

KIC 010536241

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})
010536241-01	OBS	8026.01	7.752909	137.484268	73.2	5.361	8.0	8.7	1.07	5975	1.05	238.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010536241-01	OBS	PC	0.92	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.

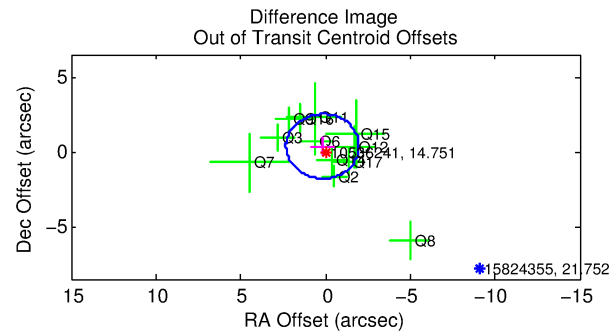
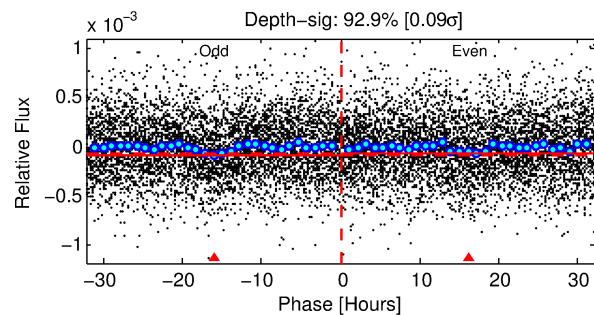
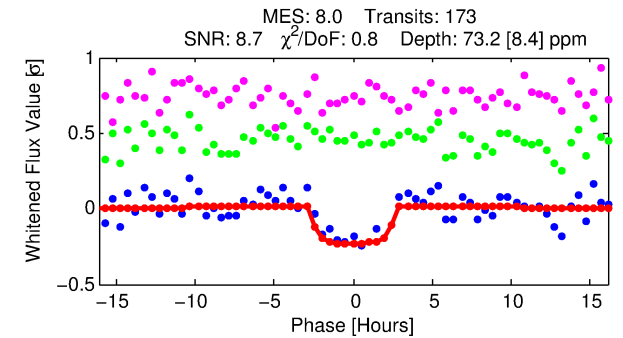
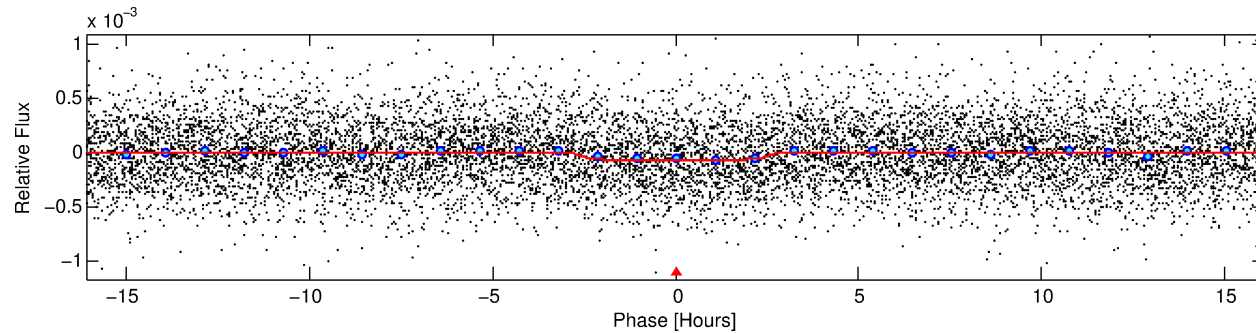
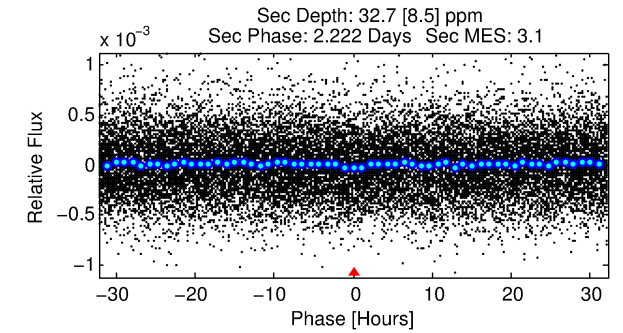
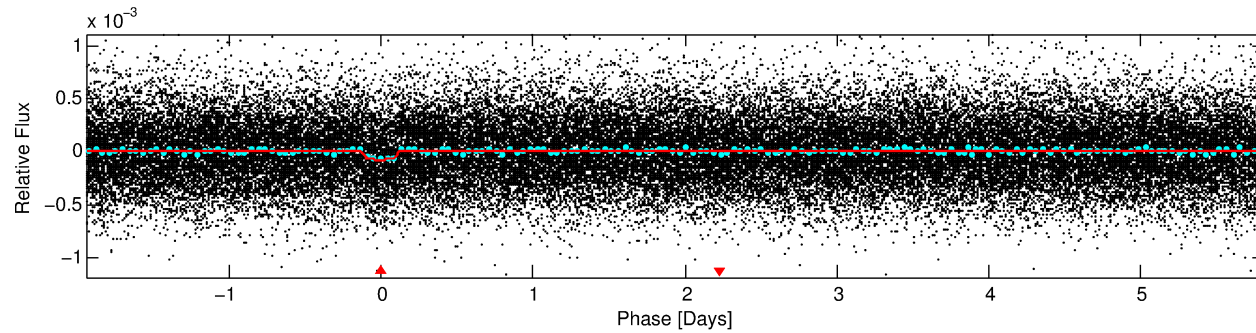
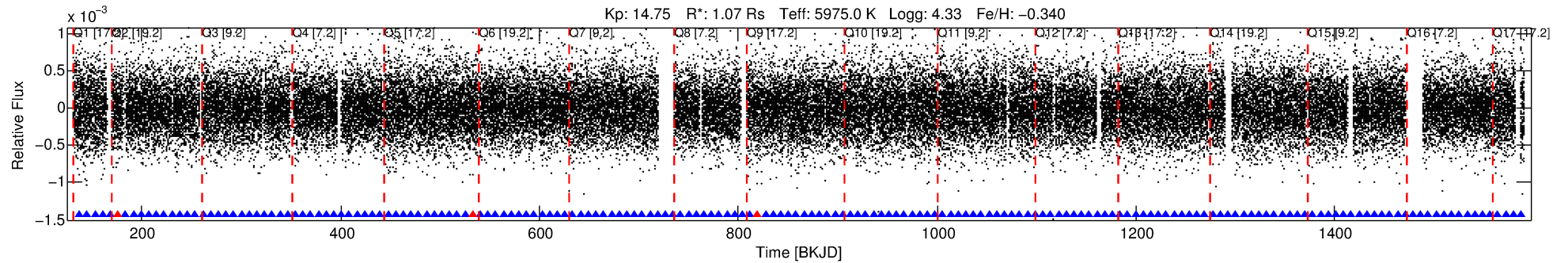
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010536241-01

No Significant Match Found

DV One-Page Summary

KIC: 10536241 Candidate: 1 of 1 Period: 7.753 d



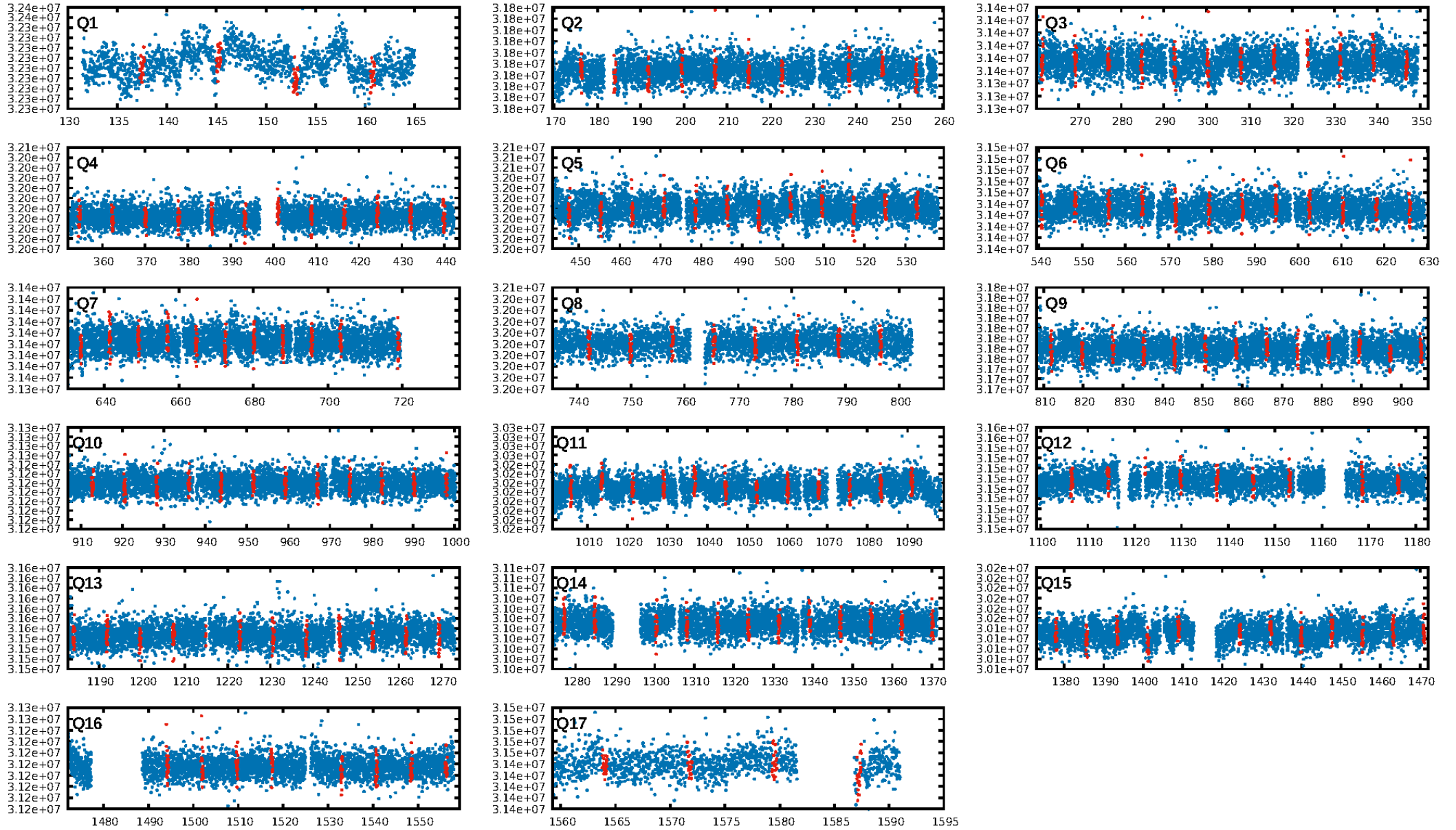
DV Fit Results:

Period = 7.75291 [0.00010] d
Epoch = 137.4843 [0.0102] BKJD
Rp/R* = 0.0090 [0.0048]
a/R* = 5.91 [15.85]
b = 0.86 [0.85]
Seff = 238.28 [88.05]
Teff = 1002 [93] K
Rp = 1.05 [0.63] Re
a = 0.0742 [0.0176] AU
Ag = 90.45 [104.40] [0.86σ]
Teffp = 4777 [1321] K [2.85σ]

