

KIC 005120225

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})
005120225-01	OBS	7717.01	1.041573	131.871162	1424.9	7.641	570.8	256.7	0.99	5838	6.09	2821.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005120225-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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

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

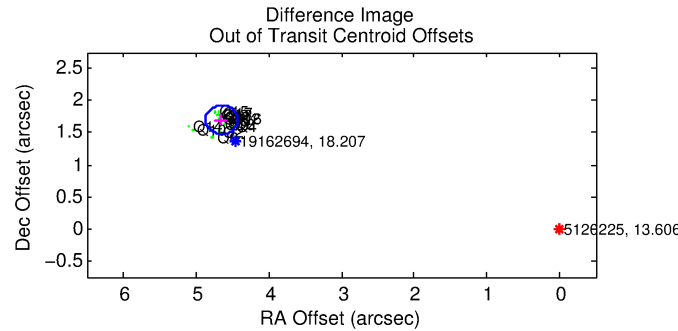
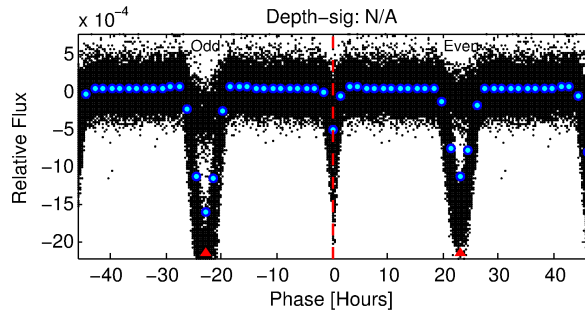
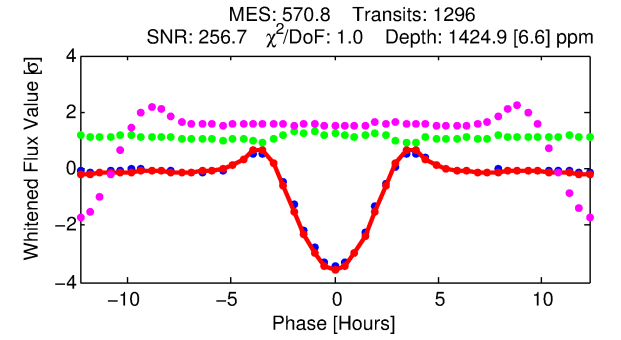
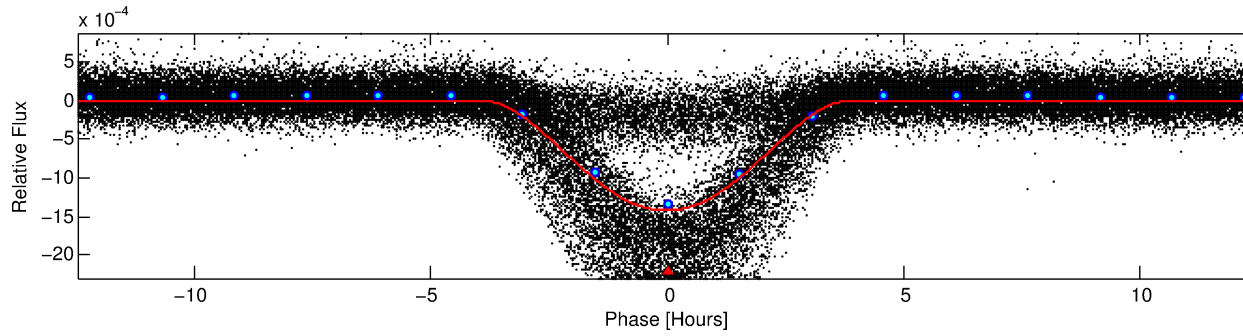
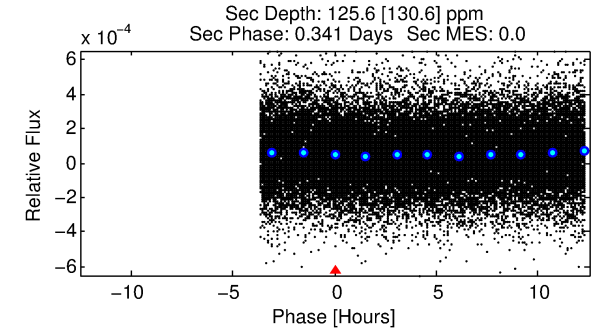
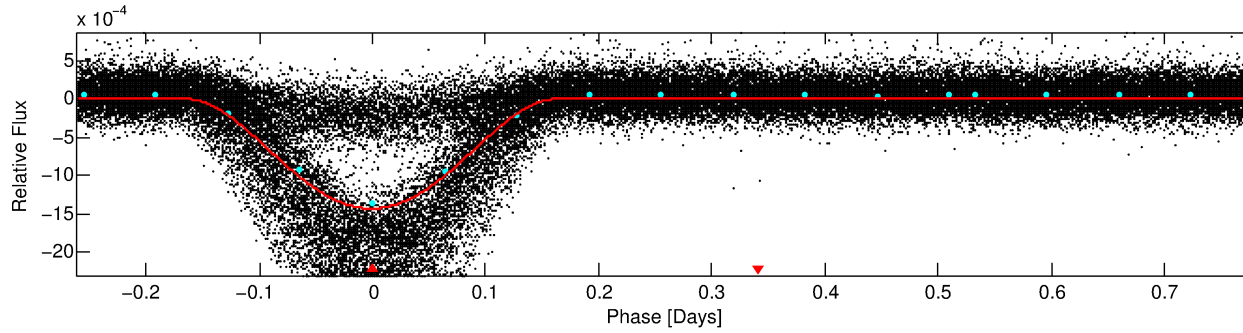
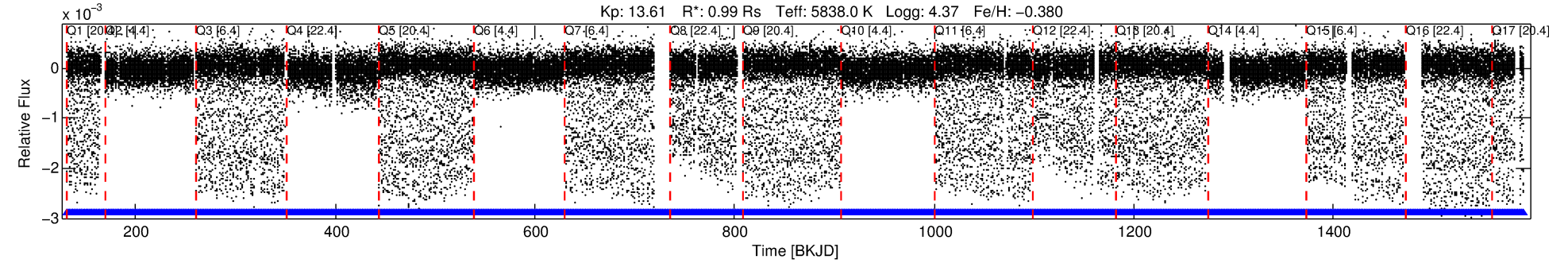
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005120225-01

No Significant Match Found

DV One-Page Summary

KIC: 5120225 Candidate: 1 of 1 Period: 1.042 d



DV Fit Results:

Period = 1.04157 [0.00000] d
Epoch = 131.8712 [0.0003] BKJD
Rp/R* = 0.0563 [0.0021]
a/R* = 1.09 [0.00]
b = 0.98 [0.00]
Seff = 2821.07 [1056.43]
Teff = 1858 [174] K
Rp = 6.09 [1.72] Re
a = 0.0190 [0.0045] AU
Ag = 0.68 [0.74] [-0.44σ]
Teffp = 2605 [684] K [1.06σ]

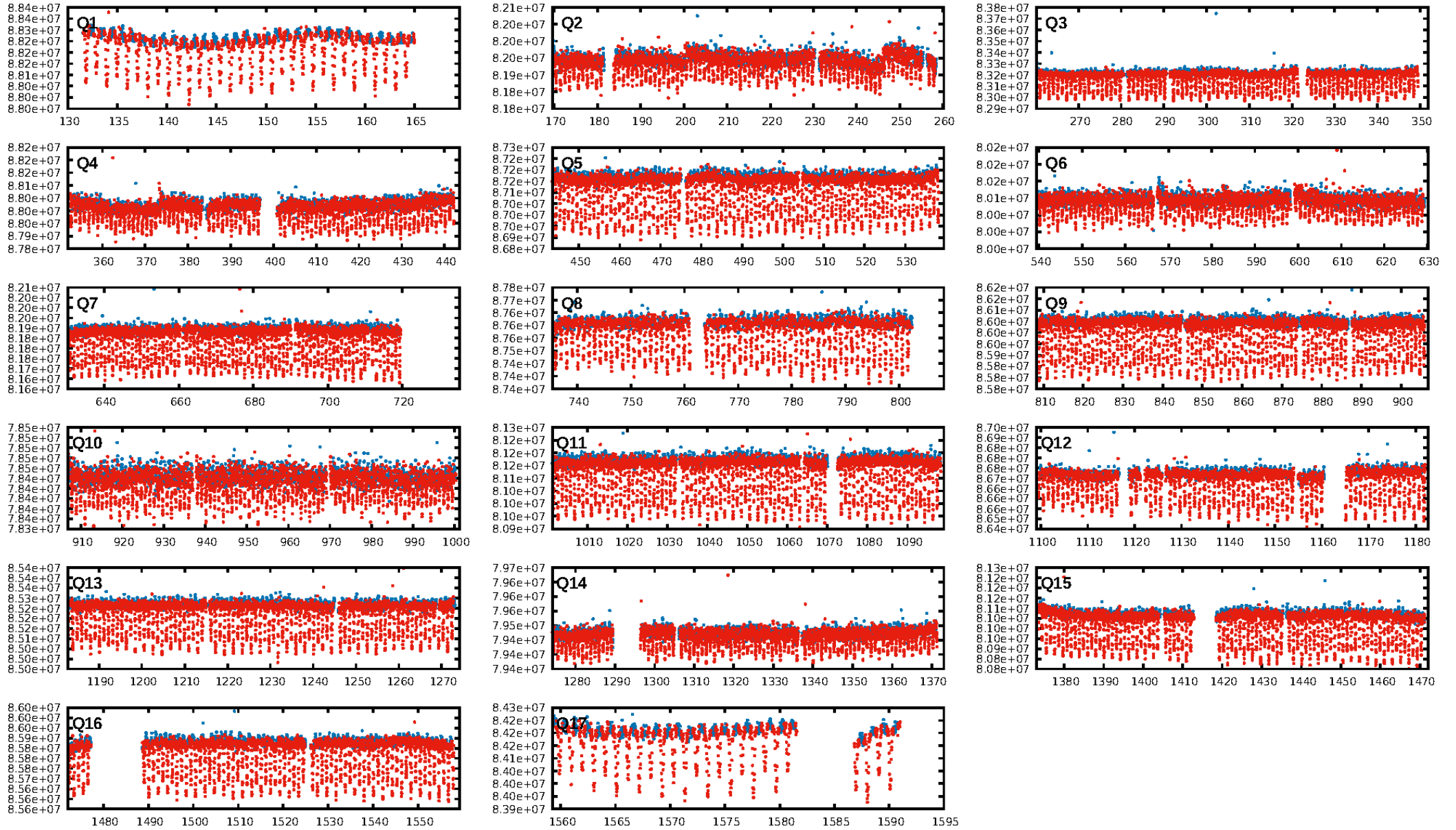
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1237/1237]
GhostDiagnostic-chr: 0.6566
Centroid-sig: 0.0%
Centroid-so: 8.082 arcsec [171.89σ]
OotOffset-rm: 4.948 arcsec [66.56σ]
KicOffset-rm: 4.685 arcsec [67.13σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

