

KIC 007282008

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007282008-01	OBS	6858.01	0.566792	131.820581	38.5	3.058	8.9	6.1	0.78	5230	0.58	2480.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007282008-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—HALO_GHOST—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 007282008-01

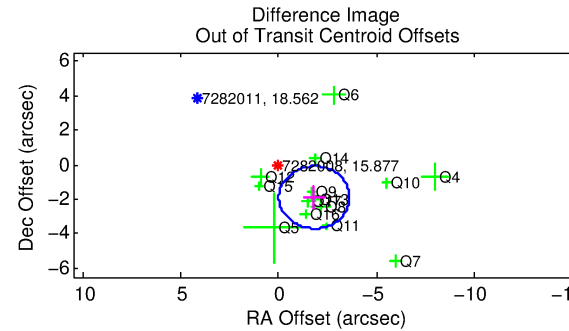
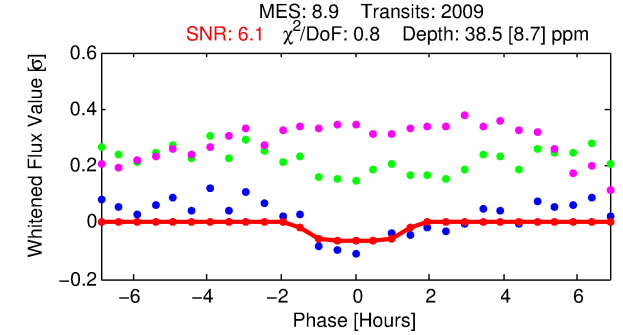
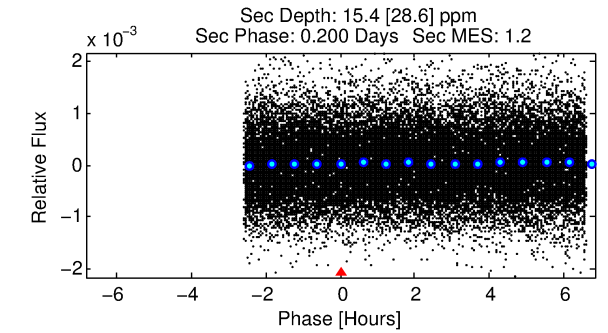
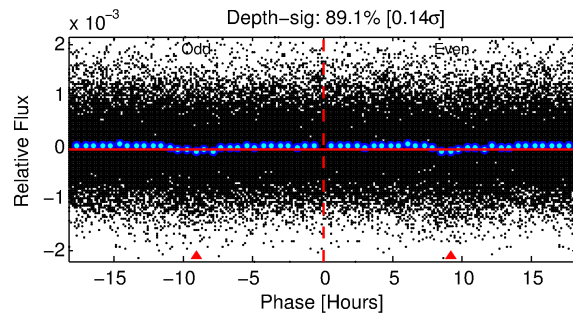
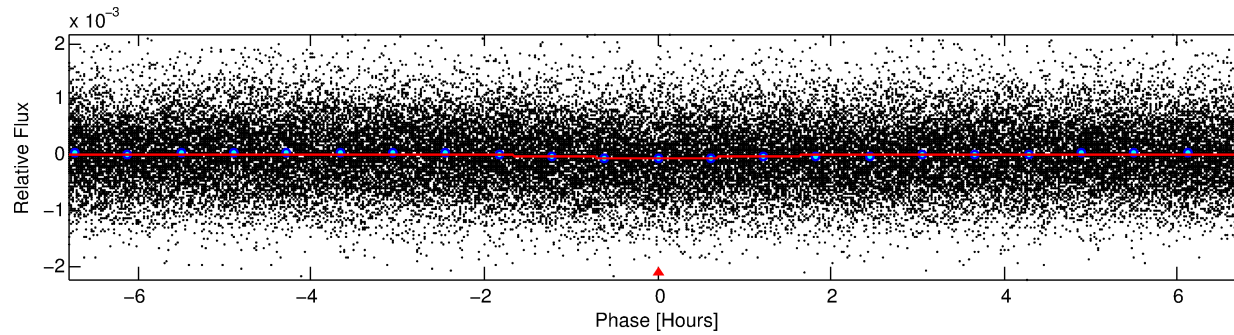
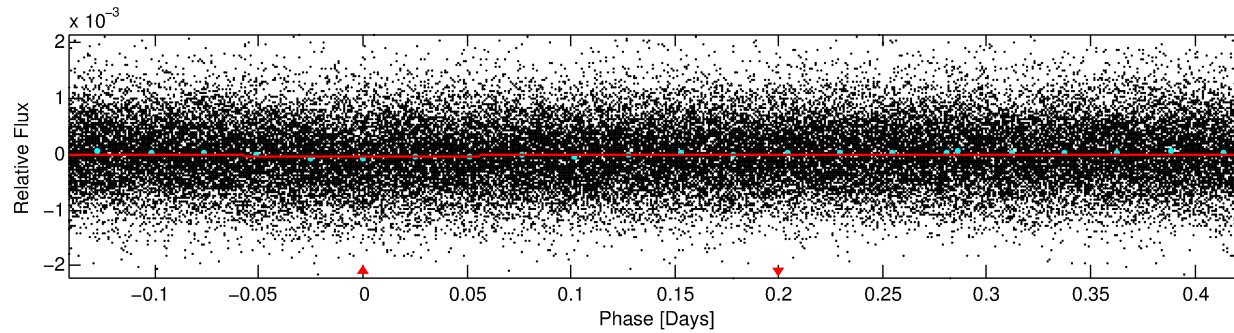
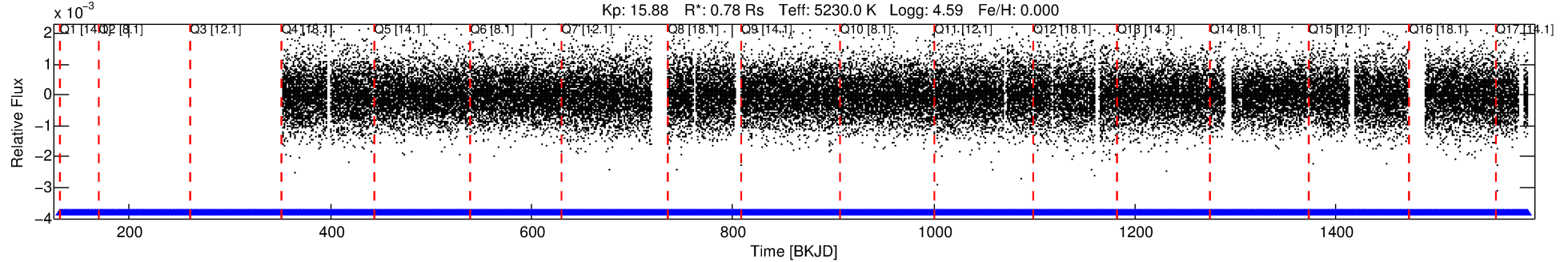
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007282008-01	7282008	RR-Lyr-pri	7198959	1:1	1107.3	99	260	7.86	15.88	15982.00	Direct-PRF	0	1.20	19.46

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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 σ_P < 5.0 and σ_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: 7282008 Candidate: 1 of 1 Period: 0.567 d
KOI: K06858.01 Corr: 0.752

Kp: 15.88 R*: 0.78 Rs Teff: 5230.0 K Logg: 4.59 Fe/H: 0.000



DV Fit Results:

Period = 0.56679 [0.00002] d
Epoch = 131.8206 [0.0062] BKJD
Rp/R* = 0.0069 [0.0092]
a/R* = 1.14 [1.47]
b = 0.90 [1.24]
Seff = 2480.94 [588.40]
Teq = 1800 [107] K
Rp = 0.58 [0.78] Re
a = 0.0128 [0.0017] AU
Ag = 4.07 [13.22] [0.23σ]
Teffp = 3952 [3207] K [0.67σ]

