

KIC 011177676

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})
011177676-01	OBS	3281.01	47.032396	175.468672	371.4	5.930	10.5	10.8	1.05	5370	2.17	13.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011177676-01	OBS	PC	0.96	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.

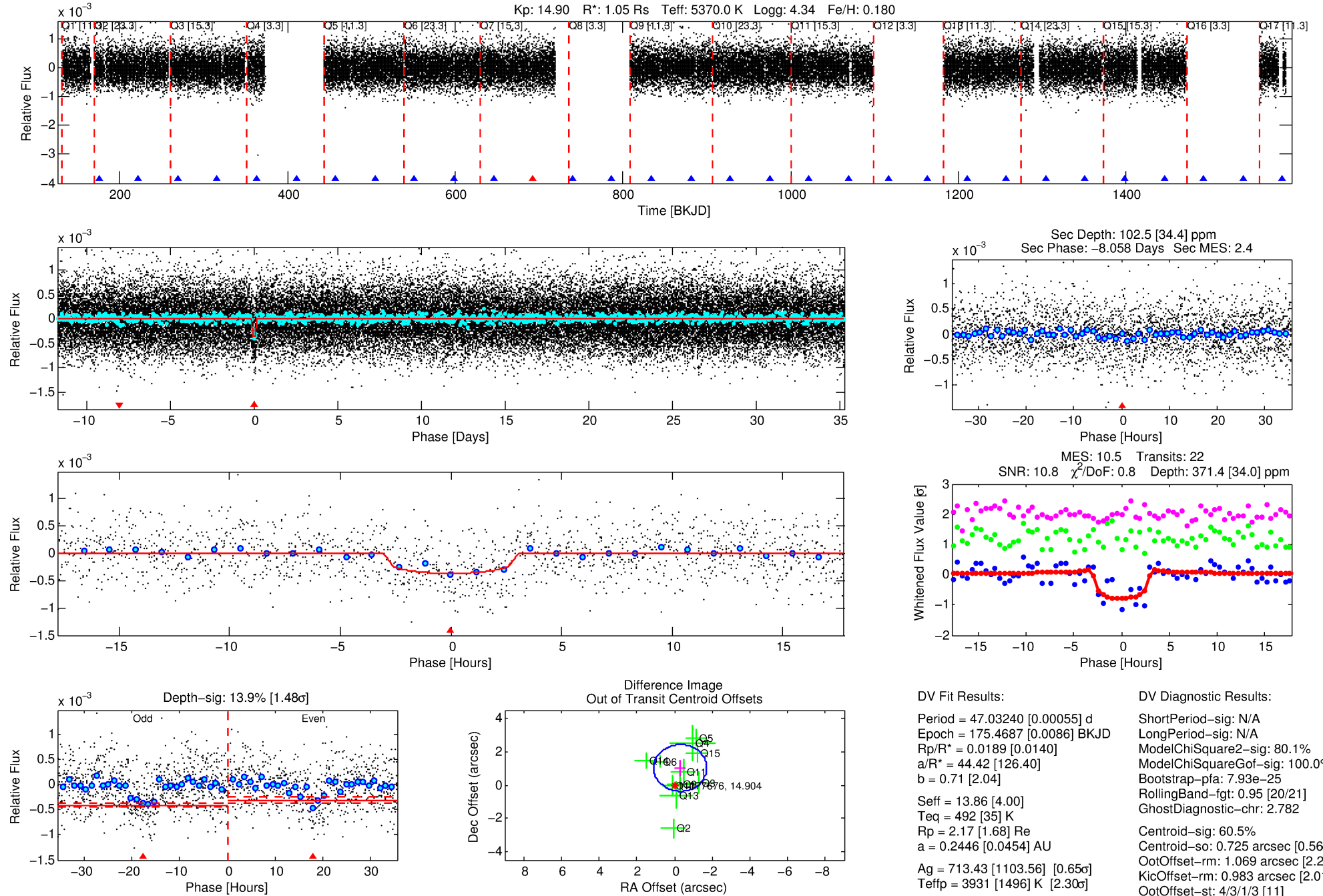
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011177676-01

No Significant Match Found

DV One-Page Summary

KIC: 11177676 Candidate: 1 of 1 Period: 47.032 d
KOI: K03281.01 Corr: 0.986



DV Fit Results:

Period = 47.03240 [0.00055] d
Epoch = 175.4687 [0.0086] BKJD
Rp/R* = 0.0189 [0.0140]
a/R* = 44.42 [126.40]
b = 0.71 [2.04]
Seff = 13.86 [4.00]
Teff = 492 [35] K
Rp = 2.17 [1.68] Re
a = 0.2446 [0.0454] AU
Ag = 713.43 [1103.56] [0.65 σ]
Teffp = 3931 [1496] K [2.30 σ]

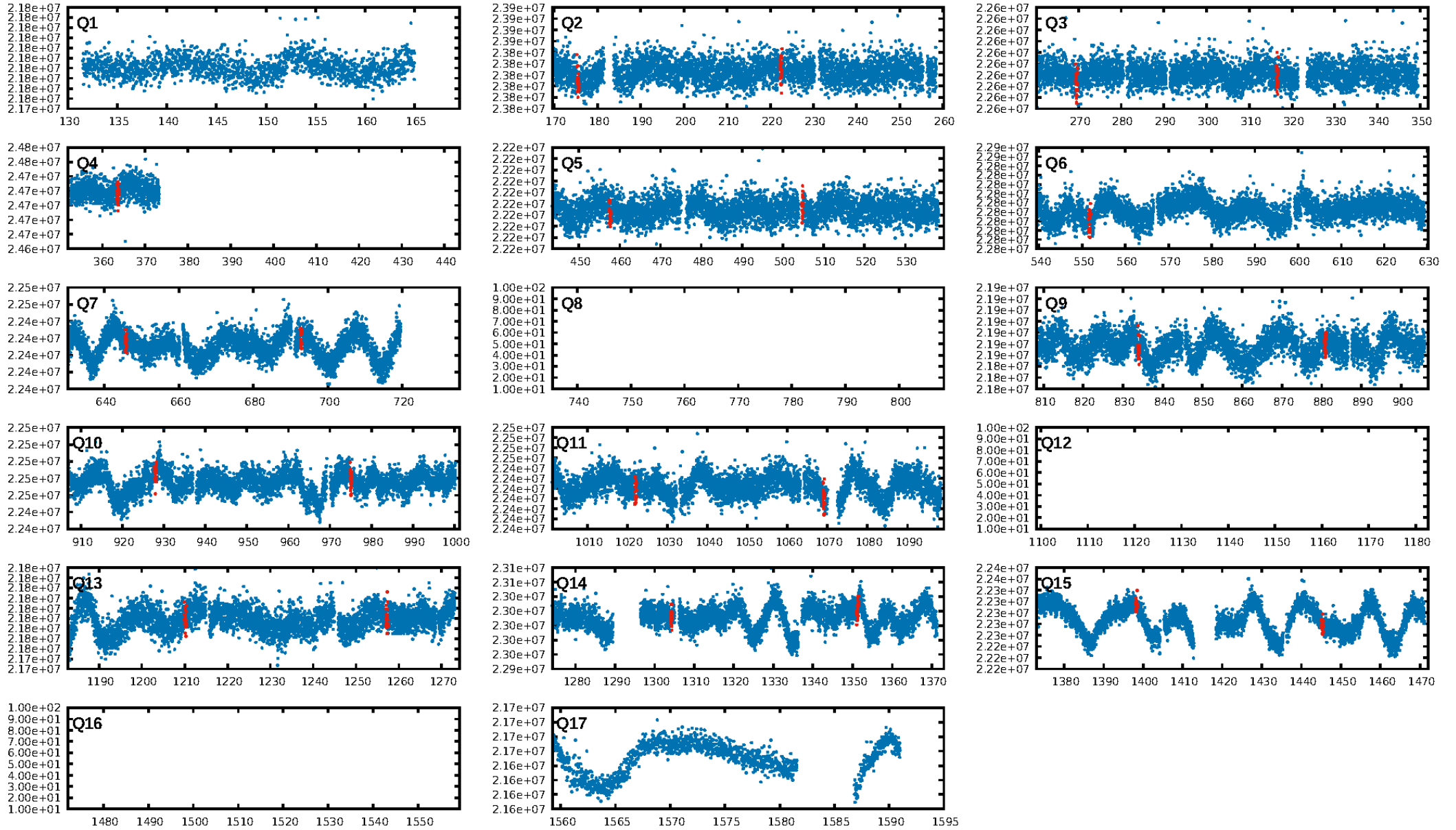
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 80.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.93e-25
RollingBand-fgt: 0.95 [20/21]
GhostDiagnostic-chr: 2.782
Centroid-sig: 60.5%
Centroid-so: 0.725 arcsec [0.56 σ]
OotOffset-rm: 1.069 arcsec [2.28 σ]
KicOffset-rm: 0.983 arcsec [2.01 σ]
OotOffset-st: 4/3/1/3 [11]
KicOffset-st: 4/3/1/3 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 1.00 [12/12]