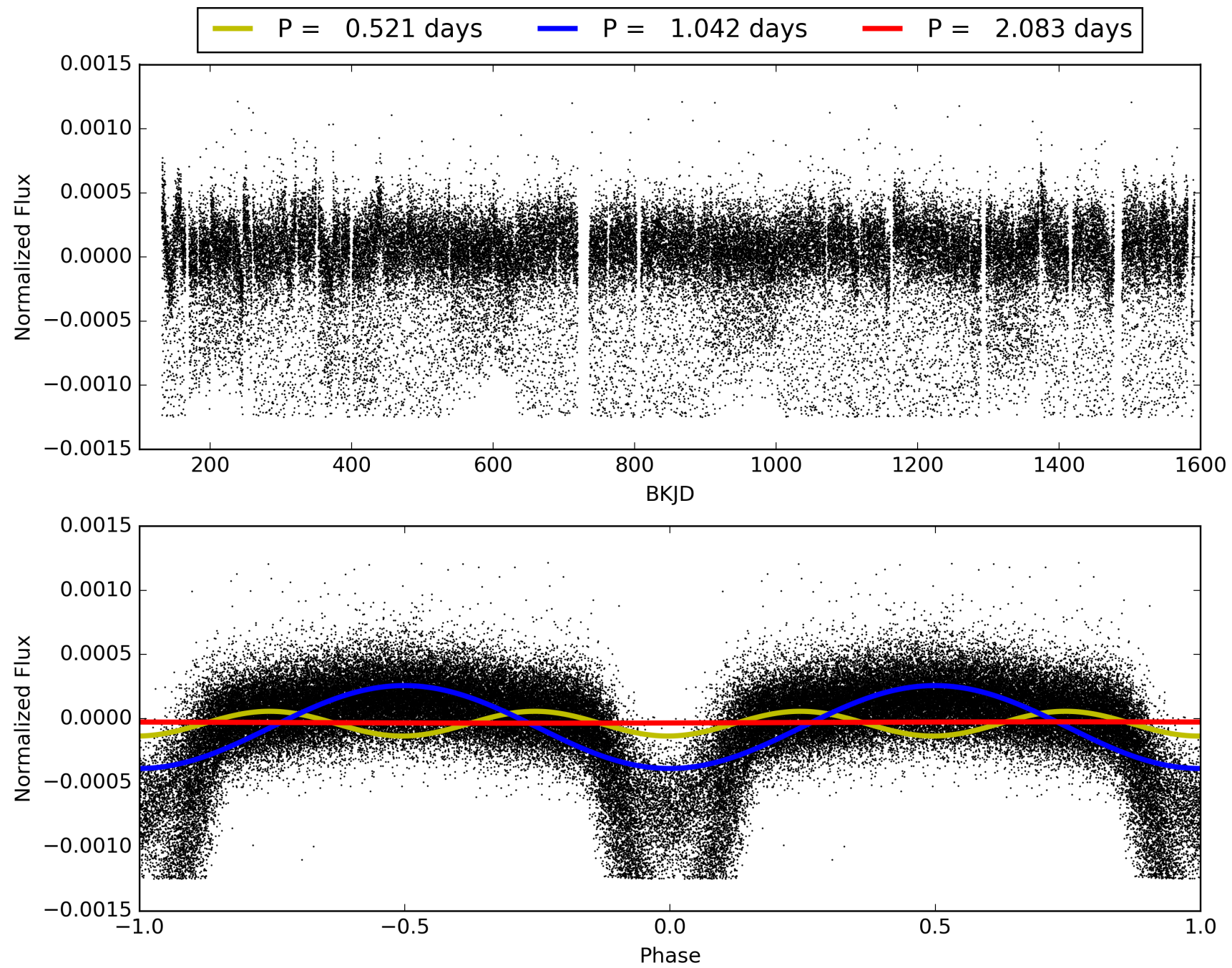
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:36:36 Z

