

KIC 005350244

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})
005350244-01	OBS	2555.01	12.572258	143.063732	94.8	5.684	16.7	17.5	1.17	6084	1.53	145.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005350244-01	OBS	PC	0.99	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.

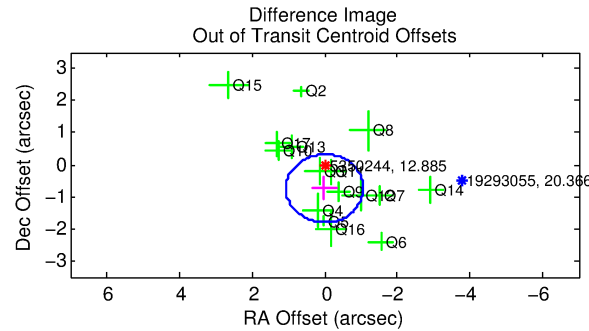
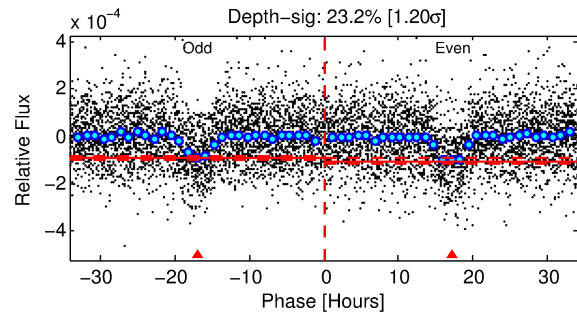
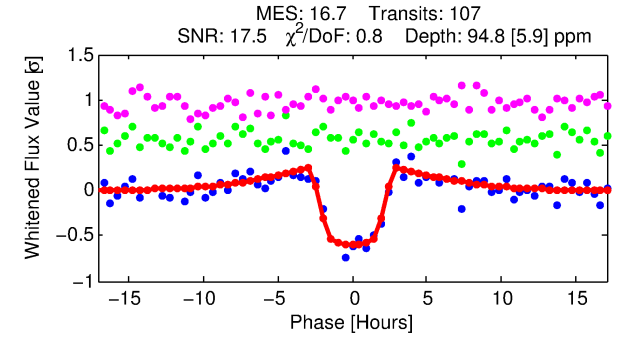
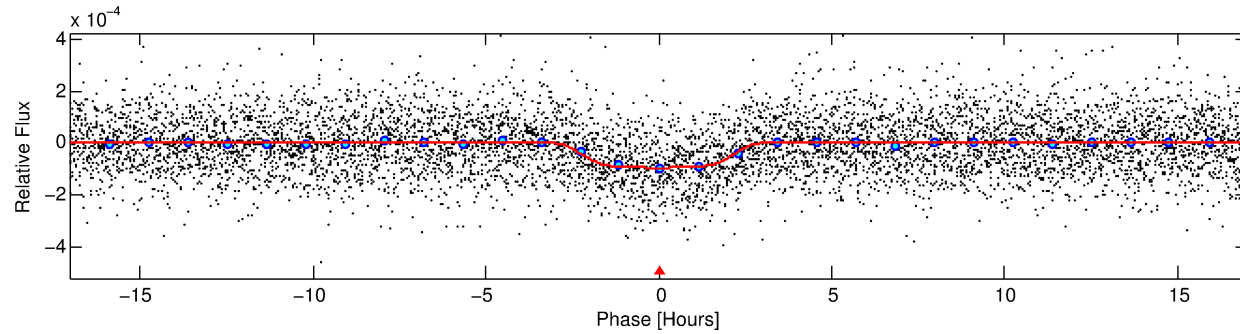
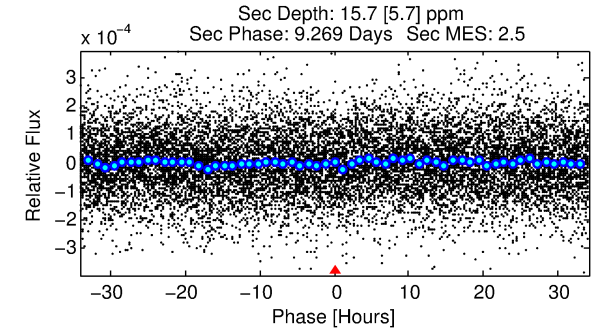
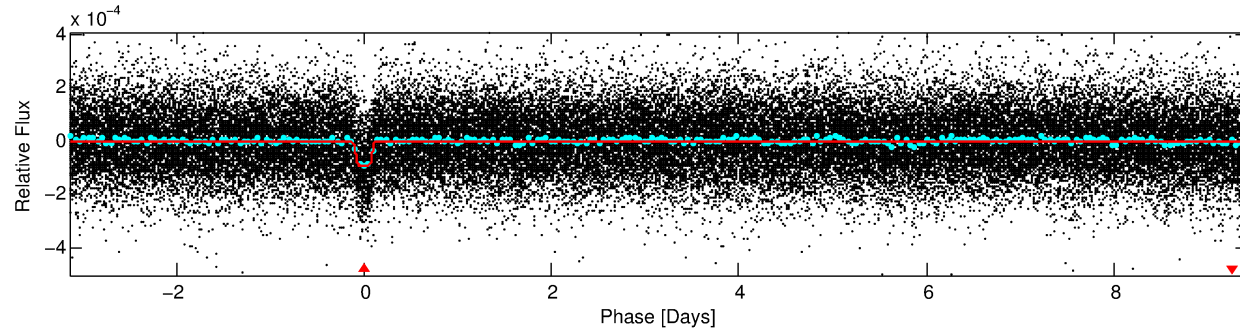
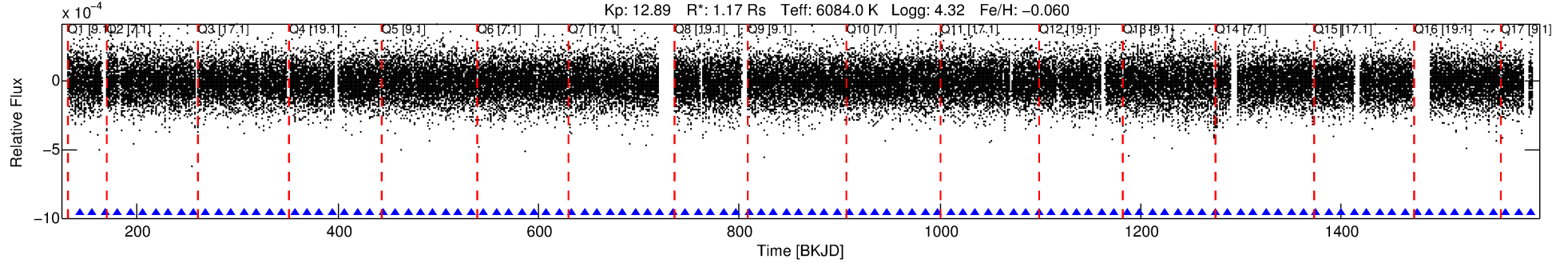
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005350244-01

No Significant Match Found

DV One-Page Summary

KIC: 5350244 Candidate: 1 of 1 Period: 12.572 d
KOI: K02555.01 Corr: 0.911



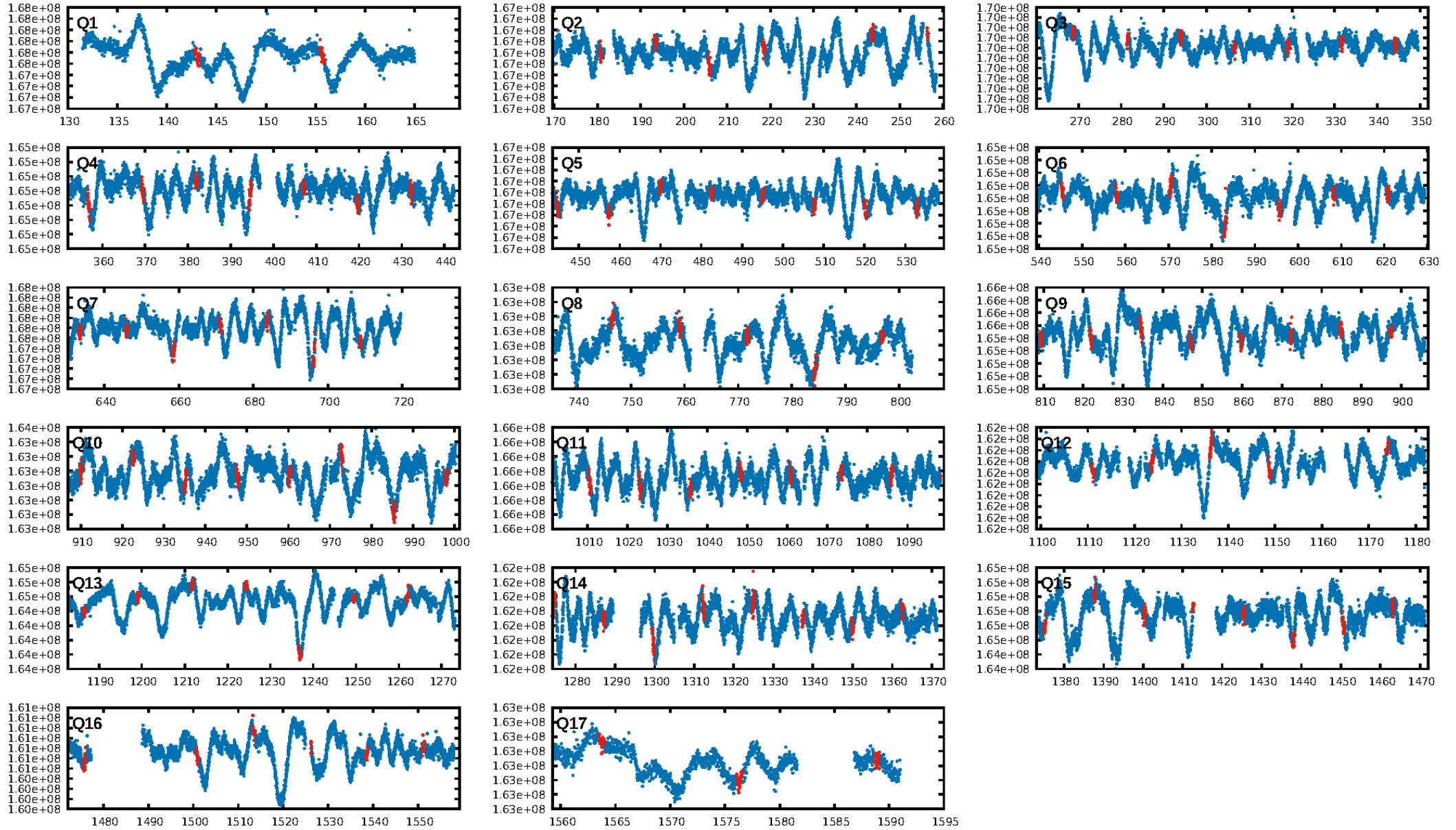
DV Fit Results:

Period = 12.57226 [0.00009] d
Epoch = 143.0637 [0.0057] BKJD
Rp/R* = 0.0120 [0.0005]
a/R* = 4.44 [0.55]
b = 0.98 [0.01]
Seff = 145.99 [33.06]
Teq = 886 [50] K
Rp = 1.53 [0.26] Re
a = 0.1072 [0.0152] AU
Ag = 42.39 [18.04] [2.29σ]
Teffp = 3497 [333] K [7.75σ]

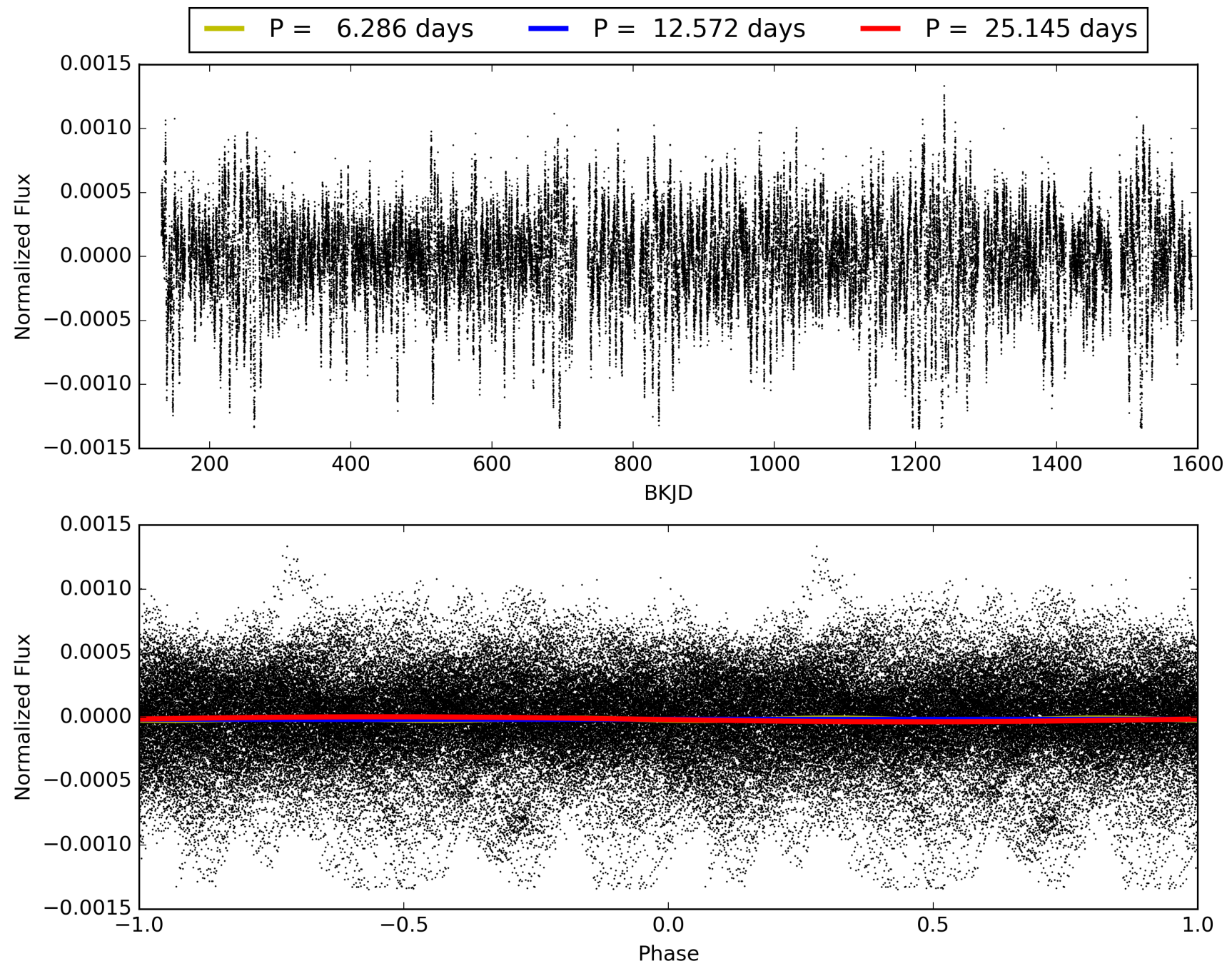
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.19e-63
RollingBand-fgt: 1.00 [102/102]
GhostDiagnostic-chr: 5.118
Centroid-sig: 12.5%
Centroid-so: 0.634 arcsec [1.27σ]
OotOffset-rm: 0.741 arcsec [2.09σ]
KicOffset-rm: 0.618 arcsec [1.87σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005350244-01, PDC Light Curves

