

KIC 011905409

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})
011905409-01	OBS	3312.01	18.093792	139.020911	433.6	3.494	9.8	10.5	0.87	5904	2.15	46.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011905409-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_DIFFS

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 011905409-01

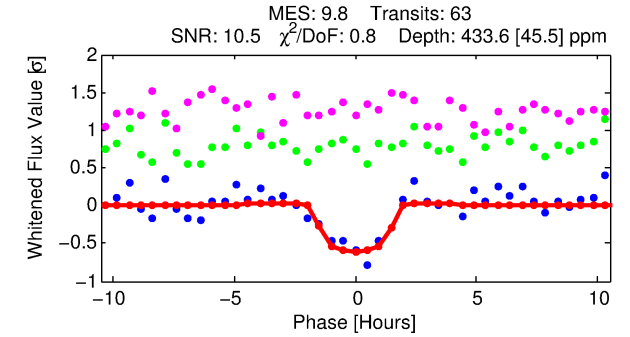
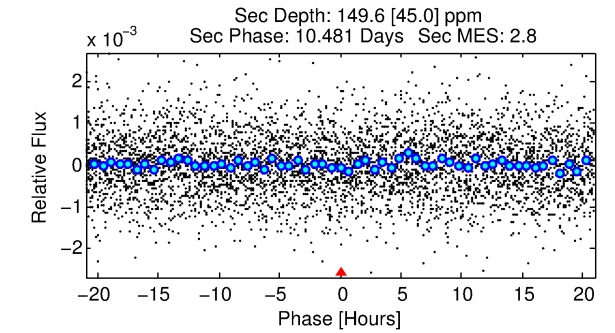
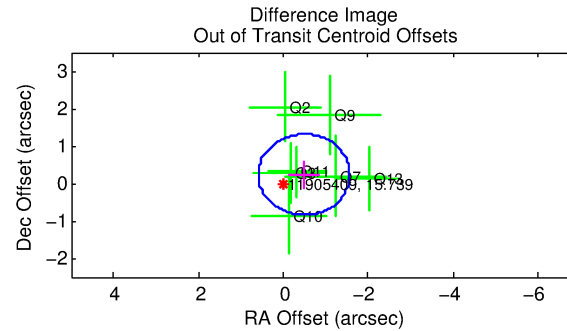
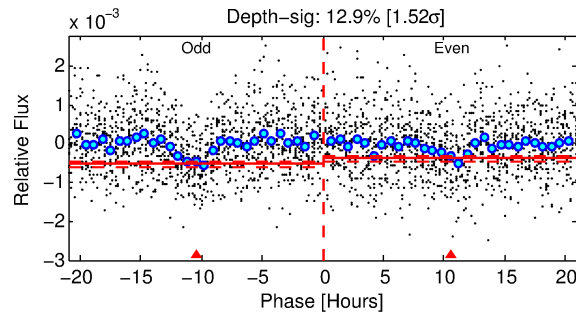
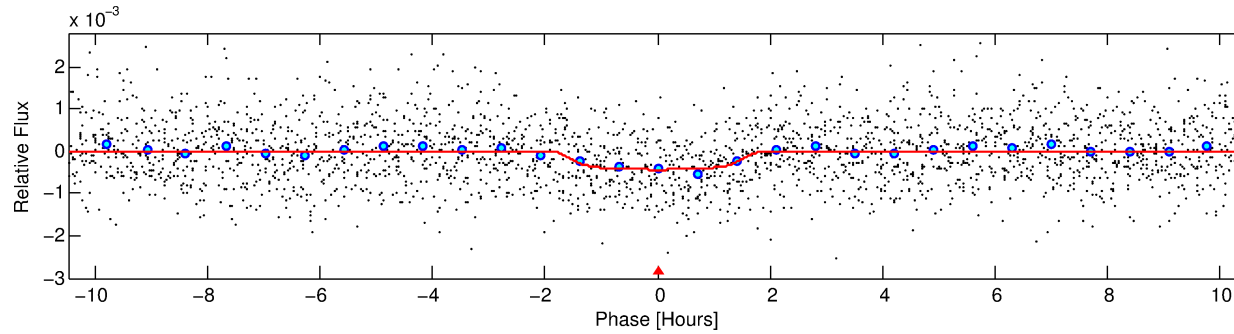
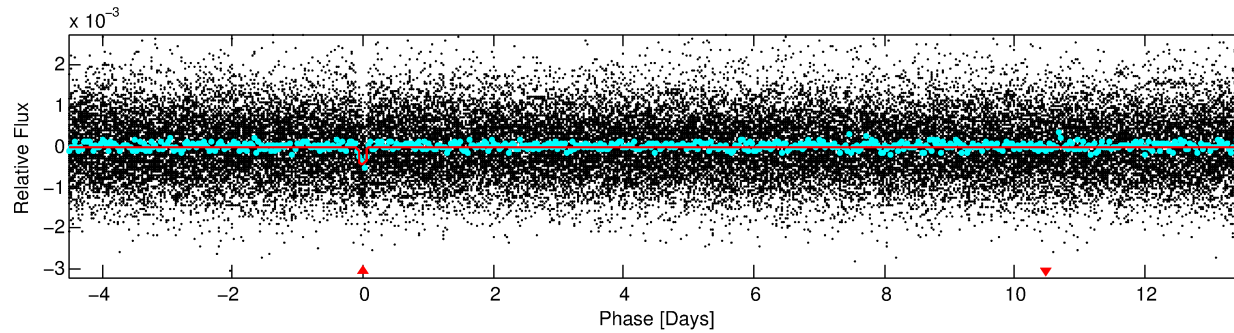
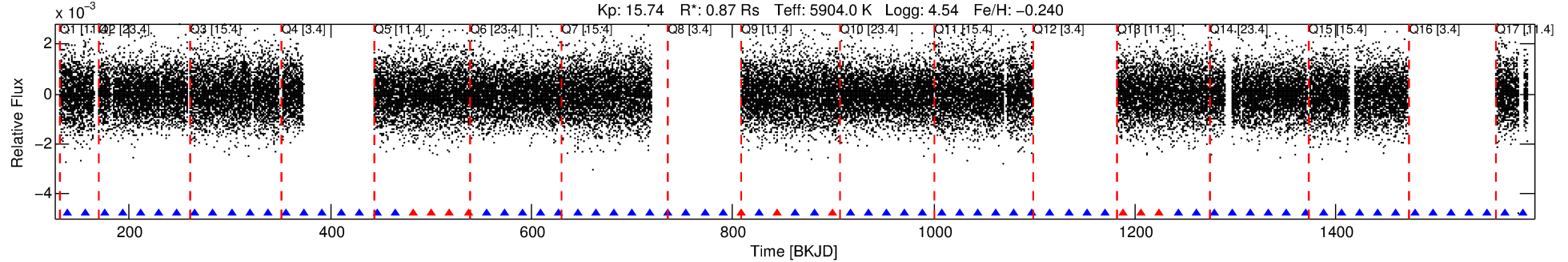
No Significant Match Found

DV One-Page Summary

KIC: 11905409 Candidate: 1 of 1 Period: 18.094 d

KOI: K03312.01 Corr: 0.967

Kp: 15.74 R*: 0.87 Rs Teff: 5904.0 K Logg: 4.54 Fe/H: -0.240



DV Fit Results:

Period = 18.09379 [0.00018] d
Epoch = 139.0209 [0.0075] BKJD
Rp/R* = 0.0227 [0.0062]
a/R* = 18.83 [24.62]
b = 0.91 [0.27]
Seff = 46.29 [15.74]
Teq = 665 [57] K
Rp = 2.14 [0.80] Re
a = 0.1330 [0.0286] AU
Ag = 316.27 [221.12] [1.43σ]
Teffp = 4337 [688] K [5.32σ]

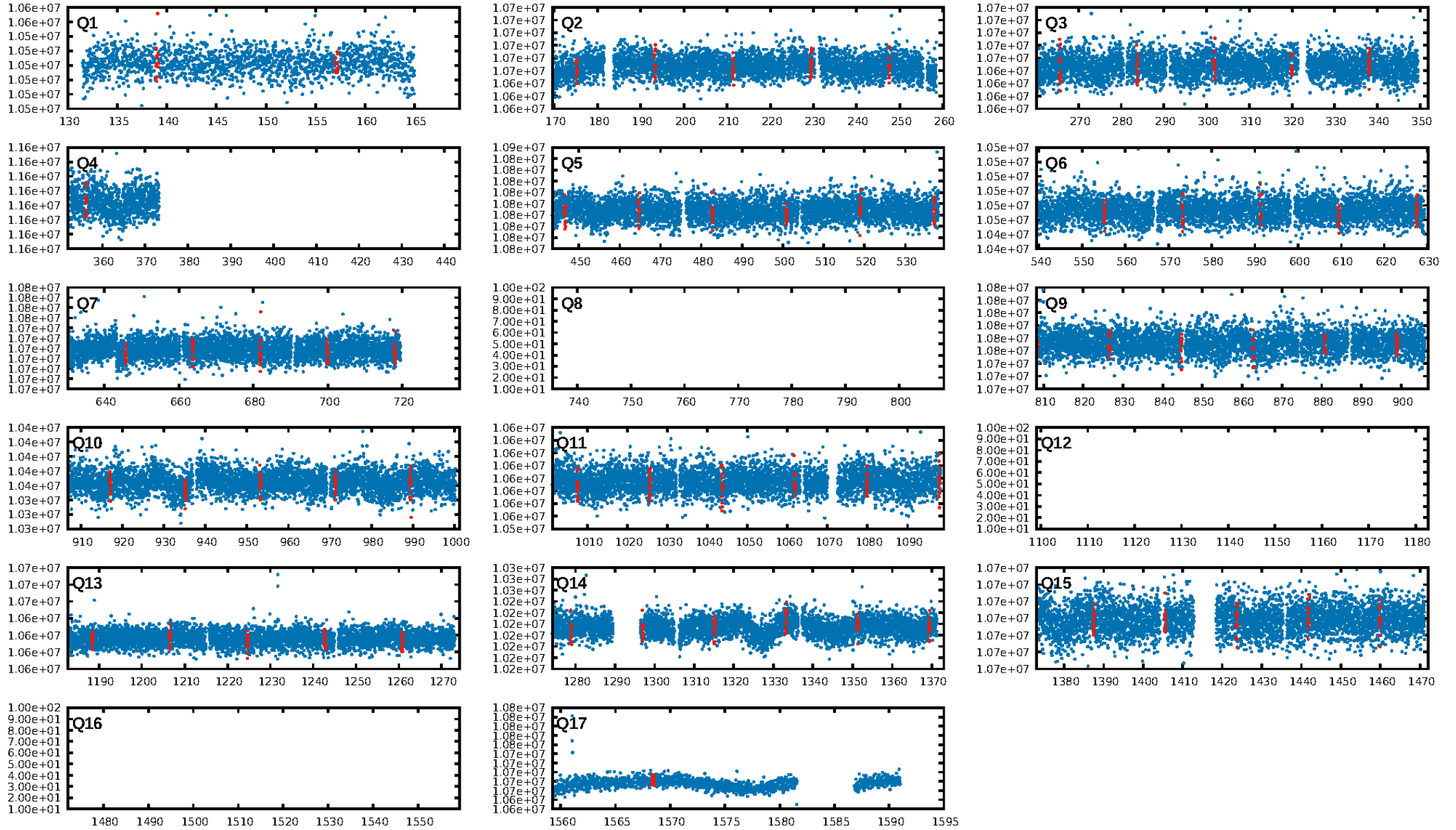
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.87e-23
RollingBand-fgt: 0.83 [49/59]
GhostDiagnostic-chr: 21.11
Centroid-sig: 0.4%
Centroid-so: 2.589 arcsec [1.96σ]
OotOffset-rm: 0.547 arcsec [1.52σ]
KicOffset-rm: 0.449 arcsec [1.25σ]
OotOffset-st: 2/3/0/2 [7]
KicOffset-st: 2/3/0/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [14/14]

