

KIC 005791720

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})
005791720-01	OBS	No	1.531706	131.984371	937.8	5.000	24.5	-1.0	0.57	3694	1.67	115.31
005791720-02	OBS	No	1.532133	132.443573	2881.4	8.166	74.9	64.4	0.57	3694	5.99	115.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005791720-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
005791720-02	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD

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

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

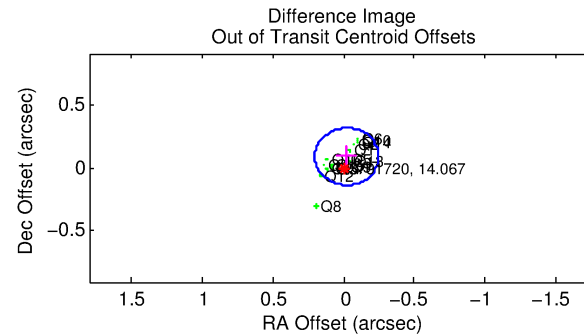
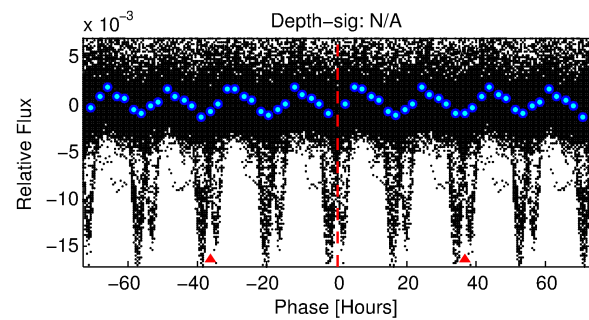
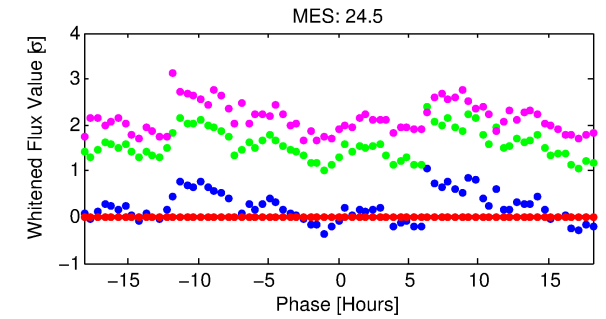
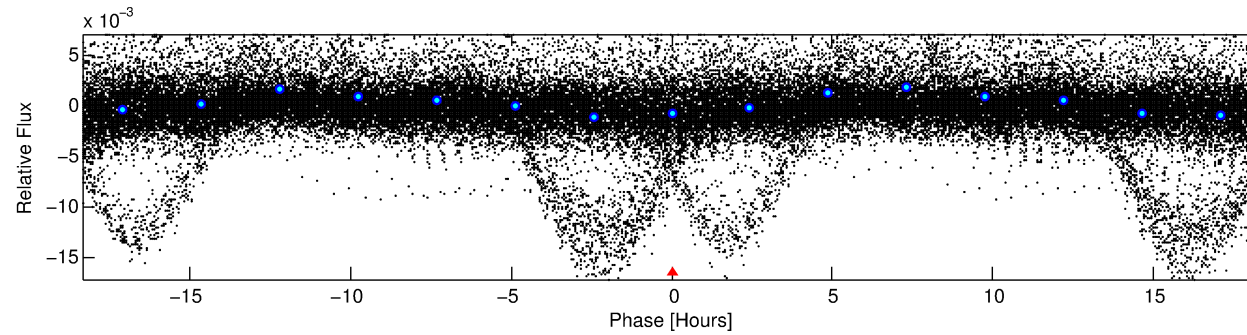
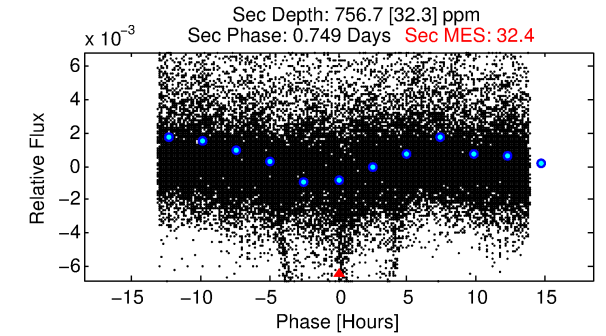
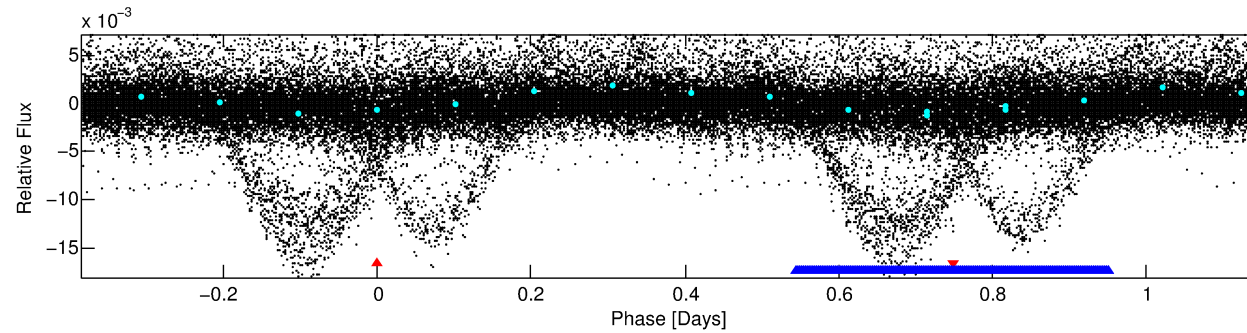
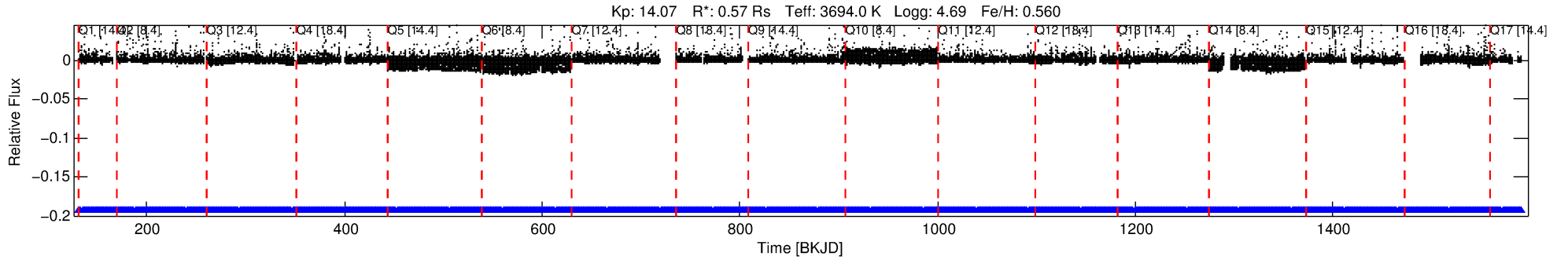
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005791720-01

No Significant Match Found

DV One-Page Summary

KIC: 5791720 Candidate: 1 of 2 Period: 1.532 d



TPS TCE Results:

Period = 1.53171 d
Epoch = 131.9844 BKJD

DV fit results are unavailable

DV Diagnostic Results:

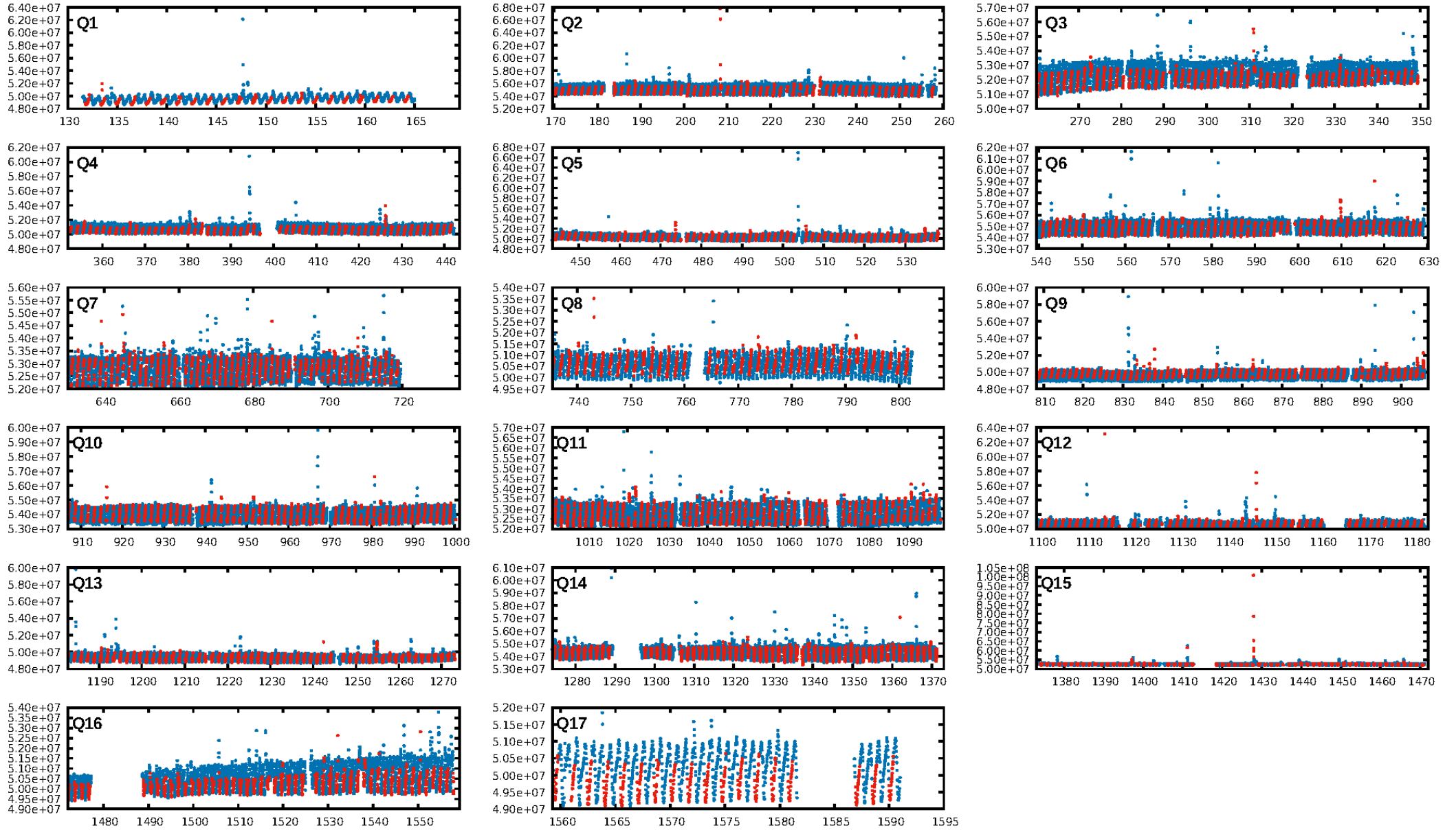
ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.65e-95
RollingBand-fgt: 1.00 [850/850]
GhostDiagnostic-chr: 4.33

Centroid-sig: 0.0%
Centroid-so: 0.168 arcsec [49.11σ]
OotOffset-rm: 0.092 arcsec [1.22σ]
KicOffset-rm: 0.123 arcsec [1.54σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

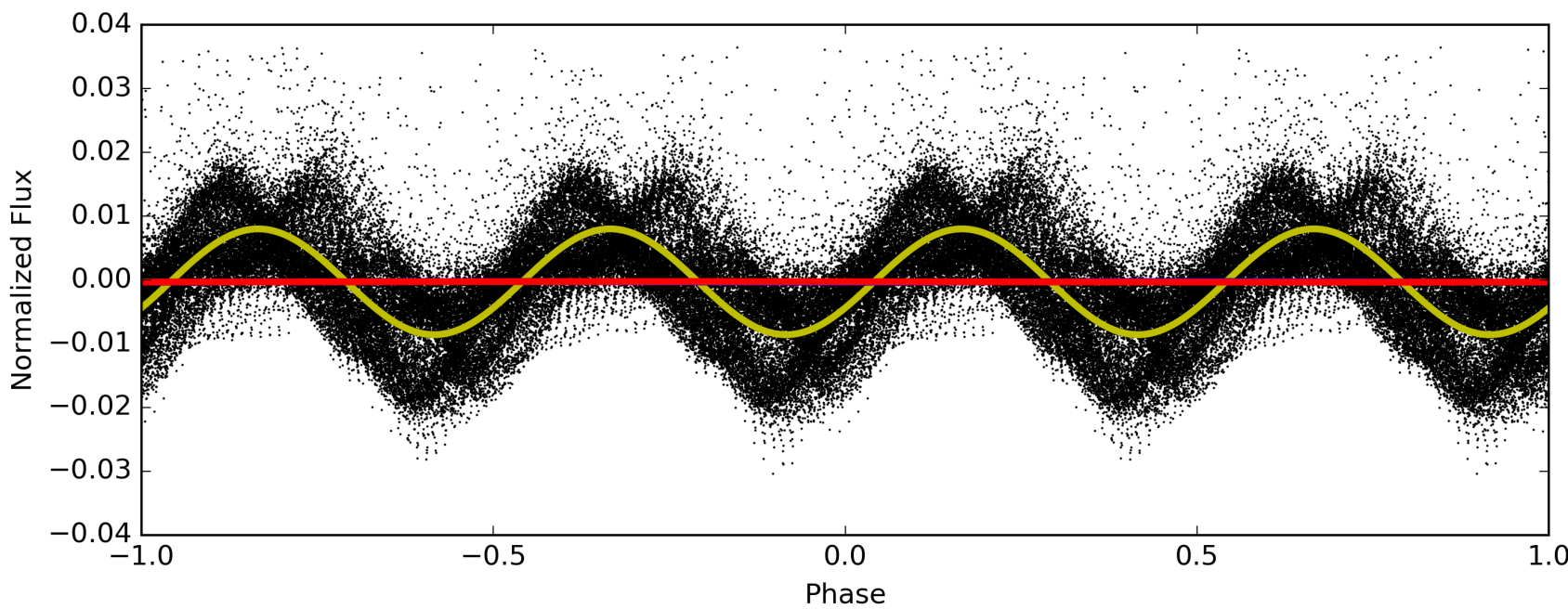
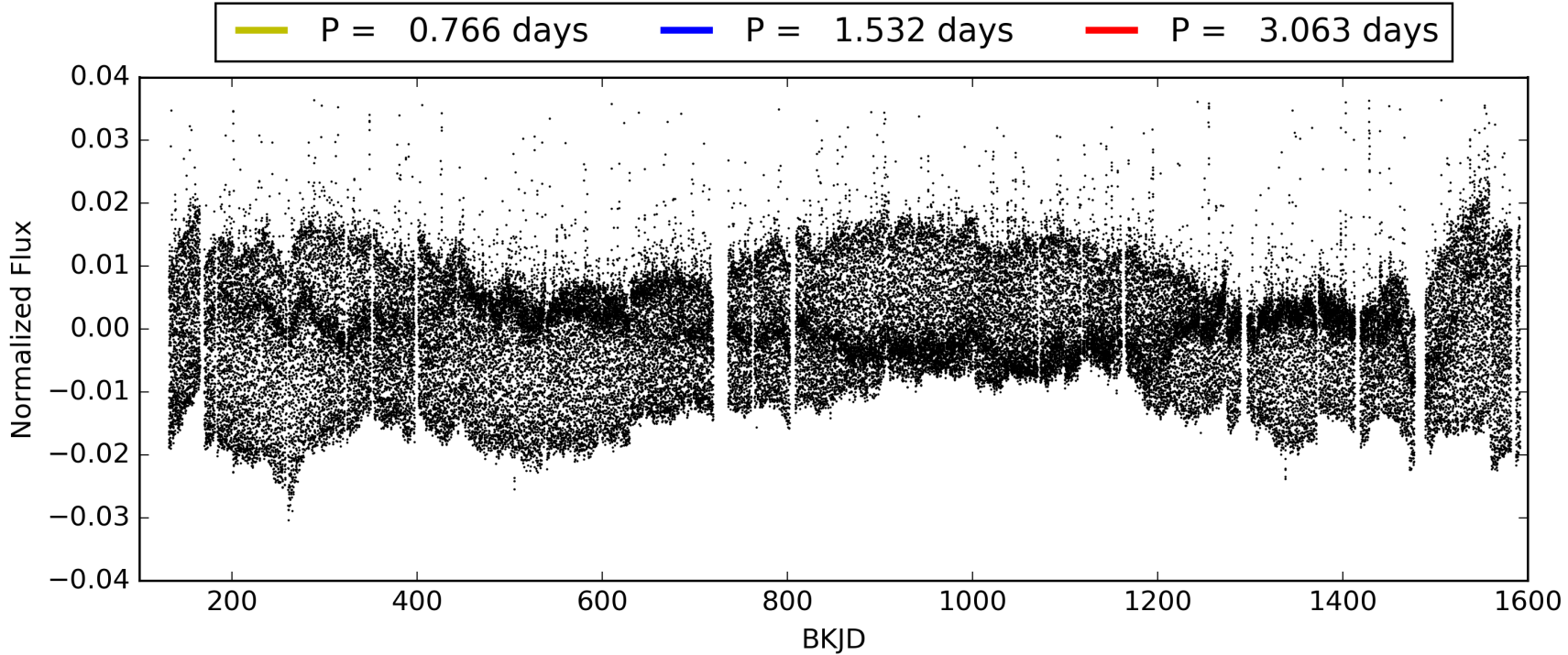
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:01:53 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005791720-01, PDC Light Curves