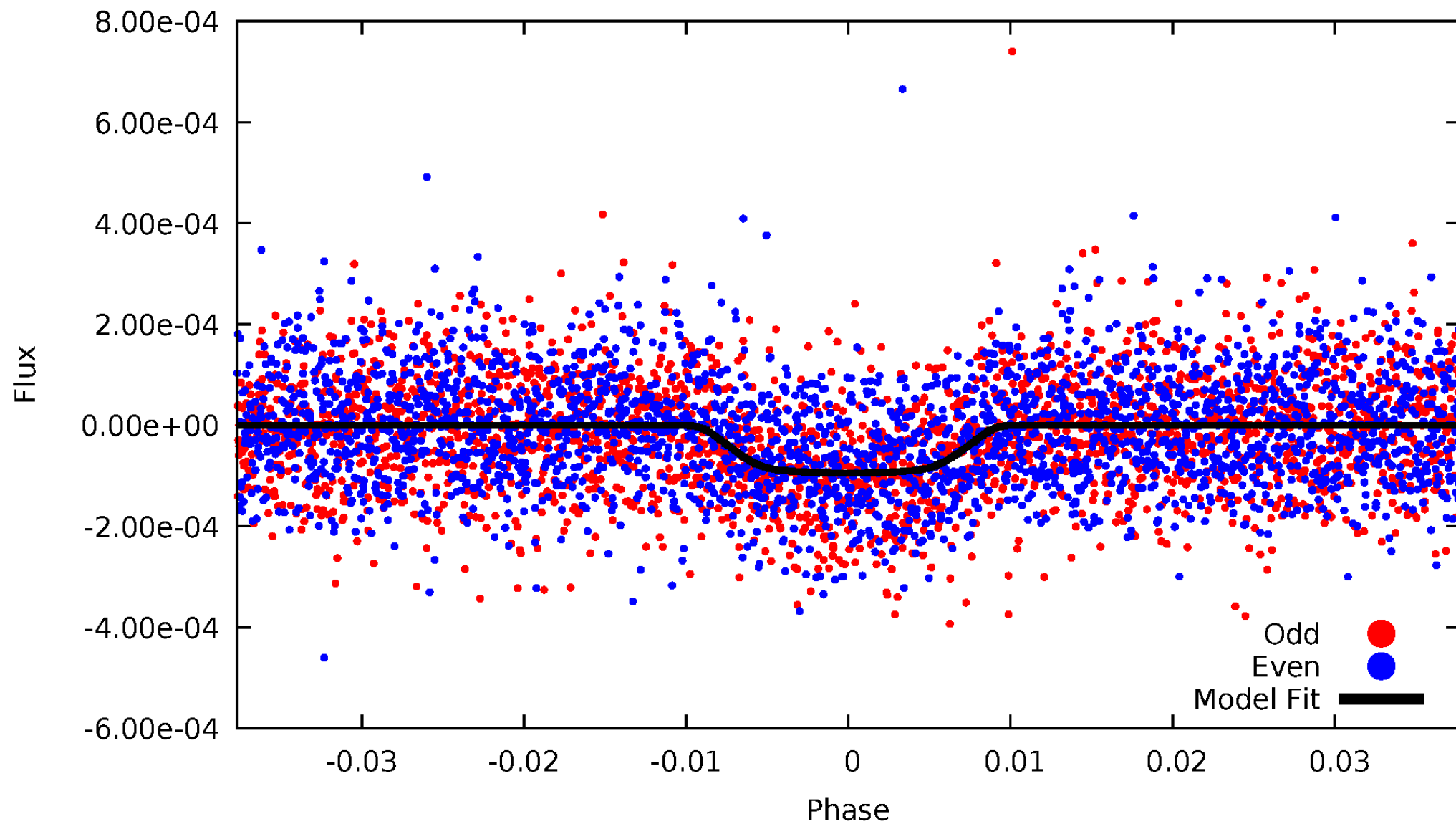


TCE 005350244-01



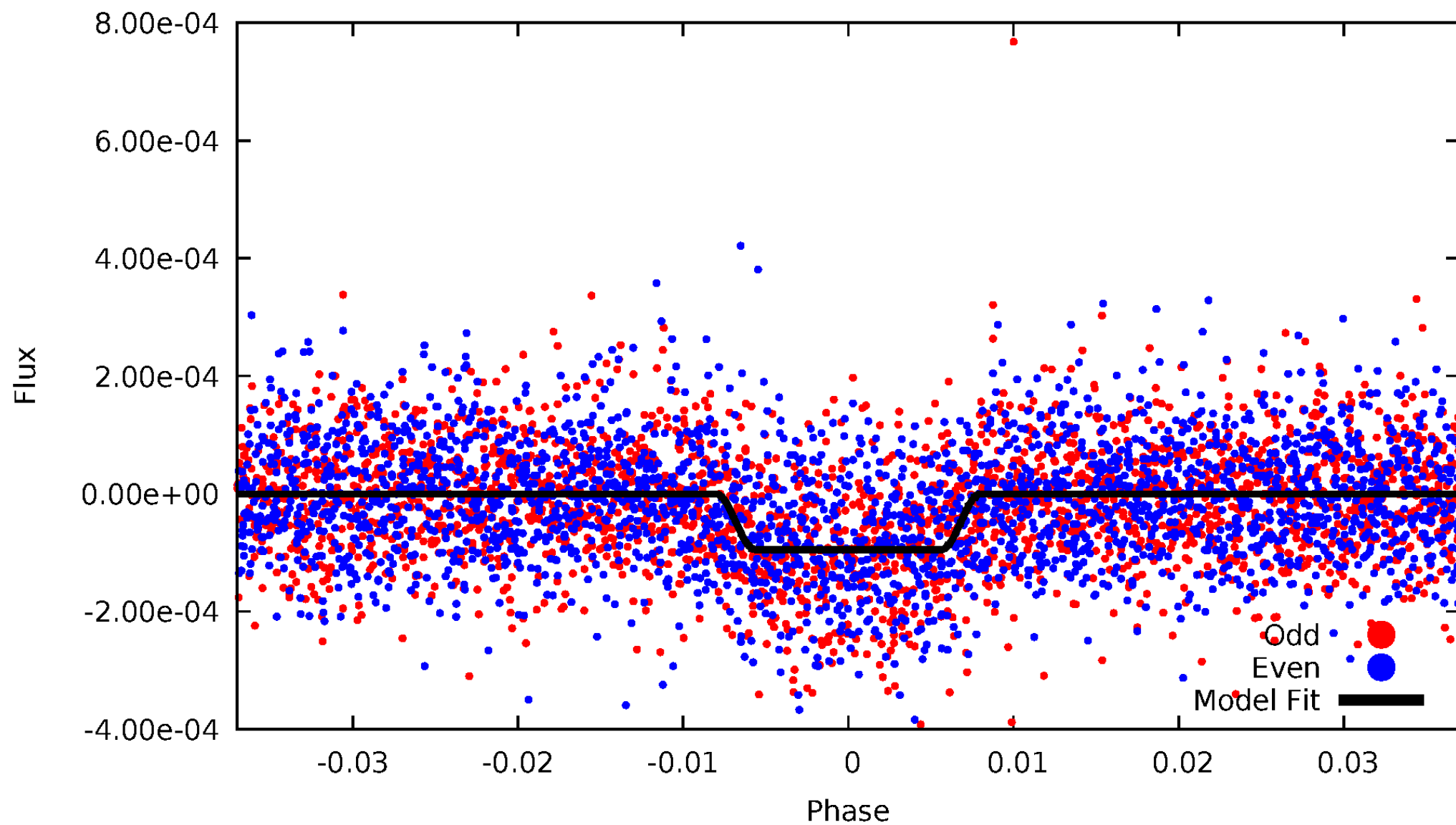
DV Odd/Even

TCE 005350244-01



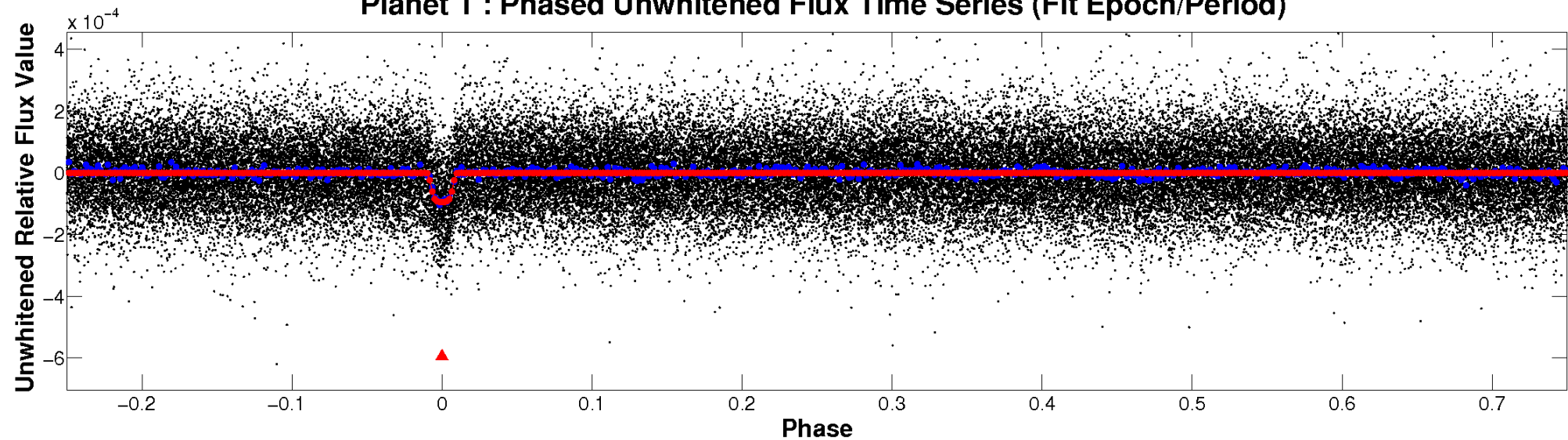
ALT Odd/Even

TCE 005350244-01

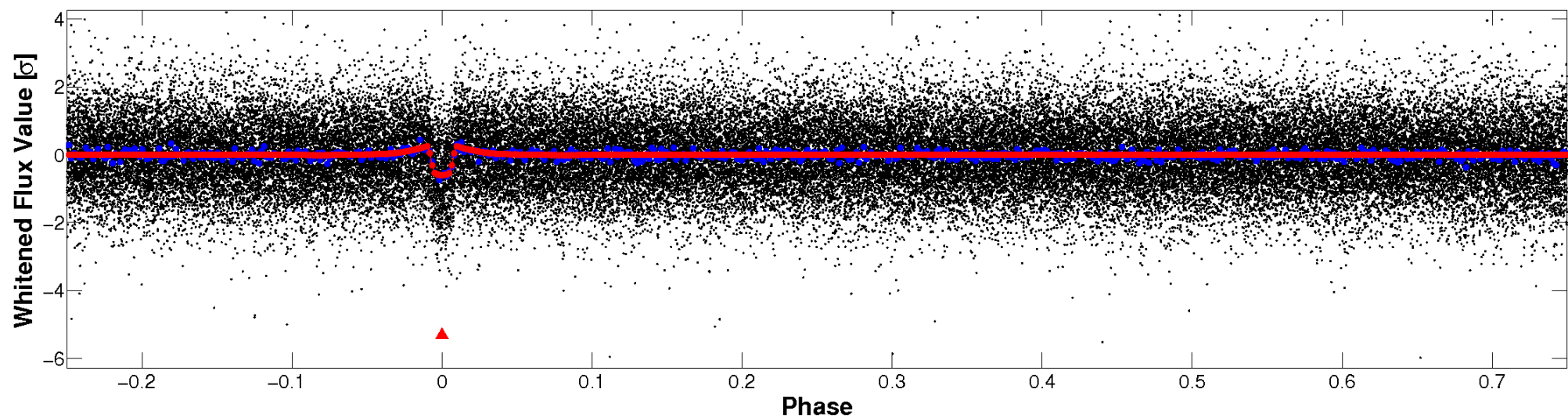


Non-Whitened Vs. Whitened Light Curve

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

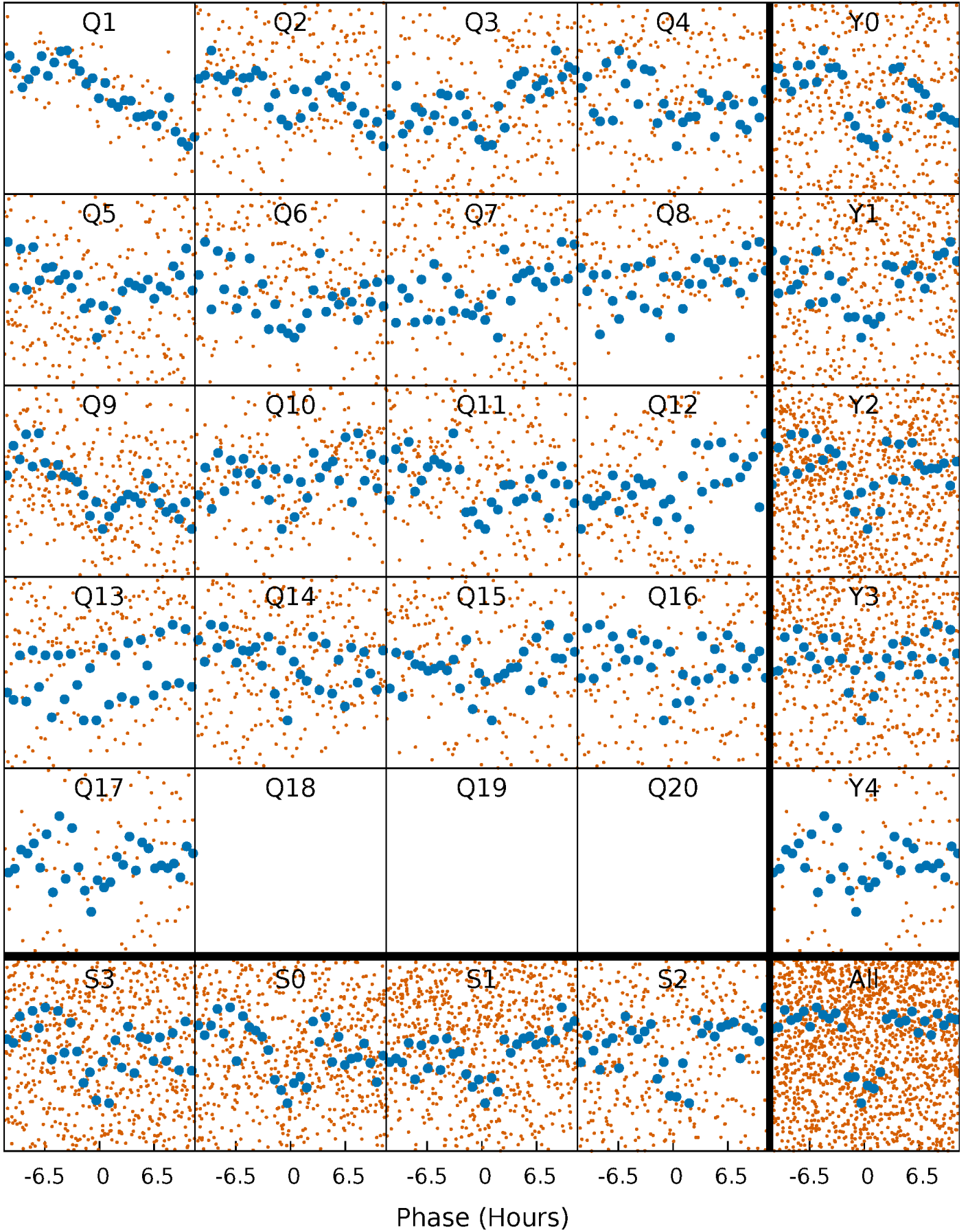


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



