

KIC 010585852

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})
010585852-01	OBS	1314.01	8.575077	131.562998	147.4	8.940	22.2	23.5	3.46	4986	5.08	843.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010585852-01	OBS	PC	1.00	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.

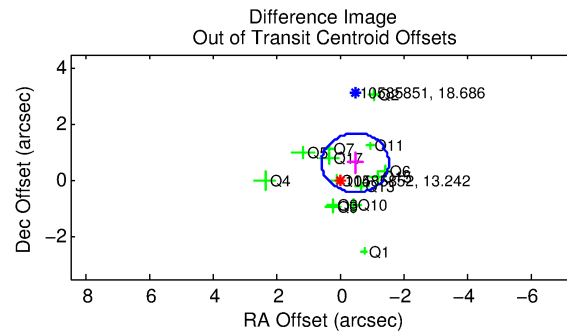
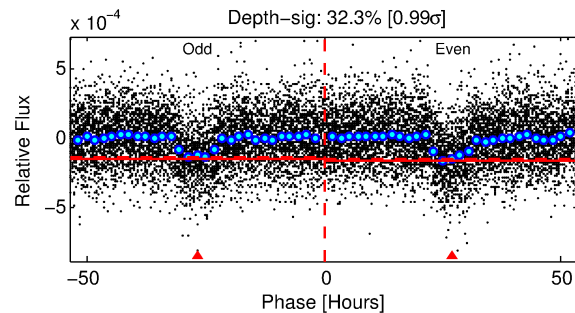
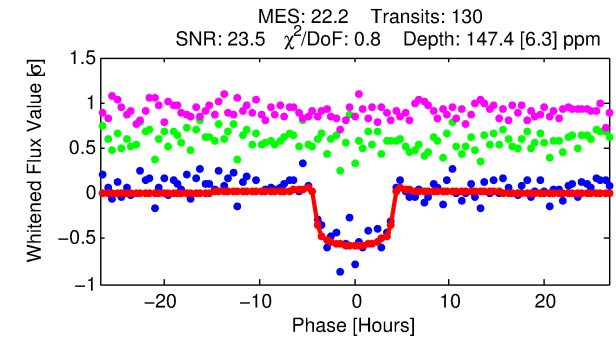
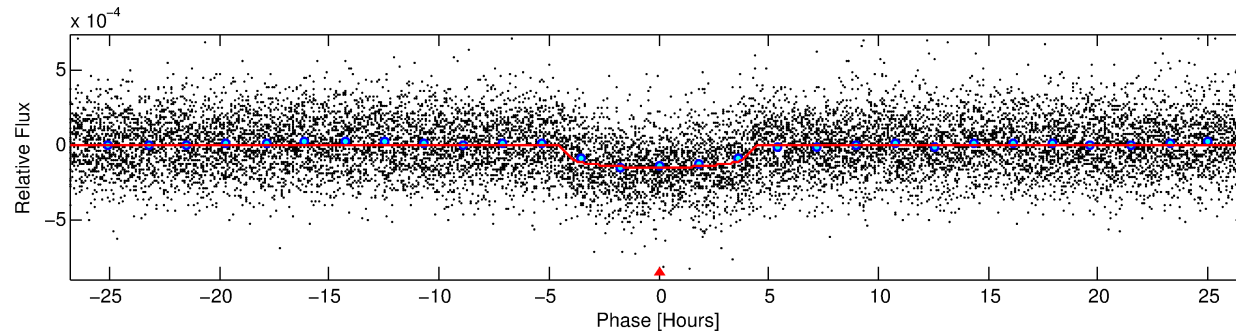
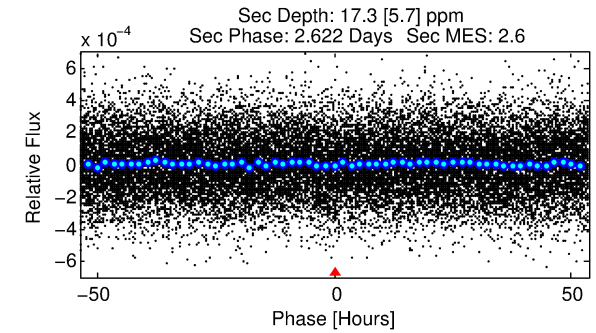
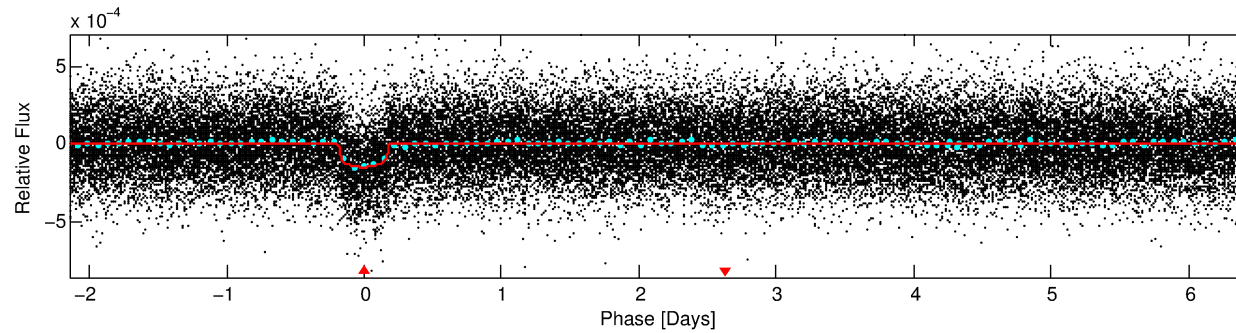
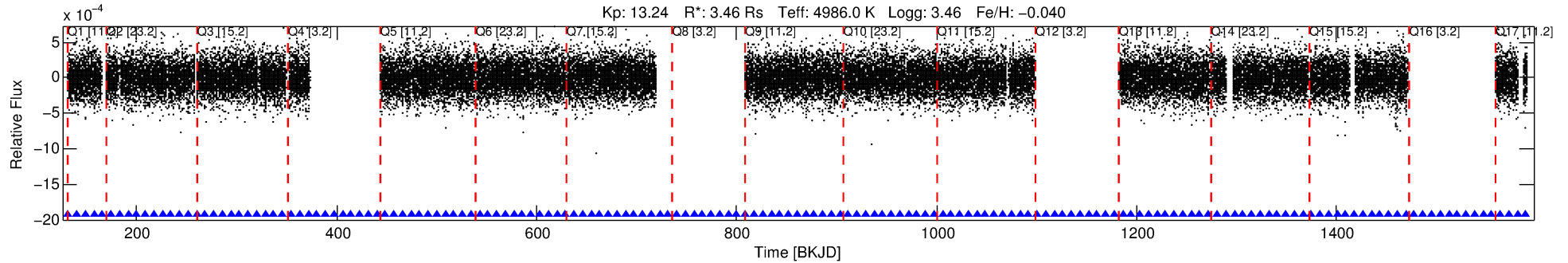
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010585852-01

No Significant Match Found

DV One-Page Summary

KIC: 10585852 Candidate: 1 of 1 Period: 8.575 d
KOI: K01314.01 Corr: 0.978



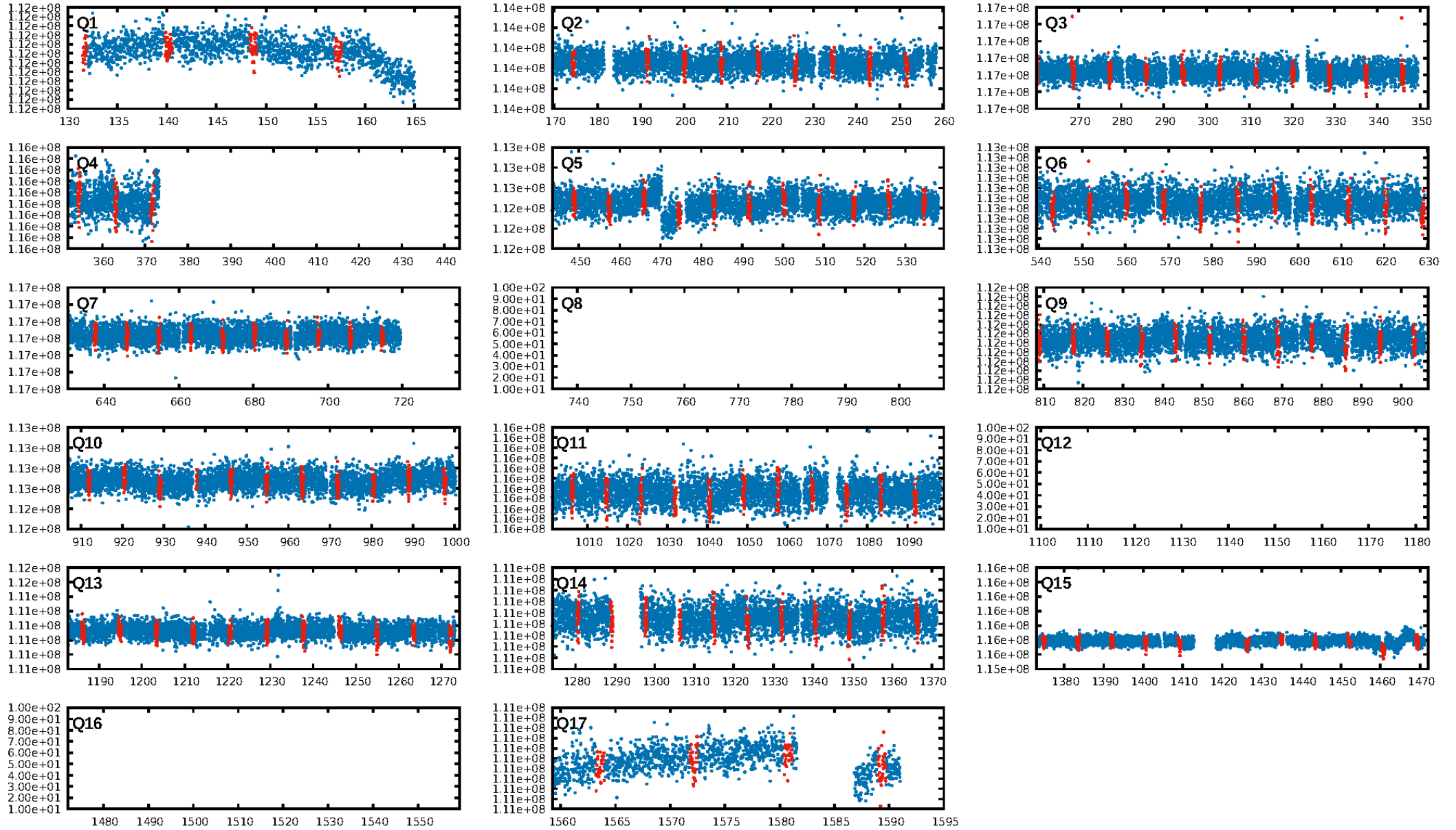
DV Fit Results:

