

KIC 012119295

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})
012119295-01	OBS	No	0.600378	131.803398	20.8	2.398	10.5	11.5	1.35	7284	0.72	20563.65
012119295-02	OBS	No	507.228270	177.309240	306.5	22.424	7.3	7.5	1.35	7284	2.74	2.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012119295-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
012119295-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

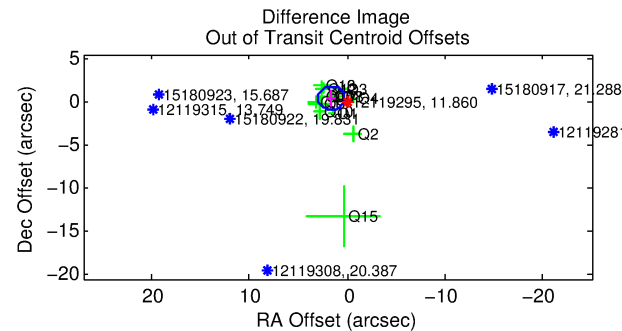
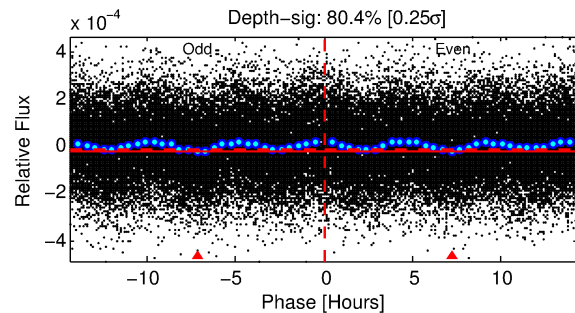
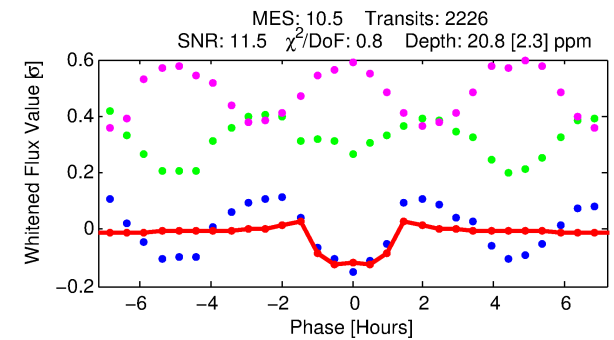
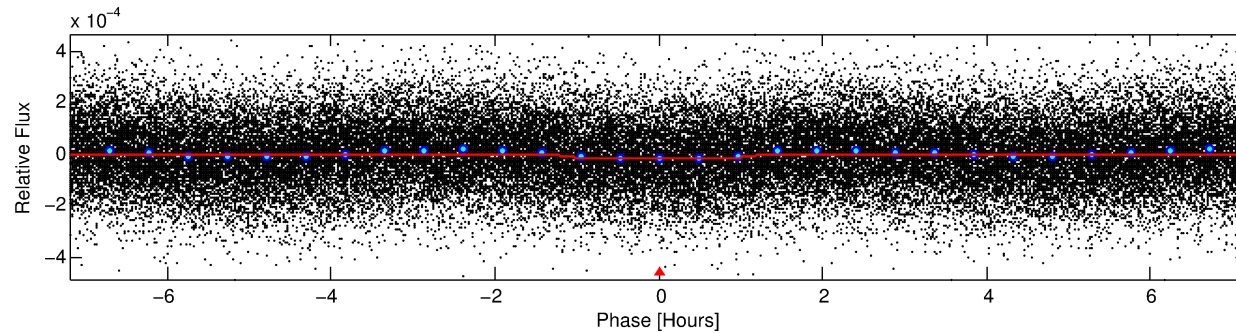
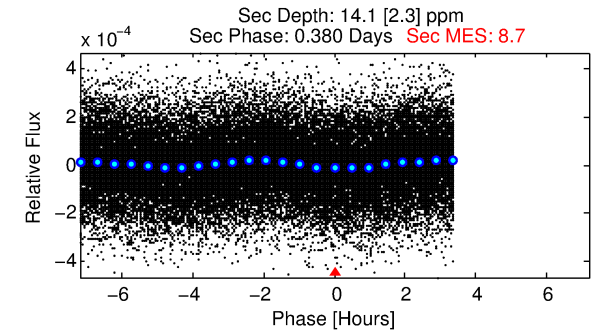
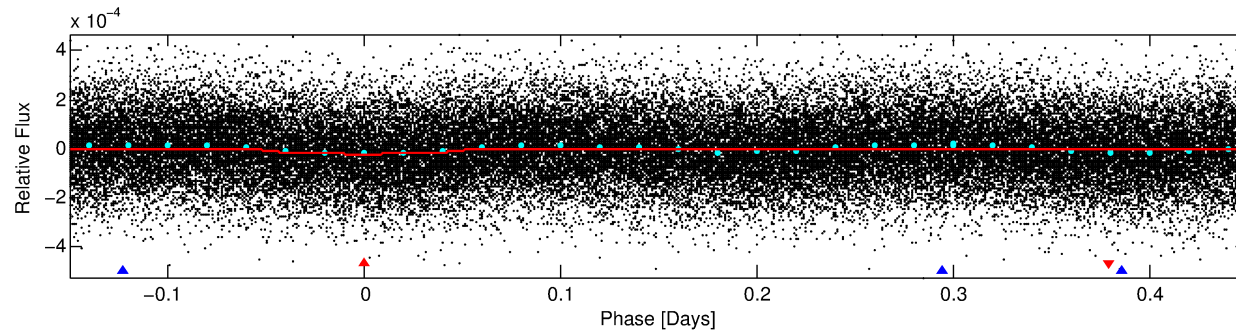
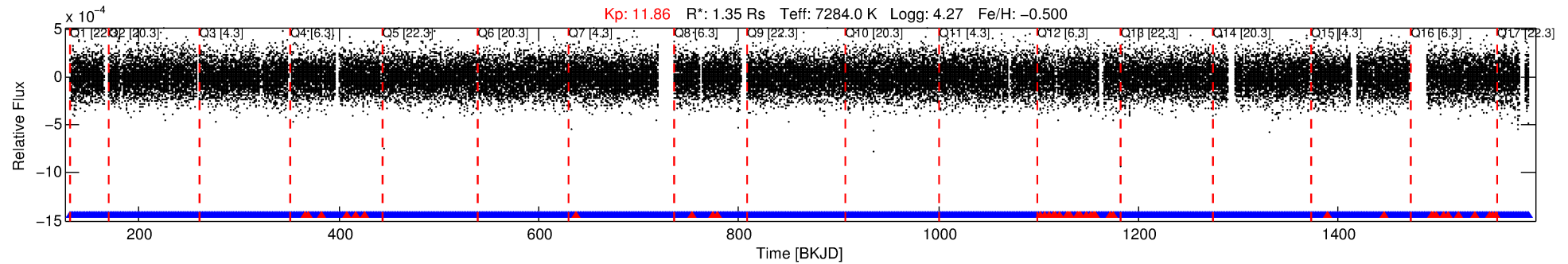
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012119295-01

No Significant Match Found

DV One-Page Summary

KIC: 12119295 Candidate: 1 of 2 Period: 0.600 d



DV Fit Results:

Period = 0.60038 [0.00001] d
Epoch = 131.8034 [0.0019] BKJD
Rp/R* = 0.0048 [0.0012]
a/R* = 1.27 [0.76]
b = 0.90 [0.34]
Seff = 20563.65 [8142.67]
Teq = 3054 [302] K
Rp = 0.72 [0.29] Re
a = 0.0150 [0.0038] AU
Ag = 3.39 [2.15] [1.11σ]
Teffp = 6404 [883] K [3.59σ]

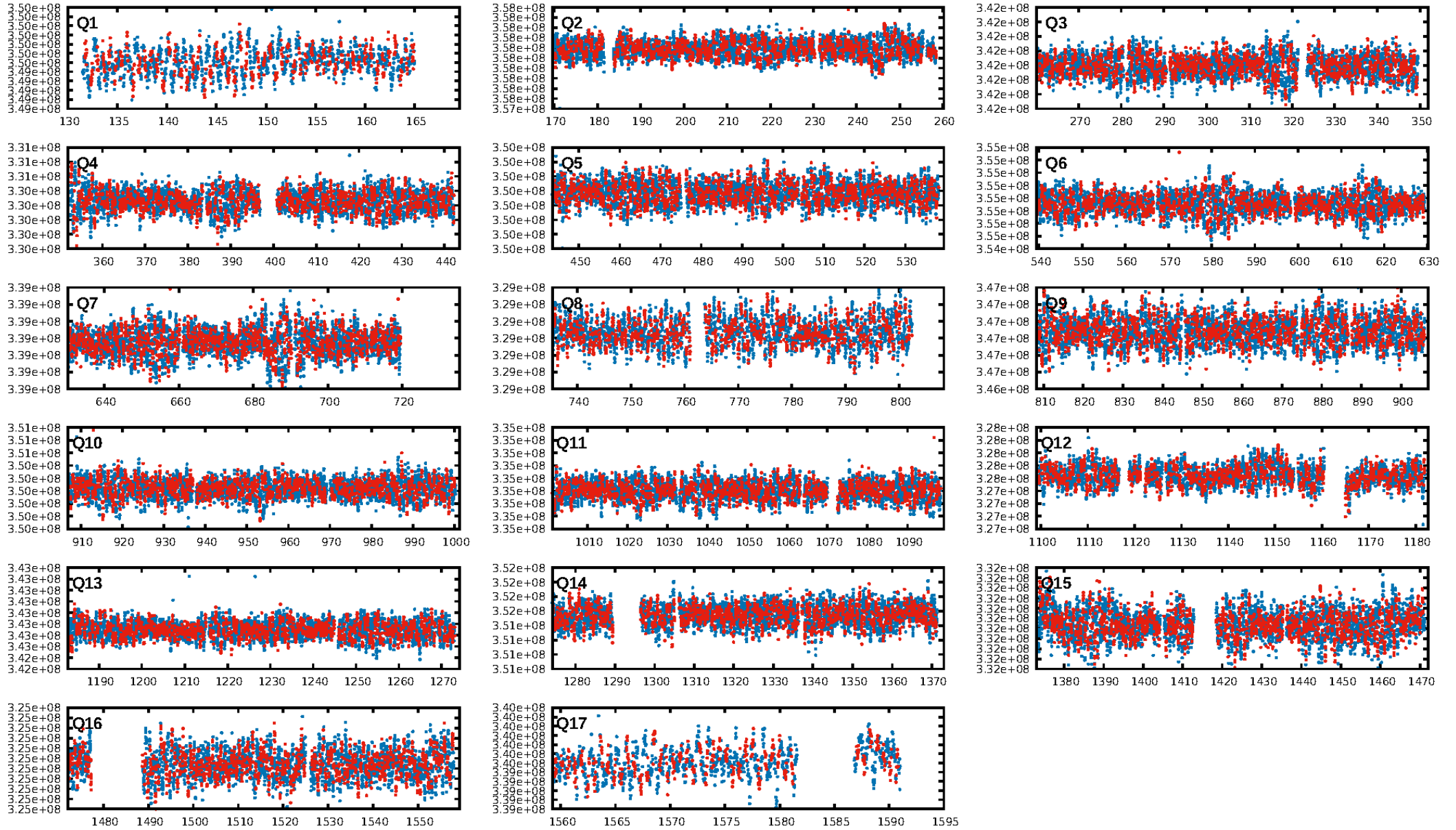
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [539.15σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.84e-18
RollingBand-fgt: 0.98 [2085/2126]
GhostDiagnostic-chr: 2.578
Centroid-sig: 53.8%
Centroid-so: 0.423 arcsec [0.64σ]
OotOffset-rm: 1.728 arcsec [3.79σ]
KicOffset-rm: 1.739 arcsec [3.26σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

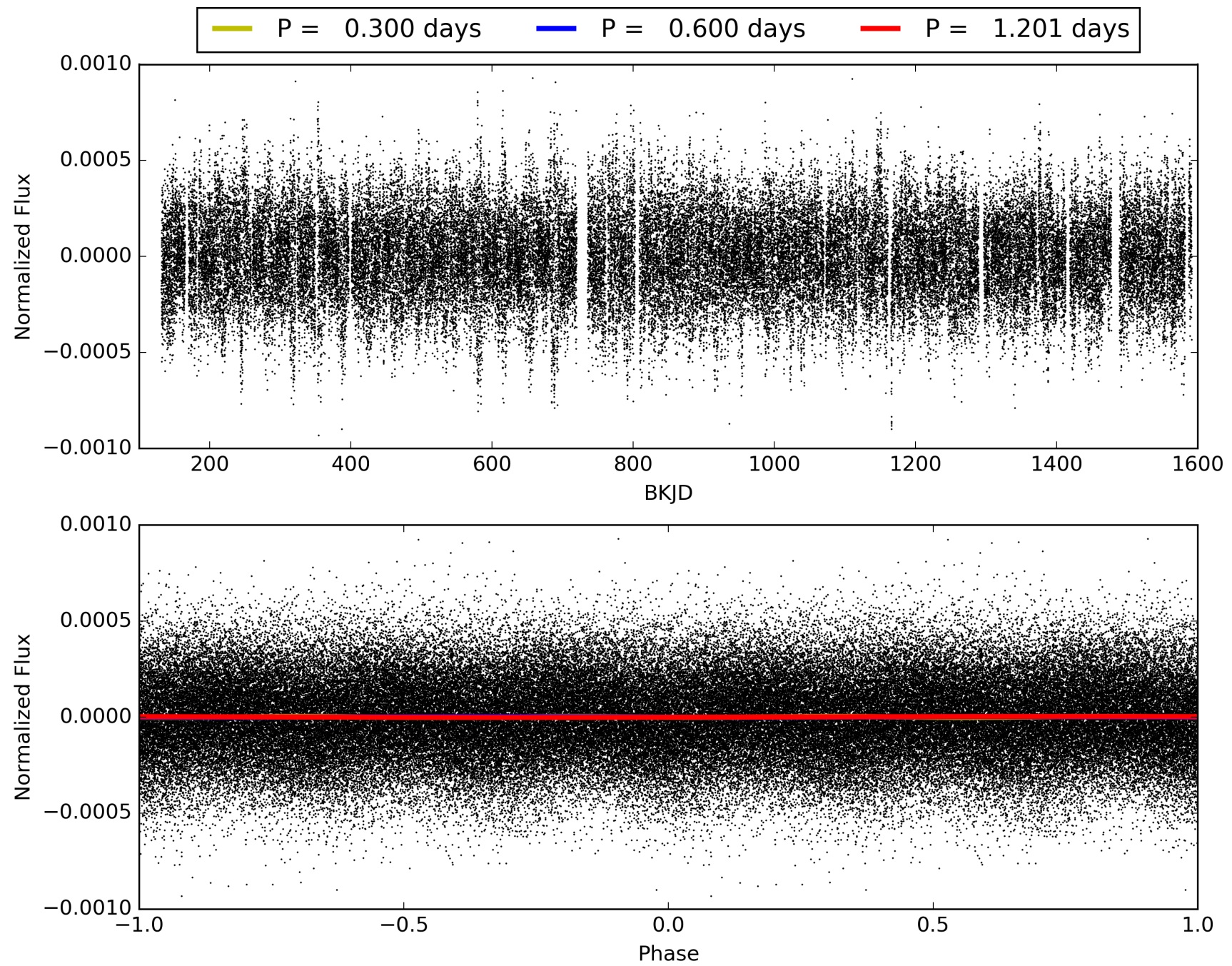
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:47:41 Z

