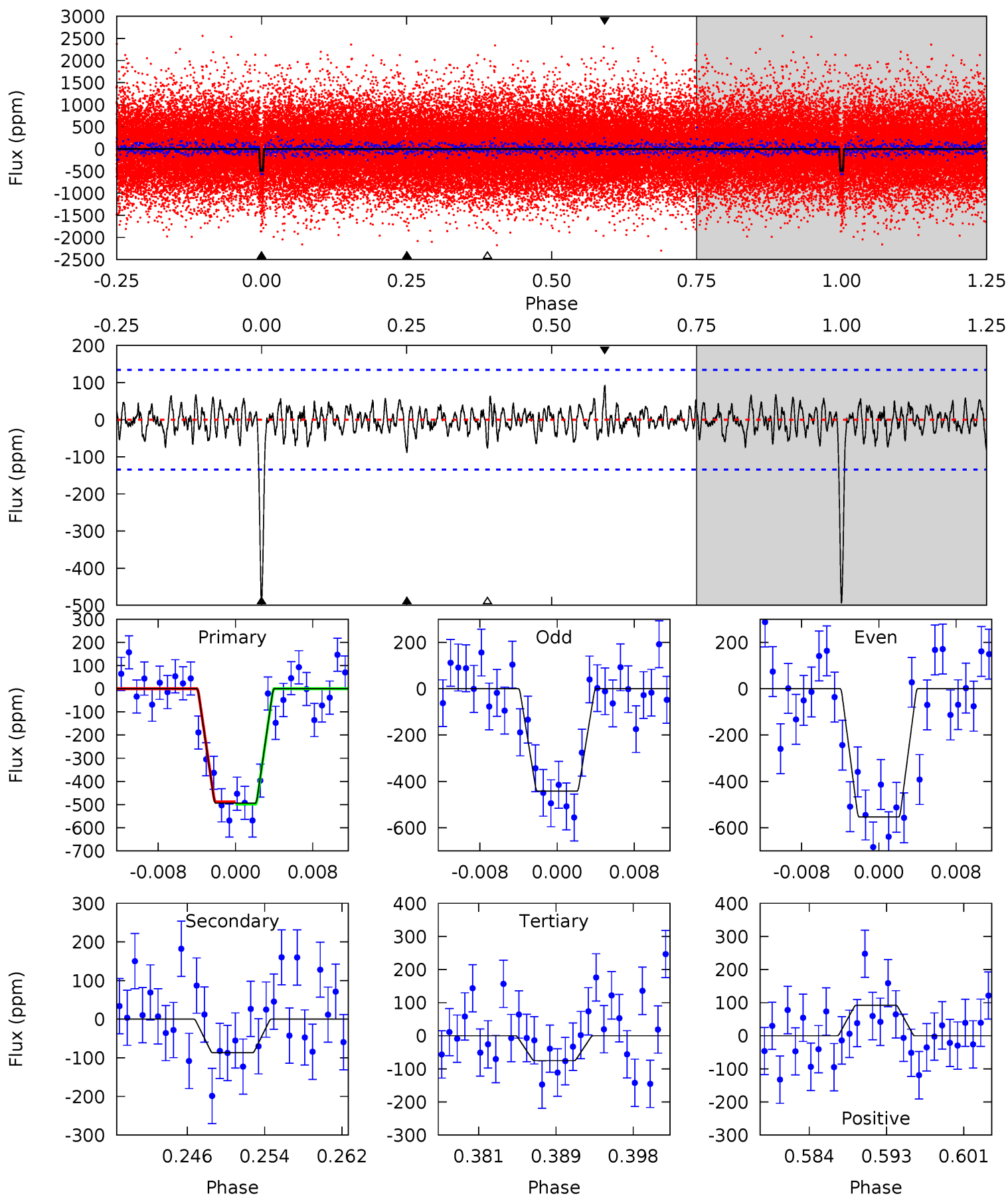
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	4.66	3.79	3.37	5.07	2.65	1.25	13.3	13.8	0.87	1.29	1.43	1.07	0.16	0.71



Alt Model-Shift Uniqueness Test

009282853-01, P = 83.503751 Days, E = 163.514118 