

KIC 006668712

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})
006668712-01	OBS	No	0.577493	131.870879	95.9	4.753	7.9	7.3	1.00	5780	1.12	5426.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006668712-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_RESOLVED_OFFSET

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

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

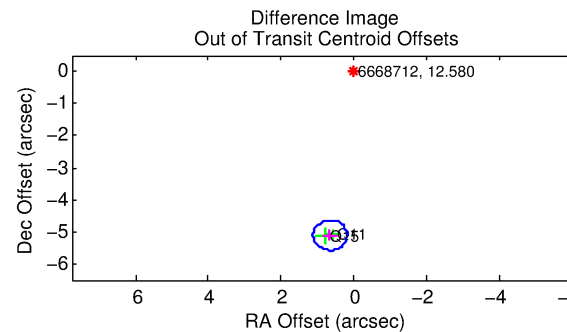
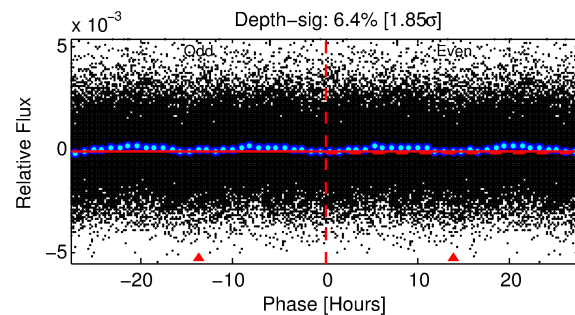
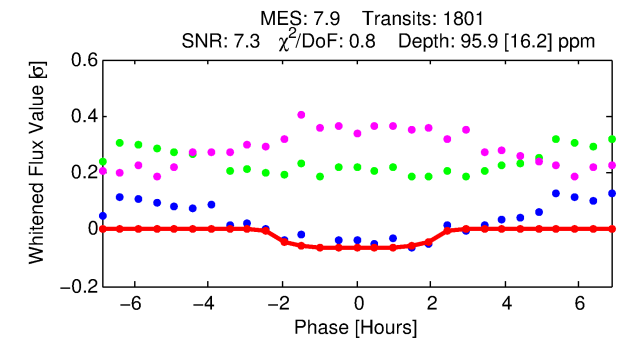
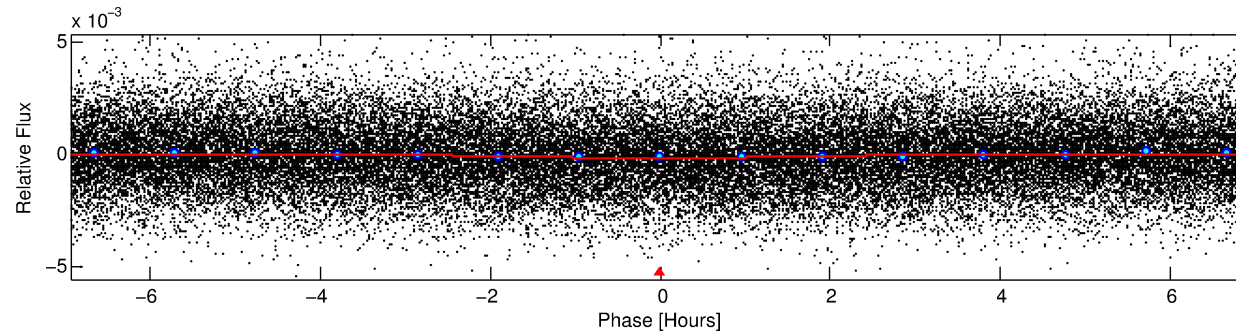
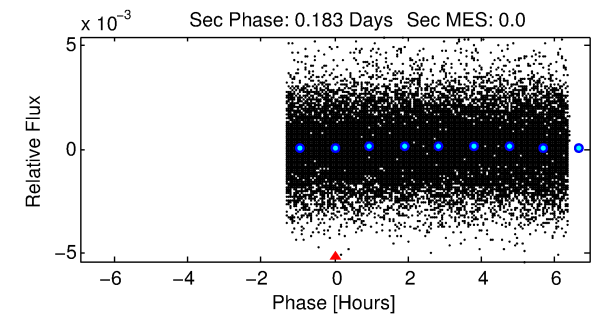
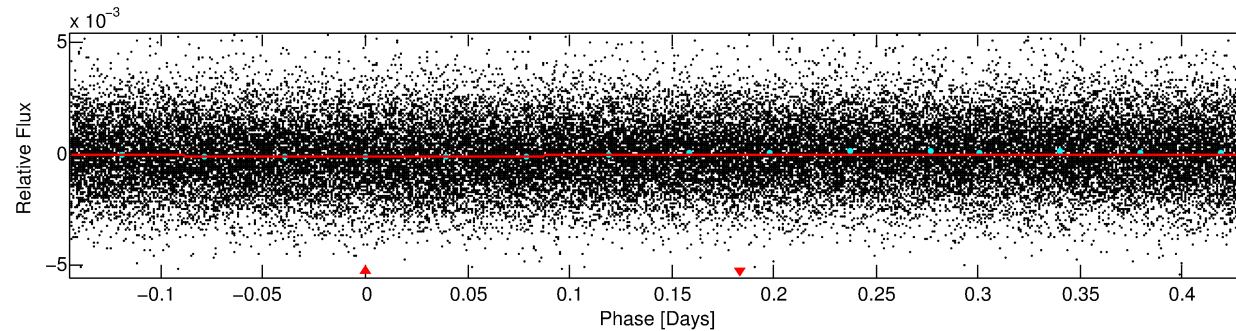
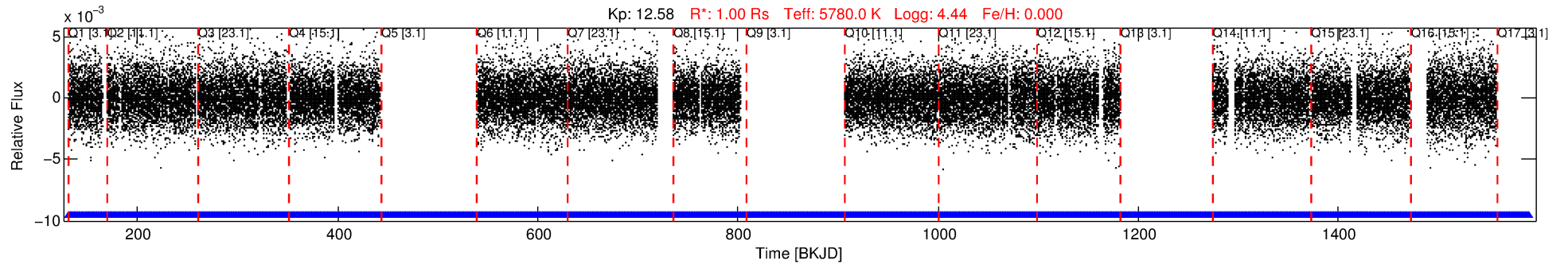
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006668712-01

No Significant Match Found

DV One-Page Summary

KIC: 6668712 Candidate: 1 of 1 Period: 0.577 d



DV Fit Results:

Period = 0.57749 [0.00002] d
Epoch = 131.8709 [0.0075] BKJD
 $R_p/R^* = 0.0103$ [0.0099]
 $a/R^* = 1.05$ [0.43]
 $b = 0.86$ [1.41]
 $S_{\text{eff}} = 5426.79$ [0.19]
 $T_{\text{eq}} = 2189$ [0] K
 $R_p = 1.13$ [1.08] R_e
 $a = 0.0136$ [0.0000] AU
 $A_g = \text{N/A}$
 $T_{\text{eff}} = \text{N/A}$

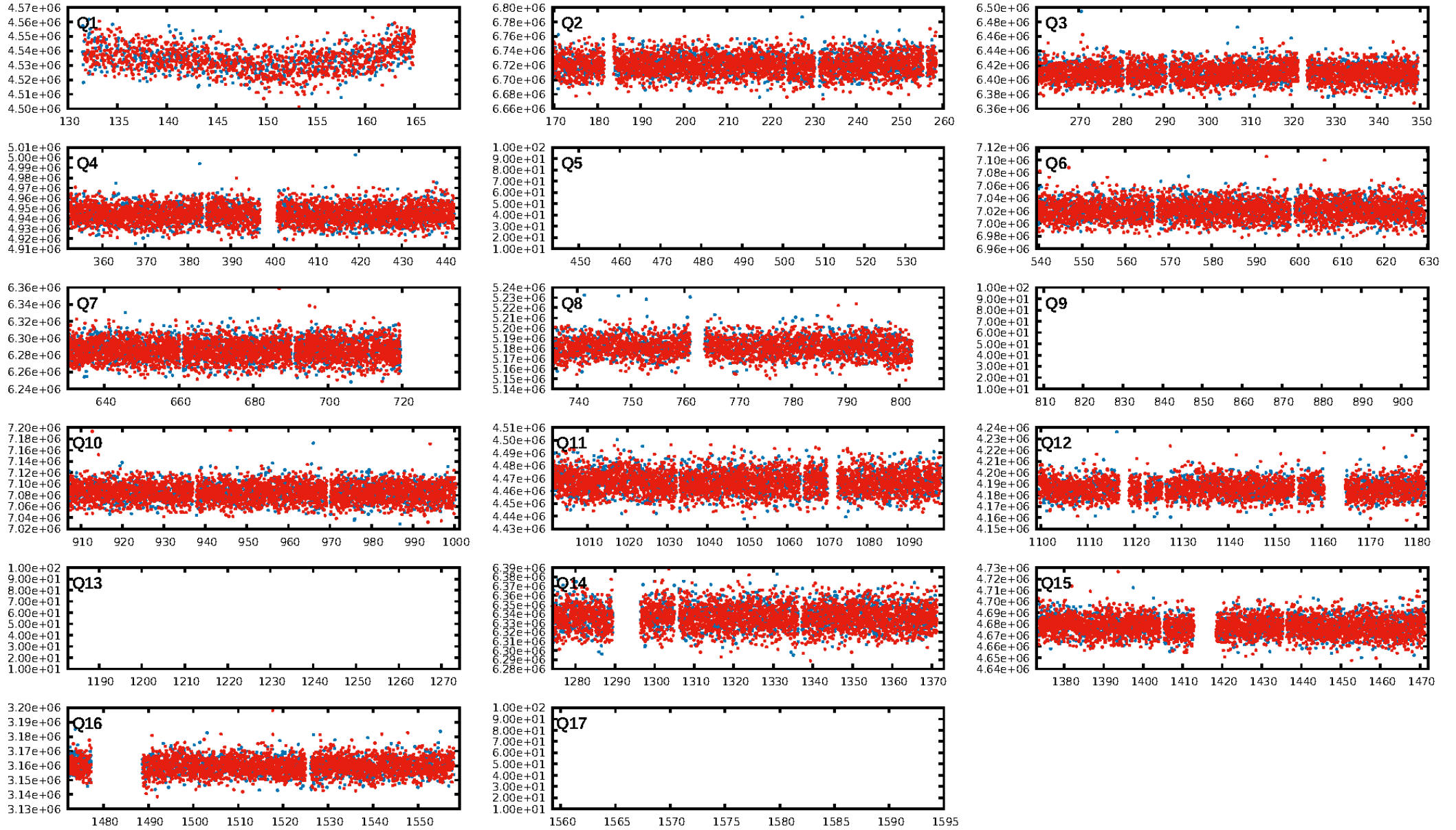
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1743/1743]
GhostDiagnostic-chr: -0.524
Centroid-sig: 0.0%
Centroid-so: 7.968 arcsec [7.94σ]
OotOffset-rm: 5.146 arcsec [32.87σ]
KicOffset-rm: 9.564 arcsec [61.10σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [13/13]