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

TCE 005120225-01, PDC Light Curves

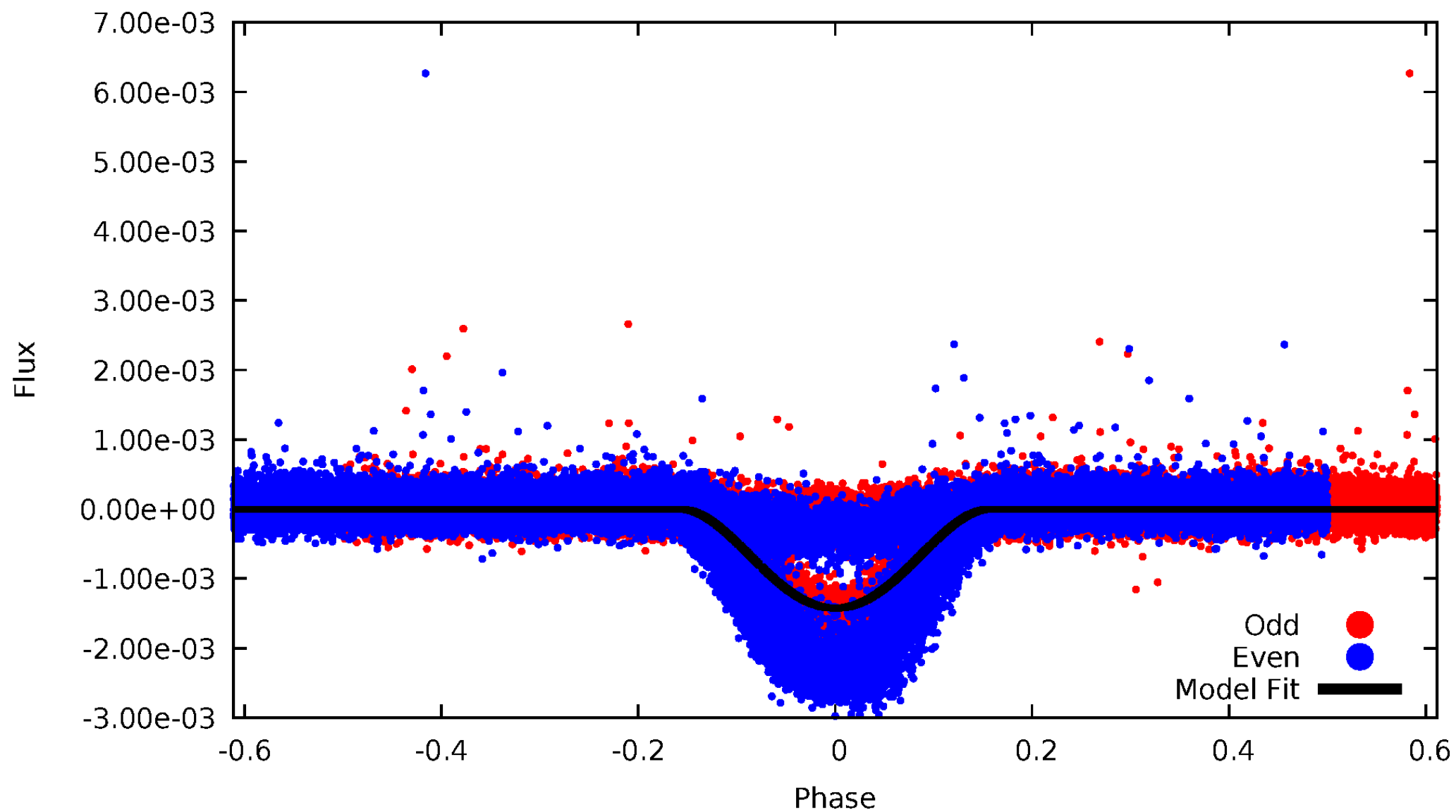


TCE 005120225-01



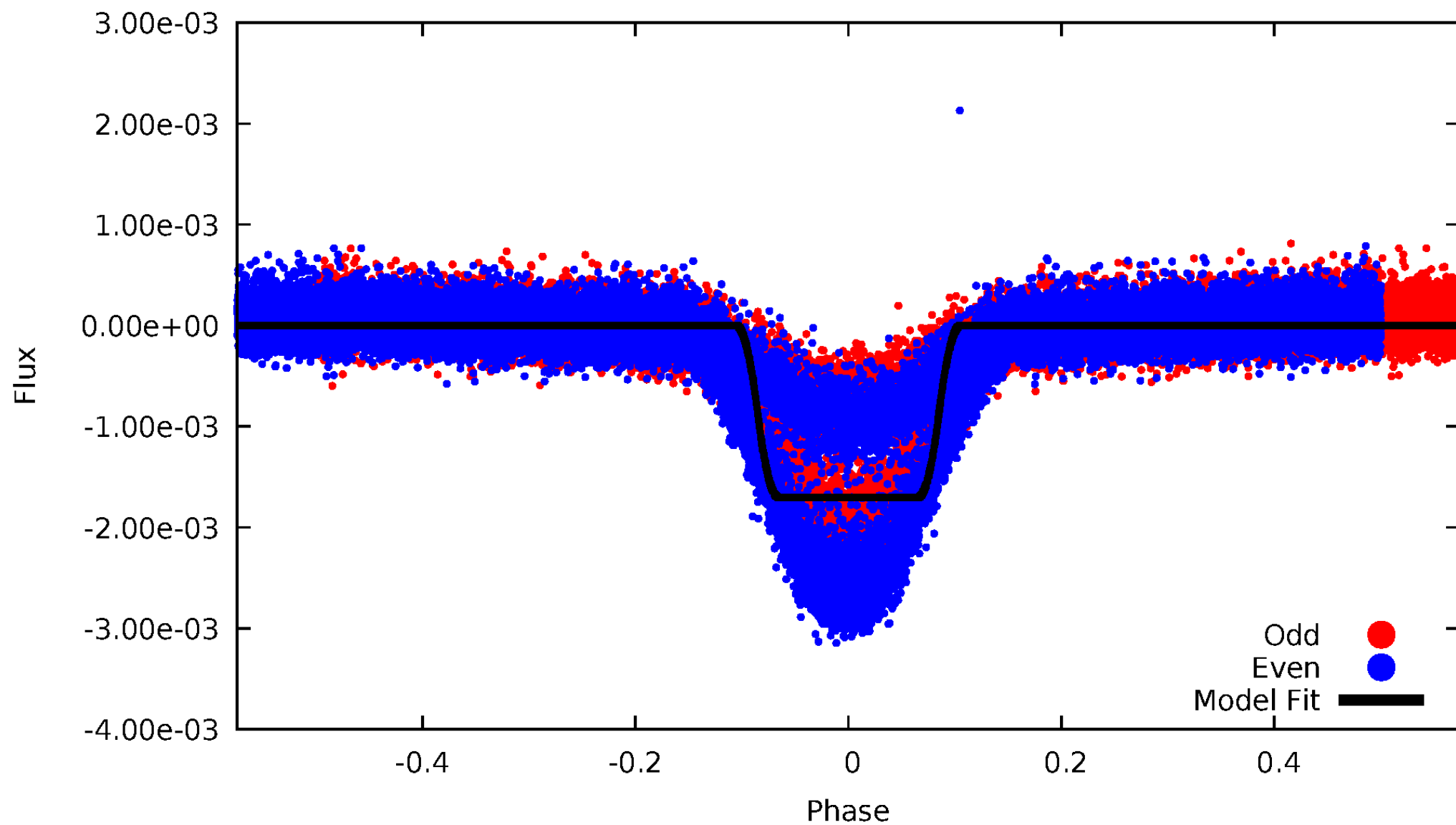
DV Odd/Even

TCE 005120225-01



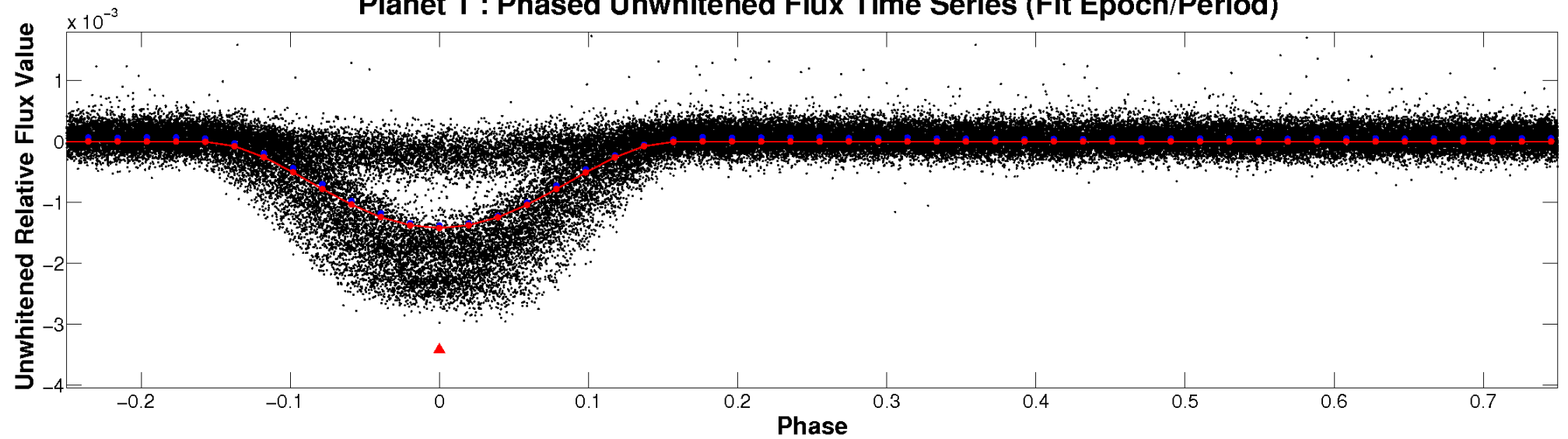
ALT Odd/Even

TCE 005120225-01

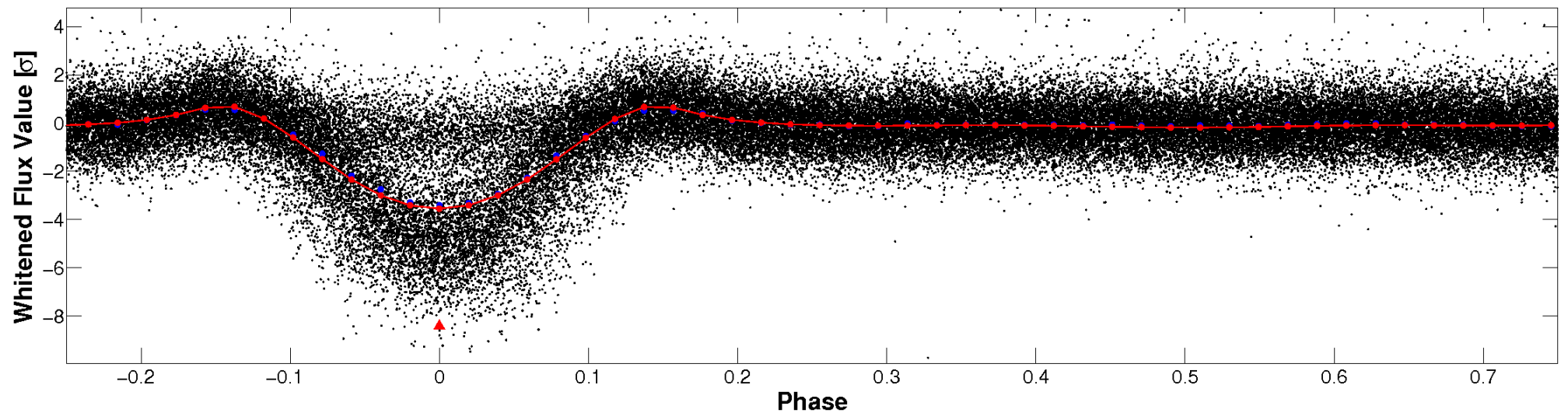


Non-Whitened Vs. Whitened Light Curve

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

