

KIC 005440317

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})
005440317-01	OBS	3141.01	2.319430	131.933939	96.0	1.609	10.4	11.7	1.25	5624	1.43	1167.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005440317-01	OBS	PC	0.89	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.

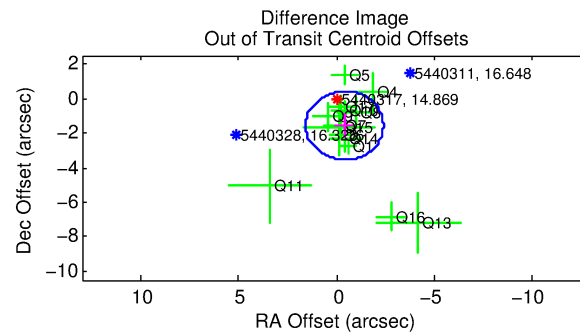
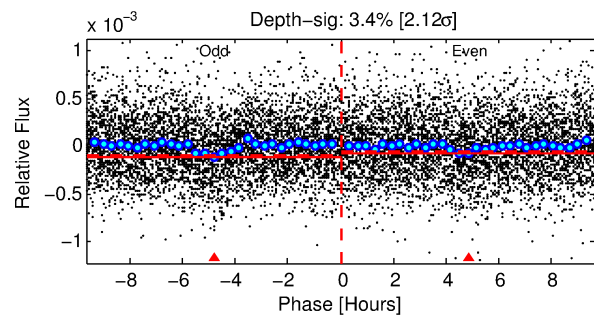
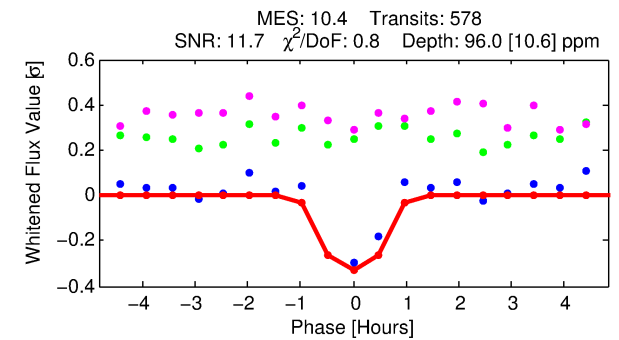
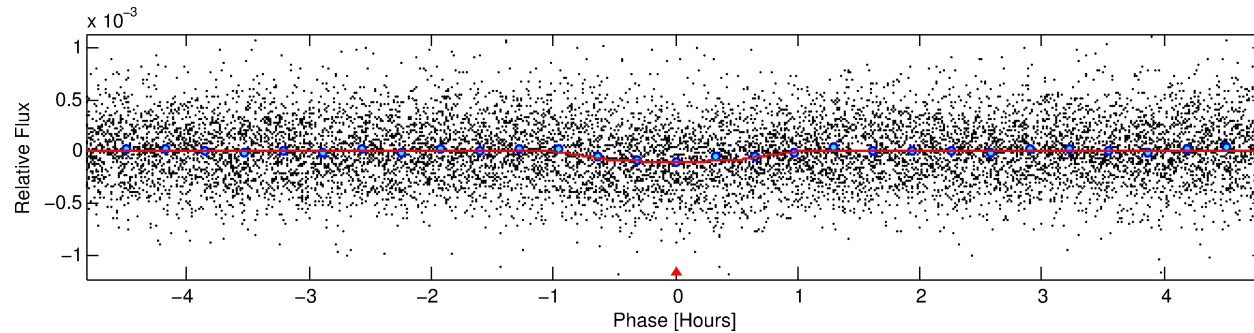
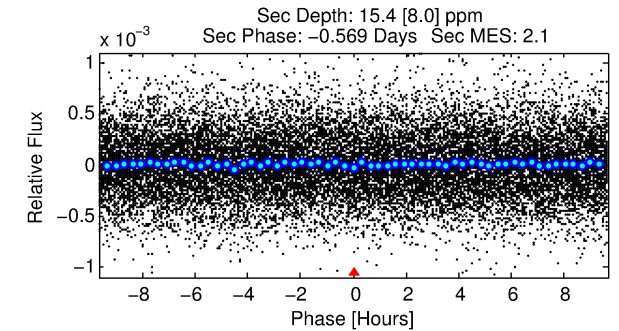
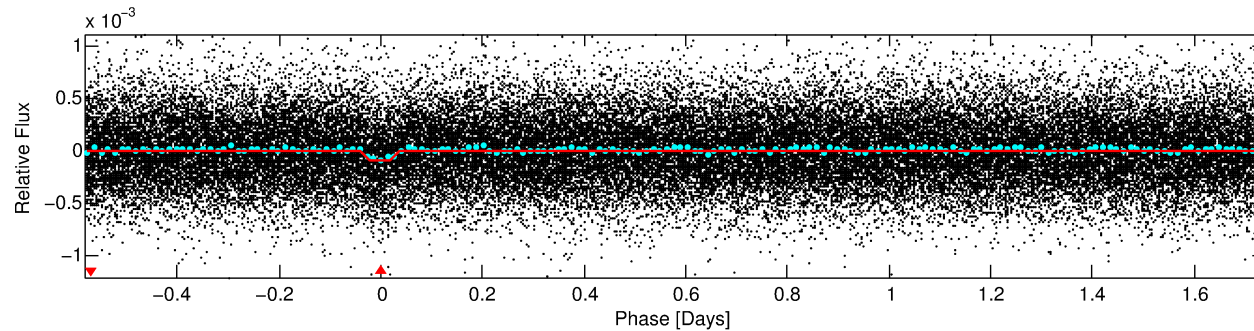
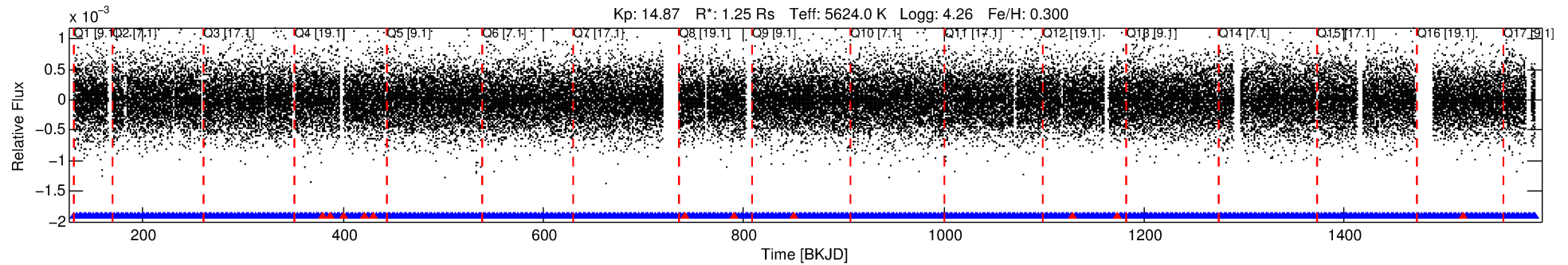
Ephemeris Match Information For 005440317-01

No Significant Match Found

DV One-Page Summary

KIC: 5440317 Candidate: 1 of 1 Period: 2.319 d

KOI: K03141.01 Corr: 0.972



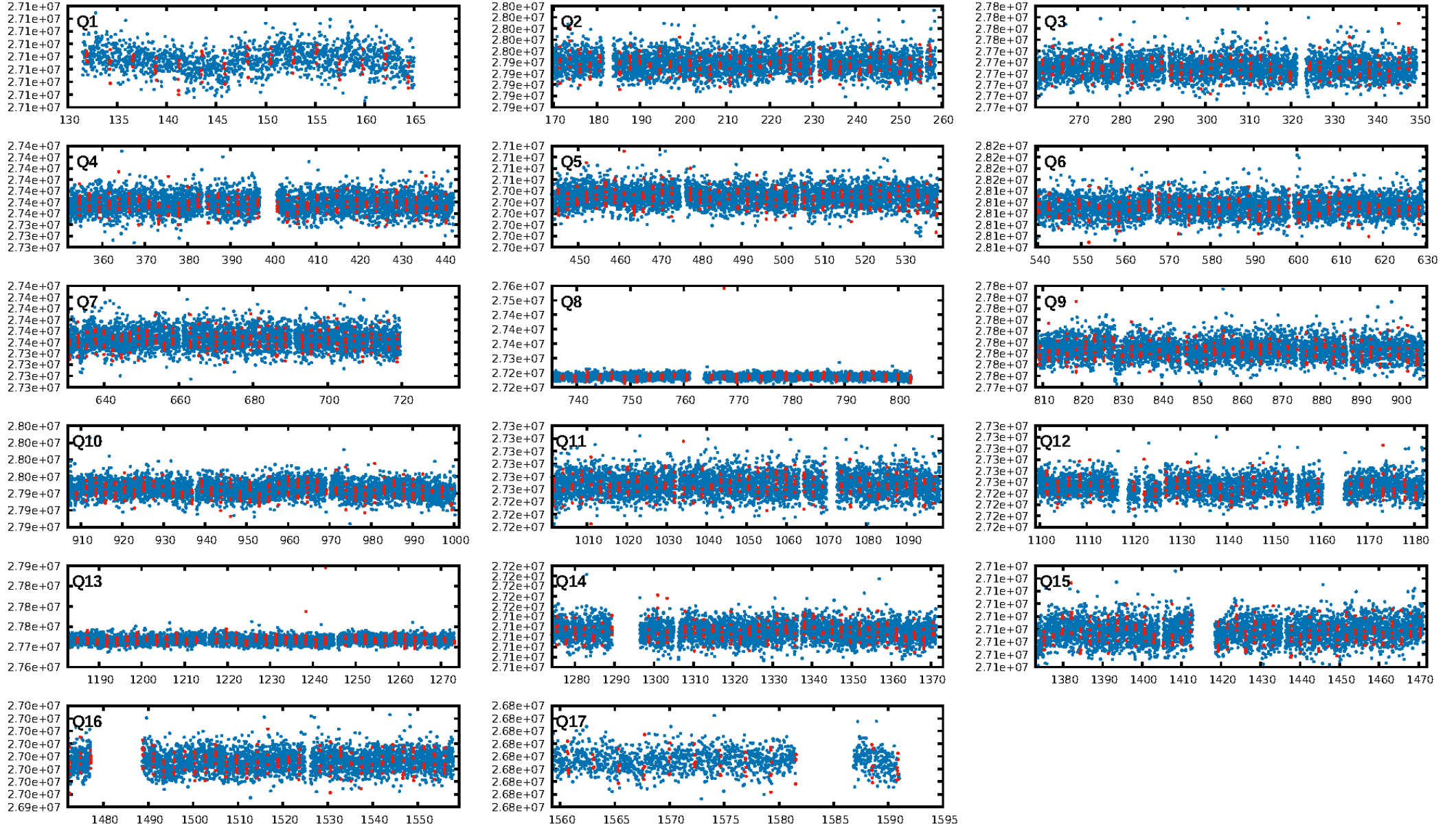
DV Fit Results:

Period = 2.31943 [0.00001] d
Epoch = 131.9339 [0.0024] BKJD
Rp/R* = 0.0105 [0.0081]
a/R* = 5.70 [18.58]
b = 0.87 [0.95]
Seff = 1167.82 [292.81]
Teff = 1491 [93] K
Rp = 1.43 [1.13] Re
a = 0.0346 [0.0053] AU
Ag = 4.94 [8.14] [0.48σ]
Teffp = 3437 [1400] K [1.39σ]

