

KIC 004676964

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})
004676964-01	OBS	3069.01	43.102690	140.134074	308.8	7.250	12.8	13.2	1.10	5741	2.05	20.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004676964-01	OBS	PC	1.00	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.

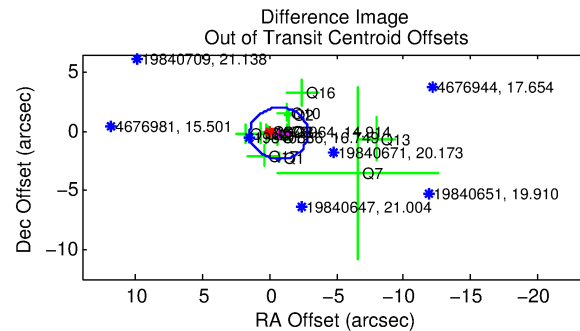
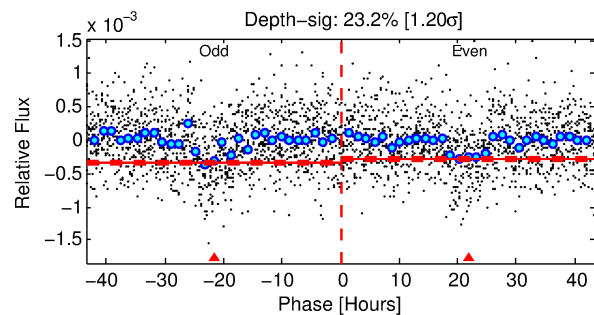
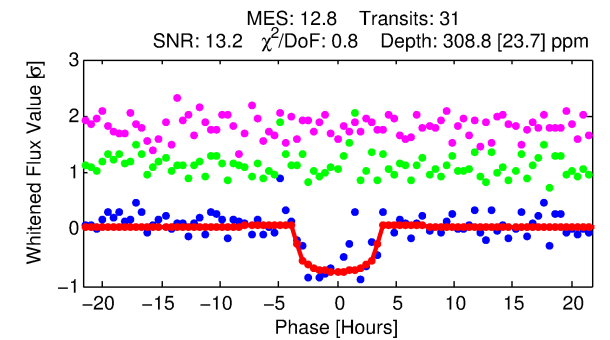
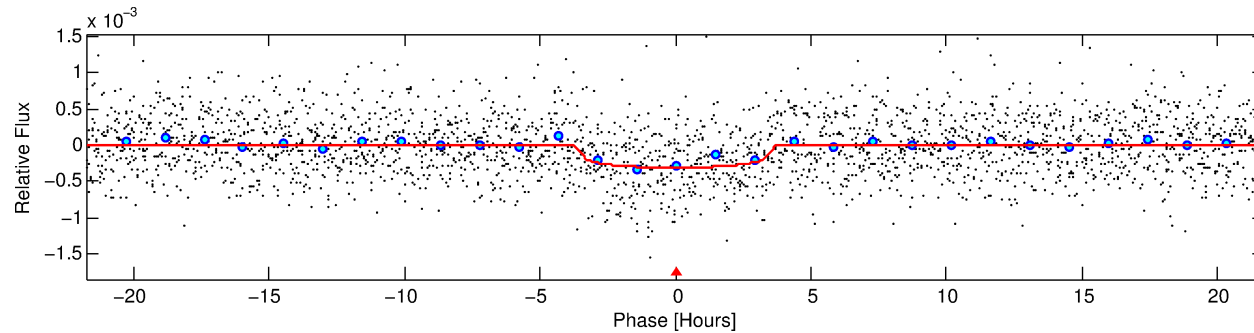
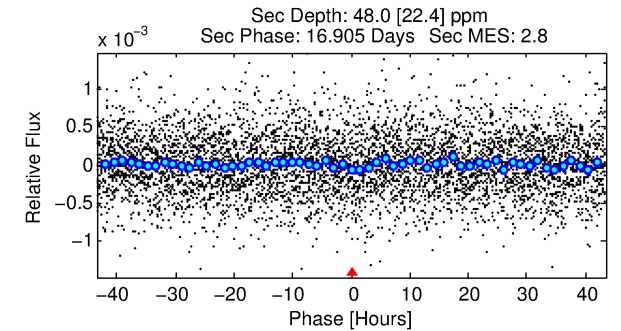
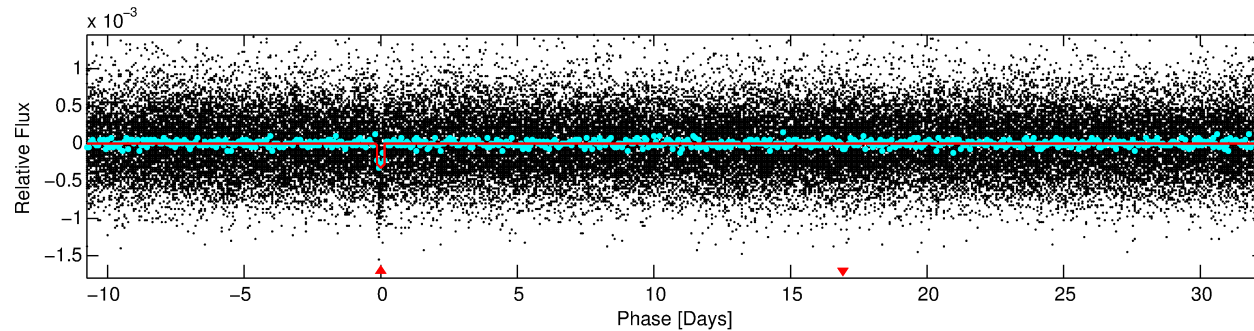
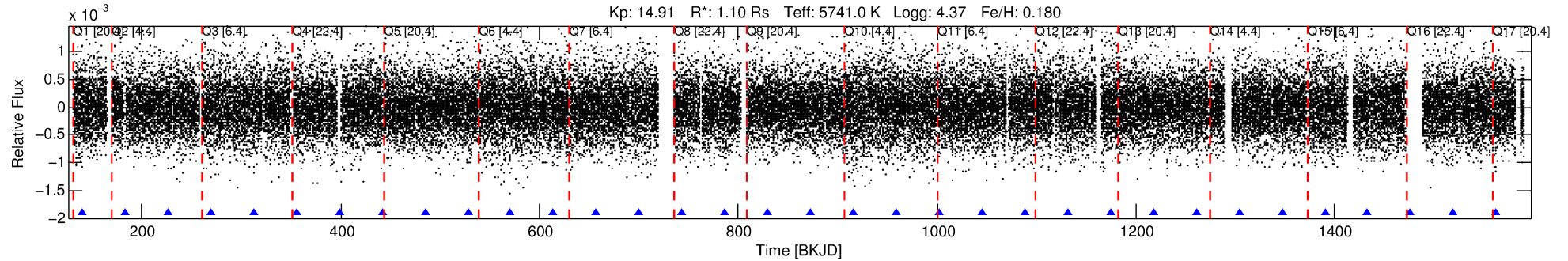
Ephemeris Match Information For 004676964-01

No Significant Match Found

DV One-Page Summary

KIC: 4676964 Candidate: 1 of 1 Period: 43.103 d

KOI: K03069.01 Corr: 0.967



DV Fit Results:

Period = 43.10269 [0.00054] d
Epoch = 140.1341 [0.0105] BKJD
Rp/R* = 0.0171 [0.0134]
a/R* = 34.25 [114.12]
b = 0.68 [2.64]
Seff = 20.00 [7.32]
Teff = 539 [49] K
Rp = 2.05 [1.70] Re
a = 0.2420 [0.0571] AU
Ag = 369.80 [617.32] [0.60 σ]
Teffp = 3656 [1498] K [2.08 σ]

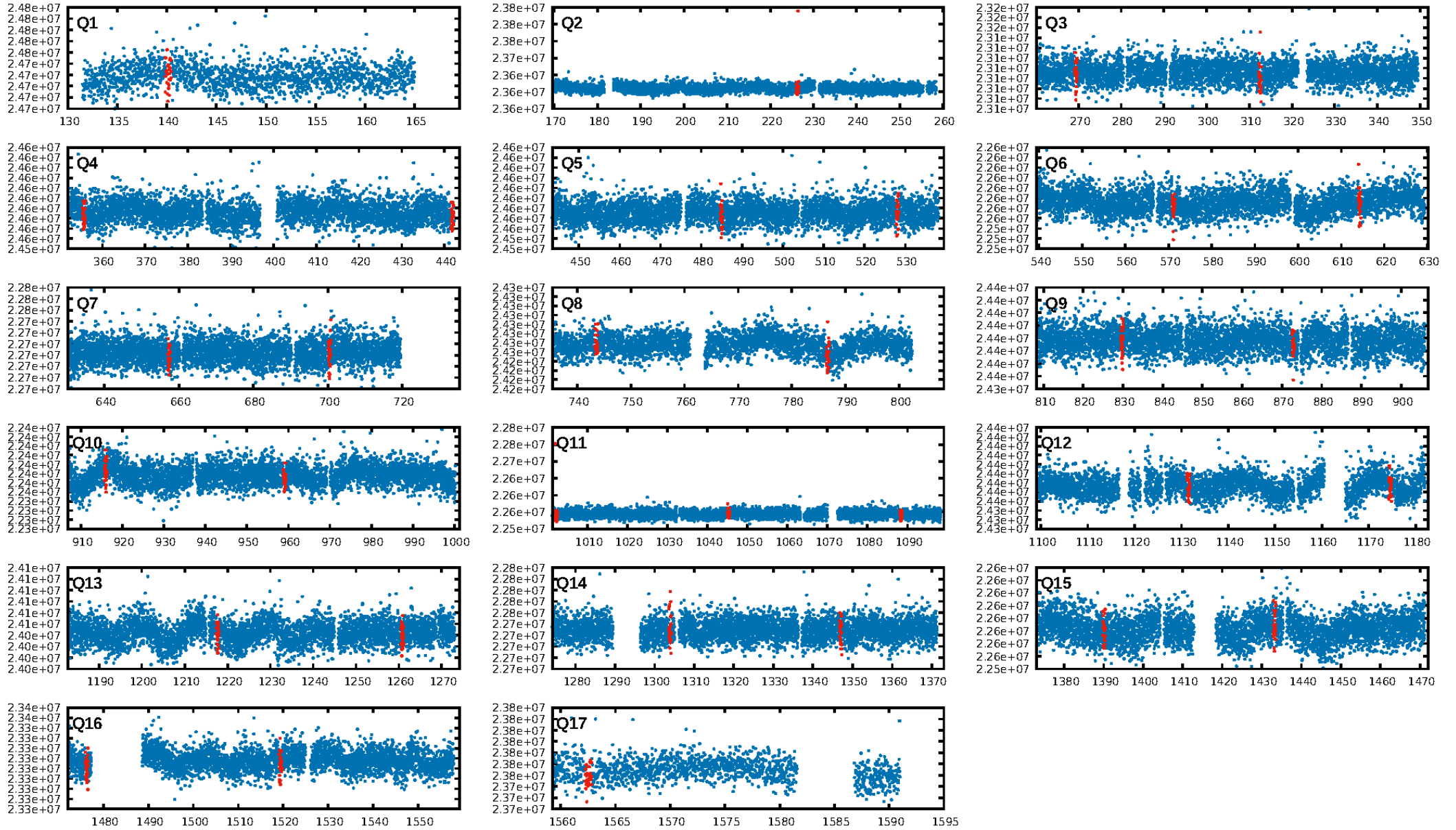
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 35.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.46e-37
RollingBand-fgt: 1.00 [29/29]
GhostDiagnostic-chr: 0.9109
Centroid-sig: 0.1%
Centroid-so: 1.314 arcsec [1.57 σ]
OotOffset-rm: 0.731 arcsec [1.01 σ]
KicOffset-rm: 0.792 arcsec [1.08 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 1.00 [17/17]

