

KIC 006670742

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})
006670742-01	OBS	No	2.493301	131.804721	161.2	23.036	13.5	16.1	3.63	7694	4.77	19747.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670742-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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.

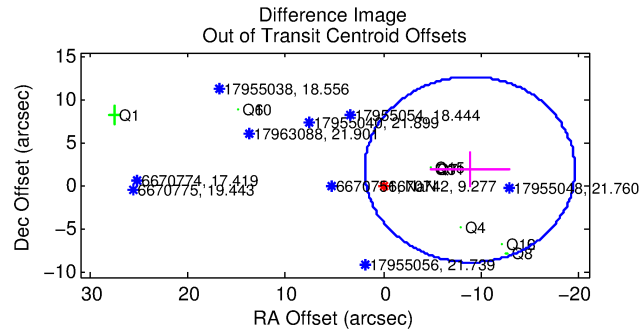
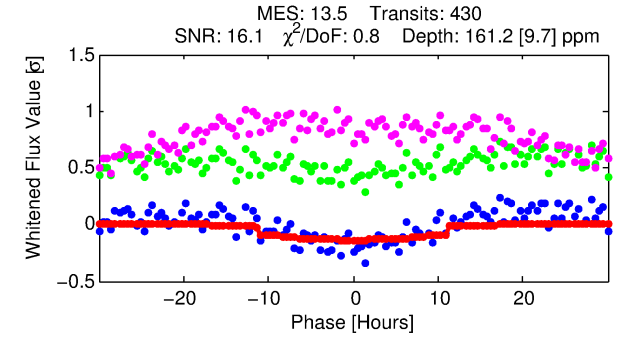
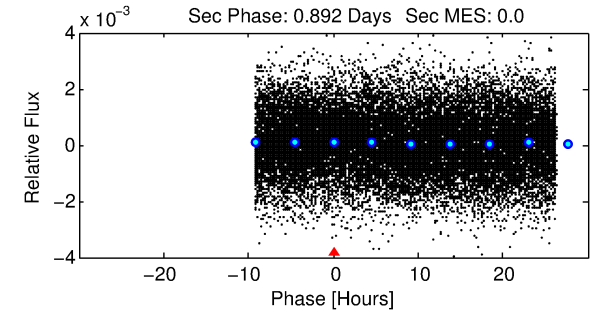
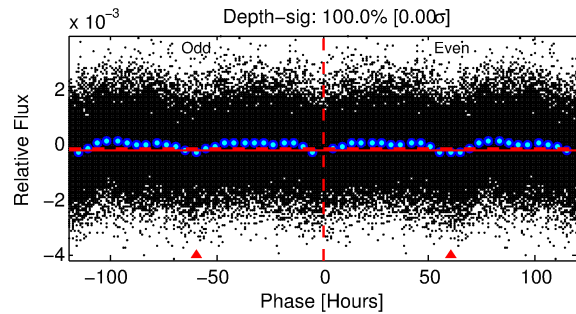
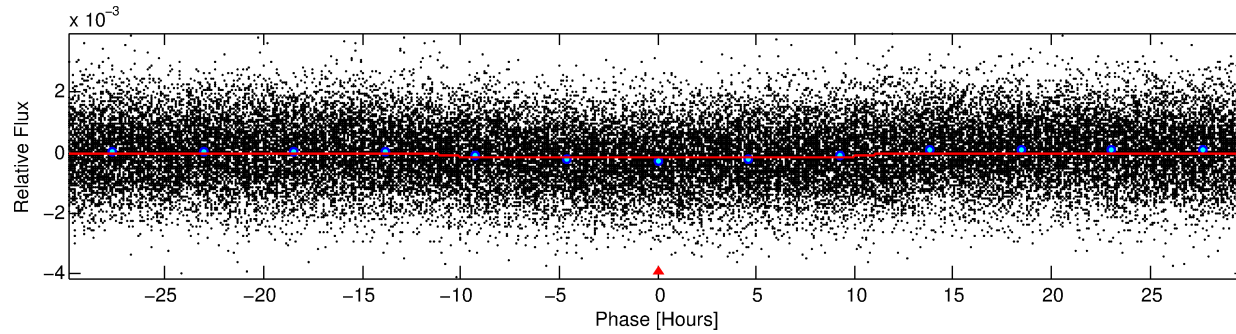
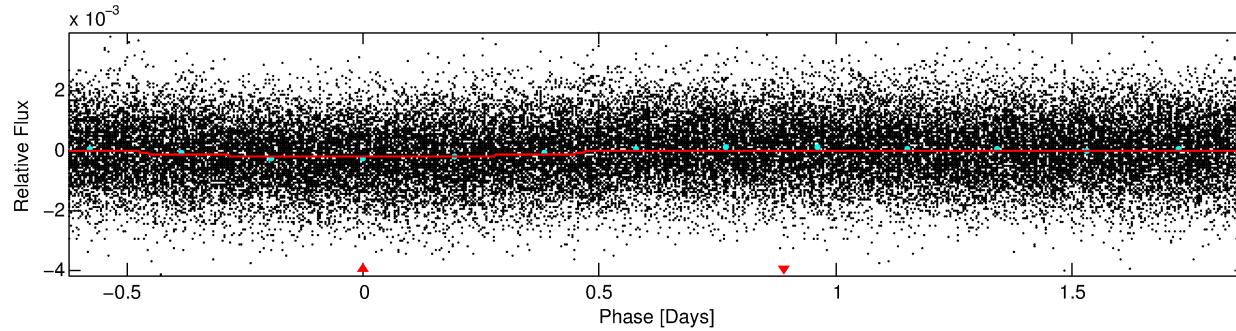
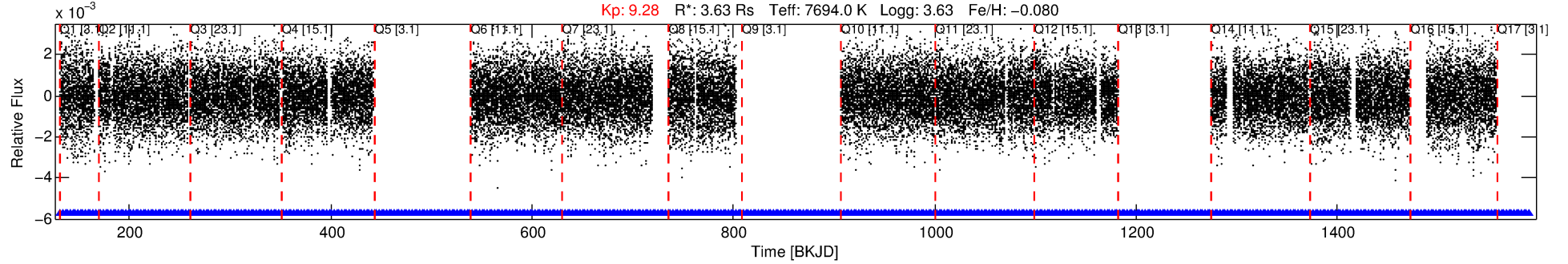
Ephemeris Match Information For 006670742-01

No Significant Match Found

DV One-Page Summary

KIC: 6670742 Candidate: 1 of 1 Period: 2.493 d
KOI: K06753 Corr: No Ephemeris Match

Kp: 9.28 R*: 3.63 Rs Teff: 7694.0 K Logg: 3.63 Fe/H: -0.080



DV Fit Results:

Period = 2.49330 [0.00004] d
Epoch = 131.8047 [0.0084] BKJD
Rp/R* = 0.0120 [0.0014]
a/R* = 1.07 [0.08]
b = 0.50 [0.96]
Seff = 19747.03 [16517.71]
Teq = 3023 [632] K
Rp = 4.77 [2.49] Re
a = 0.0457 [0.0230] AU
Ag = N/A
Teffp = N/A

