

KIC 010977671

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})
010977671-01	OBS	5846.01	199.049411	180.155317	252.7	18.387	10.2	10.8	3.44	5157	7.59	12.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010977671-01	OBS	FP	0.43	0	0	1	0	CENT_UNRESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

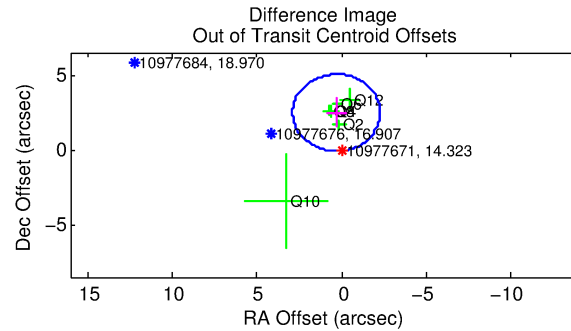
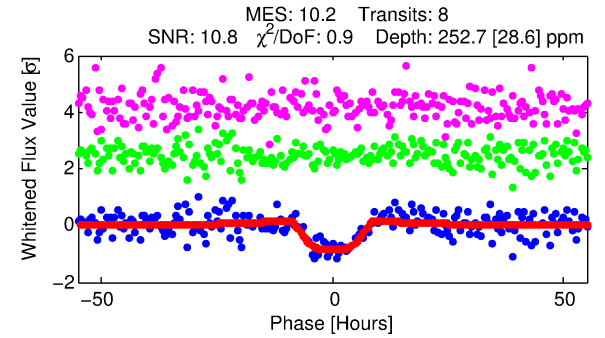
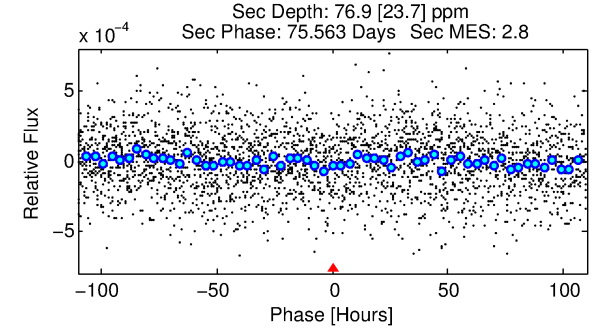
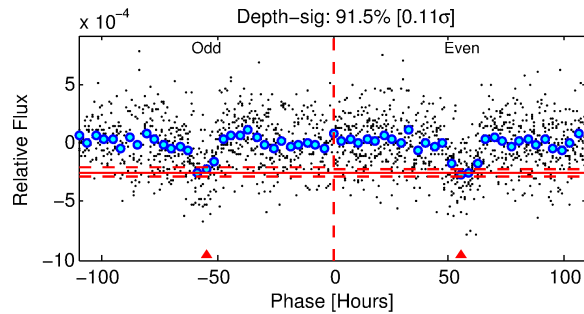
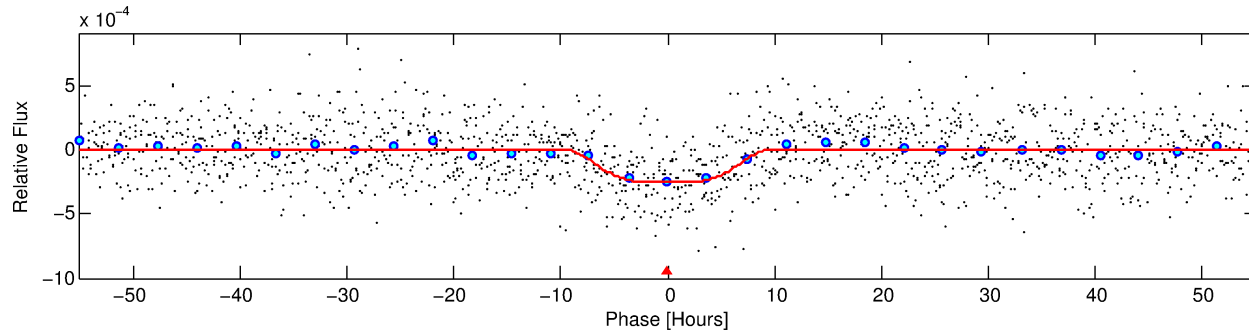
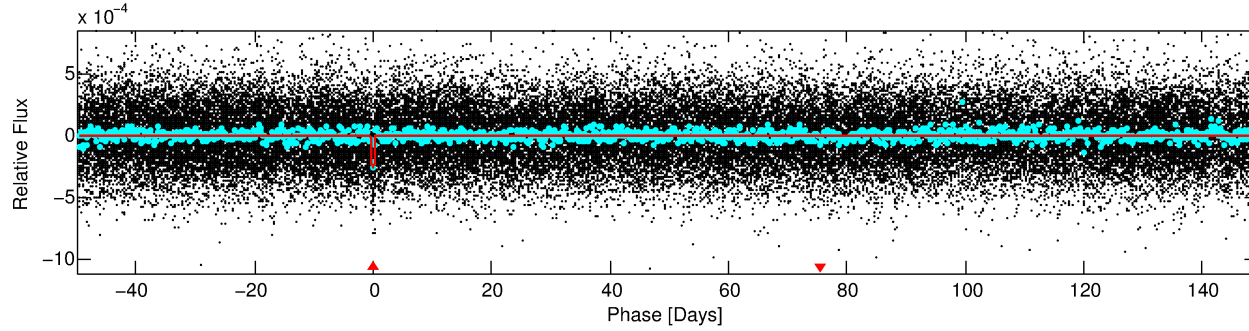
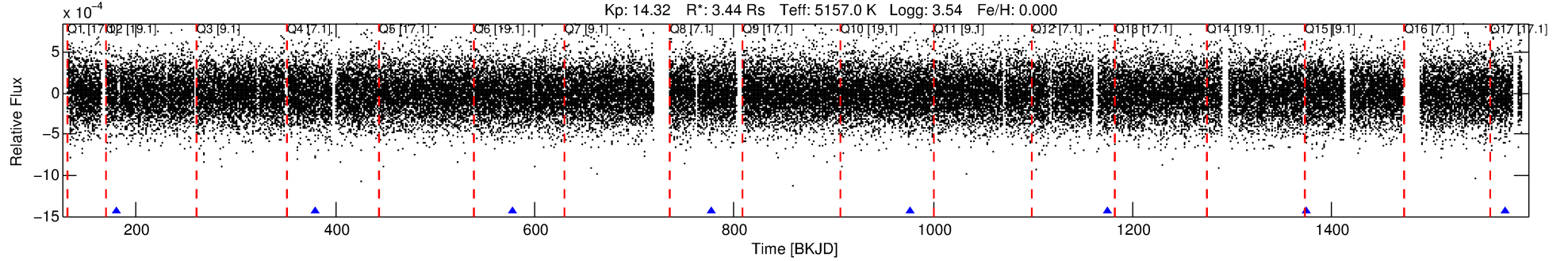
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010977671-01

No Significant Match Found

DV One-Page Summary

KIC: 10977671 Candidate: 1 of 1 Period: 199.049 d
KOI: K05846.01 Corr: 0.845



DV Fit Results:

Period = 199.04941 [0.00771] d
Epoch = 180.1553 [0.0305] BKJD
Rp/R* = 0.0202 [0.0016]
a/R* = 25.30 [4.52]
b = 0.97 [0.01]
Seff = 12.84 [4.25]
Teq = 483 [40] K
Rp = 7.59 [2.10] Re
a = 0.7633 [0.1668] AU
Ag = 427.54 [200.13] [2.13σ]
Teffp = 3394 [310] K [9.32σ]