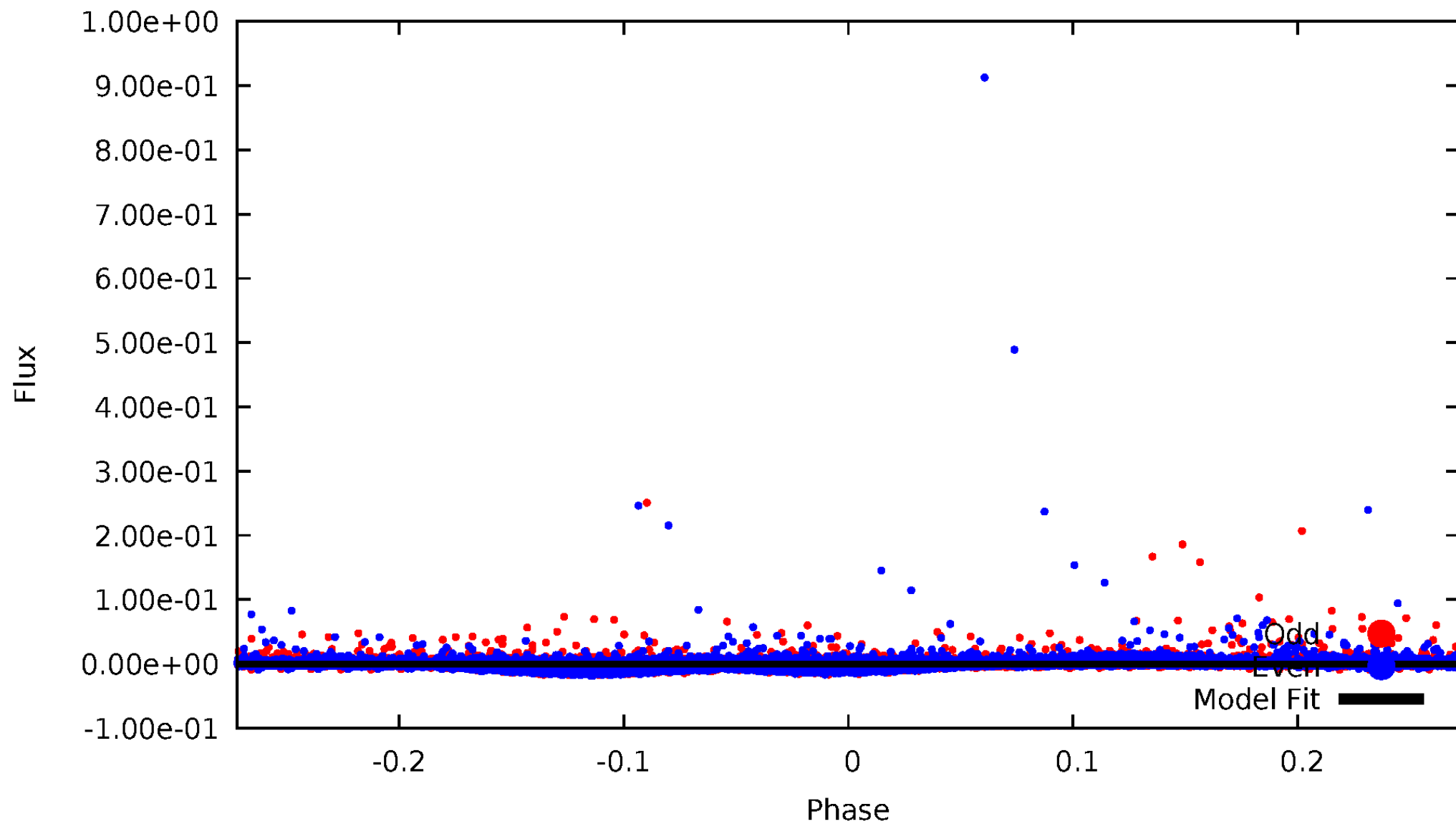


TCE 005791720-01



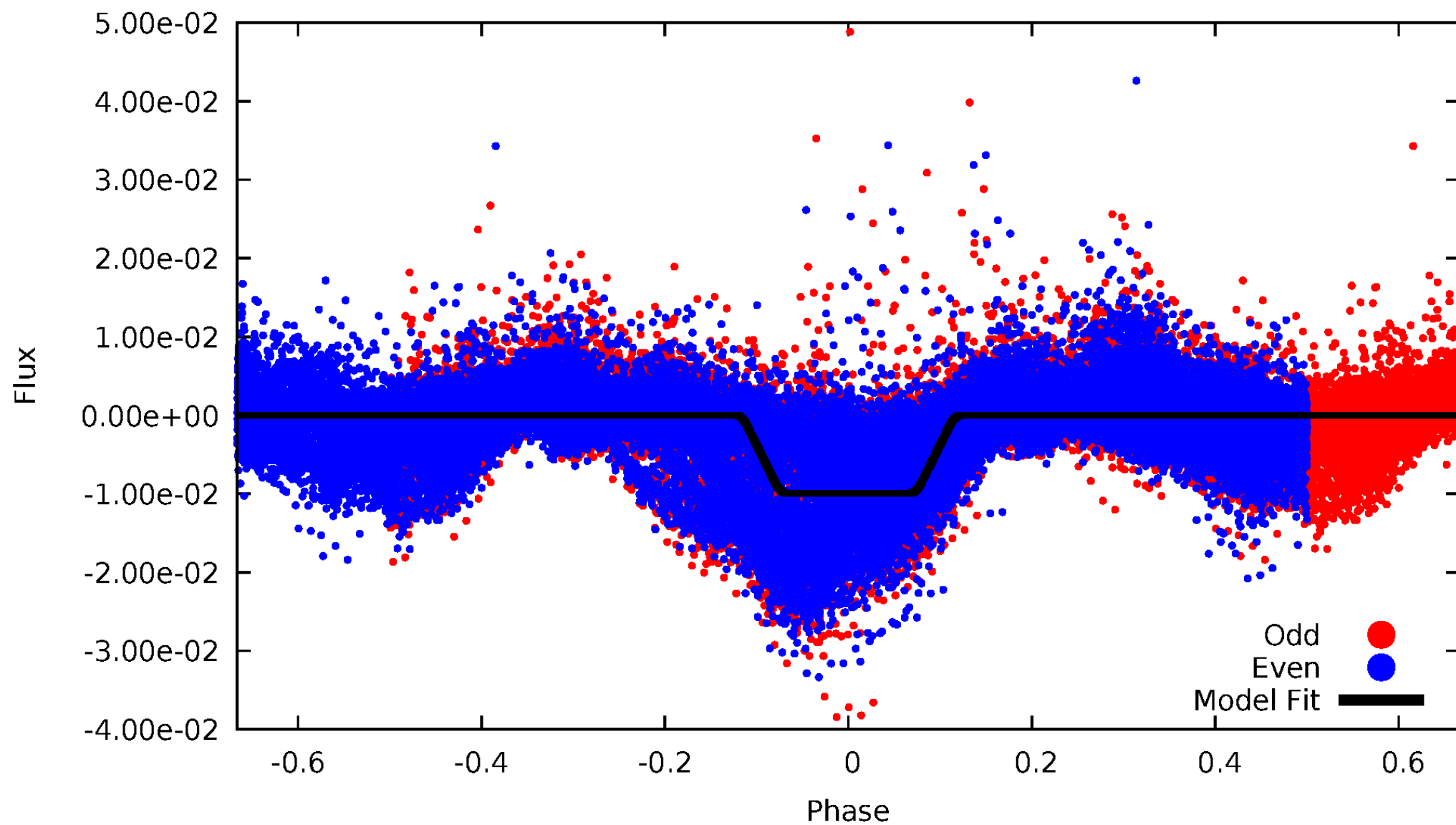
DV Odd/Even

TCE 005791720-01



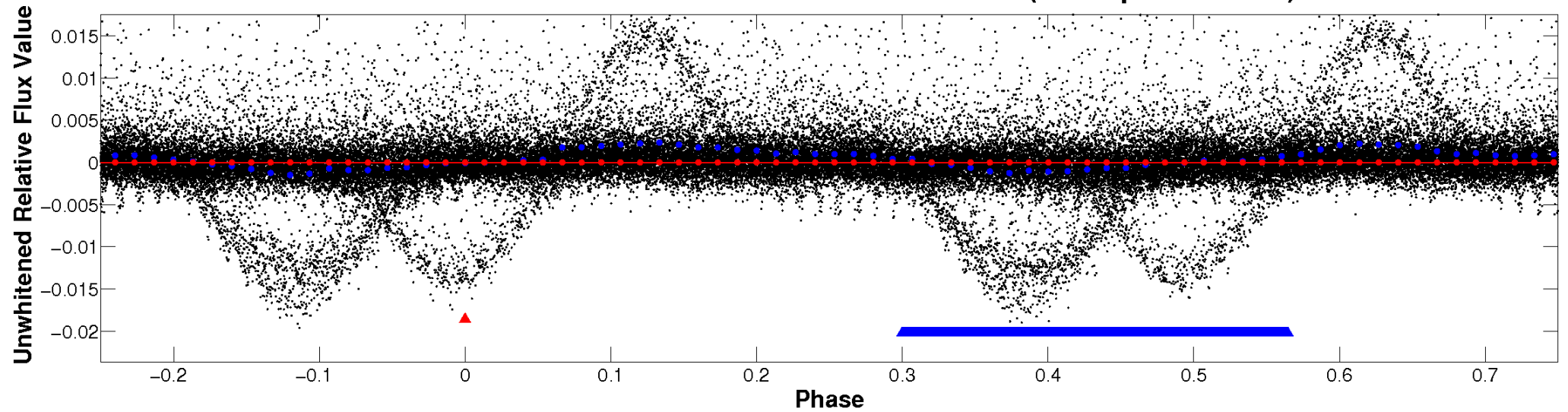
ALT Odd/Even

TCE 005791720-01



Non-Whitened Vs. Whitened Light Curve

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

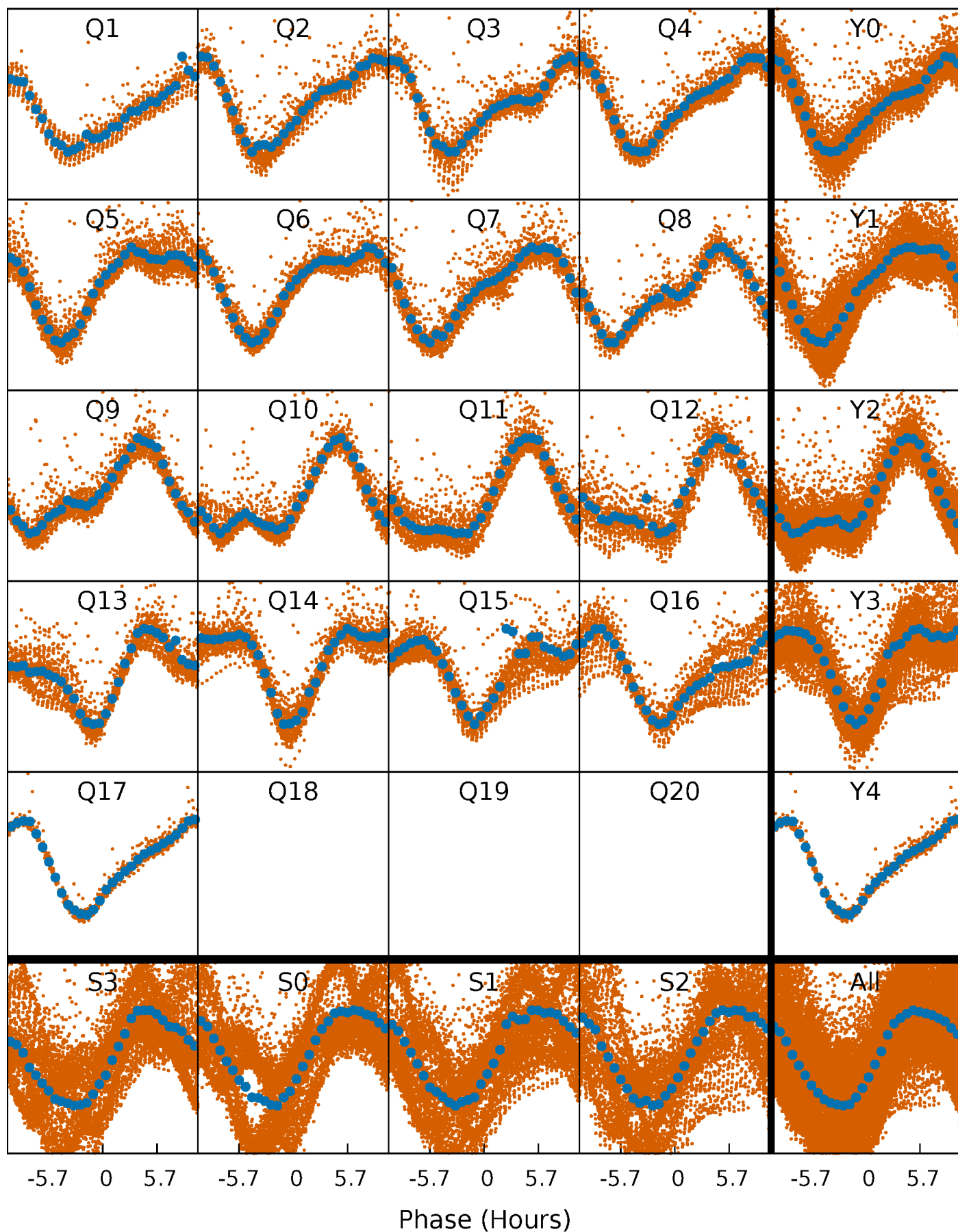


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



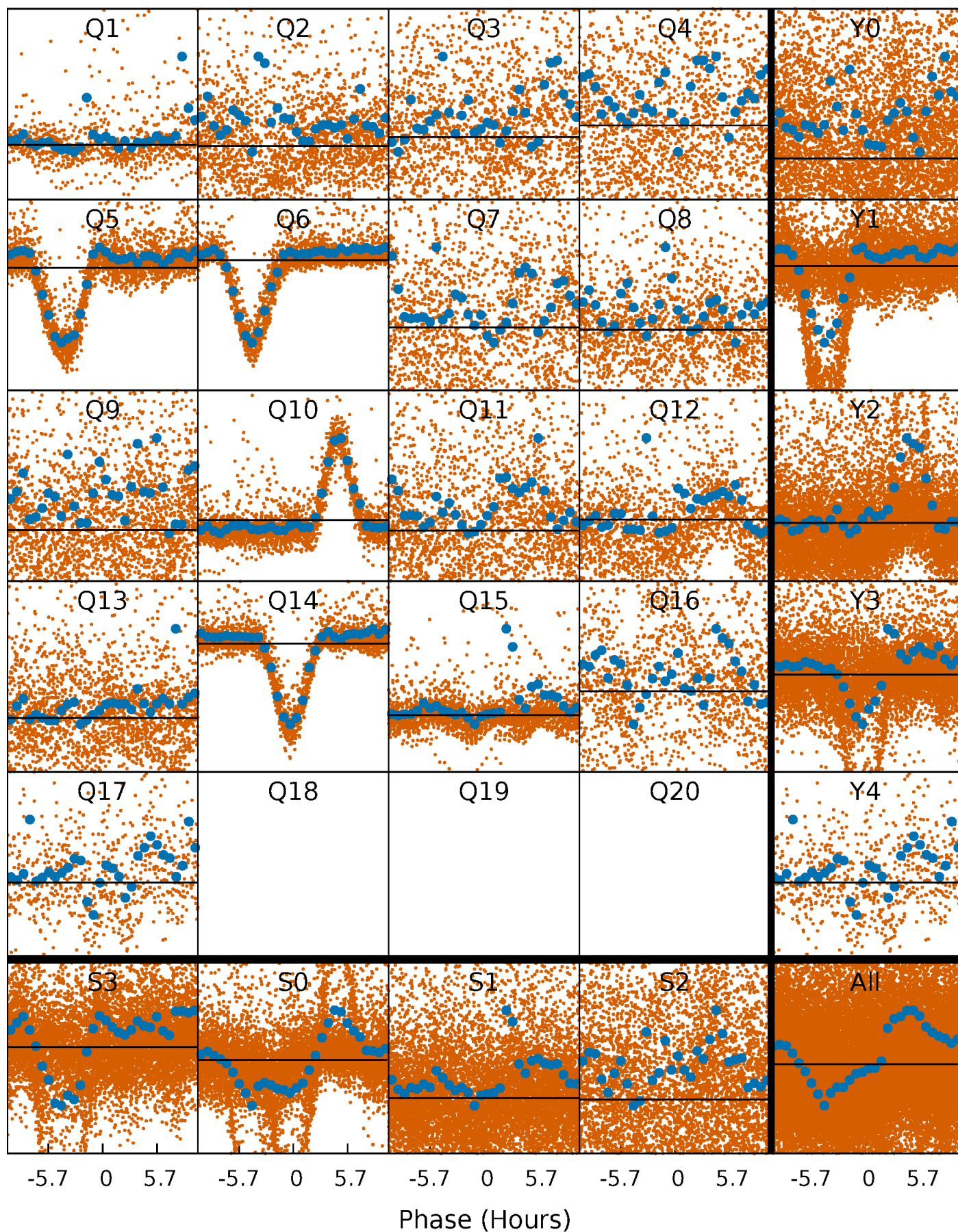
PDC Quarter-Phased Transit Curves

TCE 005791720-01 P= 1.531706 Days $T_0=131.984371$ (BKJD)



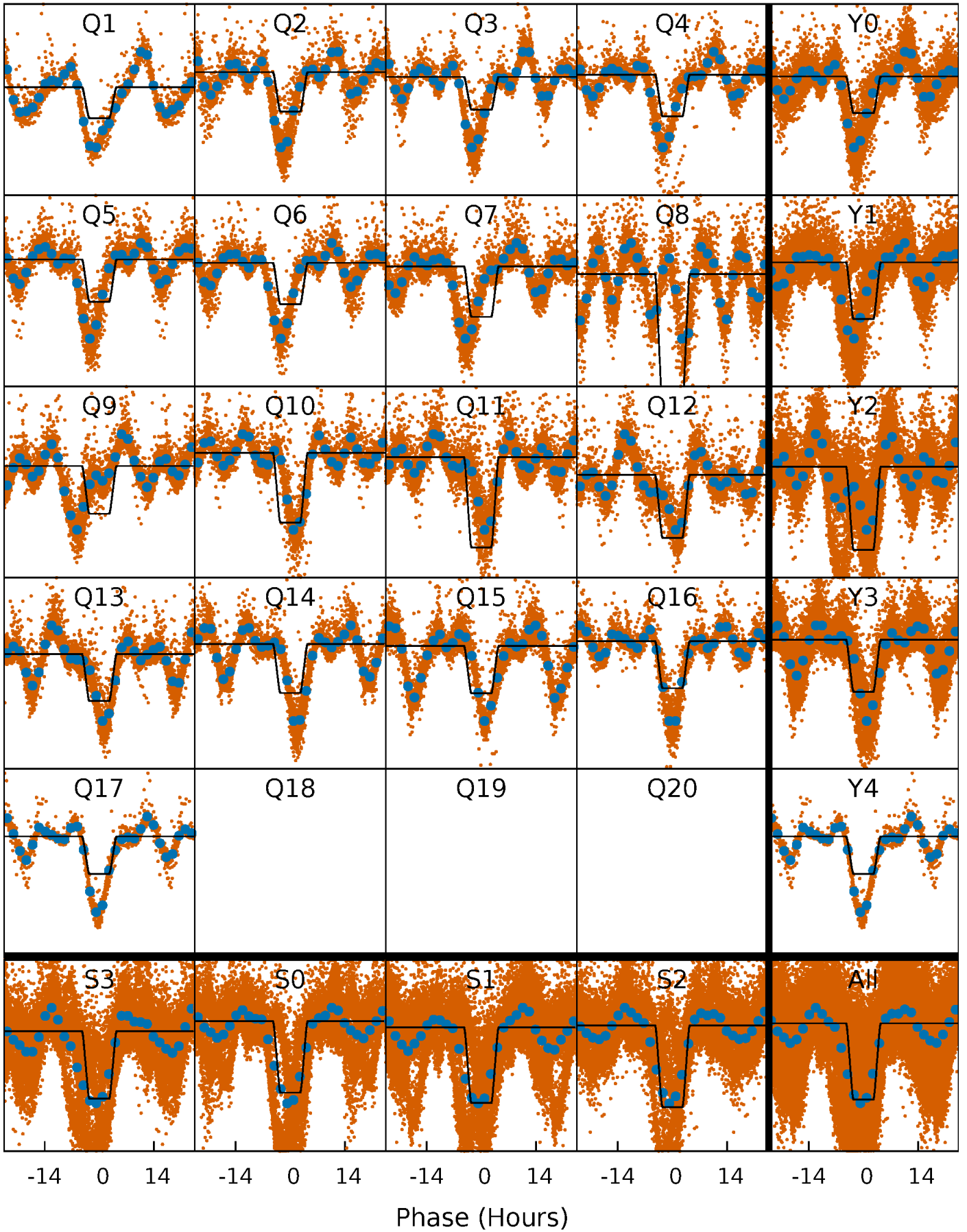
DV Quarter-Phased Transit Curves

TCE 005791720-01 P= 1.531706 Days $T_0=131.984371$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

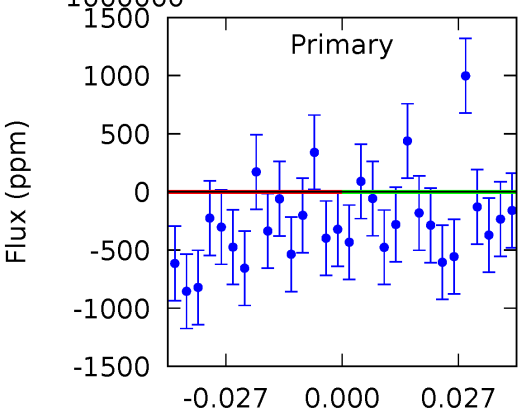
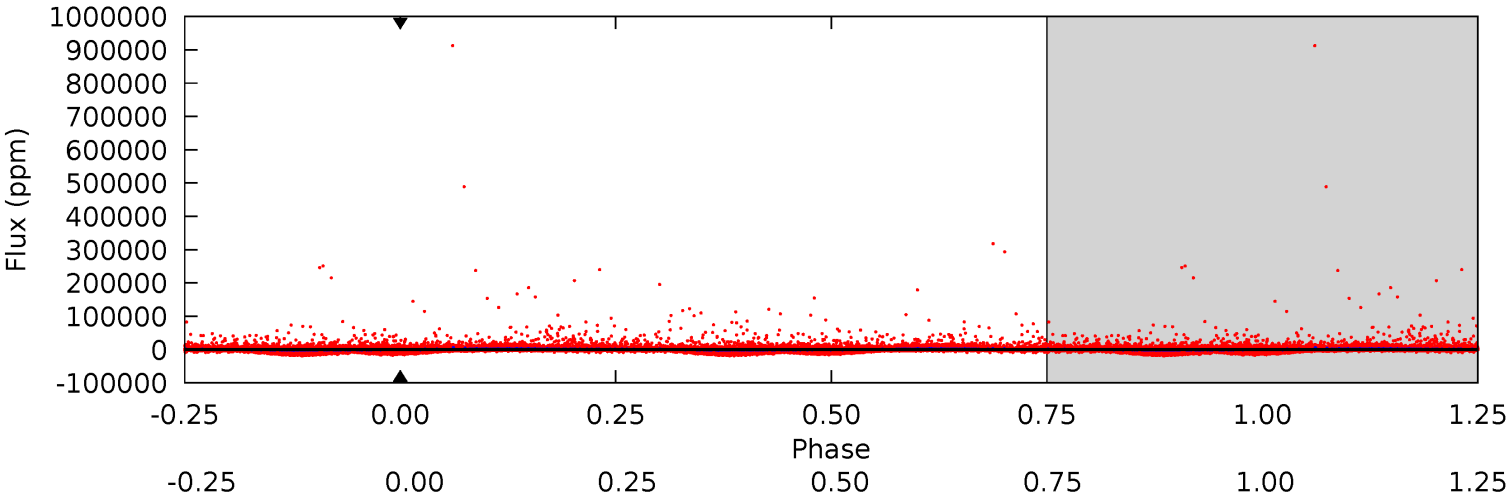
TCE 005791720-01 P= 1.531706 Days $T_0=131.898609$ (BKJD)



DV Model-Shift Uniqueness Test

005791720-01, P = 1.531706 Days, E = 130.452665 Days

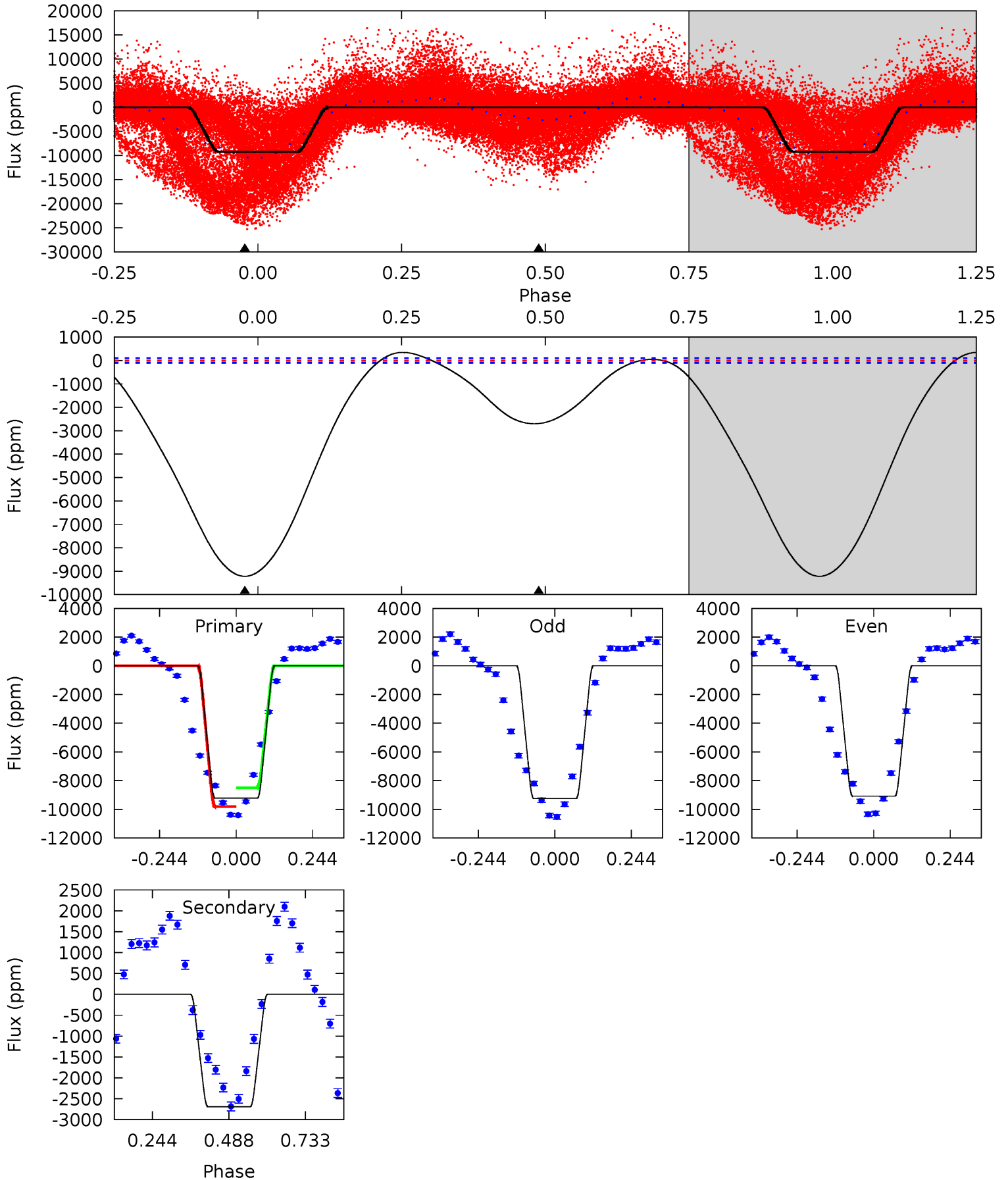
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005791720-01, P = 1.531706 Days, E = 130.366903 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
409.5	119.6	0	0	4.37	1.16	14.5	409.5	409.5	119.6	119.6	3.69	0.96	0.04	28.6



