

KIC 007771181

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})
007771181-01	OBS	4797.01	9.972080	137.706828	378.1	1.260	8.1	9.5	0.70	4810	1.53	36.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007771181-01	OBS	PC	0.94	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.

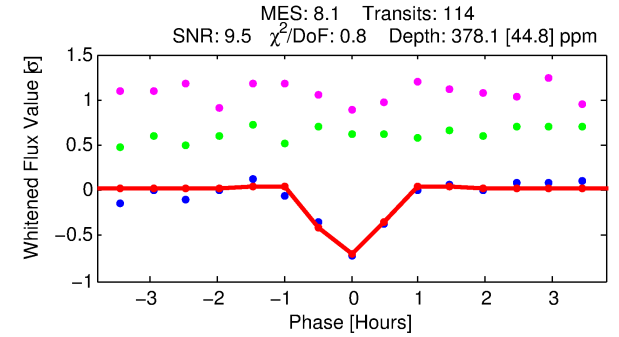
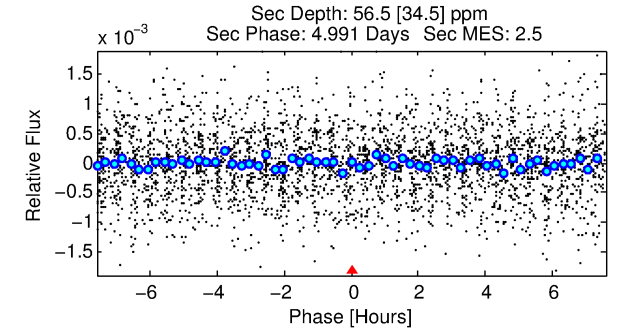
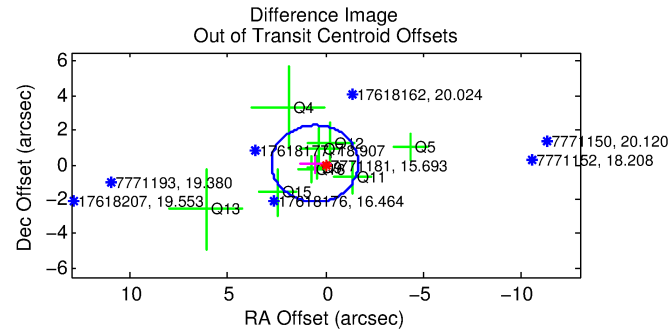
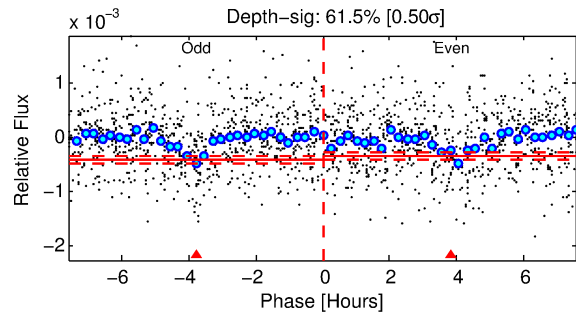
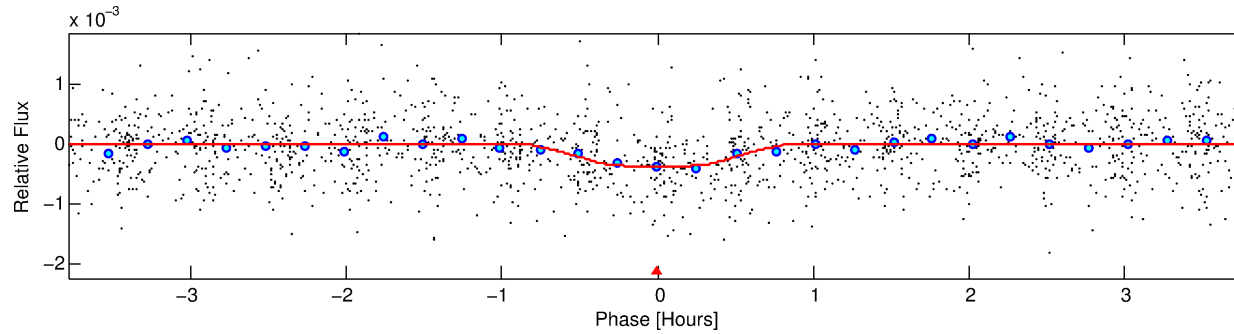
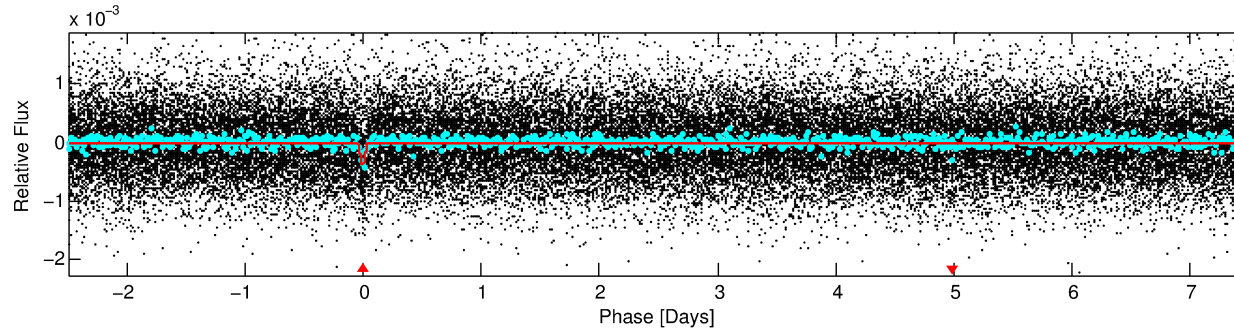
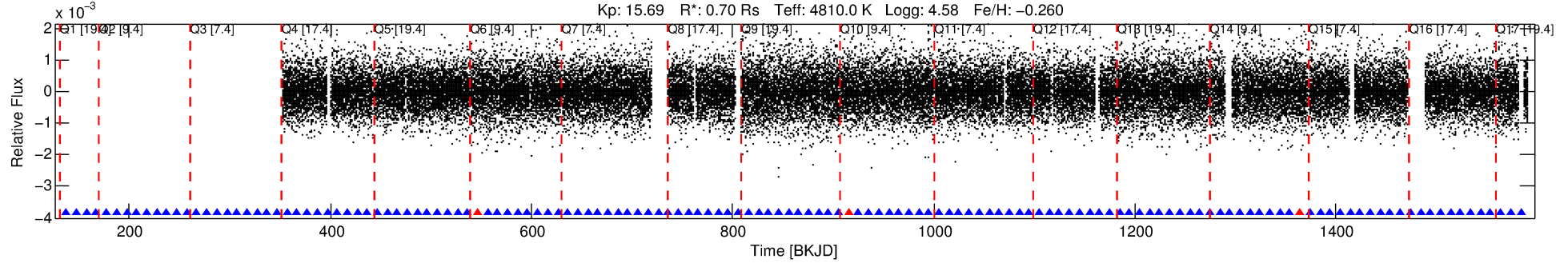
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007771181-01

No Significant Match Found

DV One-Page Summary

KIC: 7771181 Candidate: 1 of 1 Period: 9.972 d
KOI: K04797.01 Corr: 0.885



DV Fit Results:

Period = 9.97208 [0.00005] d
Epoch = 137.7068 [0.0042] BKJD
Rp/R* = 0.0202 [0.0350]
a/R* = 37.85 [227.75]
b = 0.81 [2.72]
Seff = 36.60 [6.67]
Teq = 627 [29] K
Rp = 1.53 [2.66] Re
a = 0.0797 [0.0062] AU
Ag = 83.84 [294.93] [0.28 σ]
Teffp = 2934 [2581] K [0.89 σ]

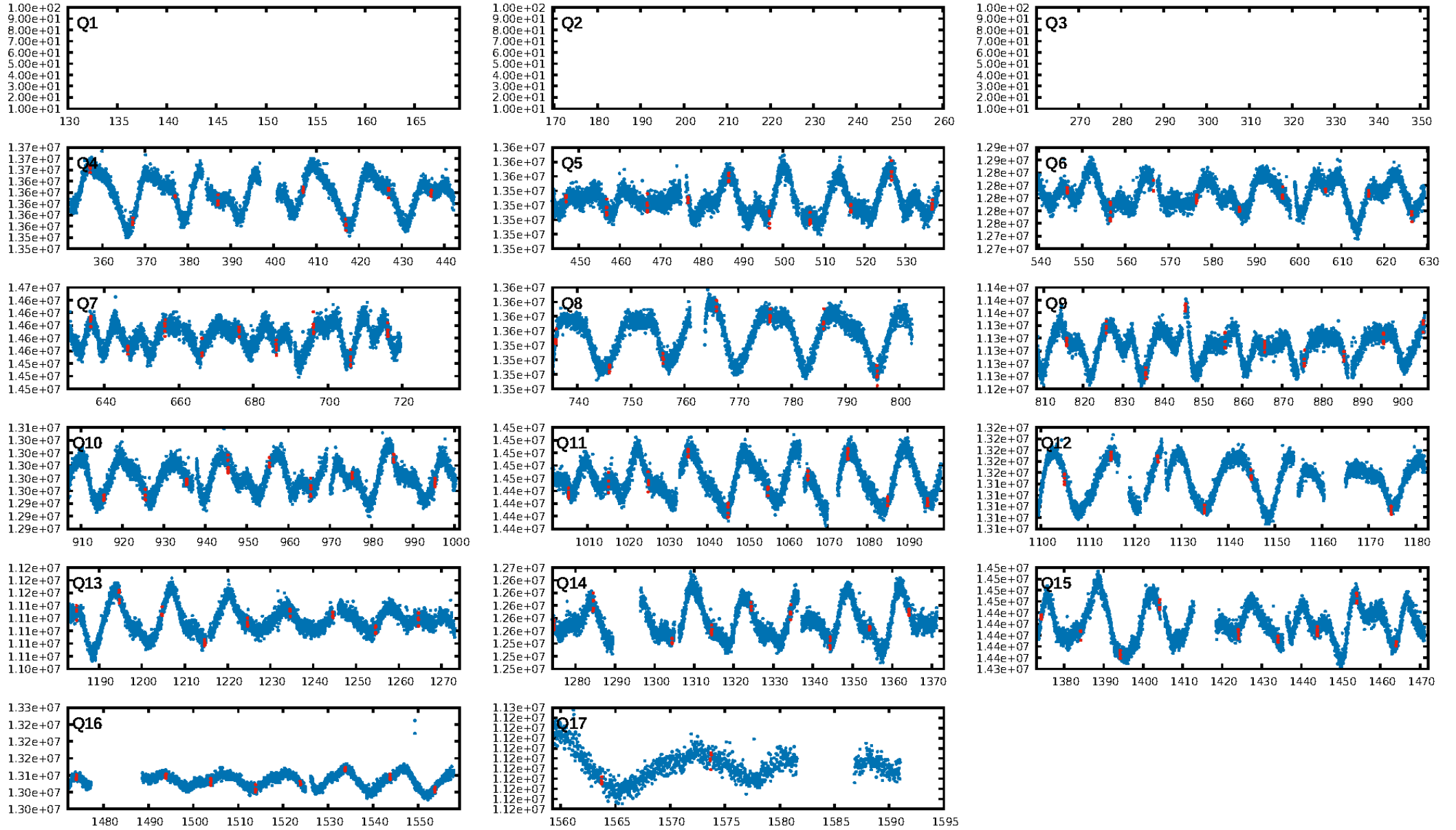
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.54e-15
RollingBand-fgt: 0.97 [109/112]
GhostDiagnostic-chr: -3.003
Centroid-sig: 59.2%
Centroid-so: 2.553 arcsec [2.81 σ]
OotOffset-rm: 0.553 arcsec [0.75 σ]
KicOffset-rm: 1.275 arcsec [2.90 σ]
OotOffset-st: 0/3/3/3 [9]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 1.00 [14/14]

