

KIC 005653795

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})
005653795-01	OBS	No	3.245740	132.620783	26.3	10.662	8.0	6.2	4.76	6190	2.56	10910.02
005653795-02	OBS	7734.01	118.305767	215.637657	257.8	5.887	9.0	7.8	4.76	6190	8.68	90.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005653795-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005653795-02	OBS	FP	0.23	1	0	0	0	MOD_NONUNIQ_ALT

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

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

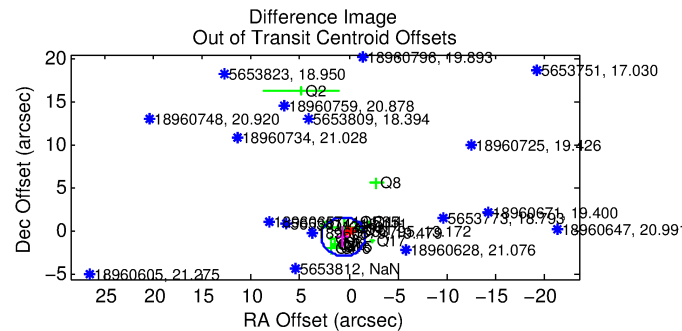
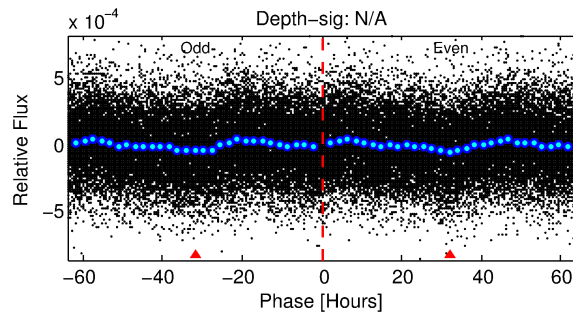
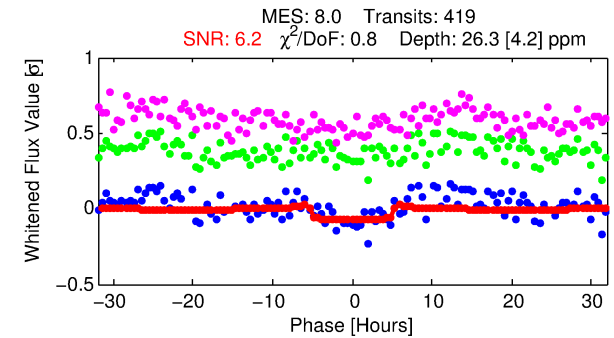
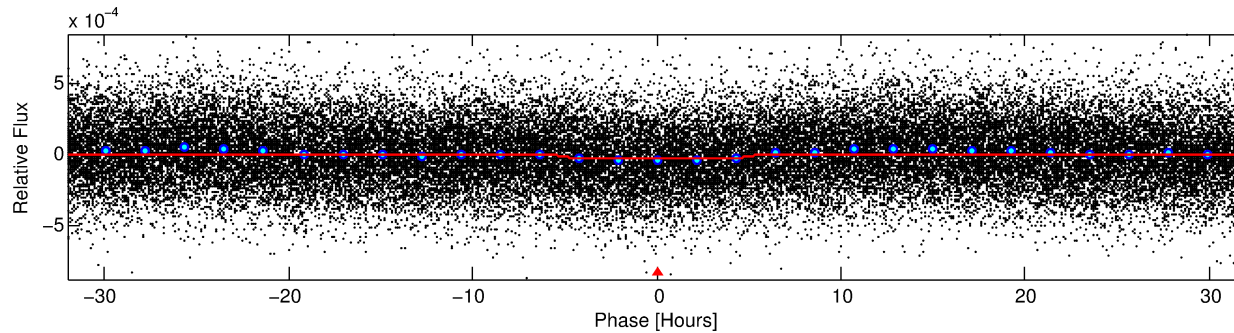
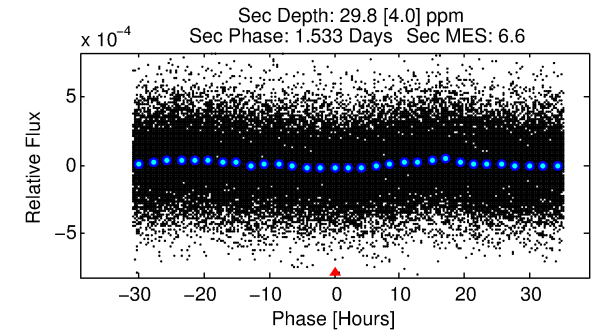
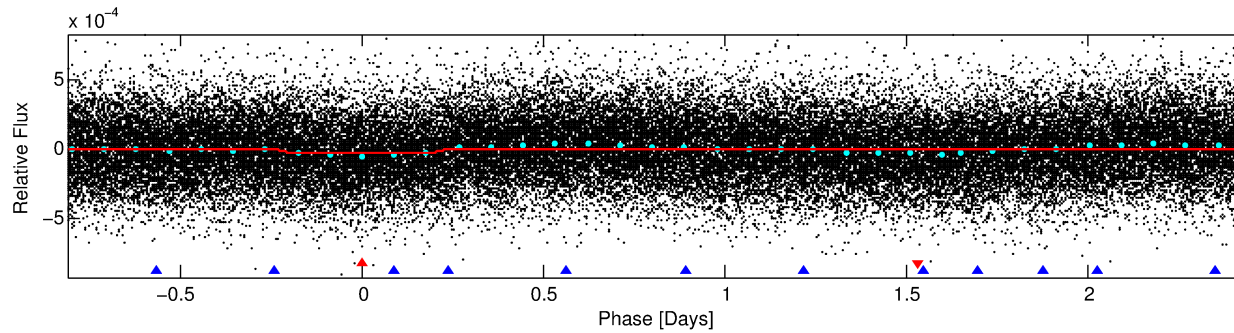
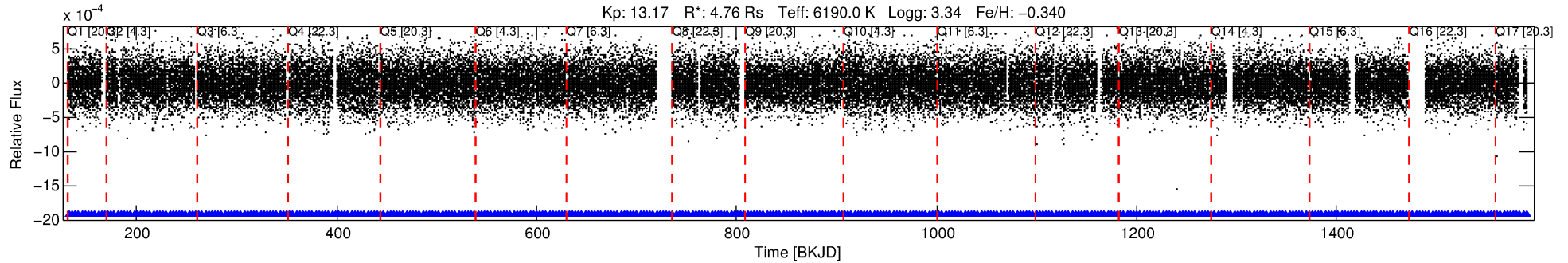
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005653795-01

No Significant Match Found

DV One-Page Summary

KIC: 5653795 Candidate: 1 of 2 Period: 3.246 d



DV Fit Results:

Period = 3.24574 [0.00006] d
Epoch = 132.6208 [0.0105] BKJD
Rp/R* = 0.0049 [0.0019]
a/R* = 2.01 [2.94]
b = 0.61 [2.00]
Seff = 10910.02 [7447.13]
Teq = 2606 [445] K
Rp = 2.56 [1.48] Re
a = 0.0523 [0.0219] AU
Ag = 6.84 [6.95] [0.84σ]
Teffp = 6515 [1271] K [2.90σ]

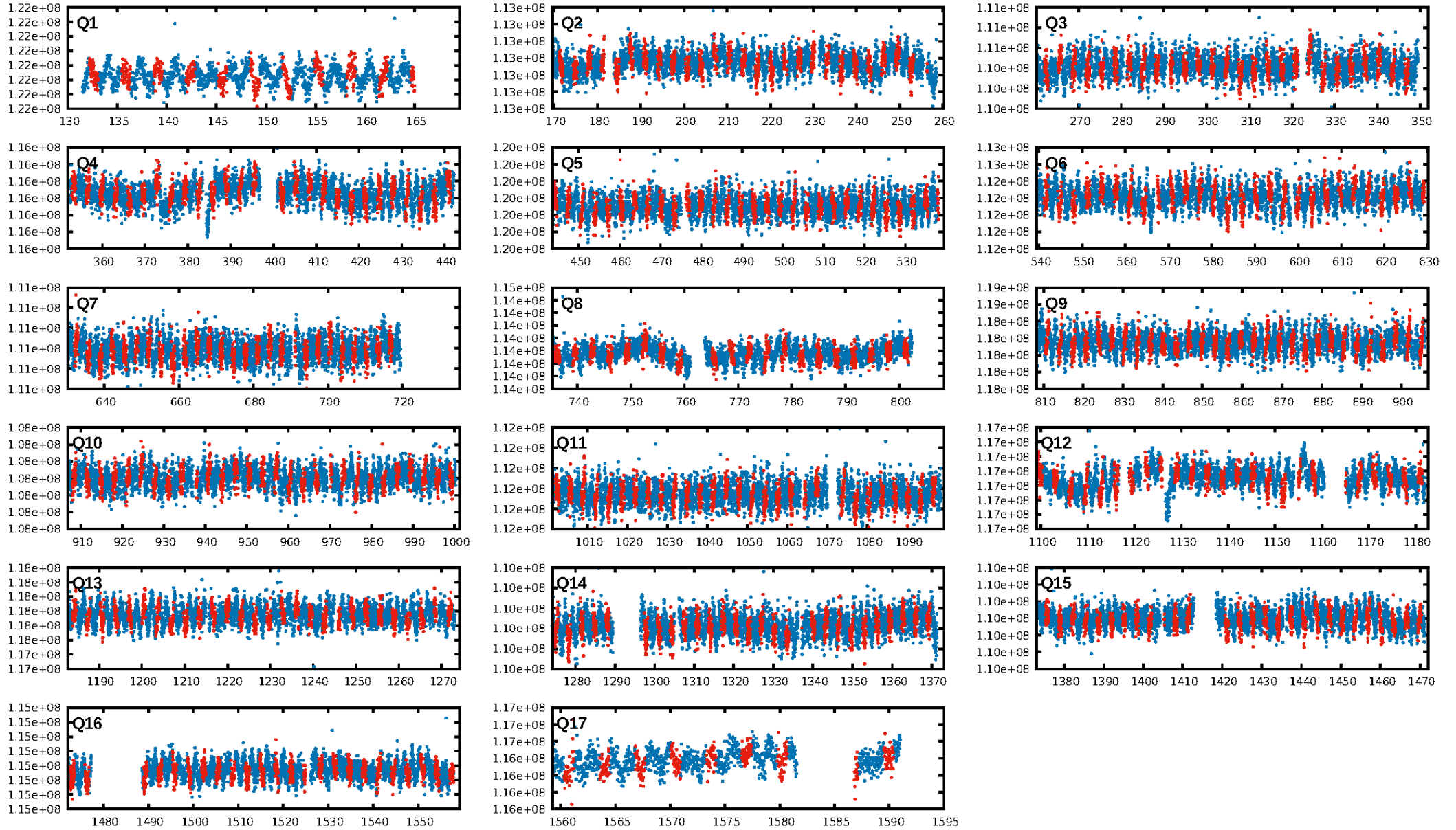
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [226.73σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.47e-12
RollingBand-fgt: 1.00 [399/399]
GhostDiagnostic-chr: 2.39
Centroid-sig: N/A
Centroid-so: 1.046 arcsec [0.98σ]
OotOffset-rm: 0.855 arcsec [1.14σ]
KicOffset-rm: 0.898 arcsec [1.25σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

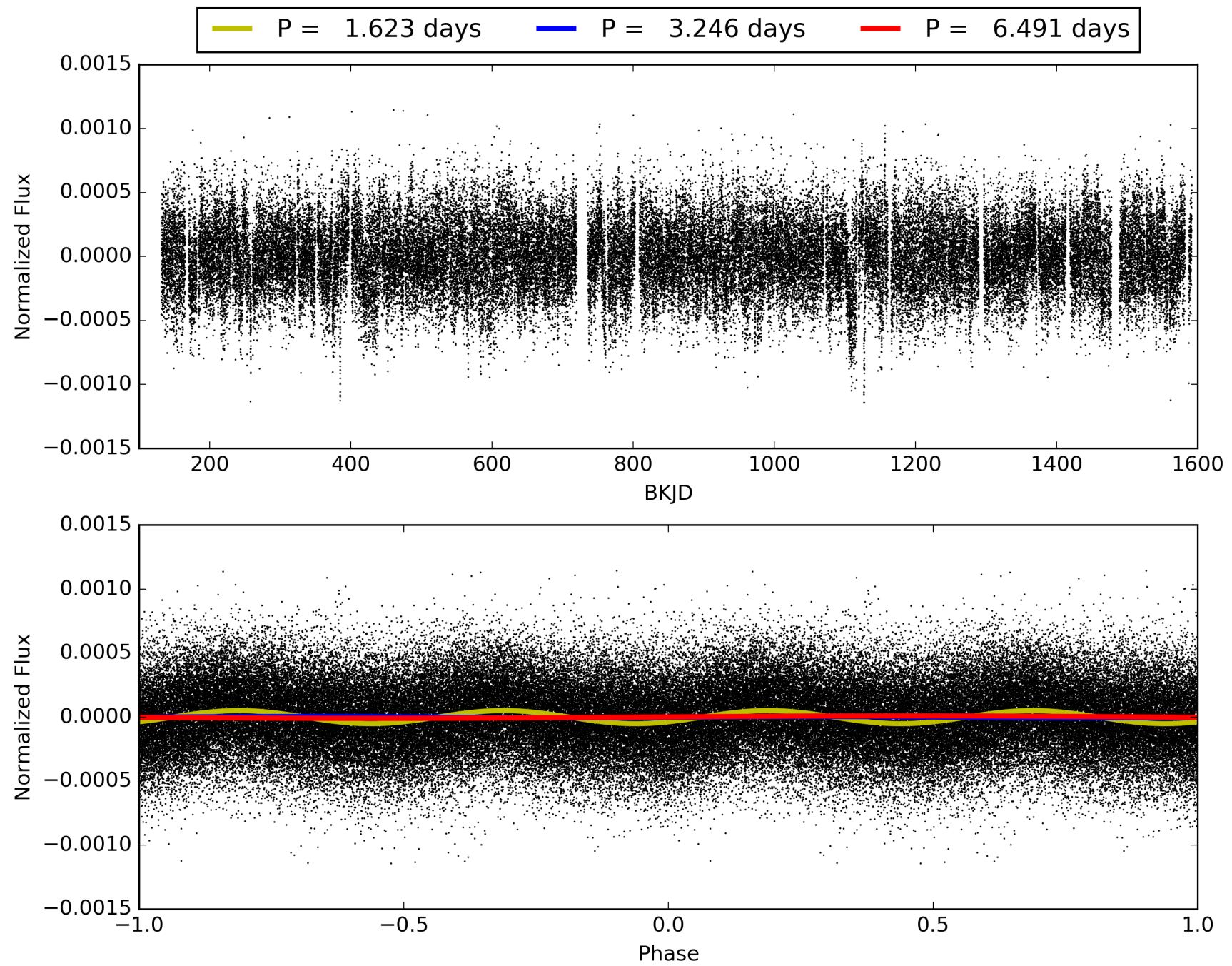
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:45:30 Z

