

KIC 011818166

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})
011818166-01	OBS	No	1.607935	132.310966	15.2	4.829	8.7	5.2	1.34	6937	0.60	4267.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011818166-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

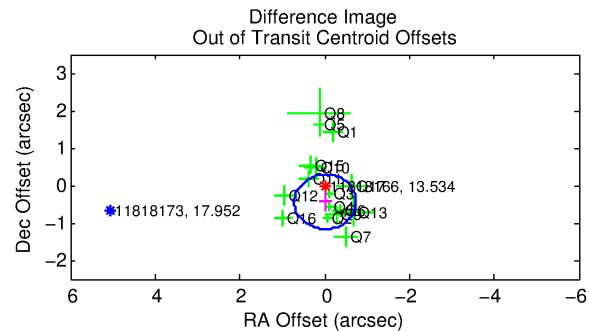
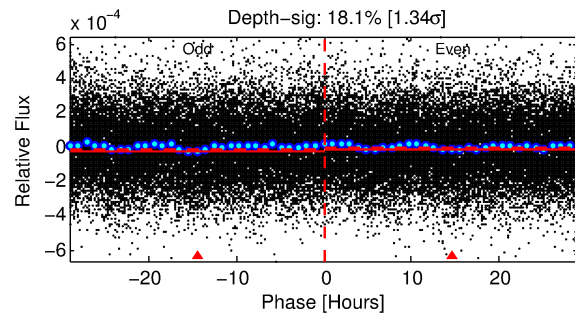
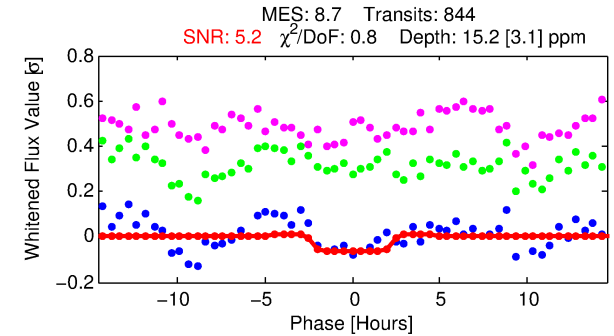
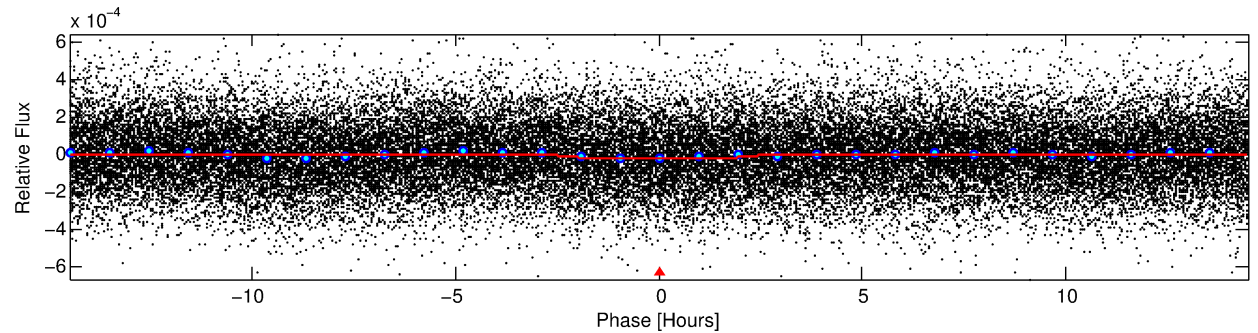
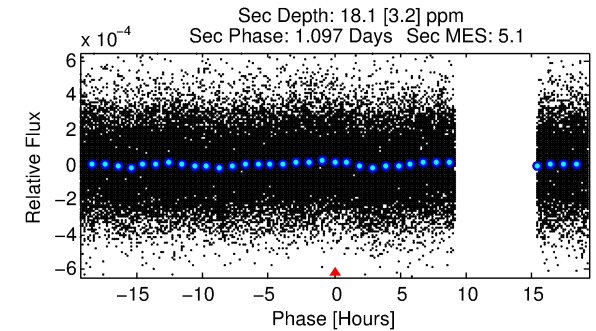
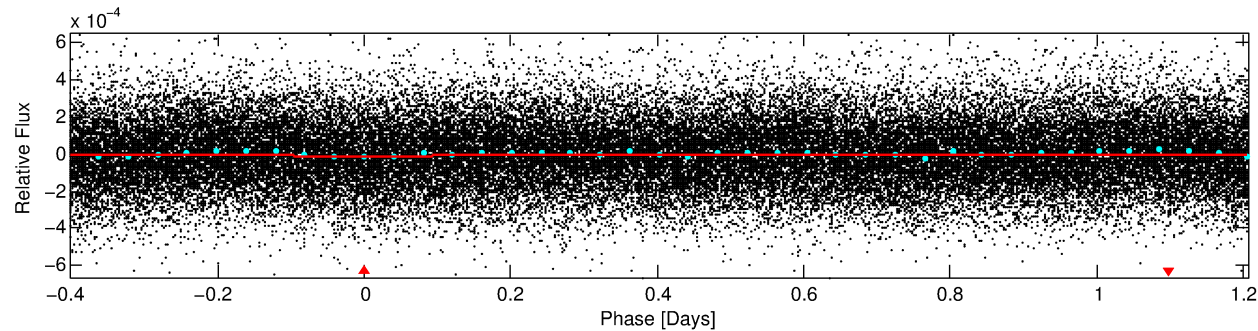
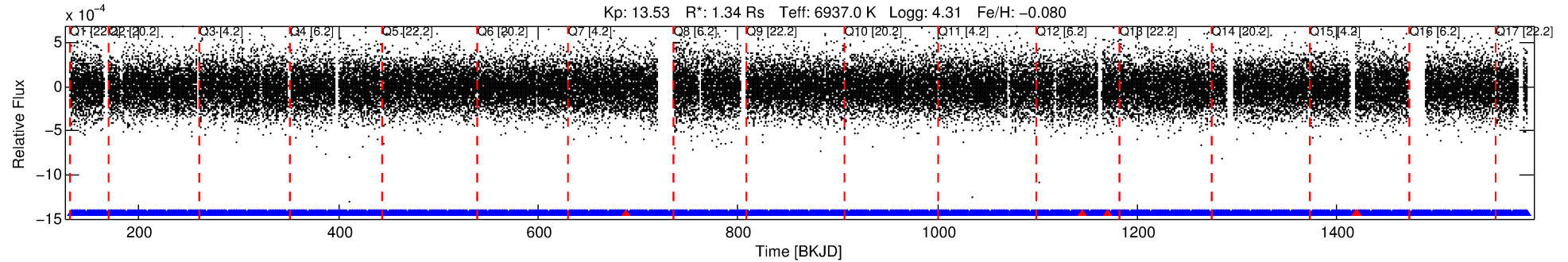
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011818166-01

No Significant Match Found

DV One-Page Summary

KIC: 11818166 Candidate: 1 of 1 Period: 1.608 d



DV Fit Results:

Period = 1.60794 [0.00003] d
Epoch = 132.3110 [0.0080] BKJD
Rp/R* = 0.0041 [0.0019]
a/R* = 1.47 [2.24]
b = 0.90 [0.60]
Seff = 4267.70 [1908.56]
Teq = 2061 [230] K
Rp = 0.61 [0.36] Re
a = 0.0295 [0.0090] AU
Ag = 23.72 [24.56] [0.93σ]
Teffp = 7032 [1686] K [2.92σ]

