

KIC 007703882

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})
007703882-01	OBS	4403.01	5.883430	136.956115	224.5	2.727	11.8	11.9	0.85	5840	1.51	192.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007703882-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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 007703882-01

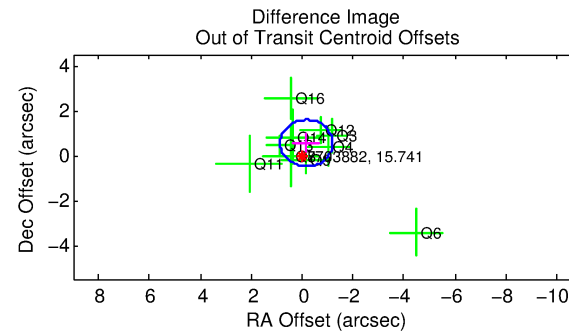
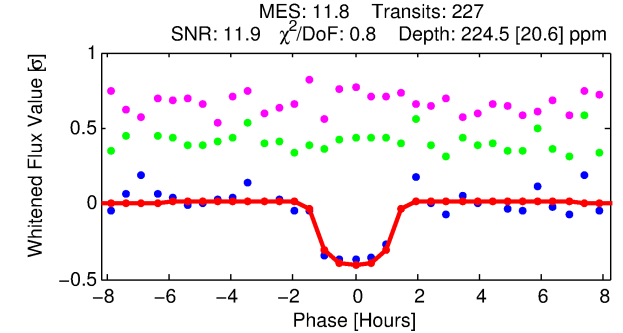
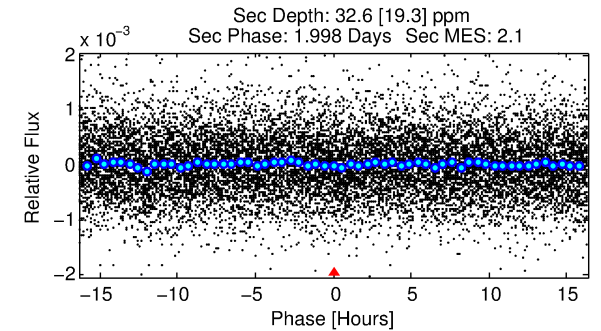
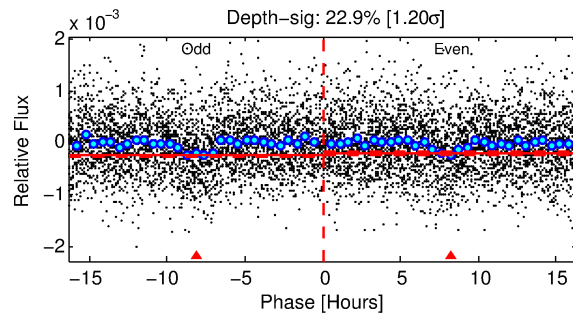
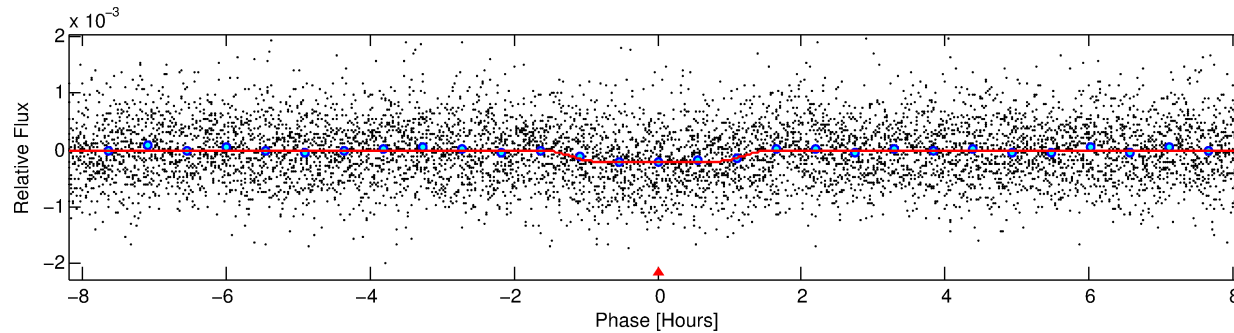
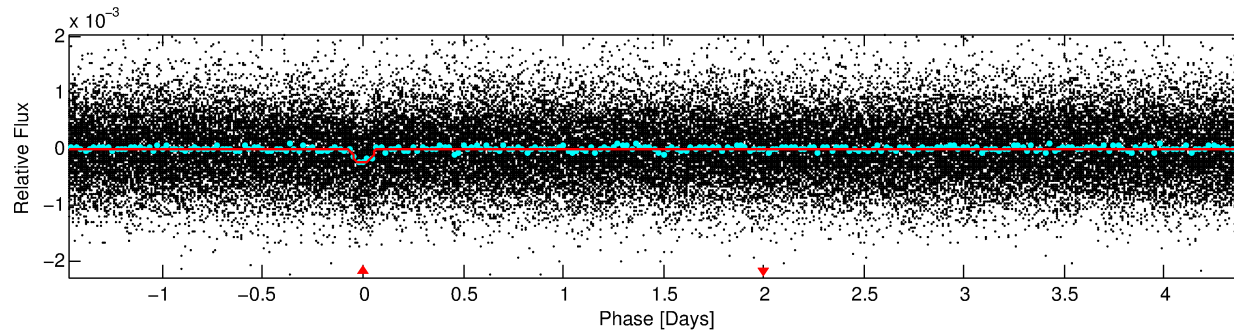
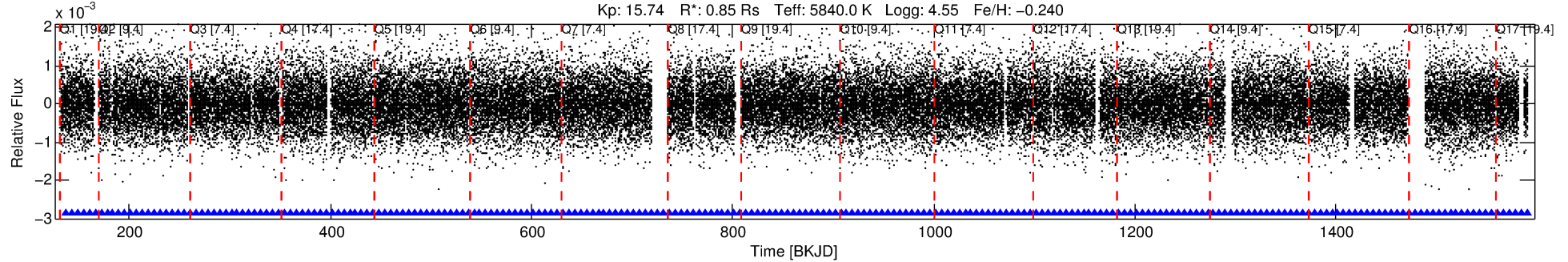
No Significant Match Found

DV One-Page Summary

KIC: 7703882 Candidate: 1 of 1 Period: 5.883 d

KOI: K04403.01 Corr: 0.951

Kp: 15.74 R*: 0.85 Rs Teff: 5840.0 K Logg: 4.55 Fe/H: -0.240



DV Fit Results:

Period = 5.88343 [0.00004] d
Epoch = 136.9561 [0.0044] BKJD
Rp/R* = 0.0163 [0.0070]
a/R* = 7.75 [16.26]
b = 0.90 [0.45]
Seff = 192.45 [75.04]
Teff = 950 [93] K
Rp = 1.51 [0.79] Re
a = 0.0625 [0.0158] AU
Ag = 30.75 [34.03] [0.87σ]
Teffp = 3458 [907] K [2.75σ]

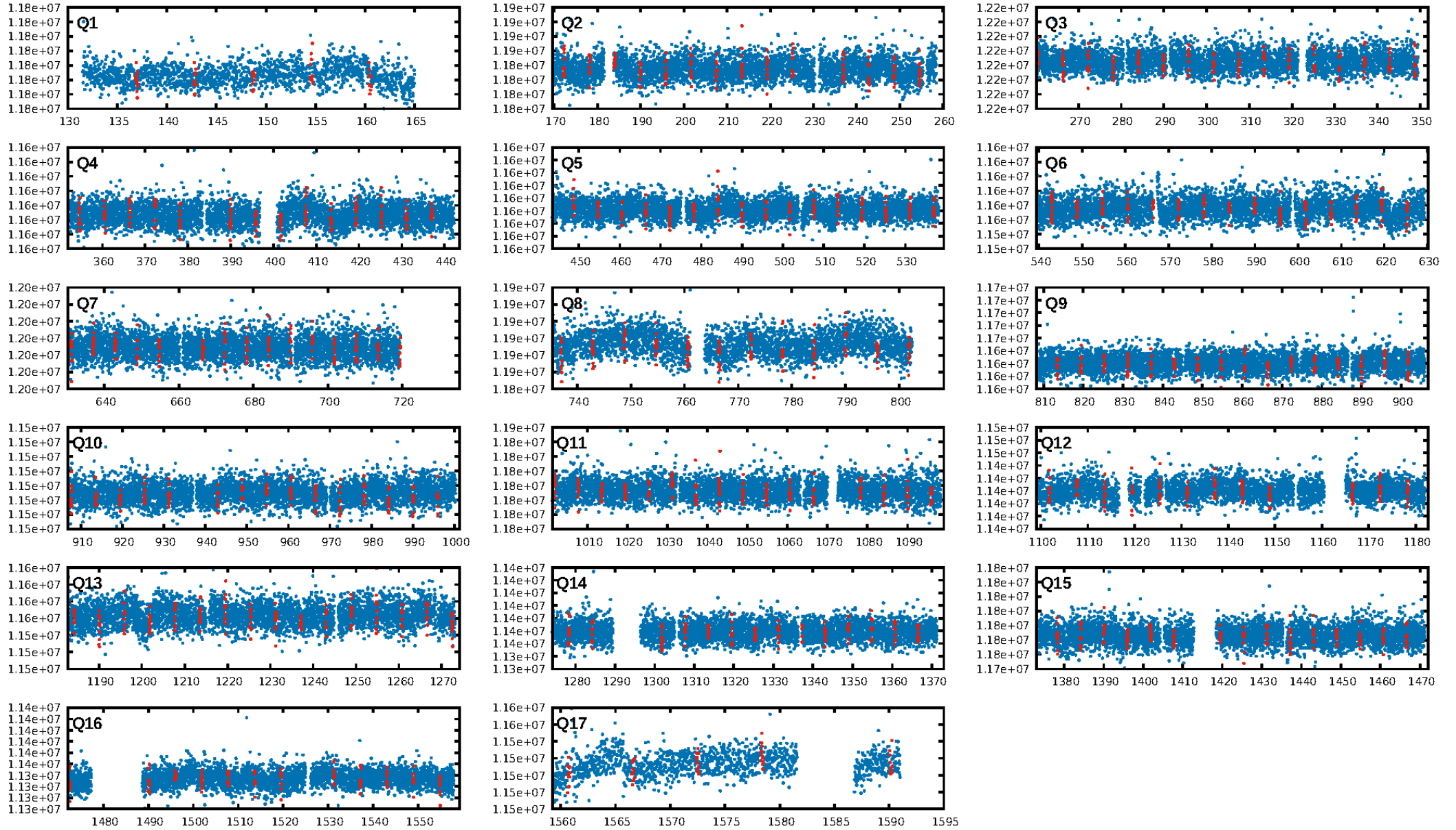
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.19e-31
RollingBand-fgt: 1.00 [217/217]
GhostDiagnostic-chr: 1.15
Centroid-sig: 19.2%
Centroid-so: 1.379 arcsec [1.40σ]
OotOffset-rm: 0.573 arcsec [1.66σ]
KicOffset-rm: 0.573 arcsec [1.68σ]
OotOffset-st: 2/2/4/2 [10]
KicOffset-st: 2/2/4/2 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [17/17]

