

KIC 005687700

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})
005687700-01	OBS	4587.01	6.362831	131.803784	152.3	3.911	8.2	9.1	0.88	5955	1.20	198.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005687700-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT

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

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

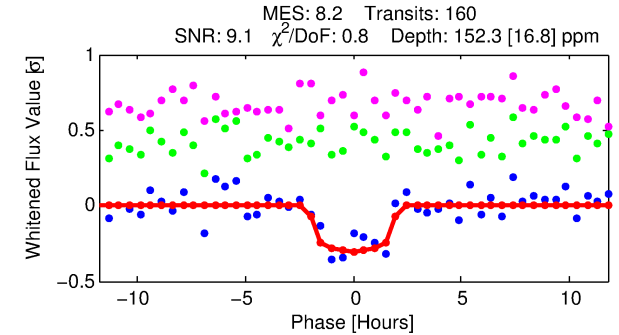
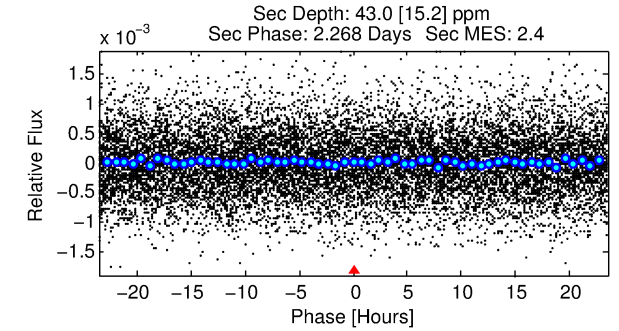
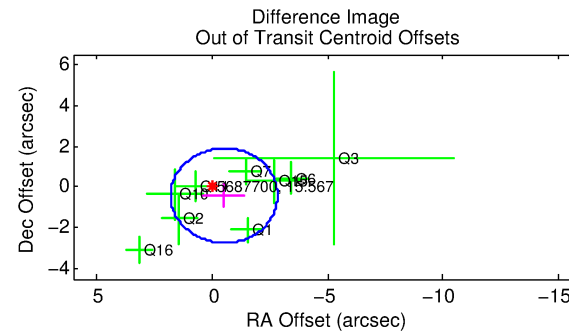
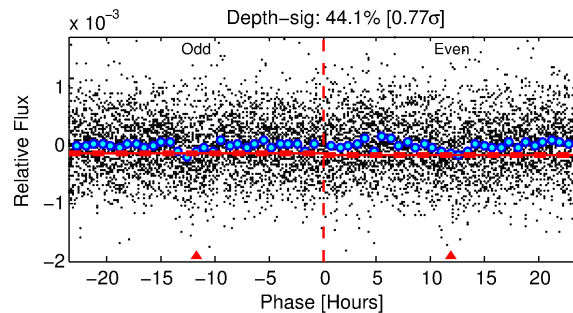
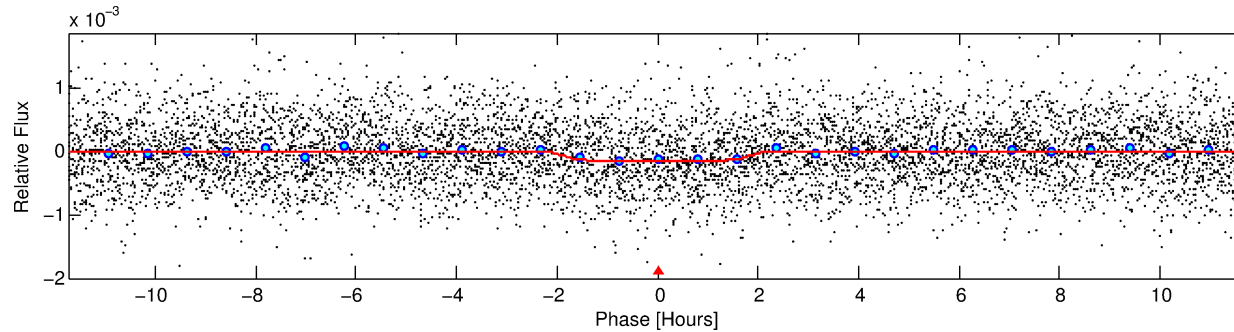
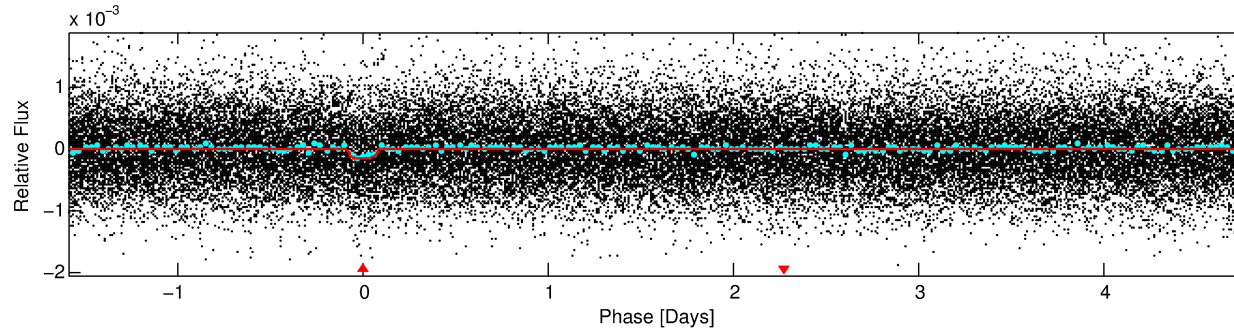
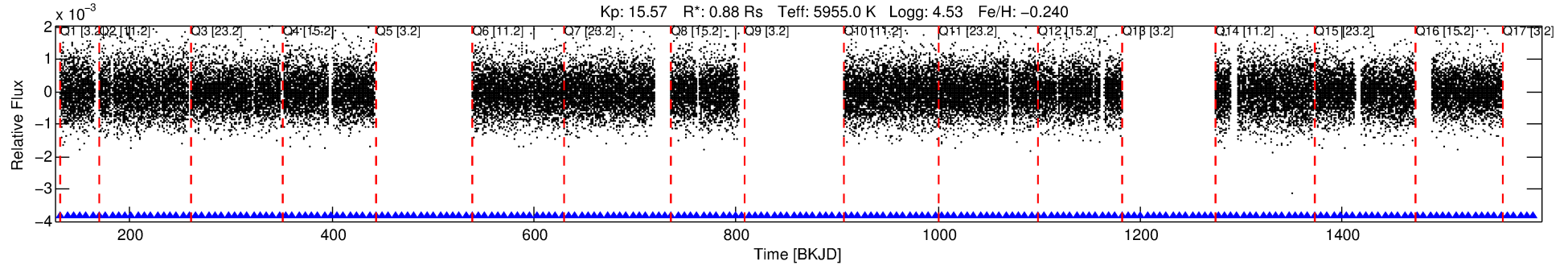
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005687700-01

No Significant Match Found

DV One-Page Summary

KIC: 5687700 Candidate: 1 of 1 Period: 6.363 d
KOI: K04587.01 Corr: 0.984



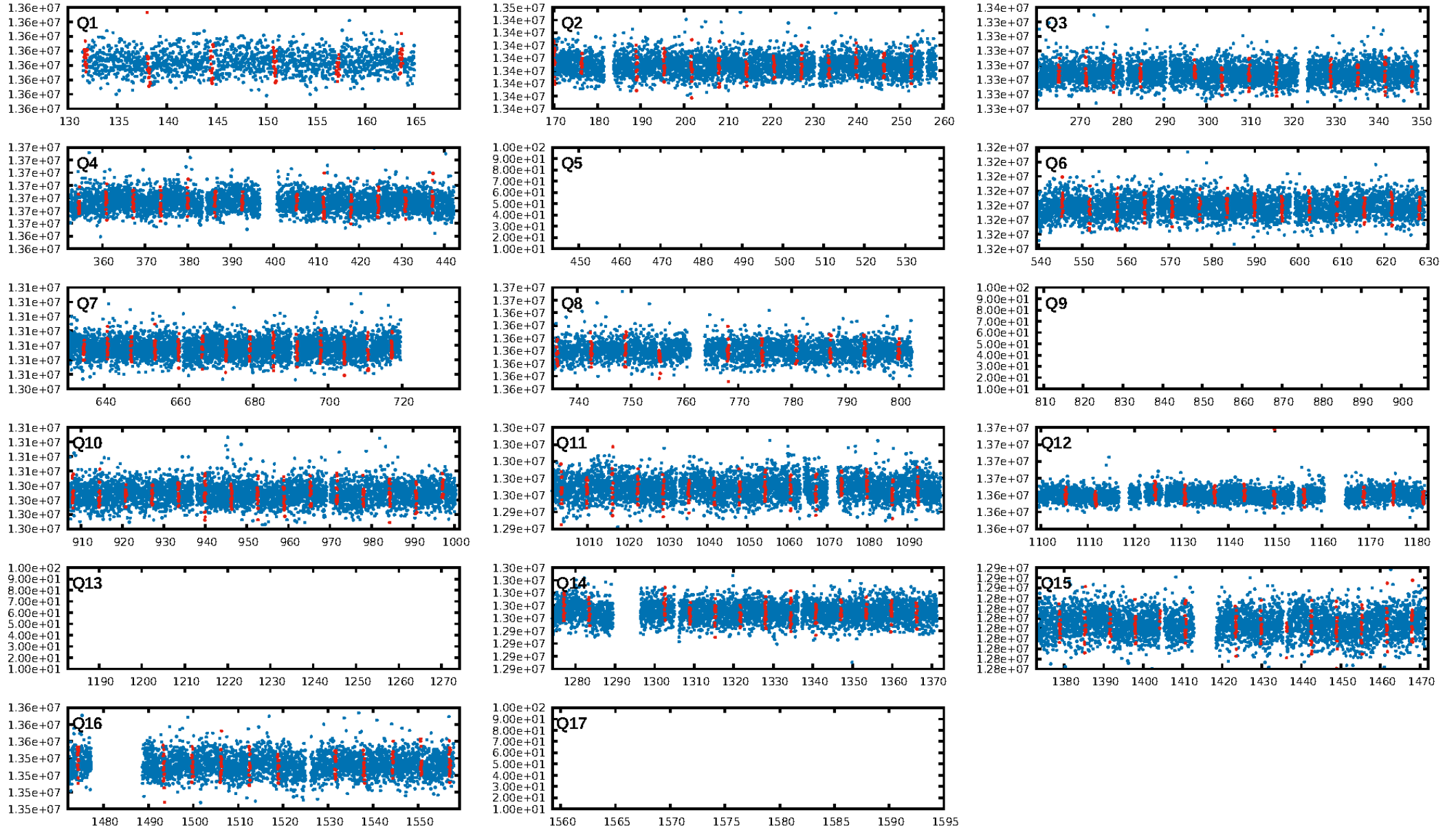
DV Fit Results:

Period = 6.36283 [0.00006] d
Epoch = 131.8038 [0.0076] BKJD
Rp/R* = 0.0124 [0.0111]
a/R* = 8.08 [34.80]
b = 0.78 [2.23]
Seff = 198.09 [76.80]
Teff = 957 [93] K
Rp = 1.20 [1.12] Re
a = 0.0666 [0.0166] AU
Ag = 73.38 [135.96] [0.53 σ]
Teffp = 4329 [1969] K [1.71 σ]

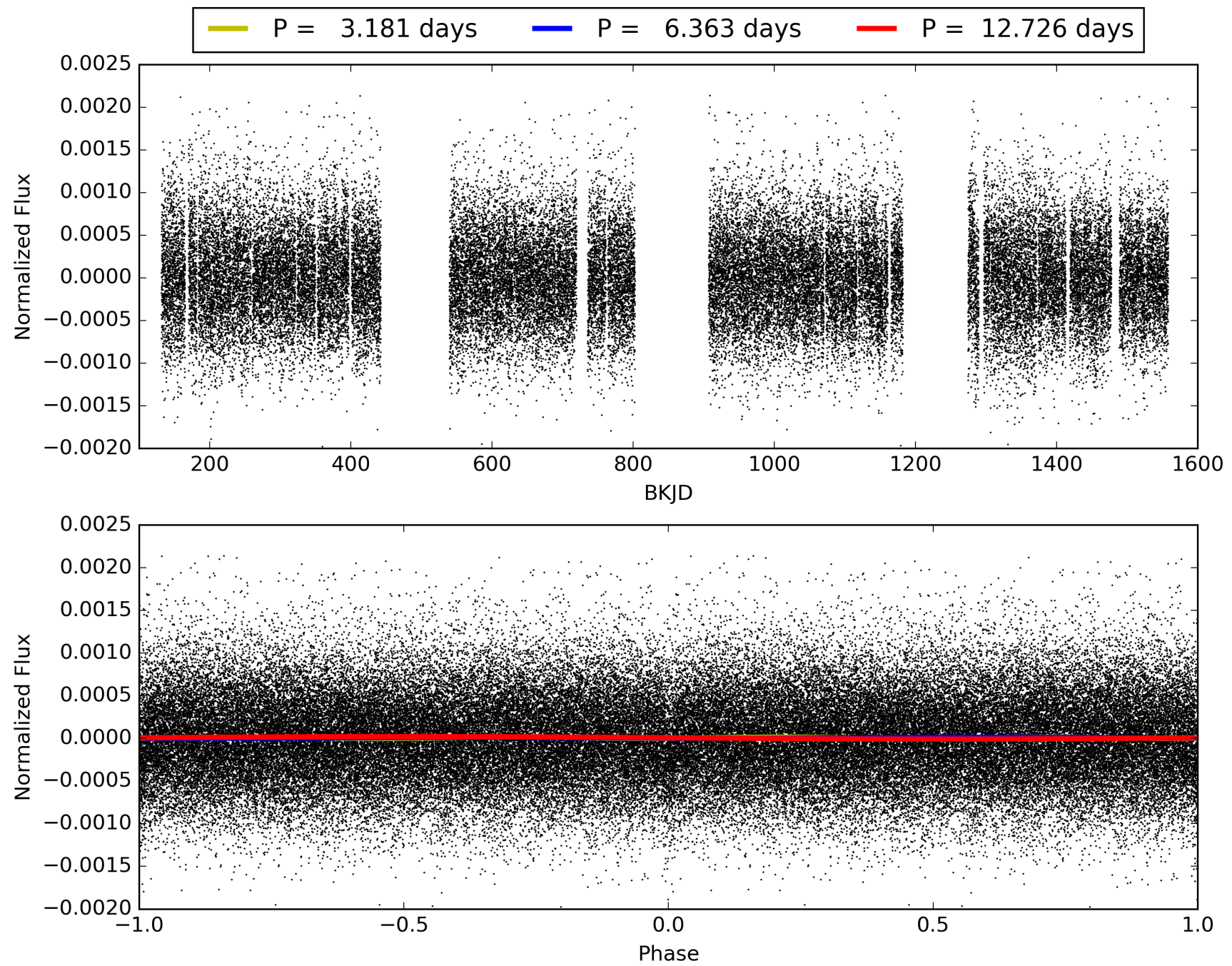
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.06e-16
RollingBand-fgt: 1.00 [154/154]
GhostDiagnostic-chr: 1.39
Centroid-sig: 2.1%
Centroid-so: 2.855 arcsec [1.62 σ]
OotOffset-rm: 0.671 arcsec [0.87 σ]
KicOffset-rm: 0.638 arcsec [0.83 σ]
OotOffset-st: 3/4/1/1 [9]
KicOffset-st: 3/4/1/1 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005687700-01, PDC Light Curves

