

KIC 005209845

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})
005209845-01	OBS	2883.01	11.953851	140.273103	858.6	2.831	16.7	18.0	0.66	4359	2.27	17.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005209845-01	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 005209845-01

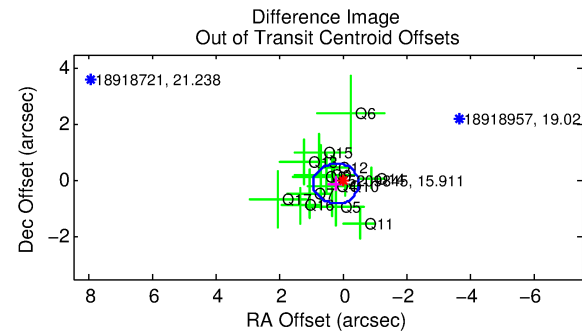
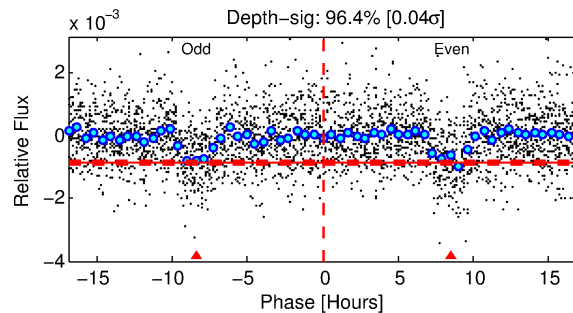
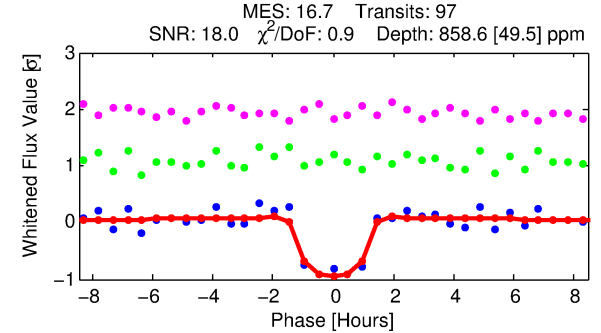
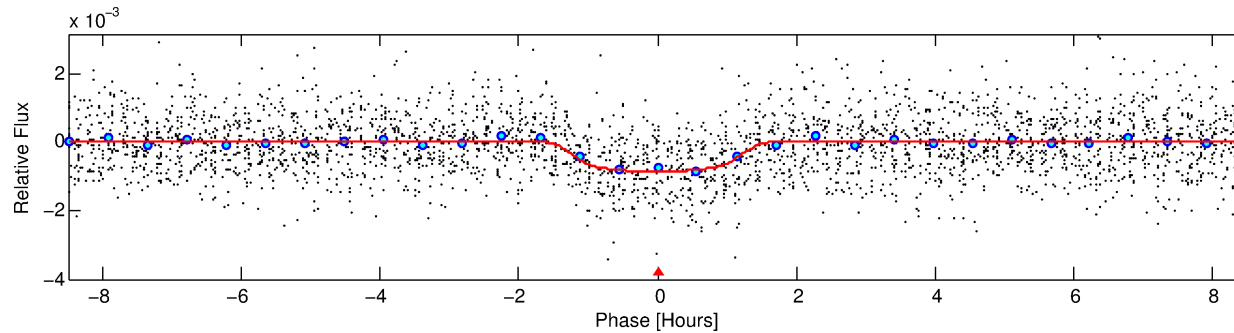
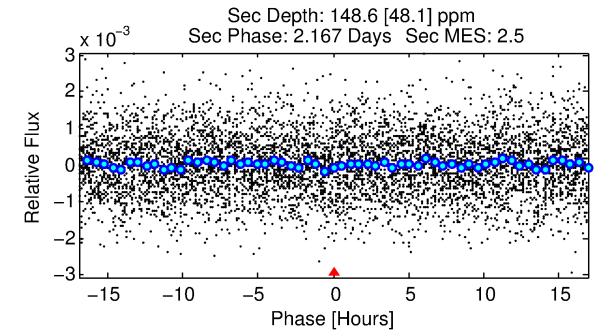
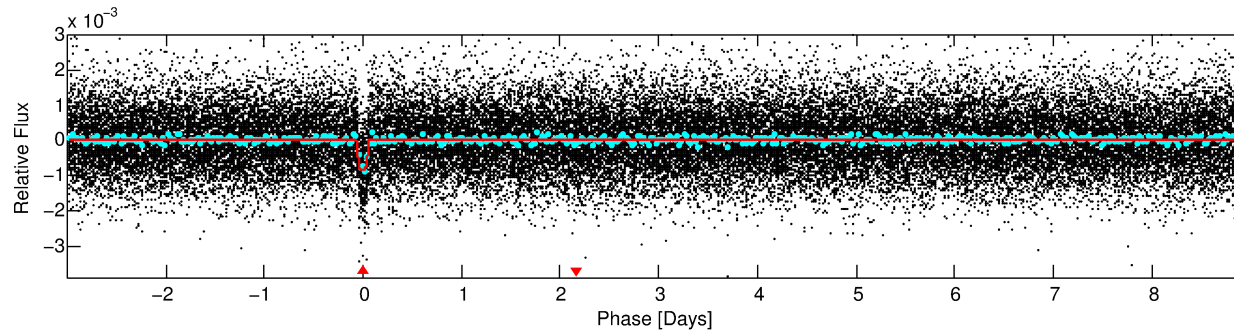
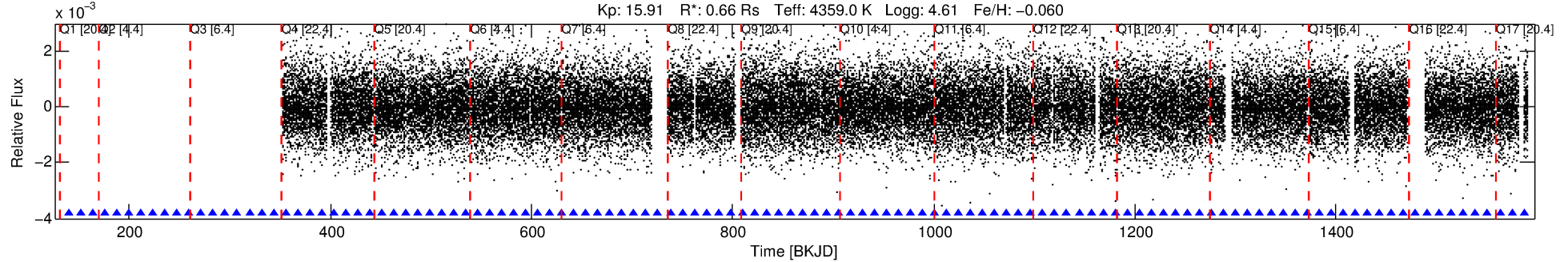
No Significant Match Found

DV One-Page Summary

KIC: 5209845 Candidate: 1 of 1 Period: 11.954 d

KOI: K02883.01 Corr: 0.956

Kp: 15.91 R*: 0.66 Rs Teff: 4359.0 K Logg: 4.61 Fe/H: -0.060



DV Fit Results:

Period = 11.95385 [0.00006] d
Epoch = 140.2731 [0.0042] BKJD
Rp/R* = 0.0315 [0.0109]
a/R* = 18.83 [21.73]
b = 0.85 [0.39]
Seff = 17.93 [3.41]
Teq = 525 [25] K
Rp = 2.27 [0.81] Re
a = 0.0885 [0.0067] AU
Ag = 124.79 [96.06] [1.29σ]
Teffp = 2712 [528] K [4.14σ]

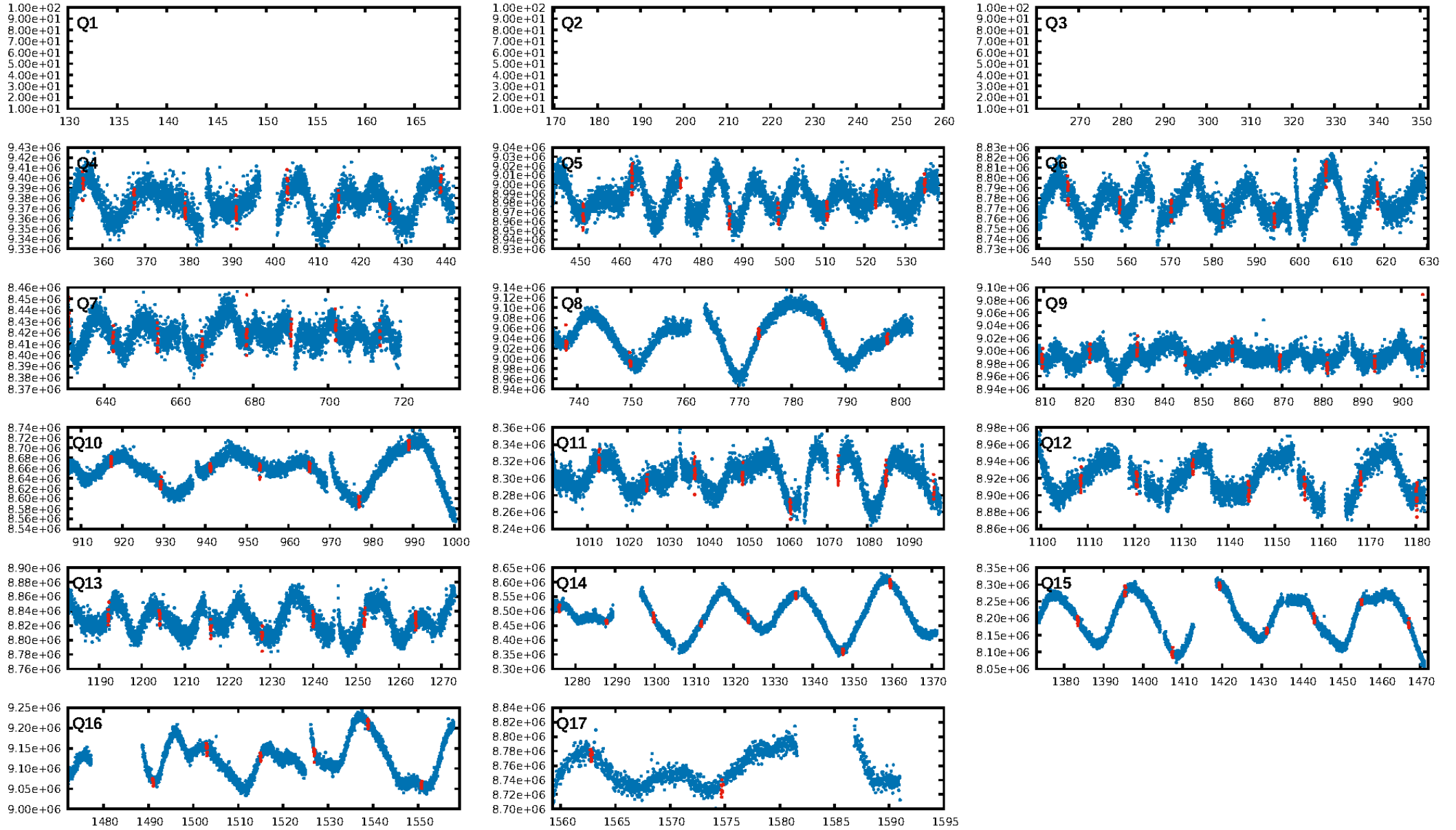
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.12e-61
RollingBand-fgt: 1.00 [95/95]
GhostDiagnostic-chr: 4.649
Centroid-sig: 0.0%
Centroid-so: 1.382 arcsec [2.24σ]
OotOffset-rm: 0.251 arcsec [1.05σ]
KicOffset-rm: 0.297 arcsec [1.30σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