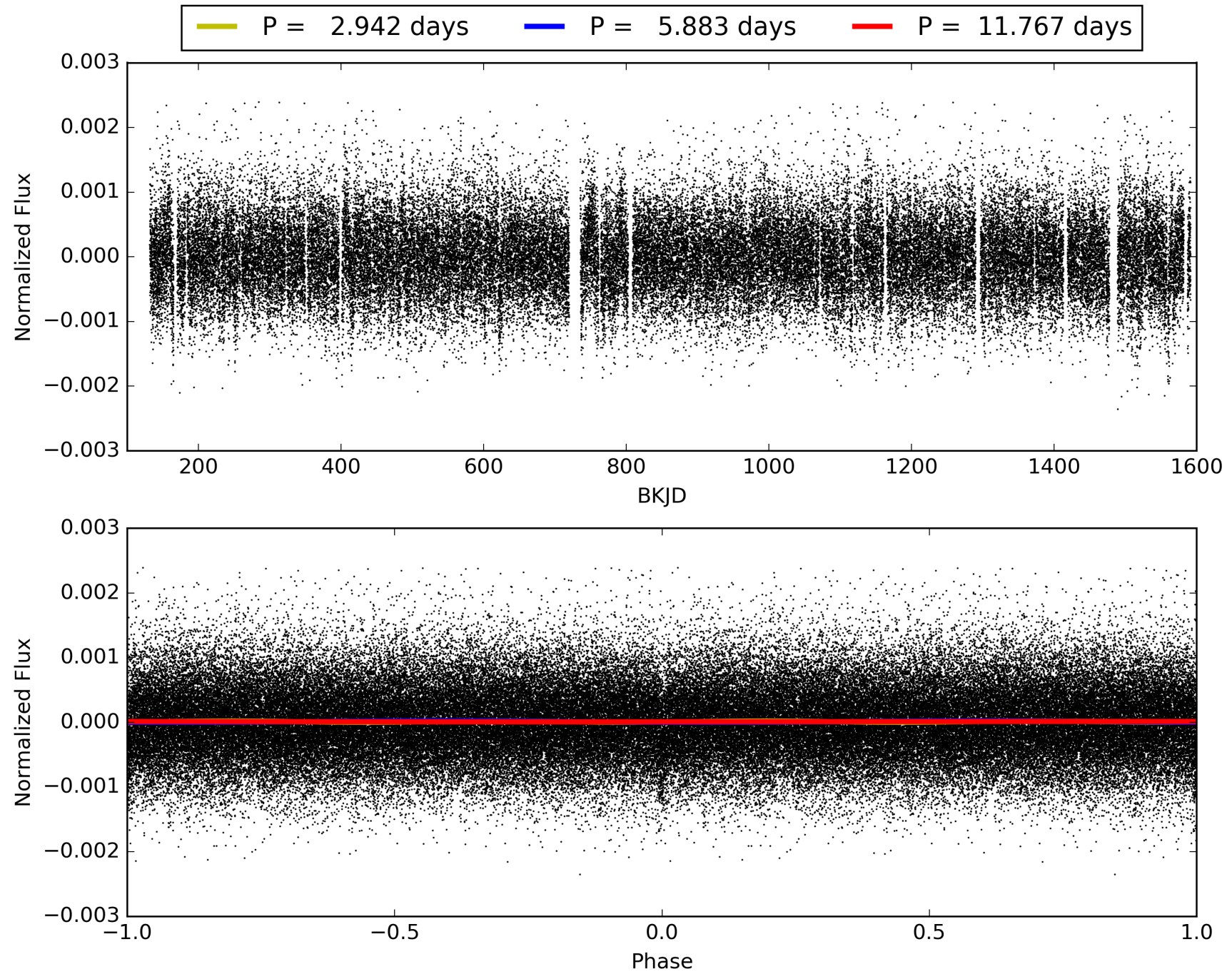
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:40:12 Z