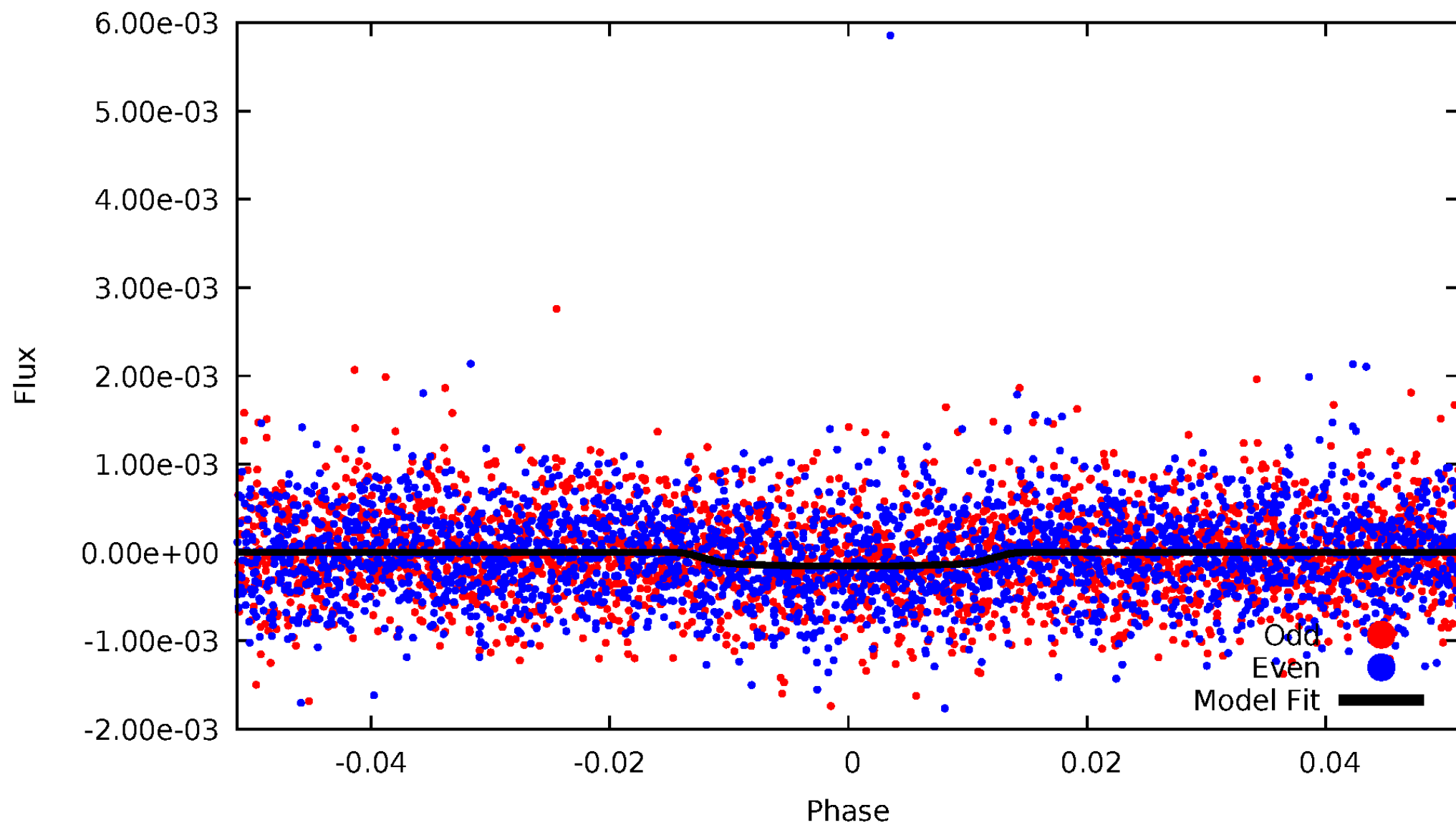


TCE 005687700-01



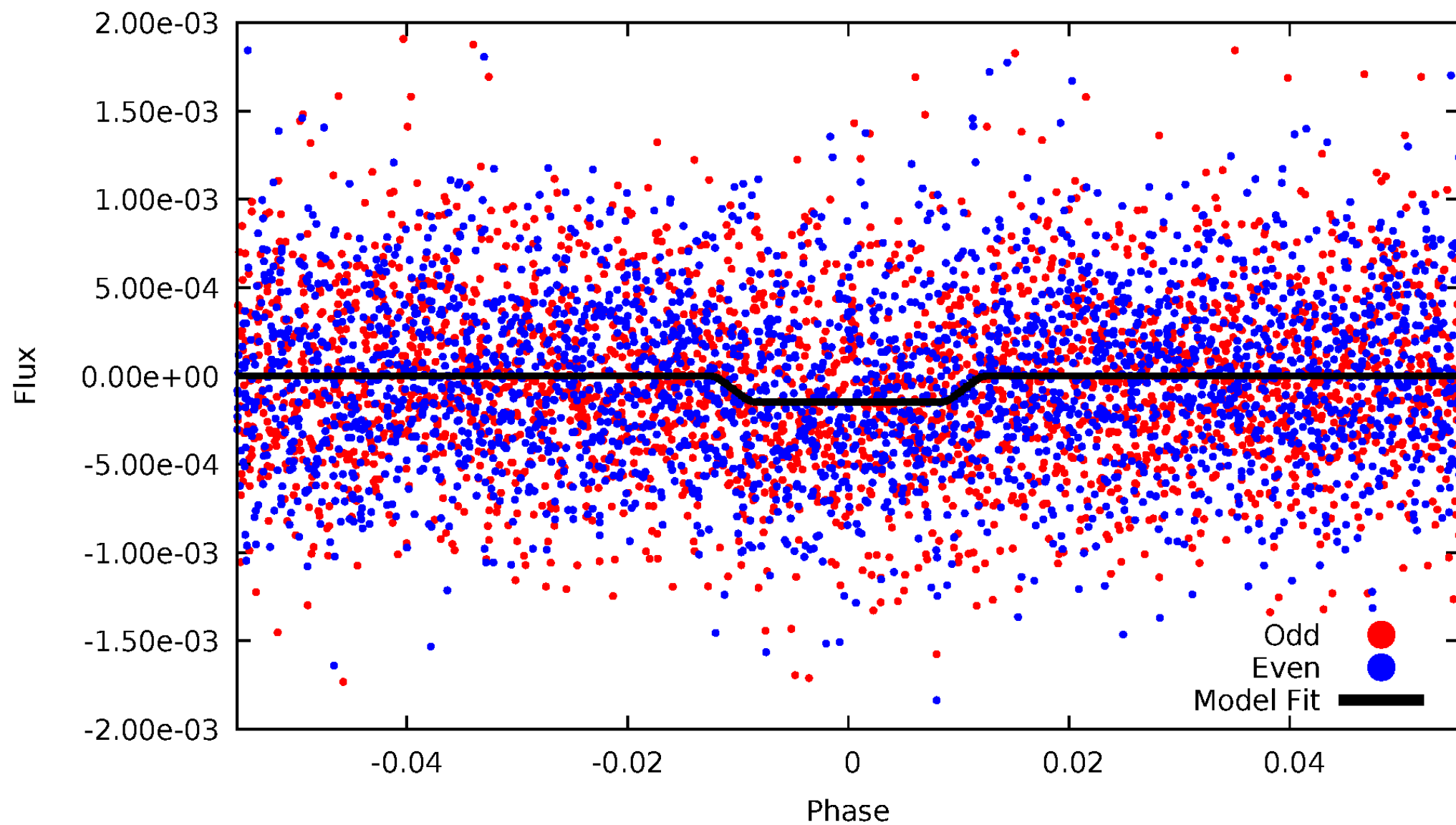
DV Odd/Even

TCE 005687700-01

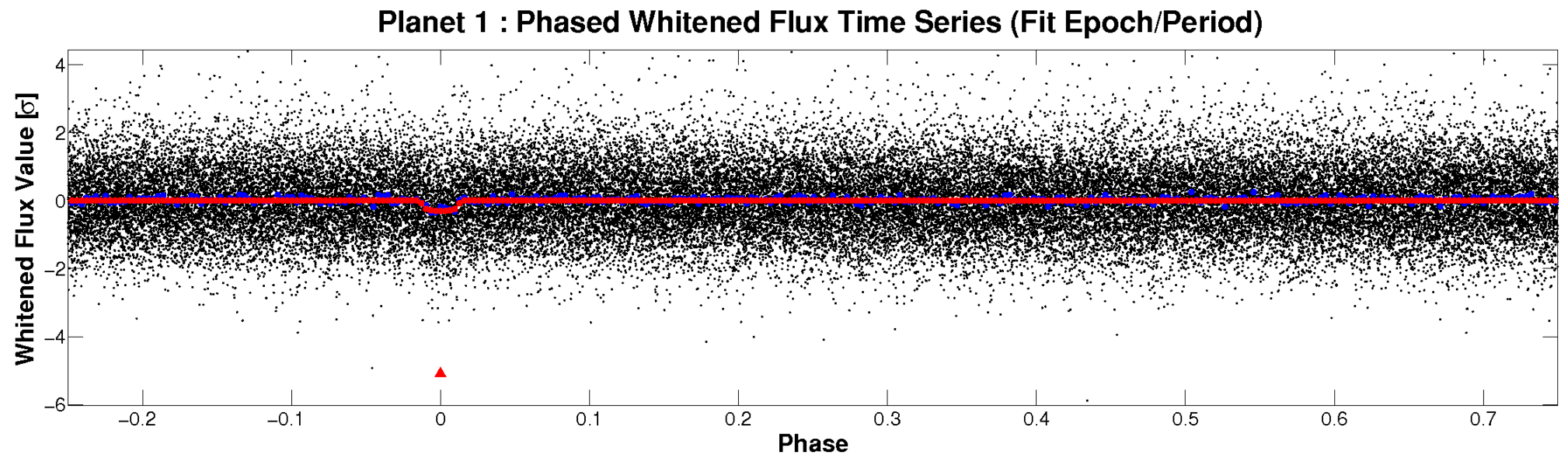
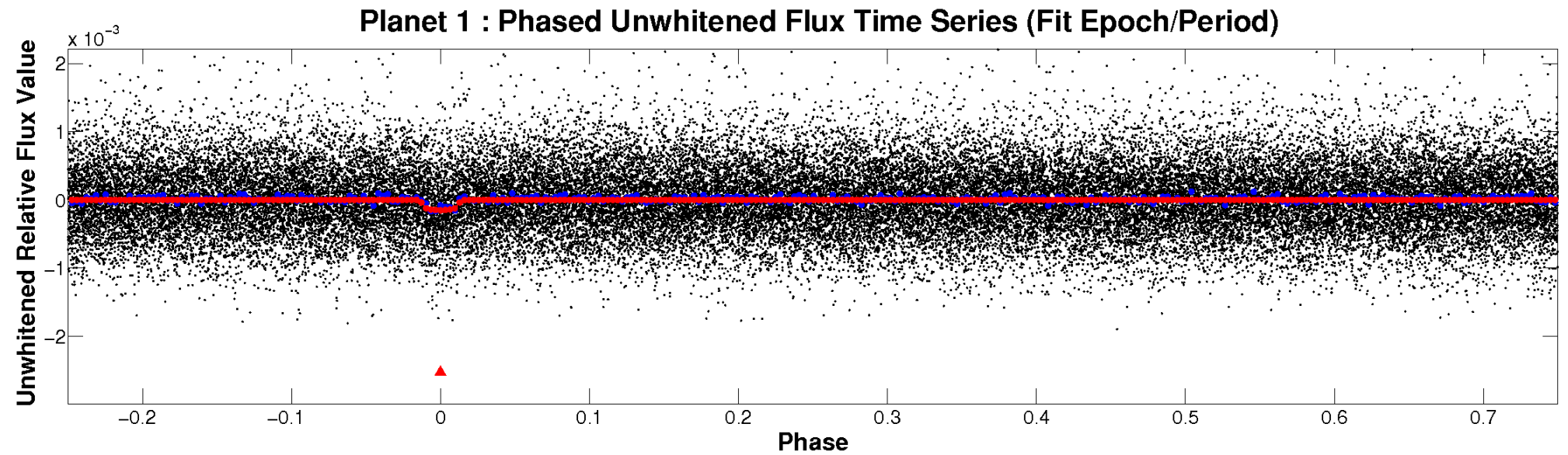