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

TCE 012119295-01, PDC Light Curves

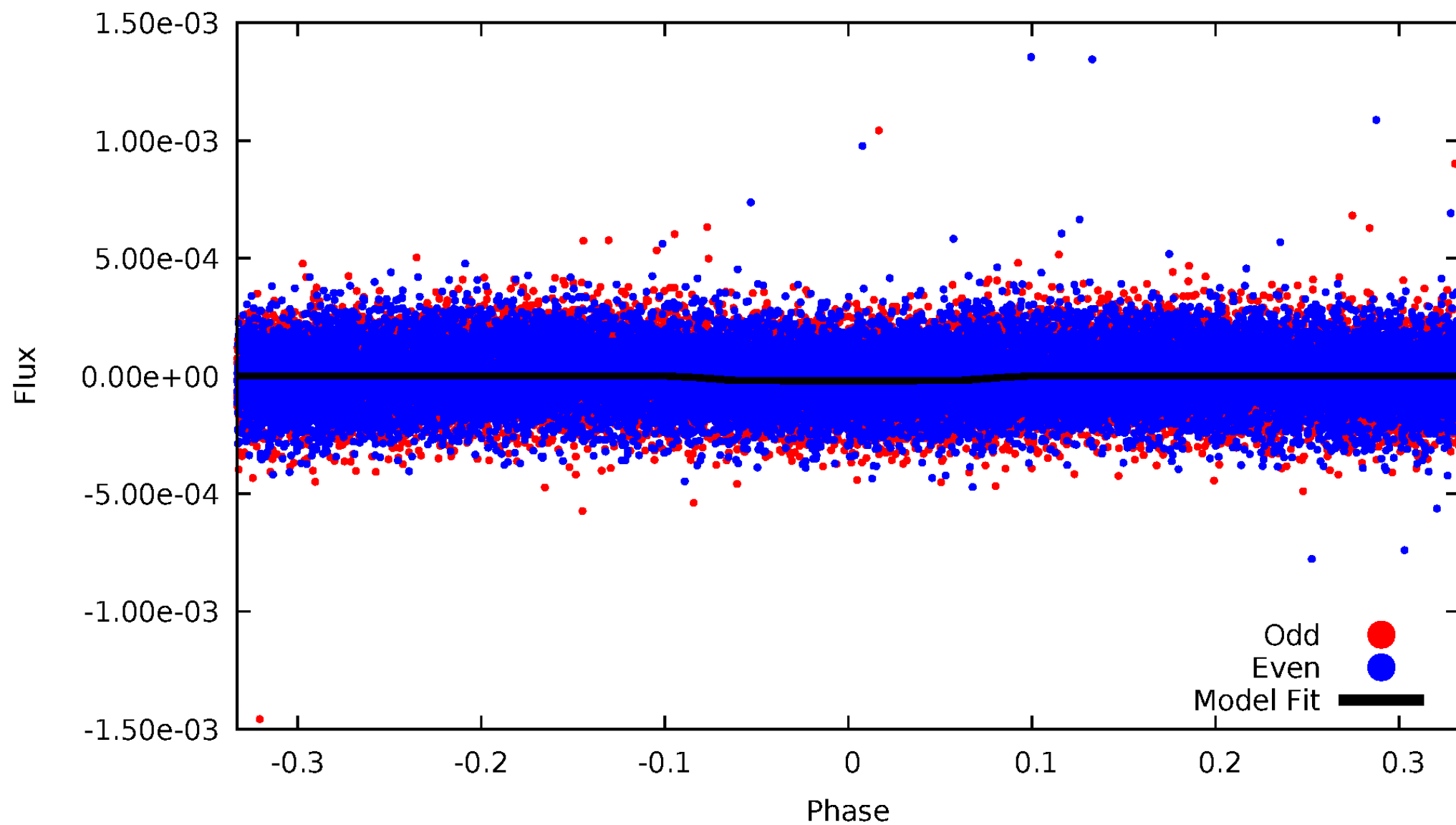


TCE 012119295-01



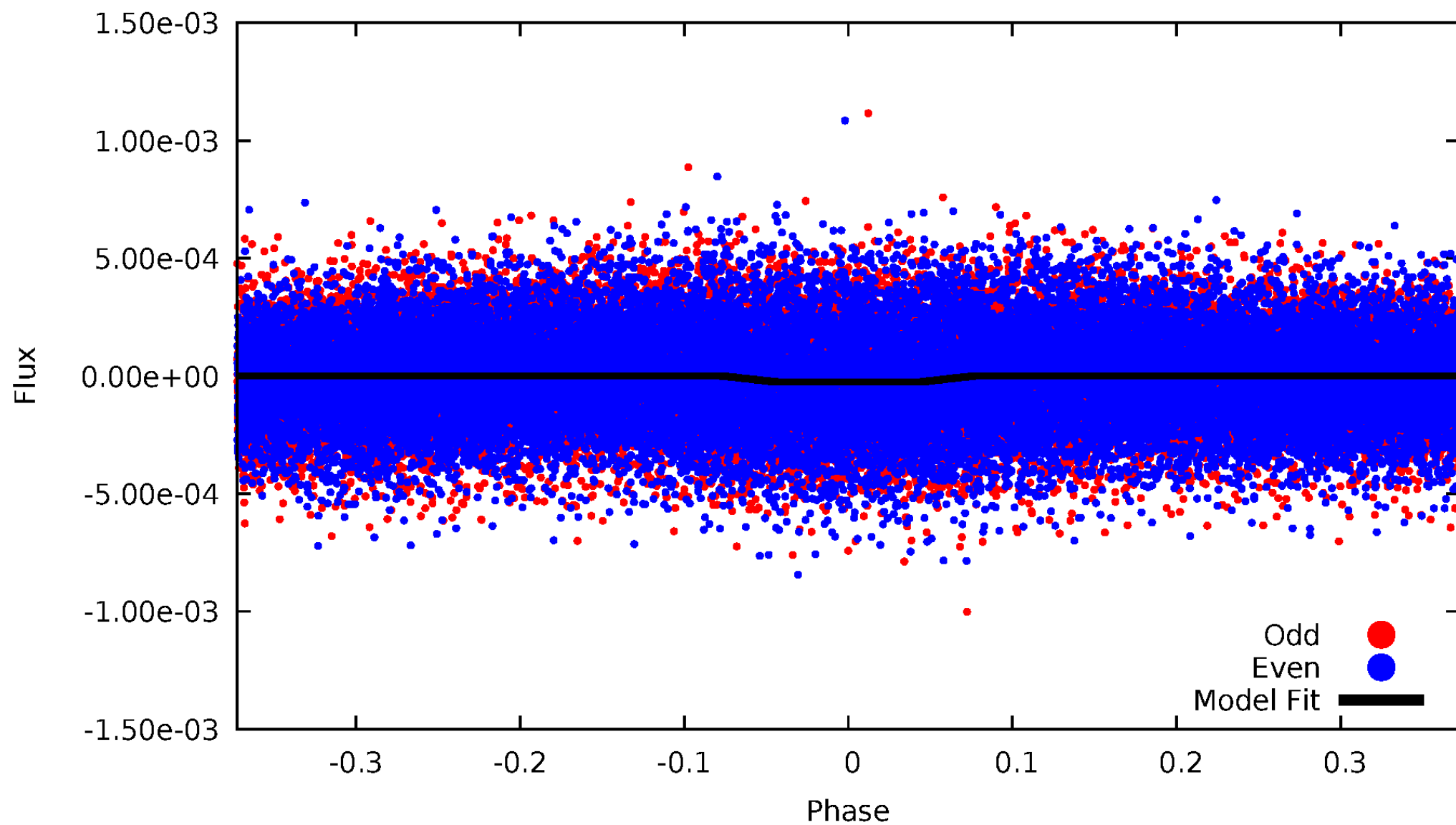
DV Odd/Even

TCE 012119295-01



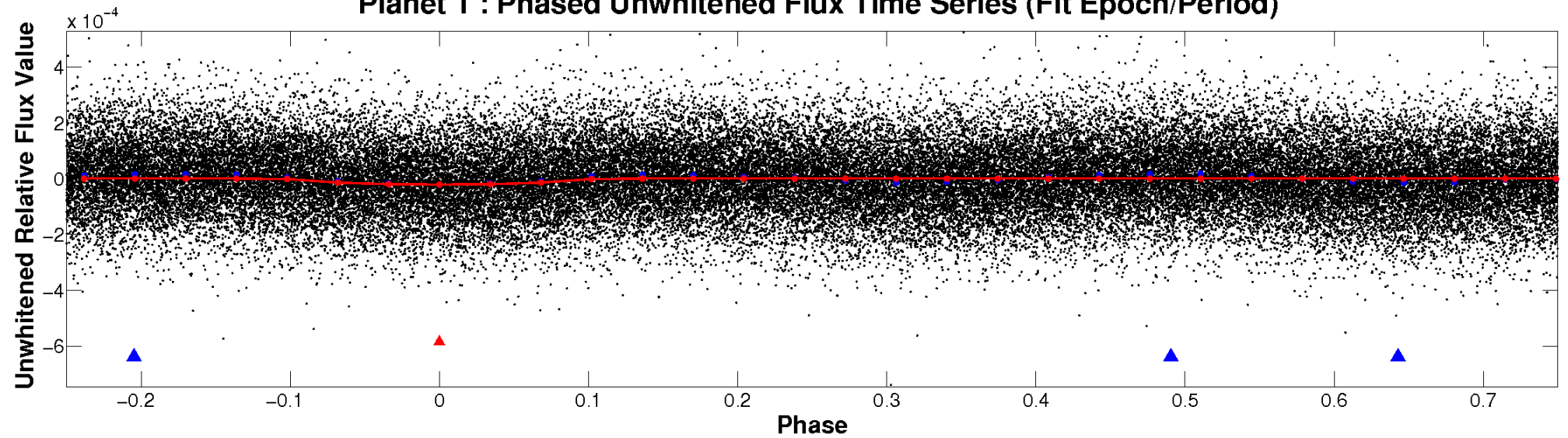
ALT Odd/Even

TCE 012119295-01

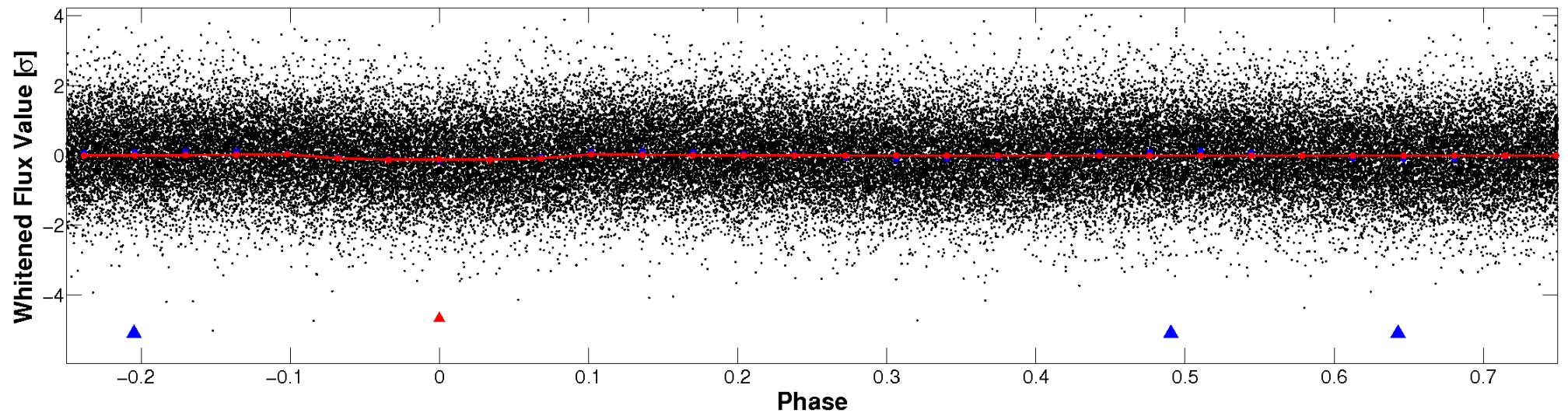


Non-Whitened Vs. Whitened Light Curve

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

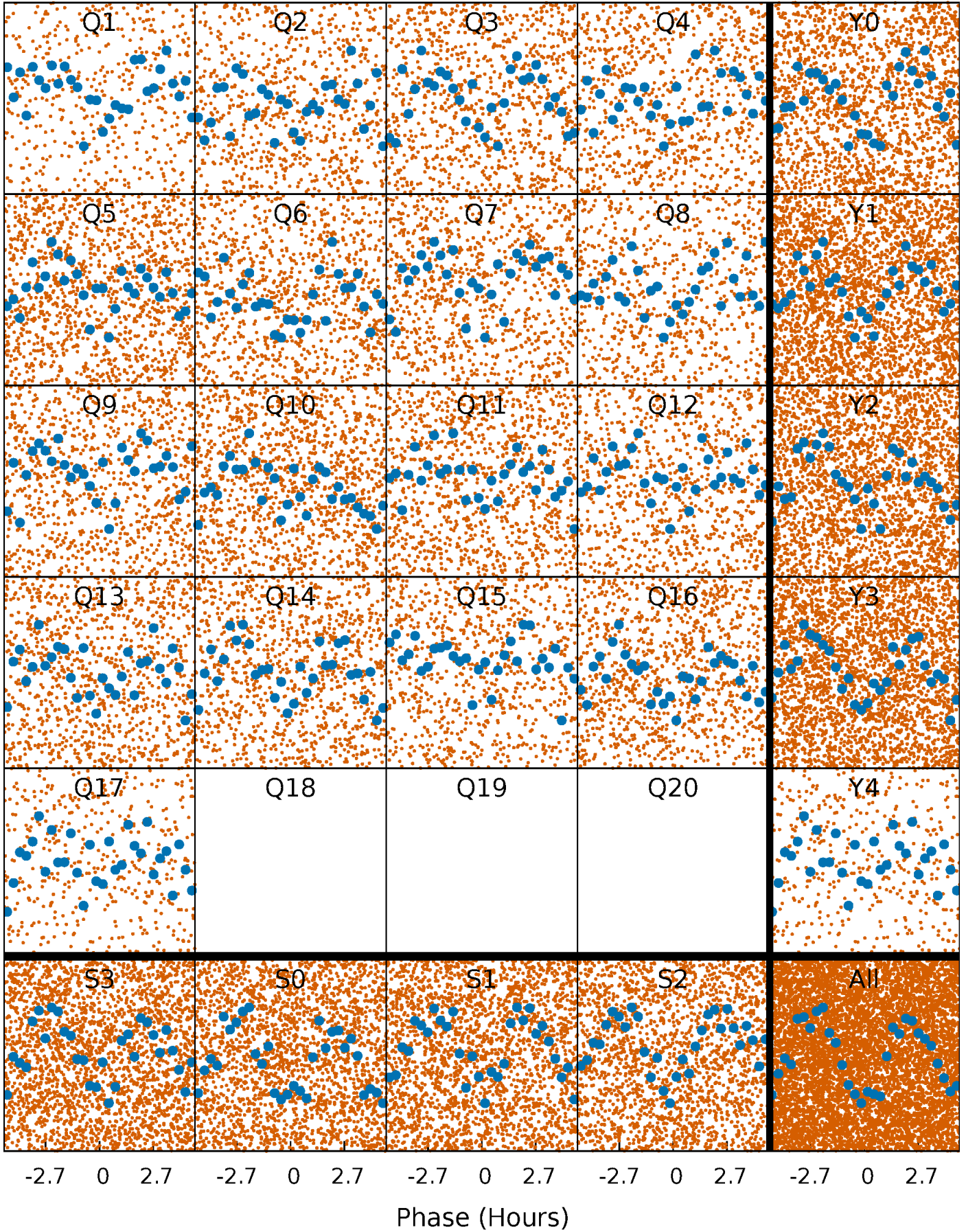


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



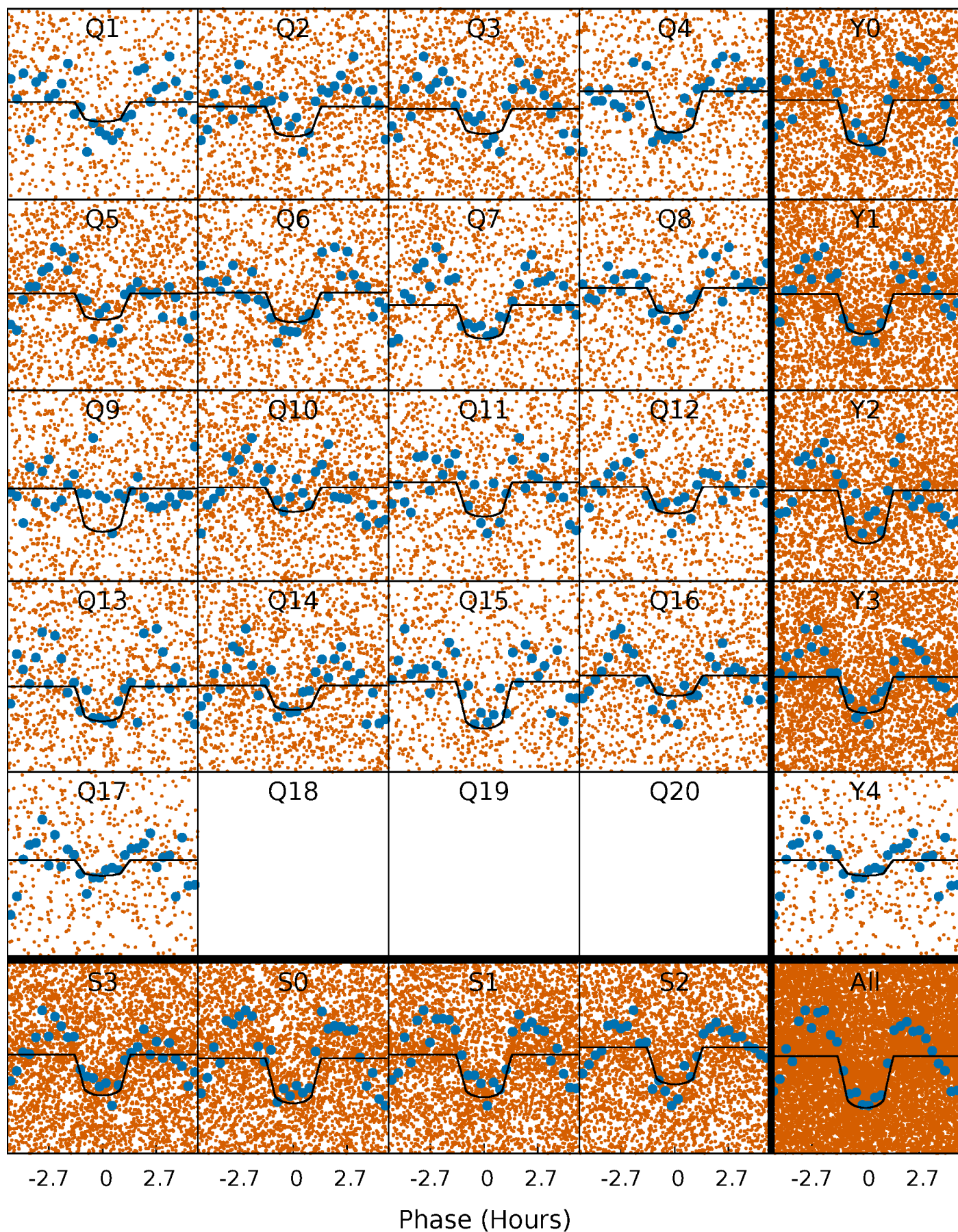
PDC Quarter-Phased Transit Curves

TCE 012119295-01 P= 0.600378 Days $T_0=131.803398$ (BKJD)



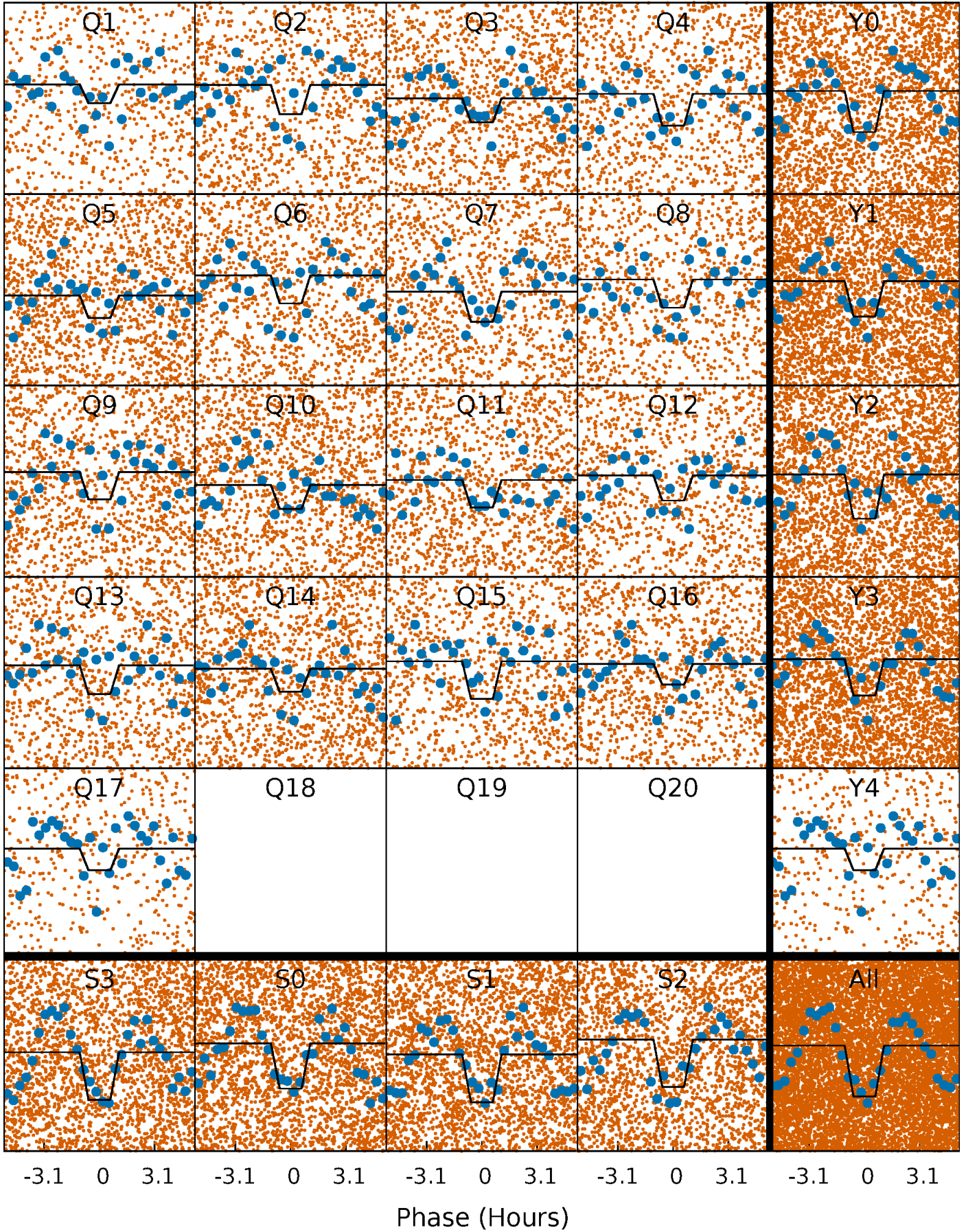
DV Quarter-Phased Transit Curves

TCE 012119295-01 P= 0.600378 Days $T_0=131.803398$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

