

KIC 005897826

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})
005897826-01	OBS	0126.01	33.802764	134.679307	13225.9	10.791	1177.6	646.1	1.80	5855	22.40	72.88
005897826-02	OBS	No	279.318704	397.048600	374.7	21.779	16.7	11.4	1.80	5855	7.00	4.36
005897826-03	OBS	0126.02	0.875177	131.854241	34.7	1.215	9.7	11.9	1.80	5855	1.28	9515.07
005897826-04	OBS	No	513.974603	373.634406	322.1	7.687	8.7	8.3	1.80	5855	3.55	1.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005897826-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005897826-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005897826-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
005897826-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—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.

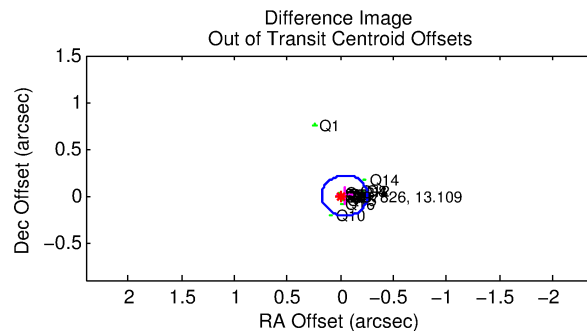
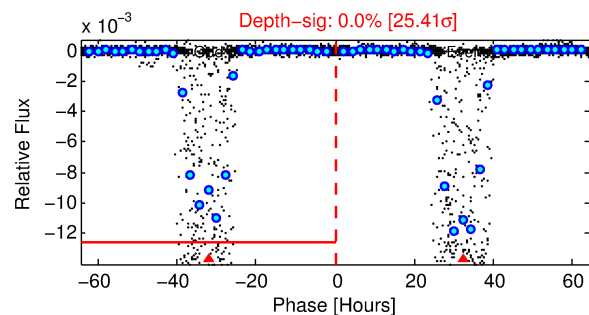
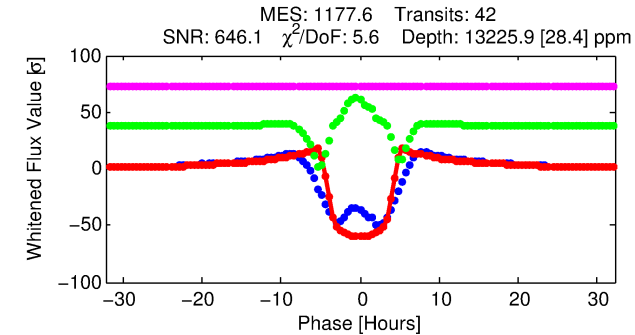
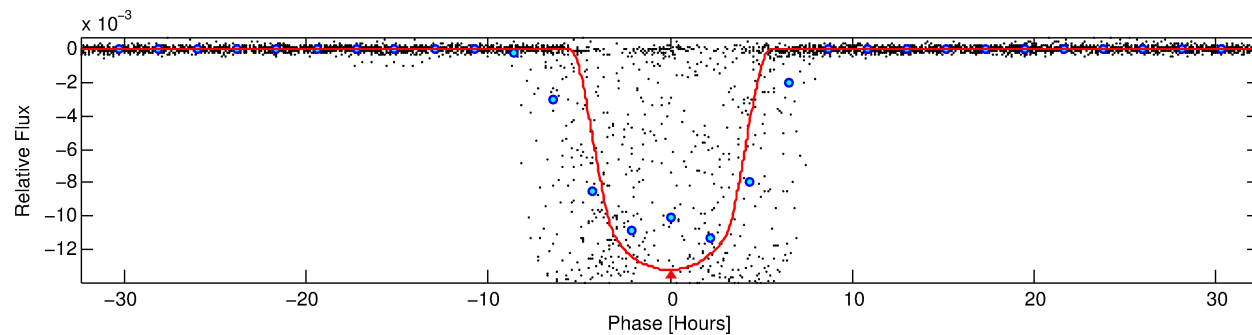
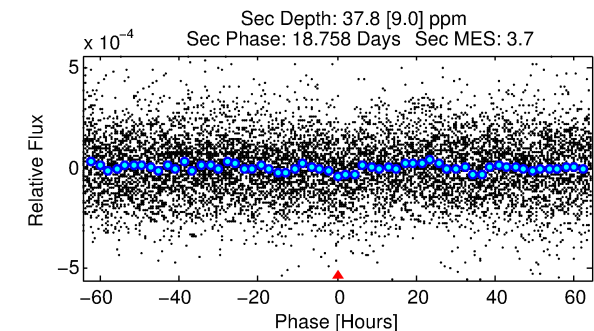
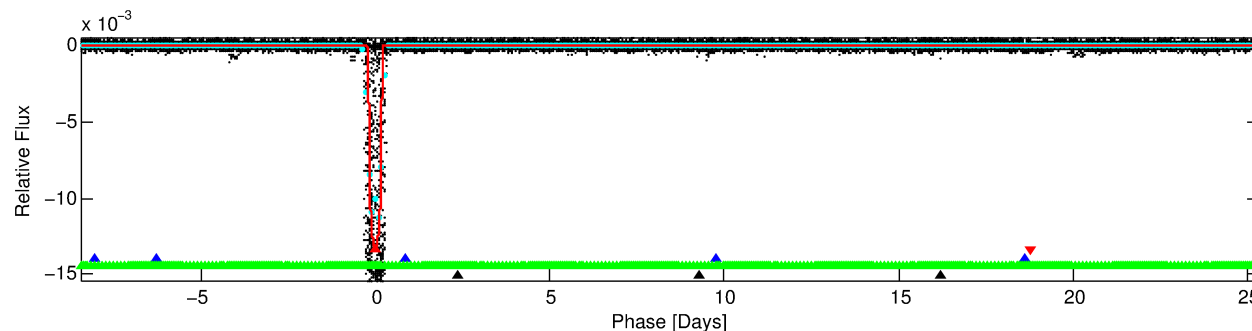
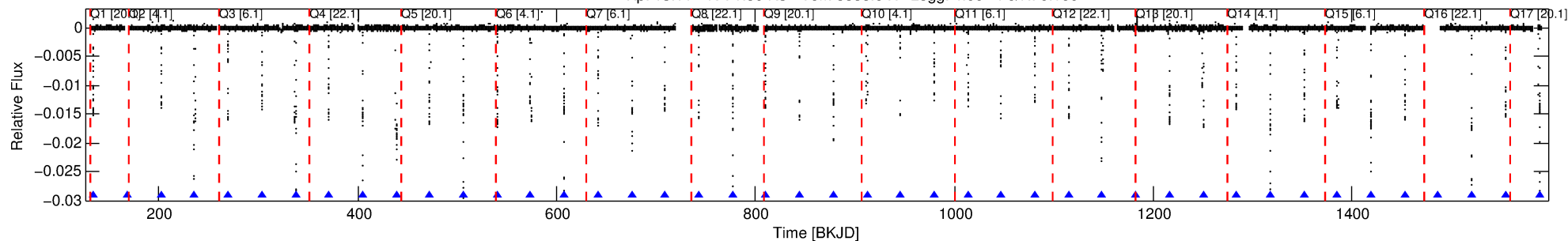
Ephemeris Match Information For 005897826-01

No Significant Match Found

DV One-Page Summary

KIC: 5897826 Candidate: 1 of 4 Period: 33.803 d
KOI: K00126.01 Corr: 0.924

Kp: 13.11 R*: 1.80 Rs Teff: 5855.0 K Logg: 4.00 Fe/H: 0.160



DV Fit Results:

Period = 33.80276 [0.00002] d
Epoch = 134.6793 [0.0004] BKJD
Rp/R* = 0.1143 [0.0002]
a/R* = 19.98 [0.10]
b = 0.74 [0.00]
Seff = 72.88 [25.40]
Teff = 745 [65] K
Rp = 22.40 [5.26] Re
a = 0.2159 [0.0469] AU
Ag = 1.93 [0.80] [1.16]
Teffp = 1358 [85] K [5.73]

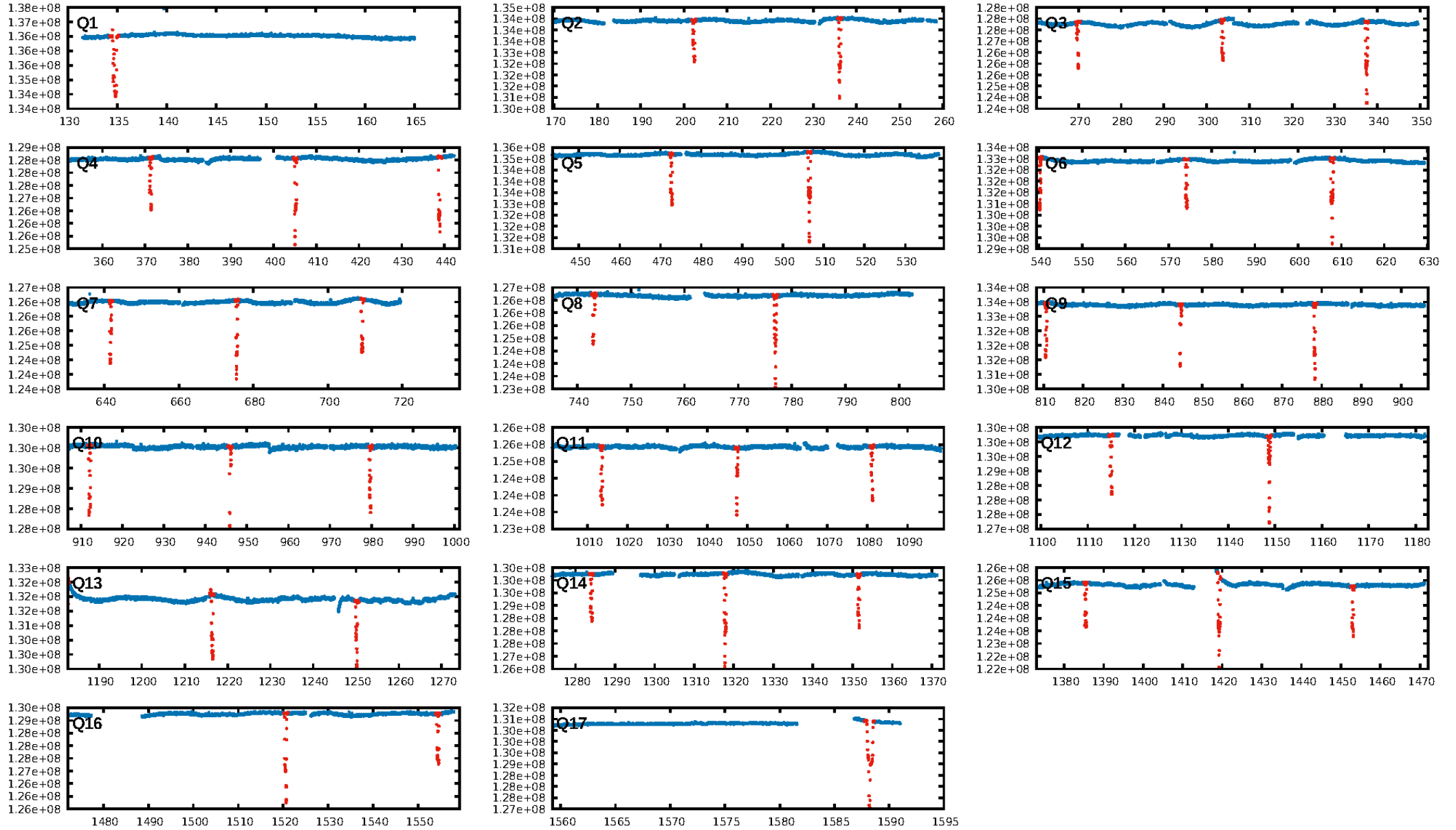
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [72.77]
LongPeriod-sig: 100.0% [242.43]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 2.585
Centroid-sig: 0.0%
Centroid-so: 0.036 arcsec [4.23]
OotOffset-rm: 0.042 arcsec [0.58]
KicOffset-rm: 0.085 arcsec [1.03]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.00 [0/16]

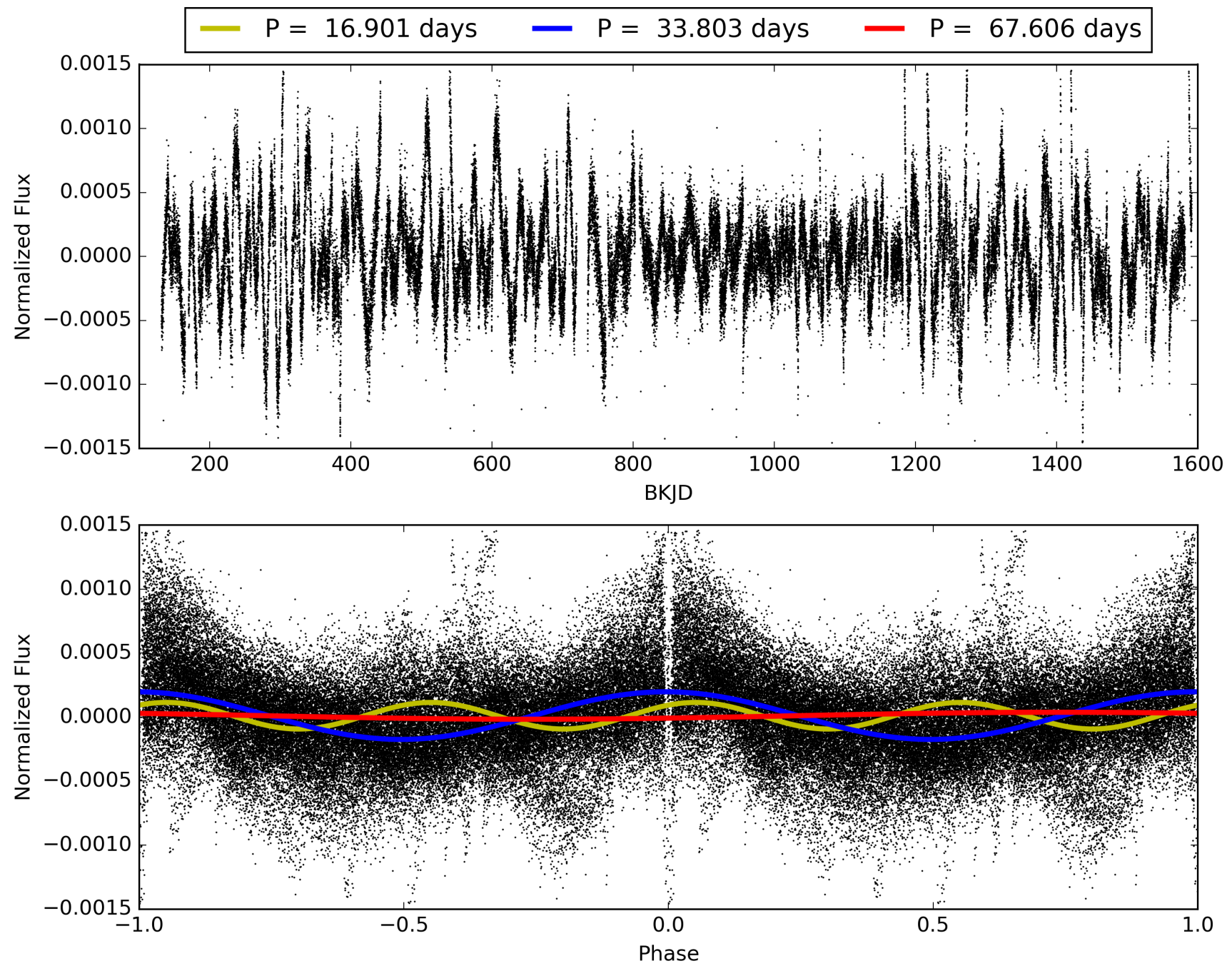
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:45:58 Z

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

TCE 005897826-01, PDC Light Curves

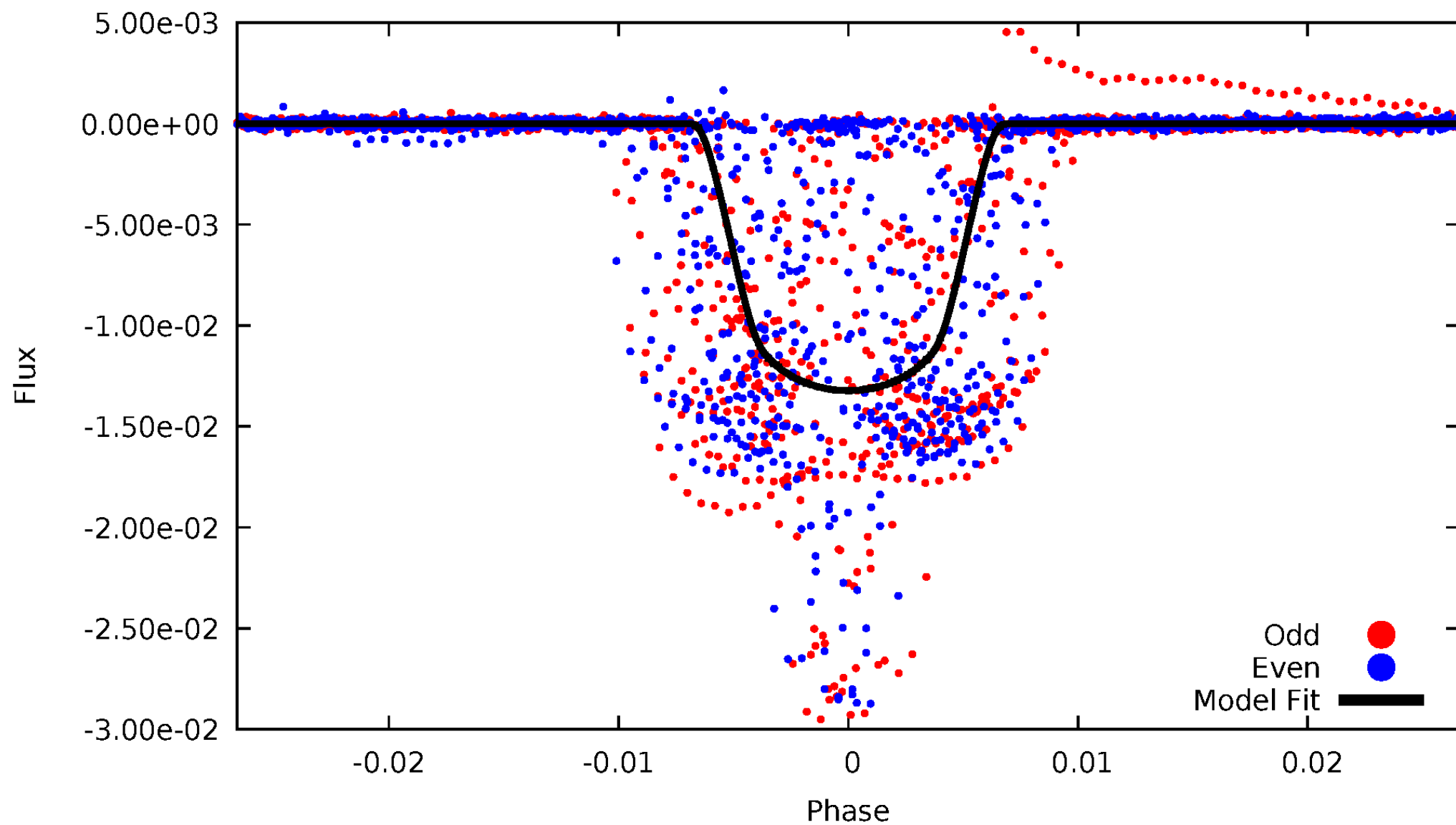


TCE 005897826-01



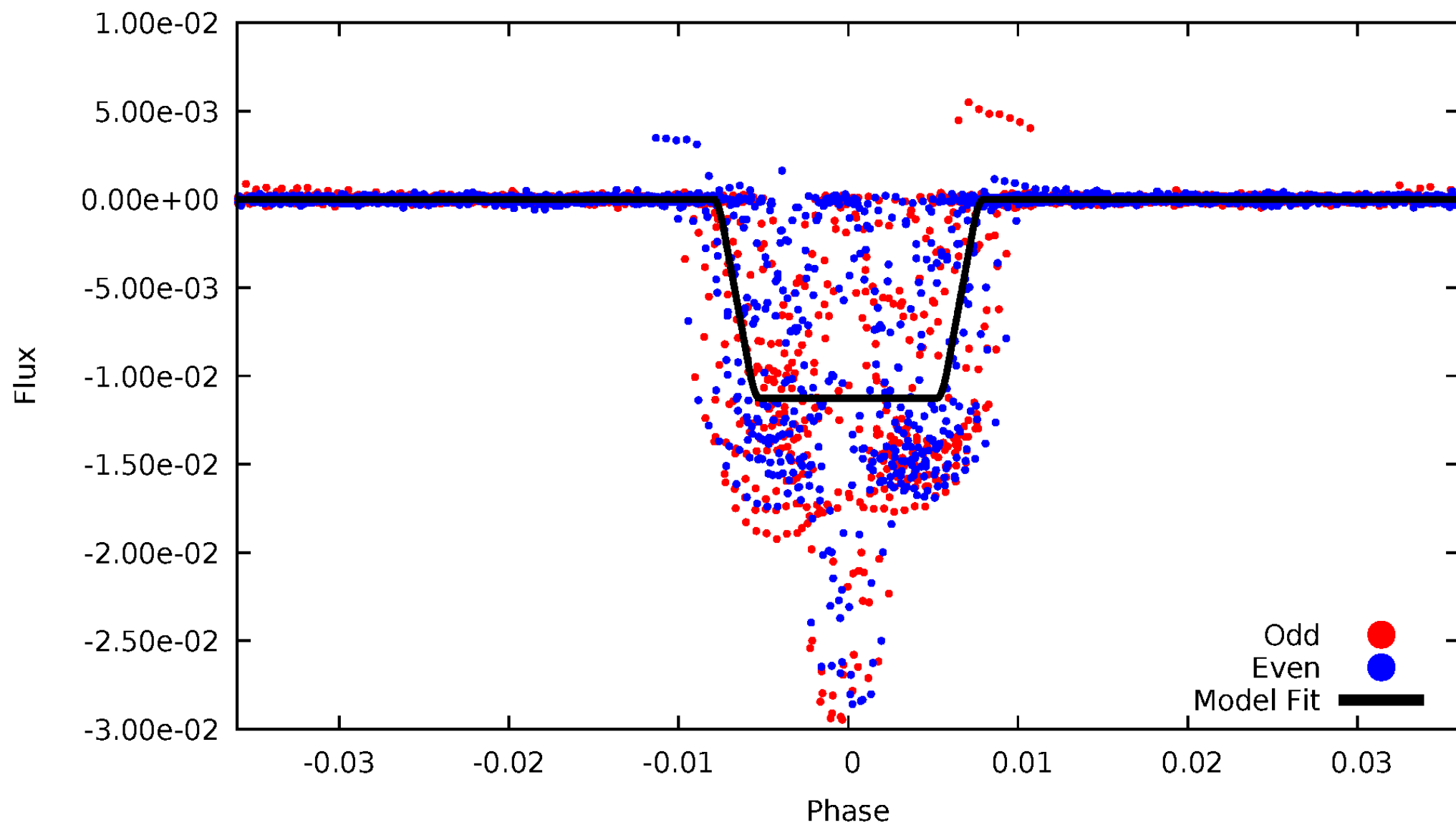
DV Odd/Even

TCE 005897826-01



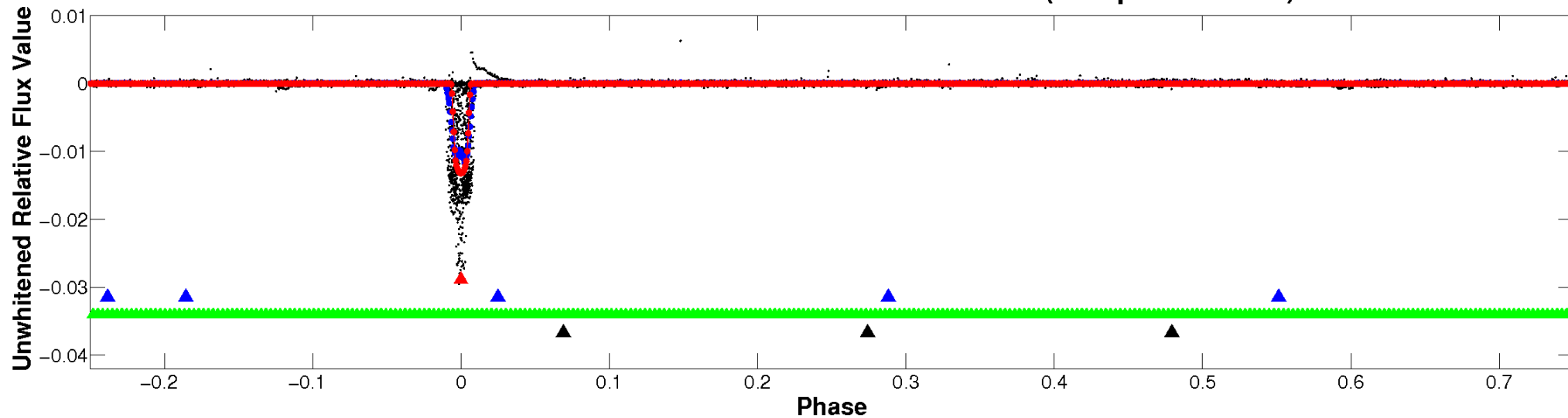
ALT Odd/Even

TCE 005897826-01

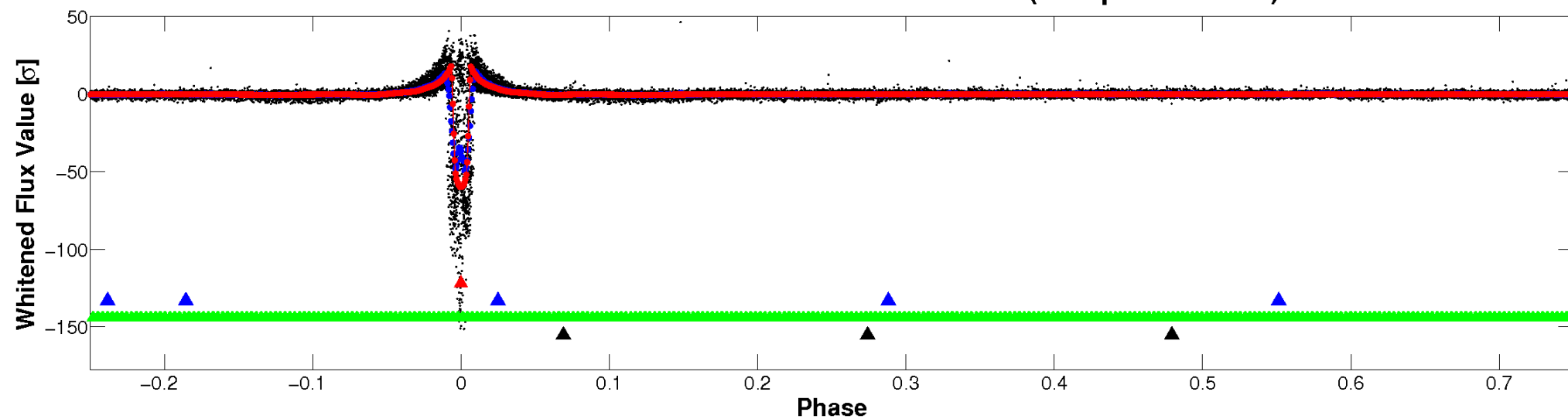


Non-Whitened Vs. Whitened Light Curve

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

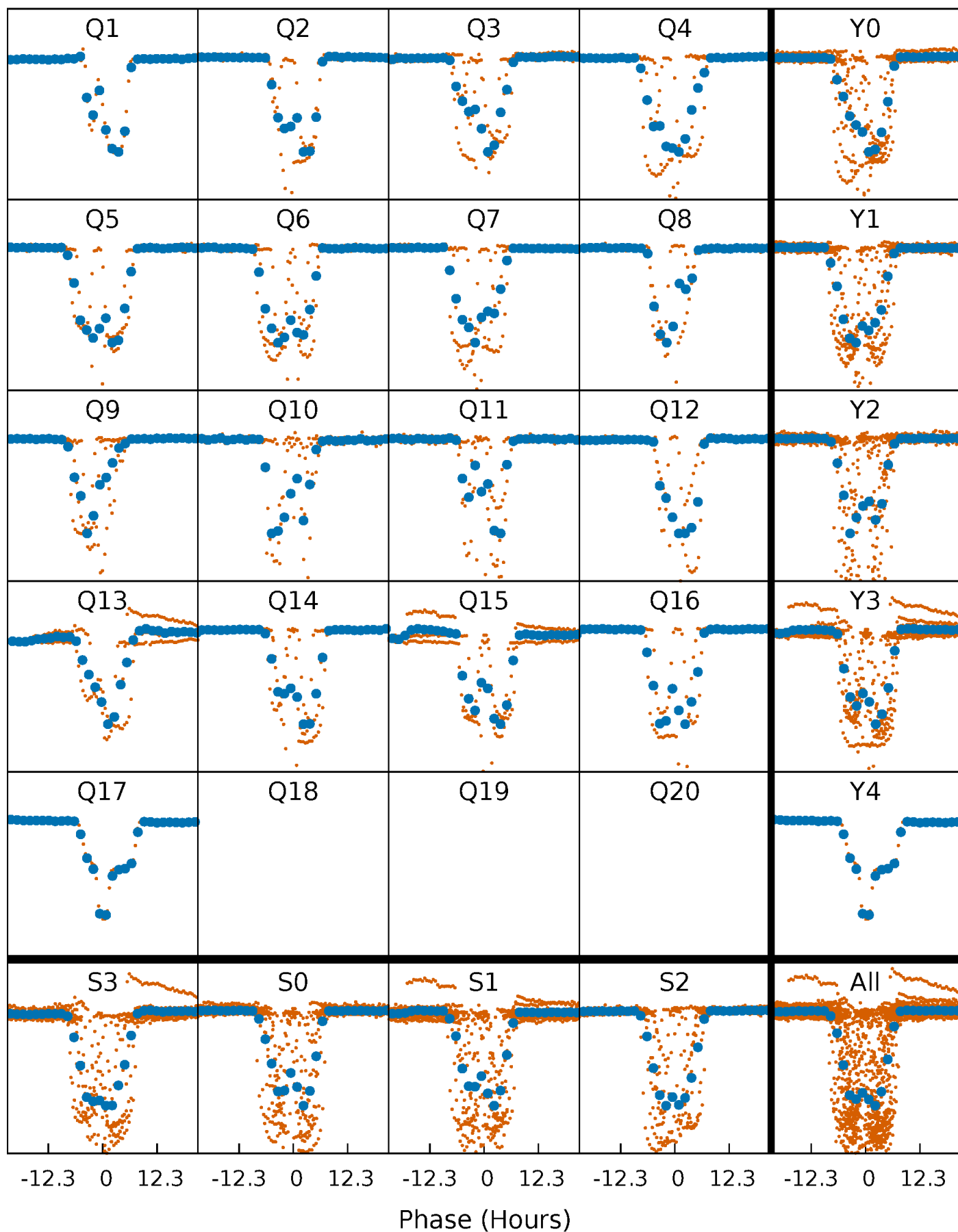


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



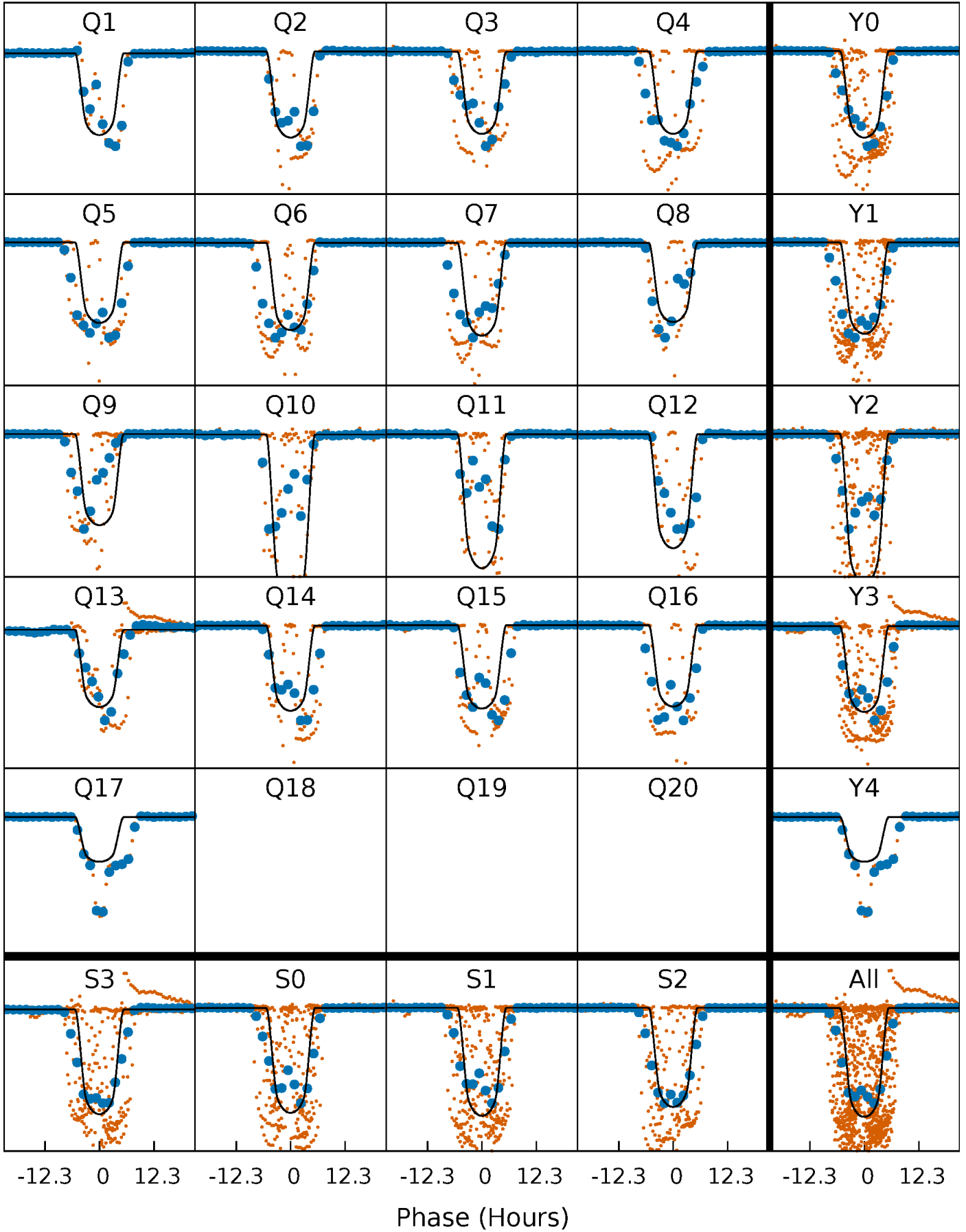
PDC Quarter-Phased Transit Curves

TCE 005897826-01 P= 33.802764 Days $T_0=134.679307$ (BKJD)



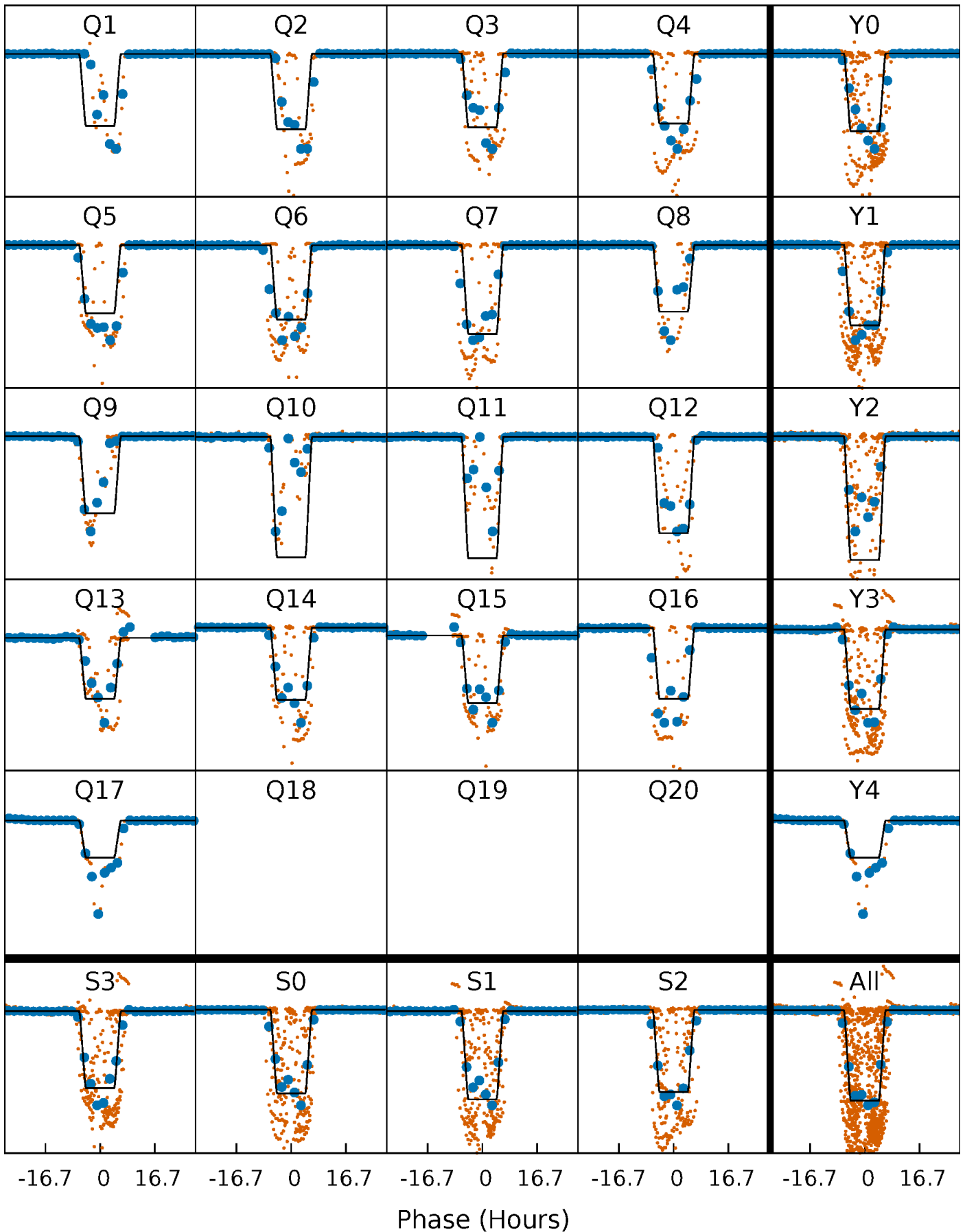
DV Quarter-Phased Transit Curves

TCE 005897826-01 P= 33.802764 Days $T_0=134.679307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

