

KIC 008107611

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})
008107611-01	OBS	4656.01	3.818374	133.905756	51.3	2.757	9.3	10.6	1.69	6738	1.49	1900.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008107611-01	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.

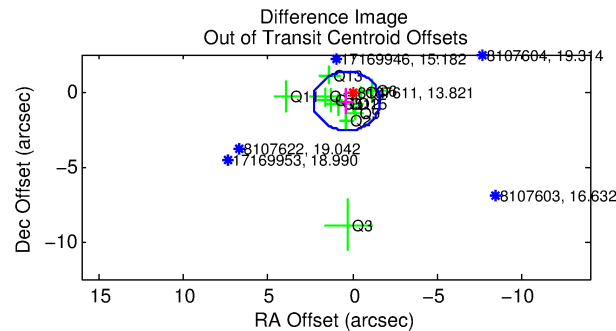
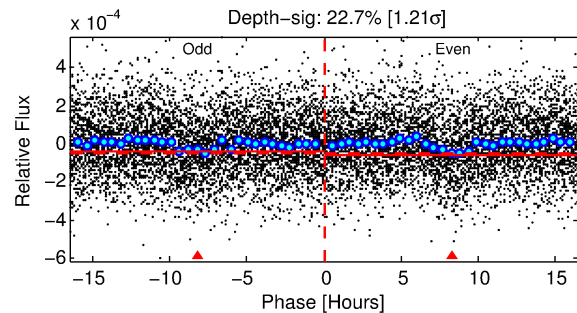
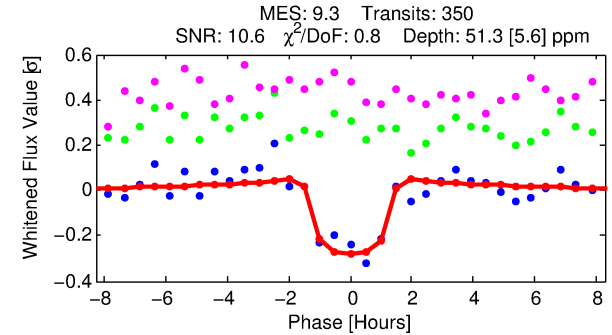
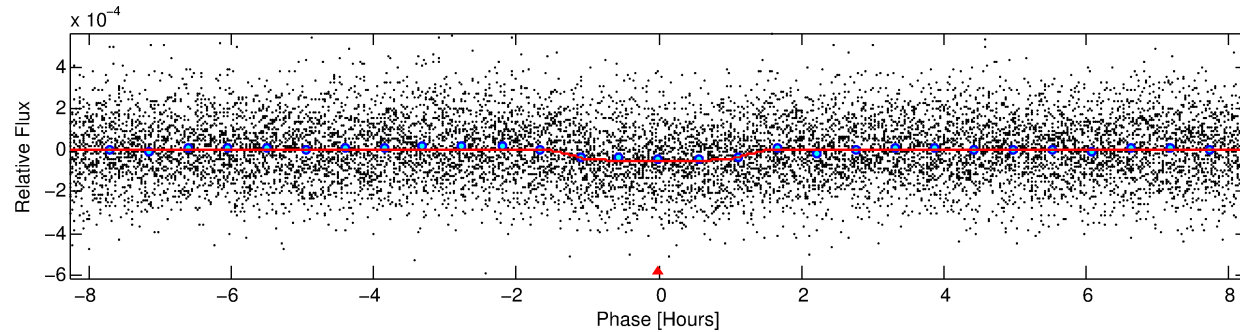
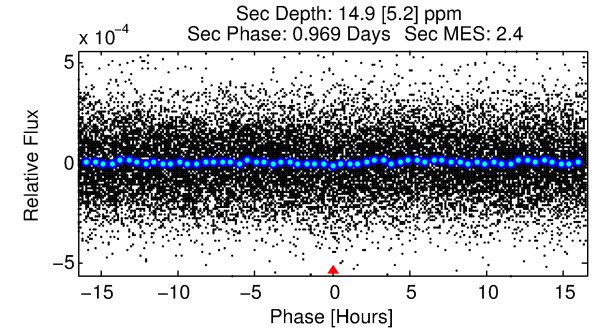
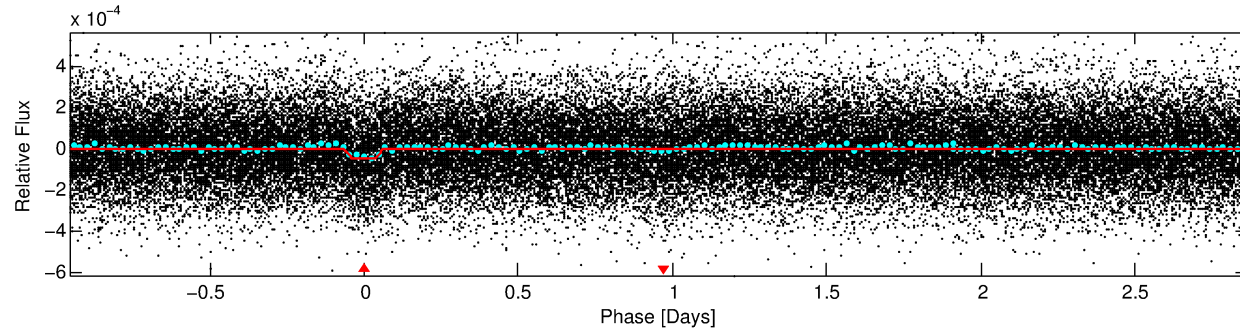
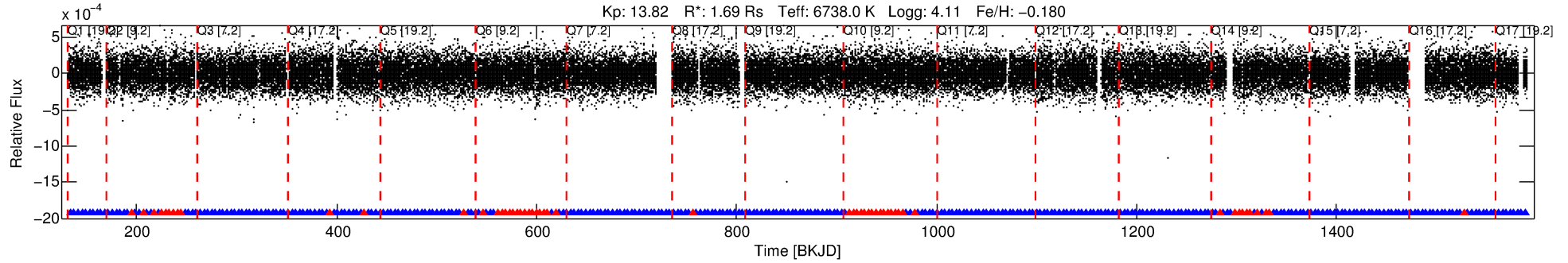
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008107611-01

No Significant Match Found

DV One-Page Summary

KIC: 8107611 Candidate: 1 of 1 Period: 3.818 d
KOI: K04656.01 Corr: 0.979



DV Fit Results:

Period = 3.81837 [0.00002] d
Epoch = 133.9058 [0.0036] BKJD
Rp/R* = 0.0081 [0.0022]
a/R* = 3.66 [5.50]
b = 0.95 [0.16]
Seff = 1900.12 [767.78]
Teq = 1684 [170] K
Rp = 1.49 [0.58] Re
a = 0.0527 [0.0132] AU
Ag = 10.26 [7.57] [1.22σ]
Teffp = 4659 [762] K [3.81σ]

