

KIC 007287677

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})
007287677-01	OBS	4815.01	18.372237	149.462000	150.4	3.769	8.6	8.9	0.83	5937	1.20	44.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007287677-01	OBS	PC	0.85	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.

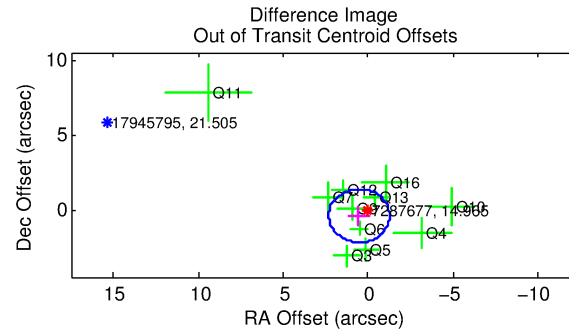
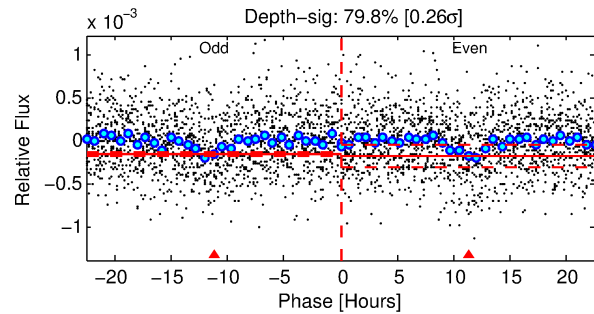
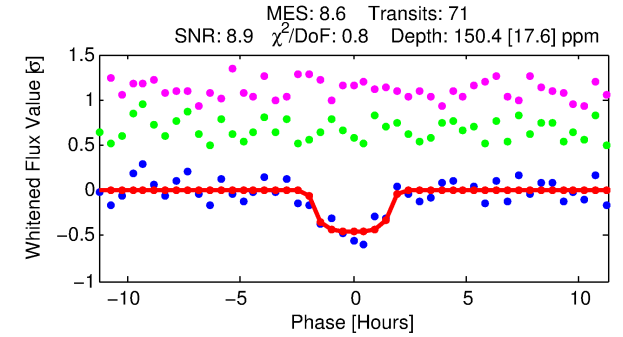
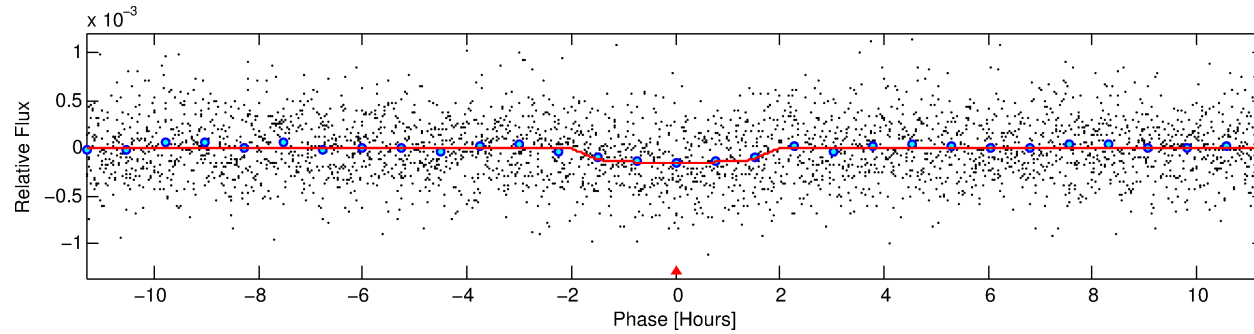
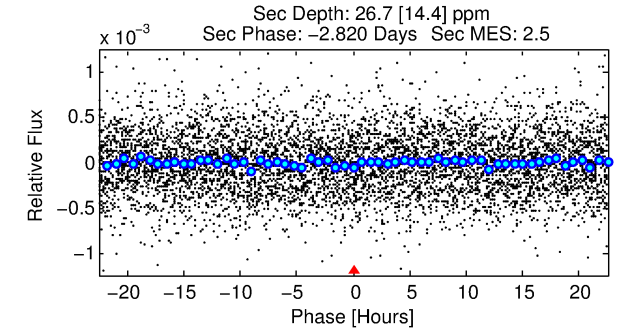
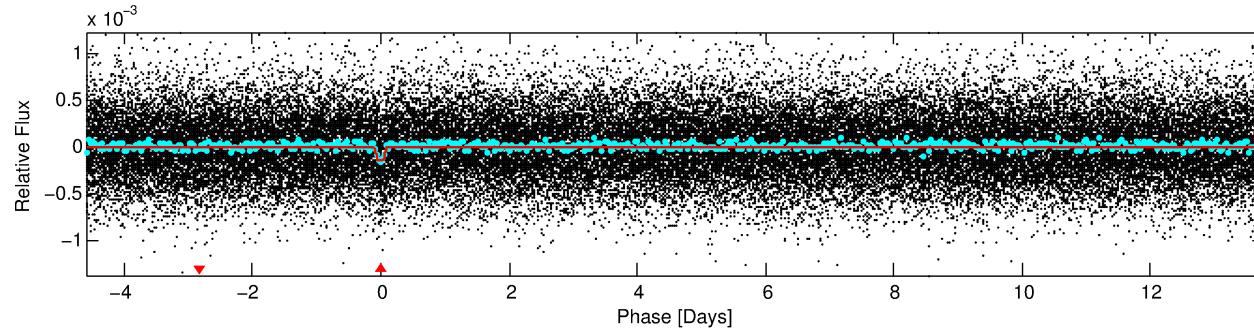
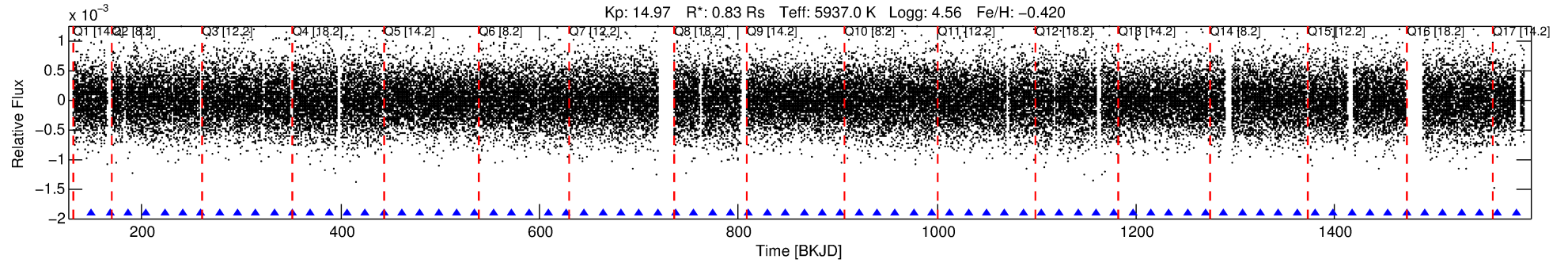
Ephemeris Match Information For 007287677-01

No Significant Match Found

DV One-Page Summary

KIC: 7287677 Candidate: 1 of 1 Period: 18.372 d

KOI: K04815.01 Corr: 0.944



DV Fit Results:

Period = 18.37224 [0.00022] d
Epoch = 149.4620 [0.0099] BKJD
Rp/R* = 0.0133 [0.0070]
a/R* = 17.07 [46.91]
b = 0.90 [0.57]
Seff = 44.02 [16.35]
Teq = 657 [61] K
Rp = 1.20 [0.71] Re
a = 0.1320 [0.0314] AU
Ag = 176.65 [217.32] [0.81σ]
Teffp = 3702 [1097] K [2.77σ]

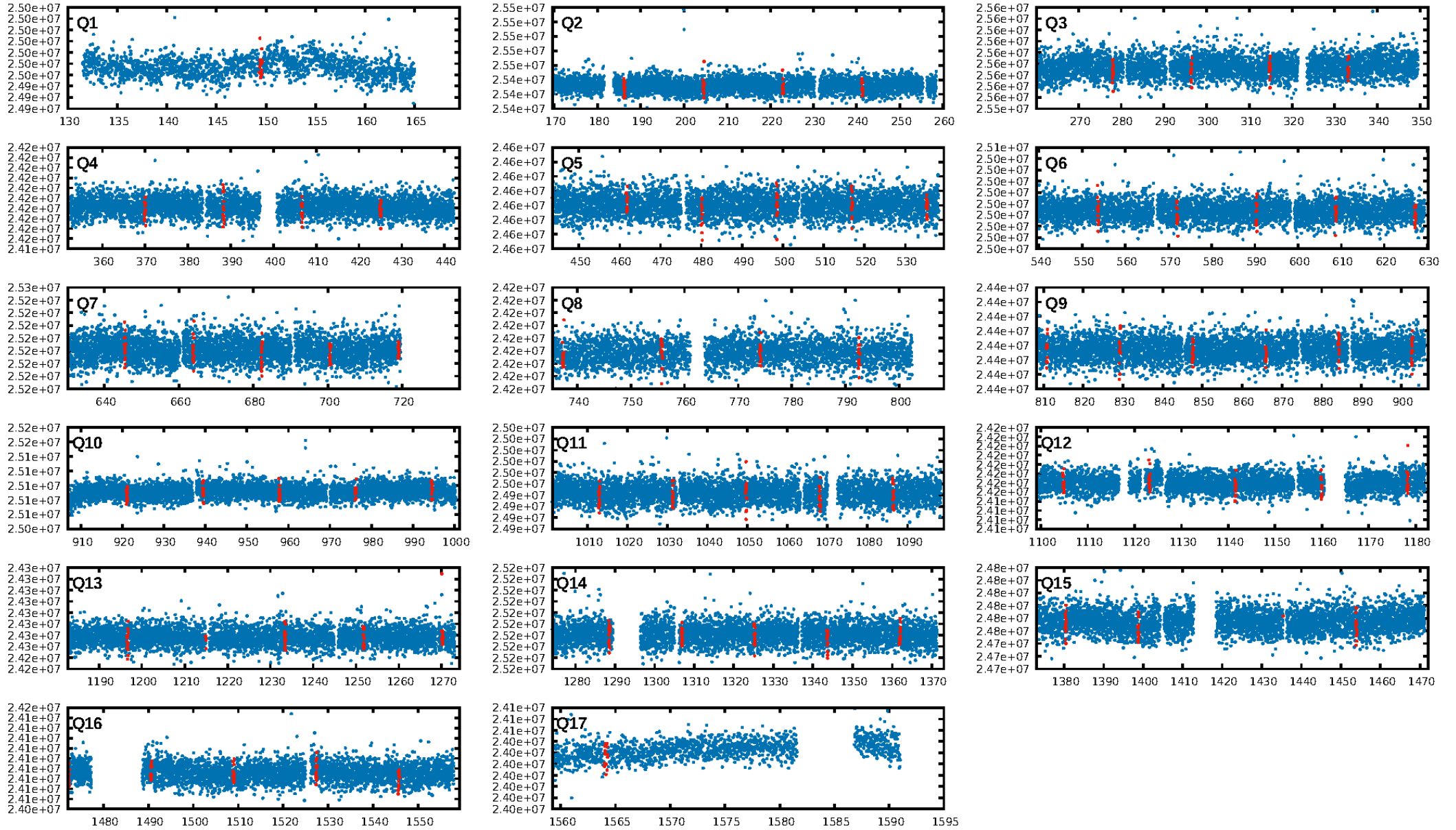
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.62e-18
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: 10.43
Centroid-sig: 76.6%
Centroid-so: 1.058 arcsec [0.60σ]
OotOffset-rm: 0.665 arcsec [1.11σ]
KicOffset-rm: 0.738 arcsec [1.17σ]
OotOffset-st: 2/3/3/3 [11]
KicOffset-st: 2/3/3/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