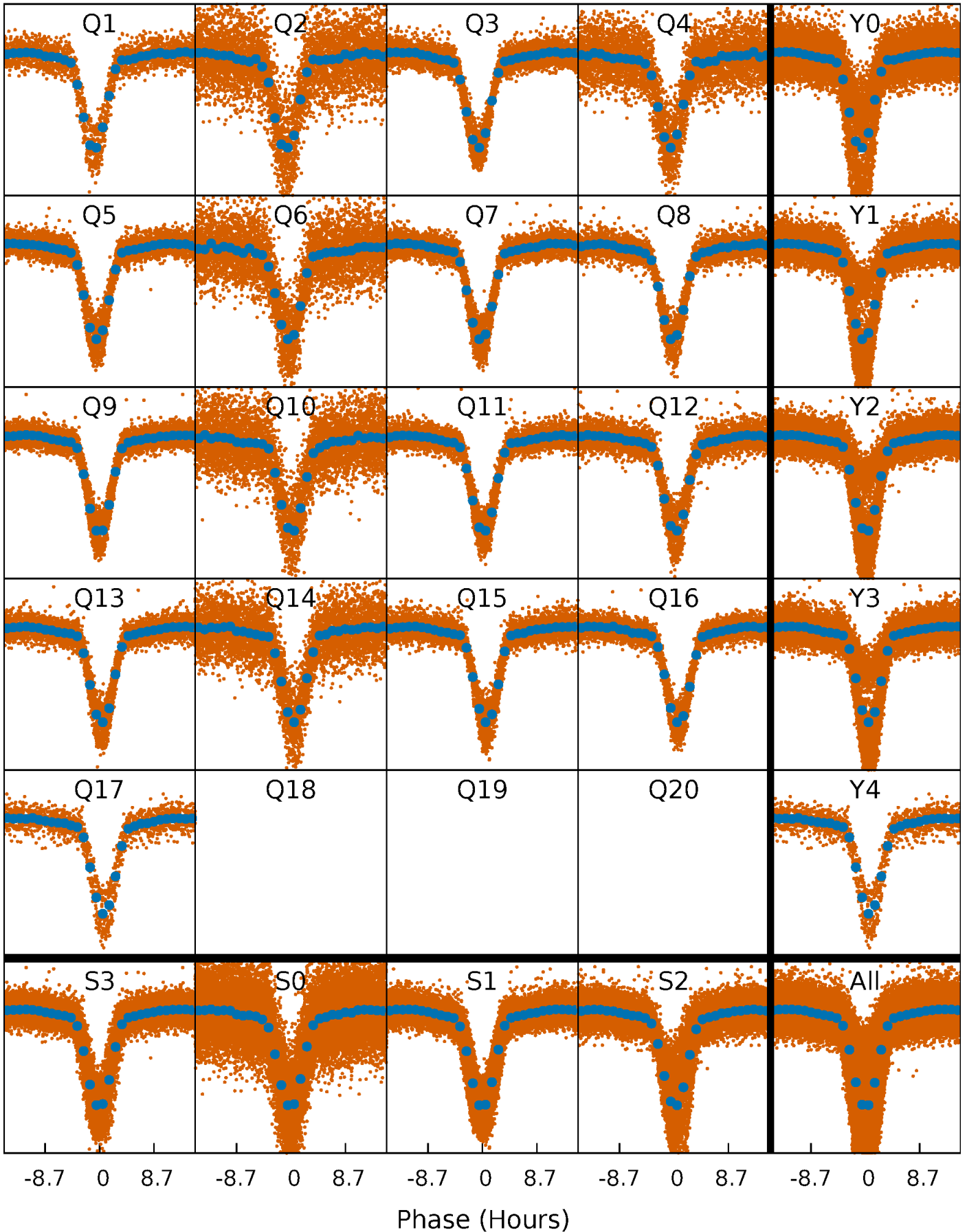


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



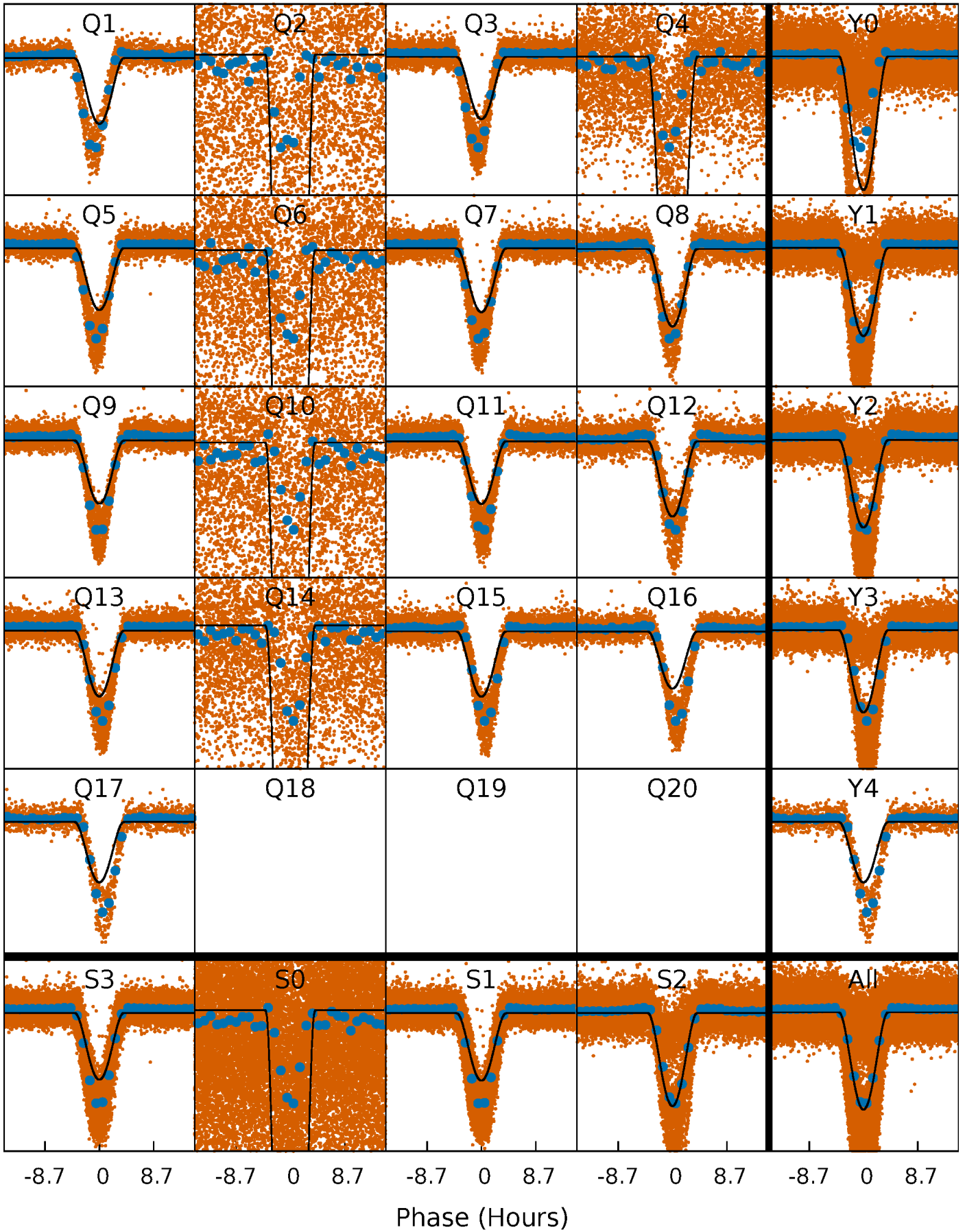
PDC Quarter-Phased Transit Curves

TCE 005120225-01 P= 1.041573 Days $T_0=131.871162$ (BKJD)



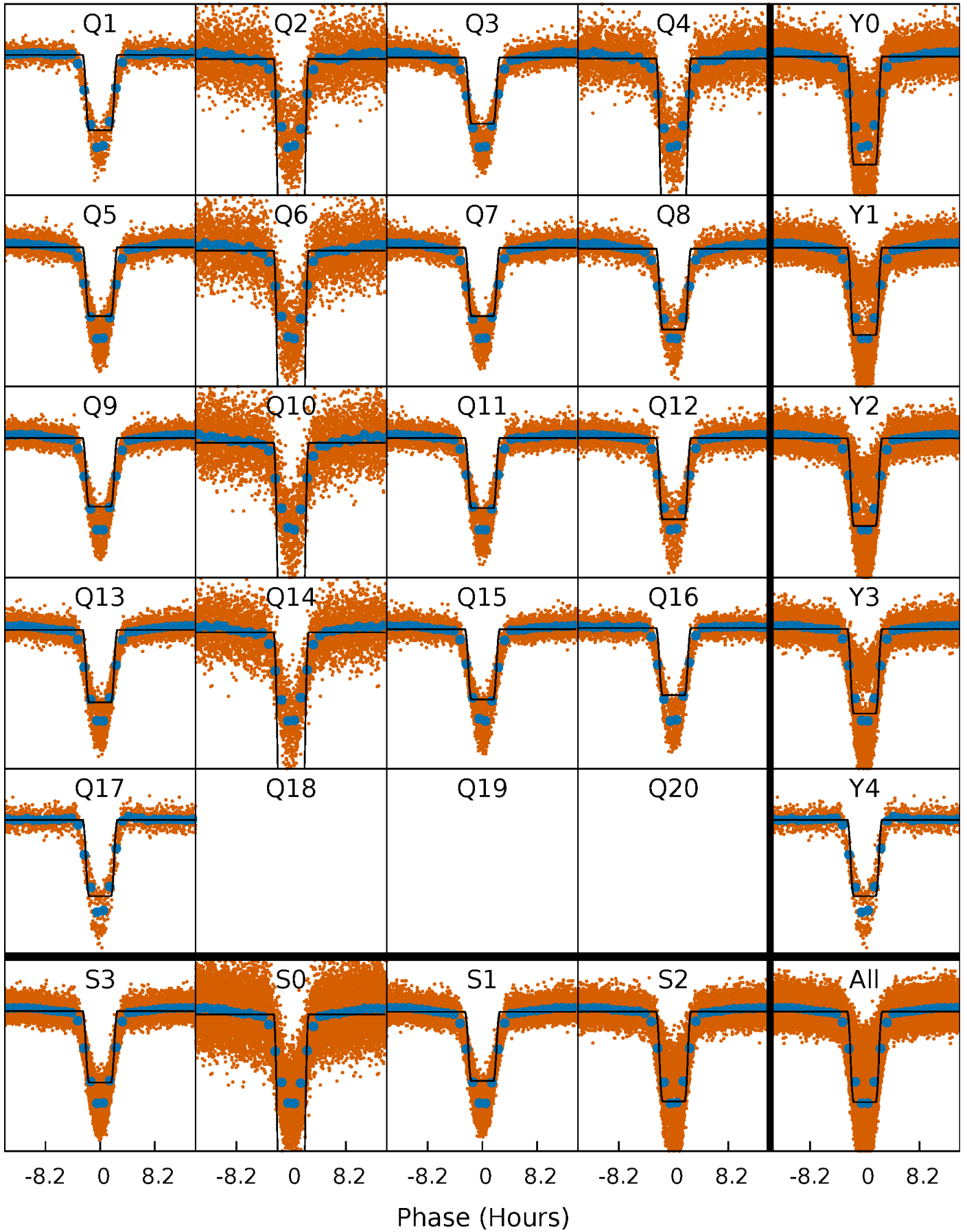
DV Quarter-Phased Transit Curves

TCE 005120225-01 P= 1.041573 Days $T_0=131.871162$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

