

KIC 007216284

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})
007216284-01	OBS	3056.01	6.699583	134.149521	235.9	2.758	11.8	12.1	0.80	5296	1.48	99.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007216284-01	OBS	PC	0.97	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.

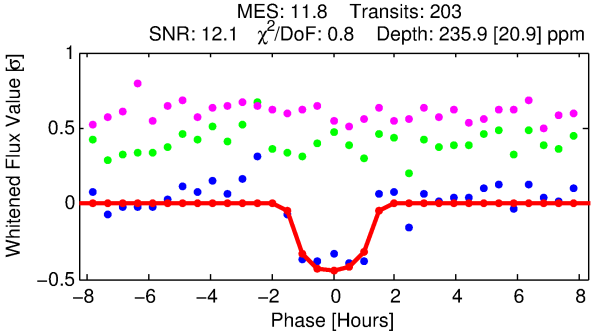
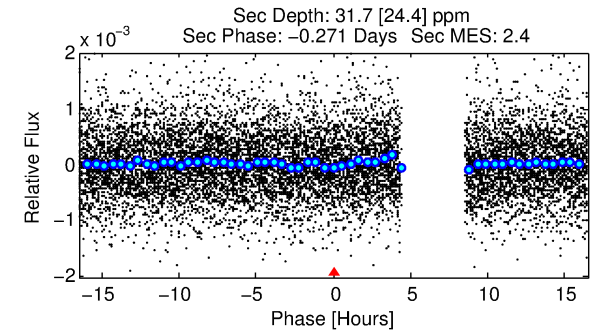
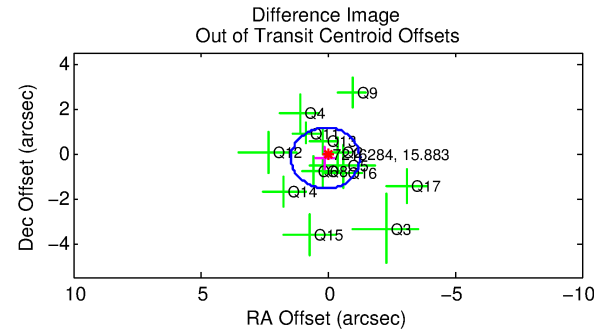
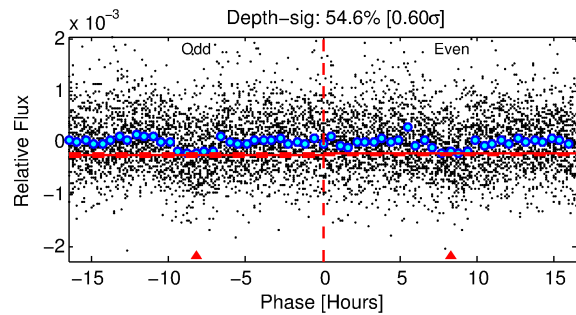
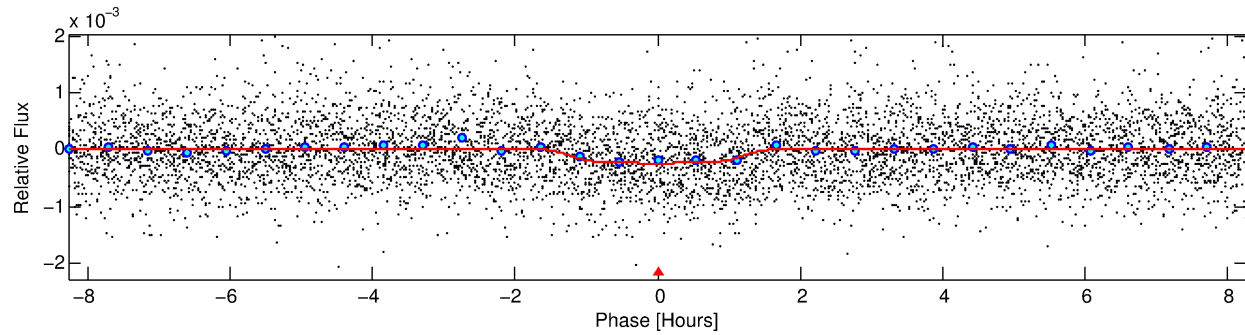
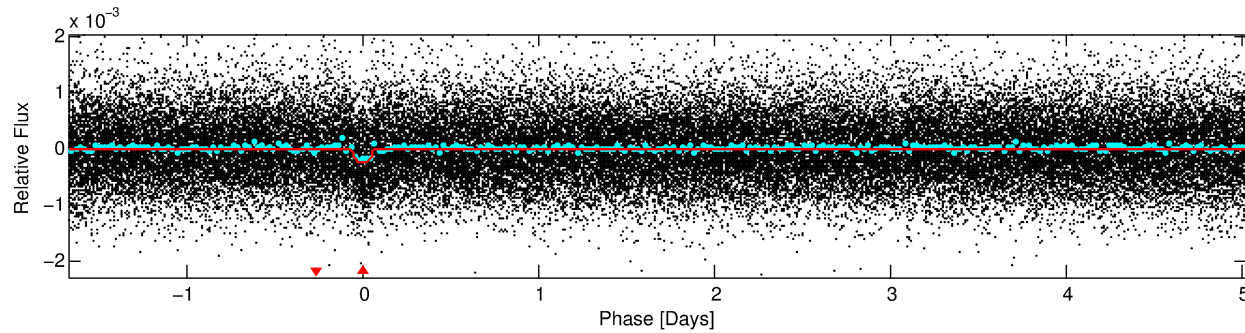
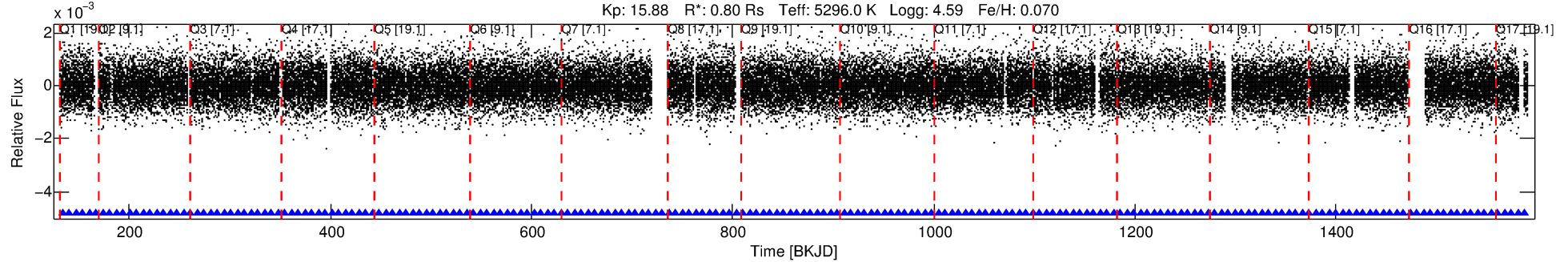
Ephemeris Match Information For 007216284-01

No Significant Match Found

DV One-Page Summary

KIC: 7216284 Candidate: 1 of 1 Period: 6.700 d
KOI: K03056.01 Corr: 0.988

Kp: 15.88 R*: 0.80 Rs Teff: 5296.0 K Logg: 4.59 Fe/H: 0.070



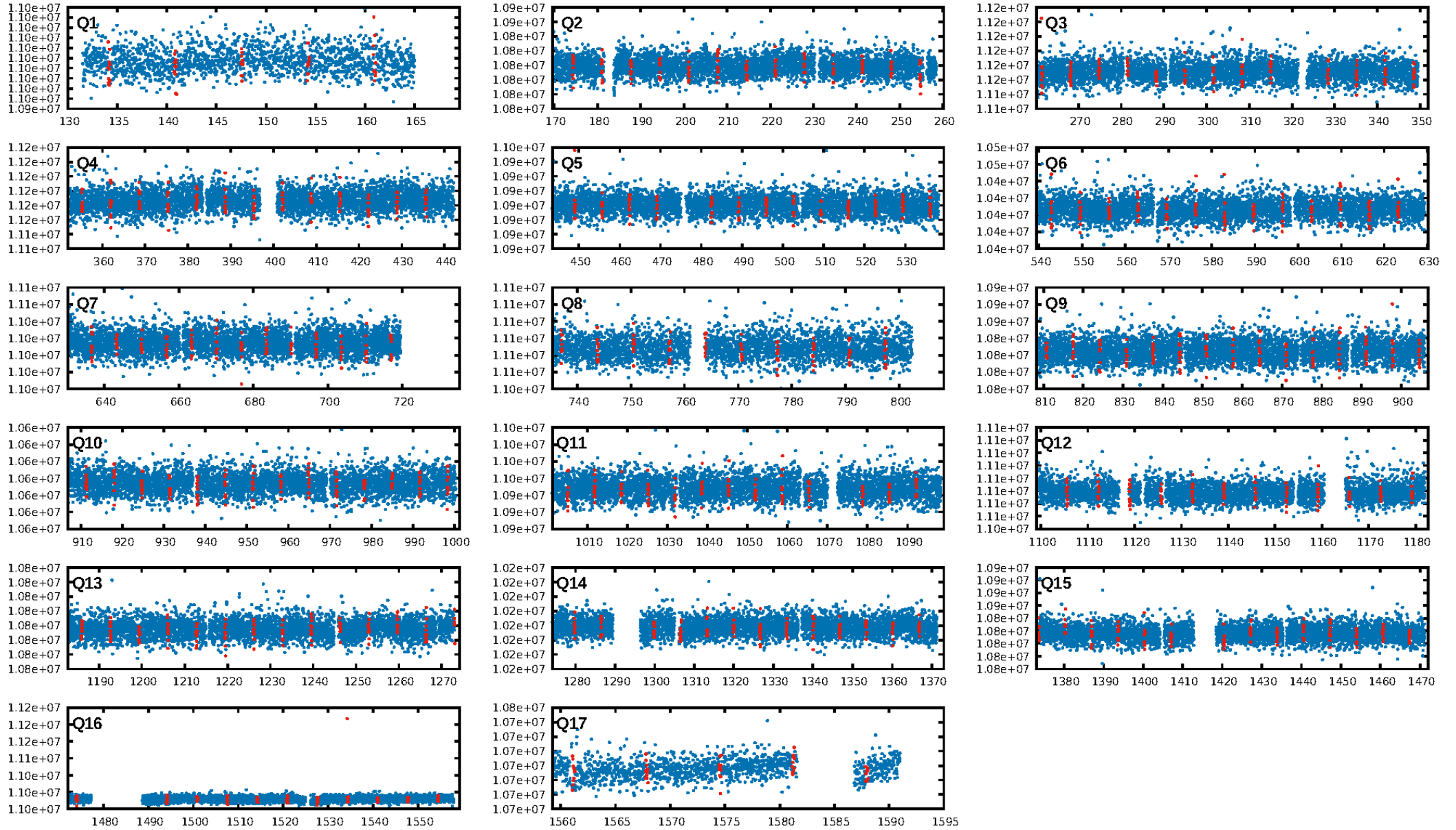
DV Fit Results:

Period = 6.69958 [0.00004] d
Epoch = 134.1495 [0.0048] BKJD
Rp/R* = 0.0170 [0.0090]
a/R* = 8.81 [19.36]
b = 0.90 [0.48]
Seff = 99.92 [24.80]
Teq = 806 [50] K
Rp = 1.48 [0.82] Re
a = 0.0671 [0.0099] AU
Ag = 35.65 [47.24] [0.73σ]
Teffp = 3046 [999] K [2.24σ]

