

KIC 003655513

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})
003655513-01	OBS	No	0.725744	131.852048	243.3	1.883	8.0	8.3	2.14	7061	3.89	27959.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003655513-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

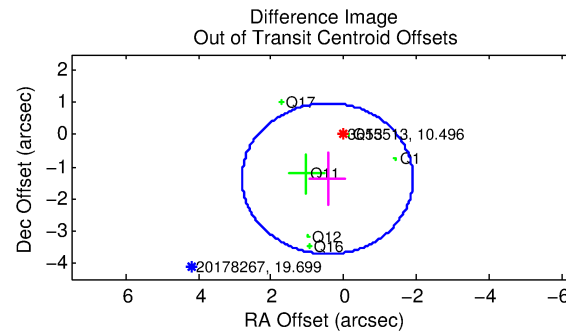
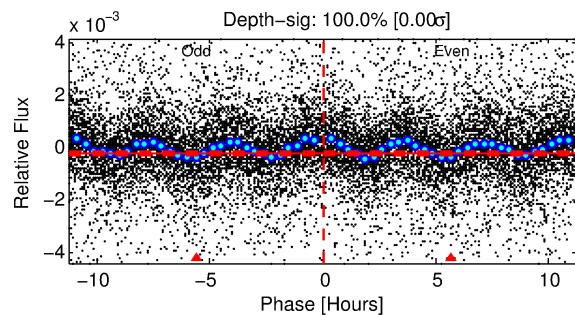
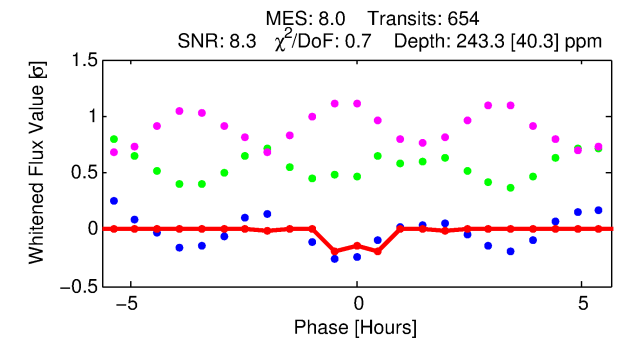
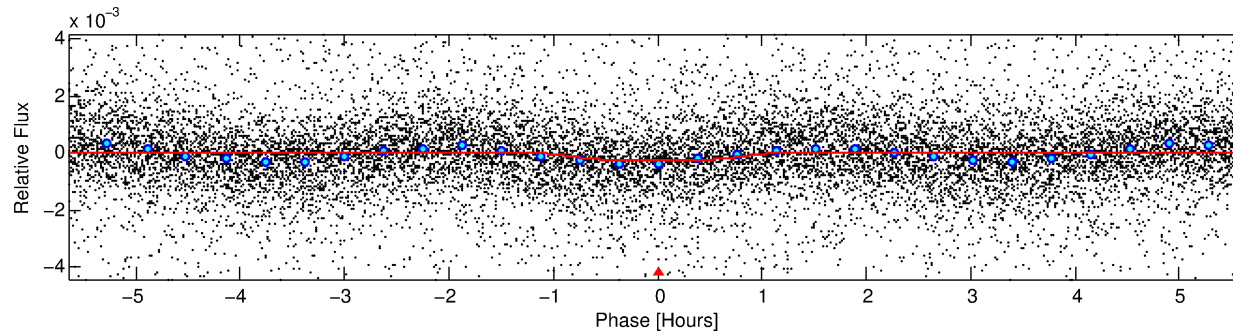
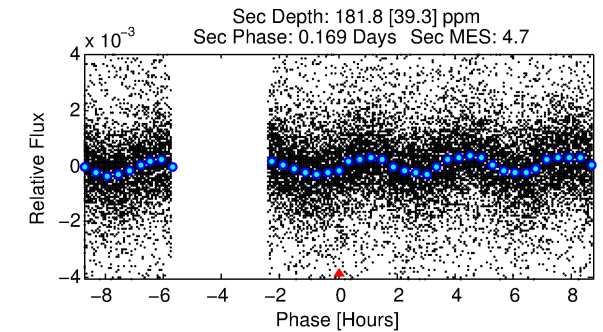
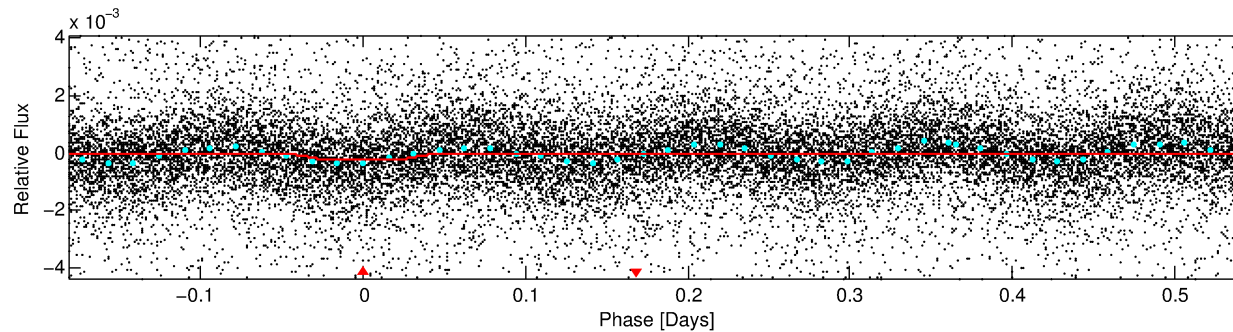
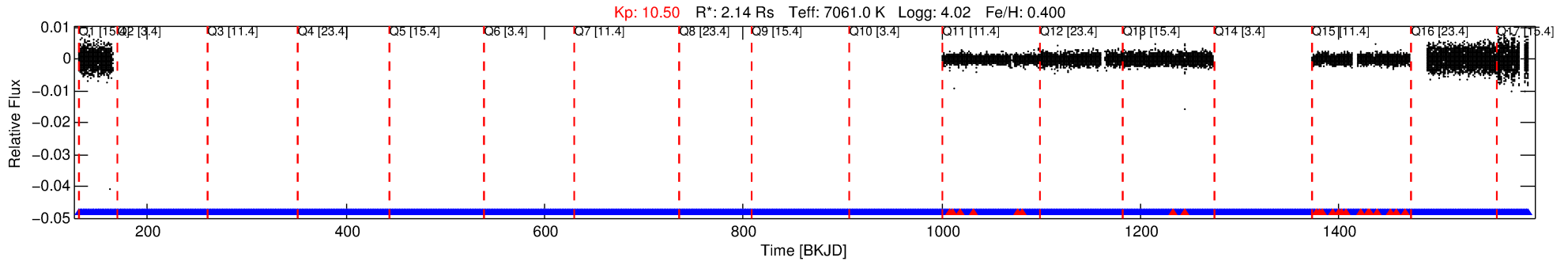
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003655513-01

No Significant Match Found

DV One-Page Summary

KIC: 3655513 Candidate: 1 of 1 Period: 0.726 d



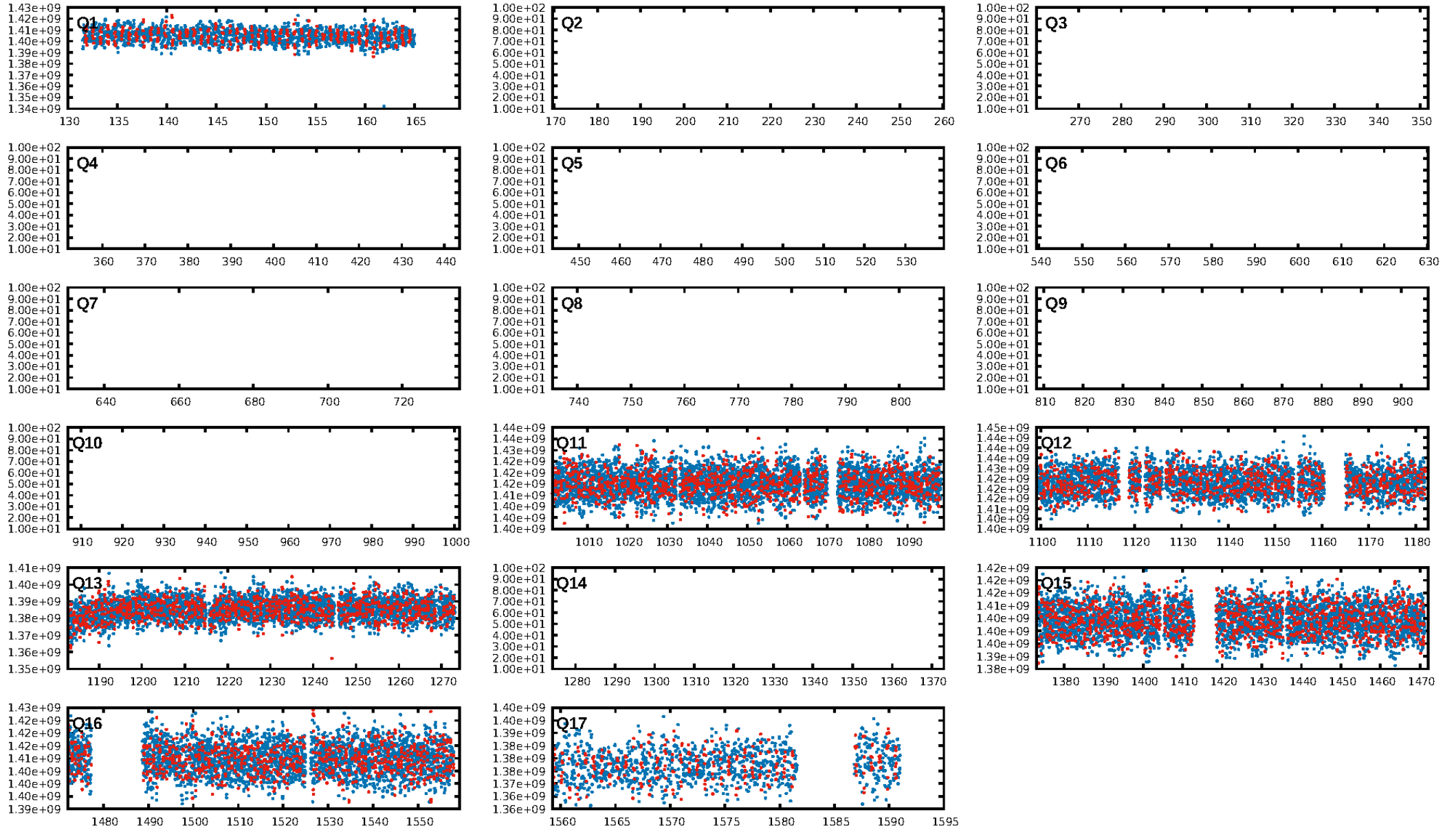
DV Fit Results:

Period = 0.72574 [0.00001] d
Epoch = 131.8520 [0.0017] BKJD
Rp/R* = 0.0166 [0.0046]
a/R* = 1.68 [1.66]
b = 0.90 [0.33]
Seff = 27959.40 [11188.57]
Teq = 3297 [330] K
Rp = 3.89 [1.57] Re
a = 0.0191 [0.0047] AU
Ag = 2.41 [1.67] [0.85σ]
Teffp = 6355 [991] K [2.93σ]

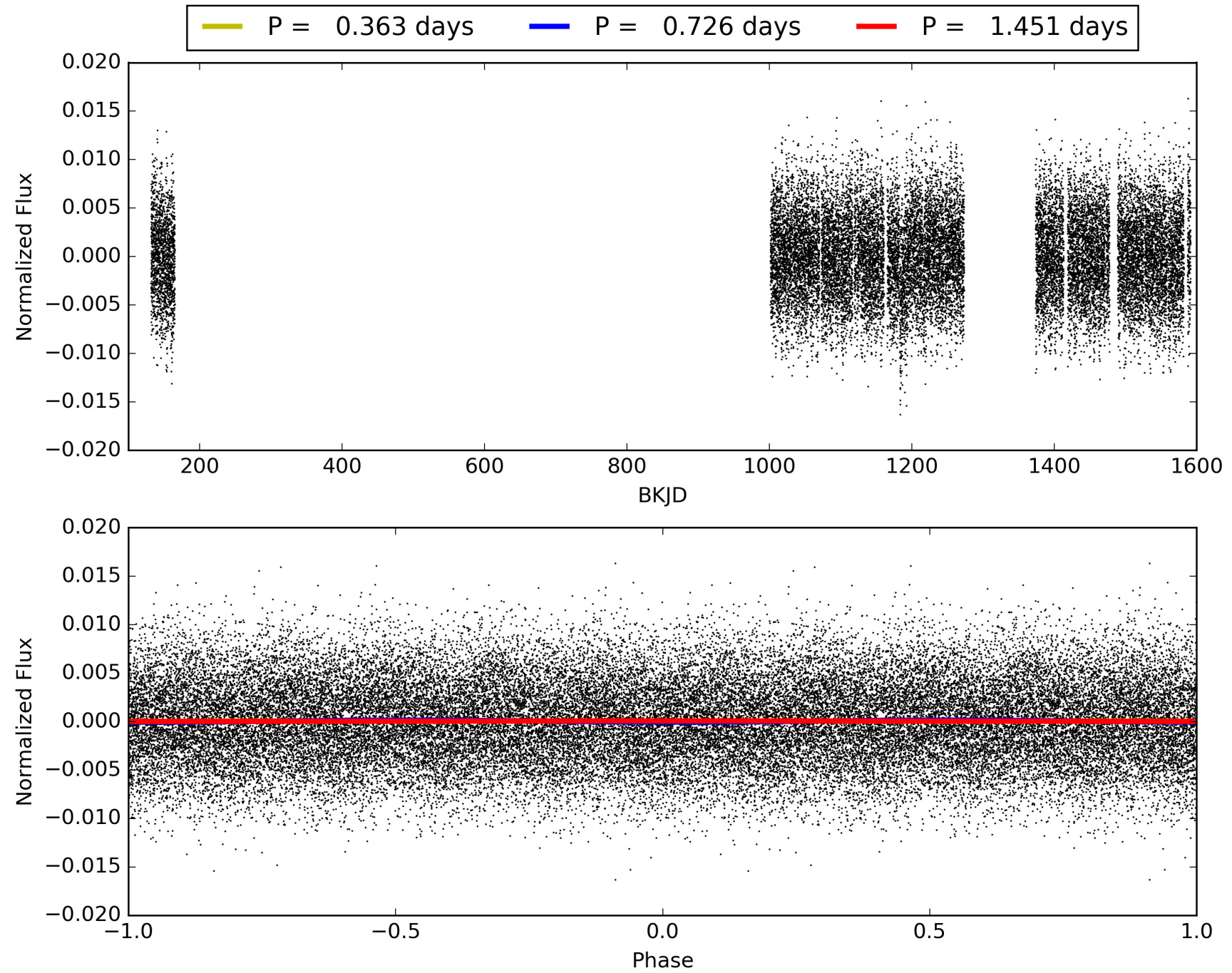
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.93e-15
RollingBand-fgt: 0.96 [546/571]
GhostDiagnostic-chr: N/A
Centroid-sig: 32.2%
Centroid-so: 0.151 arcsec [1.22σ]
OotOffset-rm: 1.444 arcsec [1.84σ]
KicOffset-rm: 1.223 arcsec [1.88σ]
OotOffset-st: 0/1/2/3 [6]
KicOffset-st: 0/1/2/3 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 1.00 [7/7]