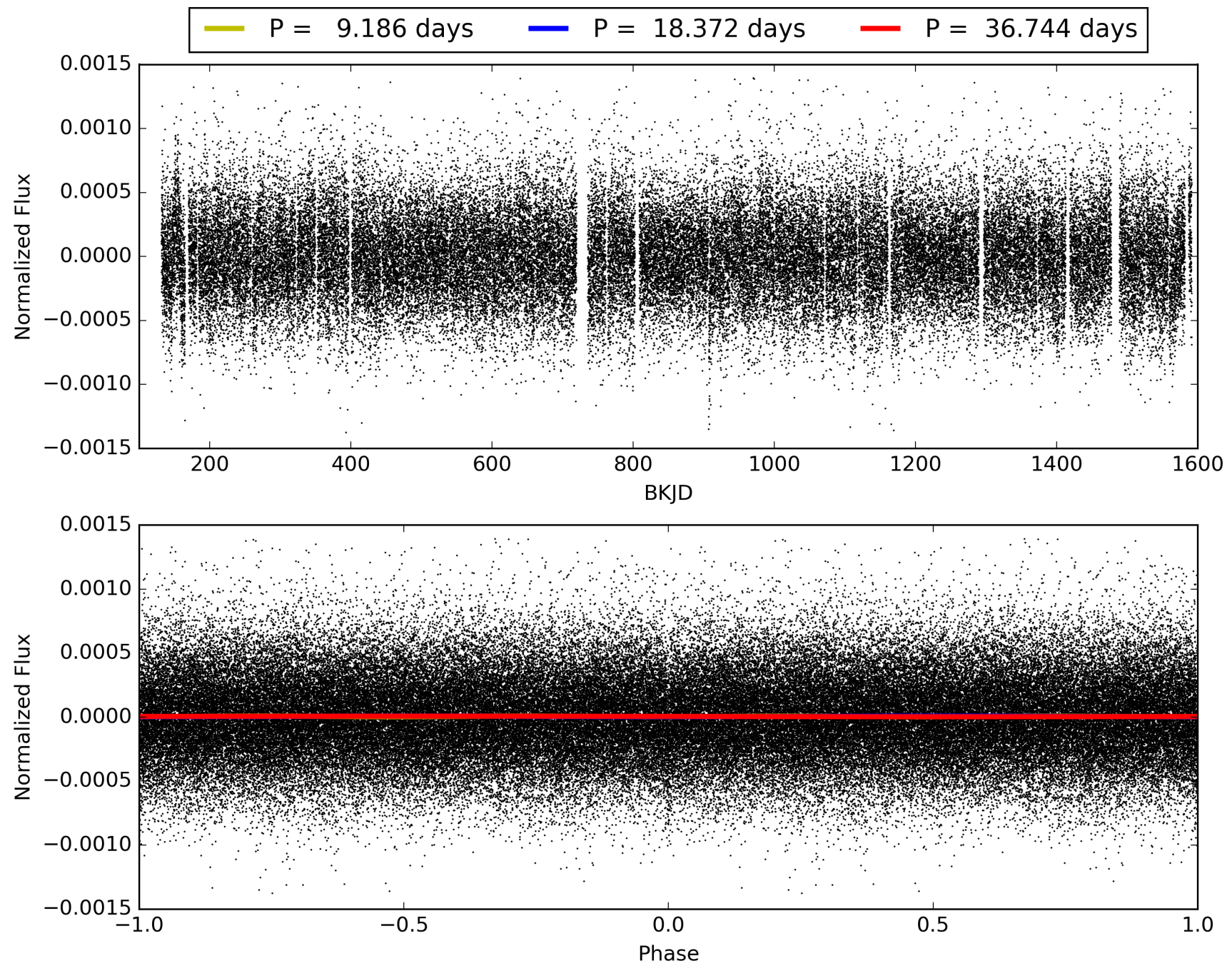
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:41:17 Z