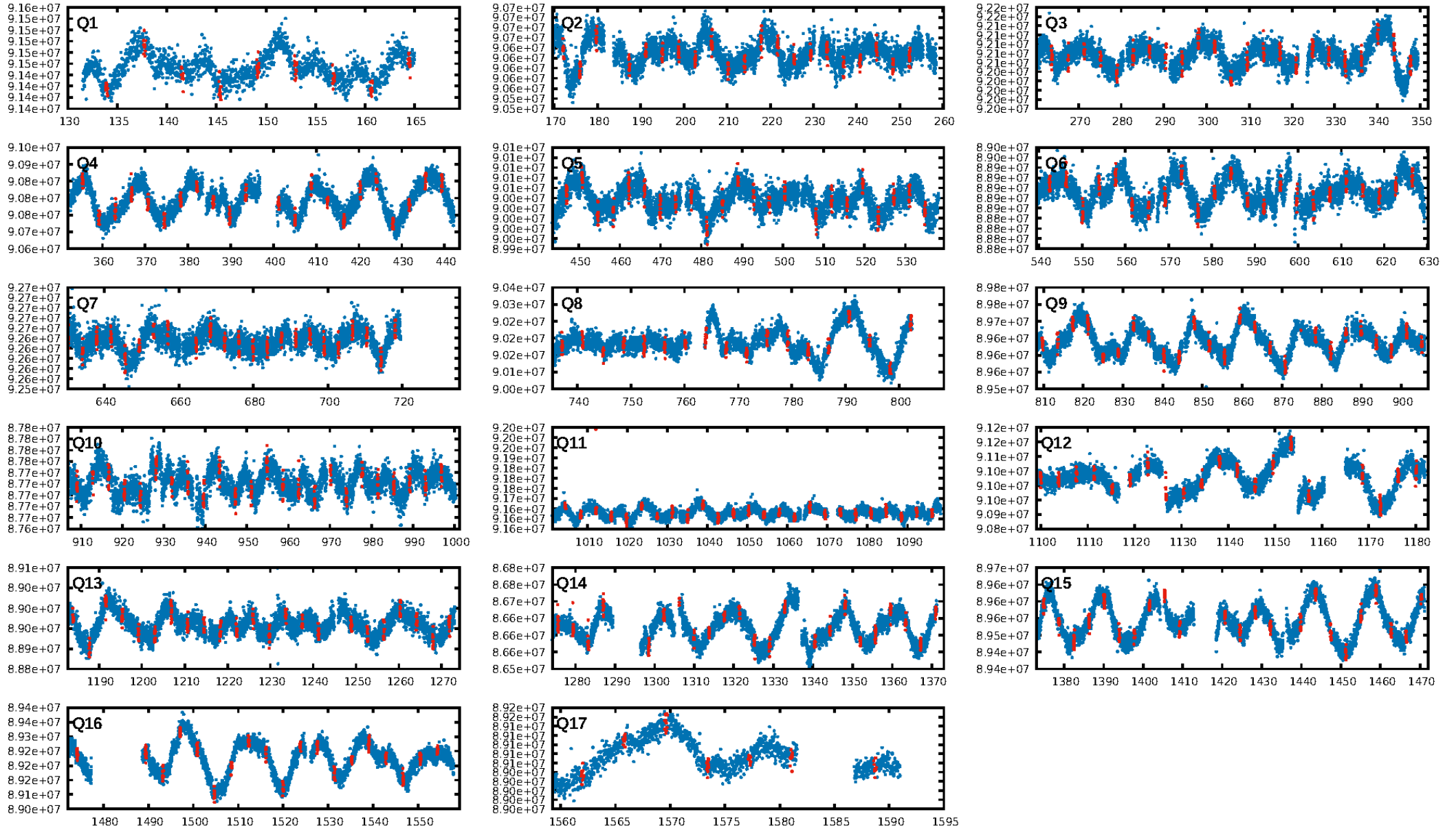
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.41e-20
RollingBand-fgt: 0.84 [279/334]
GhostDiagnostic-chr: 1.942
Centroid-sig: 74.1%
Centroid-so: 0.481 arcsec [0.51σ]
OotOffset-rm: 0.718 arcsec [1.10σ]
KicOffset-rm: 0.613 arcsec [1.10σ]
OotOffset-st: 3/4/2/3 [12]
KicOffset-st: 3/4/2/3 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

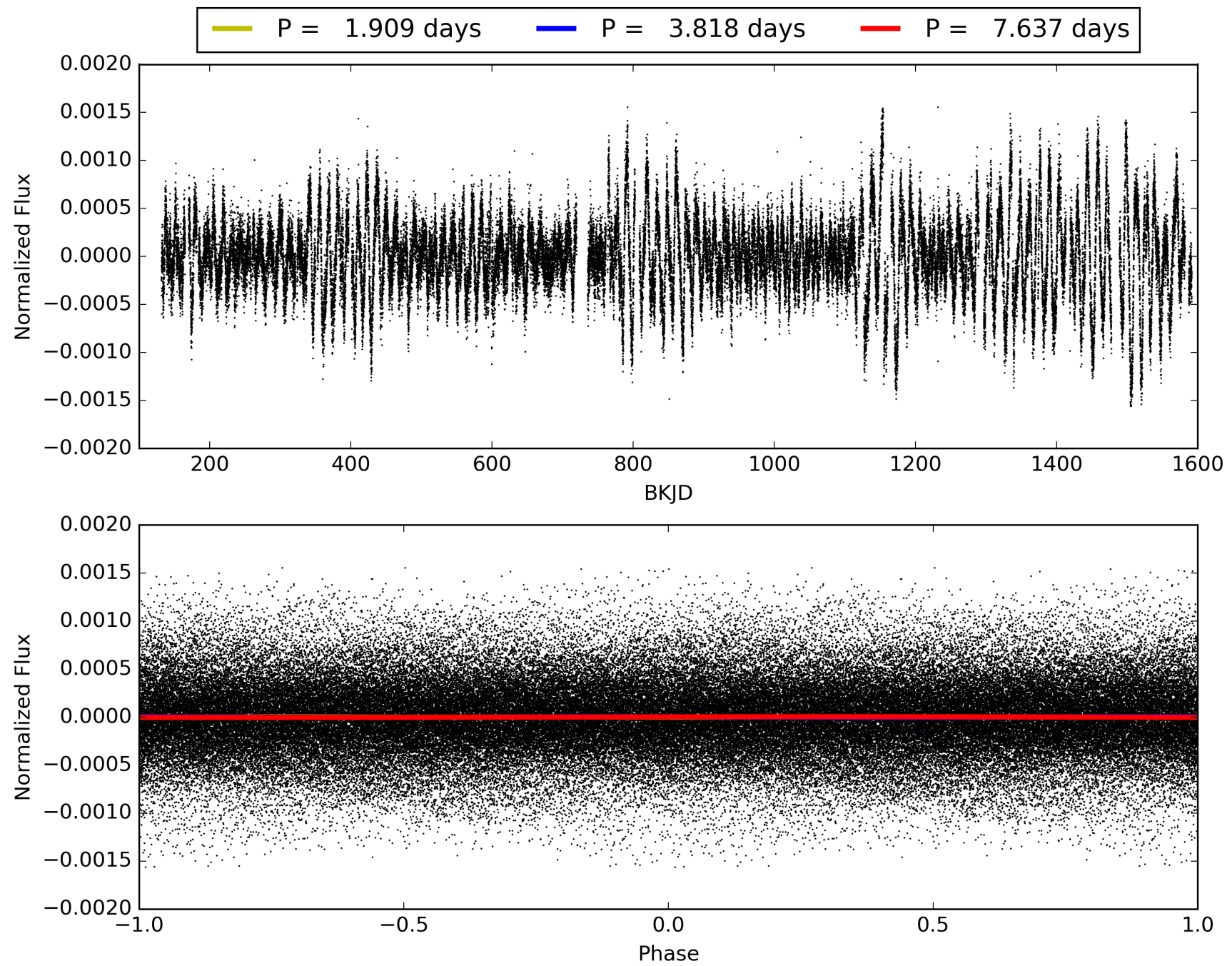
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:11:59 Z

