

KIC 006043562

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})
006043562-01	OBS	4764.01	31.420142	132.748194	384.1	4.192	9.8	10.3	0.75	5269	1.70	11.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006043562-01	OBS	PC	0.96	0	0	0	0	CENT_KIC_POS

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

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

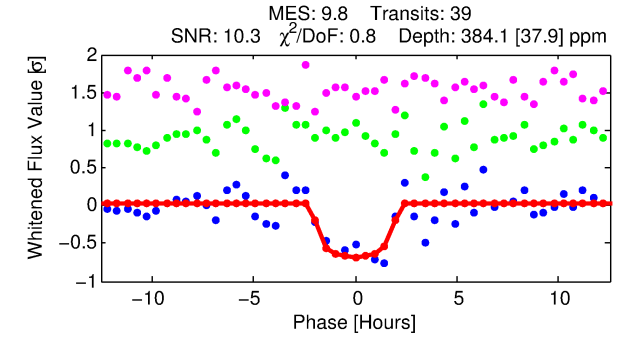
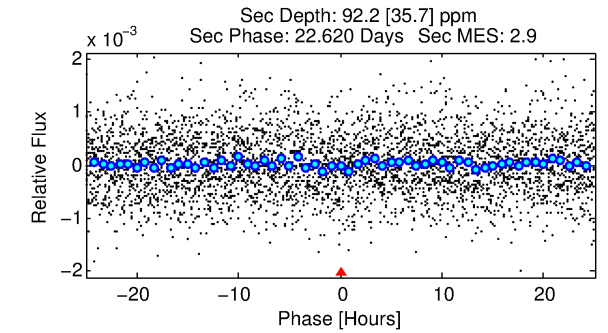
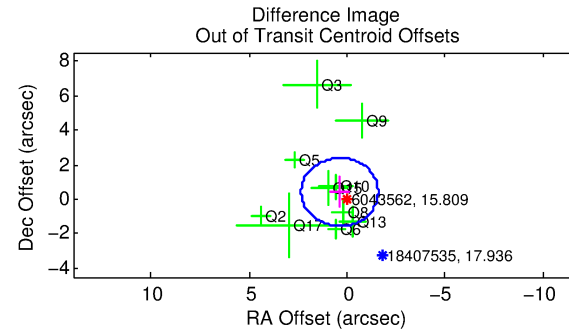
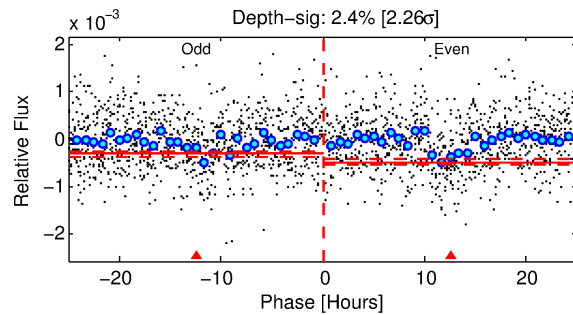
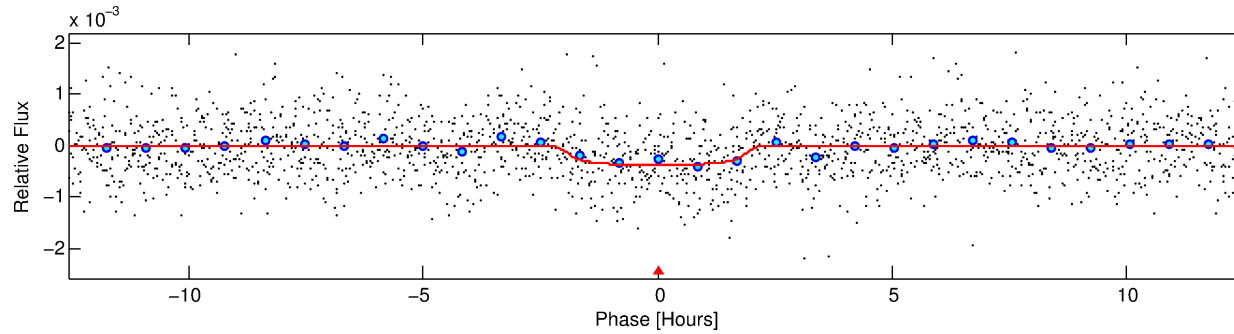
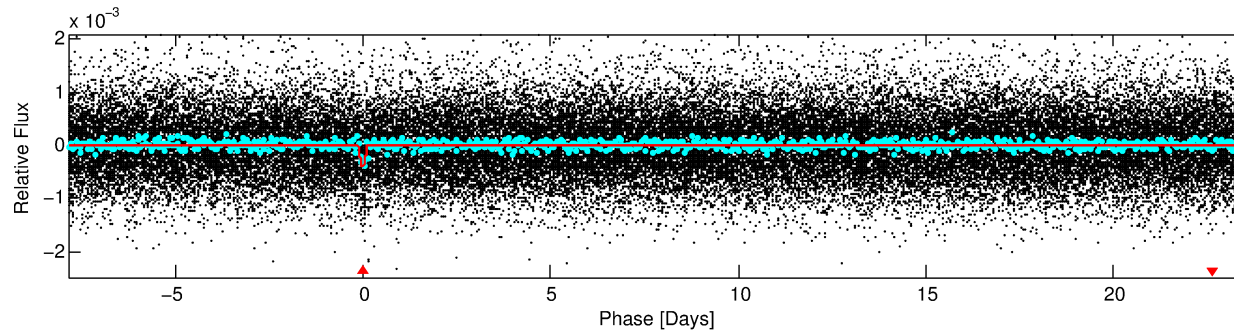
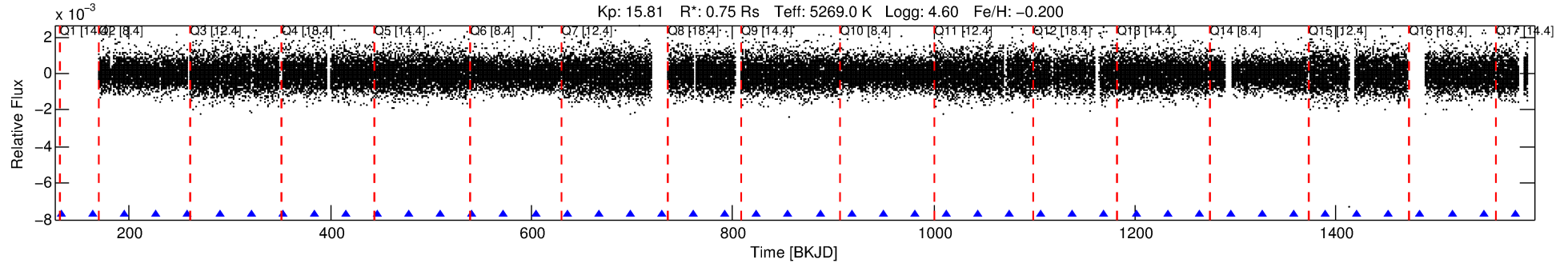
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006043562-01

No Significant Match Found

DV One-Page Summary

KIC: 6043562 Candidate: 1 of 1 Period: 31.420 d
KOI: K04764.01 Corr: 0.927



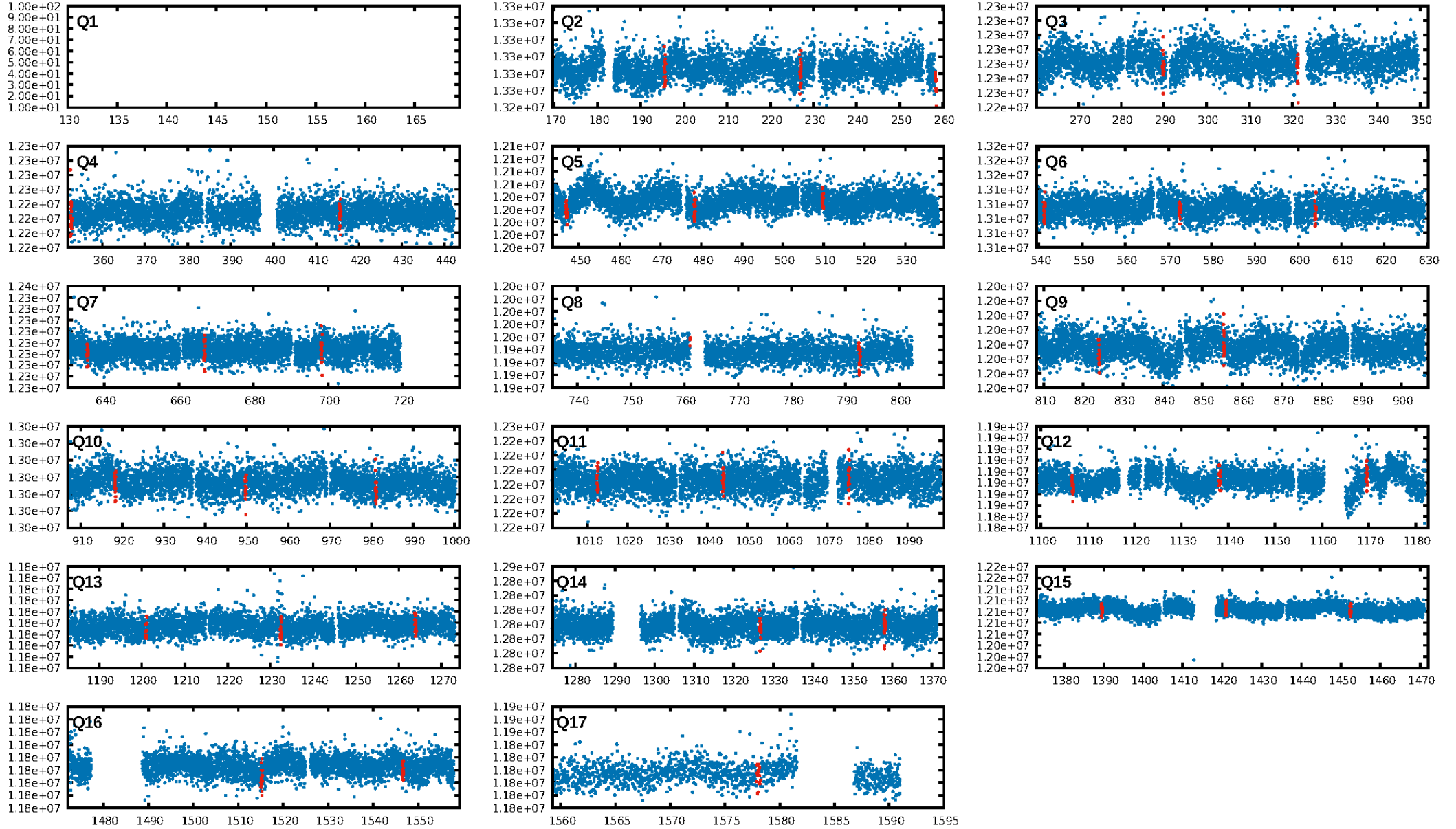
DV Fit Results:

Period = 31.42014 [0.00036] d
Epoch = 132.7482 [0.0095] BKJD
Rp/R* = 0.0208 [0.0108]
a/R* = 31.66 [67.14]
b = 0.86 [0.67]
Seff = 11.63 [2.51]
Teq = 471 [25] K
Rp = 1.70 [0.92] Re
a = 0.1823 [0.0227] AU
Ag = 583.80 [656.47] [0.89 σ]
Teff = 3578 [999] K [3.11 σ]

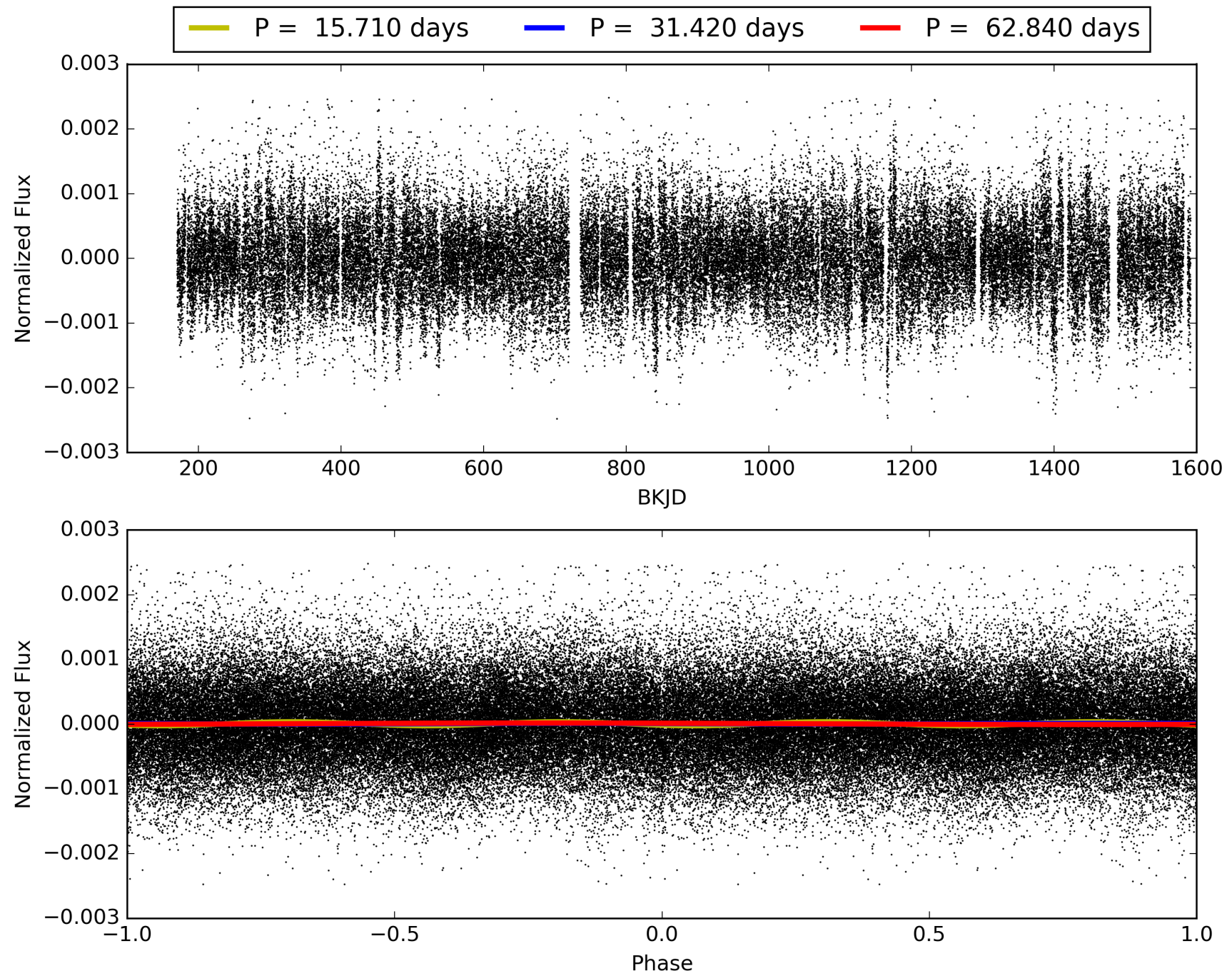
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.74e-23
RollingBand-fgt: 1.00 [38/38]
GhostDiagnostic-chr: 13.26
Centroid-sig: 36.0%
Centroid-so: 1.125 arcsec [0.76 σ]
OotOffset-rm: 0.564 arcsec [0.86 σ]
KicOffset-rm: 0.110 arcsec [0.13 σ]
OotOffset-st: 3/2/1/4 [10]
KicOffset-st: 3/2/1/4 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 006043562-01, PDC Light Curves