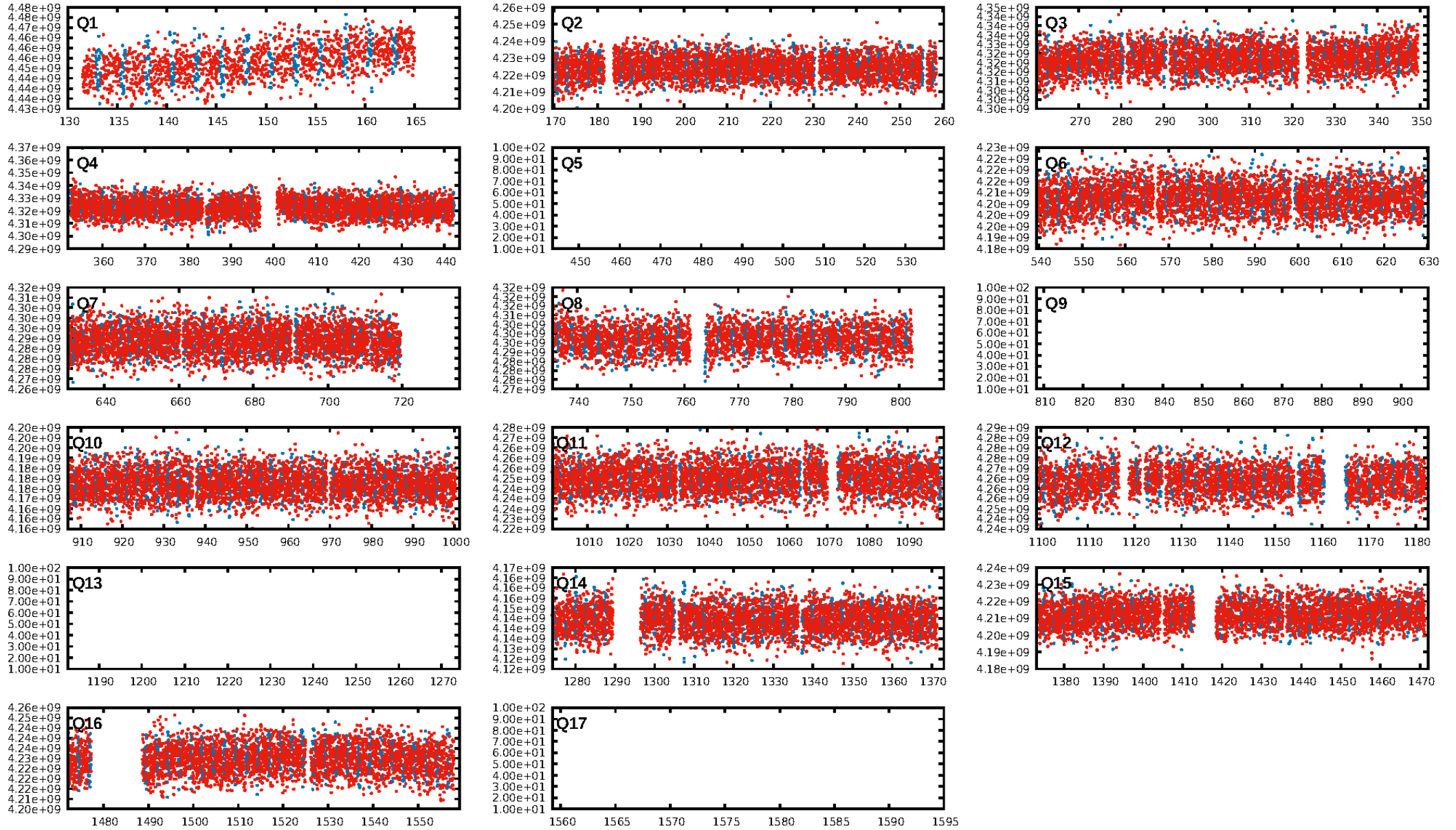
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [416/416]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 1.330 arcsec [6.16σ]
OotOffset-rm: 9.048 arcsec [2.53σ]
KicOffset-rm: 9.581 arcsec [2.36σ]
OotOffset-st: 2/4/4/1 [11]
KicOffset-st: 2/4/4/1 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [13/13]

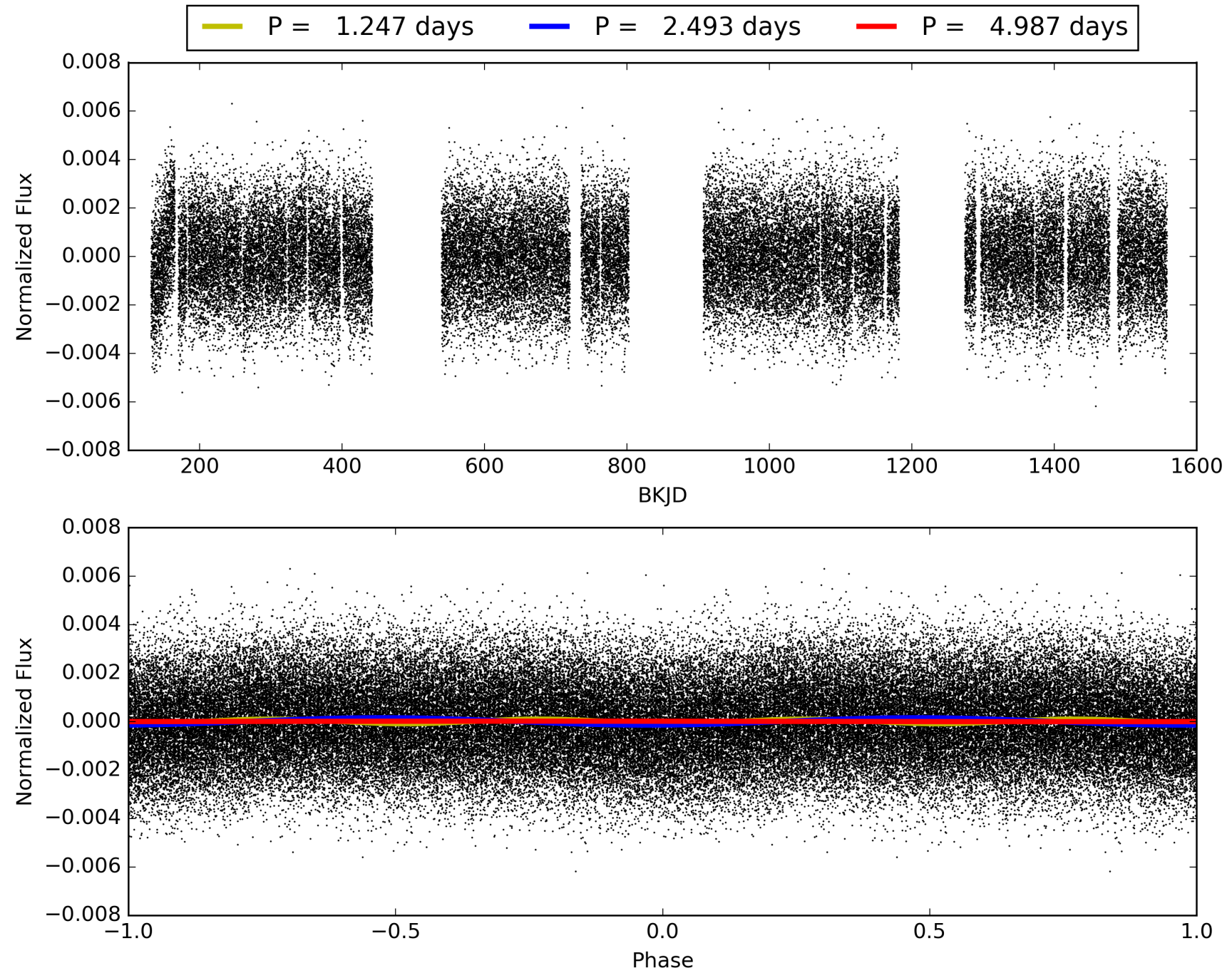
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:45:37 Z