Period = 8.57508 [0.00006] d
Epoch = 131.5630 [0.0052] BKJD
Rp/R* = 0.0134 [0.0012]
a/R* = 3.61 [1.18]
b = 0.89 [0.08]
Seff = 843.28 [72.45]
Teq = 1374 [30] K
Rp = 5.08 [0.67] Re
a = 0.0888 [0.0058] AU
Ag = 2.91 [1.11] [1.72σ]
Teffp = 2774 [263] K [5.28σ]

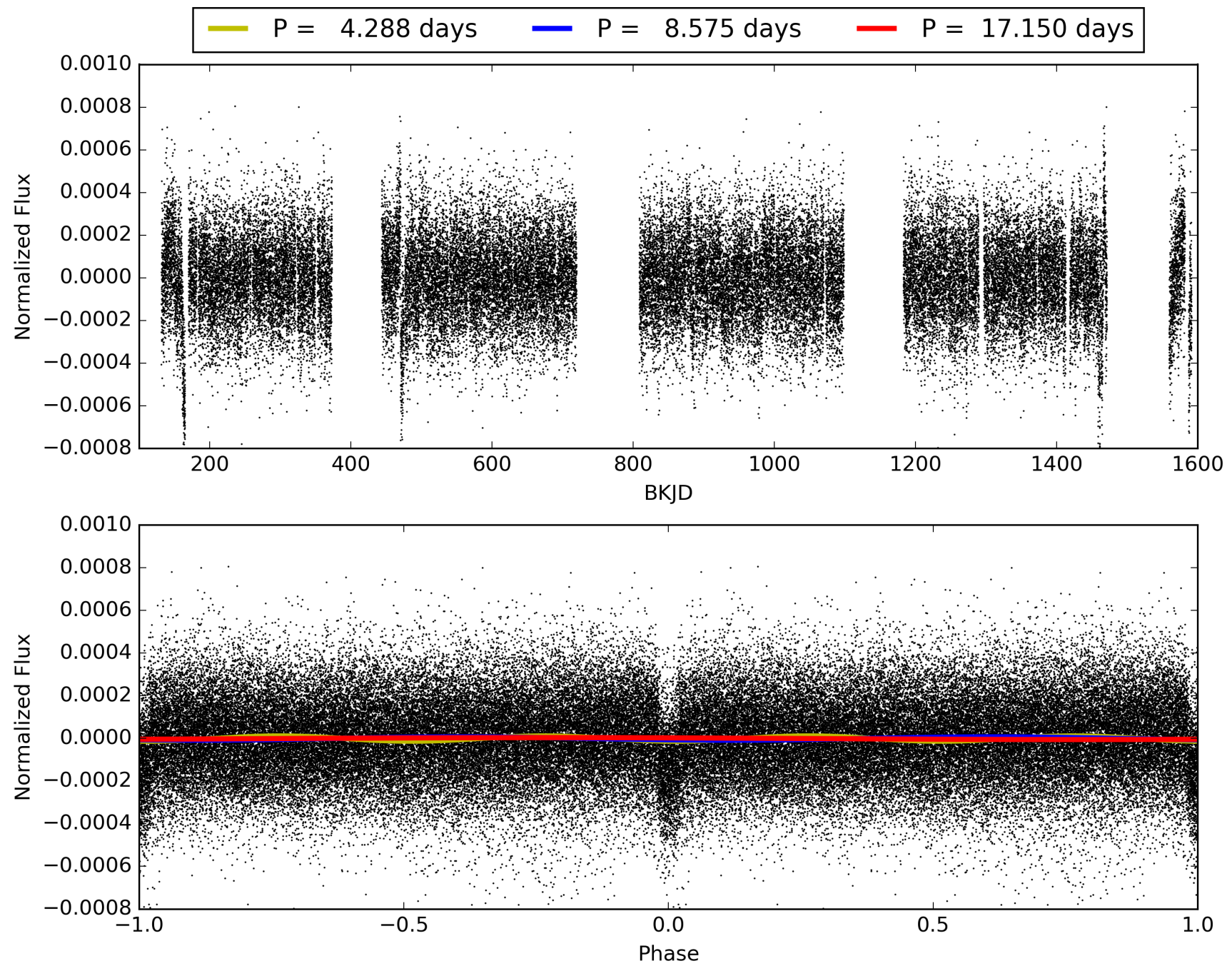
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.45e-94
RollingBand-fgt: 1.00 [119/119]
GhostDiagnostic-chr: 26.39
Centroid-sig: 0.1%
Centroid-so: 0.790 arcsec [2.50σ]
OotOffset-rm: 0.787 arcsec [2.24σ]
KicOffset-rm: 0.652 arcsec [2.08σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010585852-01, PDC Light Curves