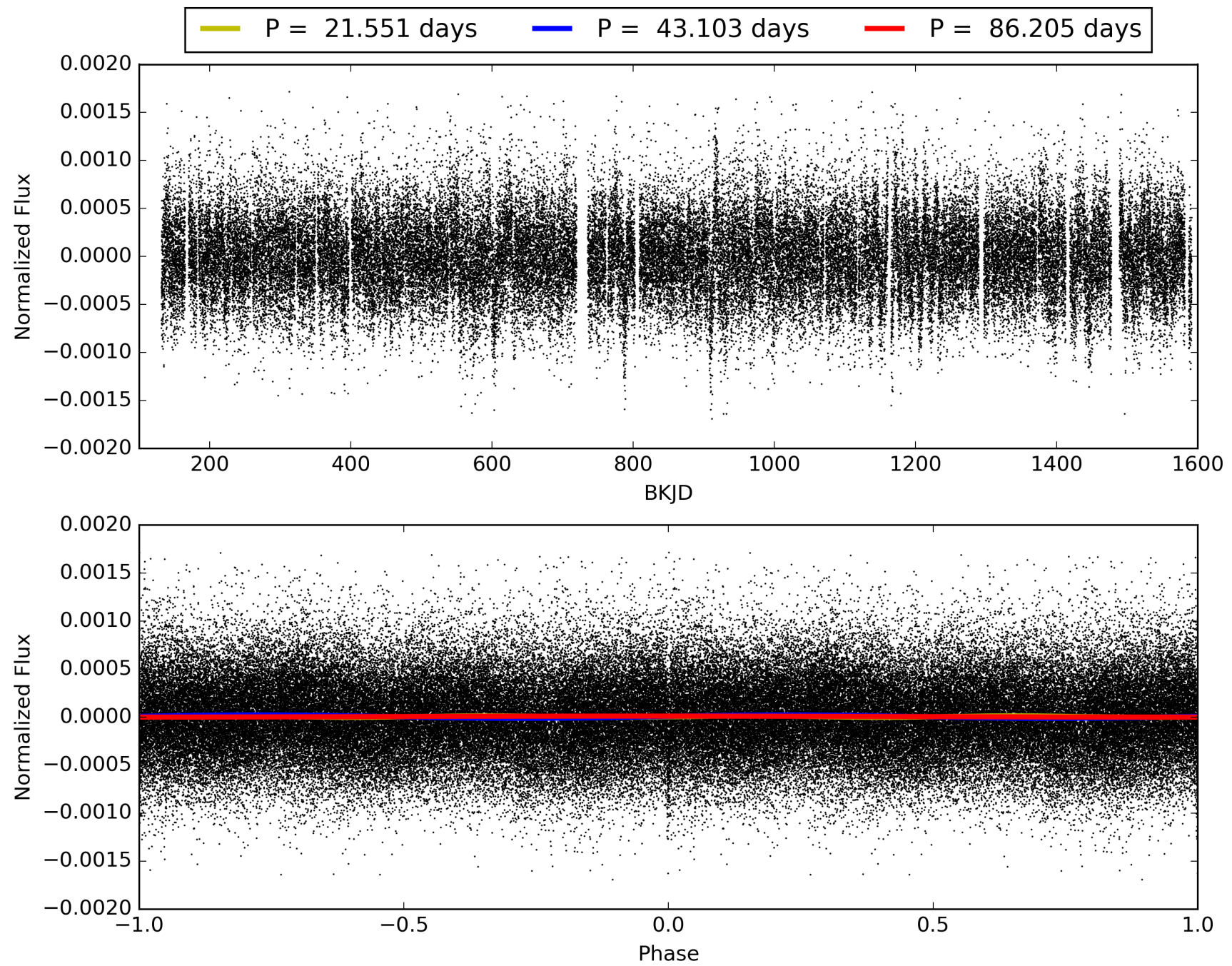
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:50:18 Z

