

KIC 008255058

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})
008255058-01	OBS	5495.01	6.279886	135.297454	1331.1	5.810	141.3	119.1	6.22	5057	45.50	3289.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008255058-01	OBS	FP	0.00	0	1	1	0	DEEP_V_SHAPED—CENT_RESOLVED_OFFSET—HALO_GHOST

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.

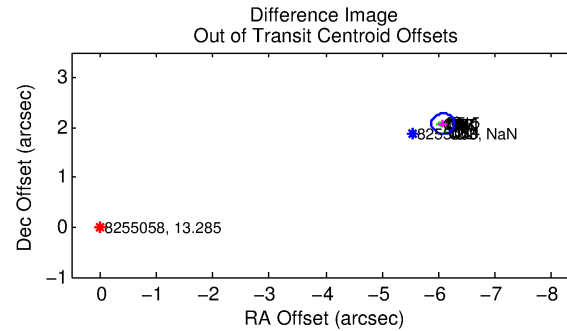
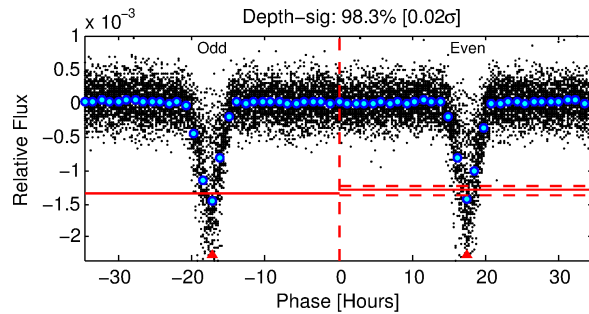
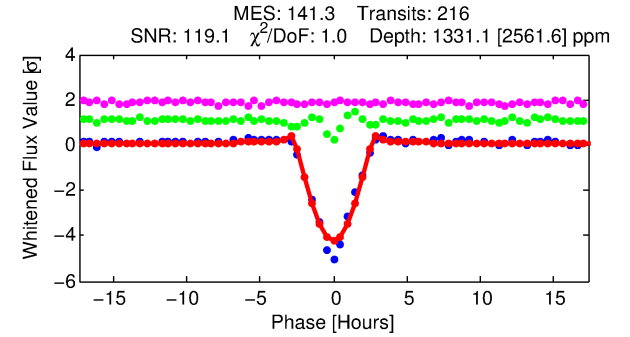
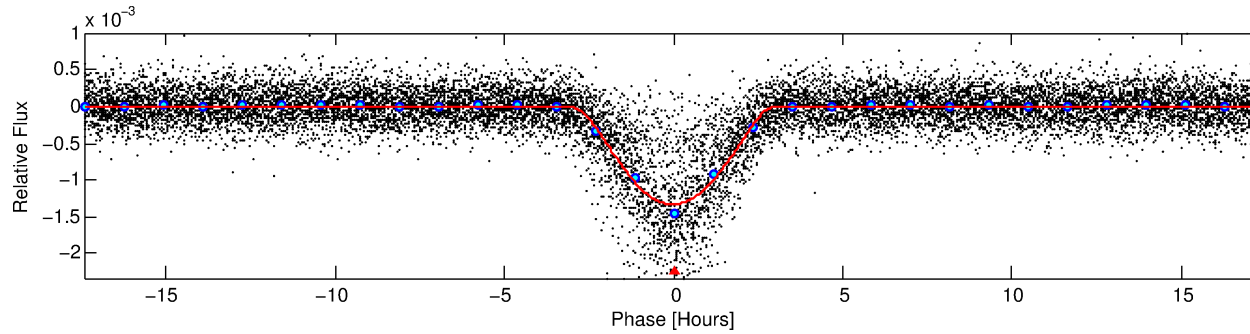
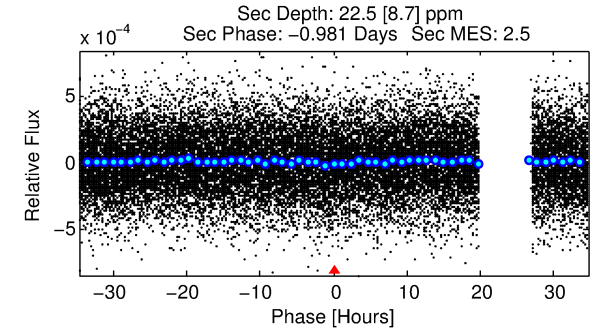
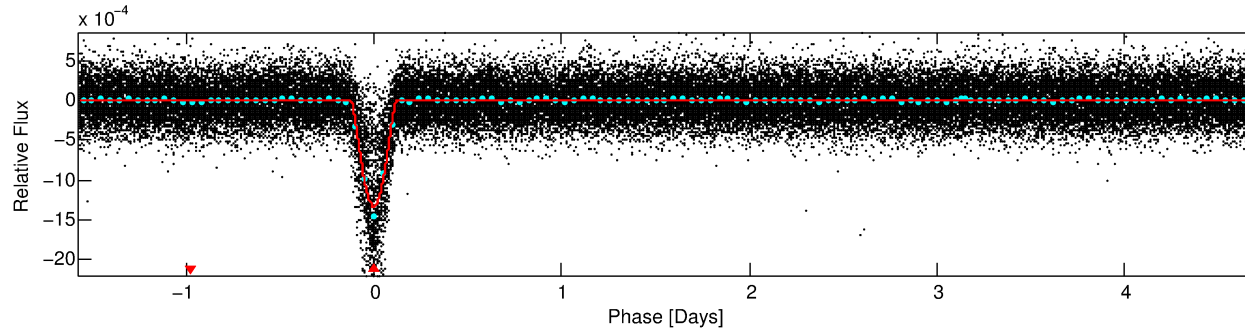
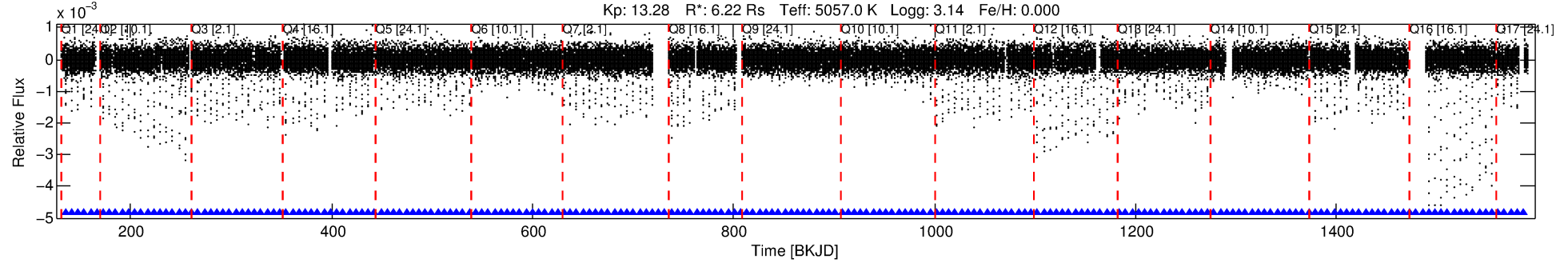
Ephemeris Match Information For 008255058-01

No Significant Match Found

DV One-Page Summary

KIC: 8255058 Candidate: 1 of 1 Period: 6.280 d
KOI: K05495.01 Corr: 0.996

Kp: 13.28 R*: 6.22 Rs Teff: 5057.0 K Logg: 3.14 Fe/H: 0.000



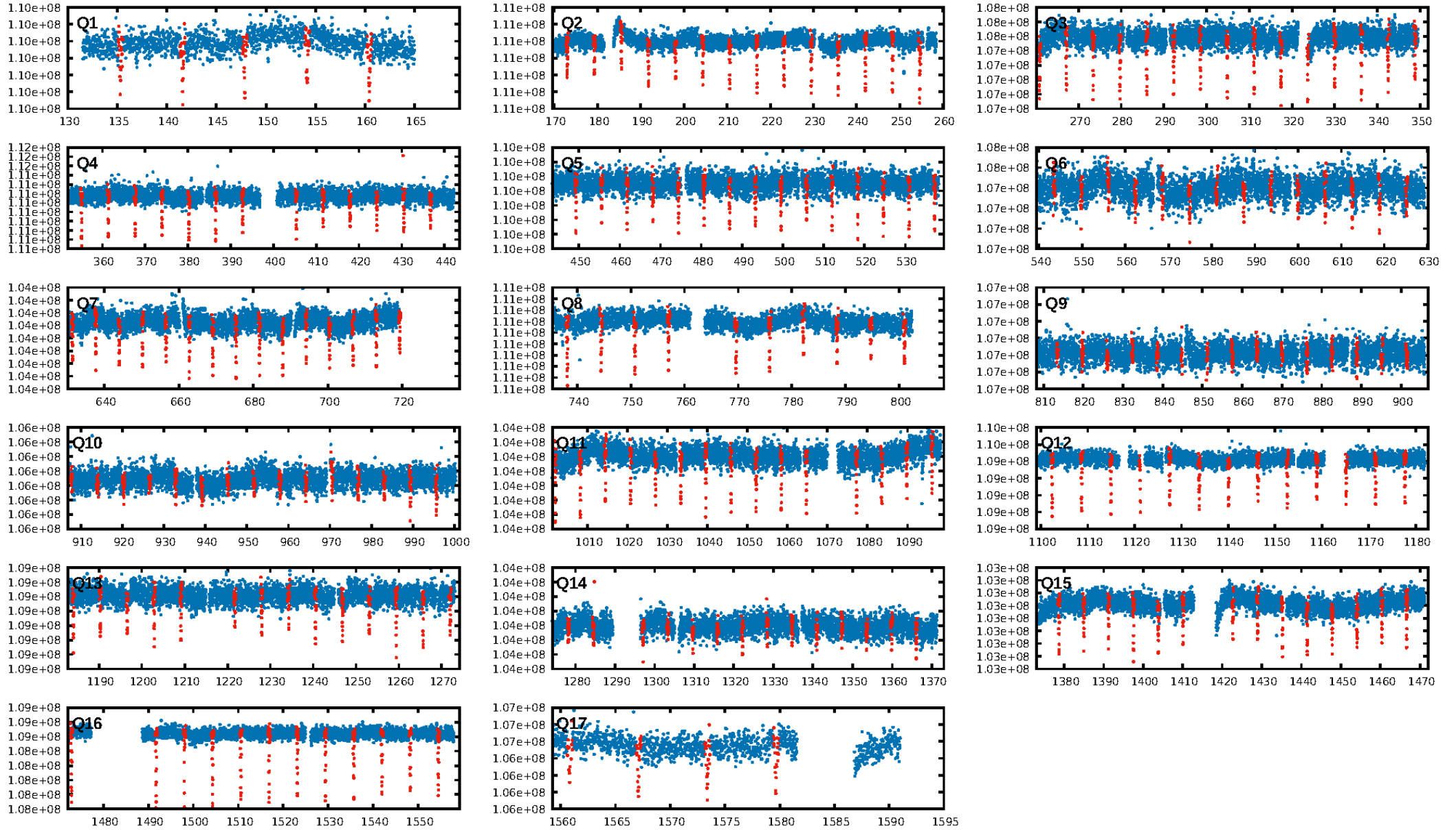
DV Fit Results:

Period = 6.27989 [0.00001] d
Epoch = 135.2975 [0.0010] BKJD
Rp/R* = 0.0670 [0.0172]
a/R* = 3.24 [0.16]
b = 1.00 [0.06]
Seff = 3289.66 [2522.74]
Teq = 1931 [370] K
Rp = 45.50 [26.89] Re
a = 0.0830 [0.0404] AU
Ag = 0.04 [0.04] [-23.47σ]
Teffp = 1345 [221] K [-1.36σ]

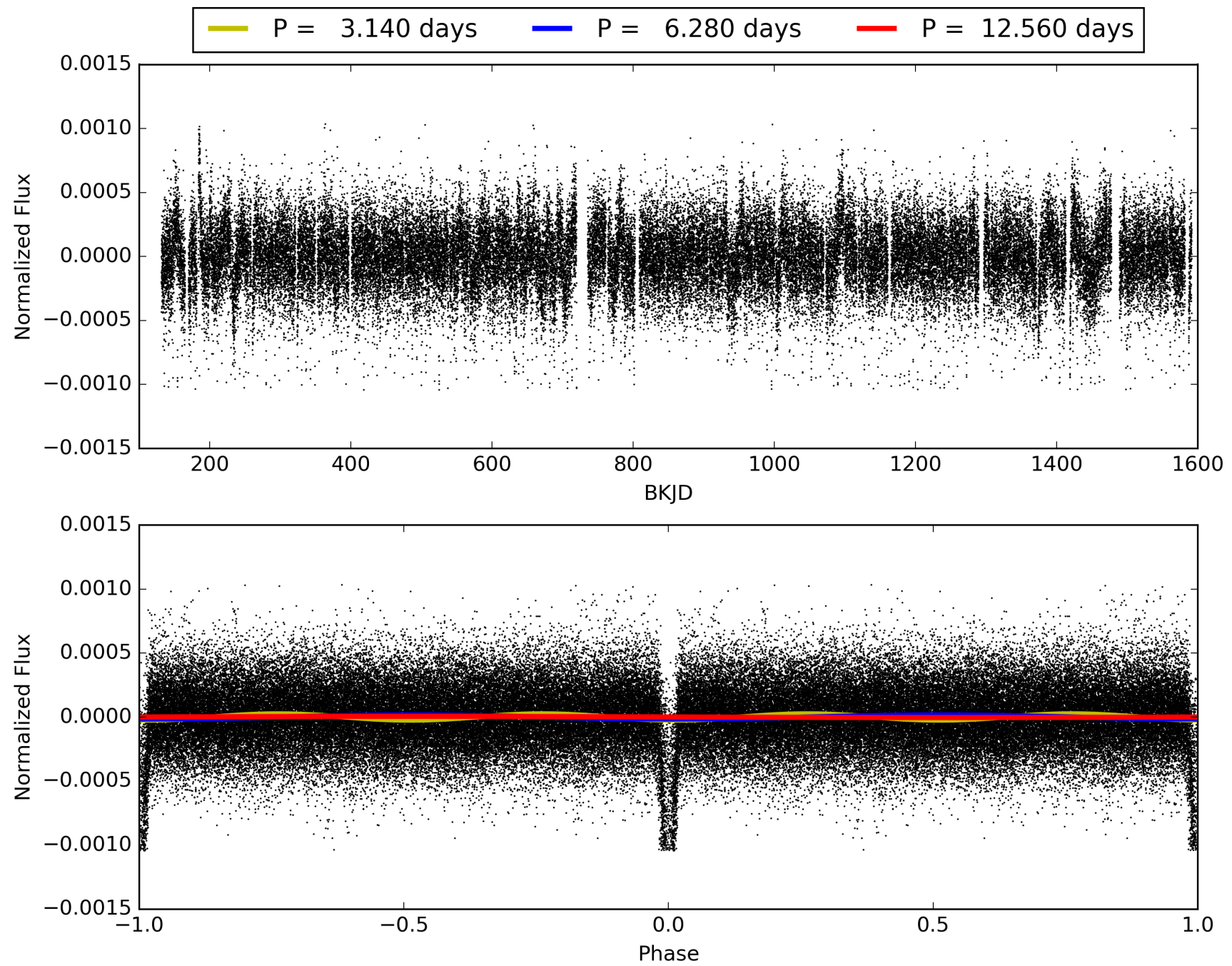
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [207/207]
GhostDiagnostic-chr: 0.01765
Centroid-sig: 0.0%
Centroid-so: 18.441 arcsec [511.28σ]
OotOffset-rm: 6.417 arcsec [94.29σ]
KicOffset-rm: 6.630 arcsec [95.95σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008255058-01, PDC Light Curves