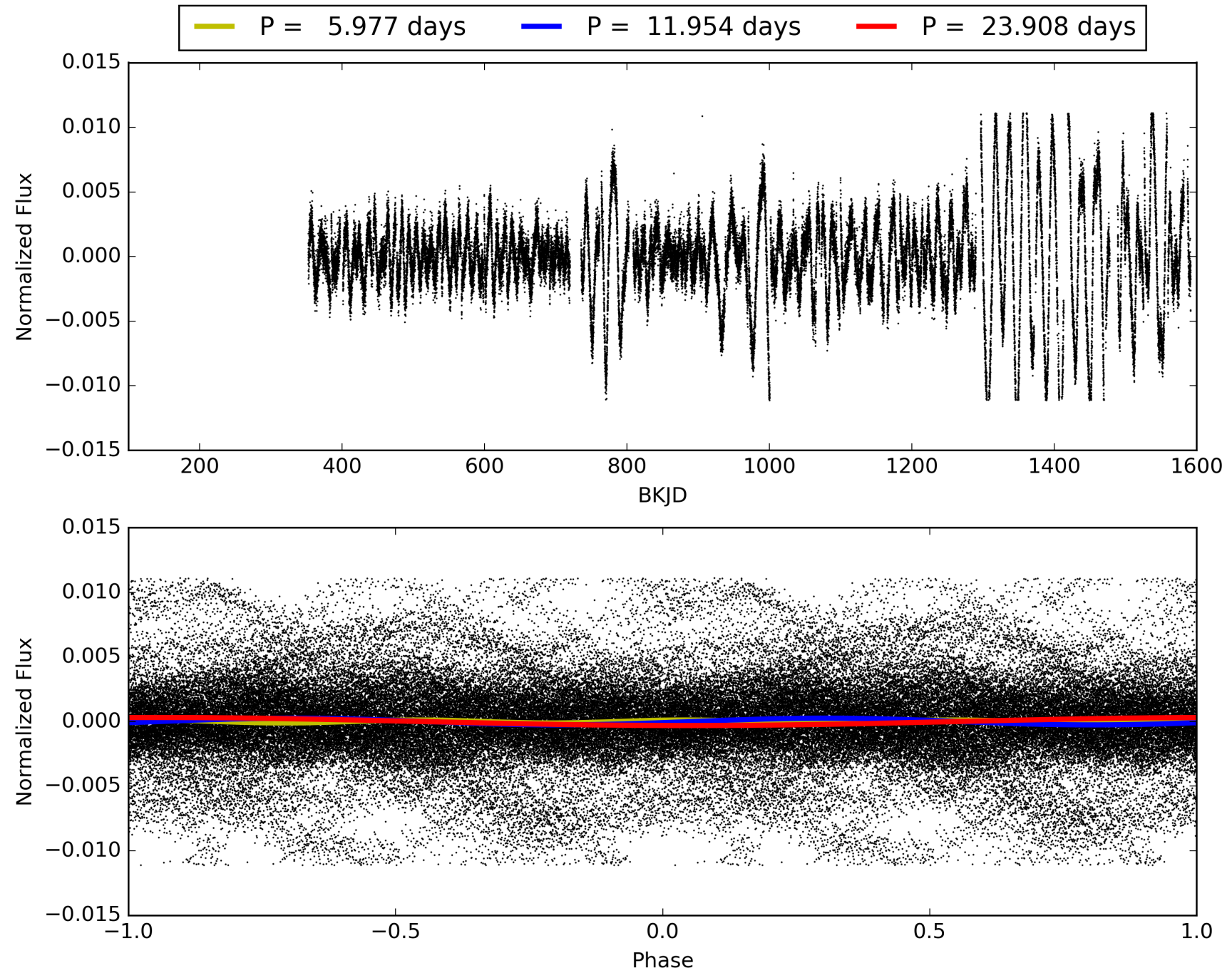
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:53:46 Z