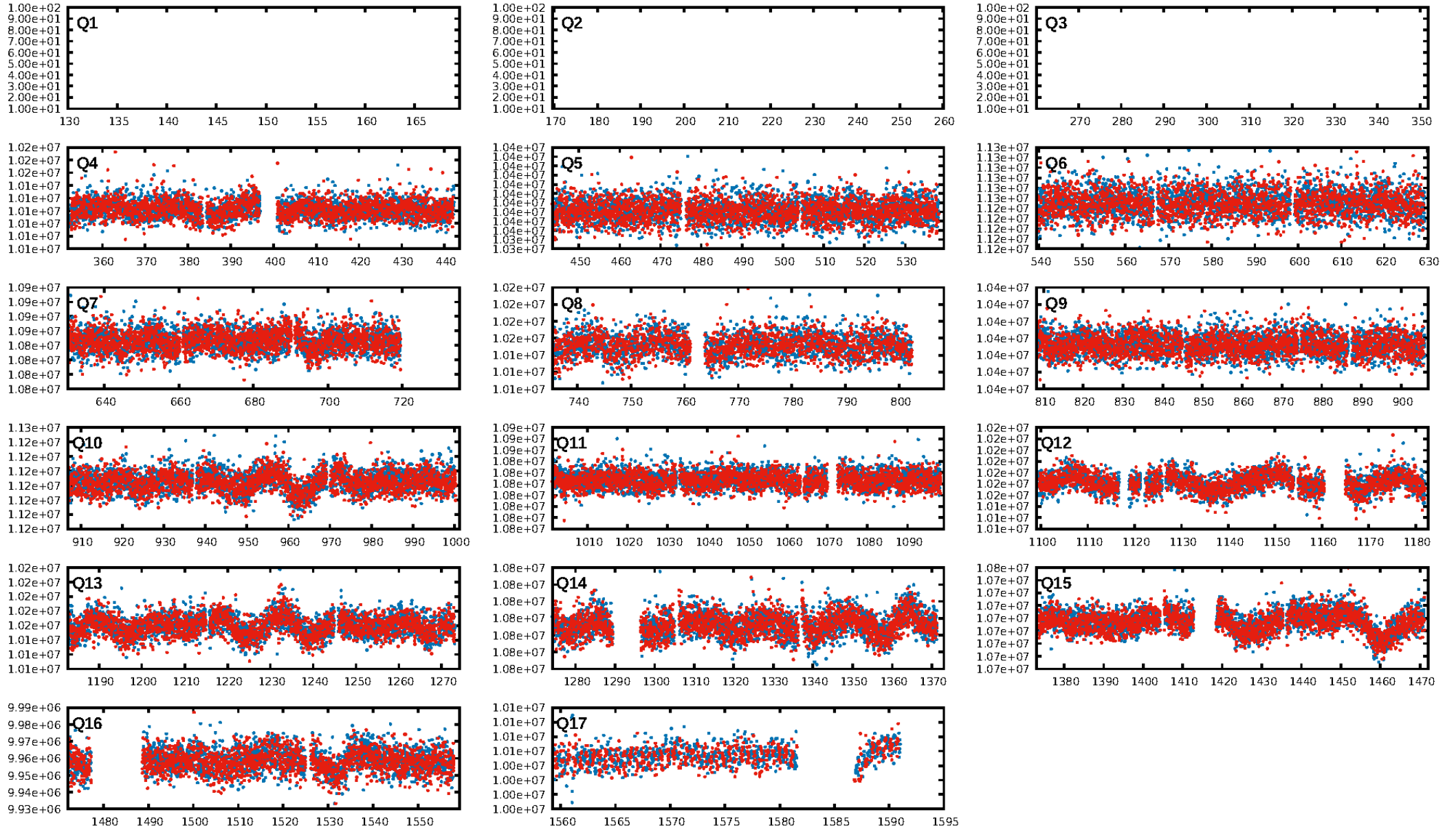
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.27e-19
RollingBand-fgt: 1.00 [1962/1962]
GhostDiagnostic-chr: 0.09507
Centroid-sig: 0.0%
Centroid-so: 4.654 arcsec [2.16σ]
OotOffset-rm: 2.623 arcsec [4.36σ]
KicOffset-rm: 2.544 arcsec [3.99σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

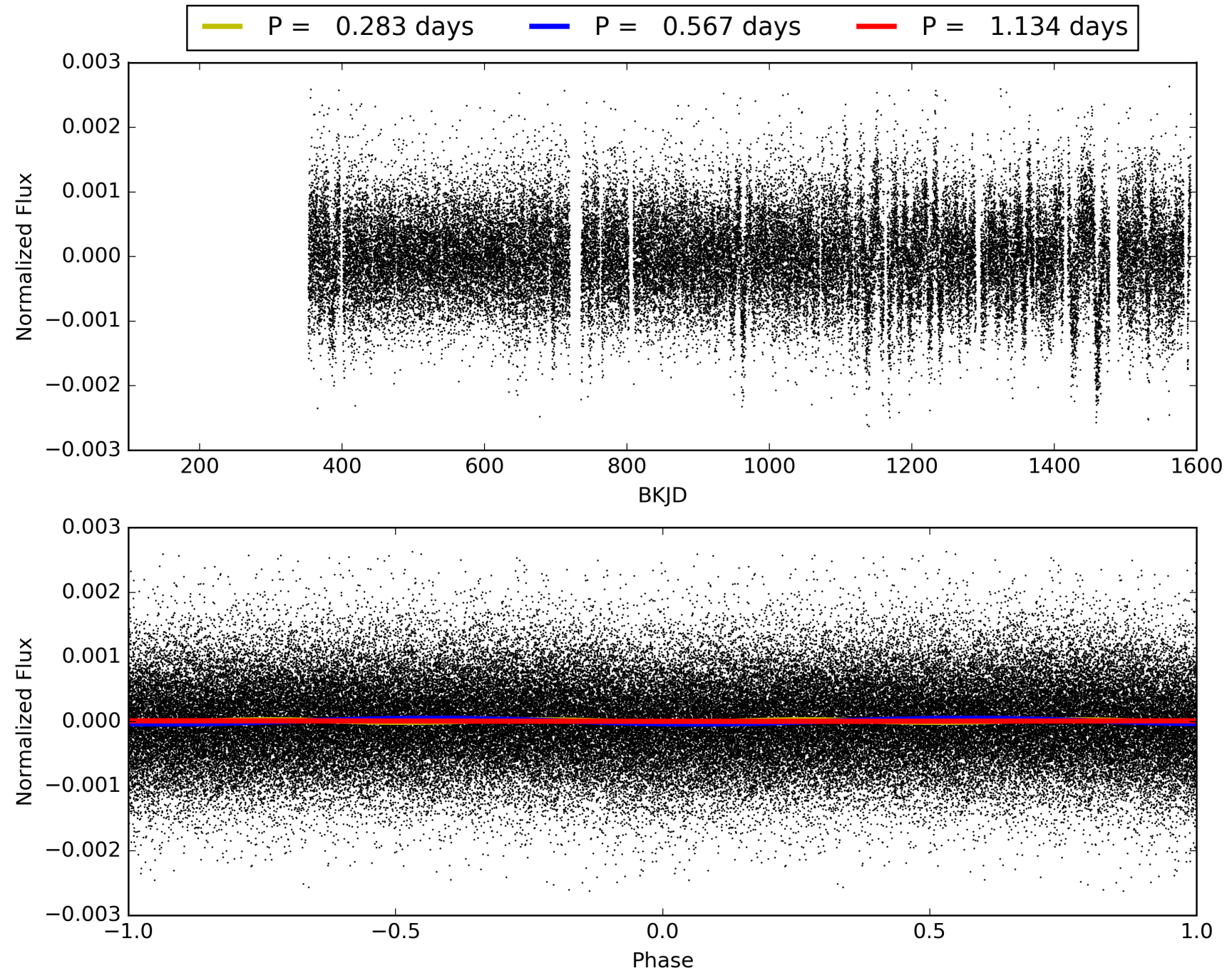
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:14:49 Z

