

KIC 008650209

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})
008650209-01	OBS	No	0.915067	131.837736	30.5	7.440	7.8	10.6	2.12	7194	1.20	23703.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008650209-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

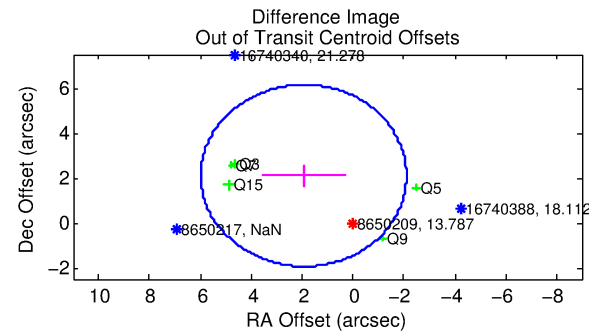
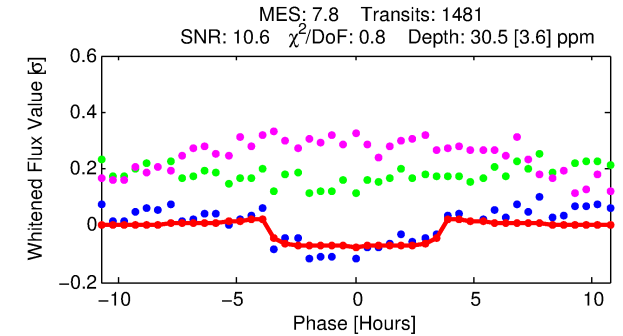
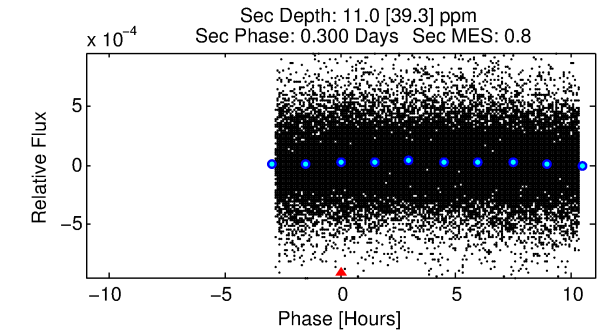
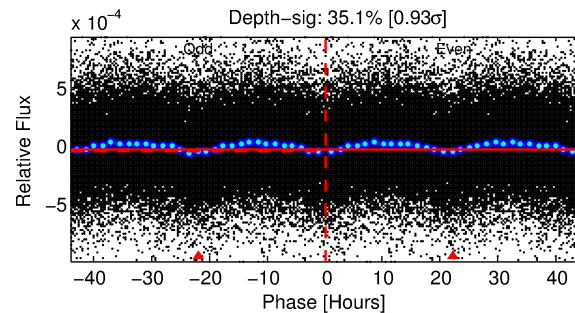
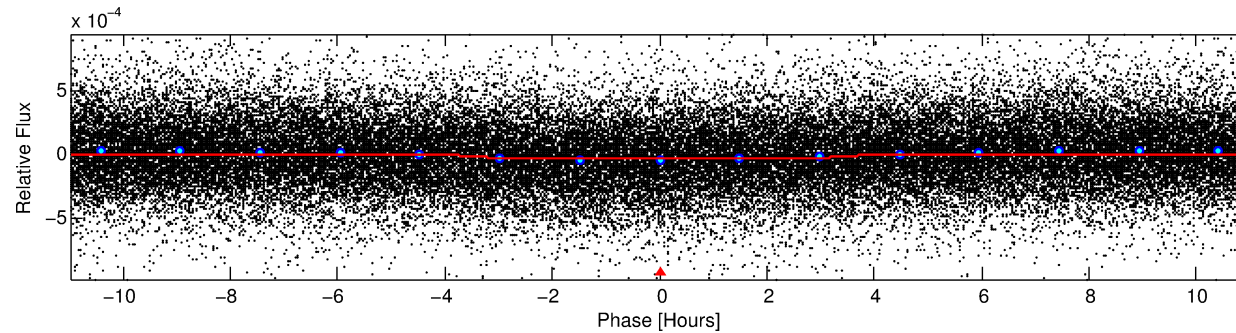
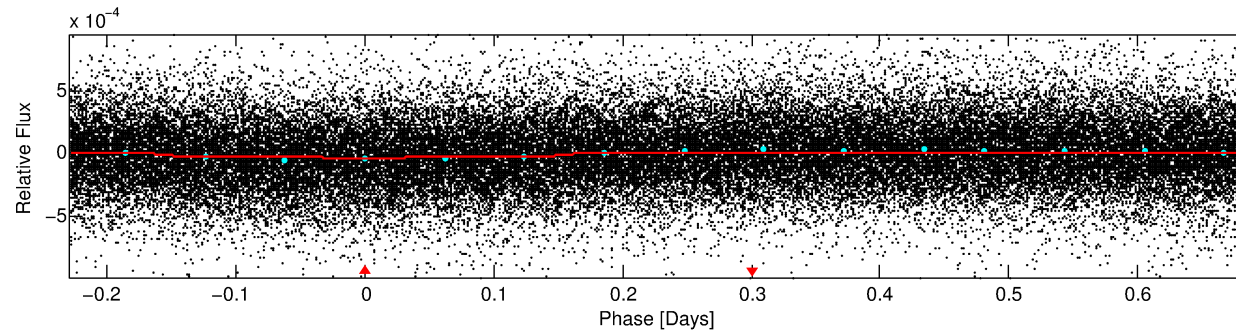
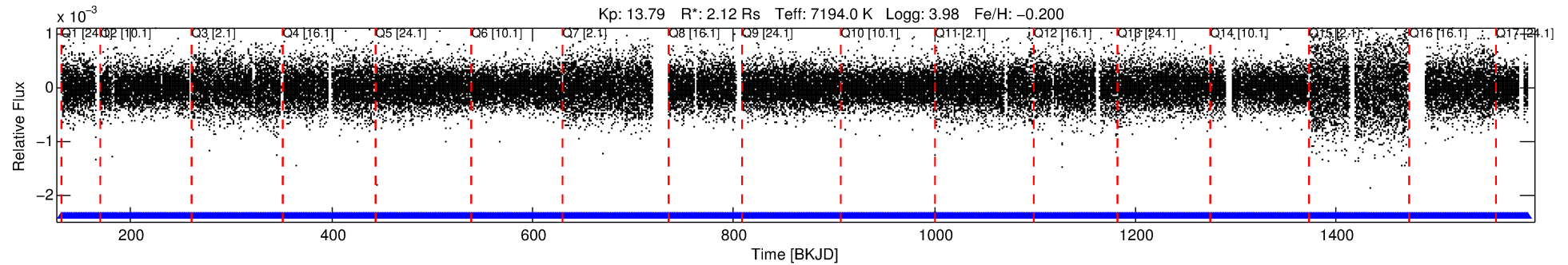
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008650209-01

No Significant Match Found

DV One-Page Summary

KIC: 8650209 Candidate: 1 of 1 Period: 0.915 d



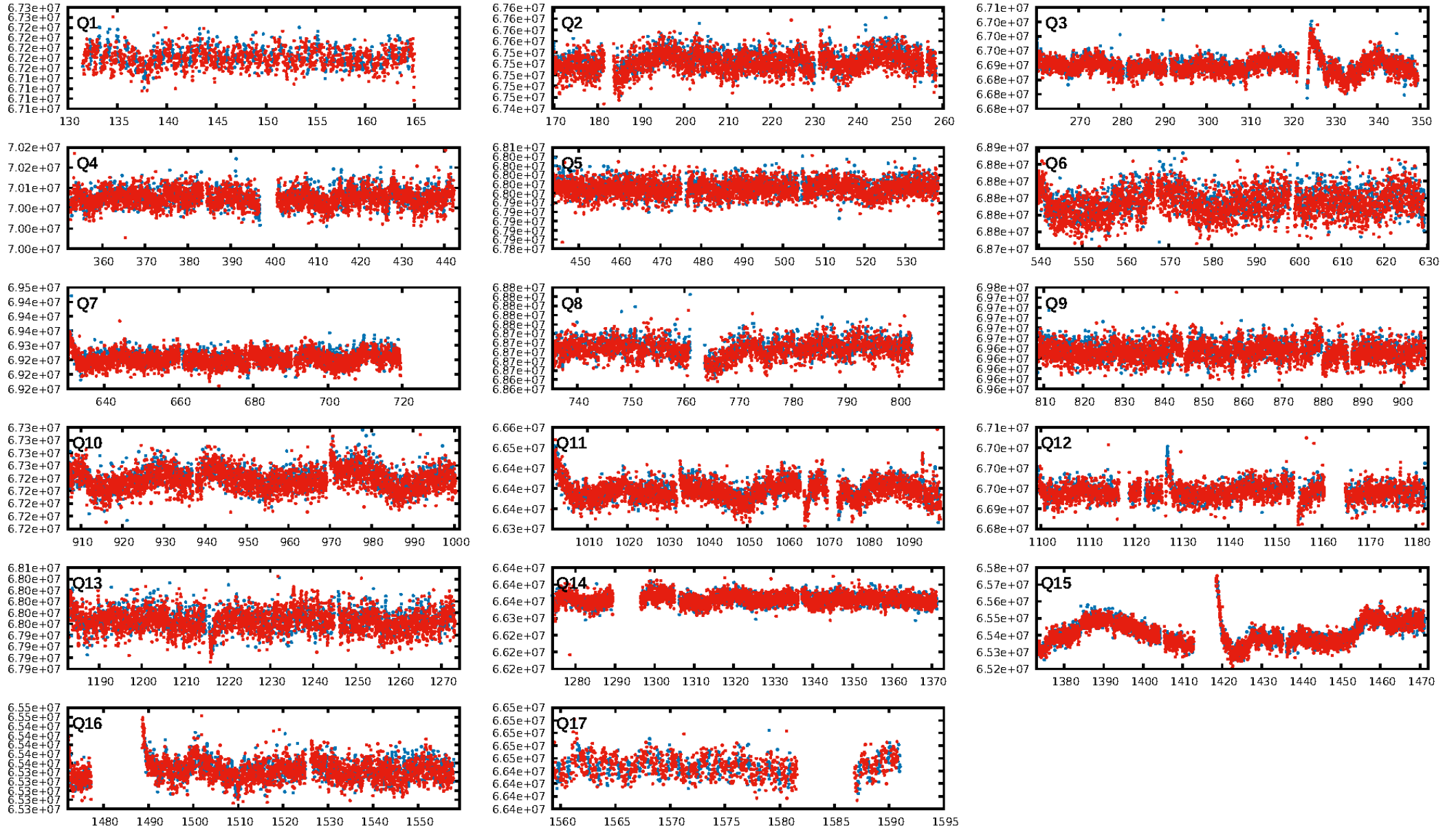
DV Fit Results:

Period = 0.91507 [0.00001] d
Epoch = 131.8377 [0.0047] BKJD
Rp/R* = 0.0052 [0.0046]
a/R* = 1.13 [1.29]
b = 0.36 [12.87]
Seff = 23703.11 [12098.20]
Teq = 3164 [404] K
Rp = 1.20 [1.13] Re
a = 0.0214 [0.0065] AU
Ag = 1.93 [7.72] [0.12 σ]
Teffp = 5764 [5735] K [0.45 σ]

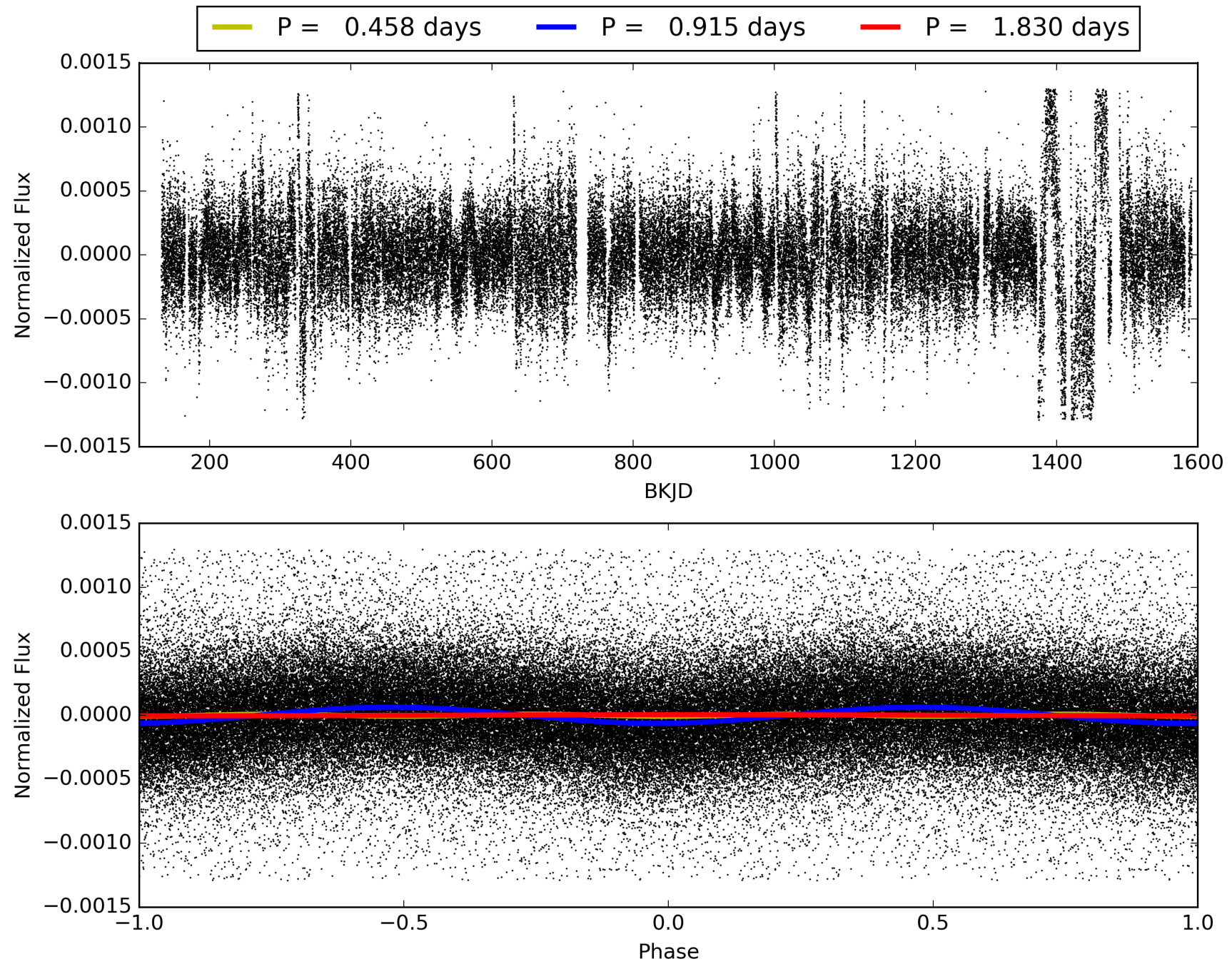
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1414/1414]
GhostDiagnostic-chr: 6.109
Centroid-sig: 0.0%
Centroid-so: 2.735 arcsec [4.12 σ]
OotOffset-rm: 2.859 arcsec [2.12 σ]
KicOffset-rm: 3.089 arcsec [1.76 σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008650209-01, PDC Light Curves