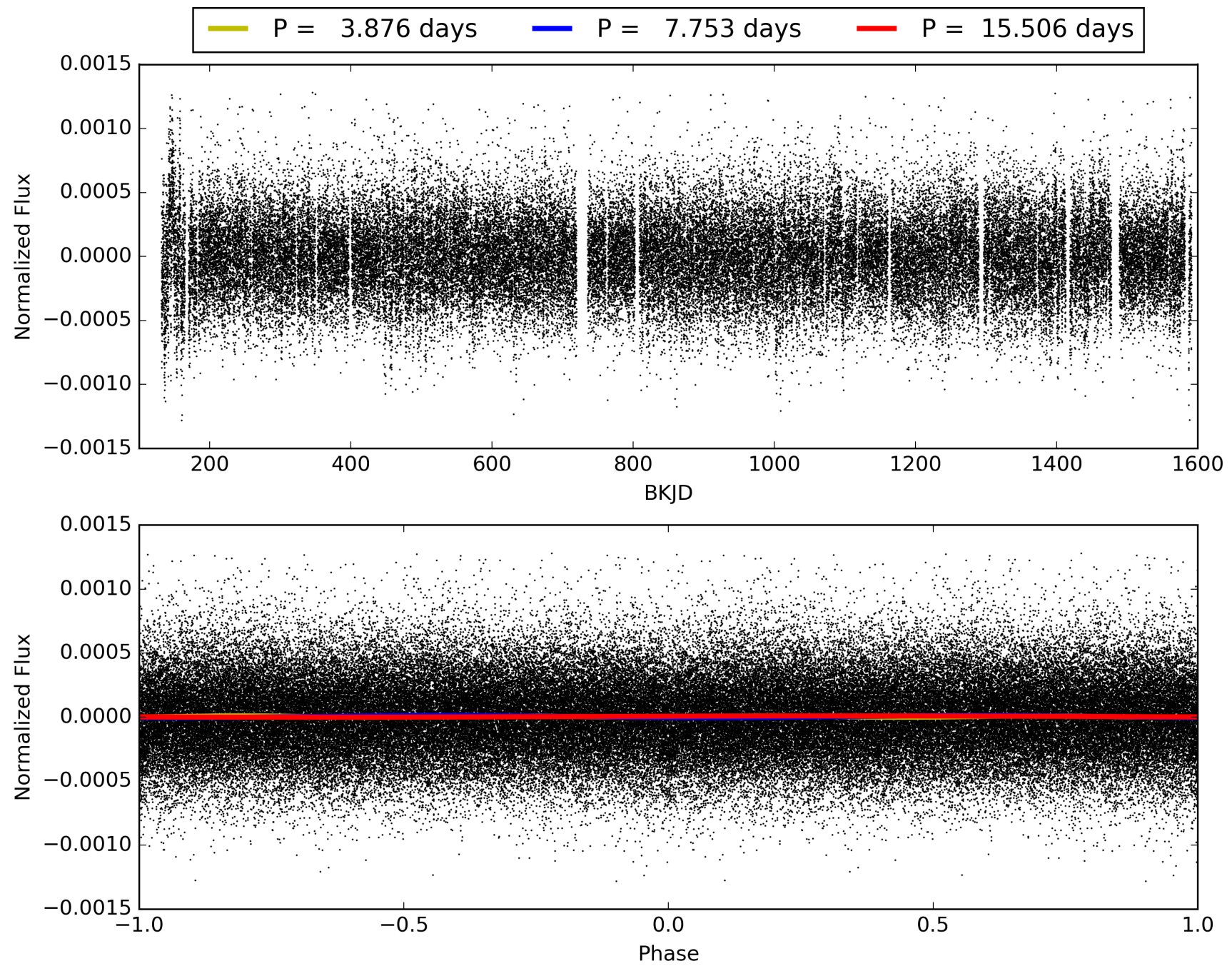
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.67e-15
RollingBand-fgt: 0.98 [162/165]
GhostDiagnostic-chr: 1.48
Centroid-sig: 28.3%
Centroid-so: 2.094 arcsec [1.20σ]
OotOffset-rm: 0.400 arcsec [0.56σ]
KicOffset-rm: 0.411 arcsec [0.61σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010536241-01, PDC Light Curves

