

KIC 008127495

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})
008127495-01	OBS	No	421.723296	282.781322	5797.1	7.417	22.5	10.1	1.38	6875	18.65	2.65
008127495-02	OBS	No	432.440986	417.061396	15746.4	11.059	22.2	11.6	1.38	6875	29.94	2.56
008127495-03	OBS	No	575.489526	209.495990	5.1	1.917	17.5	0.0	1.38	6875	0.31	1.75
008127495-04	OBS	No	207.893556	330.438125	762.1	2.500	16.5	-1.0	1.38	6875	3.84	6.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127495-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008127495-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
008127495-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS
008127495-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

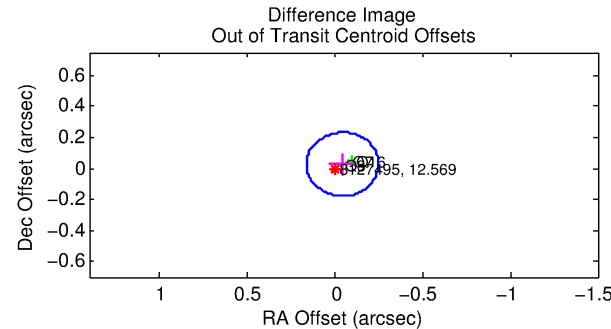
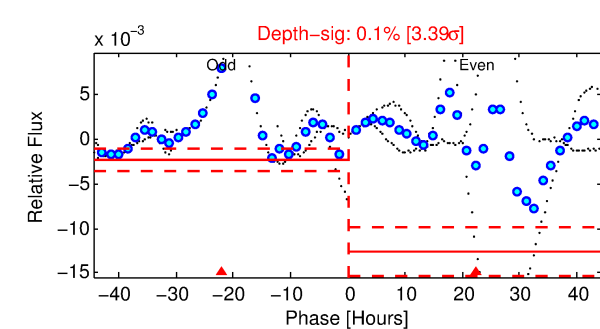
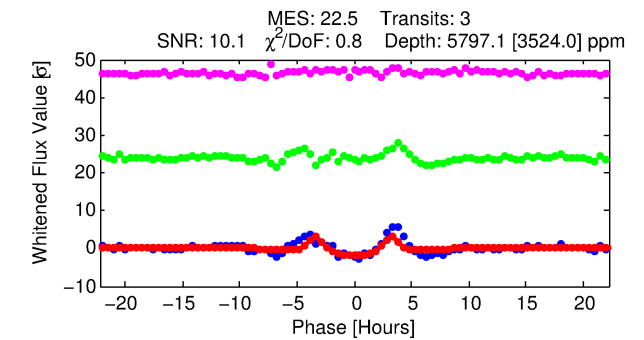
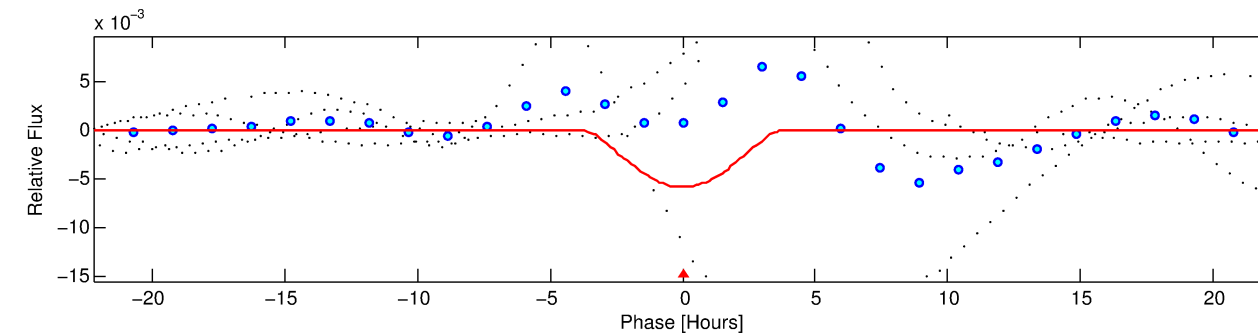
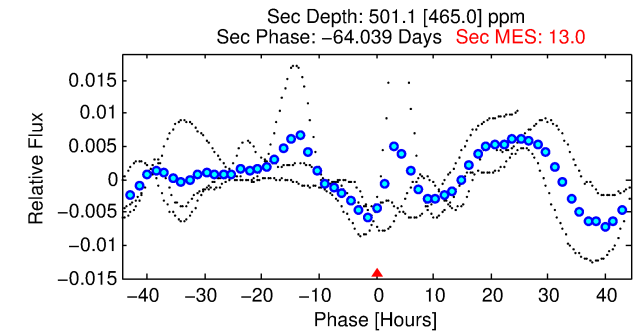
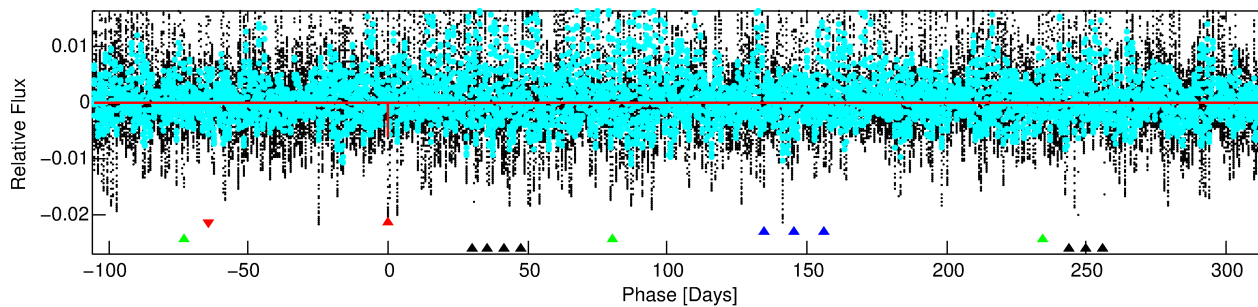
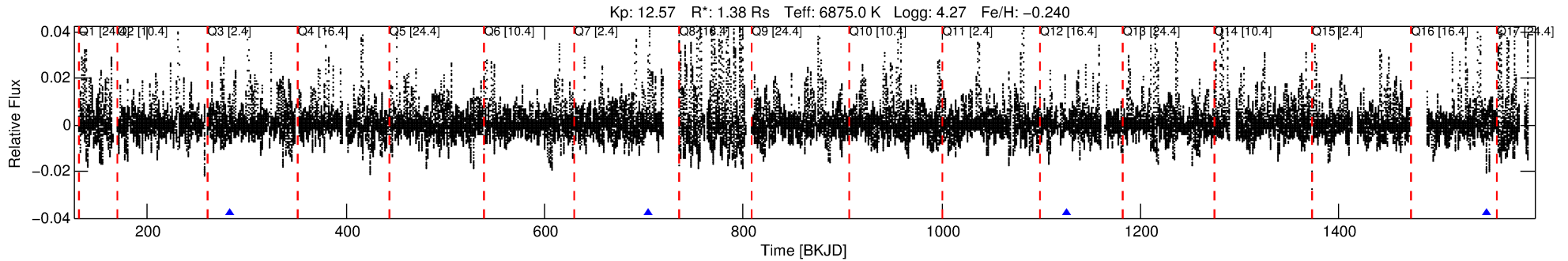
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127495-01

No Significant Match Found

DV One-Page Summary

KIC: 8127495 Candidate: 1 of 4 Period: 421.723 d



DV Fit Results:

Period = 421.72330 [0.00231] d
Epoch = 282.7813 [0.0039] BKJD
Rp/R* = 0.1243 [0.0653]
a/R* = 223.17 [19.16]
b = 1.00 [0.04]
Seff = 2.65 [1.05]
Teq = 325 [32] K
Rp = 18.65 [11.46] Re
a = 1.1947 [0.3099] AU
Ag = 1131.59 [1640.45] [0.69σ]
Teffp = 2918 [1029] K [2.52σ]

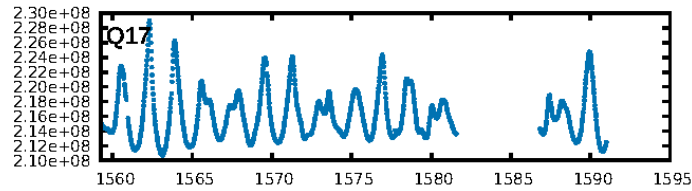
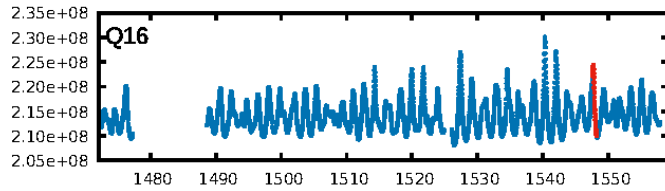
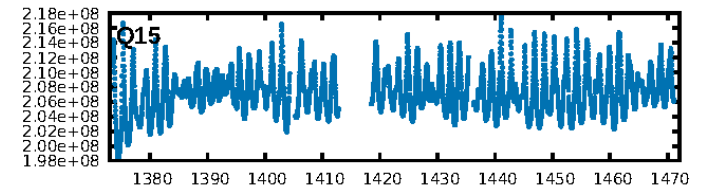
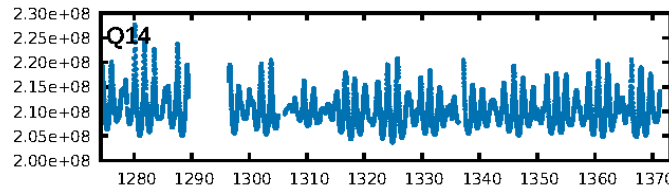
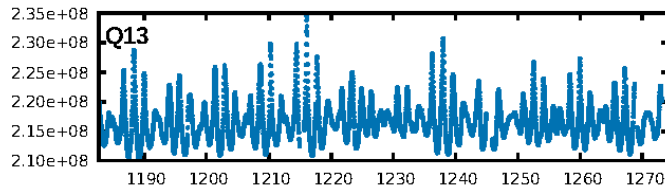
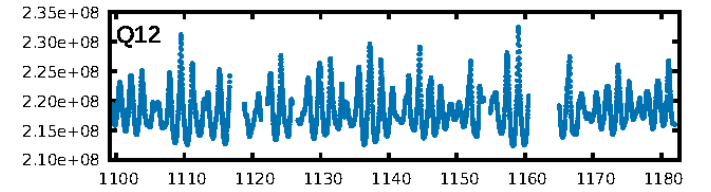
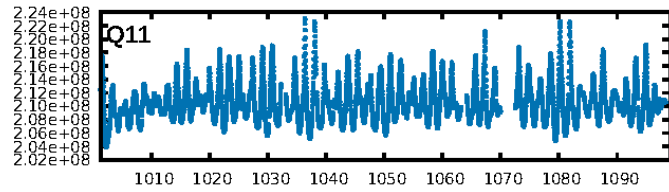
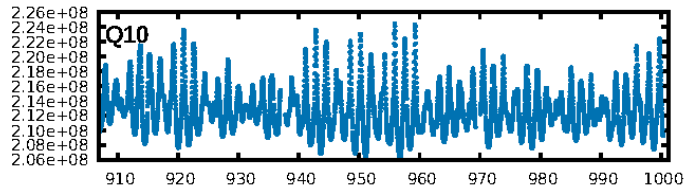
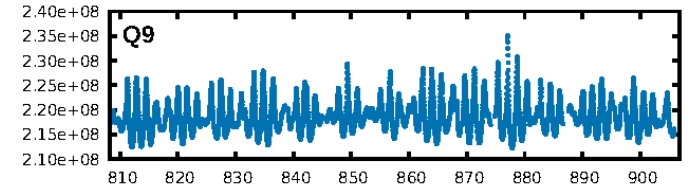
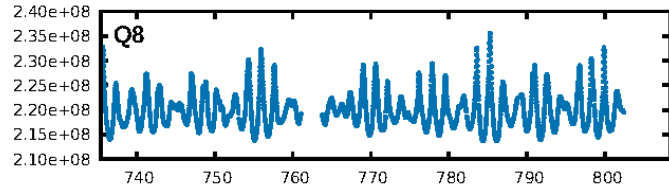
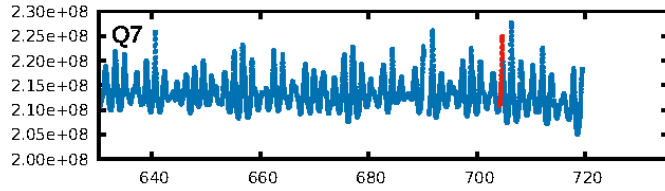
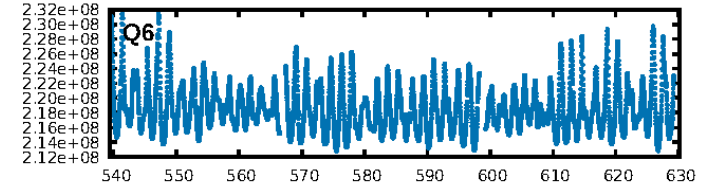
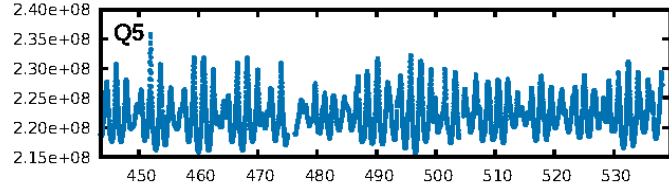
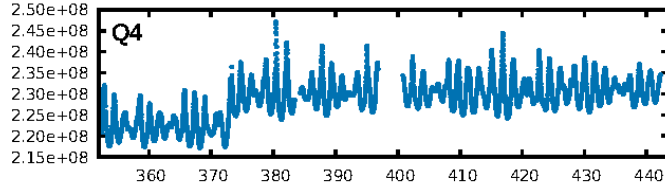
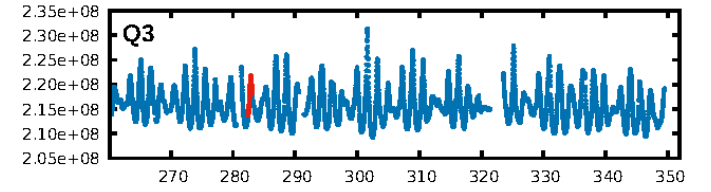
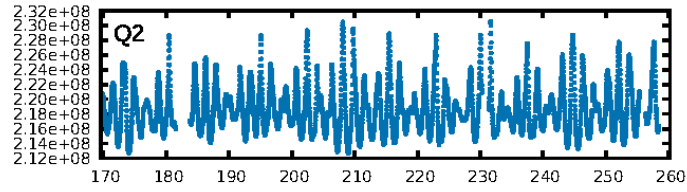
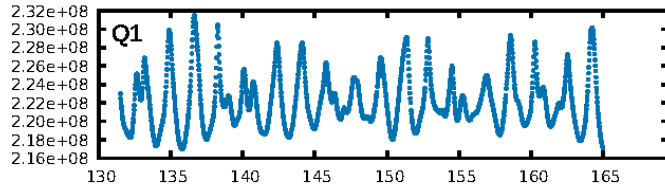
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [655.64σ]
LongPeriod-sig: 100.0% [19.32σ]
ModelChiSquare2-sig: 28.3%
ModelChiSquareGof-sig: 97.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7395
Centroid-sig: 84.5%
Centroid-so: 0.340 arcsec [1.72σ]
OotOffset-rm: 0.051 arcsec [0.75σ]
KicOffset-rm: 0.205 arcsec [2.57σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [3/3]

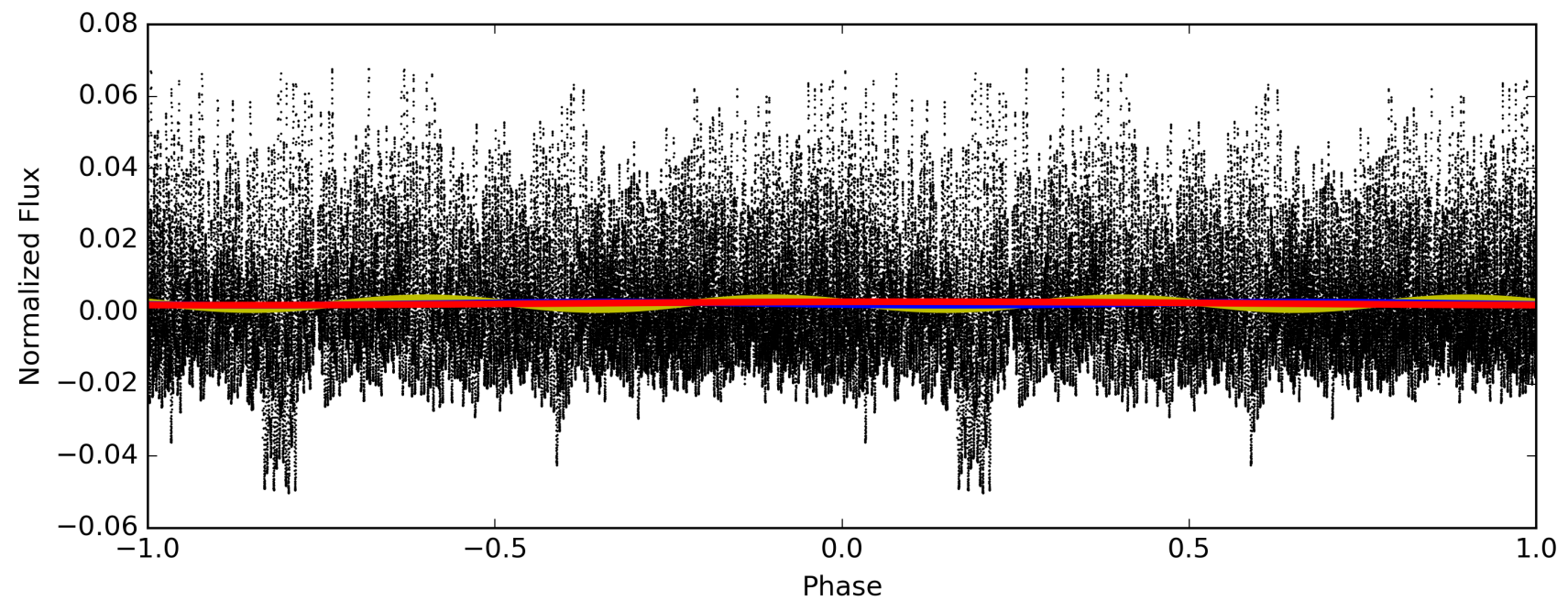
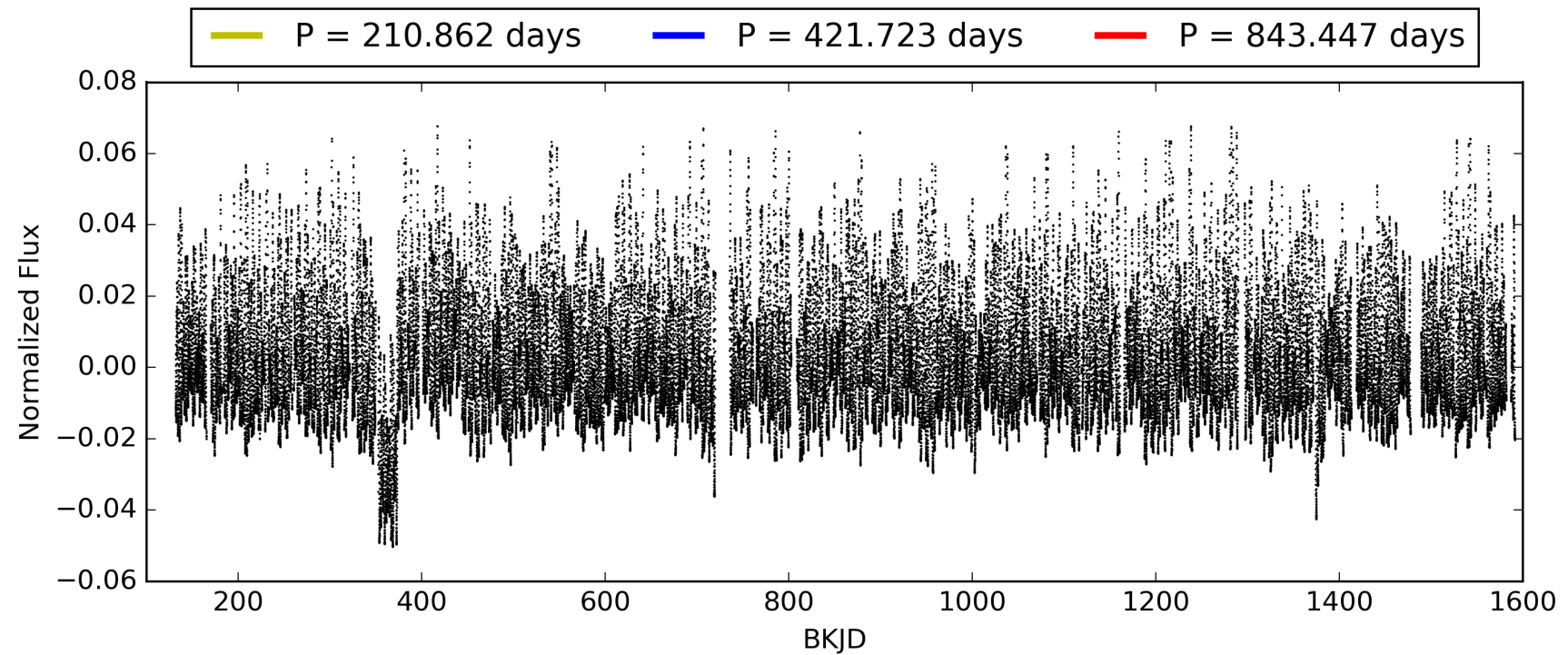
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:36:29 Z

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

TCE 008127495-01, PDC Light Curves

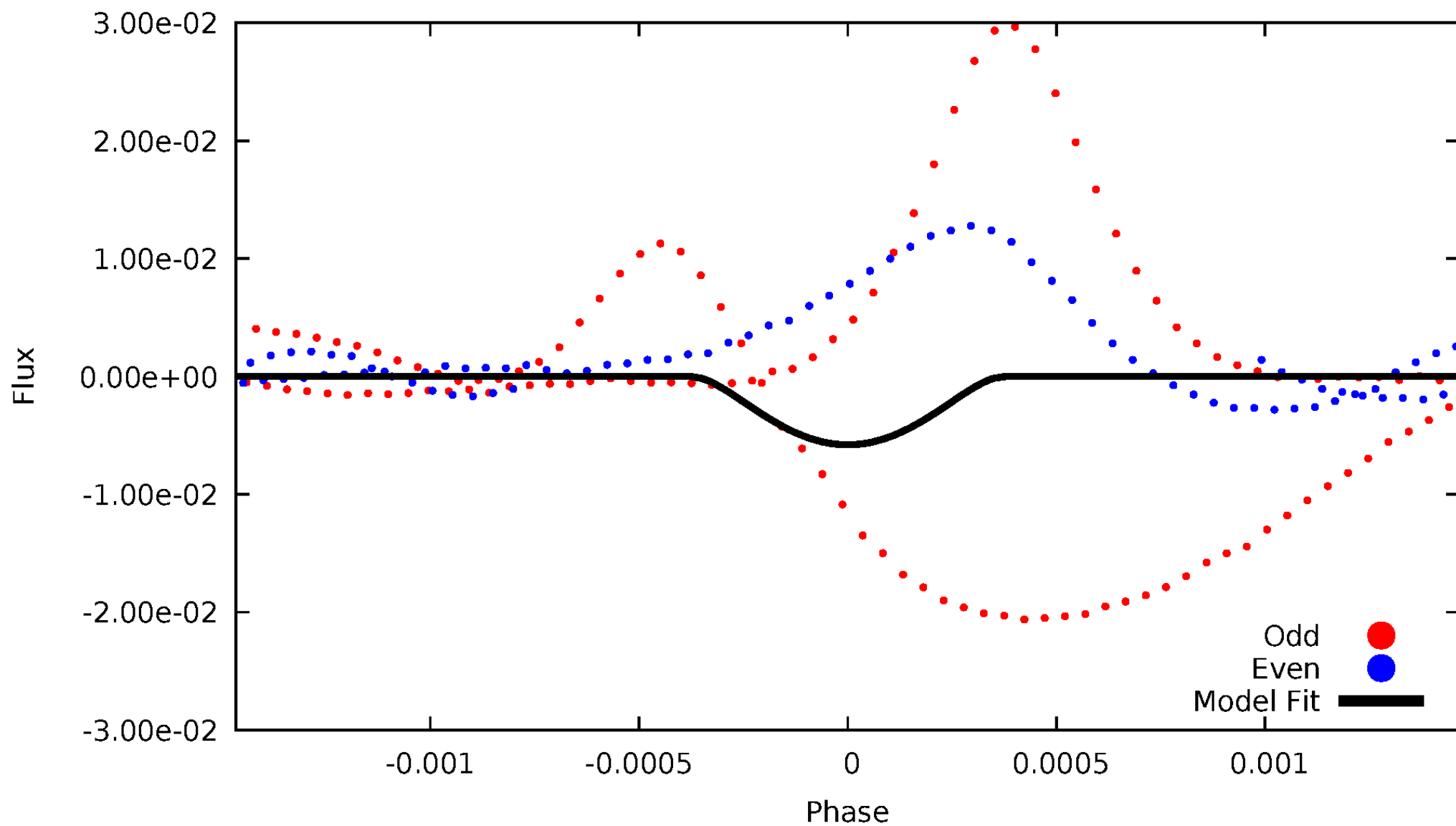


TCE 008127495-01



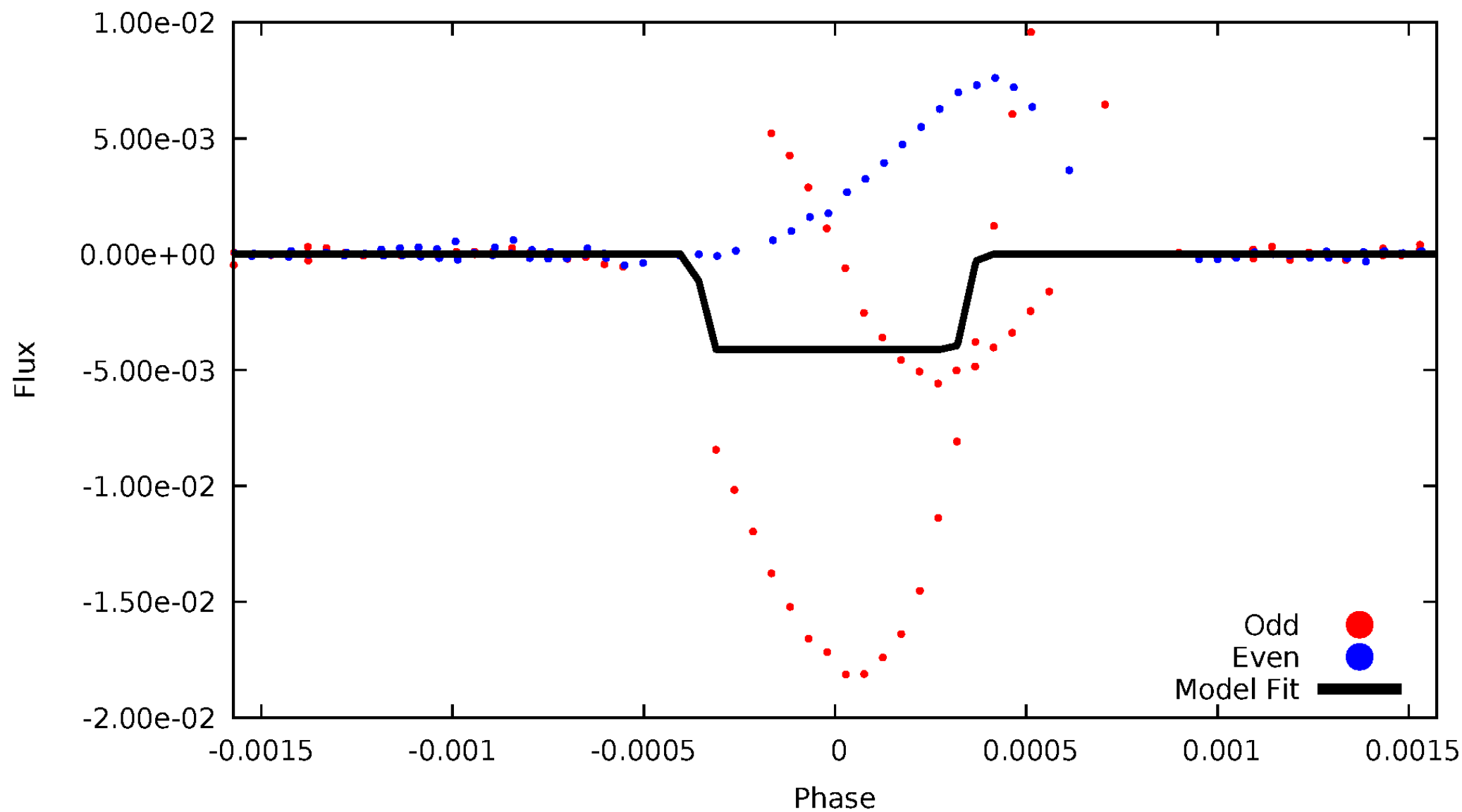
DV Odd/Even

TCE 008127495-01



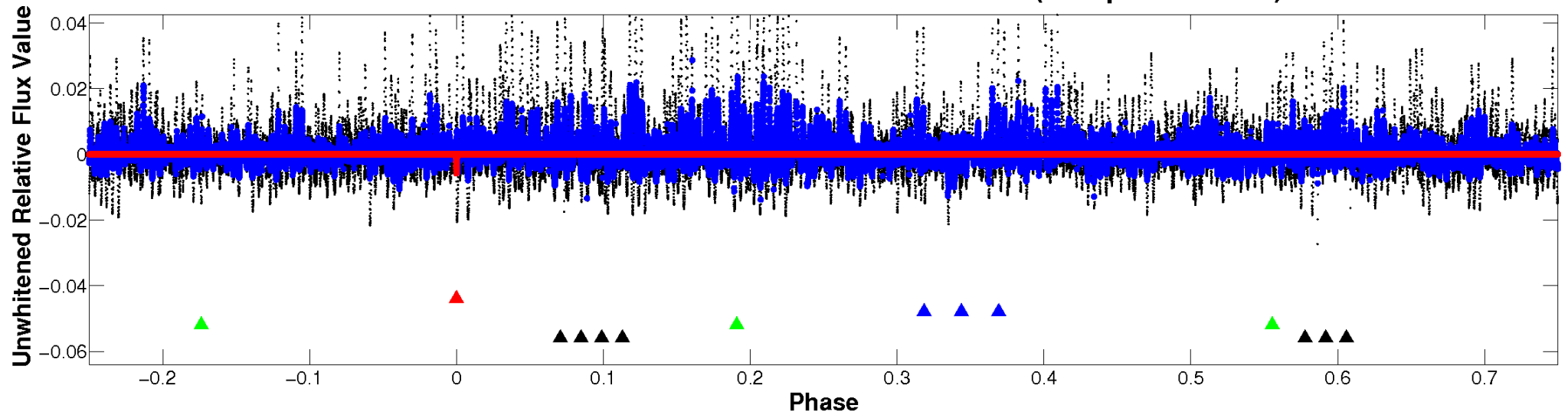
ALT Odd/Even

TCE 008127495-01

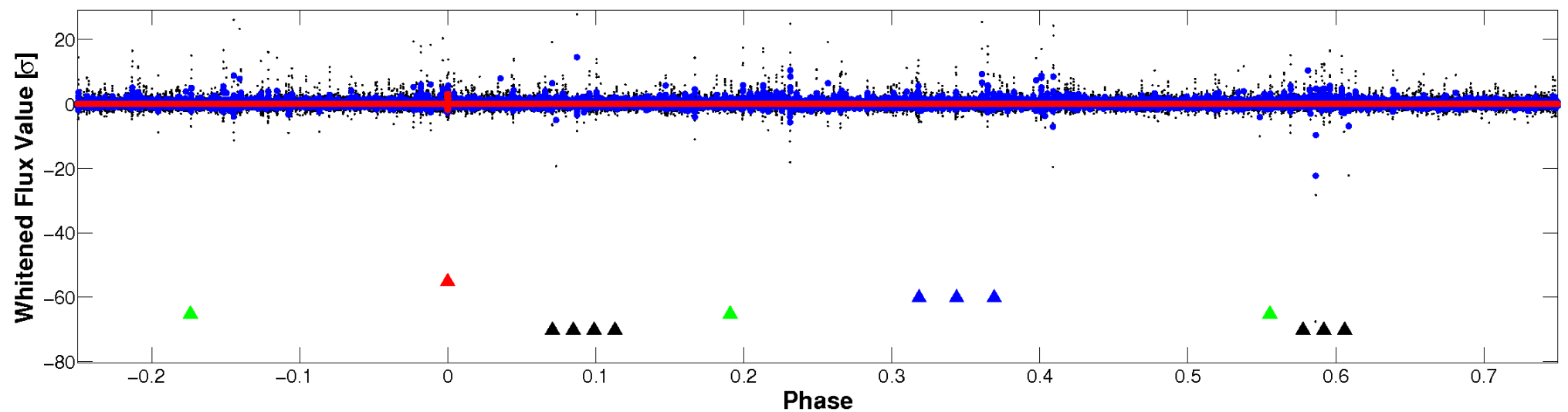


Non-Whitened Vs. Whitened Light Curve

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

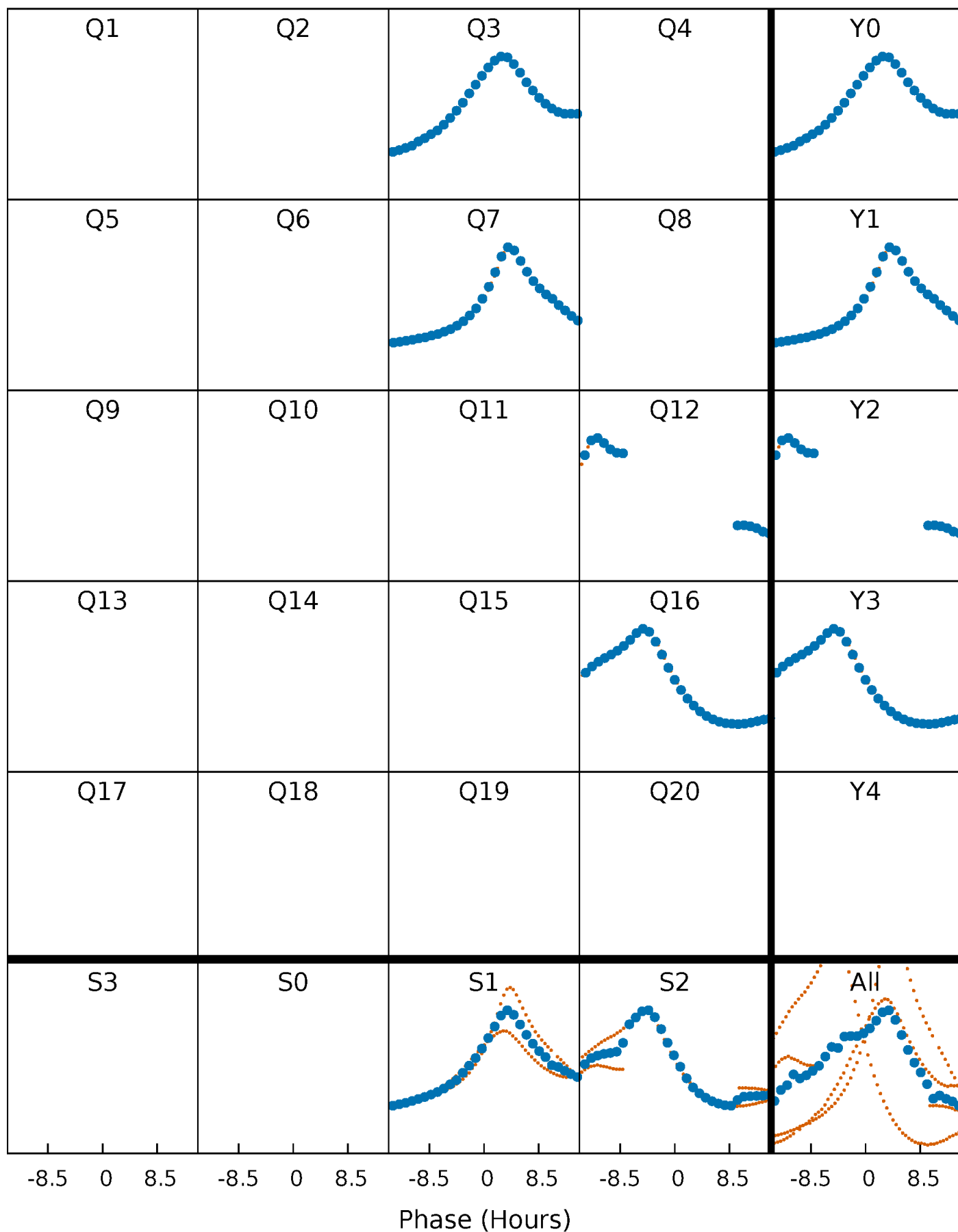


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



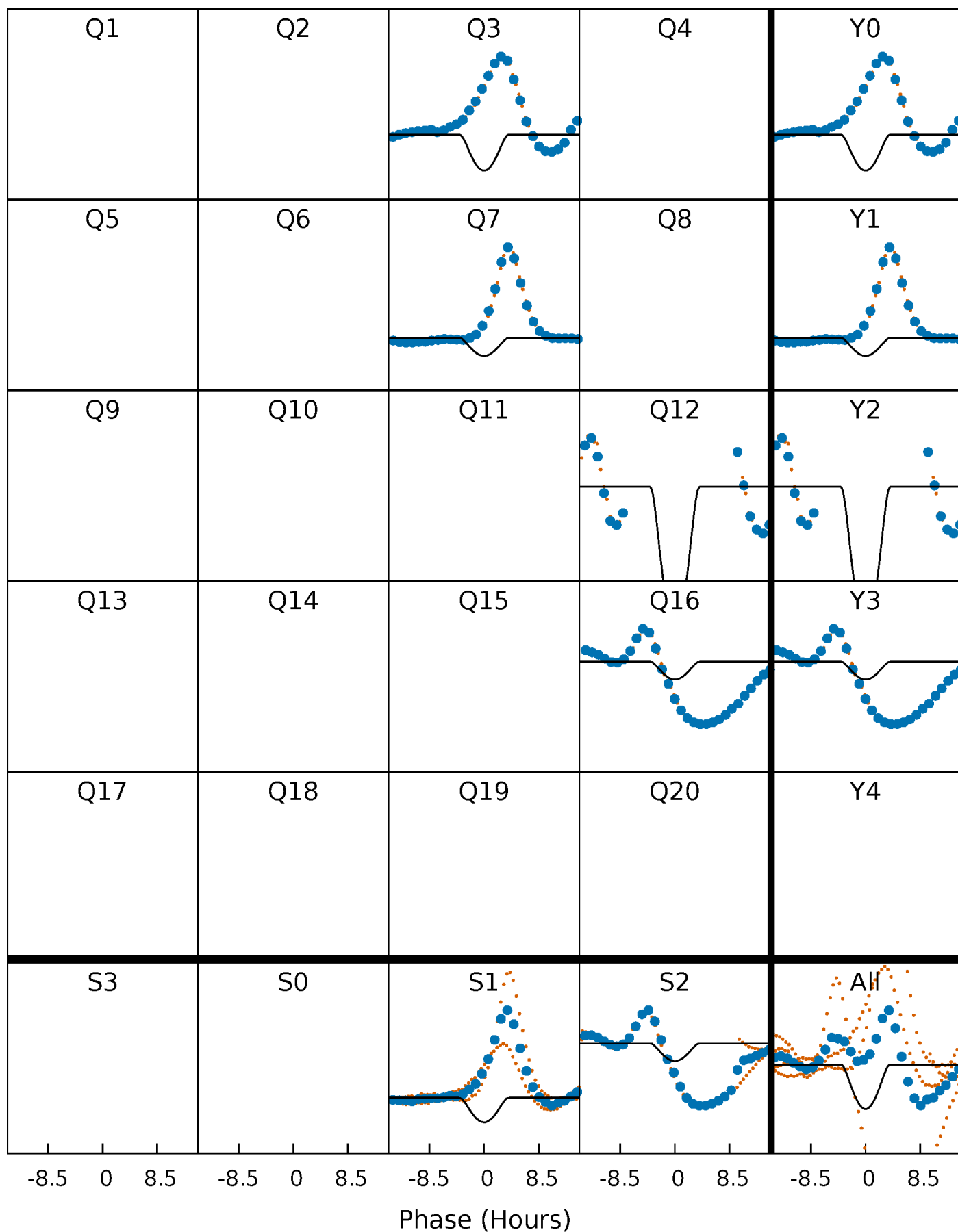
PDC Quarter-Phased Transit Curves

TCE 008127495-01 P=421.723296 Days $T_0=282.781321$ (BKJD)