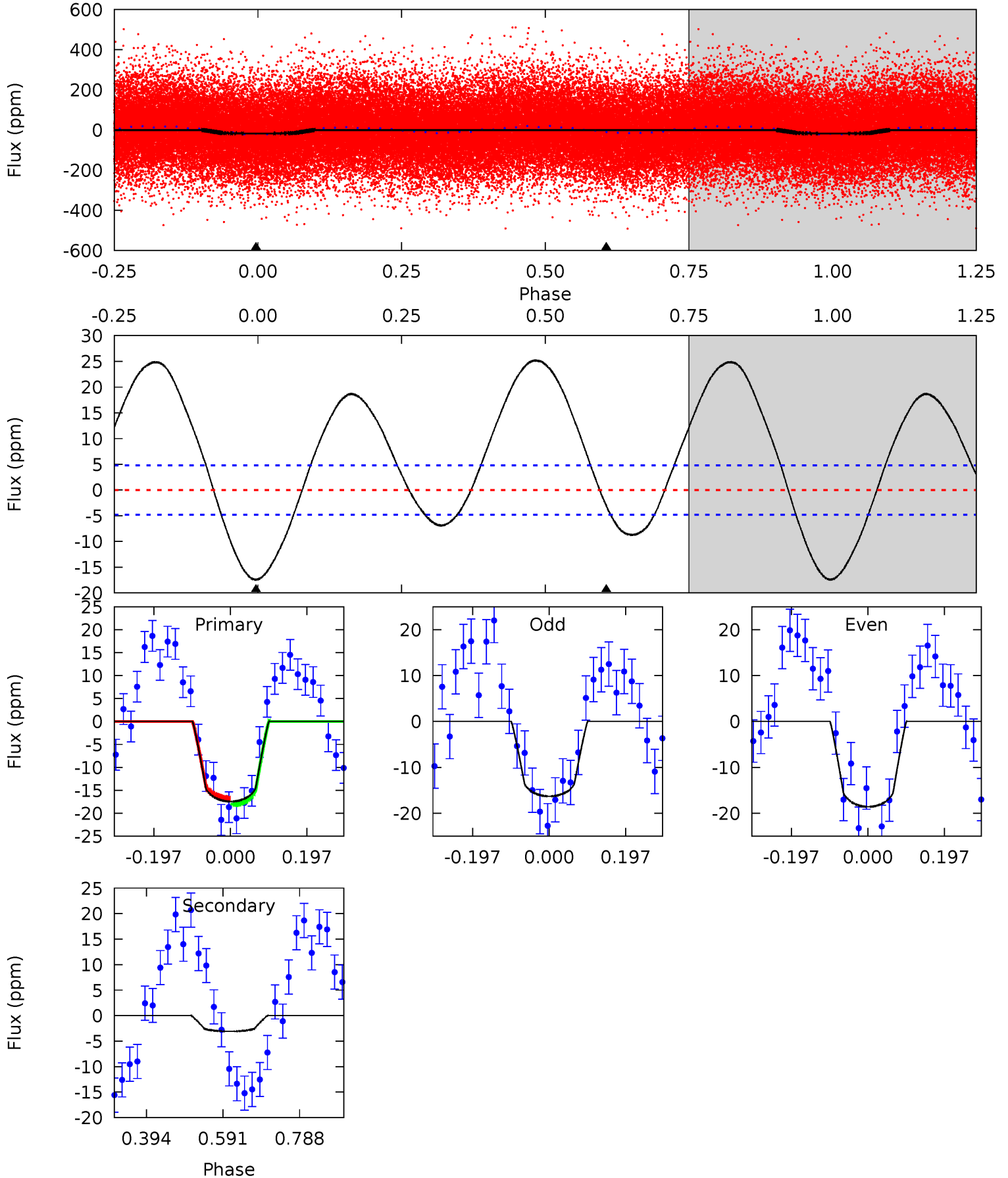
TCE 012119295-01 P= 0.600373 Days $T_0=131.810284$ (BKJD)



DV Model-Shift Uniqueness Test

012119295-01, P = 0.600378 Days, E = 131.203020 Days

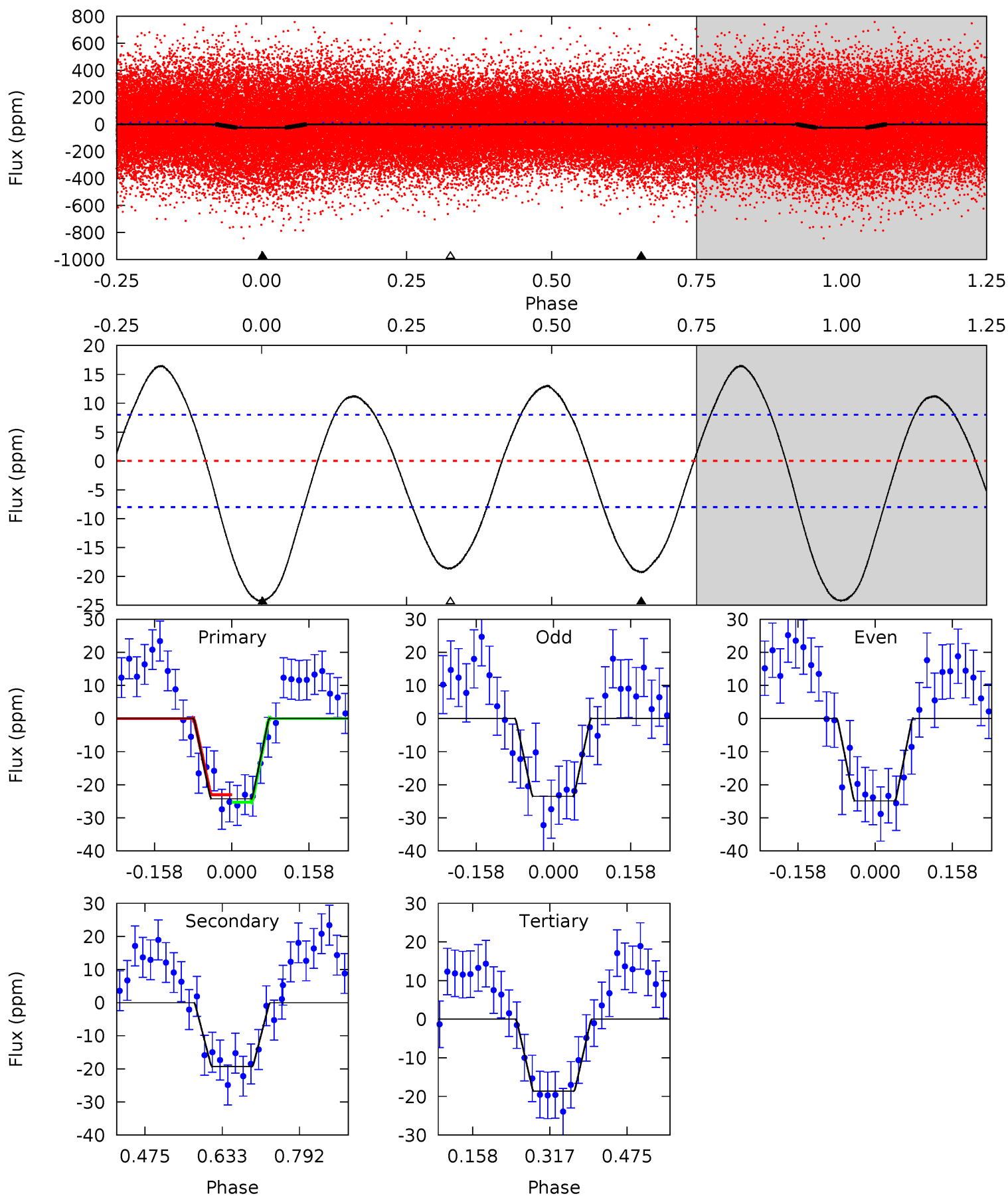
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.84	0	0	4.42	1.29	6.31	16.1	16.1	2.84	2.84	1.06	0.95	0.59	0.55



Alt Model-Shift Uniqueness Test

012119295-01, P = 0.600373 Days, E = 131.209911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	10.8	10.4	0	4.47	1.41	6.51	3.11	13.5	0.35	10.8	0.37	0.86	0.41	0.60



Stellar Parameters For KIC 012119295

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7284^{+233}_{-311}	$4.271^{+0.101}_{-0.188}$	$-0.500^{+0.250}_{-0.300}$	$1.355^{+0.428}_{-0.214}$	$1.251^{+0.196}_{-0.161}$	$0.709^{+0.376}_{-0.351}$
	+3%/-4%	+2%/-4%	+50%/-60%	+32%/-16%	+16%/-13%	+53%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 012119295-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3 ± 1	$0.73^{+0.23}_{-0.20}$	4289^{+319}_{-253}	4024^{+881}_{-1026}	$0.699^{+0.742}_{-0.343}$
Alt.	-19 ± 2	$0.77^{+0.22}_{-0.19}$	4315^{+288}_{-263}	6504^{+1302}_{-704}	$3.858^{+3.398}_{-1.427}$

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

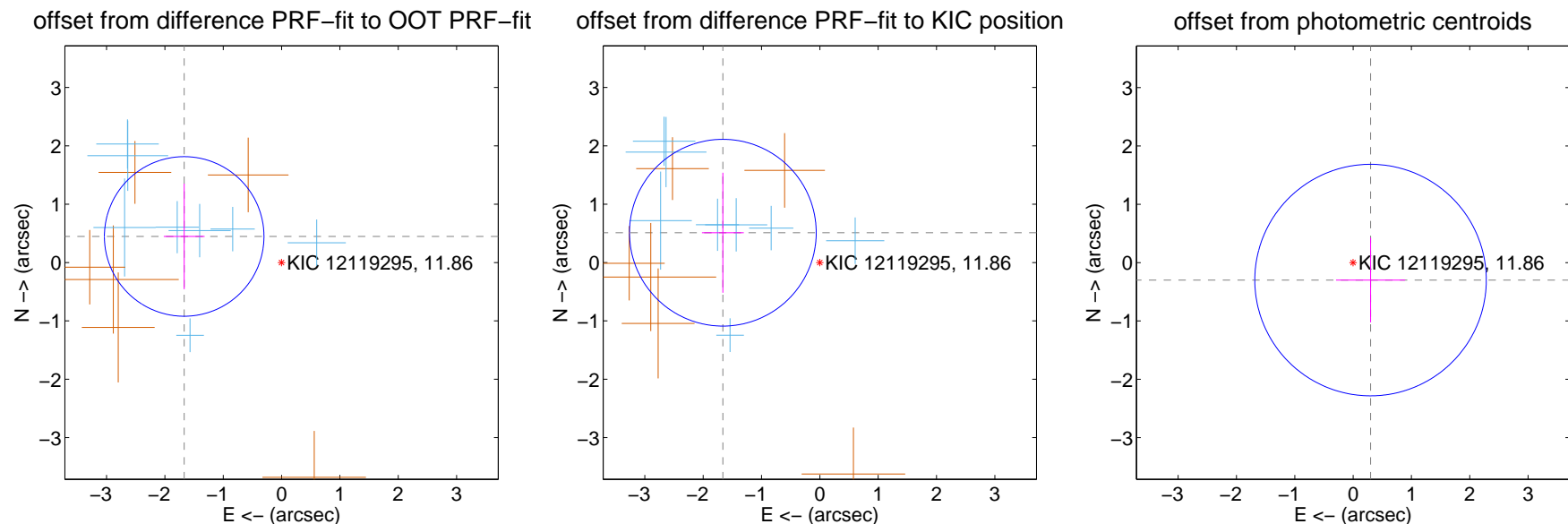
DV Centroid Data

Supplemental centroid analysis for 012119295-01. **Kepler magnitude: 11.86**. Transit SNR 11.52

There are 8 quarters with good PRF difference image offsets

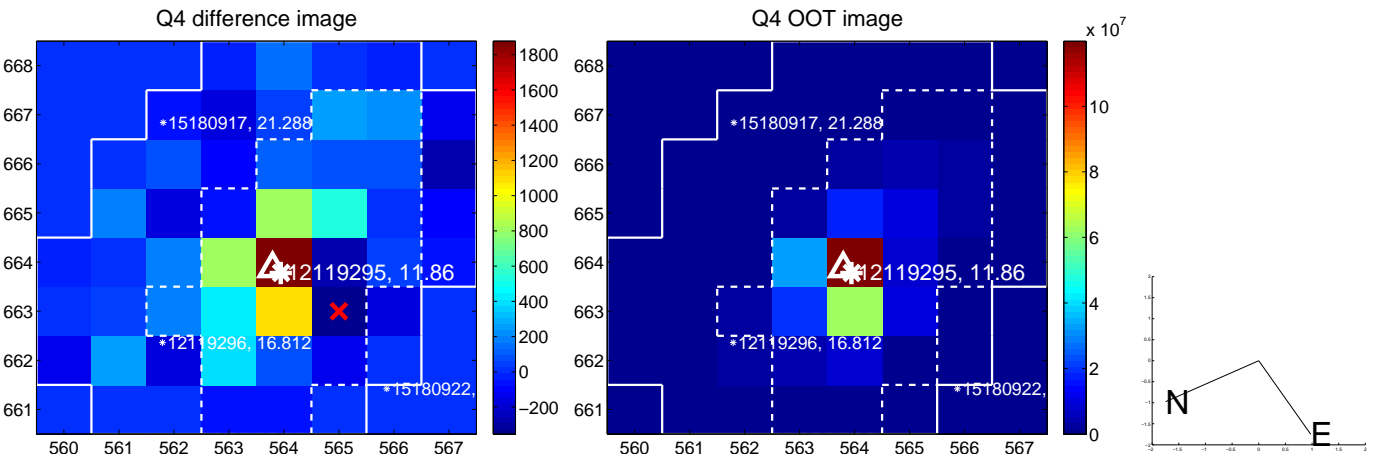
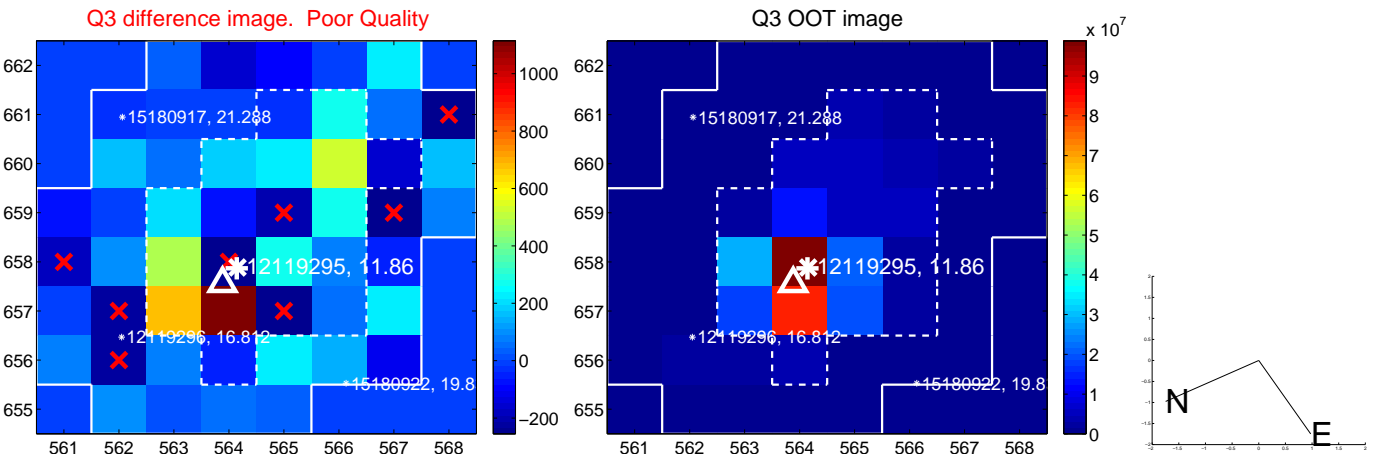
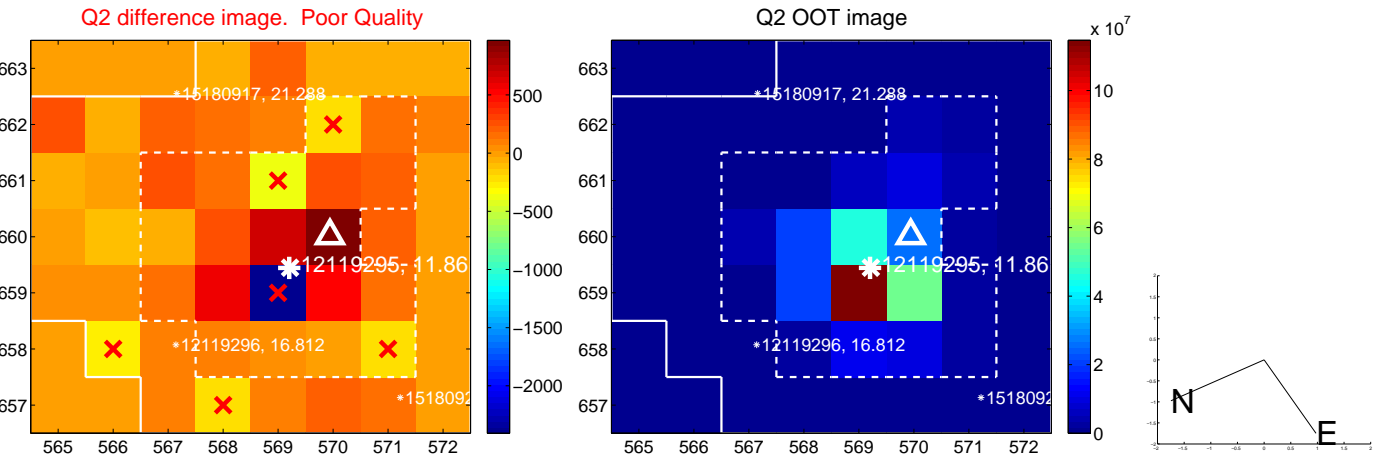
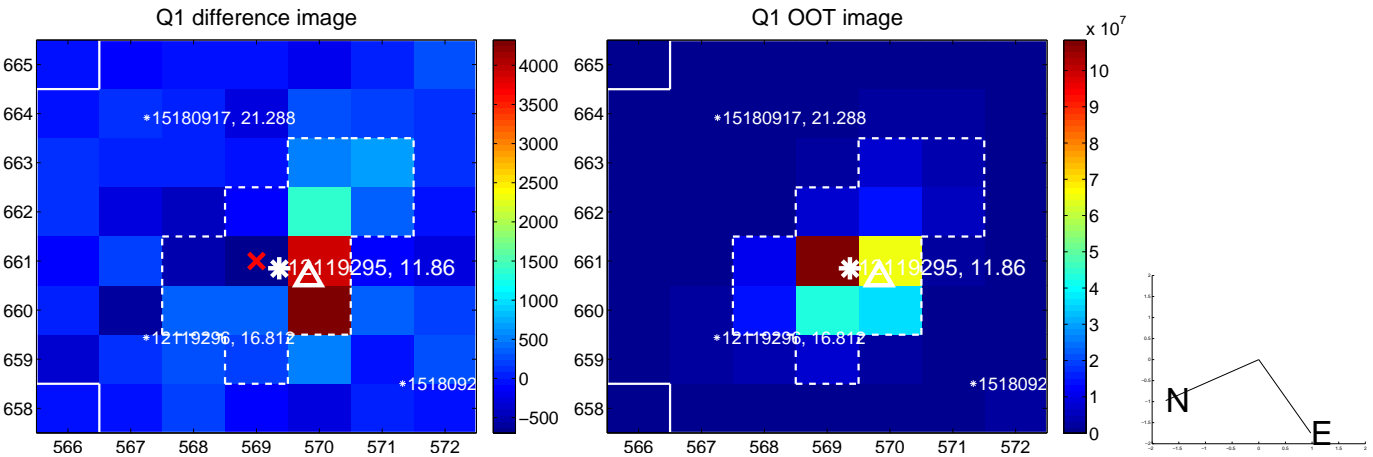
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.728 ± 0.456	3.79	1.669 ± 0.349	0.447 ± 0.905
PRF-fit source offset from KIC position	1.739 ± 0.533	3.26	1.662 ± 0.358	0.511 ± 1.028
photometric centroid source offset	0.42 ± 0.66	0.64	-0.30 ± 0.59	-0.30 ± 0.73