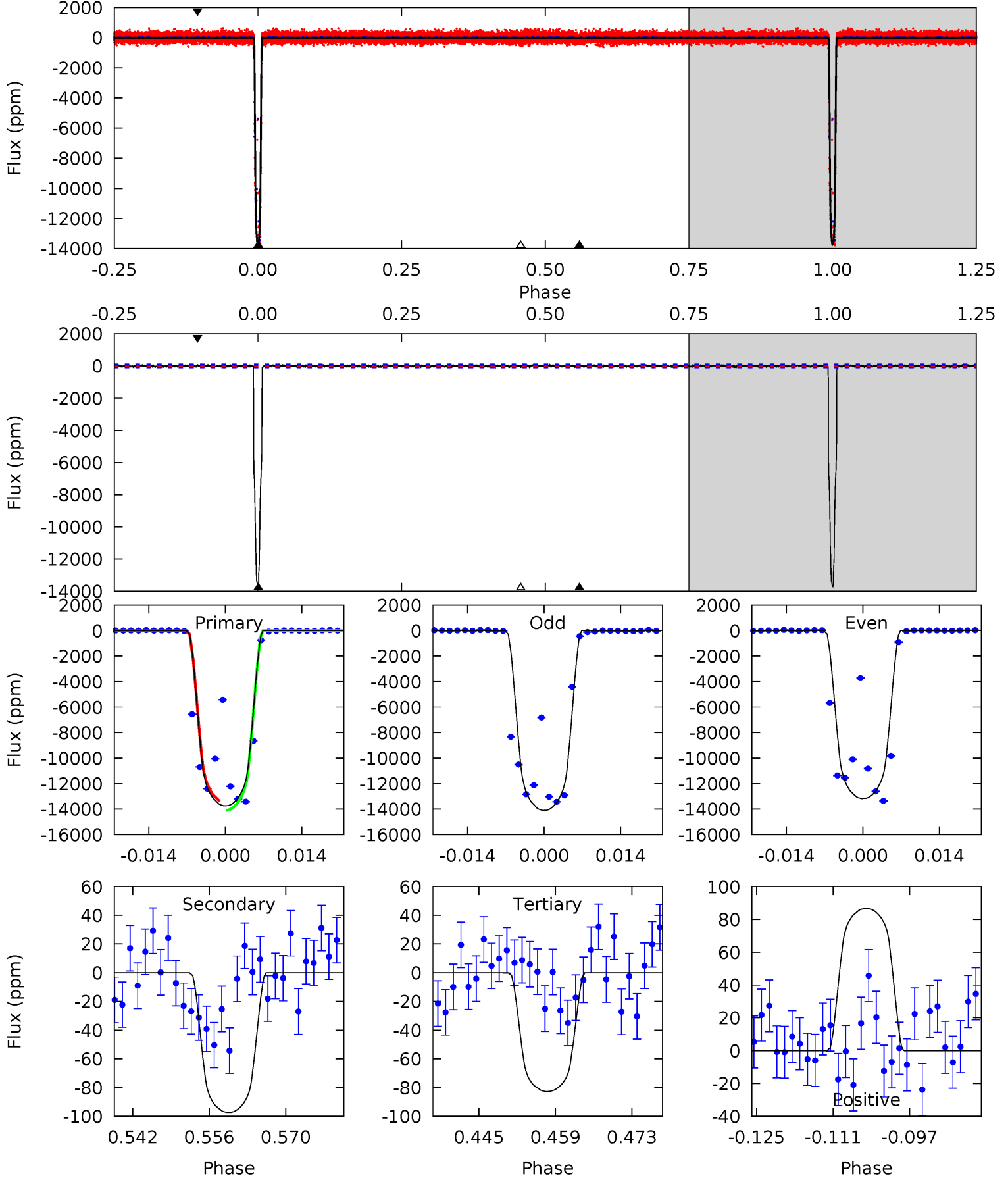
TCE 005897826-01 P= 33.804869 Days $T_0=134.627354$ (BKJD)



DV Model-Shift Uniqueness Test

005897826-01, P = 33.802764 Days, E = 100.876543 Days

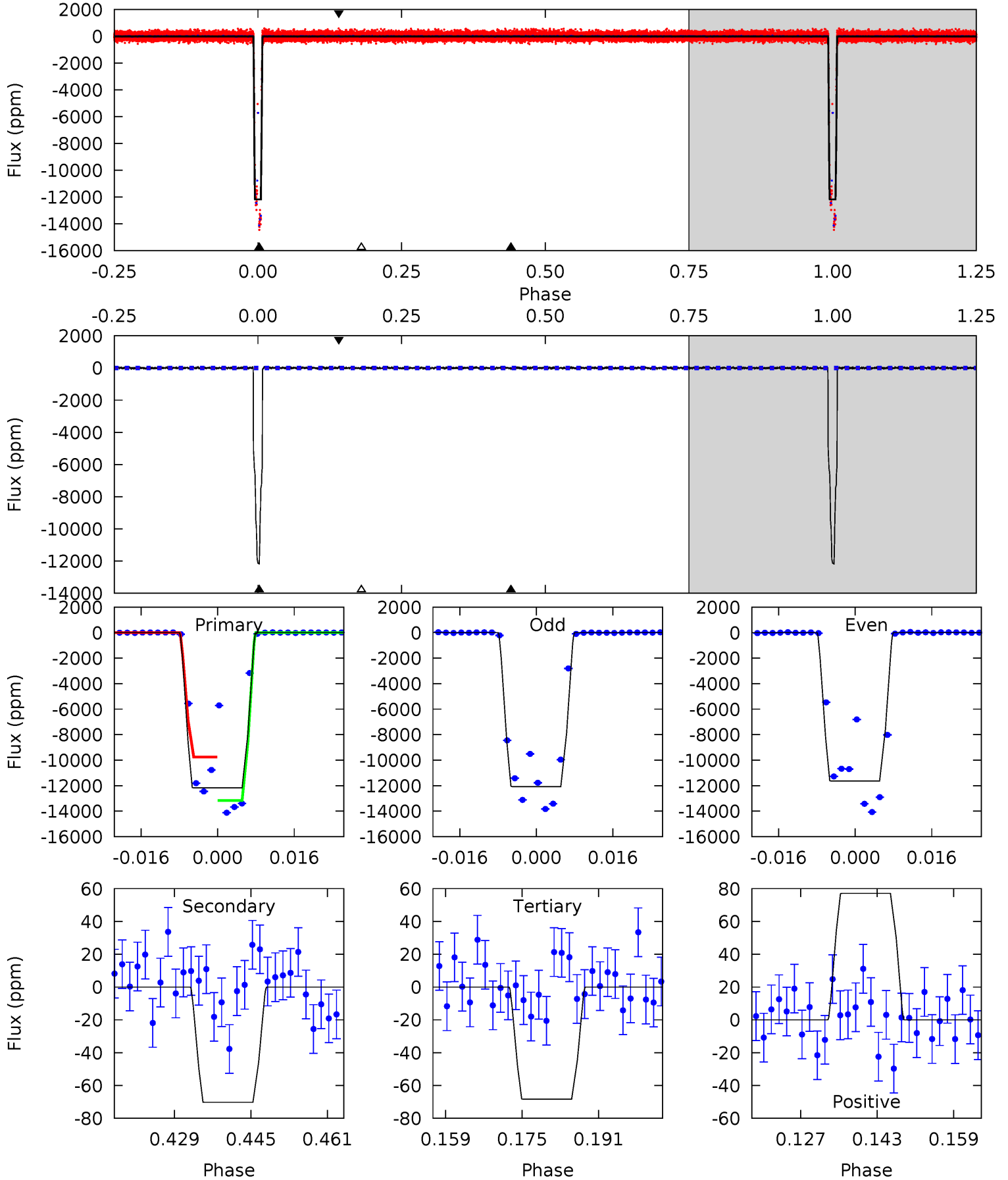
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
784.8	5.56	4.72	4.95	4.96	2.46	1.37	780.0	779.8	0.84	0.61	27.6	1.17	0.01	0



Alt Model-Shift Uniqueness Test

005897826-01, P = 33.804869 Days, E = 100.822485 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
822.6	4.75	4.62	5.21	4.94	2.41	1.30	817.9	817.4	0.13	-0.46	16.4	1.12	0.01	0



Stellar Parameters For KIC 005897826

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+117}_{-117}	$3.999^{+0.196}_{-0.084}$	$0.160^{+0.150}_{-0.150}$	$1.796^{+0.281}_{-0.422}$	$1.174^{+0.133}_{-0.133}$	$0.286^{+0.312}_{-0.077}$
	+2%/-2%	+5%/-2%	+94%/-94%	+16%/-23%	+11%/-11%	+109%/-27%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 005897826-01 / KOI 0126.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-97 ± 17	$22.06^{+2.05}_{-2.65}$	1028^{+47}_{-57}	2539^{+57}_{-71}	$5.220^{+1.497}_{-1.128}$
Alt.	-70 ± 15	$20.44^{+1.85}_{-2.47}$	1030^{+47}_{-63}	2481^{+74}_{-79}	$4.472^{+1.296}_{-1.153}$

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 $A_{obs} \gg 1.0$

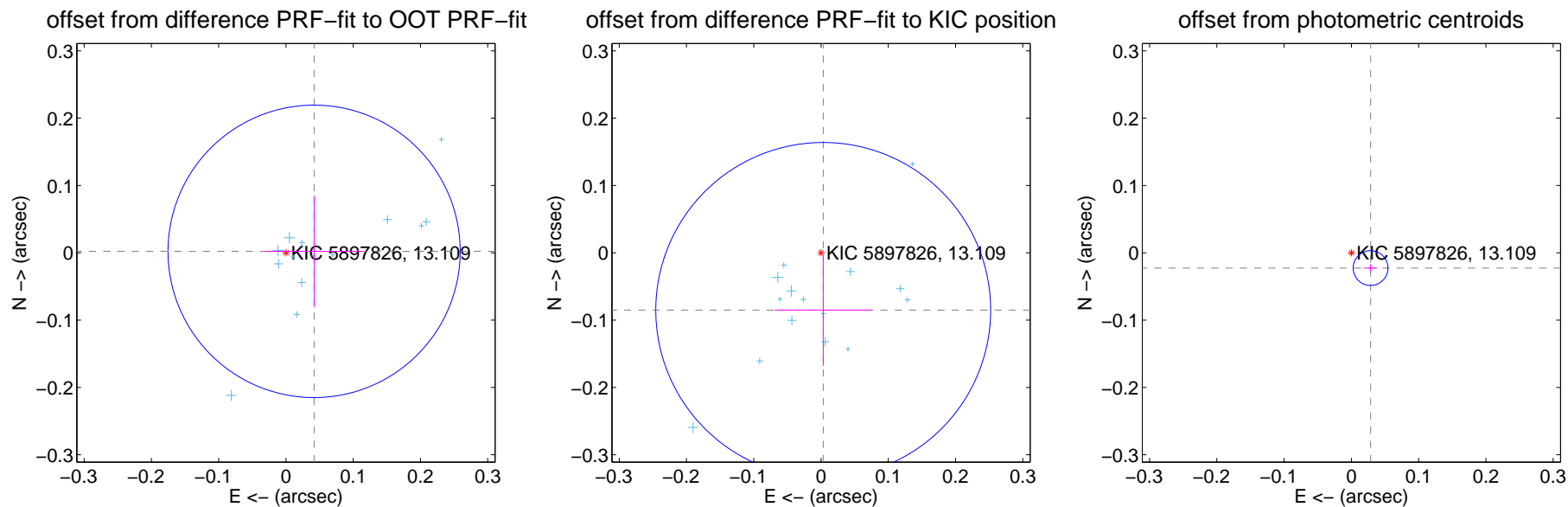
DV Centroid Data

Supplemental centroid analysis for 005897826-01. Kepler magnitude: 13.11. Transit SNR 646.10

There are 16 quarters with good PRF difference image offsets

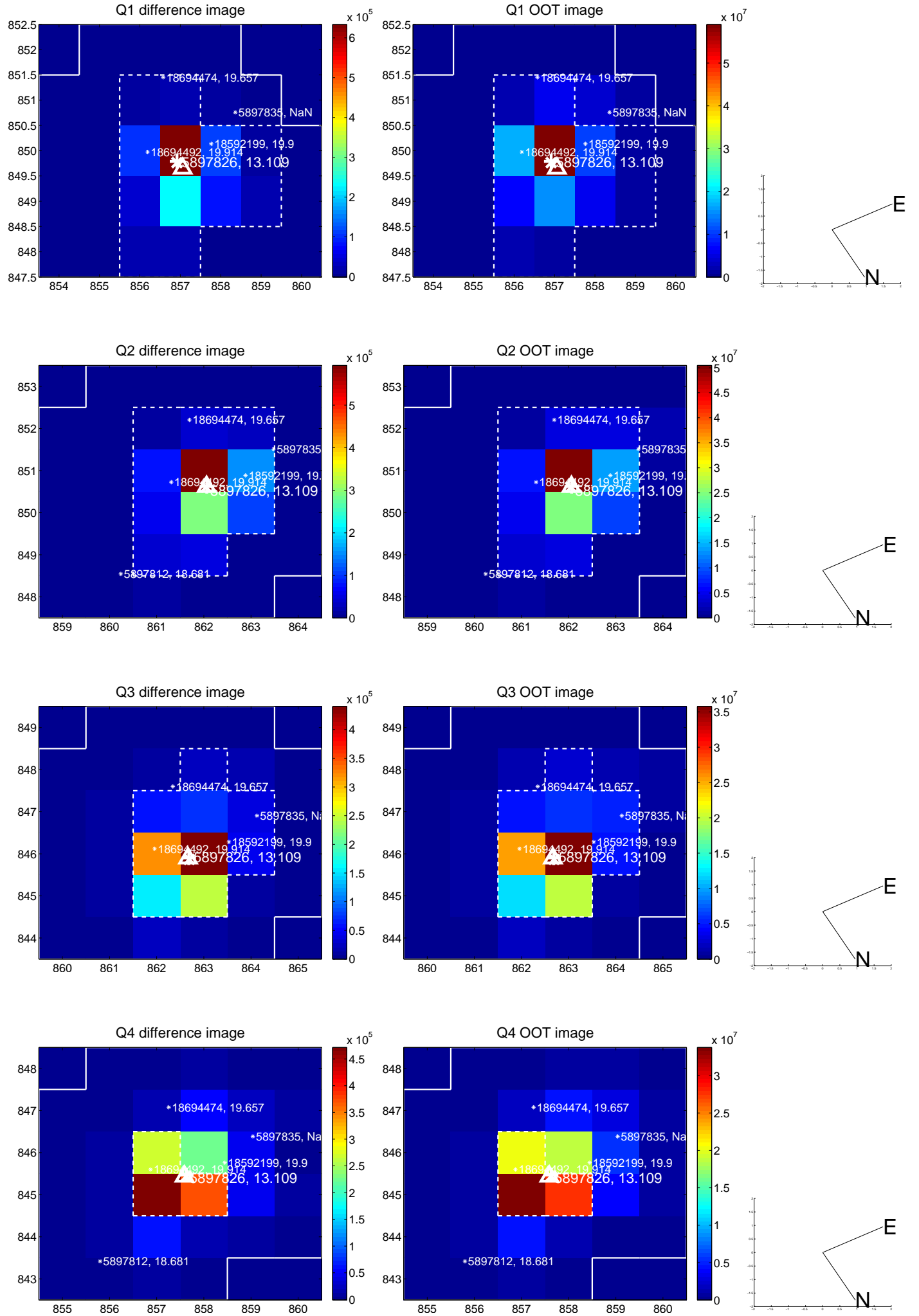
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.042 ± 0.072	0.58	-0.042 ± 0.073	0.002 ± 0.083
PRF-fit source offset from KIC position	0.085 ± 0.083	1.03	-0.003 ± 0.072	-0.085 ± 0.083
photometric centroid source offset	0.04 ± 0.01	4.23	-0.03 ± 0.01	-0.02 ± 0.01

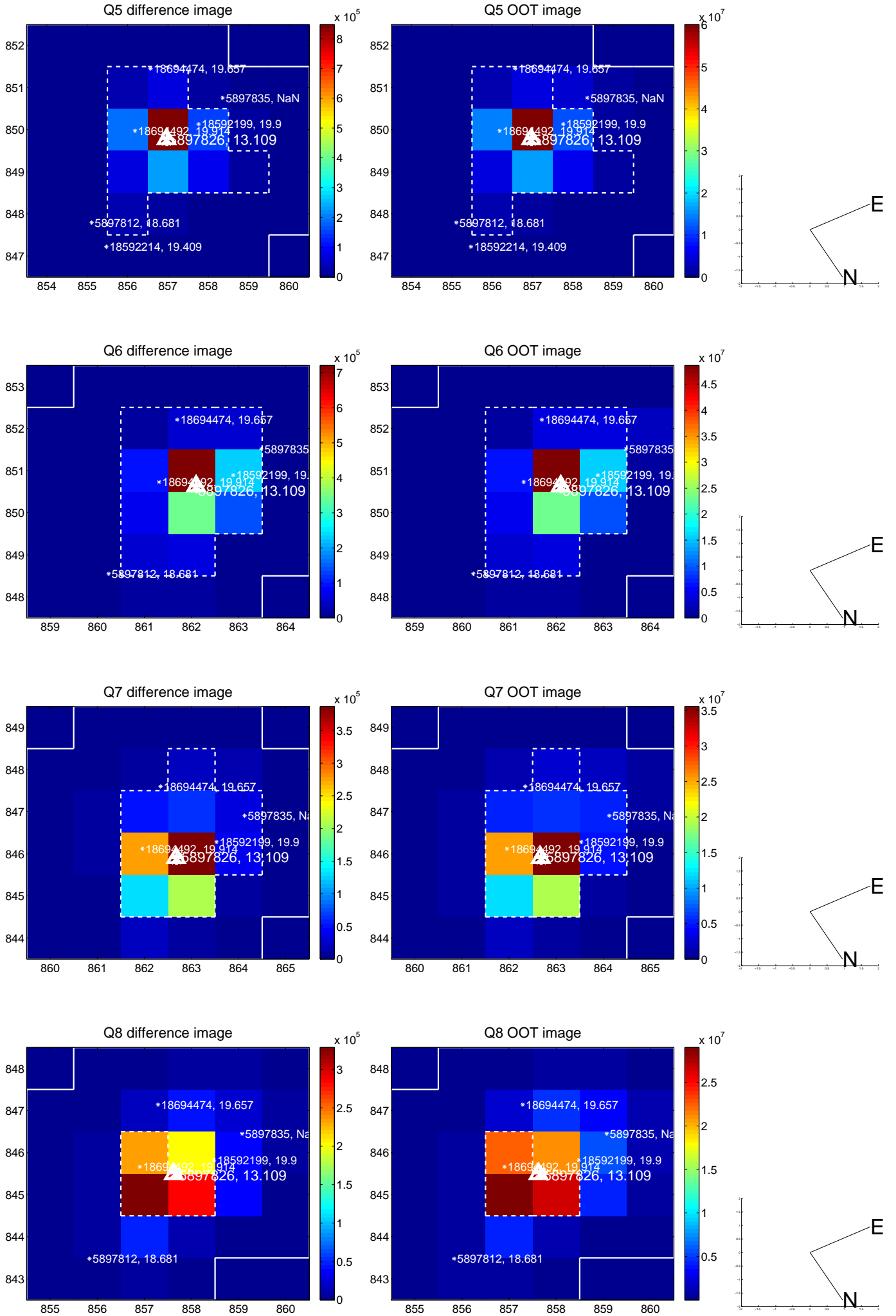


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

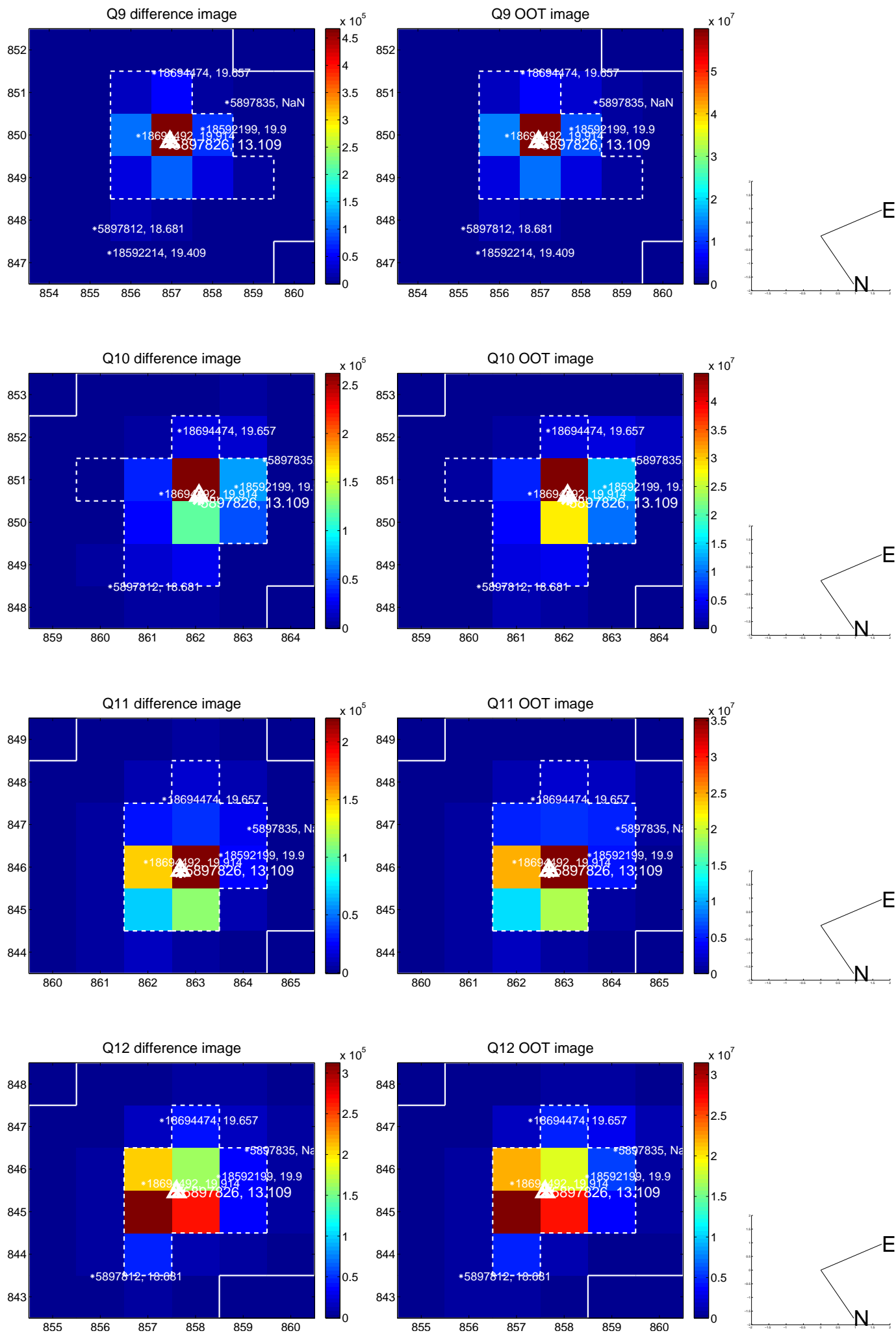
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



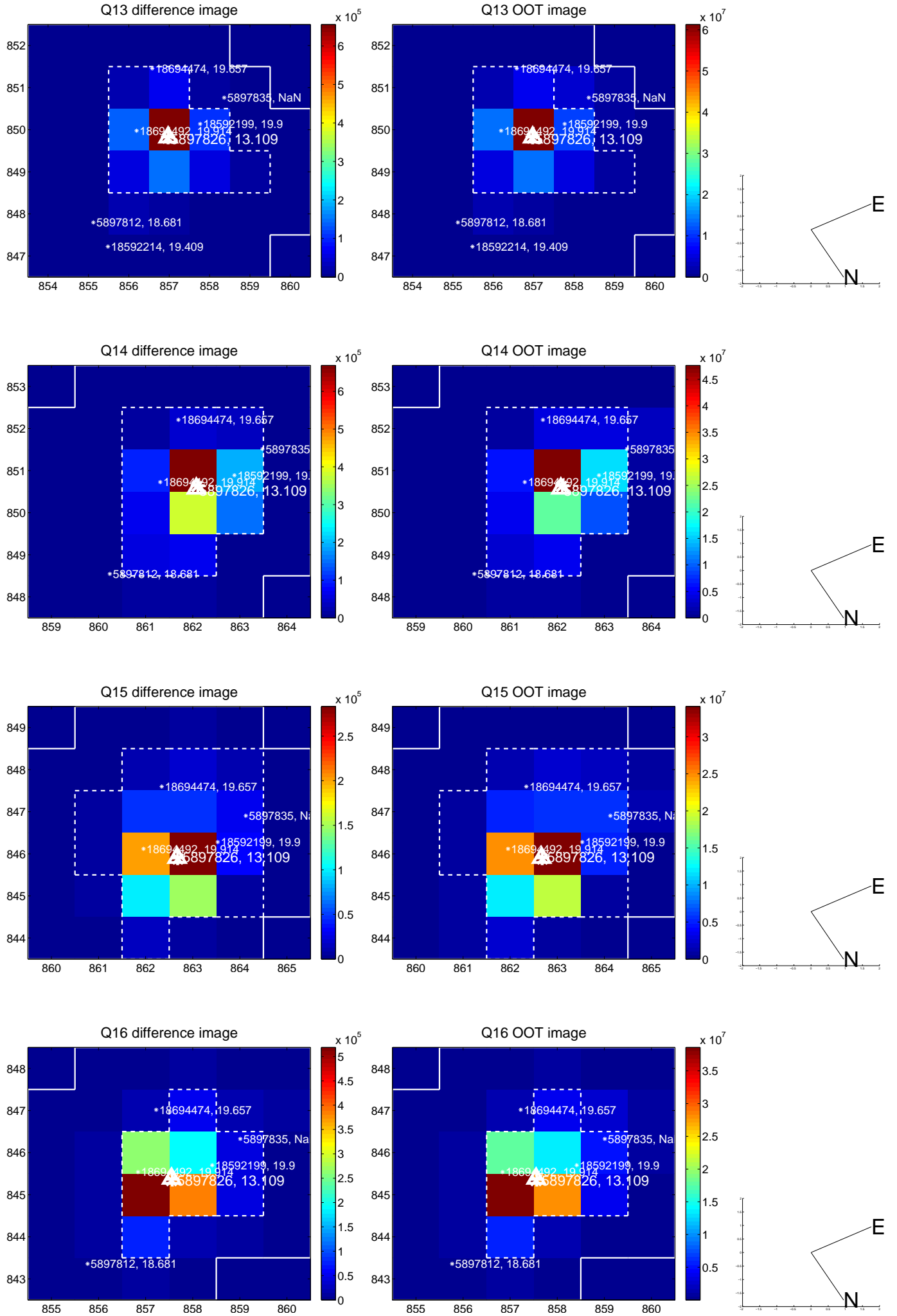
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



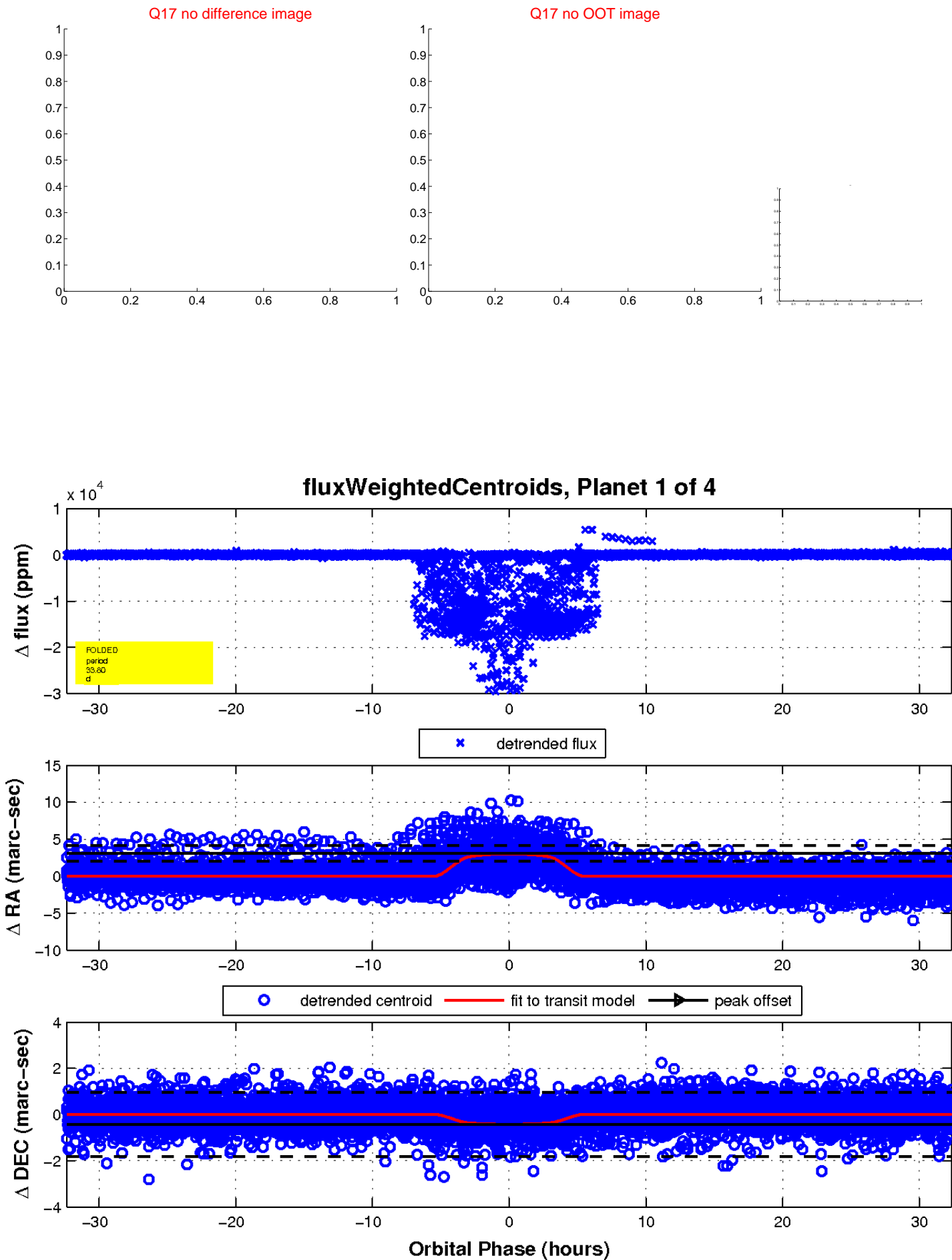
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

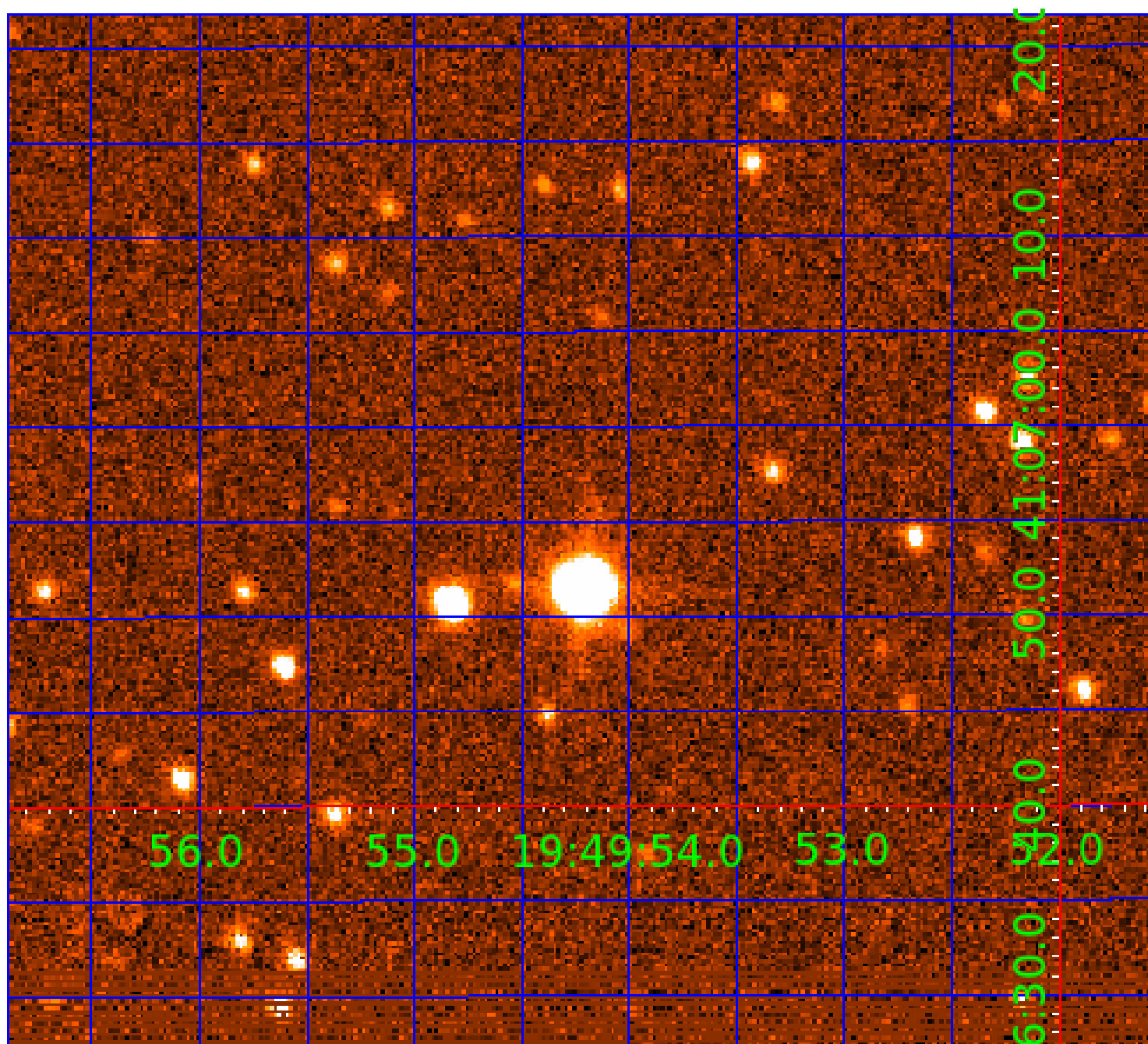


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005897826

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})
005897826-01	OBS	0126.01	33.802764	134.679307	13225.9	10.791	1177.6	646.1	1.80	5855	22.40	72.88
005897826-02	OBS	No	279.318704	397.048600	374.7	21.779	16.7	11.4	1.80	5855	7.00	4.36
005897826-03	OBS	0126.02	0.875177	131.854241	34.7	1.215	9.7	11.9	1.80	5855	1.28	9515.07
005897826-04	OBS	No	513.974603	373.634406	322.1	7.687	8.7	8.3	1.80	5855	3.55	1.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005897826-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005897826-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005897826-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
005897826-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—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.