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

TCE 006670742-01, PDC Light Curves

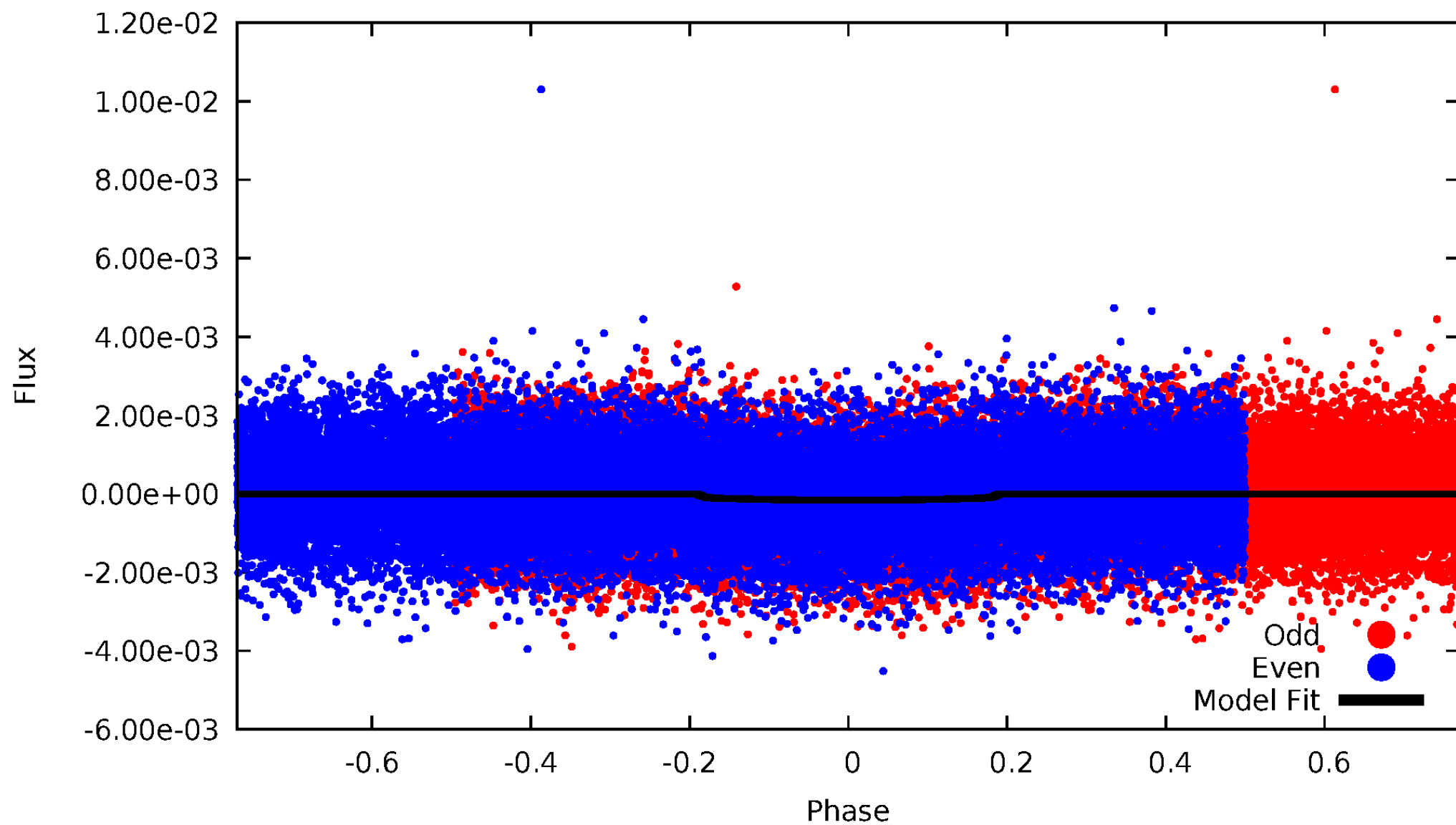


TCE 006670742-01



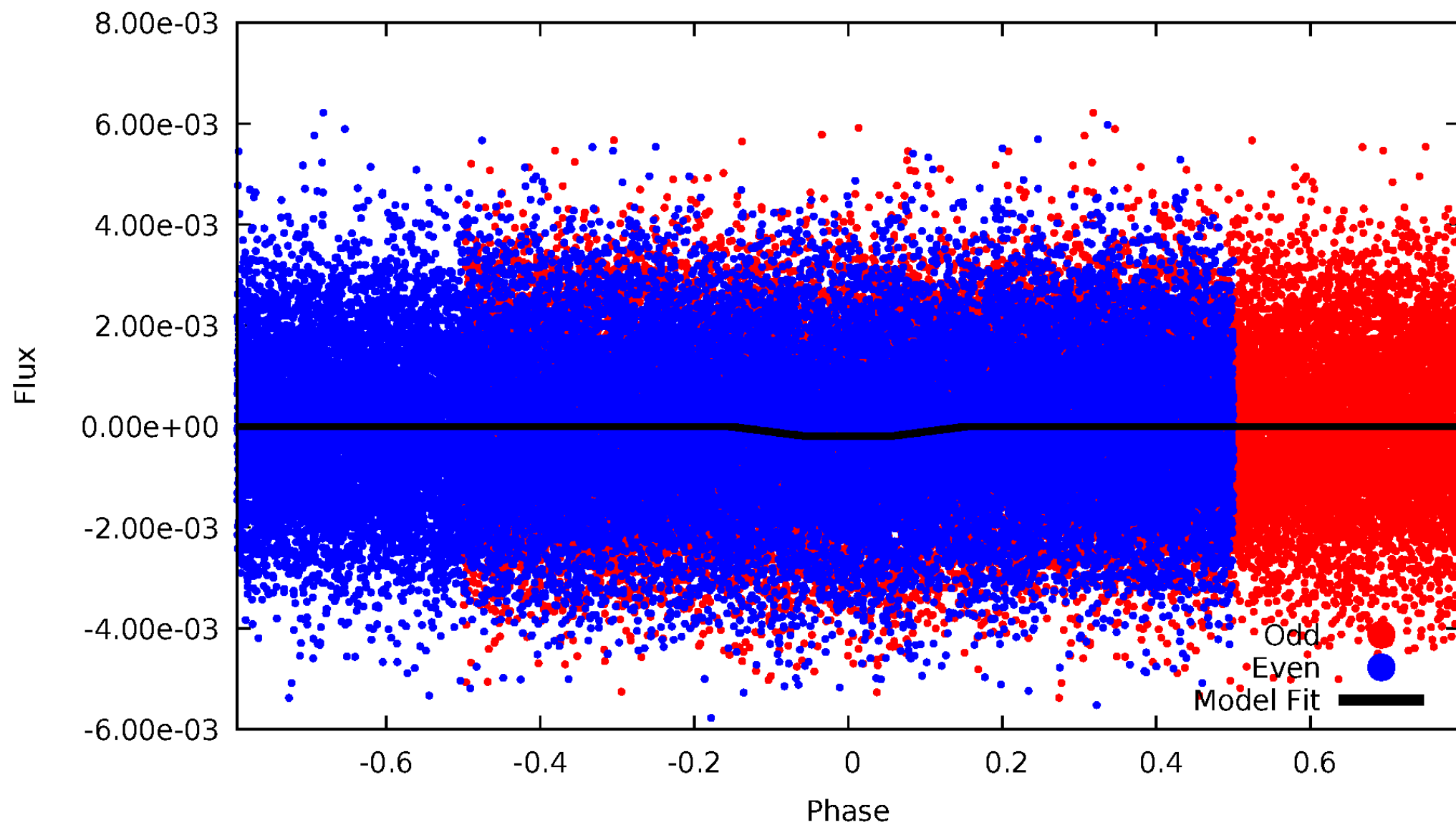
DV Odd/Even

TCE 006670742-01



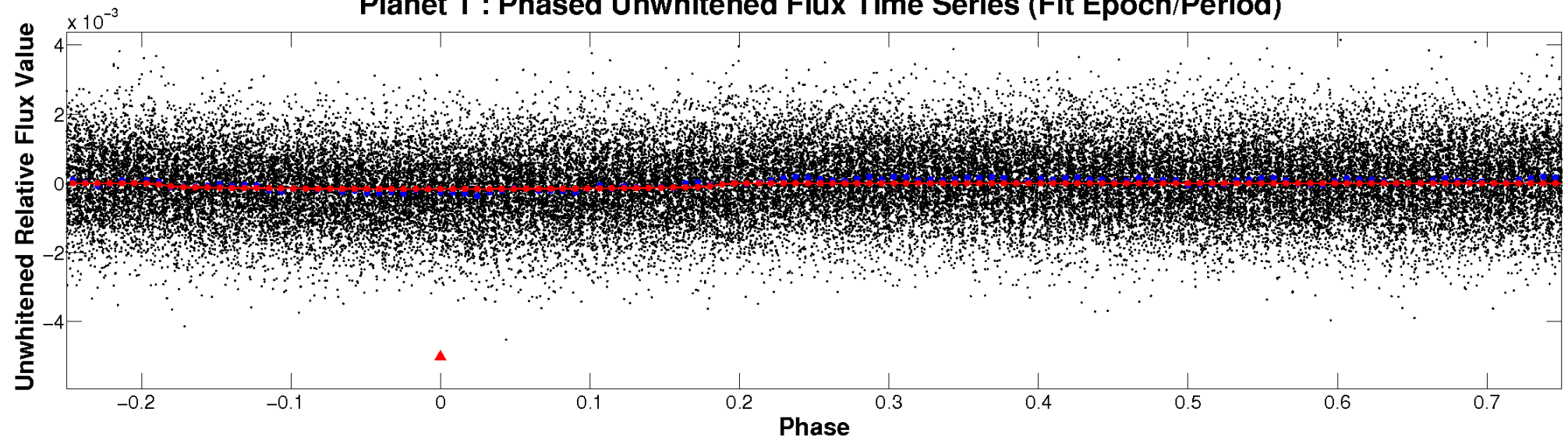
ALT Odd/Even

TCE 006670742-01

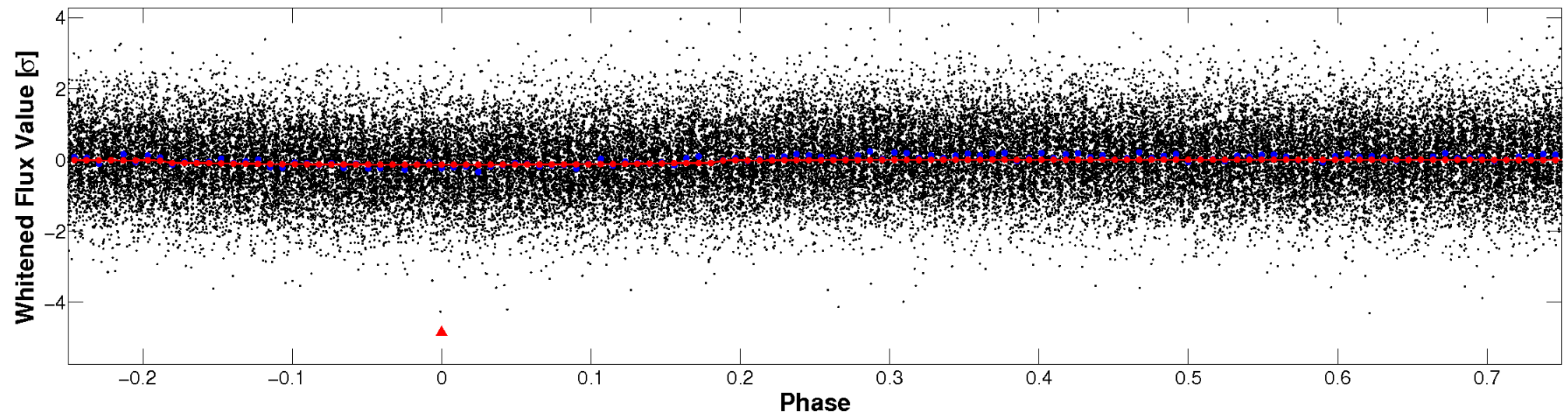