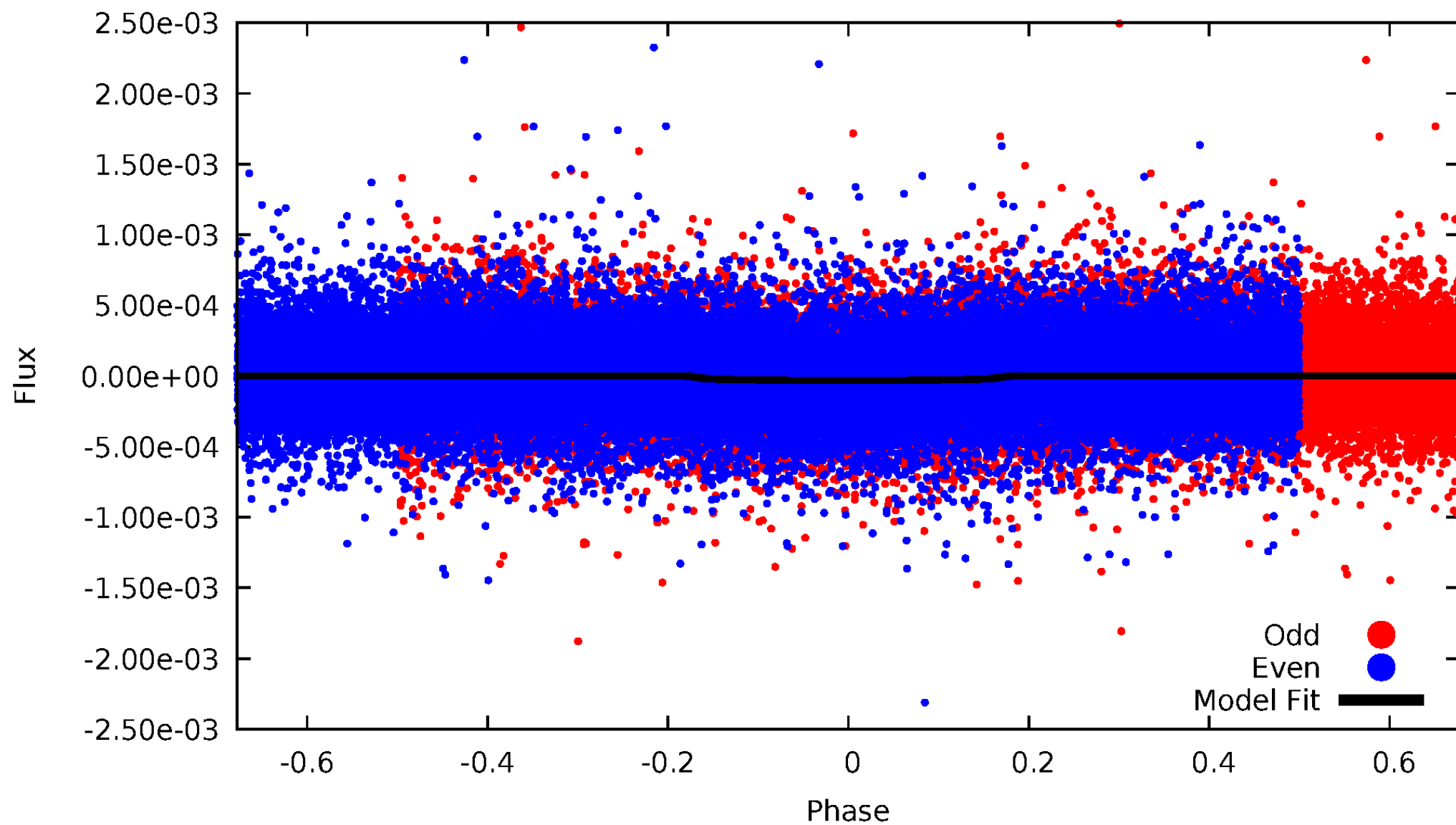


TCE 008650209-01



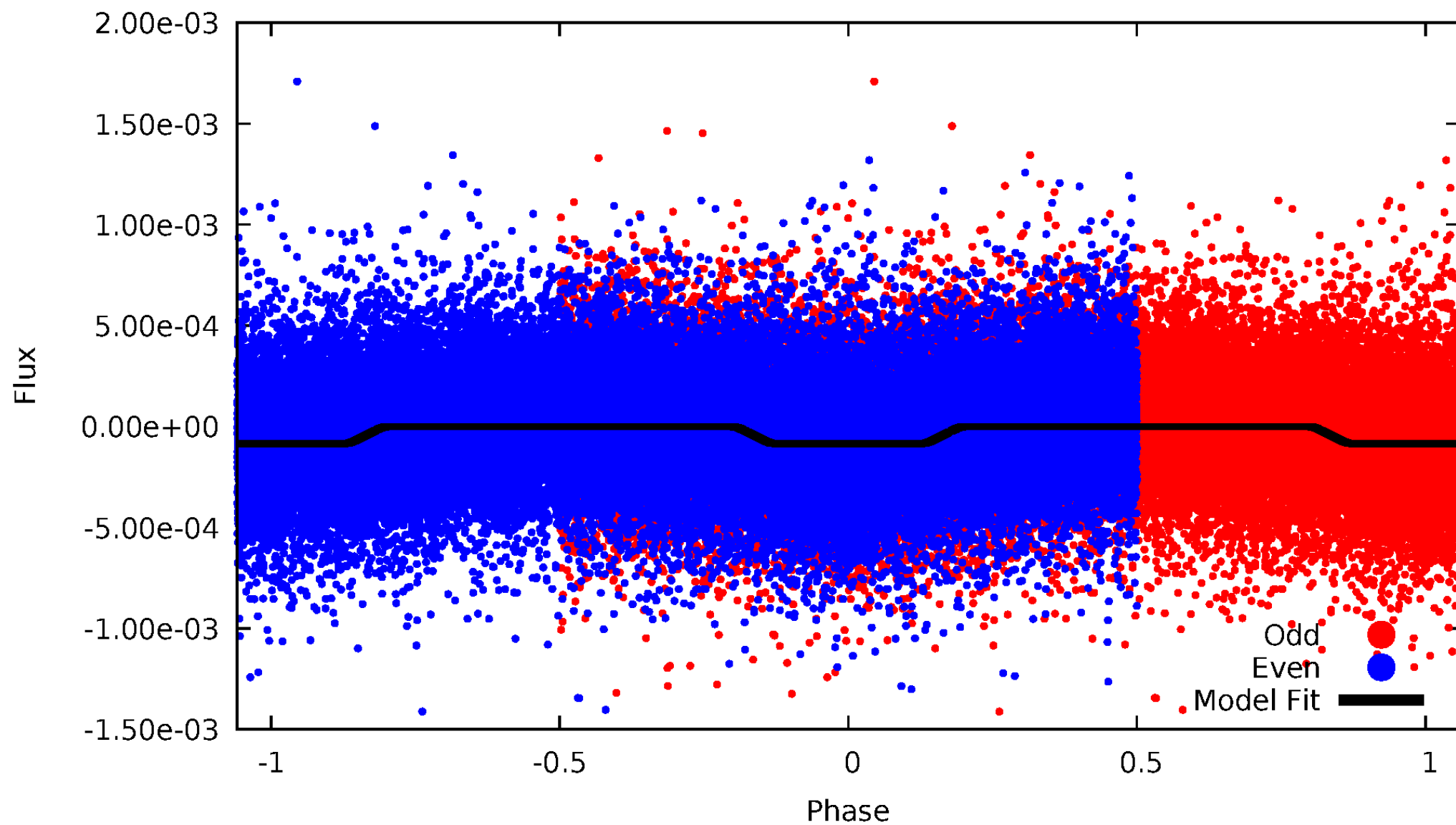
DV Odd/Even

TCE 008650209-01

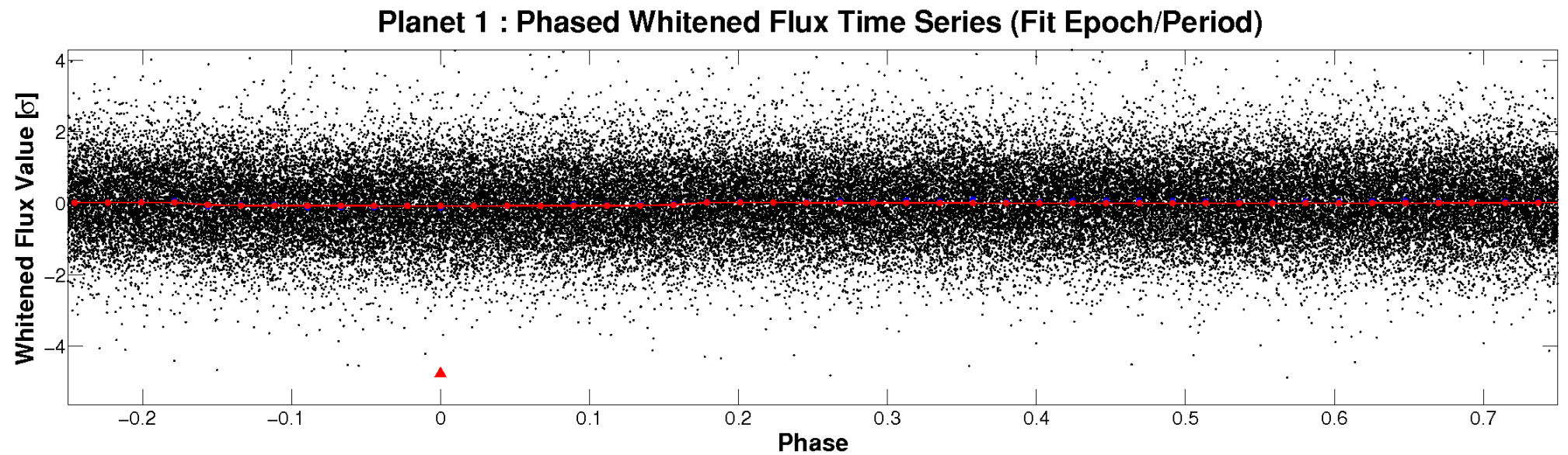
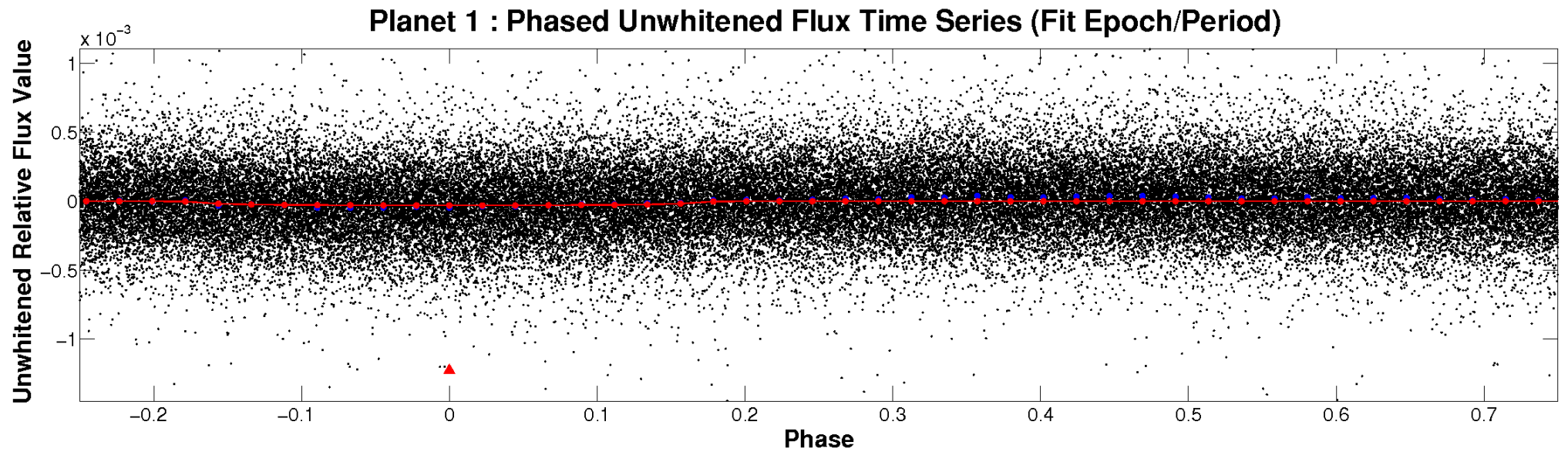