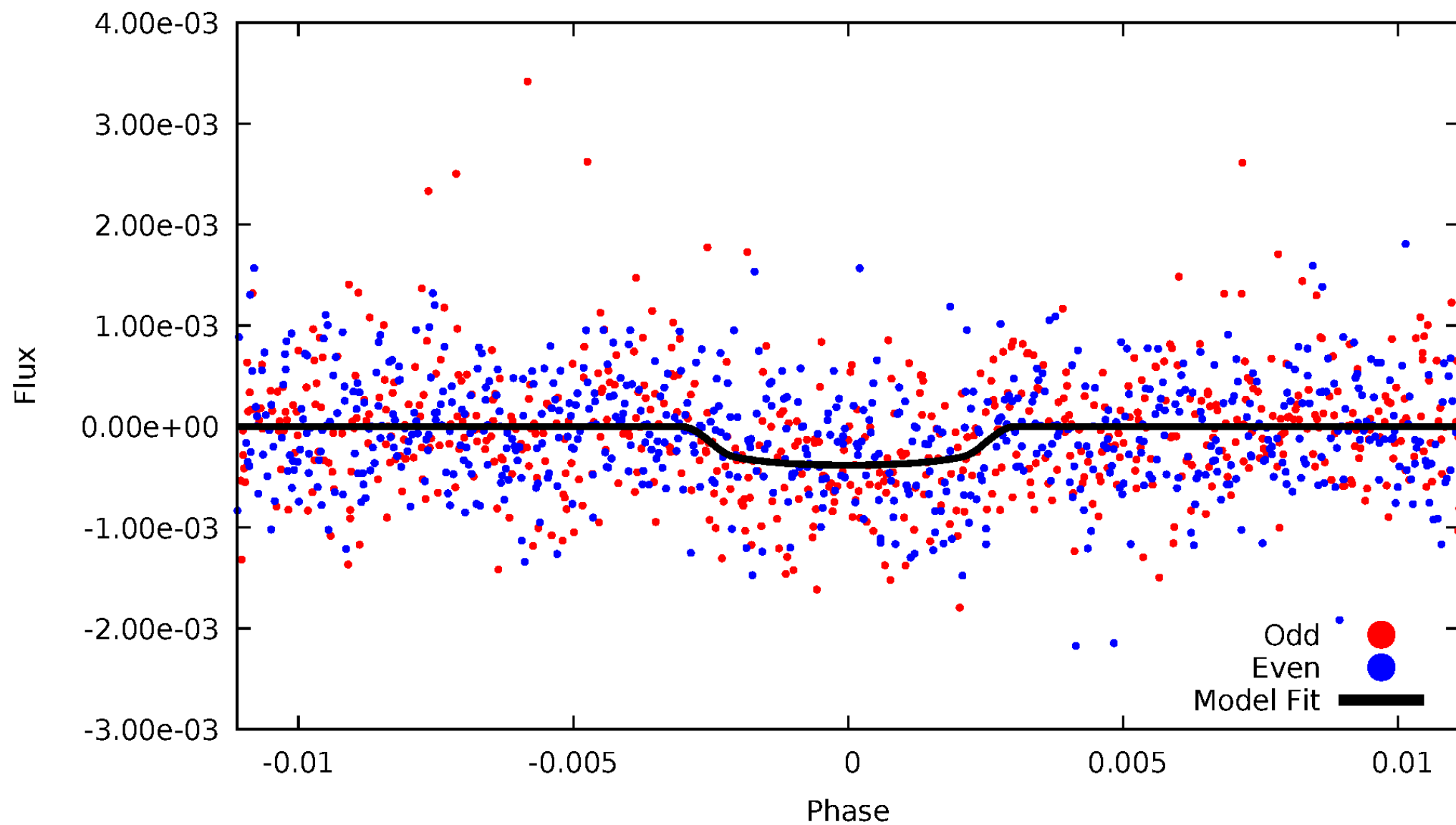


TCE 006043562-01



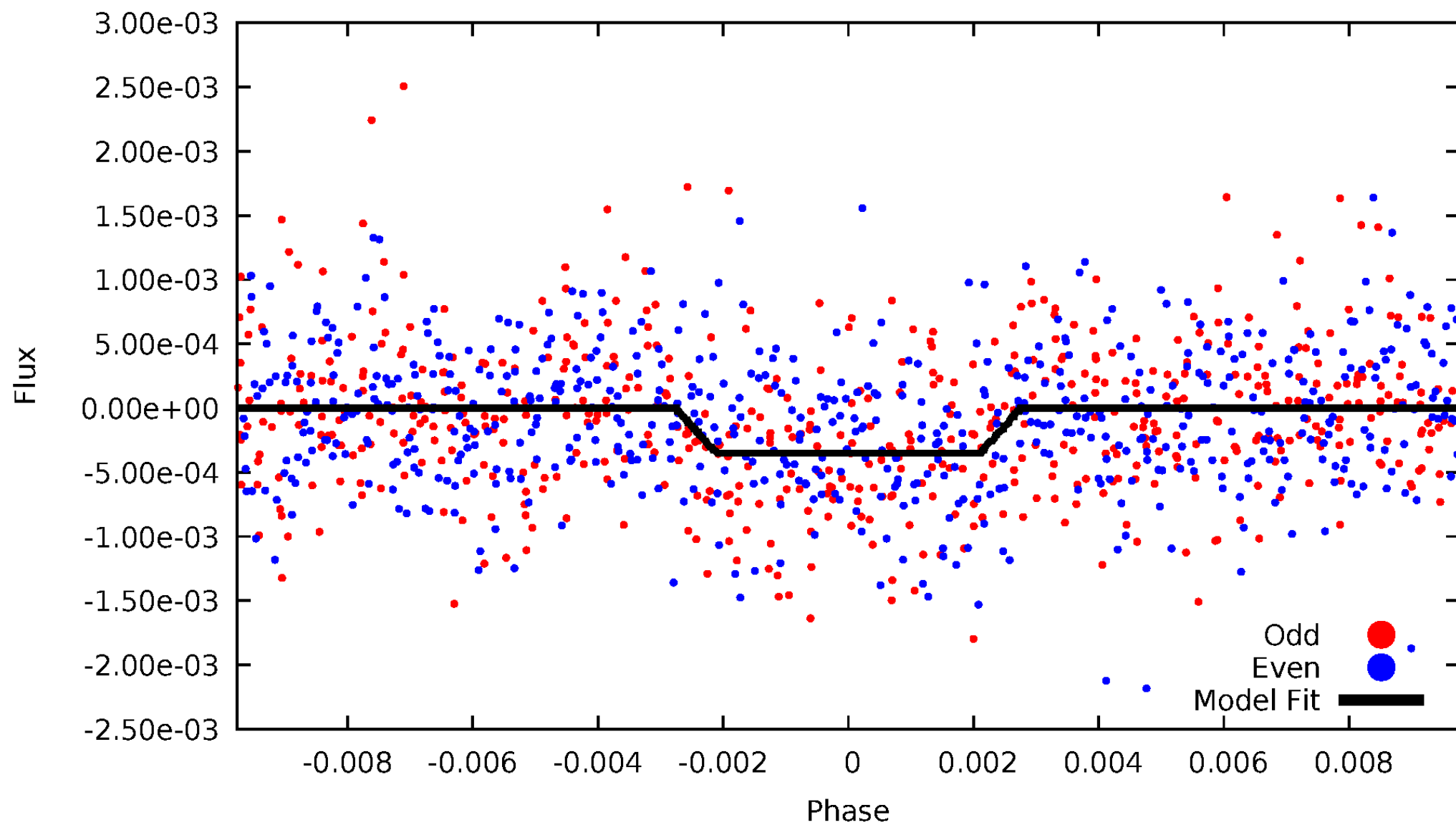
DV Odd/Even

TCE 006043562-01

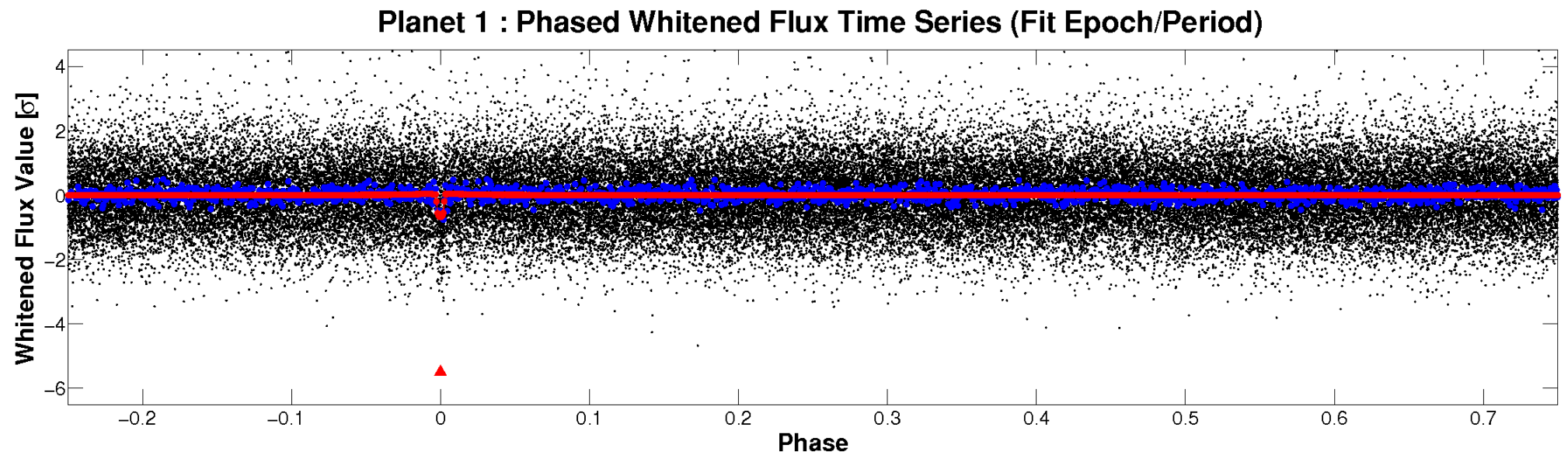
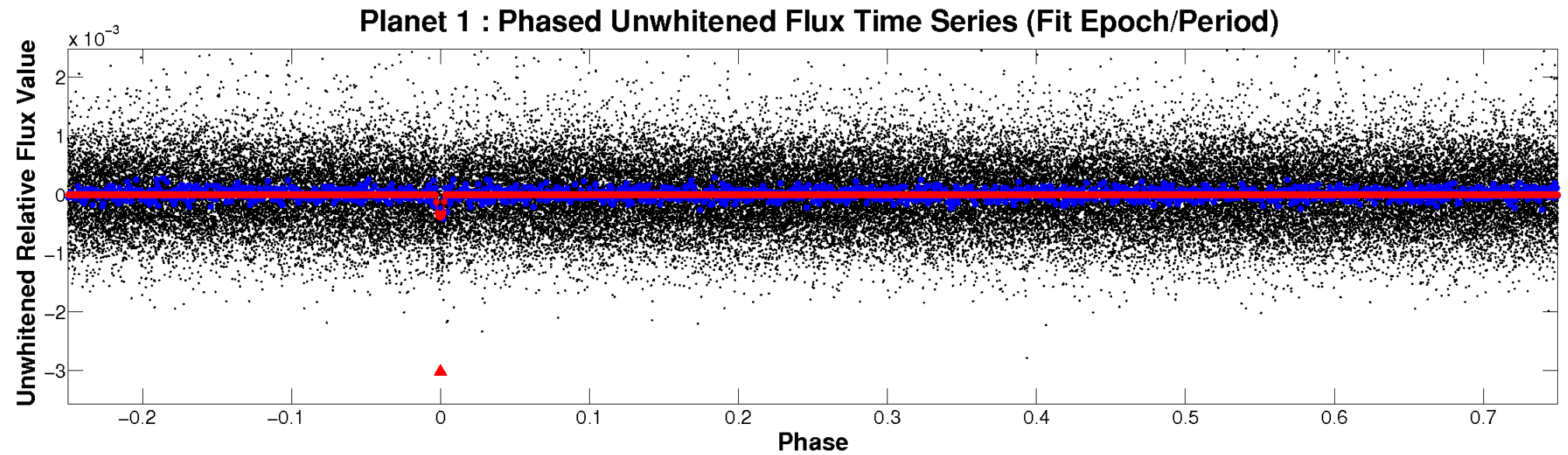