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

TCE 004676964-01, PDC Light Curves

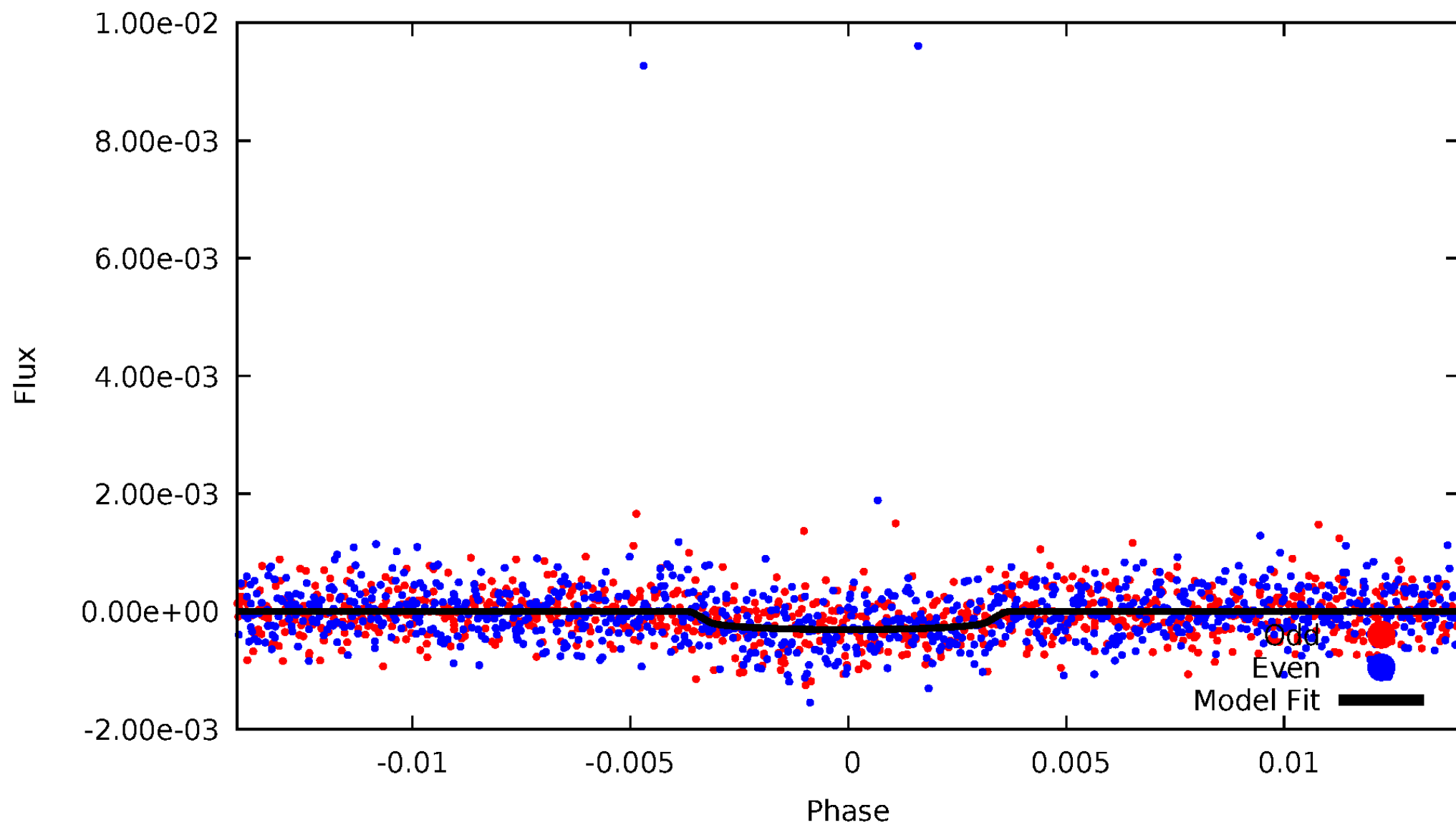


TCE 004676964-01



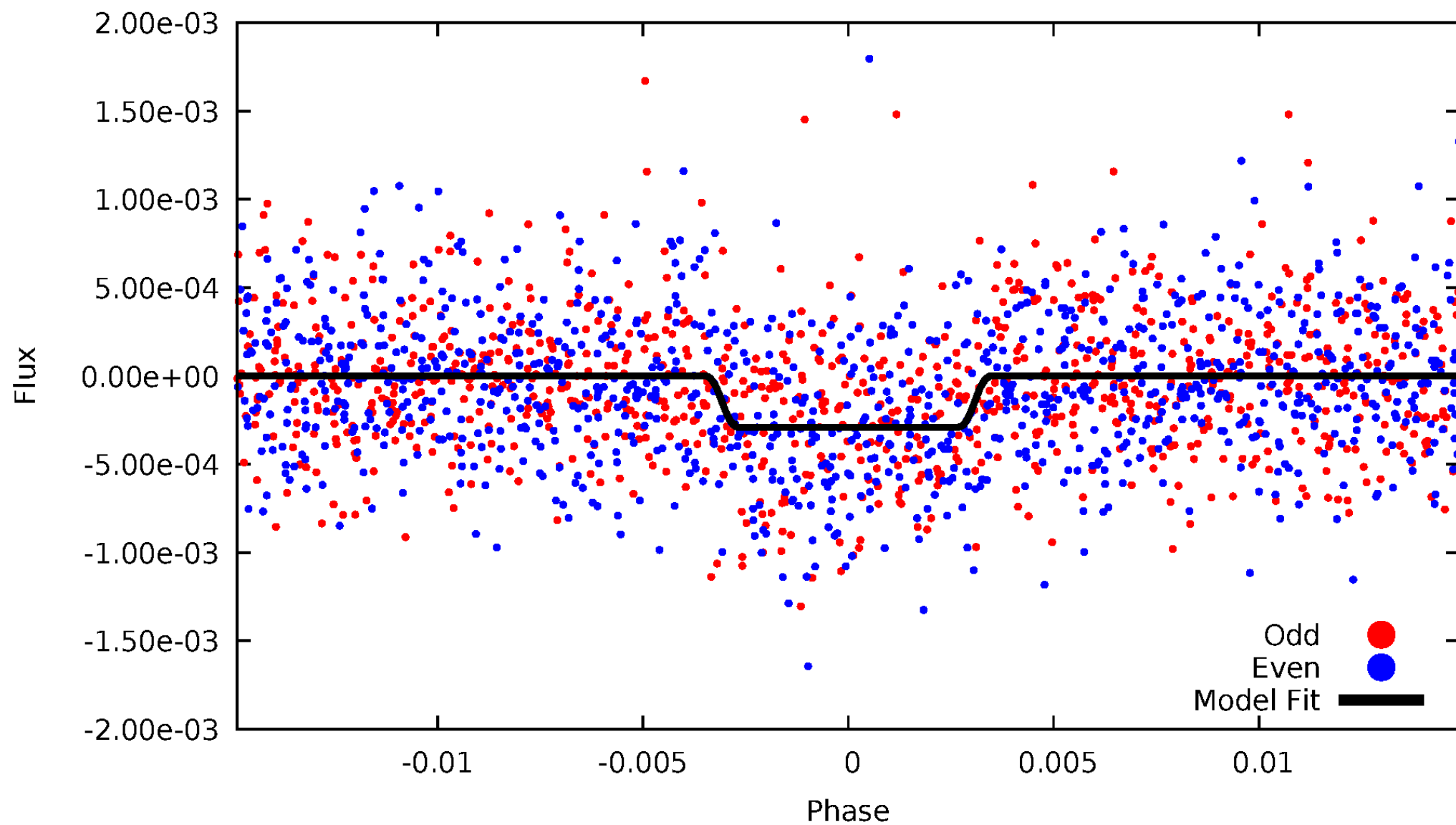
DV Odd/Even

TCE 004676964-01

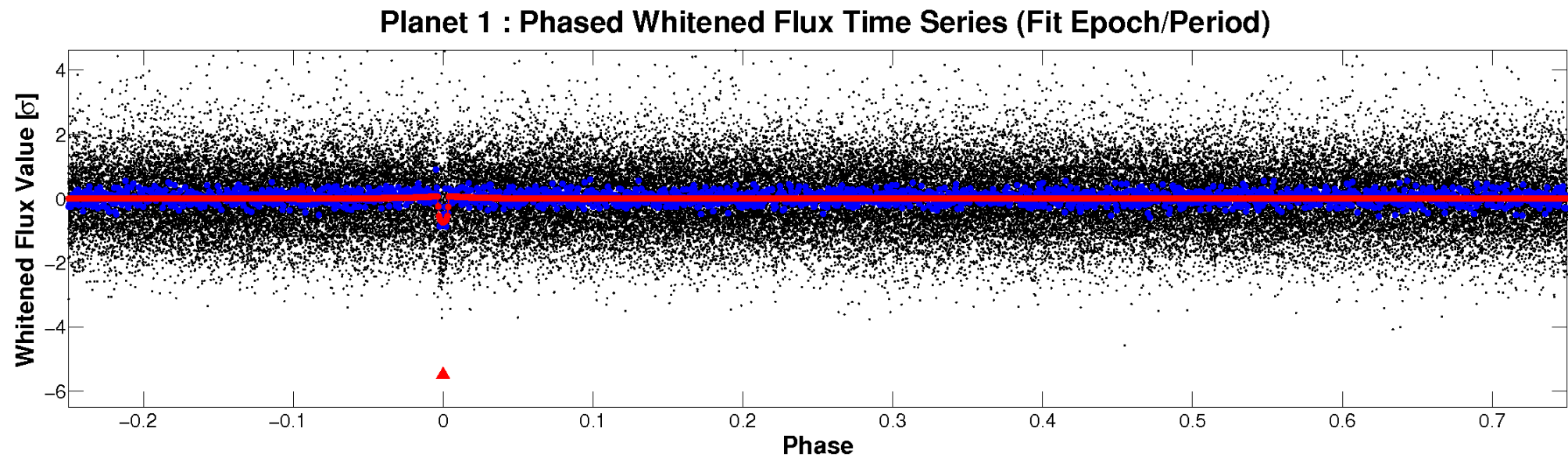
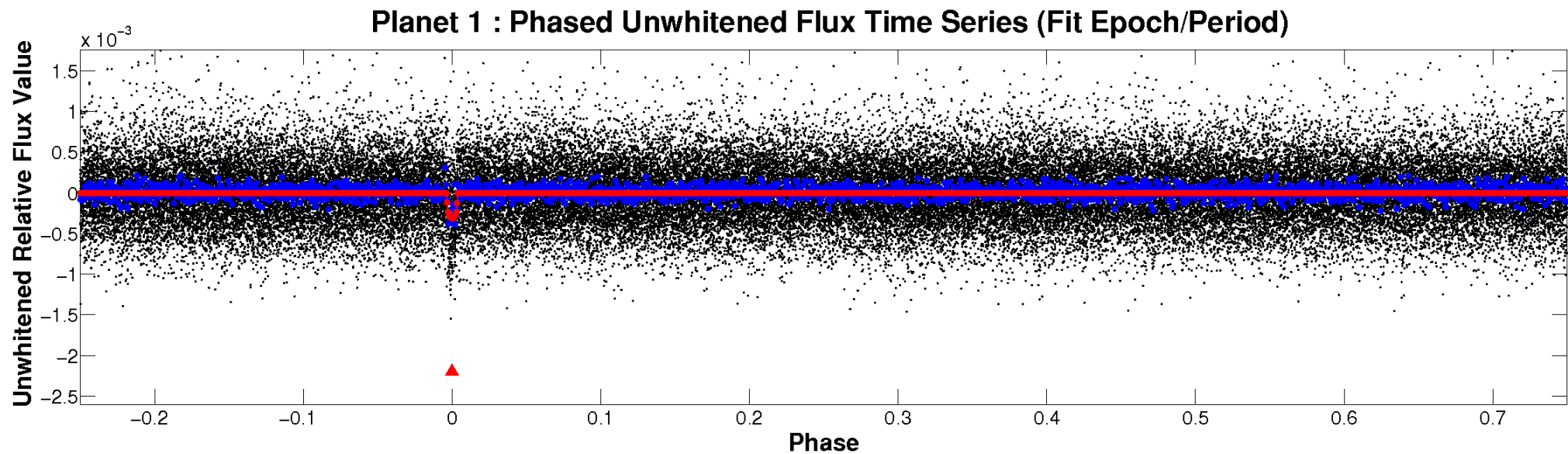


