

KIC 011612611

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})
011612611-01	OBS	No	2.585749	132.470102	26.3	12.594	9.6	10.0	0.78	5505	0.54	434.09
011612611-02	OBS	No	447.258737	343.002595	240.0	1.075	13.0	3.7	0.78	5505	1.71	0.45
011612611-03	OBS	No	223.590825	343.618158	330.2	15.000	13.7	-1.0	0.78	5505	1.40	1.14
011612611-04	OBS	No	141.835703	184.638165	222.8	21.663	9.1	6.2	0.78	5505	1.55	2.08
011612611-05	OBS	No	2.585609	133.811919	25.6	12.839	8.7	11.2	0.78	5505	0.45	434.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612611-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011612611-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
011612611-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

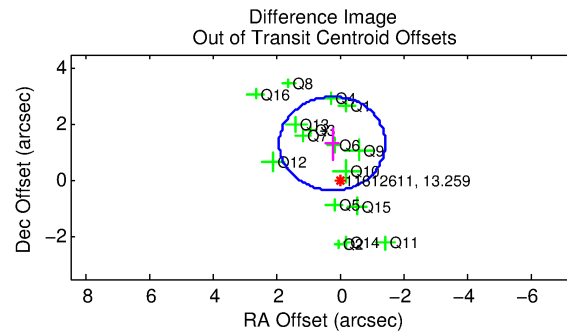
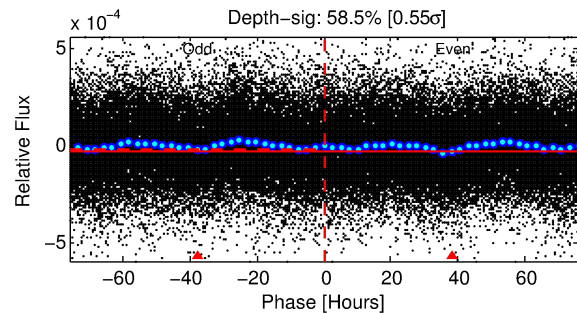
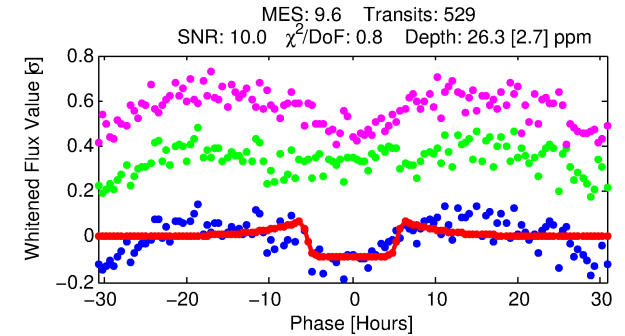
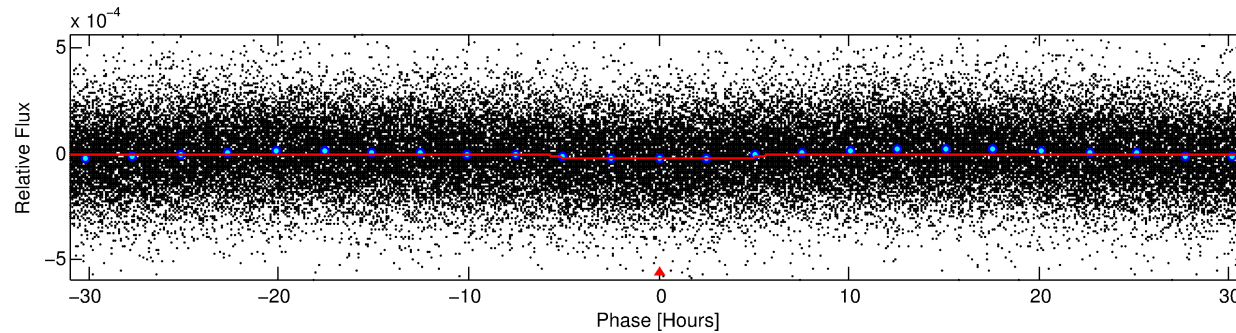
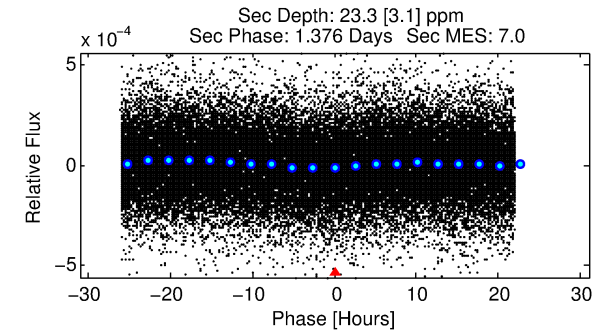
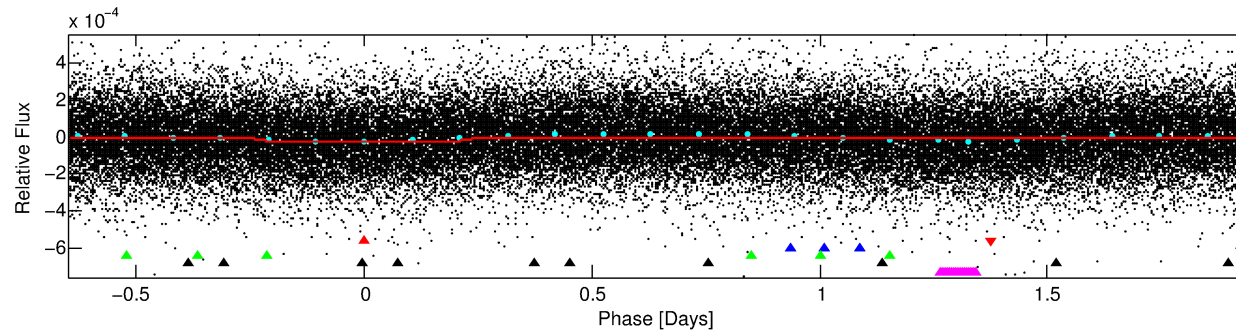
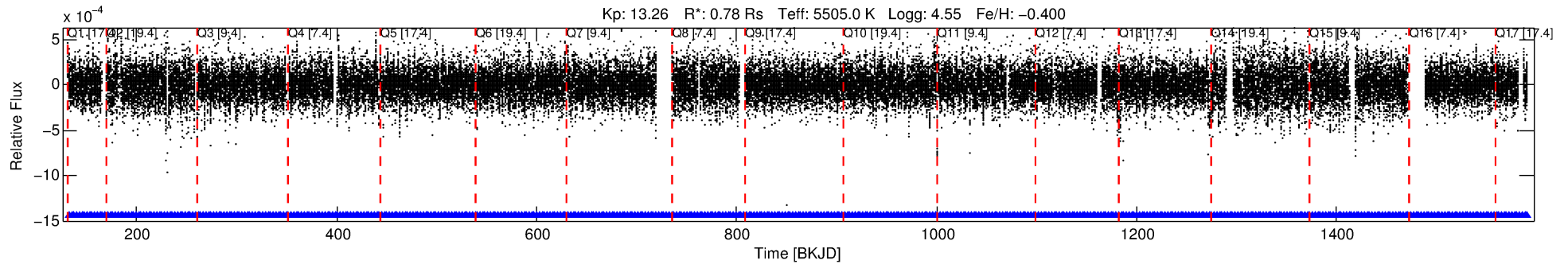
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612611-01

No Significant Match Found

DV One-Page Summary

KIC: 11612611 Candidate: 1 of 5 Period: 2.586 d



DV Fit Results:

Period = 2.58575 [0.00004] d
Epoch = 132.4701 [0.0112] BKJD
Rp/R* = 0.0063 [0.0005]
a/R* = 1.06 [0.04]
b = 0.97 [0.02]
Seff = 434.09 [103.26]
Teq = 1164 [69] K
Rp = 0.54 [0.10] Re
a = 0.0340 [0.0049] AU
Ag = 51.34 [14.74] [3.42σ]
Teffp = 4817 [280] K [12.65σ]

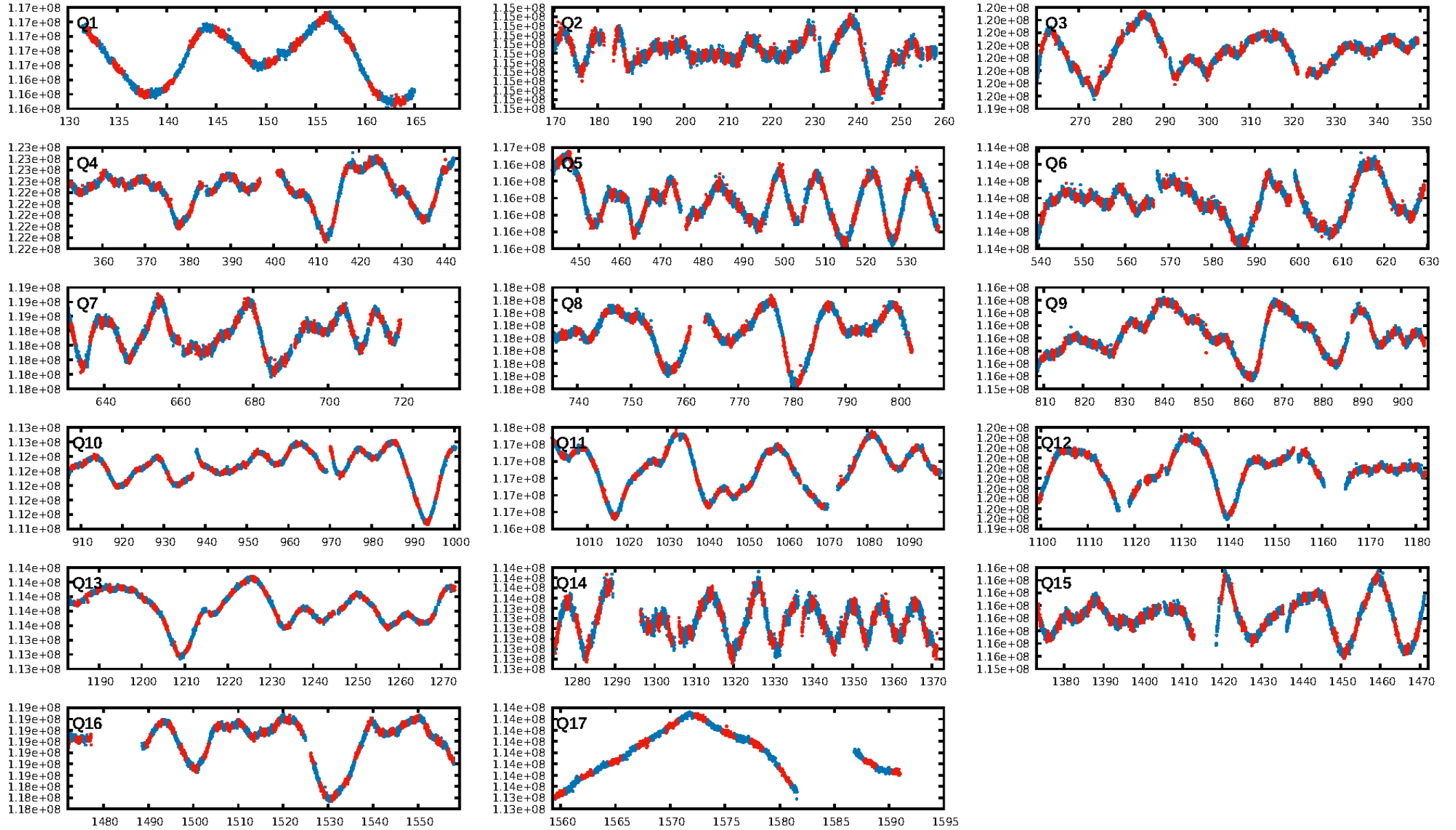
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [133.37σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [505/505]
GhostDiagnostic-chr: -7.724
Centroid-sig: 1.6%
Centroid-so: 1.002 arcsec [1.48σ]
OotOffset-rm: 1.348 arcsec [2.42σ]
KicOffset-rm: 1.634 arcsec [2.94σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

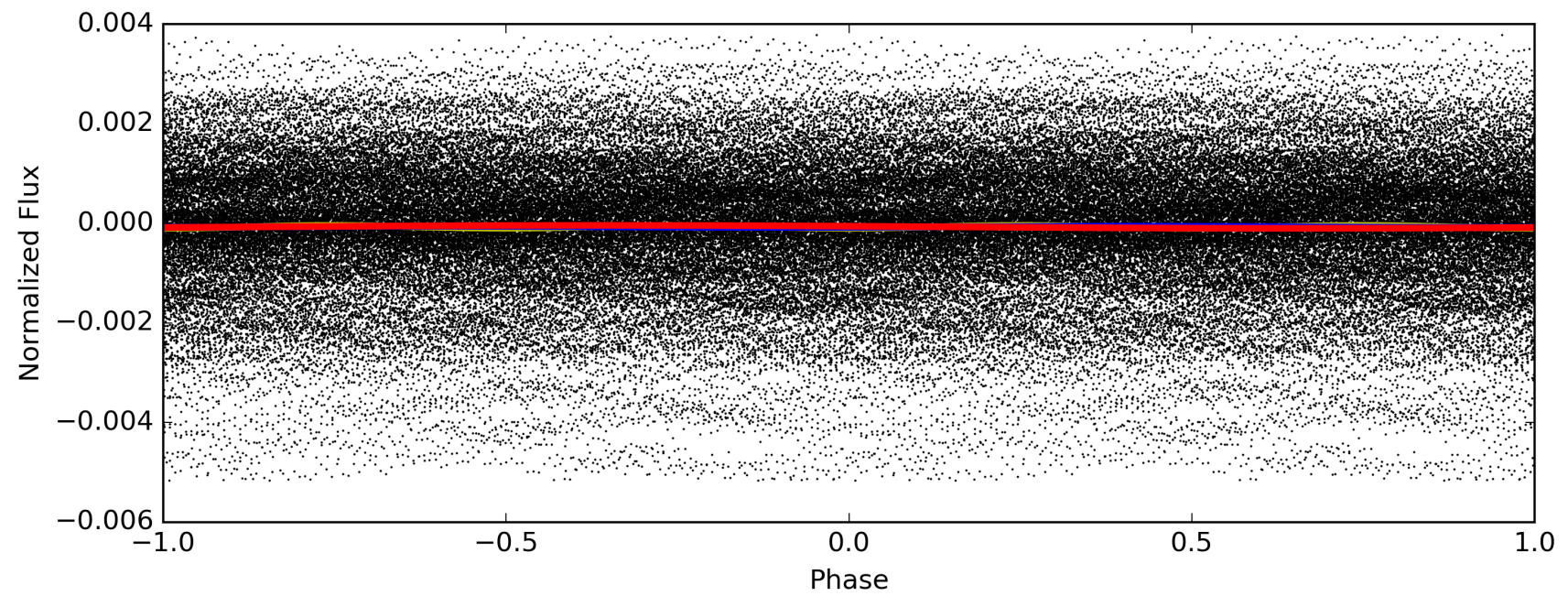
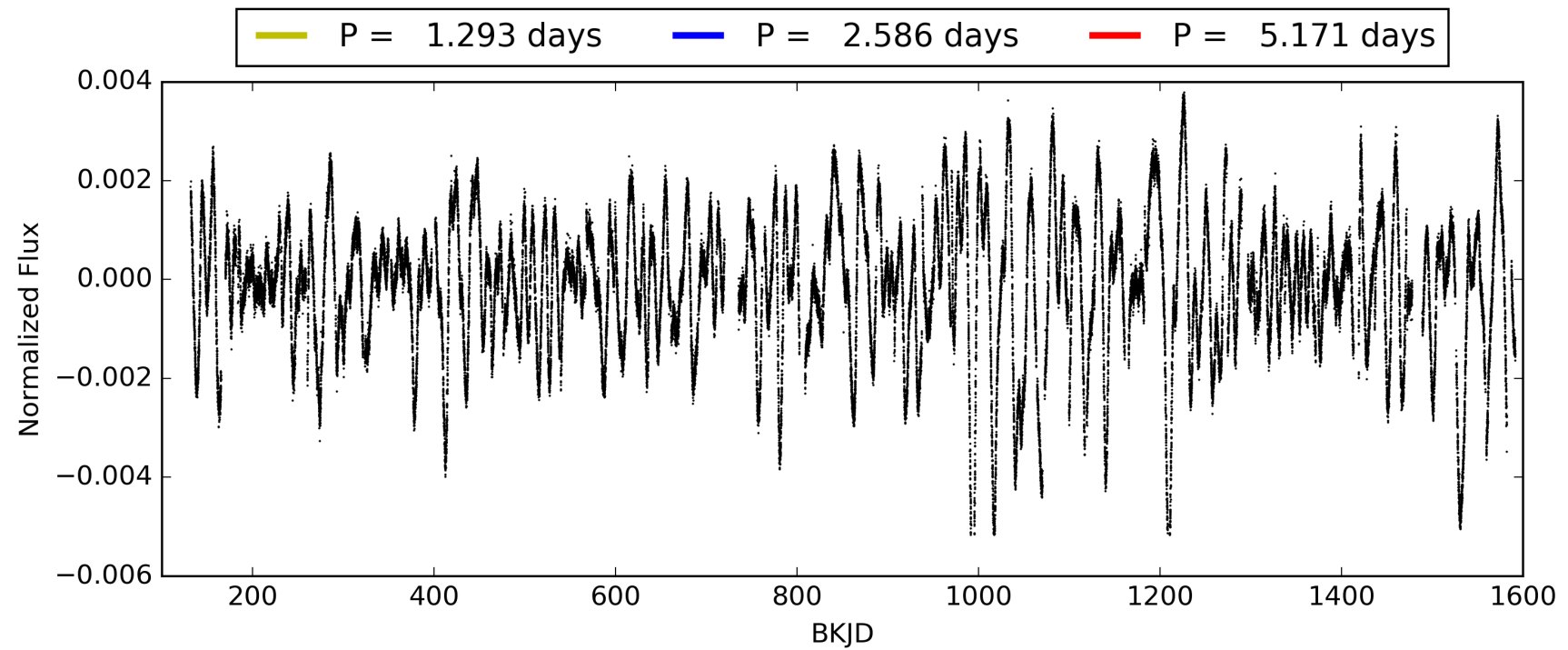
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:49:37 Z