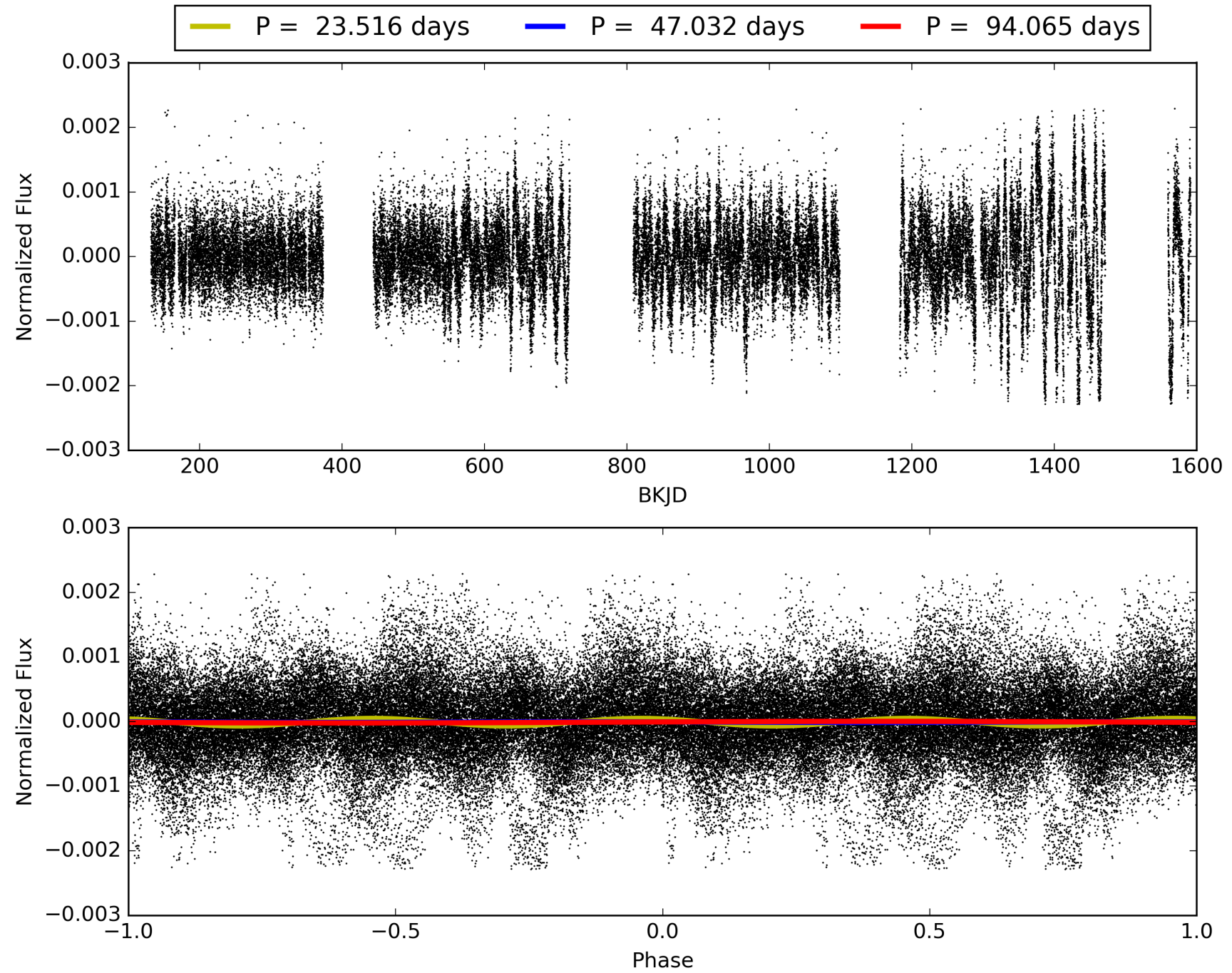
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:18:53 Z

