

KIC 007362391

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})
007362391-01	OBS	No	0.566746	131.879827	22.5	3.379	14.6	10.3	1.08	6345	0.56	8825.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007362391-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH

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.

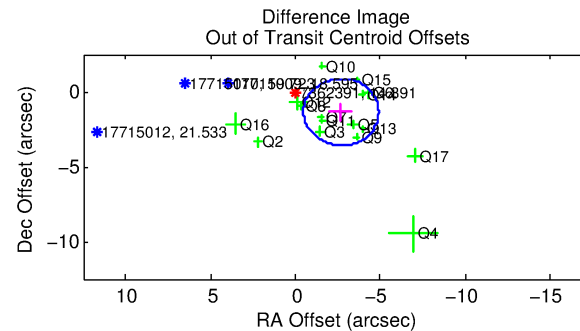
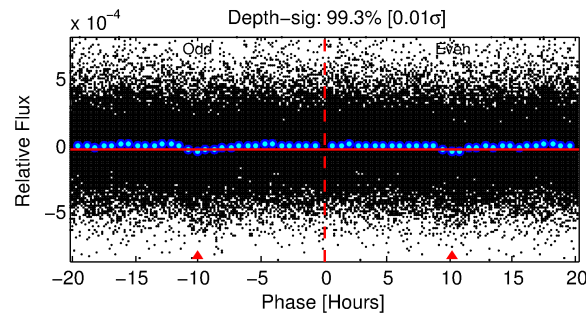
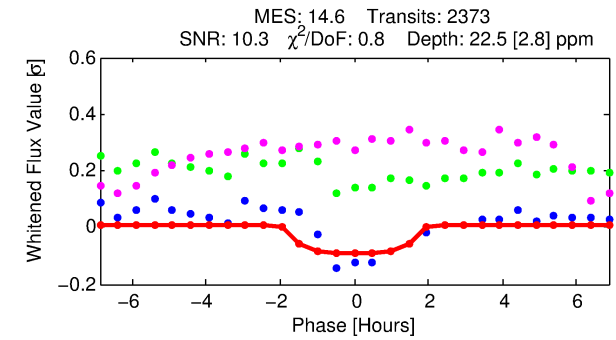
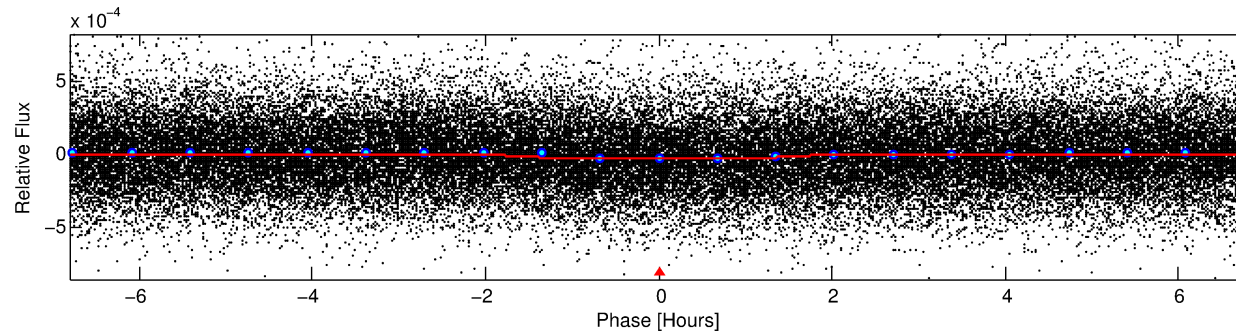
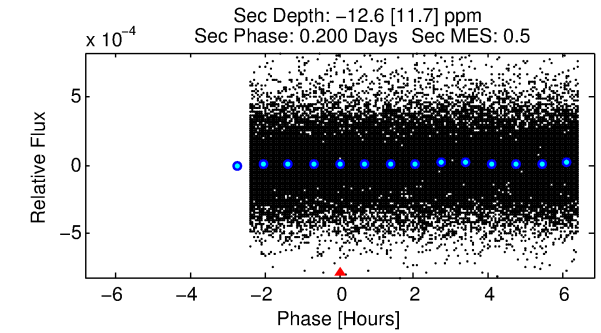
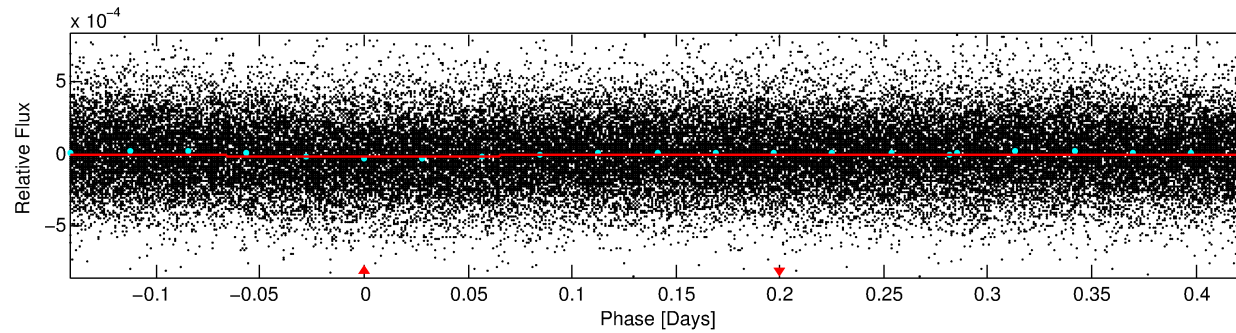
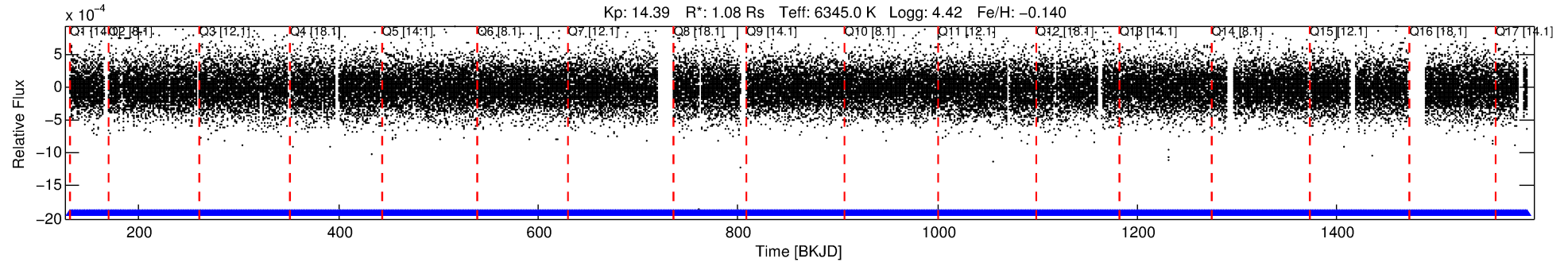
Ephemeris Match Information For 007362391-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007362391-01	7362391	RR-Lyr-pri	7198959	1:1	903.1	9	226	7.86	14.39	27100.00	Direct-PRF	0	0.33	20.58

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7362391 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56675 [0.00001] d
Epoch = 131.8798 [0.0038] BKJD
Rp/R* = 0.0047 [0.0021]
a/R* = 1.21 [0.92]
b = 0.75 [1.43]
Seff = 8825.16 [3627.15]
Teff = 2471 [254] K
Rp = 0.56 [0.31] Re
a = 0.0139 [0.0038] AU
Ag = N/A
Teffp = N/A