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

TCE 008107611-01, PDC Light Curves

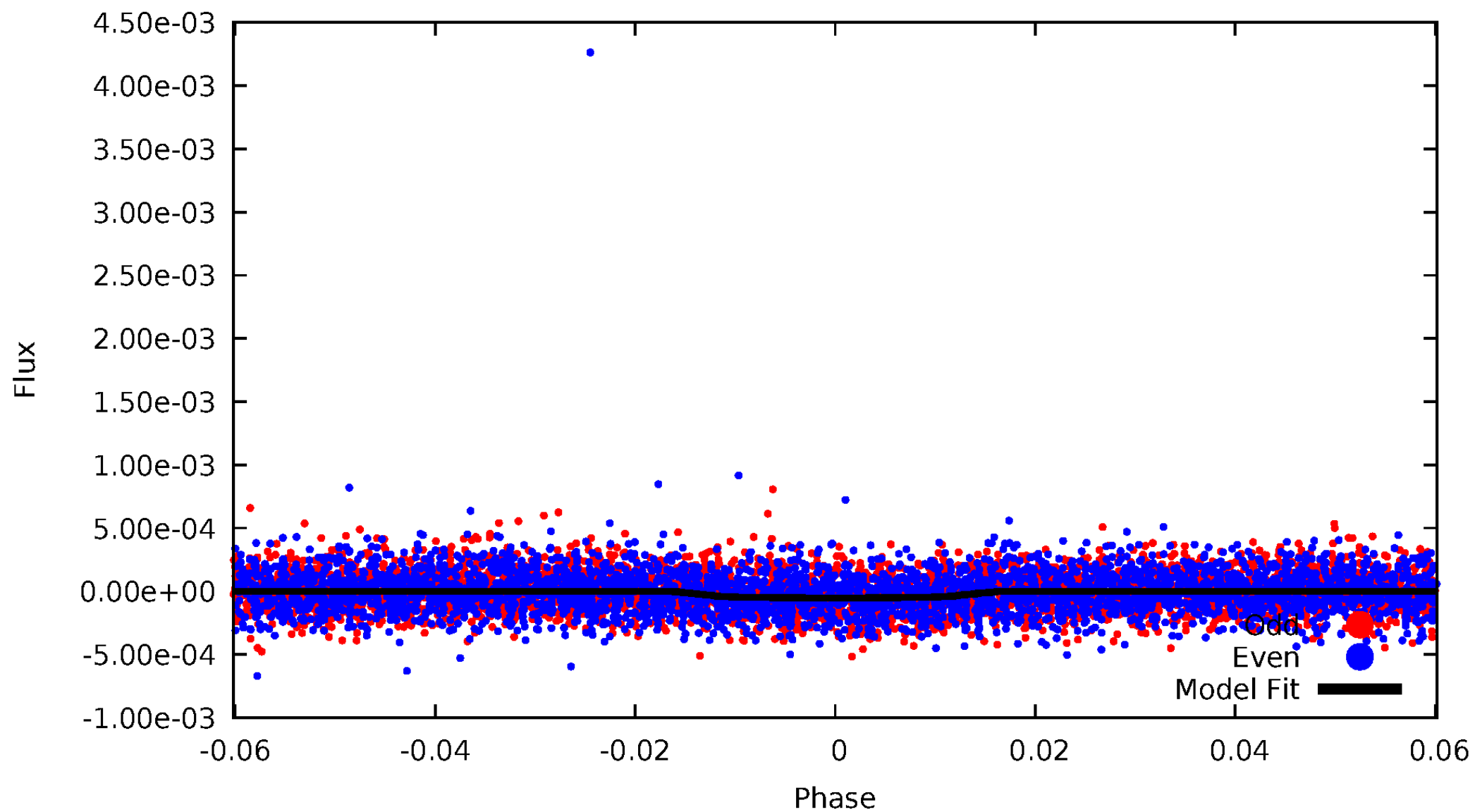


TCE 008107611-01



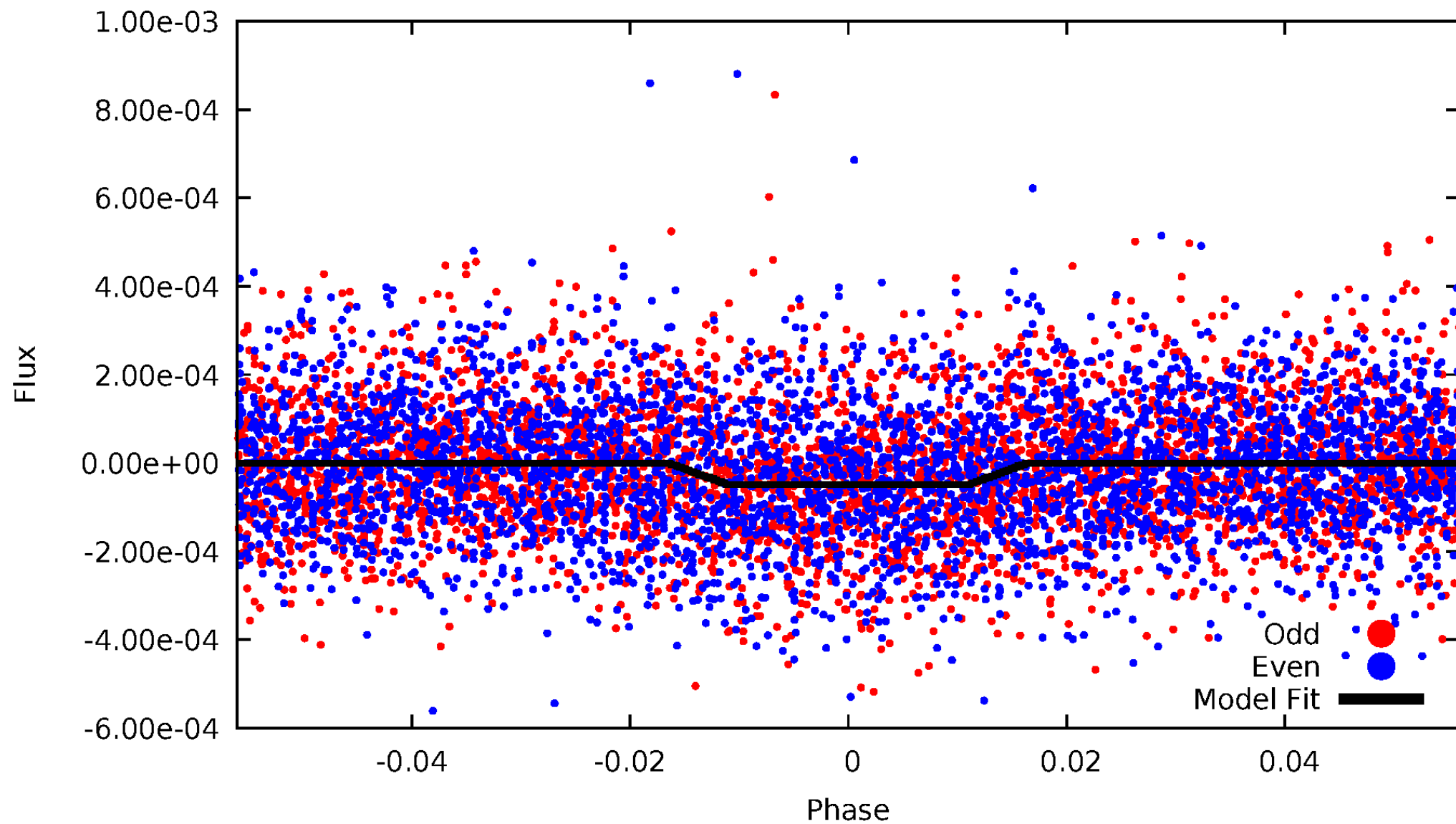
DV Odd/Even

TCE 008107611-01



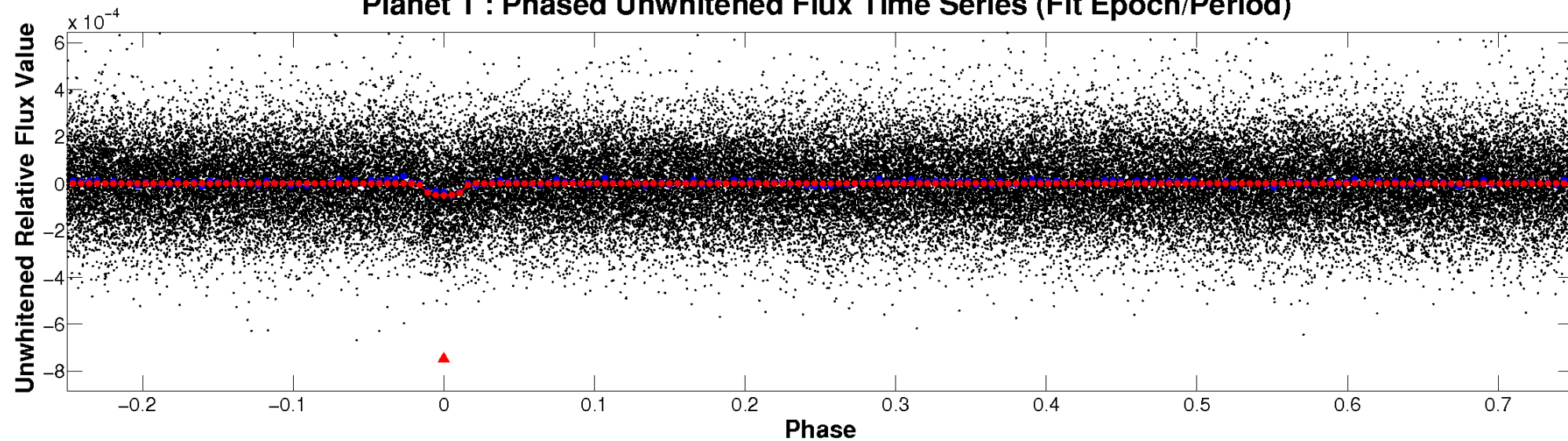
ALT Odd/Even

TCE 008107611-01

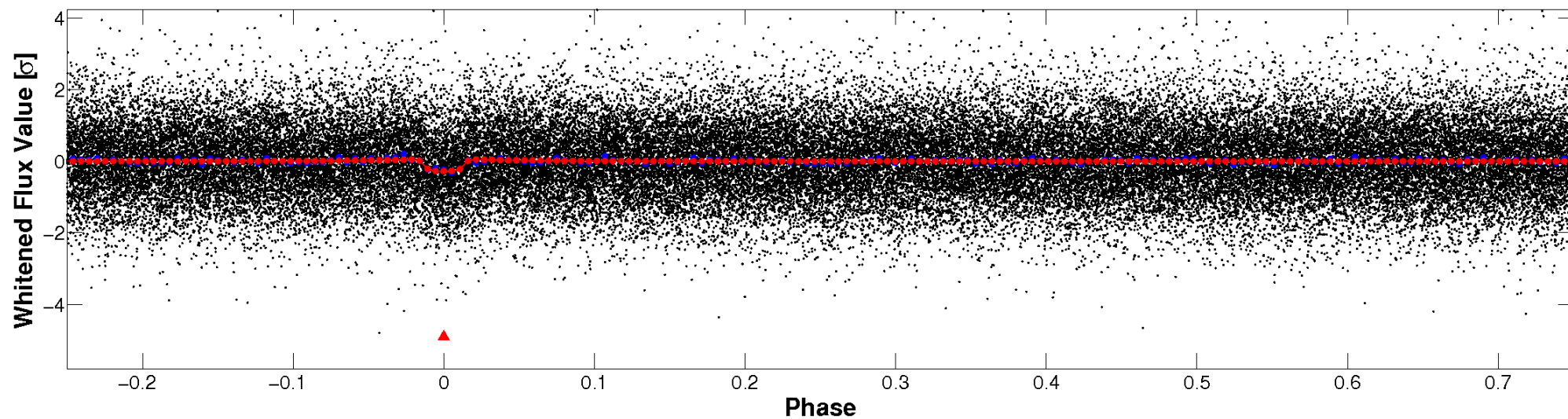