ALT Odd/Even

TCE 008650209-01

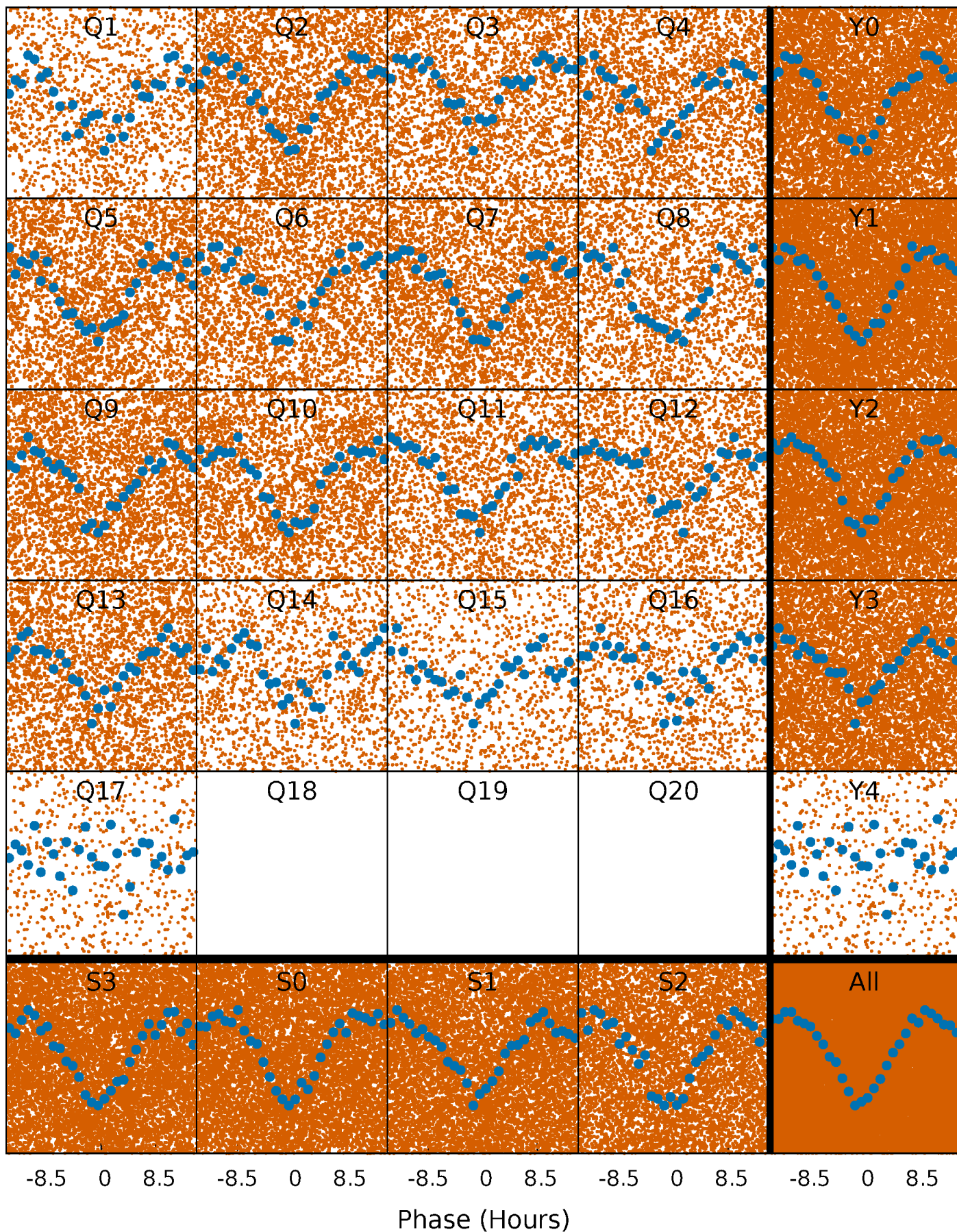


Non-Whitened Vs. Whitened Light Curve



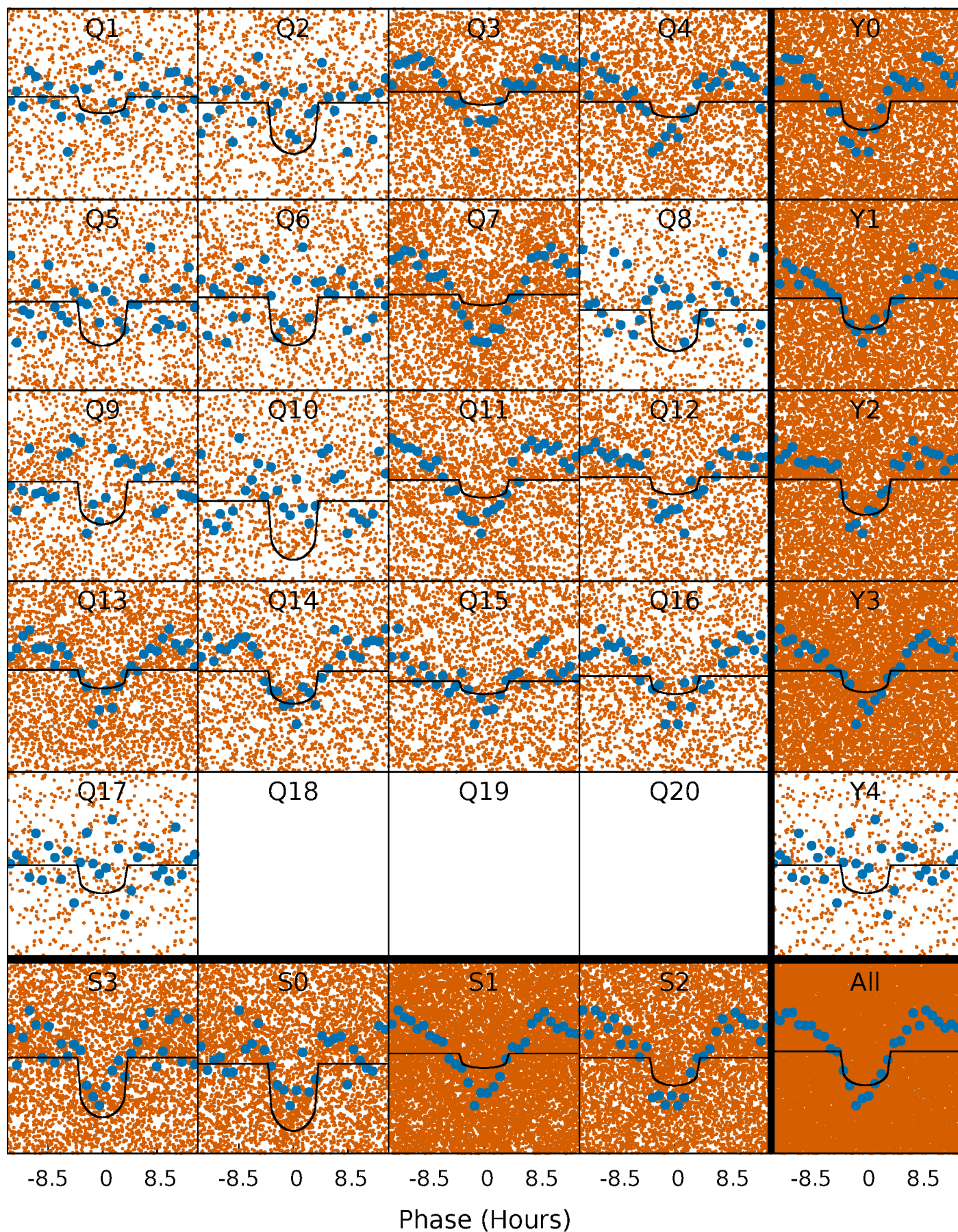
PDC Quarter-Phased Transit Curves

TCE 008650209-01 P= 0.915067 Days $T_0=131.837736$ (BKJD)



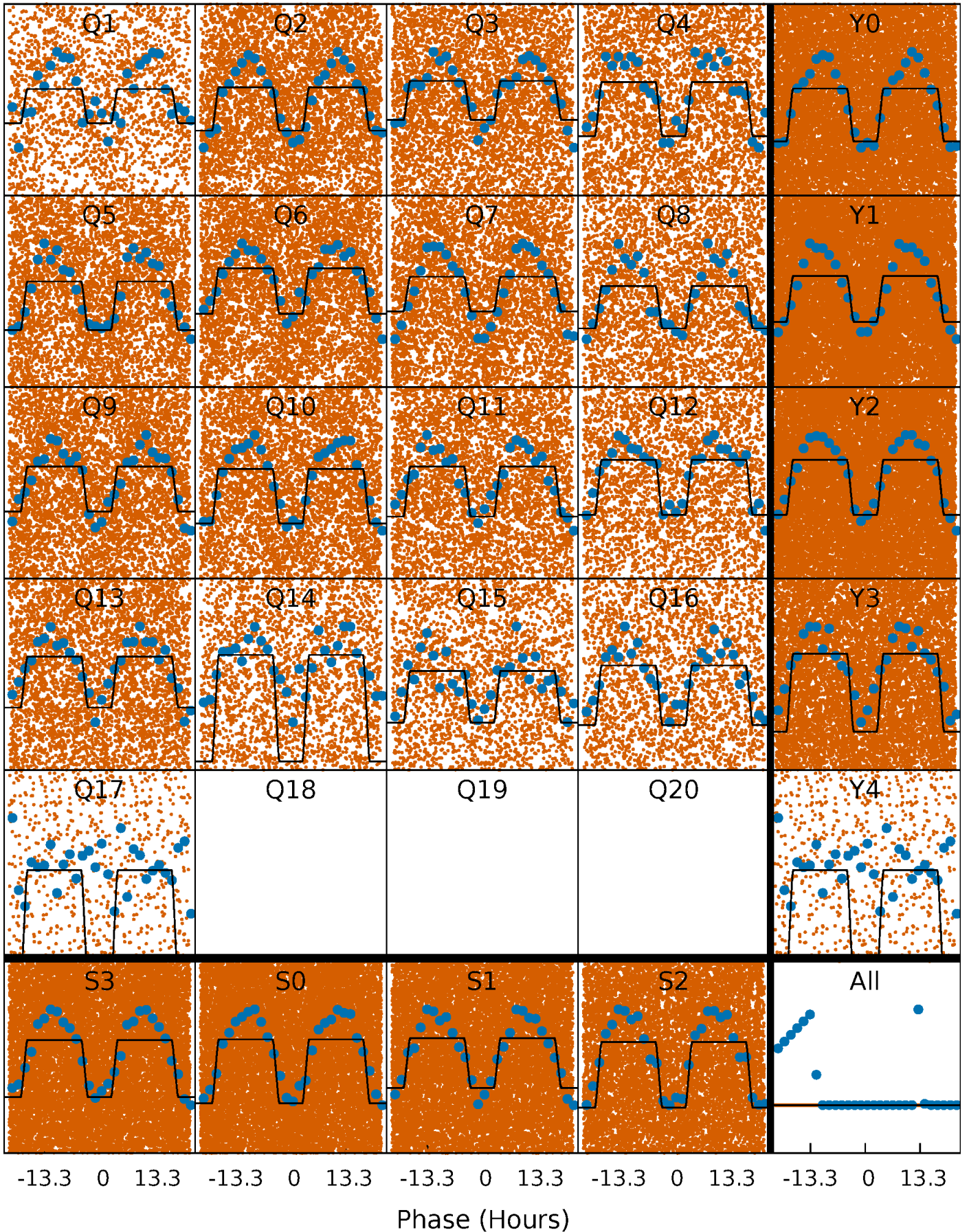
DV Quarter-Phased Transit Curves

TCE 008650209-01 P= 0.915067 Days $T_0=131.837736$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

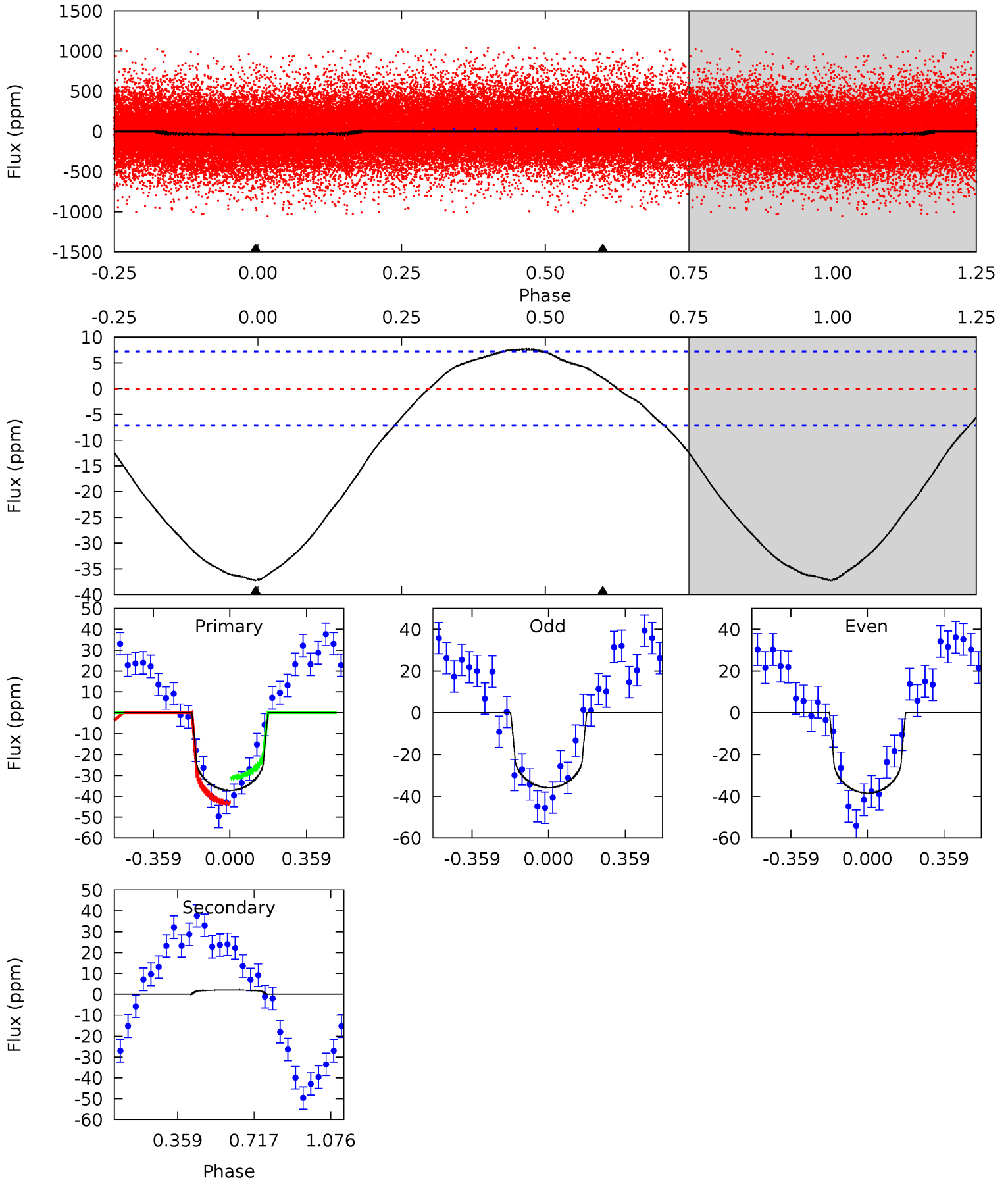
TCE 008650209-01 P= 0.915117 Days $T_0=131.784745$ (BKJD)