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

TCE 011177676-01, PDC Light Curves

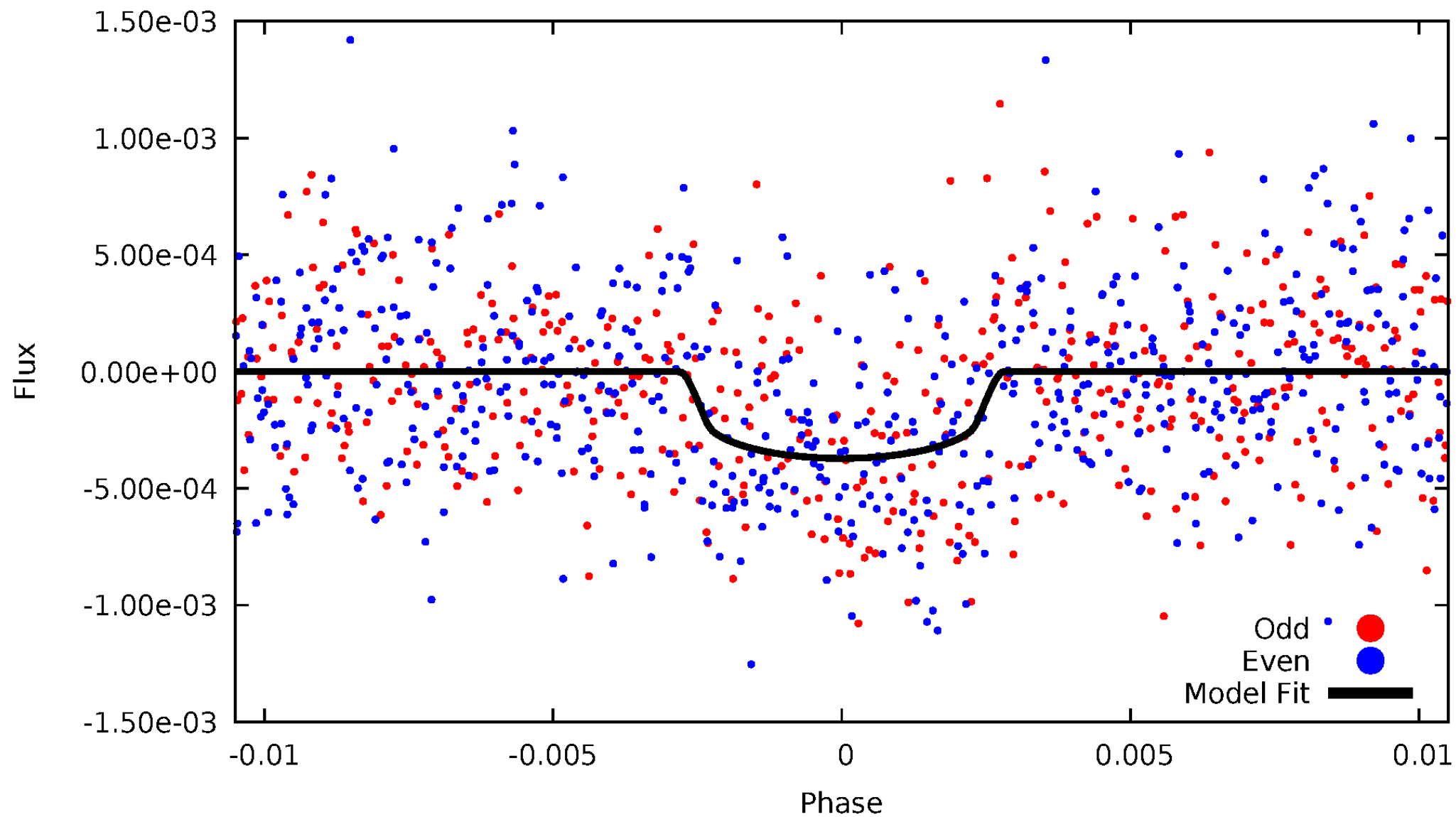


TCE 011177676-01



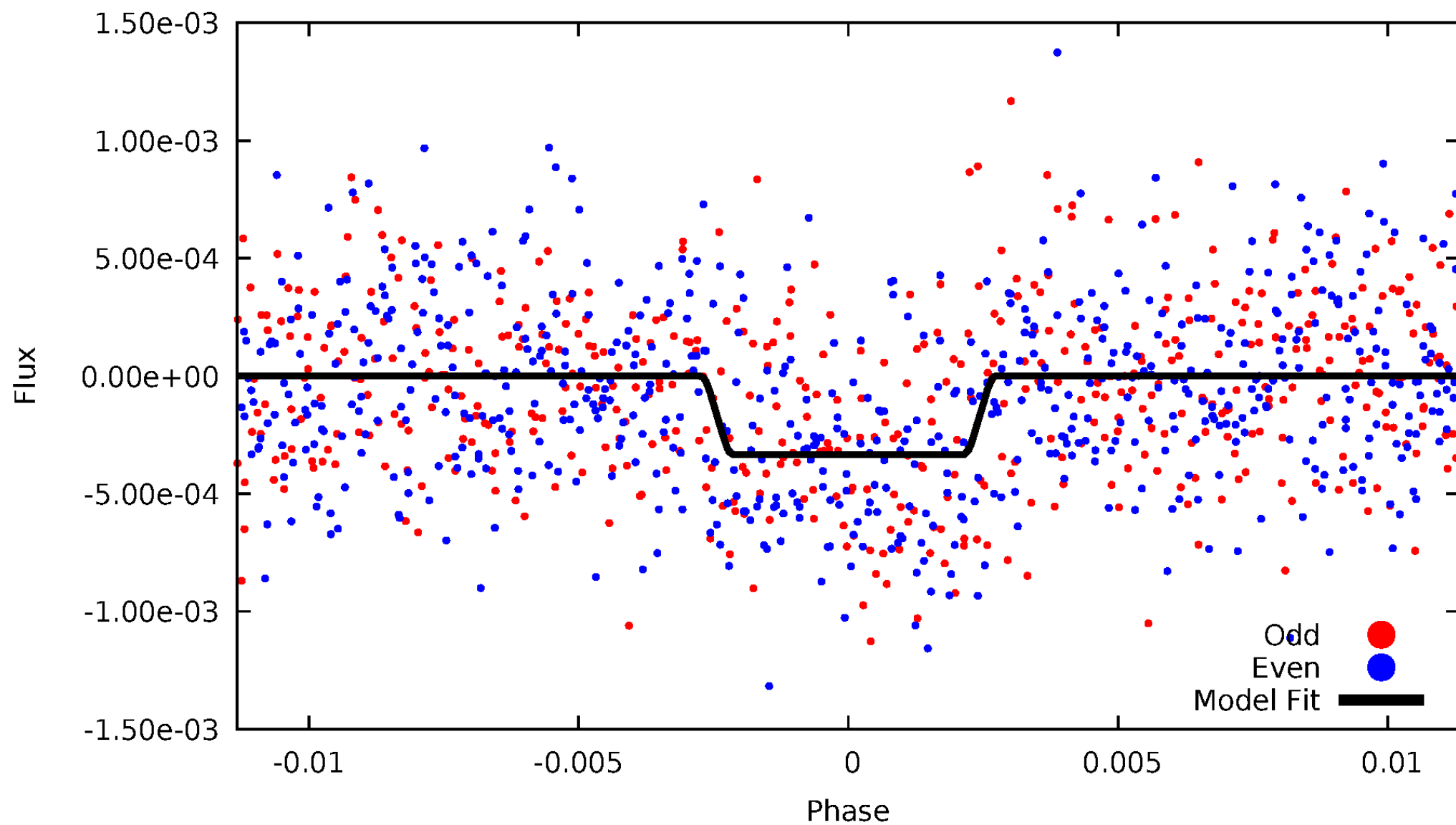
DV Odd/Even

TCE 011177676-01



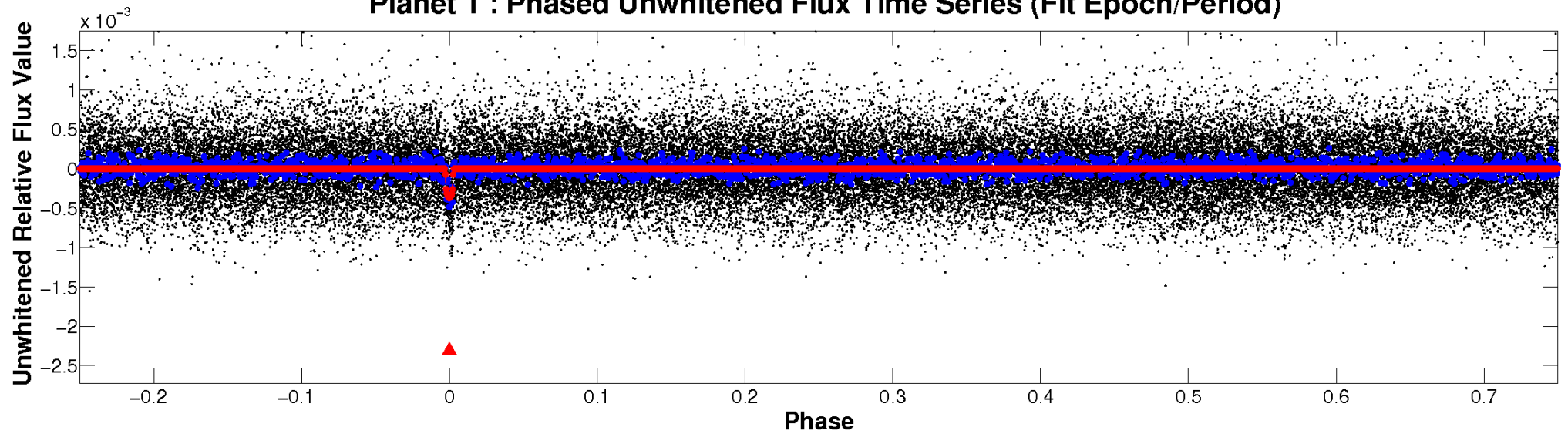
ALT Odd/Even

TCE 011177676-01

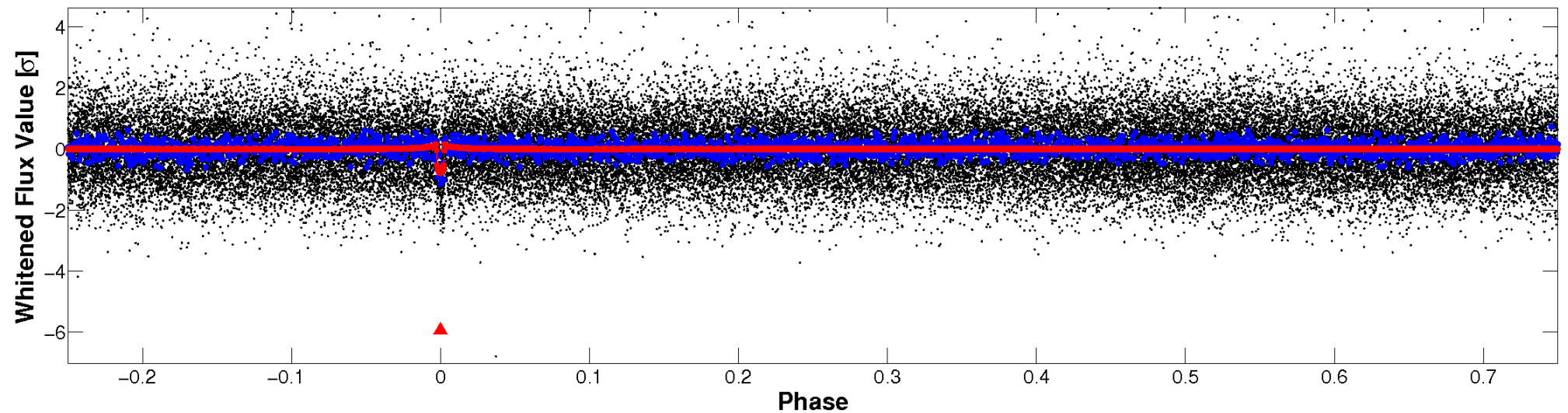


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

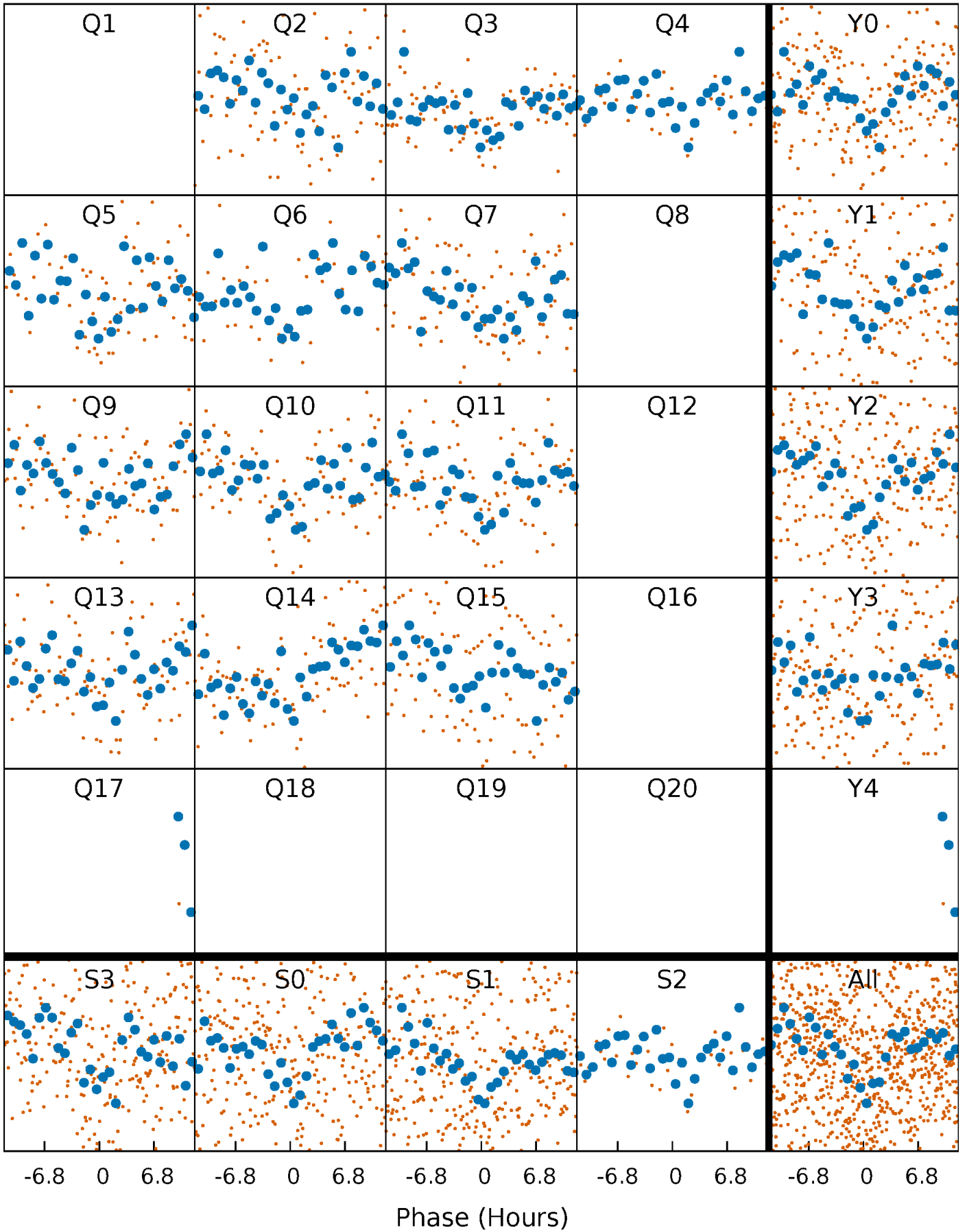