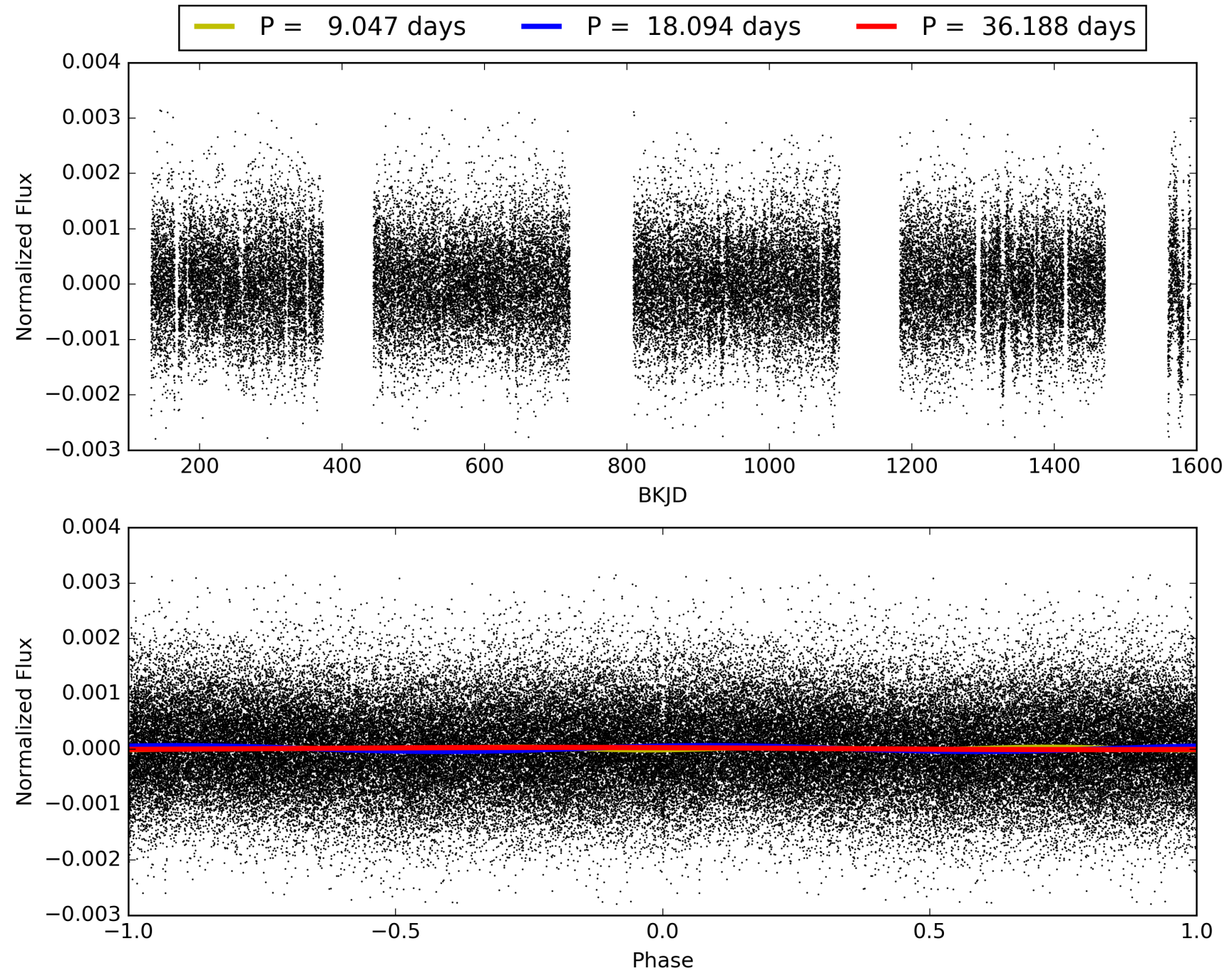
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:49:23 Z