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

TCE 007287677-01, PDC Light Curves

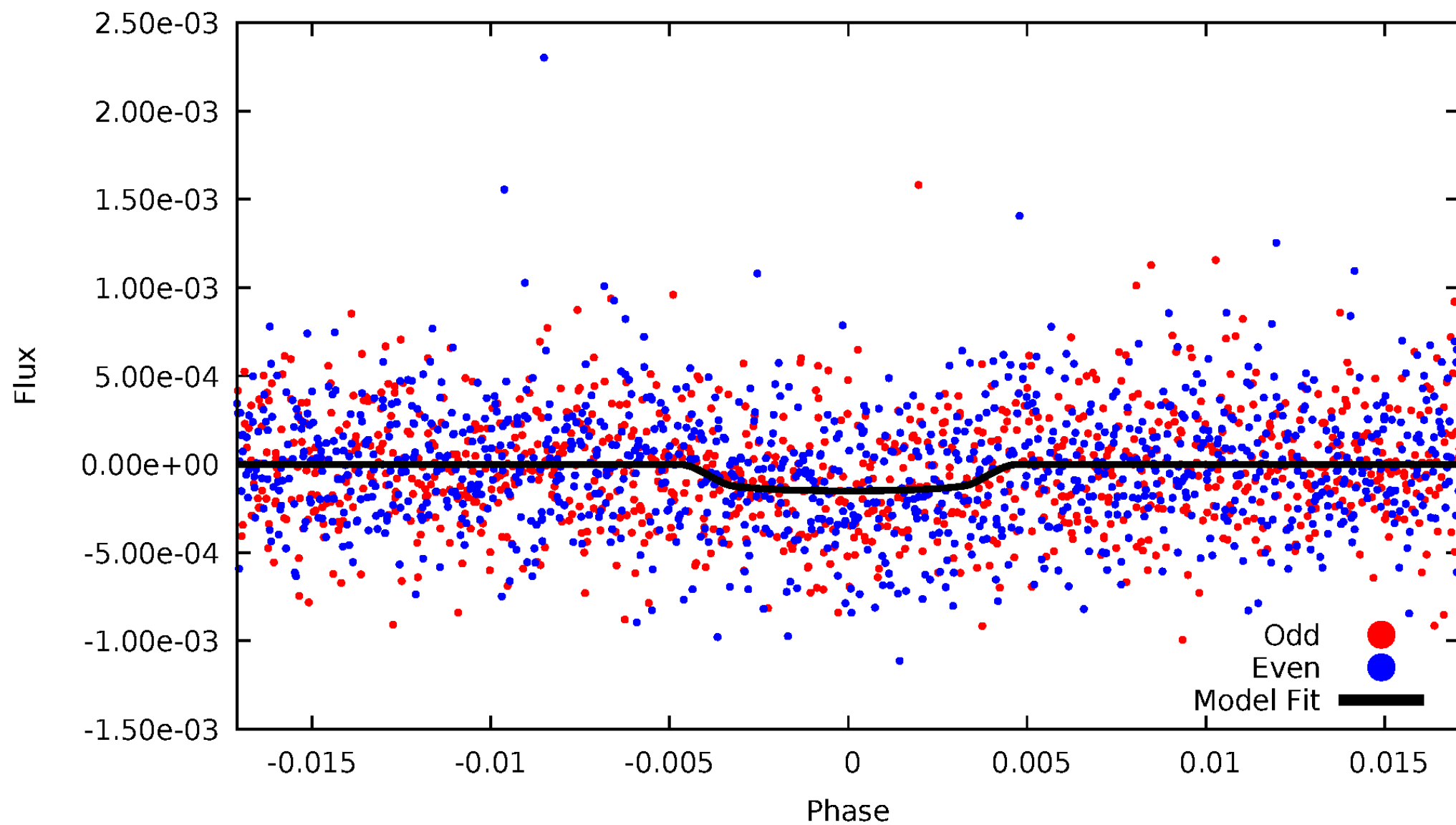


TCE 007287677-01



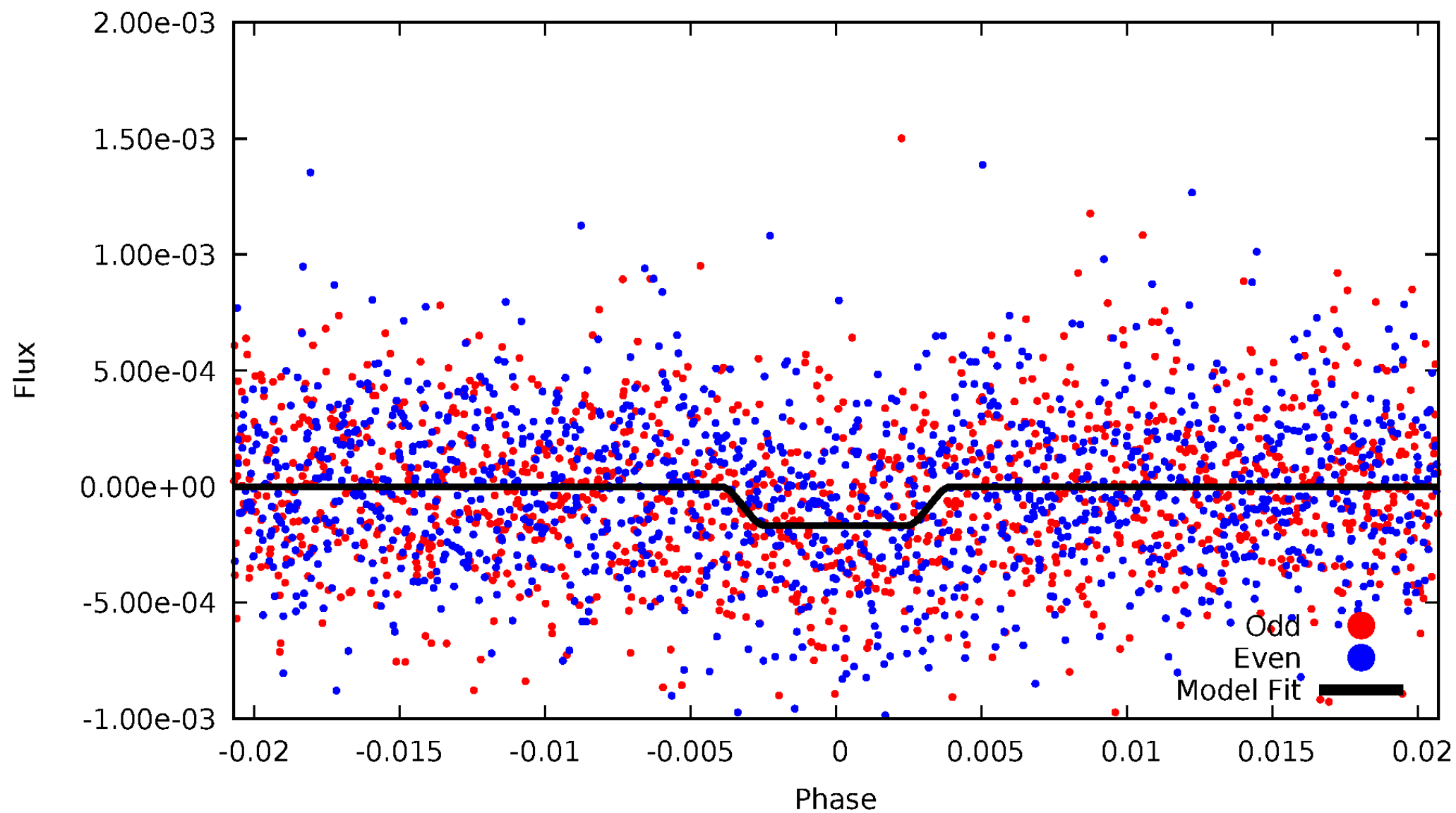
DV Odd/Even

TCE 007287677-01

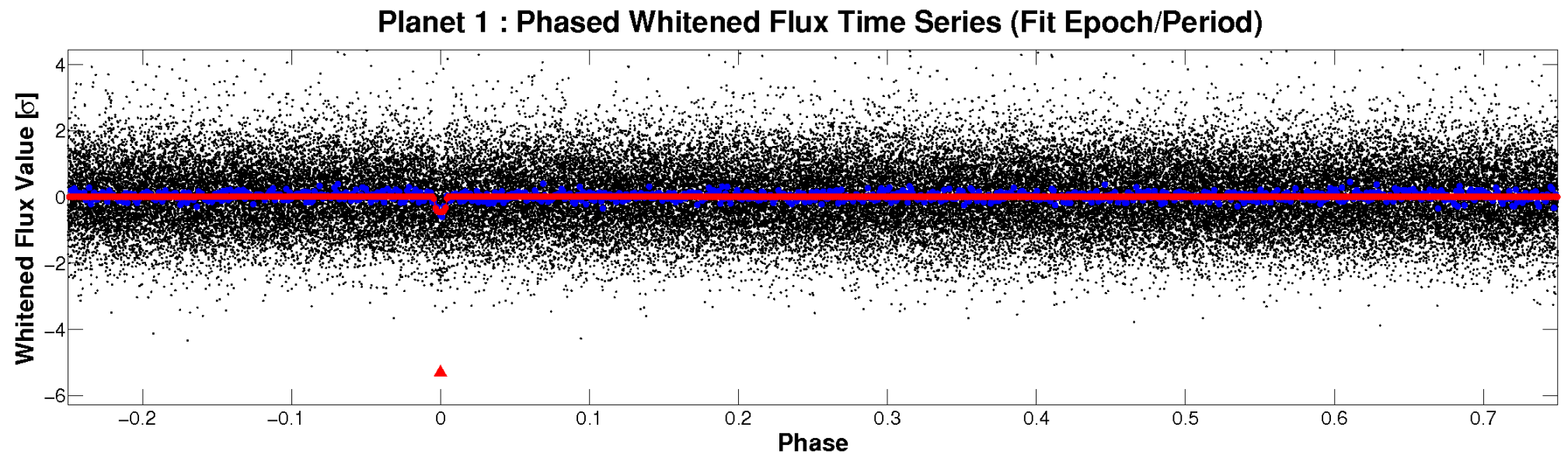
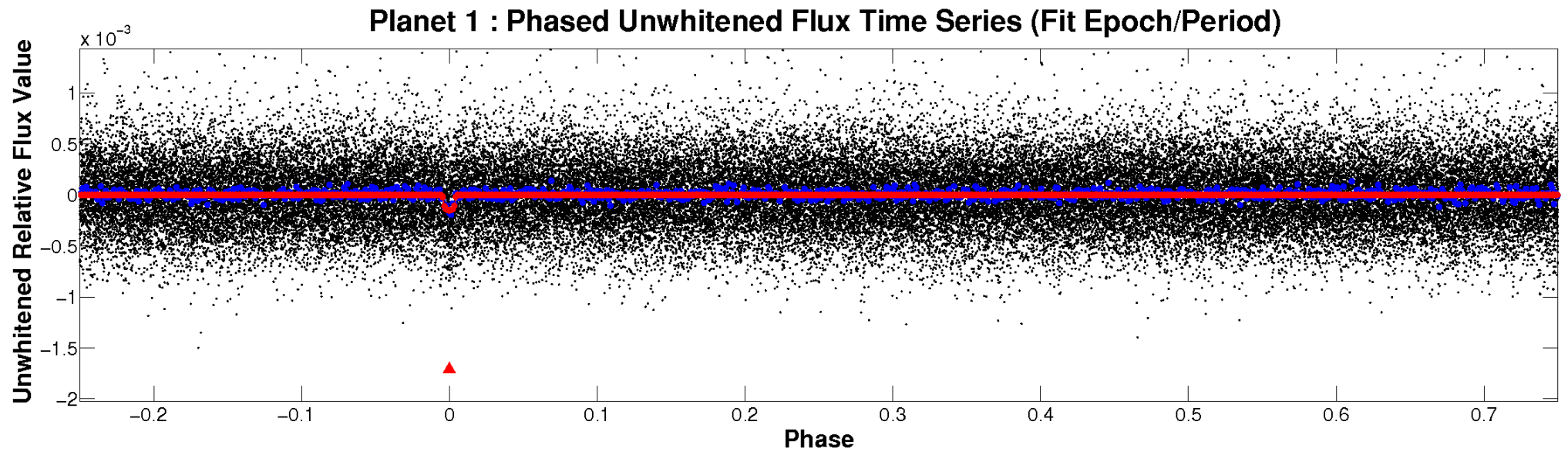


ALT Odd/Even

TCE 007287677-01

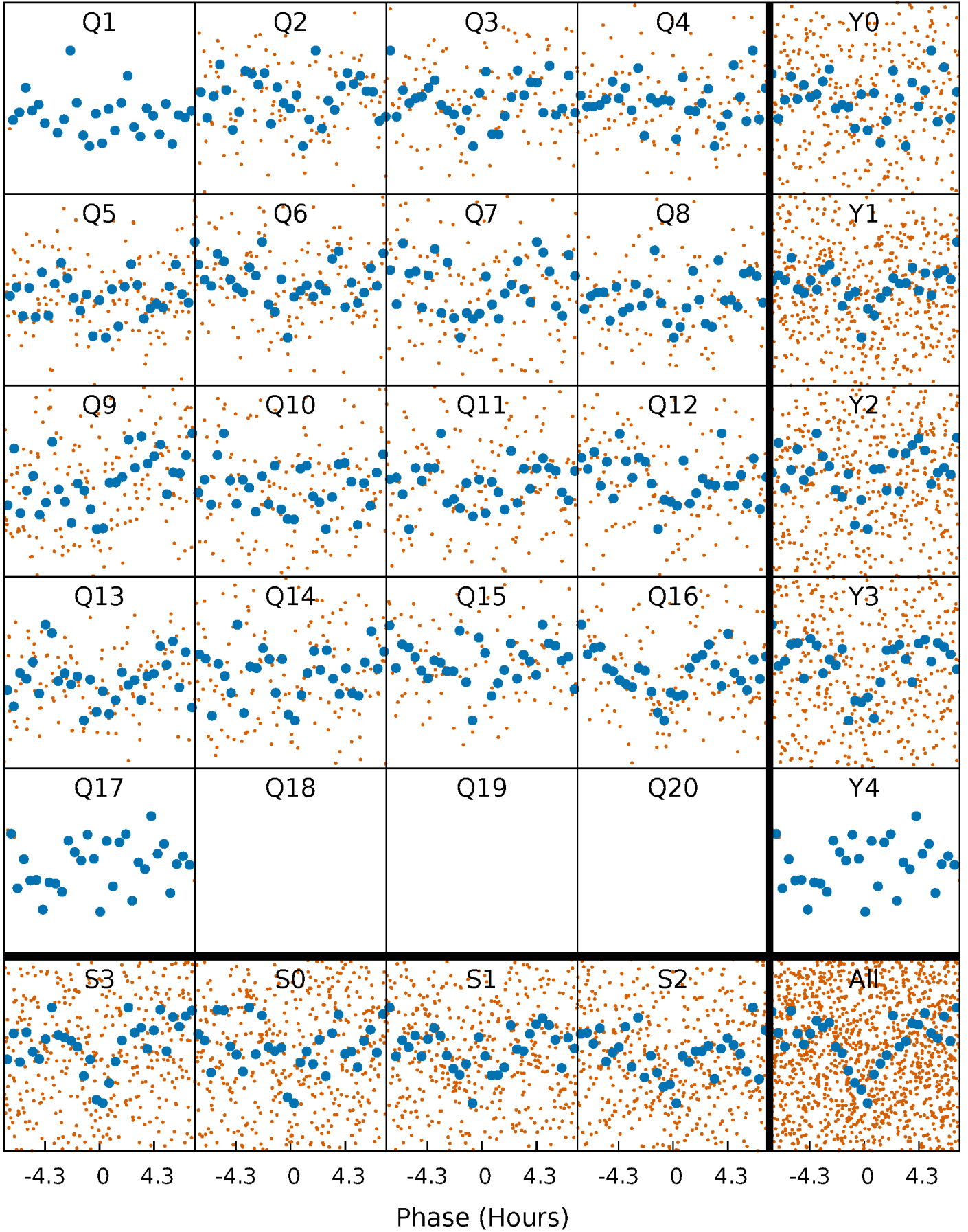


Non-Whitened Vs. Whitened Light Curve



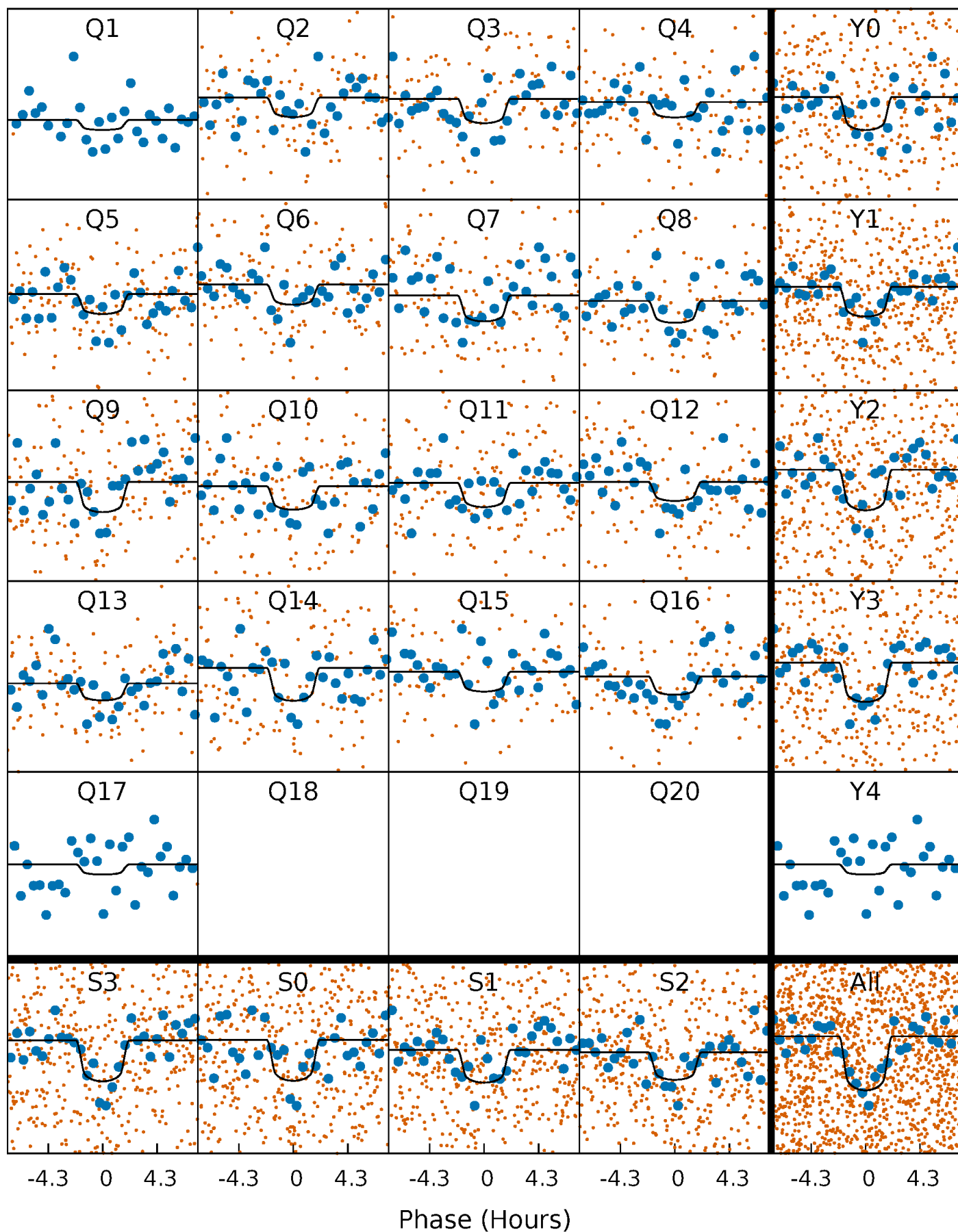
PDC Quarter-Phased Transit Curves

TCE 007287677-01 P= 18.372237 Days $T_0=149.462000$ (BKJD)