Non-Whitened Vs. Whitened Light Curve

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

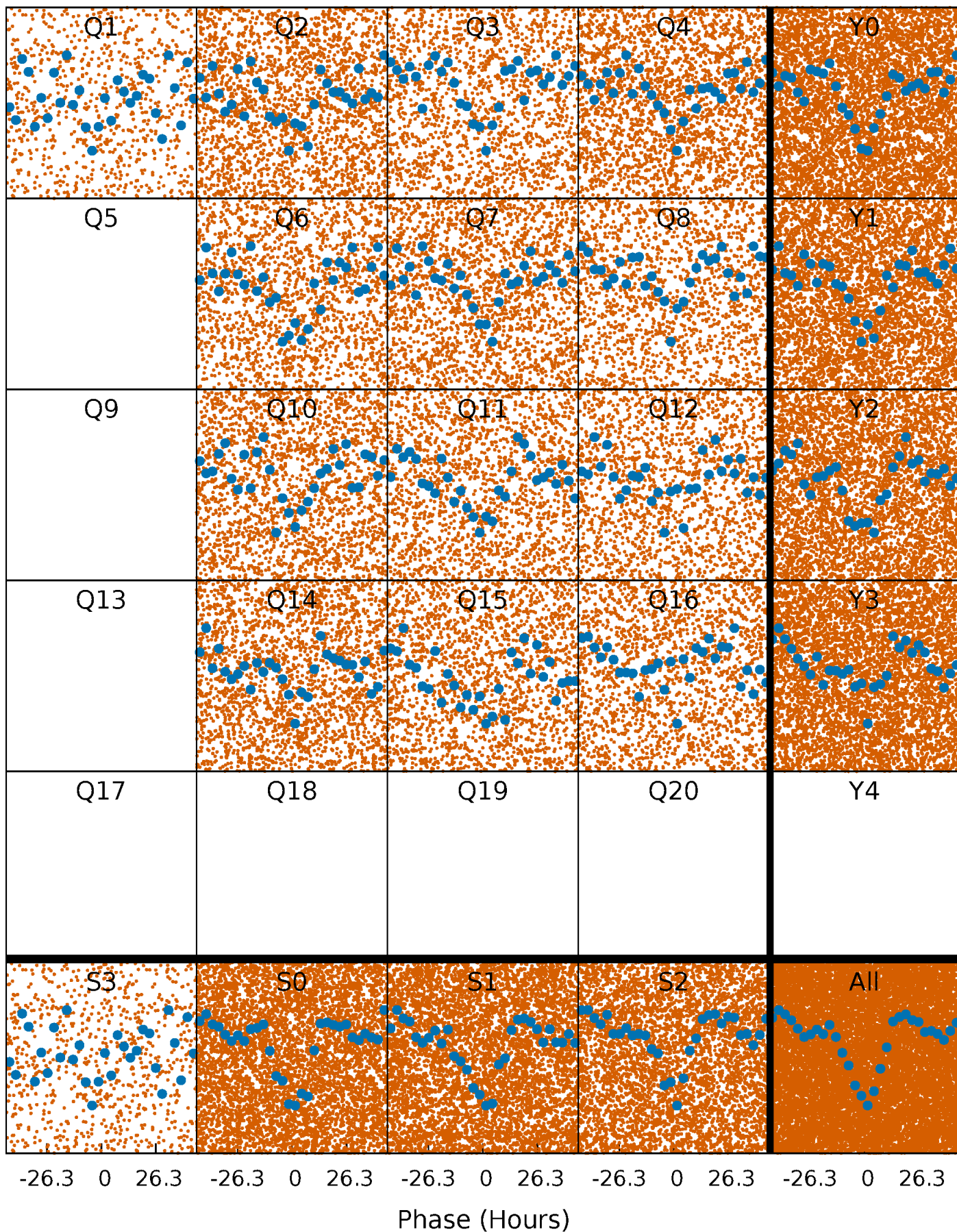


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



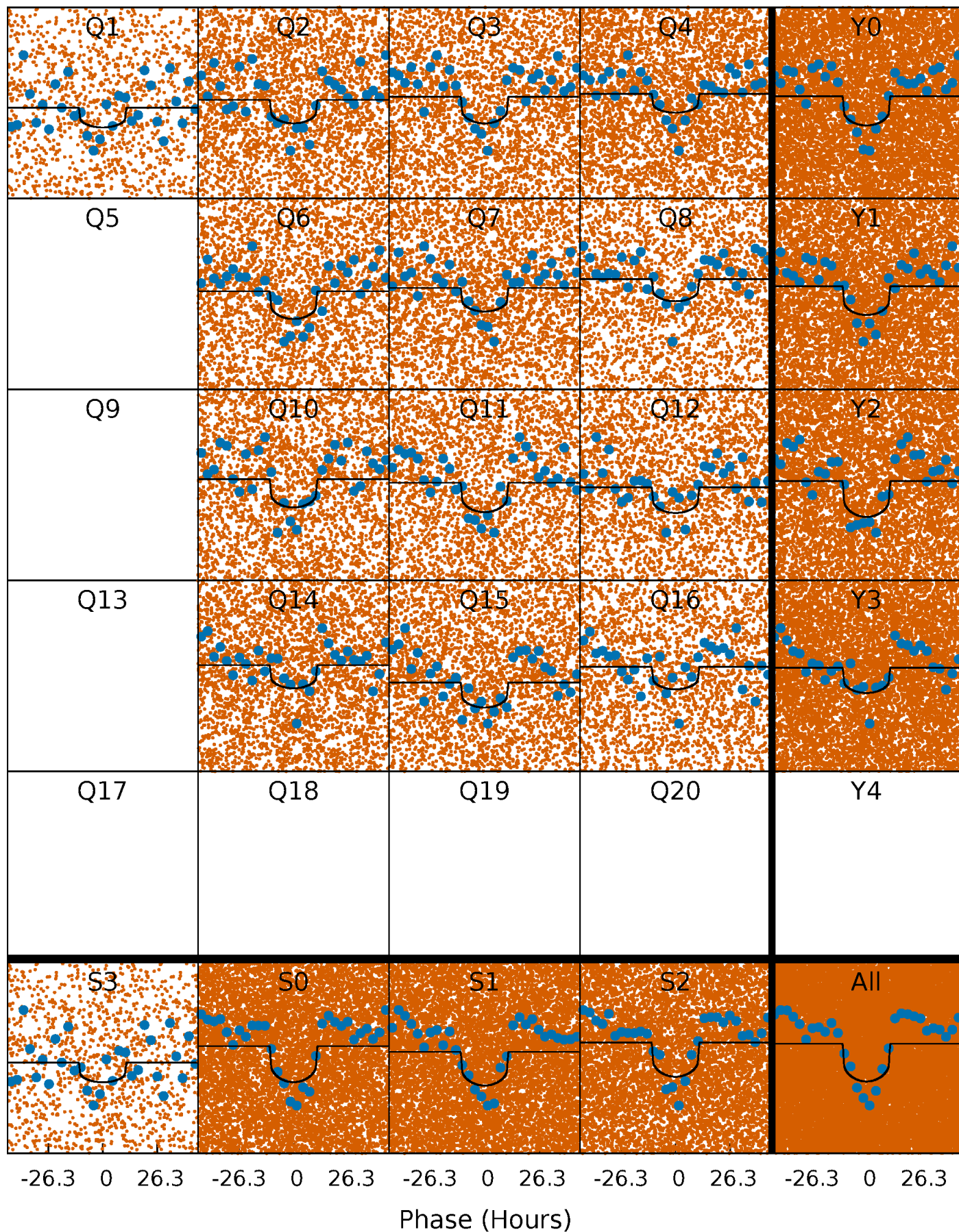
PDC Quarter-Phased Transit Curves

TCE 006670742-01 P= 2.493301 Days $T_0=131.804721$ (BKJD)



