

KIC 004175741

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})
004175741-01	OBS	No	4.003202	135.512978	119.3	14.094	8.1	7.8	0.72	4733	0.80	121.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004175741-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

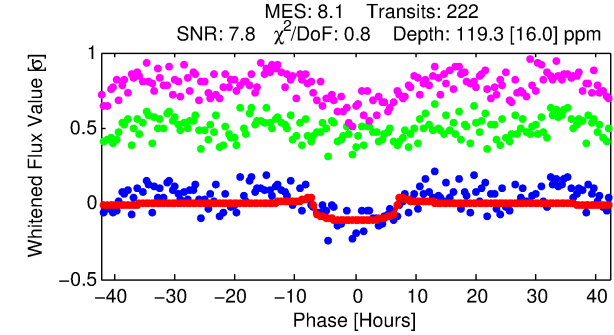
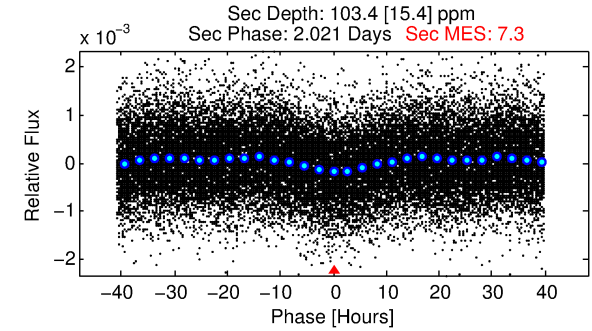
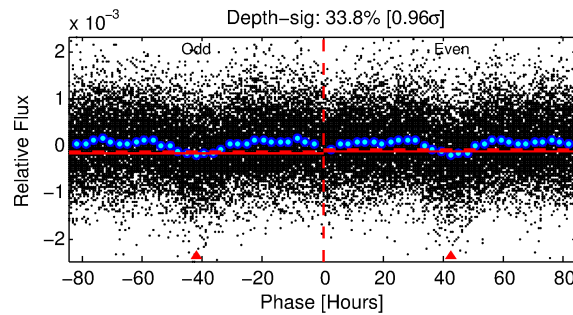
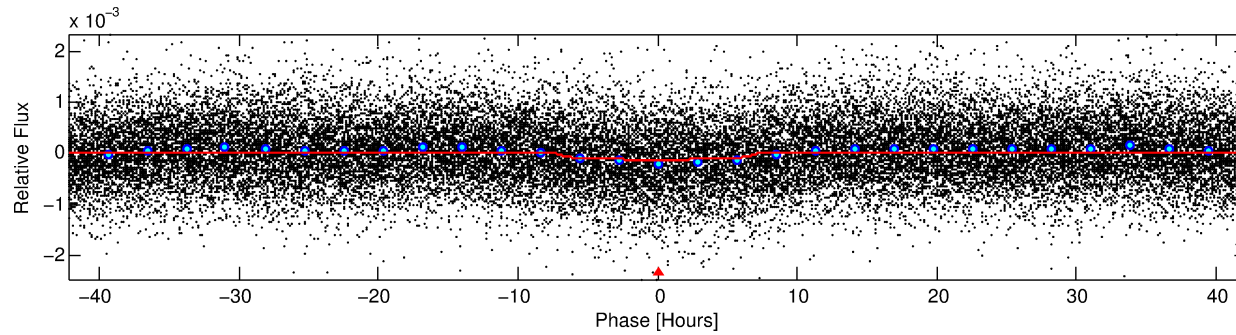
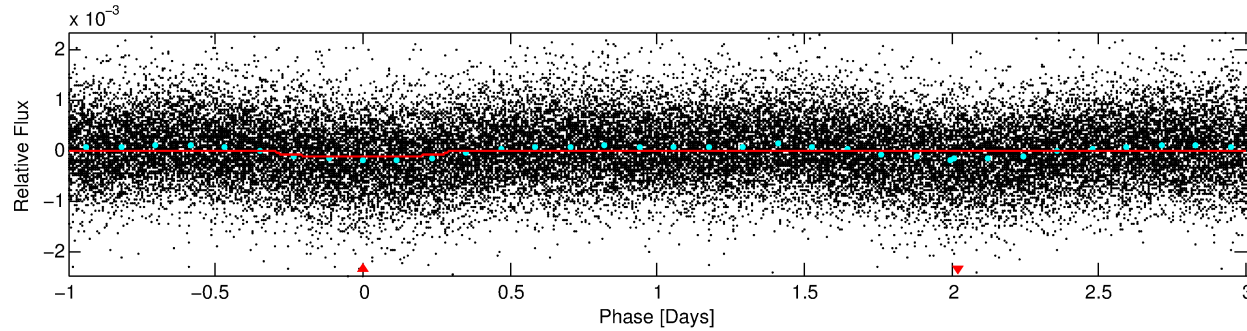
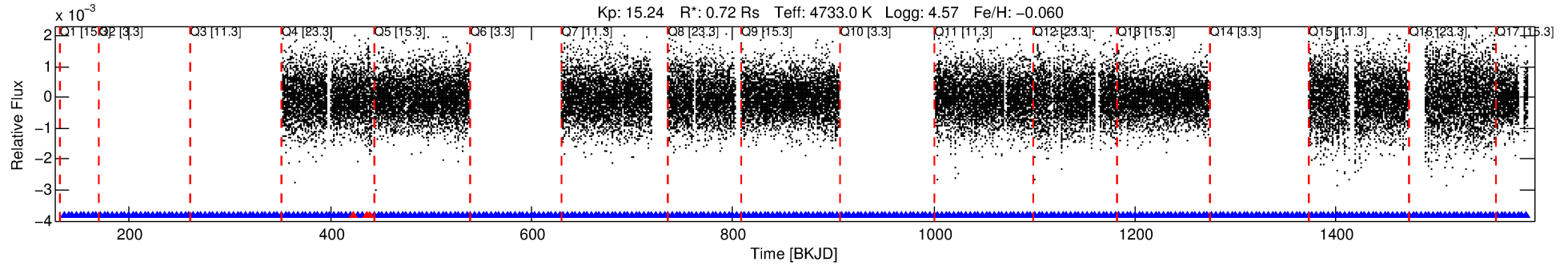
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004175741-01

No Significant Match Found

DV One-Page Summary

KIC: 4175741 Candidate: 1 of 1 Period: 4.003 d



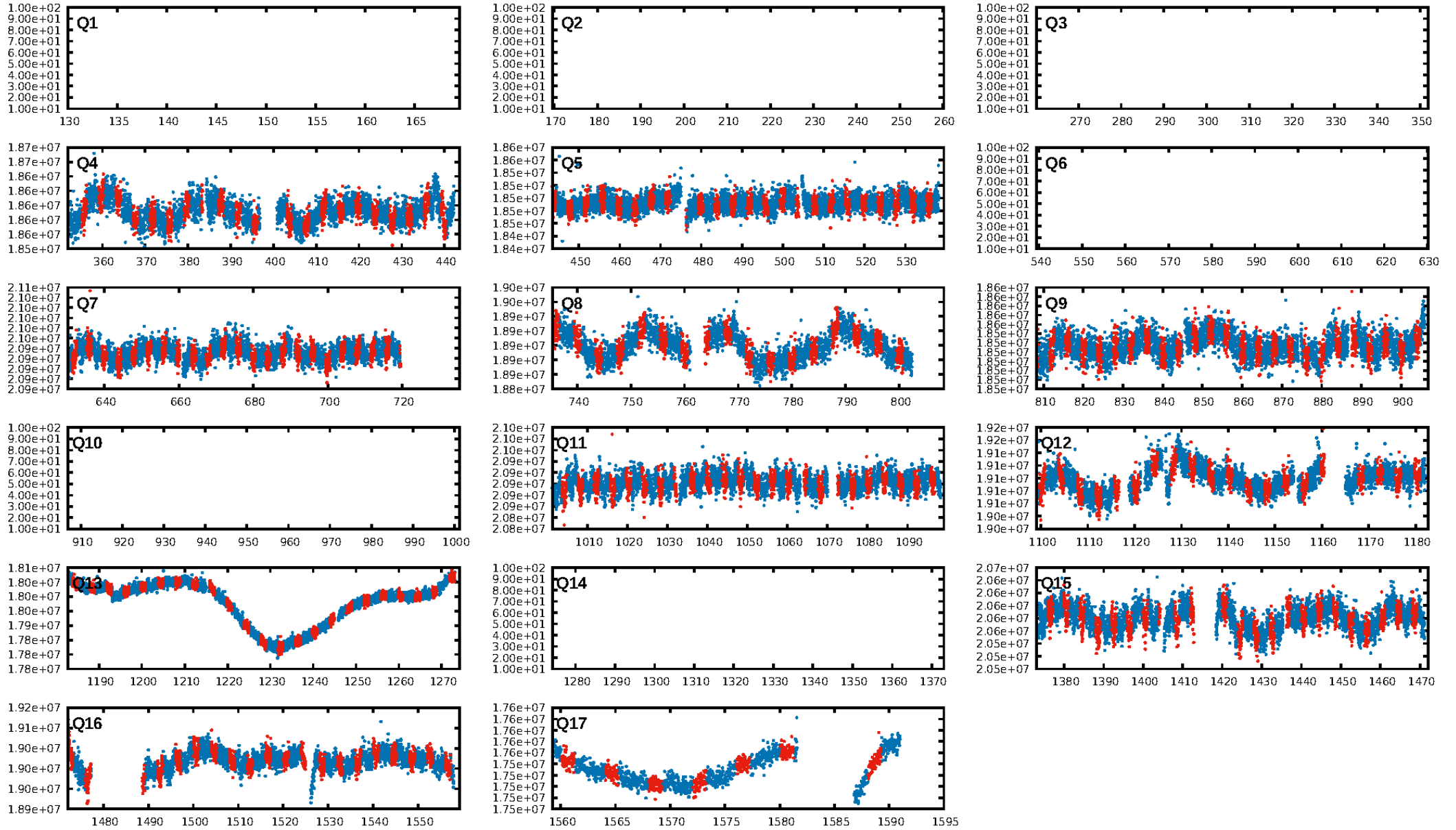
DV Fit Results:

Period = 4.00320 [0.00008] d
Epoch = 135.5130 [0.0139] BKJD
Rp/R* = 0.0102 [0.0070]
a/R* = 1.99 [3.31]
b = 0.55 [2.91]
Seff = 121.62 [22.44]
Teff = 847 [39] K
Rp = 0.80 [0.56] Re
a = 0.0440 [0.0035] AU
Ag = 171.33 [239.18] [0.71 σ]
Teffp = 4737 [1656] K [2.35 σ]

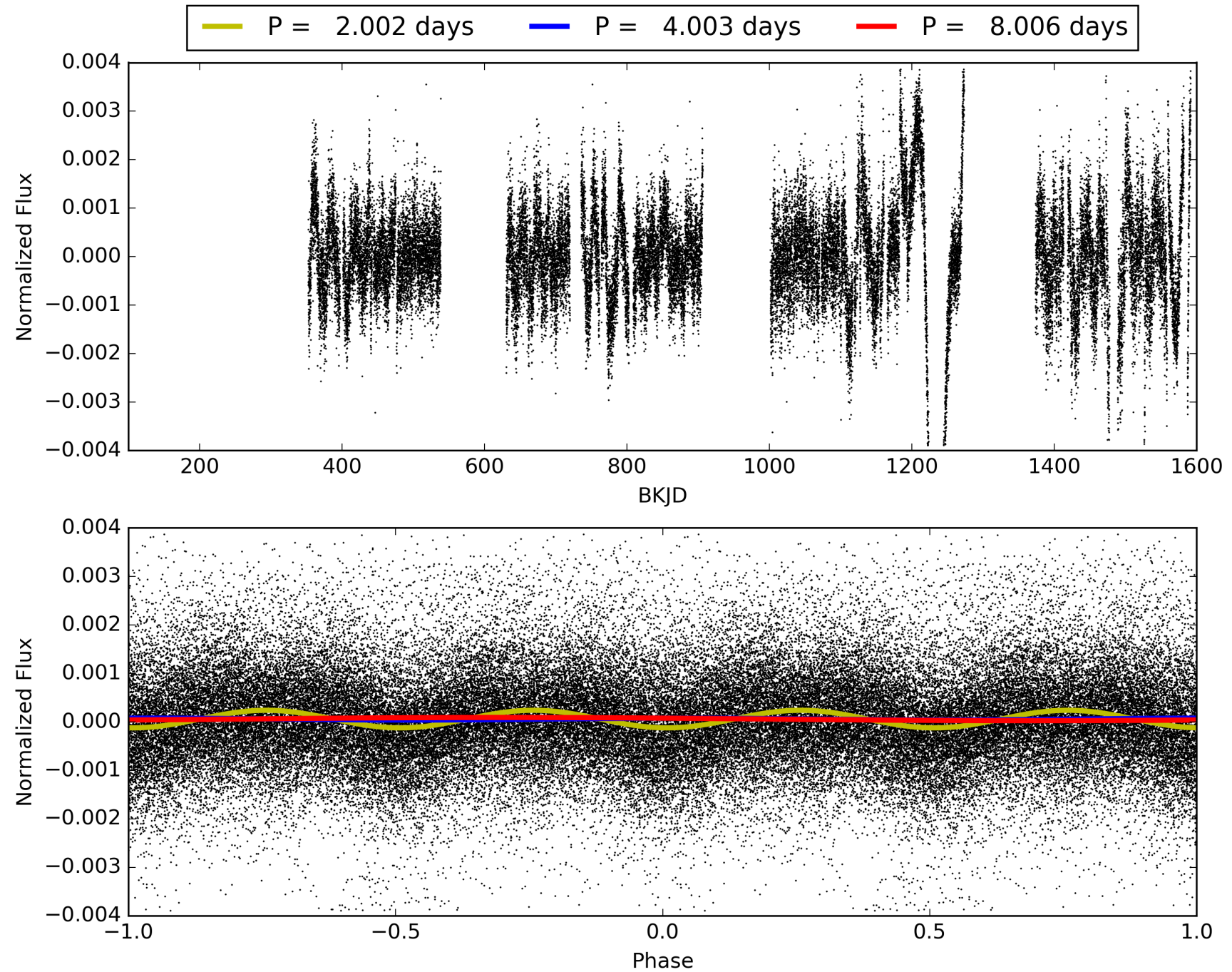
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.32e-12
RollingBand-fgm: 0.99 [212/215]
GhostDiagnostic-chr: -0.8132
Centroid-sig: 0.6%
Centroid-so: 5.907 arcsec [11.09 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [11/11]