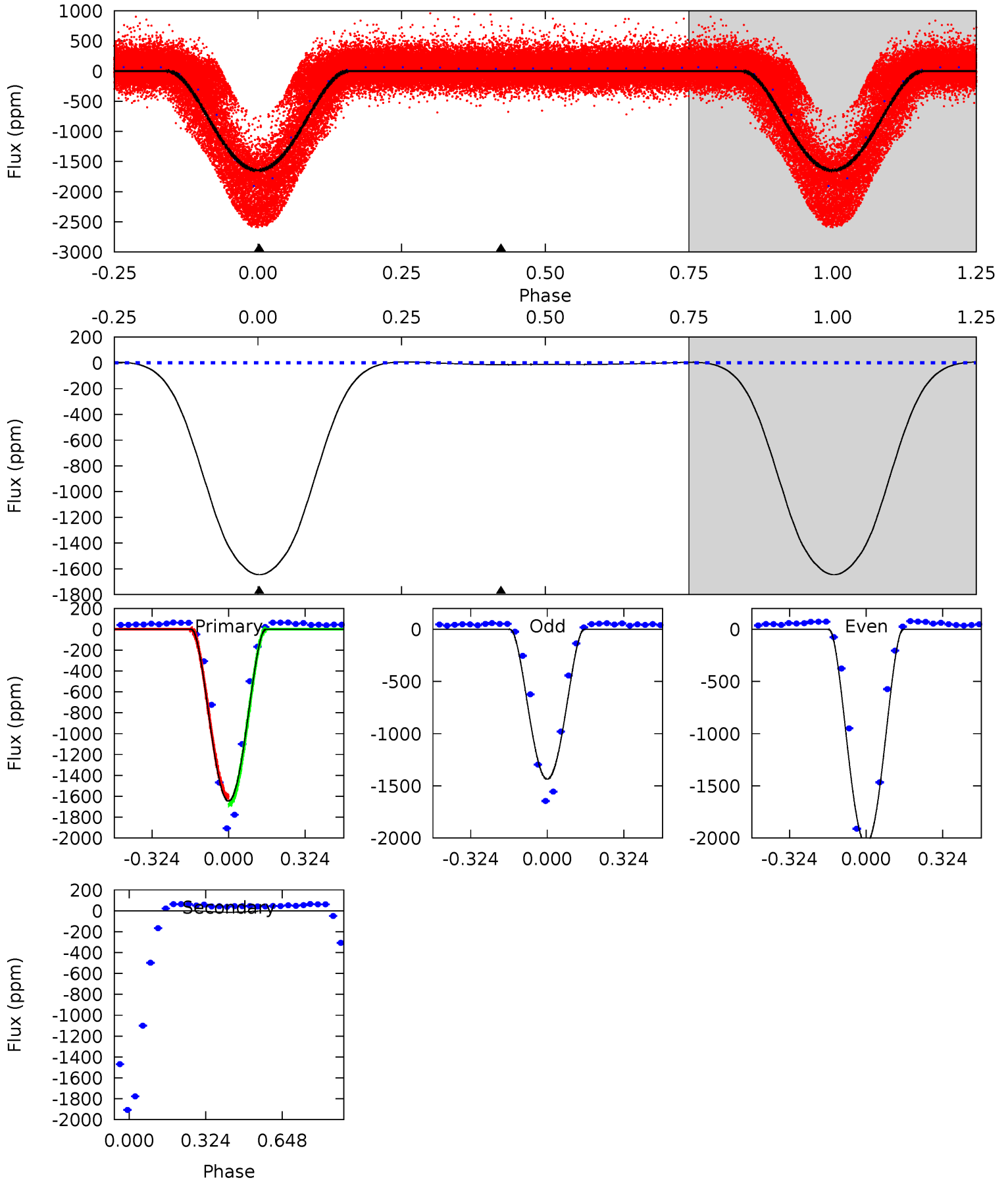
TCE 005120225-01 P= 1.041620 Days $T_0=131.836739$ (BKJD)



DV Model-Shift Uniqueness Test

005120225-01, P = 1.041573 Days, E = 130.829589 Days

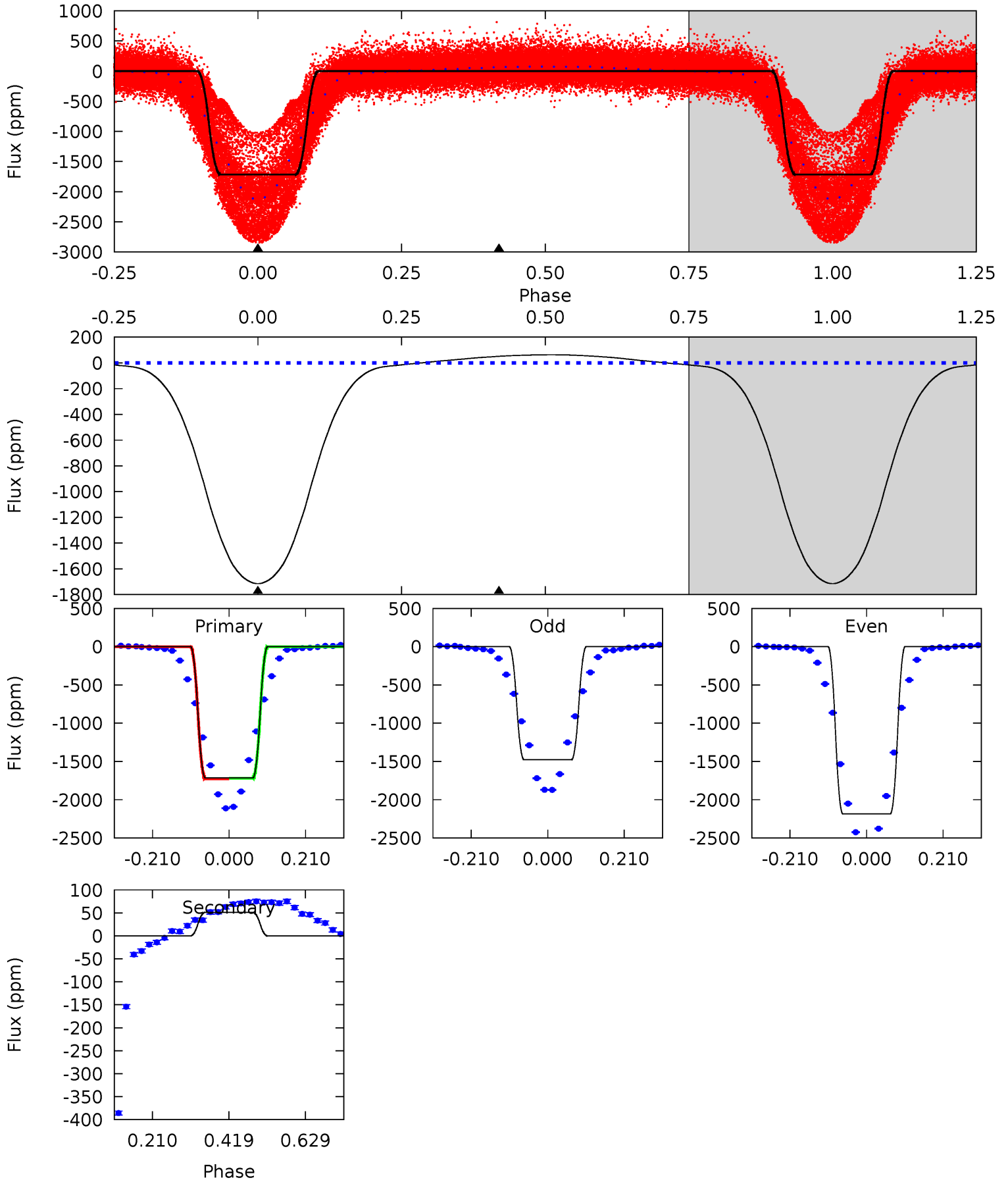
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1252	10.9	0	0	4.31	0.99	2.59	1252	1252	10.9	10.9	233.0	0.84	0.00	0



Alt Model-Shift Uniqueness Test

005120225-01, P = 1.041620 Days, E = 130.795119 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1156	-34.4	0	0	4.41	1.25	13.6	1156	1156	-34.4	-34.4	234.6	0.92	0.04	2.92



Stellar Parameters For KIC 005120225

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5838^{+193}_{-193}	$4.374^{+0.175}_{-0.193}$	$-0.380^{+0.300}_{-0.300}$	$0.991^{+0.278}_{-0.185}$	$0.848^{+0.119}_{-0.069}$	$1.227^{+0.911}_{-0.602}$
	+3%/-3%	+4%/-4%	+79%/-79%	+28%/-19%	+14%/-8%	+74%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005120225-01 / KOI 7717.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 1	$6.12^{+0.97}_{-0.71}$	2598^{+201}_{-182}	-2740^{+132}_{-140}	$0.076^{+0.023}_{-0.018}$
Alt.	51 ± 1	$4.50^{+0.75}_{-0.55}$	2605^{+200}_{-178}	-3298^{+87}_{-95}	$-0.512^{+0.132}_{-0.147}$

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 $A_{obs} \gg 1.0$

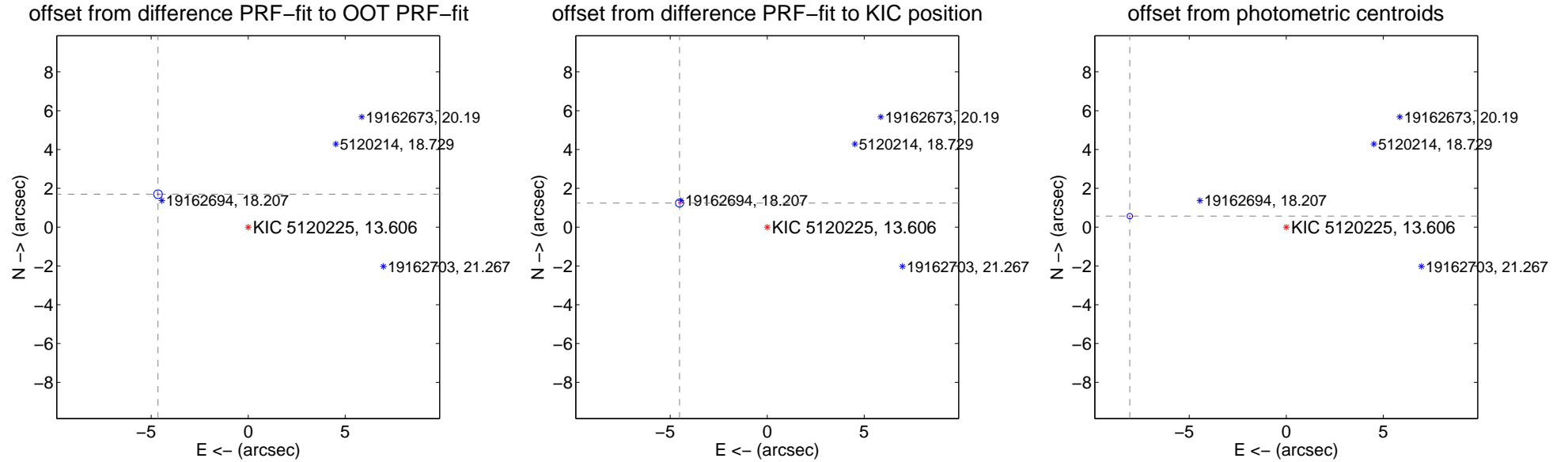
DV Centroid Data

Supplemental centroid analysis for 005120225-01. Kepler magnitude: 13.61. Transit SNR 256.68