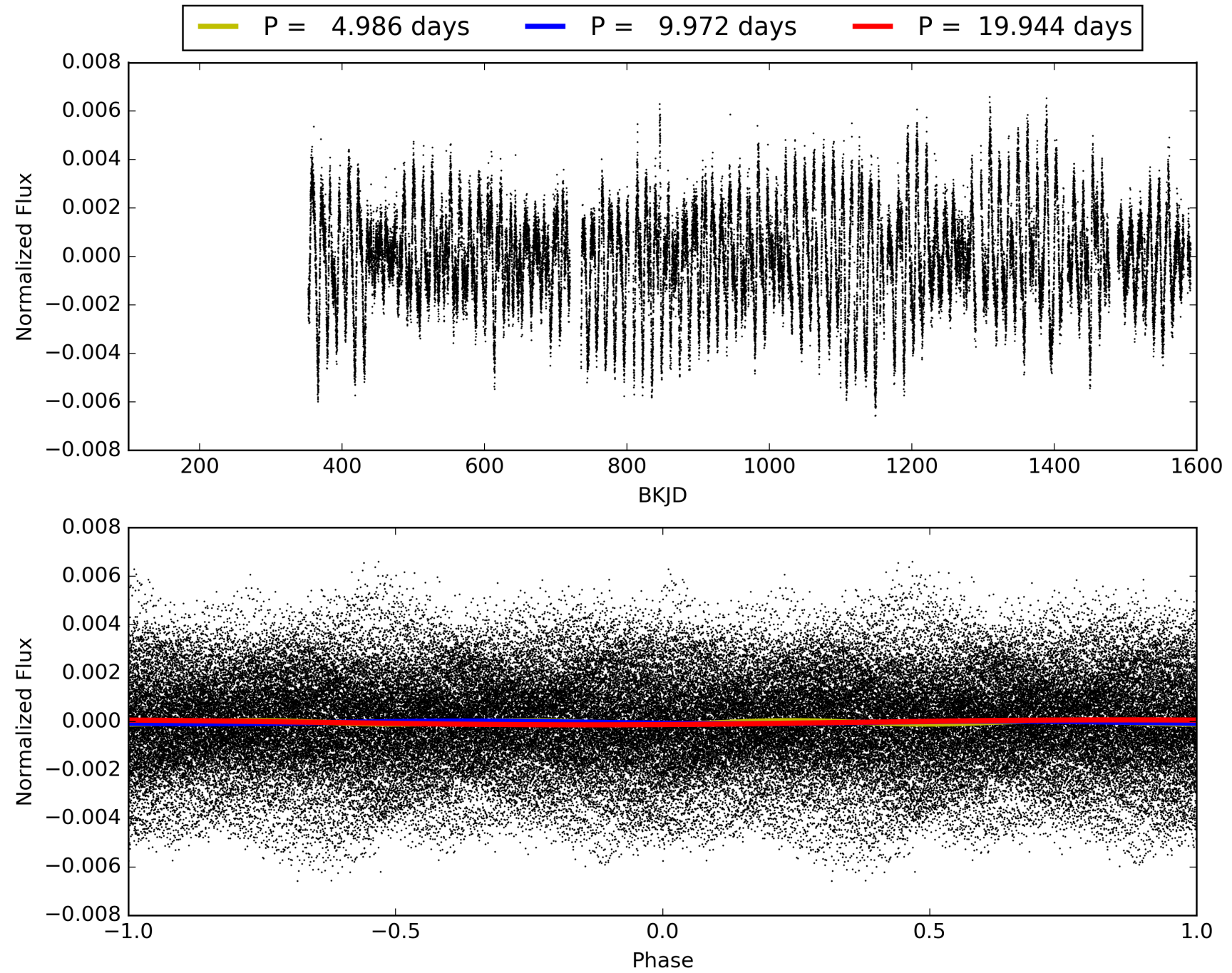
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:54:54 Z