Non-Whitened Vs. Whitened Light Curve

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

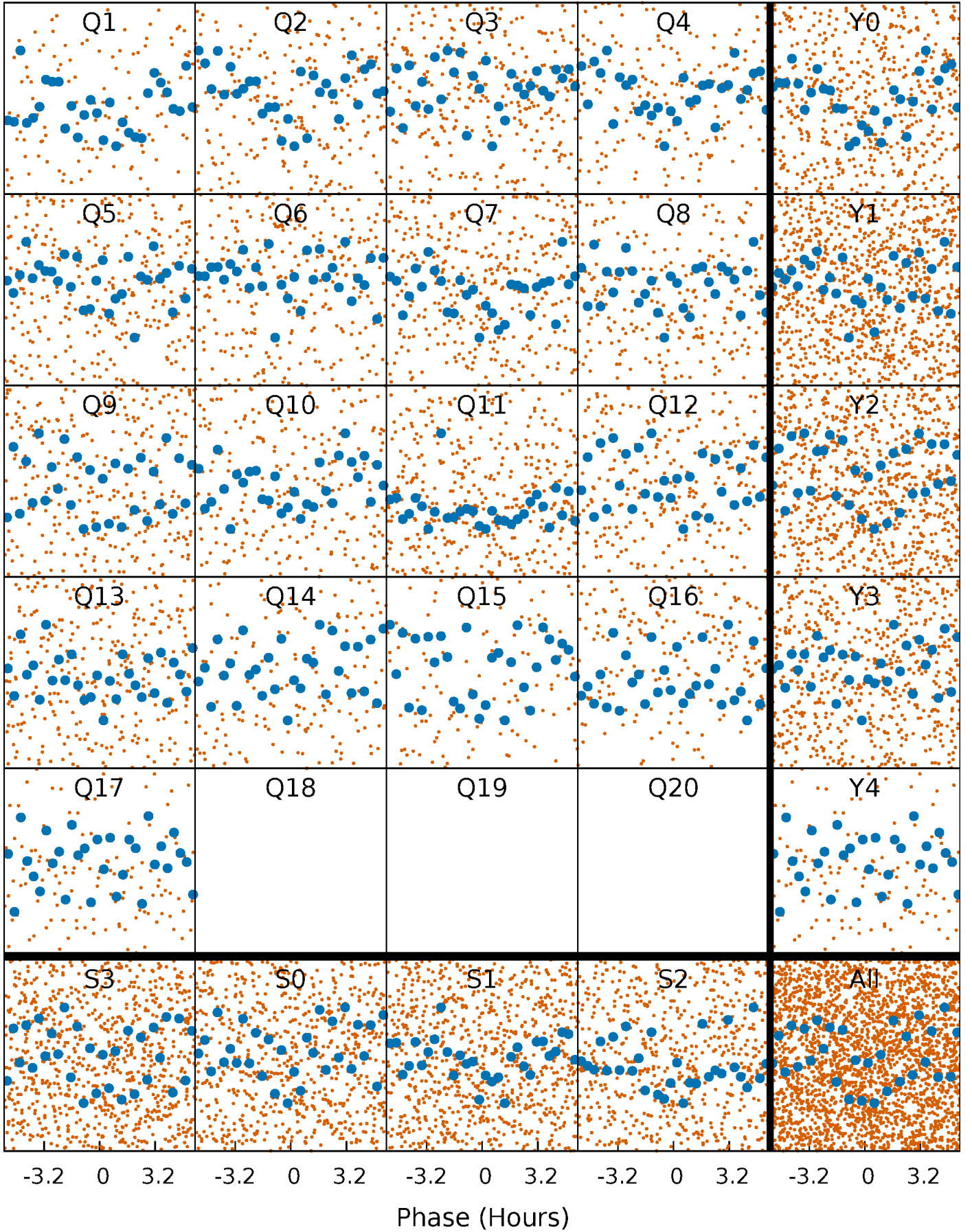


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



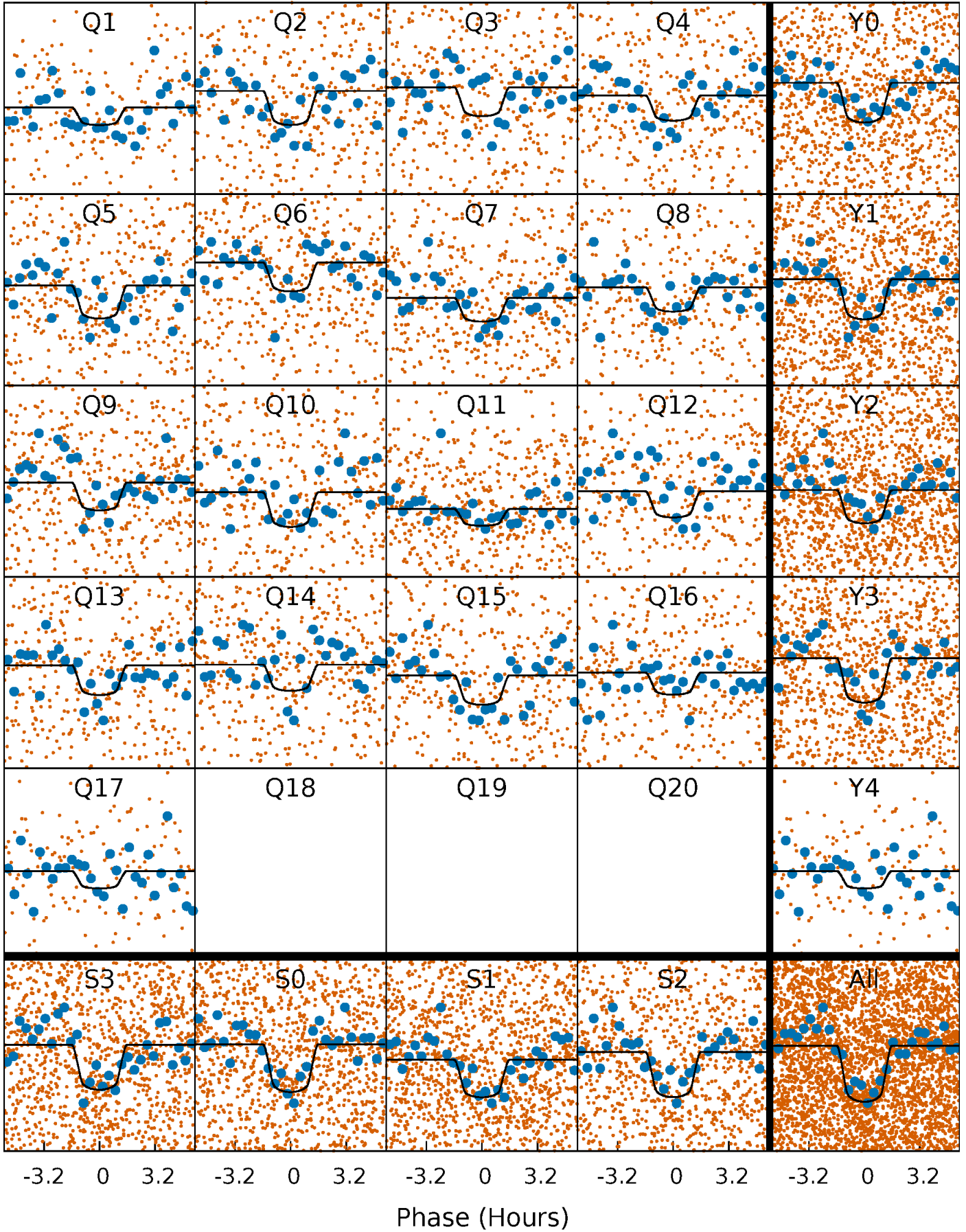
PDC Quarter-Phased Transit Curves

TCE 008107611-01 P= 3.818374 Days $T_0=133.905756$ (BKJD)