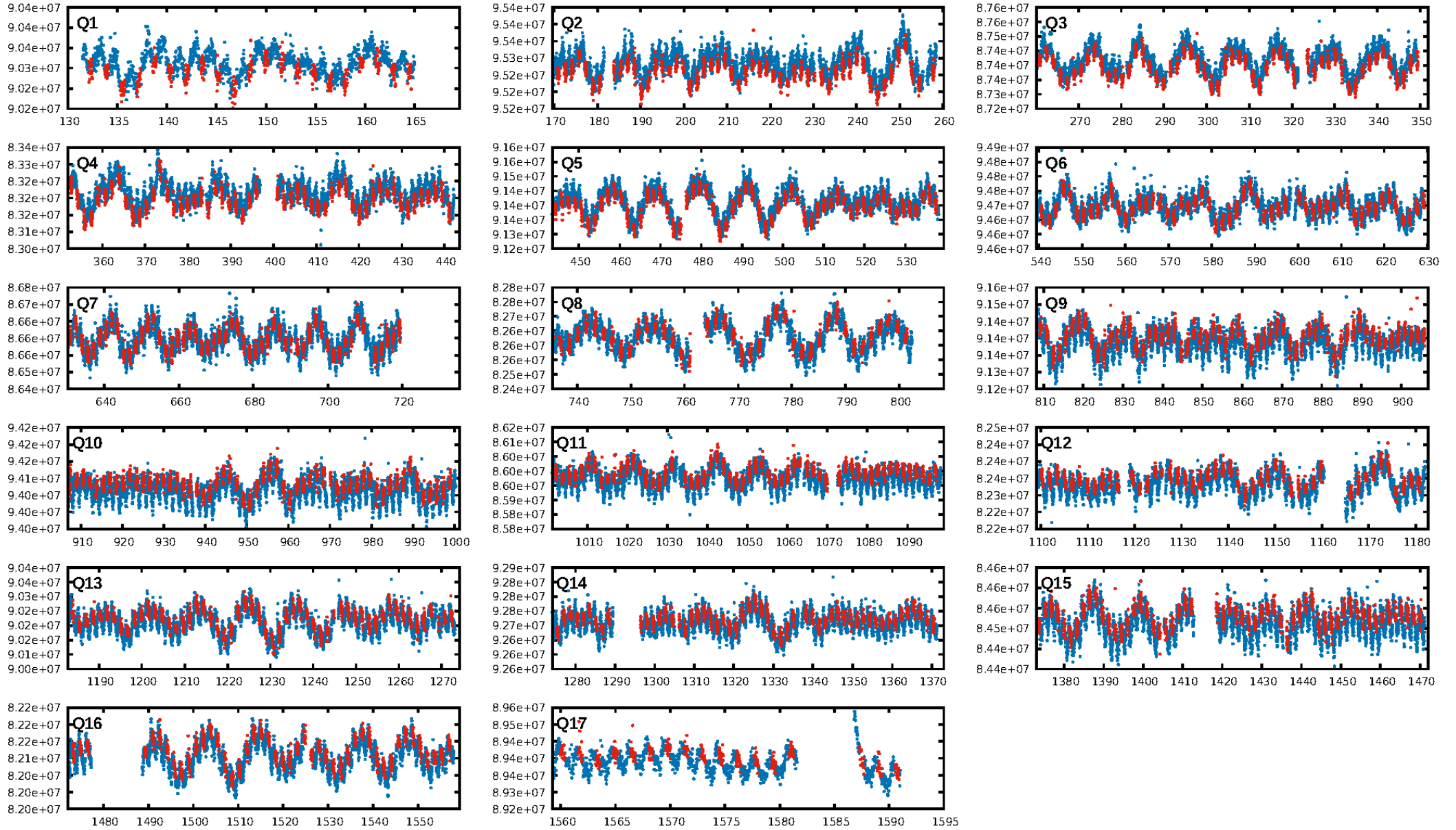
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.89e-15
RollingBand-fgt: 0.99 [801/806]
GhostDiagnostic-chr: 8.837
Centroid-sig: 3.3%
Centroid-so: 3.029 arcsec [1.44σ]
OotOffset-rm: 0.438 arcsec [1.81σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-rm: 0.598 arcsec [2.53σ]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

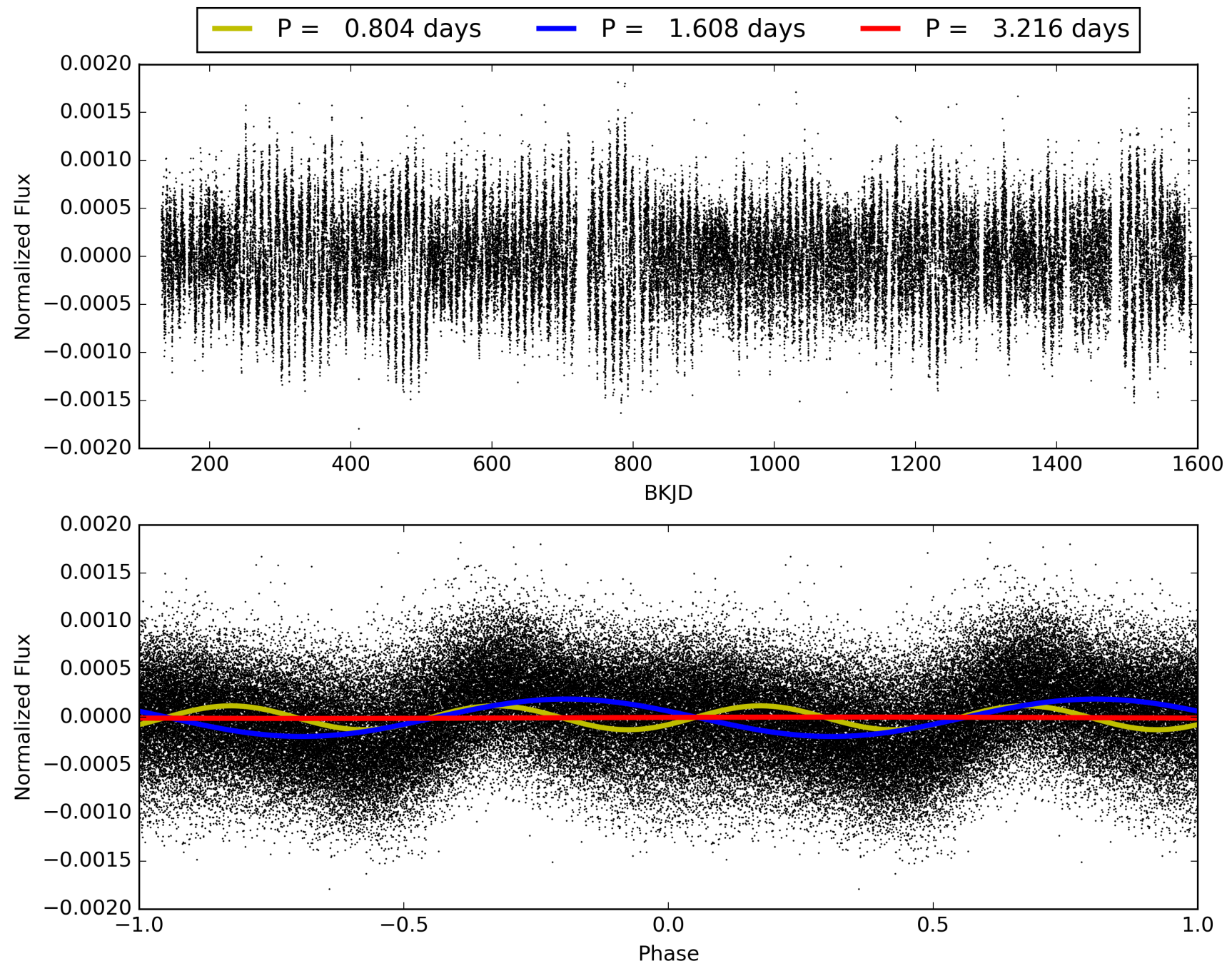
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:34:53 Z