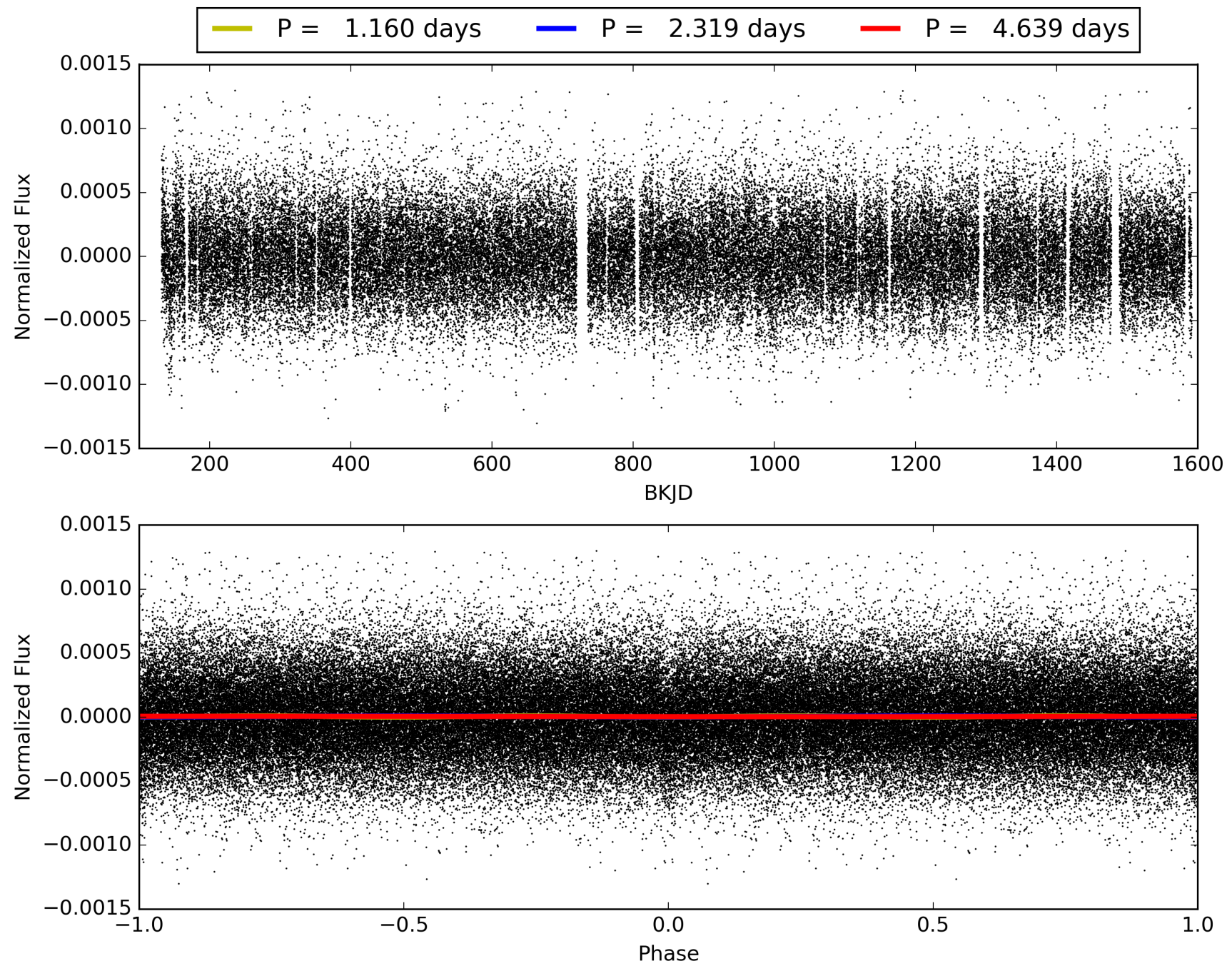
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.96e-25
RollingBand-fgt: 0.98 [540/551]
GhostDiagnostic-chr: 15.74
Centroid-sig: 1.2%
Centroid-so: 1.447 arcsec [1.73σ]
OotOffset-rm: 1.615 arcsec [2.44σ]
KicOffset-rm: 1.459 arcsec [2.30σ]
OotOffset-st: 3/3/3/5 [14]
KicOffset-st: 3/3/3/5 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005440317-01, PDC Light Curves