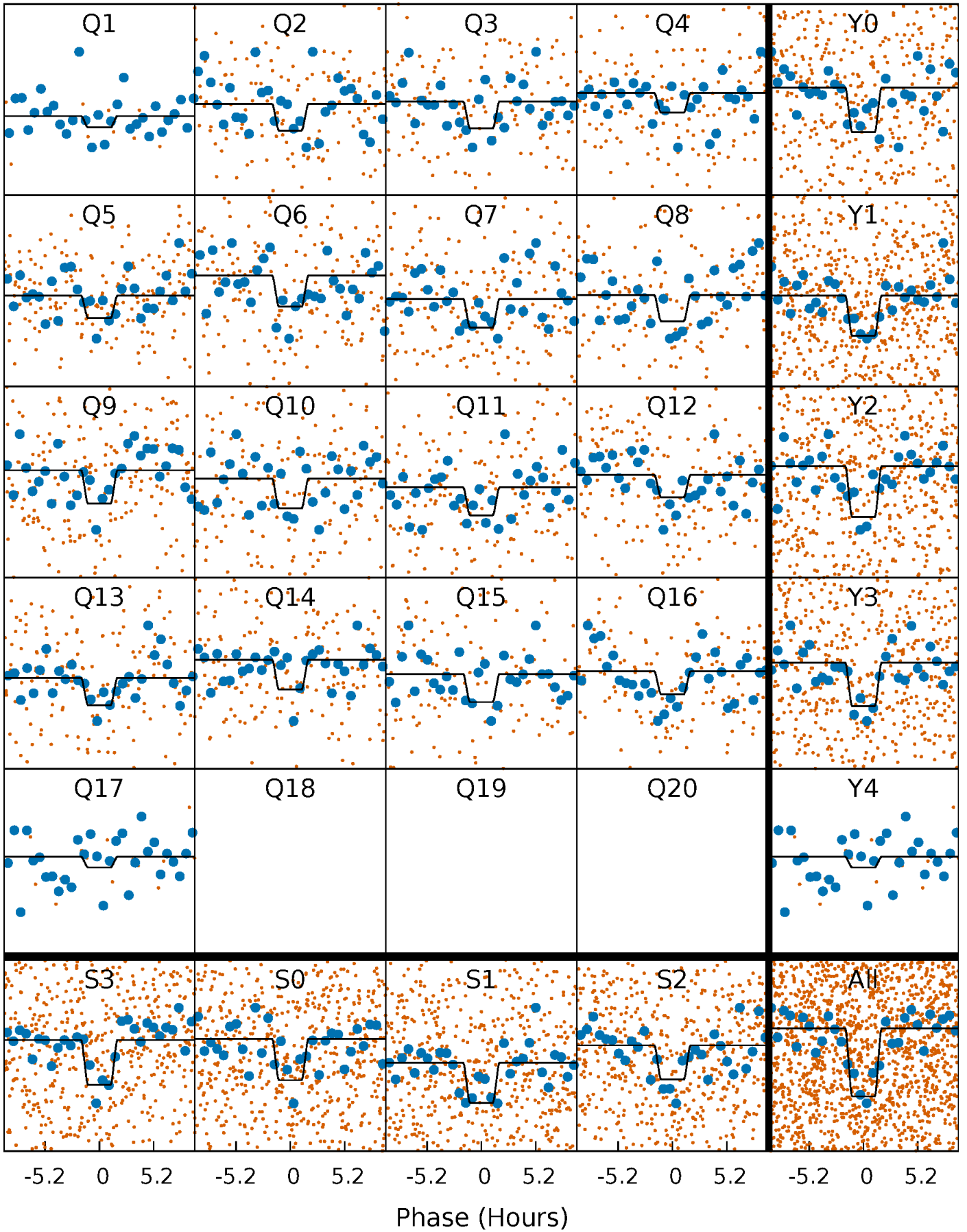
DV Quarter-Phased Transit Curves

TCE 007287677-01 P= 18.372237 Days $T_0=149.462000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

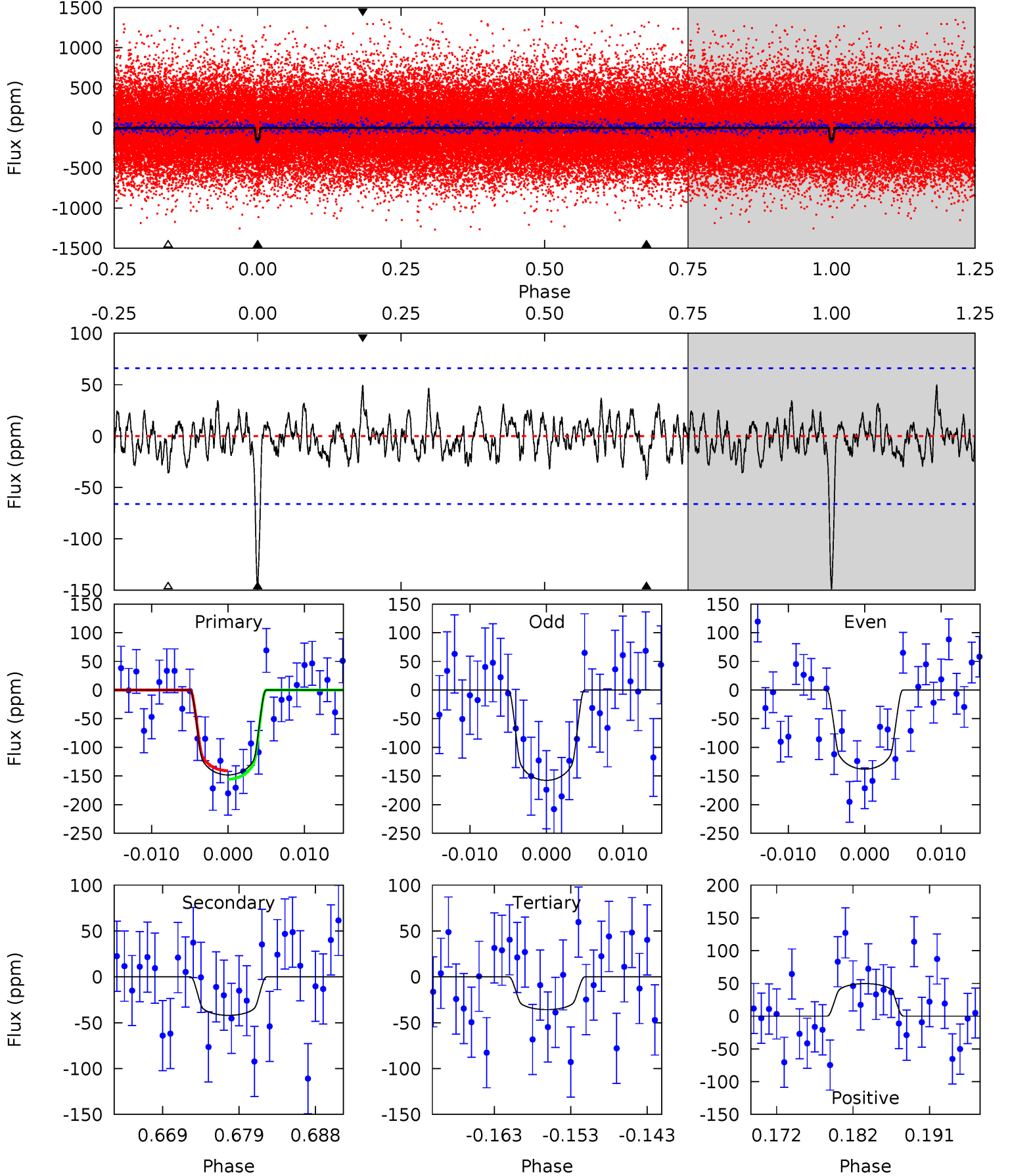
TCE 007287677-01 P= 18.372222 Days $T_0=149.457528$ (BKJD)



DV Model-Shift Uniqueness Test

007287677-01, $P = 18.372237$ Days, $E = 131.089763$ Days

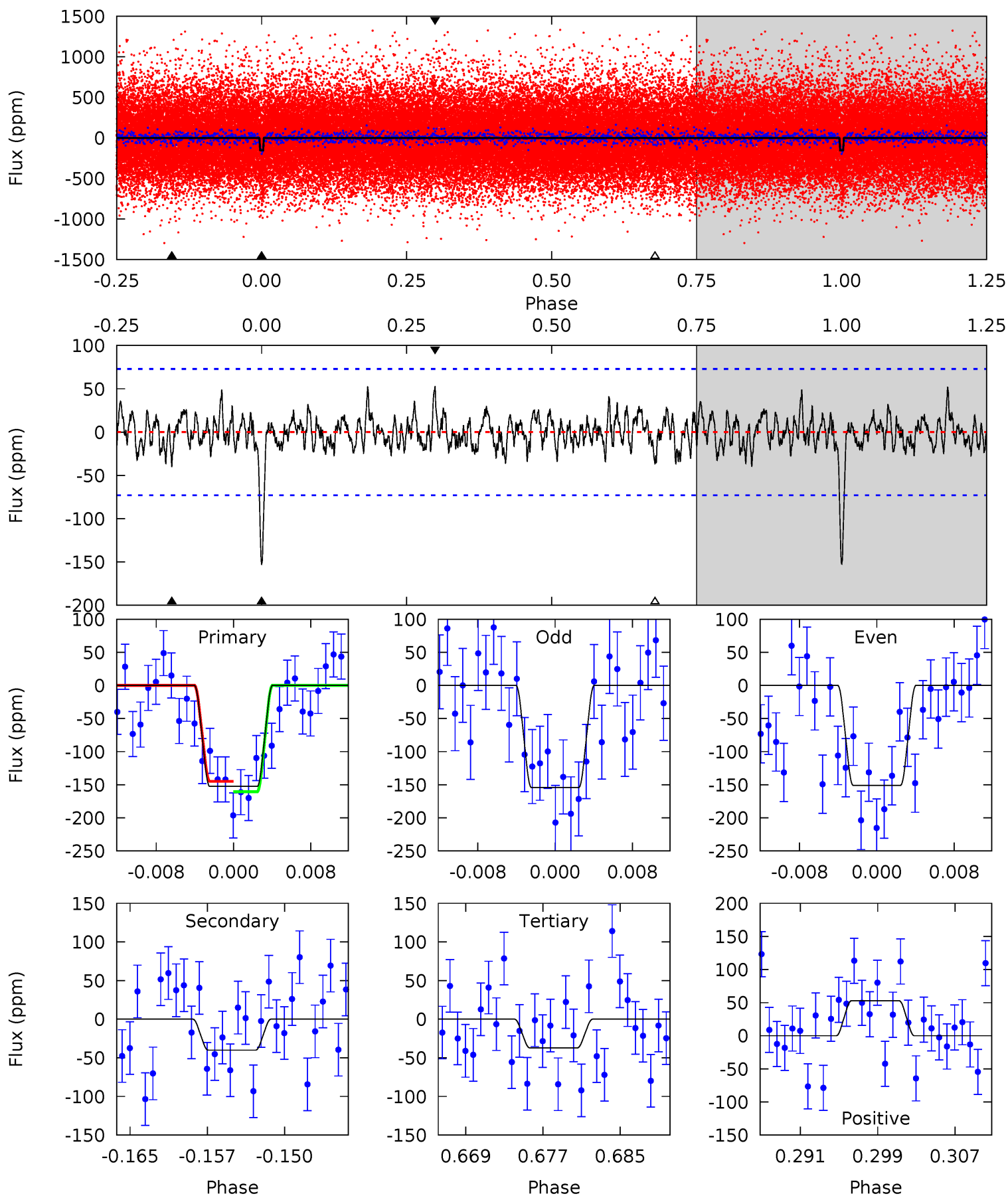
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.20	2.73	3.79	5.03	2.59	1.08	8.58	7.52	0.48	-0.59	0.74	1.08	0.25	0.56