ALT Odd/Even

TCE 006043562-01

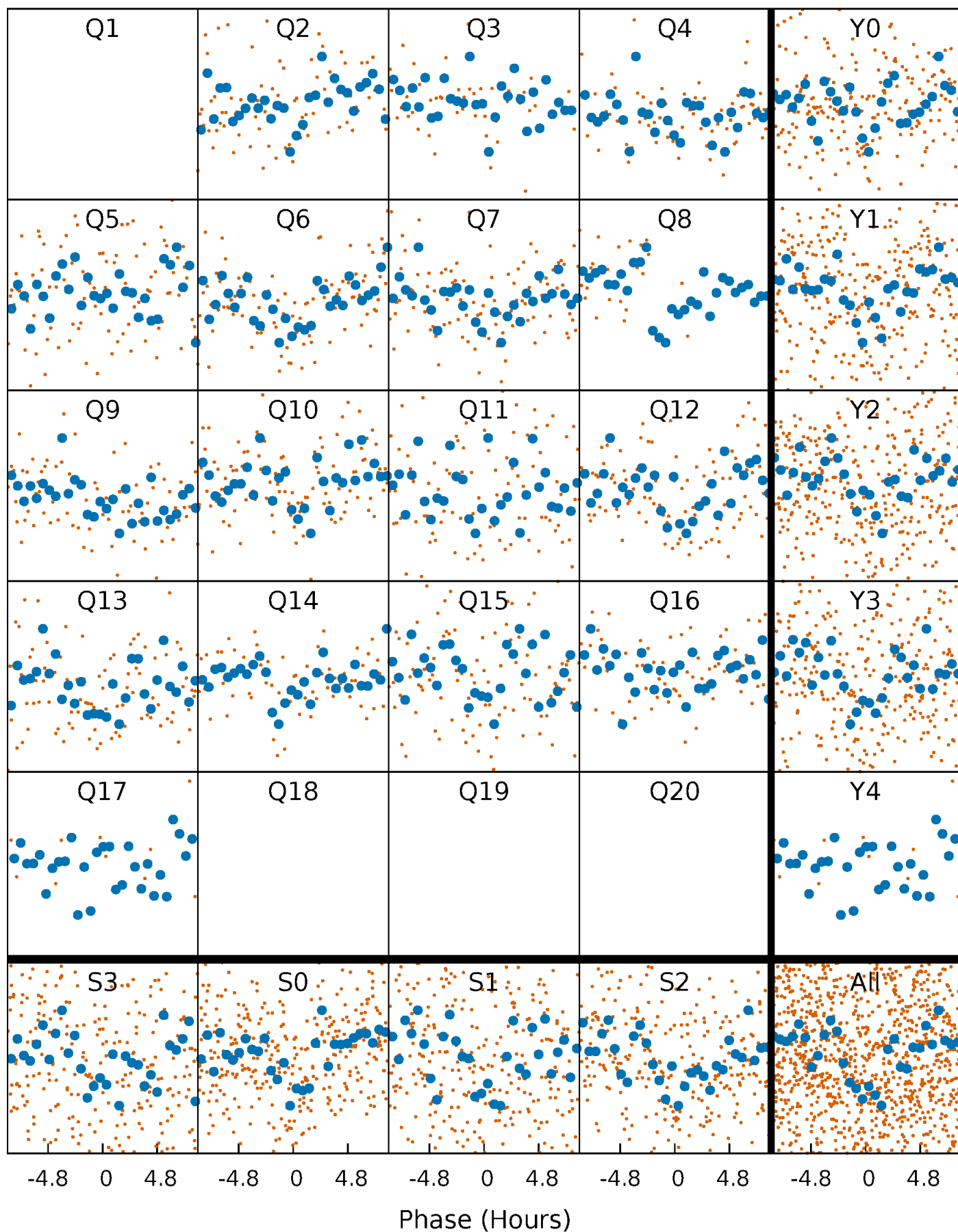


Non-Whitened Vs. Whitened Light Curve



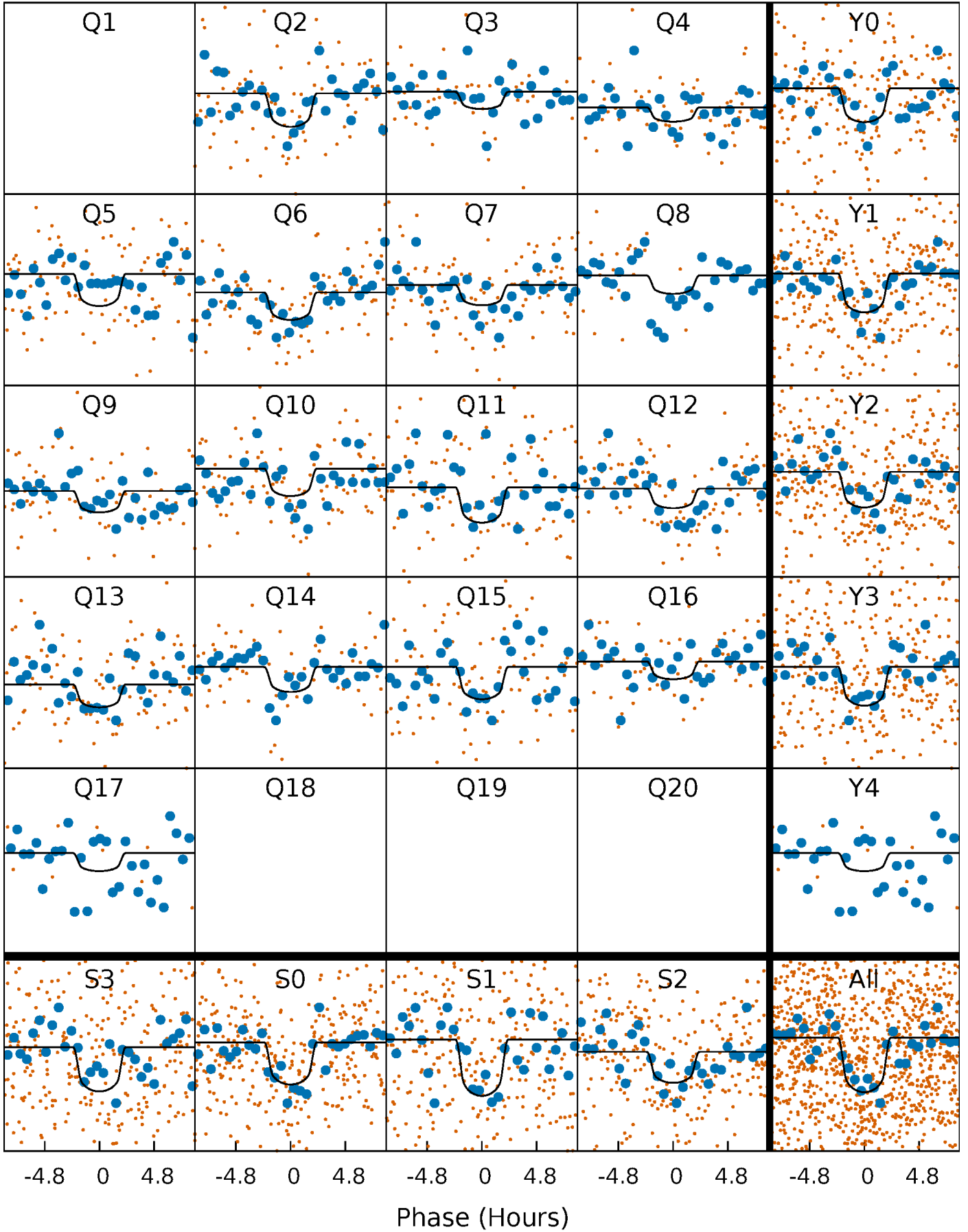
PDC Quarter-Phased Transit Curves

TCE 006043562-01 P= 31.420142 Days $T_0=132.748194$ (BKJD)



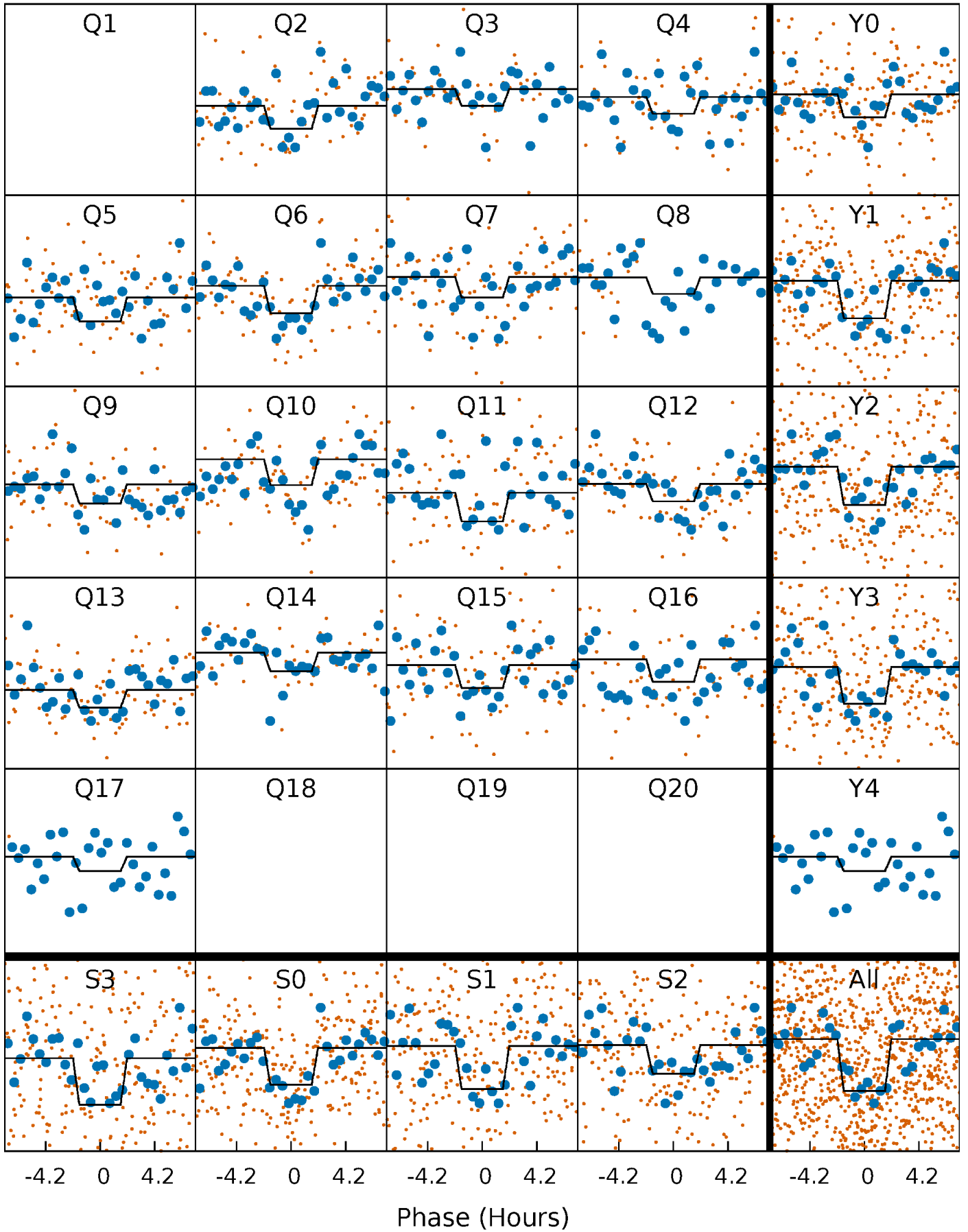
DV Quarter-Phased Transit Curves

TCE 006043562-01 $P = 31.420142$ Days $T_0 = 132.748194$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

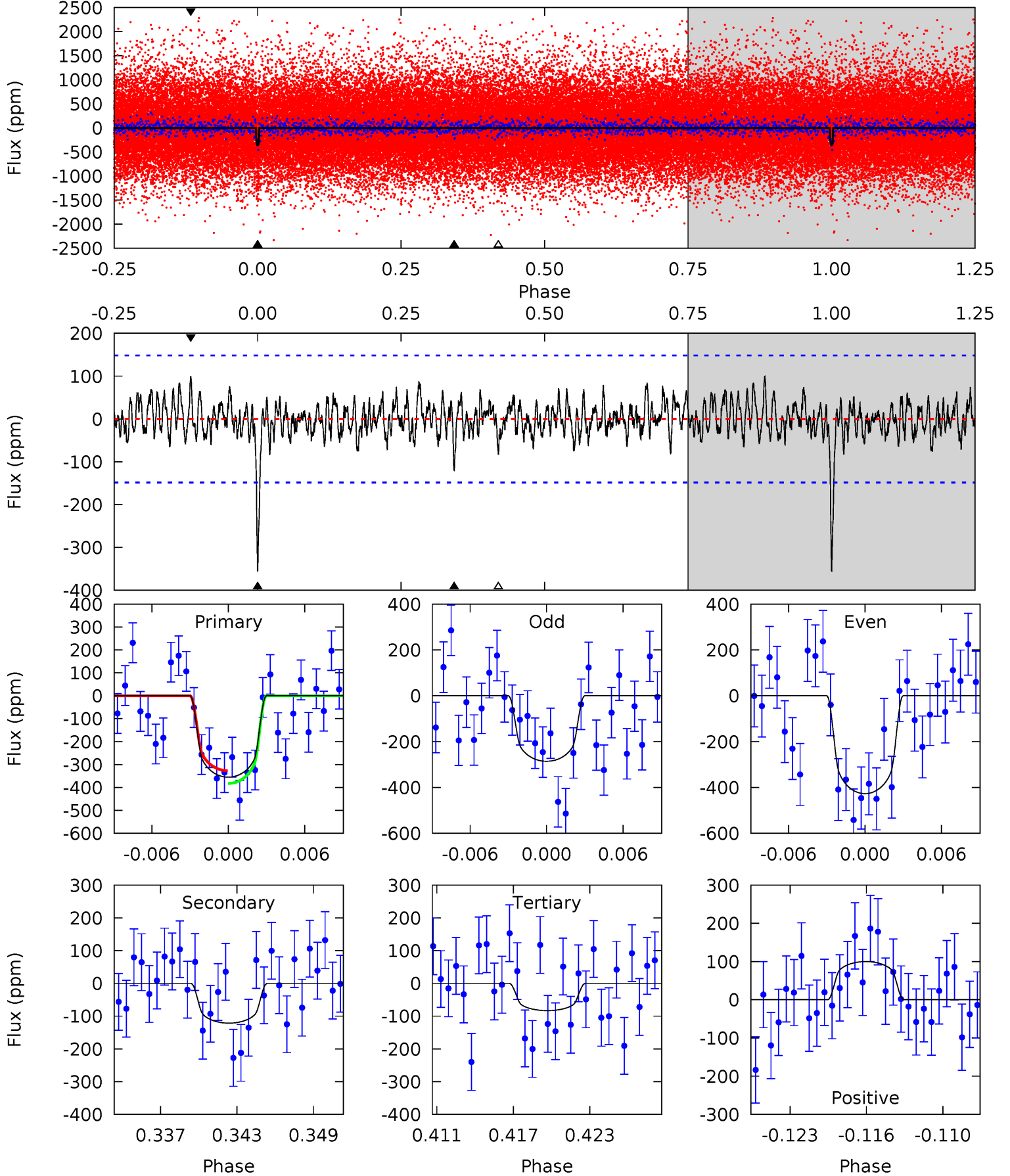
TCE 006043562-01 P= 31.420026 Days $T_0=132.751108$ (BKJD)