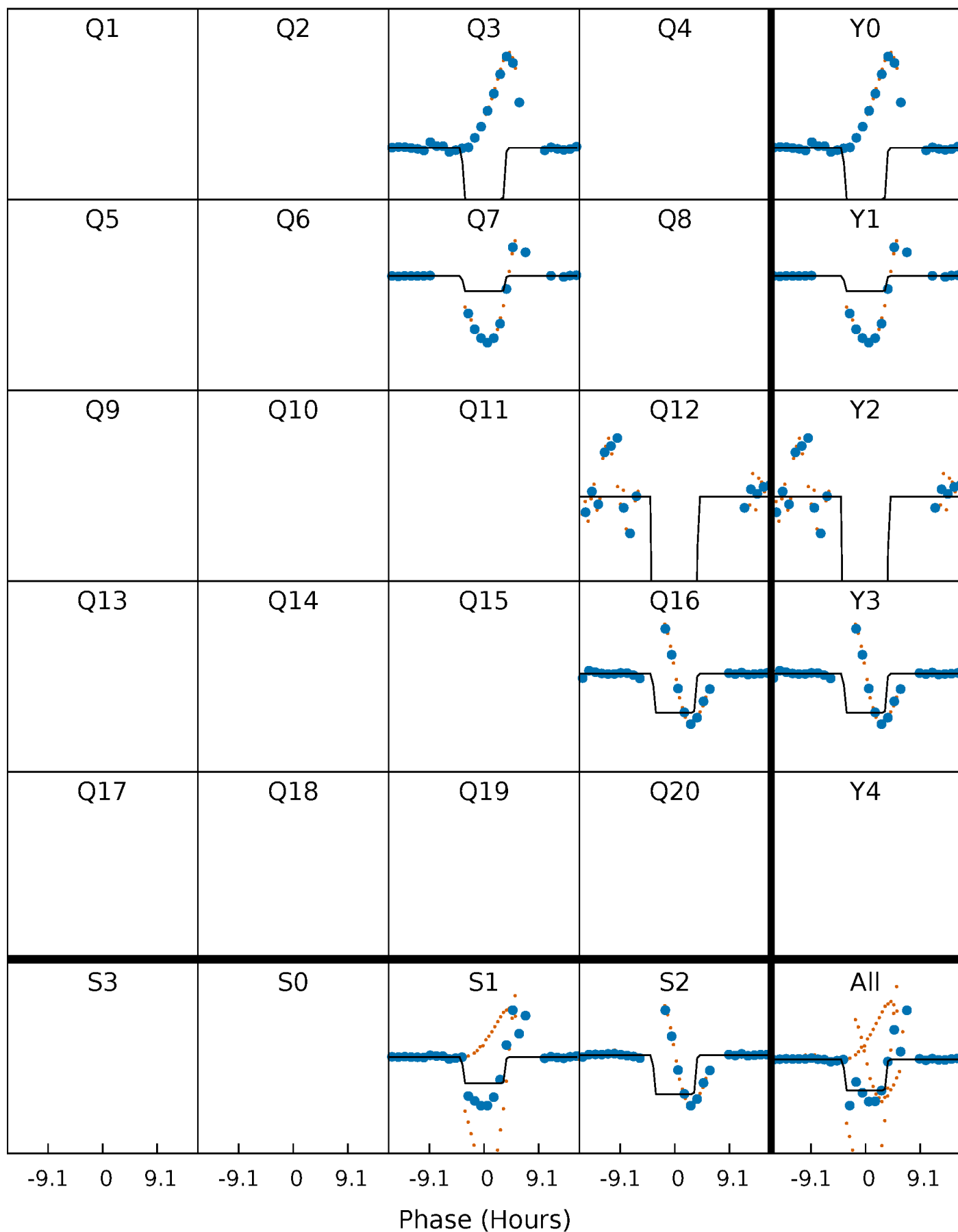
DV Quarter-Phased Transit Curves

TCE 008127495-01 P=421.723296 Days $T_0=282.781321$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

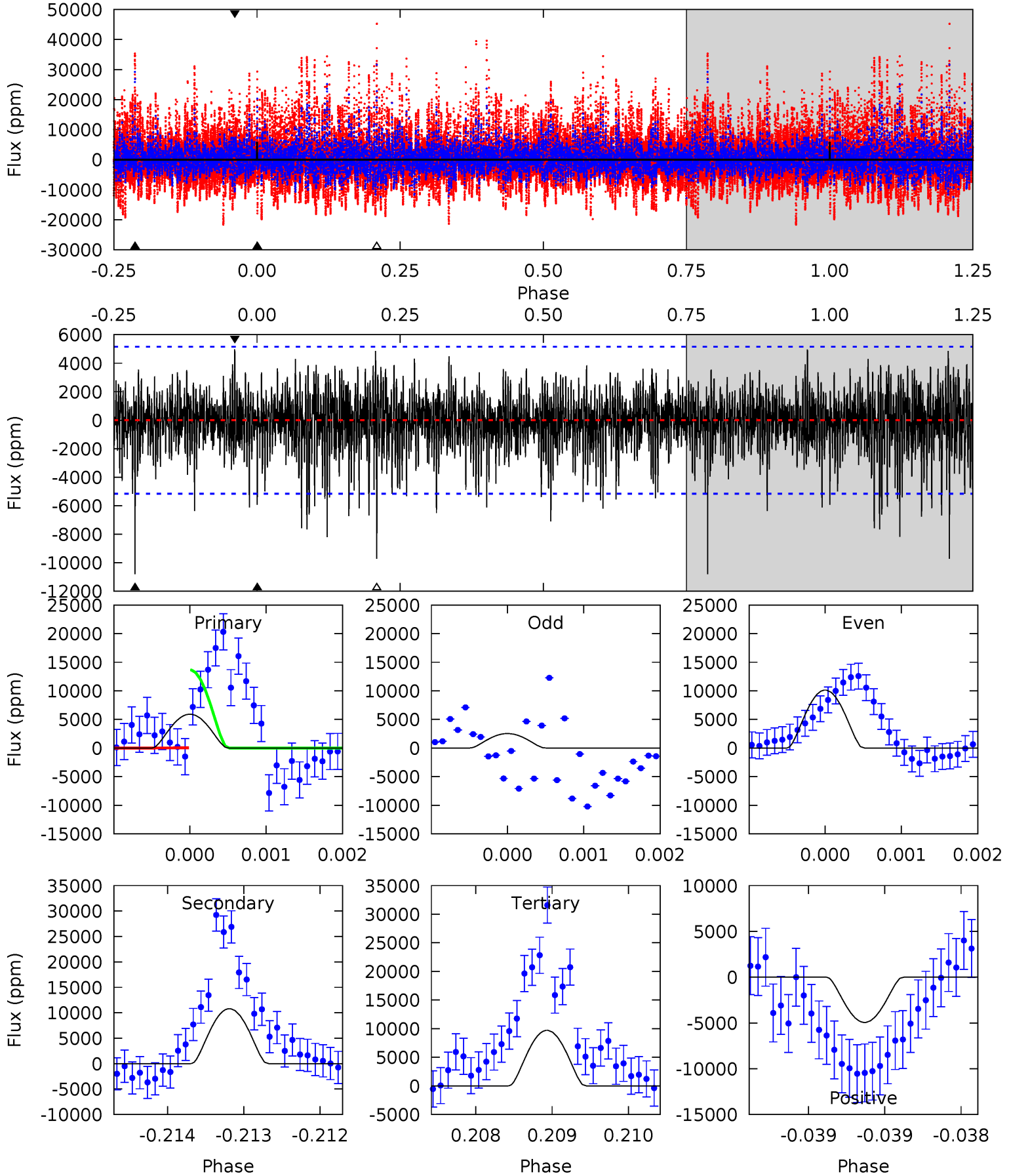
TCE 008127495-01 P=421.707811 Days $T_0=282.729284$ (BKJD)



DV Model-Shift Uniqueness Test

008127495-01, P = 421.723296 Days, E = 282.781321 Days

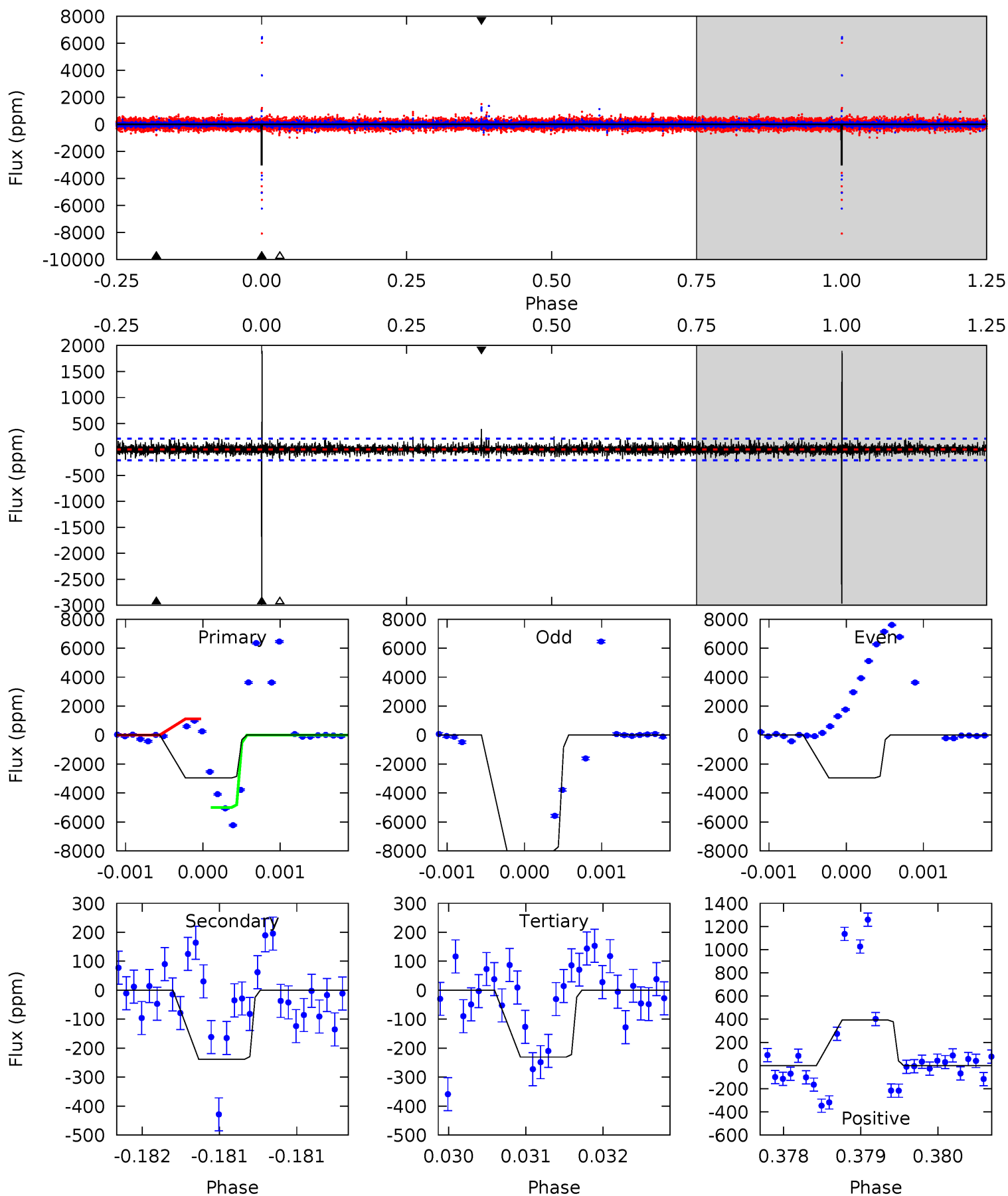
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.31	11.5	10.4	5.28	5.50	3.37	1.80	-4.04	1.04	1.17	6.25	3.53	0.20	0.31	7.08



Alt Model-Shift Uniqueness Test

008127495-01, P = 421.707811 Days, E = 282.729284 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.5	6.32	6.11	10.4	5.51	3.38	1.09	72.4	68.1	0.21	-4.08	46.5	3.28	0.39	48.8



Stellar Parameters For KIC 008127495

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+168}_{-264}	$4.268^{+0.105}_{-0.195}$	$-0.240^{+0.250}_{-0.350}$	$1.375^{+0.437}_{-0.235}$	$1.288^{+0.185}_{-0.203}$	$0.698^{+0.336}_{-0.360}$
	+2%/-4%	+2%/-5%	+104%/-146%	+32%/-17%	+14%/-16%	+48%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008127495-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10803 ± 938	$19.27^{+10.09}_{-9.30}$	457^{+33}_{-27}	6245^{+2774}_{-1143}	22531^{+62848}_{-12842}
Alt.	-239 ± 38	$11.74^{+9.84}_{-7.59}$	459^{+33}_{-27}	3545^{+1655}_{-600}	1293^{+8946}_{-915}

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

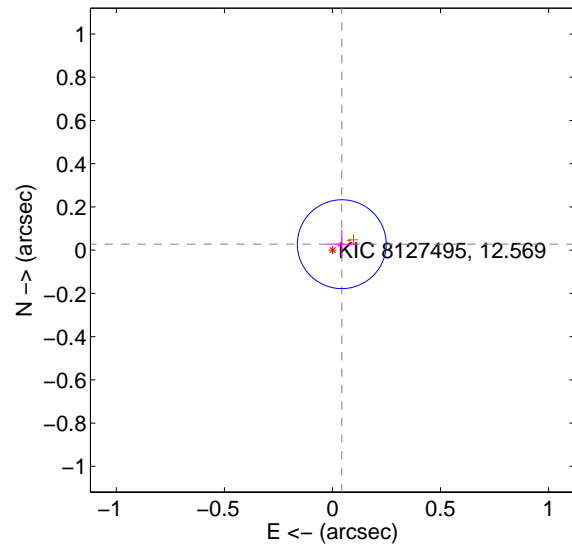
Supplemental centroid analysis for 008127495-01. Kepler magnitude: 12.57. Transit SNR 10.08

There are 0 quarters with good PRF difference image offsets

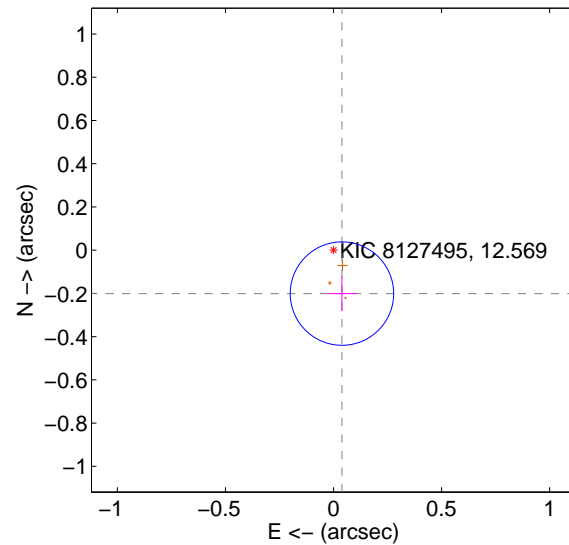
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.069	0.75	-0.043 ± 0.069	0.028 ± 0.067
PRF-fit source offset from KIC position	0.205 ± 0.080	2.57	-0.039 ± 0.068	-0.201 ± 0.081
photometric centroid source offset	0.34 ± 0.20	1.72	0.34 ± 0.20	0.04 ± 0.12

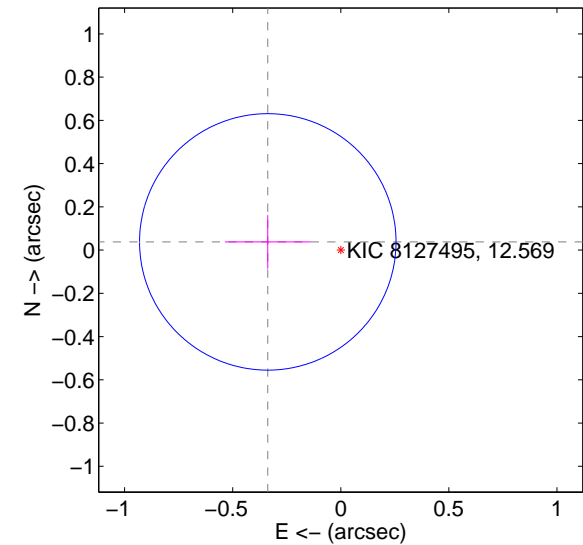
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

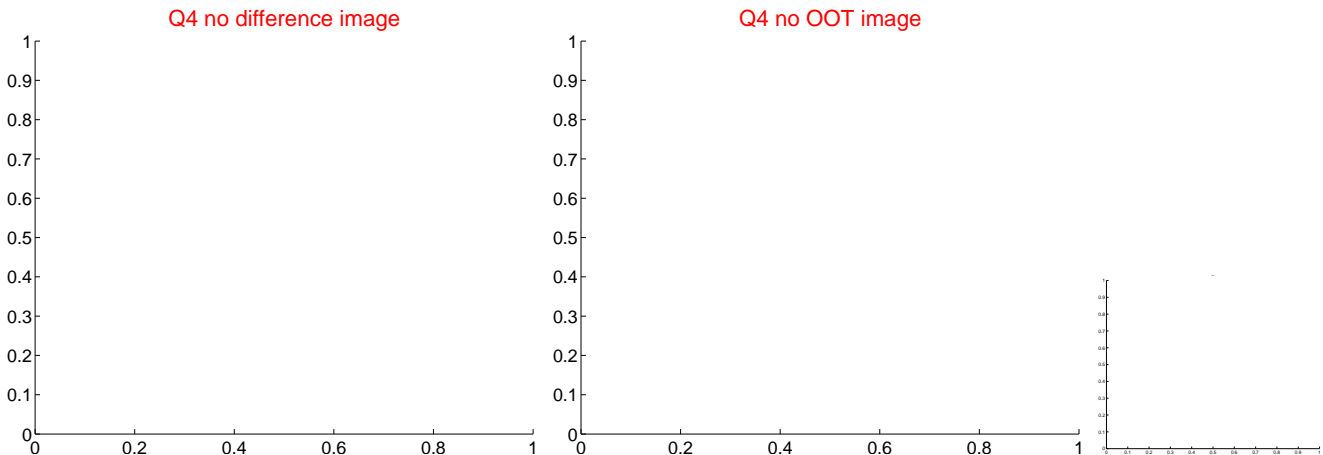
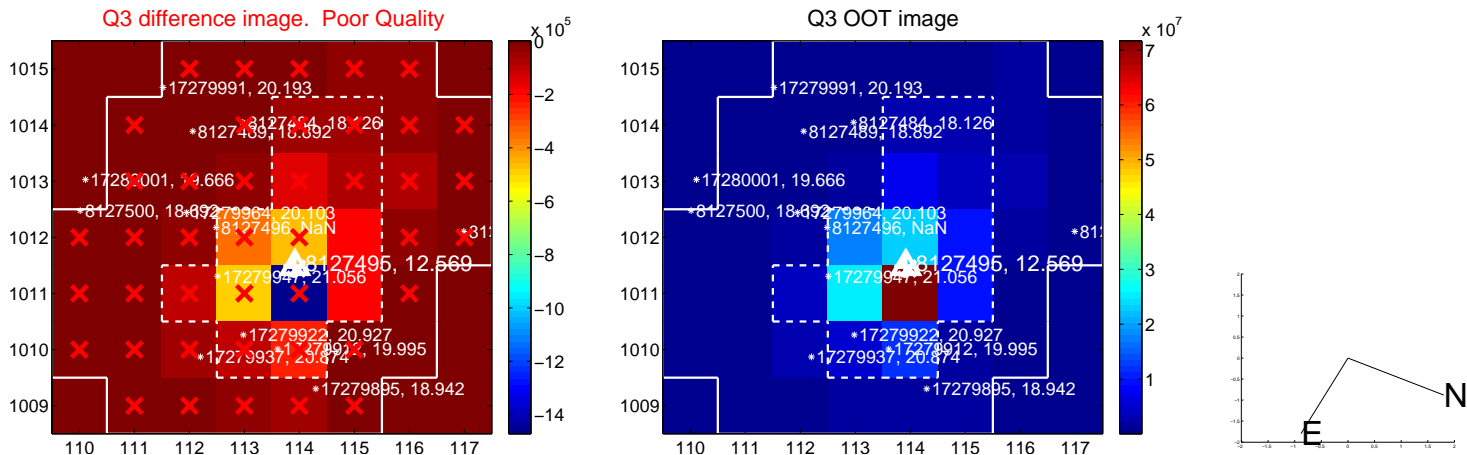


offset from photometric centroids



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.

Q5 no difference image



Q5 no OOT image



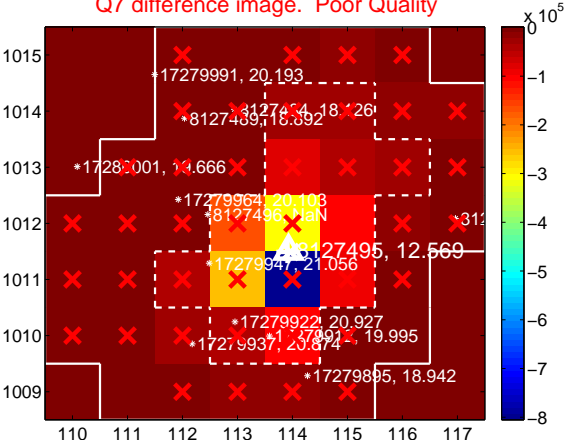
Q6 no difference image



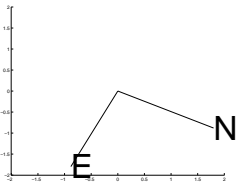
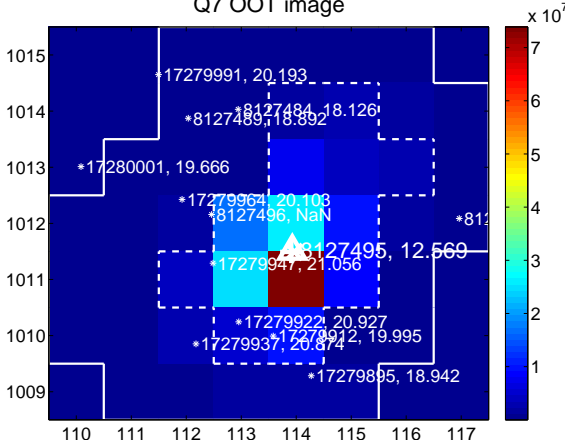
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



Q8 no difference image



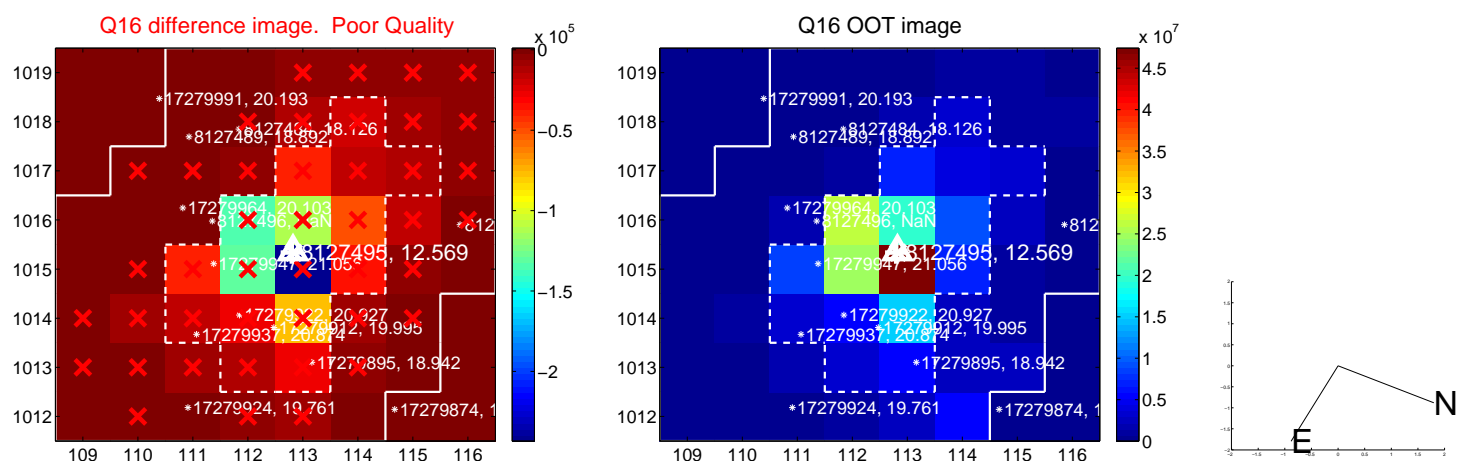
Q8 no OOT image



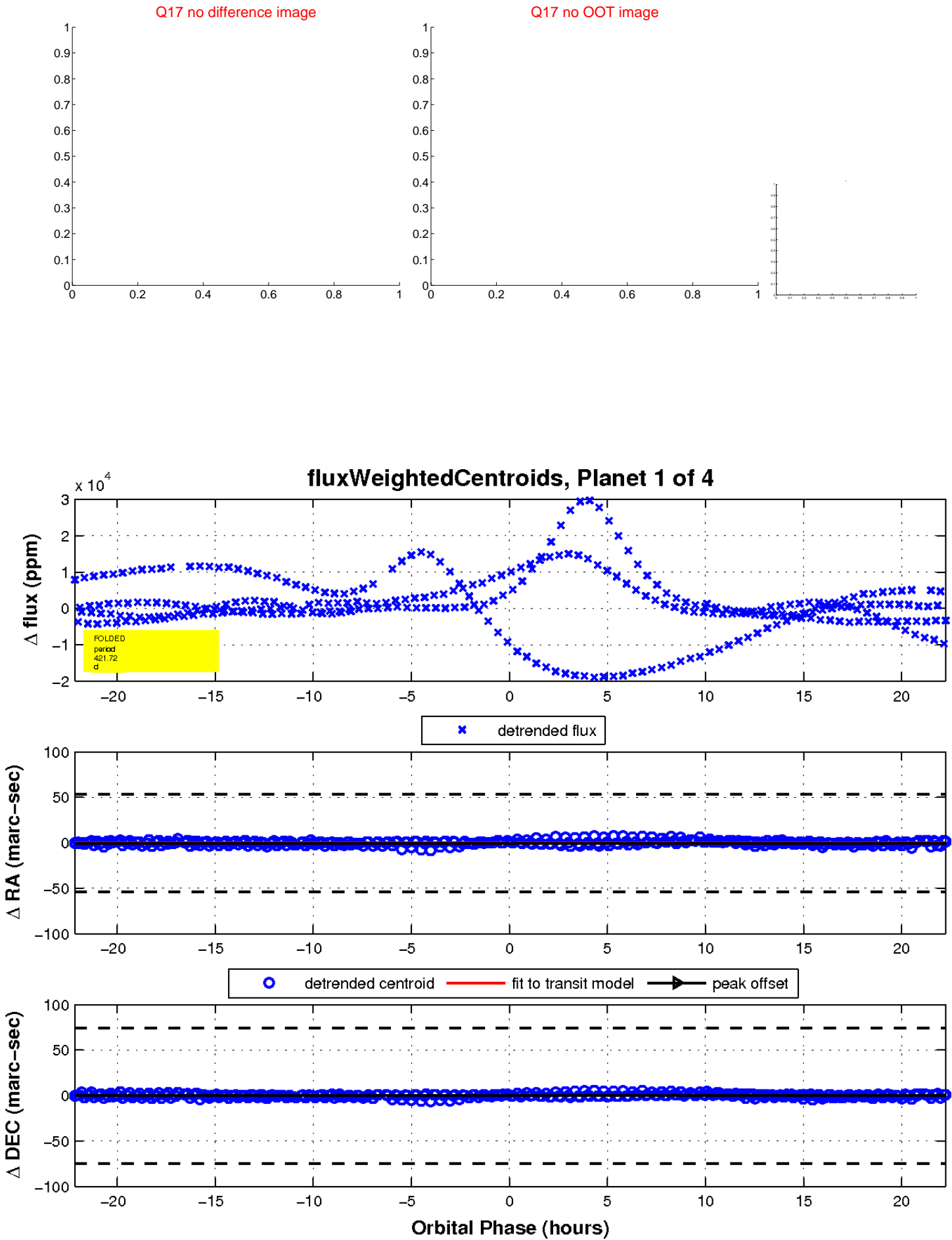
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

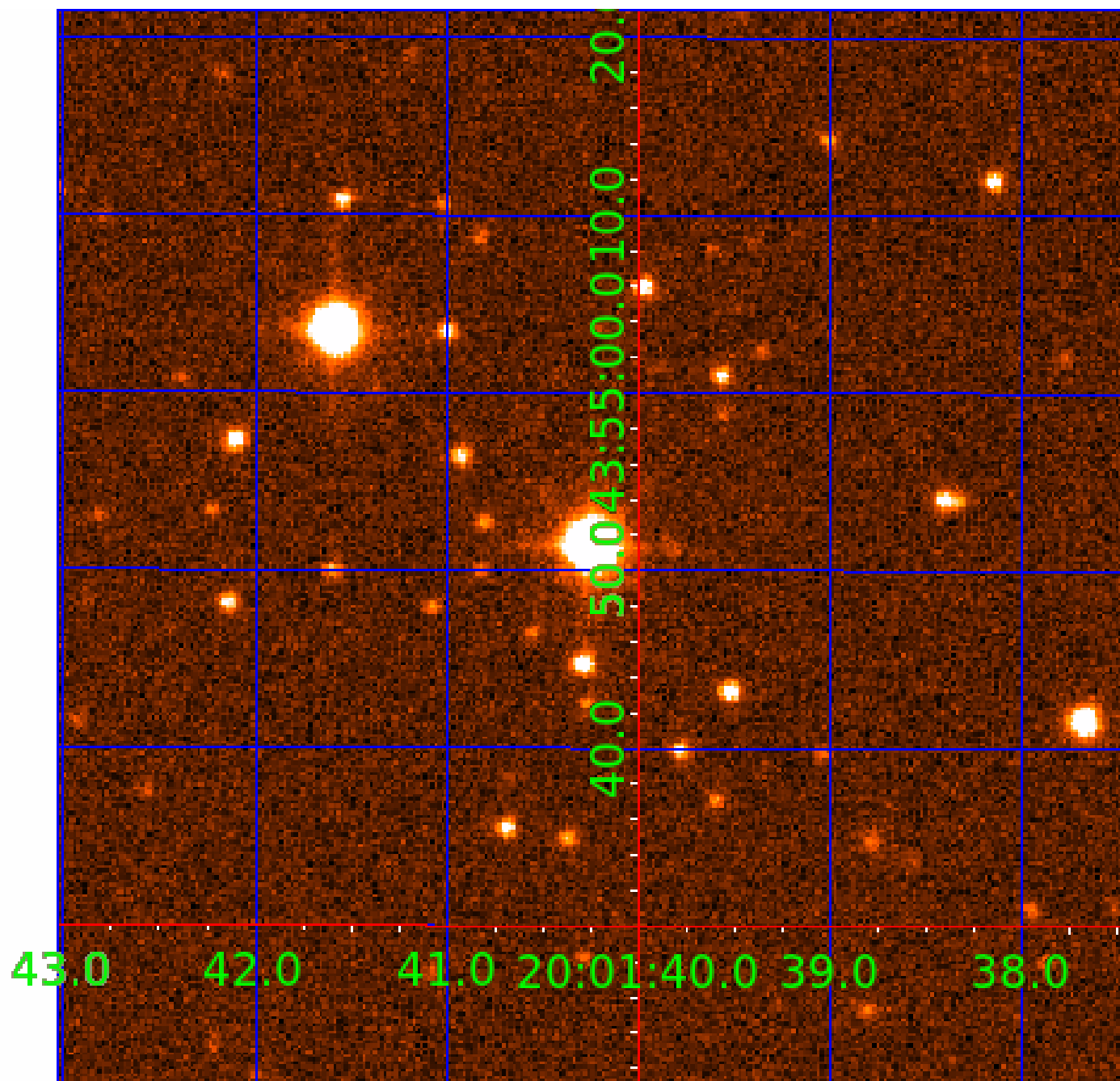


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008127495

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})
008127495-01	OBS	No	421.723296	282.781322	5797.1	7.417	22.5	10.1	1.38	6875	18.65	2.65
008127495-02	OBS	No	432.440986	417.061396	15746.4	11.059	22.2	11.6	1.38	6875	29.94	2.56
008127495-03	OBS	No	575.489526	209.495990	5.1	1.917	17.5	0.0	1.38	6875	0.31	1.75
008127495-04	OBS	No	207.893556	330.438125	762.1	2.500	16.5	-1.0	1.38	6875	3.84	6.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127495-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008127495-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
008127495-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS
008127495-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

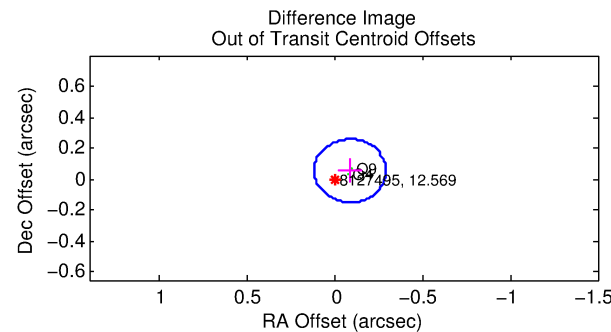
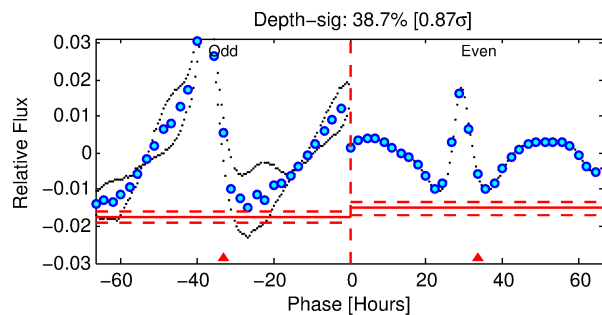
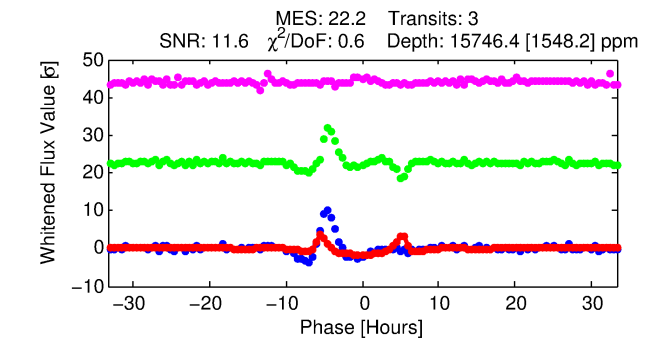
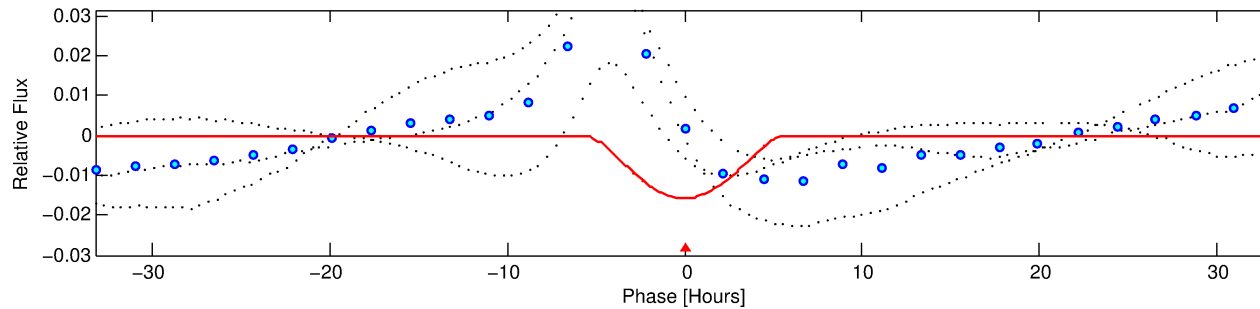
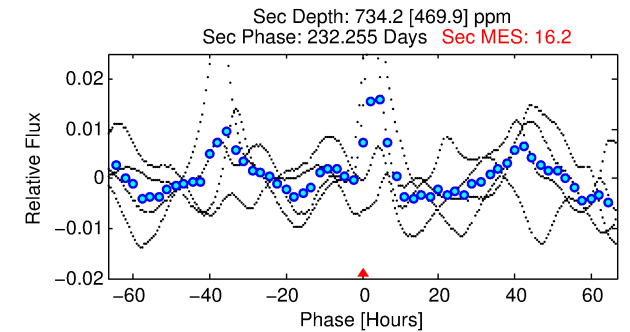
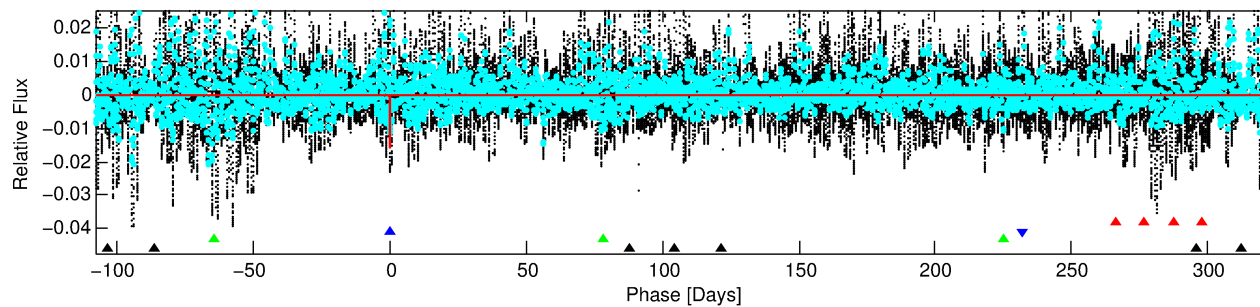
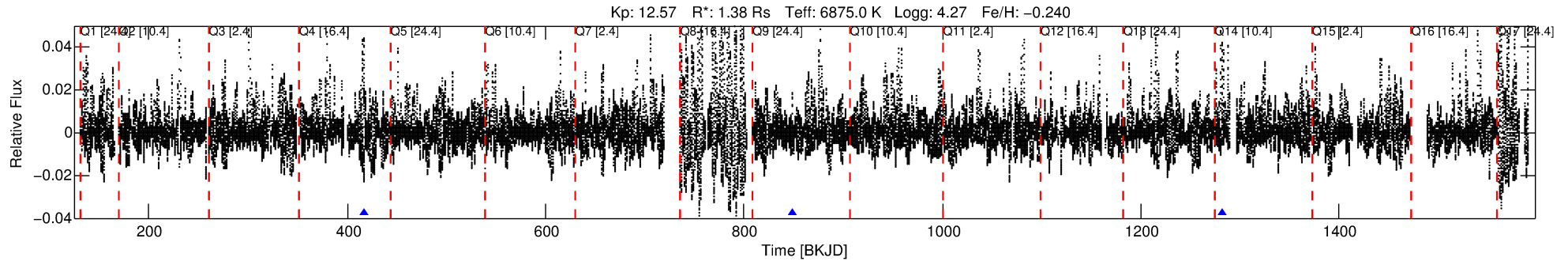
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127495-02