ALT Odd/Even

TCE 004676964-01

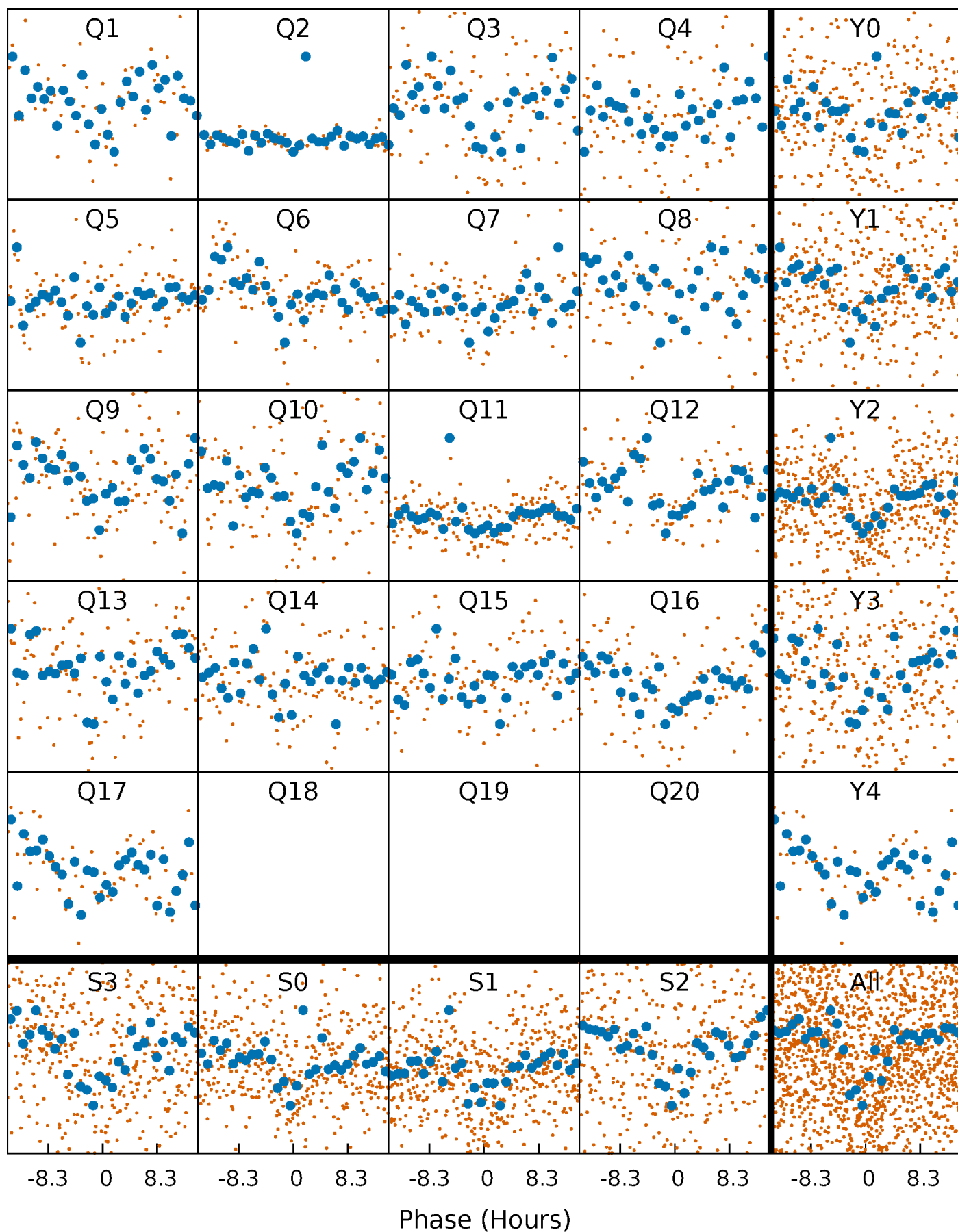


Non-Whitened Vs. Whitened Light Curve



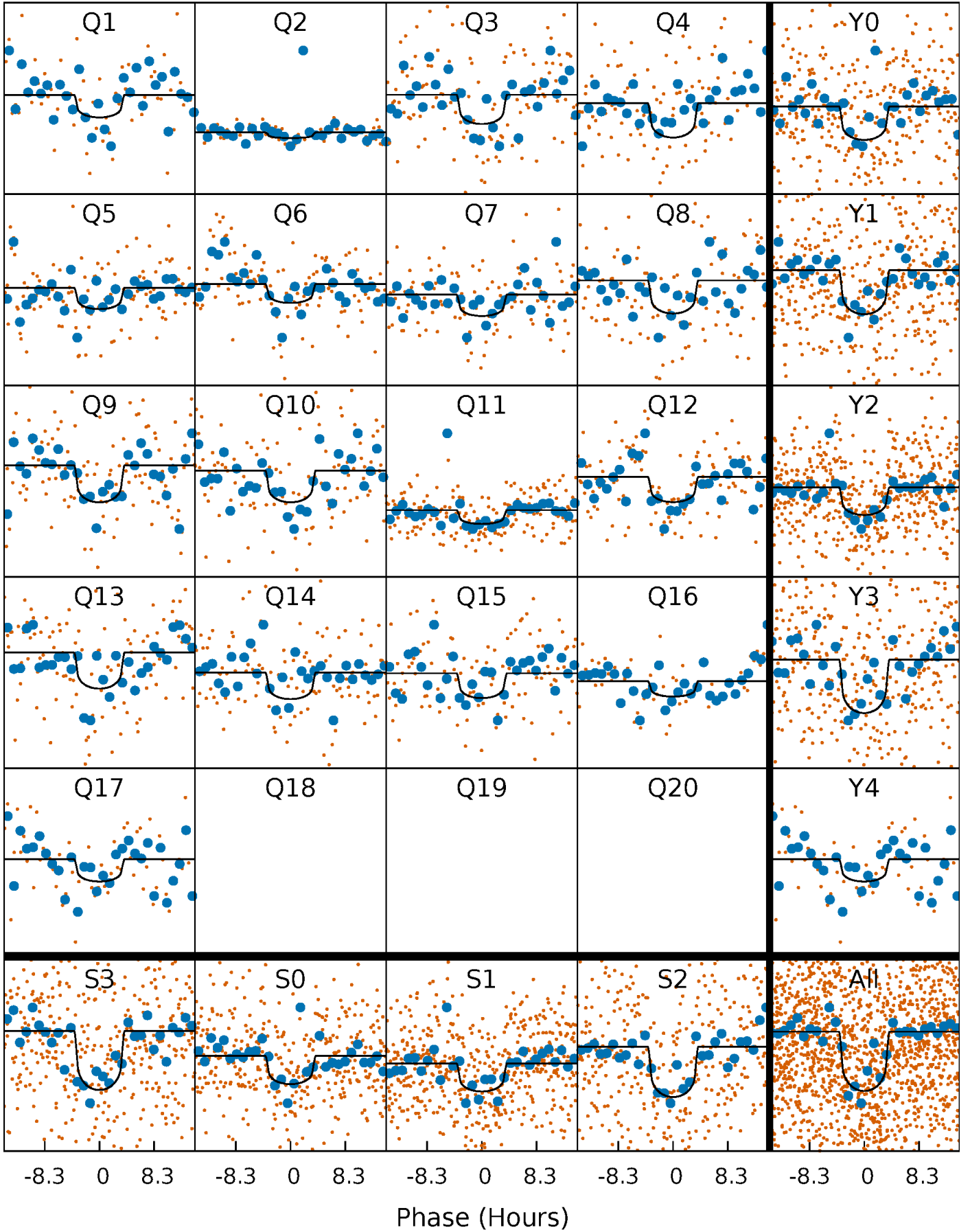
PDC Quarter-Phased Transit Curves

TCE 004676964-01 P= 43.102690 Days $T_0=140.134074$ (BKJD)



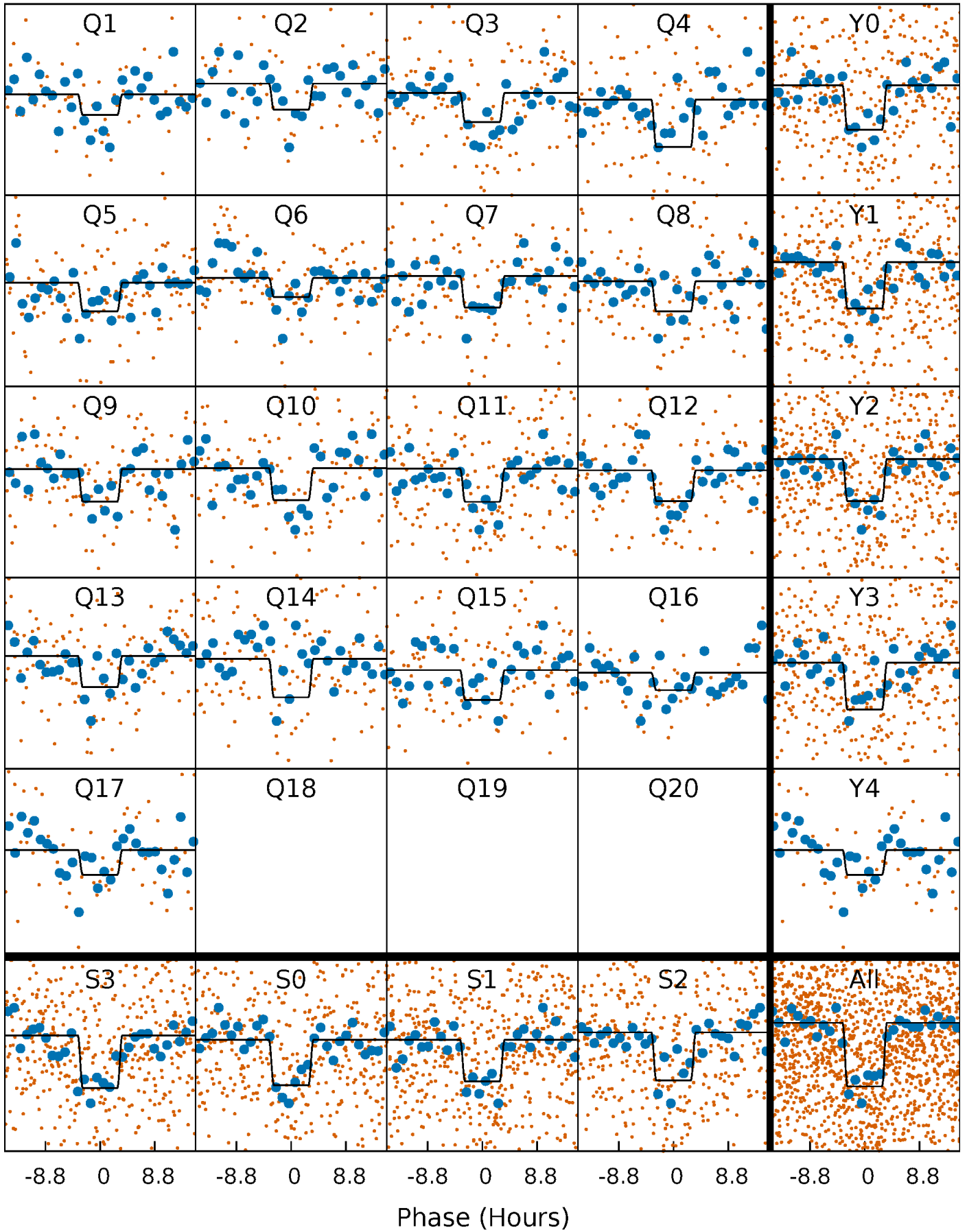
DV Quarter-Phased Transit Curves

TCE 004676964-01 P= 43.102690 Days $T_0=140.134074$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

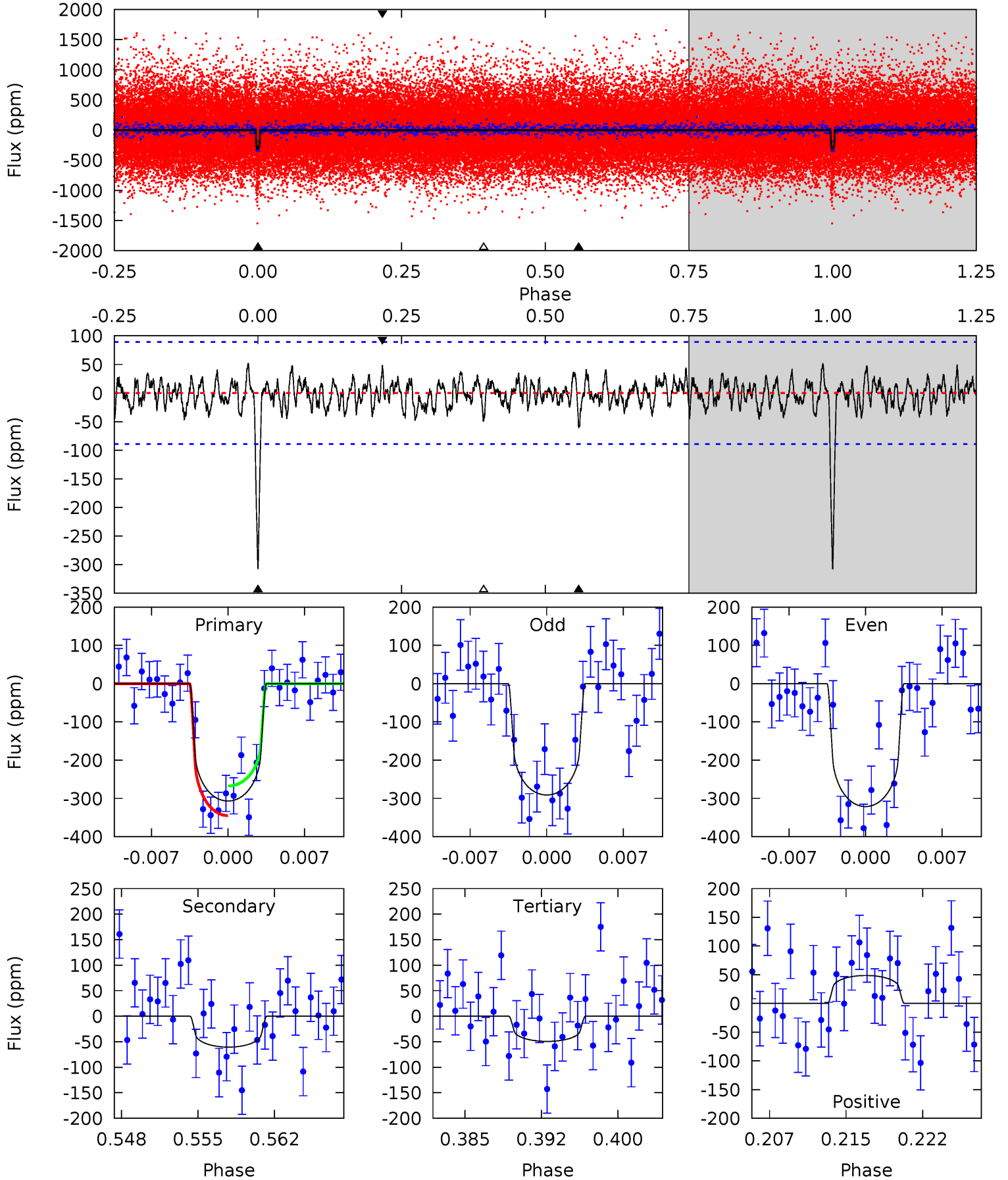
TCE 004676964-01 P= 43.102219 Days $T_0=140.143026$ (BKJD)