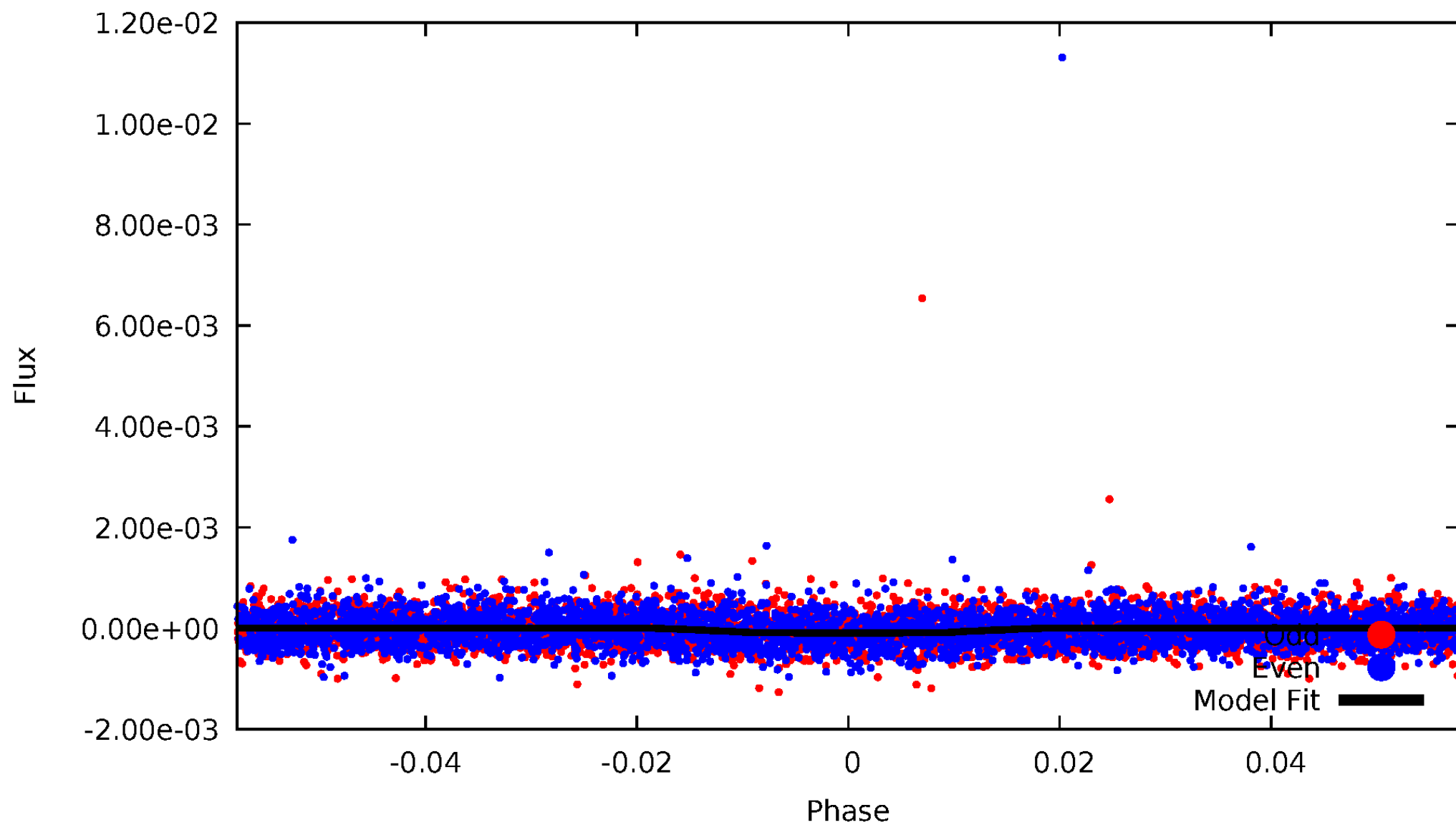


TCE 005440317-01



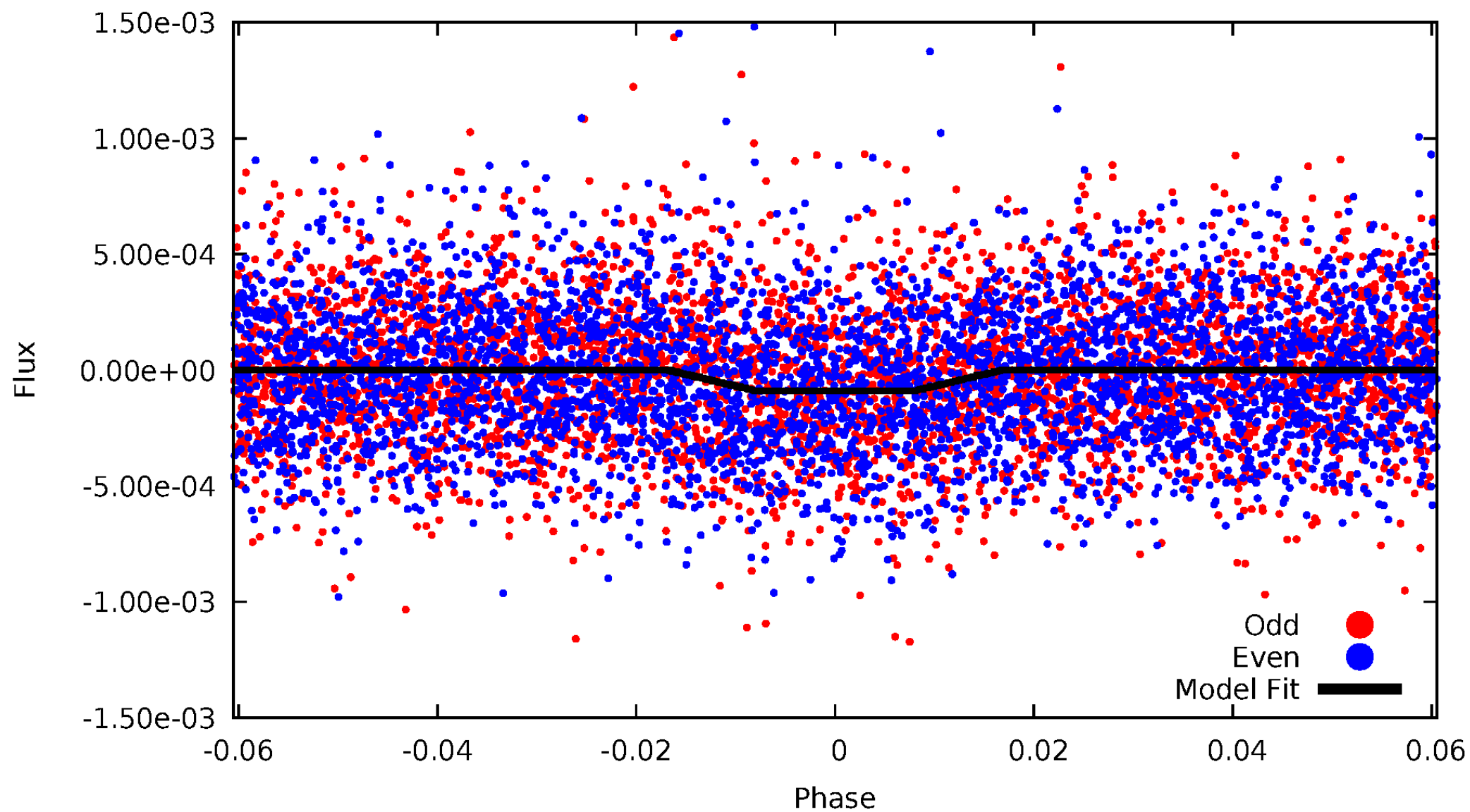
DV Odd/Even

TCE 005440317-01

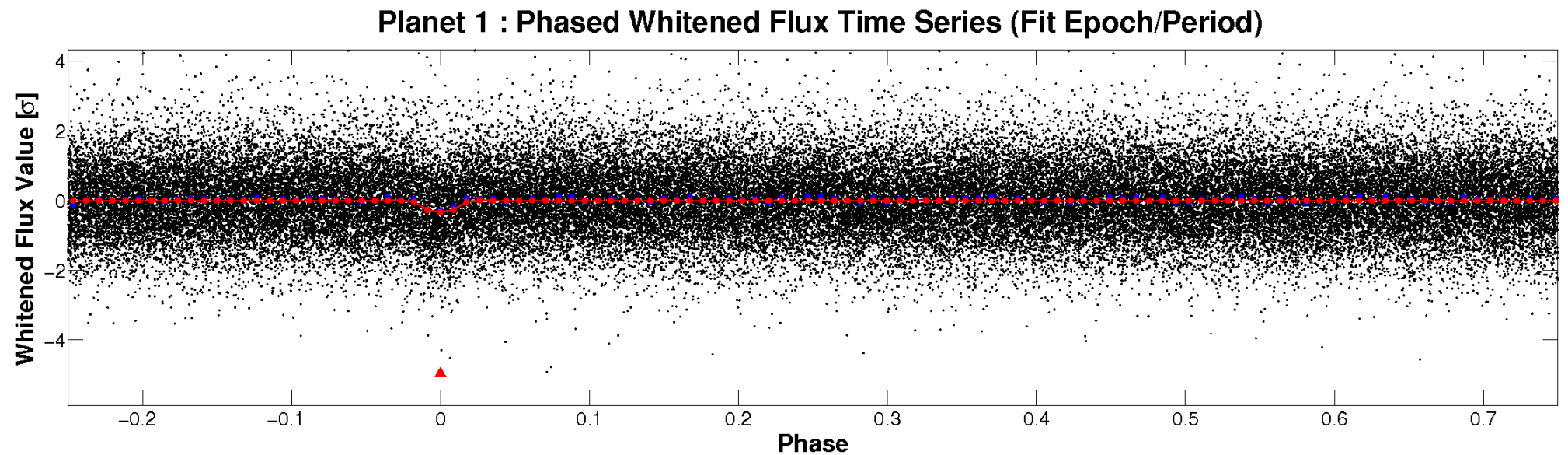
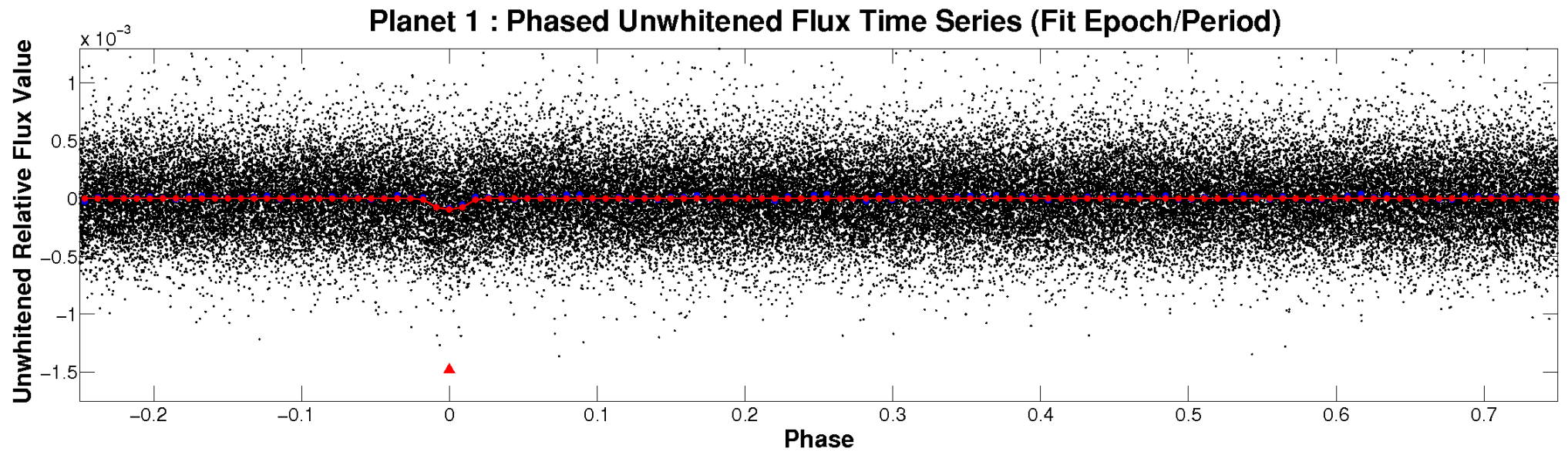


ALT Odd/Even

TCE 005440317-01

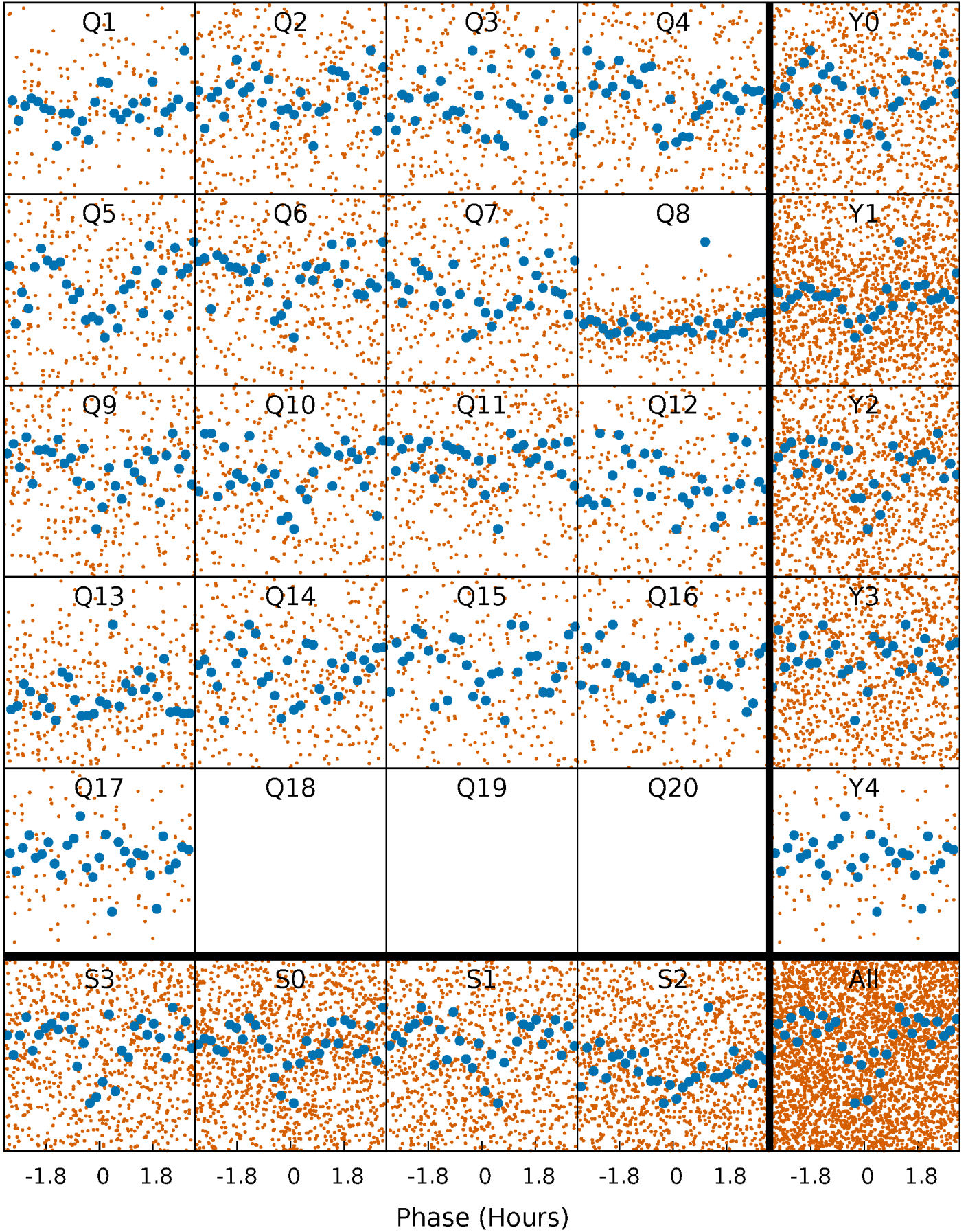


Non-Whitened Vs. Whitened Light Curve



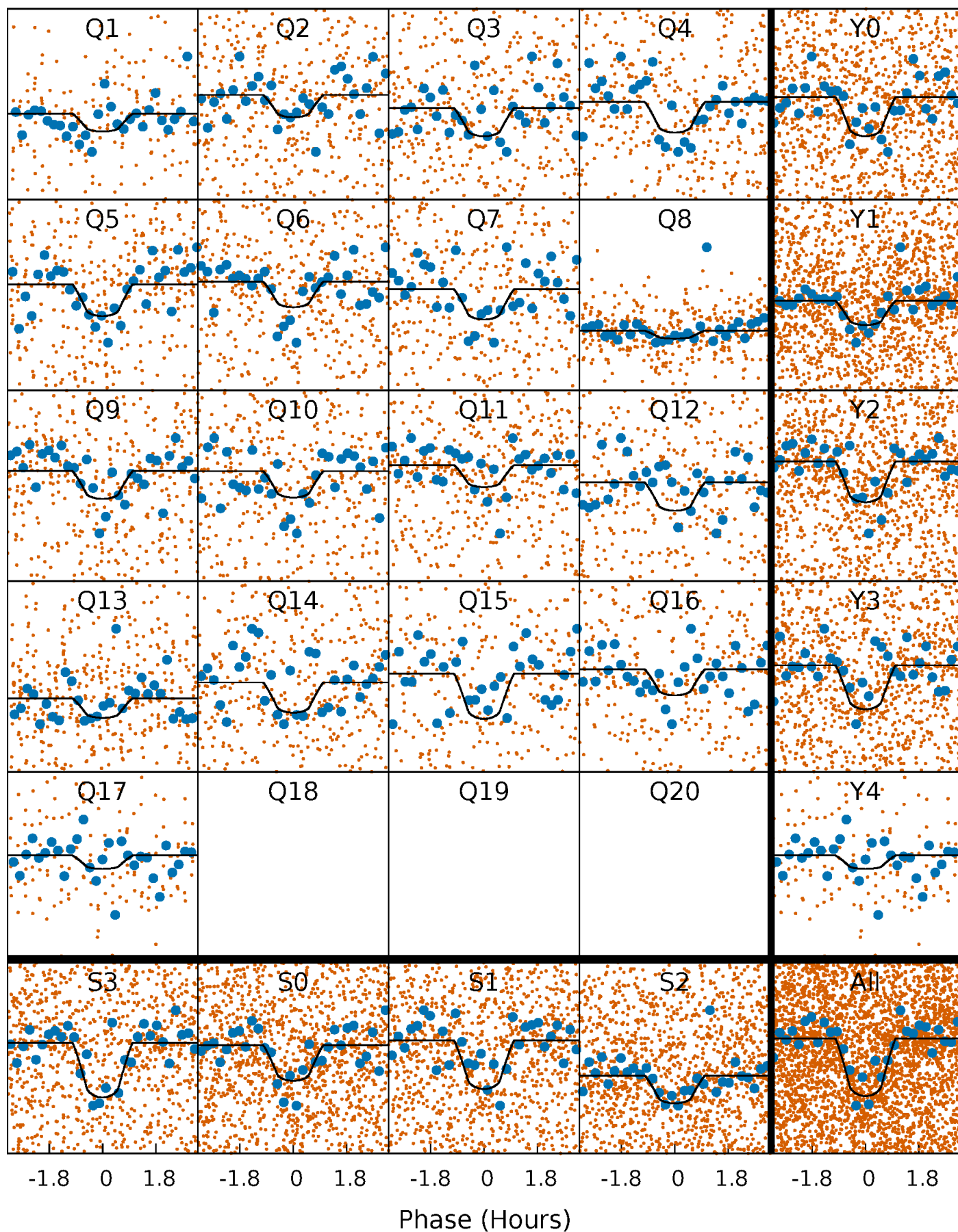
PDC Quarter-Phased Transit Curves

TCE 005440317-01 P= 2.319430 Days $T_0=131.933939$ (BKJD)