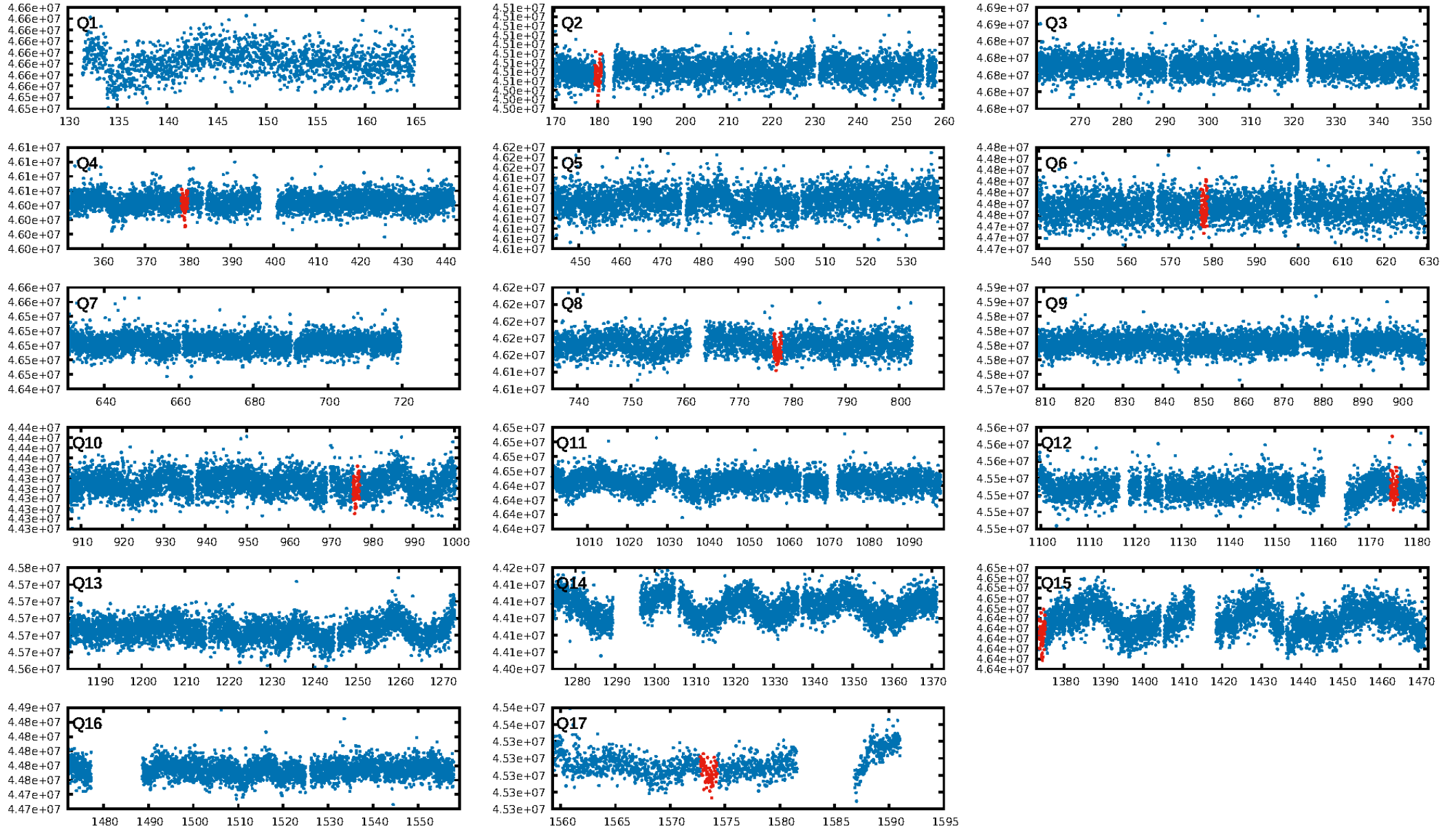
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.45e-26
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 4.553
Centroid-sig: 7.9%
Centroid-so: 1.920 arcsec [2.01σ]
OotOffset-rm: 2.483 arcsec [2.89σ]
KicOffset-rm: 2.329 arcsec [2.97σ]
OotOffset-st: 3/0/3/0 [6]
KicOffset-st: 3/0/3/0 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 1.00 [7/7]

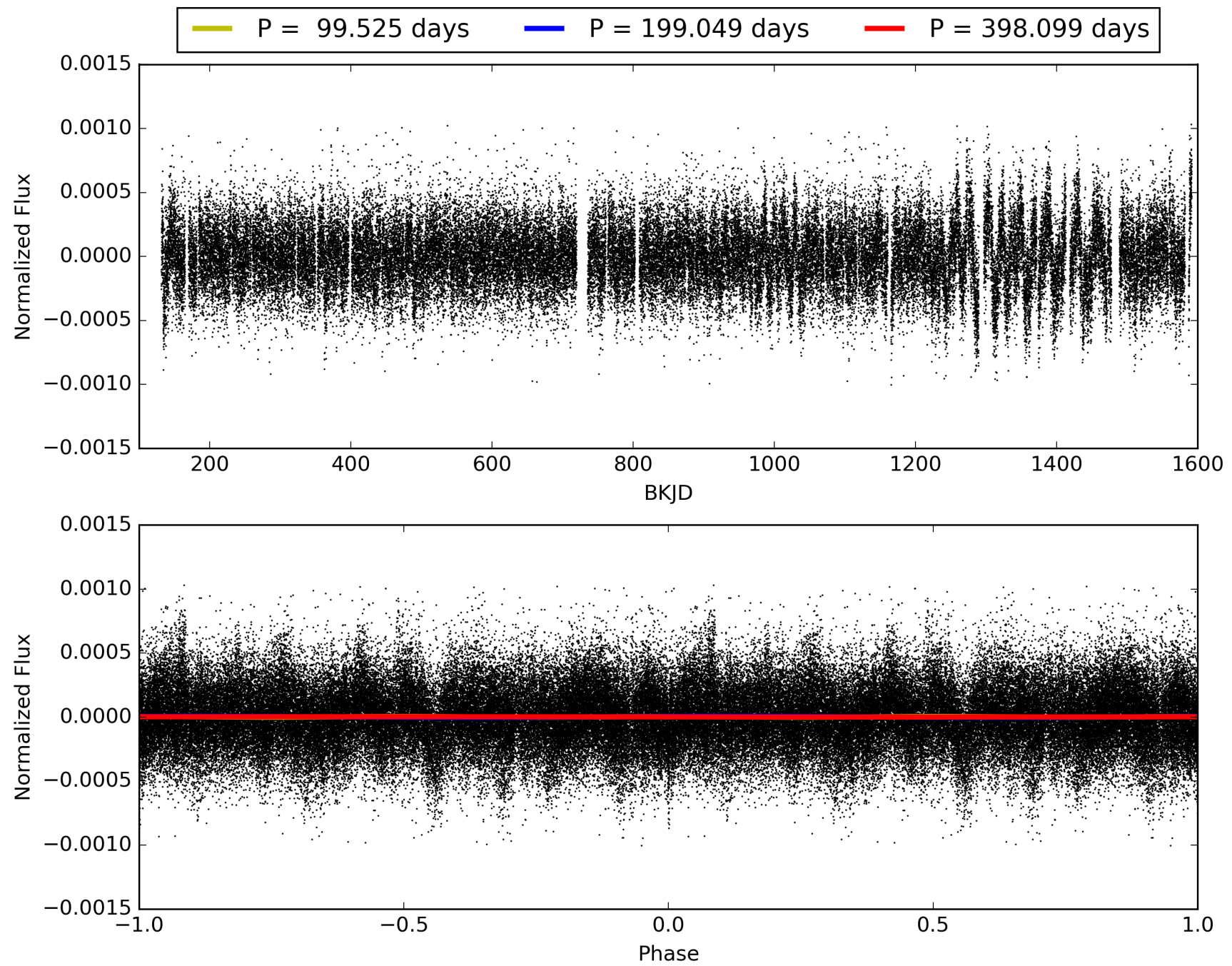
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:56:12 Z