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

TCE 005209845-01, PDC Light Curves

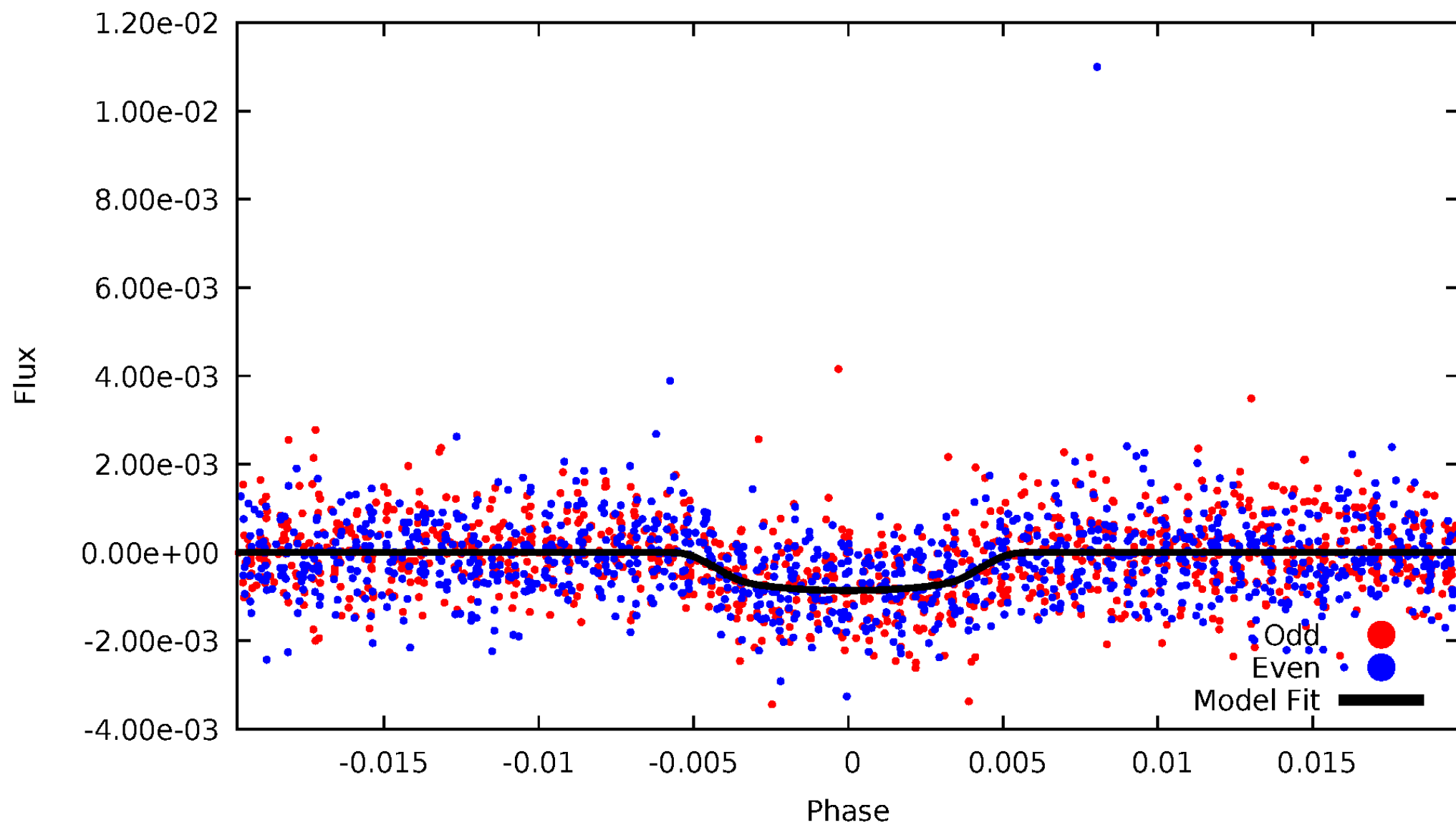


TCE 005209845-01



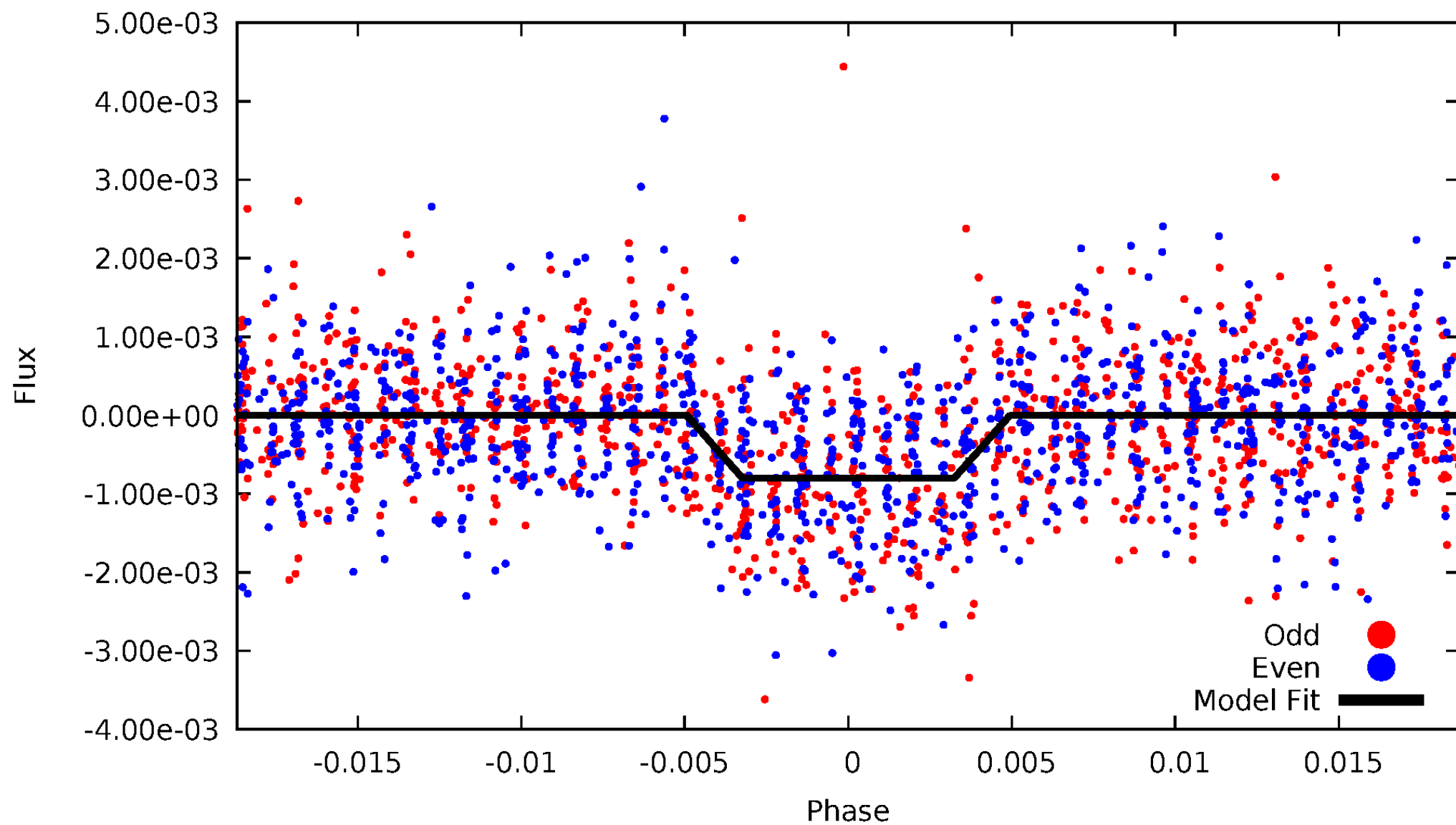
DV Odd/Even

TCE 005209845-01



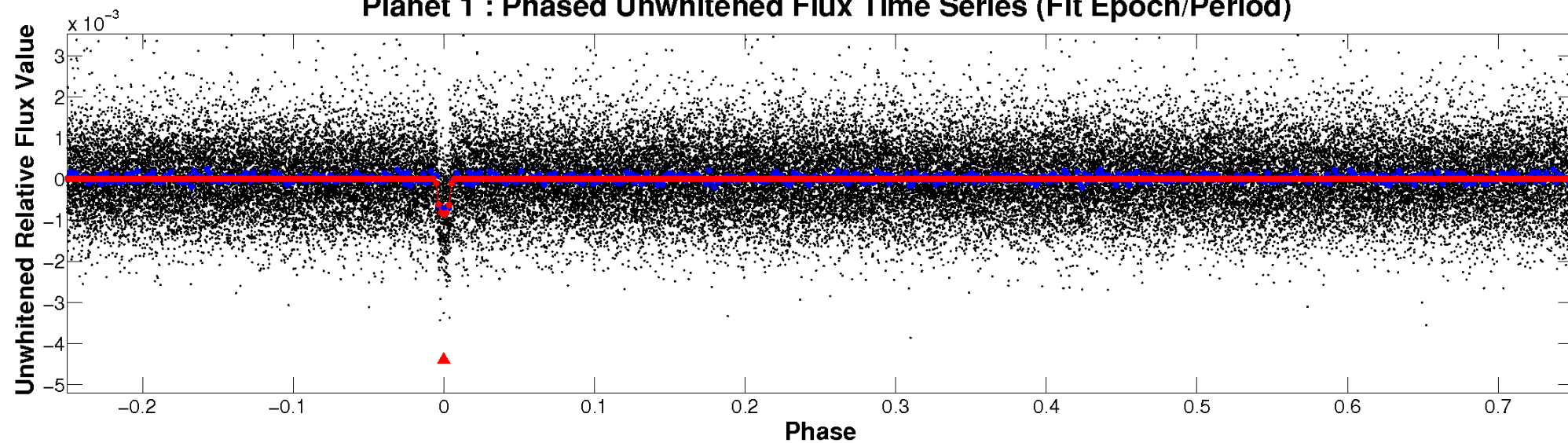
ALT Odd/Even

TCE 005209845-01

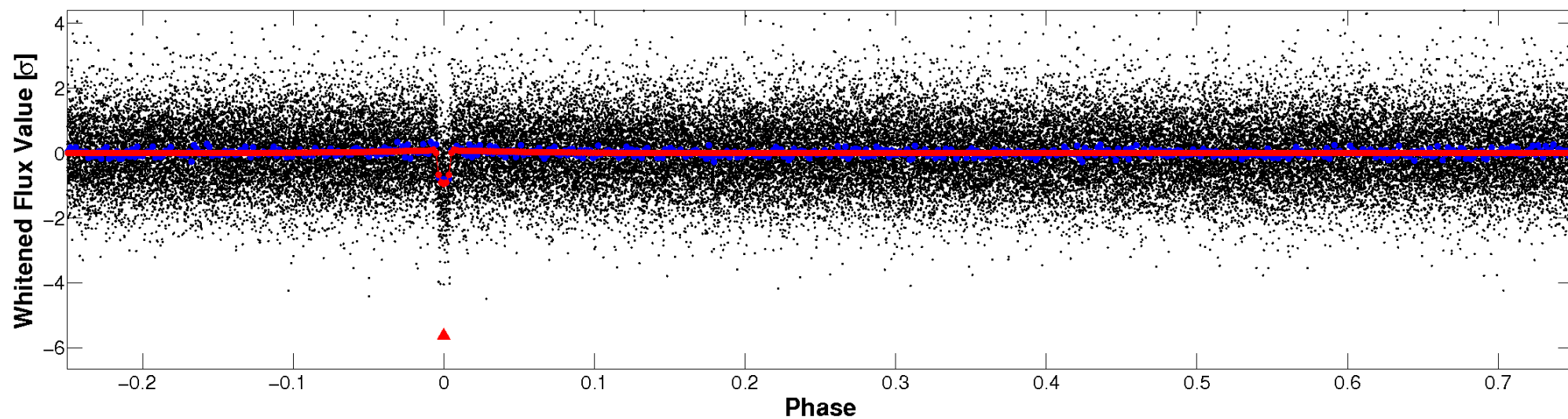


Non-Whitened Vs. Whitened Light Curve

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