TCE 00365513-01, PDC Light Curves

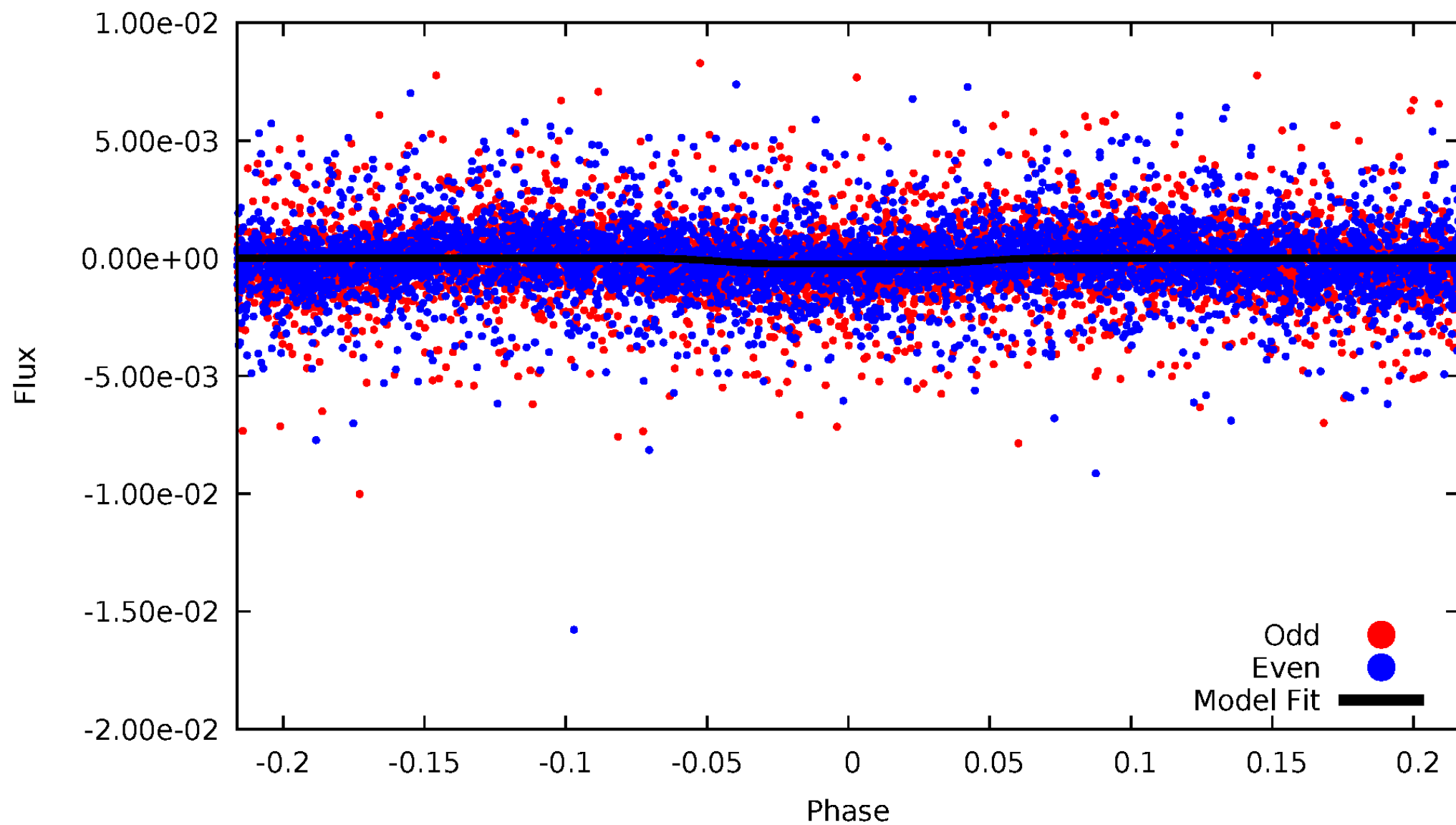


TCE 003655513-01



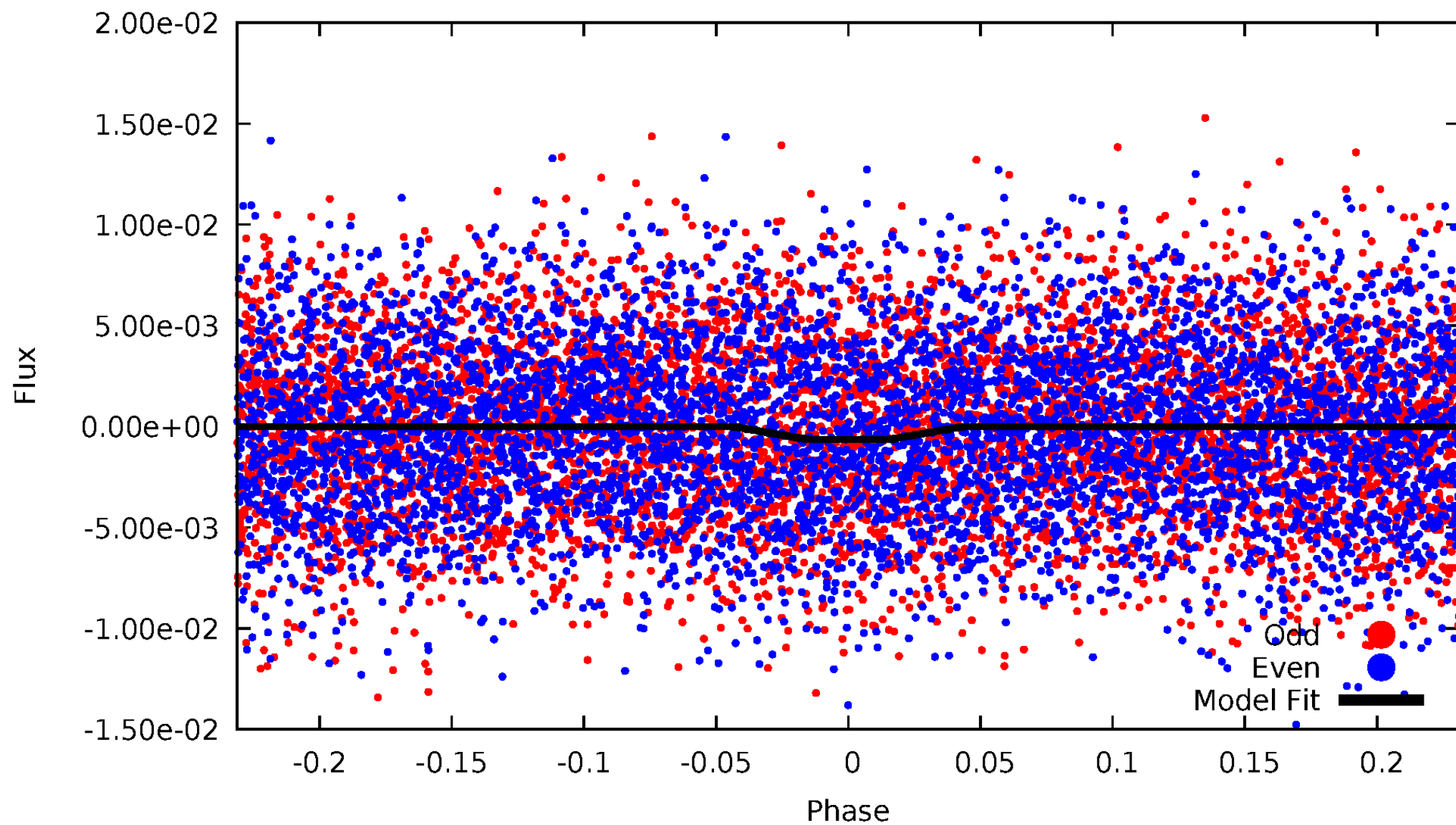
DV Odd/Even

TCE 00365513-01



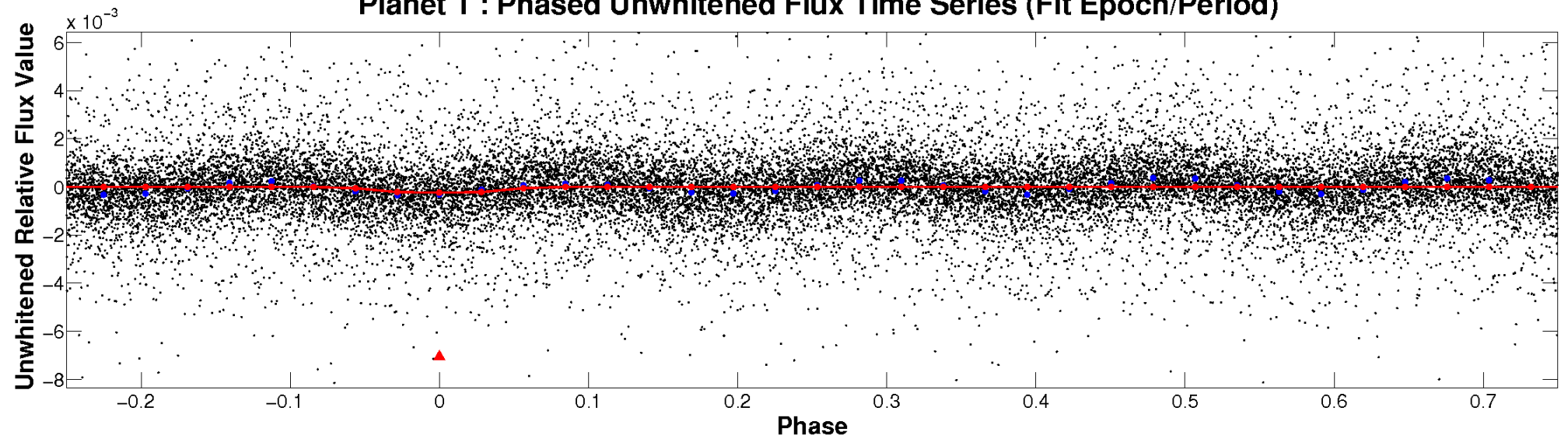
ALT Odd/Even

TCE 003655513-01

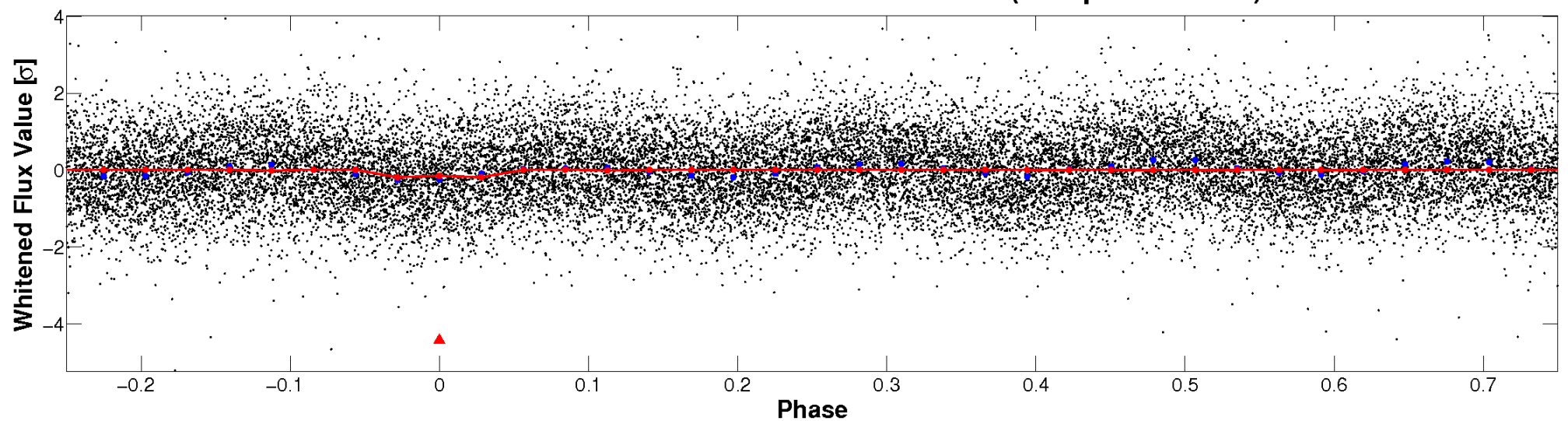


Non-Whitened Vs. Whitened Light Curve

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