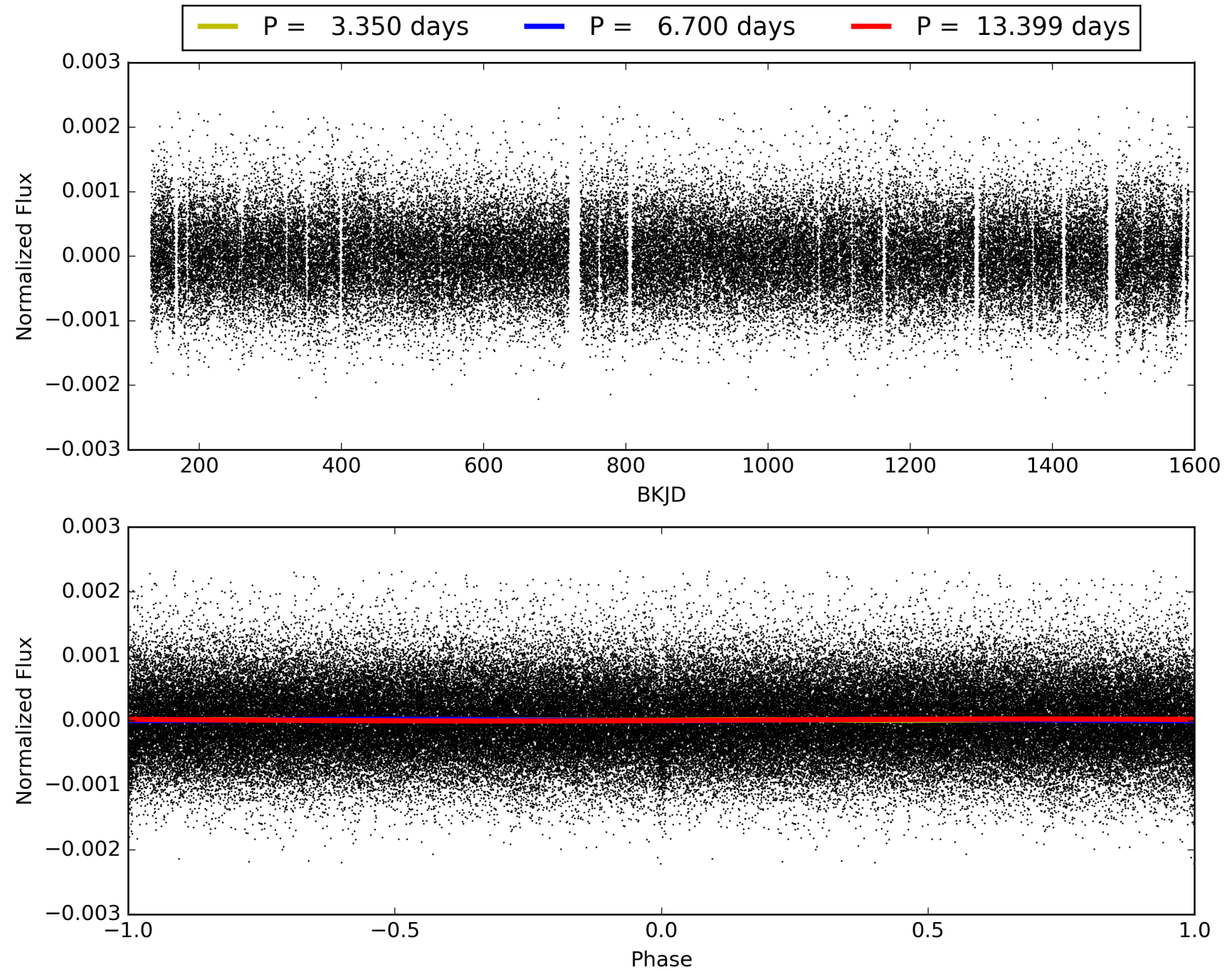
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-32
RollingBand-fgt: 1.00 [193/193]
GhostDiagnostic-chr: -21.15
Centroid-sig: 1.8%
Centroid-so: 2.047 arcsec [1.57σ]
OotOffset-rm: 0.227 arcsec [0.50σ]
KicOffset-rm: 0.209 arcsec [0.52σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007216284-01, PDC Light Curves

