

KIC 004070633

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})
004070633-01	OBS	No	0.835159	131.990161	37944.2	2.500	218.0	-1.0	0.68	4257	12.71	586.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004070633-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS

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

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

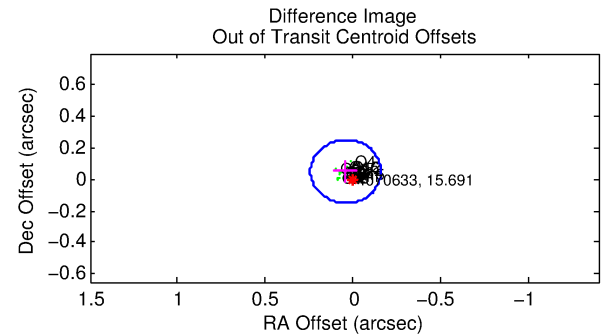
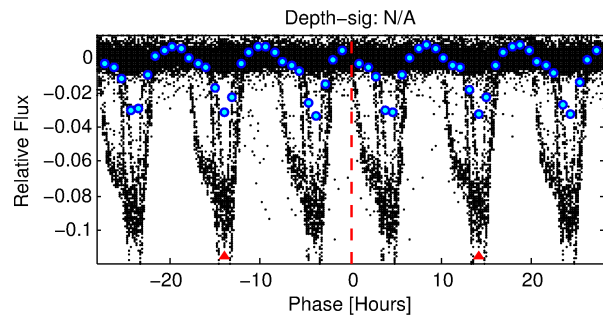
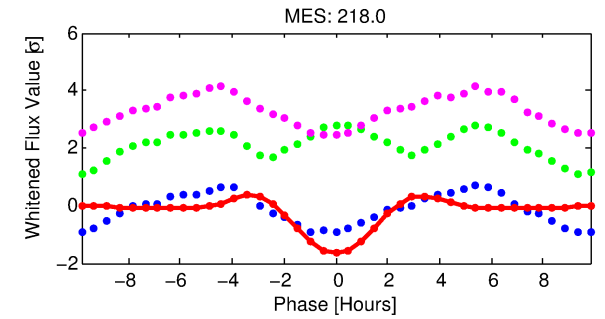
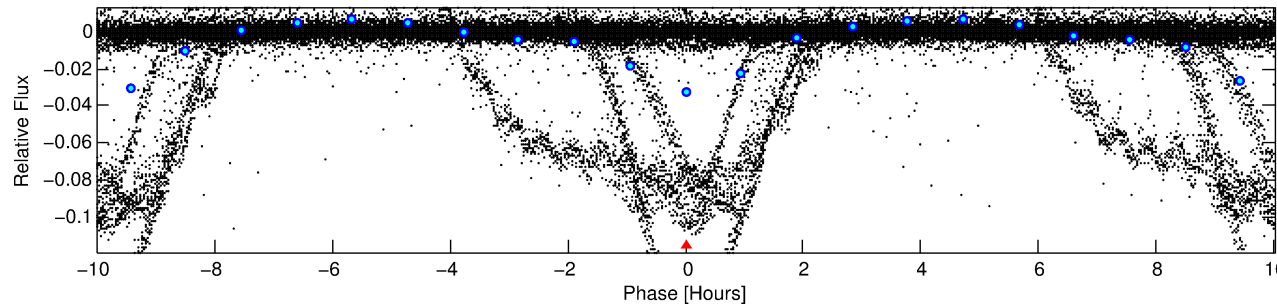
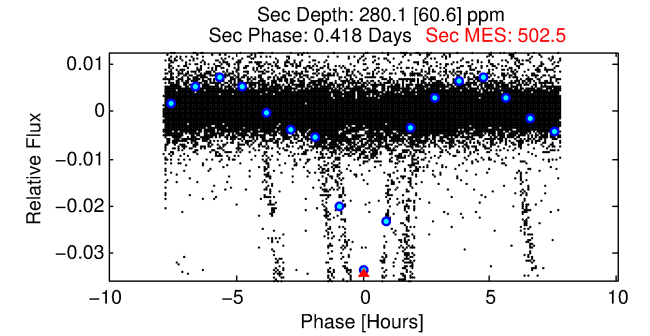
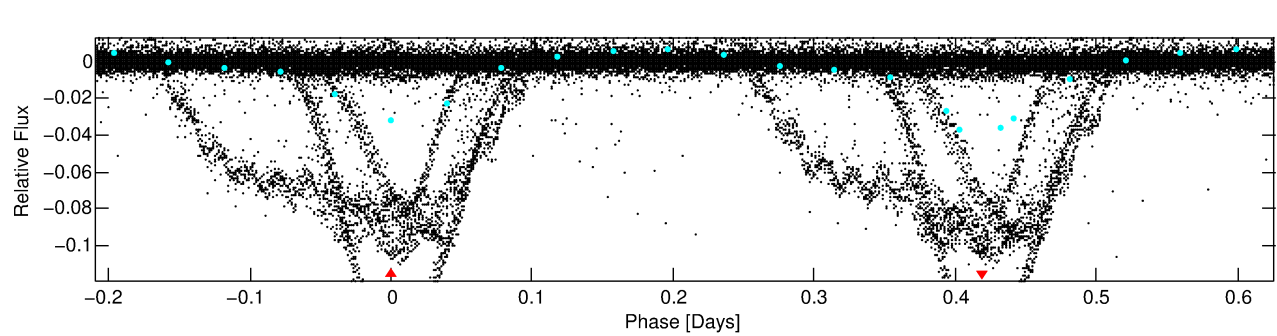
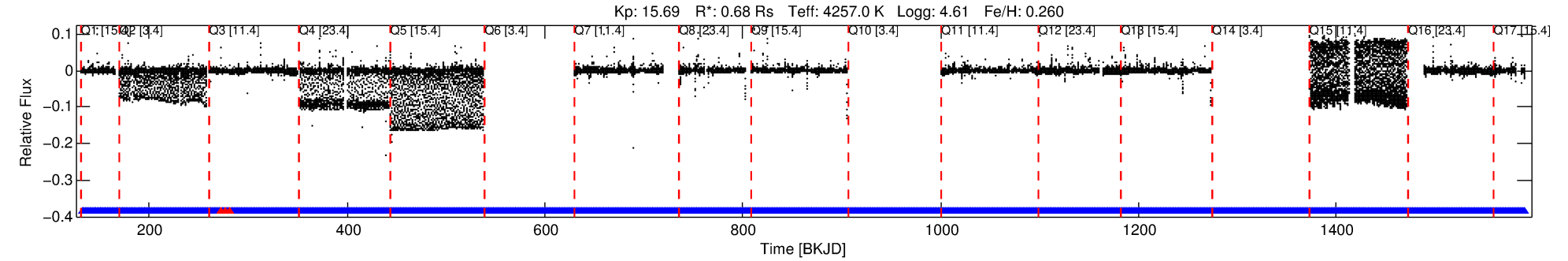
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004070633-01

No Significant Match Found

DV One-Page Summary

KIC: 4070633 Candidate: 1 of 1 Period: 0.835 d



TPS TCE Results:

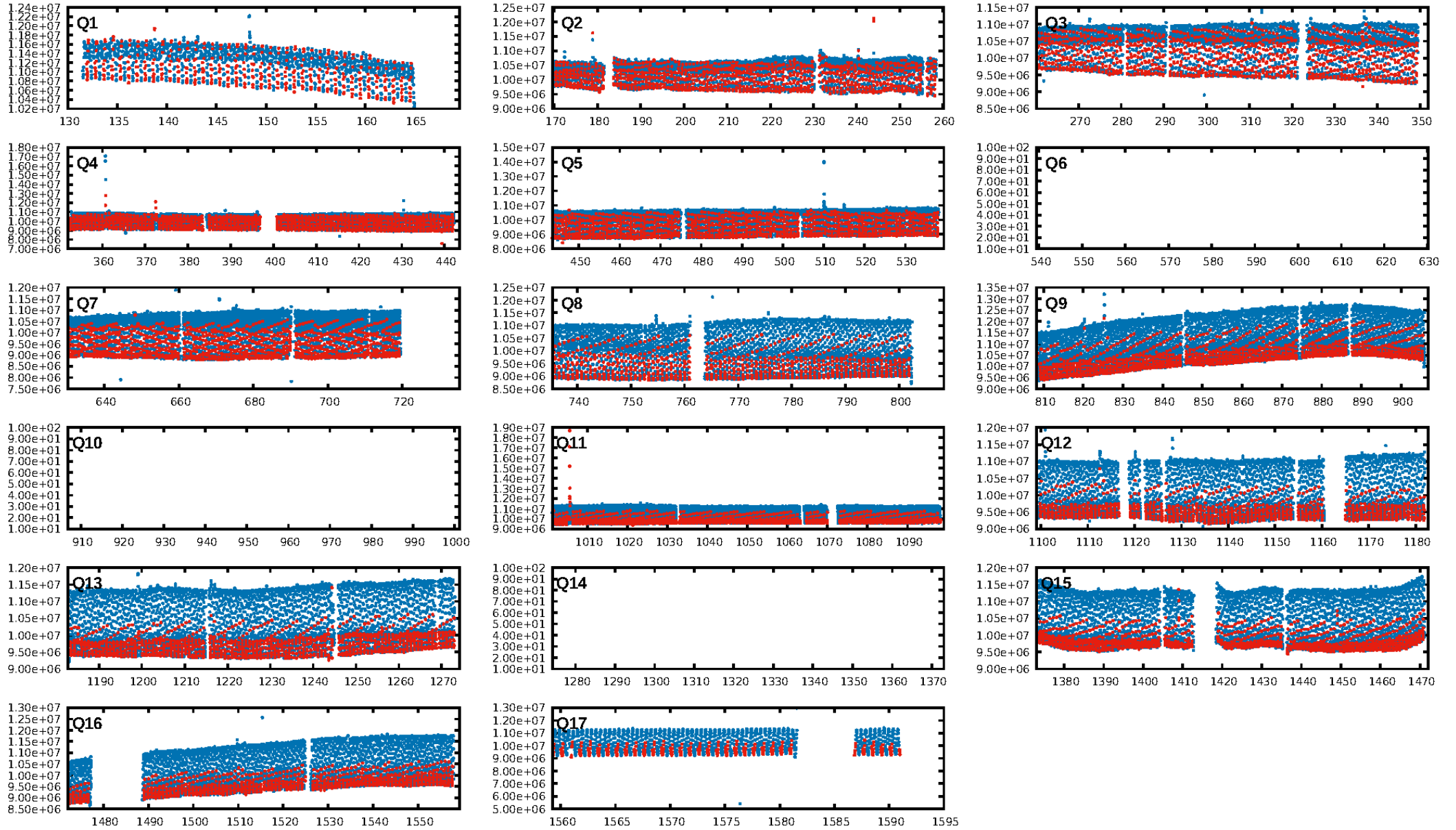
Period = 0.83516 d
Epoch = 131.9902 BKJD