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

TCE 011905409-01, PDC Light Curves

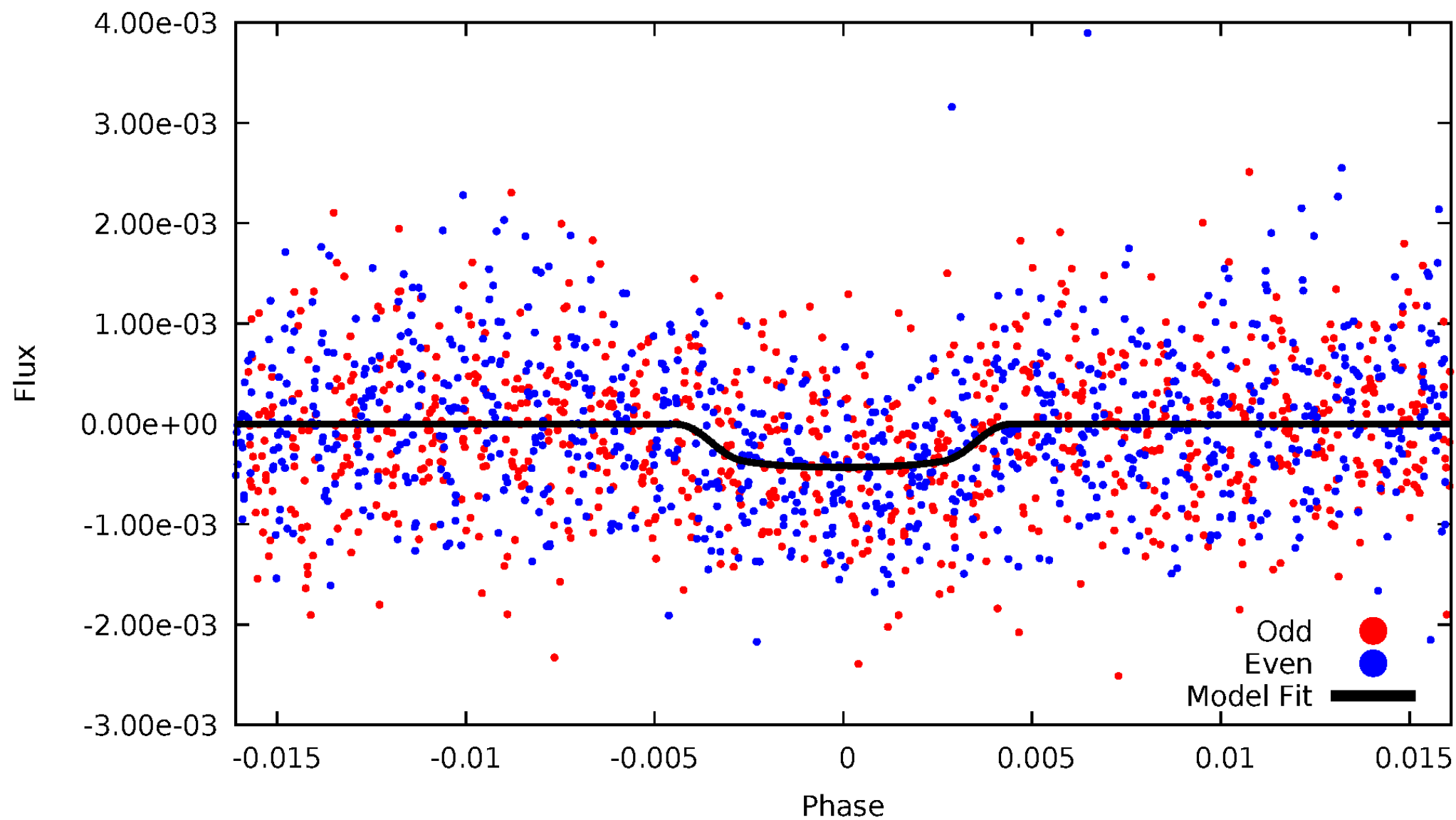


TCE 011905409-01



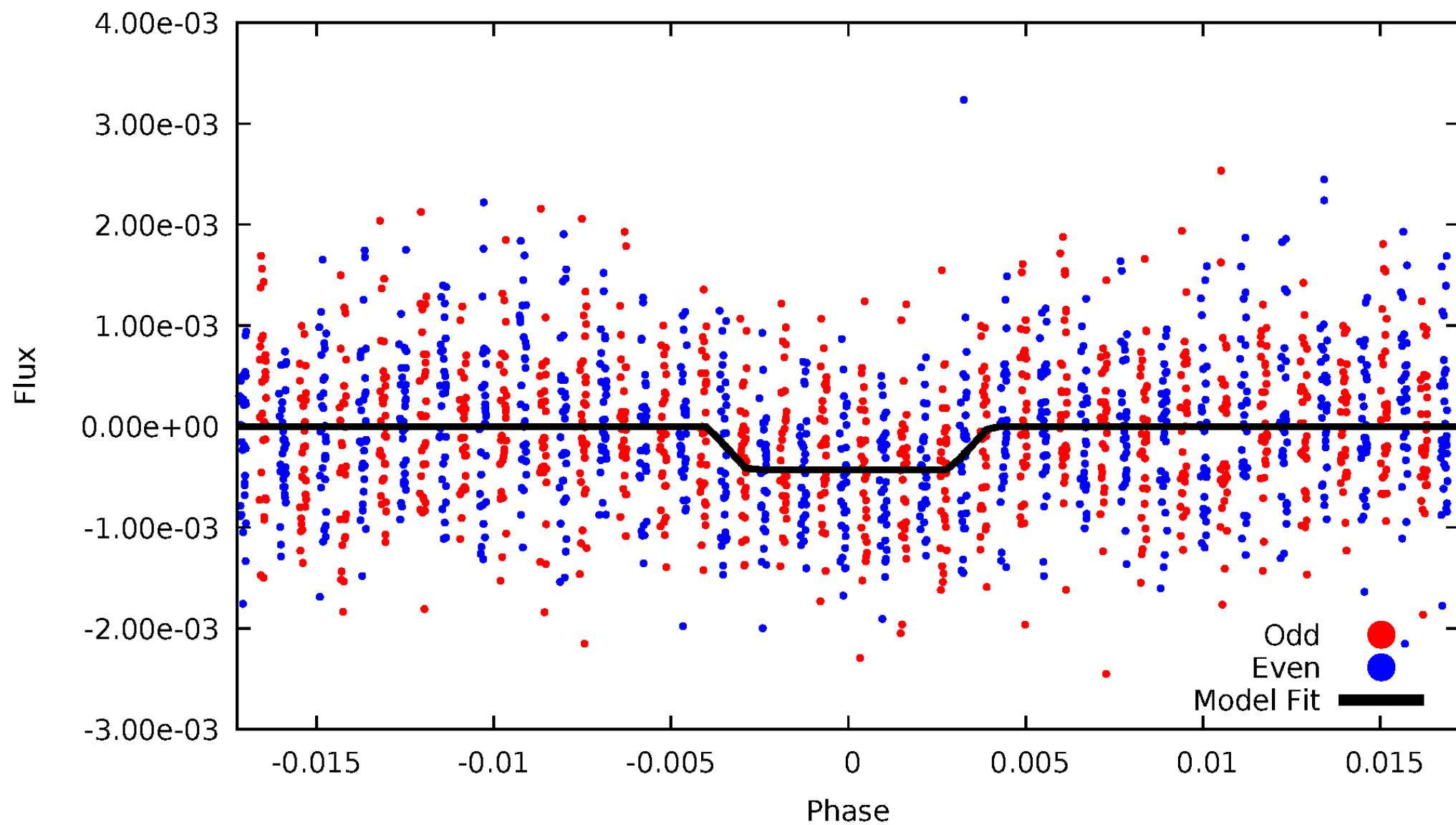
DV Odd/Even

TCE 011905409-01



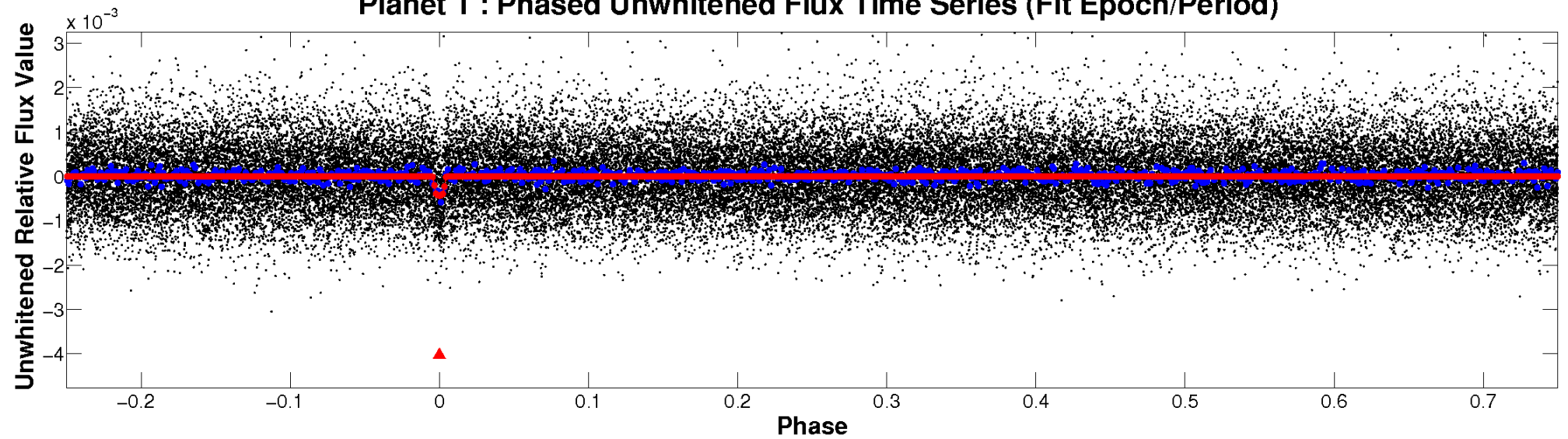
ALT Odd/Even

TCE 011905409-01

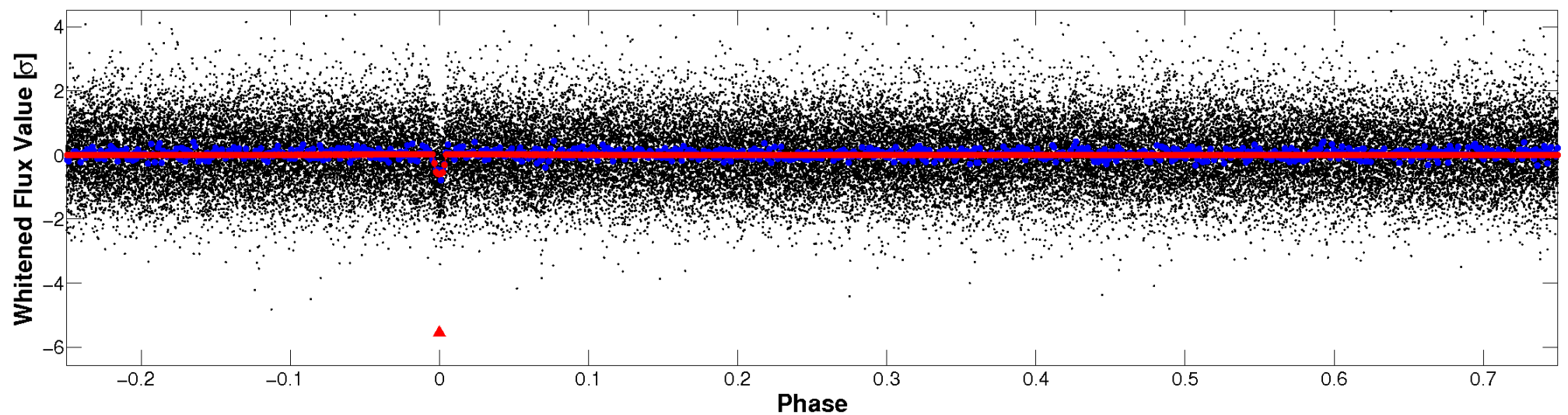


Non-Whitened Vs. Whitened Light Curve

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

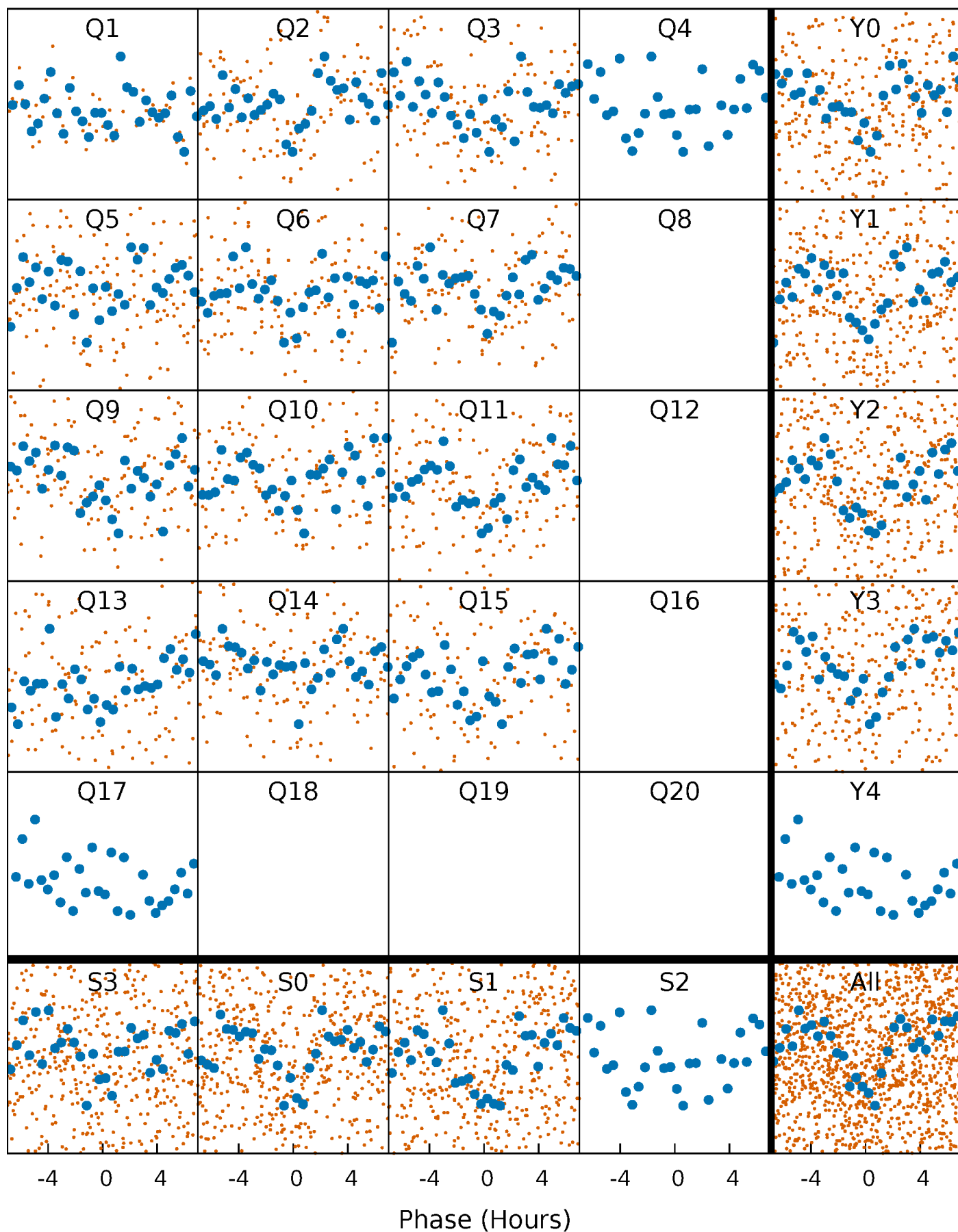