Alt Model-Shift Uniqueness Test

007287677-01, P = 18.372222 Days, E = 131.085306 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	2.78	2.58	3.68	5.07	2.66	1.05	8.03	6.93	0.20	-0.90	0.12	1.16	0.26	0.55



Stellar Parameters For KIC 007287677

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5937^{+159}_{-177}	$4.558^{+0.034}_{-0.195}$	$-0.420^{+0.300}_{-0.300}$	$0.830^{+0.230}_{-0.061}$	$0.908^{+0.095}_{-0.105}$	$2.235^{+0.432}_{-1.137}$
	+3%/-3%	+1%/-4%	+71%/-71%	+28%/-7%	+10%/-12%	+19%/-51%
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 007287677-01 / KOI 4815.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-42 ± 13	$1.25^{+0.61}_{-0.61}$	939^{+60}_{-41}	4364^{+1471}_{-686}	243^{+736}_{-147}
Alt.	-40 ± 14	$1.25^{+0.67}_{-0.63}$	938^{+60}_{-38}	4307^{+1449}_{-680}	223^{+734}_{-140}

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 $A_{obs} \gg 1.0$

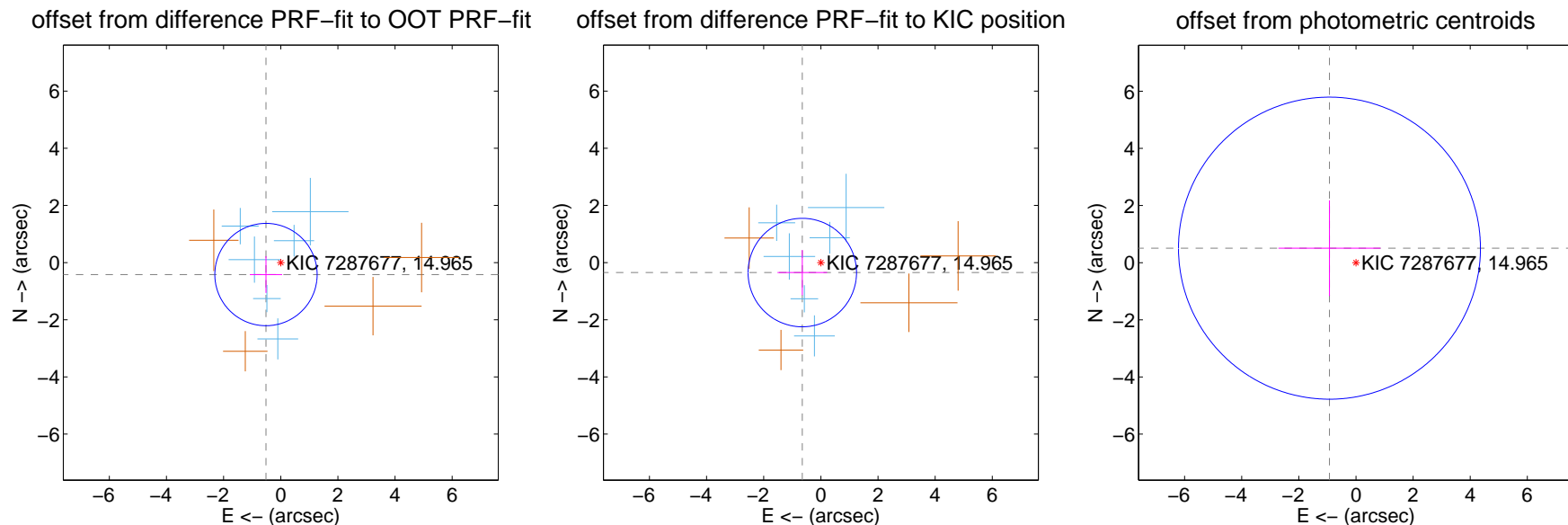
DV Centroid Data

Supplemental centroid analysis for 007287677-01. Kepler magnitude: 14.96. Transit SNR 8.95

There are 6 quarters with good PRF difference image offsets

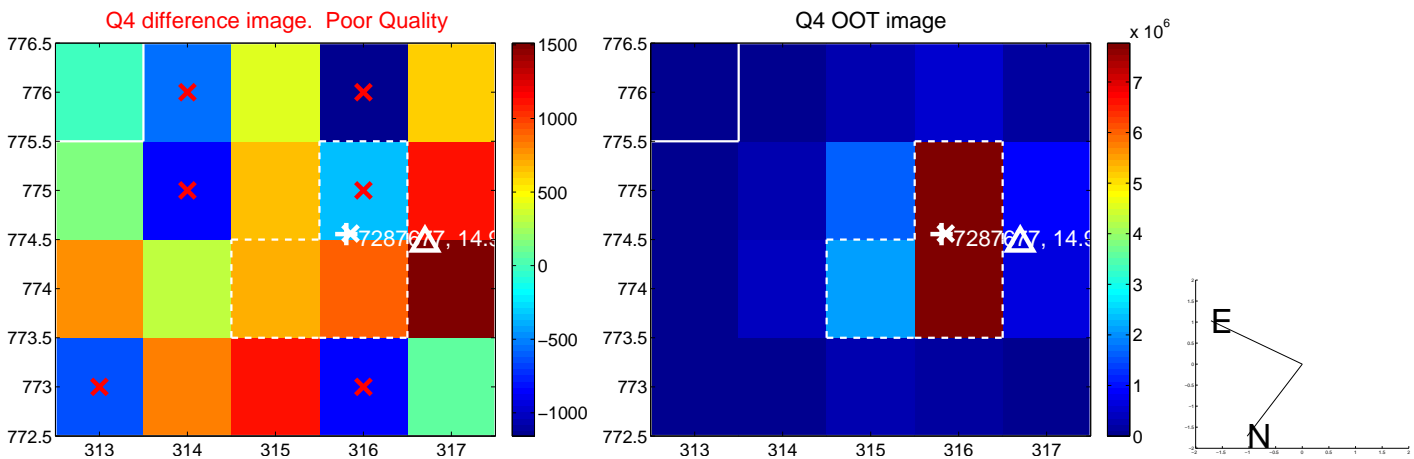
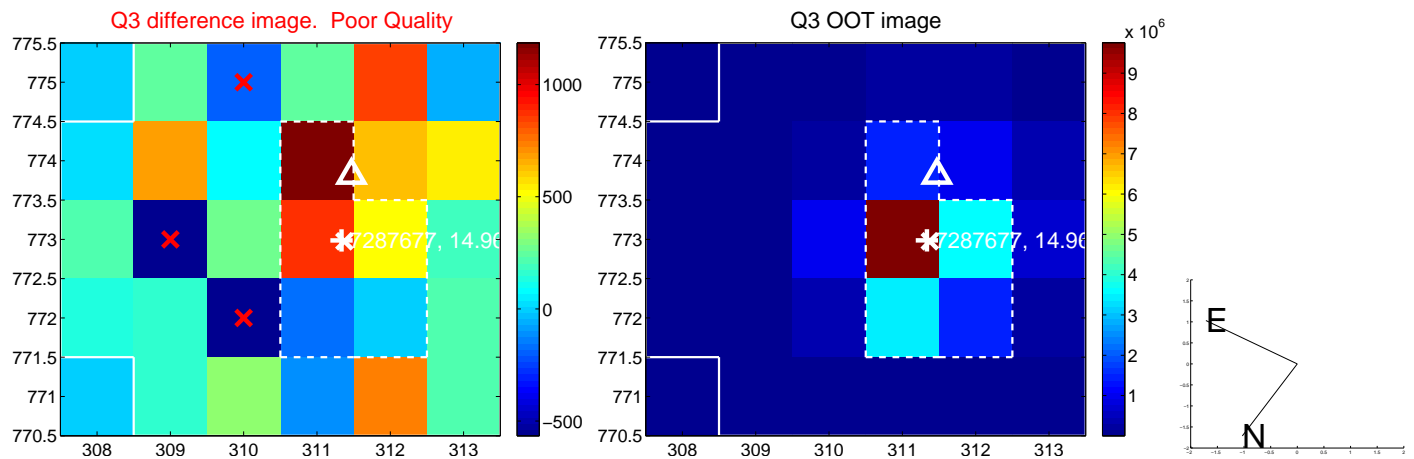
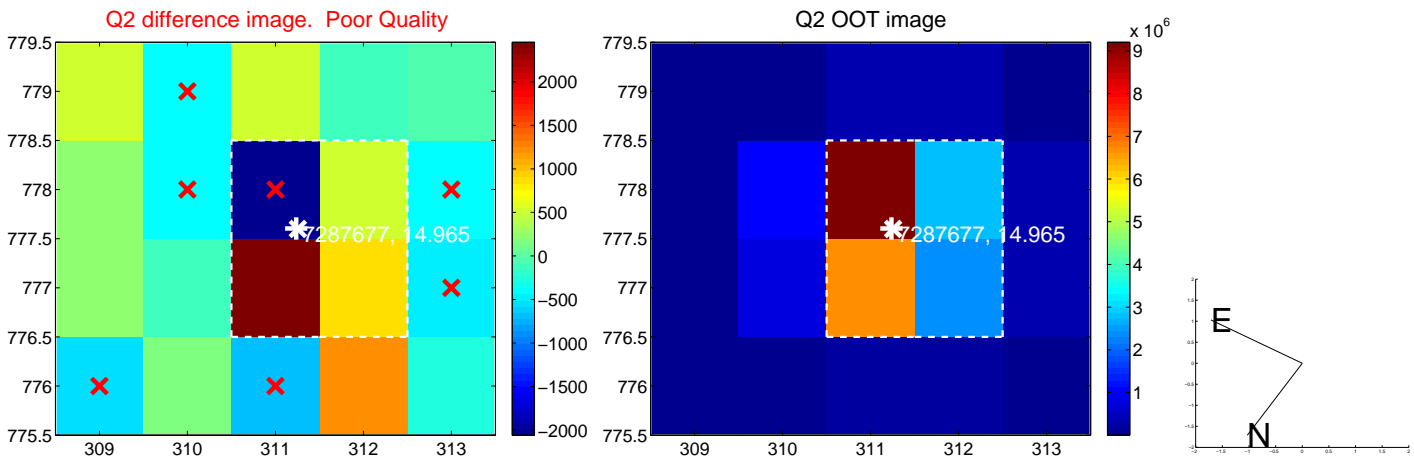
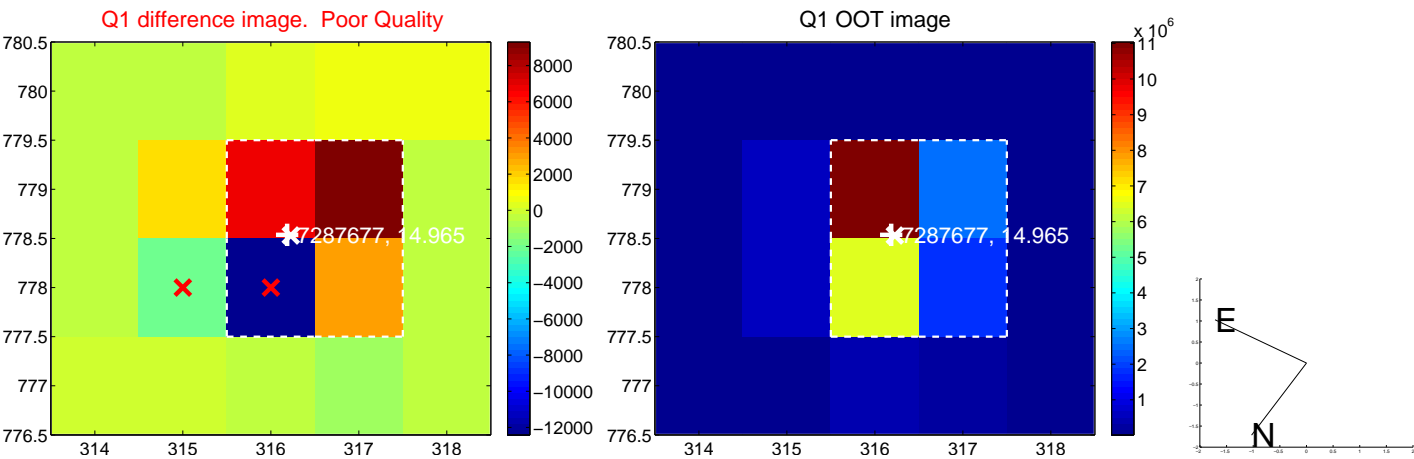
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.665 ± 0.597	1.11	0.517 ± 0.565	-0.418 ± 0.643
PRF-fit source offset from KIC position	0.738 ± 0.633	1.17	0.650 ± 0.869	-0.349 ± 0.792
photometric centroid source offset	1.06 ± 1.76	0.60	0.93 ± 1.79	0.51 ± 1.67