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



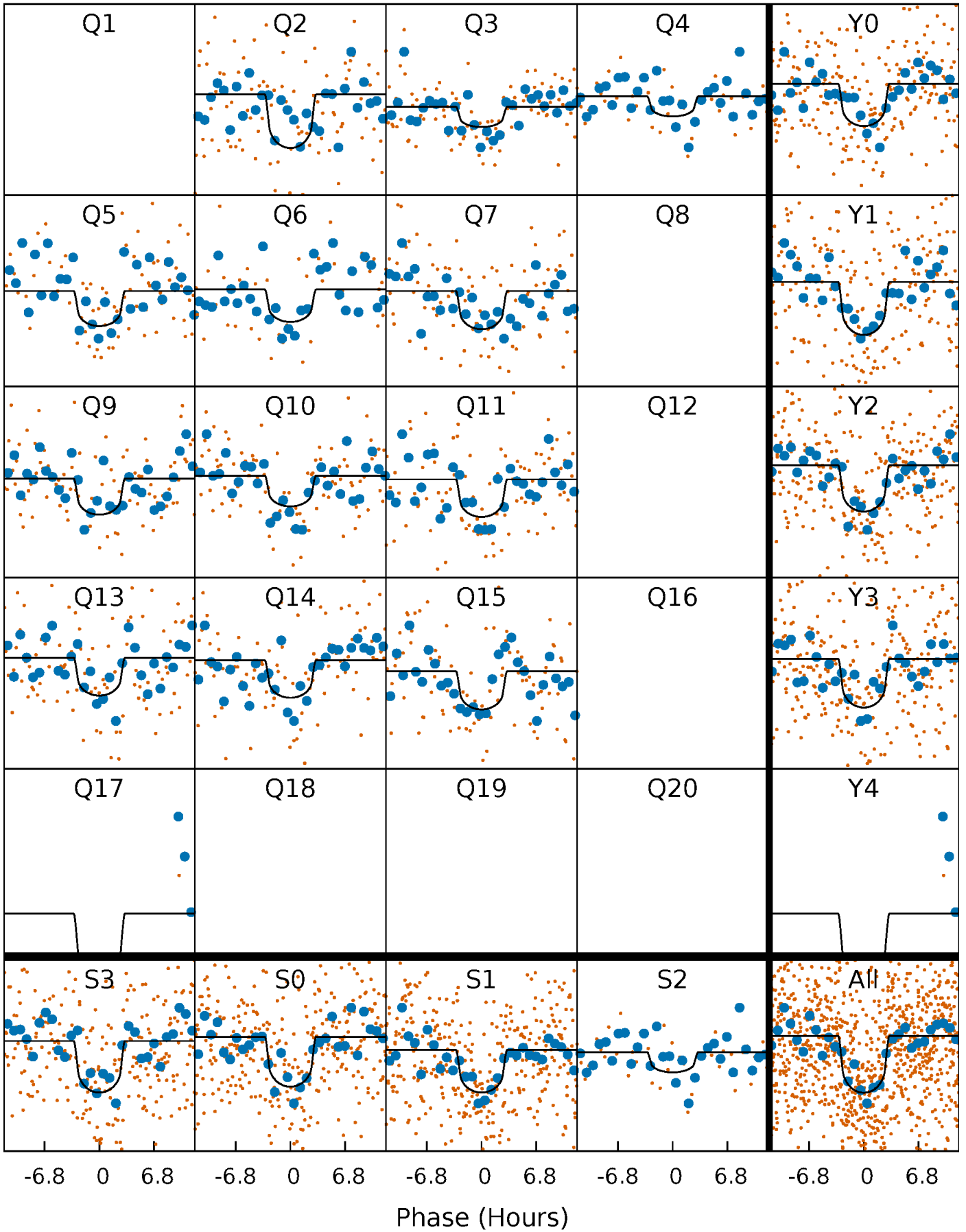
PDC Quarter-Phased Transit Curves

TCE 011177676-01 P= 47.032396 Days $T_0=175.468672$ (BKJD)



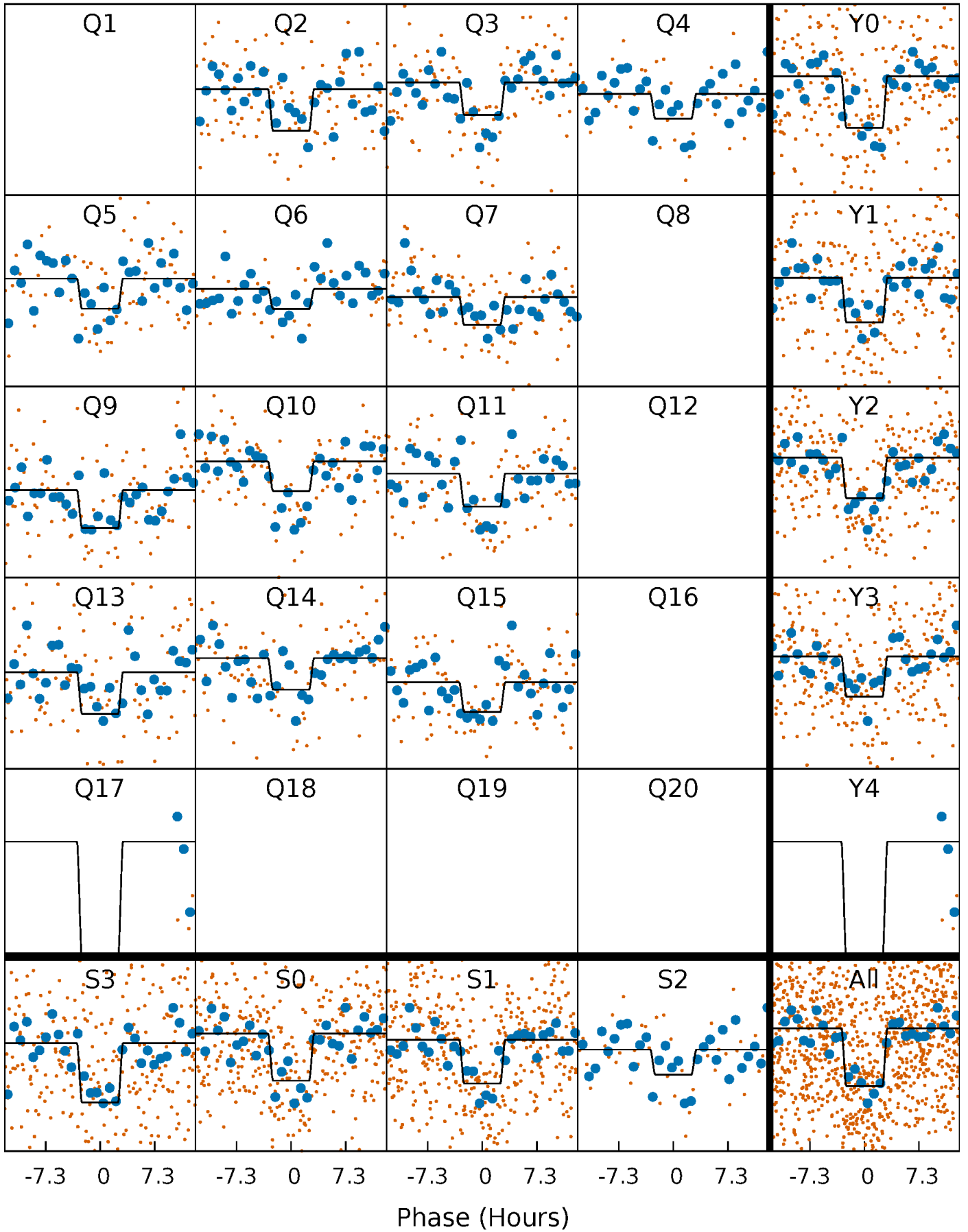
DV Quarter-Phased Transit Curves

TCE 011177676-01 P= 47.032396 Days $T_0=175.468672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

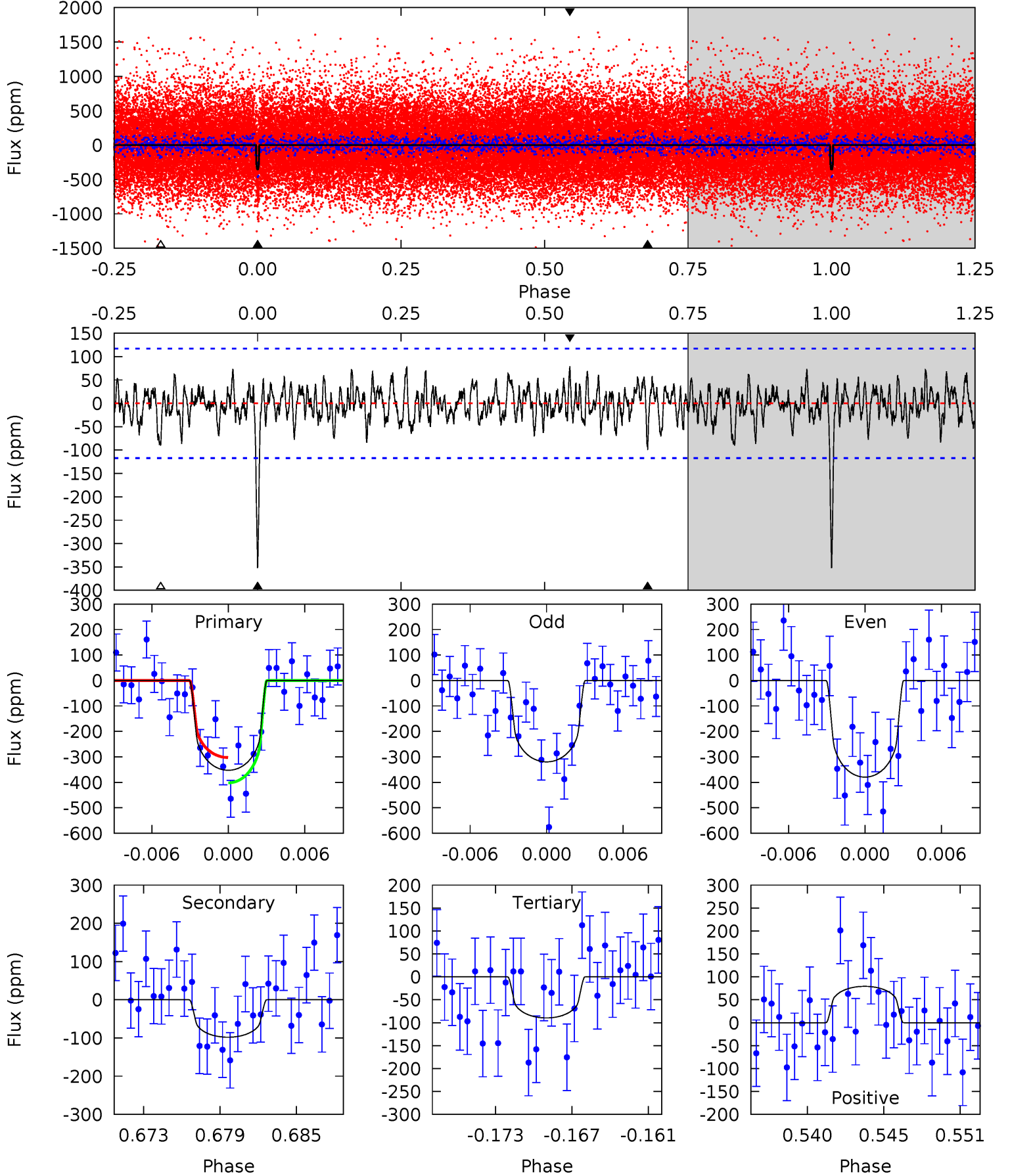
TCE 011177676-01 P= 47.031257 Days $T_0=175.482210$ (BKJD)