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



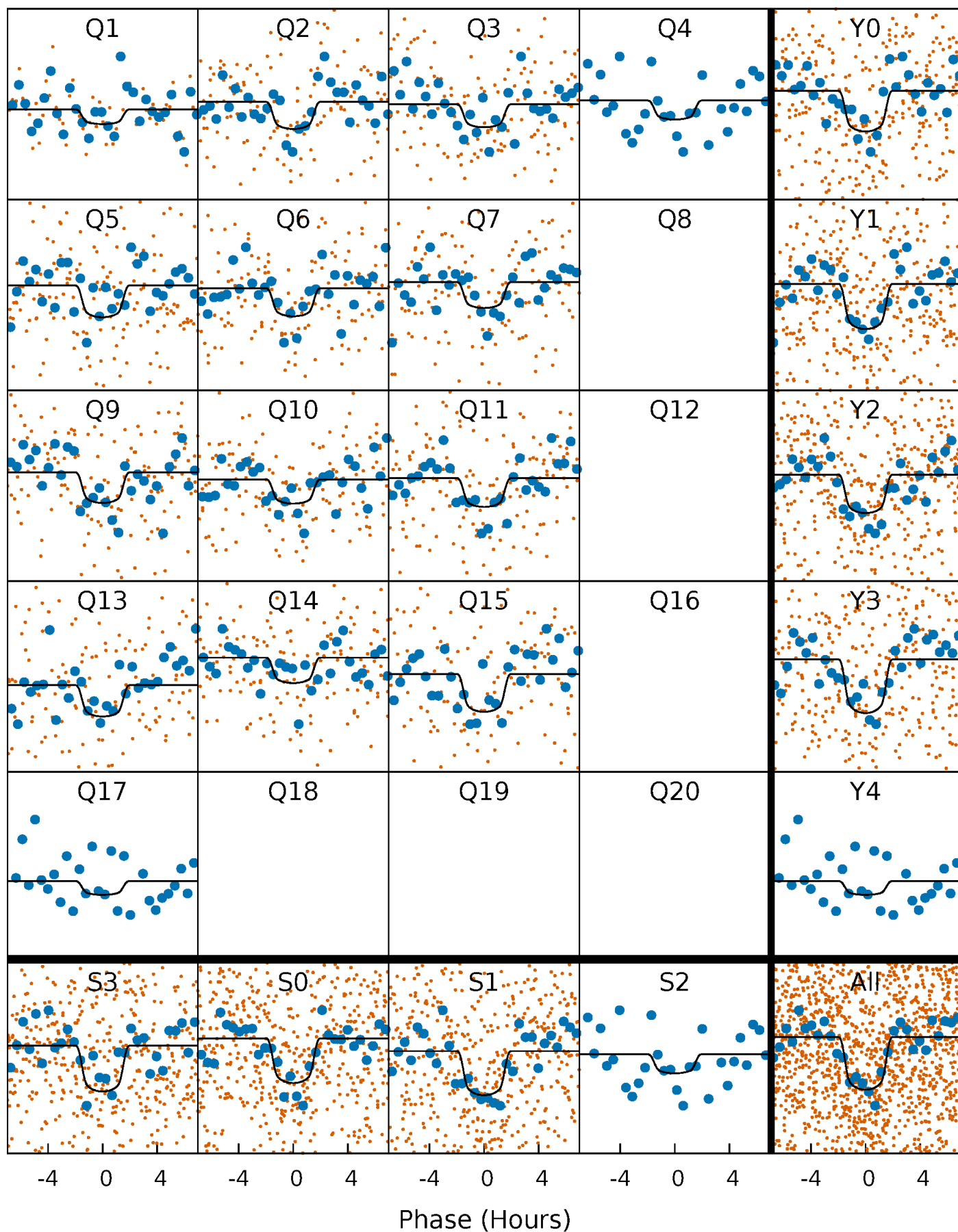
PDC Quarter-Phased Transit Curves

TCE 011905409-01 P= 18.093792 Days $T_0=139.020911$ (BKJD)



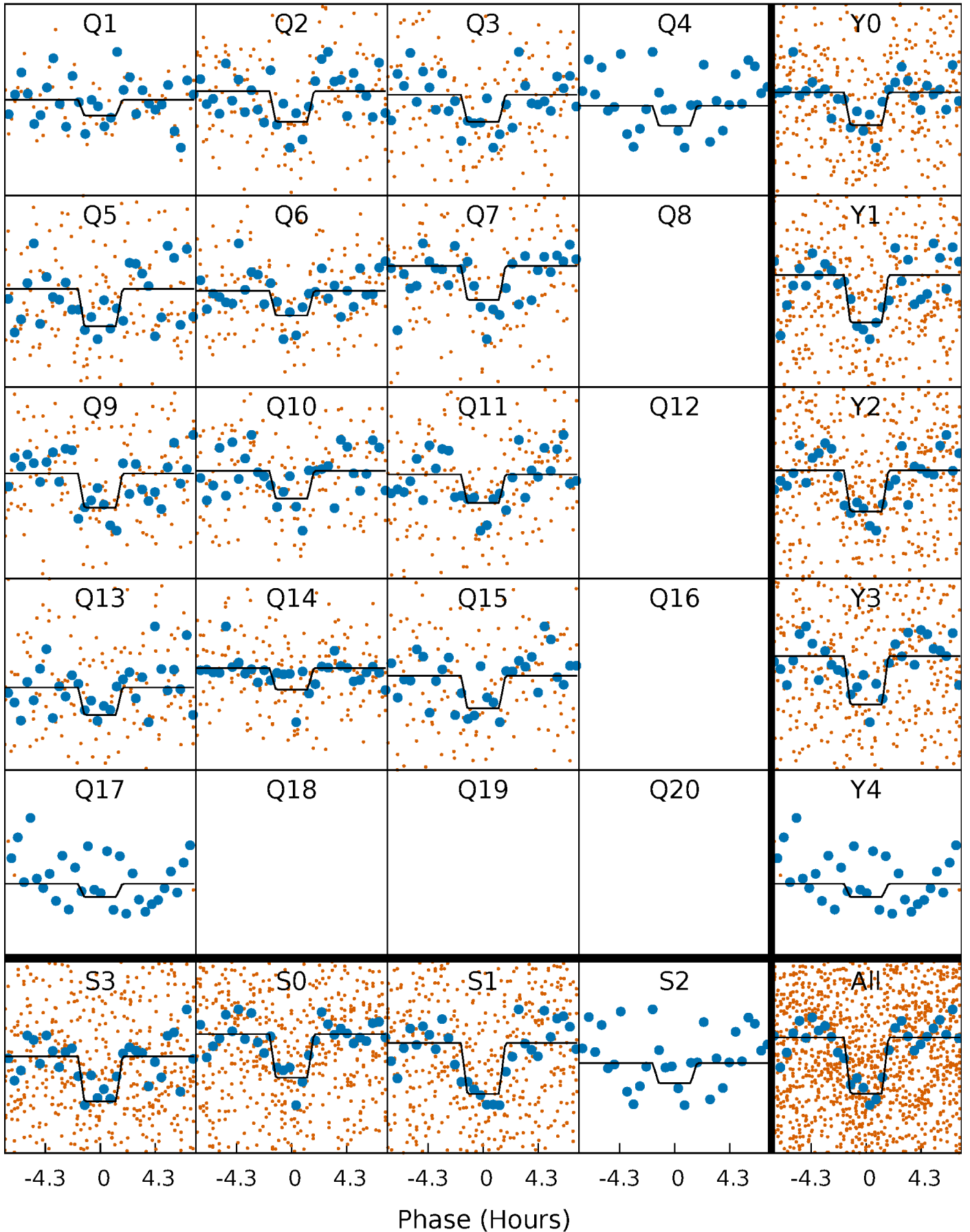
DV Quarter-Phased Transit Curves

TCE 011905409-01 P= 18.093792 Days $T_0=139.020911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

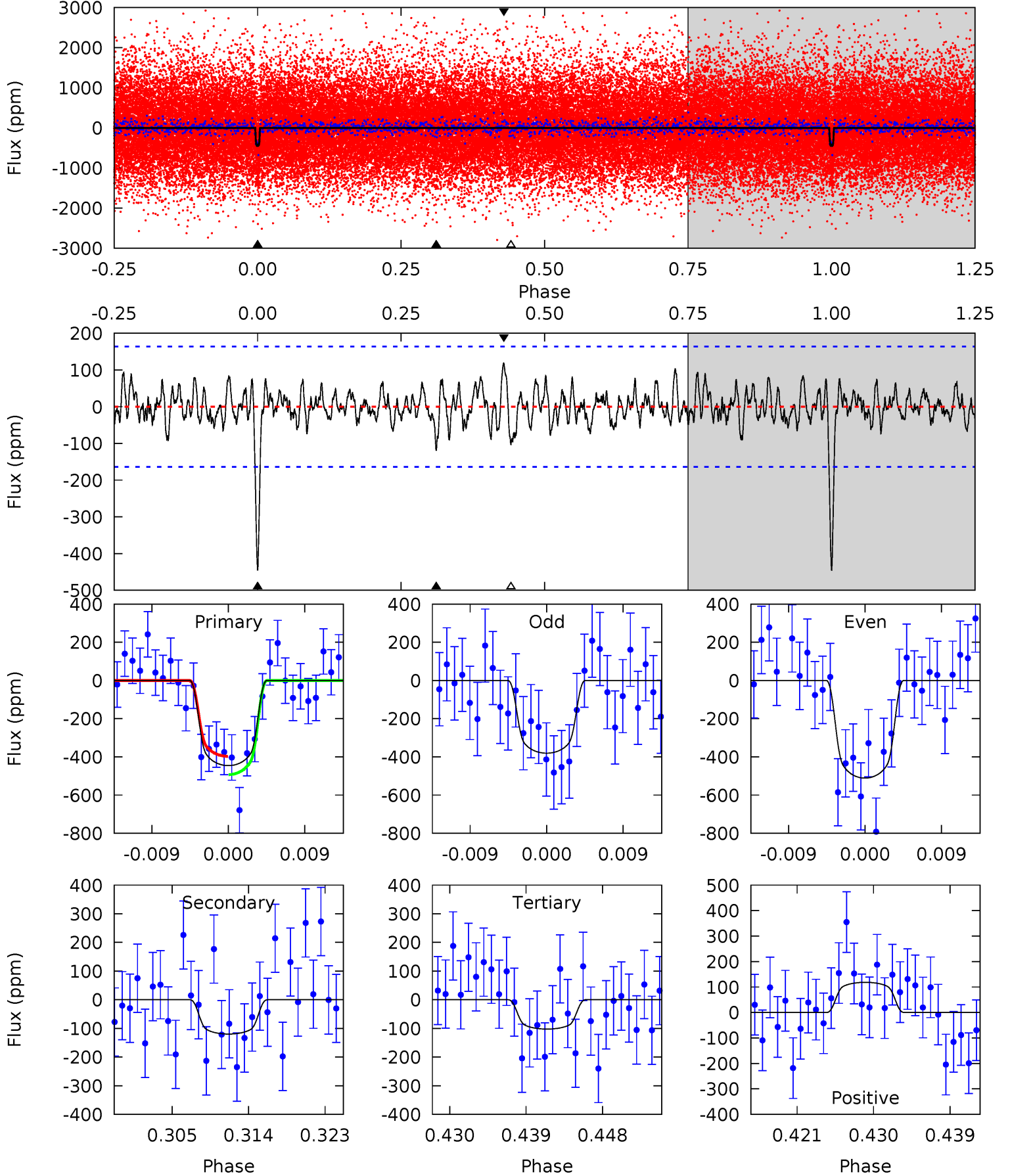
TCE 011905409-01 P= 18.093947 Days $T_0=139.013875$ (BKJD)