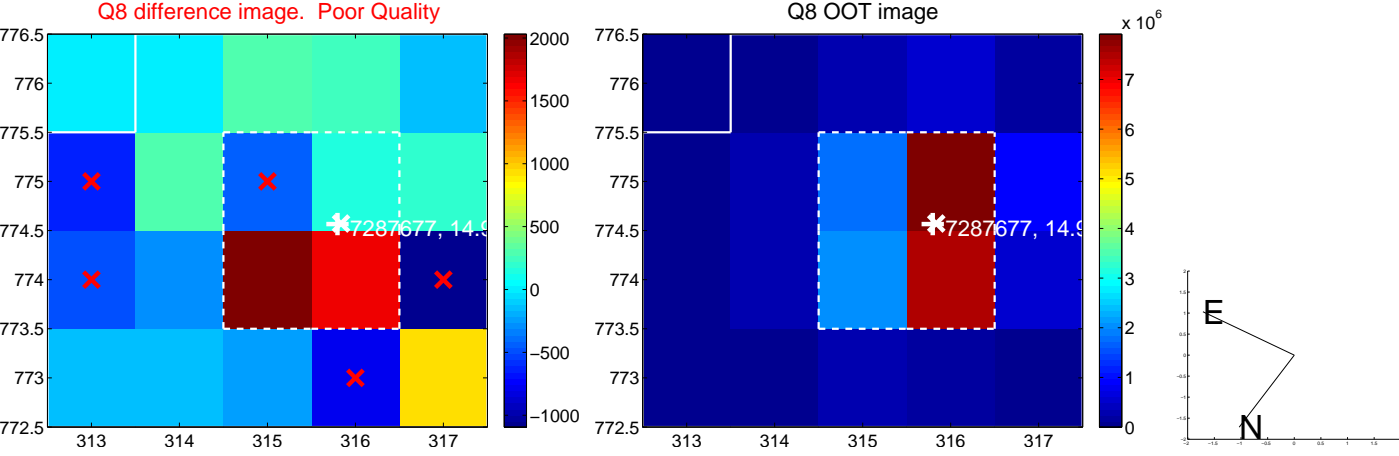
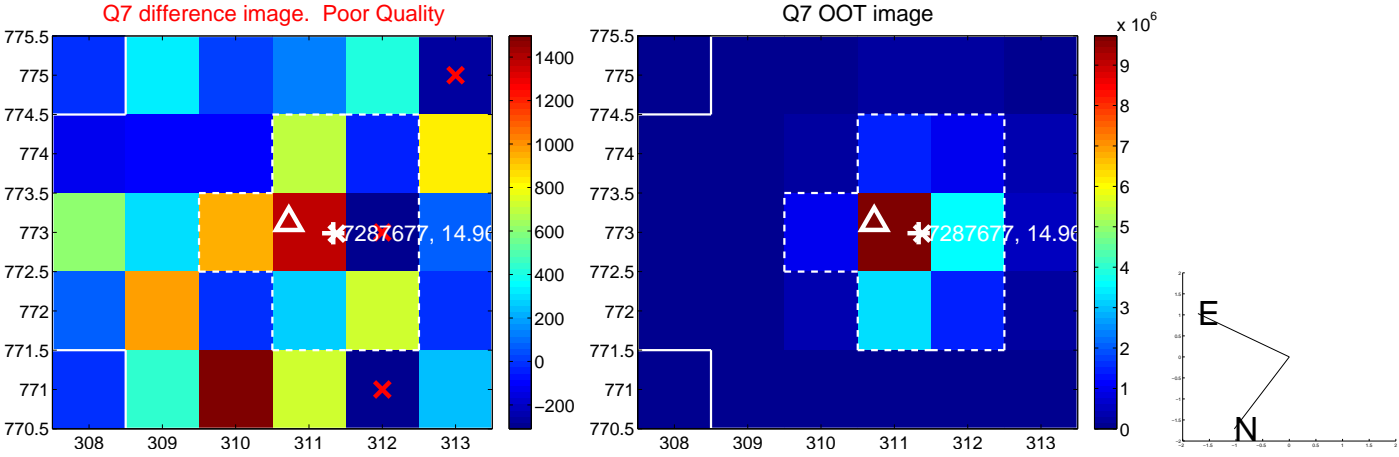
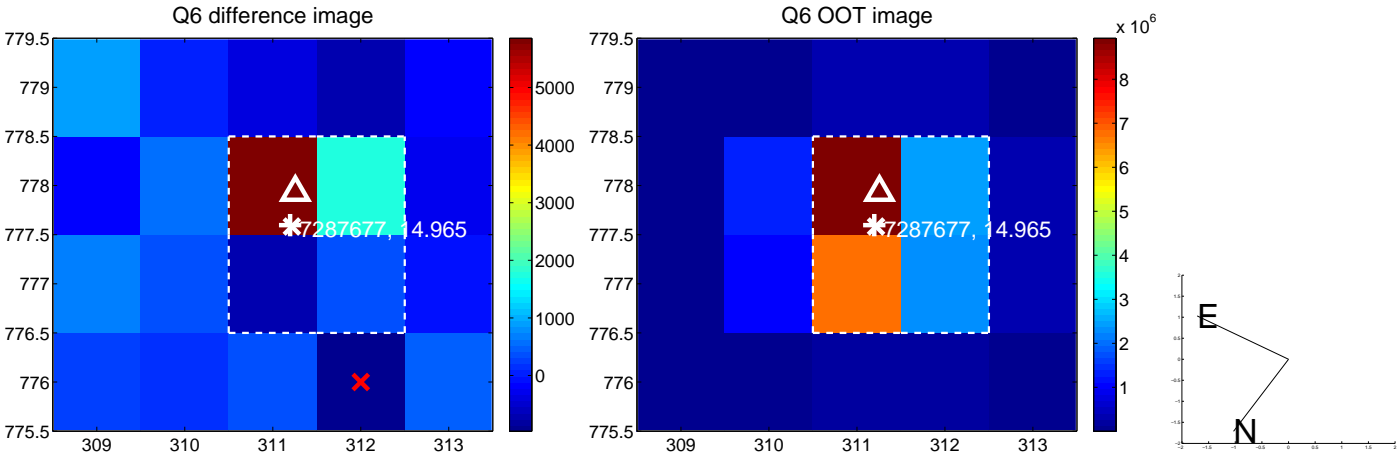
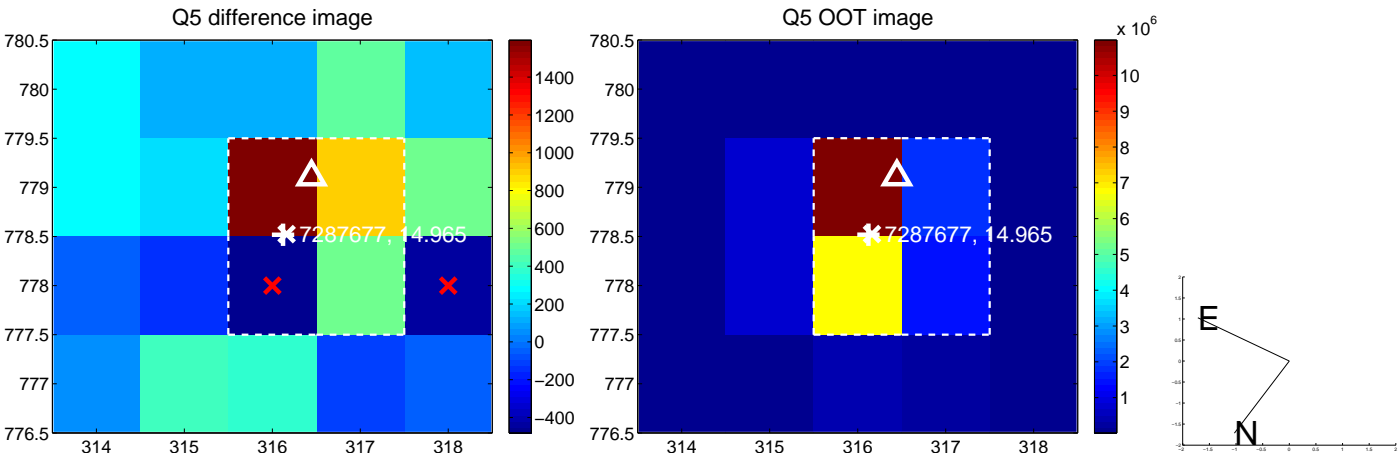