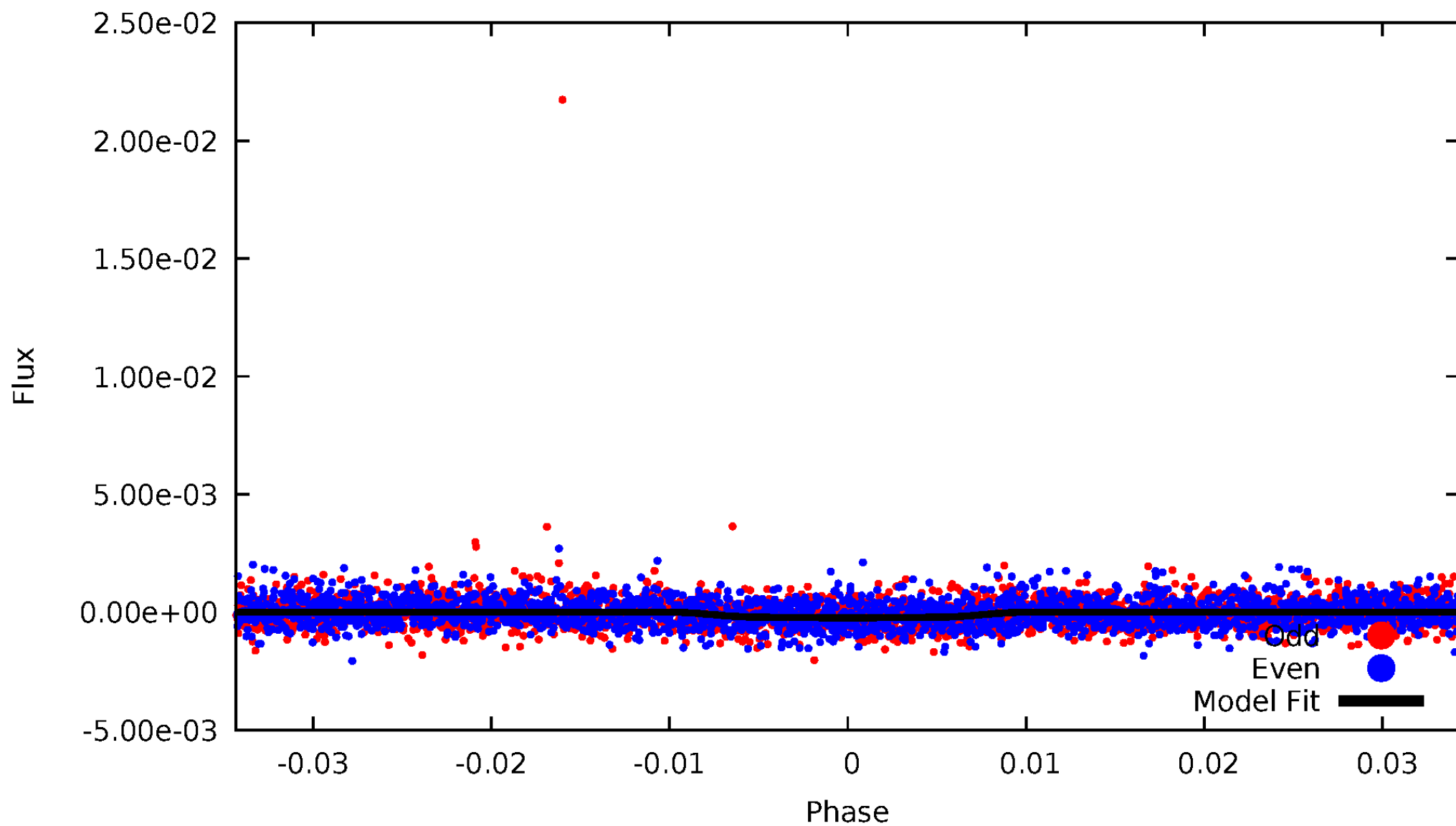


TCE 007216284-01



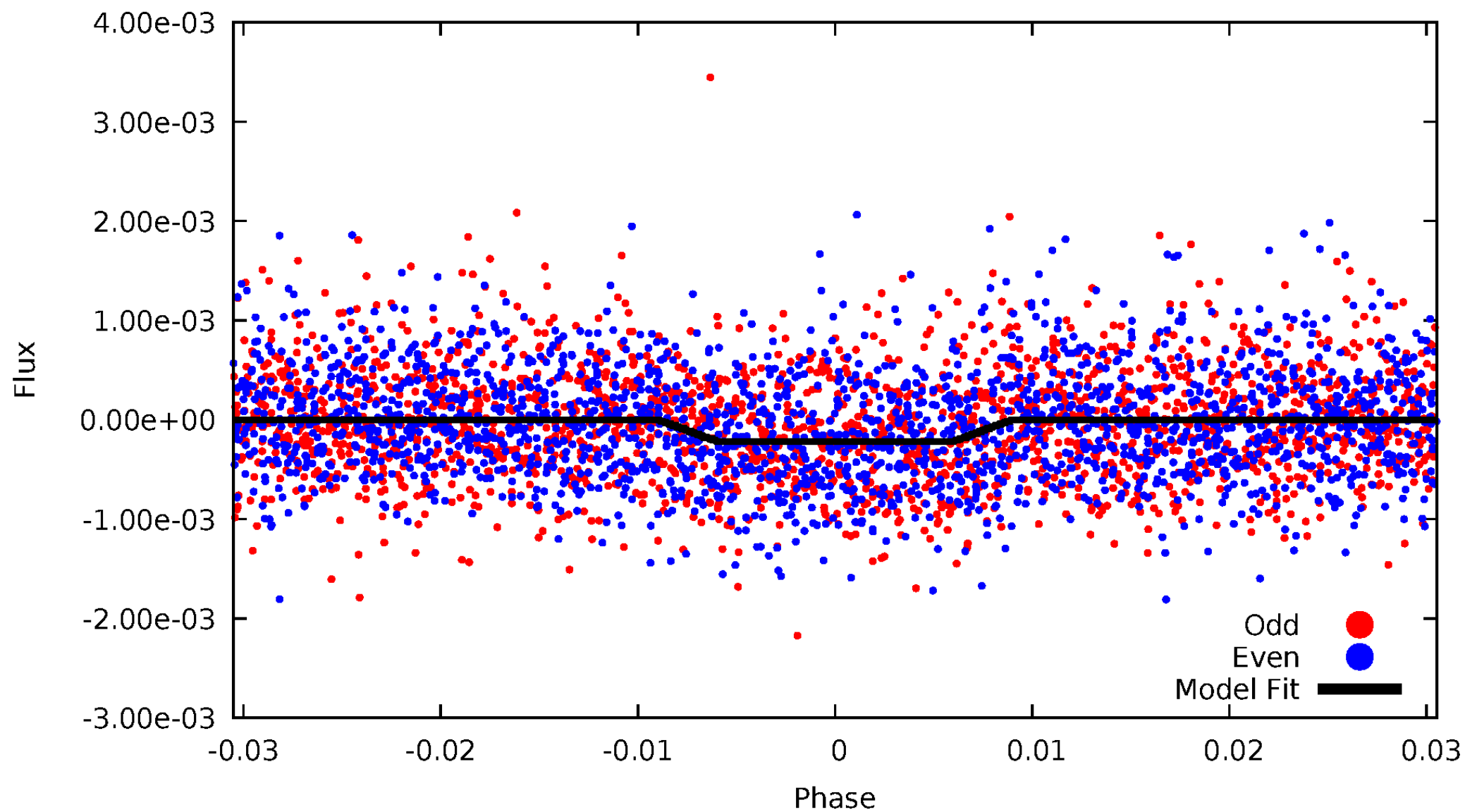
DV Odd/Even

TCE 007216284-01

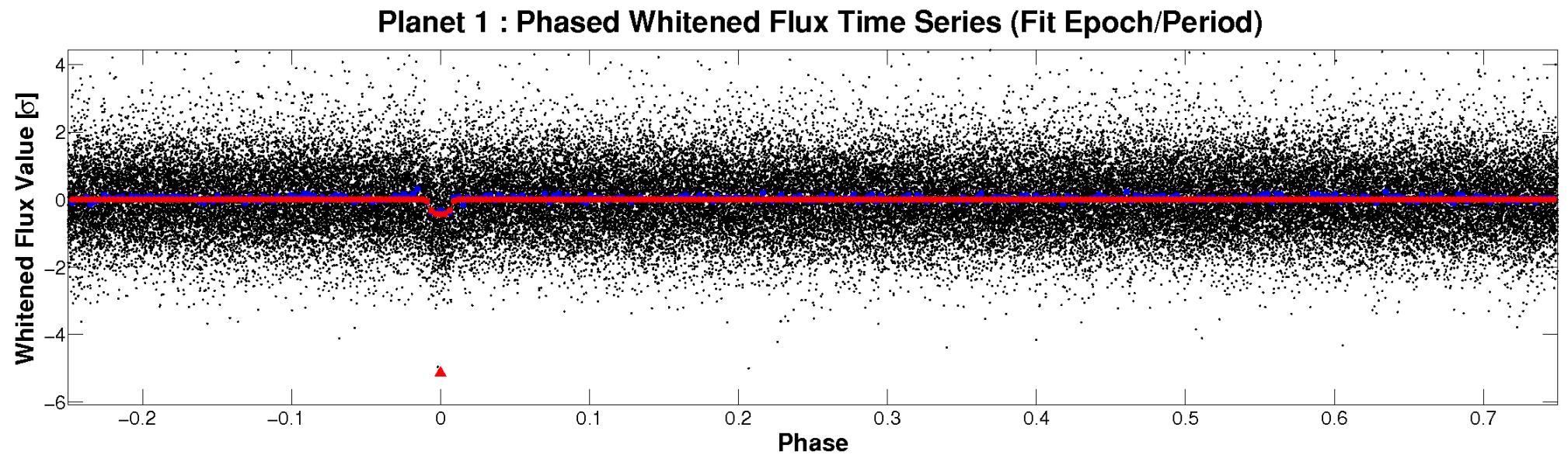
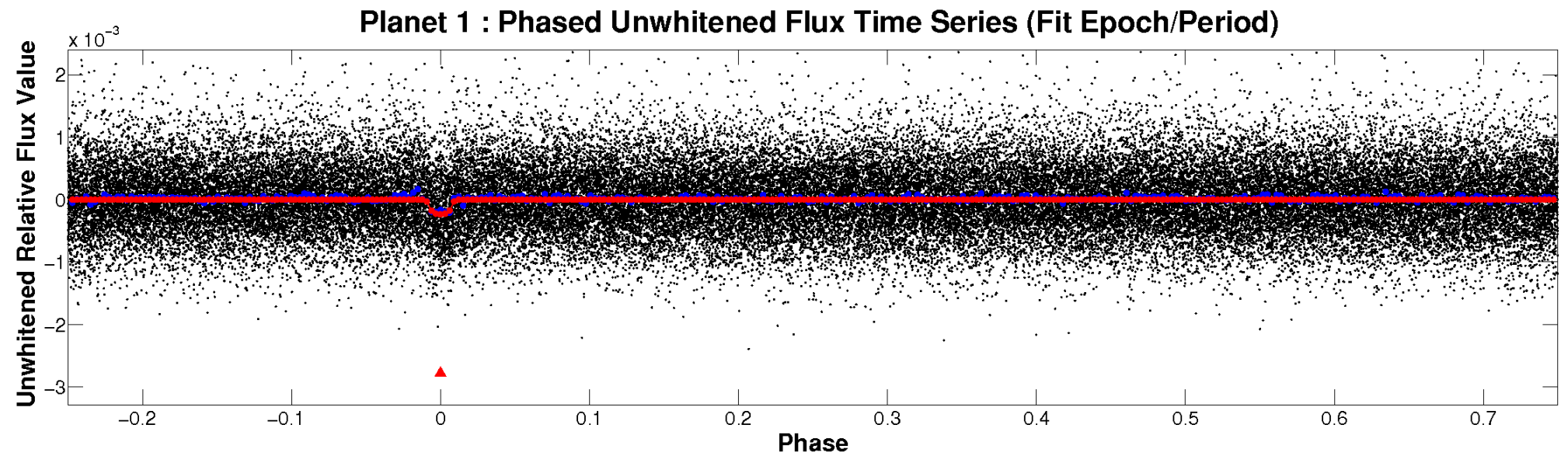


ALT Odd/Even

TCE 007216284-01

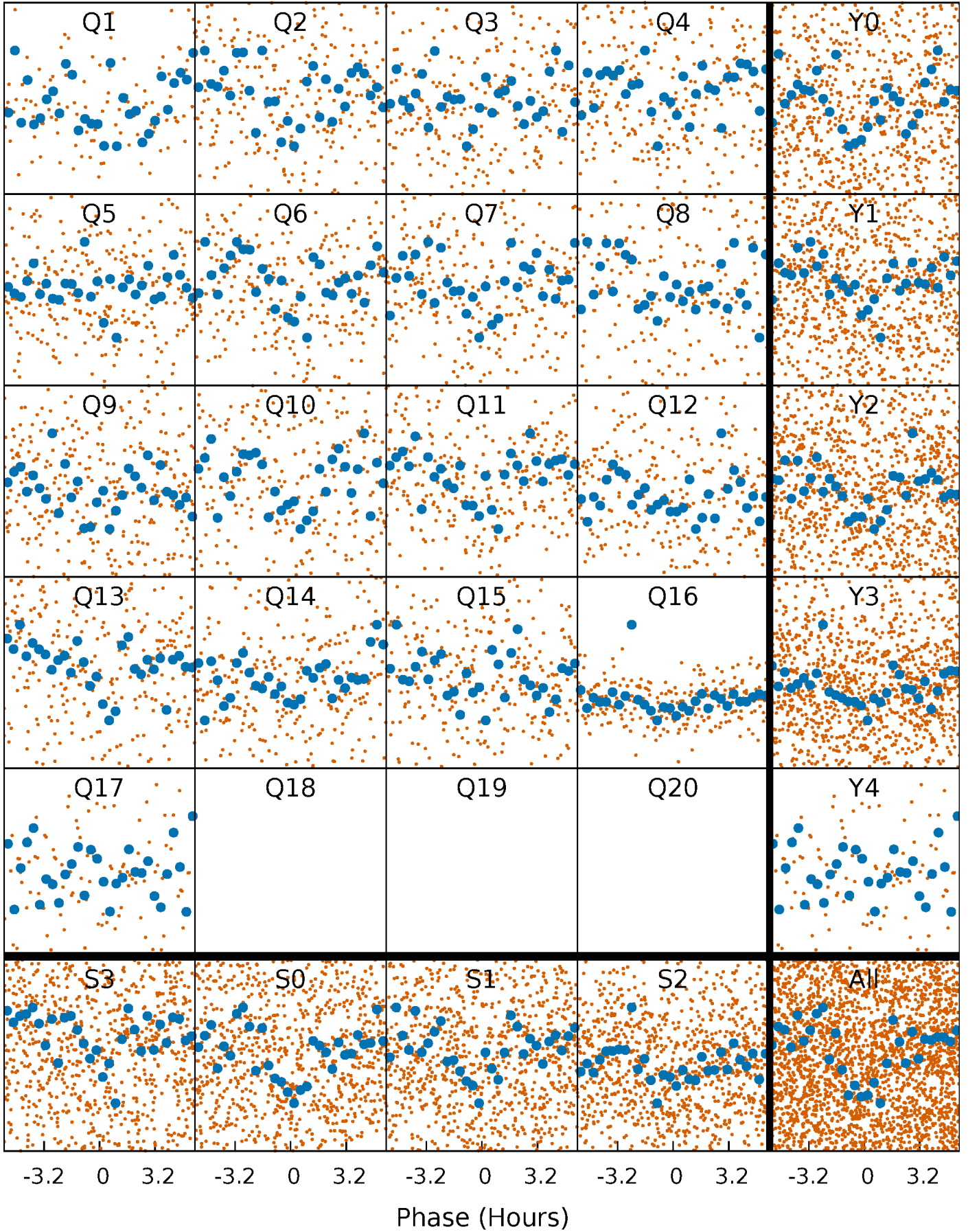


Non-Whitened Vs. Whitened Light Curve



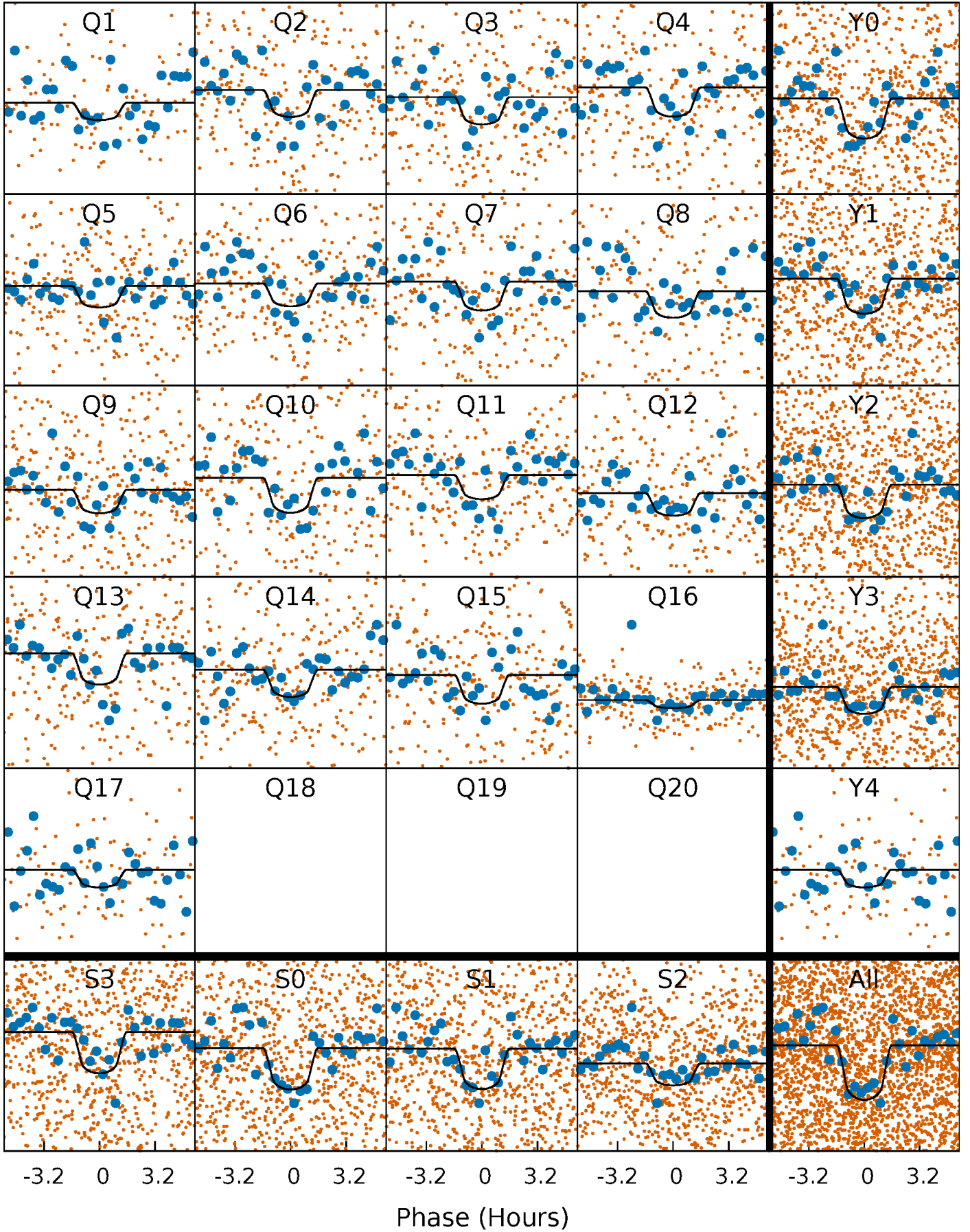
PDC Quarter-Phased Transit Curves

TCE 007216284-01 P= 6.699583 Days $T_0=134.149521$ (BKJD)