DV Model-Shift Uniqueness Test

011177676-01, P = 47.032396 Days, E = 128.436276 Days

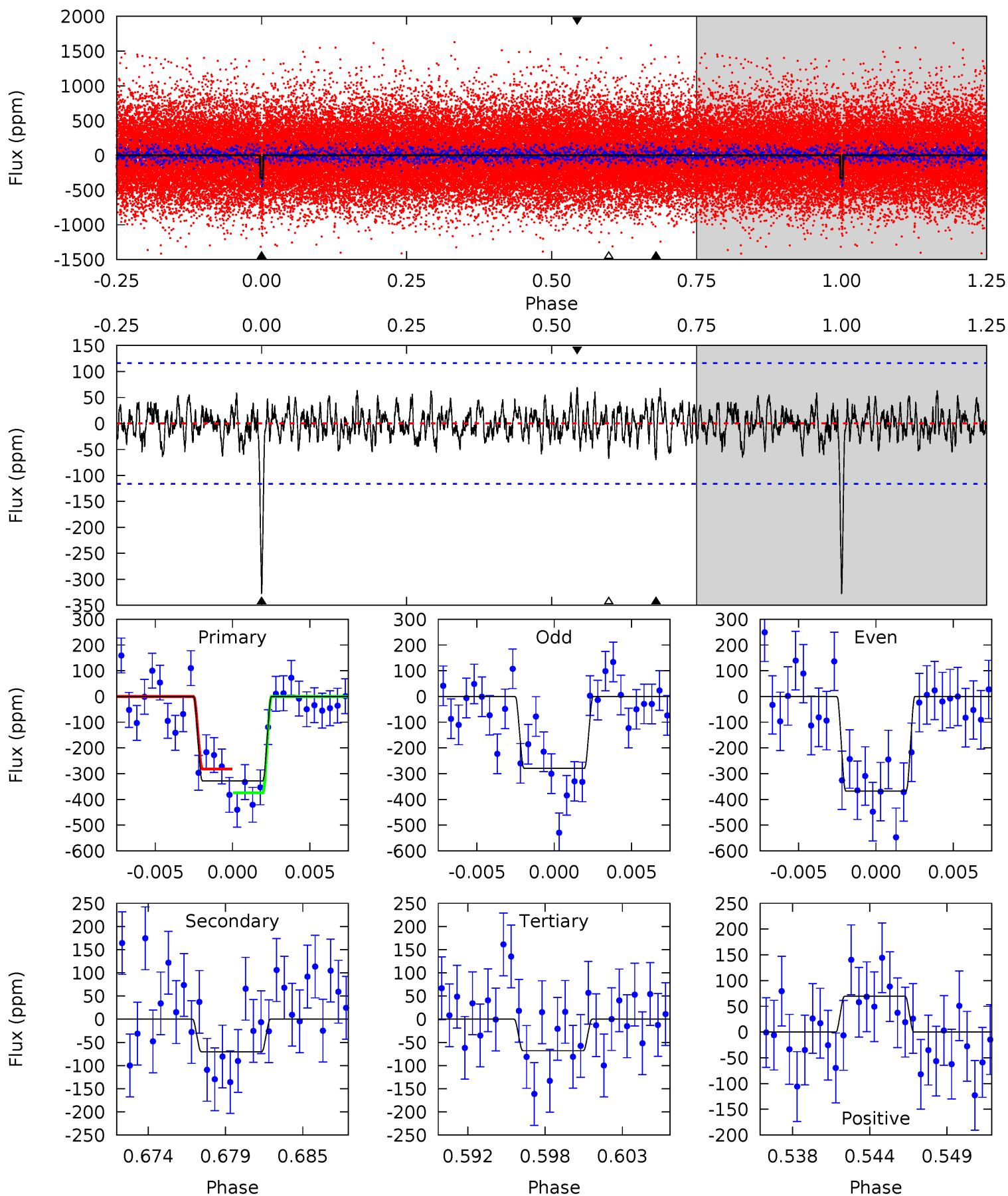
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	4.30	3.93	3.48	5.14	2.77	1.29	11.5	12.0	0.37	0.82	1.31	1.15	0.18	2.18



Alt Model-Shift Uniqueness Test

011177676-01, $P = 47.031257$ Days, $E = 128.450953$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.11	3.01	3.09	5.14	2.78	1.05	11.5	11.4	0.10	0.02	1.94	1.14	0.18	2.05



Stellar Parameters For KIC 011177676

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5370^{+80}_{-80}	$4.337^{+0.145}_{-0.160}$	$0.180^{+0.150}_{-0.100}$	$1.055^{+0.220}_{-0.165}$	$0.881^{+0.061}_{-0.035}$	$1.056^{+0.641}_{-0.436}$
	+1%/-1%	+3%/-4%	+83%/-56%	+21%/-16%	+7%/-4%	+61%/-41%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011177676-01 / KOI 3281.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-98 ± 23	$2.34^{+1.63}_{-1.33}$	688^{+41}_{-35}	4053^{+1596}_{-650}	608^{+2588}_{-406}
Alt.	-70 ± 23	$2.33^{+1.45}_{-1.43}$	690^{+42}_{-37}	3797^{+1733}_{-585}	415^{+2549}_{-274}

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 $A_{obs} \gg 1.0$

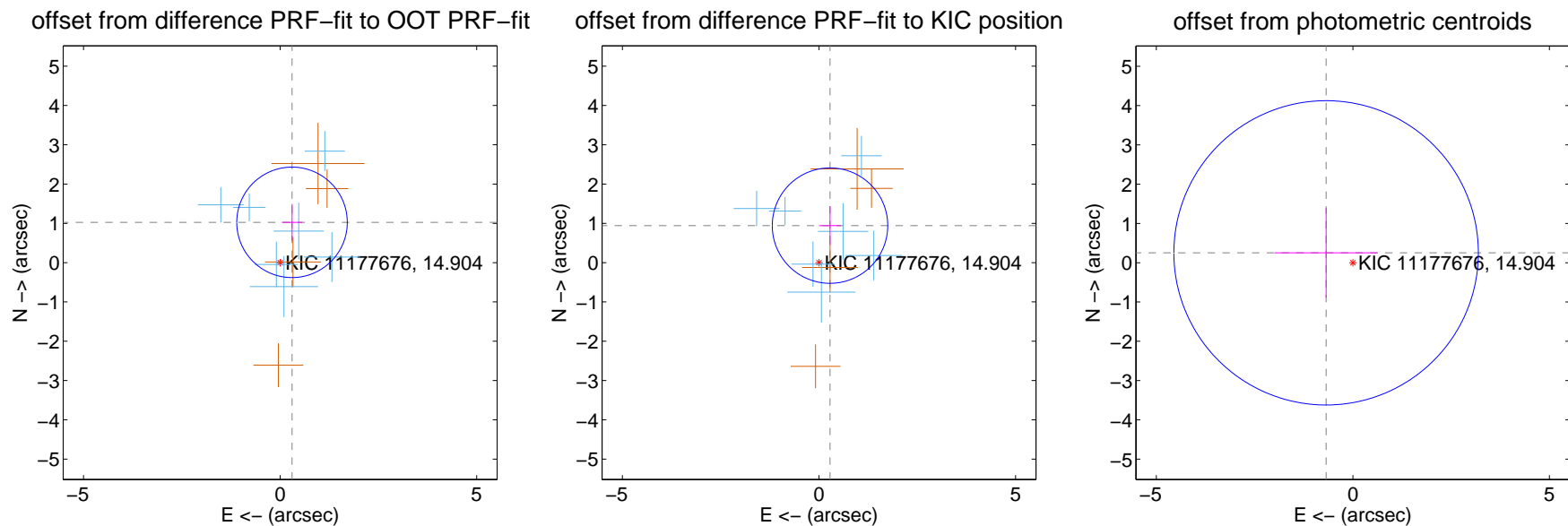
DV Centroid Data

Supplemental centroid analysis for 011177676-01. Kepler magnitude: 14.90. Transit SNR 10.81