DV Model-Shift Uniqueness Test

011905409-01, P = 18.093792 Days, E = 120.927119 Days

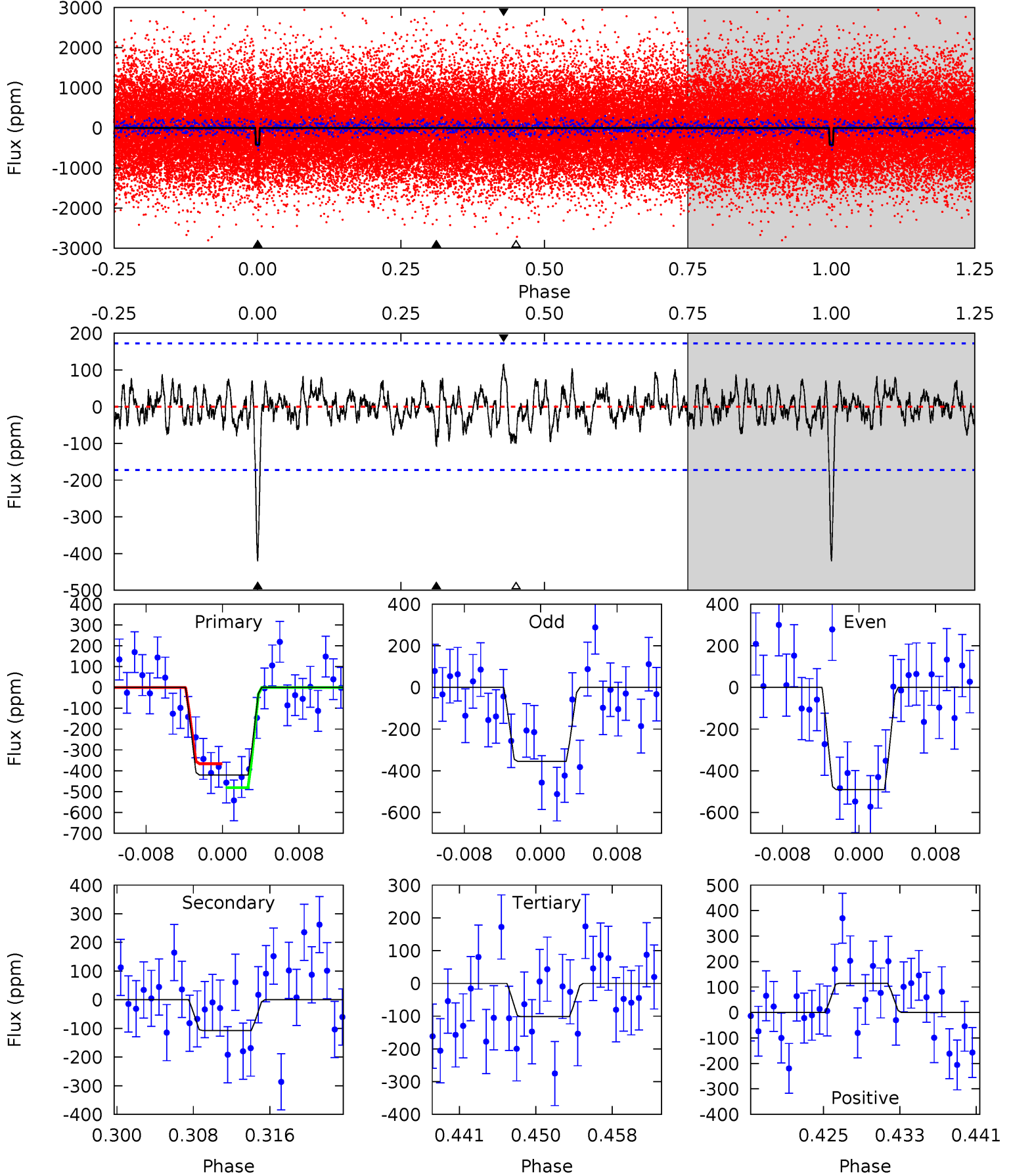
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	3.69	3.15	3.65	5.05	2.61	1.14	10.6	10.1	0.54	0.04	2.01	0.90	0.21	1.48



Alt Model-Shift Uniqueness Test

011905409-01, P = 18.093947 Days, E = 120.919928 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	3.16	2.98	3.36	5.06	2.64	1.06	9.38	9.00	0.18	-0.20	1.98	0.97	0.21	1.69



Stellar Parameters For KIC 011905409

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5904^{+142}_{-178}	$4.543^{+0.044}_{-0.176}$	$-0.240^{+0.300}_{-0.300}$	$0.867^{+0.218}_{-0.073}$	$0.958^{+0.109}_{-0.120}$	$2.073^{+0.462}_{-0.984}$
	+2%/-3%	+1%/-4%	+125%/-125%	+25%/-8%	+11%/-13%	+22%/-47%
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 011905409-01 / KOI 3312.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-120 ± 32	$2.22^{+0.69}_{-0.61}$	946^{+52}_{-40}	4287^{+641}_{-411}	221^{+230}_{-100}
Alt.	-108 ± 34	$2.02^{+0.70}_{-0.63}$	946^{+52}_{-40}	4347^{+735}_{-464}	246^{+290}_{-123}

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

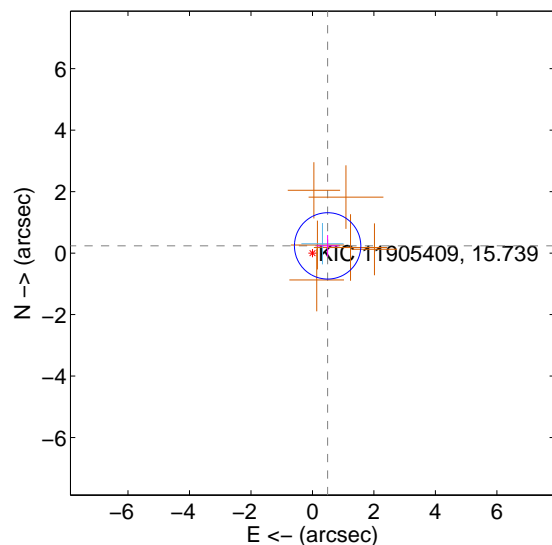
Supplemental centroid analysis for 011905409-01. Kepler magnitude: 15.74. Transit SNR 10.47

There are 1 quarters with good PRF difference image offsets

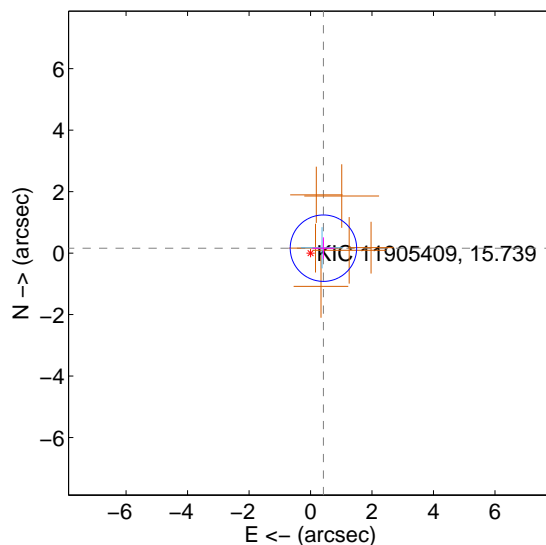
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.547 ± 0.360	1.52	-0.494 ± 0.361	0.235 ± 0.354
PRF-fit source offset from KIC position	0.449 ± 0.360	1.25	-0.420 ± 0.361	0.160 ± 0.354
photometric centroid source offset	2.59 ± 1.32	1.96	-1.54 ± 1.36	-2.08 ± 1.30

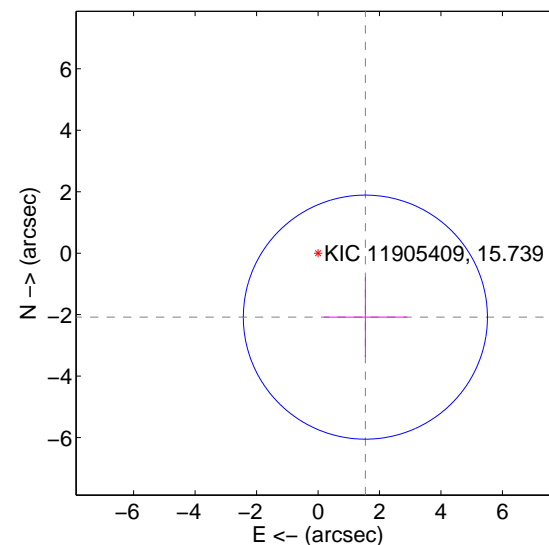
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