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

TCE 007703882-01, PDC Light Curves

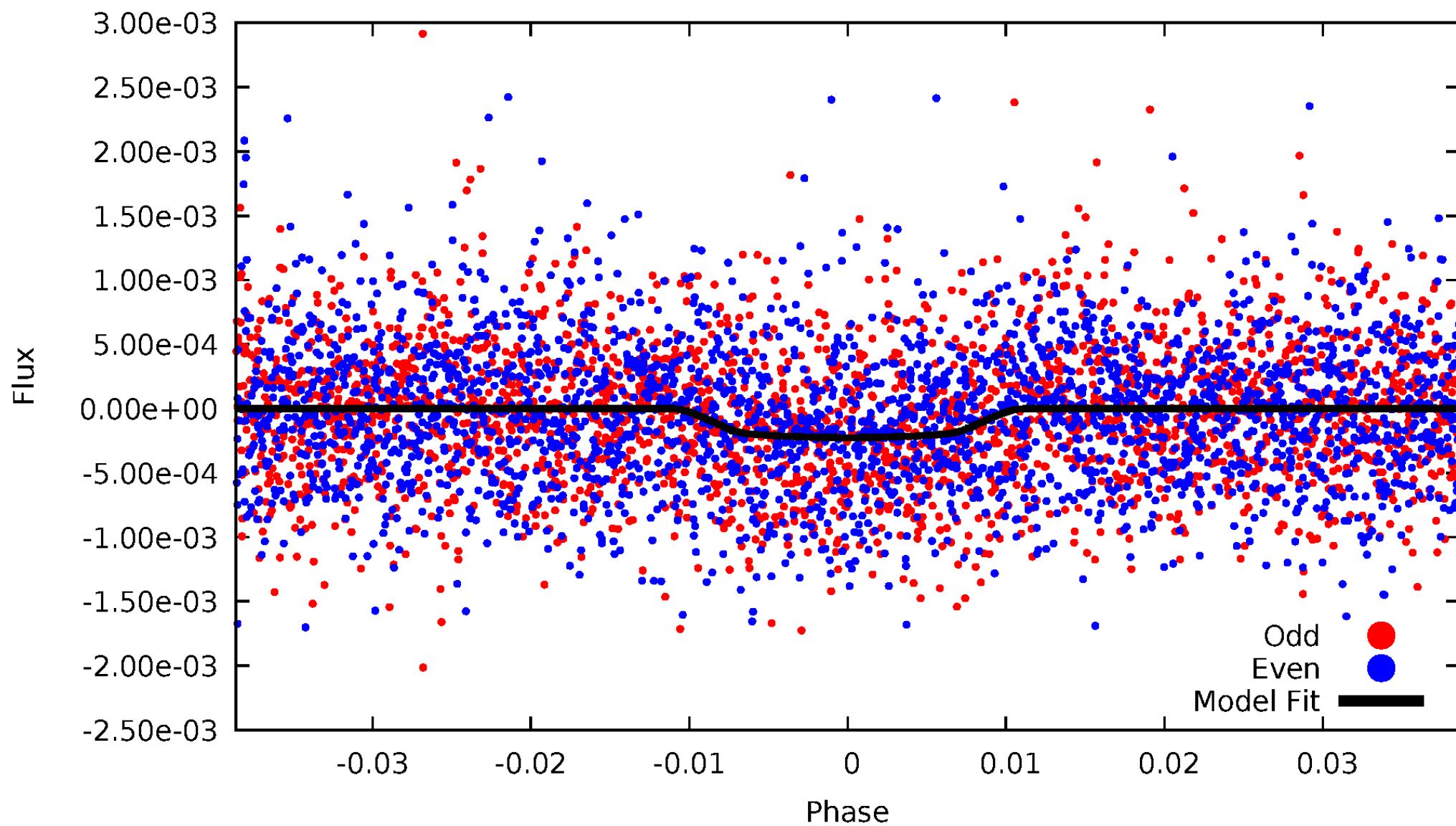


TCE 007703882-01



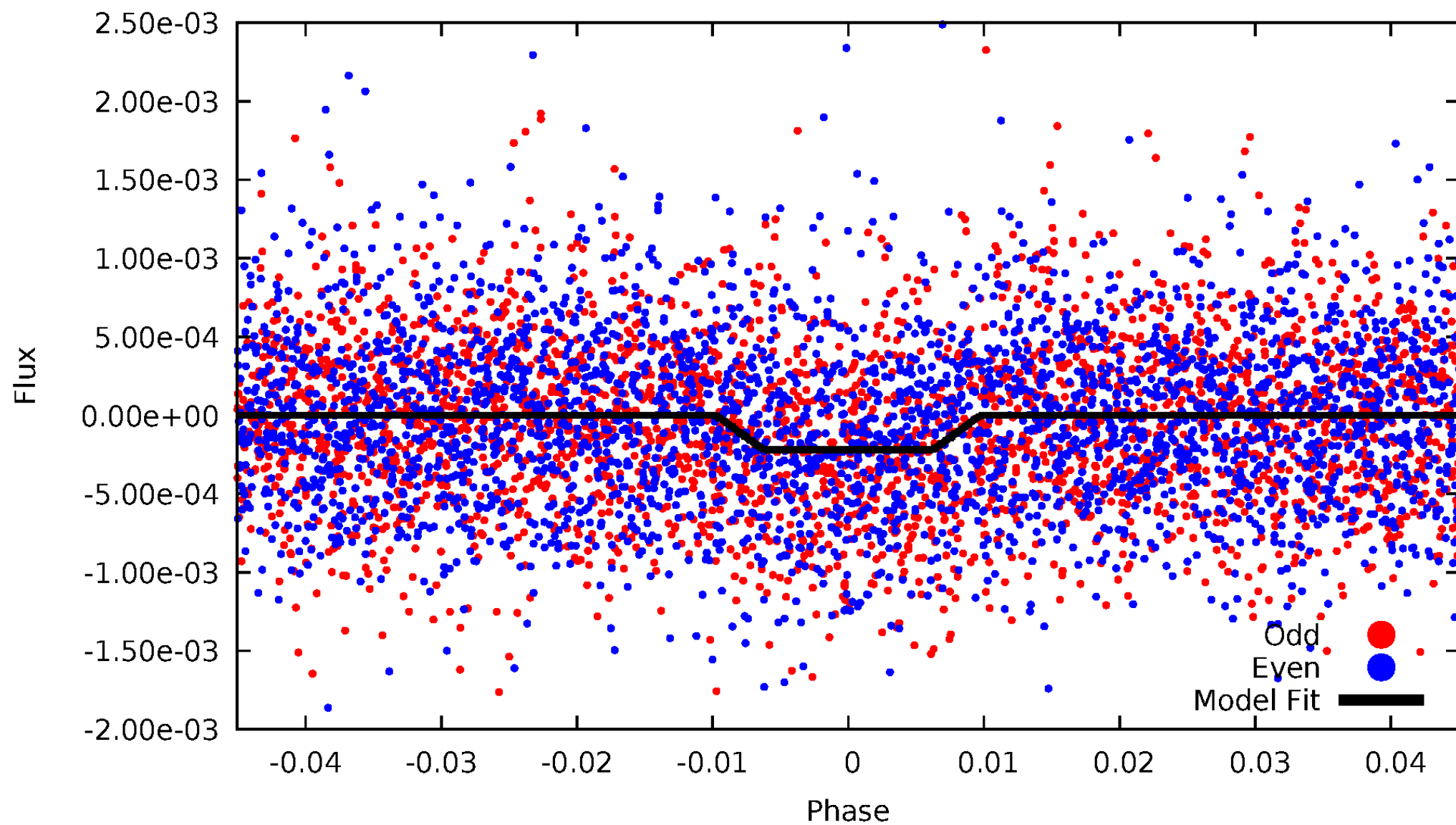
DV Odd/Even

TCE 007703882-01



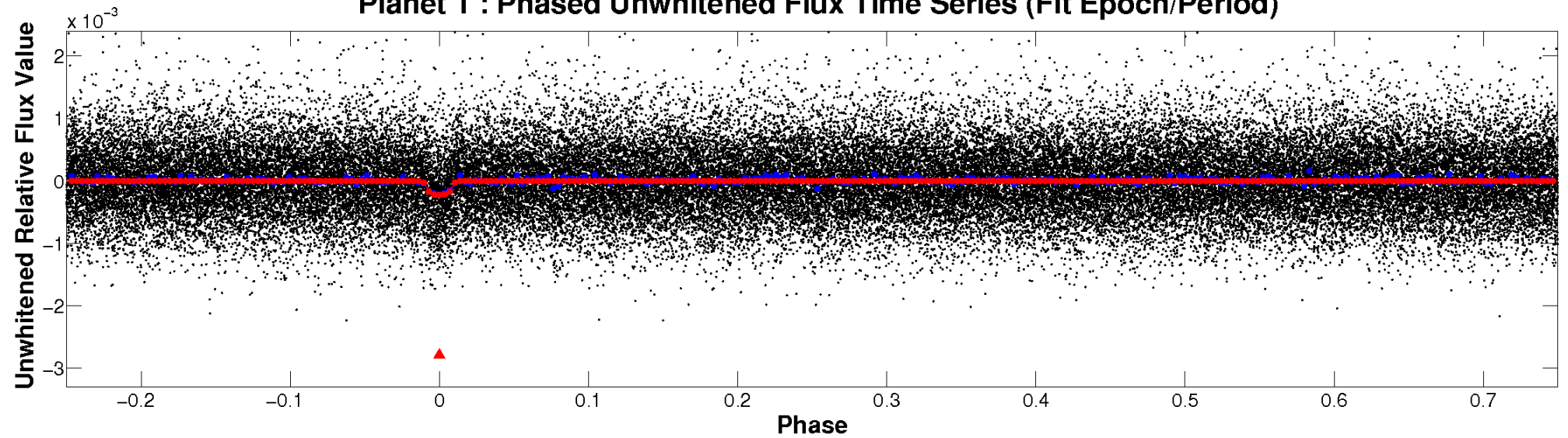
ALT Odd/Even

TCE 007703882-01

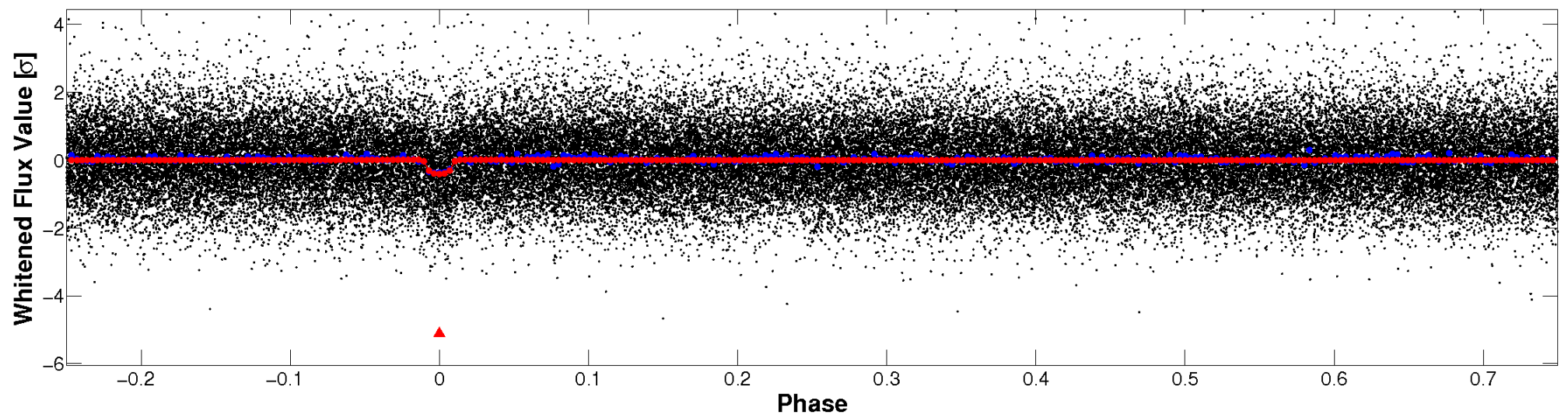


Non-Whitened Vs. Whitened Light Curve

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

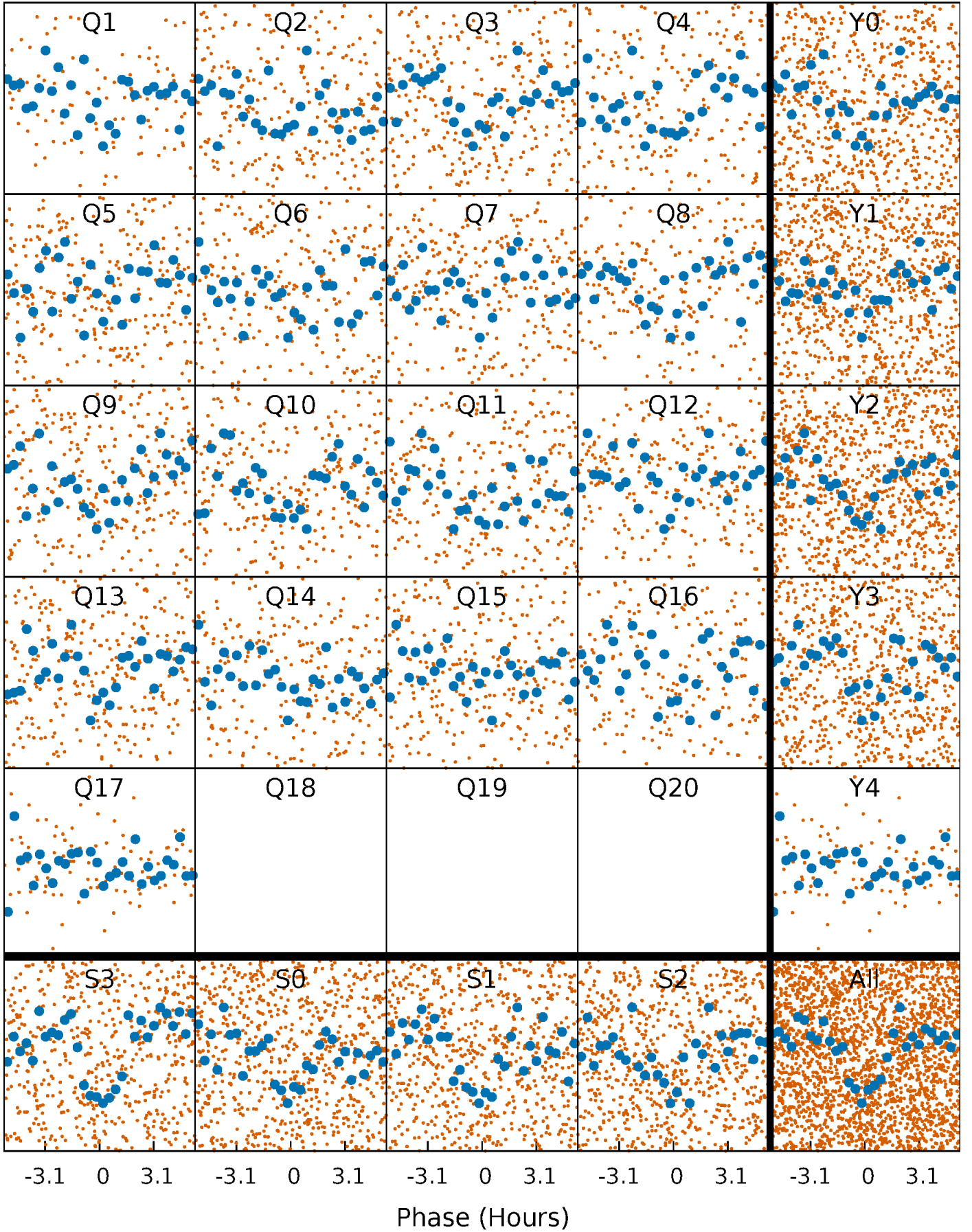


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



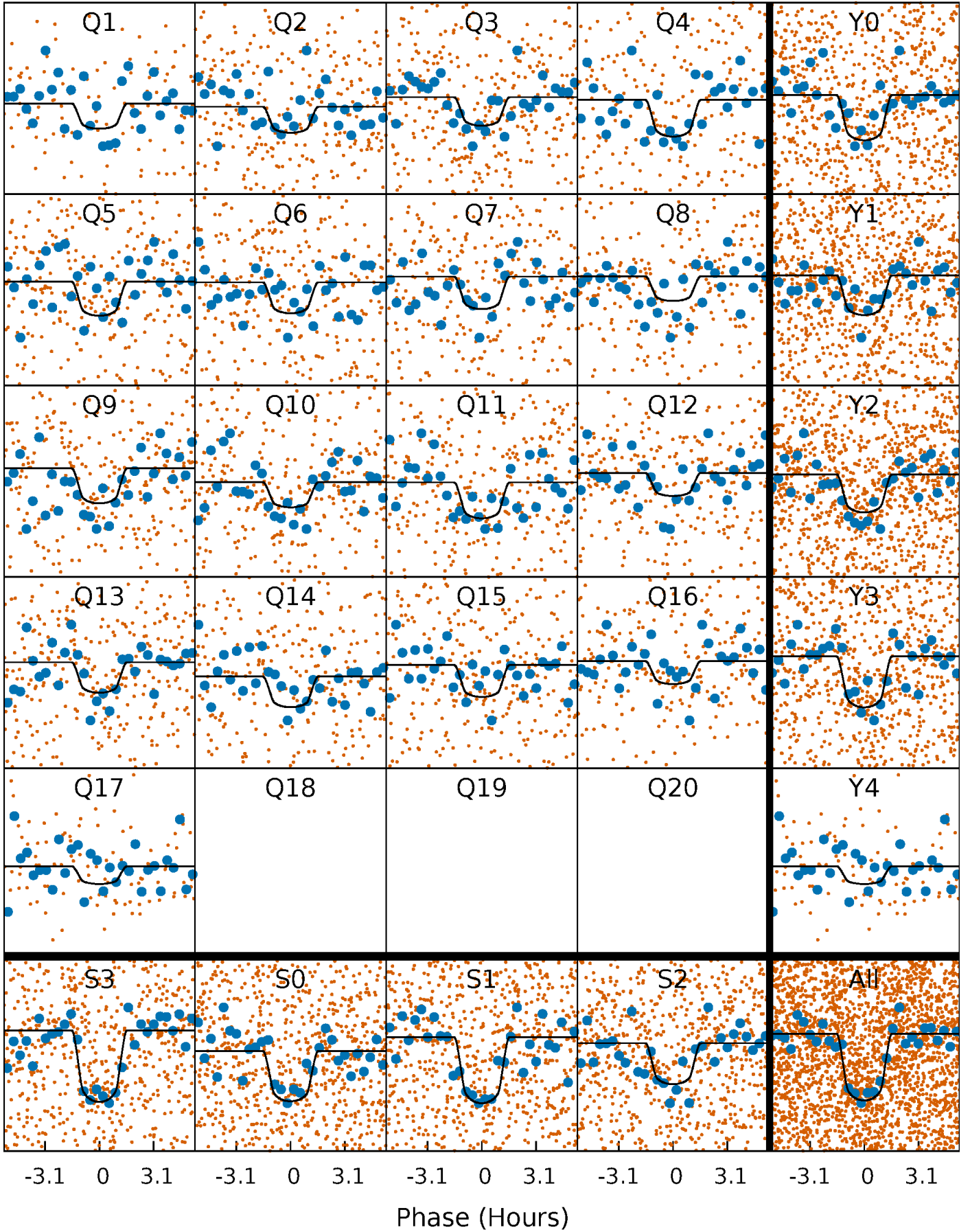
PDC Quarter-Phased Transit Curves

TCE 007703882-01 P= 5.883430 Days $T_0=136.956116$ (BKJD)