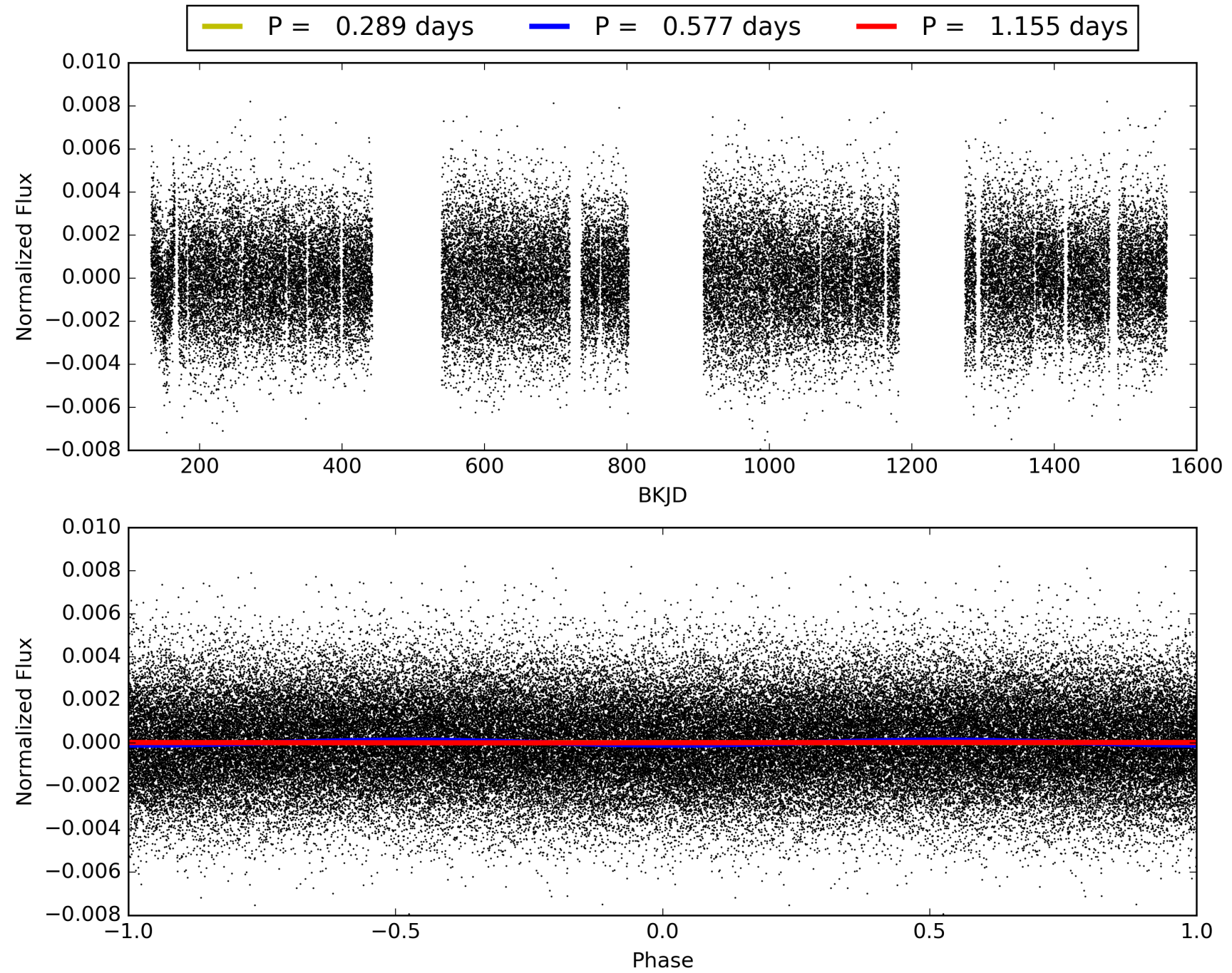
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:01:15 Z