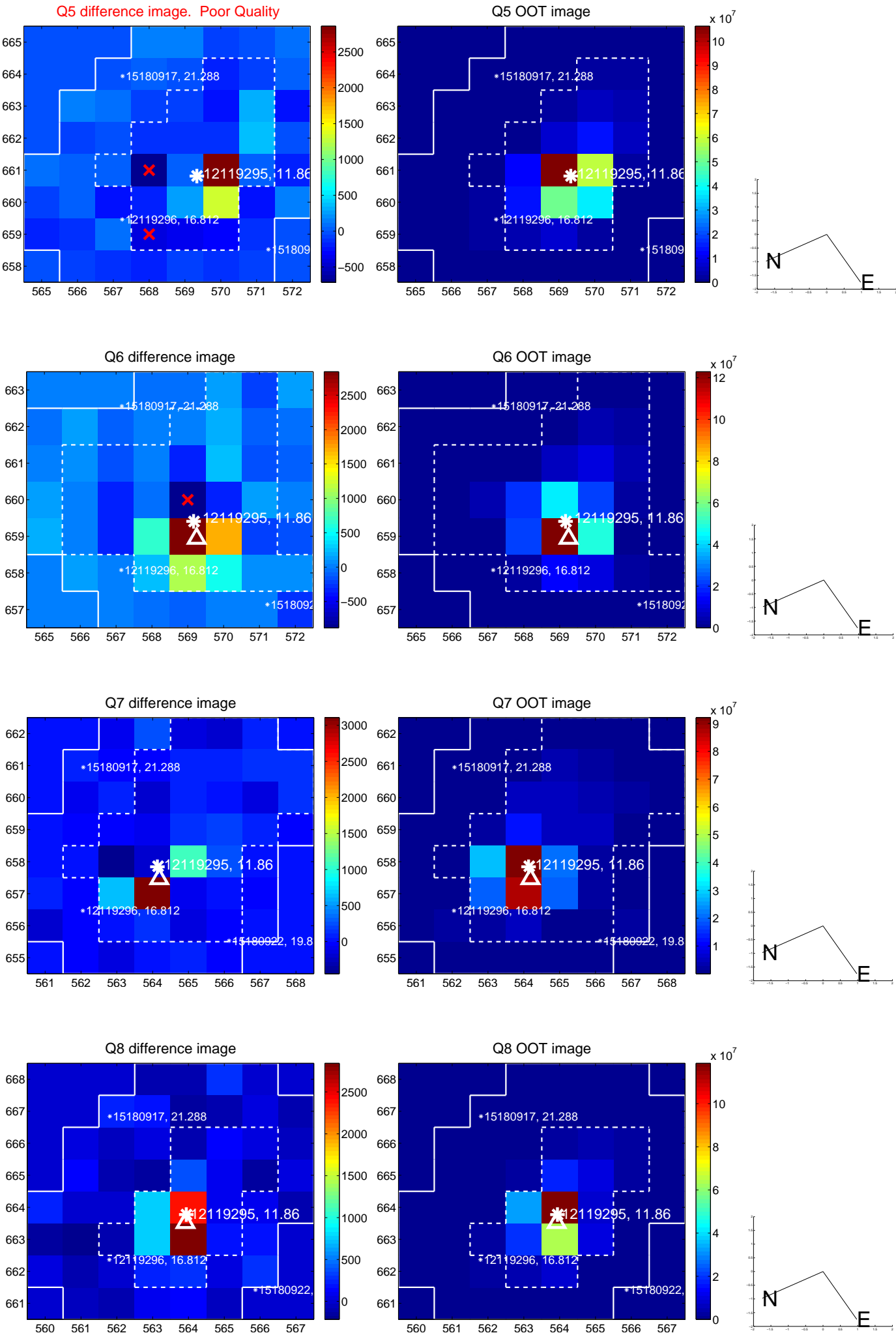


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

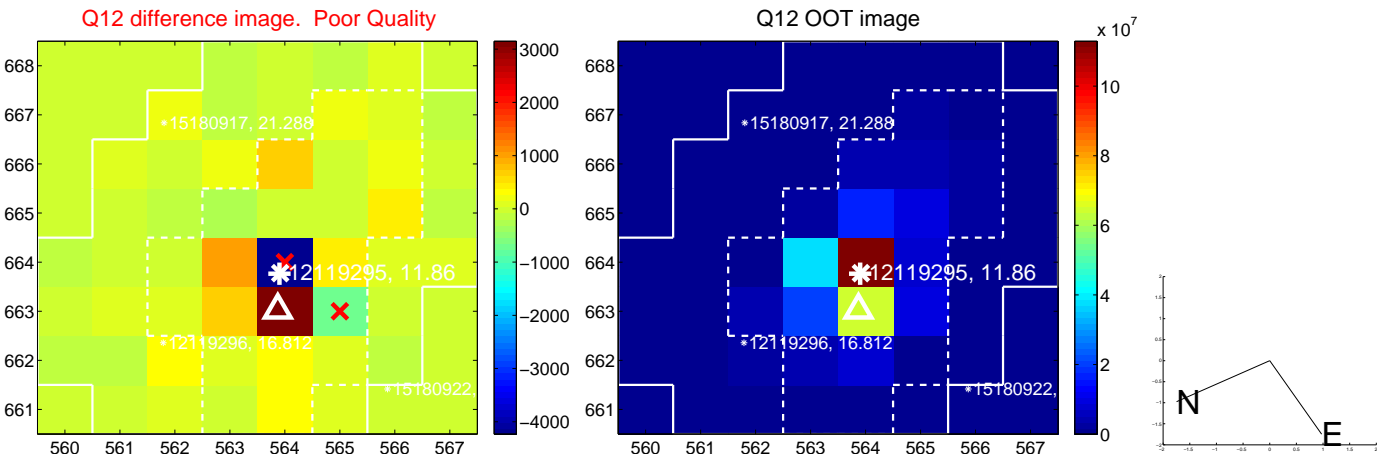
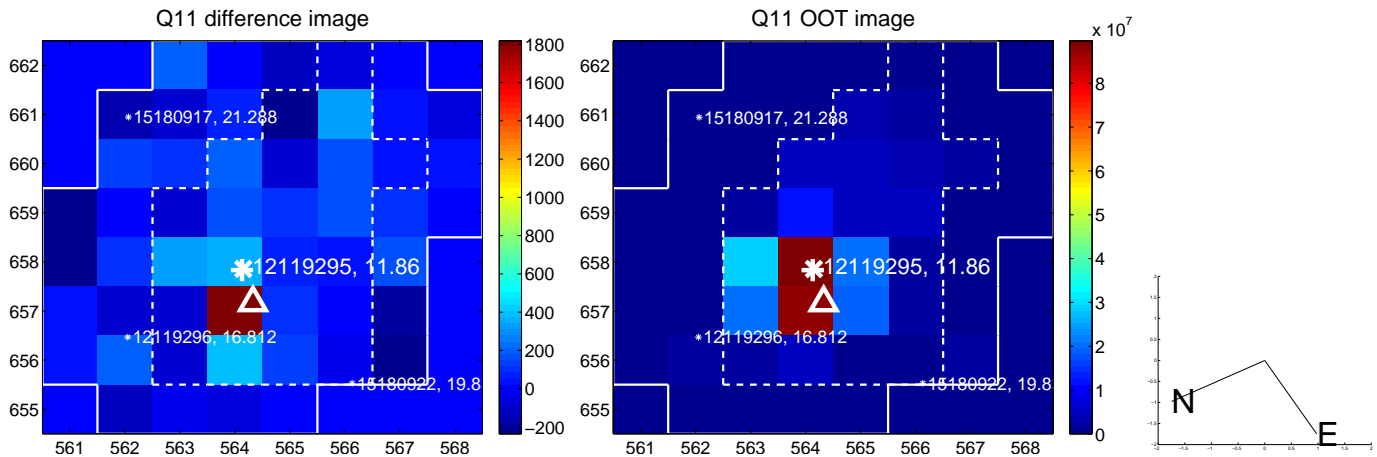
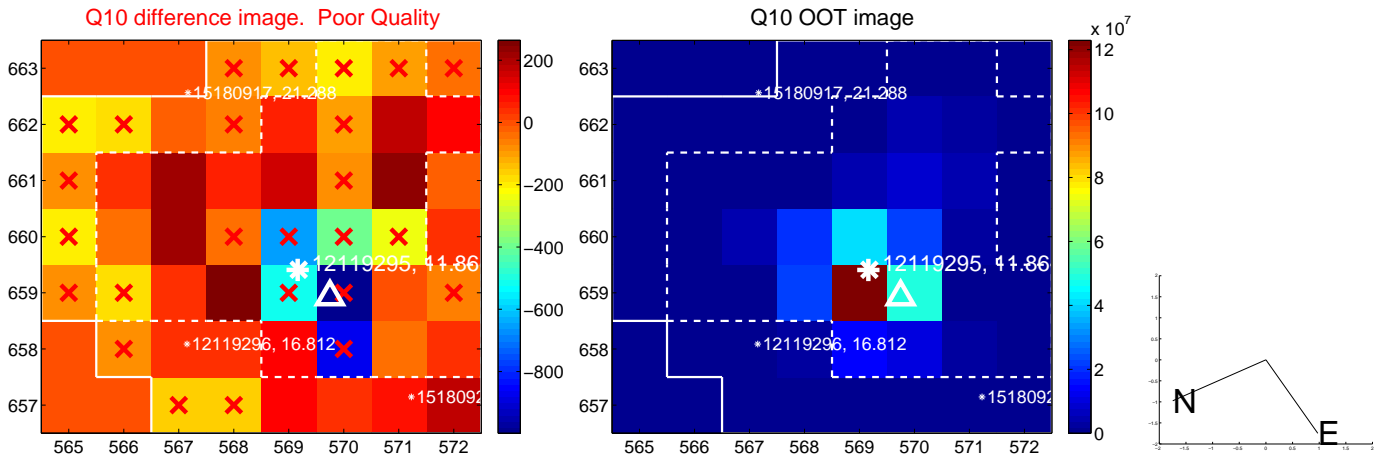
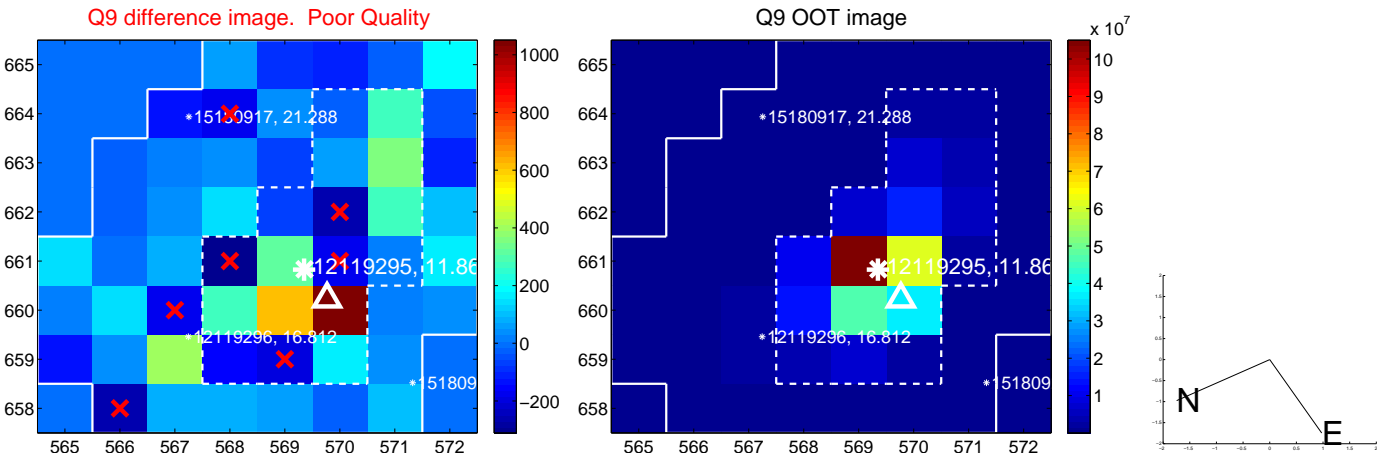
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