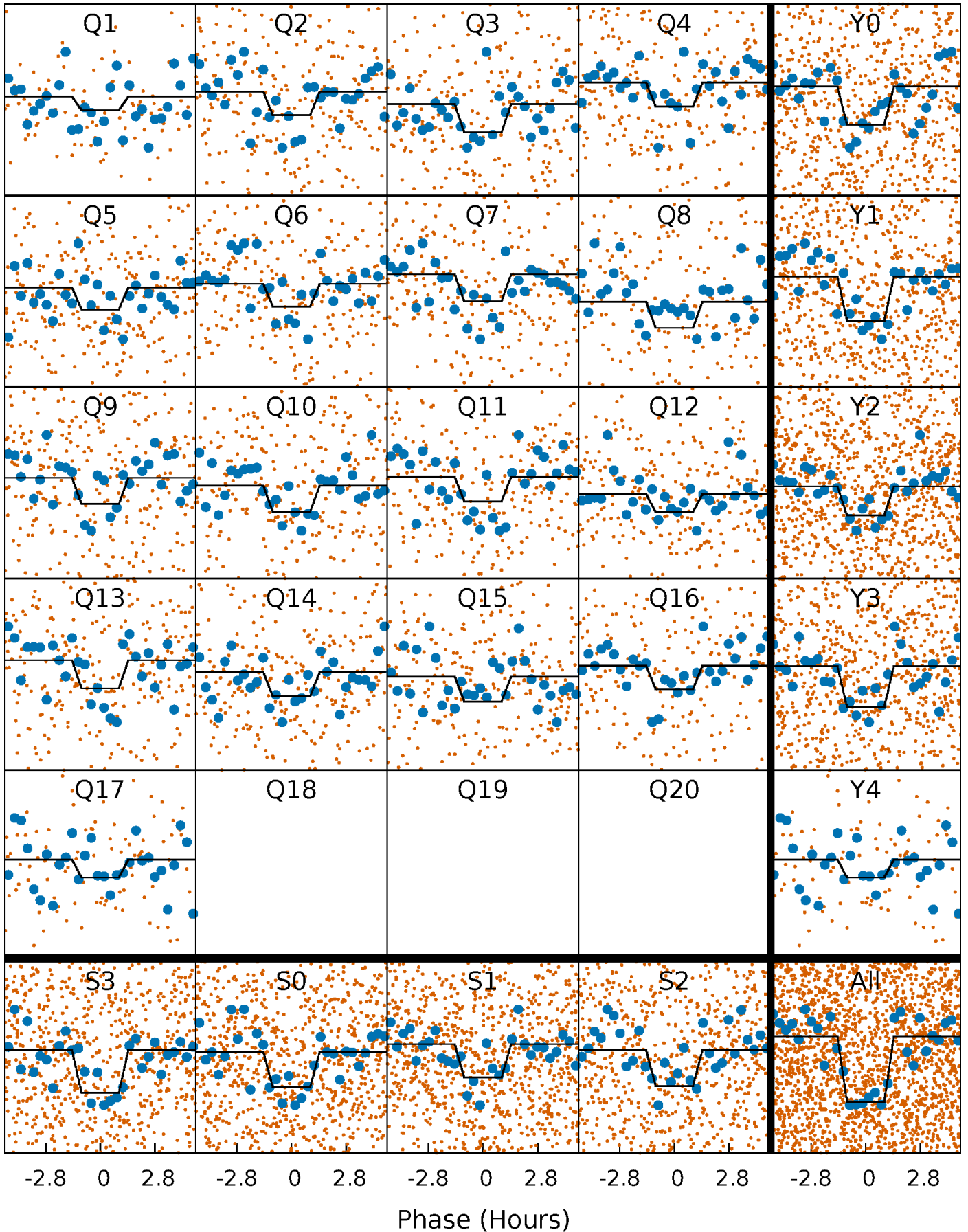
DV Quarter-Phased Transit Curves

TCE 007216284-01 P= 6.699583 Days $T_0=134.149521$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

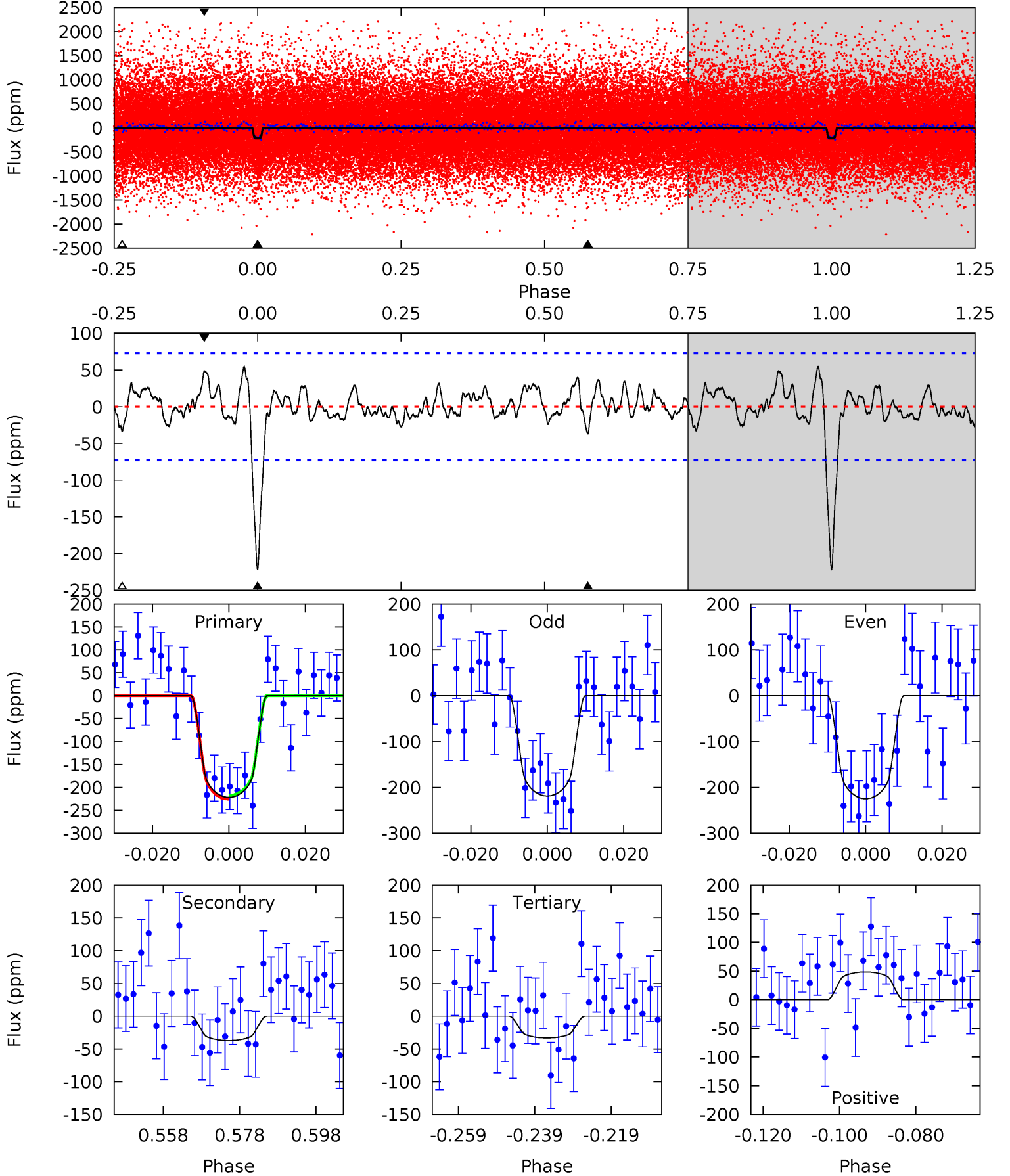
TCE 007216284-01 P= 6.699617 Days $T_0=134.146976$ (BKJD)



DV Model-Shift Uniqueness Test

007216284-01, P = 6.699583 Days, E = 127.449938 Days

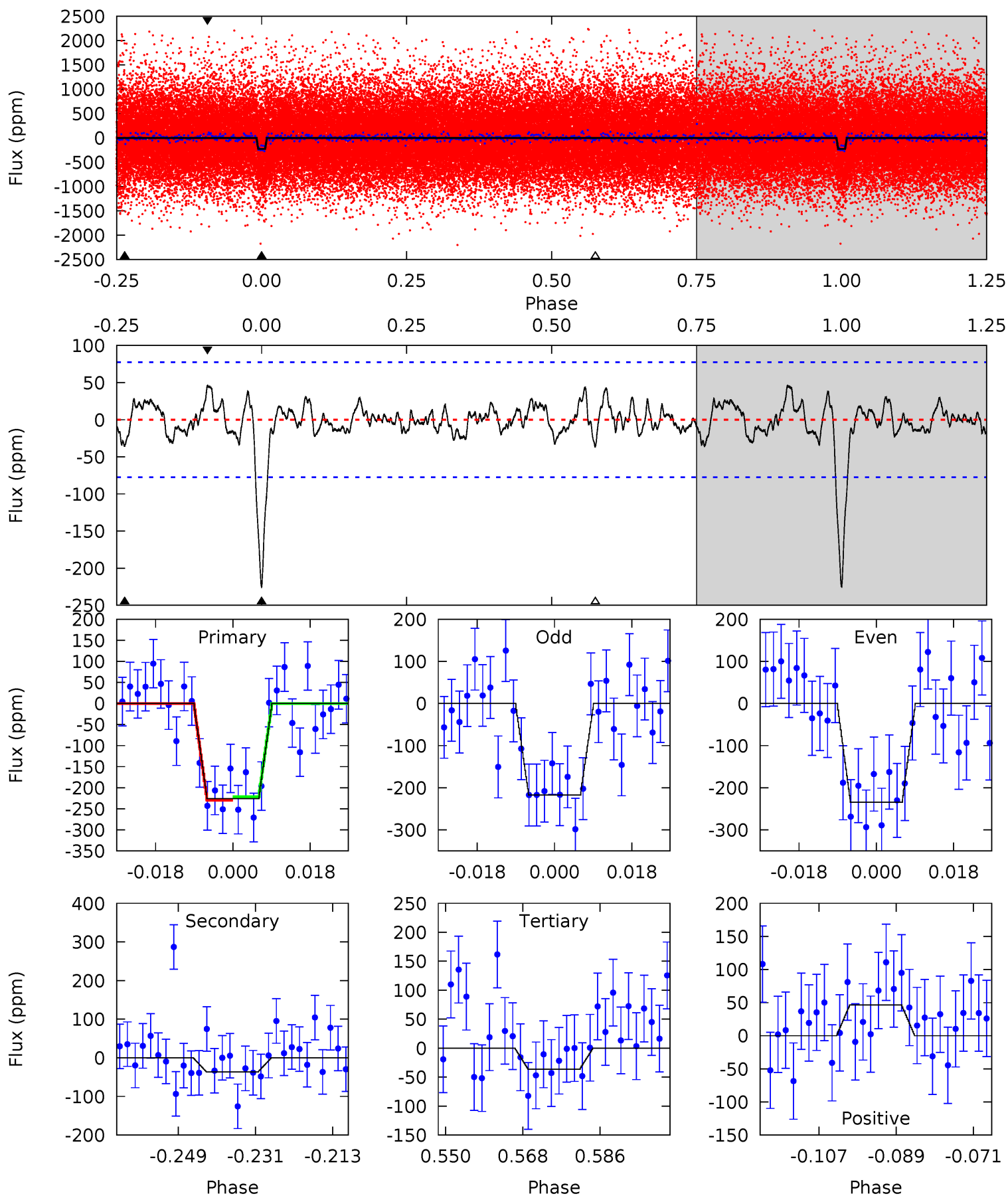
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	2.50	2.23	3.26	4.89	2.33	1.07	12.6	11.6	0.27	-0.75	0.20	0.98	0.20	0.24