DV fit results are unavailable

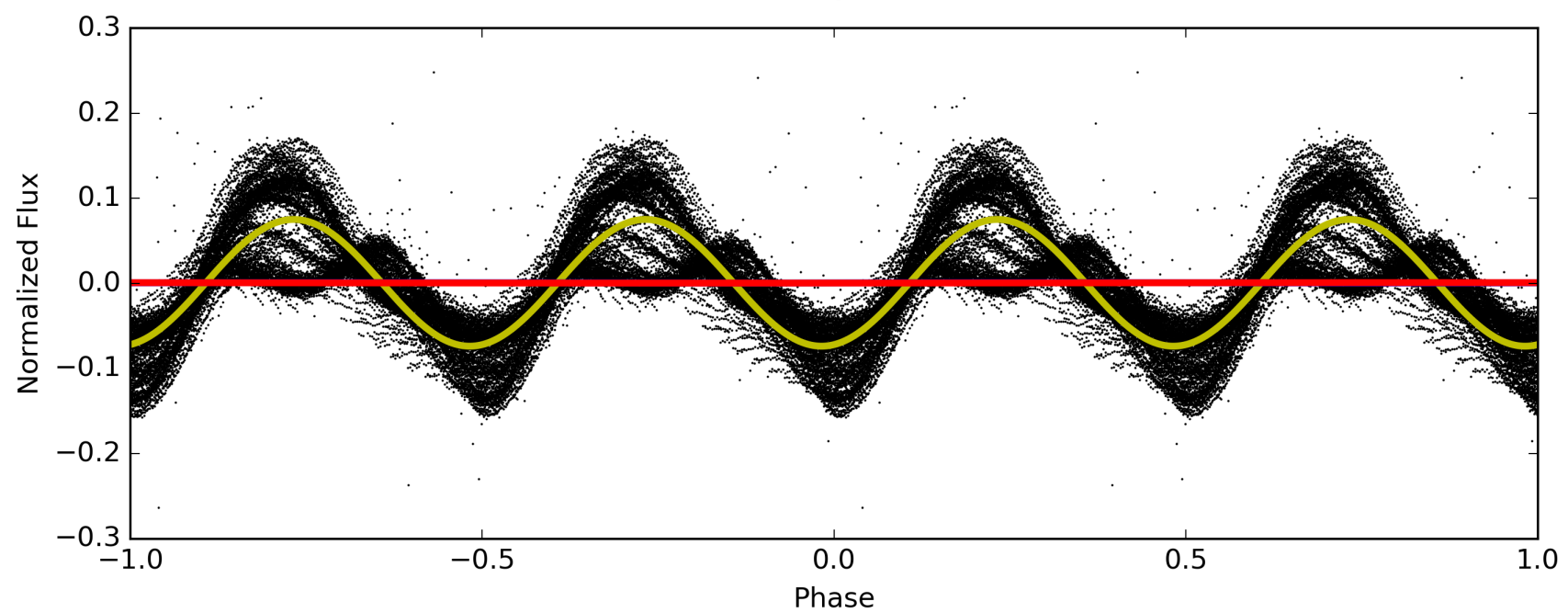
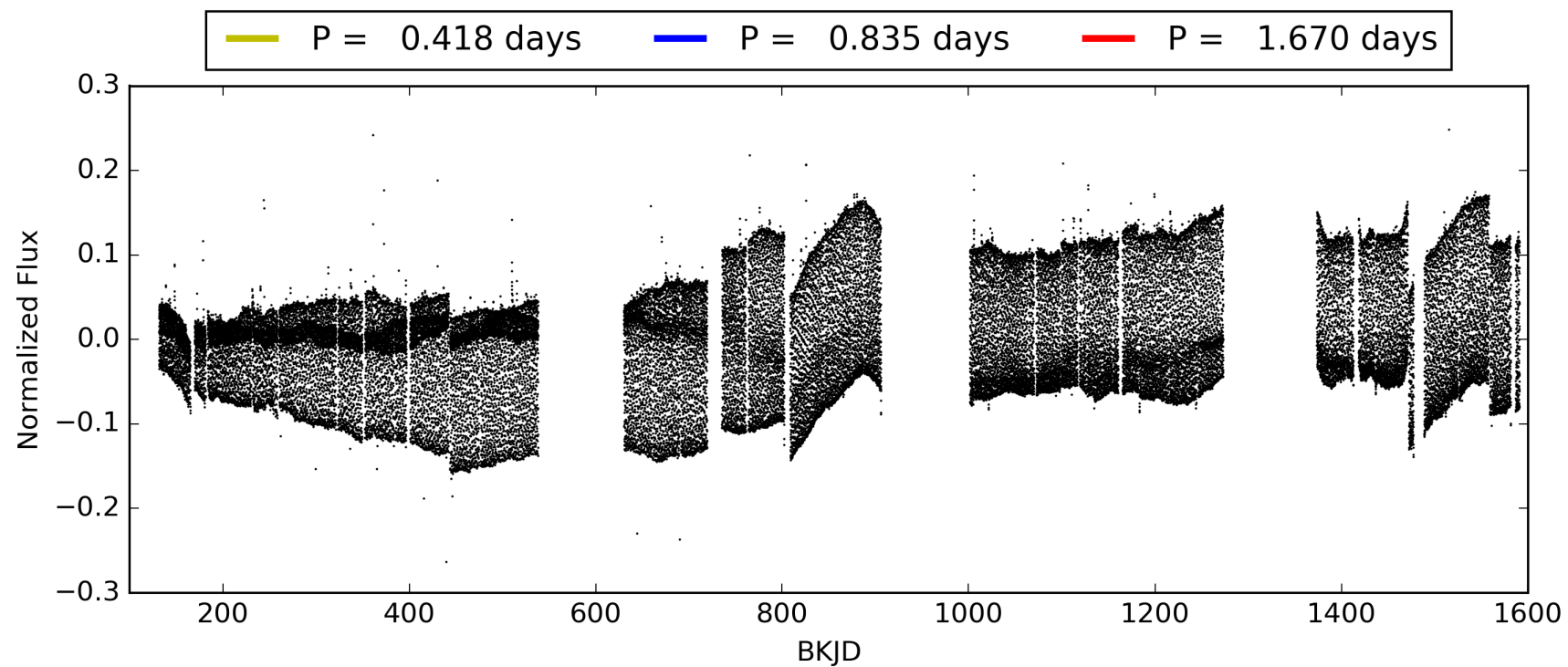
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1209/1213]
GhostDiagnostic-chr: 0.7591
Centroid-sig: N/A
Centroid-so: 0.366 arcsec [213.36σ]
OotOffset-rm: 0.067 arcsec [0.99σ]
KicOffset-rm: 0.102 arcsec [1.46σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004070633-01, PDC Light Curves