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

TCE 007771181-01, PDC Light Curves

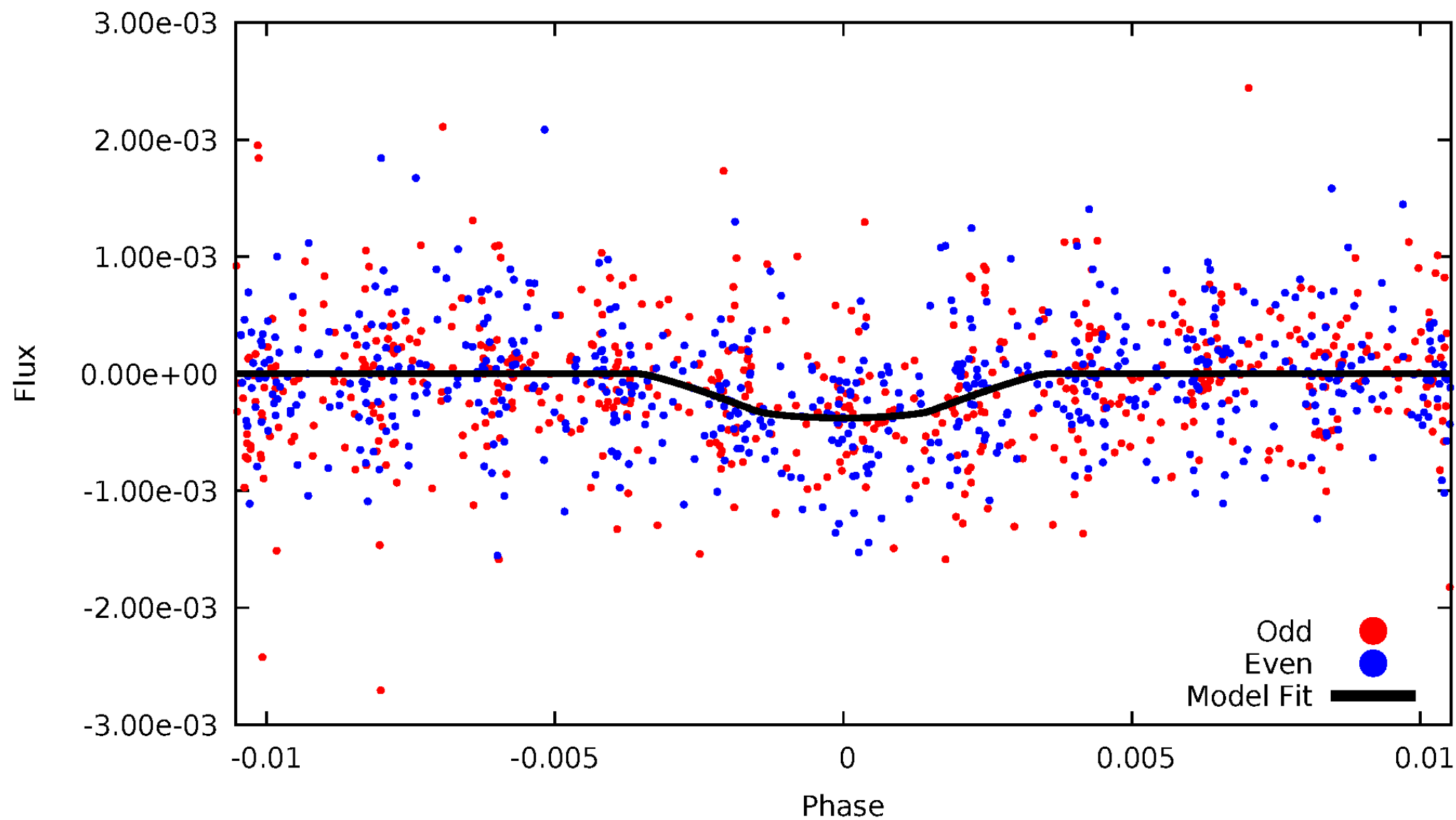


TCE 007771181-01



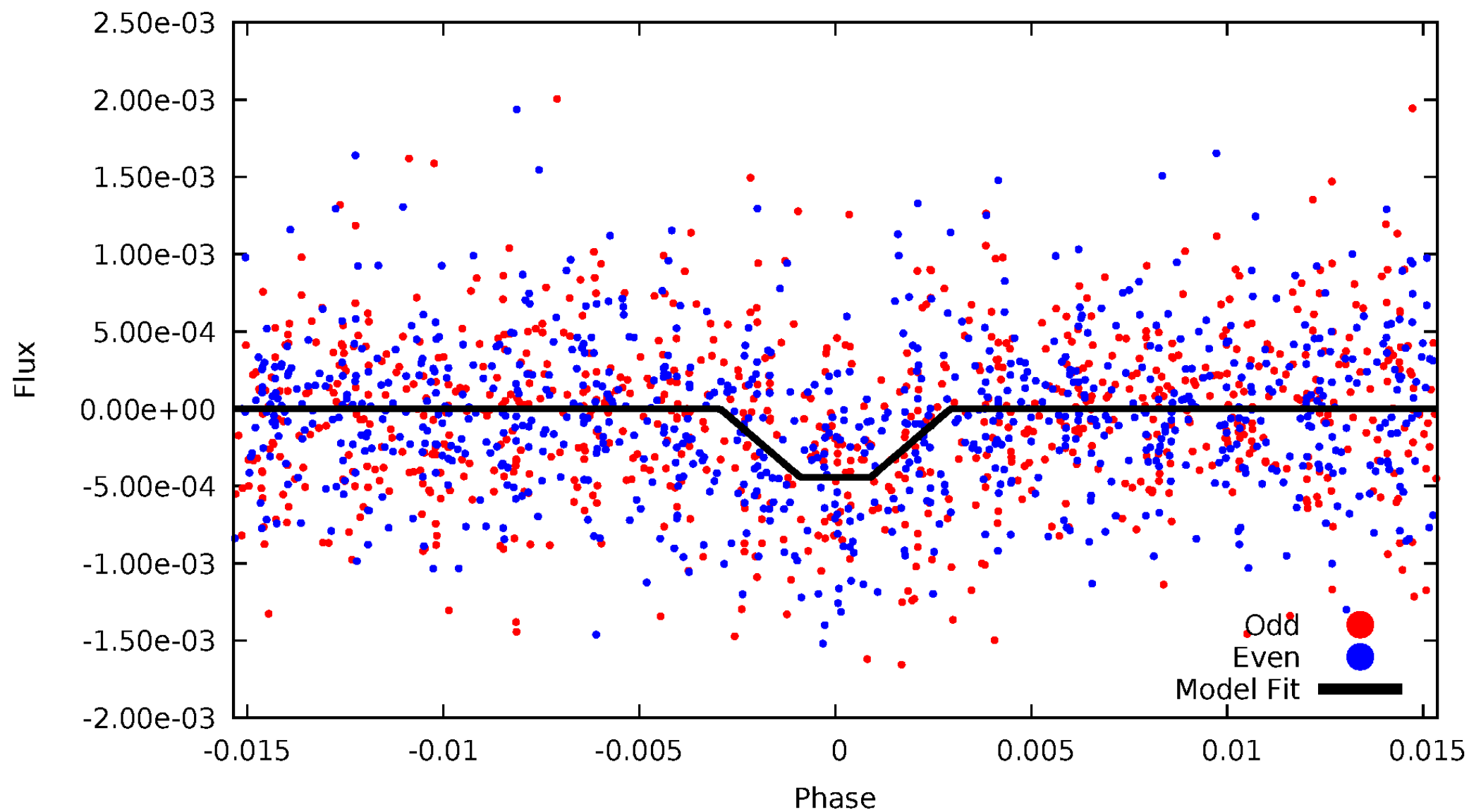
DV Odd/Even

TCE 007771181-01

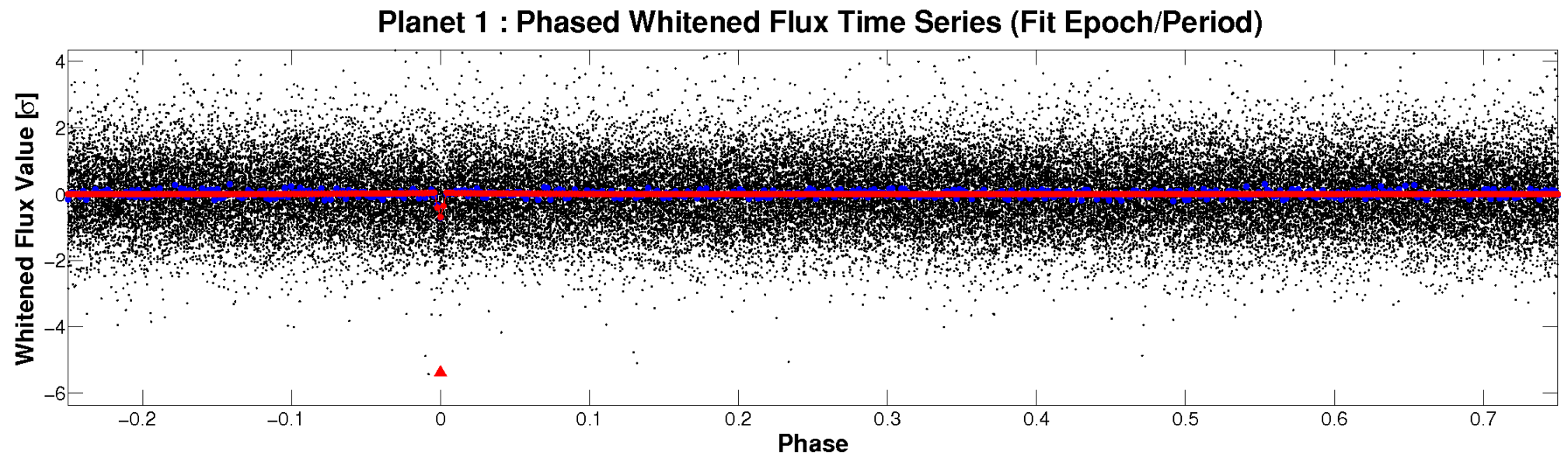
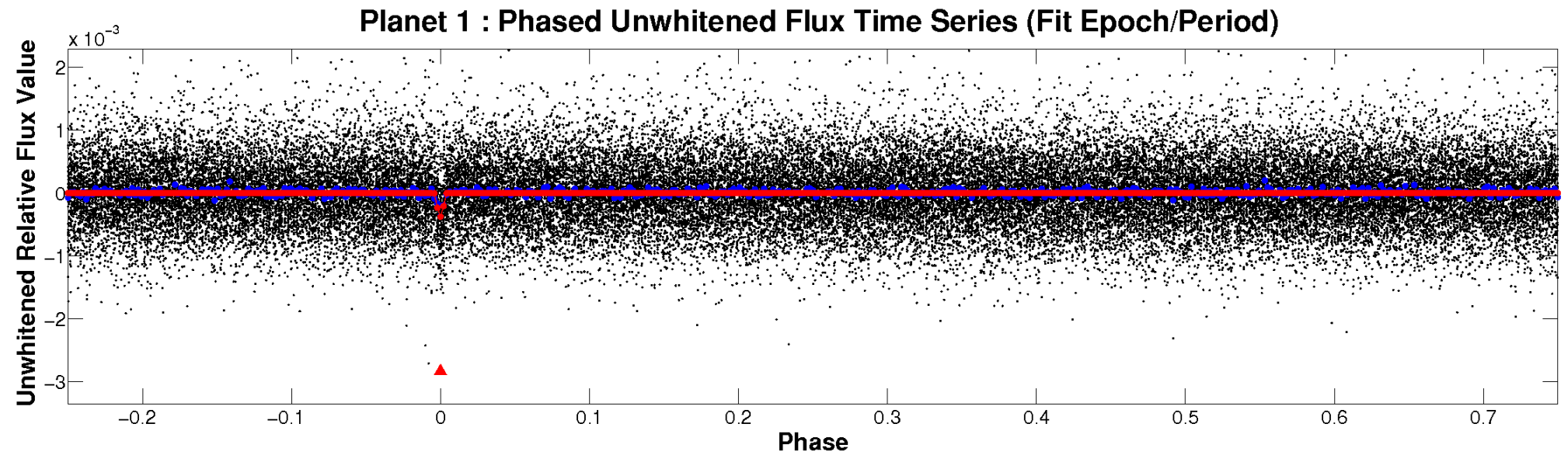