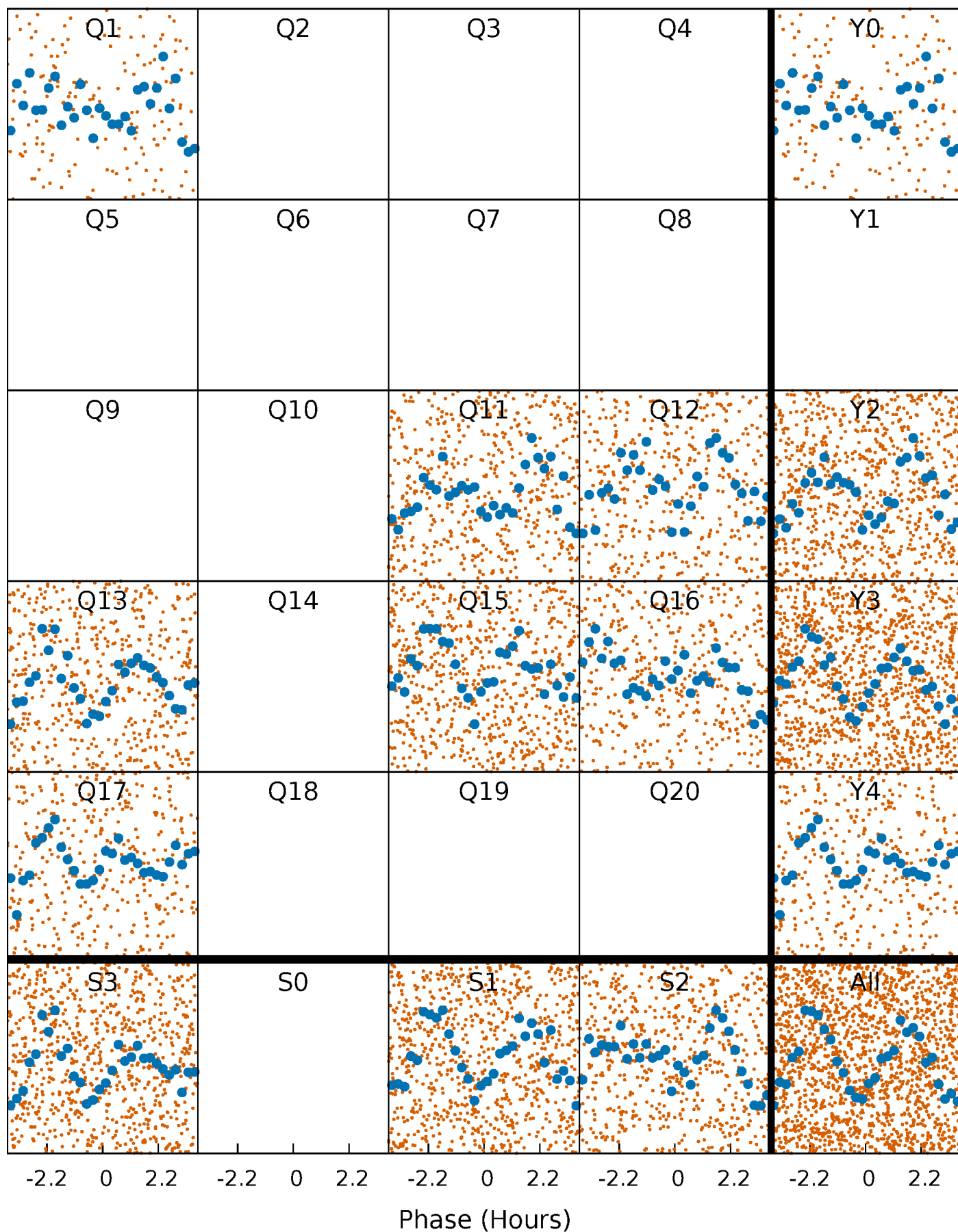


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



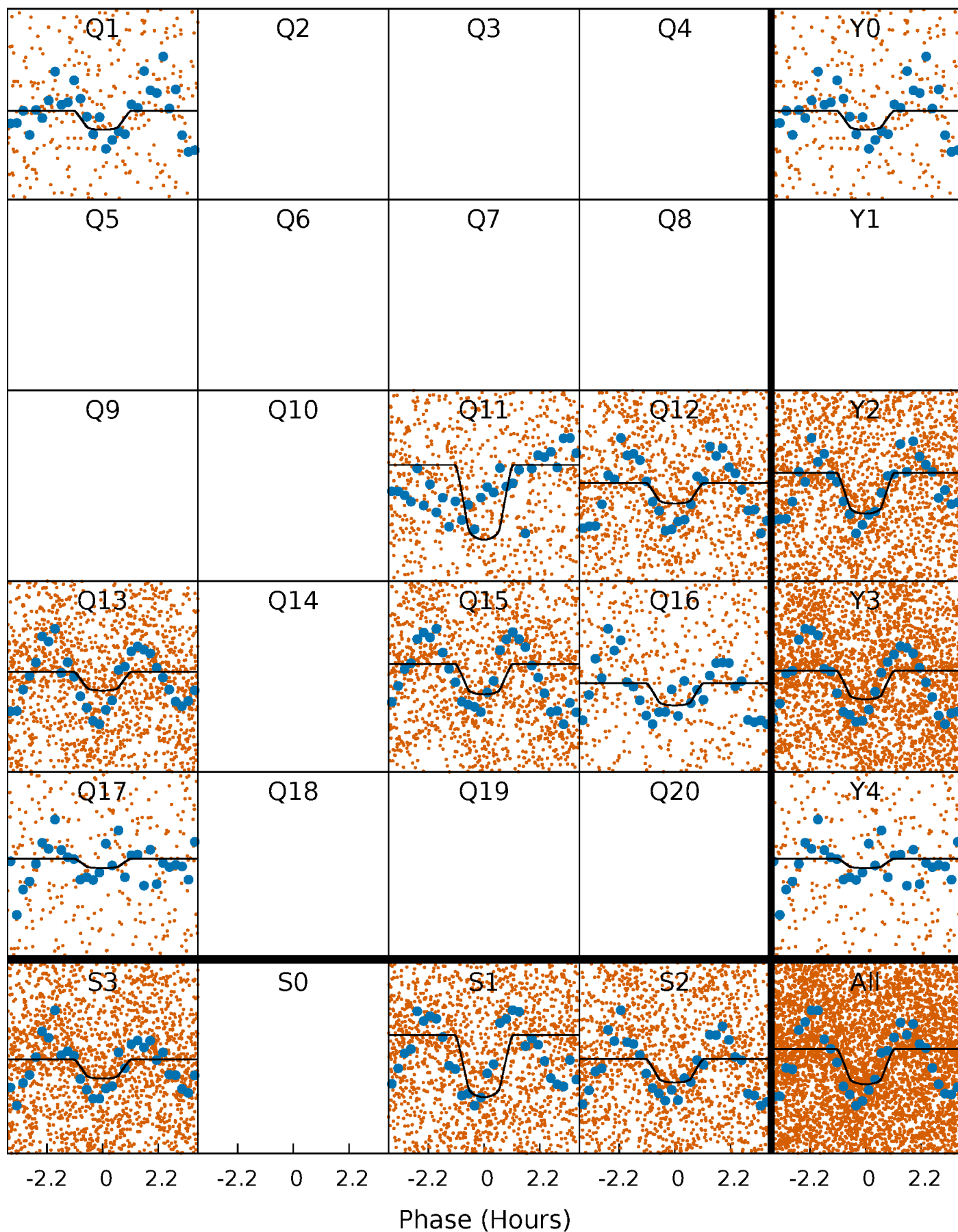
PDC Quarter-Phased Transit Curves

TCE 003655513-01 P= 0.725744 Days $T_0=131.852048$ (BKJD)



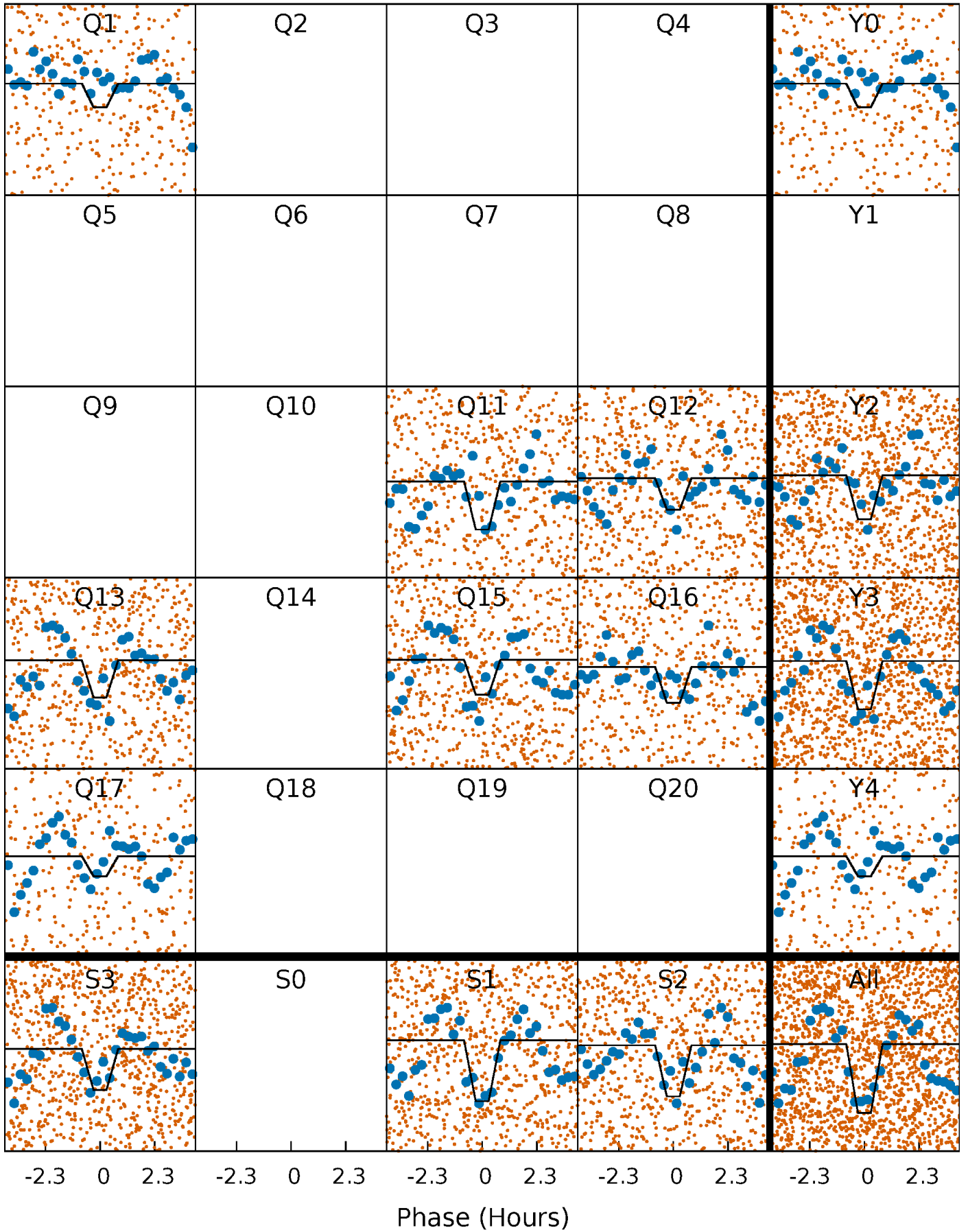
DV Quarter-Phased Transit Curves

TCE 003655513-01 P= 0.725744 Days $T_0=131.852048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