No Significant Match Found

DV One-Page Summary

KIC: 8127495 Candidate: 2 of 4 Period: 432.441 d



DV Fit Results:

Period = 432.44099 [0.00276] d
Epoch = 417.0614 [0.0032] BKJD
Rp/R* = 0.1995 [0.0659]
a/R* = 197.91 [6.74]
b = 1.00 [0.08]
Seff = 2.56 [1.02]
Teq = 323 [32] K
Rp = 29.94 [13.72] Re
a = 1.2148 [0.3151] AU
Ag = 665.15 [658.52] [1.01σ]
Teffp = 2534 [591] K [3.74σ]

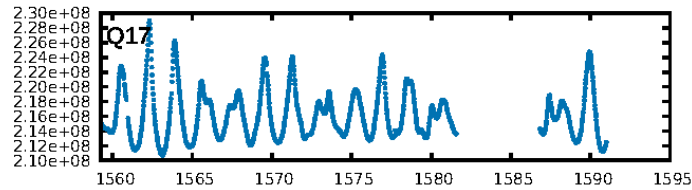
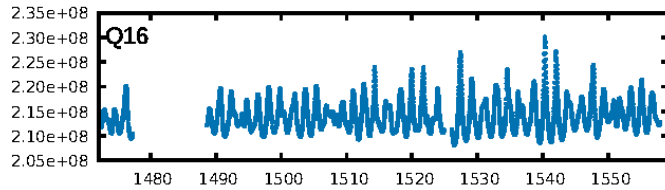
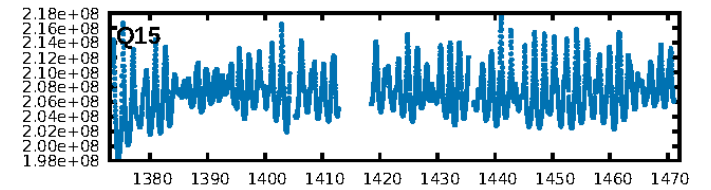
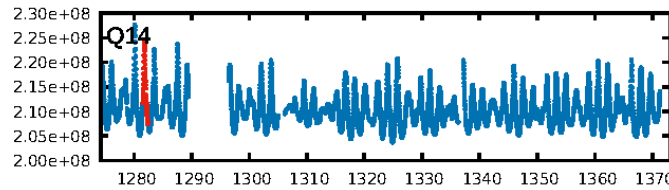
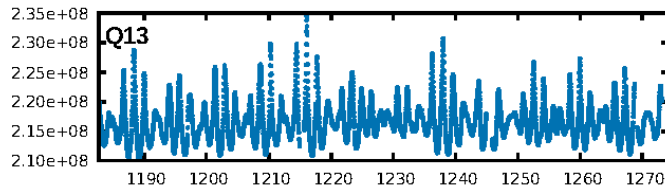
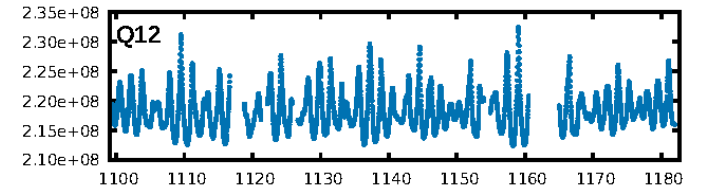
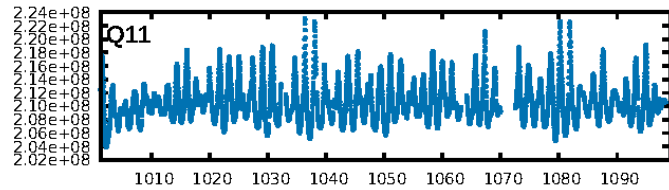
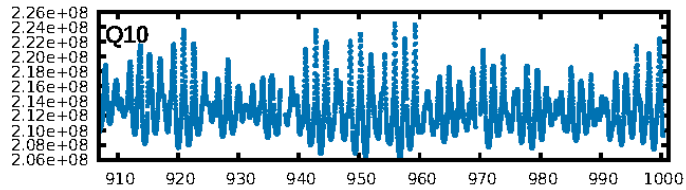
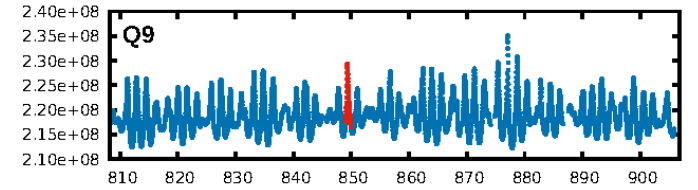
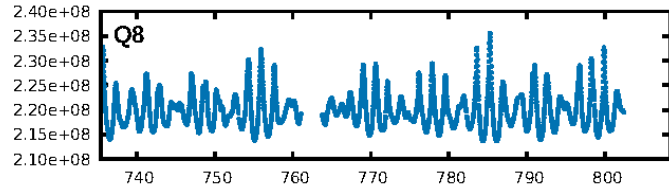
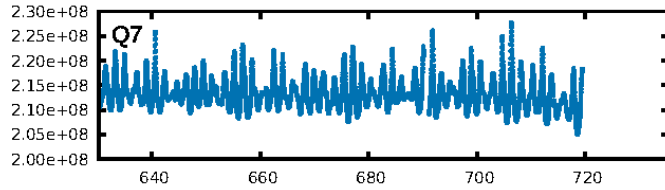
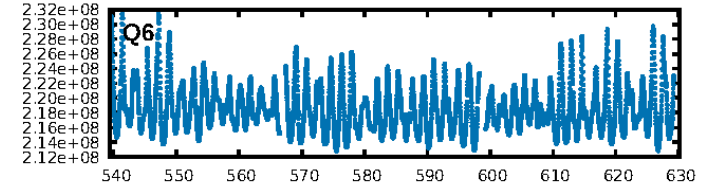
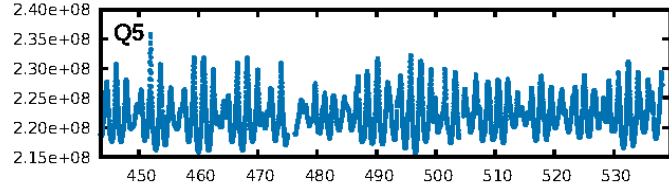
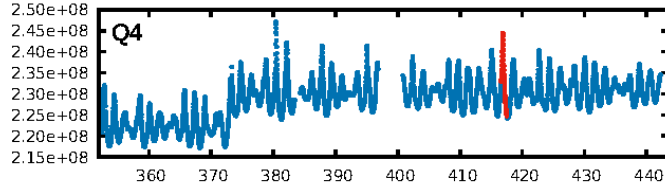
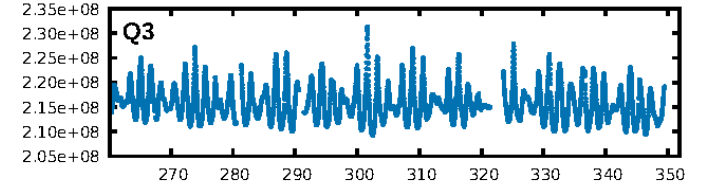
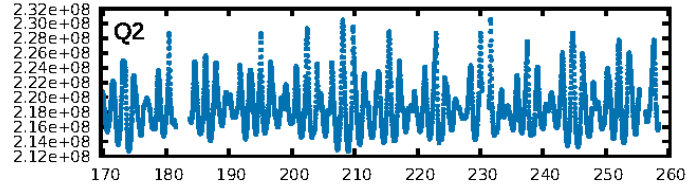
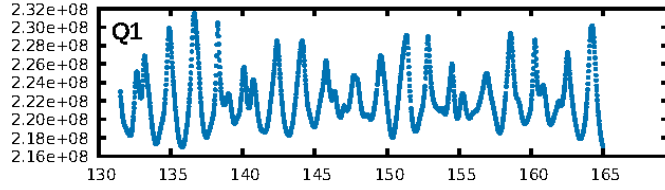
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.32σ]
LongPeriod-sig: 100.0% [305.87σ]
ModelChiSquare2-sig: 37.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.451
Centroid-sig: 25.1%
Centroid-so: 0.170 arcsec [2.01σ]
OotOffset-rm: 0.102 arcsec [1.50σ]
KicOffset-rm: 0.137 arcsec [1.56σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

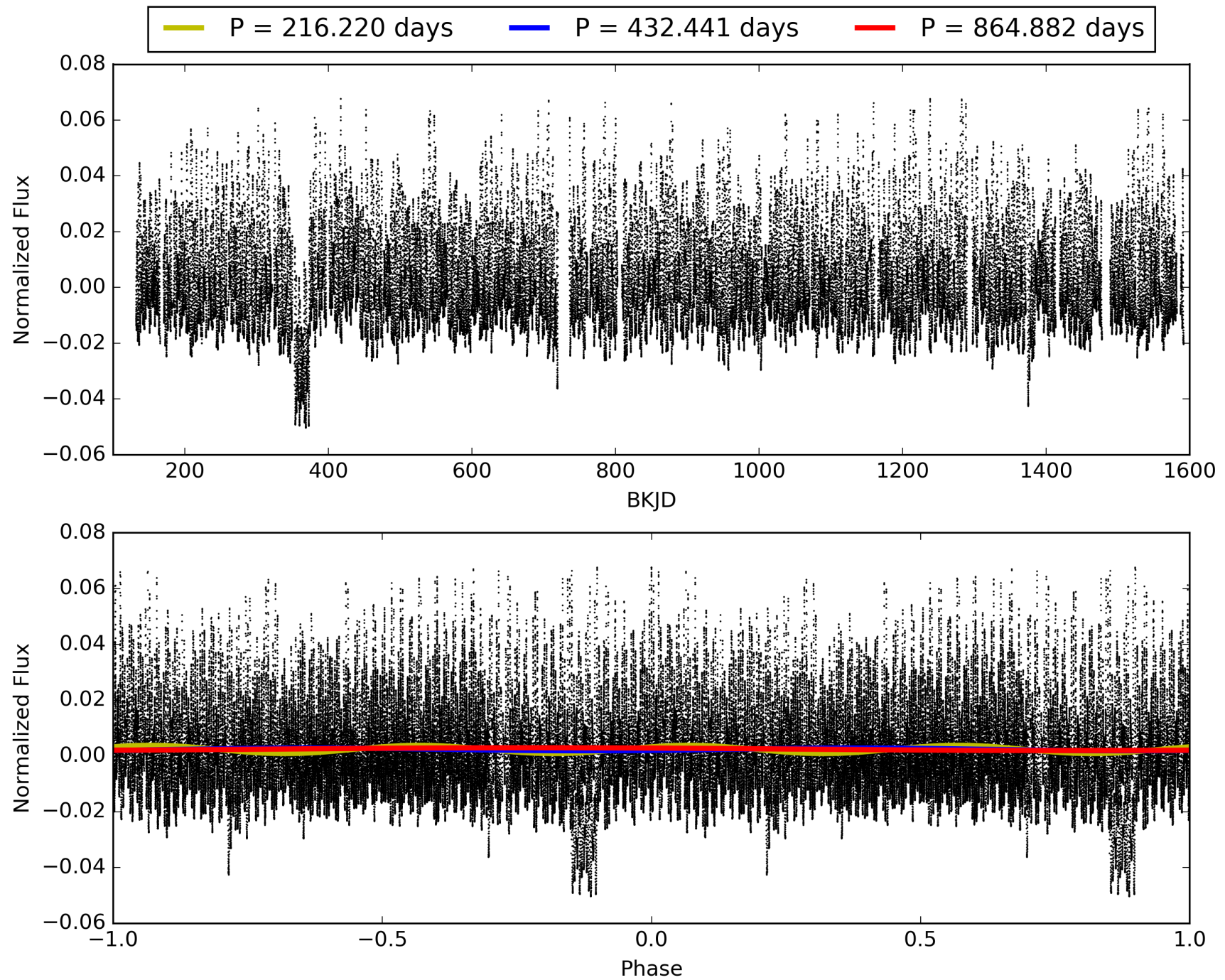
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:36:38 Z

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

TCE 008127495-02, PDC Light Curves

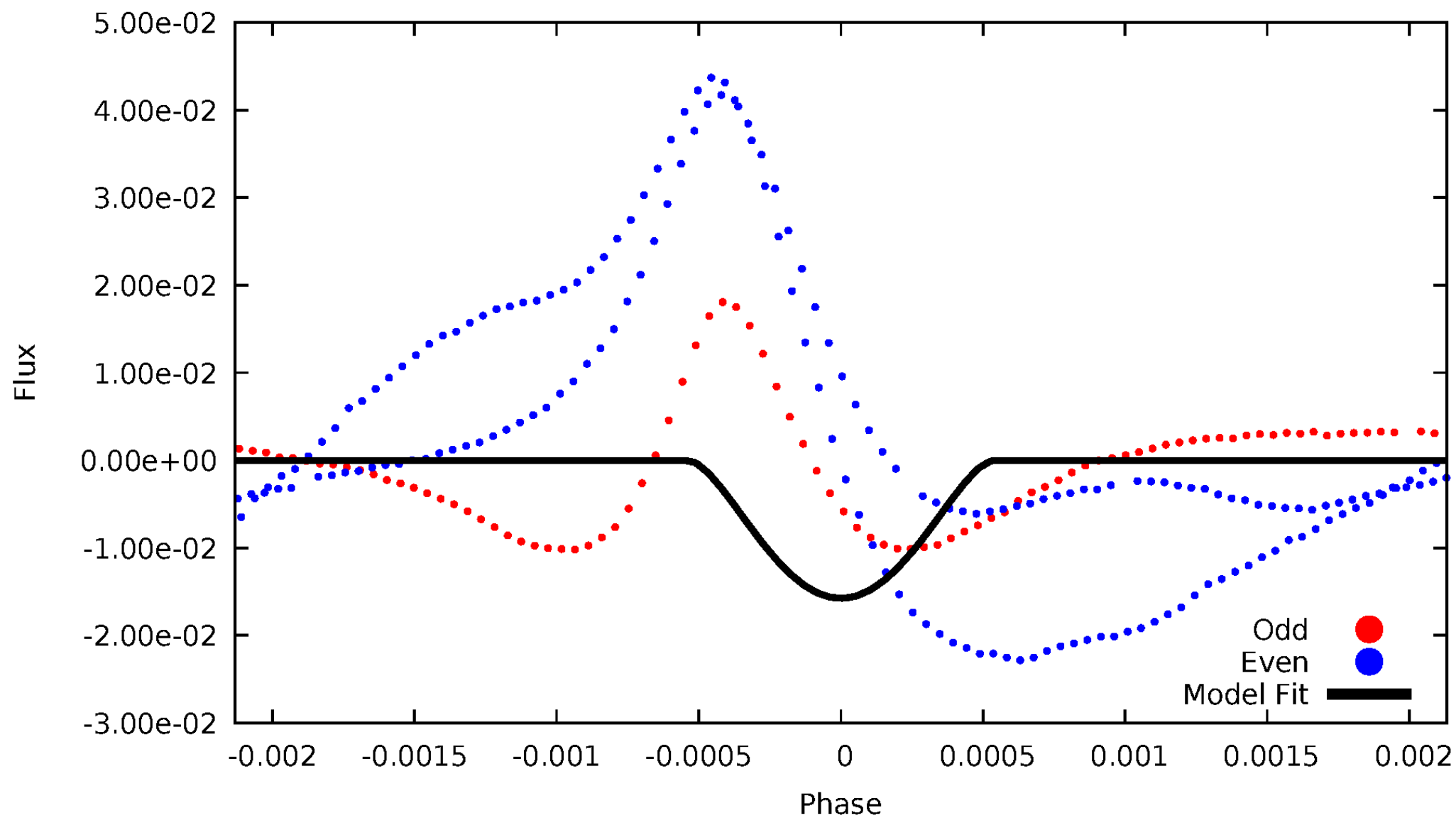


TCE 008127495-02



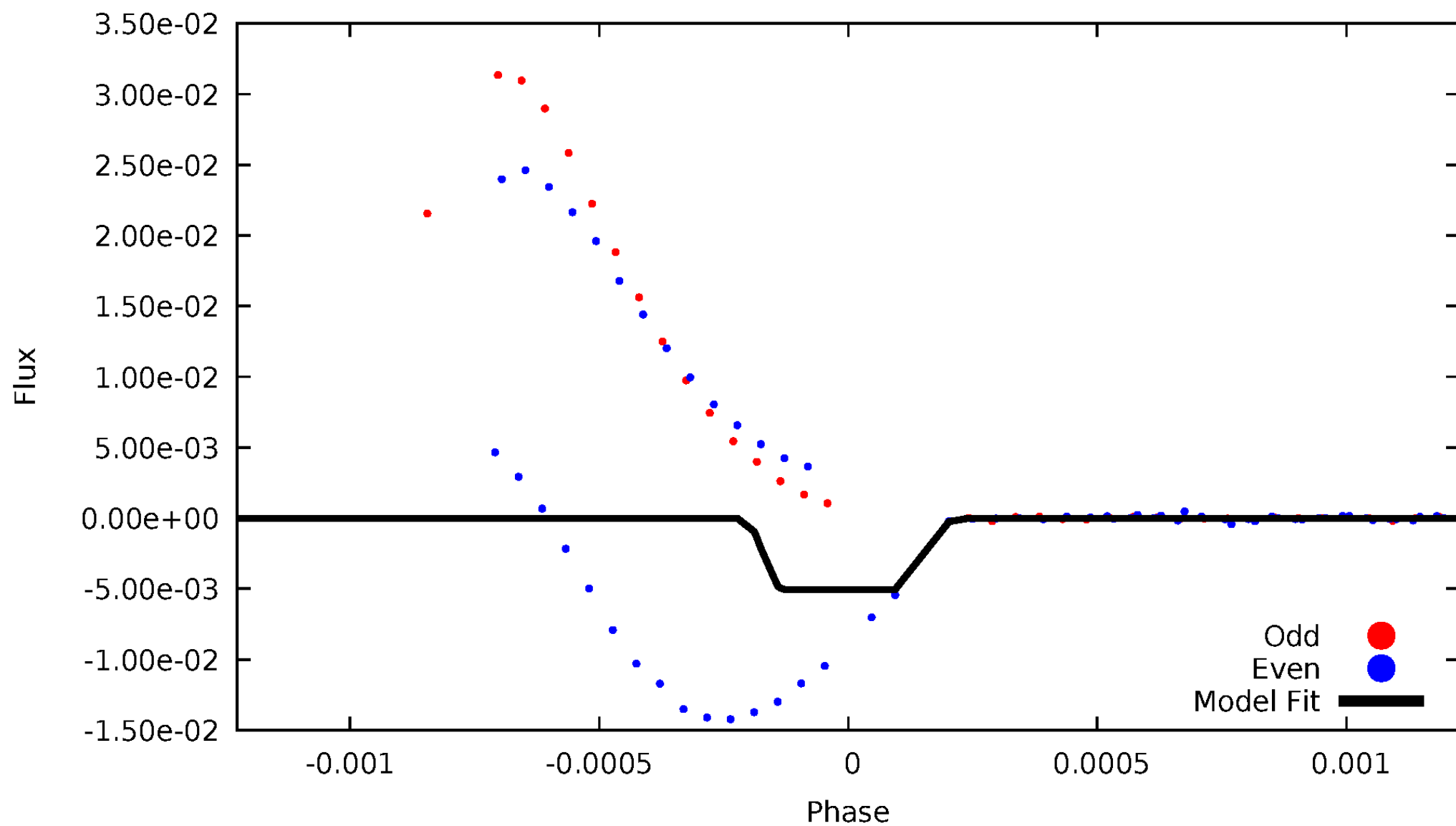
DV Odd/Even

TCE 008127495-02



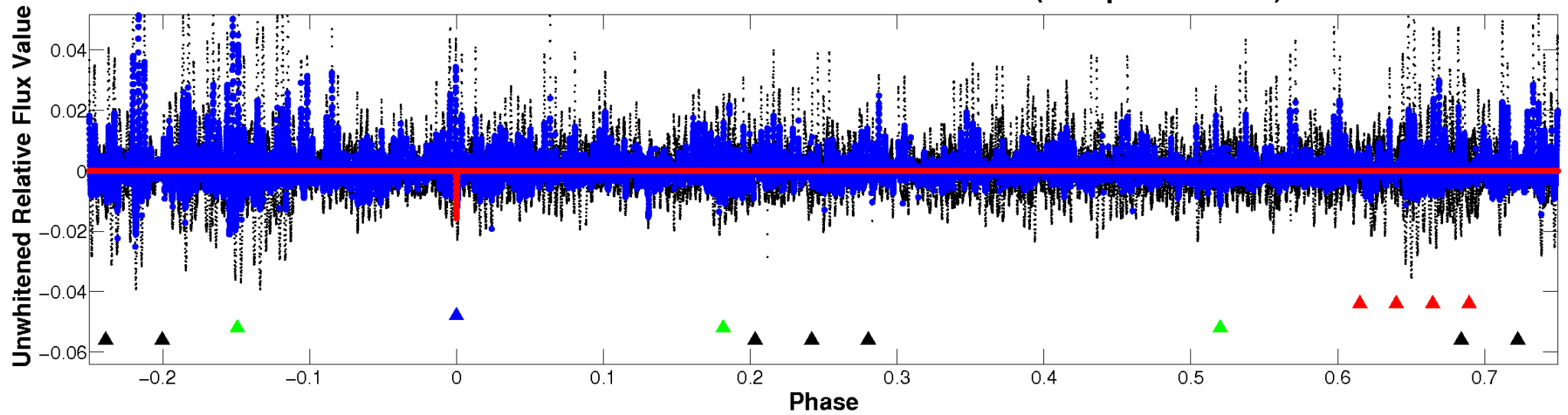
ALT Odd/Even

TCE 008127495-02

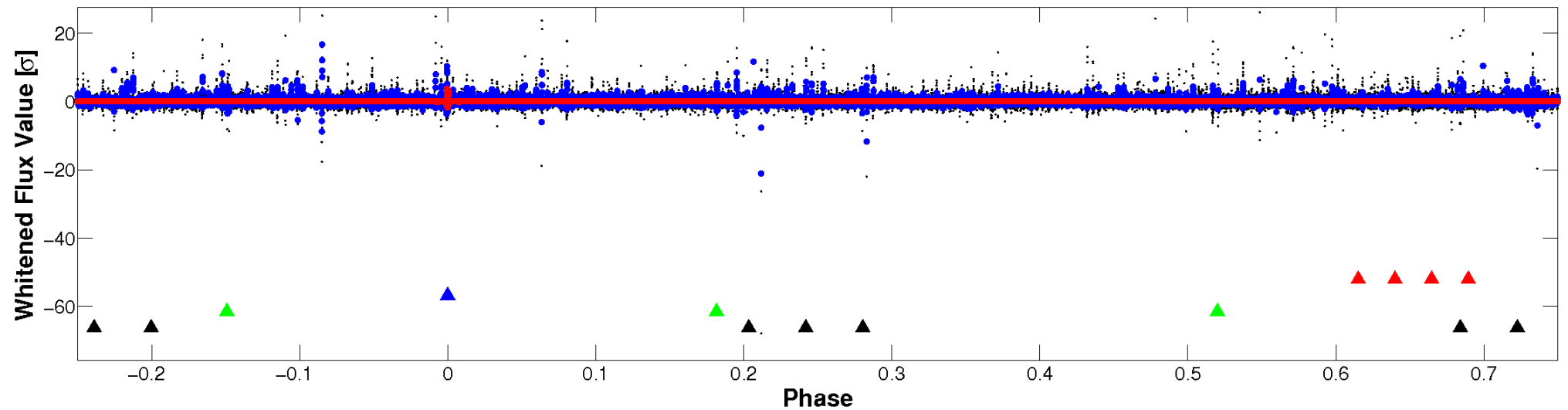


Non-Whitened Vs. Whitened Light Curve

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

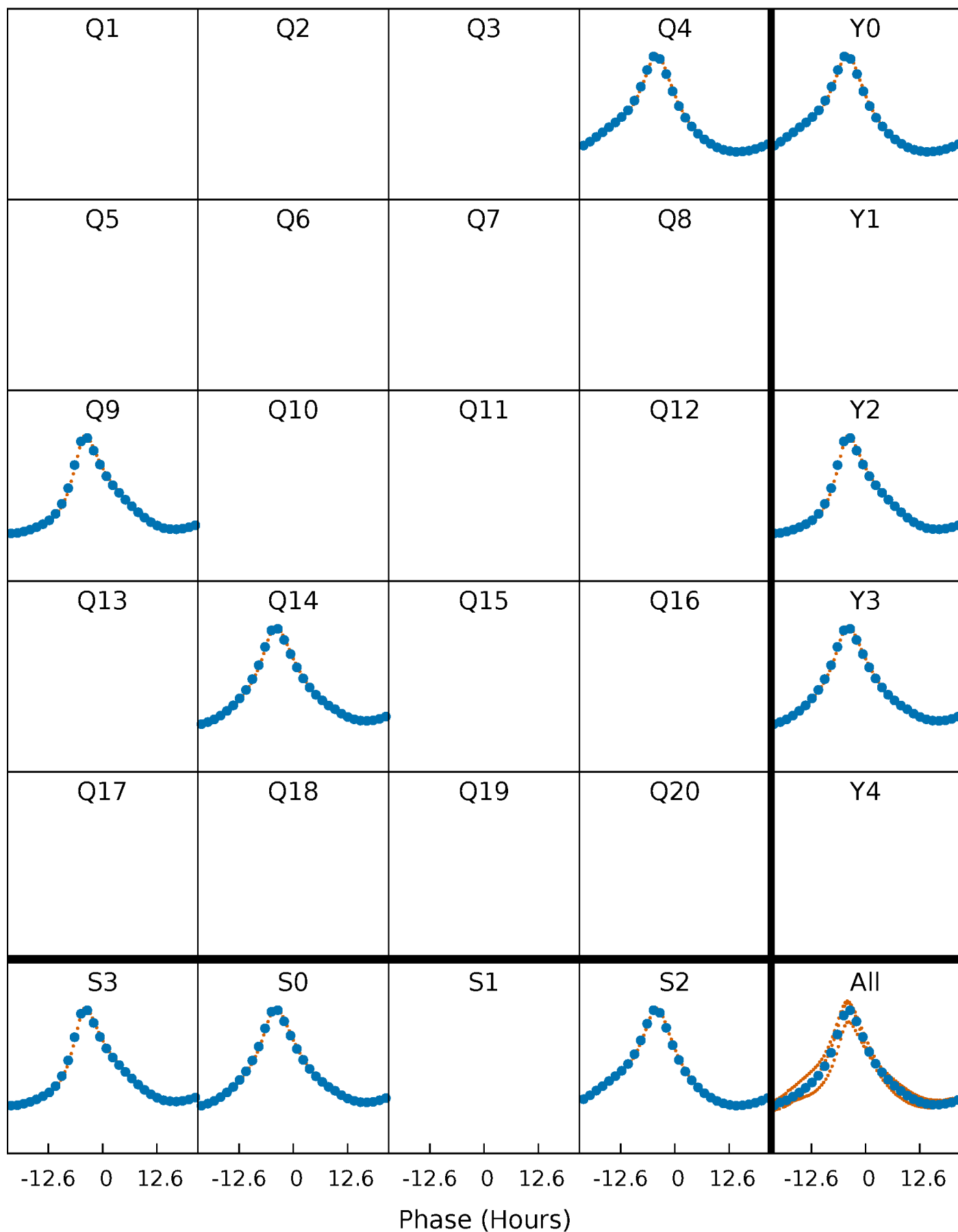


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



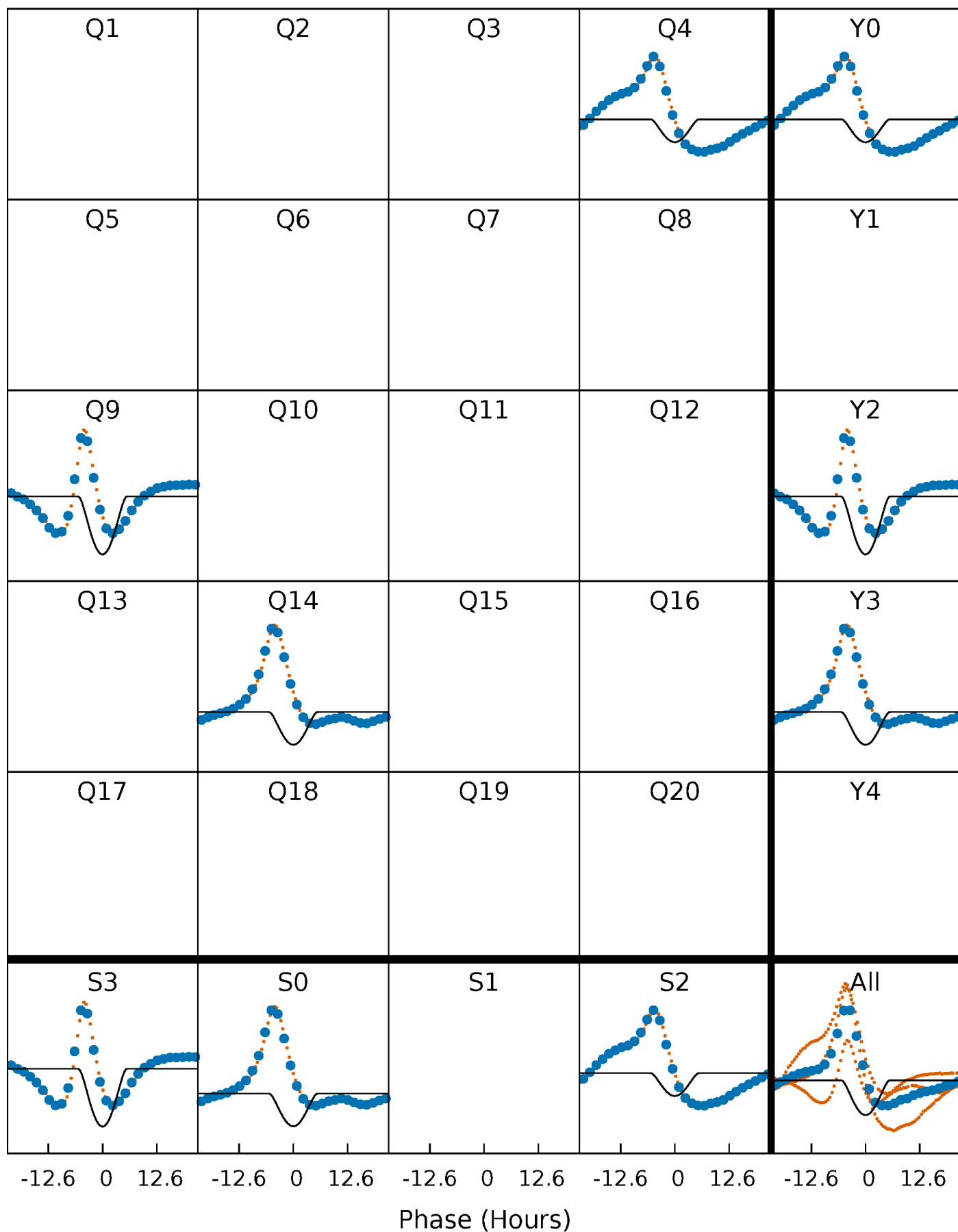
PDC Quarter-Phased Transit Curves

TCE 008127495-02 $P=432.440987$ Days $T_0=417.061397$ (BKJD)



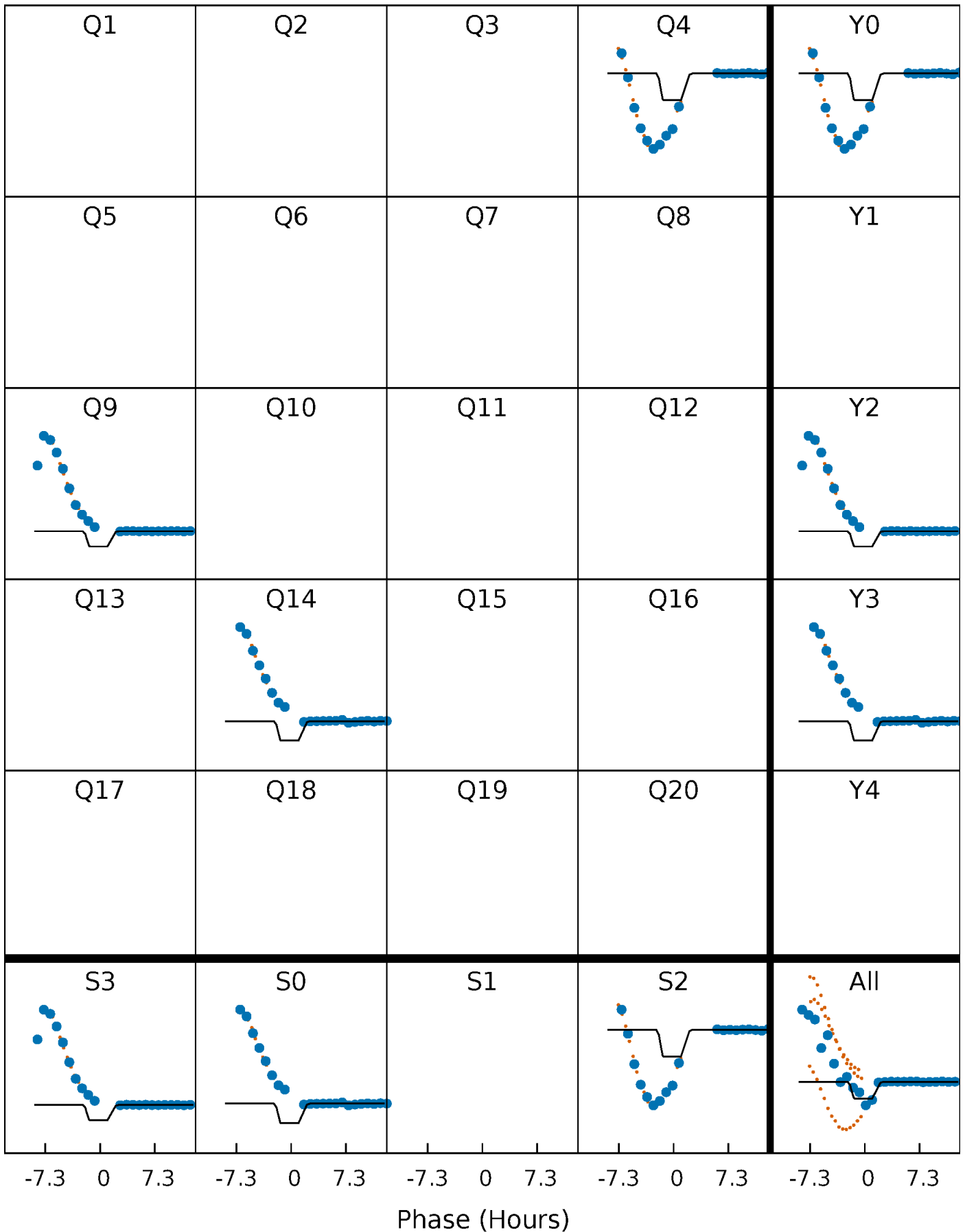
DV Quarter-Phased Transit Curves

TCE 008127495-02 P=432.440987 Days $T_0=417.061397$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

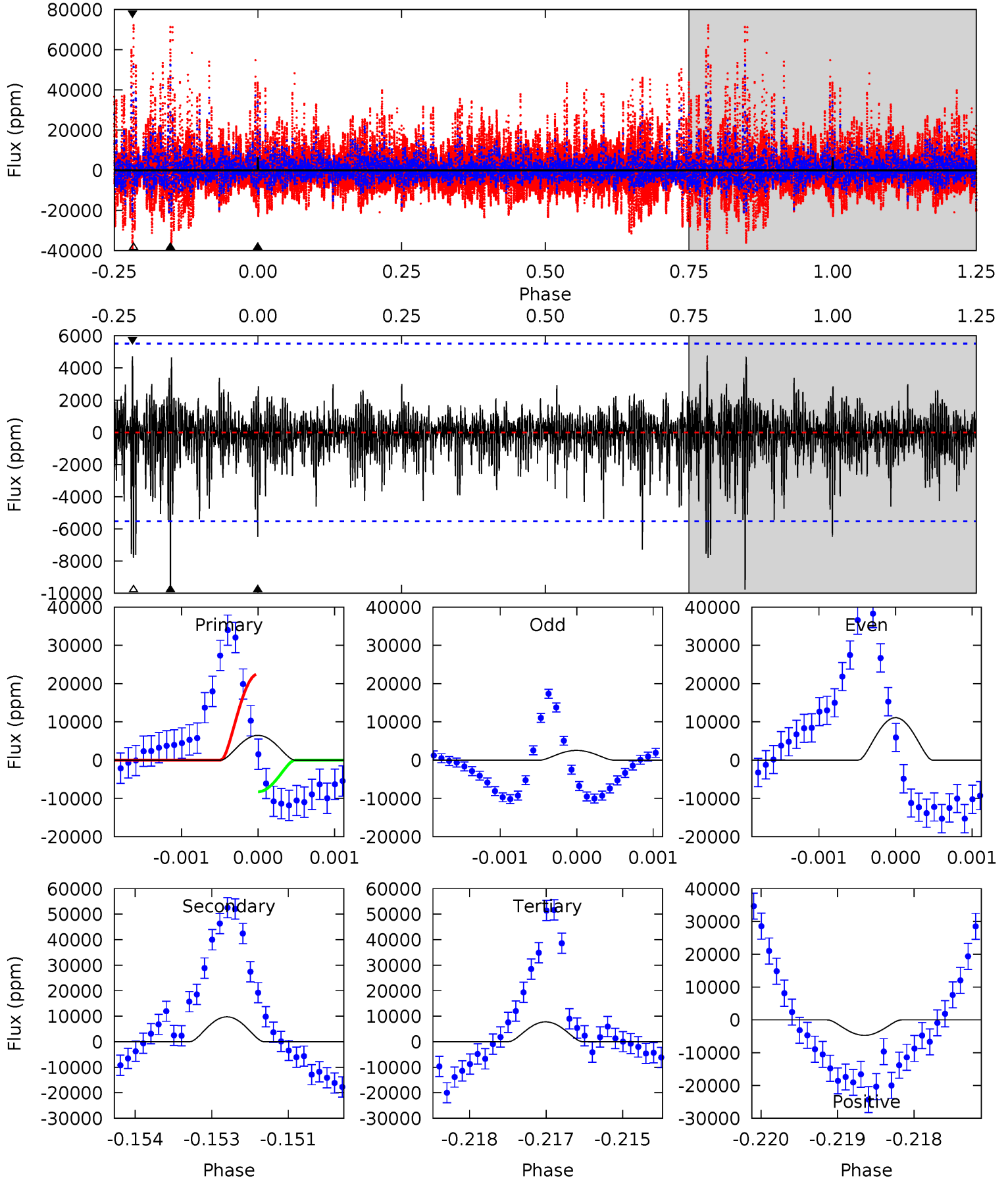
TCE 008127495-02 P=432.435430 Days $T_0=417.191286$ (BKJD)