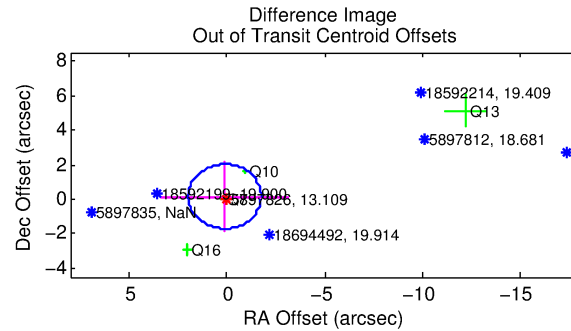
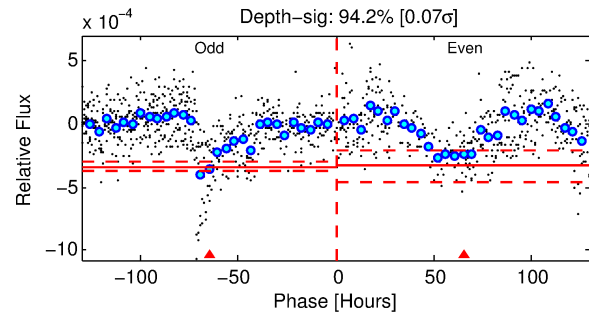
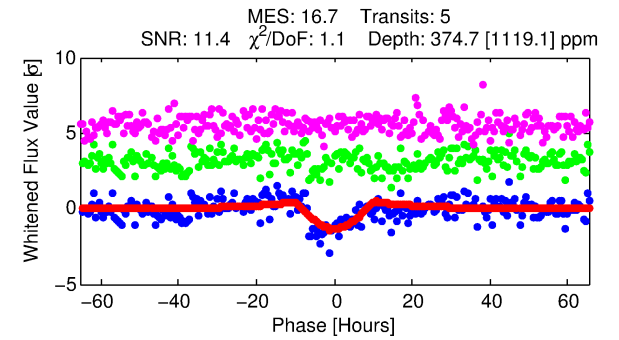
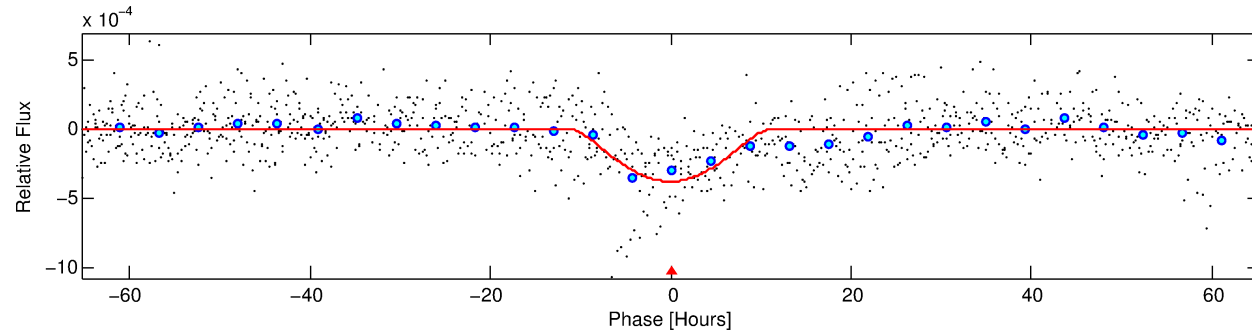
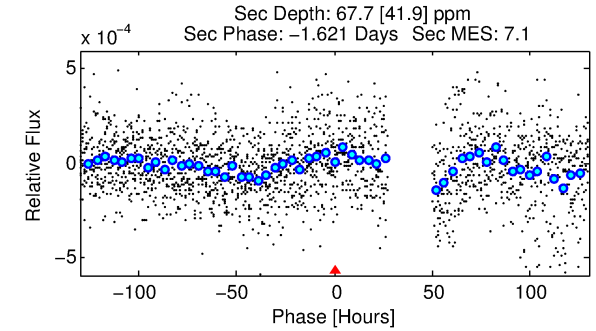
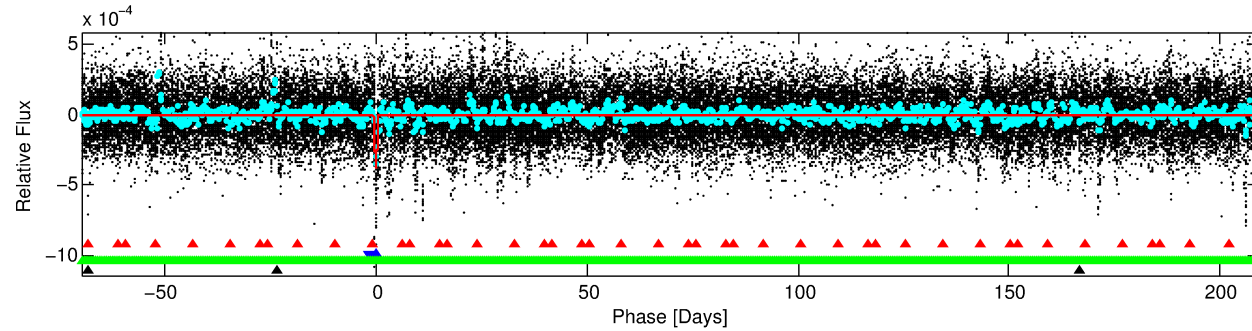
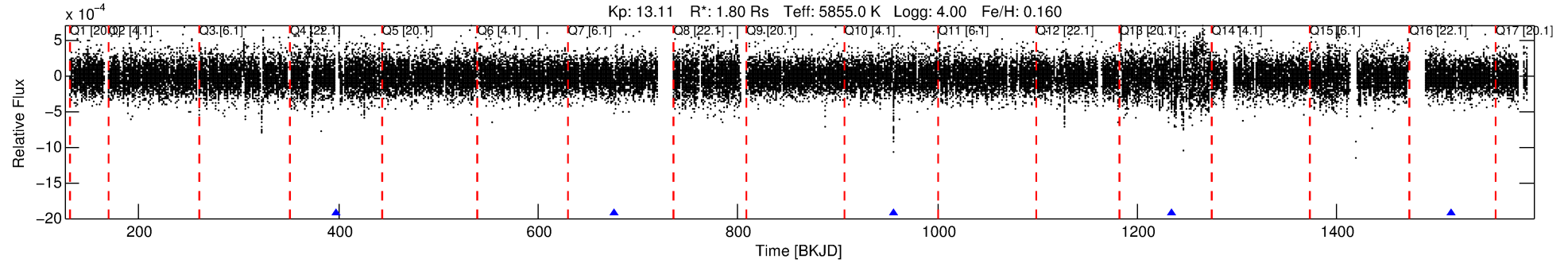
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005897826-02

No Significant Match Found

DV One-Page Summary

KIC: 5897826 Candidate: 2 of 4 Period: 279.319 d
KOI: K00126 Corr: No Ephemeris Match



DV Fit Results:

Period = 279.31870 [0.01548] d
Epoch = 397.0486 [0.0411] BKJD
Rp/R* = 0.0357 [0.0819]
a/R* = 26.44 [15.40]
b = 1.00 [0.05]
Seff = 4.36 [1.52]
Teff = 369 [32] K
Rp = 7.00 [16.14] Re
a = 0.8823 [0.1916] AU
Ag = 591.79 [2746.30] [0.22σ]
Teffp = 2810 [3252] K [0.75σ]

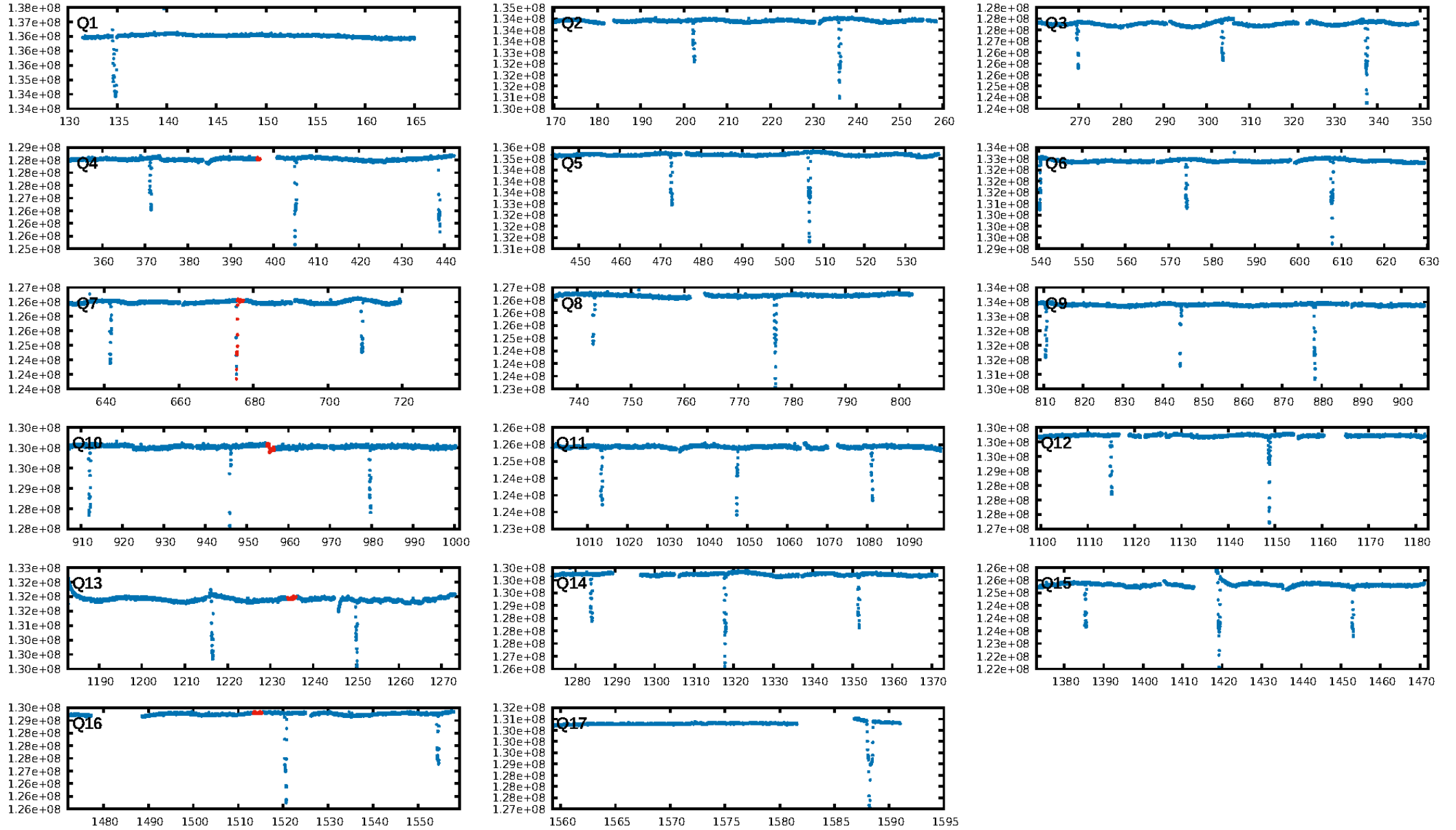
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [242.43σ]
LongPeriod-sig: 100.0% [243.84σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 26.72
Centroid-sig: 7.3%
Centroid-so: 1.666 arcsec [1.23σ]
OotOffset-rm: 0.192 arcsec [0.31σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-rm: 0.174 arcsec [0.07σ]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/4]

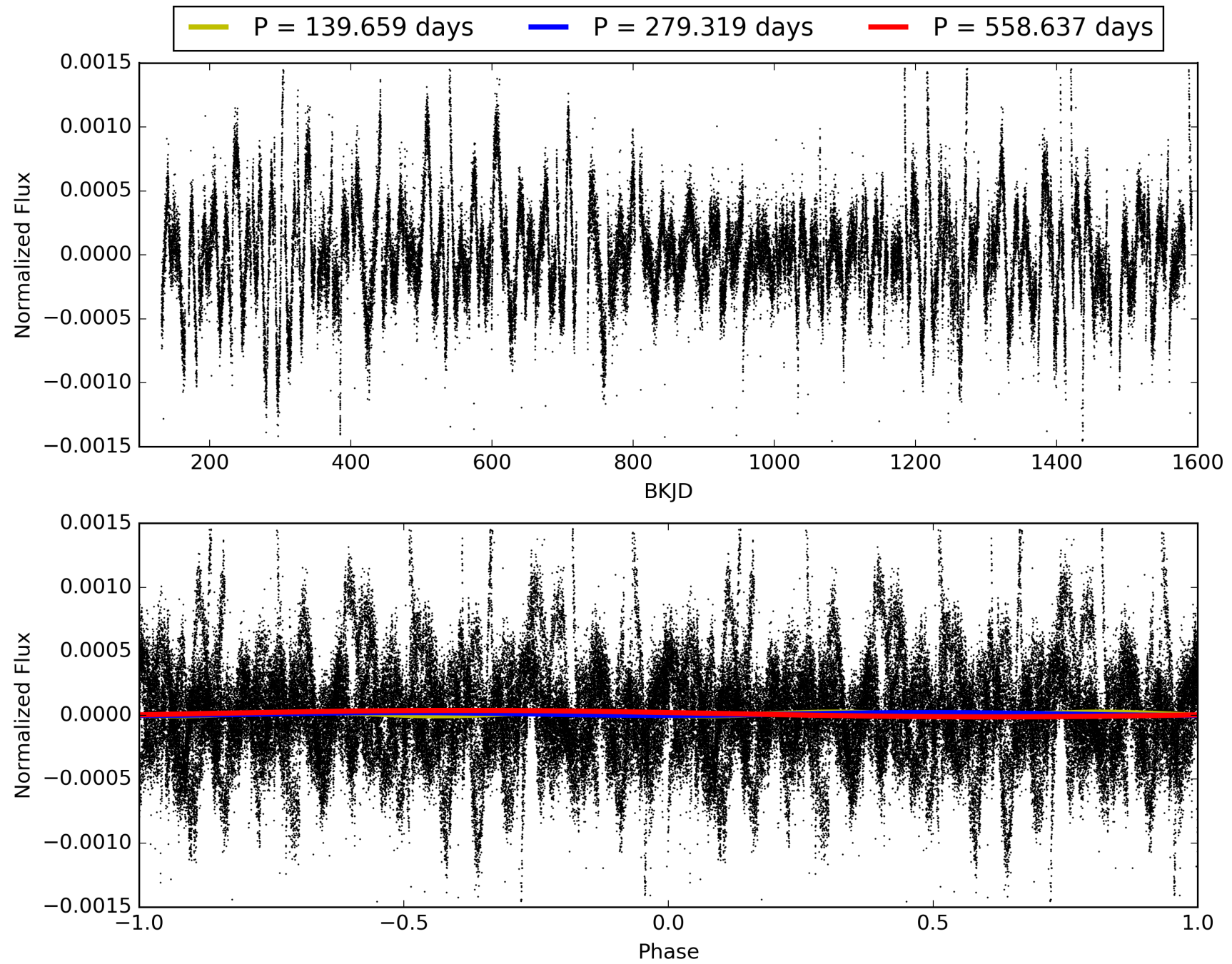
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:46:05 Z

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

TCE 005897826-02, PDC Light Curves

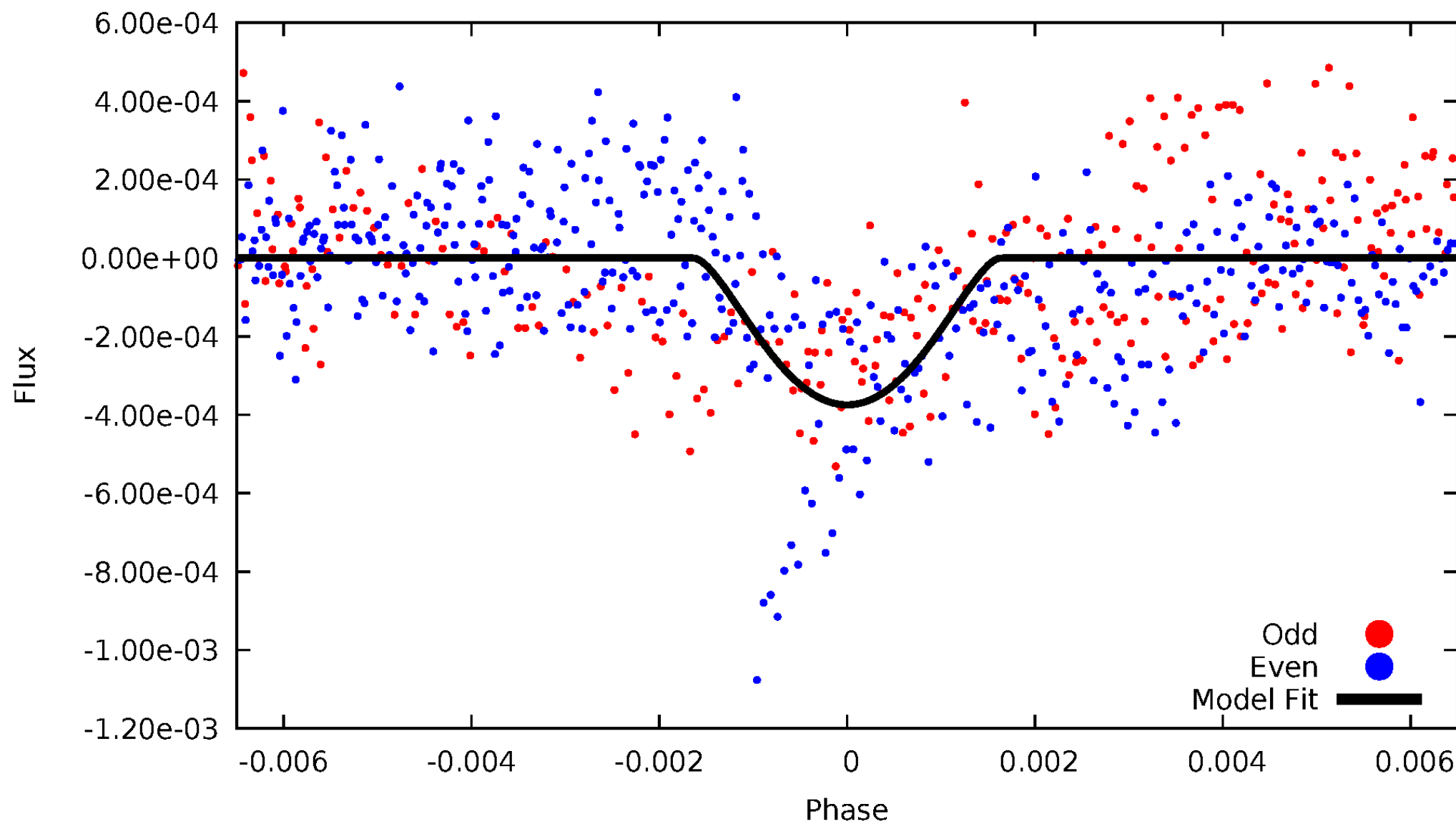


TCE 005897826-02



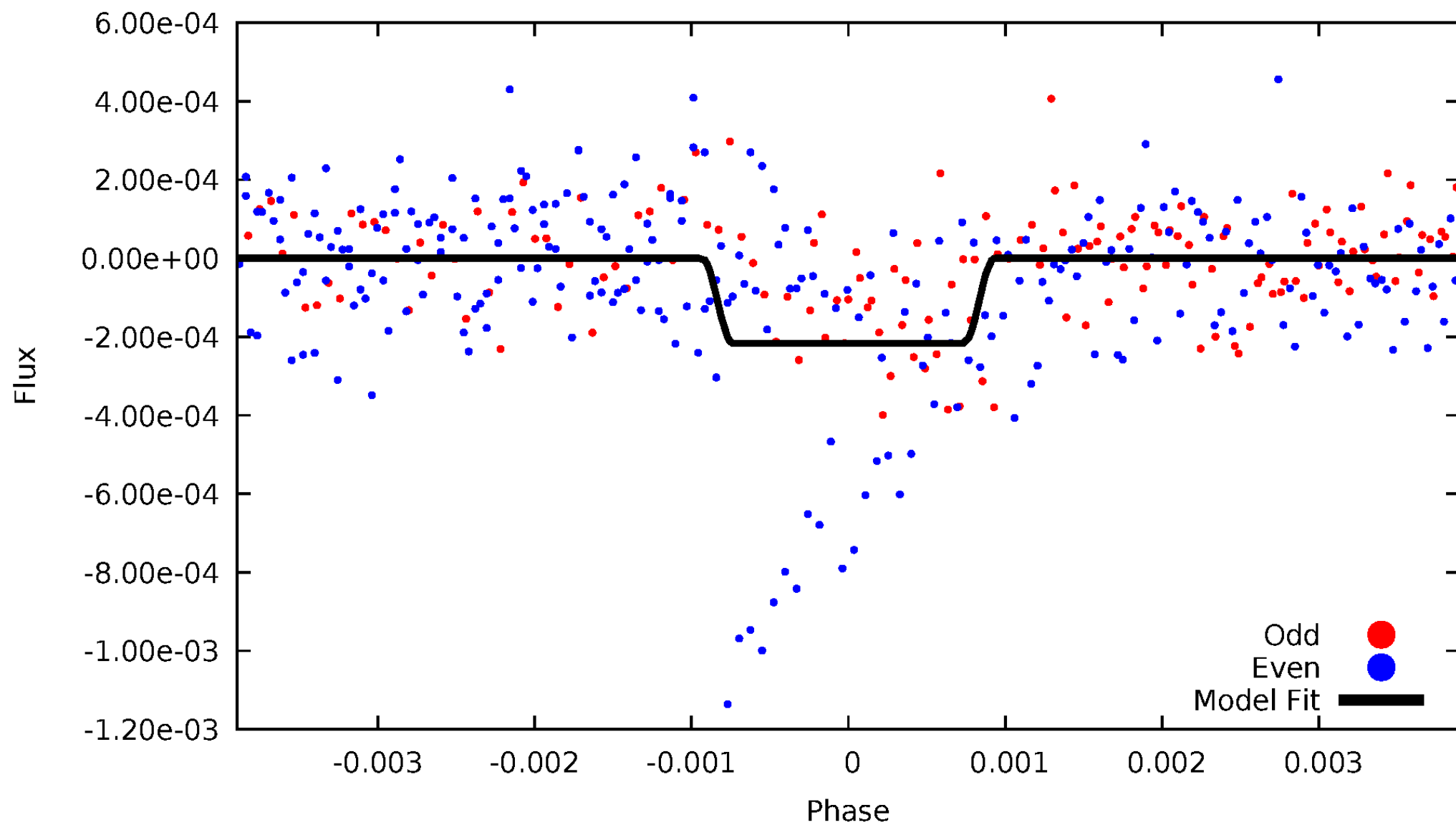
DV Odd/Even

TCE 005897826-02



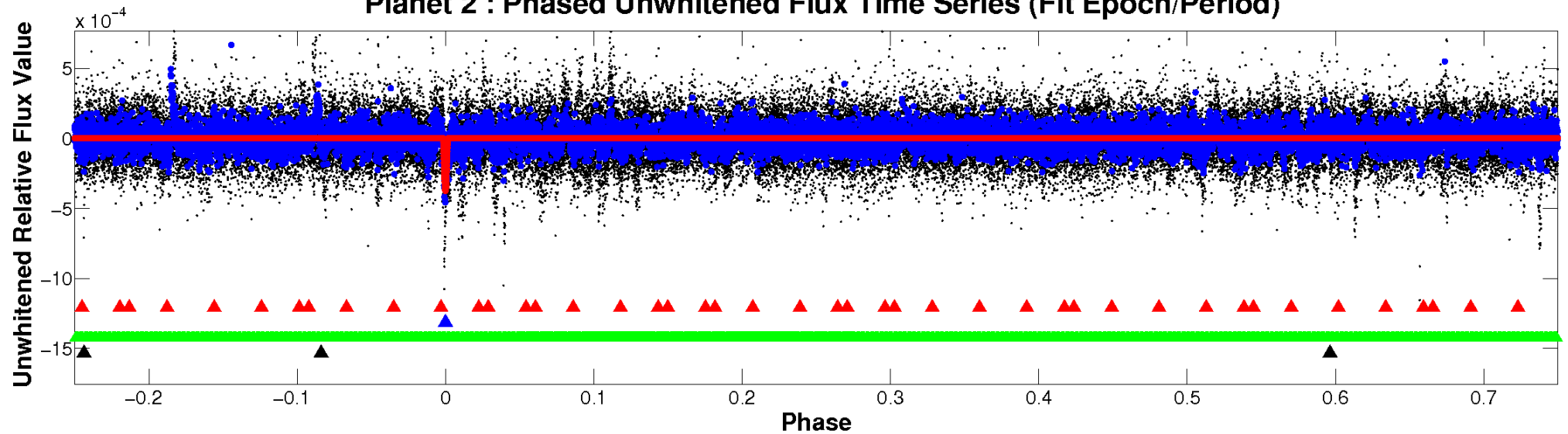
ALT Odd/Even

TCE 005897826-02

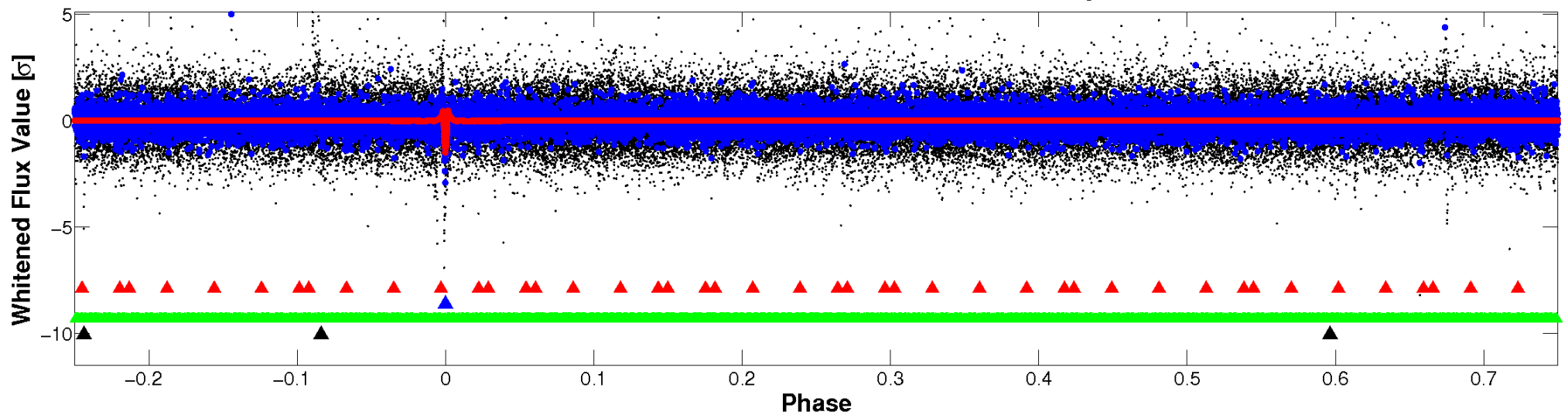


Non-Whitened Vs. Whitened Light Curve

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

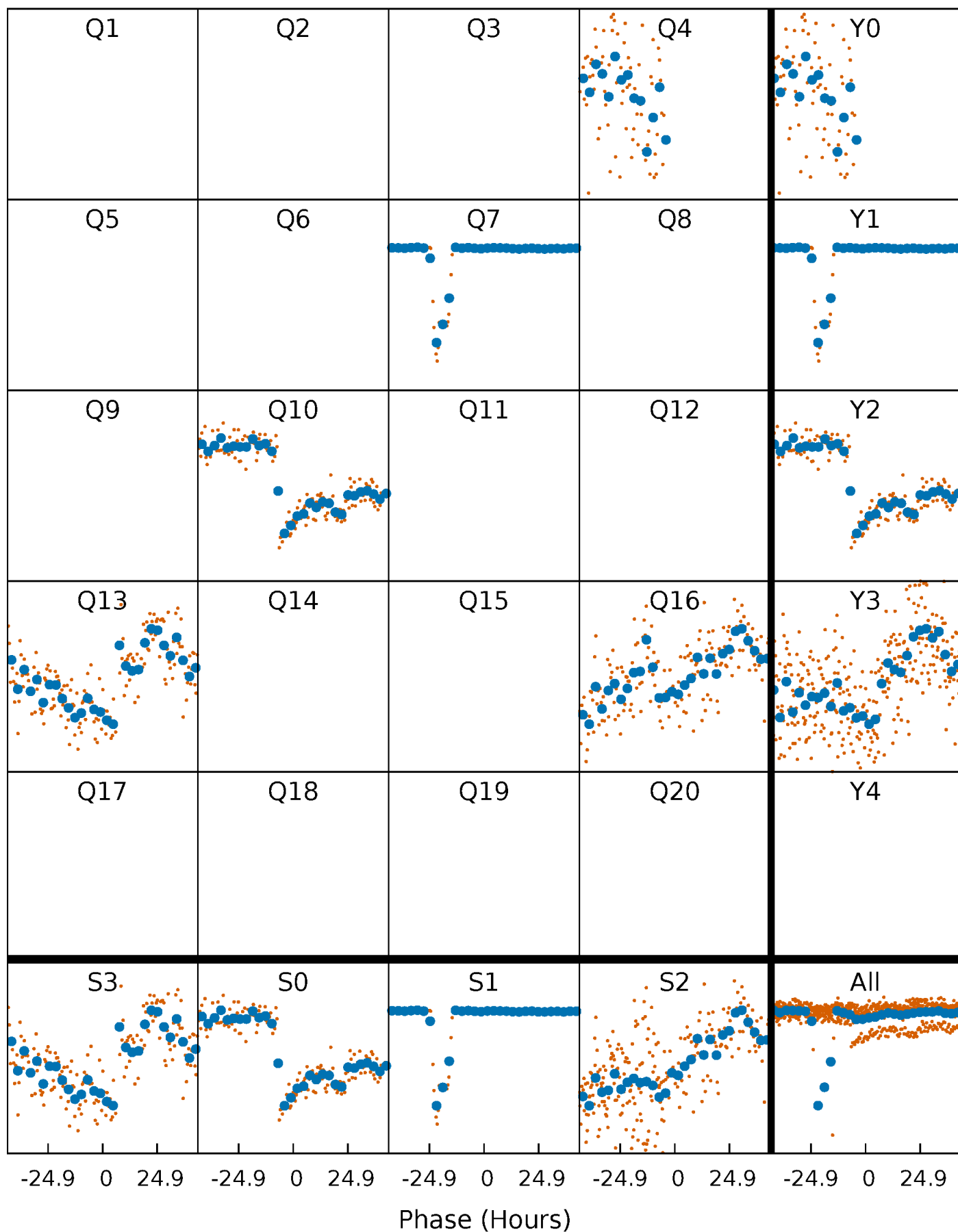


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



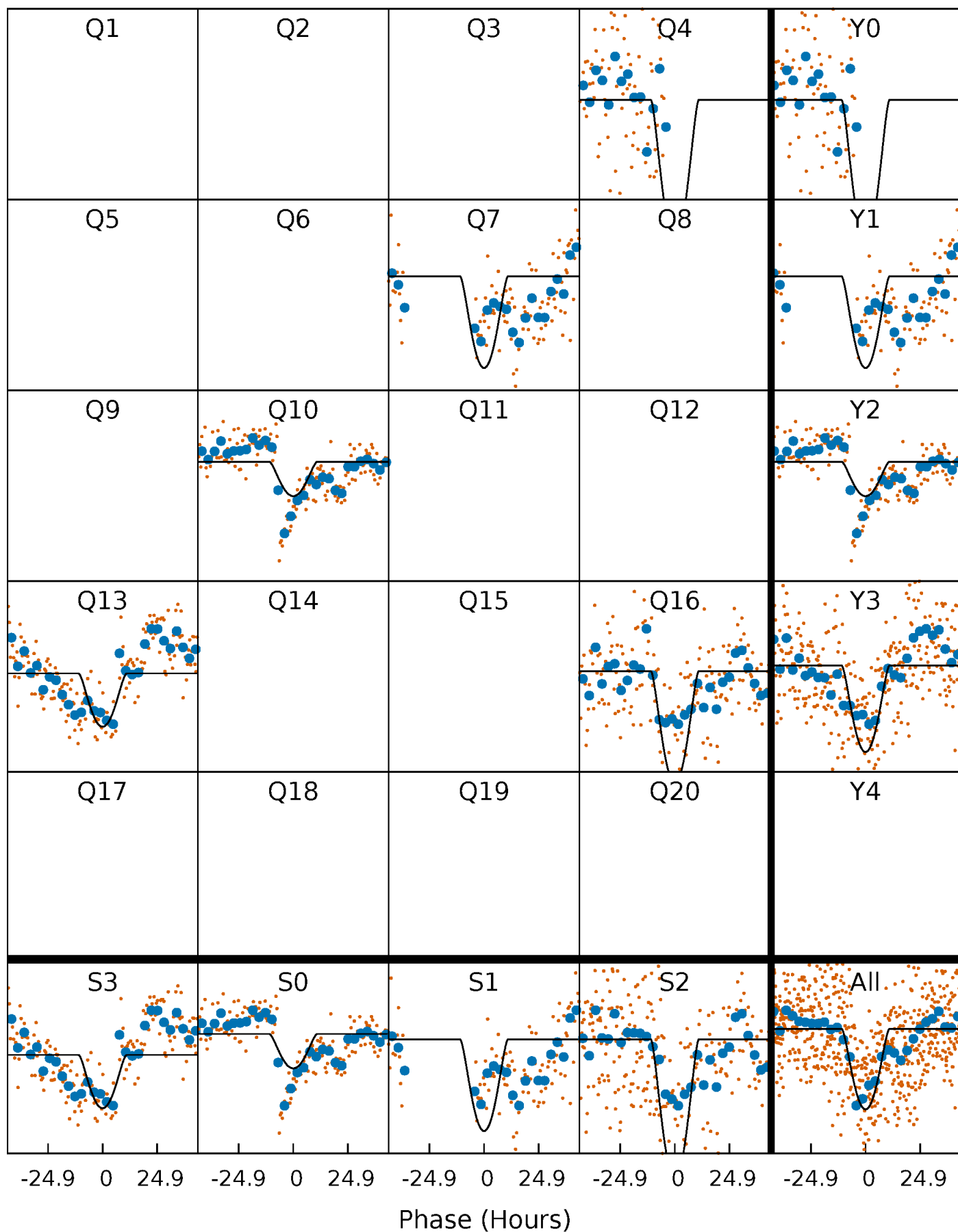
PDC Quarter-Phased Transit Curves

TCE 005897826-02 P=279.318704 Days $T_0=397.048600$ (BKJD)



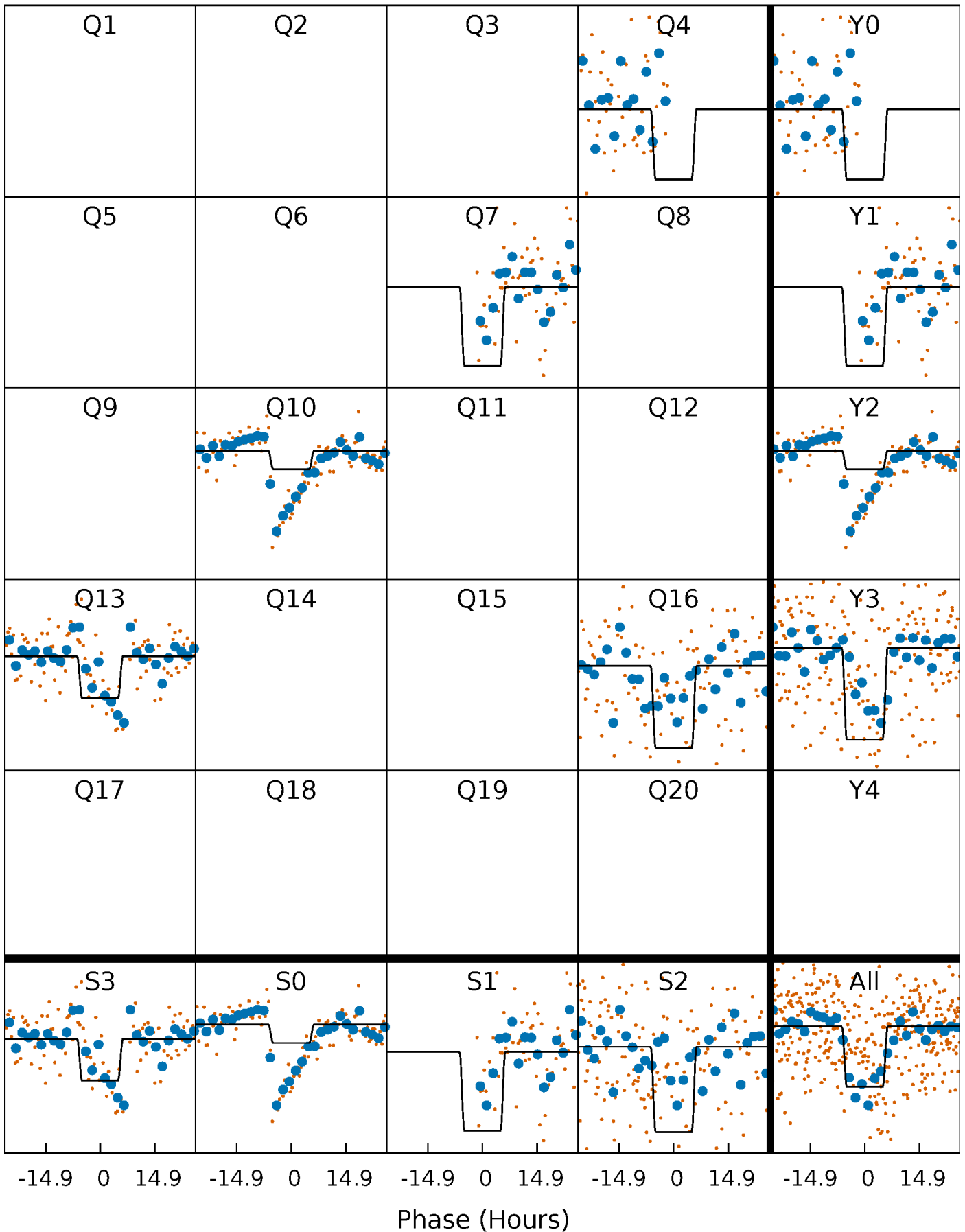
DV Quarter-Phased Transit Curves

TCE 005897826-02 $P=279.318704$ Days $T_0=397.048600$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