Stellar Parameters For KIC 005791720

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3694^{+117}_{-147}	$4.686^{+0.075}_{-0.020}$	$0.560^{+0.050}_{-0.300}$	$0.566^{+0.032}_{-0.076}$	$0.567^{+0.036}_{-0.067}$	$4.400^{+1.720}_{-0.431}$
	+3%/-4%	+2%/-0%	+9%/-54%	+6%/-13%	+6%/-12%	+39%/-10%
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 005791720-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$4.84^{+4.61}_{-3.46}$	1155^{+42}_{-51}	3445^{+5415}_{-10481}	48^{+3075}_{-1470}
Alt.	-2692 ± 23	$7.05^{+5.31}_{-4.56}$	1154^{+44}_{-52}	2882^{+1049}_{-403}	14^{+101}_{-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 $A_{\text{obs}} \gg 1.0$

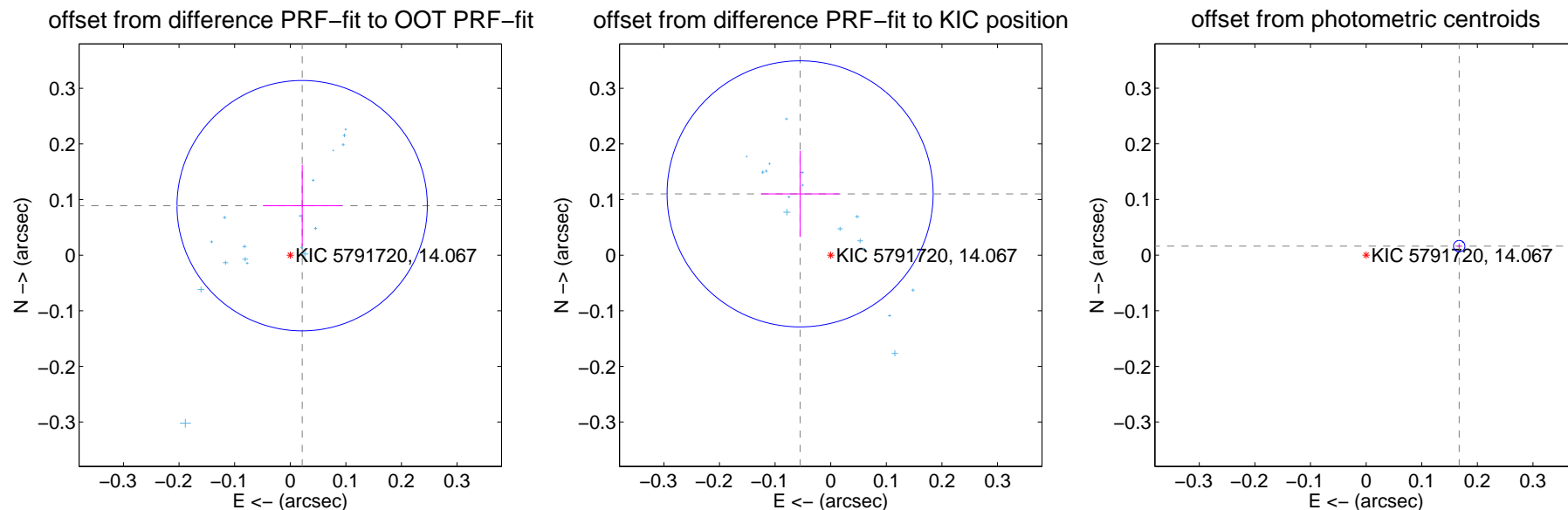
DV Centroid Data

Supplemental centroid analysis for 005791720-01. Kepler magnitude: 14.07. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

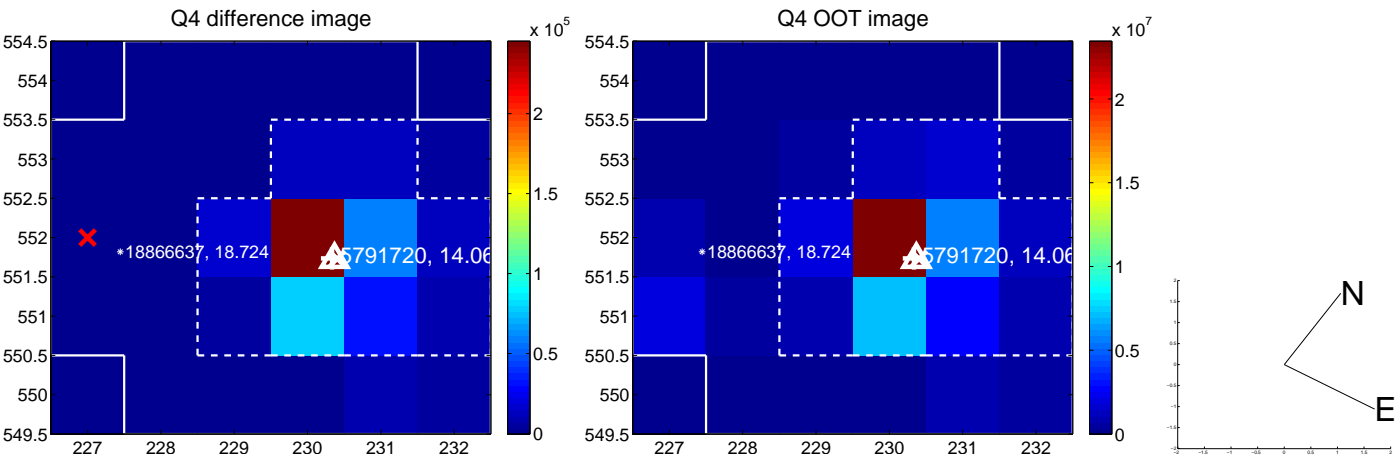
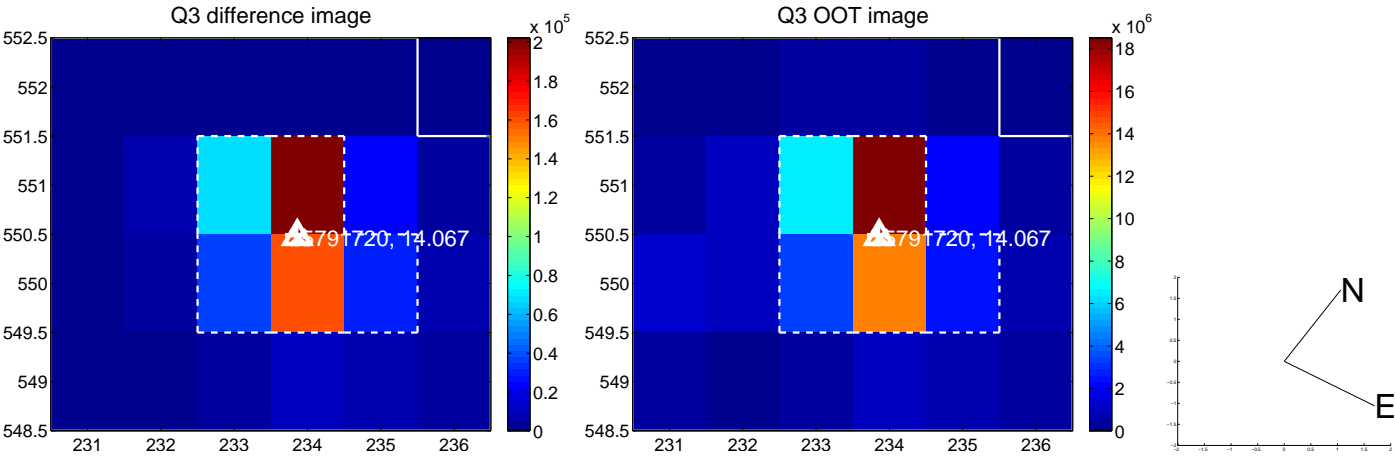
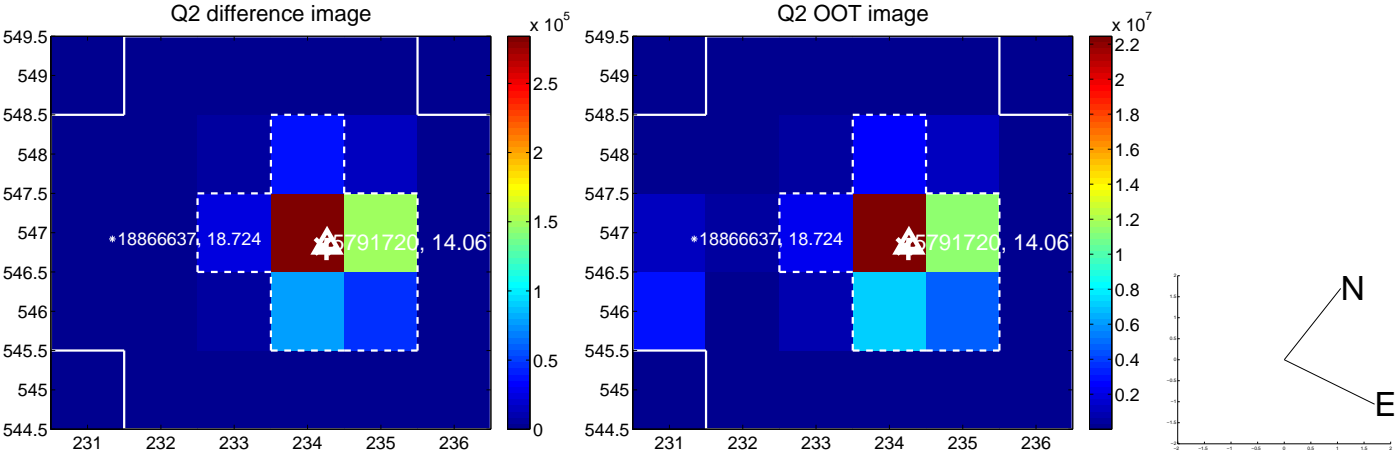
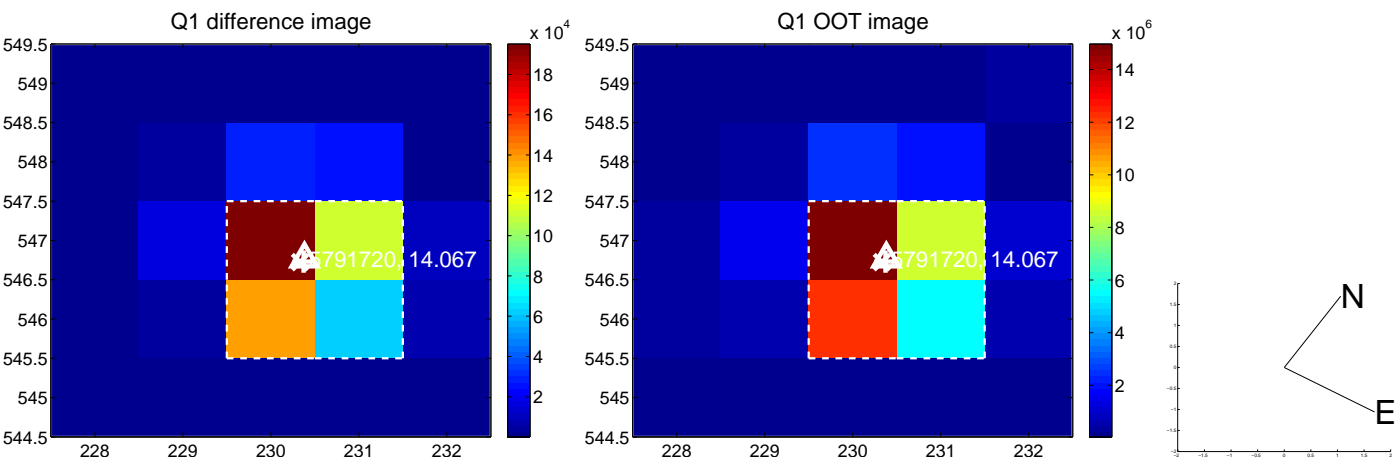
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.092 ± 0.075	1.22	-0.021 ± 0.071	0.089 ± 0.073
PRF-fit source offset from KIC position	0.123 ± 0.080	1.54	0.055 ± 0.071	0.110 ± 0.077
photometric centroid source offset	0.17 ± 0.00	49.11	-0.17 ± 0.00	0.02 ± 0.00

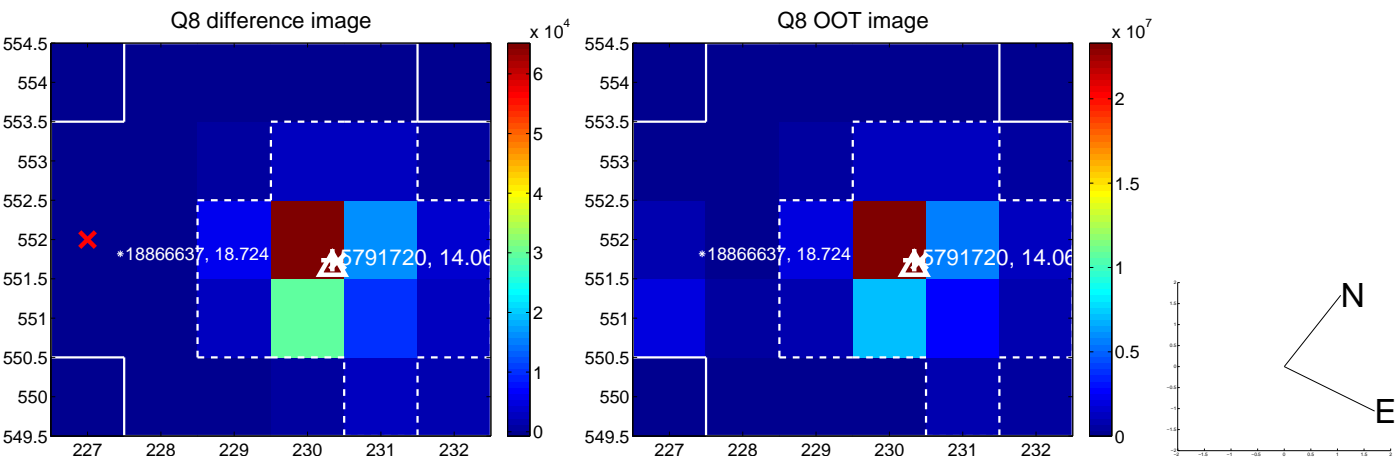
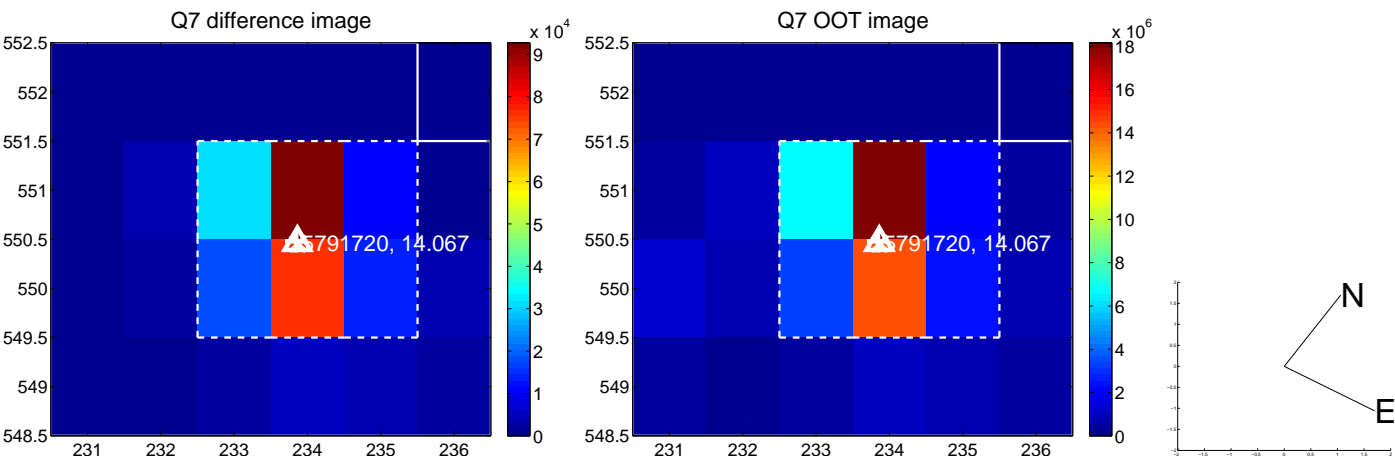
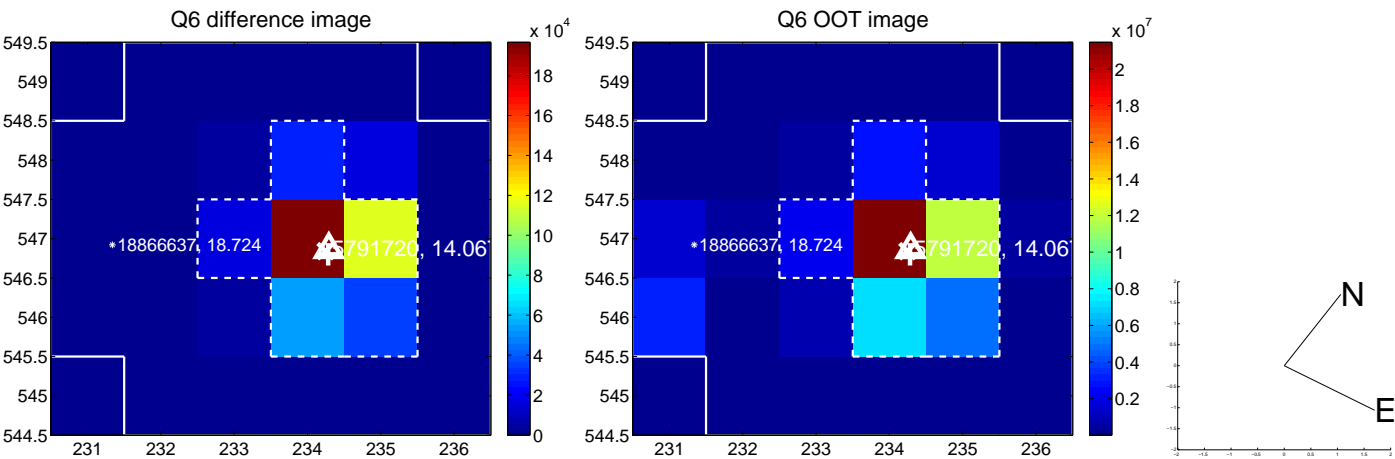
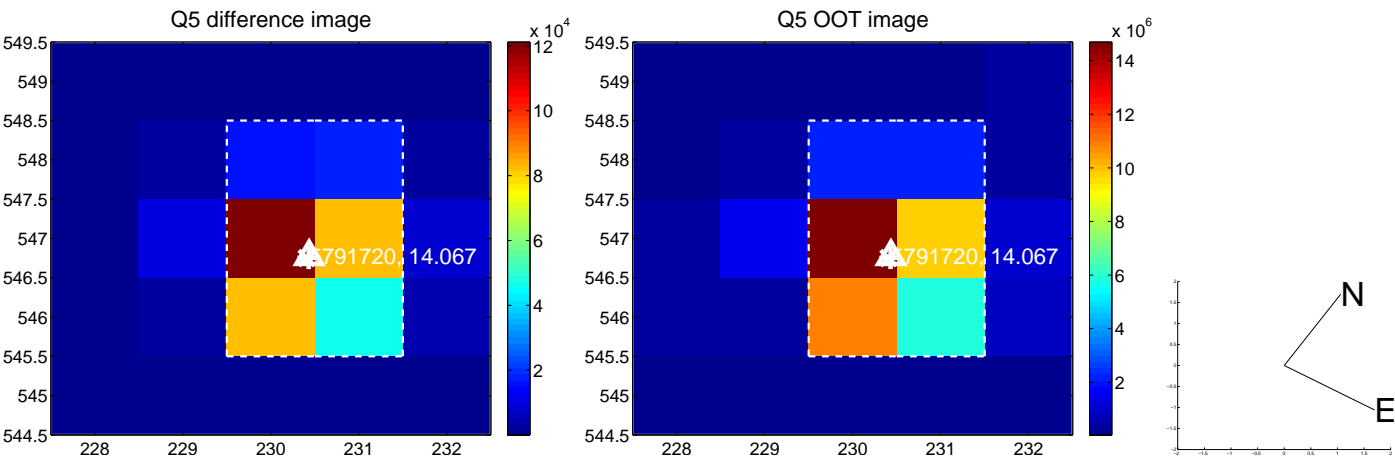