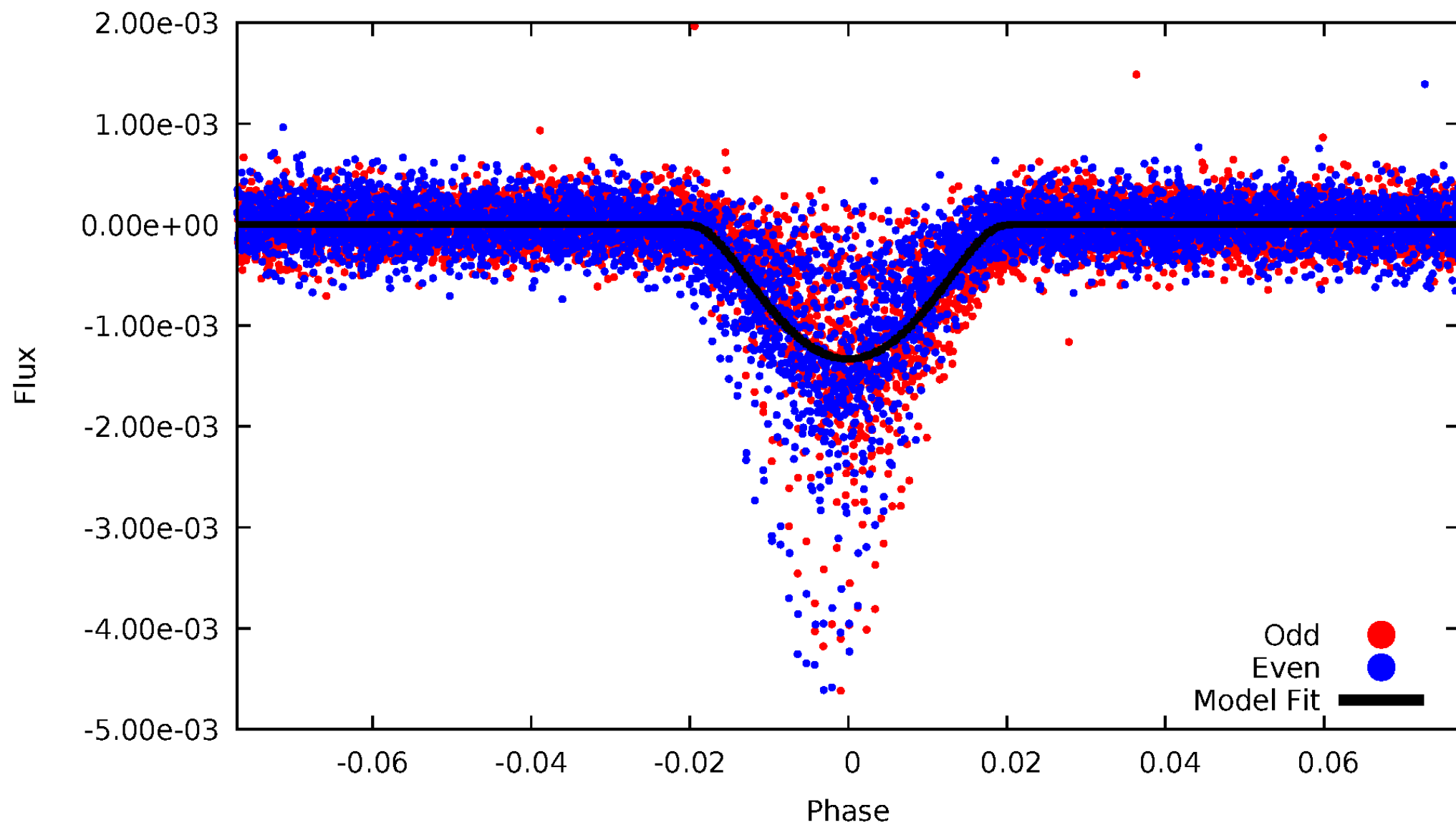


TCE 008255058-01



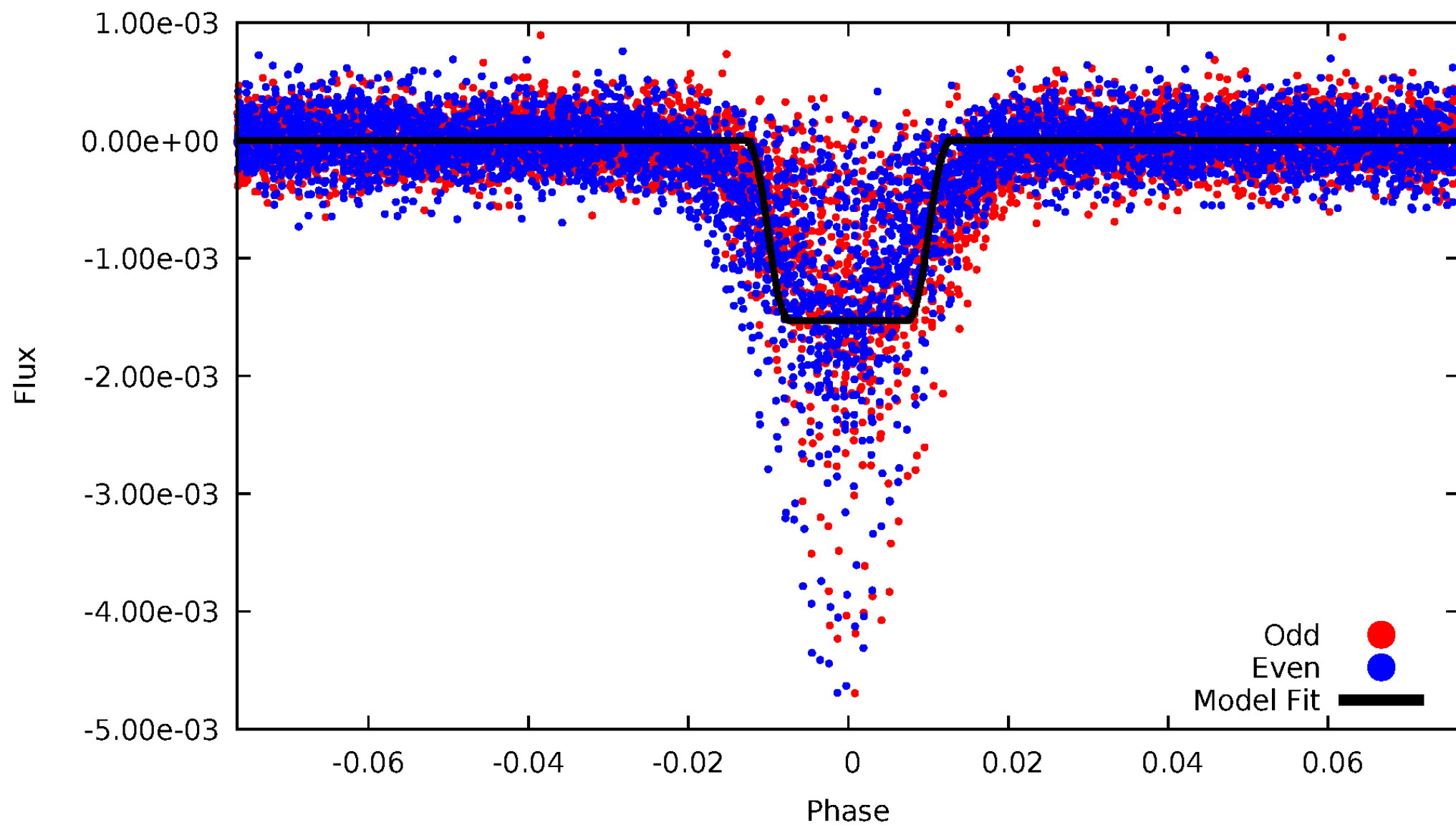
DV Odd/Even

TCE 008255058-01



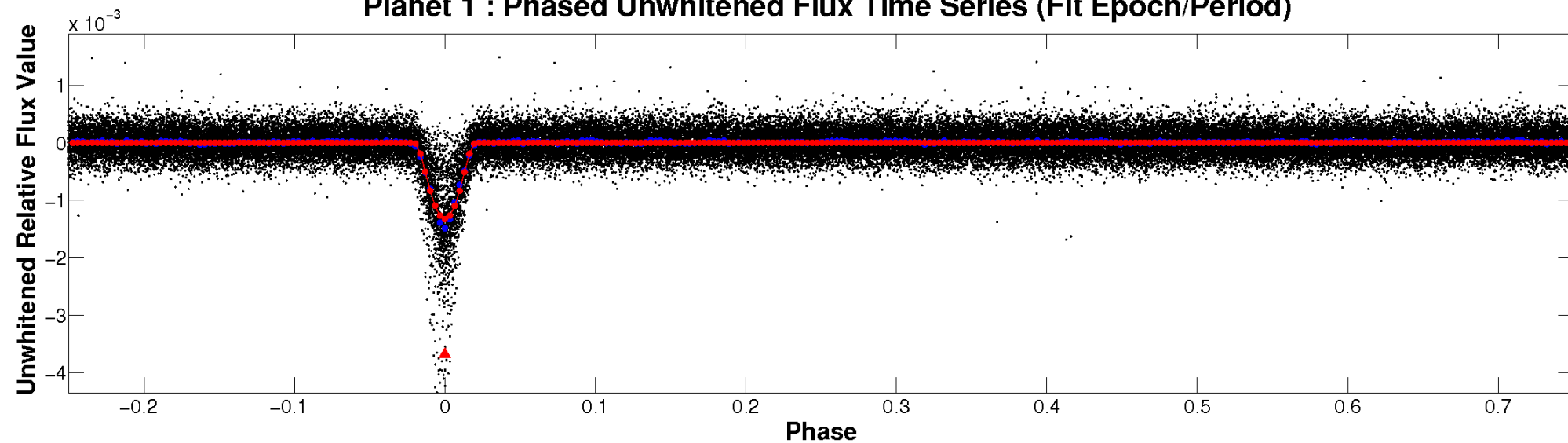
ALT Odd/Even

TCE 008255058-01

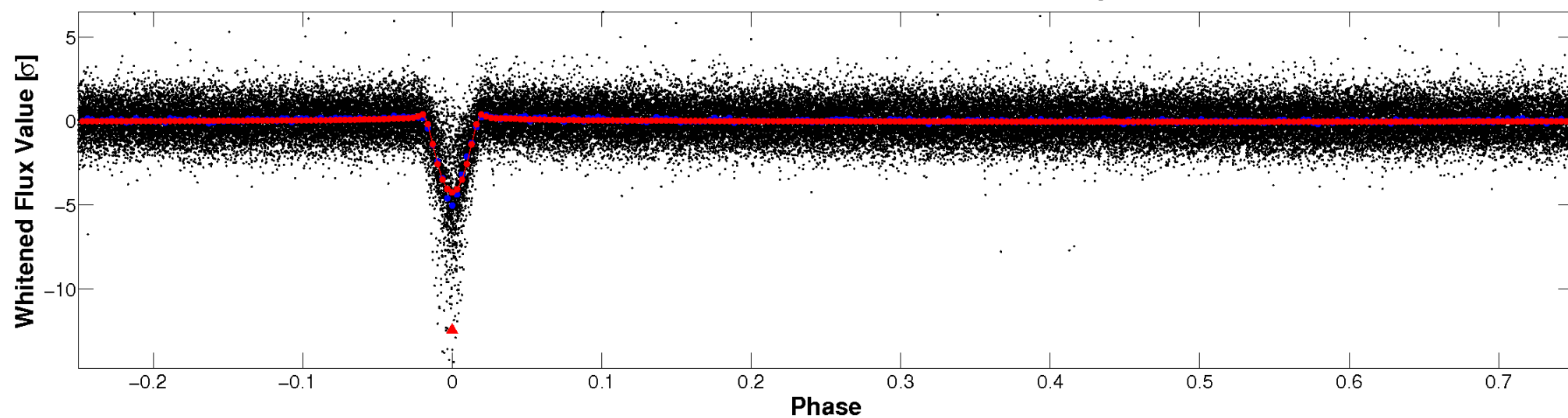


Non-Whitened Vs. Whitened Light Curve

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

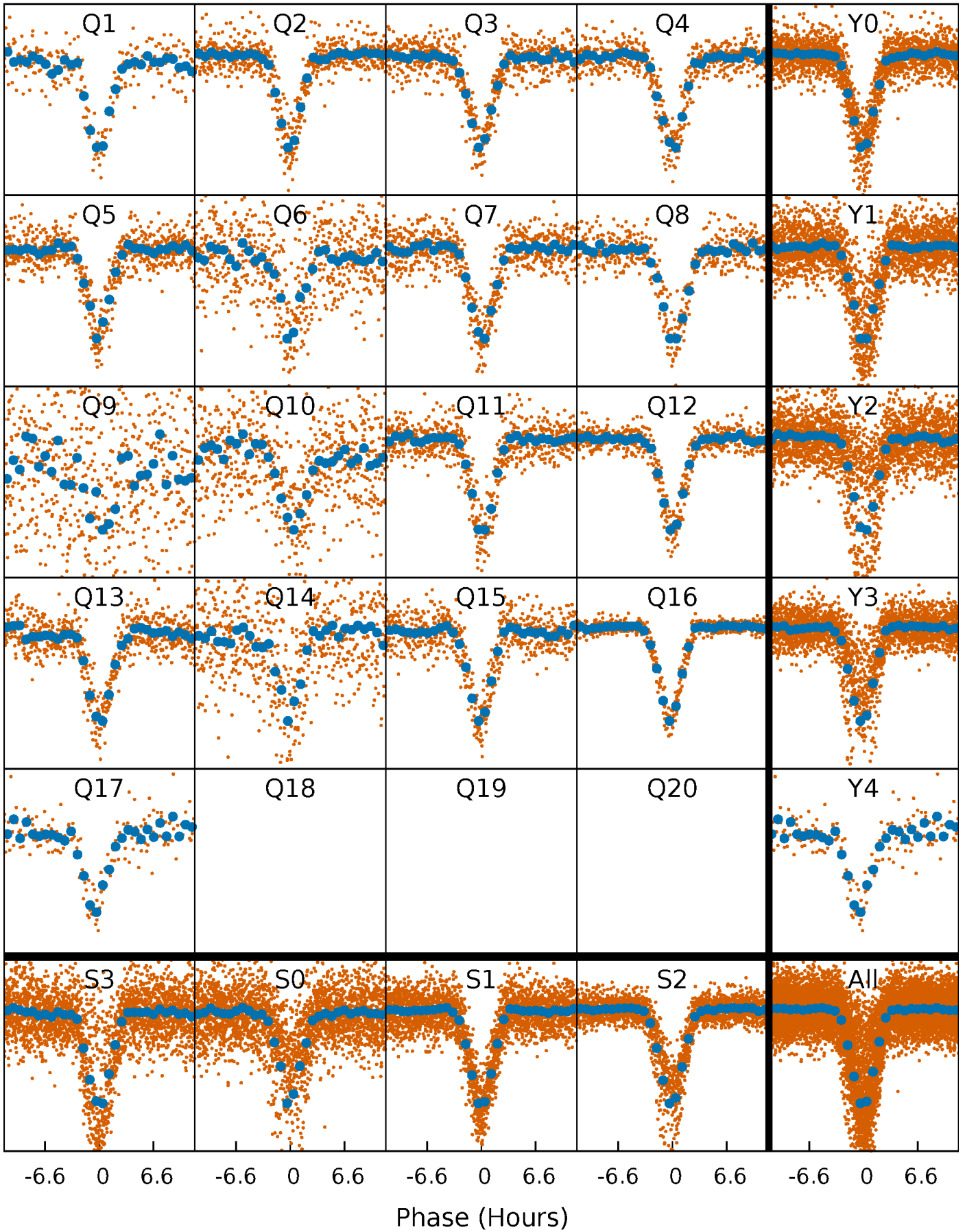


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