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	3.27	2.83	3.45	5.06	2.63	1.00	15.7	15.1	0.44	-0.18	2.10	1.05	0.16	0.17



Stellar Parameters For KIC 009282853

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5141^{+196}_{-179}	$4.526^{+0.082}_{-0.075}$	$-0.240^{+0.300}_{-0.300}$	$0.773^{+0.088}_{-0.088}$	$0.731^{+0.110}_{-0.051}$	$2.230^{+0.835}_{-0.511}$
	+4%/-3%	+2%/-2%	+125%/-125%	+11%/-11%	+15%/-7%	+37%/-23%
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 009282853-01 / KOI 5651.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 27	$1.95^{+0.35}_{-0.33}$	478^{+23}_{-20}	3905^{+305}_{-282}	2126^{+1048}_{-725}
Alt.	-87 ± 27	$1.92^{+0.36}_{-0.33}$	481^{+23}_{-21}	3686^{+318}_{-285}	1476^{+857}_{-587}

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 $A_{obs} \gg 1.0$

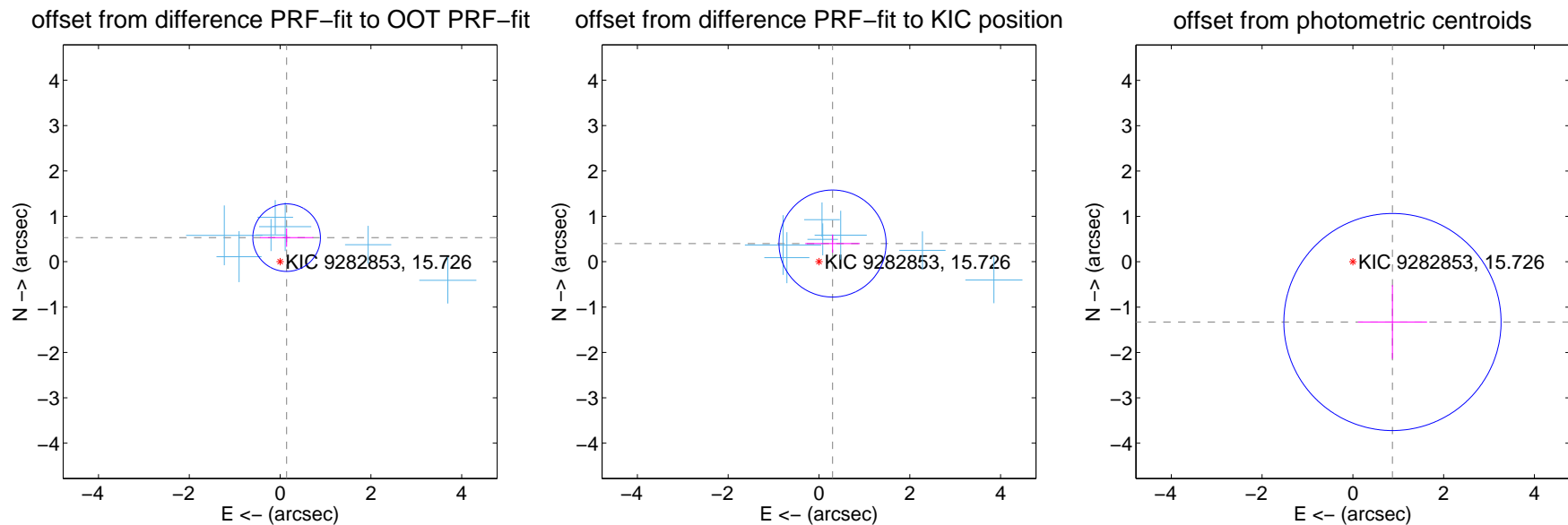
DV Centroid Data

Supplemental centroid analysis for 009282853-01. Kepler magnitude: 15.73. Transit SNR 12.44

There are 7 quarters with good PRF difference image offsets

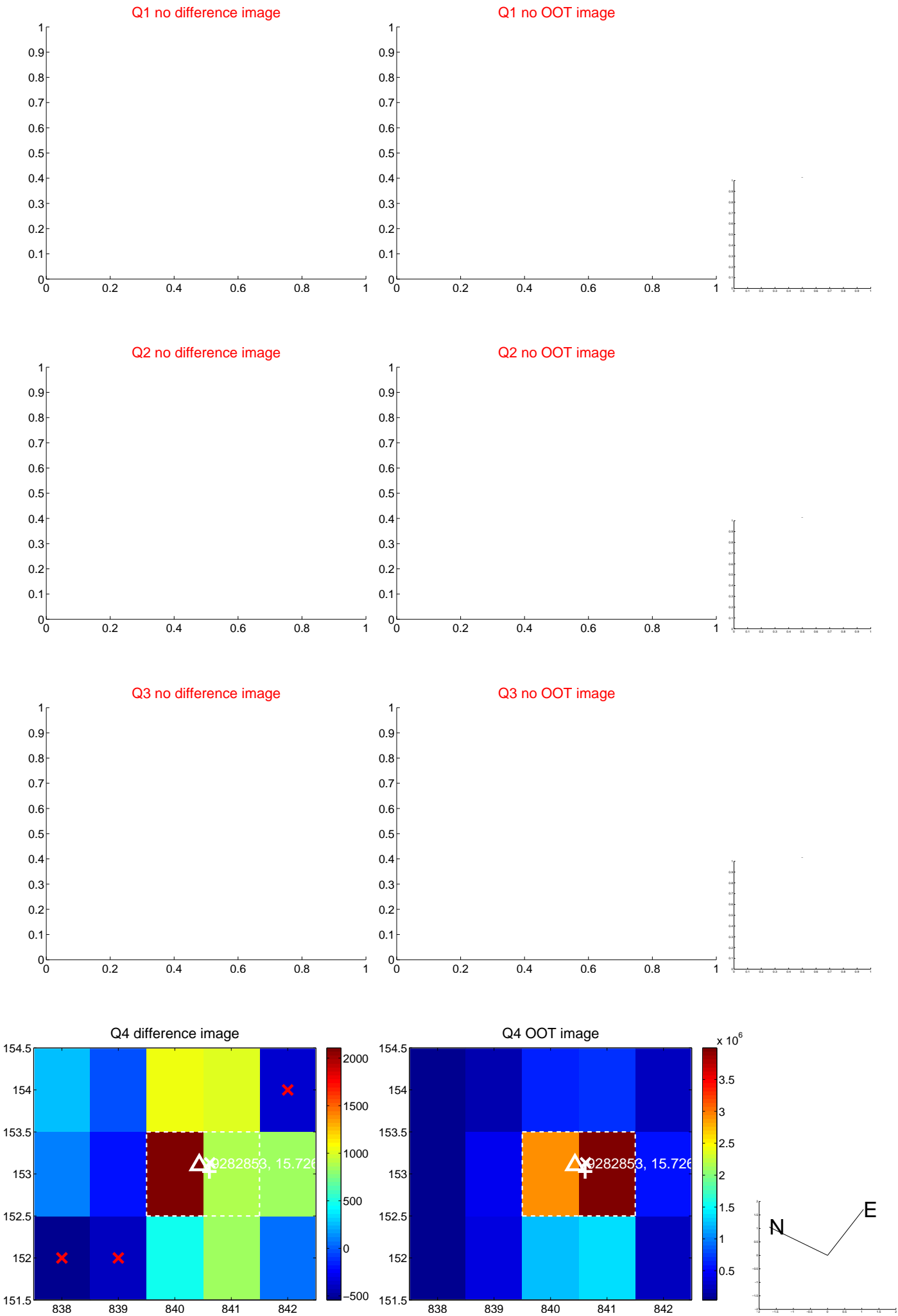