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

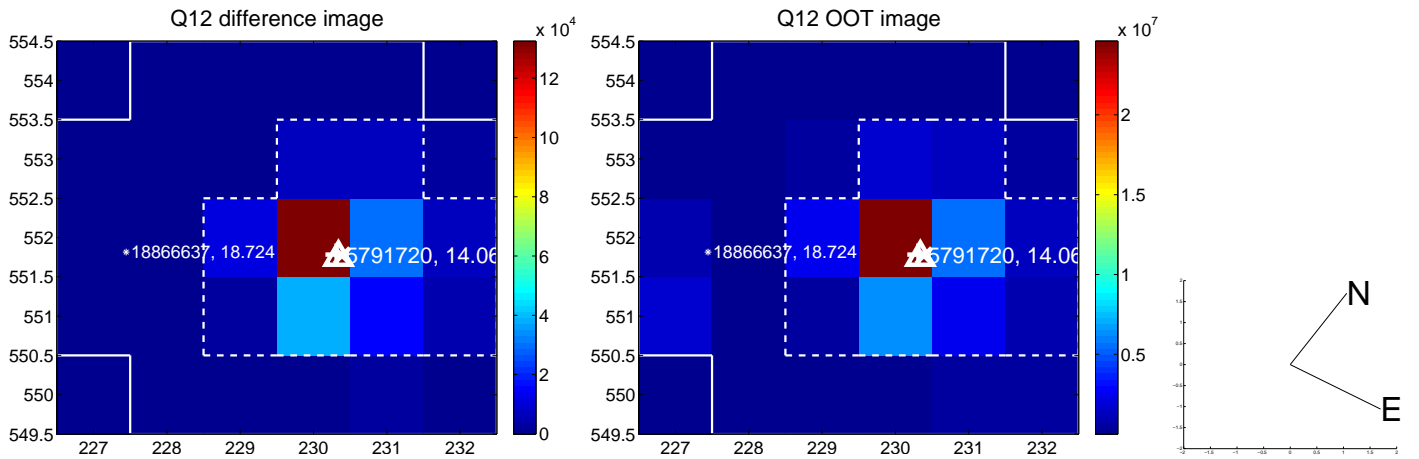
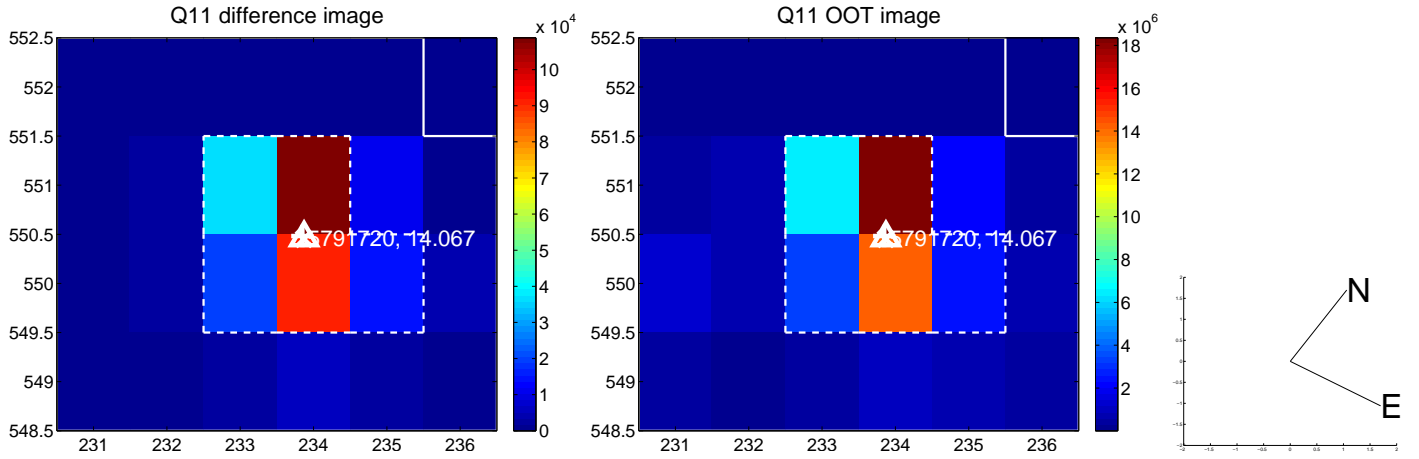
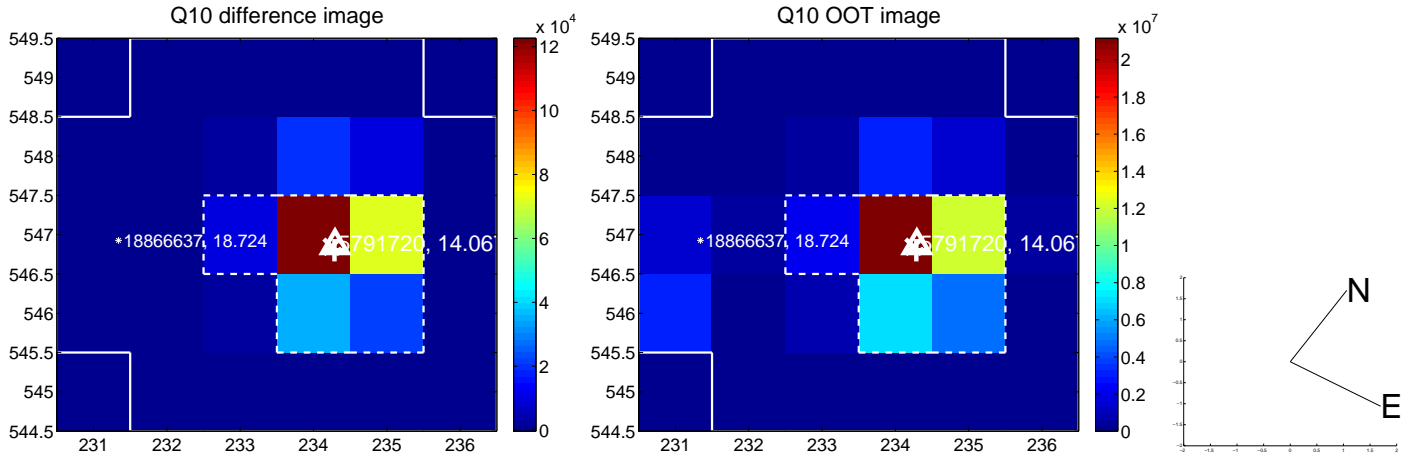
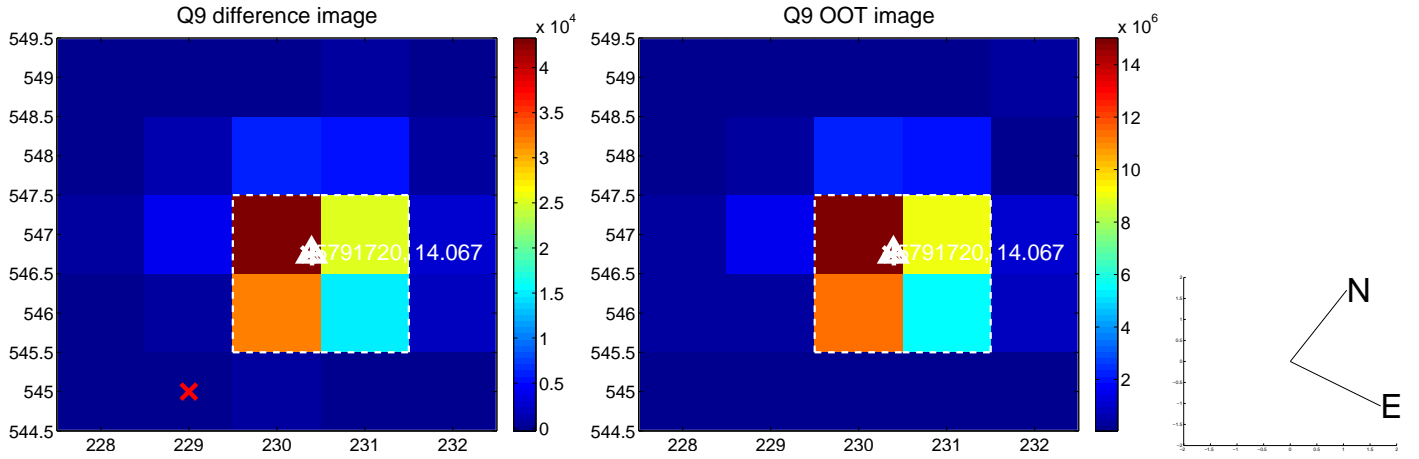
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



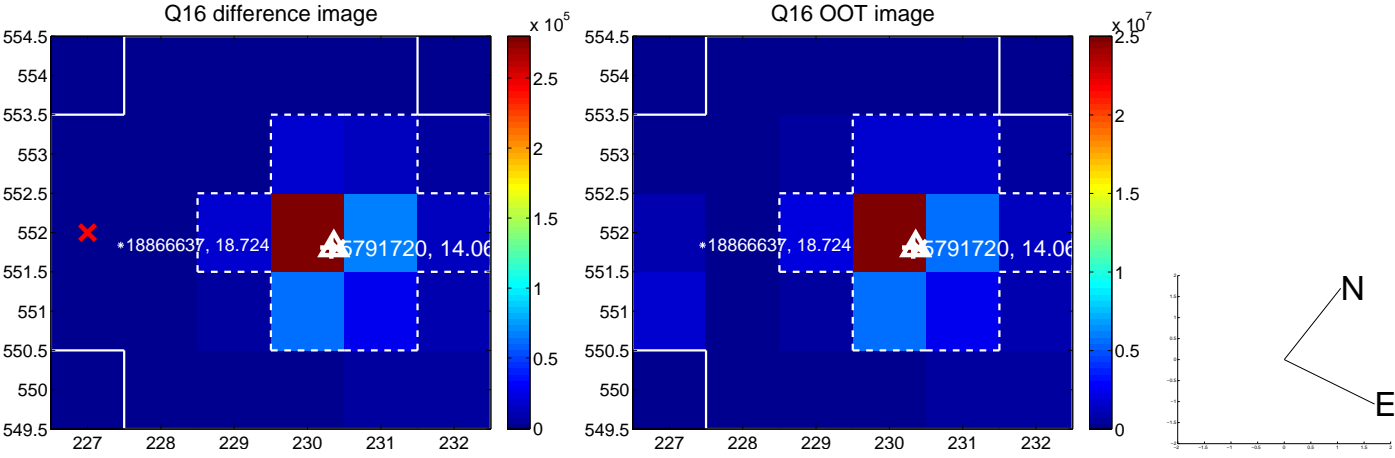
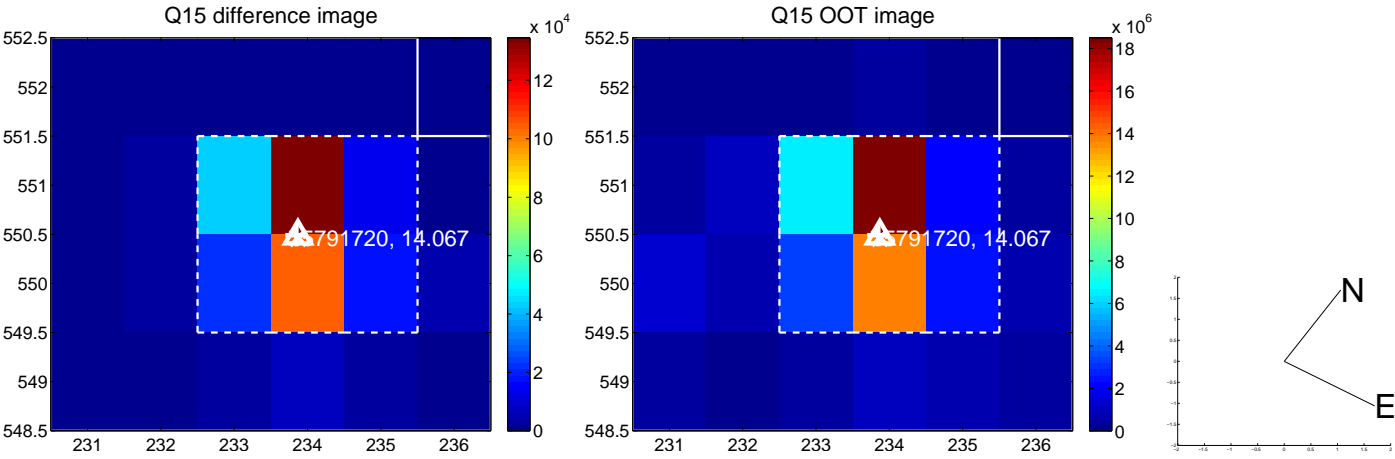
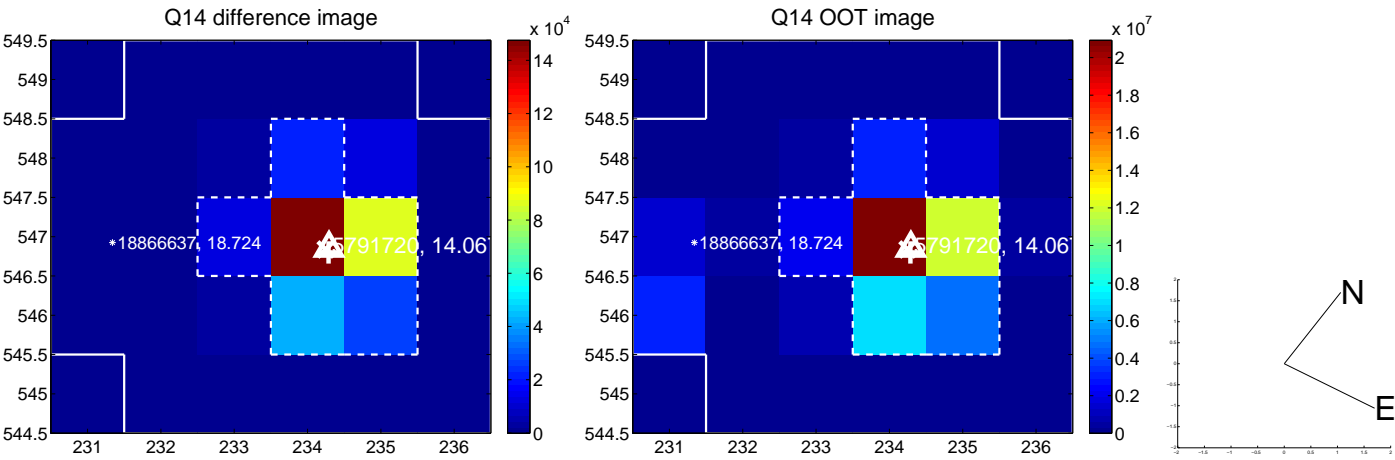
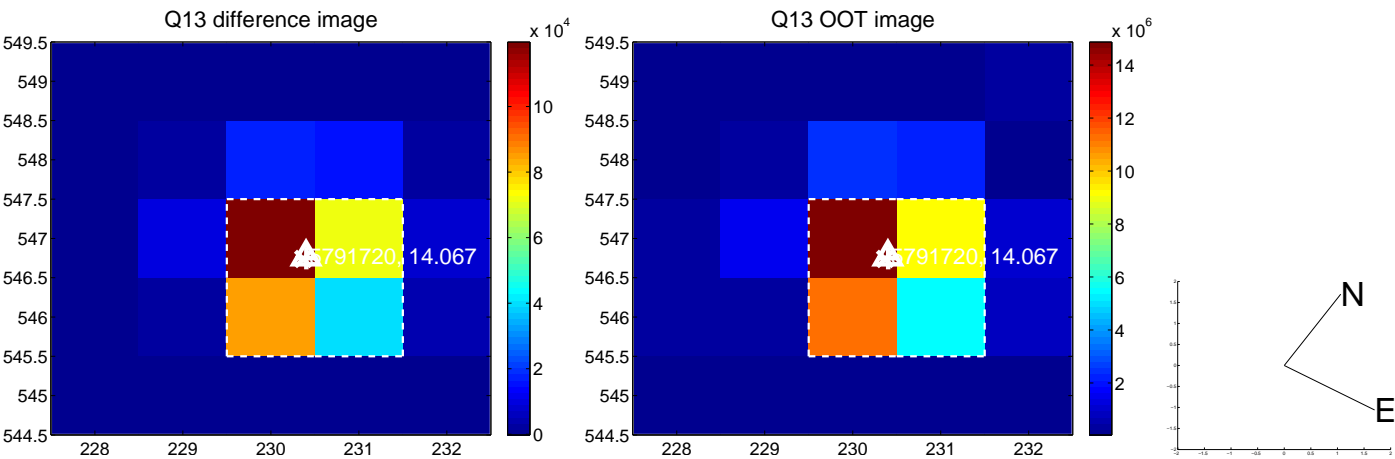
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



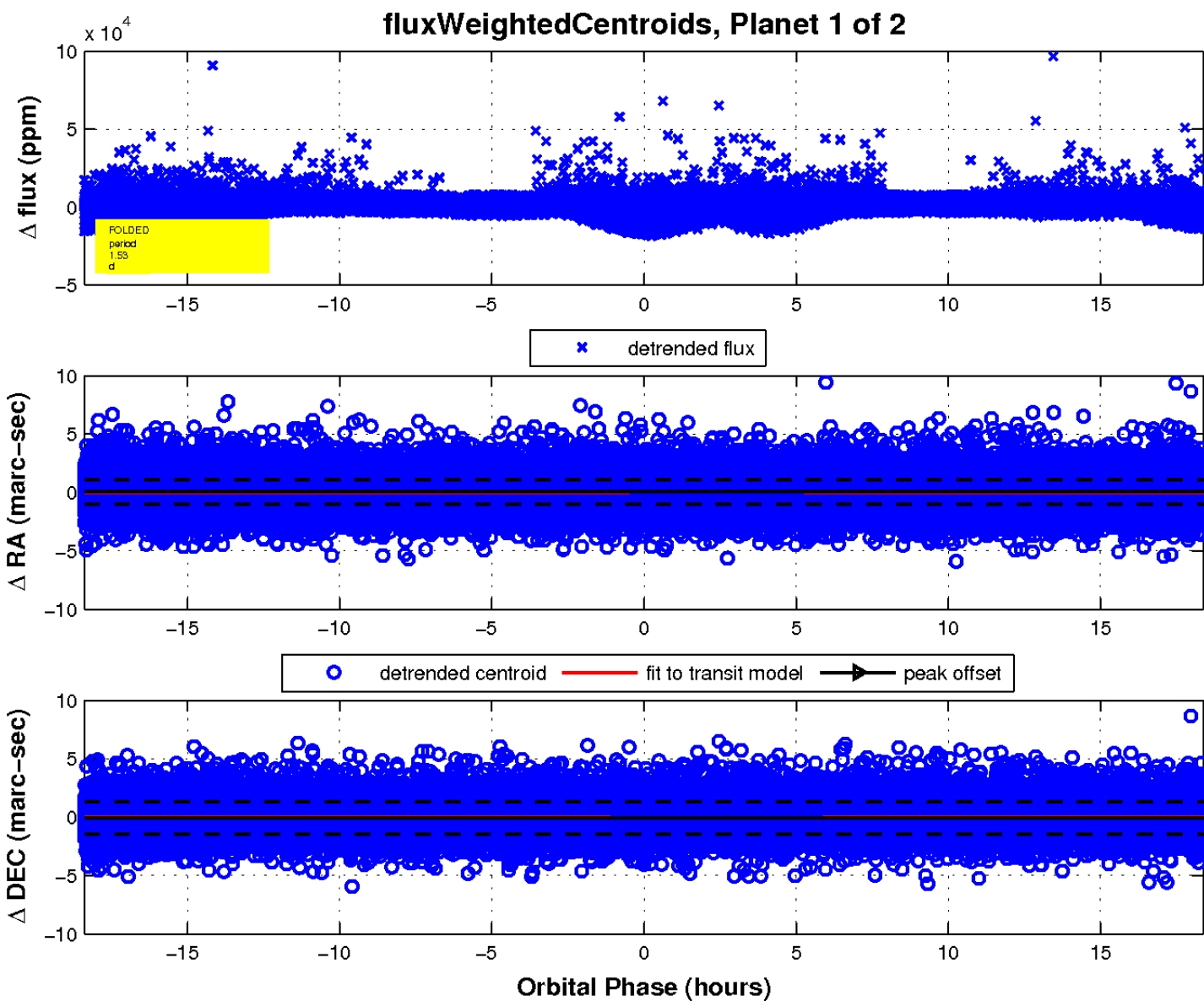
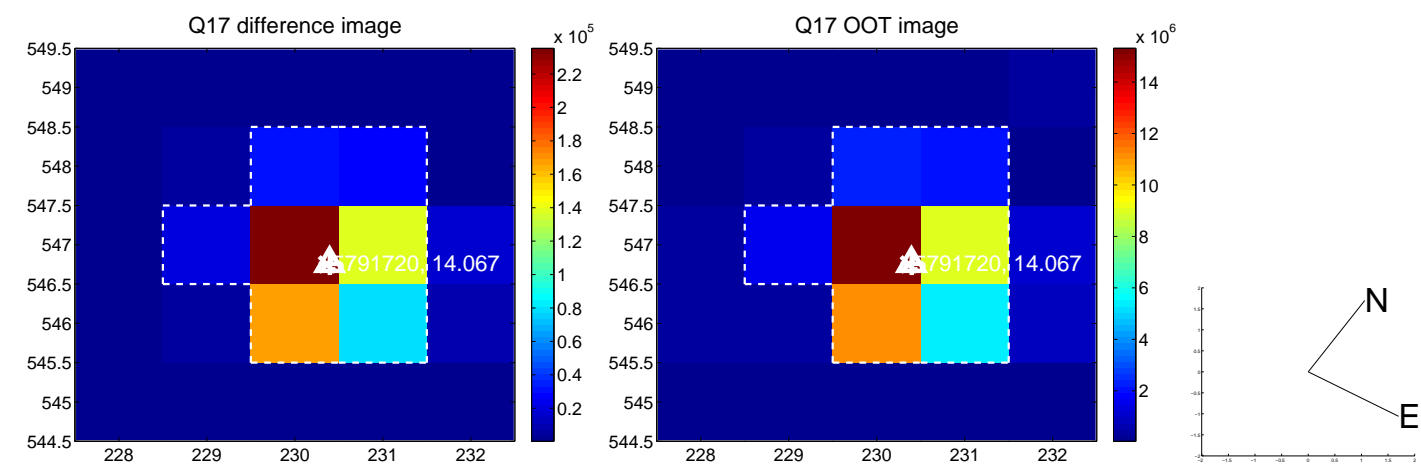
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

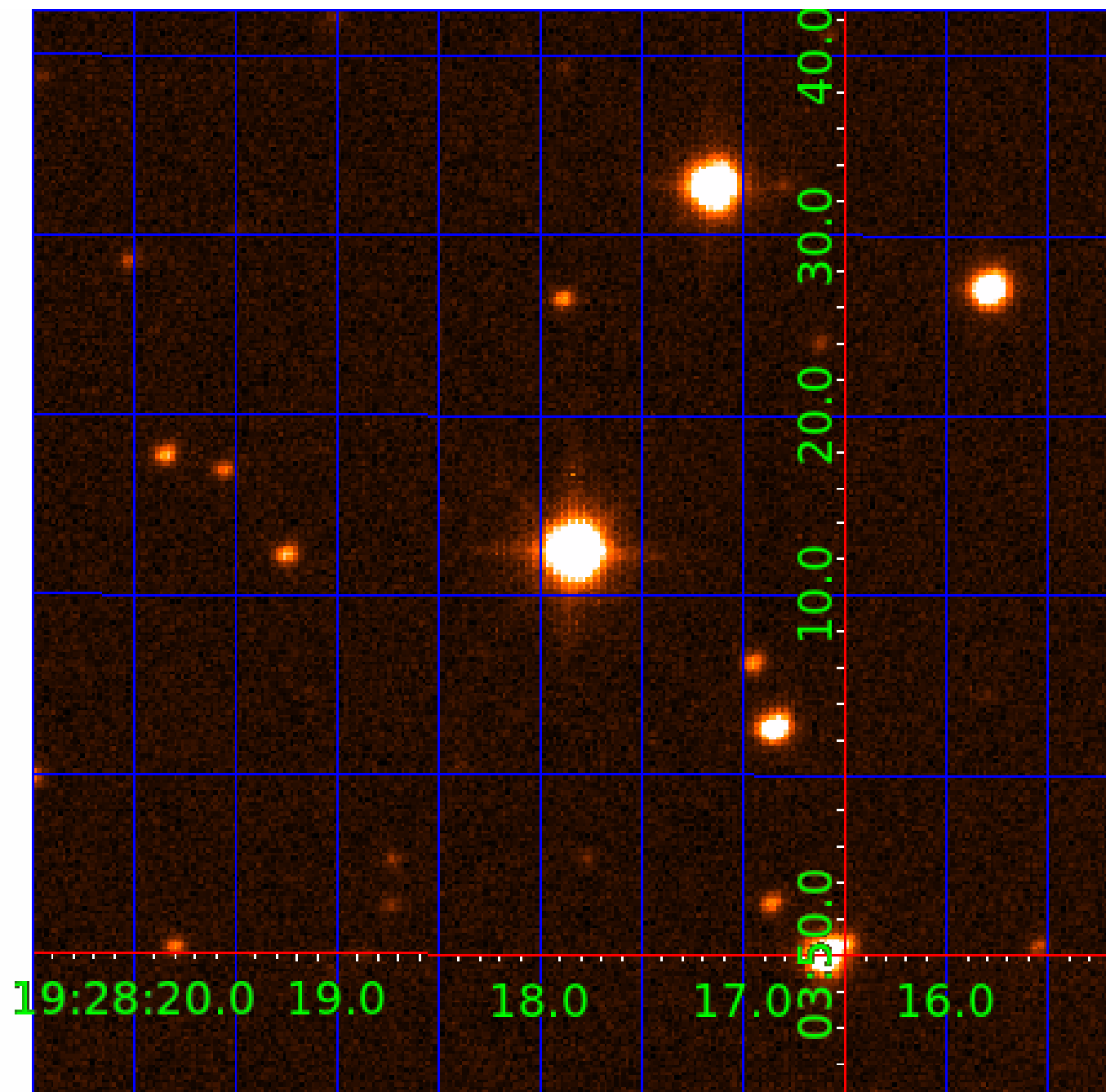


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005791720

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})
005791720-01	OBS	No	1.531706	131.984371	937.8	5.000	24.5	-1.0	0.57	3694	1.67	115.31
005791720-02	OBS	No	1.532133	132.443573	2881.4	8.166	74.9	64.4	0.57	3694	5.99	115.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005791720-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
005791720-02	OBS	FP	0.00	1	0	0	0	LPP_DV—SAME_NTL_PERIOD