DV Model-Shift Uniqueness Test

008127495-02, P = 432.440987 Days, E = 417.061397 Days

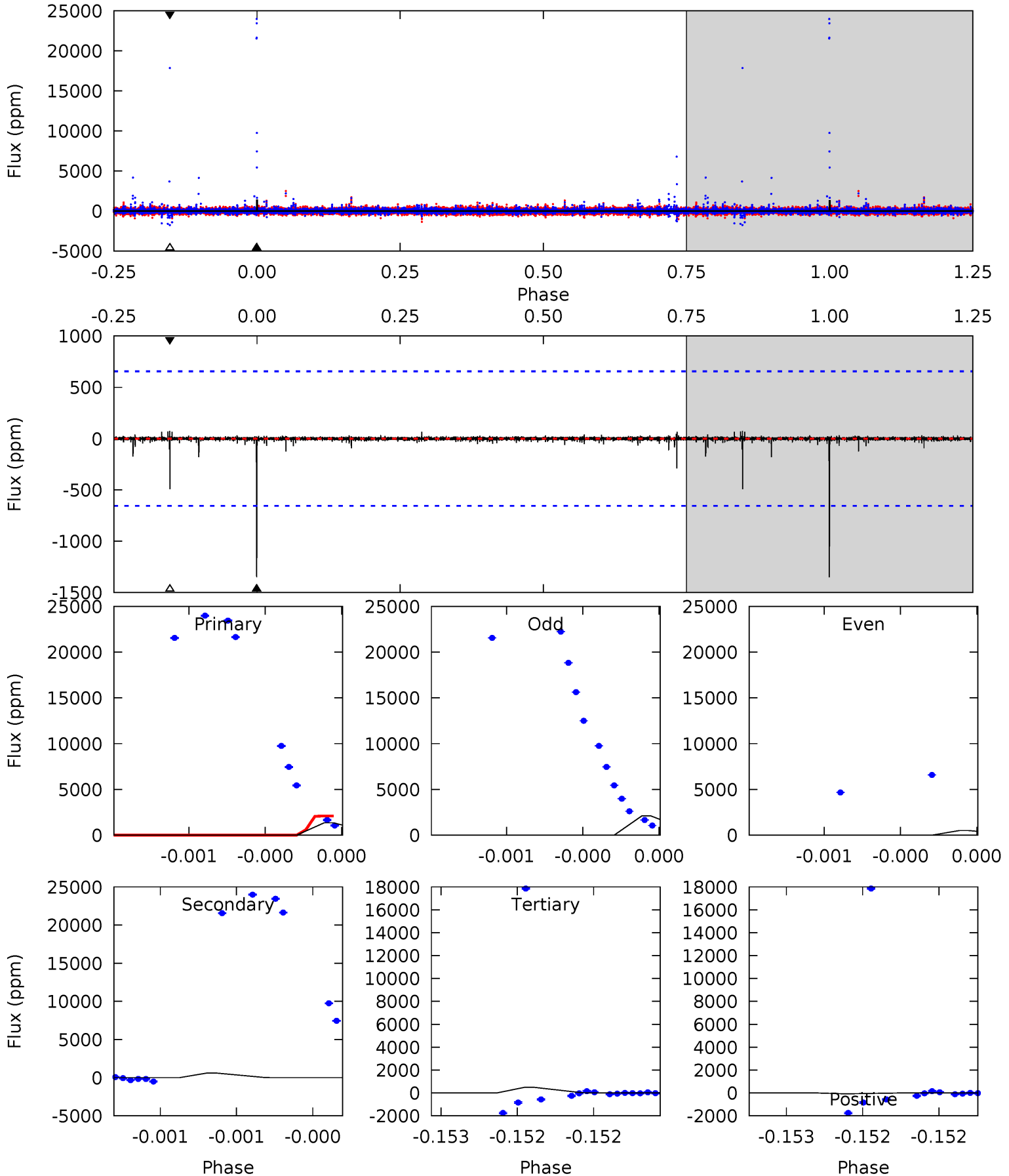
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.39	9.62	7.68	4.66	5.43	3.26	1.21	-1.29	1.73	1.94	4.97	3.32	1.41	0.33	6.95



Alt Model-Shift Uniqueness Test

008127495-02, P = 432.435430 Days, E = 417.191286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	5.14	4.22	0.63	5.62	3.55	0.06	7.36	10.9	0.92	4.51	6.52	-0.52	0.05	17.3



Stellar Parameters For KIC 008127495

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+168}_{-264}	$4.268^{+0.105}_{-0.195}$	$-0.240^{+0.250}_{-0.350}$	$1.375^{+0.437}_{-0.235}$	$1.288^{+0.185}_{-0.203}$	$0.698^{+0.336}_{-0.360}$
	+2%/-4%	+2%/-5%	+104%/-146%	+32%/-17%	+14%/-16%	+48%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008127495-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9770 ± 1016	$30.77^{+11.09}_{-9.85}$	454^{+35}_{-29}	4892^{+897}_{-531}	8204^{+9695}_{-3650}
Alt.	-600 ± 117	$13.40^{+9.85}_{-8.43}$	455^{+34}_{-27}	3968^{+2129}_{-667}	2724^{+17311}_{-1840}

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 $A_{obs} \gg 1.0$

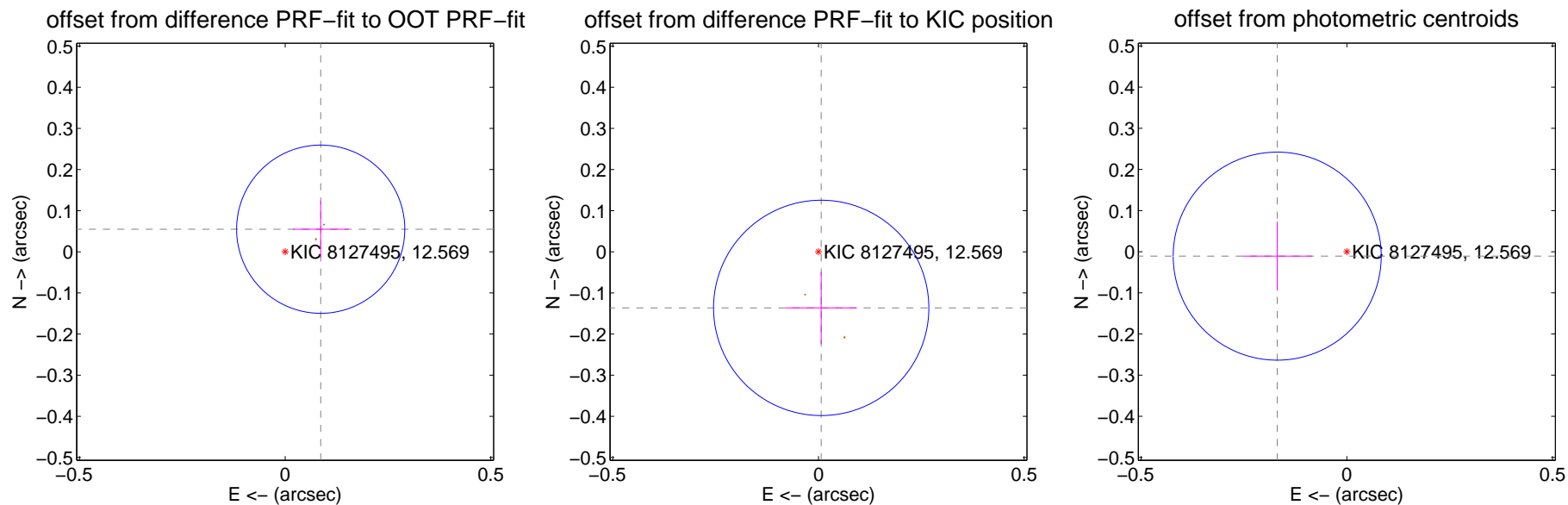
DV Centroid Data

Supplemental centroid analysis for 008127495-02. Kepler magnitude: 12.57. Transit SNR 11.61

There are 0 quarters with good PRF difference image offsets

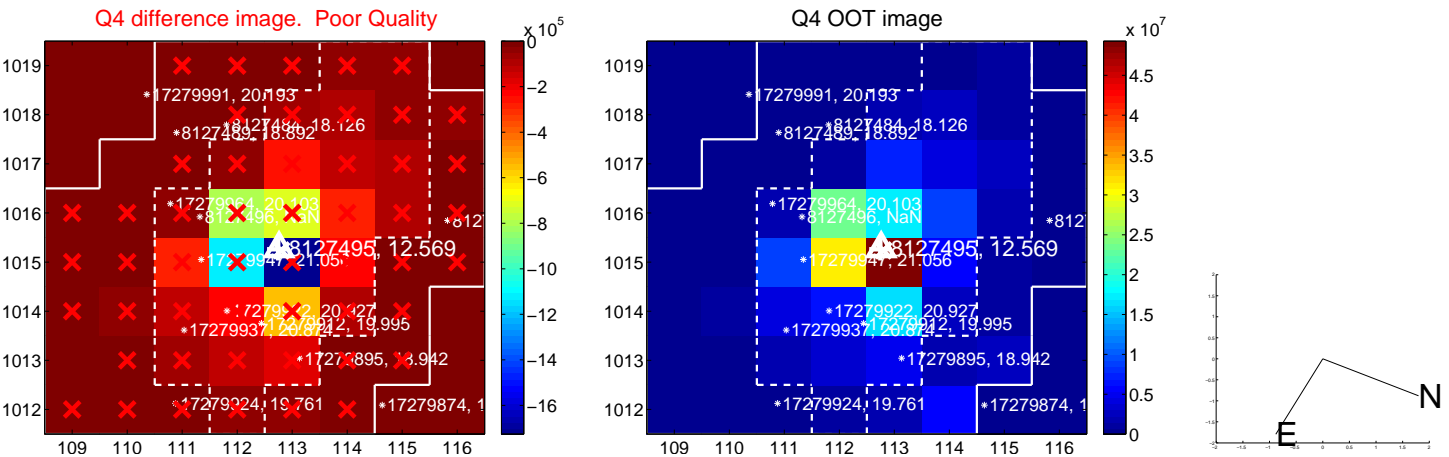
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.102 ± 0.068	1.50	-0.086 ± 0.068	0.055 ± 0.069
PRF-fit source offset from KIC position	0.137 ± 0.087	1.56	-0.007 ± 0.086	-0.136 ± 0.087
photometric centroid source offset	0.17 ± 0.08	2.01	0.17 ± 0.08	-0.01 ± 0.08



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.

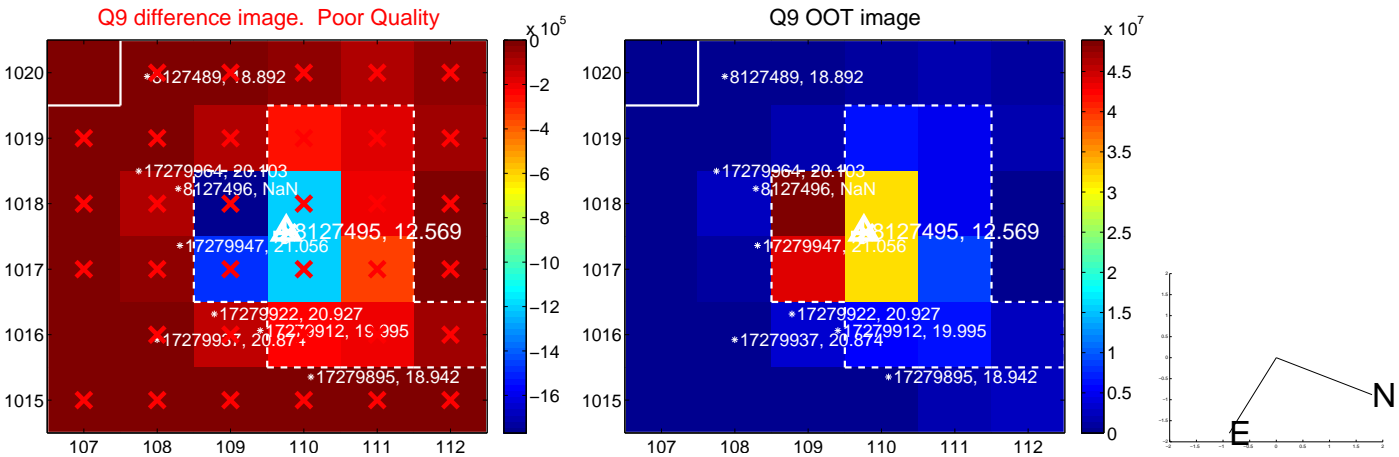
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



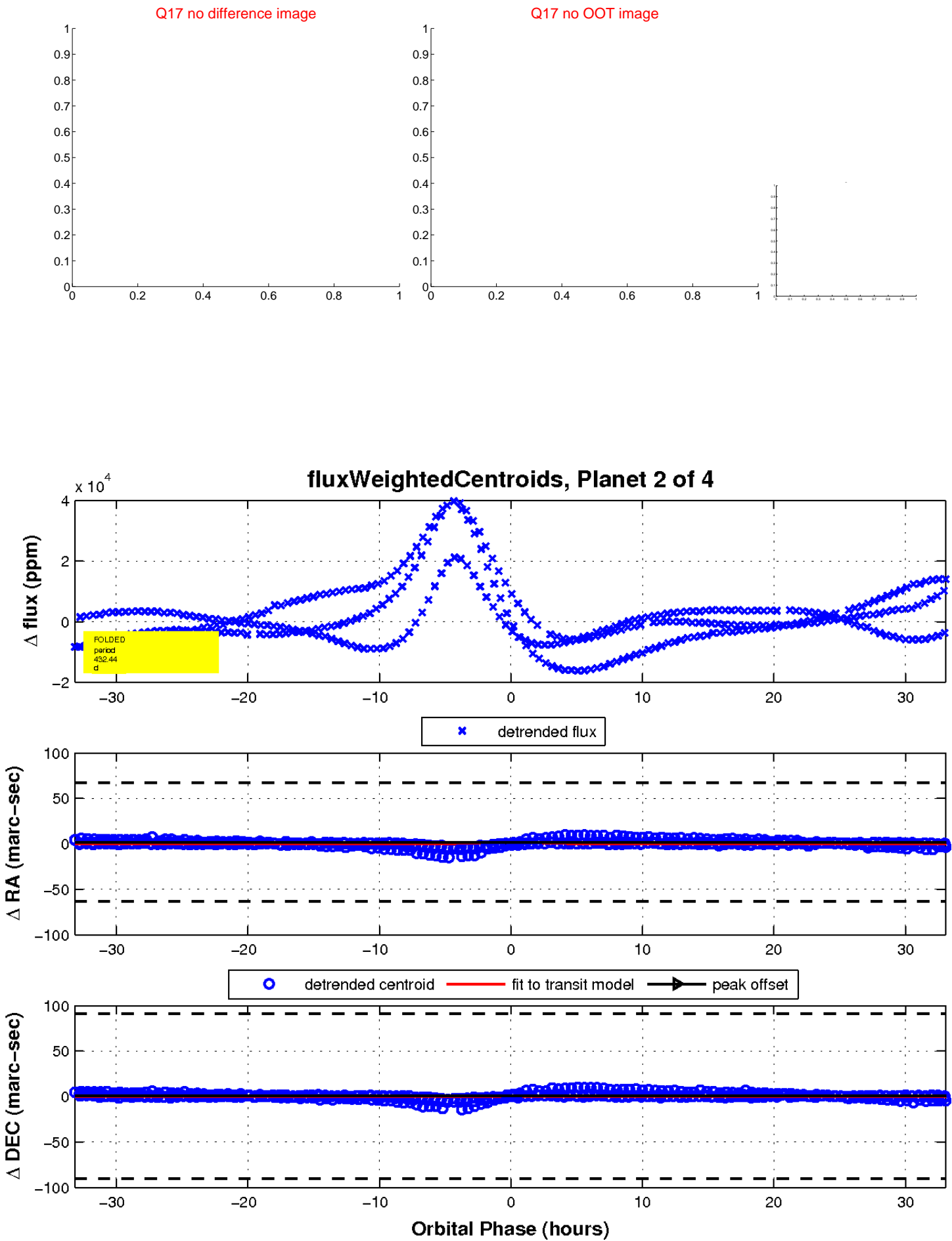
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

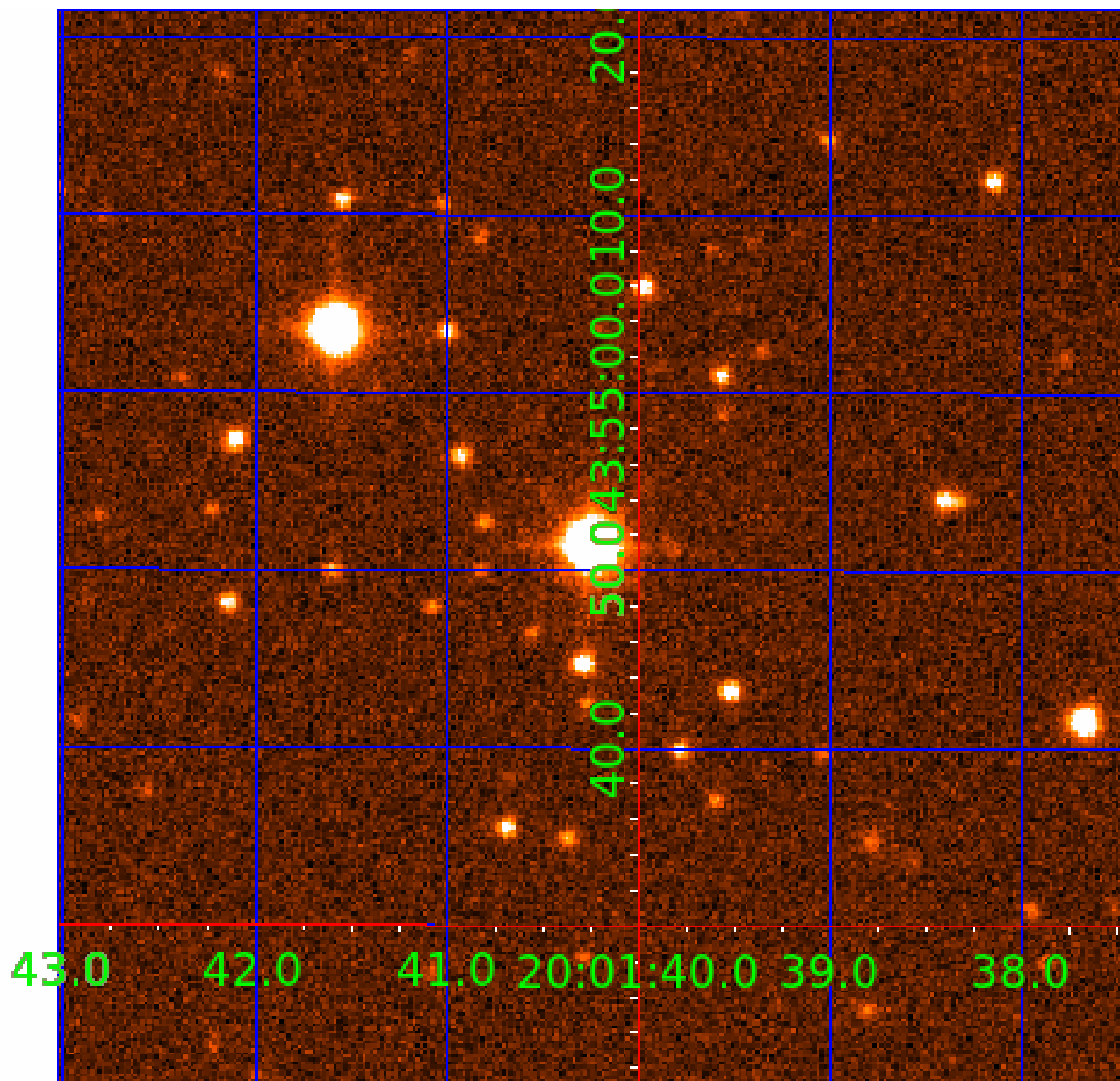


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008127495

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})
008127495-01	OBS	No	421.723296	282.781322	5797.1	7.417	22.5	10.1	1.38	6875	18.65	2.65
008127495-02	OBS	No	432.440986	417.061396	15746.4	11.059	22.2	11.6	1.38	6875	29.94	2.56
008127495-03	OBS	No	575.489526	209.495990	5.1	1.917	17.5	0.0	1.38	6875	0.31	1.75
008127495-04	OBS	No	207.893556	330.438125	762.1	2.500	16.5	-1.0	1.38	6875	3.84	6.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127495-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008127495-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
008127495-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS
008127495-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

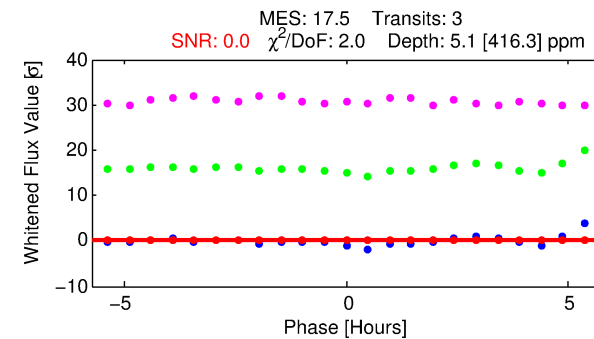
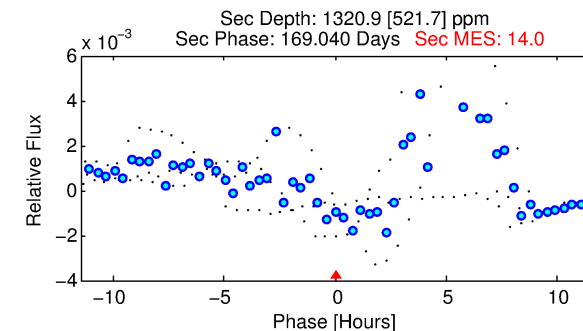
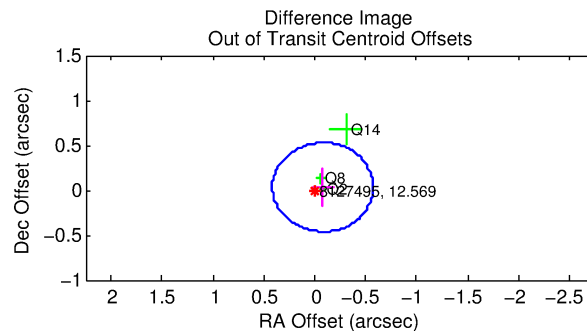
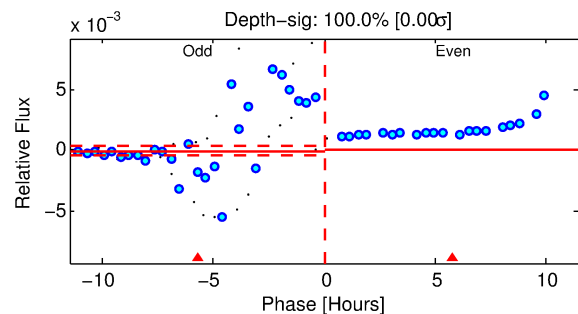
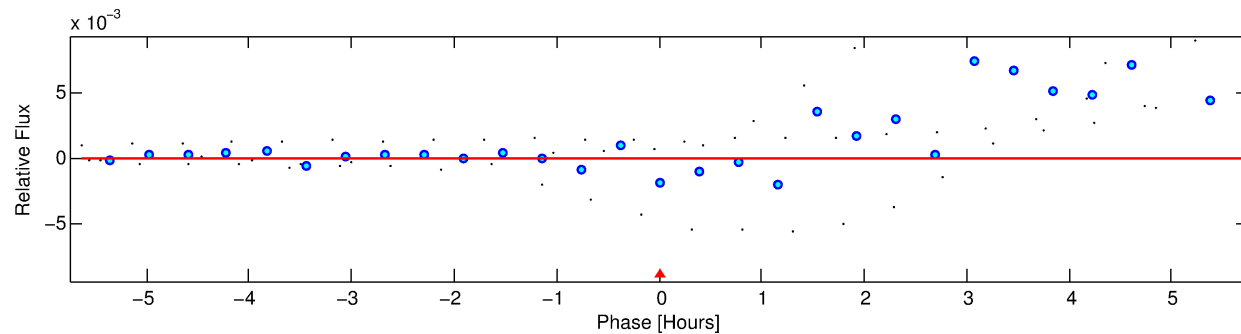
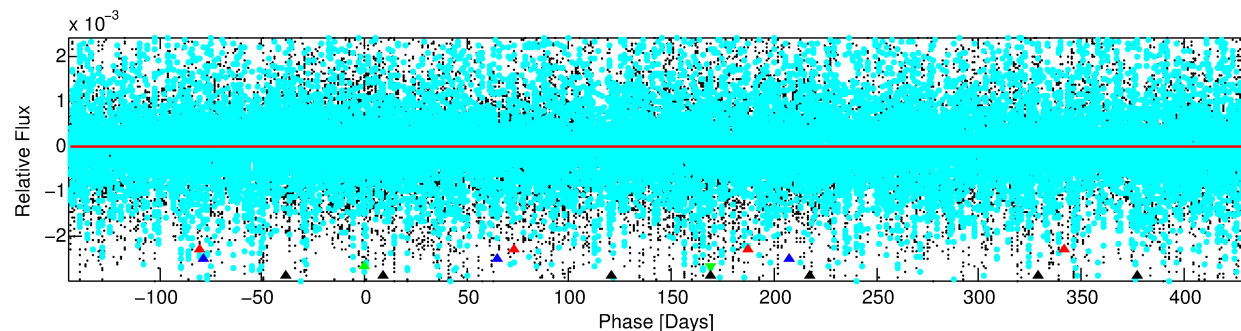
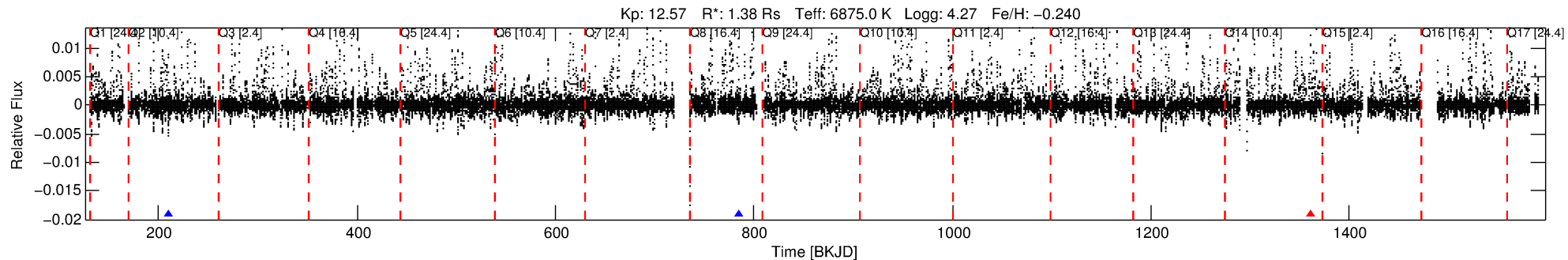
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127495-03

No Significant Match Found

DV One-Page Summary

KIC: 8127495 Candidate: 3 of 4 Period: 575.490 d



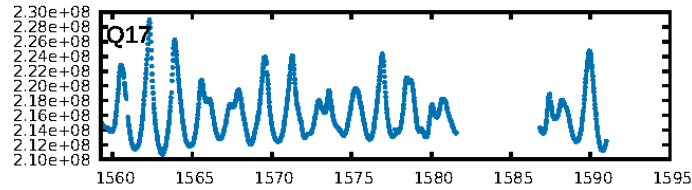
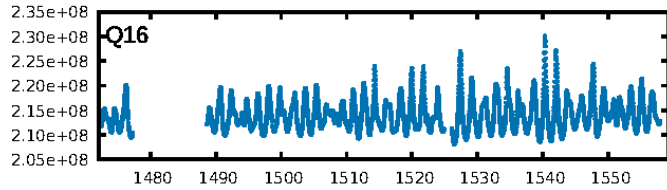
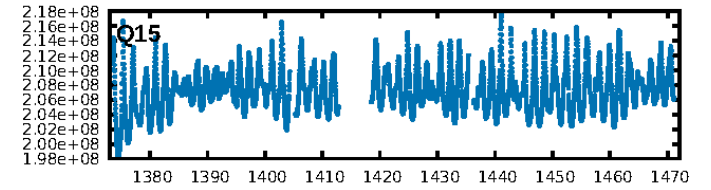
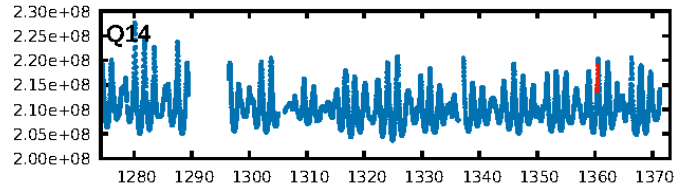
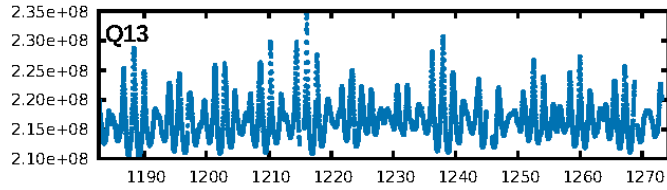
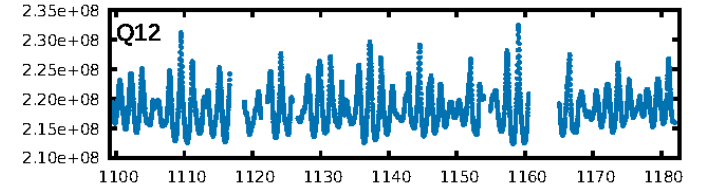
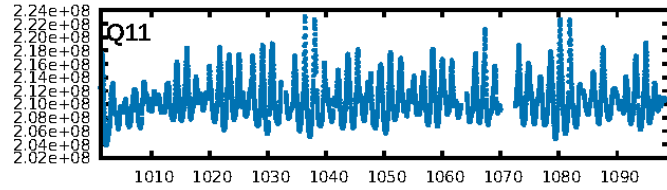
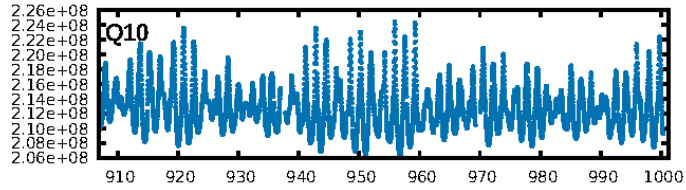
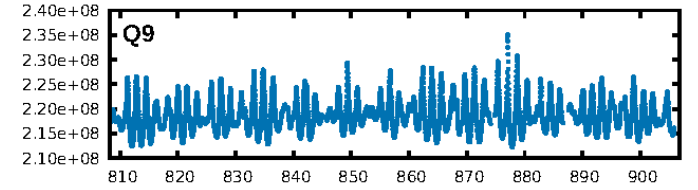
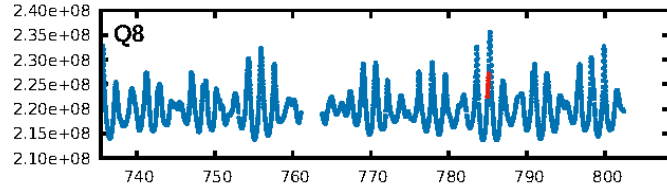
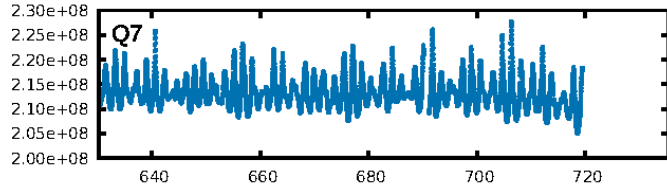
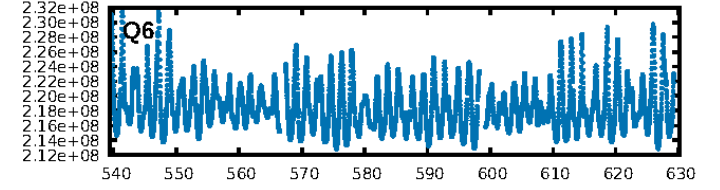
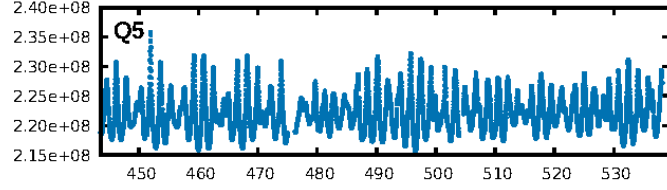
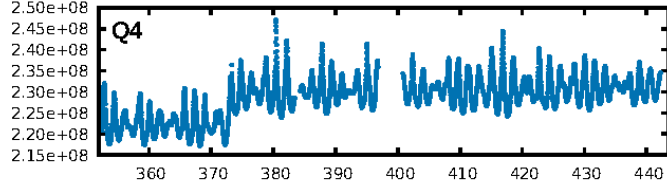
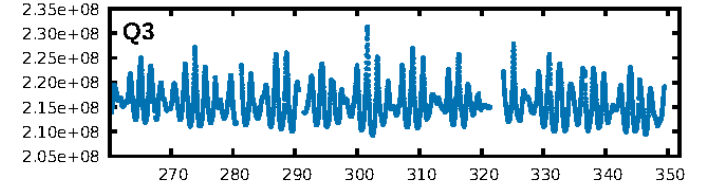
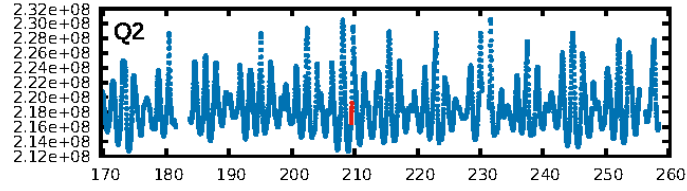
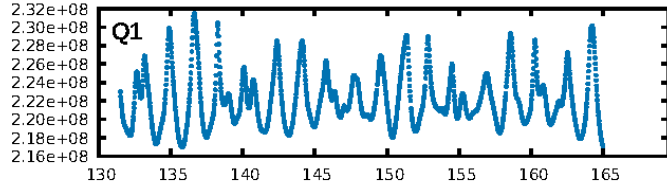
DV Fit Results:

Period = 575.48953 [2.89766] d
Epoch = 209.4960 [2.1357] BKJD
Rp/R* = 0.0021 [2.8506]
a/R* = 2290.11 [16944654.46]
b = 0.09 [87391.43]
Seff = 1.75 [0.70]
Teq = 293 [29] K
Rp = 0.31 [427.72] Re
a = 1.4698 [0.3813] AU
Ag = 15991149.90 [43659165317.56]
Teff = 28682 [19576689] K [0.00σ]

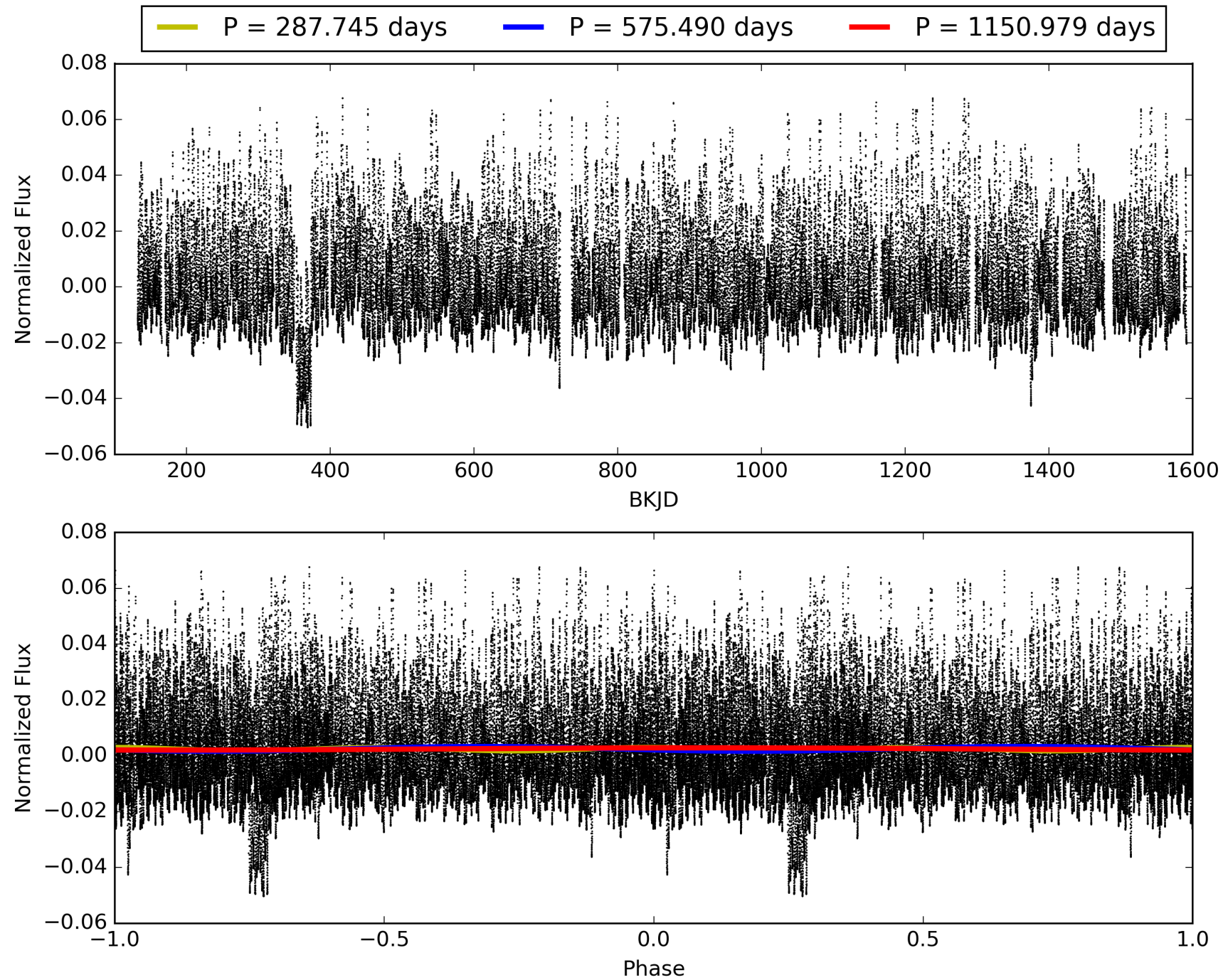
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [305.87σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 23.4%
ModelChiSquareGof-sig: 55.4%
Bootstrap-pfa: N/A
RollingBand-fig: 0.67 [2/3]
GhostDiagnostic-chr: 1.912
Centroid-sig: 86.3%
Centroid-so: 87.567 arcsec [0.41σ]
OotOffset-rm: 0.086 arcsec [0.52σ]
KicOffset-rm: 0.298 arcsec [3.31σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-figm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008127495-03, PDC Light Curves