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

TCE 011818166-01, PDC Light Curves

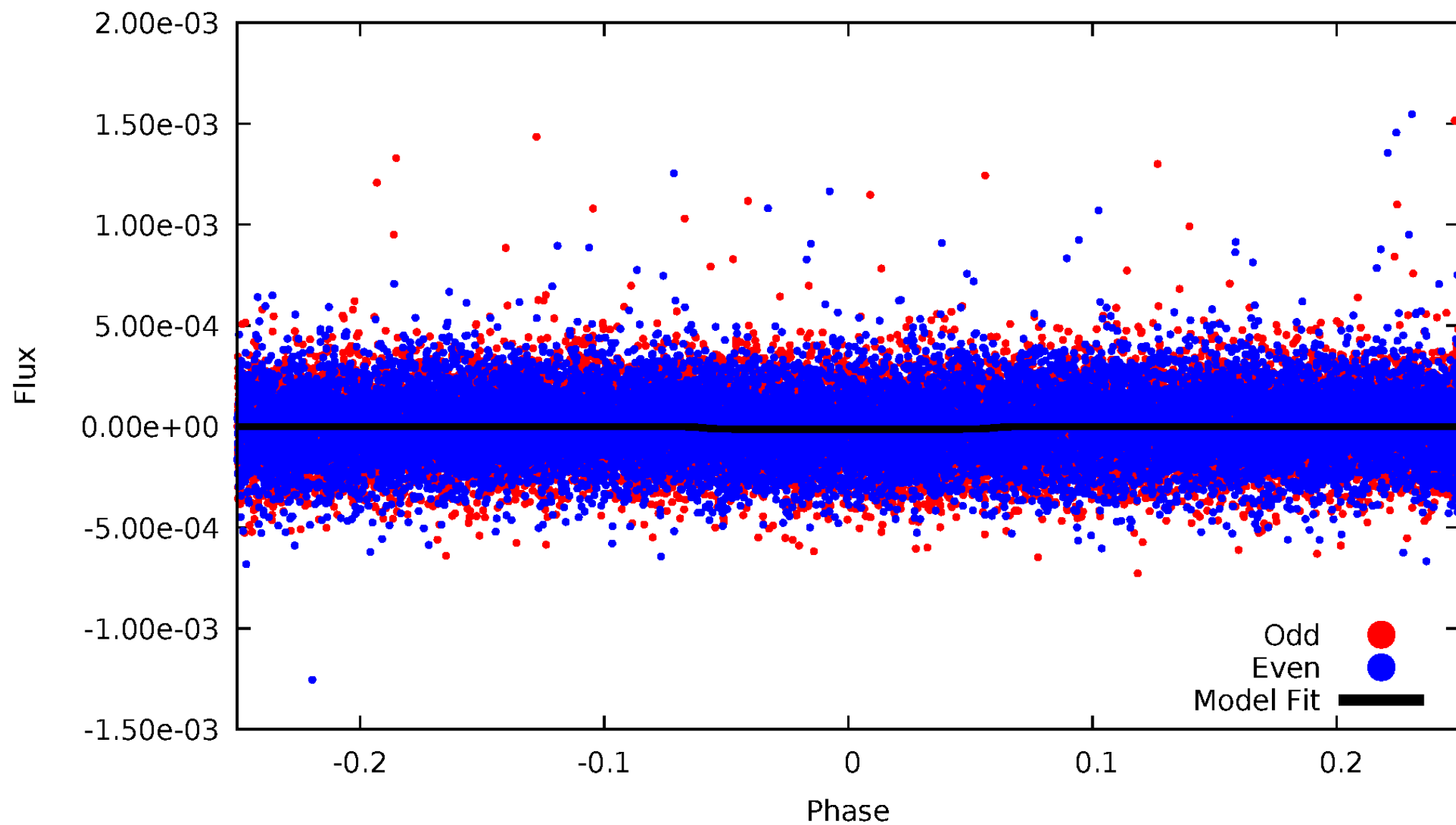


TCE 011818166-01



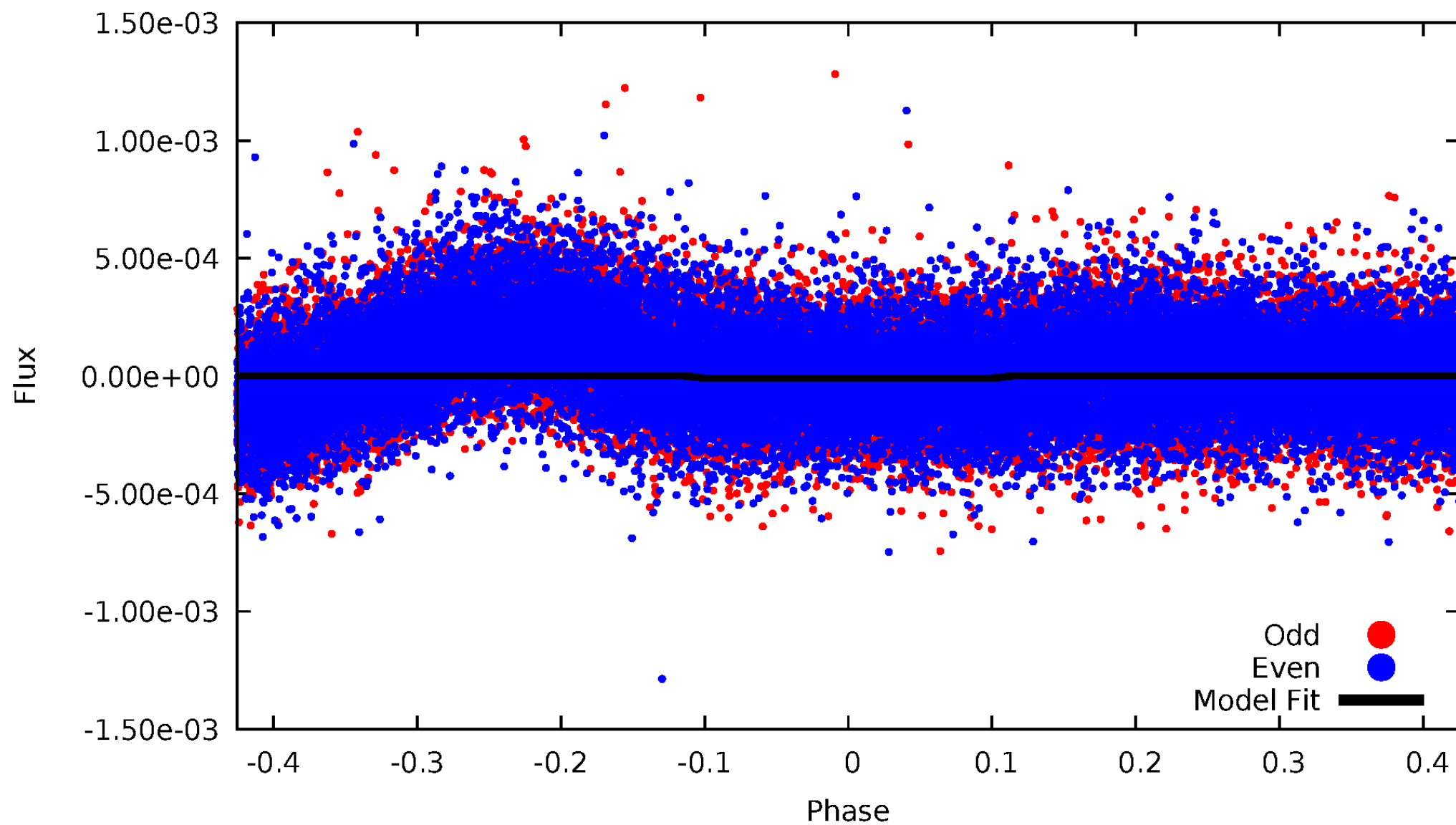
DV Odd/Even

TCE 011818166-01



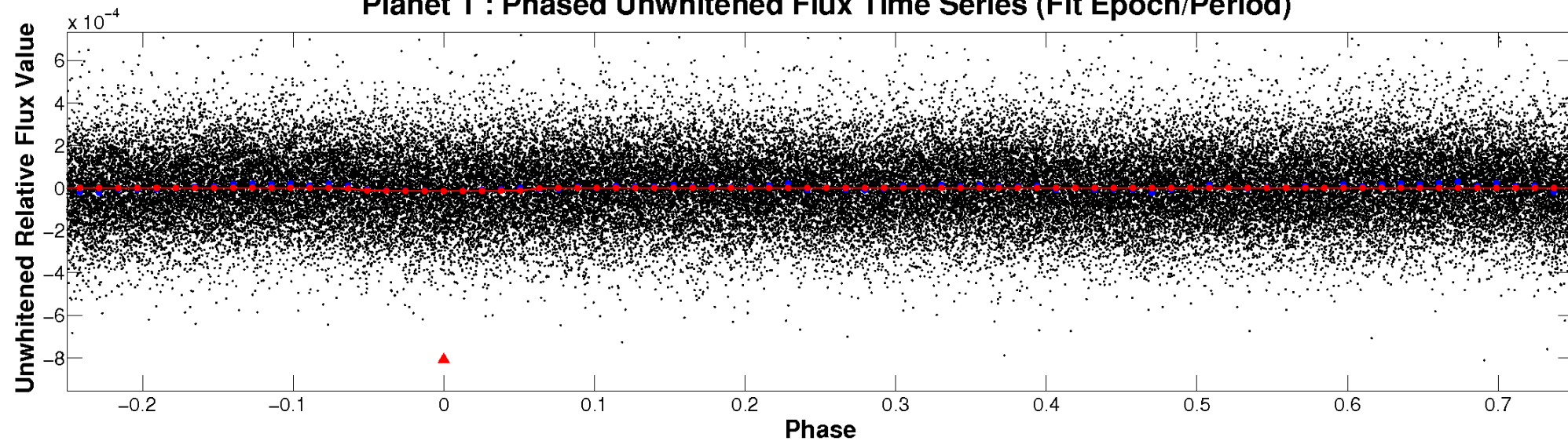
ALT Odd/Even

TCE 011818166-01

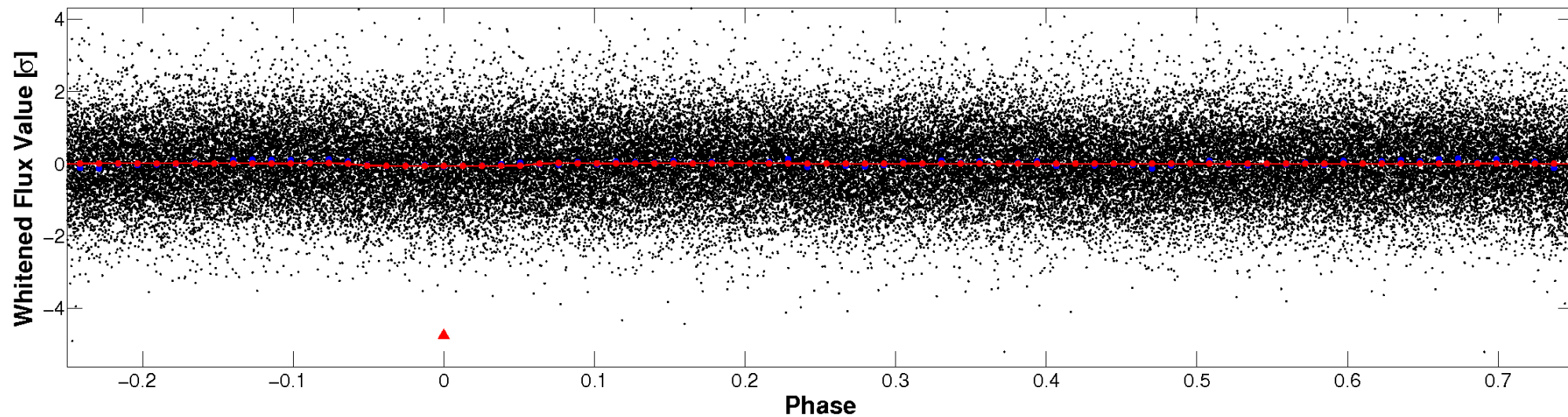