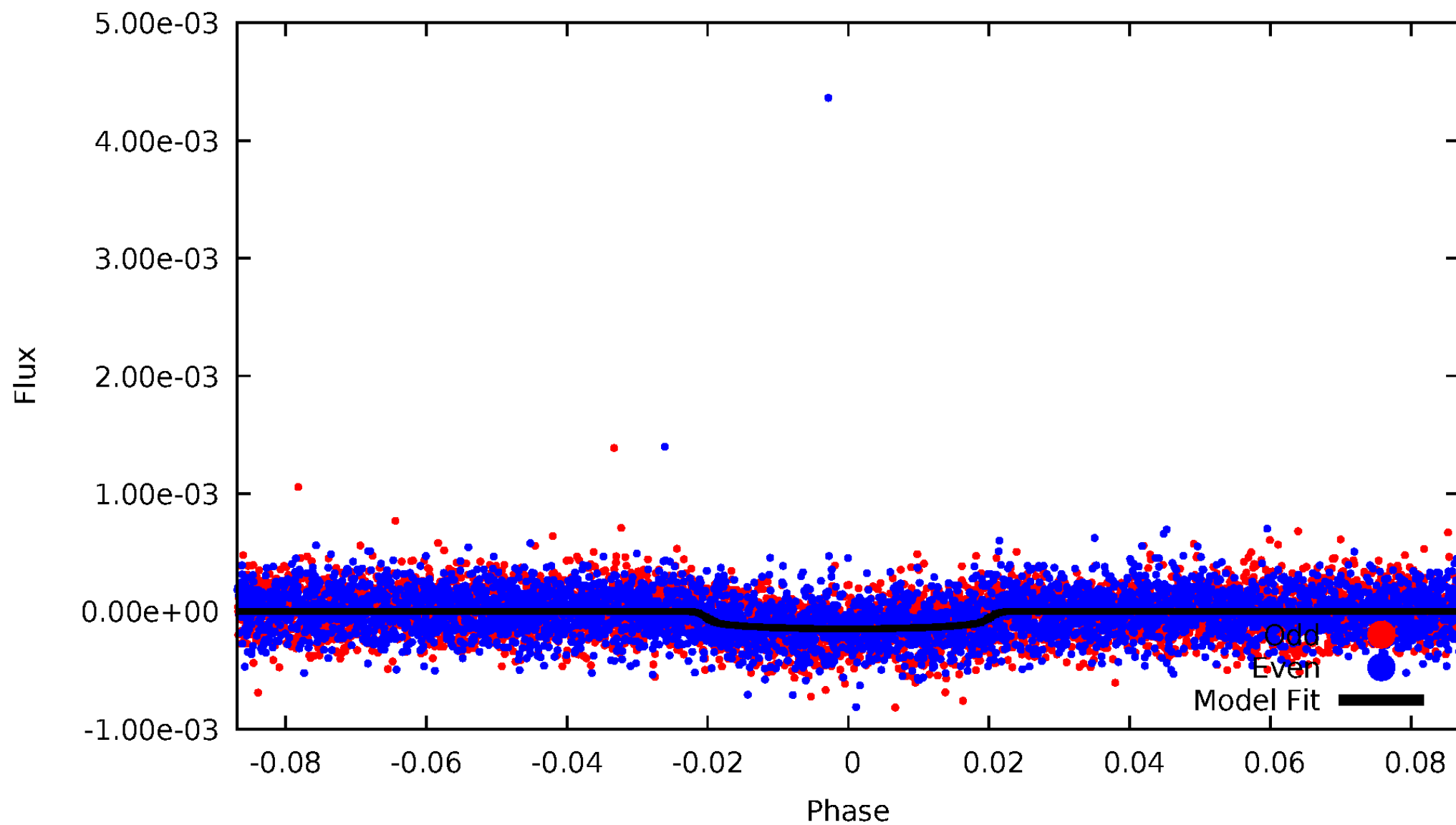


TCE 010585852-01



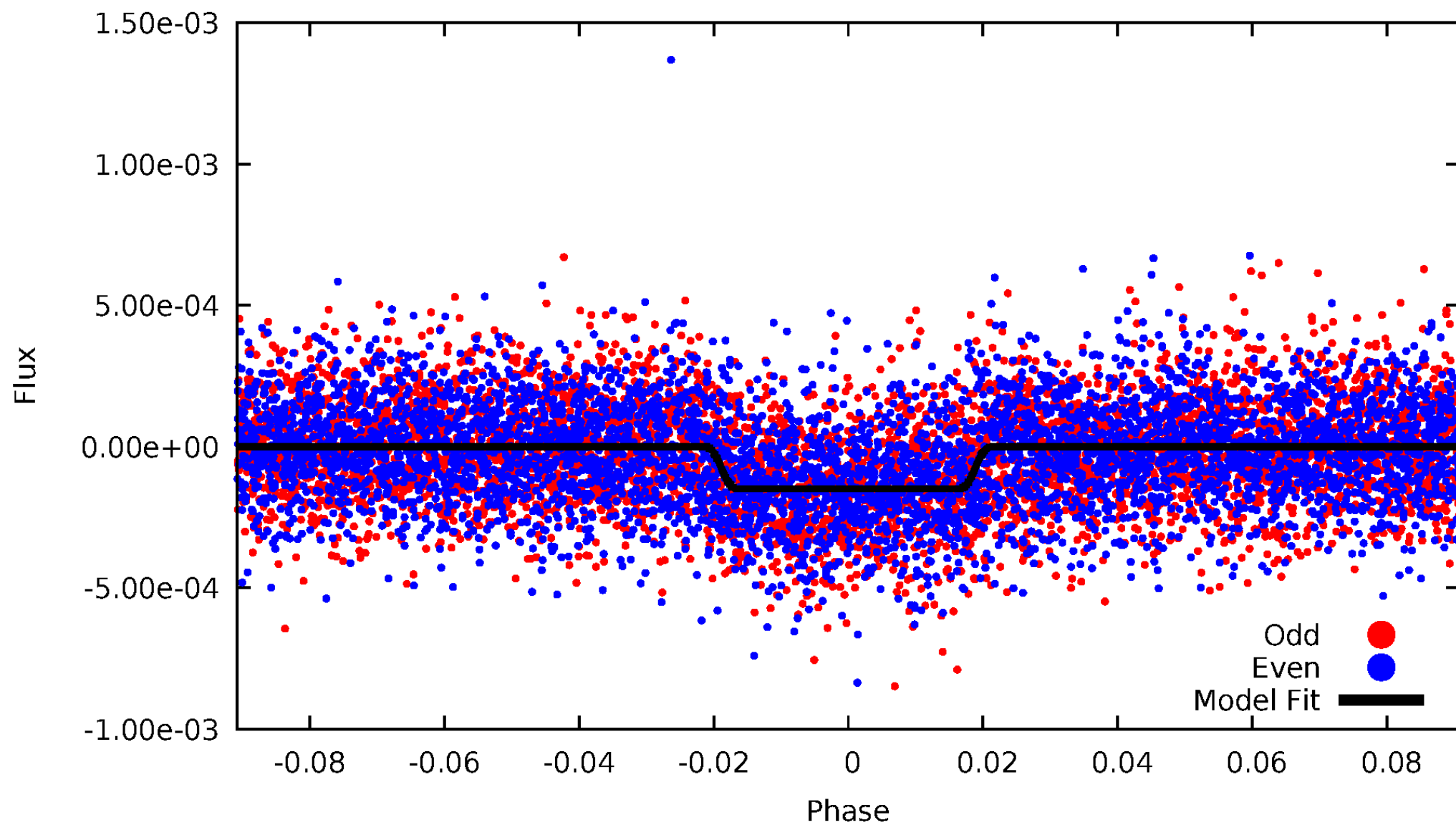
DV Odd/Even

TCE 010585852-01

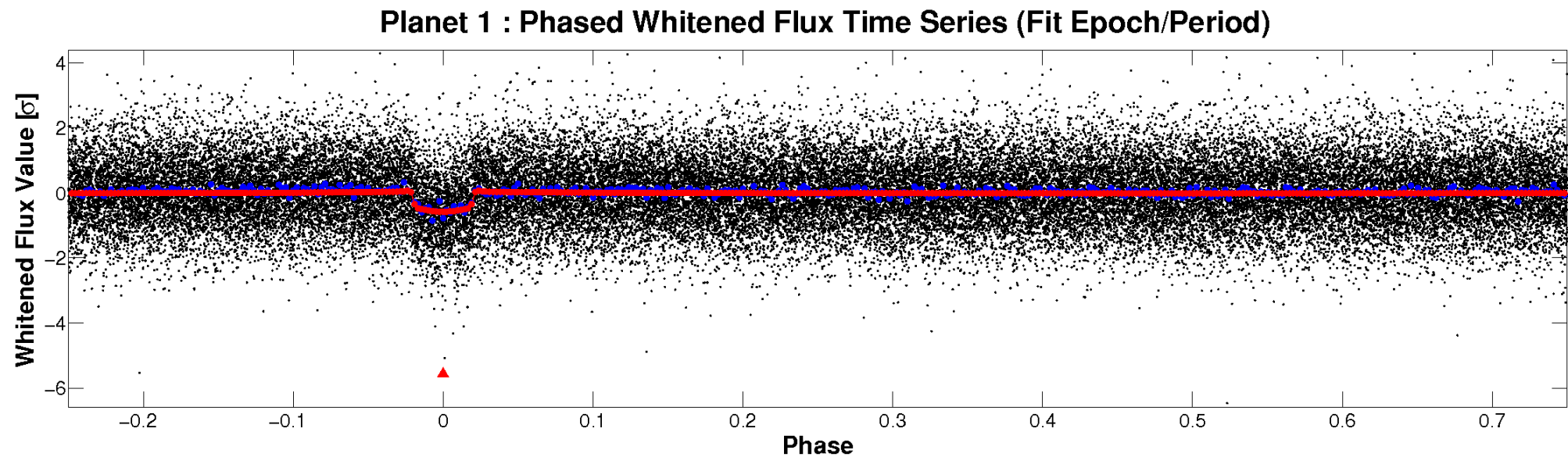
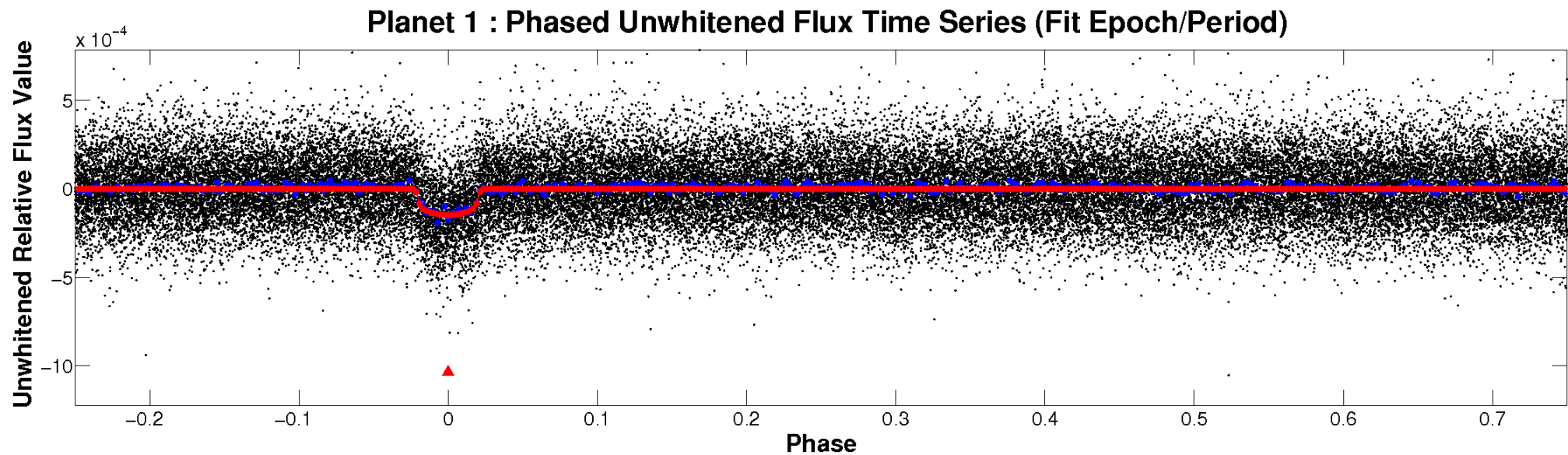