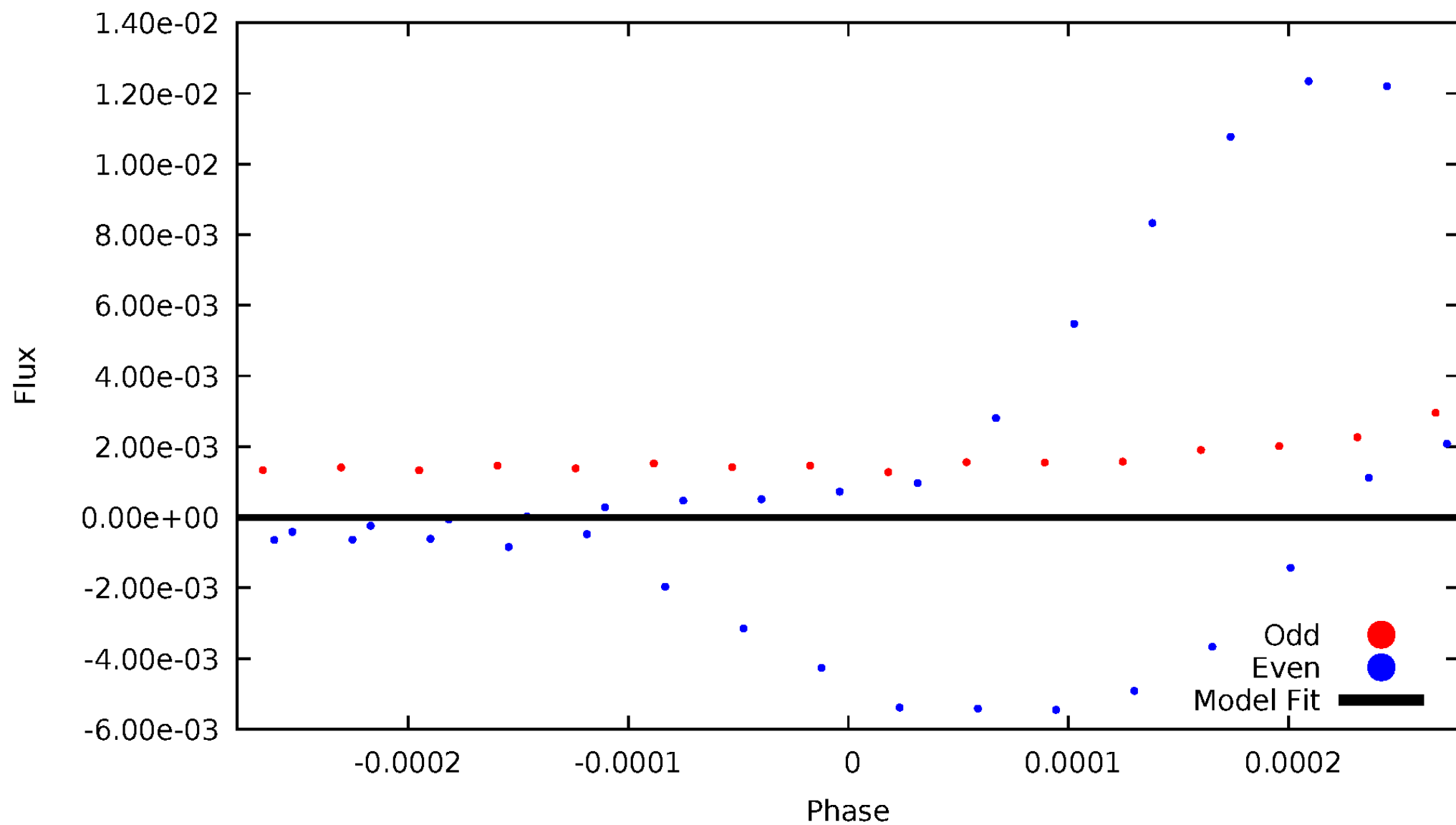


TCE 008127495-03



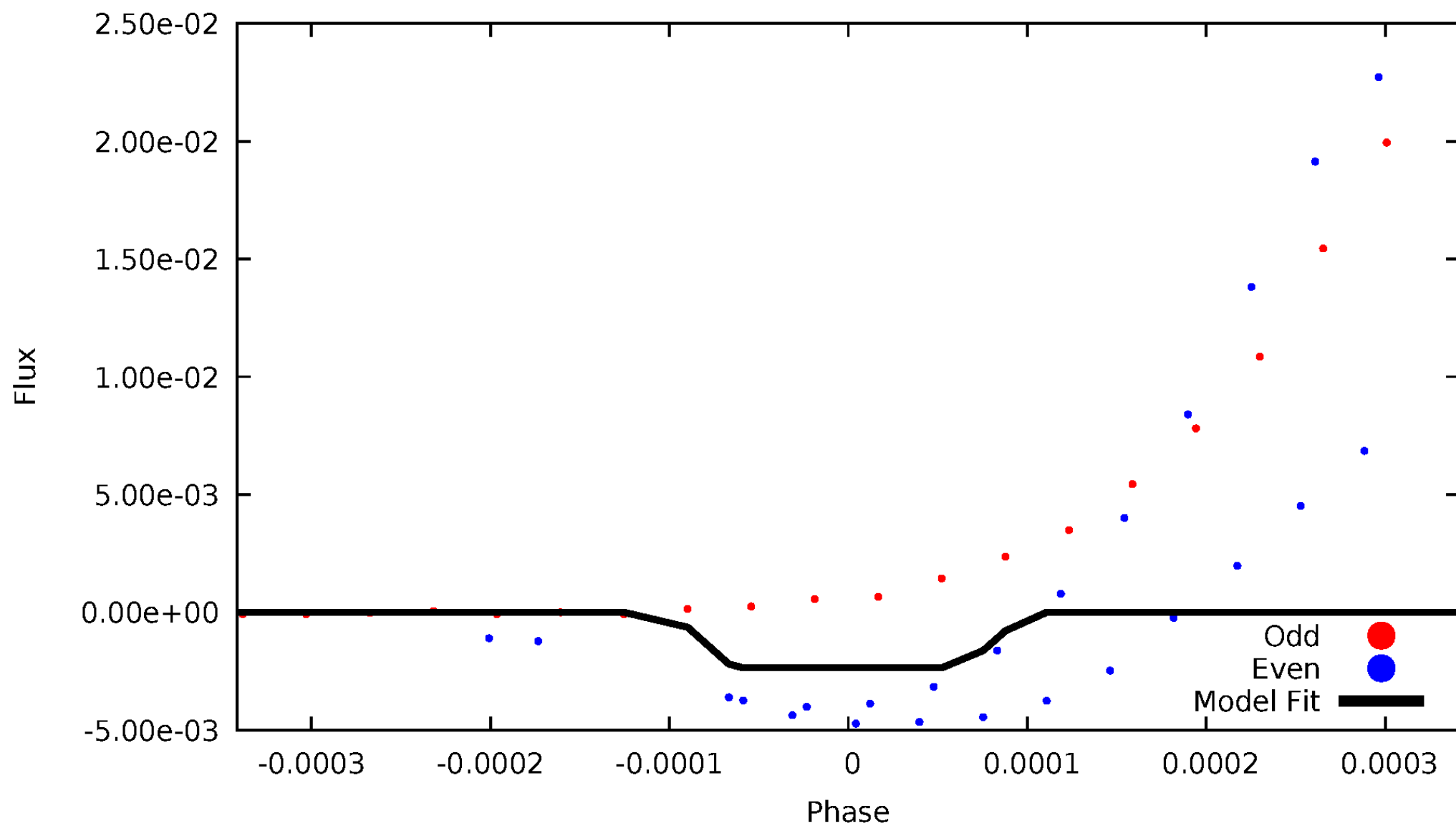
DV Odd/Even

TCE 008127495-03



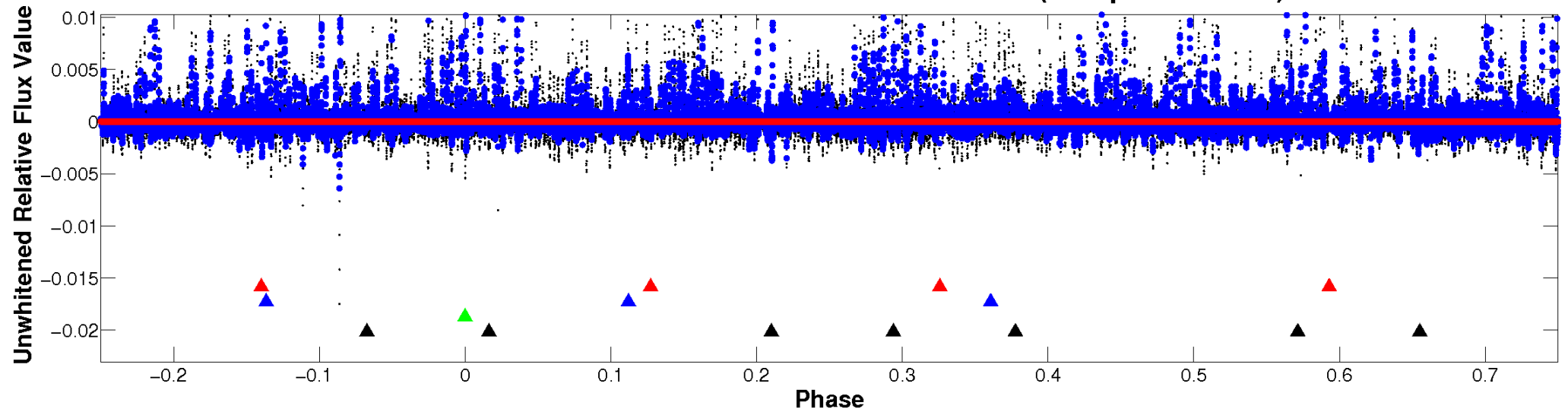
ALT Odd/Even

TCE 008127495-03

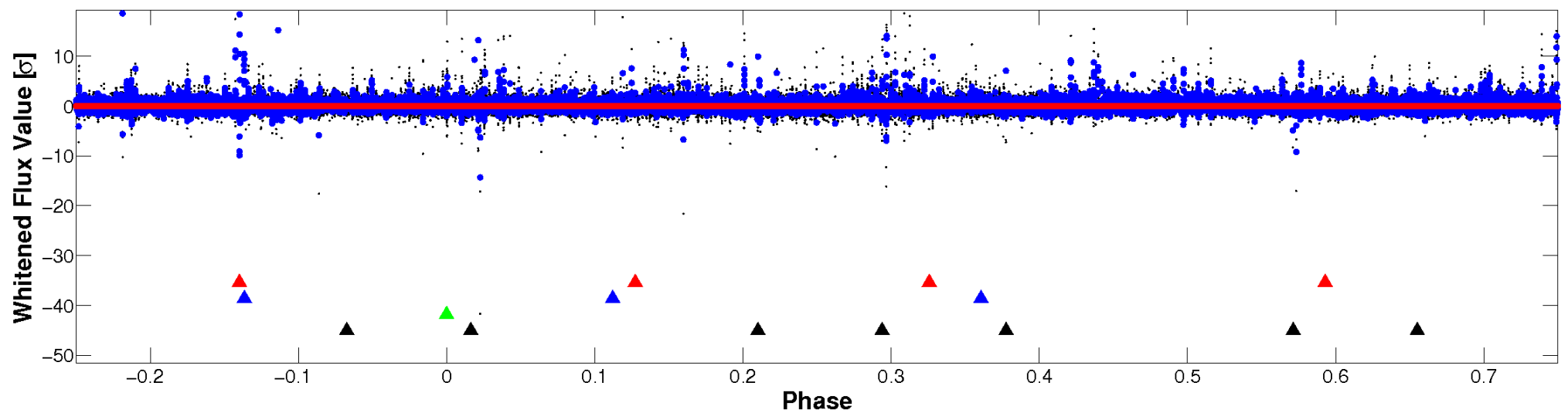


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

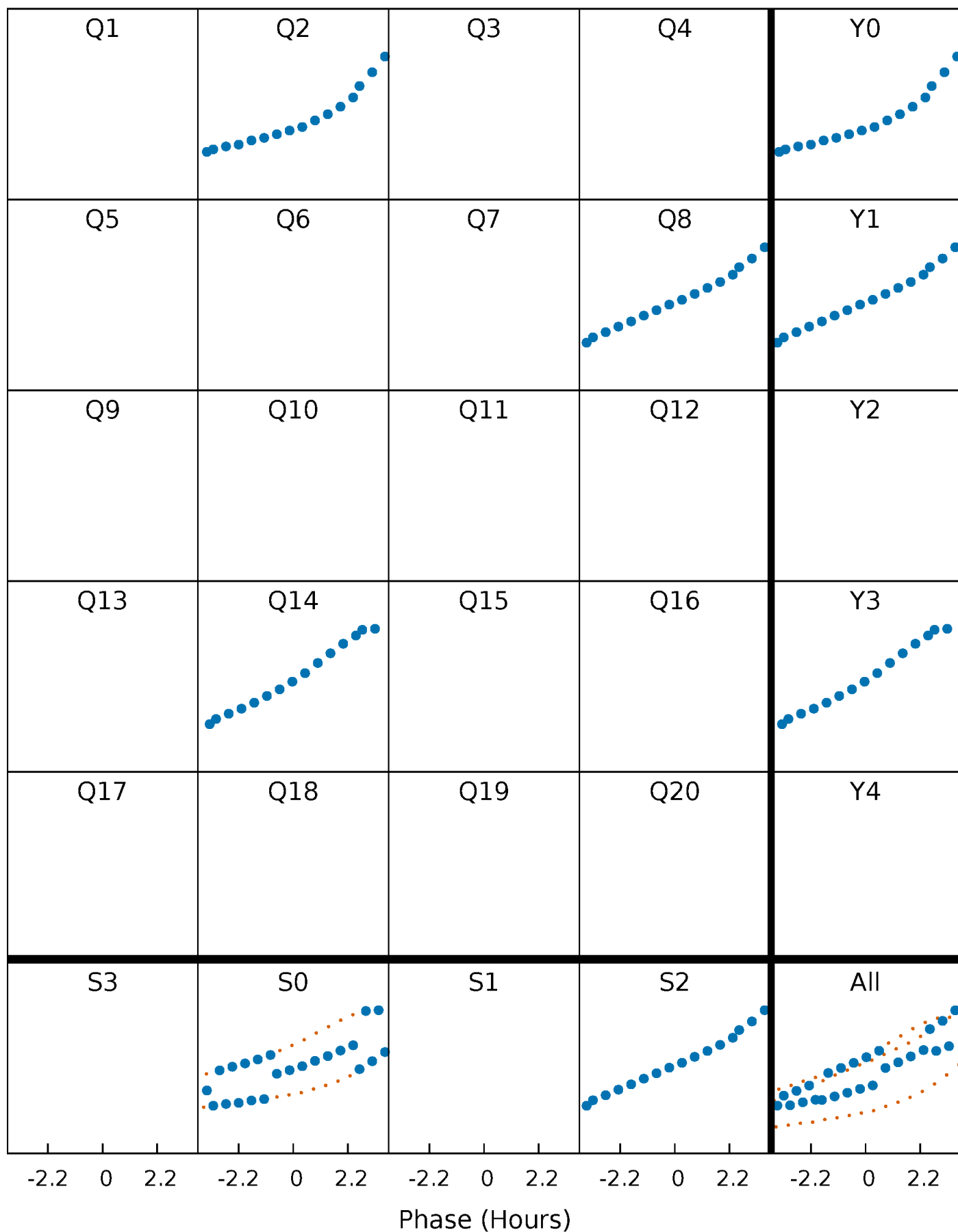


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



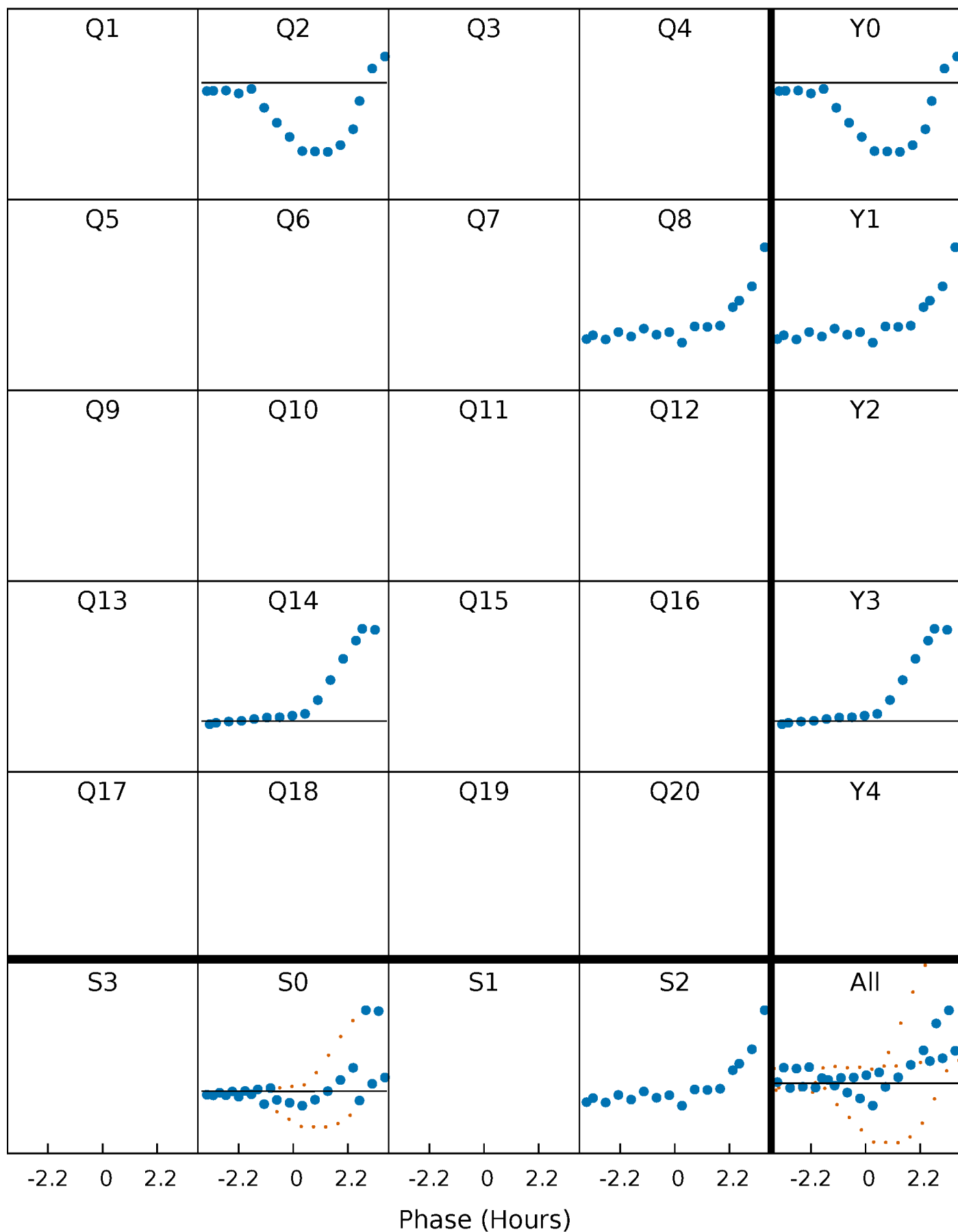
PDC Quarter-Phased Transit Curves

TCE 008127495-03 $P=575.489526$ Days $T_0=209.495990$ (BKJD)



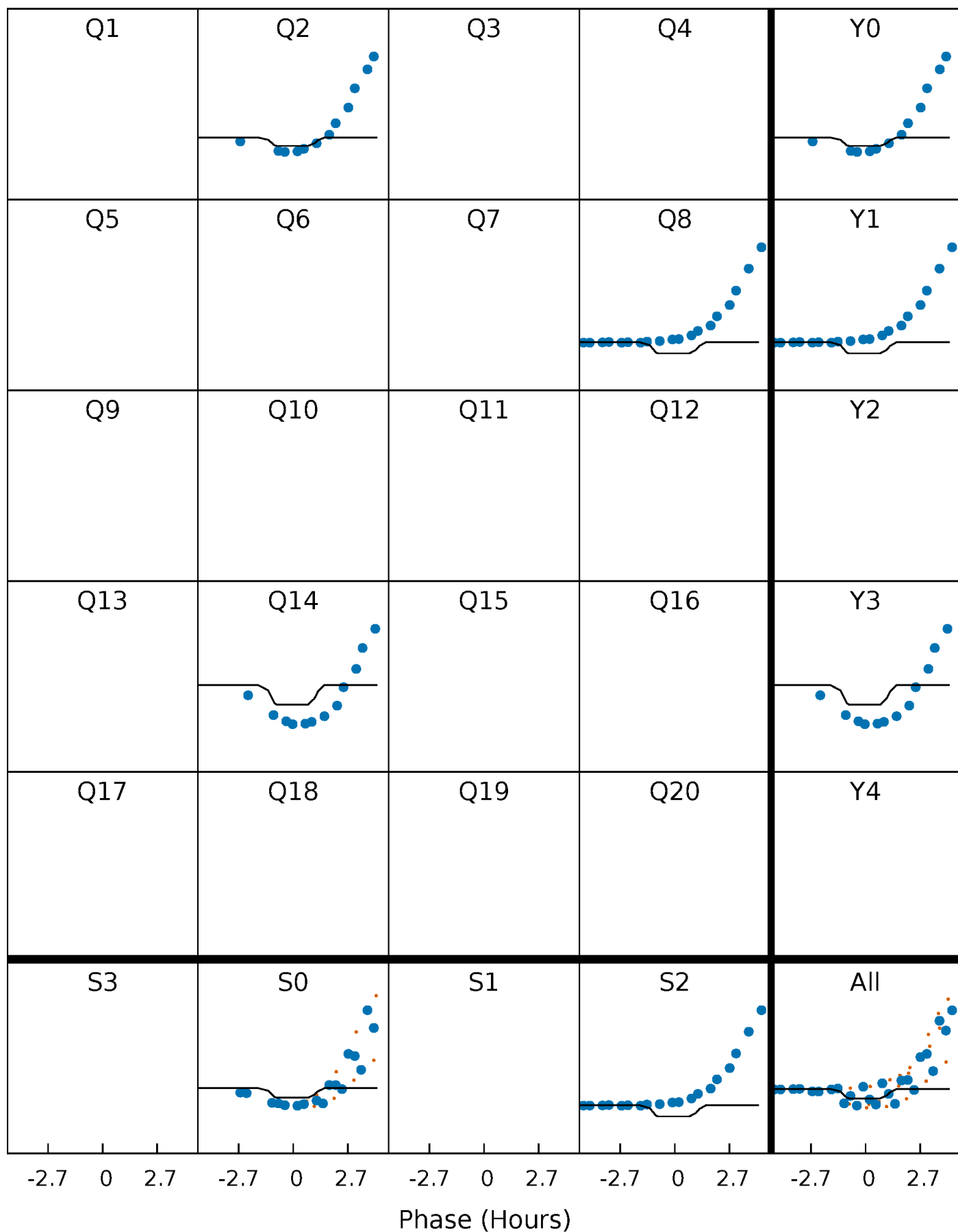
DV Quarter-Phased Transit Curves

TCE 008127495-03 P=575.489526 Days $T_0=209.495990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

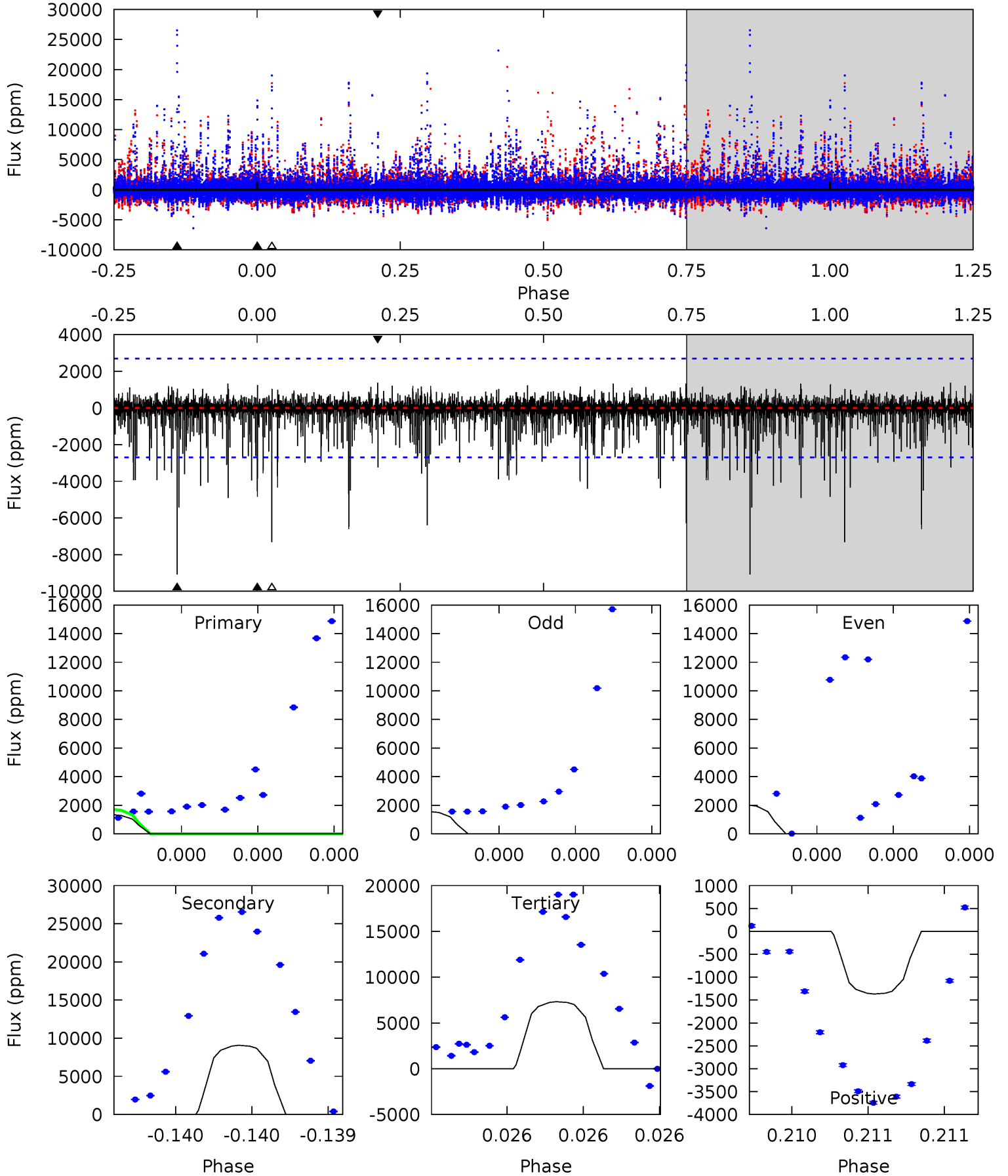
TCE 008127495-03 P=575.422672 Days $T_0=209.563679$ (BKJD)



DV Model-Shift Uniqueness Test

008127495-03, P = 575.489526 Days, E = 209.495990 Days

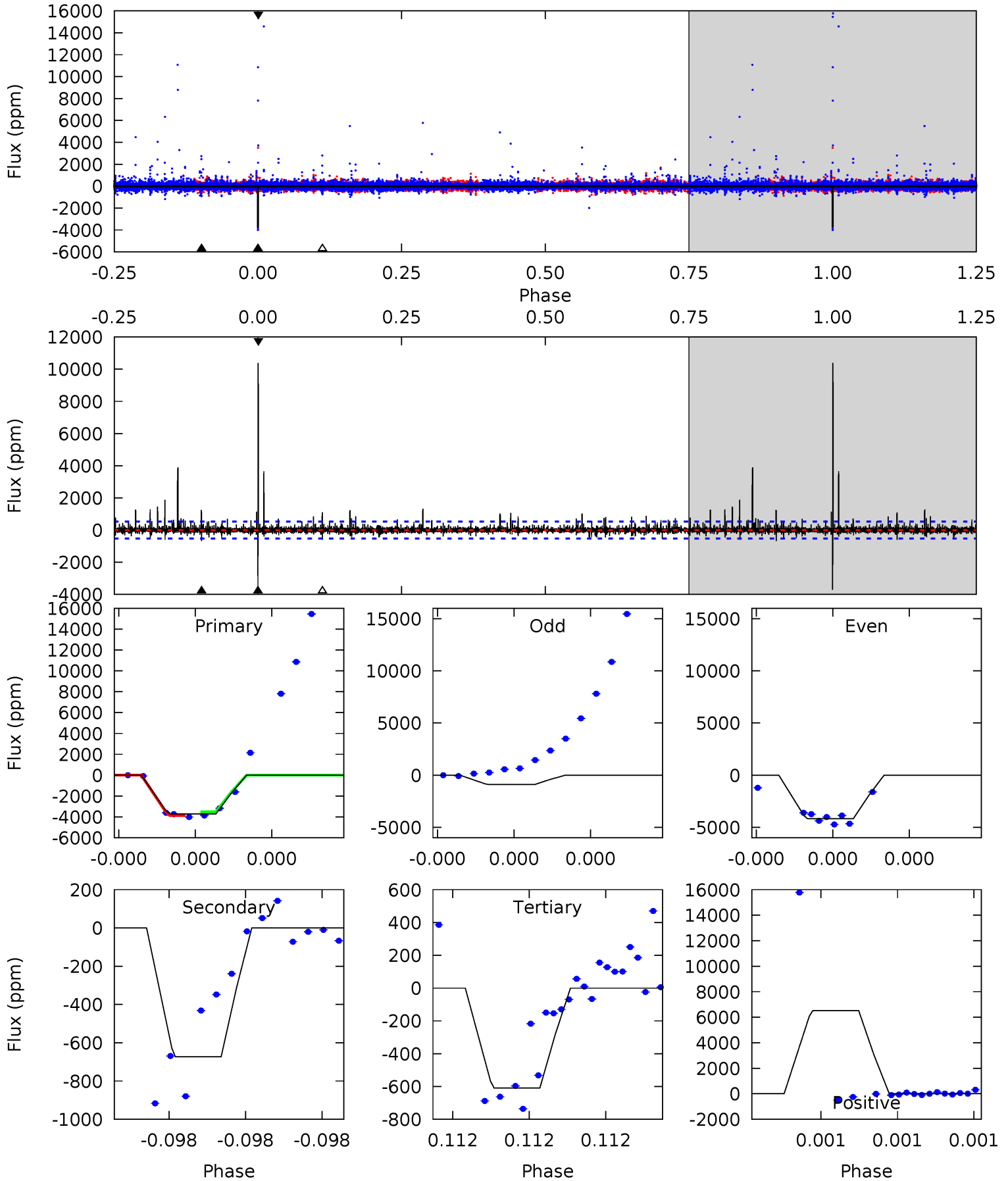
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.88	19.5	15.7	2.93	5.78	3.79	0.99	-12.8	-0.05	3.76	16.5	0.47	-0.69	0.13	0.67



Alt Model-Shift Uniqueness Test

008127495-03, P = 575.422672 Days, E = 209.563679 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.7	7.38	6.67	71.5	5.75	3.75	1.38	34.1	-30.8	0.70	-64.1	22.7	0.67	0.74	0



Stellar Parameters For KIC 008127495

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+168}_{-264}	$4.268^{+0.105}_{-0.195}$	$-0.240^{+0.250}_{-0.350}$	$1.375^{+0.437}_{-0.235}$	$1.288^{+0.185}_{-0.203}$	$0.698^{+0.336}_{-0.360}$
	+2%/-4%	+2%/-5%	+104%/-146%	+32%/-17%	+14%/-16%	+48%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008127495-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9075 ± 467	$289.95^{+339.55}_{-212.15}$	412^{+32}_{-24}	2421^{+1062}_{-382}	130^{+1709}_{-102}
Alt.	-673 ± 91	$308.98^{+342.45}_{-202.10}$	415^{+32}_{-26}	1811^{+455}_{-239}	$8.224^{+60.583}_{-6.379}$

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 $A_{obs} \gg 1.0$

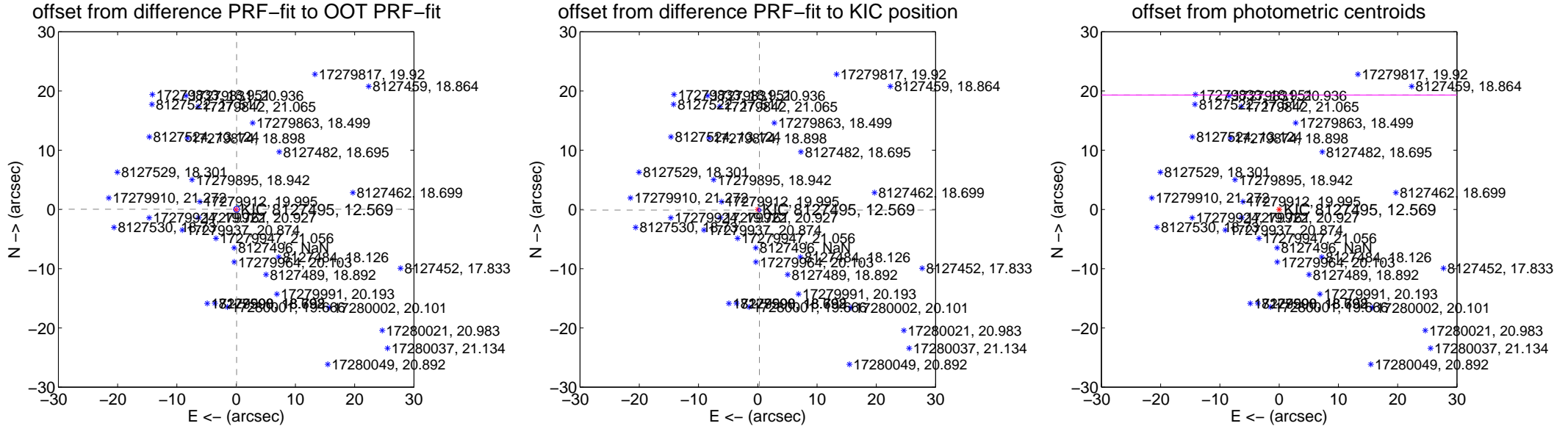
DV Centroid Data

Supplemental centroid analysis for 008127495-03. Kepler magnitude: 12.57. Transit SNR 0.03

There are 3 quarters with good PRF difference image offsets

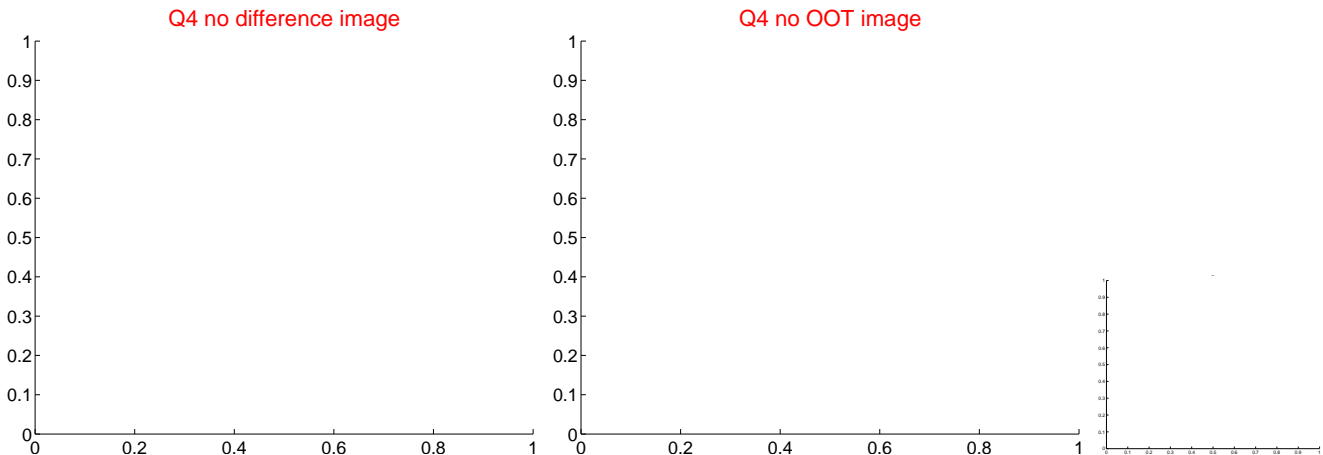
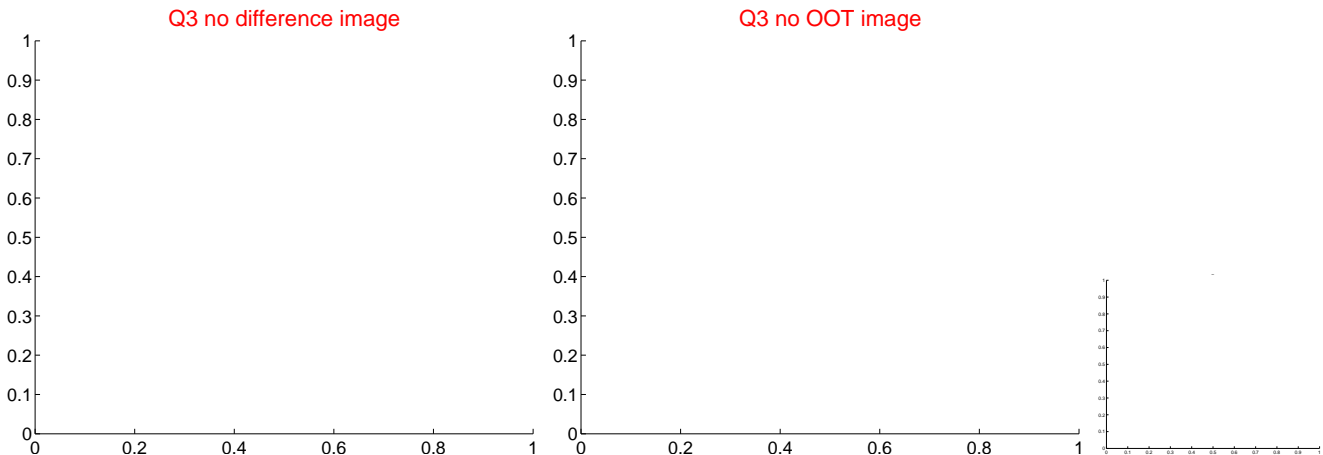
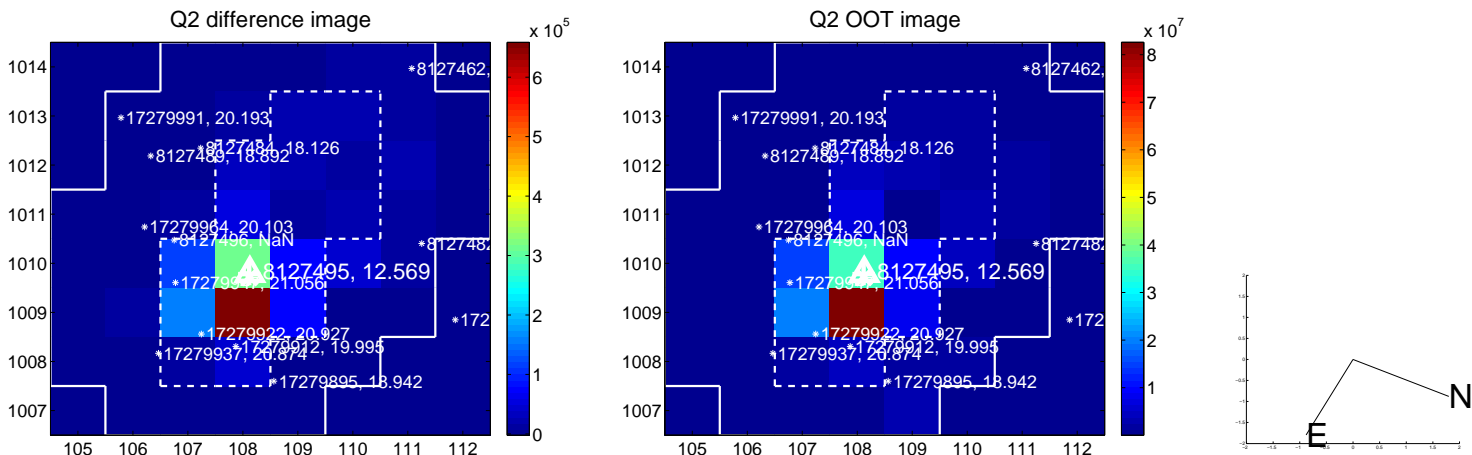
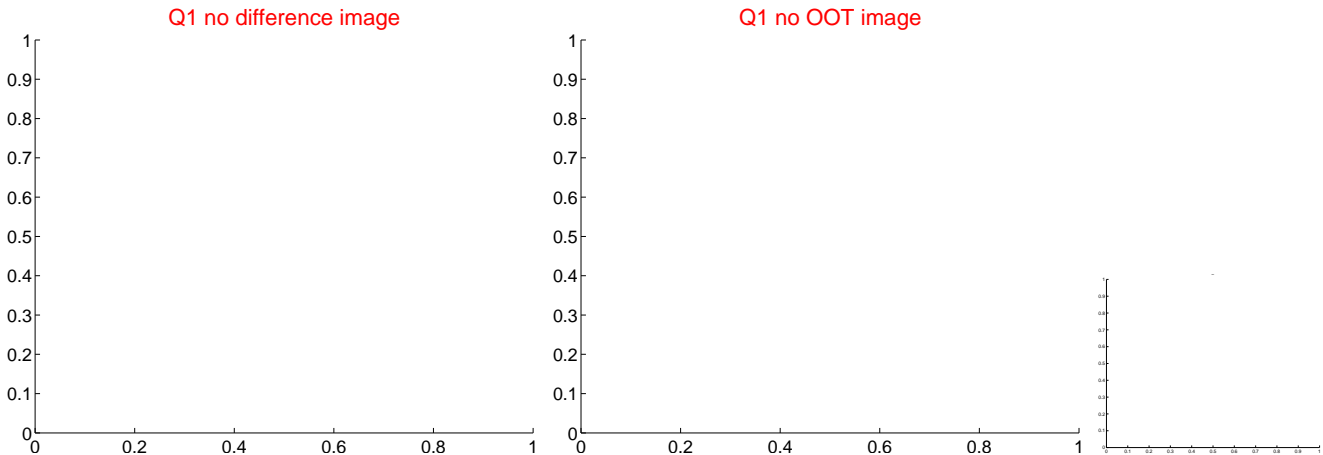
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.086 ± 0.165	0.52	-0.079 ± 0.104	0.033 ± 0.214
PRF-fit source offset from KIC position	0.298 ± 0.090	3.31	-0.278 ± 0.080	-0.108 ± 0.166
photometric centroid source offset	87.56 ± 213.05	0.41	85.40 ± 214.56	19.32 ± 181.03



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.