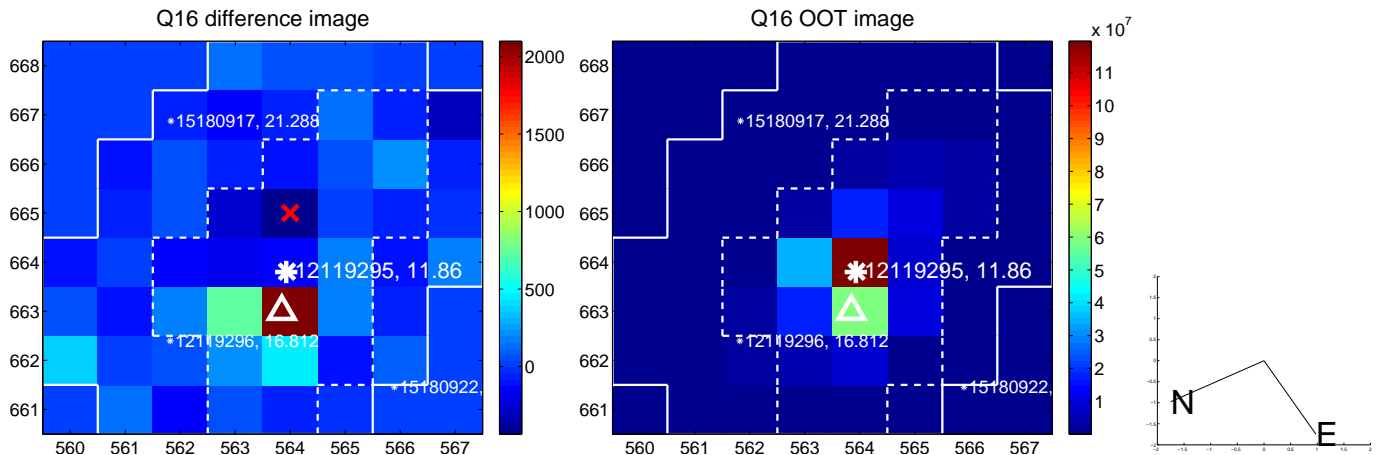
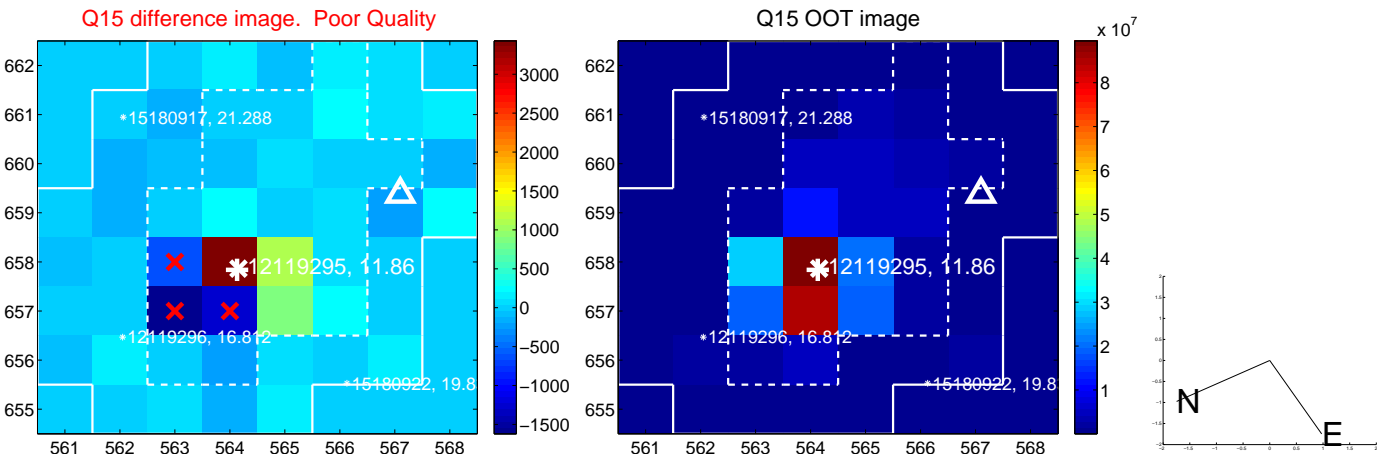
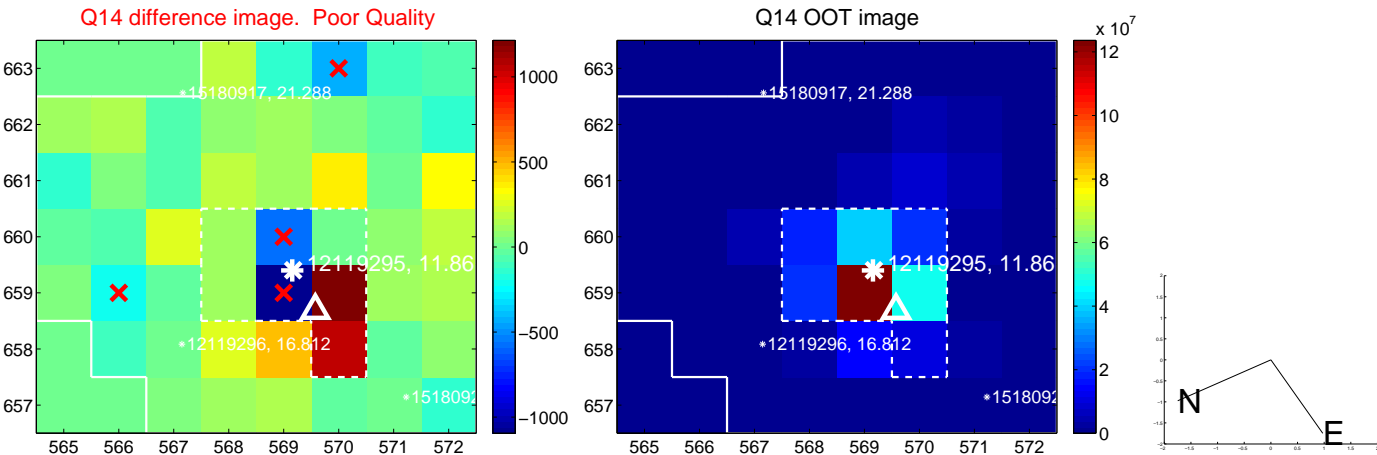
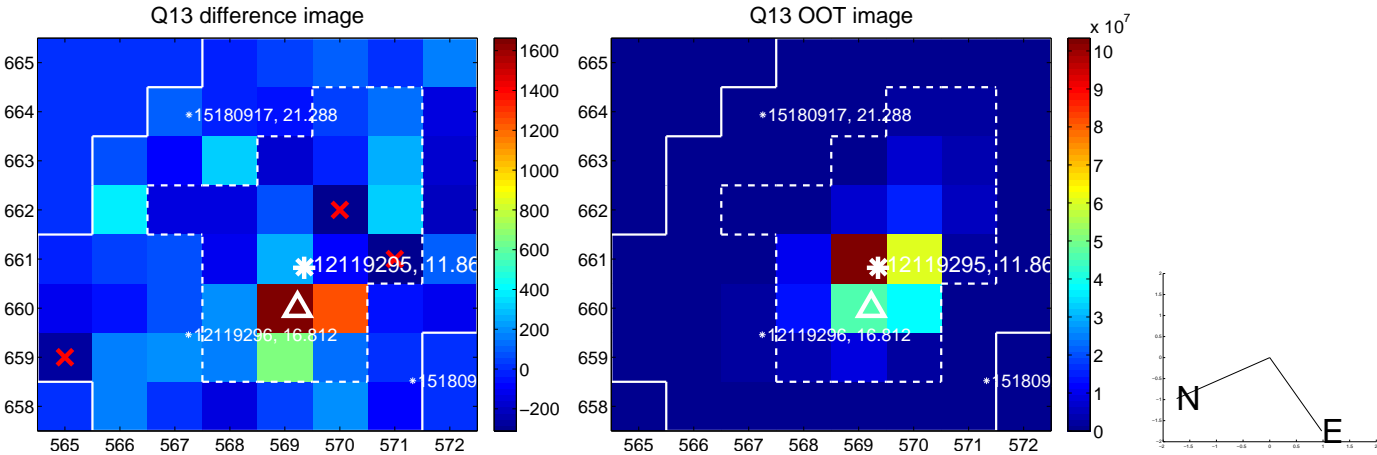
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



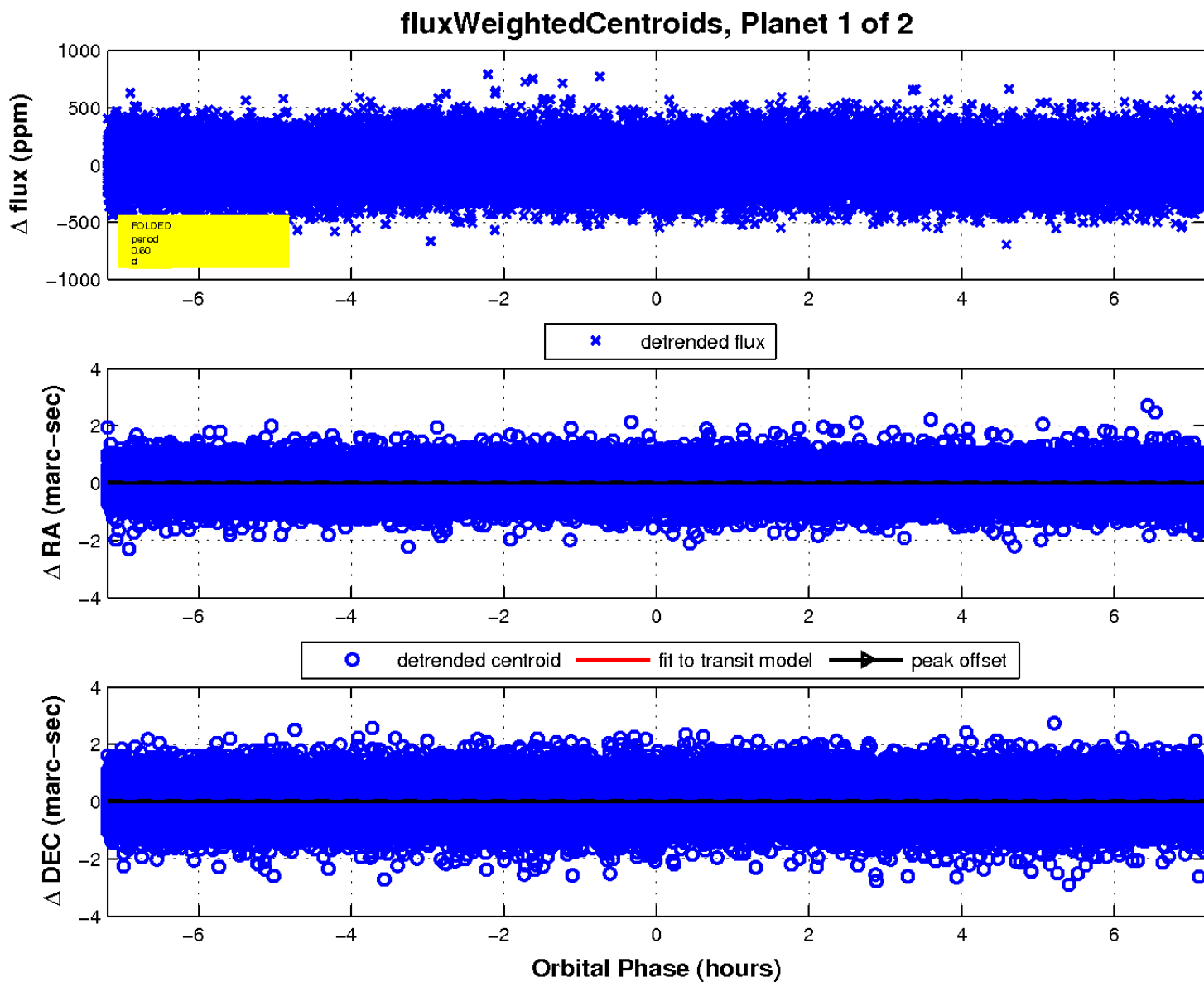
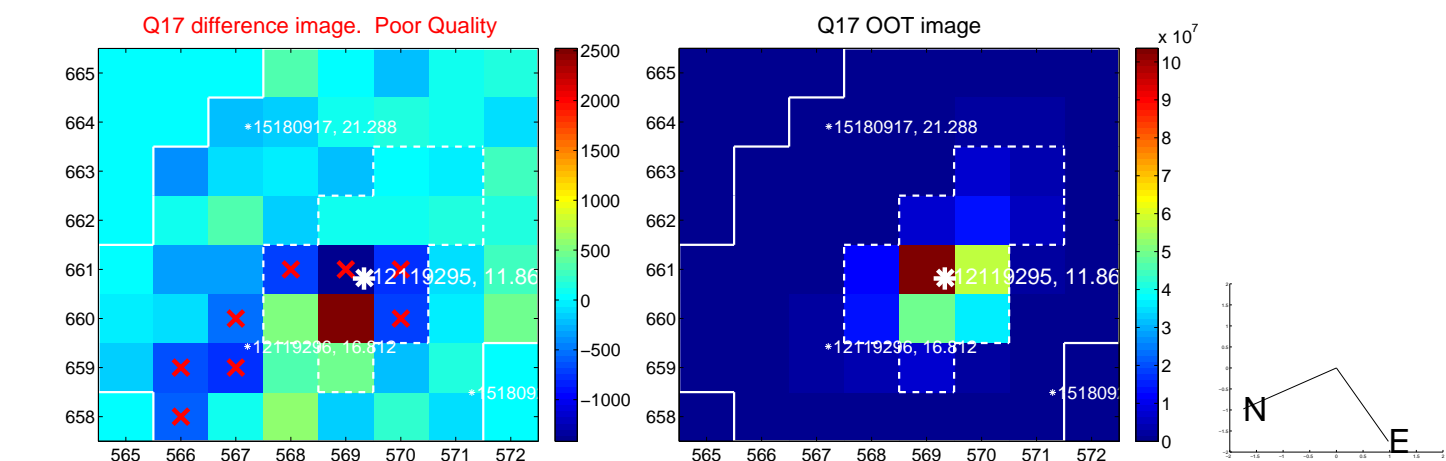
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

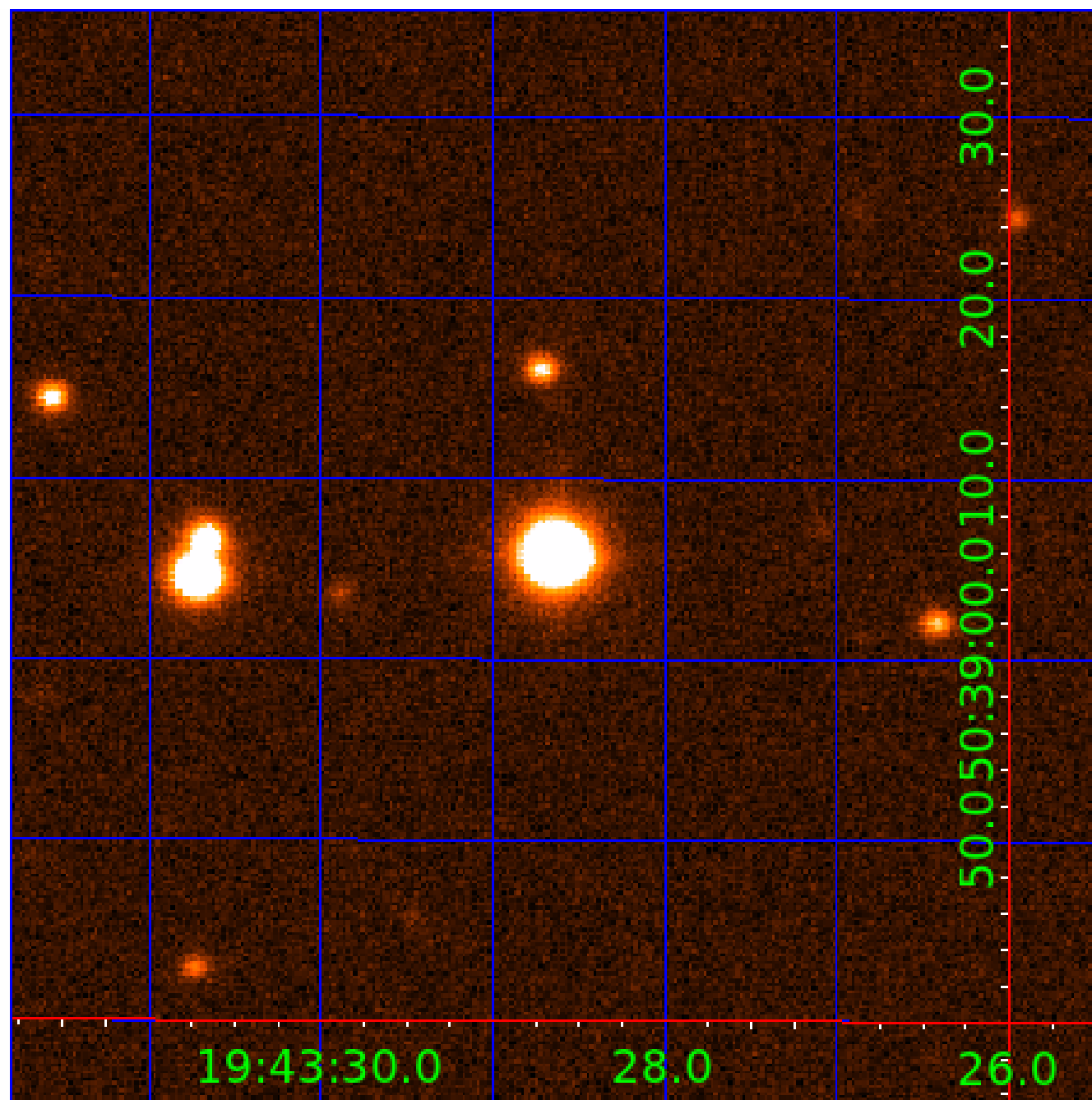


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012119295

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})
012119295-01	OBS	No	0.600378	131.803398	20.8	2.398	10.5	11.5	1.35	7284	0.72	20563.65
012119295-02	OBS	No	507.228270	177.309240	306.5	22.424	7.3	7.5	1.35	7284	2.74	2.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012119295-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
012119295-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

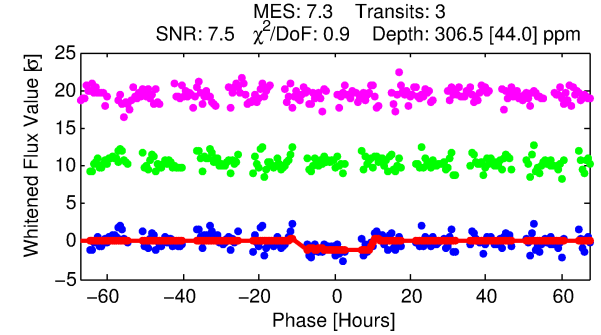
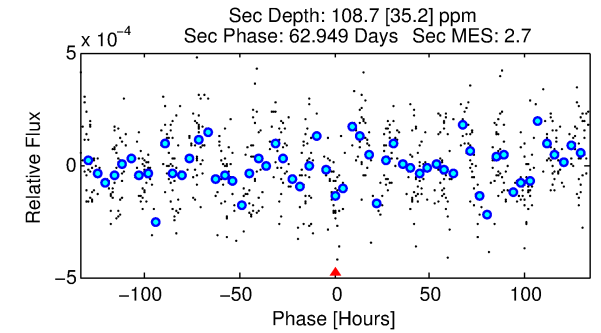
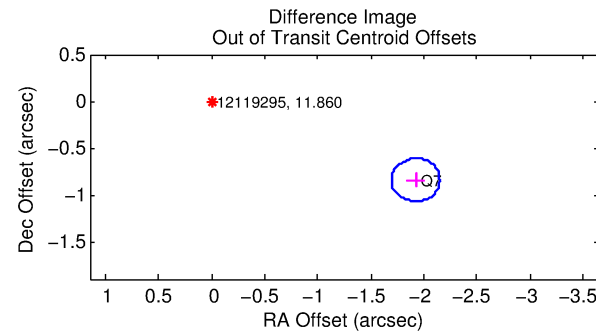
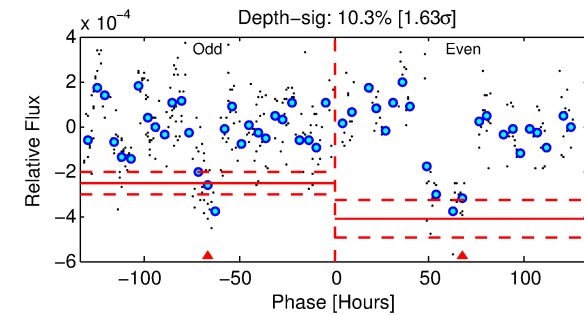
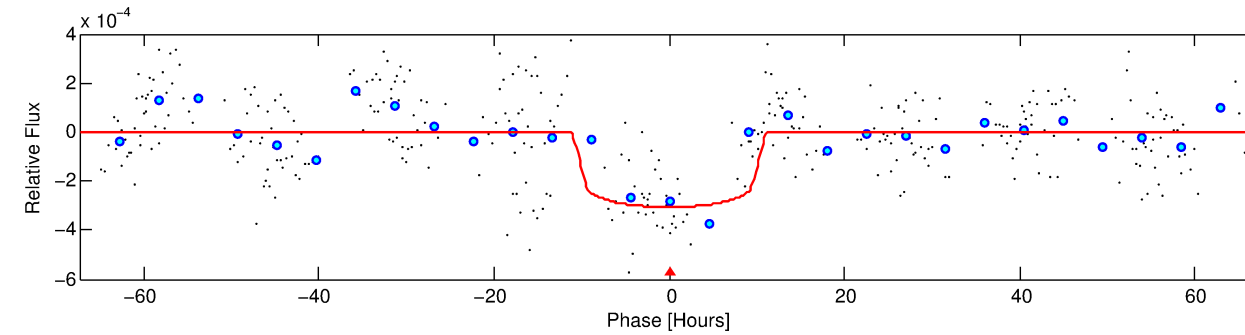
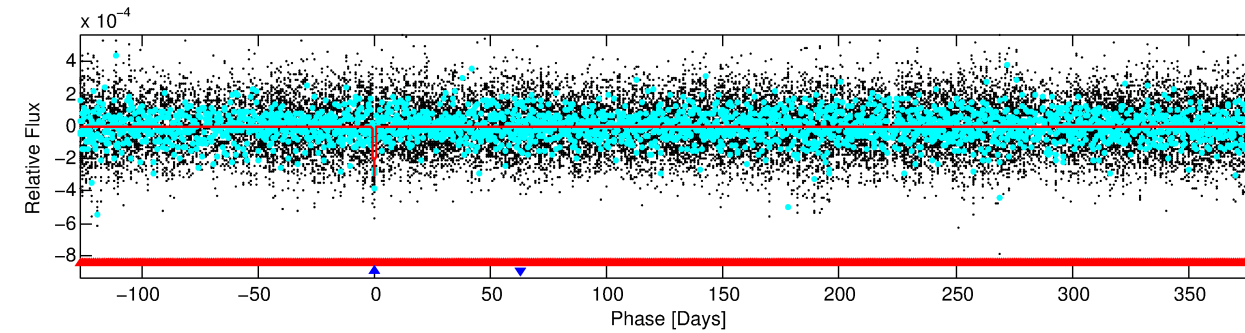
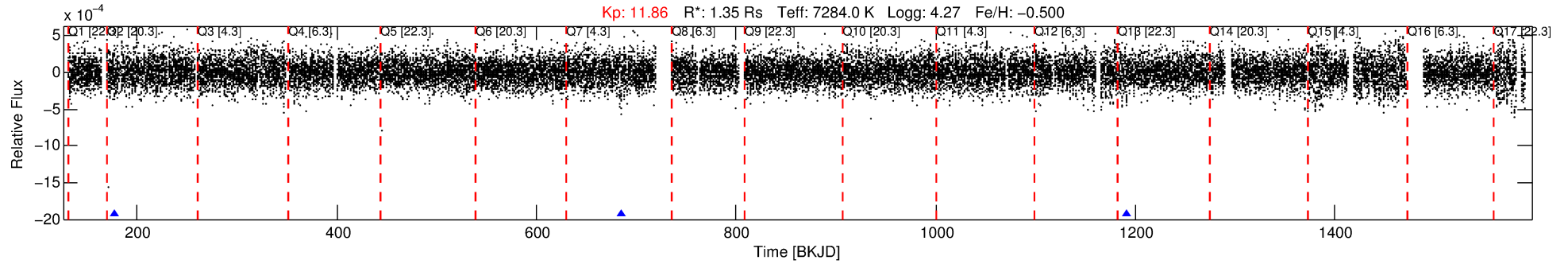
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012119295-02