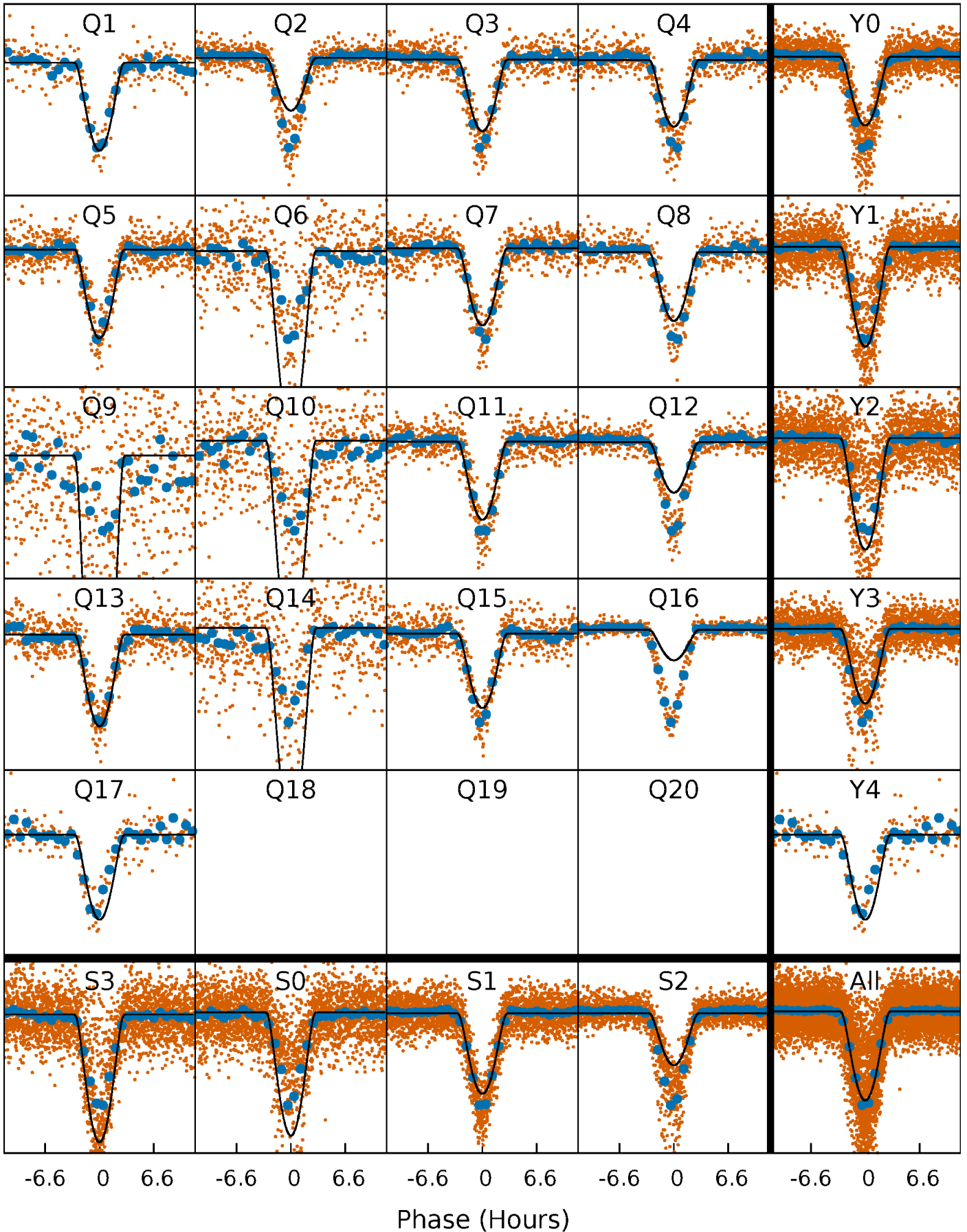
PDC Quarter-Phased Transit Curves

TCE 008255058-01 P= 6.279886 Days $T_0=135.297454$ (BKJD)



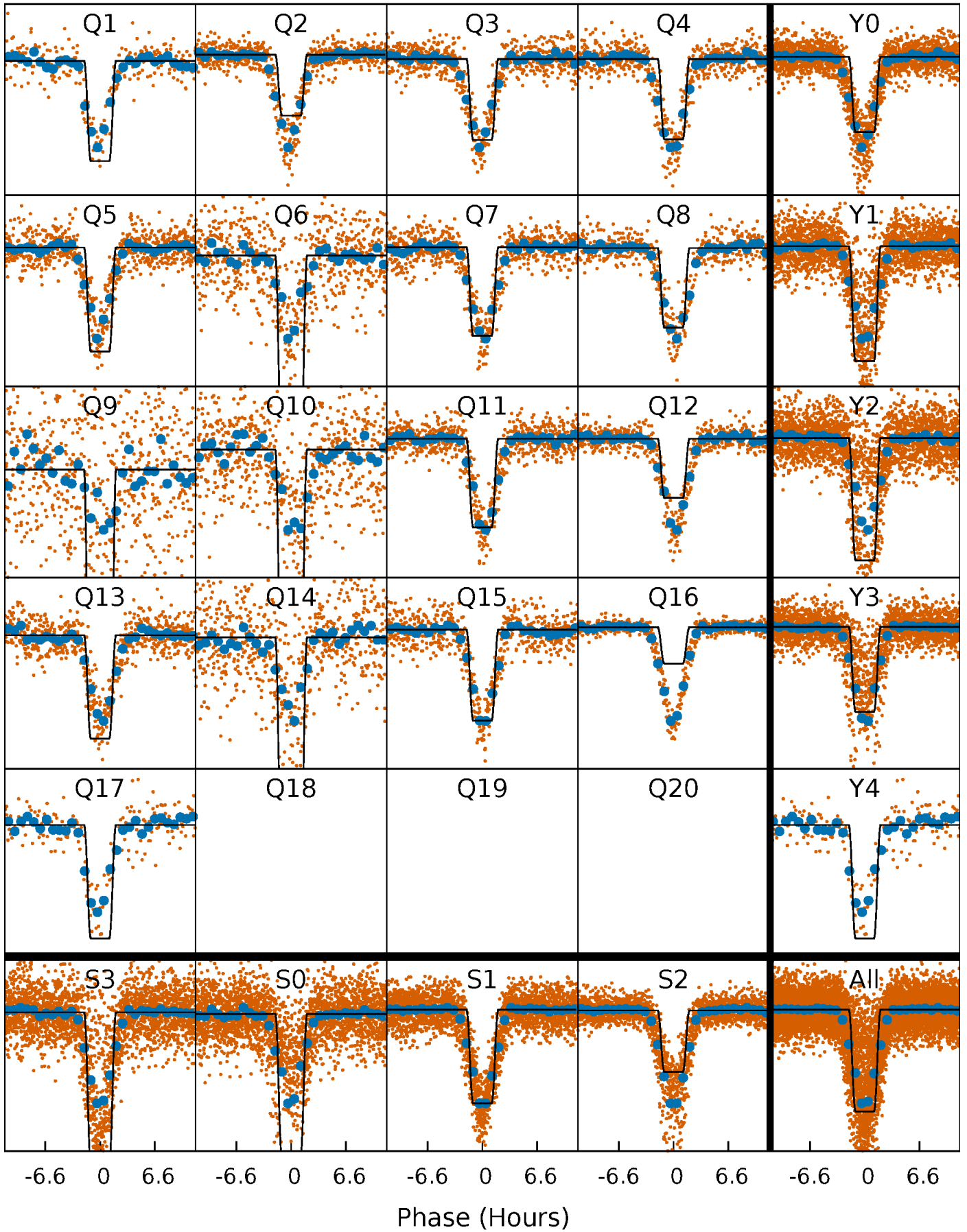
DV Quarter-Phased Transit Curves

TCE 008255058-01 P= 6.279886 Days $T_0=135.297454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

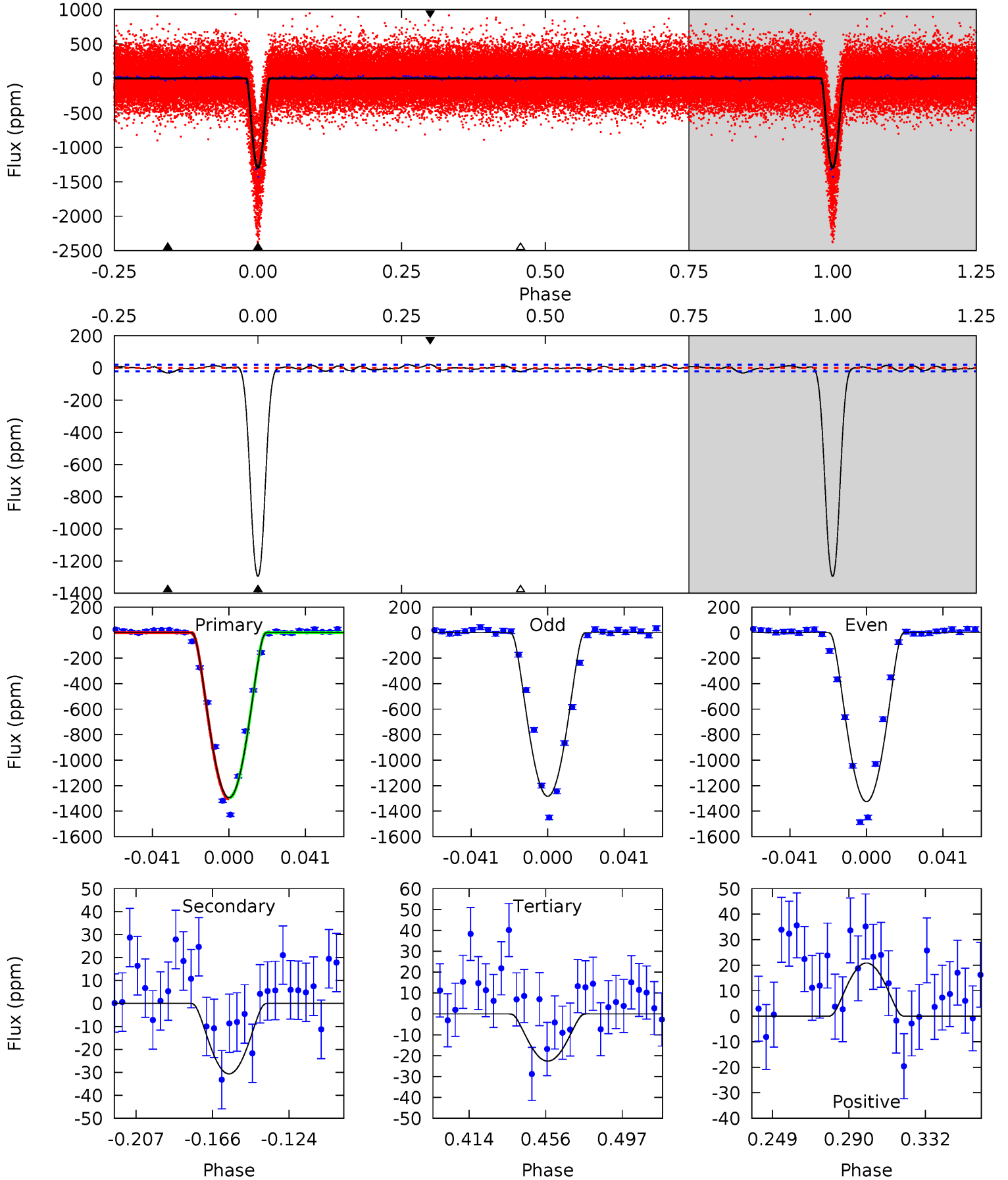
TCE 008255058-01 P= 6.279797 Days $T_0=135.305732$ (BKJD)