DV Model-Shift Uniqueness Test

004676964-01, P = 43.102690 Days, E = 97.031384 Days

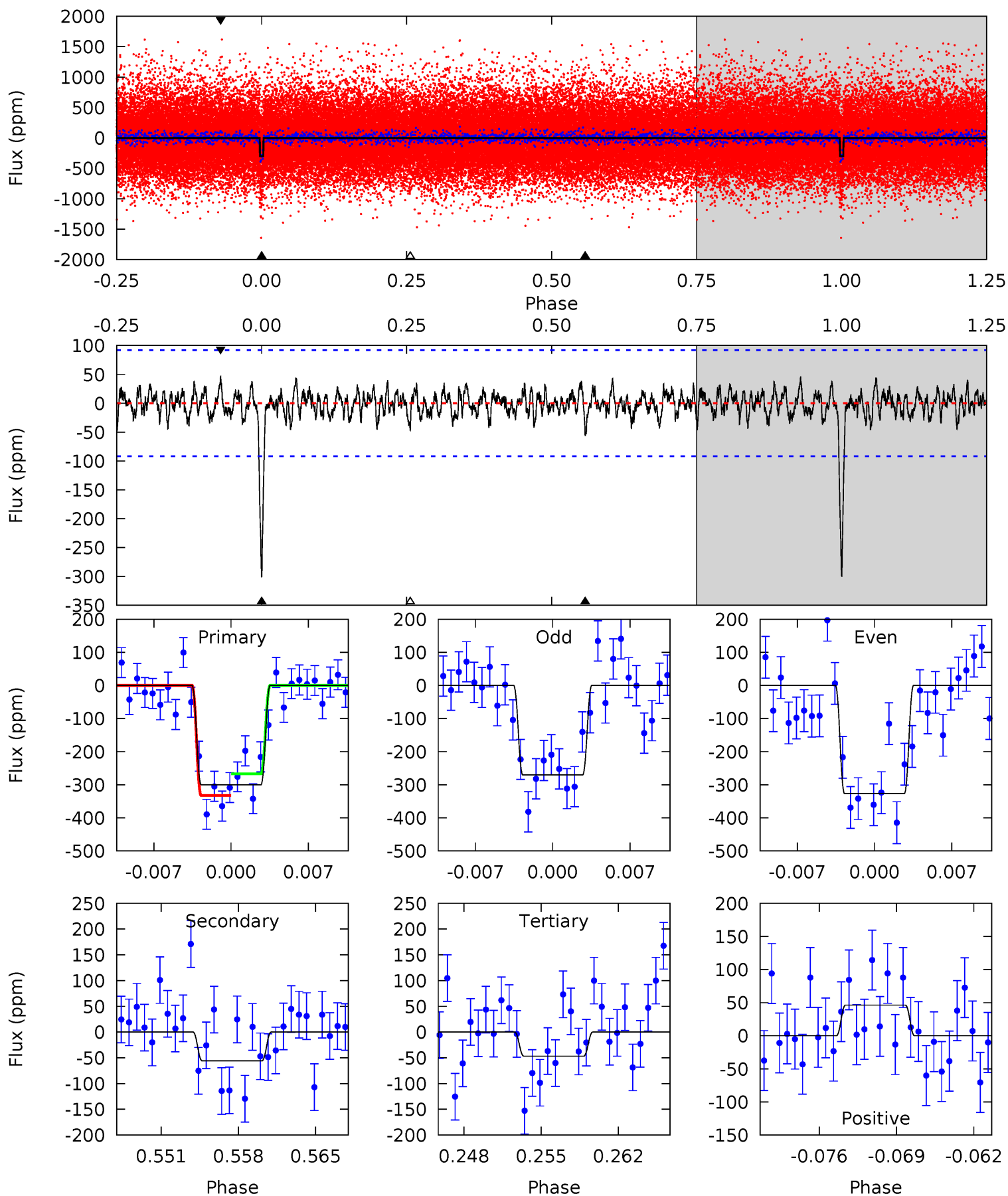
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	3.45	2.81	2.77	5.08	2.68	1.05	14.7	14.7	0.64	0.67	0.86	0.99	0.14	2.20



Alt Model-Shift Uniqueness Test

004676964-01, P = 43.102219 Days, E = 97.040807 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	3.10	2.60	2.57	5.10	2.70	0.92	14.1	14.1	0.50	0.53	1.56	0.99	0.13	1.82



Stellar Parameters For KIC 004676964

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5741^{+171}_{-188}	$4.365^{+0.108}_{-0.186}$	$0.180^{+0.200}_{-0.300}$	$1.097^{+0.309}_{-0.190}$	$1.017^{+0.122}_{-0.110}$	$1.083^{+0.632}_{-0.545}$
	+3%/-3%	+2%/-4%	+111%/-167%	+28%/-17%	+12%/-11%	+58%/-50%
Source	PHO1	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 004676964-01 / KOI 3069.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 18	$2.34^{+1.53}_{-1.33}$	761^{+57}_{-46}	3974^{+1619}_{-634}	347^{+1540}_{-225}
Alt.	-56 ± 18	$2.20^{+1.71}_{-1.18}$	764^{+54}_{-45}	3958^{+1553}_{-628}	347^{+1373}_{-234}

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 $A_{obs} \gg 1.0$

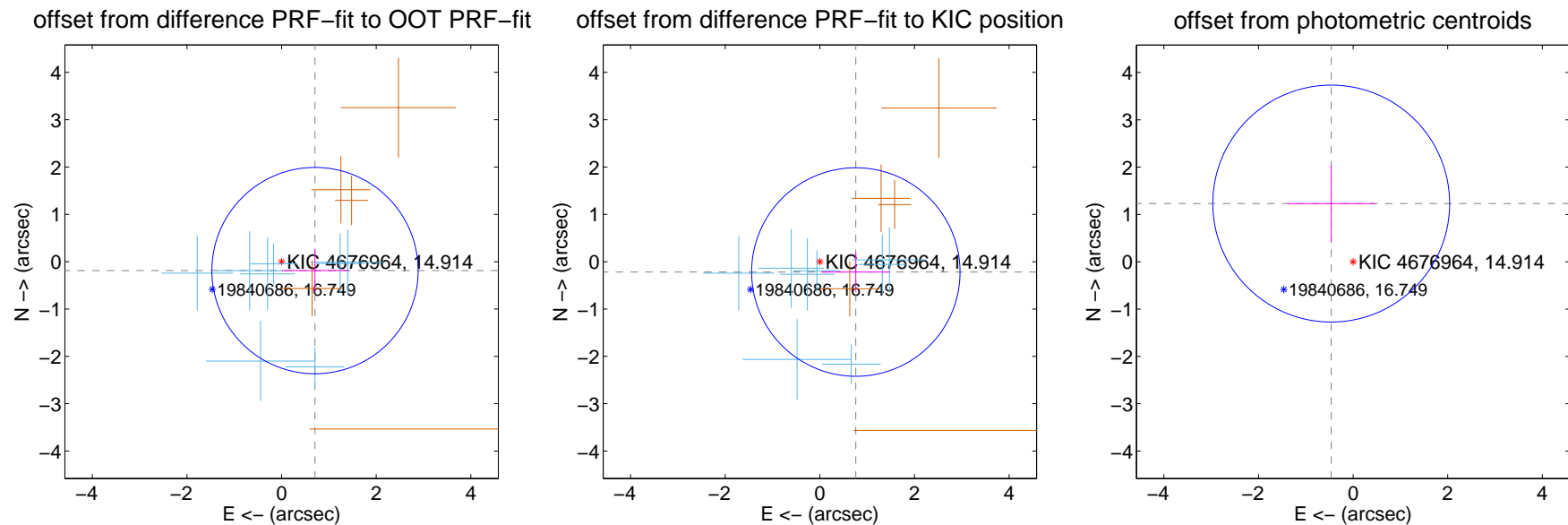
DV Centroid Data

Supplemental centroid analysis for 004676964-01. Kepler magnitude: 14.91. Transit SNR 13.24

There are 8 quarters with good PRF difference image offsets

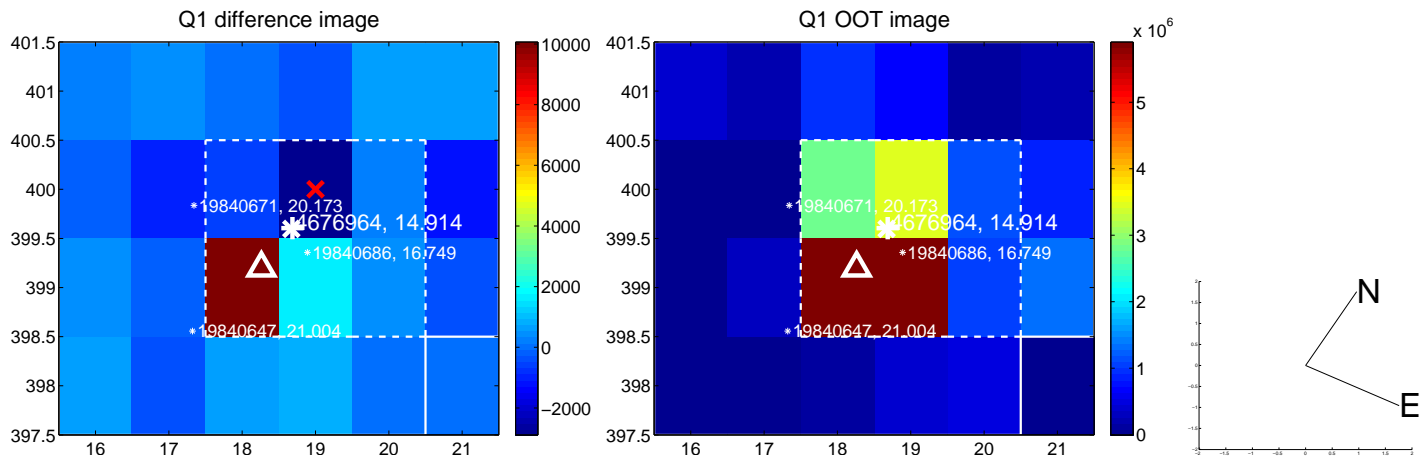
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.731 ± 0.727	1.01	-0.706 ± 0.706	-0.188 ± 0.460
PRF-fit source offset from KIC position	0.792 ± 0.734	1.08	-0.761 ± 0.730	-0.219 ± 0.415
photometric centroid source offset	1.31 ± 0.83	1.57	0.46 ± 0.92	1.23 ± 0.82