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

TCE 011612611-01, PDC Light Curves

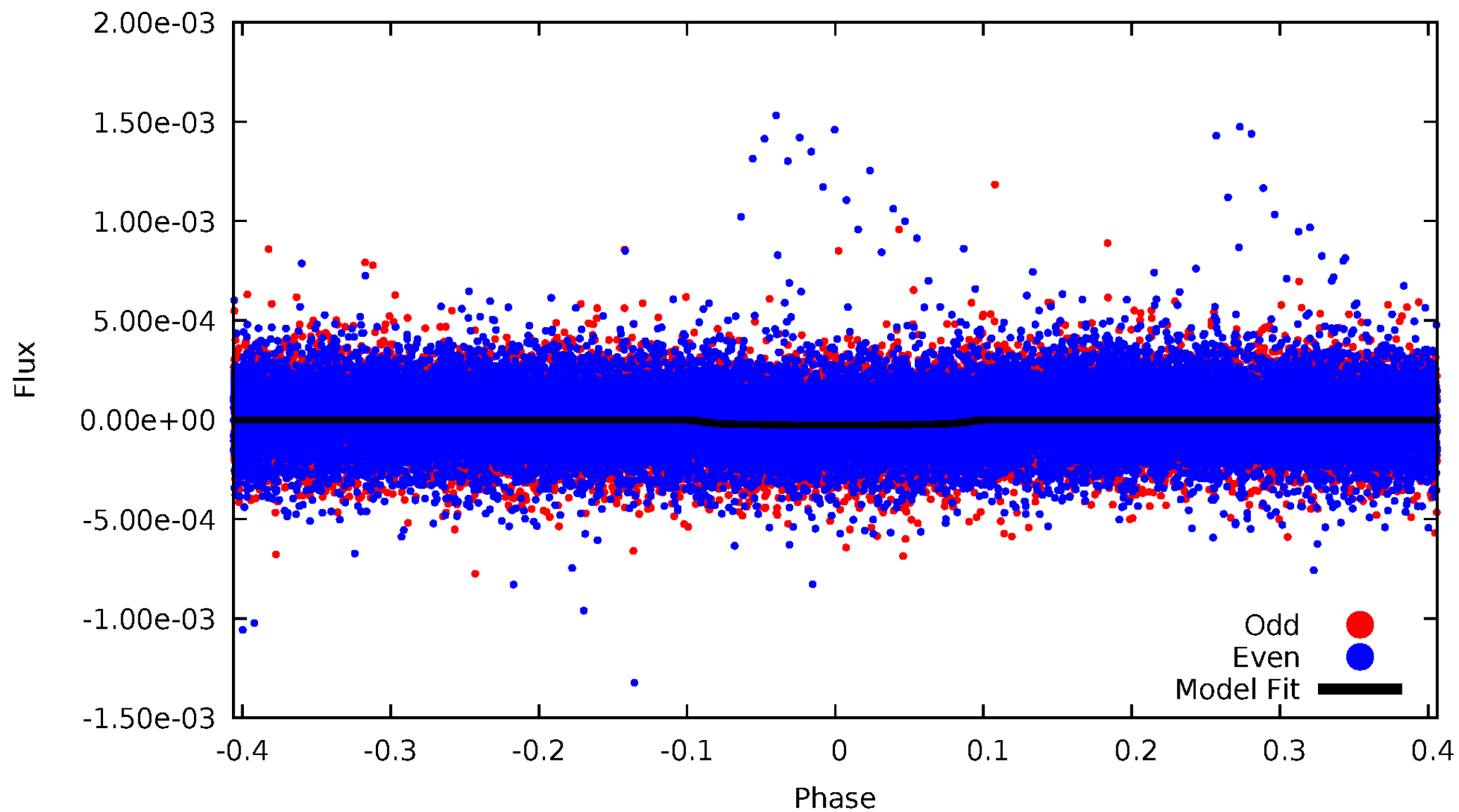


TCE 011612611-01



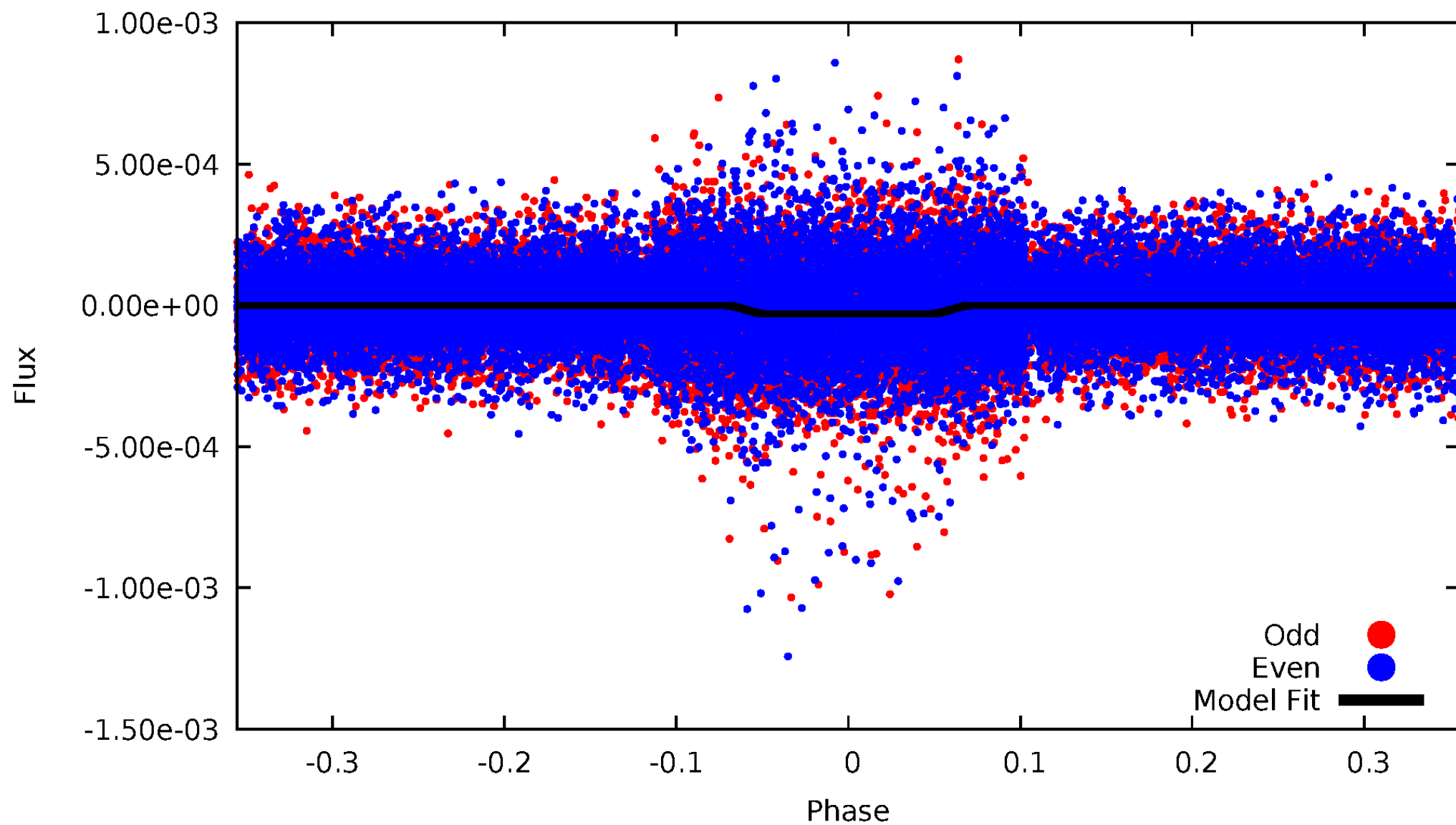
DV Odd/Even

TCE 011612611-01



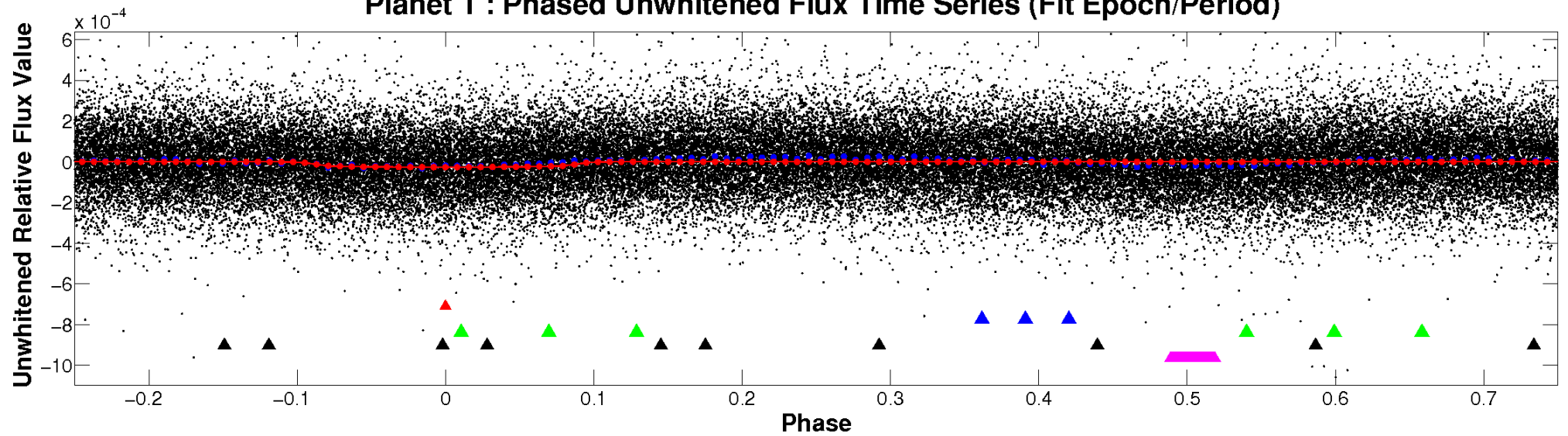
ALT Odd/Even

TCE 011612611-01

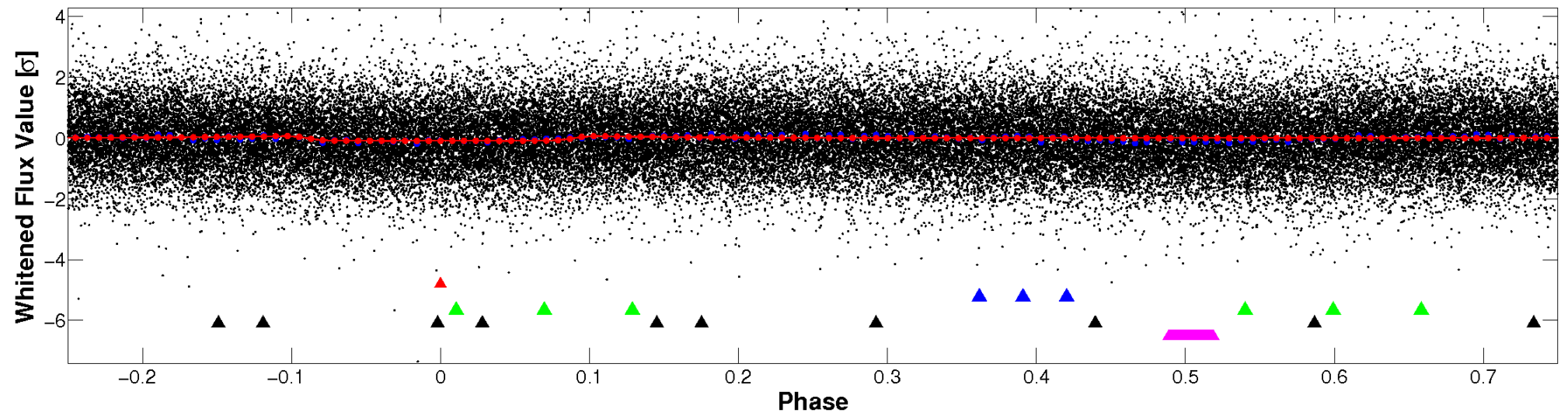


Non-Whitened Vs. Whitened Light Curve

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

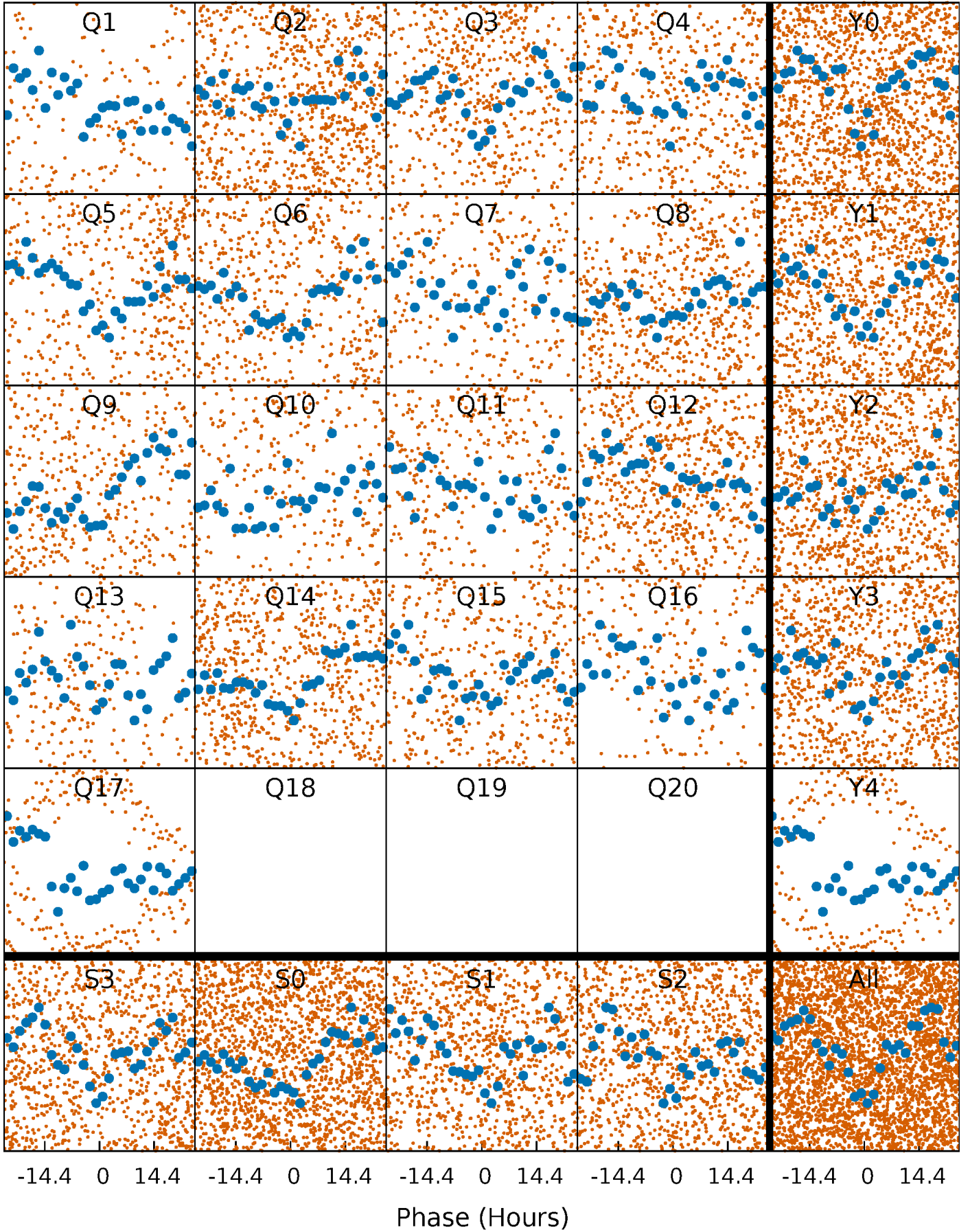


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



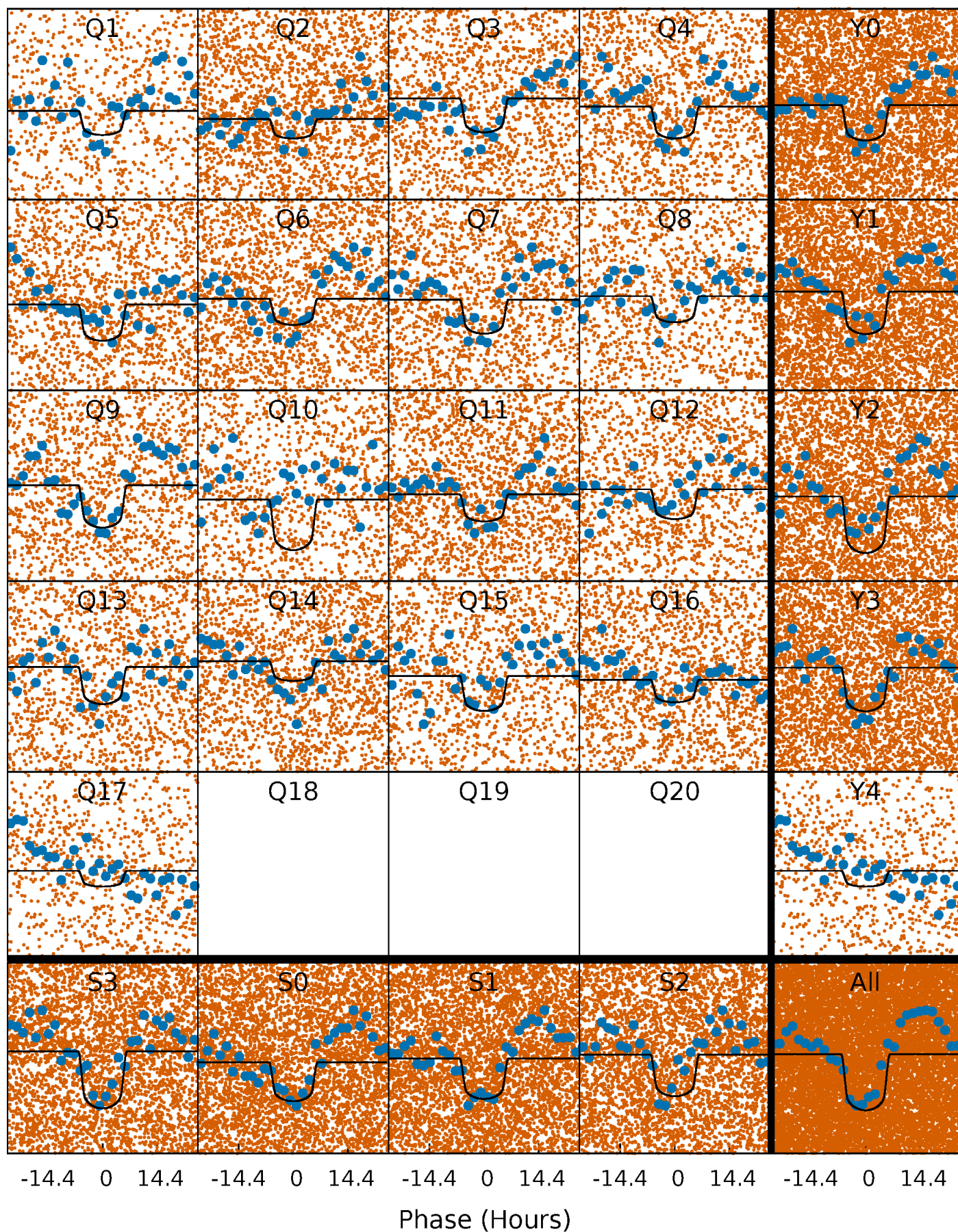
PDC Quarter-Phased Transit Curves

TCE 011612611-01 P= 2.585749 Days $T_0=132.470102$ (BKJD)



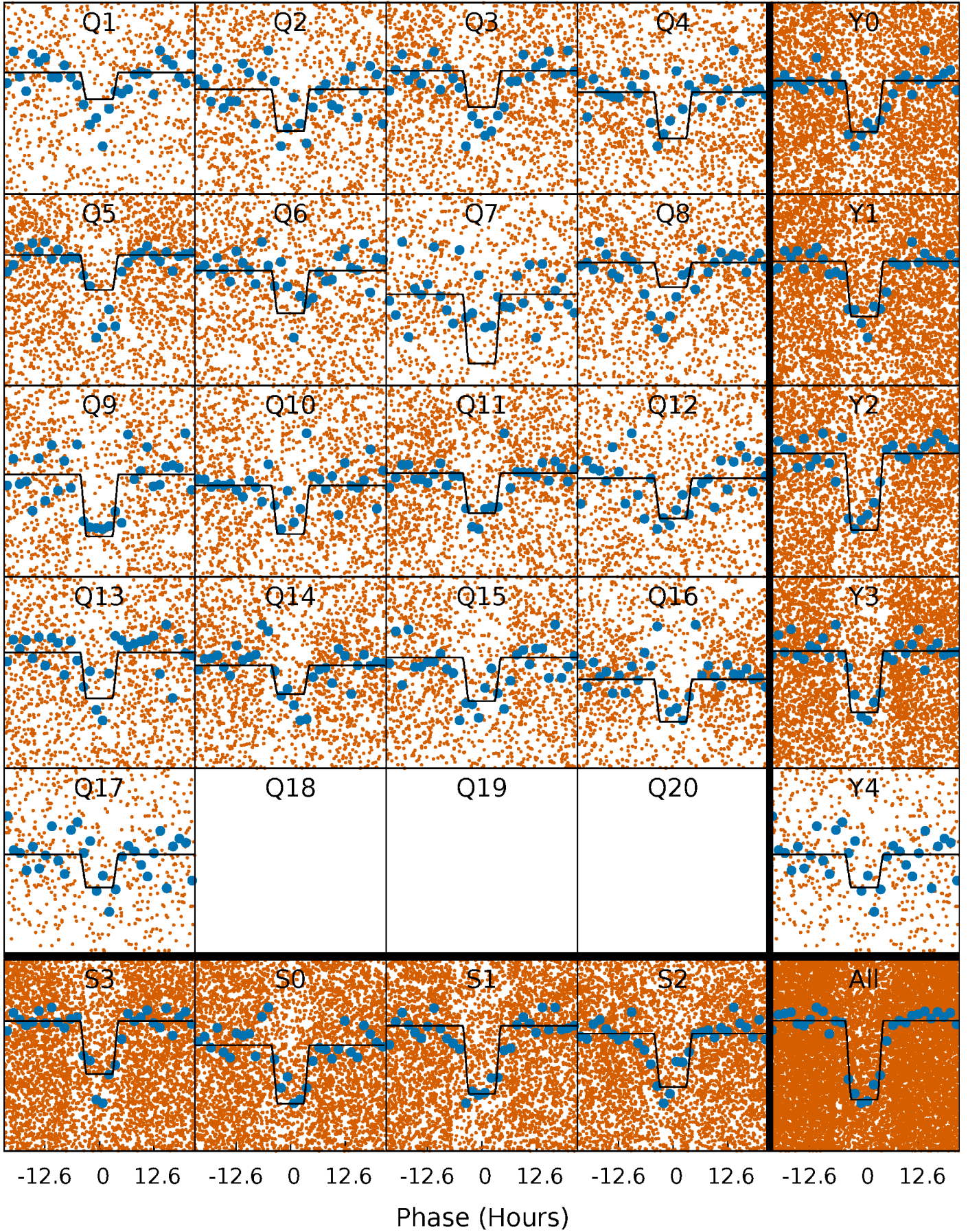
DV Quarter-Phased Transit Curves

TCE 011612611-01 P= 2.585749 Days $T_0=132.470102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

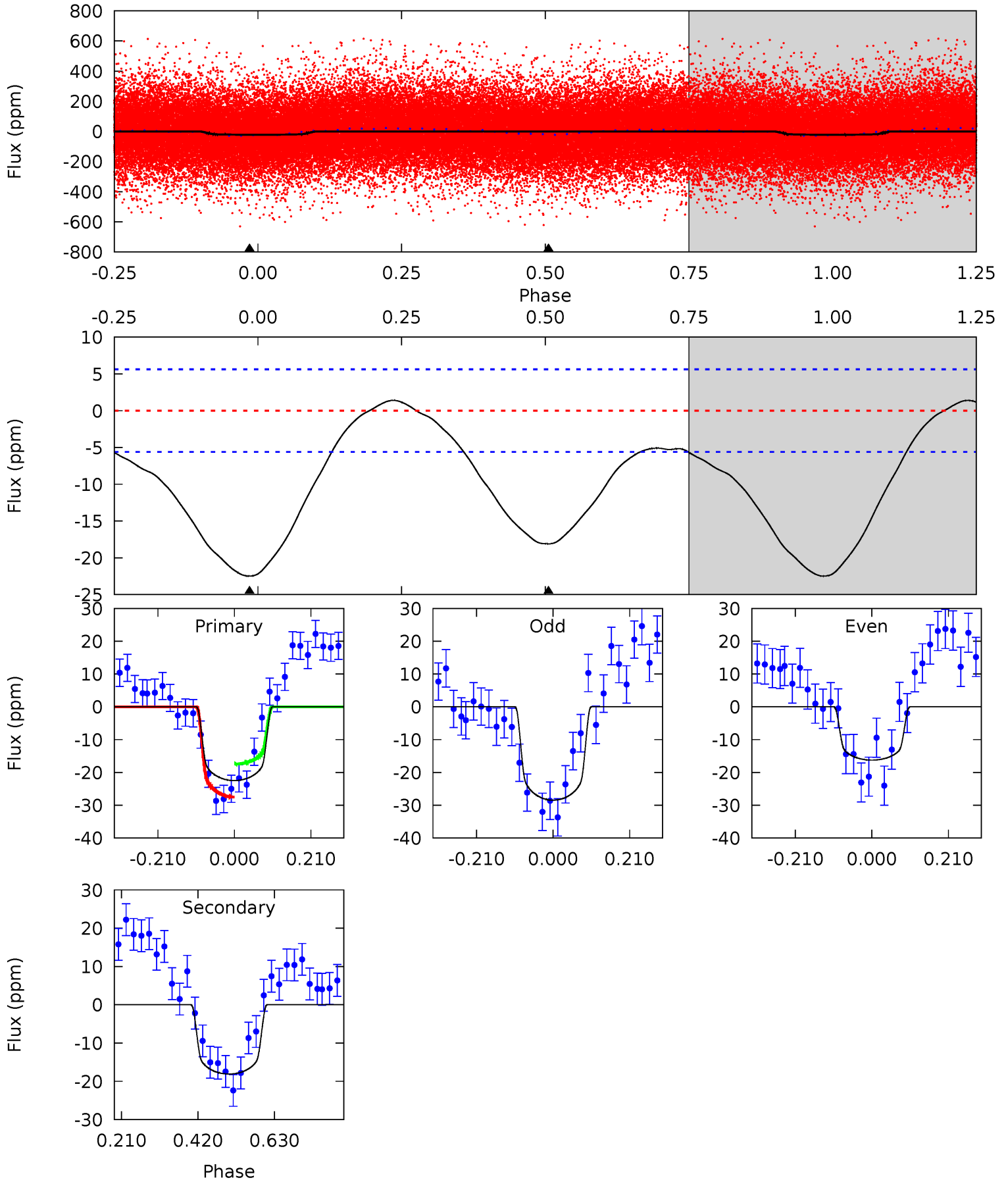
TCE 011612611-01 P= 2.585634 Days $T_0=132.445096$ (BKJD)



DV Model-Shift Uniqueness Test

011612611-01, P = 2.585749 Days, E = 129.884353 Days

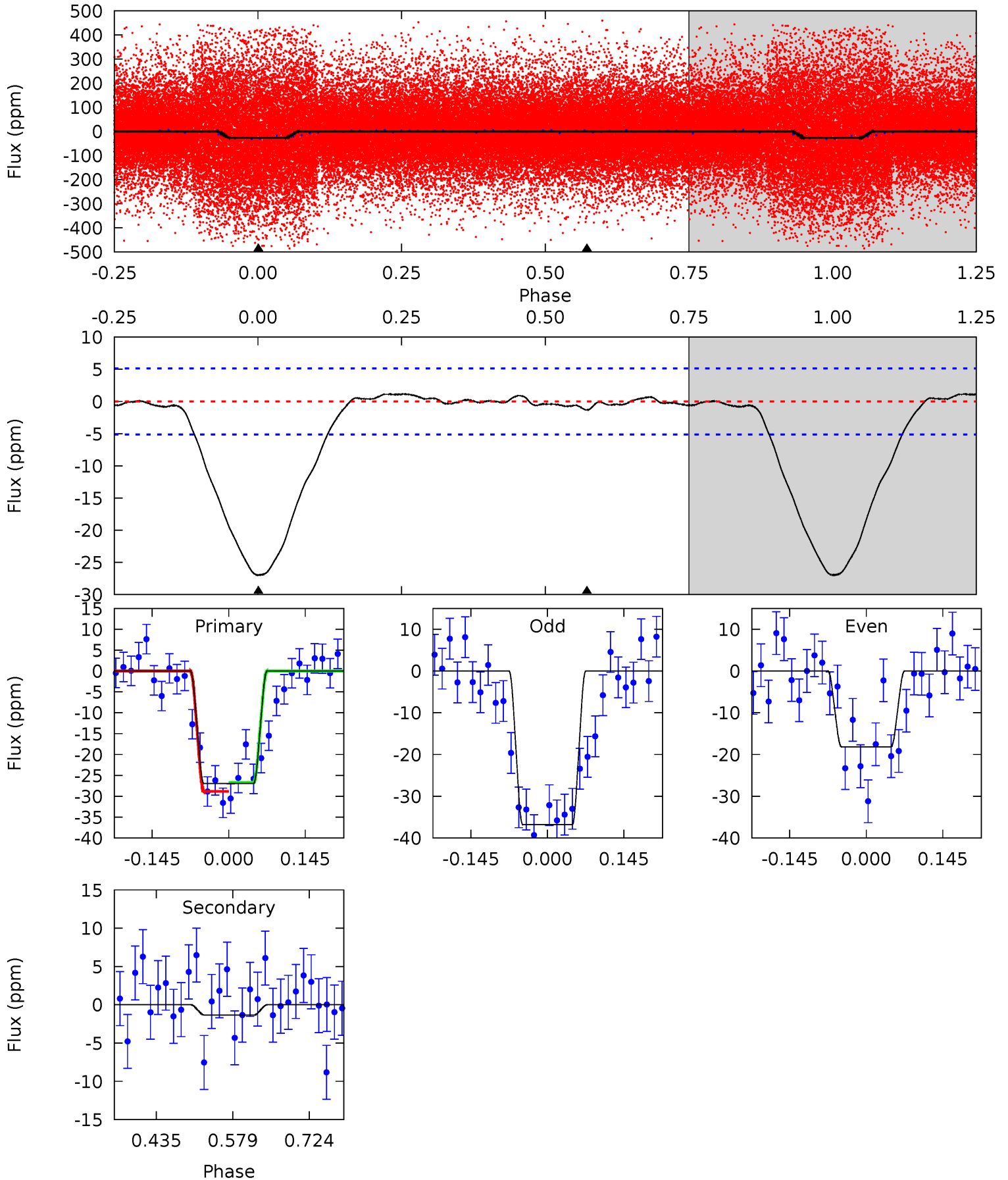
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	14.2	0	0	4.41	1.25	2.44	17.6	17.6	14.2	14.2	4.80	0.88	0.06	3.97



Alt Model-Shift Uniqueness Test

011612611-01, P = 2.585634 Days, E = 129.859462 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	1.17	0	0	4.49	1.46	0.50	23.6	23.6	1.17	1.17	8.13	1.05	0.04	0.93



Stellar Parameters For KIC 011612611

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5505^{+164}_{-148}	$4.547^{+0.068}_{-0.110}$	$-0.400^{+0.350}_{-0.300}$	$0.781^{+0.138}_{-0.074}$	$0.783^{+0.095}_{-0.063}$	$2.316^{+0.708}_{-0.763}$
	+3%/-3%	+1%/-2%	+87%/-75%	+18%/-9%	+12%/-8%	+31%/-33%
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 011612611-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-18 ± 1	$0.54^{+0.06}_{-0.05}$	1632^{+86}_{-65}	4646^{+208}_{-182}	39^{+9}_{-7}
Alt.	-1 ± 1	$0.48^{+0.06}_{-0.05}$	1638^{+71}_{-69}	3108^{+325}_{-1217}	$3.782^{+3.546}_{-3.423}$

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 $A_{obs} \gg 1.0$

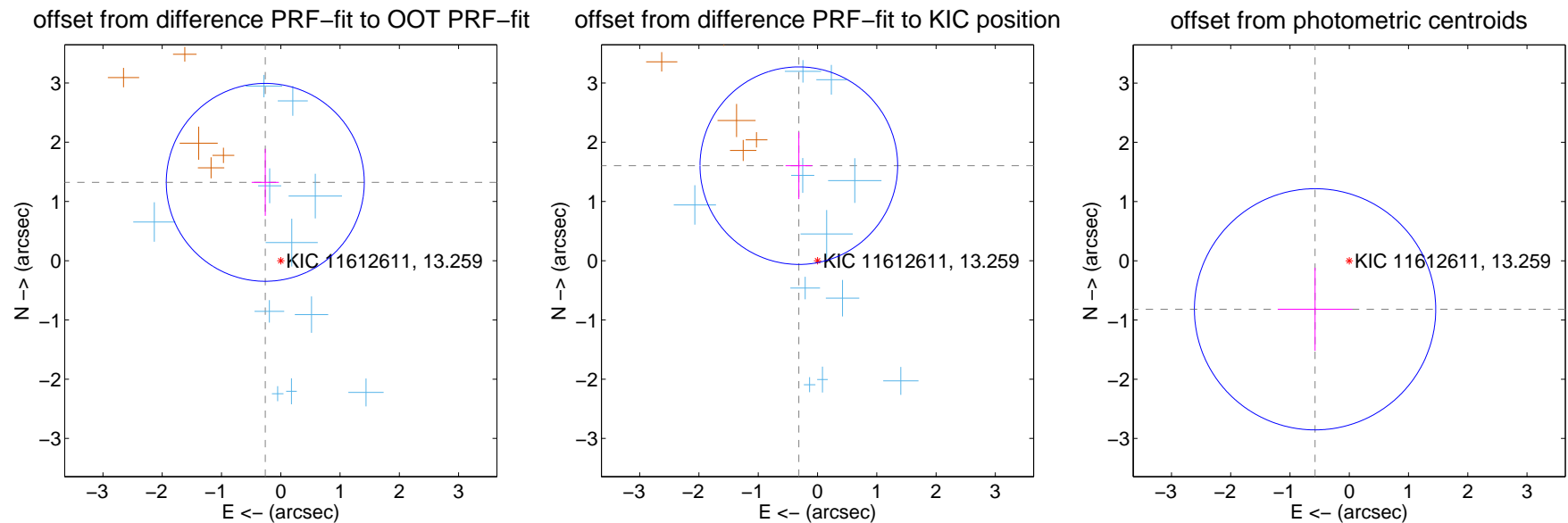
DV Centroid Data

Supplemental centroid analysis for 011612611-01. Kepler magnitude: 13.26. Transit SNR 10.02