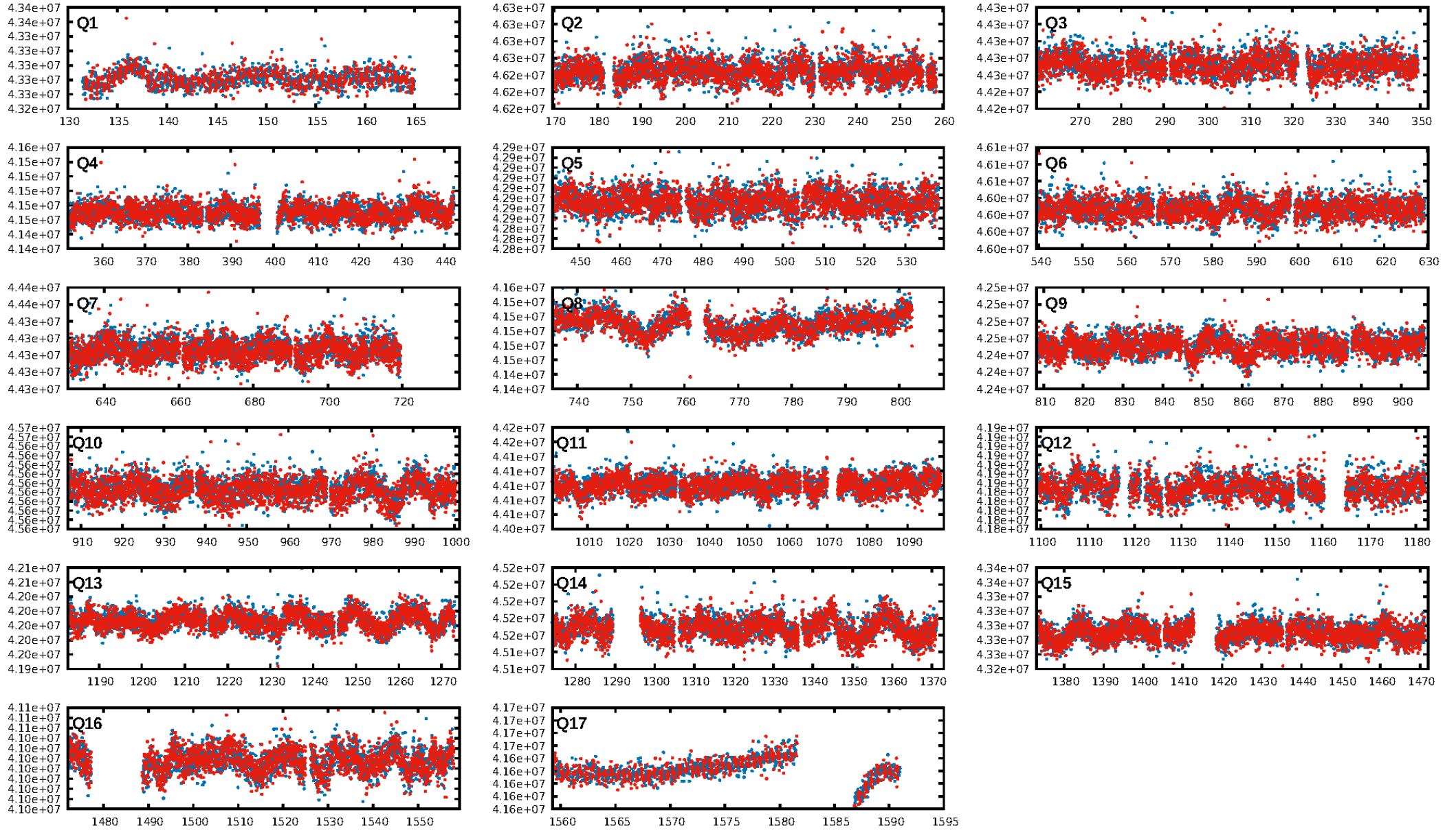
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.25e-34
RollingBand-fgt: 1.00 [2267/2267]
GhostDiagnostic-chr: 0.4959
Centroid-sig: 0.0%
Centroid-so: 3.980 arcsec [3.29σ]
OotOffset-rm: 3.029 arcsec [4.09σ]
KicOffset-rm: 2.964 arcsec [4.16σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.12 [2/16]
DiffImageOverlap-fno: 1.00 [17/17]

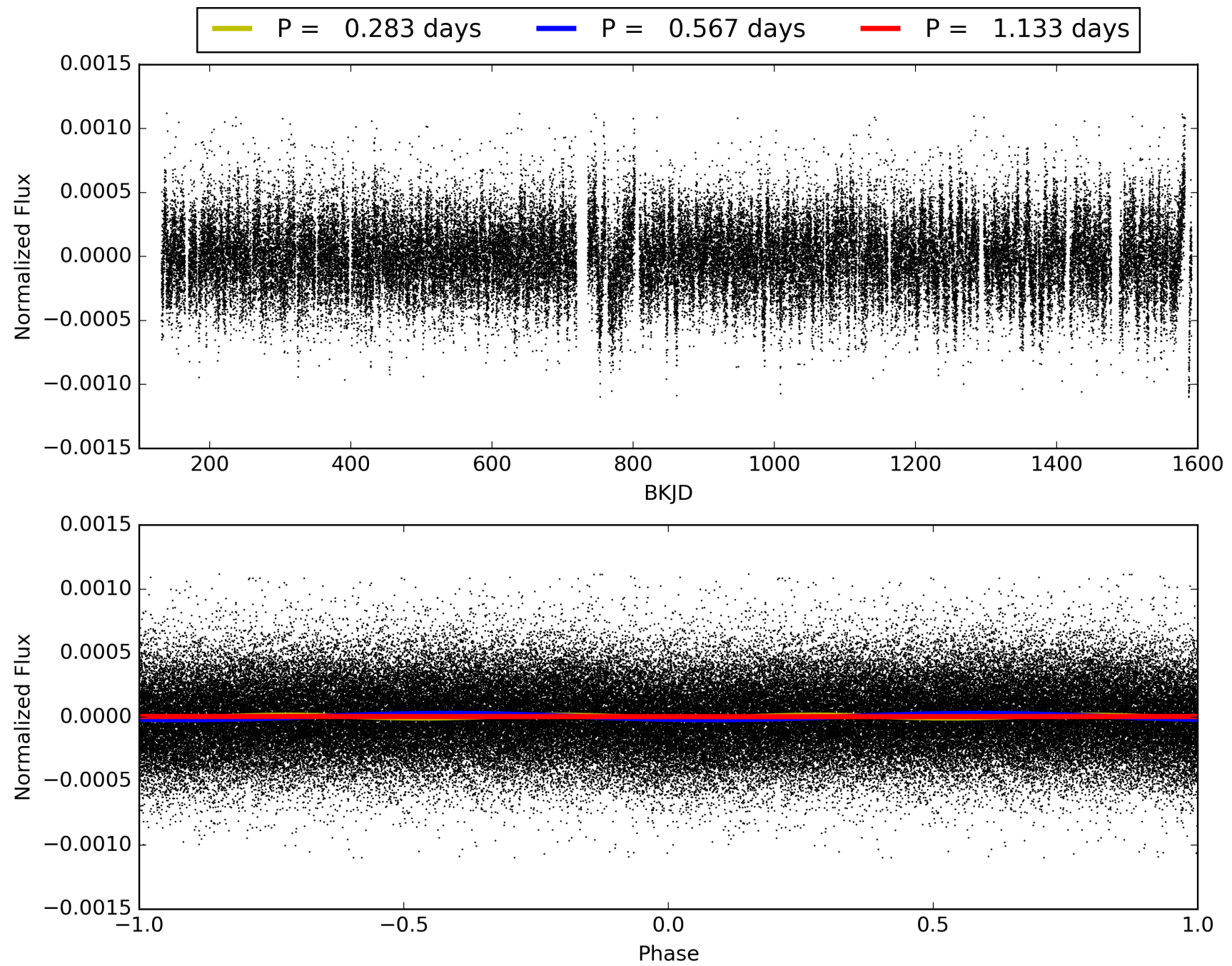
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:51:21 Z