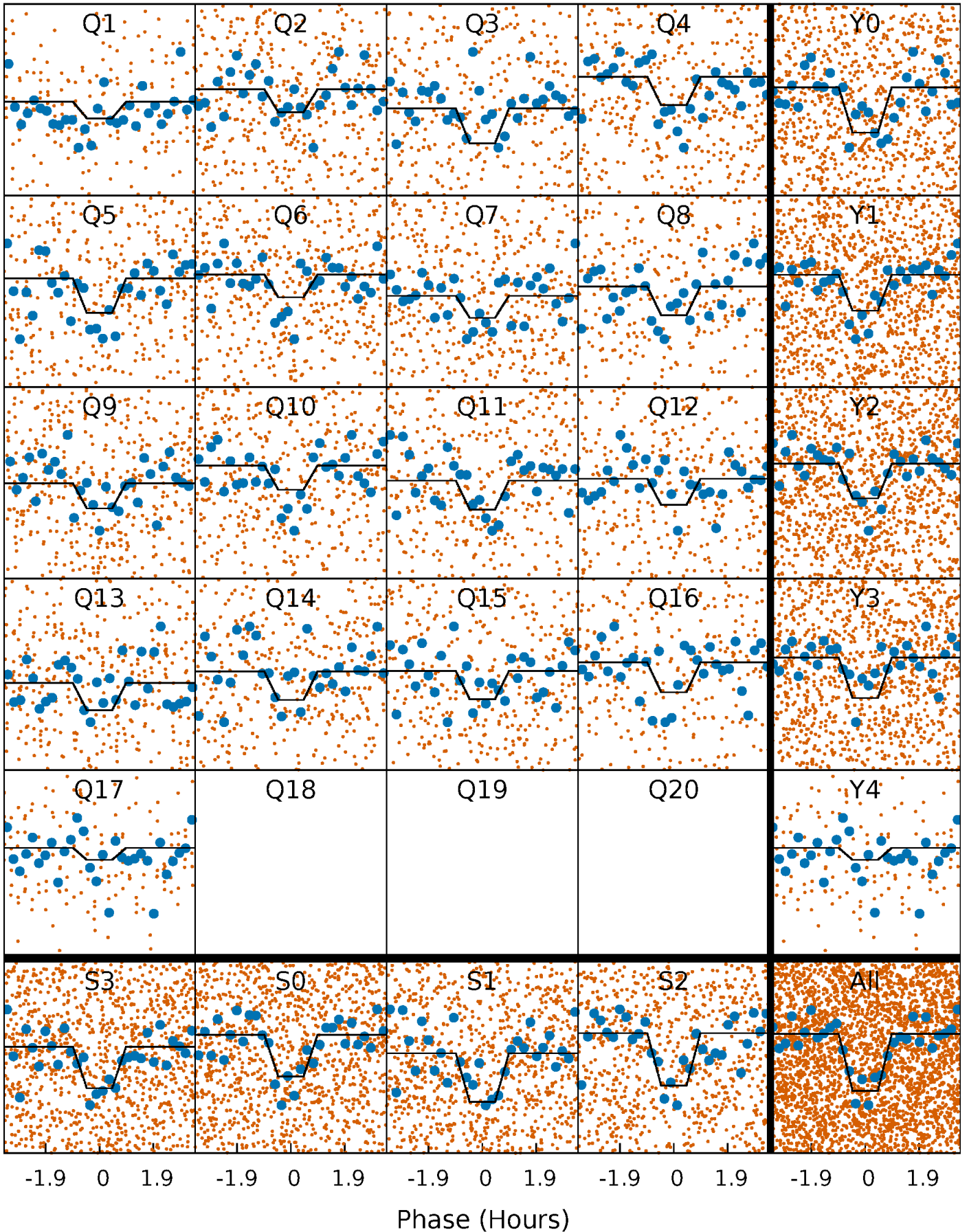
DV Quarter-Phased Transit Curves

TCE 005440317-01 P= 2.319430 Days $T_0=131.933939$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

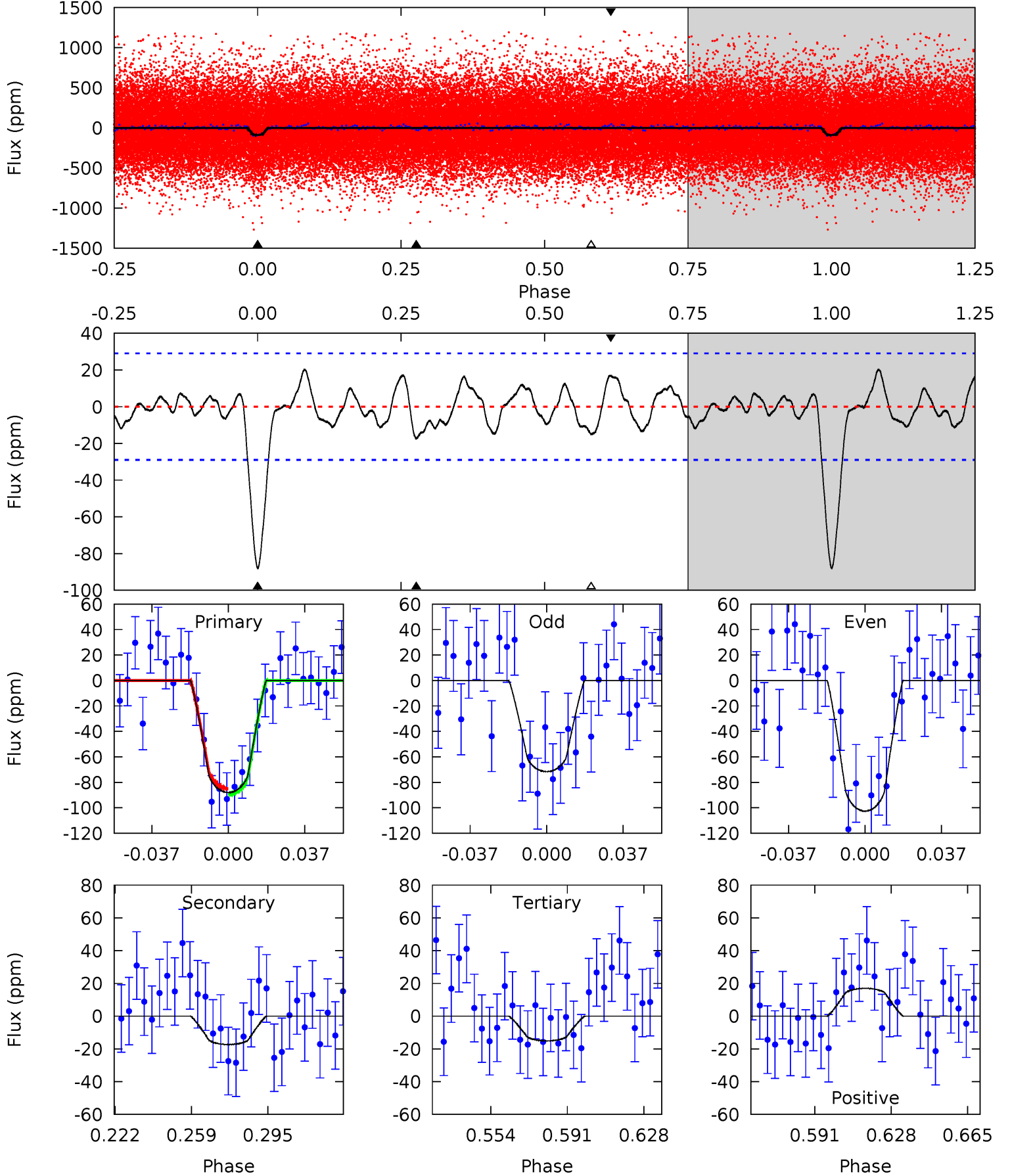
TCE 005440317-01 P= 2.319429 Days $T_0=131.935143$ (BKJD)