There are 7 quarters with good PRF difference image offsets

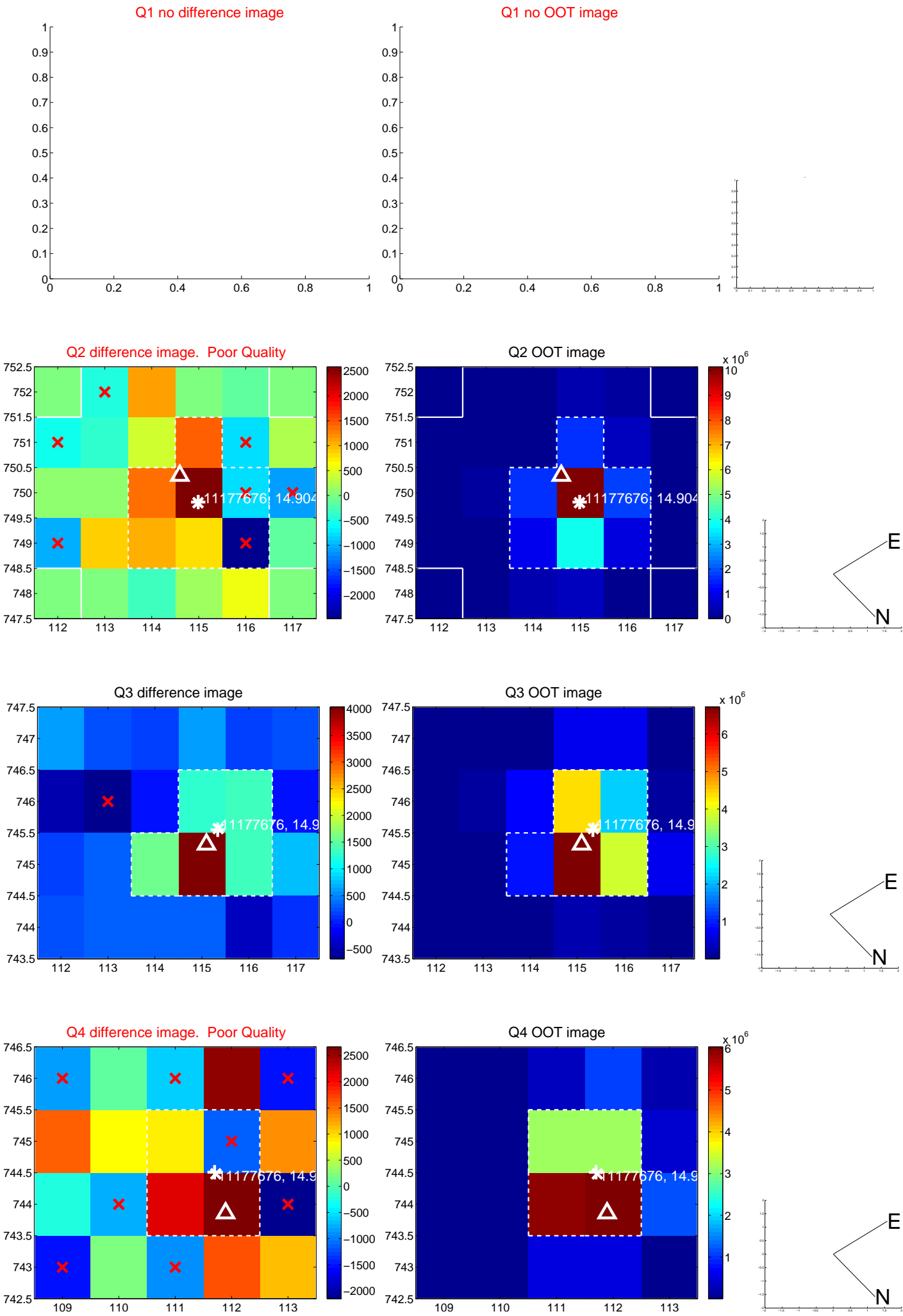
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.069 ± 0.468	2.28	-0.303 ± 0.258	1.025 ± 0.467
PRF-fit source offset from KIC position	0.983 ± 0.489	2.01	-0.280 ± 0.276	0.942 ± 0.492
photometric centroid source offset	0.73 ± 1.29	0.56	0.68 ± 1.31	0.25 ± 1.14

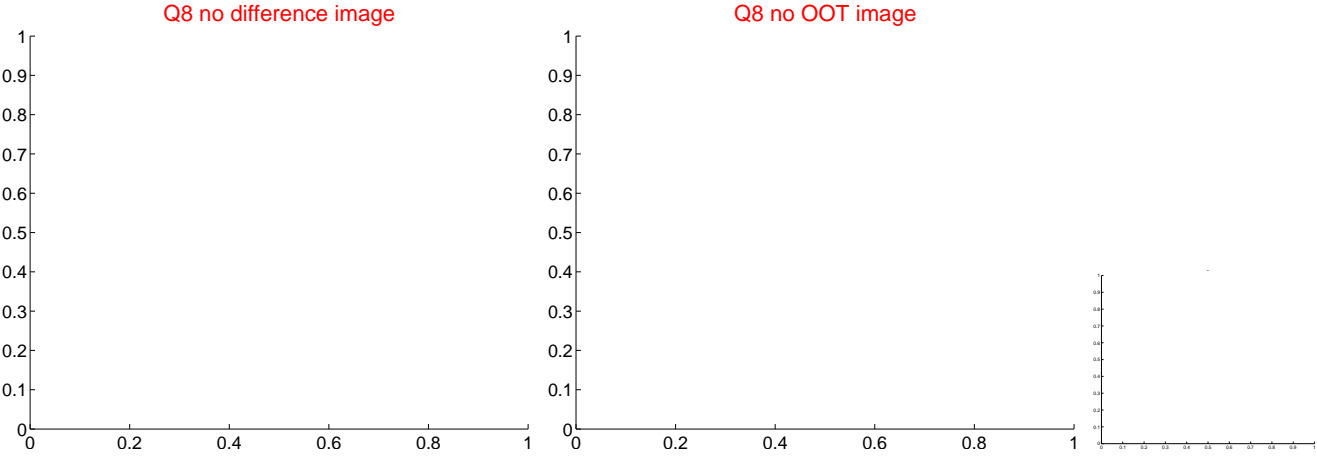
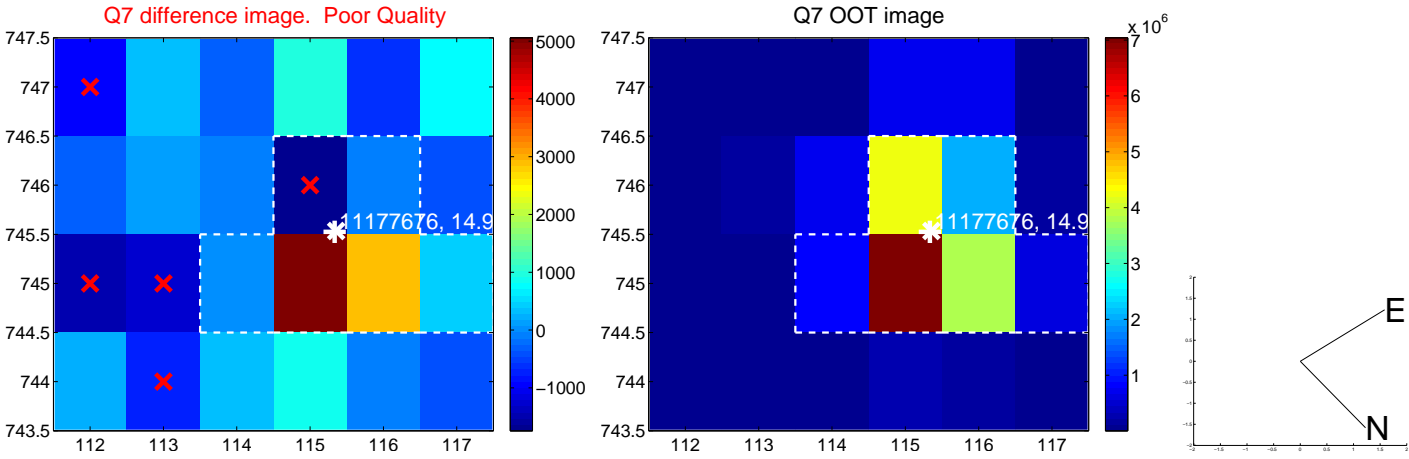
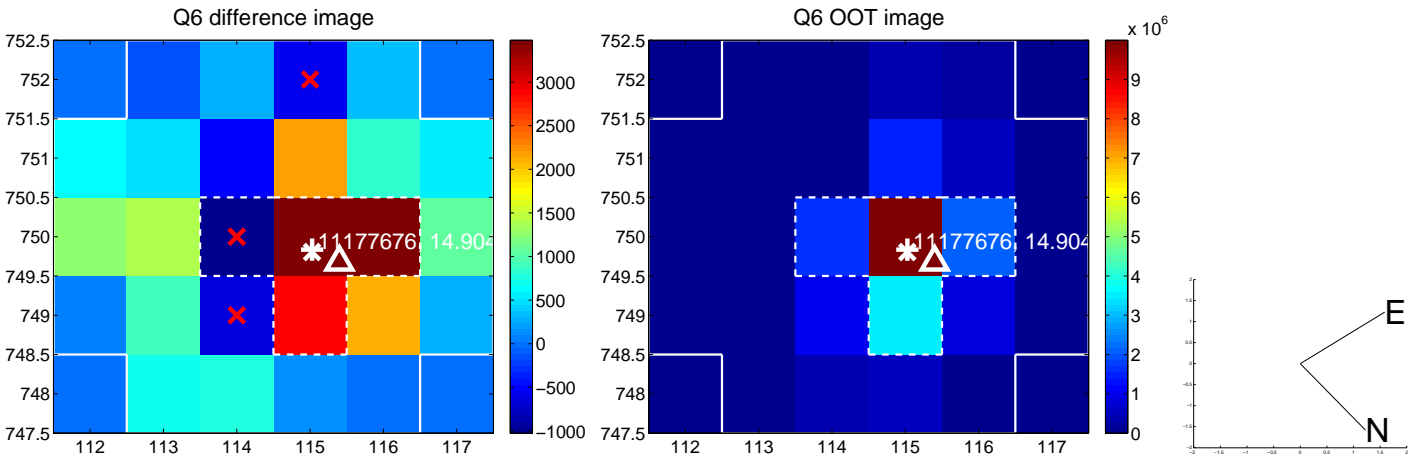
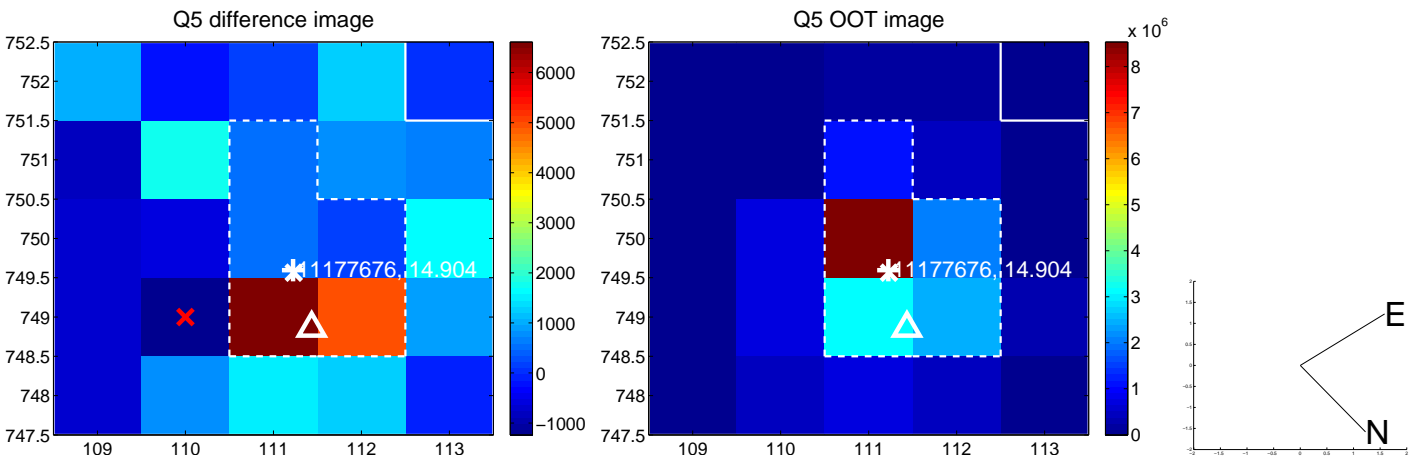