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

TCE 007362391-01, PDC Light Curves

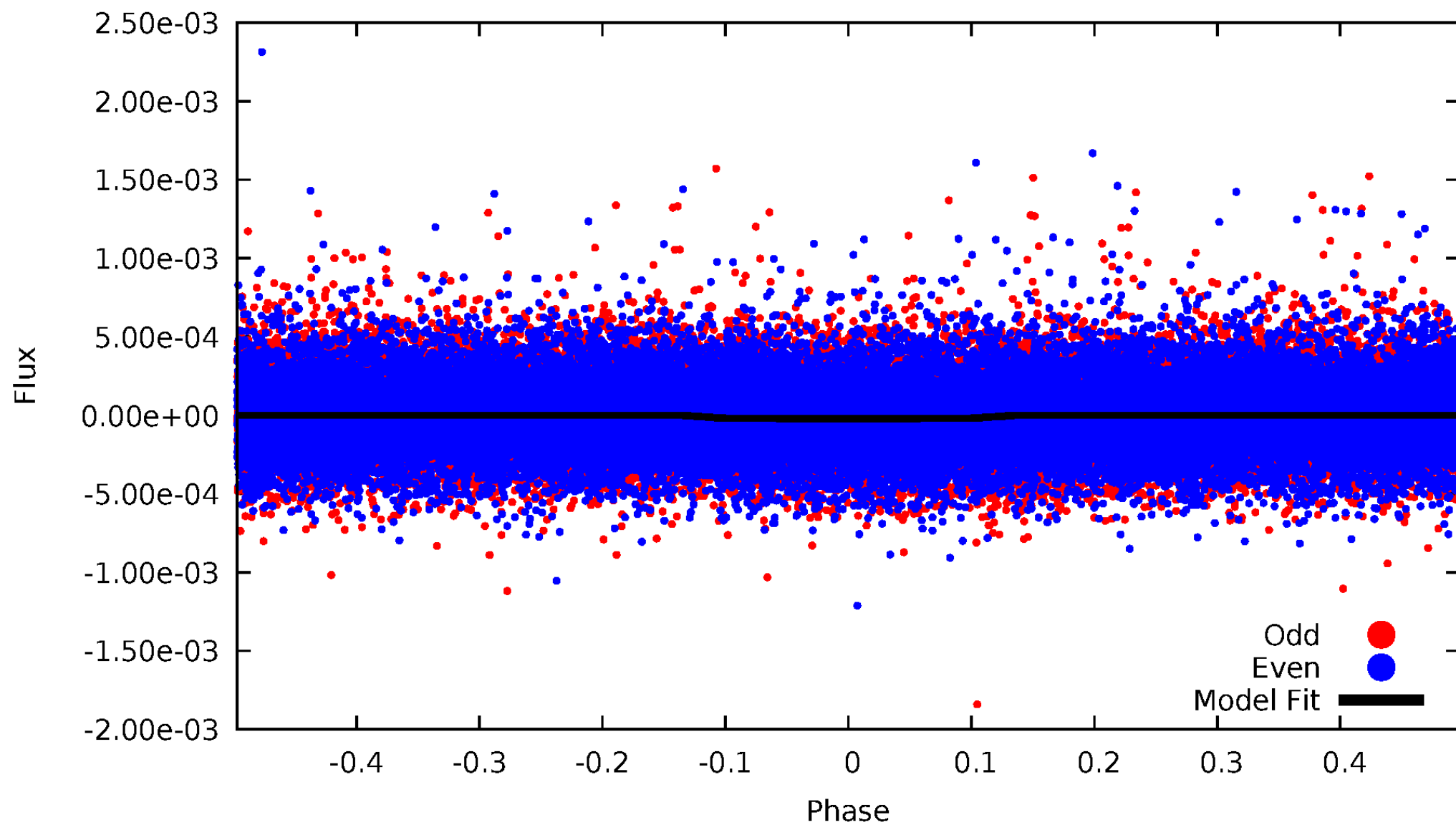


TCE 007362391-01



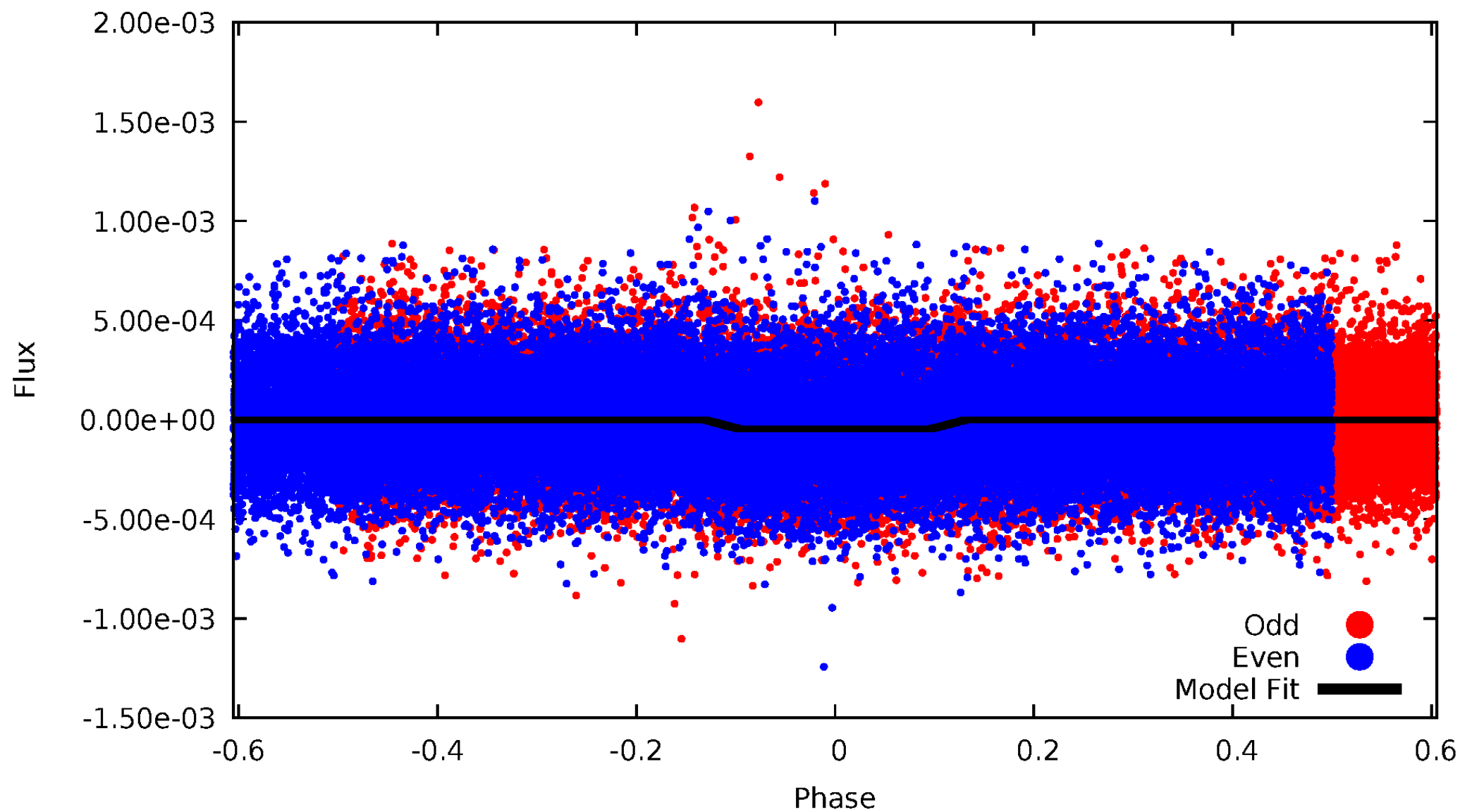
DV Odd/Even

TCE 007362391-01

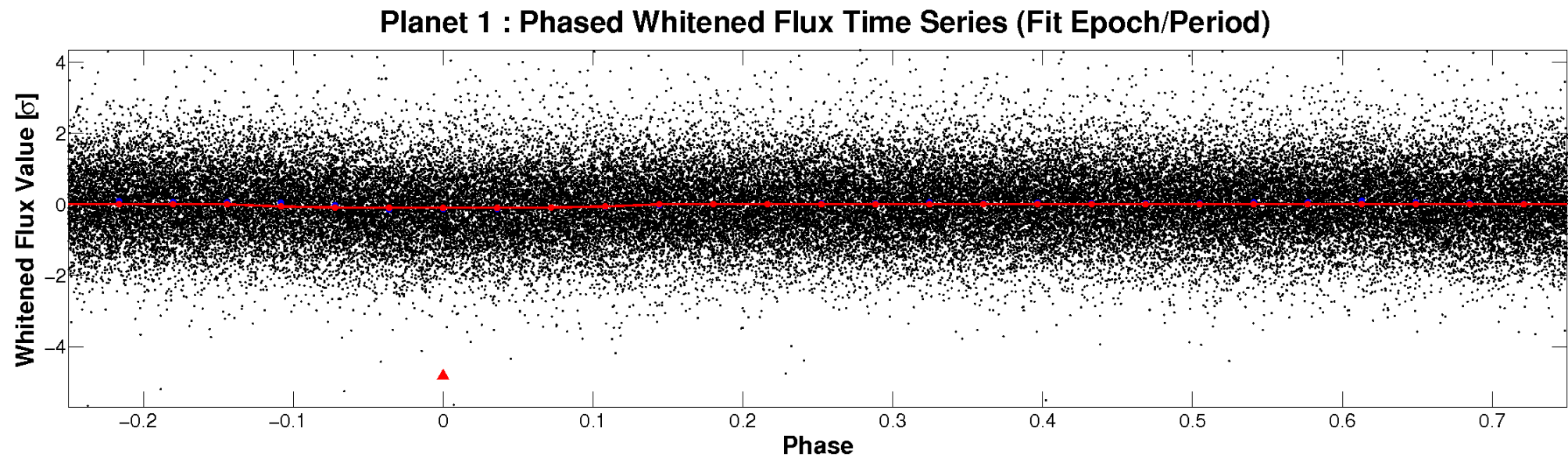
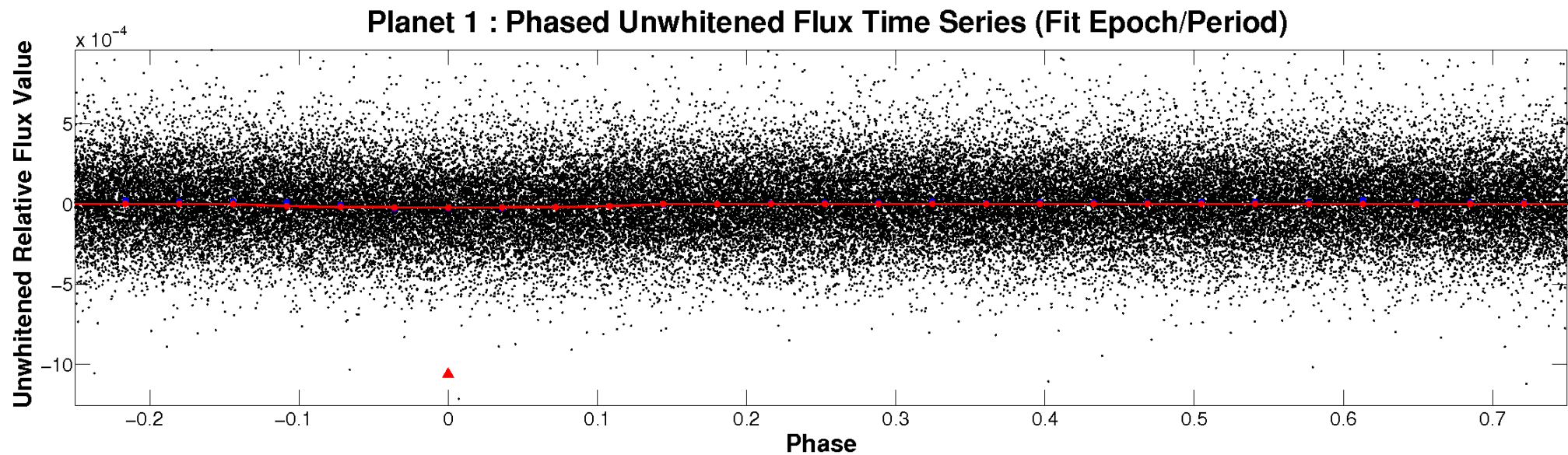