Q5 no difference image



Q5 no OOT image



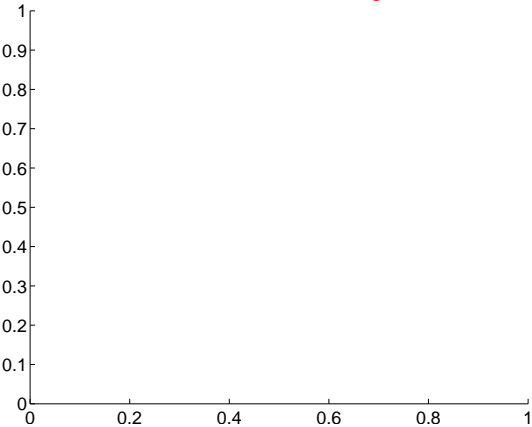
Q6 no difference image



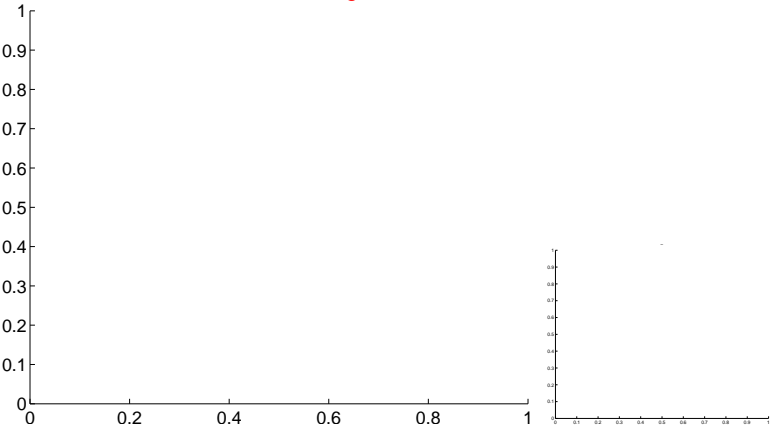
Q6 no OOT image



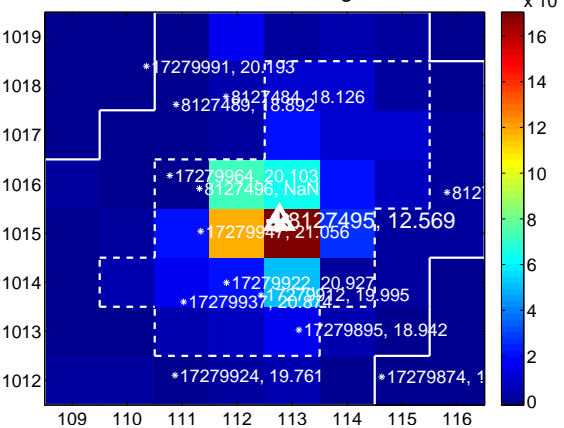
Q7 no difference image



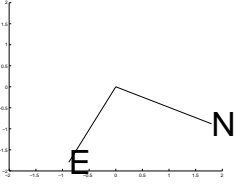
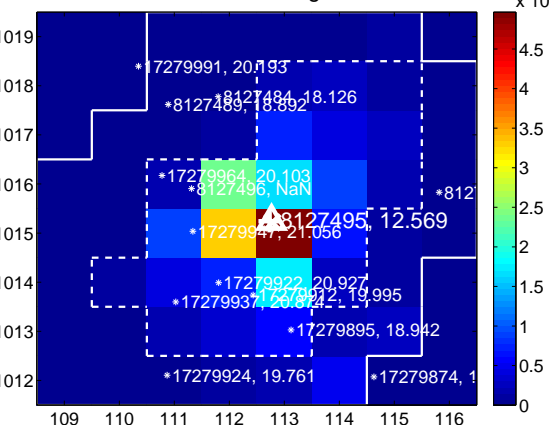
Q7 no OOT image



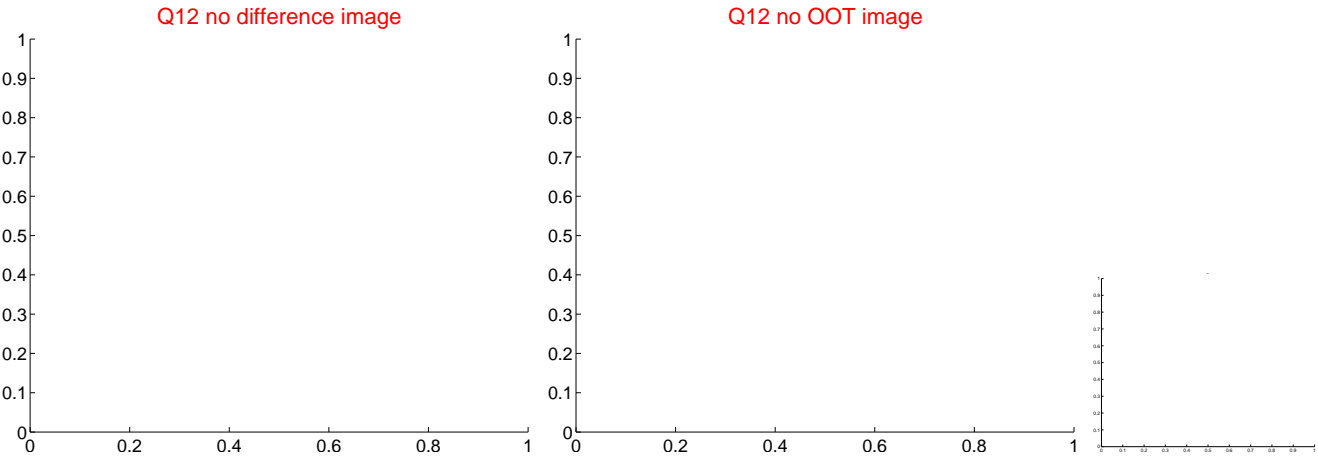
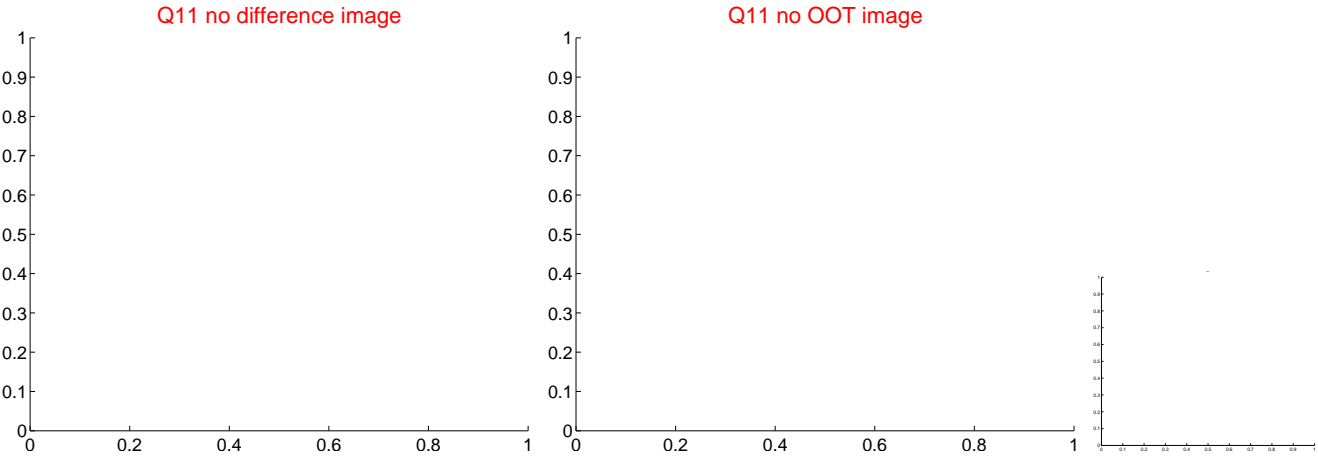
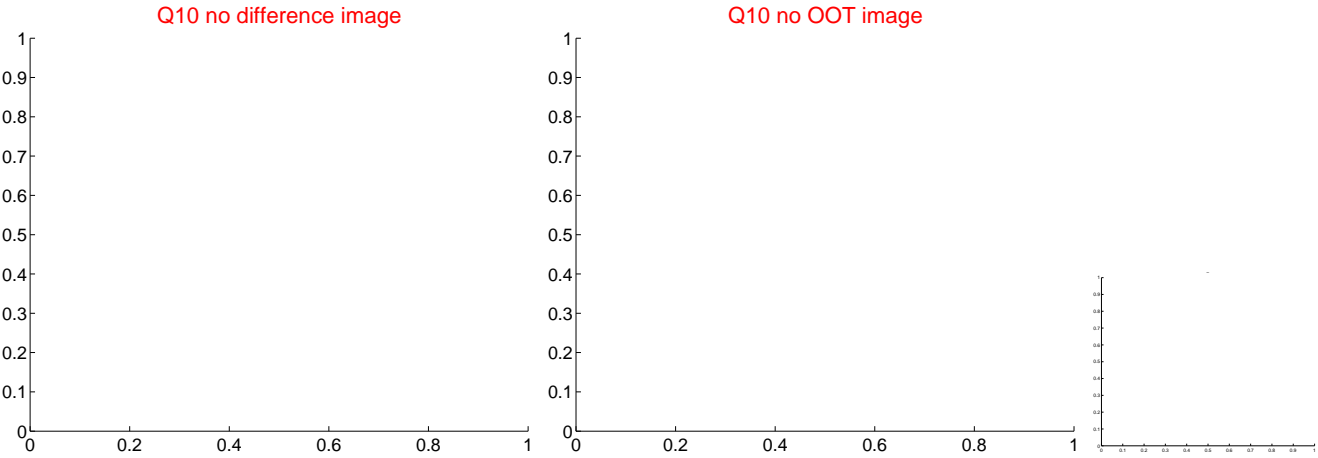
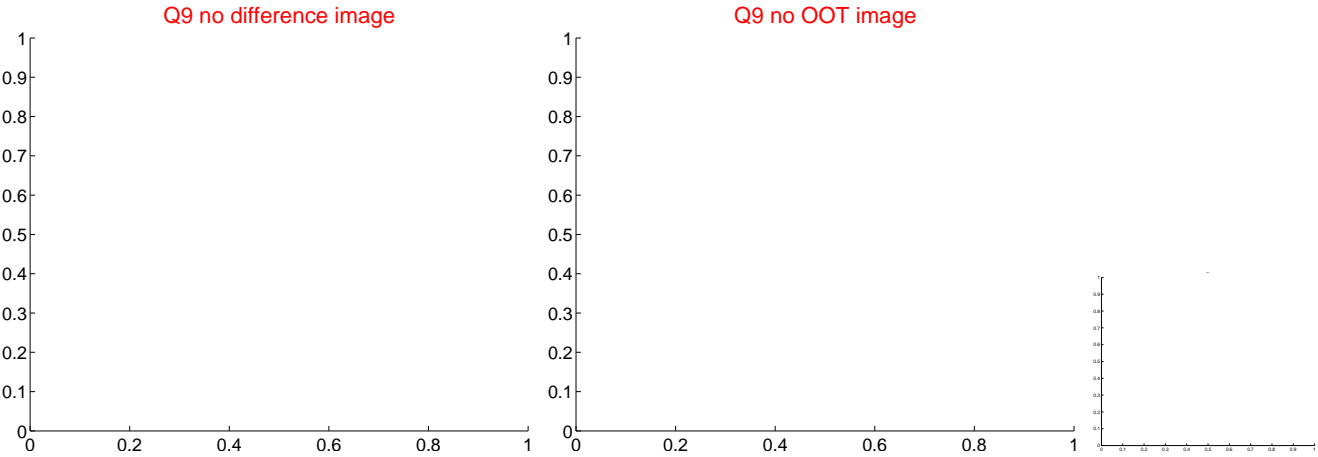
Q8 difference image



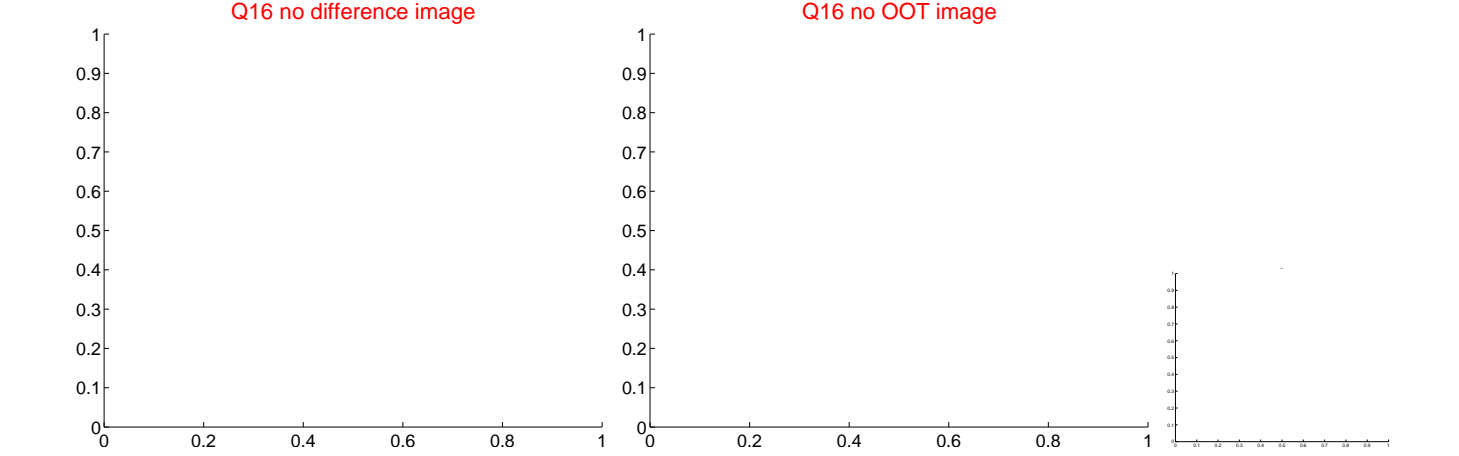
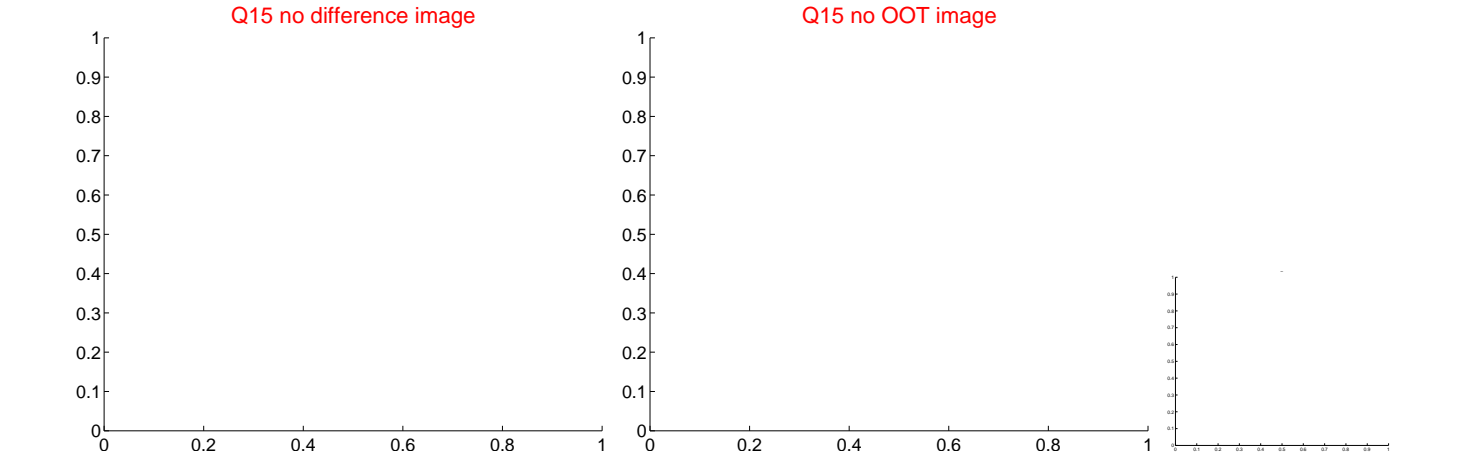
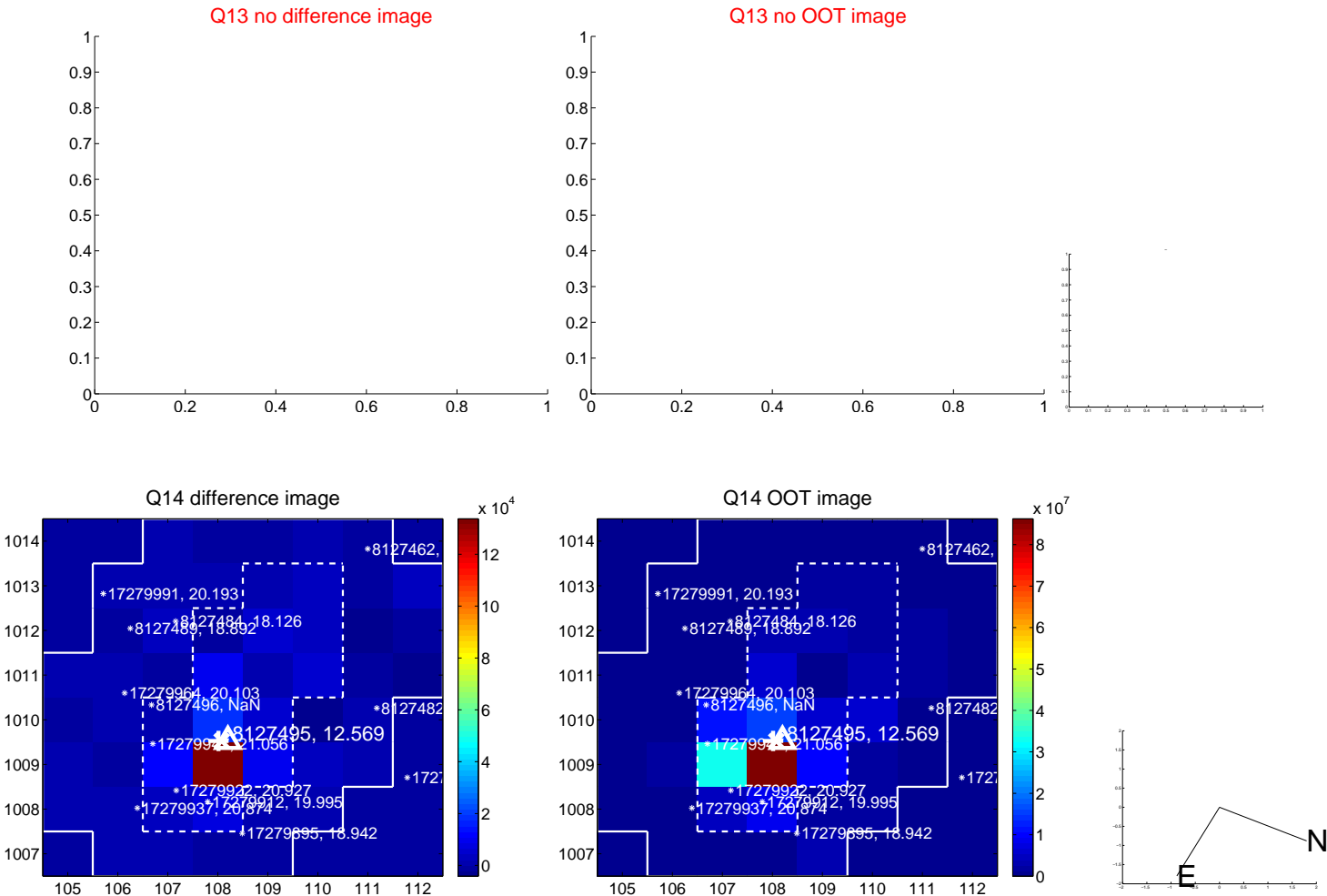
Q8 OOT image



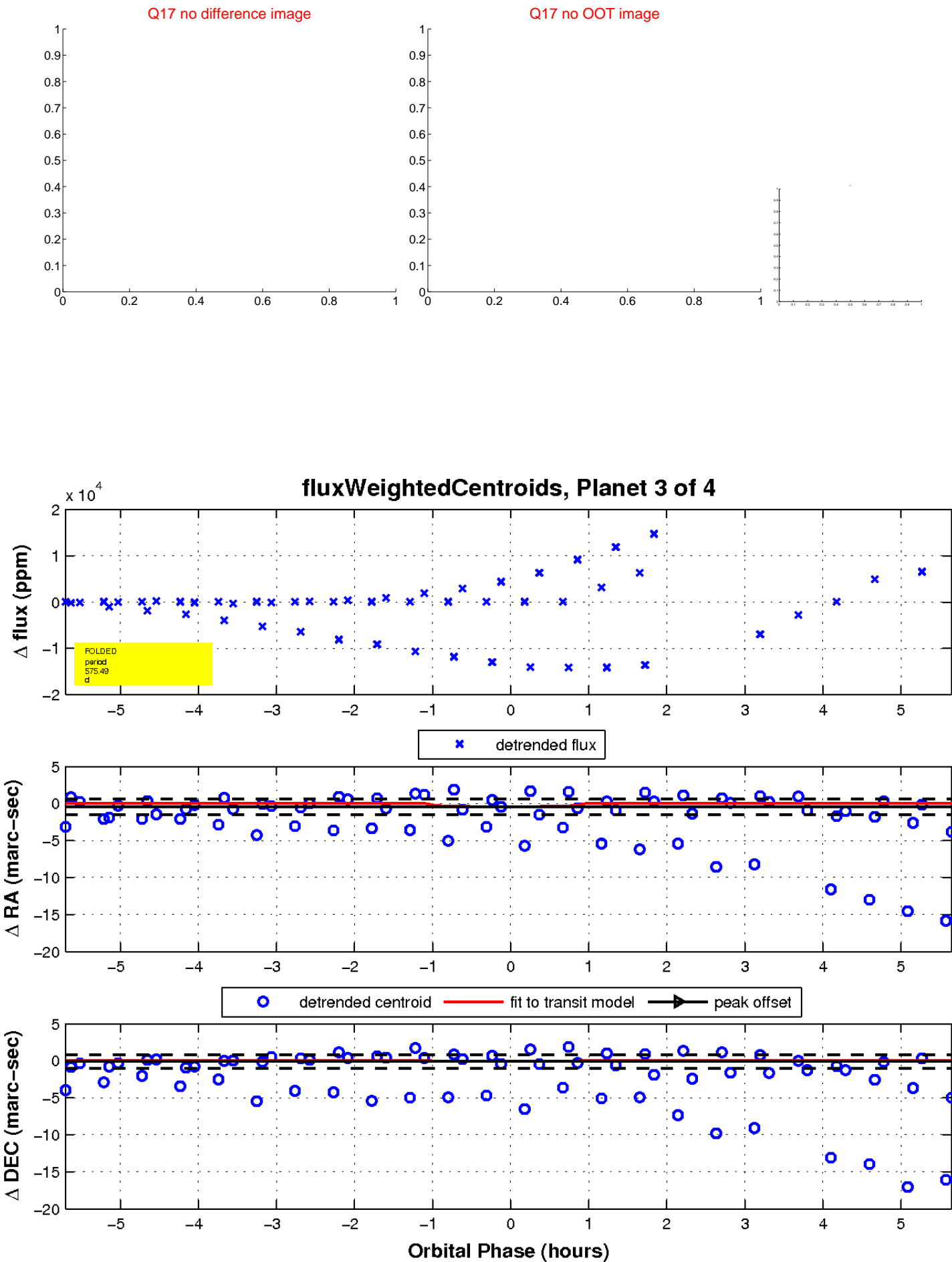
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

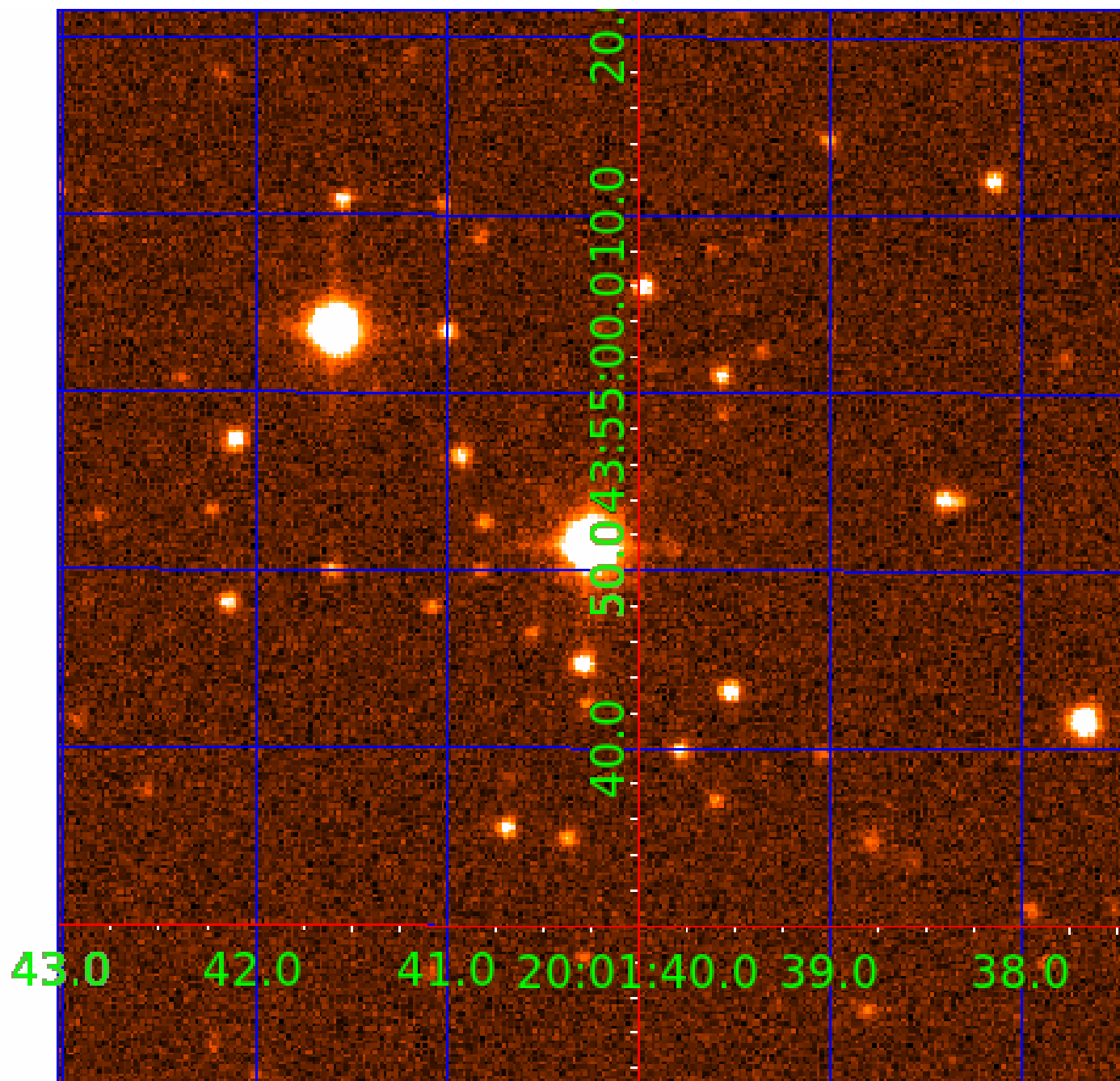


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008127495

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})
008127495-01	OBS	No	421.723296	282.781322	5797.1	7.417	22.5	10.1	1.38	6875	18.65	2.65
008127495-02	OBS	No	432.440986	417.061396	15746.4	11.059	22.2	11.6	1.38	6875	29.94	2.56
008127495-03	OBS	No	575.489526	209.495990	5.1	1.917	17.5	0.0	1.38	6875	0.31	1.75
008127495-04	OBS	No	207.893556	330.438125	762.1	2.500	16.5	-1.0	1.38	6875	3.84	6.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008127495-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008127495-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS
008127495-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS
008127495-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

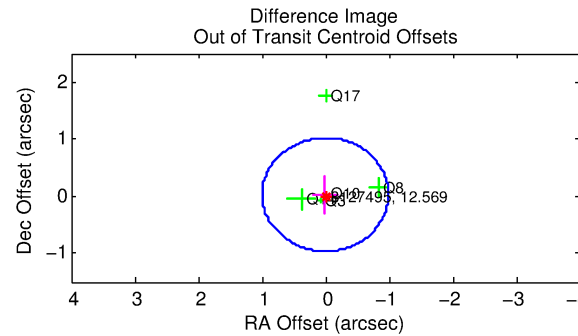
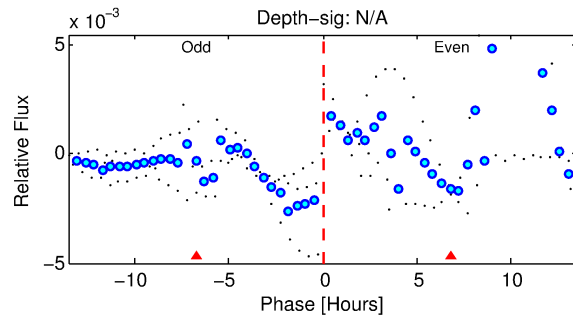
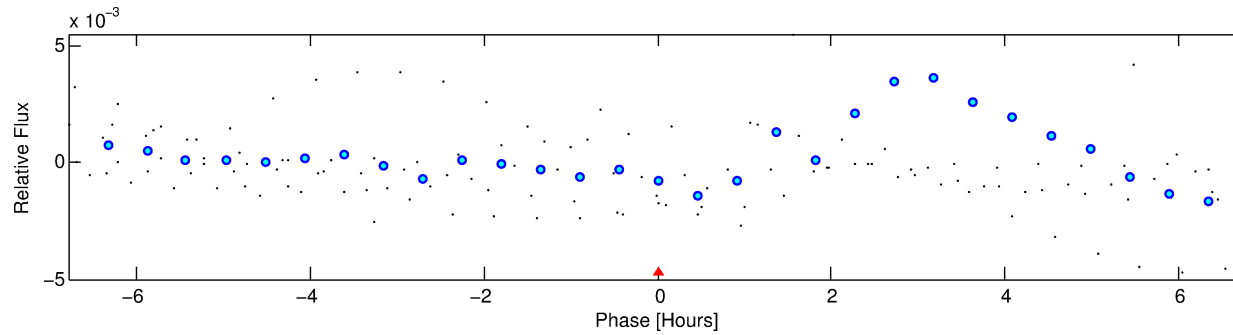
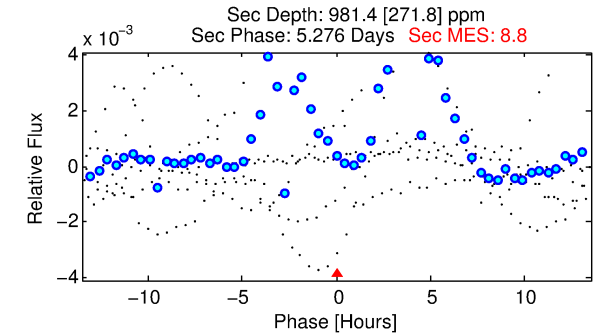
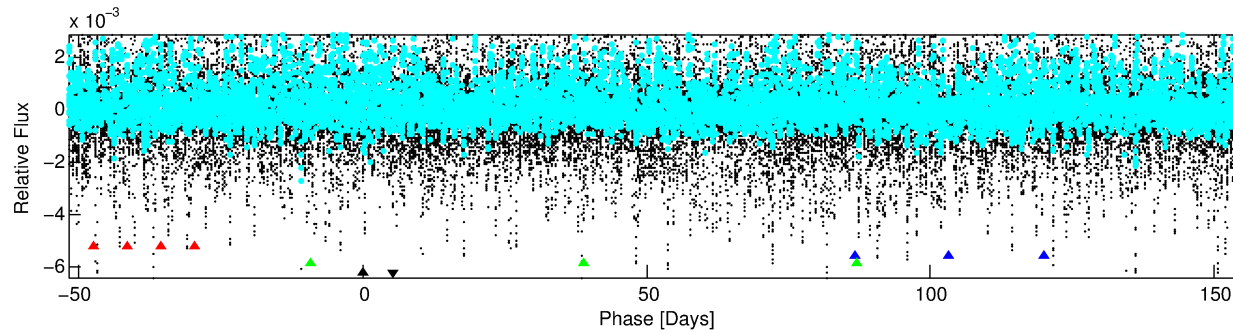
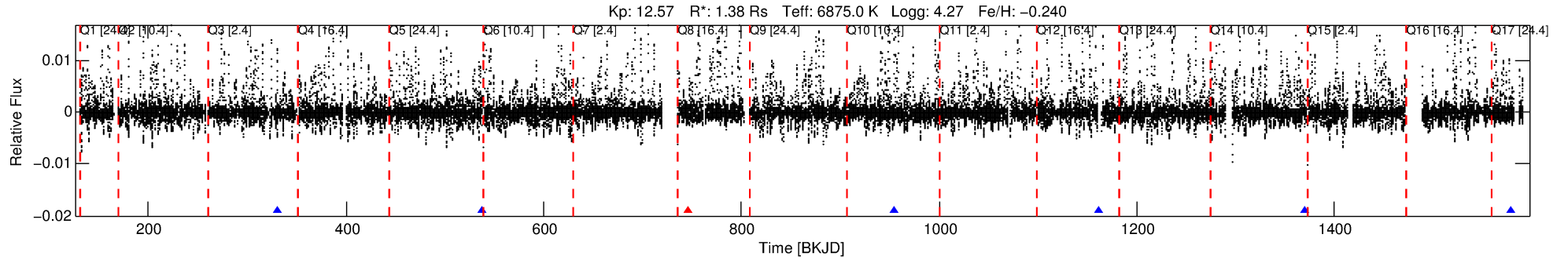
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008127495-04