DV Model-Shift Uniqueness Test

008255058-01, P = 6.279886 Days, E = 129.017568 Days

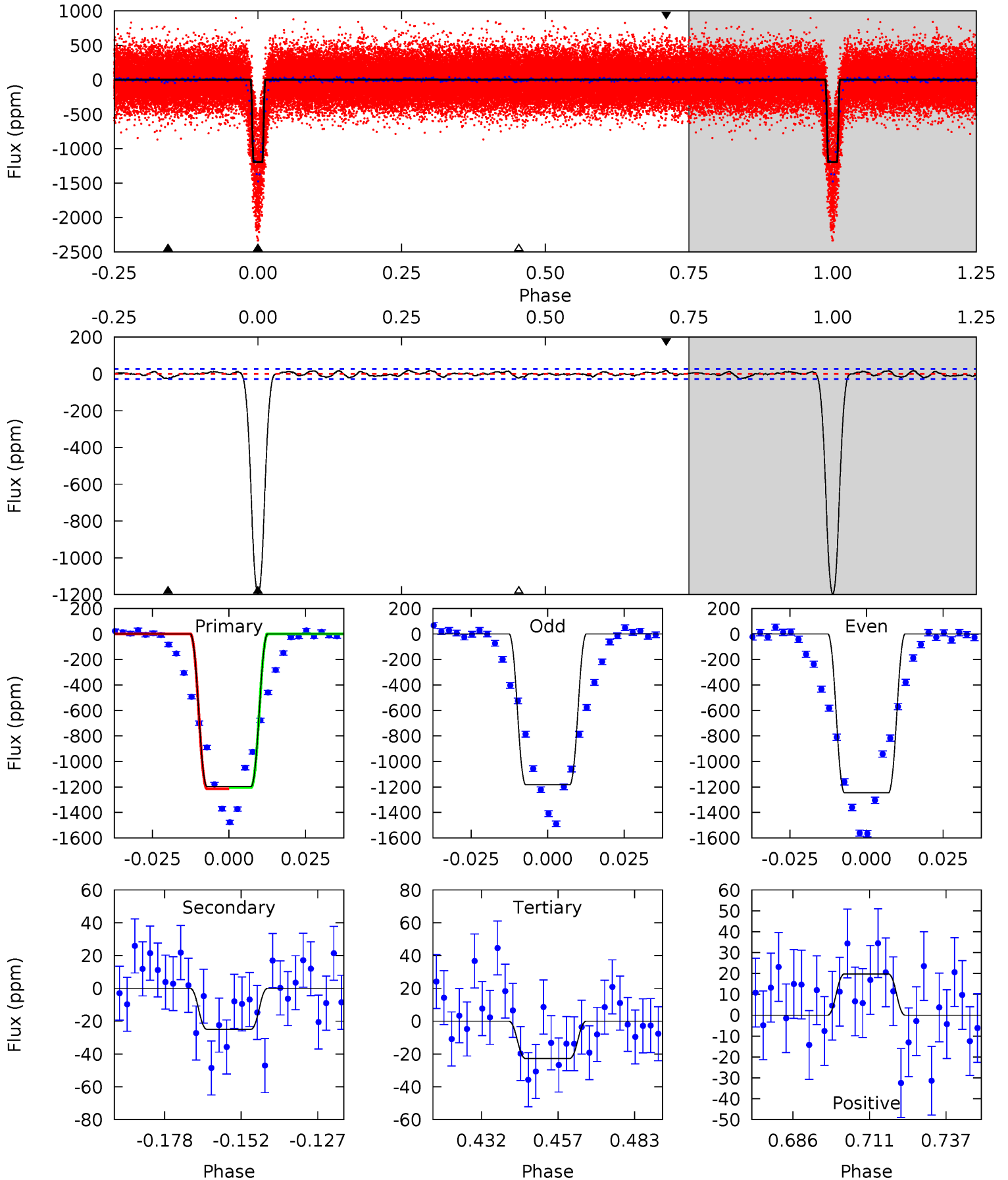
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
299.0	7.08	5.23	4.82	4.75	2.04	2.01	293.8	294.2	1.85	2.26	4.80	1.00	0.02	0



Alt Model-Shift Uniqueness Test

008255058-01, P = 6.279797 Days, E = 129.025935 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
210.7	4.39	4.01	3.48	4.84	2.24	1.48	206.7	207.2	0.38	0.92	5.53	1.00	0.02	0.74



Stellar Parameters For KIC 008255058

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5057^{+112}_{-162}	$3.137^{+0.435}_{-0.234}$	$0.000^{+0.200}_{-0.300}$	$6.222^{+1.782}_{-3.310}$	$1.936^{+0.707}_{-0.864}$	$0.011^{+0.056}_{-0.006}$
	+2%/-3%	+14%/-7%	+inf%/-inf%	+29%/-53%	+37%/-45%	+492%/-54%
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 008255058-01 / KOI 5495.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-31 ± 4	$43.62^{+17.70}_{-15.22}$	2678^{+254}_{-291}	-2774^{+264}_{-192}	$0.062^{+0.078}_{-0.030}$
Alt.	-25 ± 6	$25.58^{+14.67}_{-11.65}$	2670^{+254}_{-347}	-2591^{+5182}_{-288}	$0.148^{+0.359}_{-0.092}$

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

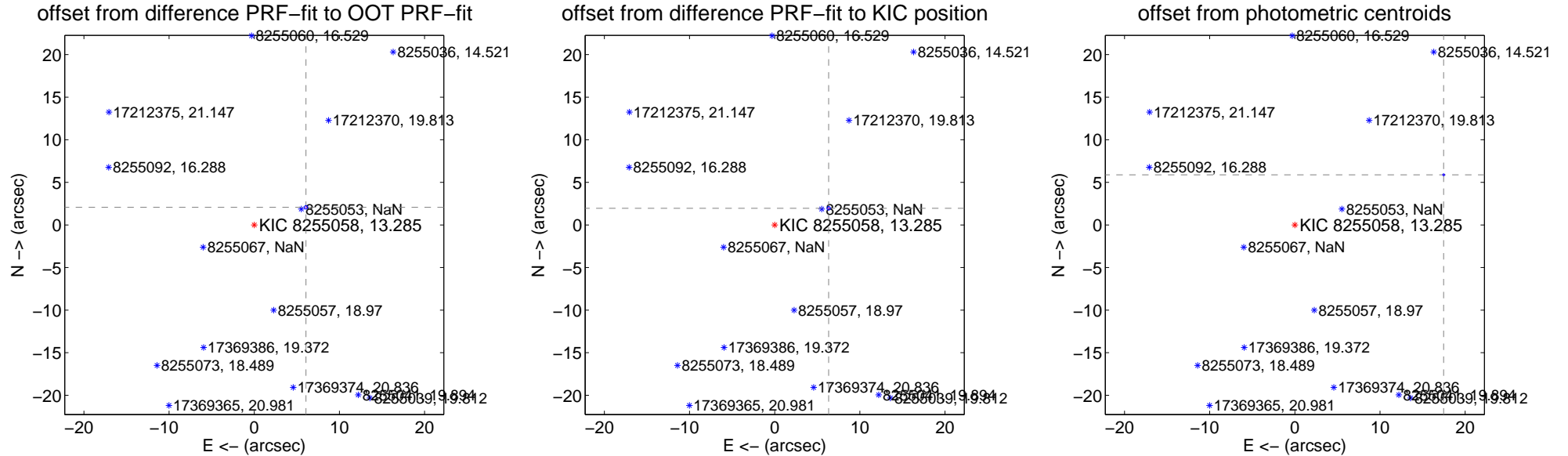
DV Centroid Data

Supplemental centroid analysis for 008255058-01. Kepler magnitude: 13.29. Transit SNR 119.12

There are 17 quarters with good PRF difference image offsets

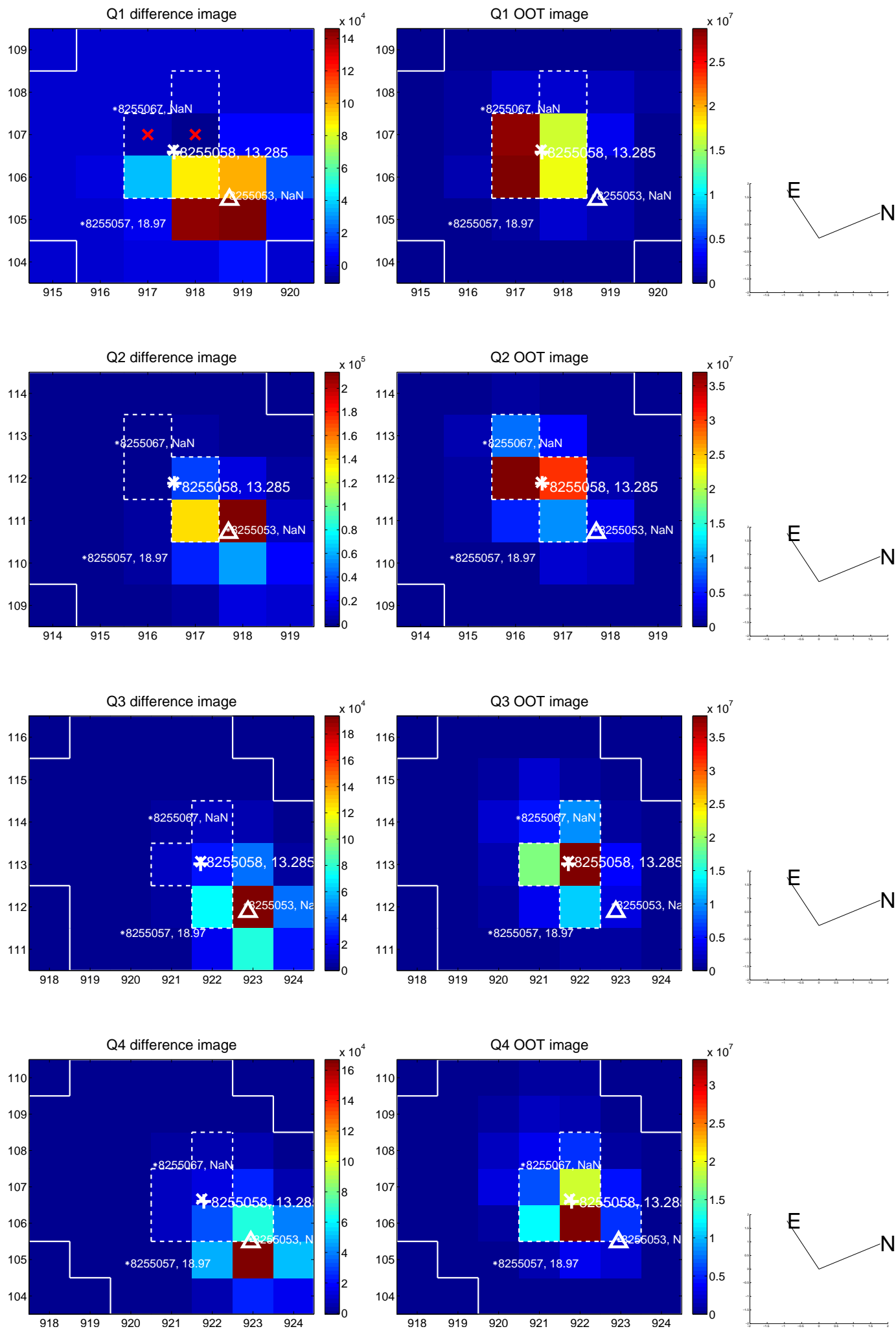
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.417 \pm 0.068	94.29	-6.075 \pm 0.068	2.068 \pm 0.067
PRF-fit source offset from KIC position	6.630 \pm 0.069	95.95	-6.335 \pm 0.070	1.955 \pm 0.069
photometric centroid source offset	18.44 \pm 0.04	511.28	-17.48 \pm 0.04	5.89 \pm 0.04