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

TCE 007282008-01, PDC Light Curves

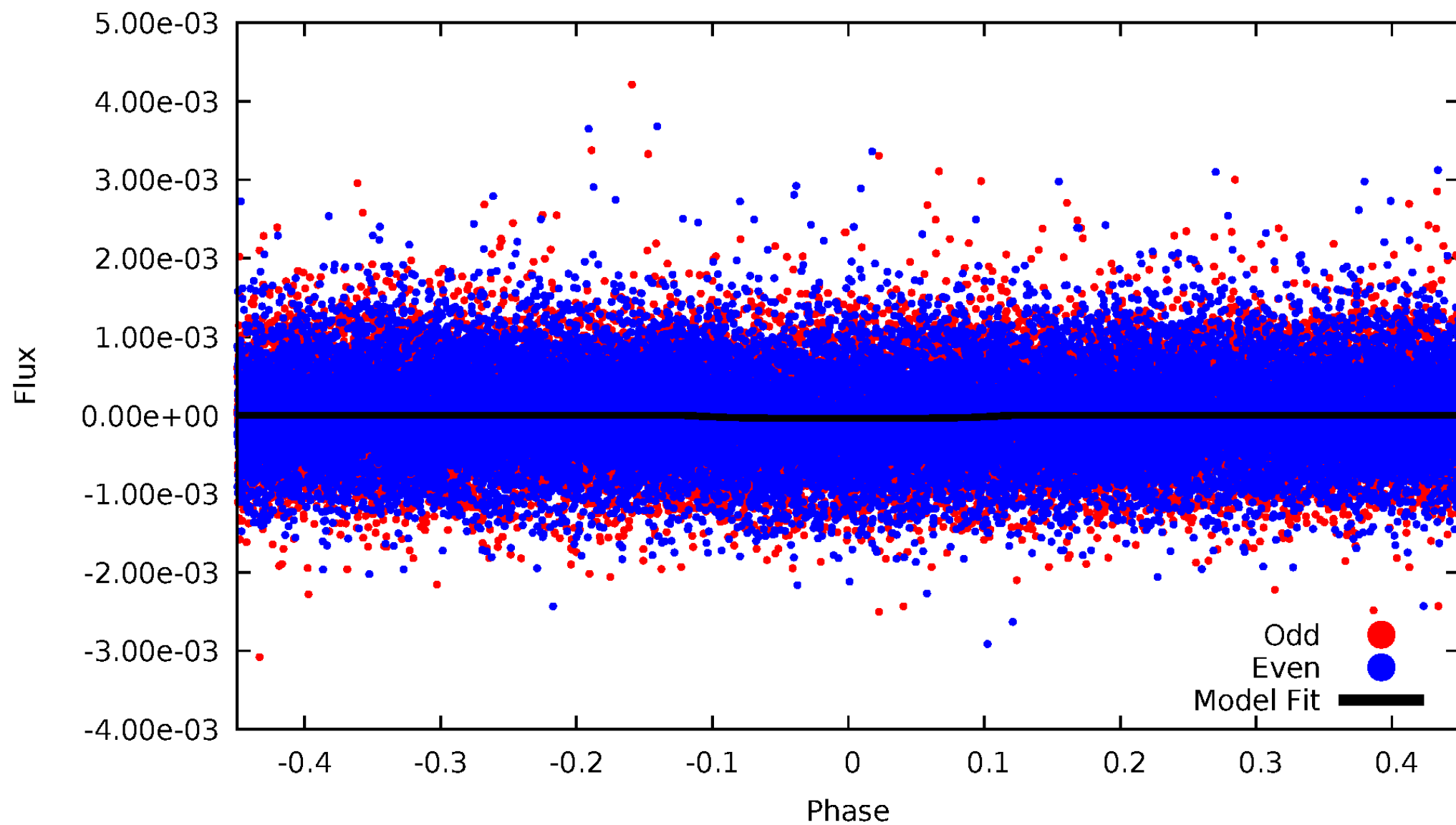


TCE 007282008-01



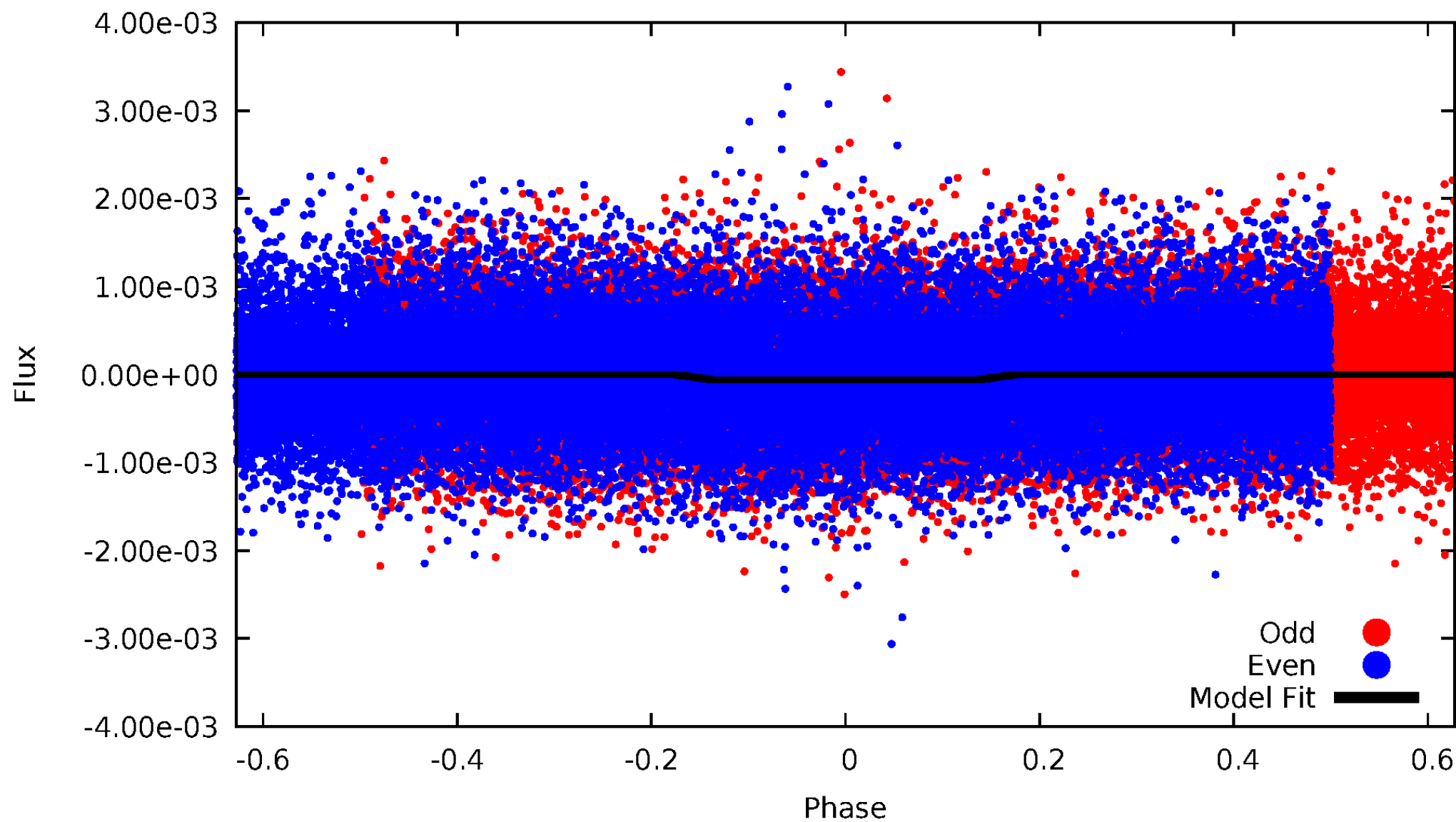
DV Odd/Even

TCE 007282008-01

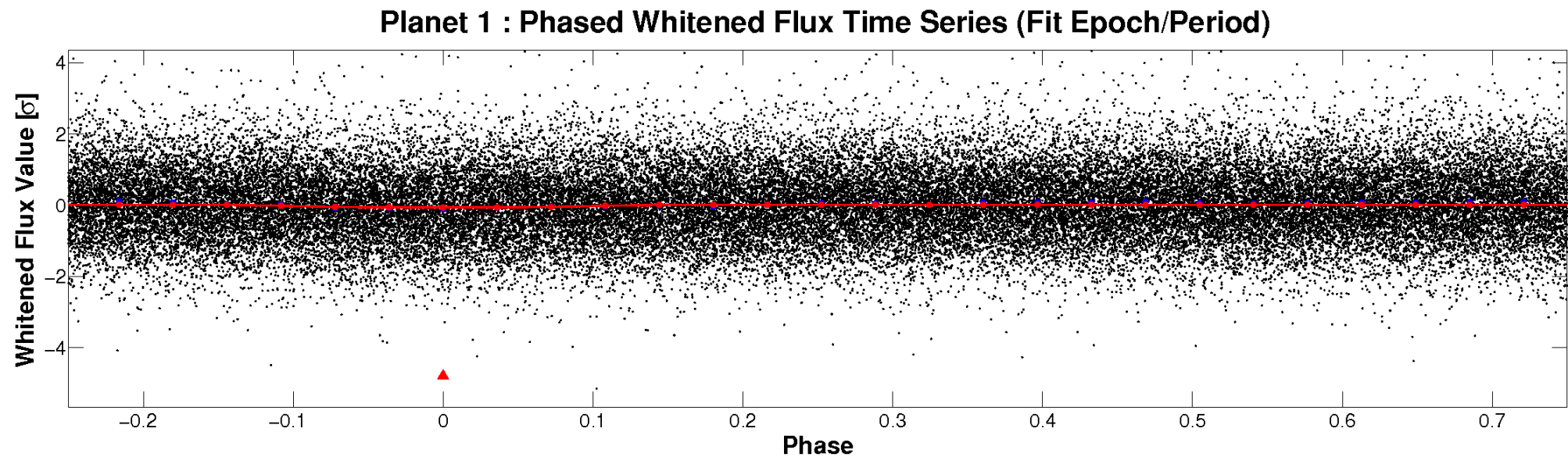
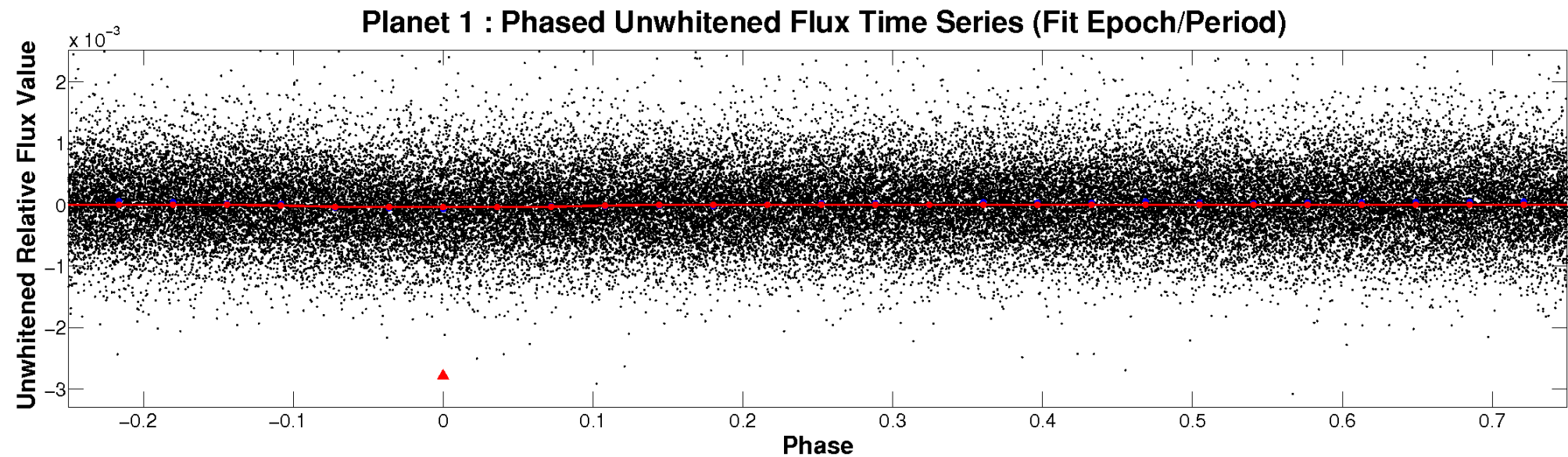