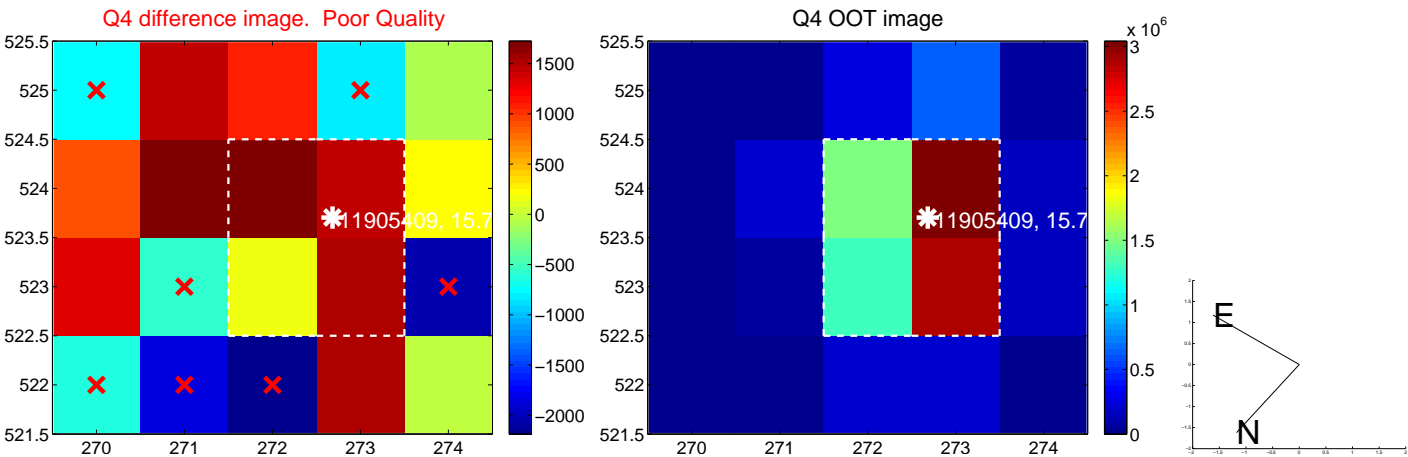
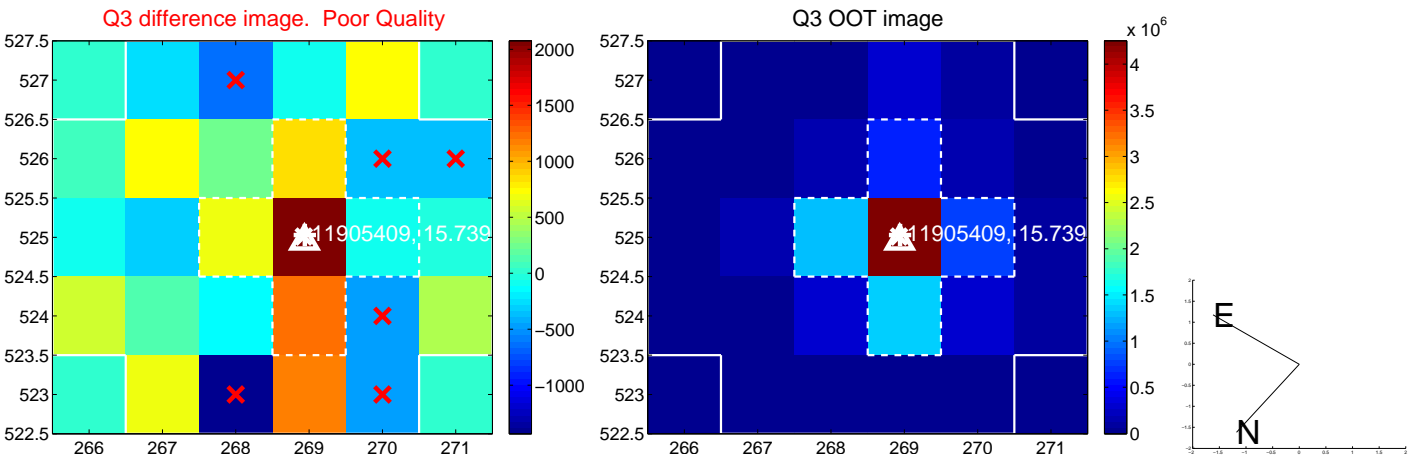
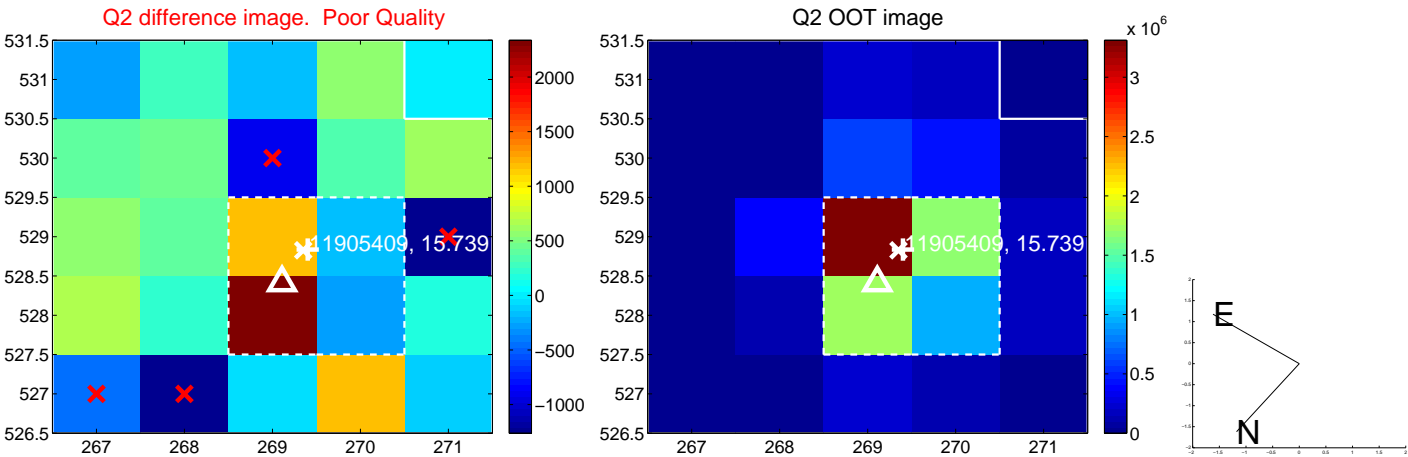
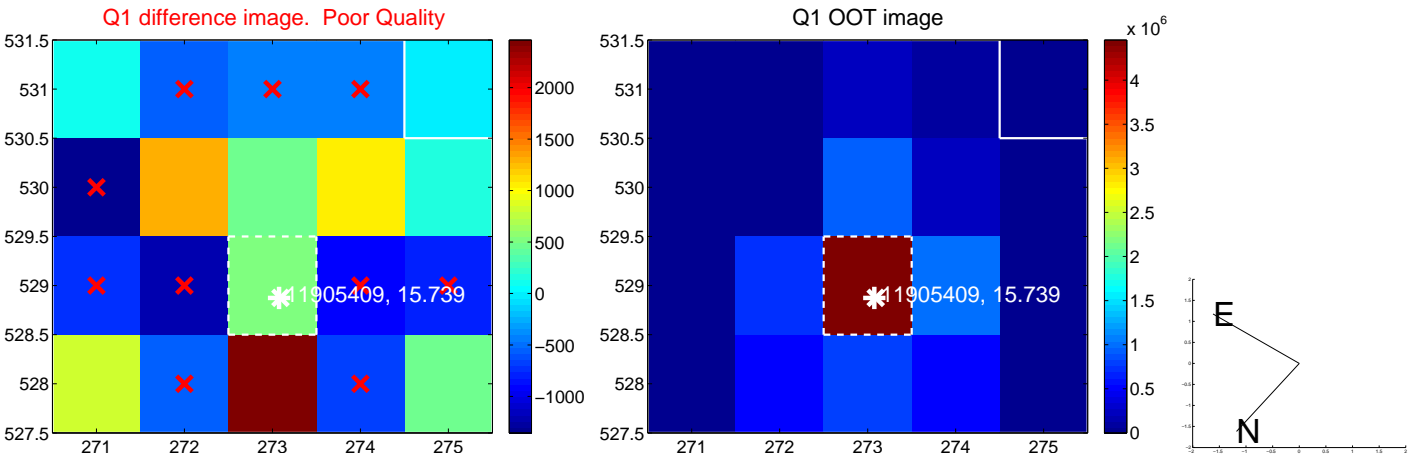


offset from photometric centroids

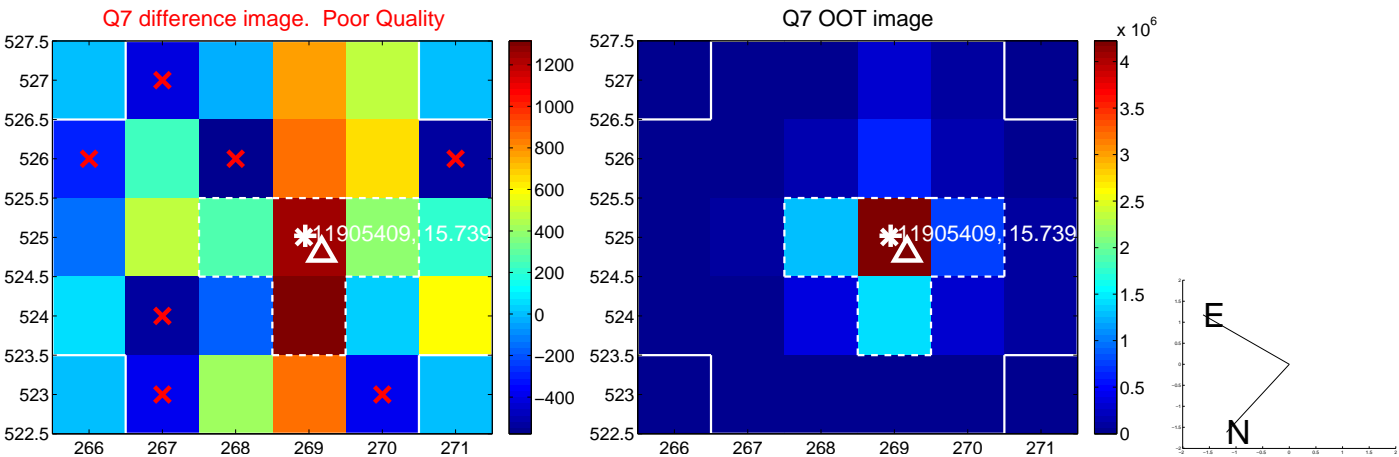
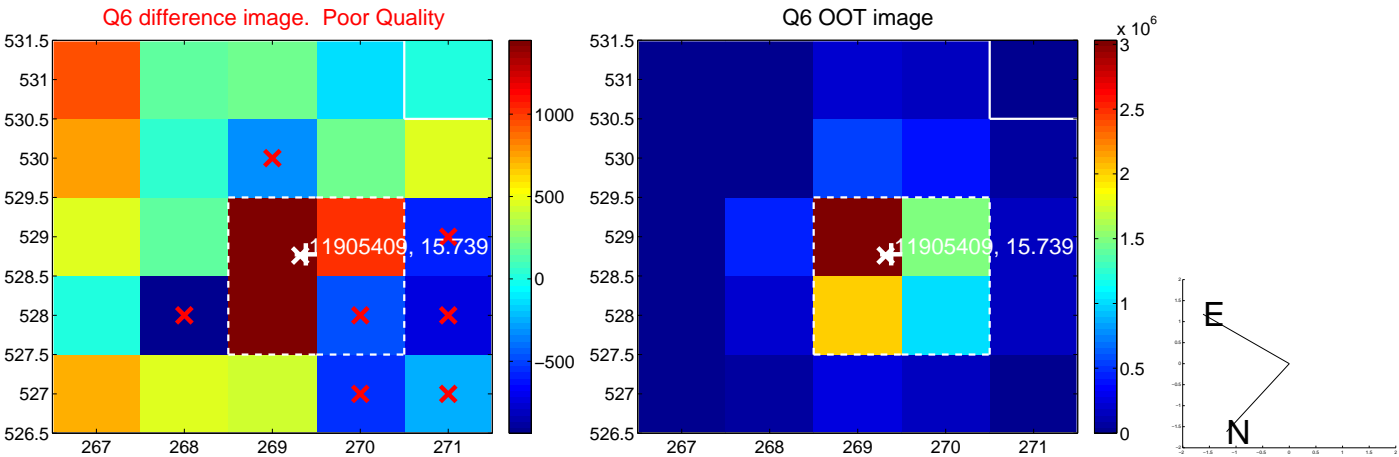
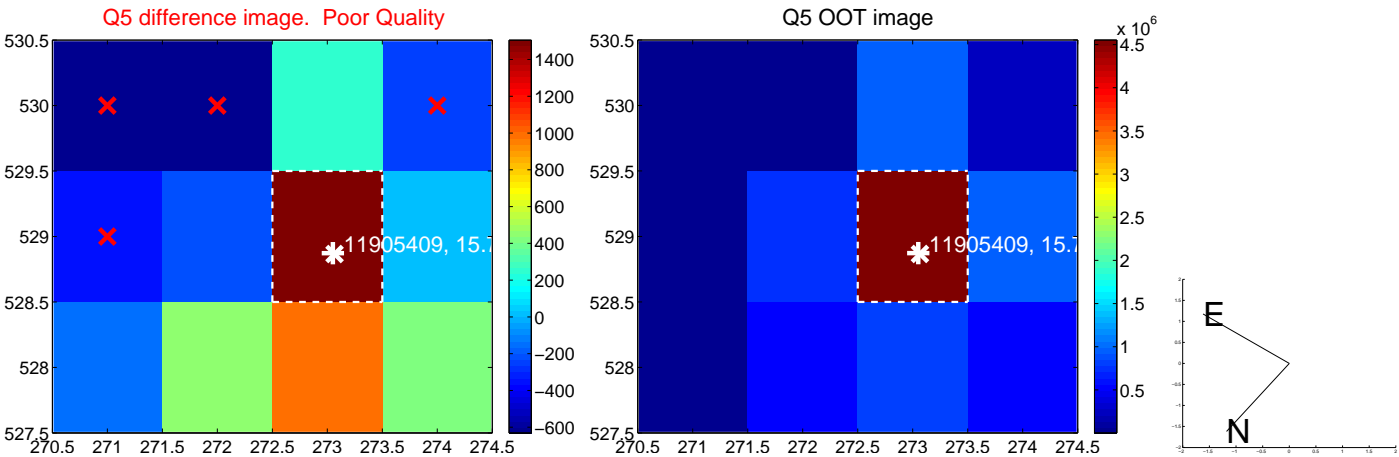