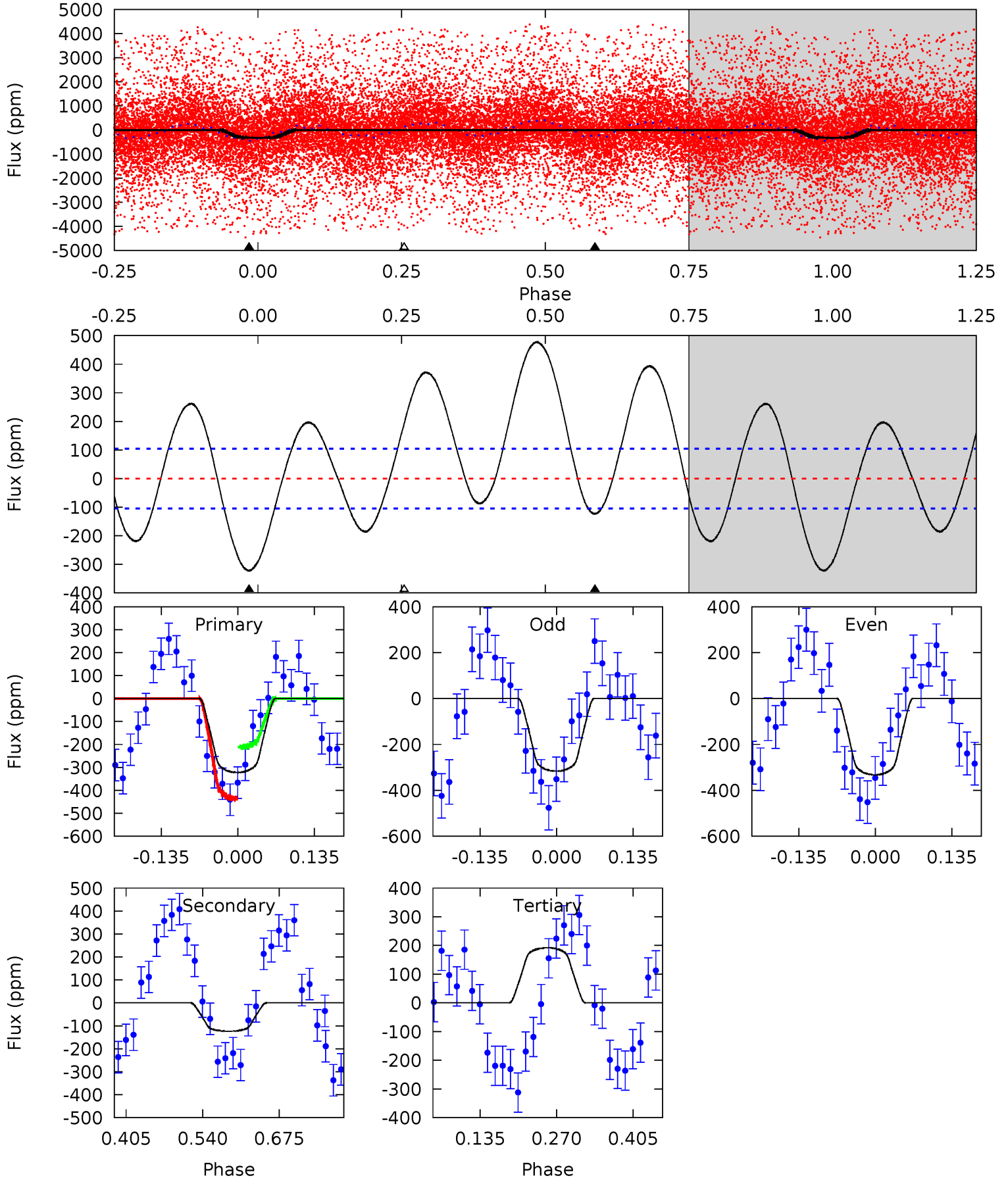
TCE 003655513-01 P= 0.725738 Days $T_0=131.852997$ (BKJD)



DV Model-Shift Uniqueness Test

003655513-01, P = 0.725744 Days, E = 131.126304 Days

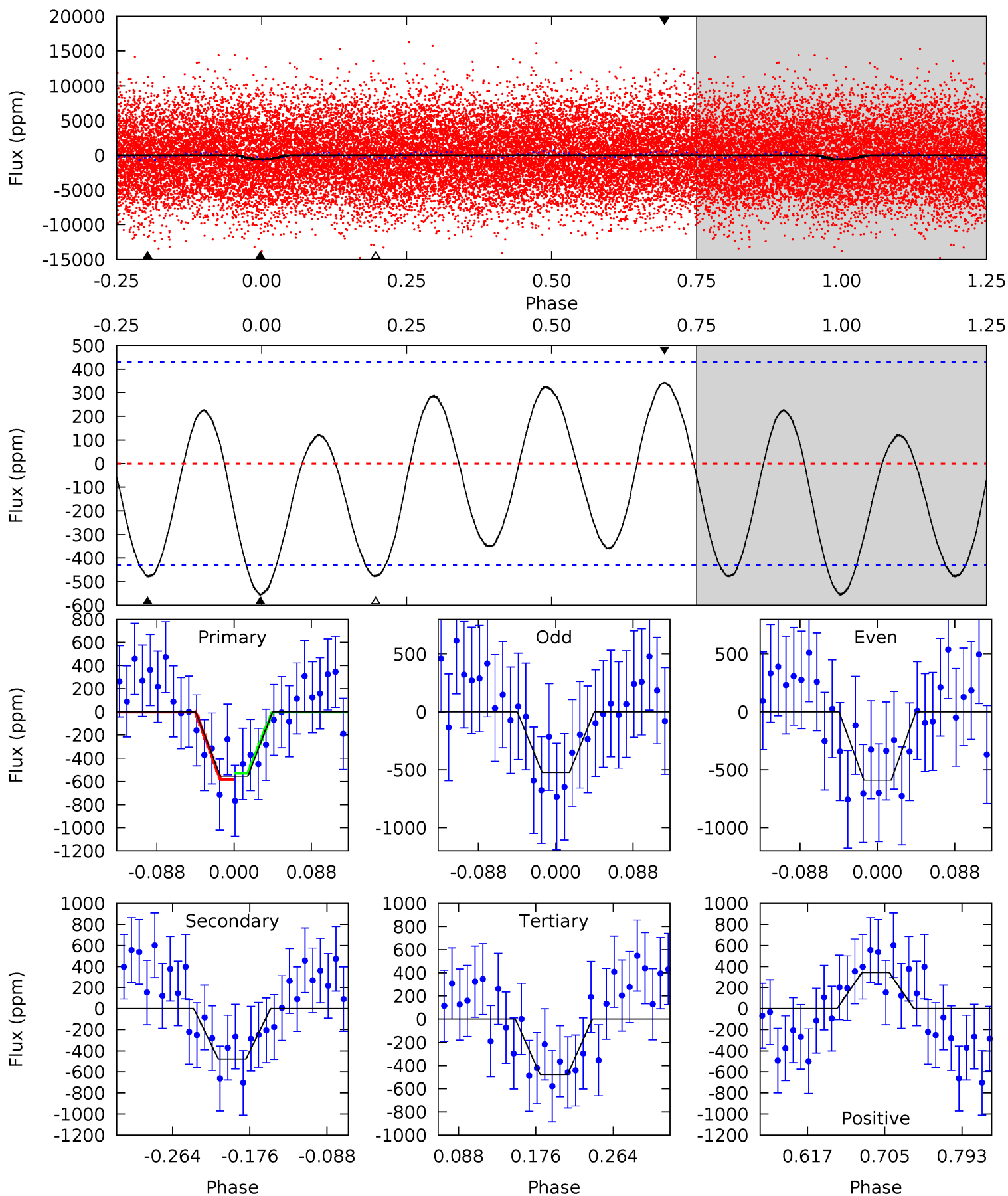
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	5.32	-8.27	0	4.50	1.49	7.42	22.1	13.9	13.6	5.32	0.35	1.00	0.60	4.87



Alt Model-Shift Uniqueness Test

003655513-01, P = 0.725738 Days, E = 131.127259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.93	5.11	5.10	3.66	4.59	1.71	2.64	0.83	2.28	0.01	1.45	0.36	1.17	0.38	0.29



Stellar Parameters For KIC 003655513

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7061^{+191}_{-328}	$4.024^{+0.158}_{-0.193}$	$0.400^{+0.050}_{-0.350}$	$2.142^{+0.625}_{-0.512}$	$1.766^{+0.201}_{-0.301}$	$0.253^{+0.243}_{-0.124}$
	+3%/-5%	+4%/-5%	+12%/-87%	+29%/-24%	+11%/-17%	+96%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003655513-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-124 ± 23	$3.93^{+1.26}_{-1.19}$	4595^{+362}_{-314}	5397^{+1107}_{-820}	$1.592^{+1.688}_{-0.735}$
Alt.	-479 ± 94	$5.95^{+1.46}_{-1.30}$	4629^{+342}_{-328}	6220^{+929}_{-713}	$2.637^{+1.636}_{-1.021}$