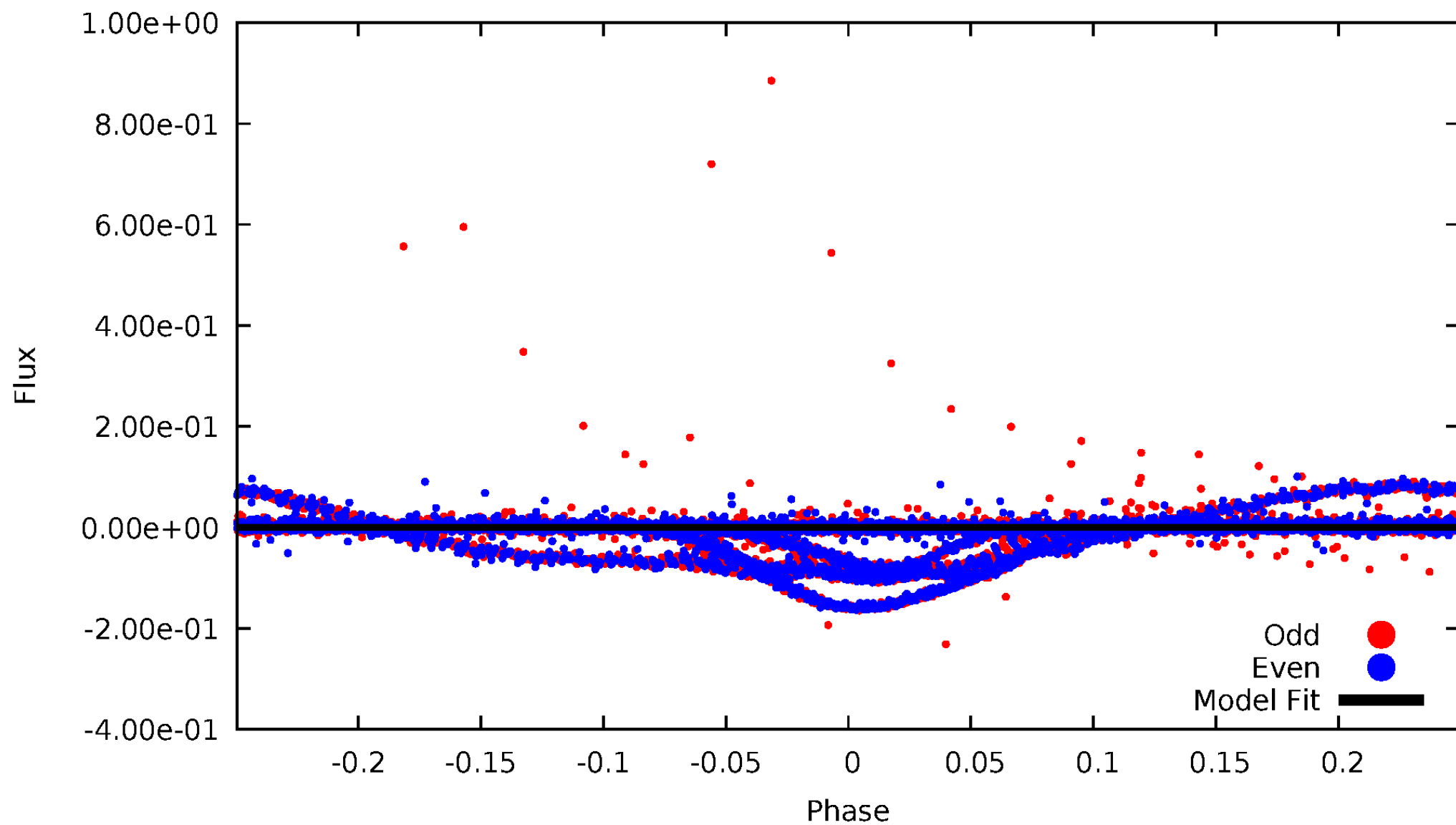


TCE 004070633-01



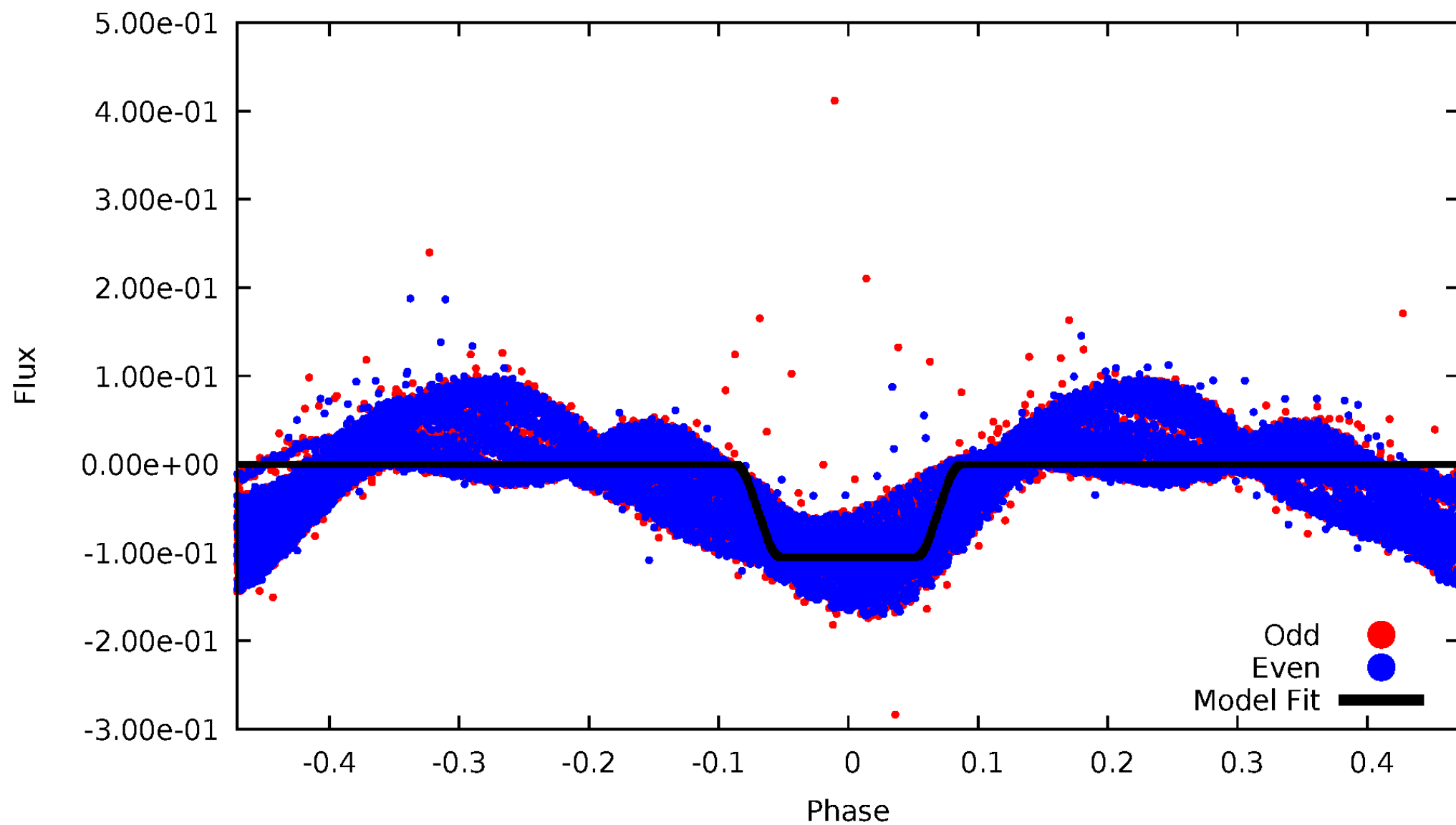
DV Odd/Even

TCE 004070633-01



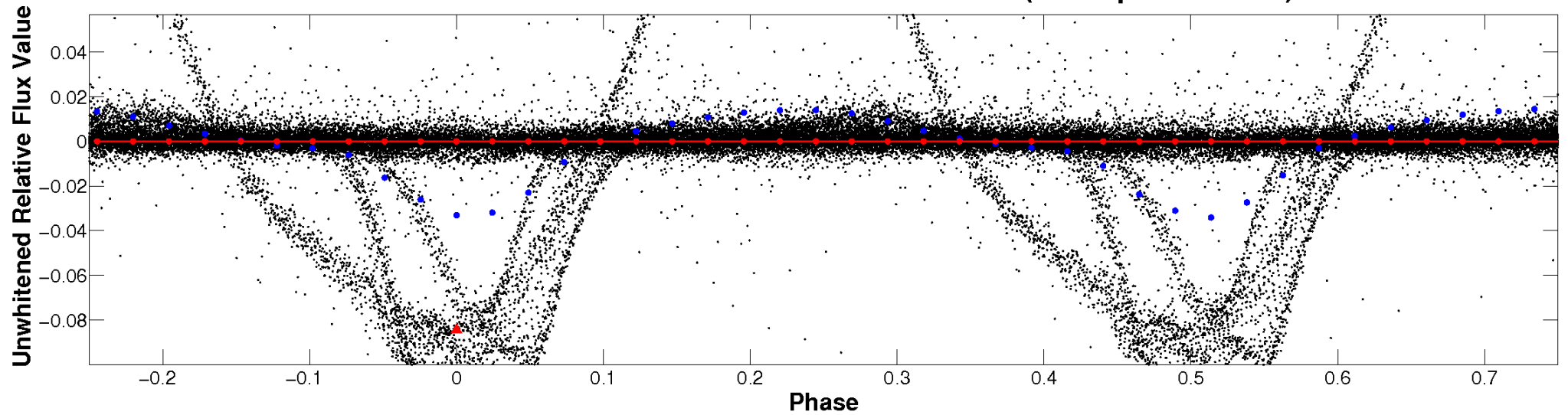
ALT Odd/Even

TCE 004070633-01



Non-Whitened Vs. Whitened Light Curve

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

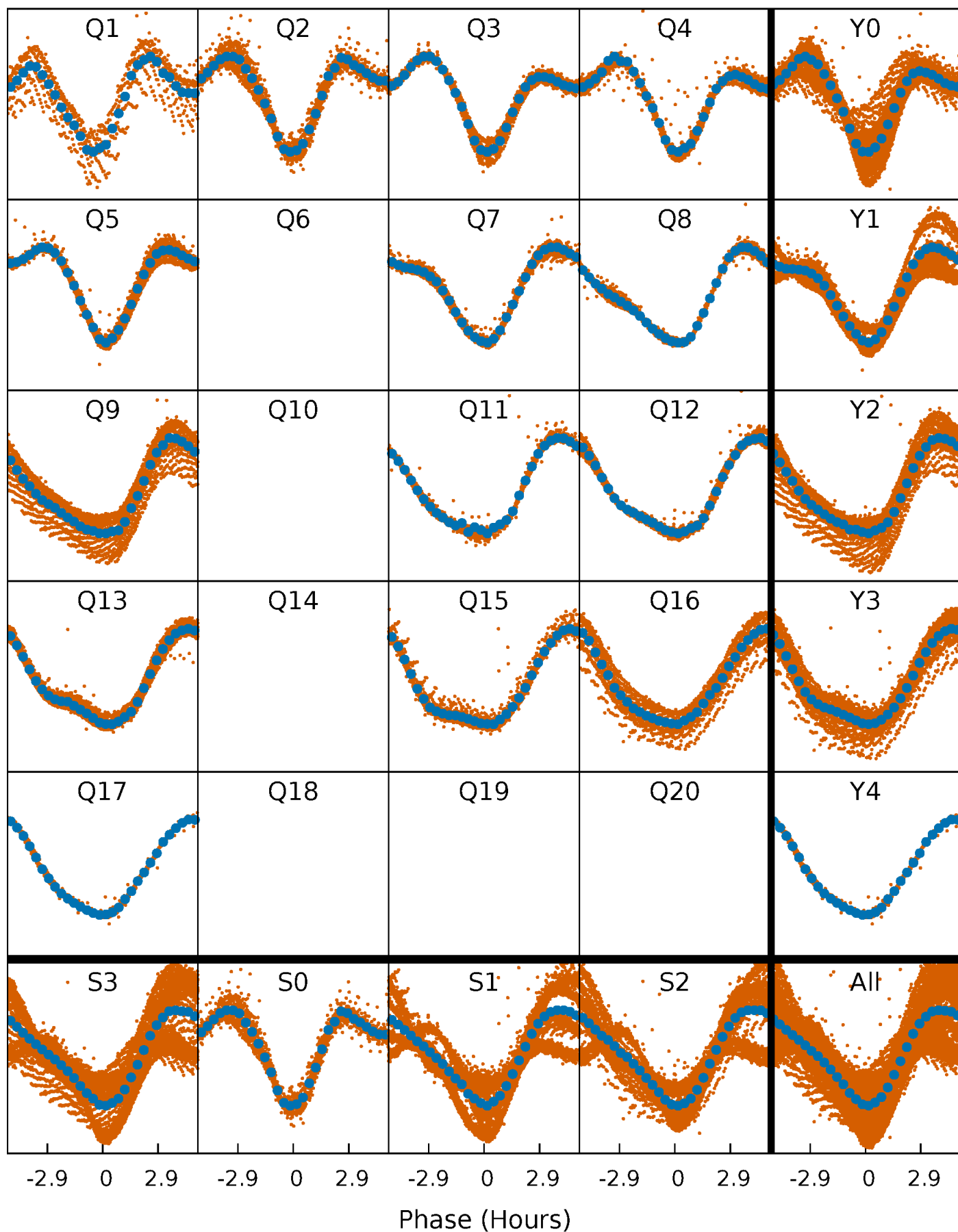


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