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

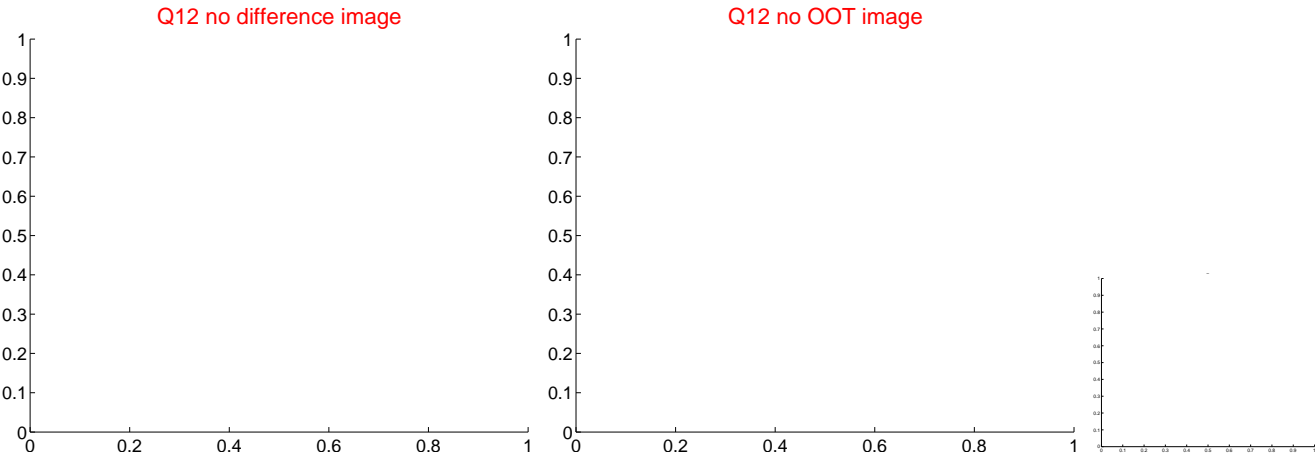
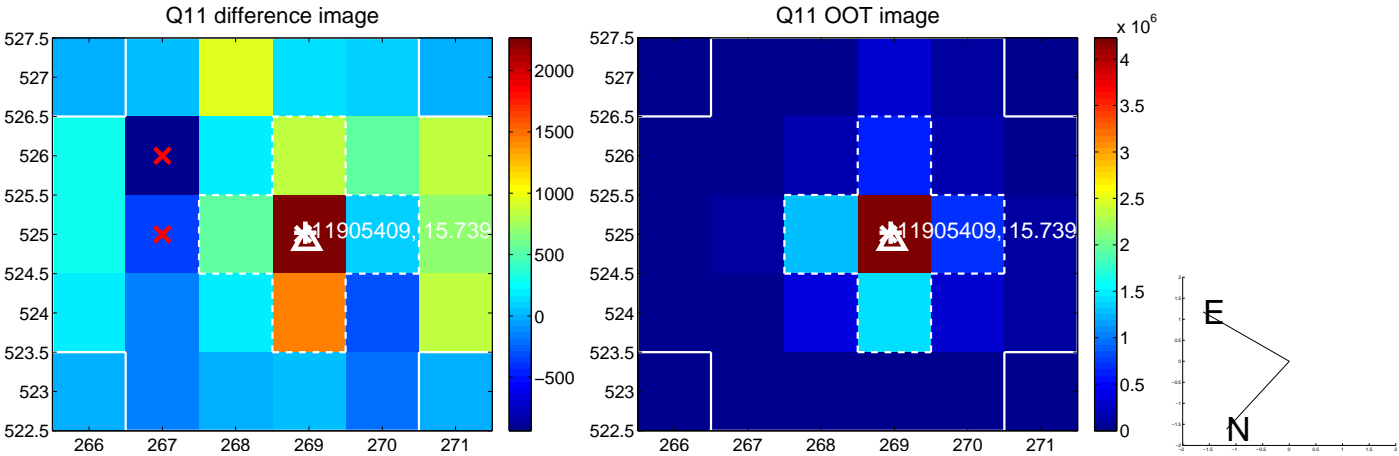
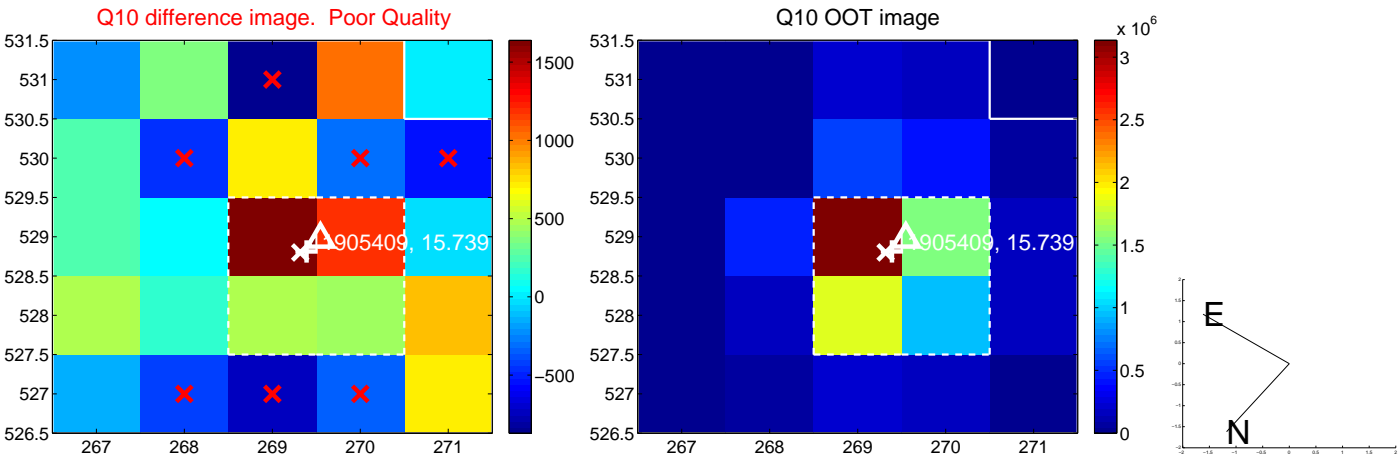
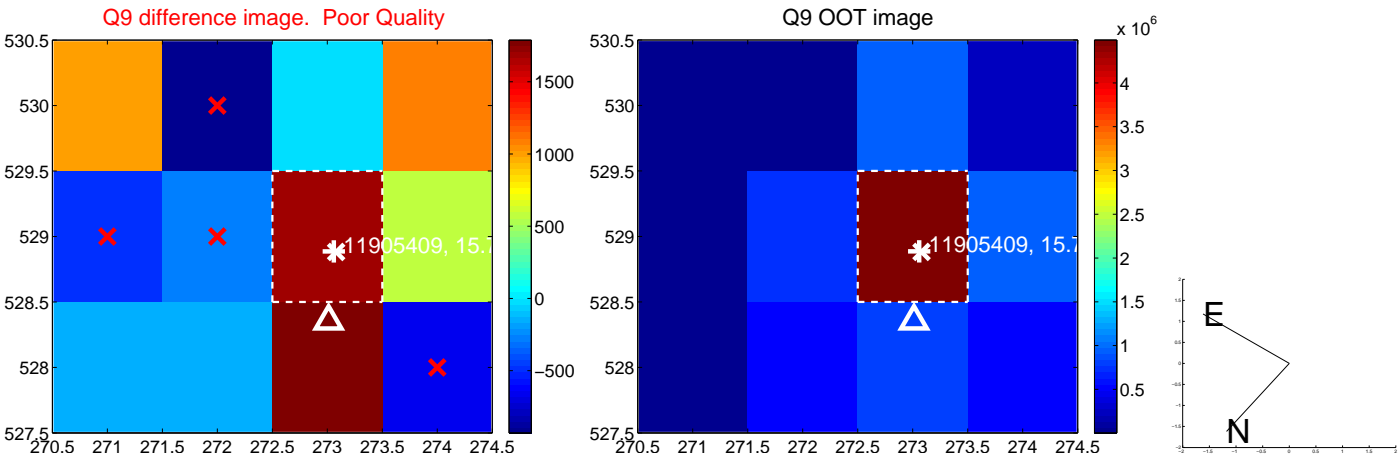
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