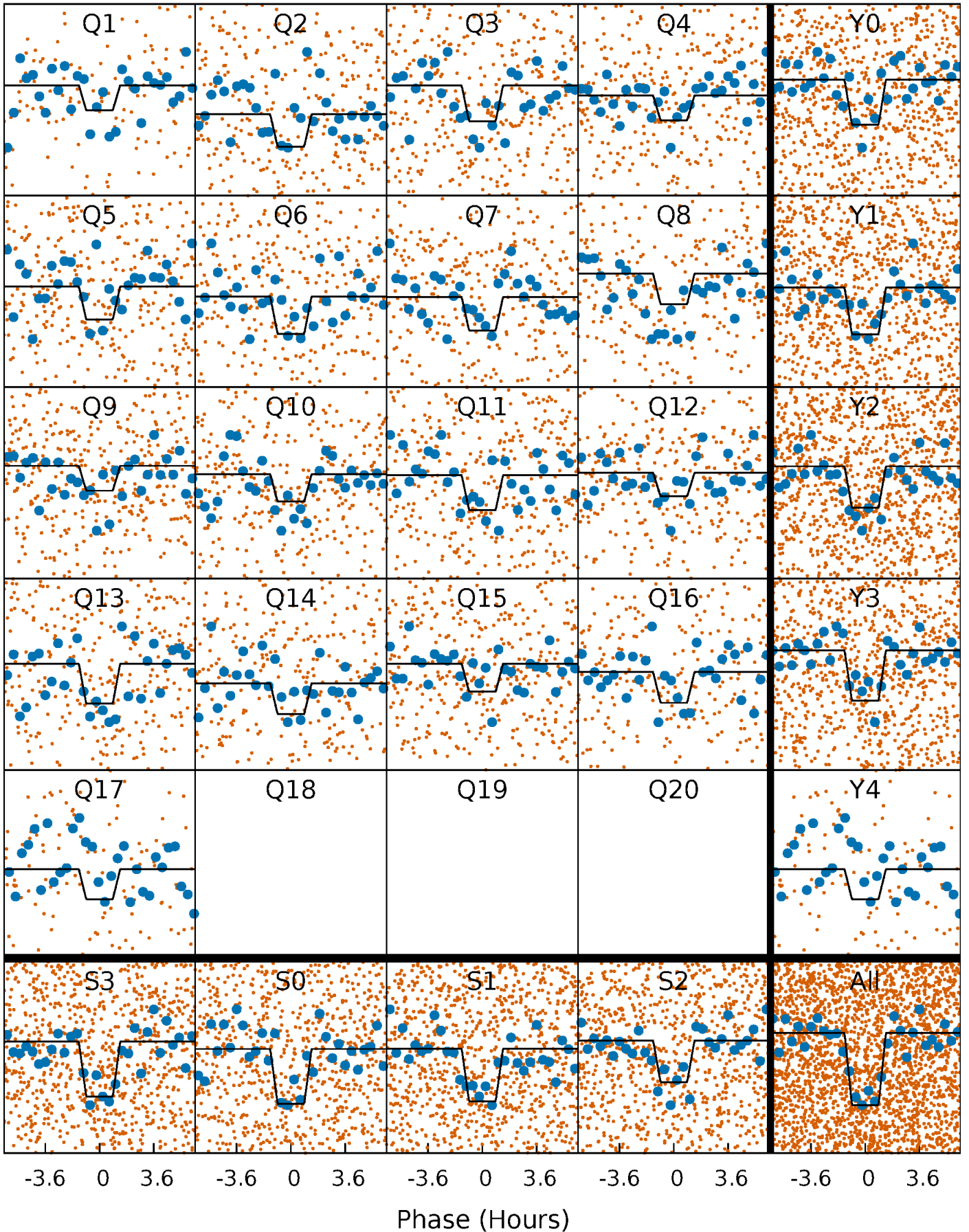
DV Quarter-Phased Transit Curves

TCE 007703882-01 P= 5.883430 Days $T_0=136.956116$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

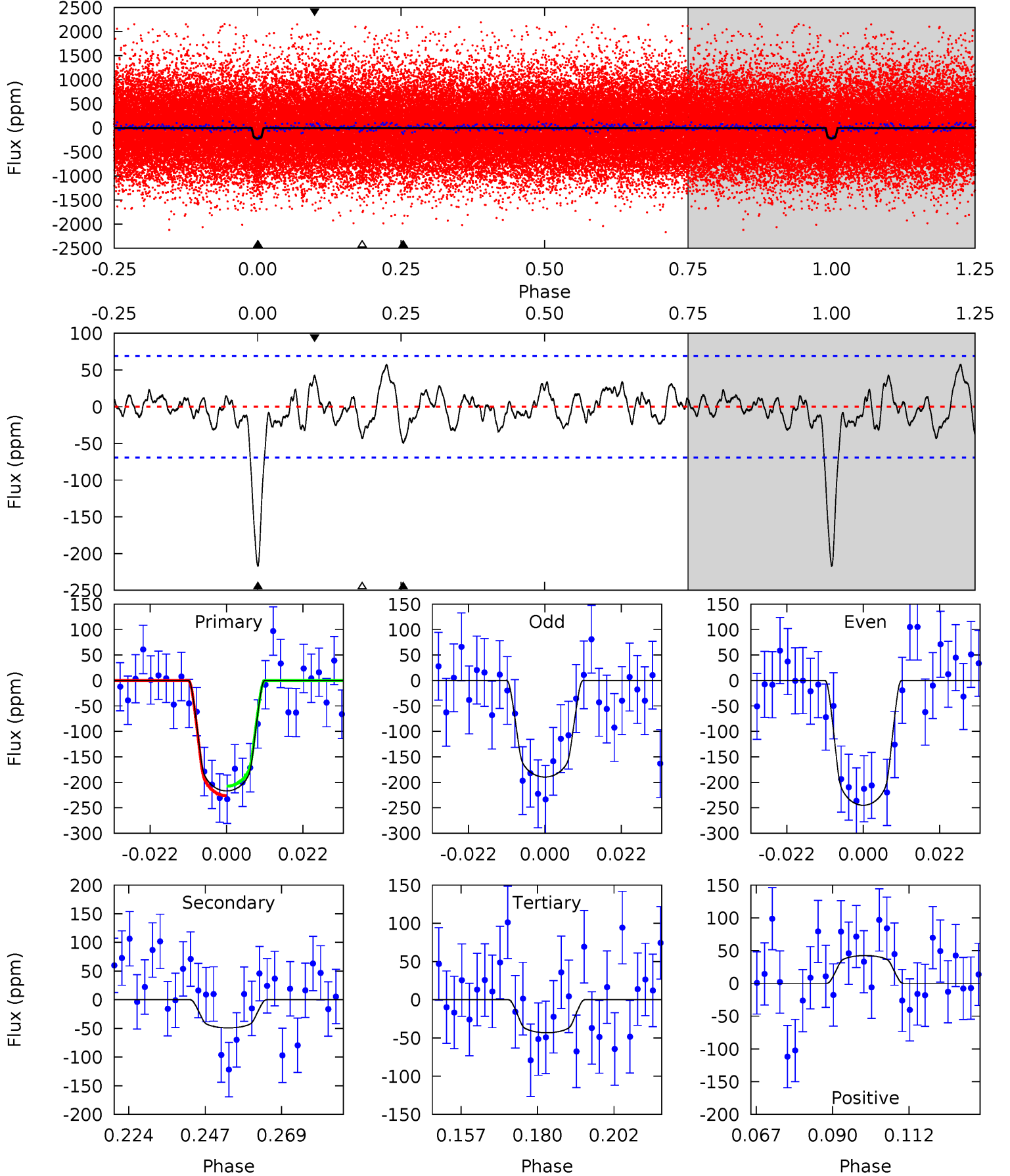
TCE 007703882-01 P= 5.883488 Days $T_0=136.947478$ (BKJD)



DV Model-Shift Uniqueness Test

007703882-01, P = 5.883430 Days, E = 131.072686 Days

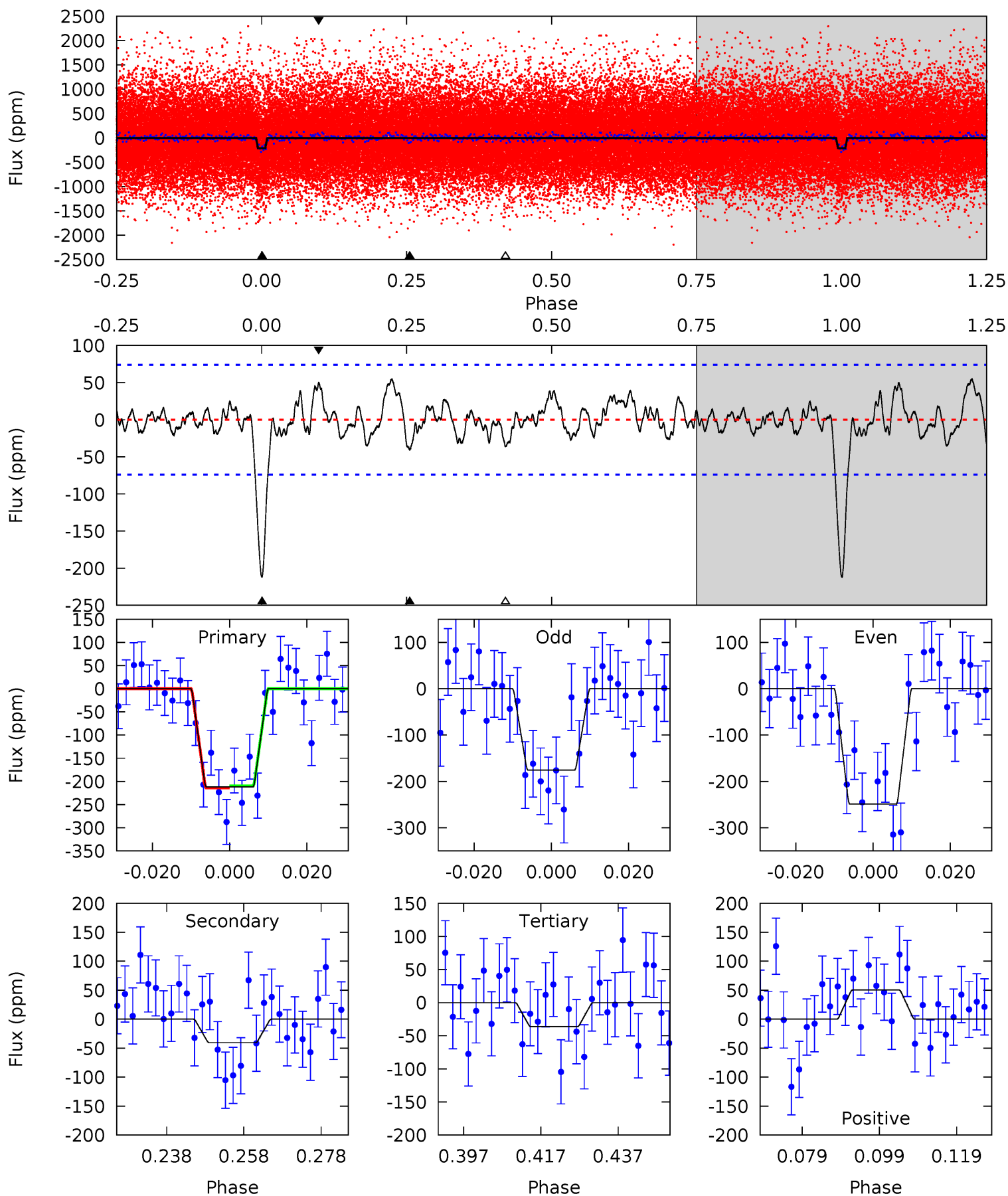
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	3.46	3.04	2.99	4.87	2.28	1.23	12.2	12.3	0.42	0.47	1.96	0.86	0.21	0.65