DV Model-Shift Uniqueness Test

005440317-01, P = 2.319430 Days, E = 129.614509 Days

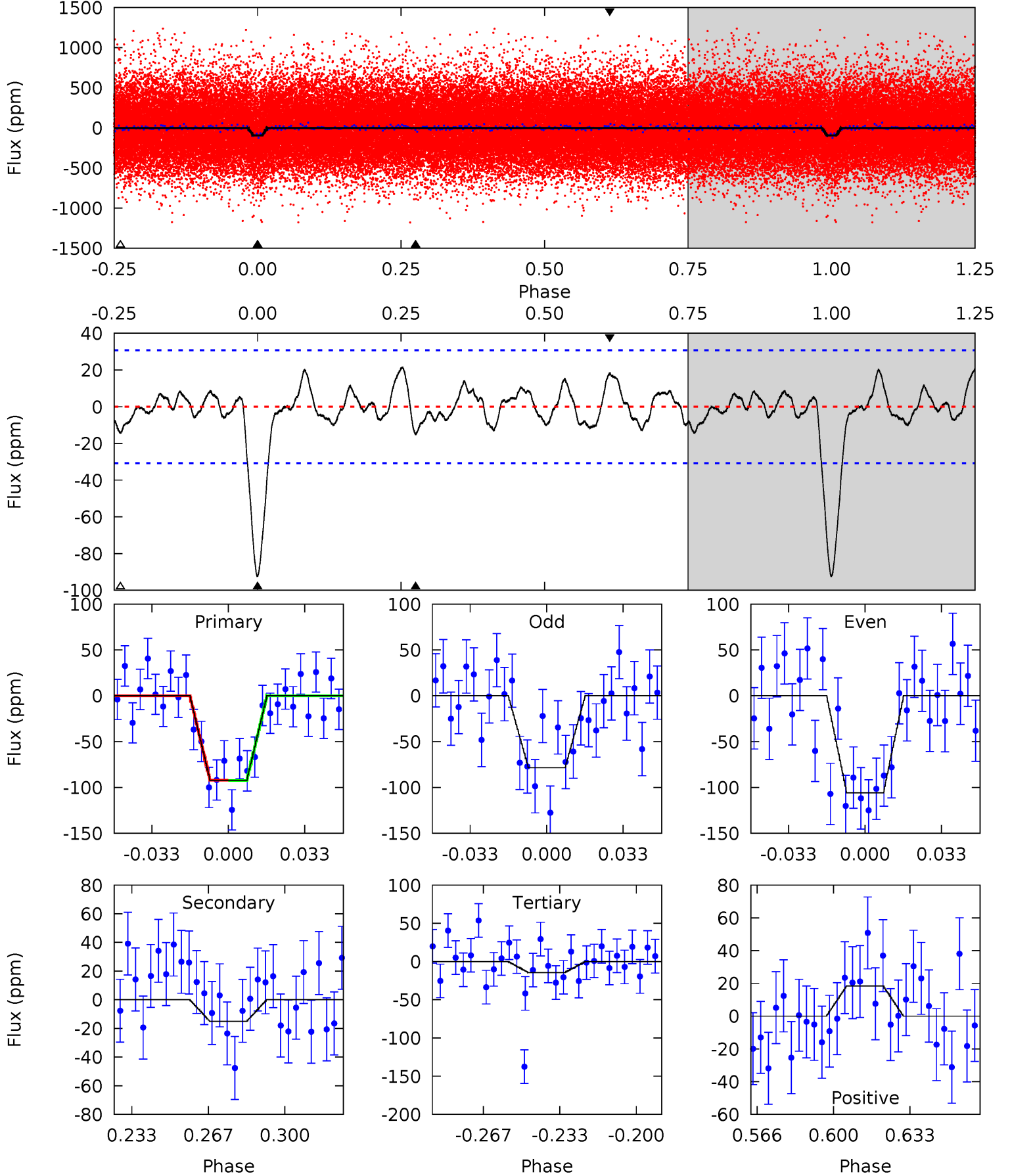
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	2.85	2.48	2.78	4.77	2.09	1.29	12.0	11.7	0.37	0.07	2.55	0.98	0.19	0.36



Alt Model-Shift Uniqueness Test

005440317-01, P = 2.319429 Days, E = 129.615714 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	2.35	2.24	2.86	4.79	2.13	1.13	12.1	11.5	0.11	-0.51	2.13	0.95	0.19	0.02



Stellar Parameters For KIC 005440317

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5624^{+76}_{-76}	$4.256^{+0.143}_{-0.117}$	$0.300^{+0.150}_{-0.150}$	$1.248^{+0.203}_{-0.203}$	$1.023^{+0.069}_{-0.055}$	$0.741^{+0.482}_{-0.251}$
	+1%/-1%	+3%/-3%	+50%/-50%	+16%/-16%	+7%/-5%	+65%/-34%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 005440317-01 / KOI 3141.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-17 ± 6	$1.53^{+1.11}_{-0.89}$	2078^{+105}_{-95}	3748^{+1528}_{-713}	$4.704^{+24.581}_{-3.292}$
Alt.	-15 ± 6	$1.44^{+1.05}_{-0.88}$	2081^{+100}_{-100}	3672^{+1815}_{-720}	$4.340^{+28.185}_{-3.087}$

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

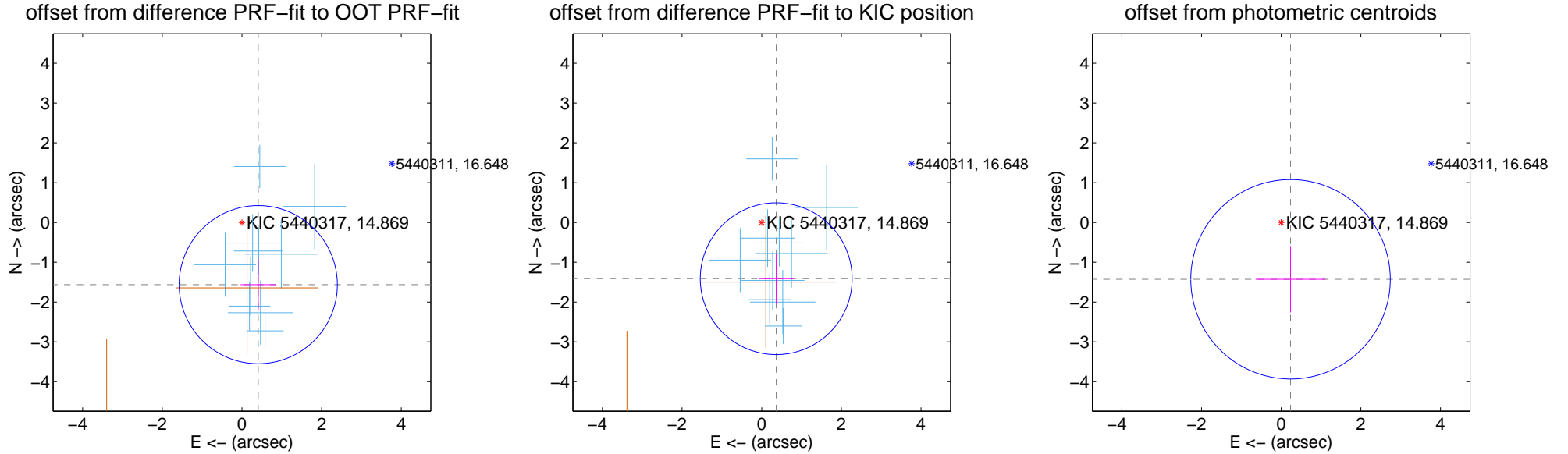
DV Centroid Data

Supplemental centroid analysis for 005440317-01. Kepler magnitude: 14.87. Transit SNR 11.69

There are 10 quarters with good PRF difference image offsets

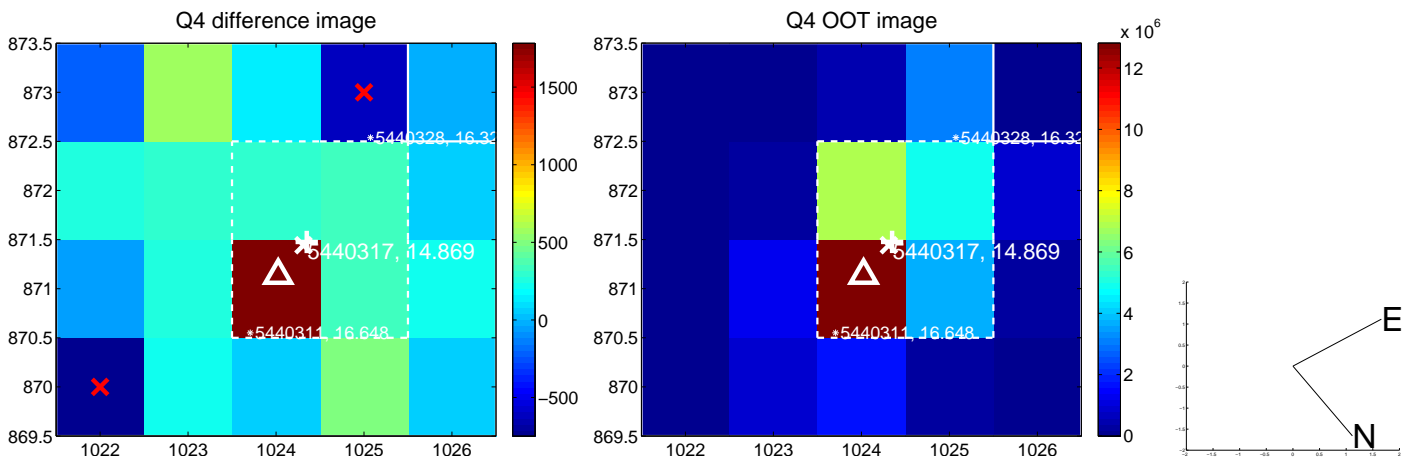
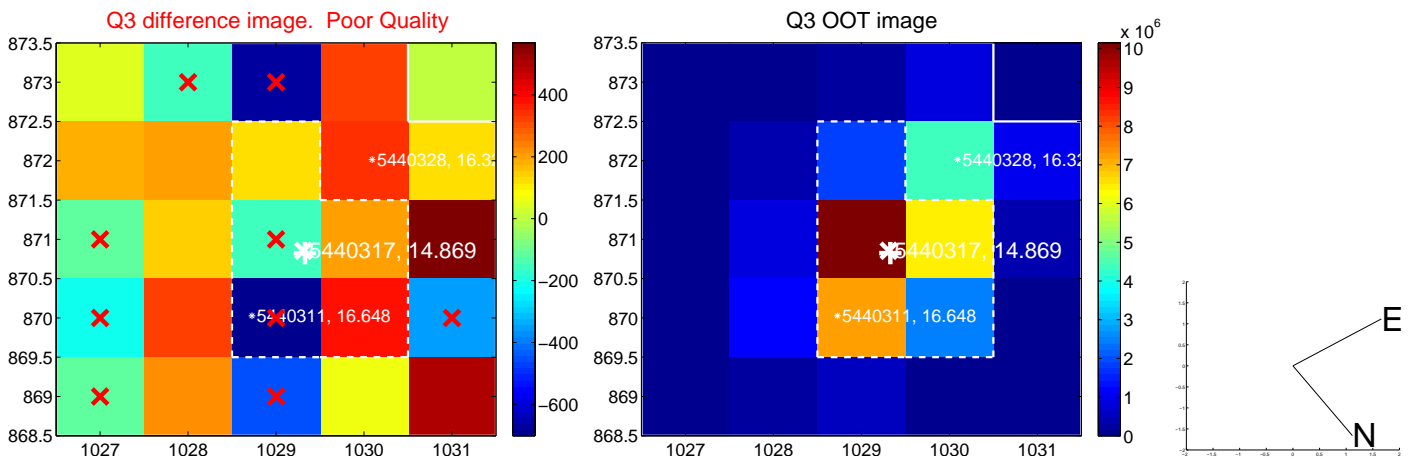
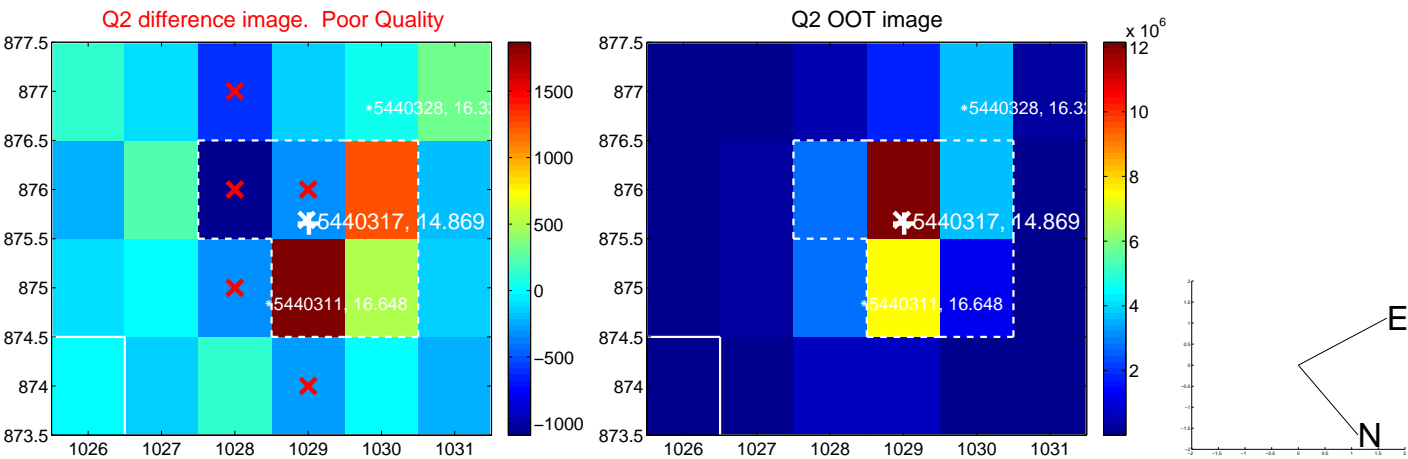
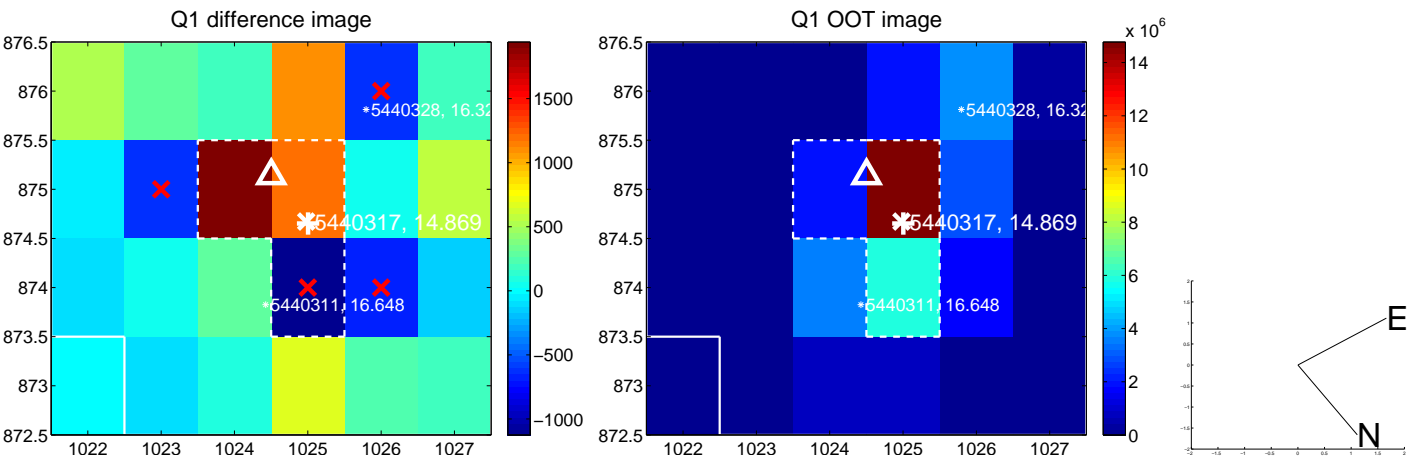
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.615 ± 0.662	2.44	-0.409 ± 0.445	-1.562 ± 0.650
PRF-fit source offset from KIC position	1.459 ± 0.636	2.30	-0.364 ± 0.437	-1.413 ± 0.628
photometric centroid source offset	1.45 ± 0.83	1.73	-0.23 ± 0.88	-1.43 ± 0.83