ALT Odd/Even

TCE 005687700-01

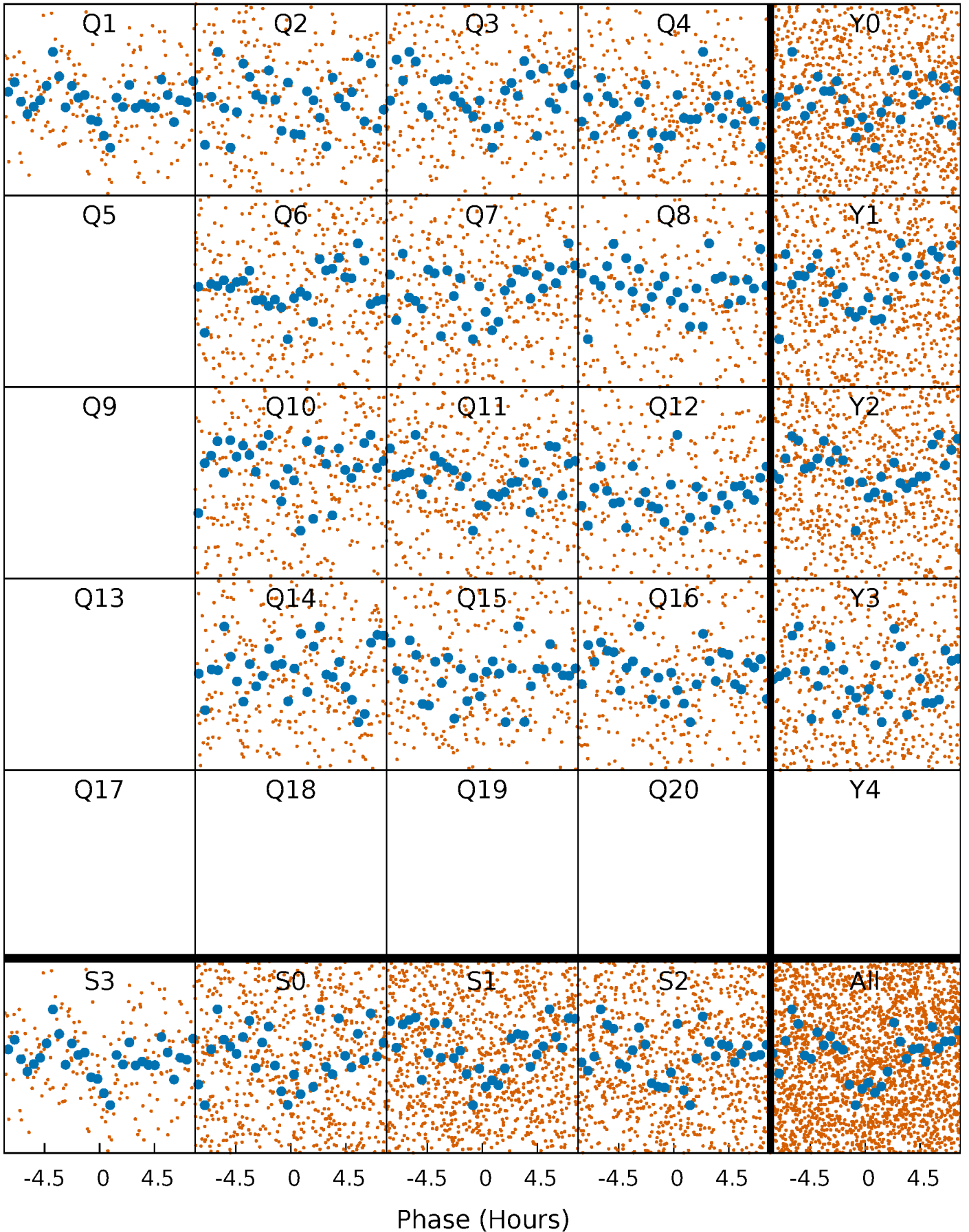


Non-Whitened Vs. Whitened Light Curve



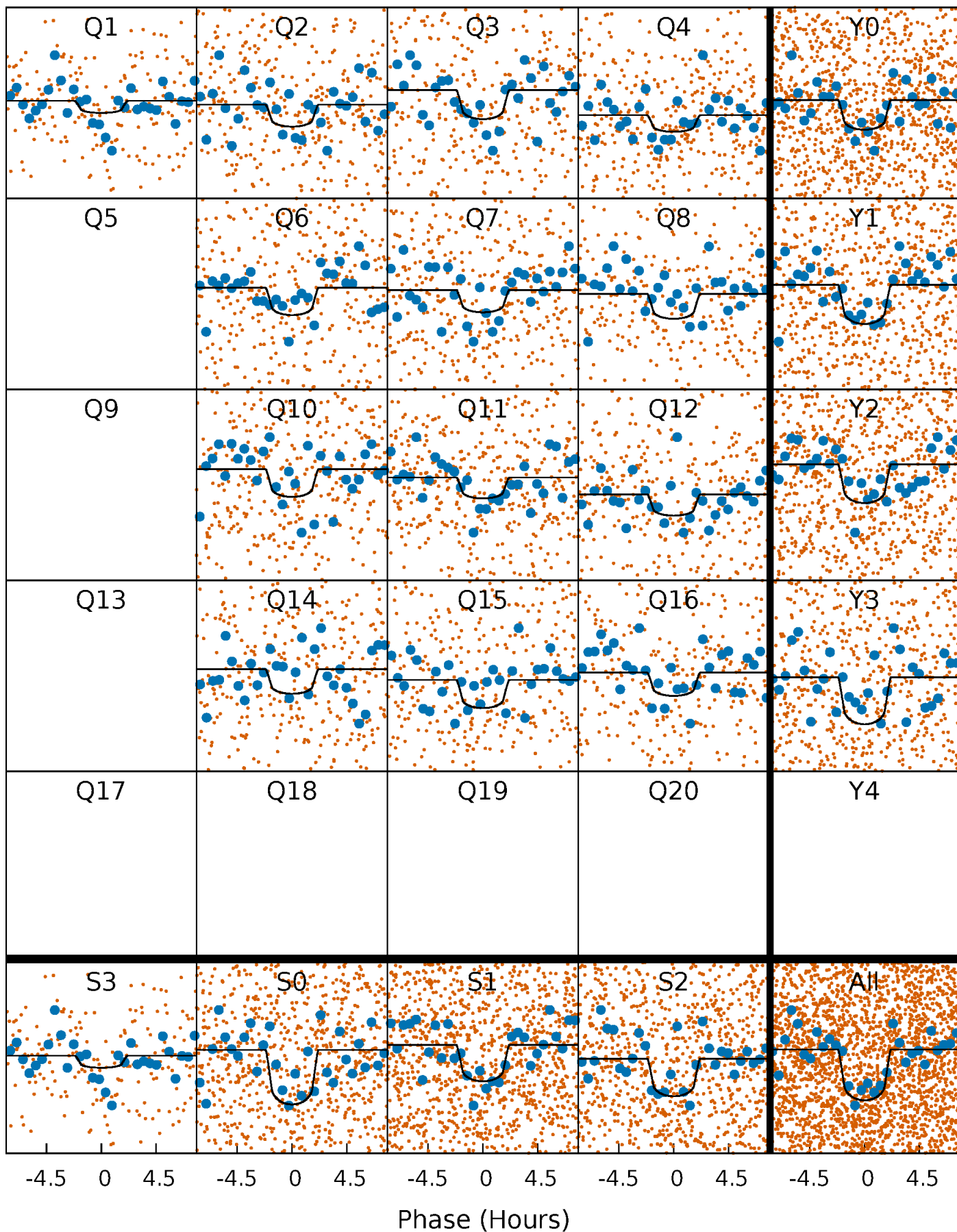
PDC Quarter-Phased Transit Curves

TCE 005687700-01 P= 6.362831 Days $T_0=131.803785$ (BKJD)