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

TCE 010977671-01, PDC Light Curves

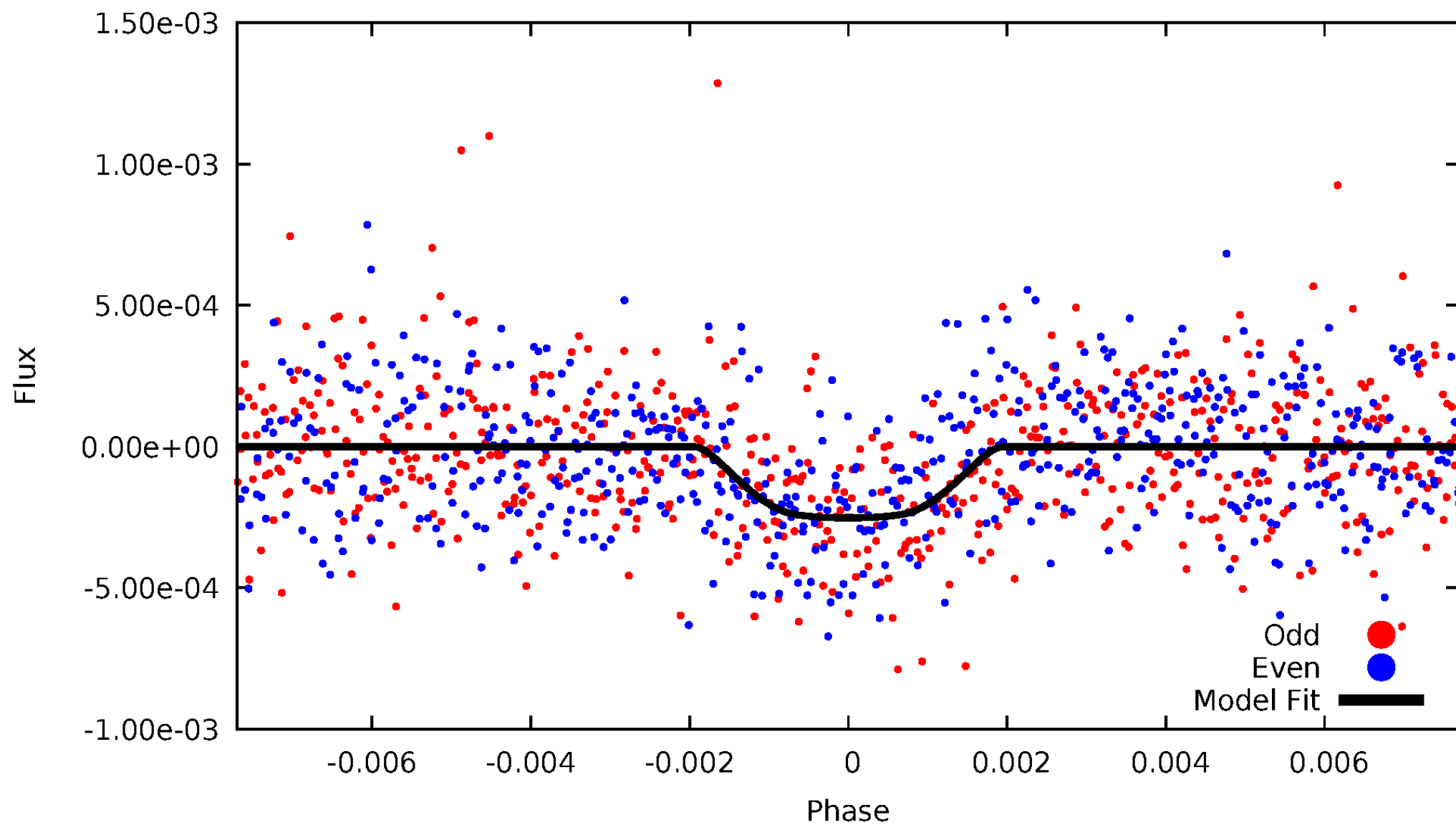


TCE 010977671-01



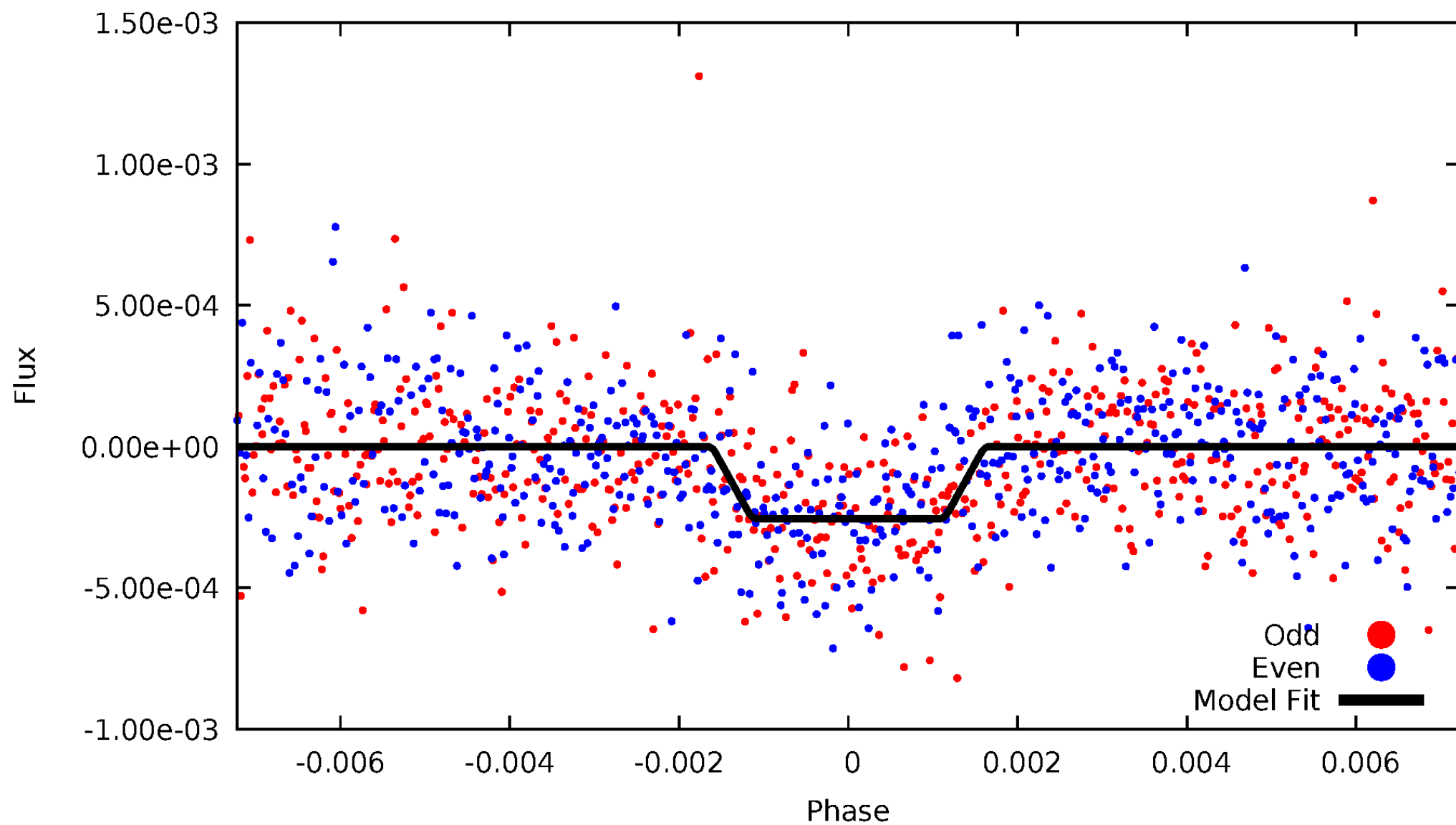
DV Odd/Even

TCE 010977671-01



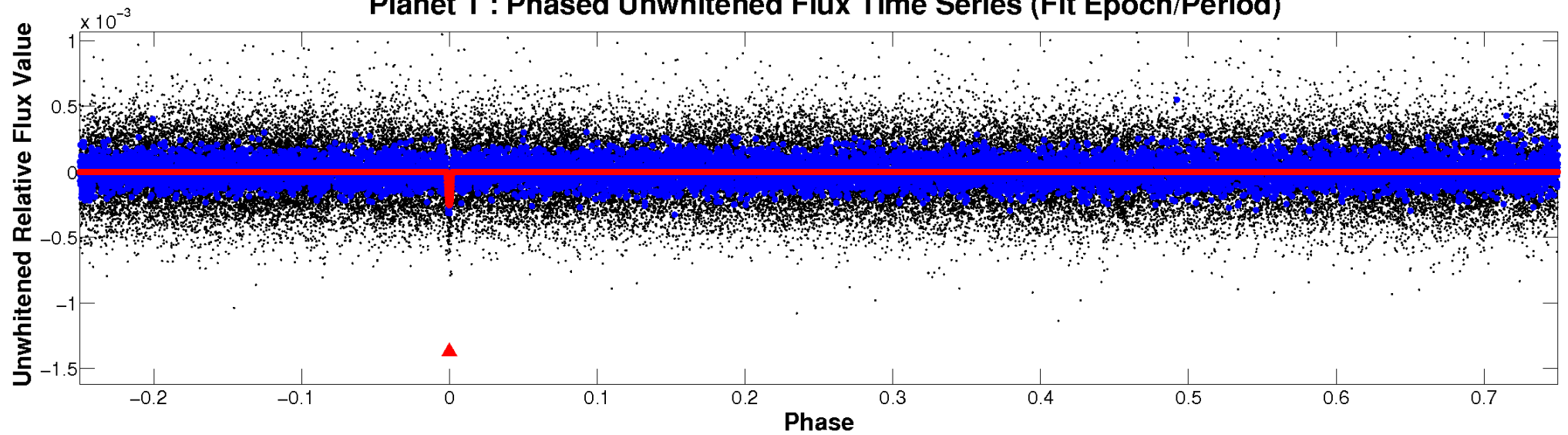
ALT Odd/Even

TCE 010977671-01