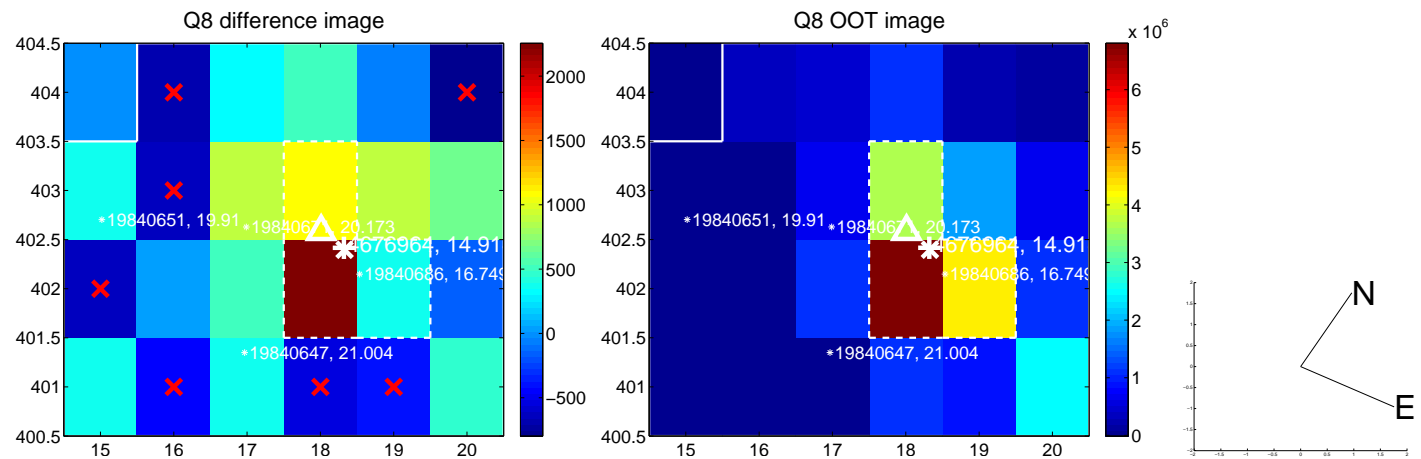
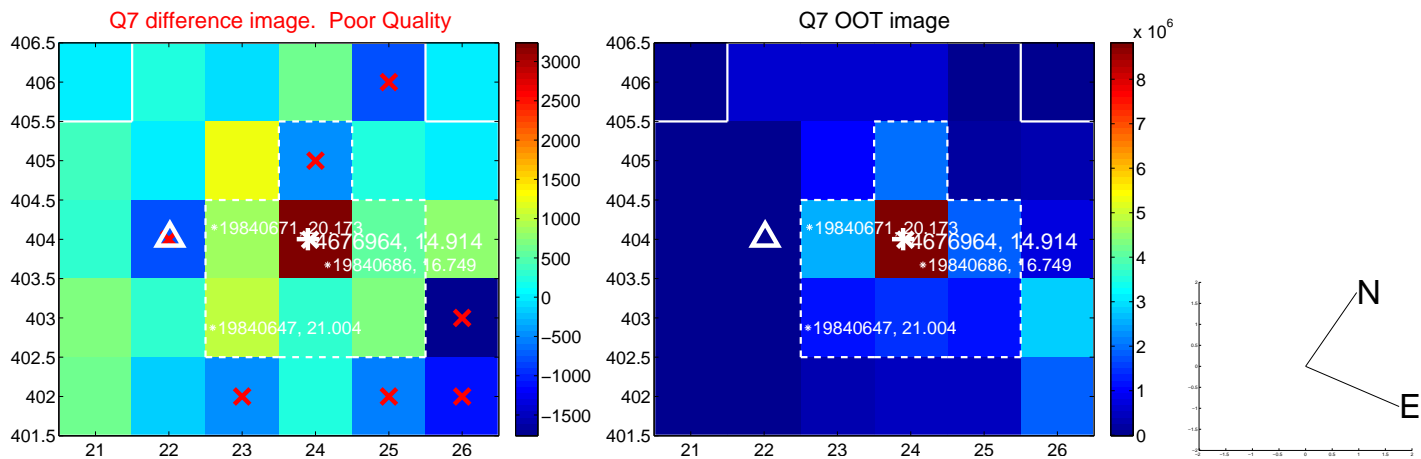
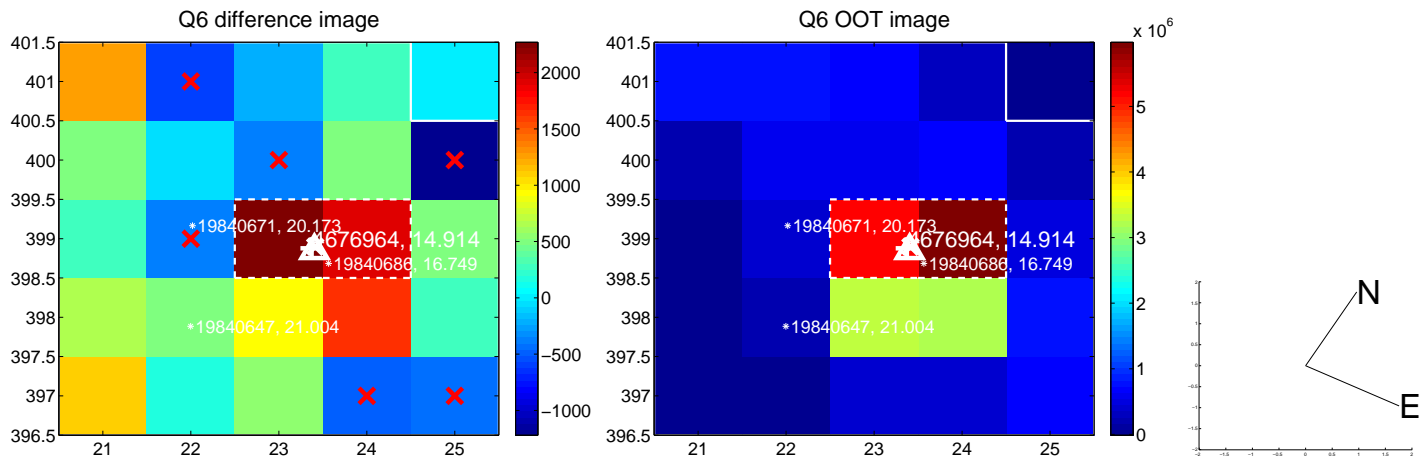
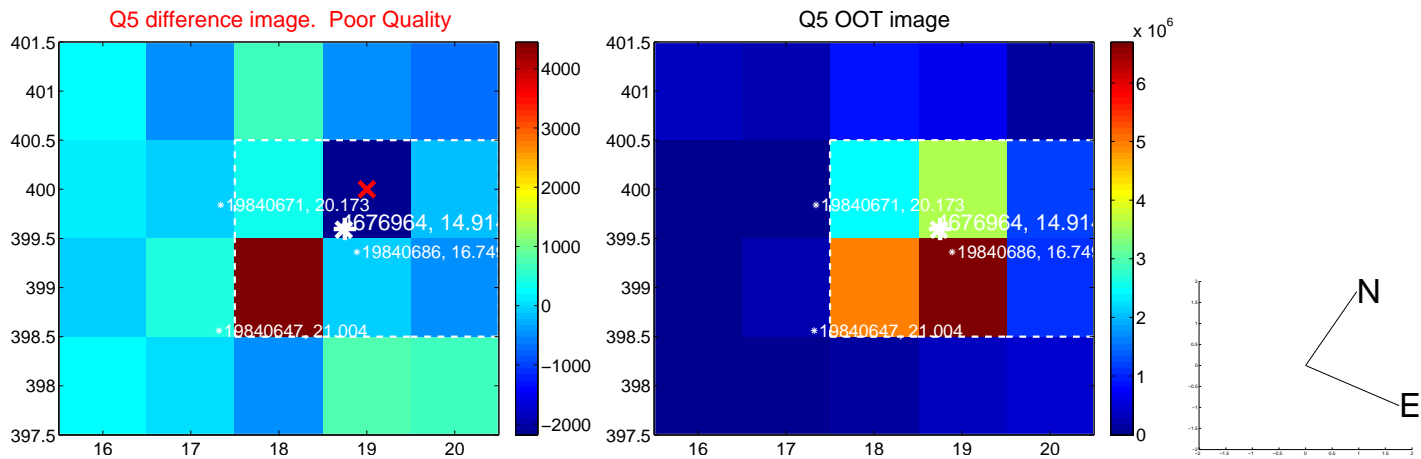