TCE 004175741-01, PDC Light Curves

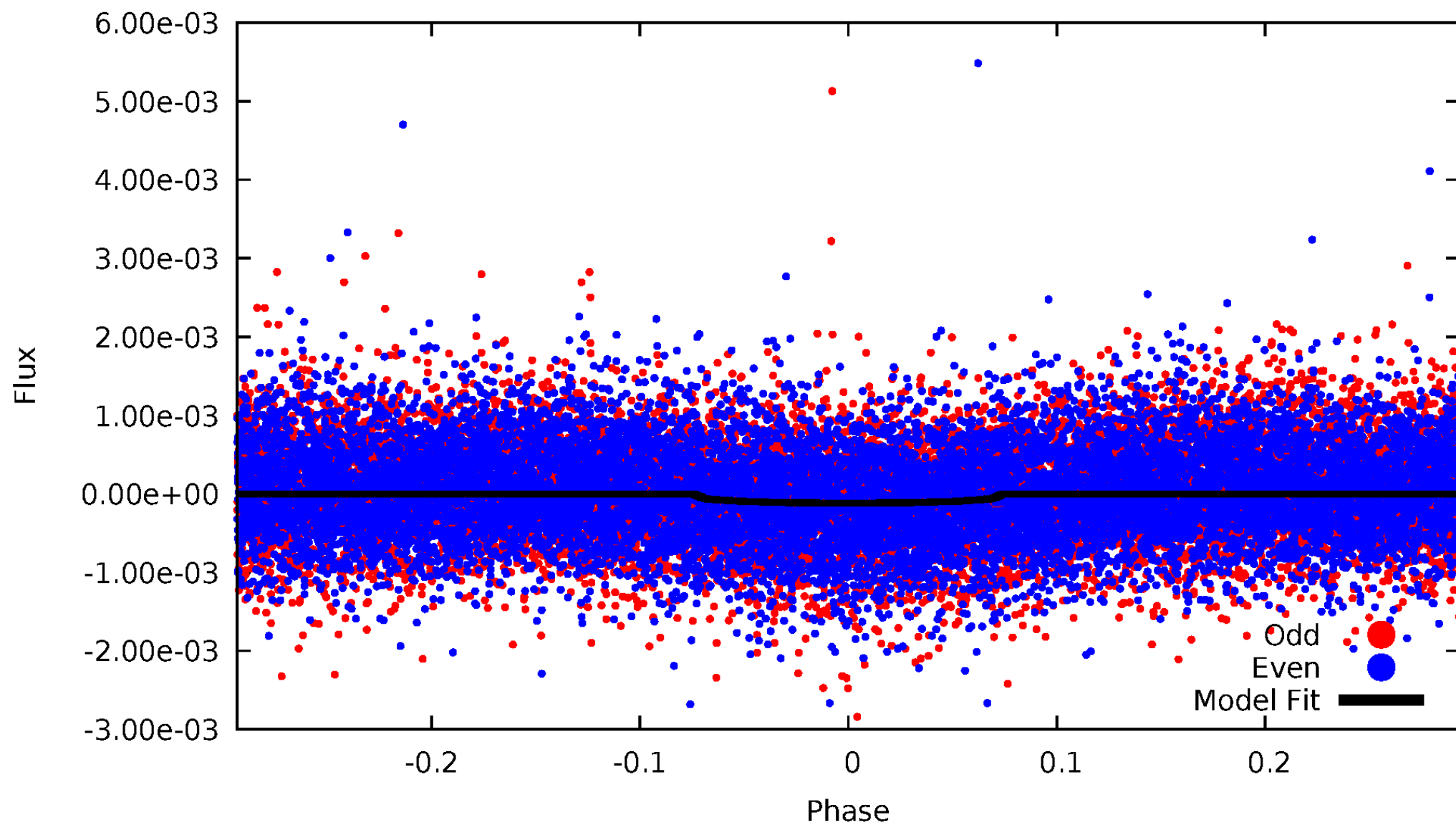


TCE 004175741-01



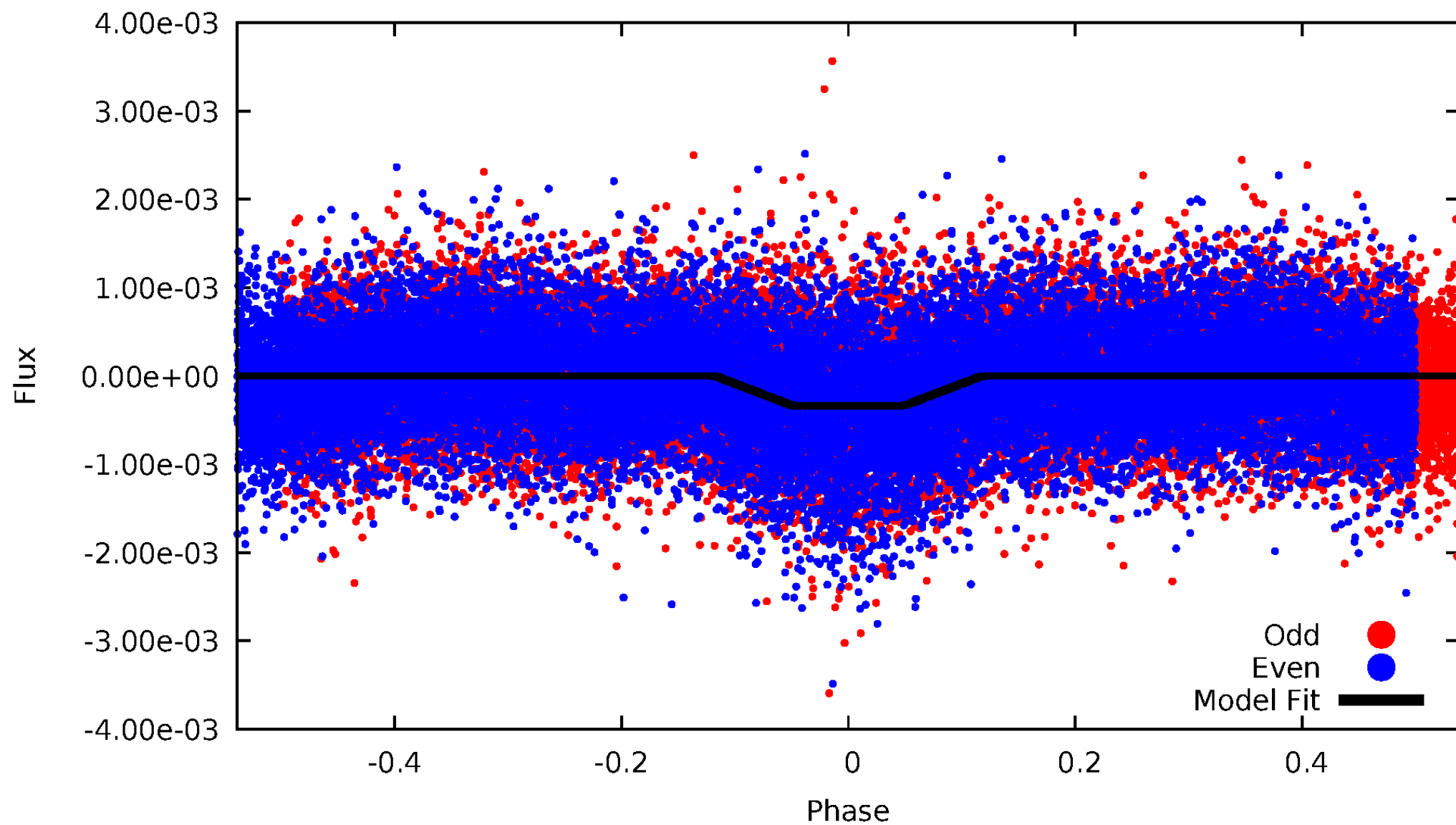
DV Odd/Even

TCE 004175741-01



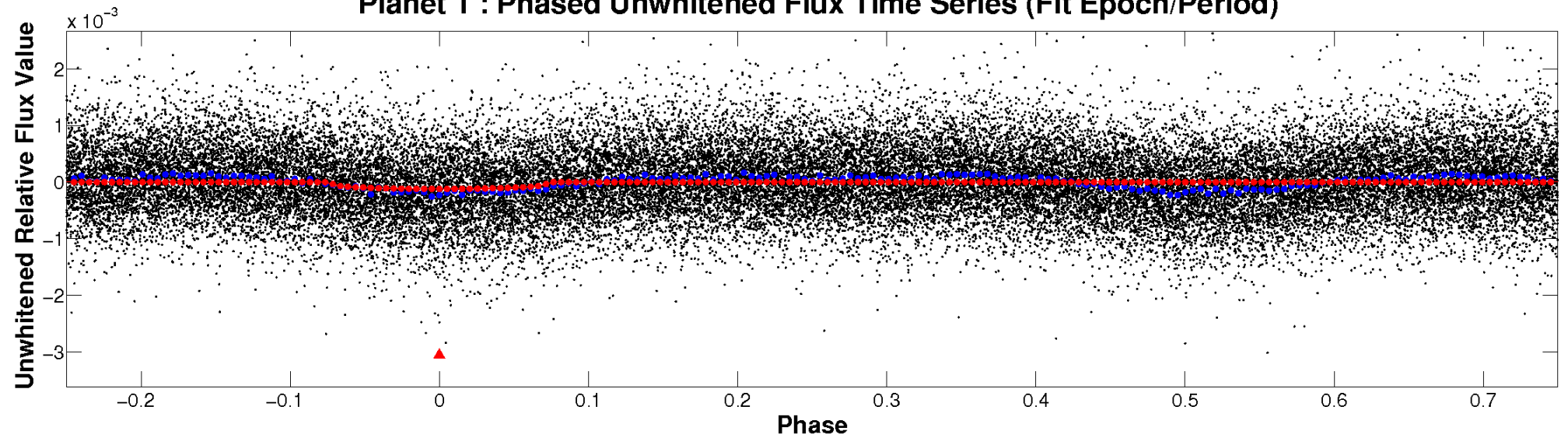
ALT Odd/Even

TCE 004175741-01

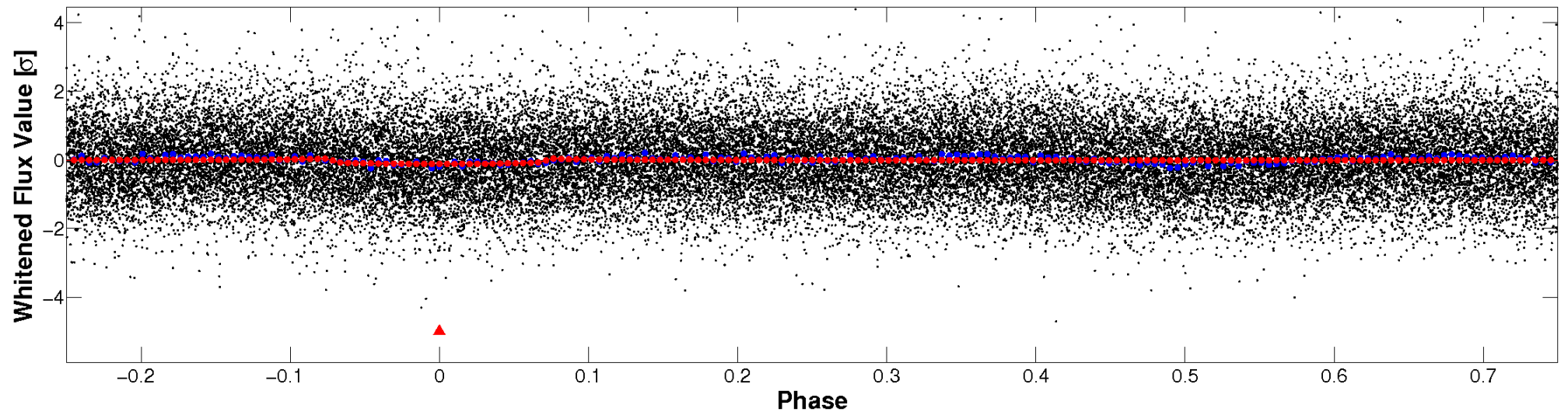


Non-Whitened Vs. Whitened Light Curve

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