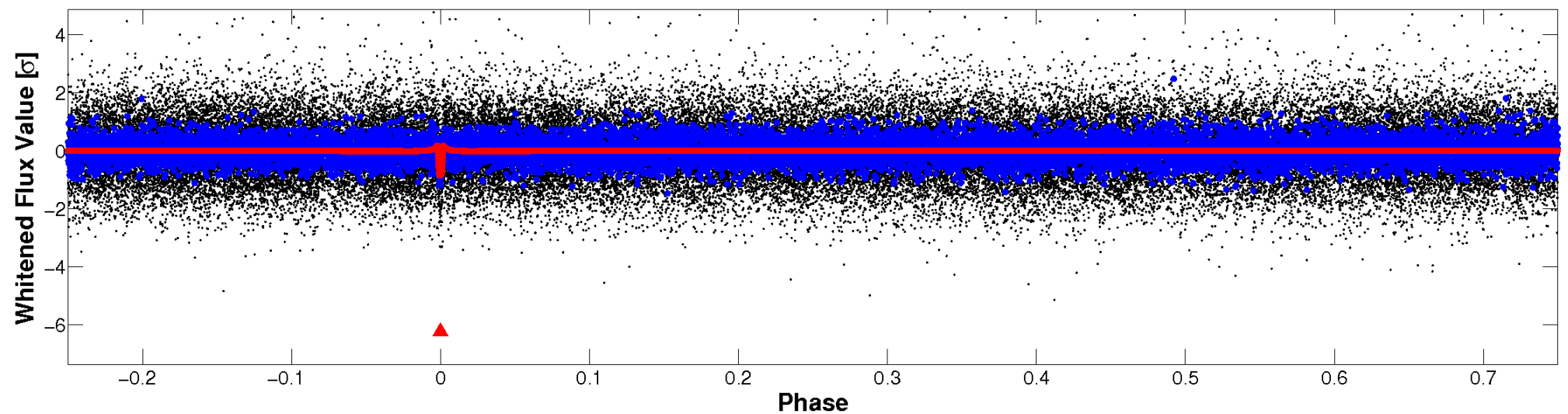


Non-Whitened Vs. Whitened Light Curve

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

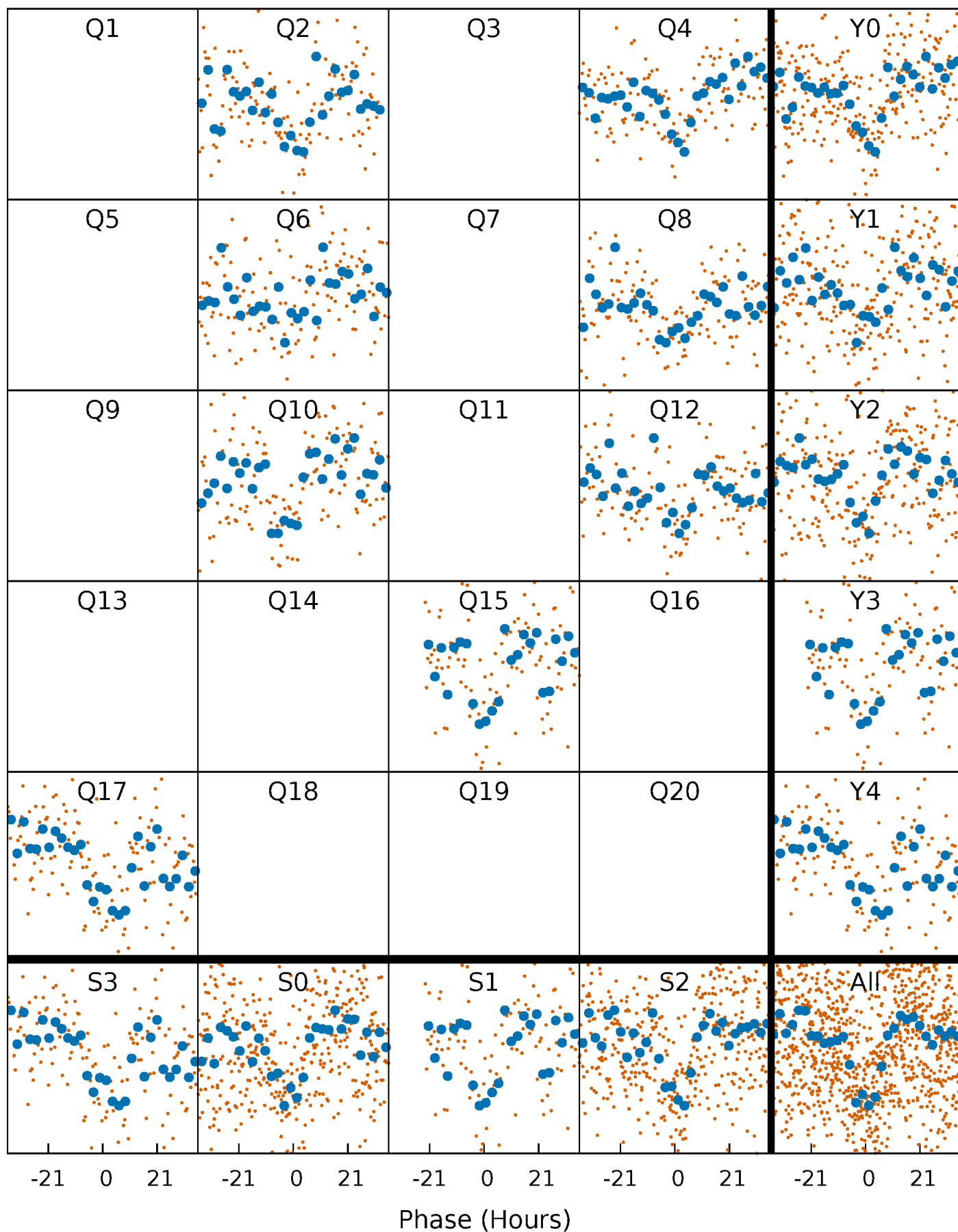


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010977671-01 P=199.049410 Days $T_0=180.155317$ (BKJD)