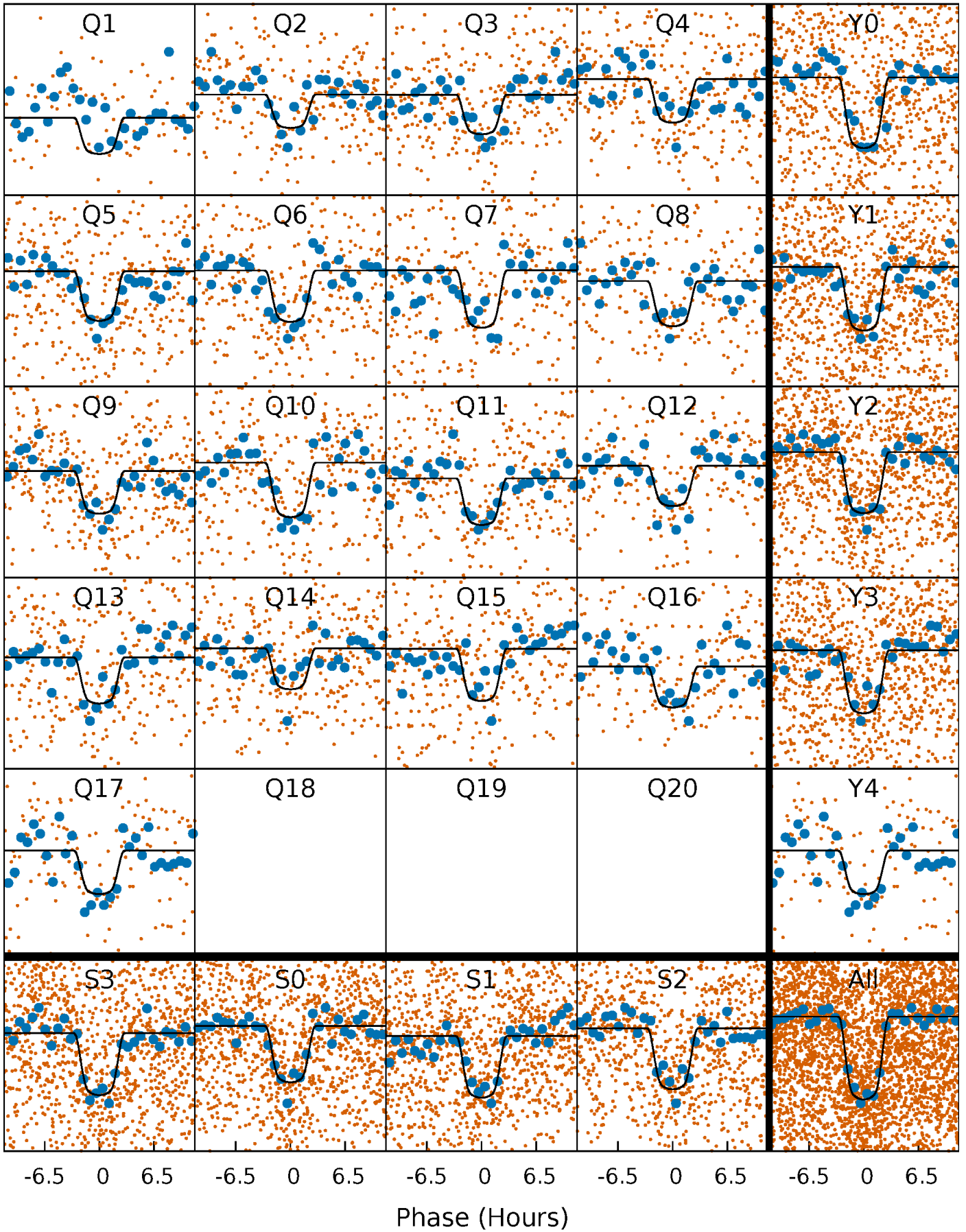
PDC Quarter-Phased Transit Curves

TCE 005350244-01 P= 12.572258 Days $T_0=143.063732$ (BKJD)



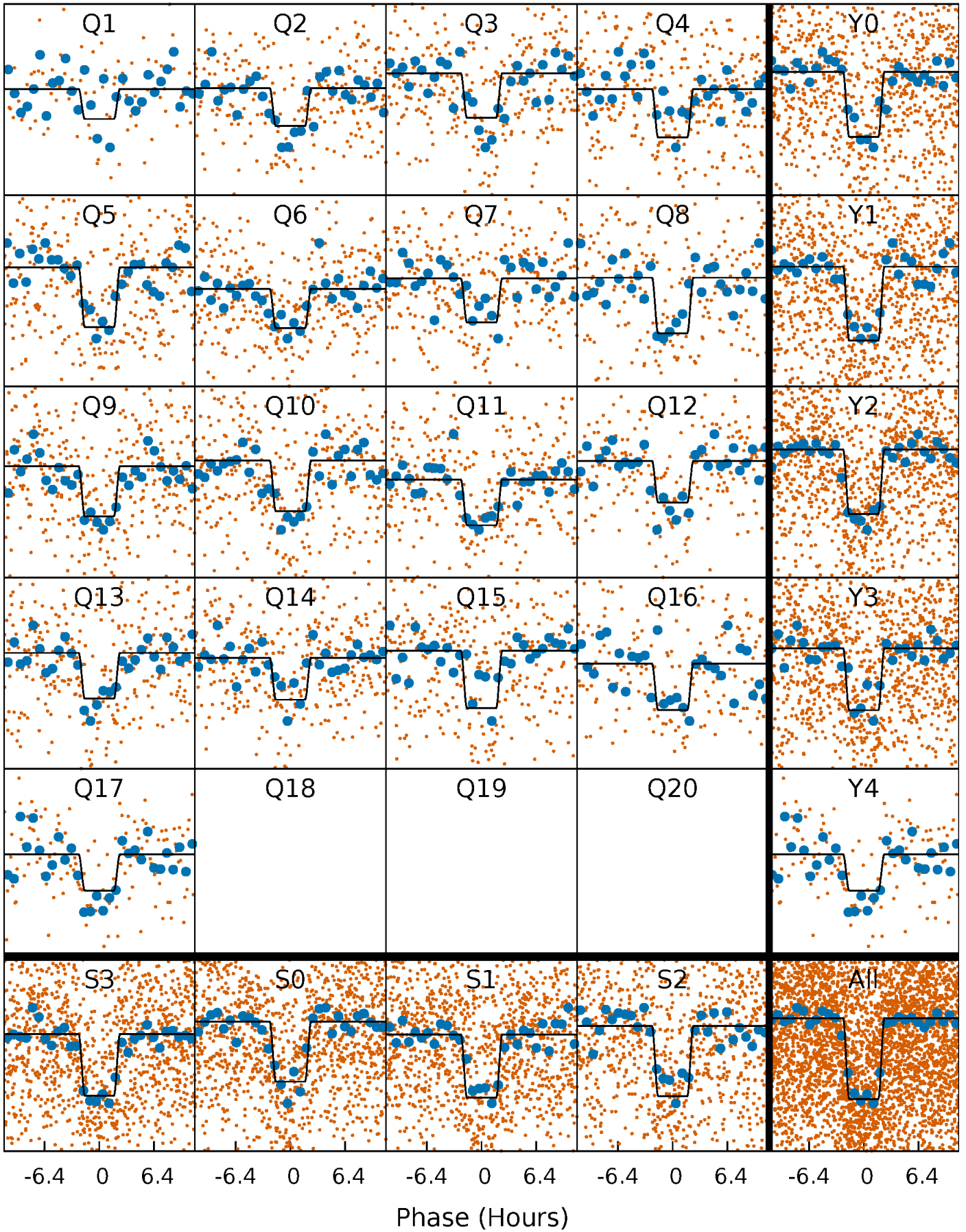
DV Quarter-Phased Transit Curves

TCE 005350244-01 P= 12.572258 Days $T_0=143.063732$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

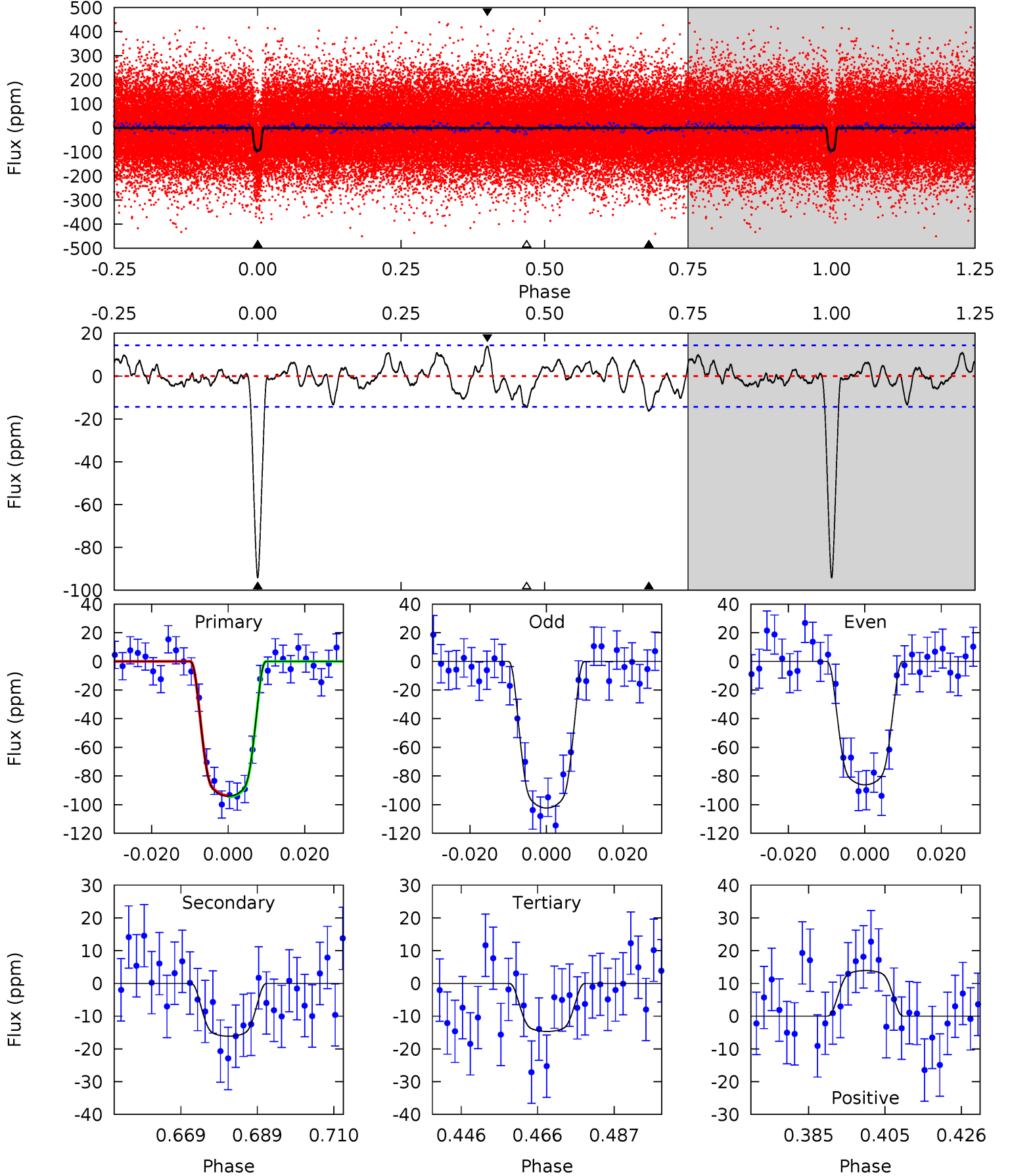
TCE 005350244-01 P= 12.572312 Days $T_0=143.062948$ (BKJD)