ALT Odd/Even

TCE 007282008-01

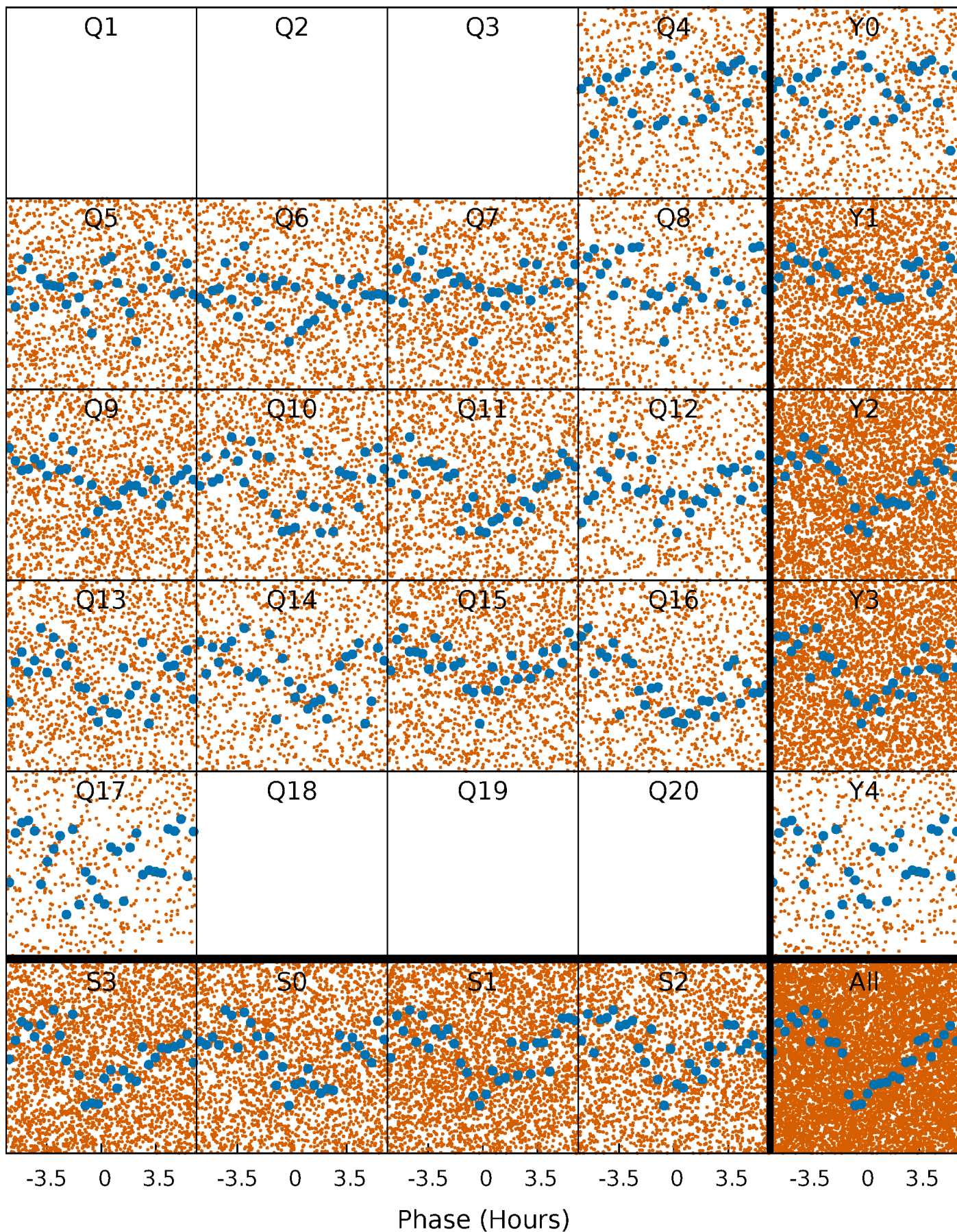


Non-Whitened Vs. Whitened Light Curve



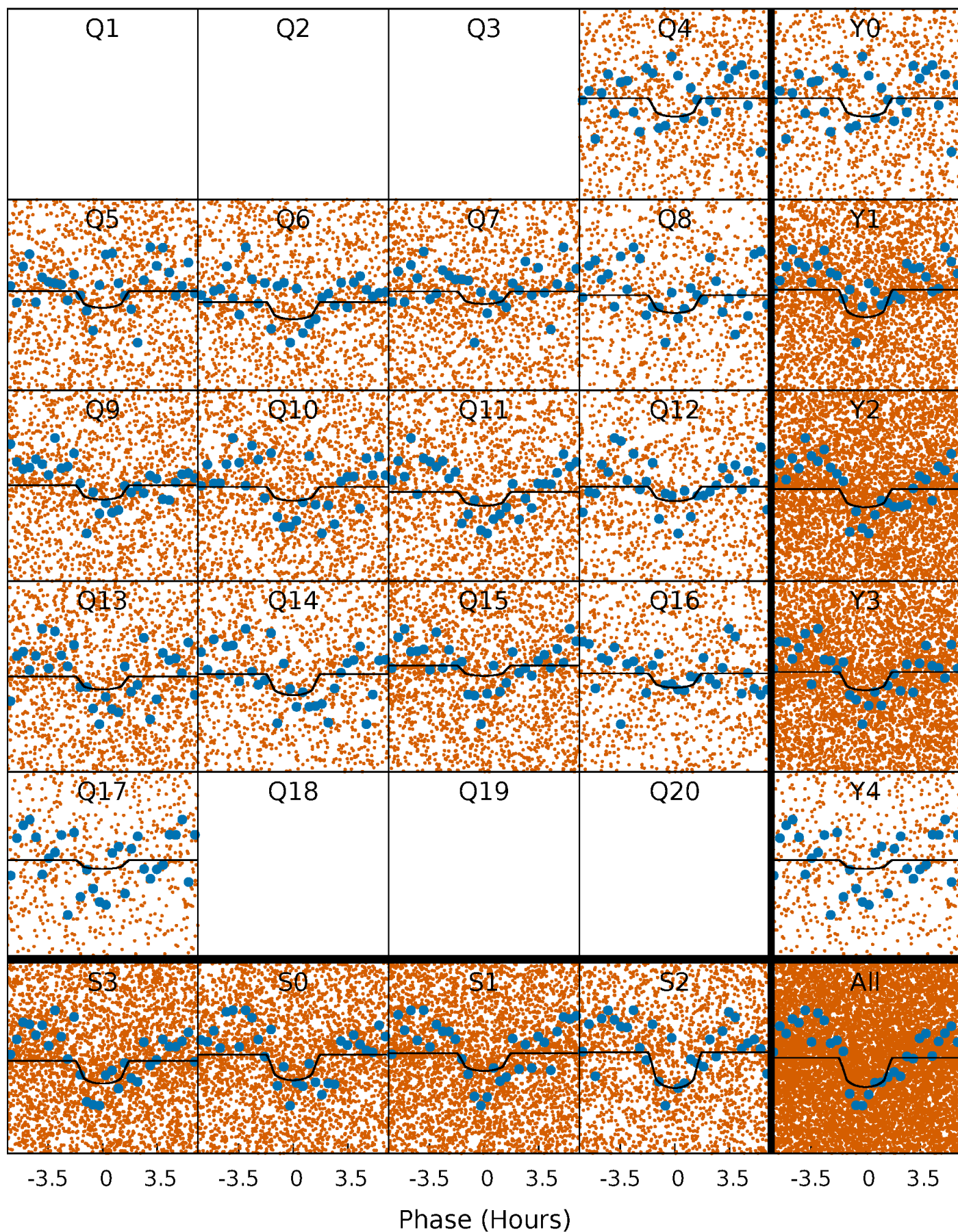
PDC Quarter-Phased Transit Curves

TCE 007282008-01 P= 0.566792 Days $T_0=131.820581$ (BKJD)



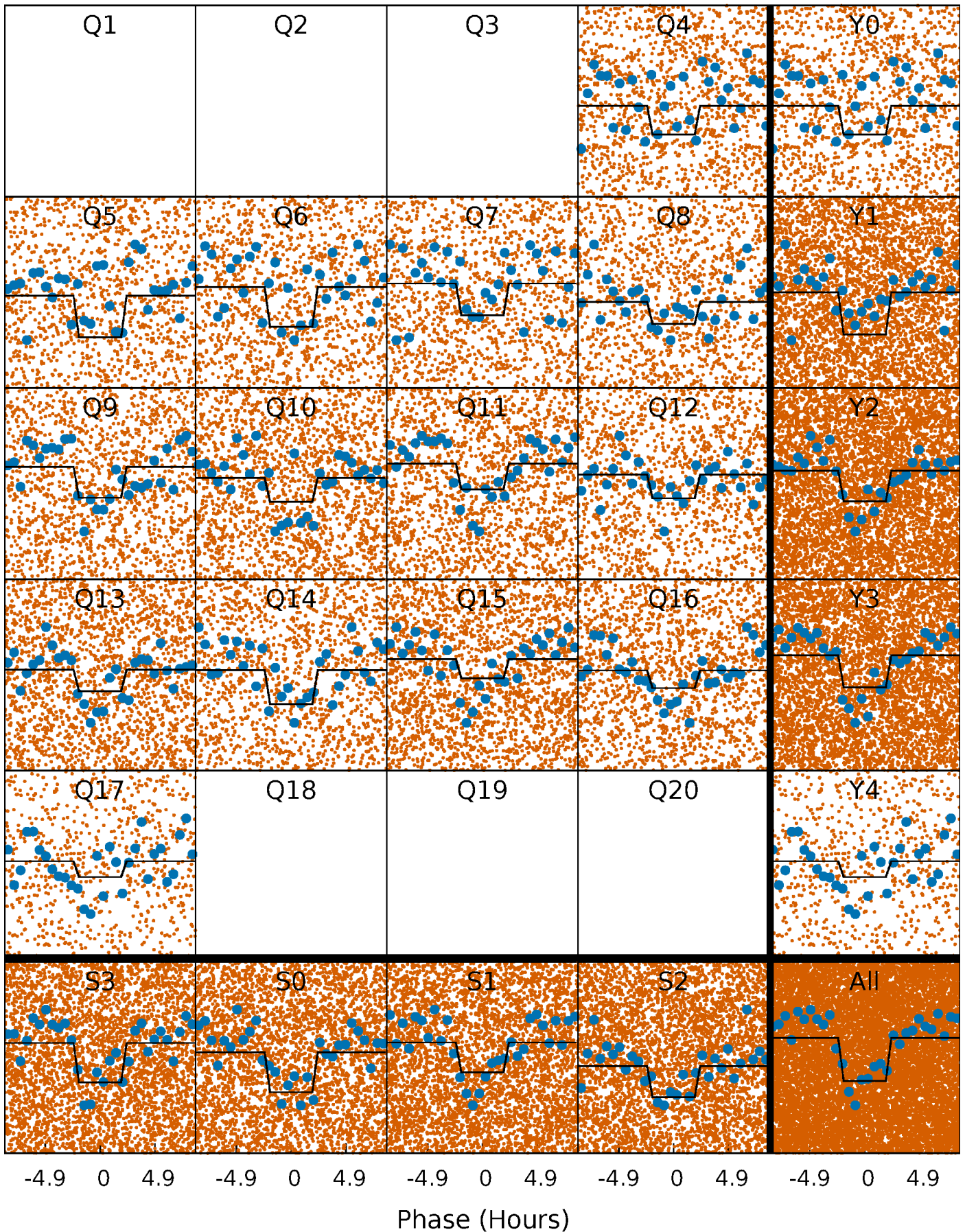
DV Quarter-Phased Transit Curves

TCE 007282008-01 P= 0.566792 Days $T_0=131.820581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