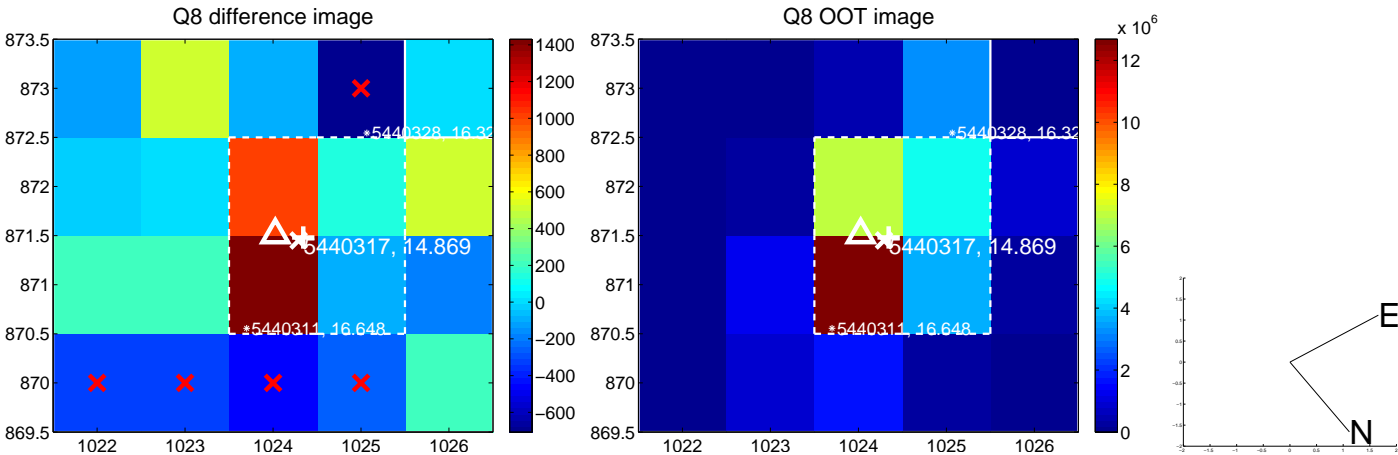
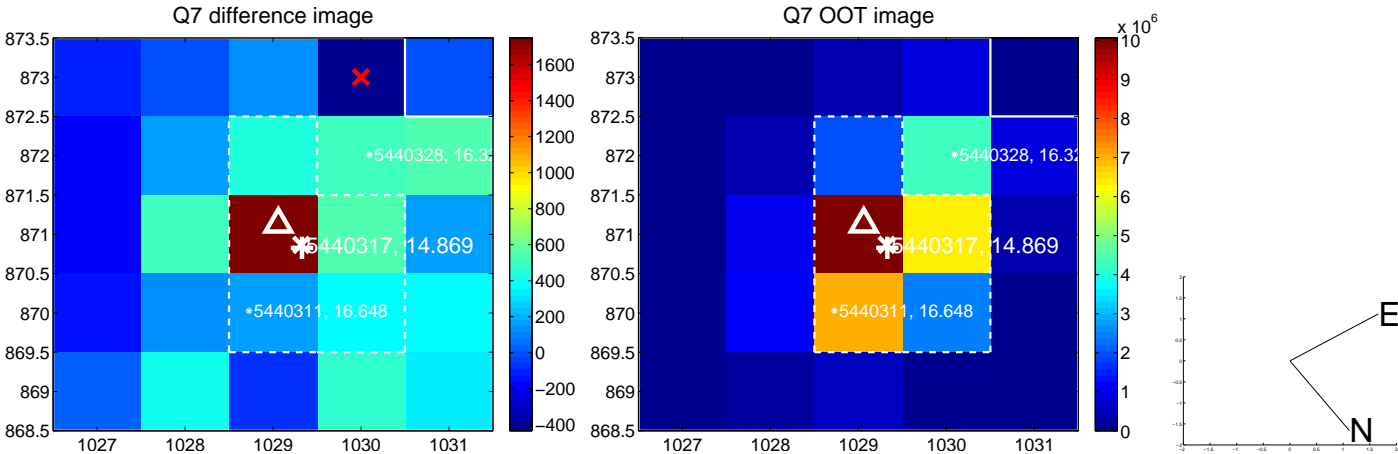
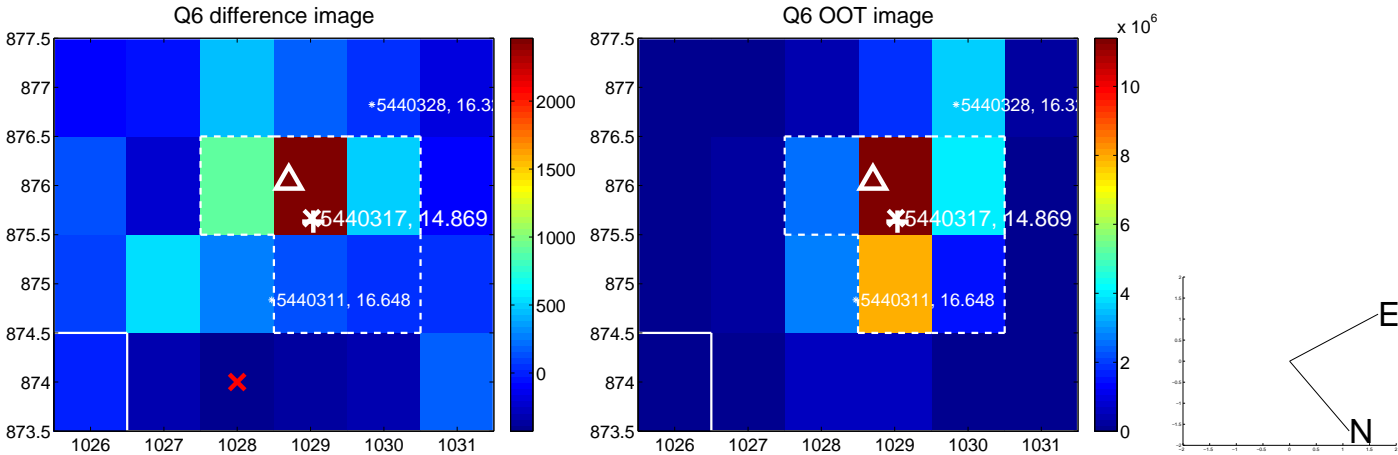
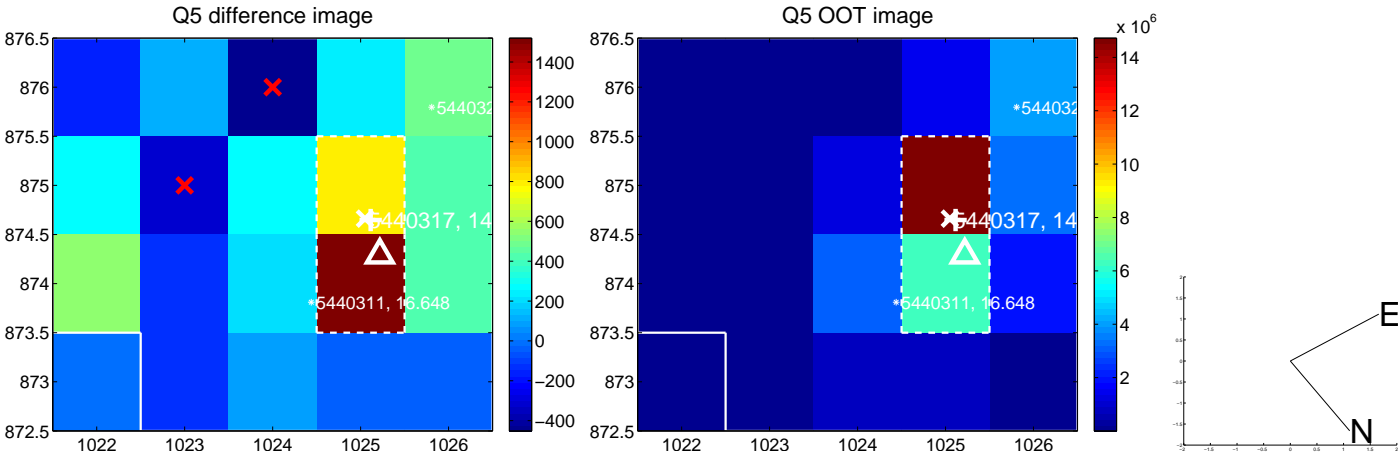