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

TCE 005653795-01, PDC Light Curves

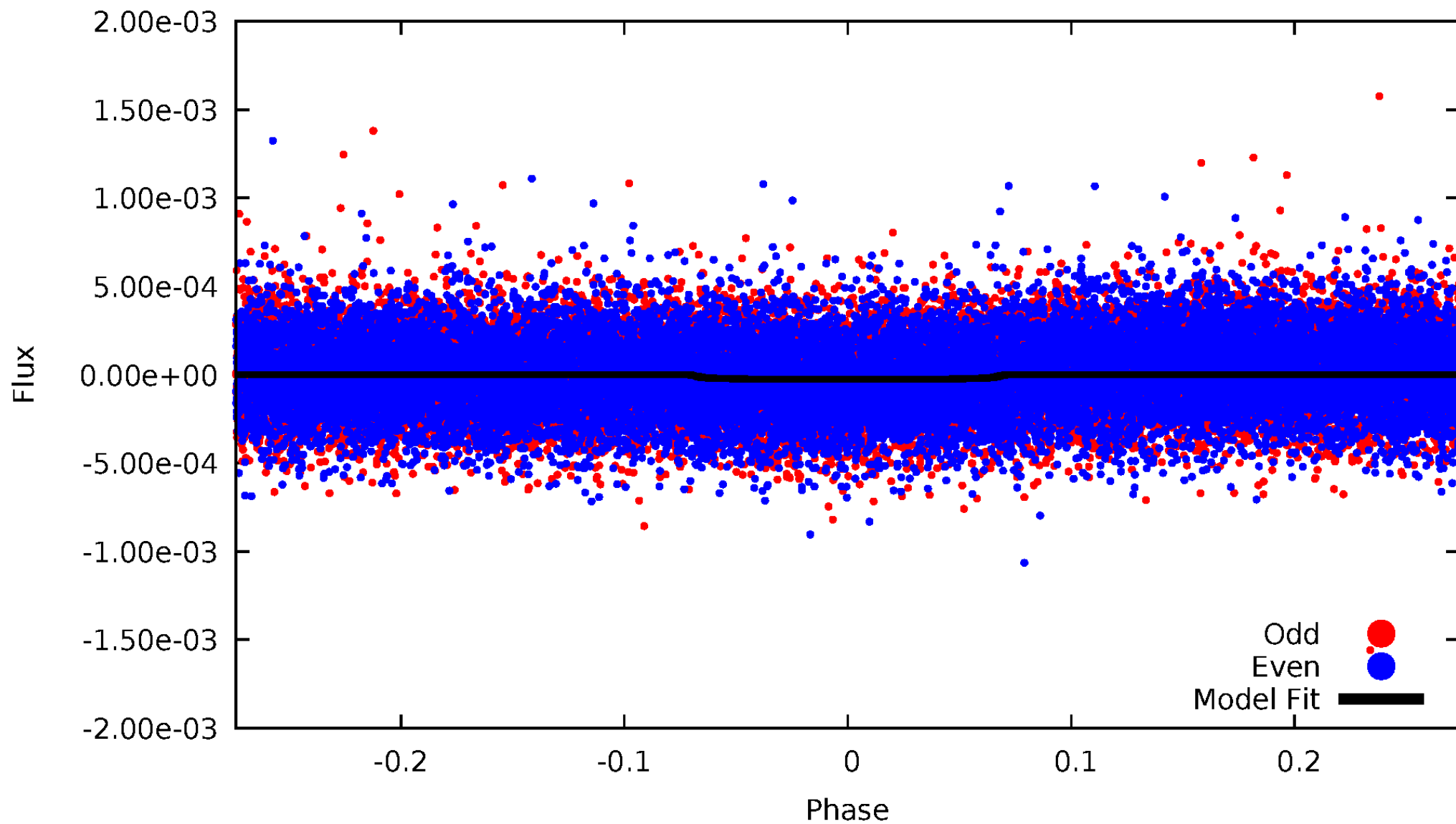


TCE 005653795-01



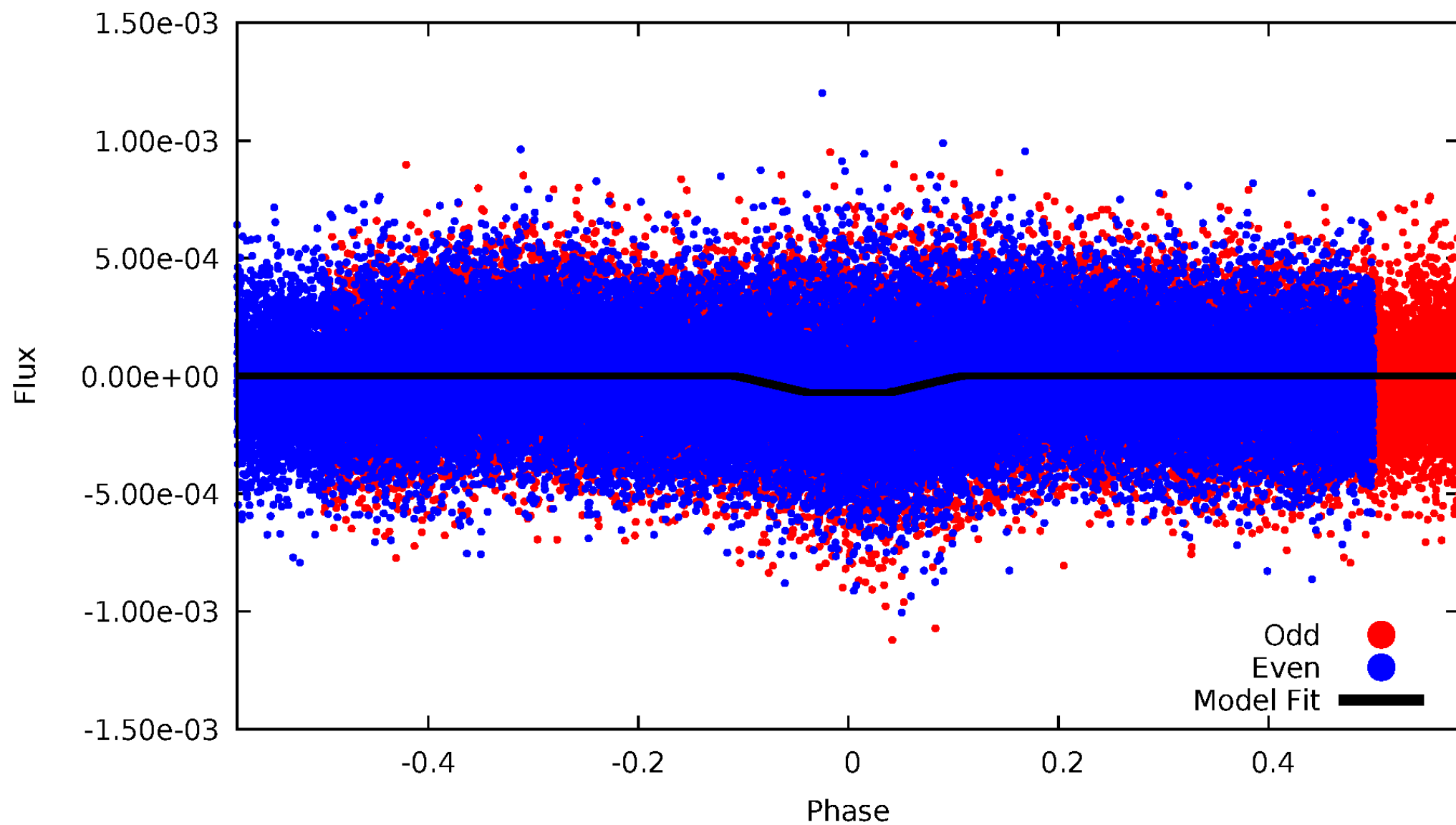
DV Odd/Even

TCE 005653795-01

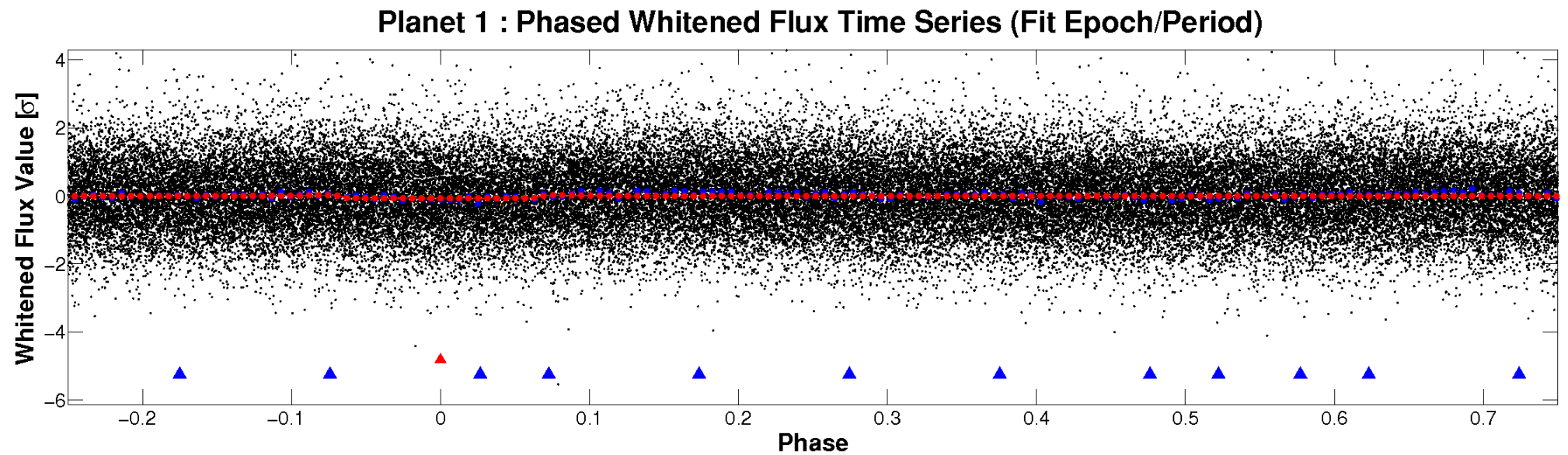
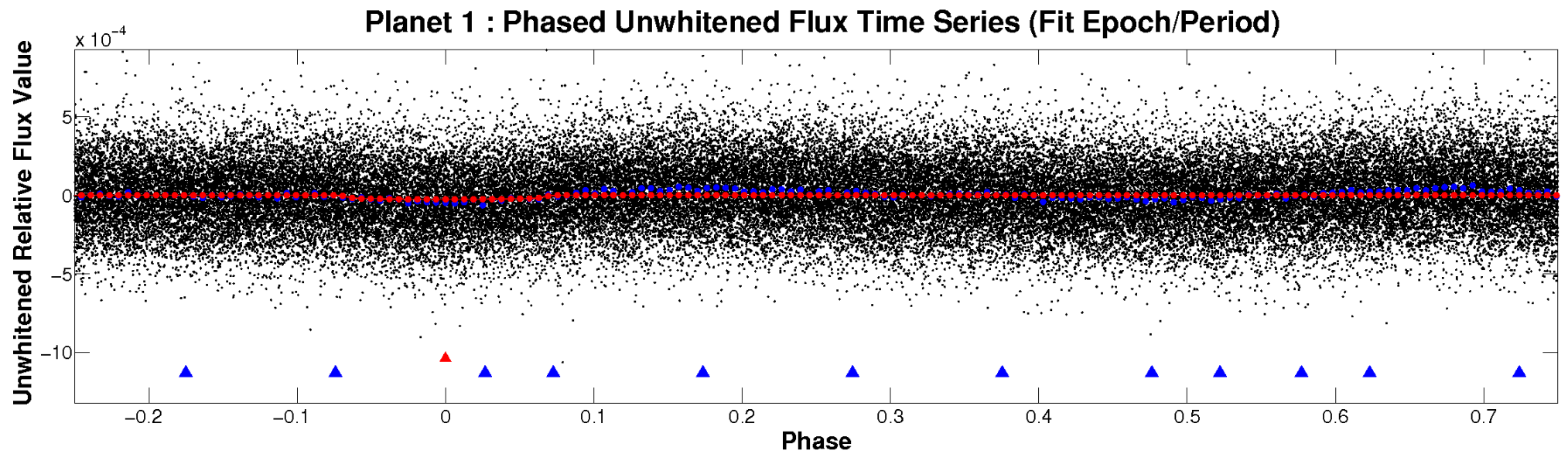


ALT Odd/Even

TCE 005653795-01

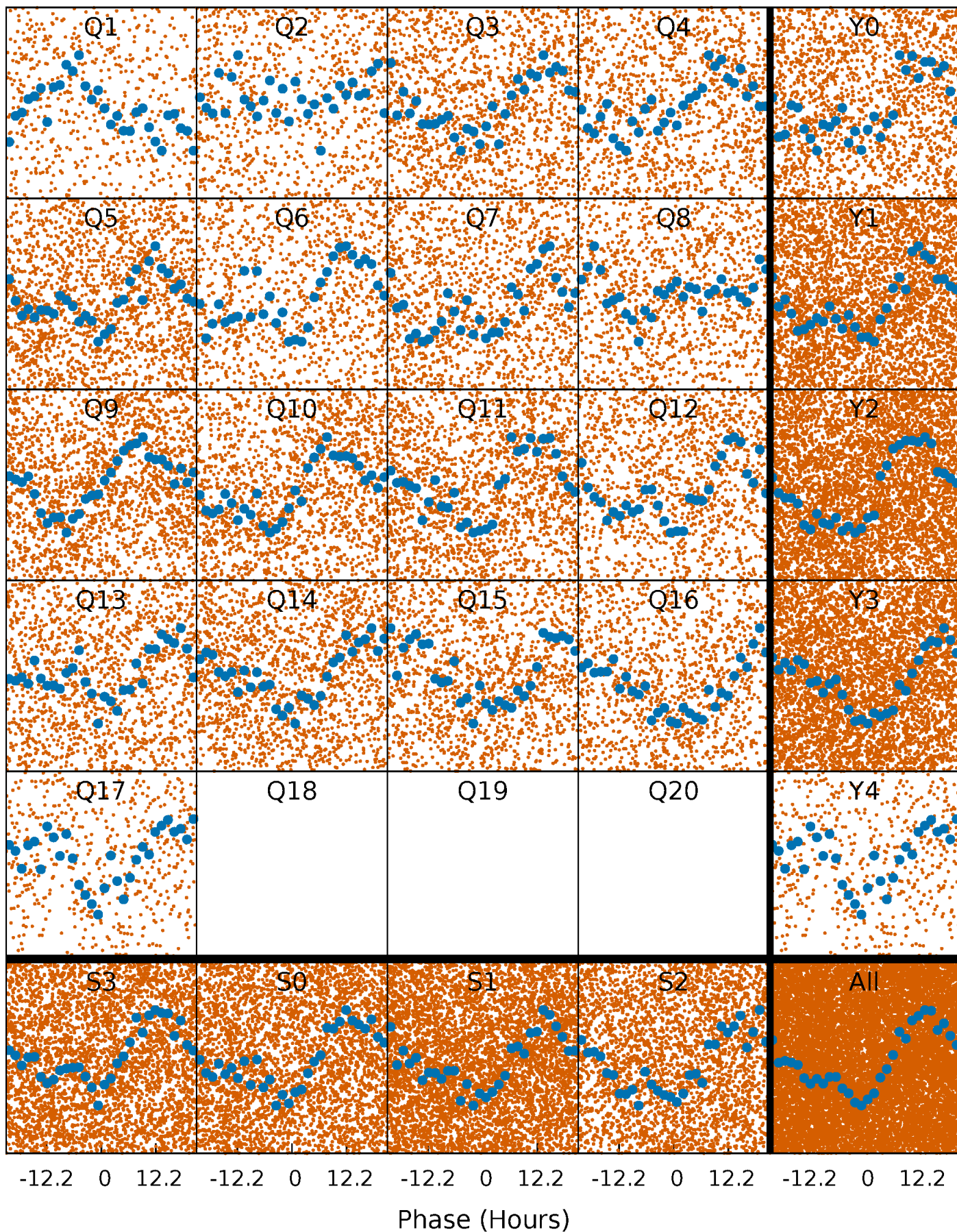


Non-Whitened Vs. Whitened Light Curve



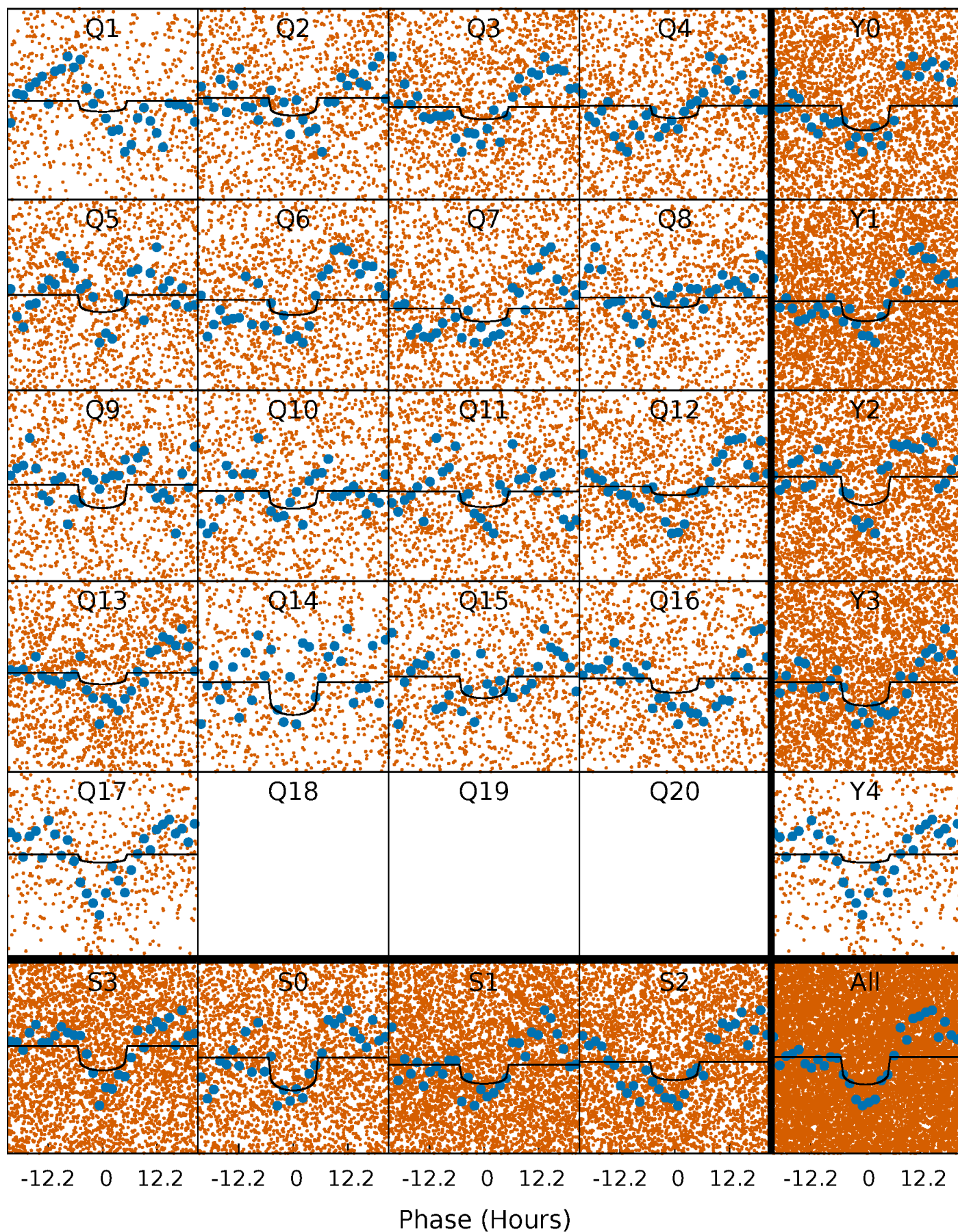
PDC Quarter-Phased Transit Curves

TCE 005653795-01 P= 3.245740 Days $T_0=132.620783$ (BKJD)



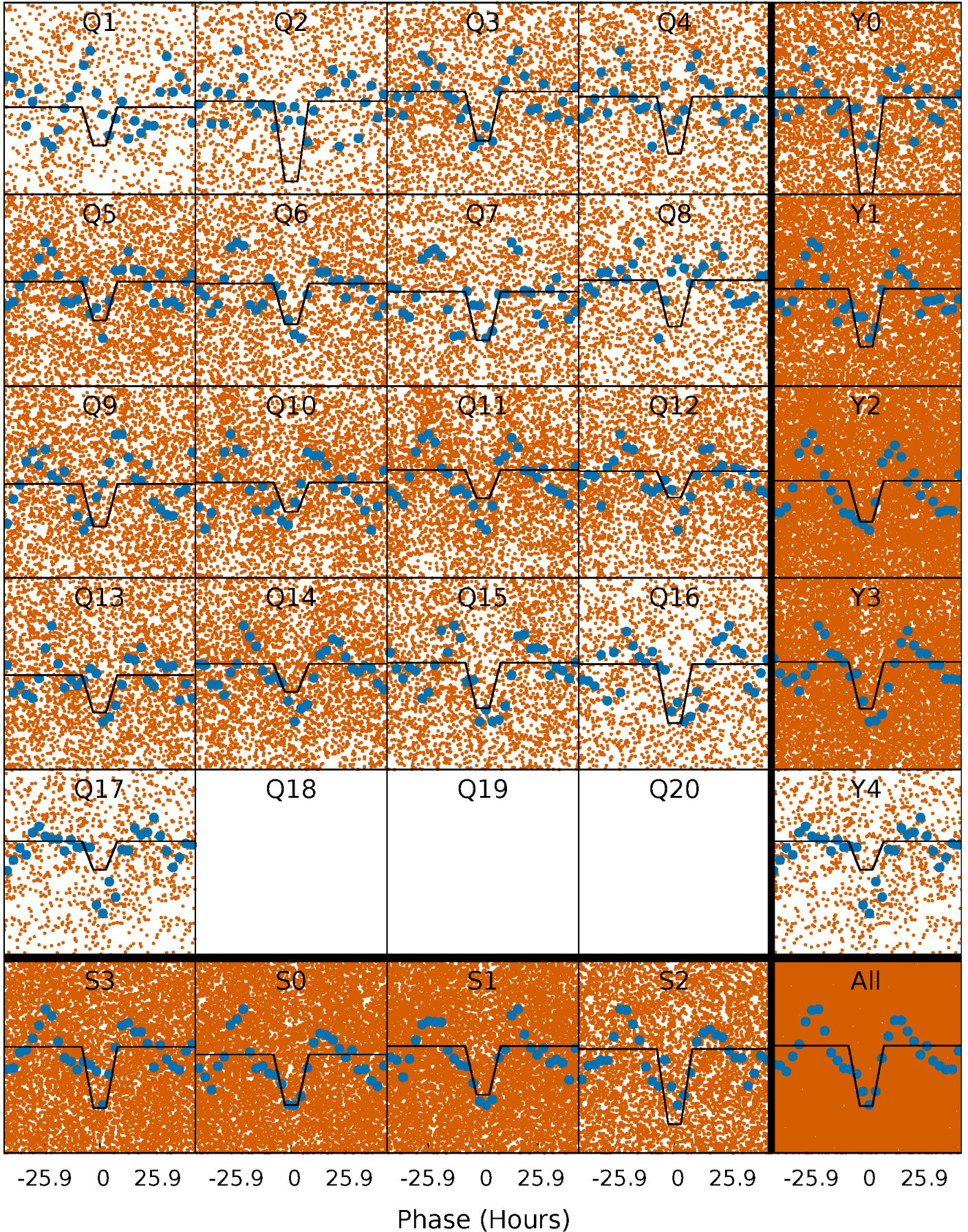
DV Quarter-Phased Transit Curves

TCE 005653795-01 P= 3.245740 Days $T_0=132.620783$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