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

TCE 006668712-01, PDC Light Curves

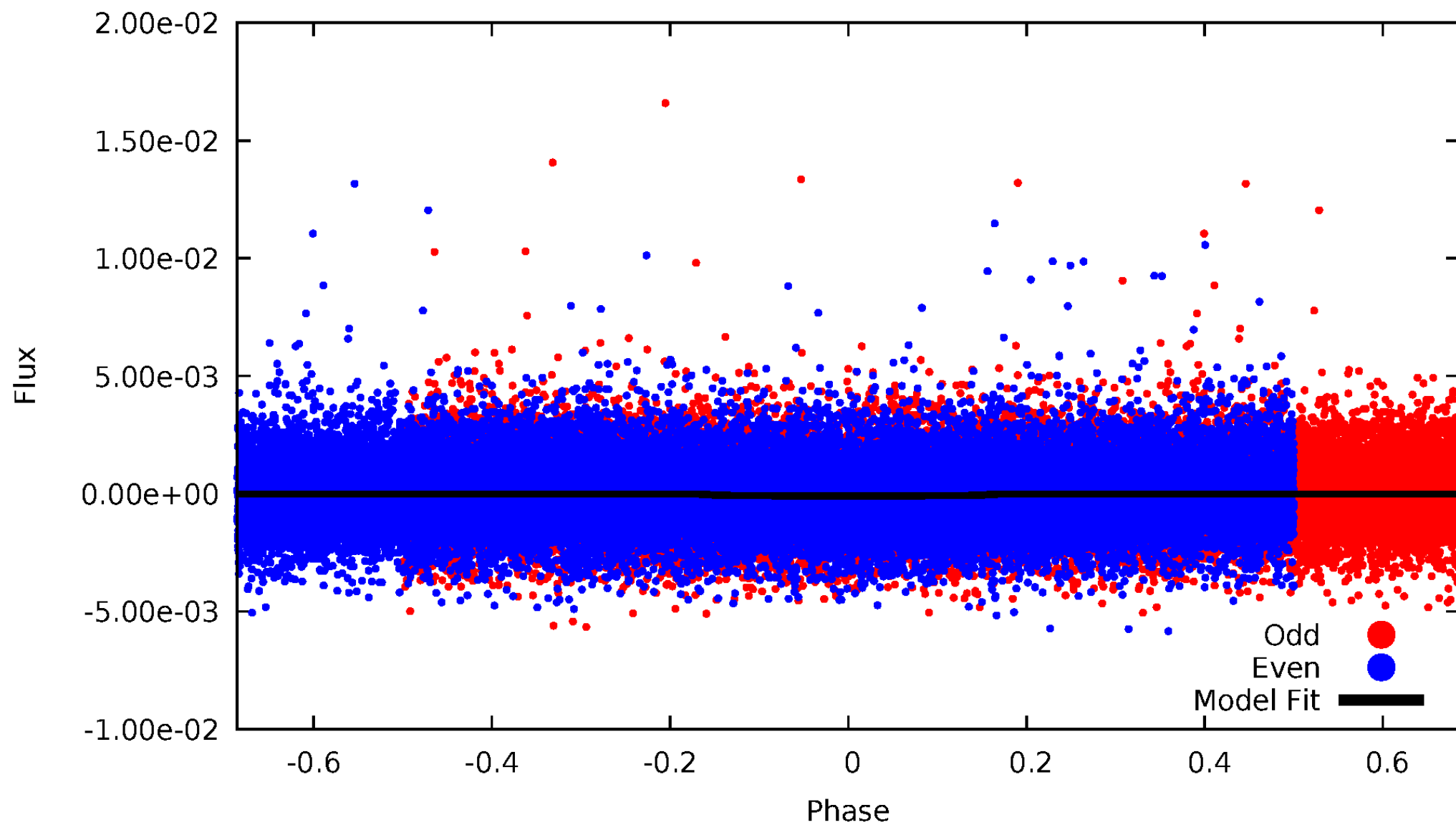


TCE 006668712-01



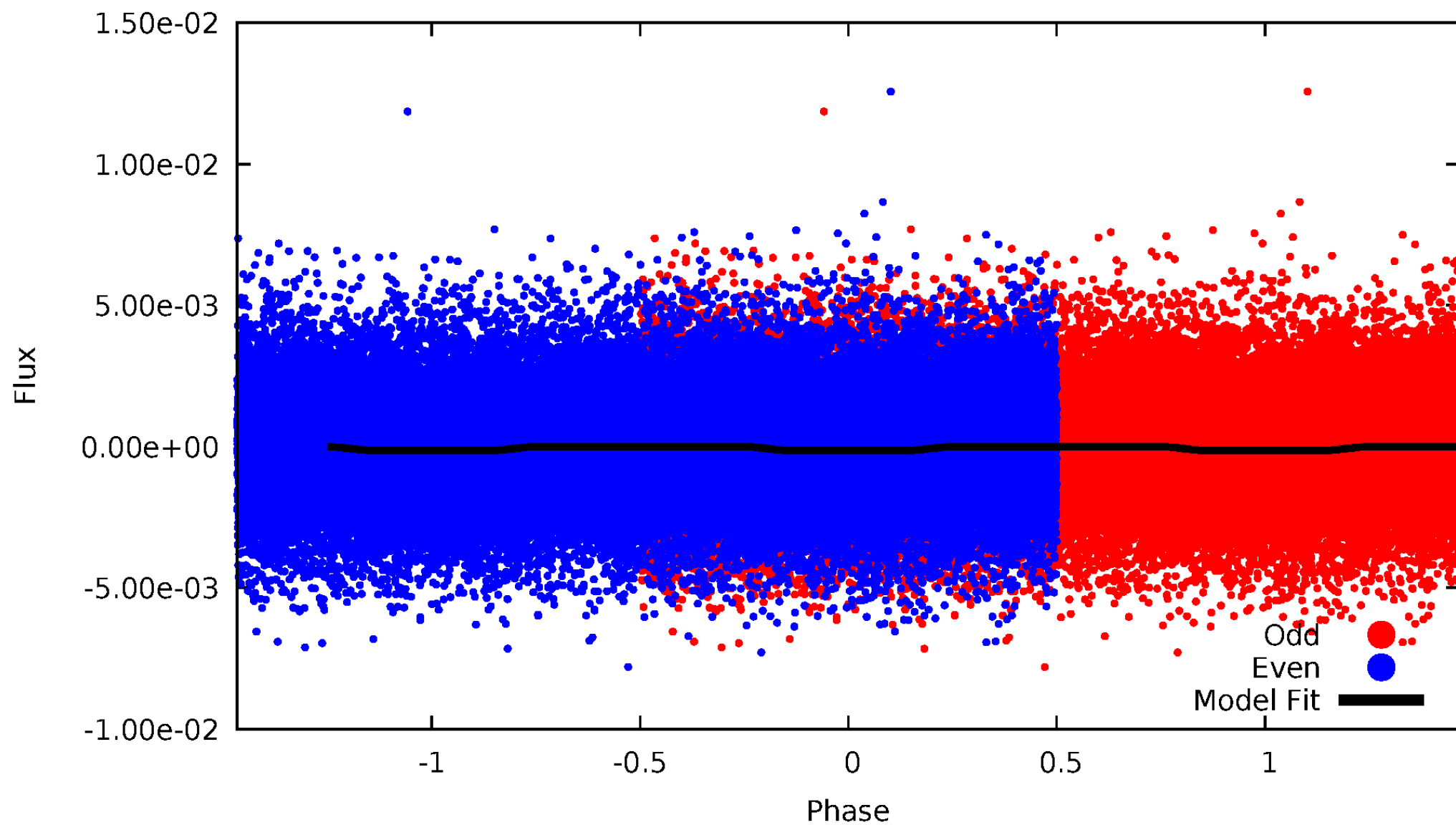
DV Odd/Even

TCE 006668712-01

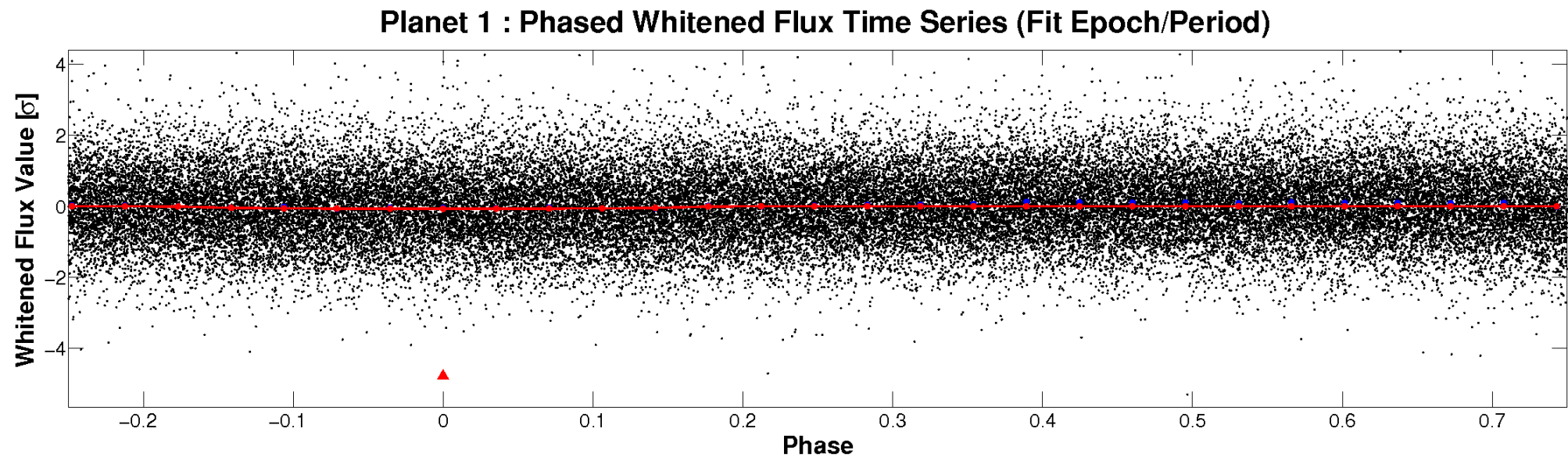
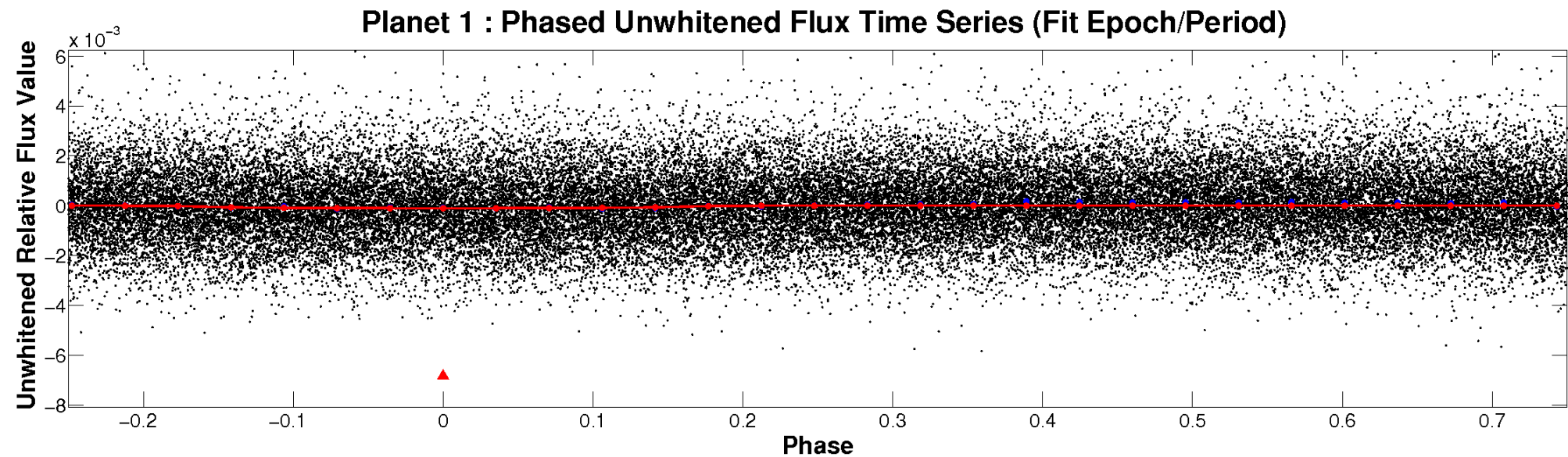