Alt Model-Shift Uniqueness Test

007216284-01, P = 6.699617 Days, E = 127.447359 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	2.31	2.29	2.95	4.92	2.37	1.00	12.0	11.3	0.01	-0.65	0.54	0.94	0.17	0.25



Stellar Parameters For KIC 007216284

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5296^{+159}_{-159}	$4.586^{+0.030}_{-0.120}$	$0.070^{+0.250}_{-0.300}$	$0.799^{+0.138}_{-0.059}$	$0.901^{+0.058}_{-0.099}$	$2.487^{+0.380}_{-0.860}$
	+3%/-3%	+1%/-3%	+357%/-429%	+17%/-7%	+6%/-11%	+15%/-35%
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 007216284-01 / KOI 3056.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-37 ± 15	$1.58^{+0.85}_{-0.77}$	1146^{+50}_{-44}	3519^{+987}_{-475}	35^{+98}_{-22}
Alt.	-36 ± 16	$1.37^{+0.76}_{-0.72}$	1144^{+52}_{-46}	3664^{+1198}_{-562}	44^{+166}_{-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

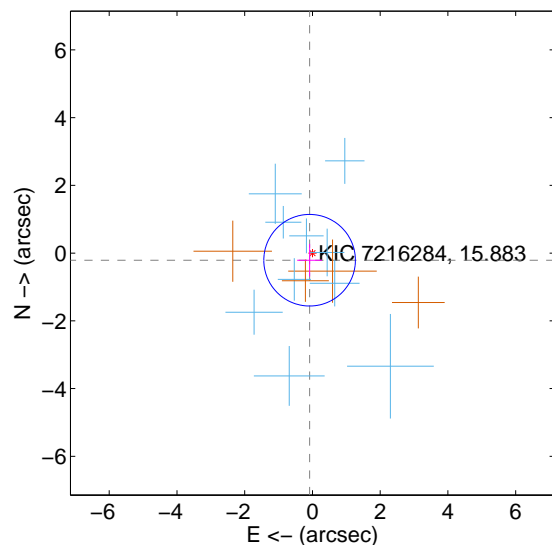
Supplemental centroid analysis for 007216284-01. Kepler magnitude: 15.88. Transit SNR 12.08

There are 10 quarters with good PRF difference image offsets

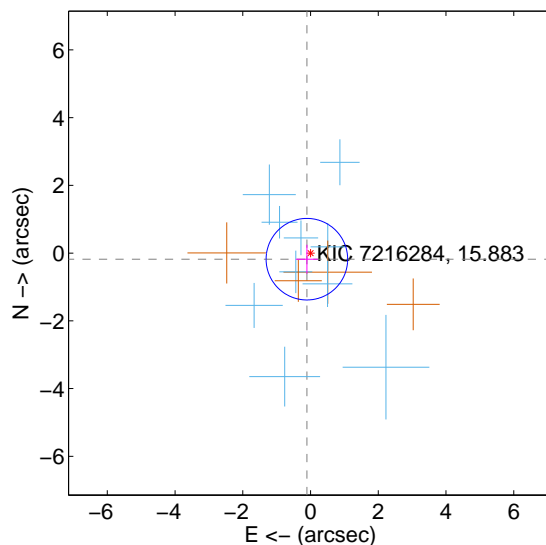
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.227 ± 0.451	0.50	0.084 ± 0.368	-0.210 ± 0.483
PRF-fit source offset from KIC position	0.209 ± 0.401	0.52	0.107 ± 0.324	-0.180 ± 0.426
photometric centroid source offset	2.05 ± 1.30	1.57	1.16 ± 1.34	1.69 ± 1.29

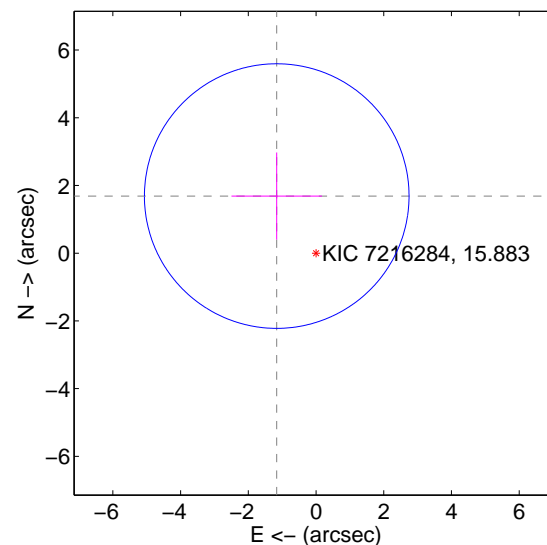
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

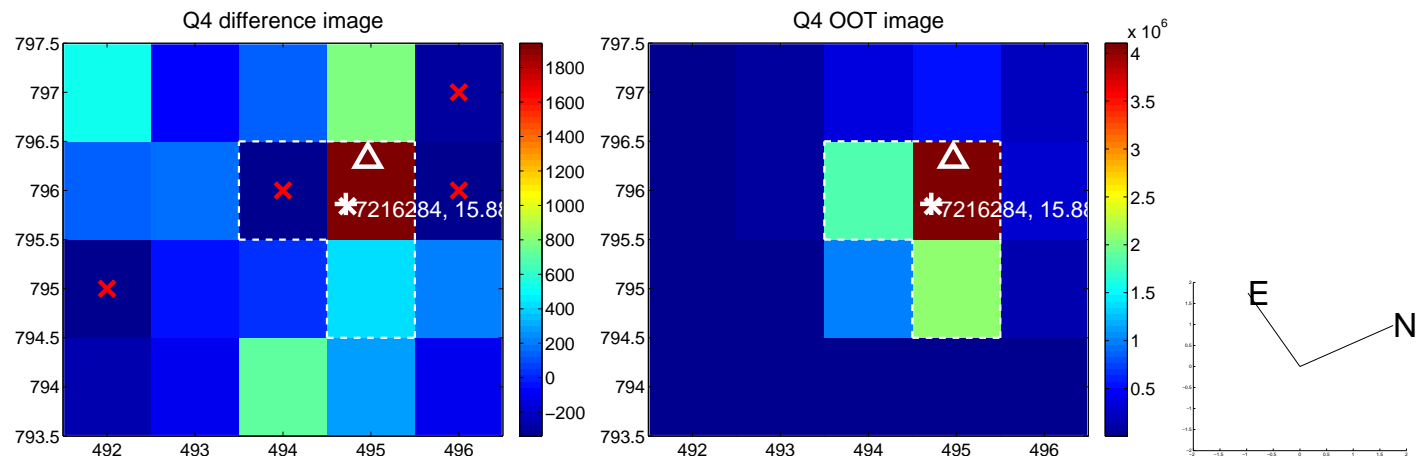
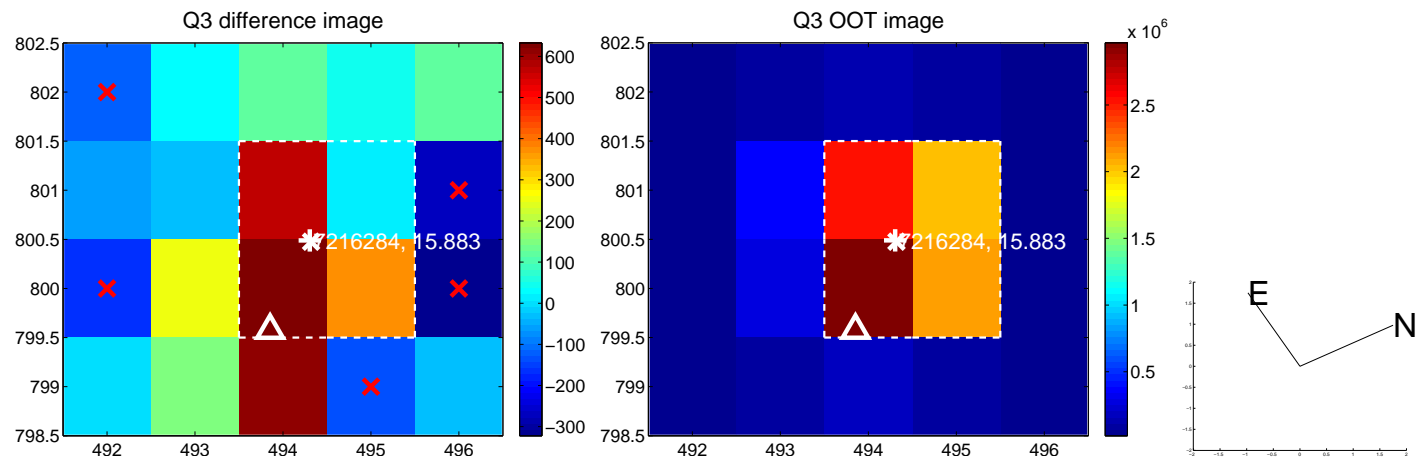
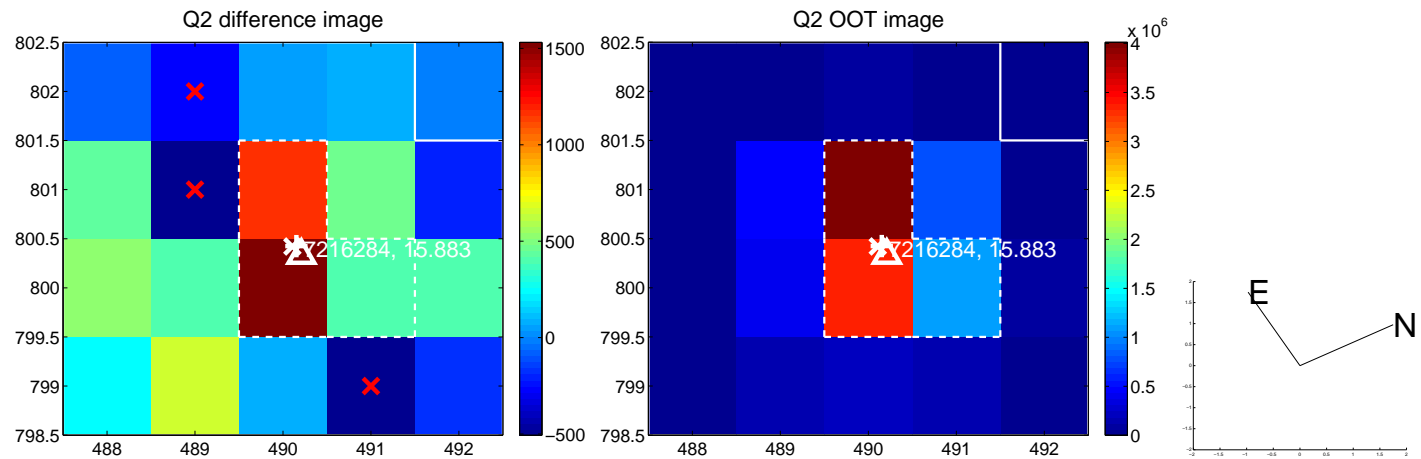
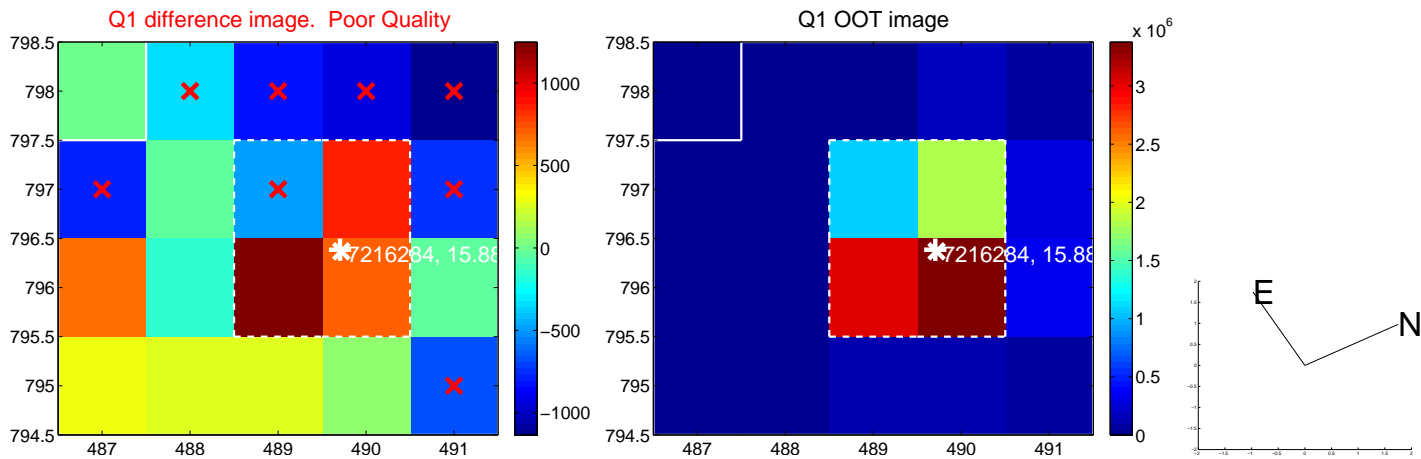