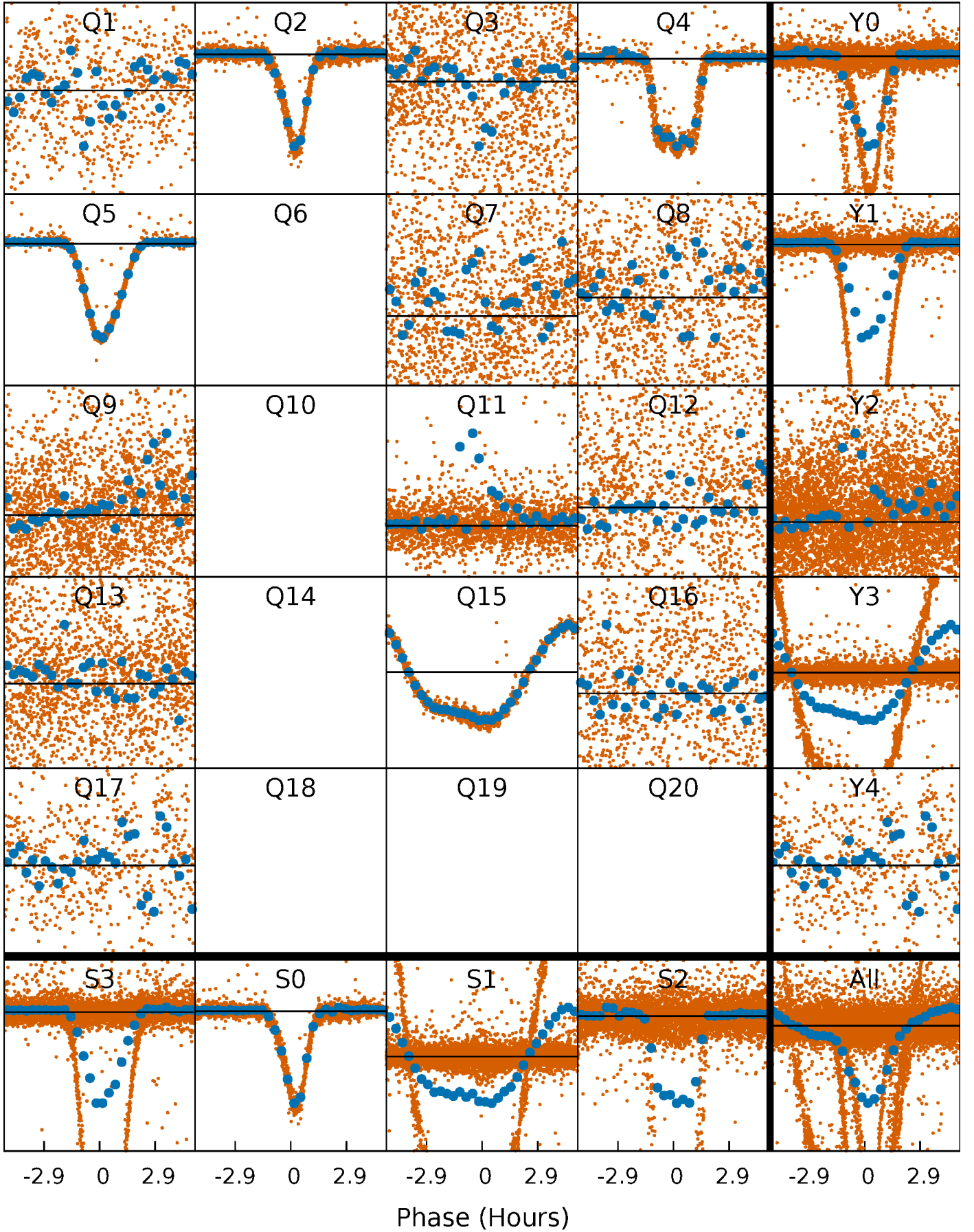
PDC Quarter-Phased Transit Curves

TCE 004070633-01 P= 0.835159 Days $T_0=131.990161$ (BKJD)



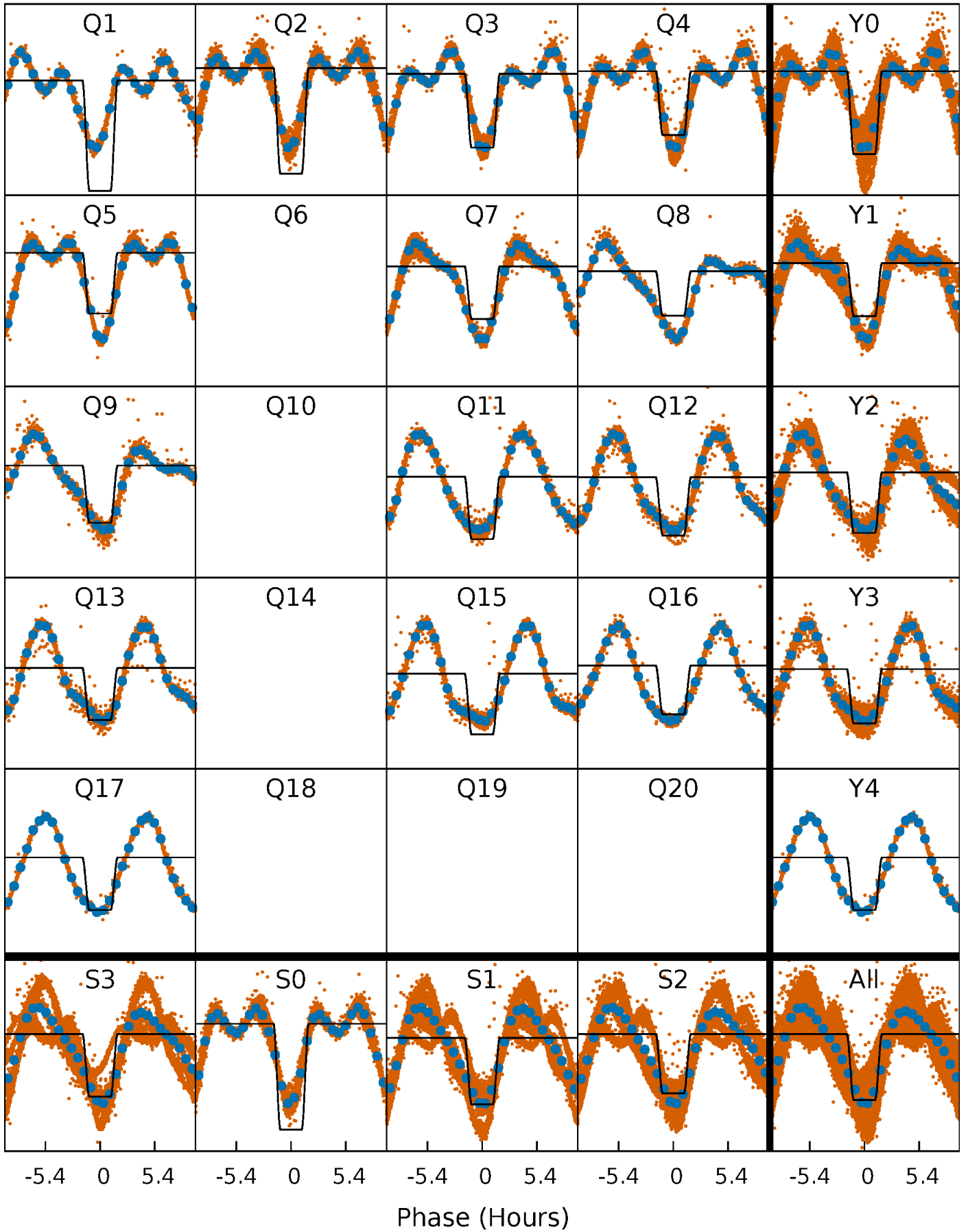
DV Quarter-Phased Transit Curves

TCE 004070633-01 P= 0.835159 Days $T_0=131.990161$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

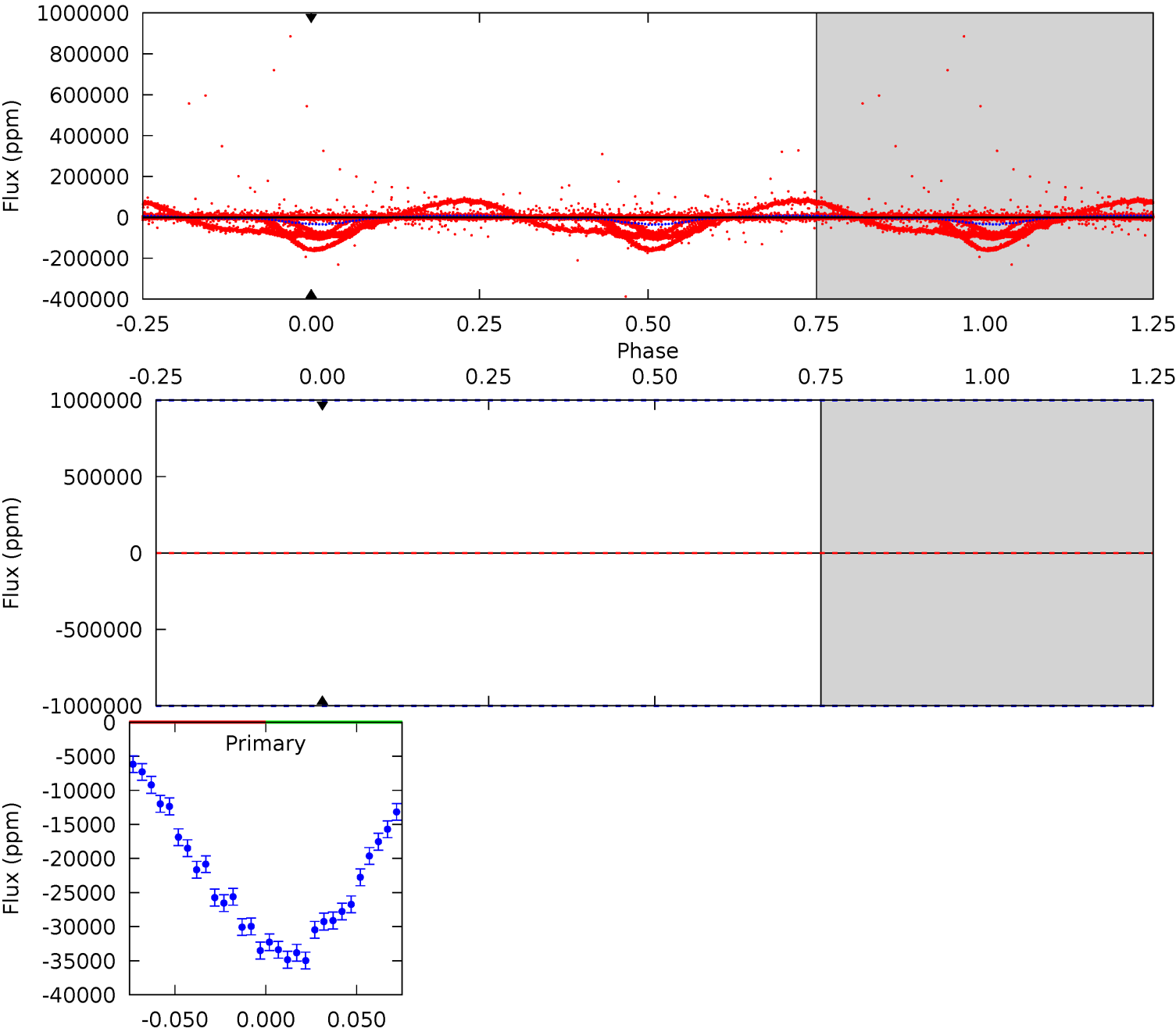
TCE 004070633-01 P= 0.835159 Days $T_0=131.993218$ (BKJD)