DV Model-Shift Uniqueness Test

008650209-01, P = 0.915067 Days, E = 130.922669 Days

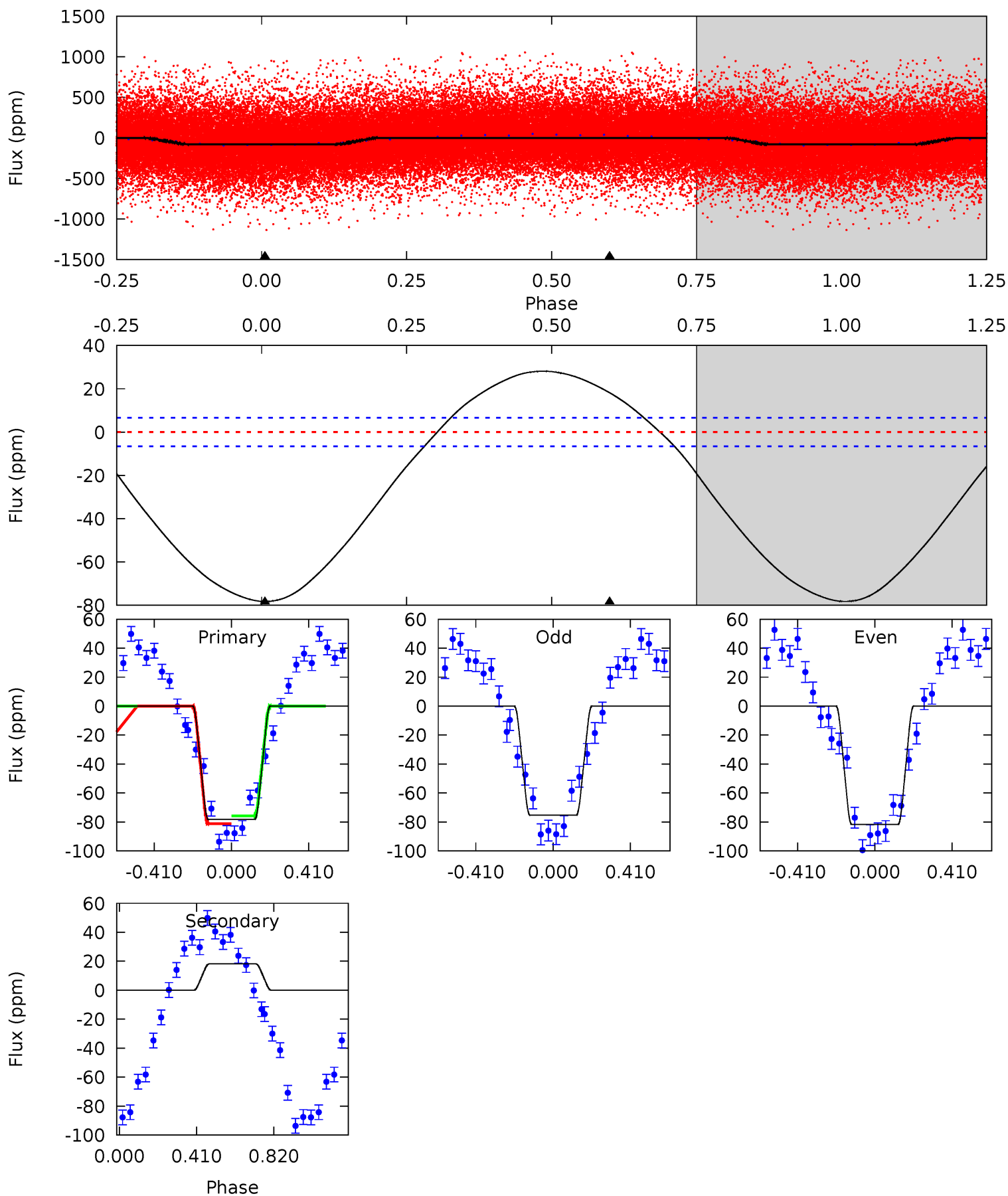
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.1	-1.24	0	0	4.29	0.92	1.85	22.1	22.1	-1.24	-1.24	0.79	1.39	0.17	3.67



Alt Model-Shift Uniqueness Test

008650209-01, P = 0.915117 Days, E = 130.869628 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.7	-11.8	0	0	4.26	0.82	5.46	50.7	50.7	-11.8	-11.8	2.06	0.94	0.26	1.68



Stellar Parameters For KIC 008650209

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7194^{+228}_{-342}	$3.975^{+0.273}_{-0.147}$	$-0.200^{+0.250}_{-0.350}$	$2.123^{+0.575}_{-0.703}$	$1.549^{+0.205}_{-0.334}$	$0.228^{+0.430}_{-0.099}$
	+3%/-5%	+7%/-4%	+125%/-175%	+27%/-33%	+13%/-22%	+189%/-43%
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 008650209-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 2	$1.32^{+1.03}_{-0.79}$	4343^{+407}_{-393}	-4381^{+468}_{-1283}	$-0.268^{+0.227}_{-1.381}$
Alt.	18 ± 2	$2.10^{+1.15}_{-0.92}$	4333^{+360}_{-381}	-5135^{+605}_{-1306}	$-0.996^{+0.572}_{-2.188}$

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 $A_{obs} \gg 1.0$

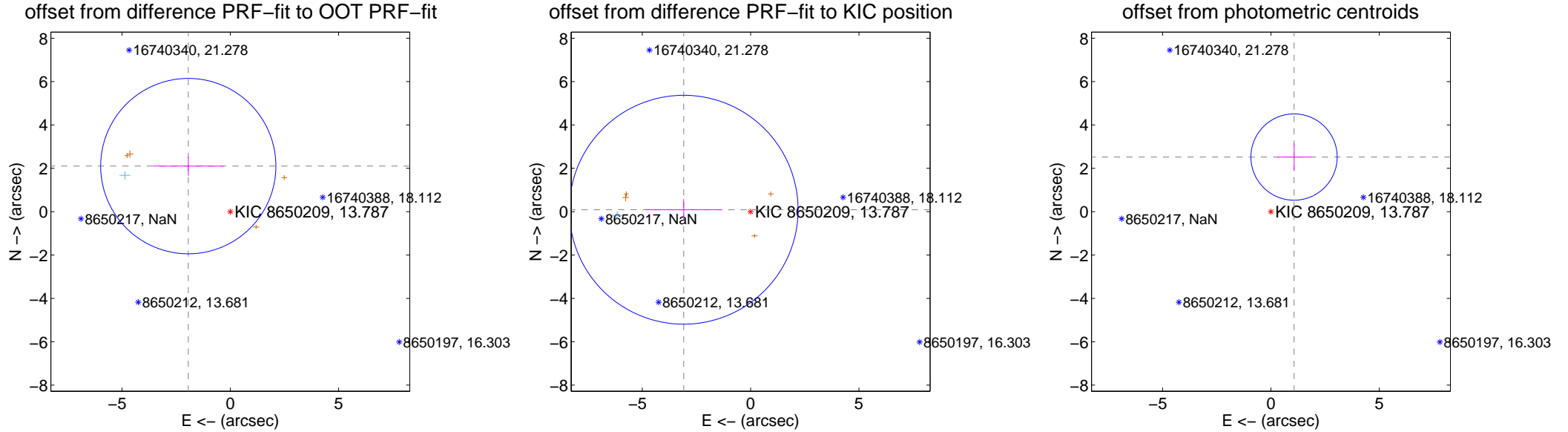
DV Centroid Data

Supplemental centroid analysis for 008650209-01. Kepler magnitude: 13.79. Transit SNR 10.56