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

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

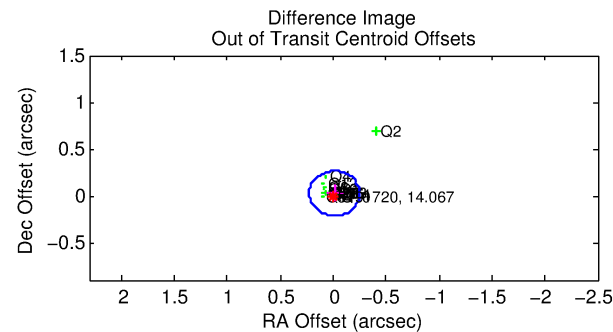
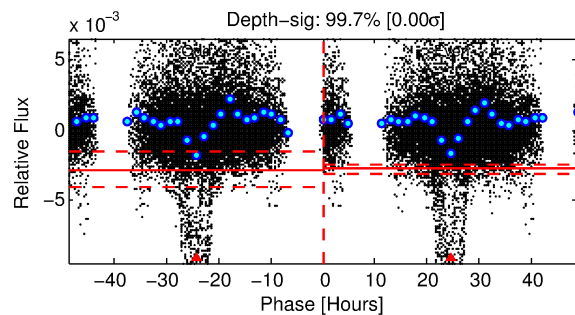
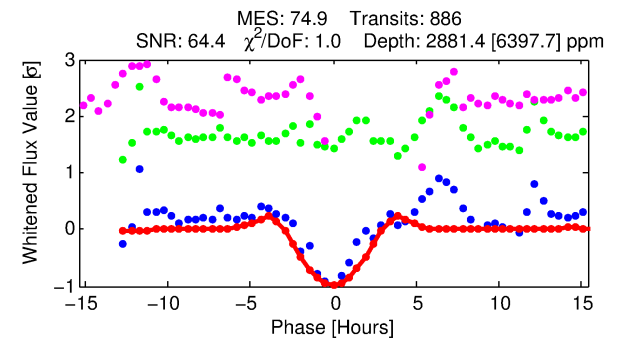
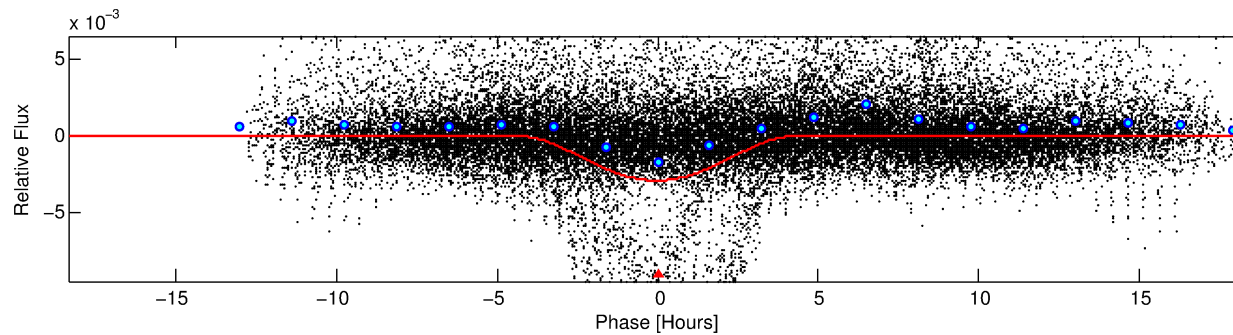
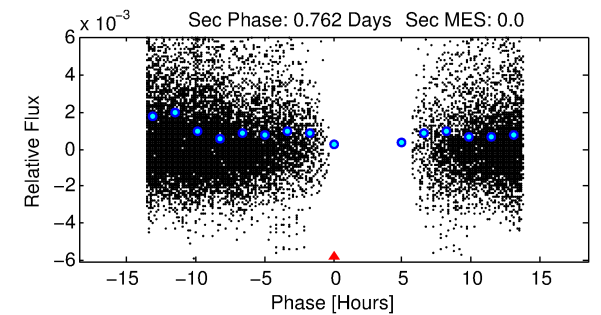
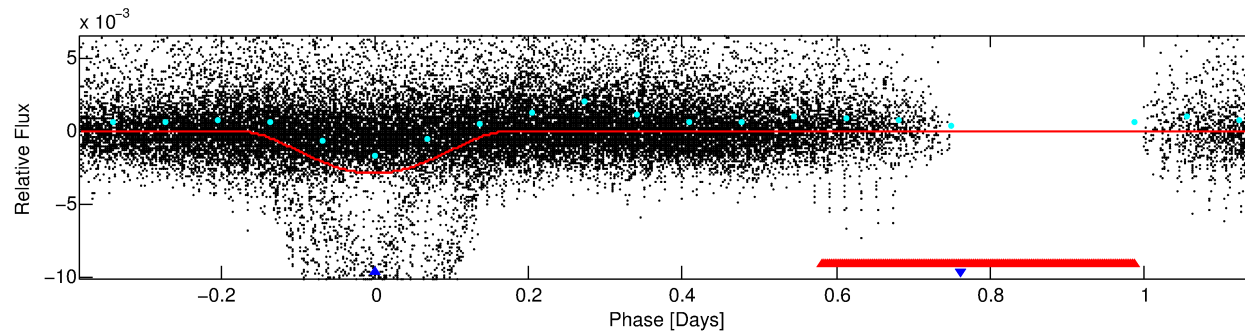
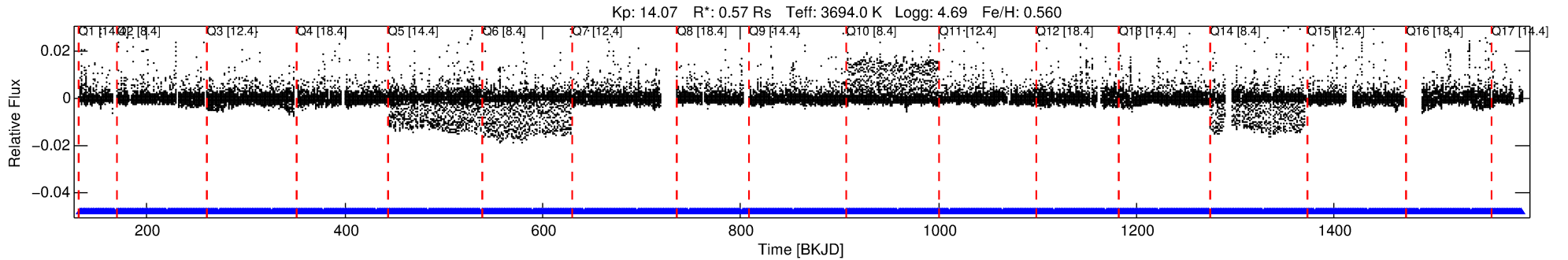
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005791720-02

No Significant Match Found

DV One-Page Summary

KIC: 5791720 Candidate: 2 of 2 Period: 1.532 d



DV Fit Results:

Period = 1.53213 [0.00000] d
Epoch = 132.4436 [0.0018] BKJD
Rp/R* = 0.0970 [0.0323]
a/R* = 1.22 [0.01]
b = 1.00 [0.09]
Seff = 115.27 [24.88]
Teff = 836 [45] K
Rp = 5.99 [2.15] Re
a = 0.0215 [0.0023] AU
Ag = N/A
Teffp = N/A

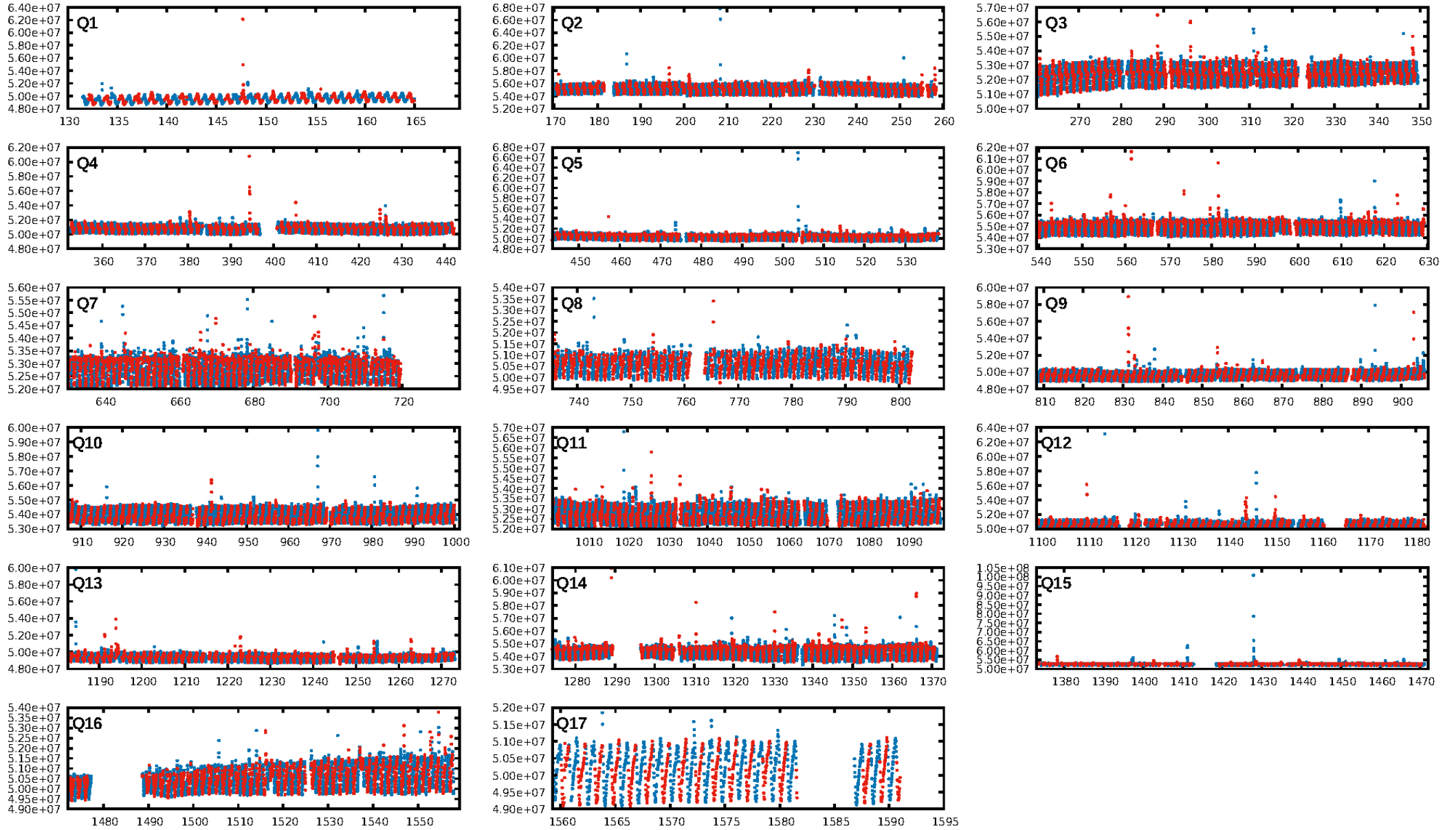
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [847/847]
GhostDiagnostic-chr: 7.457
Centroid-sig: 83.3%
Centroid-so: 0.168 arcsec [10.53σ]
OotOffset-rm: 0.027 arcsec [0.34σ]
KicOffset-rm: 0.091 arcsec [1.26σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

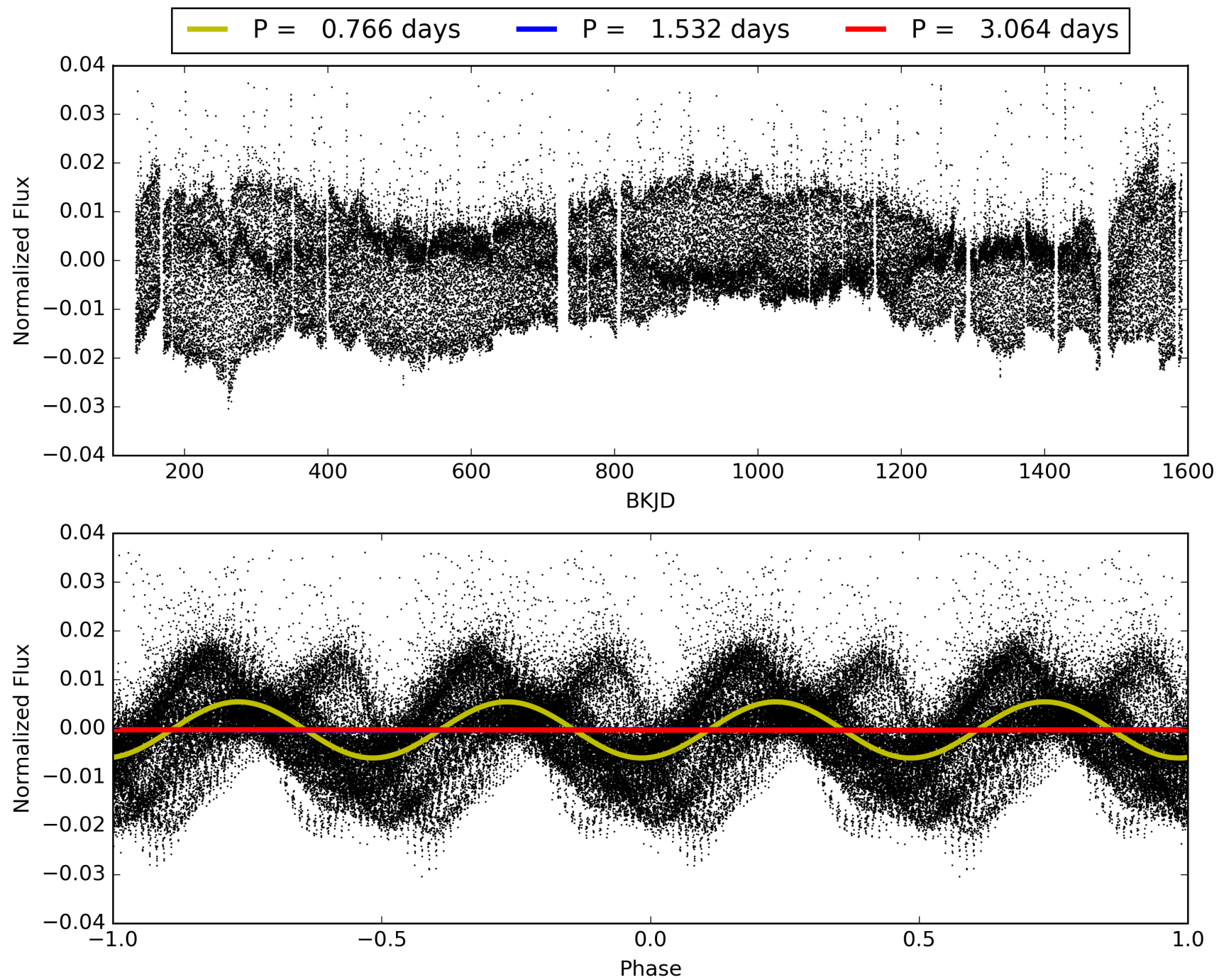
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:02:06 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005791720-02, PDC Light Curves