ALT Odd/Even

TCE 010585852-01

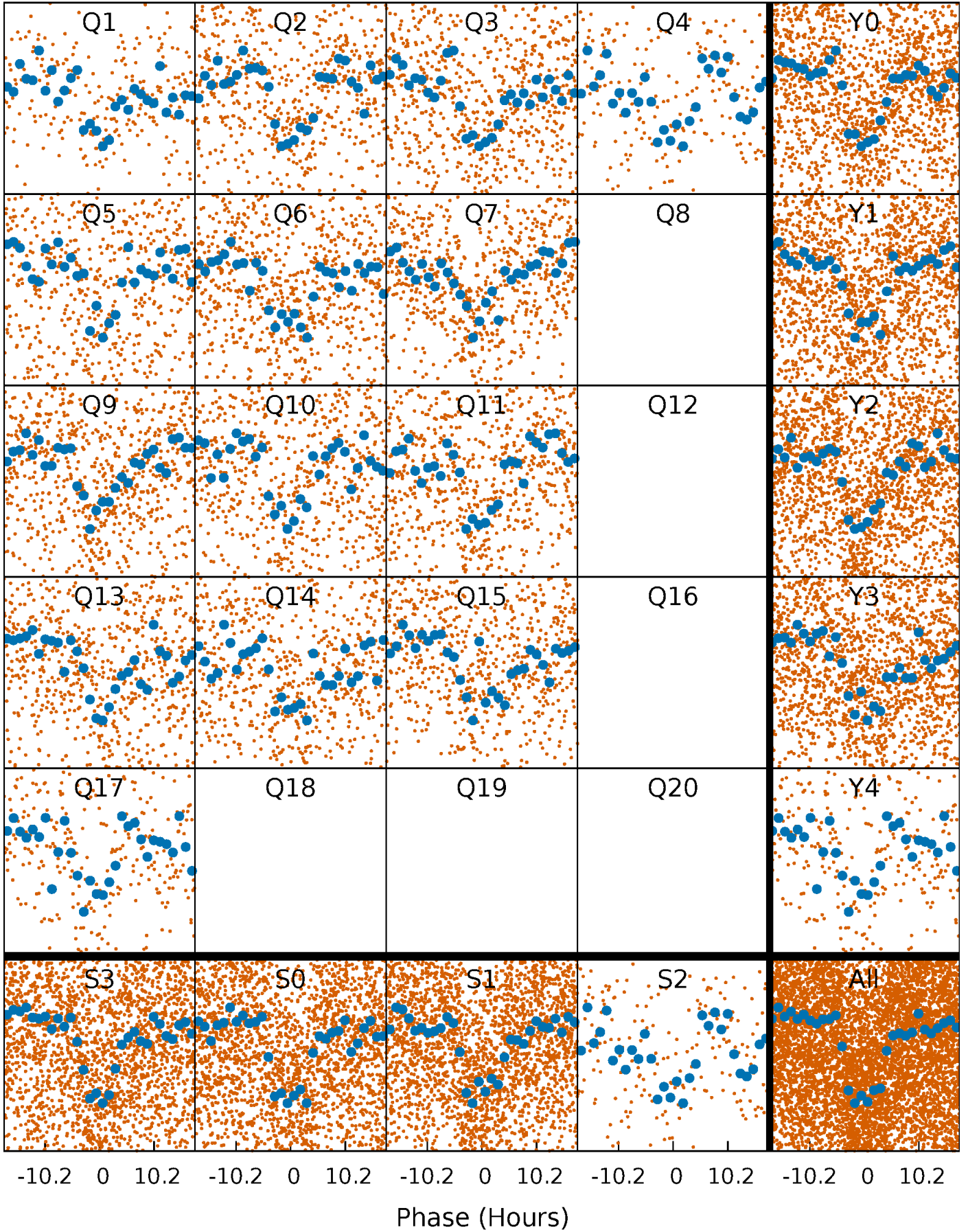


Non-Whitened Vs. Whitened Light Curve



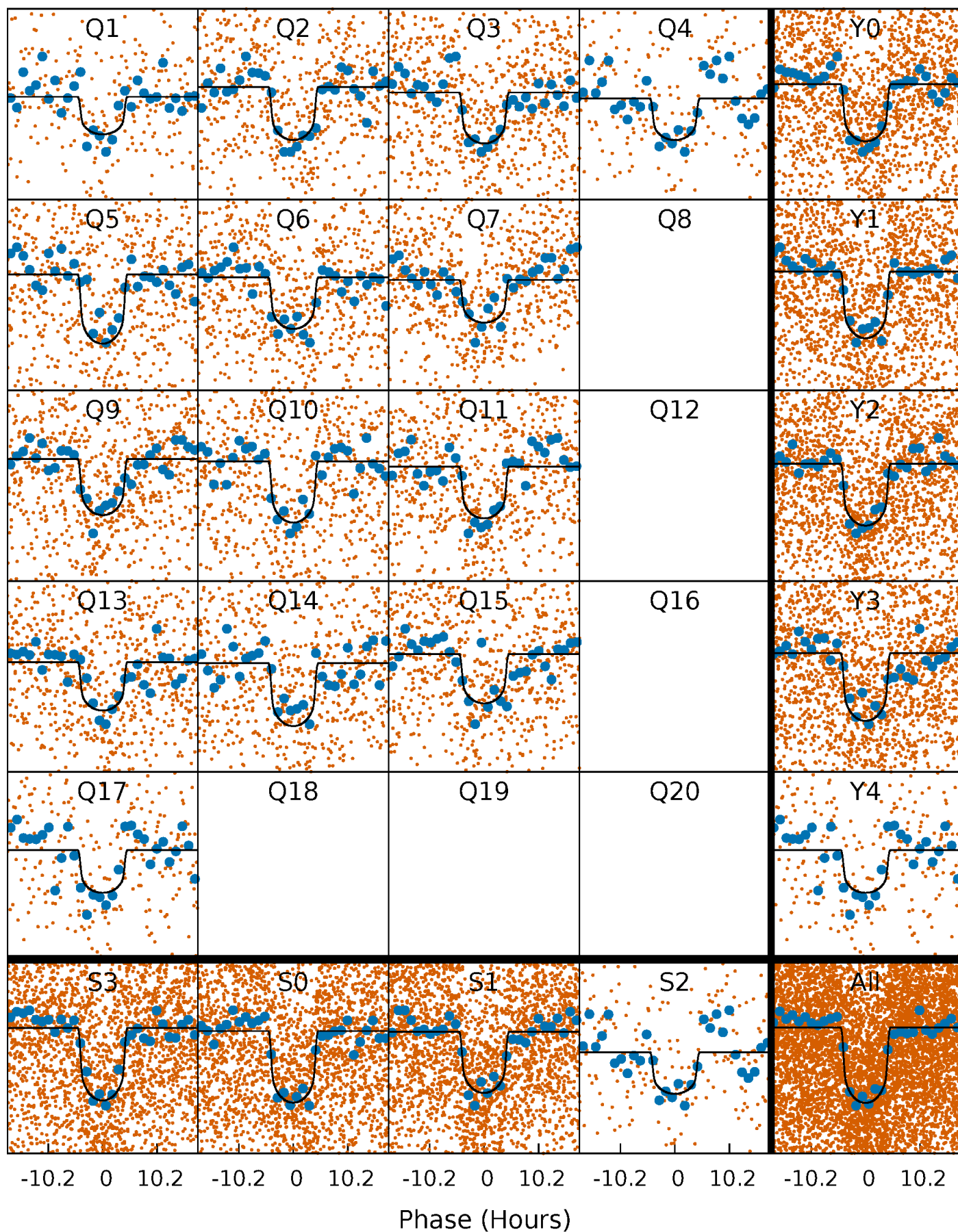
PDC Quarter-Phased Transit Curves

TCE 010585852-01 P= 8.575077 Days $T_0=131.562998$ (BKJD)



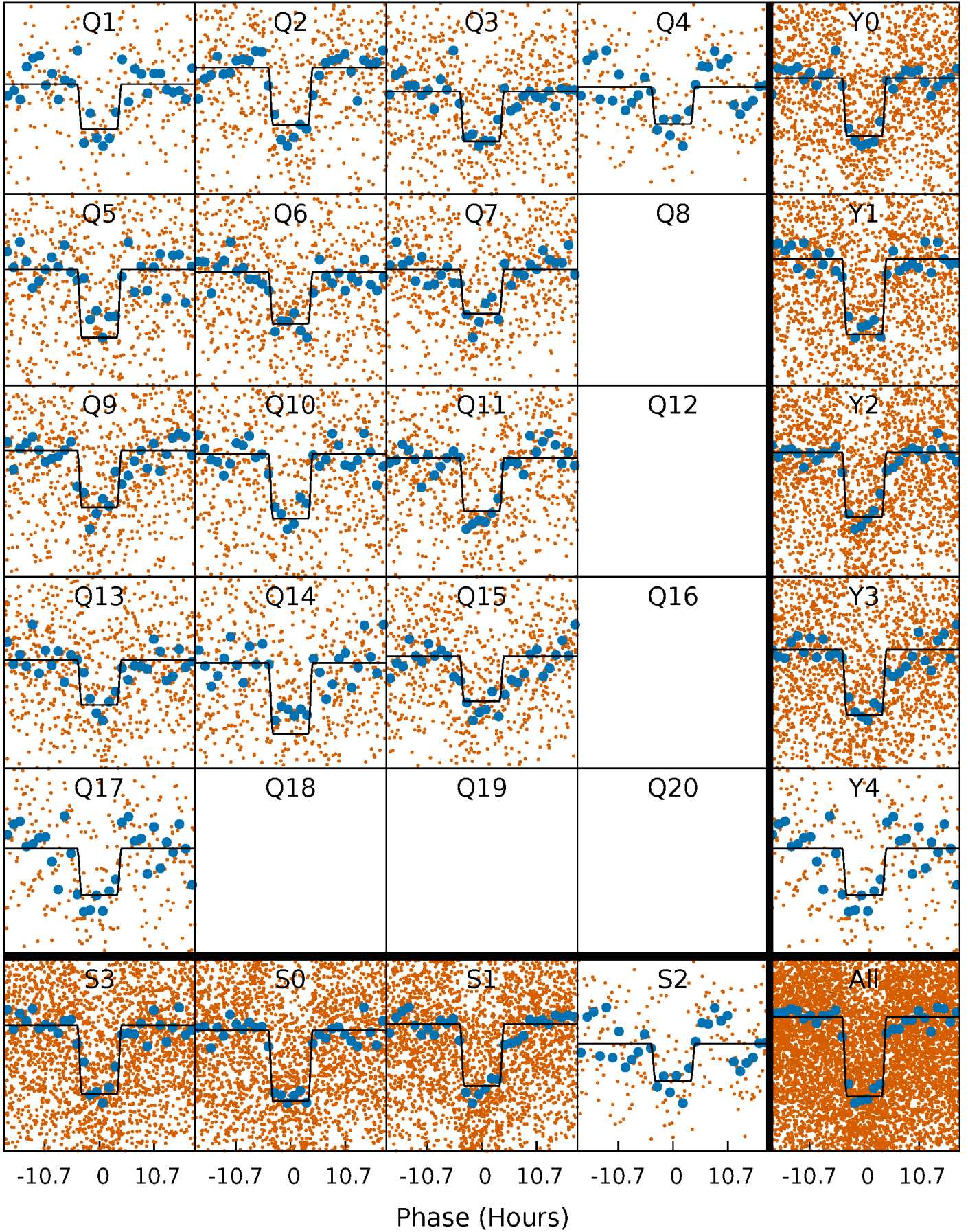
DV Quarter-Phased Transit Curves

TCE 010585852-01 P= 8.575077 Days $T_0=131.562998$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

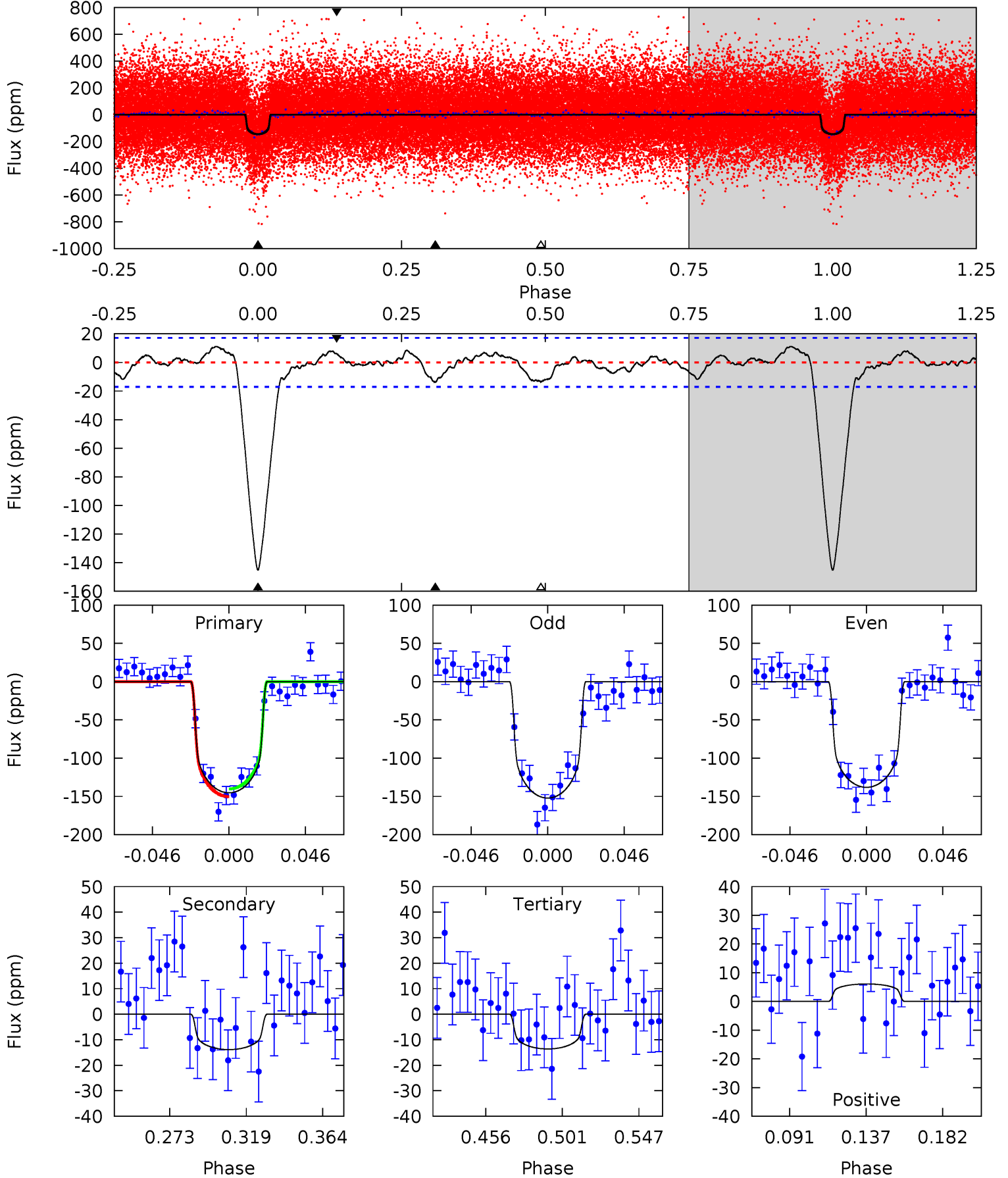
TCE 010585852-01 P= 8.575047 Days $T_0=131.565518$ (BKJD)