There are 11 quarters with good PRF difference image offsets

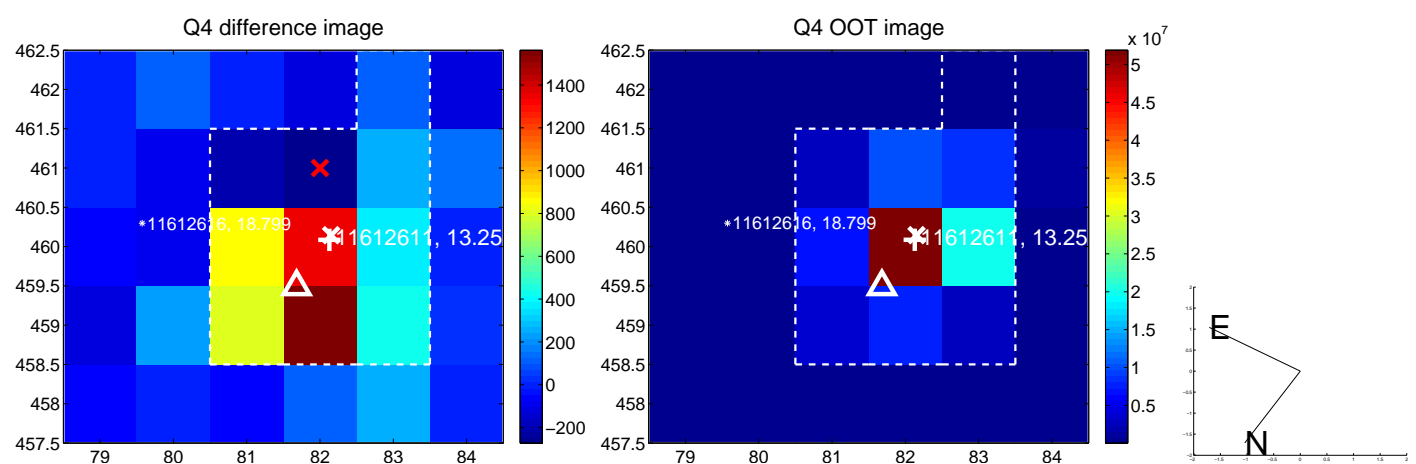
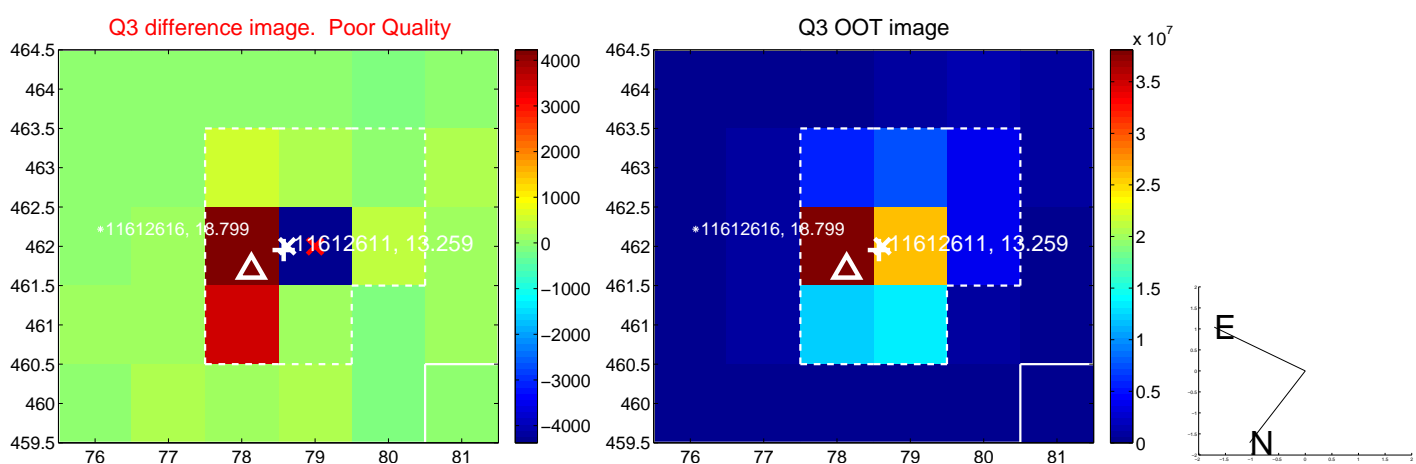
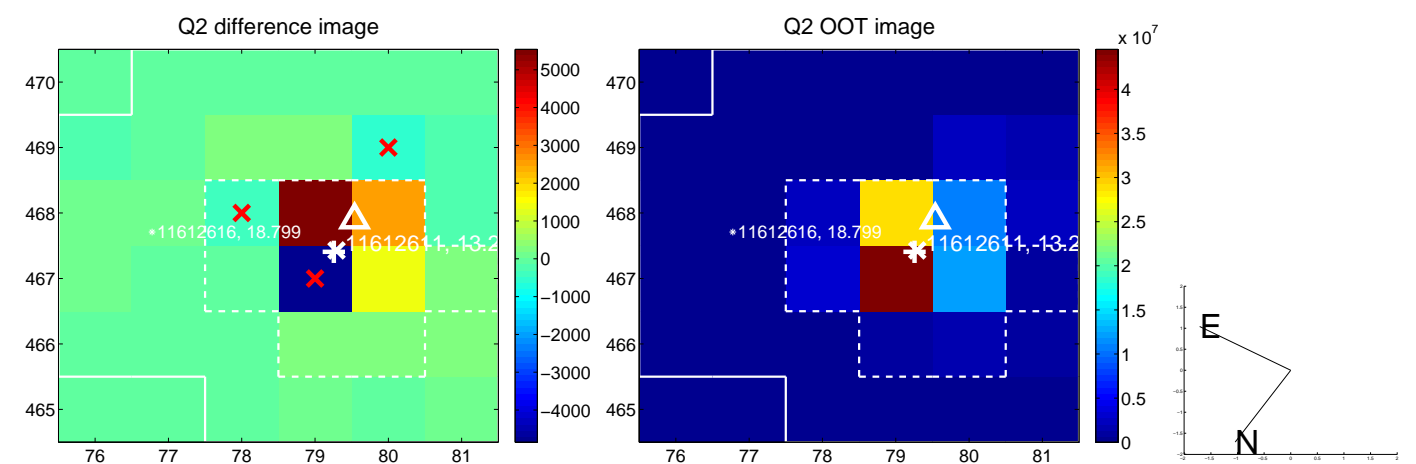
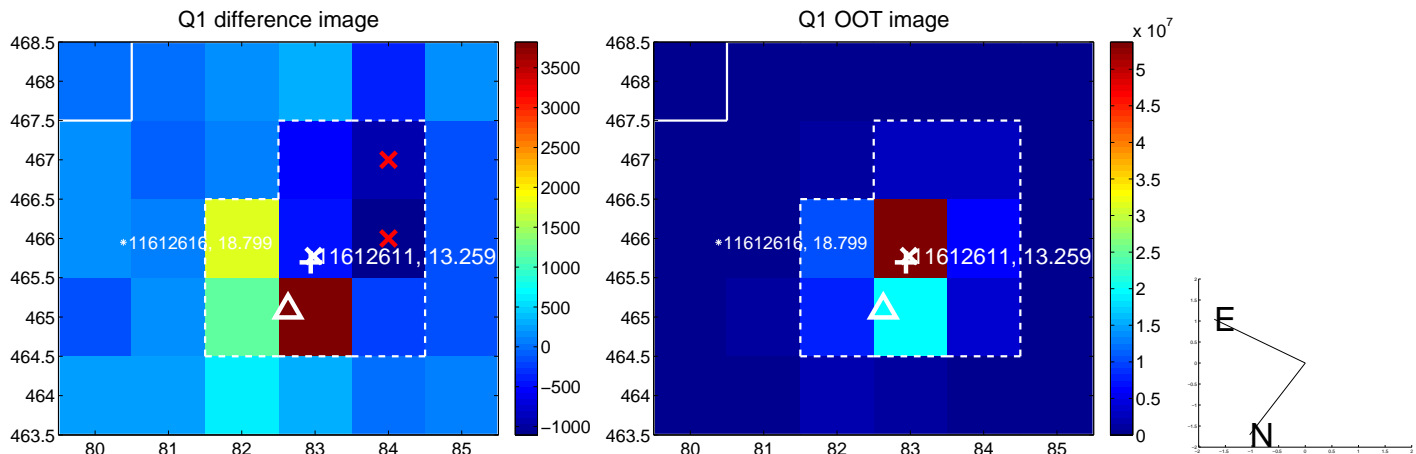
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.348 ± 0.557	2.42	0.261 ± 0.230	1.323 ± 0.566
PRF-fit source offset from KIC position	1.634 ± 0.556	2.94	0.315 ± 0.224	1.604 ± 0.565
photometric centroid source offset	1.00 ± 0.68	1.48	0.58 ± 0.63	-0.82 ± 0.70

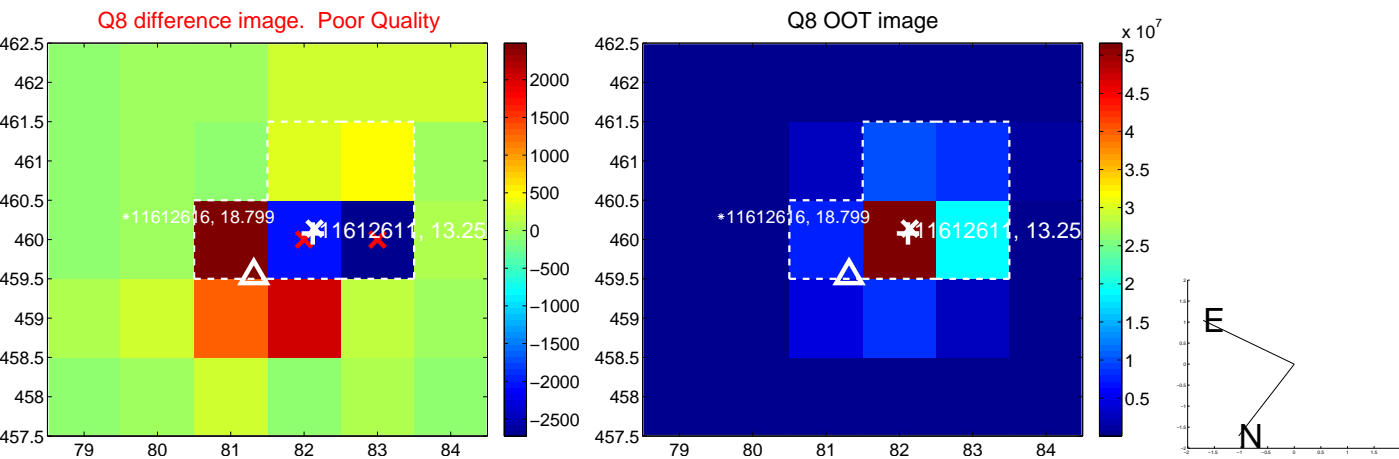
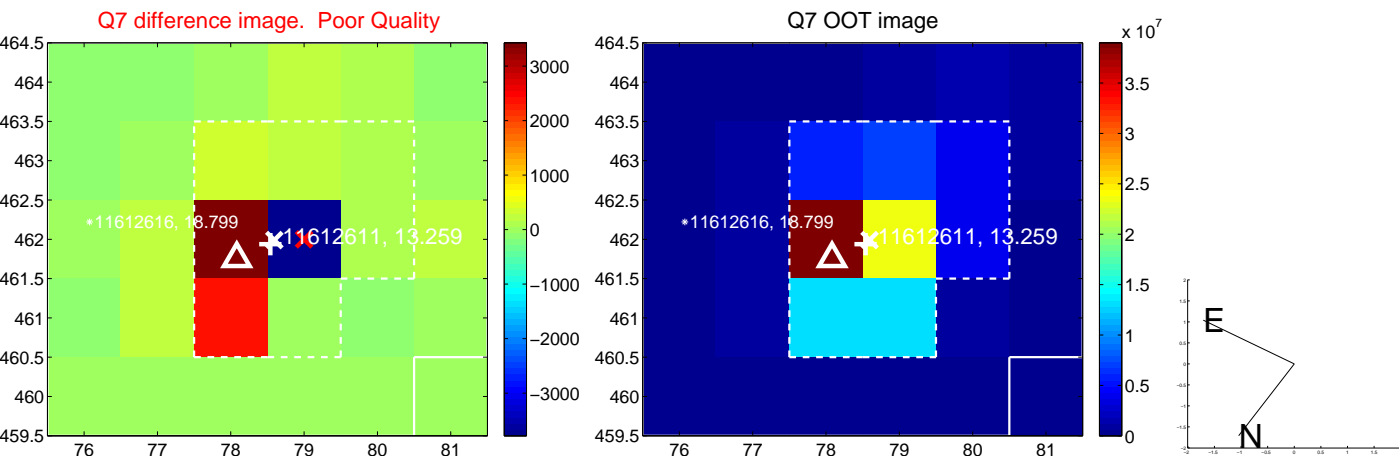
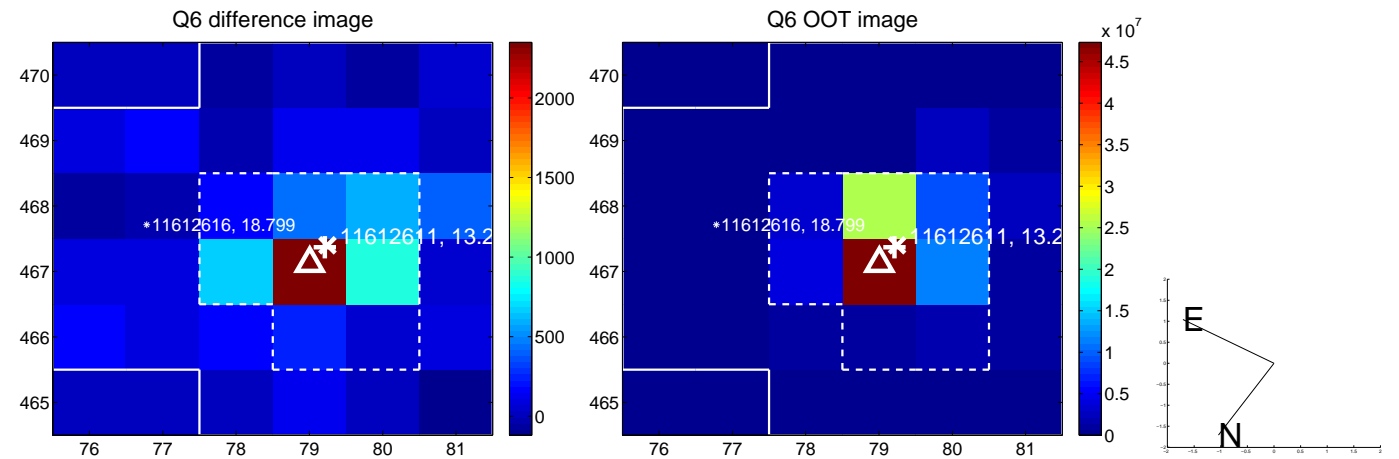
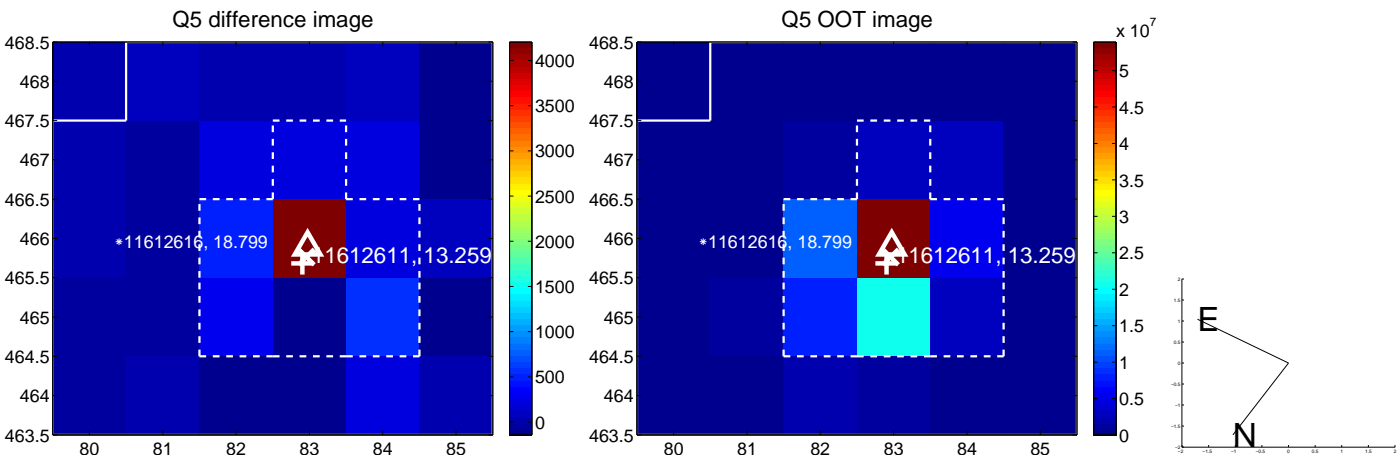


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

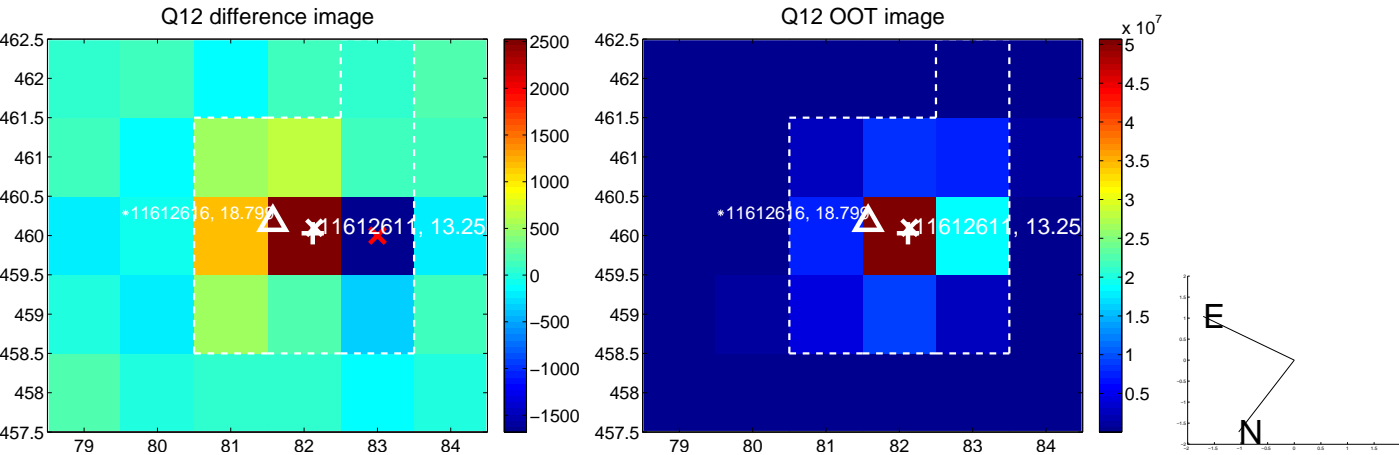
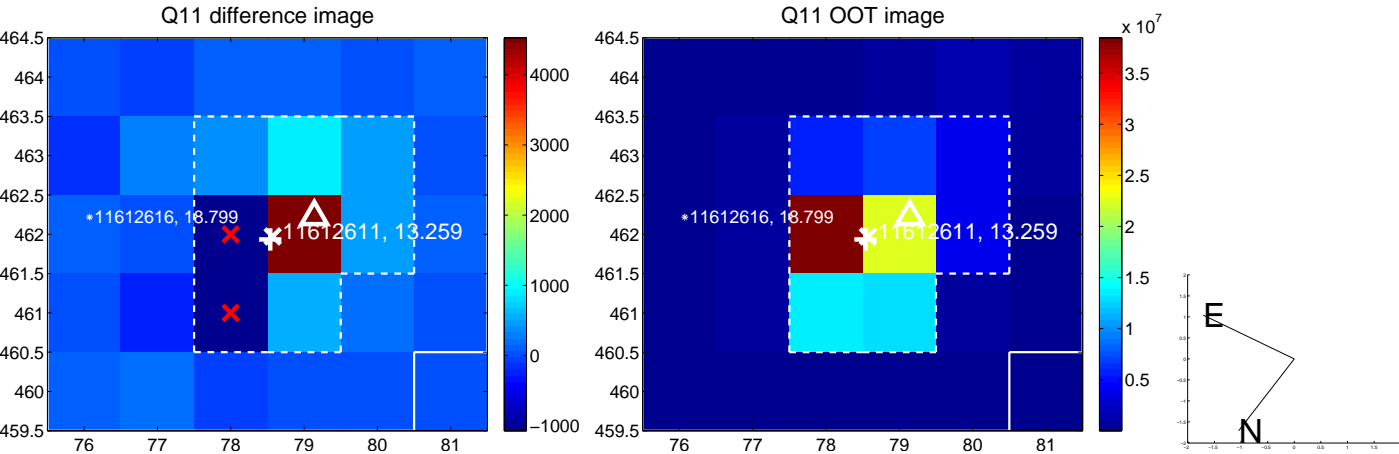
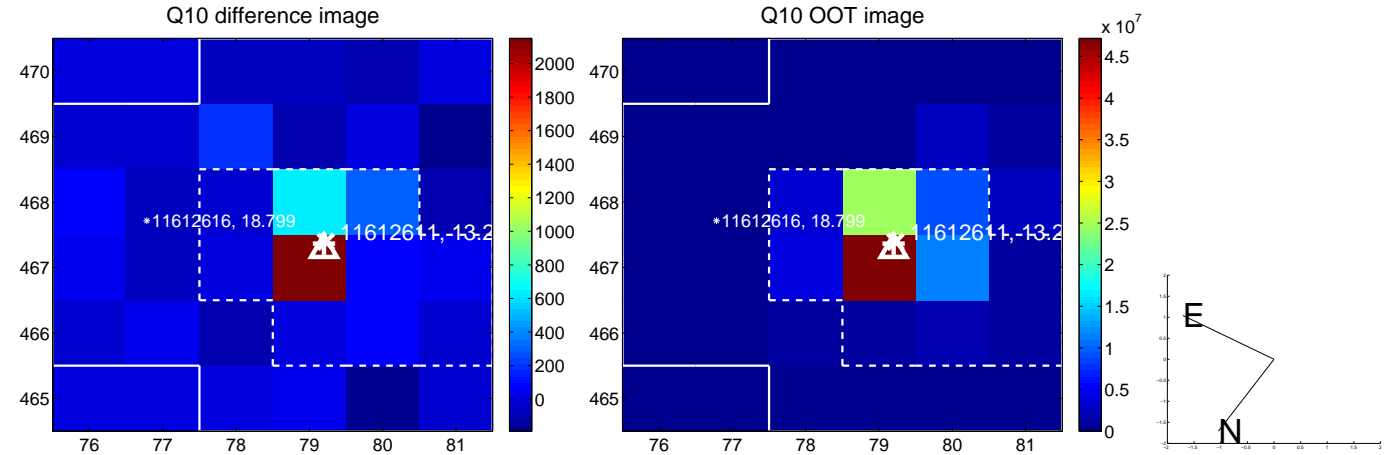
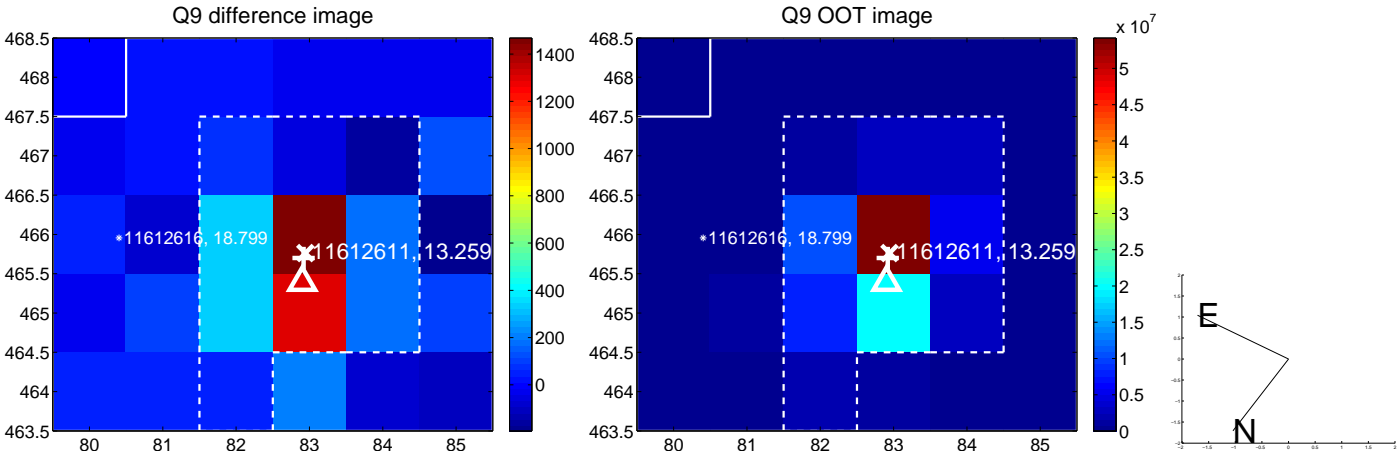
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