No Significant Match Found

DV One-Page Summary

KIC: 8127495 Candidate: 4 of 4 Period: 207.894 d



TPS TCE Results:

Period = 207.89356 d
Epoch = 330.4381 BKJD

DV fit results are unavailable

DV Diagnostic Results:

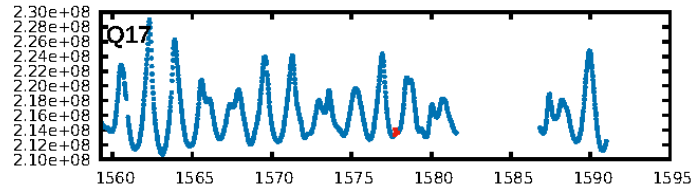
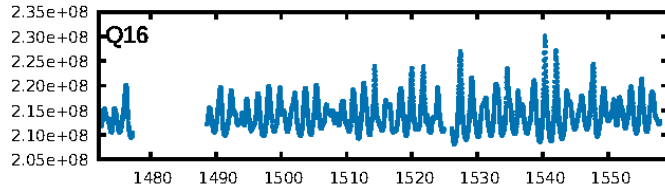
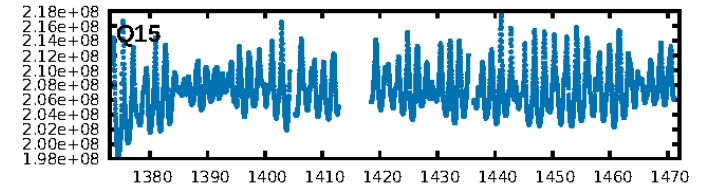
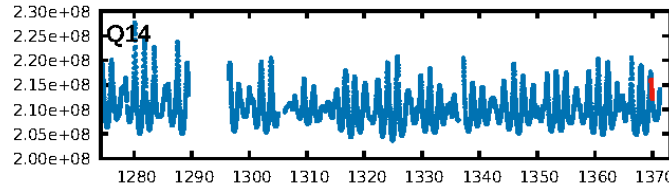
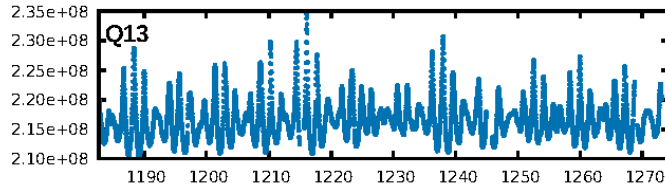
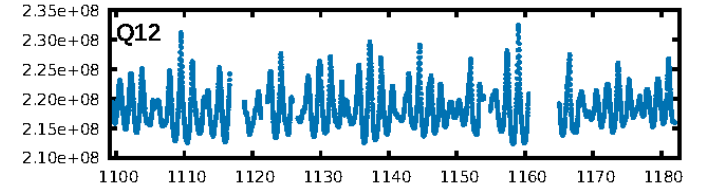
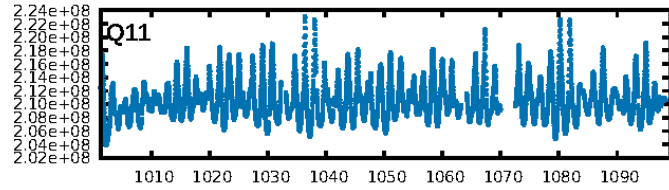
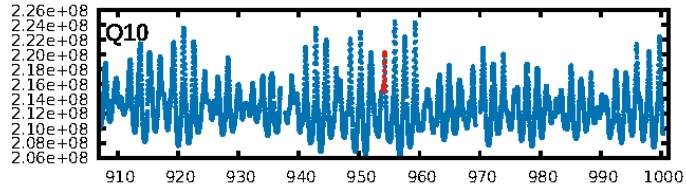
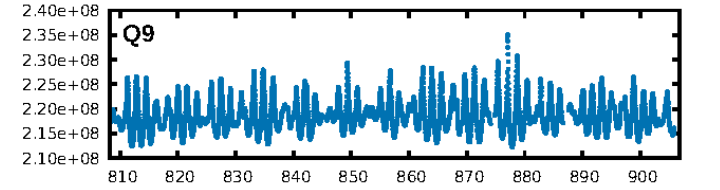
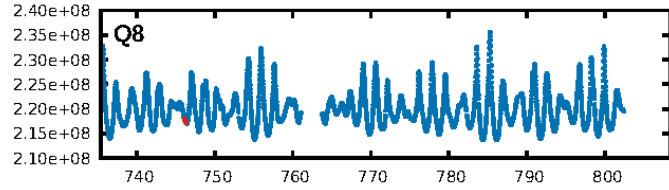
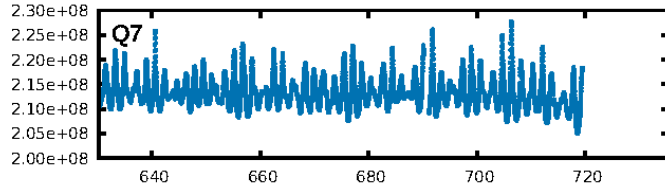
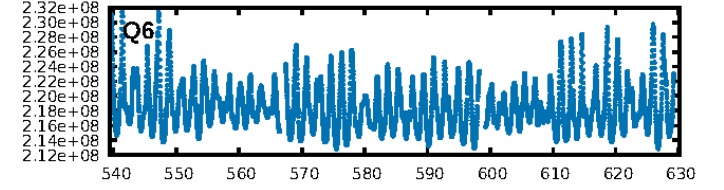
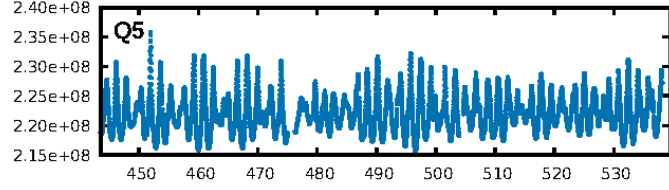
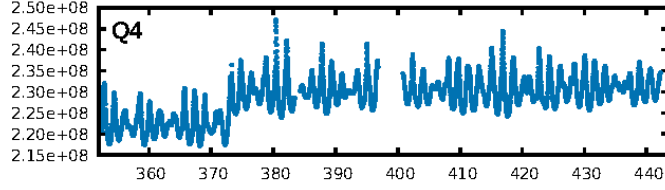
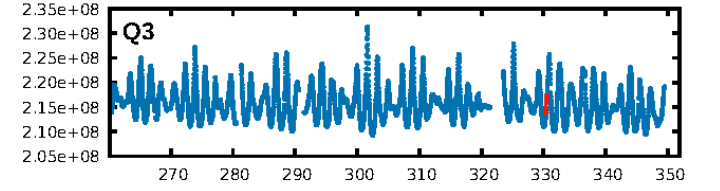
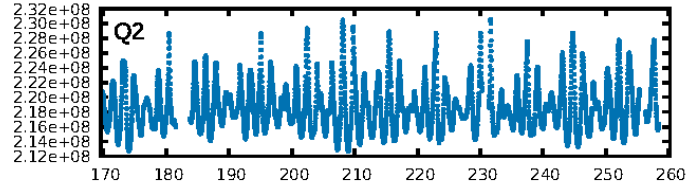
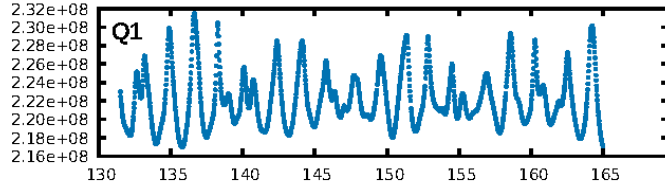
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [655.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 46.54

Centroid-sig: 0.6%
Centroid-so: 0.633 arcsec [2.36σ]
OotOffset-rm: 0.030 arcsec [0.09σ]
KicOffset-rm: 0.305 arcsec [1.02σ]
OotOffset-st: 2/1/1/1 [5]
KicOffset-st: 2/1/1/1 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [5/5]

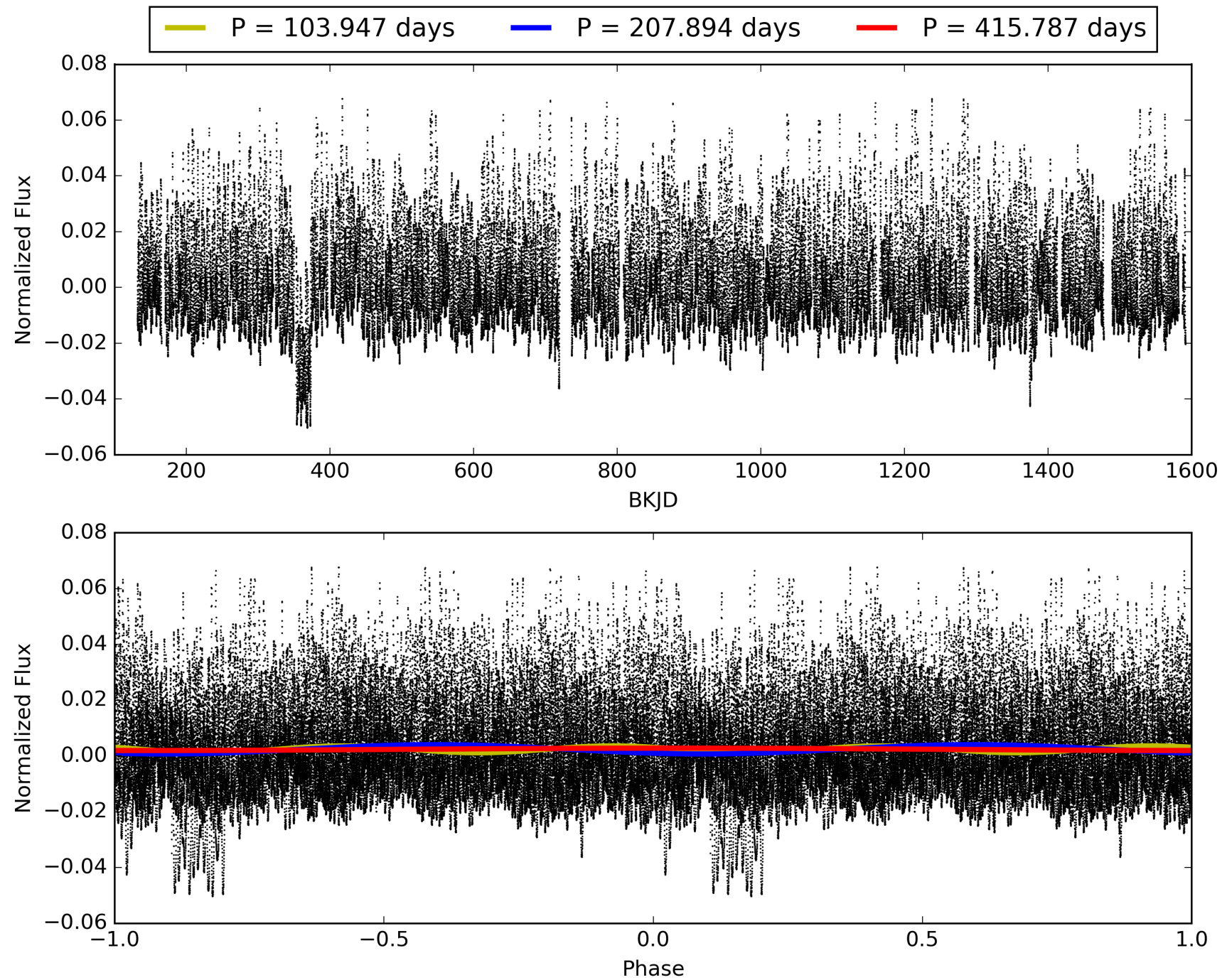
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:28 Z

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

TCE 008127495-04, PDC Light Curves

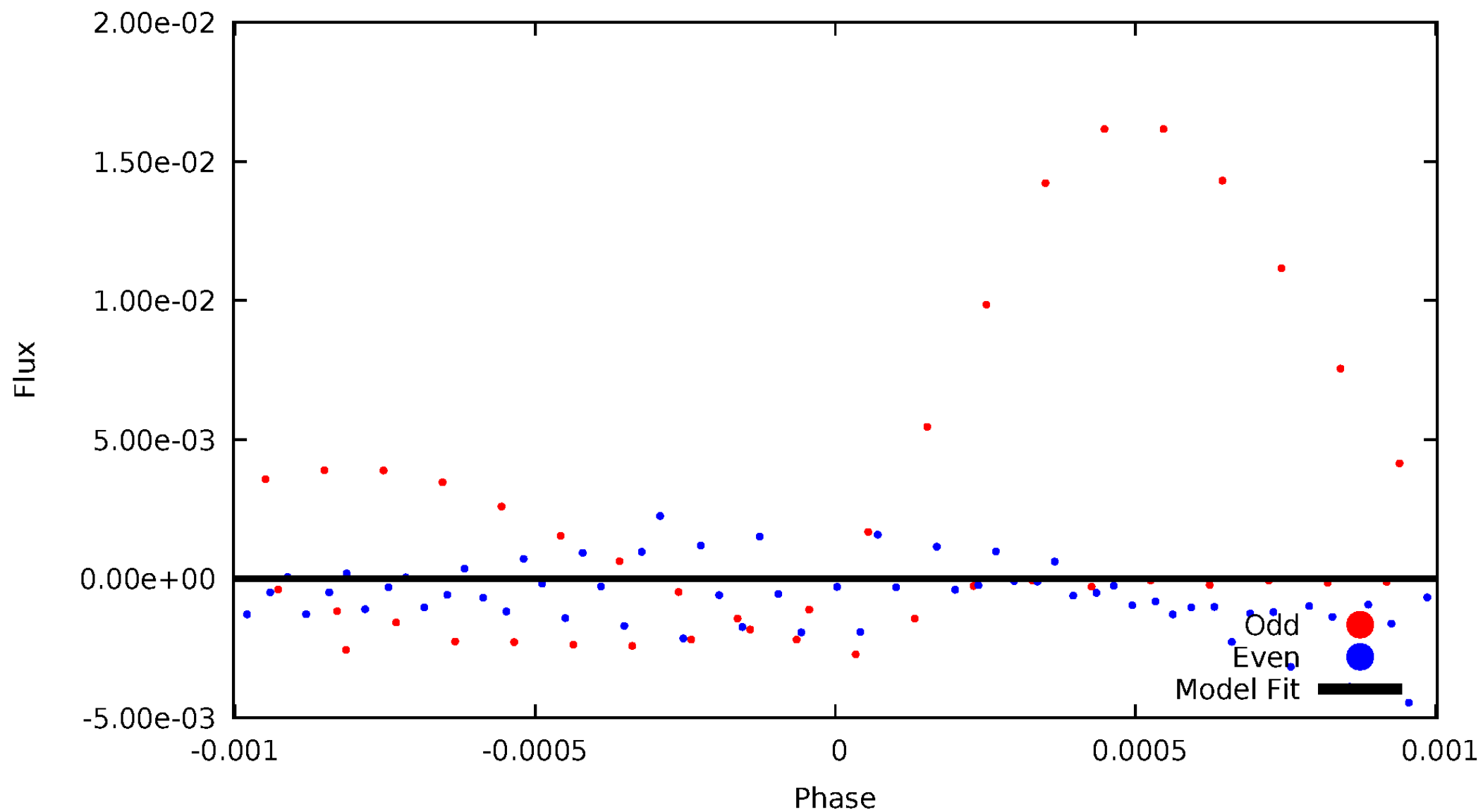


TCE 008127495-04



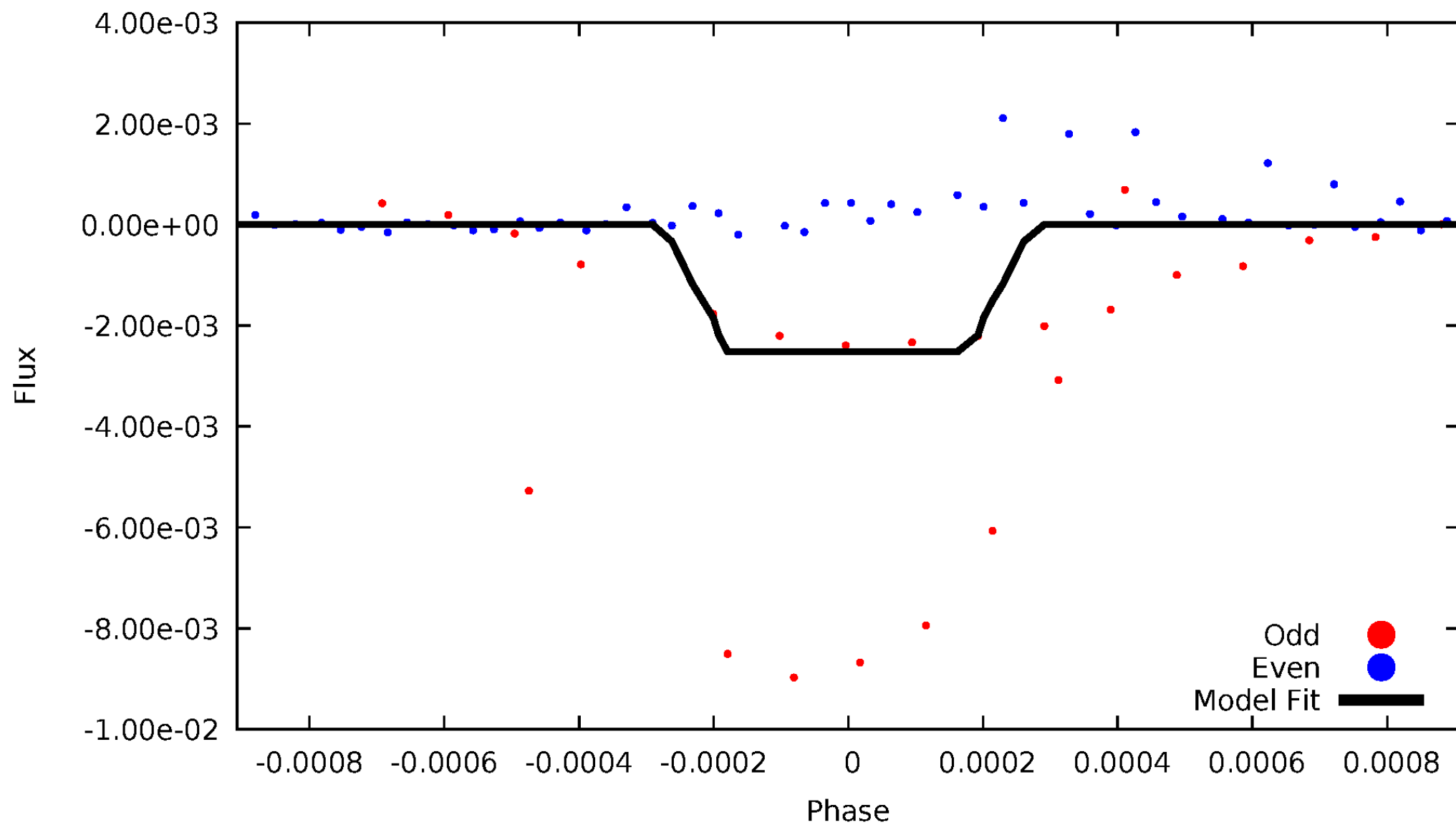
DV Odd/Even

TCE 008127495-04



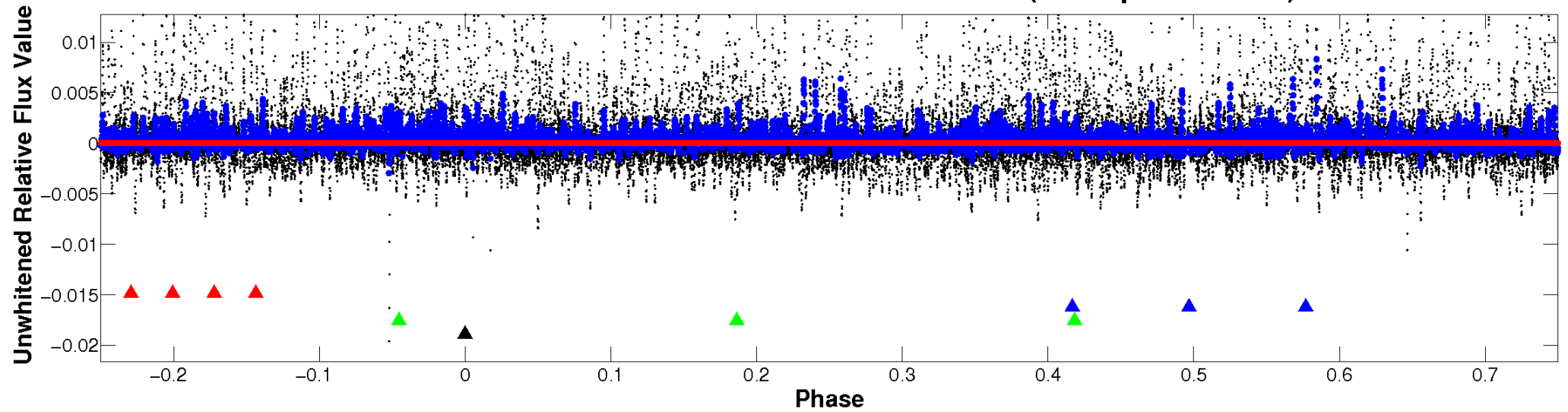
ALT Odd/Even

TCE 008127495-04

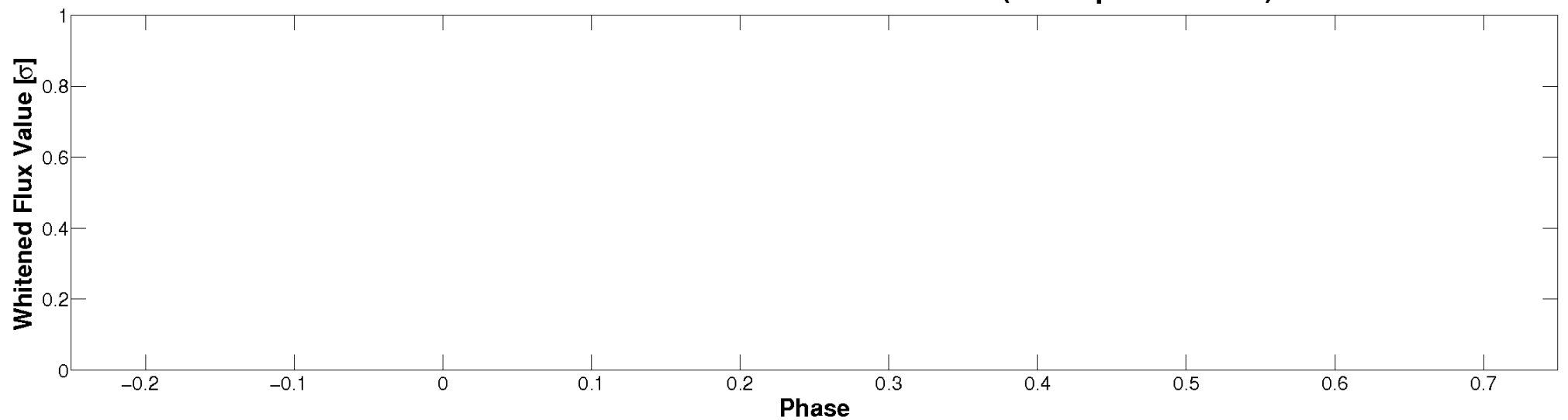


Non-Whitened Vs. Whitened Light Curve

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

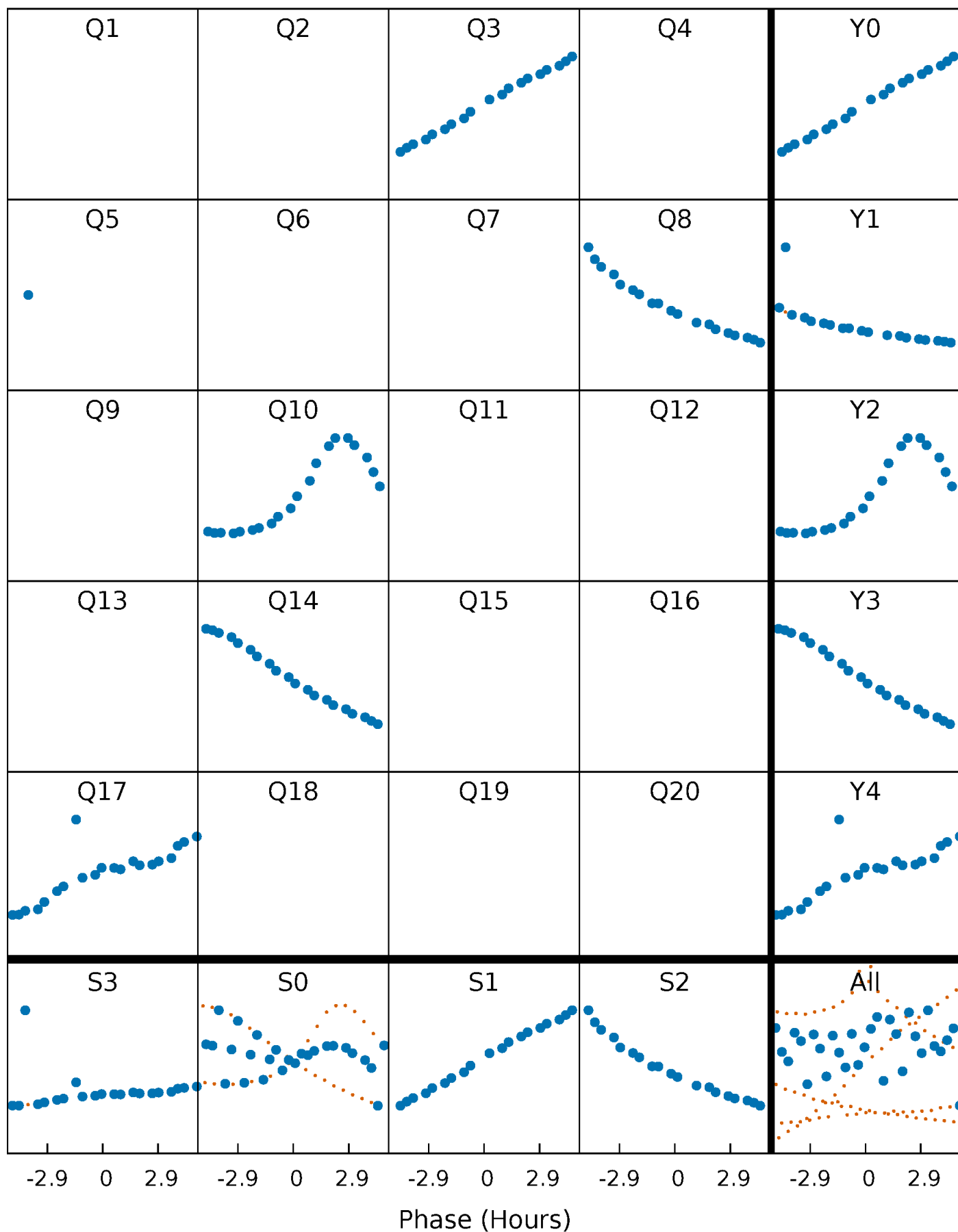


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



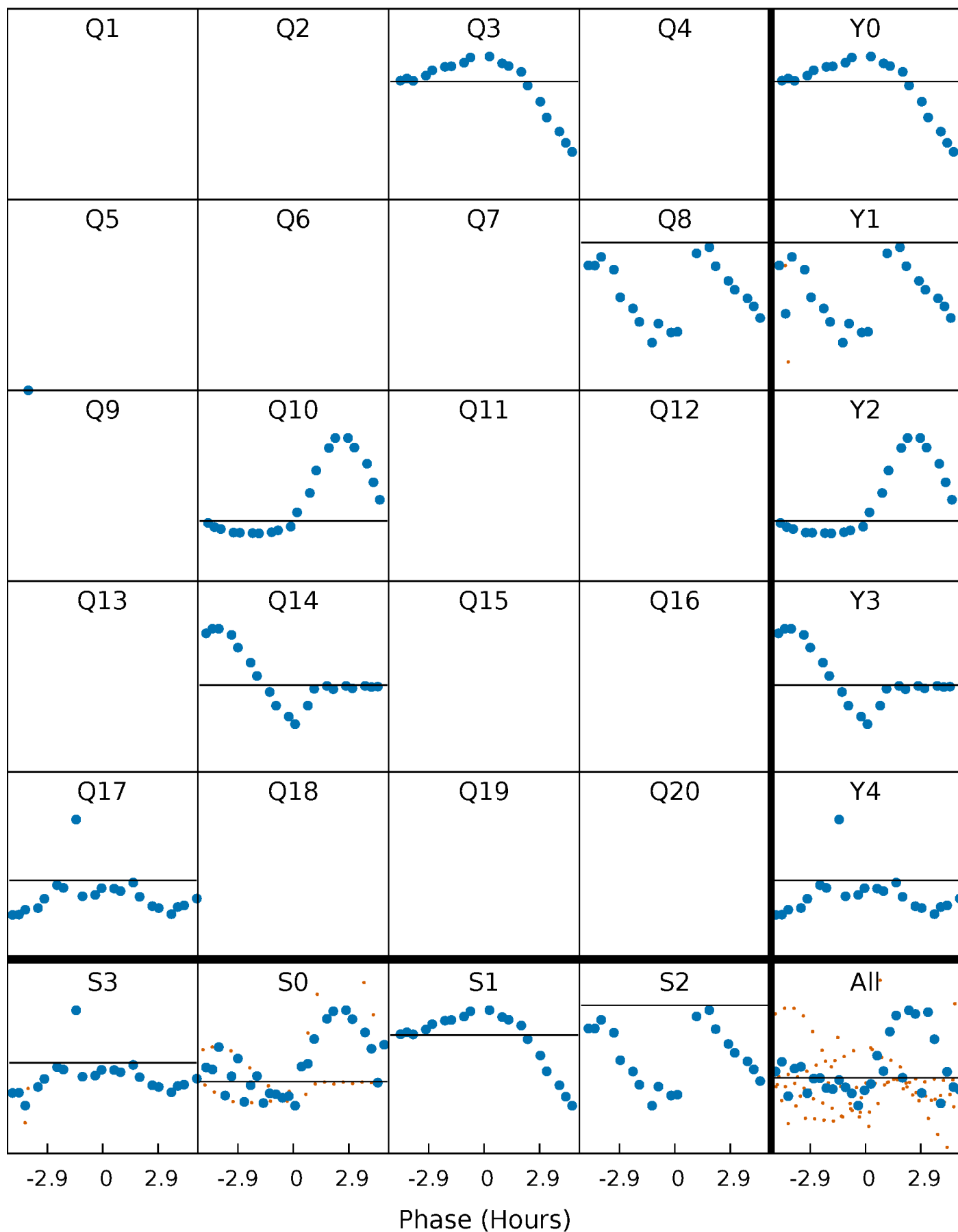
PDC Quarter-Phased Transit Curves

TCE 008127495-04 $P=207.893556$ Days $T_0=330.438125$ (BKJD)



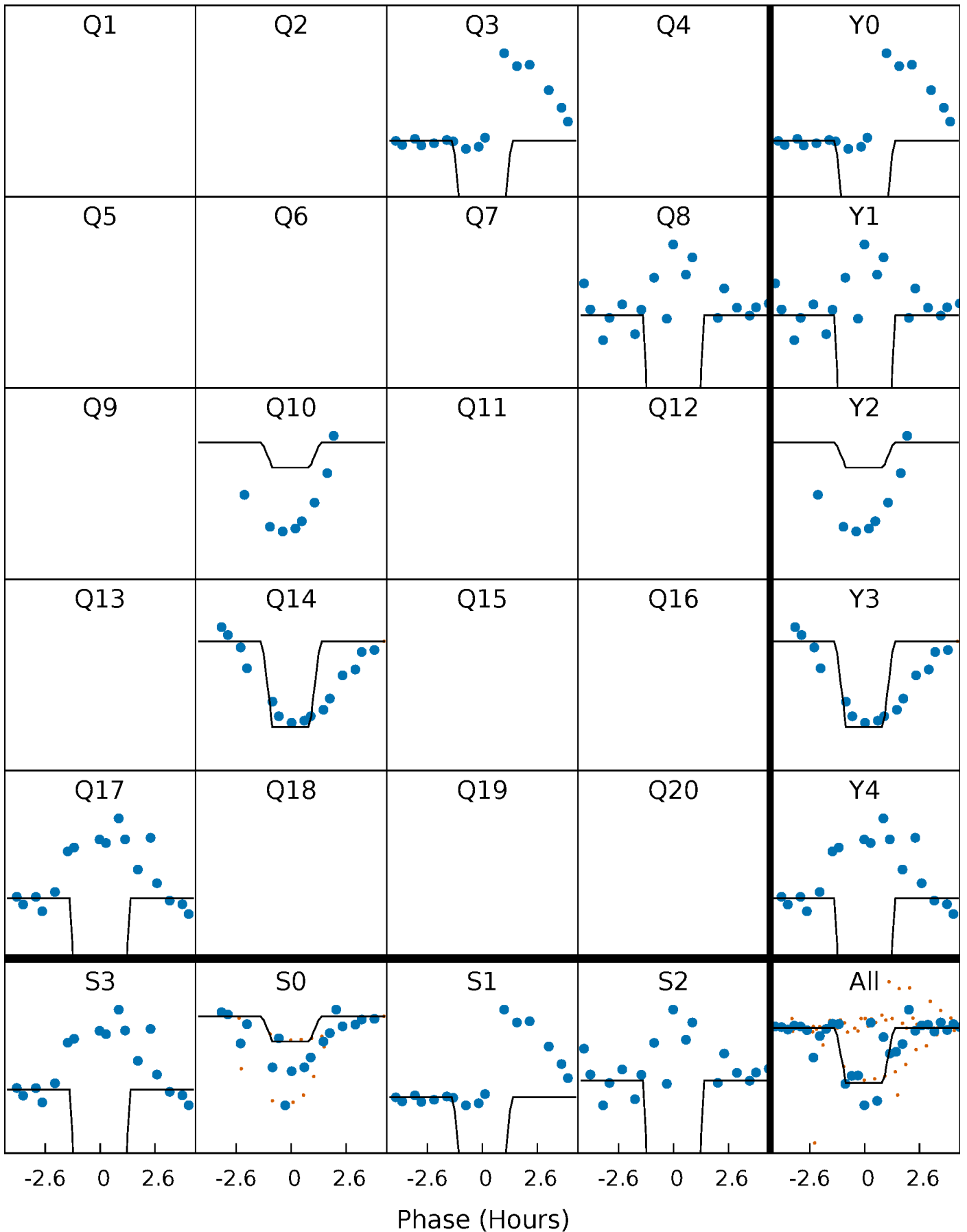
DV Quarter-Phased Transit Curves

TCE 008127495-04 P=207.893556 Days $T_0=330.438125$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

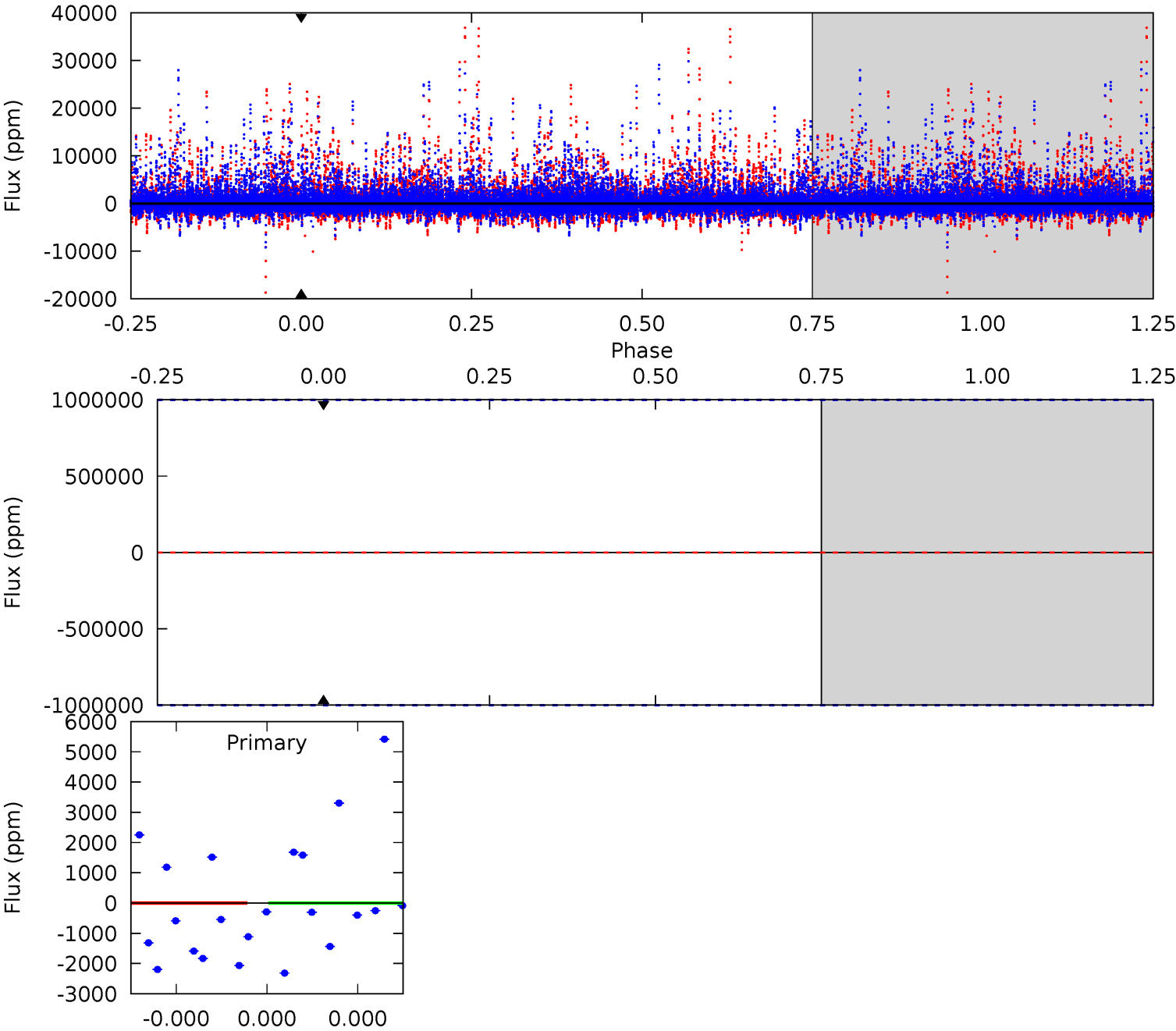
TCE 008127495-04 P=207.893556 Days $T_0=330.405093$ (BKJD)