Non-Whitened Vs. Whitened Light Curve

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

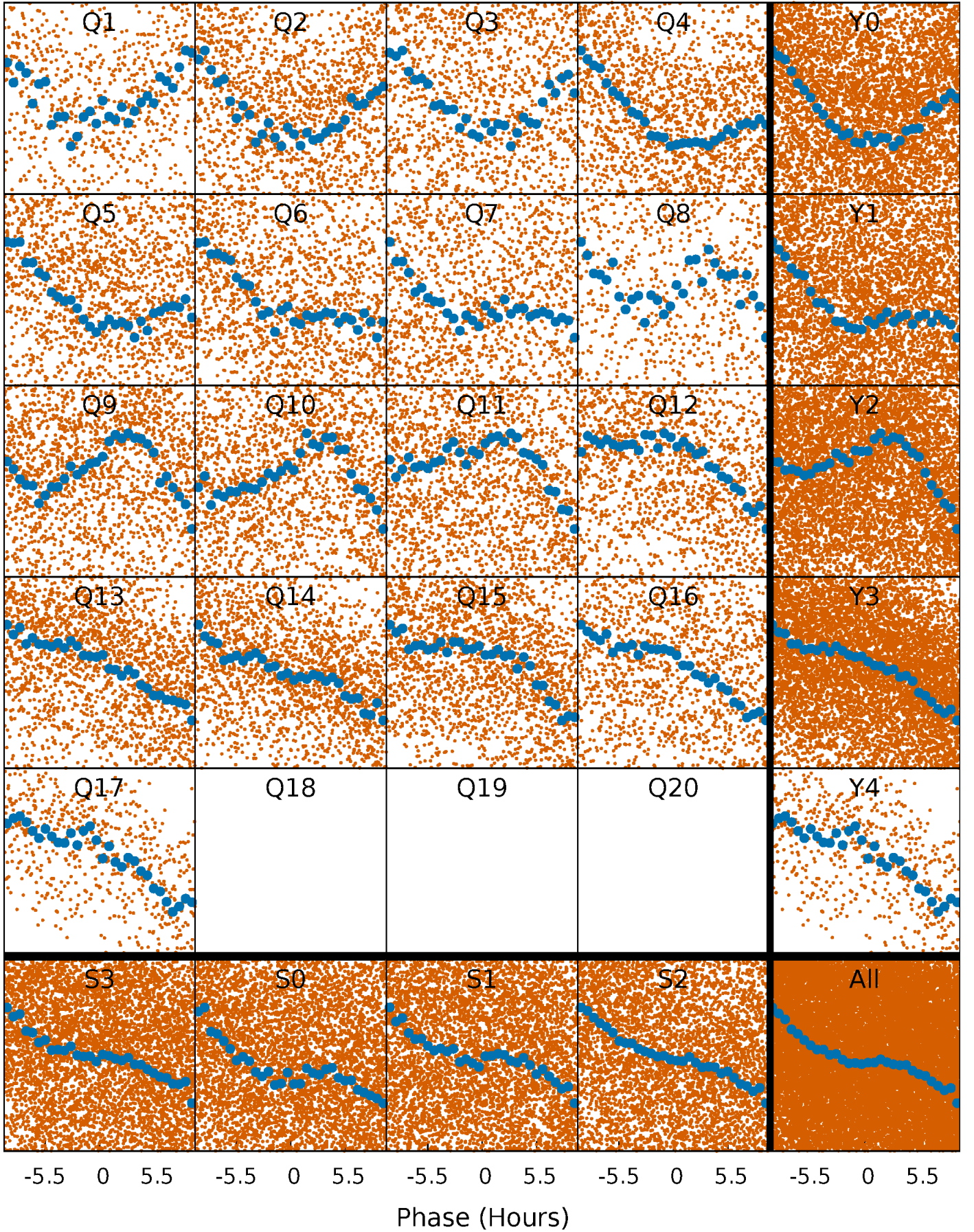


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



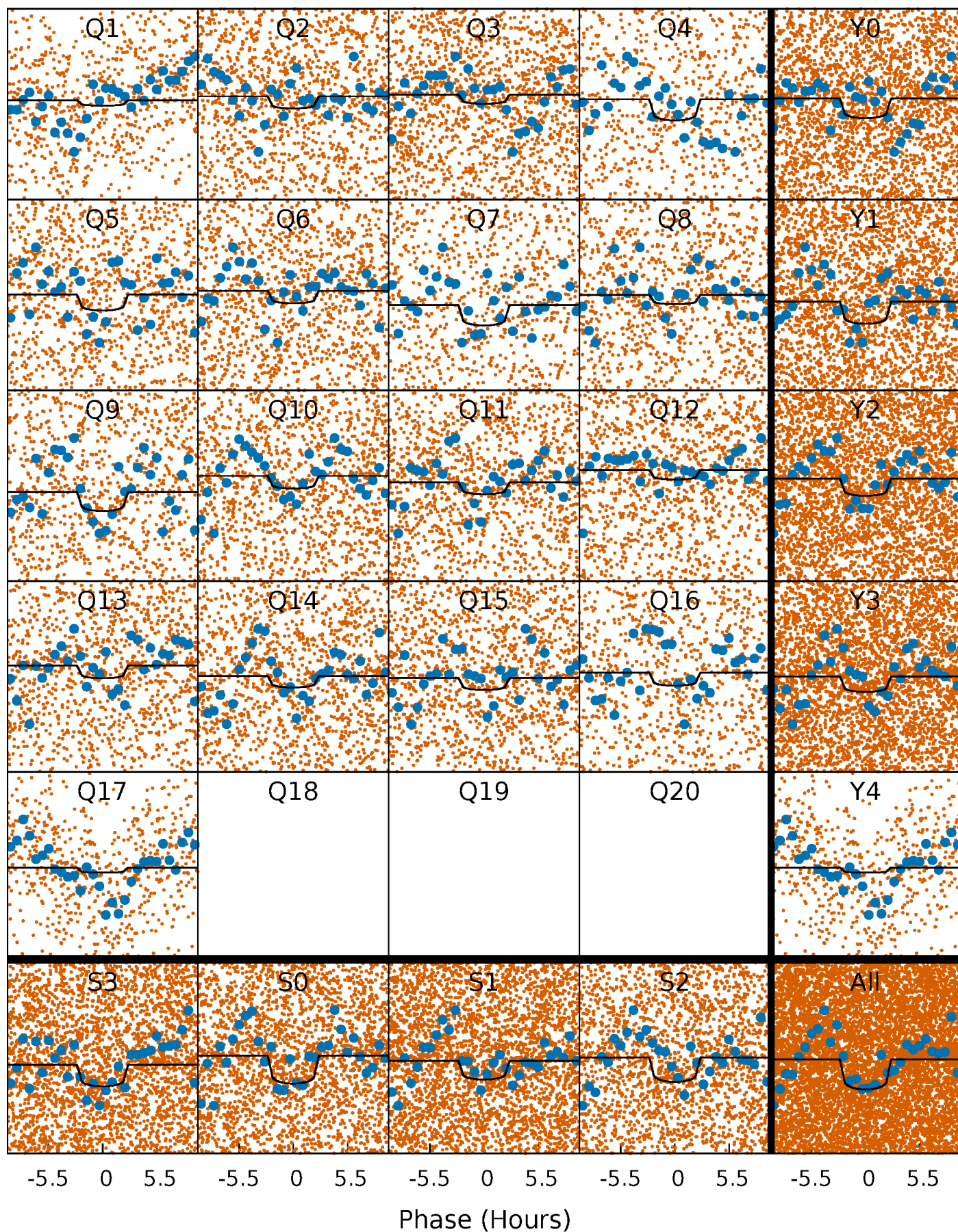
PDC Quarter-Phased Transit Curves

TCE 011818166-01 P= 1.607935 Days $T_0=132.310966$ (BKJD)