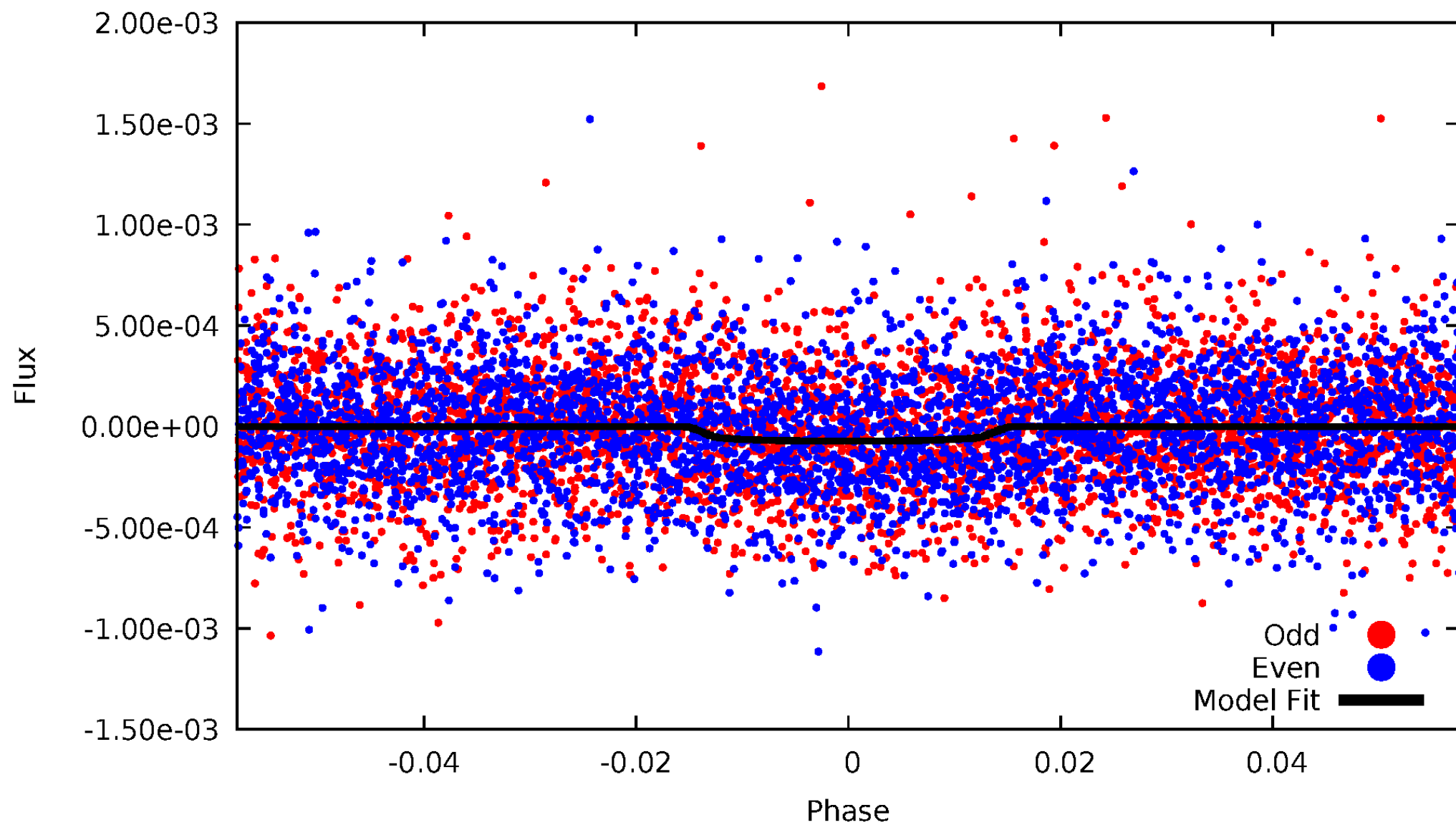


TCE 010536241-01



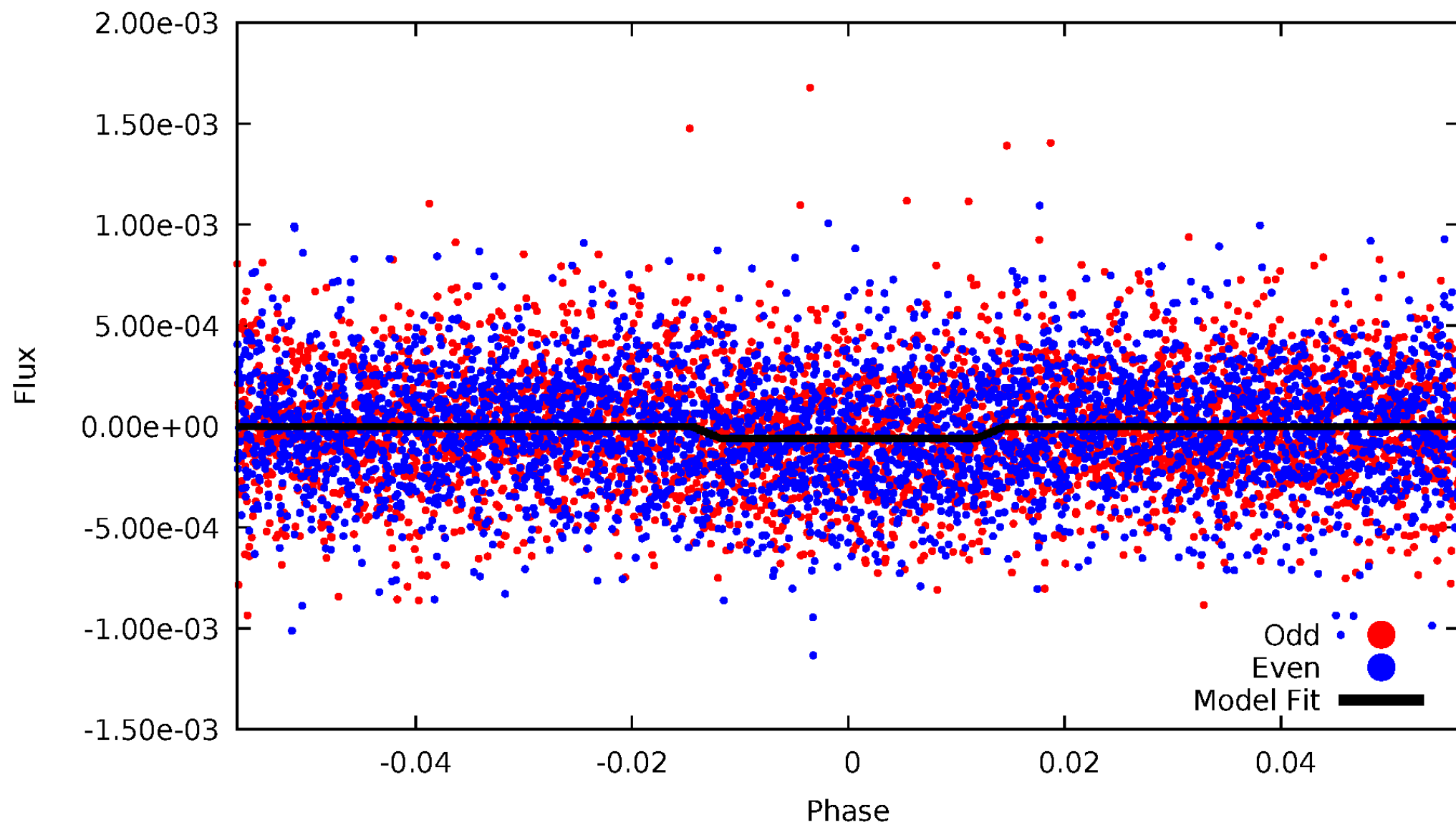
DV Odd/Even

TCE 010536241-01

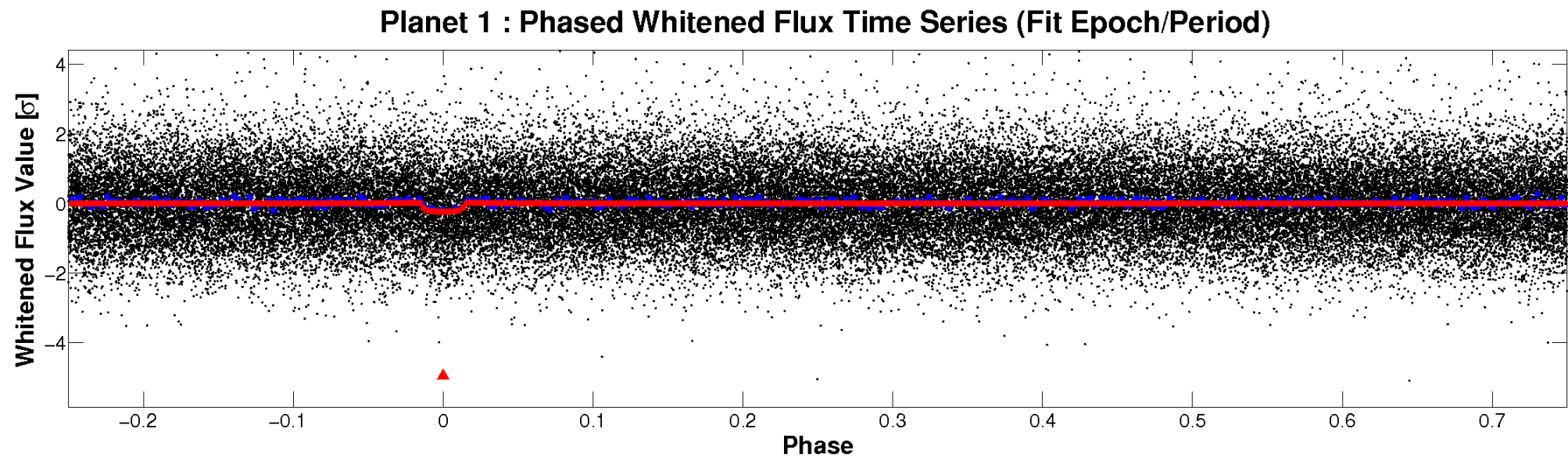
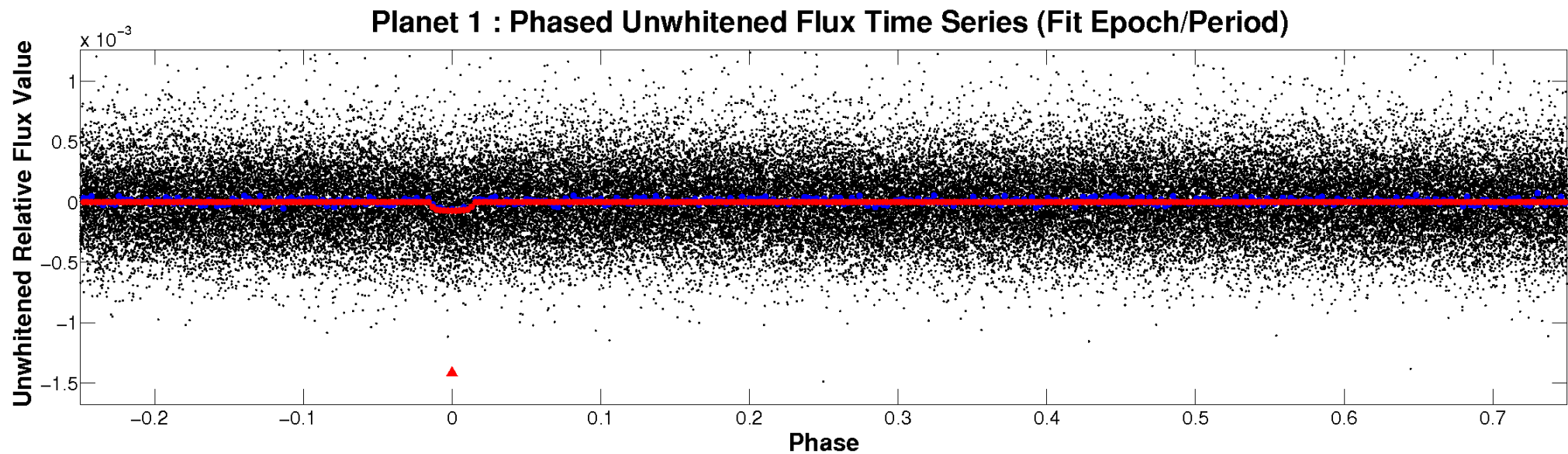


ALT Odd/Even

TCE 010536241-01

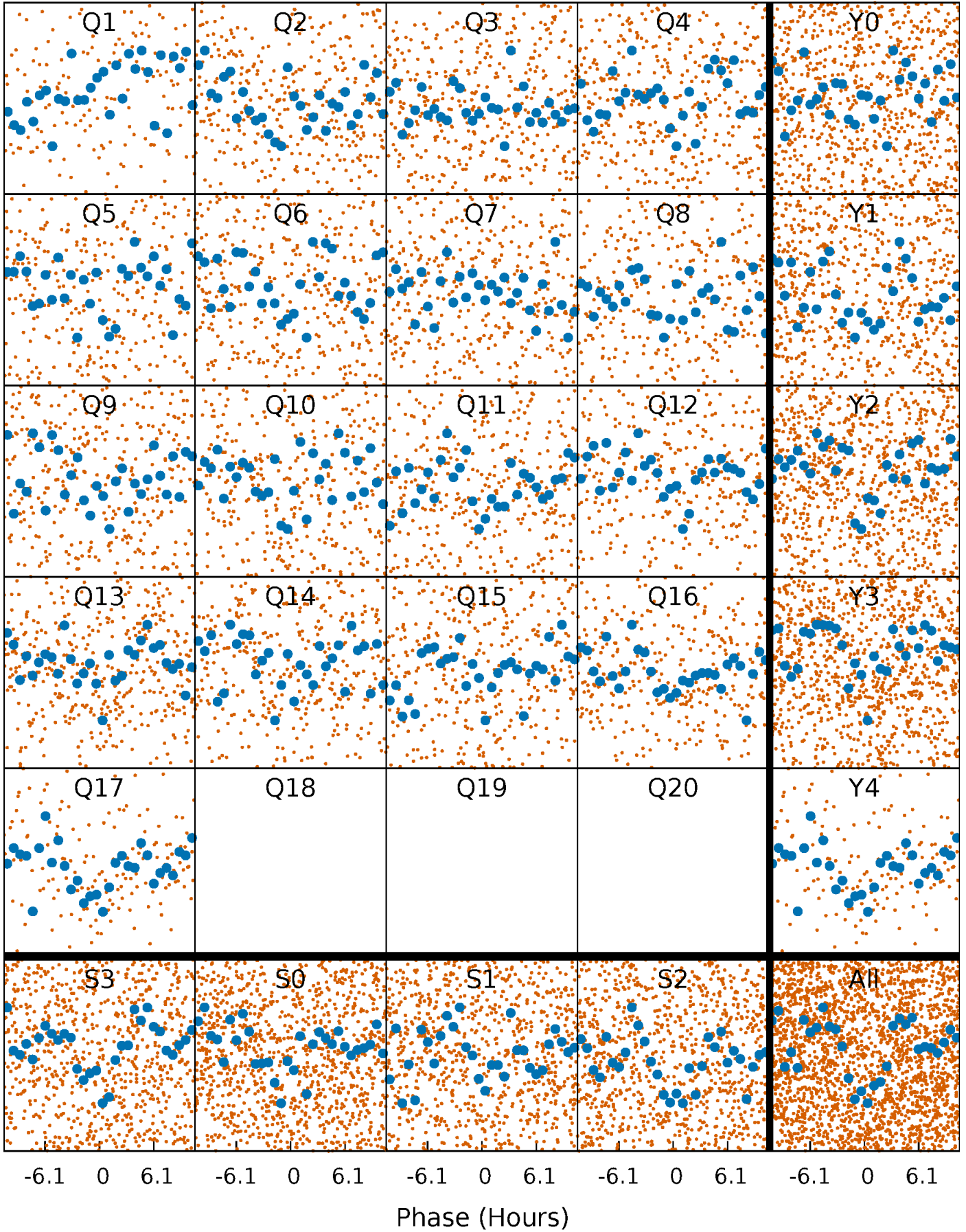


Non-Whitened Vs. Whitened Light Curve



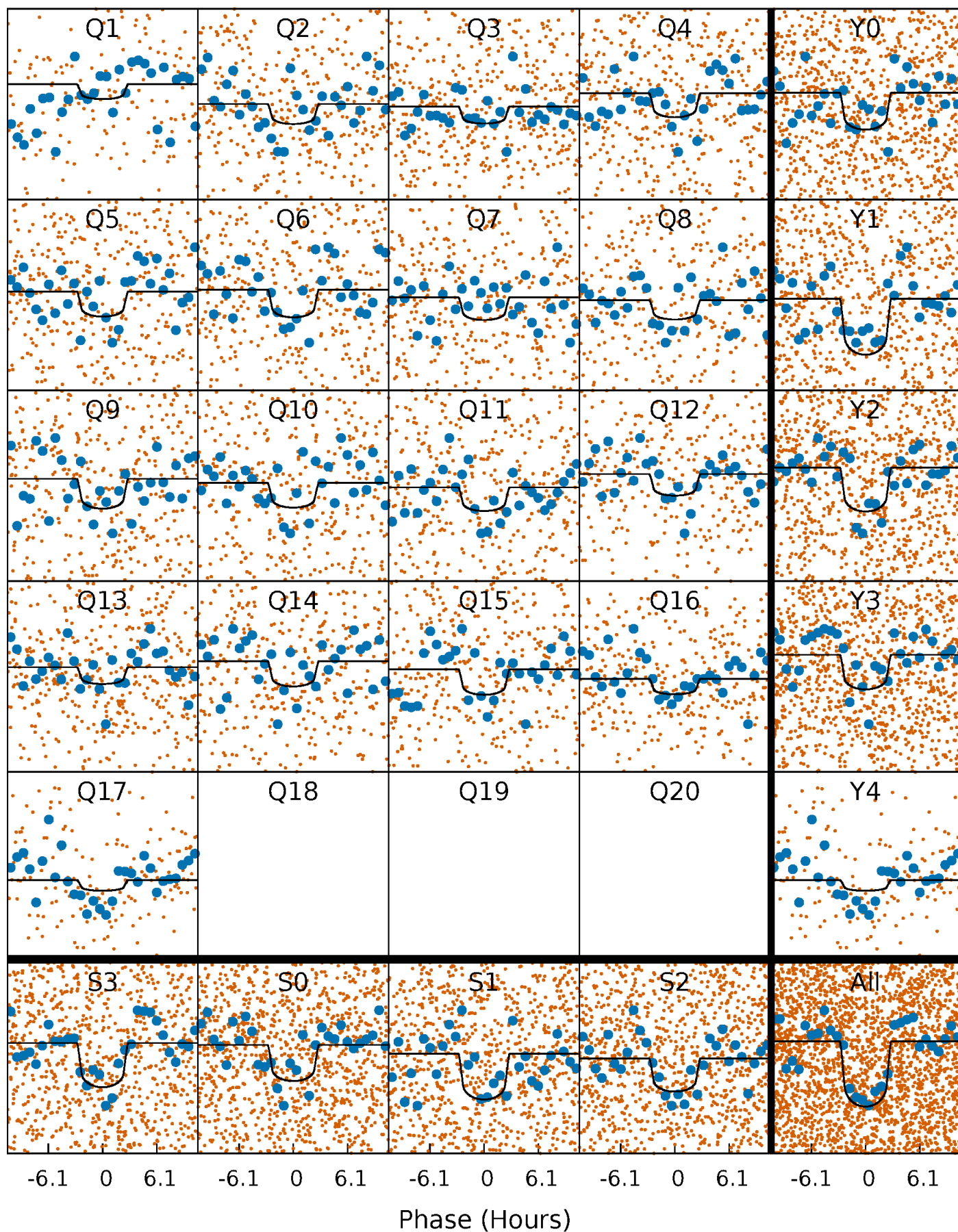
PDC Quarter-Phased Transit Curves

TCE 010536241-01 P= 7.752909 Days $T_0=137.484268$ (BKJD)