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

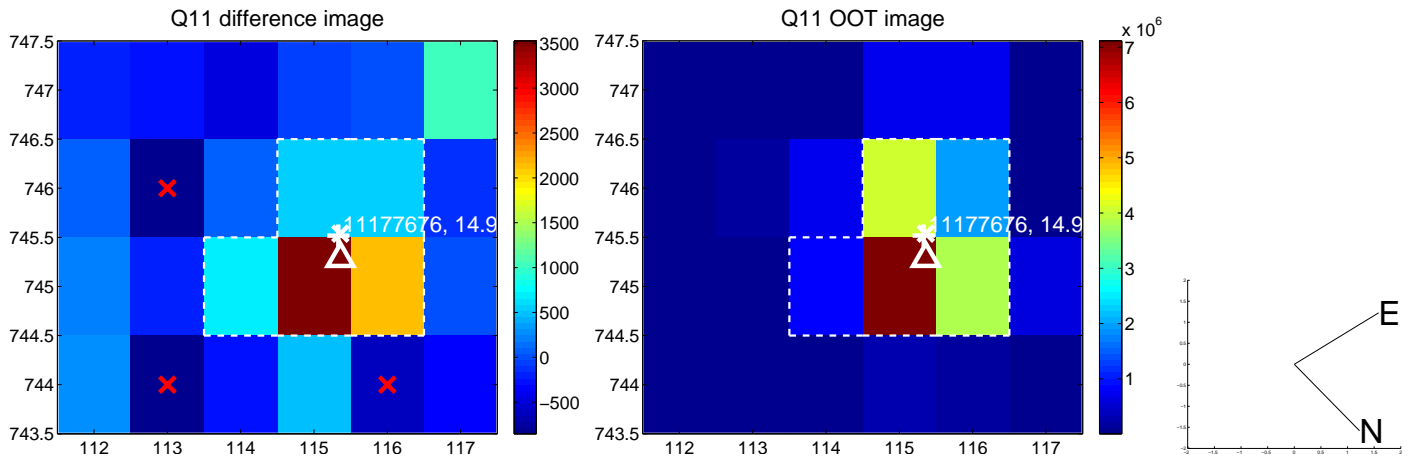
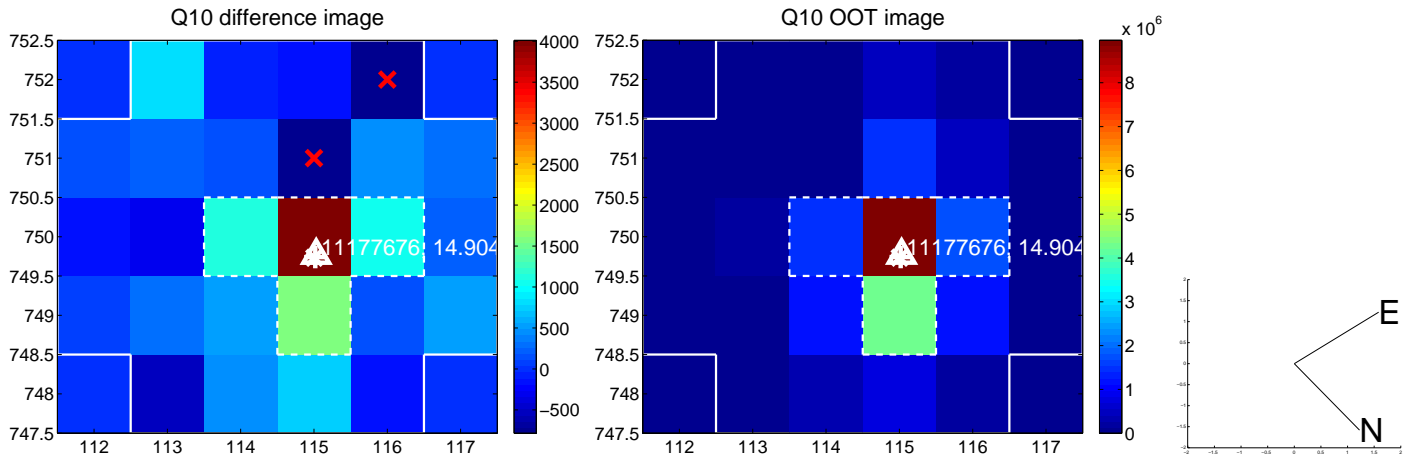
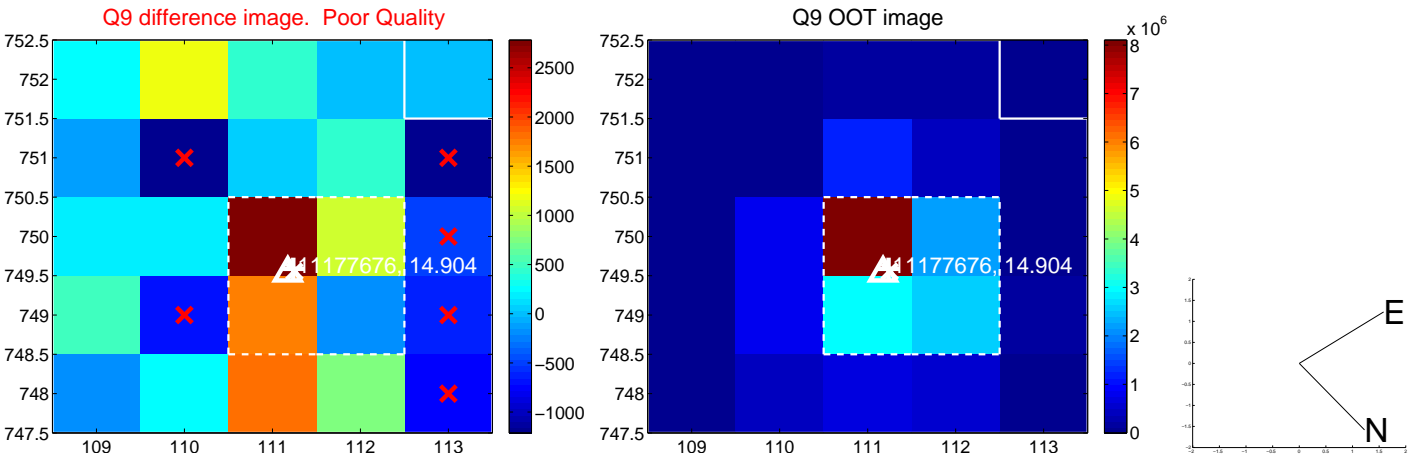
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