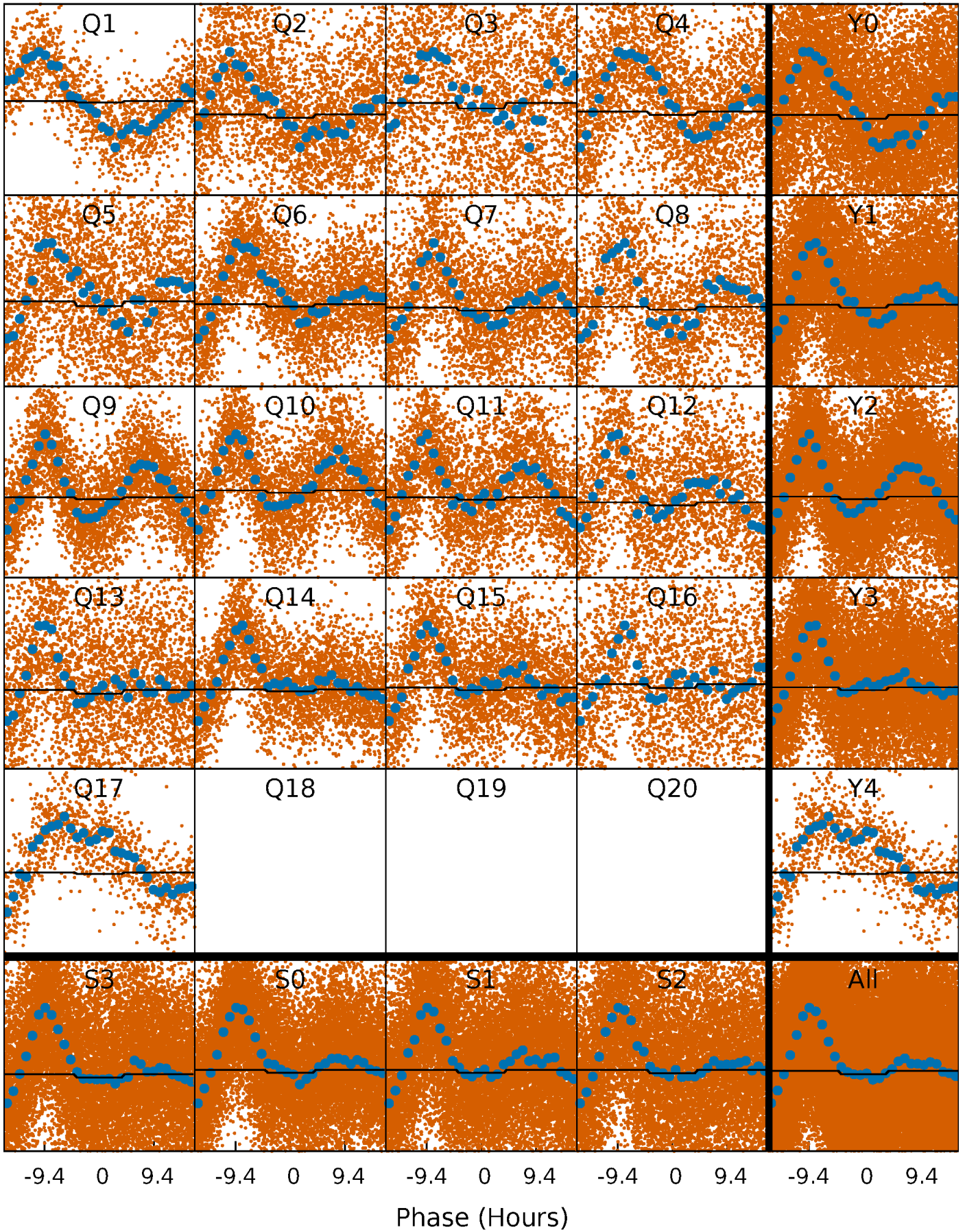
DV Quarter-Phased Transit Curves

TCE 011818166-01 P= 1.607935 Days $T_0=132.310966$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

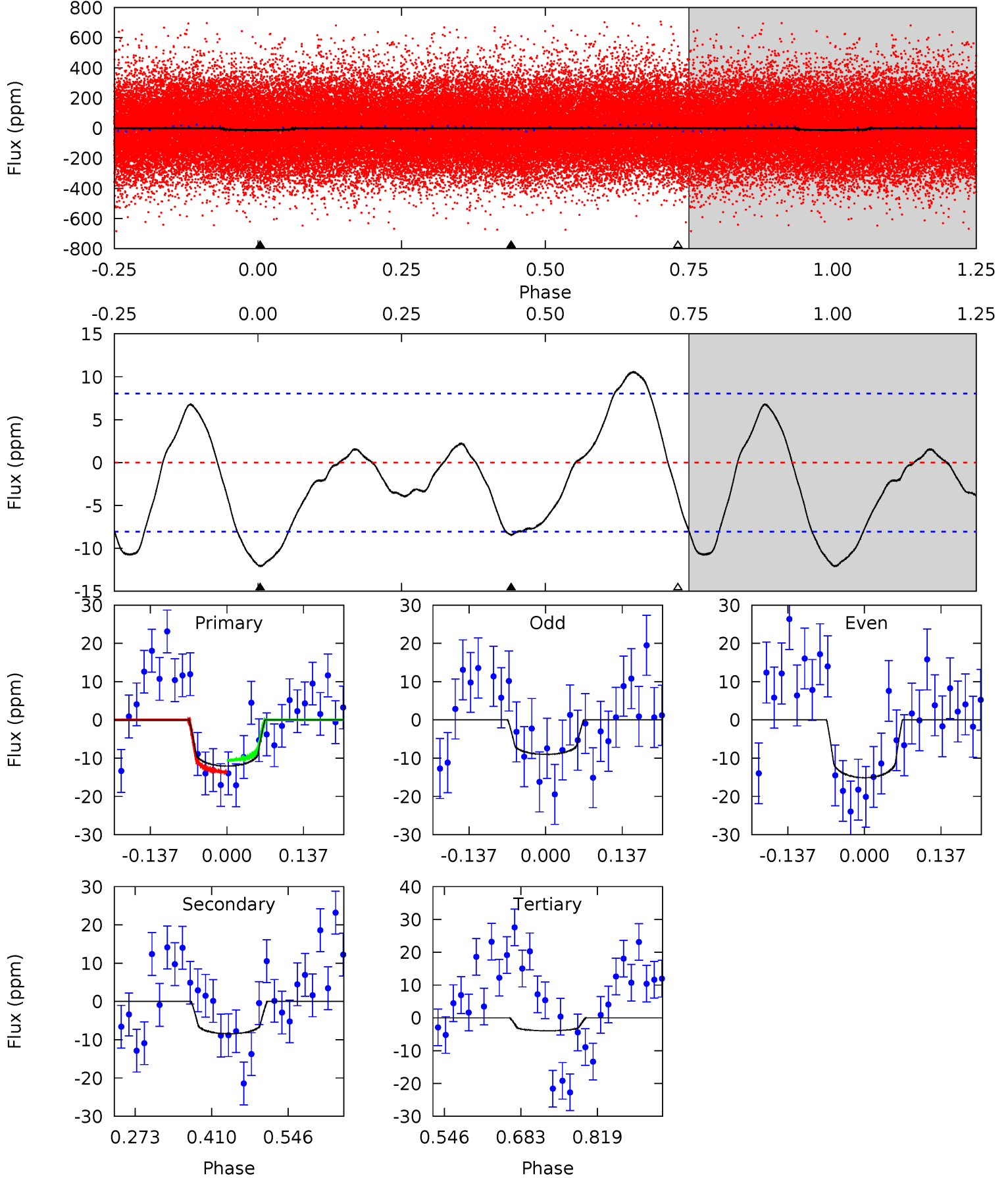
TCE 011818166-01 P= 1.608093 Days $T_0=132.077913$ (BKJD)



DV Model-Shift Uniqueness Test

011818166-01, P = 1.607935 Days, E = 130.703031 Days

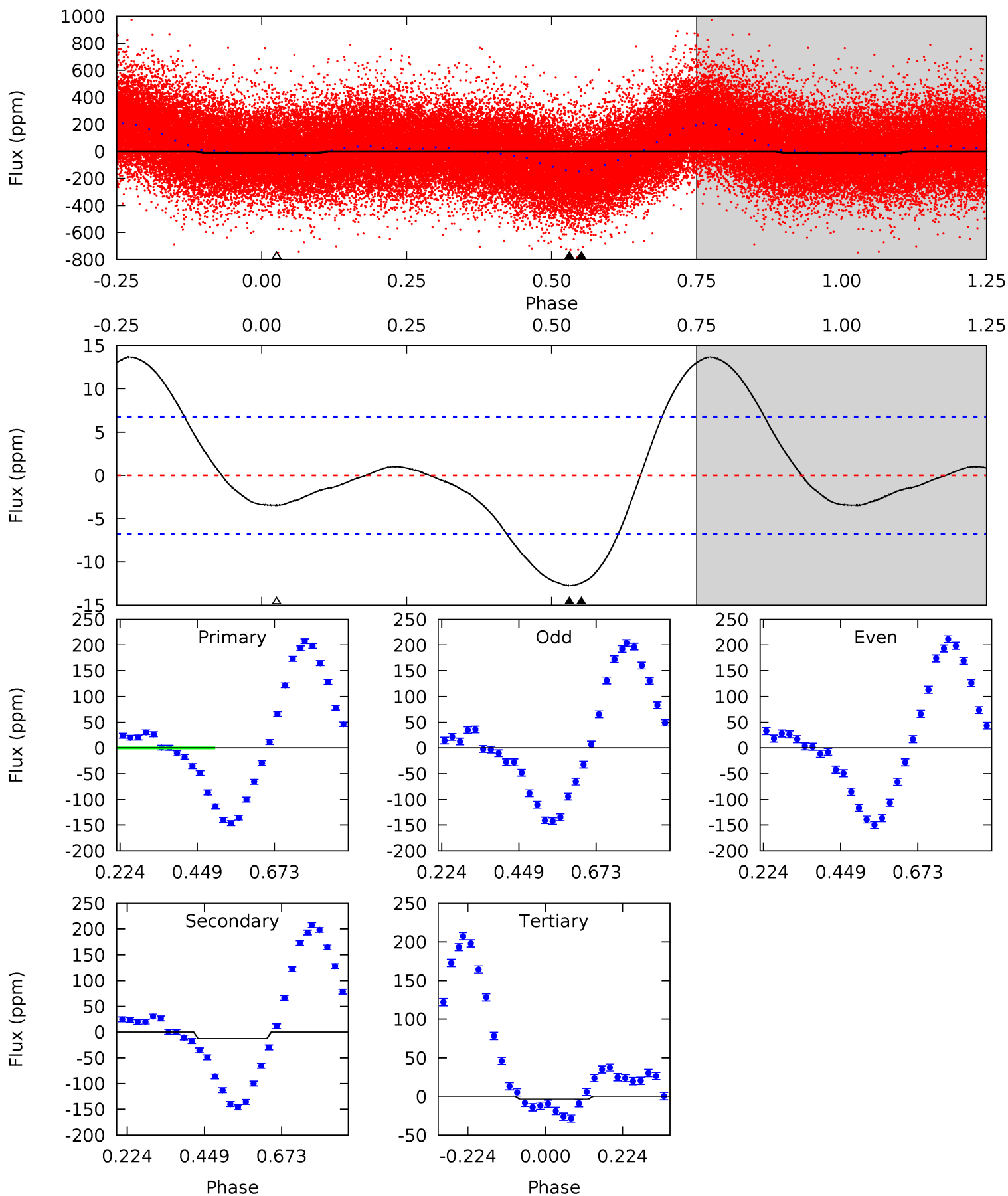
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.74	4.72	2.20	0	4.50	1.49	3.27	4.54	6.74	2.51	4.72	1.70	1.07	0.47	0.87