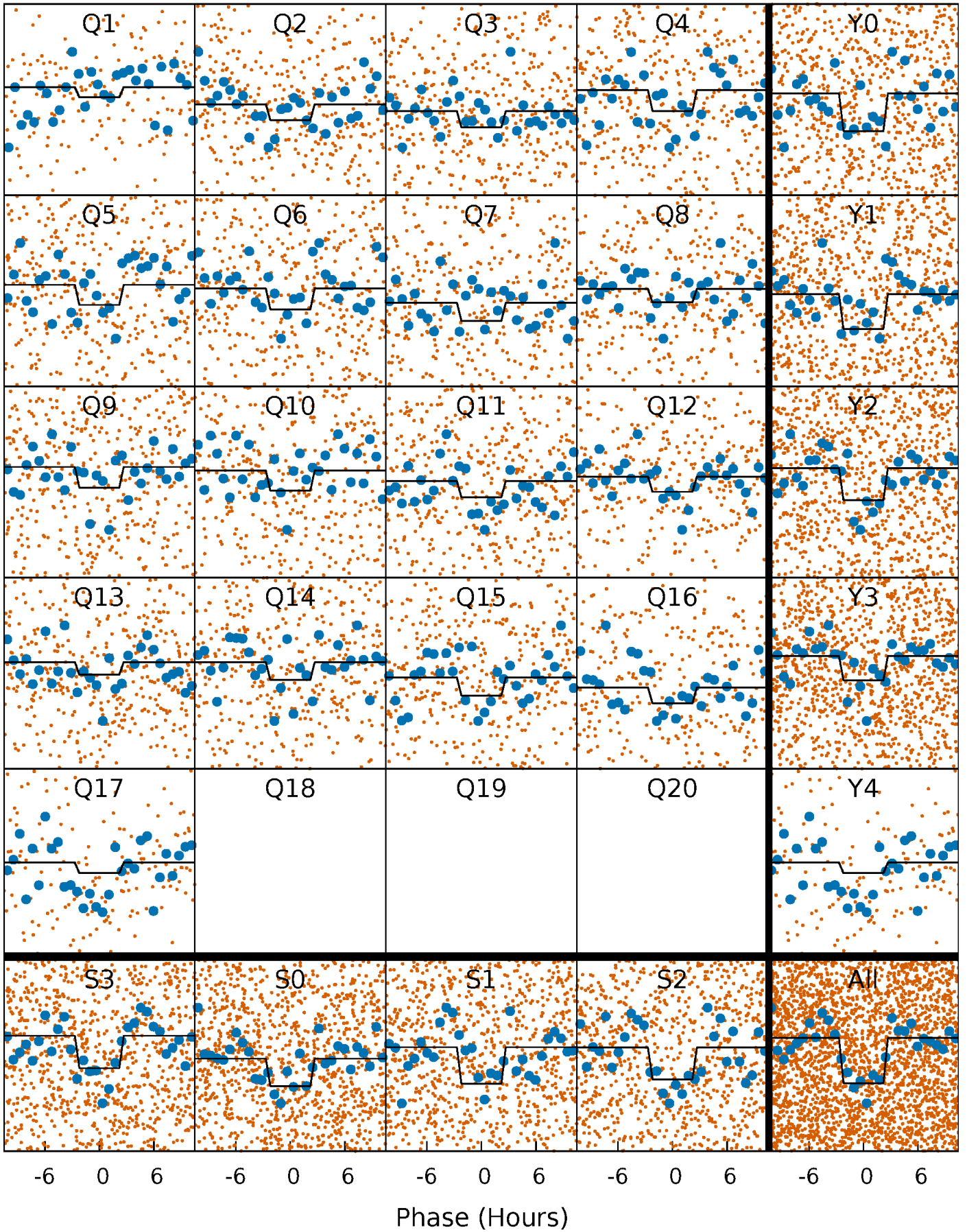
DV Quarter-Phased Transit Curves

TCE 010536241-01 P= 7.752909 Days $T_0=137.484268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

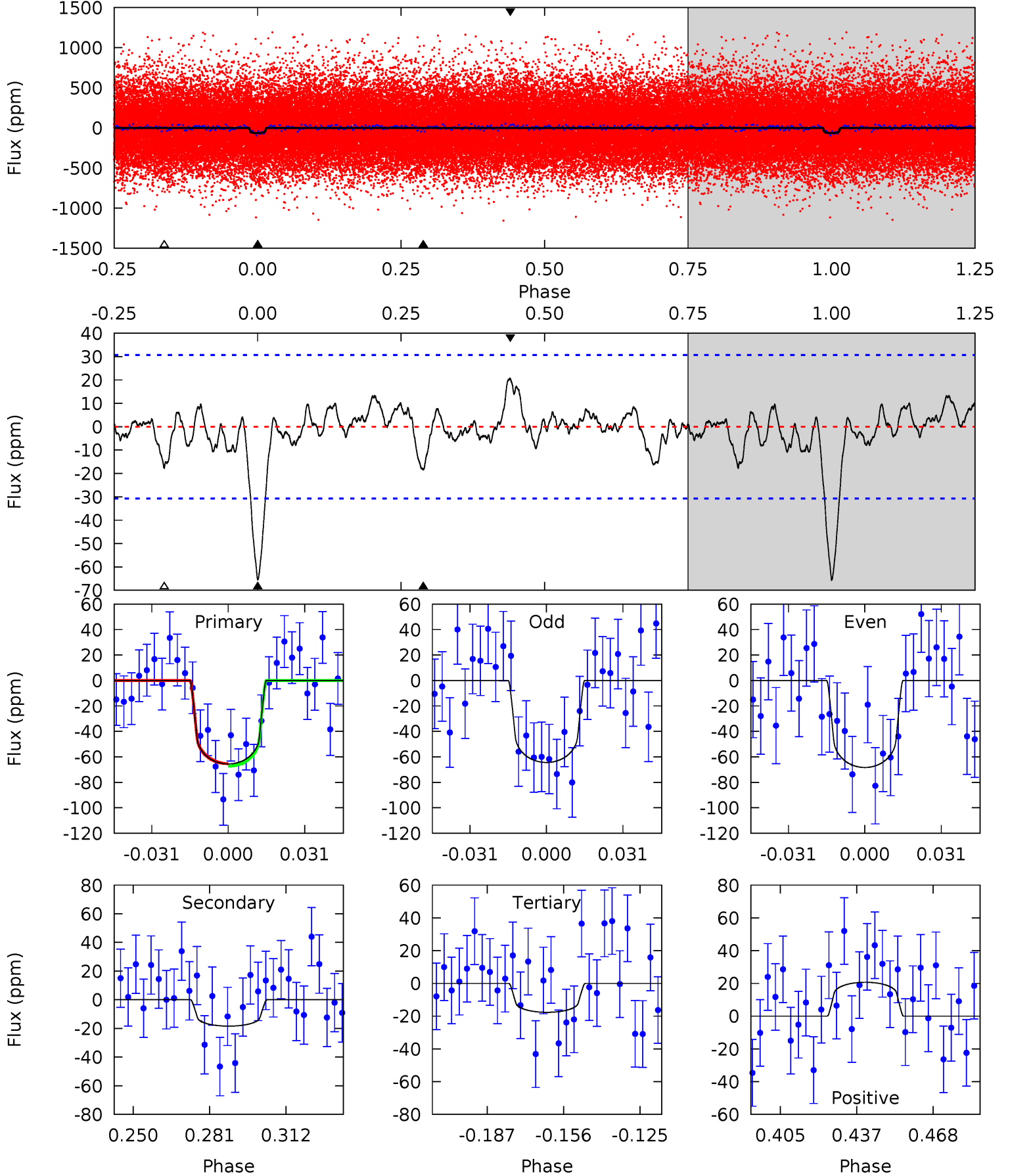
TCE 010536241-01 P= 7.752867 Days $T_0=137.492415$ (BKJD)



DV Model-Shift Uniqueness Test

010536241-01, P = 7.752909 Days, E = 129.731359 Days

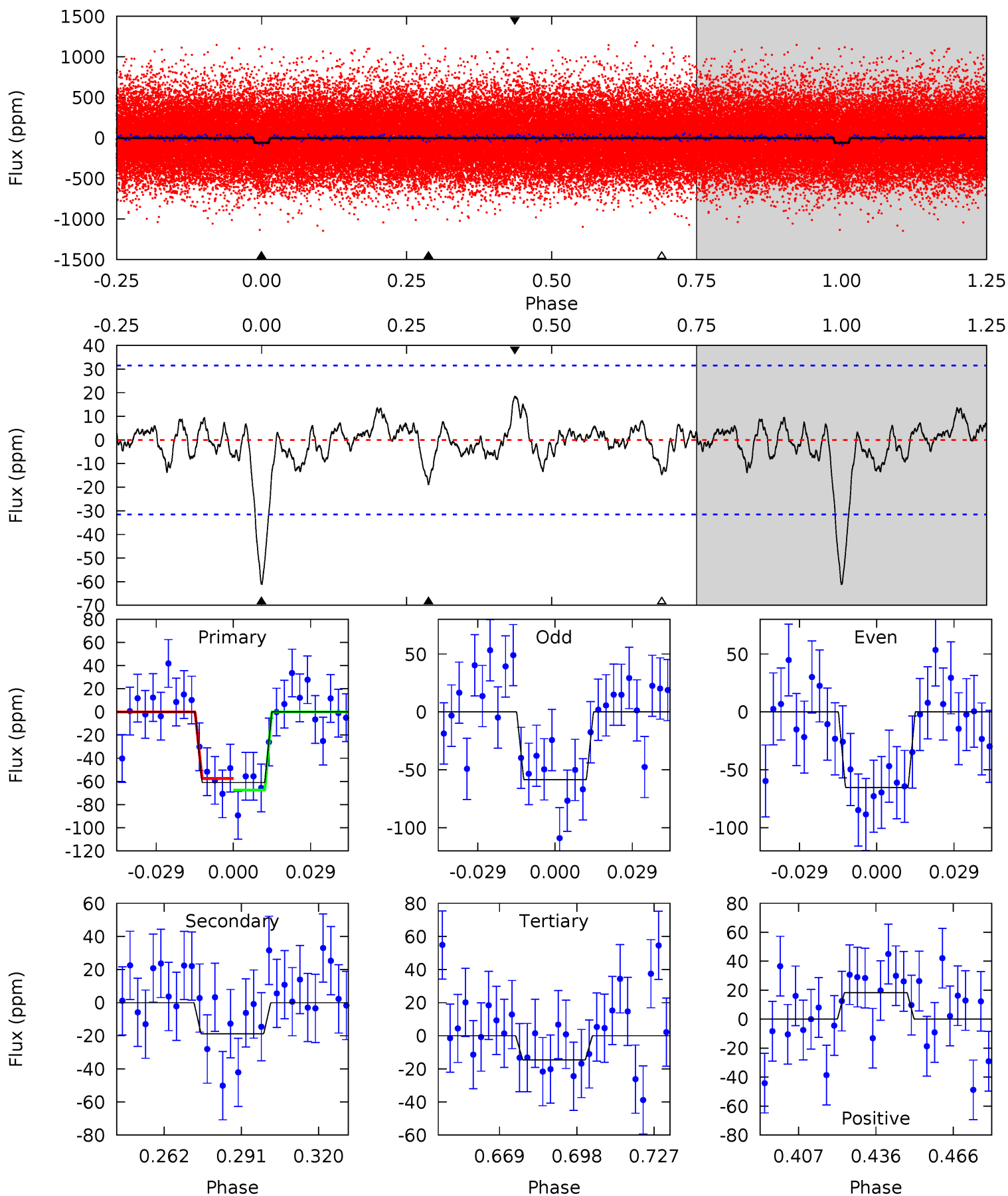
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.88	2.76	3.23	4.80	2.15	0.99	7.49	7.02	0.11	-0.35	0.31	0.98	0.24	0.15