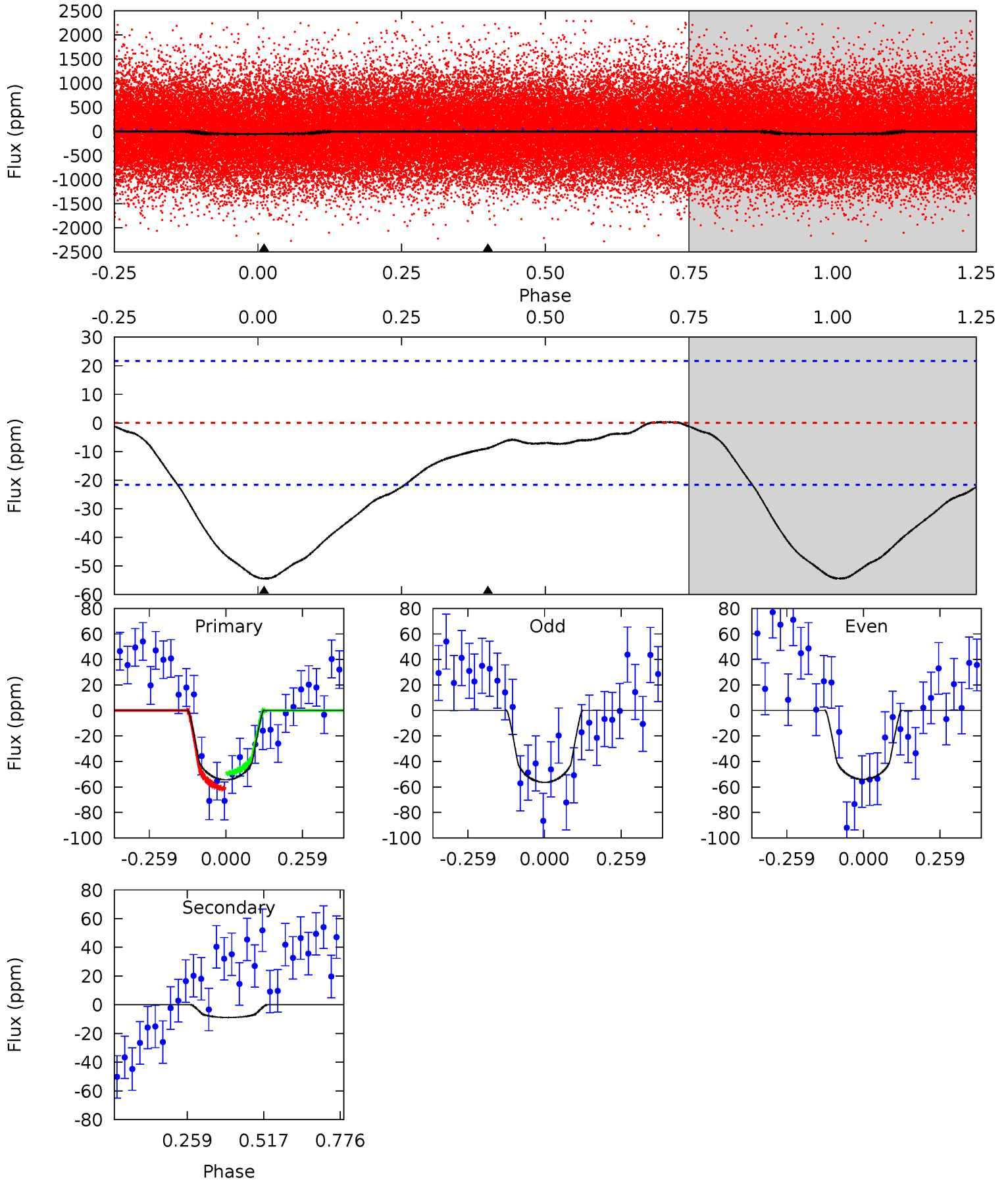
TCE 007282008-01 P= 0.566808 Days $T_0=131.827373$ (BKJD)



DV Model-Shift Uniqueness Test

007282008-01, P = 0.566792 Days, E = 131.820581 Days

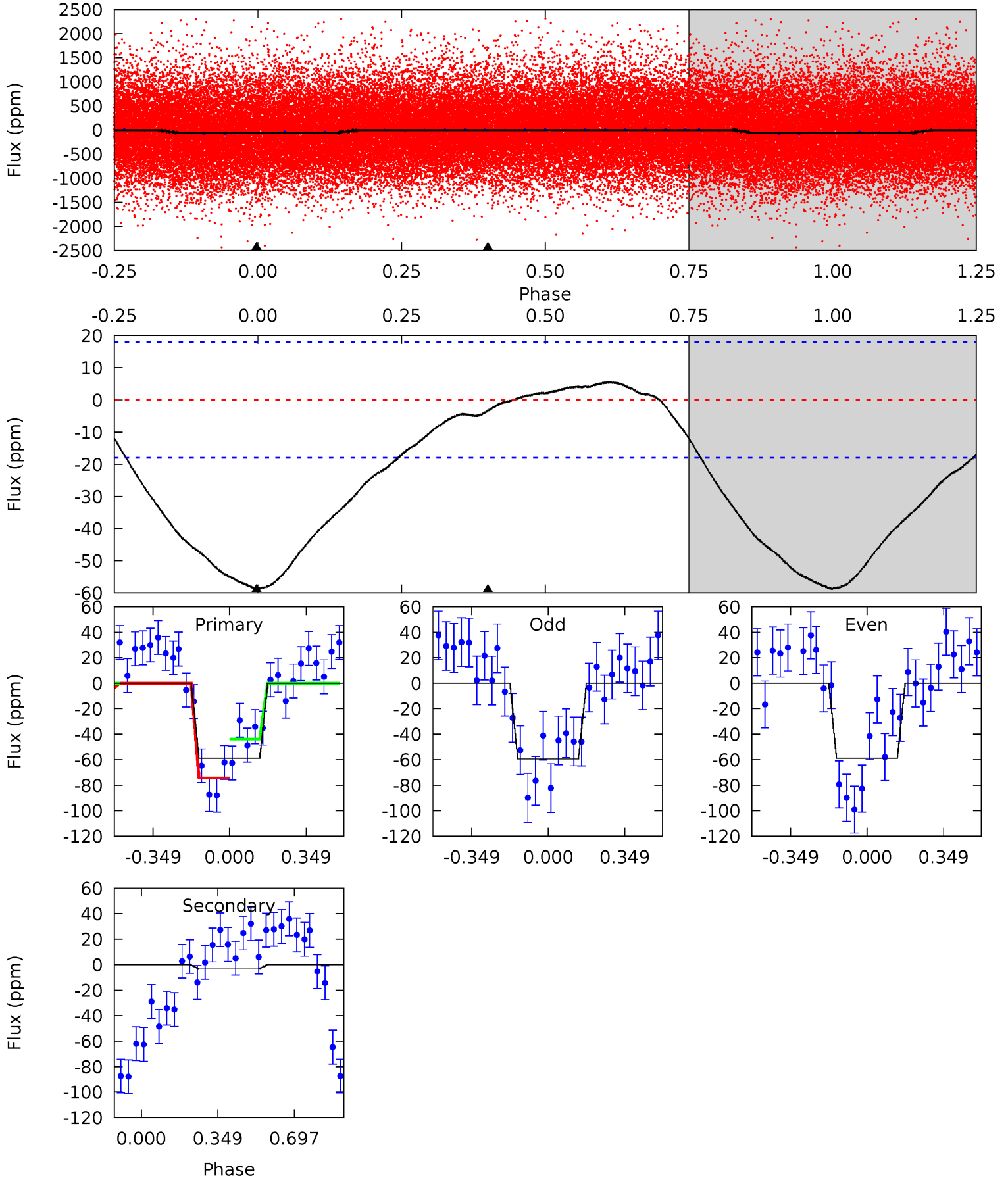
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	1.78	0	0	4.36	1.13	0.17	11.0	11.0	1.78	1.78	0.23	0.99	0.01	1.23



Alt Model-Shift Uniqueness Test

007282008-01, P = 0.566808 Days, E = 131.827373 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	0.81	0	0	4.30	0.94	1.09	14.0	14.0	0.81	0.81	0.06	0.99	0.09	3.63



Stellar Parameters For KIC 007282008

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5230^{+184}_{-184}	$4.594^{+0.026}_{-0.104}$	$0.000^{+0.250}_{-0.300}$	$0.777^{+0.122}_{-0.056}$	$0.873^{+0.060}_{-0.103}$	$2.620^{+0.391}_{-0.847}$
	+4%/-4%	+1%/-2%	+inf%/-inf%	+16%/-7%	+7%/-12%	+15%/-32%
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 007282008-01 / KOI 6858.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 5	$0.83^{+0.65}_{-0.53}$	2555^{+114}_{-104}	3181^{+1669}_{-5520}	$1.015^{+7.063}_{-0.781}$
Alt.	-3 ± 4	$0.79^{+0.77}_{-0.50}$	2558^{+119}_{-115}	2040^{+1761}_{-4957}	$0.318^{+2.212}_{-0.387}$