offset from photometric centroids

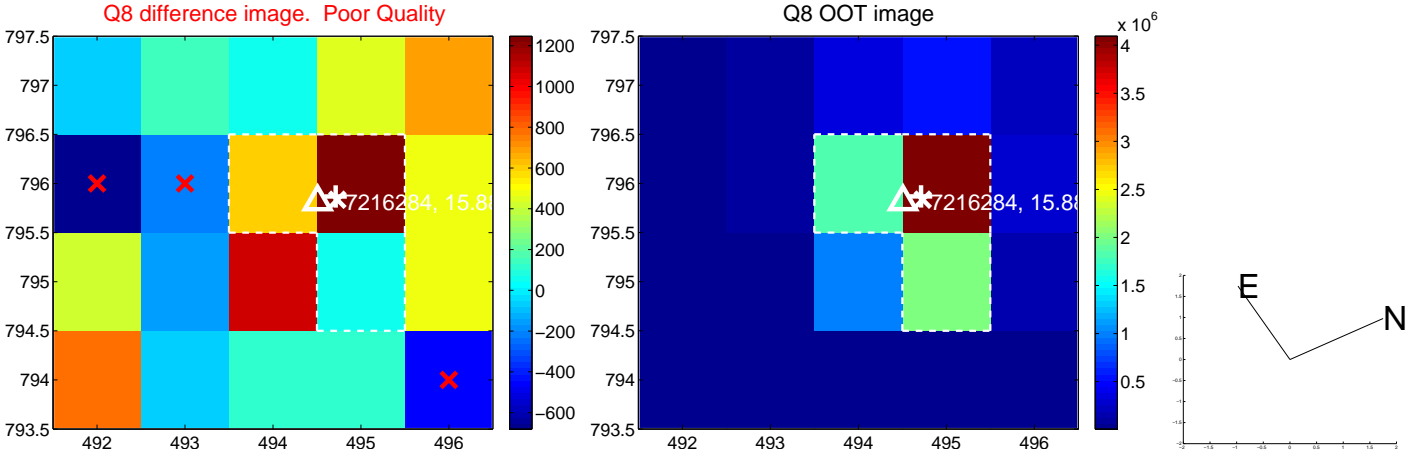
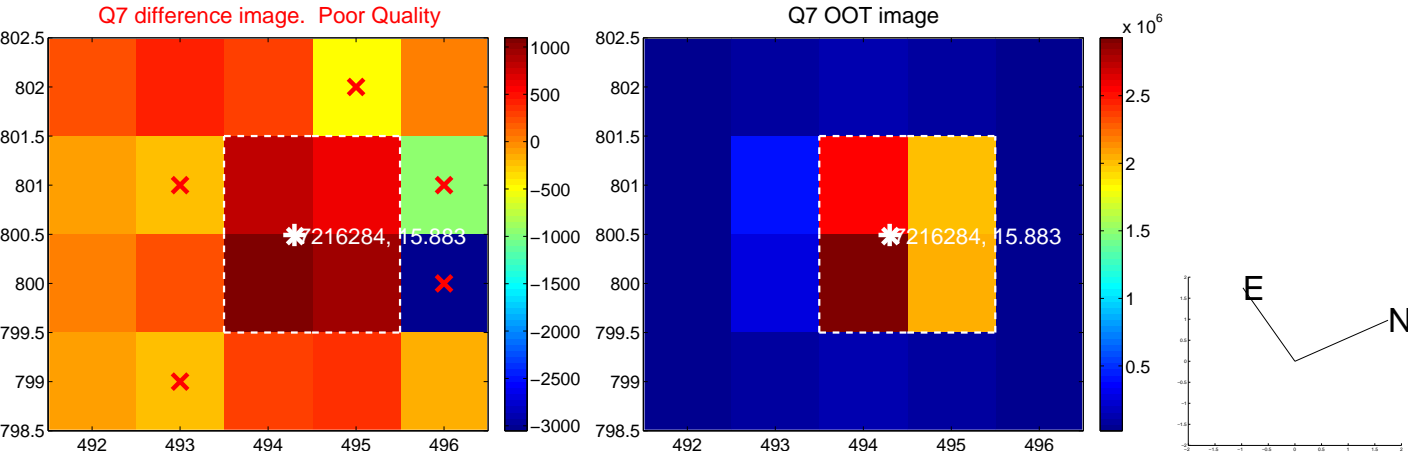
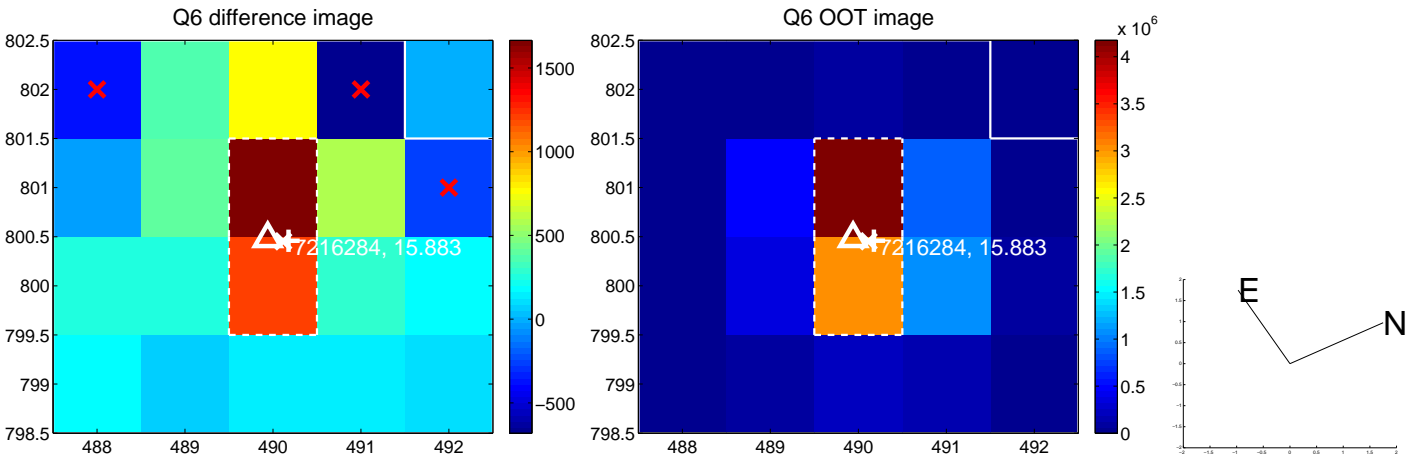
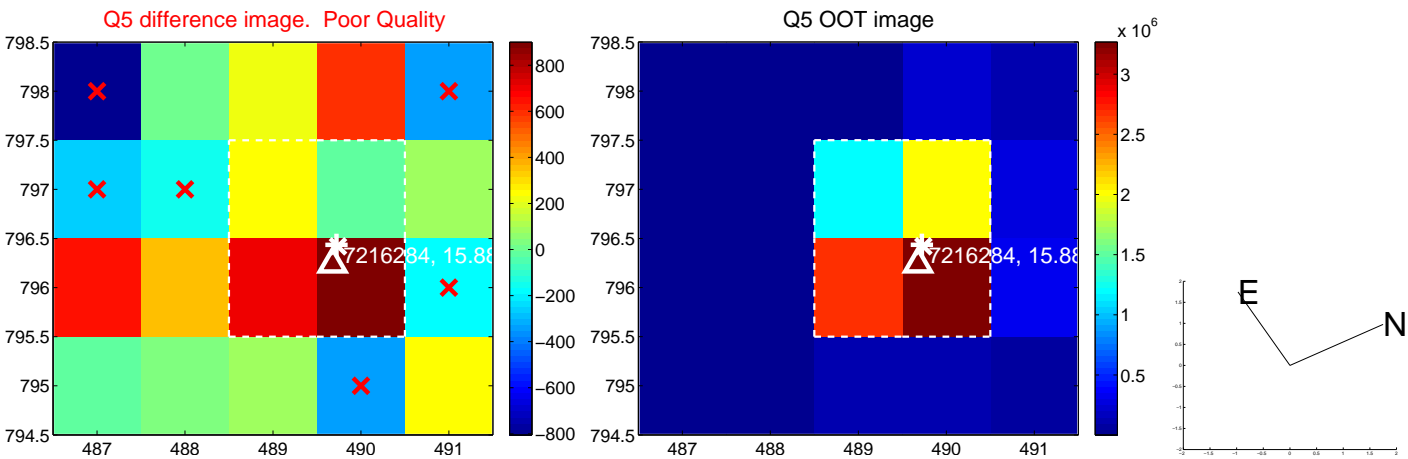