There are 1 quarters with good PRF difference image offsets

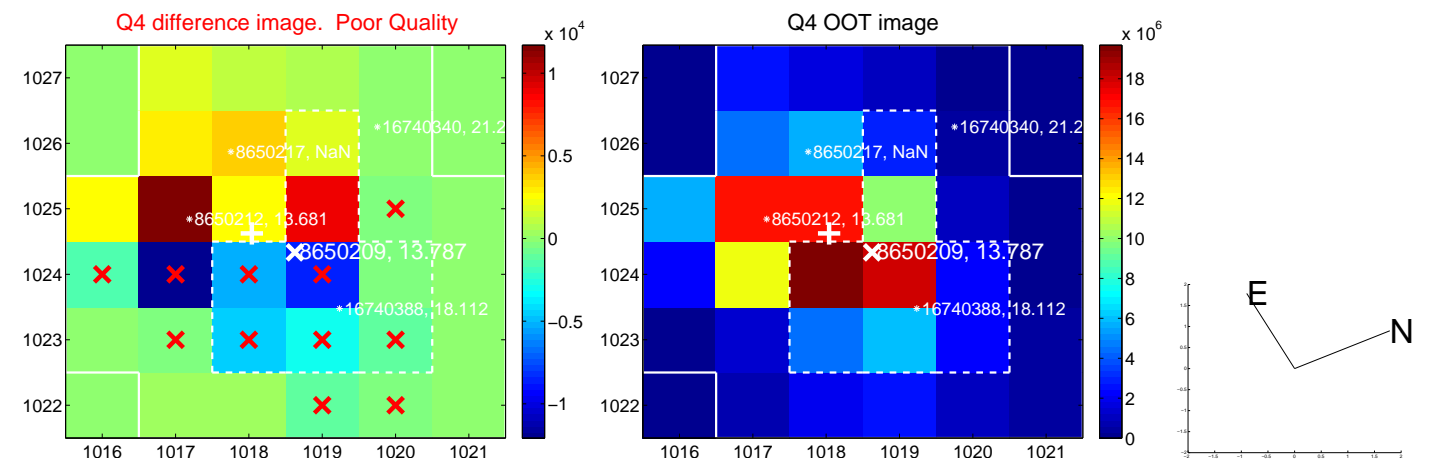
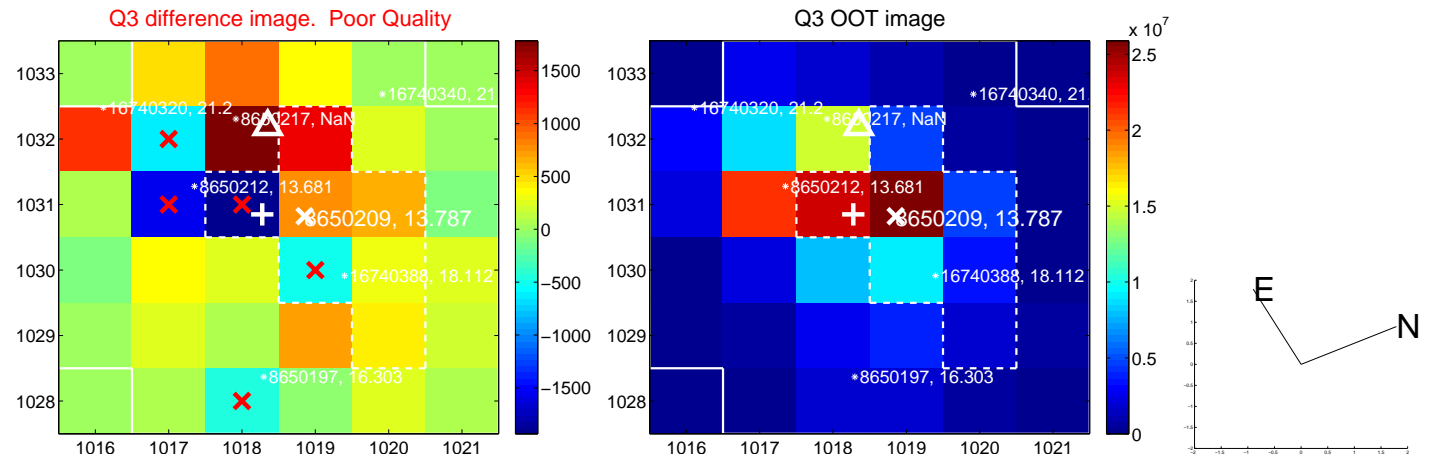
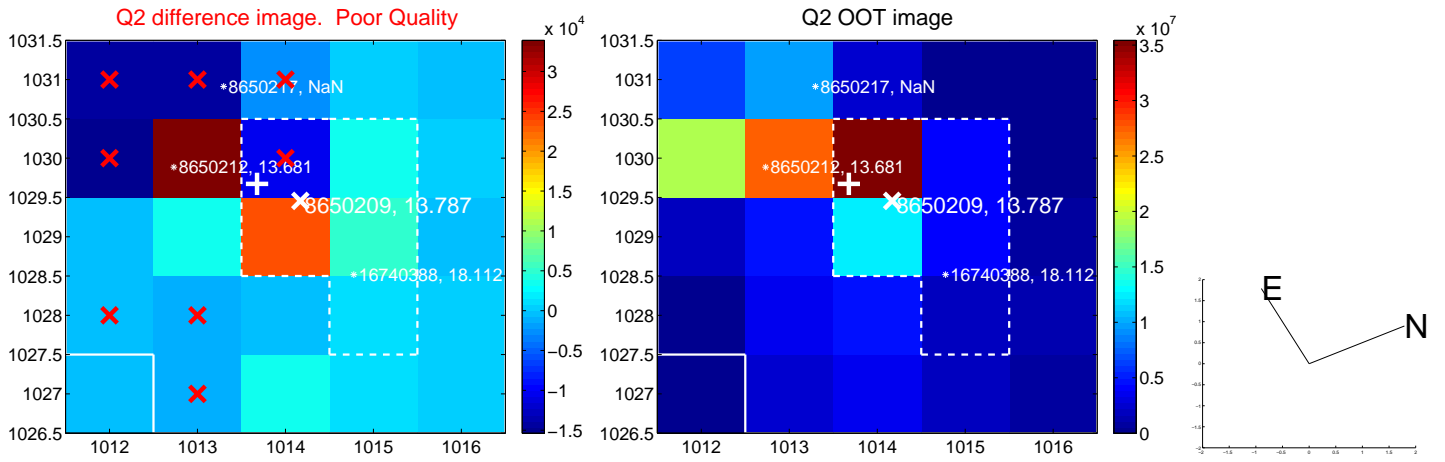
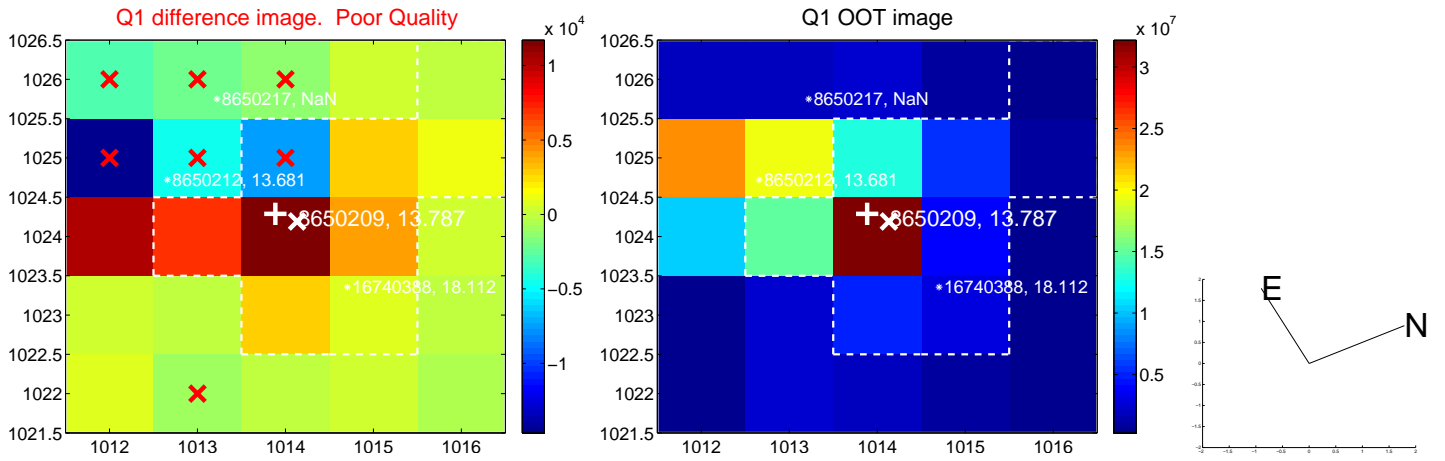
The OOT PRF centroid is offset from the target star catalog position by about 2.25 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.859 ± 1.348	2.12	1.939 ± 1.631	2.101 ± 0.444
PRF-fit source offset from KIC position	3.089 ± 1.759	1.76	3.088 ± 1.760	0.089 ± 0.495
photometric centroid source offset	2.74 ± 0.66	4.12	-1.07 ± 0.81	2.52 ± 0.63



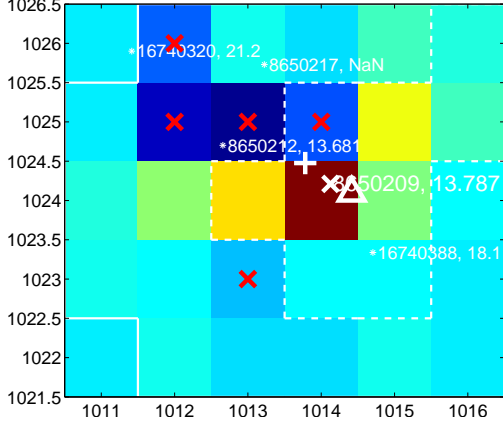
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

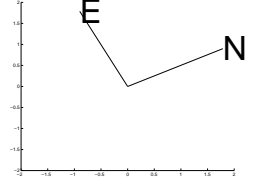
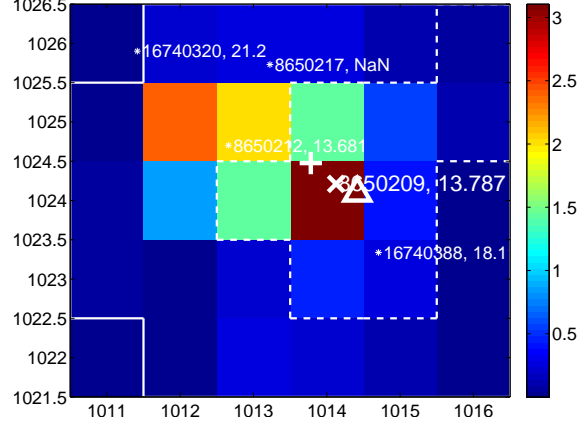


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

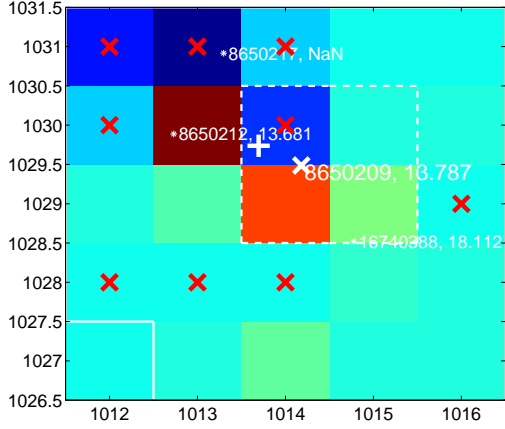
Q5 difference image. Poor Quality



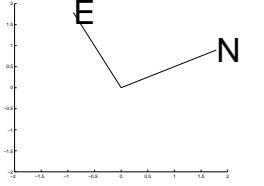
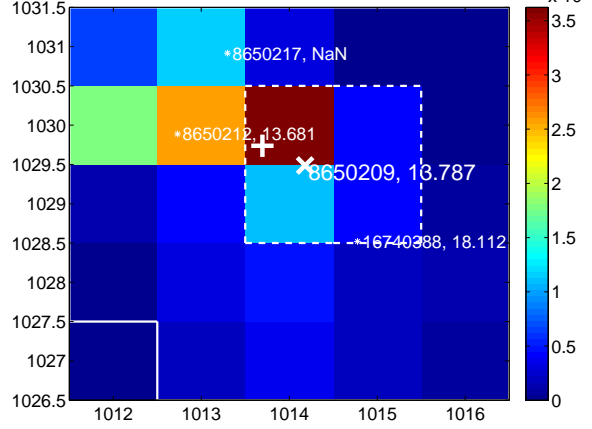
Q5 OOT image



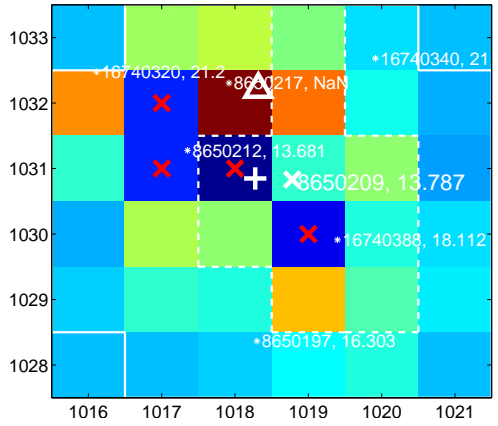
Q6 difference image. Poor Quality



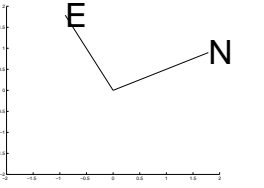
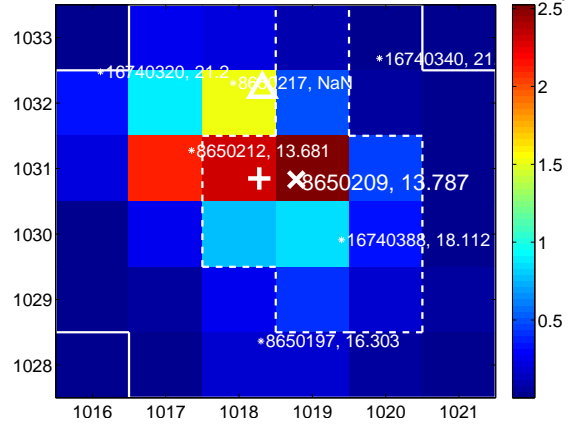
Q6 OOT image