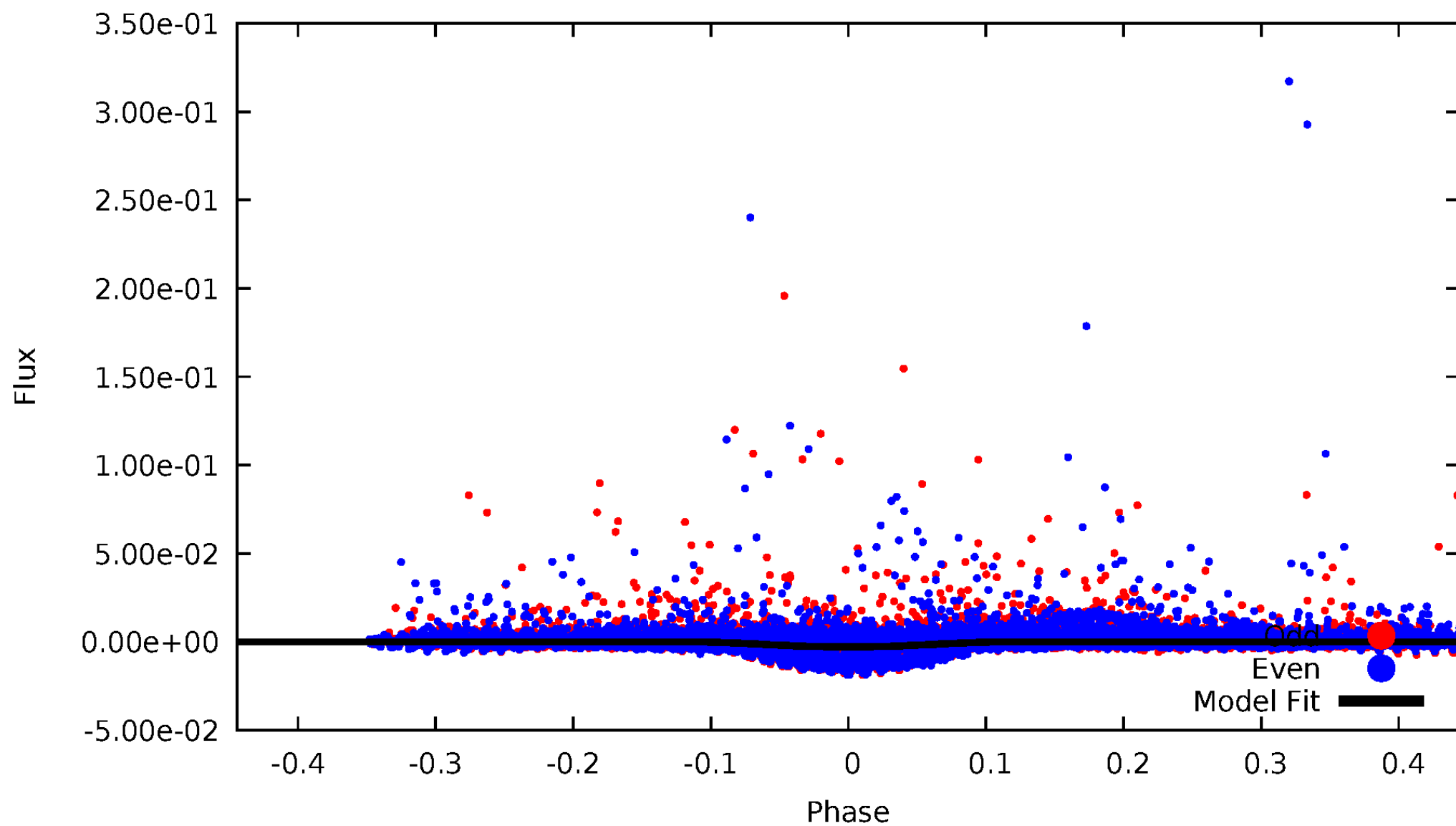


TCE 005791720-02



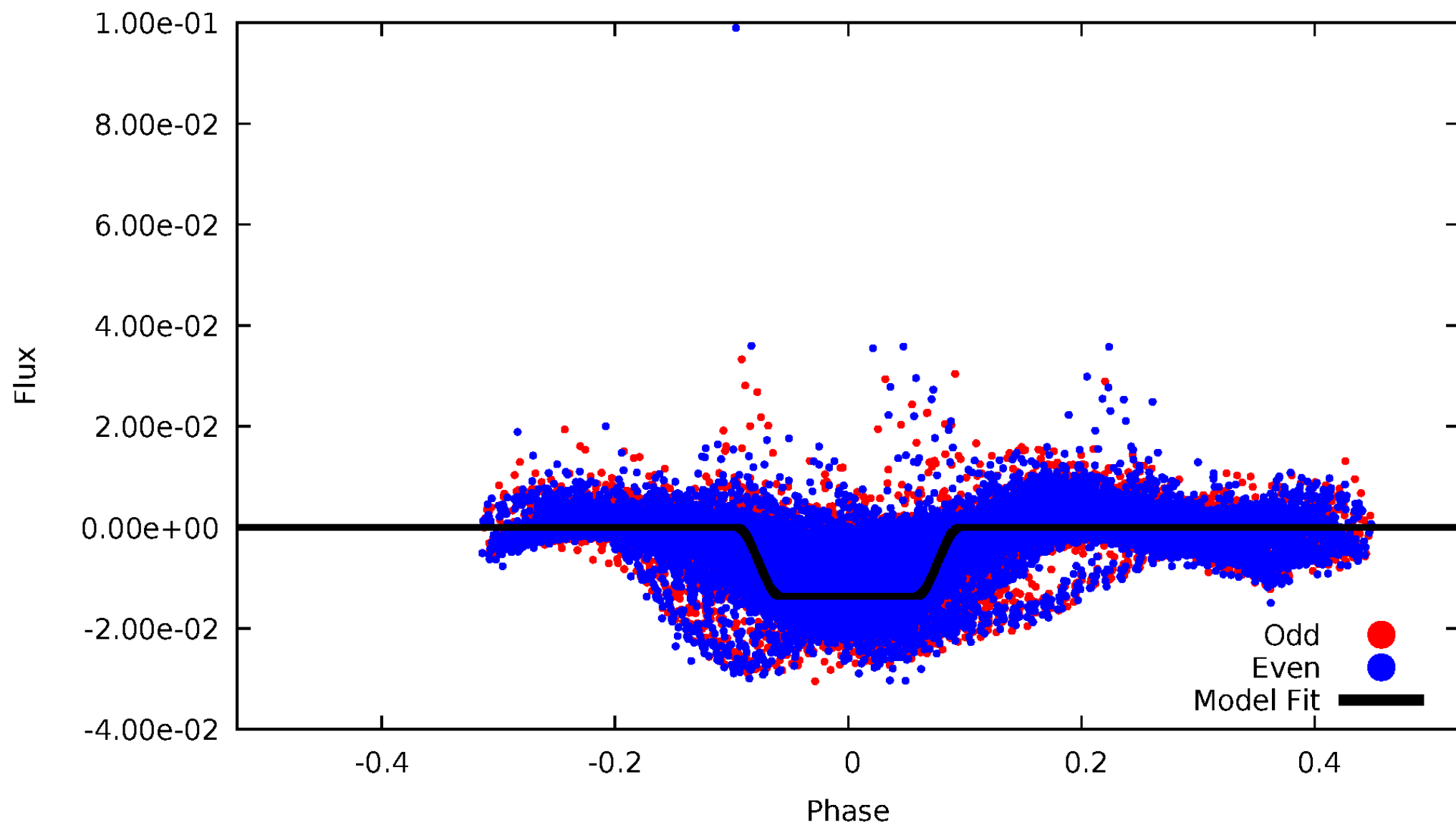
DV Odd/Even

TCE 005791720-02



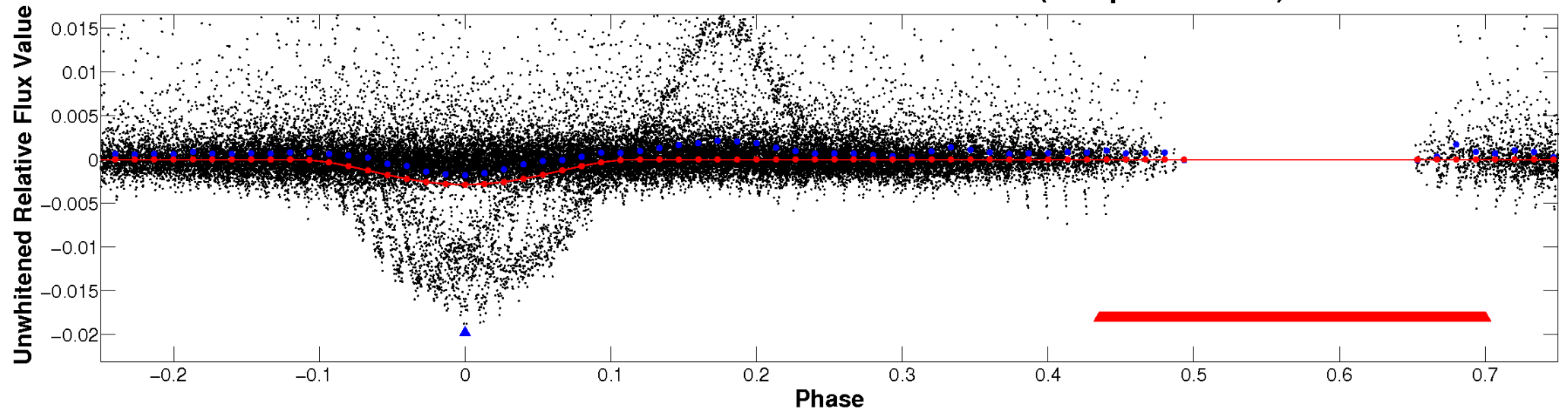
ALT Odd/Even

TCE 005791720-02

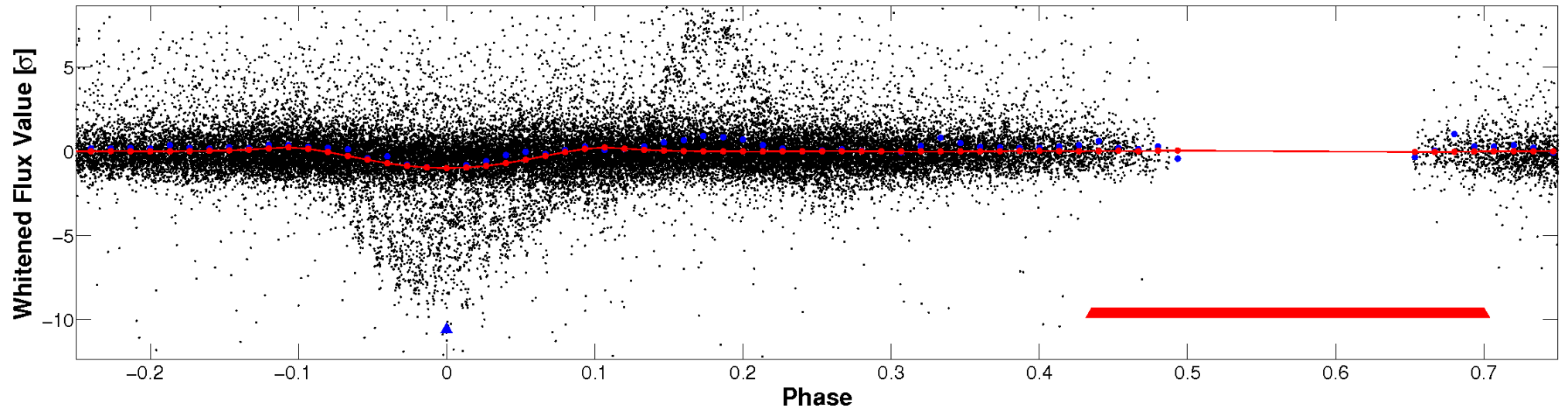


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

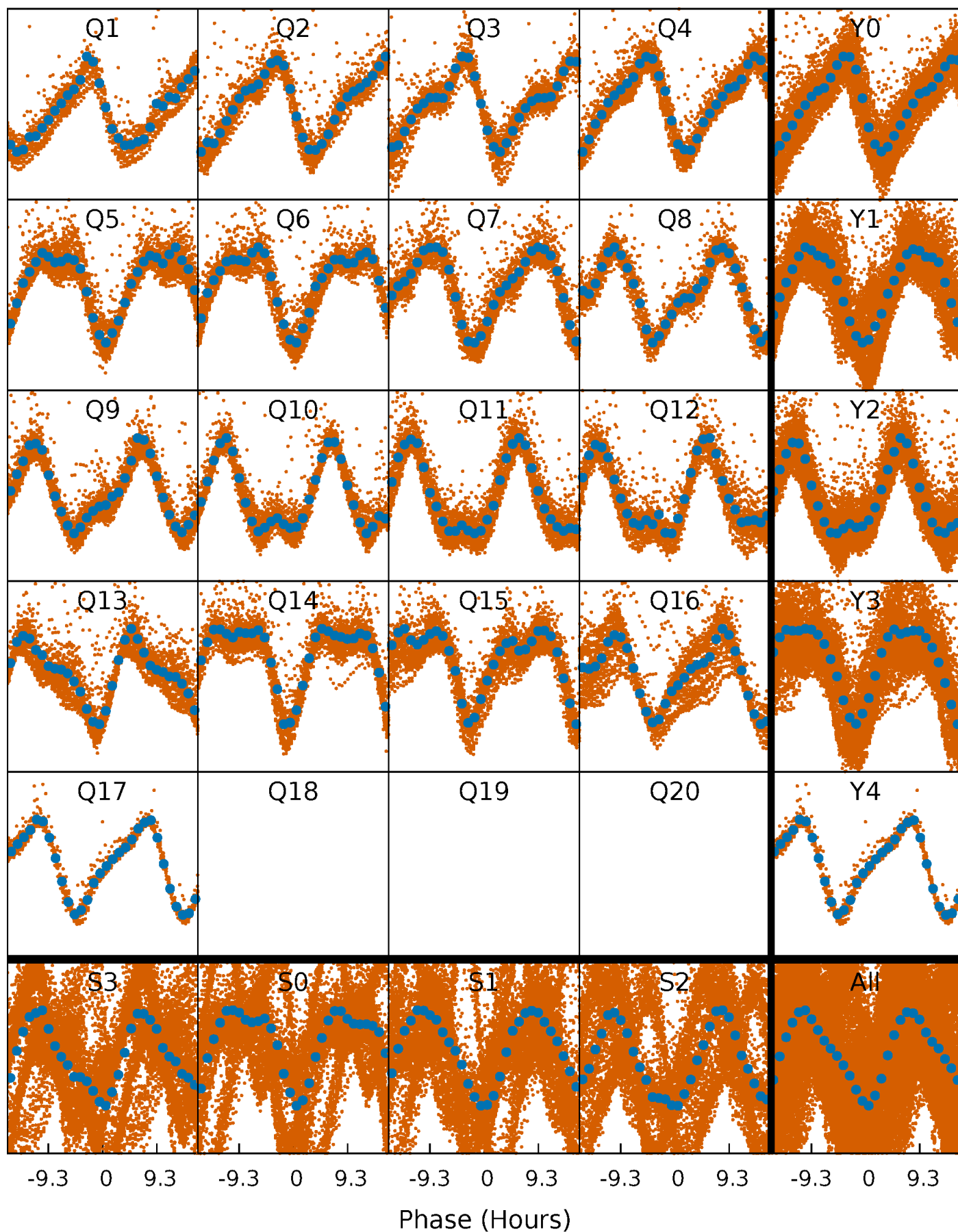


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



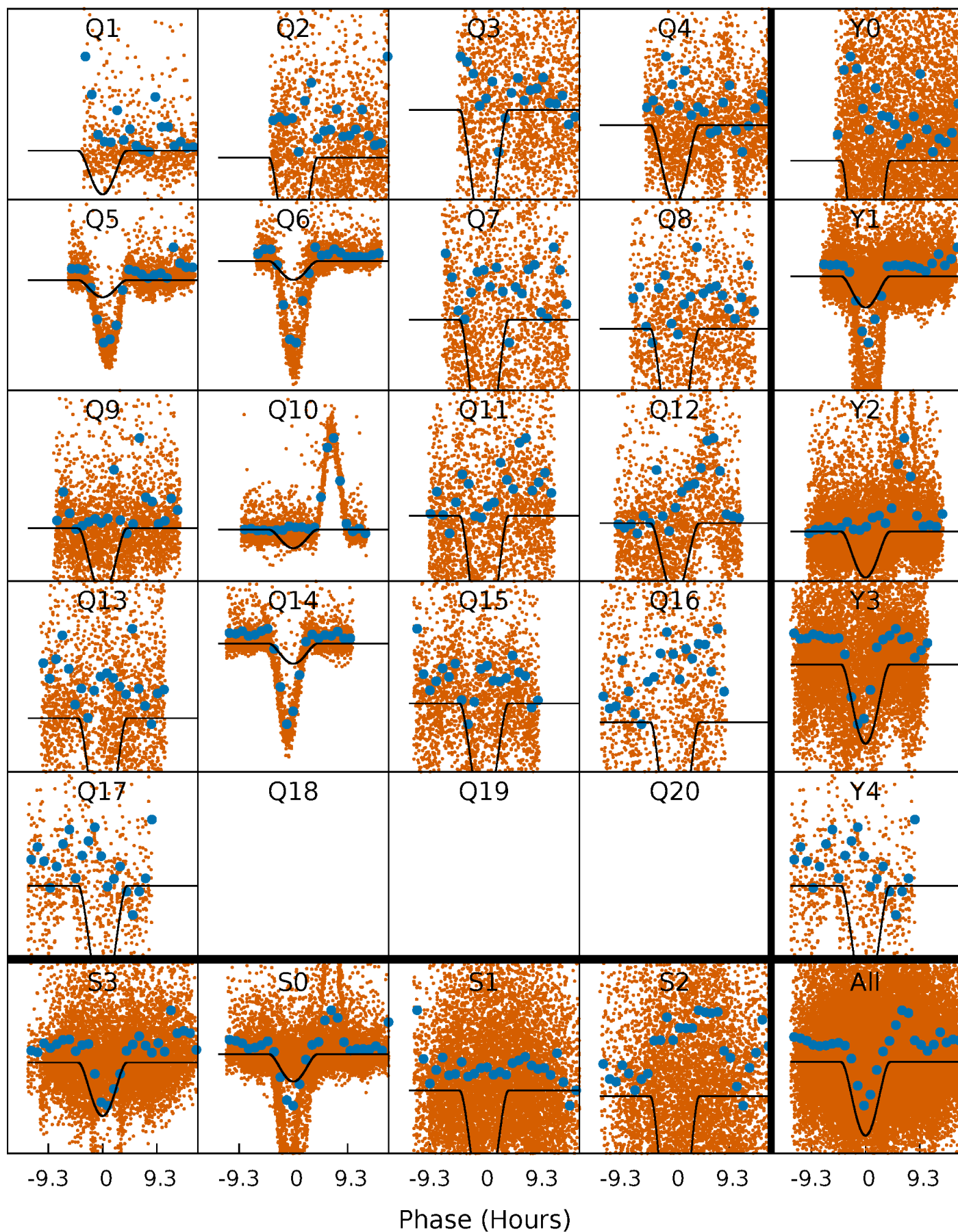
PDC Quarter-Phased Transit Curves

TCE 005791720-02 P= 1.532133 Days $T_0=132.443573$ (BKJD)



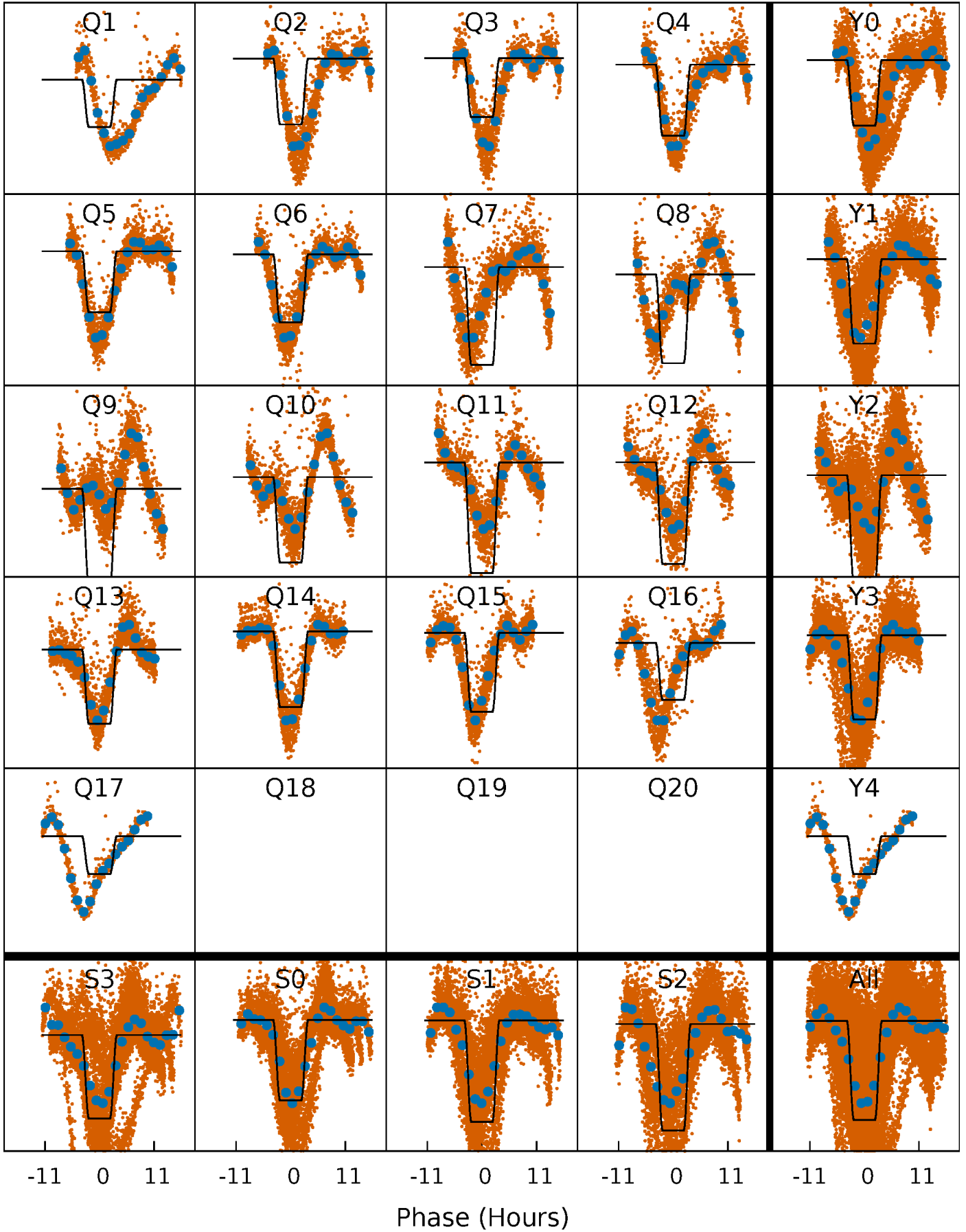
DV Quarter-Phased Transit Curves

TCE 005791720-02 P= 1.532133 Days $T_0=132.443573$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

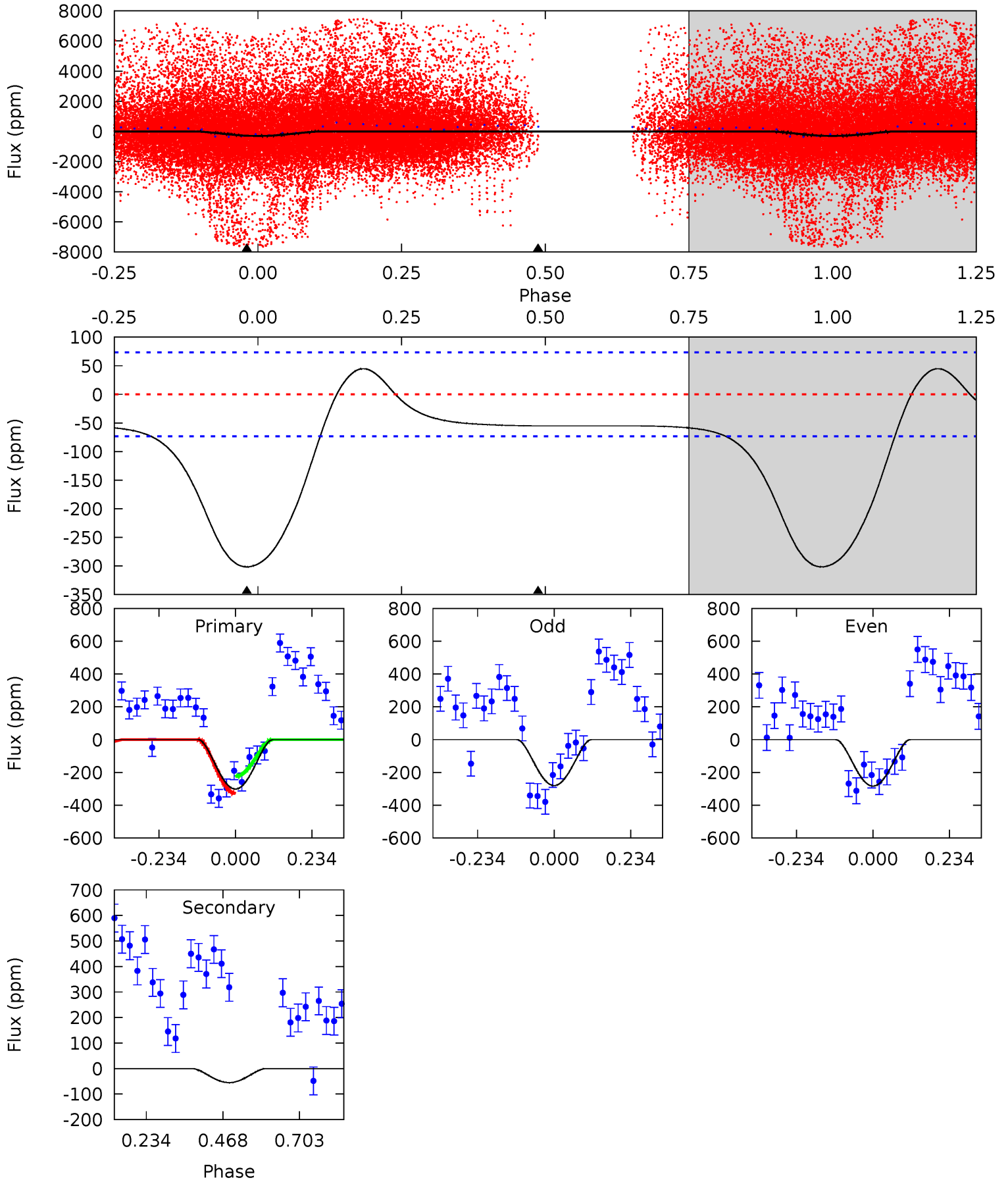
TCE 005791720-02 P= 1.532012 Days $T_0=132.503800$ (BKJD)