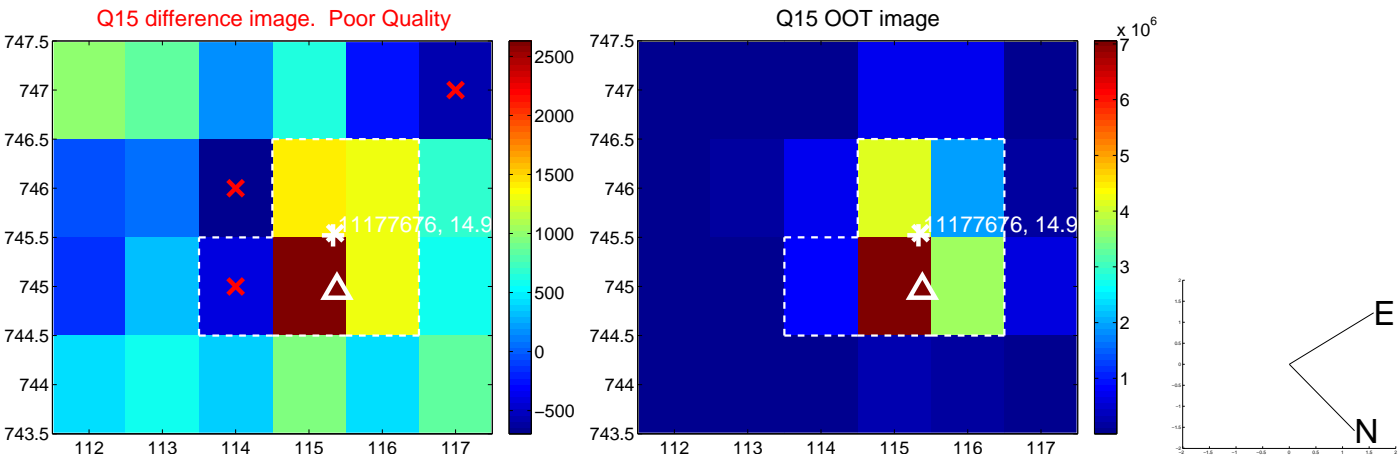
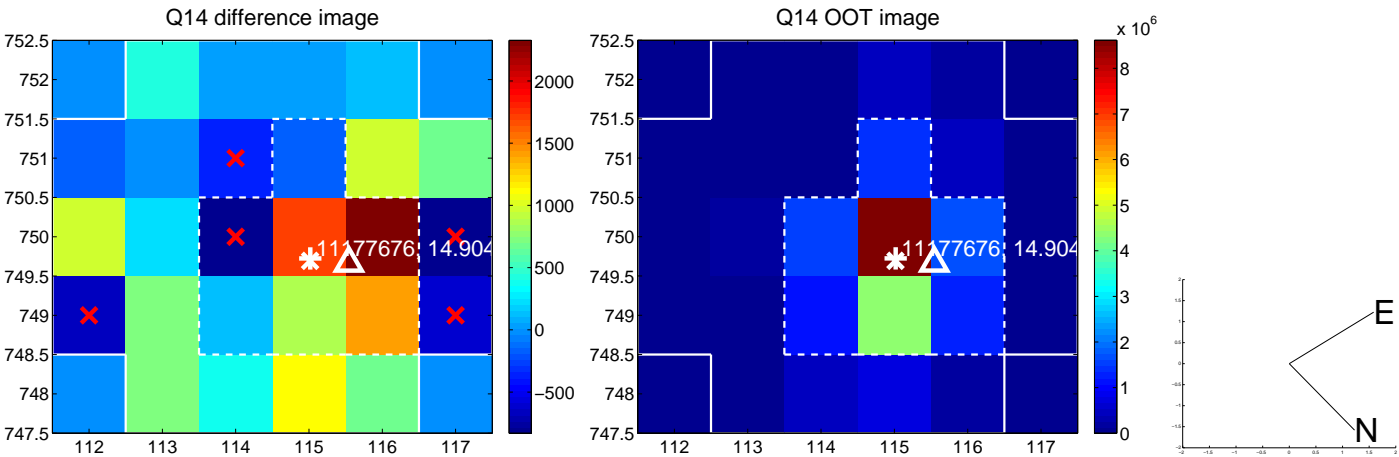
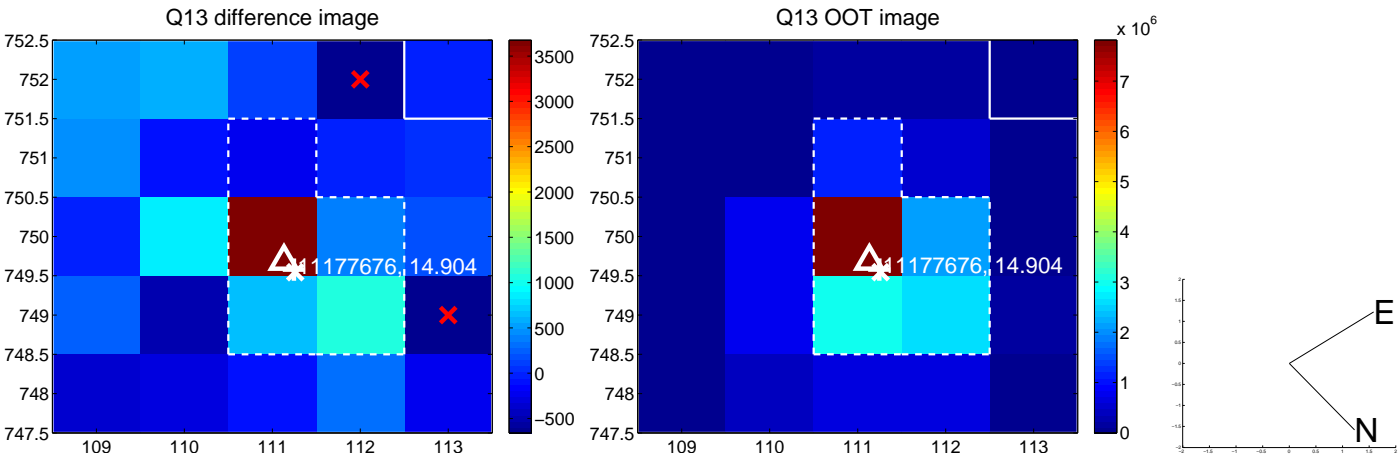
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



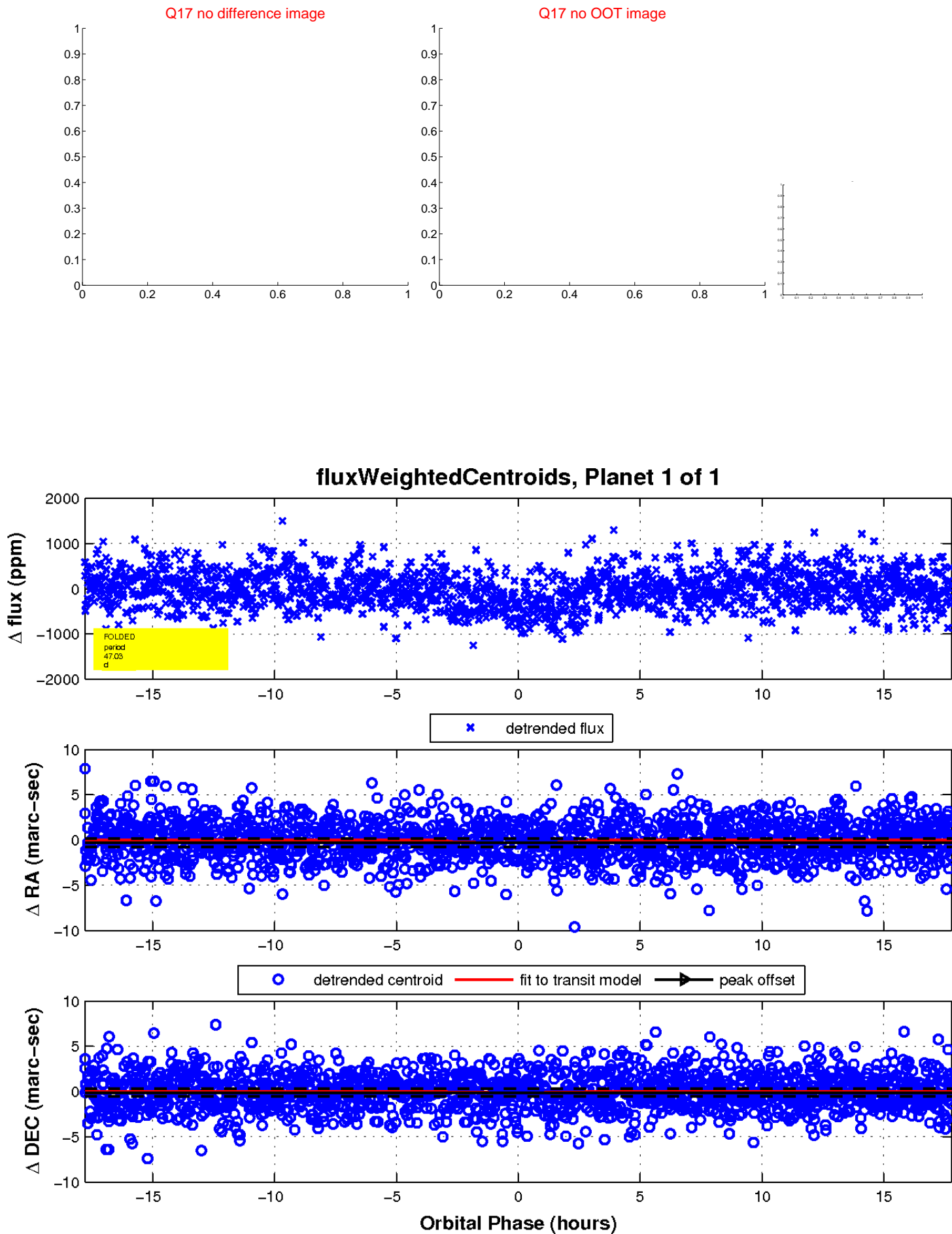
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