DV Model-Shift Uniqueness Test

006043562-01, P = 31.420142 Days, E = 132.748194 Days

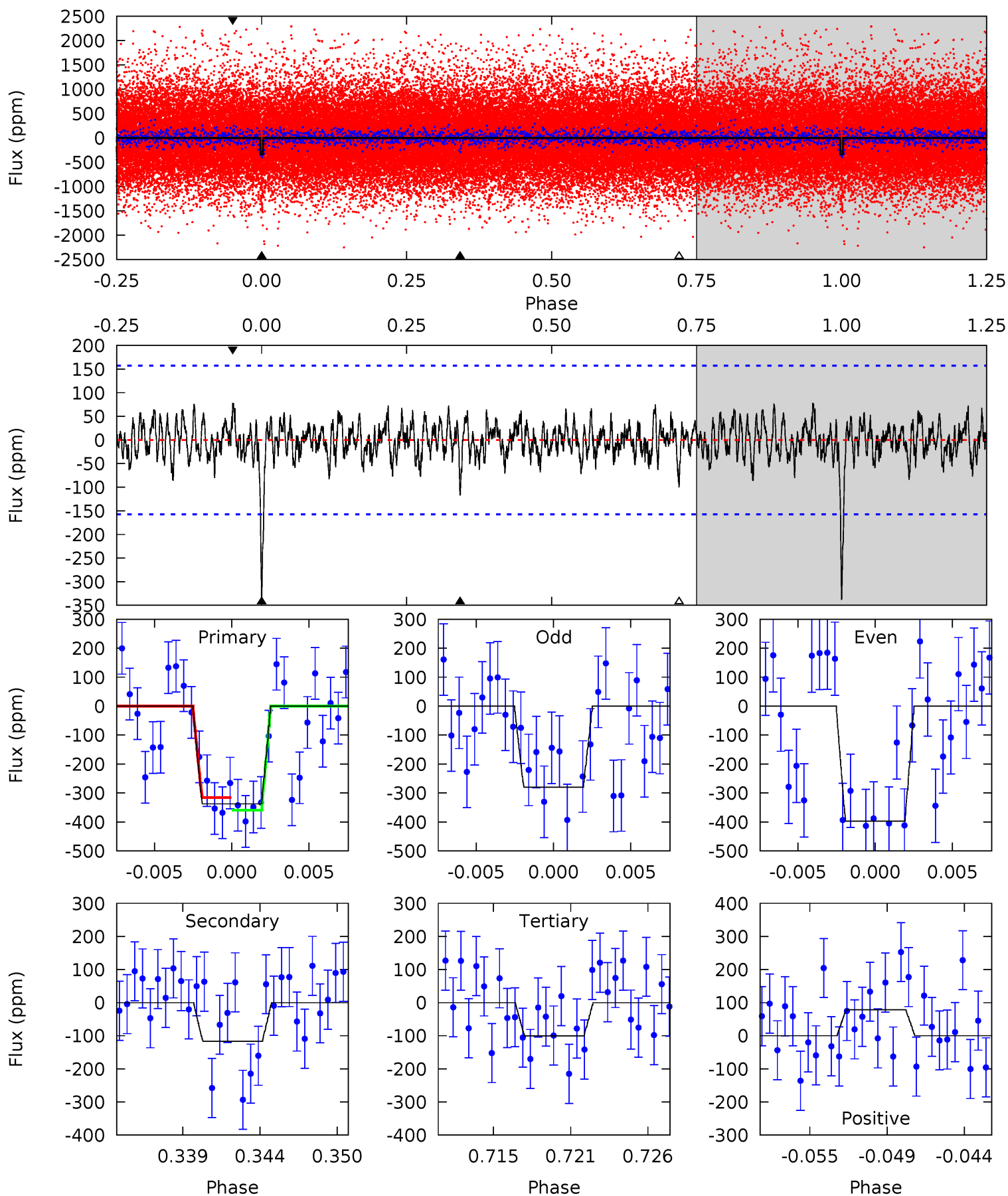
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	4.19	2.87	3.45	5.12	2.74	1.10	9.39	8.81	1.32	0.74	2.44	1.14	0.22	0.96



Alt Model-Shift Uniqueness Test

006043562-01, $P = 31.420026$ Days, $E = 132.751108$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.83	3.27	2.57	5.14	2.78	0.97	7.76	8.46	0.56	1.26	1.92	1.06	0.19	0.71



Stellar Parameters For KIC 006043562

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5269^{+158}_{-158}	$4.603^{+0.032}_{-0.097}$	$-0.200^{+0.300}_{-0.300}$	$0.748^{+0.112}_{-0.060}$	$0.822^{+0.078}_{-0.086}$	$2.769^{+0.481}_{-0.865}$
	+3%/-3%	+1%/-2%	+150%/-150%	+15%/-8%	+9%/-10%	+17%/-31%
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 006043562-01 / KOI 4764.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-121 ± 29	$1.74^{+0.91}_{-0.82}$	668^{+30}_{-26}	4075^{+1216}_{-575}	722^{+1922}_{-435}
Alt.	-117 ± 31	$1.56^{+0.86}_{-0.77}$	667^{+29}_{-25}	4209^{+1410}_{-640}	867^{+2588}_{-544}

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

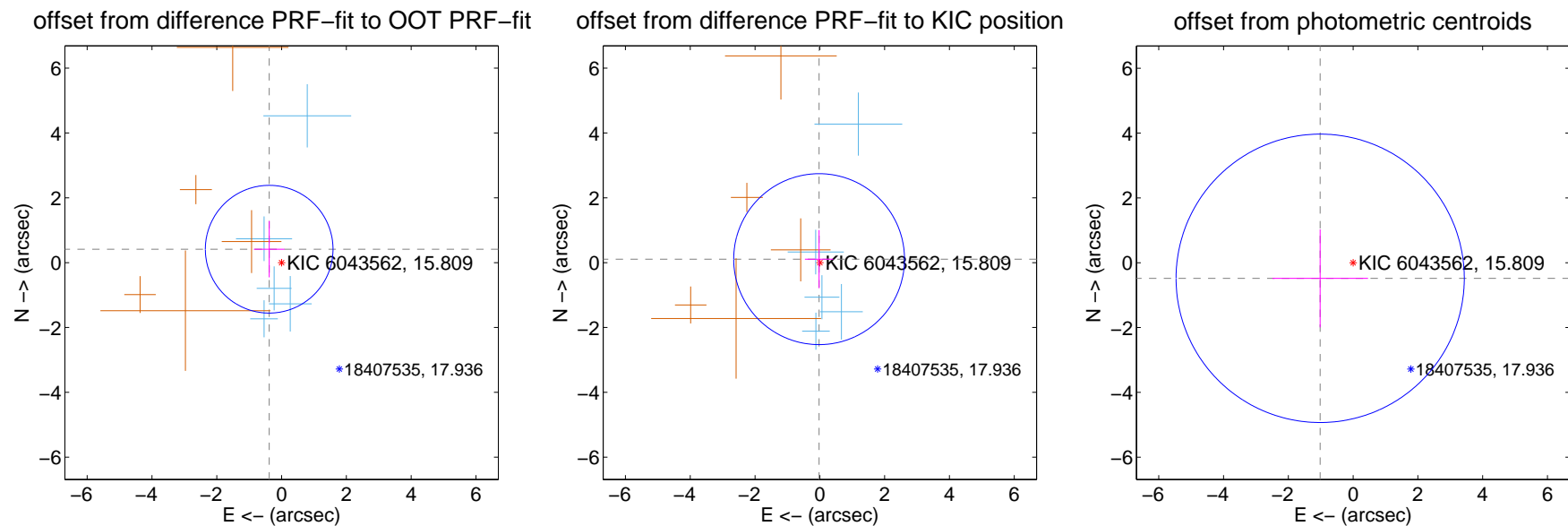
DV Centroid Data

Supplemental centroid analysis for 006043562-01. Kepler magnitude: 15.81. Transit SNR 10.33

There are 5 quarters with good PRF difference image offsets

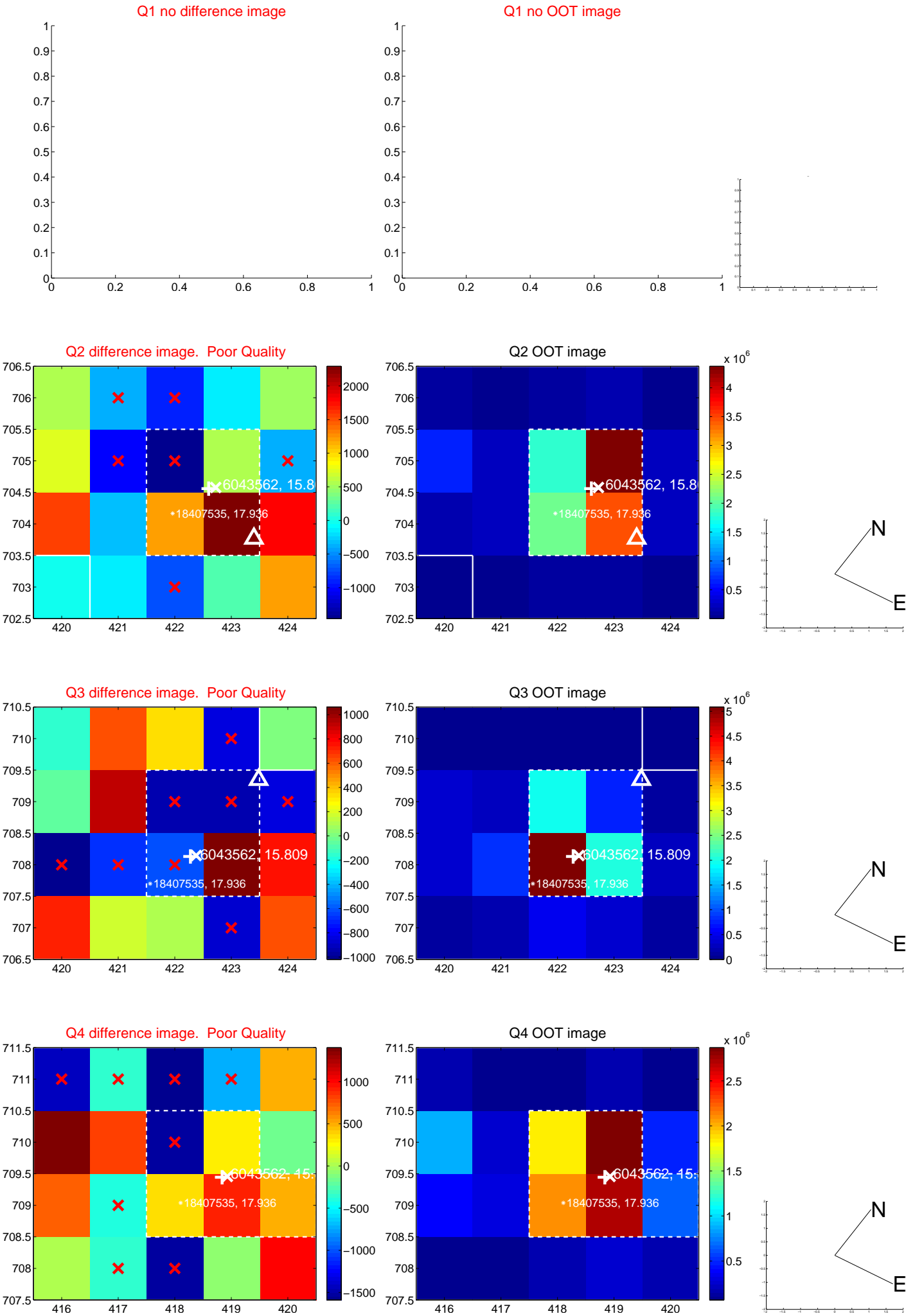
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.564 ± 0.656	0.86	0.383 ± 0.472	0.414 ± 0.869
PRF-fit source offset from KIC position	0.110 ± 0.878	0.13	0.023 ± 0.438	0.108 ± 0.898
photometric centroid source offset	1.12 ± 1.48	0.76	1.02 ± 1.48	-0.48 ± 1.51