DV Model-Shift Uniqueness Test

005350244-01, $P = 12.572258$ Days, $E = 130.491474$ Days

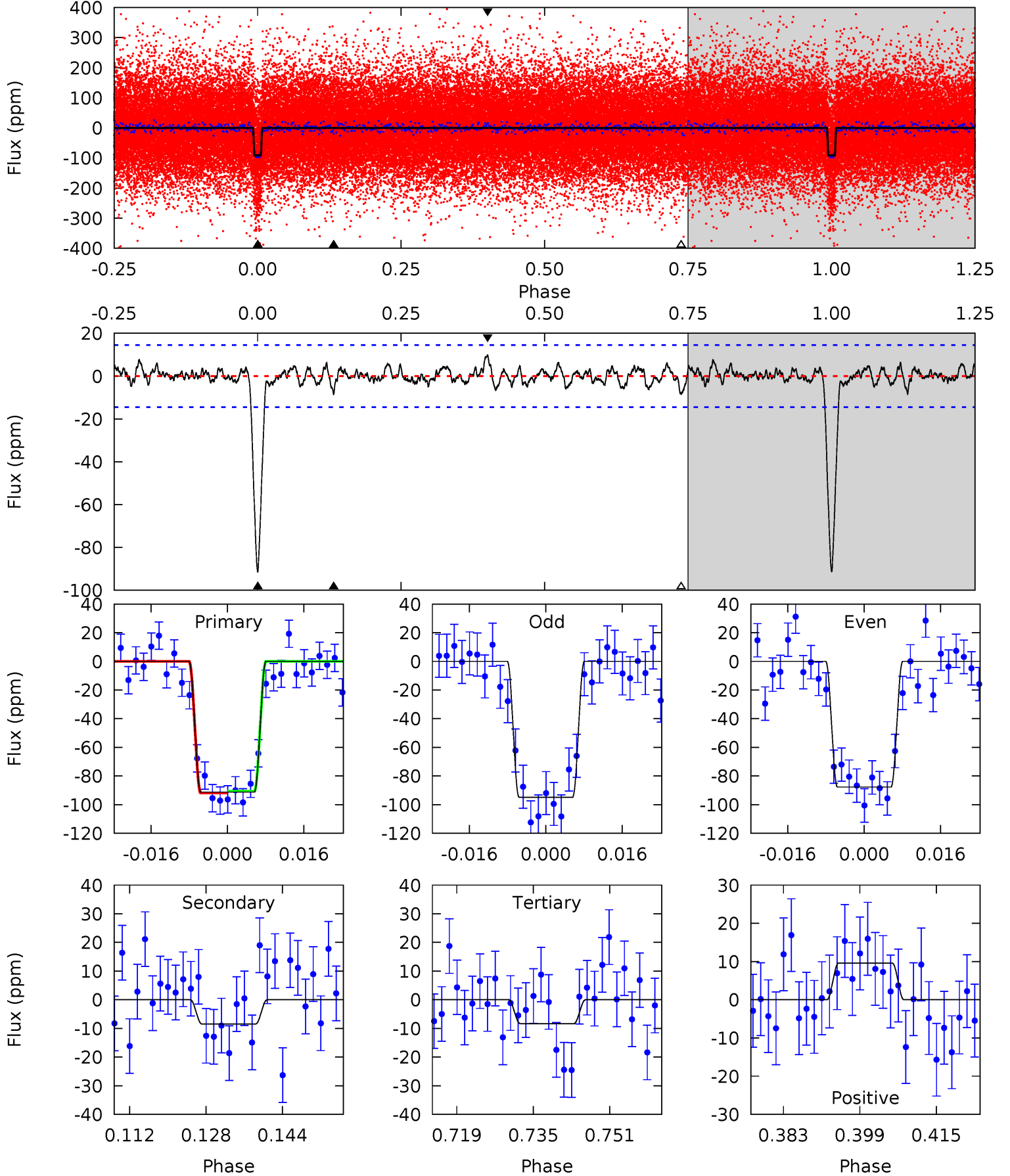
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.1	5.50	5.00	4.74	4.89	2.32	1.73	27.1	27.3	0.50	0.76	2.77	0.92	0.13	0.16



Alt Model-Shift Uniqueness Test

005350244-01, P = 12.572312 Days, E = 130.490636 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	2.87	2.82	3.26	4.94	2.41	0.94	28.1	27.7	0.05	-0.39	1.20	0.98	0.10	0.23



Stellar Parameters For KIC 005350244

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6084^{+122}_{-134}	$4.319^{+0.103}_{-0.115}$	$-0.060^{+0.150}_{-0.150}$	$1.169^{+0.195}_{-0.142}$	$1.037^{+0.096}_{-0.064}$	$0.915^{+0.403}_{-0.330}$
	+2%/-2%	+2%/-3%	+250%/-250%	+17%/-12%	+9%/-6%	+44%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 005350244-01 / KOI 2555.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 3	$1.54^{+0.15}_{-0.13}$	1238^{+57}_{-50}	3875^{+138}_{-150}	44^{+12}_{-11}
Alt.	-8 ± 3	$1.24^{+0.14}_{-0.11}$	1236^{+61}_{-49}	3708^{+226}_{-290}	33^{+15}_{-13}

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

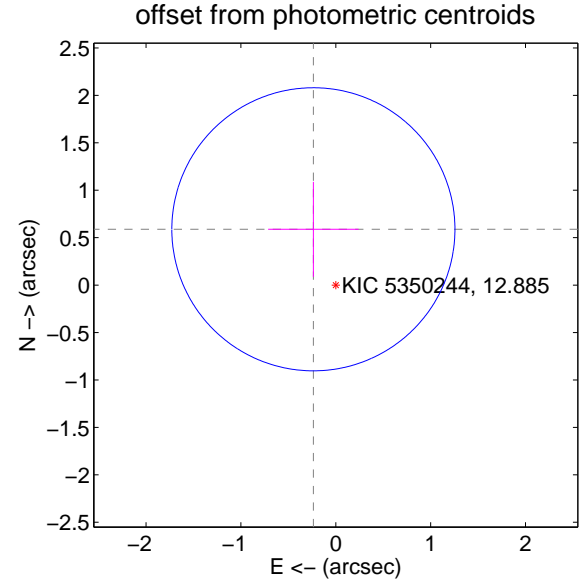
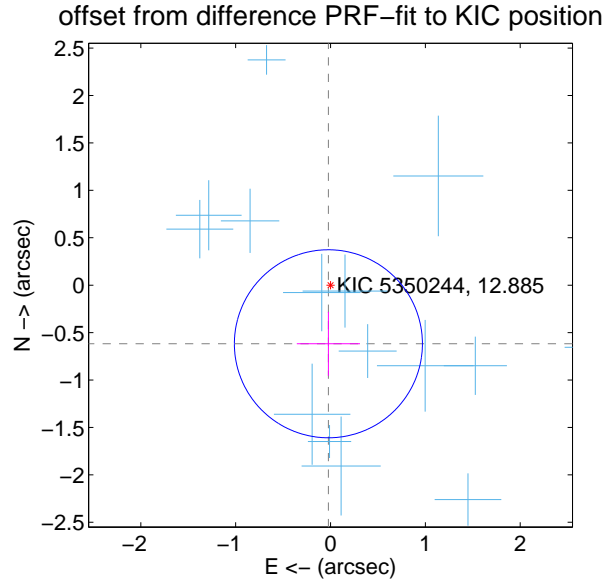
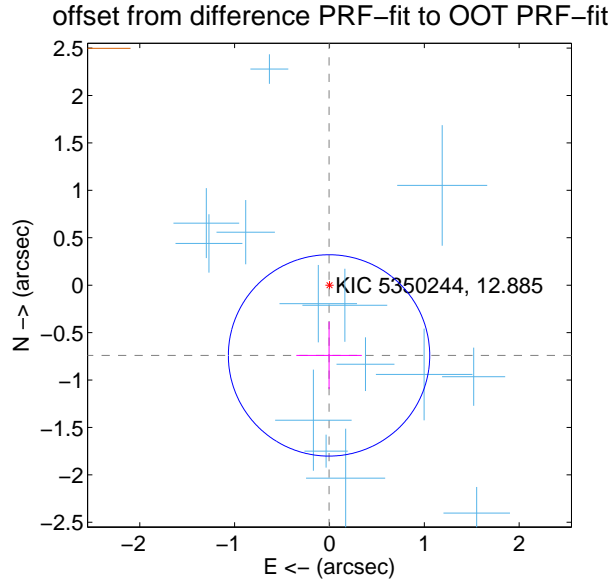
DV Centroid Data

Supplemental centroid analysis for 005350244-01. Kepler magnitude: 12.88. Transit SNR 17.53