DV Model-Shift Uniqueness Test

008127495-04, P = 207.893556 Days, E = 122.544569 Days

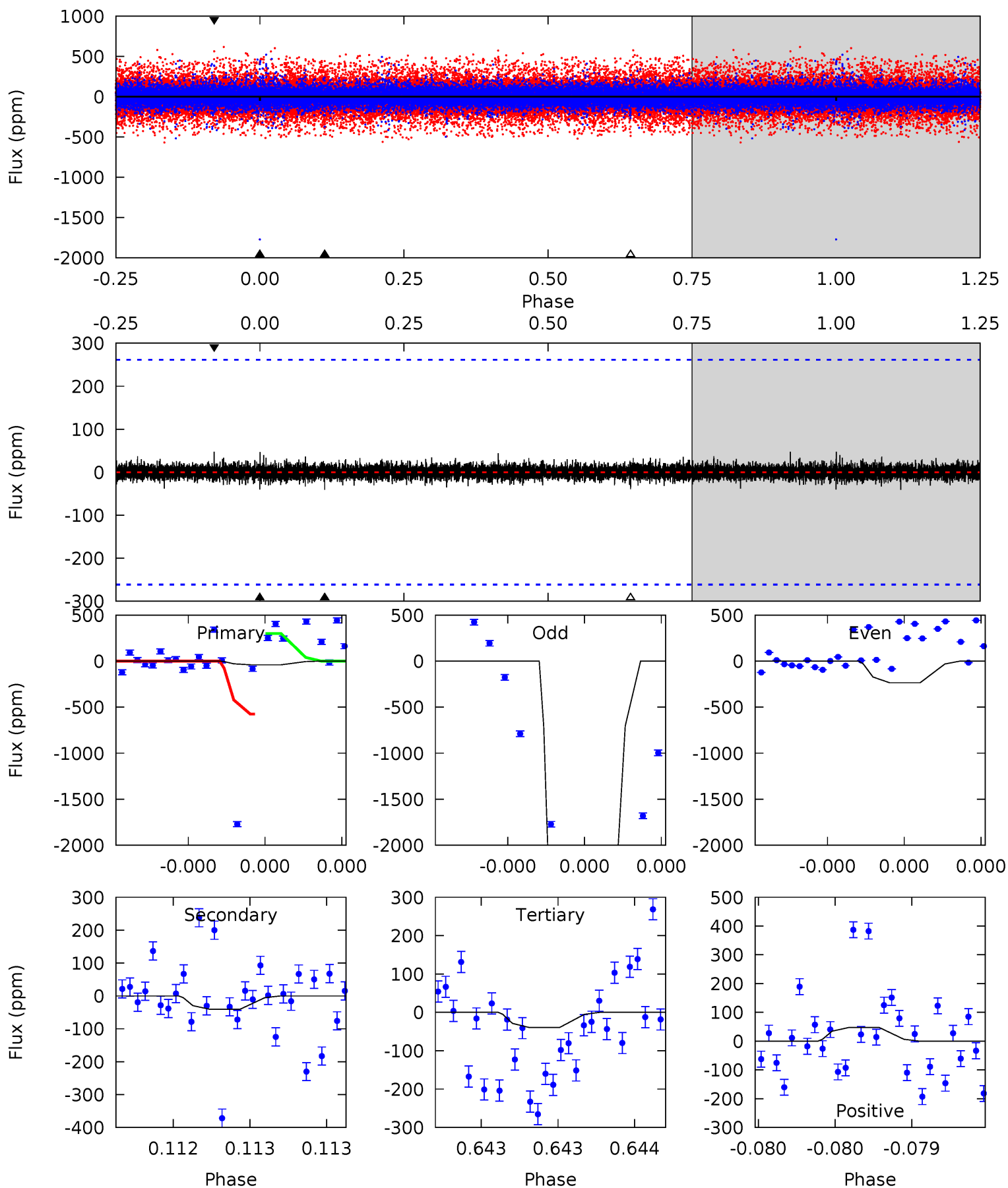
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008127495-04, P = 207.893556 Days, E = 122.511537 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.85	0.86	0.84	1.01	5.58	3.49	0.18	0.02	-0.16	0.02	-0.15	66.2	-9.17	0.54	0



Stellar Parameters For KIC 008127495

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6875^{+168}_{-264}	$4.268^{+0.105}_{-0.195}$	$-0.240^{+0.250}_{-0.350}$	$1.375^{+0.437}_{-0.235}$	$1.288^{+0.185}_{-0.203}$	$0.698^{+0.336}_{-0.360}$
	+2%/-4%	+2%/-5%	+104%/-146%	+32%/-17%	+14%/-16%	+48%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008127495-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.09^{+11.73}_{-8.06}$	581^{+42}_{-35}	4594^{+26925}_{-28755}	$1634^{+386879}_{-285856}$
Alt.	-40 ± 47	$13.33^{+12.98}_{-8.89}$	580^{+44}_{-34}	2520^{+1040}_{-4544}	47^{+495}_{-53}

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 $A_{obs} \gg 1.0$

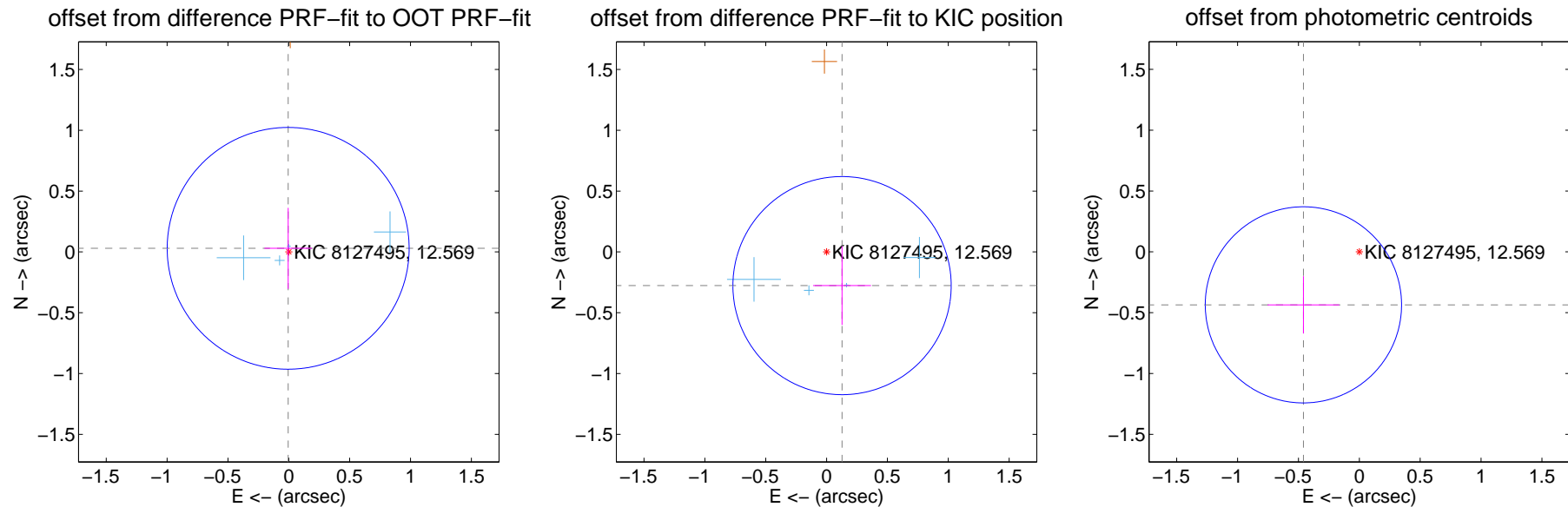
DV Centroid Data

Supplemental centroid analysis for 008127495-04. Kepler magnitude: 12.57. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.331	0.09	0.005 ± 0.195	0.029 ± 0.333
PRF-fit source offset from KIC position	0.305 ± 0.299	1.02	-0.127 ± 0.238	-0.277 ± 0.323
photometric centroid source offset	0.63 ± 0.27	2.36	0.46 ± 0.29	-0.44 ± 0.24



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.

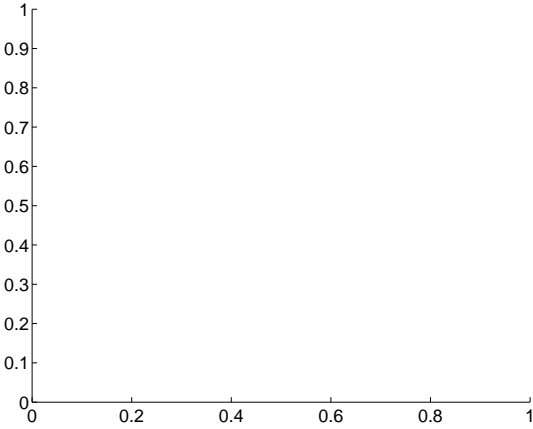
Q1 no difference image



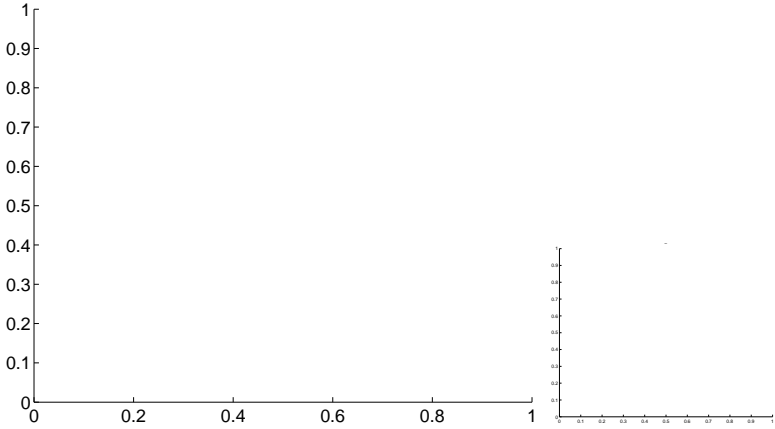
Q1 no OOT image



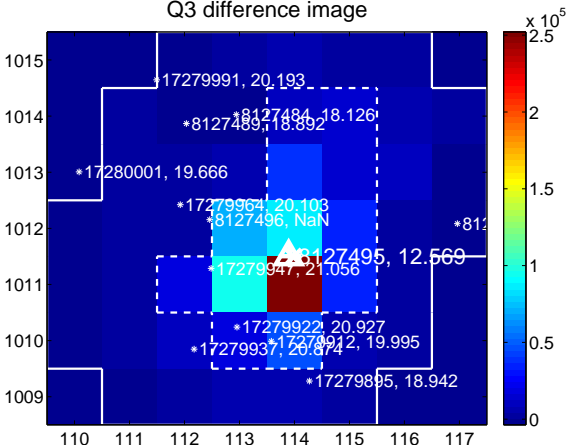
Q2 no difference image



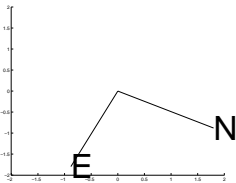
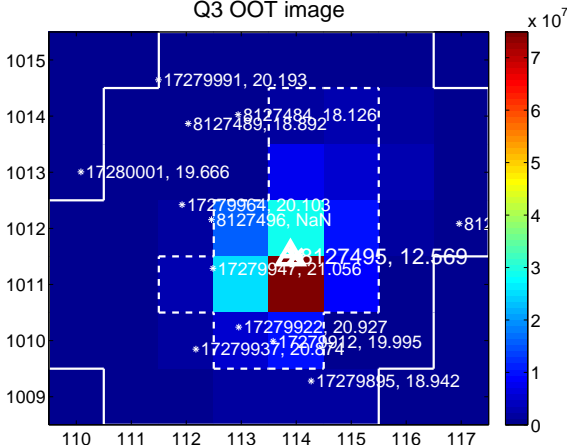
Q2 no OOT image



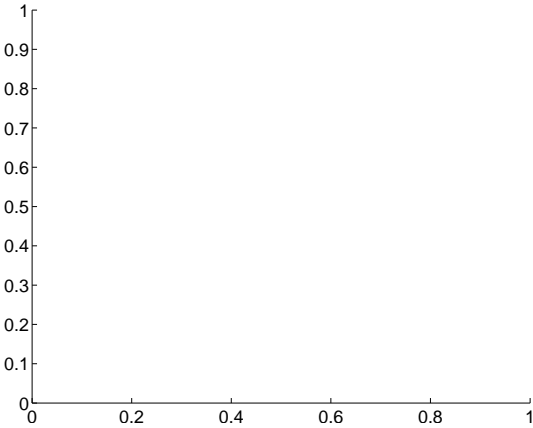
Q3 difference image



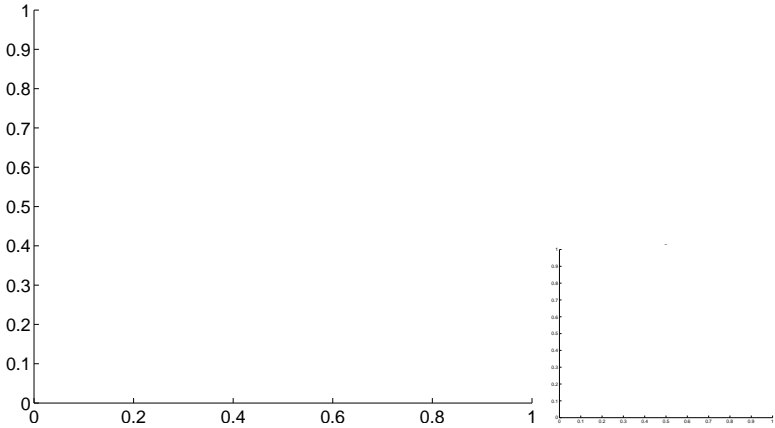
Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

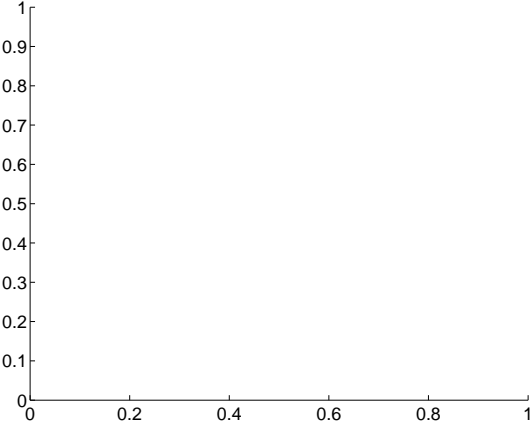
Q5 no difference image



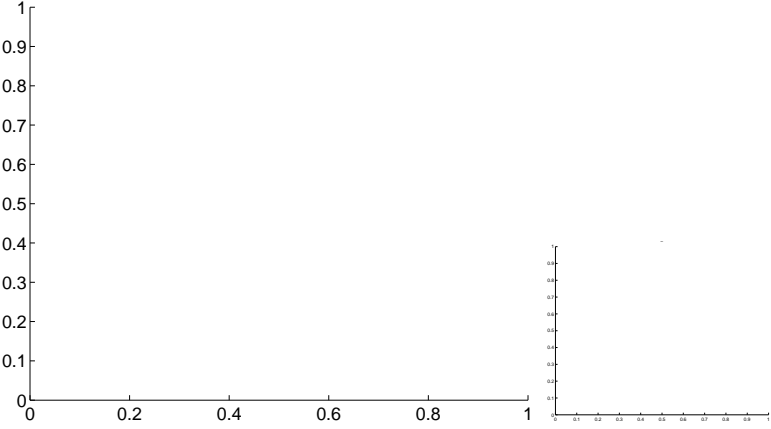
Q5 no OOT image



Q6 no difference image



Q6 no OOT image



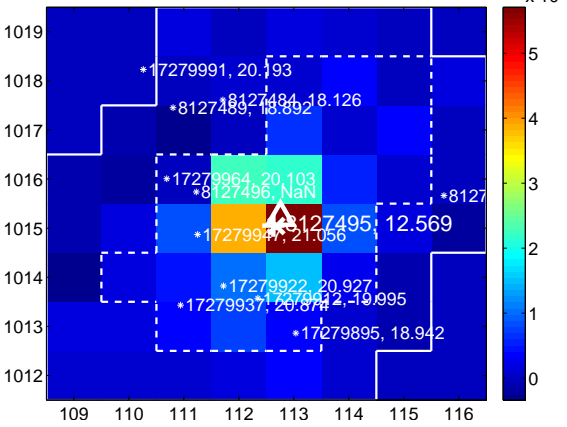
Q7 no difference image



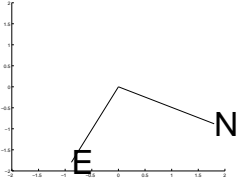
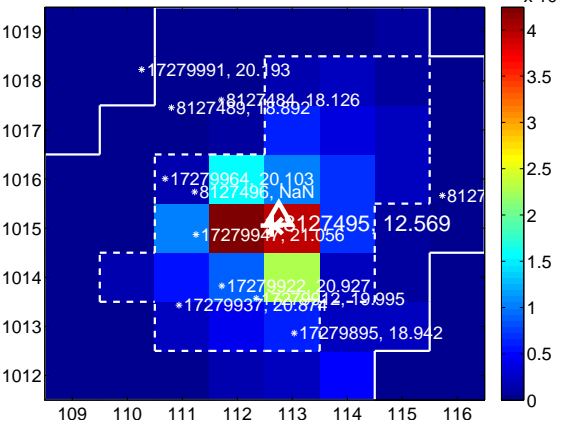
Q7 no OOT image



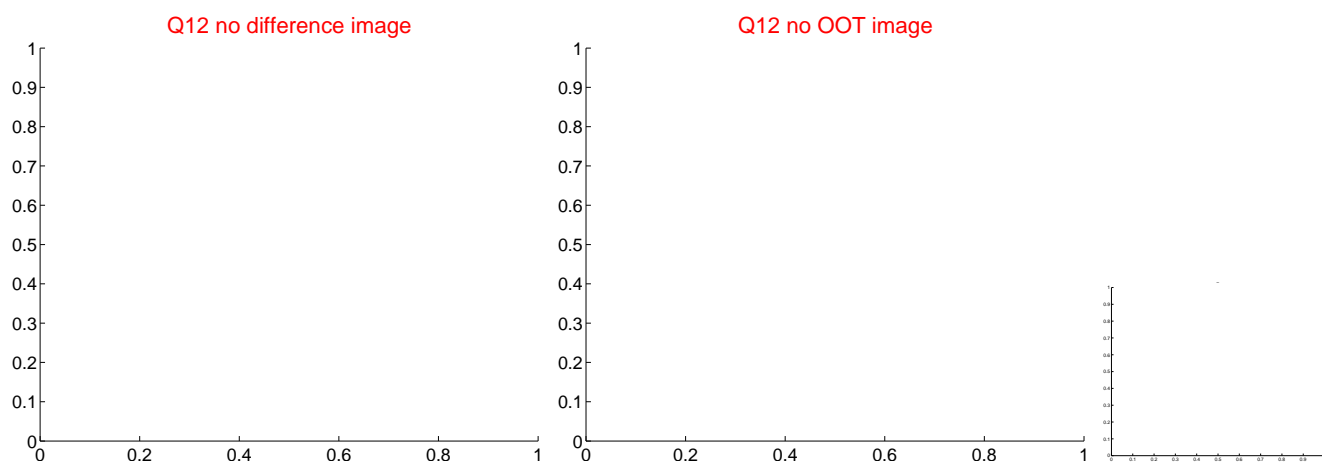
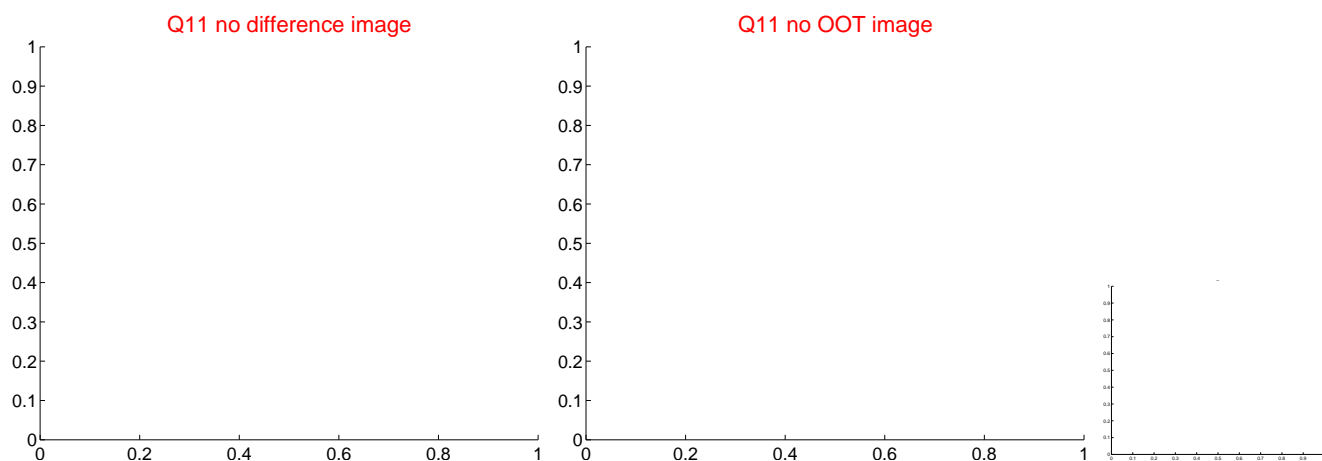
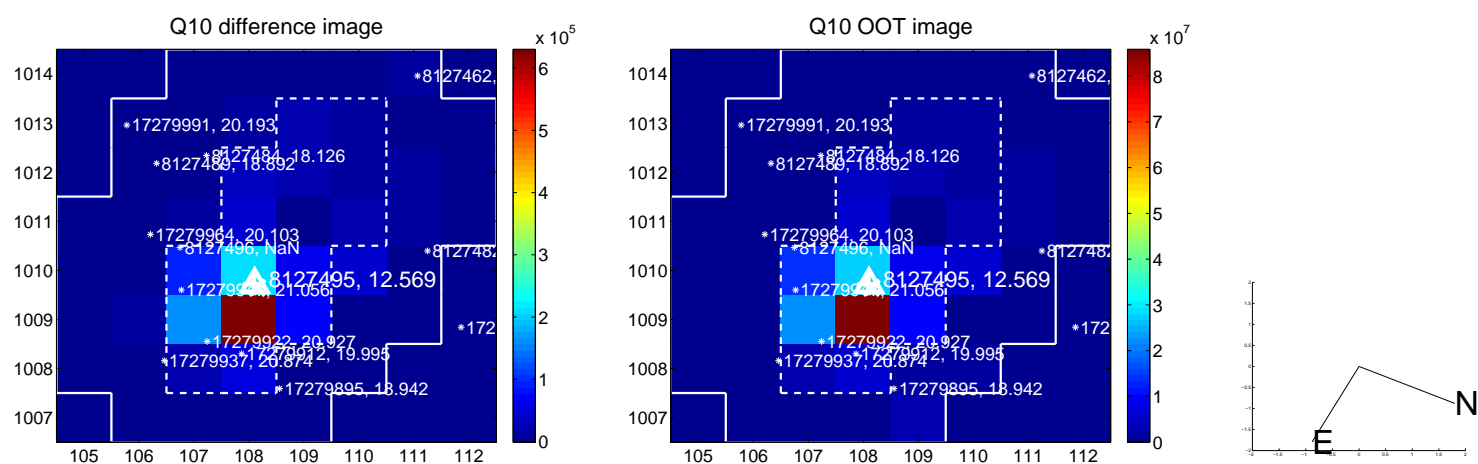
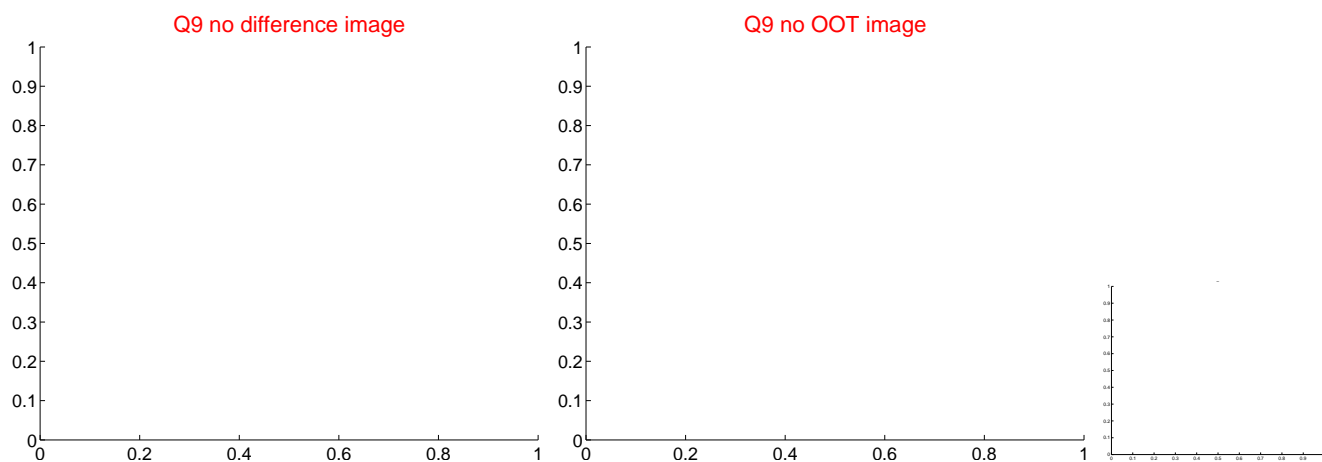
Q8 difference image



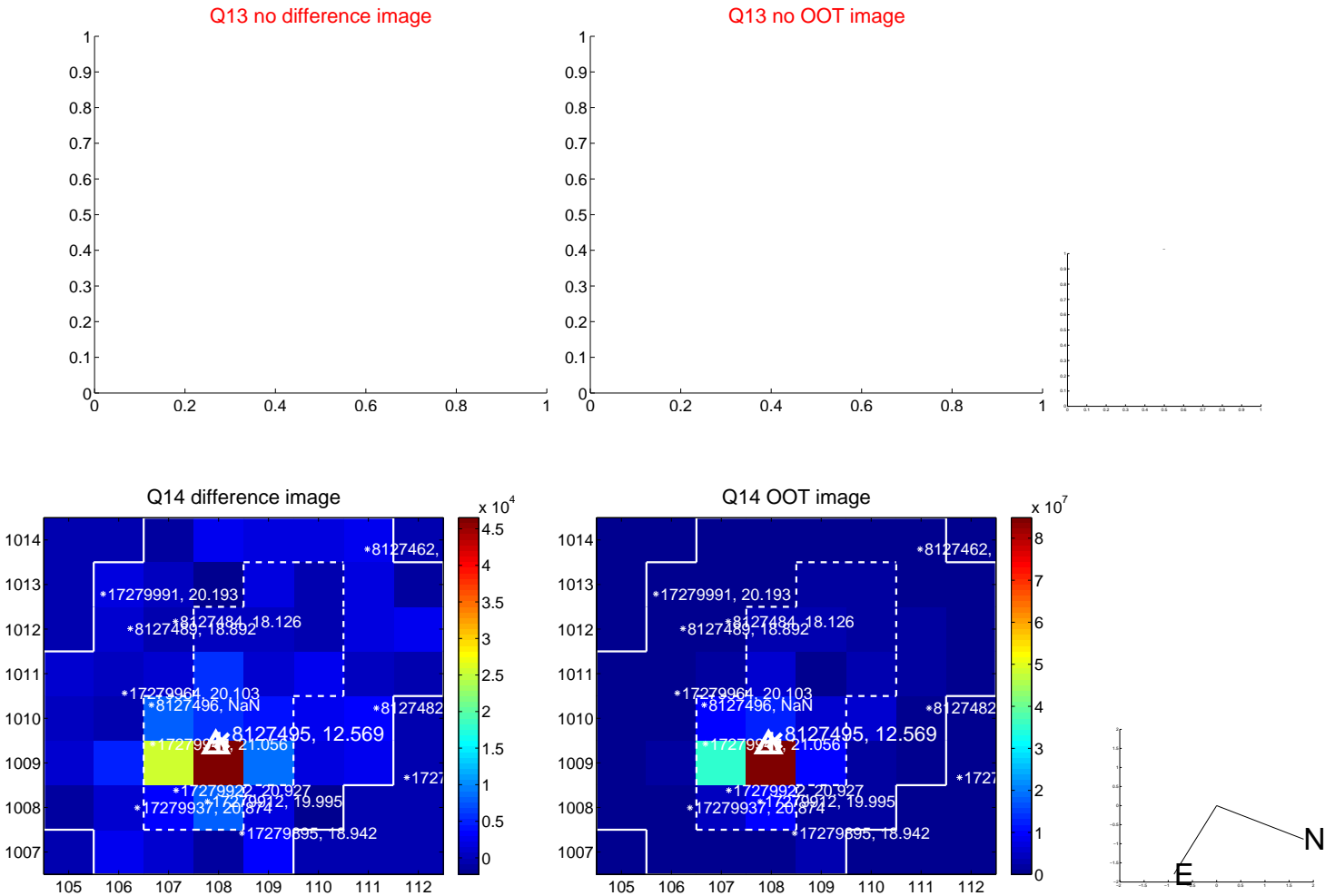
Q8 OOT image



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

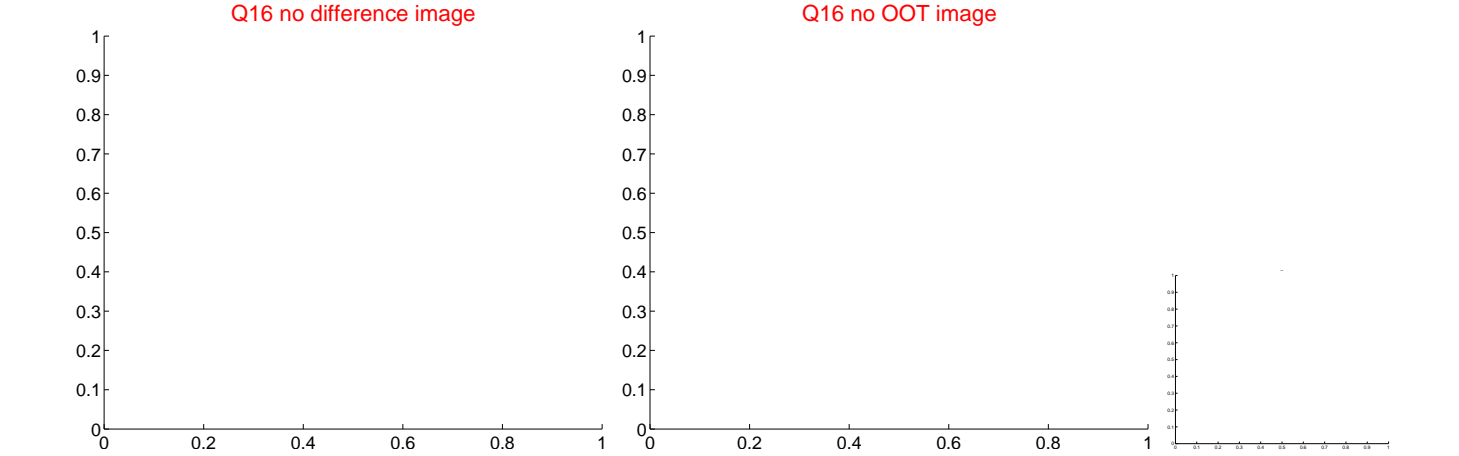
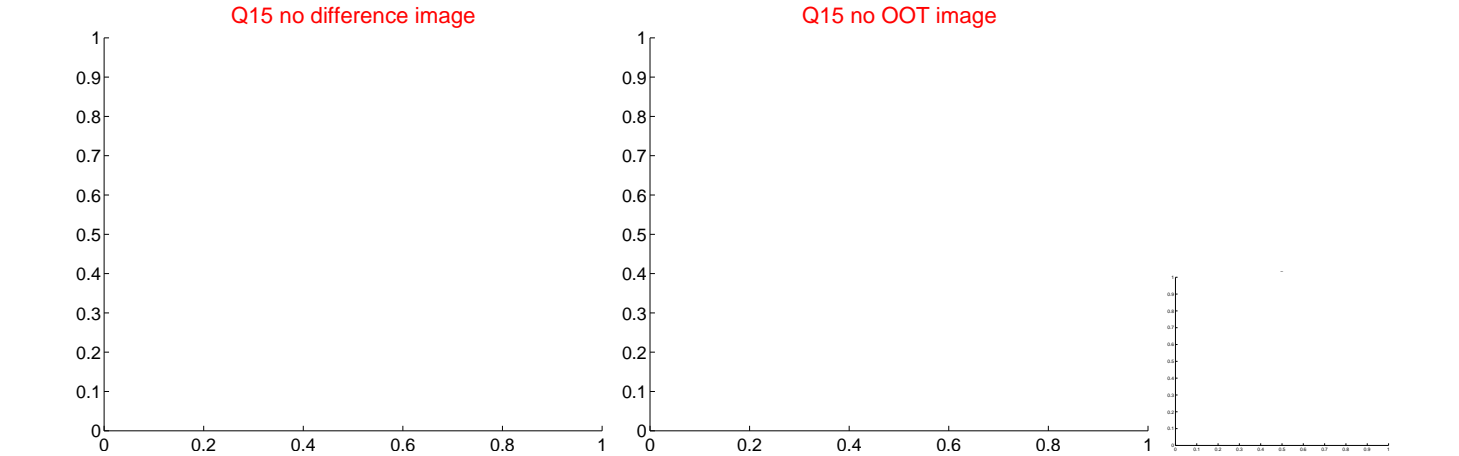


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

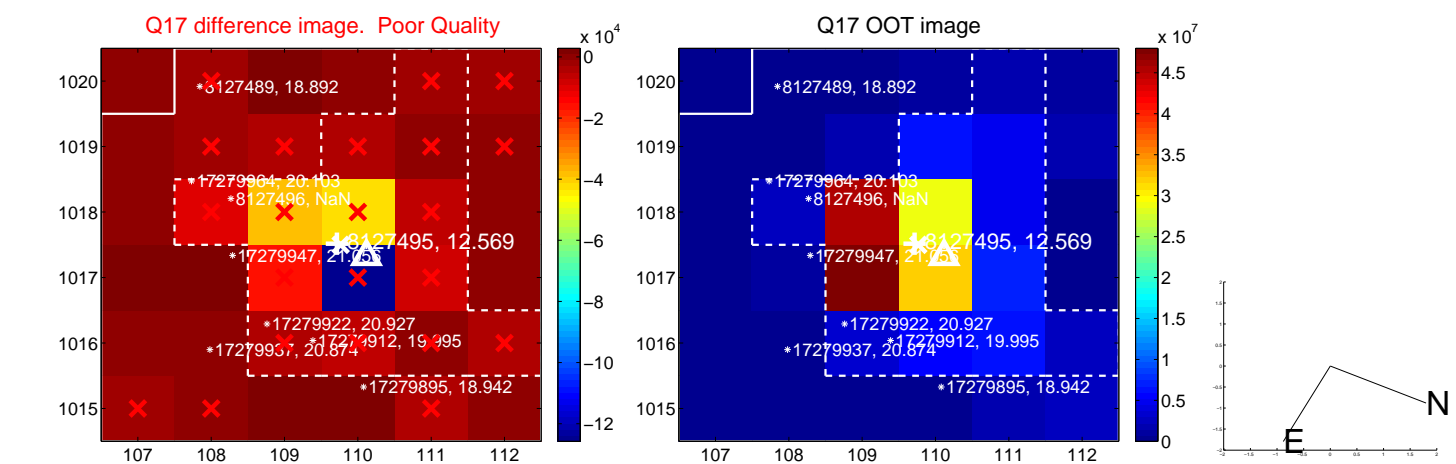


Q14 difference image

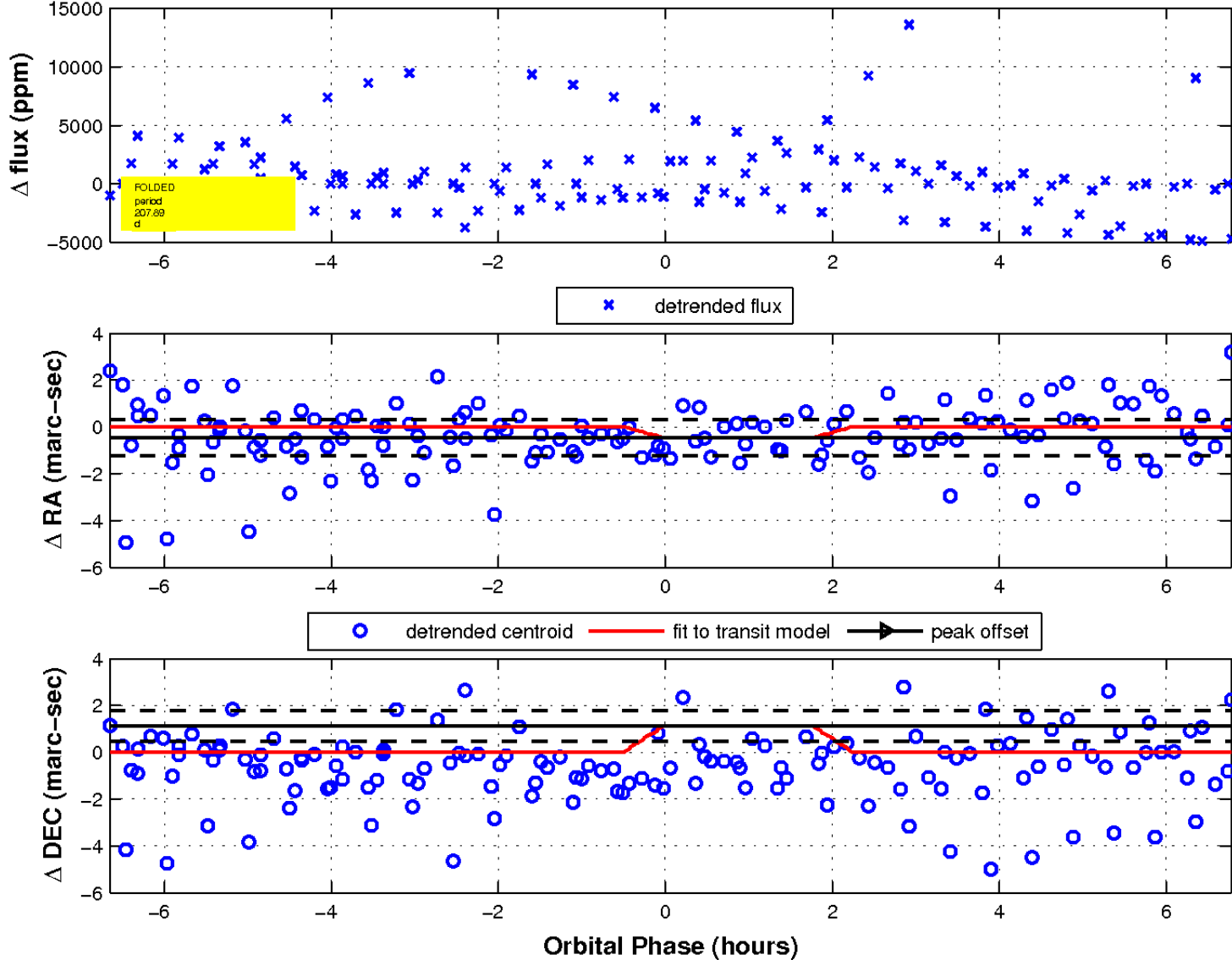
Q14 OOT image



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



fluxWeightedCentroids, Planet 4 of 4



UKIRT Image

Declination