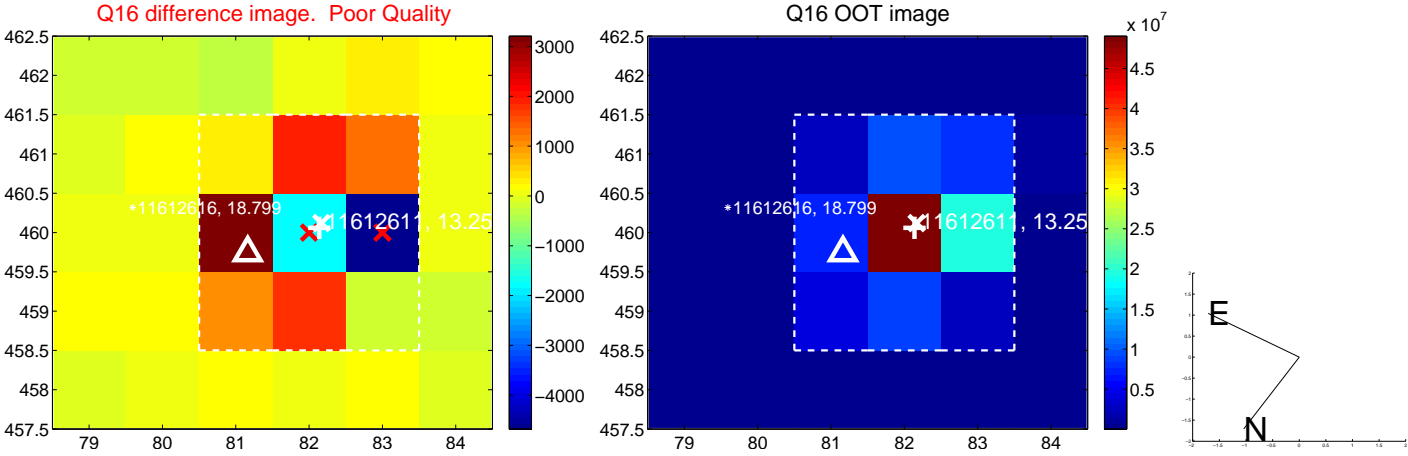
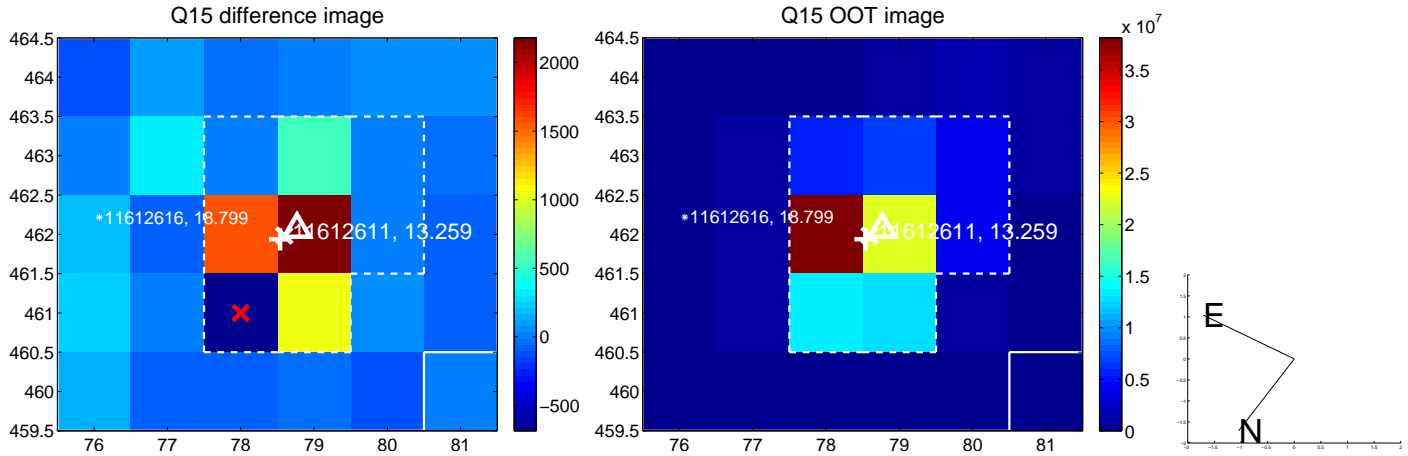
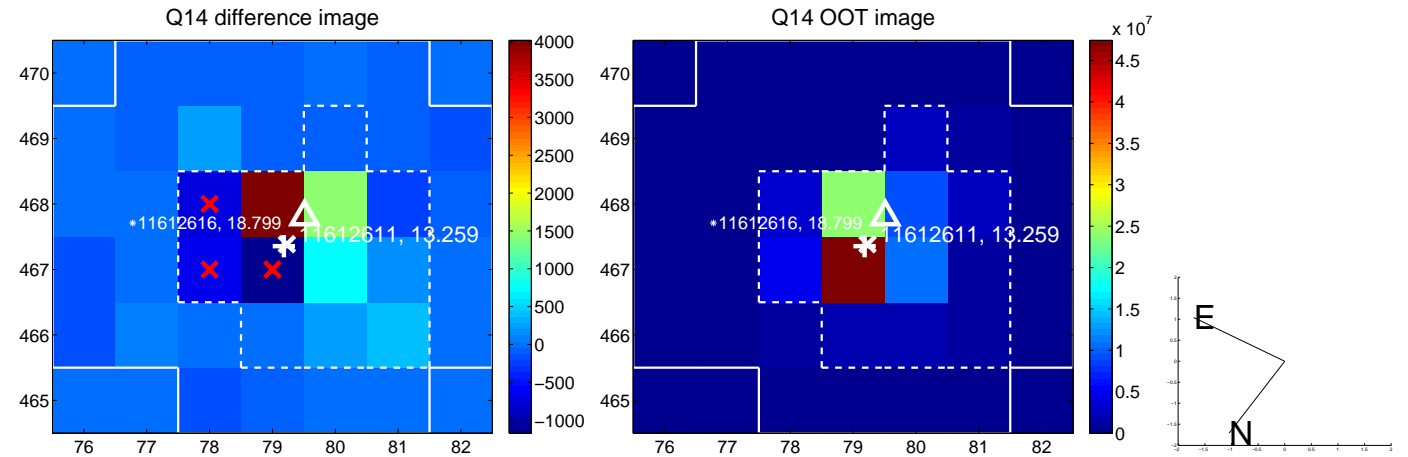
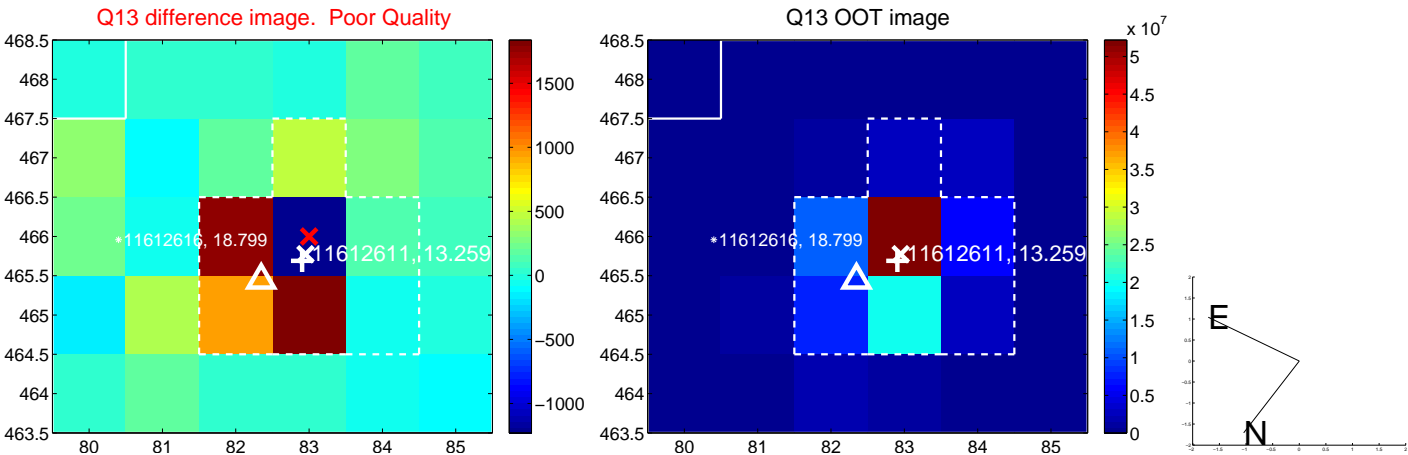
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



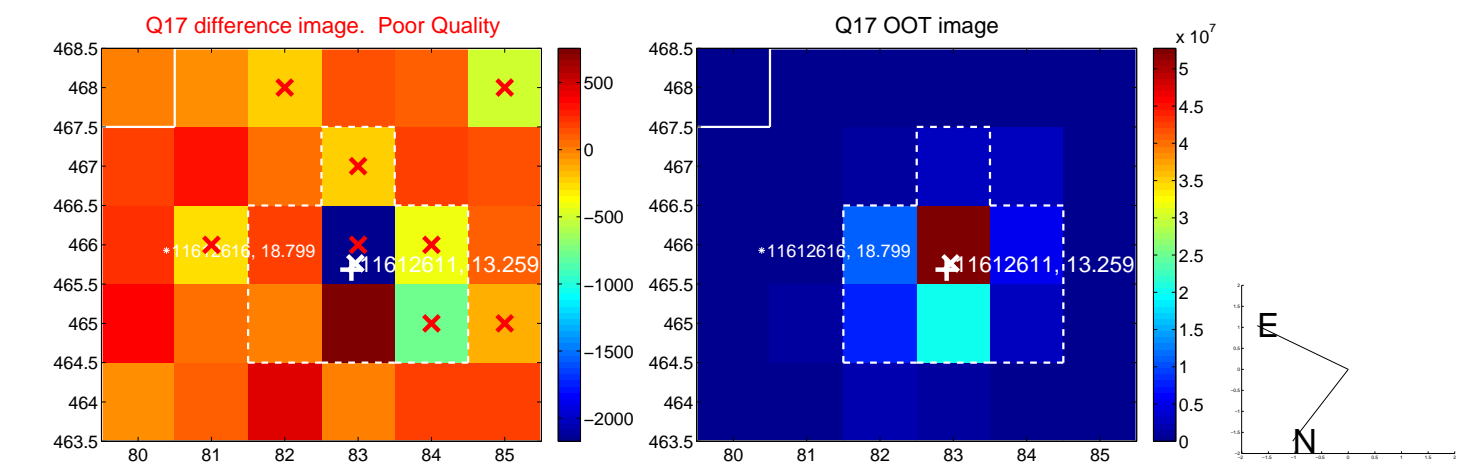
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



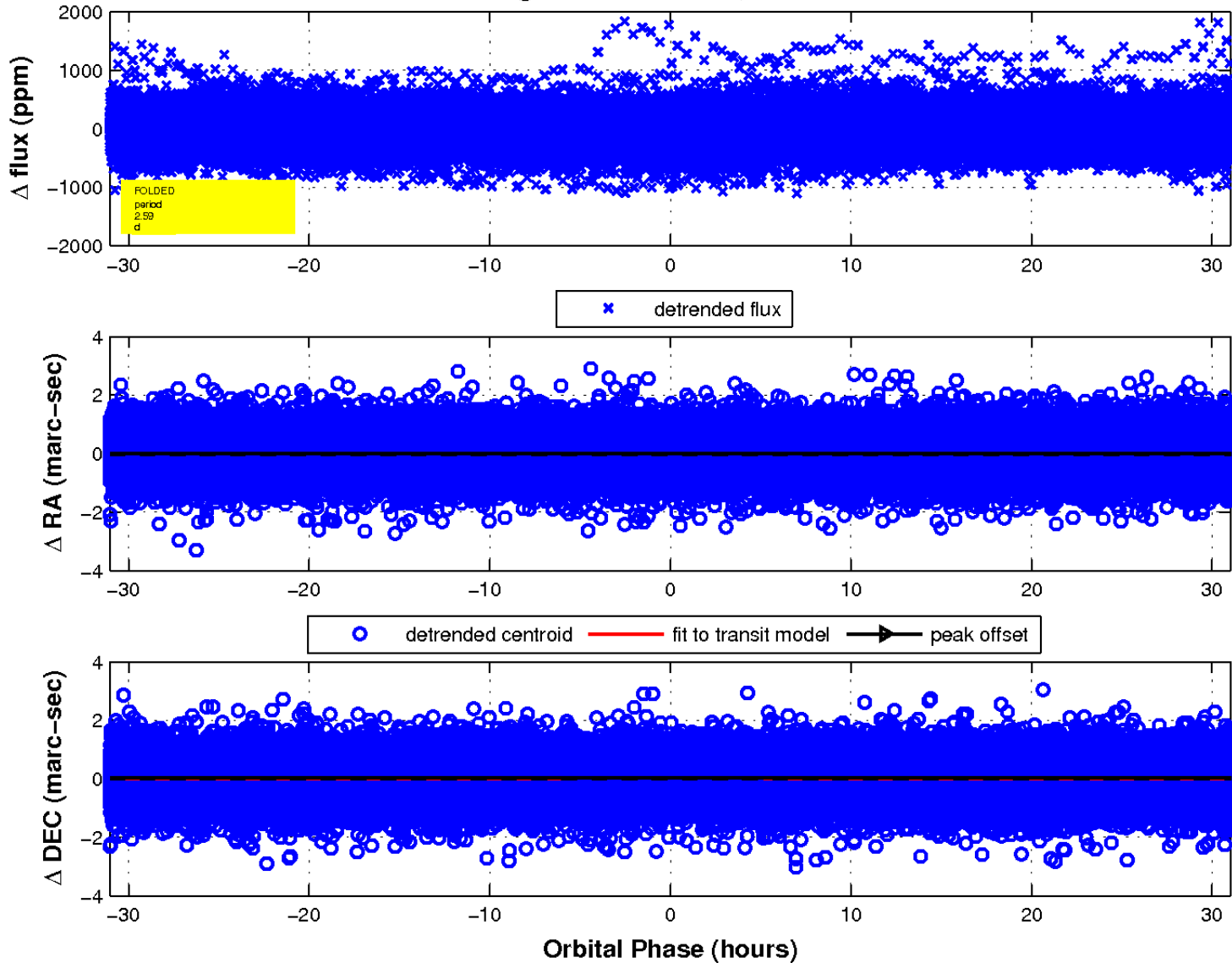
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



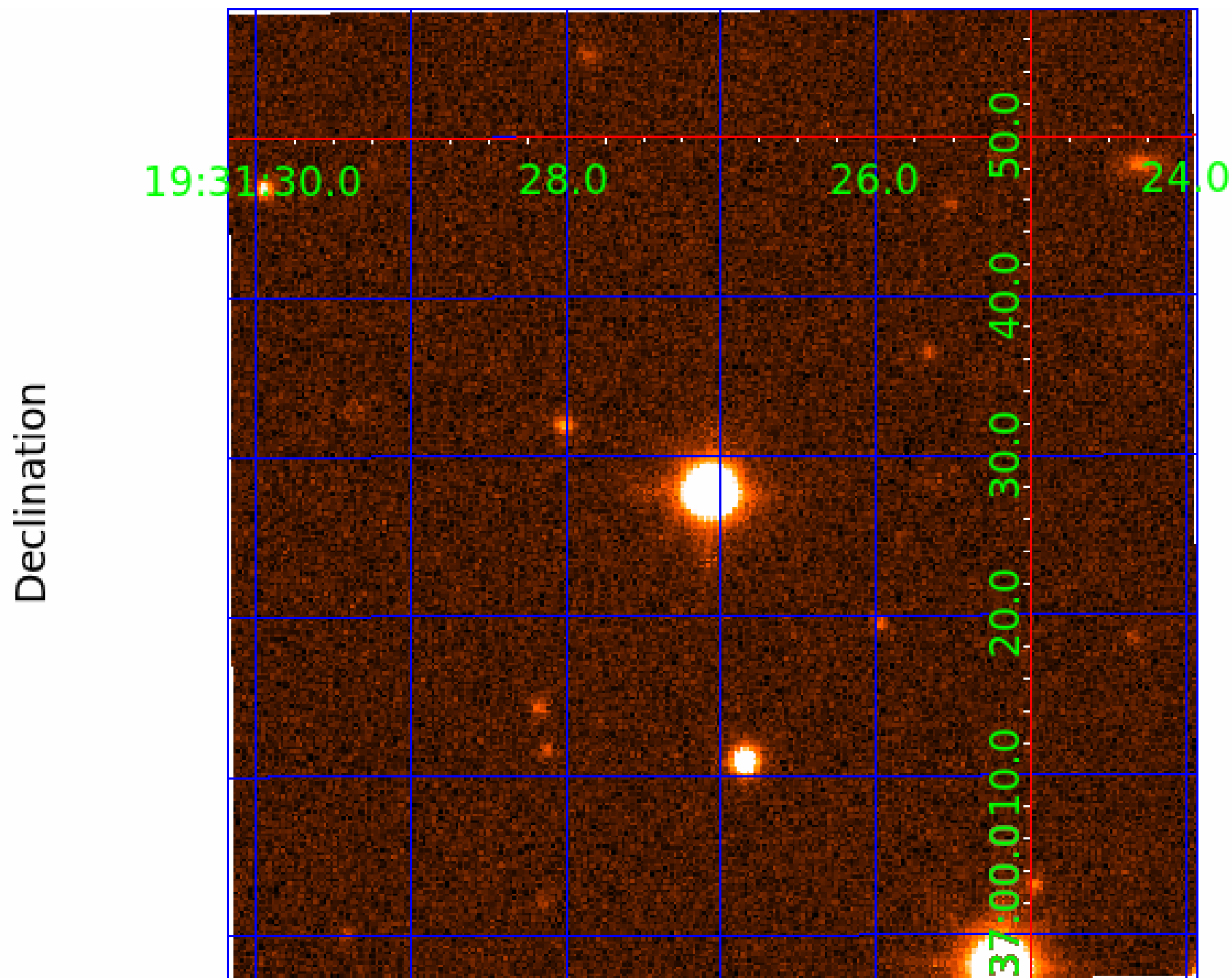
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 5



UKIRT Image



KIC 011612611

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})
011612611-01	OBS	No	2.585749	132.470102	26.3	12.594	9.6	10.0	0.78	5505	0.54	434.09
011612611-02	OBS	No	447.258737	343.002595	240.0	1.075	13.0	3.7	0.78	5505	1.71	0.45
011612611-03	OBS	No	223.590825	343.618158	330.2	15.000	13.7	-1.0	0.78	5505	1.40	1.14
011612611-04	OBS	No	141.835703	184.638165	222.8	21.663	9.1	6.2	0.78	5505	1.55	2.08
011612611-05	OBS	No	2.585609	133.811919	25.6	12.839	8.7	11.2	0.78	5505	0.45	434.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612611-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011612611-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
011612611-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

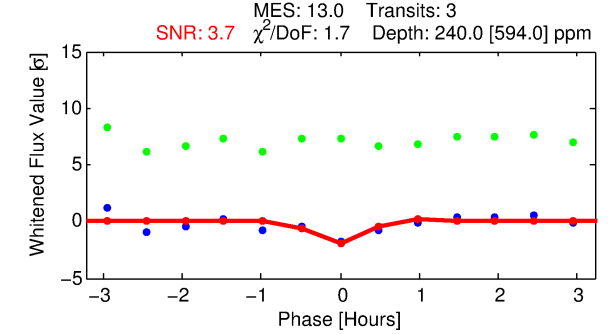
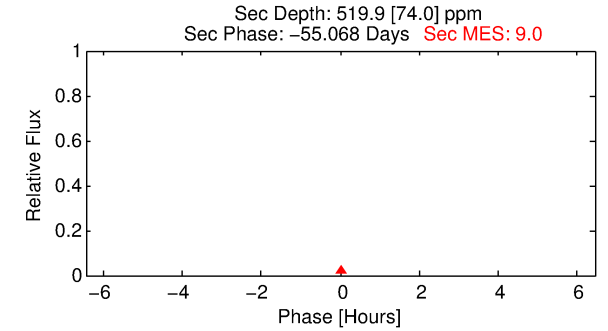
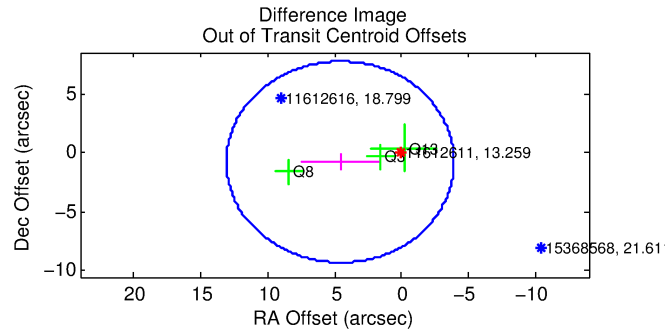
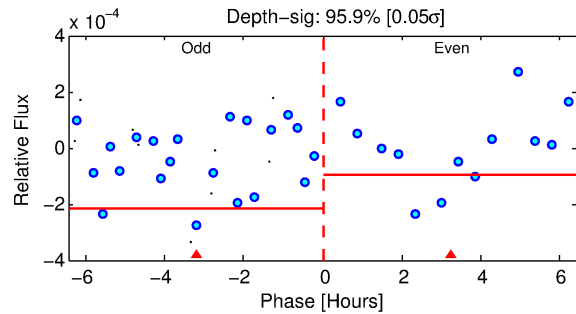
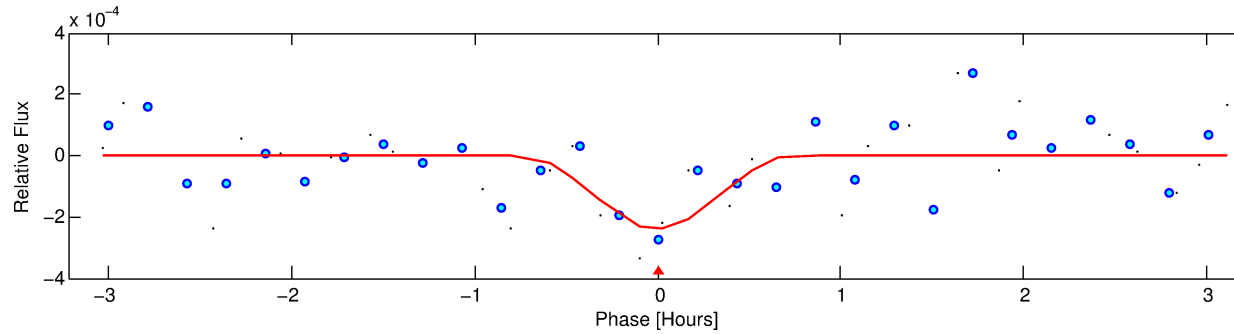
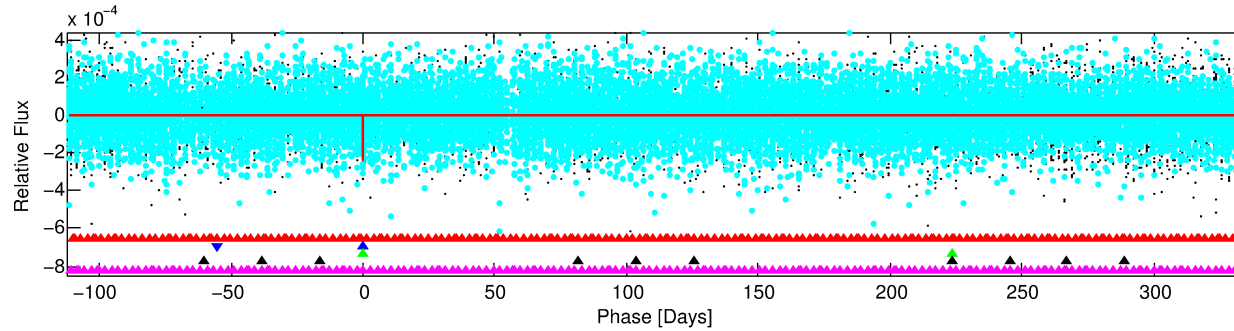
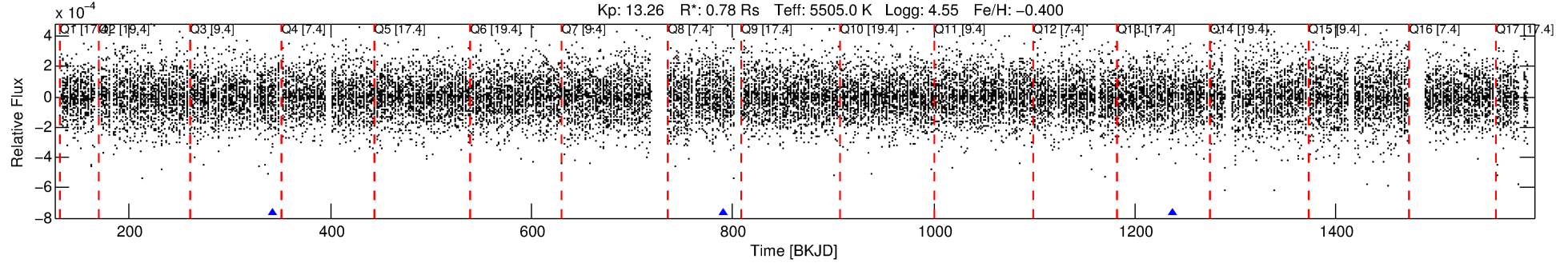
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612611-02

No Significant Match Found

DV One-Page Summary

KIC: 11612611 Candidate: 2 of 5 Period: 447.259 d



DV Fit Results:

Period = 447.25874 [0.00918] d
Epoch = 343.0026 [0.0113] BKJD
Rp/R* = 0.0201 [0.0571]
a/R* = 915.11 [4639.62]
b = 0.98 [0.31]
Seff = 0.45 [0.11]
Teq = 209 [12] K
Rp = 1.71 [4.87] Re
a = 1.0556 [0.1530] AU
Ag = 108492.60 [616381.23] [0.18 σ]
Teffp = 5862 [8322] K [0.68 σ]