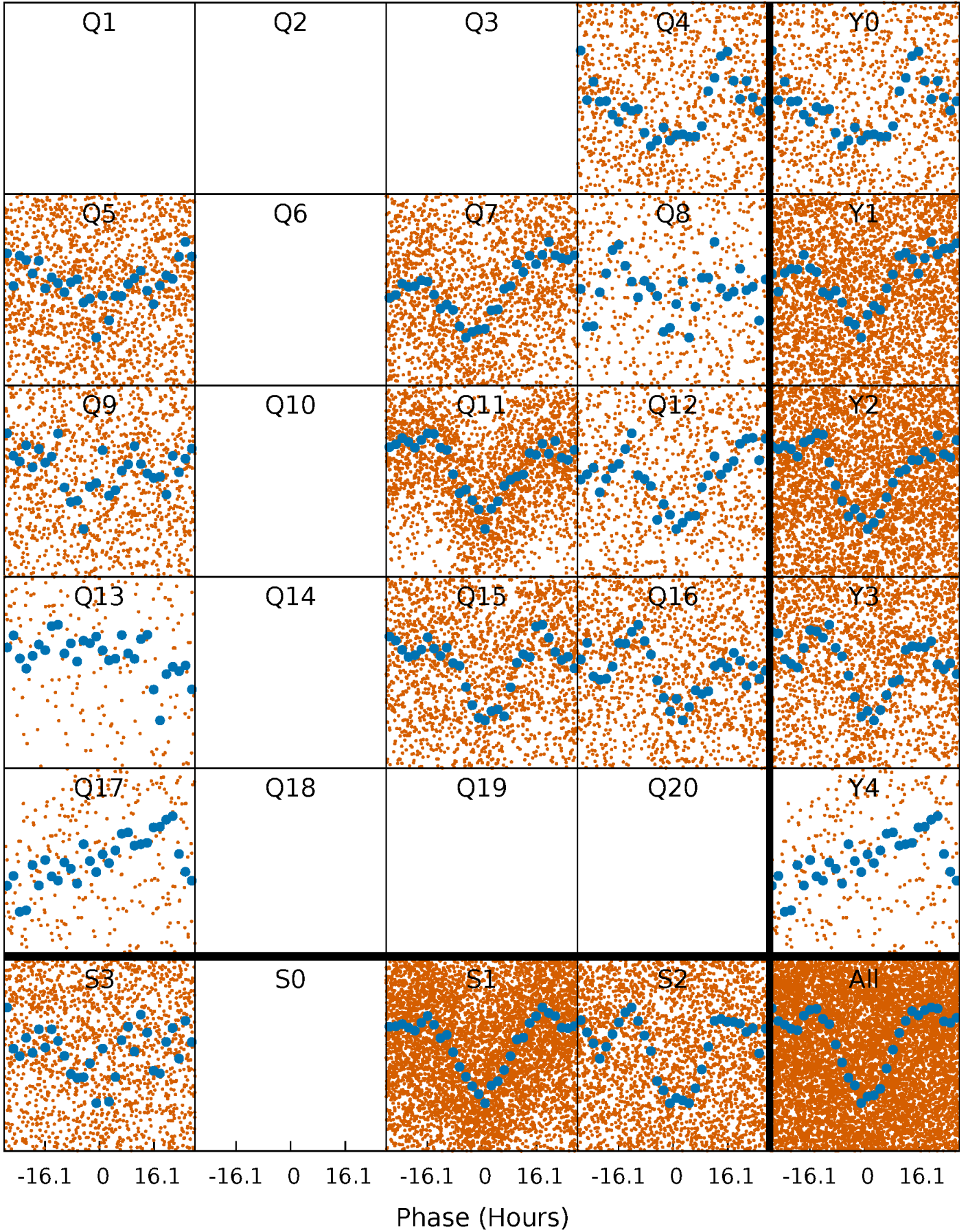


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



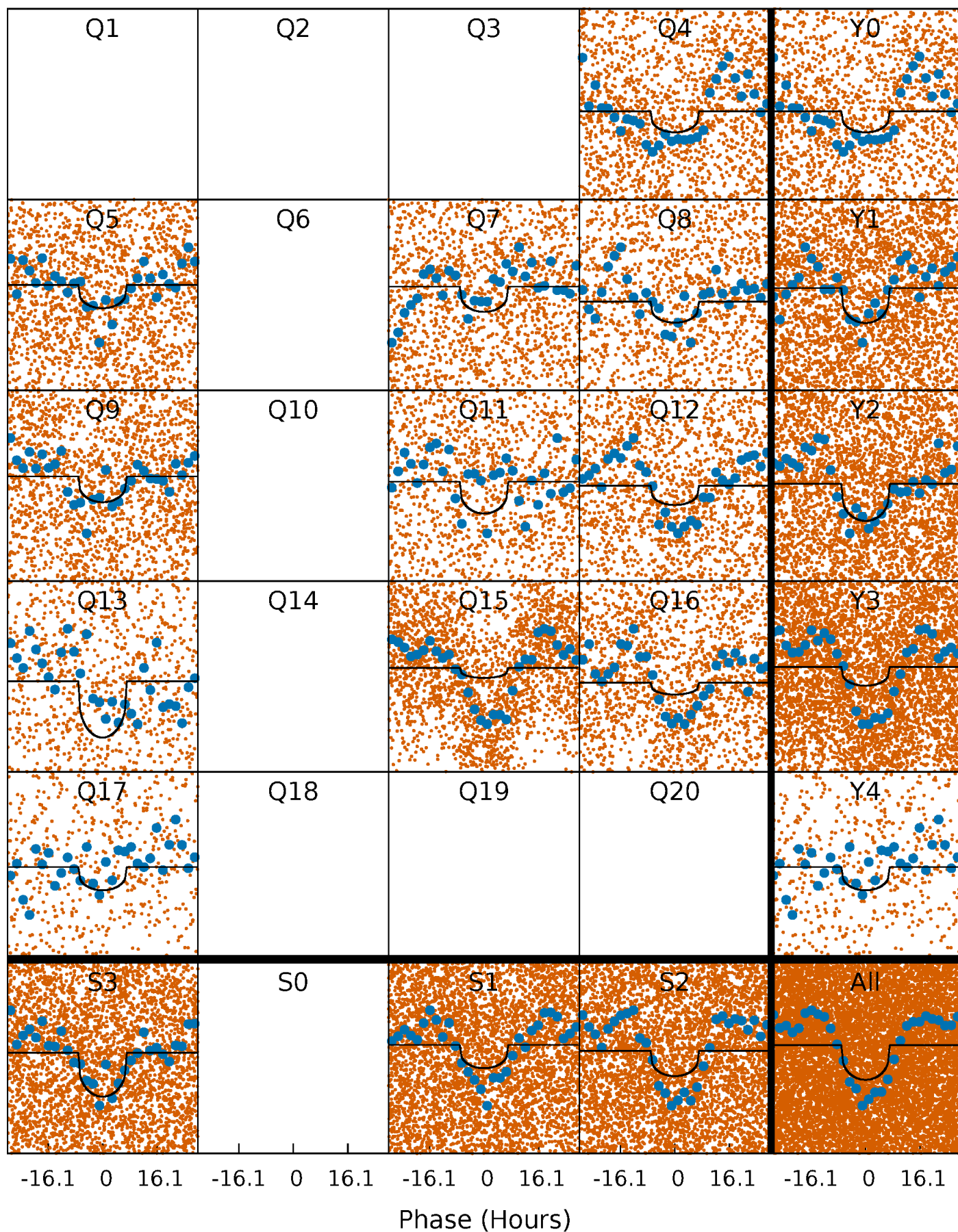
PDC Quarter-Phased Transit Curves

TCE 004175741-01 P= 4.003202 Days $T_0=135.512978$ (BKJD)



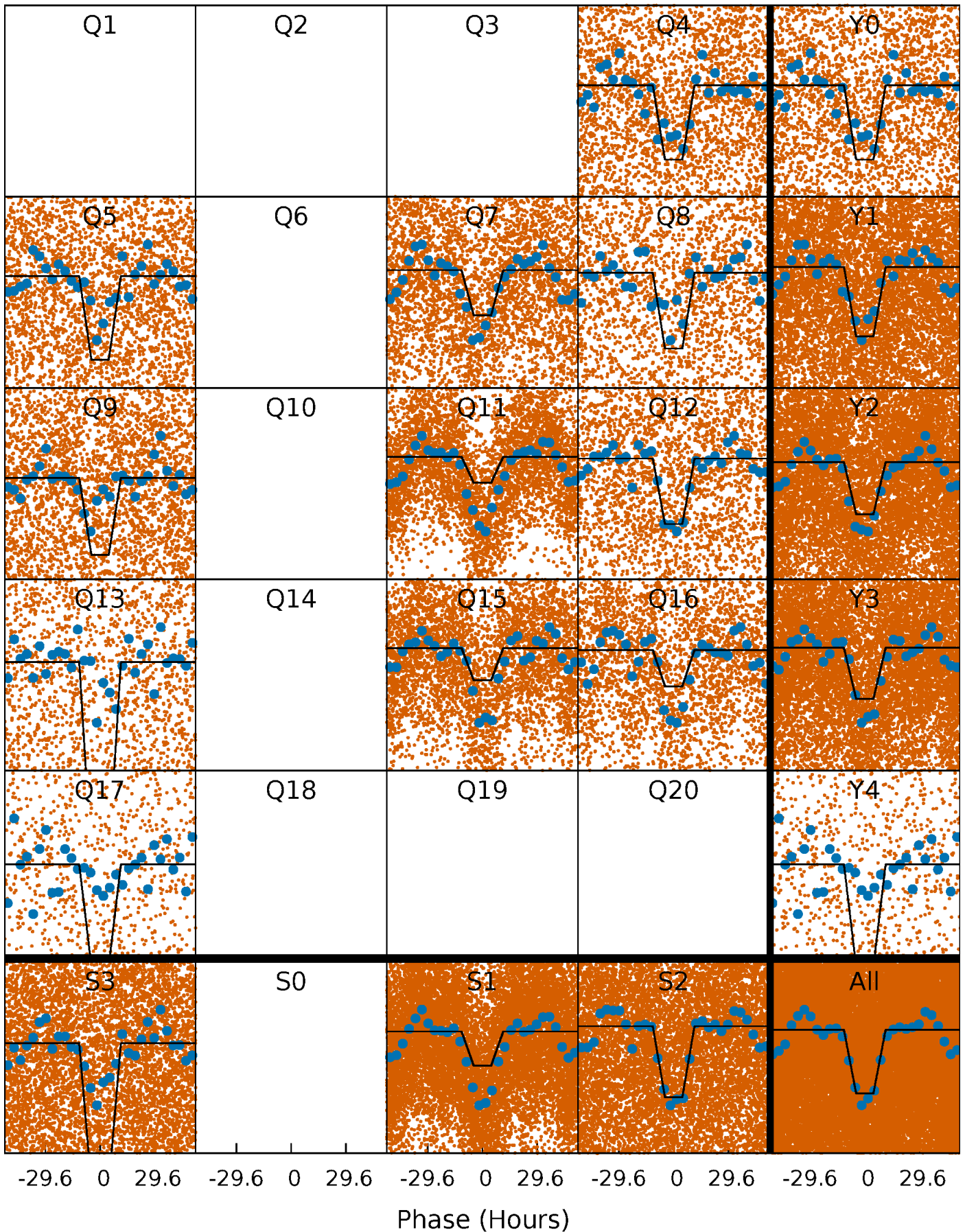
DV Quarter-Phased Transit Curves

TCE 004175741-01 P= 4.003202 Days $T_0=135.512978$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