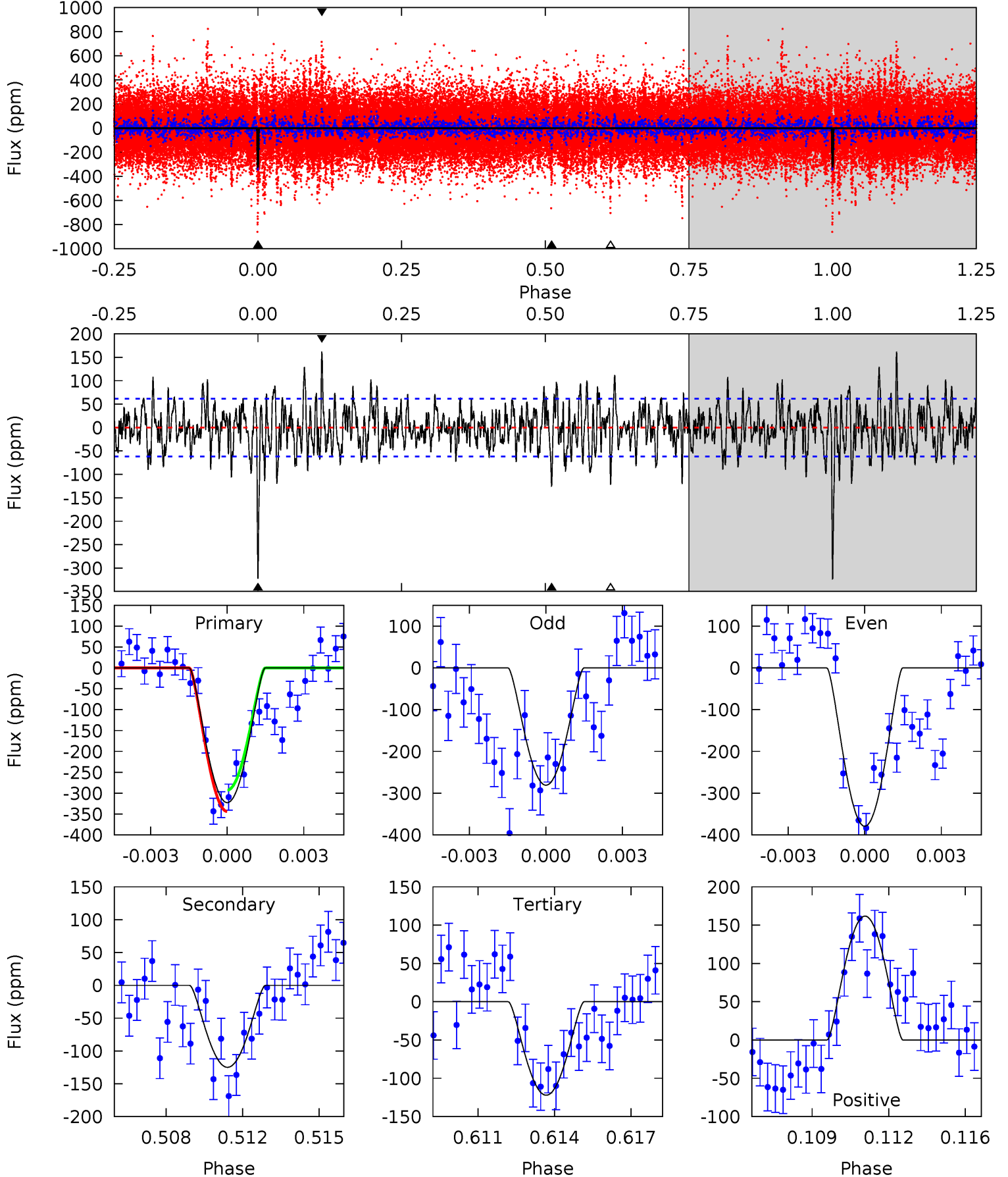
TCE 005897826-02 P=279.360821 Days $T_0=396.911002$ (BKJD)



DV Model-Shift Uniqueness Test

005897826-02, P = 279.318704 Days, E = 117.729896 Days

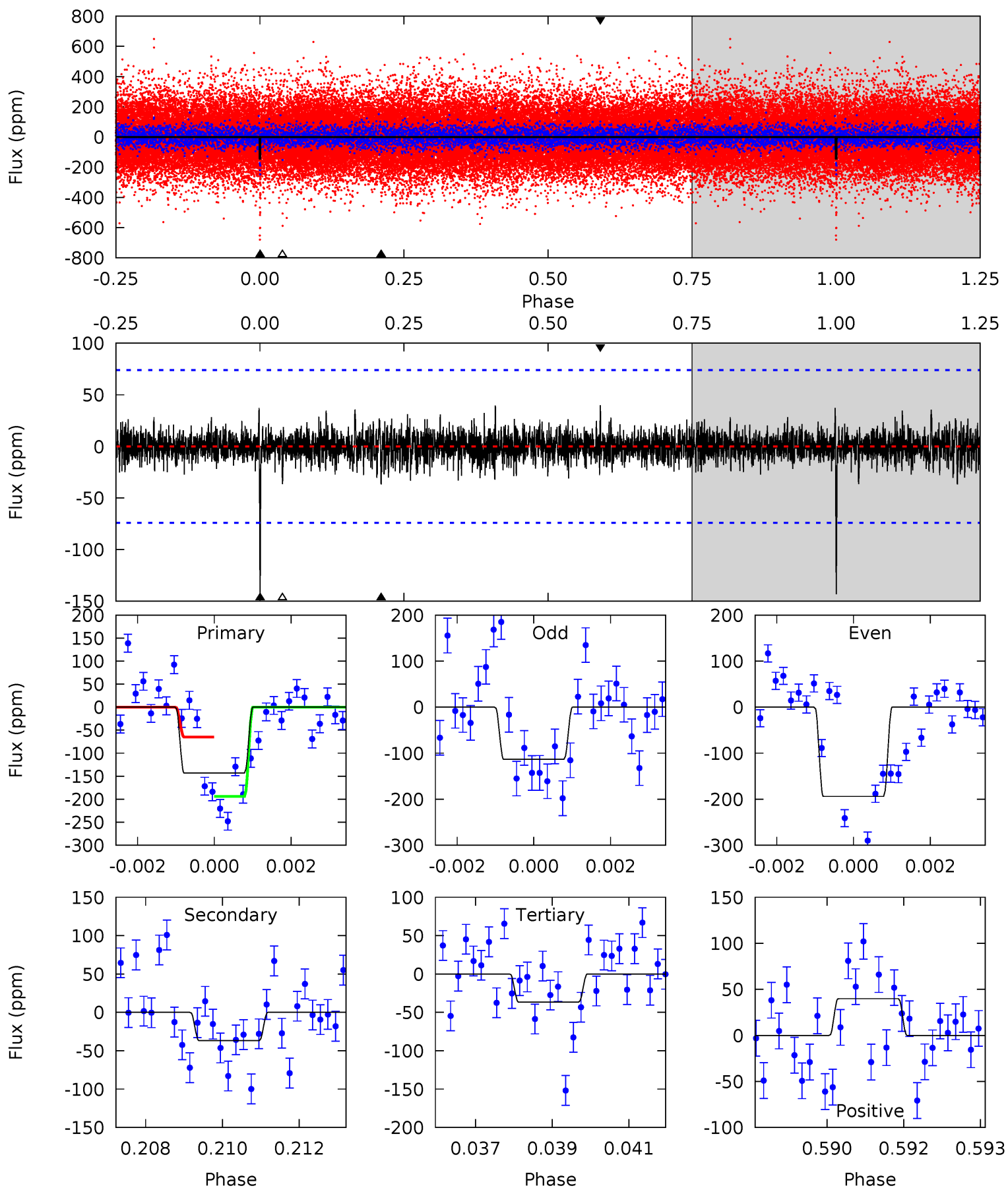
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	10.6	10.4	13.7	5.23	2.94	3.35	17.0	13.6	0.24	-3.13	4.01	1.33	0.33	2.17



Alt Model-Shift Uniqueness Test

005897826-02, P = 279.360821 Days, E = 117.550181 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.66	2.64	2.88	5.34	3.11	0.69	7.70	7.46	0.02	-0.22	2.88	2.19	0.22	4.62



Stellar Parameters For KIC 005897826

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+117}_{-117}	$3.999^{+0.196}_{-0.084}$	$0.160^{+0.150}_{-0.150}$	$1.796^{+0.281}_{-0.422}$	$1.174^{+0.133}_{-0.133}$	$0.286^{+0.312}_{-0.077}$
	+2%/-2%	+5%/-2%	+94%/-94%	+16%/-23%	+11%/-11%	+109%/-27%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 005897826-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-125 ± 12	$13.58^{+12.61}_{-8.95}$	508^{+26}_{-29}	3003^{+1180}_{-499}	291^{+2233}_{-214}
Alt.	-37 ± 14	$12.05^{+10.45}_{-8.38}$	508^{+23}_{-28}	2570^{+1099}_{-354}	93^{+952}_{-67}

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

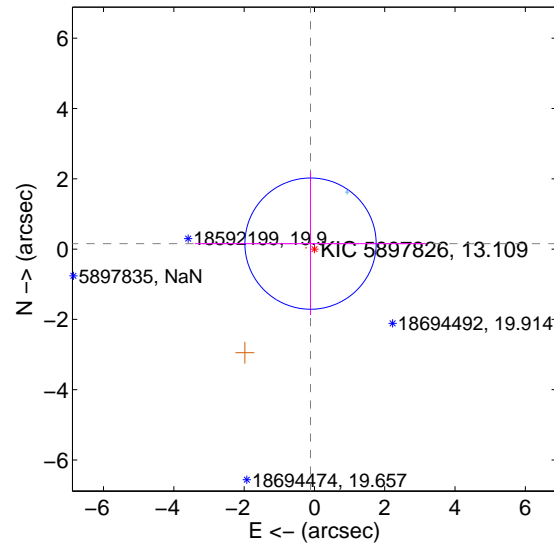
Supplemental centroid analysis for 005897826-02. Kepler magnitude: 13.11. Transit SNR 11.40

There are 1 quarters with good PRF difference image offsets

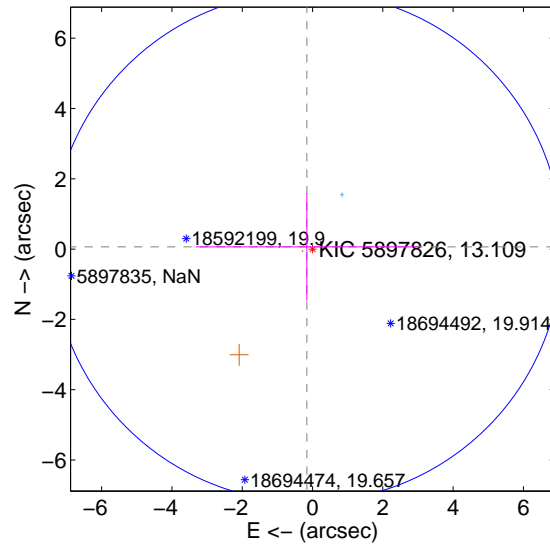
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.192 ± 0.622	0.31	0.111 ± 3.289	0.156 ± 2.030
PRF-fit source offset from KIC position	0.174 ± 2.421	0.07	0.162 ± 3.159	0.064 ± 1.532
photometric centroid source offset	1.67 ± 1.36	1.23	-1.55 ± 1.43	-0.61 ± 0.66

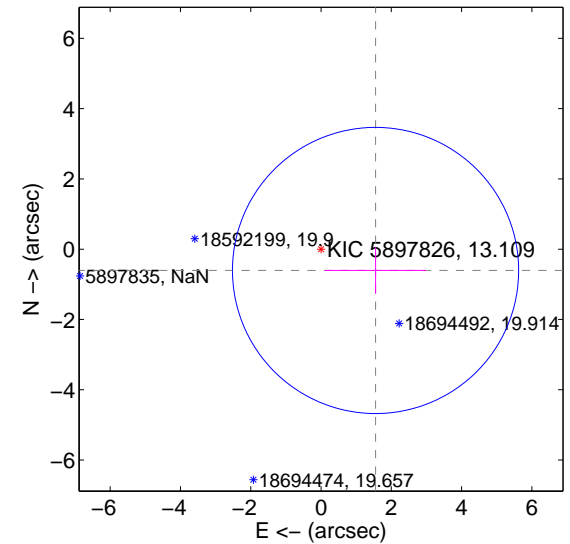
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

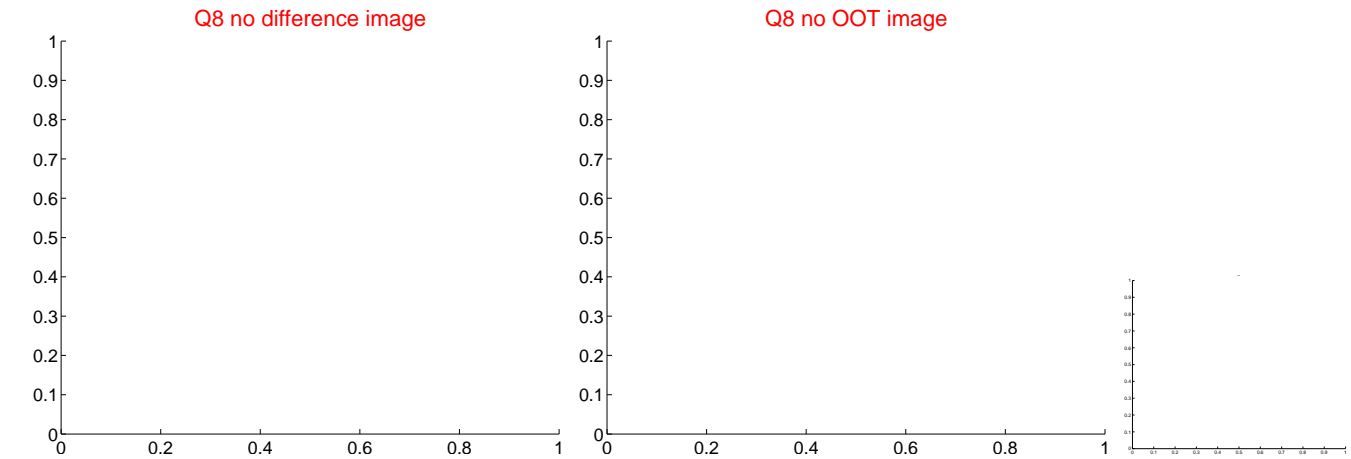
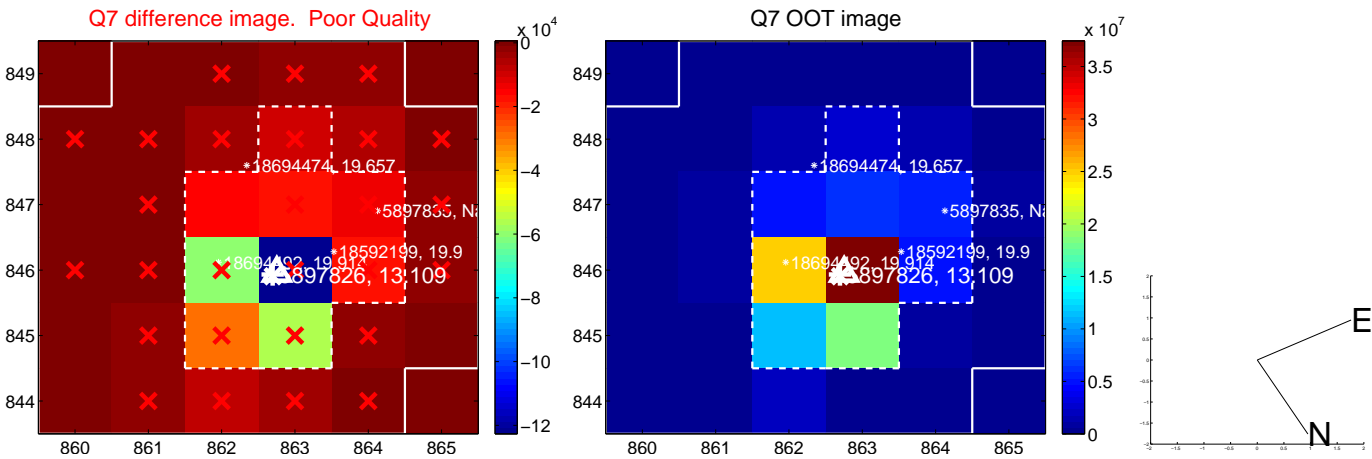
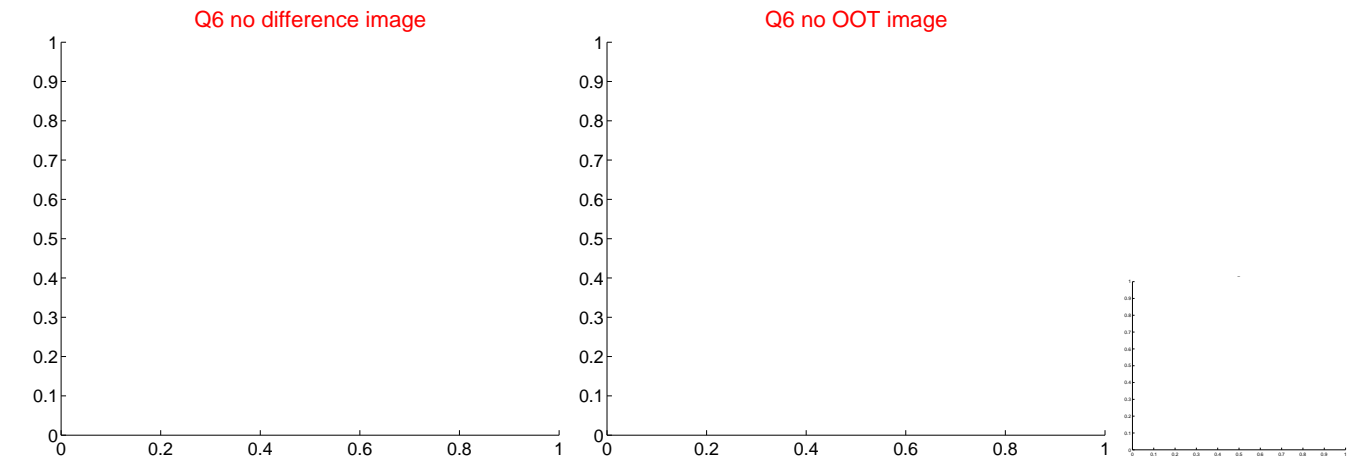
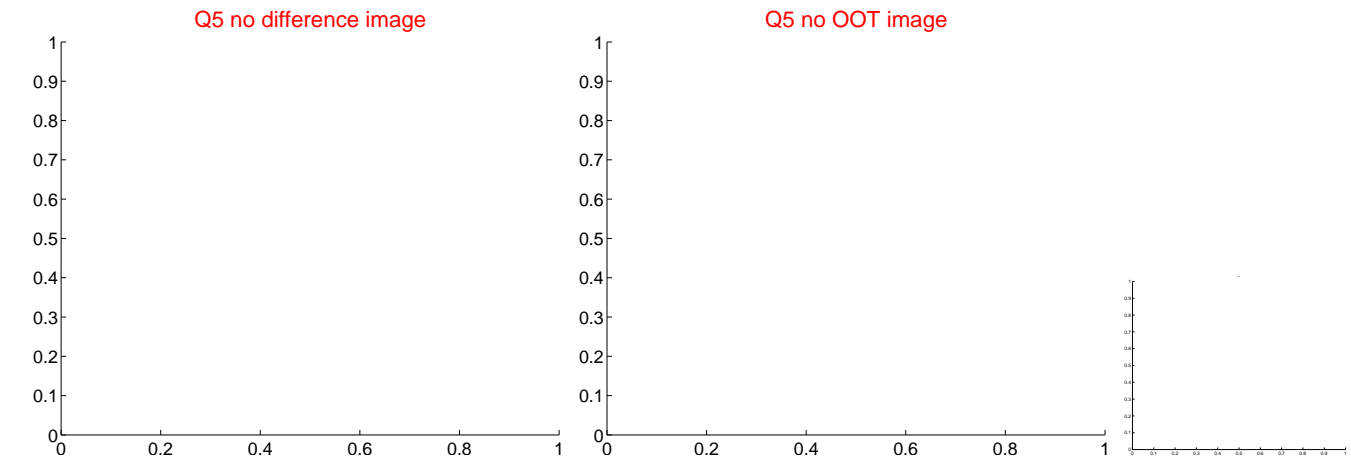


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

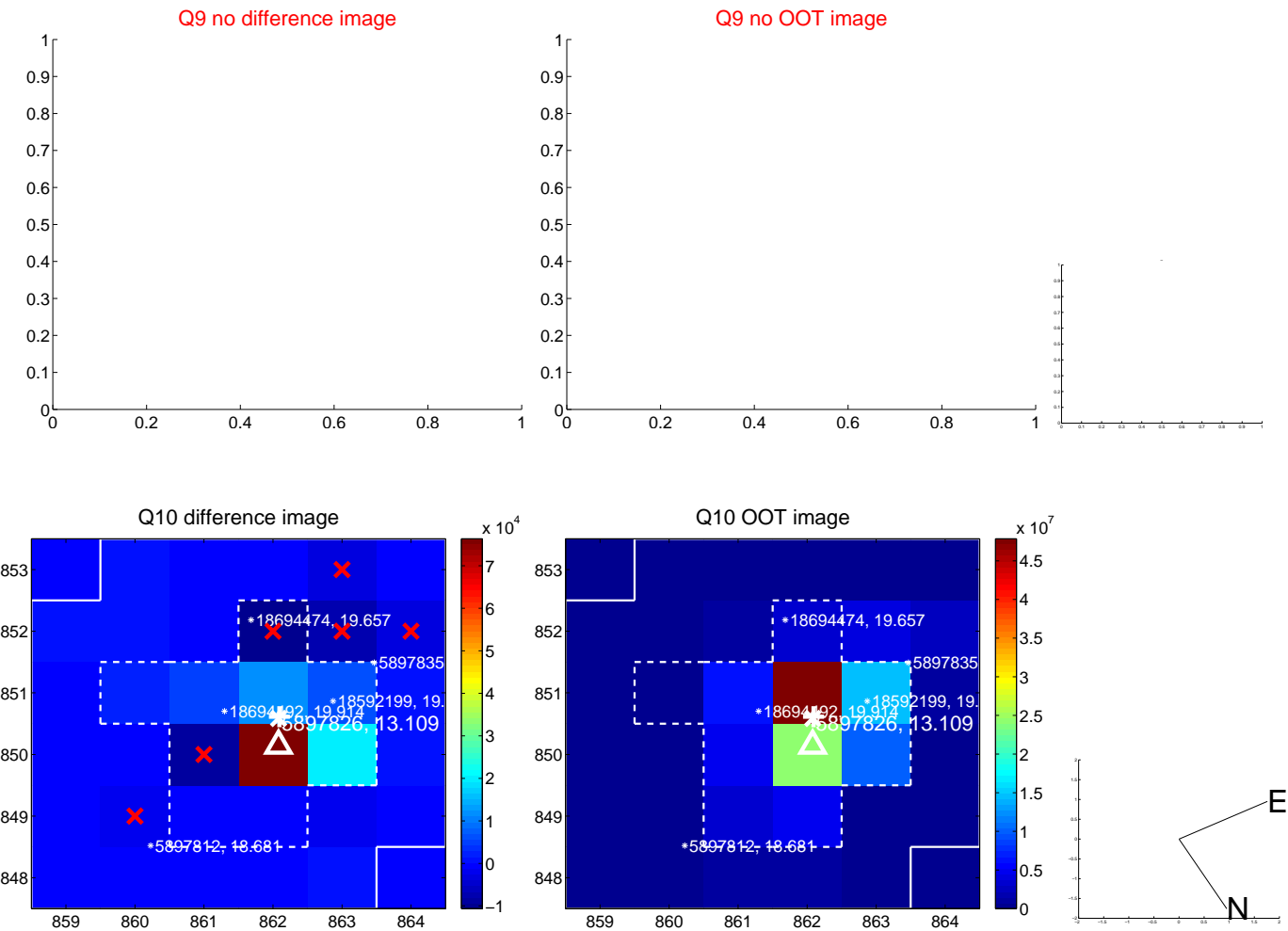
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



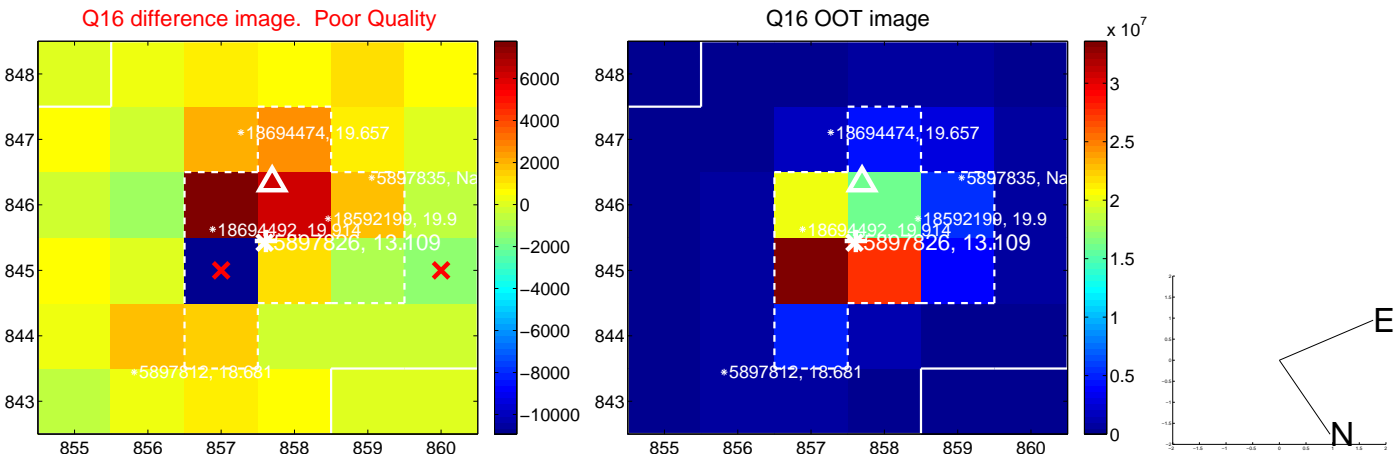
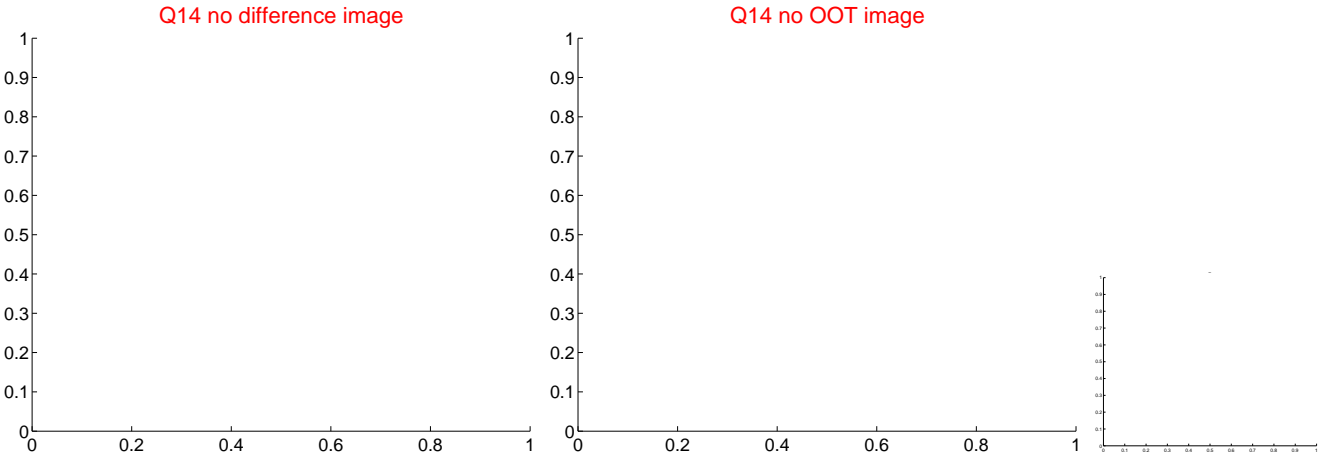
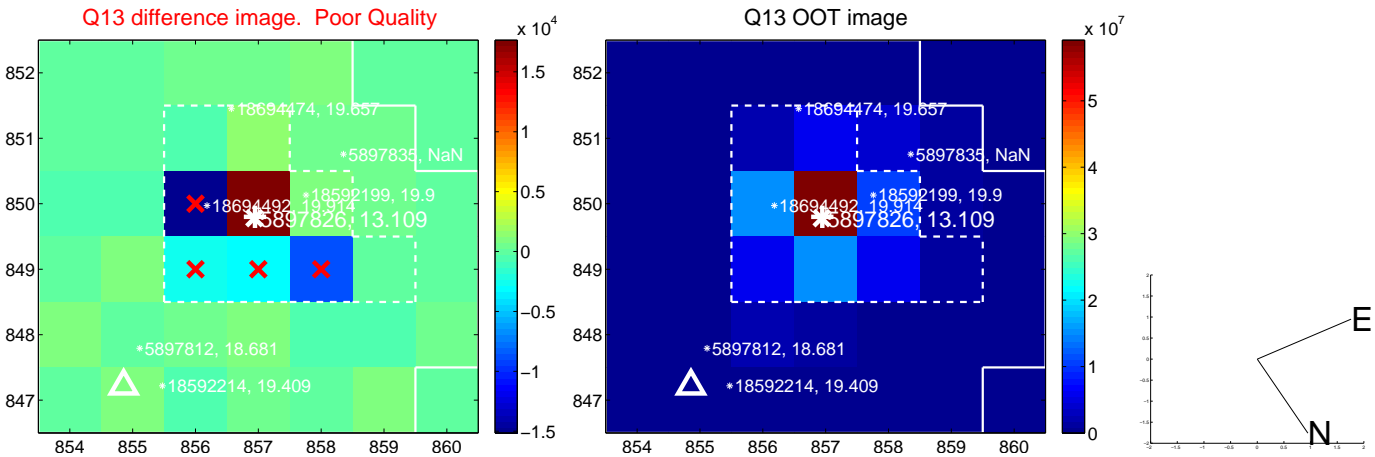
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



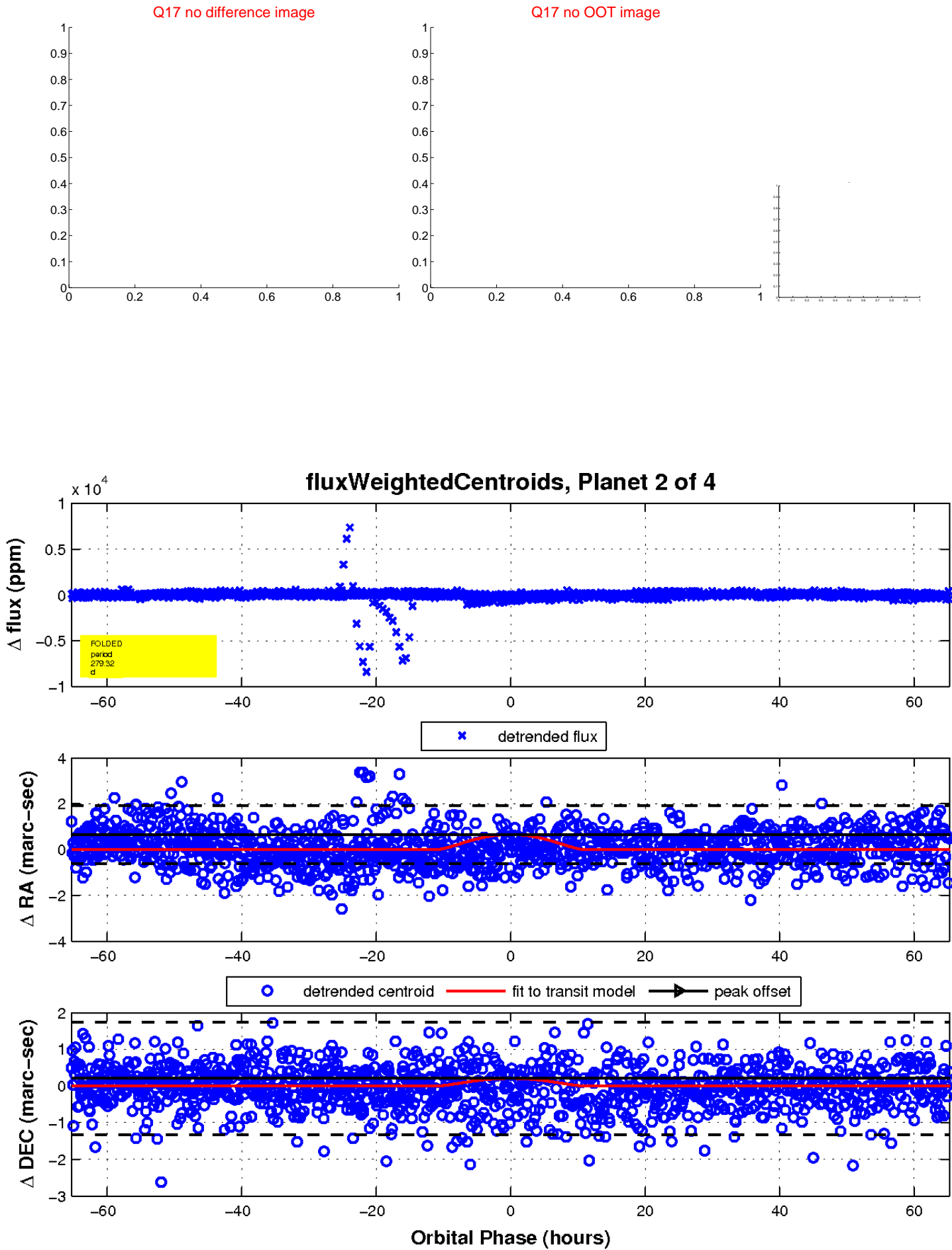
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

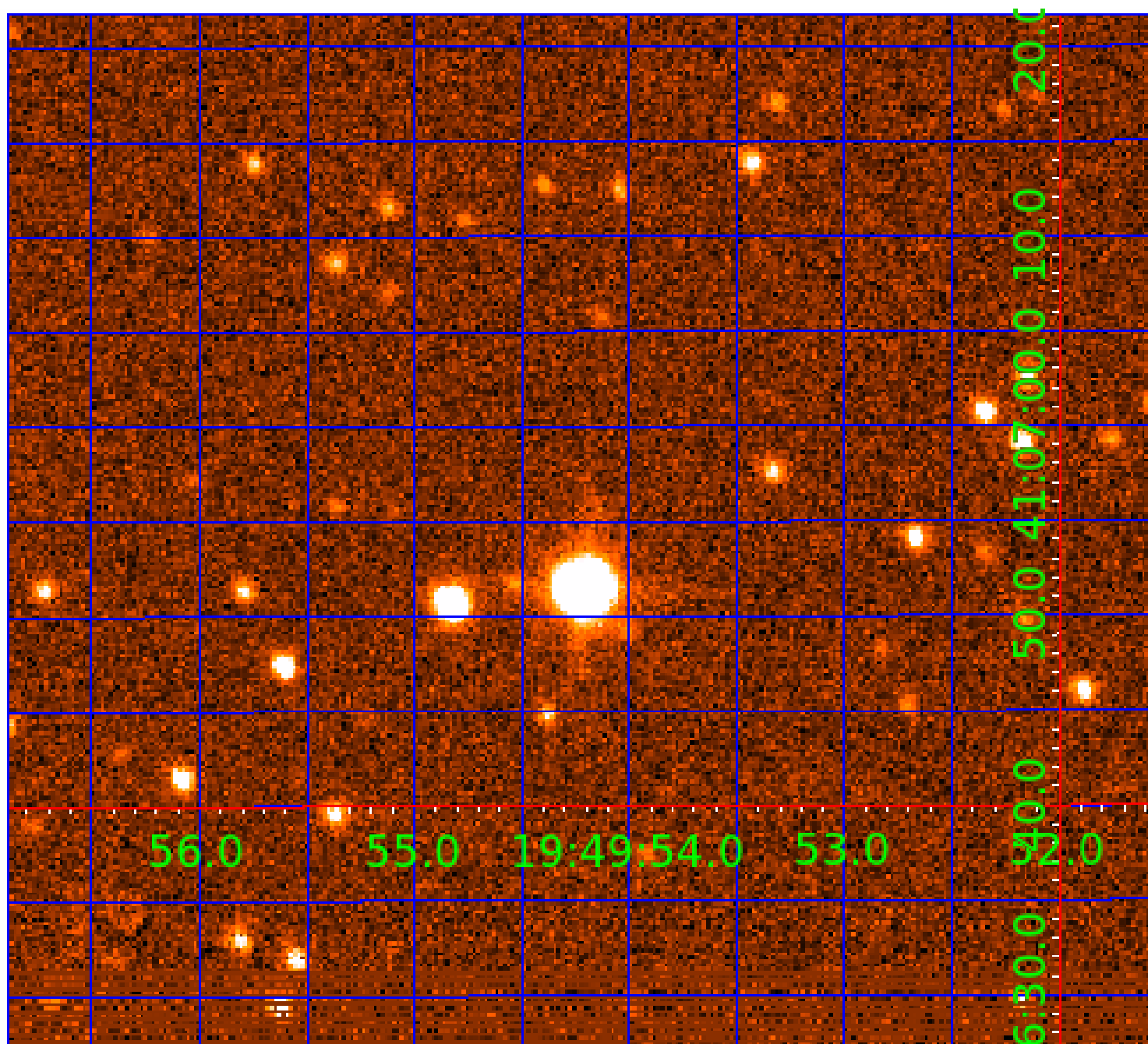


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005897826

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})
005897826-01	OBS	0126.01	33.802764	134.679307	13225.9	10.791	1177.6	646.1	1.80	5855	22.40	72.88
005897826-02	OBS	No	279.318704	397.048600	374.7	21.779	16.7	11.4	1.80	5855	7.00	4.36
005897826-03	OBS	0126.02	0.875177	131.854241	34.7	1.215	9.7	11.9	1.80	5855	1.28	9515.07
005897826-04	OBS	No	513.974603	373.634406	322.1	7.687	8.7	8.3	1.80	5855	3.55	1.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005897826-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005897826-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005897826-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
005897826-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—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 005897826-03