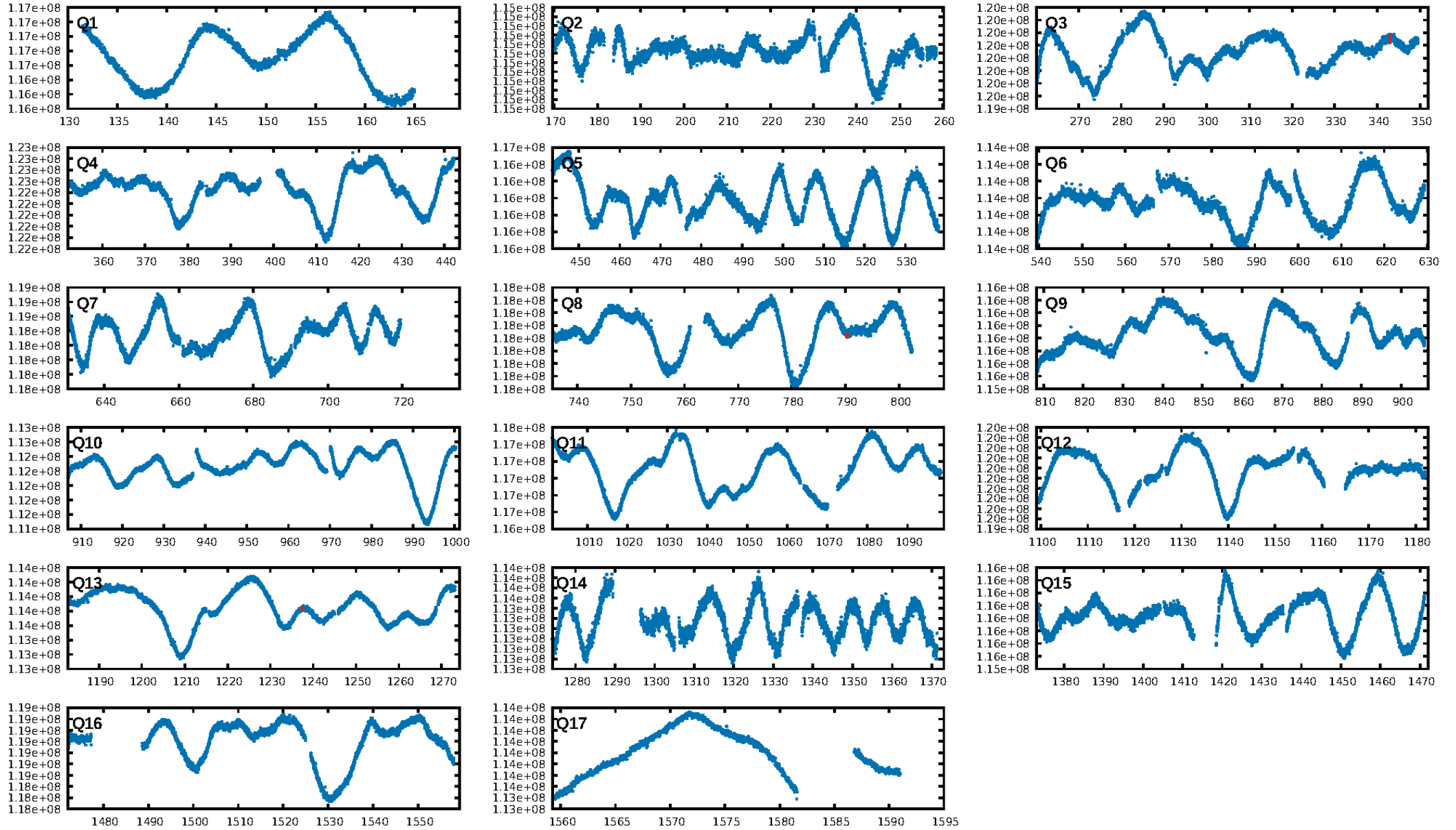
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [356.95 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 37.5%
ModelChiSquareGof-sig: 60.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.168
Centroid-sig: 97.8%
Centroid-so: 0.486 arcsec [0.15 σ]
OotOffset-rm: 4.637 arcsec [1.64 σ]
KicOffset-rm: 4.600 arcsec [1.62 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

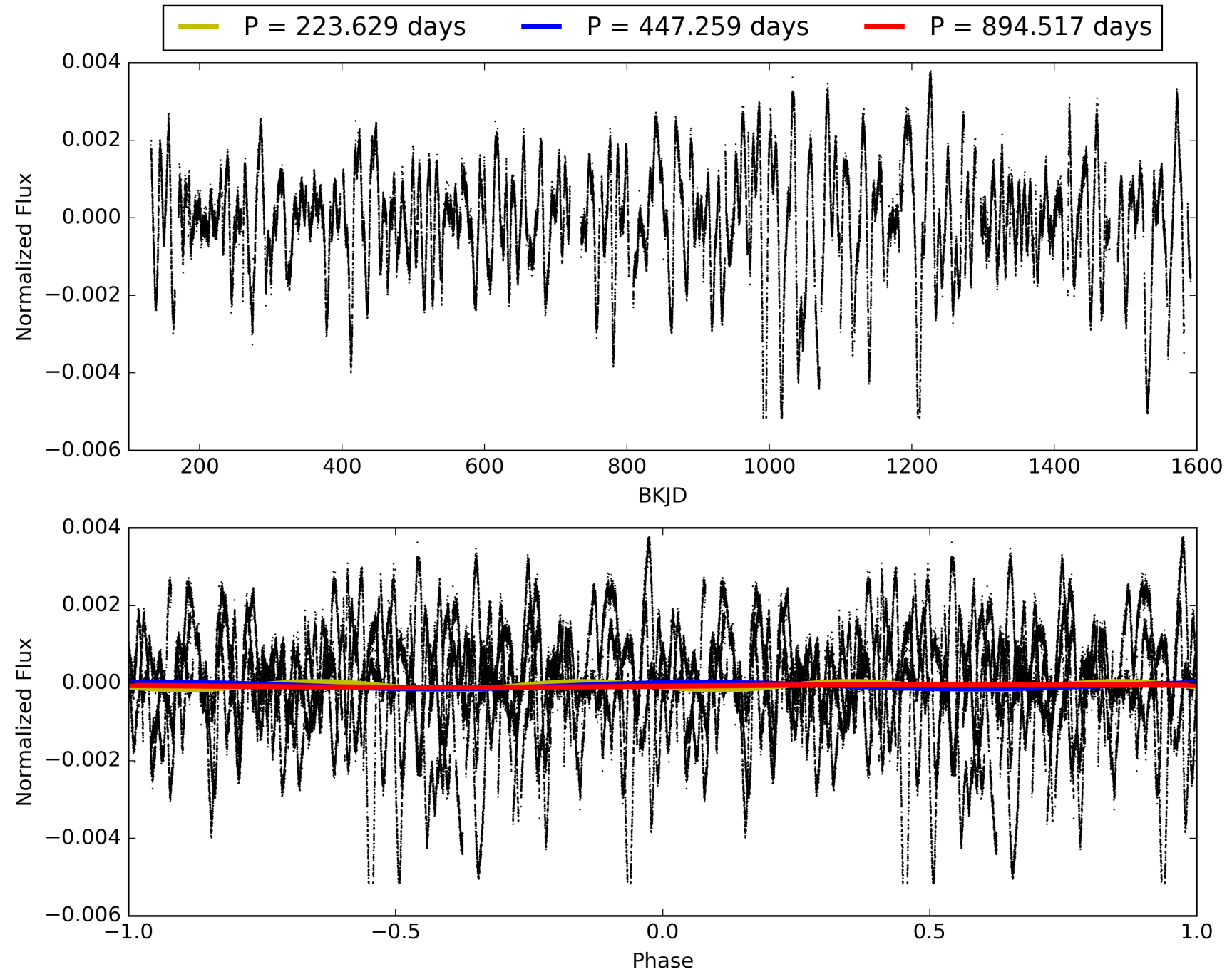
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:50:04 Z

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

TCE 011612611-02, PDC Light Curves

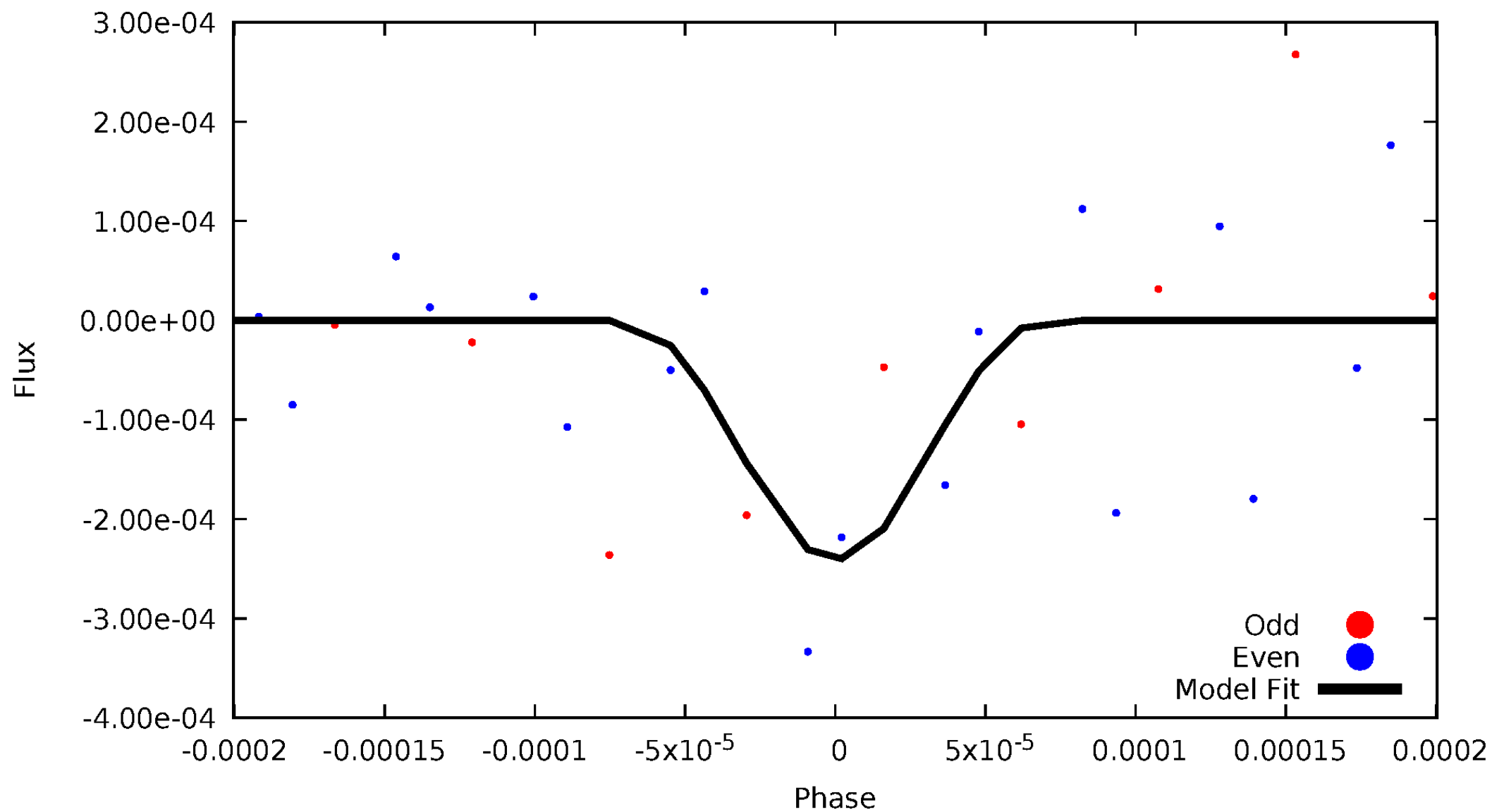


TCE 011612611-02



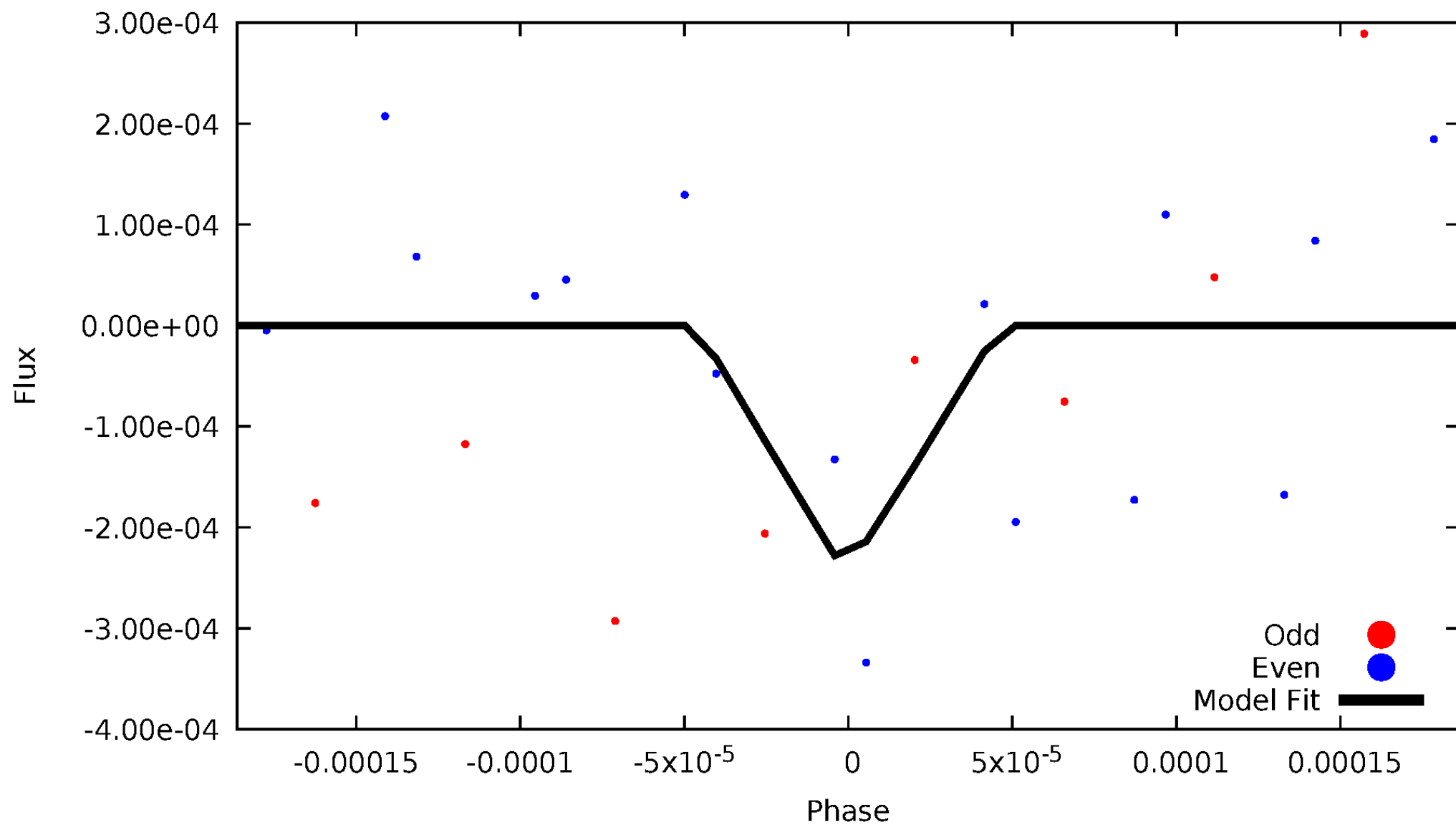
DV Odd/Even

TCE 011612611-02



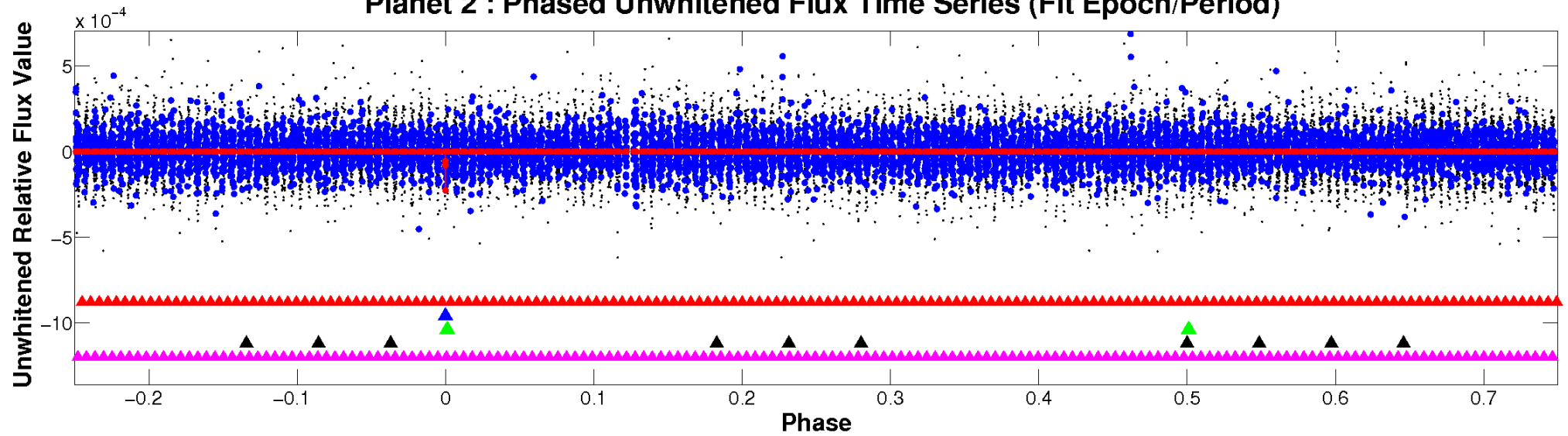
ALT Odd/Even

TCE 011612611-02

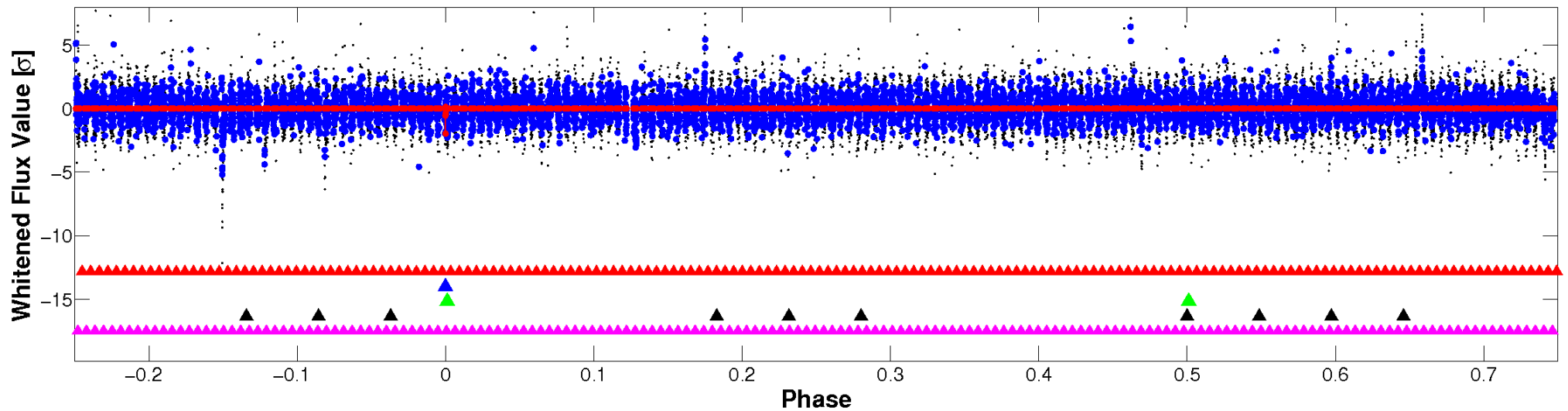


Non-Whitened Vs. Whitened Light Curve

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

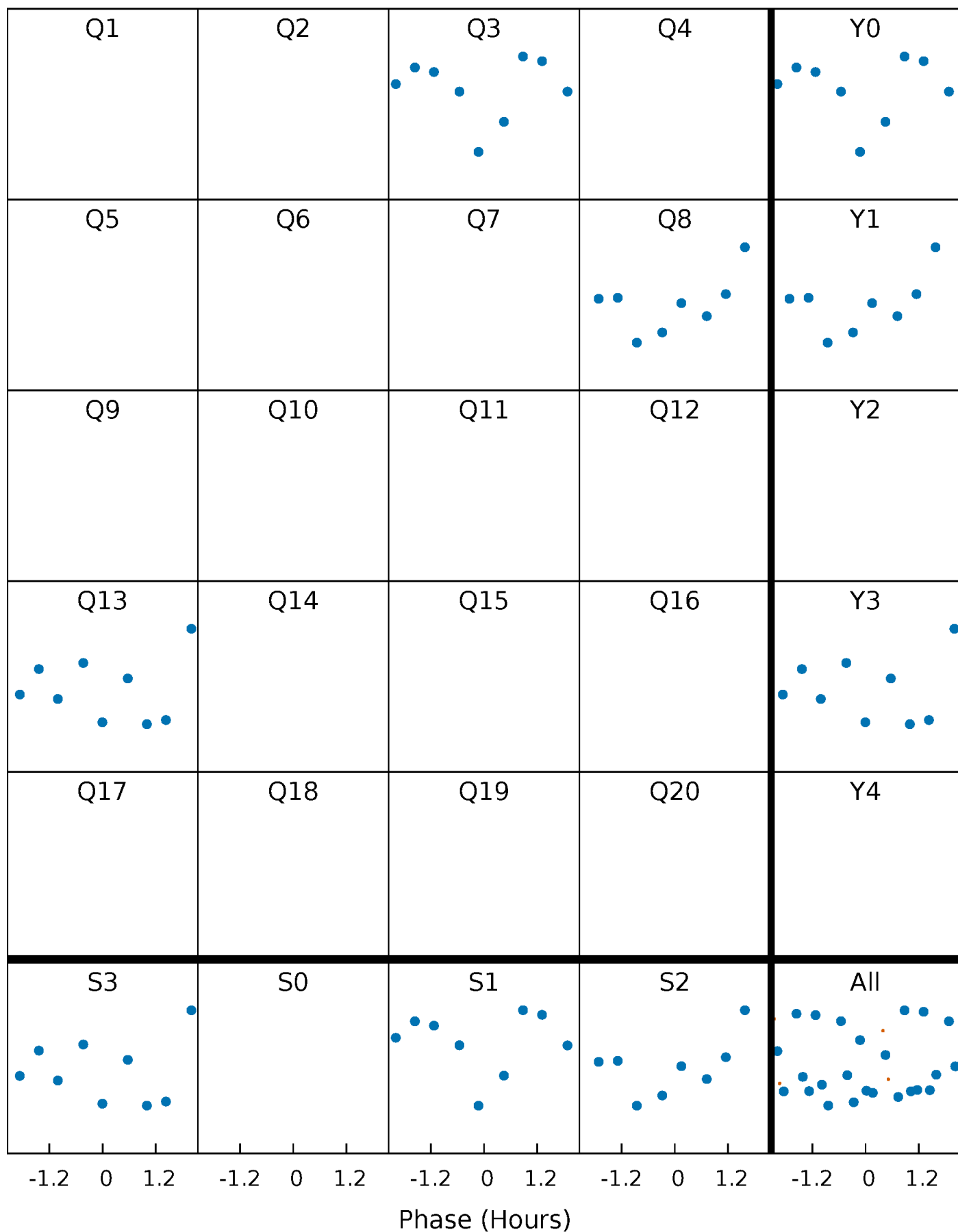


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



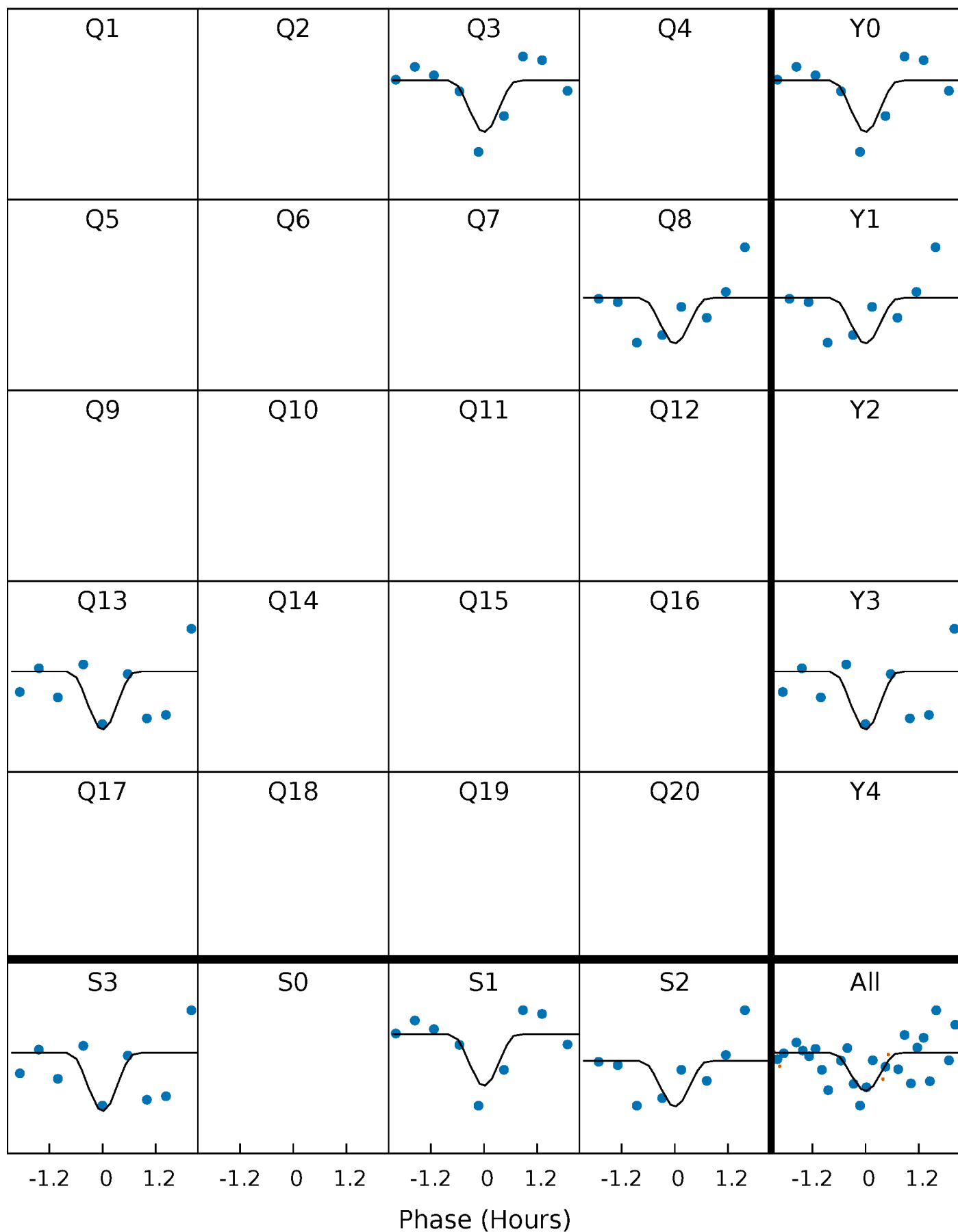
PDC Quarter-Phased Transit Curves

TCE 011612611-02 P=447.258736 Days $T_0=343.002595$ (BKJD)