ALT Odd/Even

TCE 006668712-01

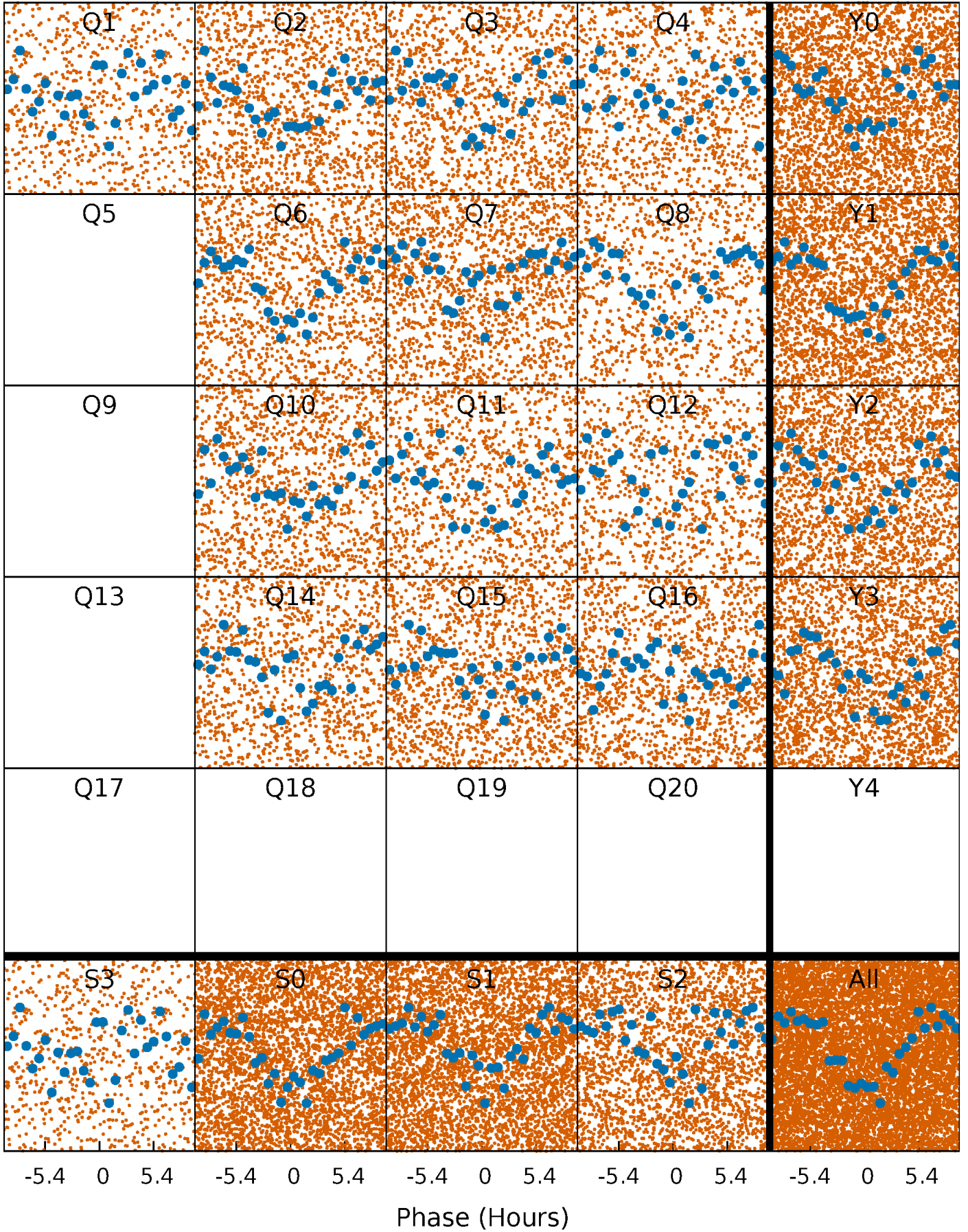


Non-Whitened Vs. Whitened Light Curve



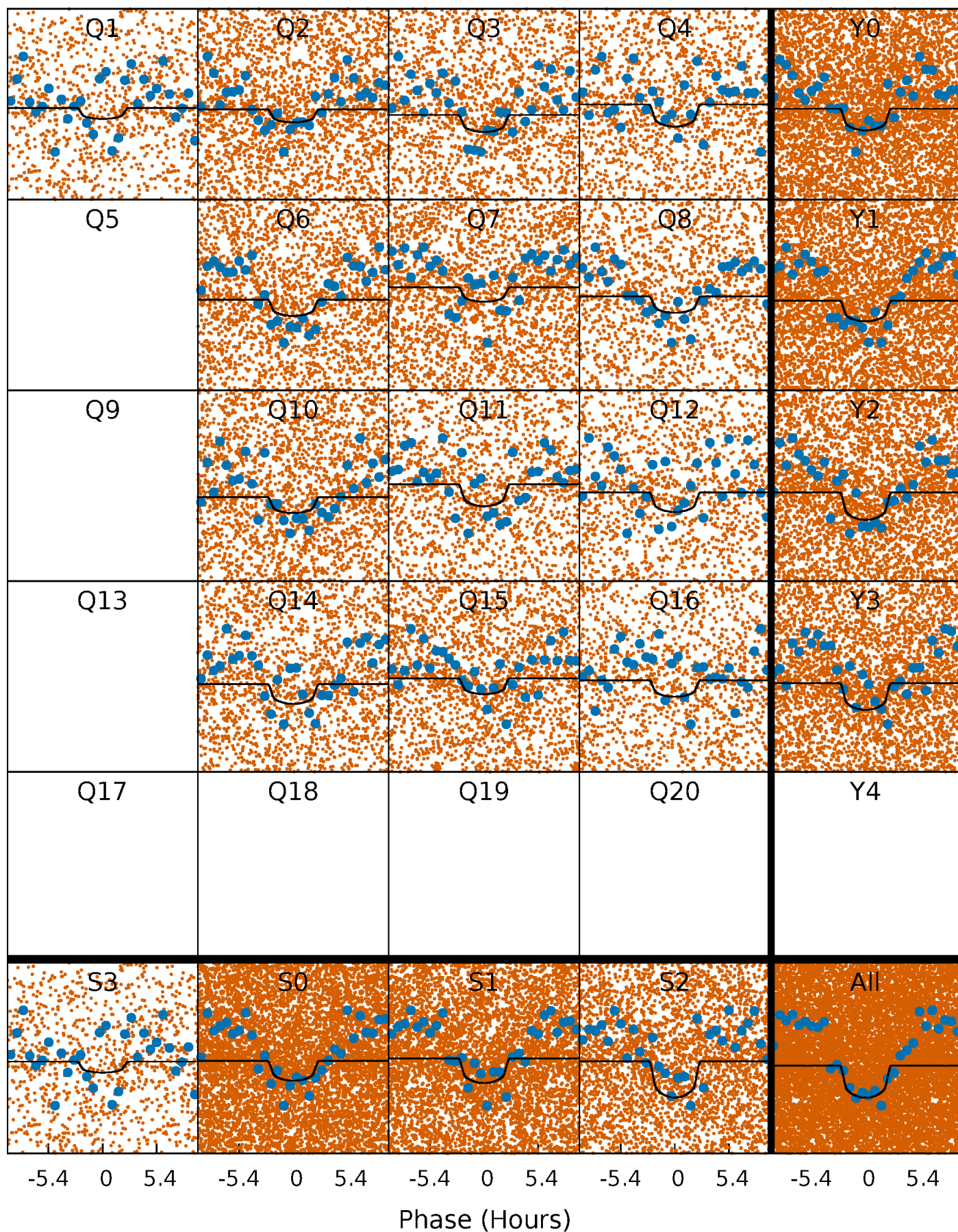
PDC Quarter-Phased Transit Curves

TCE 006668712-01 P= 0.577493 Days $T_0=131.870879$ (BKJD)



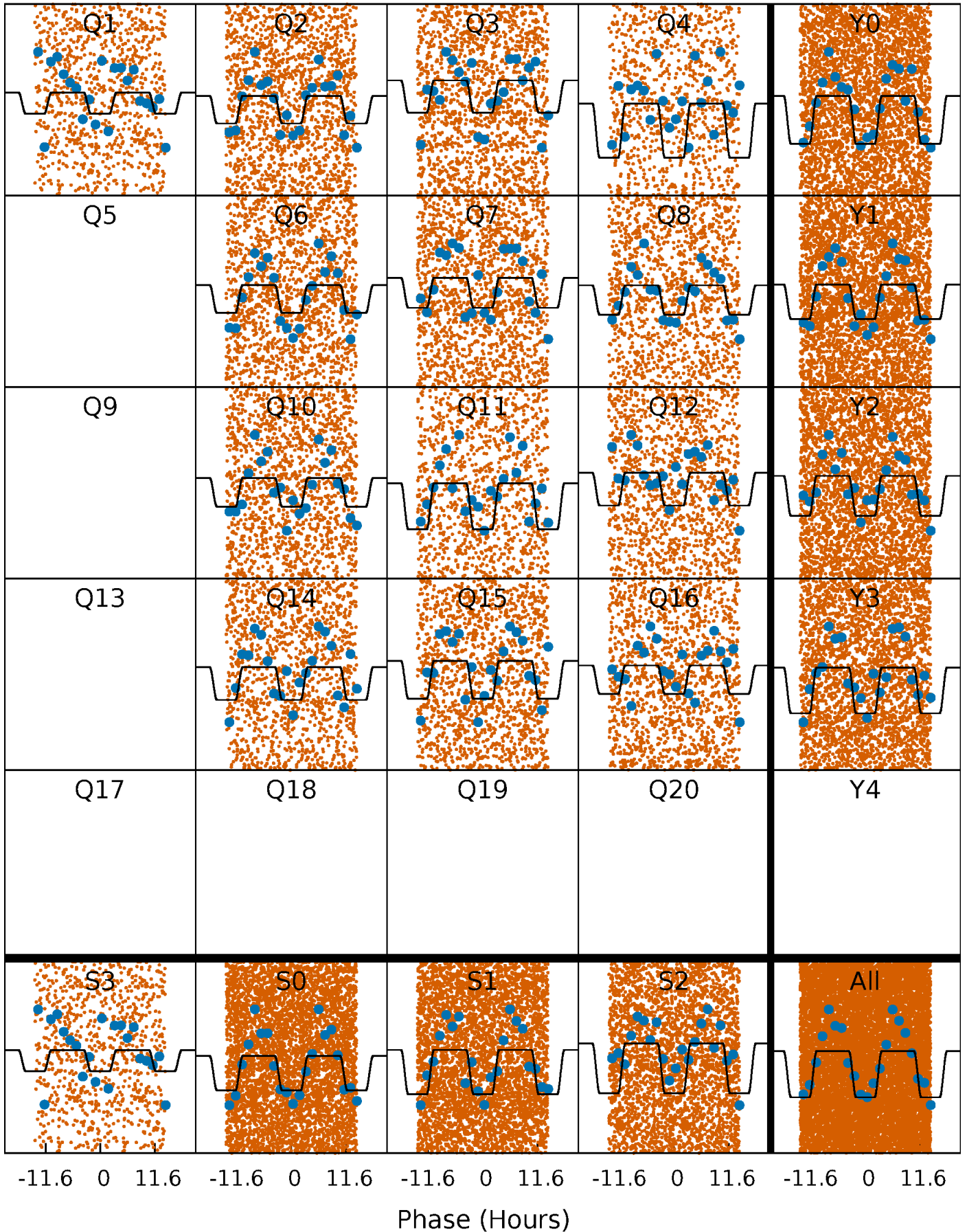
DV Quarter-Phased Transit Curves

TCE 006668712-01 P= 0.577493 Days $T_0=131.870879$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