DV Model-Shift Uniqueness Test

004070633-01, P = 0.835159 Days, E = 131.155002 Days

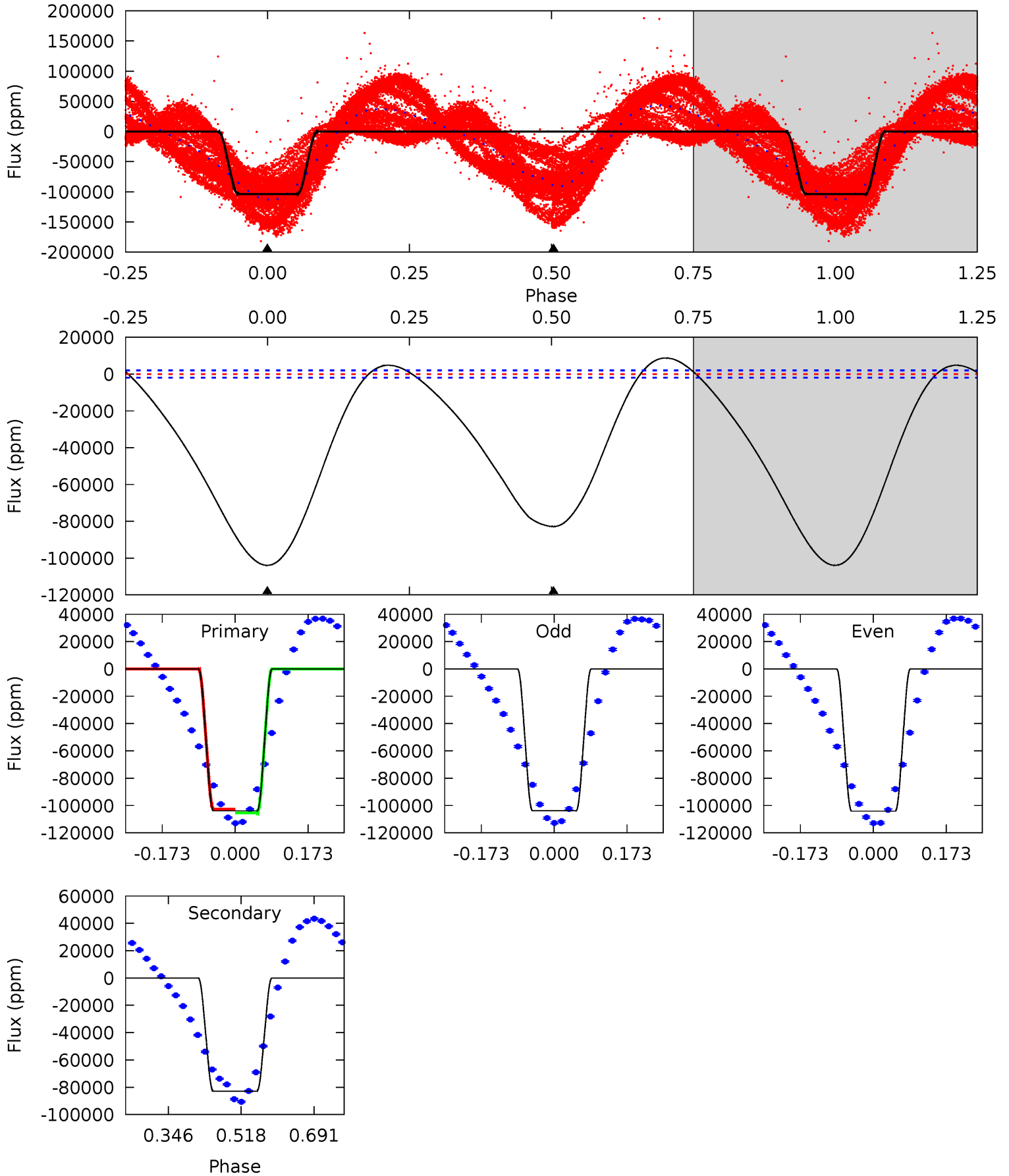
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004070633-01, P = 0.835159 Days, E = 131.158059 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
232.6	185.4	0	0	4.45	1.36	21.4	232.6	232.6	185.4	185.4	0.36	1.02	0.08	3.20



Stellar Parameters For KIC 004070633

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4257^{+150}_{-150}	$4.605^{+0.049}_{-0.017}$	$0.260^{+0.150}_{-0.300}$	$0.683^{+0.028}_{-0.057}$	$0.684^{+0.042}_{-0.052}$	$3.028^{+0.694}_{-0.240}$
	+4%/-4%	+1%/-0%	+58%/-115%	+4%/-8%	+6%/-8%	+23%/-8%
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 004070633-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$13.19^{+8.00}_{-6.79}$	1740^{+68}_{-65}	-2946^{+8780}_{-2659}	$-2.118^{+112.047}_{-90.355}$
Alt.	-82852 ± 447	$23.75^{+7.54}_{-7.27}$	1740^{+65}_{-64}	4143^{+616}_{-412}	21^{+23}_{-9}

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

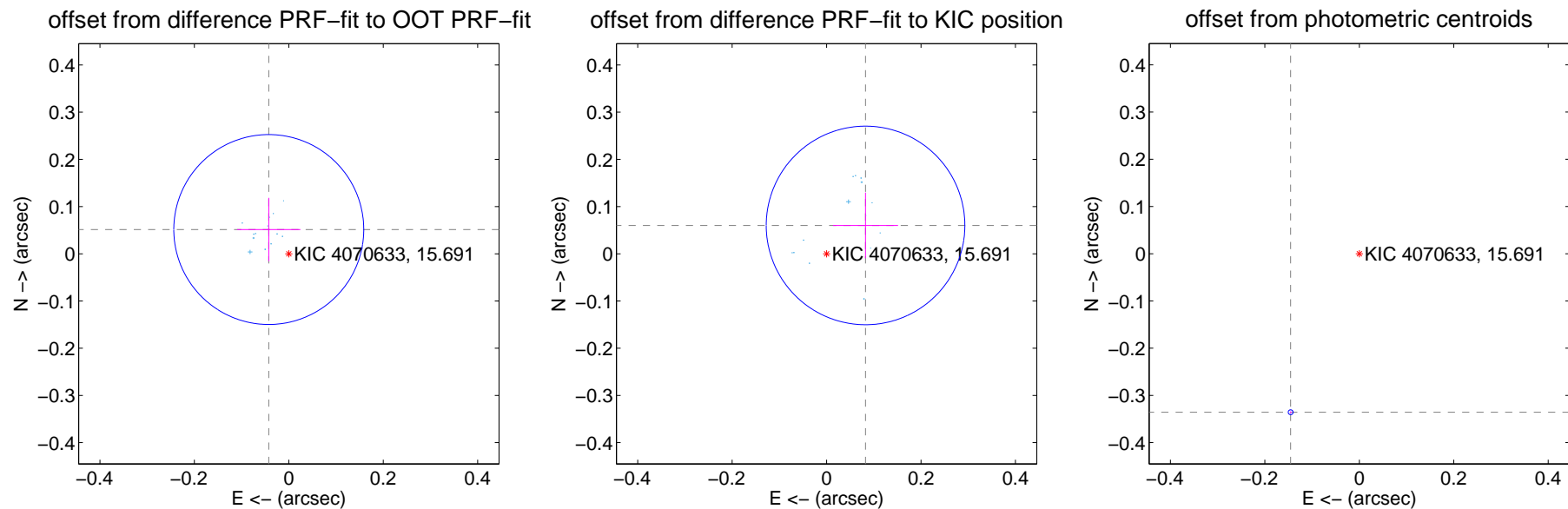
DV Centroid Data

Supplemental centroid analysis for 004070633-01. Kepler magnitude: 15.69. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