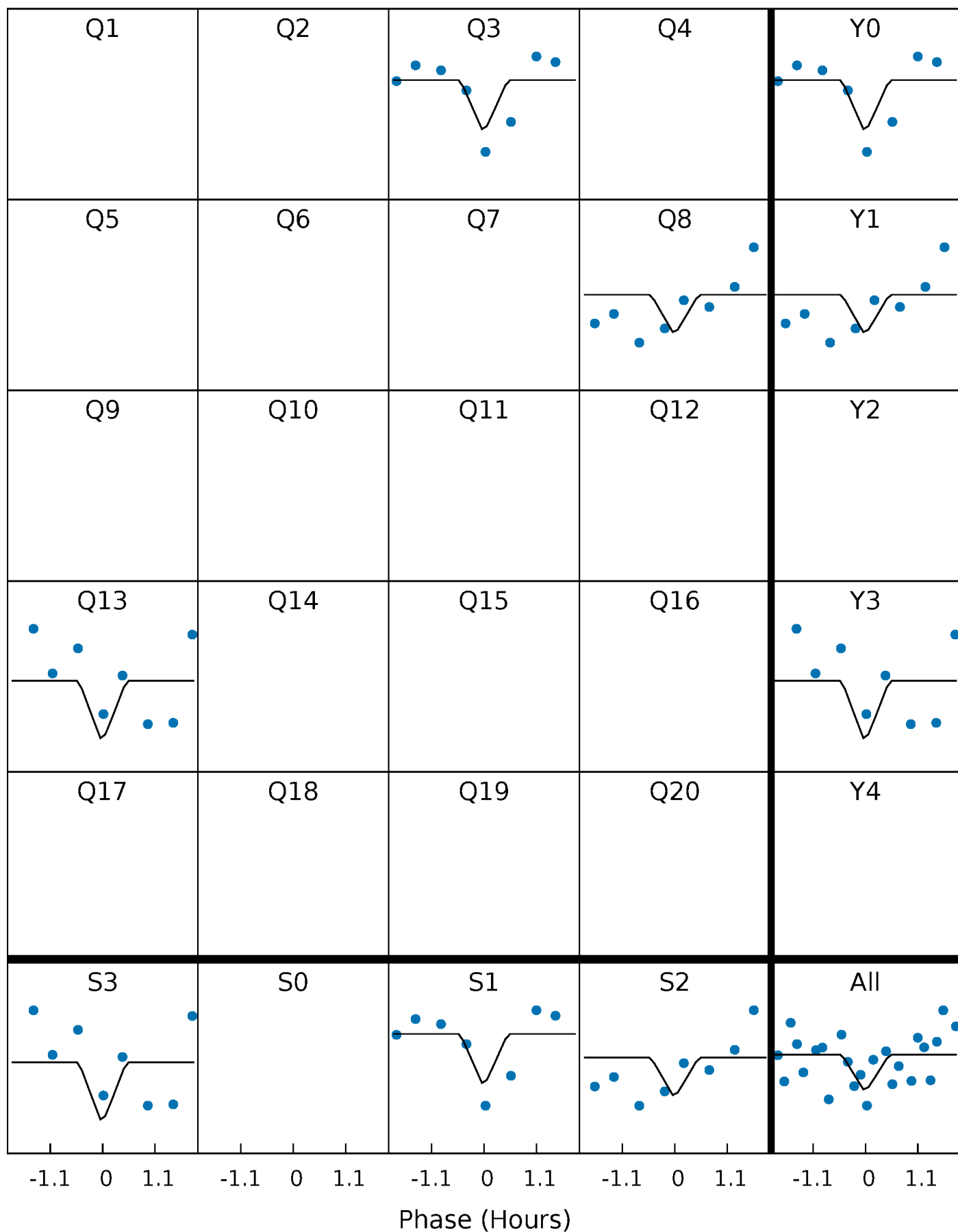
DV Quarter-Phased Transit Curves

TCE 011612611-02 P=447.258736 Days $T_0=343.002595$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

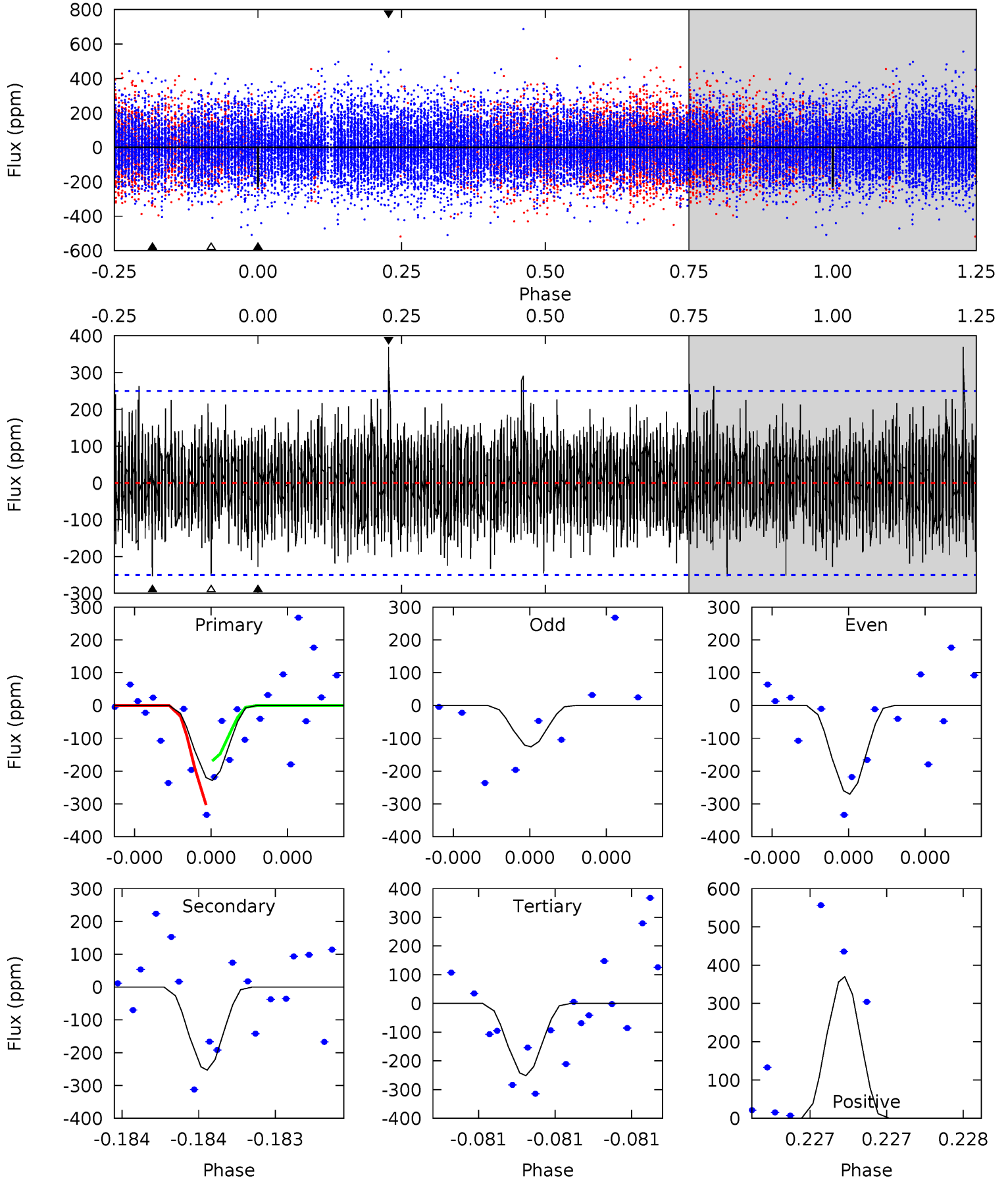
TCE 011612611-02 P=447.263384 Days $T_0=342.996132$ (BKJD)



DV Model-Shift Uniqueness Test

011612611-02, P = 447.258736 Days, E = 343.002595 Days

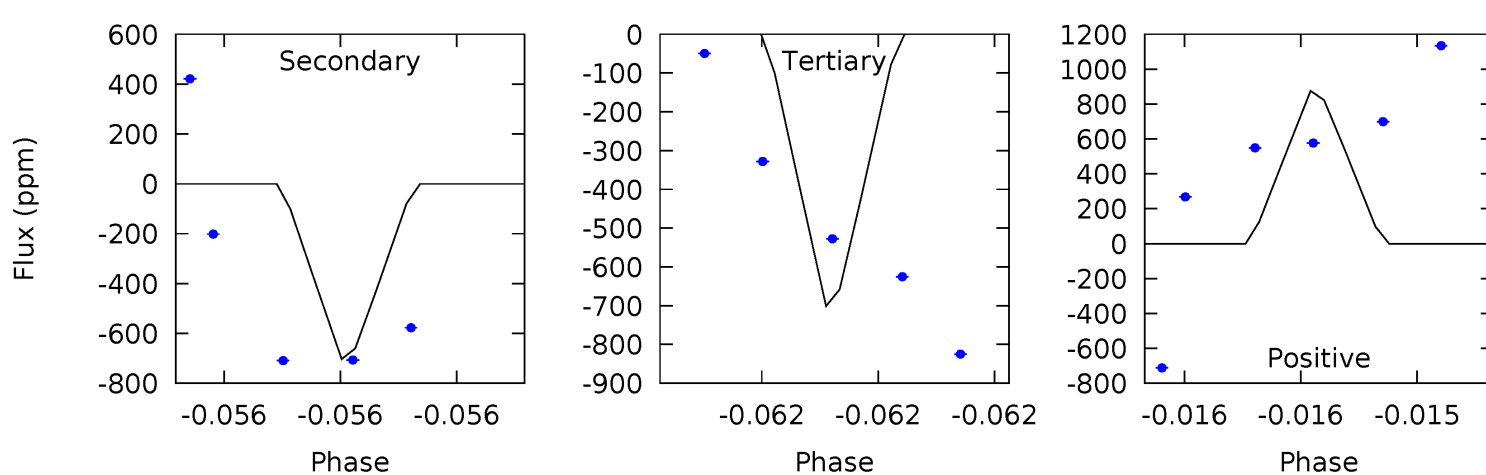
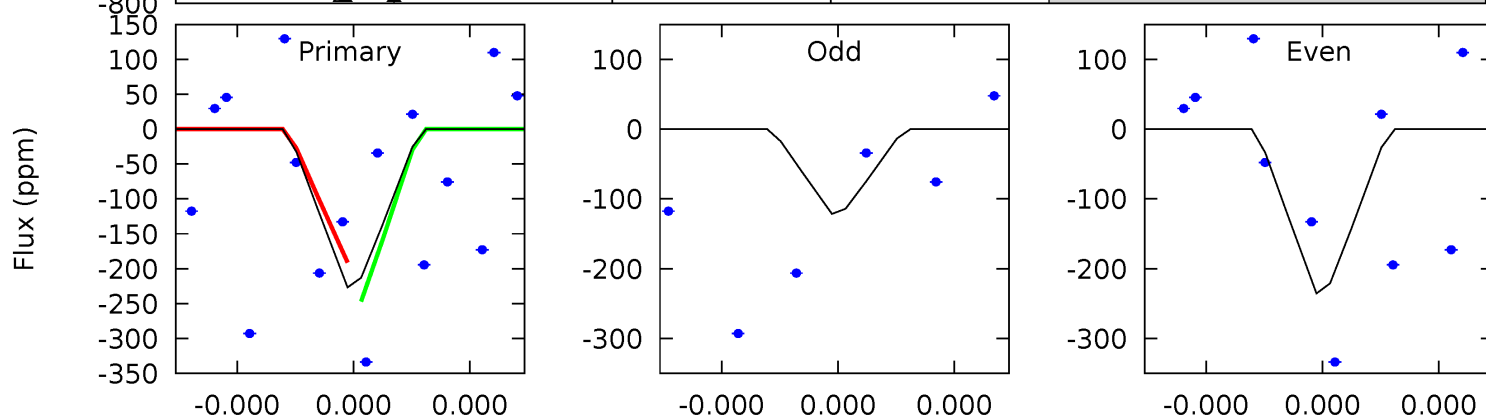
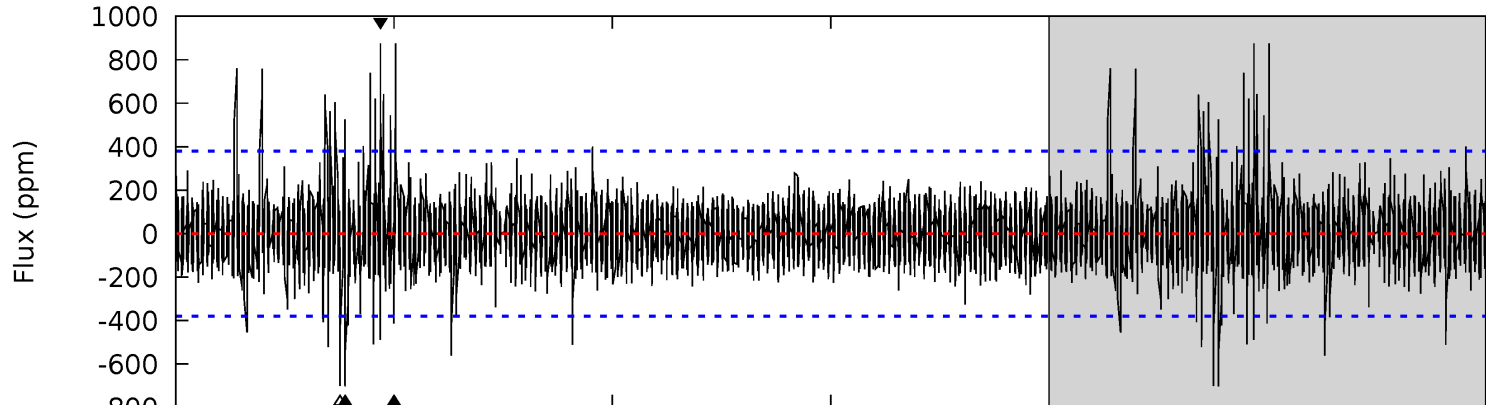
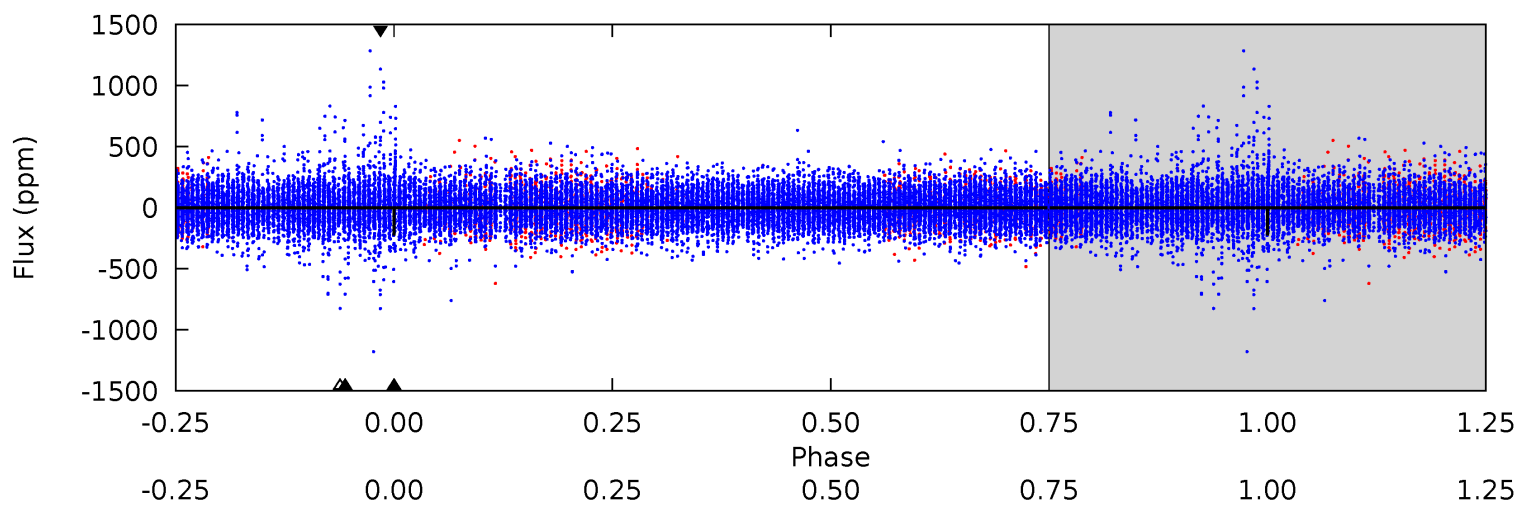
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.30	5.87	5.84	8.58	5.79	3.81	1.47	-0.54	-3.28	0.04	-2.71	1.62	1.22	0.59	1.51



Alt Model-Shift Uniqueness Test

011612611-02, P = 447.263384 Days, E = 342.996132 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.51	10.9	10.9	13.6	5.88	3.94	1.32	-7.34	-10.0	0.03	-2.67	0.87	1.14	0.55	0.44



Stellar Parameters For KIC 011612611

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5505^{+164}_{-148}	$4.547^{+0.068}_{-0.110}$	$-0.400^{+0.350}_{-0.300}$	$0.781^{+0.138}_{-0.074}$	$0.783^{+0.095}_{-0.063}$	$2.316^{+0.708}_{-0.763}$
	+3%/-3%	+1%/-2%	+87%/-75%	+18%/-9%	+12%/-8%	+31%/-33%
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 011612611-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-253 ± 43	$4.39^{+3.94}_{-3.04}$	294^{+14}_{-12}	3577^{+1939}_{-651}	8200^{+77803}_{-6054}
Alt.	-703 ± 65	$3.69^{+4.10}_{-2.61}$	293^{+14}_{-11}	4498^{+3671}_{-1019}	$32019^{+335627}_{-24869}$

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 $A_{obs} \gg 1.0$

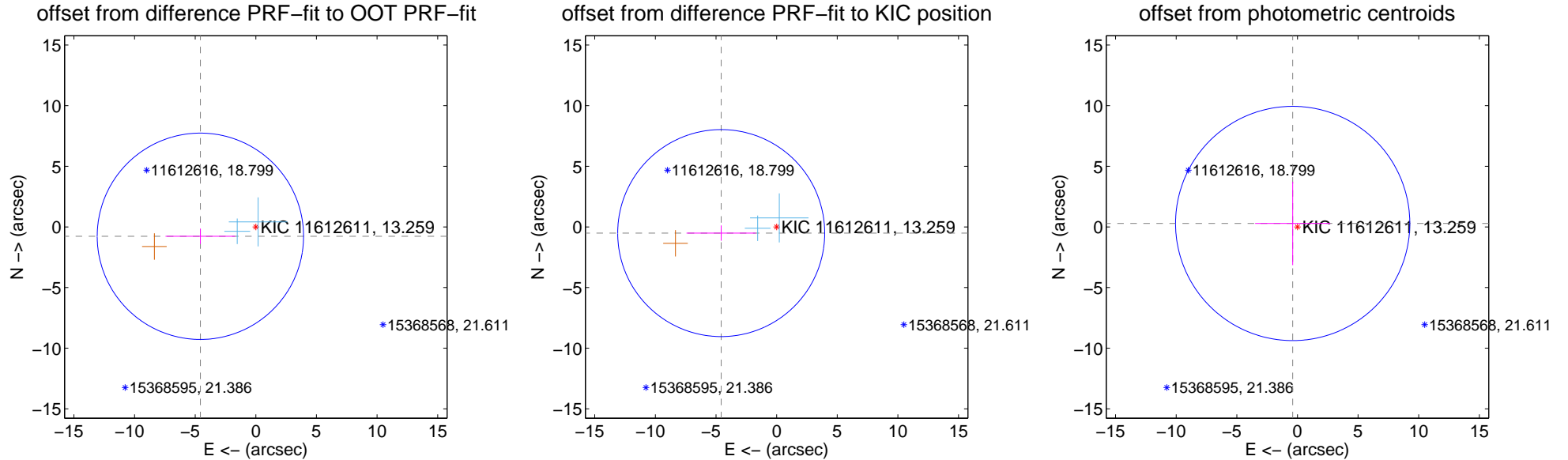
DV Centroid Data

Supplemental centroid analysis for 011612611-02. Kepler magnitude: 13.26. Transit SNR 3.71

There are 2 quarters with good PRF difference image offsets

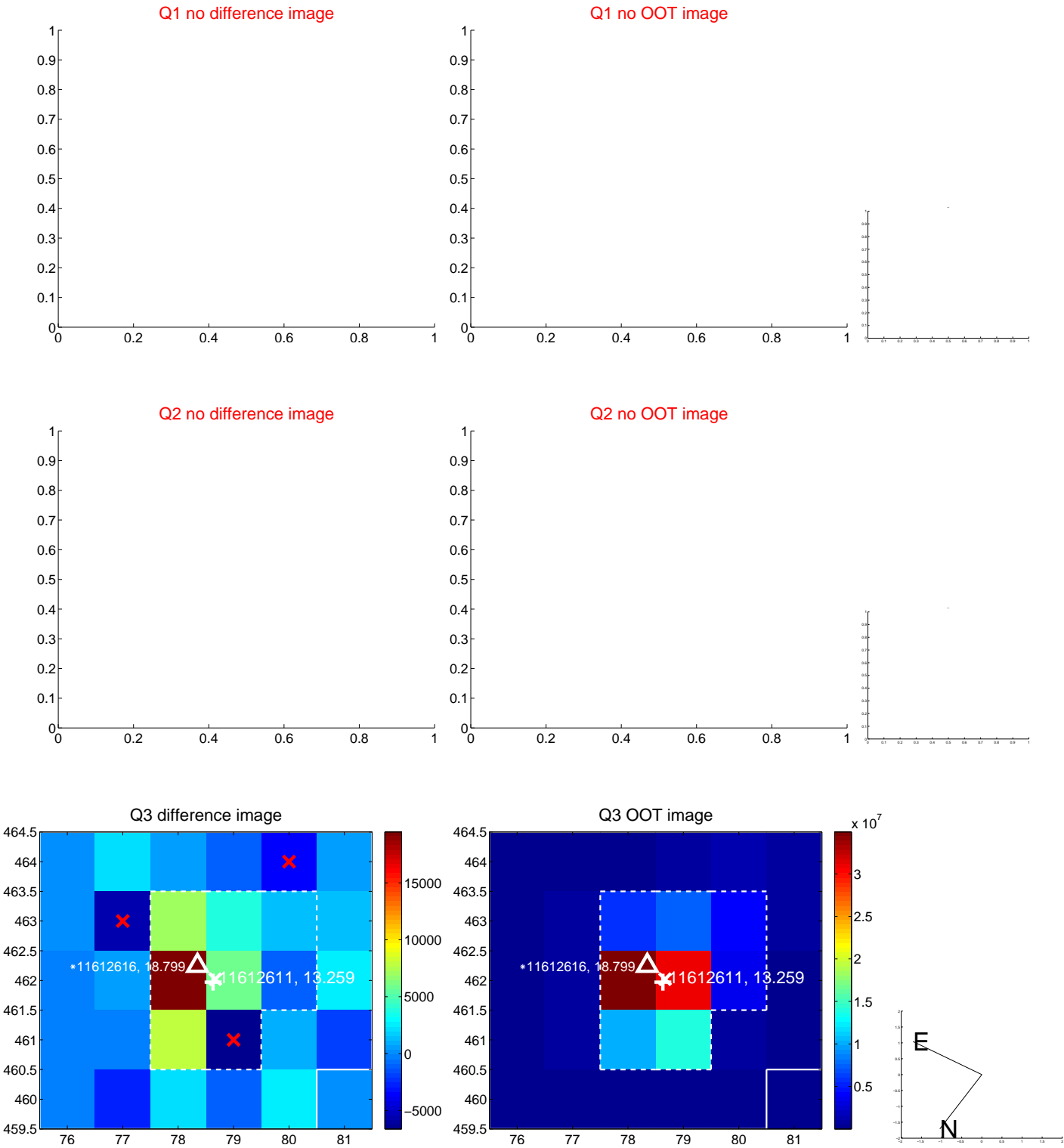
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.637 ± 2.836	1.64	4.572 ± 2.874	-0.771 ± 0.633
PRF-fit source offset from KIC position	4.600 ± 2.845	1.62	4.572 ± 2.862	-0.509 ± 0.631
photometric centroid source offset	0.49 ± 3.22	0.15	0.39 ± 3.10	0.29 ± 3.44