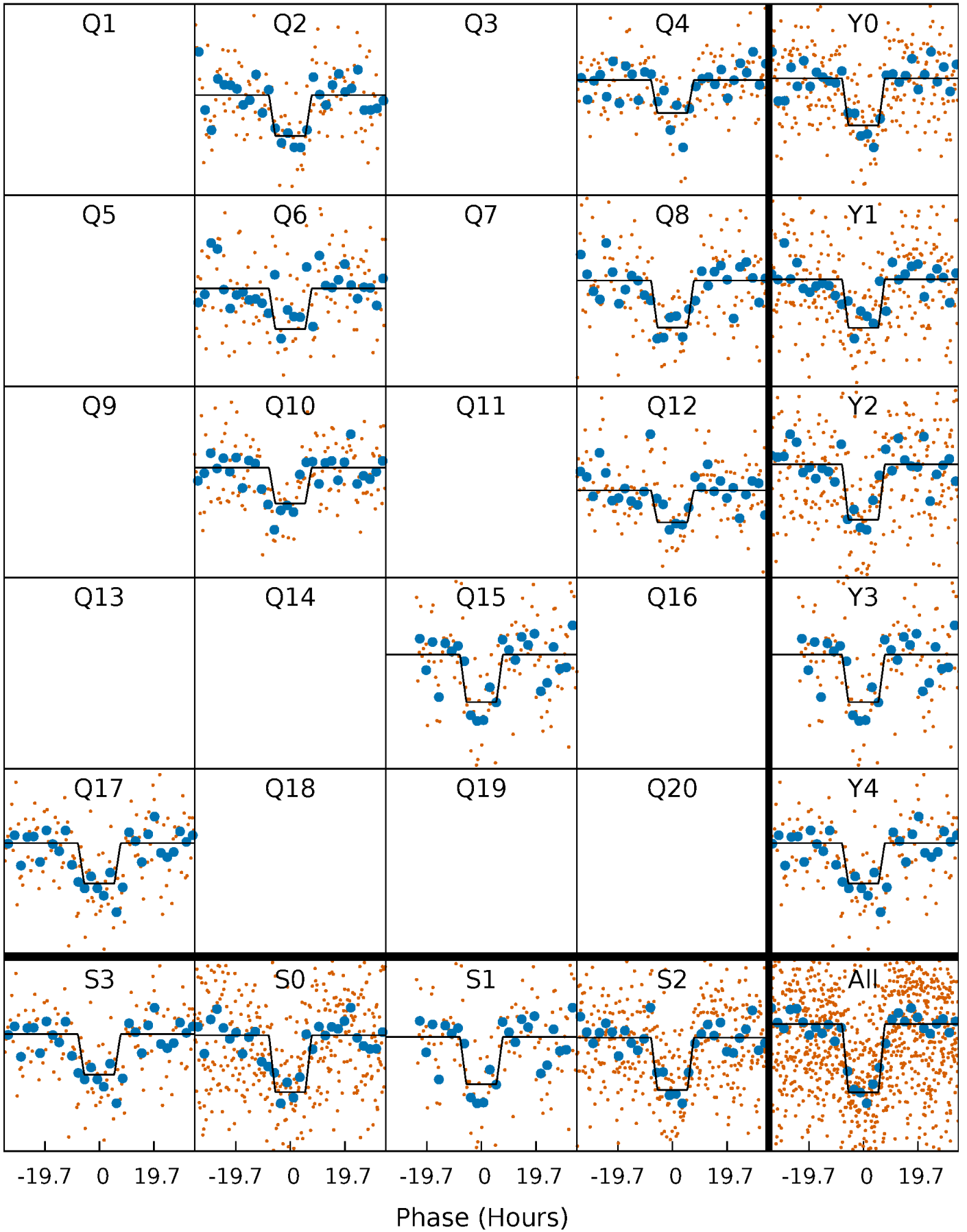
DV Quarter-Phased Transit Curves

TCE 010977671-01 P=199.049410 Days $T_0=180.155317$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

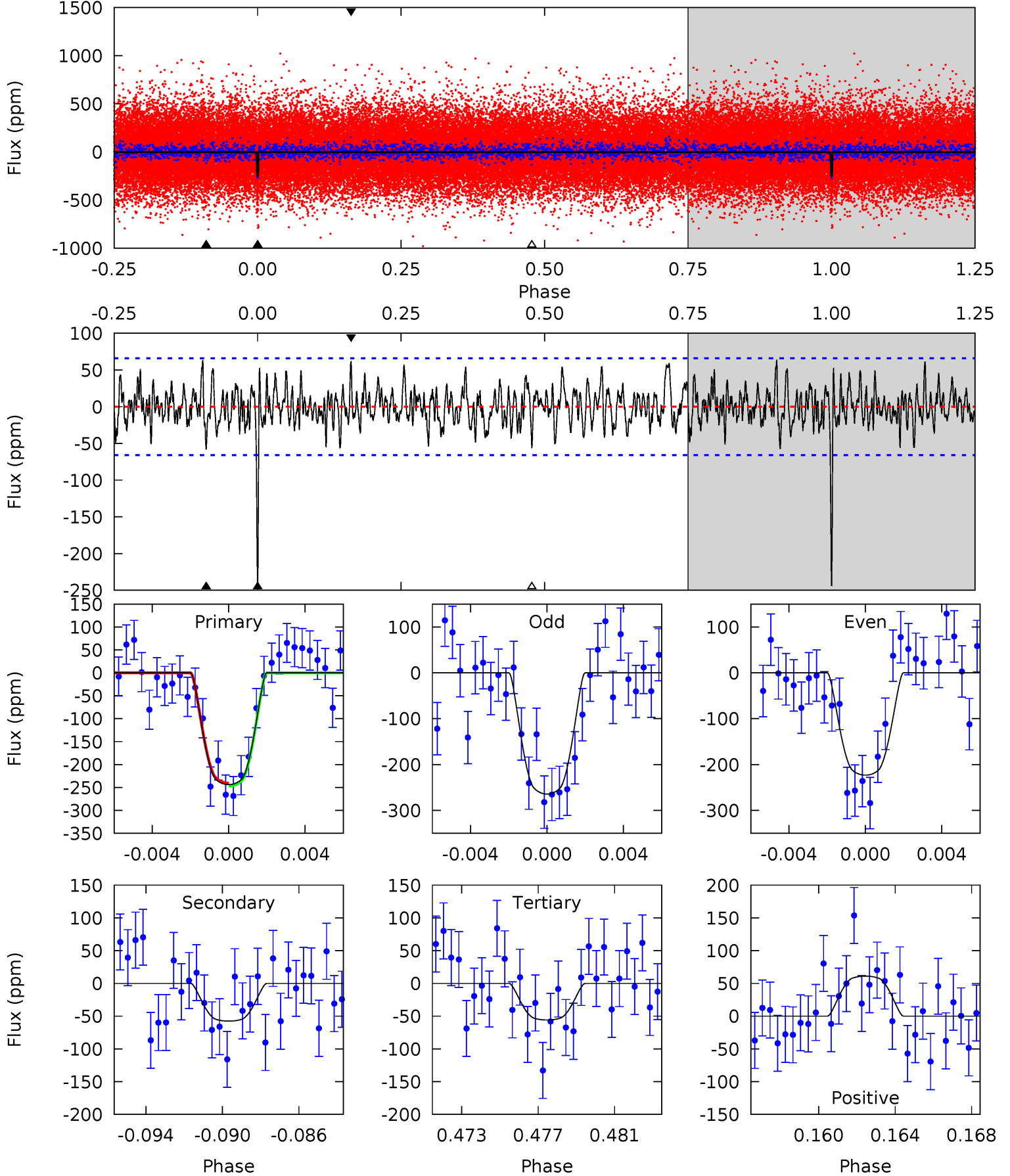
TCE 010977671-01 P=199.056930 Days $T_0=180.140739$ (BKJD)