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

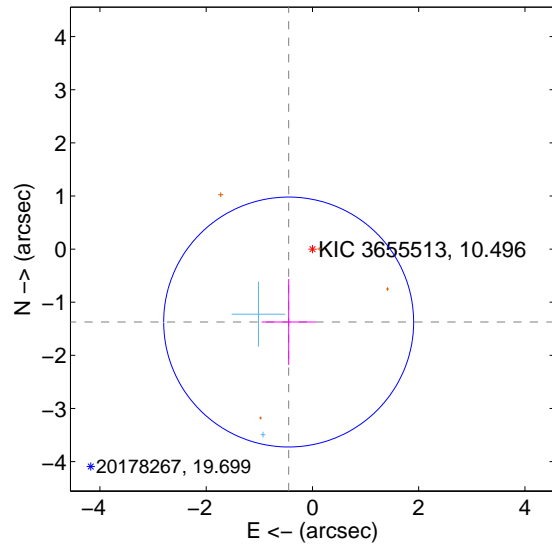
Supplemental centroid analysis for 003655513-01. **Kepler magnitude: 10.50.** Transit SNR 8.28

There are 2 quarters with good PRF difference image offsets

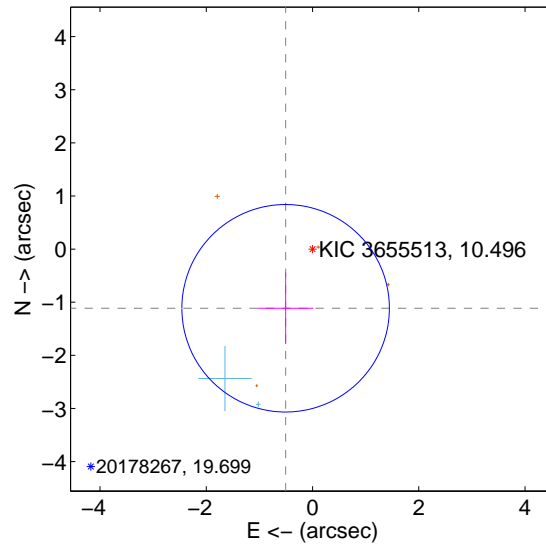
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.444 ± 0.784	1.84	0.448 ± 0.508	-1.373 ± 0.808
PRF-fit source offset from KIC position	1.223 ± 0.651	1.88	0.506 ± 0.523	-1.114 ± 0.674
photometric centroid source offset	0.15 ± 0.12	1.22	0.03 ± 0.07	-0.15 ± 0.13

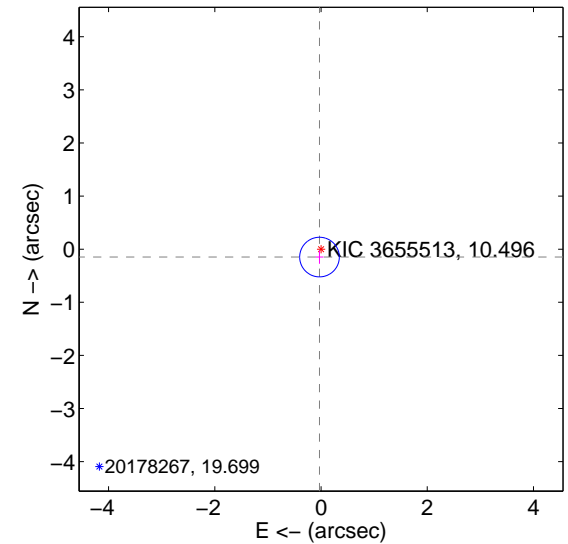
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

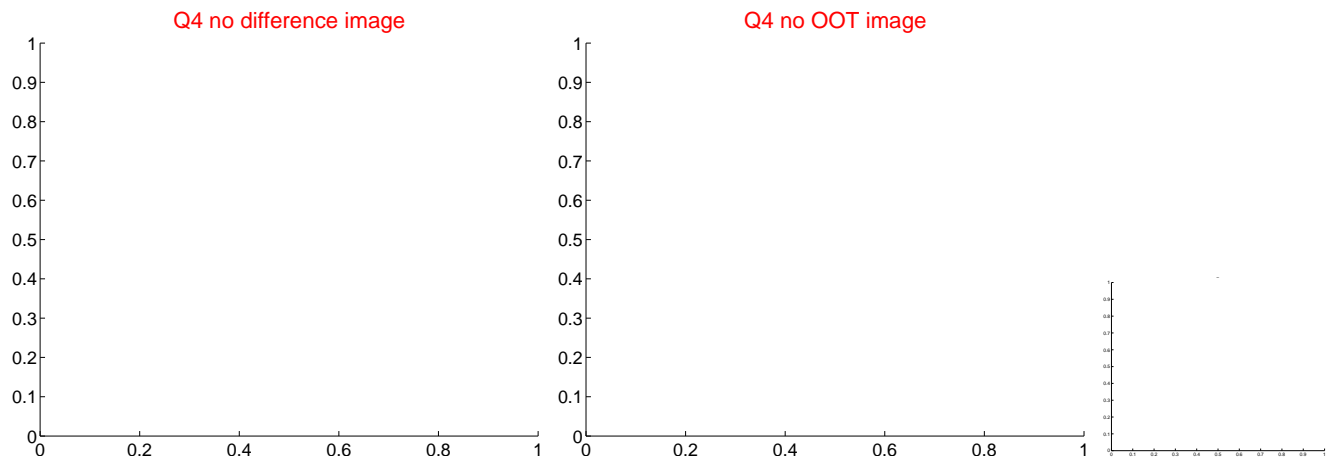
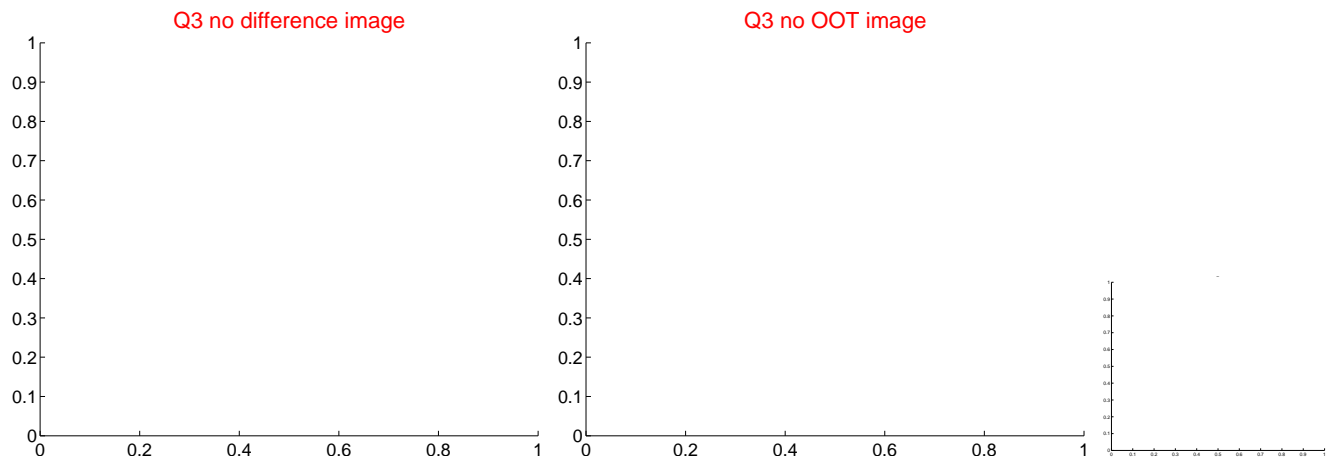
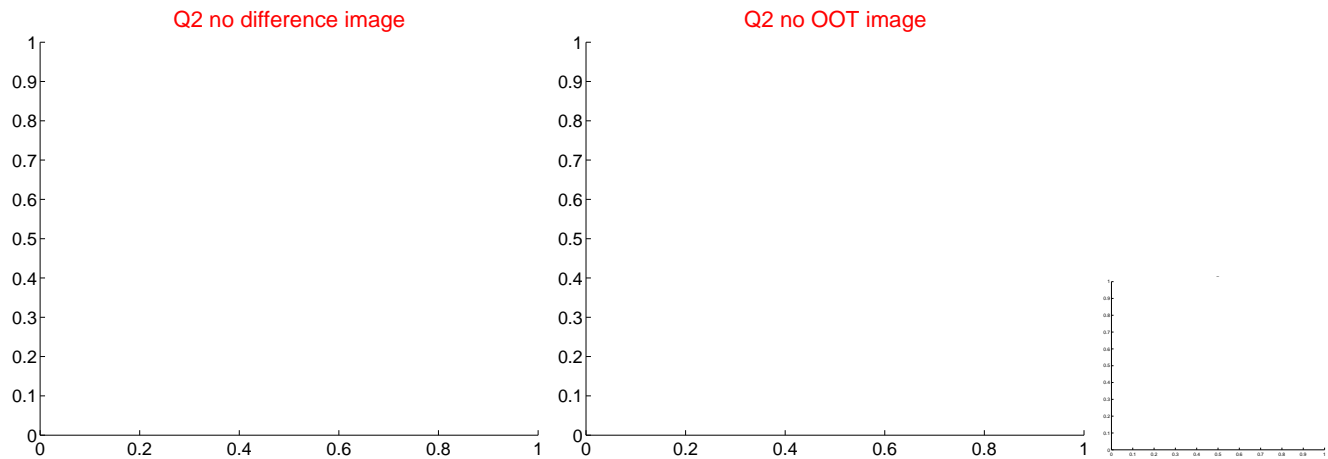
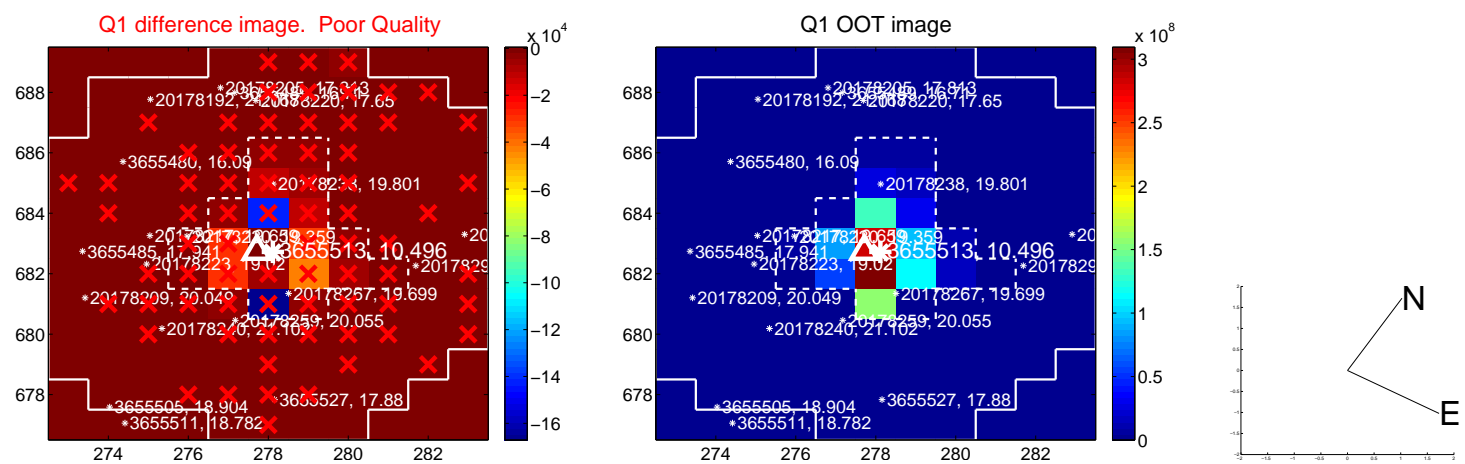