ALT Odd/Even

TCE 007771181-01

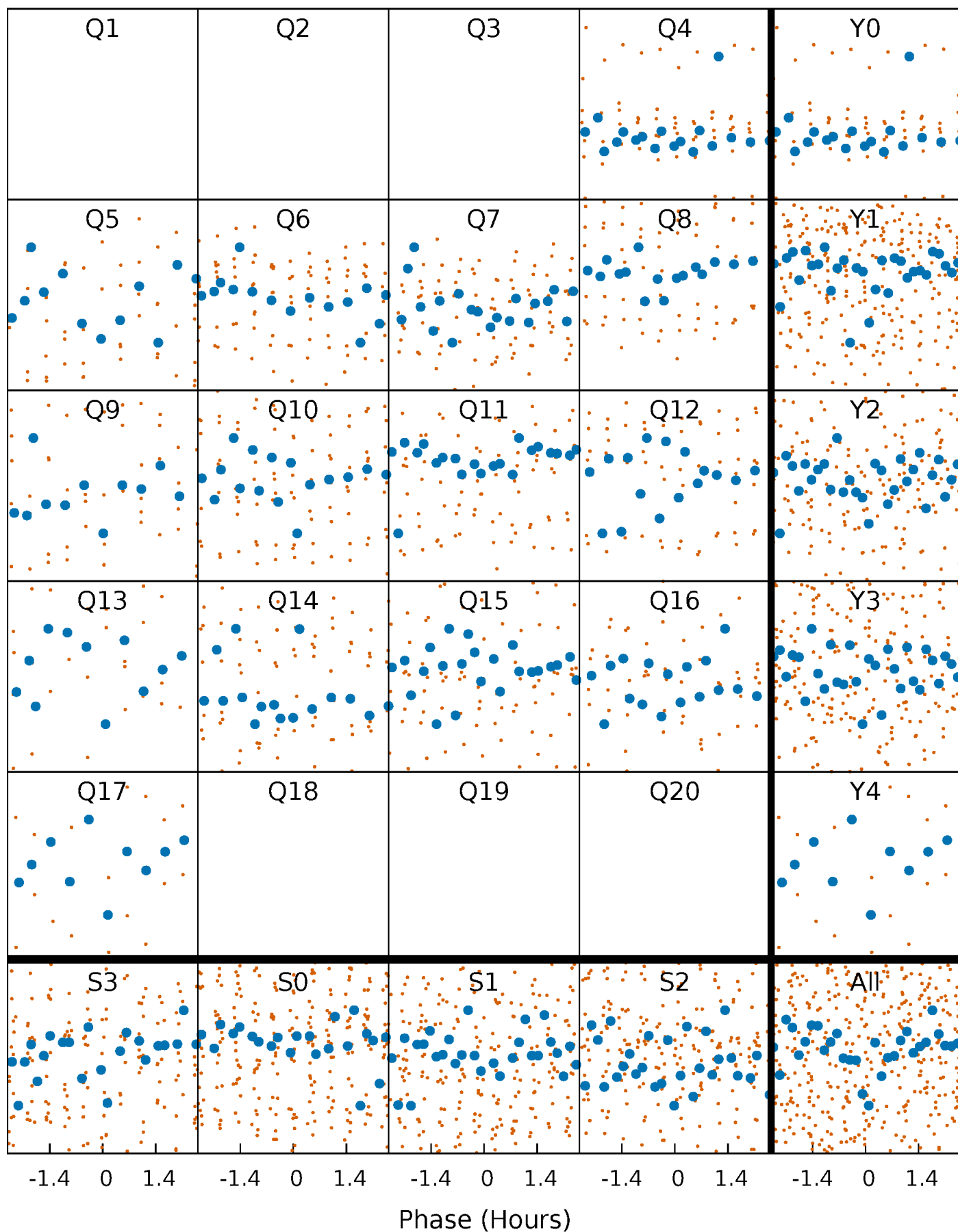


Non-Whitened Vs. Whitened Light Curve



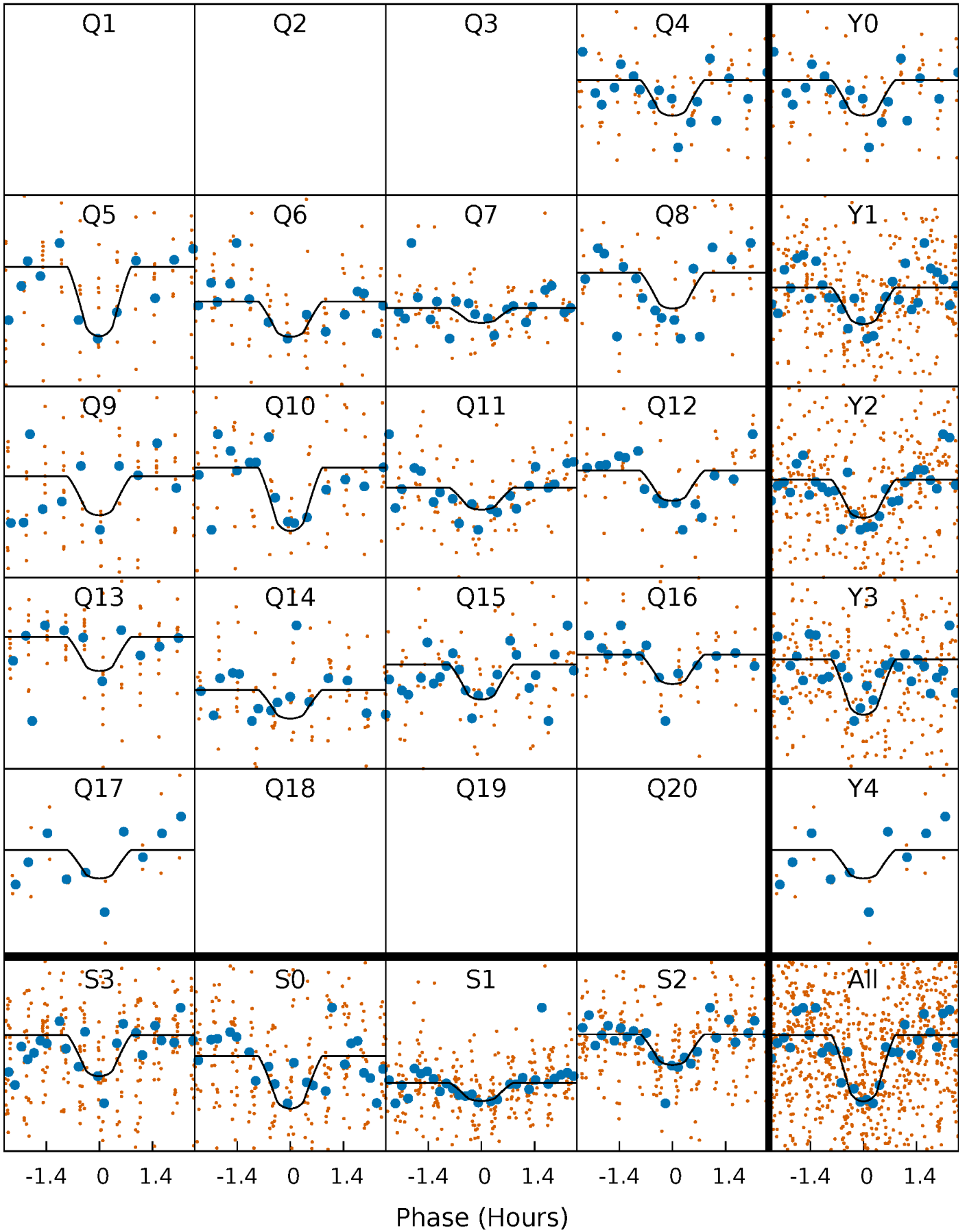
PDC Quarter-Phased Transit Curves

TCE 007771181-01 P= 9.972080 Days $T_0=137.706828$ (BKJD)



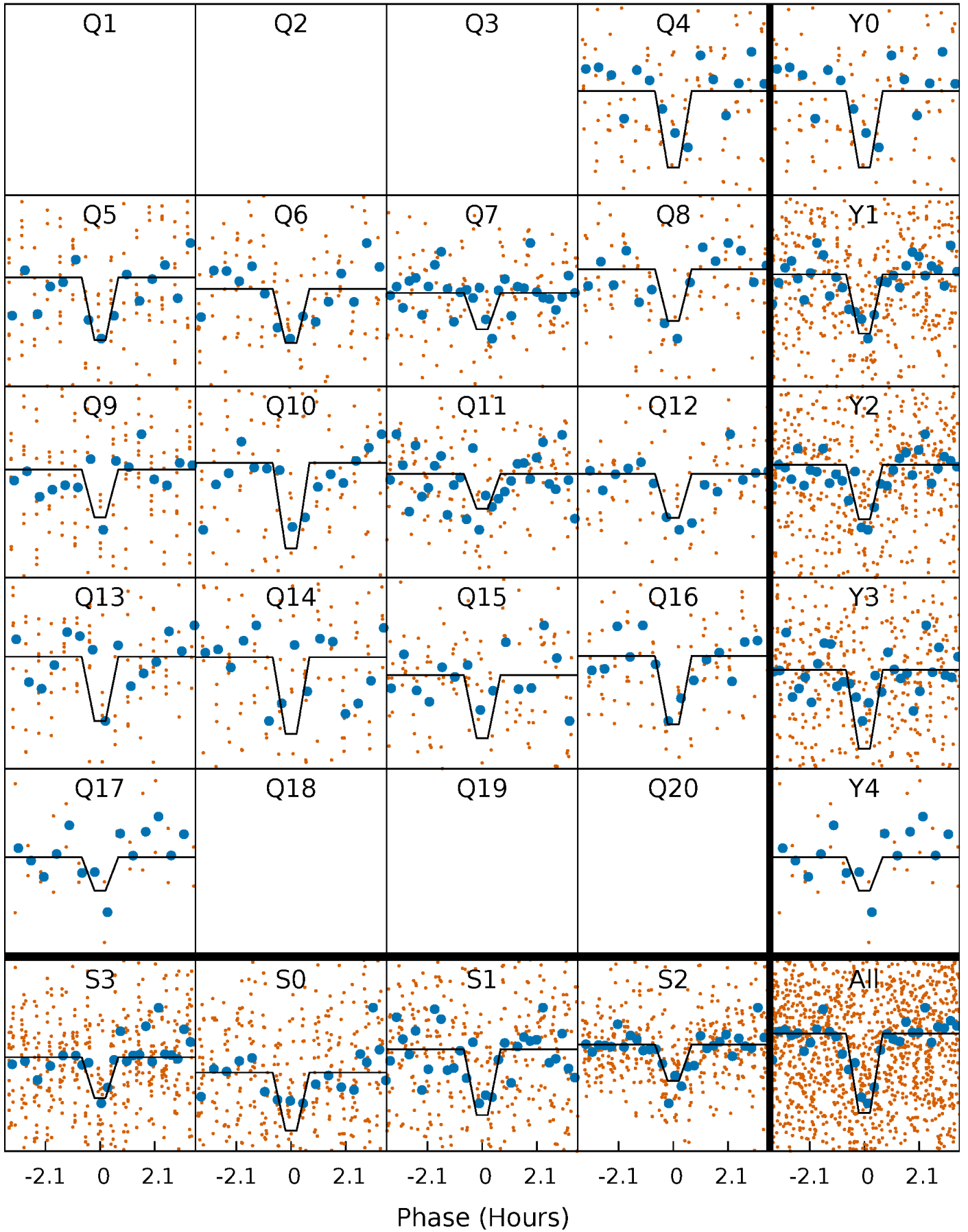
DV Quarter-Phased Transit Curves

TCE 007771181-01 P= 9.972080 Days $T_0=137.706828$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