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

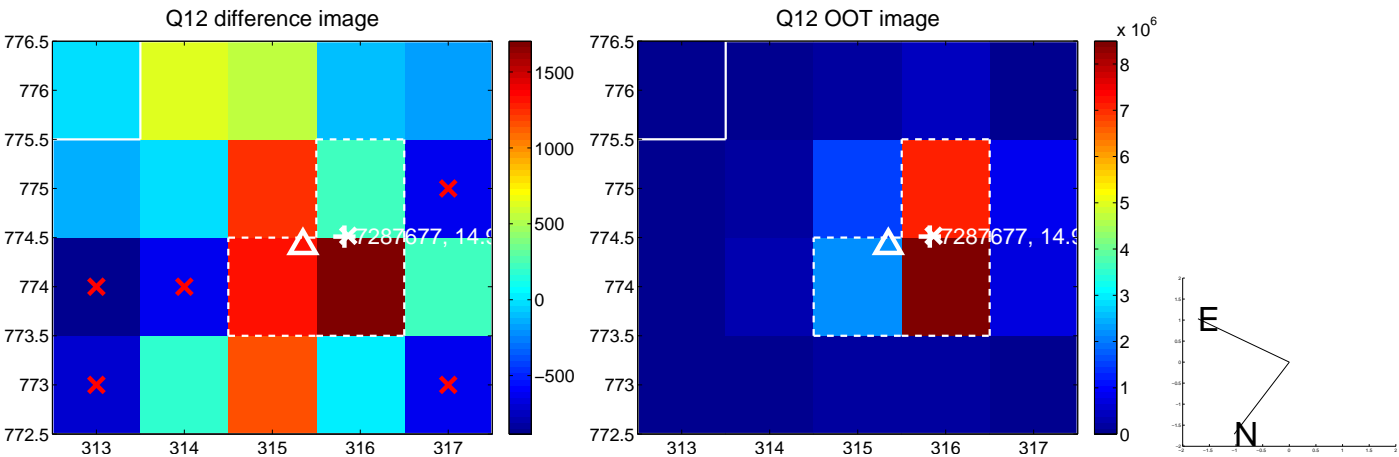
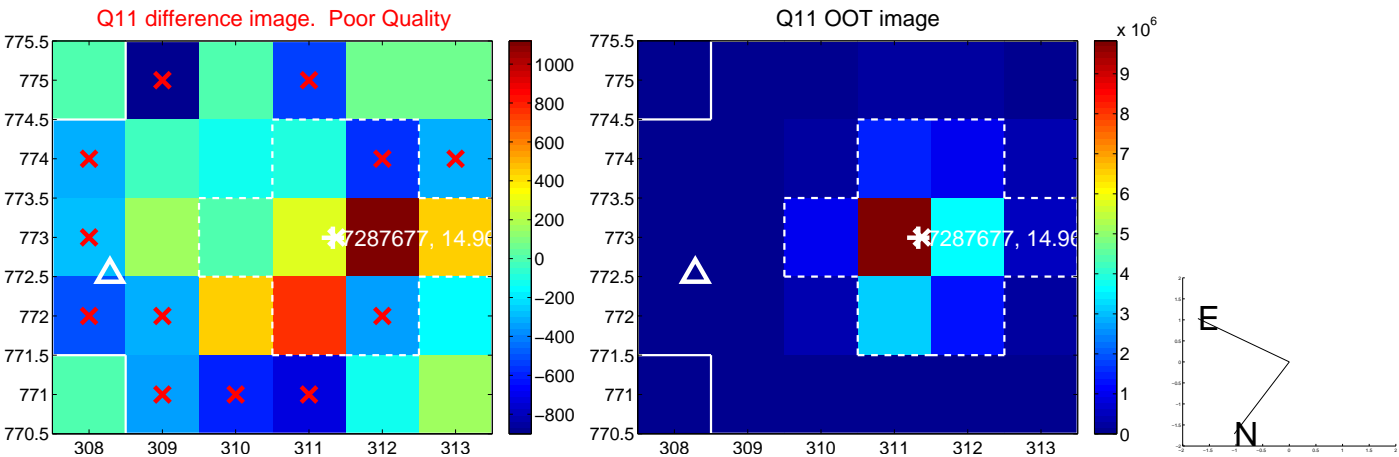
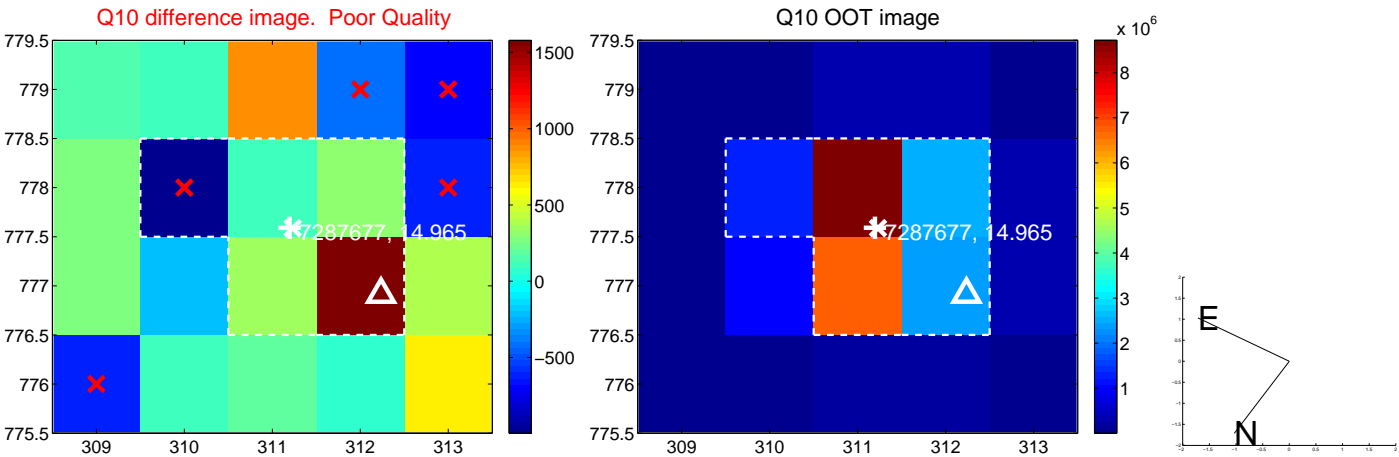
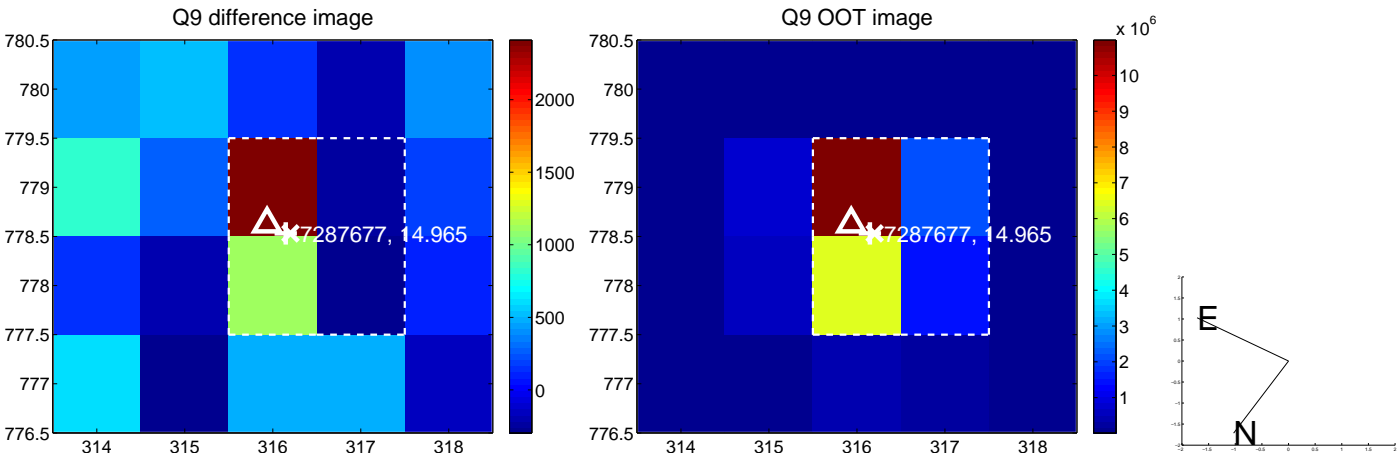
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