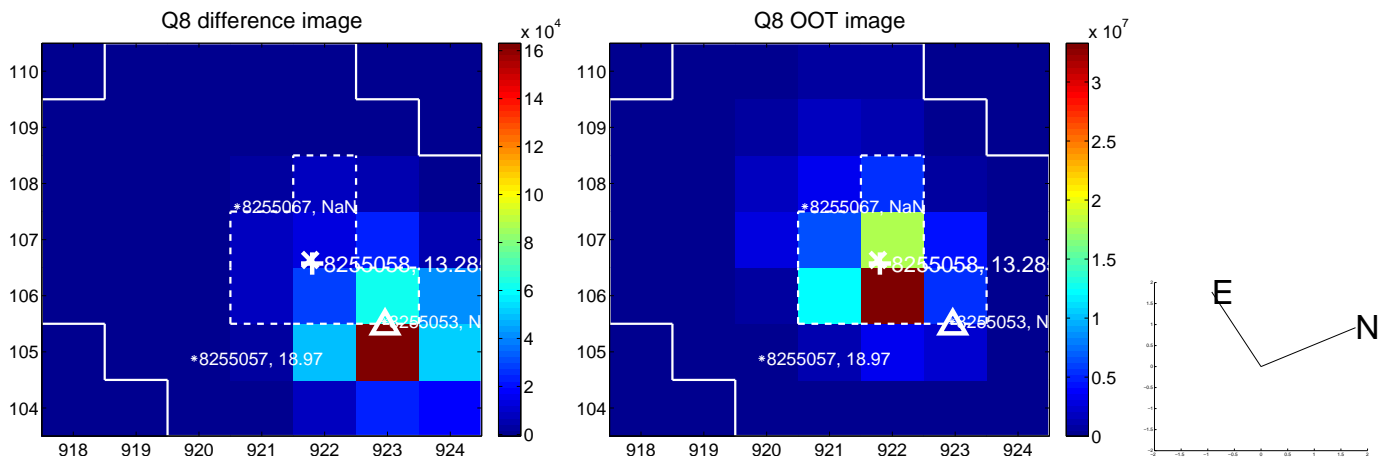
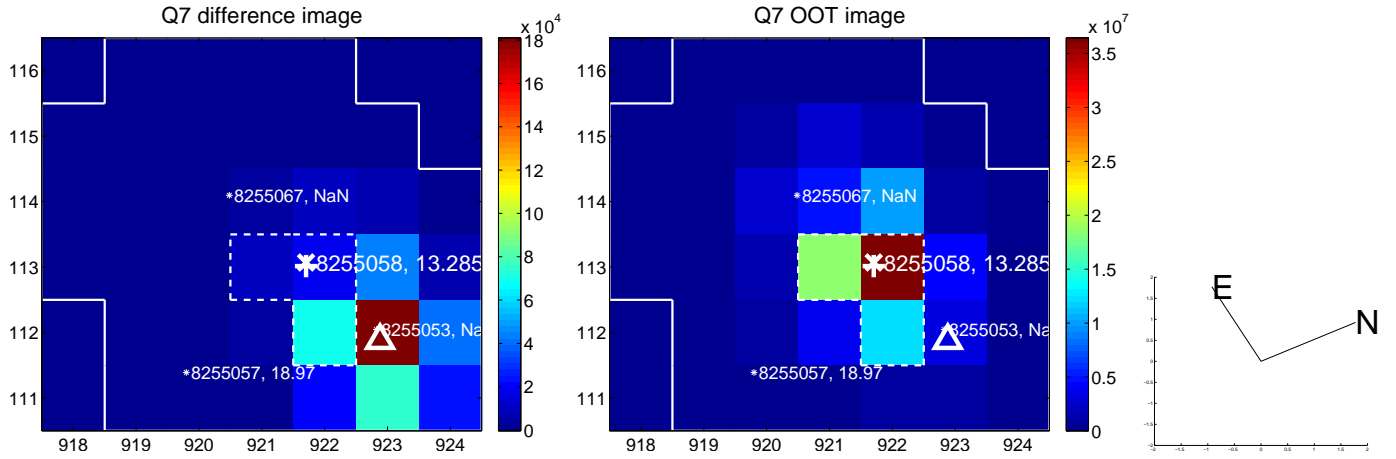
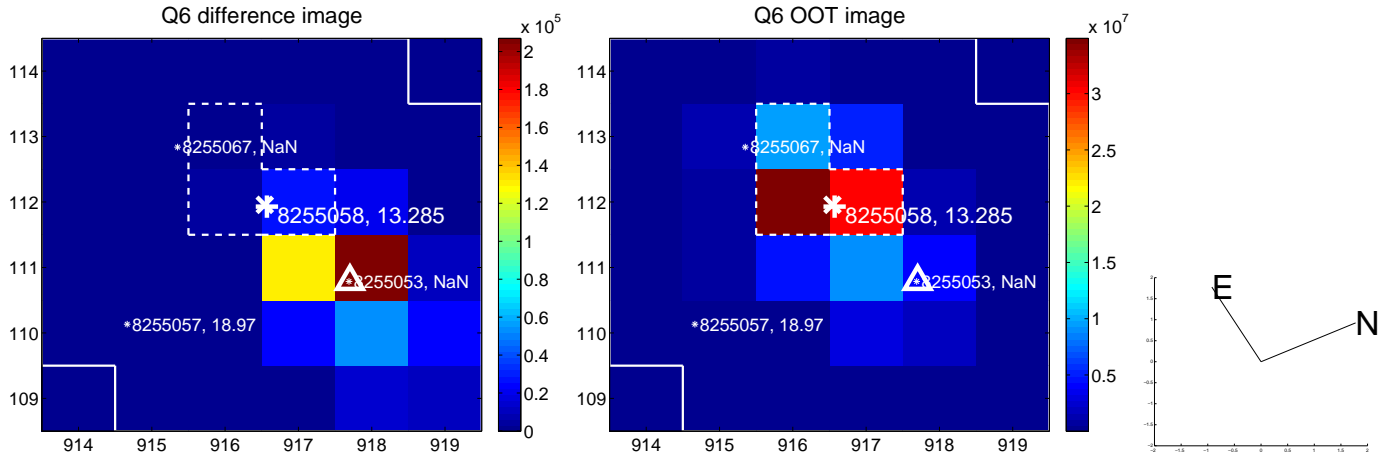
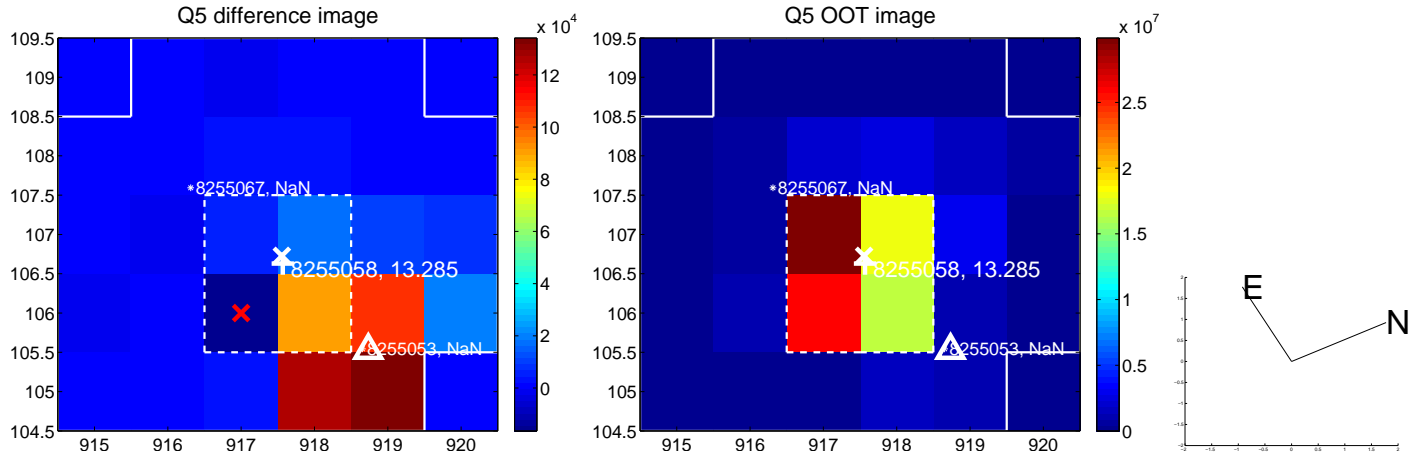