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

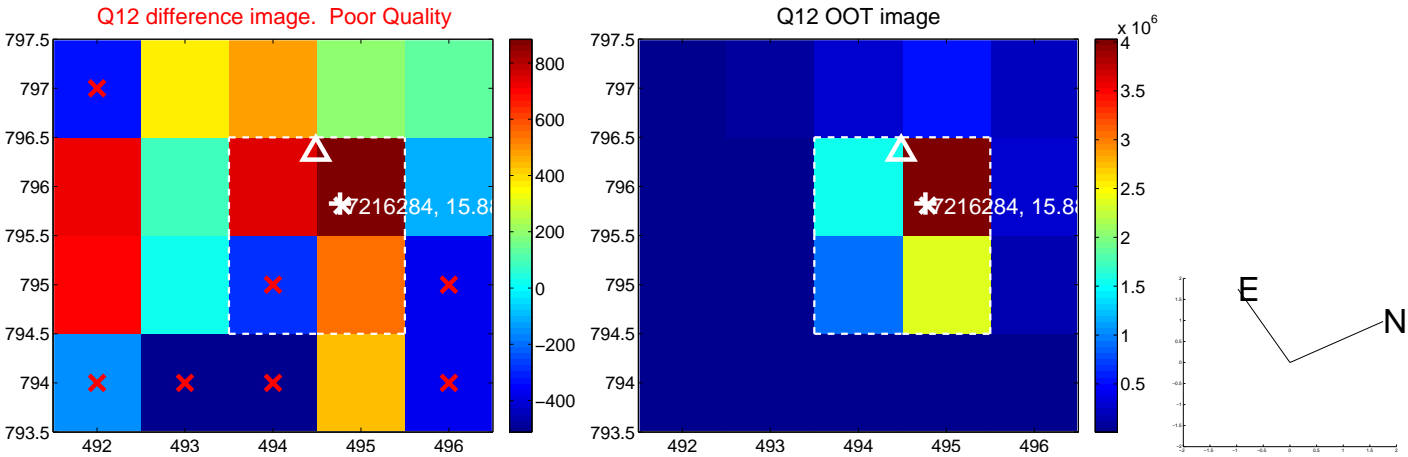
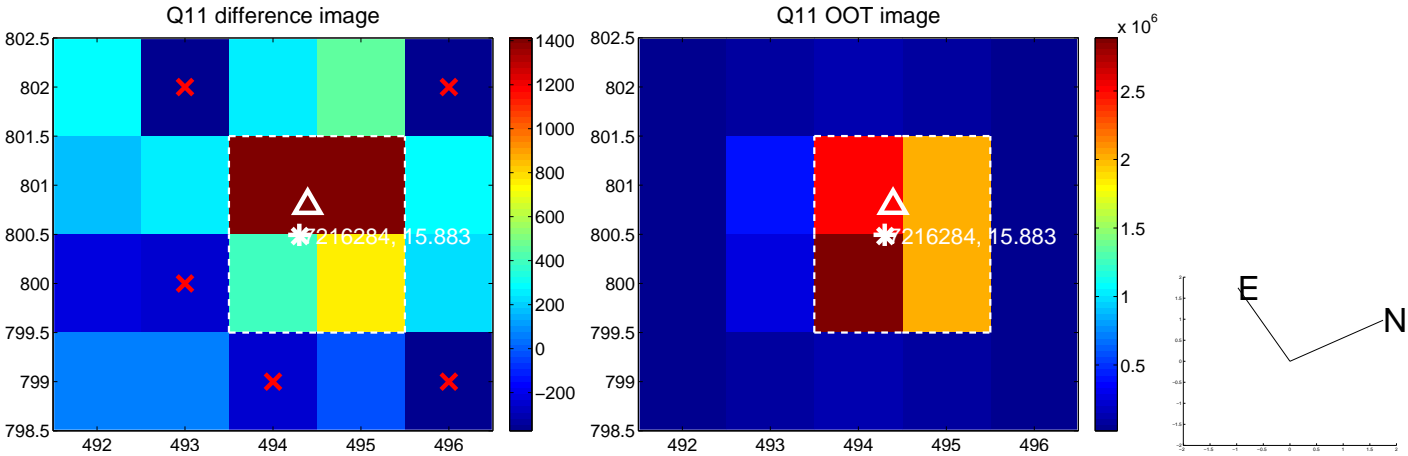
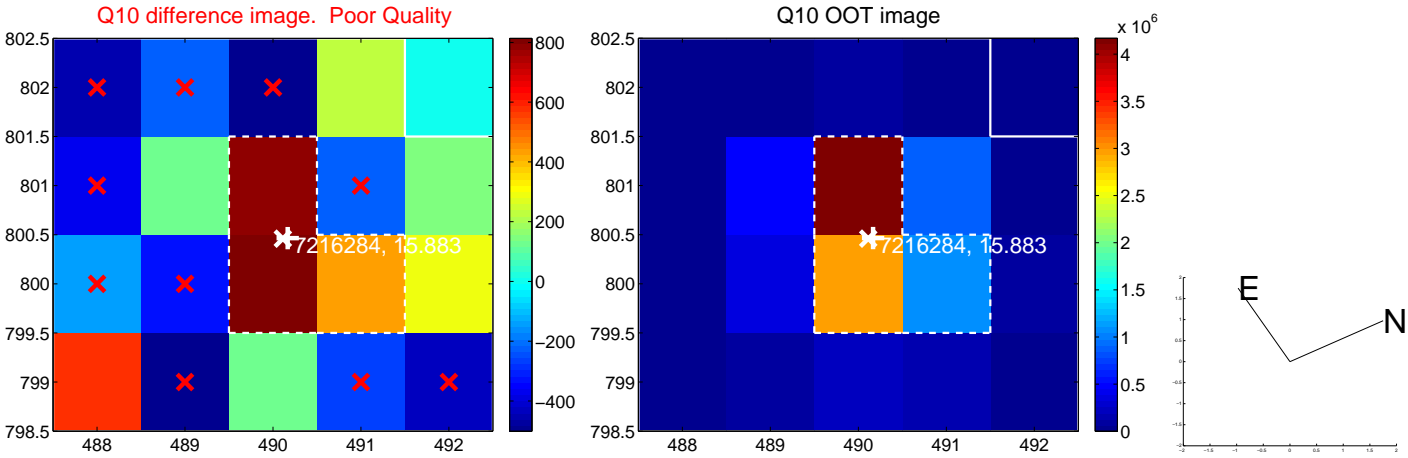
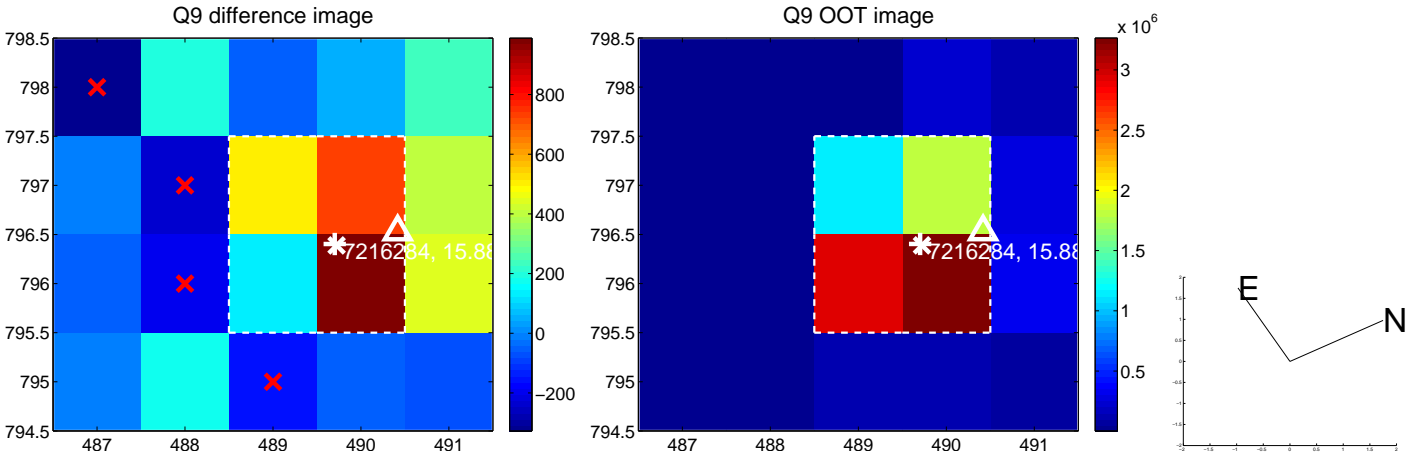
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