DV Model-Shift Uniqueness Test

010585852-01, P = 8.575077 Days, E = 122.987921 Days

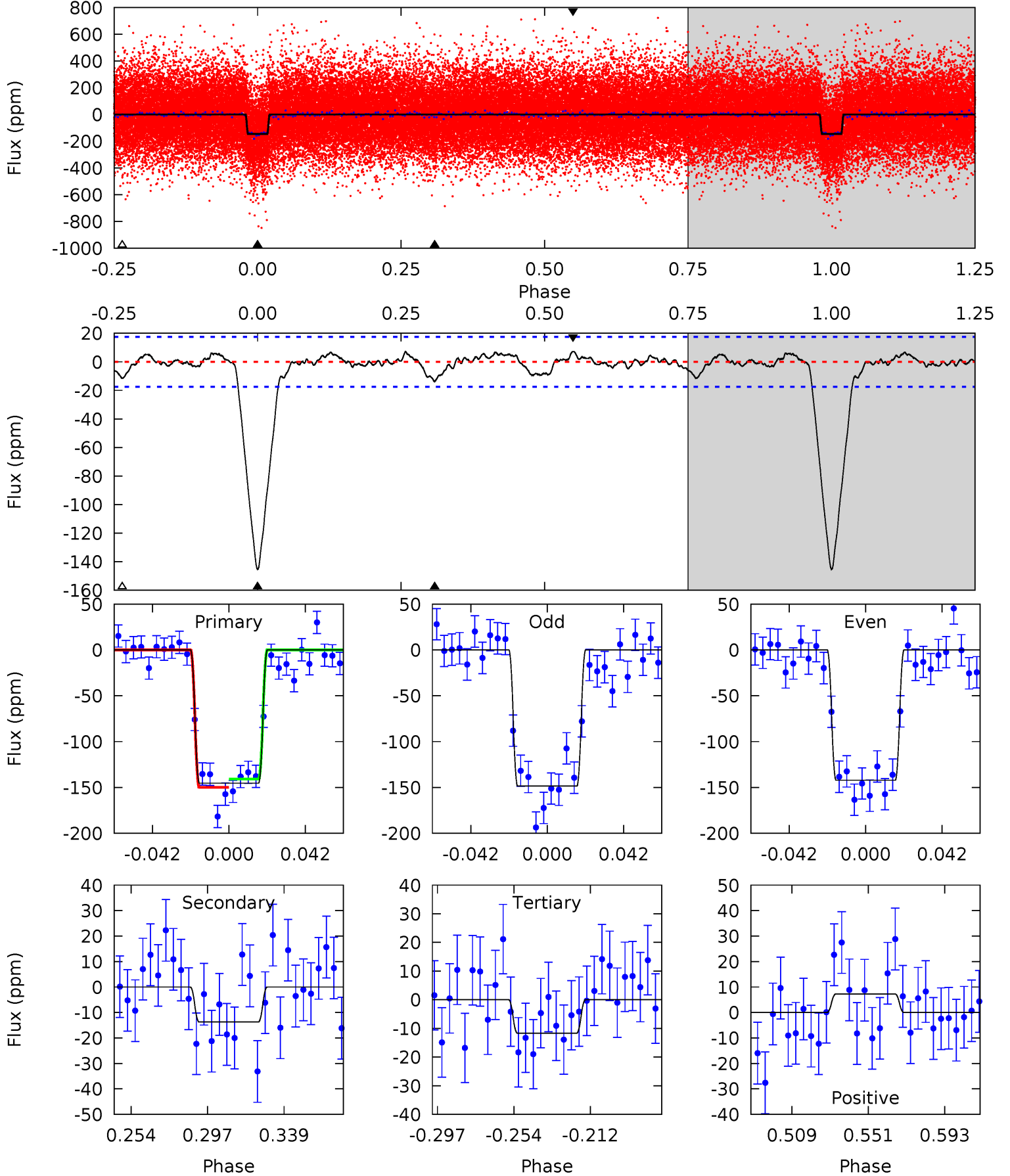
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.1	3.83	3.76	1.68	4.73	2.00	1.40	36.3	38.4	0.07	2.14	1.94	1.00	0.07	1.41



Alt Model-Shift Uniqueness Test

010585852-01, P = 8.575047 Days, E = 122.990471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.5	3.74	3.17	1.98	4.74	2.03	1.05	36.3	37.5	0.57	1.76	0.86	1.06	0.05	1.23



Stellar Parameters For KIC 010585852

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4986^{+60}_{-67}	$3.462^{+0.011}_{-0.008}$	$-0.040^{+0.100}_{-0.150}$	$3.464^{+0.197}_{-0.337}$	$1.268^{+0.130}_{-0.224}$	$0.043^{+0.005}_{-0.003}$
	+1%/-1%	+0%/-0%	+250%/-375%	+6%/-10%	+10%/-18%	+11%/-6%
Source	SPE72	AST8	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 010585852-01 / KOI 1314.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 4	$5.09^{+0.51}_{-0.51}$	1919^{+29}_{-32}	3115^{+172}_{-181}	$2.338^{+0.832}_{-0.704}$
Alt.	-14 ± 4	$4.65^{+0.52}_{-0.54}$	1920^{+30}_{-29}	3200^{+187}_{-194}	$2.732^{+1.097}_{-0.826}$

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

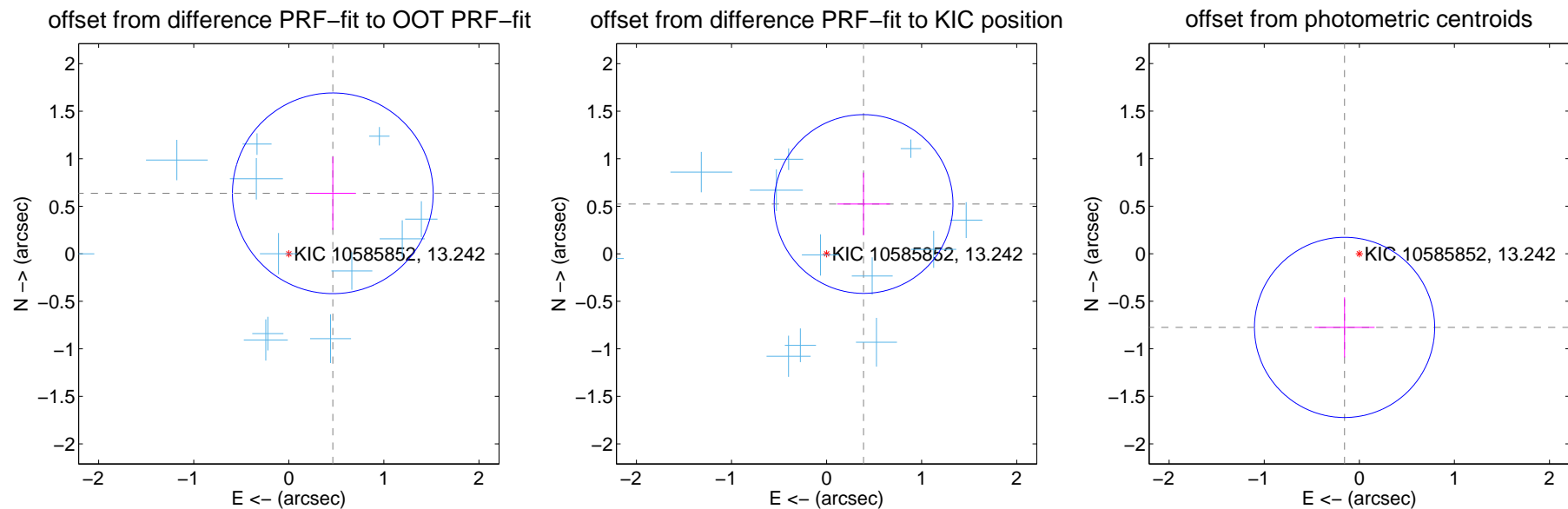
DV Centroid Data

Supplemental centroid analysis for 010585852-01. Kepler magnitude: 13.24. Transit SNR 23.53