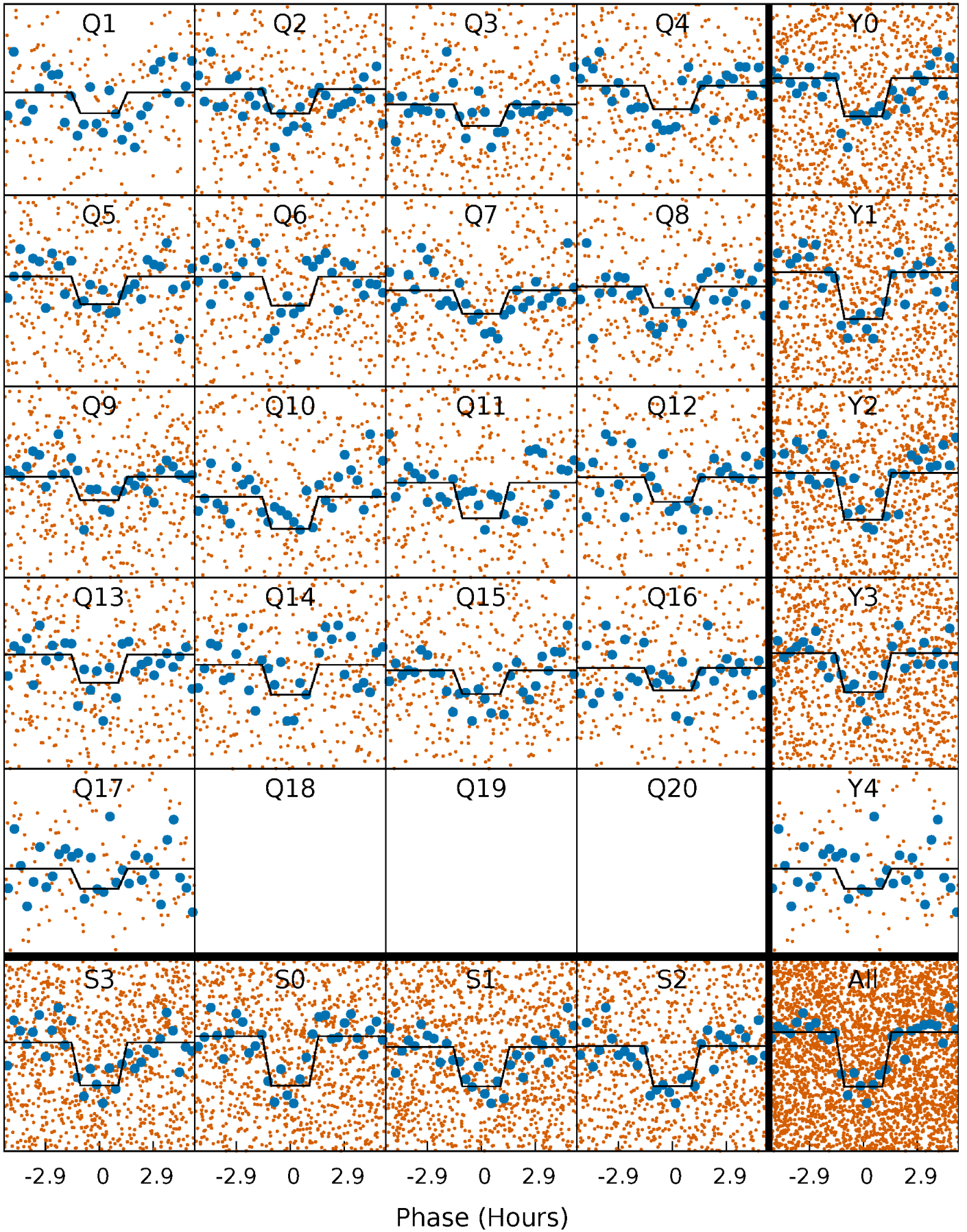
DV Quarter-Phased Transit Curves

TCE 008107611-01 P= 3.818374 Days $T_0=133.905756$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

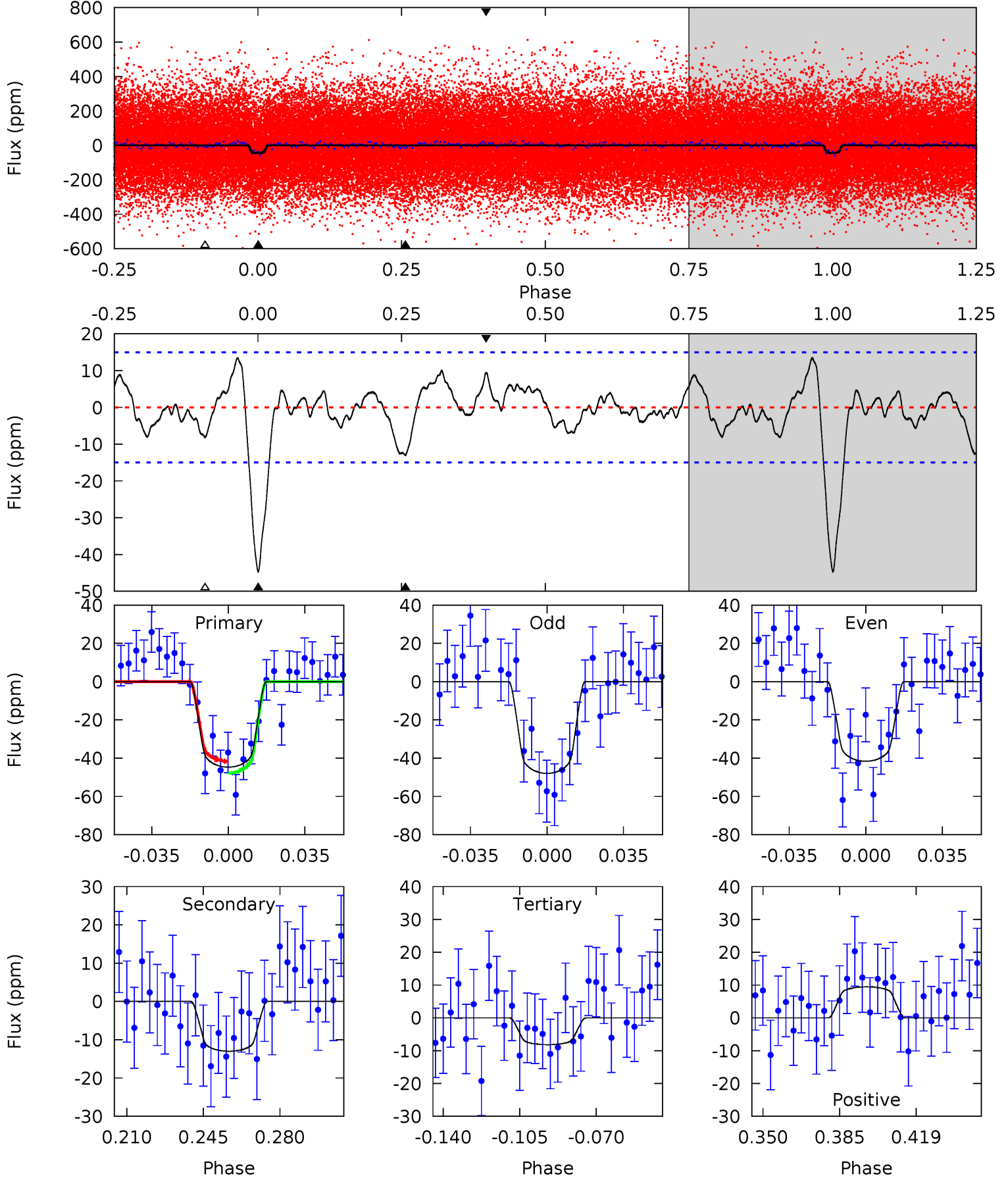
TCE 008107611-01 P= 3.818372 Days $T_0=133.908023$ (BKJD)



DV Model-Shift Uniqueness Test

008107611-01, P = 3.818374 Days, E = 130.087382 Days

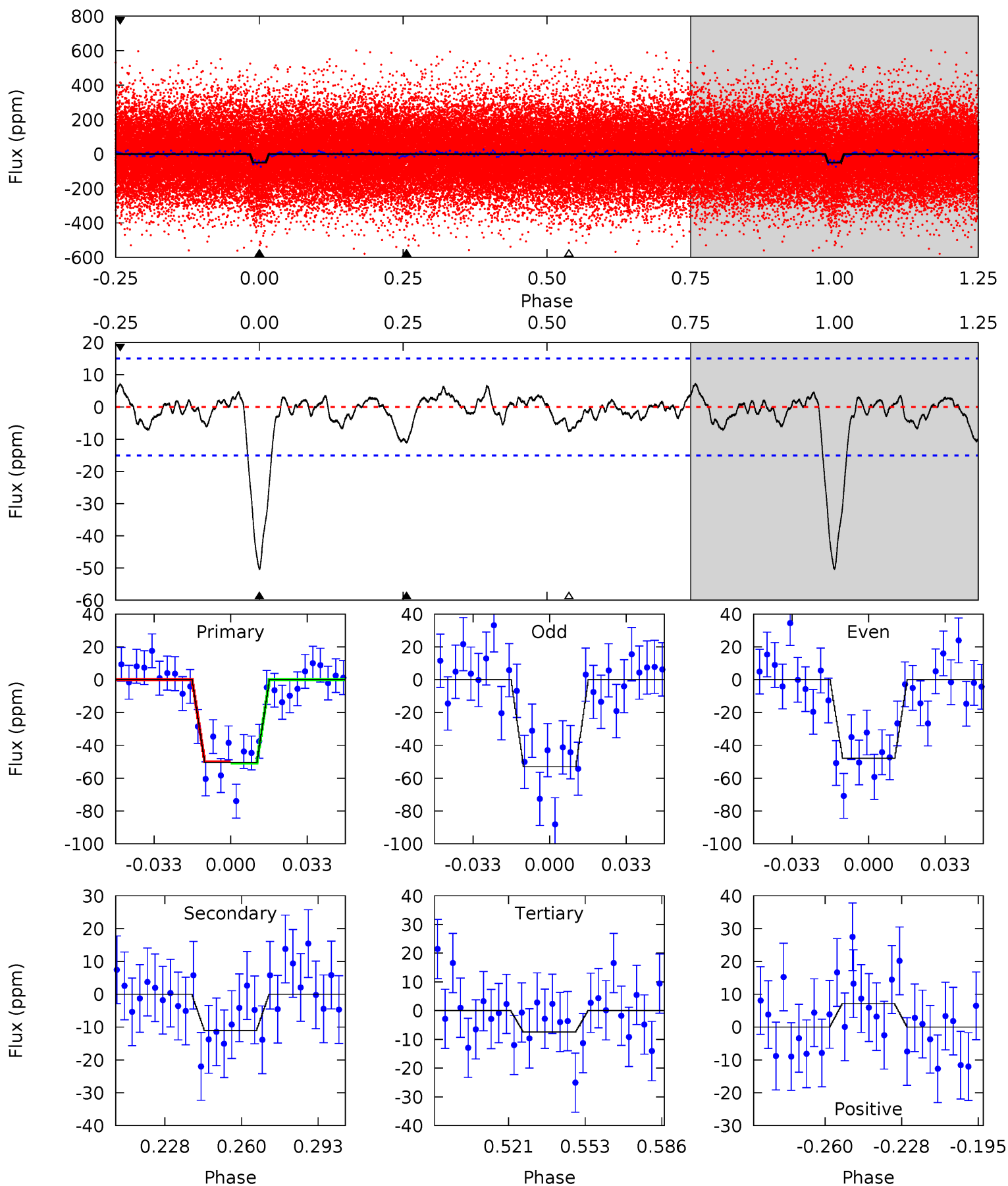
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	4.15	2.61	3.01	4.78	2.11	1.30	11.7	11.2	1.54	1.14	1.02	0.97	0.23	0.98