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

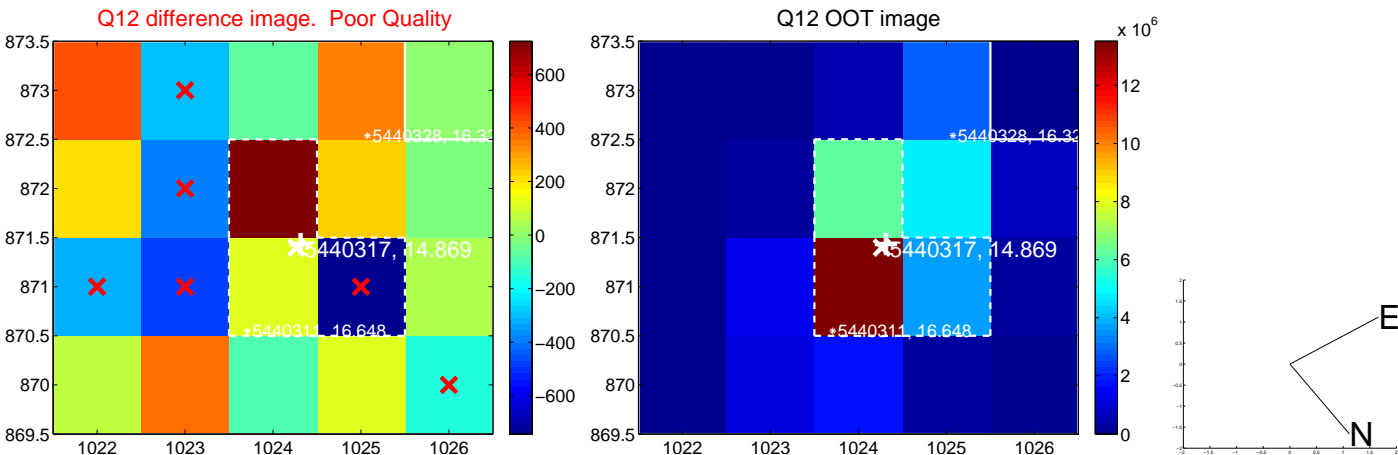
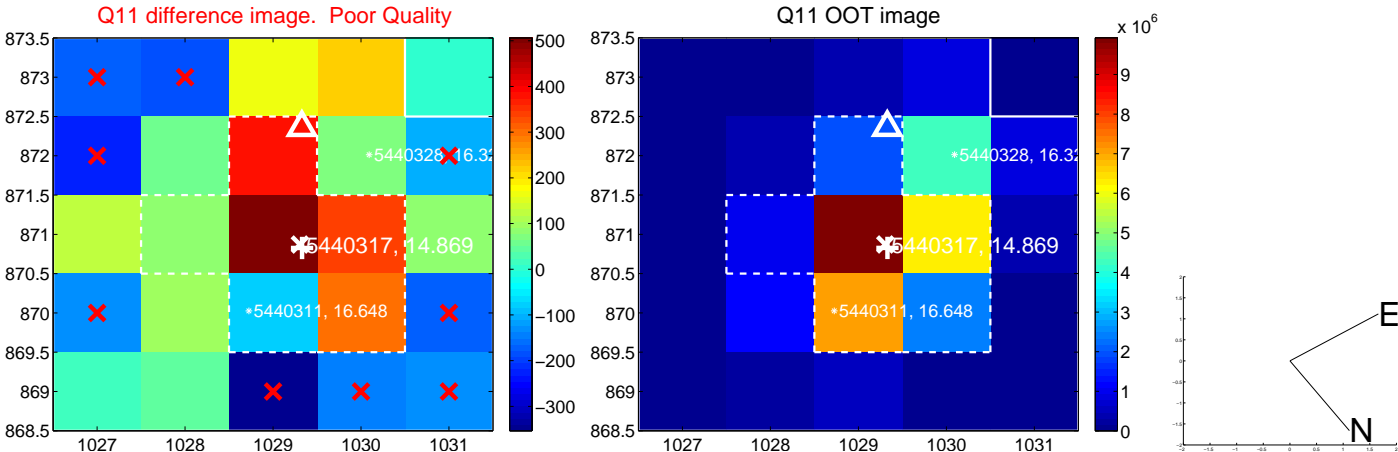
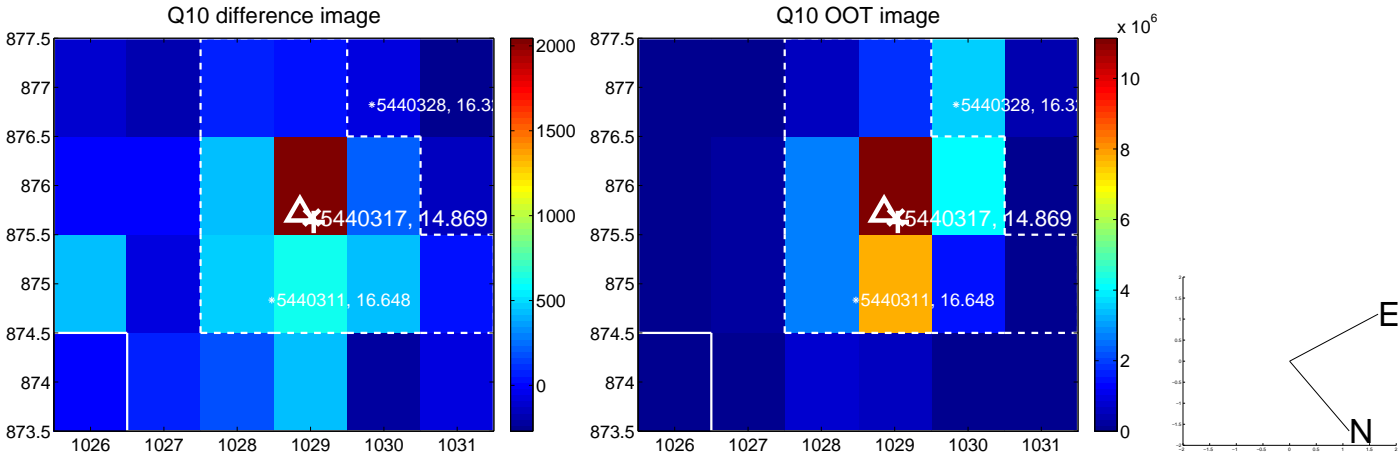
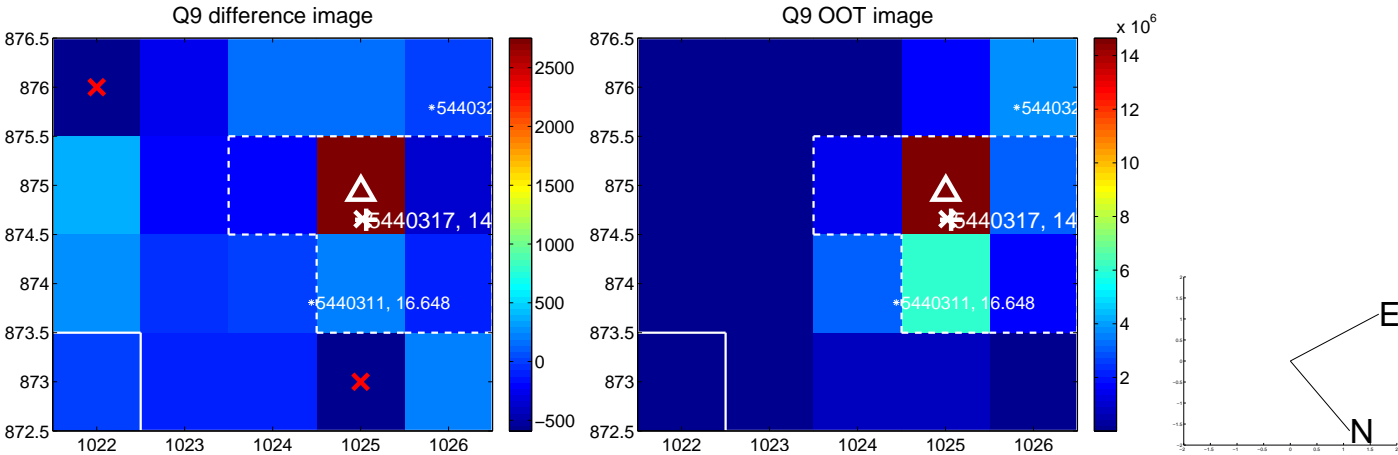
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