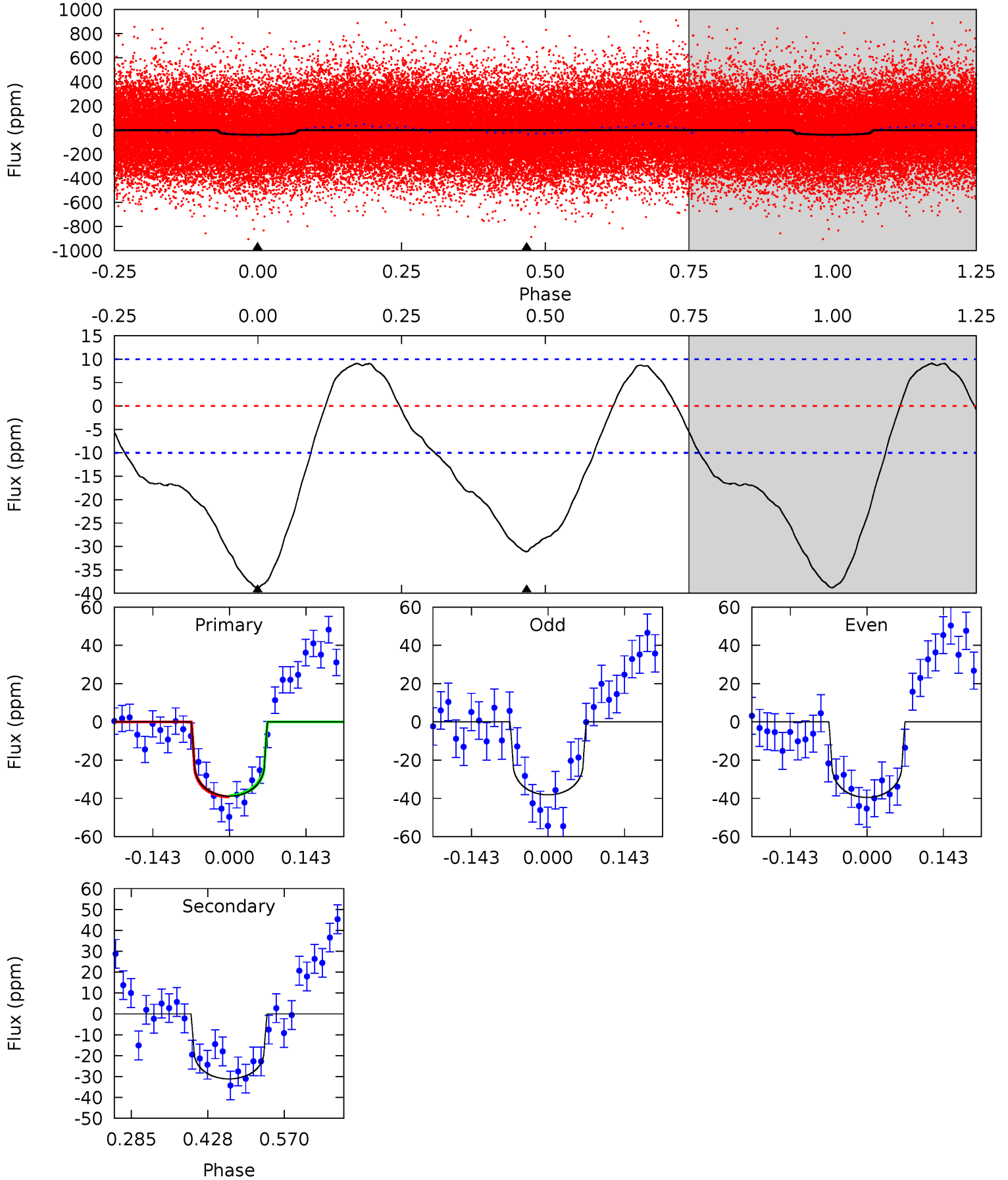
TCE 005653795-01 P= 3.245538 Days $T_0=132.609563$ (BKJD)



DV Model-Shift Uniqueness Test

005653795-01, P = 3.245740 Days, E = 129.375043 Days

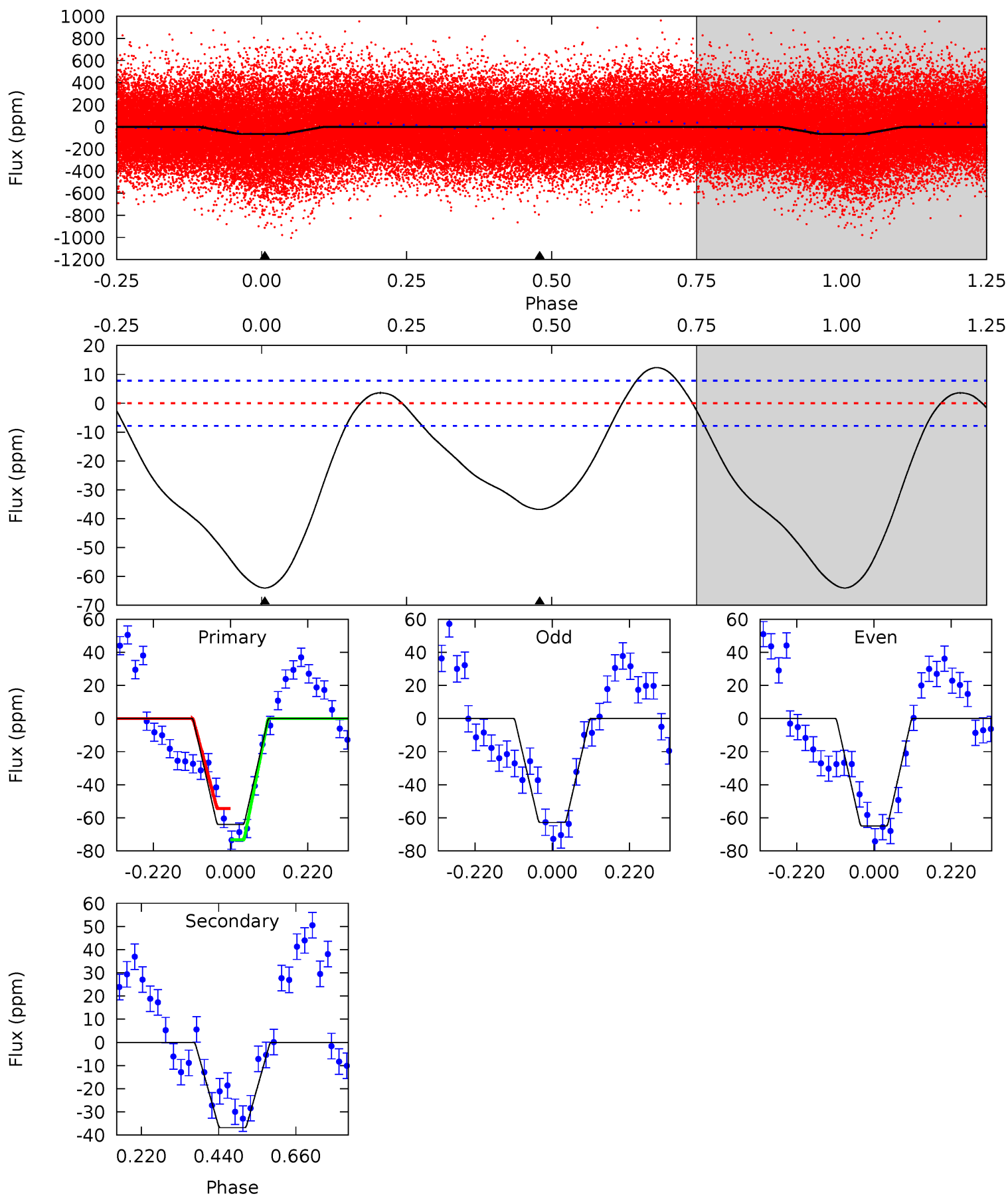
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	14.0	0	0	4.49	1.47	4.06	17.4	17.4	14.0	14.0	0.31	1.06	0.19	0.16



Alt Model-Shift Uniqueness Test

005653795-01, P = 3.245538 Days, E = 129.364025 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.9	20.6	0	0	4.40	1.23	3.98	35.9	35.9	20.6	20.6	0.59	0.83	0.16	5.38



Stellar Parameters For KIC 005653795

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6190^{+223}_{-223}	$3.340^{+0.391}_{-0.069}$	$-0.340^{+0.350}_{-0.350}$	$4.763^{+0.694}_{-2.082}$	$1.811^{+0.131}_{-0.523}$	$0.024^{+0.080}_{-0.007}$
	+4%/-4%	+12%/-2%	+103%/-103%	+15%/-44%	+7%/-29%	+337%/-29%
Source	PHO1	FLK73	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 005653795-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-31 ± 2	$2.31^{+0.97}_{-0.91}$	3508^{+244}_{-348}	6497^{+1975}_{-1010}	$8.616^{+12.976}_{-4.302}$
Alt.	-37 ± 2	$3.96^{+1.14}_{-1.10}$	3536^{+228}_{-344}	5219^{+670}_{-520}	$3.489^{+2.841}_{-1.360}$

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

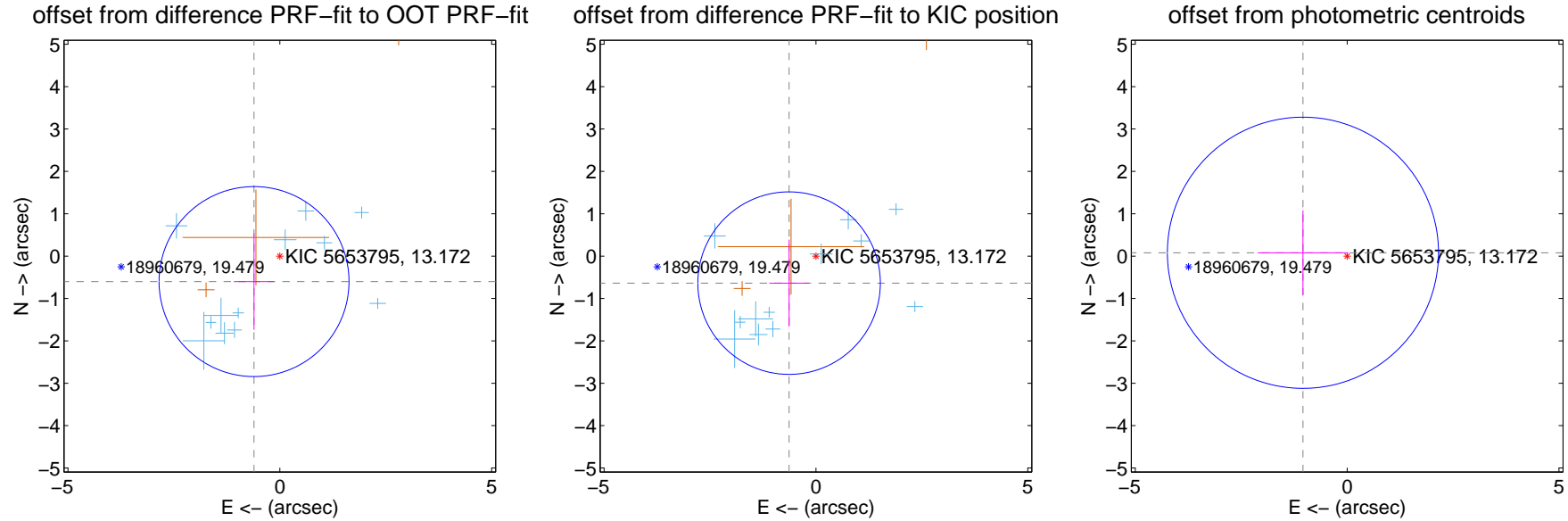
DV Centroid Data

Supplemental centroid analysis for 005653795-01. Kepler magnitude: 13.17. Transit SNR 6.16

There are 12 quarters with good PRF difference image offsets

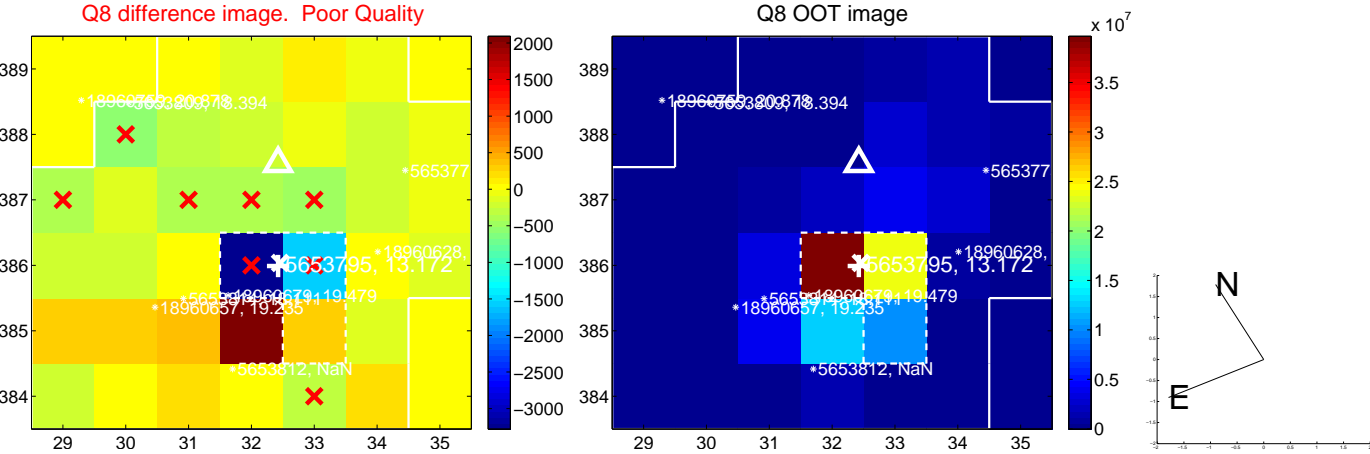
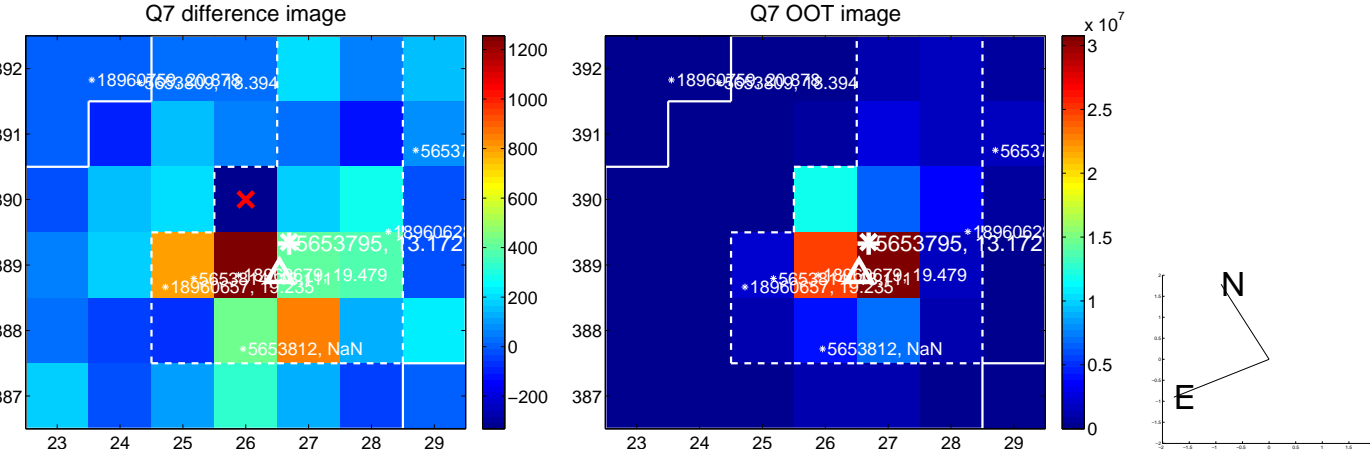
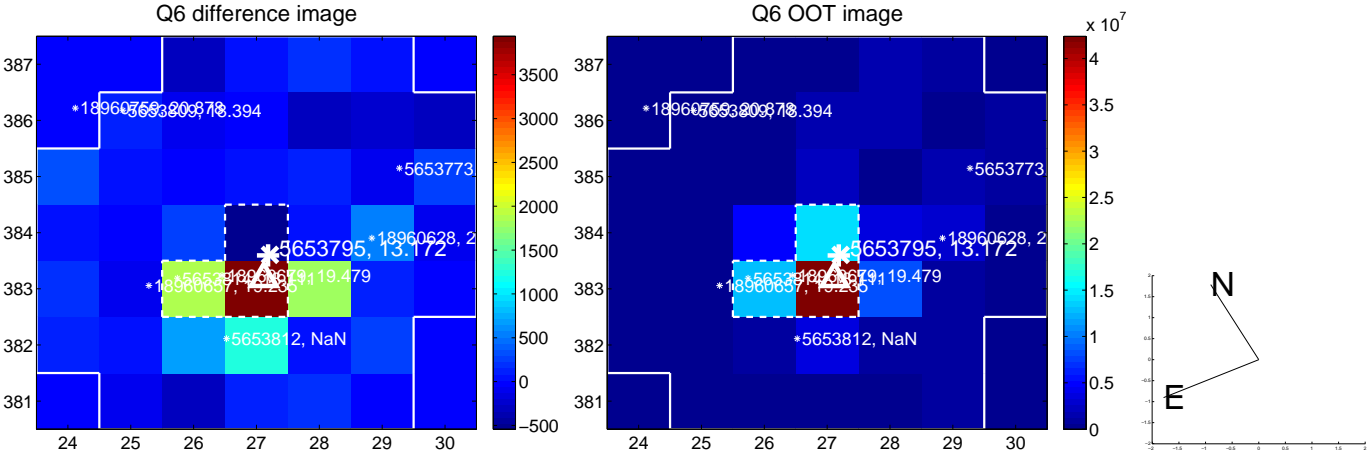
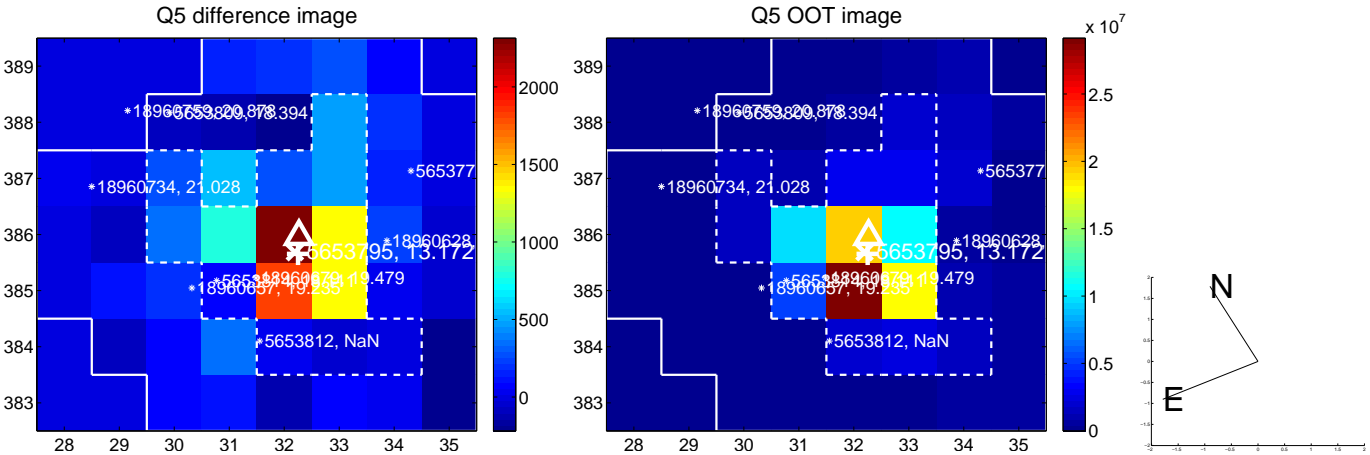
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.855 ± 0.747	1.14	0.608 ± 0.479	-0.600 ± 1.140
PRF-fit source offset from KIC position	0.898 ± 0.718	1.25	0.633 ± 0.468	-0.637 ± 1.026
photometric centroid source offset	1.05 ± 1.07	0.98	1.04 ± 1.07	0.08 ± 1.00