No Significant Match Found

DV One-Page Summary

KIC: 12119295 Candidate: 2 of 2 Period: 507.228 d



DV Fit Results:

Period = 507.22827 [0.03419] d
Epoch = 177.3092 [0.0694] BKJD
Rp/R* = 0.0186 [0.0018]
a/R* = 83.16 [34.19]
b = 0.90 [0.08]
Seff = 2.57 [1.02]
Teq = 323 [32] K
Rp = 2.74 [0.91] Re
a = 1.3411 [0.3423] AU
Ag = 14284.79 [7441.40] [1.92 σ]
Teffp = 5460 [568] K [9.04 σ]

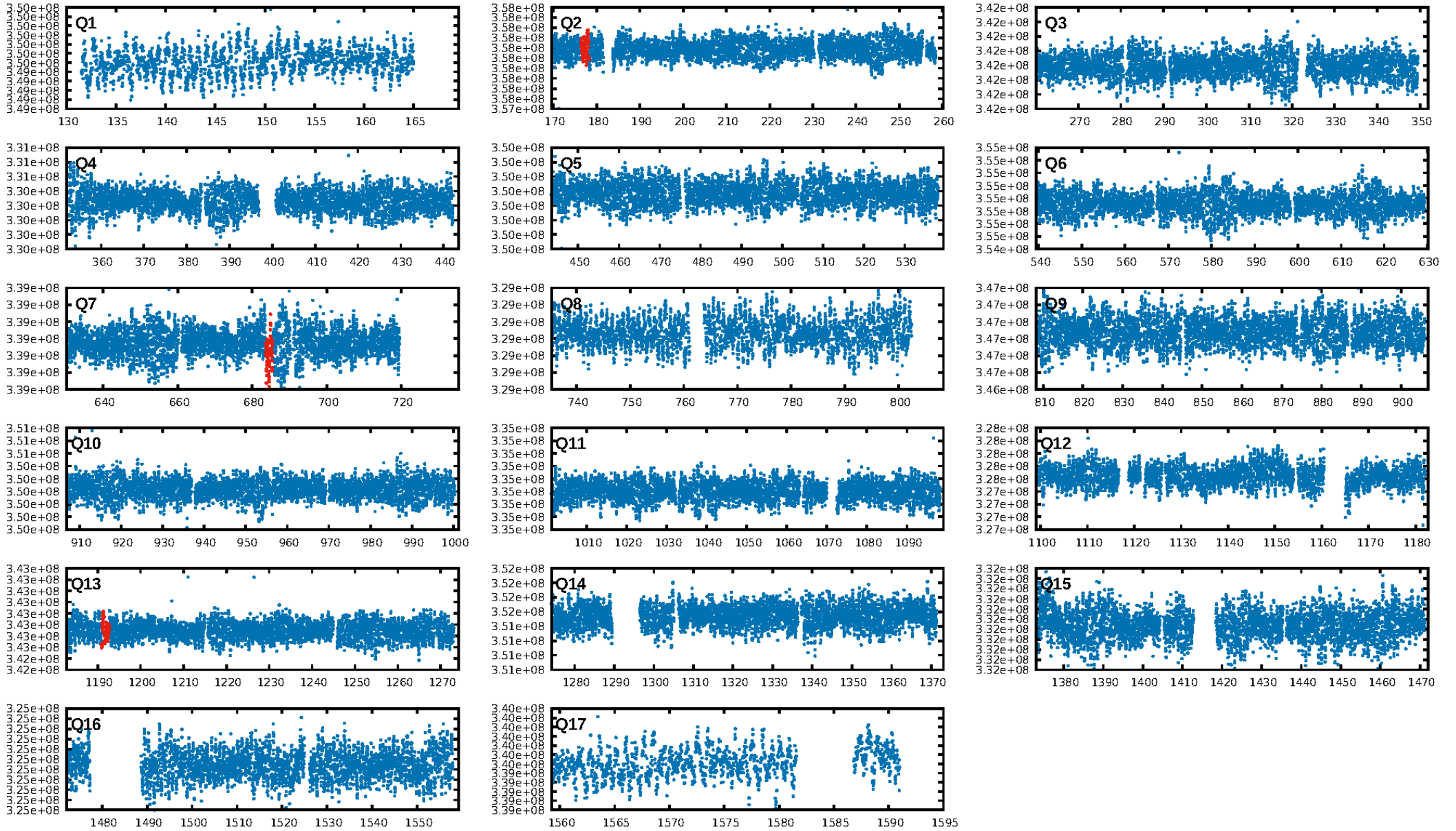
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [539.15 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.99e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.706
Centroid-sig: 50.0%
Centroid-so: 0.679 arcsec [0.77 σ]
OotOffset-rm: 2.098 arcsec [27.54 σ]
KicOffset-rm: 2.031 arcsec [26.64 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/2]

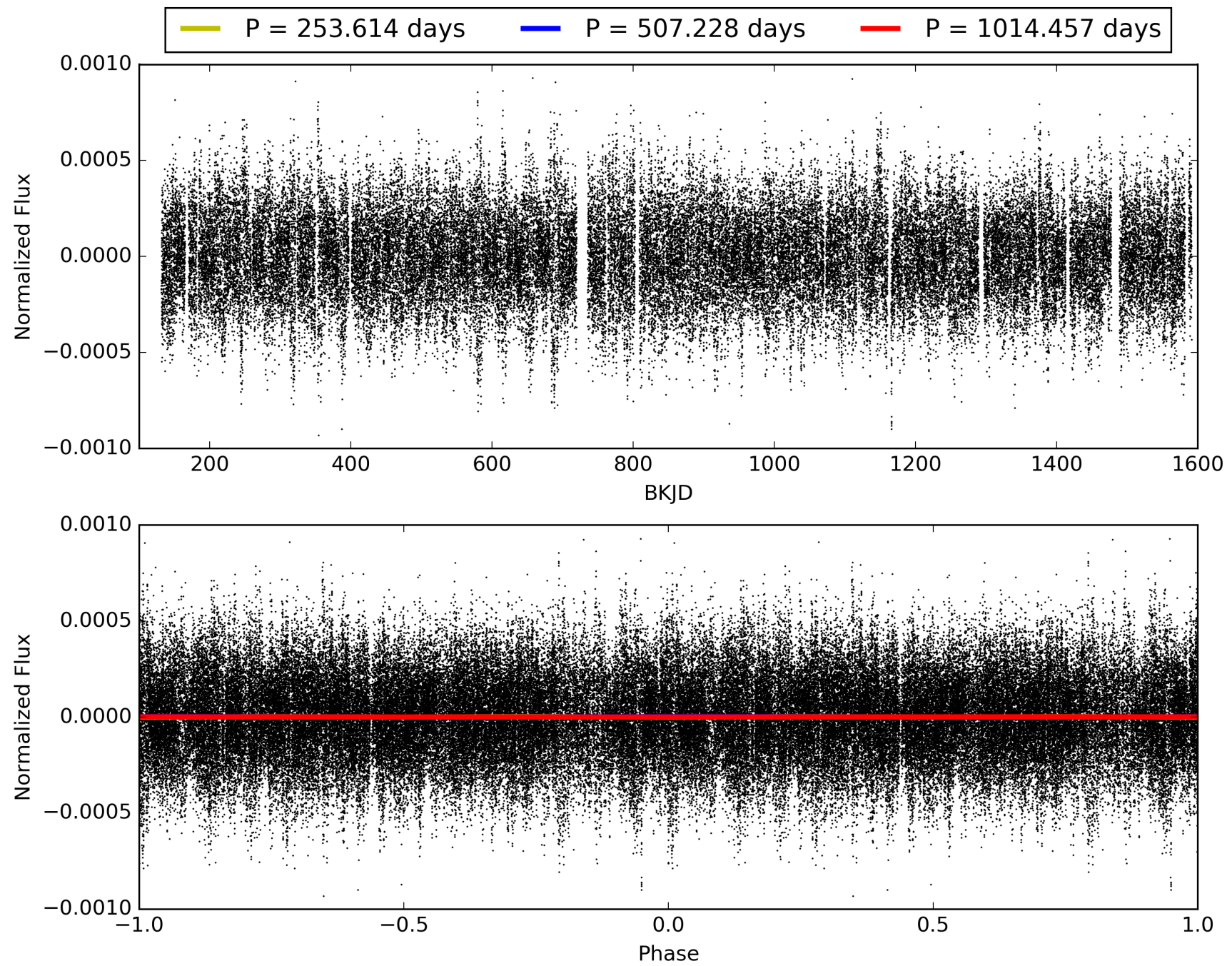
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:47:53 Z