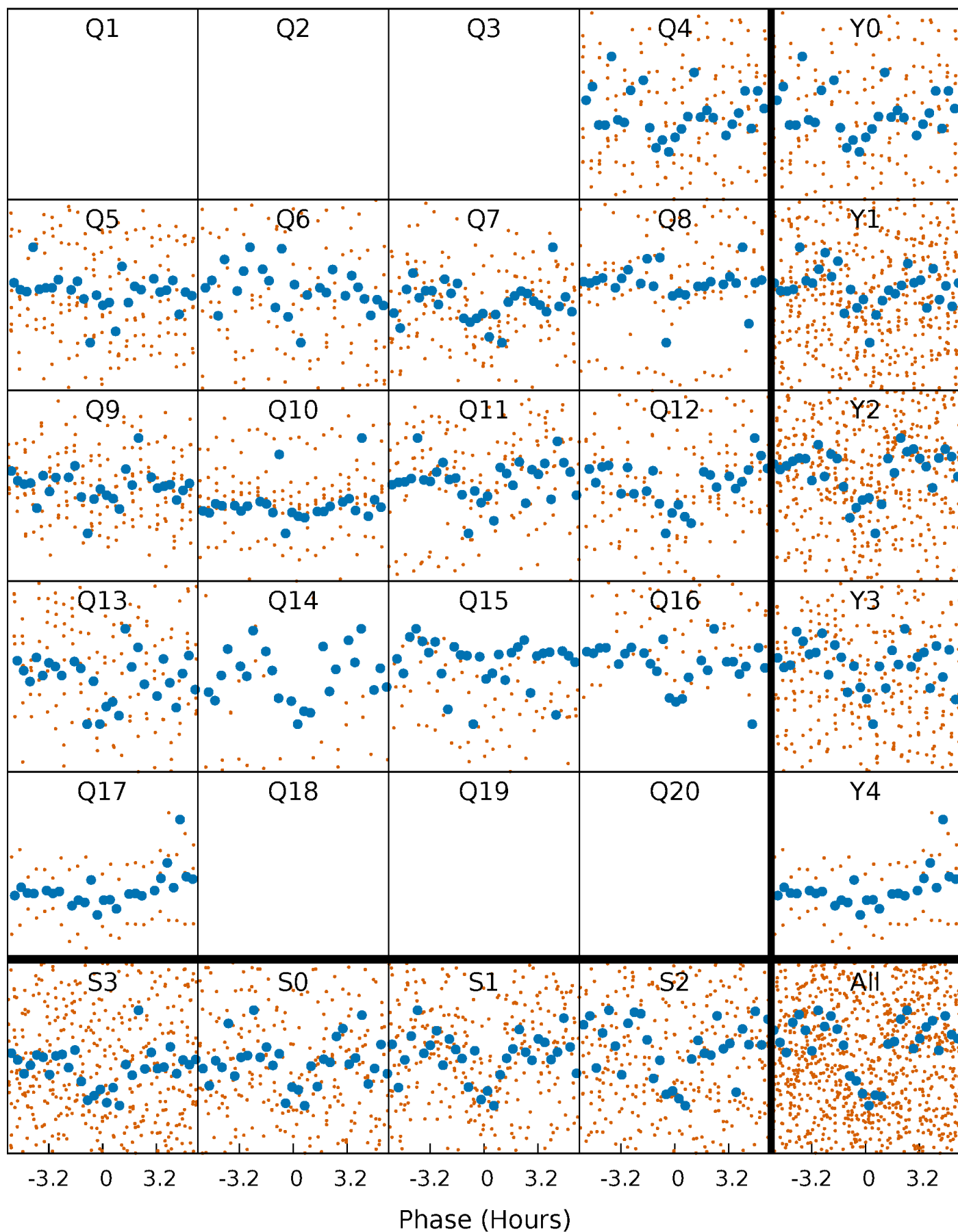


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



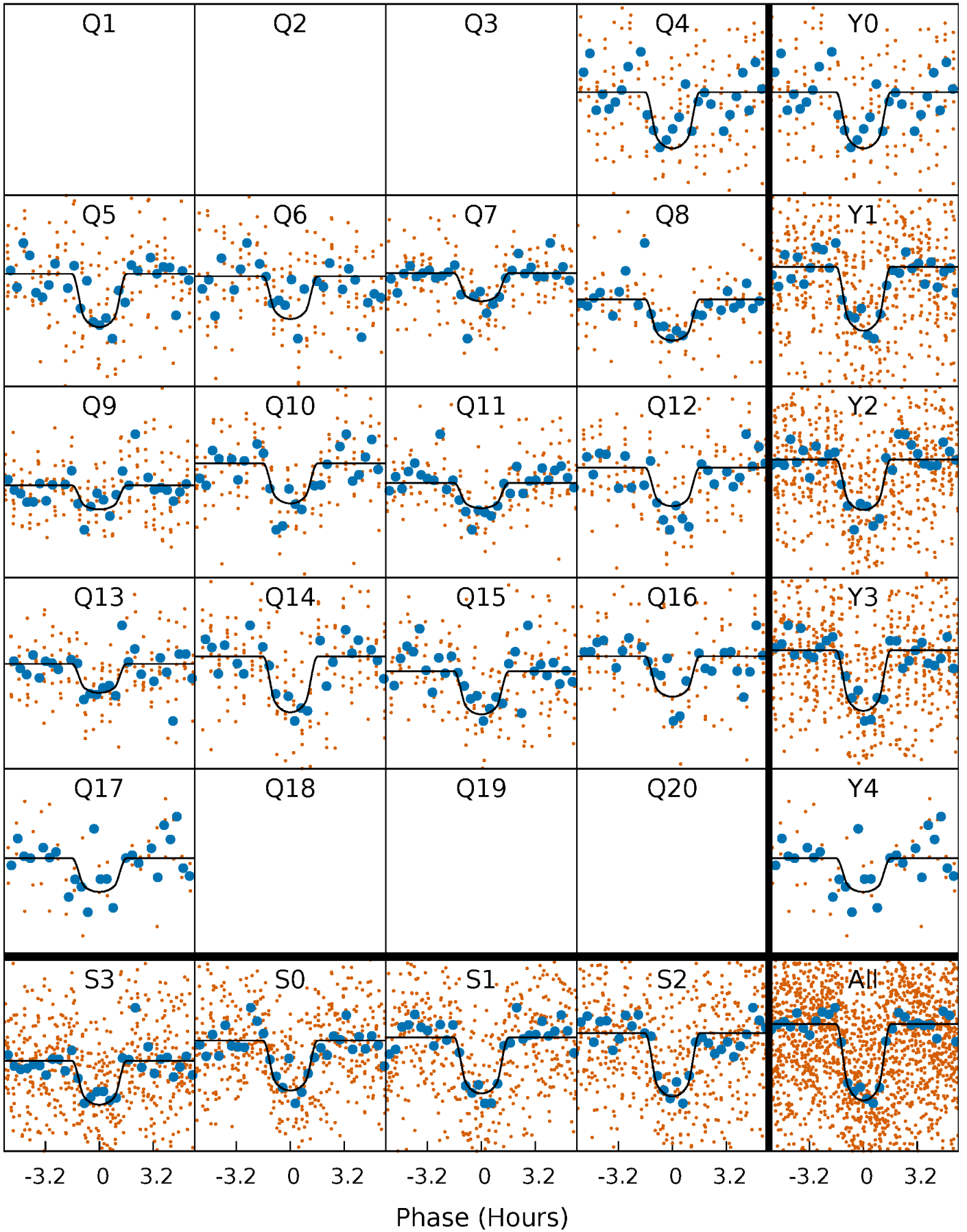
PDC Quarter-Phased Transit Curves

TCE 005209845-01 P= 11.953851 Days $T_0=140.273103$ (BKJD)



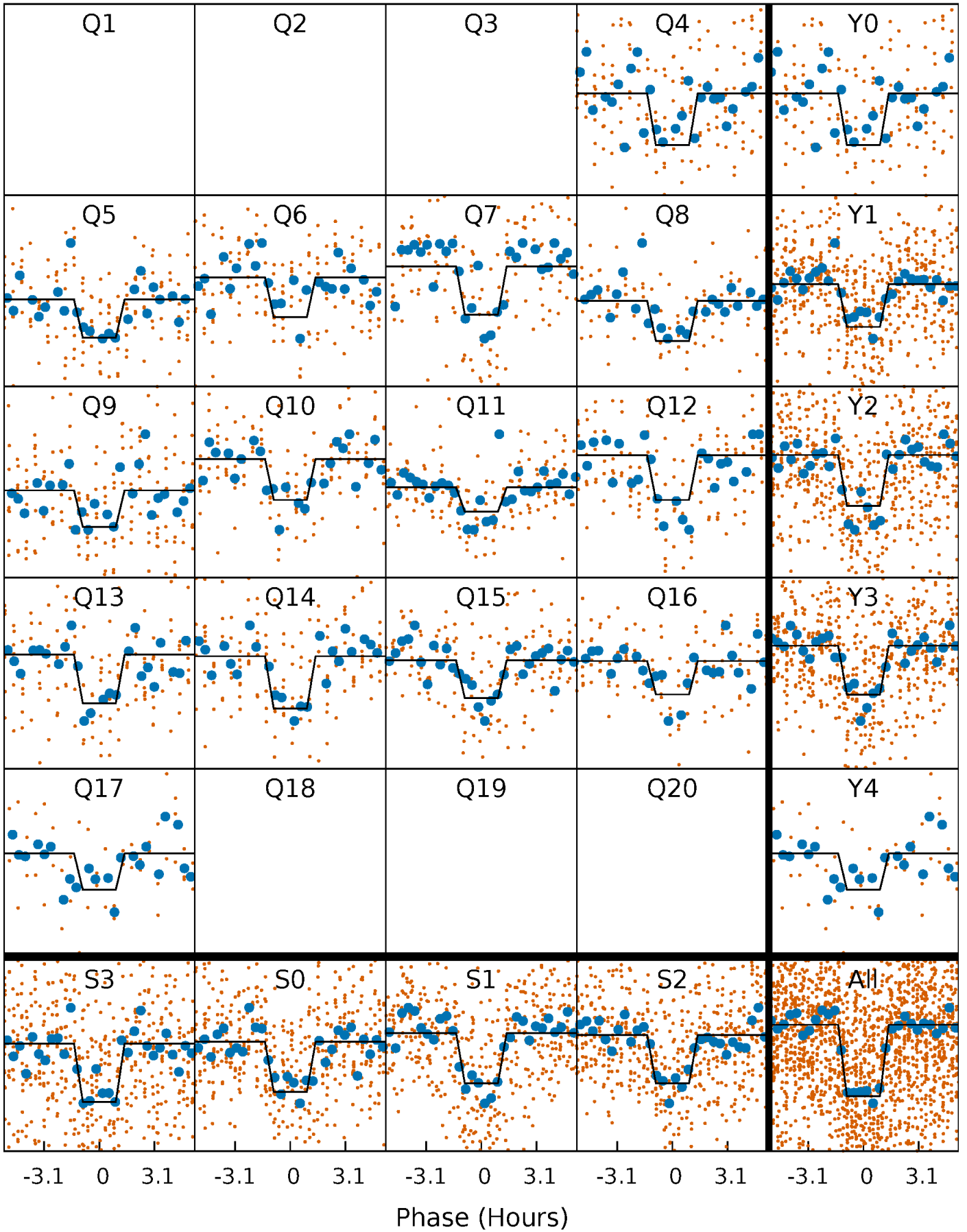
DV Quarter-Phased Transit Curves

TCE 005209845-01 P= 11.953851 Days $T_0=140.273103$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