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

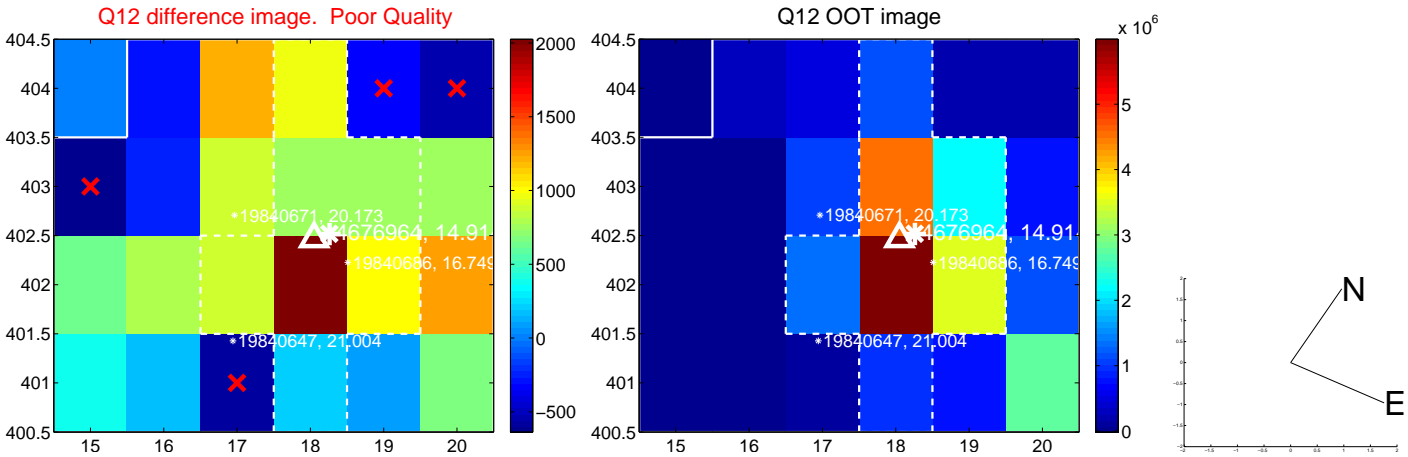
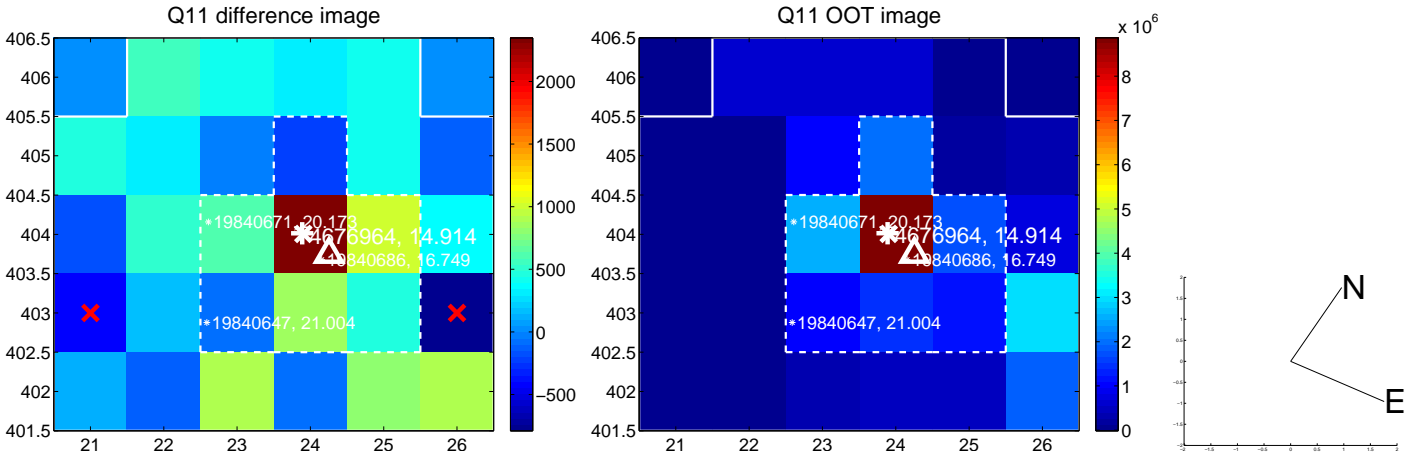
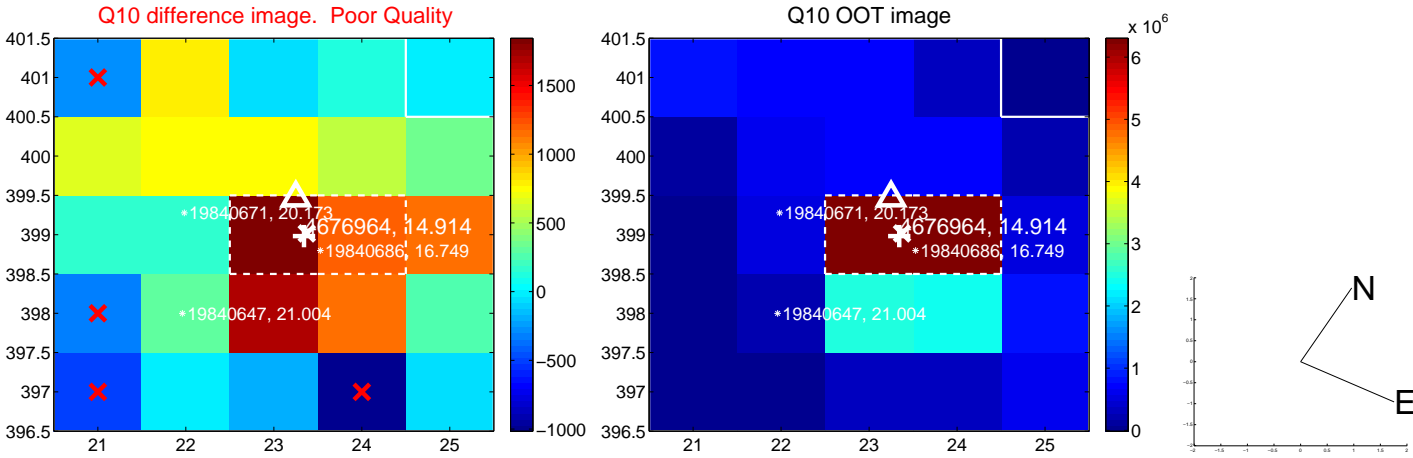
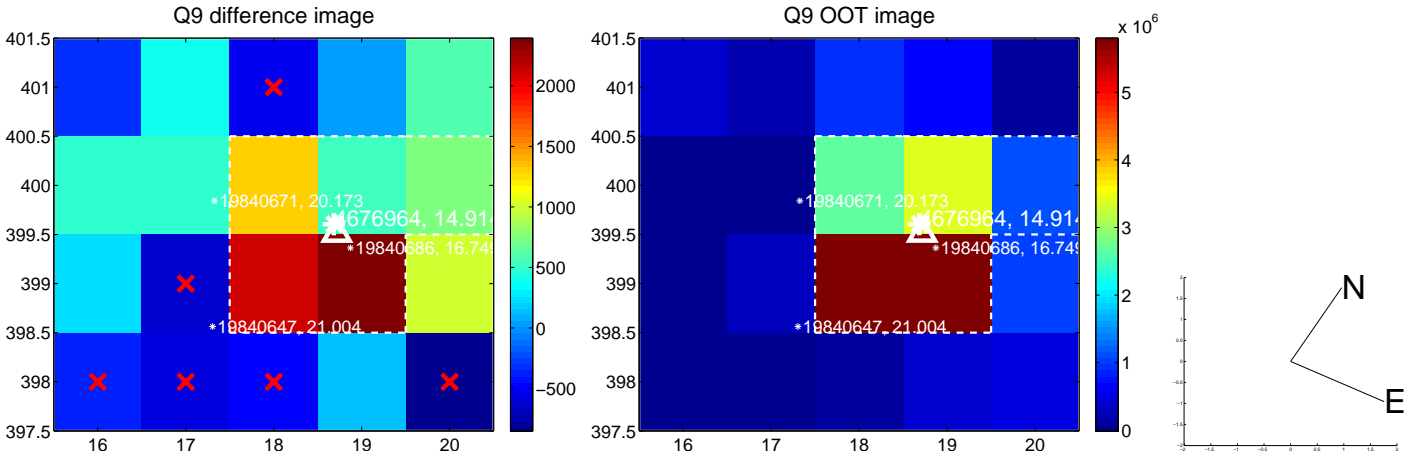
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