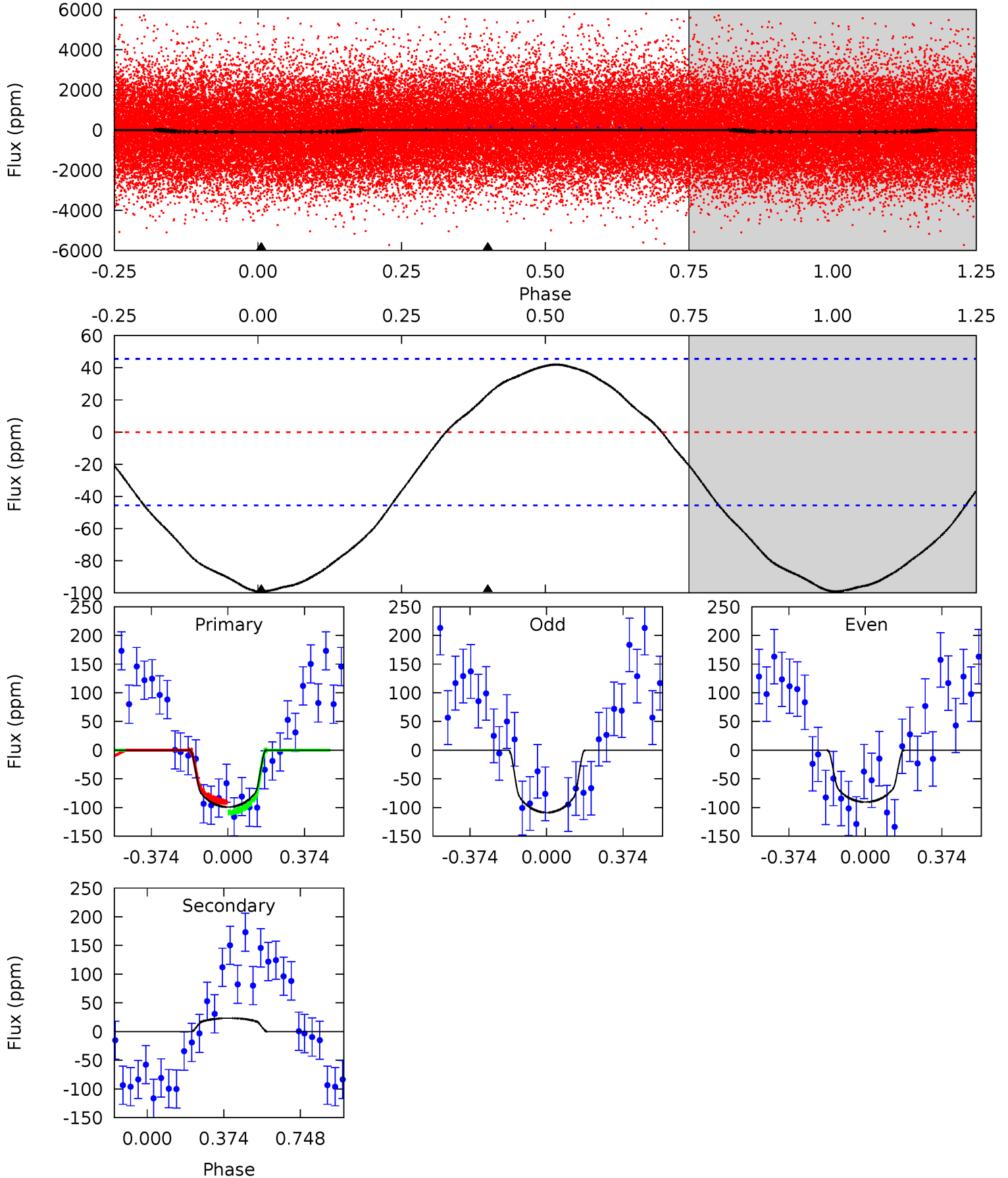
TCE 006668712-01 P= 0.577534 Days $T_0=131.841867$ (BKJD)



DV Model-Shift Uniqueness Test

006668712-01, P = 0.577493 Days, E = 131.293386 Days

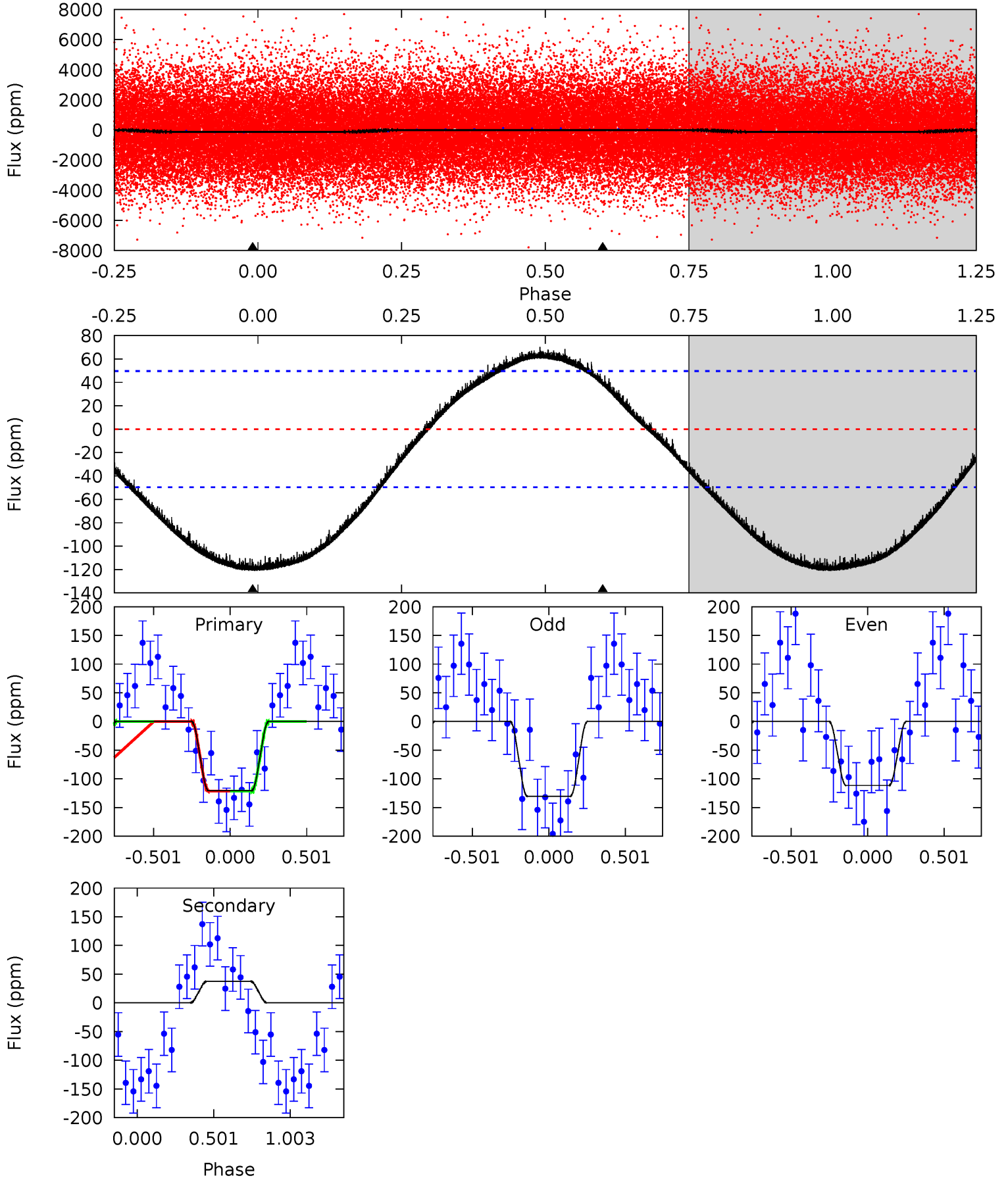
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	-2.20	0	0	4.28	0.89	1.07	9.33	9.33	-2.20	-2.20	0.86	0.86	0.30	0.88



Alt Model-Shift Uniqueness Test

006668712-01, P = 0.577534 Days, E = 131.264333 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	-3.21	0	0	4.21	0.67	1.37	10.2	10.2	-3.21	-3.21	0.79	1.10	0.37	0.01



Stellar Parameters For KIC 006668712

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 006668712-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	23 ± 11	$1.31^{+1.01}_{-0.80}$	3055^{+155}_{-152}	-4123^{+605}_{-1790}	$-1.336^{+0.960}_{-7.340}$
Alt.	38 ± 12	$1.45^{+1.07}_{-0.87}$	3052^{+151}_{-139}	-4259^{+591}_{-2164}	$-1.662^{+1.125}_{-10.554}$

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

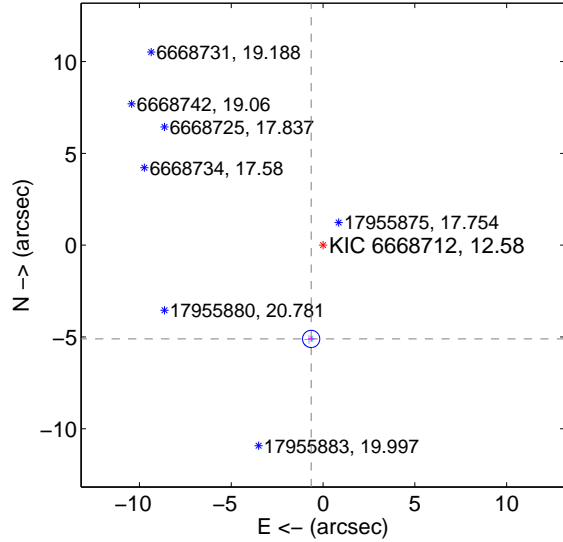
Supplemental centroid analysis for 006668712-01. Kepler magnitude: 12.58. Transit SNR 7.28

There are 2 quarters with good PRF difference image offsets

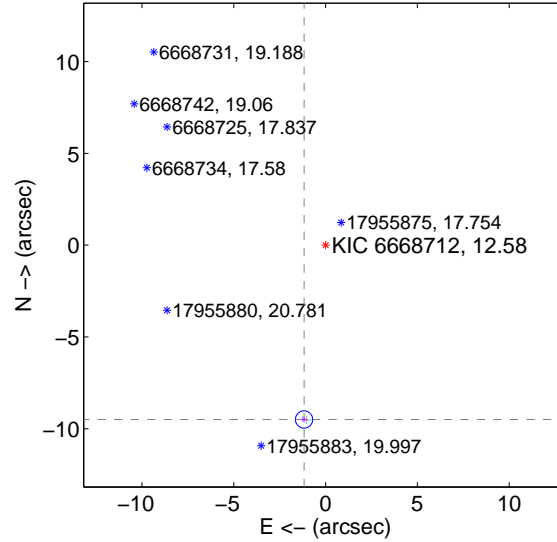
The OOT PRF centroid is offset from the target star catalog position by about 4.40 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.146 ± 0.157	32.87	0.647 ± 0.172	-5.106 ± 0.156
PRF-fit source offset from KIC position	9.564 ± 0.157	61.10	1.172 ± 0.172	-9.492 ± 0.156
photometric centroid source offset	7.97 ± 1.00	7.94	1.69 ± 0.81	-7.79 ± 1.01