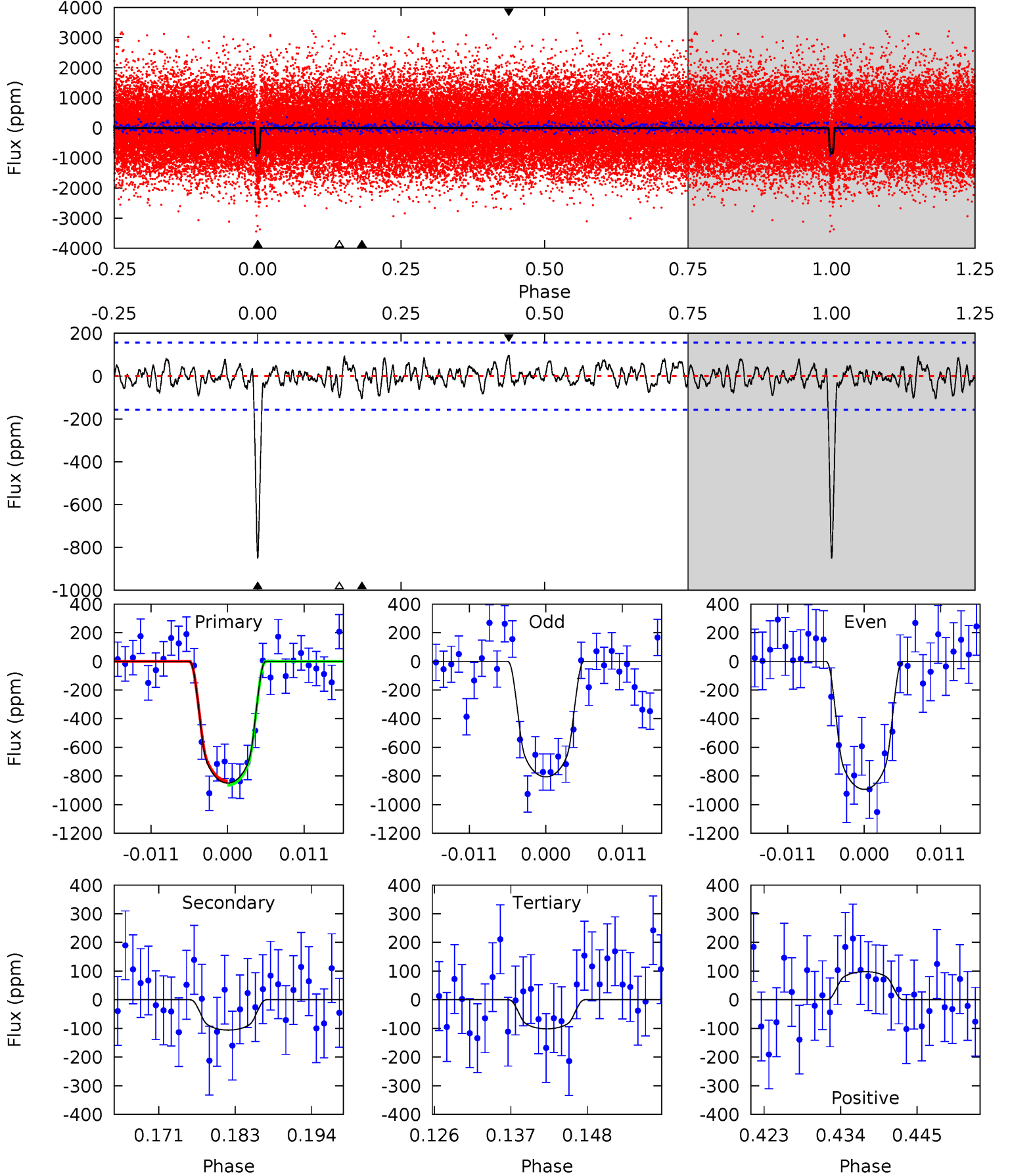
TCE 005209845-01 P= 11.953954 Days $T_0=140.266456$ (BKJD)



DV Model-Shift Uniqueness Test

005209845-01, P = 11.953851 Days, E = 140.273103 Days

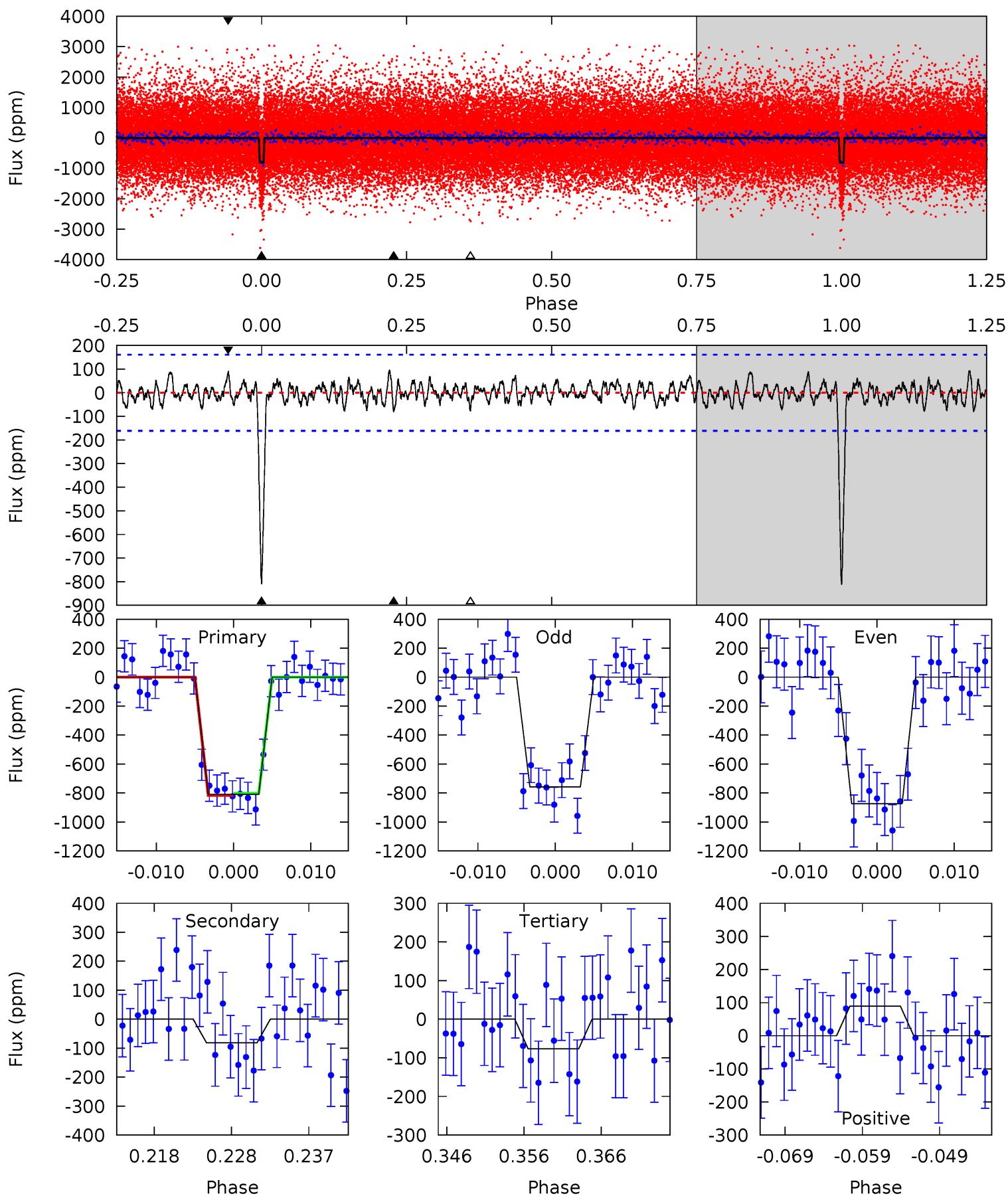
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.2	3.38	3.25	3.14	5.00	2.53	1.15	23.9	24.0	0.14	0.25	1.39	1.06	0.10	0.49



Alt Model-Shift Uniqueness Test

005209845-01, P = 11.953954 Days, E = 140.266456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.2	2.54	2.40	2.78	5.03	2.58	0.94	22.8	22.5	0.14	-0.24	1.80	1.05	0.10	0.21



Stellar Parameters For KIC 005209845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4359^{+138}_{-172}	$4.611^{+0.056}_{-0.020}$	$-0.060^{+0.300}_{-0.300}$	$0.659^{+0.042}_{-0.062}$	$0.648^{+0.064}_{-0.057}$	$3.187^{+0.803}_{-0.292}$
	+3%/-4%	+1%/-0%	+500%/-500%	+6%/-9%	+10%/-9%	+25%/-9%
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 005209845-01 / KOI 2883.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-106 ± 31	$2.20^{+0.75}_{-0.73}$	725^{+26}_{-31}	3039^{+419}_{-296}	97^{+126}_{-49}
Alt.	-82 ± 32	$1.95^{+0.86}_{-0.76}$	726^{+26}_{-31}	2993^{+517}_{-334}	86^{+155}_{-49}

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 $A_{obs} \gg 1.0$

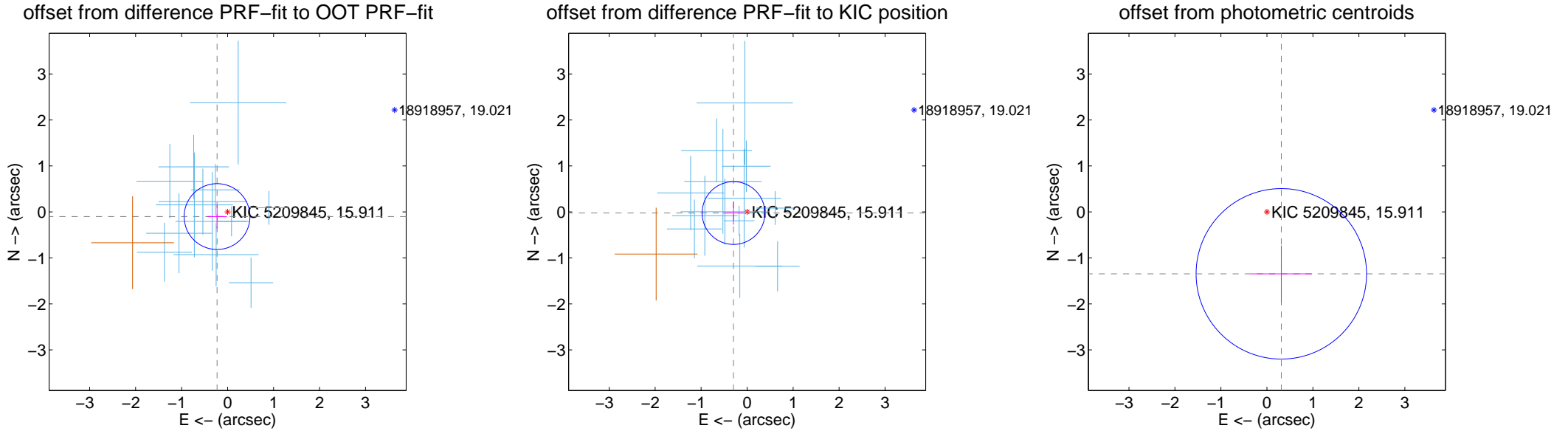
DV Centroid Data

Supplemental centroid analysis for 005209845-01. Kepler magnitude: 15.91. Transit SNR 18.04