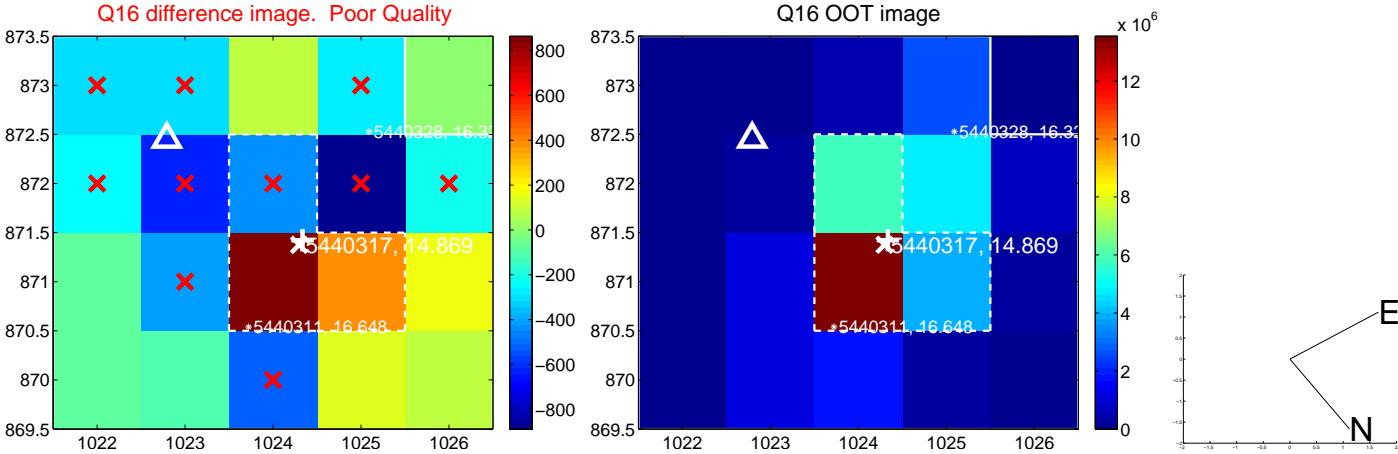
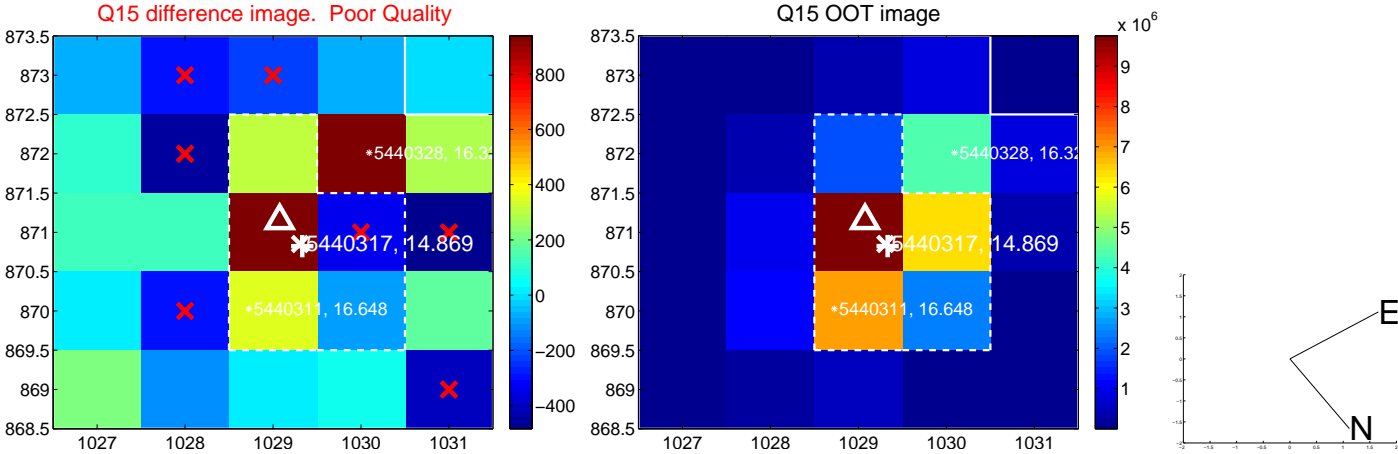
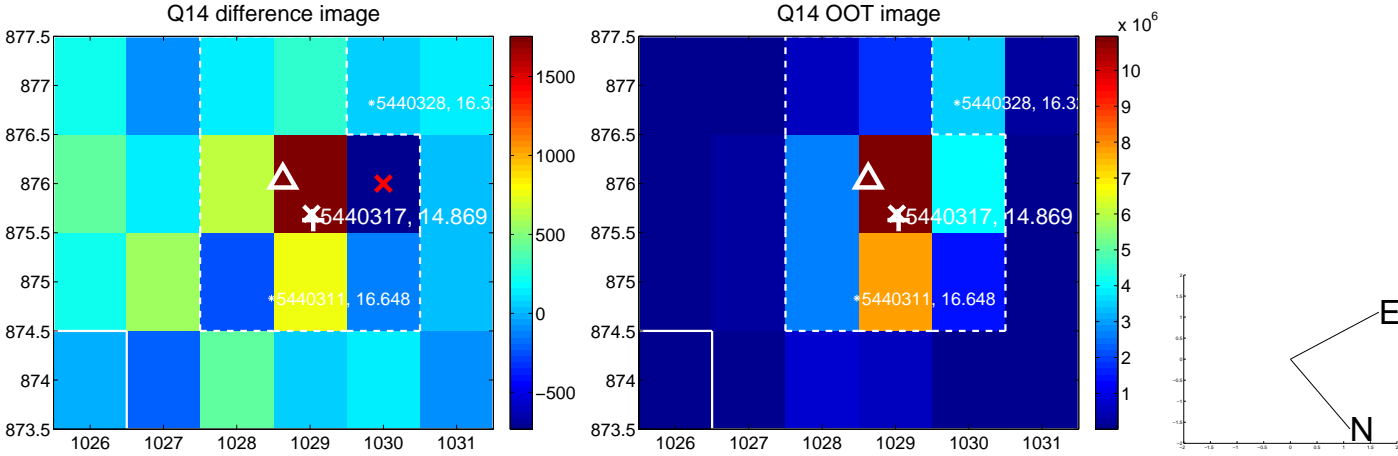
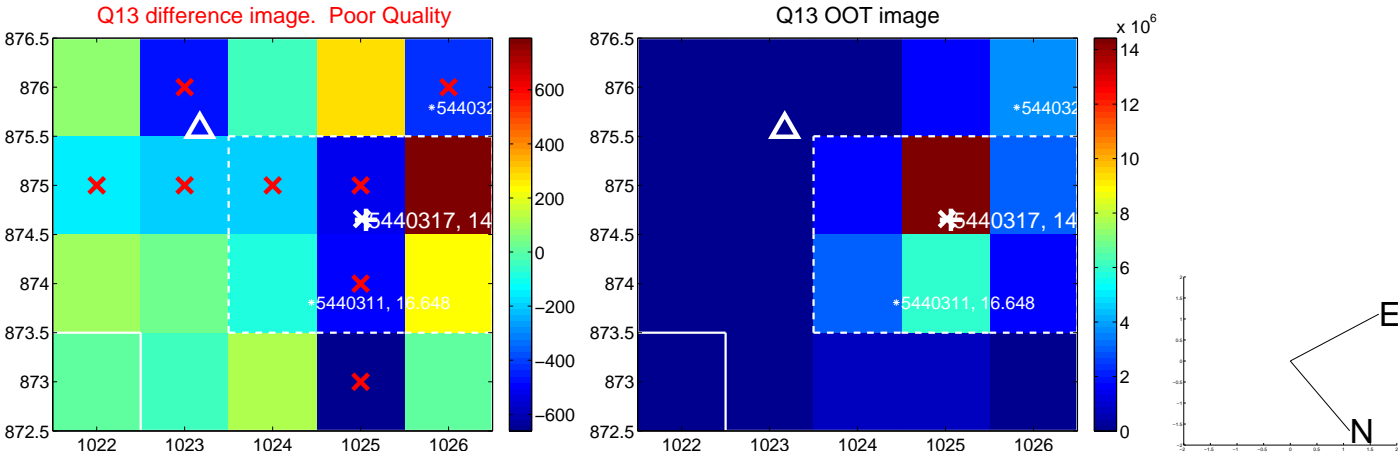
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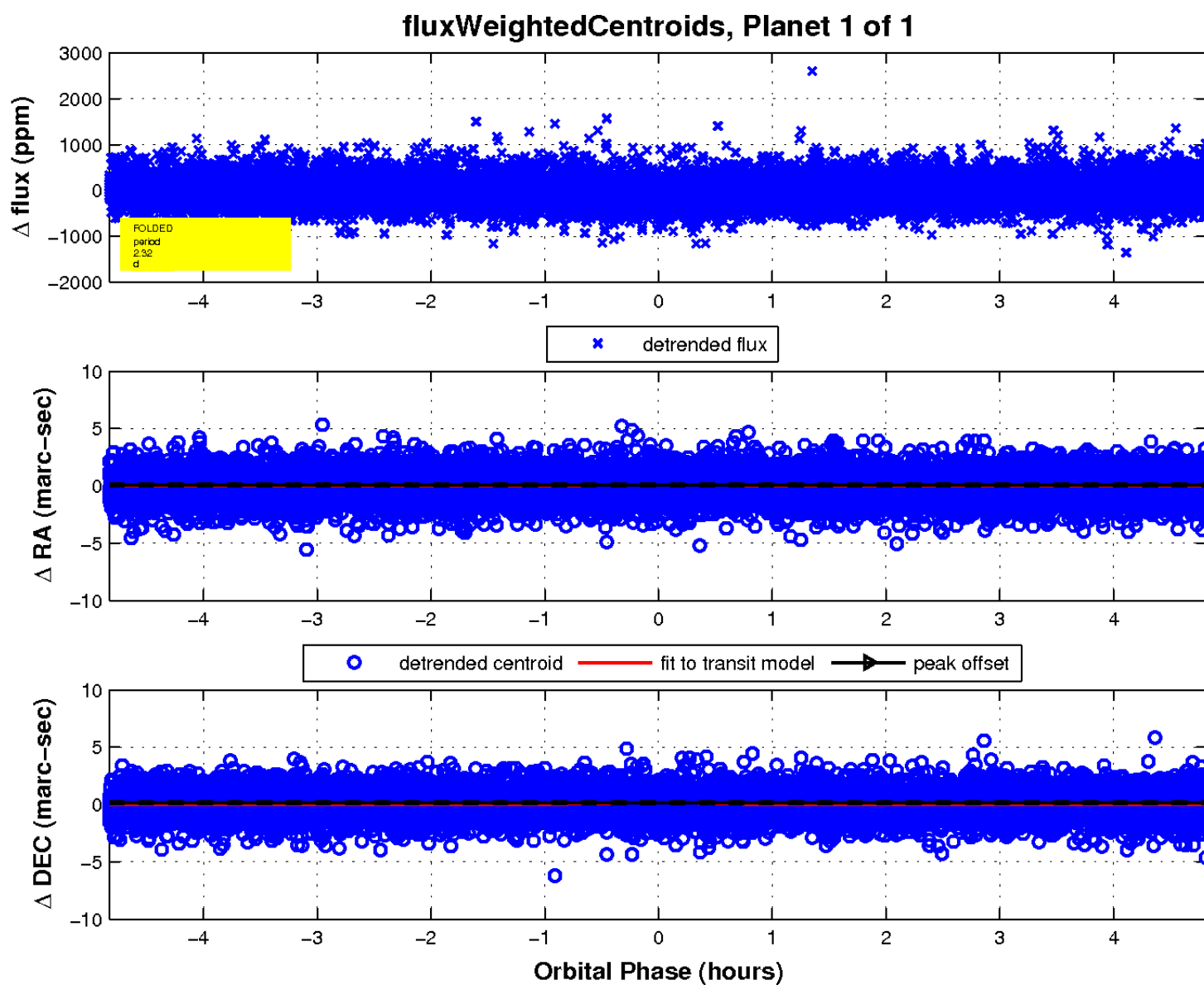
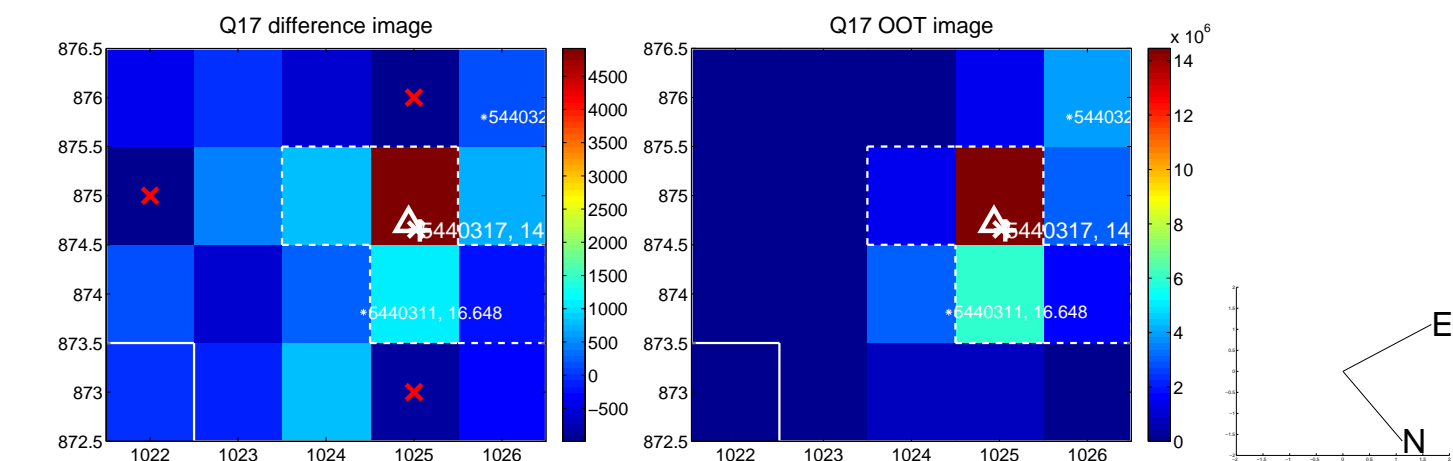
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UKIRT Image

Declination