Alt Model-Shift Uniqueness Test

010536241-01, P = 7.752867 Days, E = 129.739548 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.33	2.86	2.22	2.81	4.82	2.18	0.88	7.11	6.52	0.64	0.05	0.52	1.09	0.23	0.76



Stellar Parameters For KIC 010536241

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5975^{+160}_{-178}	$4.335^{+0.175}_{-0.193}$	$-0.340^{+0.300}_{-0.300}$	$1.072^{+0.299}_{-0.224}$	$0.907^{+0.120}_{-0.087}$	$1.036^{+0.892}_{-0.473}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-21%	+13%/-10%	+86%/-46%
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 010536241-01 / KOI 8026.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 6	$1.06^{+0.60}_{-0.50}$	1401^{+109}_{-90}	4320^{+1322}_{-681}	49^{+135}_{-31}
Alt.	-19 ± 7	$0.96^{+0.56}_{-0.53}$	1400^{+100}_{-93}	4493^{+1970}_{-711}	60^{+227}_{-38}

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

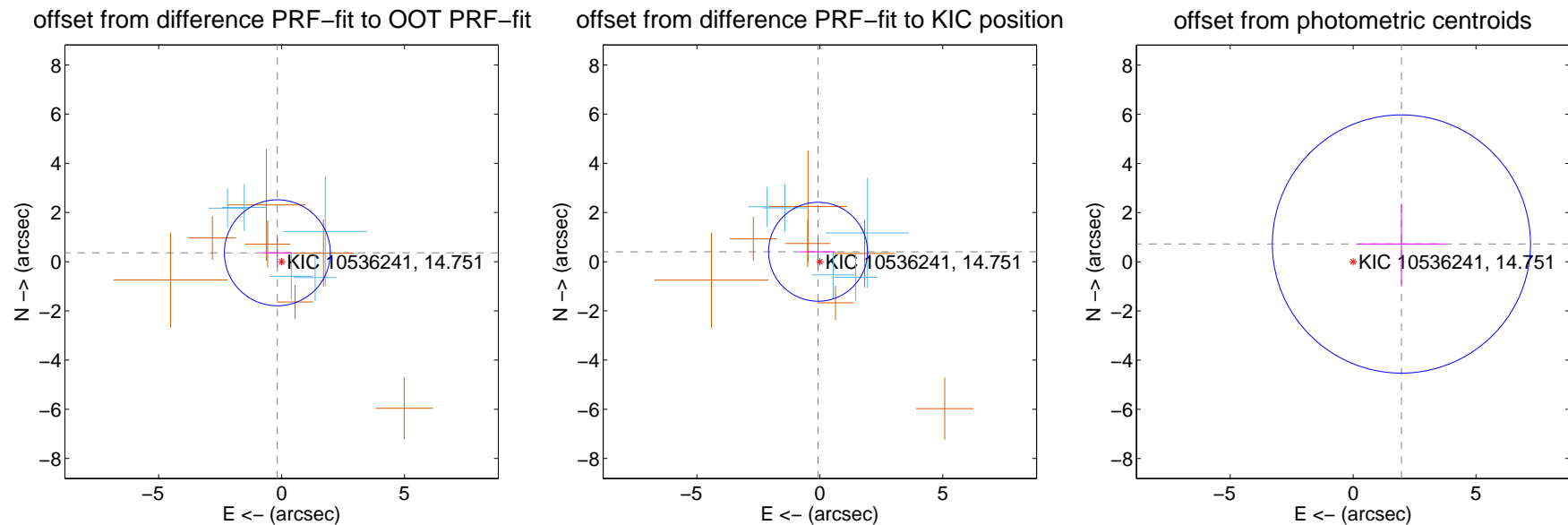
DV Centroid Data

Supplemental centroid analysis for 010536241-01. Kepler magnitude: 14.75. Transit SNR 8.69

There are 5 quarters with good PRF difference image offsets

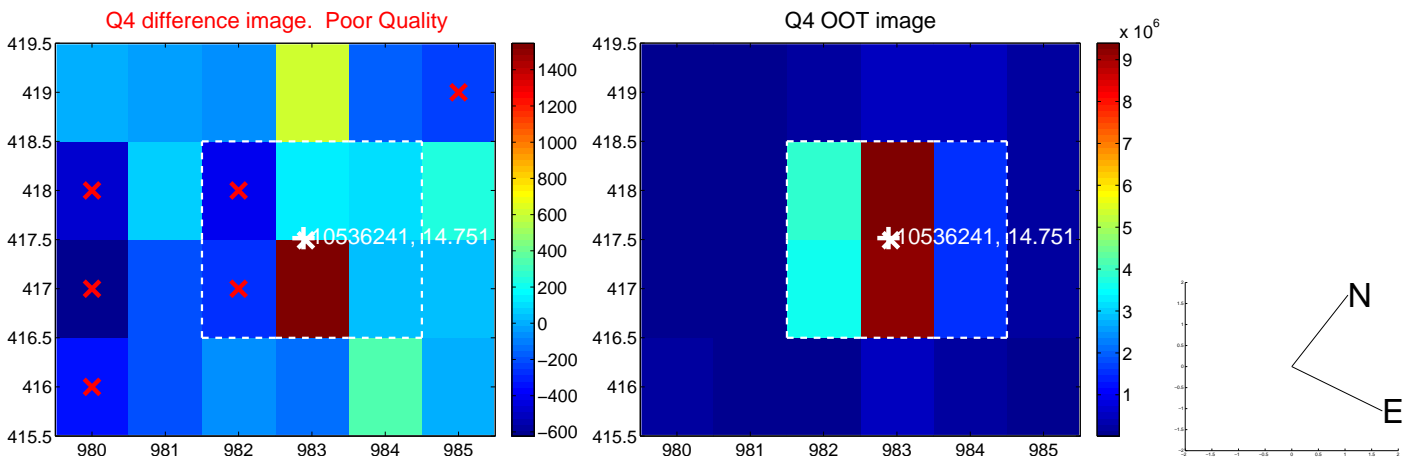
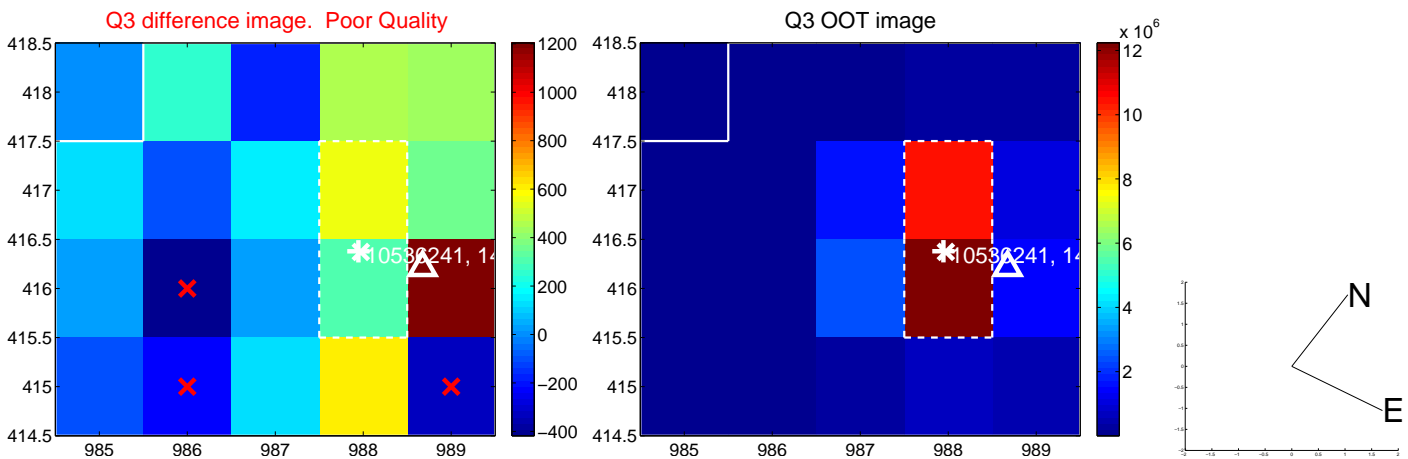
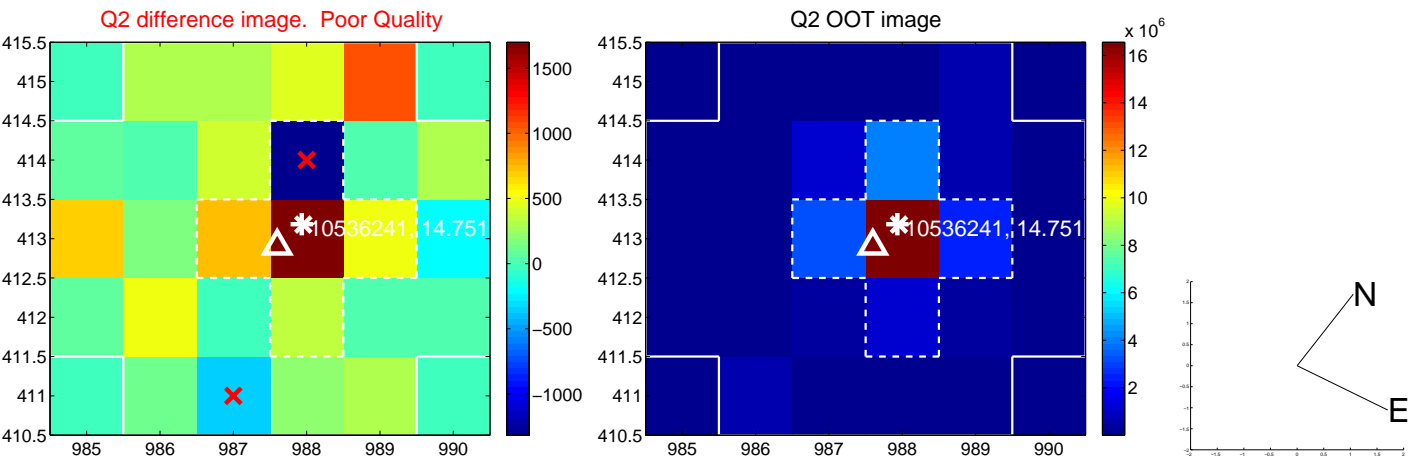
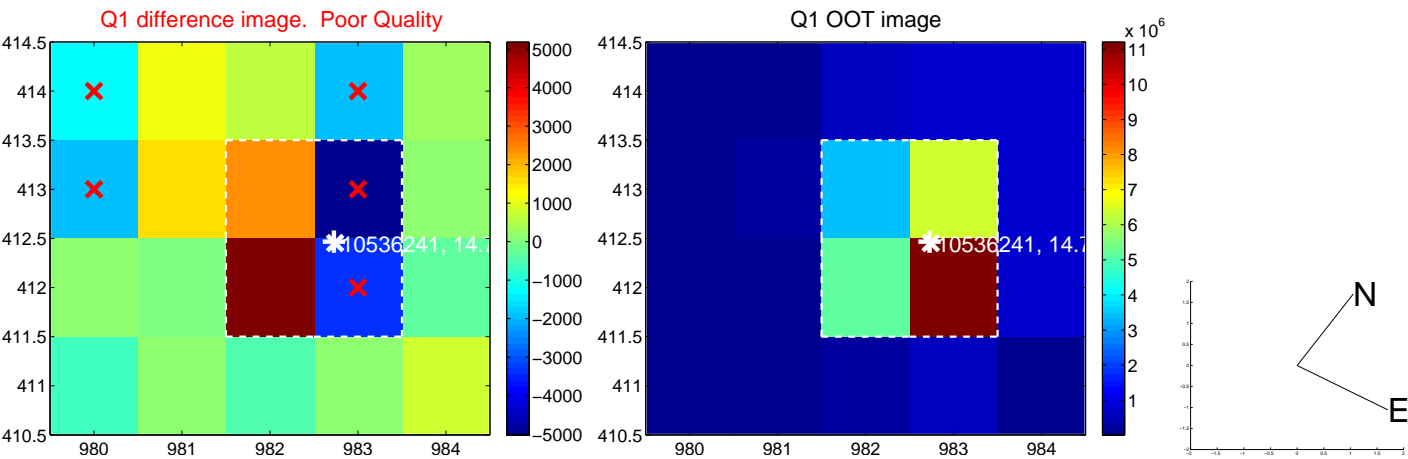
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.400 ± 0.718	0.56	0.172 ± 0.614	0.362 ± 0.608
PRF-fit source offset from KIC position	0.411 ± 0.670	0.61	0.074 ± 0.712	0.404 ± 0.597
photometric centroid source offset	2.09 ± 1.75	1.20	-1.97 ± 1.76	0.72 ± 1.65