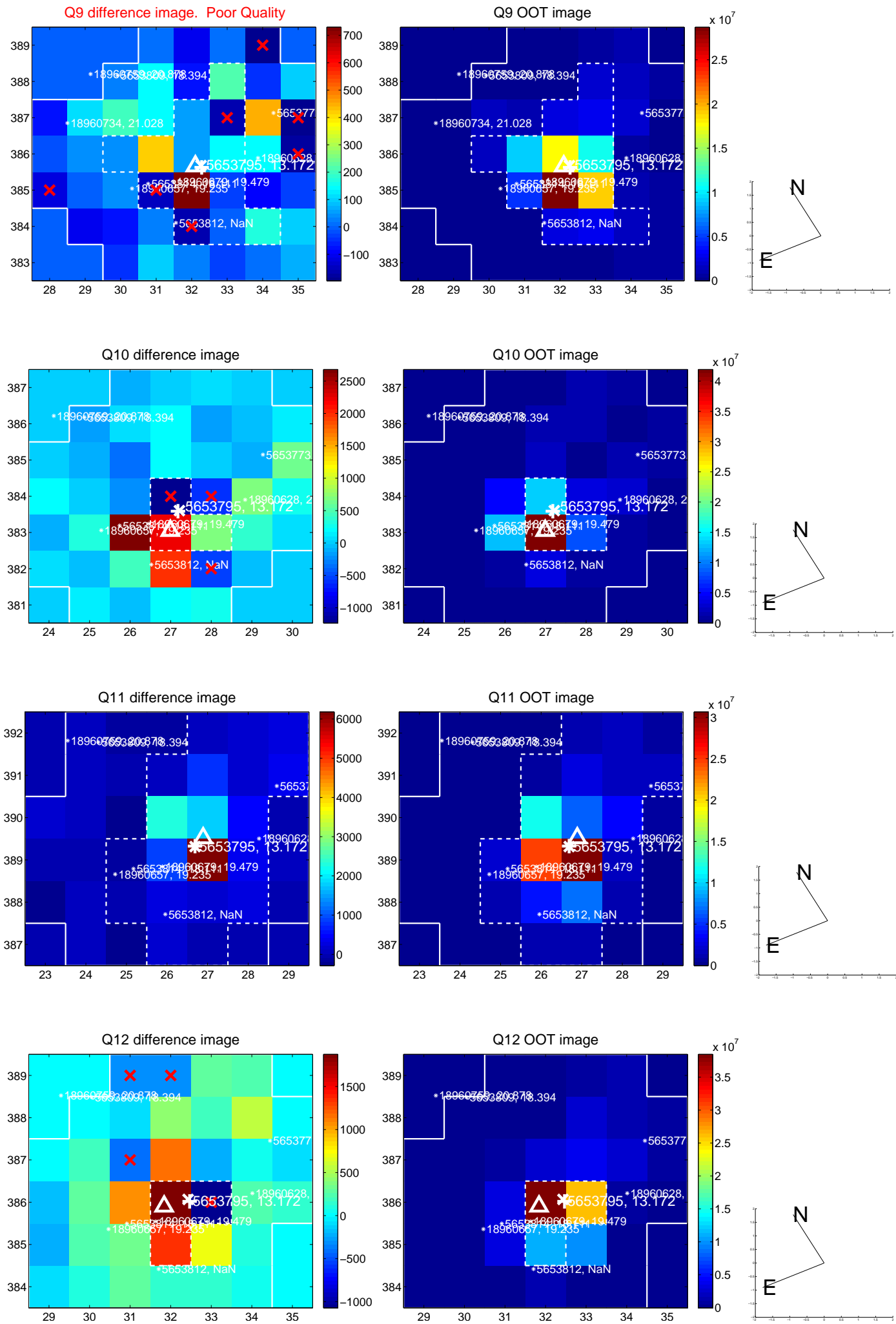


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

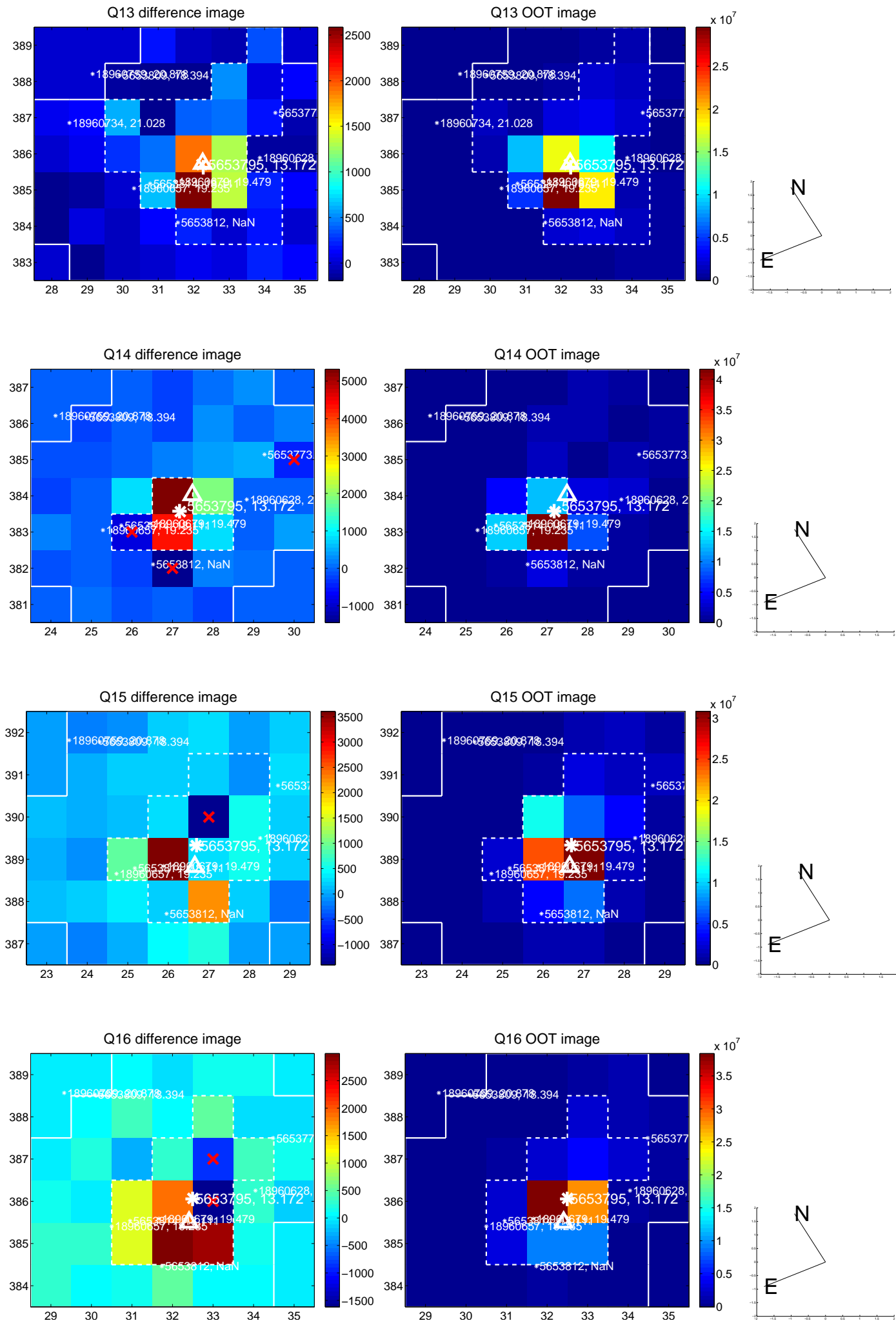
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



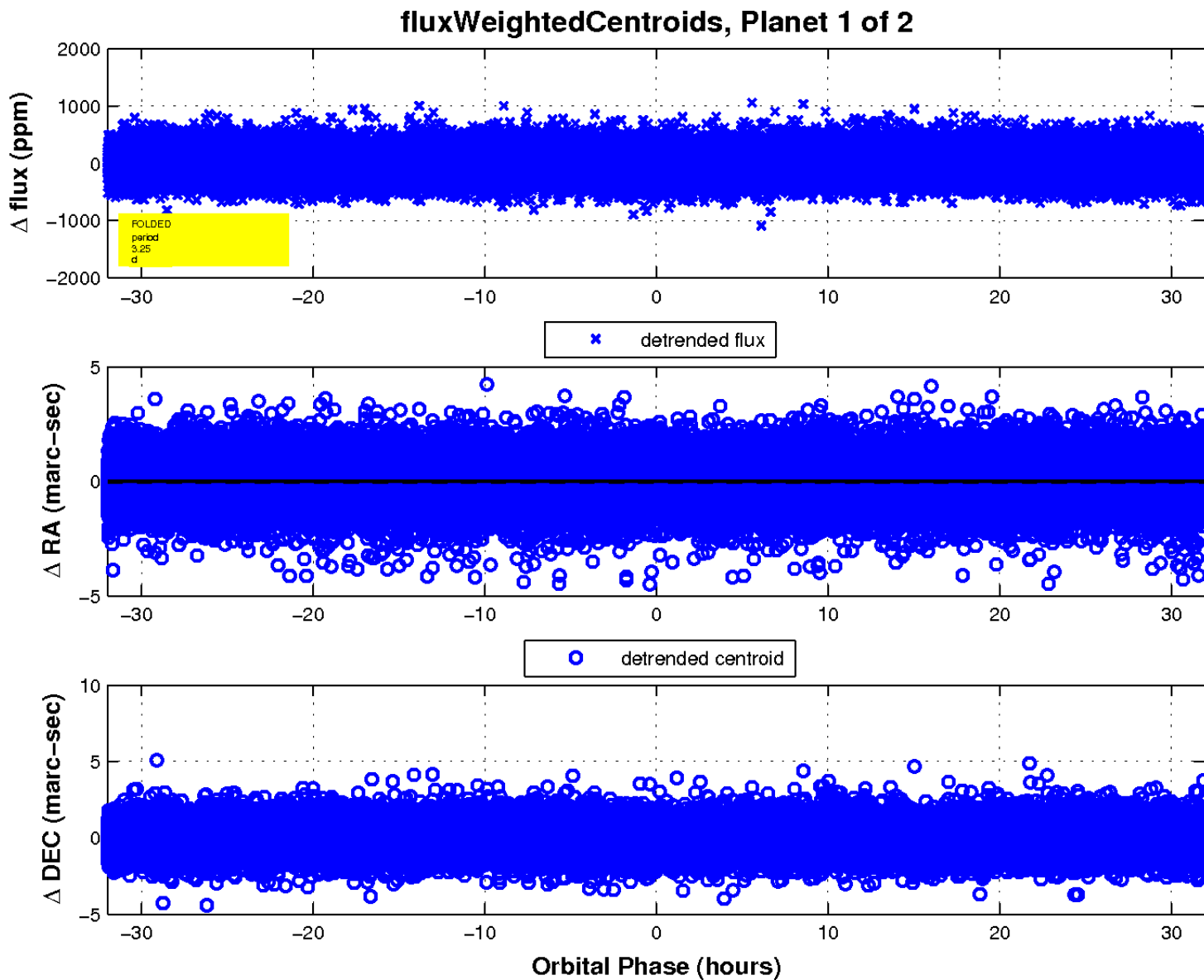
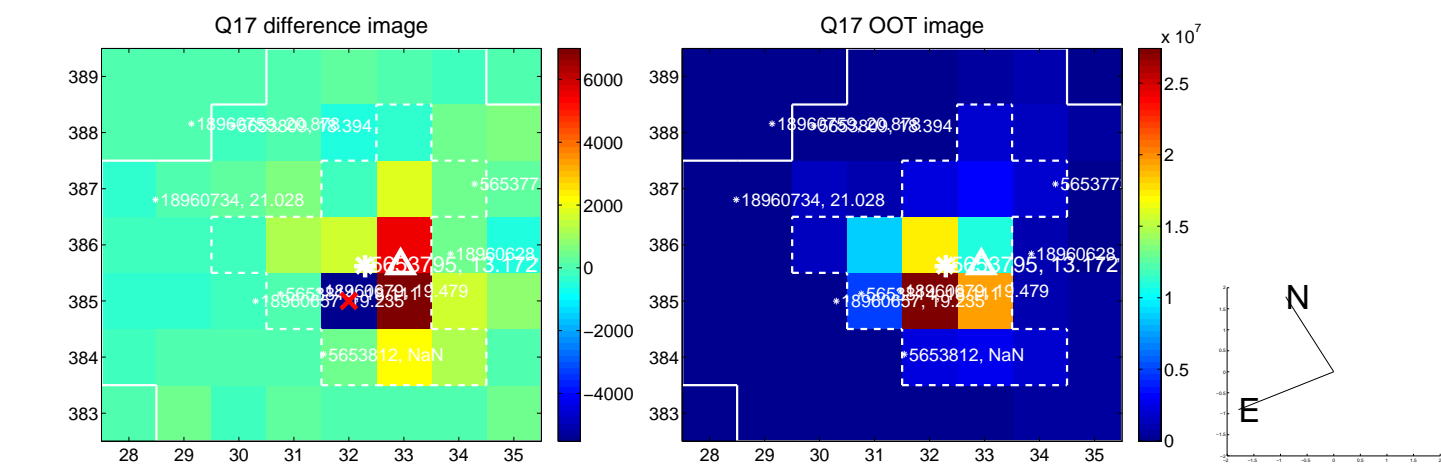
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

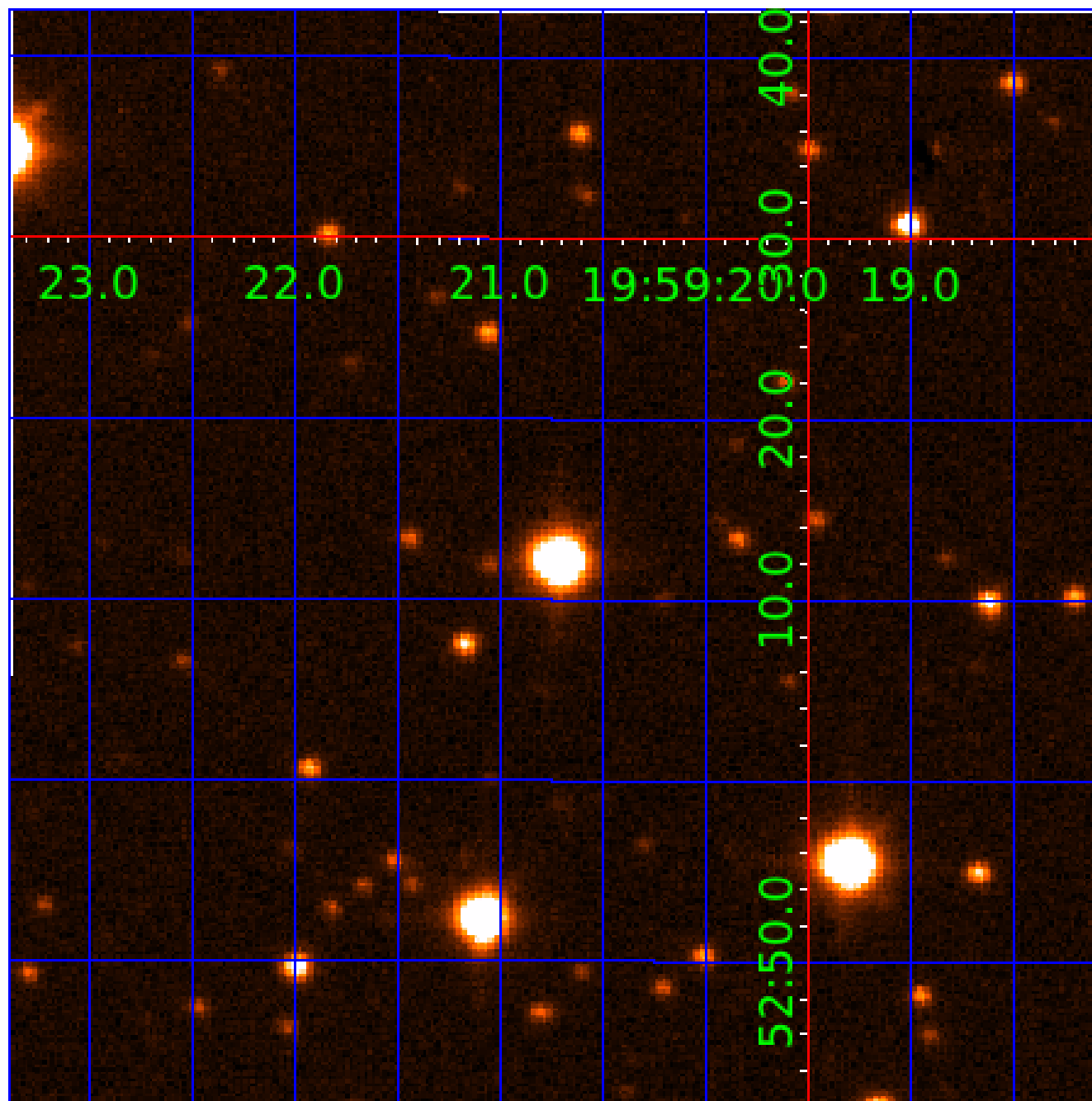


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005653795

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})
005653795-01	OBS	No	3.245740	132.620783	26.3	10.662	8.0	6.2	4.76	6190	2.56	10910.02
005653795-02	OBS	7734.01	118.305767	215.637657	257.8	5.887	9.0	7.8	4.76	6190	8.68	90.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005653795-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005653795-02	OBS	FP	0.23	1	0	0	0	MOD_NONUNIQ_ALT