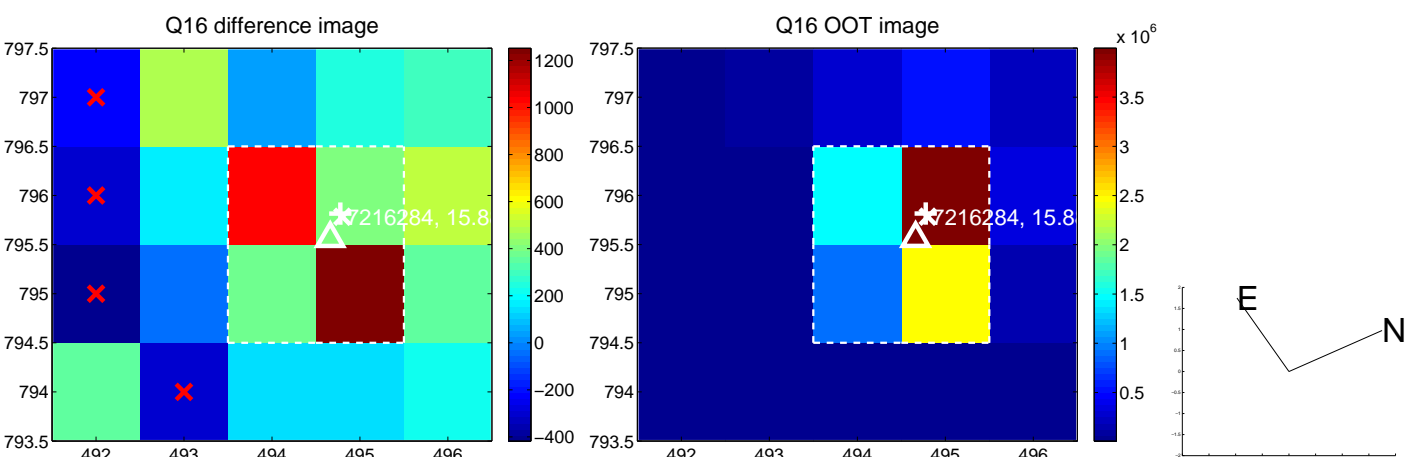
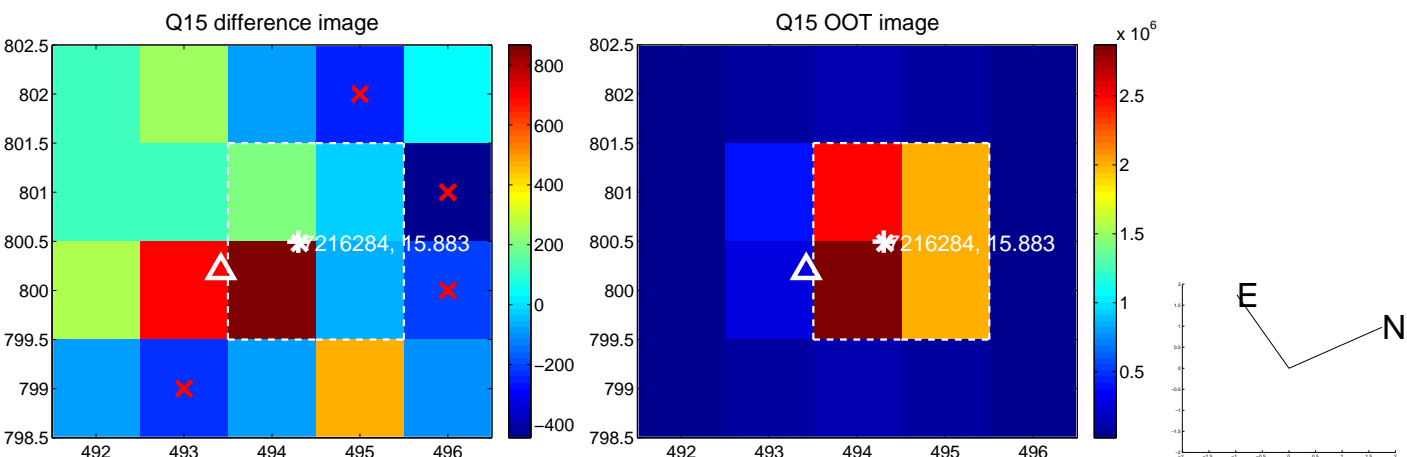
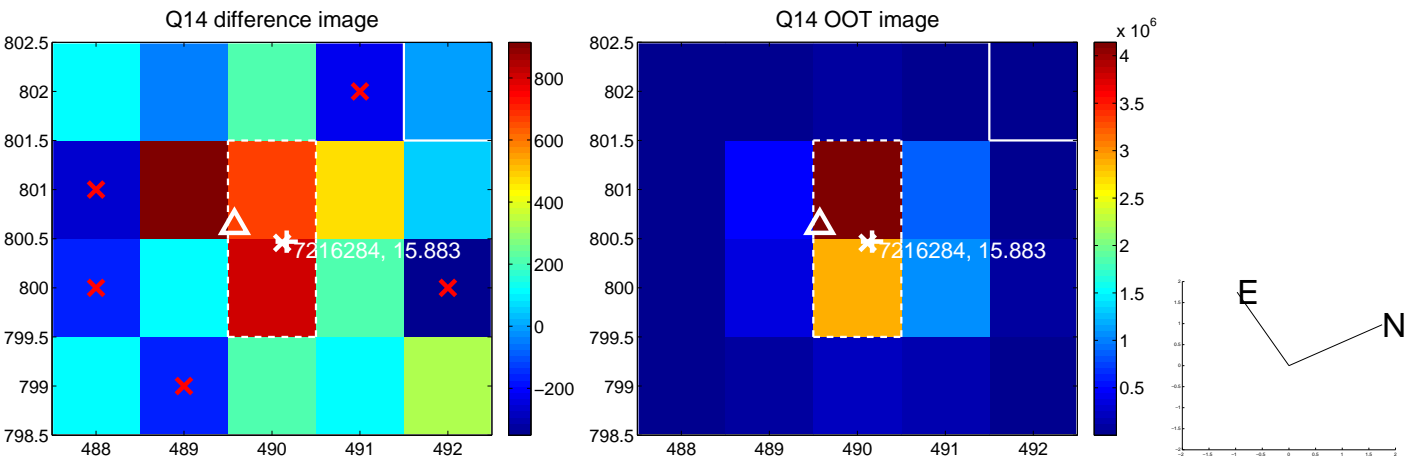
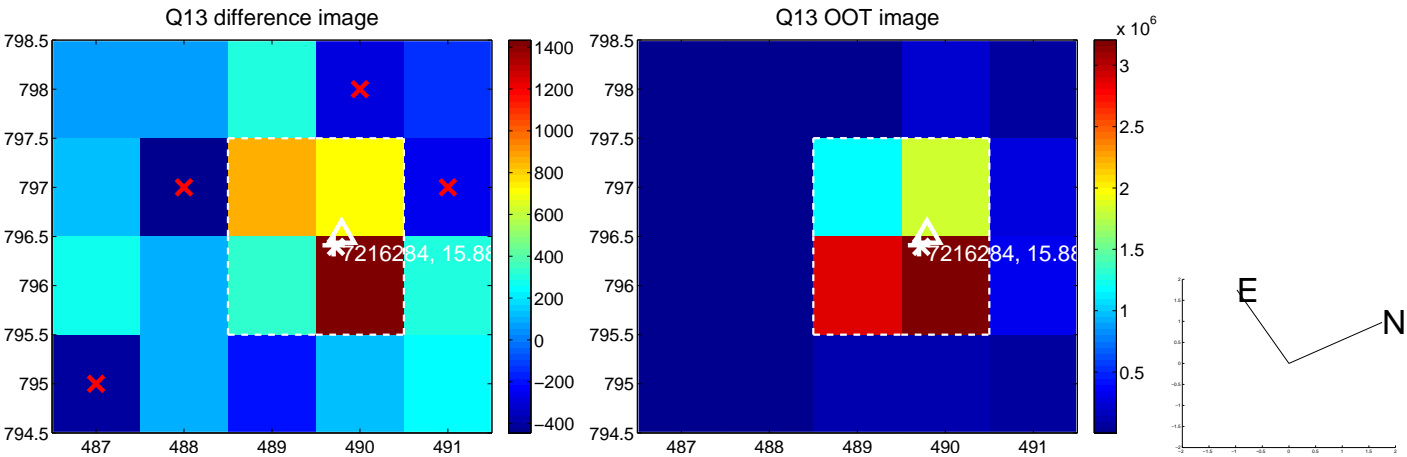
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



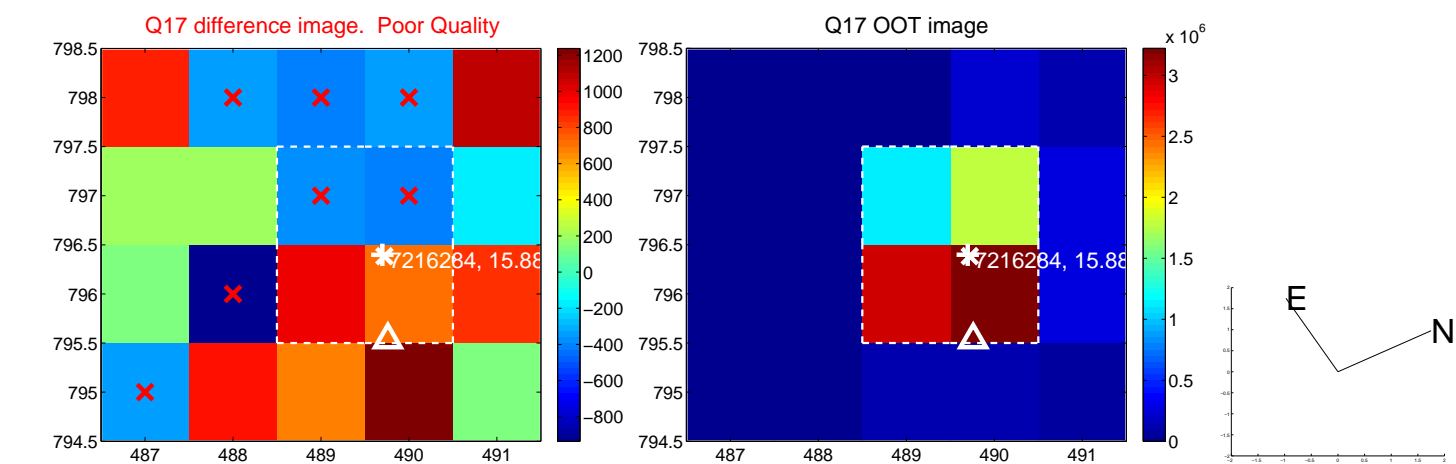
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



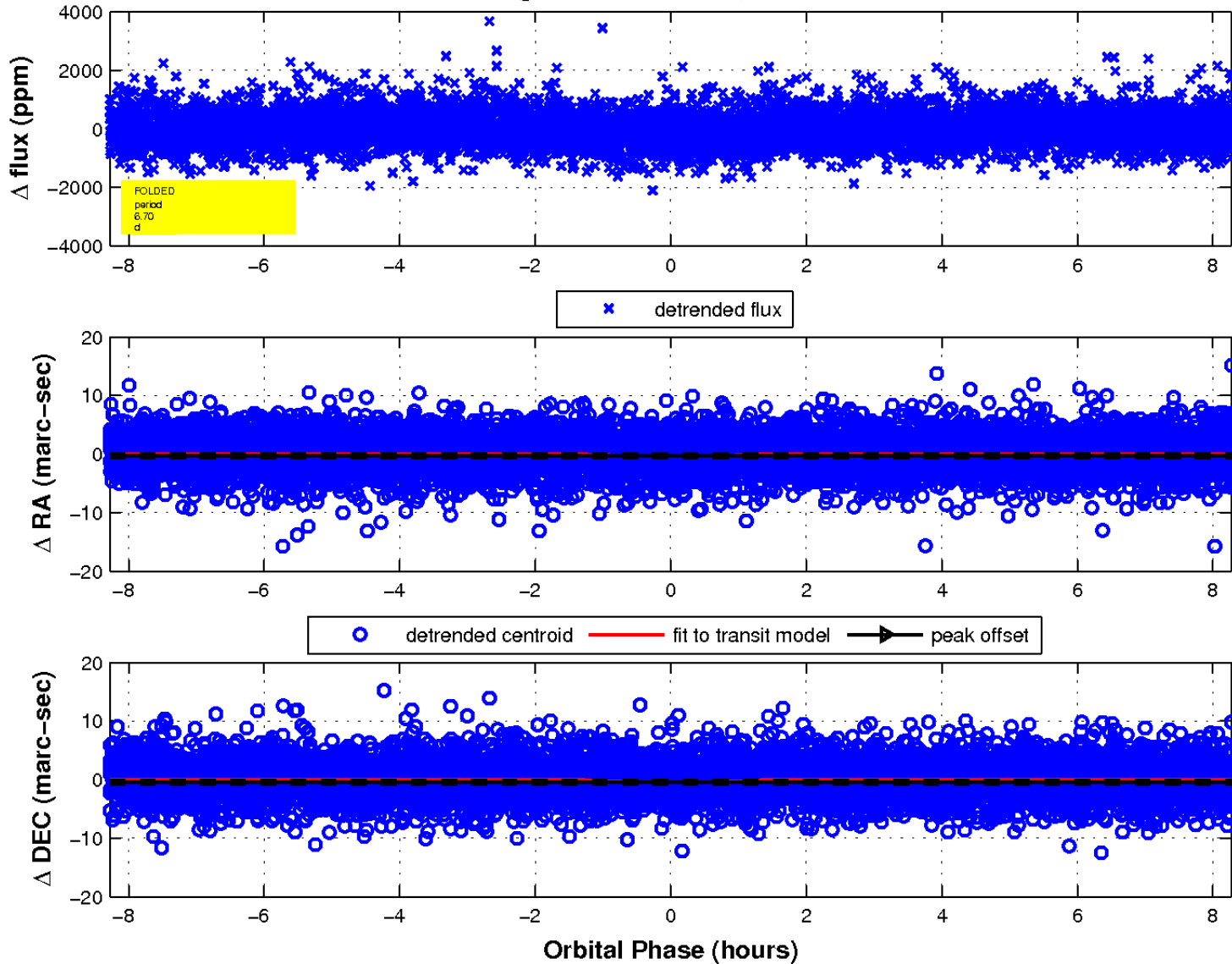
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