DV Model-Shift Uniqueness Test

010977671-01, P = 199.049410 Days, E = 180.155317 Days

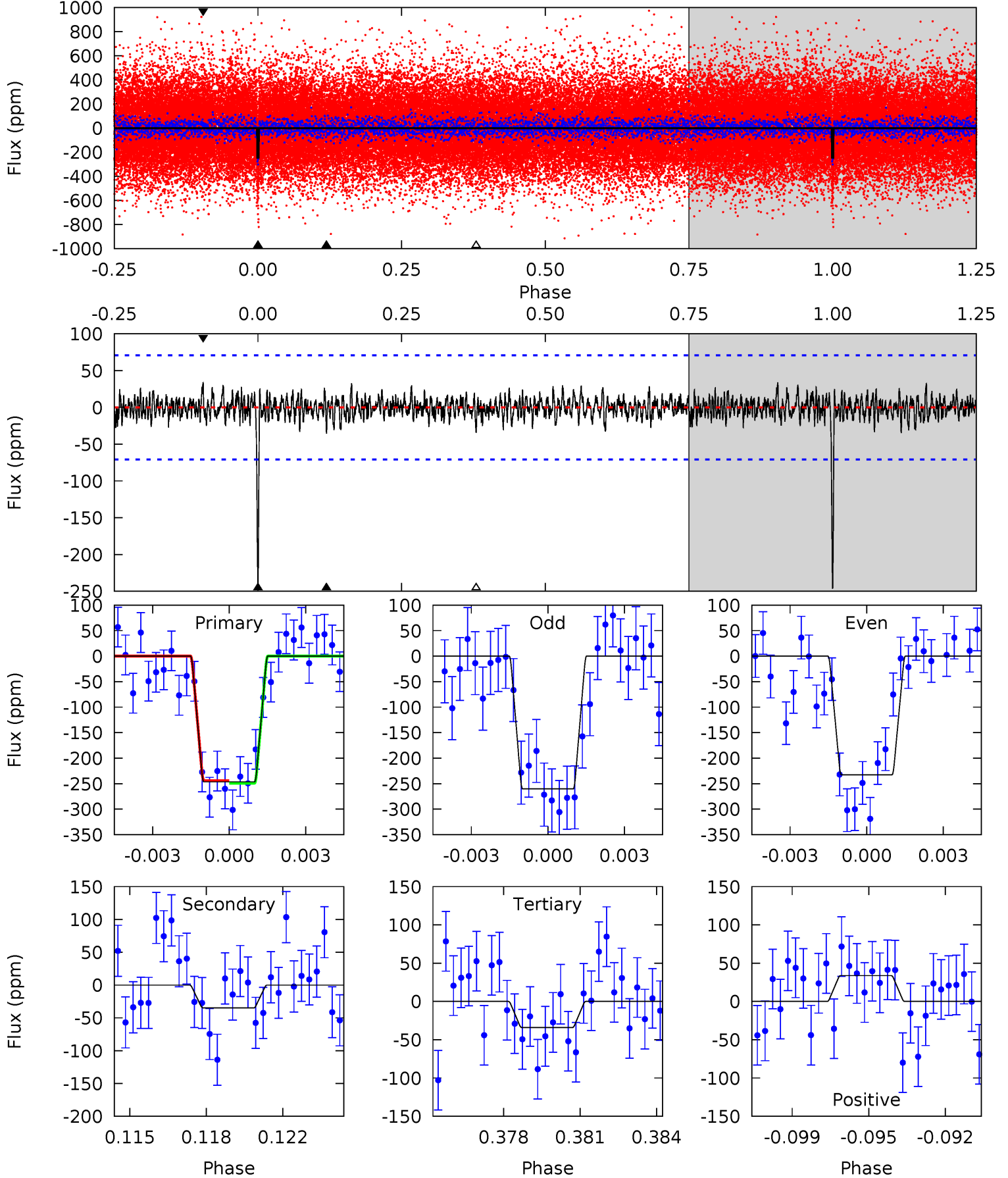
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	4.54	4.41	4.81	5.20	2.89	1.63	14.8	14.4	0.13	-0.27	1.62	0.96	0.21	0.26



Alt Model-Shift Uniqueness Test

010977671-01, P = 199.056930 Days, E = 180.140739 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	2.58	2.52	2.50	5.24	2.94	0.79	15.7	15.7	0.06	0.08	1.02	0.93	0.12	0.18



Stellar Parameters For KIC 010977671

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5157^{+77}_{-141}	$3.541^{+0.168}_{-0.112}$	$0.000^{+0.100}_{-0.200}$	$3.436^{+0.489}_{-0.909}$	$1.496^{+0.166}_{-0.388}$	$0.052^{+0.053}_{-0.016}$
	+1%/-3%	+5%/-3%	+inf%/-inf%	+14%/-26%	+11%/-26%	+103%/-32%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 010977671-01 / KOI 5846.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-58 ± 13	$7.53^{+0.99}_{-1.27}$	671^{+31}_{-42}	3556^{+180}_{-158}	326^{+143}_{-95}
Alt.	-35 ± 14	$5.87^{+1.07}_{-0.92}$	671^{+33}_{-43}	3551^{+234}_{-287}	319^{+173}_{-138}

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

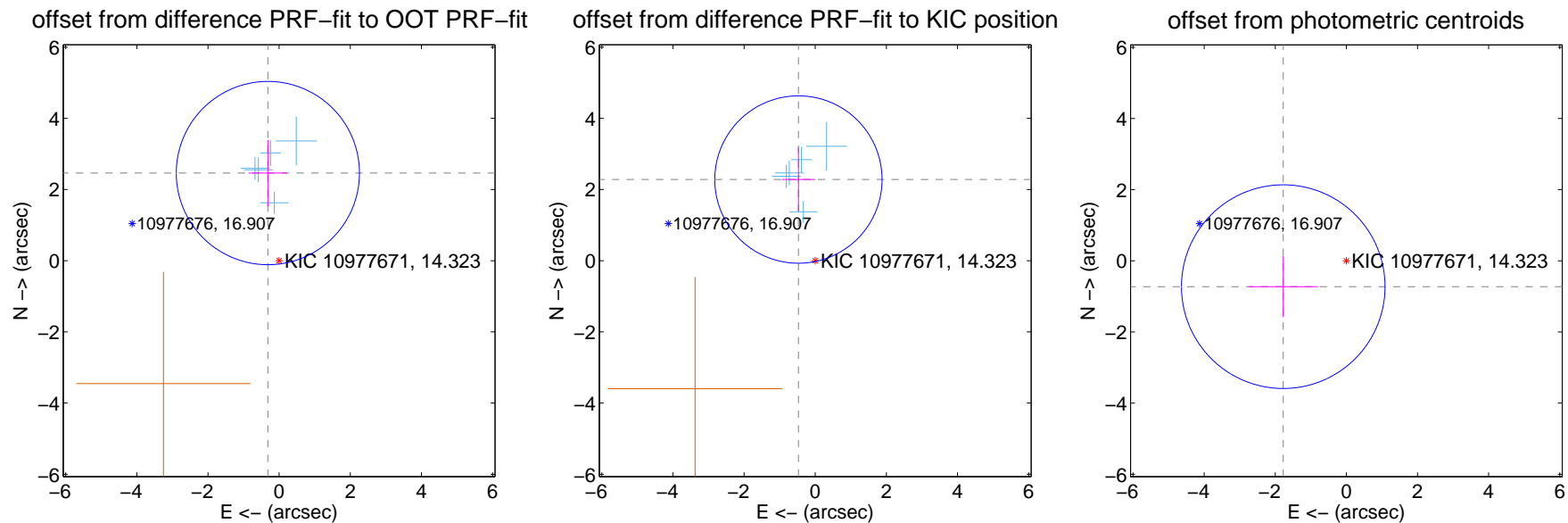
DV Centroid Data

Supplemental centroid analysis for 010977671-01. Kepler magnitude: 14.32. Transit SNR 10.78