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

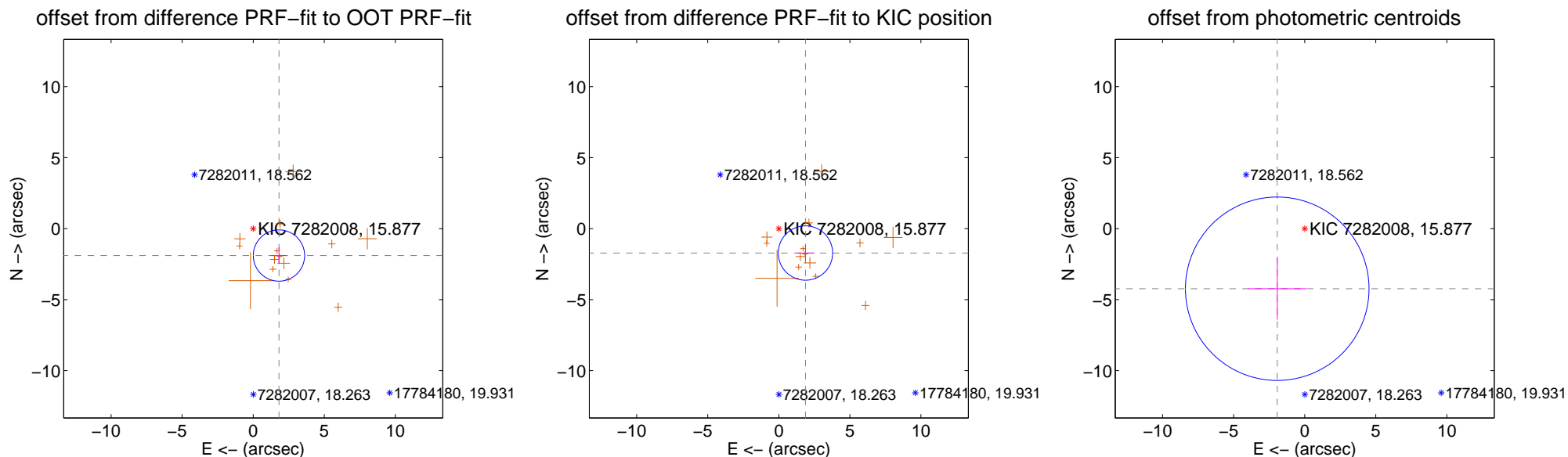
DV Centroid Data

Supplemental centroid analysis for 007282008-01. Kepler magnitude: 15.88. Transit SNR 6.13

There are 0 quarters with good PRF difference image offsets

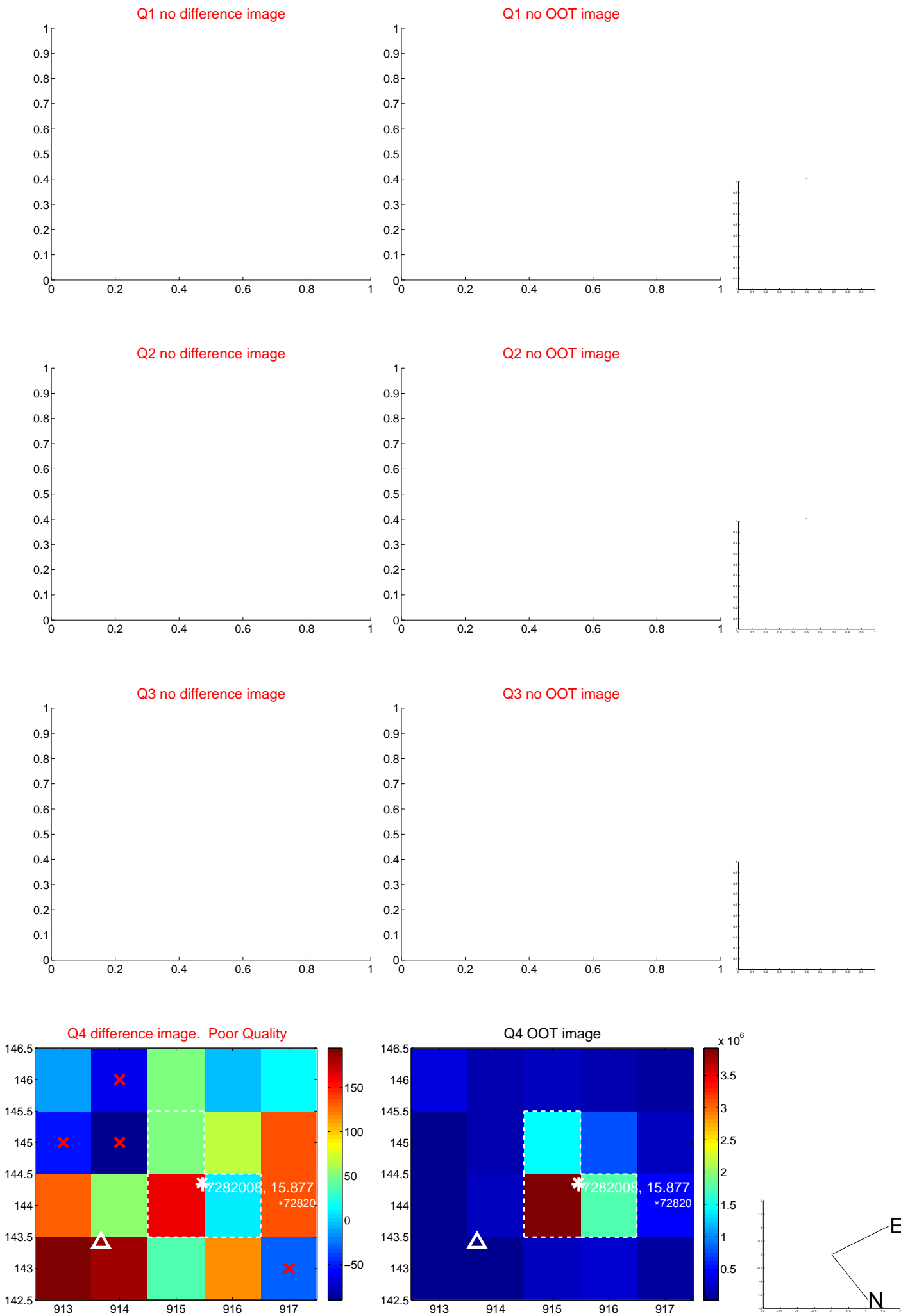
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.623 ± 0.602	4.36	-1.813 ± 0.545	-1.896 ± 0.600
PRF-fit source offset from KIC position	2.544 ± 0.638	3.99	-1.875 ± 0.646	-1.719 ± 0.567
photometric centroid source offset	4.65 ± 2.15	2.16	1.93 ± 2.07	-4.23 ± 2.17