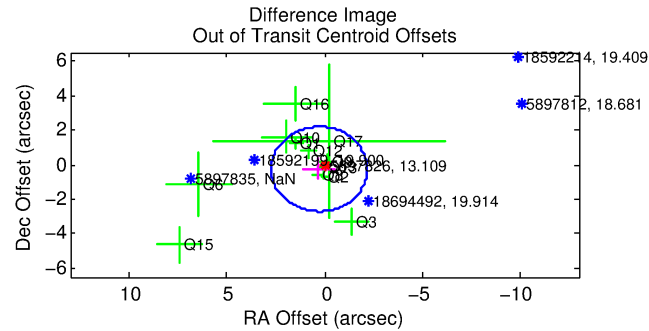
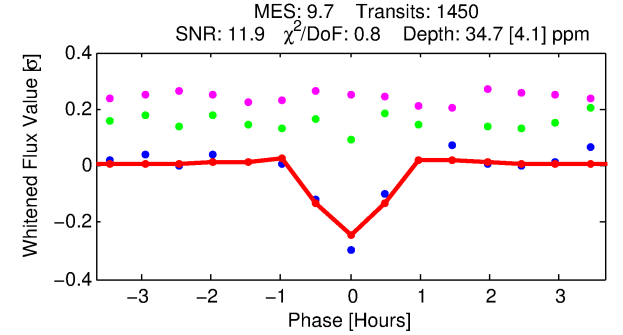
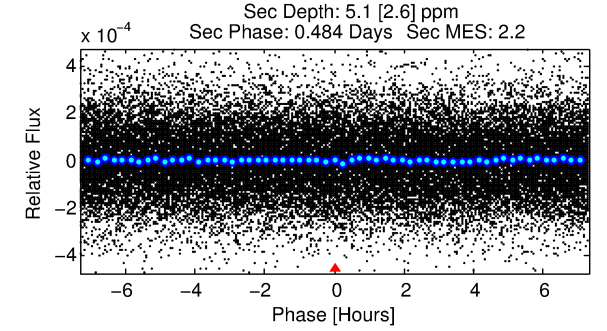
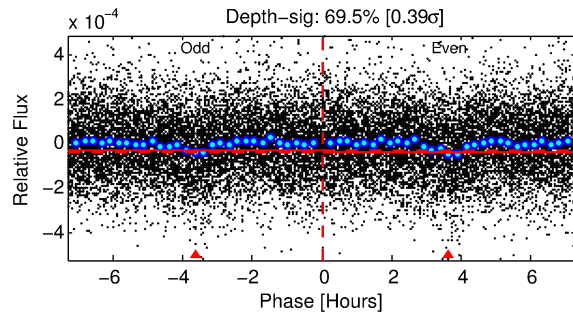
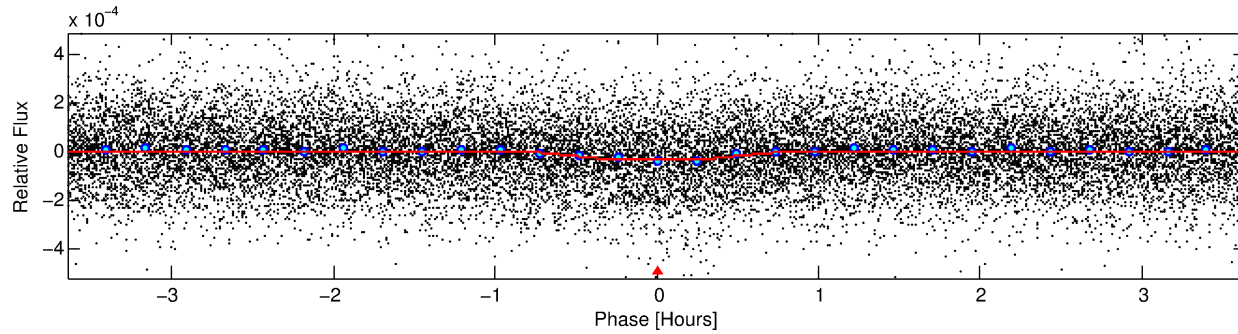
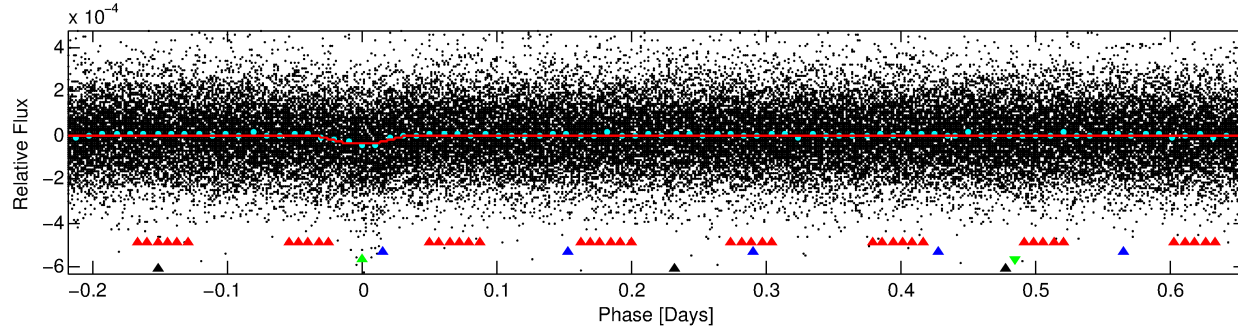
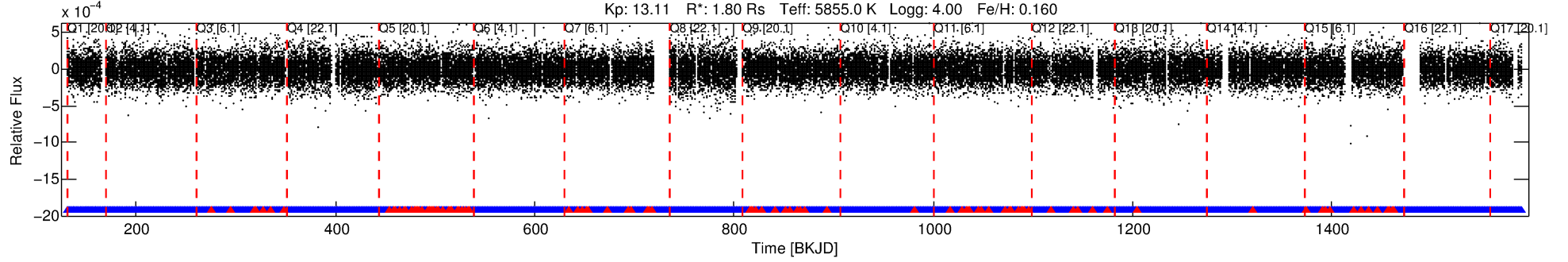
No Significant Match Found

DV One-Page Summary

KIC: 5897826 Candidate: 3 of 4 Period: 0.875 d

KOI: K00126 Corr: No Ephemeris Match

Kp: 13.11 R*: 1.80 Rs Teff: 5855.0 K Logg: 4.00 Fe/H: 0.160



DV Fit Results:

Period = 0.87518 [0.00001] d
Epoch = 131.8542 [0.0015] BKJD
Rp/R* = 0.0066 [0.0021]
a/R* = 2.49 [3.34]
b = 0.92 [0.29]
Seff = 9515.07 [3315.97]
Teq = 2518 [219] K
Rp = 1.28 [0.52] Re
a = 0.0189 [0.0041] AU
Ag = 0.61 [0.55] [-0.71σ]
Teffp = 3443 [715] K [1.24σ]

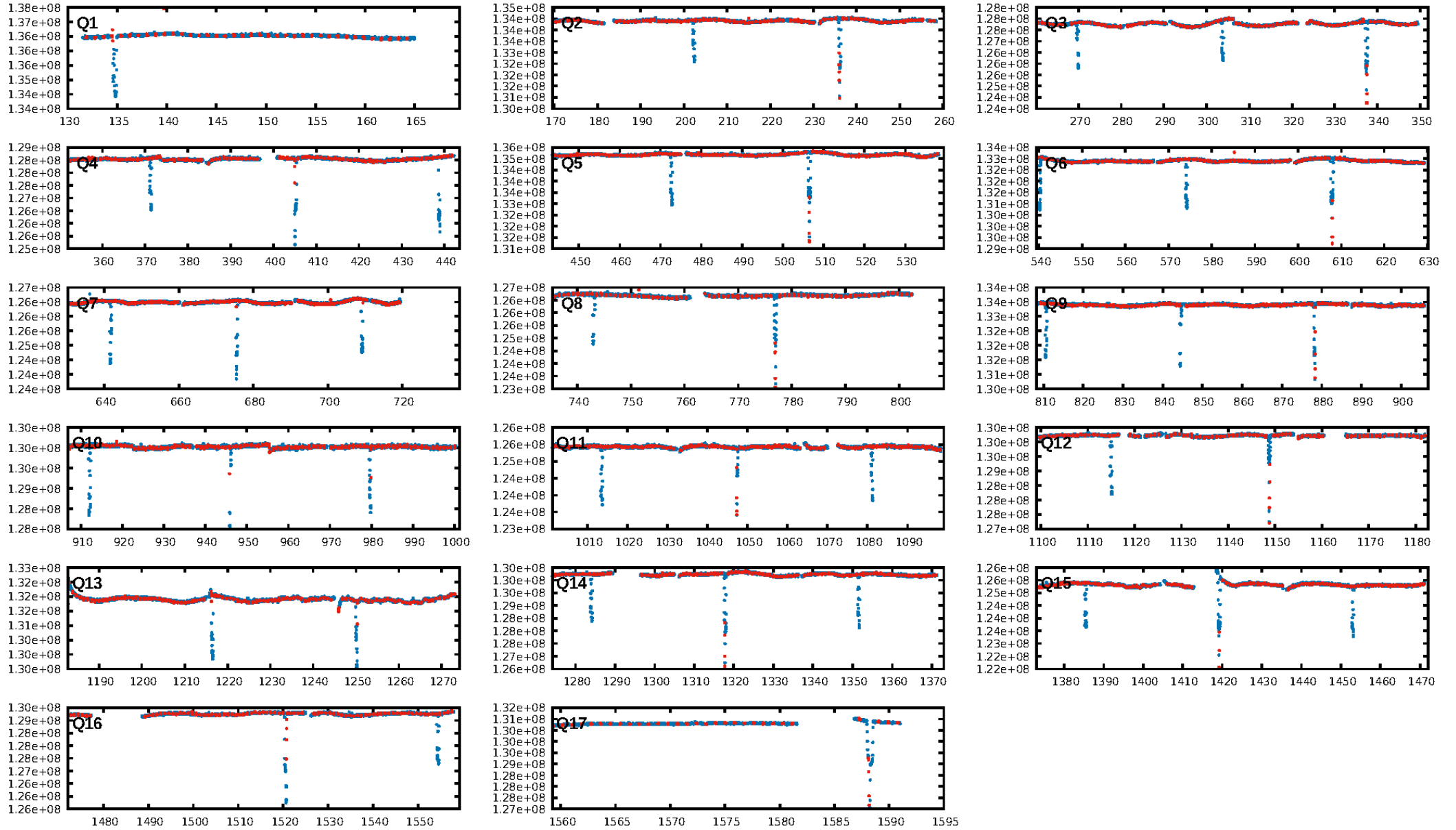
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [72.77σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1280/1383]
GhostDiagnostic-chr: 19.71
Centroid-sig: 98.7%
Centroid-so: 0.111 arcsec [0.11σ]
OotOffset-rm: 0.388 arcsec [0.47σ]
KicOffset-rm: 0.491 arcsec [0.66σ]
OotOffset-st: 3/2/3/4 [12]
KicOffset-st: 3/2/3/4 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

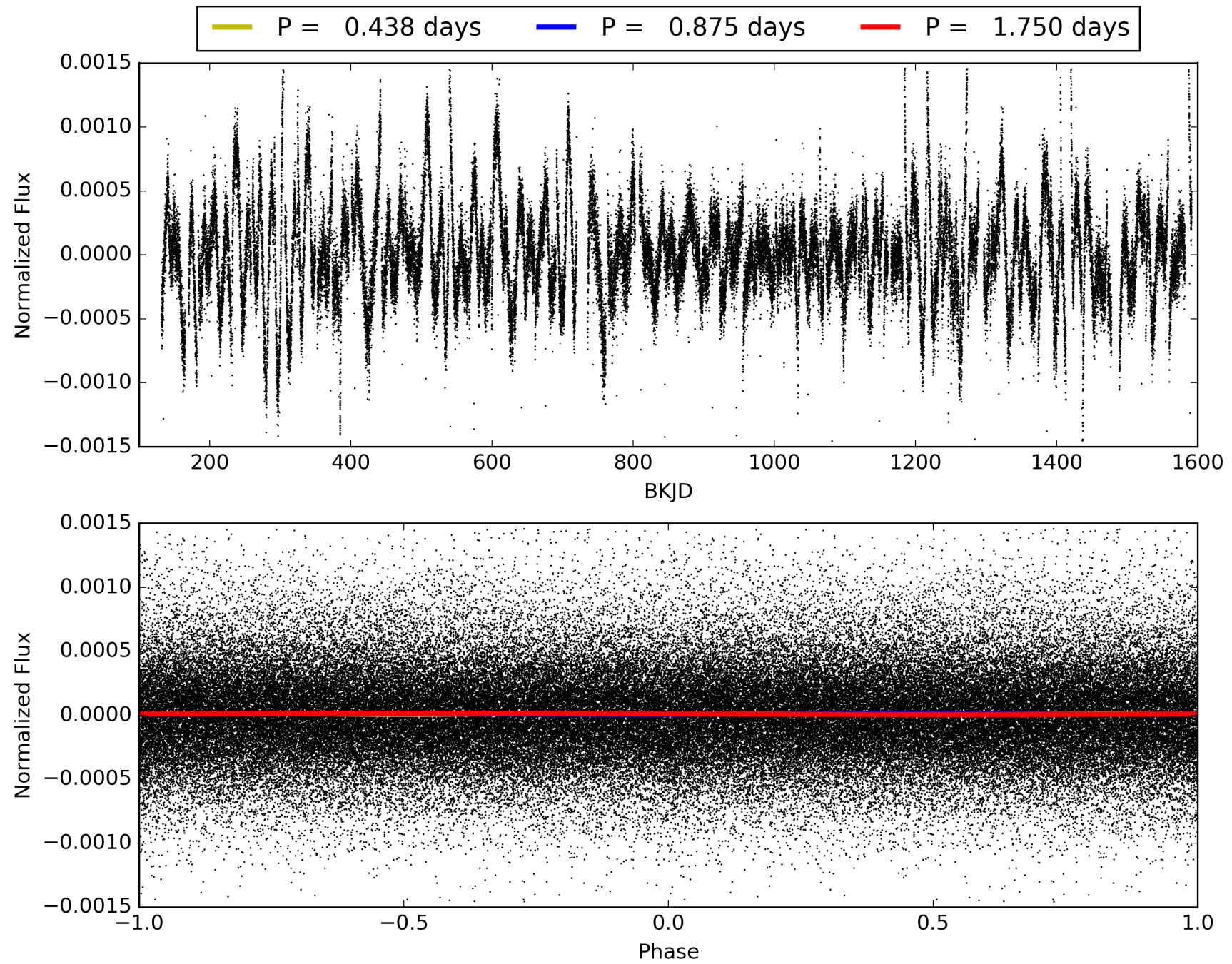
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:46:12 Z

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

TCE 005897826-03, PDC Light Curves

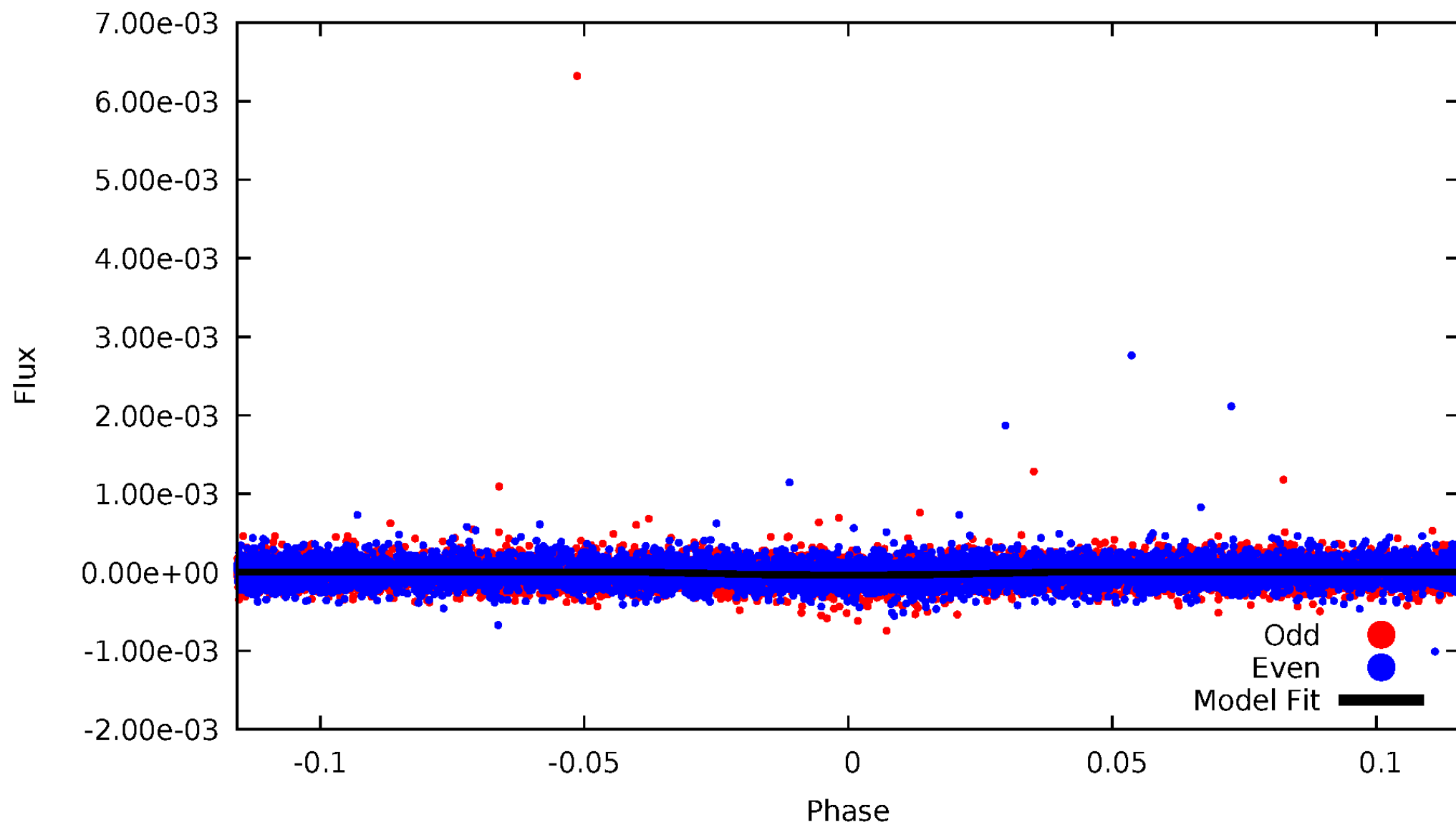


TCE 005897826-03



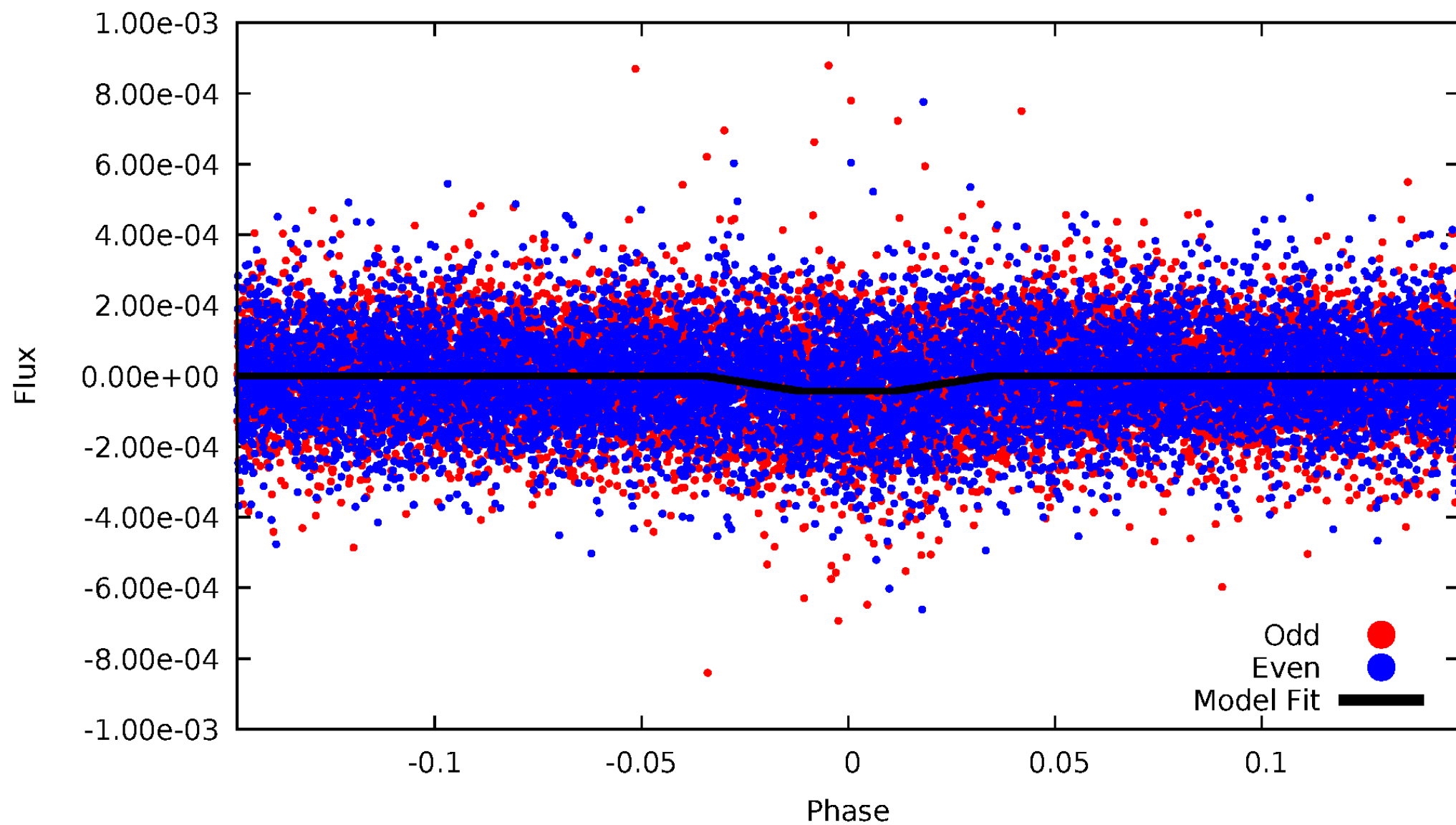
DV Odd/Even

TCE 005897826-03

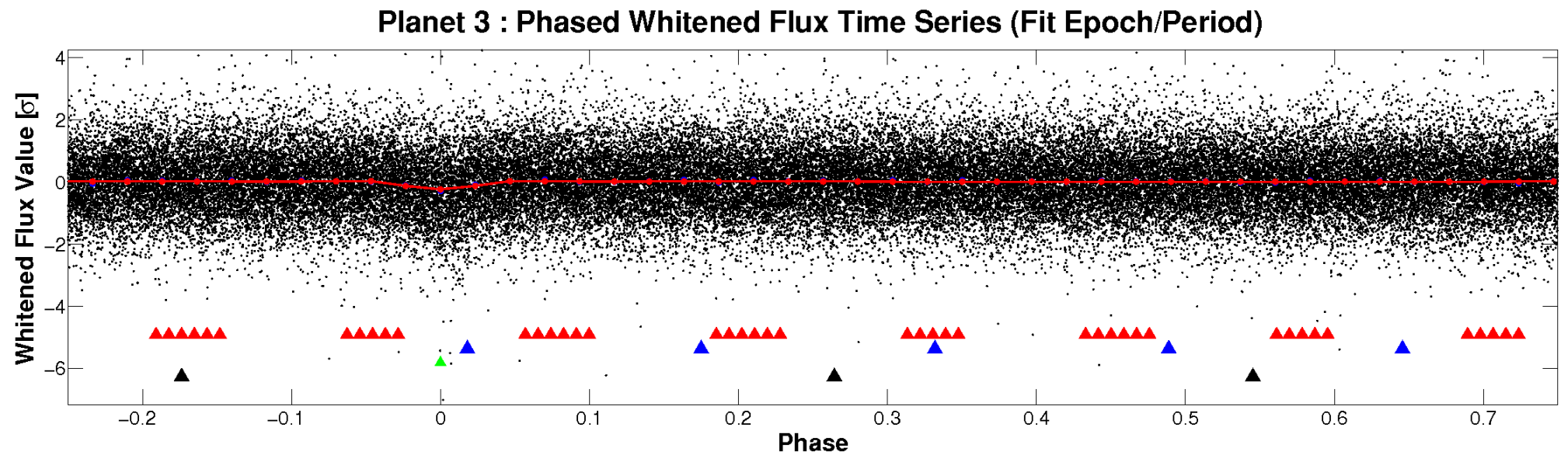
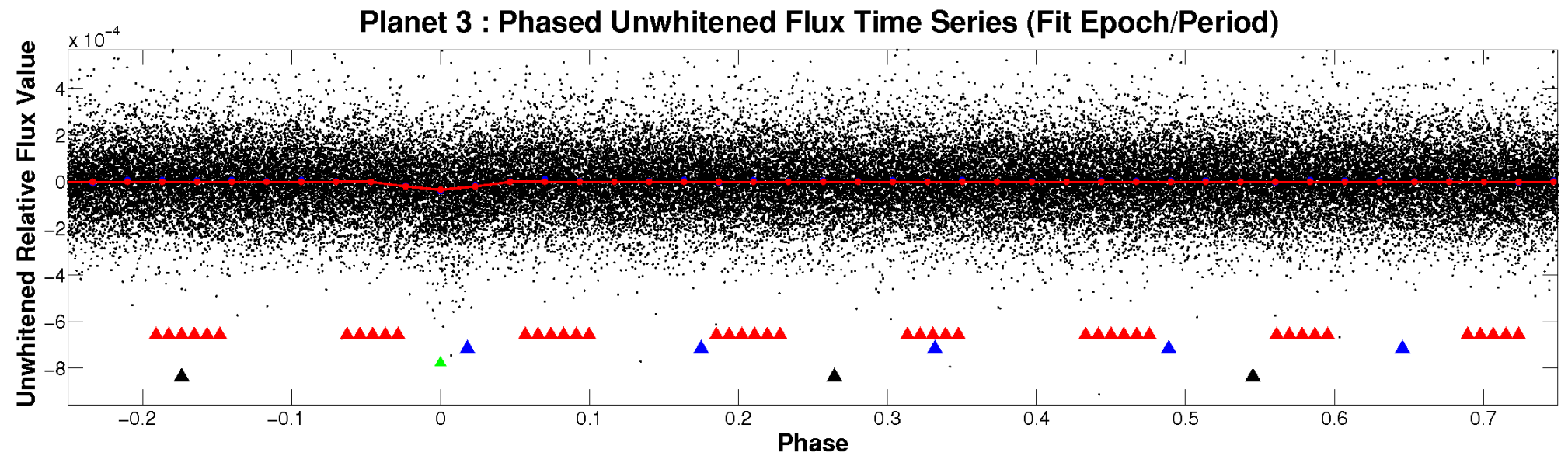


ALT Odd/Even

TCE 005897826-03

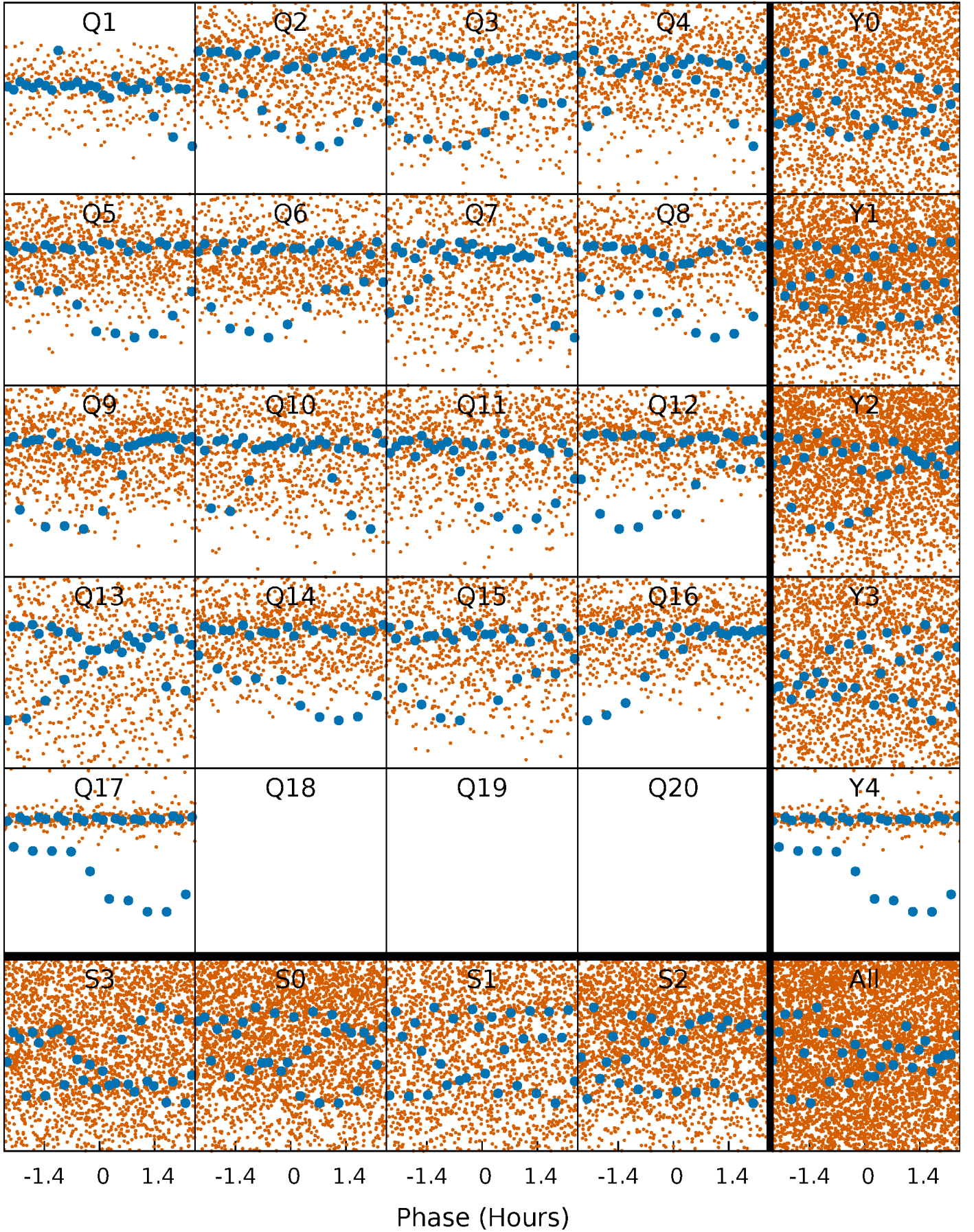


Non-Whitened Vs. Whitened Light Curve



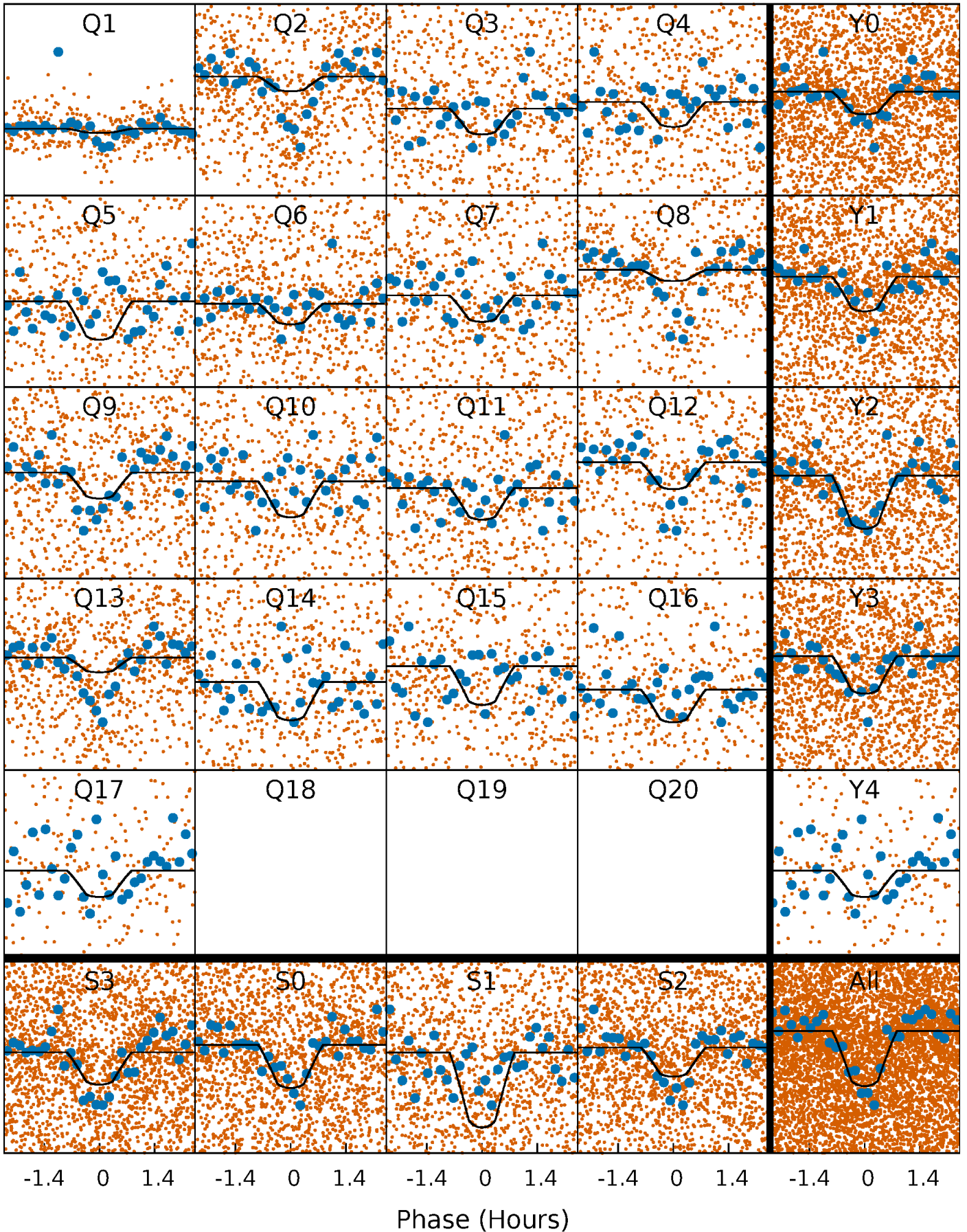
PDC Quarter-Phased Transit Curves

TCE 005897826-03 P= 0.875177 Days $T_0=131.854241$ (BKJD)