There are 5 quarters with good PRF difference image offsets

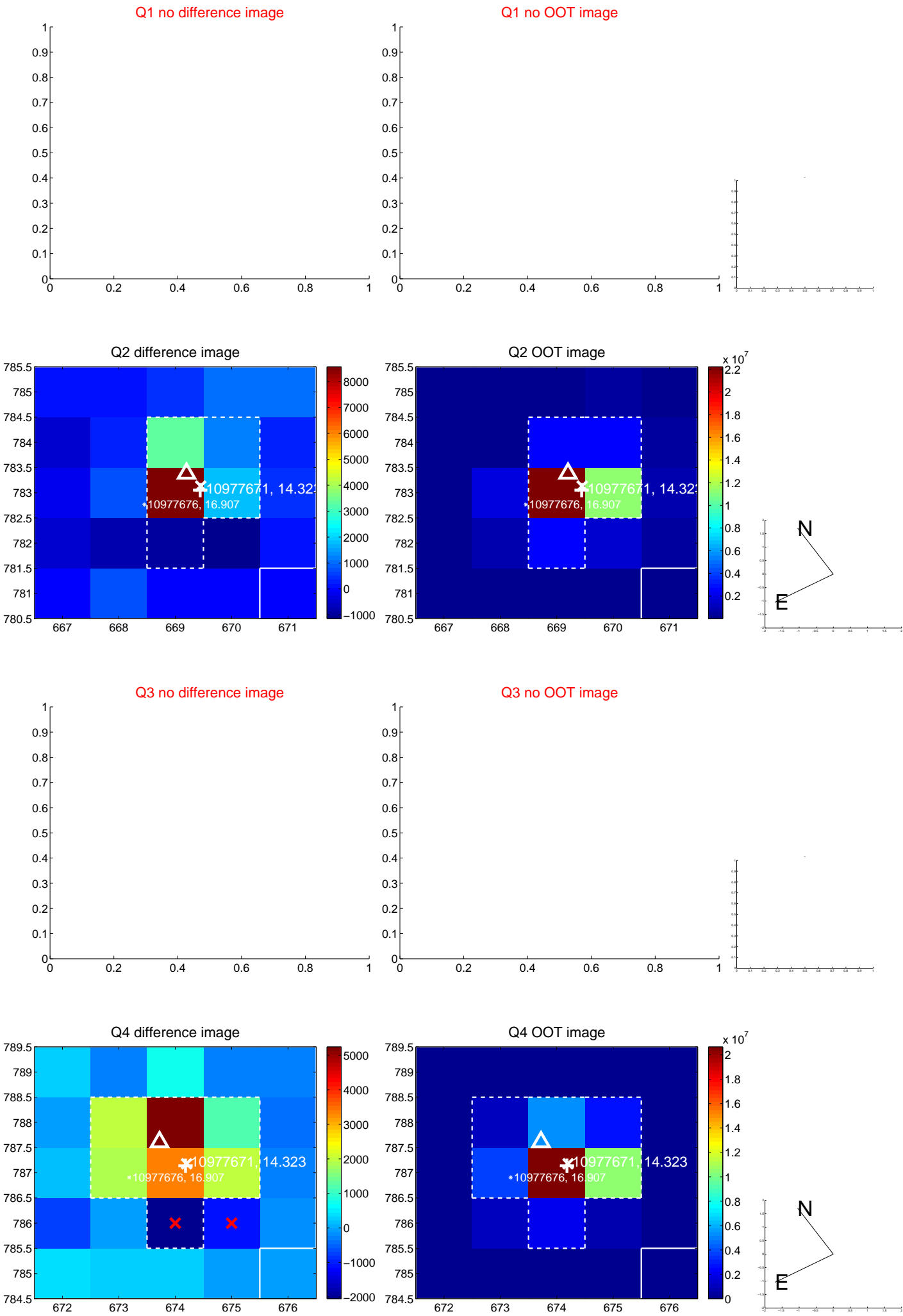
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.483 ± 0.858	2.89	0.317 ± 0.544	2.462 ± 0.931
PRF-fit source offset from KIC position	2.329 ± 0.784	2.97	0.474 ± 0.466	2.280 ± 0.890
photometric centroid source offset	1.92 ± 0.95	2.01	1.78 ± 0.97	-0.73 ± 0.86