Alt Model-Shift Uniqueness Test

011818166-01, P = 1.608093 Days, E = 130.469820 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.06	8.27	2.23	0	4.39	1.21	3.19	5.83	8.06	6.04	8.27	0.23	0.83	0.52	4.67



Stellar Parameters For KIC 011818166

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6937^{+194}_{-267}	$4.307^{+0.072}_{-0.217}$	$-0.080^{+0.250}_{-0.350}$	$1.338^{+0.513}_{-0.171}$	$1.334^{+0.222}_{-0.182}$	$0.785^{+0.258}_{-0.453}$
	+3%/-4%	+2%/-5%	+312%/-438%	+38%/-13%	+17%/-14%	+33%/-58%
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 011818166-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 2	$0.65^{+0.33}_{-0.29}$	2938^{+226}_{-163}	5687^{+2115}_{-1042}	$9.524^{+20.267}_{-5.561}$
Alt.	-13 ± 2	$0.51^{+0.32}_{-0.27}$	2927^{+256}_{-172}	7237^{+4952}_{-1635}	23^{+88}_{-14}

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 $A_{obs} \gg 1.0$

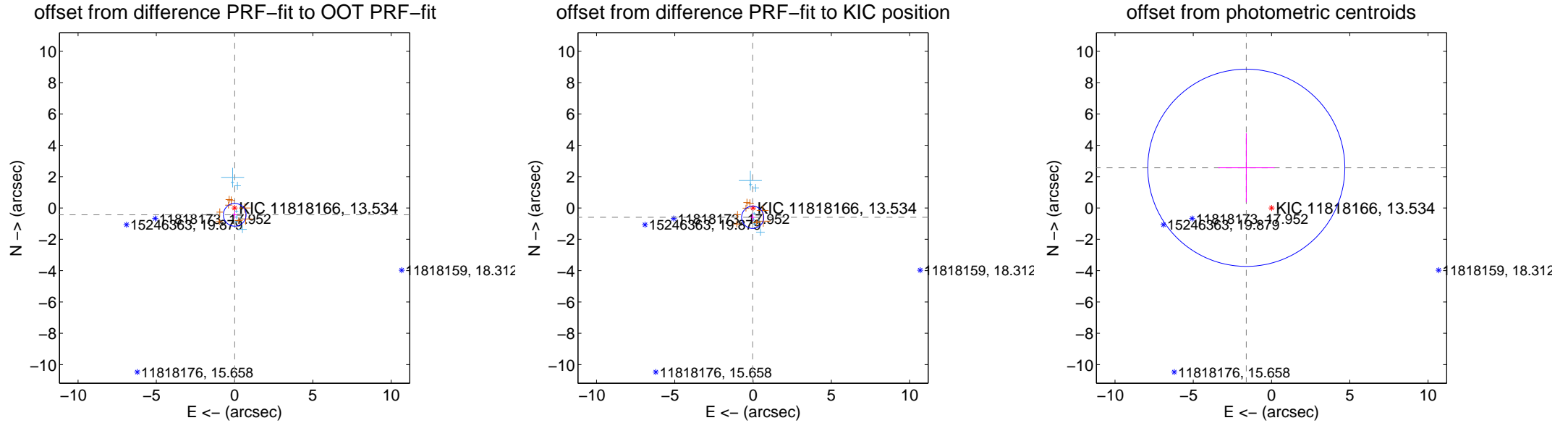
DV Centroid Data

Supplemental centroid analysis for 011818166-01. Kepler magnitude: 13.53. Transit SNR 5.21

There are 8 quarters with good PRF difference image offsets

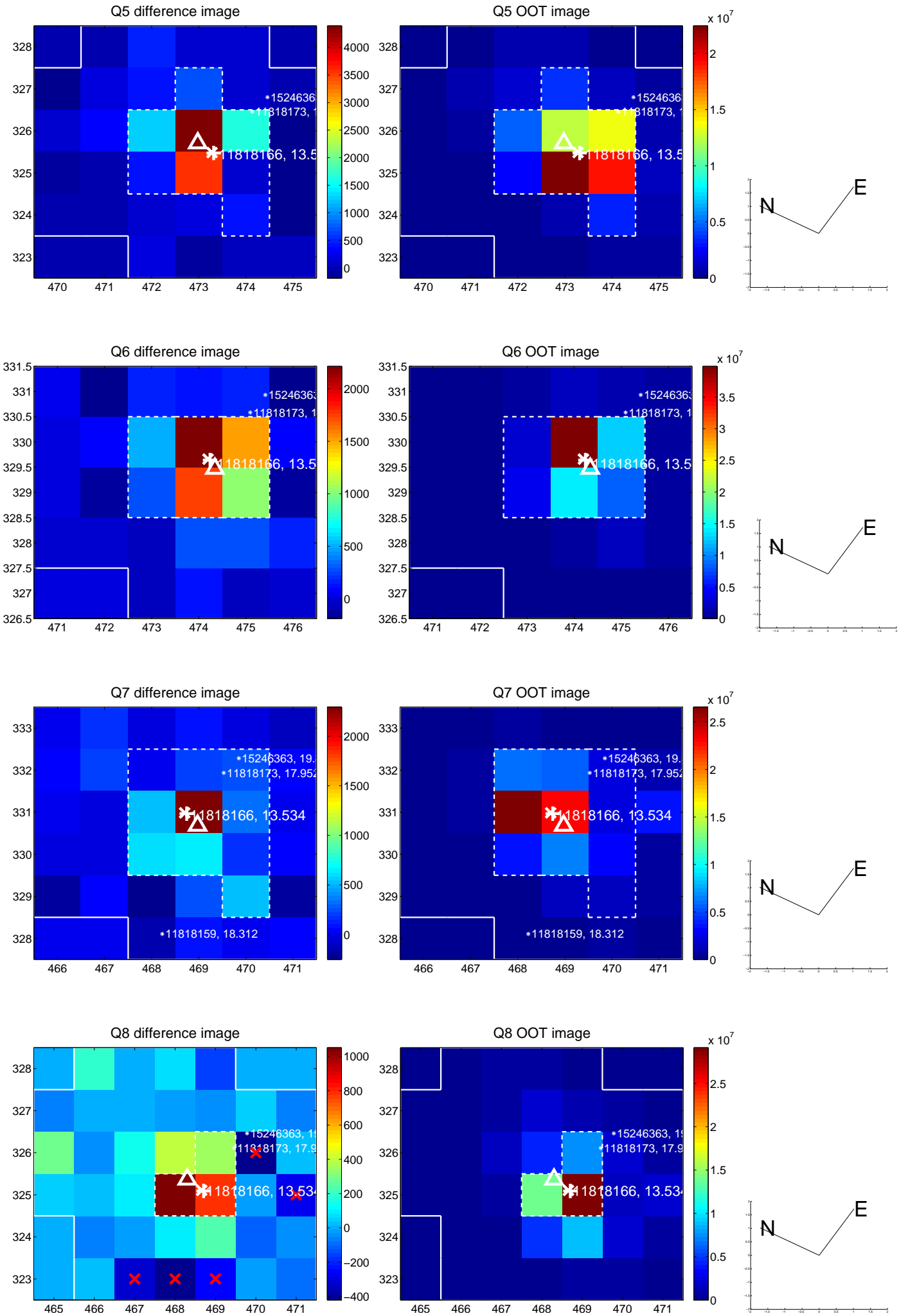
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.438 ± 0.242	1.81	-0.010 ± 0.131	-0.438 ± 0.241
PRF-fit source offset from KIC position	0.598 ± 0.236	2.53	0.022 ± 0.138	-0.597 ± 0.237
photometric centroid source offset	3.03 ± 2.10	1.44	1.61 ± 1.80	2.56 ± 2.20