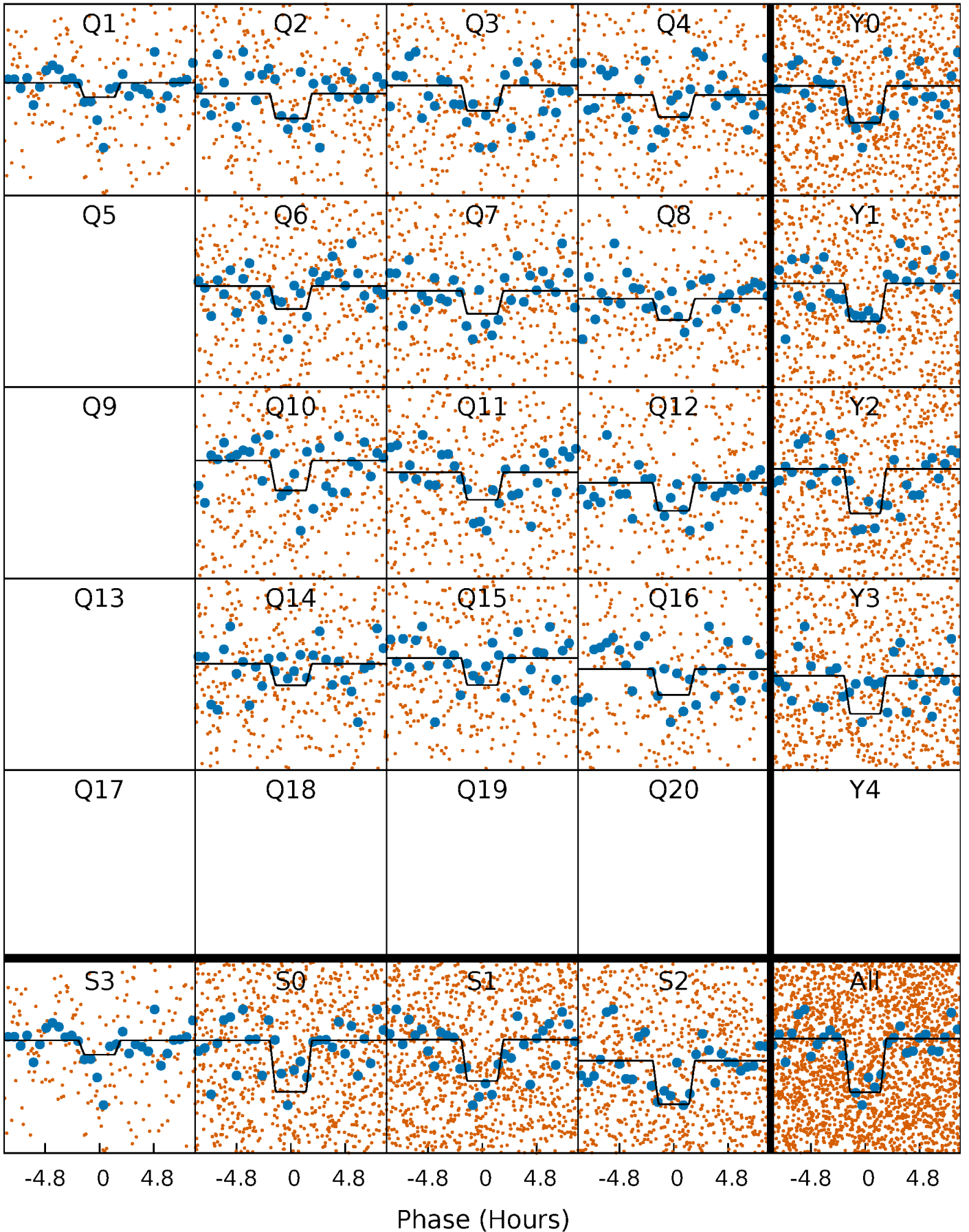
DV Quarter-Phased Transit Curves

TCE 005687700-01 P= 6.362831 Days $T_0=131.803785$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

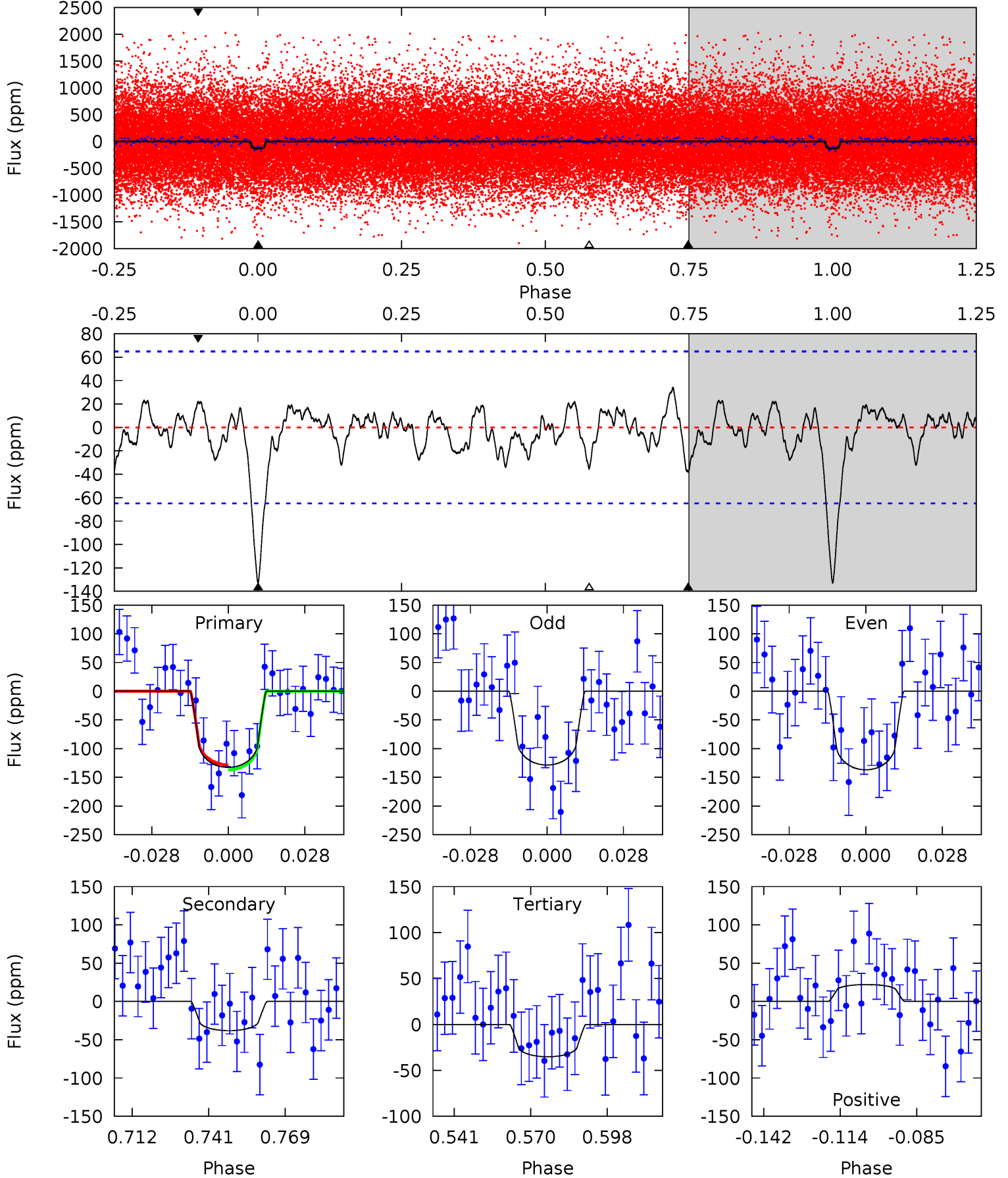
TCE 005687700-01 P= 6.362688 Days $T_0=131.818714$ (BKJD)



DV Model-Shift Uniqueness Test

005687700-01, P = 6.362831 Days, E = 125.440954 Days

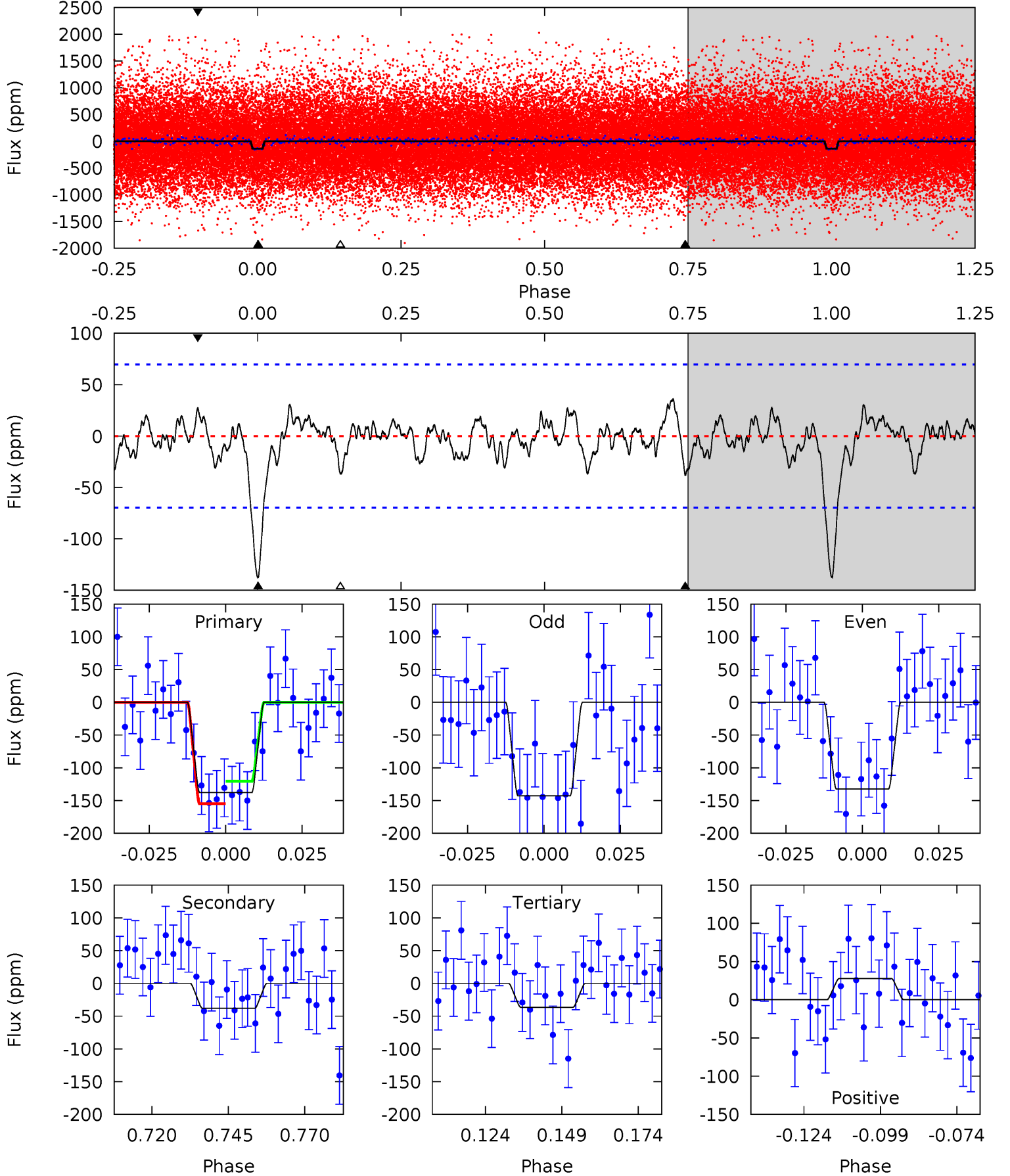
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.86	2.83	2.62	1.64	4.82	2.19	0.97	7.25	8.22	0.22	1.19	0.31	1.12	0.20	0.32