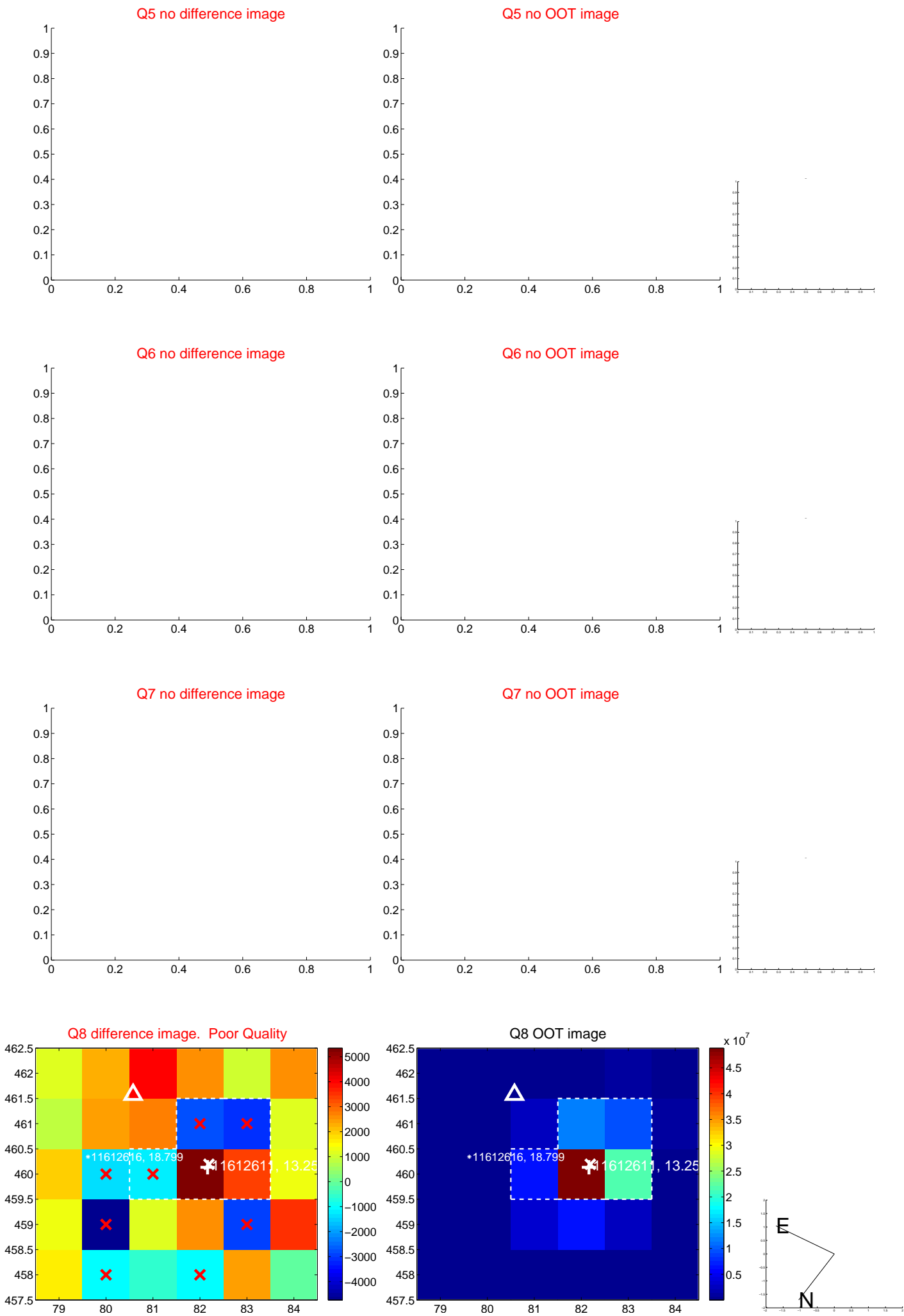


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



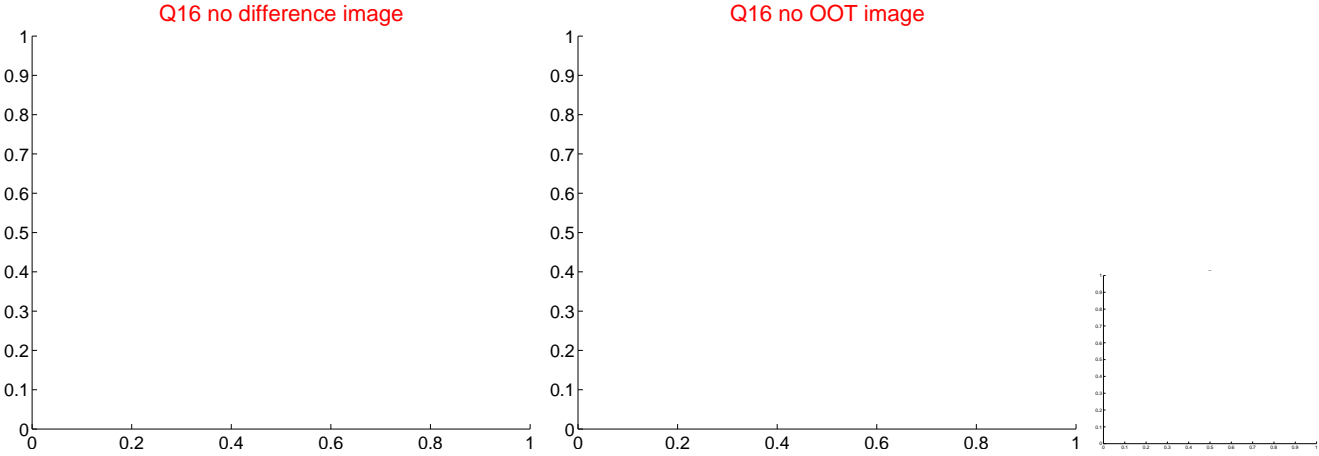
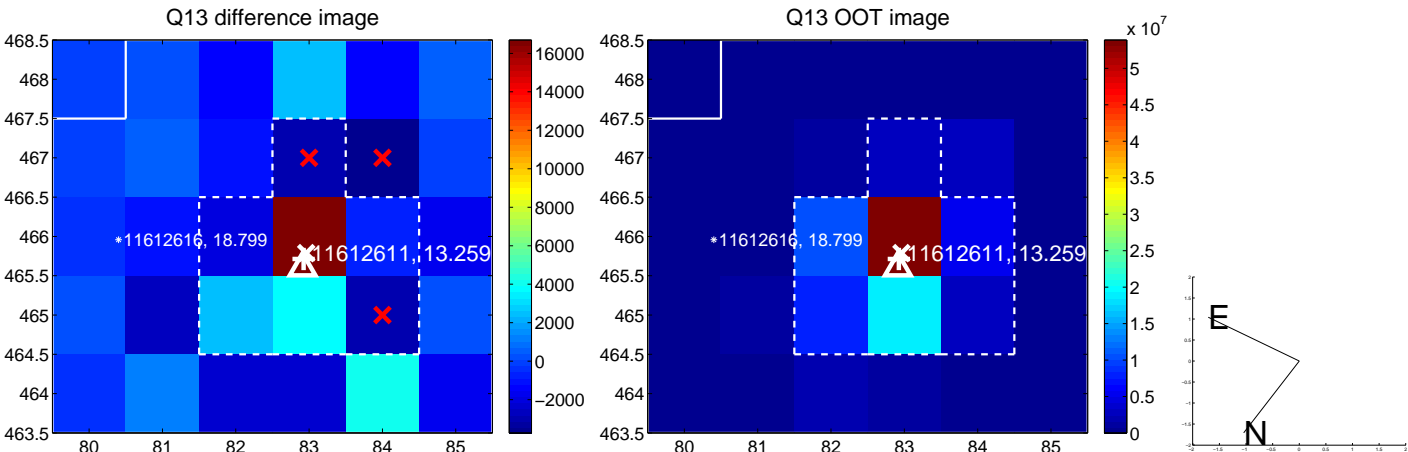
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



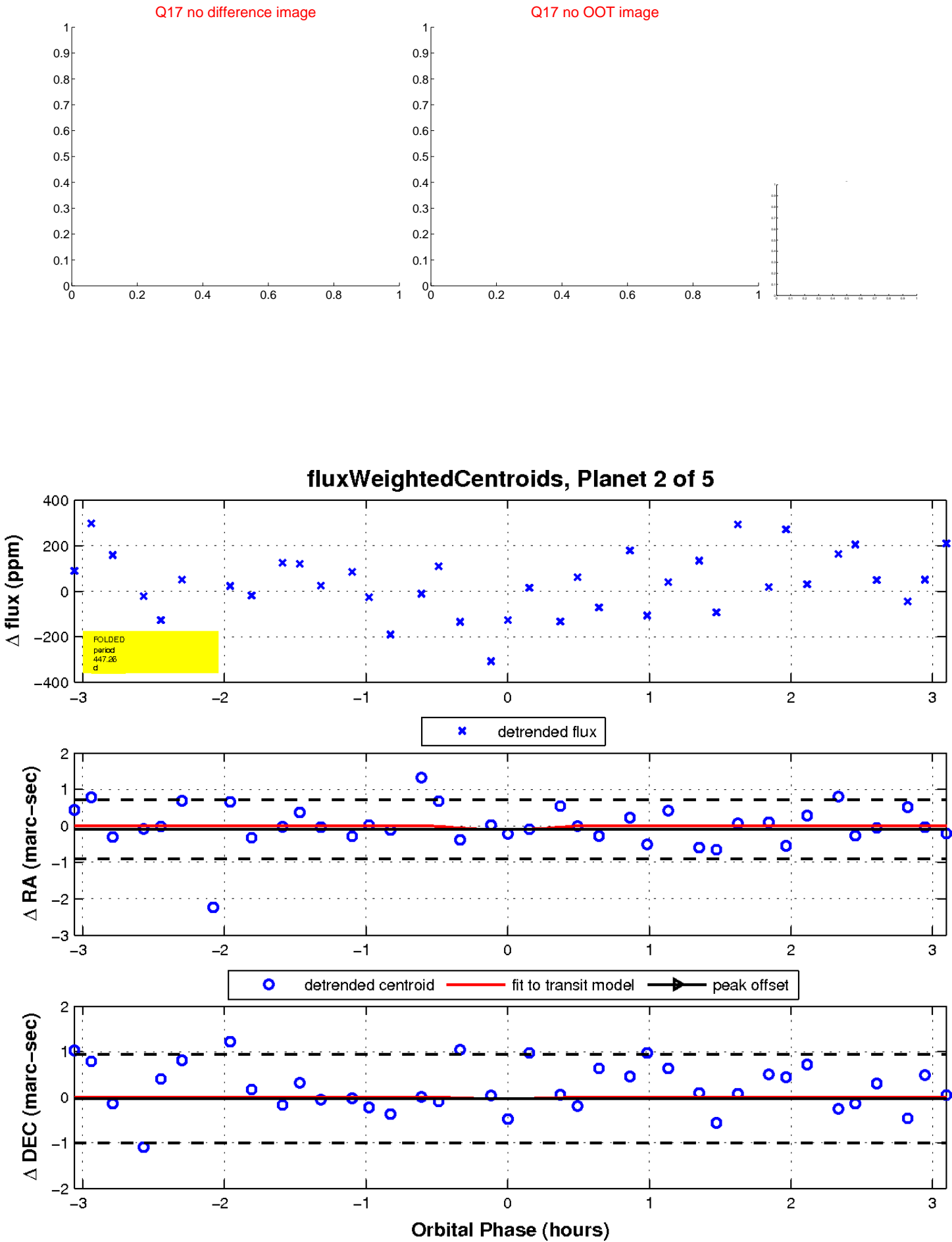
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



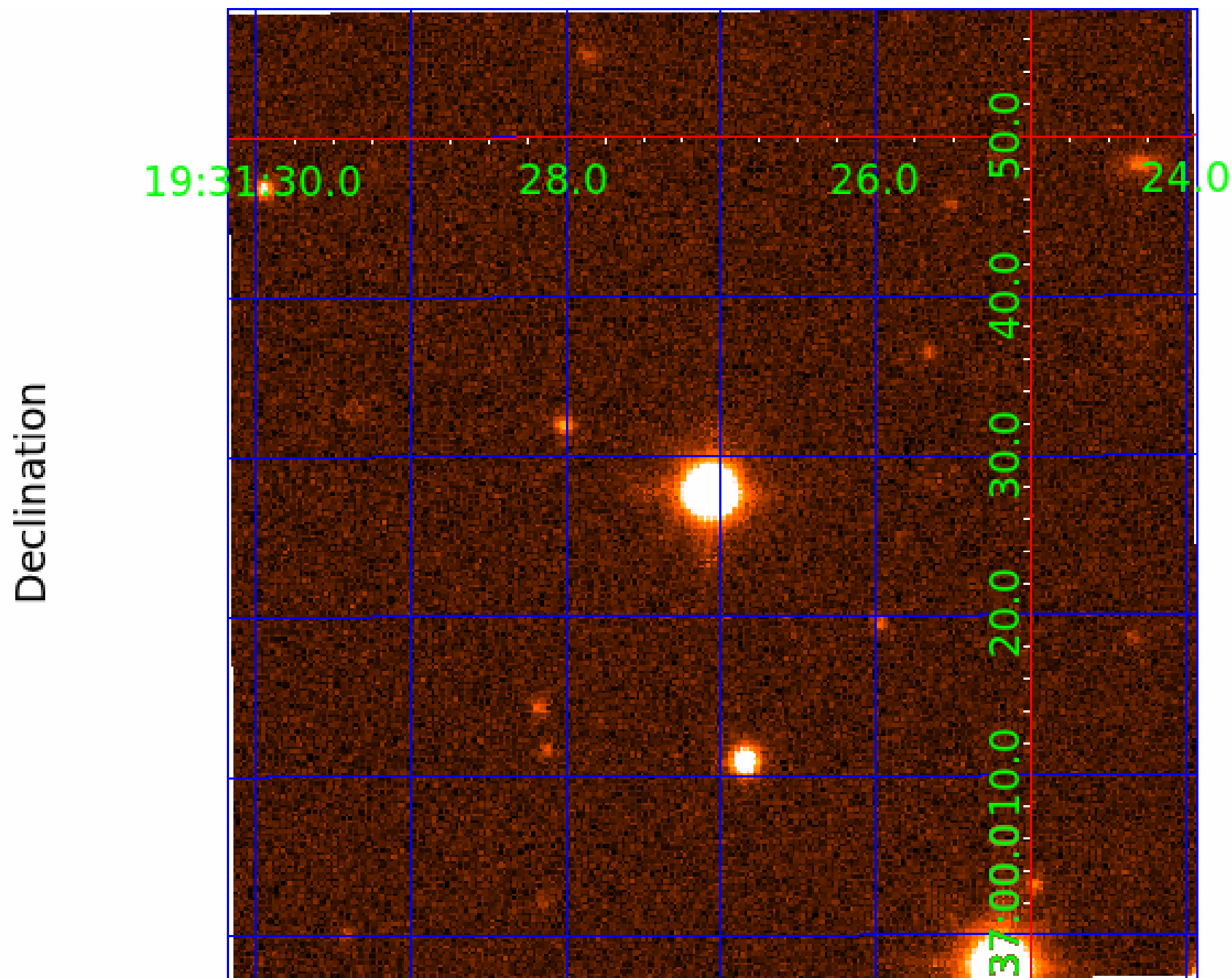
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 011612611

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})
011612611-01	OBS	No	2.585749	132.470102	26.3	12.594	9.6	10.0	0.78	5505	0.54	434.09
011612611-02	OBS	No	447.258737	343.002595	240.0	1.075	13.0	3.7	0.78	5505	1.71	0.45
011612611-03	OBS	No	223.590825	343.618158	330.2	15.000	13.7	-1.0	0.78	5505	1.40	1.14
011612611-04	OBS	No	141.835703	184.638165	222.8	21.663	9.1	6.2	0.78	5505	1.55	2.08
011612611-05	OBS	No	2.585609	133.811919	25.6	12.839	8.7	11.2	0.78	5505	0.45	434.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612611-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011612611-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
011612611-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

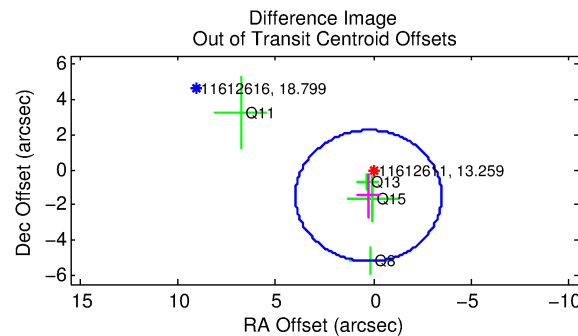
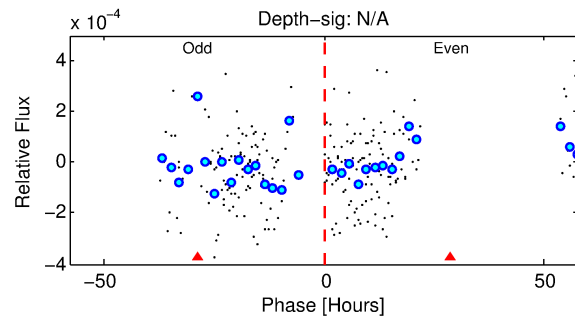
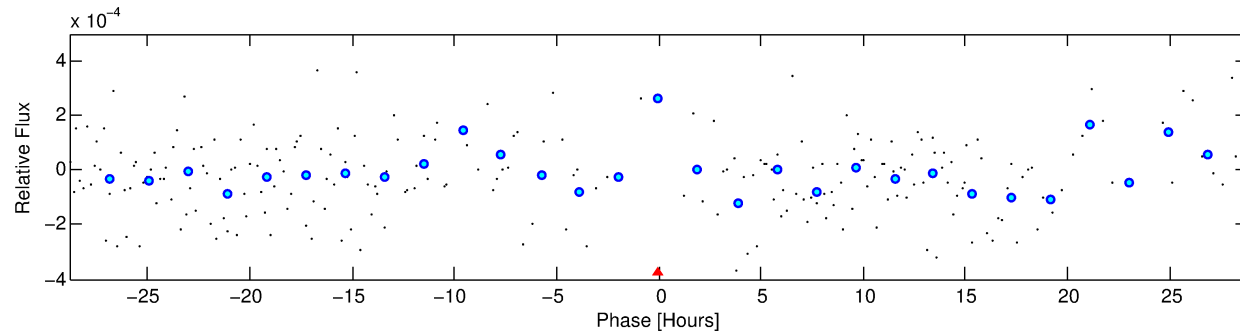
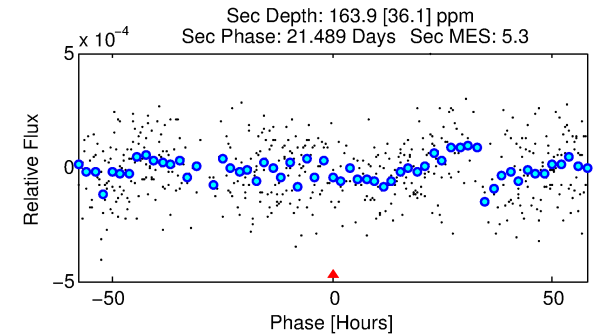
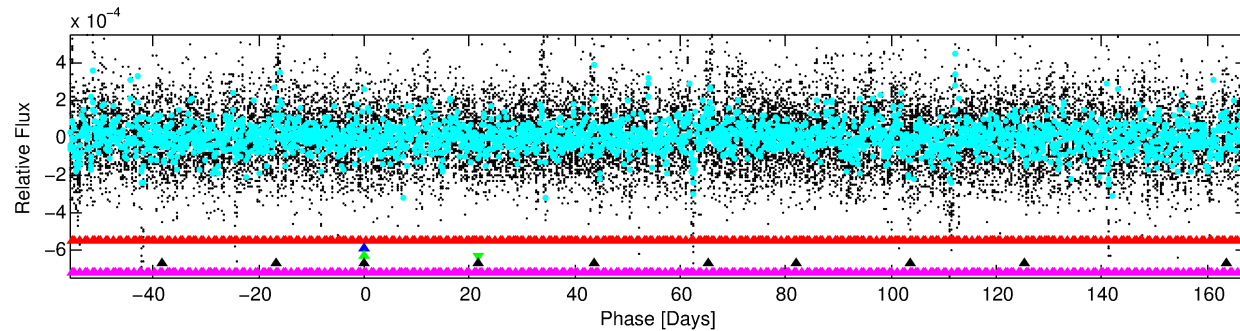
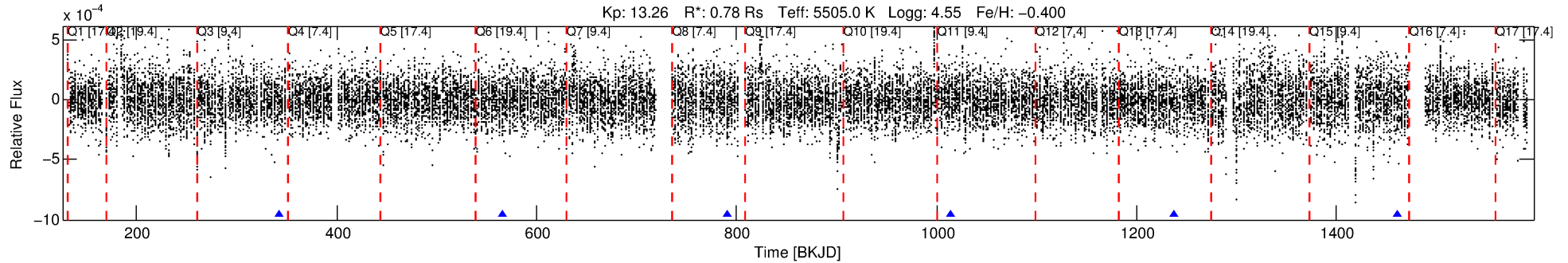
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612611-03

No Significant Match Found

DV One-Page Summary

KIC: 11612611 Candidate: 3 of 5 Period: 223.591 d



TPS TCE Results:

Period = 223.59082 d
Epoch = 343.6182 BKJD

DV fit results are unavailable

DV Diagnostic Results:

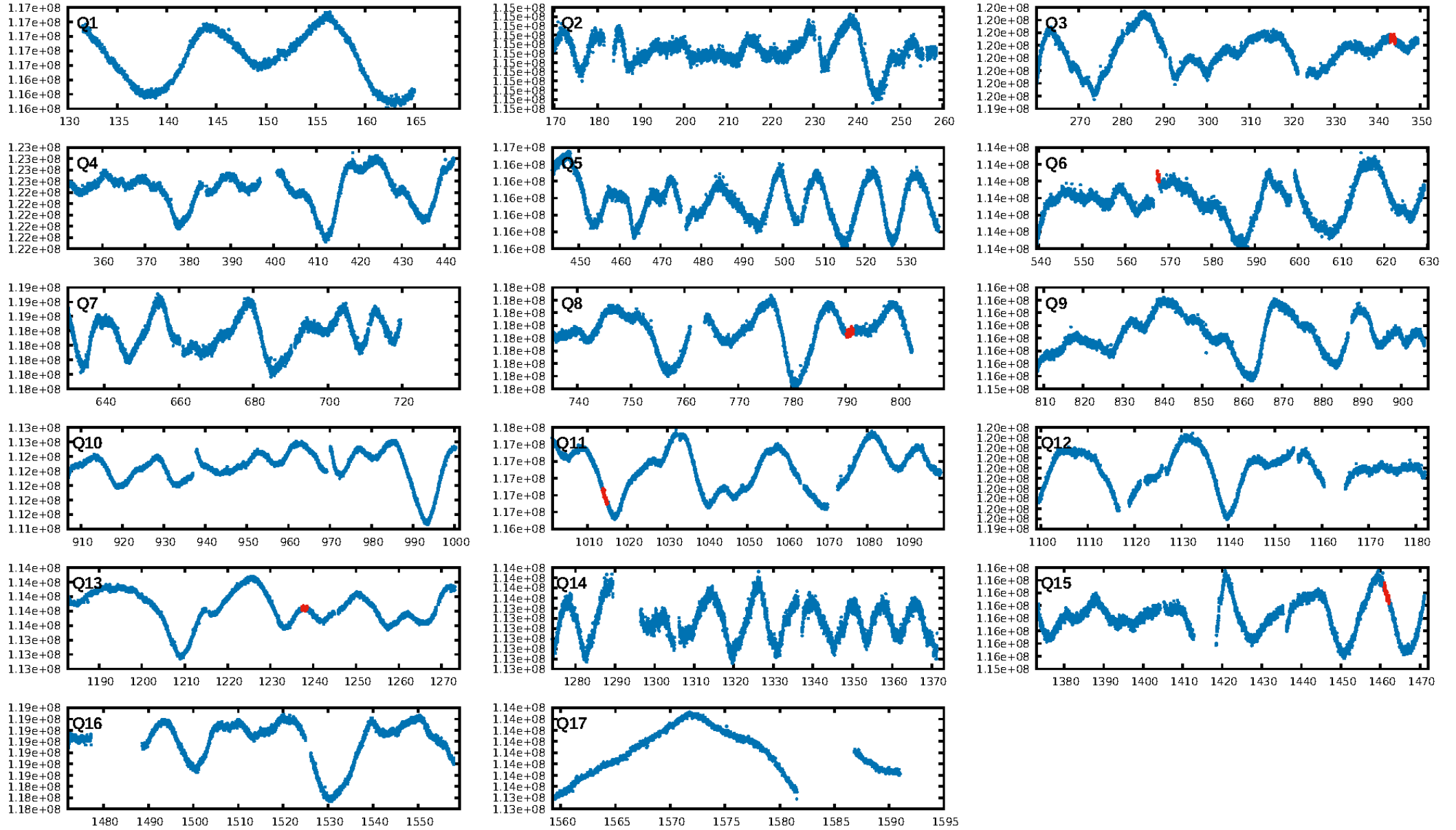
ShortPeriod-sig: 100.0% [74.47σ]
LongPeriod-sig: 100.0% [356.95σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3011

Centroid-sig: 16.1%
Centroid-so: 7.903 arcsec [1.02σ]
OotOffset-rm: 1.504 arcsec [1.21σ]
KicOffset-rm: 1.201 arcsec [0.96σ]
OotOffset-st: 0/2/1/1 [4]
KicOffset-st: 0/2/1/1 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.00 [0/5]