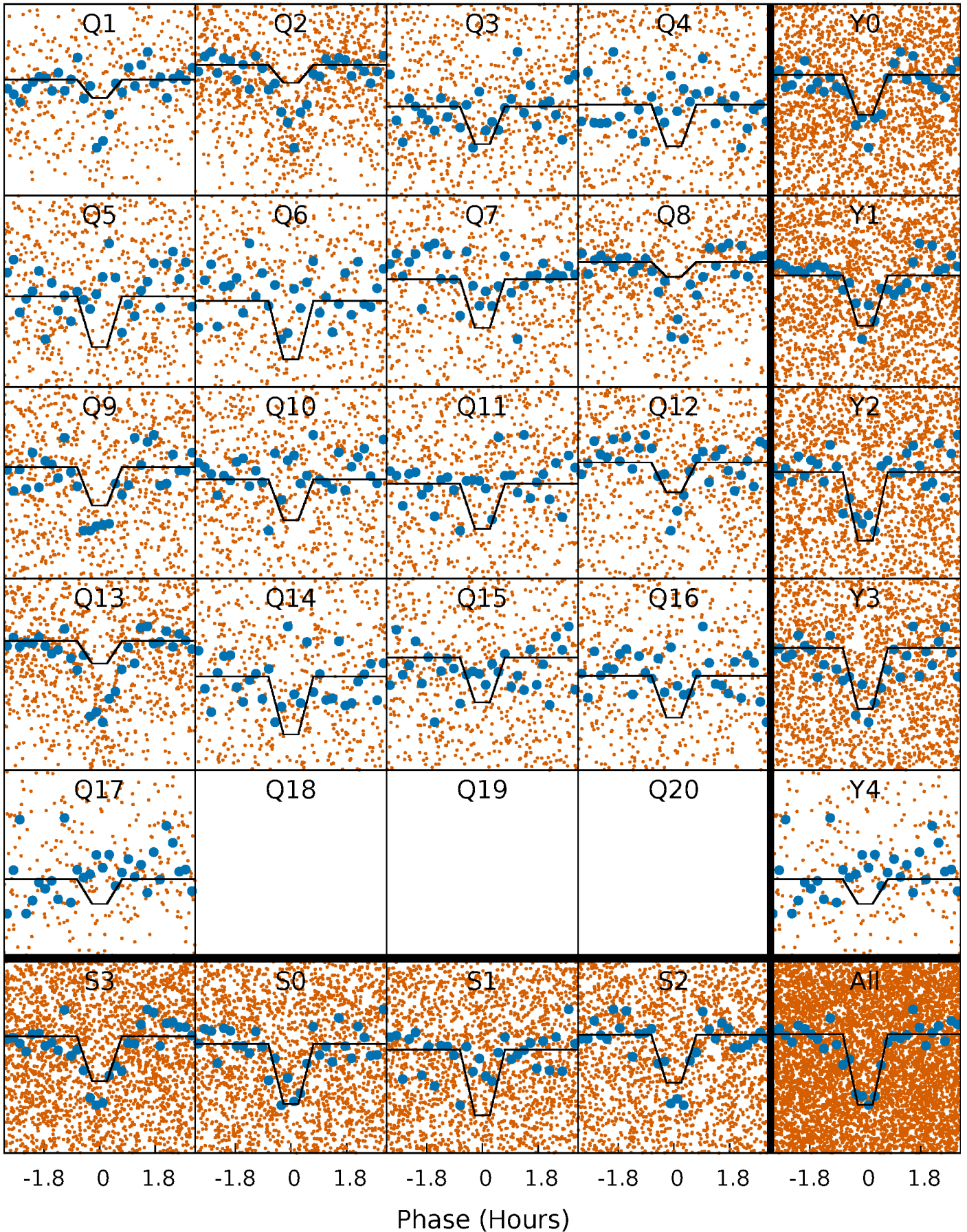
DV Quarter-Phased Transit Curves

TCE 005897826-03 P= 0.875177 Days $T_0=131.854241$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

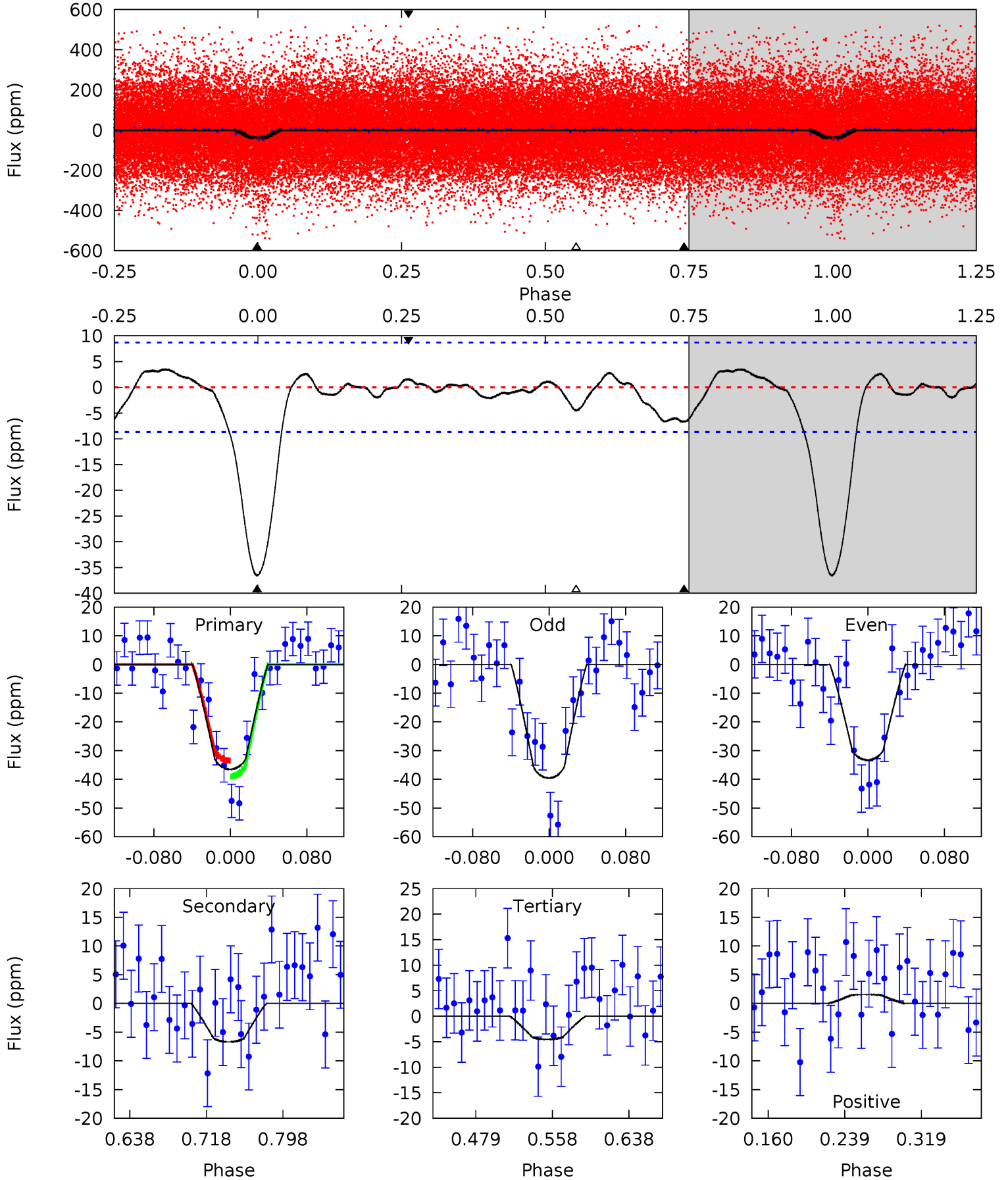
TCE 005897826-03 P= 0.875170 Days $T_0=131.858400$ (BKJD)



DV Model-Shift Uniqueness Test

005897826-03, P = 0.875177 Days, E = 130.979064 Days

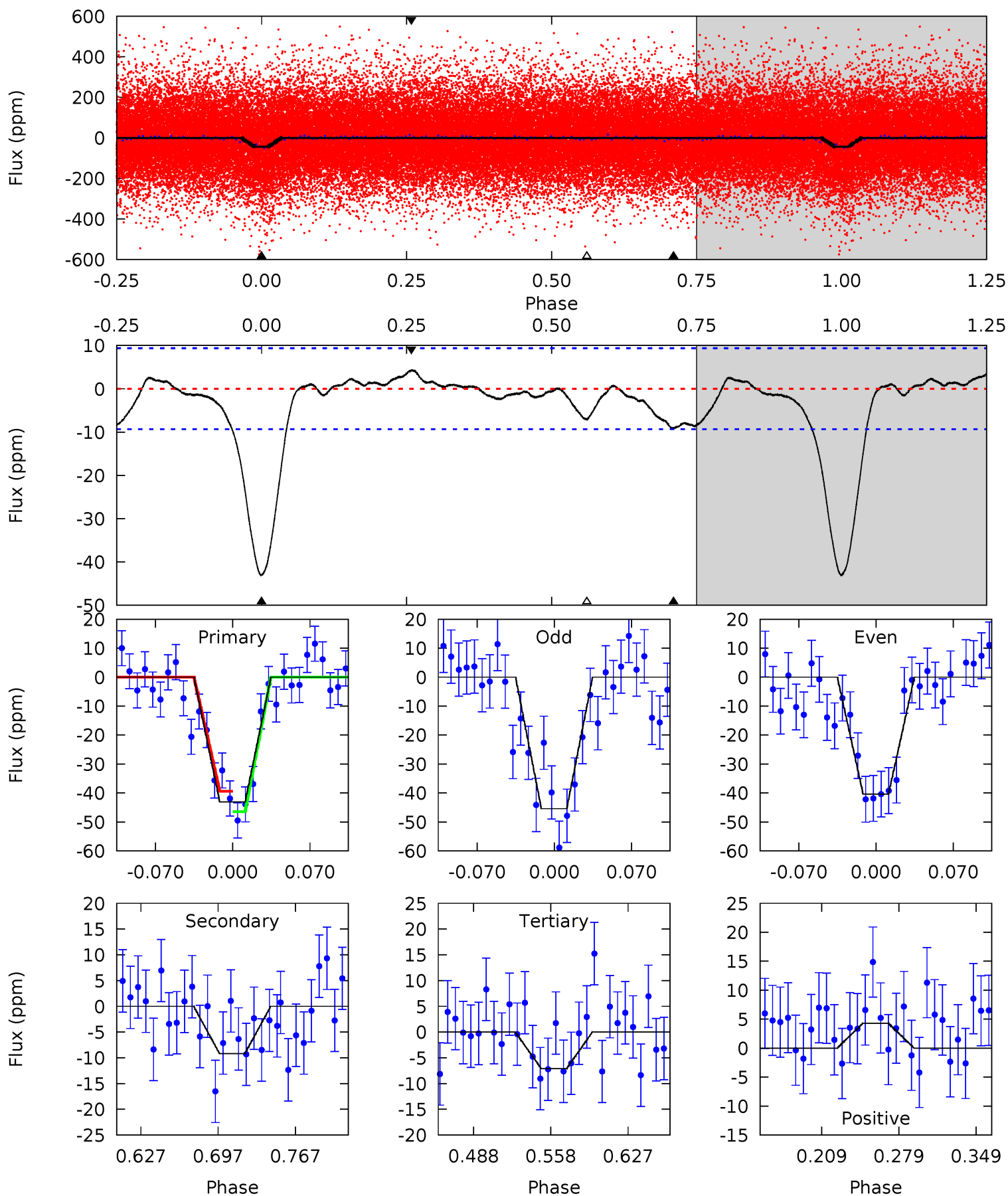
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.4	3.56	2.41	0.83	4.61	1.75	0.83	17.0	18.6	1.15	2.73	1.67	1.11	0.09	1.46



Alt Model-Shift Uniqueness Test

005897826-03, P = 0.875170 Days, E = 130.983230 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	4.56	3.52	2.13	4.64	1.81	1.04	17.9	19.2	1.04	2.43	1.25	1.02	0.09	1.74



Stellar Parameters For KIC 005897826

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+117}_{-117}	$3.999^{+0.196}_{-0.084}$	$0.160^{+0.150}_{-0.150}$	$1.796^{+0.281}_{-0.422}$	$1.174^{+0.133}_{-0.133}$	$0.286^{+0.312}_{-0.077}$
	+2%/-2%	+5%/-2%	+94%/-94%	+16%/-23%	+11%/-11%	+109%/-27%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 005897826-03 / KOI 0126.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 2	$1.23^{+0.45}_{-0.42}$	3484^{+176}_{-216}	3692^{+865}_{-773}	$0.861^{+1.199}_{-0.449}$
Alt.	-9 ± 2	$1.23^{+0.44}_{-0.41}$	3471^{+163}_{-190}	4034^{+791}_{-635}	$1.181^{+1.549}_{-0.568}$

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

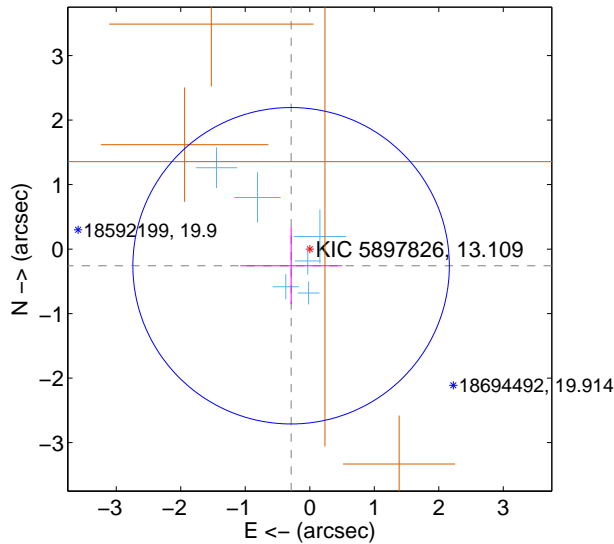
Supplemental centroid analysis for 005897826-03. Kepler magnitude: 13.11. Transit SNR 11.94

There are 6 quarters with good PRF difference image offsets

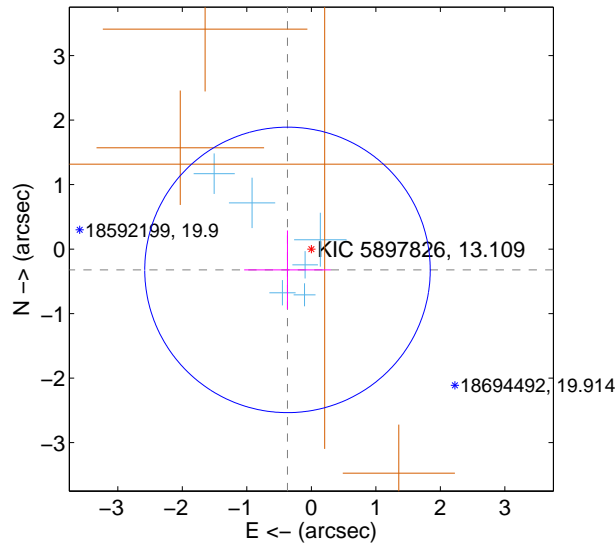
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.388 ± 0.818	0.47	0.289 ± 0.790	-0.258 ± 0.597
PRF-fit source offset from KIC position	0.491 ± 0.738	0.66	0.370 ± 0.672	-0.323 ± 0.612
photometric centroid source offset	0.11 ± 1.01	0.11	0.11 ± 1.01	-0.00 ± 0.88

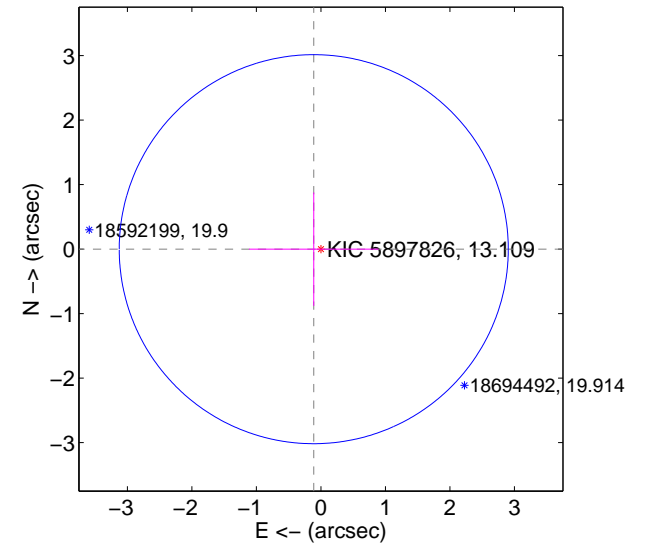
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

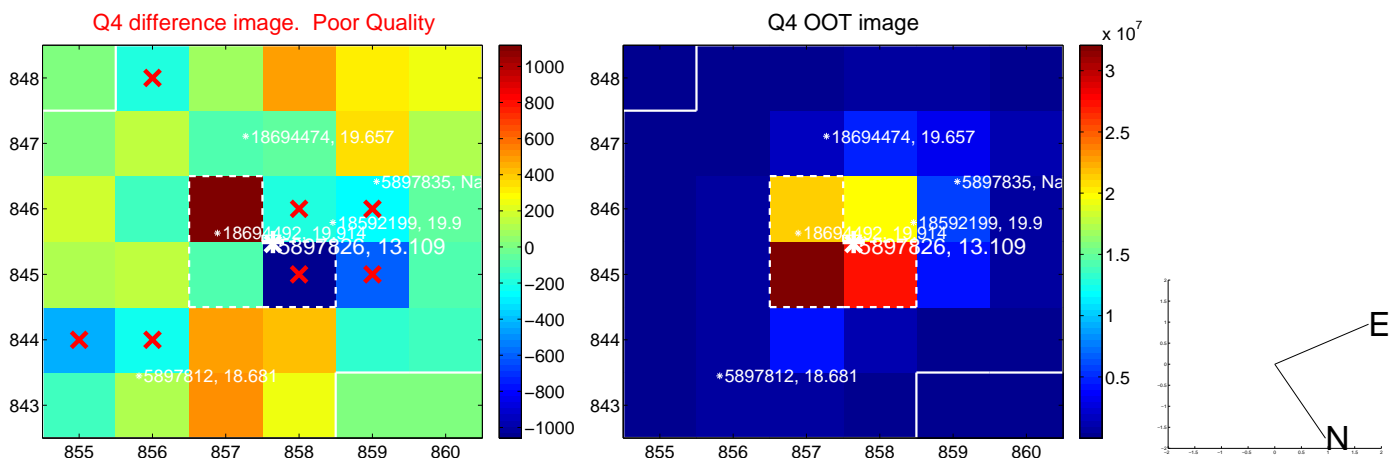
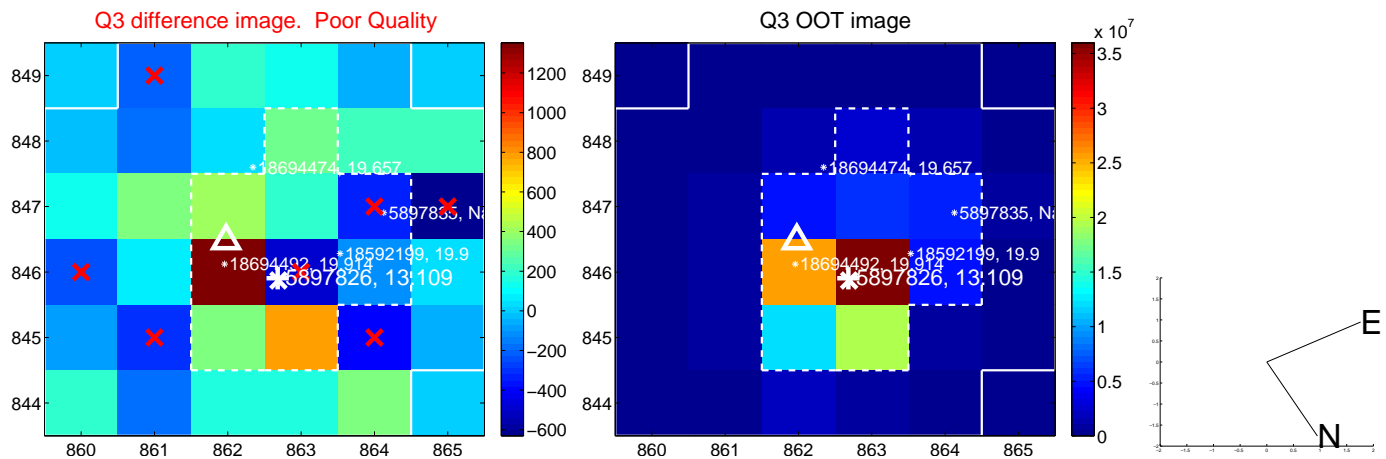
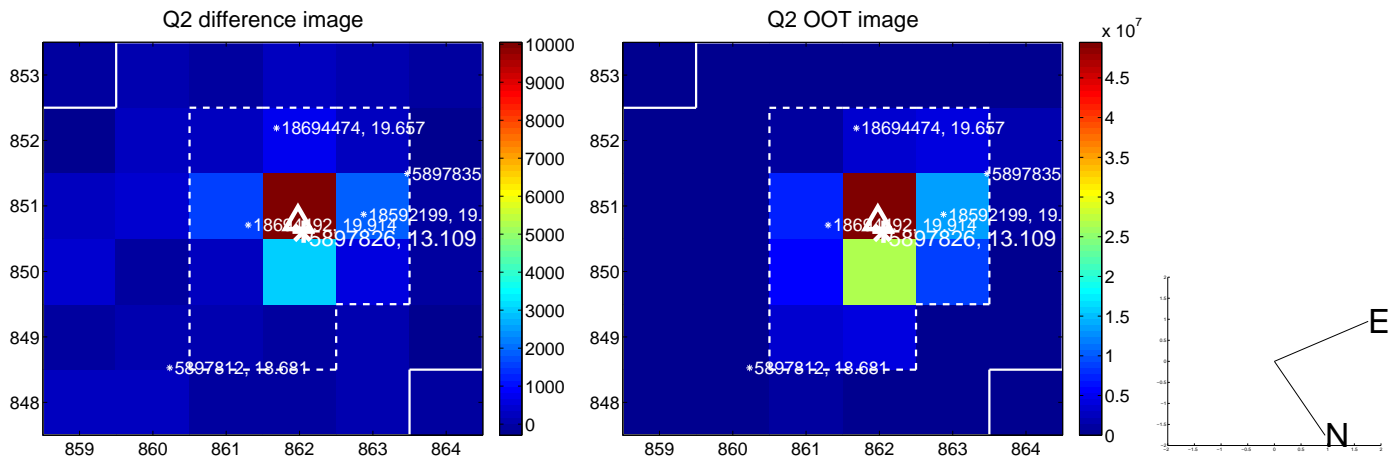
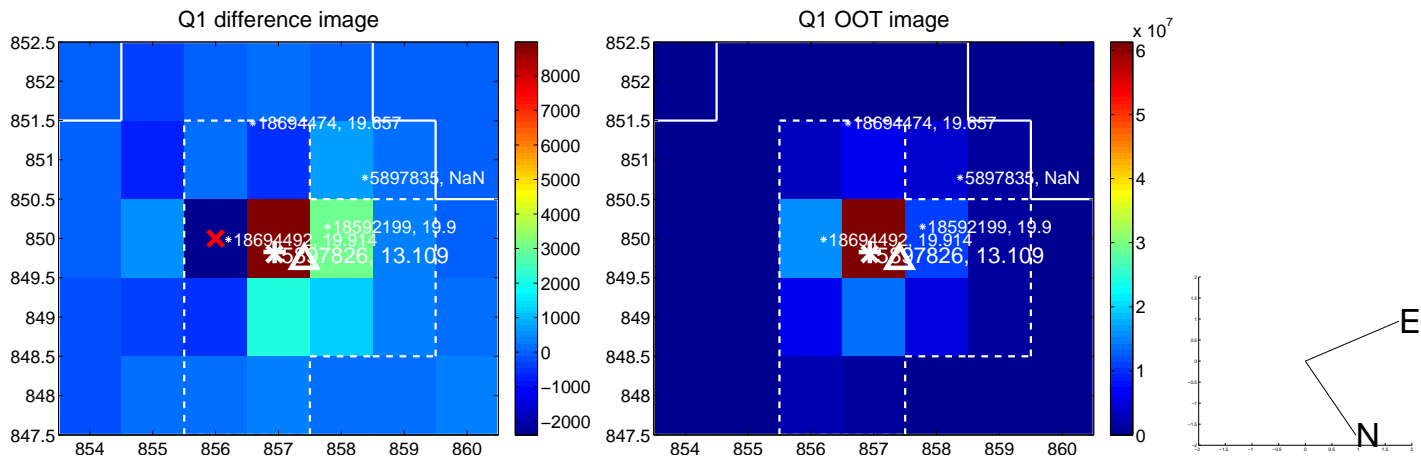


offset from photometric centroids

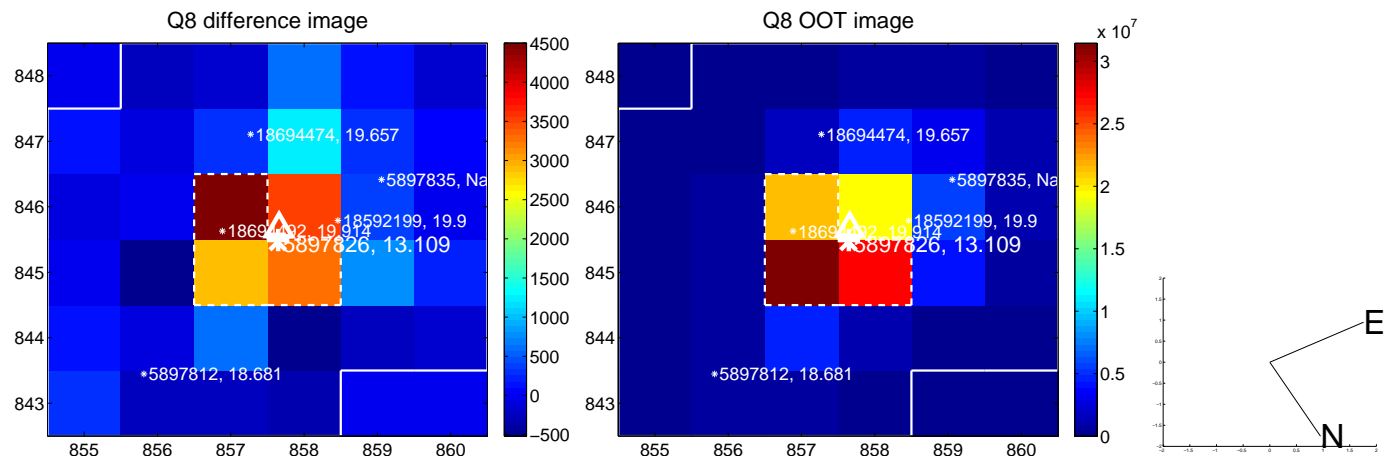
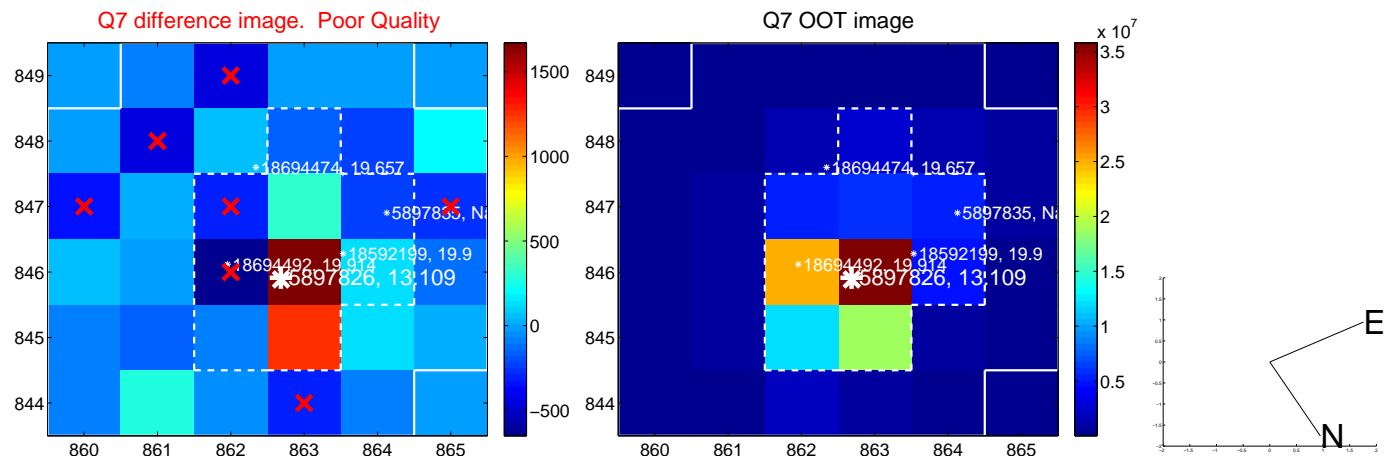
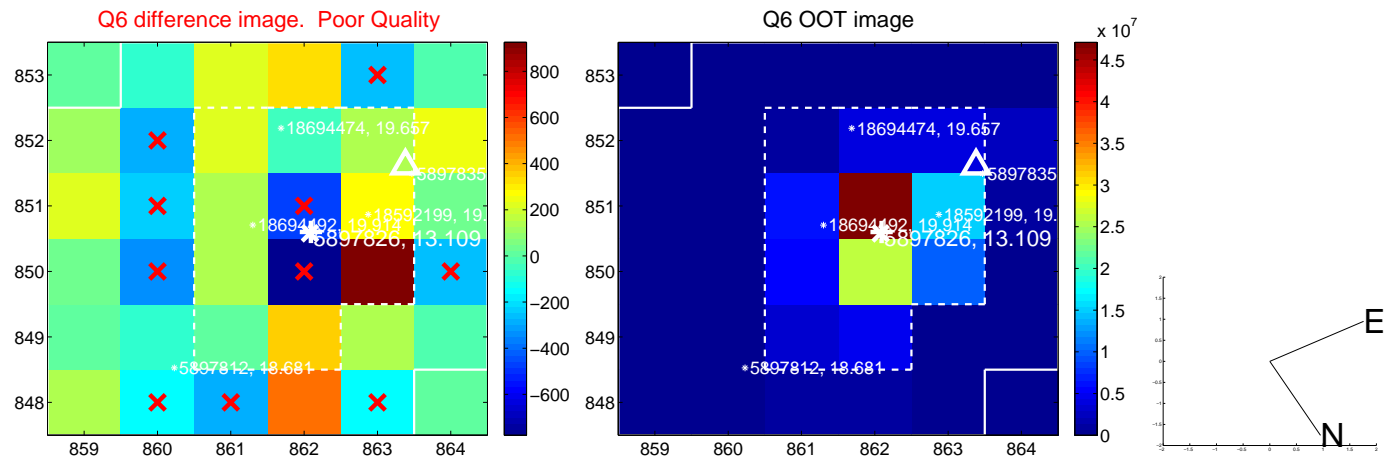
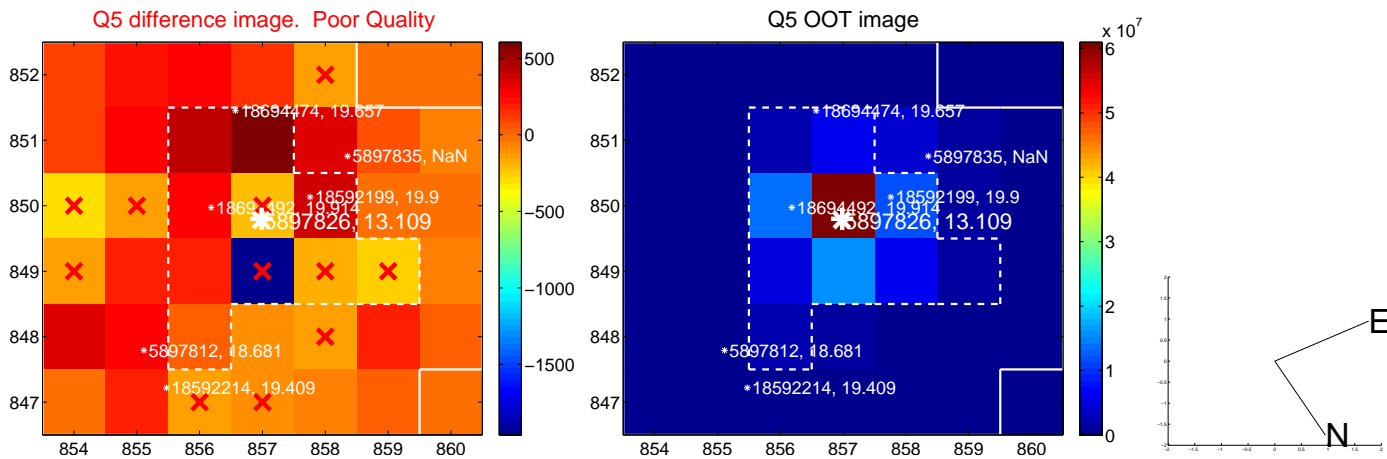


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

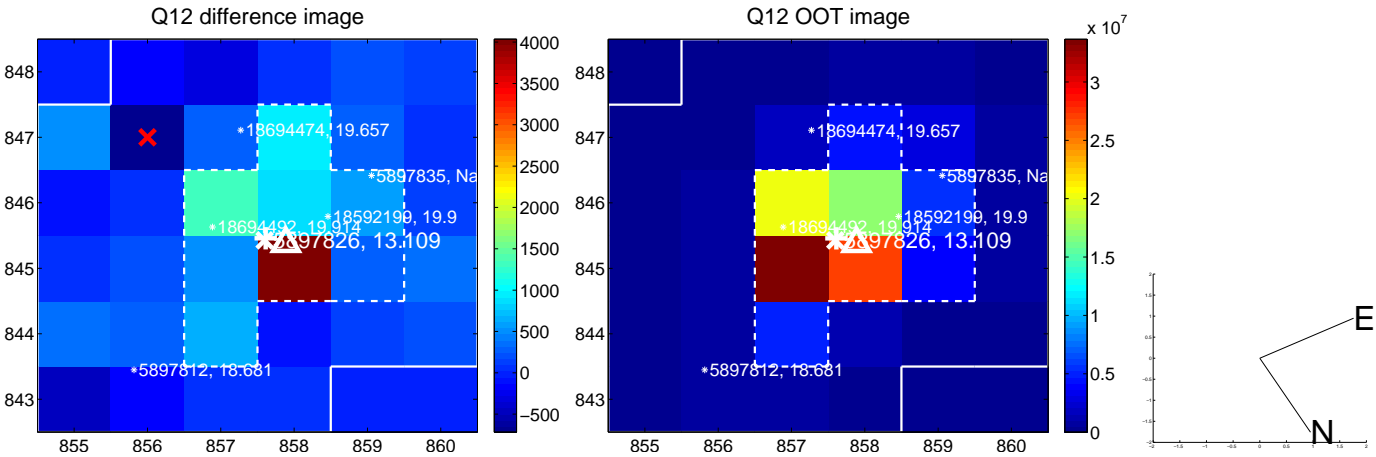
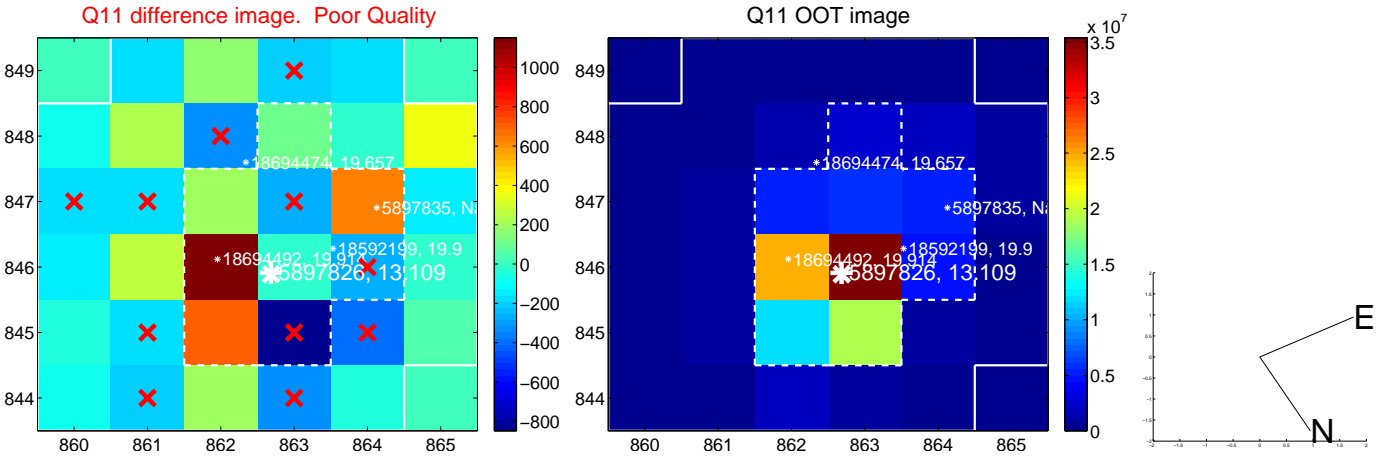
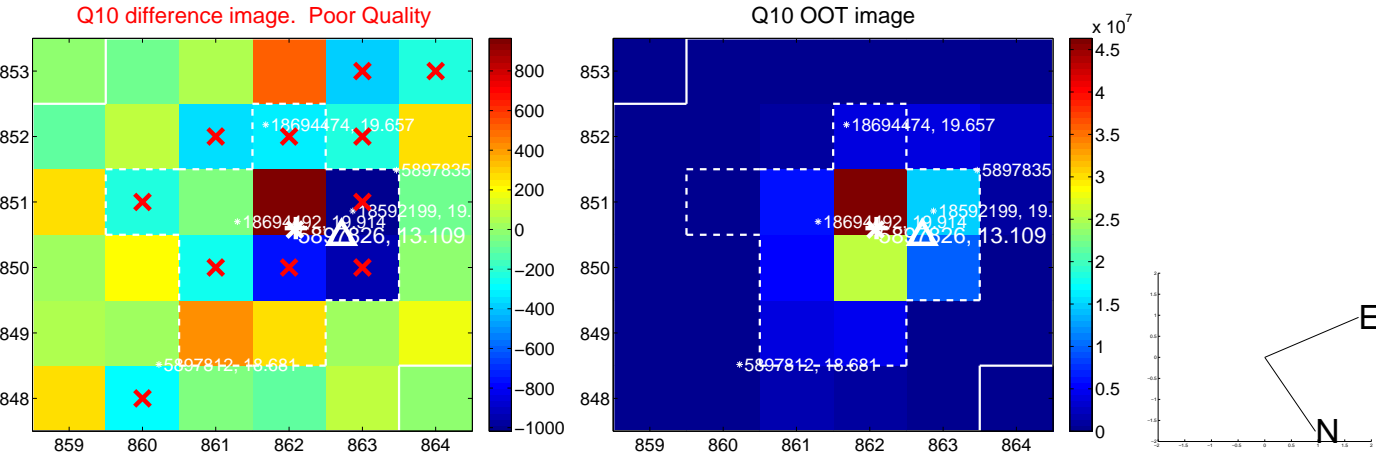
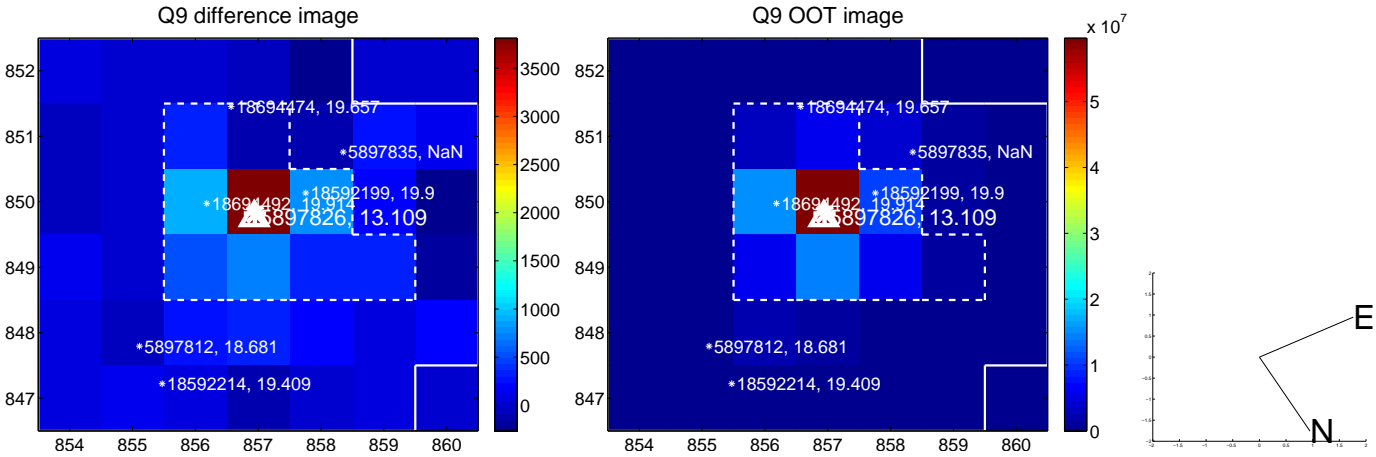
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