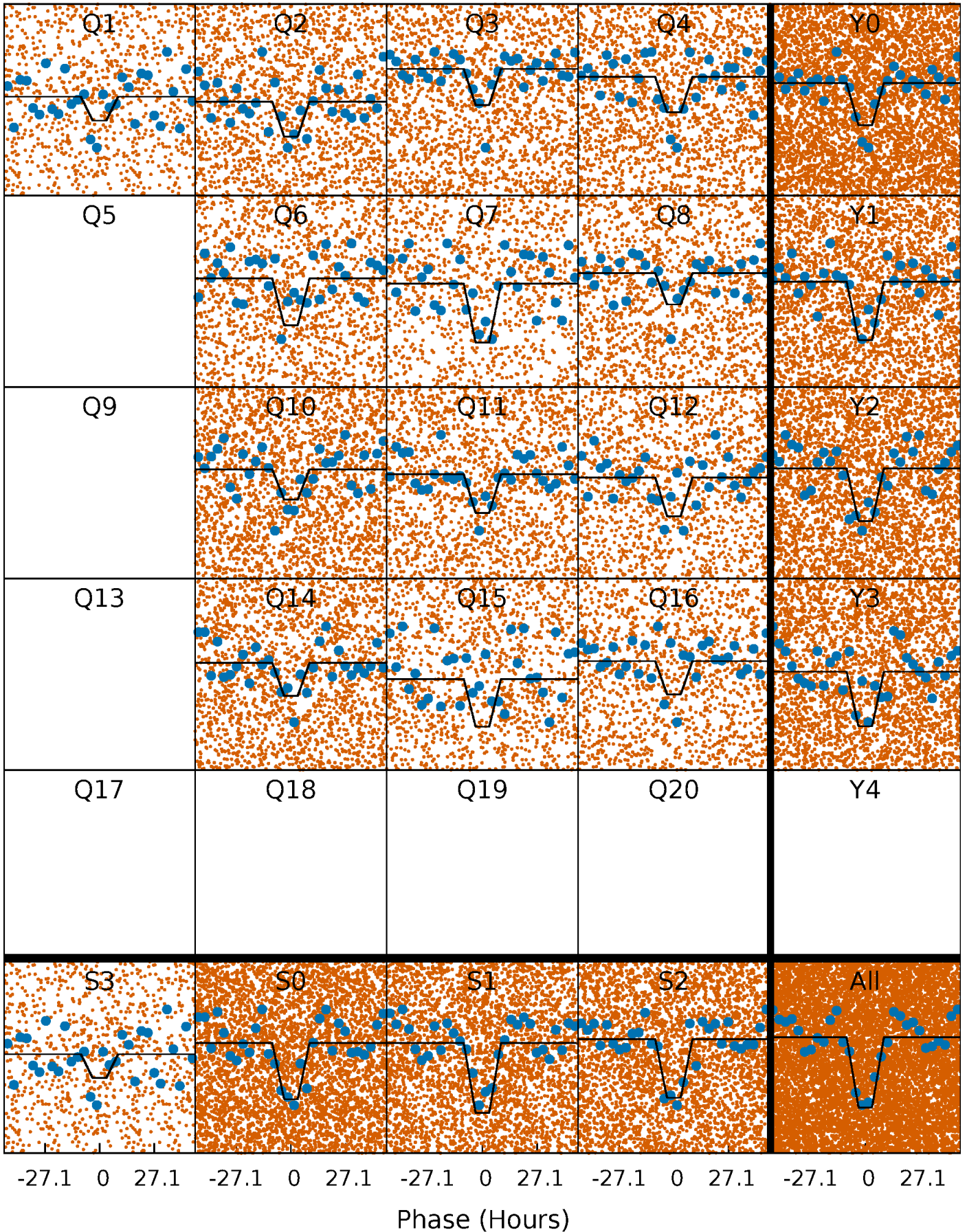
DV Quarter-Phased Transit Curves

TCE 006670742-01 P= 2.493301 Days $T_0=131.804721$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

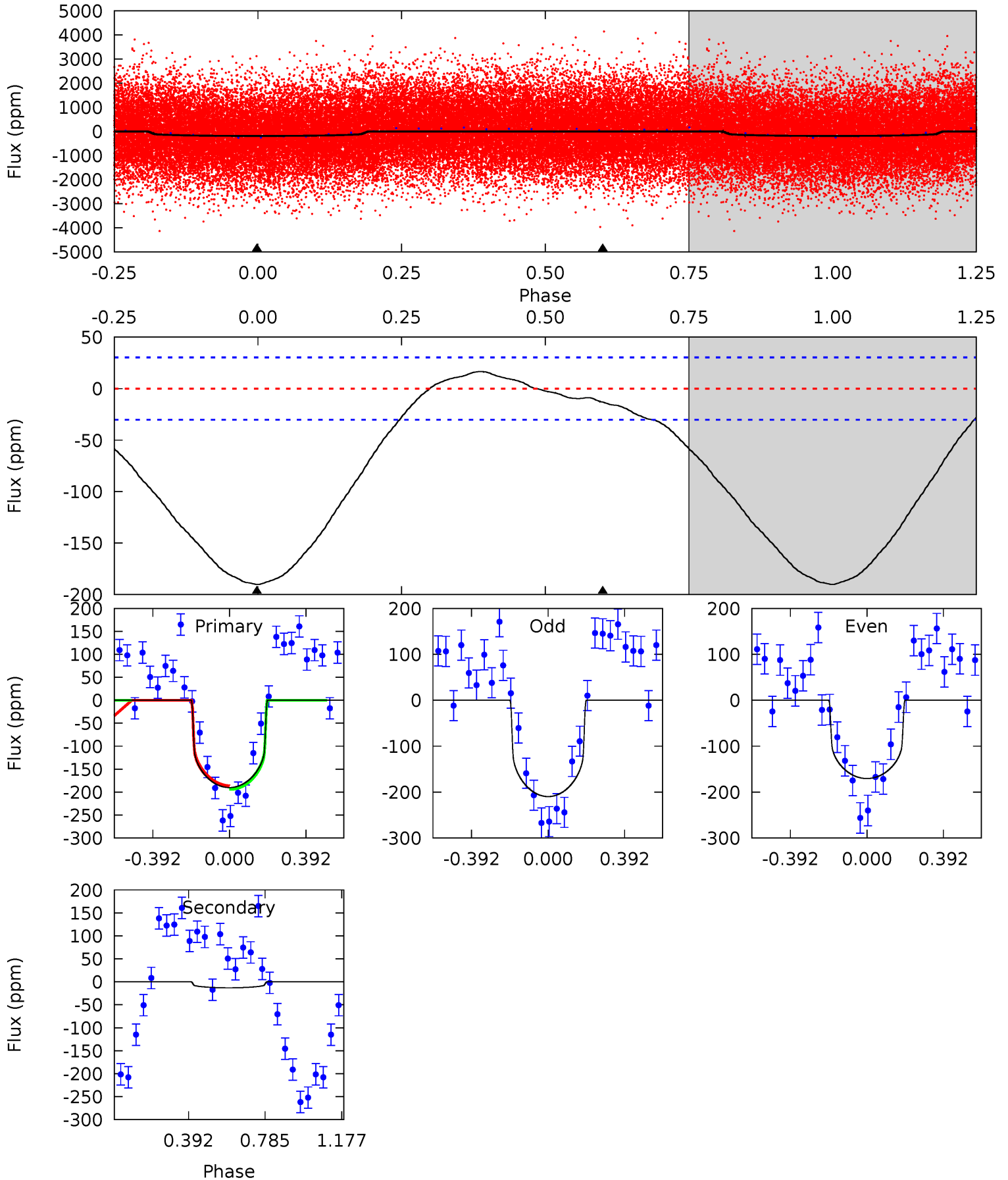
TCE 006670742-01 P= 2.493462 Days $T_0=131.757356$ (BKJD)