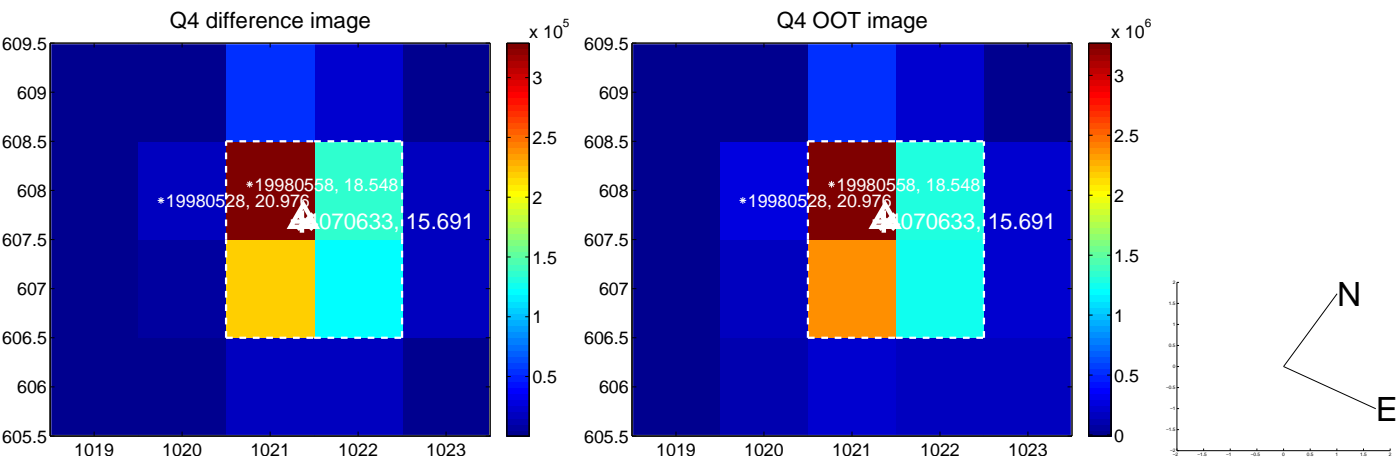
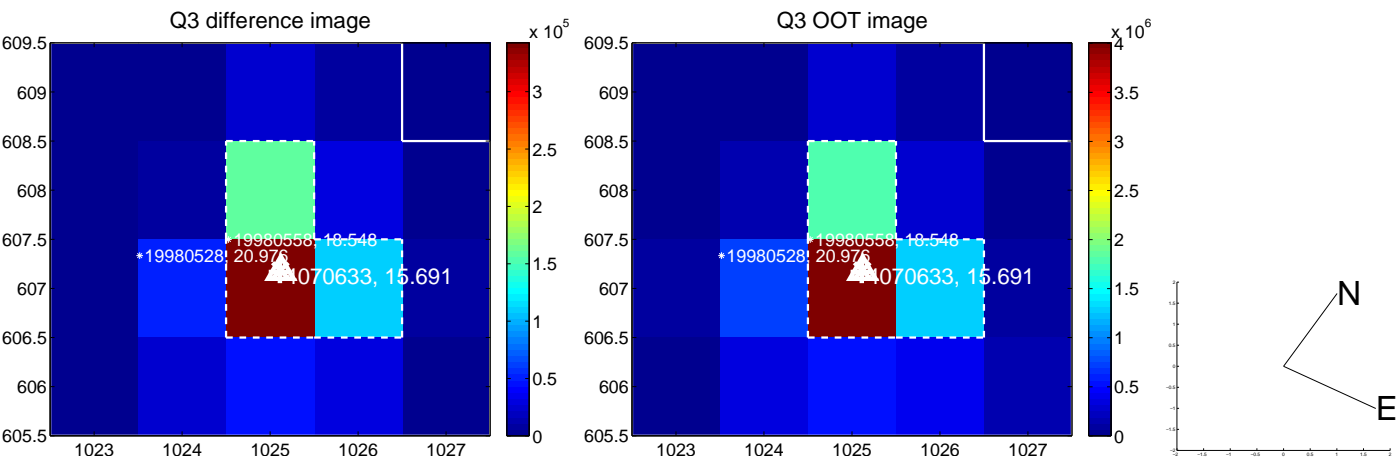
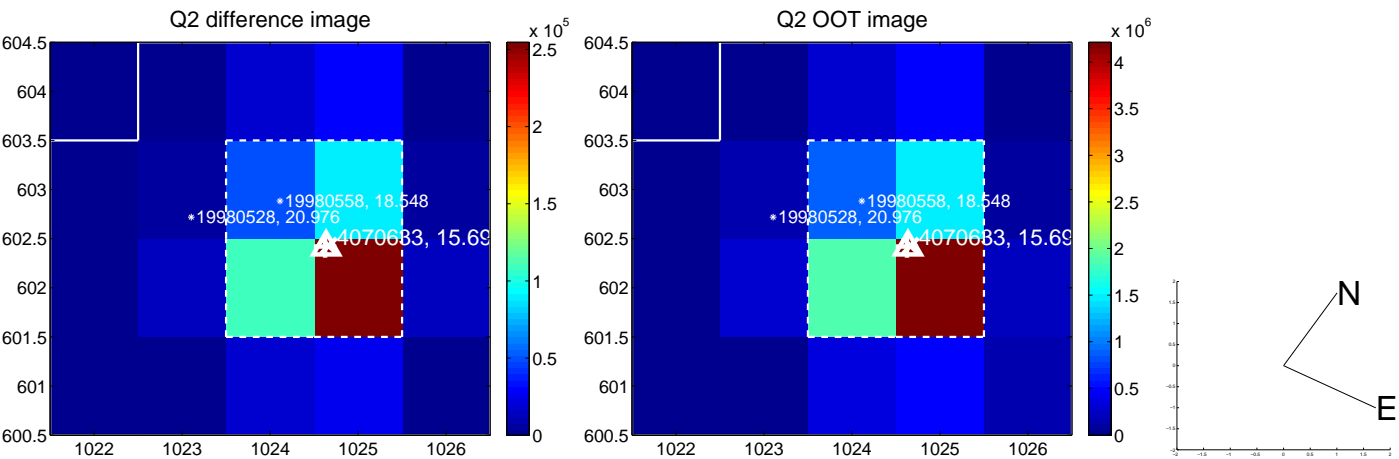
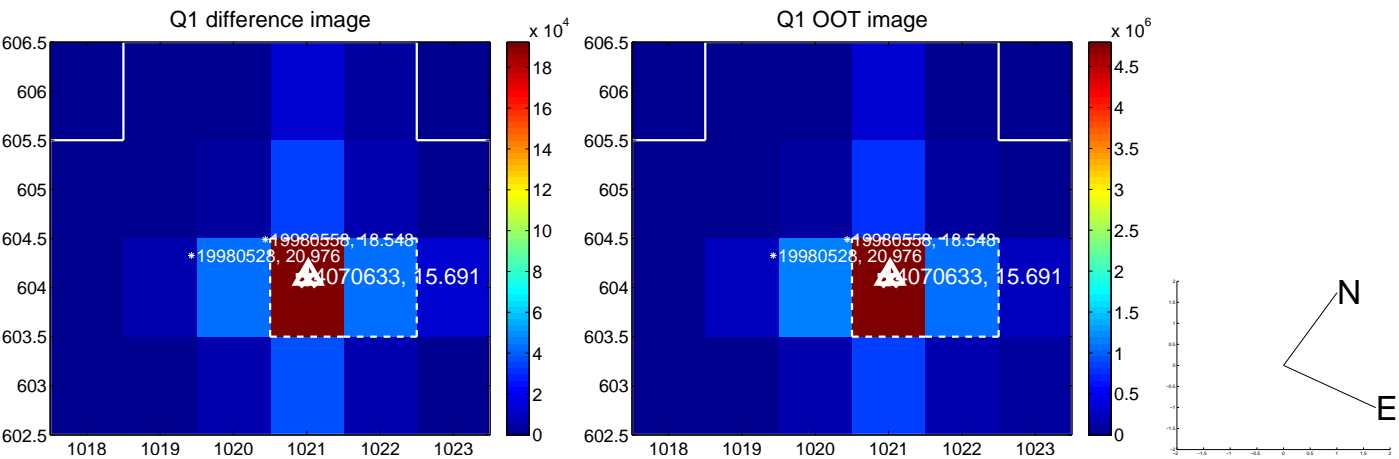
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.067	0.99	0.042 ± 0.067	0.051 ± 0.067
PRF-fit source offset from KIC position	0.102 ± 0.070	1.46	-0.083 ± 0.069	0.060 ± 0.070
photometric centroid source offset	0.37 ± 0.00	213.36	0.15 ± 0.00	-0.34 ± 0.00

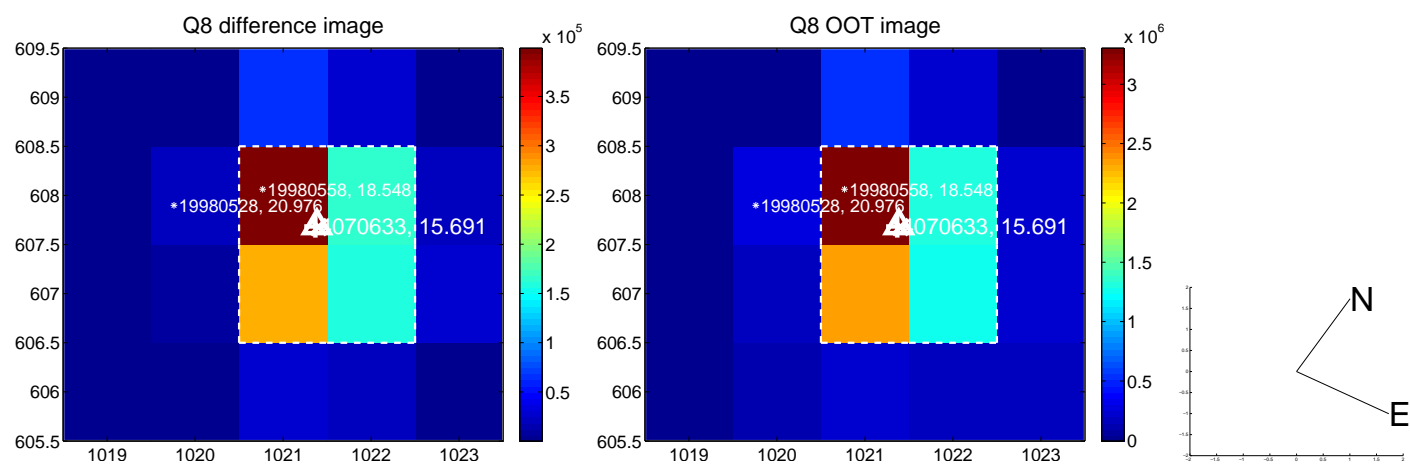
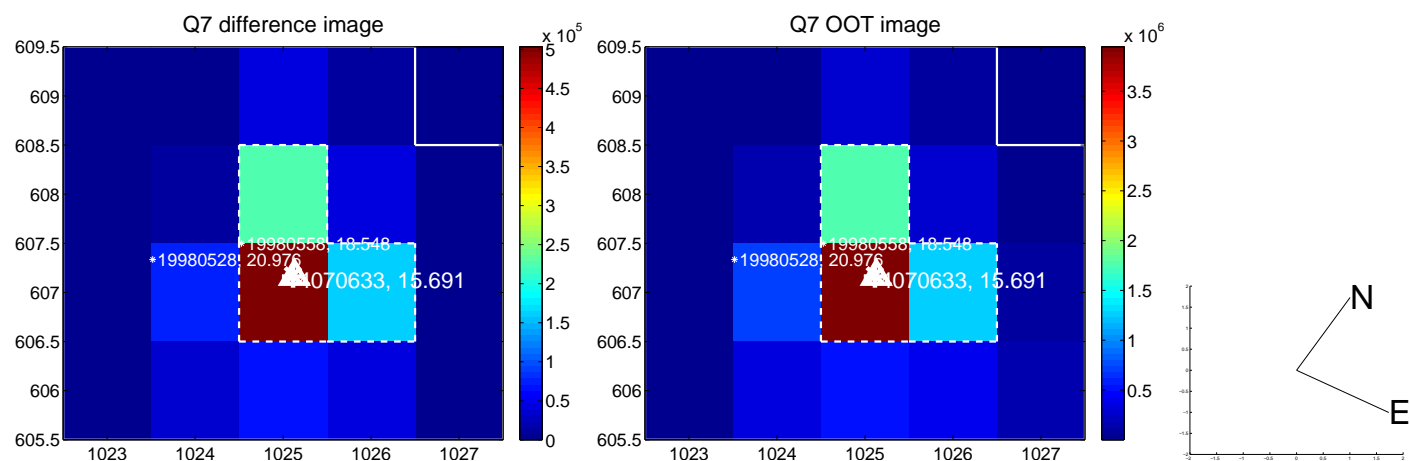
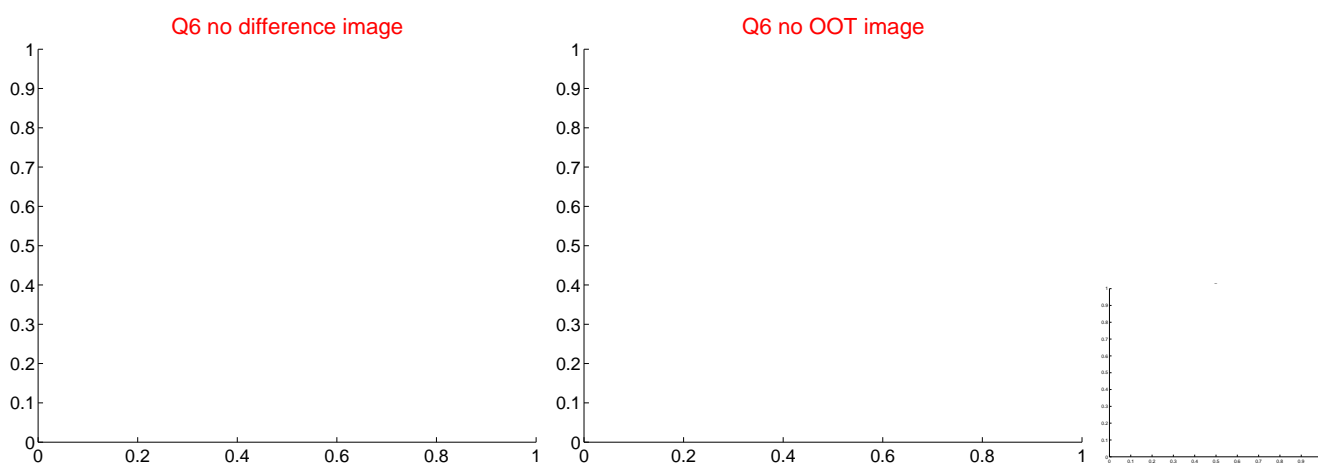
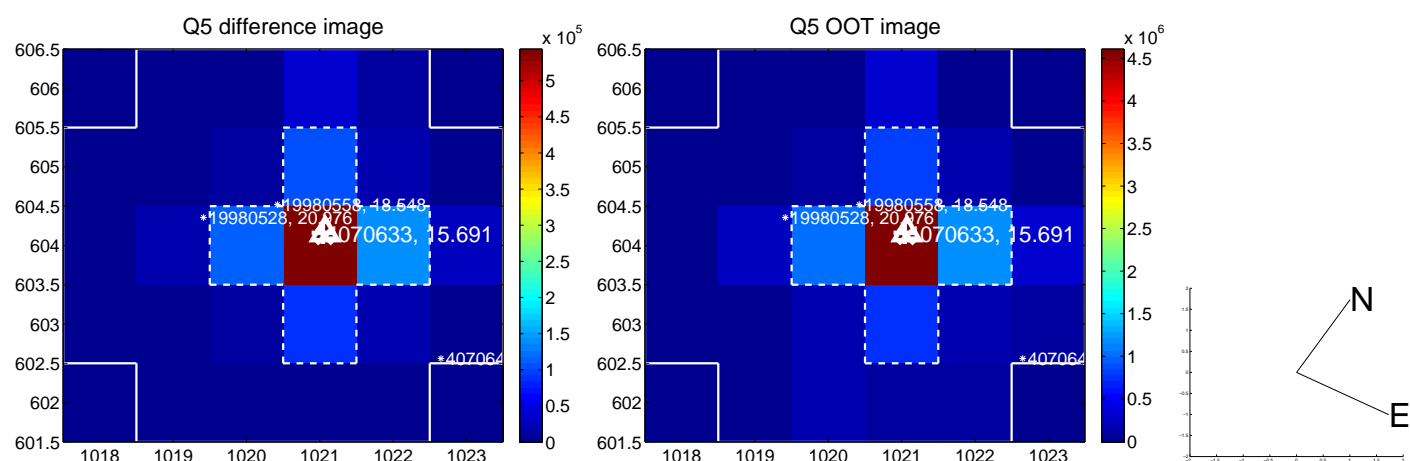