There are 14 quarters with good PRF difference image offsets

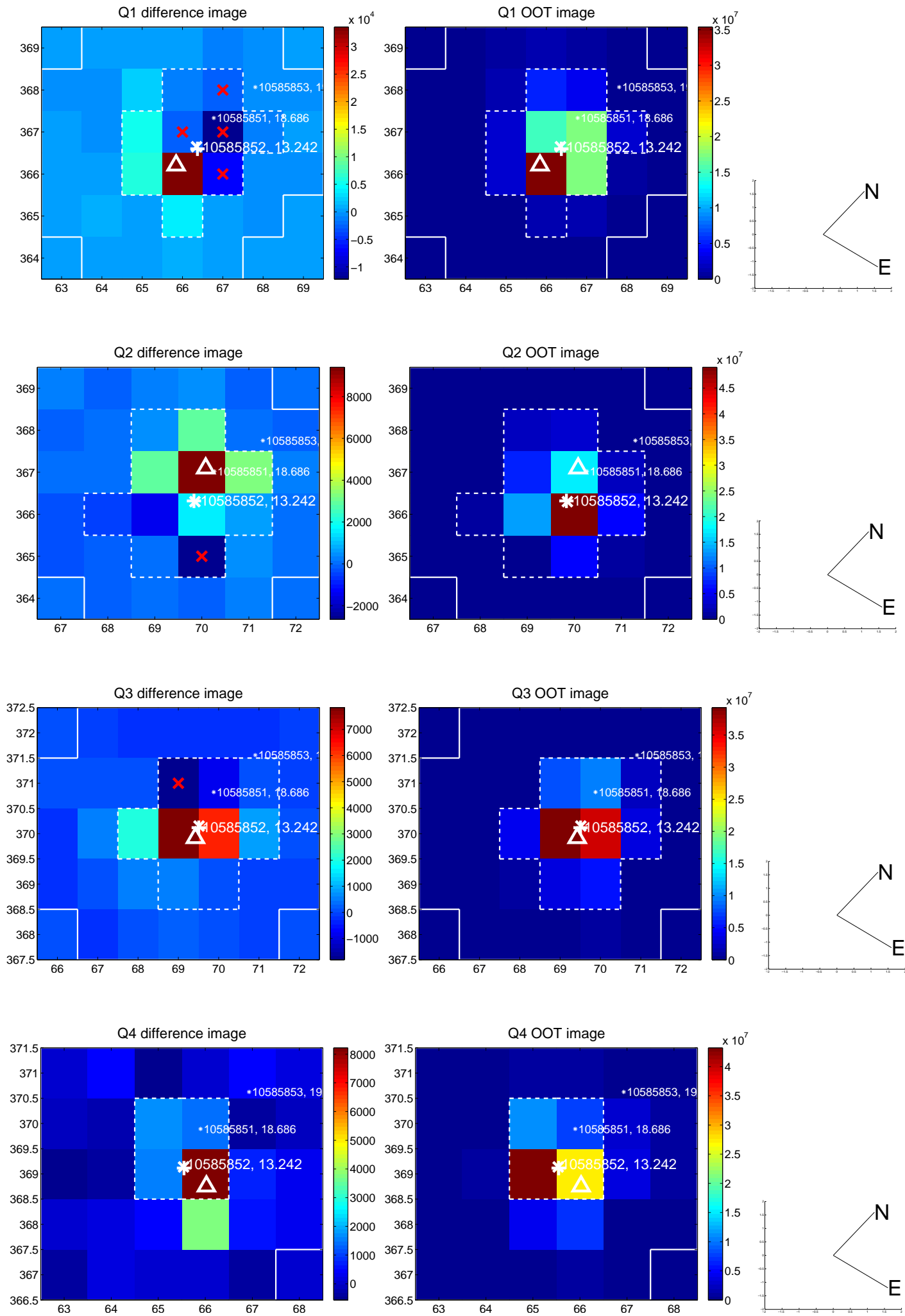
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.787 ± 0.352	2.24	-0.463 ± 0.240	0.636 ± 0.385
PRF-fit source offset from KIC position	0.652 ± 0.313	2.08	-0.389 ± 0.277	0.524 ± 0.330
photometric centroid source offset	0.79 ± 0.32	2.50	0.15 ± 0.32	-0.77 ± 0.32

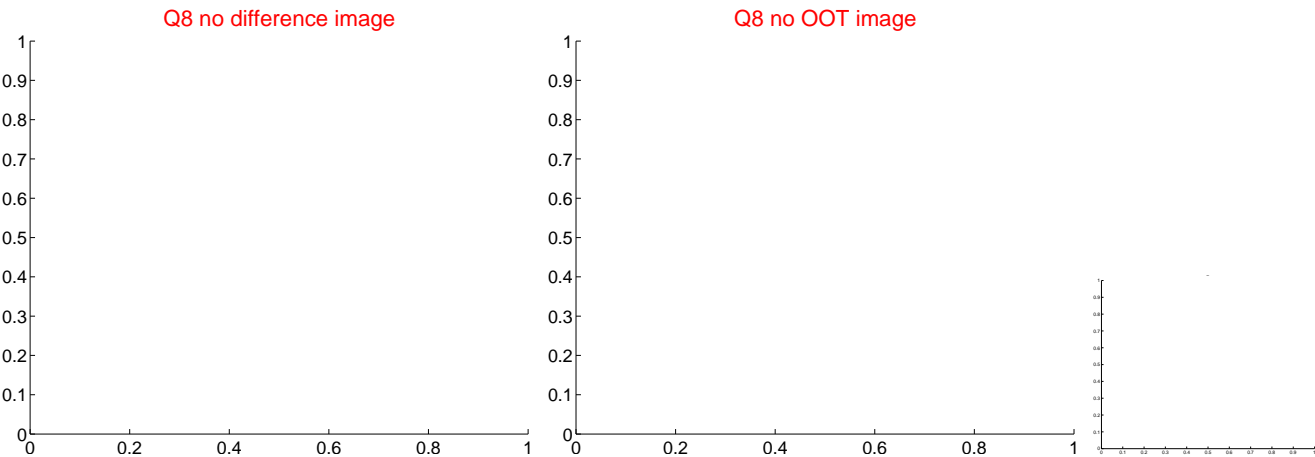
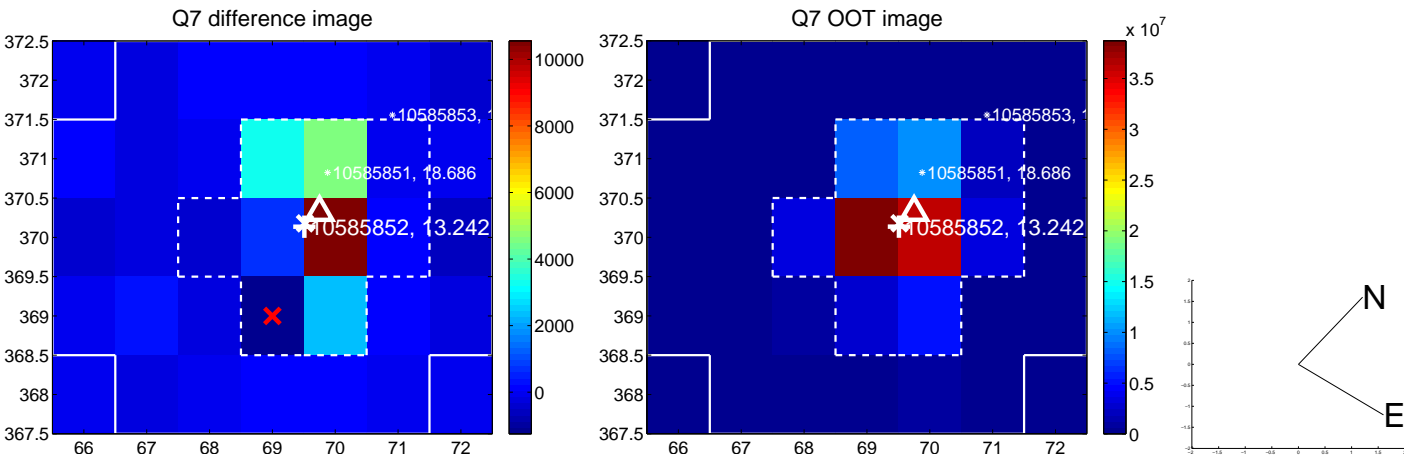
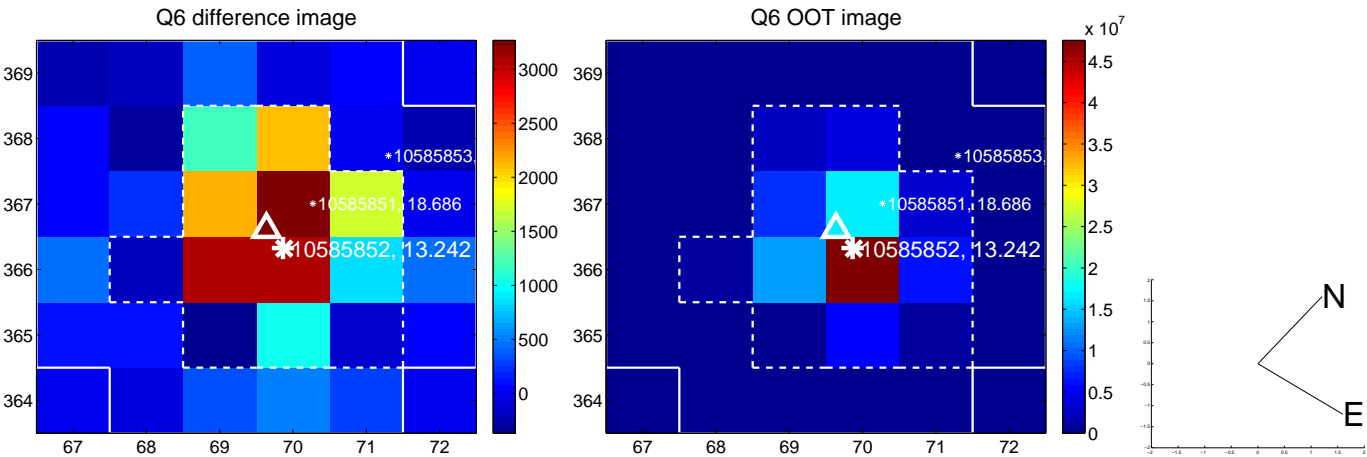
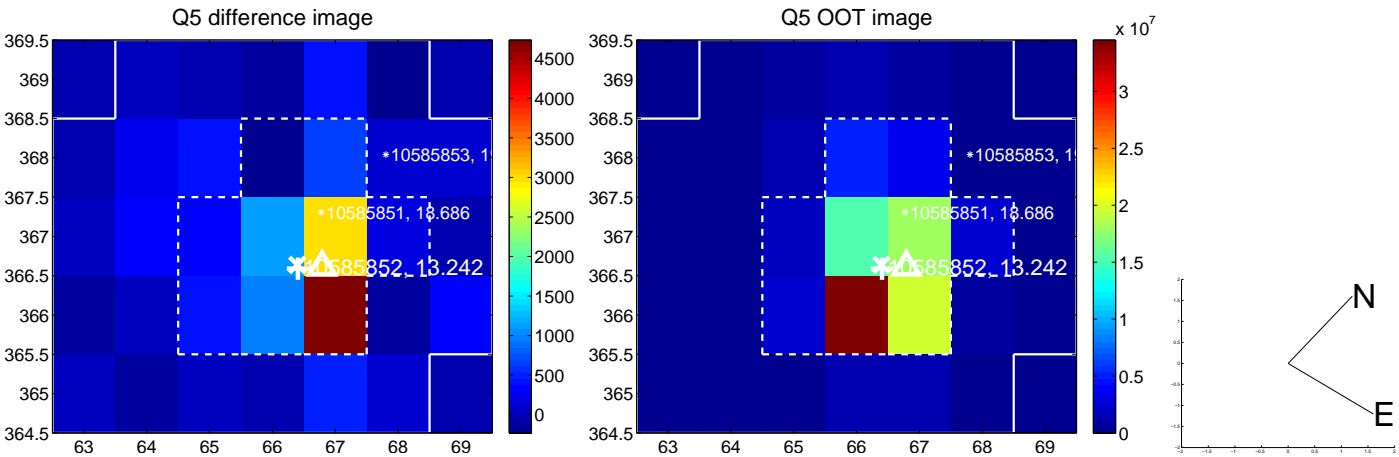