Alt Model-Shift Uniqueness Test

008107611-01, P = 3.818372 Days, E = 130.089651 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	3.51	2.38	2.28	4.79	2.14	0.92	13.7	13.8	1.14	1.23	0.84	0.91	0.12	0.14



Stellar Parameters For KIC 008107611

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6738^{+189}_{-260}	$4.109^{+0.209}_{-0.171}$	$-0.180^{+0.250}_{-0.300}$	$1.692^{+0.485}_{-0.436}$	$1.351^{+0.194}_{-0.259}$	$0.393^{+0.491}_{-0.193}$
	+3%/-4%	+5%/-4%	+139%/-167%	+29%/-26%	+14%/-19%	+125%/-49%
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 008107611-01 / KOI 4656.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 3	$1.48^{+0.47}_{-0.44}$	2340^{+179}_{-172}	4599^{+633}_{-479}	$9.191^{+8.760}_{-4.270}$
Alt.	-11 ± 3	$1.23^{+0.47}_{-0.40}$	2328^{+184}_{-176}	4721^{+924}_{-554}	10^{+14}_{-5}

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

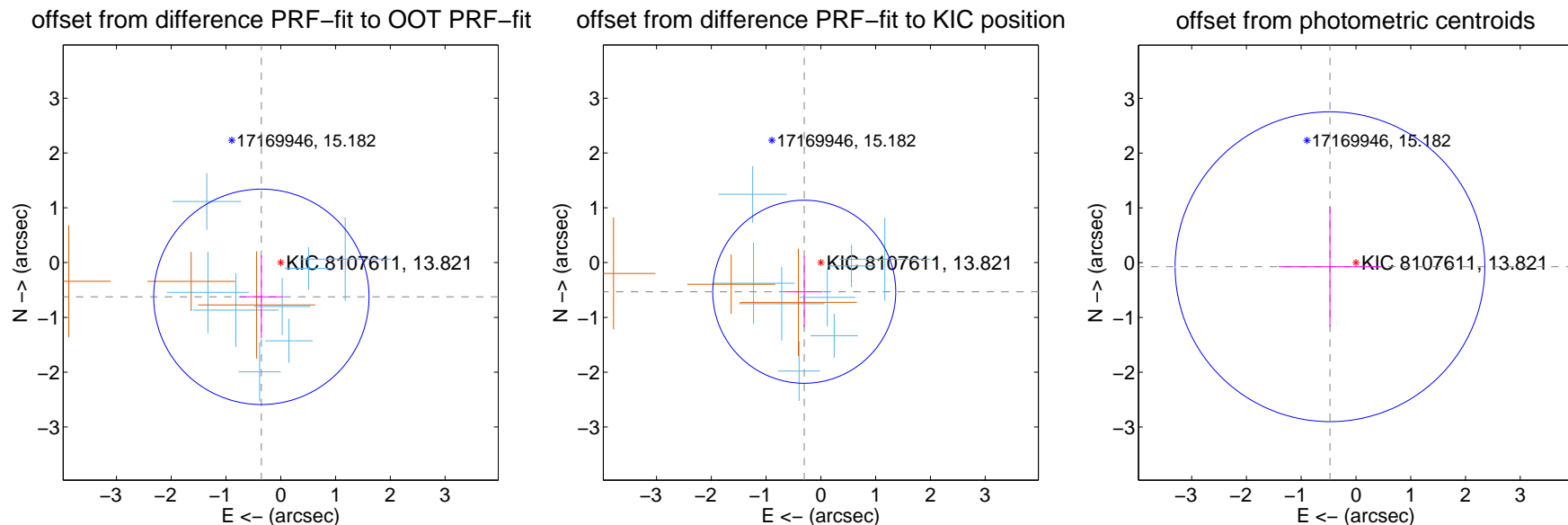
DV Centroid Data

Supplemental centroid analysis for 008107611-01. Kepler magnitude: 13.82. Transit SNR 10.60

There are 8 quarters with good PRF difference image offsets

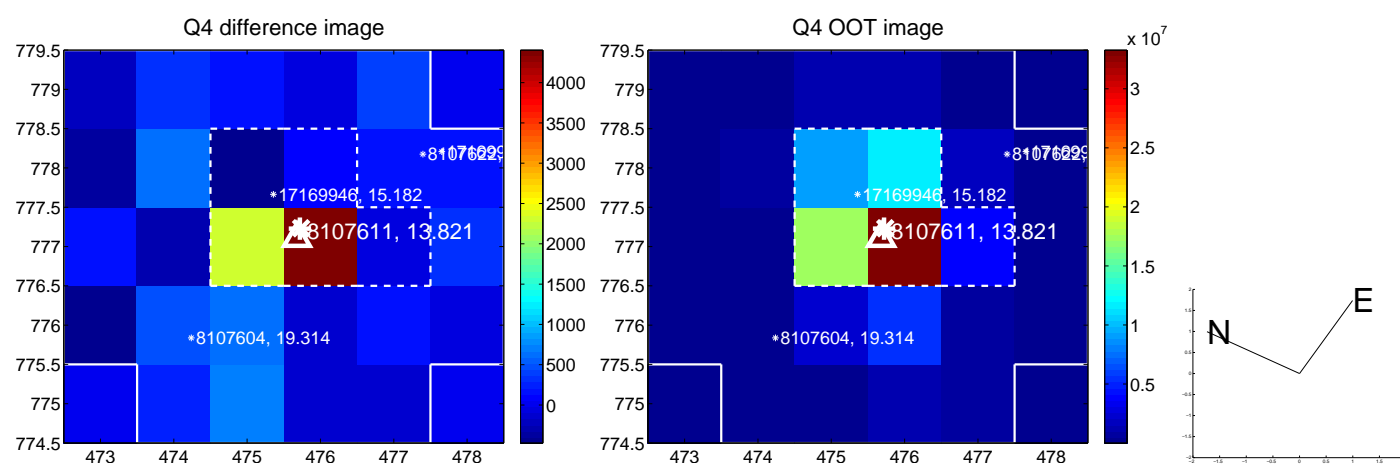
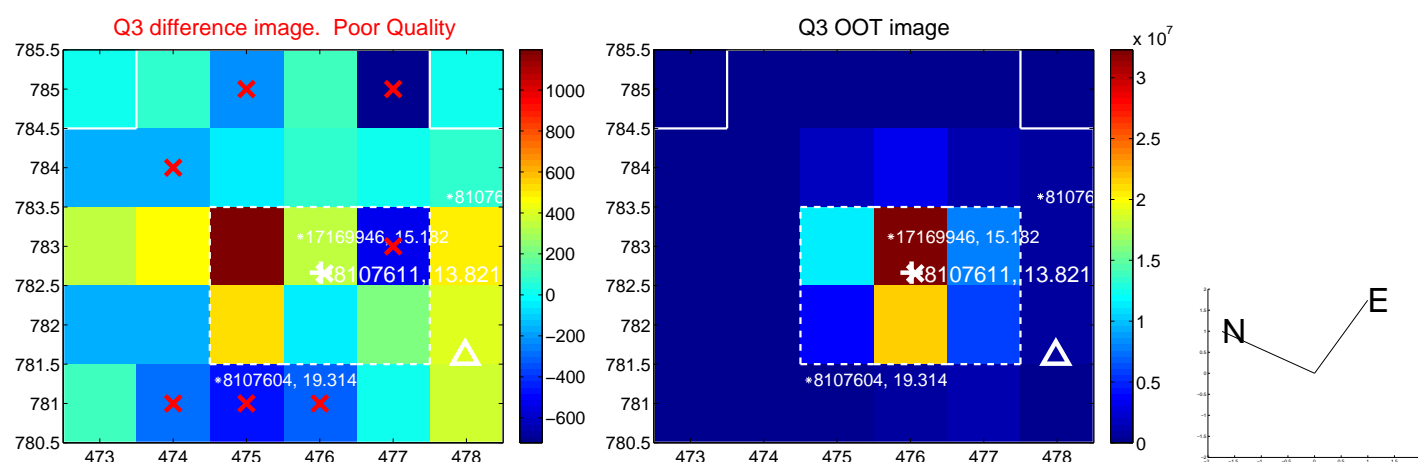
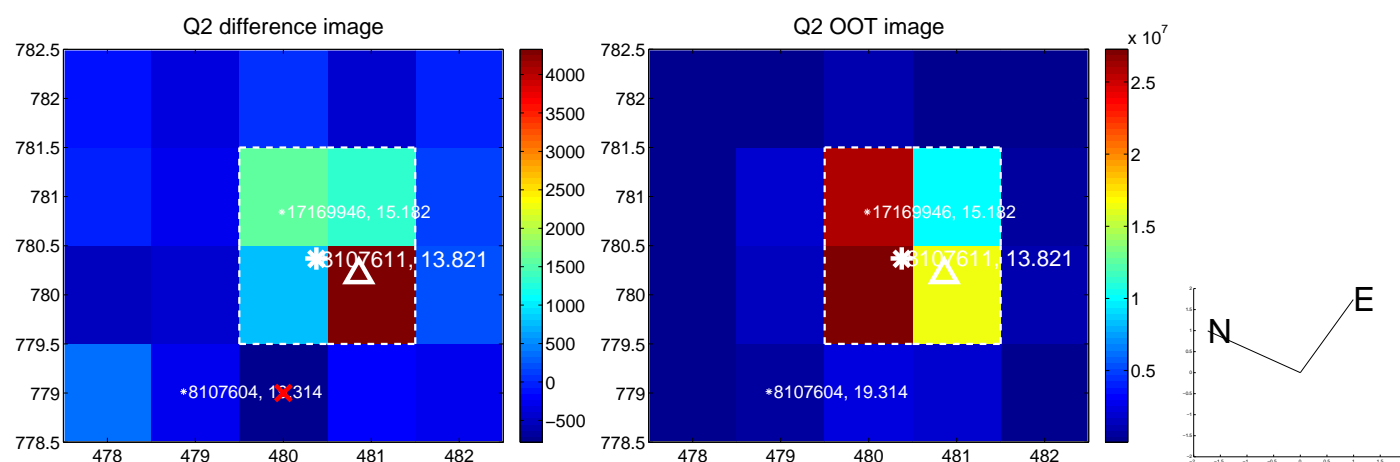
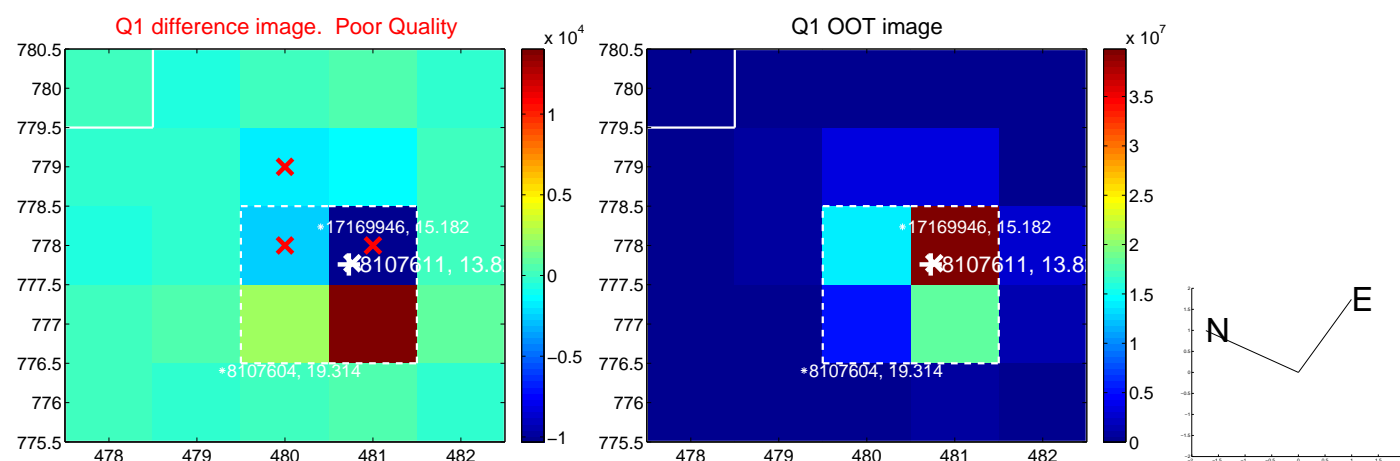
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.718 ± 0.655	1.10	0.354 ± 0.393	-0.625 ± 0.756
PRF-fit source offset from KIC position	0.613 ± 0.557	1.10	0.304 ± 0.338	-0.532 ± 0.644
photometric centroid source offset	0.48 ± 0.94	0.51	0.48 ± 0.94	-0.07 ± 1.09