DV Model-Shift Uniqueness Test

006670742-01, P = 2.493301 Days, E = 129.311420 Days

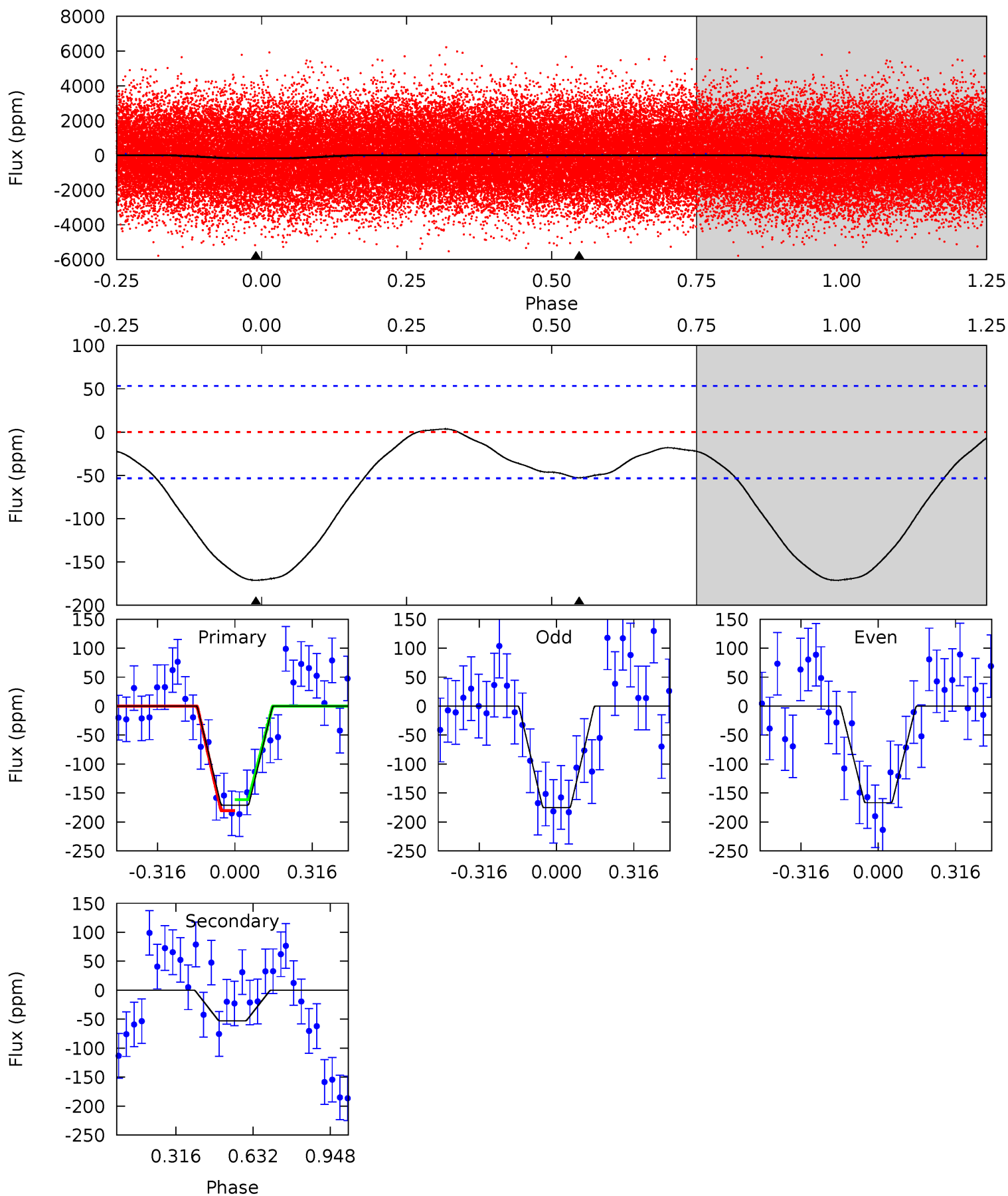
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	1.84	0	0	4.27	0.86	1.65	26.8	26.8	1.84	1.84	2.78	0.96	0.08	0.54



Alt Model-Shift Uniqueness Test

006670742-01, P = 2.493462 Days, E = 129.263894 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	4.28	0	0	4.32	1.00	0.66	13.9	13.9	4.28	4.28	0.35	1.08	0.02	0.74



Stellar Parameters For KIC 006670742

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7694^{+213}_{-347}	$3.631^{+0.484}_{-0.085}$	$-0.080^{+0.200}_{-0.300}$	$3.627^{+0.615}_{-1.846}$	$2.054^{+0.279}_{-0.557}$	$0.061^{+0.318}_{-0.017}$
	+3%/-5%	+13%/-2%	+250%/-375%	+17%/-51%	+14%/-27%	+525%/-28%
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 006670742-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 7	$4.43^{+0.95}_{-1.12}$	4050^{+323}_{-492}	3942^{+575}_{-1685}	$0.757^{+0.736}_{-0.447}$
Alt.	-53 ± 12	$5.16^{+0.94}_{-1.46}$	4039^{+312}_{-540}	5298^{+439}_{-439}	$2.372^{+2.010}_{-0.794}$

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

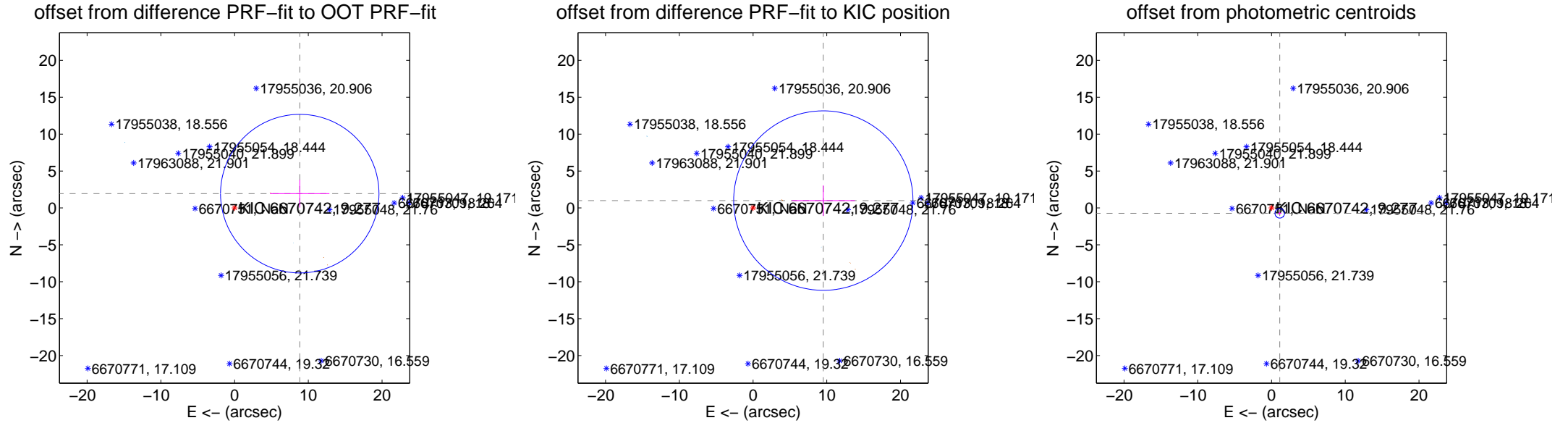
DV Centroid Data

Supplemental centroid analysis for 006670742-01. **Kepler magnitude: 9.28.** Transit SNR 16.07