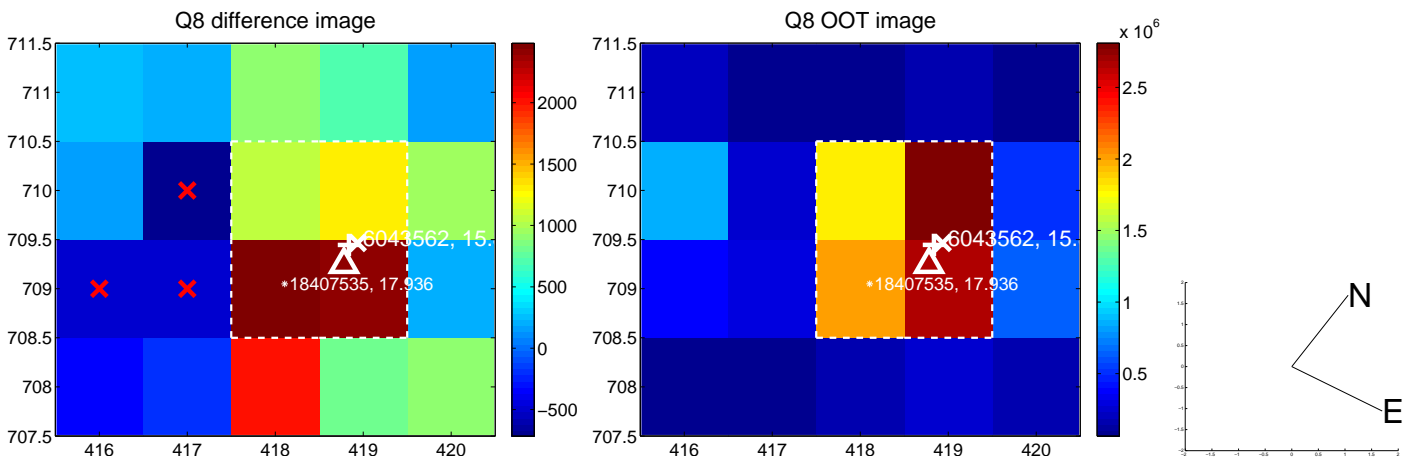
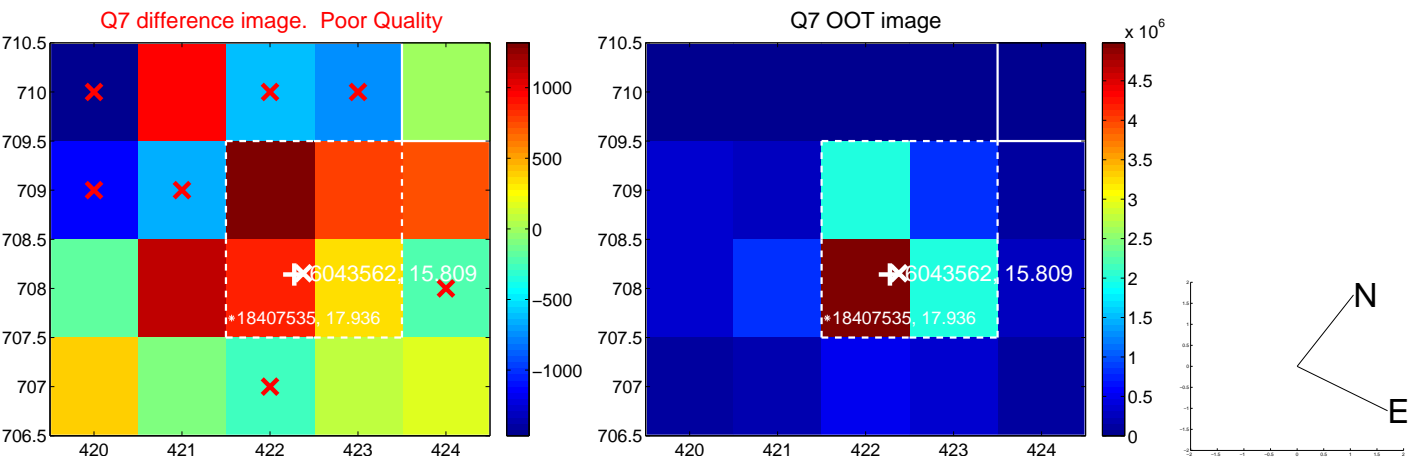
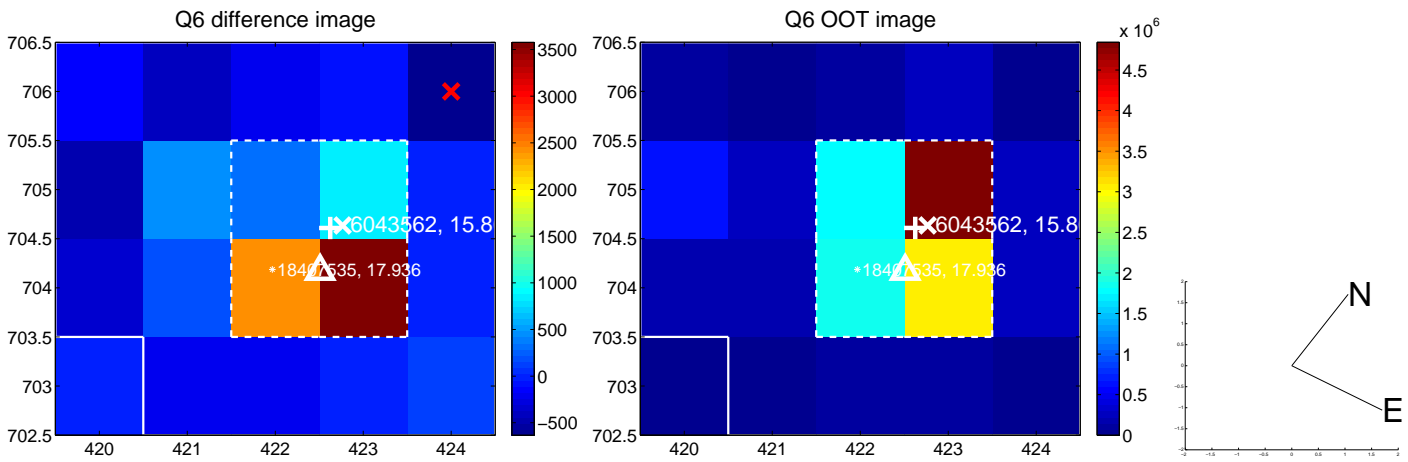
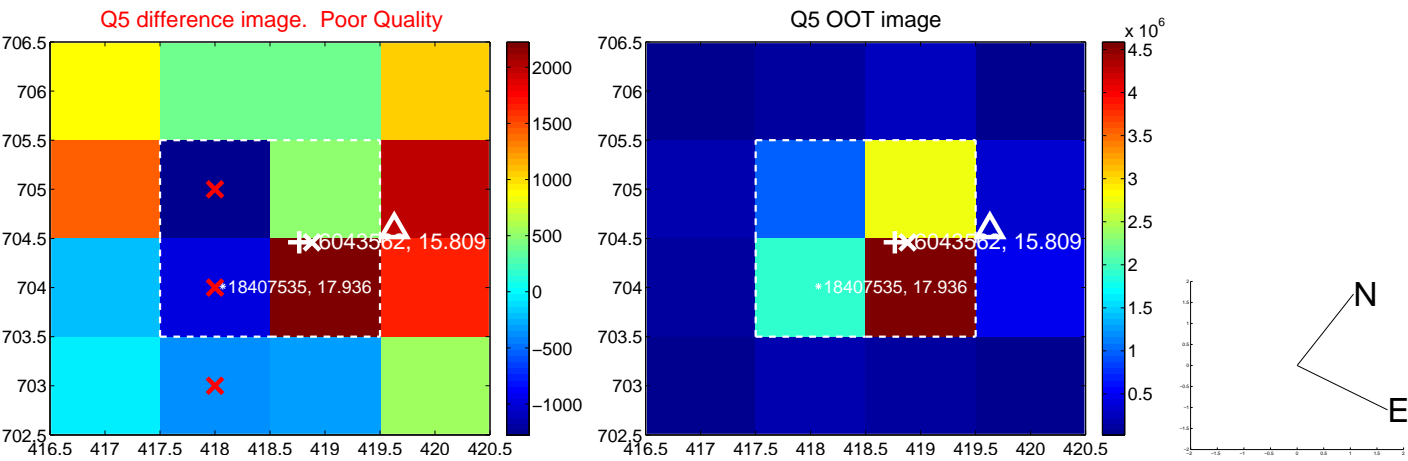