There are 17 quarters with good PRF difference image offsets

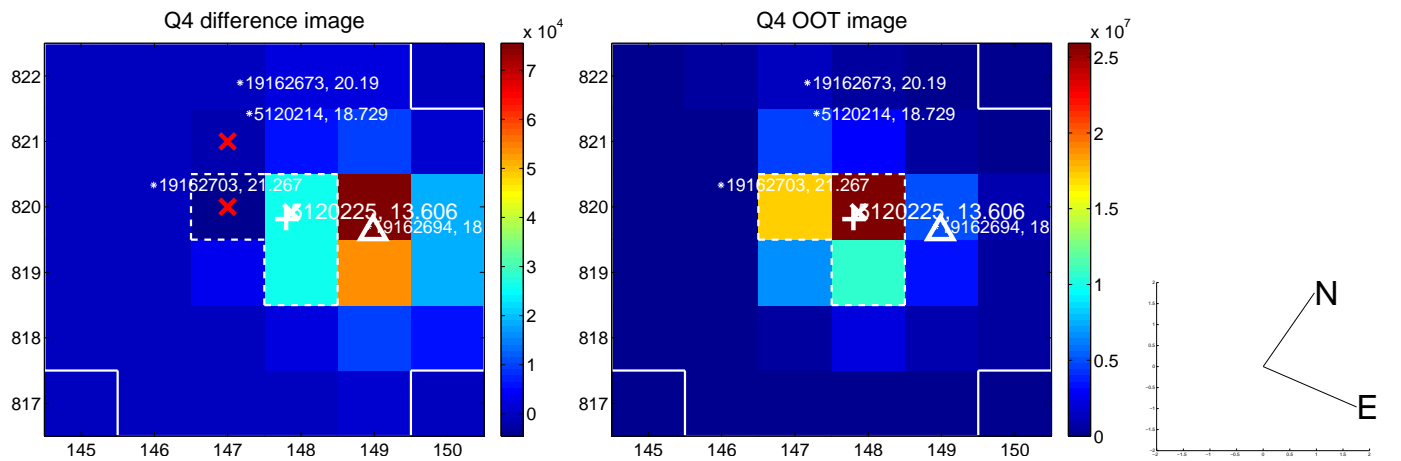
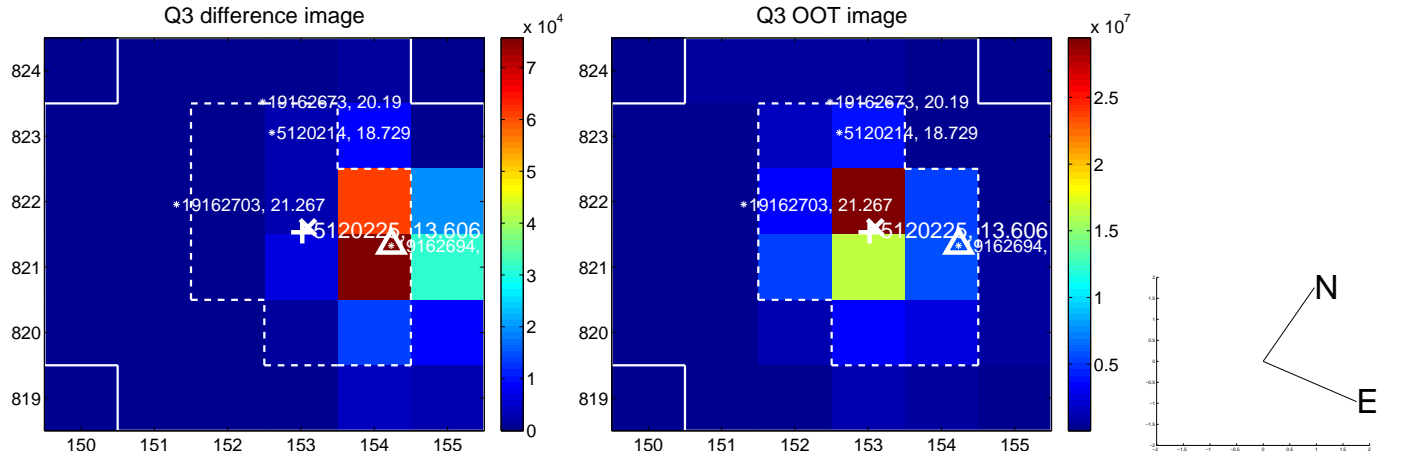
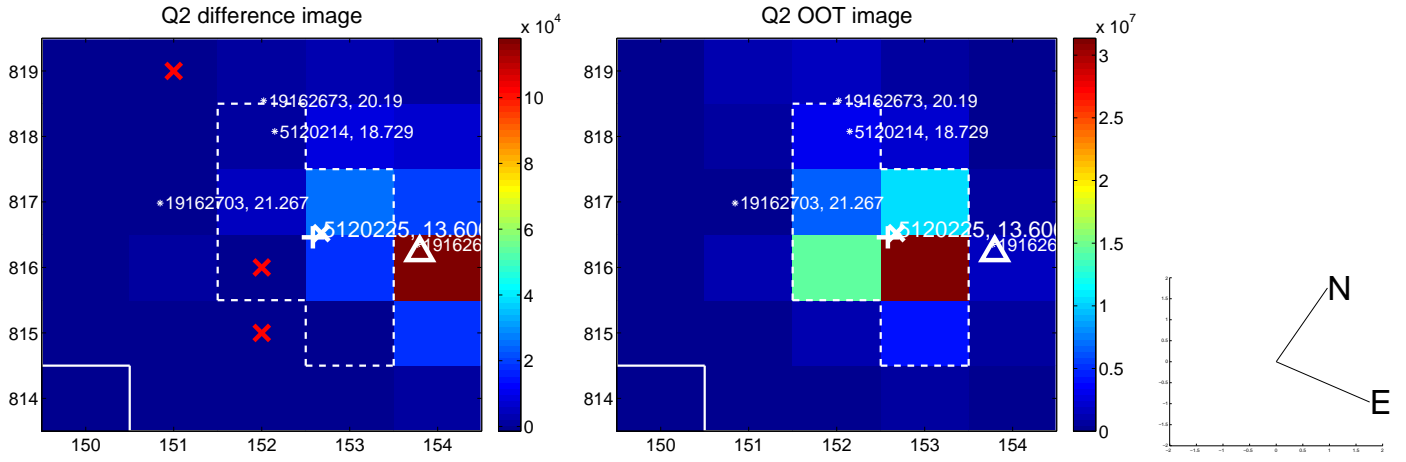
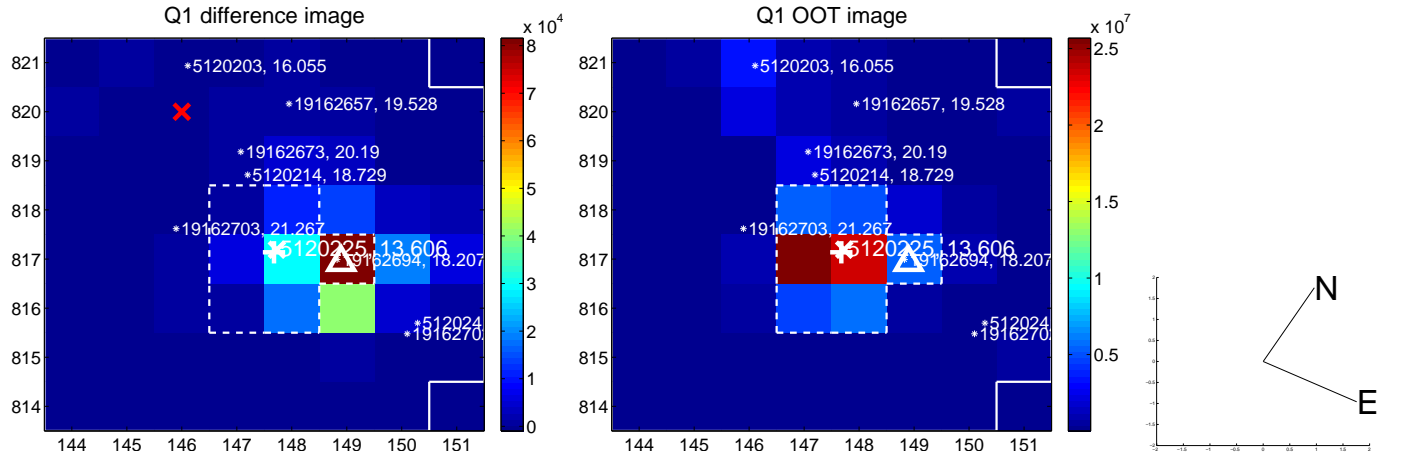
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.948 ± 0.074	66.56	4.648 ± 0.076	1.696 ± 0.071
PRF-fit source offset from KIC position	4.685 ± 0.070	67.13	4.518 ± 0.070	1.238 ± 0.072
photometric centroid source offset	8.08 ± 0.05	171.89	8.06 ± 0.05	0.57 ± 0.03