There are 3 quarters with good PRF difference image offsets

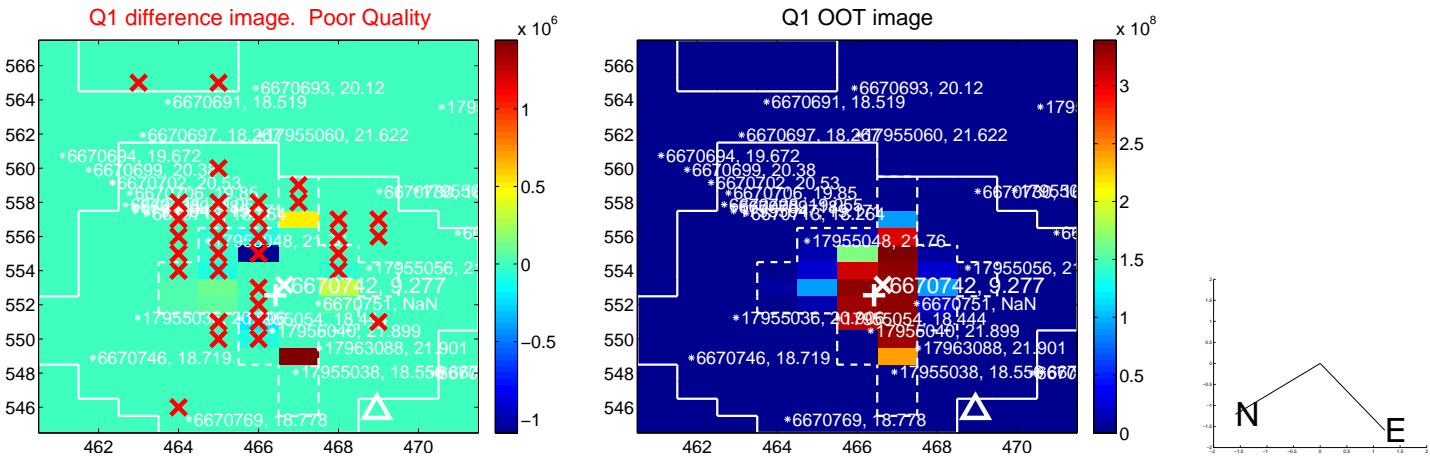
The direct PRF centroid is offset from the target star catalog position by about 1.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.048 ± 3.581	2.53	-8.839 ± 4.029	1.937 ± 1.887
PRF-fit source offset from KIC position	9.581 ± 4.053	2.36	-9.529 ± 4.278	0.998 ± 2.070
photometric centroid source offset	1.33 ± 0.22	6.16	-1.12 ± 0.23	-0.72 ± 0.19

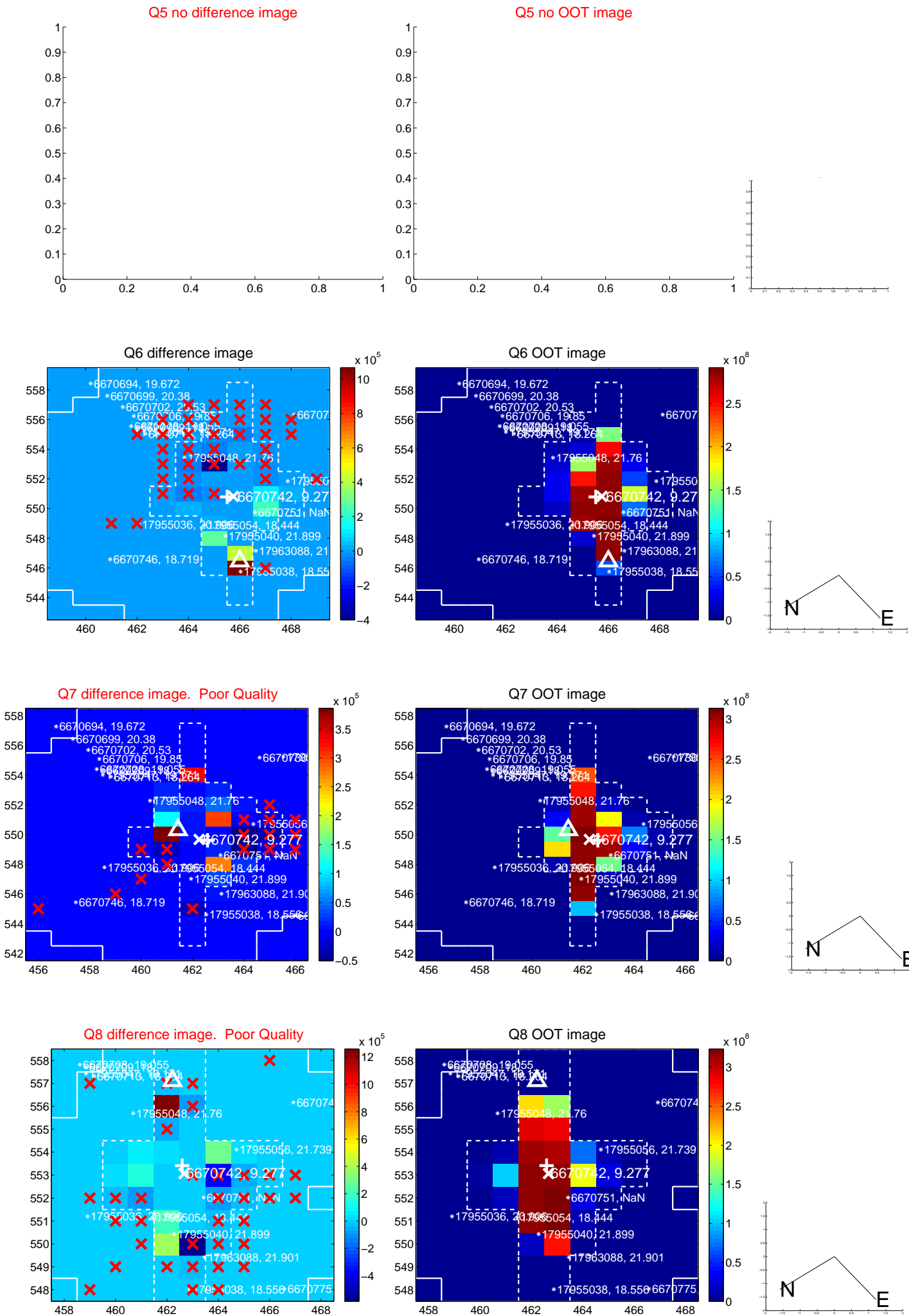


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

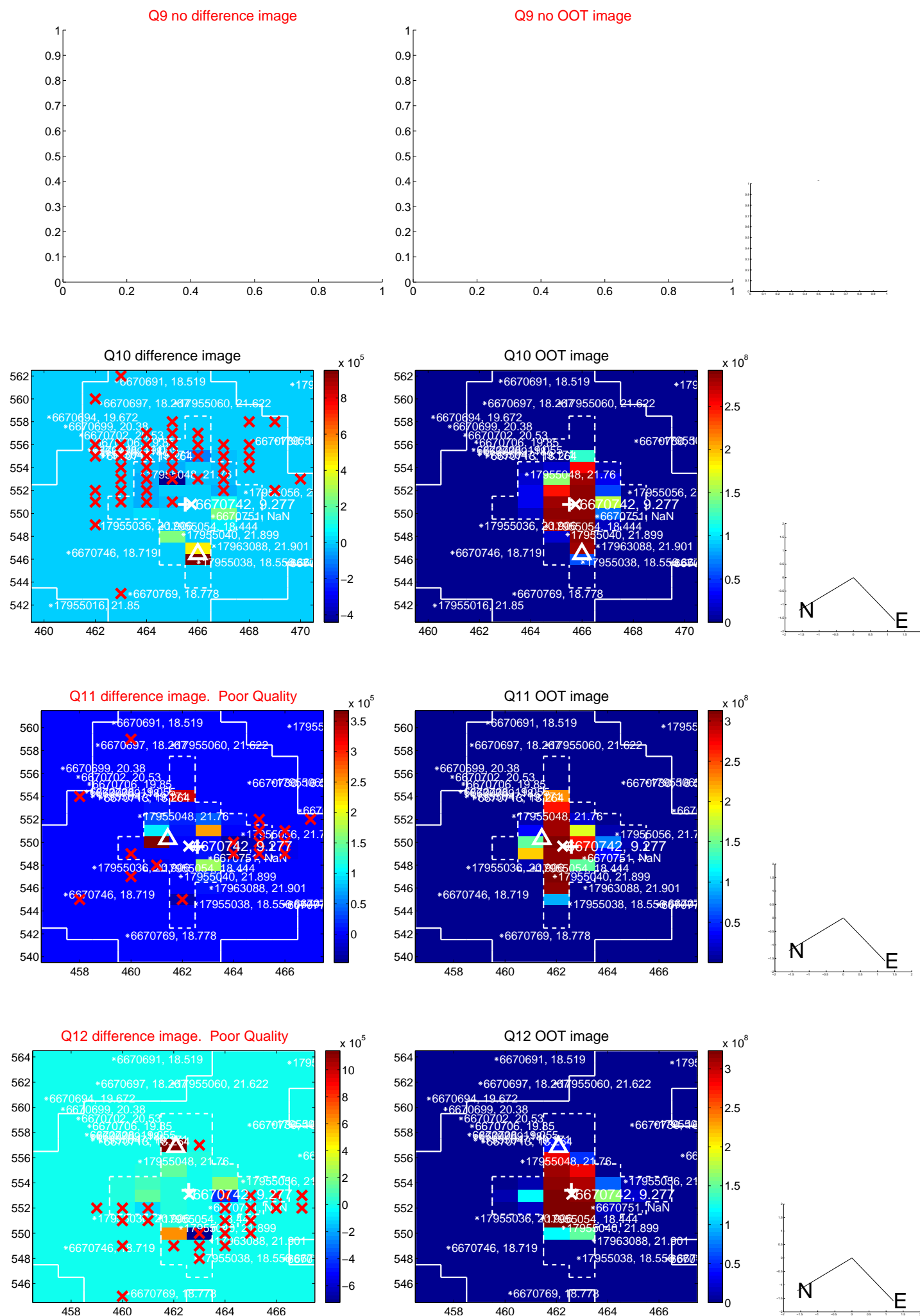
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