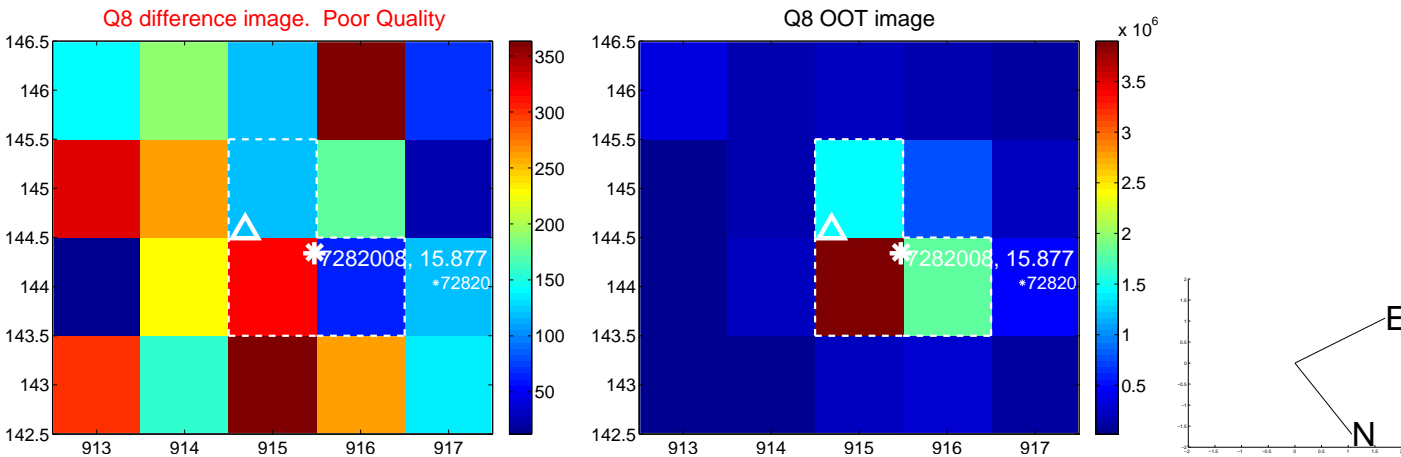
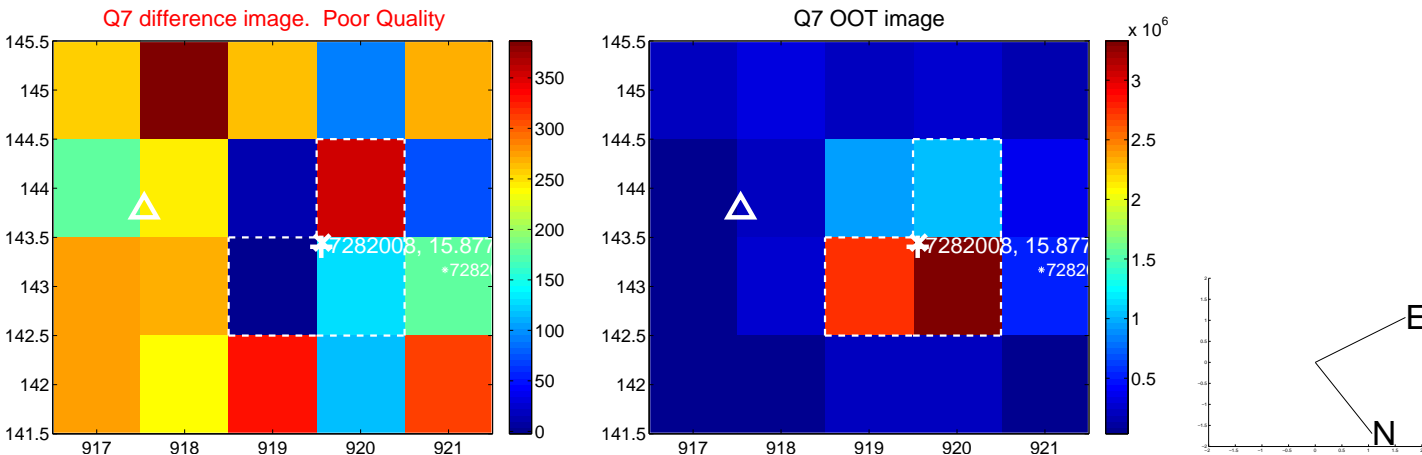
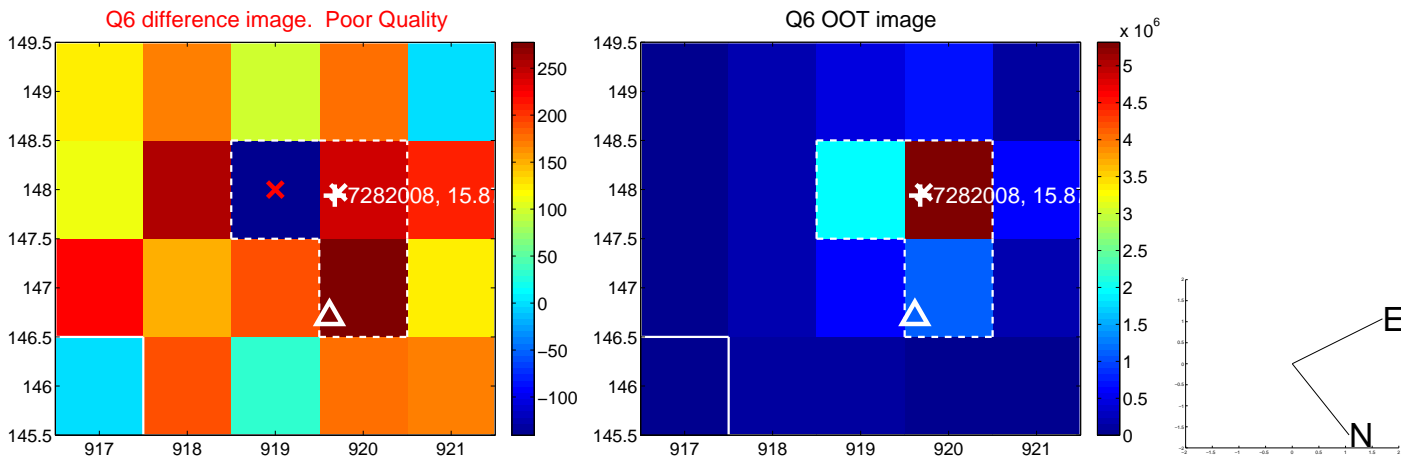
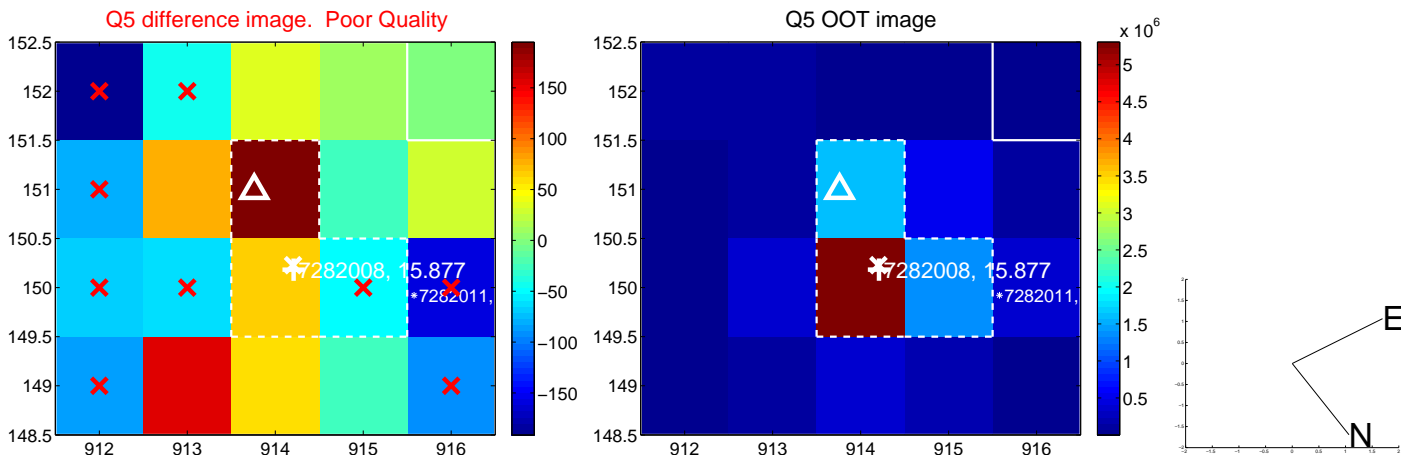


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

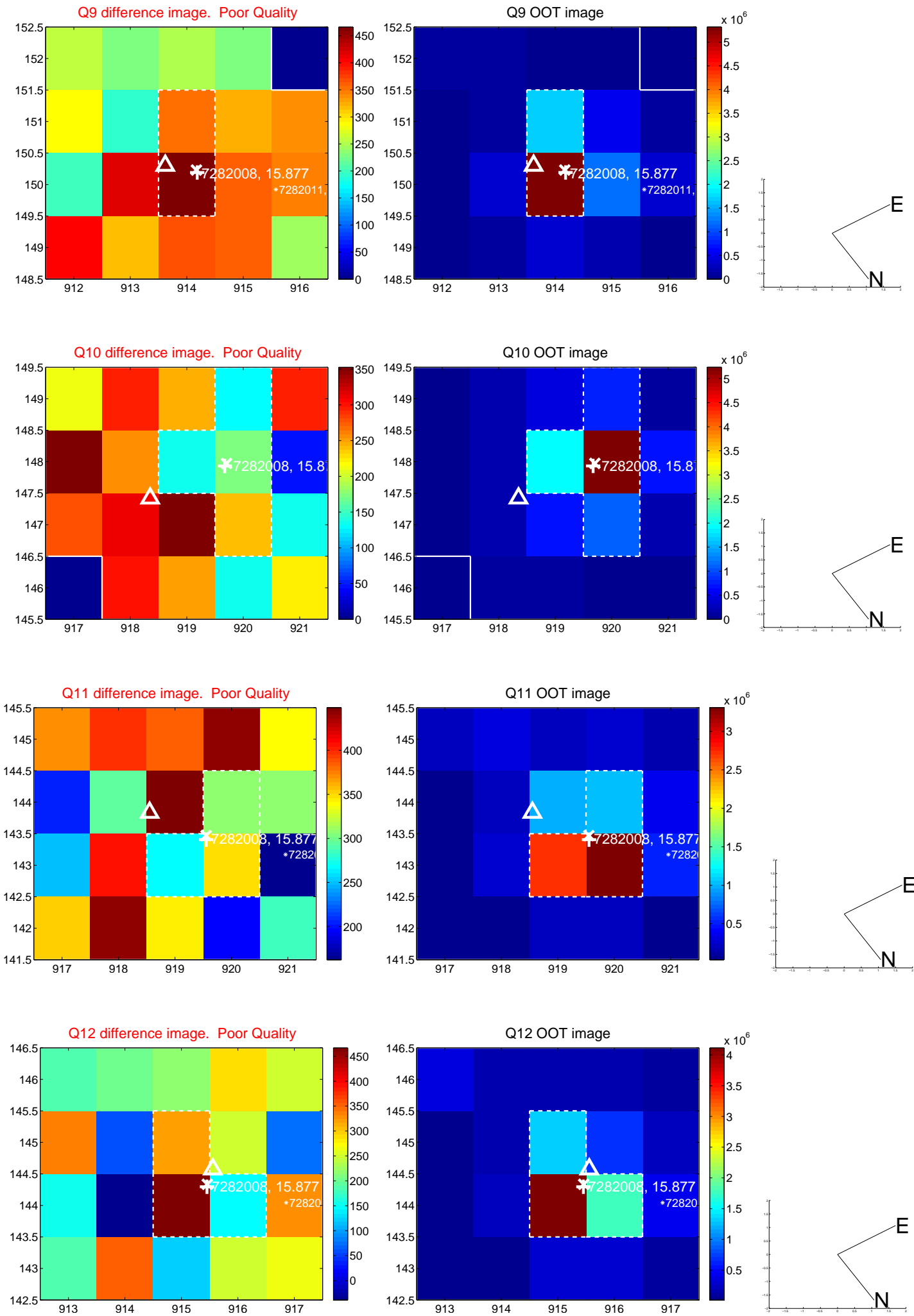
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