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.549 ± 0.248	2.21	-0.143 ± 0.588	0.530 ± 0.202
PRF-fit source offset from KIC position	0.499 ± 0.393	1.27	-0.299 ± 0.601	0.400 ± 0.200
photometric centroid source offset	1.59 ± 0.80	1.99	-0.87 ± 0.76	-1.33 ± 0.81

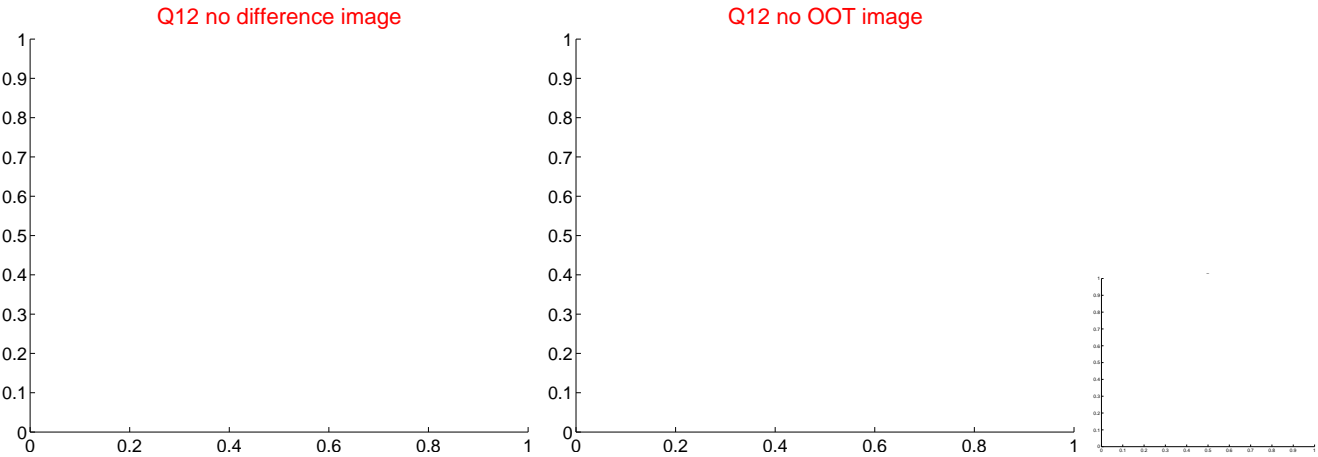
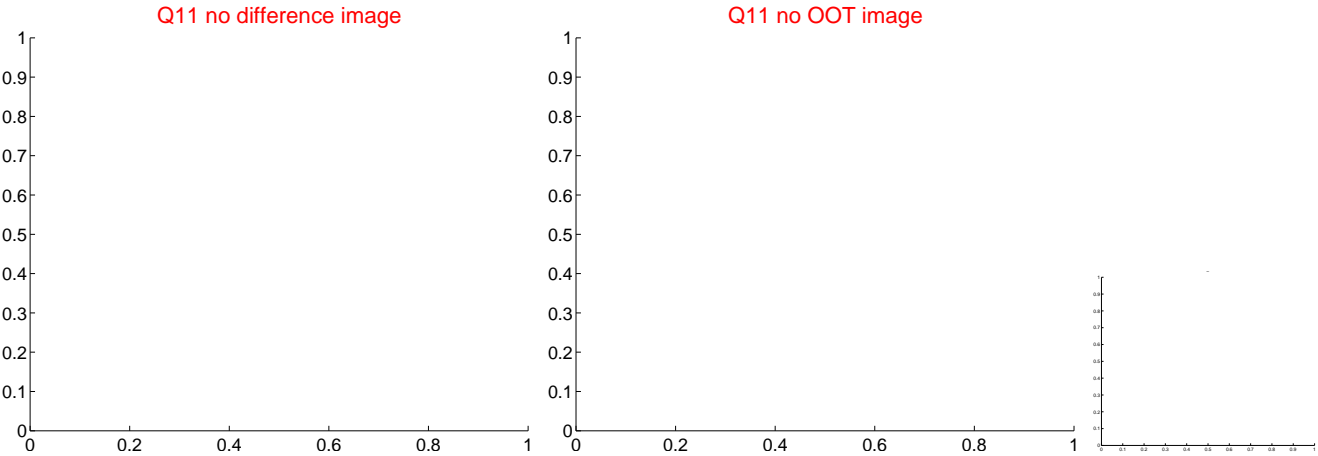
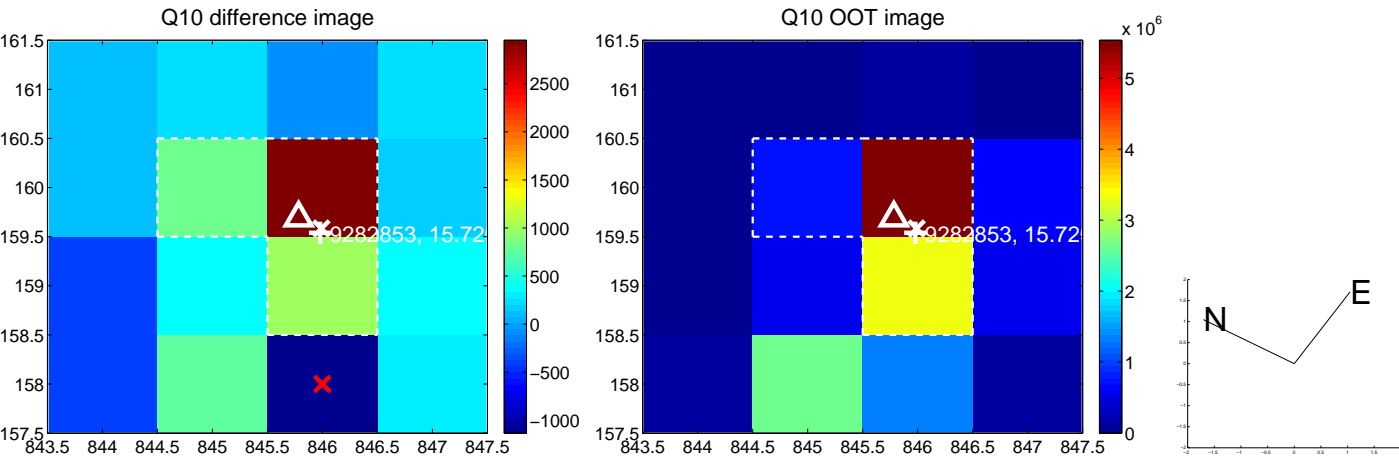
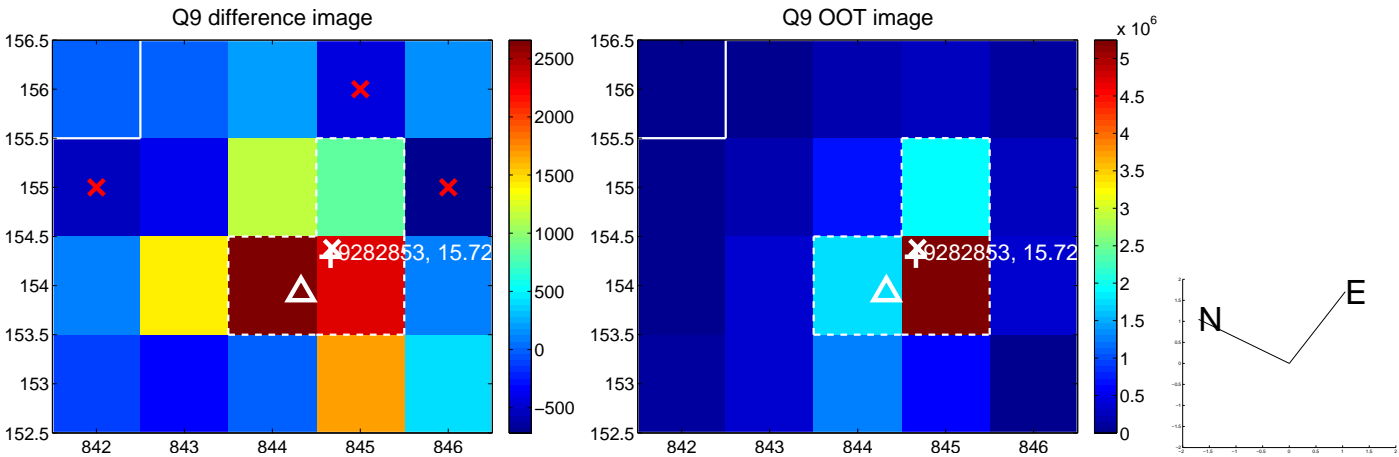


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

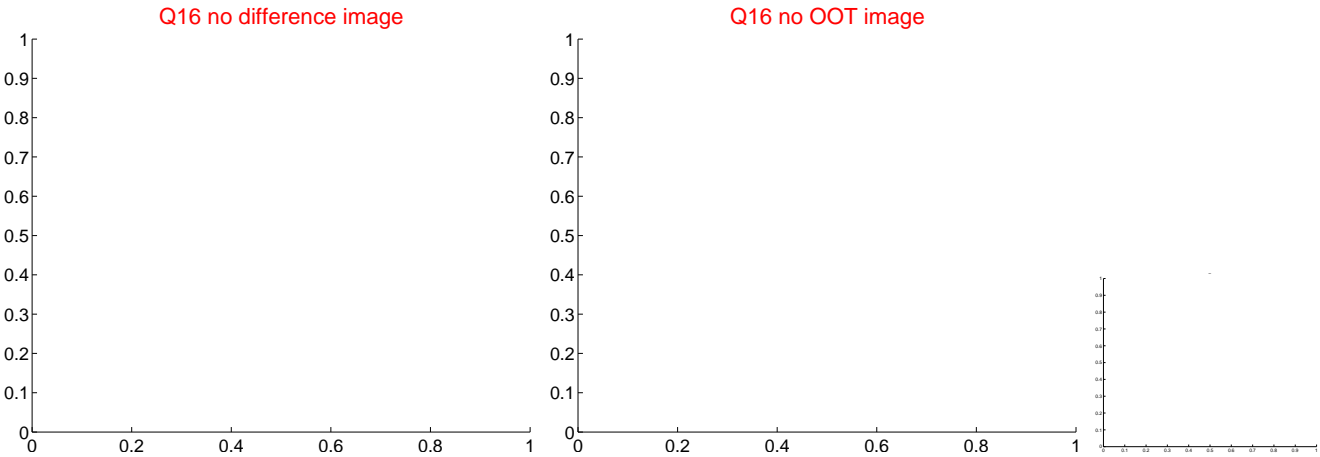