Alt Model-Shift Uniqueness Test

007703882-01, P = 5.883488 Days, E = 131.063990 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	2.67	2.40	3.32	4.89	2.33	1.16	11.6	10.7	0.26	-0.66	2.43	0.85	0.21	0.15



Stellar Parameters For KIC 007703882

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5840^{+174}_{-174}	$4.553^{+0.036}_{-0.204}$	$-0.240^{+0.300}_{-0.300}$	$0.849^{+0.254}_{-0.079}$	$0.942^{+0.110}_{-0.110}$	$2.164^{+0.426}_{-1.110}$
	+3%/-3%	+1%/-4%	+125%/-125%	+30%/-9%	+12%/-12%	+20%/-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 007703882-01 / KOI 4403.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49 ± 14	$1.57^{+0.74}_{-0.64}$	1361^{+97}_{-65}	4093^{+957}_{-568}	40^{+79}_{-23}
Alt.	-40 ± 15	$1.48^{+0.76}_{-0.72}$	1364^{+101}_{-61}	4081^{+1196}_{-620}	38^{+99}_{-23}

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

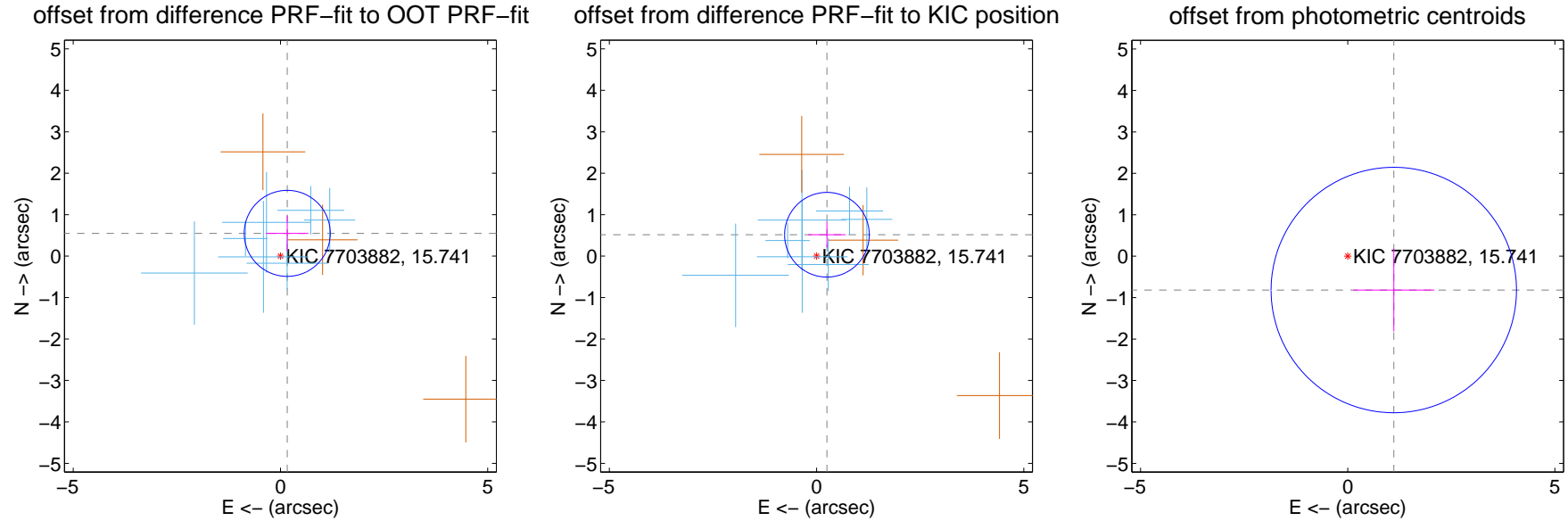
DV Centroid Data

Supplemental centroid analysis for 007703882-01. Kepler magnitude: 15.74. Transit SNR 11.91

There are 7 quarters with good PRF difference image offsets

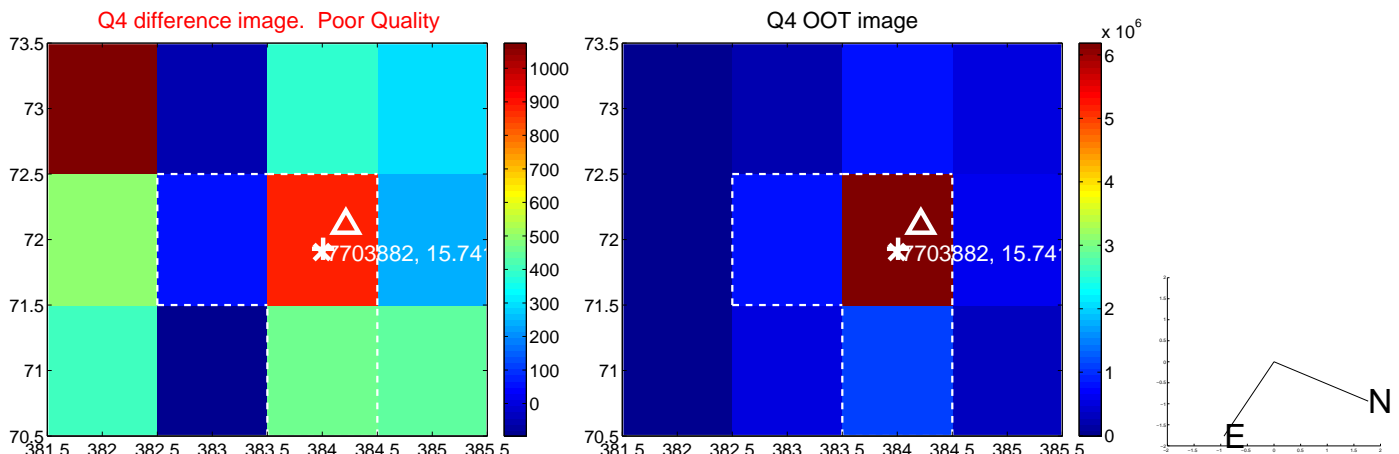
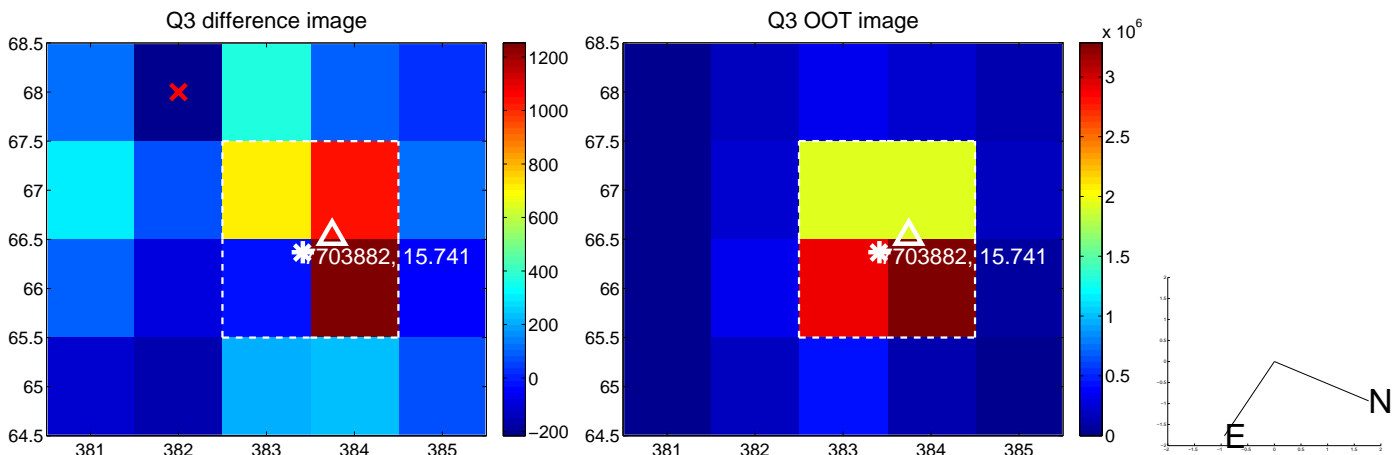
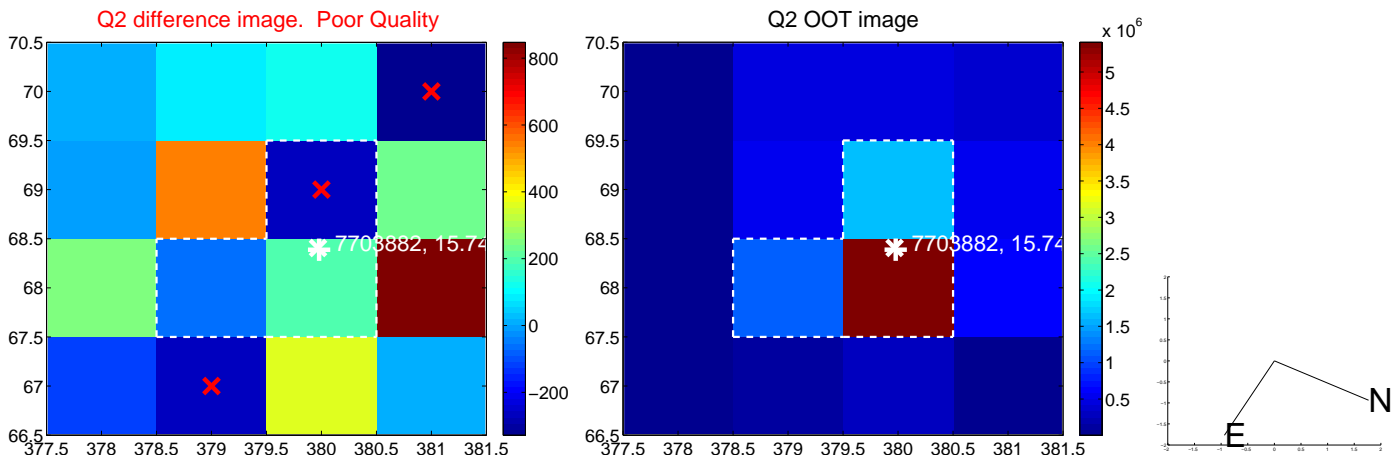
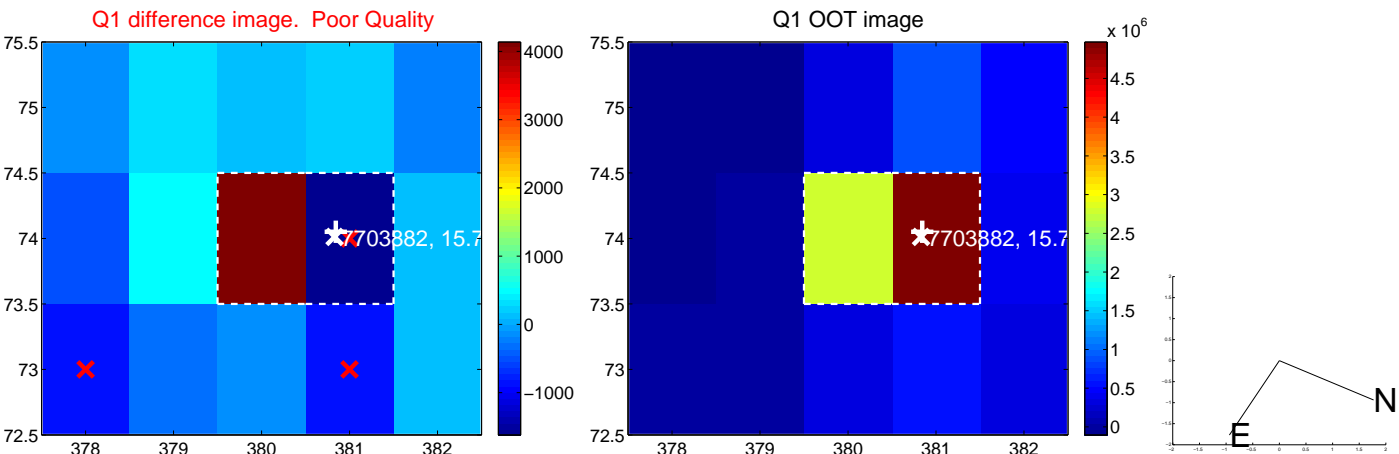
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.573 ± 0.346	1.66	-0.164 ± 0.514	0.549 ± 0.428
PRF-fit source offset from KIC position	0.573 ± 0.341	1.68	-0.250 ± 0.455	0.516 ± 0.308
photometric centroid source offset	1.38 ± 0.99	1.40	-1.11 ± 0.98	-0.82 ± 1.00