ALT Odd/Even

TCE 007362391-01

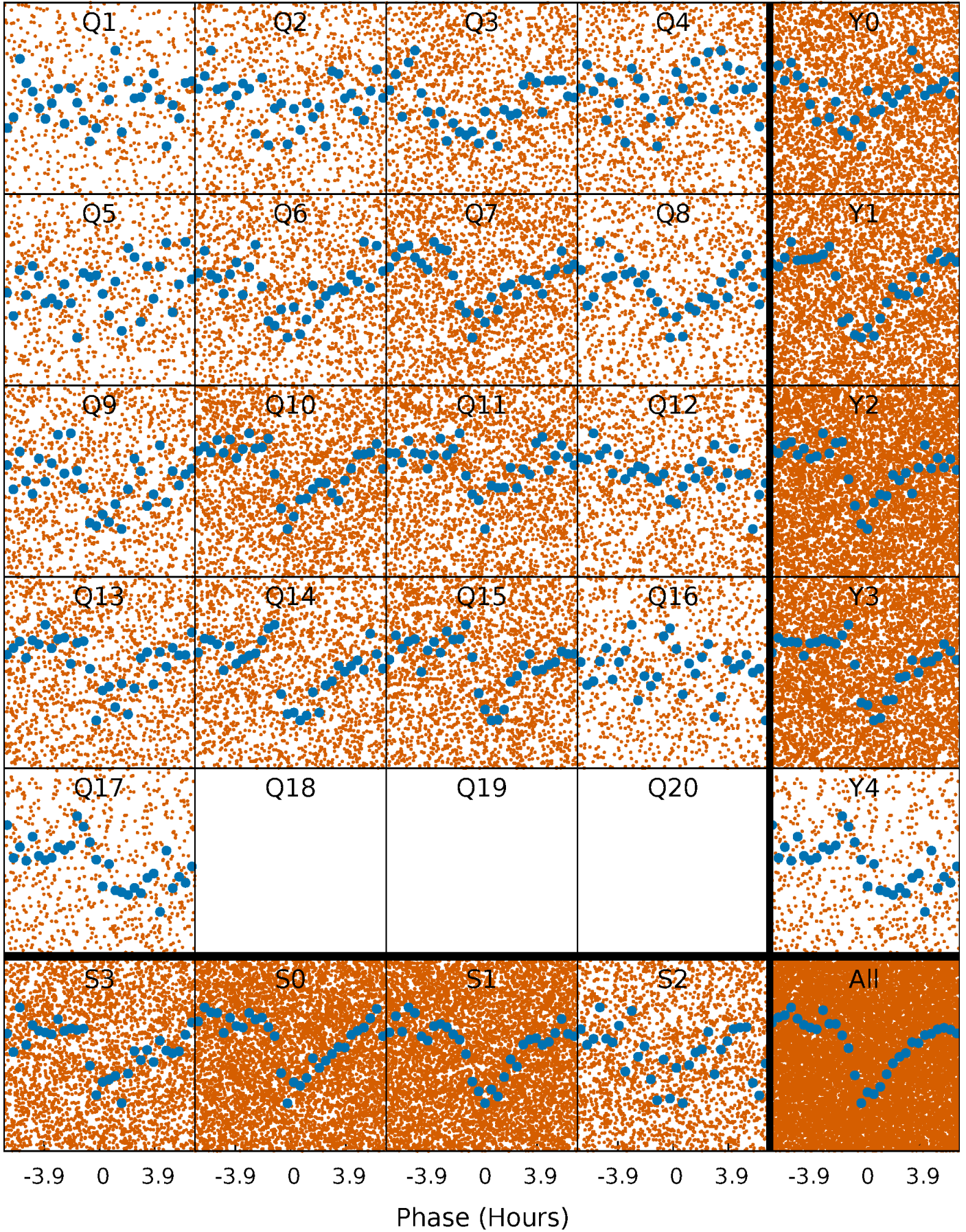


Non-Whitened Vs. Whitened Light Curve



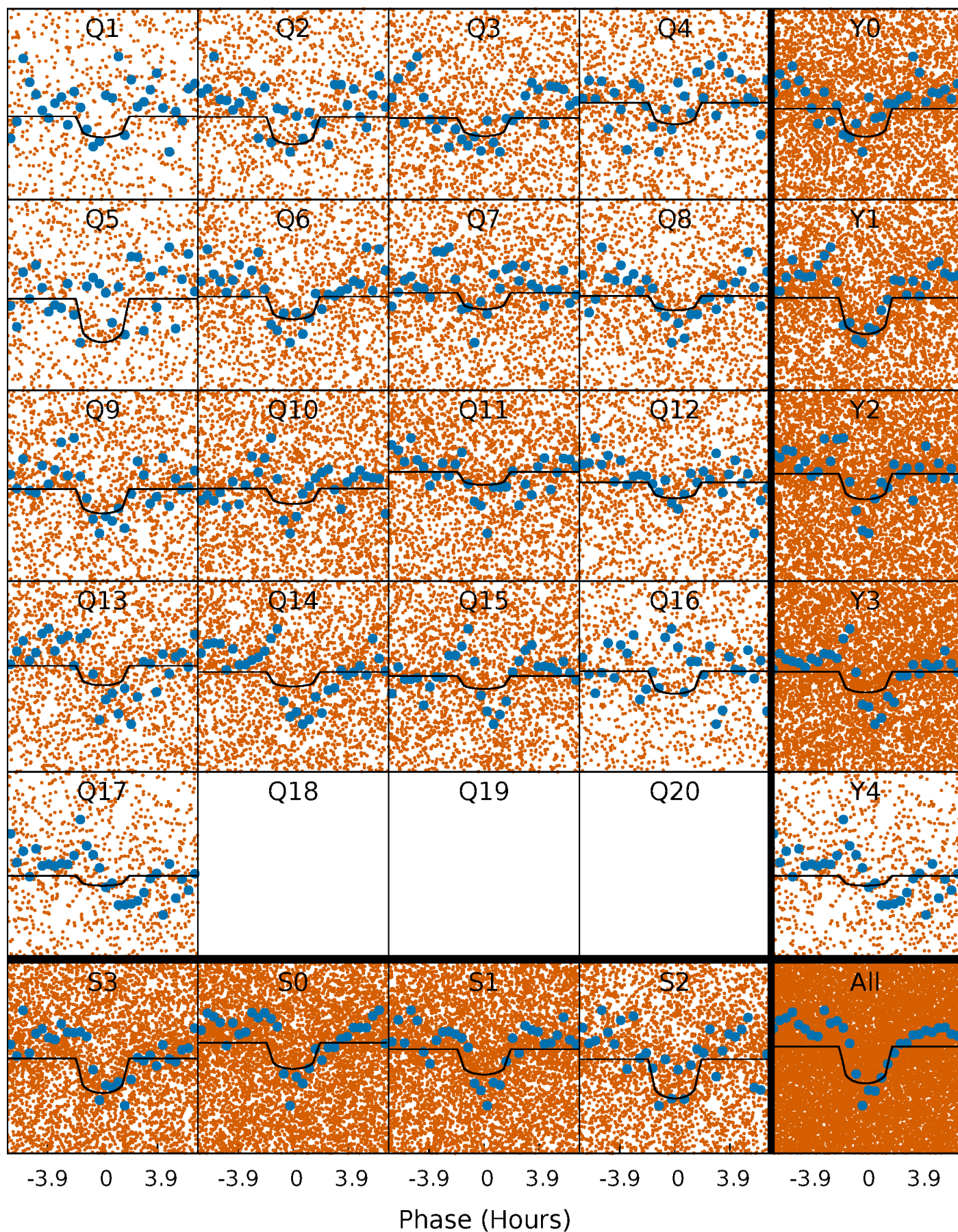
PDC Quarter-Phased Transit Curves

TCE 007362391-01 P= 0.566746 Days $T_0=131.879827$ (BKJD)