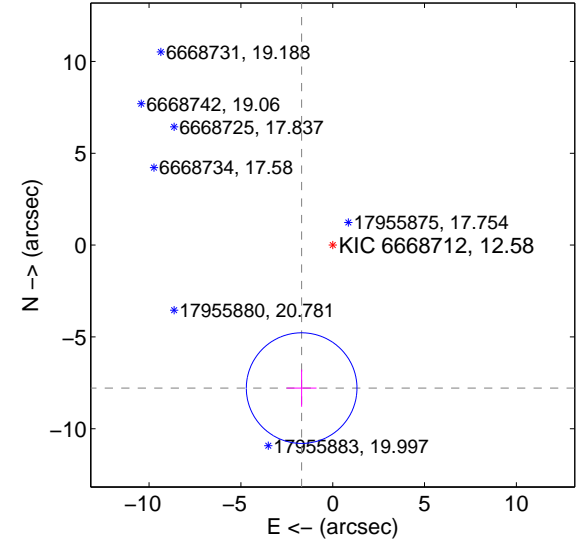
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

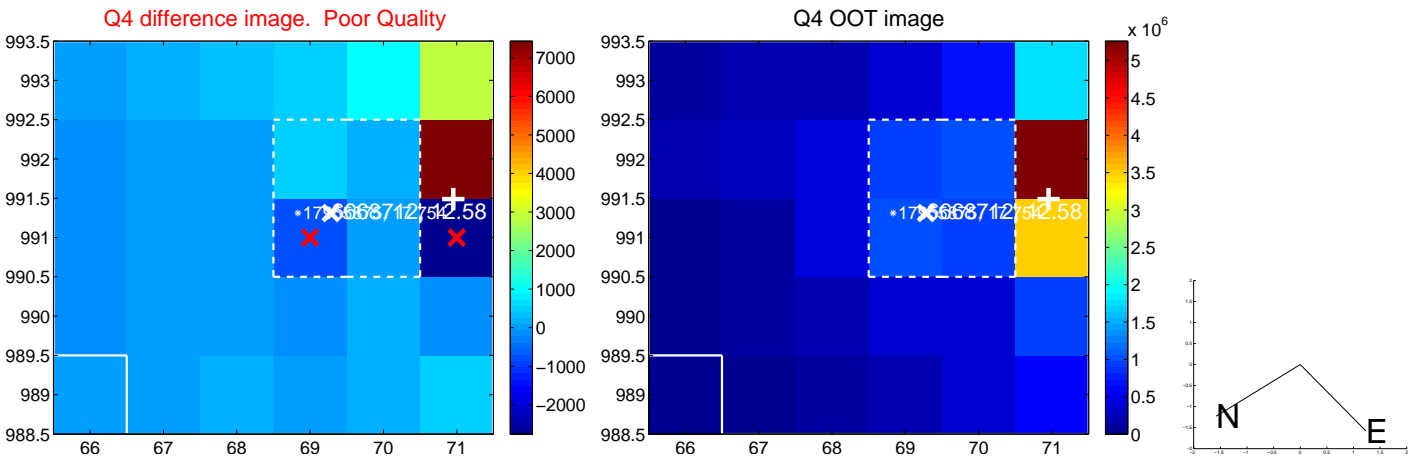
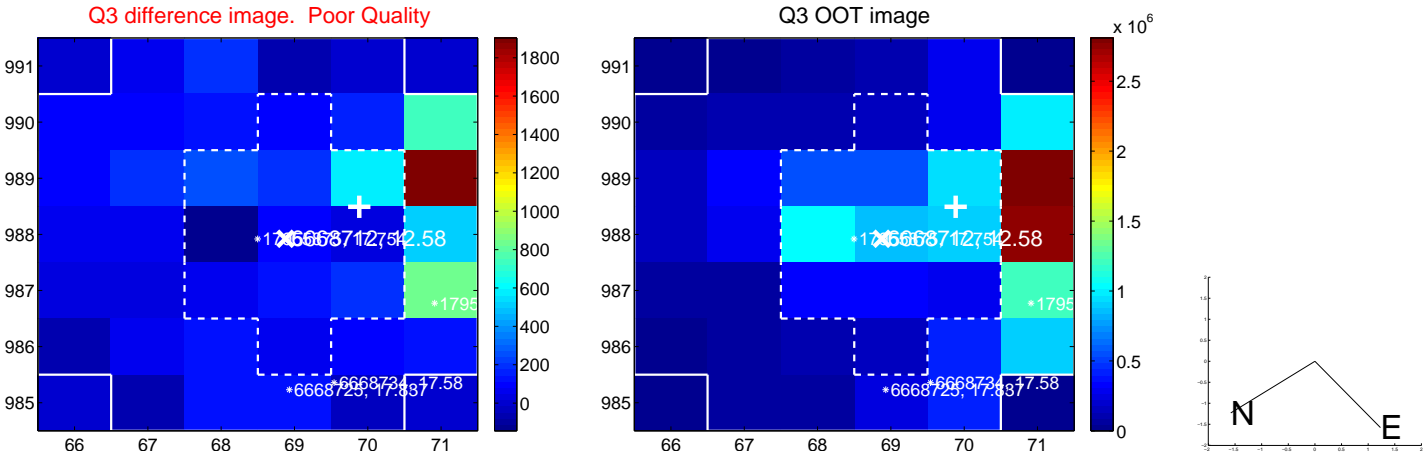
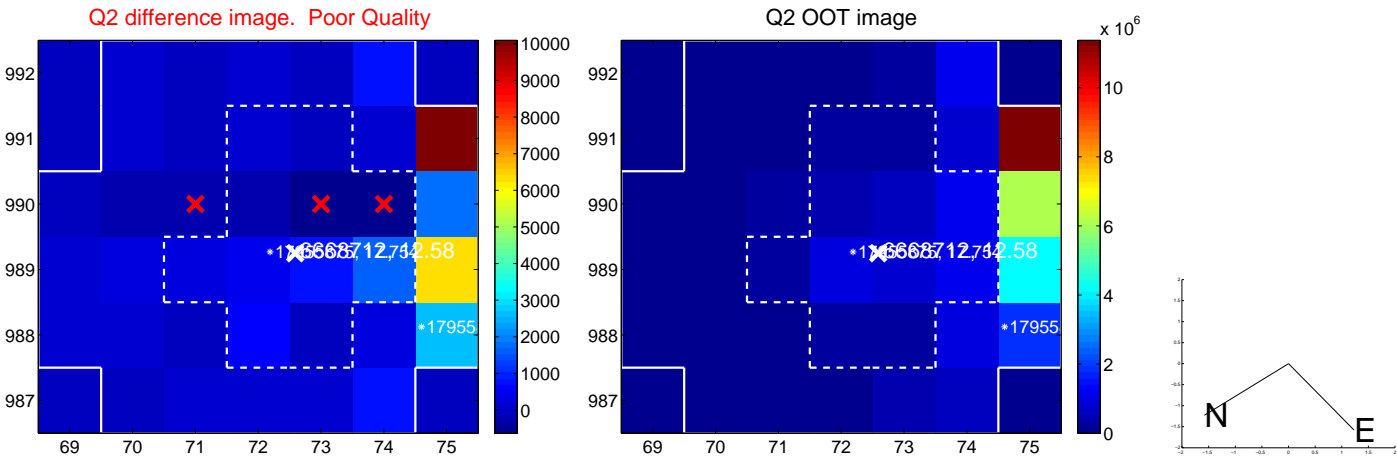
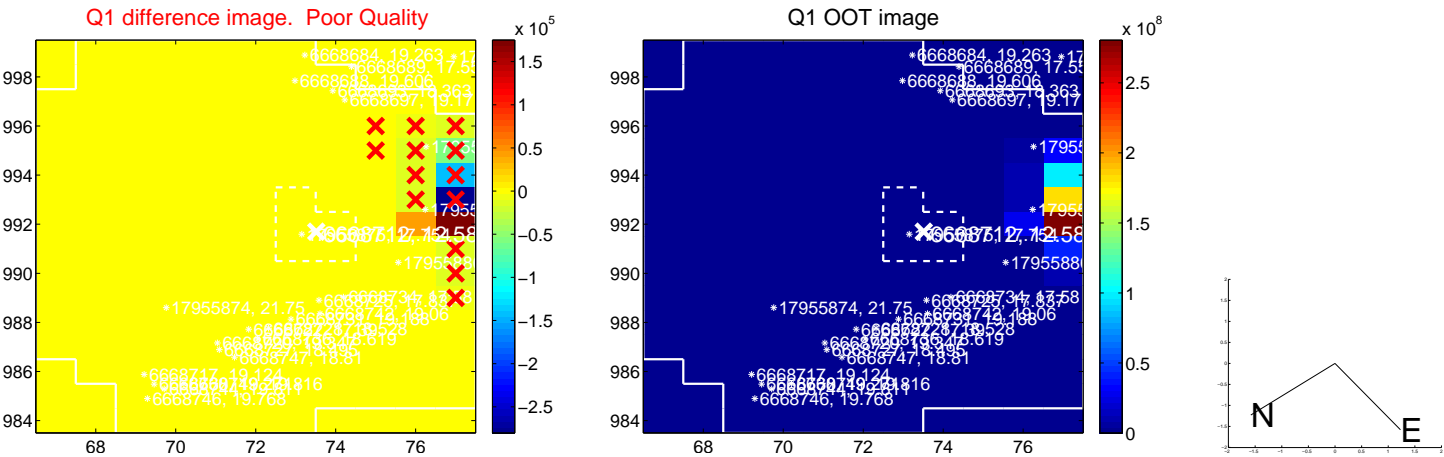