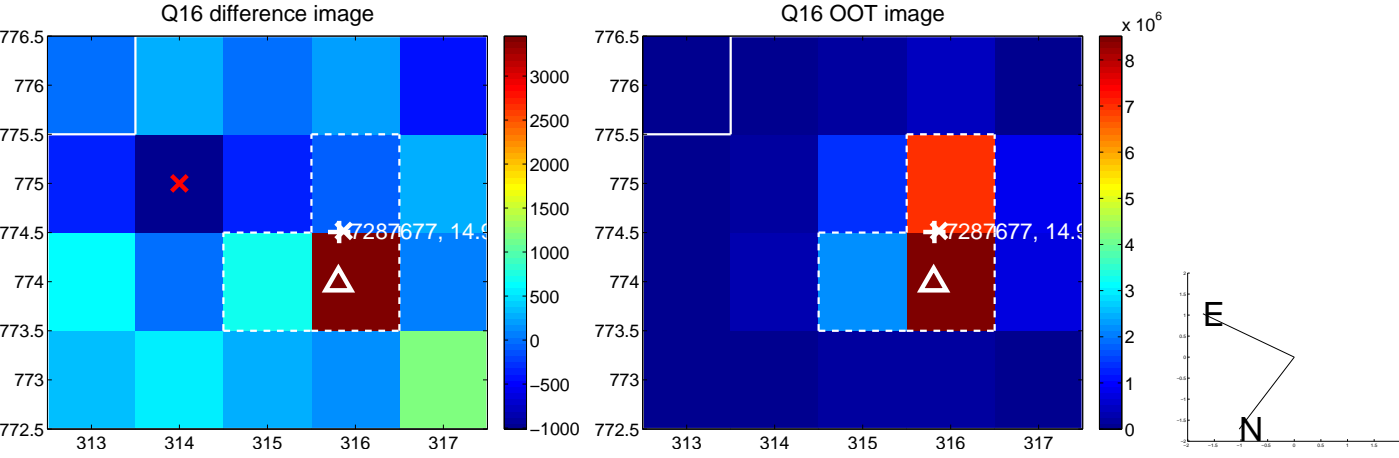
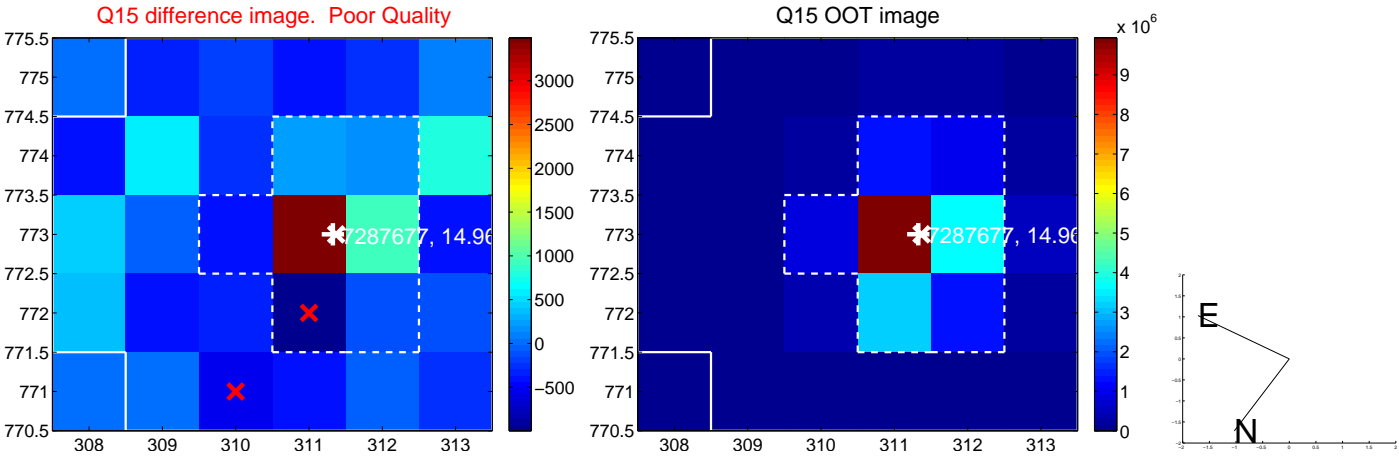
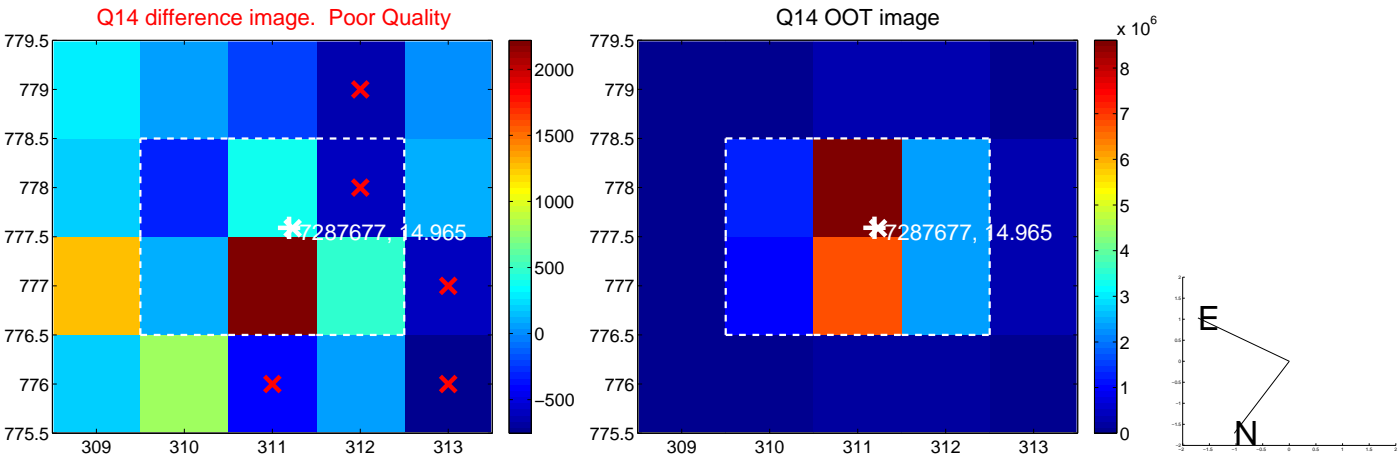
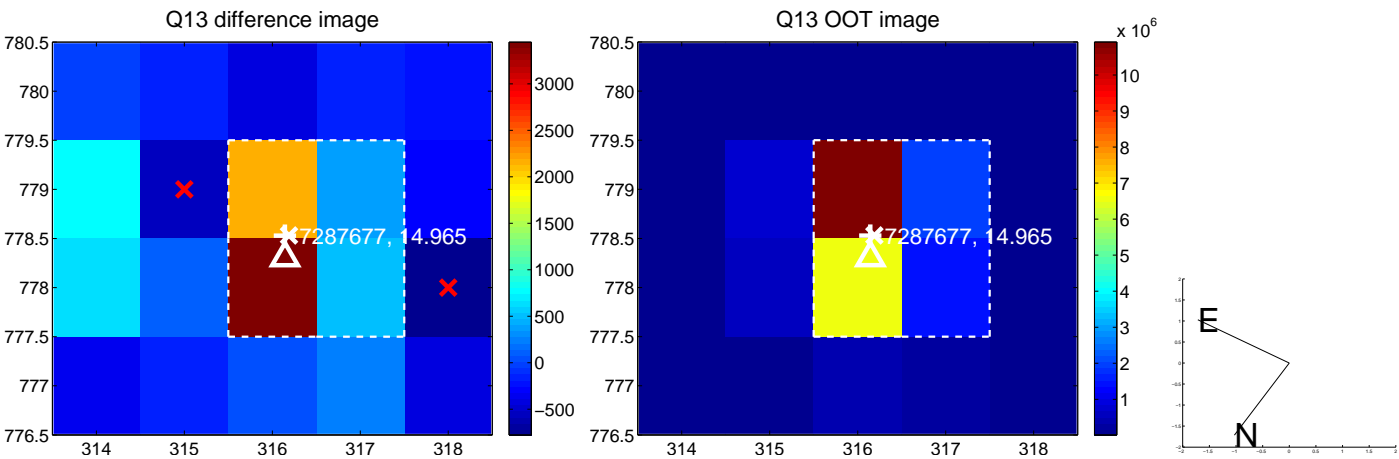
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



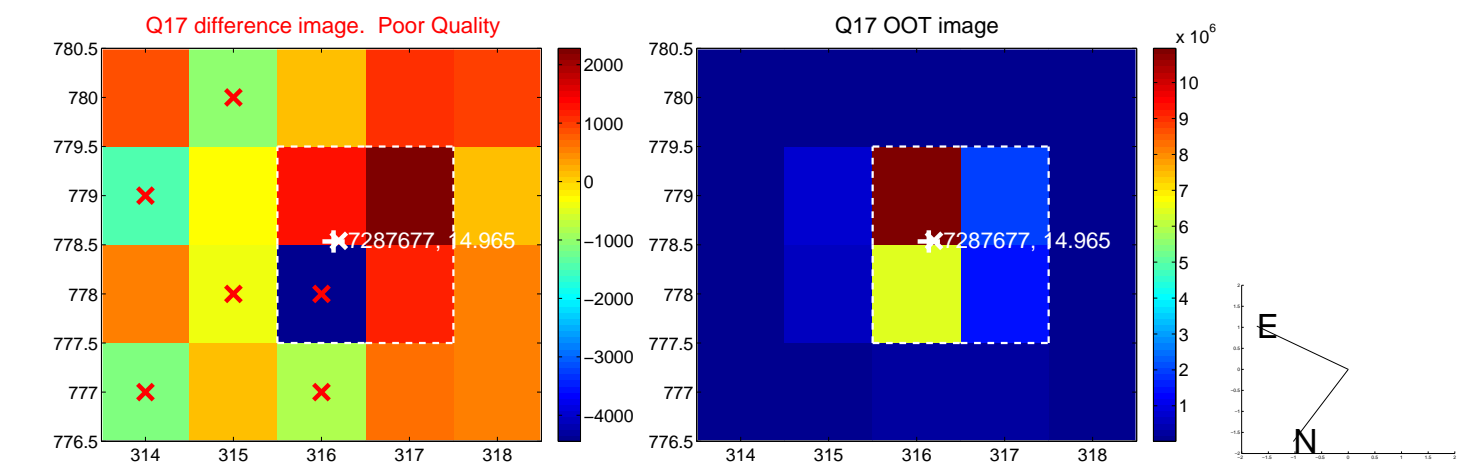
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



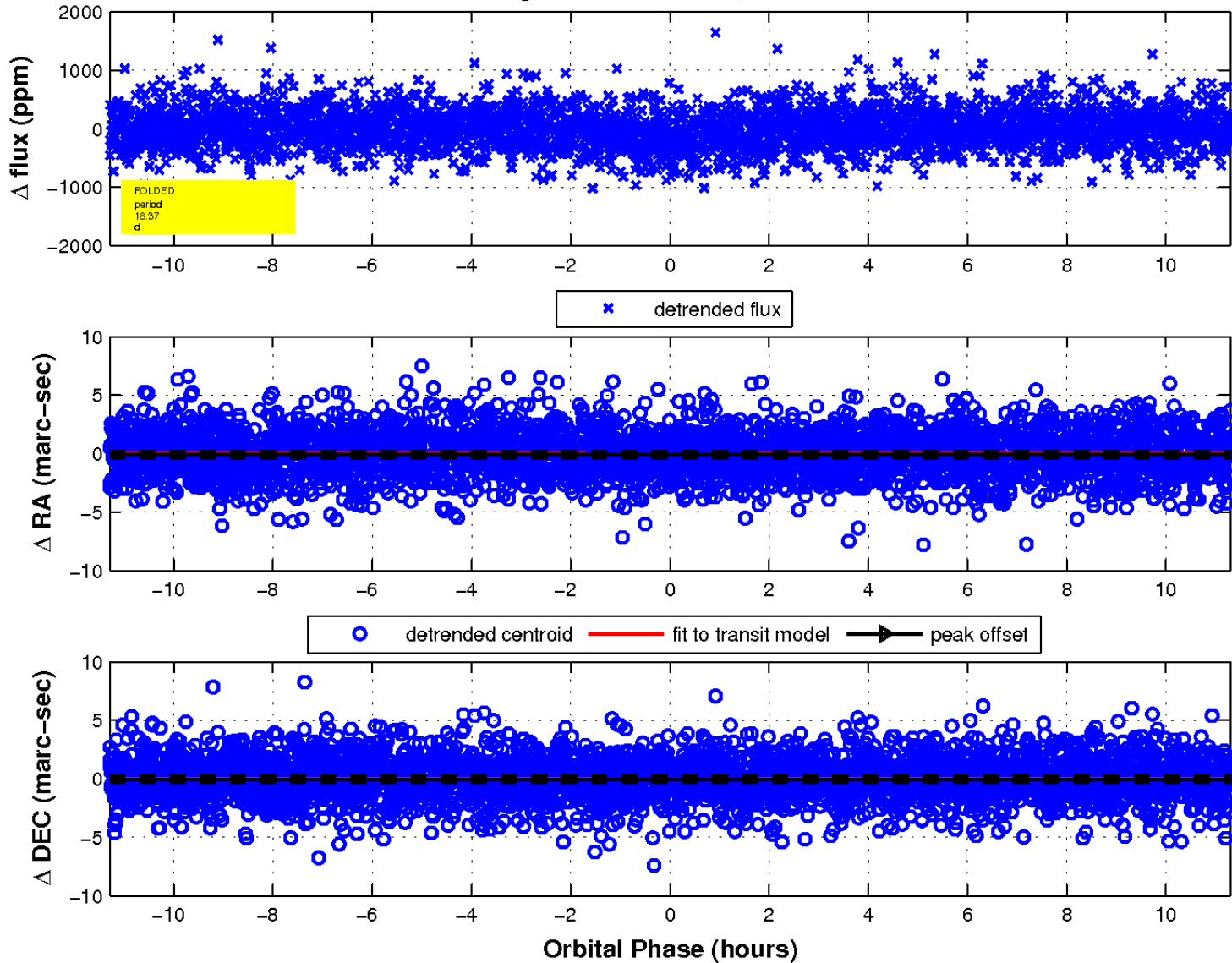
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