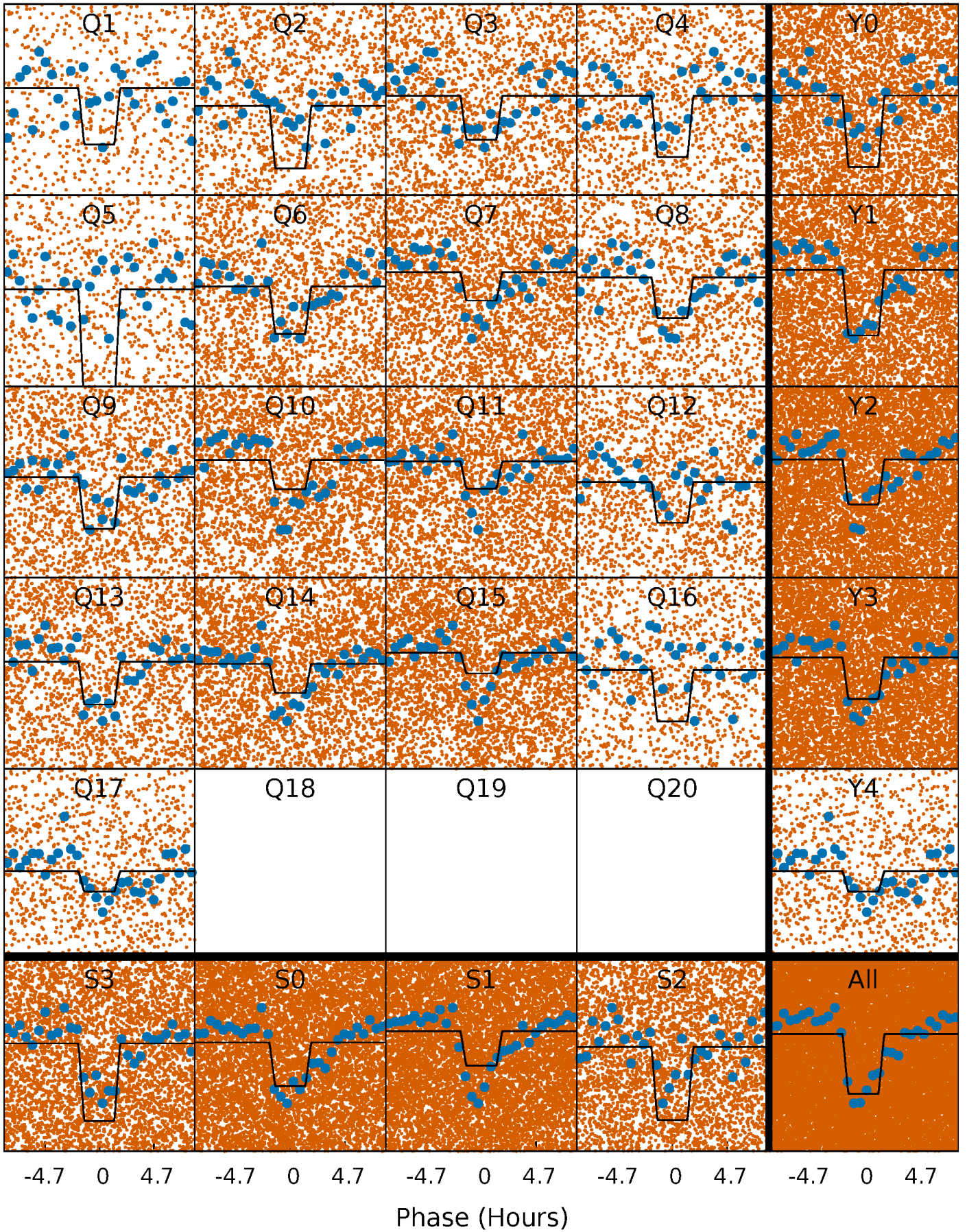
DV Quarter-Phased Transit Curves

TCE 007362391-01 P= 0.566746 Days $T_0=131.879827$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

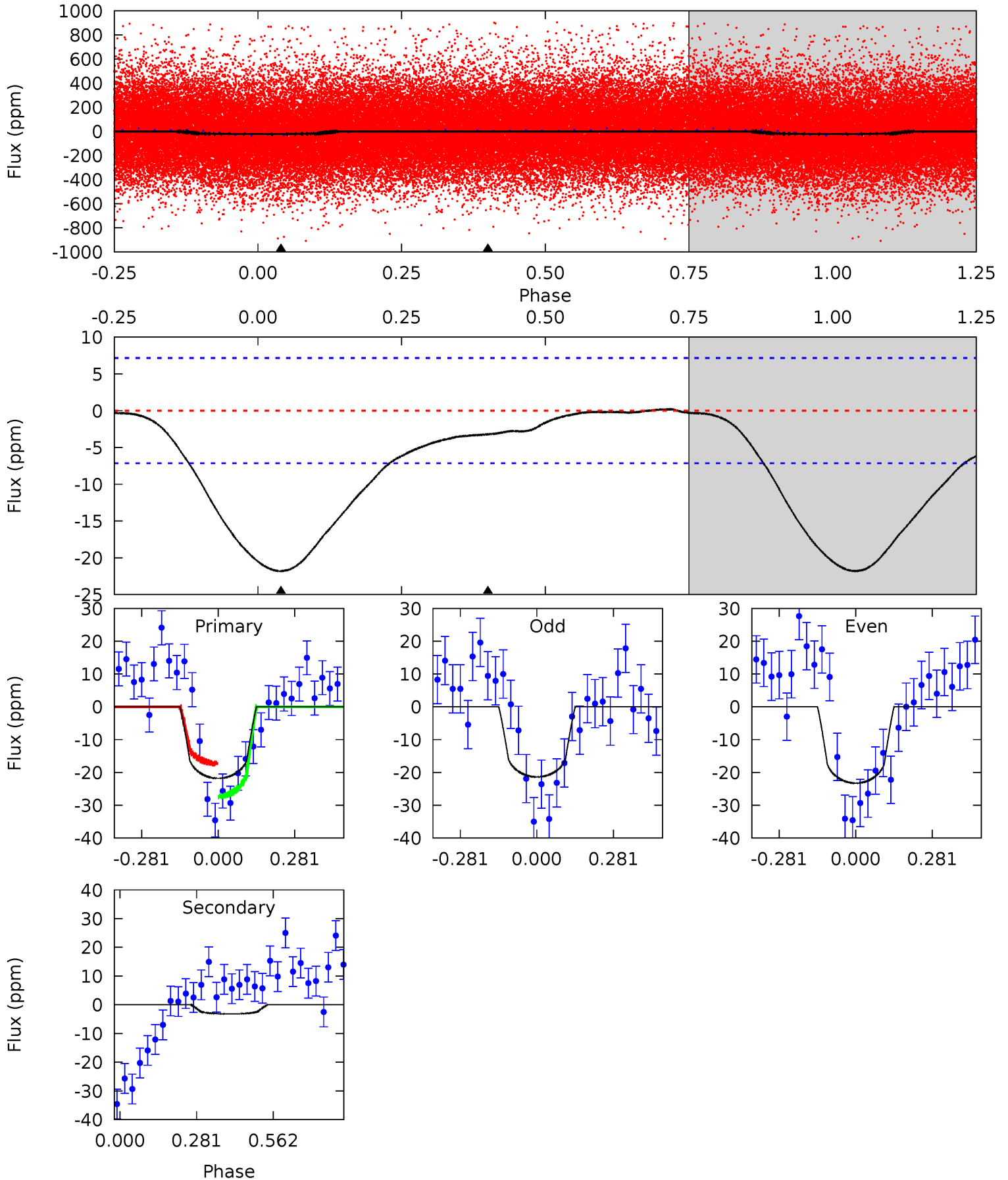
TCE 007362391-01 P= 0.566782 Days $T_0=131.848208$ (BKJD)