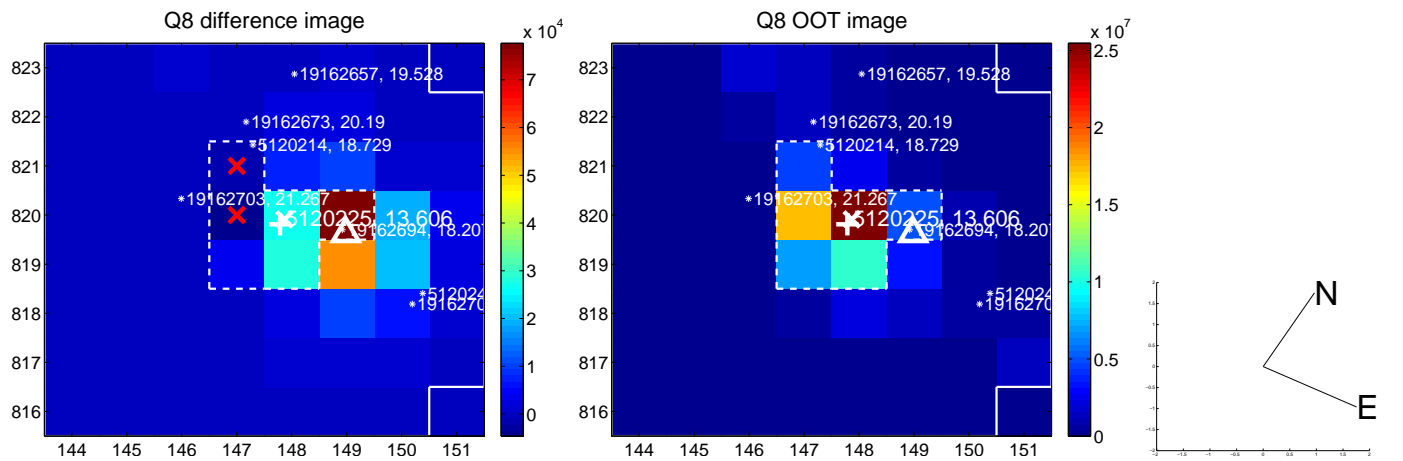
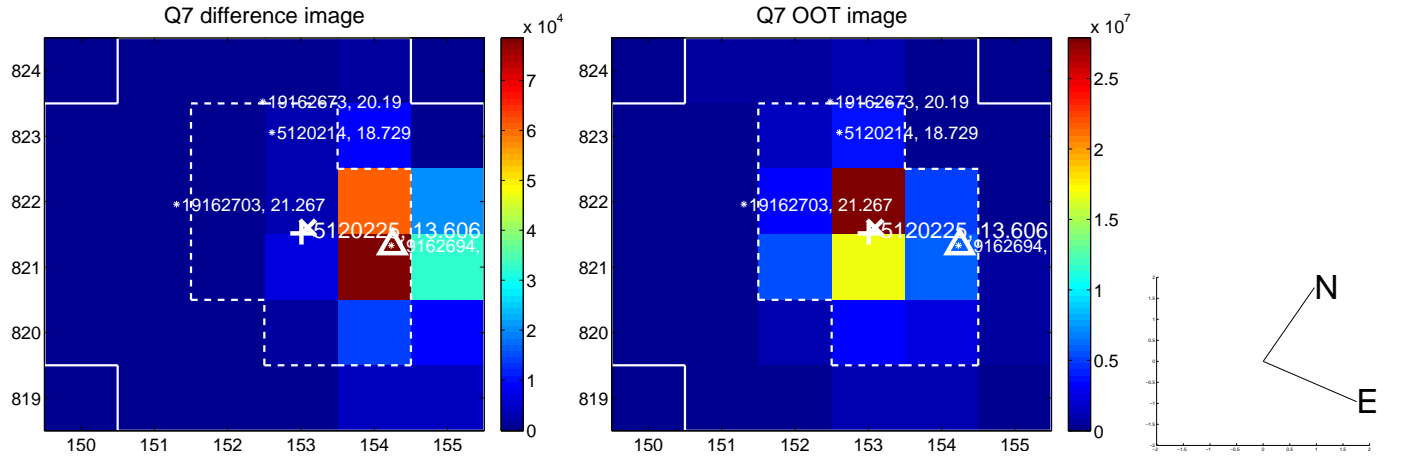
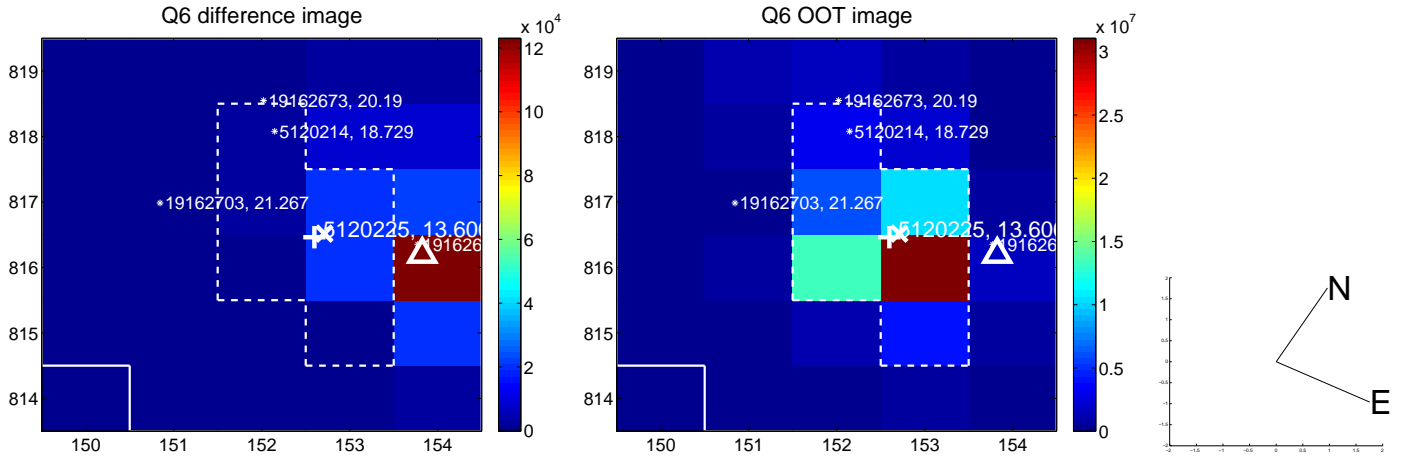
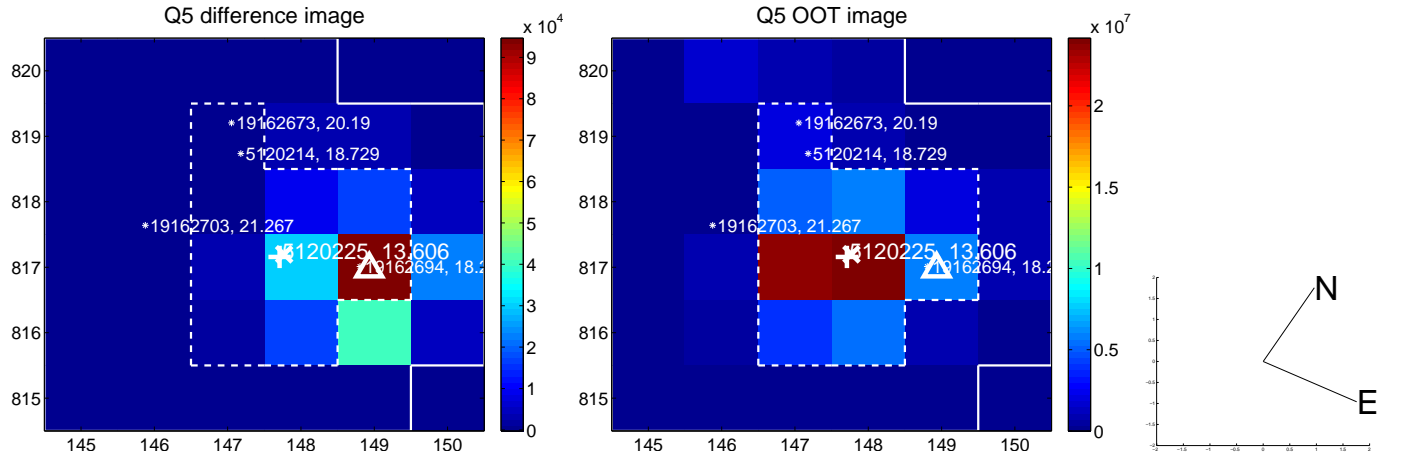