There are 15 quarters with good PRF difference image offsets

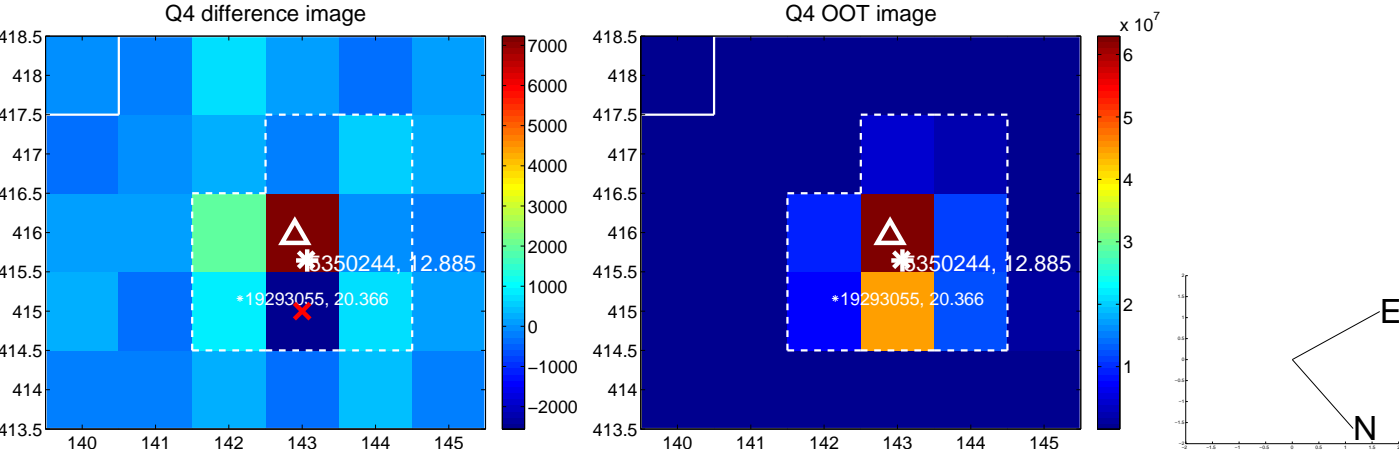
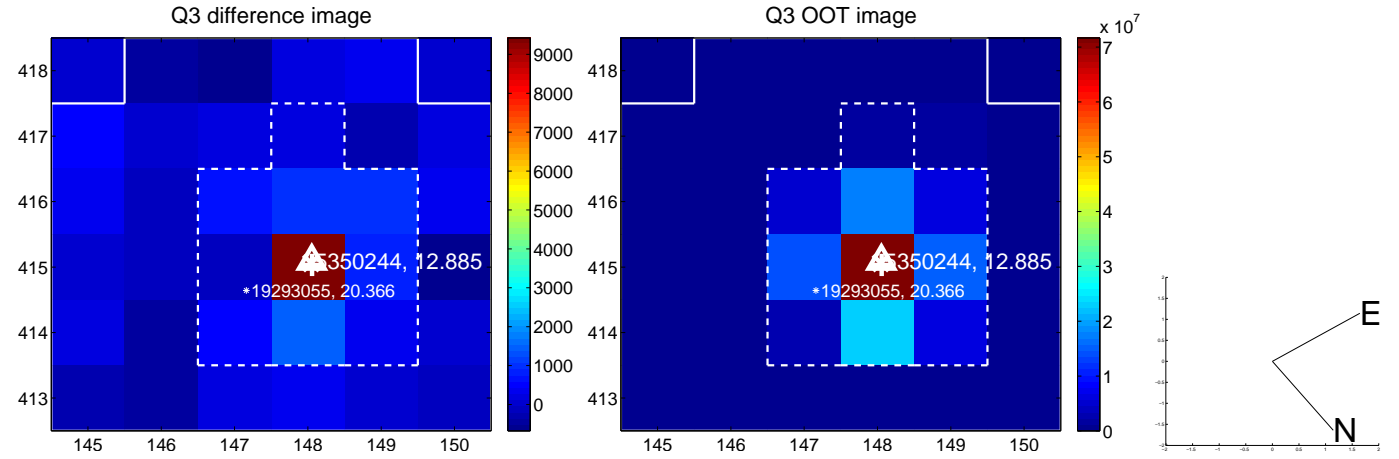
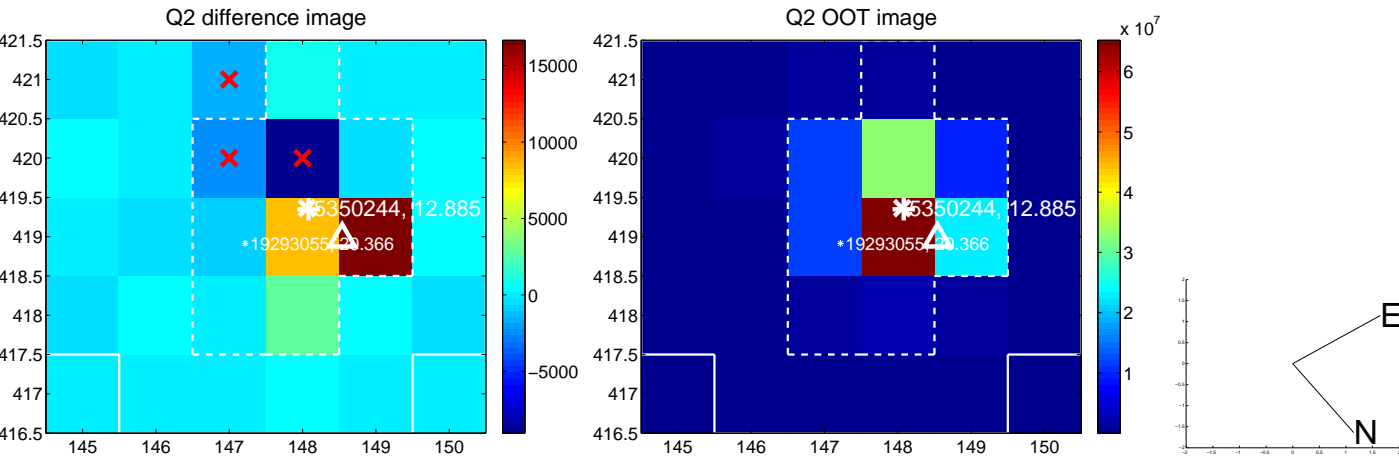
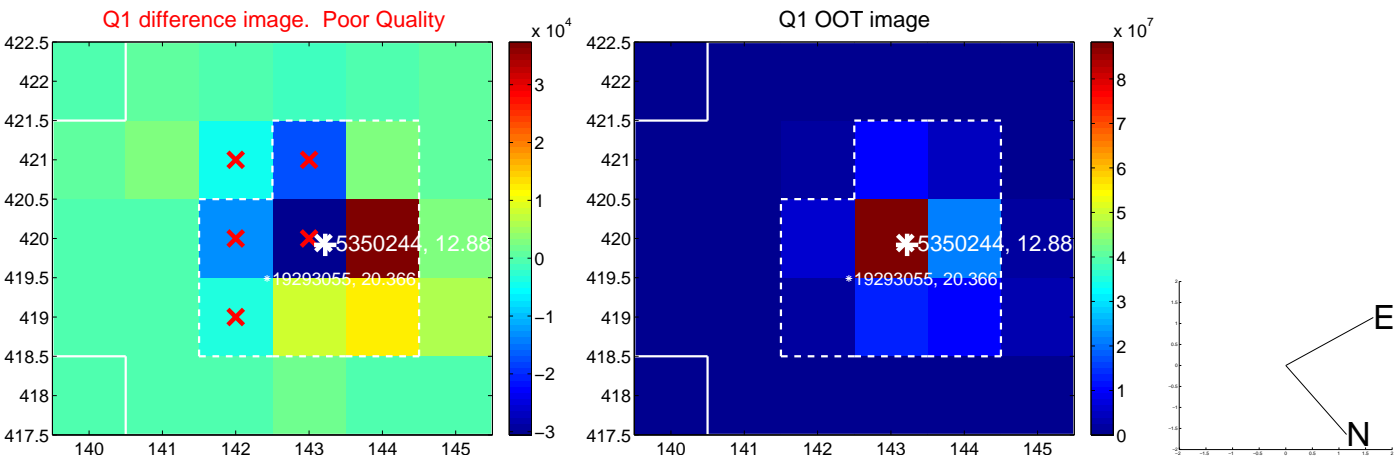
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.741 ± 0.354	2.09	0.005 ± 0.345	-0.741 ± 0.355
PRF-fit source offset from KIC position	0.618 ± 0.330	1.87	0.022 ± 0.333	-0.618 ± 0.337
photometric centroid source offset	0.63 ± 0.50	1.27	0.24 ± 0.48	0.59 ± 0.50