offset from photometric centroids

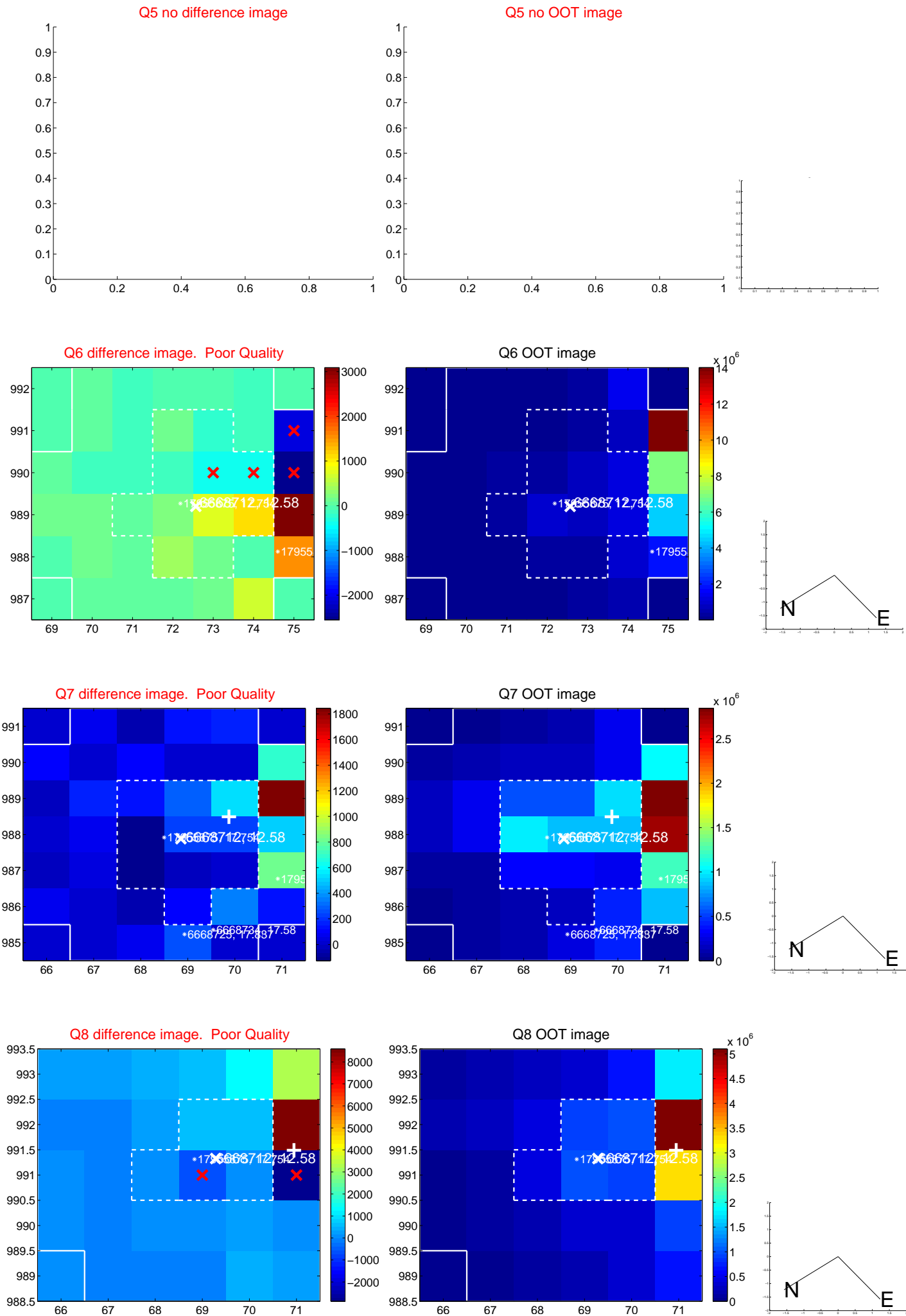


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

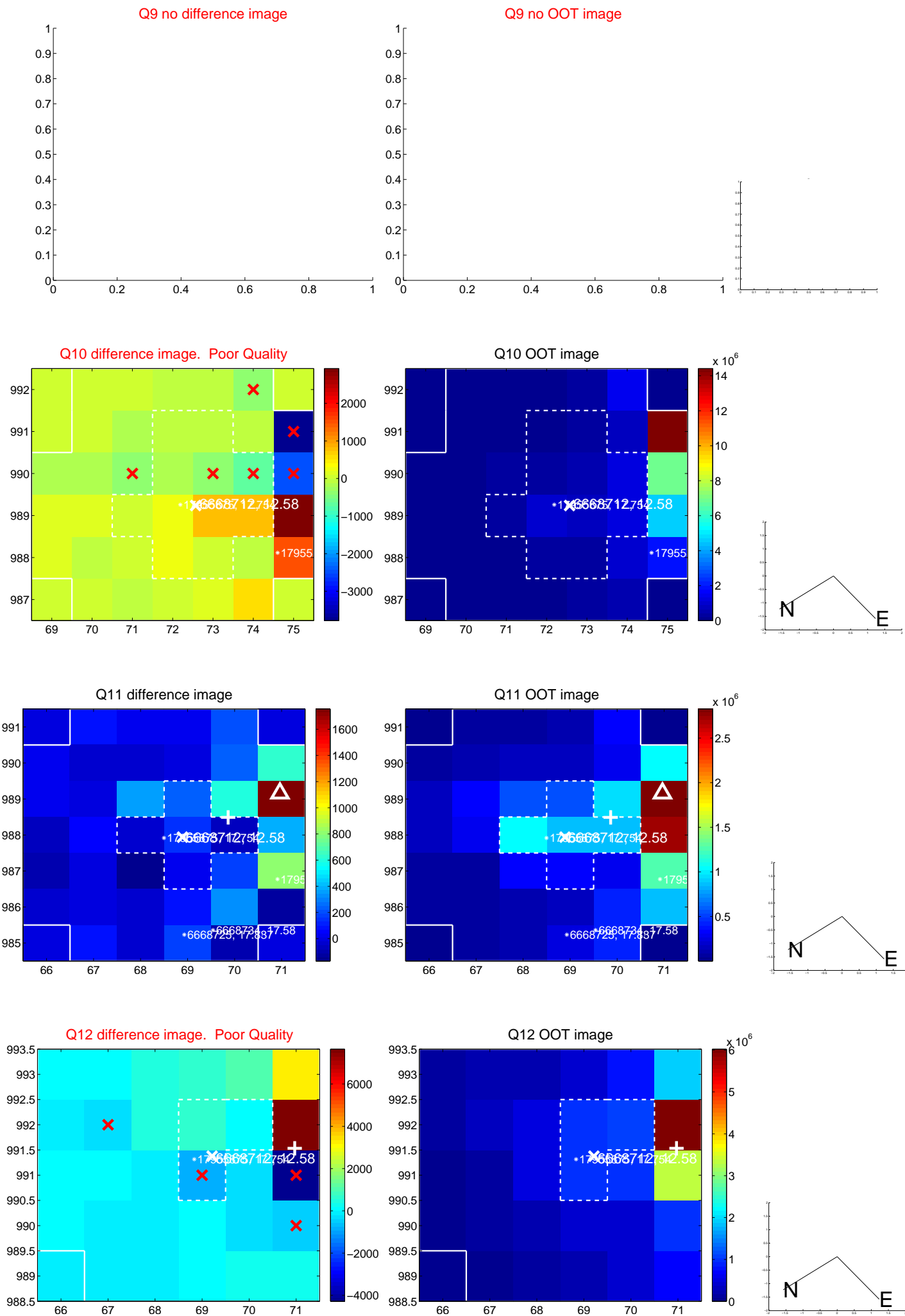
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