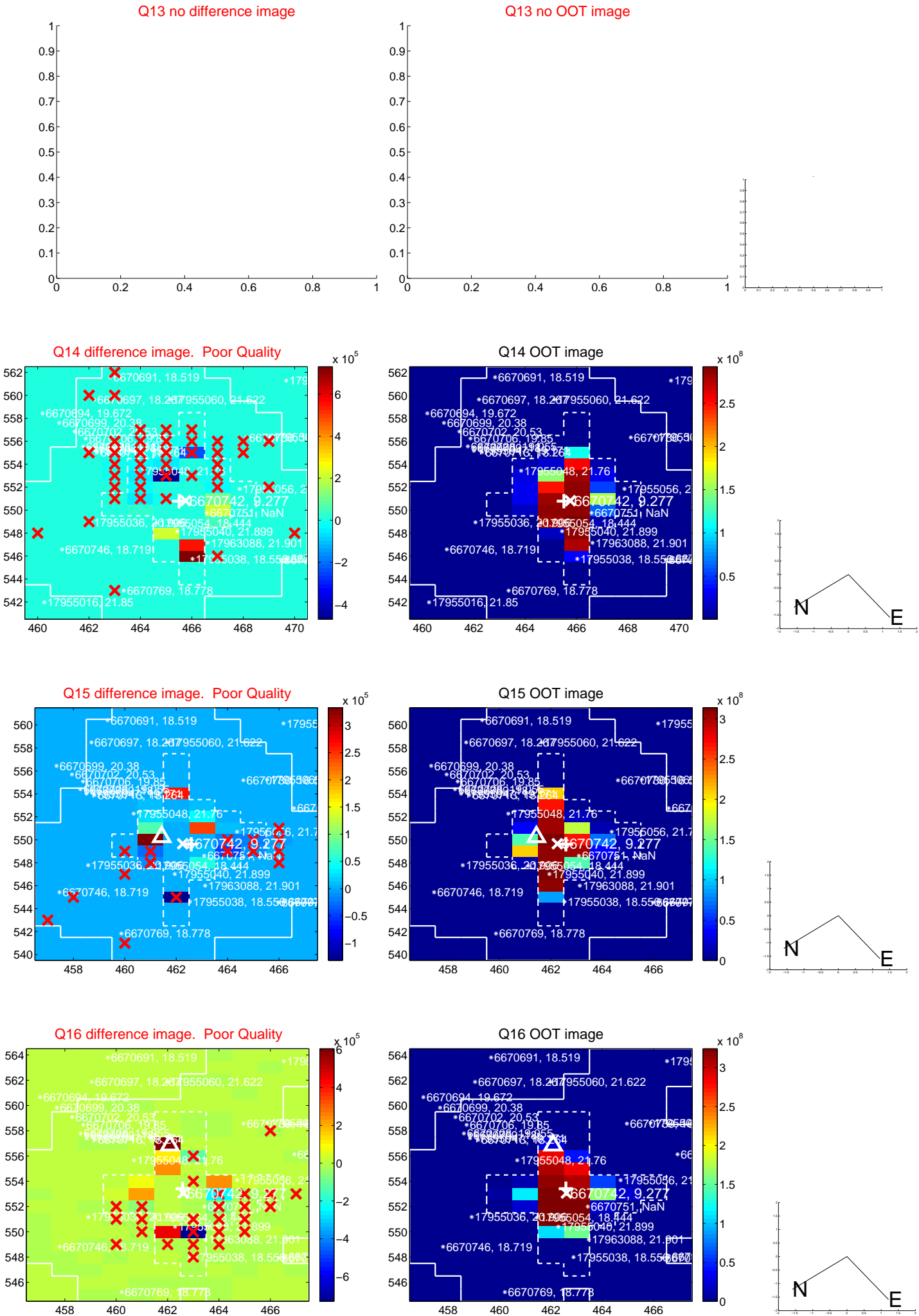
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



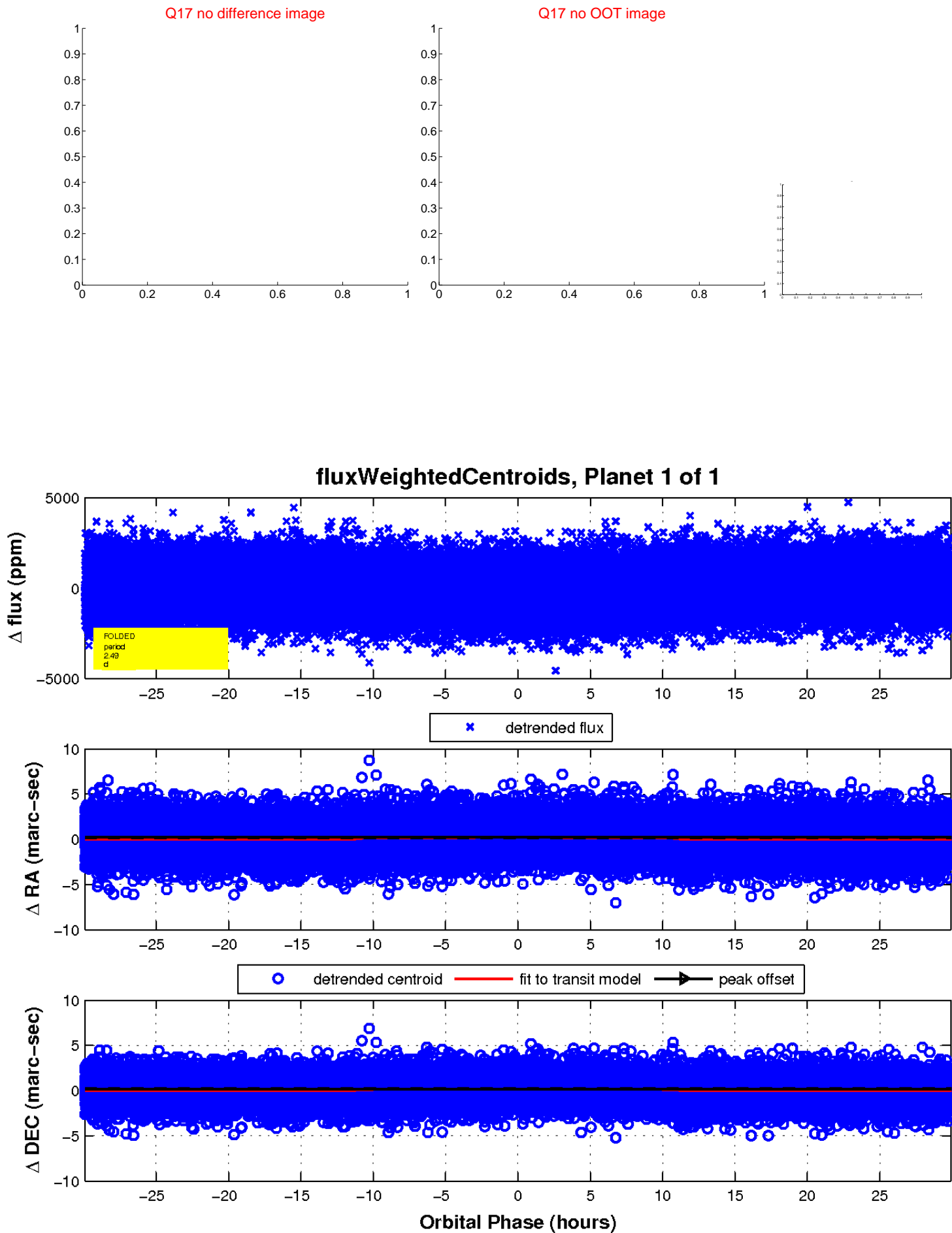
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