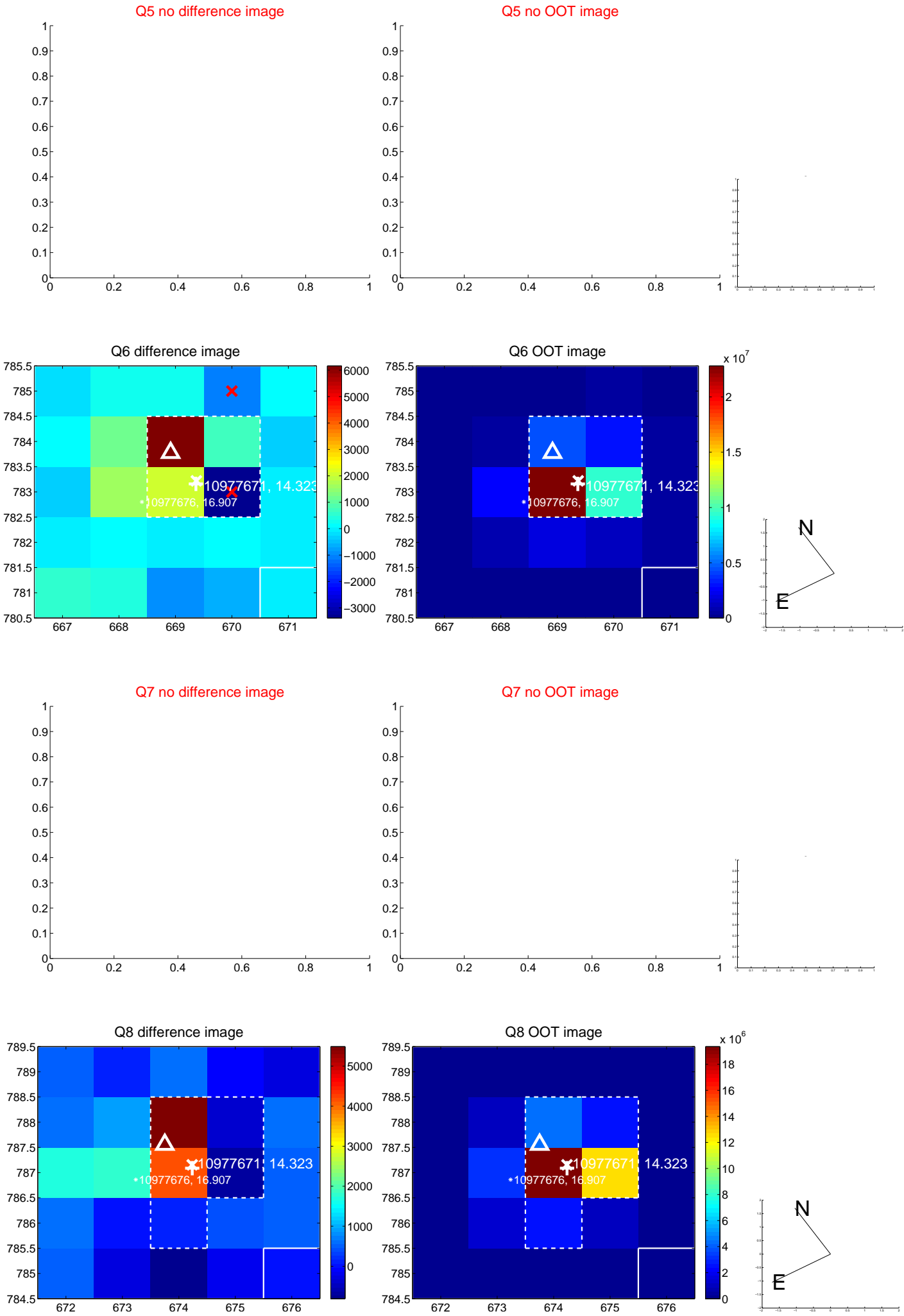


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

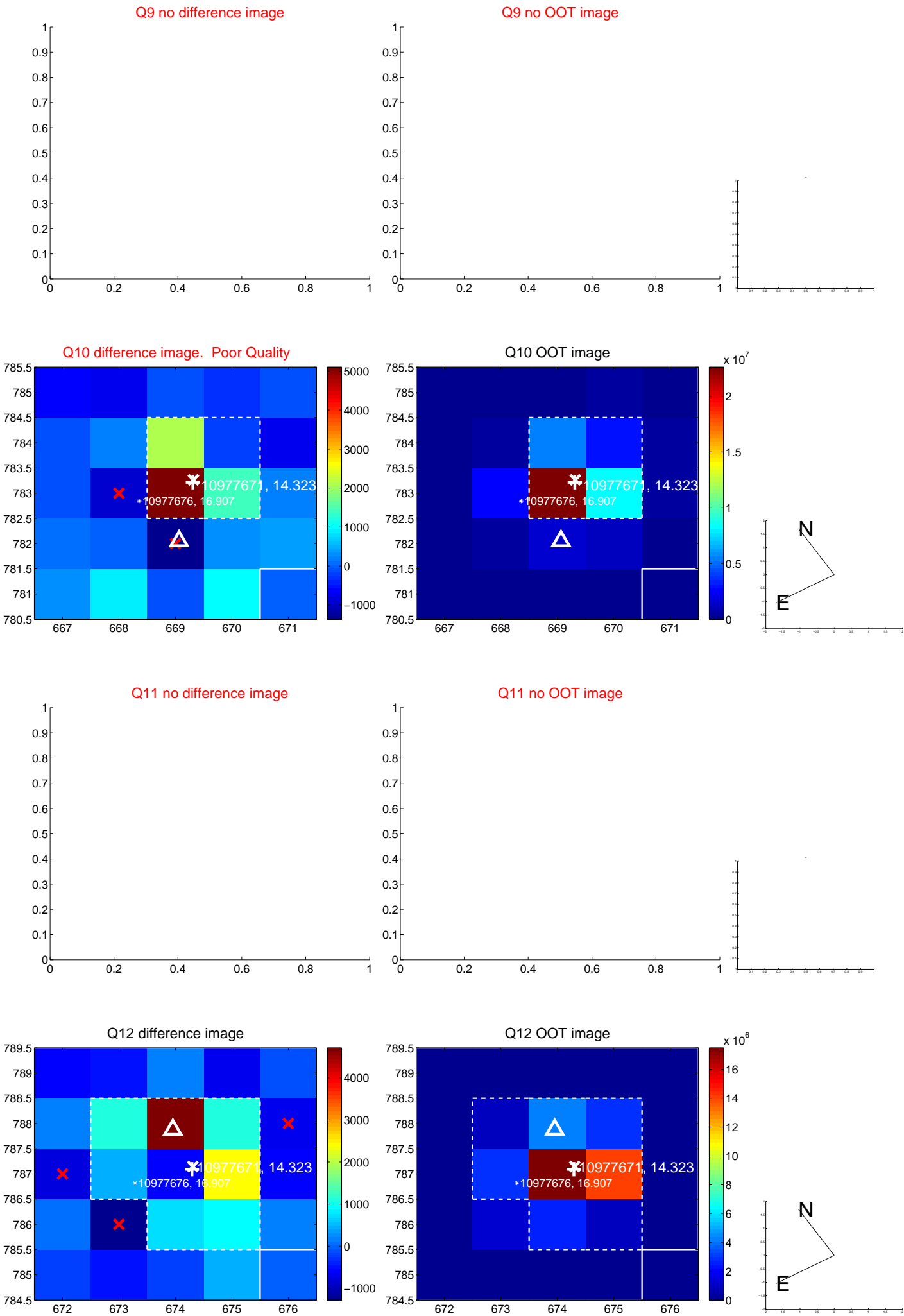
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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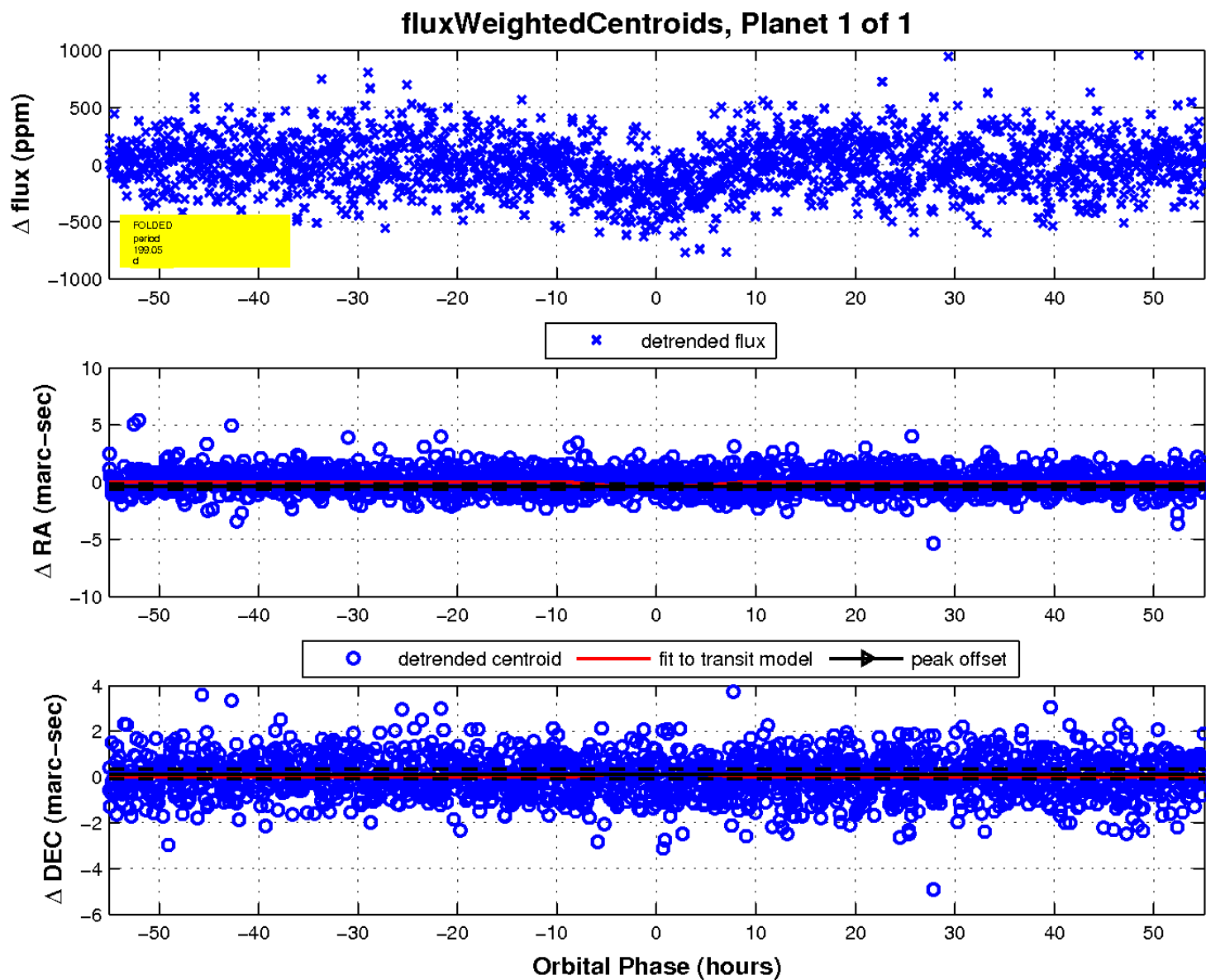
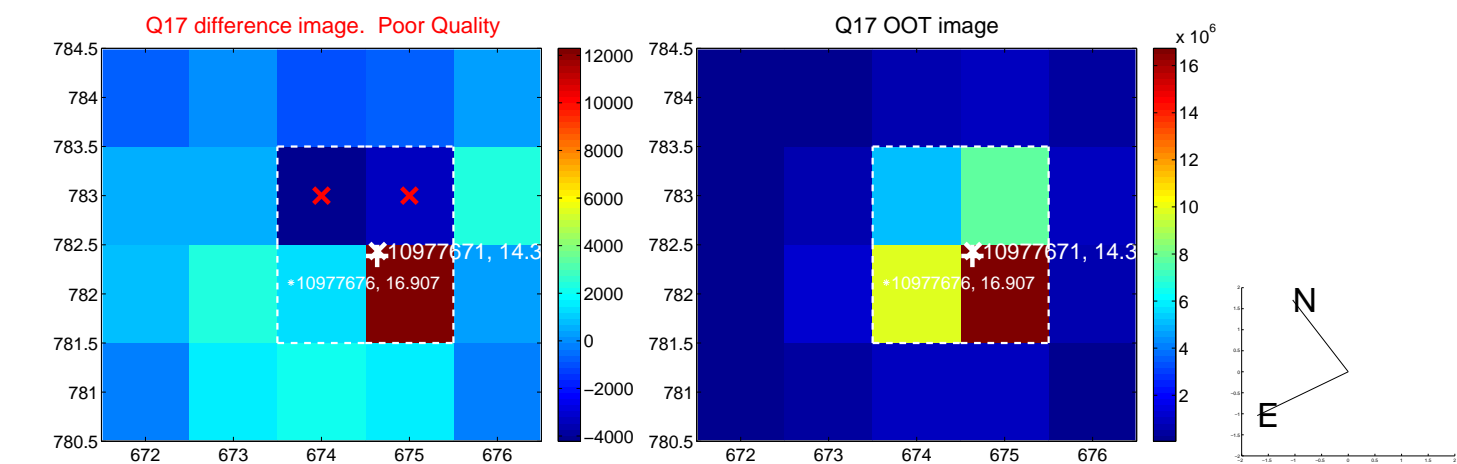
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UKIRT Image

Declination