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

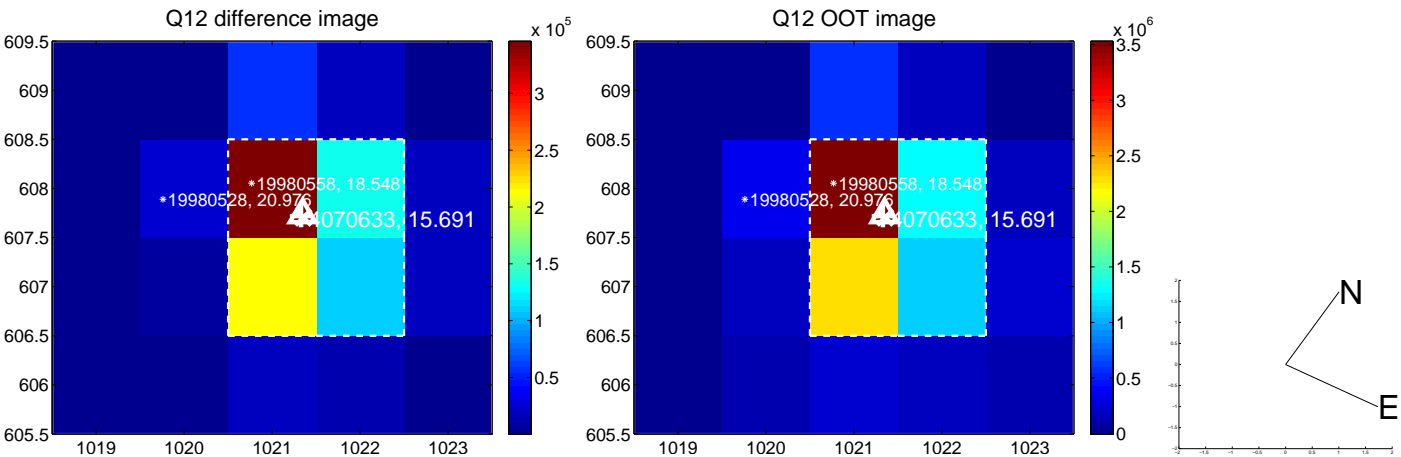
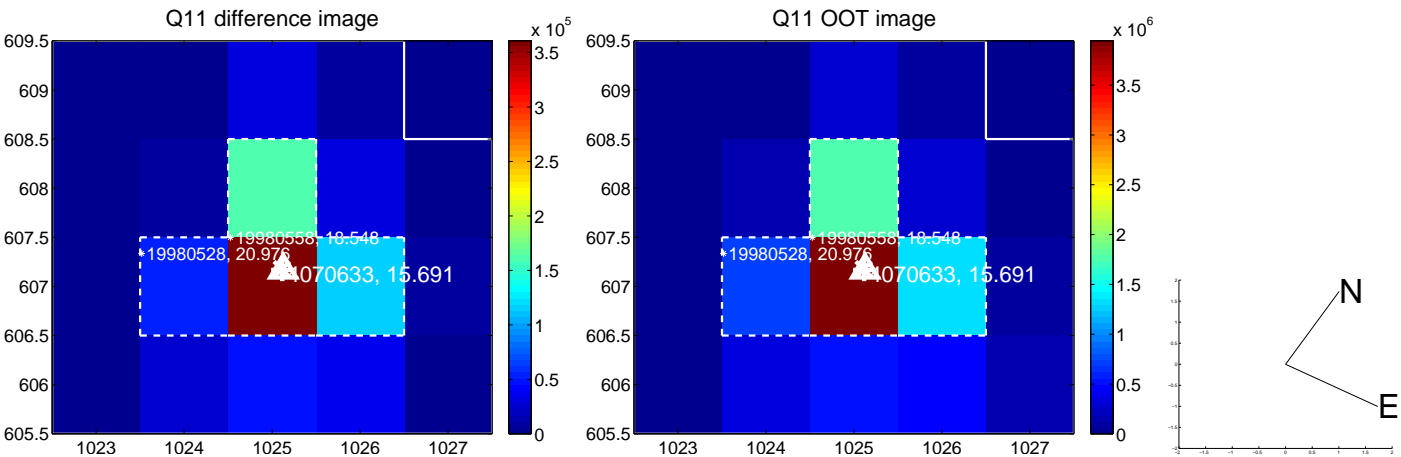
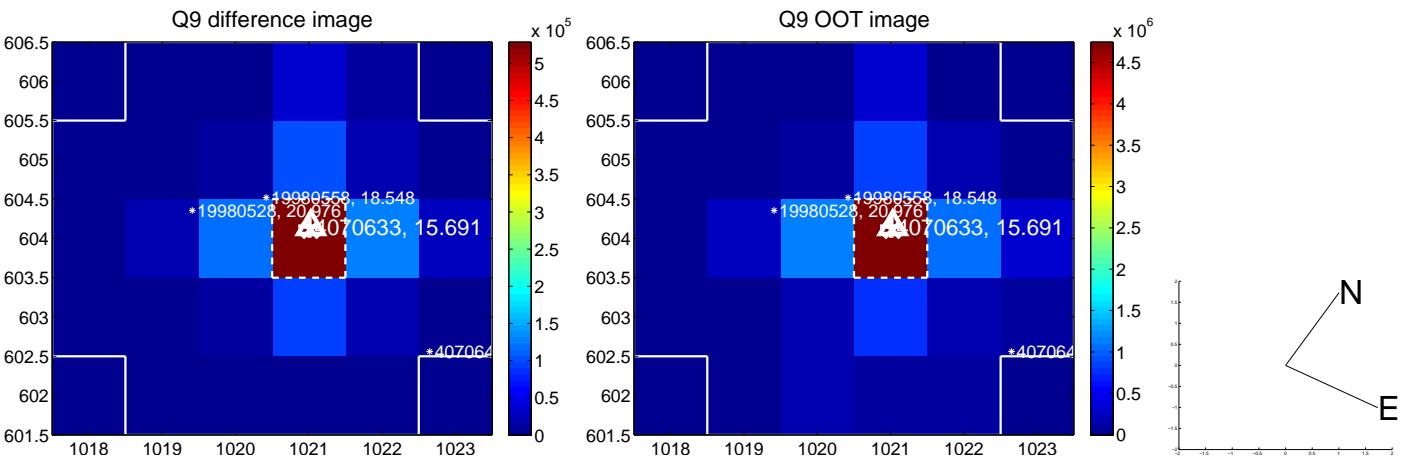
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