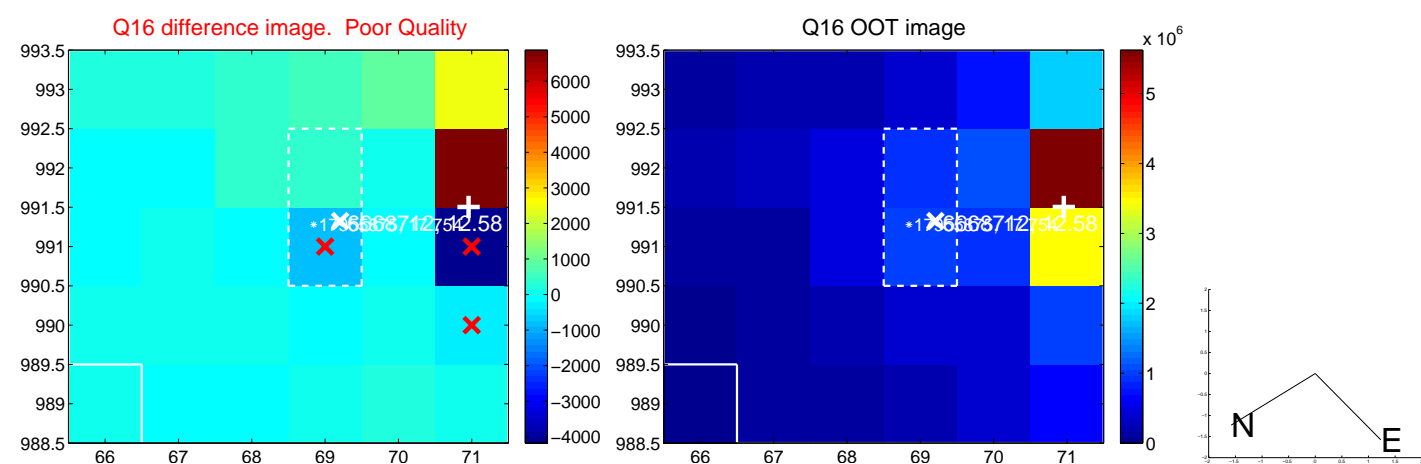
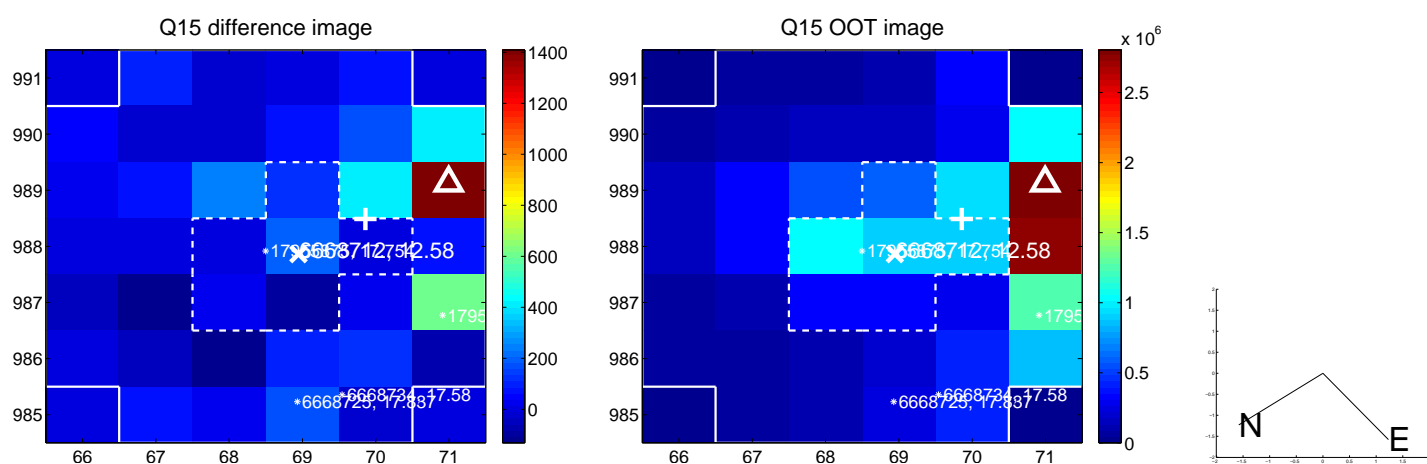
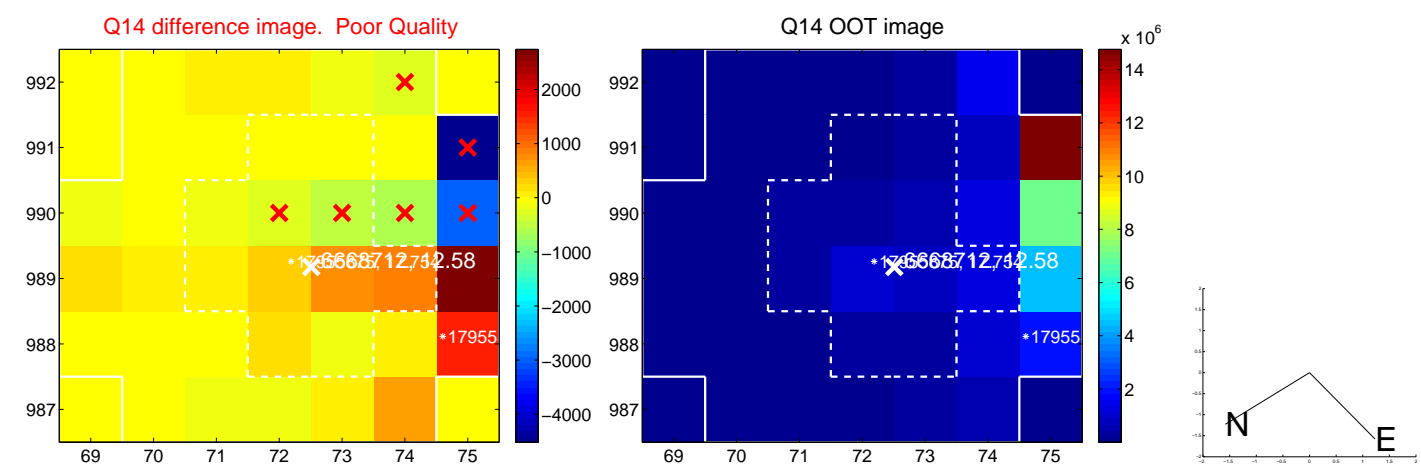
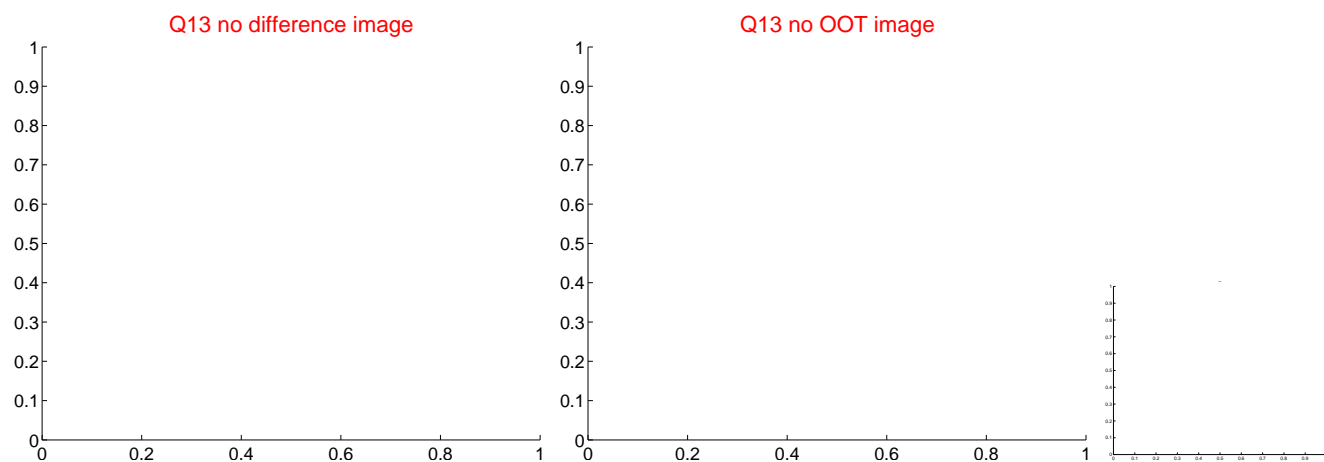
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



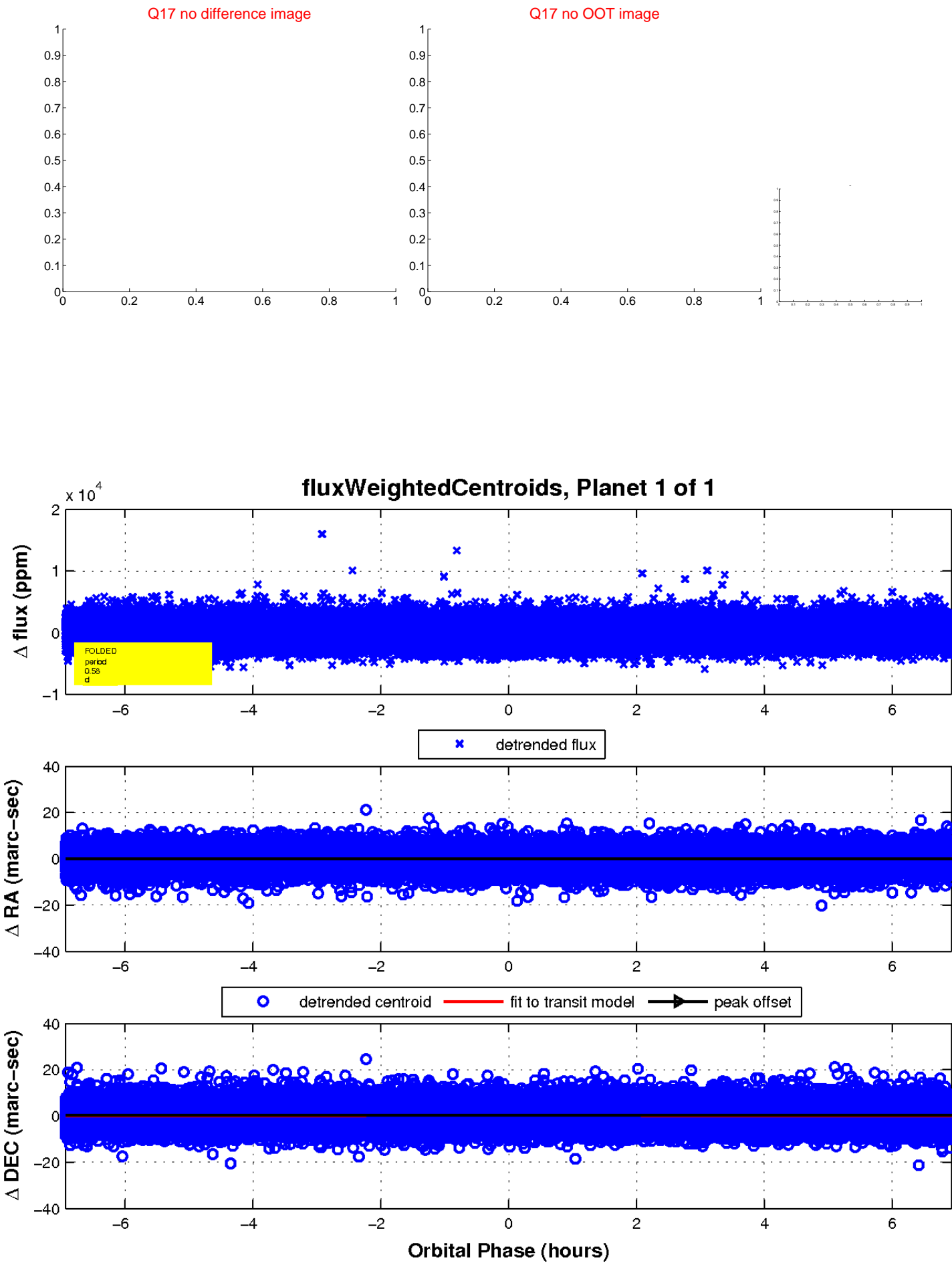
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