DV Model-Shift Uniqueness Test

007362391-01, P = 0.566746 Days, E = 131.313081 Days

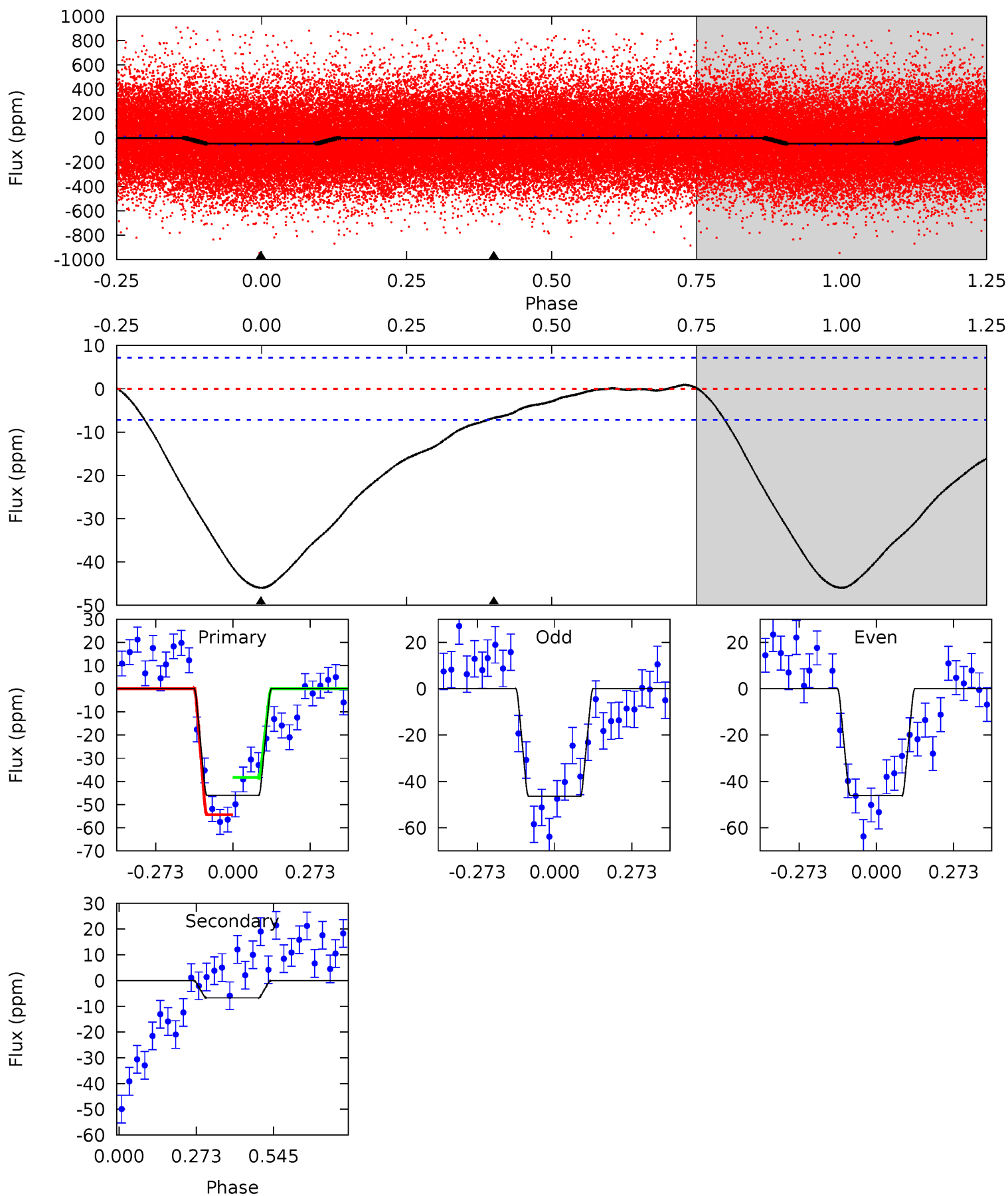
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	1.94	0	0	4.34	1.08	0.12	13.2	13.2	1.94	1.94	0.58	0.98	0.01	3.05



Alt Model-Shift Uniqueness Test

007362391-01, P = 0.566782 Days, E = 131.281426 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	4.08	0	0	4.35	1.10	0.27	27.8	27.8	4.08	4.08	0.07	0.91	0.02	4.80



Stellar Parameters For KIC 007362391

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6345^{+172}_{-211}	$4.416^{+0.056}_{-0.210}$	$-0.140^{+0.250}_{-0.300}$	$1.085^{+0.354}_{-0.118}$	$1.120^{+0.162}_{-0.146}$	$1.235^{+0.358}_{-0.654}$
	+3%/-3%	+1%/-5%	+179%/-214%	+33%/-11%	+14%/-13%	+29%/-53%
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 007362391-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$0.60^{+0.31}_{-0.27}$	3520^{+258}_{-174}	3817^{+1334}_{-5451}	$0.889^{+2.233}_{-0.589}$
Alt.	-7 ± 2	$0.86^{+0.31}_{-0.28}$	3529^{+277}_{-174}	3890^{+793}_{-726}	$0.921^{+1.271}_{-0.446}$

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

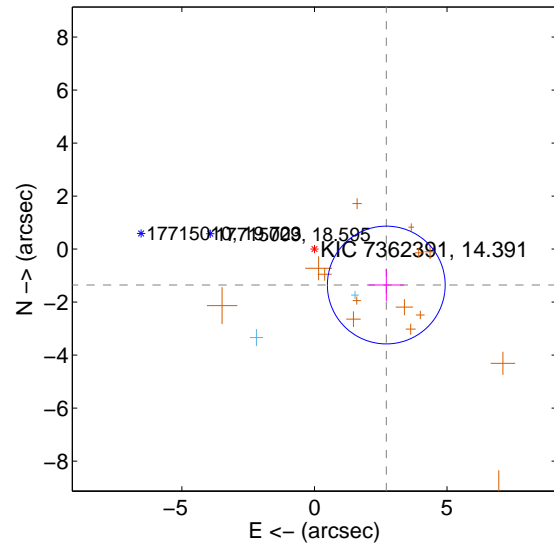
Supplemental centroid analysis for 007362391-01. Kepler magnitude: 14.39. Transit SNR 10.29

There are 2 quarters with good PRF difference image offsets

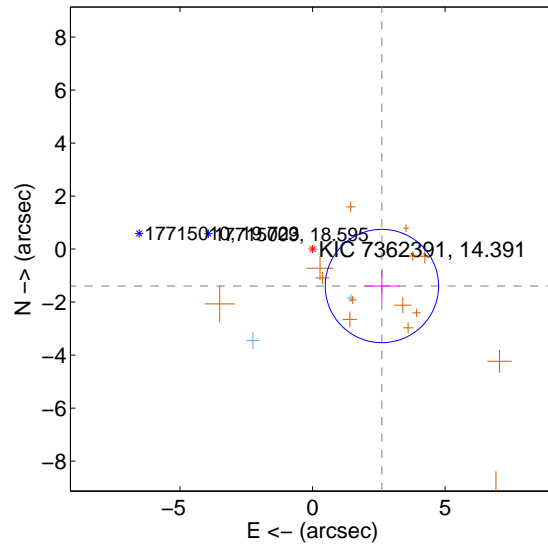
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.029 ± 0.740	4.09	-2.709 ± 0.673	-1.355 ± 0.603
PRF-fit source offset from KIC position	2.964 ± 0.712	4.16	-2.616 ± 0.678	-1.393 ± 0.586
photometric centroid source offset	3.98 ± 1.21	3.29	-3.98 ± 1.21	-0.20 ± 1.11

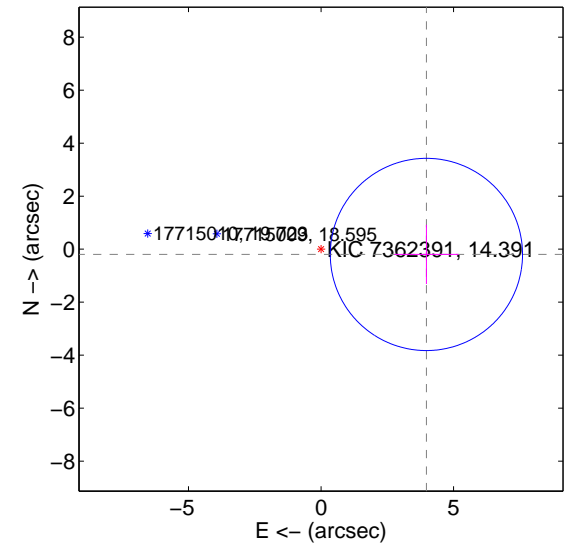
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