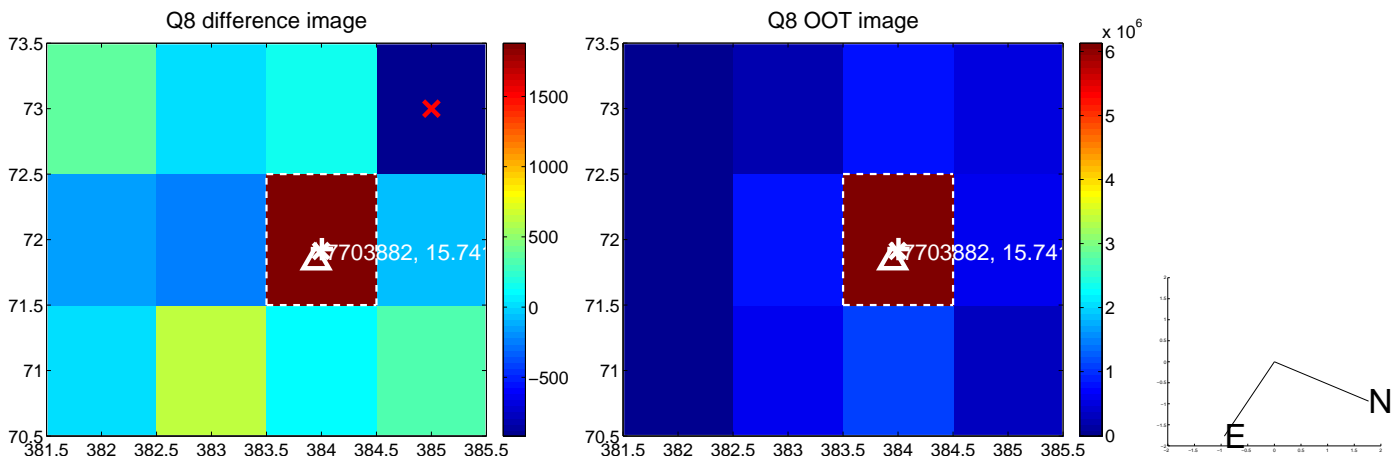
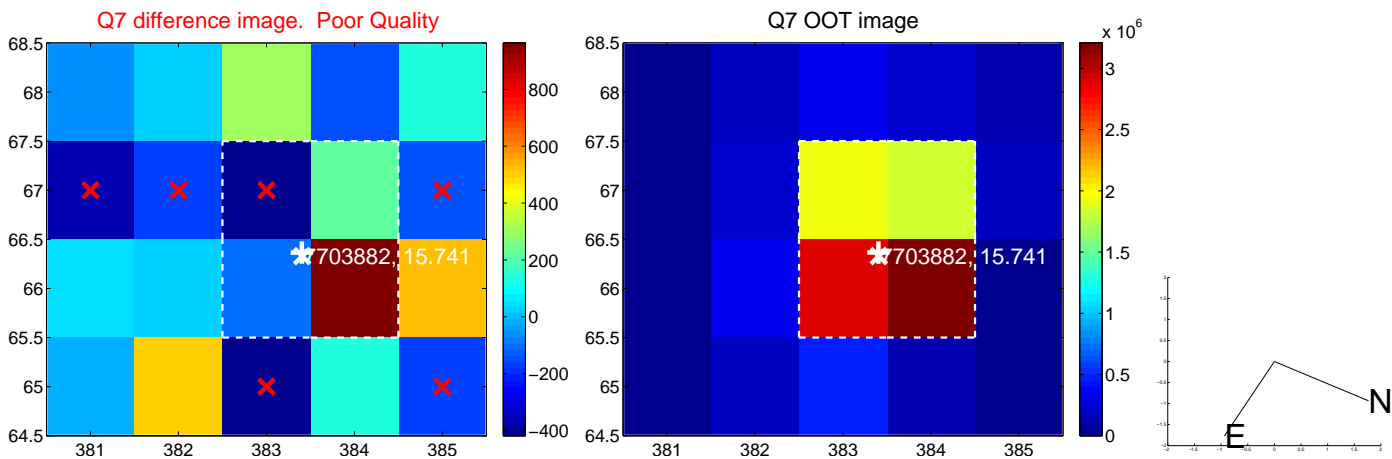
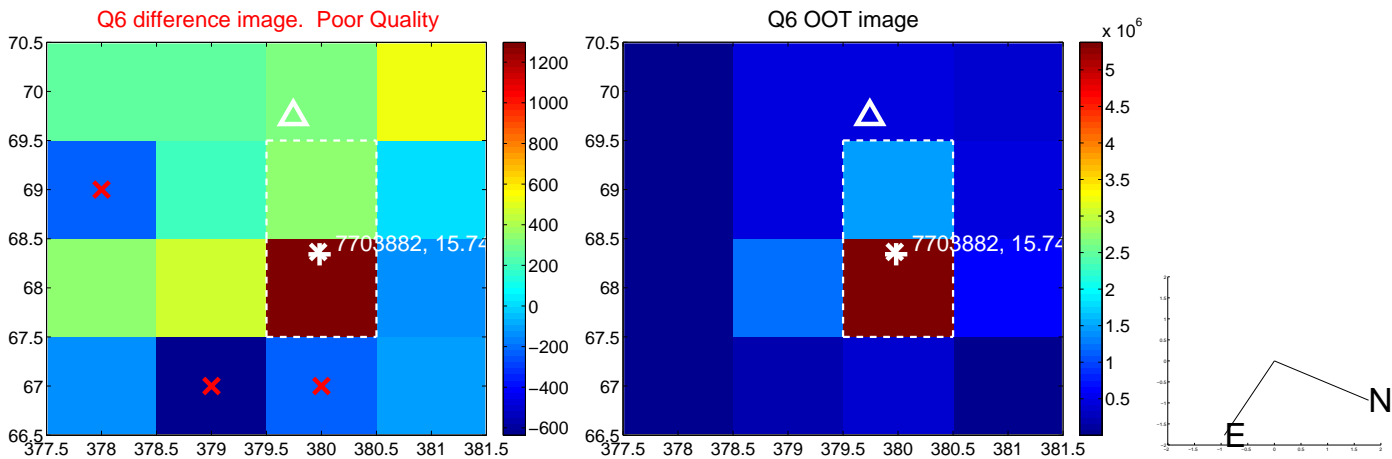
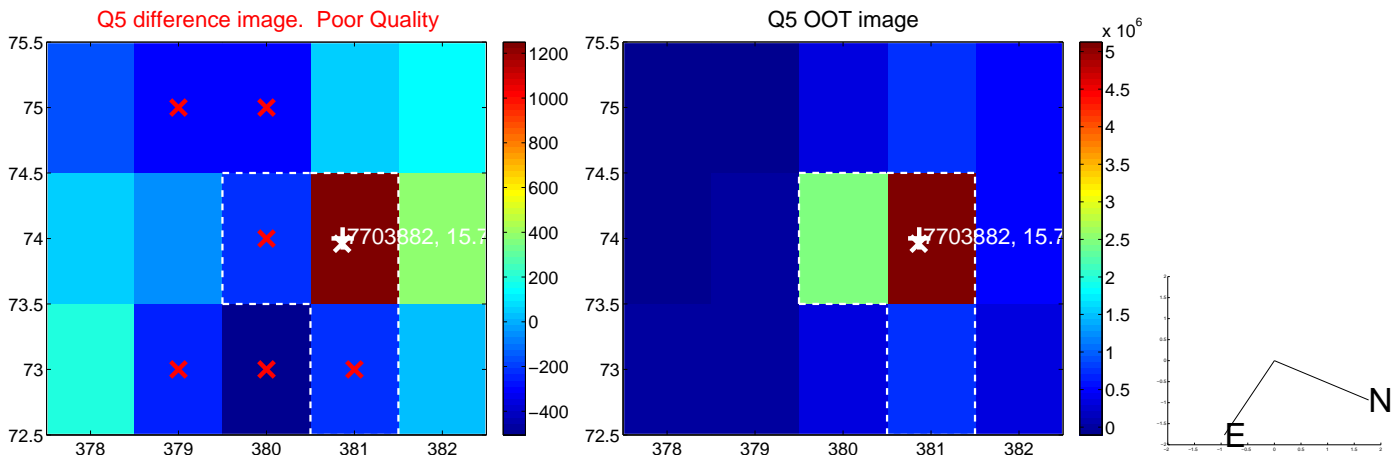