DV Model-Shift Uniqueness Test

005791720-02, P = 1.532133 Days, E = 130.911440 Days

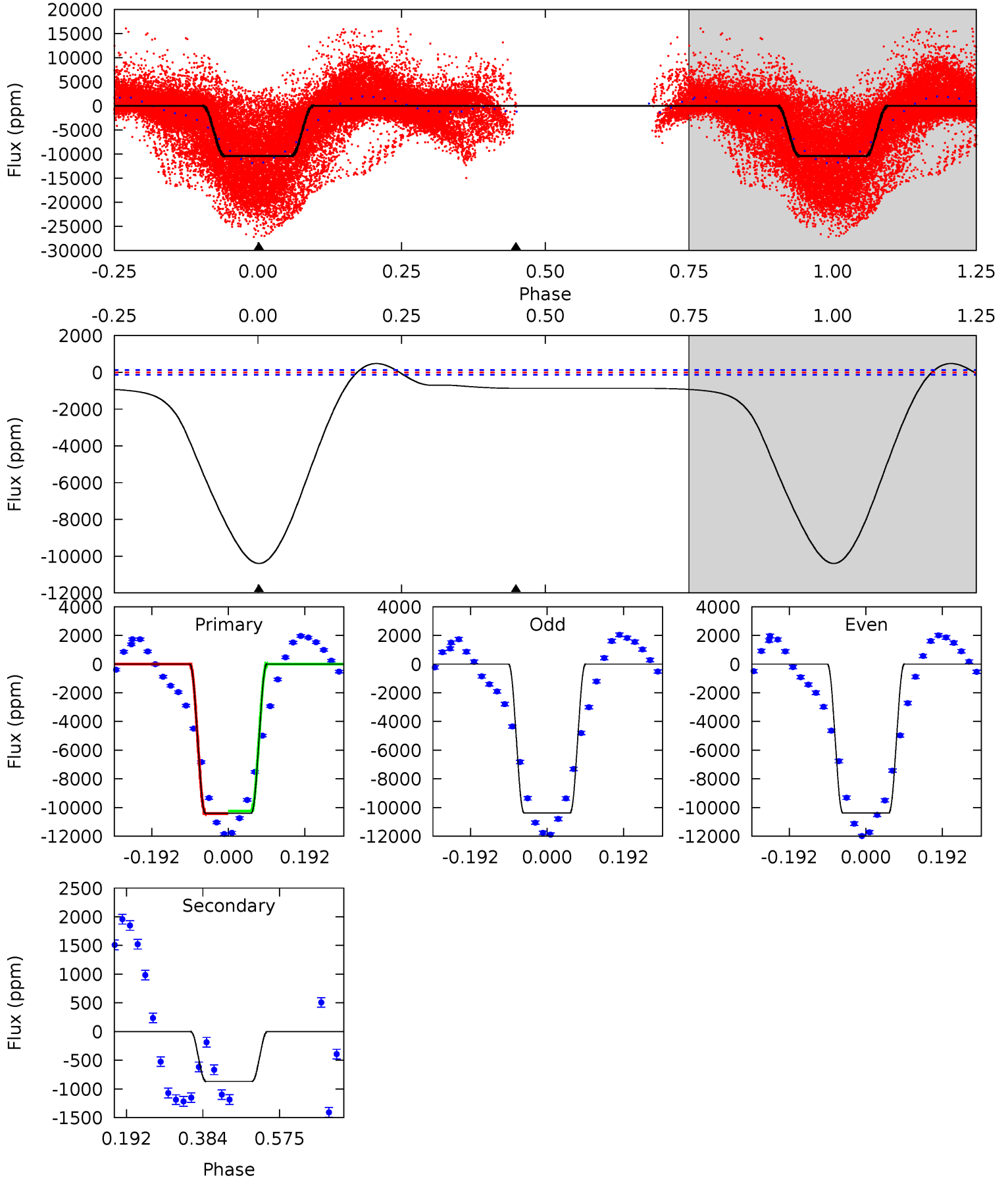
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	3.29	0	0	4.38	1.19	1.70	18.0	18.0	3.29	3.29	0.10	4.73	0.13	3.16



Alt Model-Shift Uniqueness Test

005791720-02, P = 1.532012 Days, E = 130.971788 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
356.6	29.8	0	0	4.43	1.31	22.0	356.6	356.6	29.8	29.8	0.11	0.96	0.04	2.01



Stellar Parameters For KIC 005791720

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3694^{+117}_{-147}	$4.686^{+0.075}_{-0.020}$	$0.560^{+0.050}_{-0.300}$	$0.566^{+0.032}_{-0.076}$	$0.567^{+0.036}_{-0.067}$	$4.400^{+1.720}_{-0.431}$
	+3%/-4%	+2%/-0%	+9%/-54%	+6%/-13%	+6%/-12%	+39%/-10%
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 005791720-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-55 ± 17	$5.82^{+2.10}_{-1.99}$	1155^{+42}_{-53}	1685^{+342}_{-3349}	$0.401^{+0.601}_{-0.192}$
Alt.	-869 ± 29	$6.96^{+2.13}_{-1.89}$	1154^{+44}_{-52}	2486^{+235}_{-173}	$4.589^{+4.155}_{-1.866}$

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 $A_{obs} \gg 1.0$

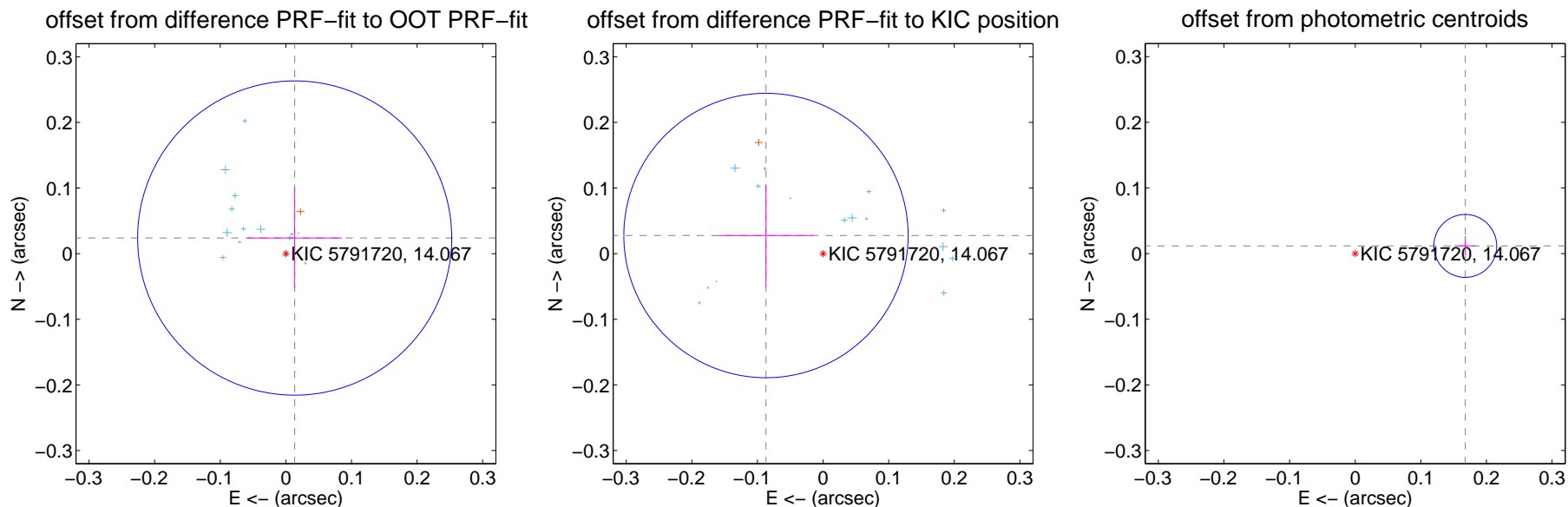
DV Centroid Data

Supplemental centroid analysis for 005791720-02. Kepler magnitude: 14.07. Transit SNR 64.42

There are 15 quarters with good PRF difference image offsets

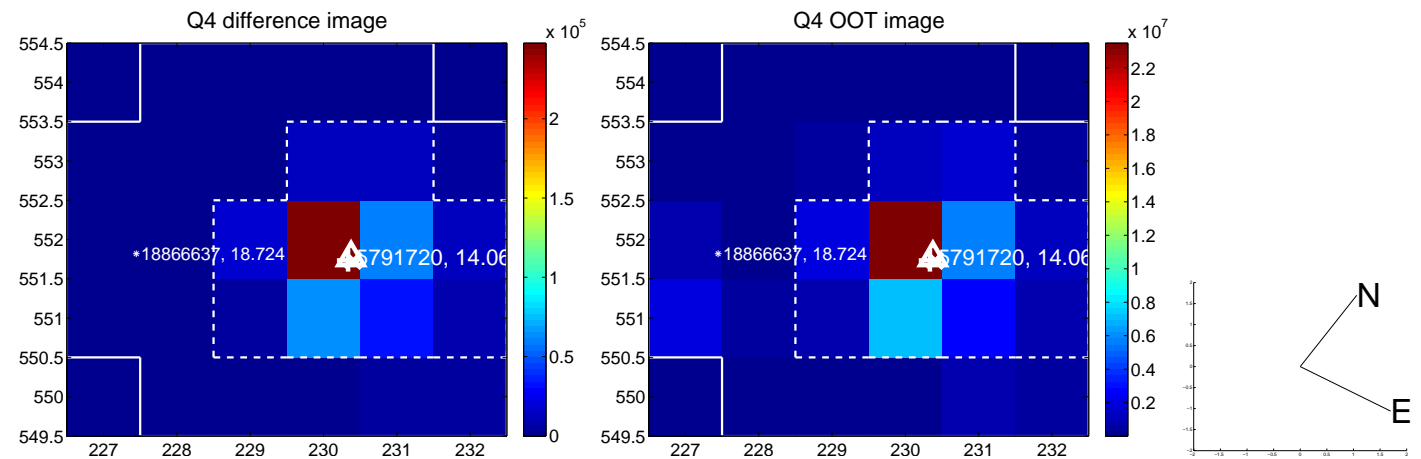
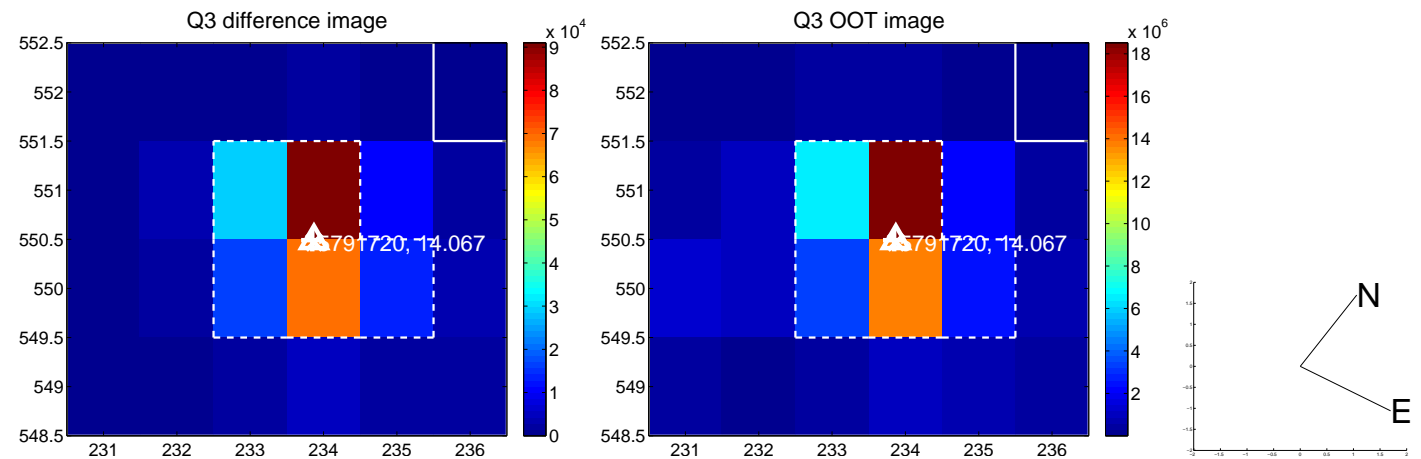
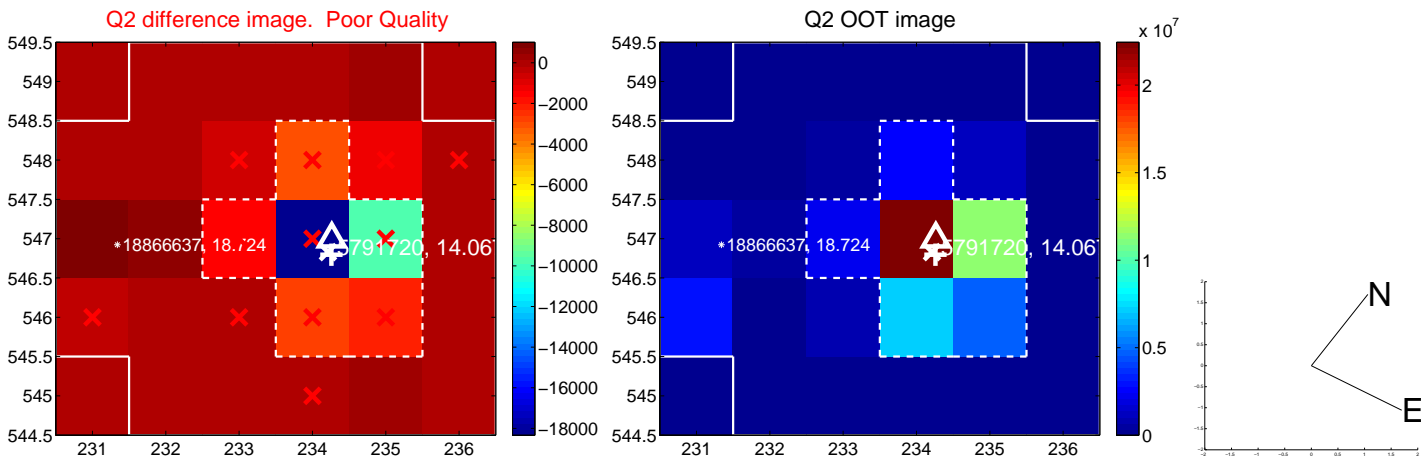
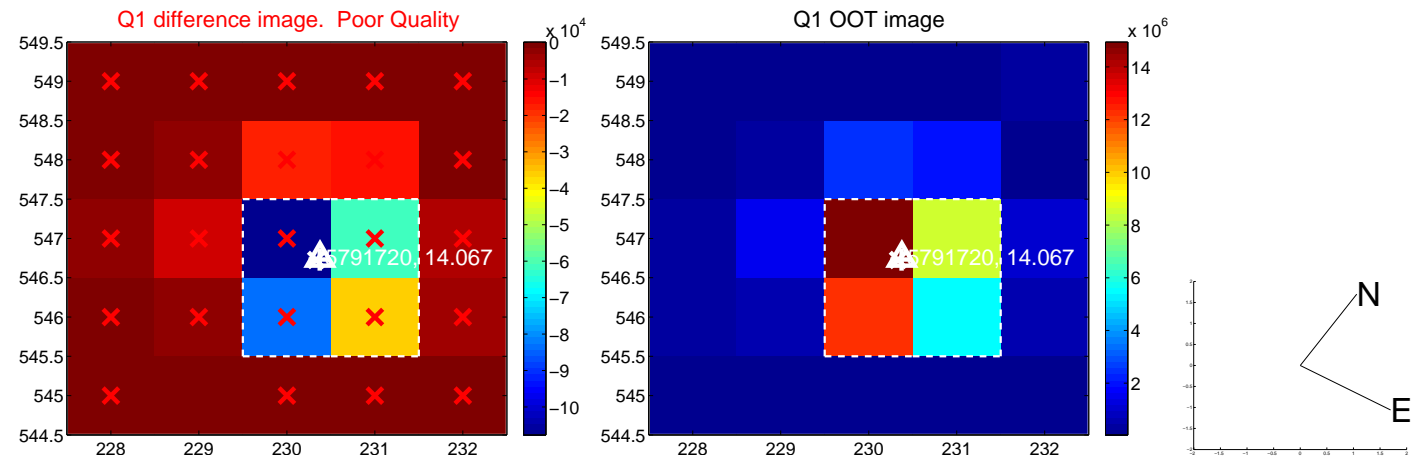
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.027 ± 0.080	0.34	-0.013 ± 0.072	0.024 ± 0.076
PRF-fit source offset from KIC position	0.091 ± 0.072	1.26	0.087 ± 0.073	0.028 ± 0.078
photometric centroid source offset	0.17 ± 0.02	10.53	-0.17 ± 0.02	0.01 ± 0.01

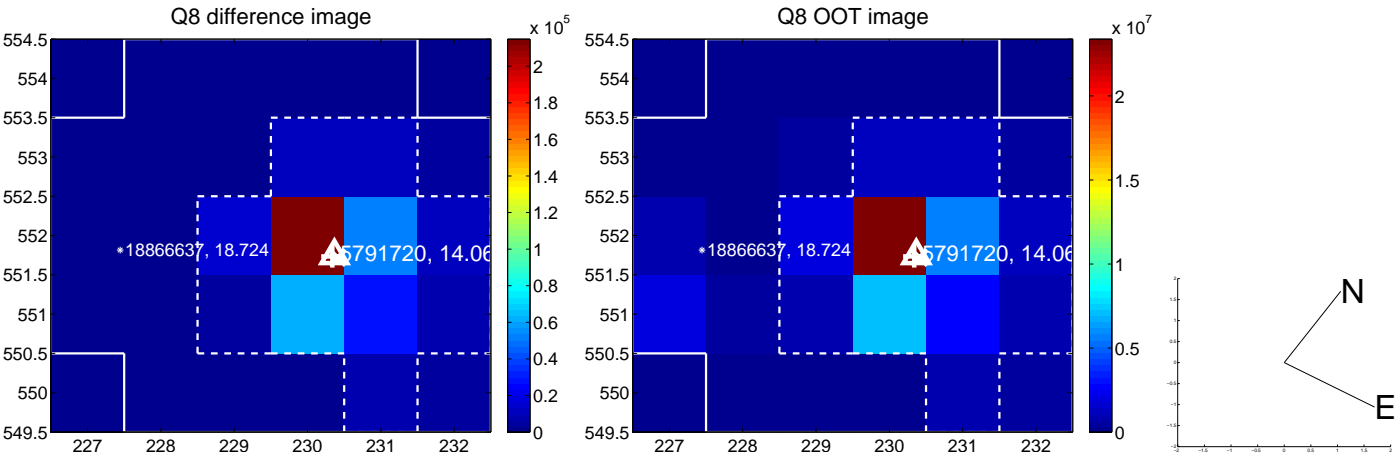
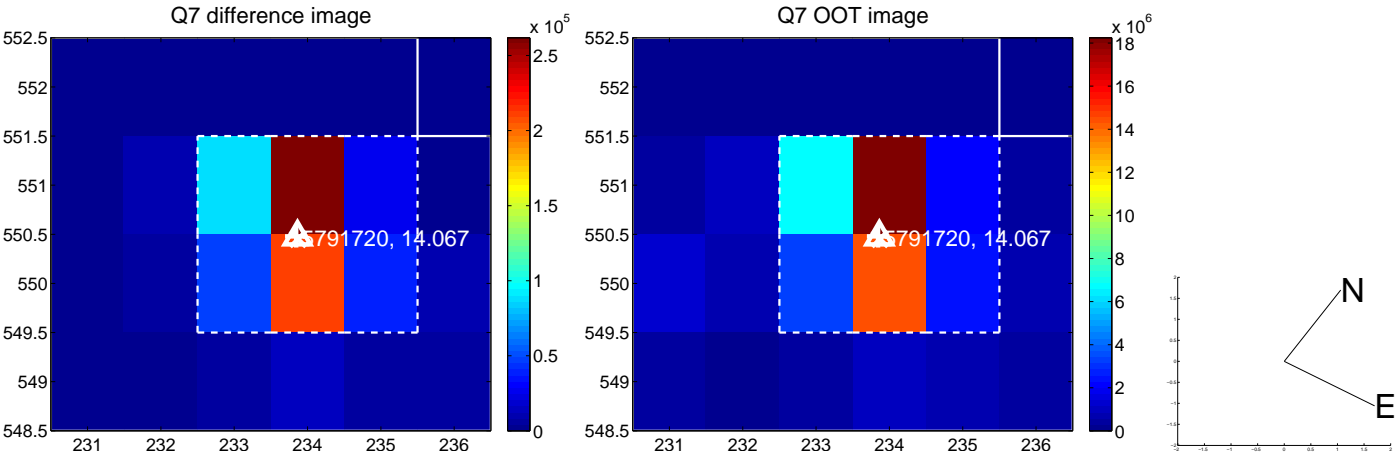
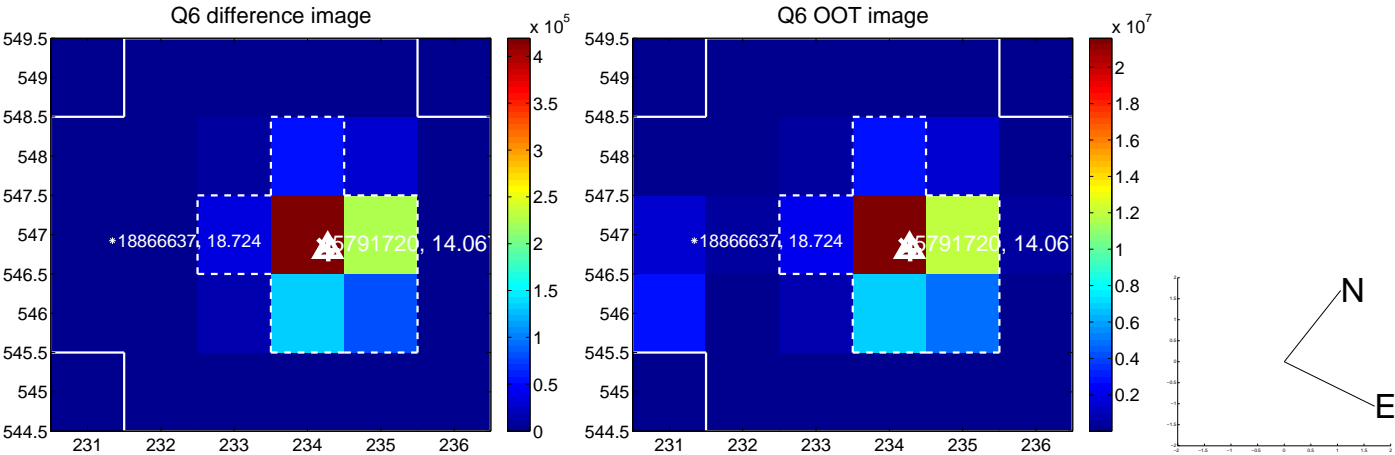
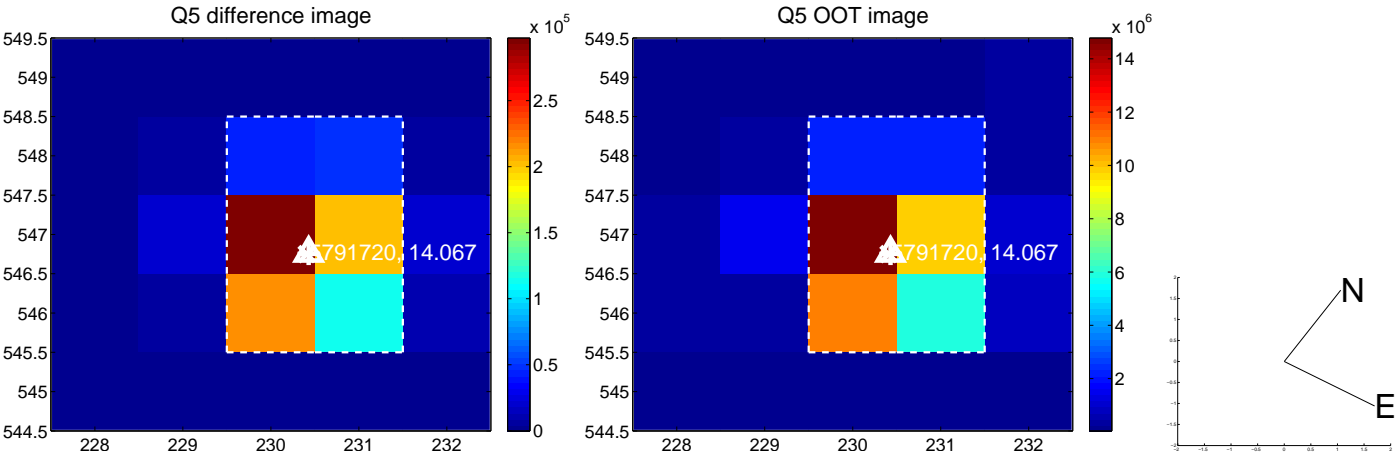