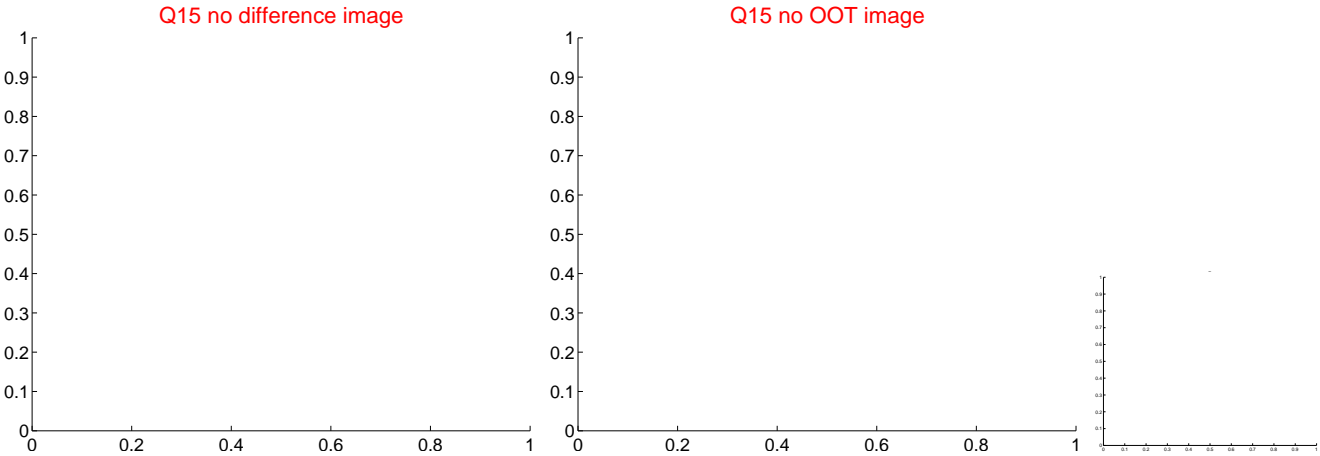
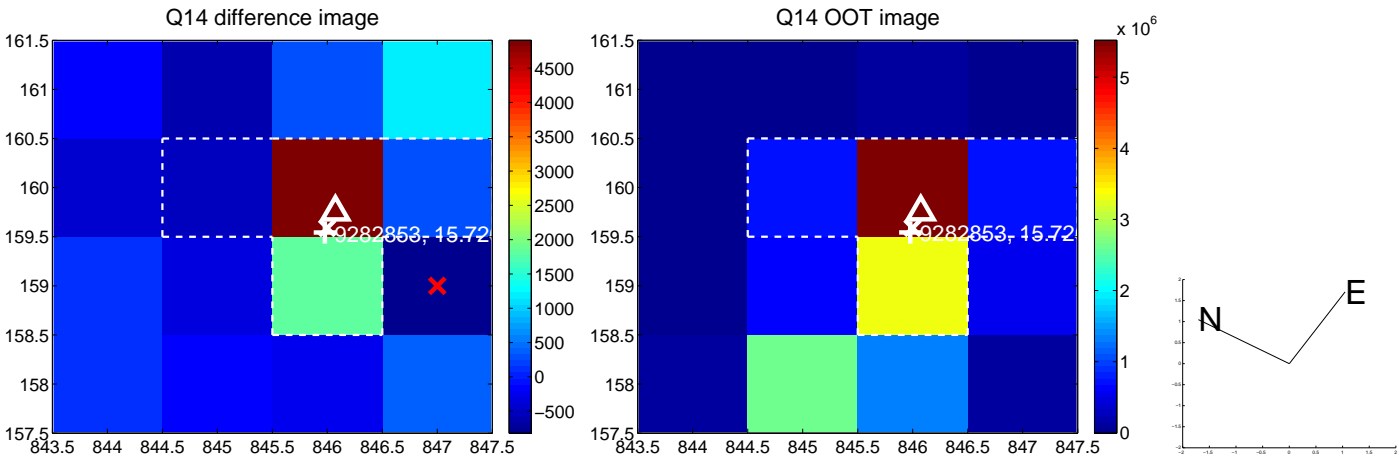
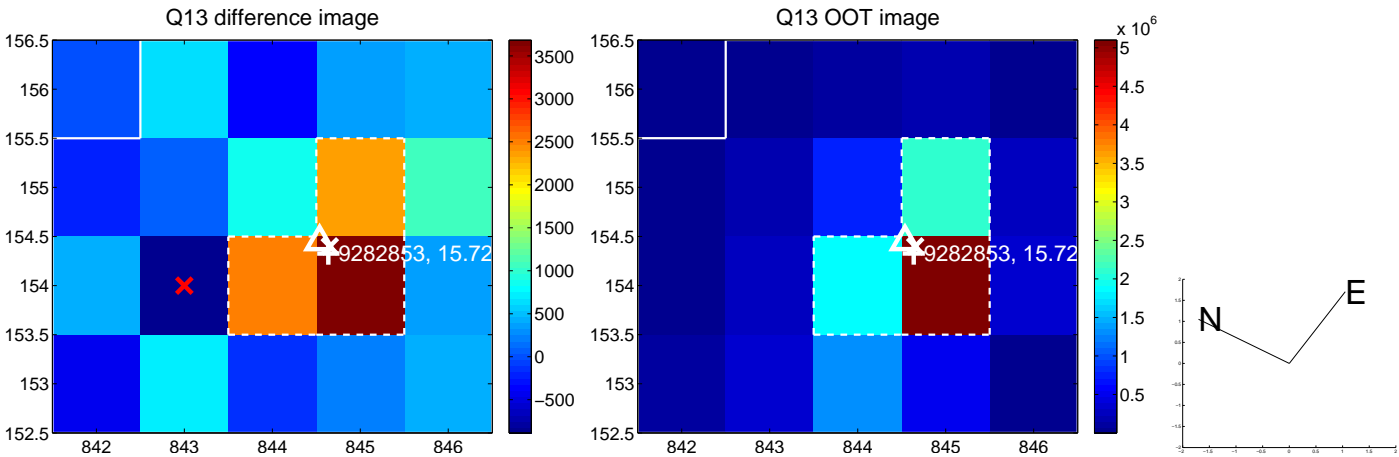
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



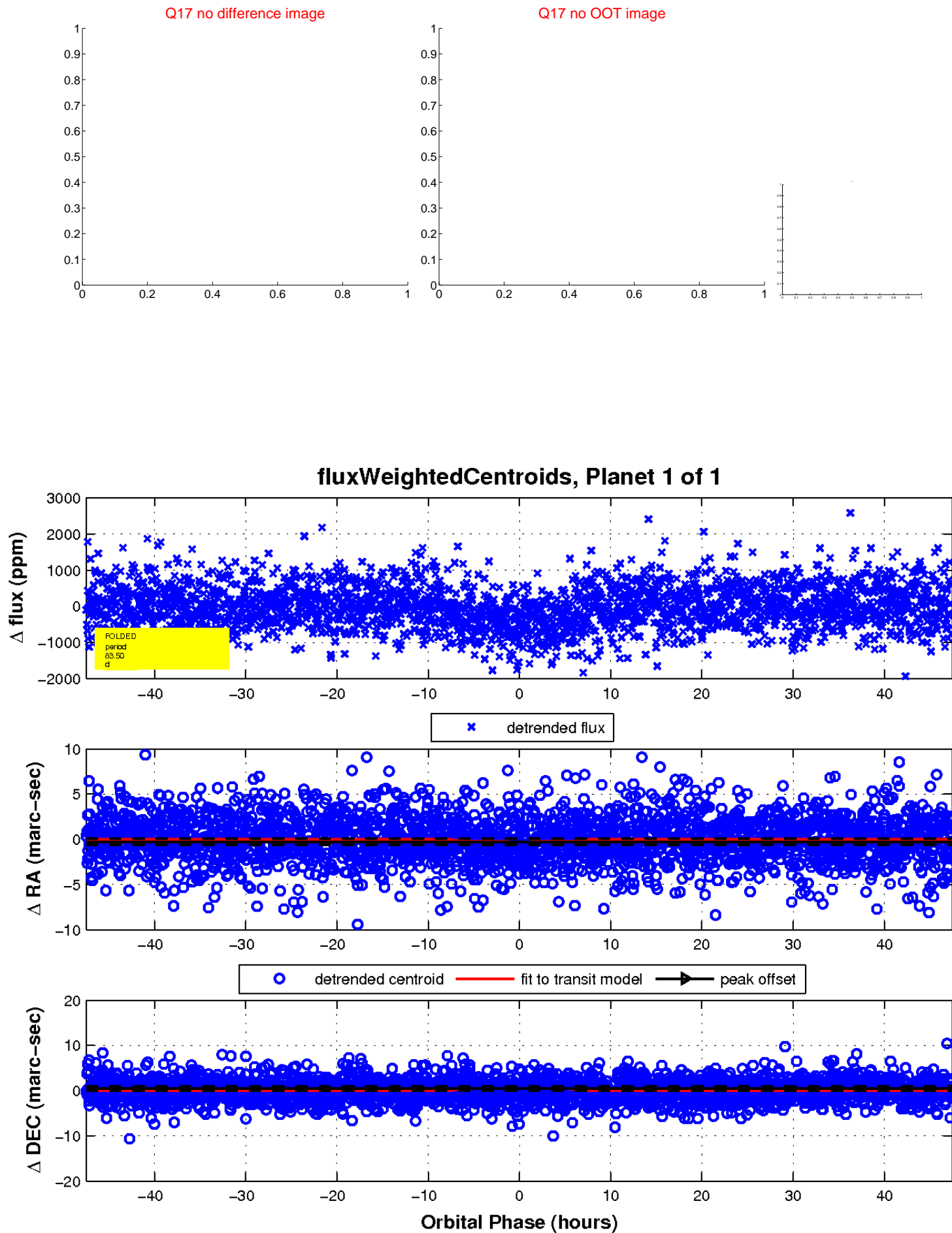
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