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

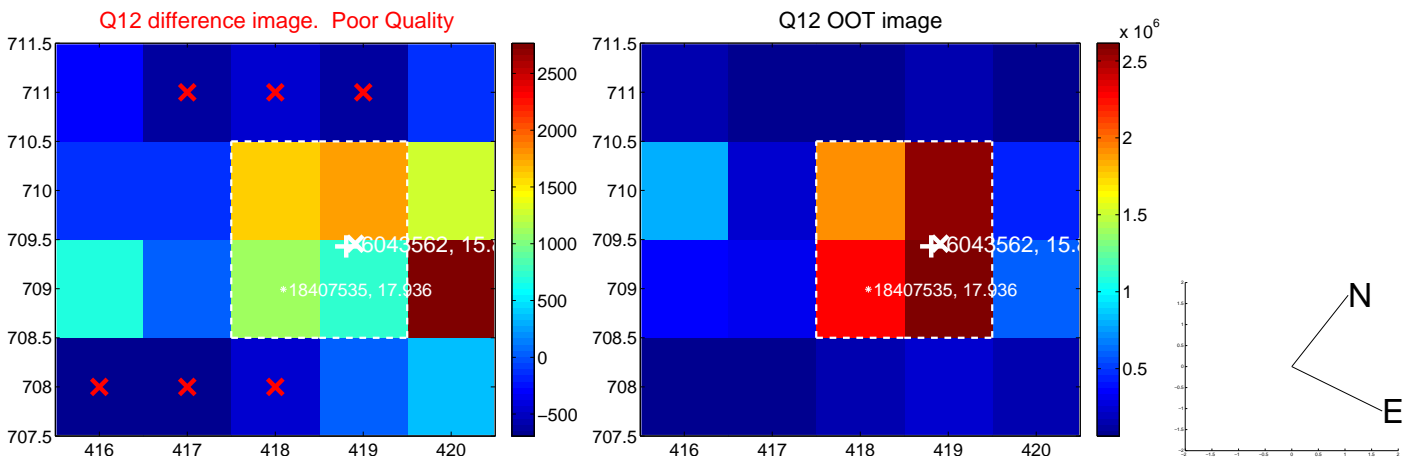
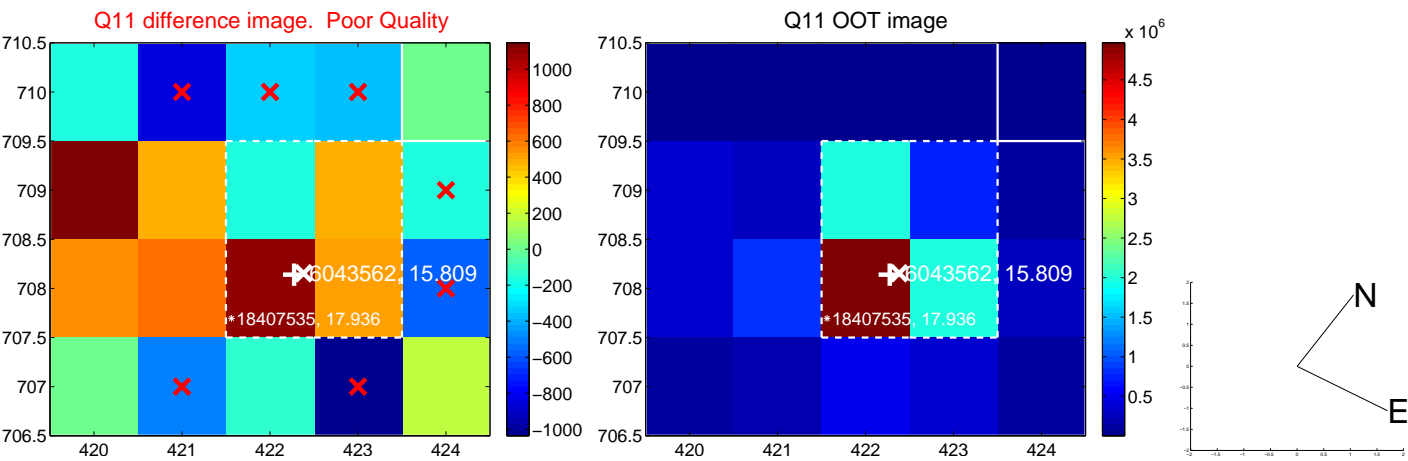
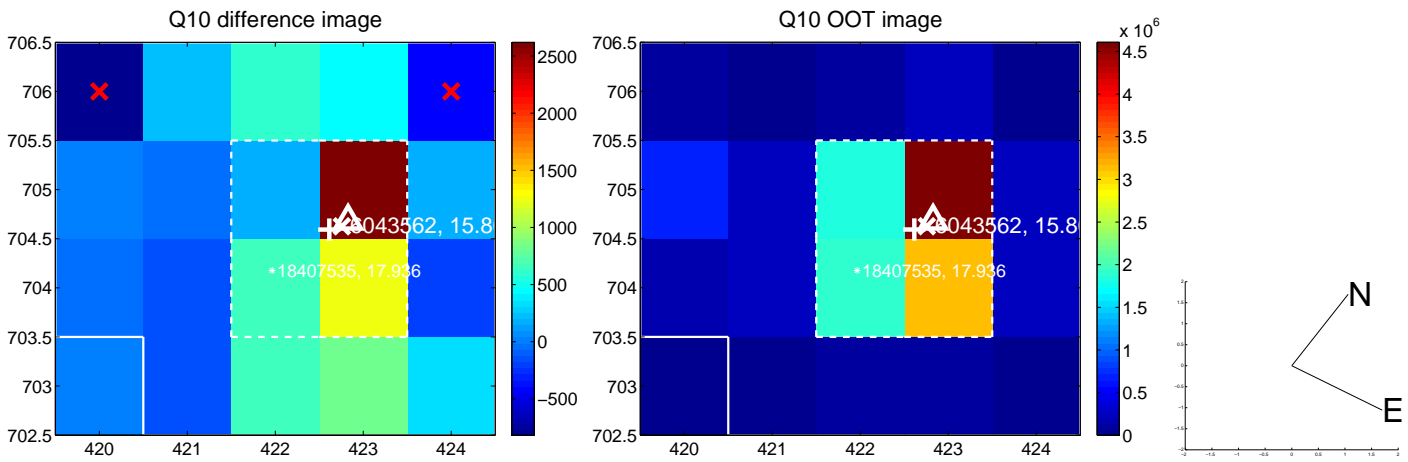
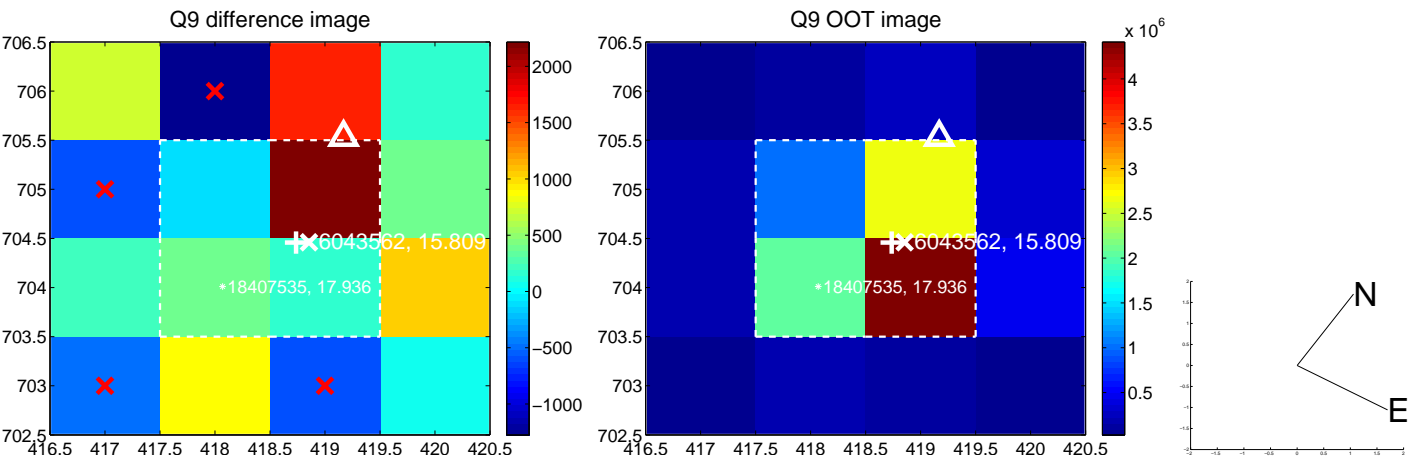
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