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

TCE 012119295-02, PDC Light Curves

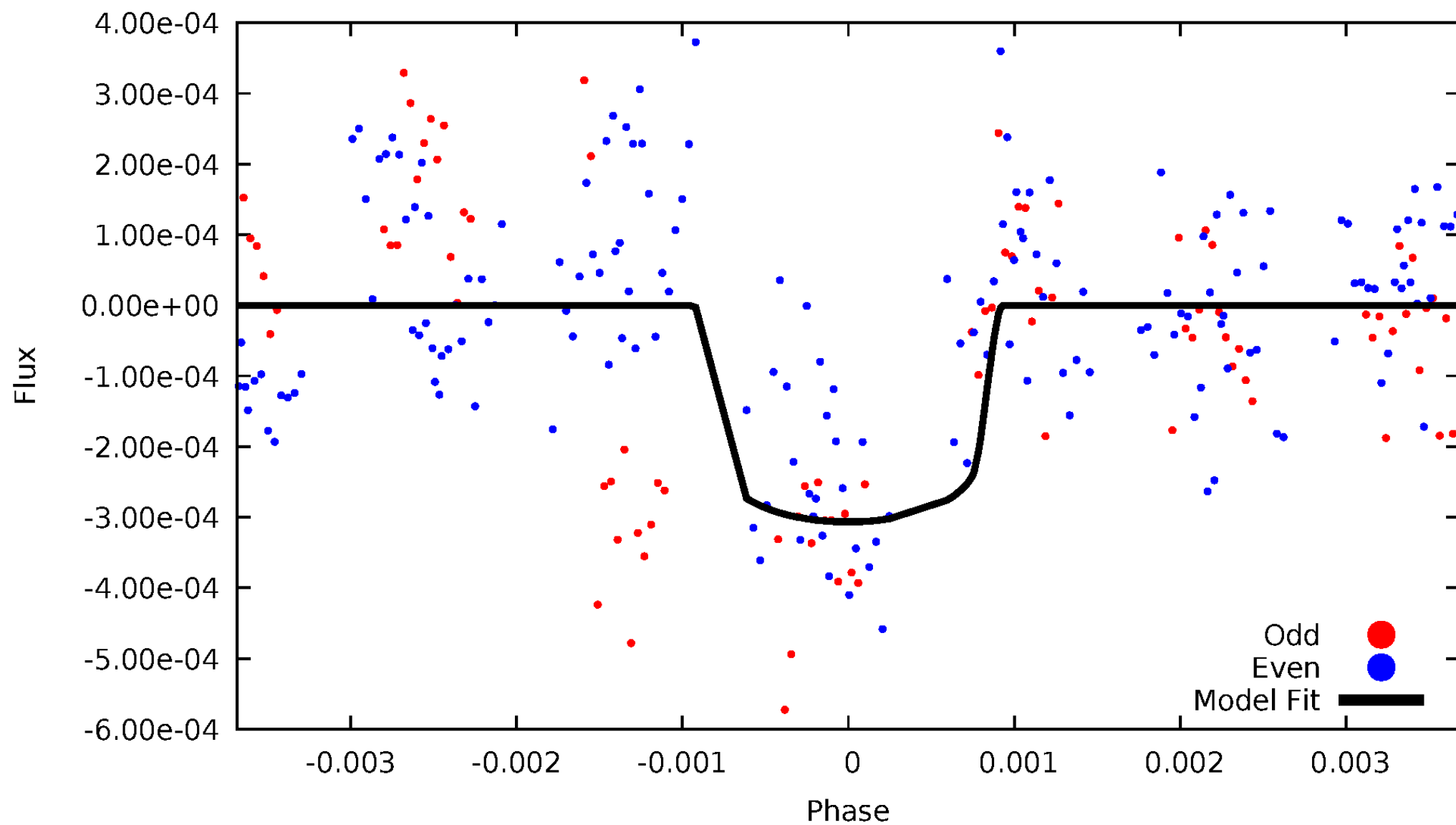


TCE 012119295-02



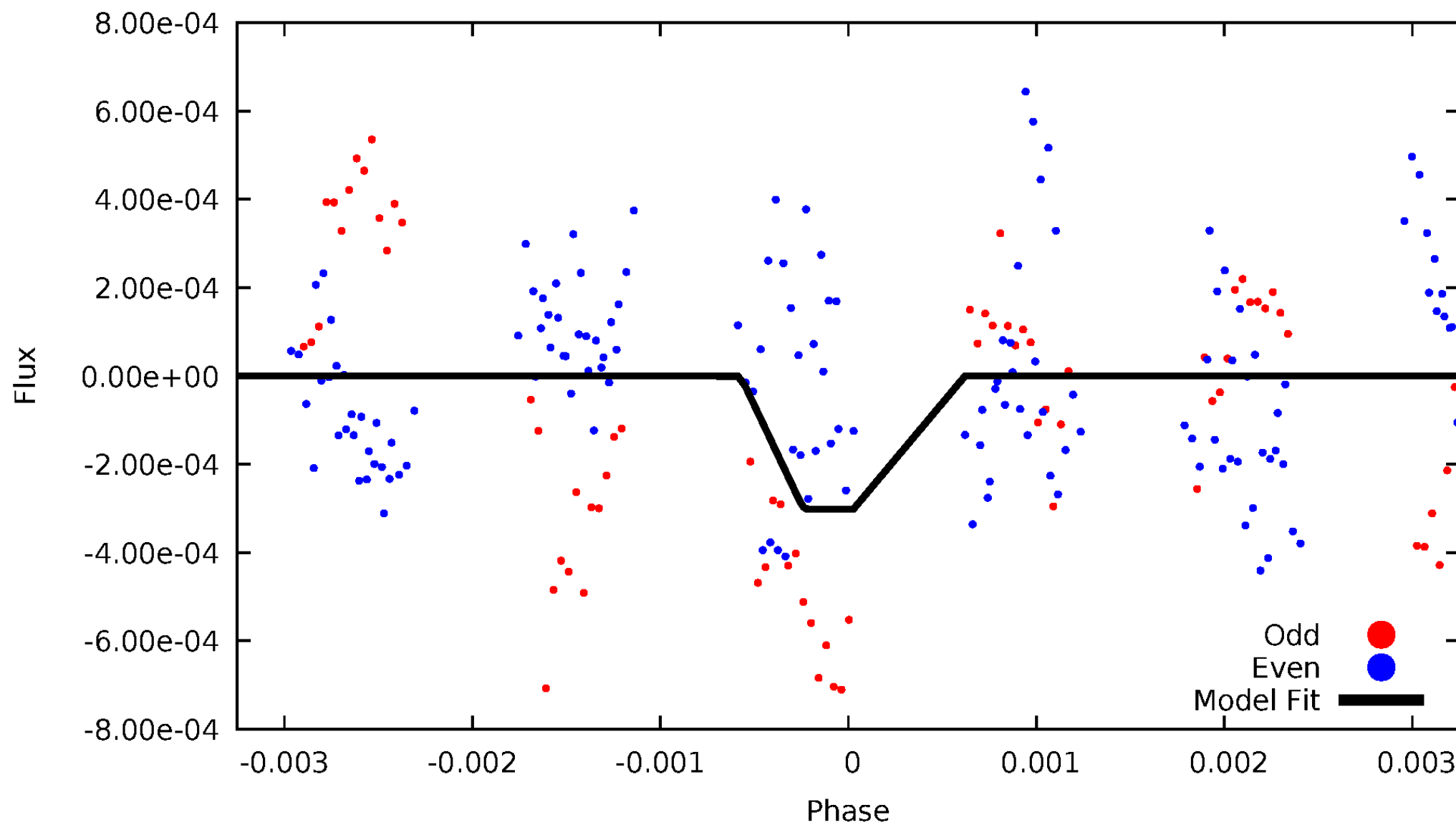
DV Odd/Even

TCE 012119295-02



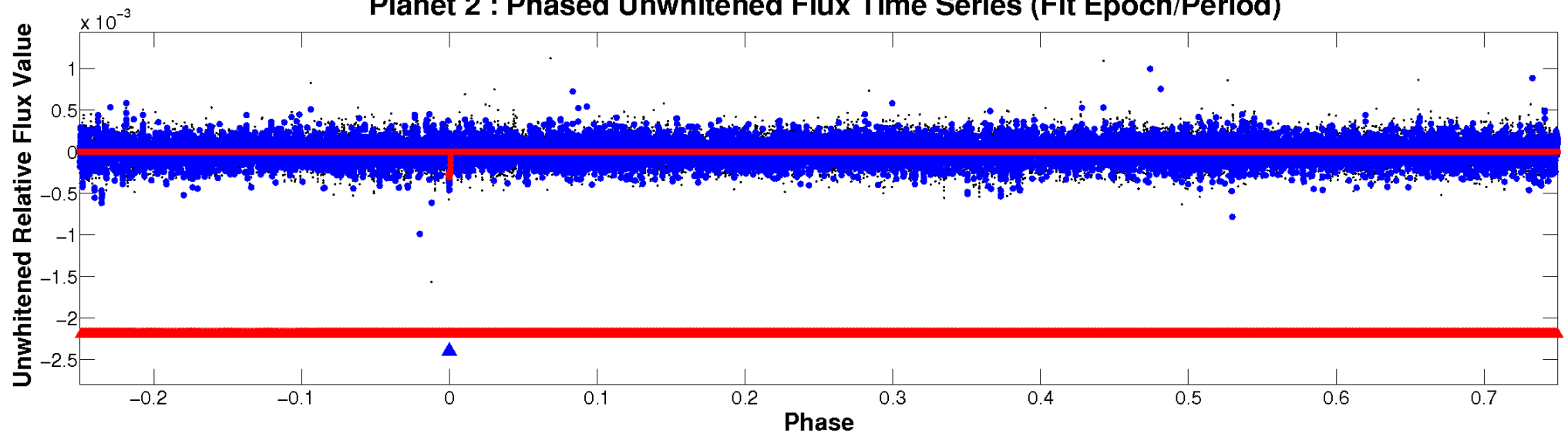
ALT Odd/Even

TCE 012119295-02

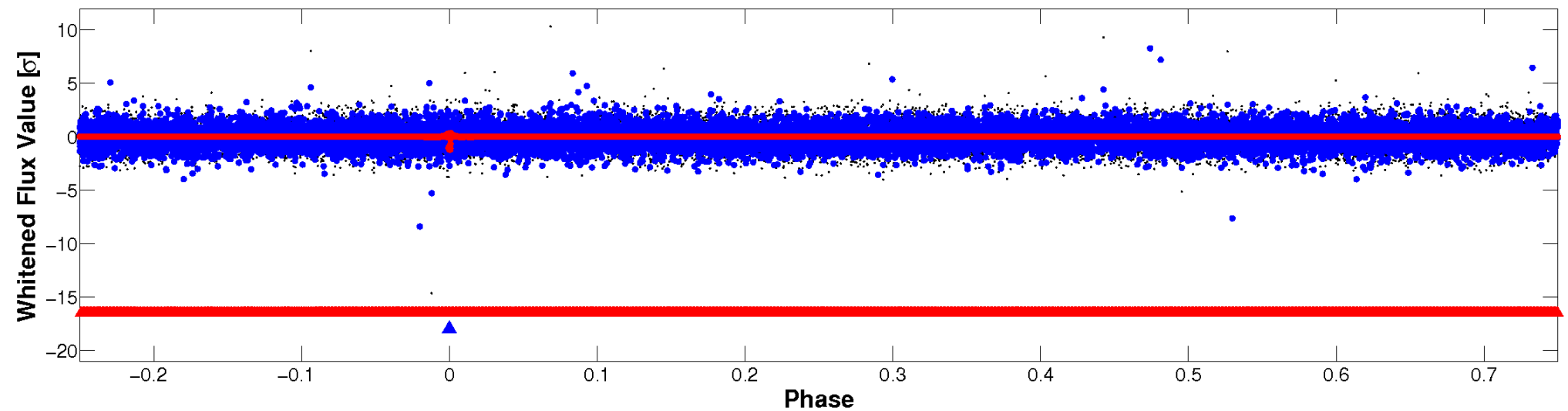


Non-Whitened Vs. Whitened Light Curve

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

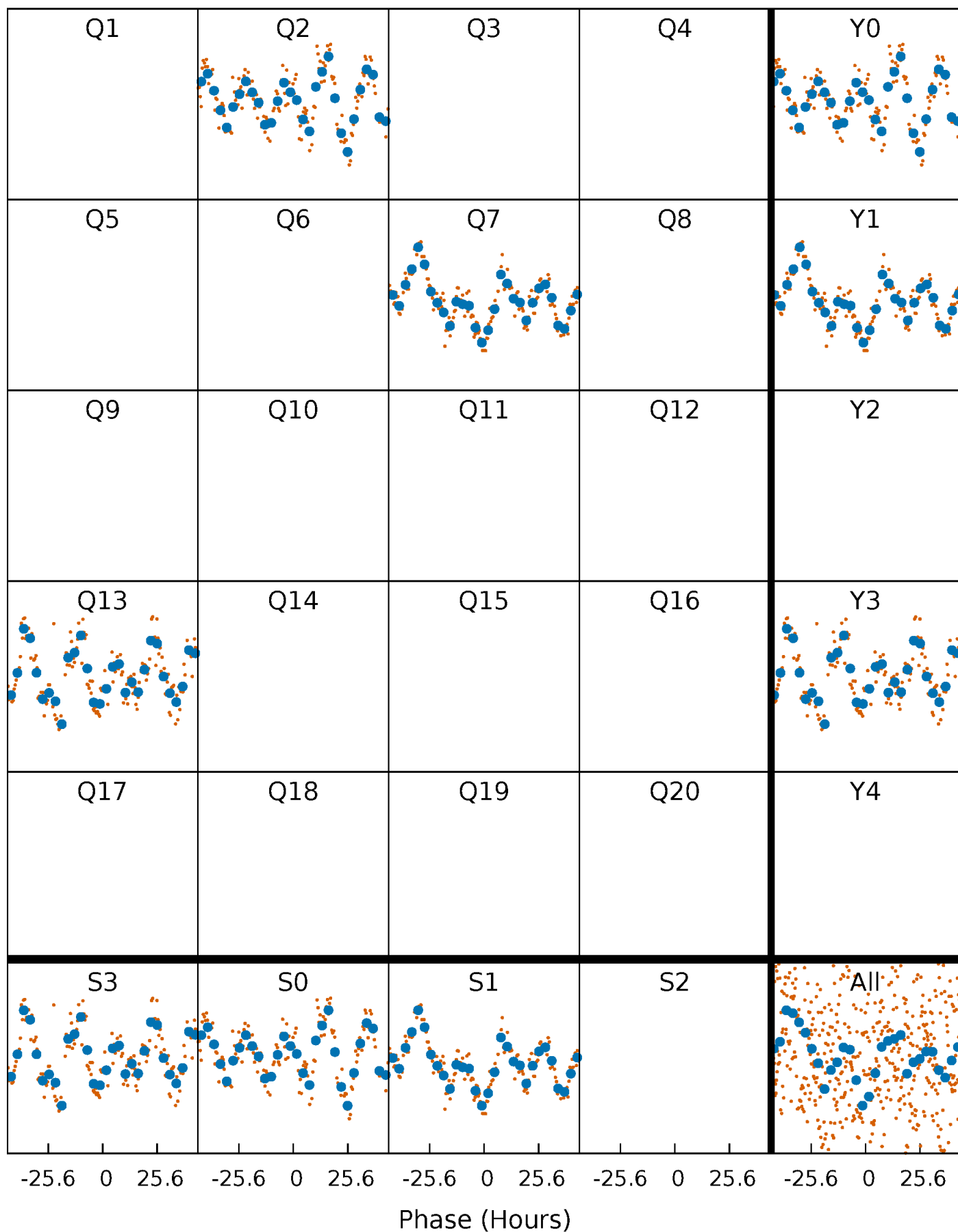


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



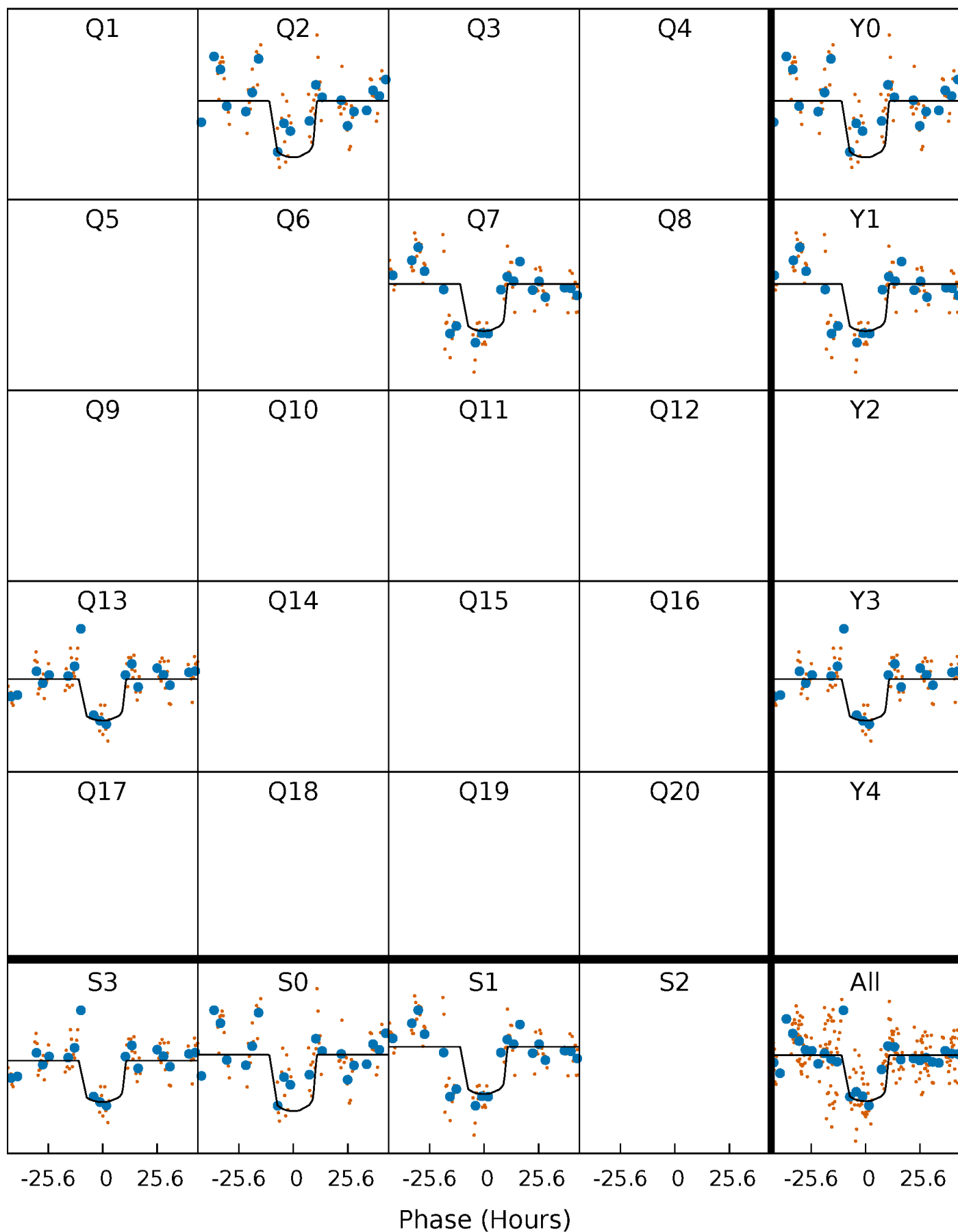
PDC Quarter-Phased Transit Curves

TCE 012119295-02 P=507.228271 Days $T_0=177.309240$ (BKJD)



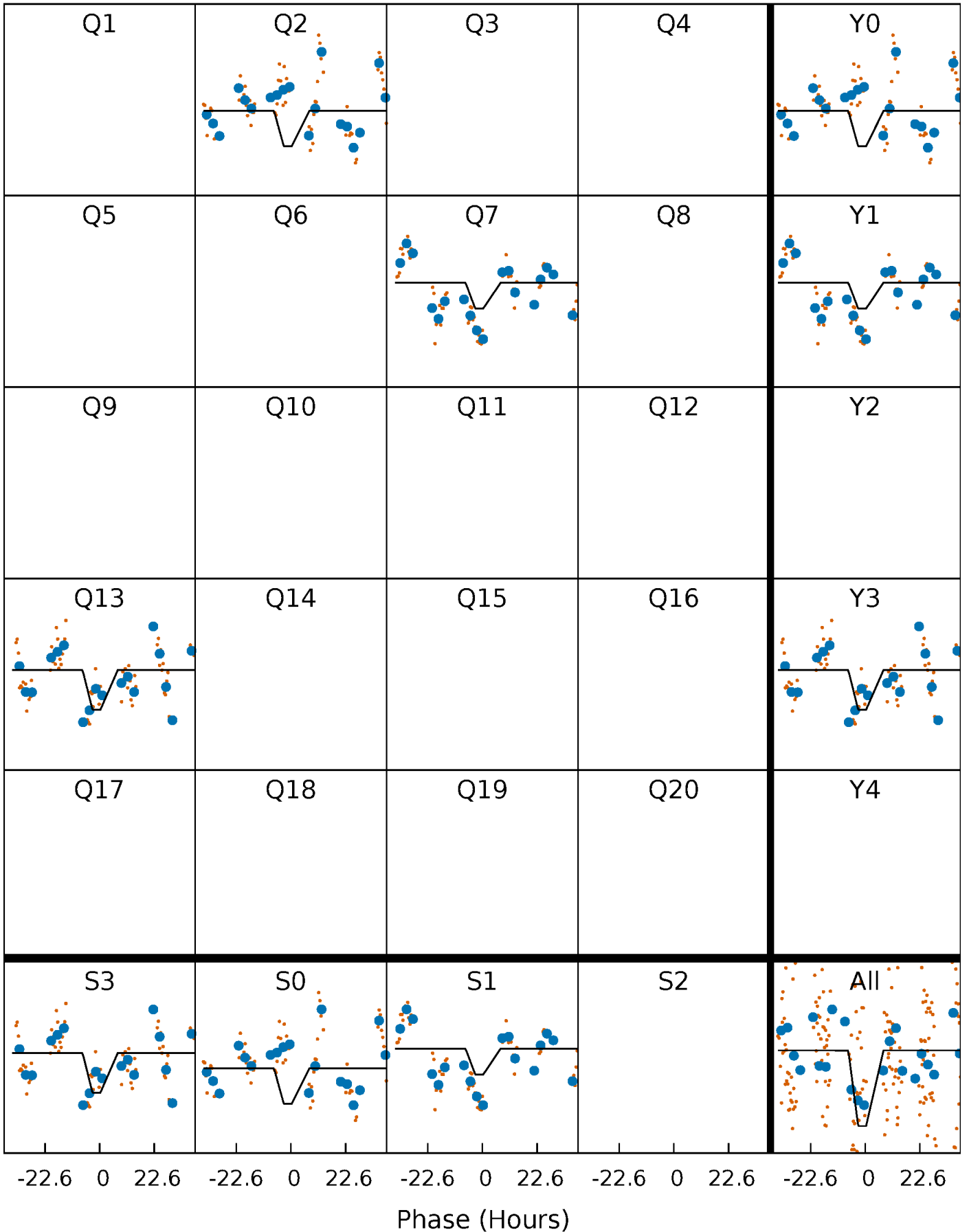
DV Quarter-Phased Transit Curves

TCE 012119295-02 P=507.228271 Days $T_0=177.309240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

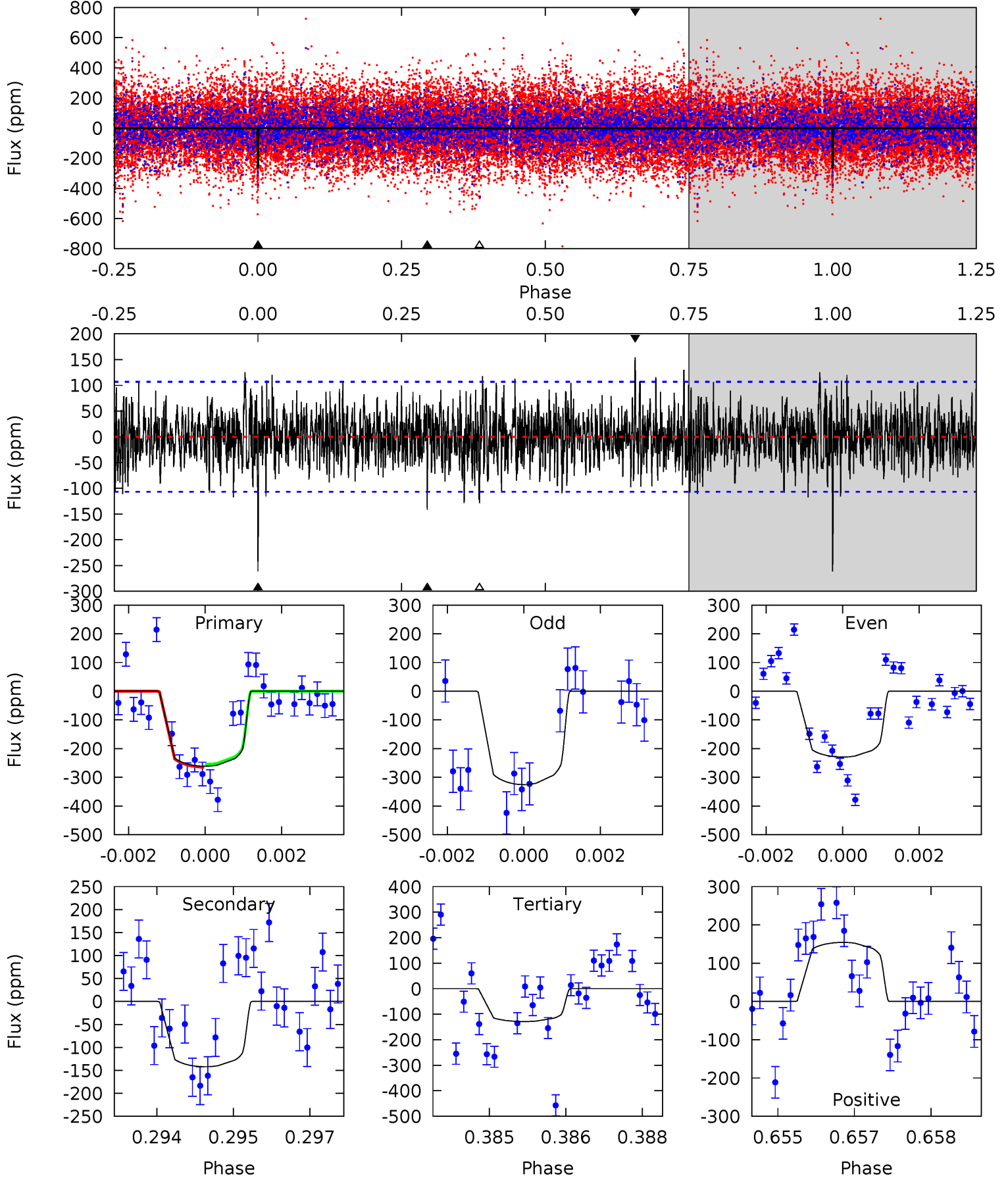
TCE 012119295-02 P=507.290372 Days $T_0=177.296421$ (BKJD)