offset from photometric centroids



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.



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

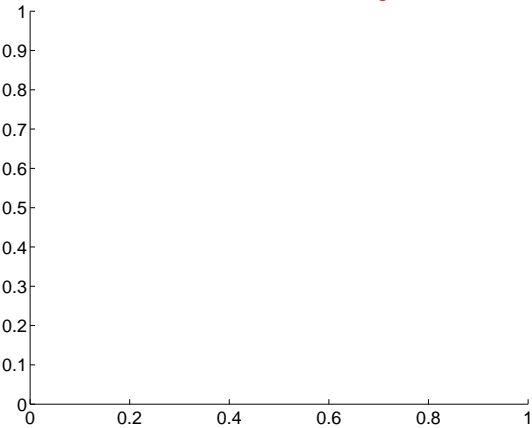
Q9 no difference image



Q9 no OOT image



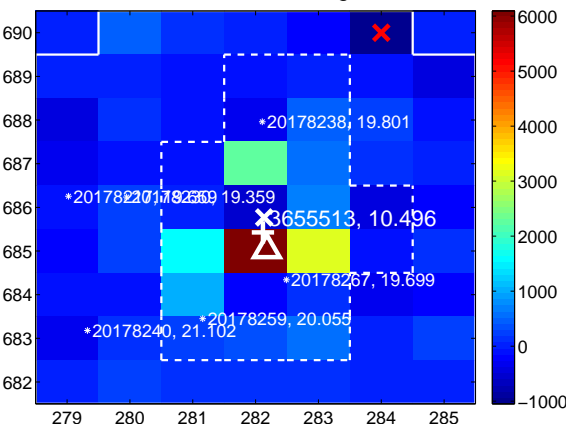
Q10 no difference image



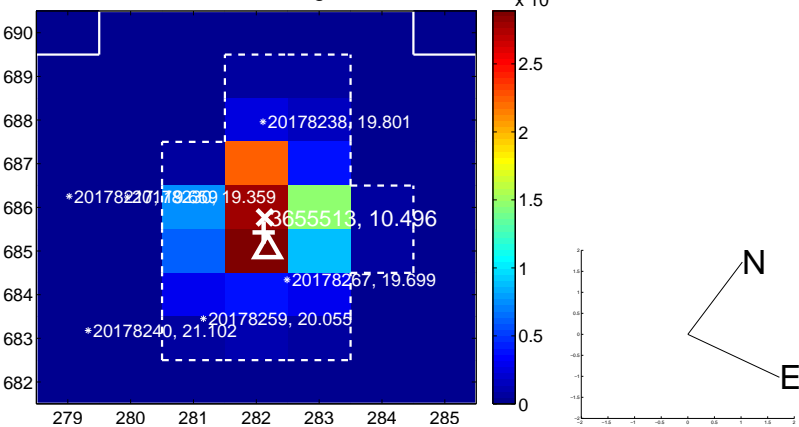
Q10 no OOT image



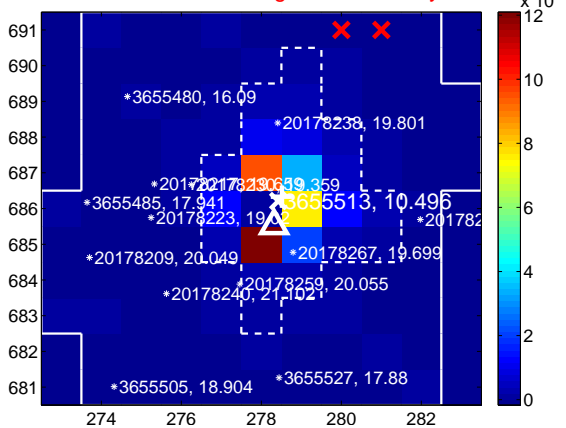