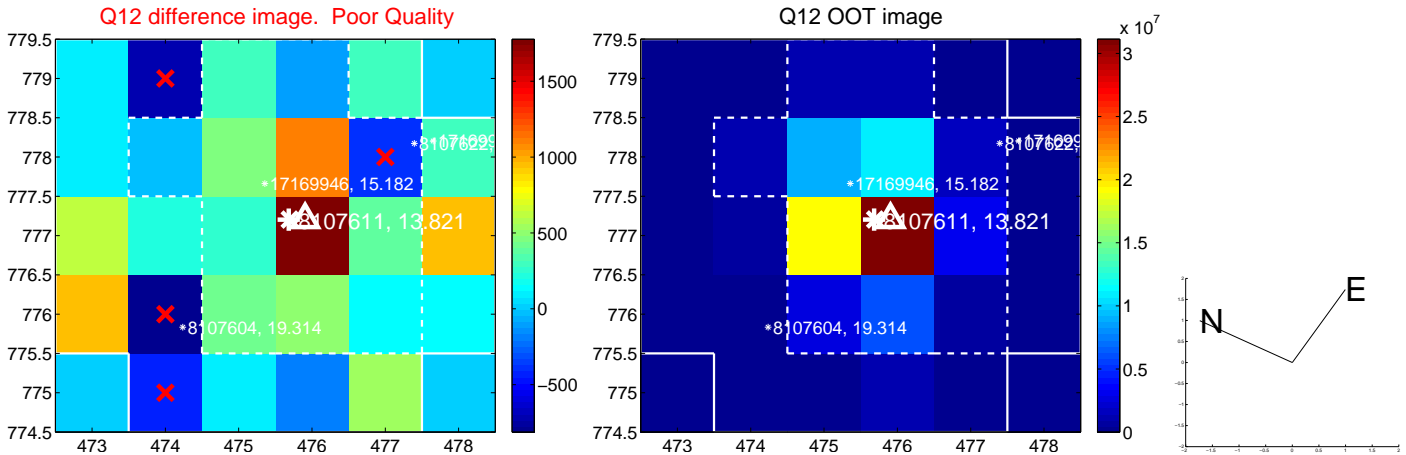
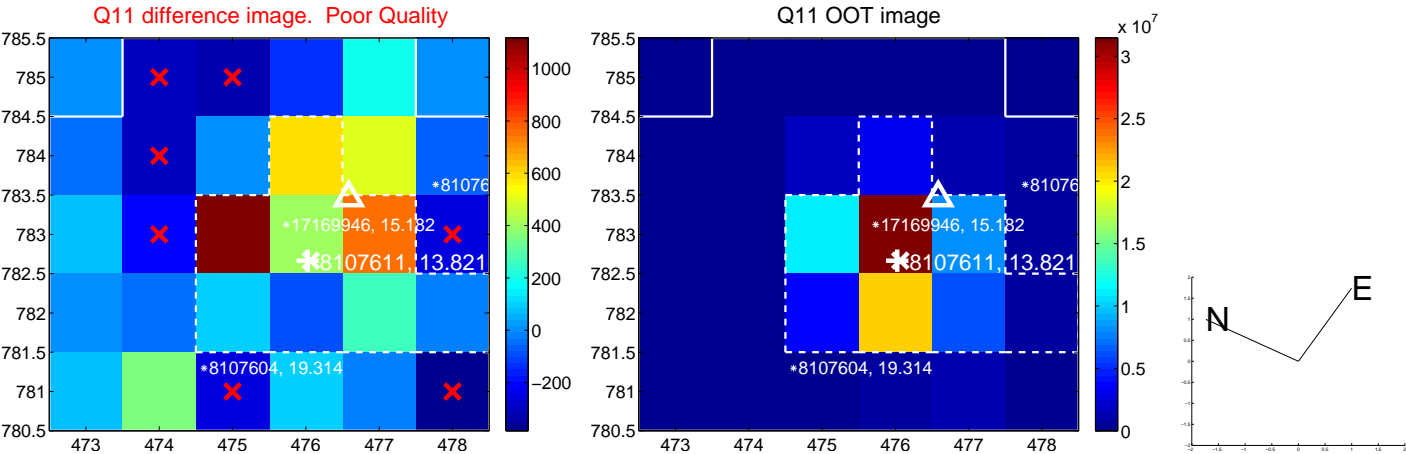
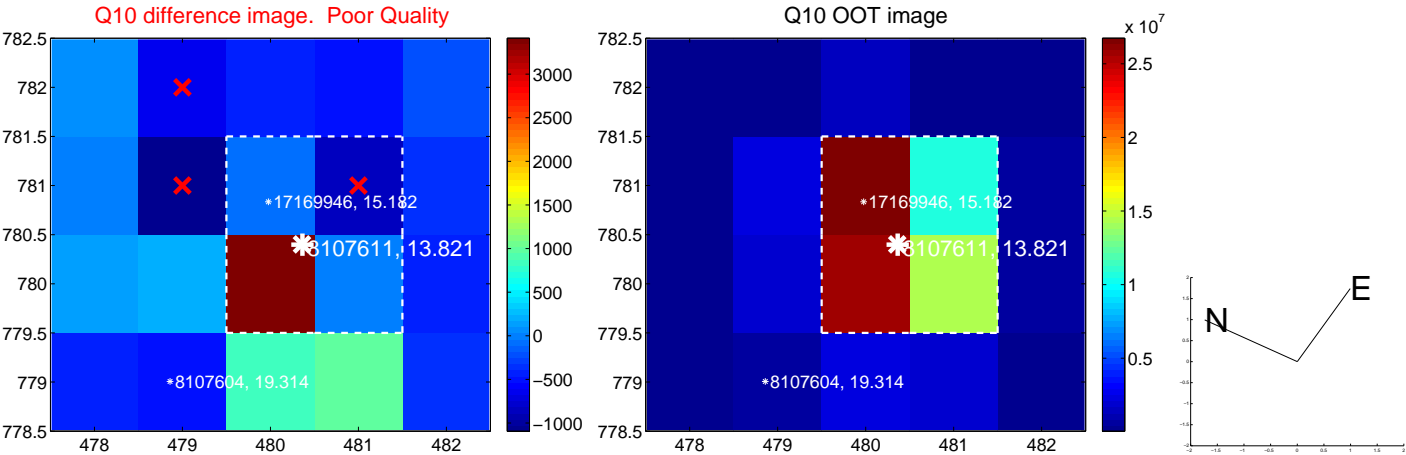
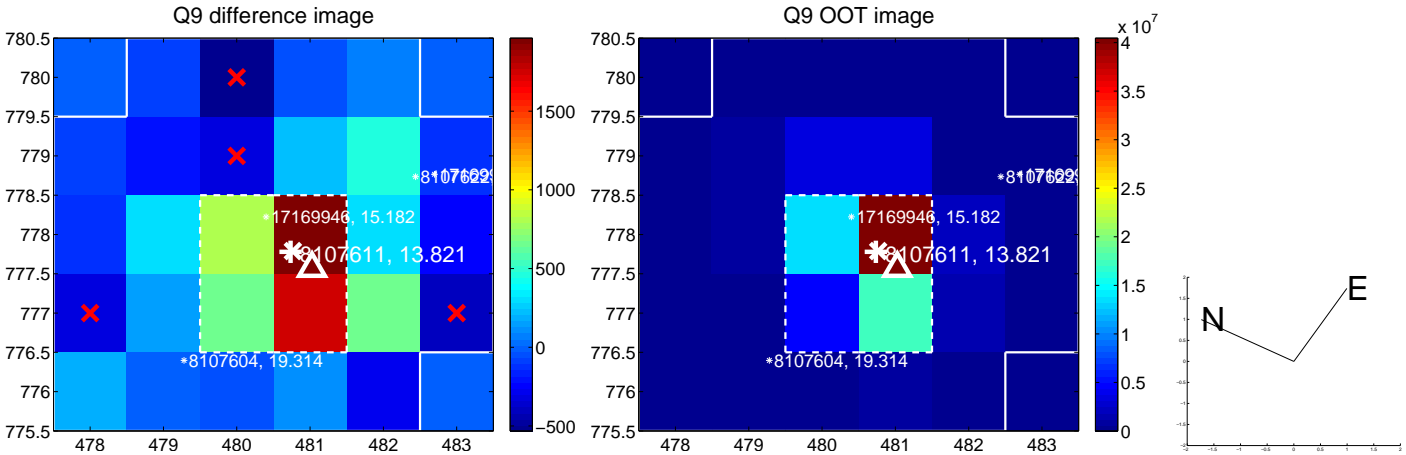