There are 13 quarters with good PRF difference image offsets

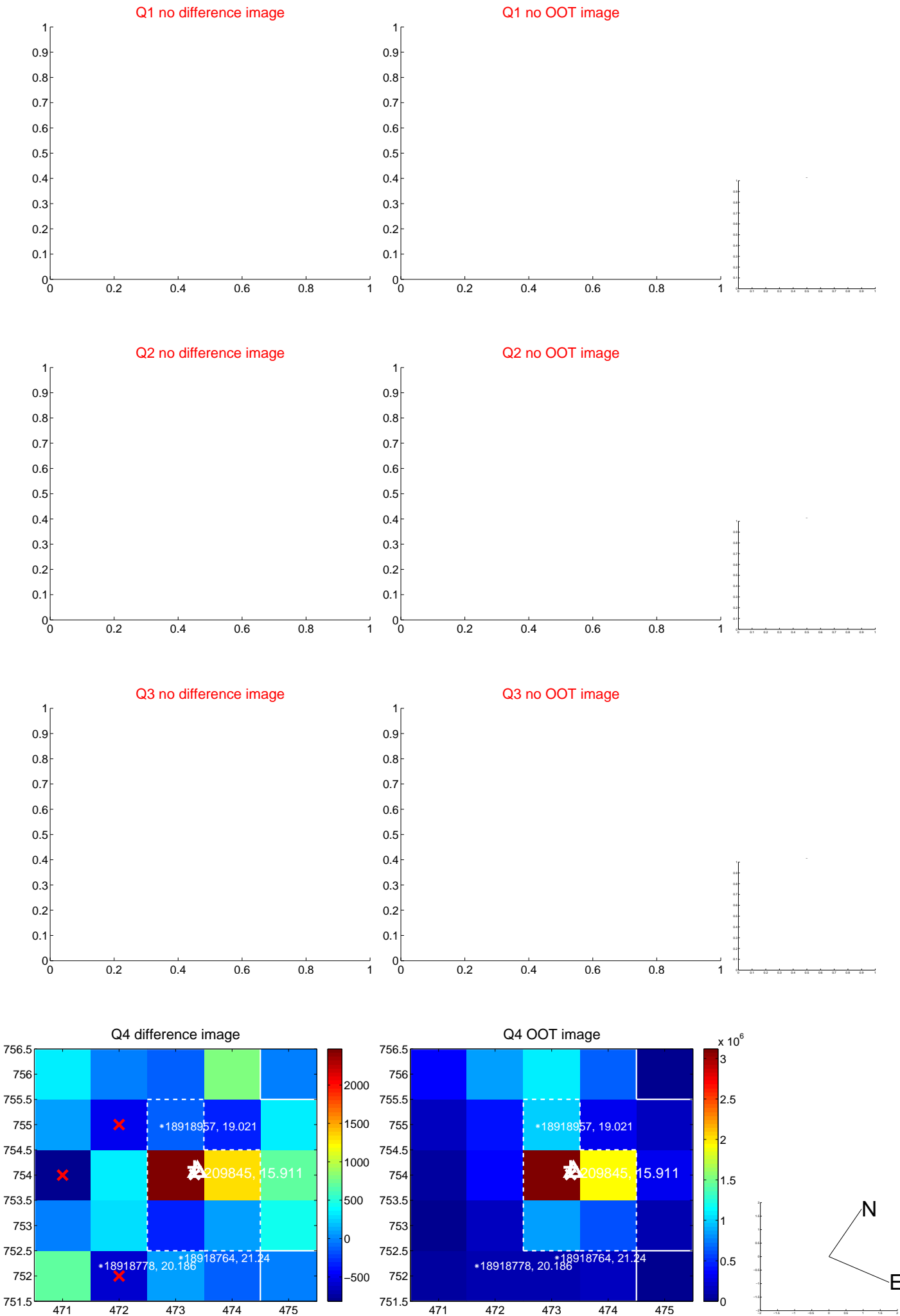
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.251 ± 0.239	1.05	0.230 ± 0.212	-0.101 ± 0.259
PRF-fit source offset from KIC position	0.297 ± 0.228	1.30	0.296 ± 0.227	-0.024 ± 0.252
photometric centroid source offset	1.38 ± 0.62	2.24	-0.31 ± 0.67	-1.35 ± 0.62