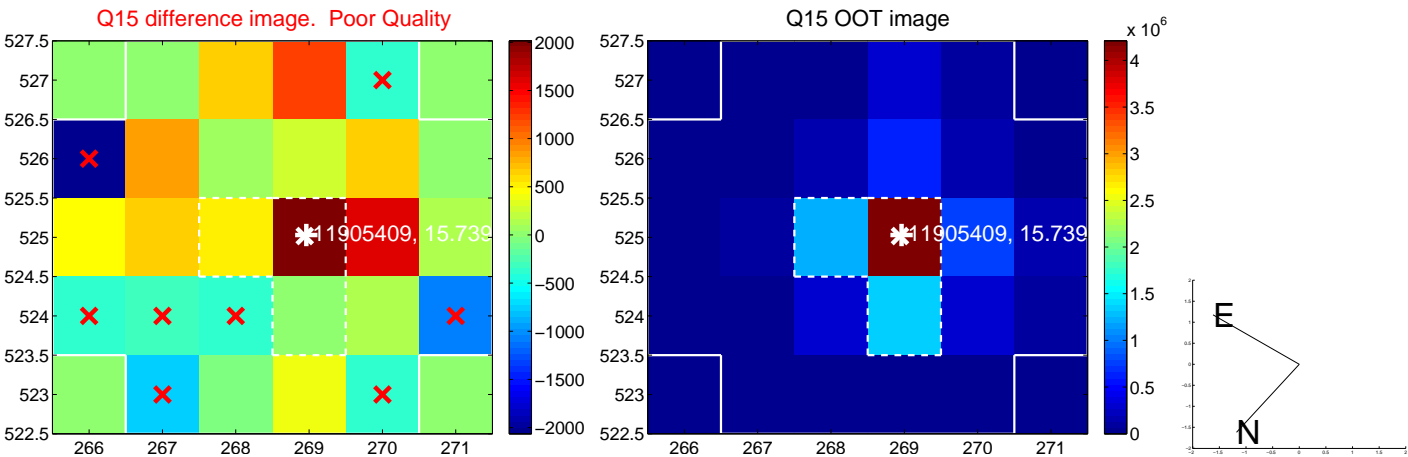
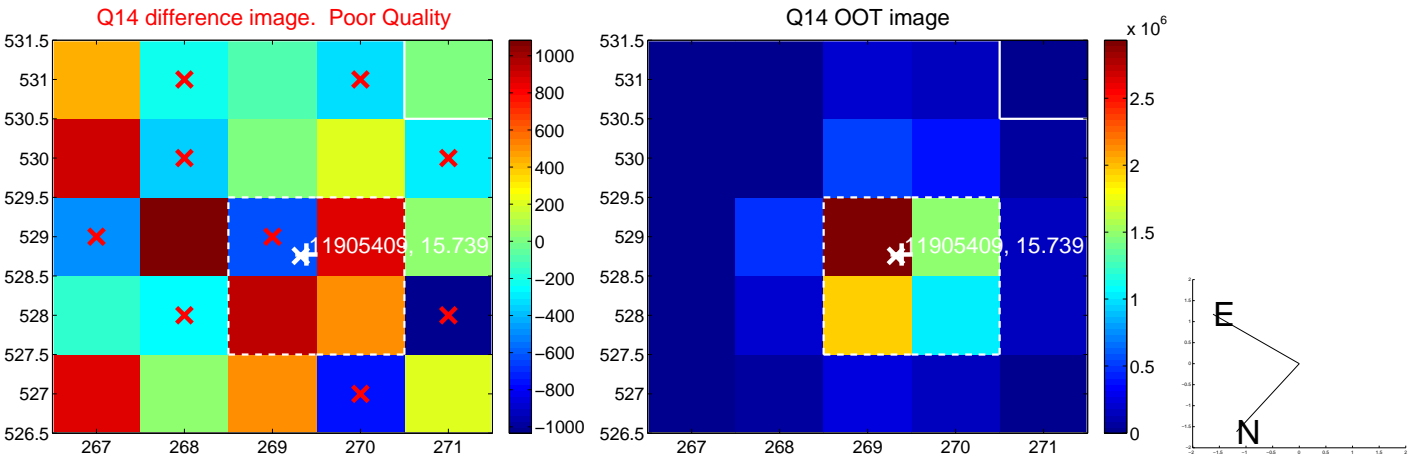
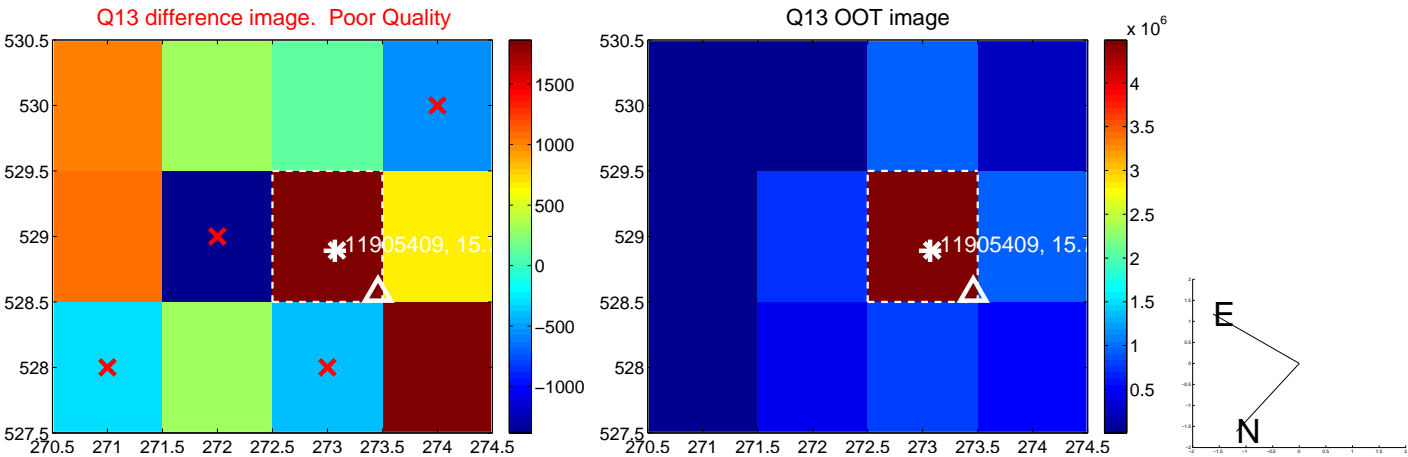
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



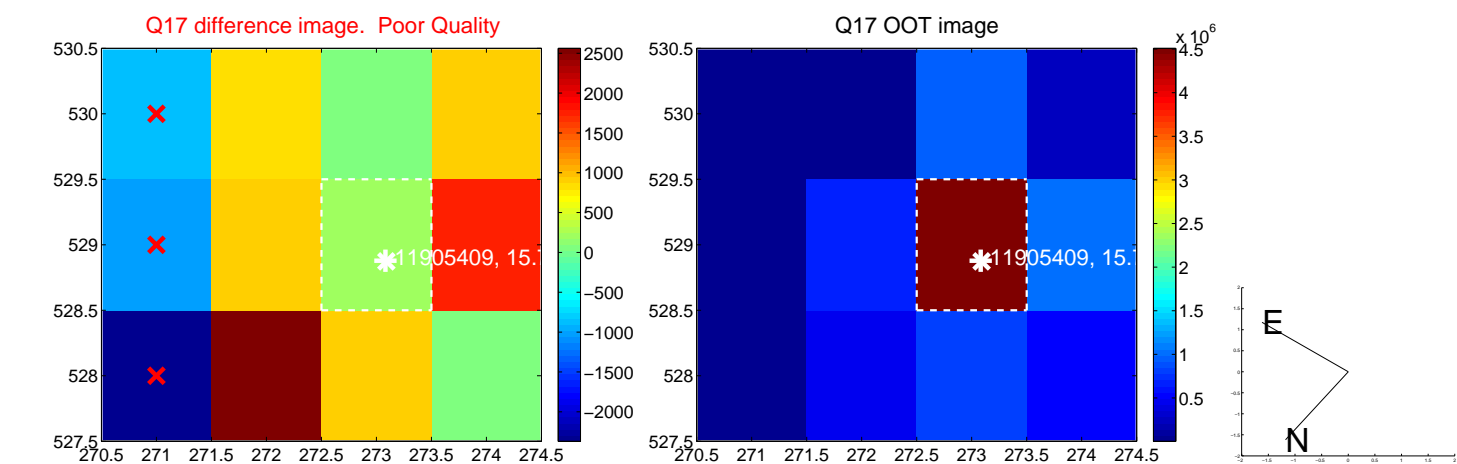
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



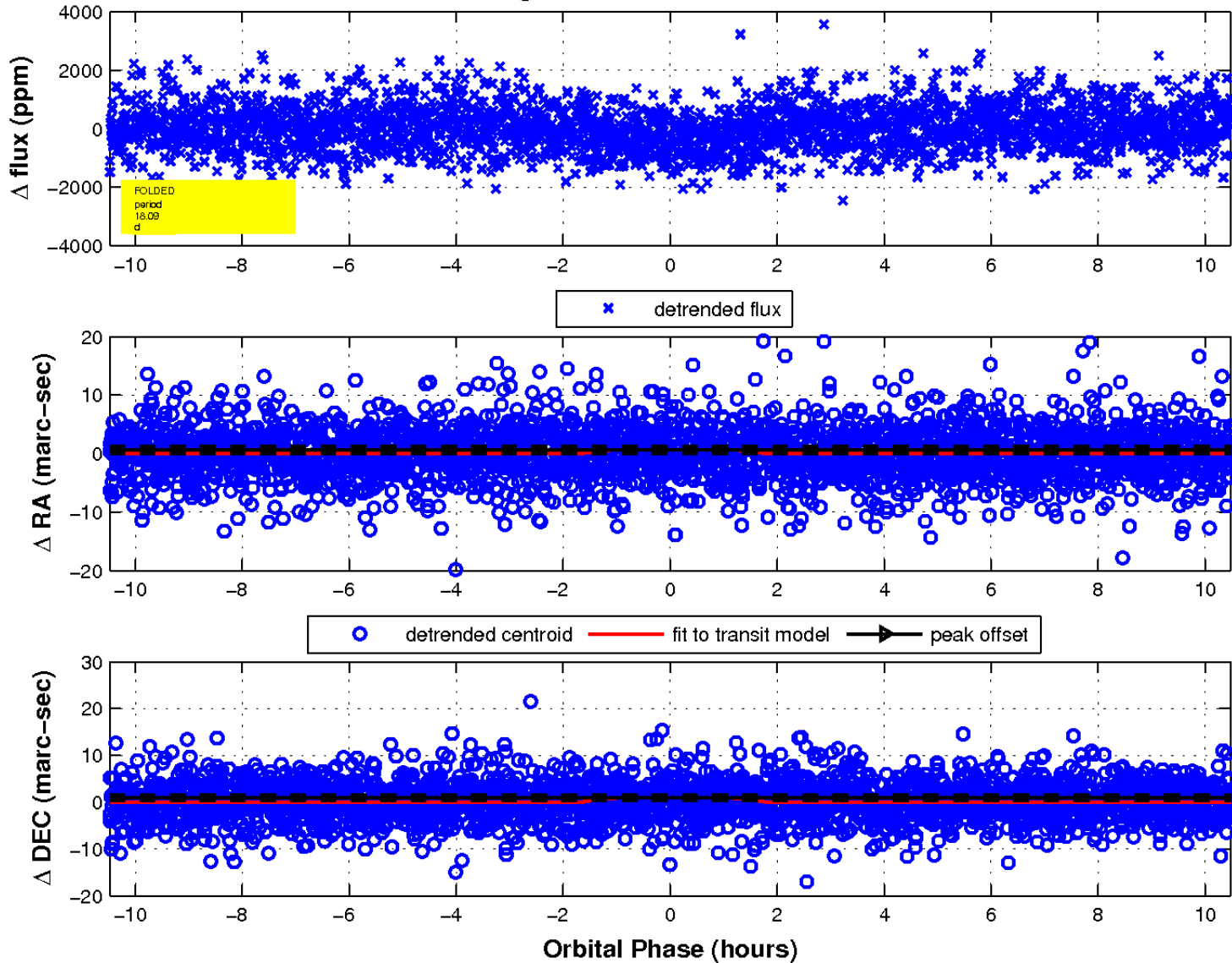
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