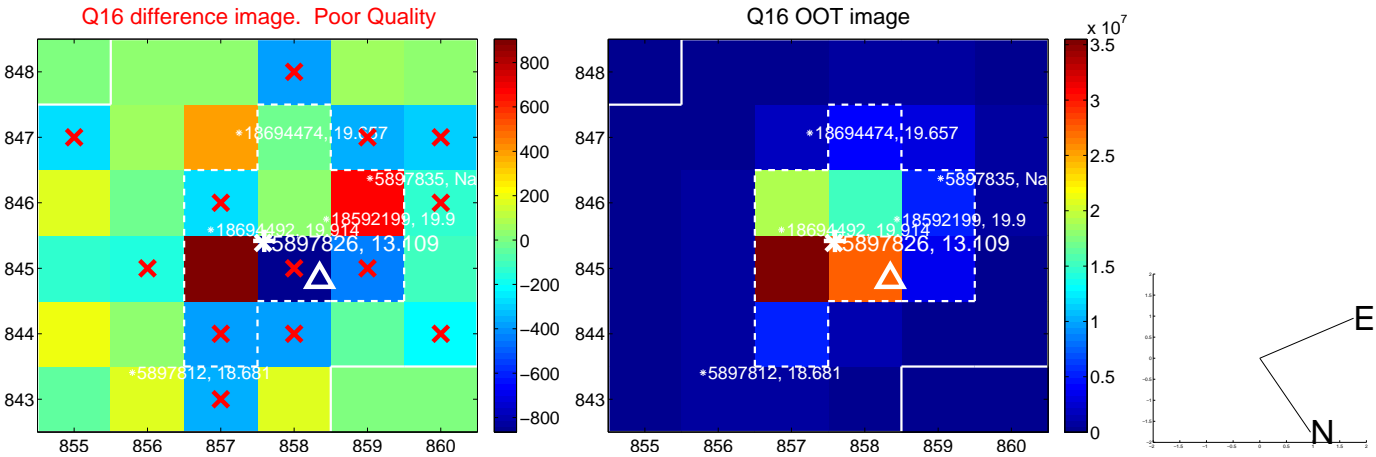
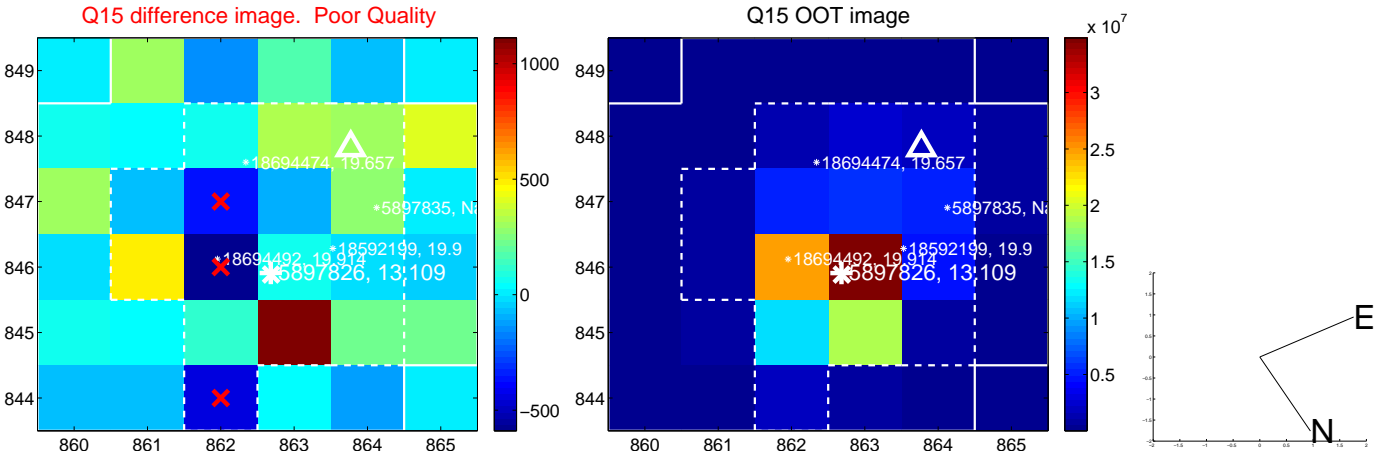
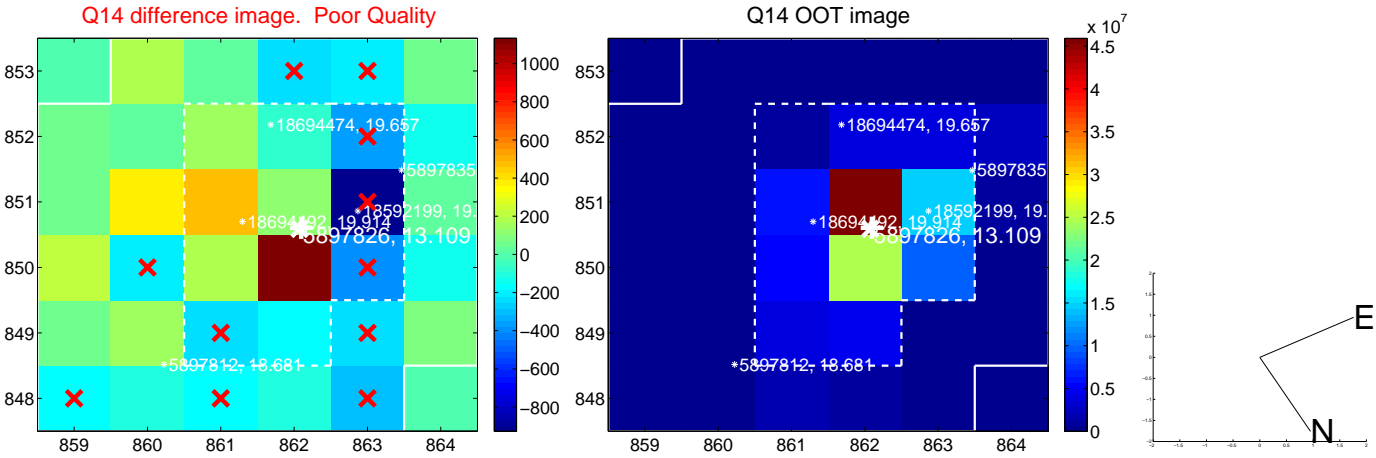
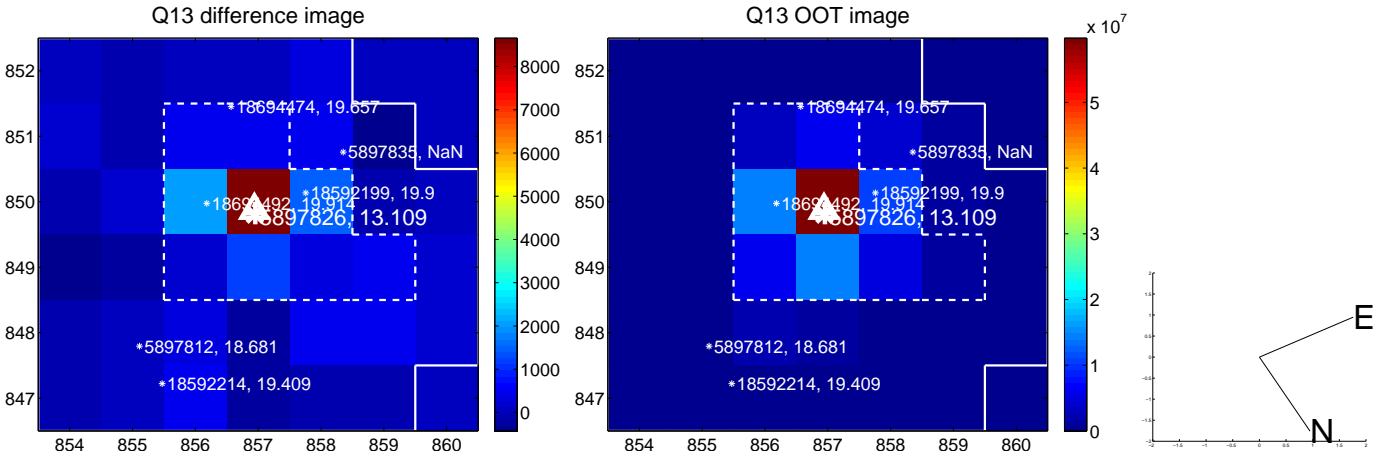
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



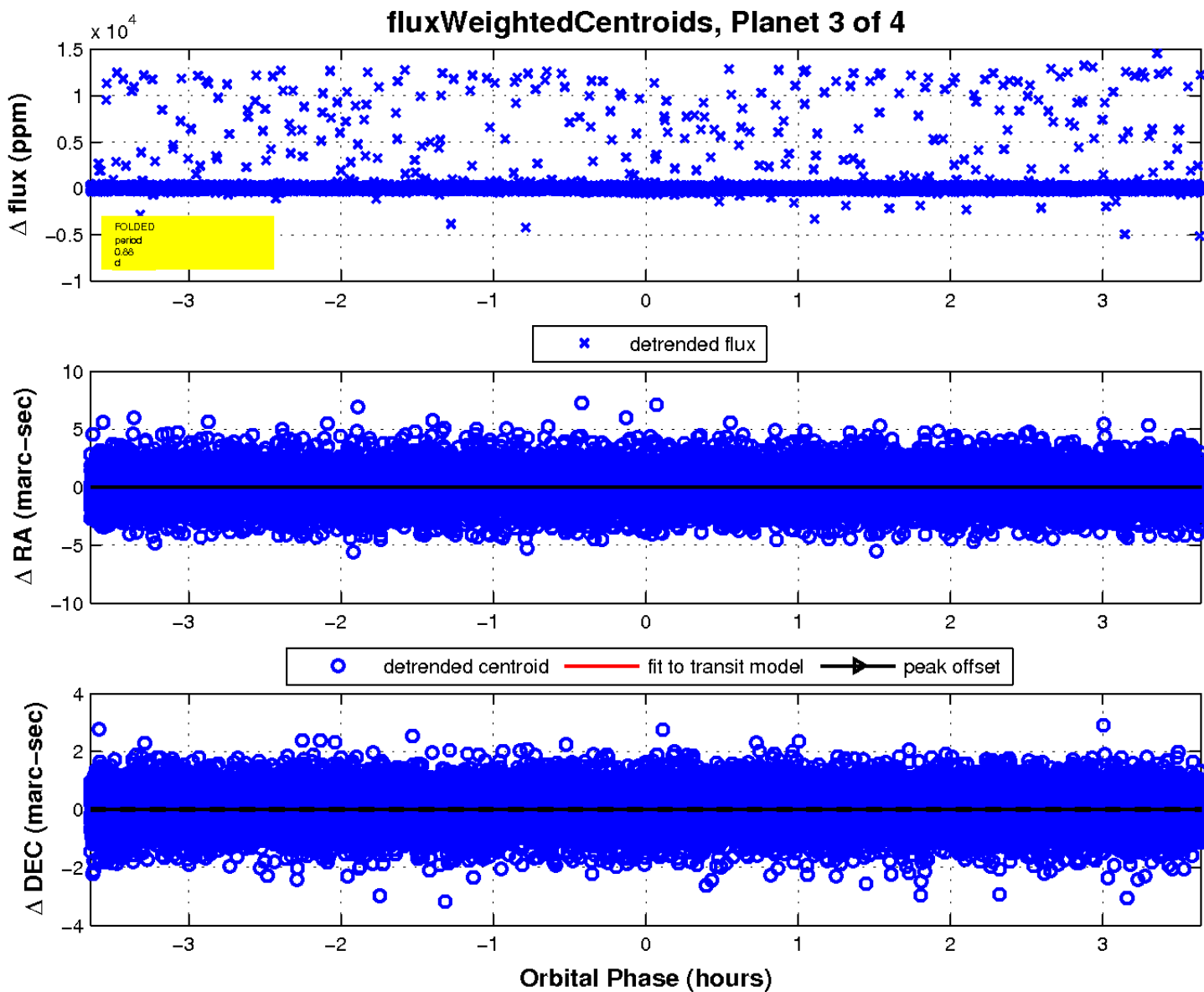
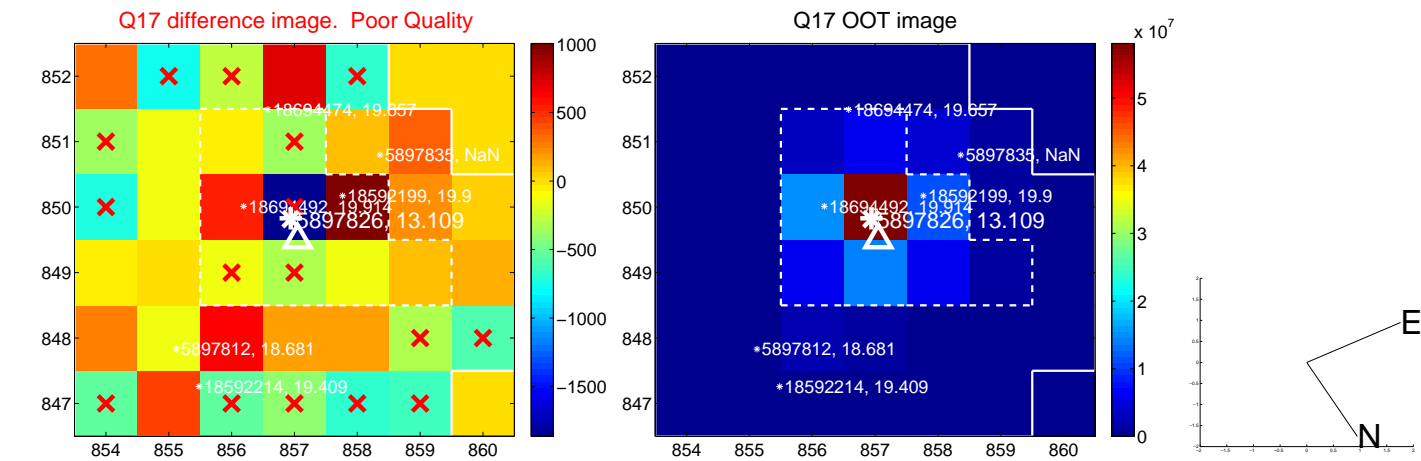
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

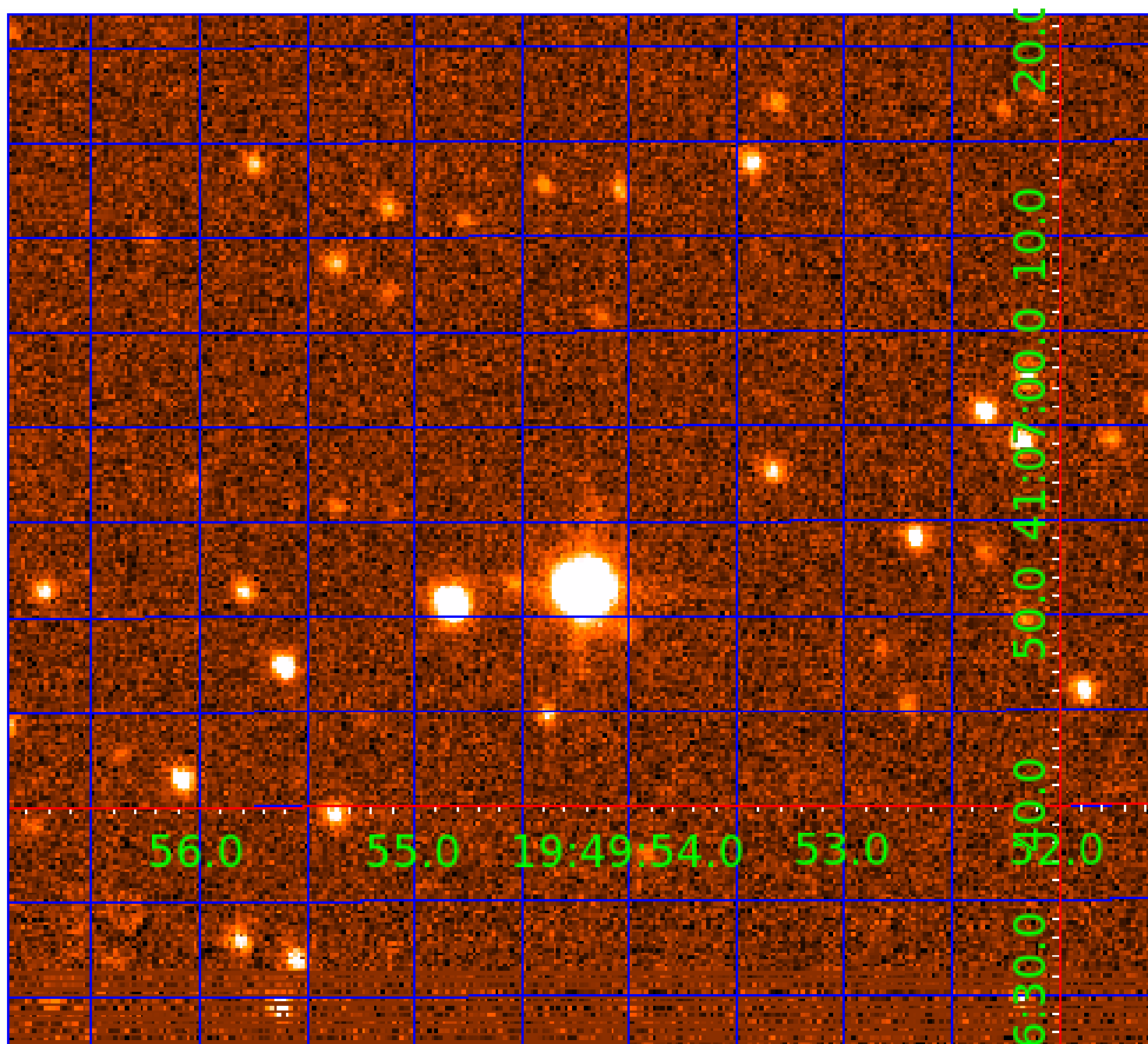


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005897826

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})
005897826-01	OBS	0126.01	33.802764	134.679307	13225.9	10.791	1177.6	646.1	1.80	5855	22.40	72.88
005897826-02	OBS	No	279.318704	397.048600	374.7	21.779	16.7	11.4	1.80	5855	7.00	4.36
005897826-03	OBS	0126.02	0.875177	131.854241	34.7	1.215	9.7	11.9	1.80	5855	1.28	9515.07
005897826-04	OBS	No	513.974603	373.634406	322.1	7.687	8.7	8.3	1.80	5855	3.55	1.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005897826-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005897826-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005897826-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
005897826-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—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.

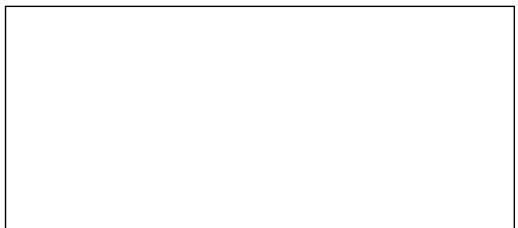
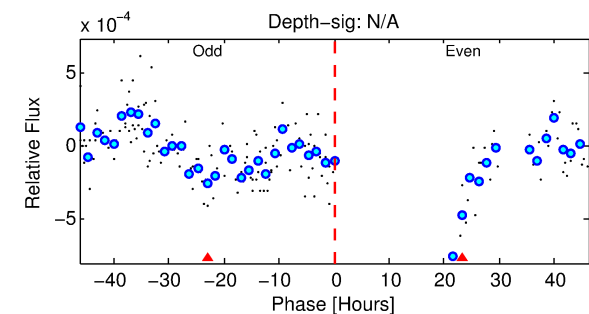
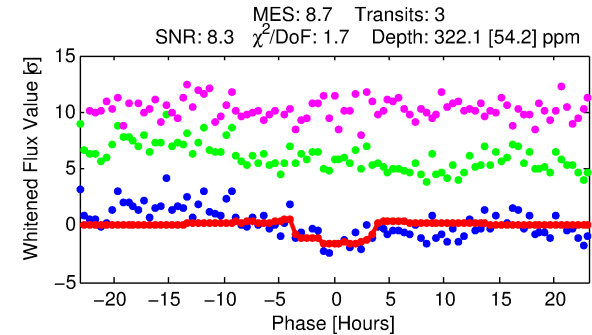
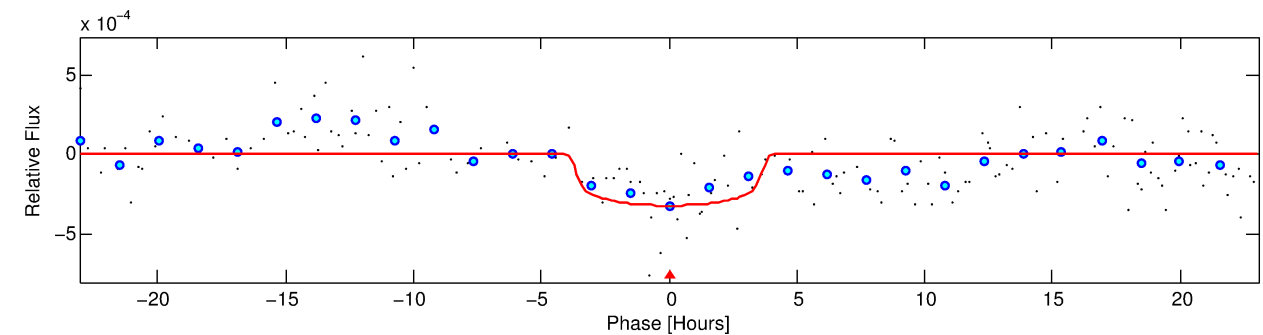
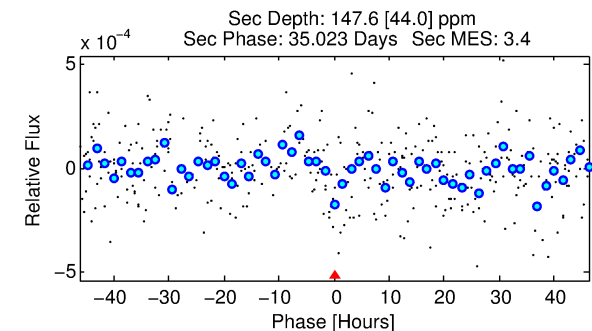
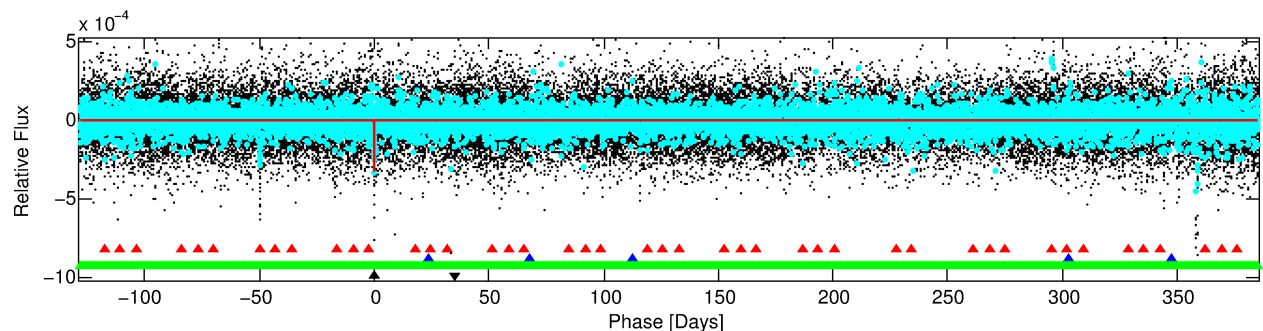
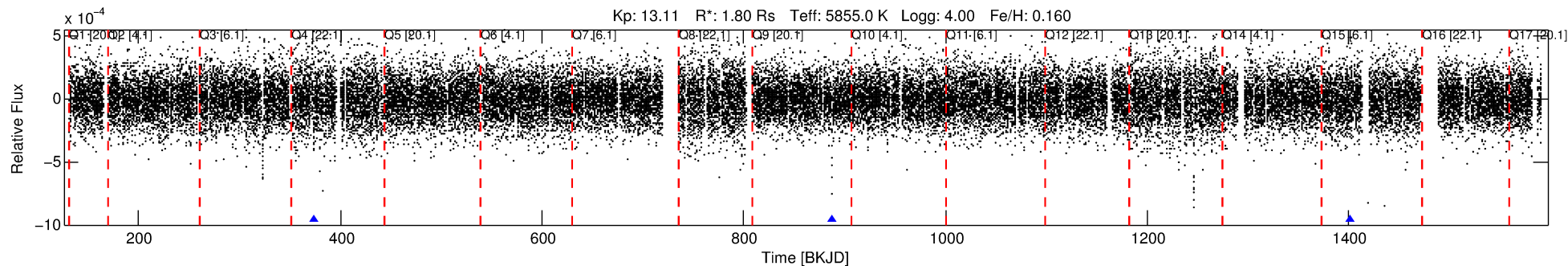
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005897826-04

No Significant Match Found

DV One-Page Summary

KIC: 5897826 Candidate: 4 of 4 Period: 513.975 d
KOI: K00126 Corr: No Ephemeris Match



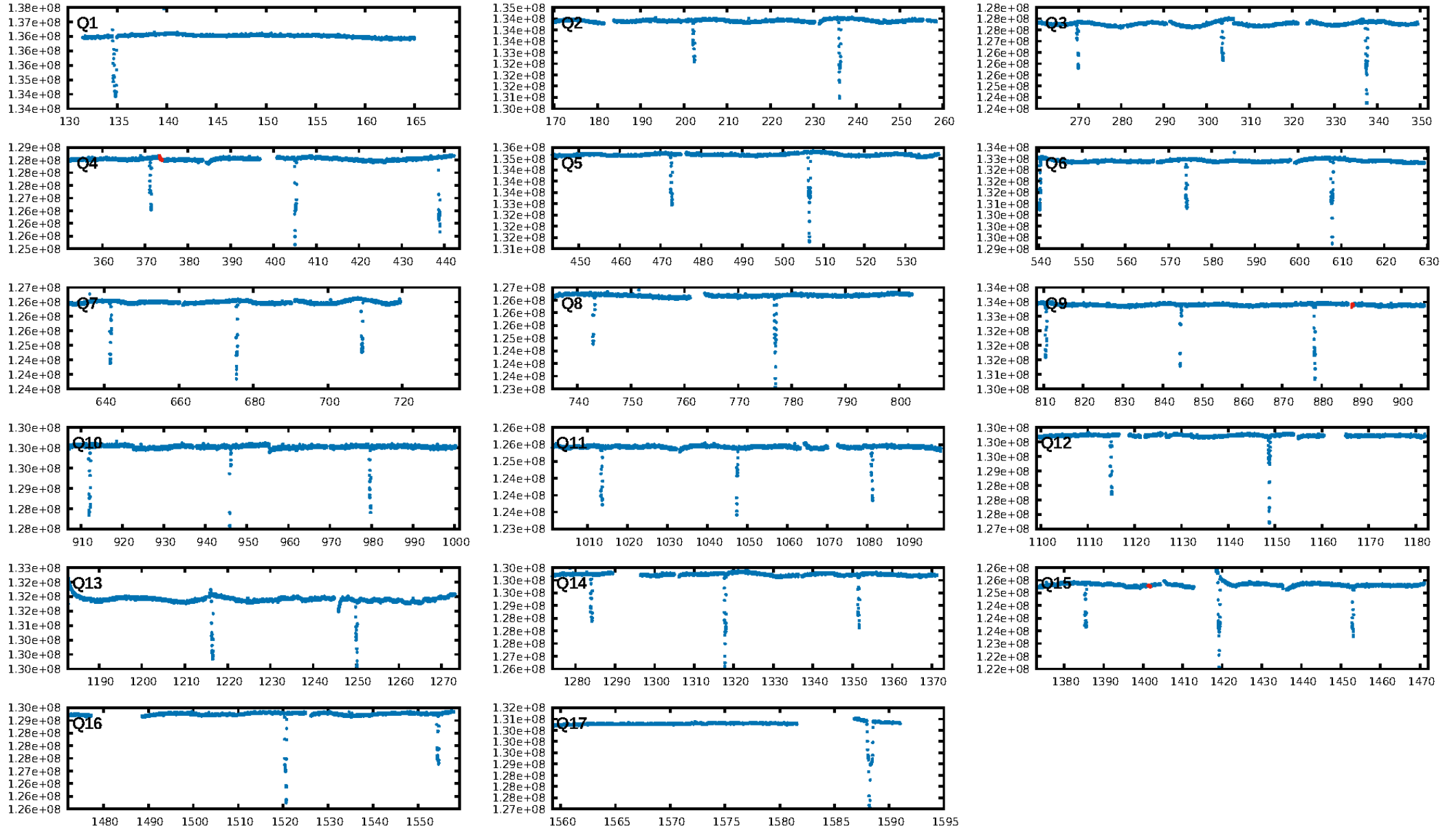
DV Fit Results:

Period = 513.97460 [0.02988] d
Epoch = 373.6344 [0.0416] BKJD
Rp/R* = 0.0181 [0.0148]
a/R* = 333.07 [1245.98]
b = 0.78 [1.84]
Seff = 1.93 [0.67]
Teq = 301 [26] K
Rp = 3.55 [3.01] Re
a = 1.3249 [0.2878] AU
Ag = 11331.24 [19202.81] [0.59 σ]
Teffp = 4797 [1994] K [2.26 σ]

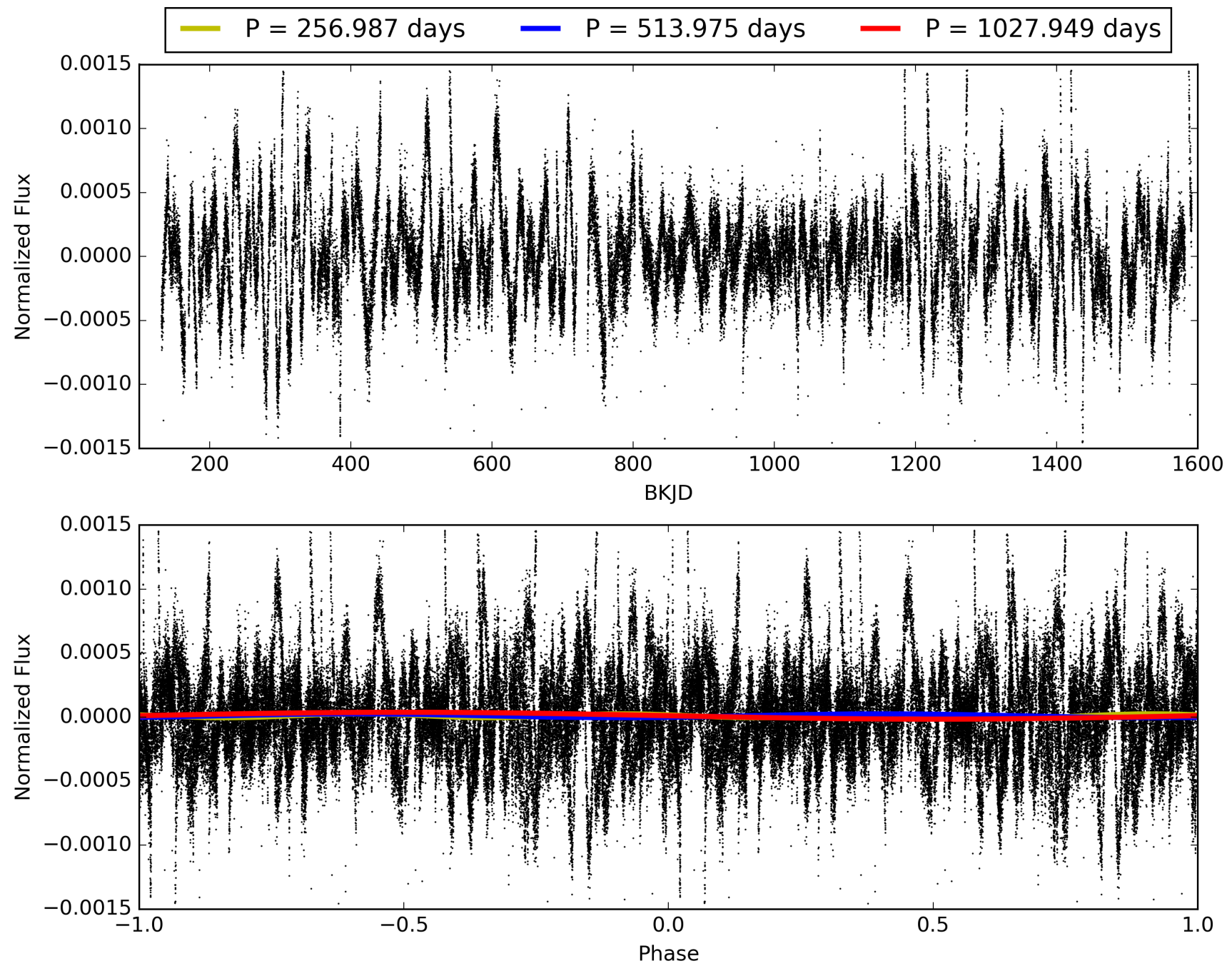
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [243.84 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.7%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -7.367
Centroid-sig: 12.0%
Centroid-so: 1.207 arcsec [1.05 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: 0.00 [0/1]