DV Model-Shift Uniqueness Test

012119295-02, P = 507.228271 Days, E = 177.309240 Days

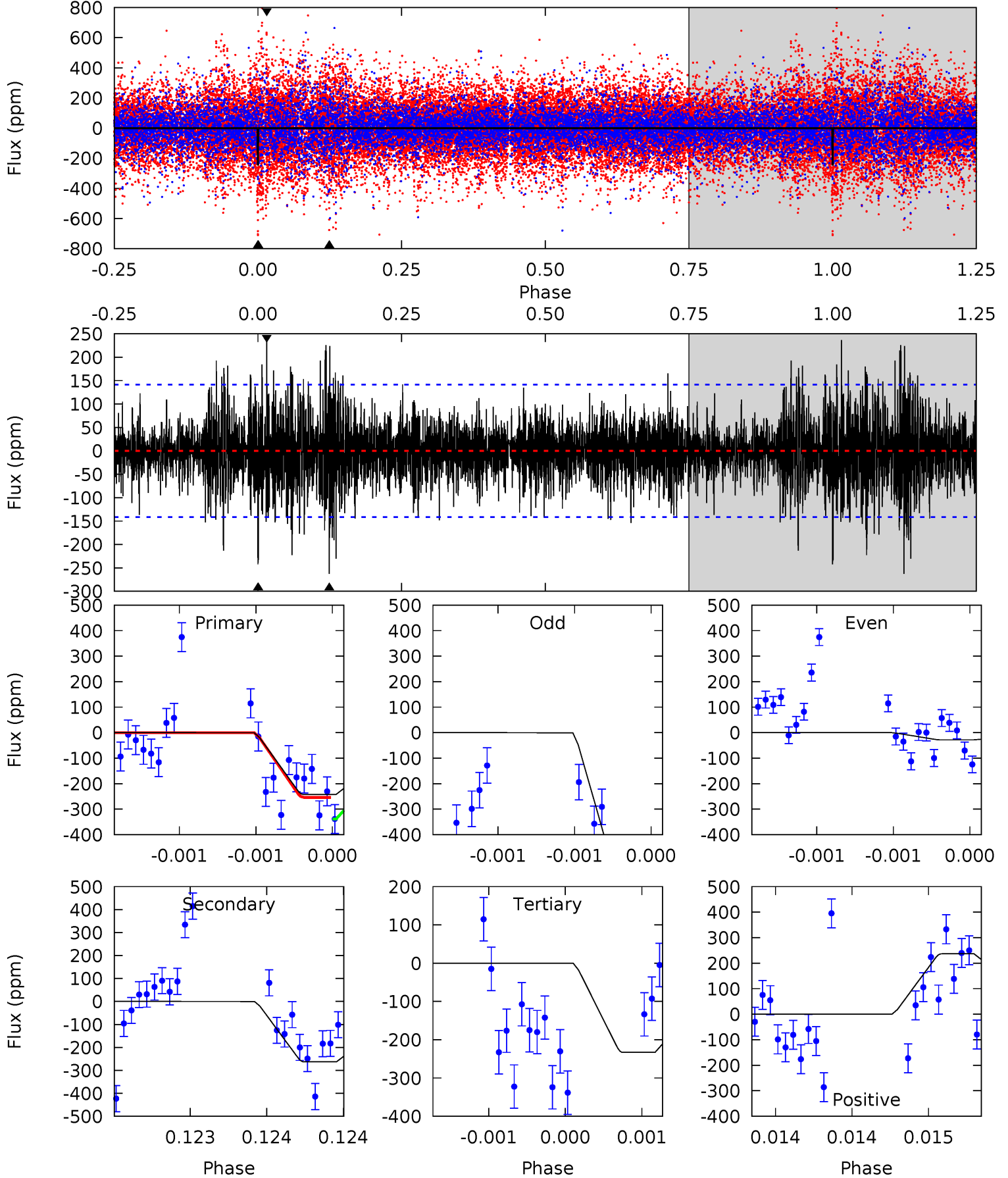
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	7.15	6.47	7.76	5.37	3.17	1.93	6.68	5.39	0.68	-0.61	2.34	0.85	0.37	0.26



Alt Model-Shift Uniqueness Test

012119295-02, P = 507.290372 Days, E = 177.296421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.49	10.3	9.12	9.27	5.55	3.44	1.95	0.38	0.23	1.18	1.03	11.1	0.89	0.47	0.52



Stellar Parameters For KIC 012119295

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7284^{+233}_{-311}	$4.271^{+0.101}_{-0.188}$	$-0.500^{+0.250}_{-0.300}$	$1.355^{+0.428}_{-0.214}$	$1.251^{+0.196}_{-0.161}$	$0.709^{+0.376}_{-0.351}$
	+3%/-4%	+2%/-4%	+50%/-60%	+32%/-16%	+16%/-13%	+53%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 012119295-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-142 ± 20	$2.80^{+0.45}_{-0.38}$	455^{+33}_{-27}	5754^{+408}_{-397}	17378^{+6352}_{-4744}
Alt.	-263 ± 26	$2.62^{+0.50}_{-0.38}$	456^{+35}_{-30}	6997^{+577}_{-528}	37586^{+14560}_{-10940}

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

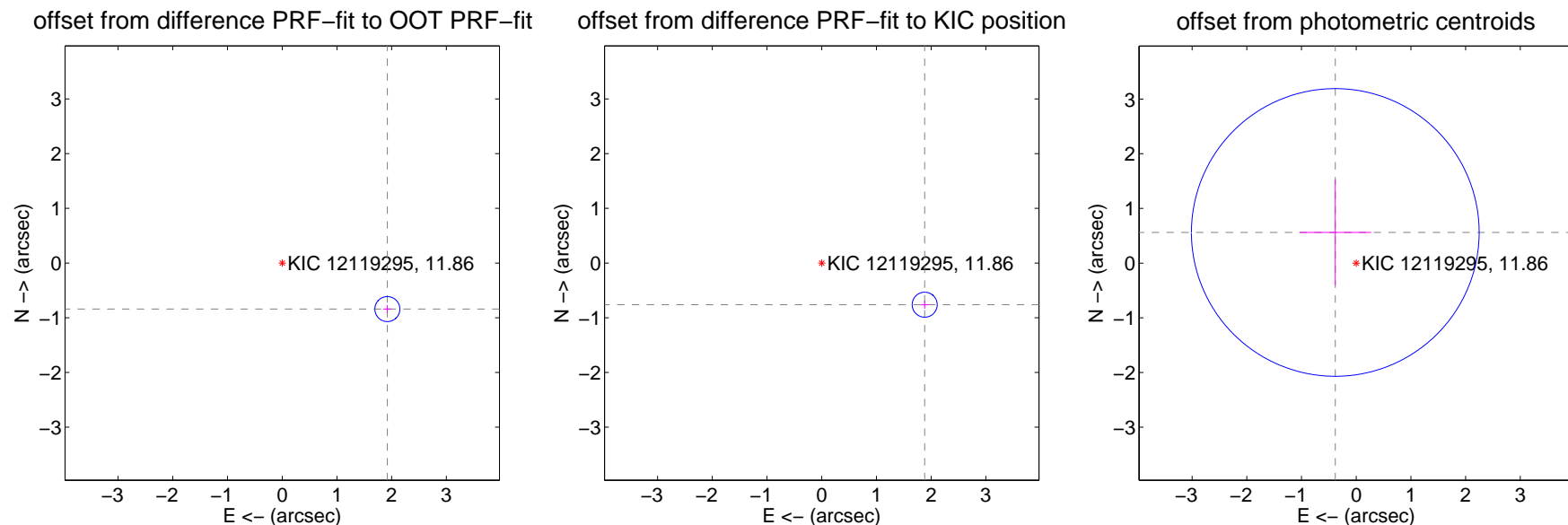
DV Centroid Data

Supplemental centroid analysis for 012119295-02. **Kepler magnitude: 11.86.** Transit SNR 7.54

There are 1 quarters with good PRF difference image offsets

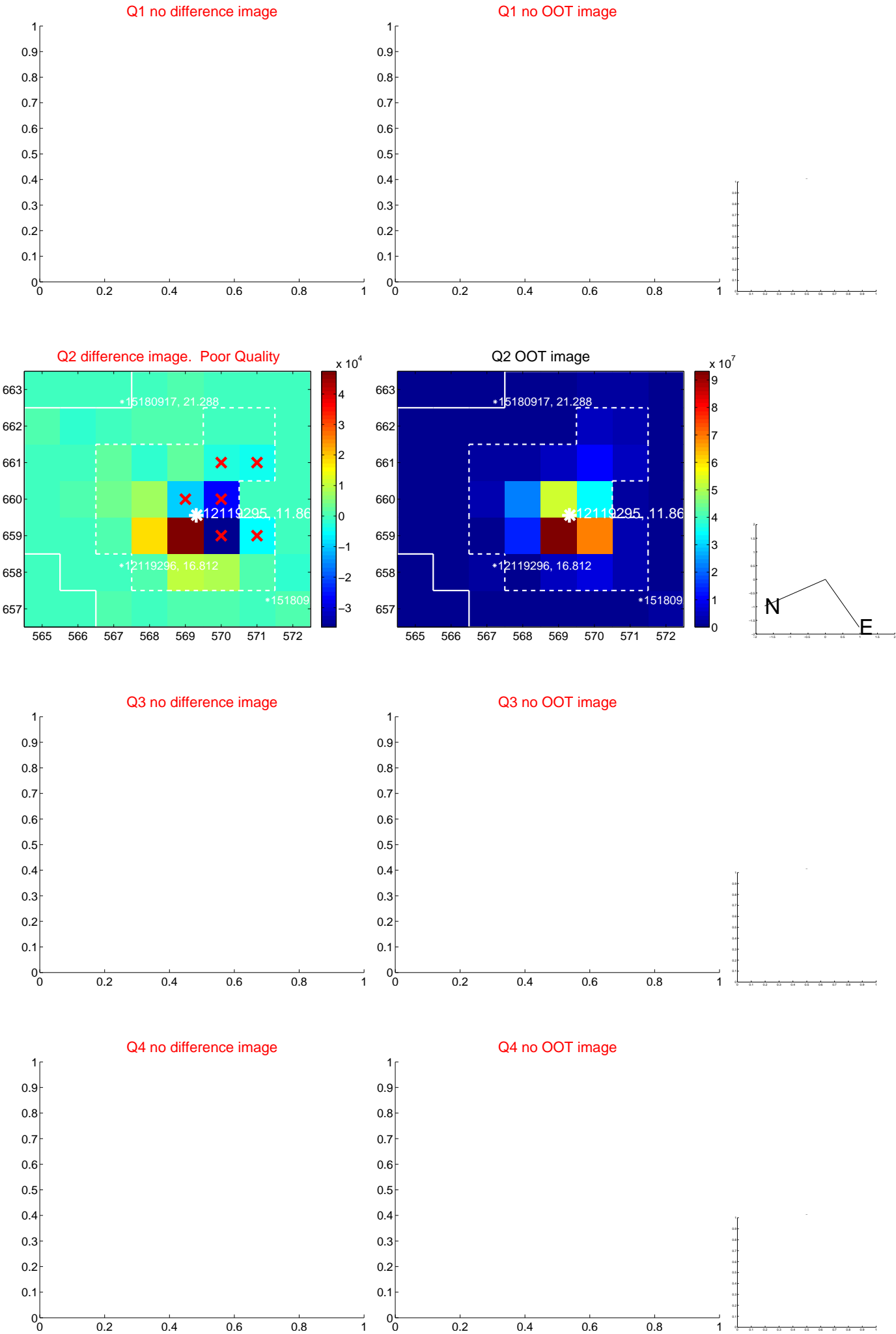
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.098 ± 0.076	27.54	-1.922 ± 0.077	-0.842 ± 0.074
PRF-fit source offset from KIC position	2.031 ± 0.076	26.64	-1.883 ± 0.077	-0.762 ± 0.074
photometric centroid source offset	0.68 ± 0.88	0.77	0.38 ± 0.66	0.56 ± 0.96

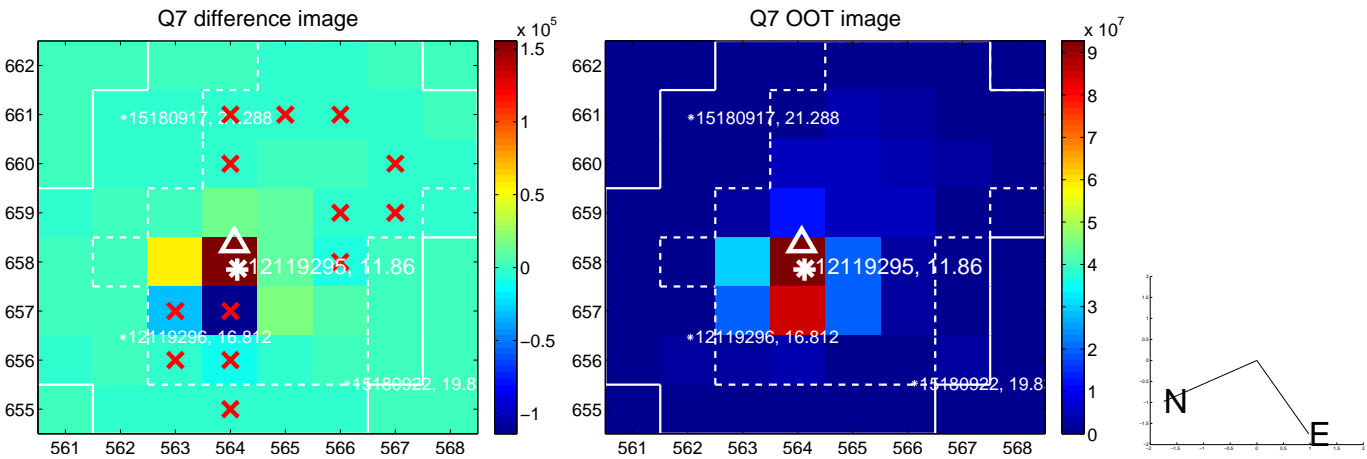


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



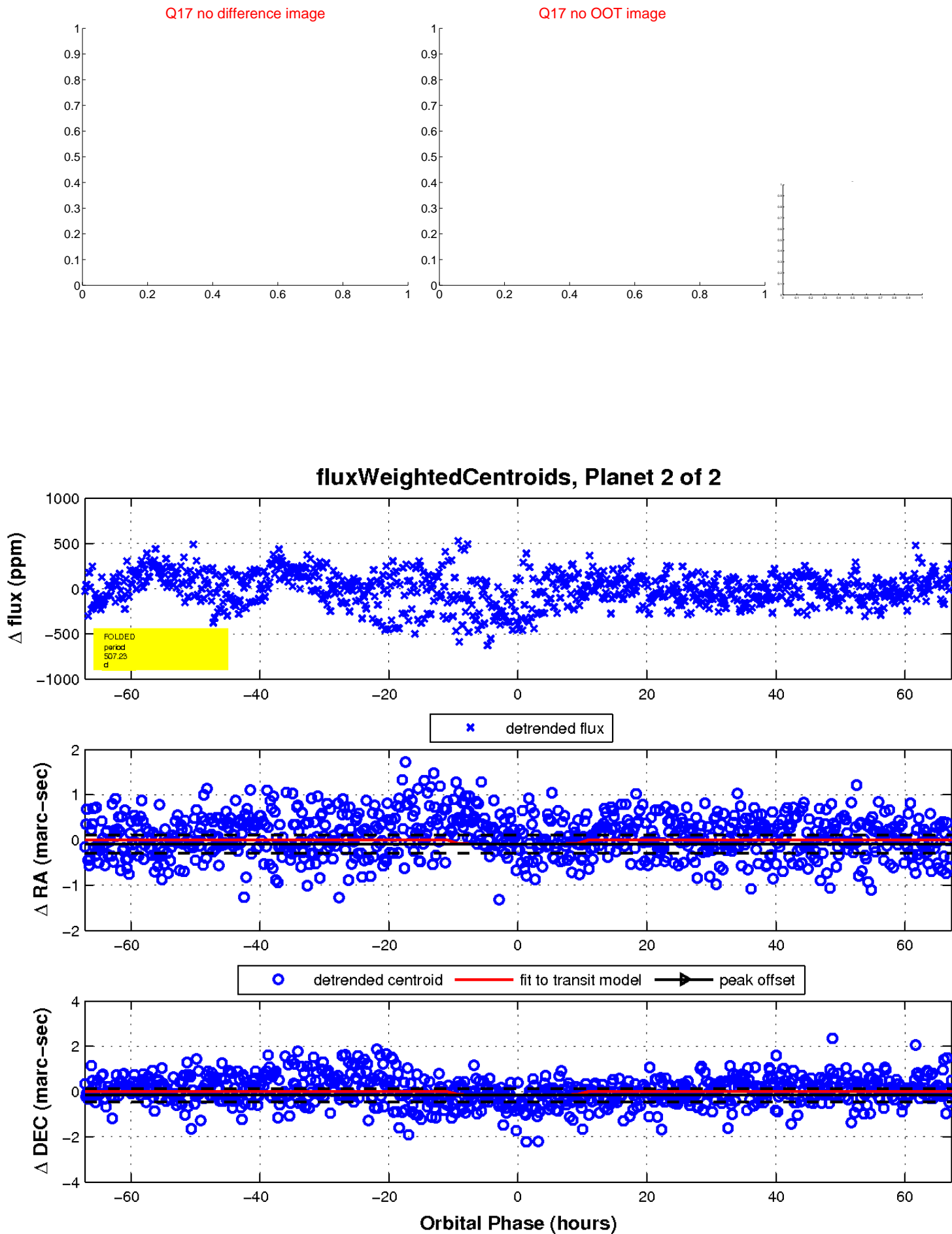
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