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

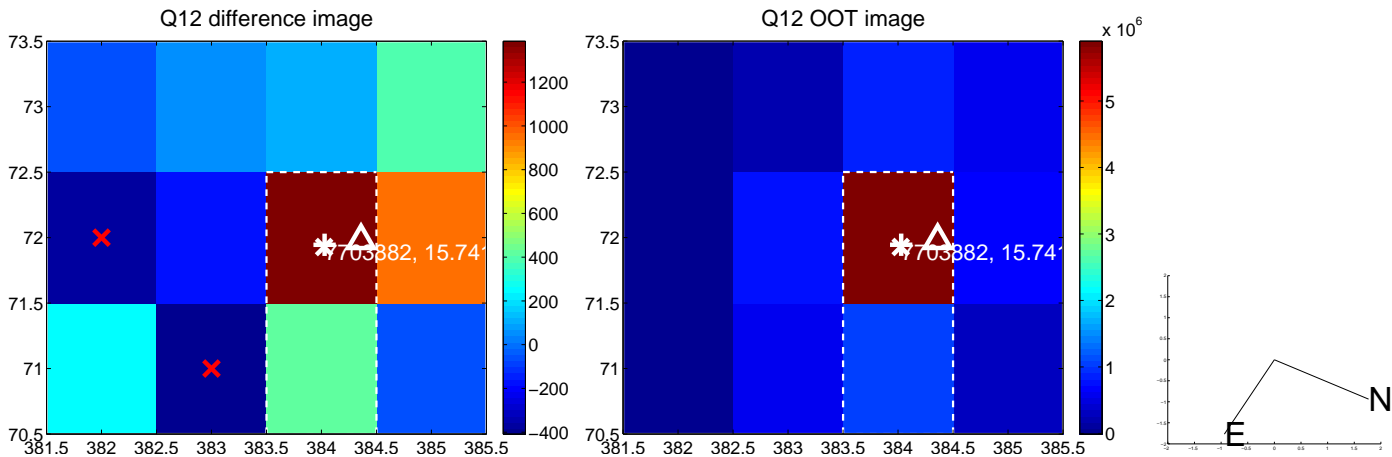
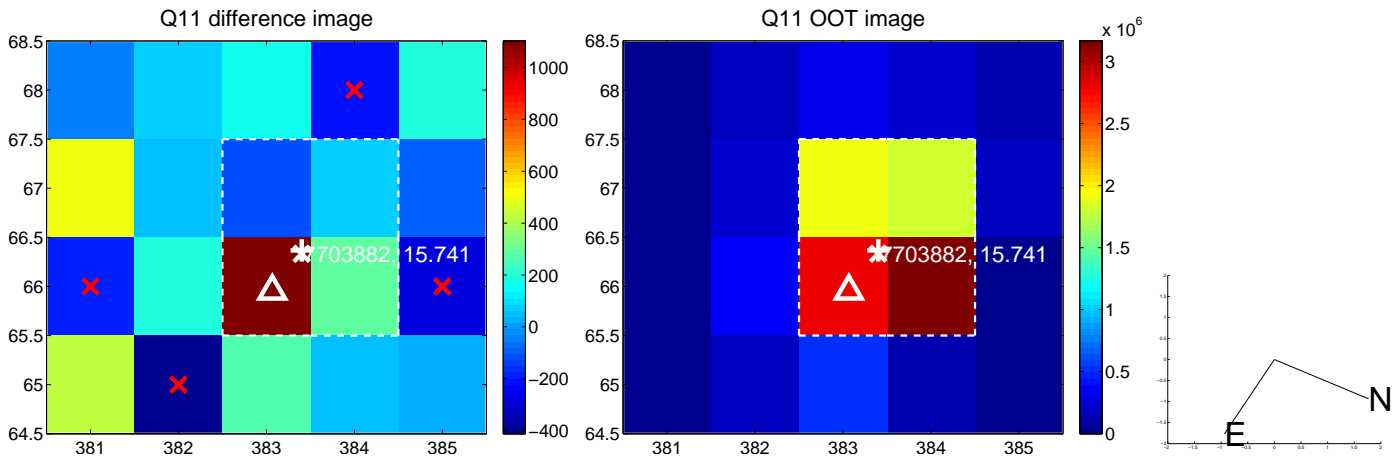
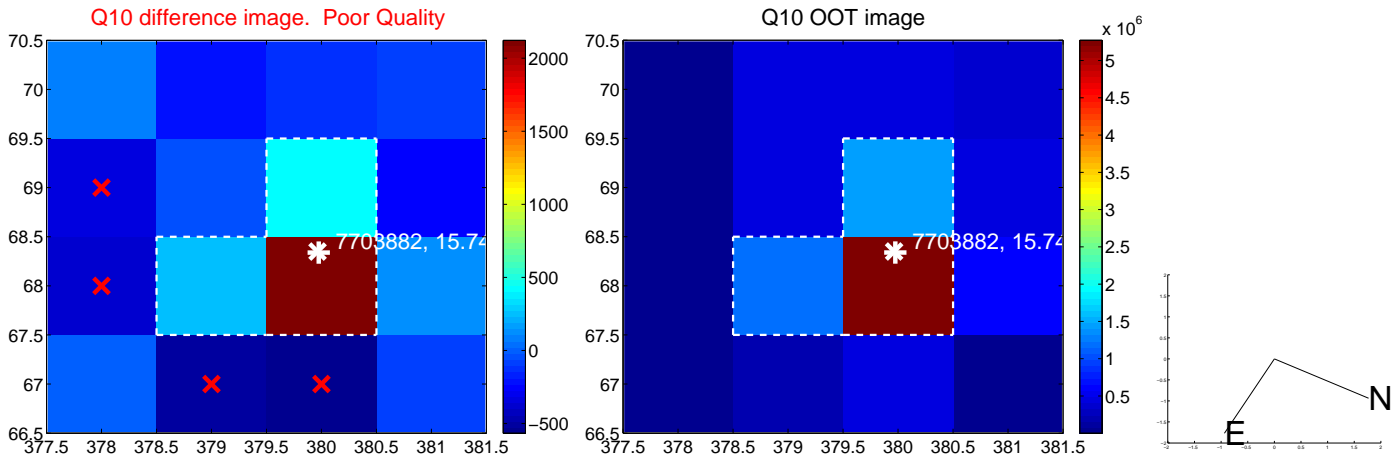
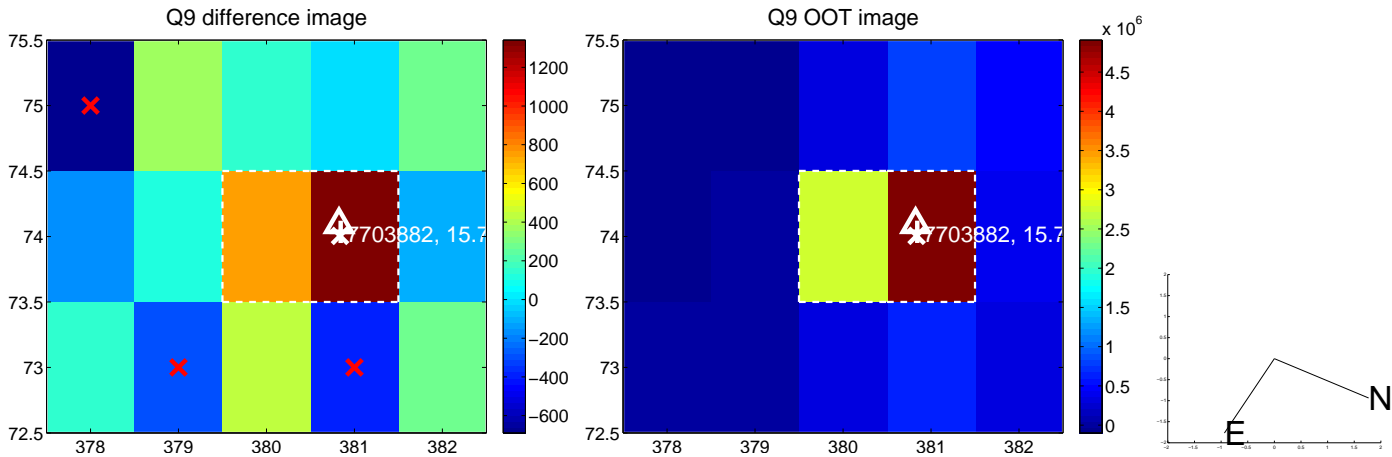
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