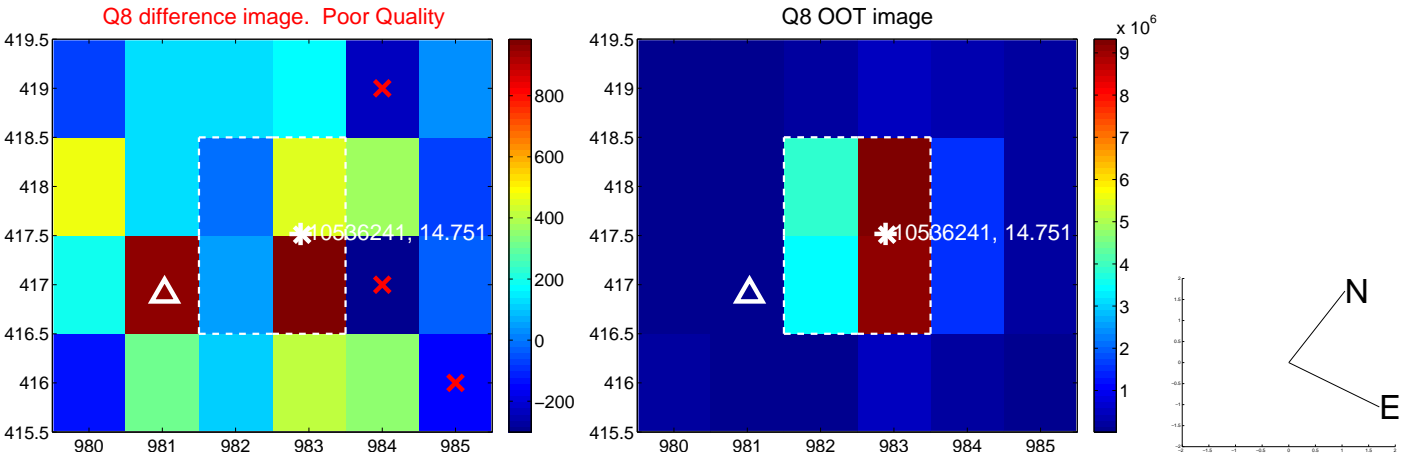
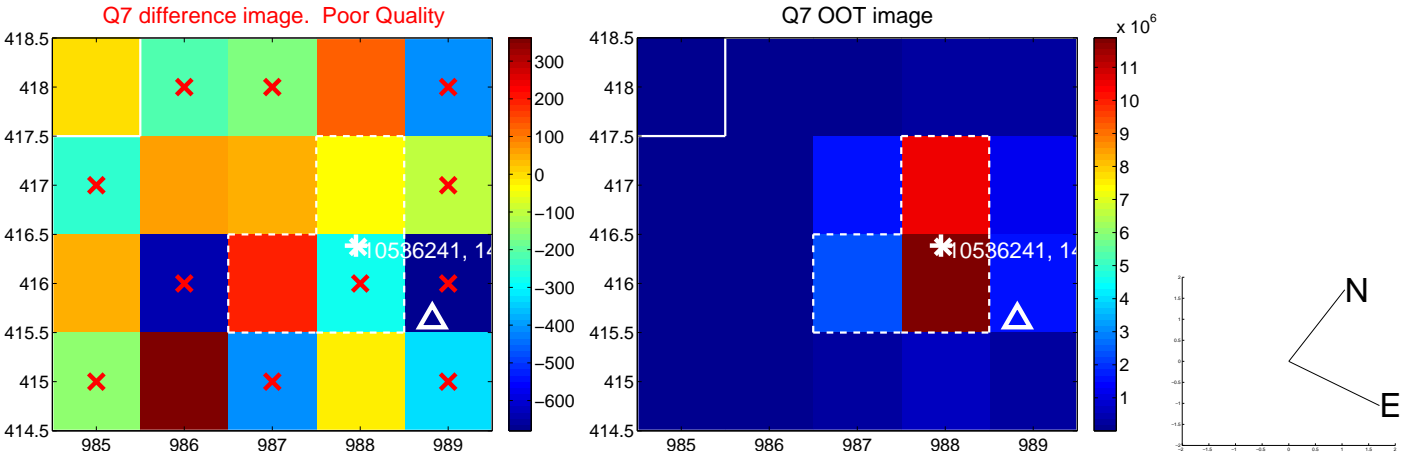
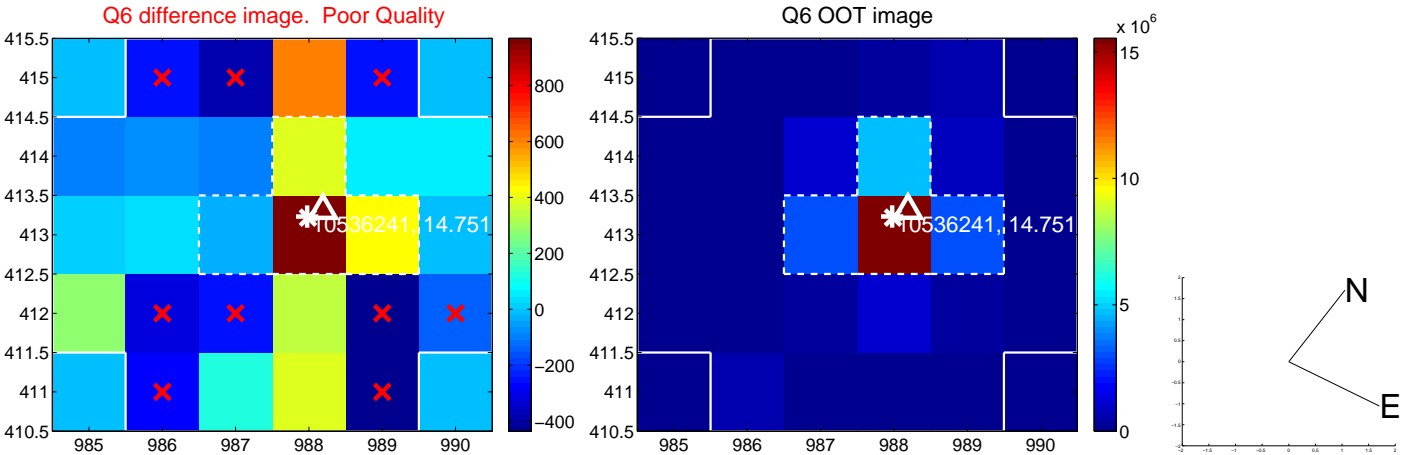
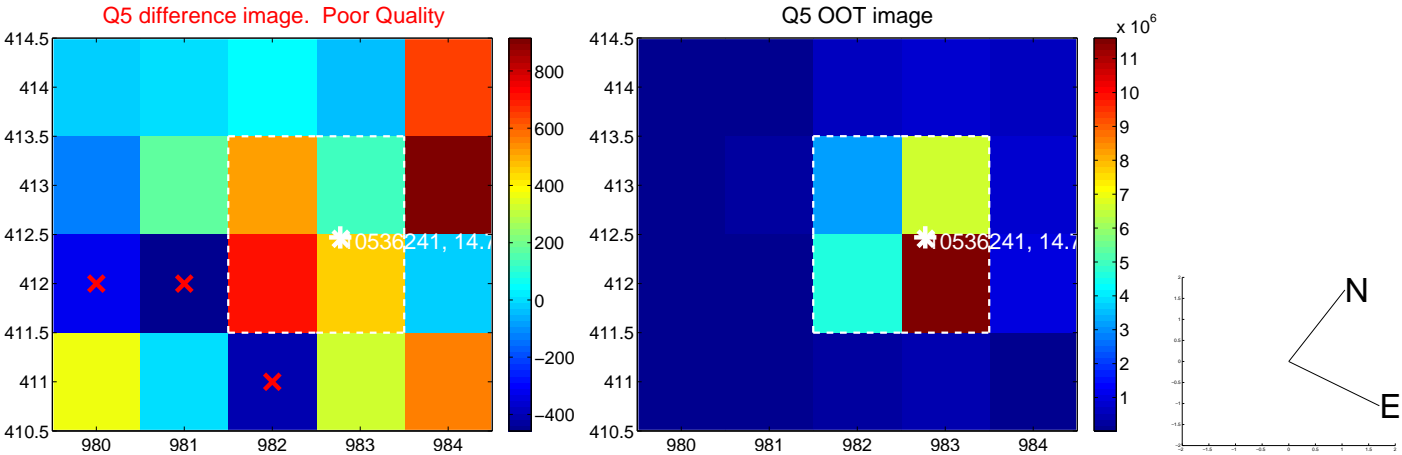