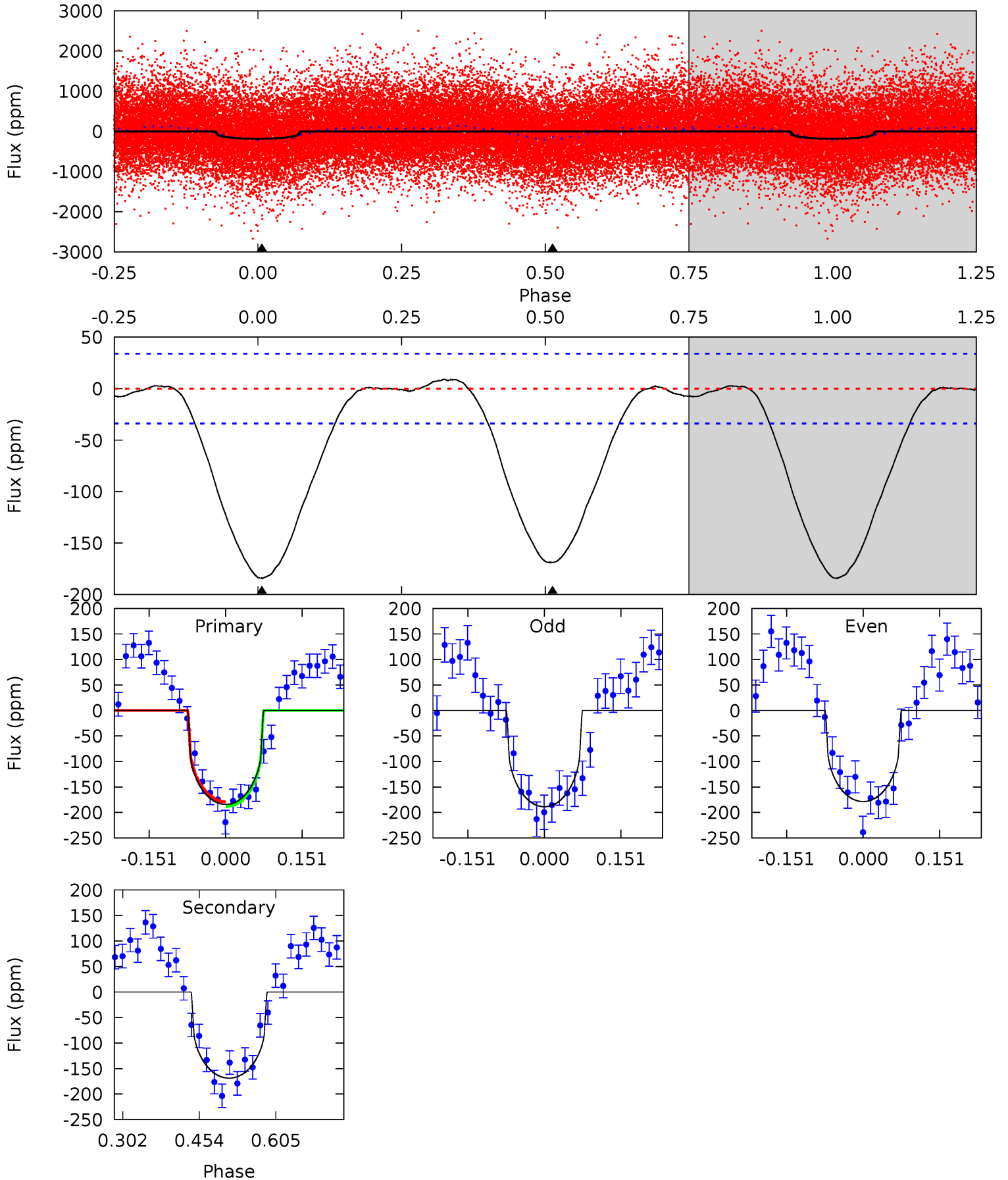
TCE 004175741-01 P= 4.003320 Days $T_0=135.506011$ (BKJD)



DV Model-Shift Uniqueness Test

004175741-01, P = 4.003202 Days, E = 135.512978 Days

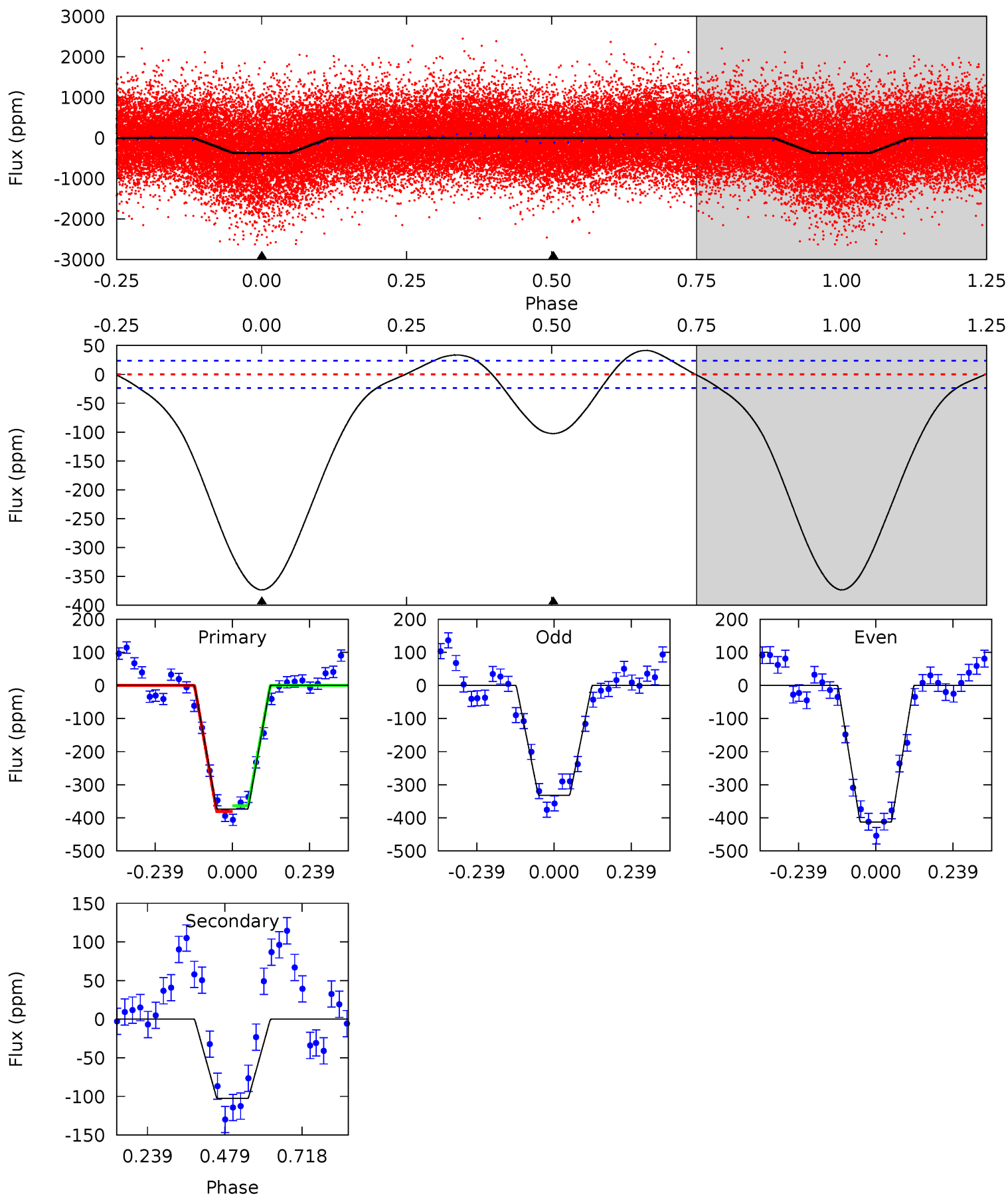
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.4	22.3	0	0	4.48	1.44	0.58	24.4	24.4	22.3	22.3	0.67	1.33	0.05	0.59



Alt Model-Shift Uniqueness Test

004175741-01, P = 4.003320 Days, E = 135.506011 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
68.9	18.9	0	0	4.38	1.18	1.45	68.9	68.9	18.9	18.9	7.45	1.14	0.10	1.66



Stellar Parameters For KIC 004175741

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4733^{+170}_{-170}	$4.569^{+0.063}_{-0.032}$	$-0.060^{+0.300}_{-0.300}$	$0.723^{+0.050}_{-0.069}$	$0.706^{+0.079}_{-0.058}$	$2.632^{+0.713}_{-0.319}$
	+4%/-4%	+1%/-1%	+500%/-500%	+7%/-10%	+11%/-8%	+27%/-12%
Source	KIC0	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 004175741-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-169 ± 8	$0.88^{+0.51}_{-0.49}$	1177^{+46}_{-48}	5057^{+2411}_{-896}	239^{+944}_{-145}
Alt.	-103 ± 5	$1.40^{+0.56}_{-0.57}$	1177^{+47}_{-48}	3852^{+809}_{-438}	58^{+101}_{-29}

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

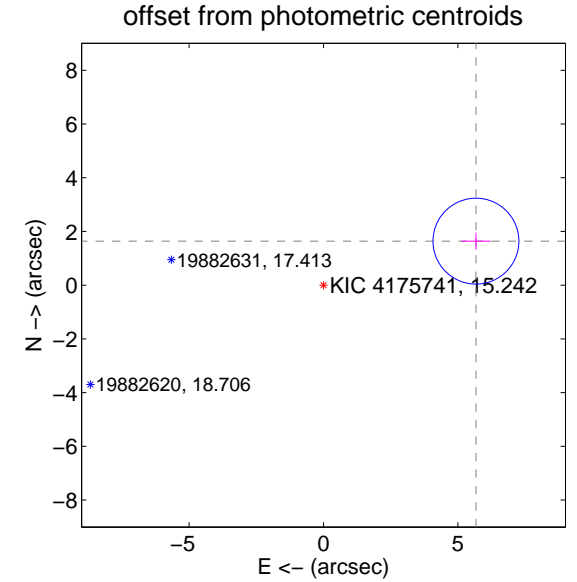
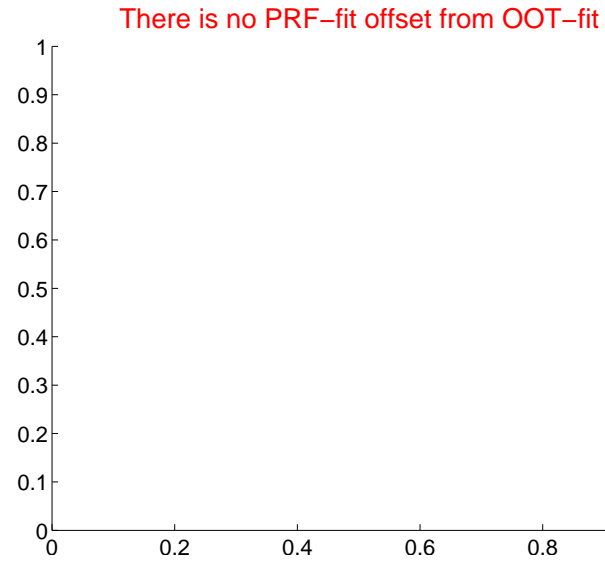
DV Centroid Data

Supplemental centroid analysis for 004175741-01. Kepler magnitude: 15.24. Transit SNR 7.79