Alt Model-Shift Uniqueness Test

005687700-01, P = 6.362688 Days, E = 125.456026 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.59	2.65	2.54	1.93	4.85	2.24	0.93	7.05	7.66	0.11	0.73	0.36	0.93	0.21	1.20



Stellar Parameters For KIC 005687700

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5955^{+161}_{-178}	$4.534^{+0.036}_{-0.204}$	$-0.240^{+0.300}_{-0.300}$	$0.883^{+0.258}_{-0.086}$	$0.972^{+0.118}_{-0.118}$	$1.987^{+0.478}_{-0.985}$
	+3%/-3%	+1%/-4%	+125%/-125%	+29%/-10%	+12%/-12%	+24%/-50%
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 005687700-01 / KOI 4587.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-38 ± 13	$1.47^{+1.10}_{-0.86}$	1374^{+92}_{-67}	4123^{+2043}_{-723}	41^{+208}_{-28}
Alt.	-38 ± 14	$1.40^{+1.10}_{-0.84}$	1371^{+92}_{-60}	4120^{+2145}_{-699}	42^{+247}_{-29}

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

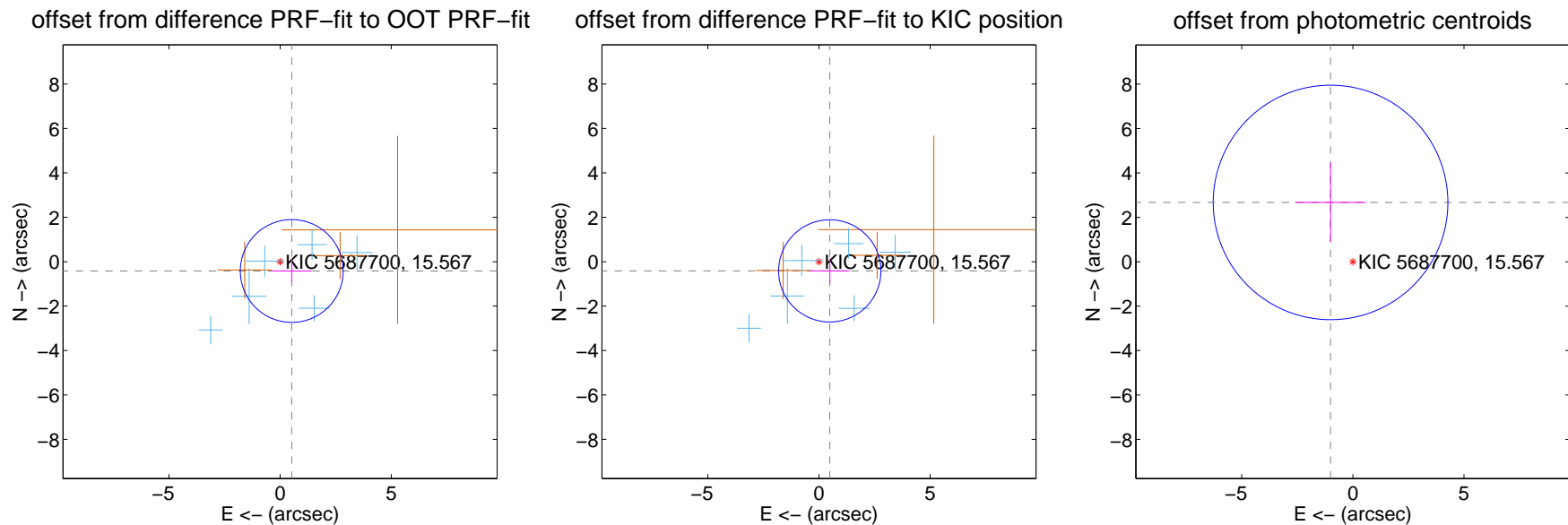
DV Centroid Data

Supplemental centroid analysis for 005687700-01. Kepler magnitude: 15.57. Transit SNR 9.05

There are 6 quarters with good PRF difference image offsets

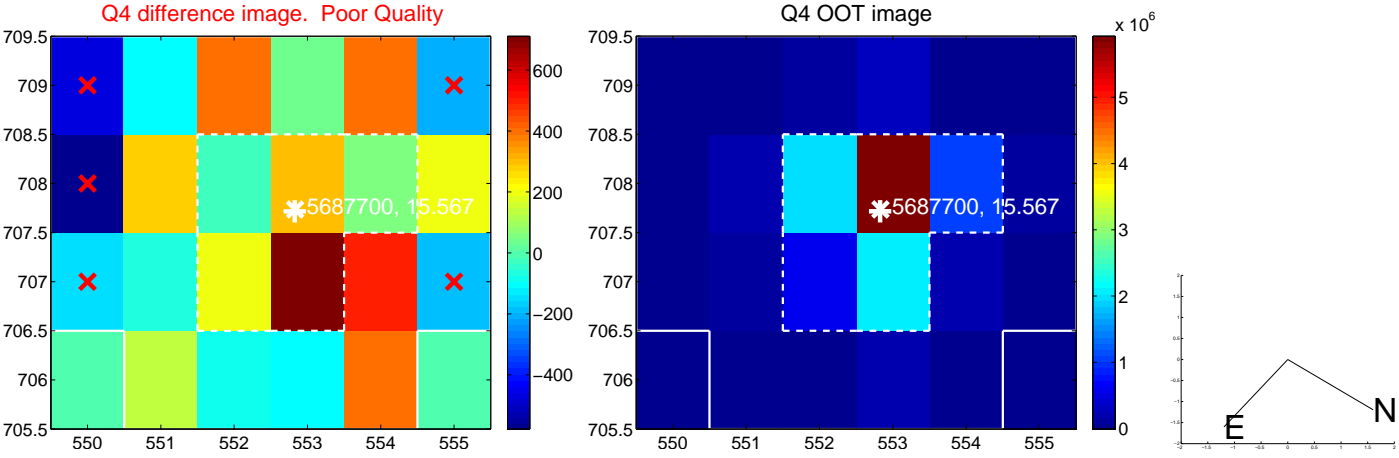
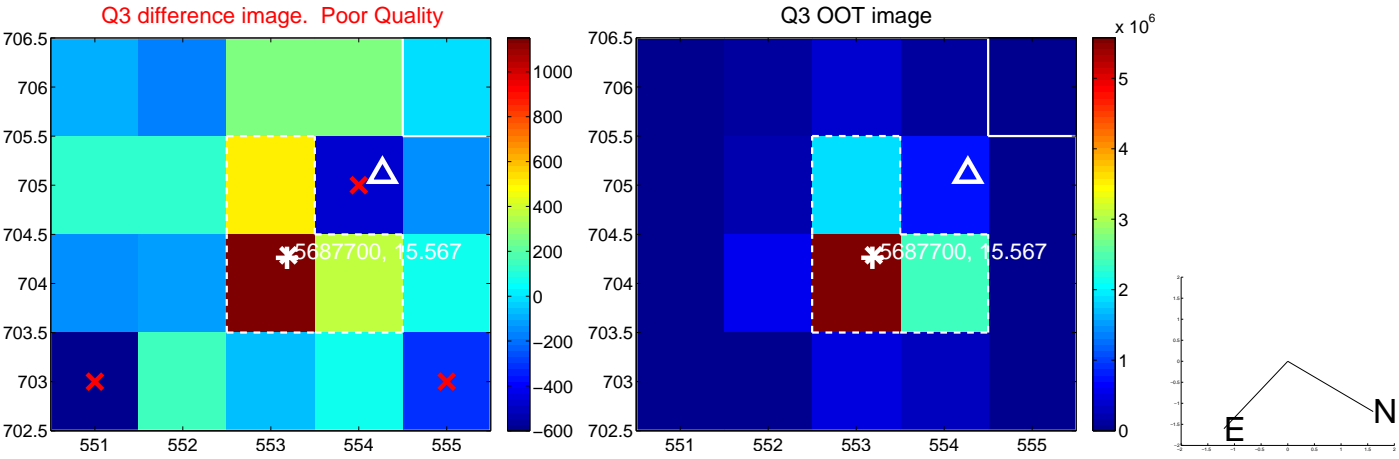
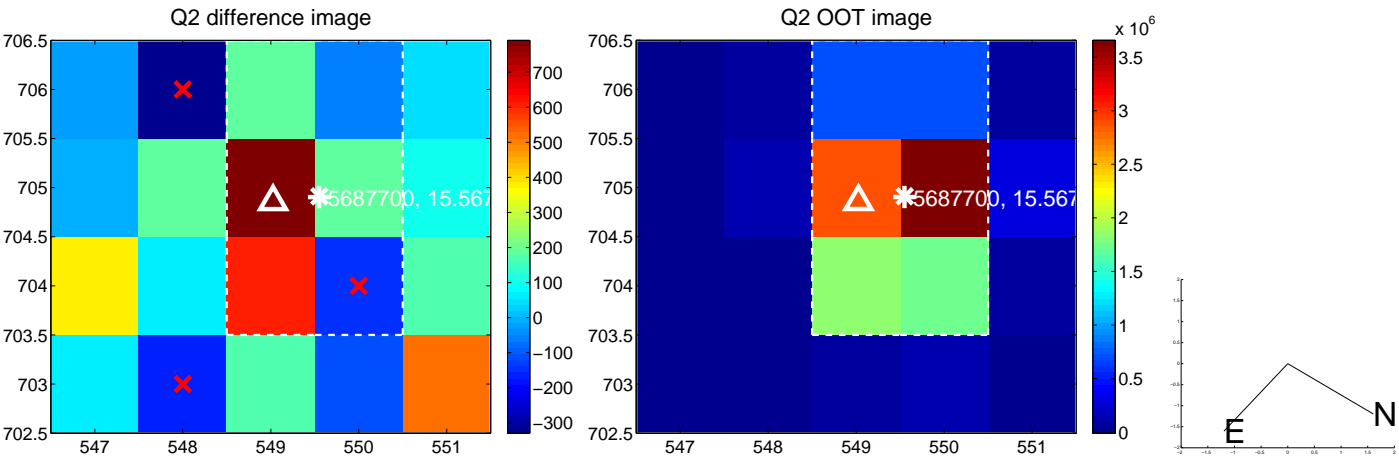
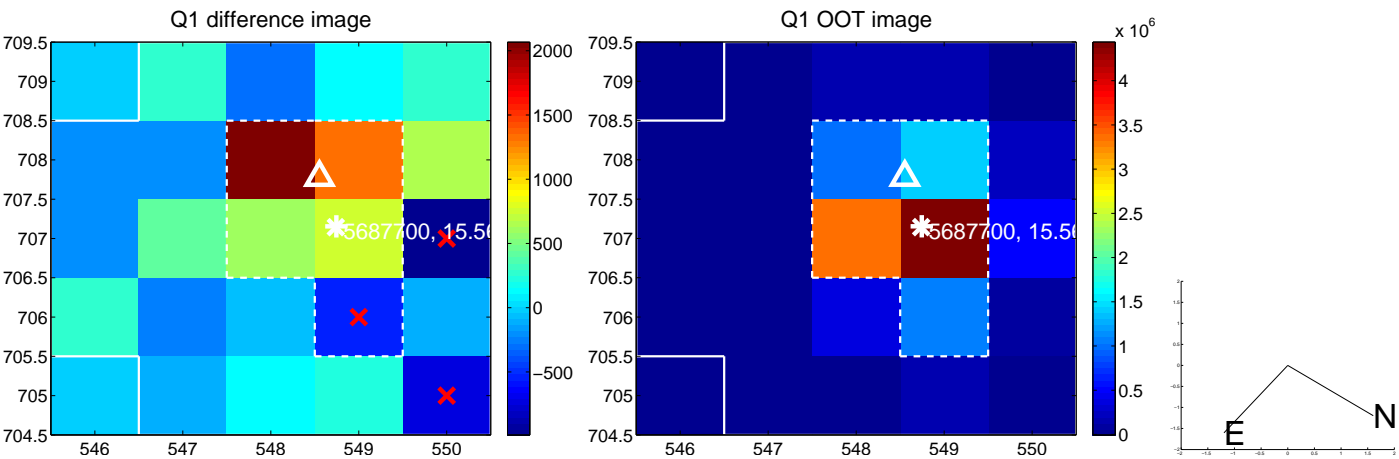
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.671 ± 0.772	0.87	-0.524 ± 0.887	-0.418 ± 0.545
PRF-fit source offset from KIC position	0.638 ± 0.767	0.83	-0.486 ± 0.888	-0.414 ± 0.558
photometric centroid source offset	2.85 ± 1.76	1.62	1.00 ± 1.60	2.67 ± 1.78