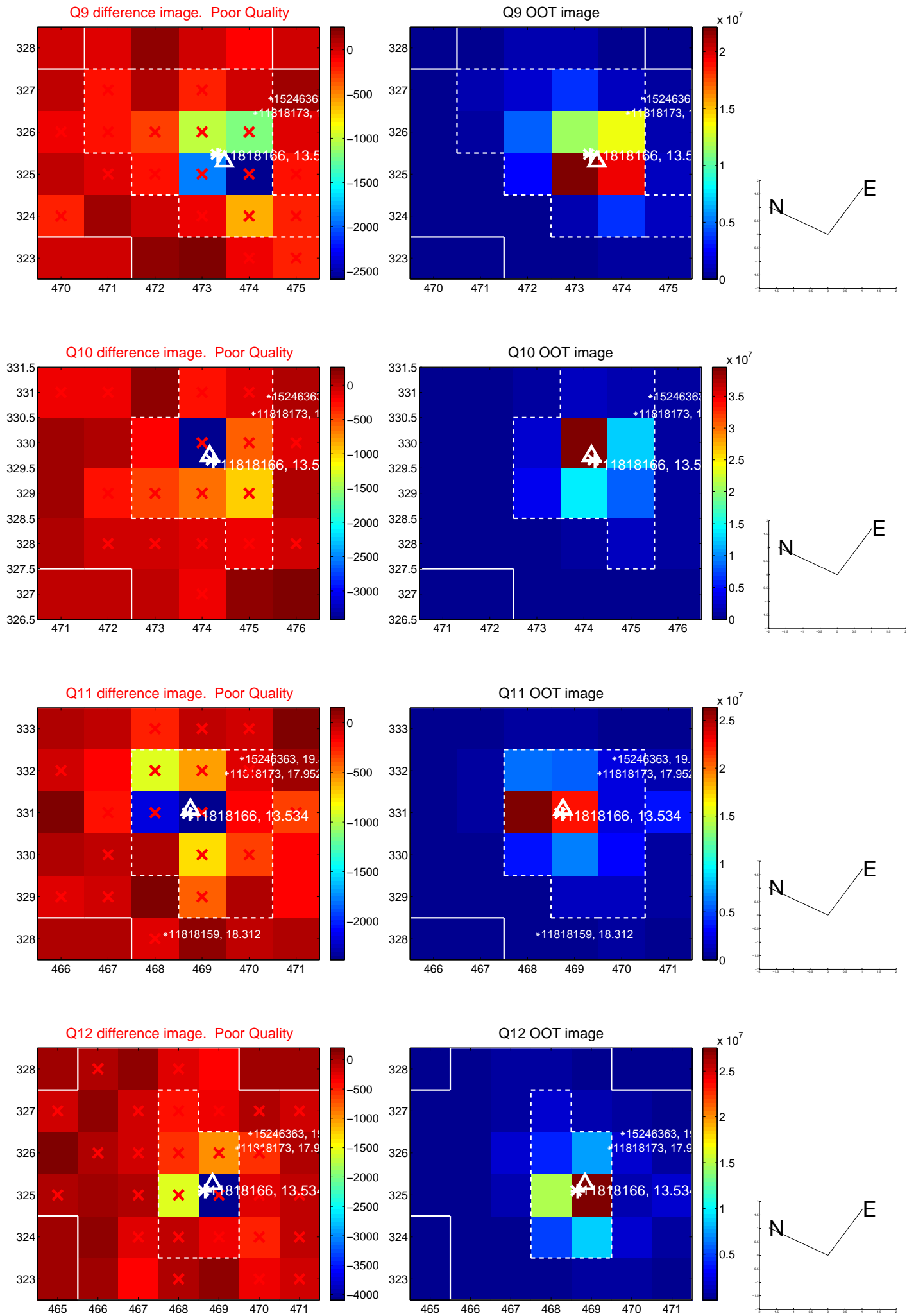


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

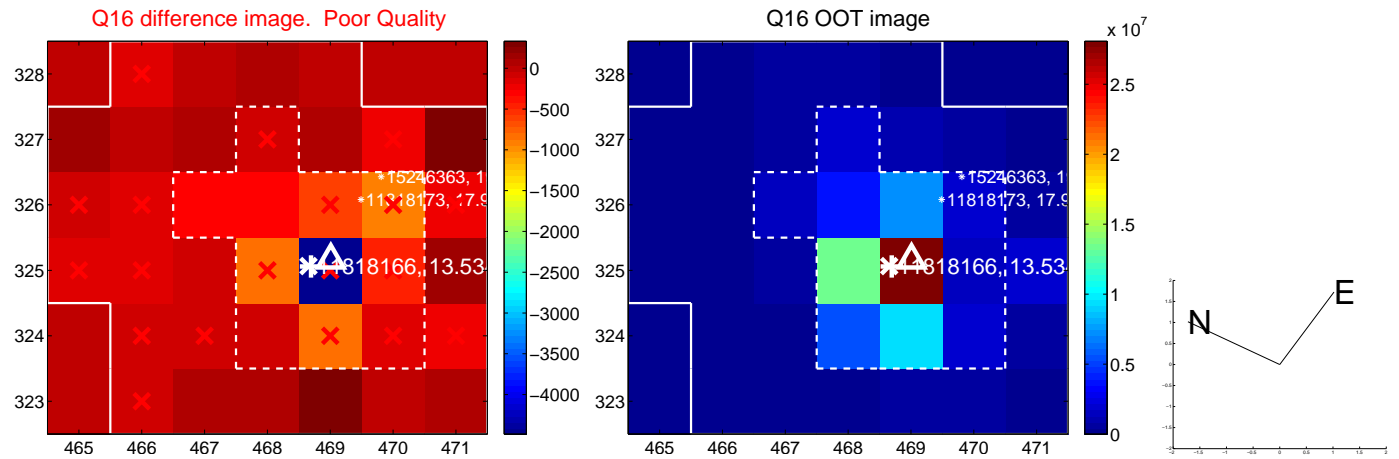
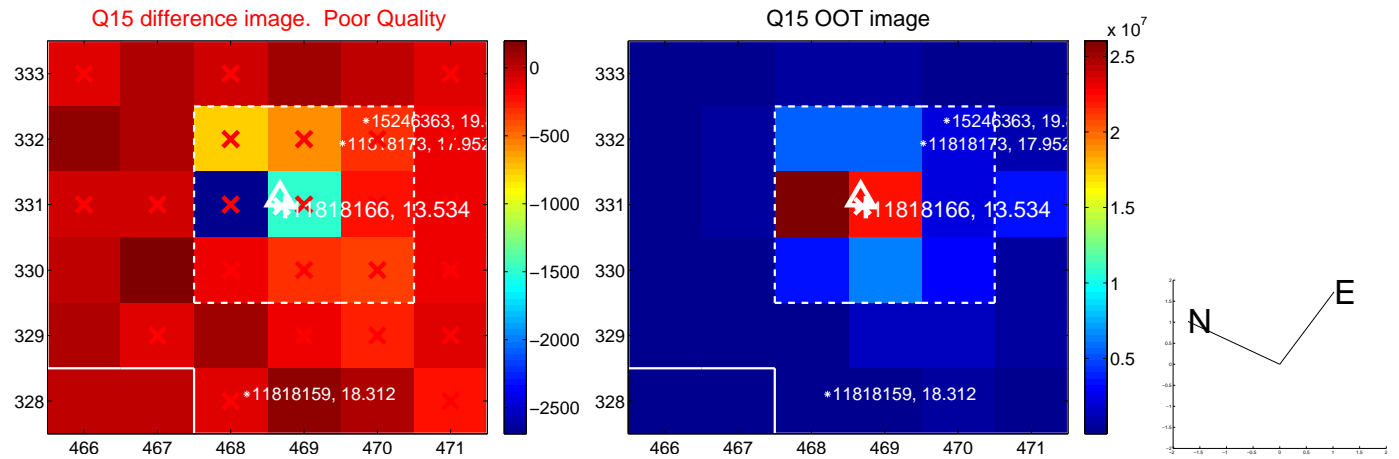
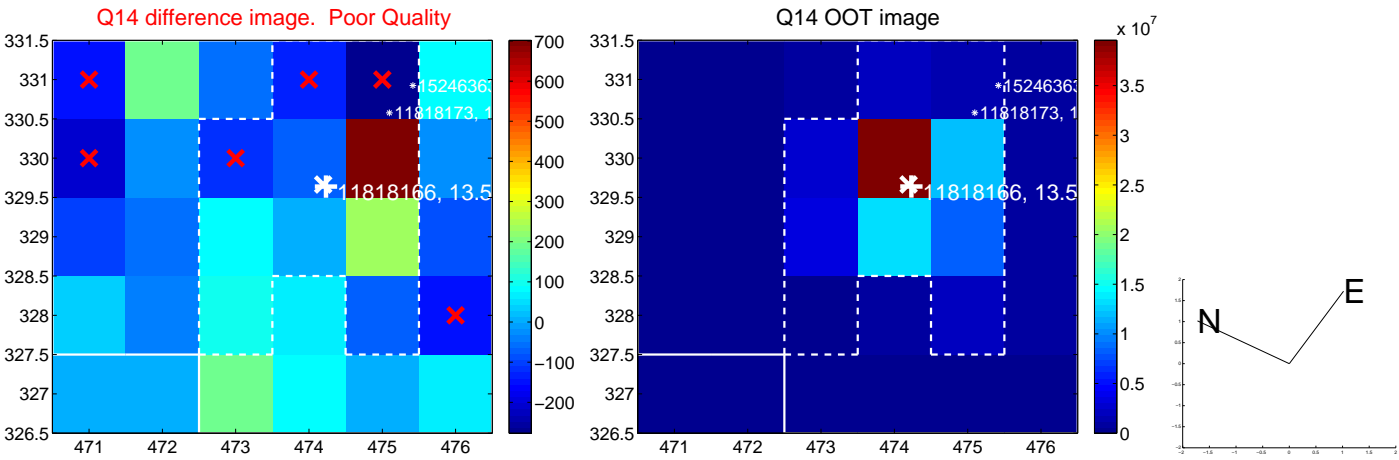
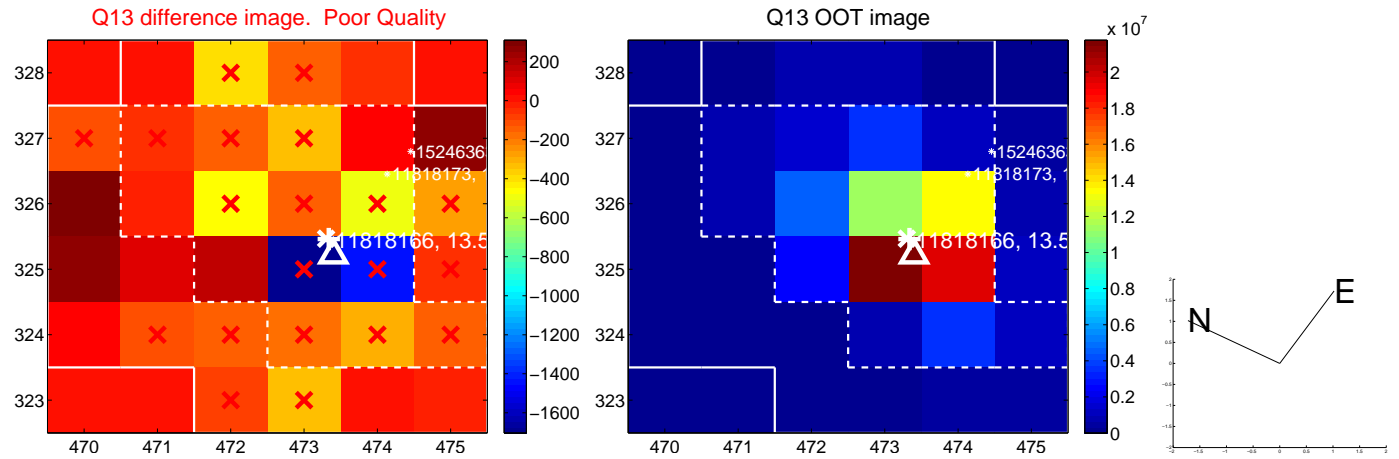
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