TCE 005897826-04, PDC Light Curves

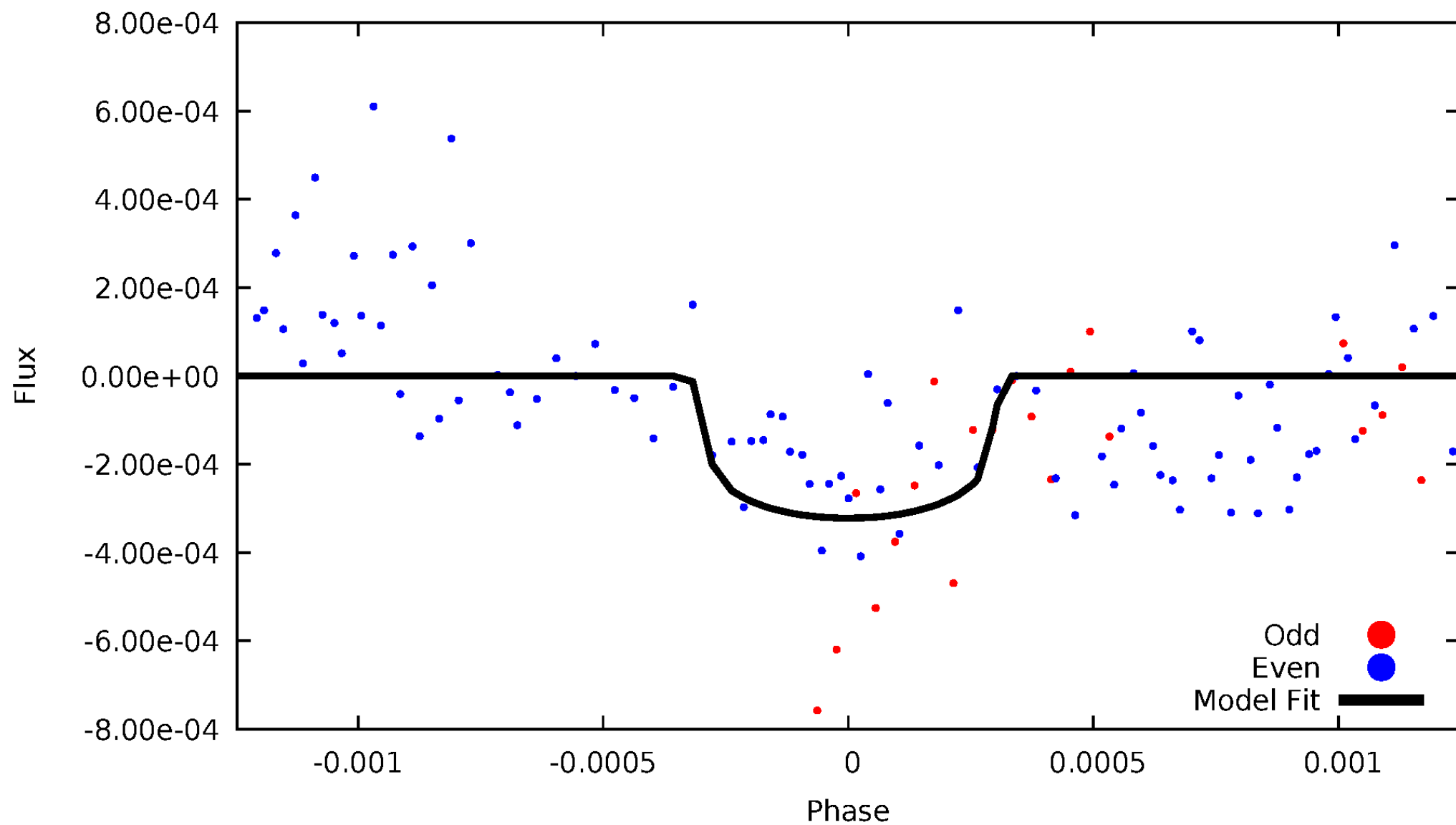


TCE 005897826-04



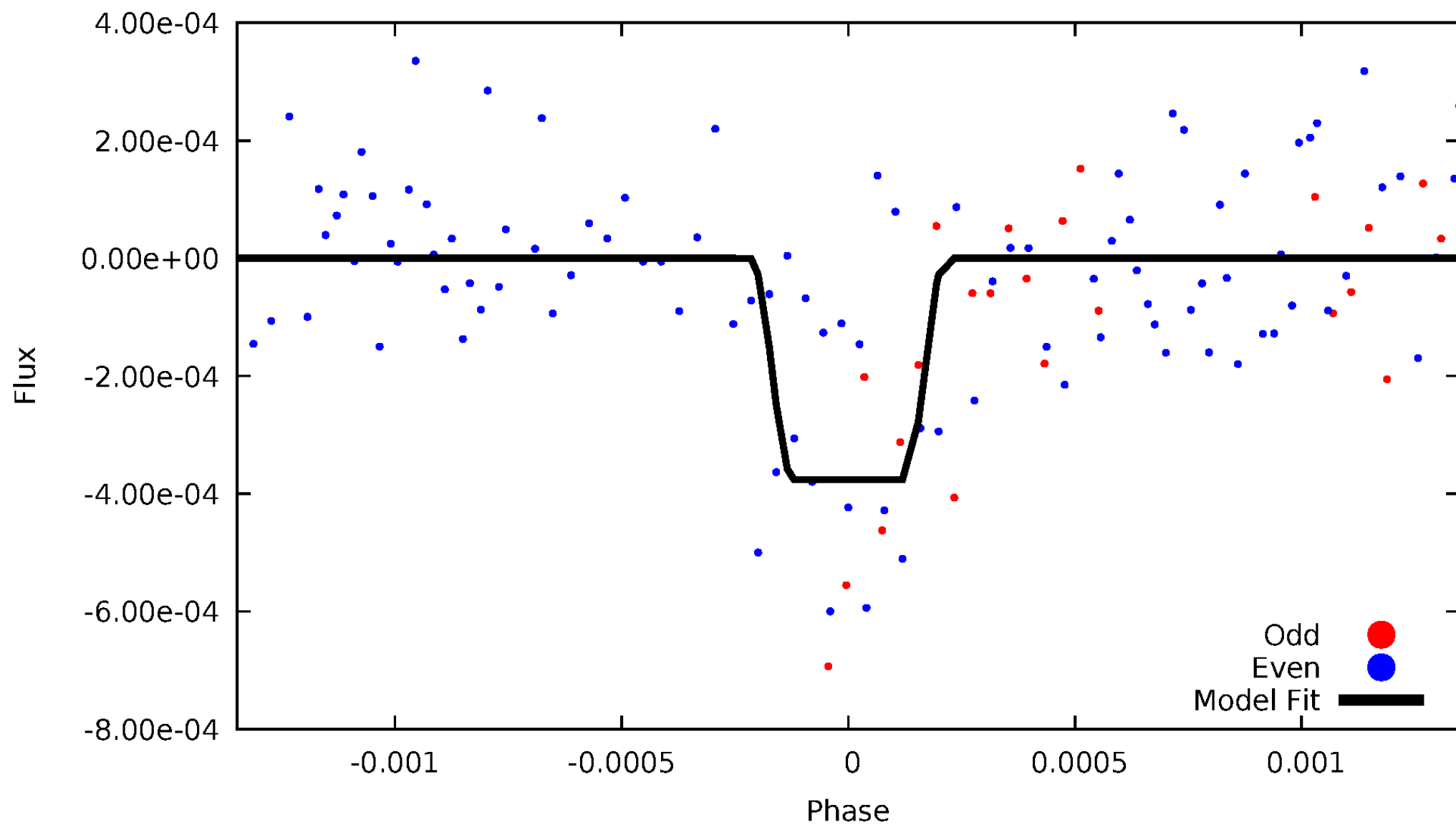
DV Odd/Even

TCE 005897826-04



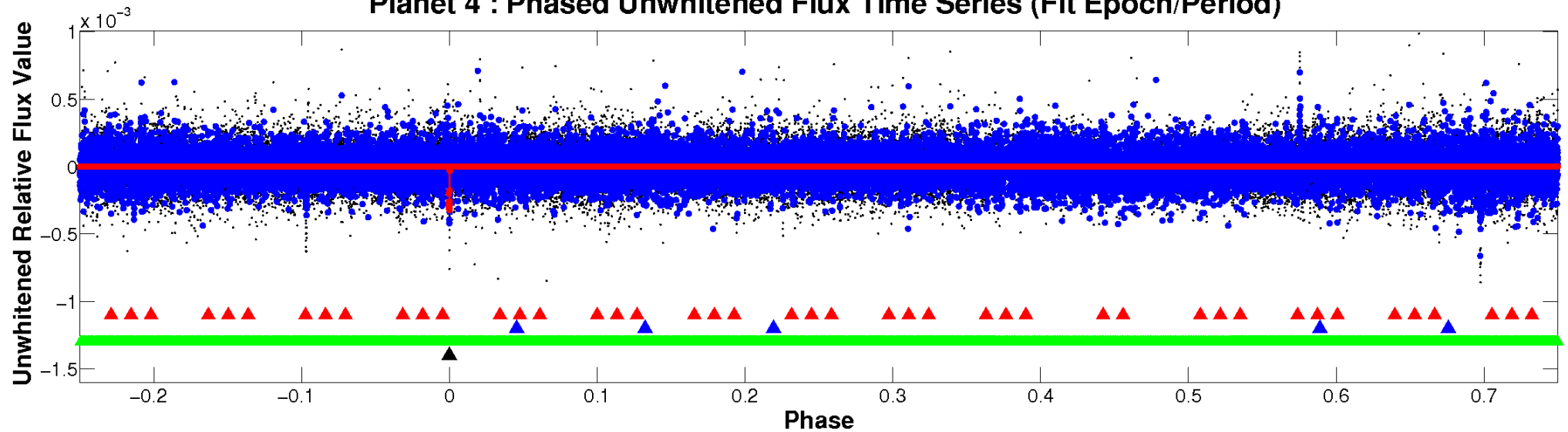
ALT Odd/Even

TCE 005897826-04

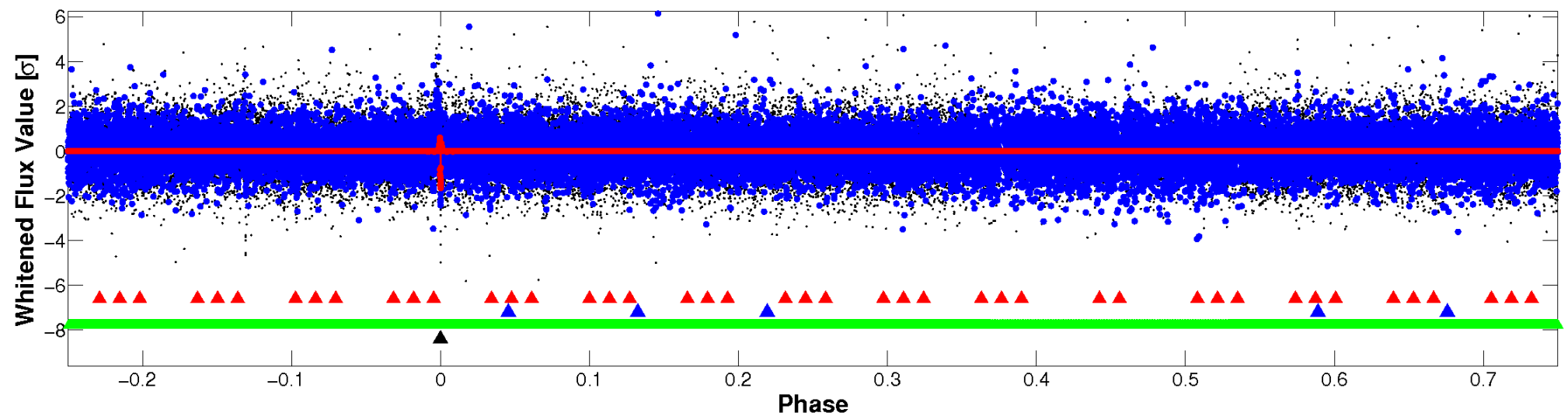


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

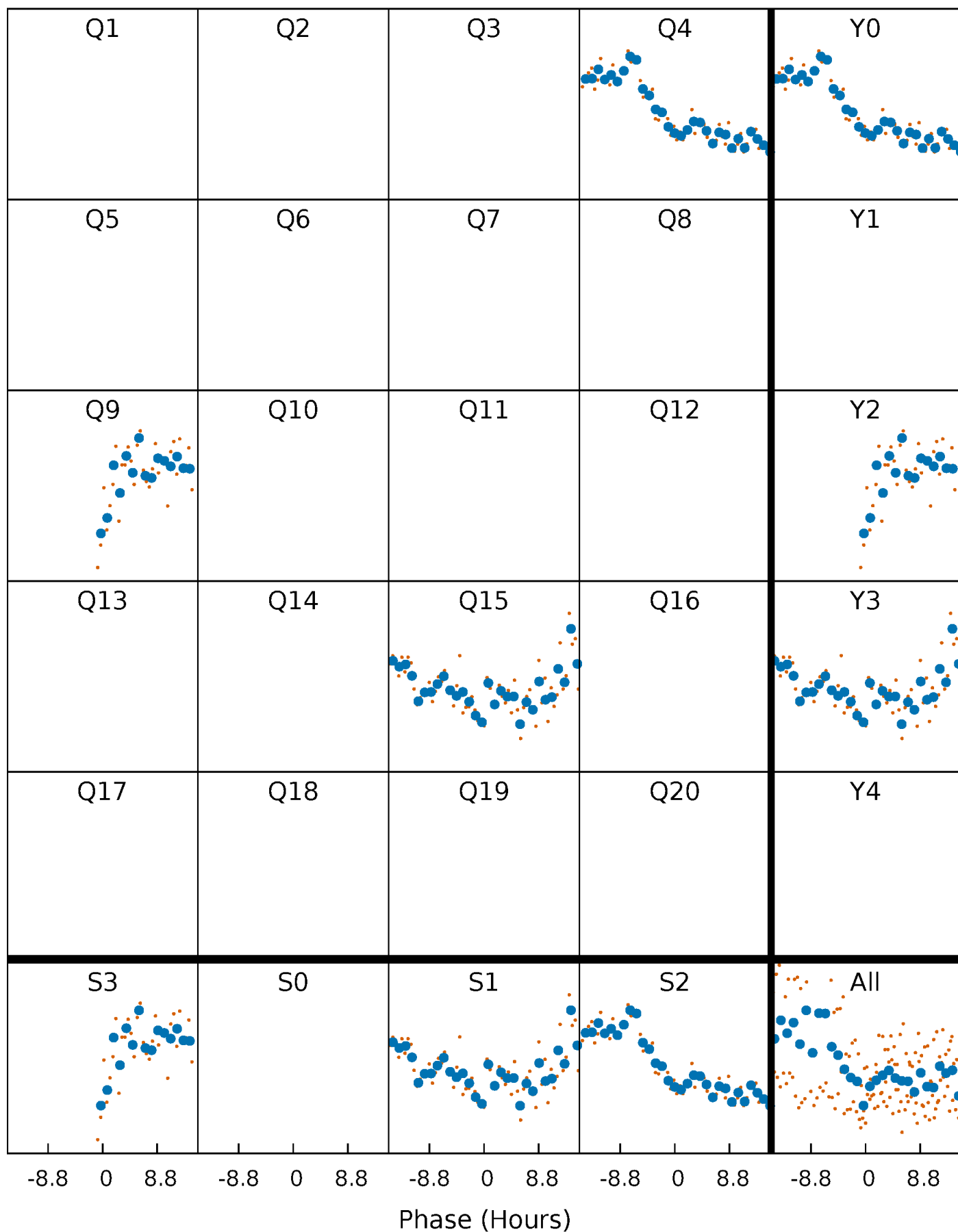


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005897826-04 P=513.974603 Days $T_0=373.634406$ (BKJD)



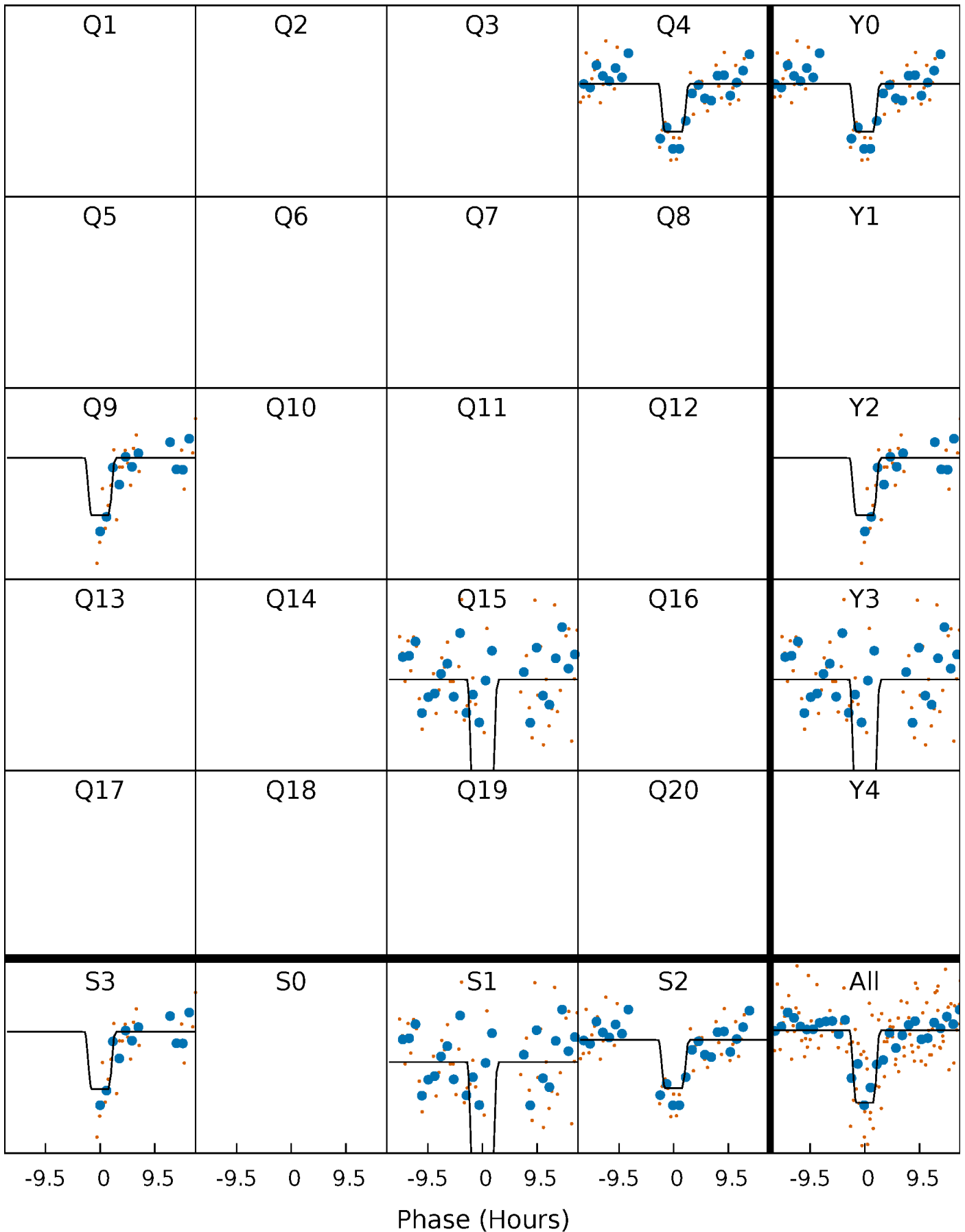
DV Quarter-Phased Transit Curves

TCE 005897826-04 $P=513.974603$ Days $T_0=373.634406$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

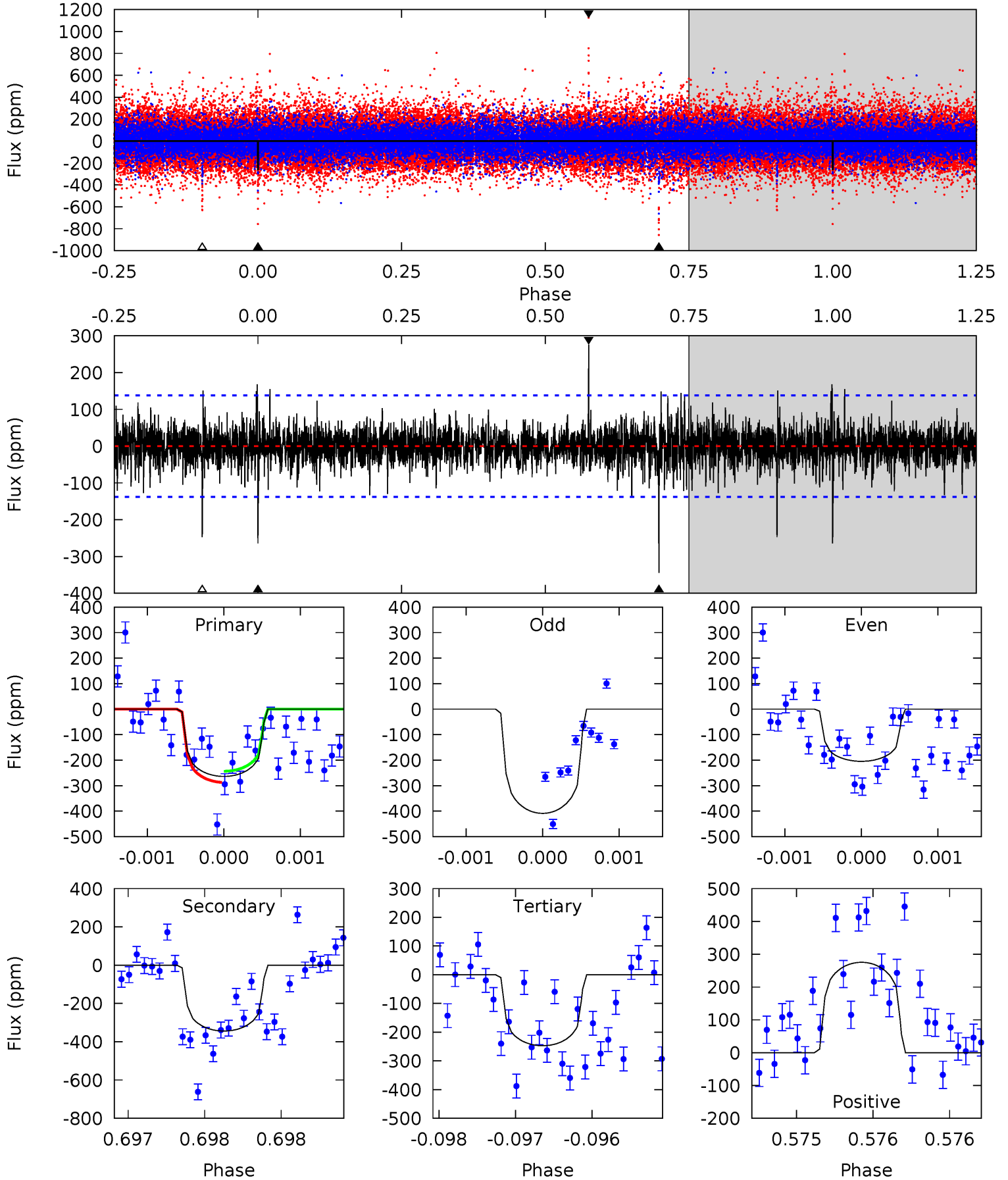
TCE 005897826-04 P=513.972146 Days $T_0=373.626999$ (BKJD)



DV Model-Shift Uniqueness Test

005897826-04, P = 513.974603 Days, E = 373.634406 Days

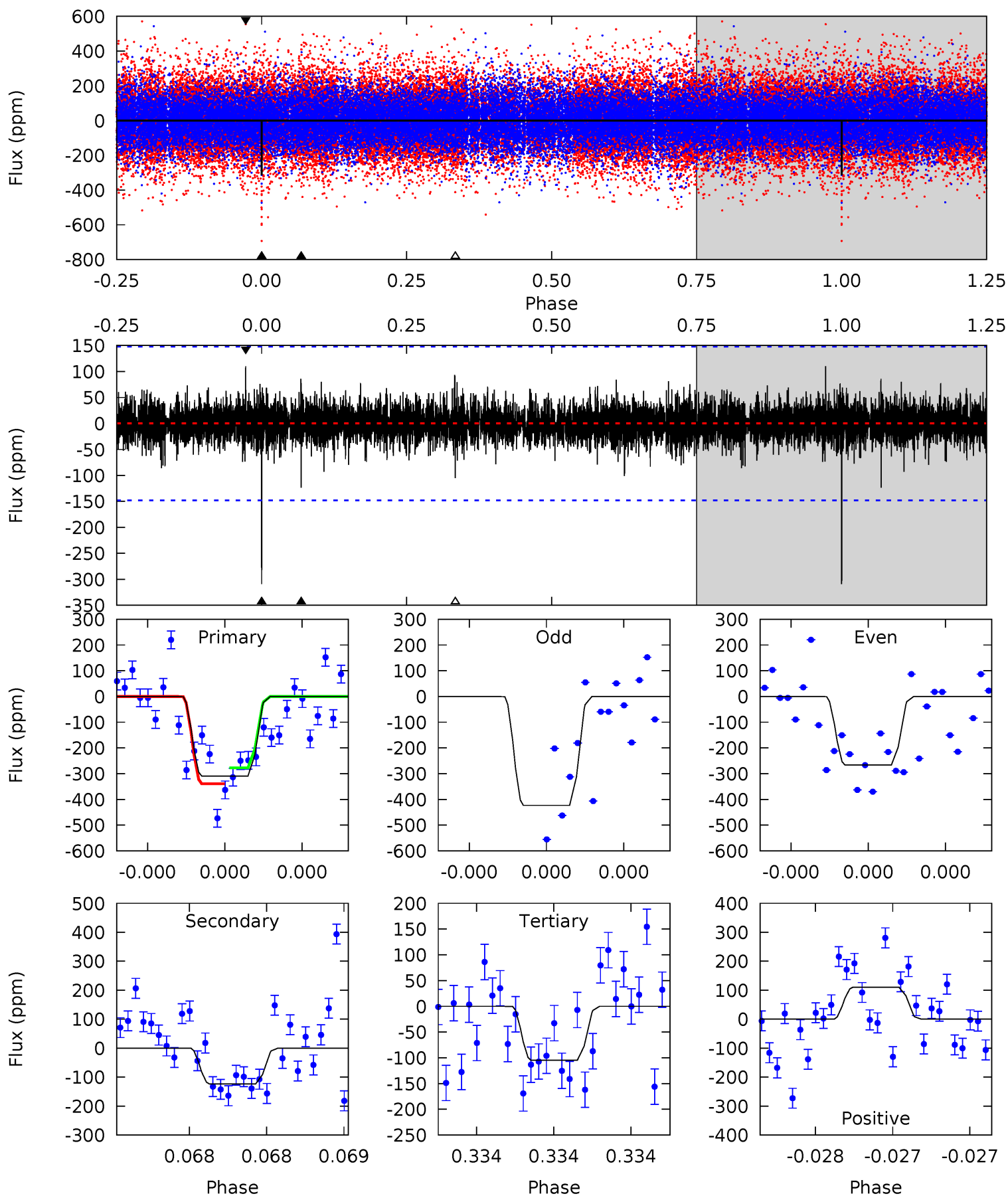
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	13.8	9.94	11.1	5.55	3.44	1.46	0.66	-0.47	3.89	2.76	3.86	1.15	0.44	0.87



Alt Model-Shift Uniqueness Test

005897826-04, P = 513.972146 Days, E = 373.626999 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.69	3.98	4.18	5.61	3.54	0.88	7.74	7.54	0.71	0.51	2.72	0.73	0.26	1.16



Stellar Parameters For KIC 005897826

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+117}_{-117}	$3.999^{+0.196}_{-0.084}$	$0.160^{+0.150}_{-0.150}$	$1.796^{+0.281}_{-0.422}$	$1.174^{+0.133}_{-0.133}$	$0.286^{+0.312}_{-0.077}$
	+2%/-2%	+5%/-2%	+94%/-94%	+16%/-23%	+11%/-11%	+109%/-27%
Source	SPE18	SPE18	SPE18	DSEP		

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

Secondary Eclipse Parameters for KIC 005897826-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-344 ± 25	$3.73^{+2.89}_{-2.18}$	416^{+19}_{-25}	5686^{+3667}_{-1153}	$23154^{+118904}_{-15286}$
Alt.	-124 ± 26	$3.76^{+2.72}_{-2.17}$	415^{+19}_{-24}	4519^{+2113}_{-827}	8309^{+37820}_{-5638}

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

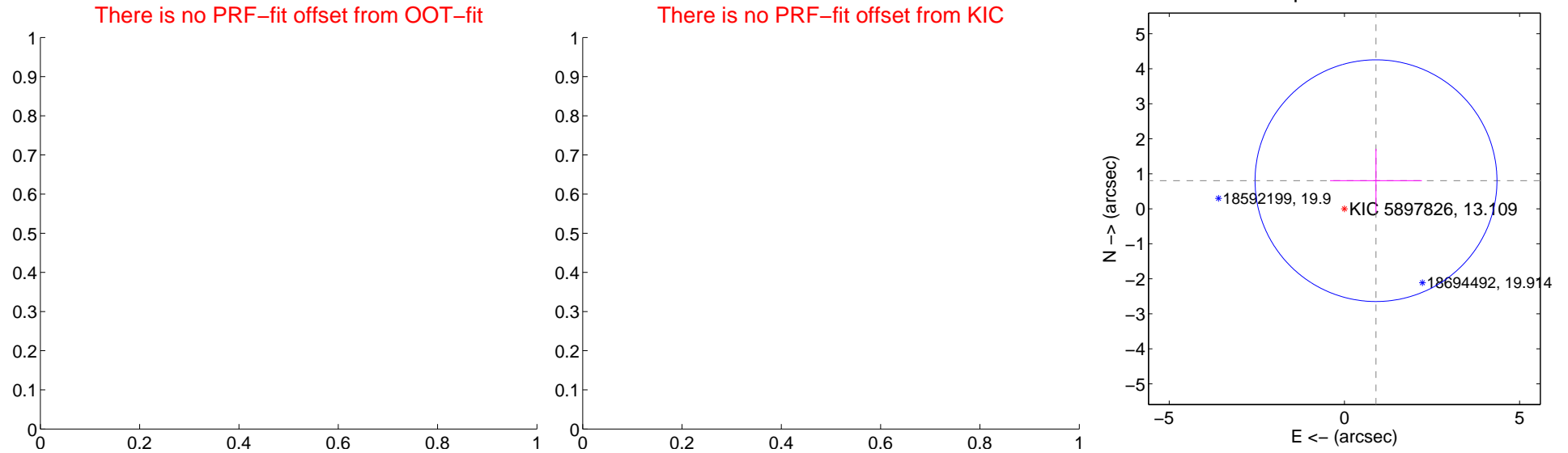
DV Centroid Data

Supplemental centroid analysis for 005897826-04. Kepler magnitude: 13.11. Transit SNR 8.29

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	1.21 ± 1.15	1.05	-0.90 ± 1.31	0.80 ± 0.91



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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q13 no difference image



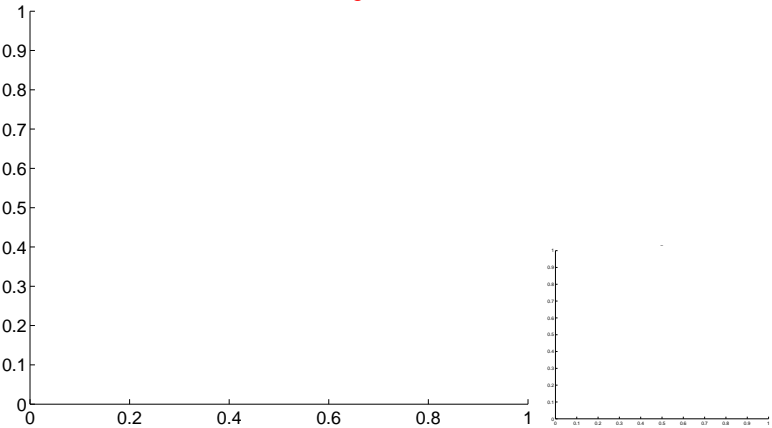
Q13 no OOT image



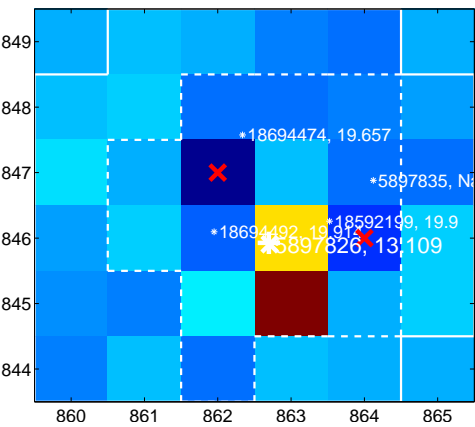
Q14 no difference image



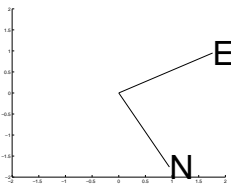
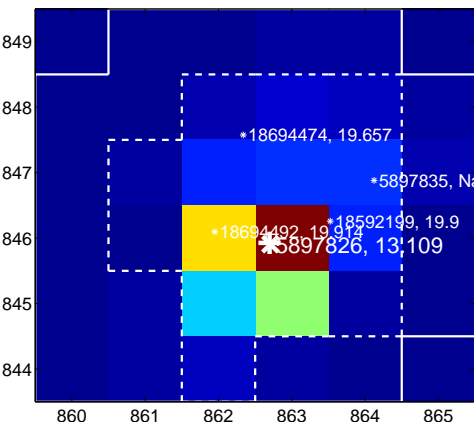
Q14 no OOT image



Q15 difference image. Poor Quality



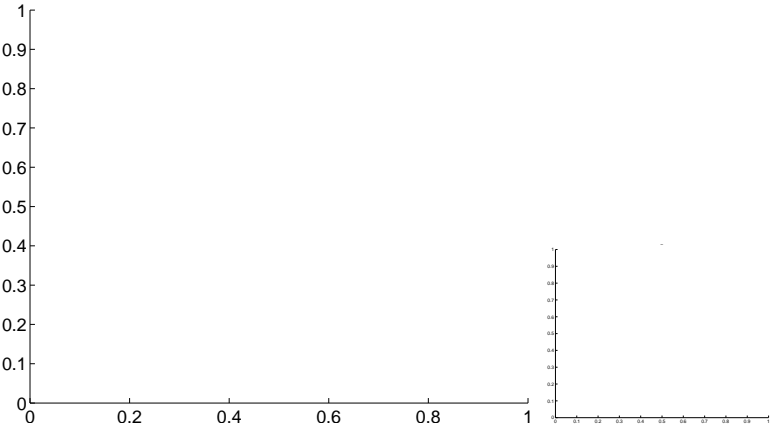
Q15 OOT image



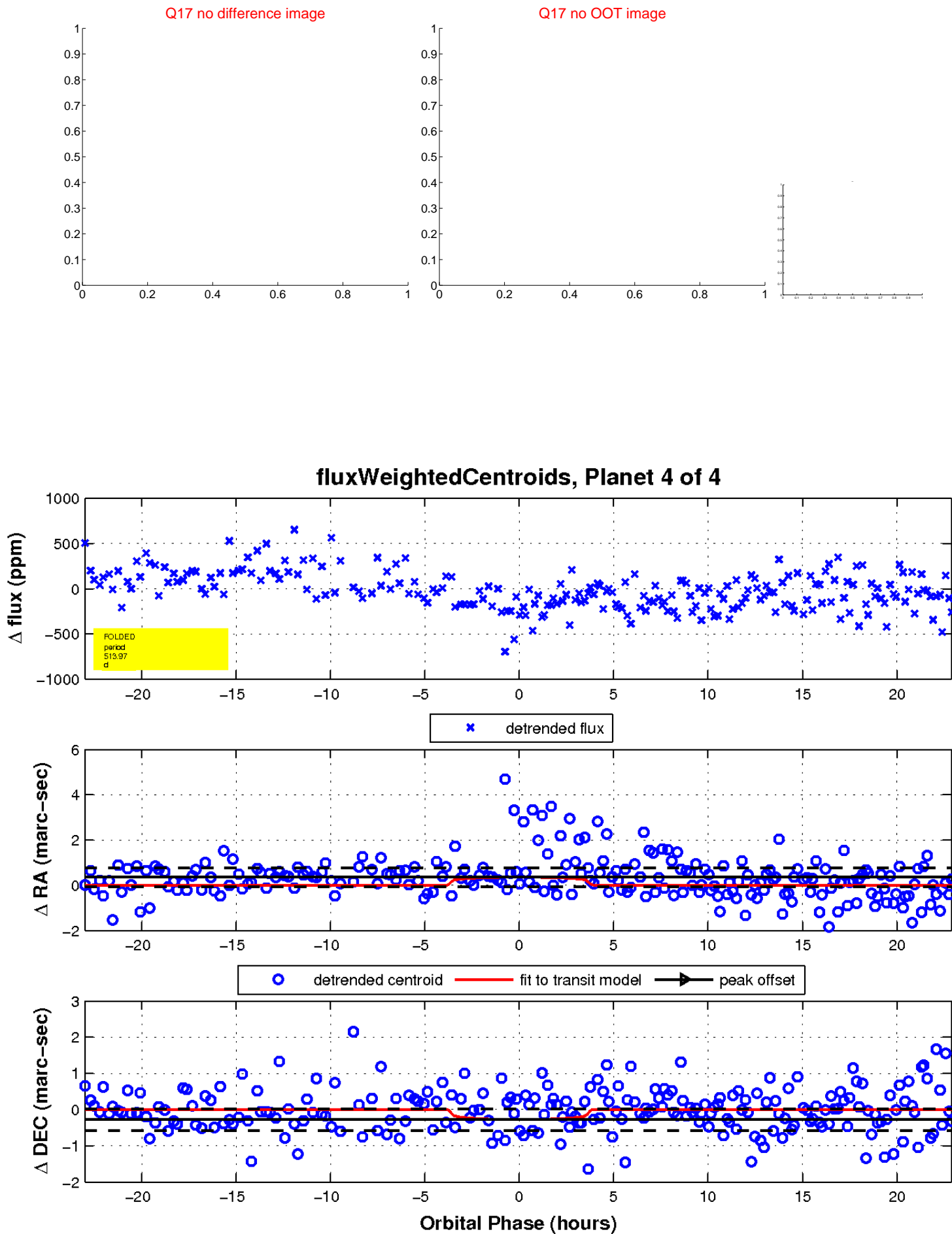
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