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

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

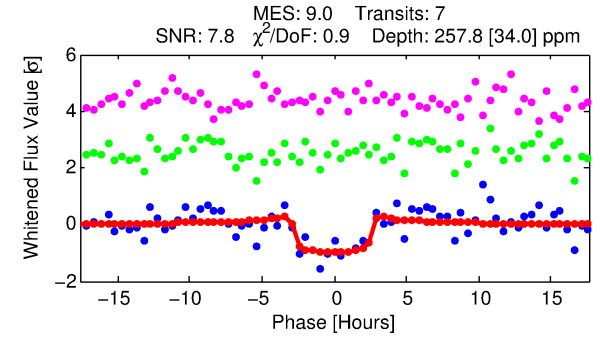
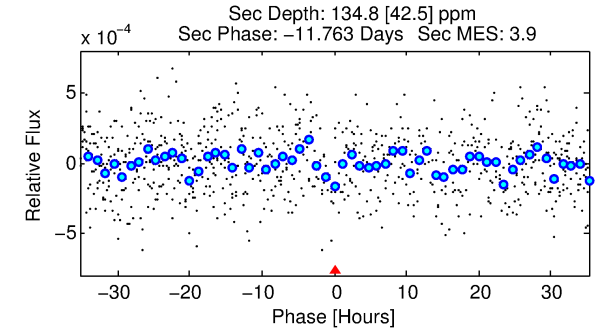
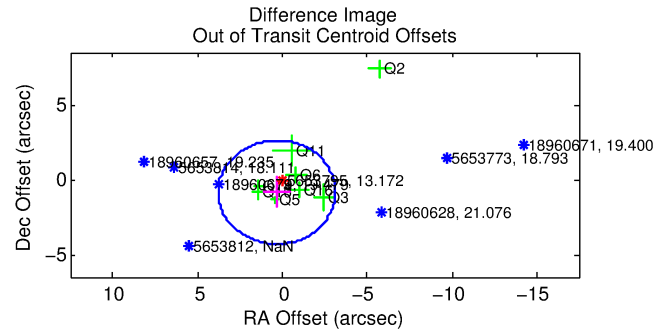
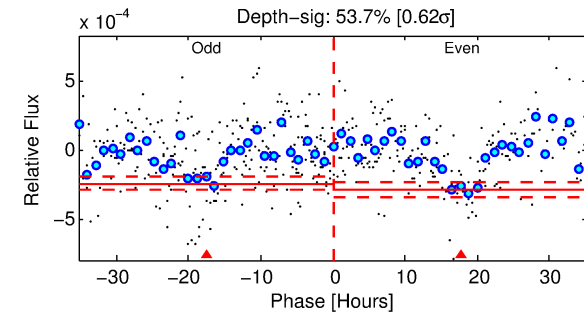
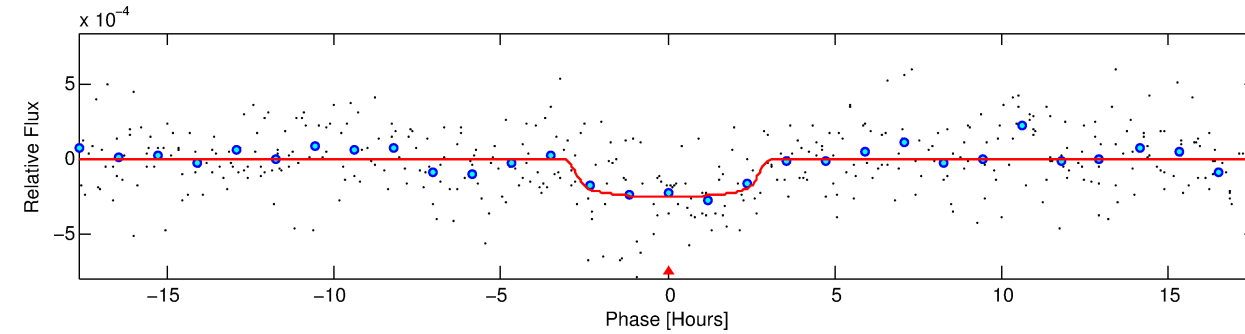
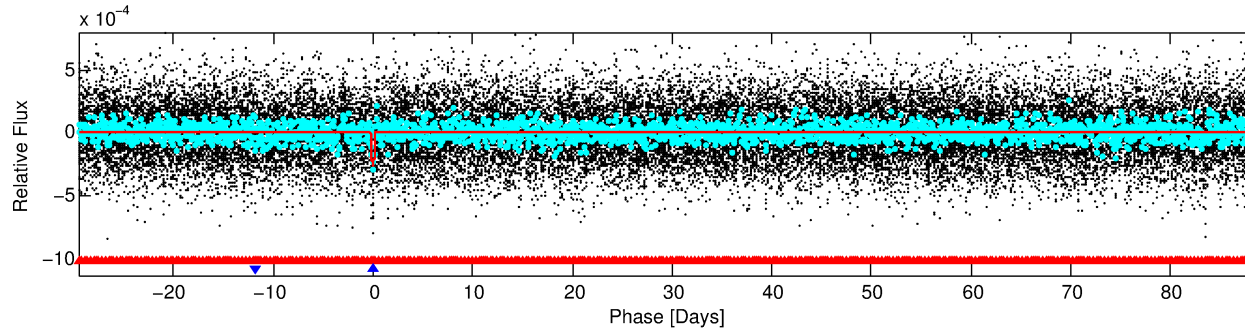
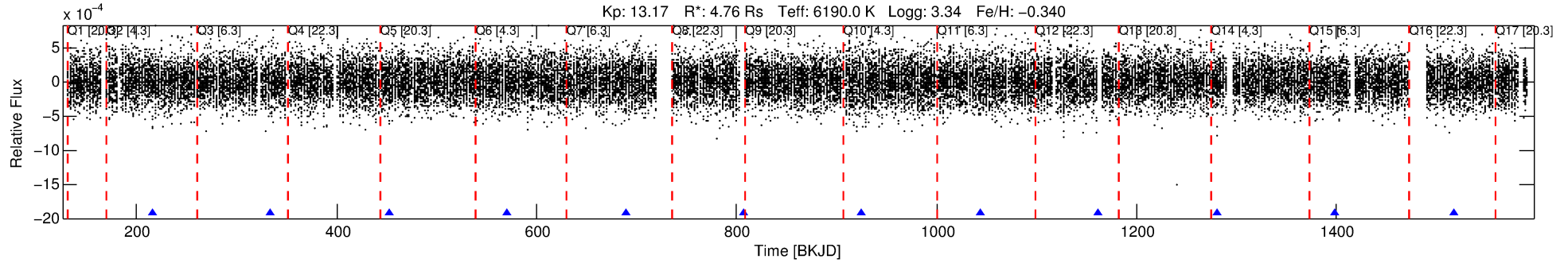
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005653795-02

No Significant Match Found

DV One-Page Summary

KIC: 5653795 Candidate: 2 of 2 Period: 118.306 d



DV Fit Results:

Period = 118.30577 [0.00161] d
Epoch = 215.6377 [0.0109] BKJD
Rp/R* = 0.0167 [0.0061]
a/R* = 84.86 [163.36]
b = 0.85 [0.62]
Seff = 90.28 [61.62]
Teq = 786 [134] K
Rp = 8.68 [4.93] Re
a = 0.5749 [0.2405] AU
Ag = 325.72 [337.64] [0.96 σ]
Teff = 5163 [1041] K [4.17 σ]

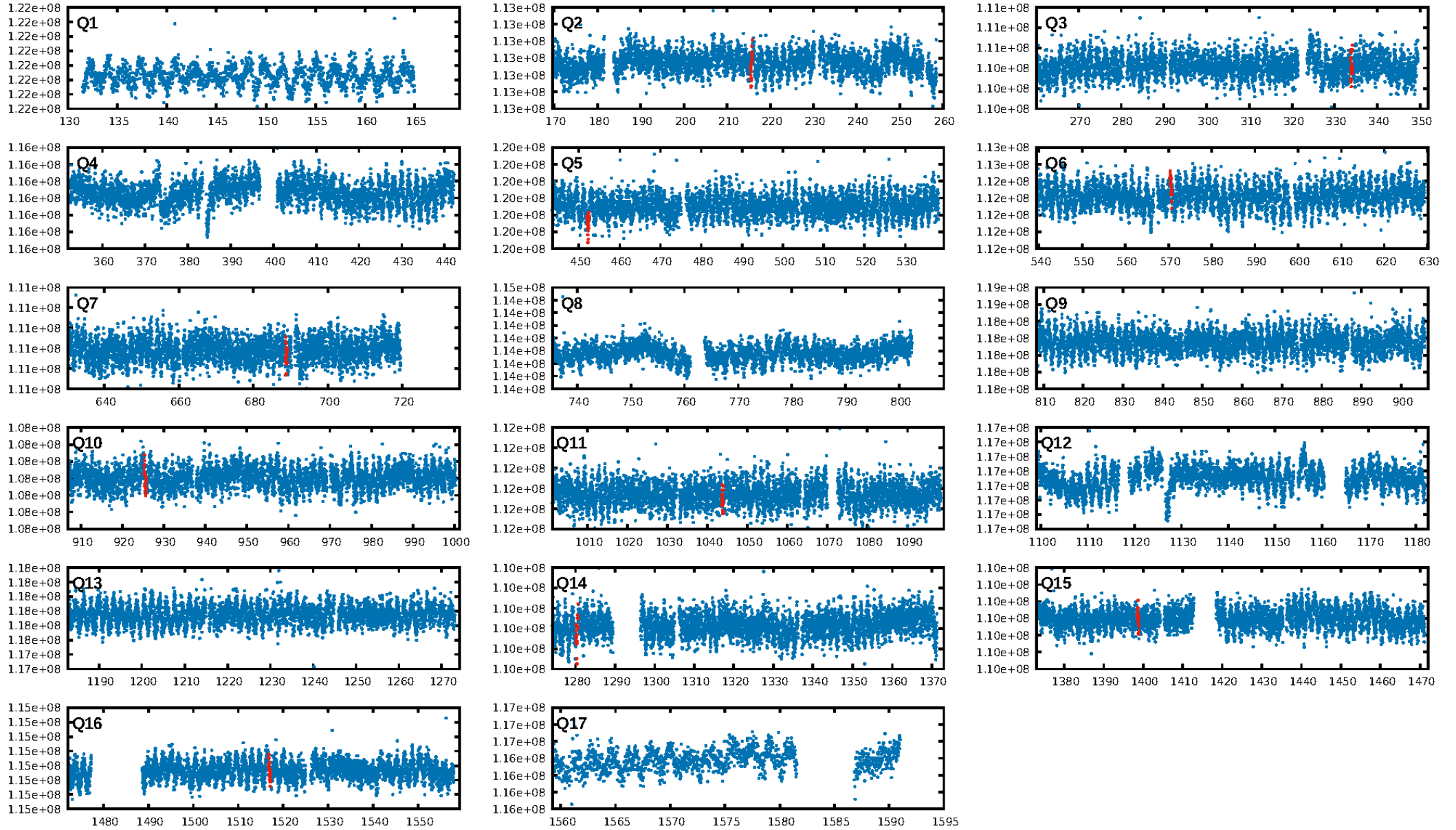
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [226.73 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 22.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.38e-14
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 2.771
Centroid-sig: N/A
Centroid-so: 0.483 arcsec [0.53 σ]
OotOffset-rm: 0.904 arcsec [0.78 σ]
OotOffset-st: 4/2/1/1 [8]
KicOffset-rm: 0.957 arcsec [0.87 σ]
KicOffset-st: 4/2/1/1 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.70 [7/10]

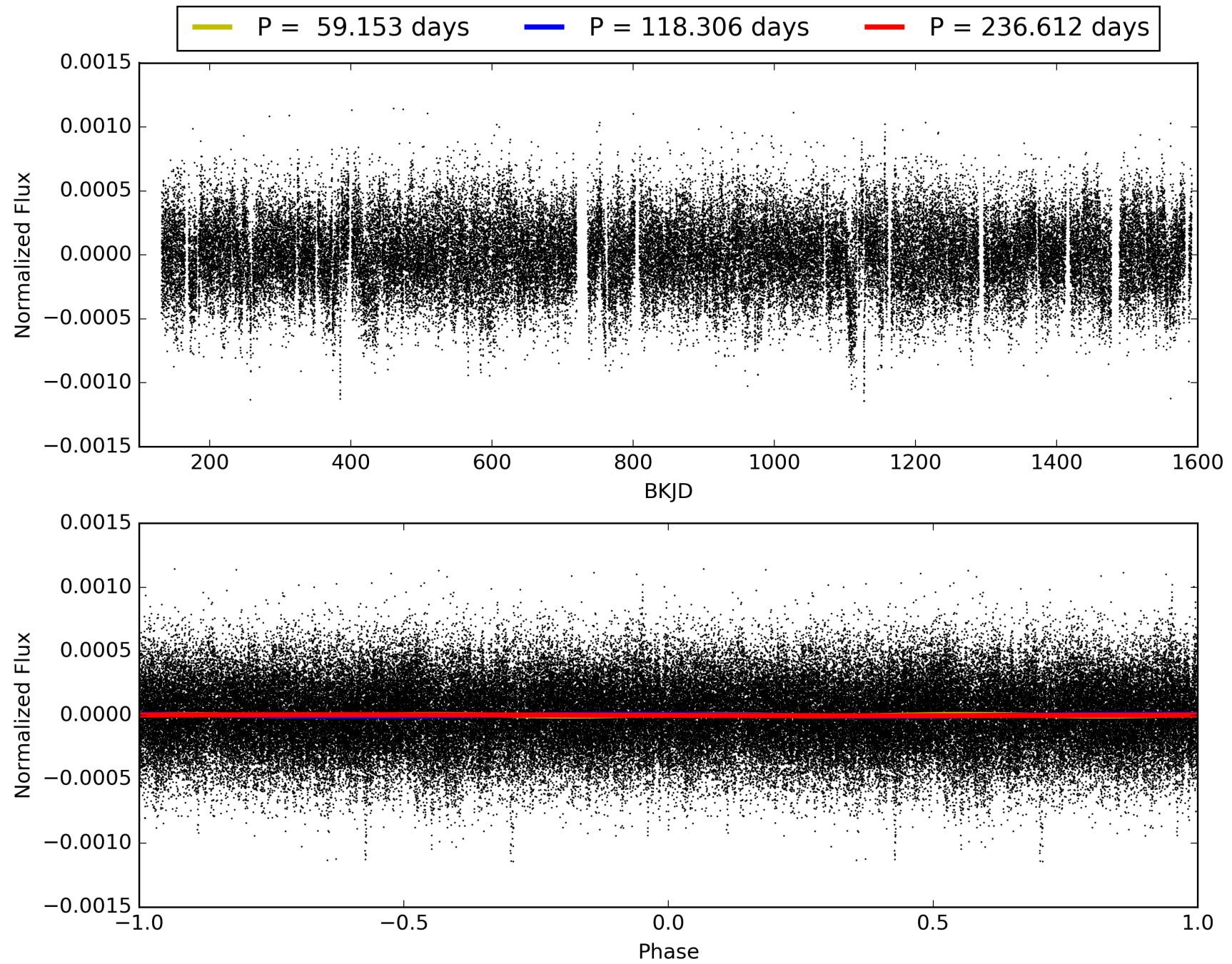
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:45:41 Z