There are 0 quarters with good PRF difference image offsets

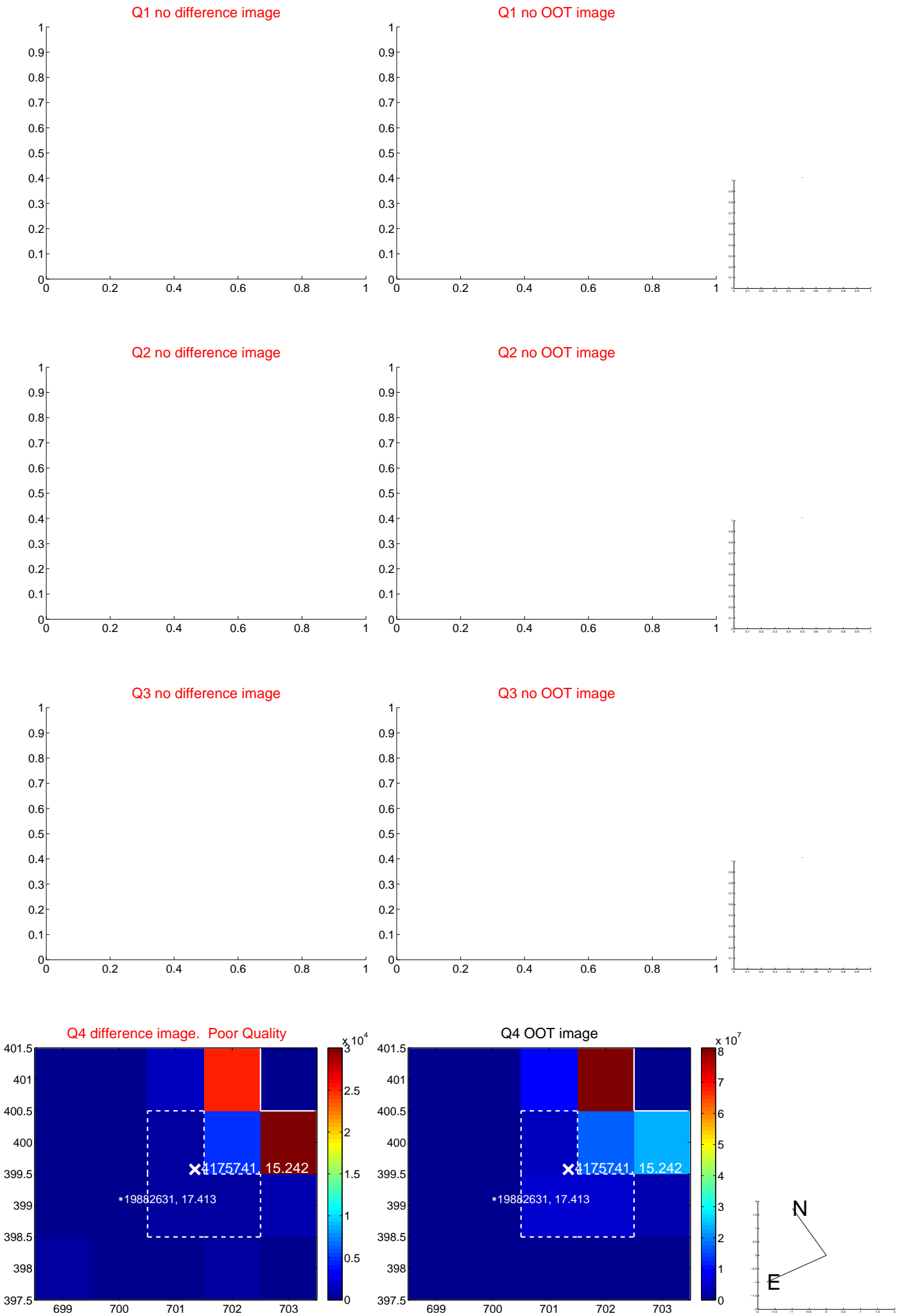
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	5.91 ± 0.53	11.09	-5.67 ± 0.55	1.64 ± 0.32

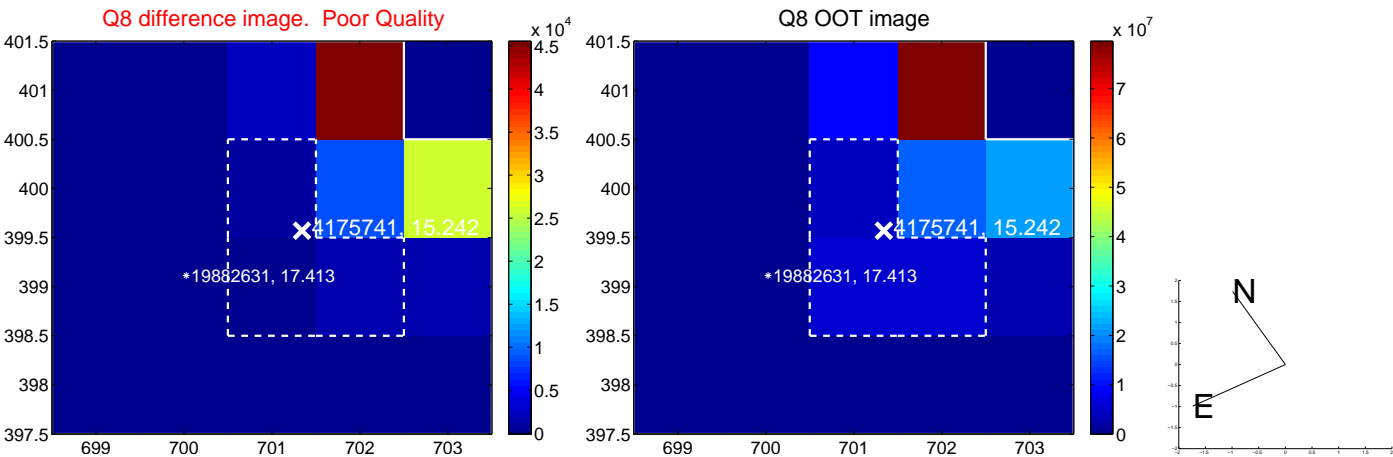
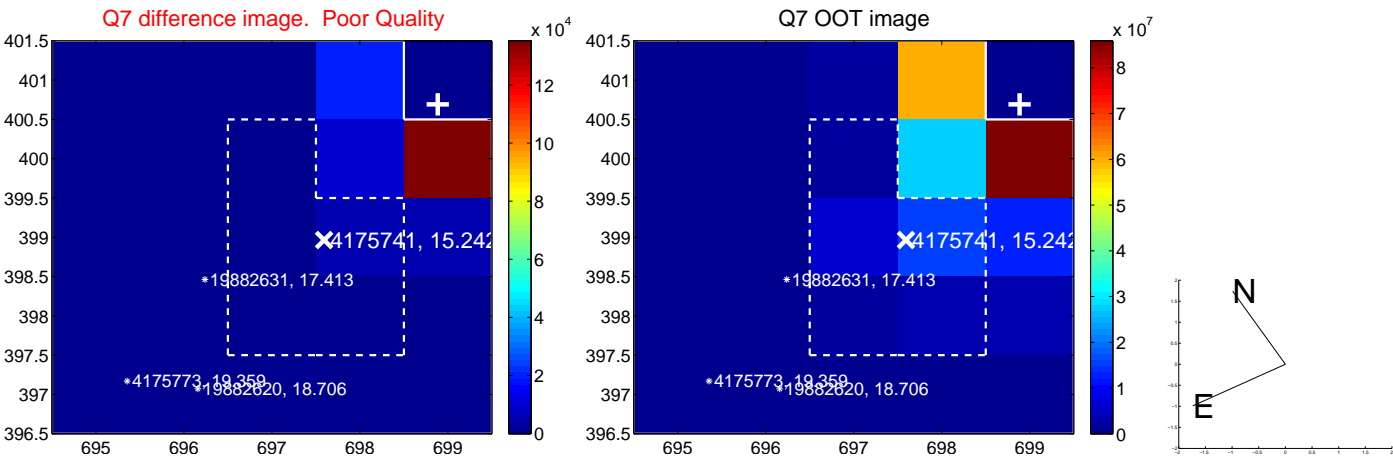
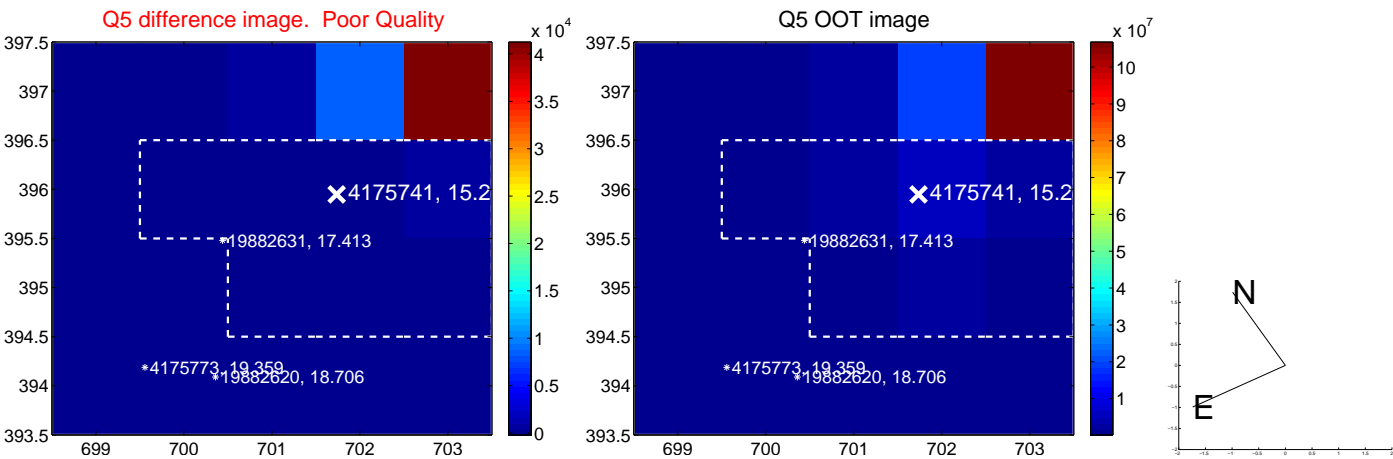