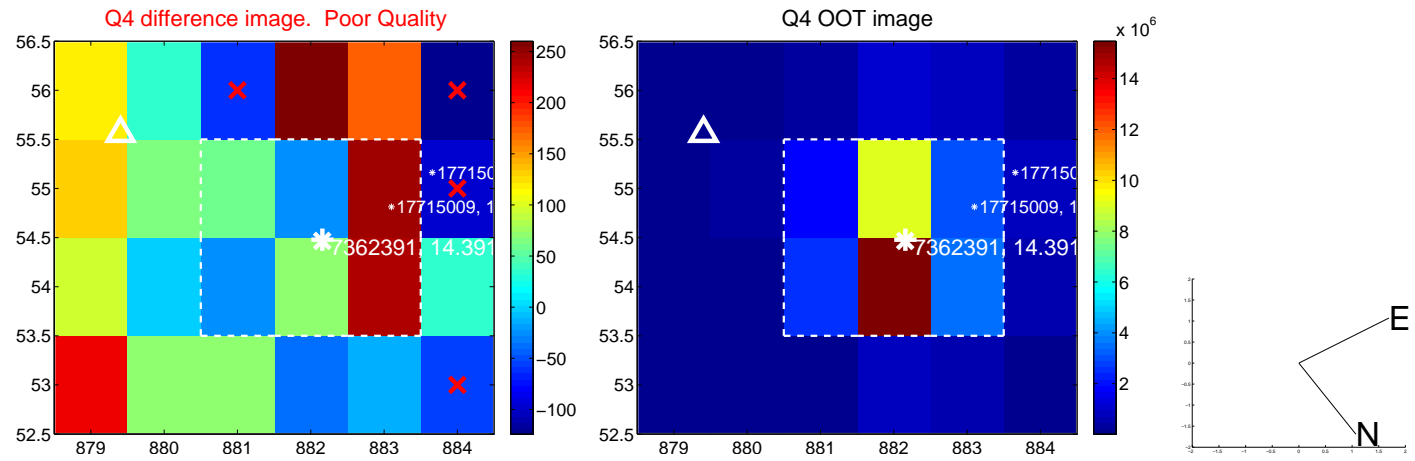
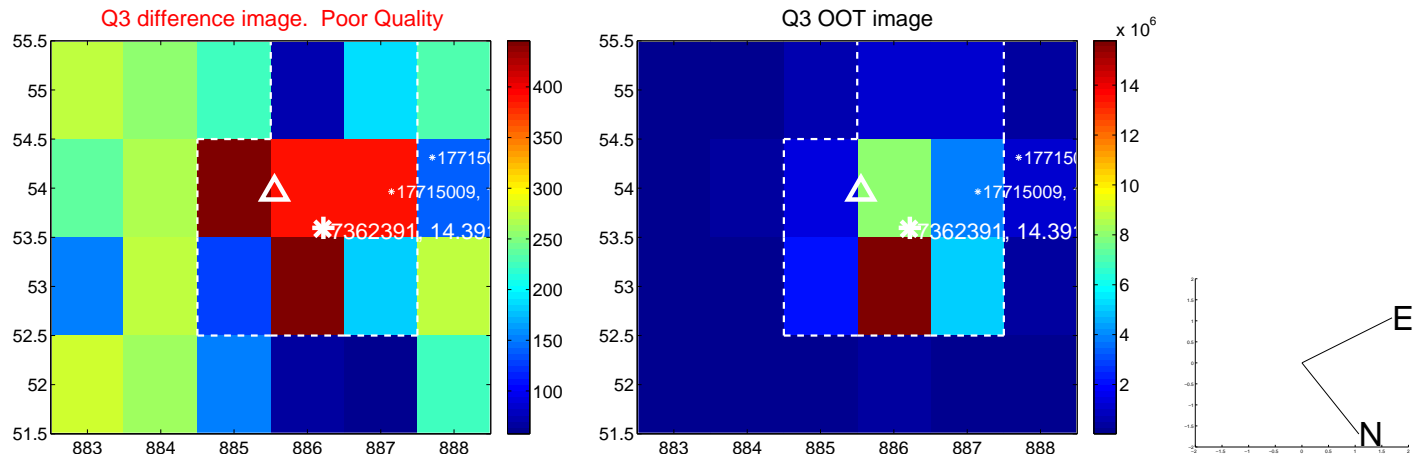
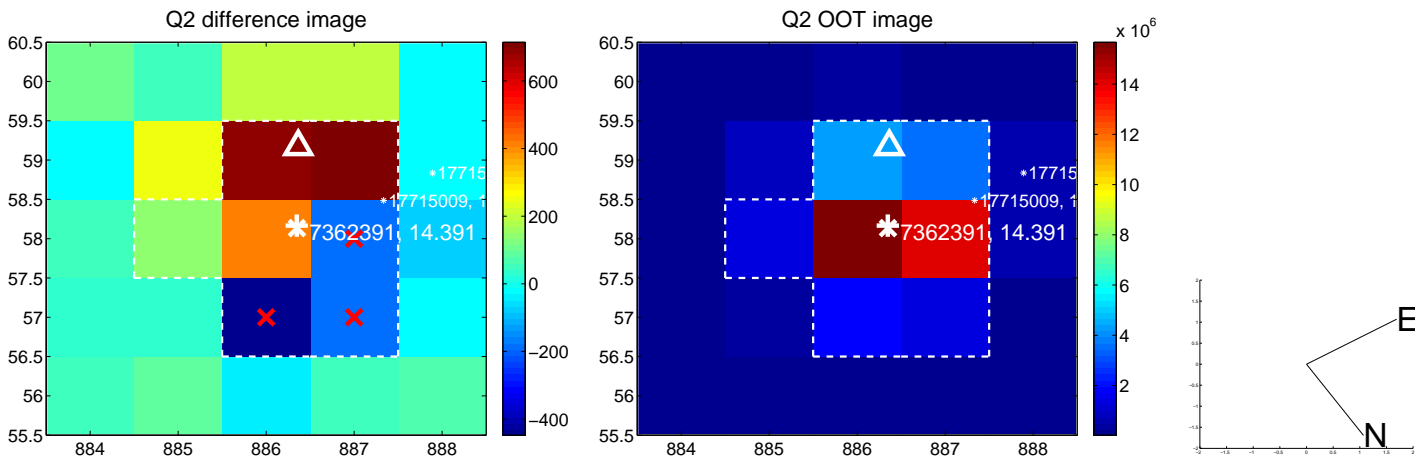
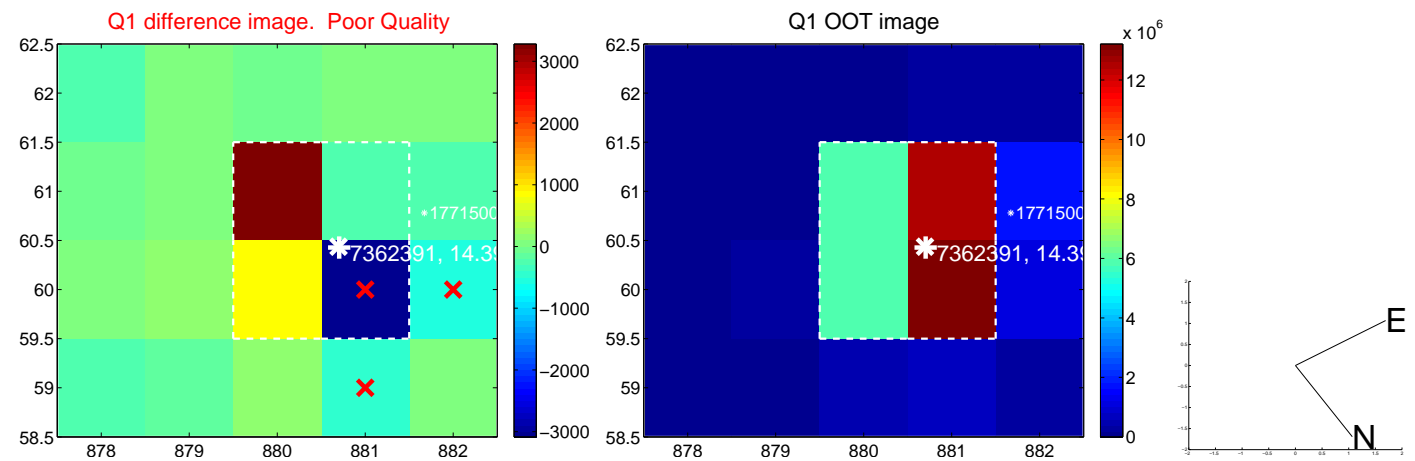