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

TCE 005653795-02, PDC Light Curves

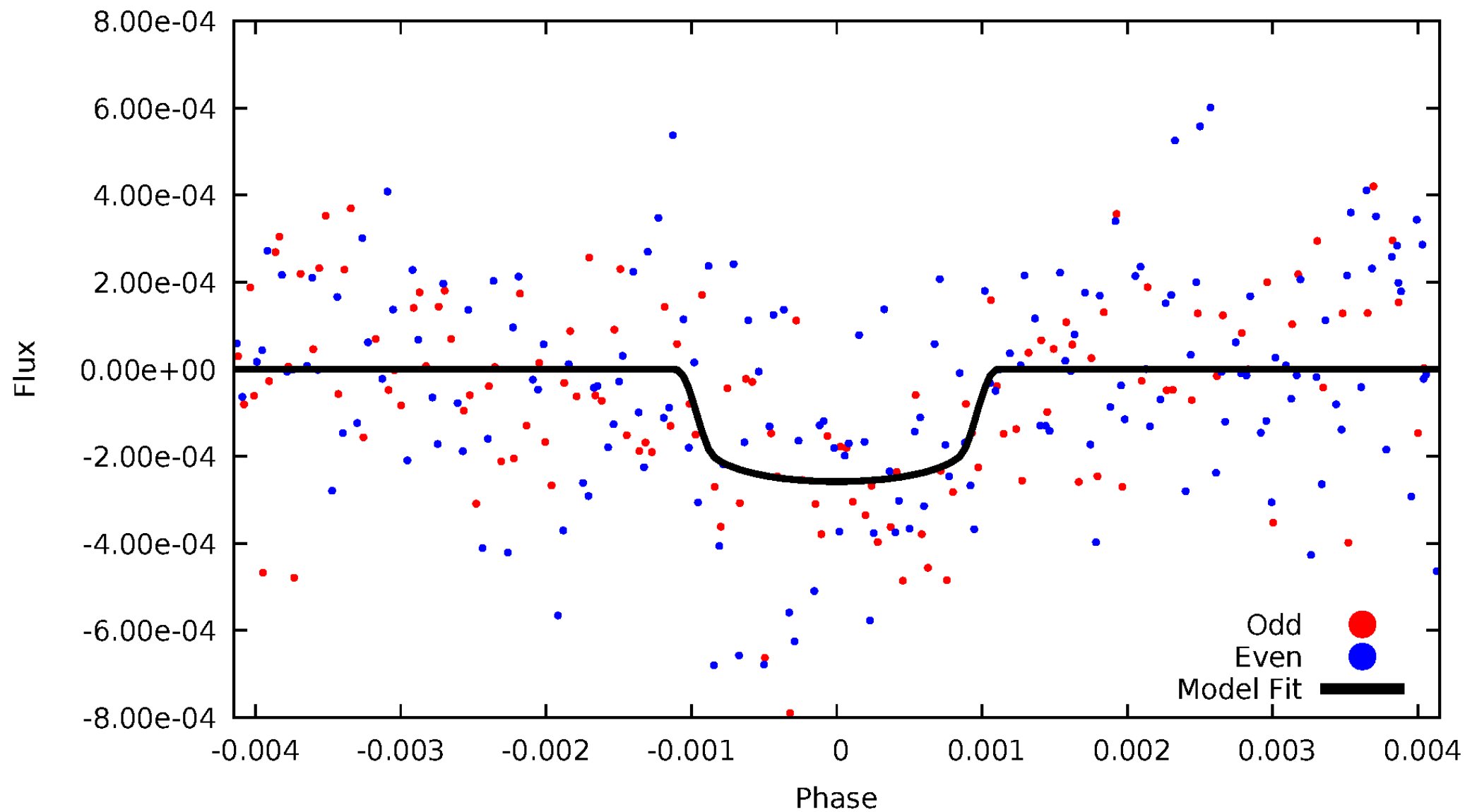


TCE 005653795-02



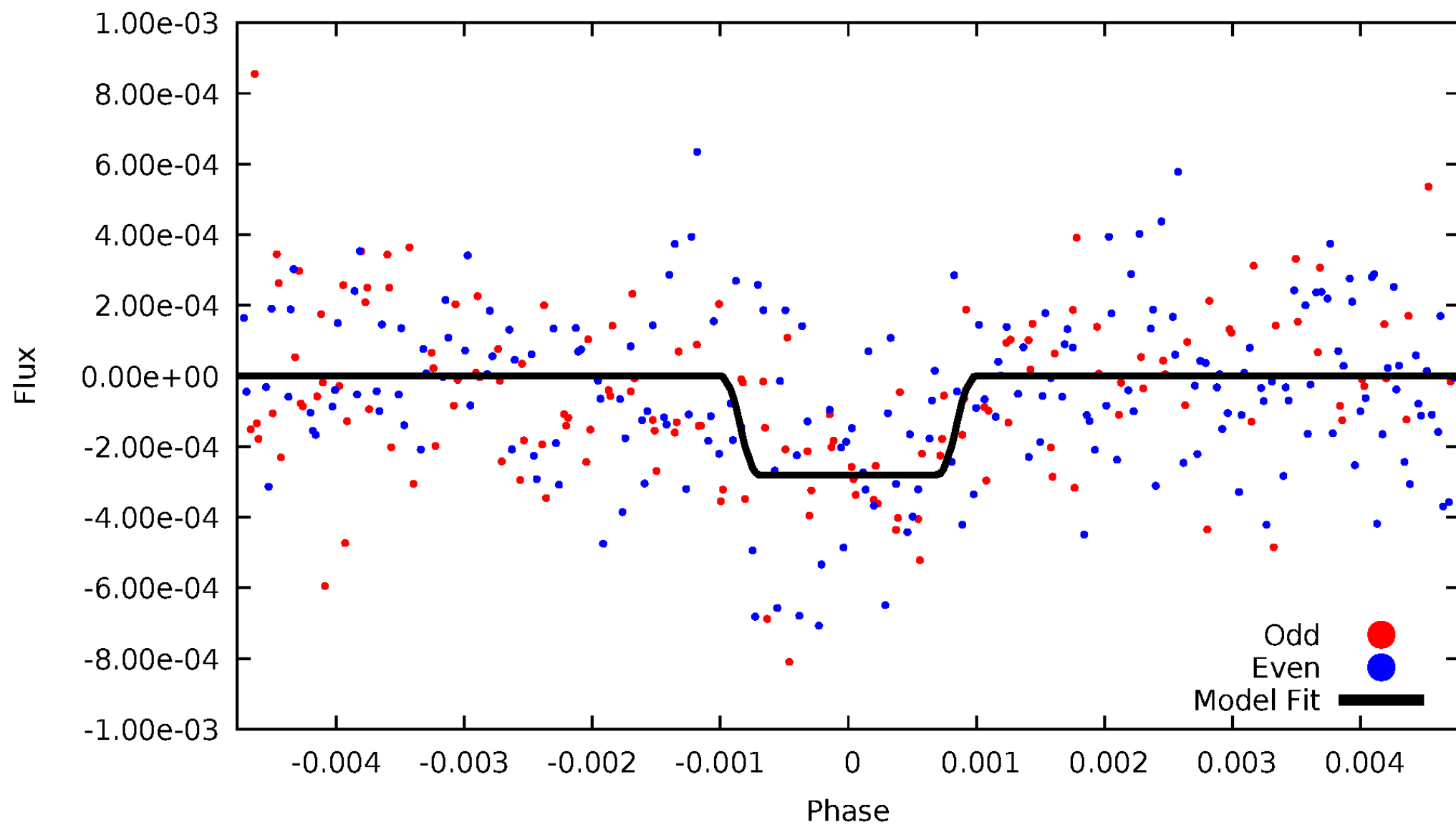
DV Odd/Even

TCE 005653795-02



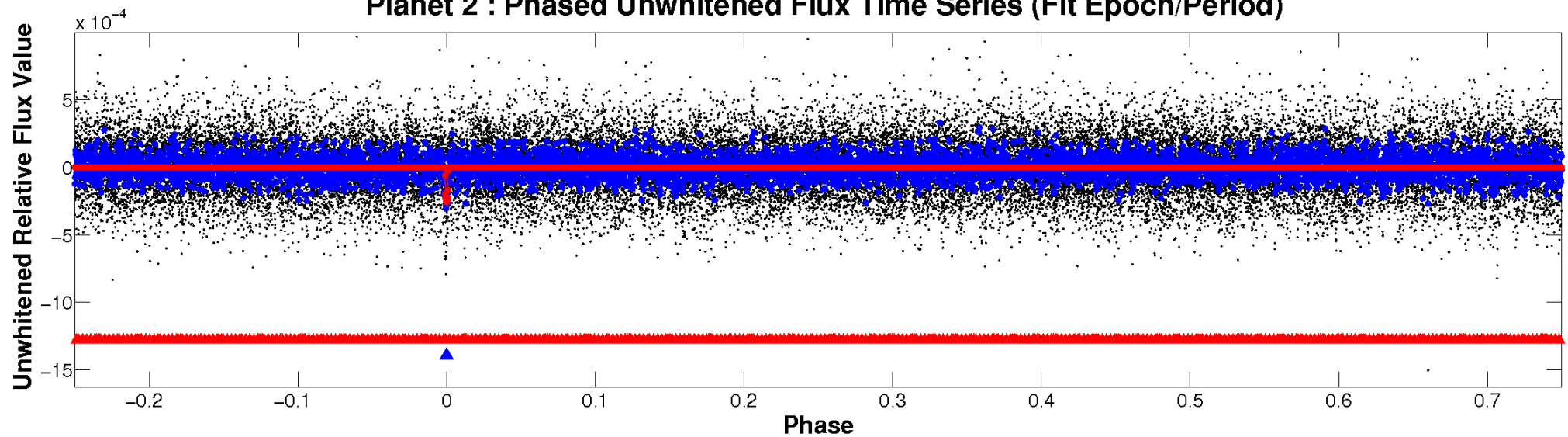
ALT Odd/Even

TCE 005653795-02

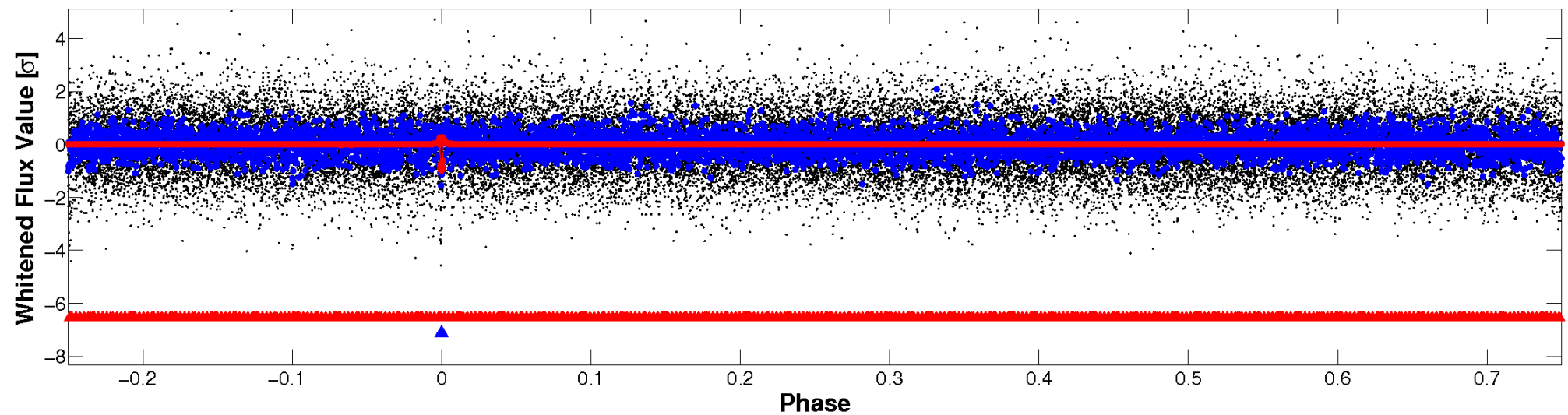


Non-Whitened Vs. Whitened Light Curve

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

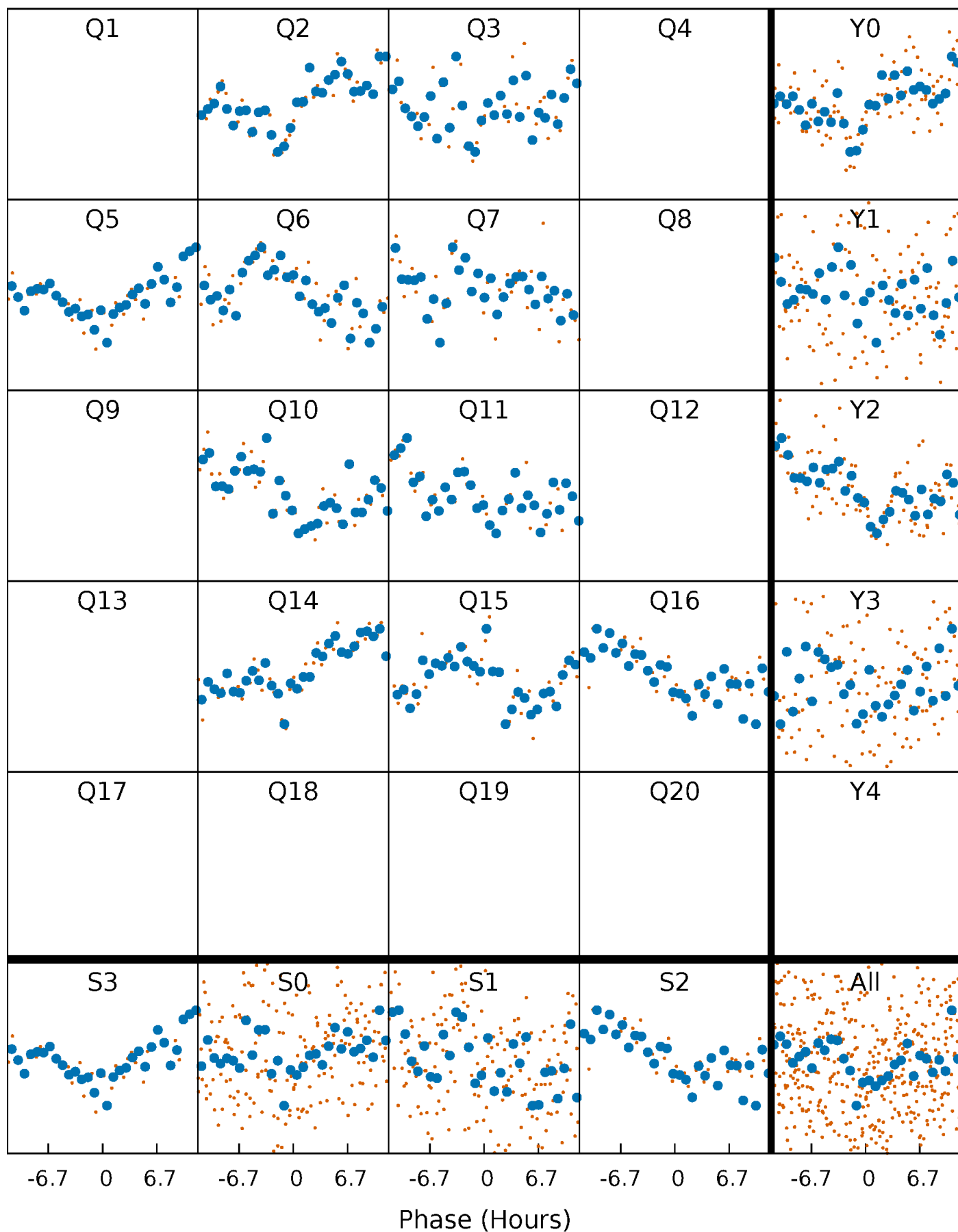


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



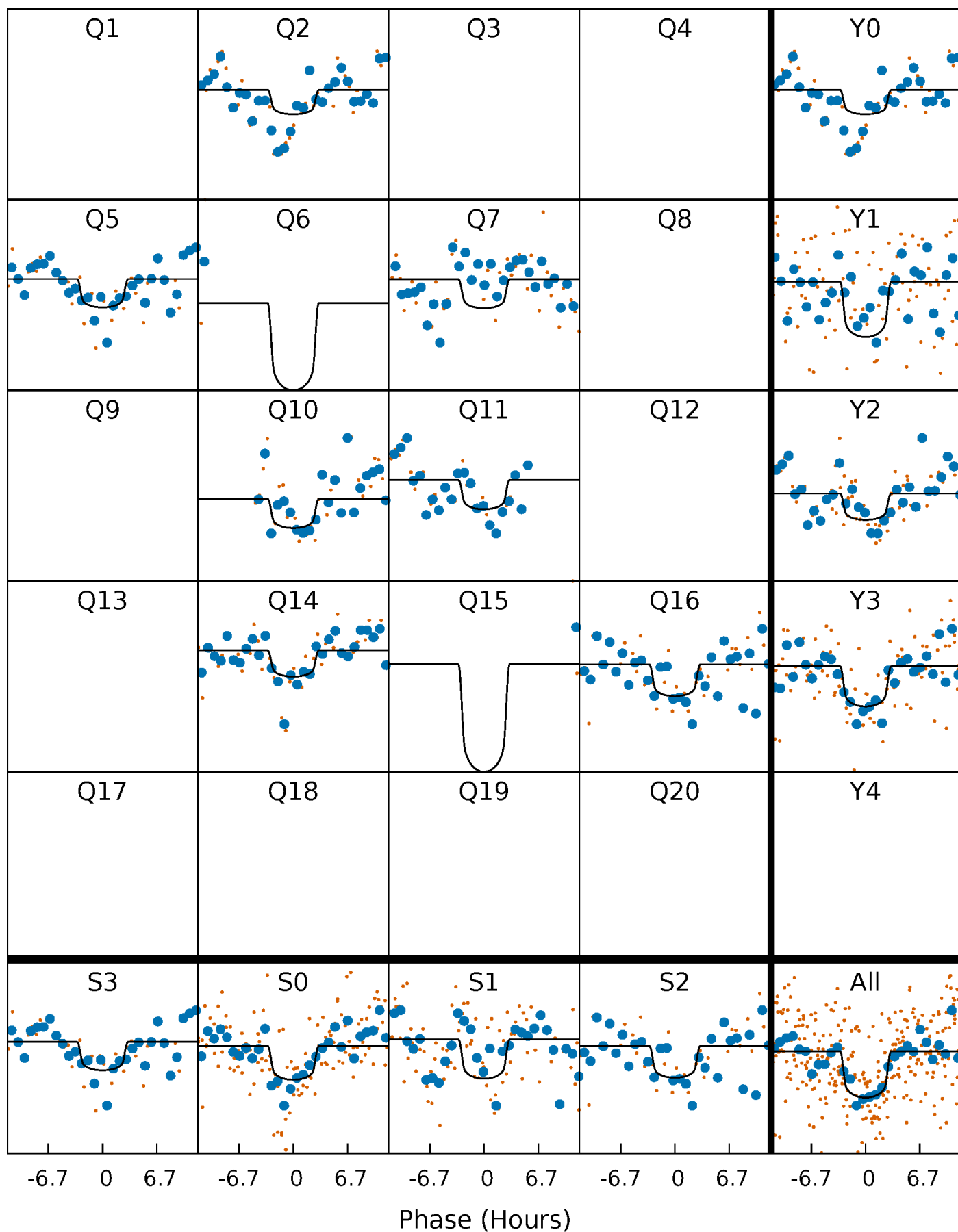
PDC Quarter-Phased Transit Curves

TCE 005653795-02 P=118.305767 Days $T_0=215.637657$ (BKJD)



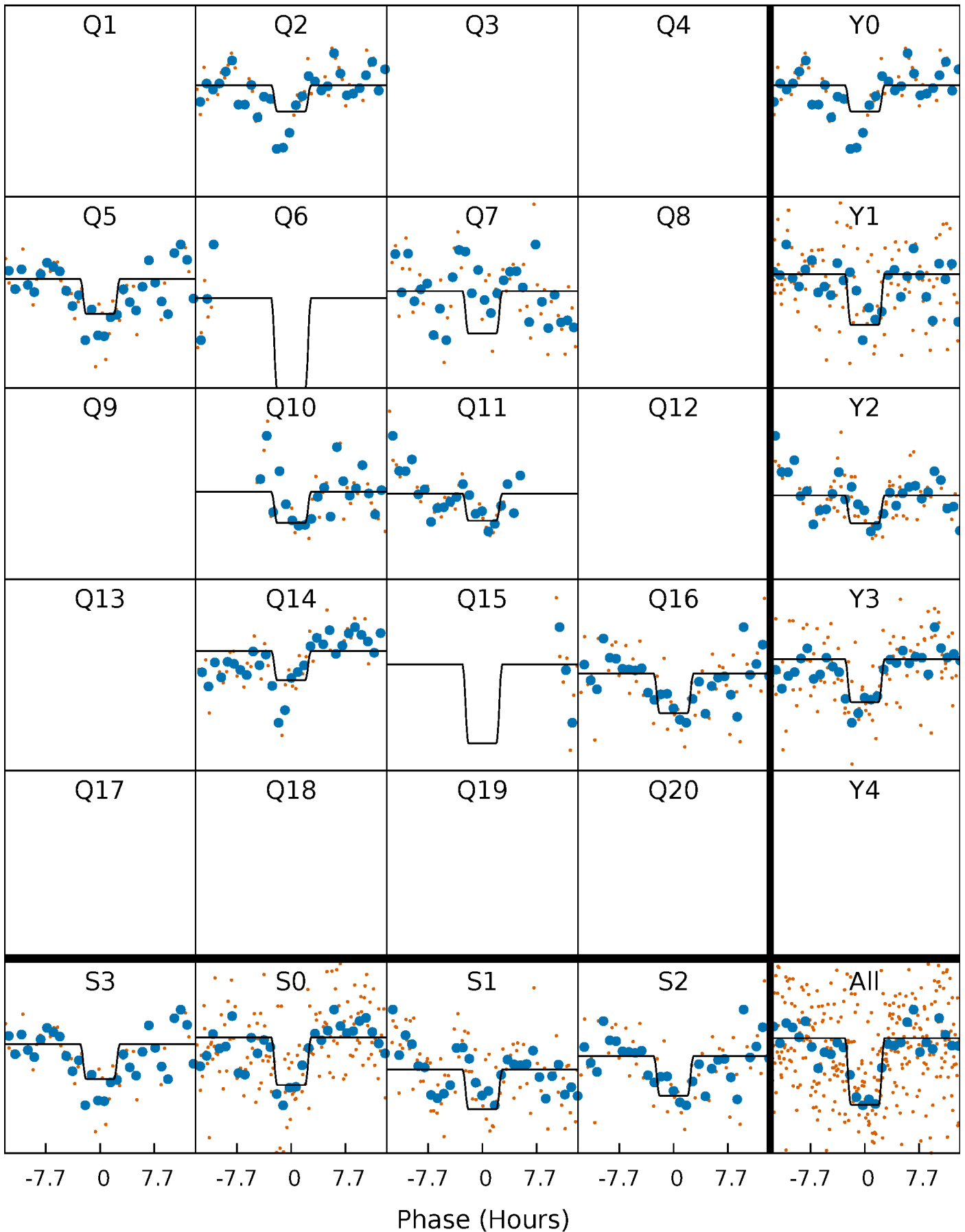
DV Quarter-Phased Transit Curves

TCE 005653795-02 P=118.305767 Days $T_0=215.637657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