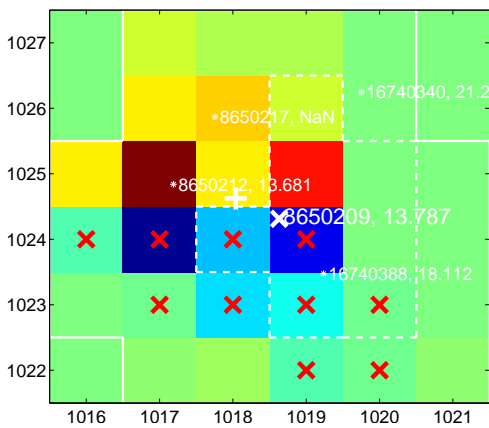
Q7 difference image. Poor Quality



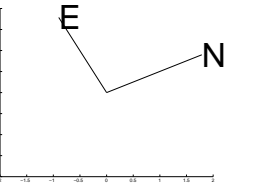
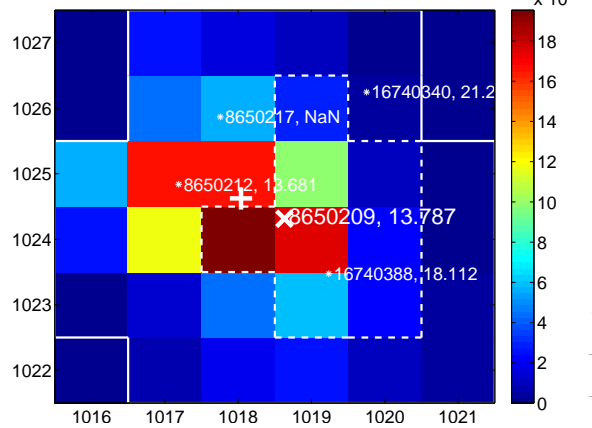
Q7 OOT image



Q8 difference image. Poor Quality

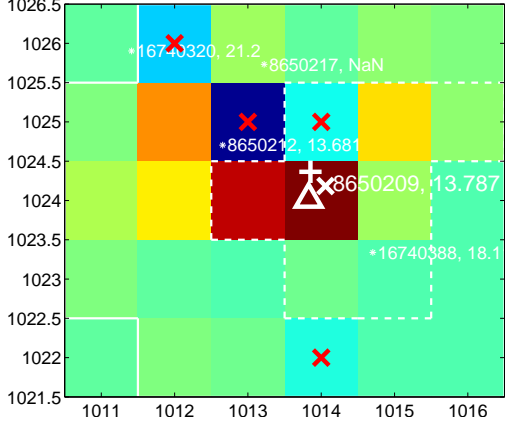


Q8 OOT image

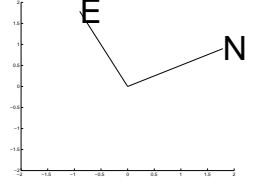
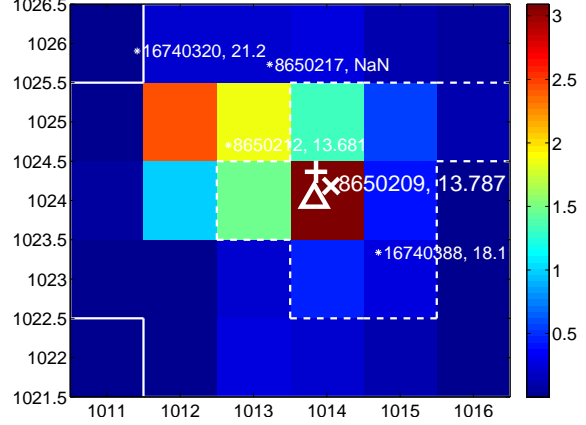


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

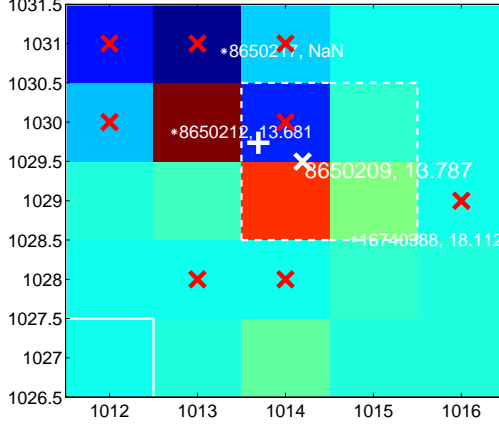
Q9 difference image. Poor Quality



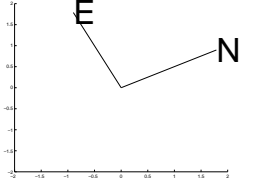
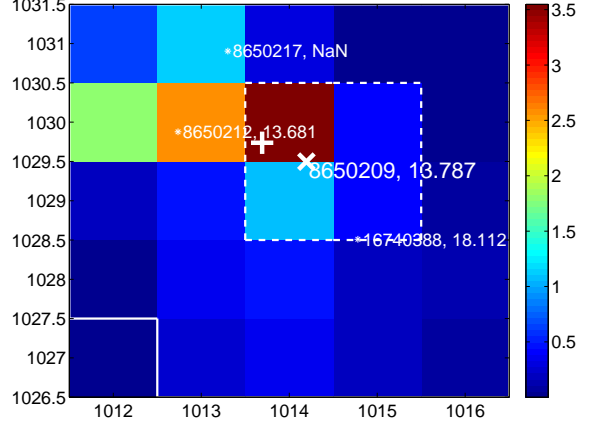
Q9 OOT image



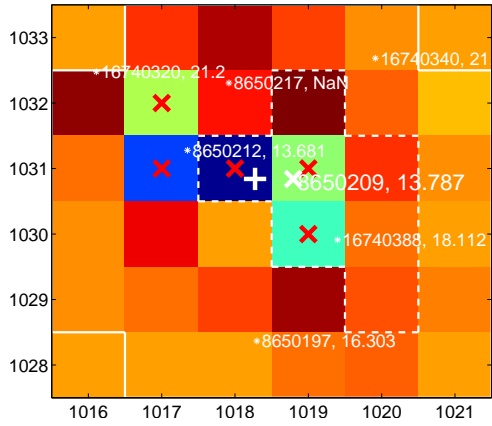
Q10 difference image. Poor Quality



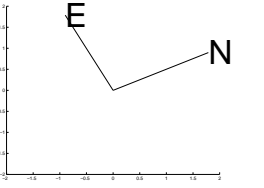
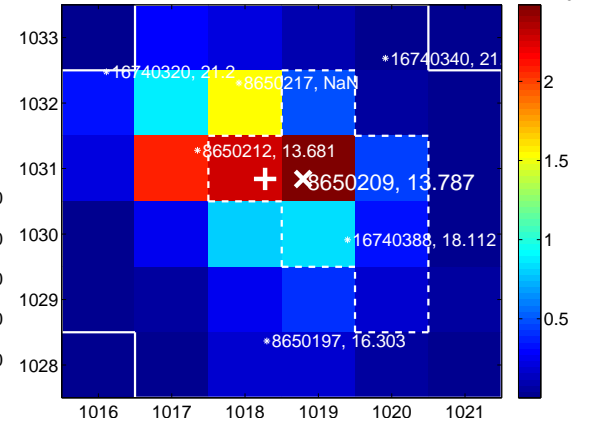
Q10 OOT image



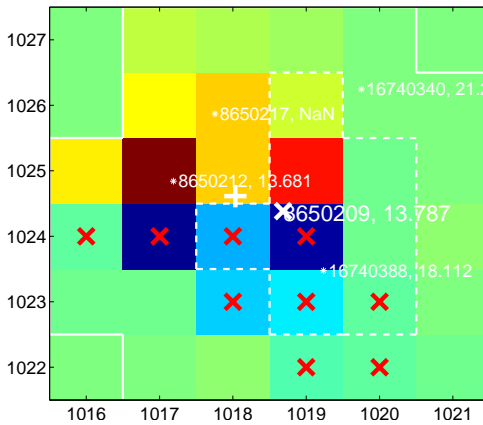
Q11 difference image. Poor Quality



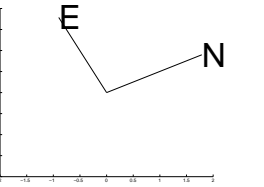
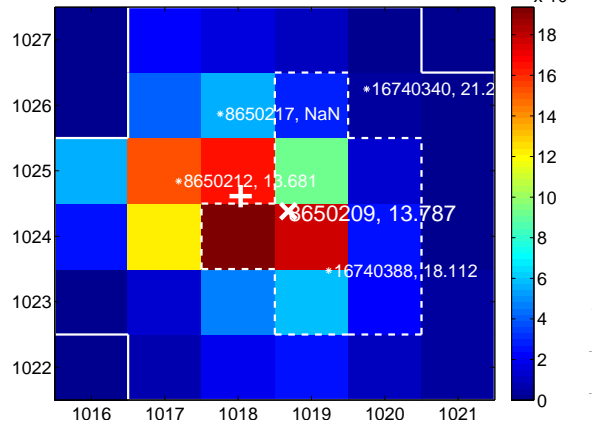
Q11 OOT image