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

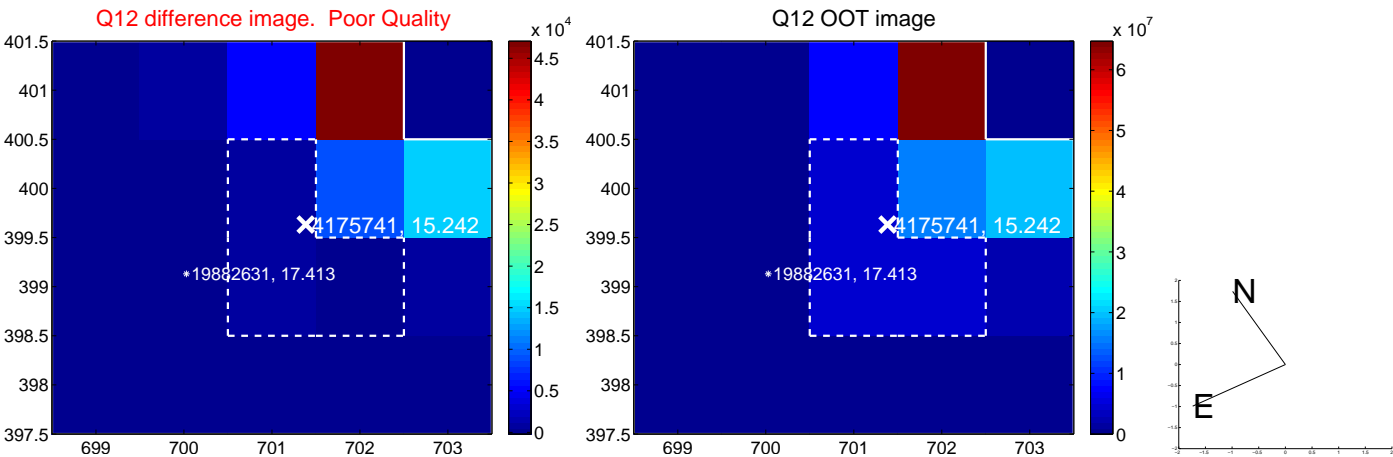
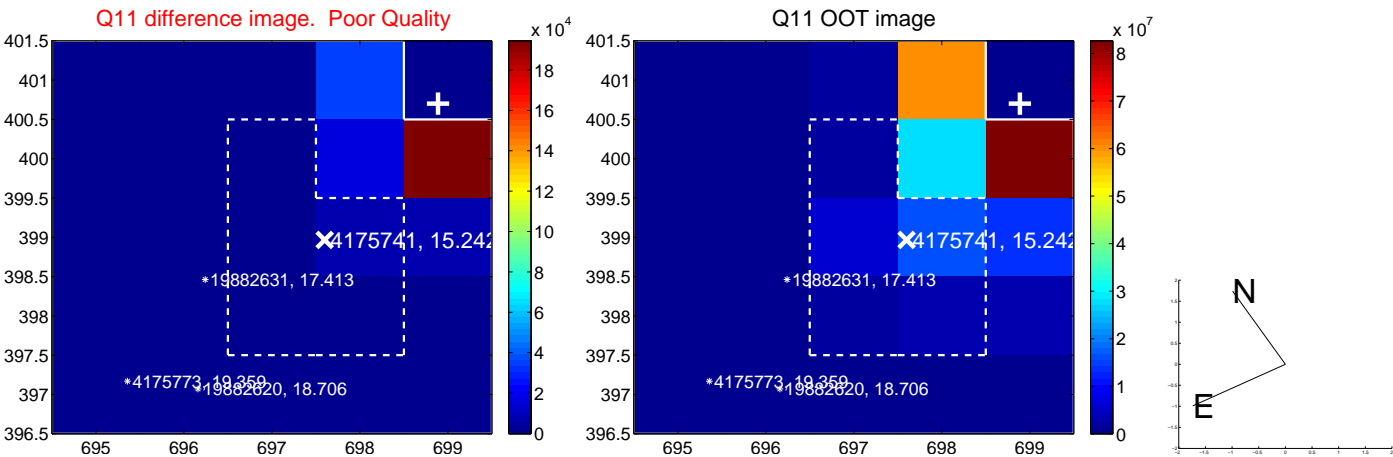
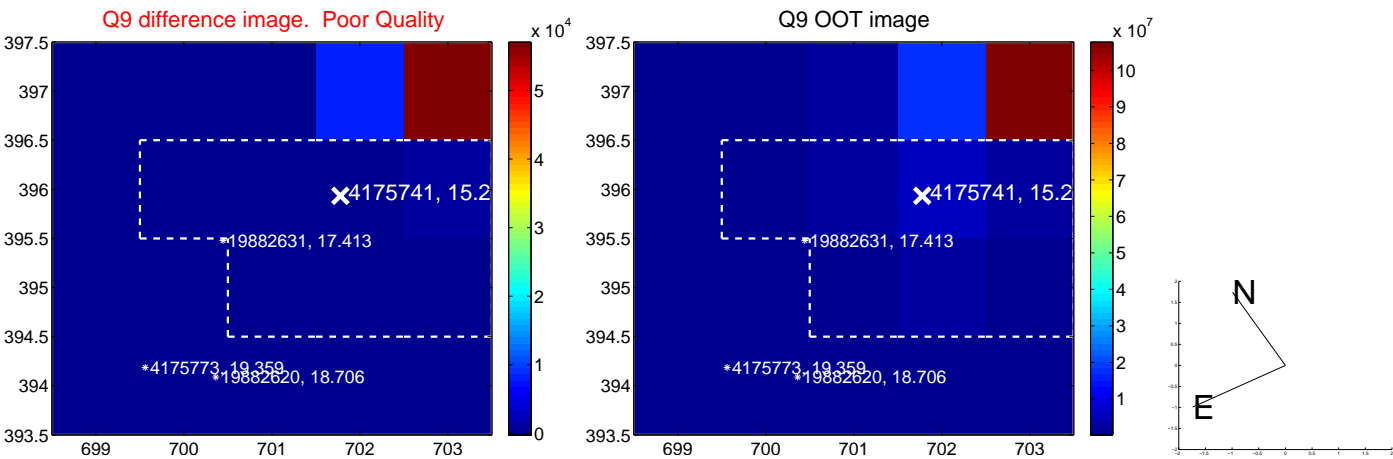
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