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

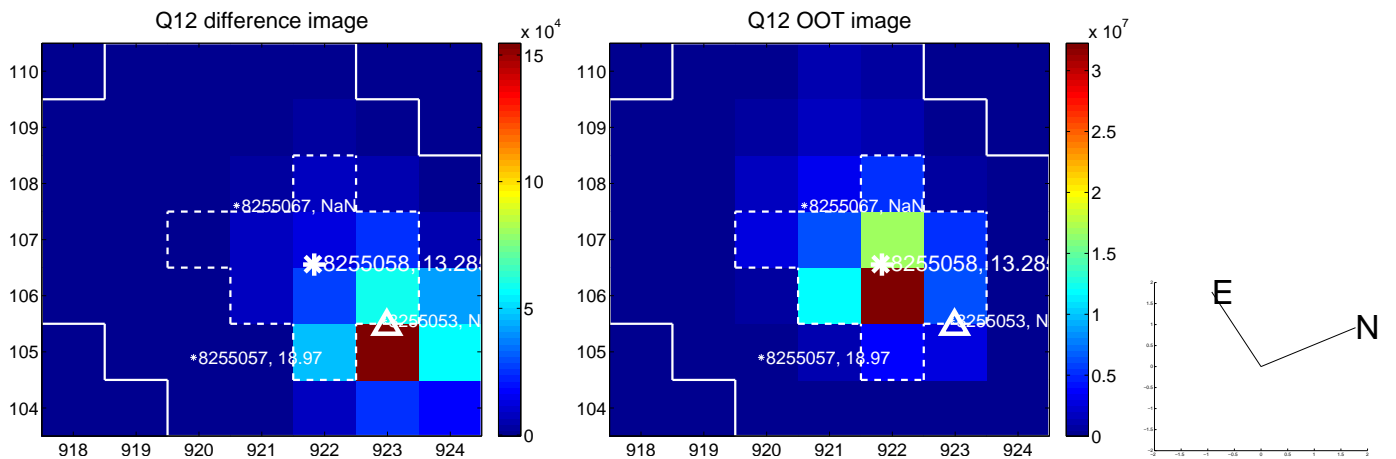
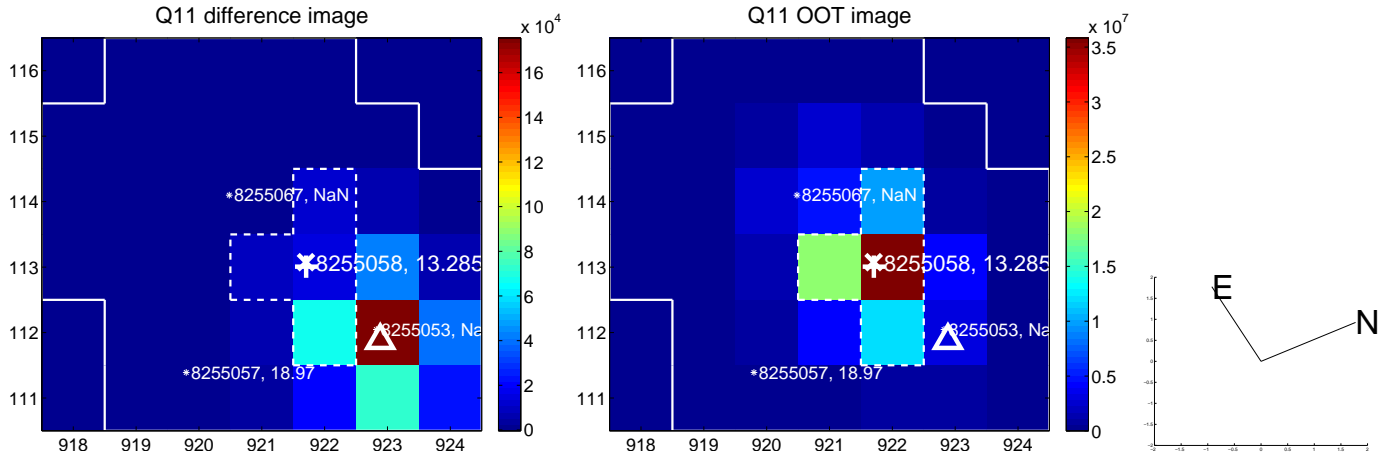
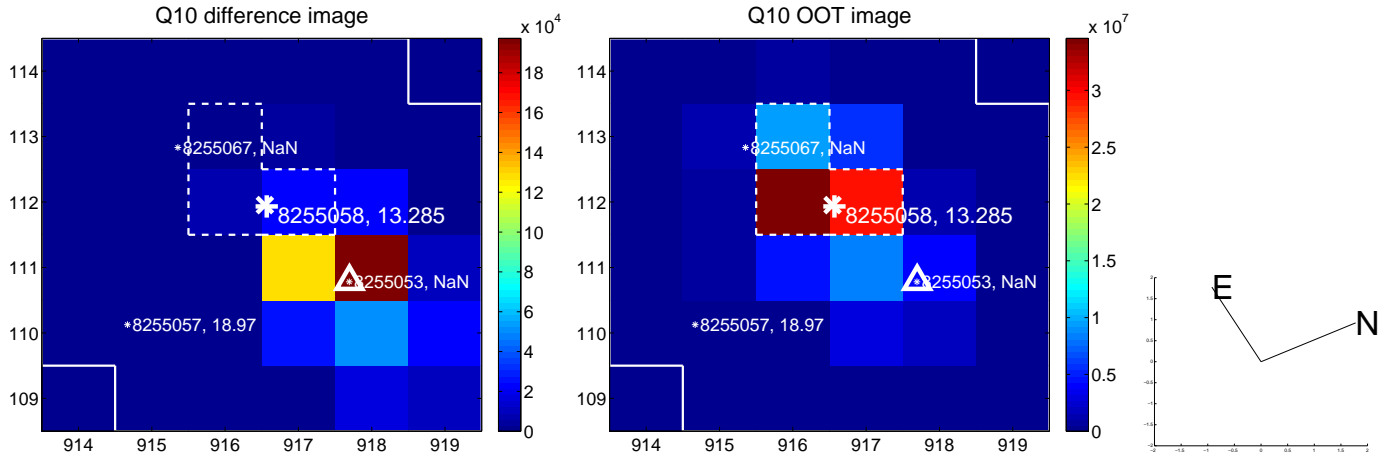
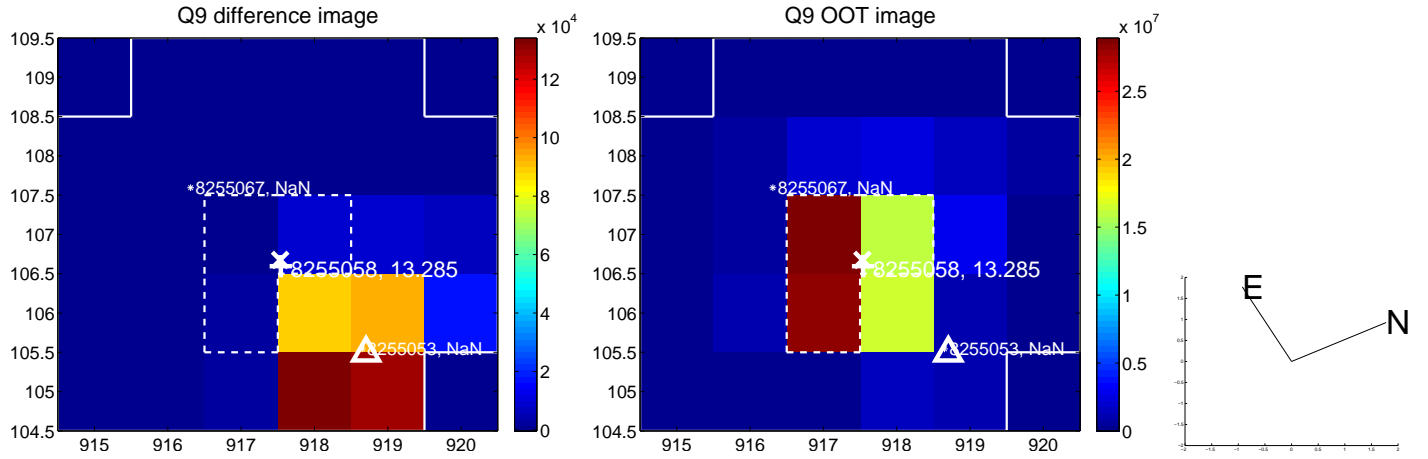
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