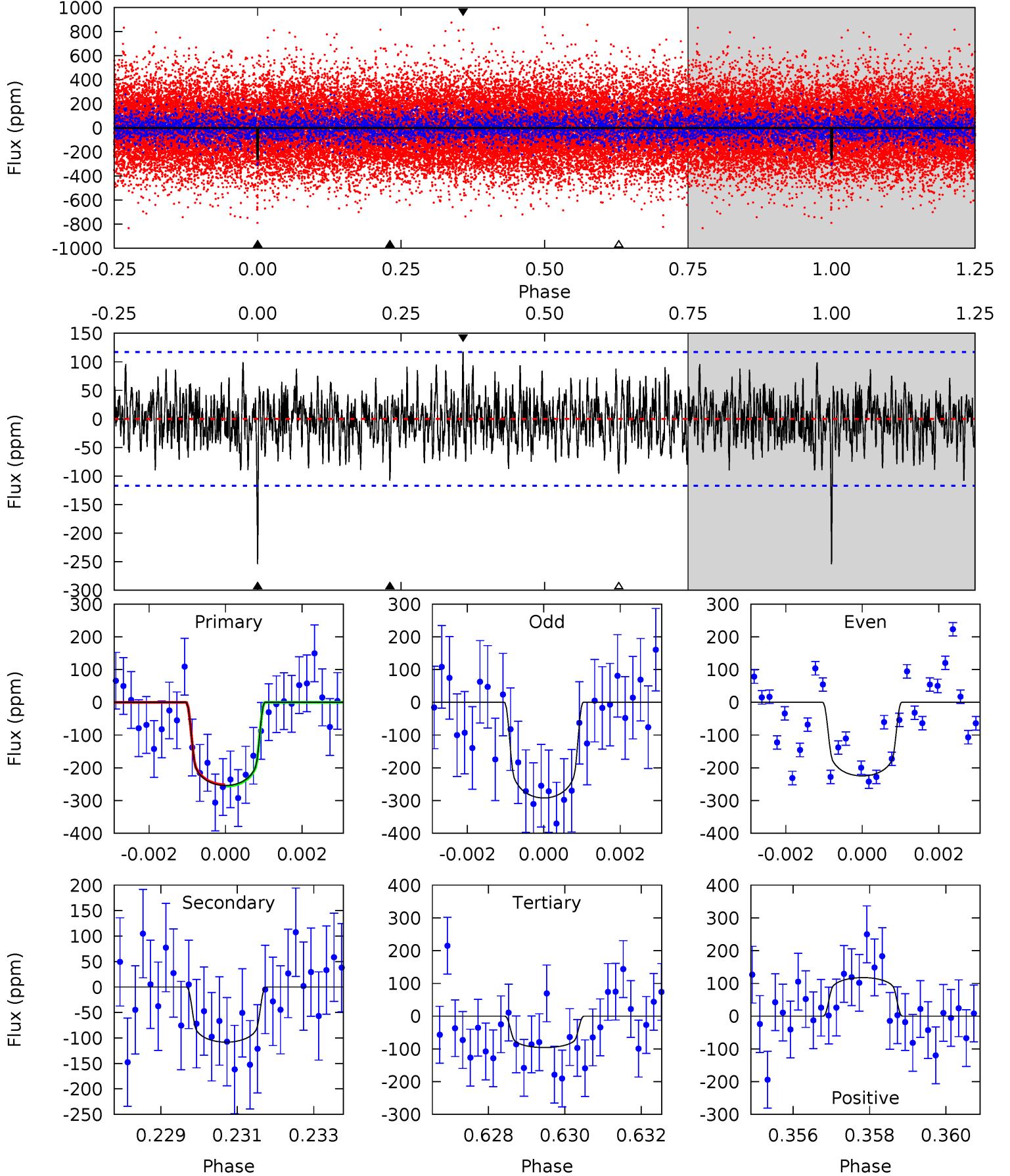
TCE 005653795-02 P=118.309155 Days $T_0=215.623835$ (BKJD)



DV Model-Shift Uniqueness Test

005653795-02, $P = 118.305767$ Days, $E = 97.331890$ Days

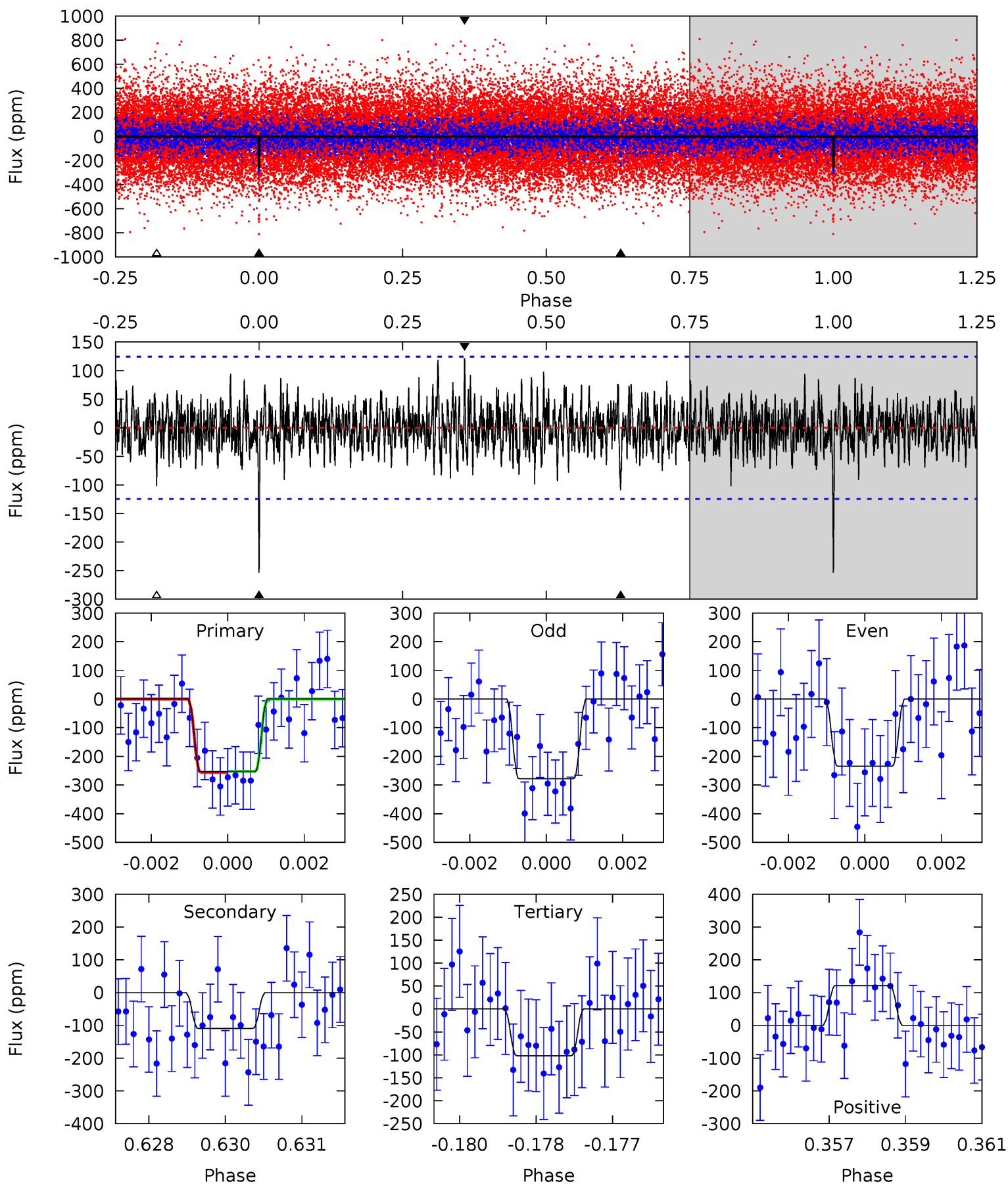
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	4.91	4.36	5.33	5.31	3.07	1.53	7.18	6.20	0.55	-0.42	1.52	0.93	0.32	0.10



Alt Model-Shift Uniqueness Test

005653795-02, P = 118.309155 Days, E = 97.314680 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	4.69	4.37	5.20	5.33	3.10	1.36	6.49	5.67	0.32	-0.51	0.94	1.01	0.32	0.08



Stellar Parameters For KIC 005653795

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6190^{+223}_{-223}	$3.340^{+0.391}_{-0.069}$	$-0.340^{+0.350}_{-0.350}$	$4.763^{+0.694}_{-2.082}$	$1.811^{+0.131}_{-0.523}$	$0.024^{+0.080}_{-0.007}$
	+4%/-4%	+12%/-2%	+103%/-103%	+15%/-44%	+7%/-29%	+337%/-29%
Source	PHO1	FLK73	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 005653795-02 / KOI 7734.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-108 ± 22	$7.80^{+3.83}_{-3.20}$	1056^{+78}_{-115}	4922^{+1201}_{-615}	316^{+545}_{-175}
Alt.	-109 ± 23	$7.90^{+3.44}_{-3.00}$	1062^{+72}_{-114}	4902^{+1049}_{-611}	296^{+517}_{-149}

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 $A_{obs} \gg 1.0$

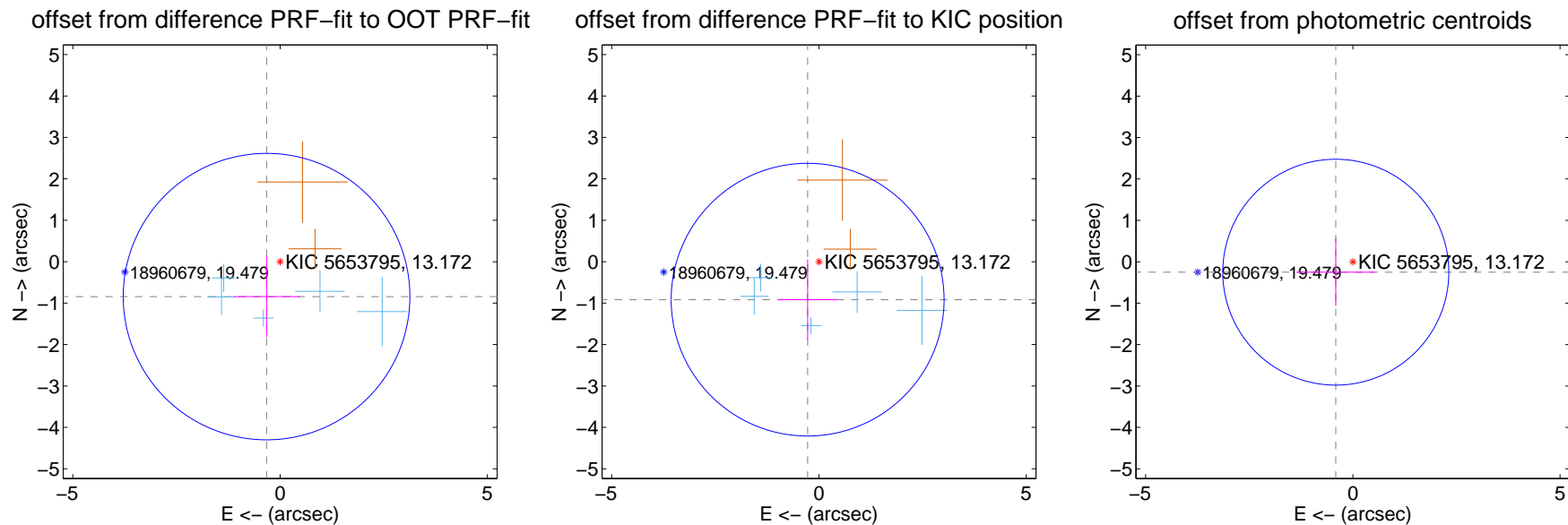
DV Centroid Data

Supplemental centroid analysis for 005653795-02. Kepler magnitude: 13.17. Transit SNR 7.76

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.904 ± 1.153	0.78	0.327 ± 0.801	-0.843 ± 0.983
PRF-fit source offset from KIC position	0.957 ± 1.097	0.87	0.274 ± 0.726	-0.917 ± 0.969
photometric centroid source offset	0.48 ± 0.91	0.53	0.41 ± 0.94	-0.25 ± 0.81



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.