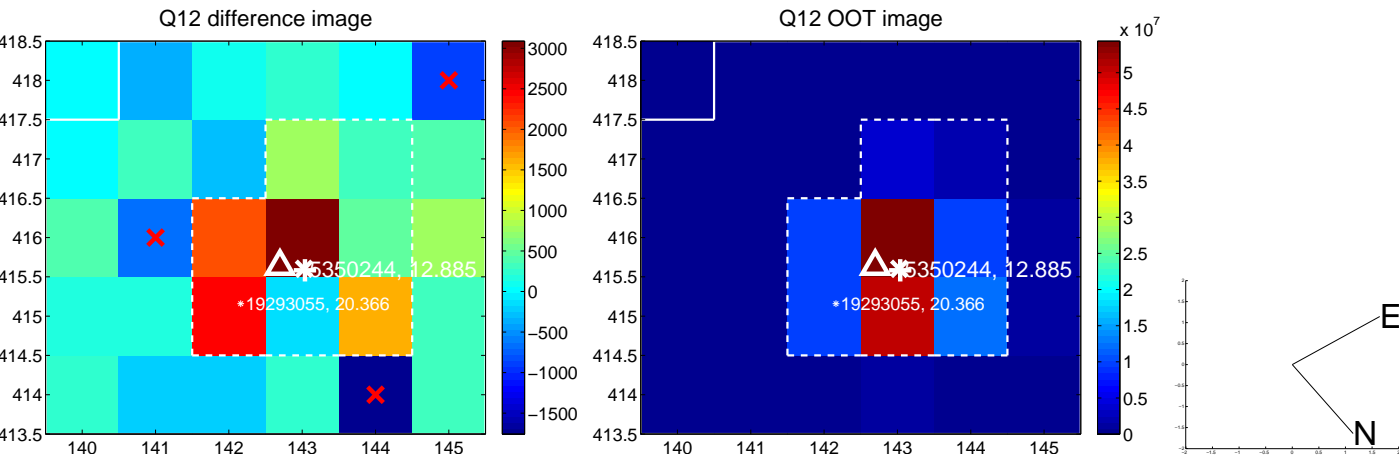
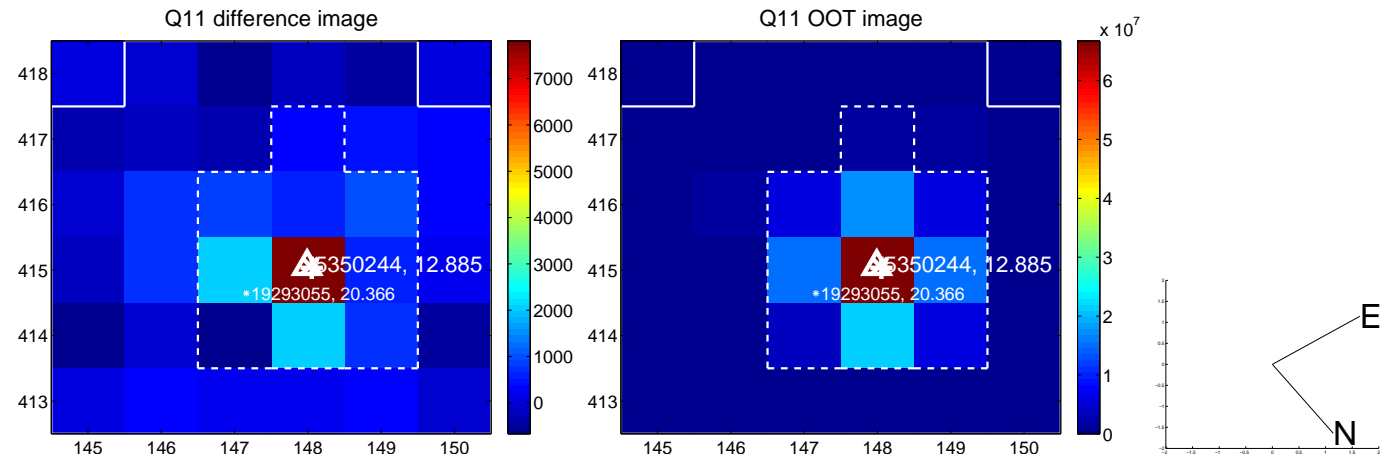
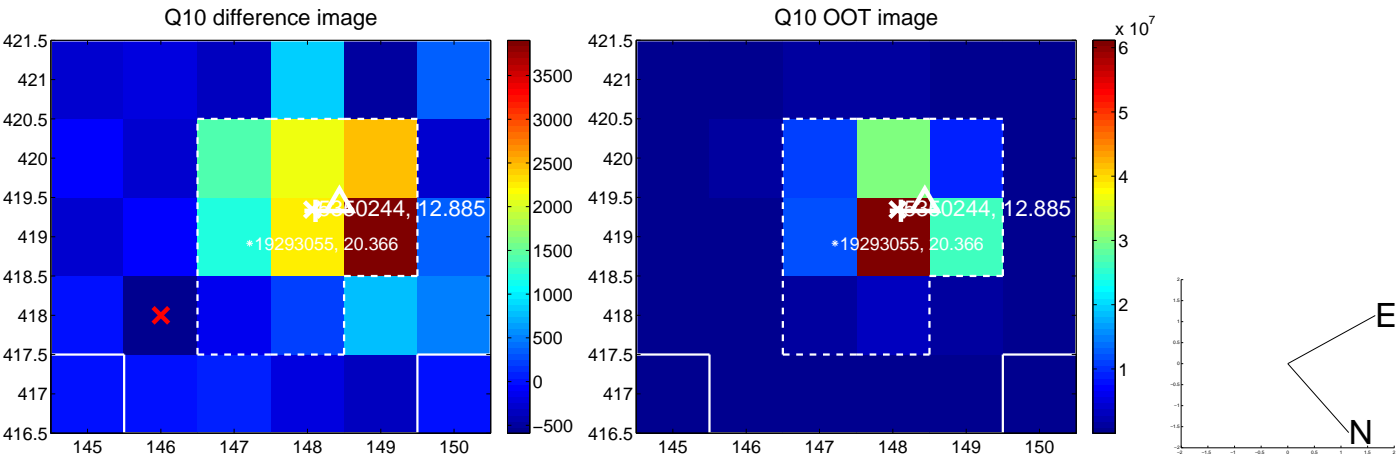
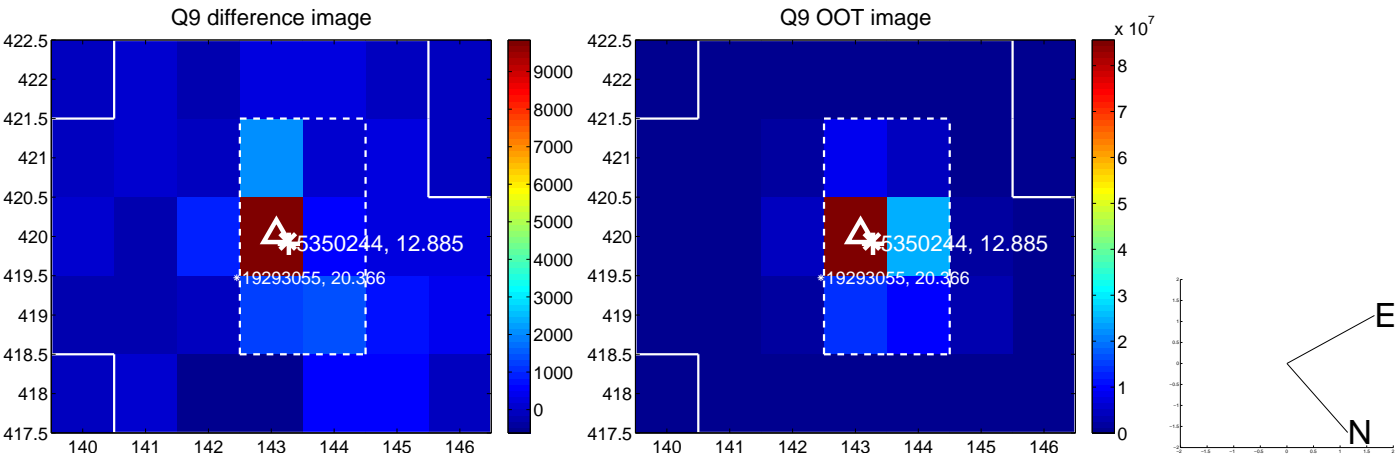