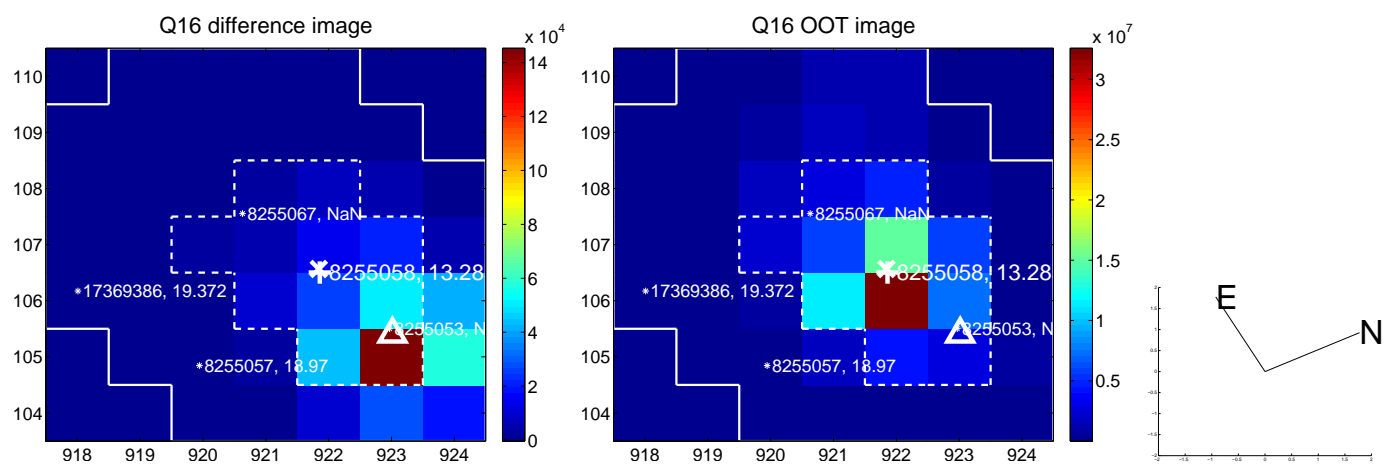
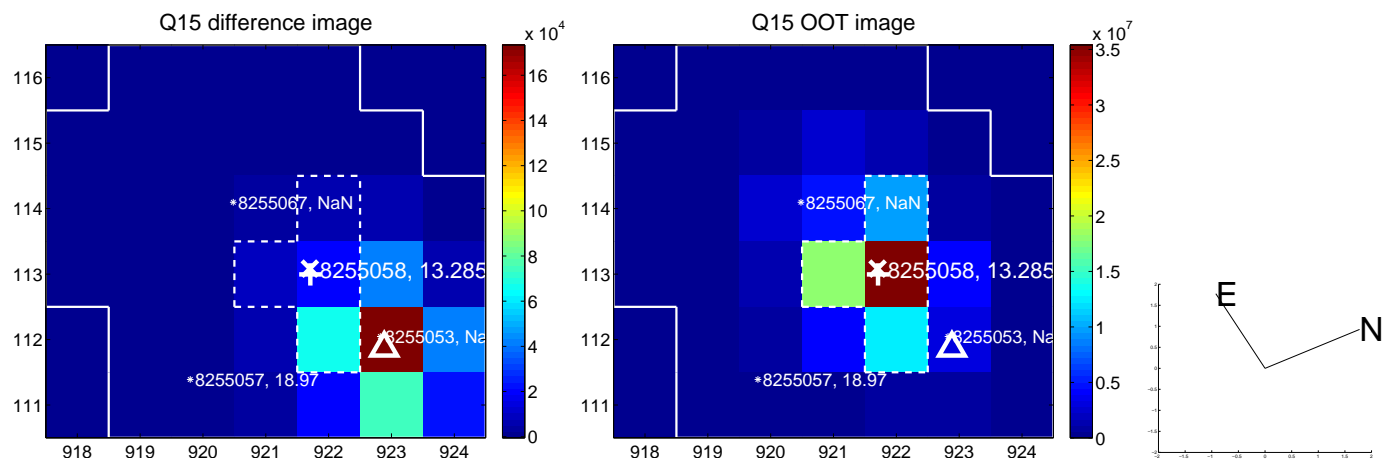
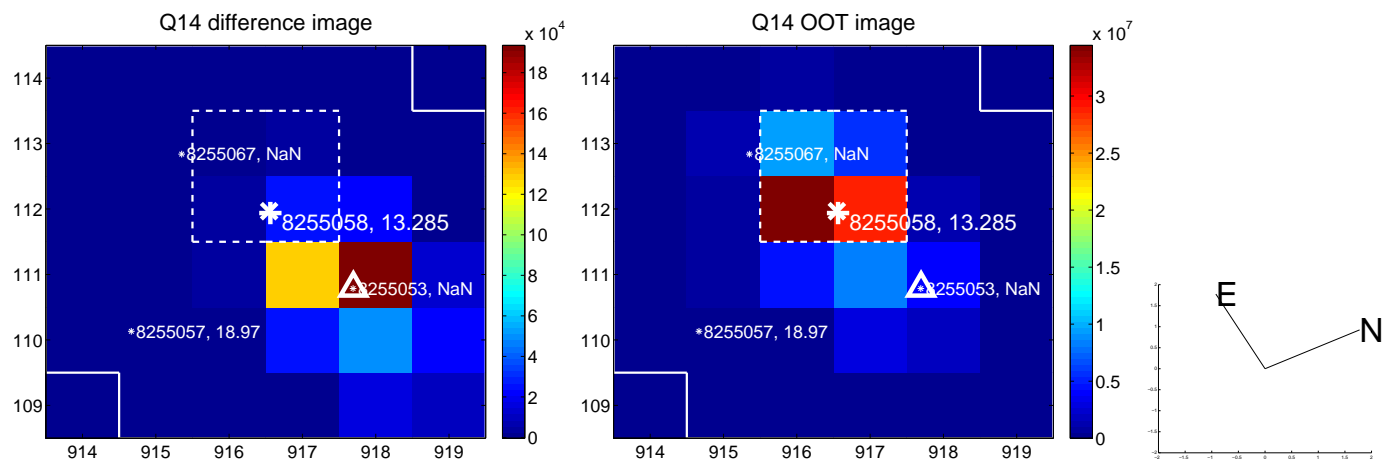
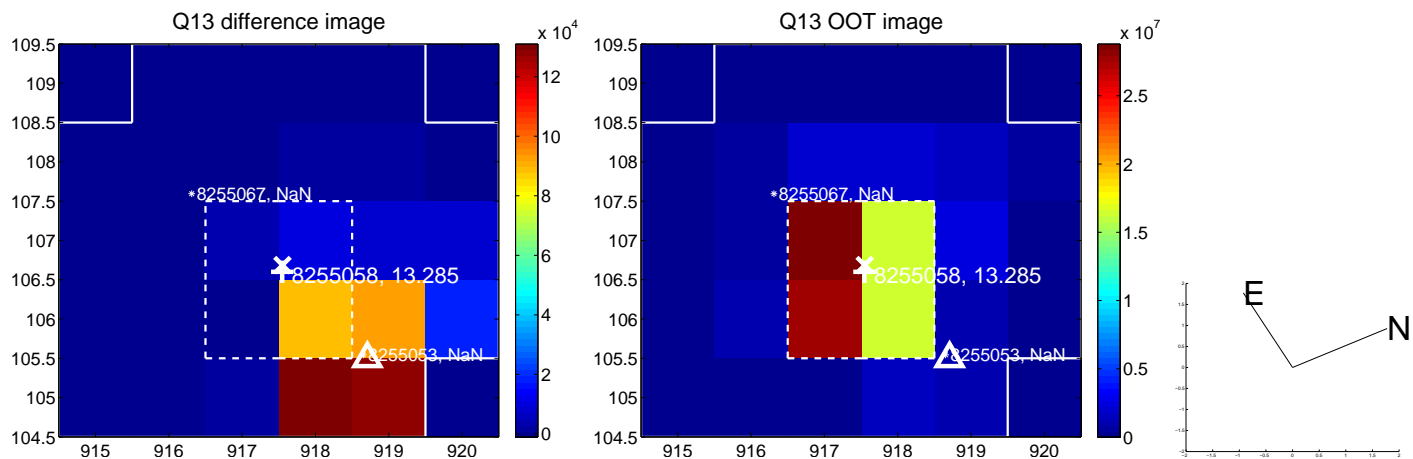
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



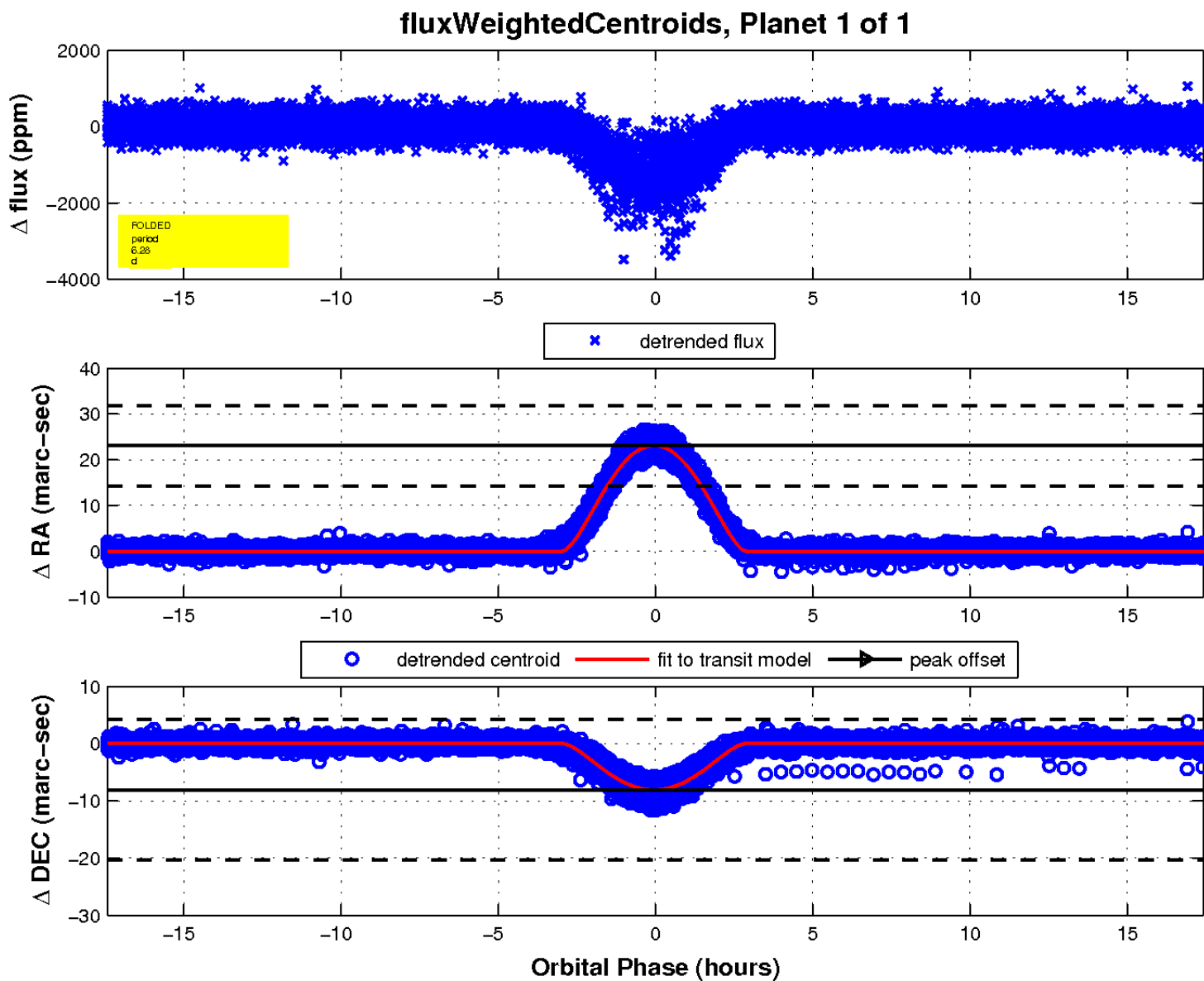
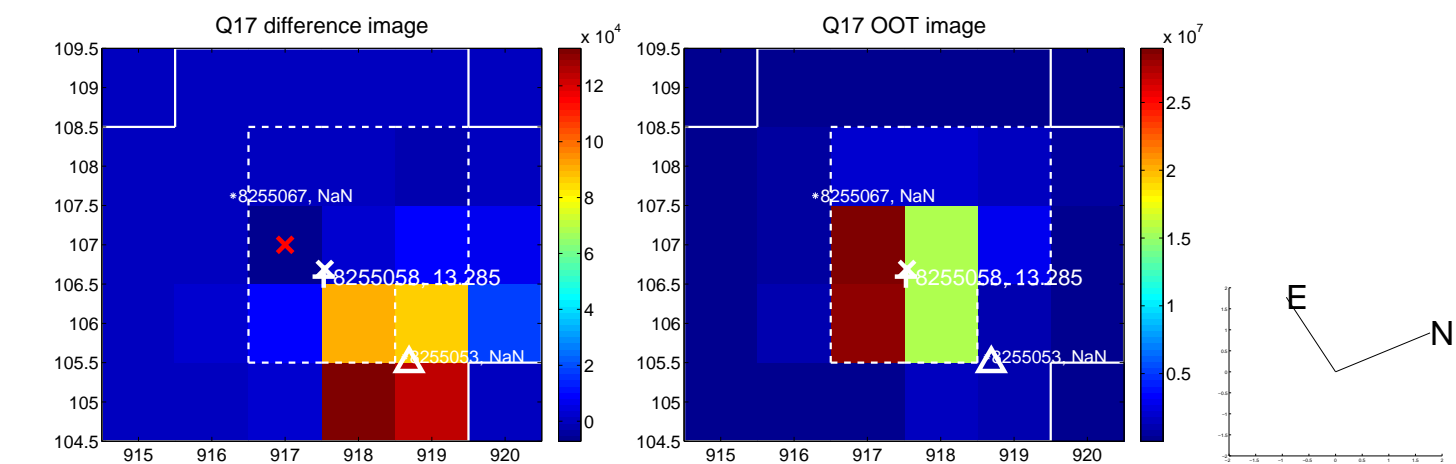
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