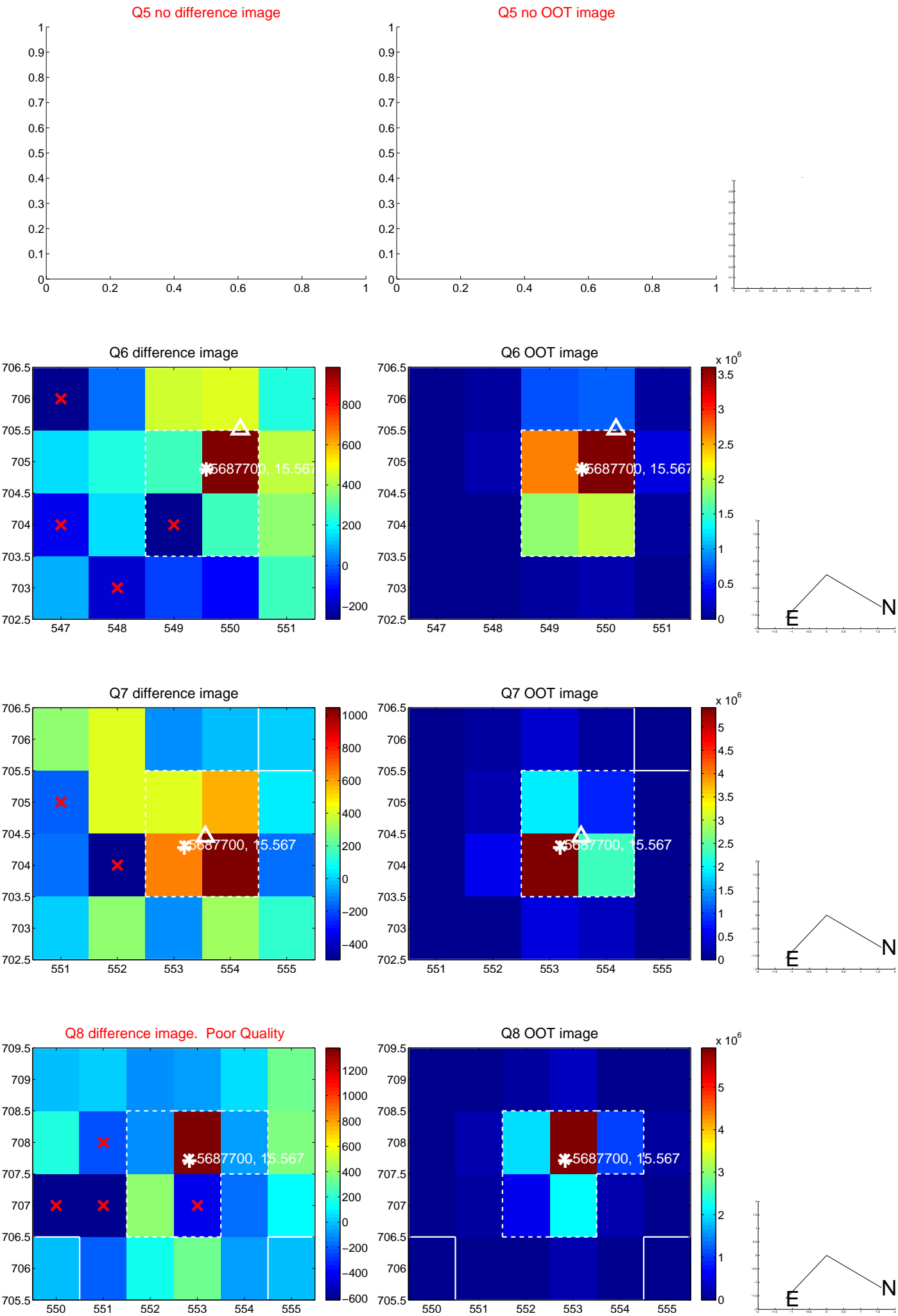


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

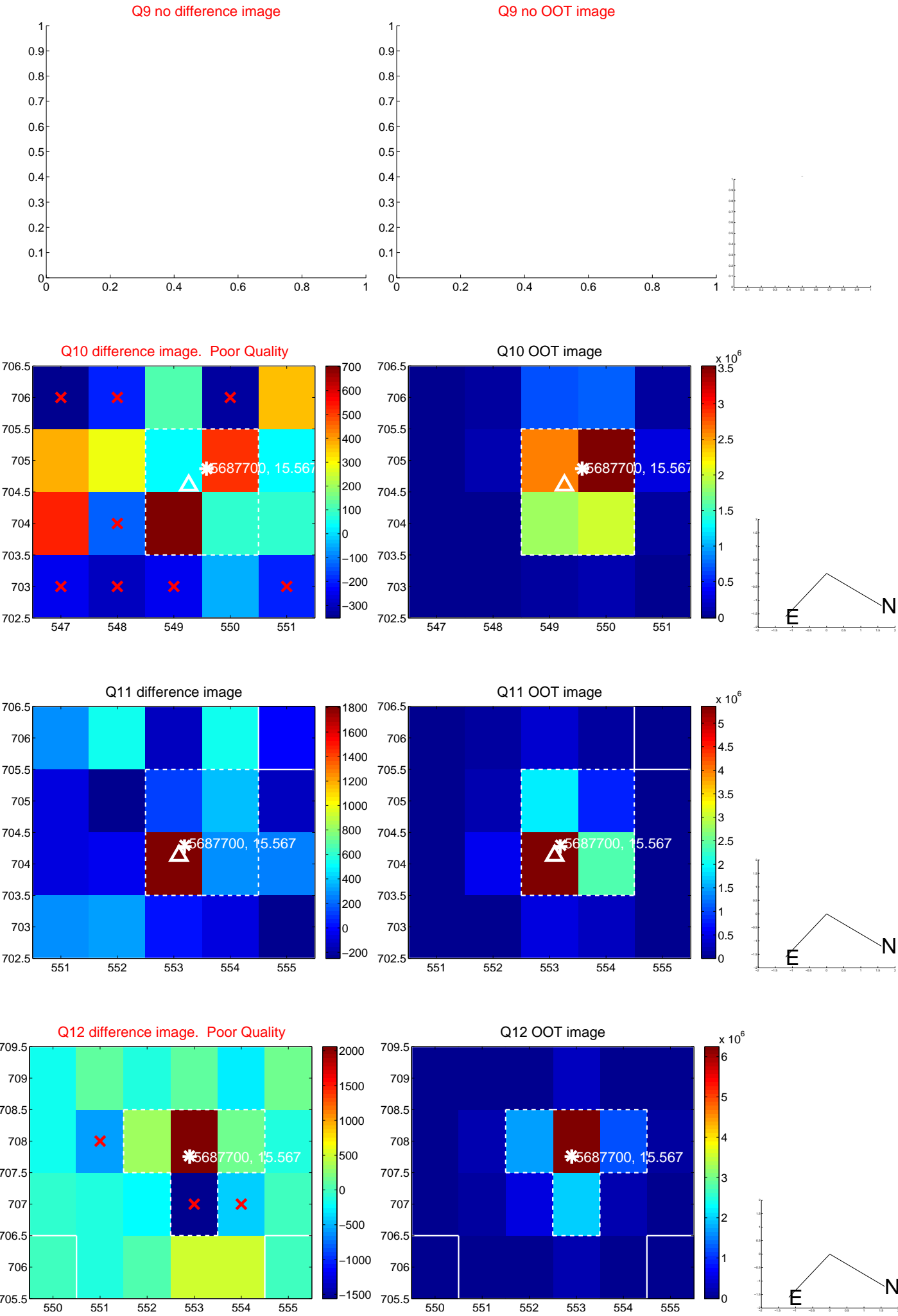
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