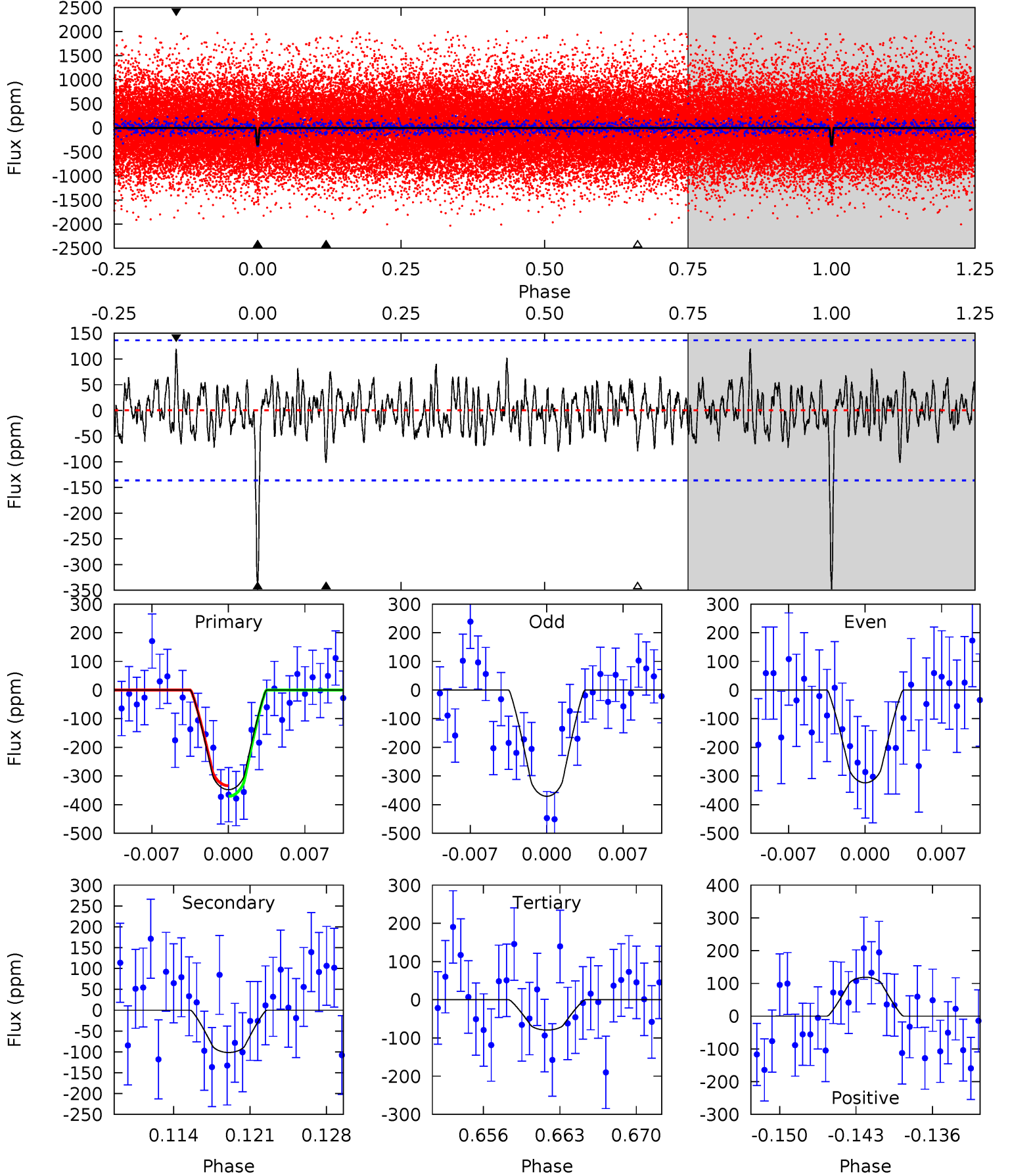
TCE 007771181-01 P= 9.972058 Days $T_0=137.709574$ (BKJD)



DV Model-Shift Uniqueness Test

007771181-01, P = 9.972080 Days, E = 137.706828 Days

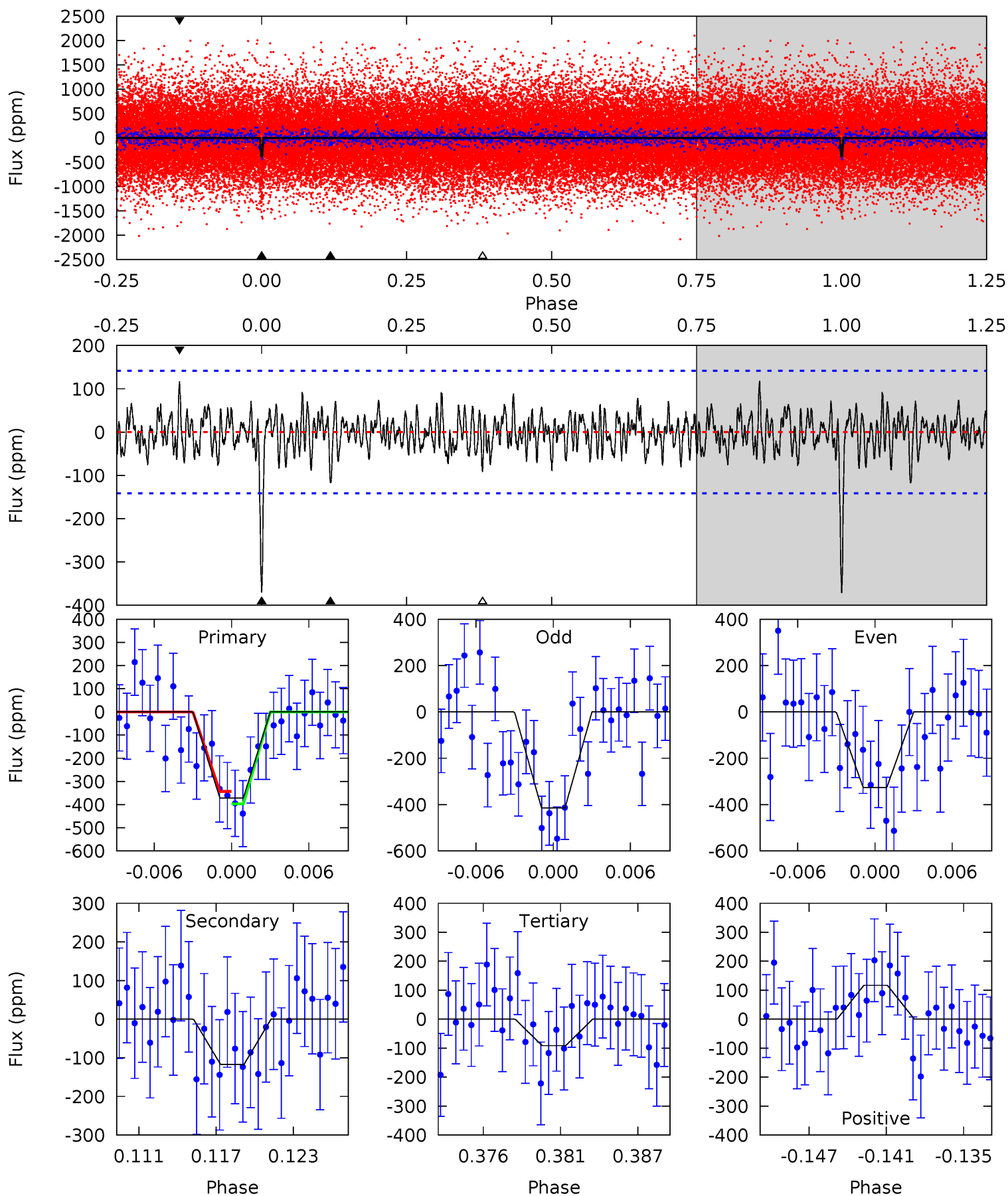
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	3.80	2.97	4.43	5.09	2.69	1.21	10.0	8.57	0.83	-0.64	0.88	0.99	0.25	0.69



Alt Model-Shift Uniqueness Test

007771181-01, P = 9.972058 Days, E = 137.709574 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	4.24	3.31	4.24	5.13	2.76	1.23	10.1	9.22	0.93	0.00	1.59	1.05	0.24	0.98



Stellar Parameters For KIC 007771181

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4810^{+173}_{-173}	$4.584^{+0.060}_{-0.035}$	$-0.260^{+0.300}_{-0.300}$	$0.696^{+0.060}_{-0.066}$	$0.677^{+0.086}_{-0.053}$	$2.834^{+0.806}_{-0.385}$
	+4%/-4%	+1%/-1%	+115%/-115%	+9%/-9%	+13%/-8%	+28%/-14%
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 007771181-01 / KOI 4797.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-102±27	$2.48^{+2.01}_{-1.58}$	872^{+35}_{-36}	3215^{+1315}_{-531}	60^{+386}_{-43}
Alt.	-117±28	$2.60^{+2.12}_{-1.83}$	872^{+35}_{-35}	3235^{+1672}_{-538}	63^{+589}_{-46}

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

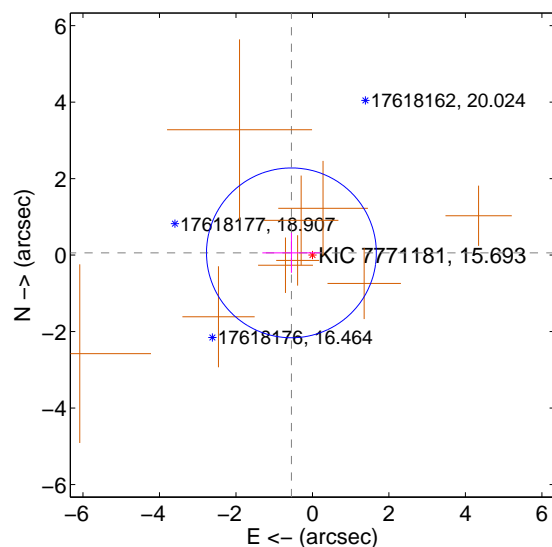
Supplemental centroid analysis for 007771181-01. Kepler magnitude: 15.69. Transit SNR 9.51

There are 0 quarters with good PRF difference image offsets

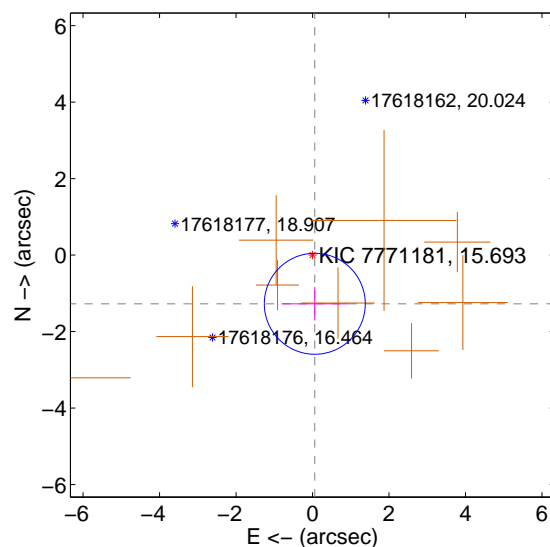
The OOT PRF centroid is offset from the target star catalog position by about 3.98 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.553 ± 0.740	0.75	0.550 ± 0.759	0.059 ± 0.522
PRF-fit source offset from KIC position	1.275 ± 0.440	2.90	-0.059 ± 0.870	-1.273 ± 0.439
photometric centroid source offset	2.55 ± 0.91	2.81	-1.60 ± 0.90	-1.99 ± 0.91