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

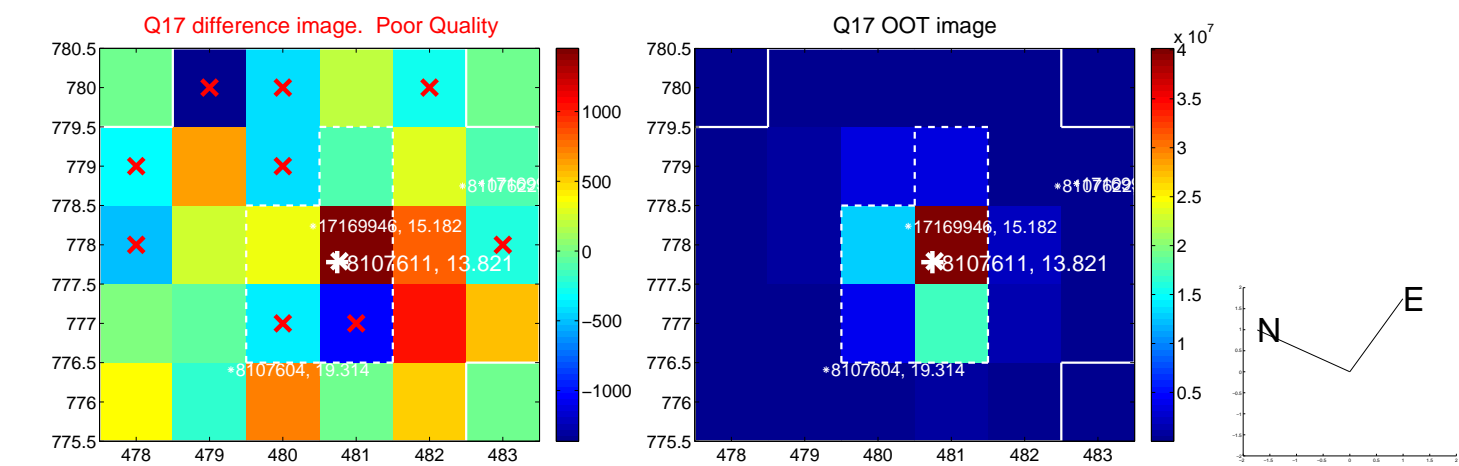
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



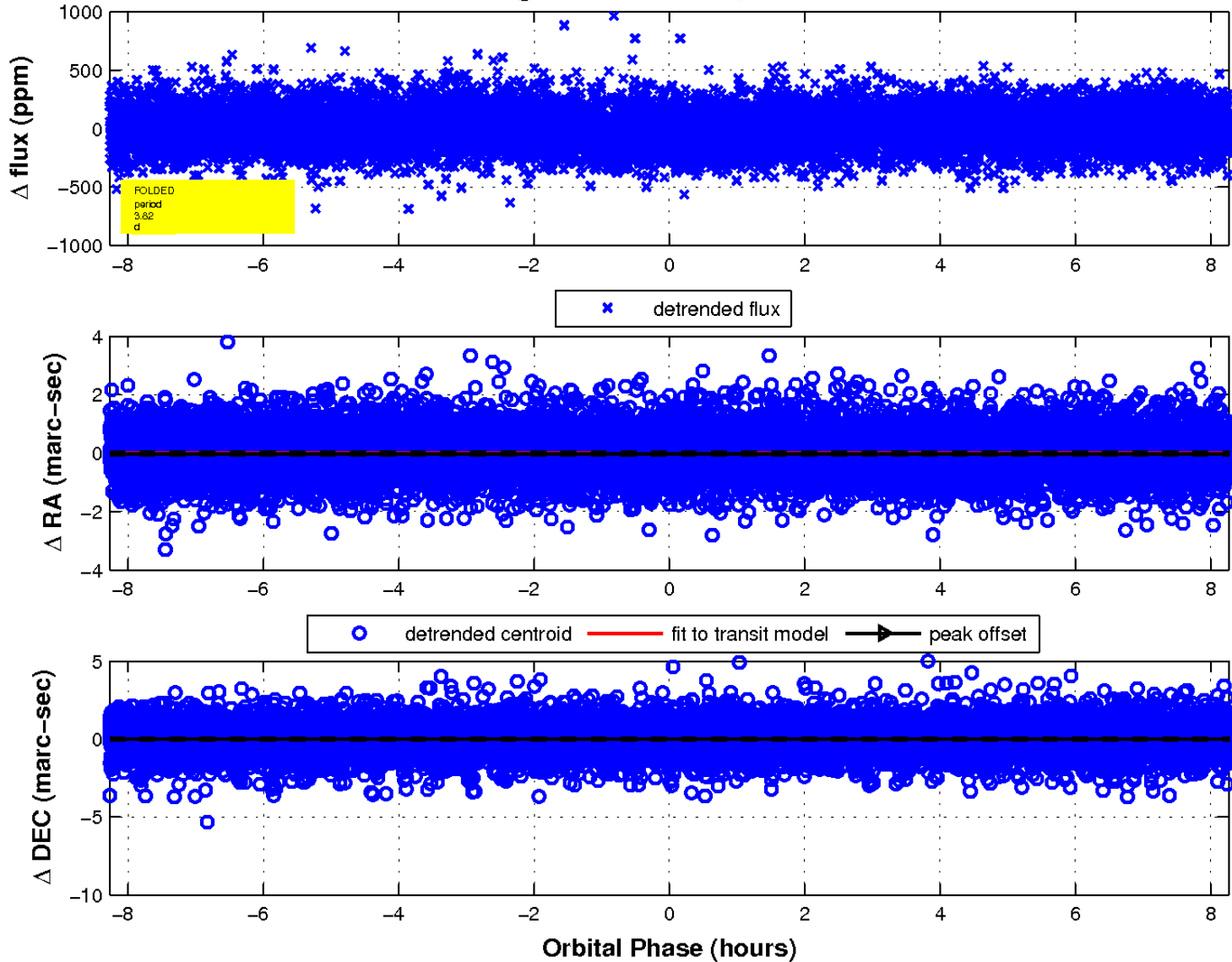
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