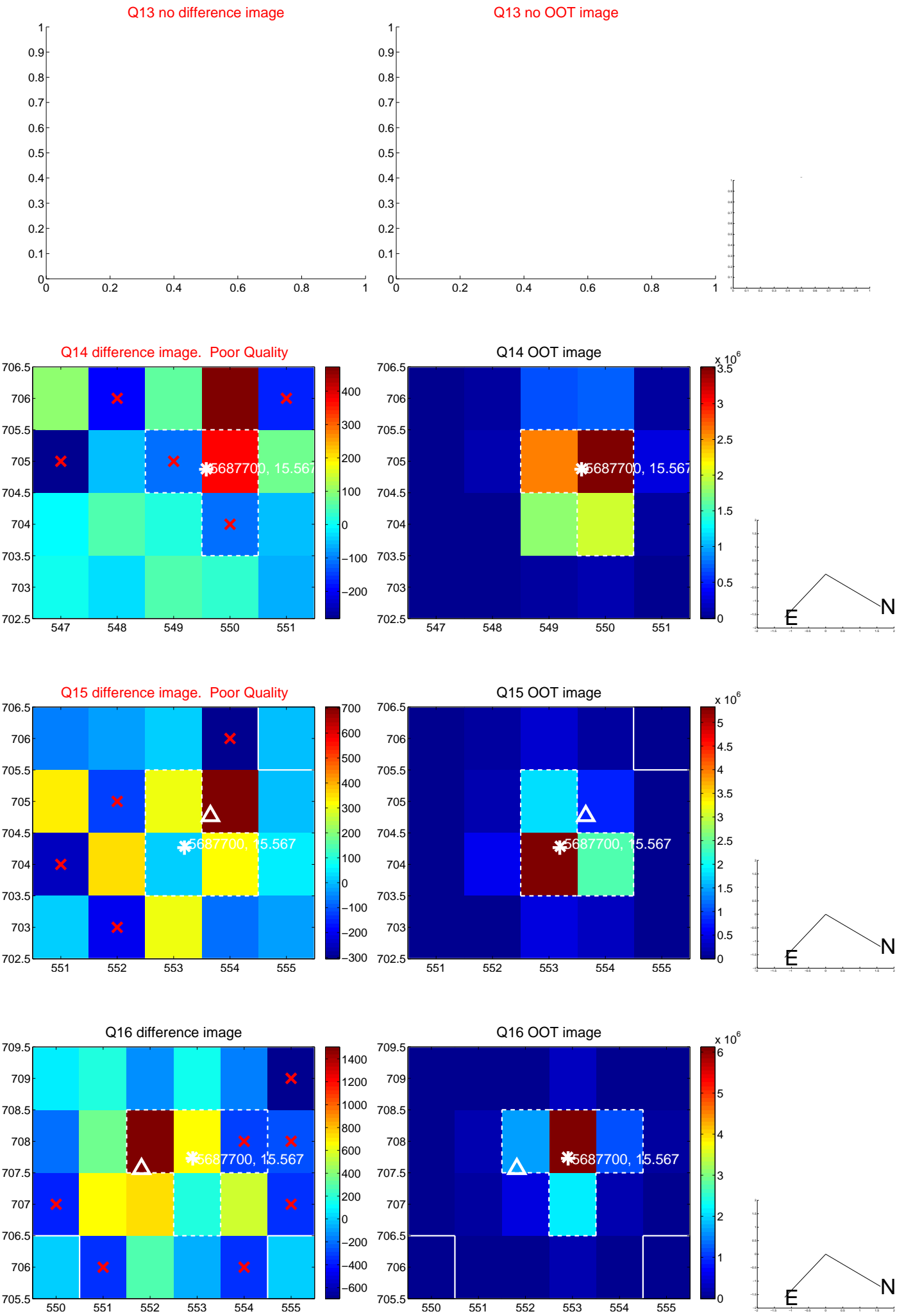
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



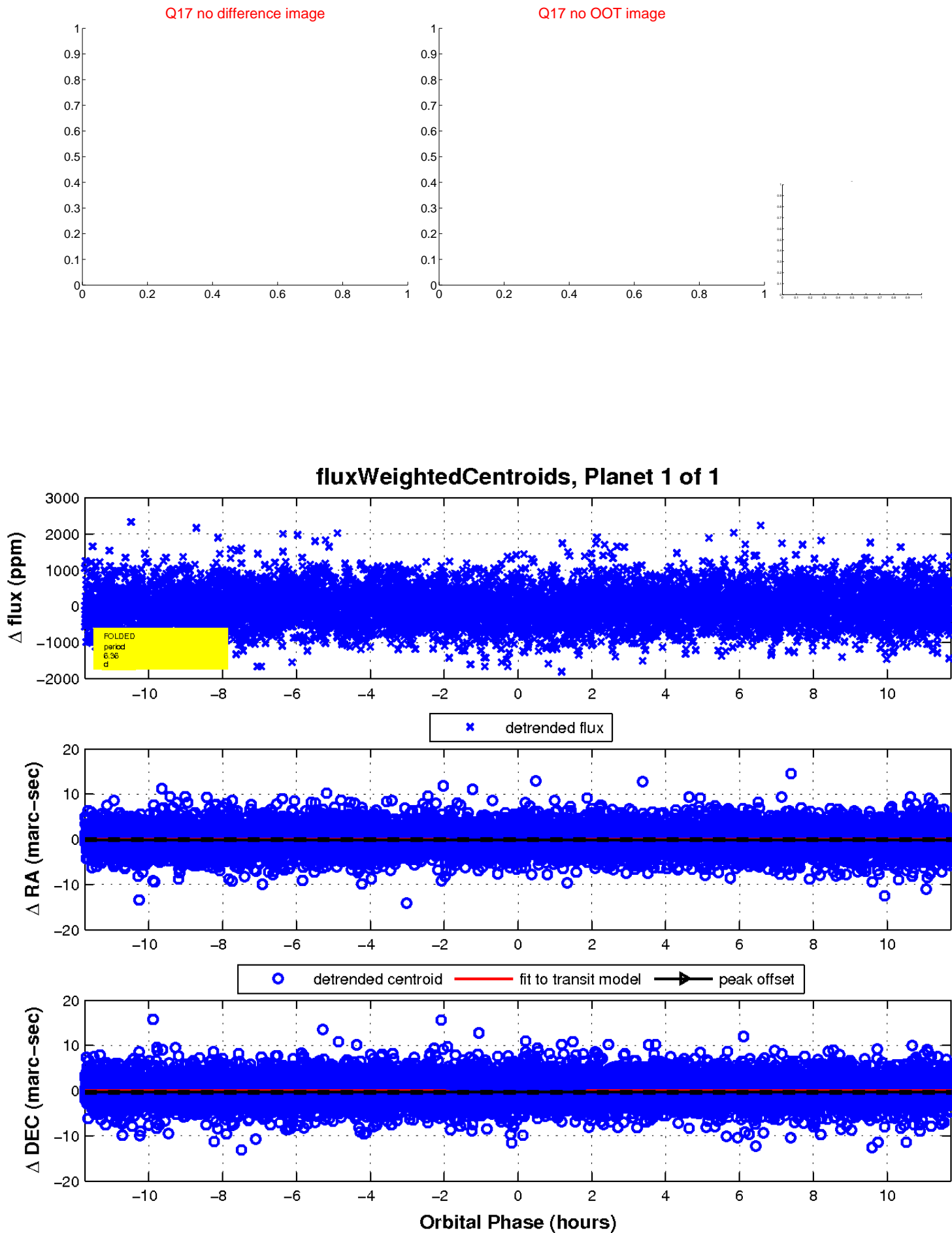
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