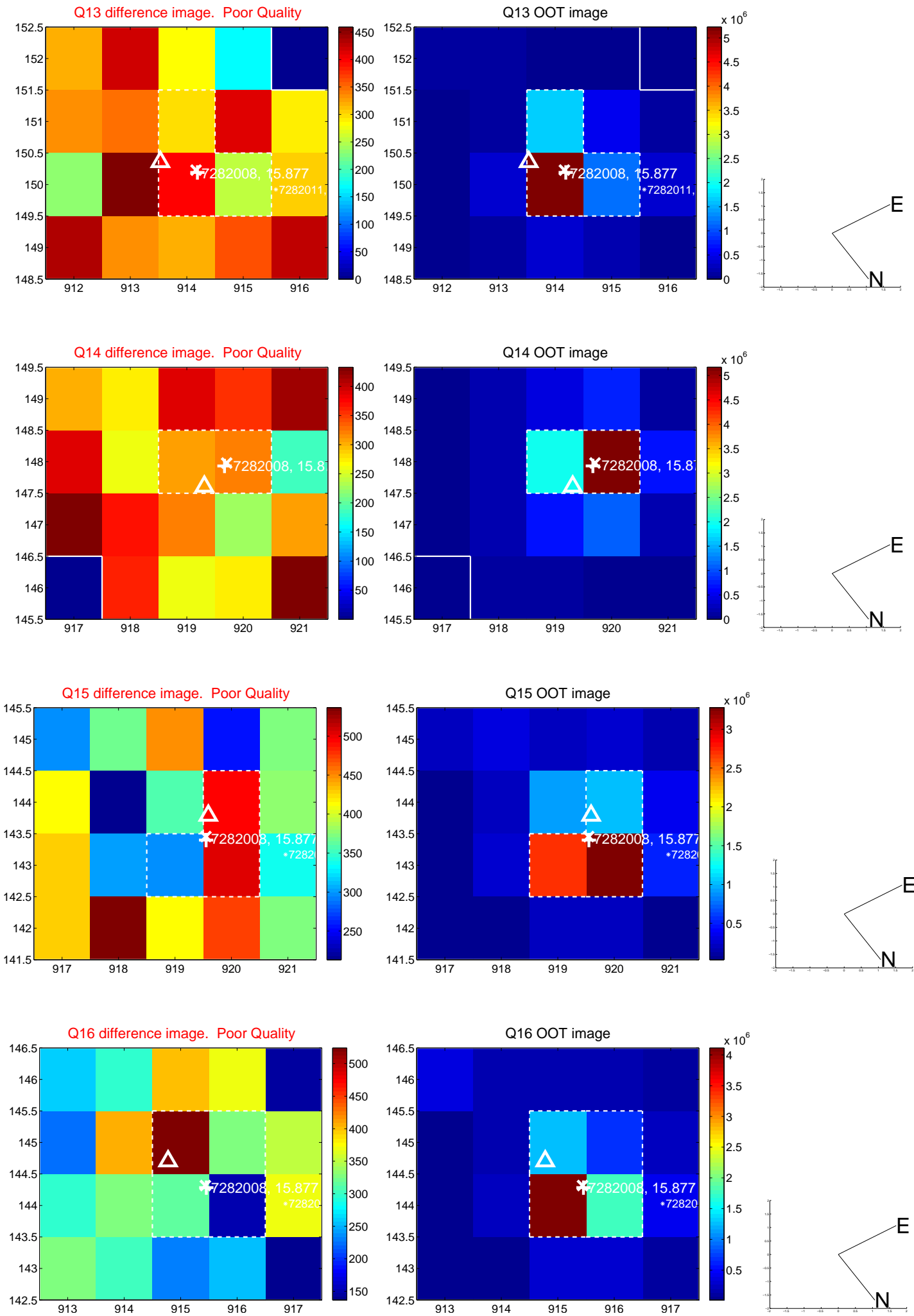
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



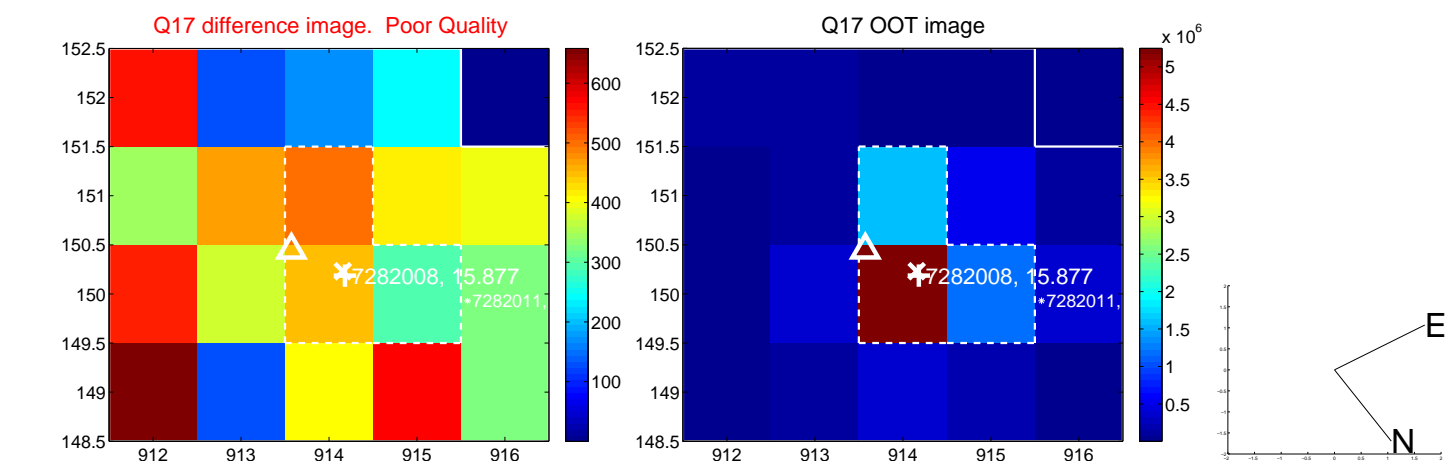
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



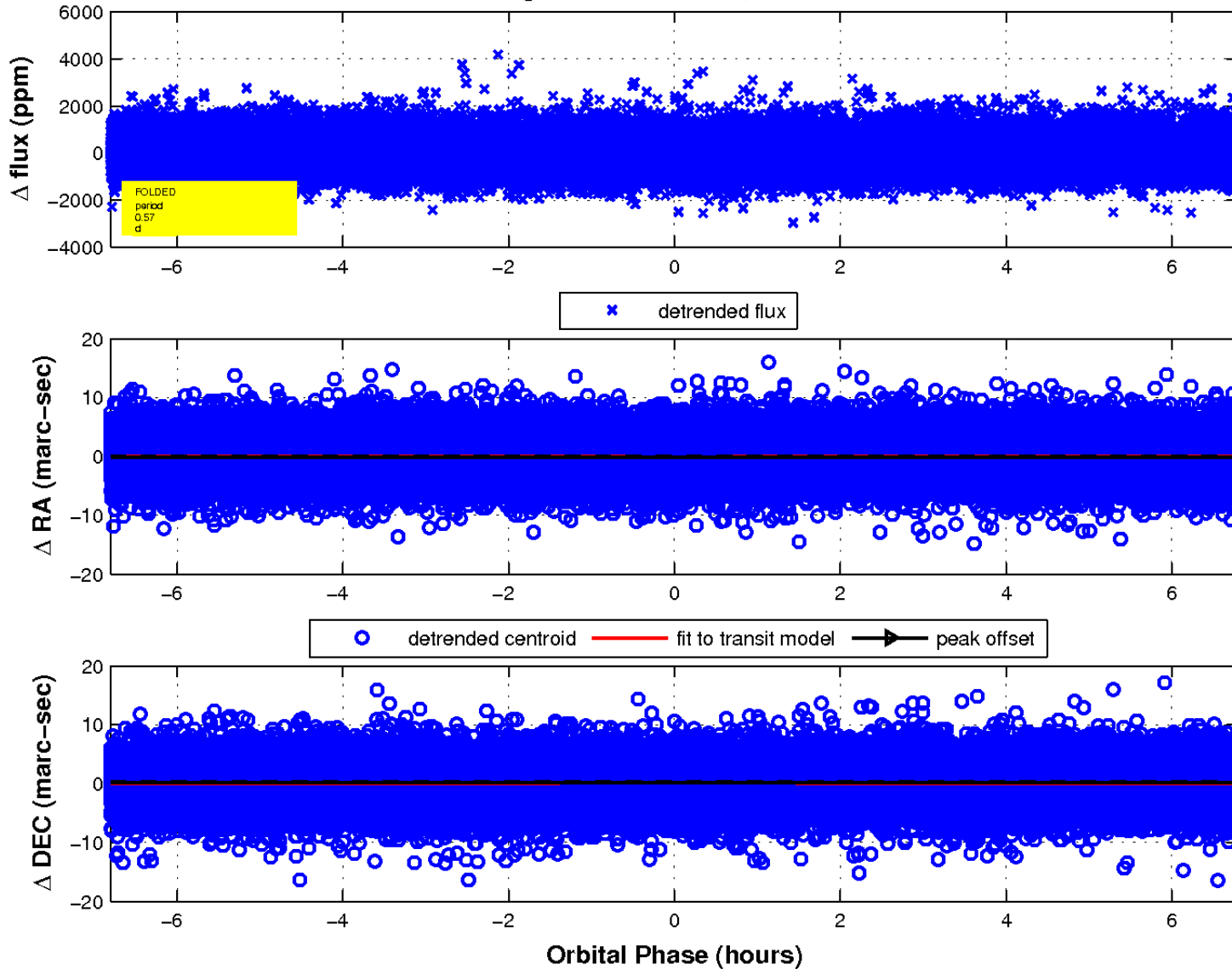
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