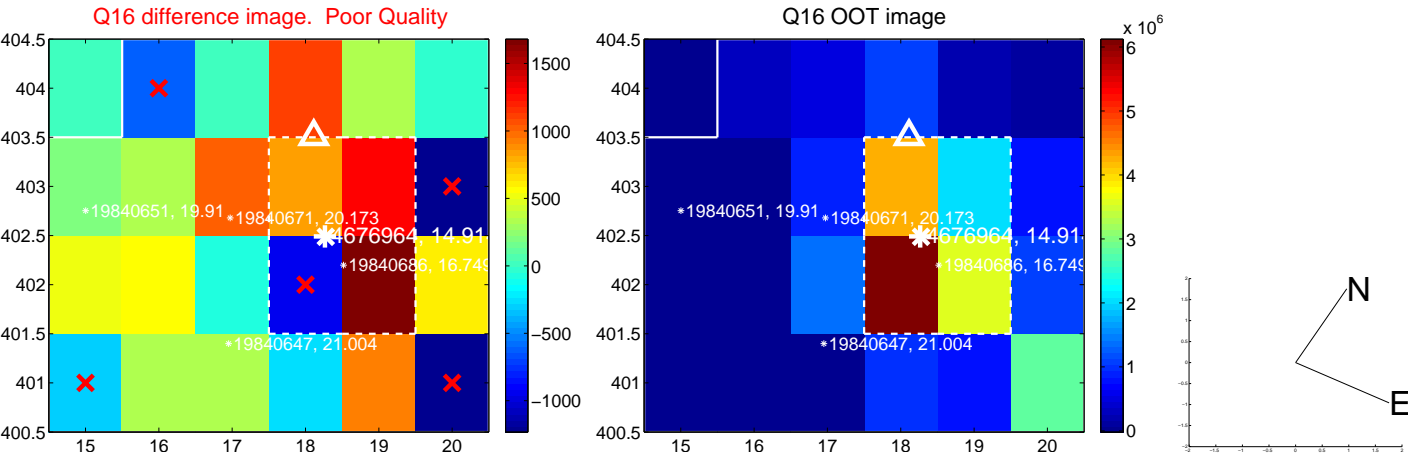
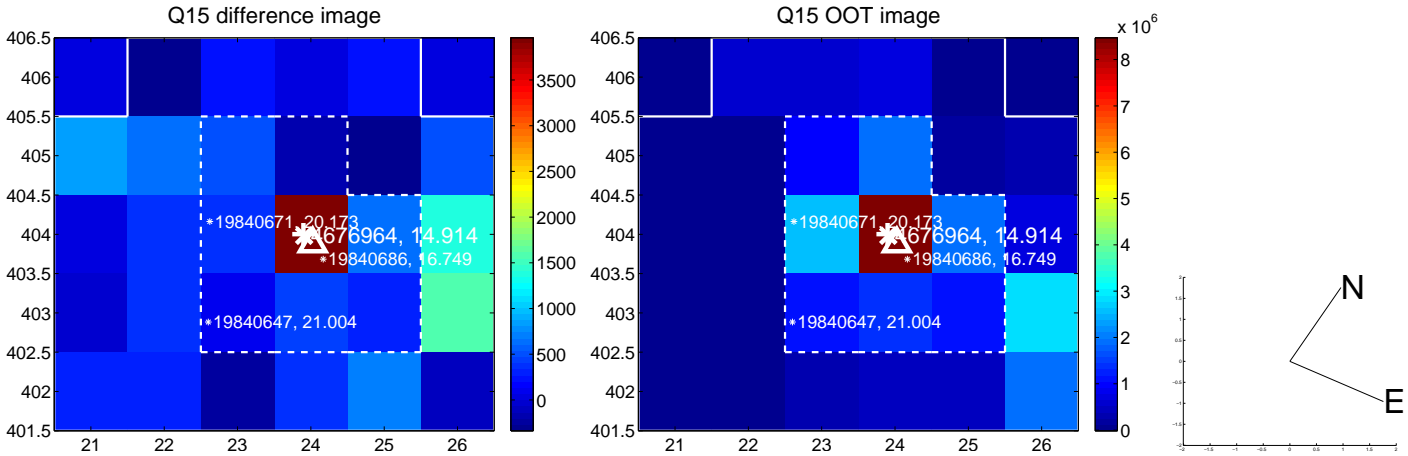
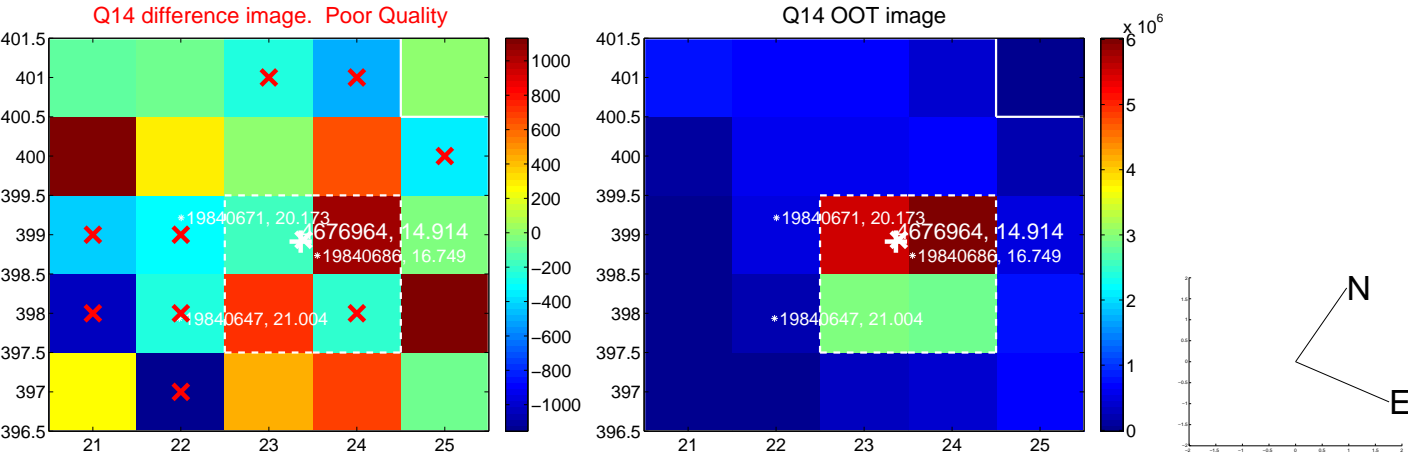
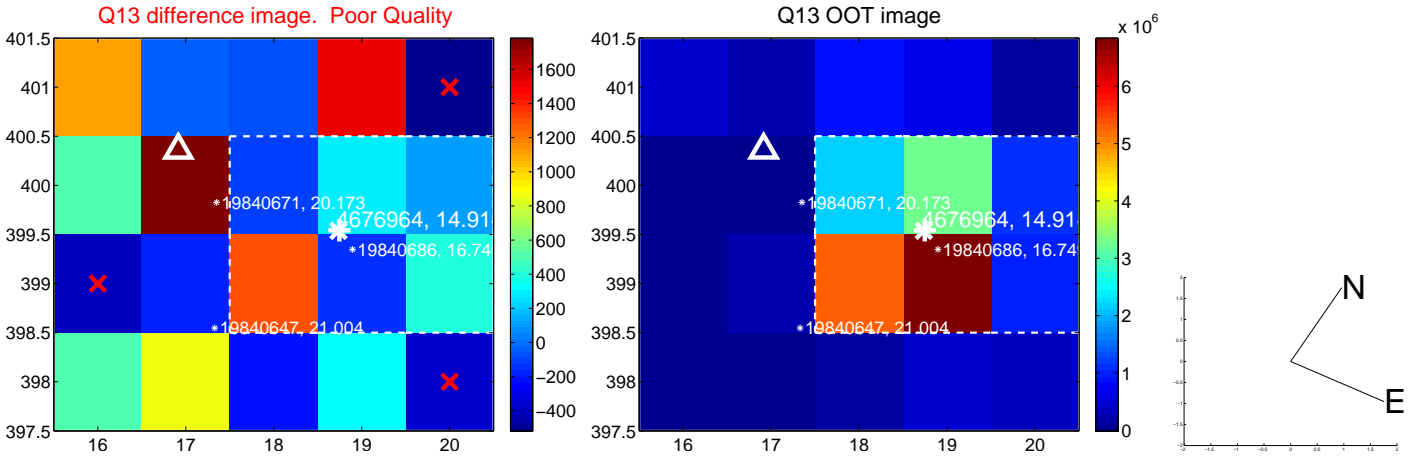
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



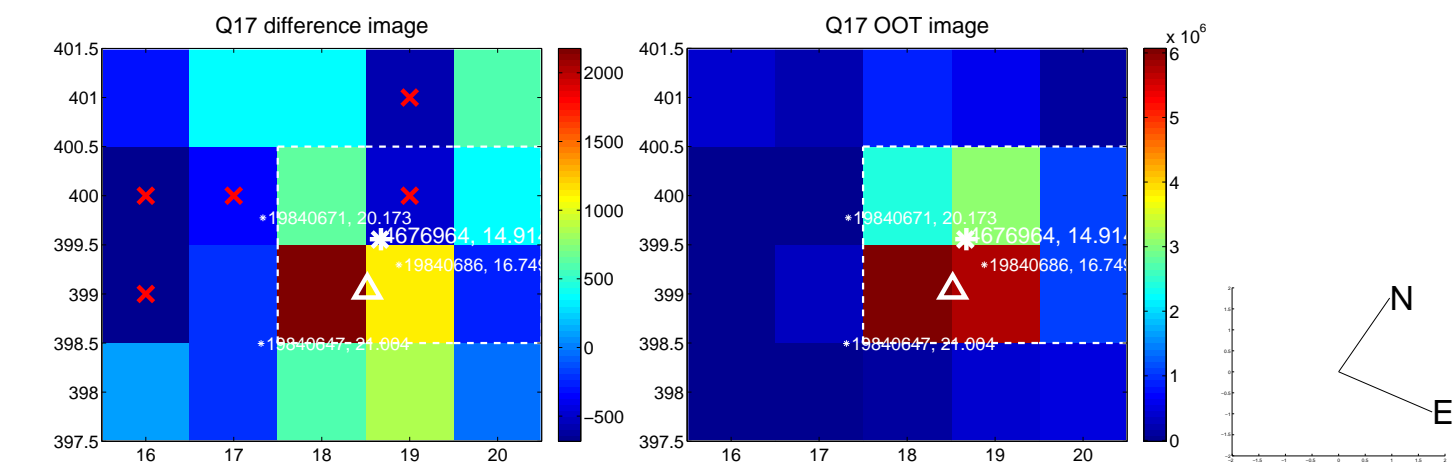
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



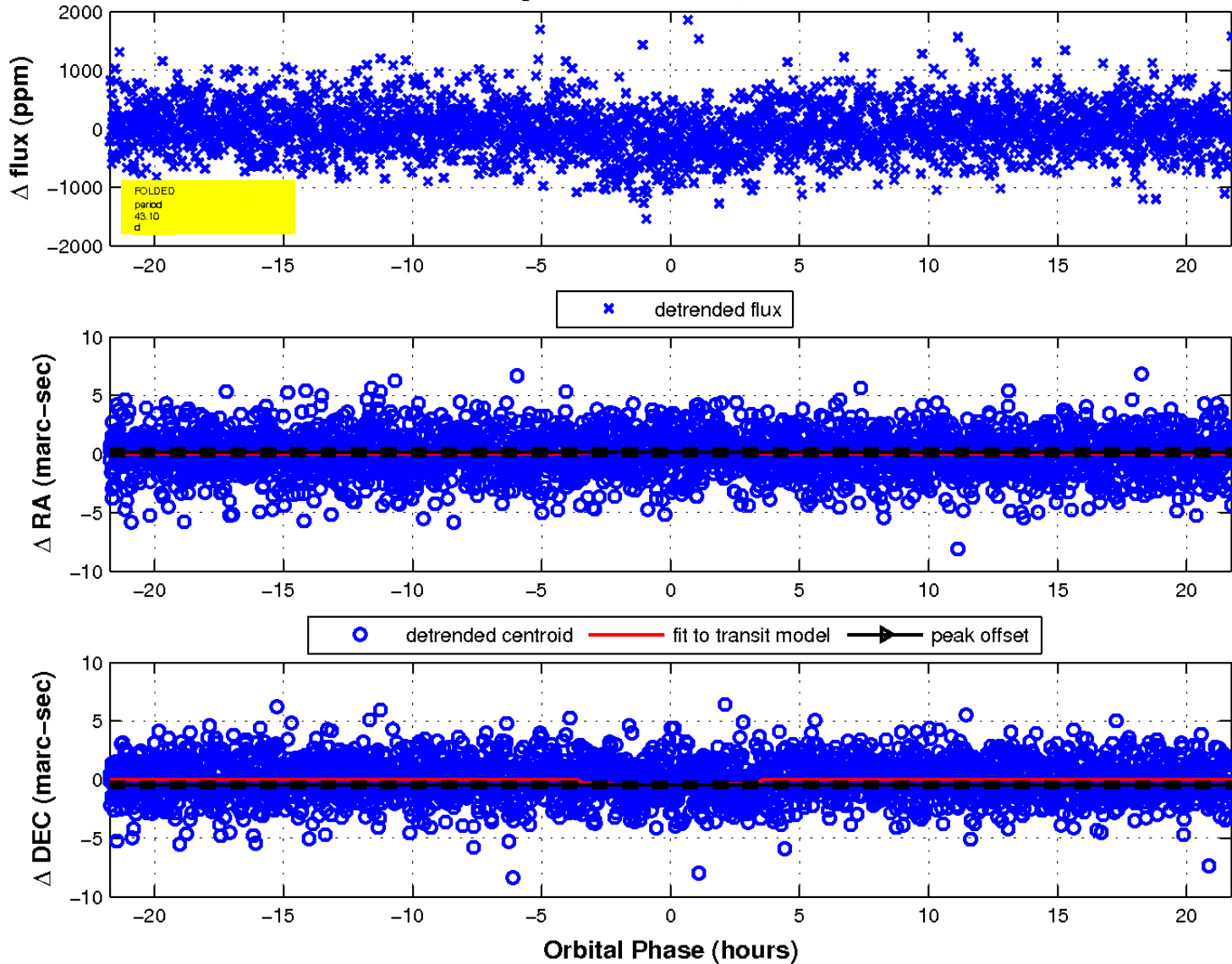
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