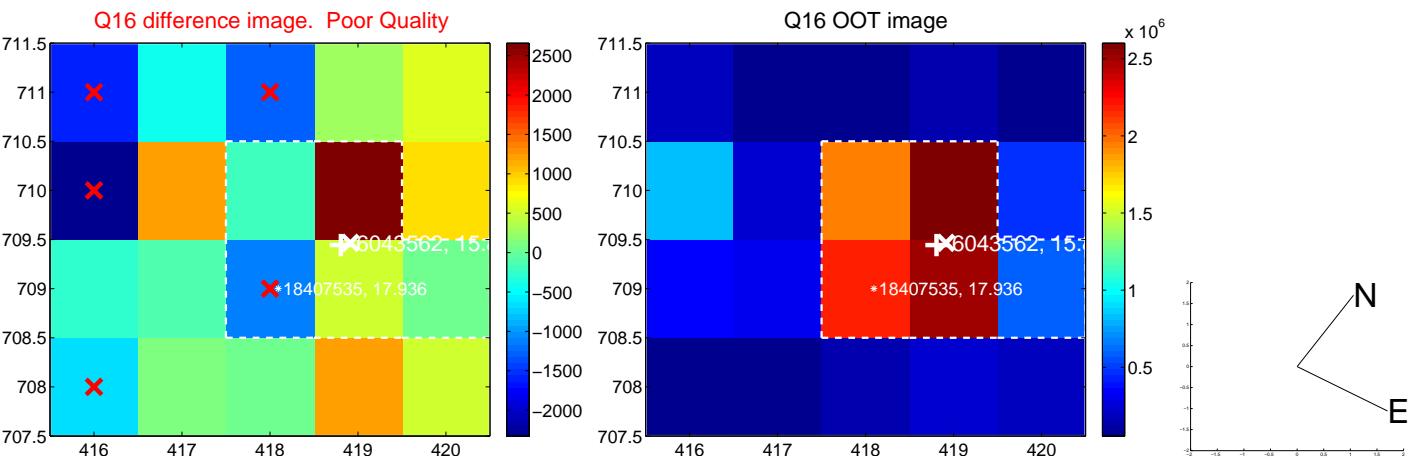
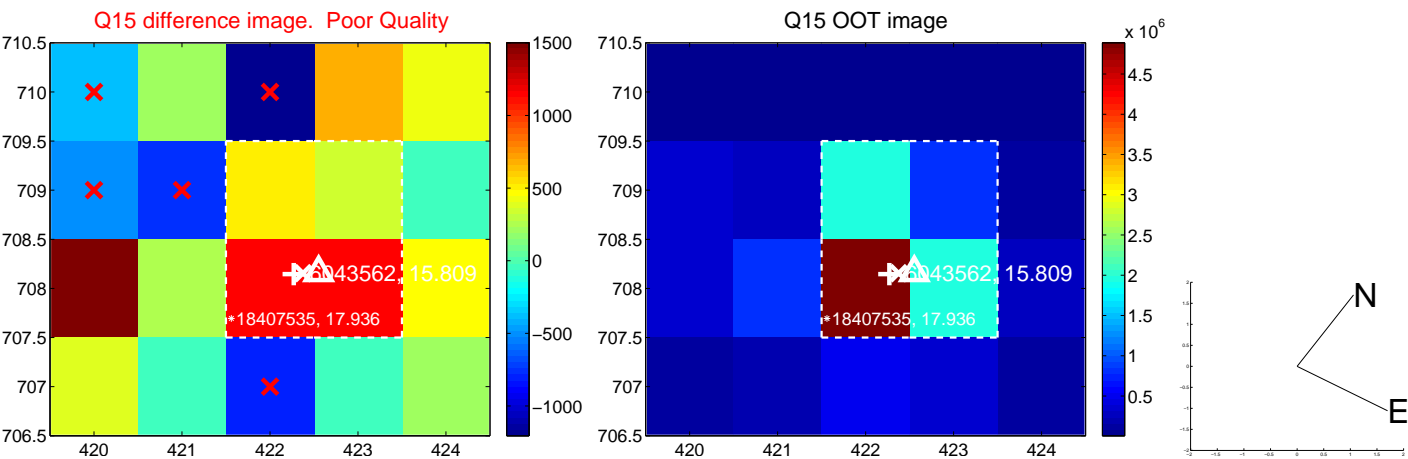
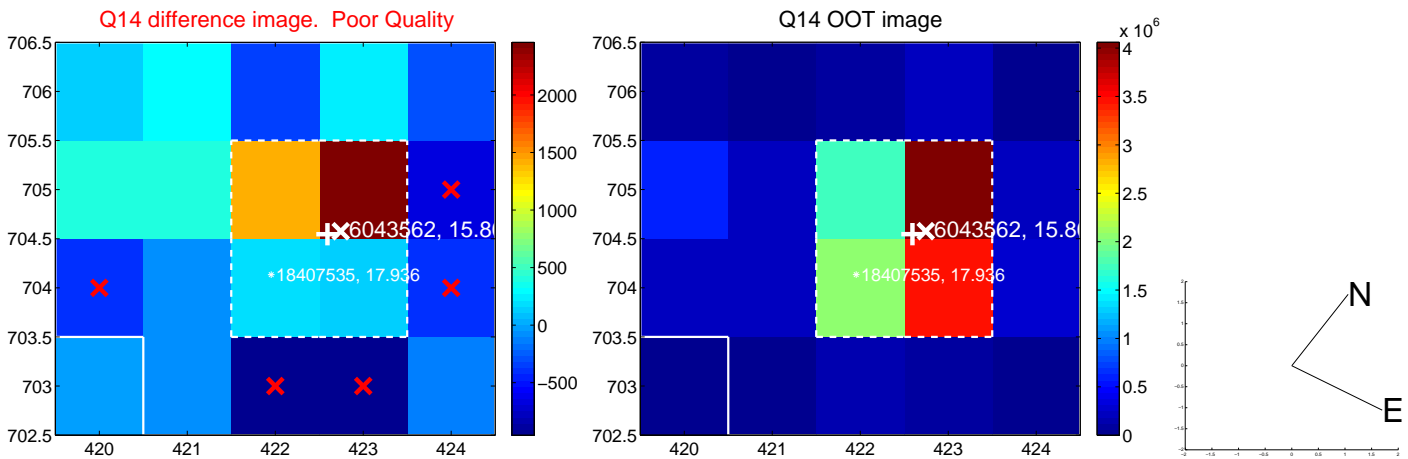
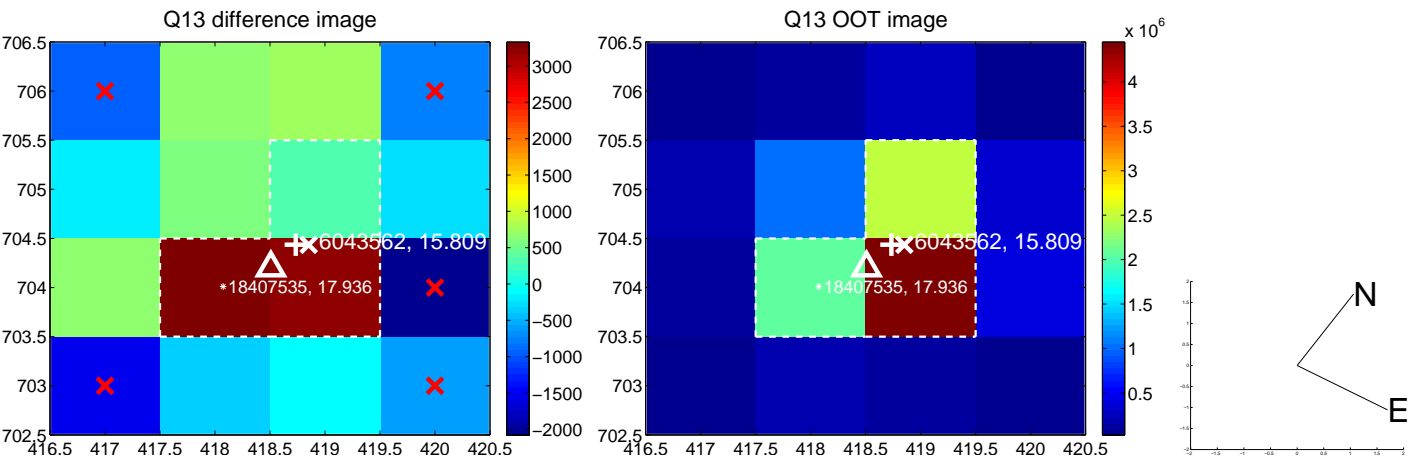
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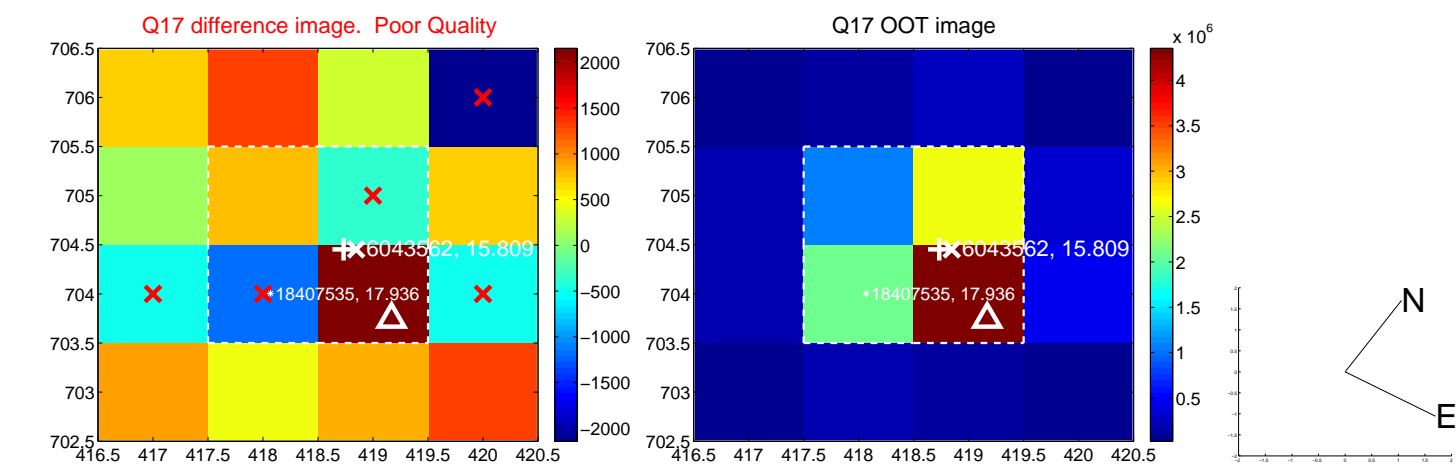
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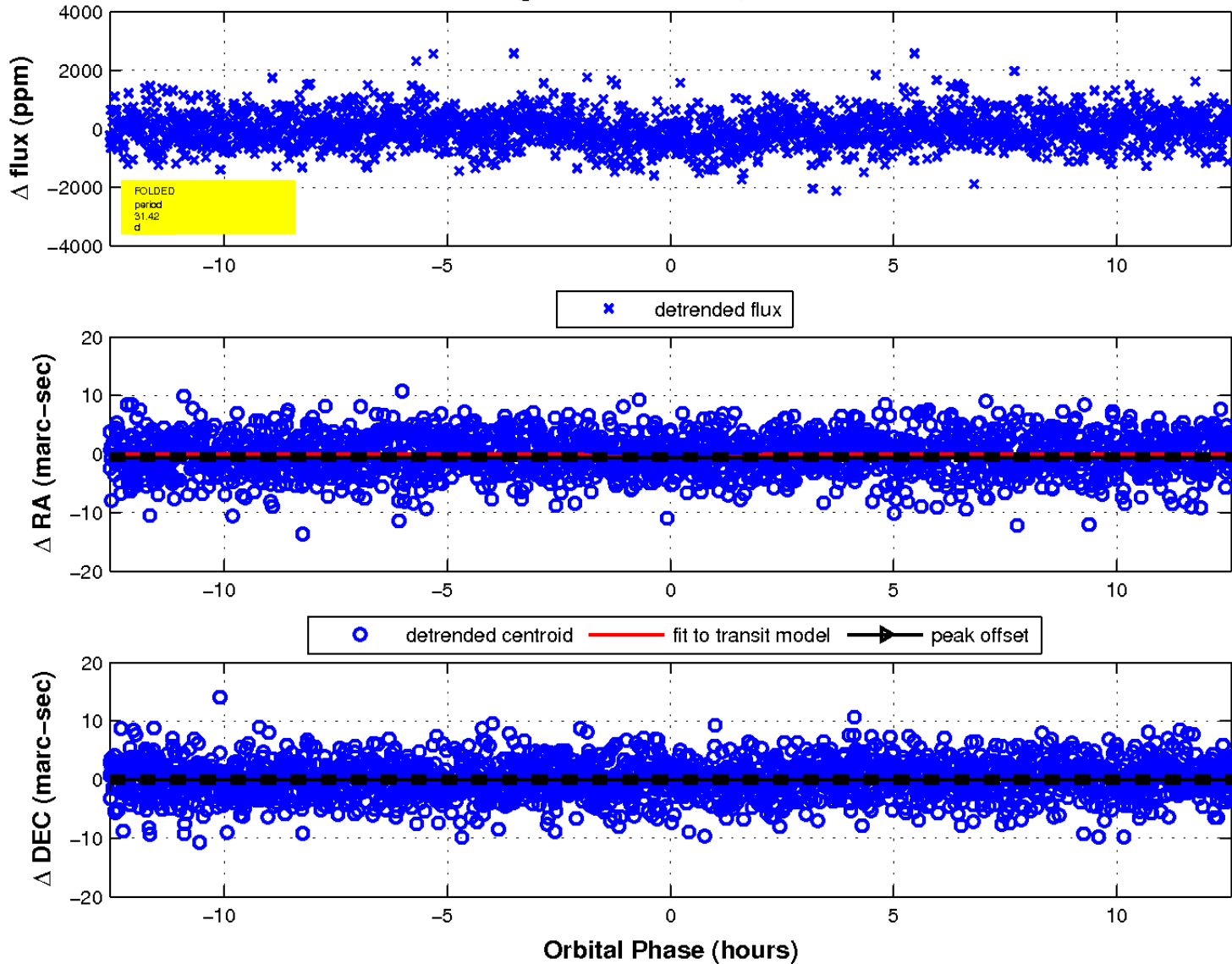
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