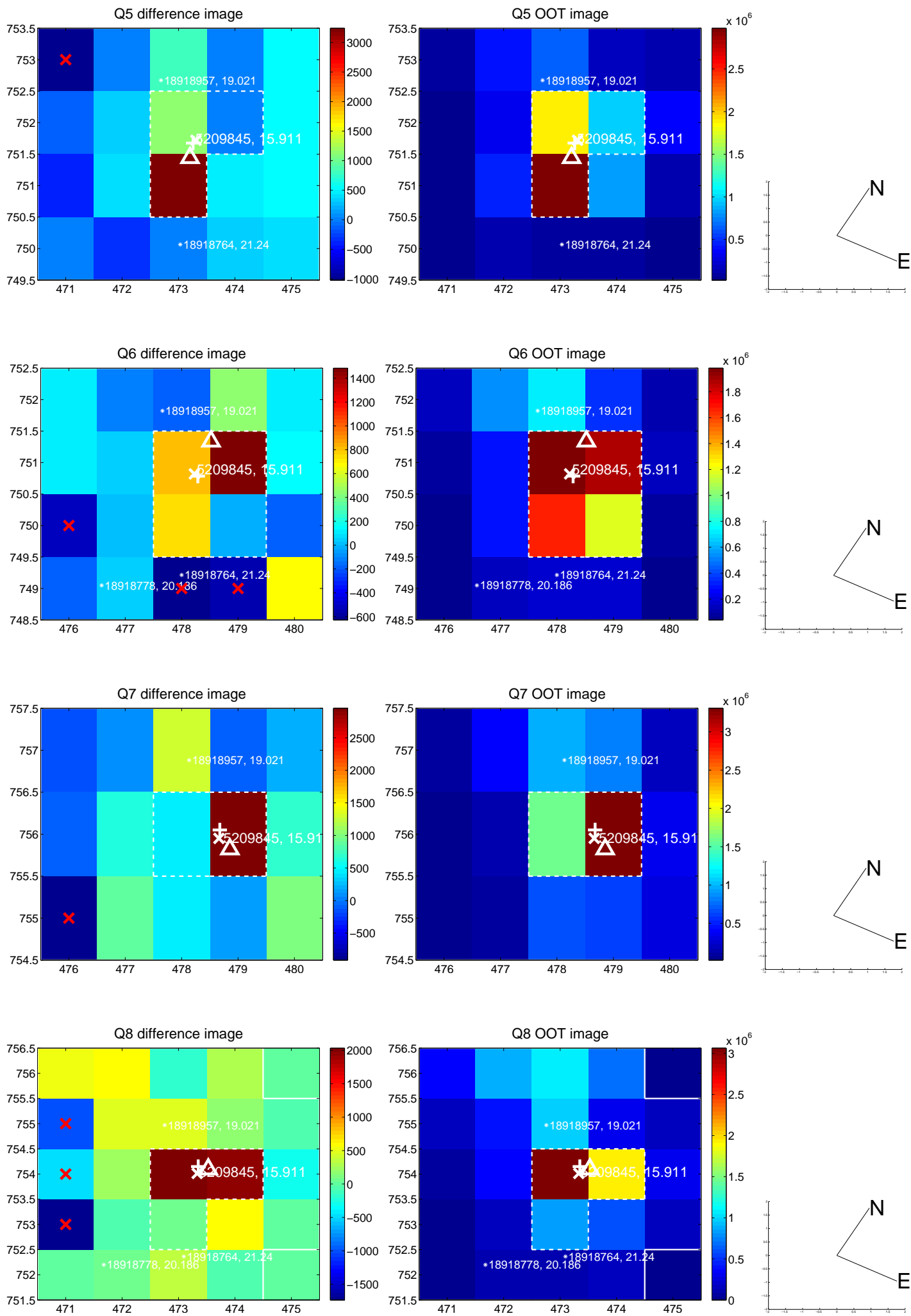


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

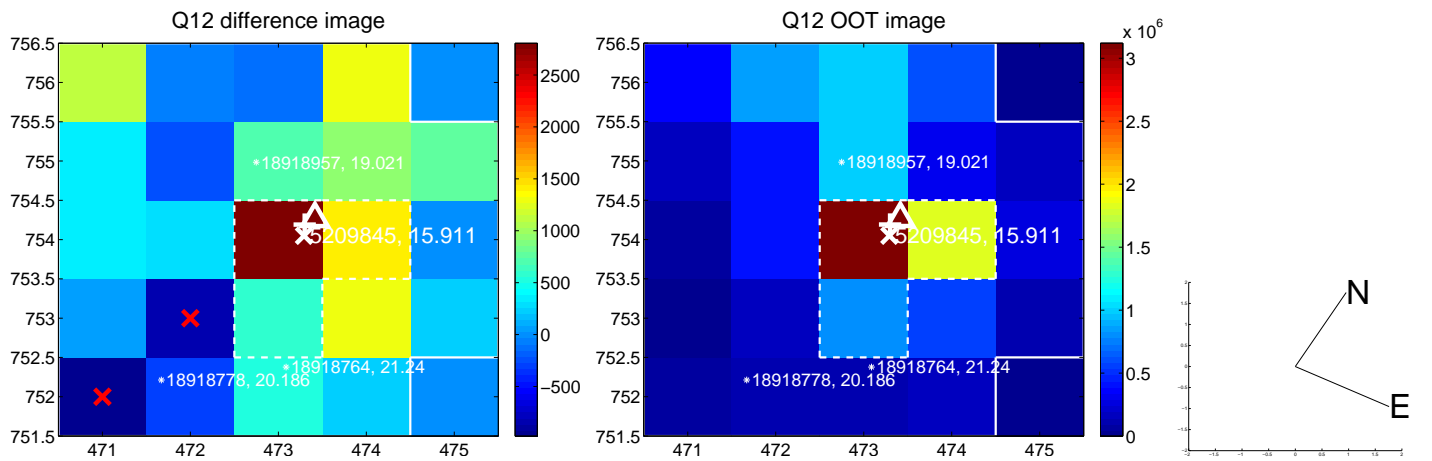
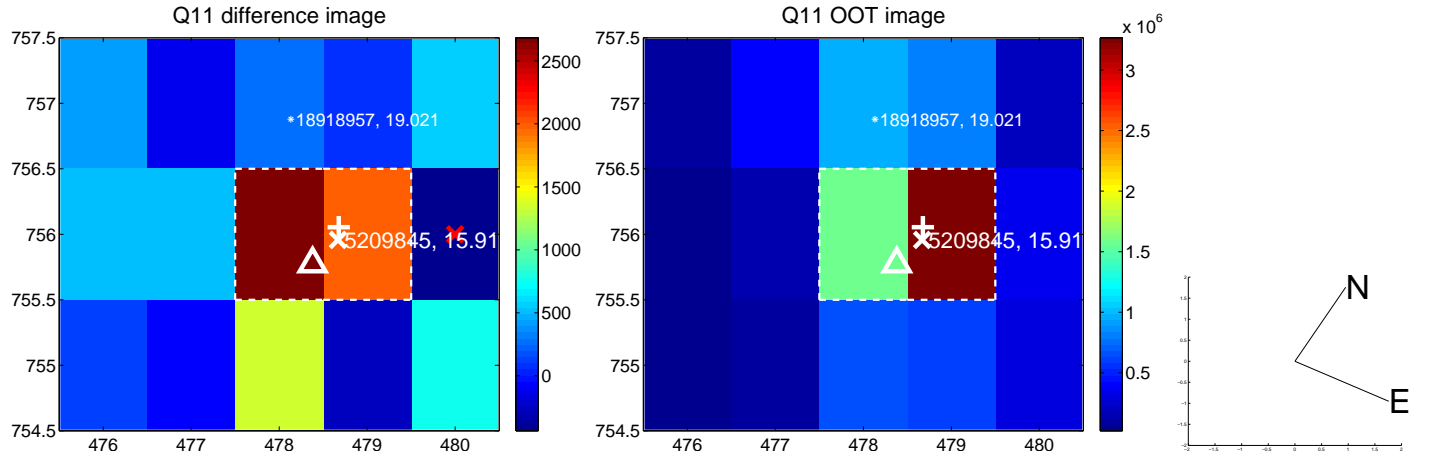
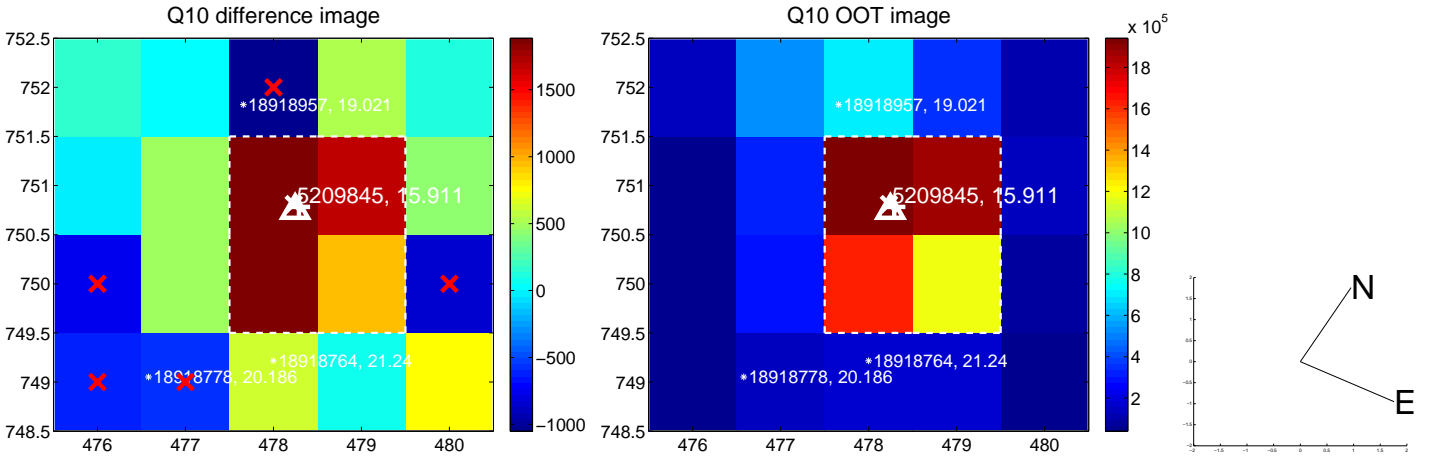
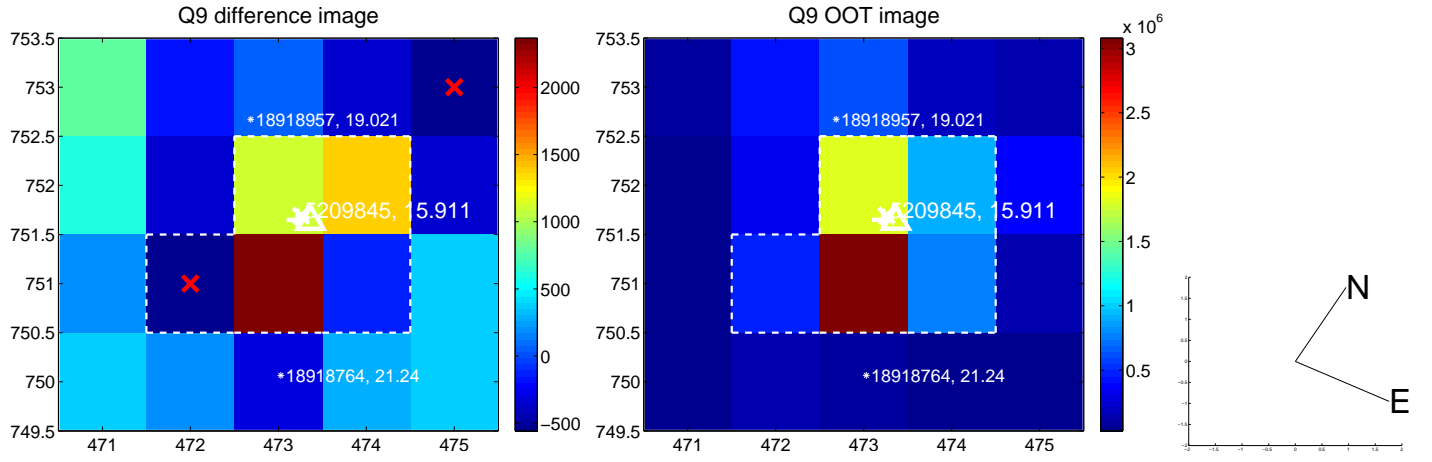
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