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

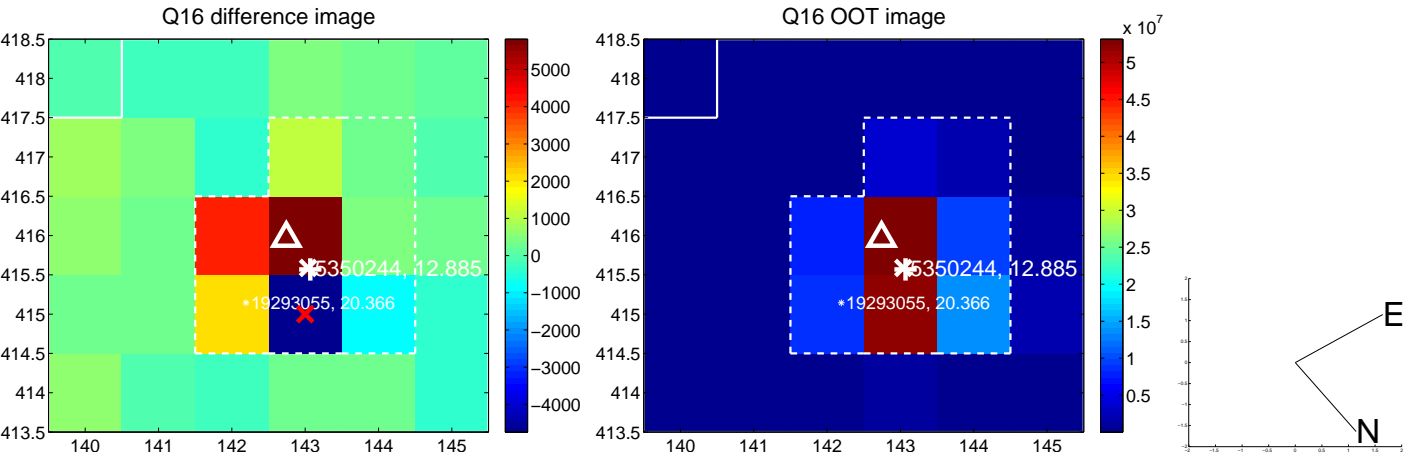
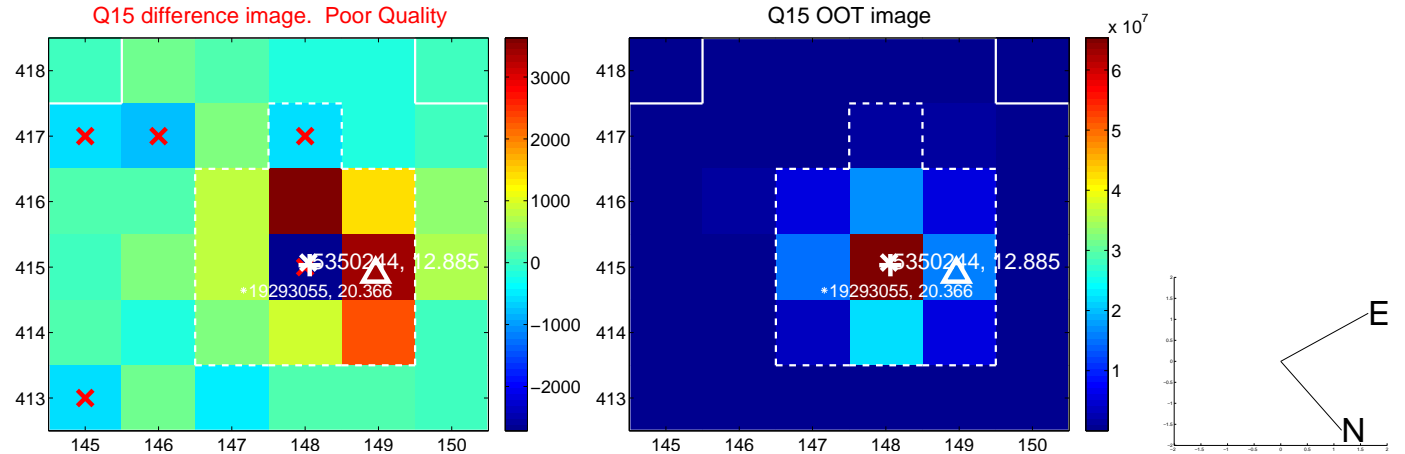
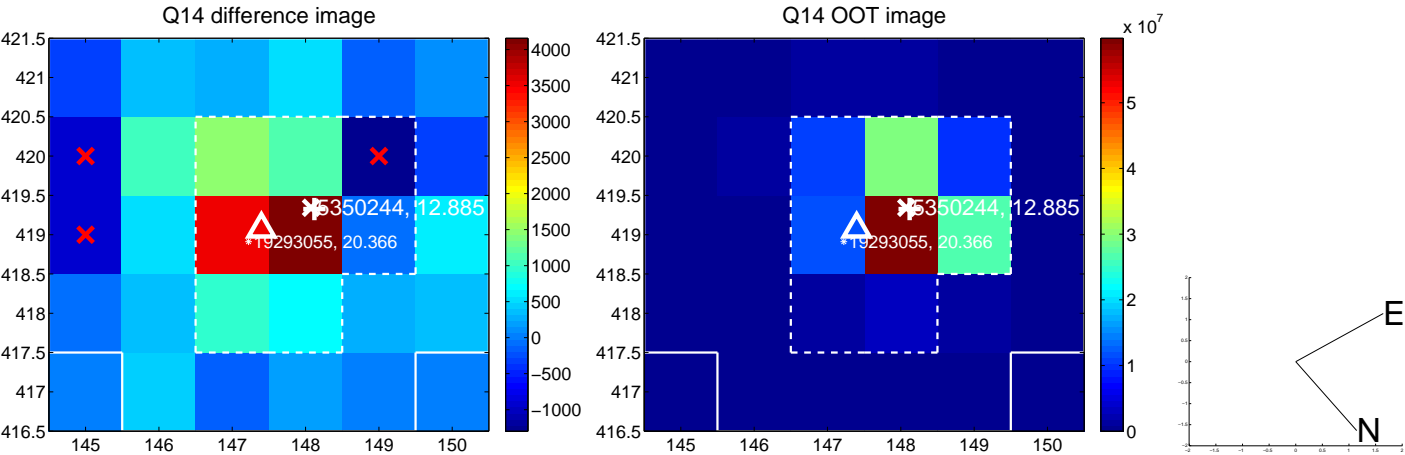
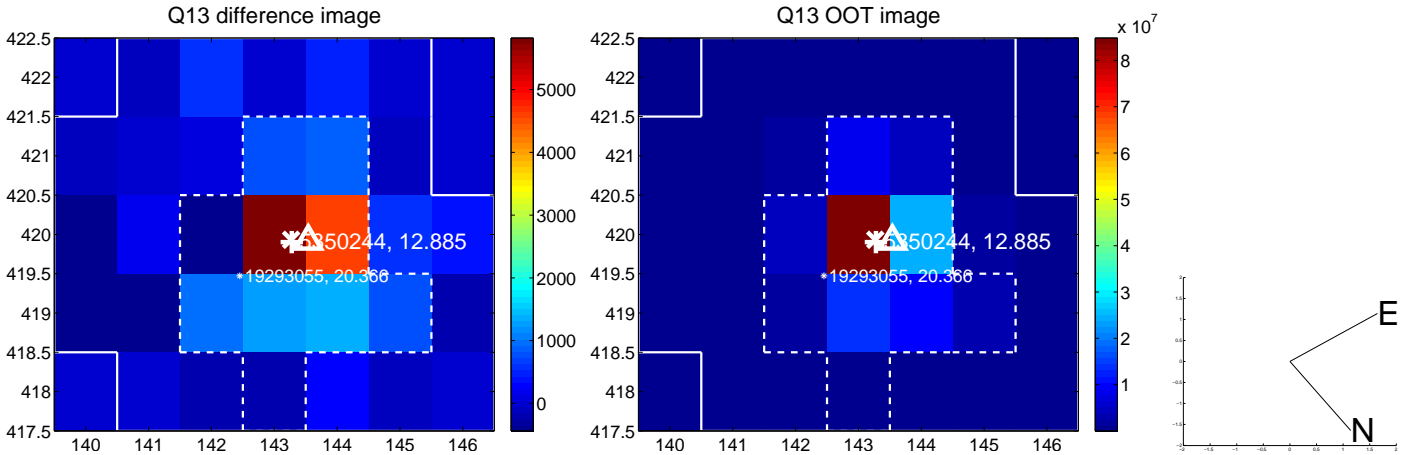
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



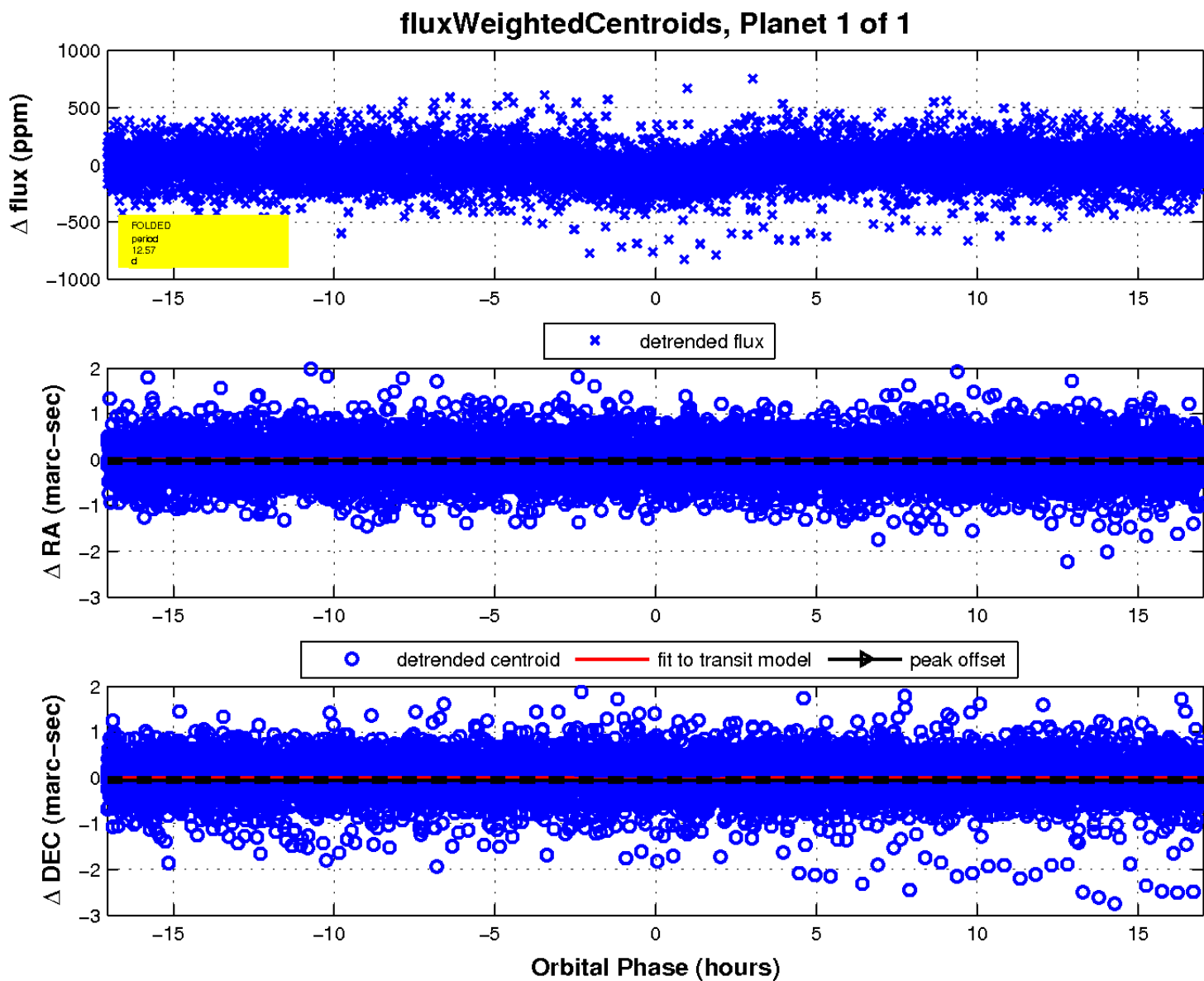
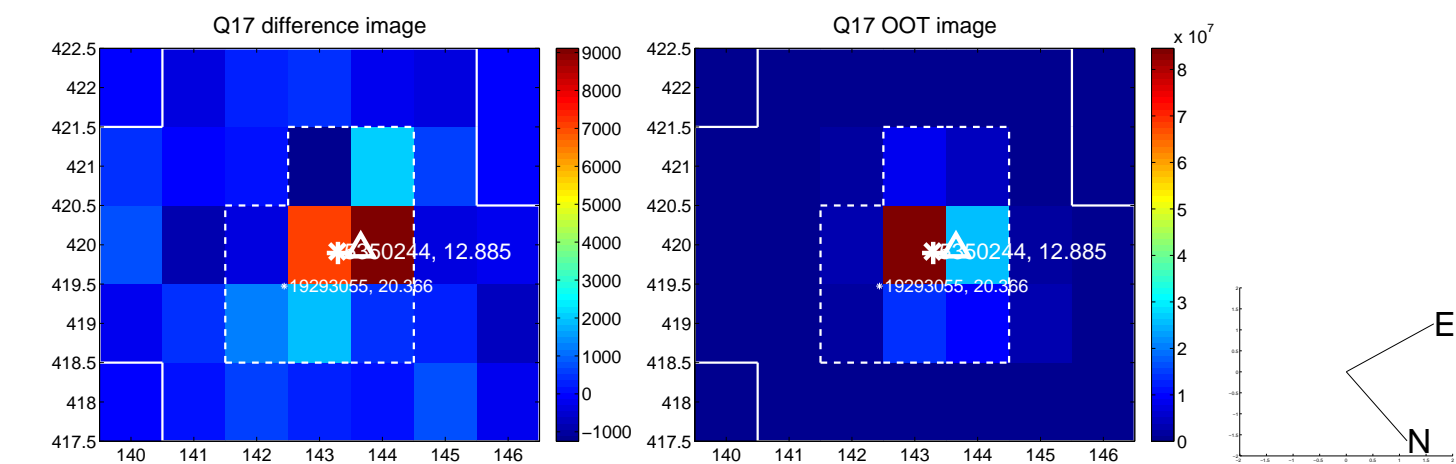
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