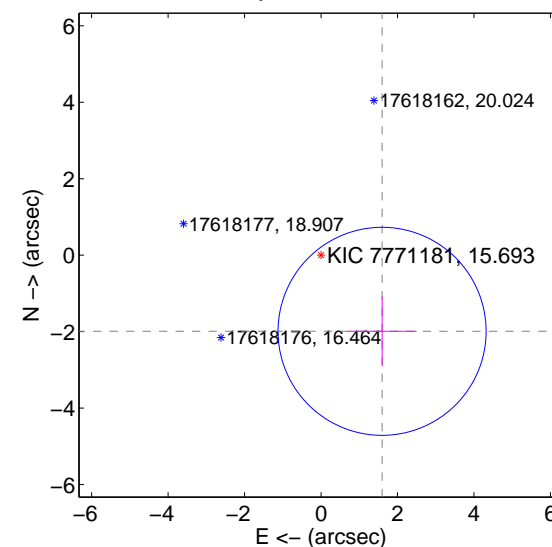
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

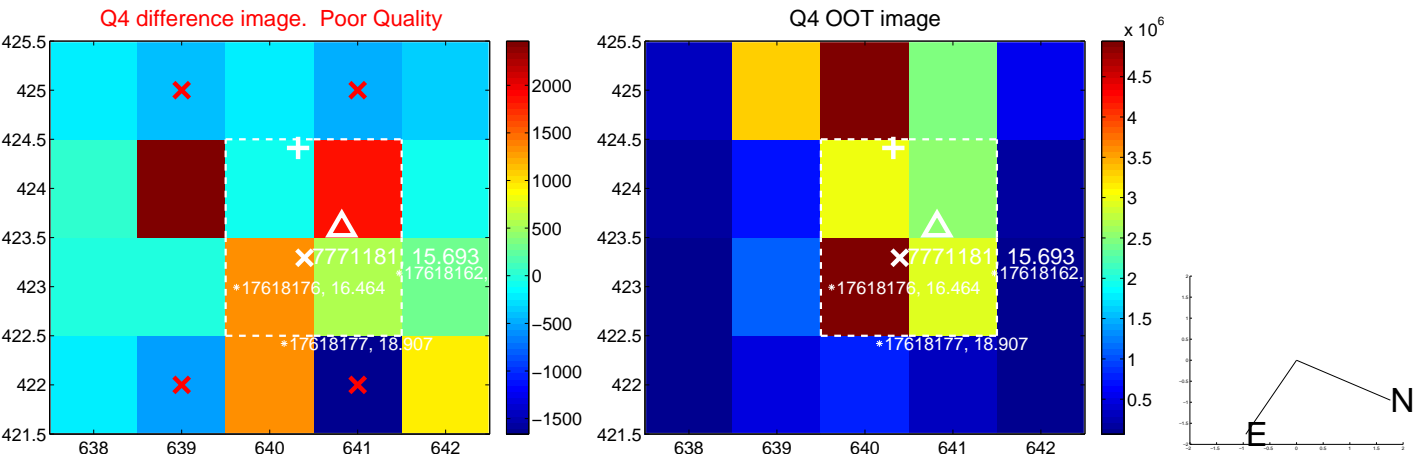


offset from photometric centroids

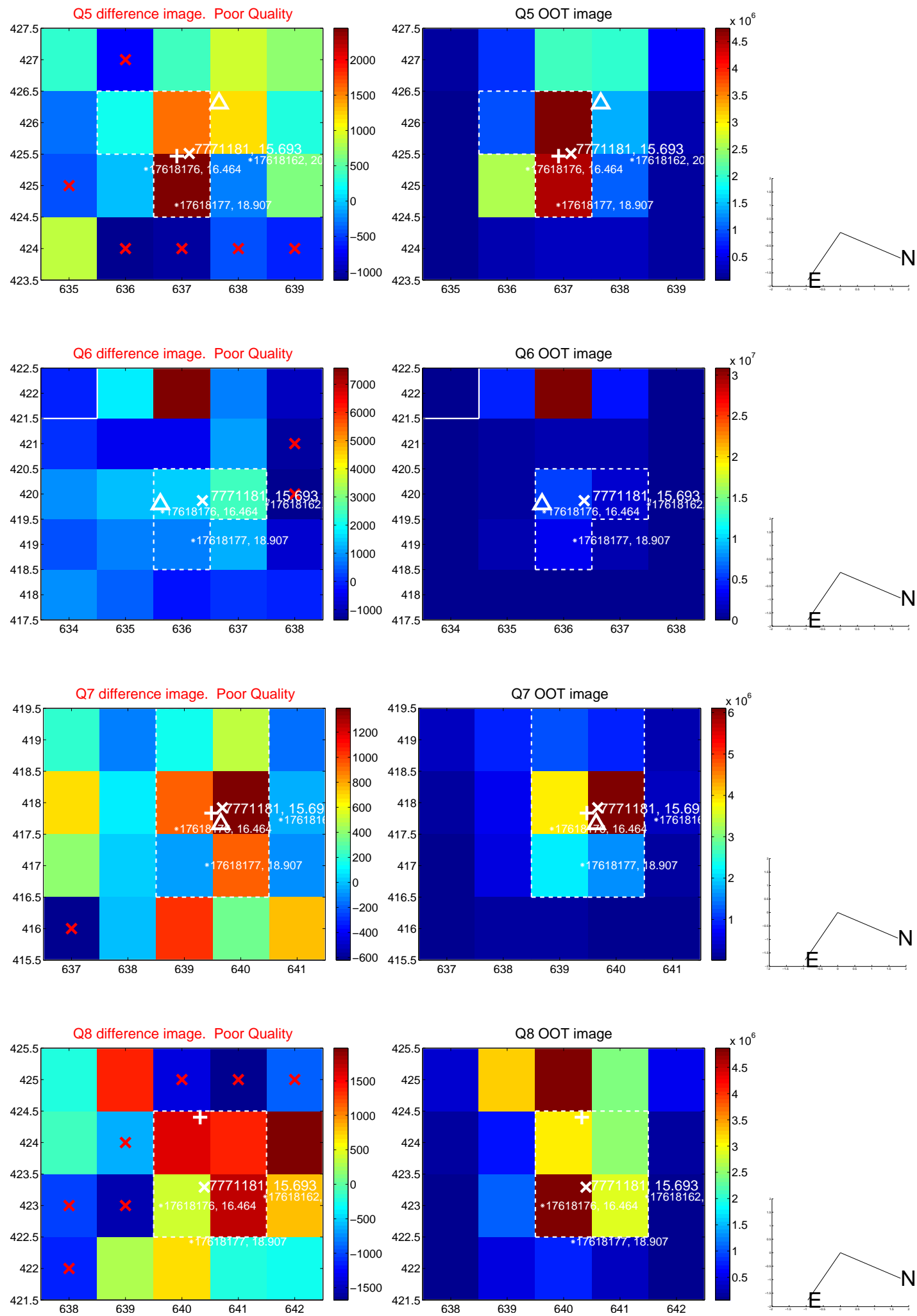


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

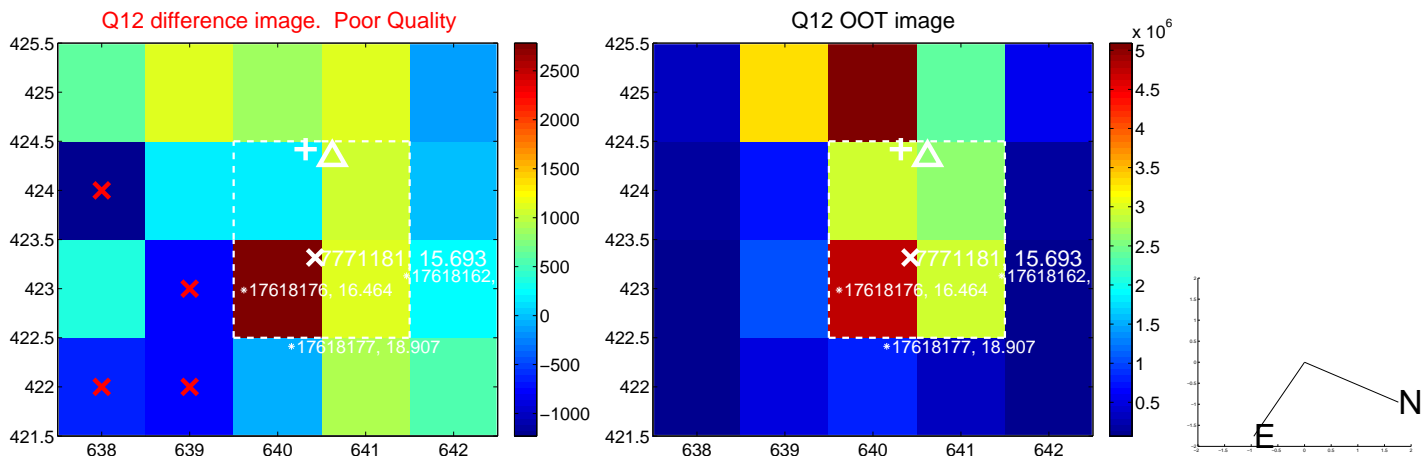
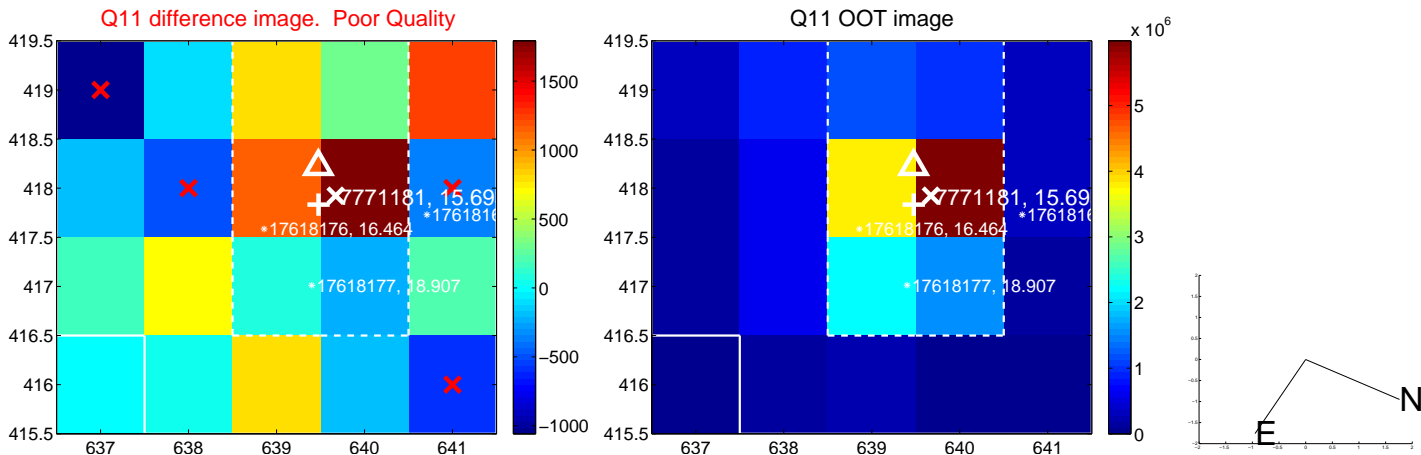