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

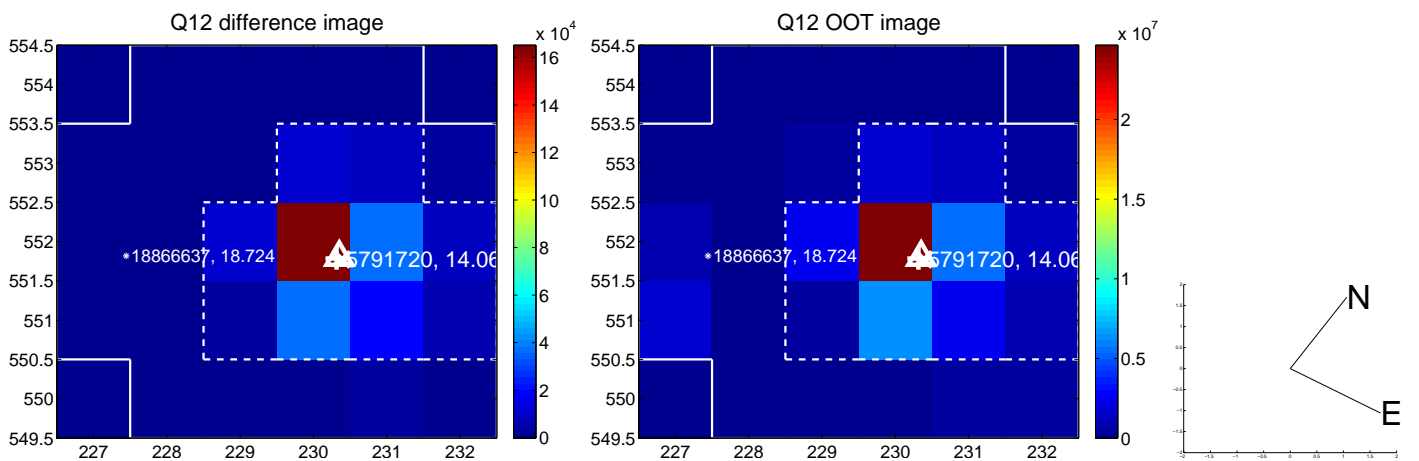
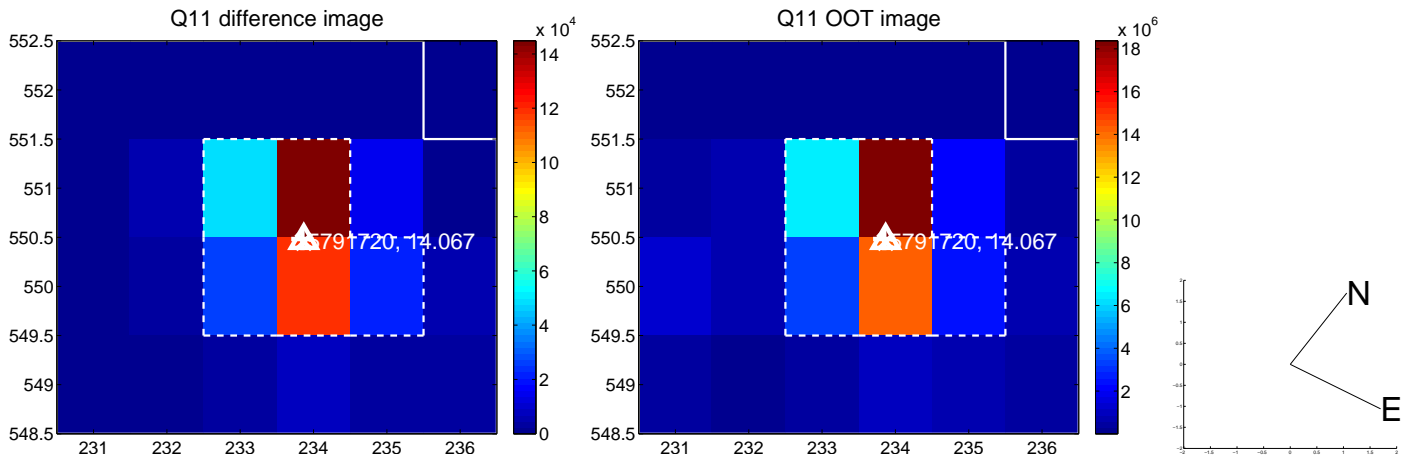
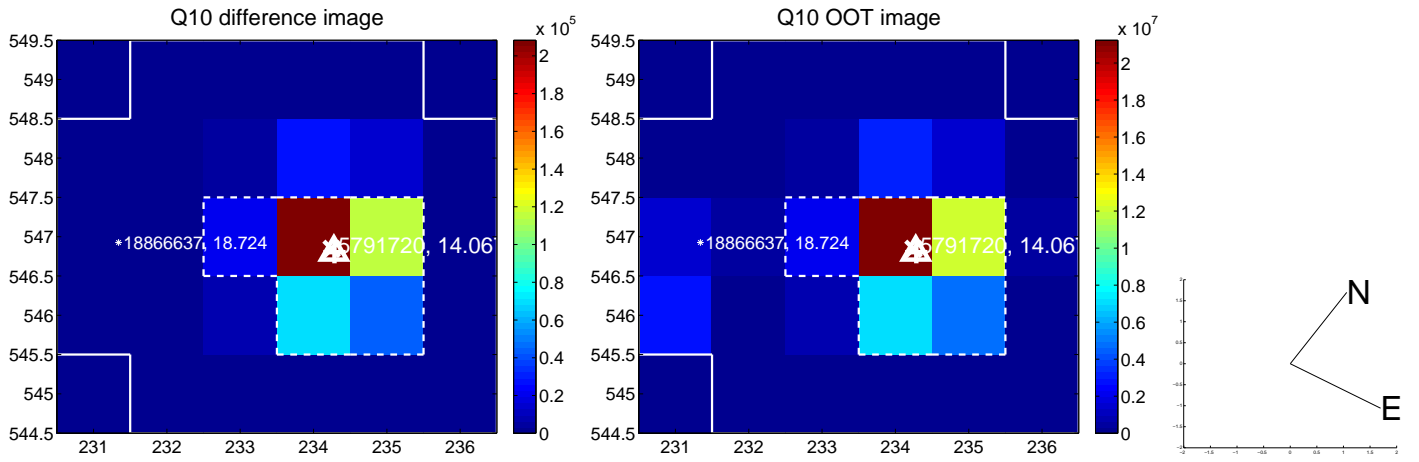
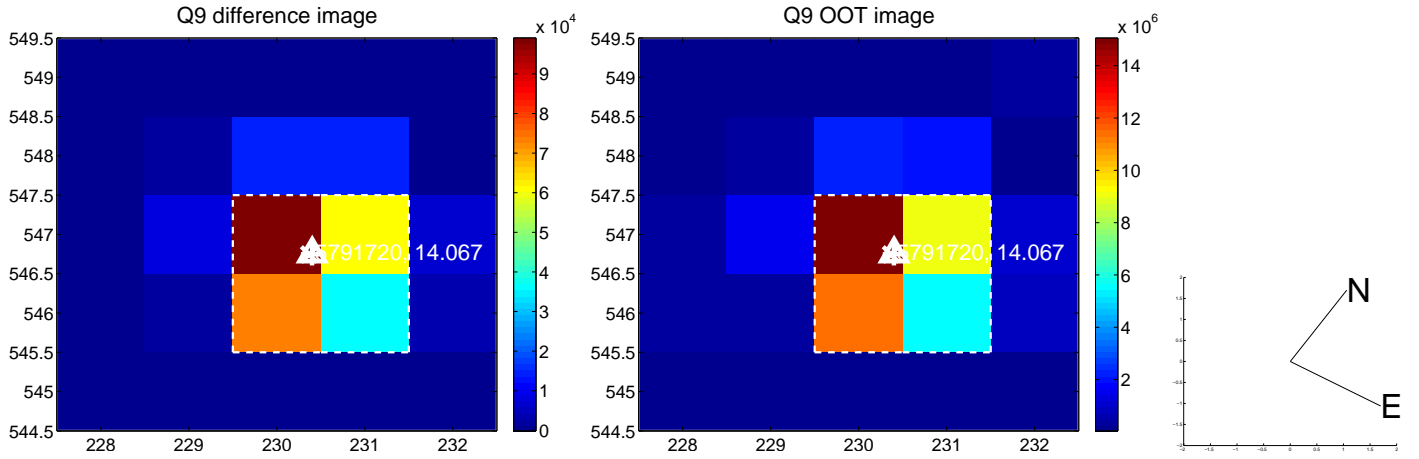
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



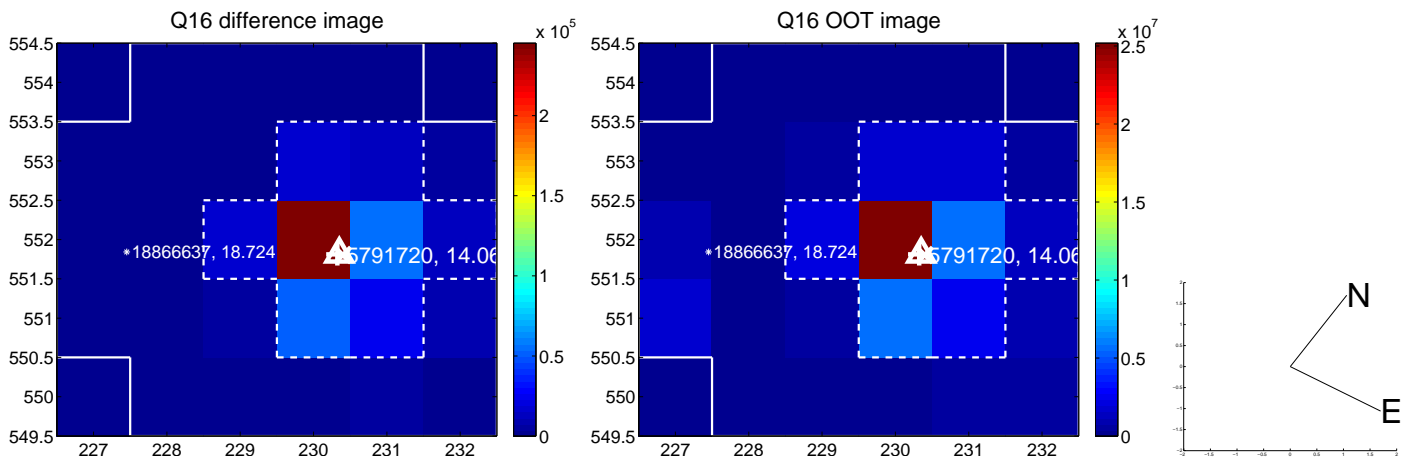
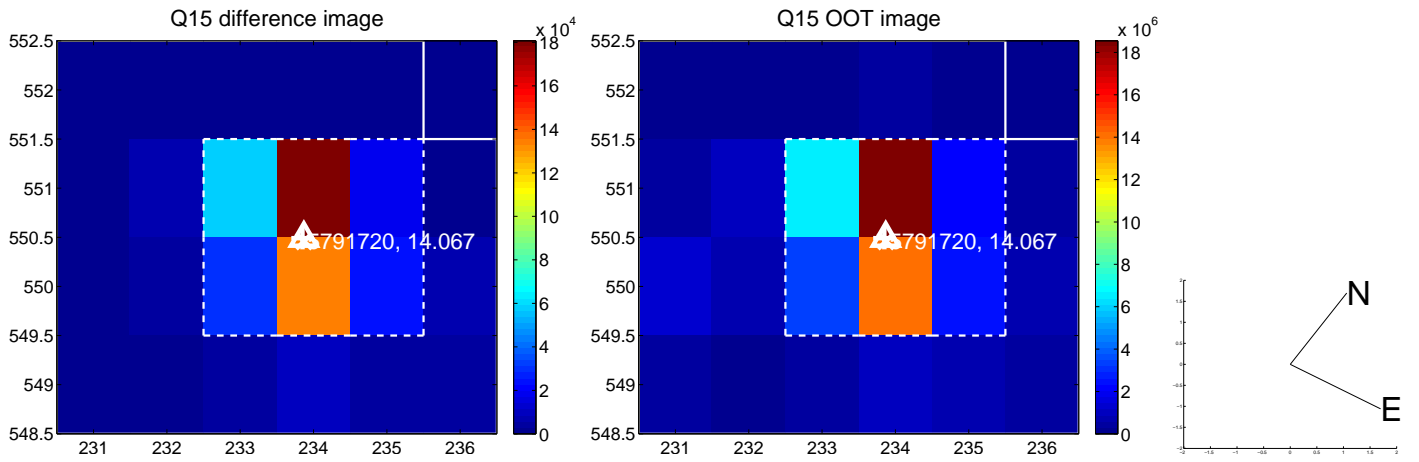
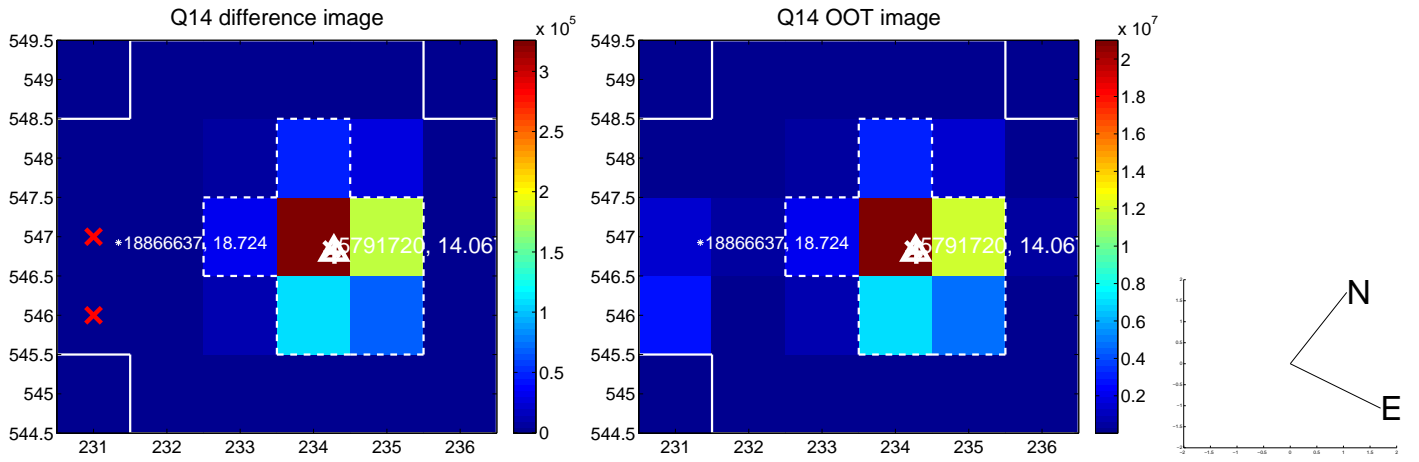
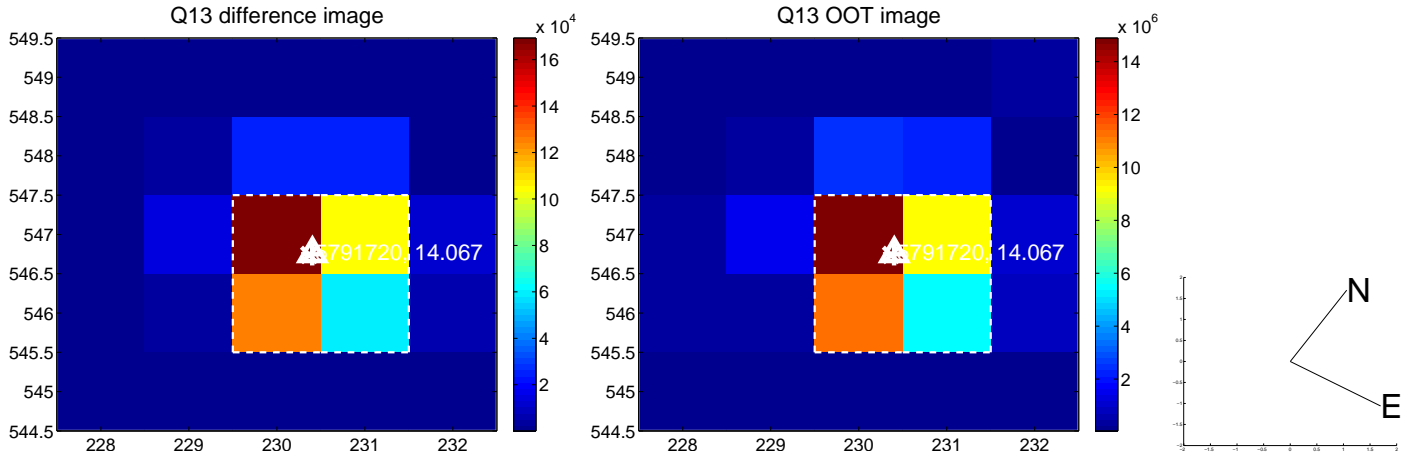
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



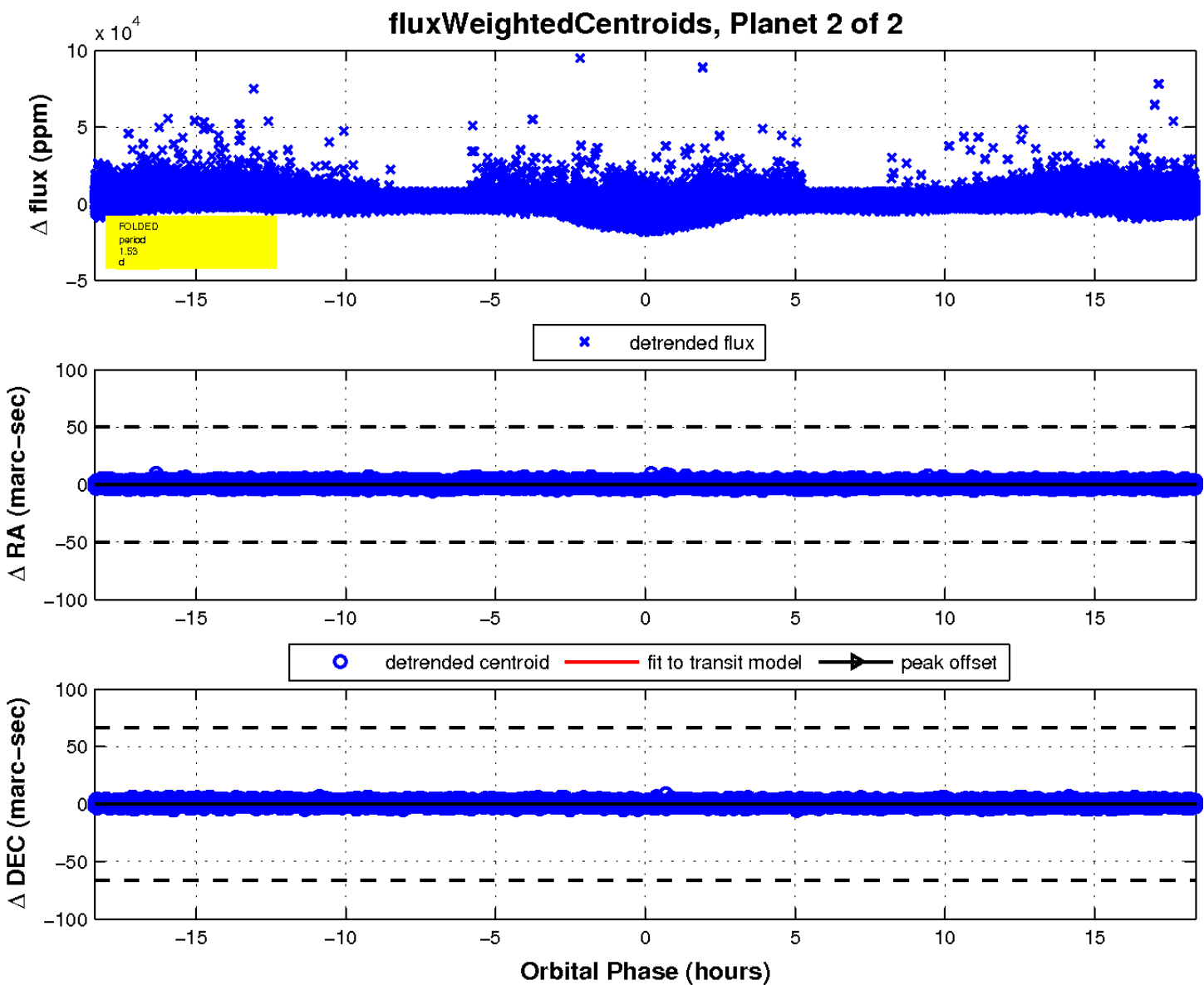
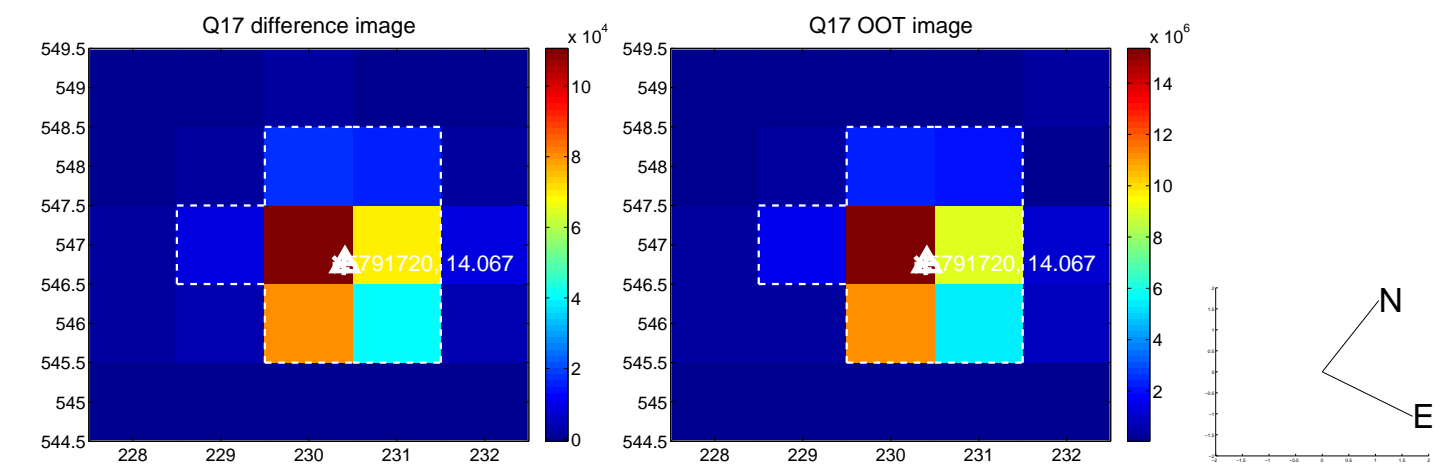
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