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

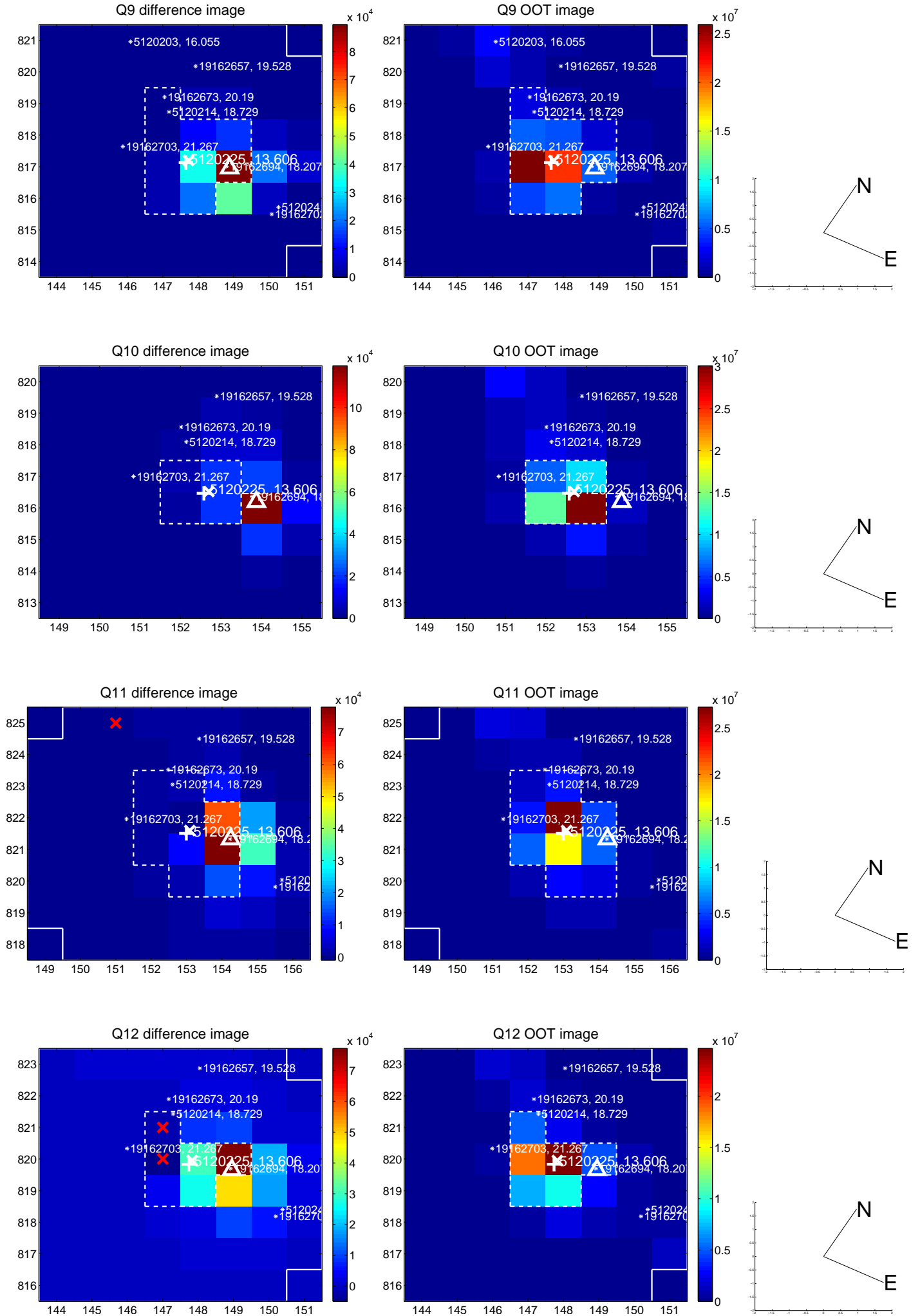
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



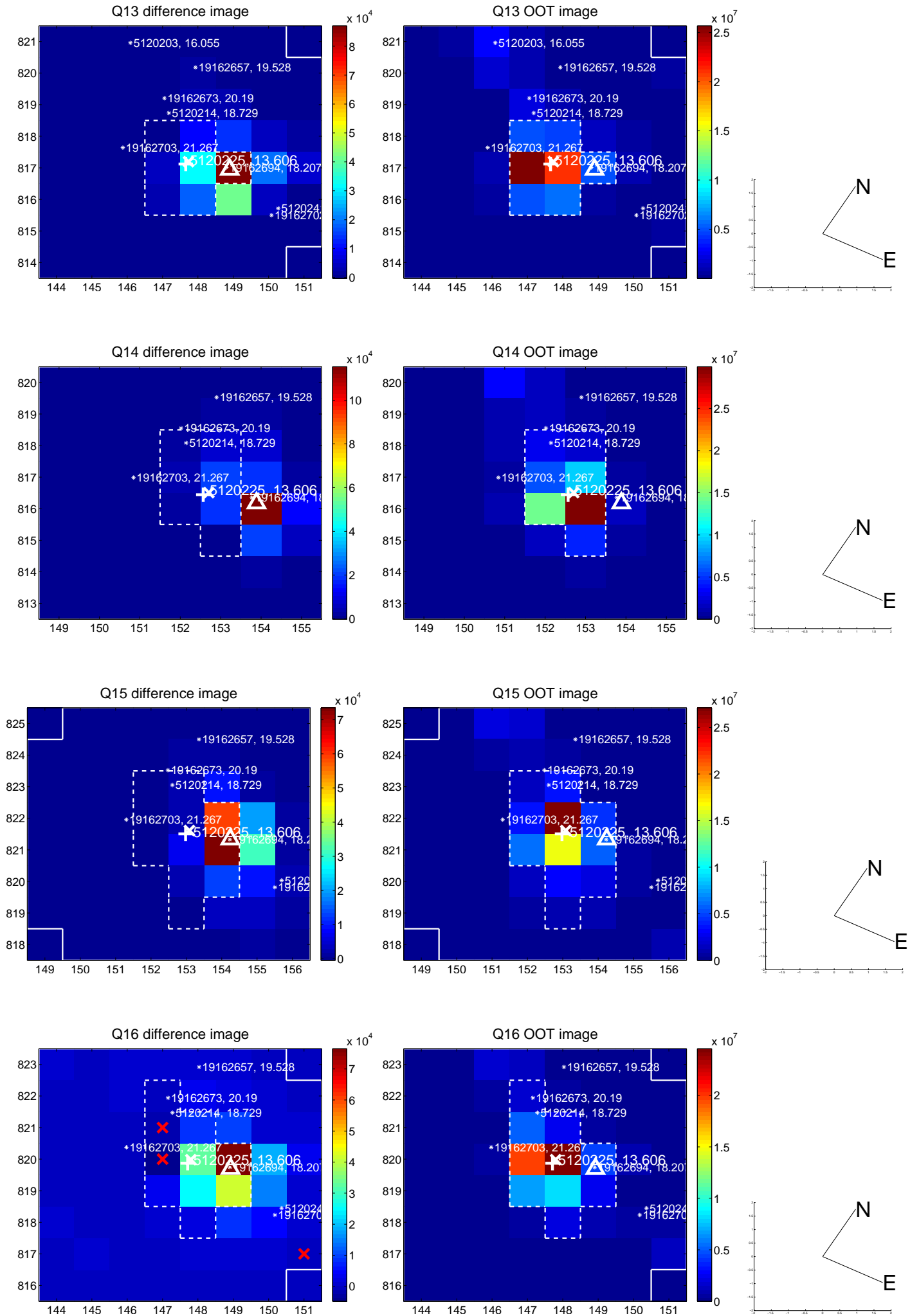
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



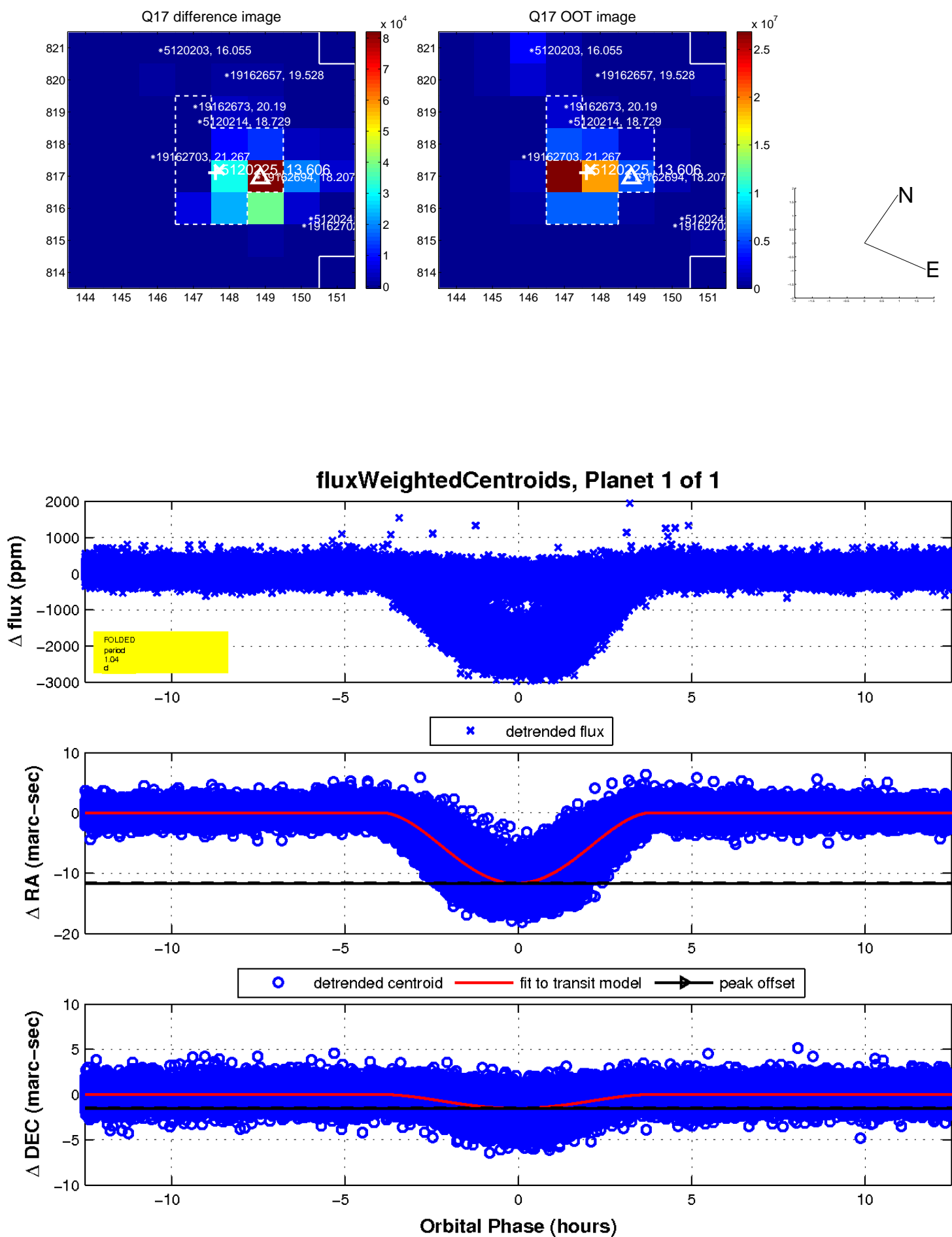
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