Q11 difference image



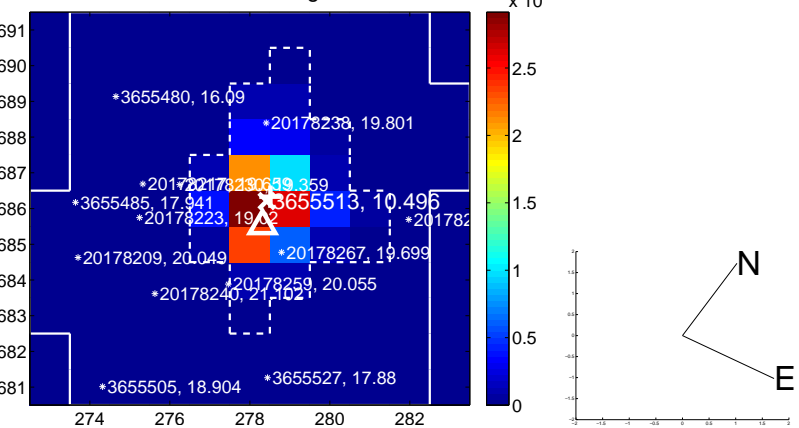
Q11 OOT image



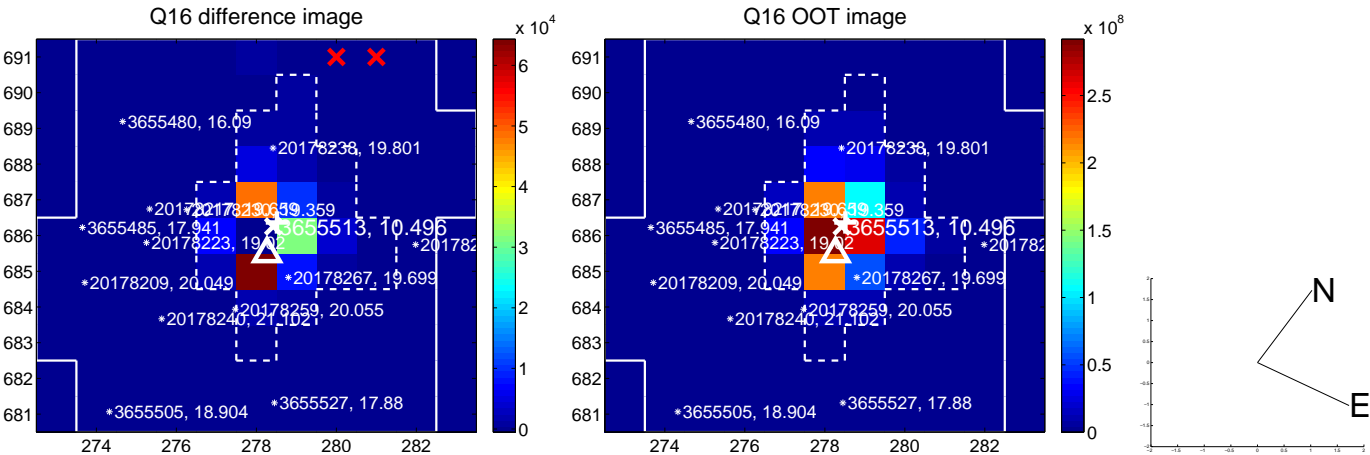
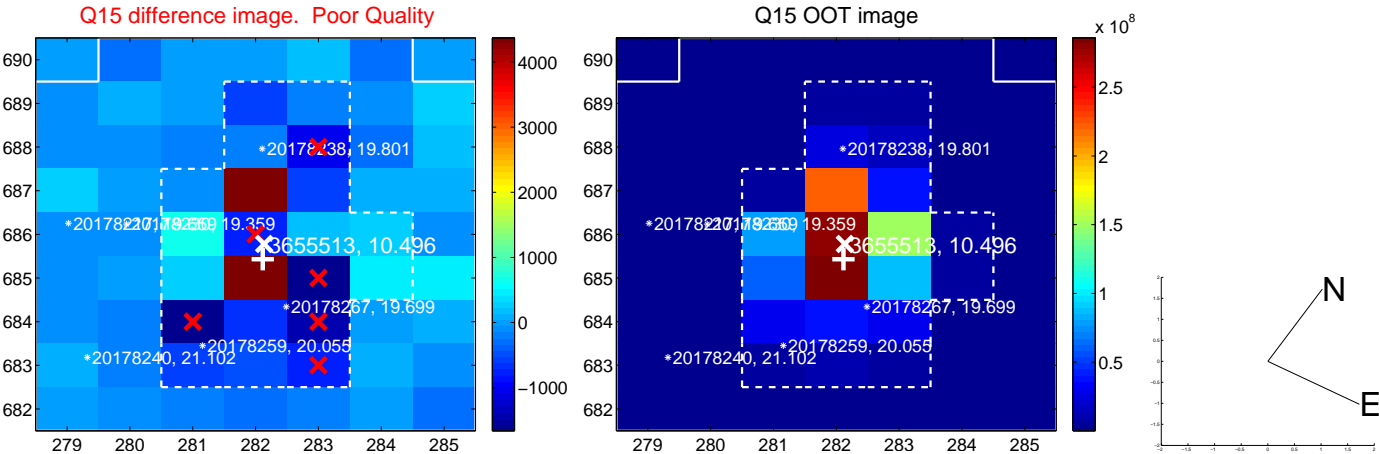
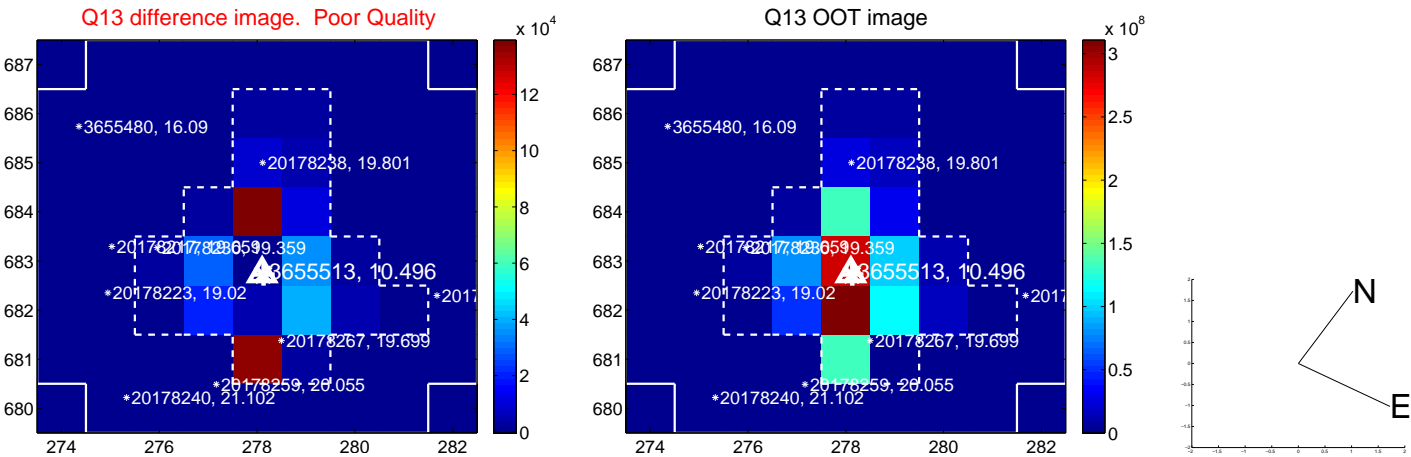
Q12 difference image. Poor Quality



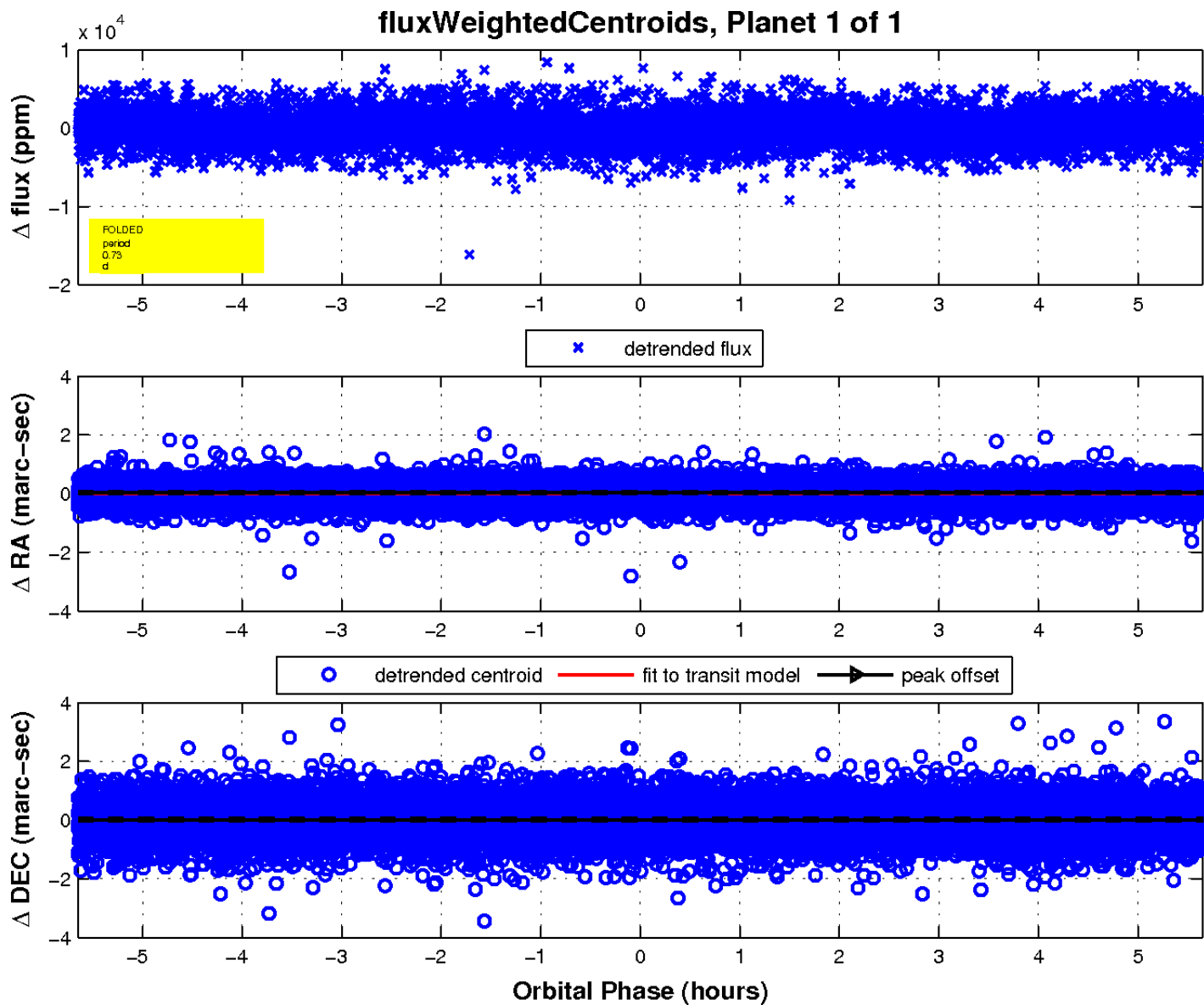
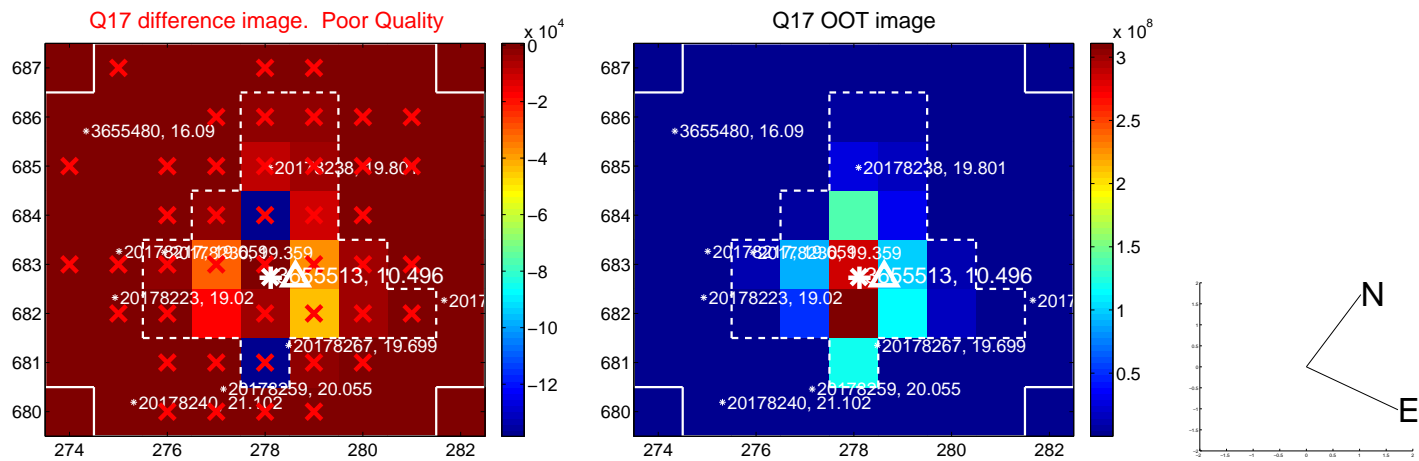
Q12 OOT image



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



UKIRT Image

Declination