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

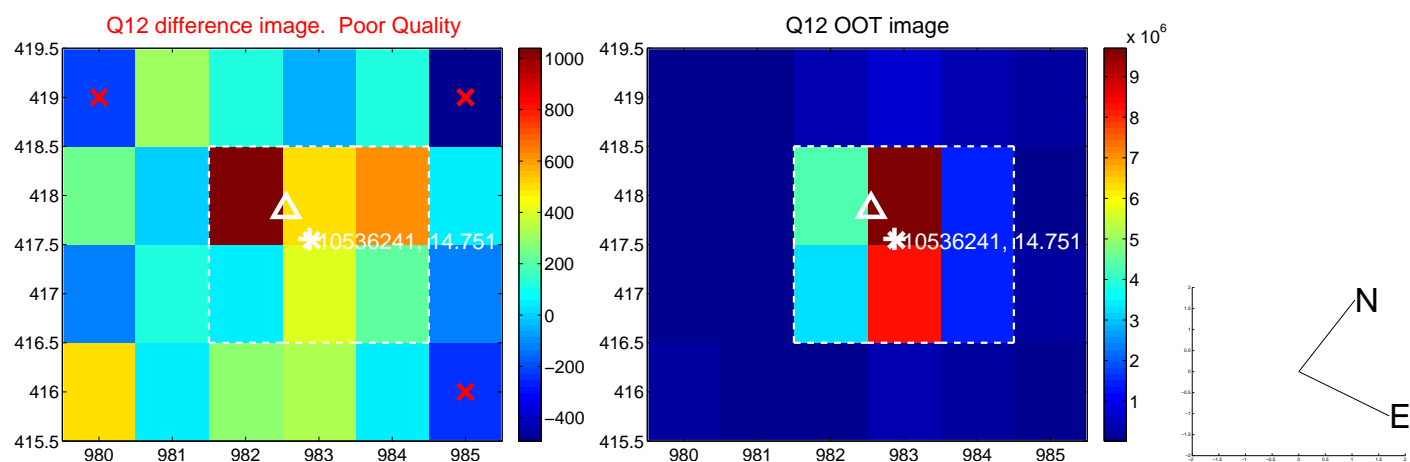
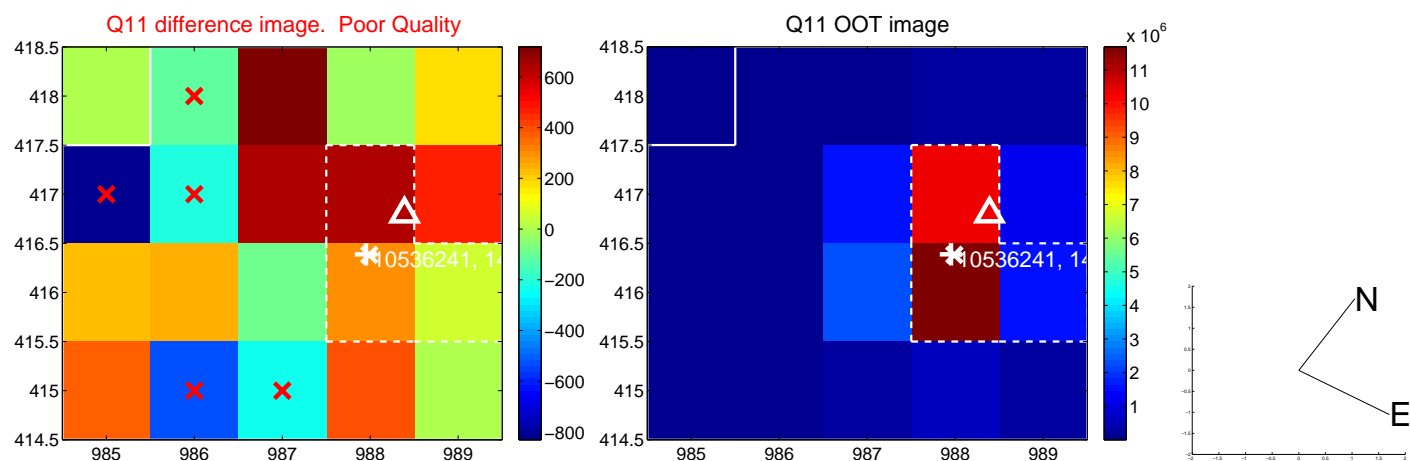
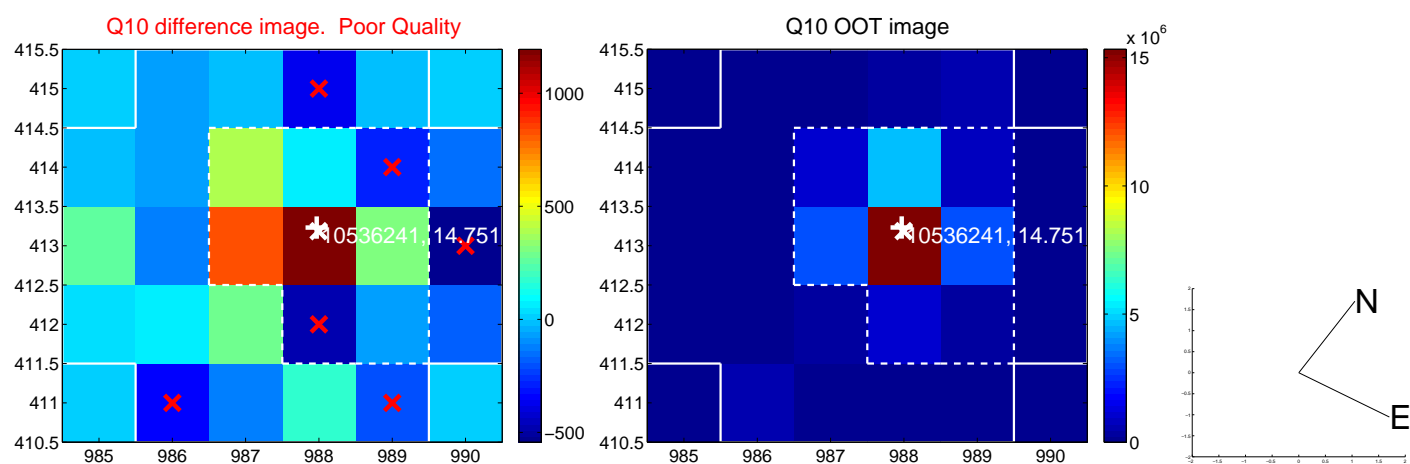
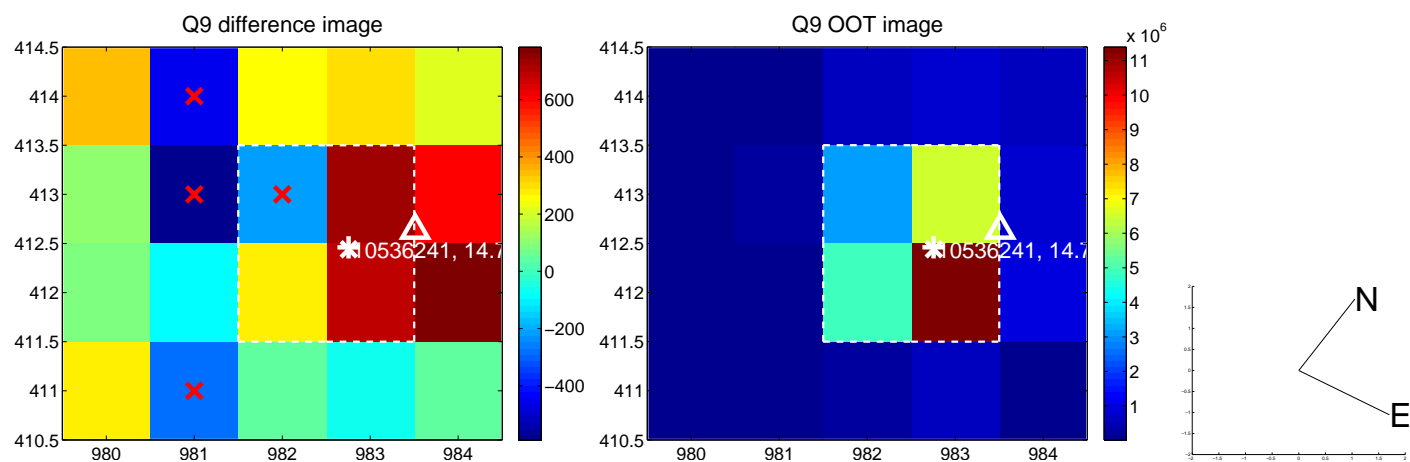
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