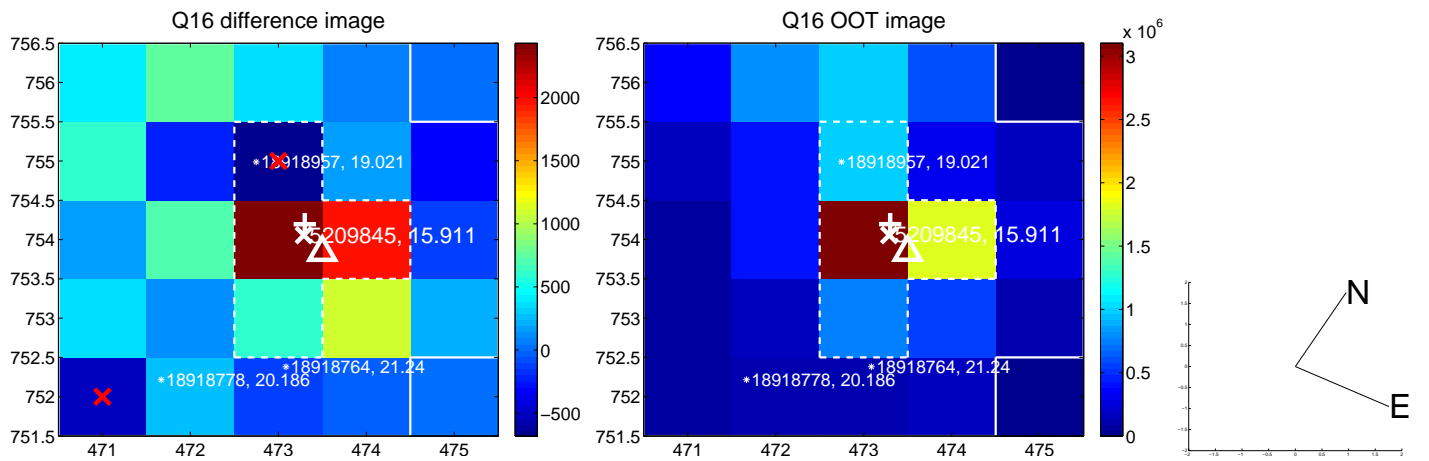
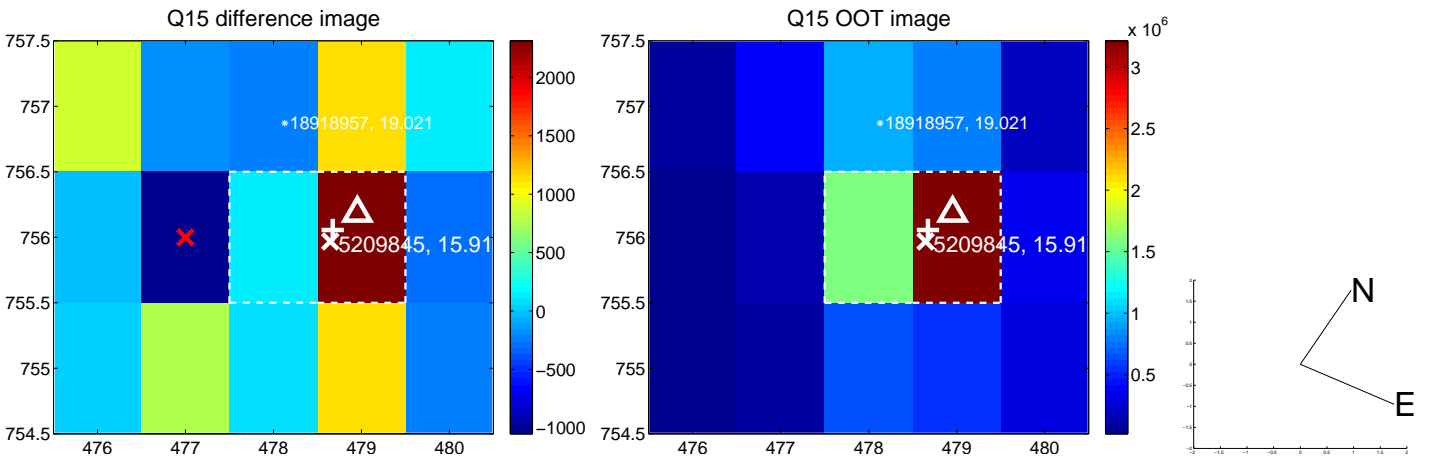
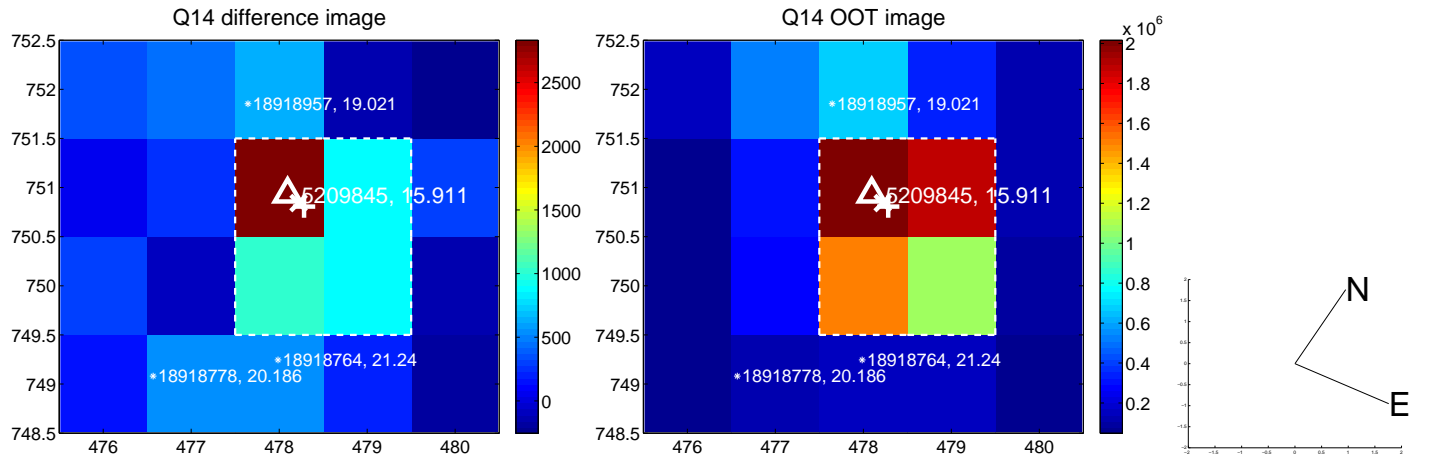
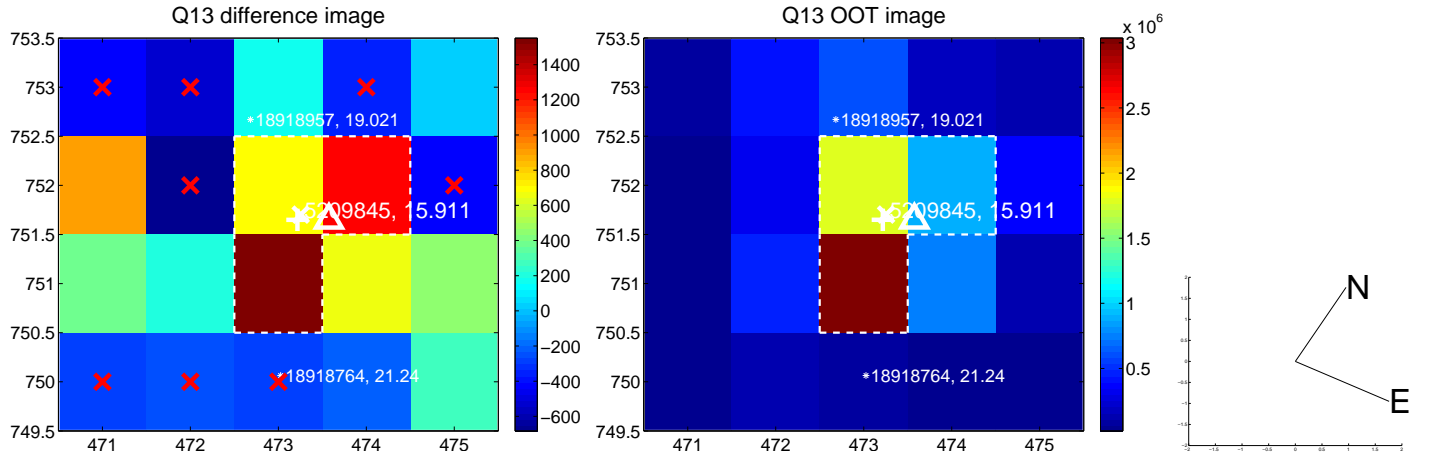
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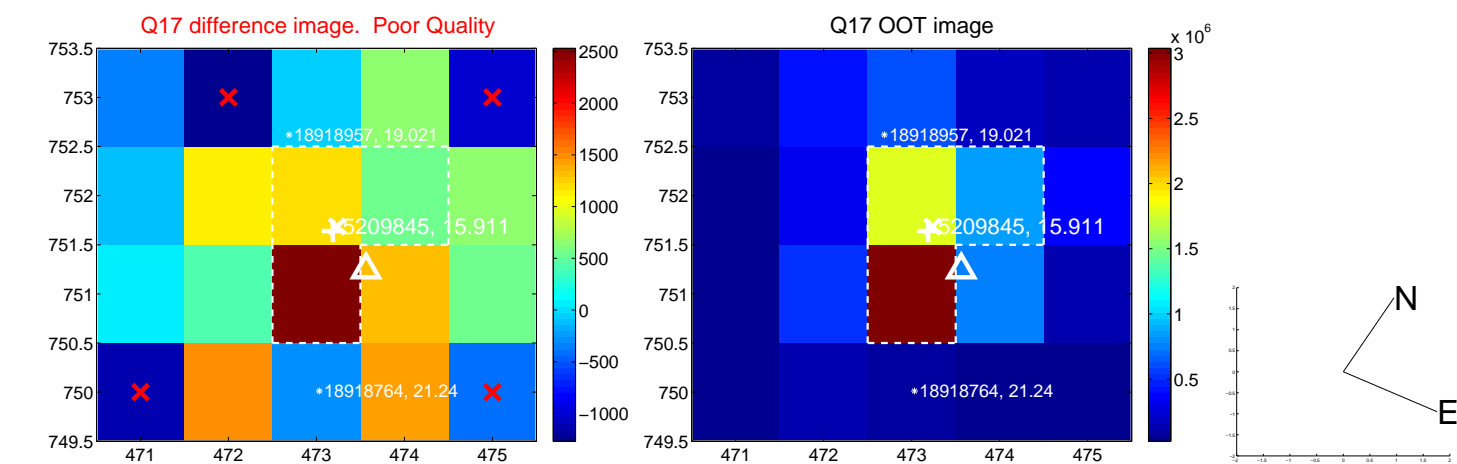
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



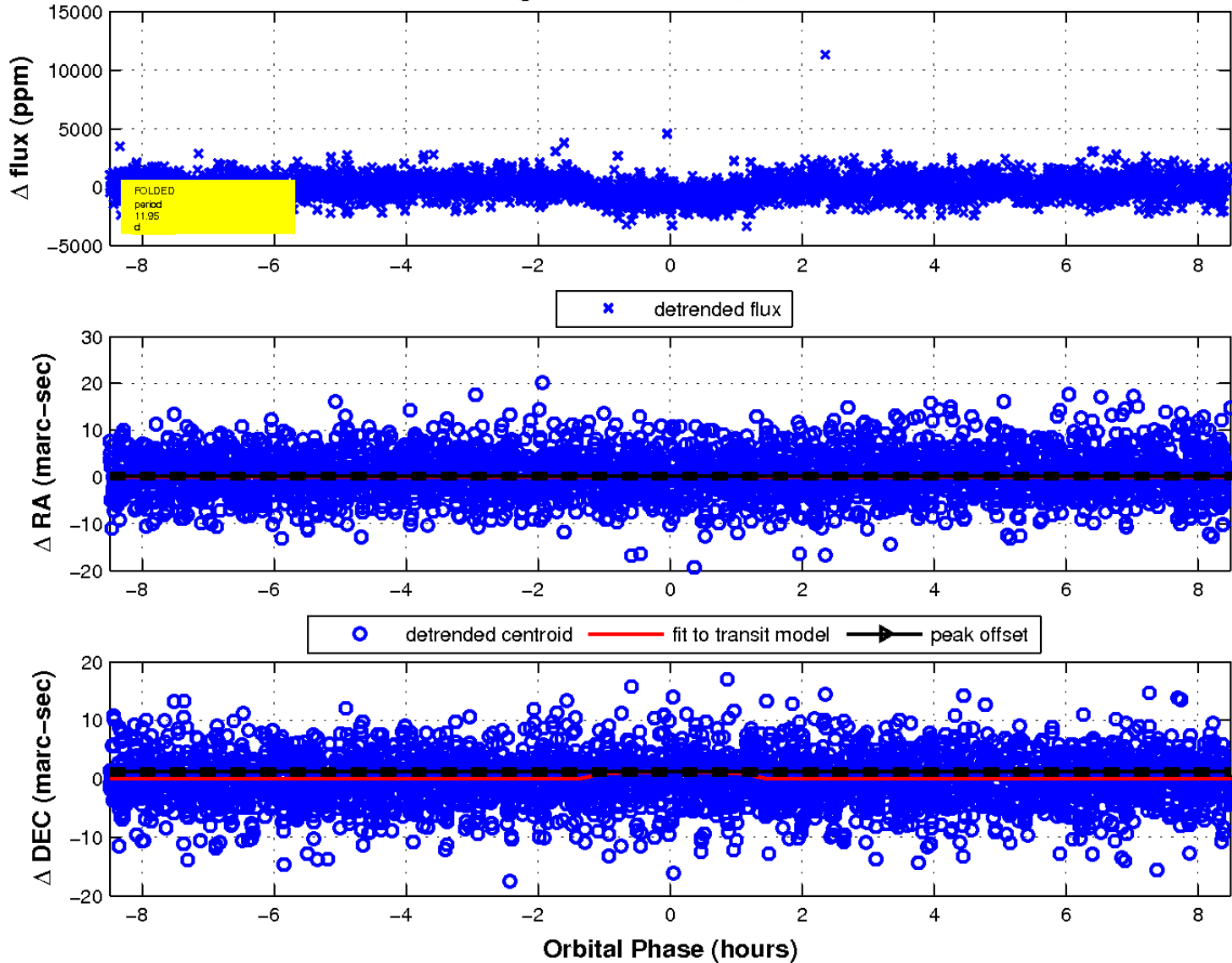
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