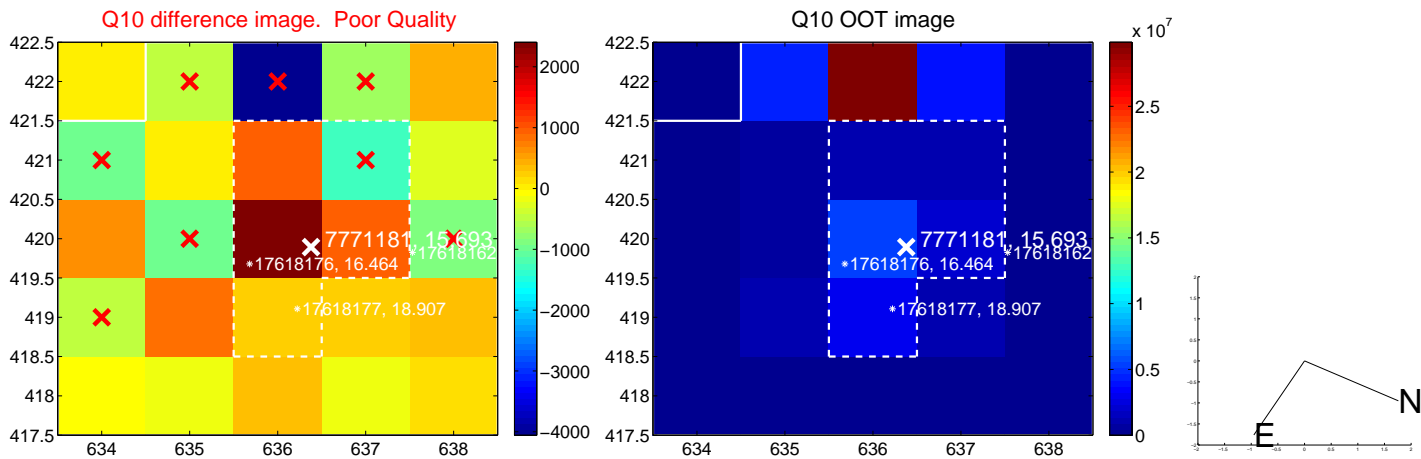
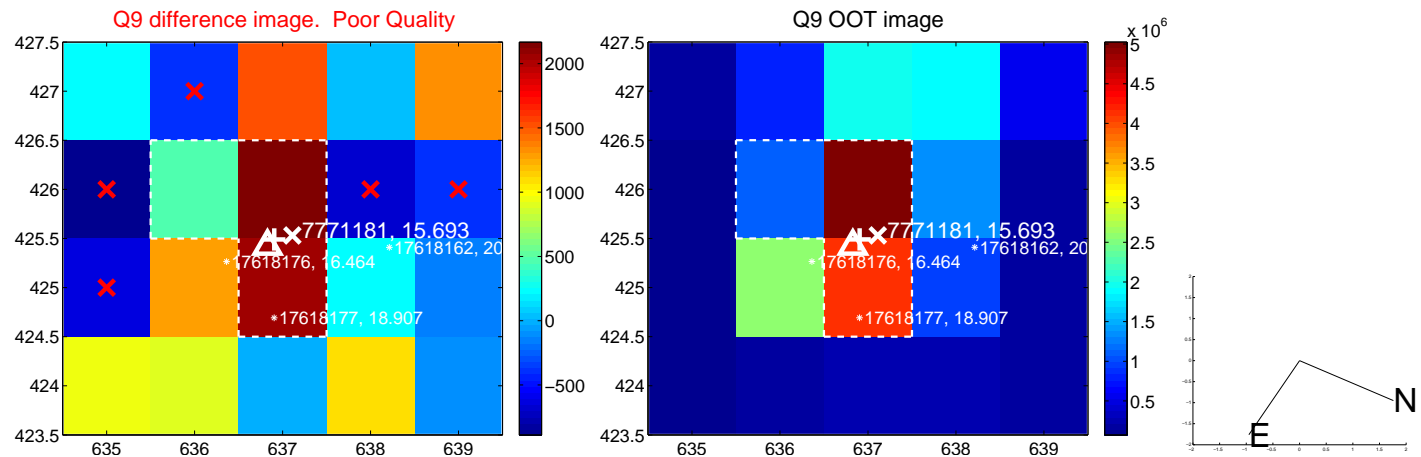
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



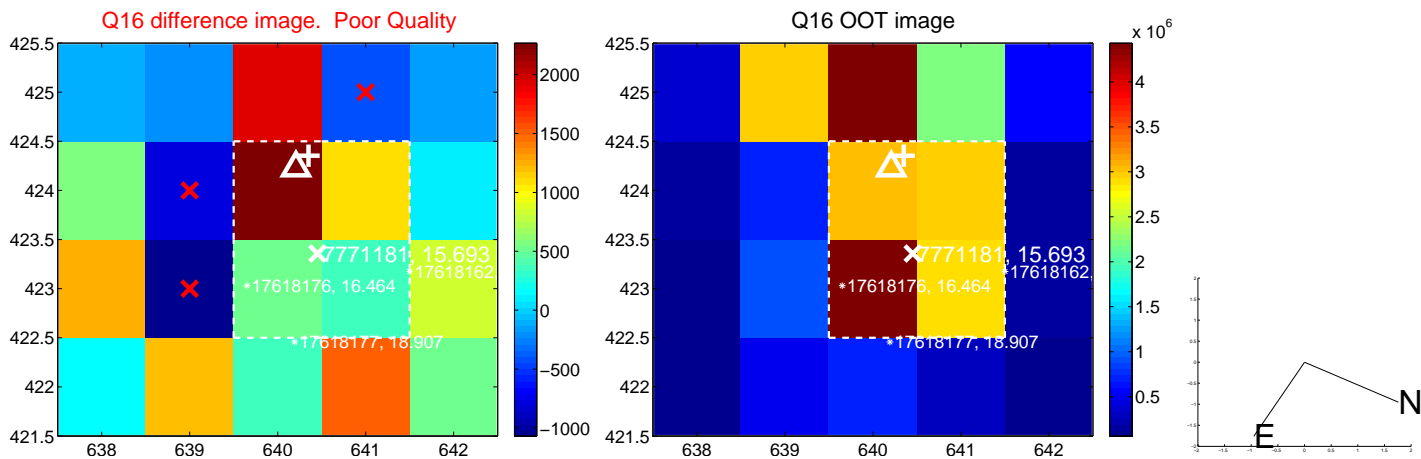
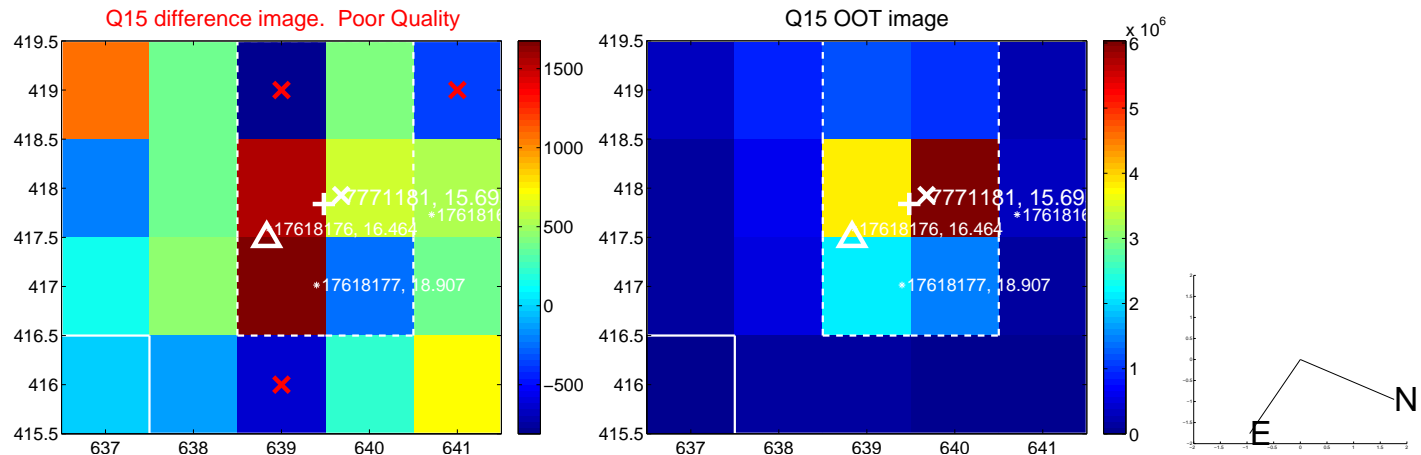
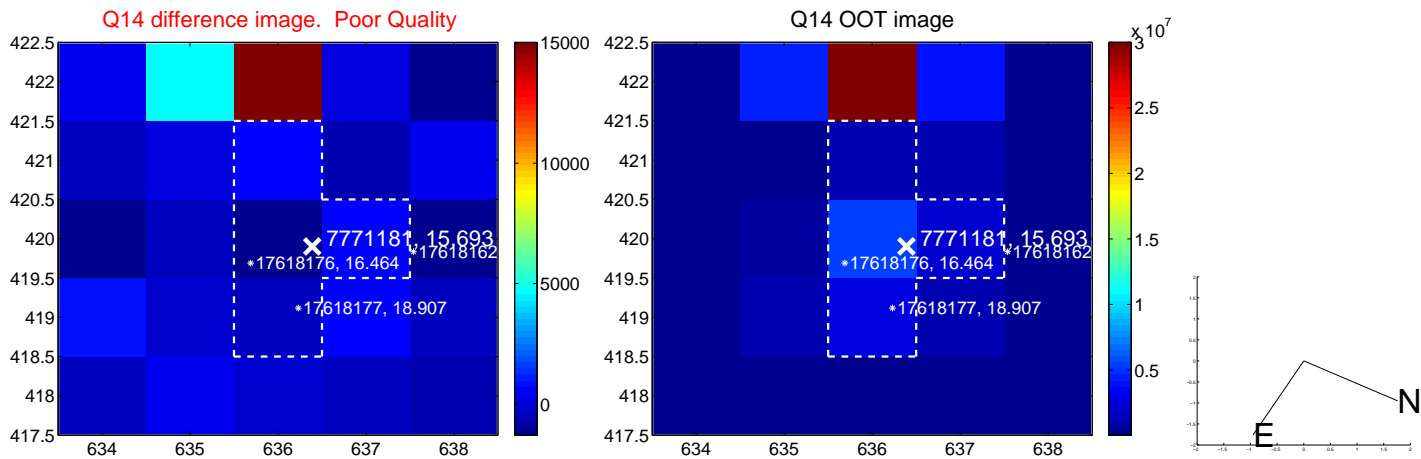
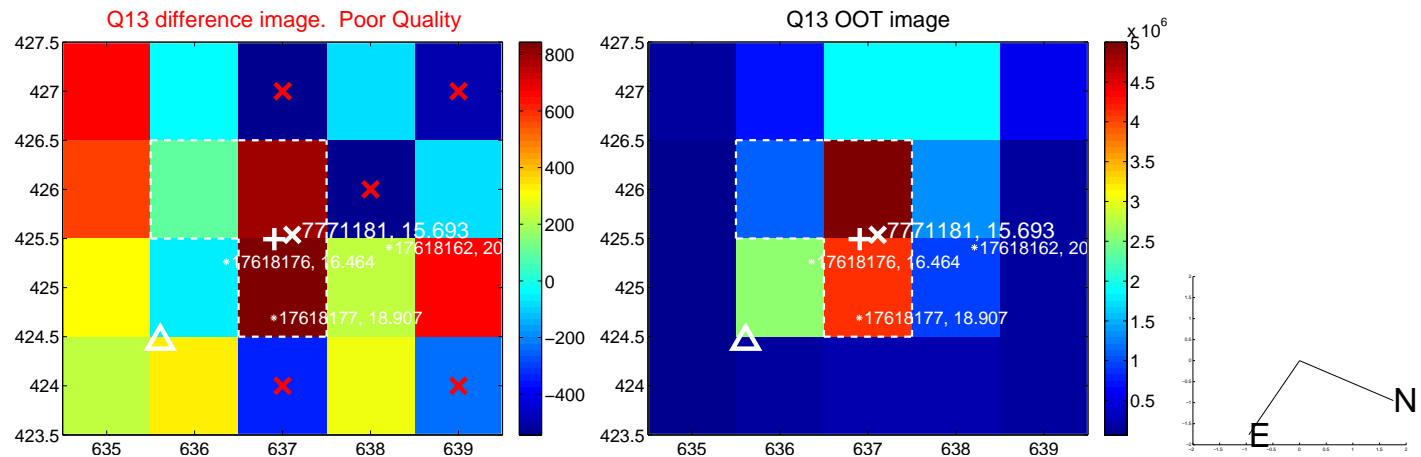
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