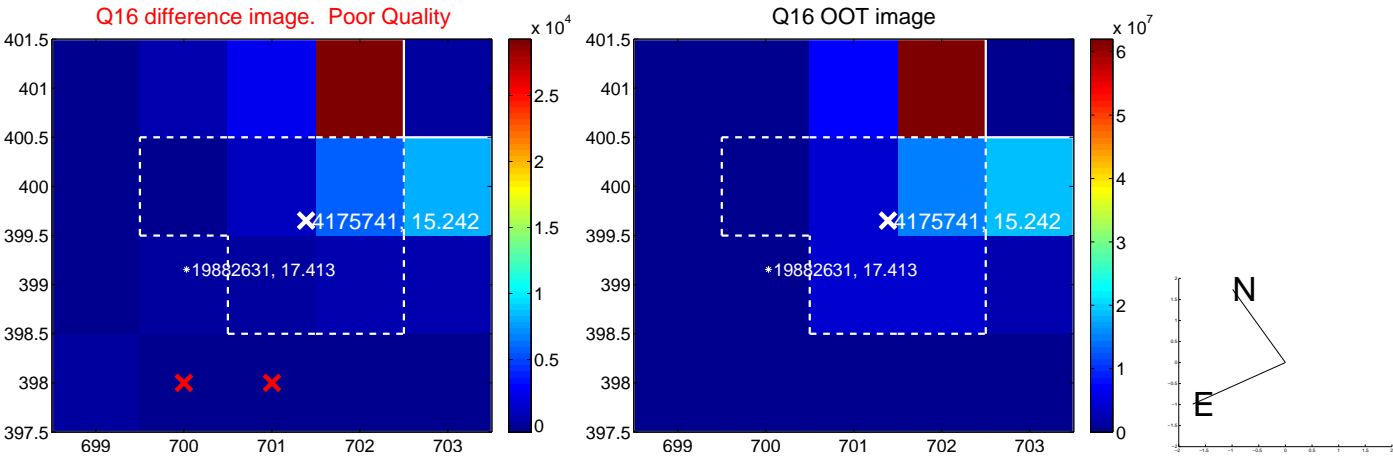
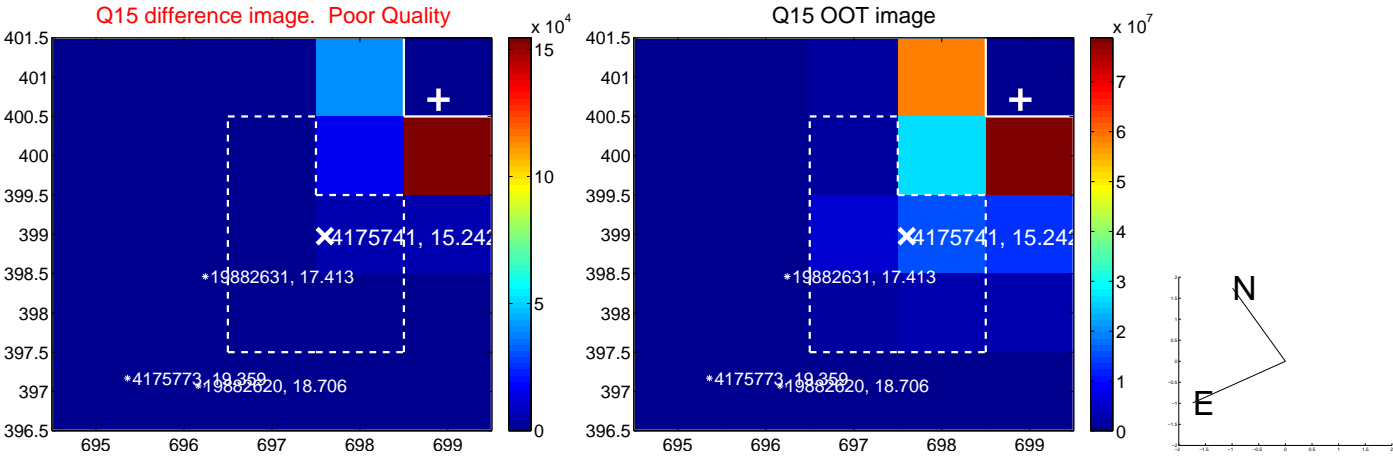
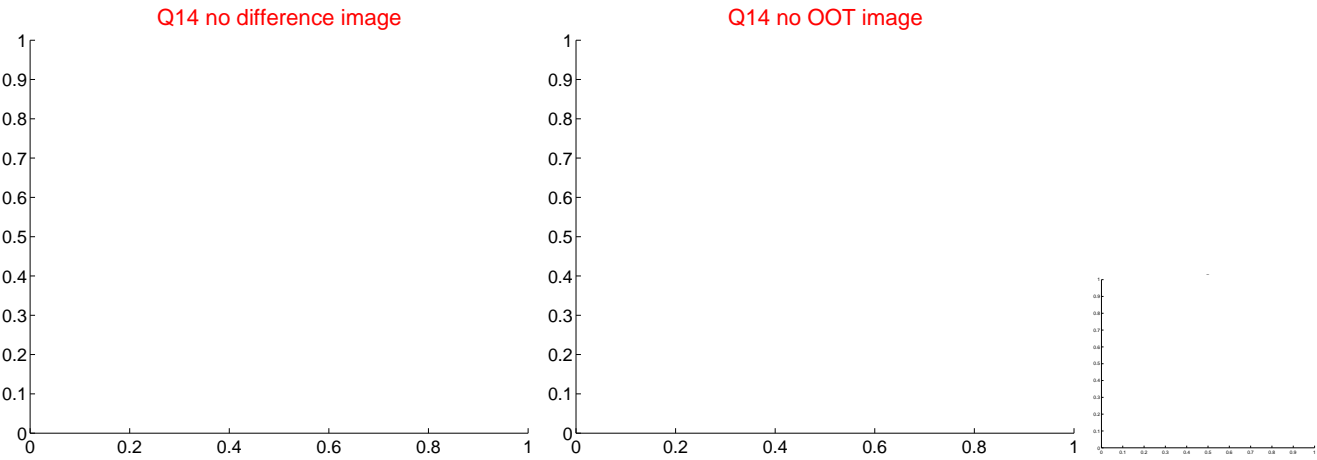
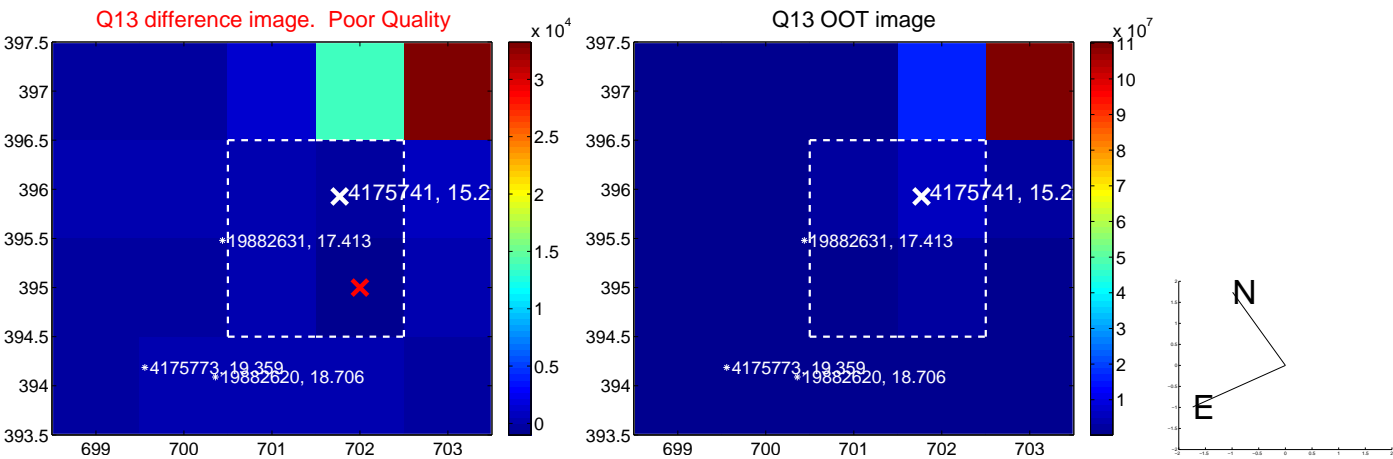
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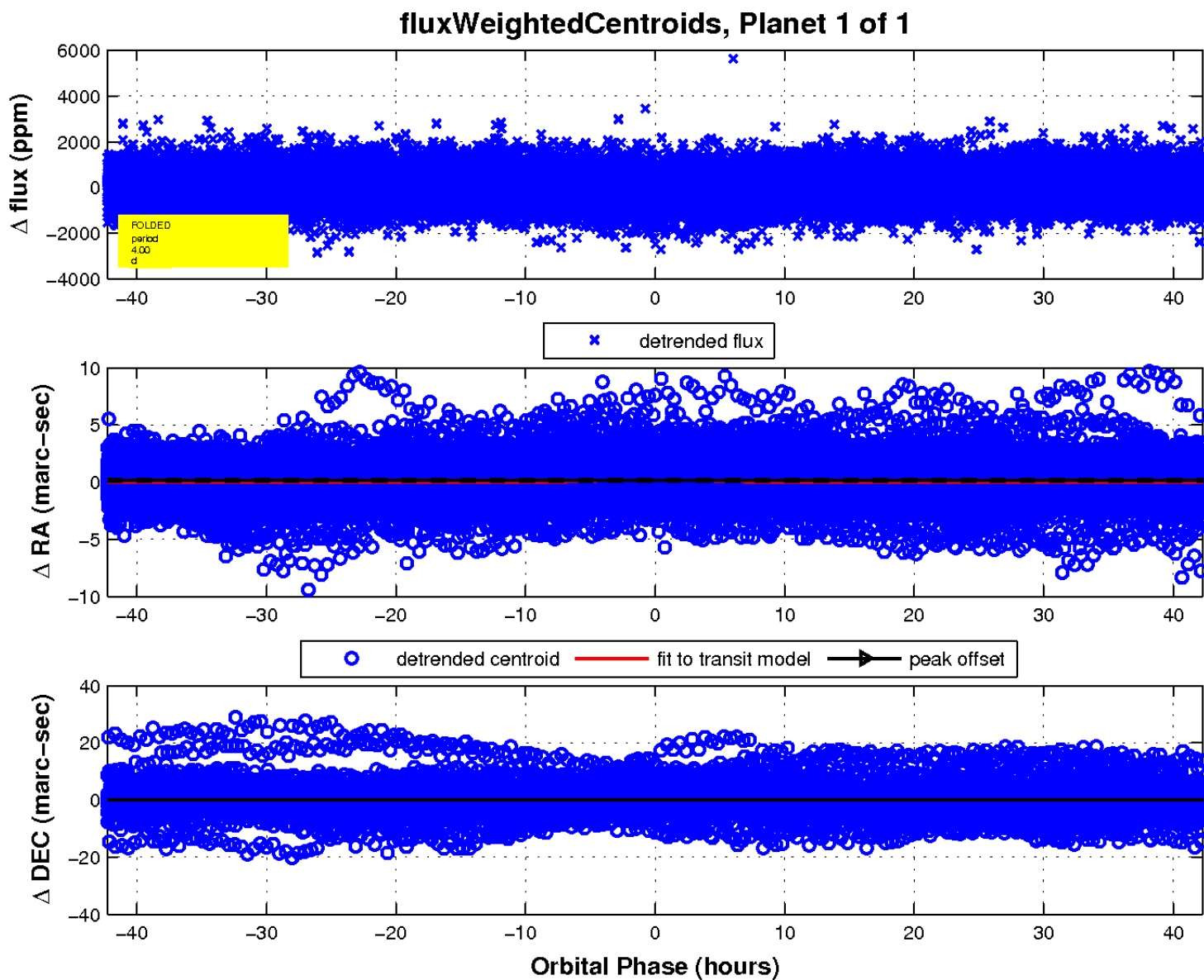
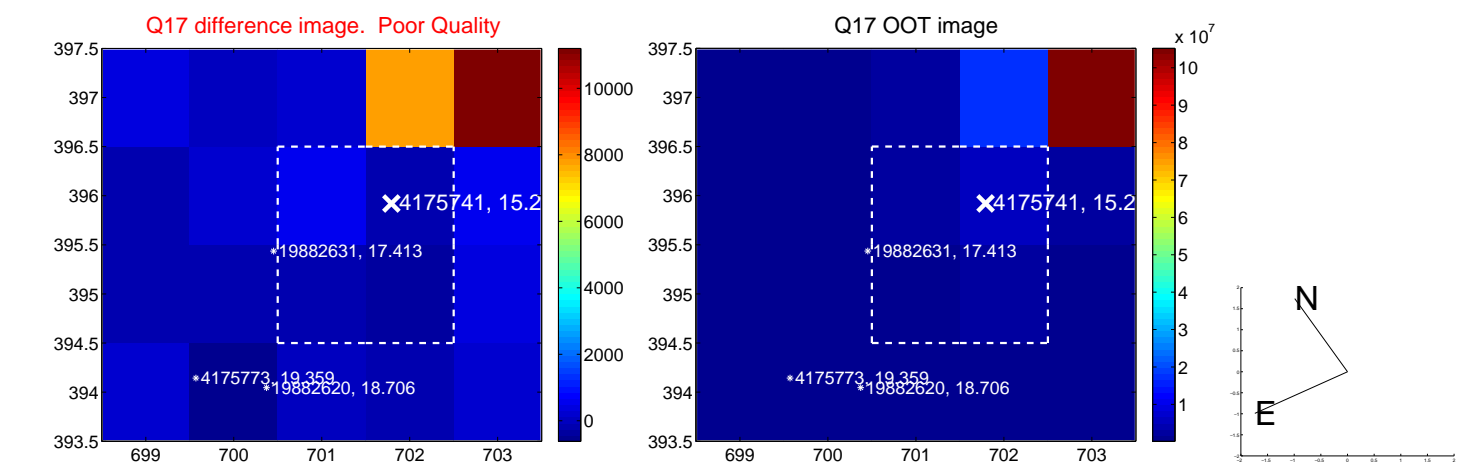
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UKIRT Image

Declination