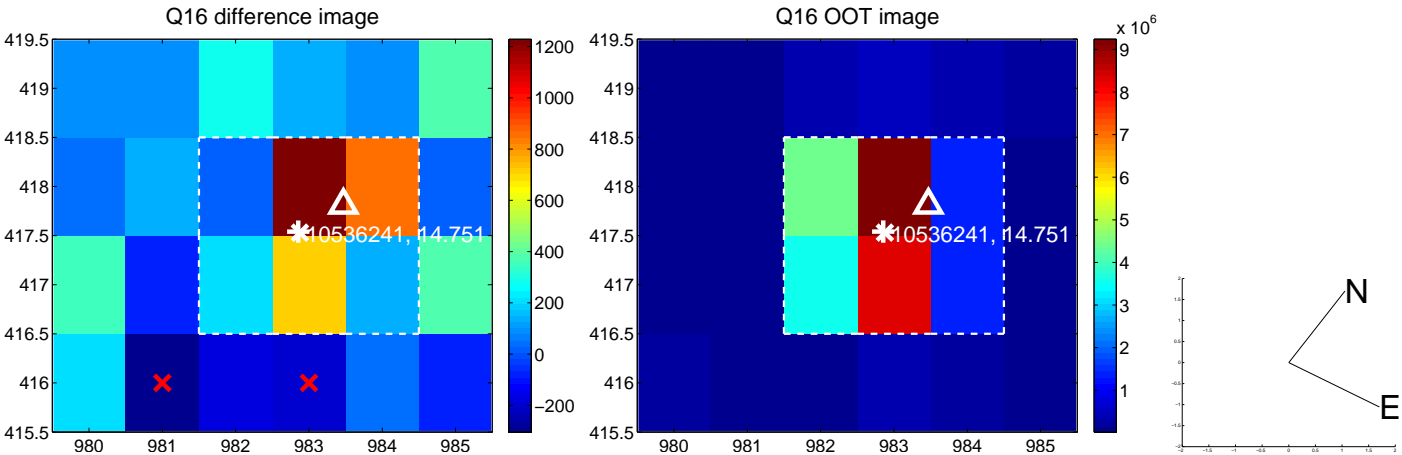
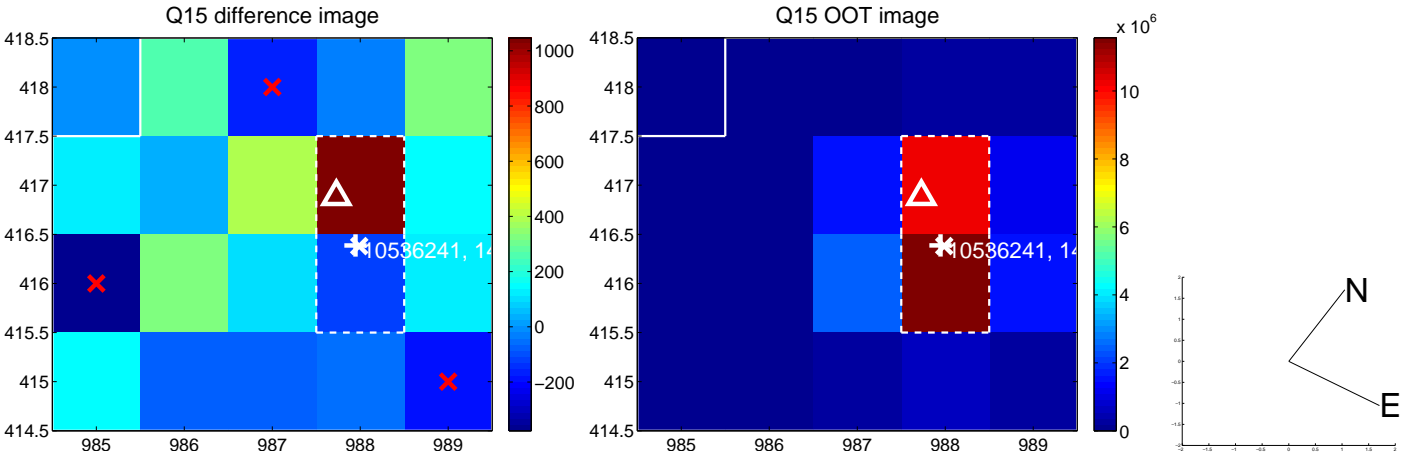
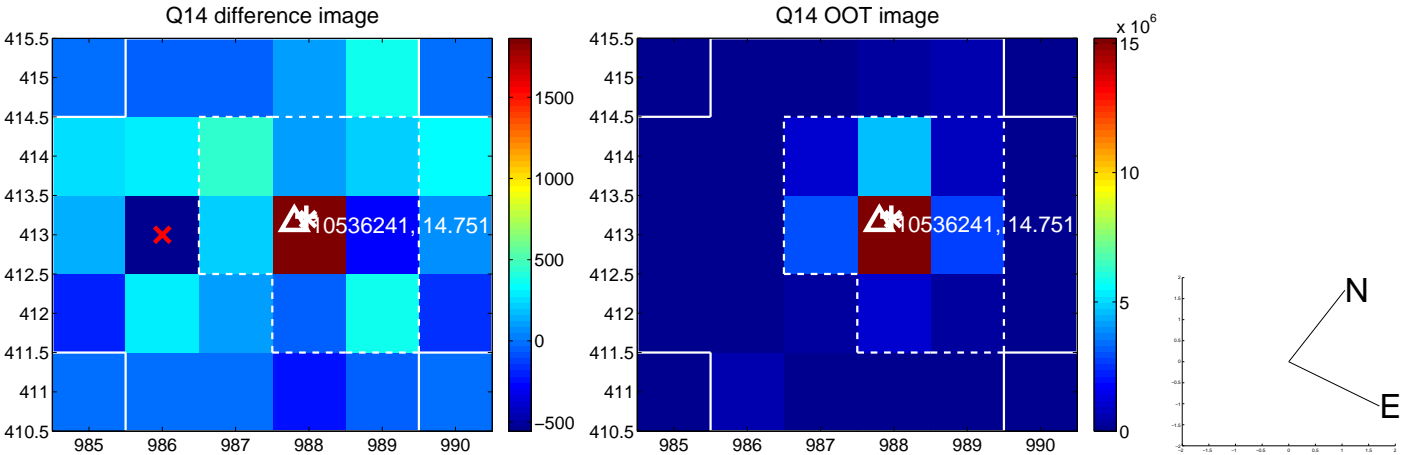
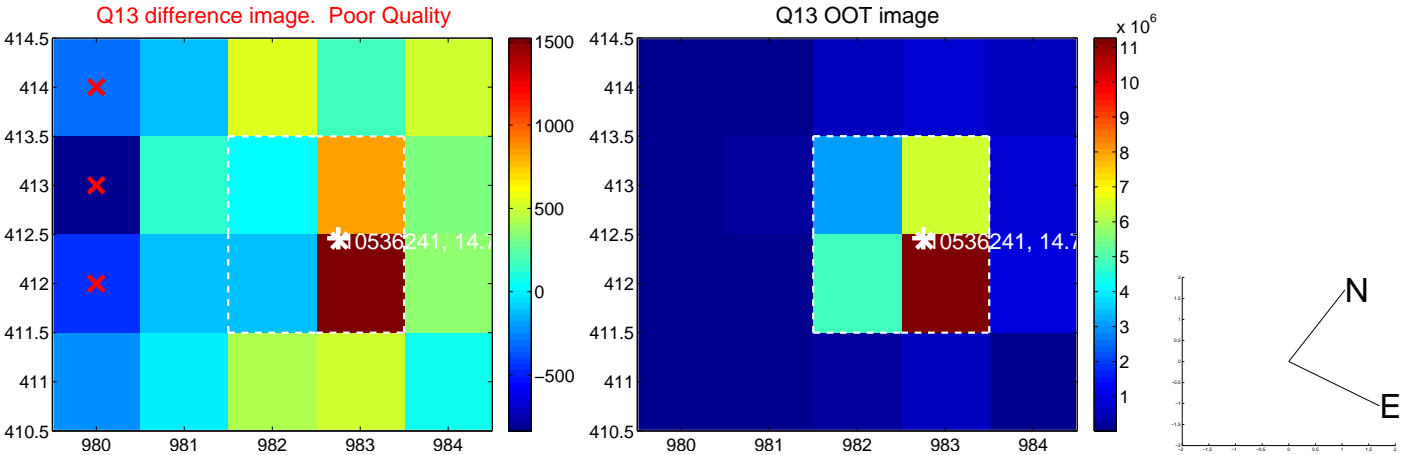
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



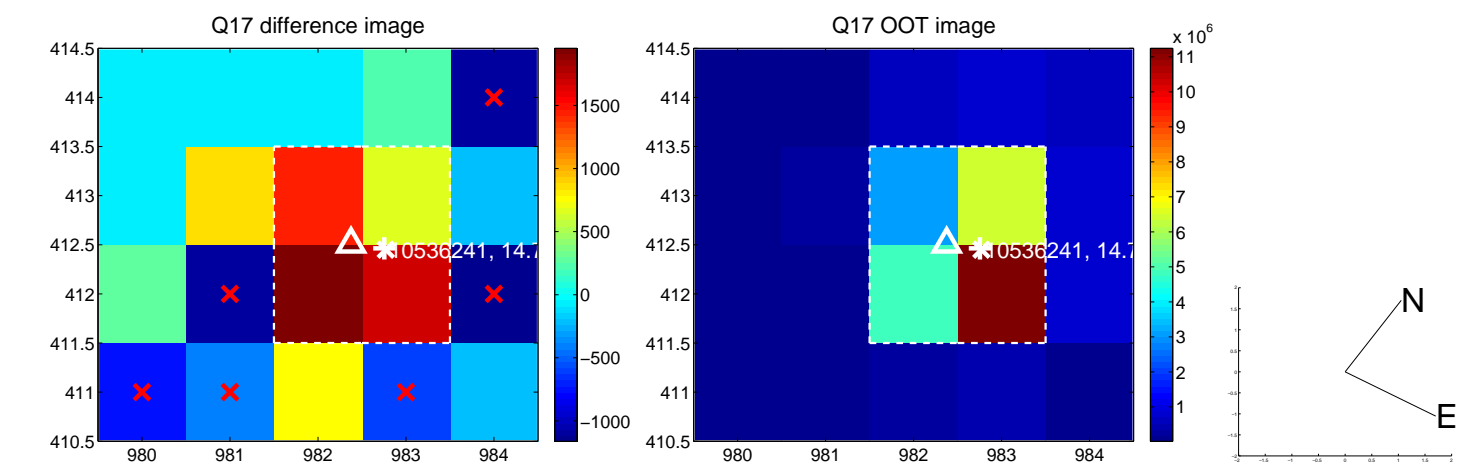
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



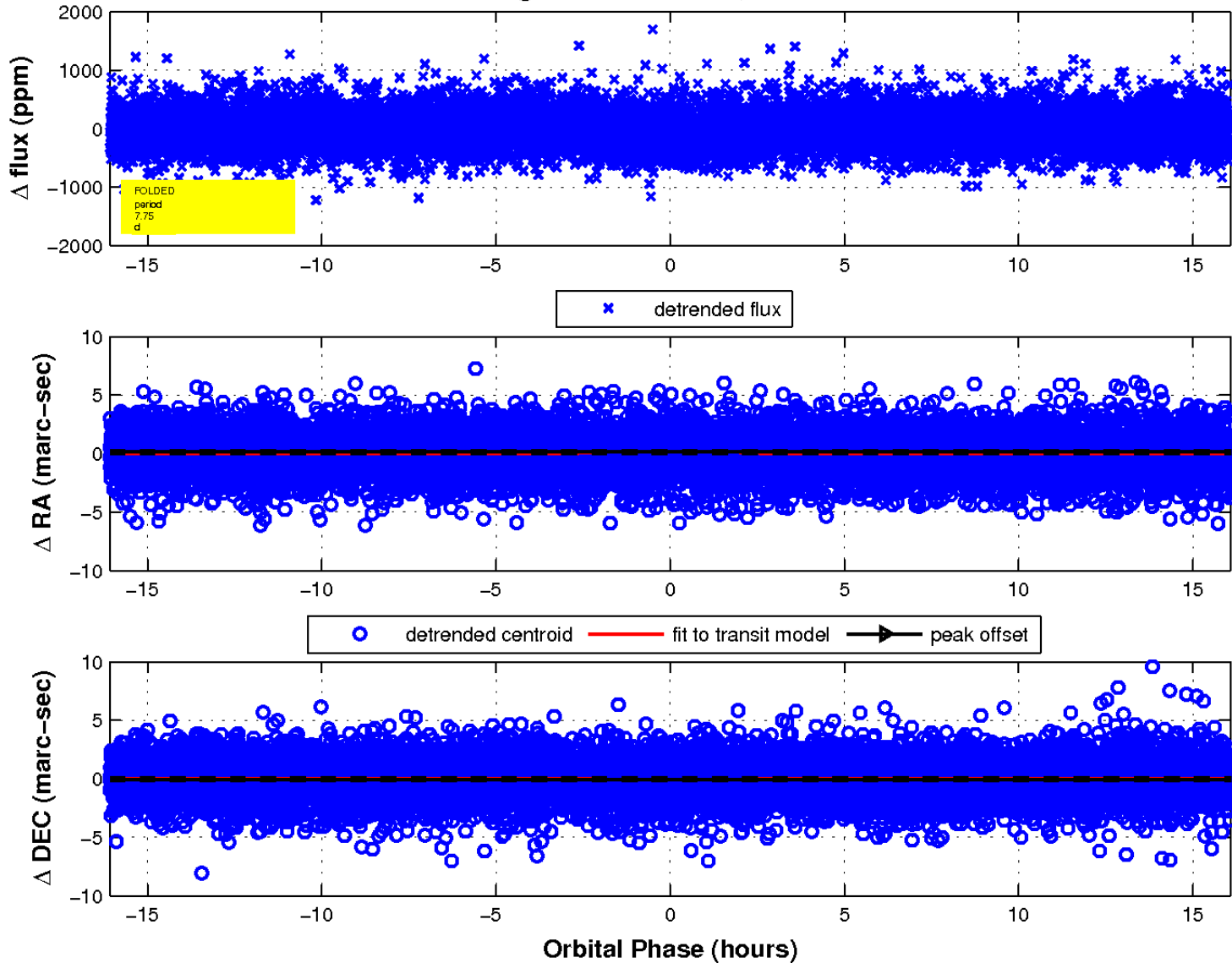
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