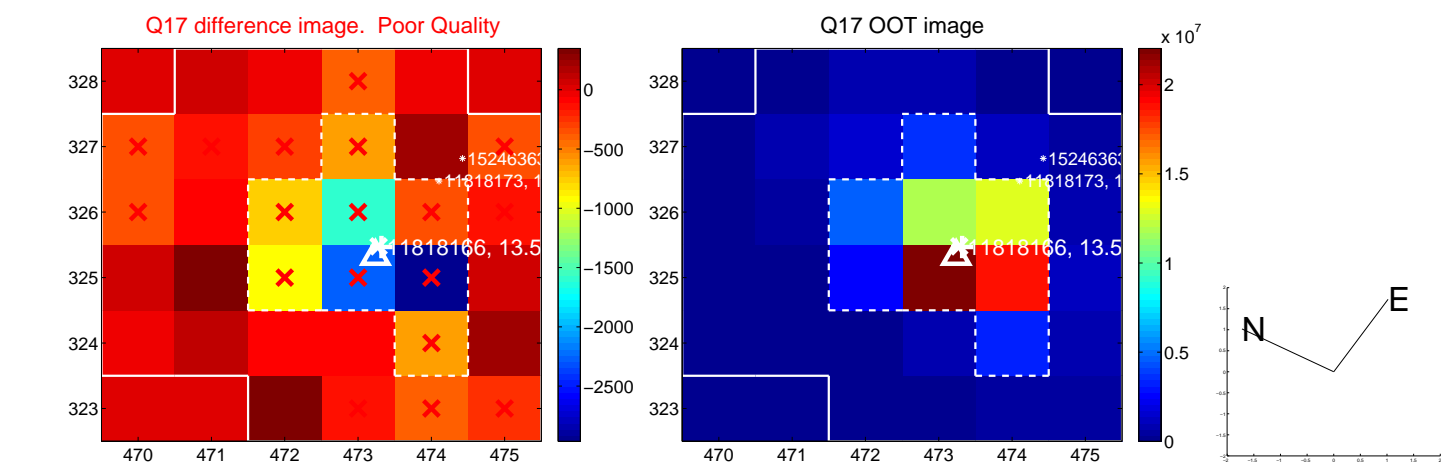
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



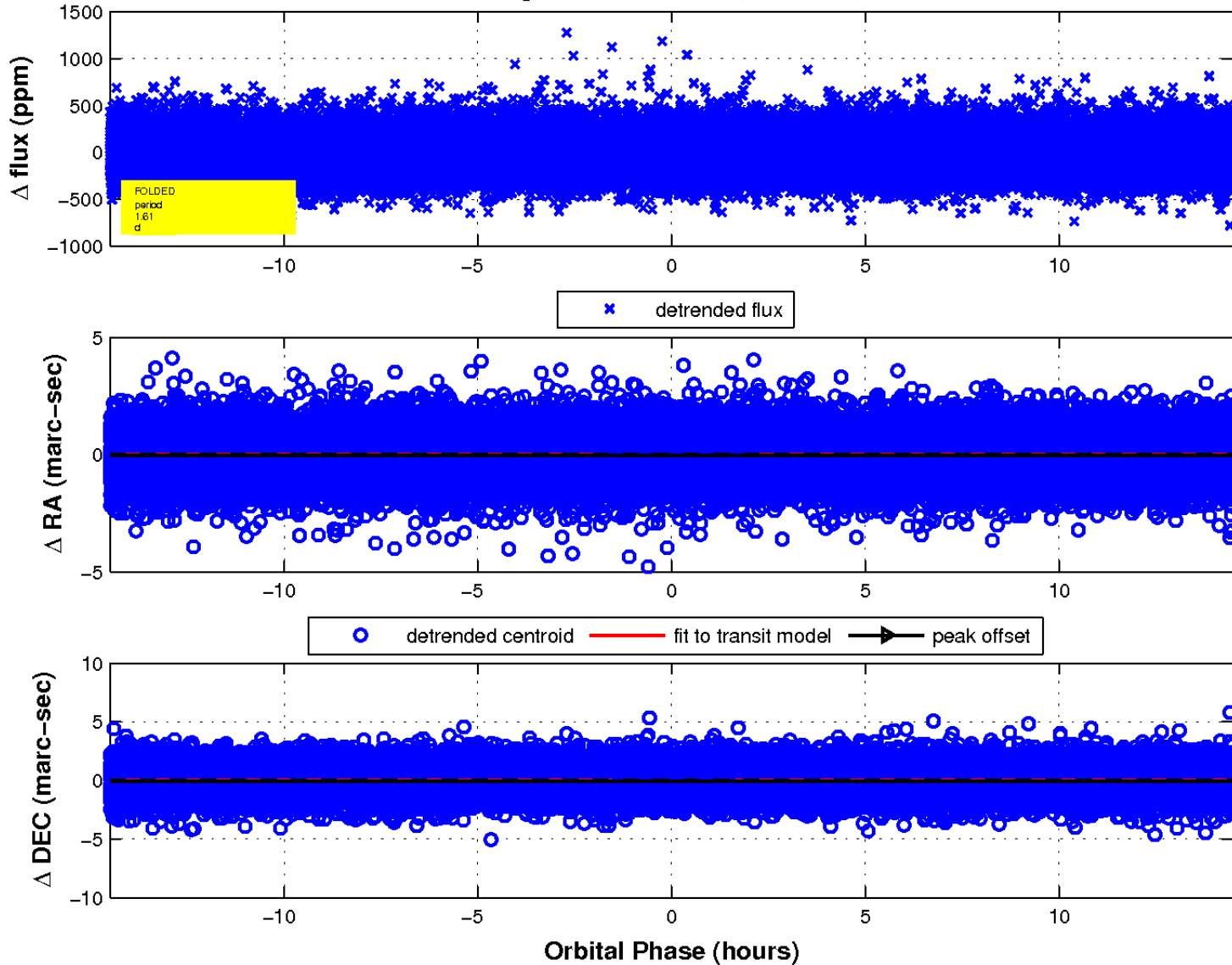
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