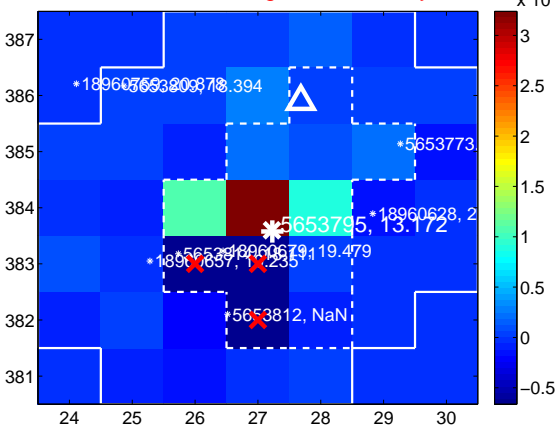
Q1 no difference image



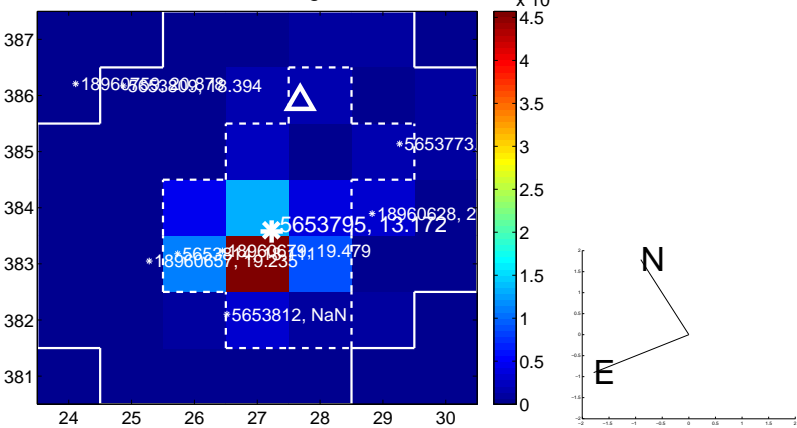
Q1 no OOT image



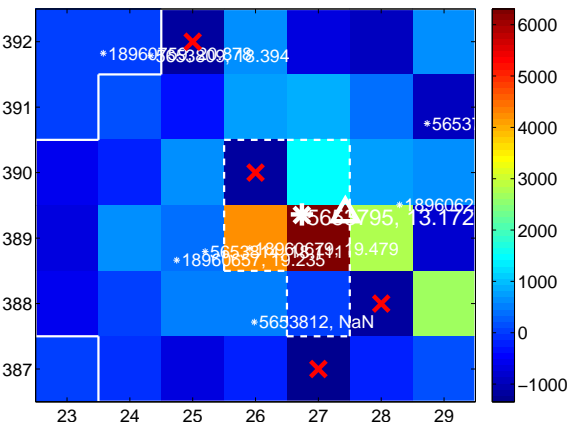
Q2 difference image. Poor Quality



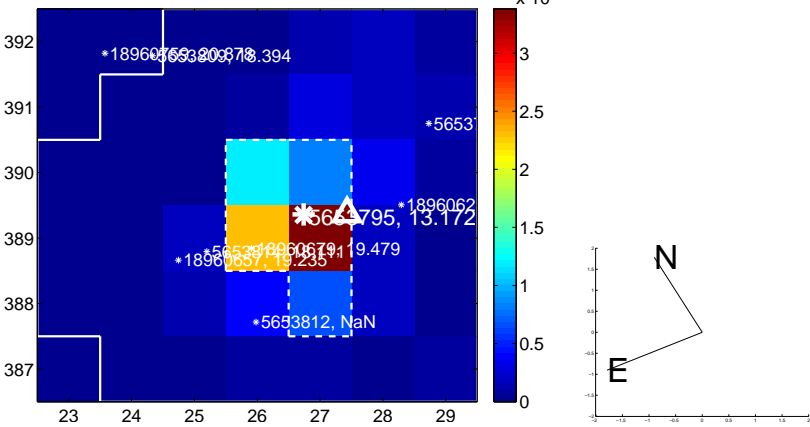
Q2 OOT image



Q3 difference image



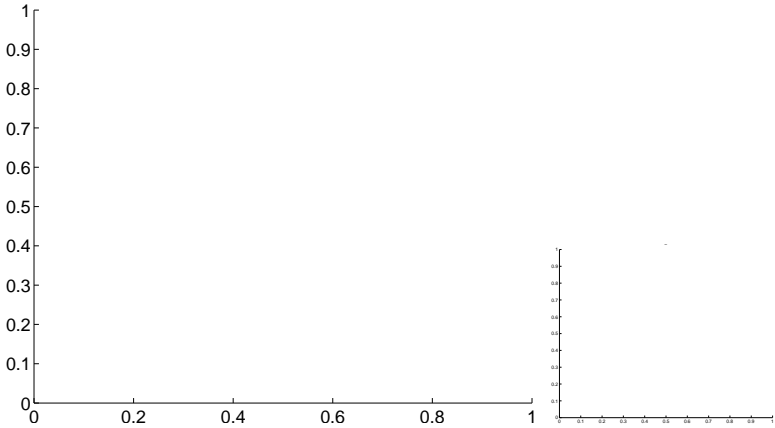
Q3 OOT image



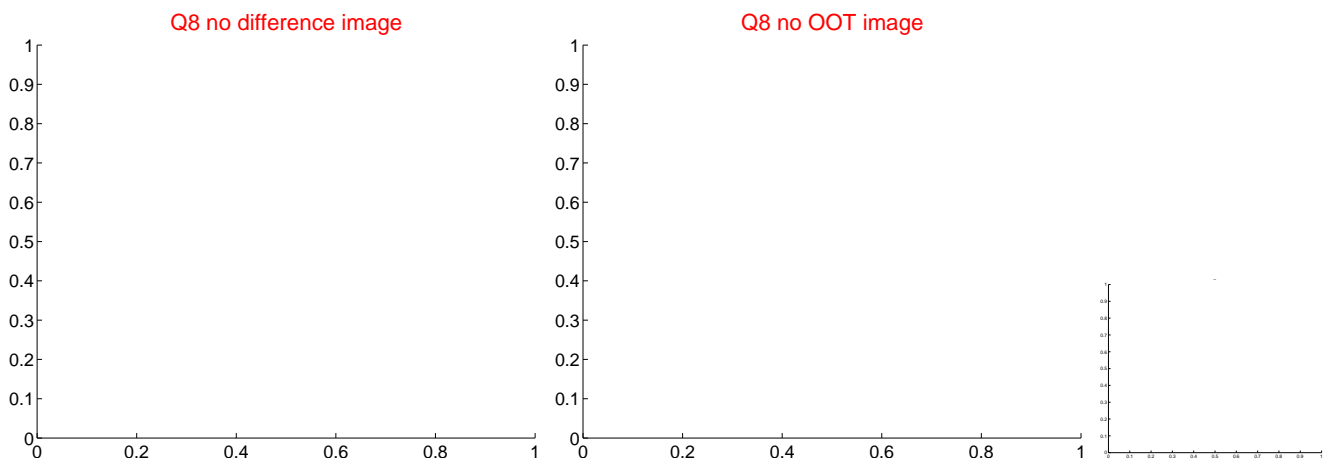
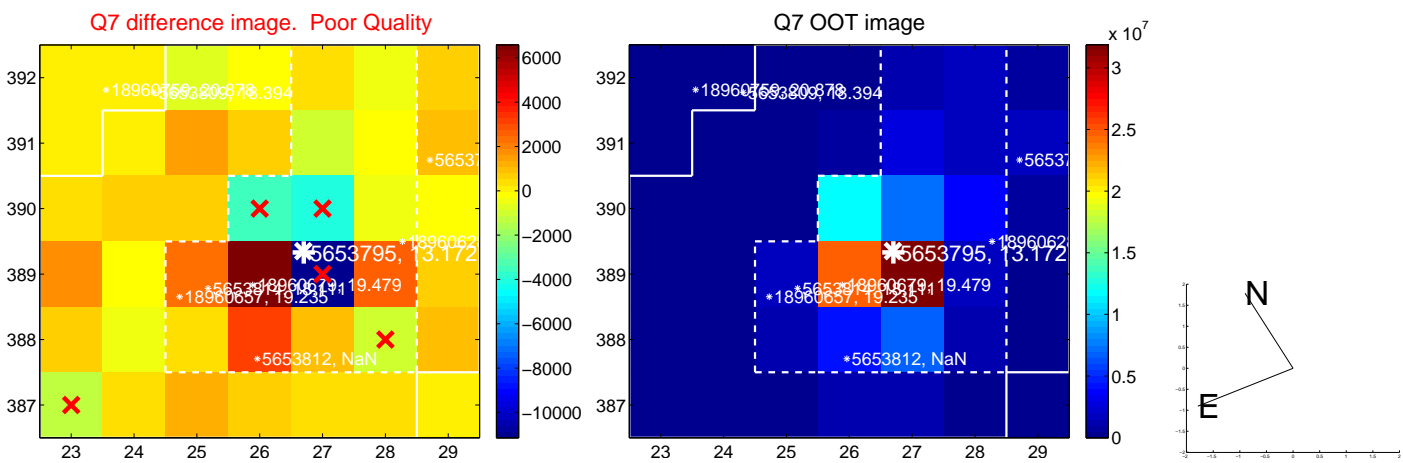
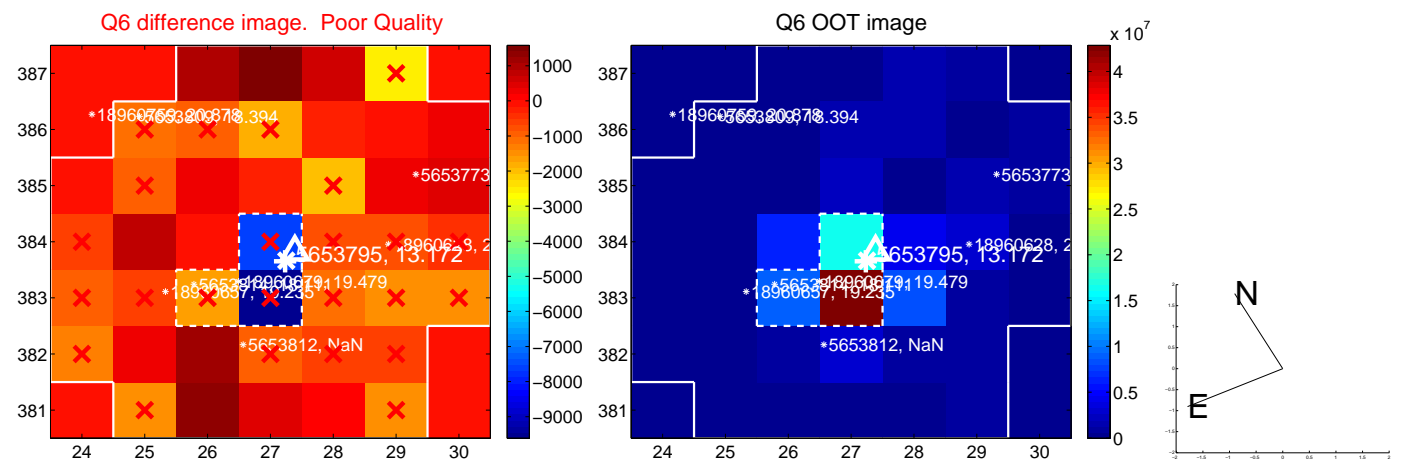
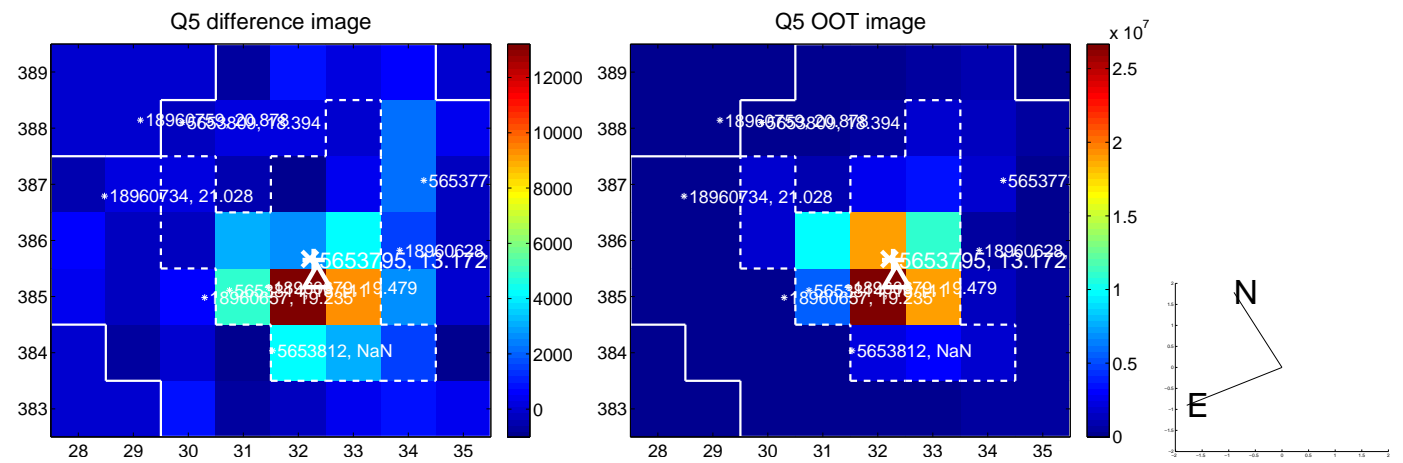
Q4 no difference image



Q4 no OOT image



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.

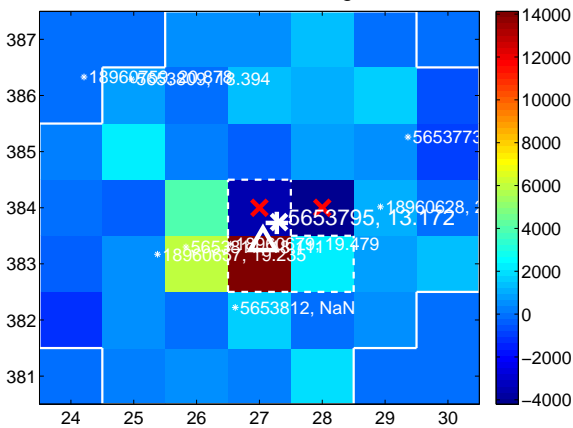
Q9 no difference image



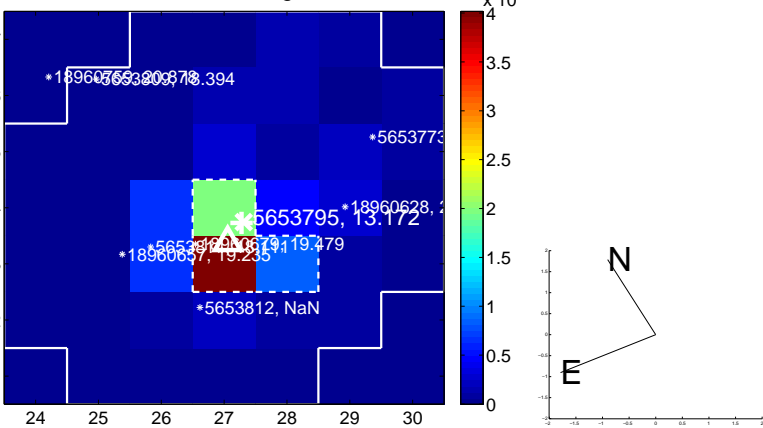
Q9 no OOT image



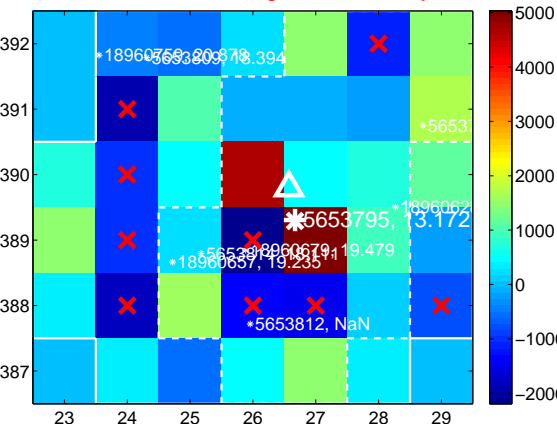
Q10 difference image



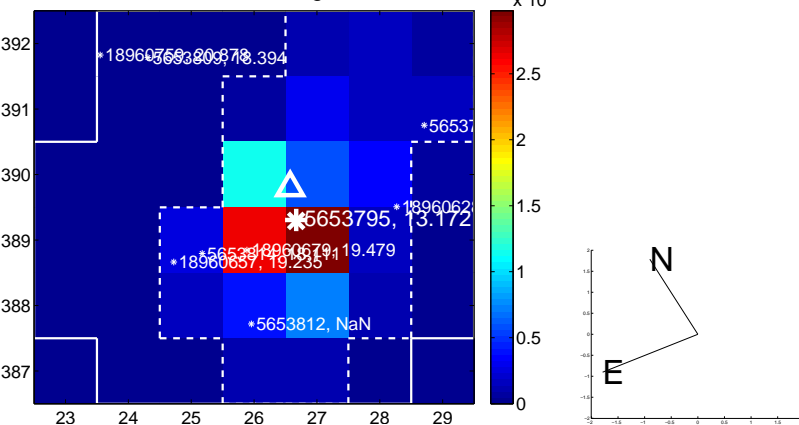
Q10 OOT image



Q11 difference image. Poor Quality



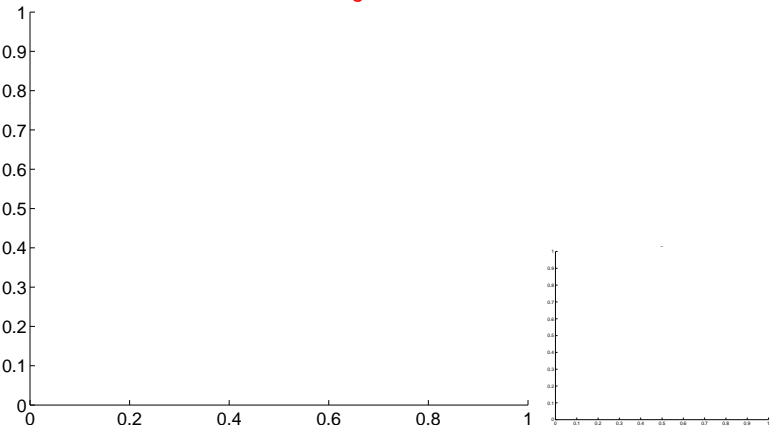
Q11 OOT image



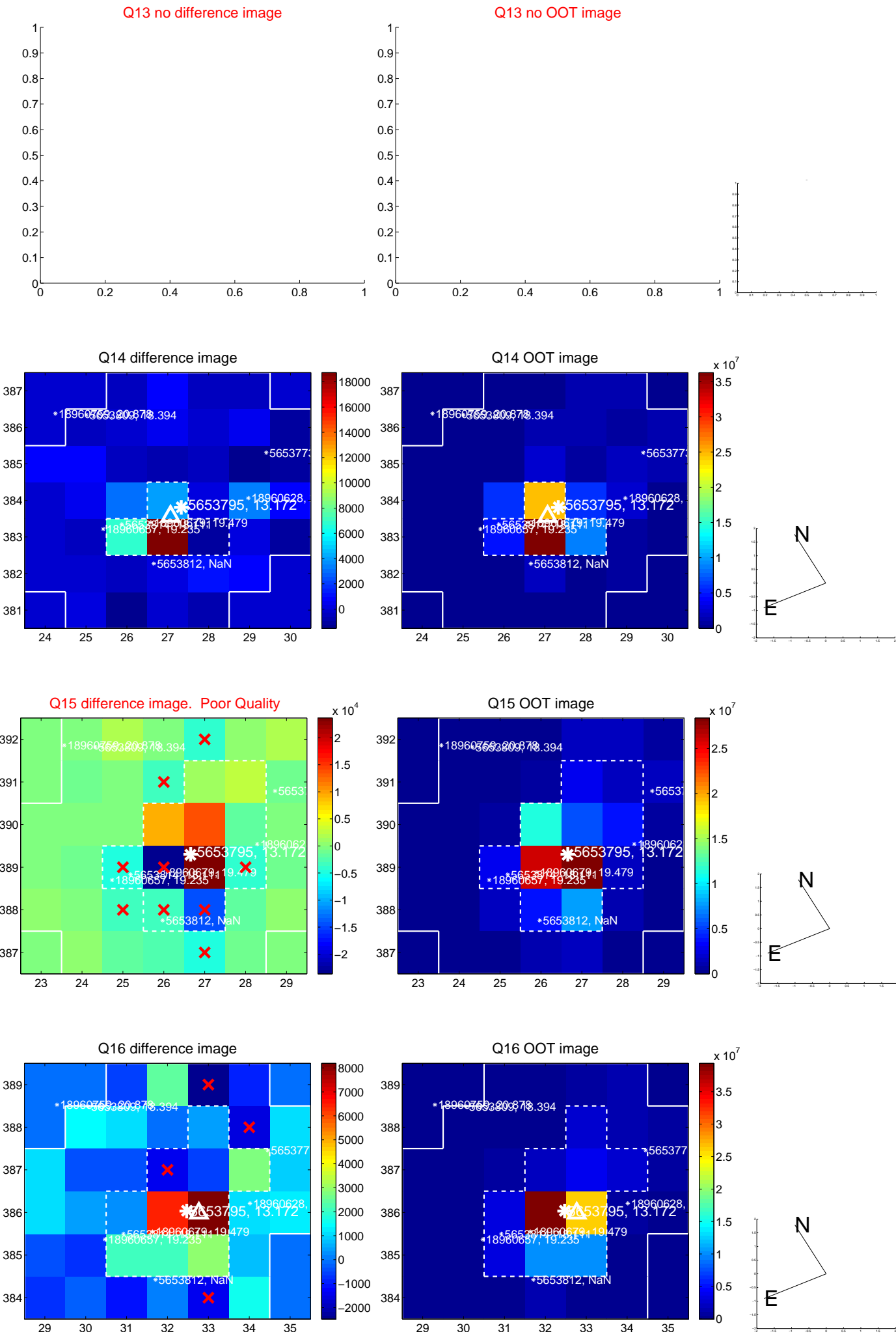
Q12 no difference image



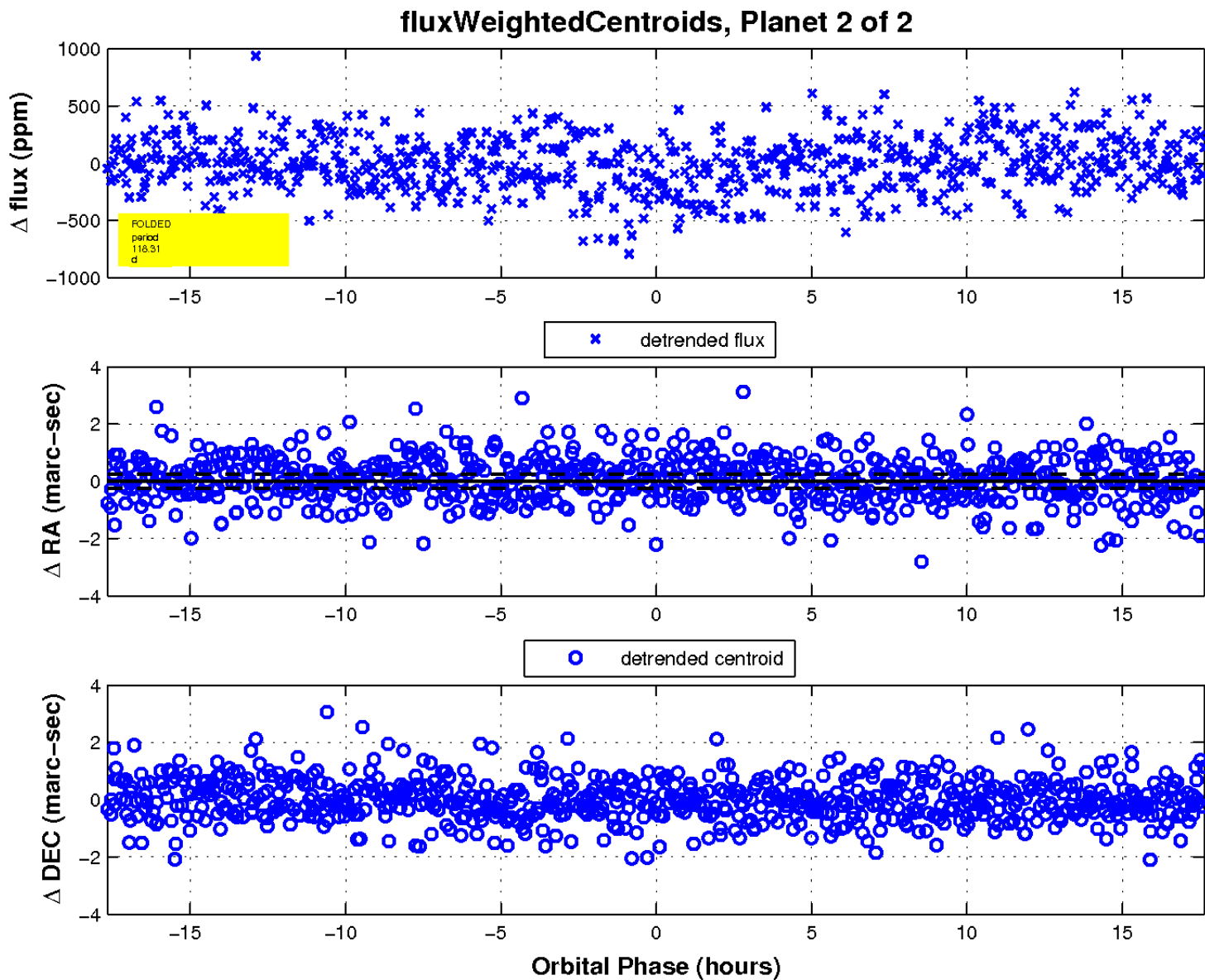
Q12 no OOT image



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