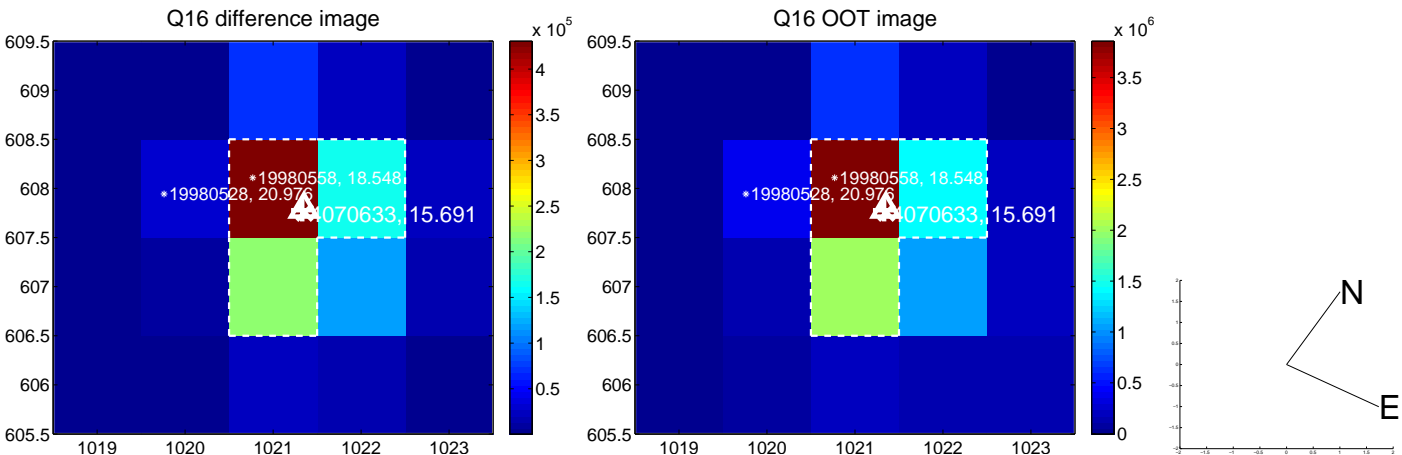
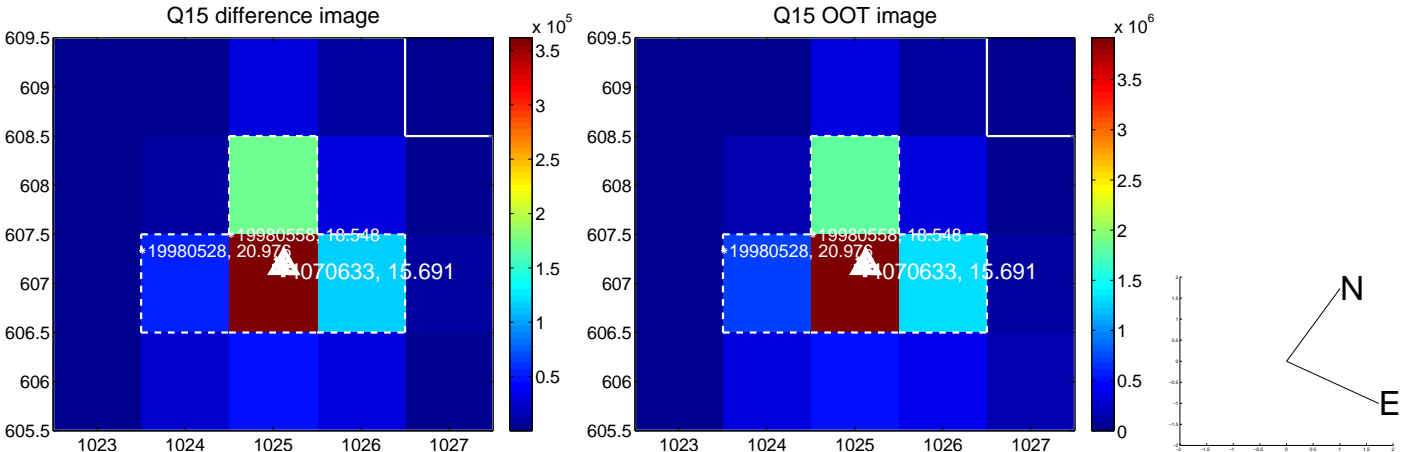
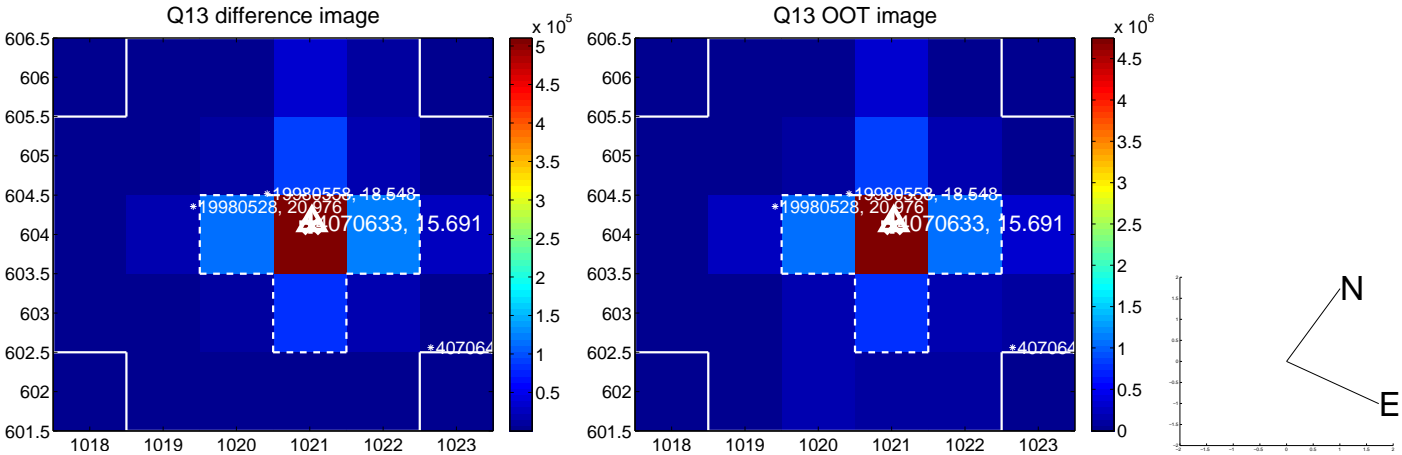
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



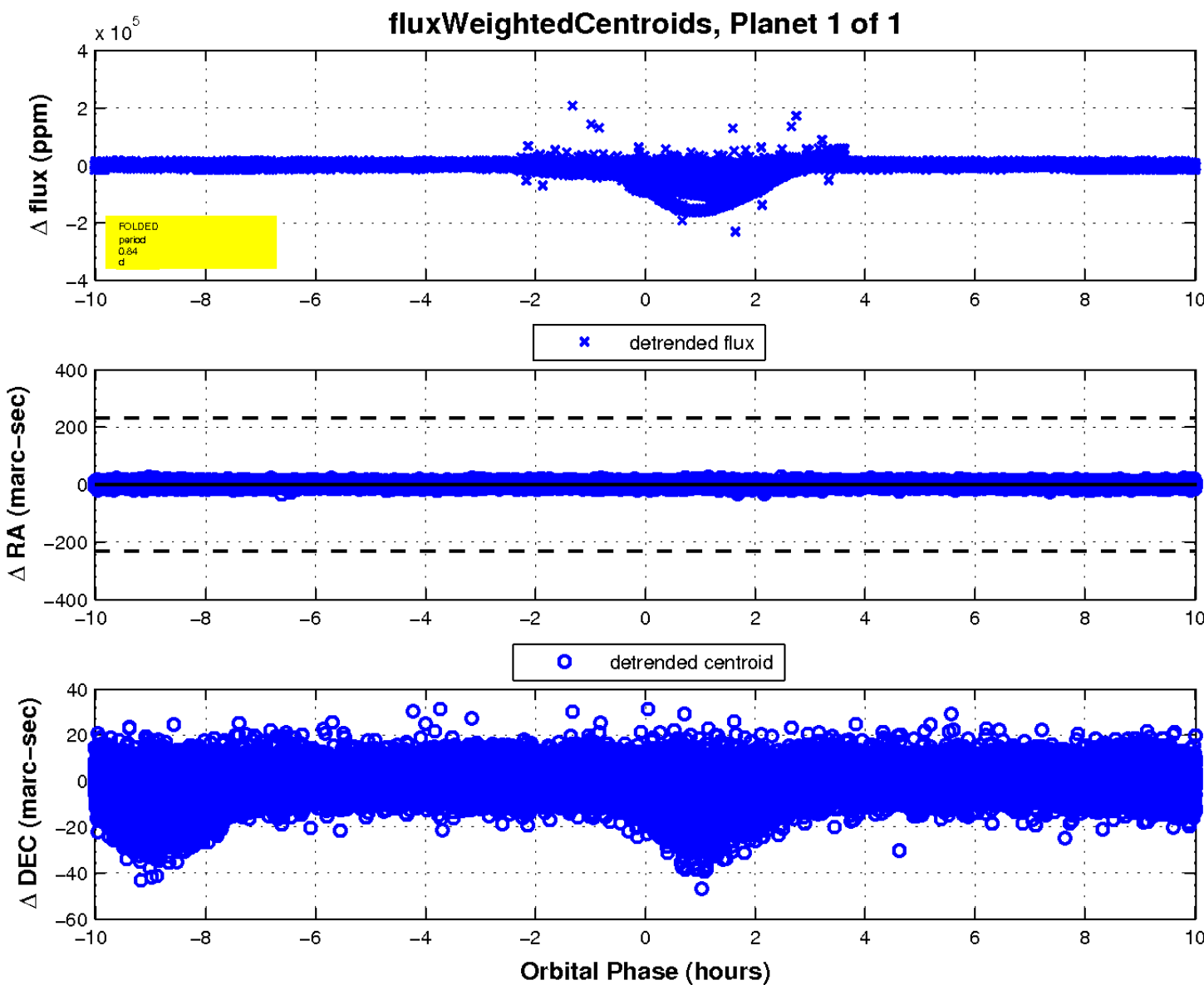
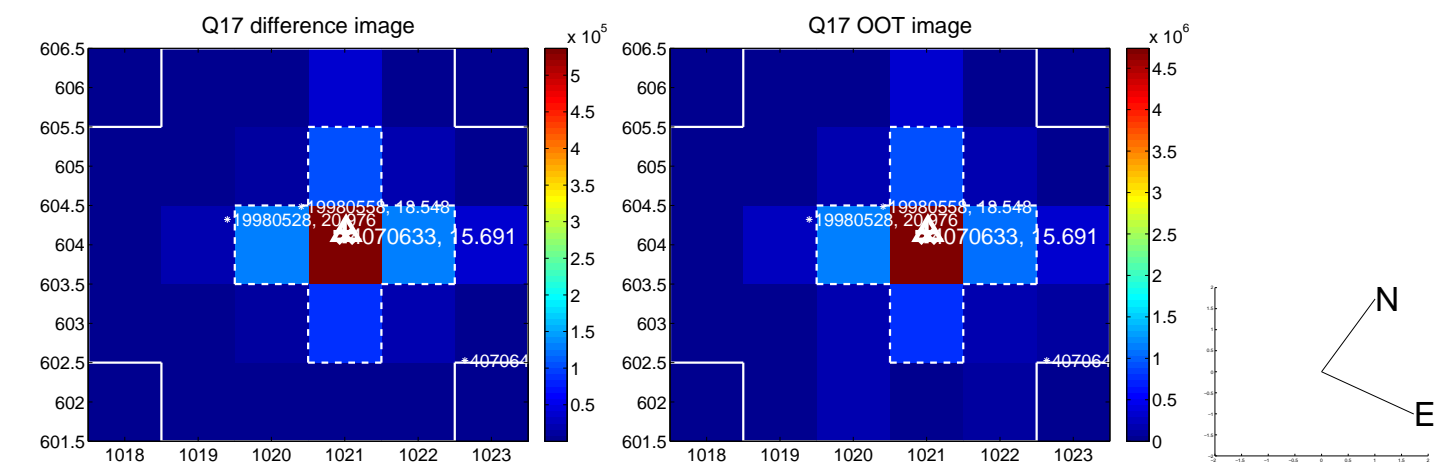
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UKIRT Image

Declination