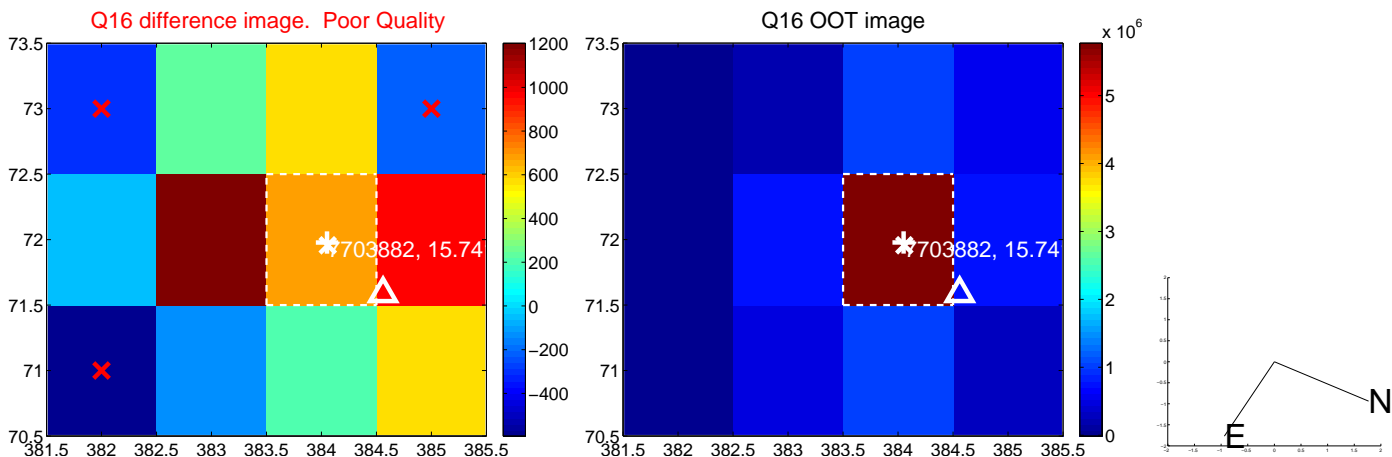
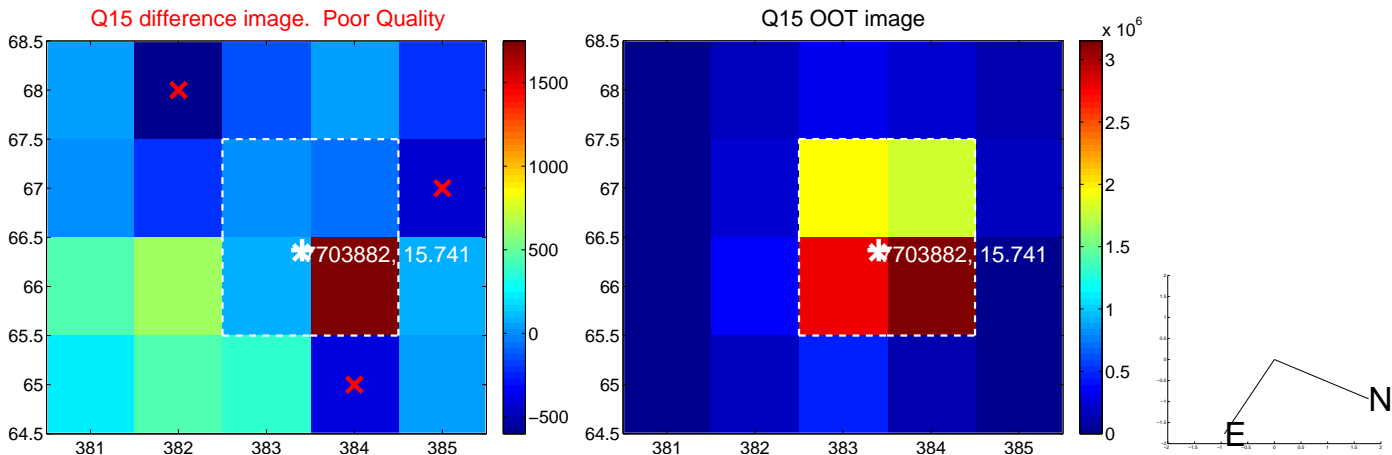
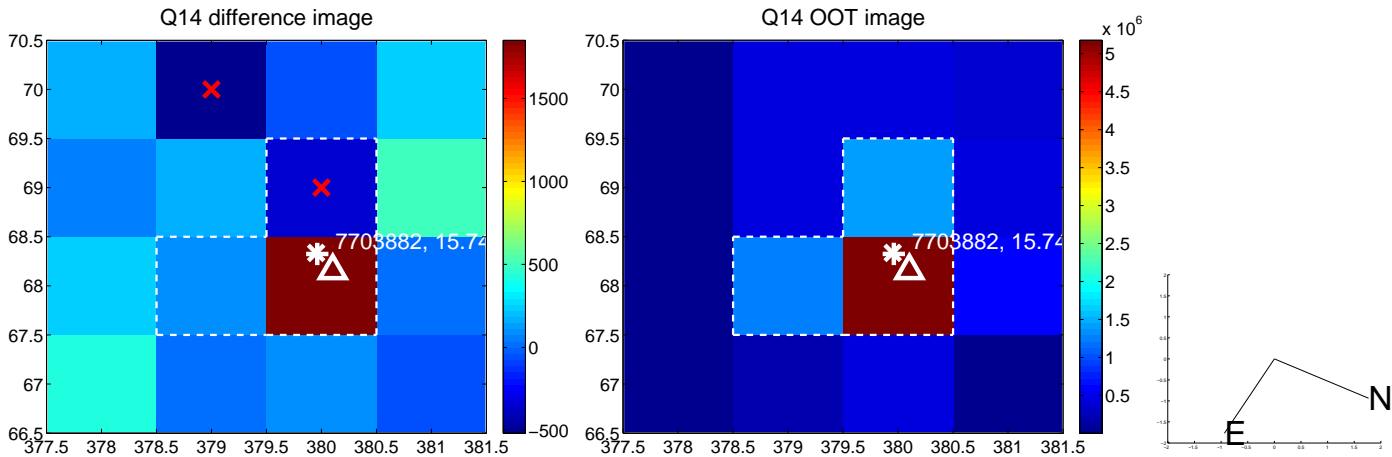
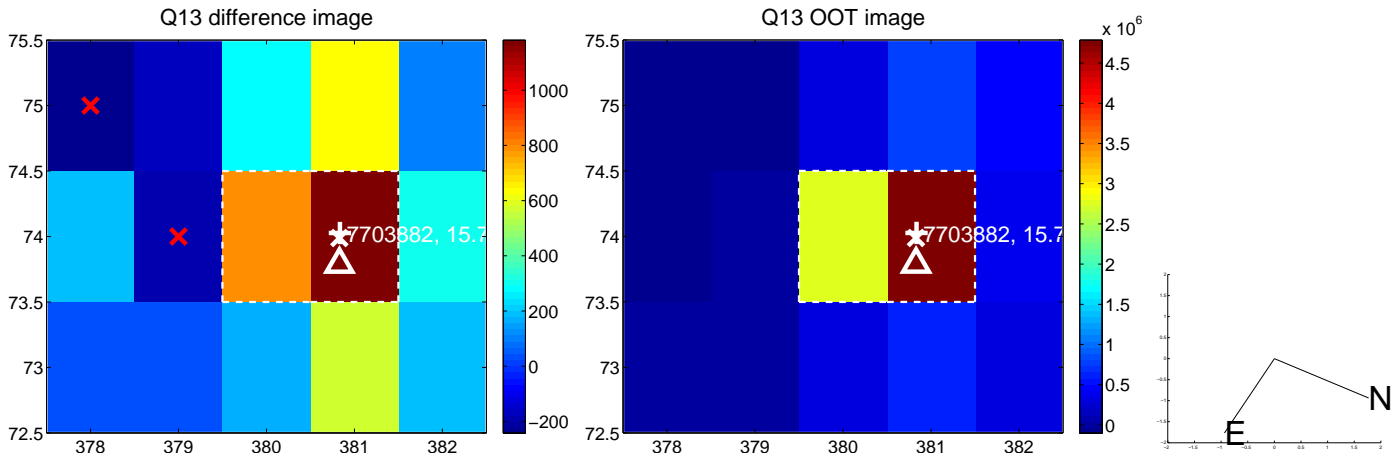
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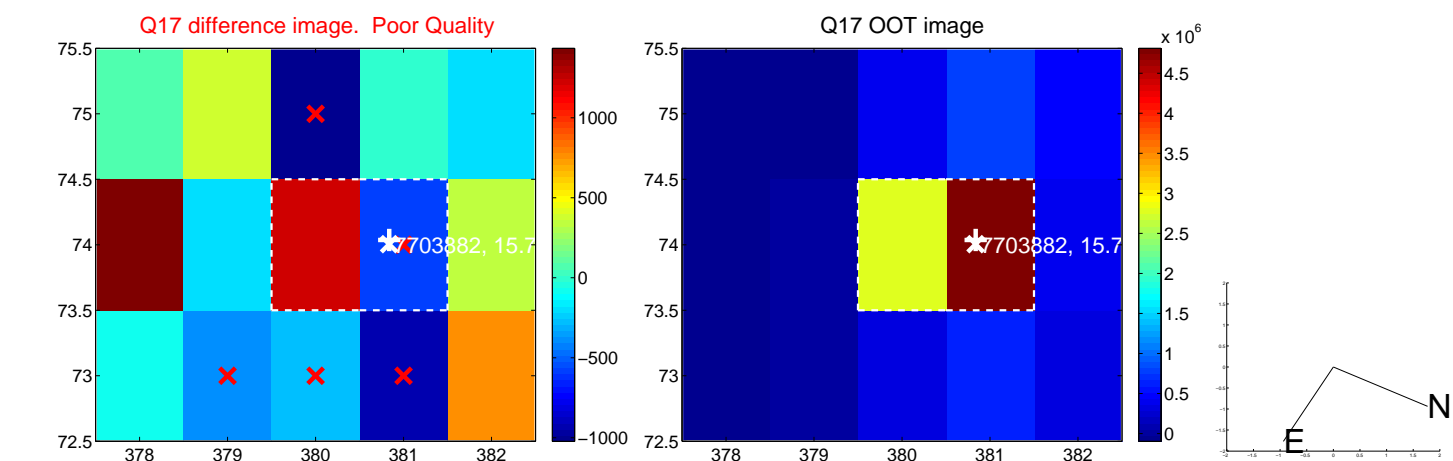
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



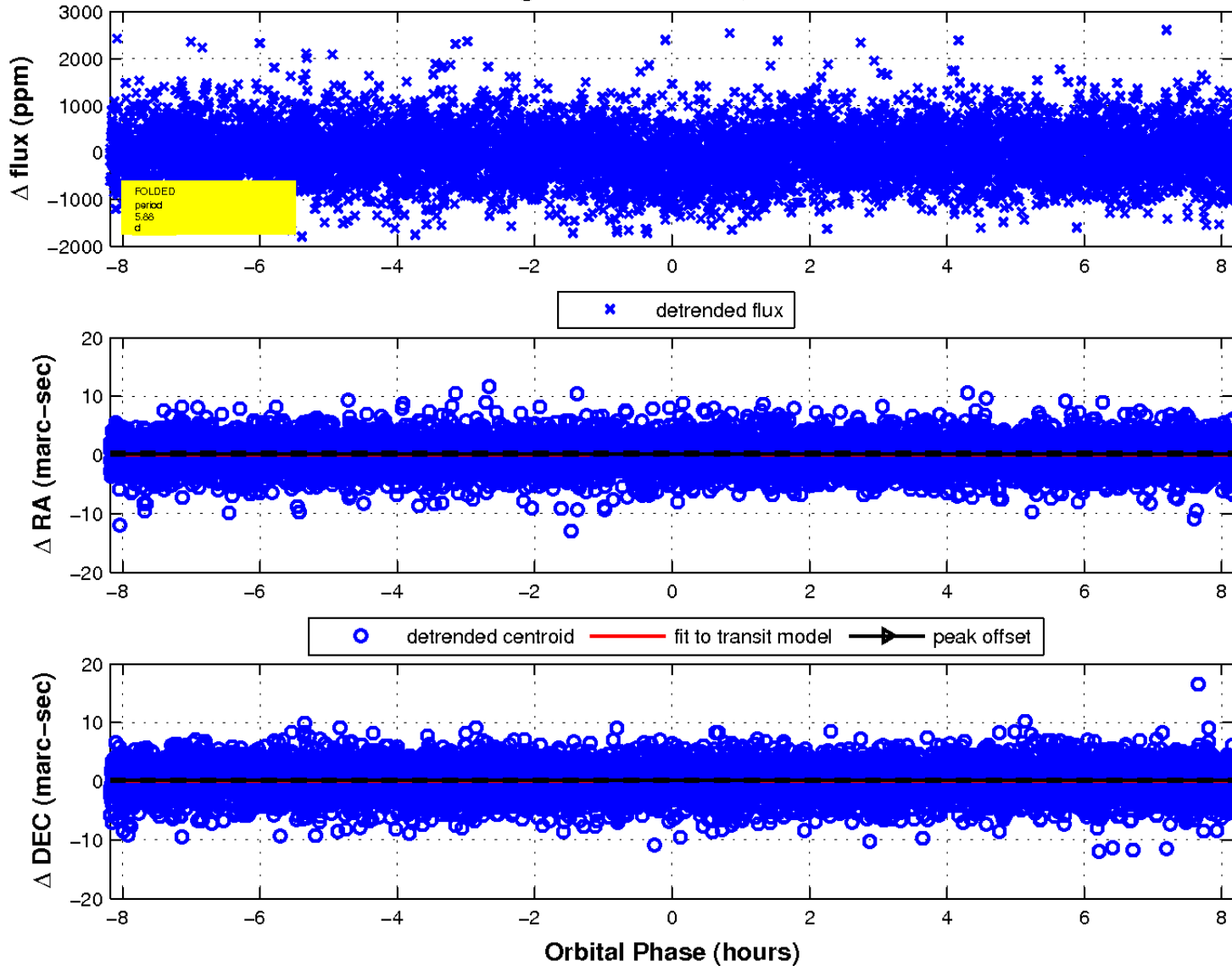
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