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

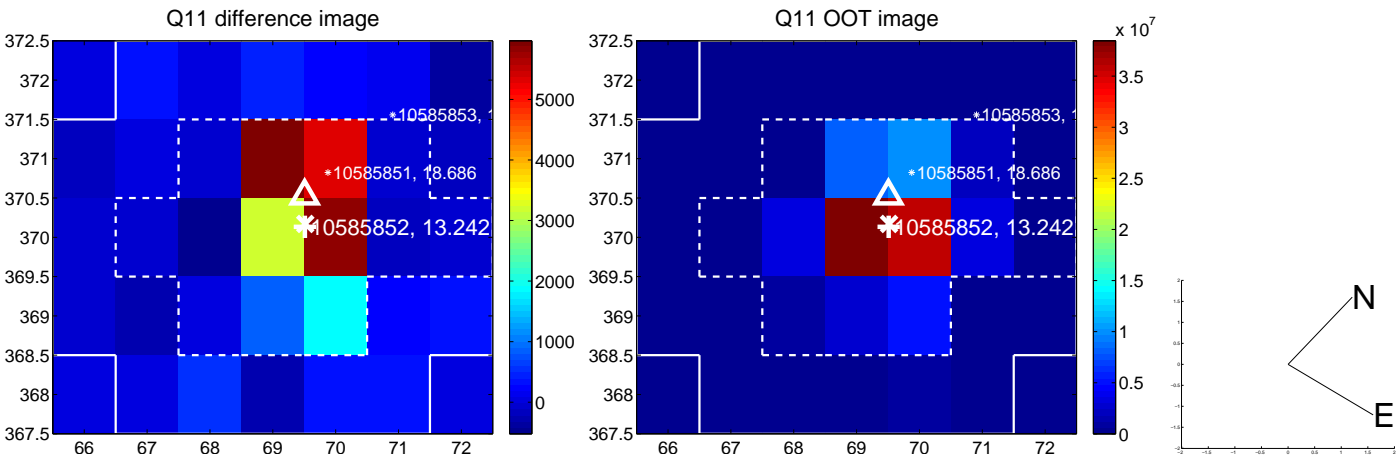
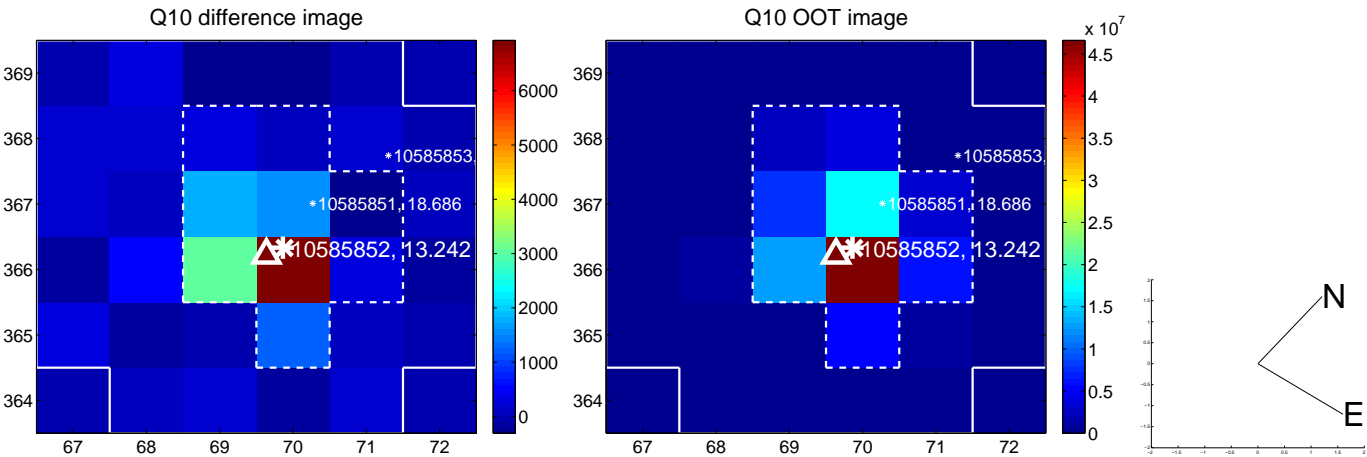
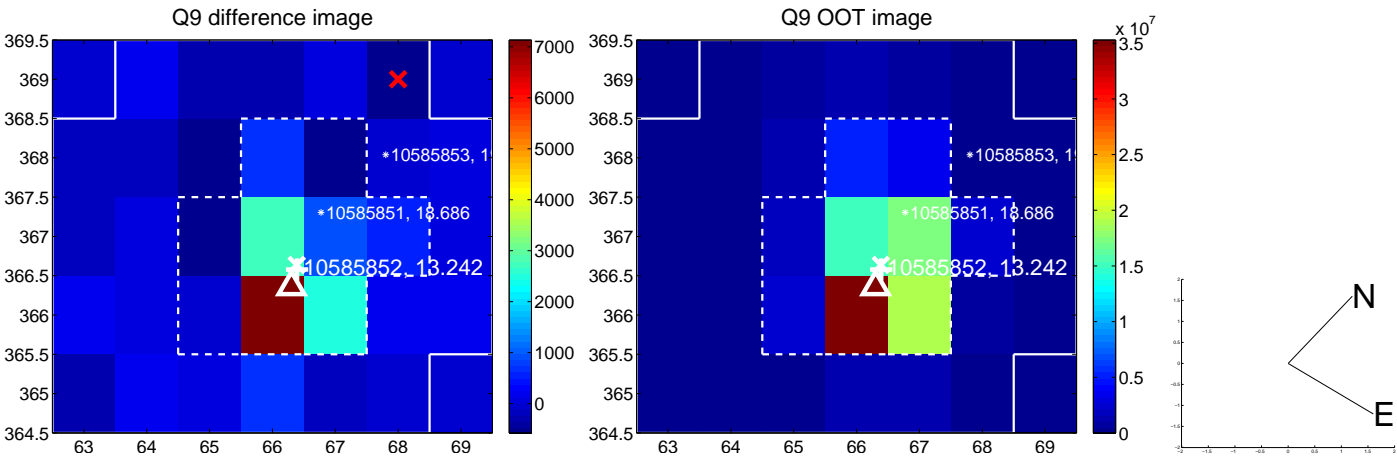
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