offset from photometric centroids

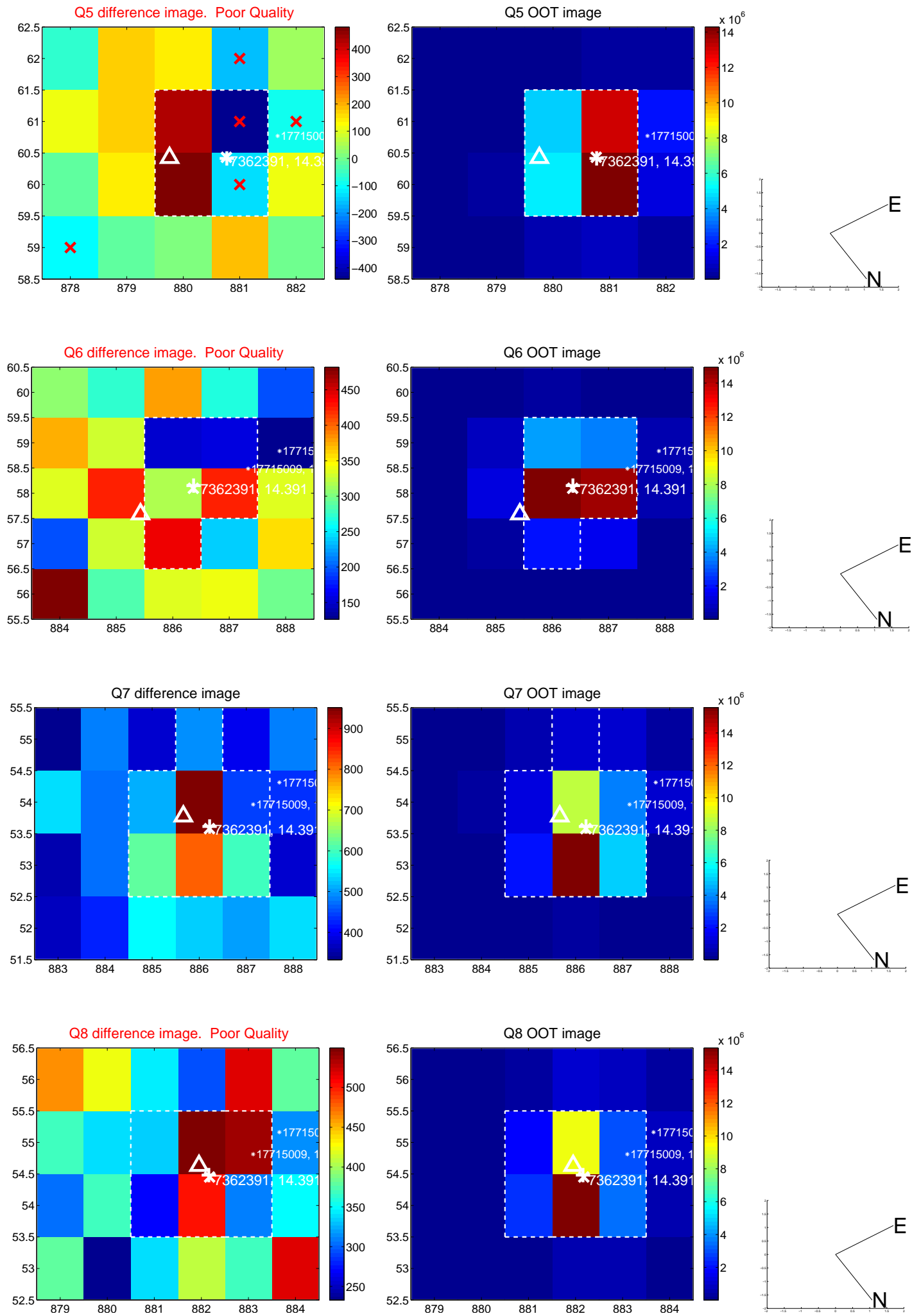


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

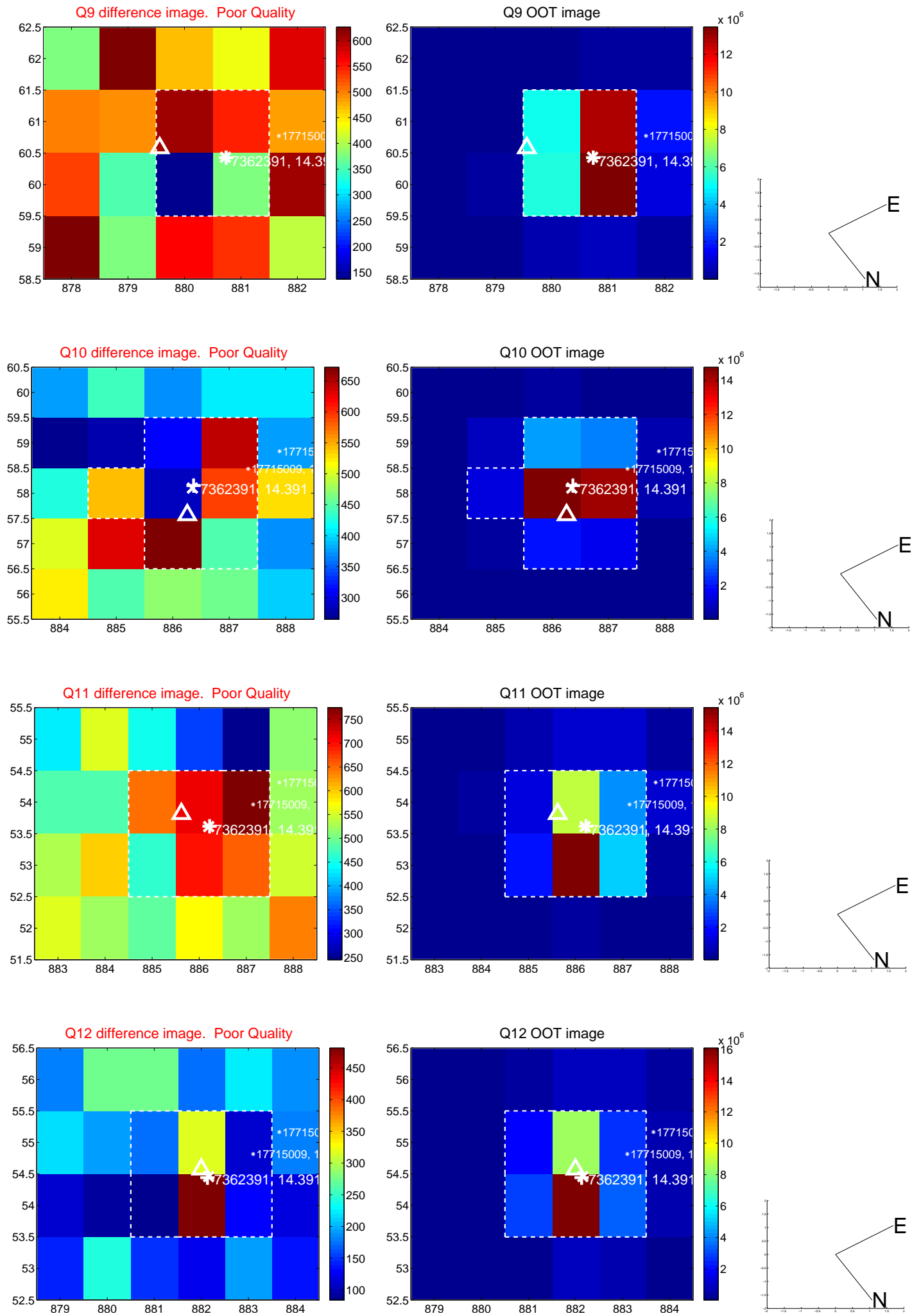
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



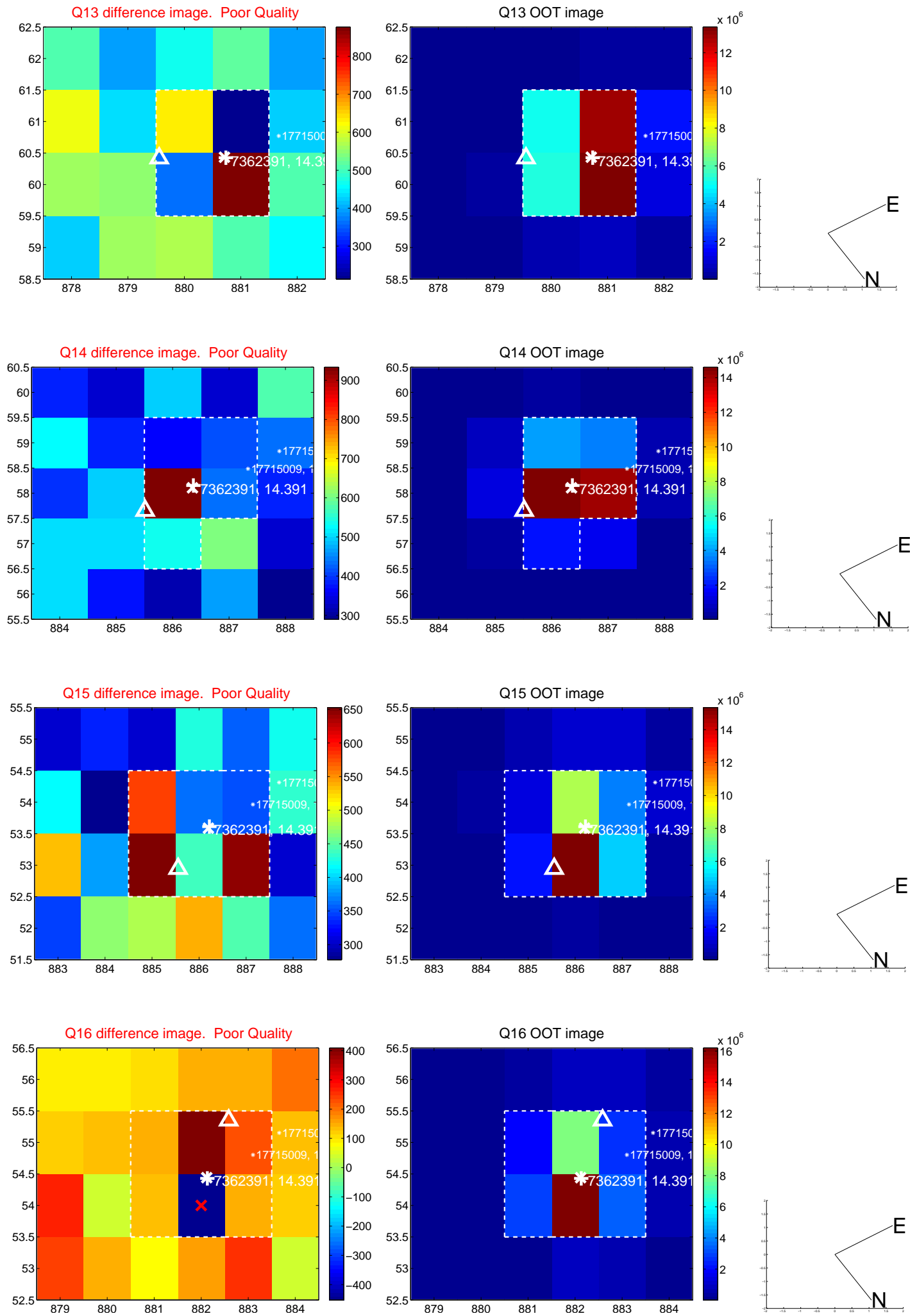
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