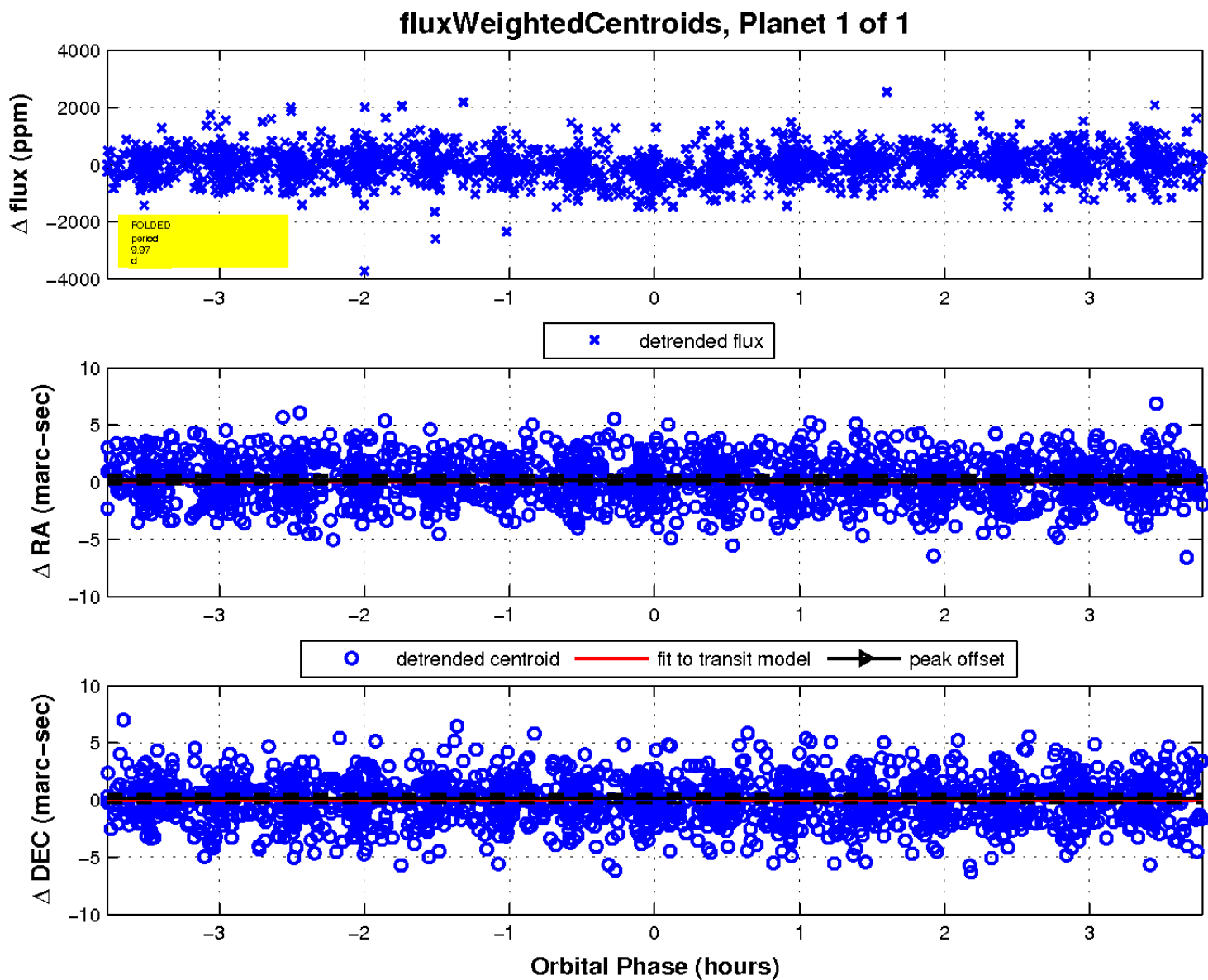
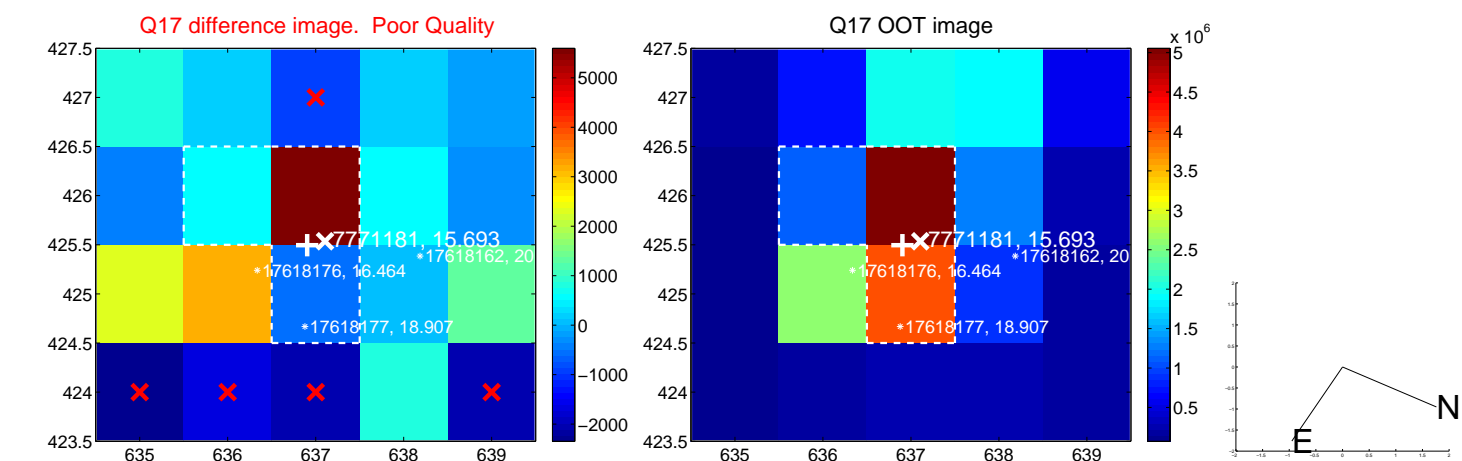
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