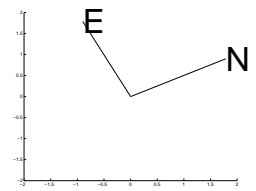
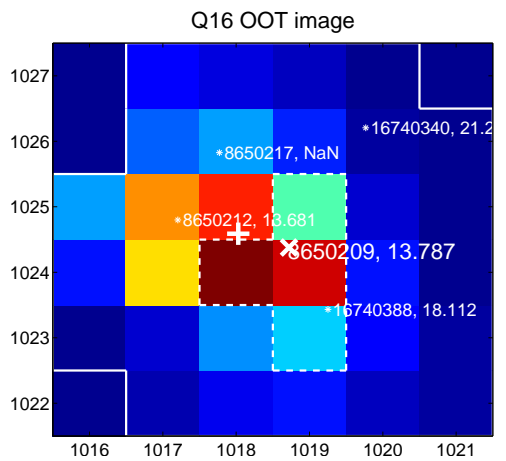
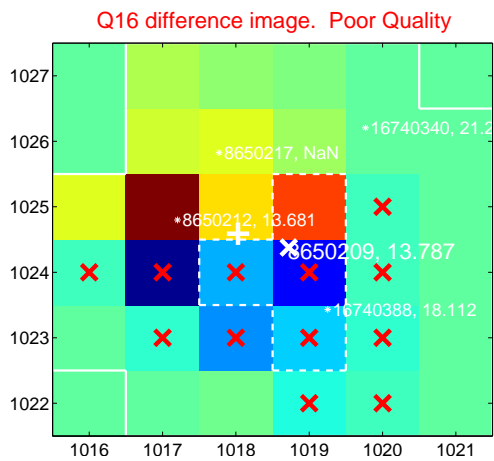
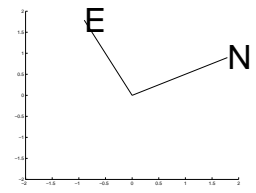
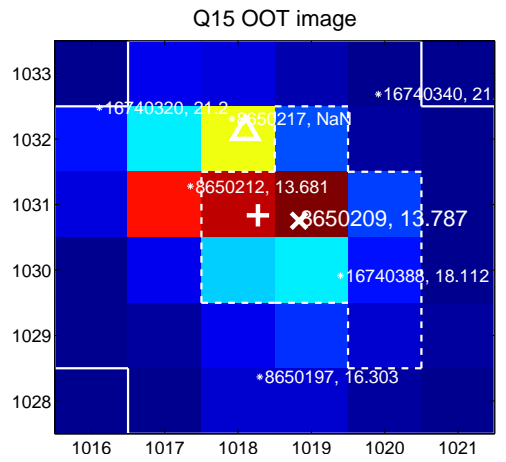
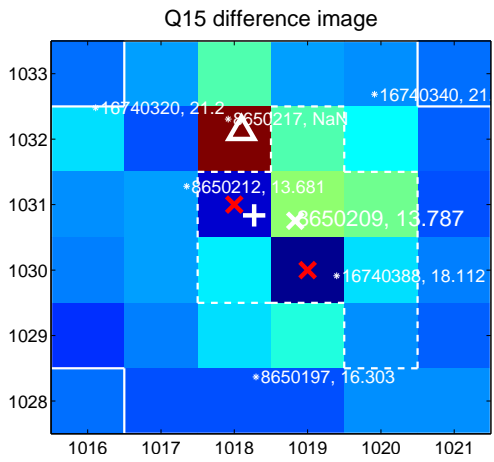
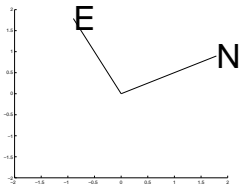
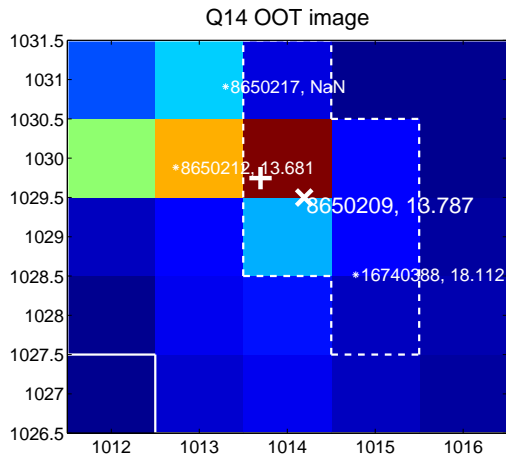
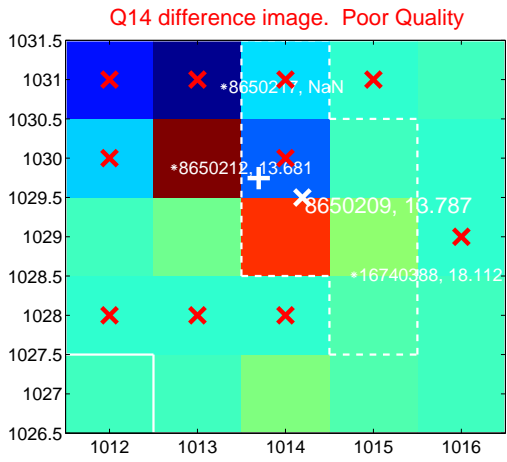
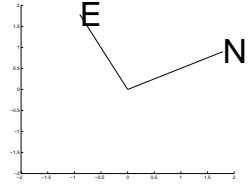
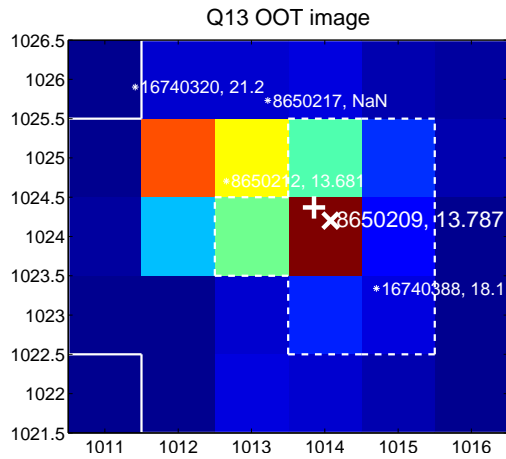
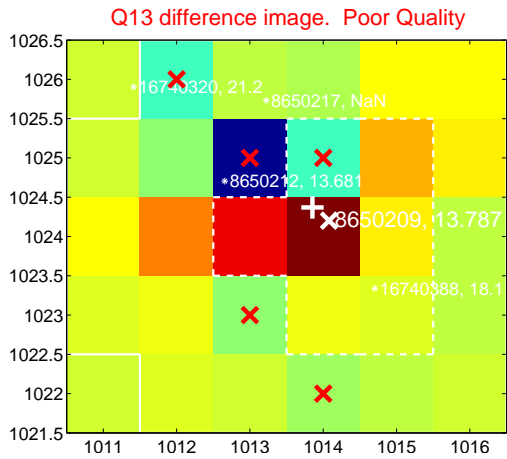
Q12 difference image. Poor Quality



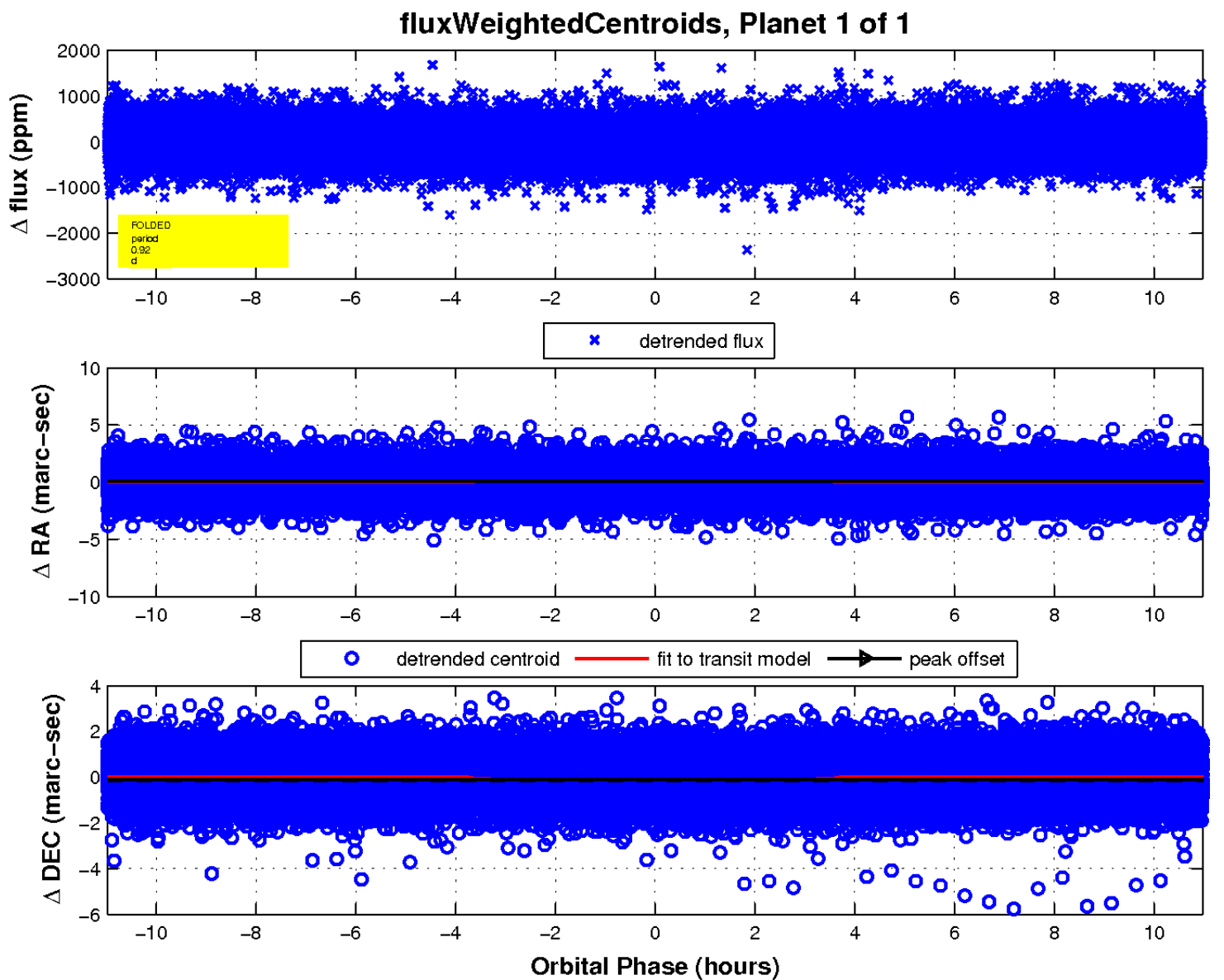
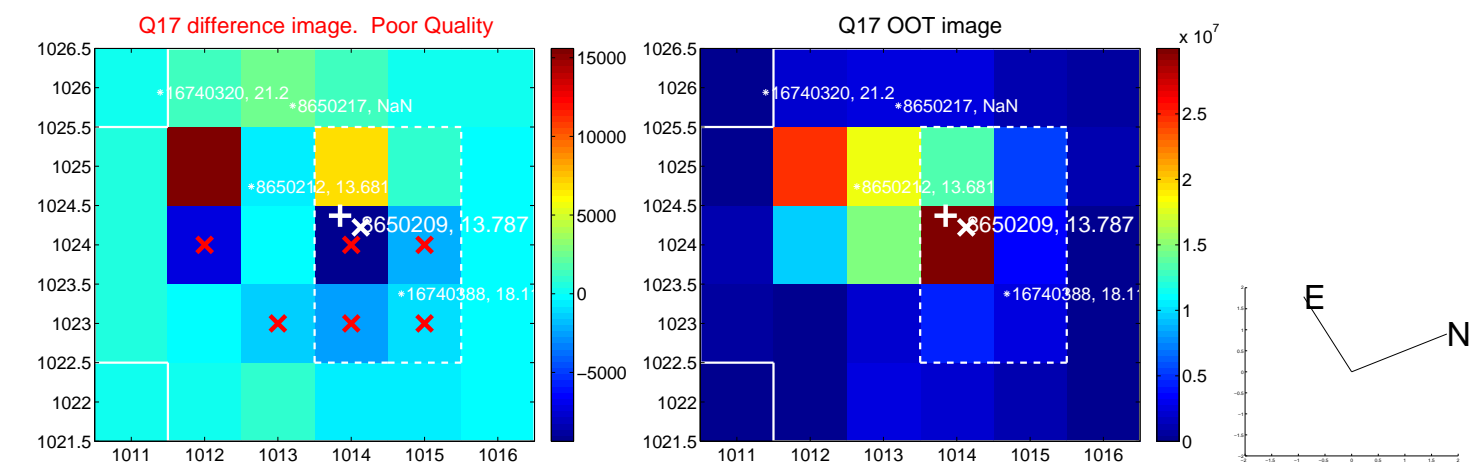
Q12 OOT image



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