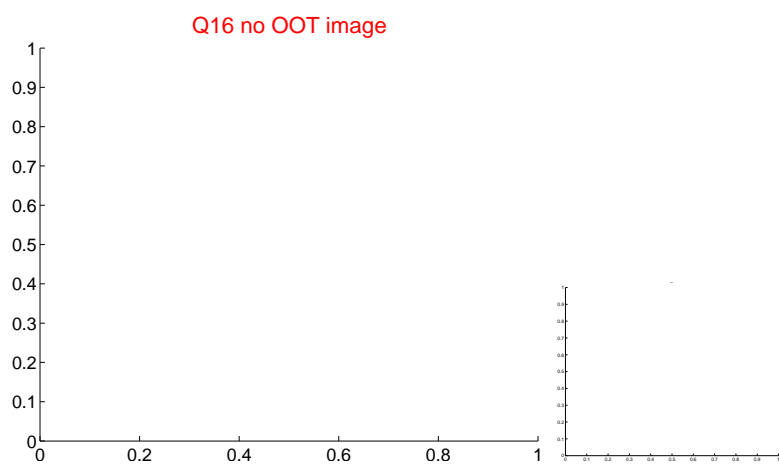
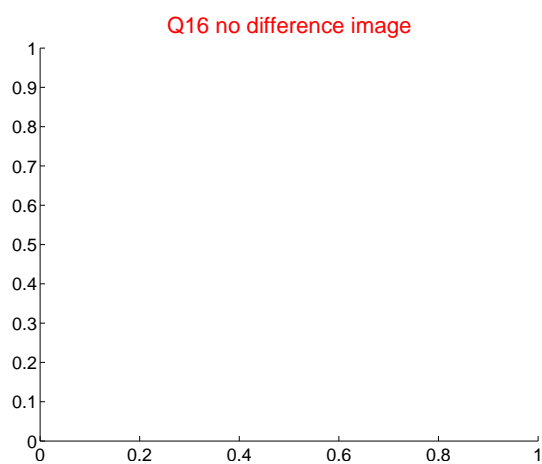
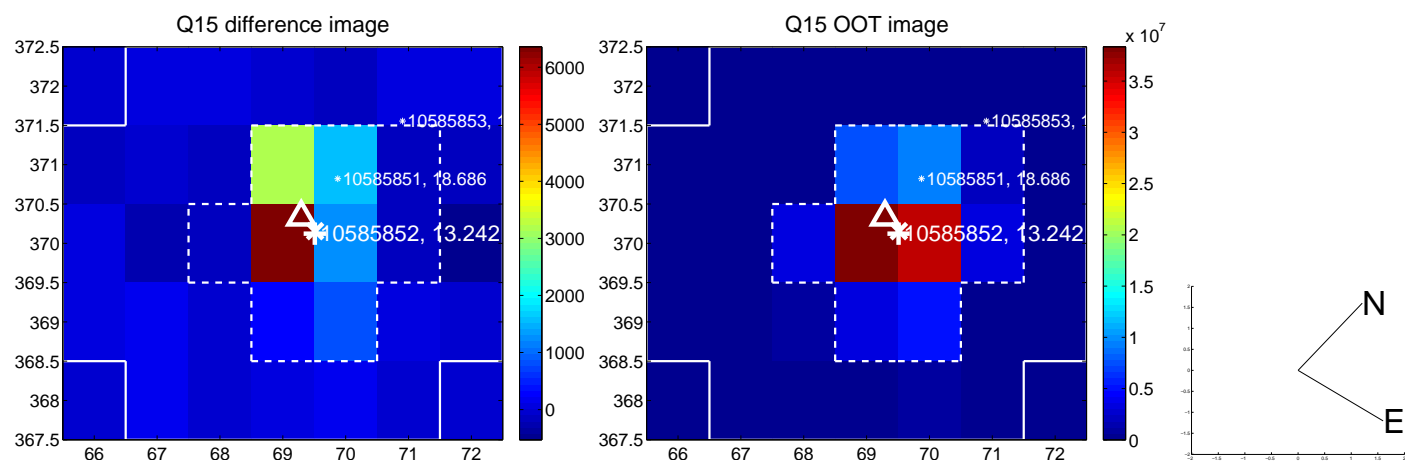
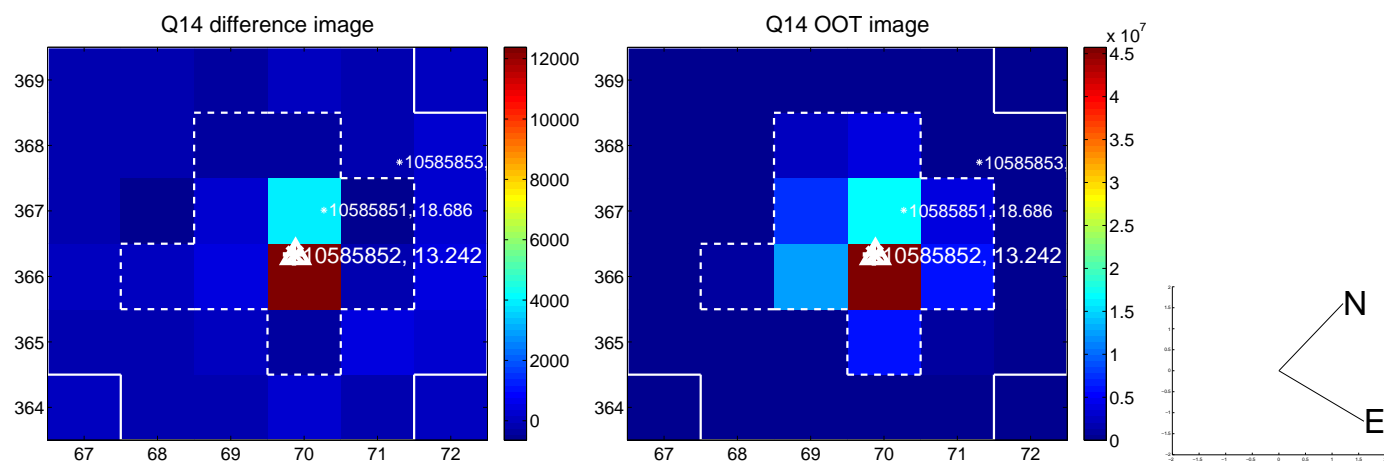
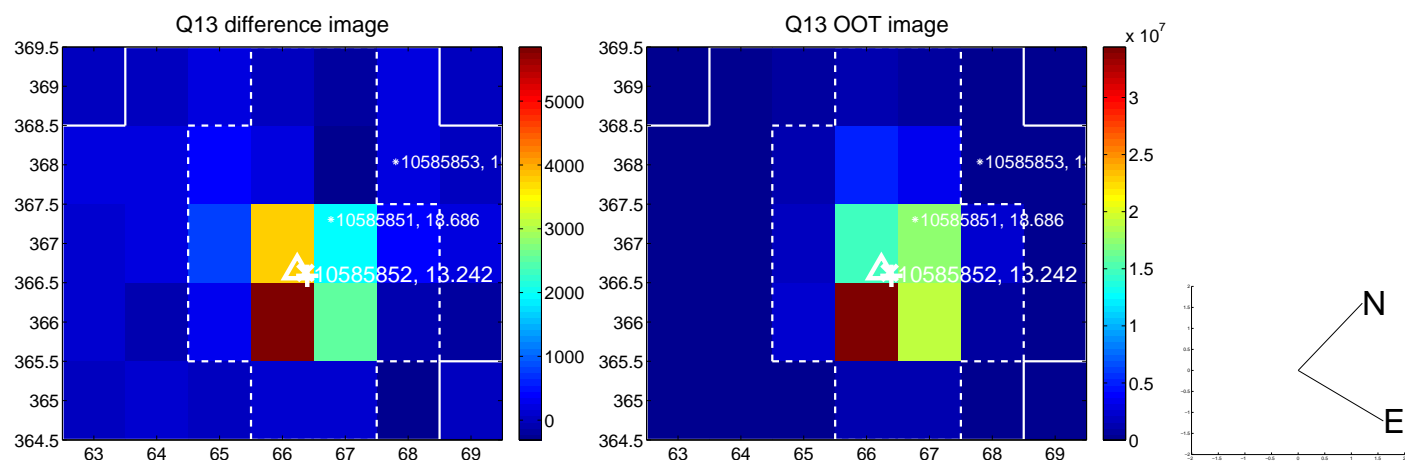
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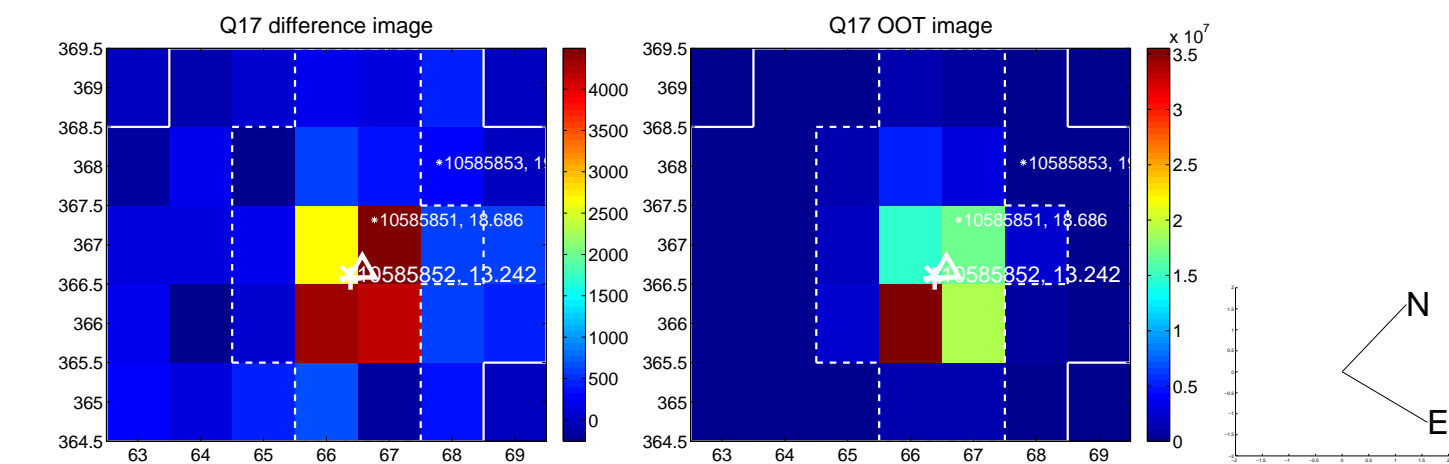
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



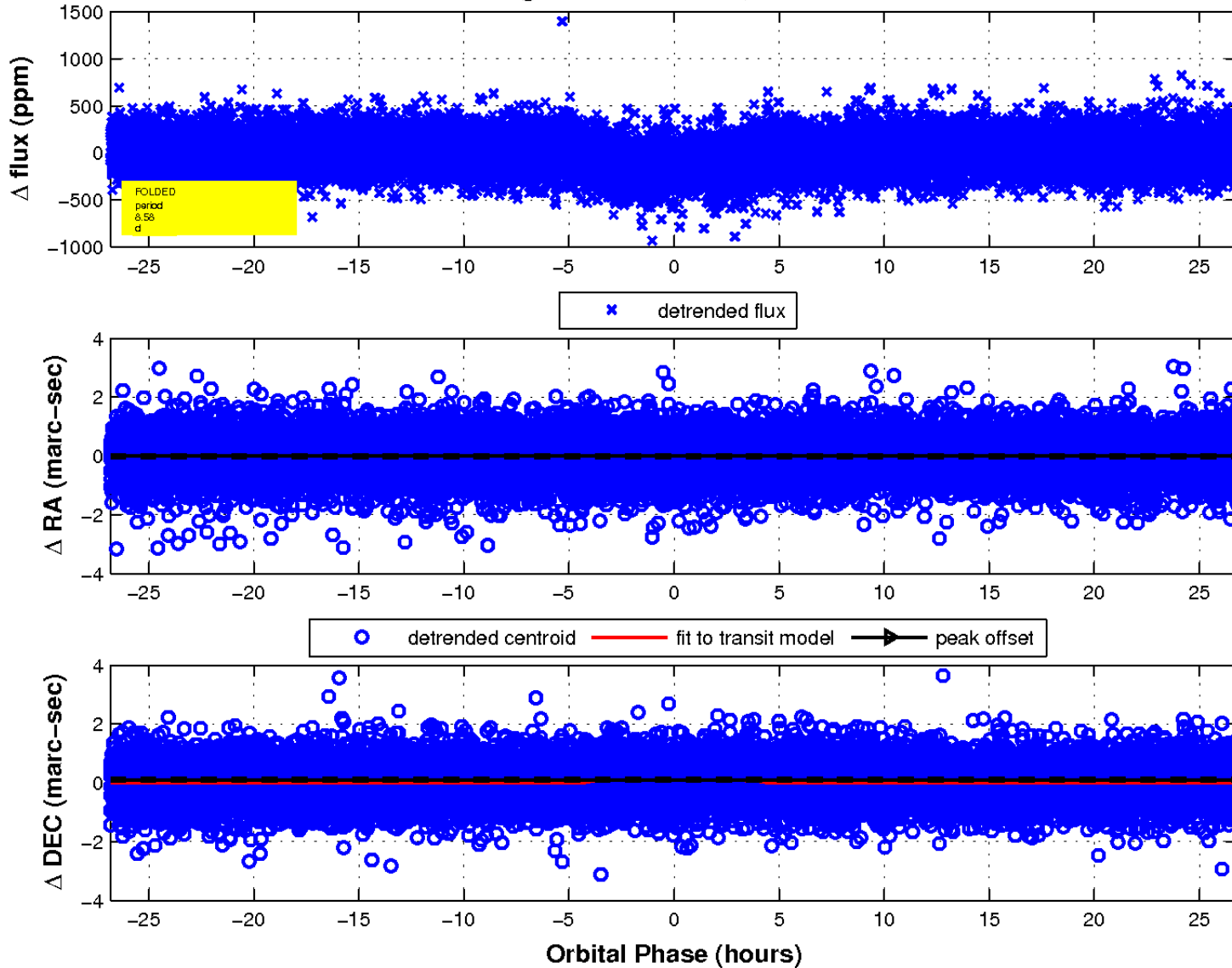
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