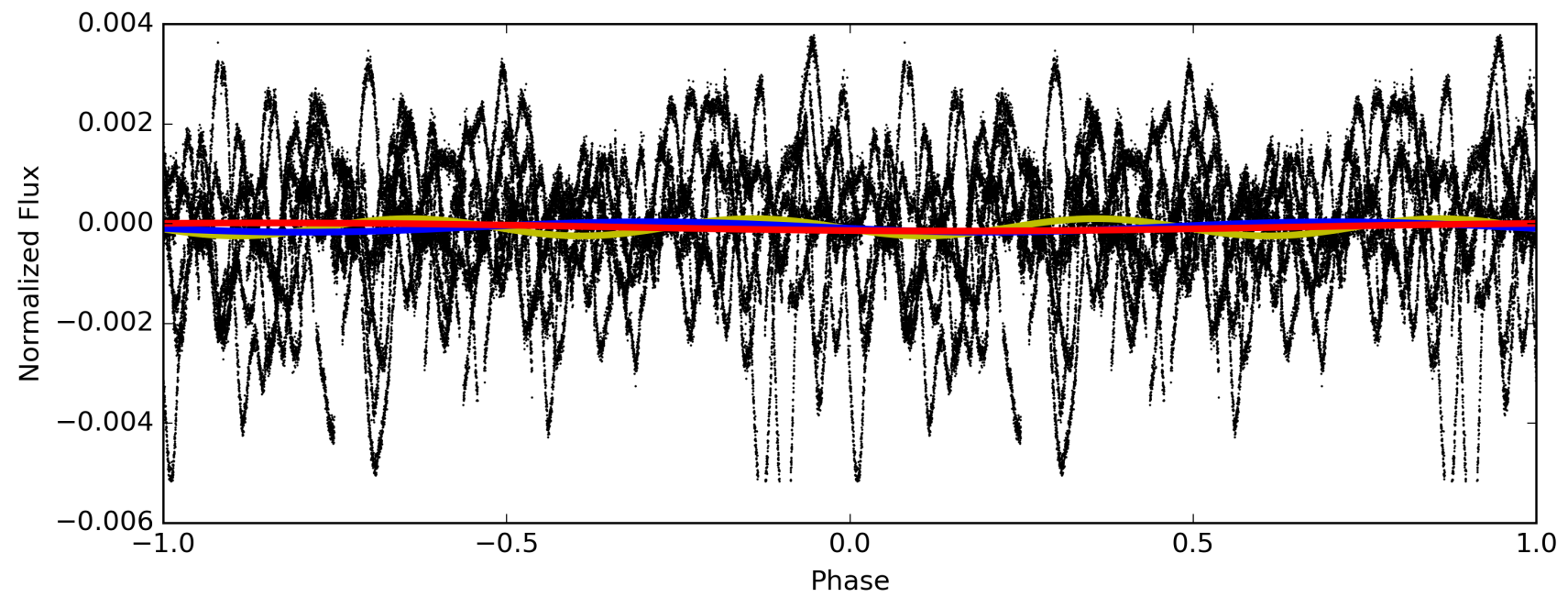
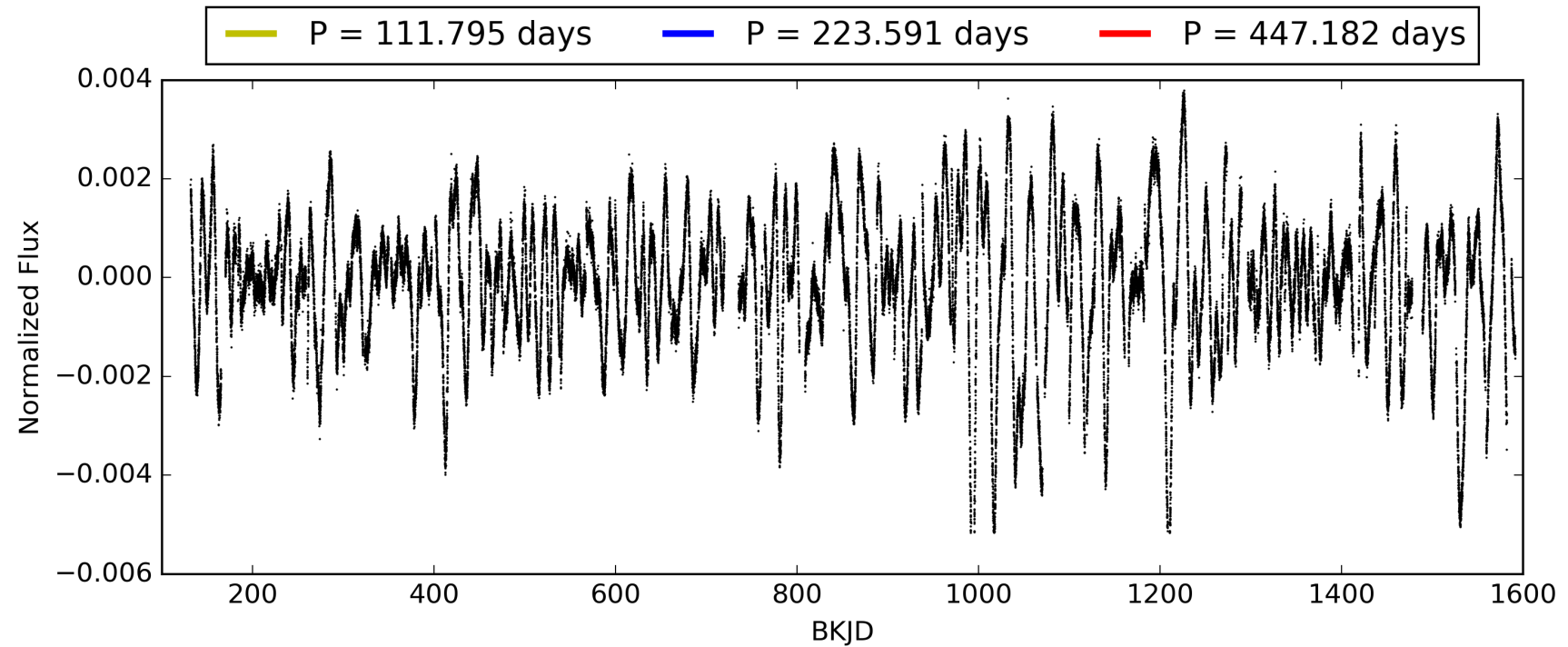
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:50:10 Z

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

TCE 011612611-03, PDC Light Curves

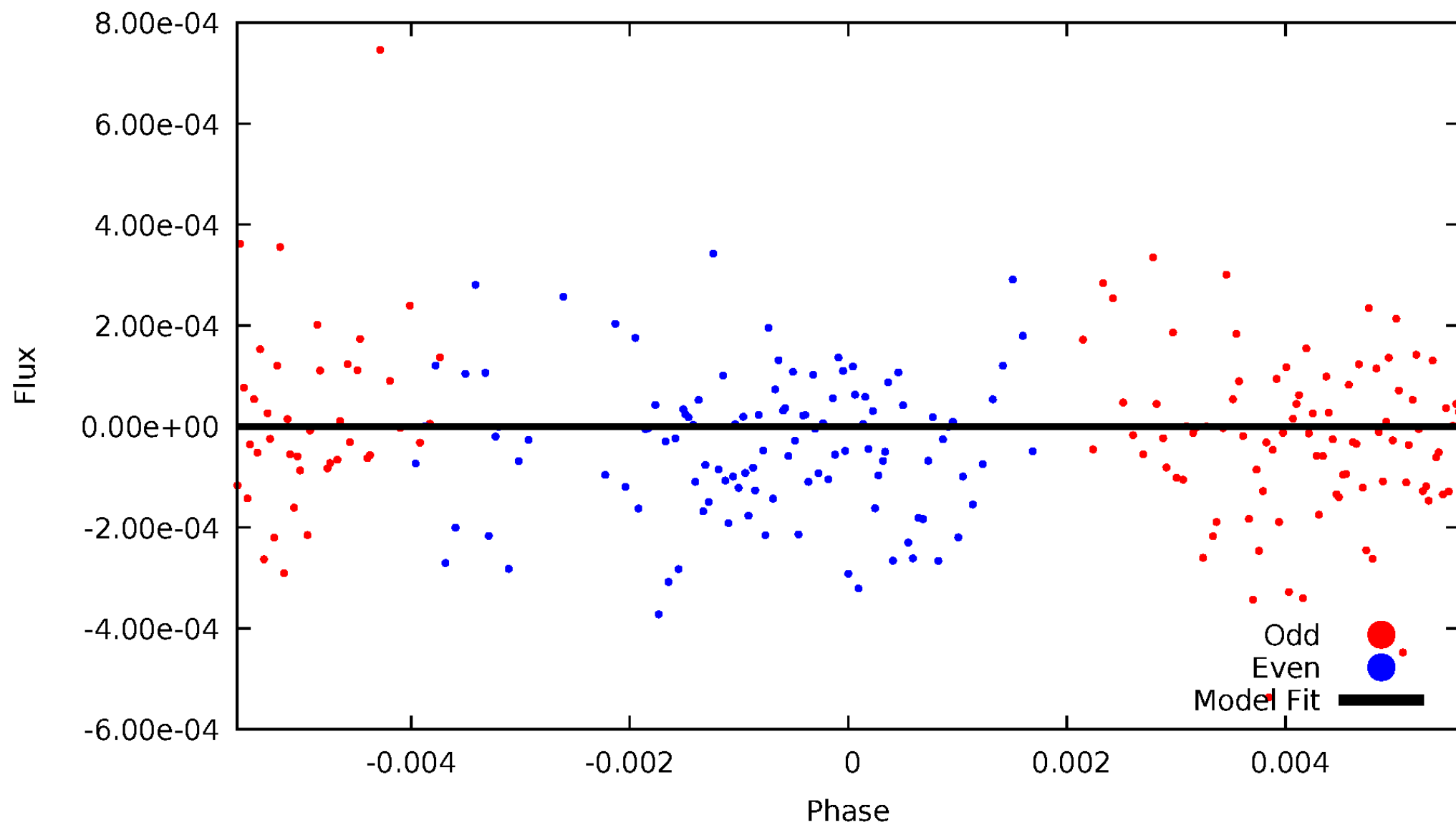


TCE 011612611-03



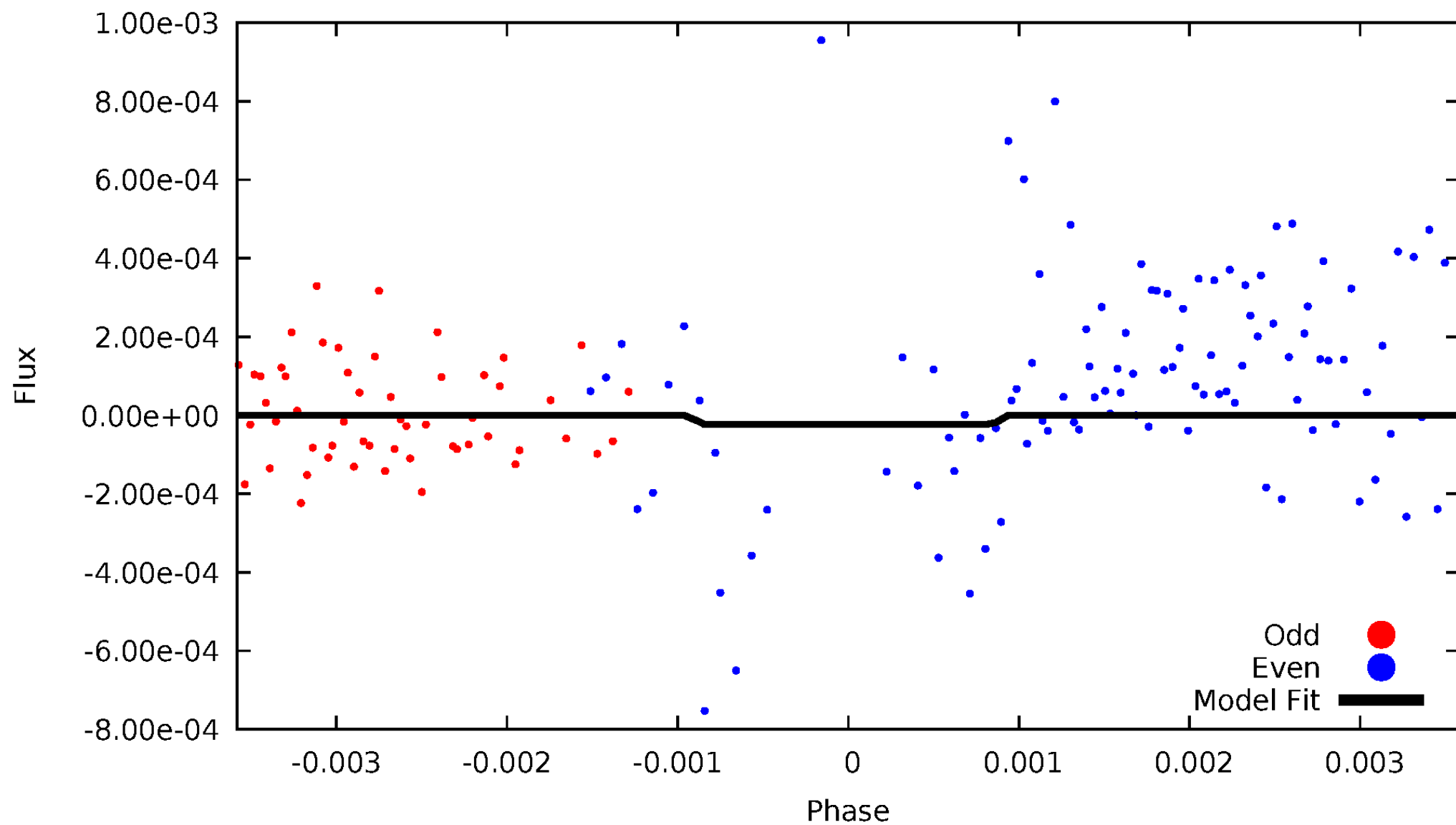
DV Odd/Even

TCE 011612611-03

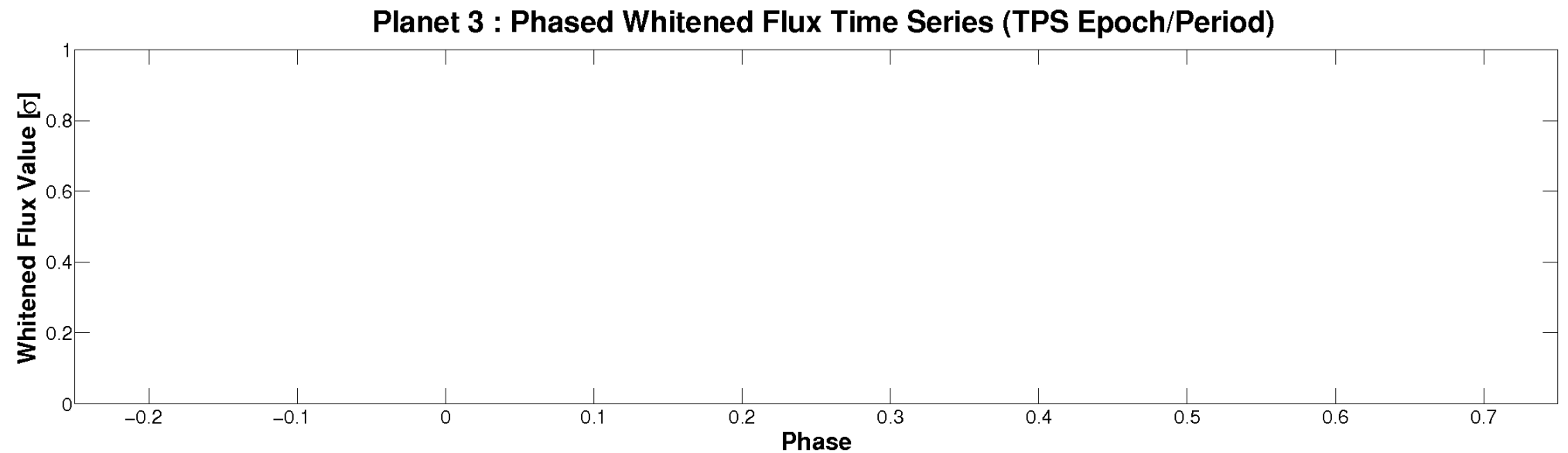
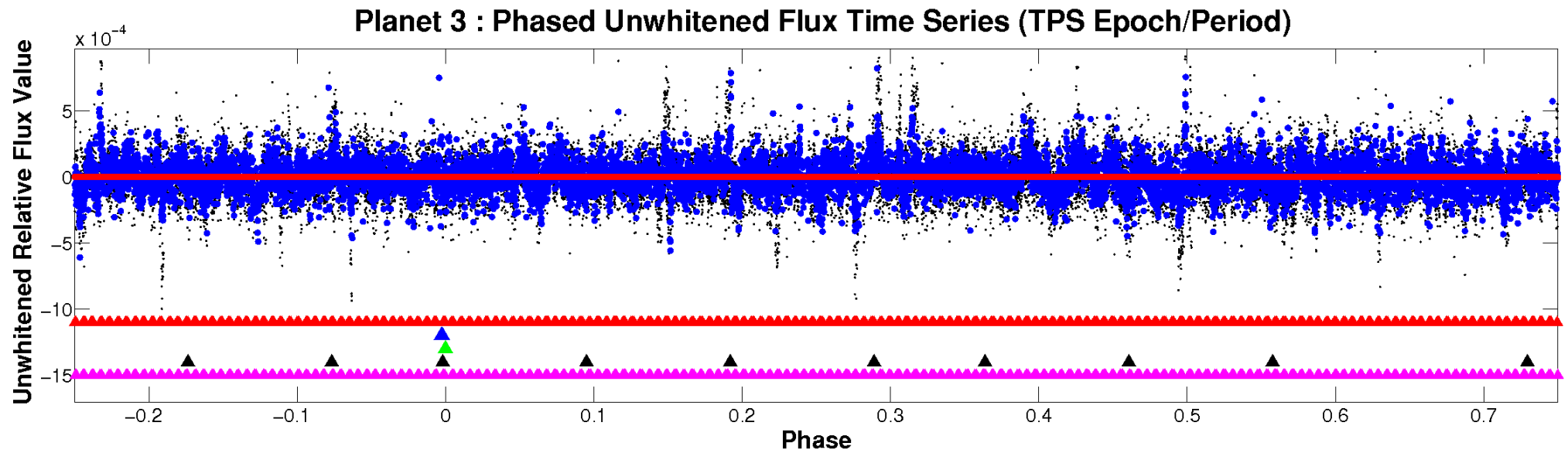


ALT Odd/Even

TCE 011612611-03

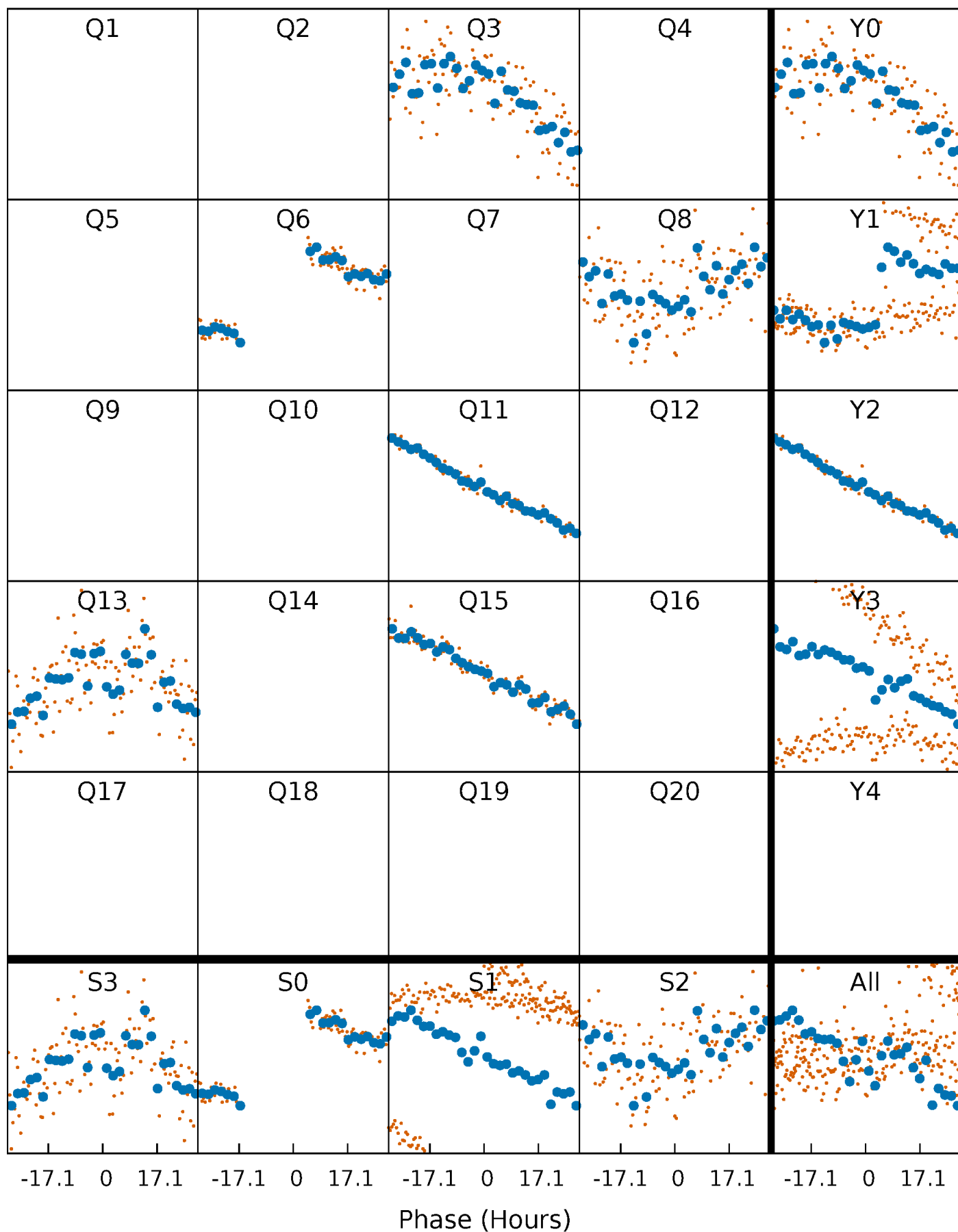


Non-Whitened Vs. Whitened Light Curve



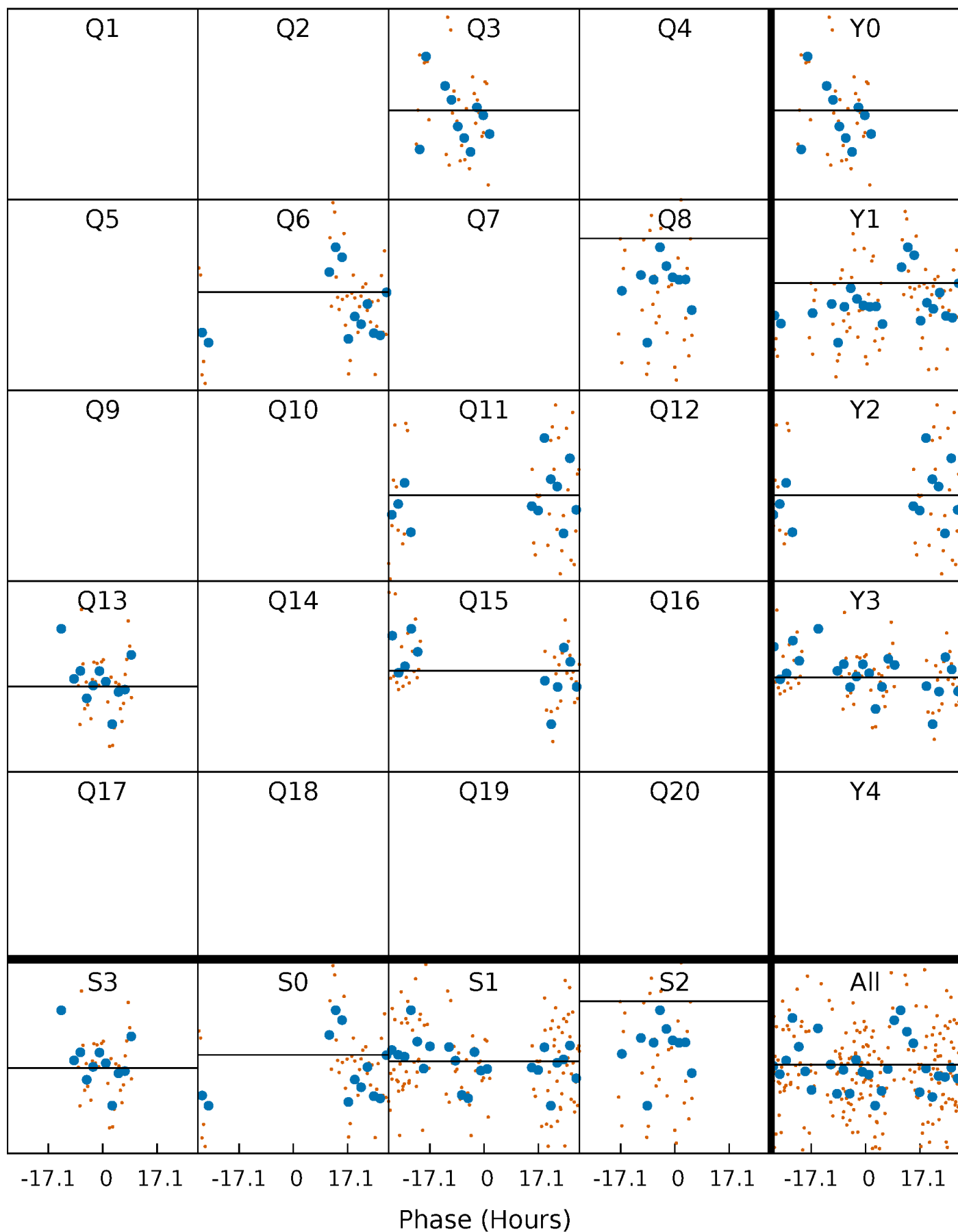
PDC Quarter-Phased Transit Curves

TCE 011612611-03 P=223.590825 Days $T_0=343.618158$ (BKJD)



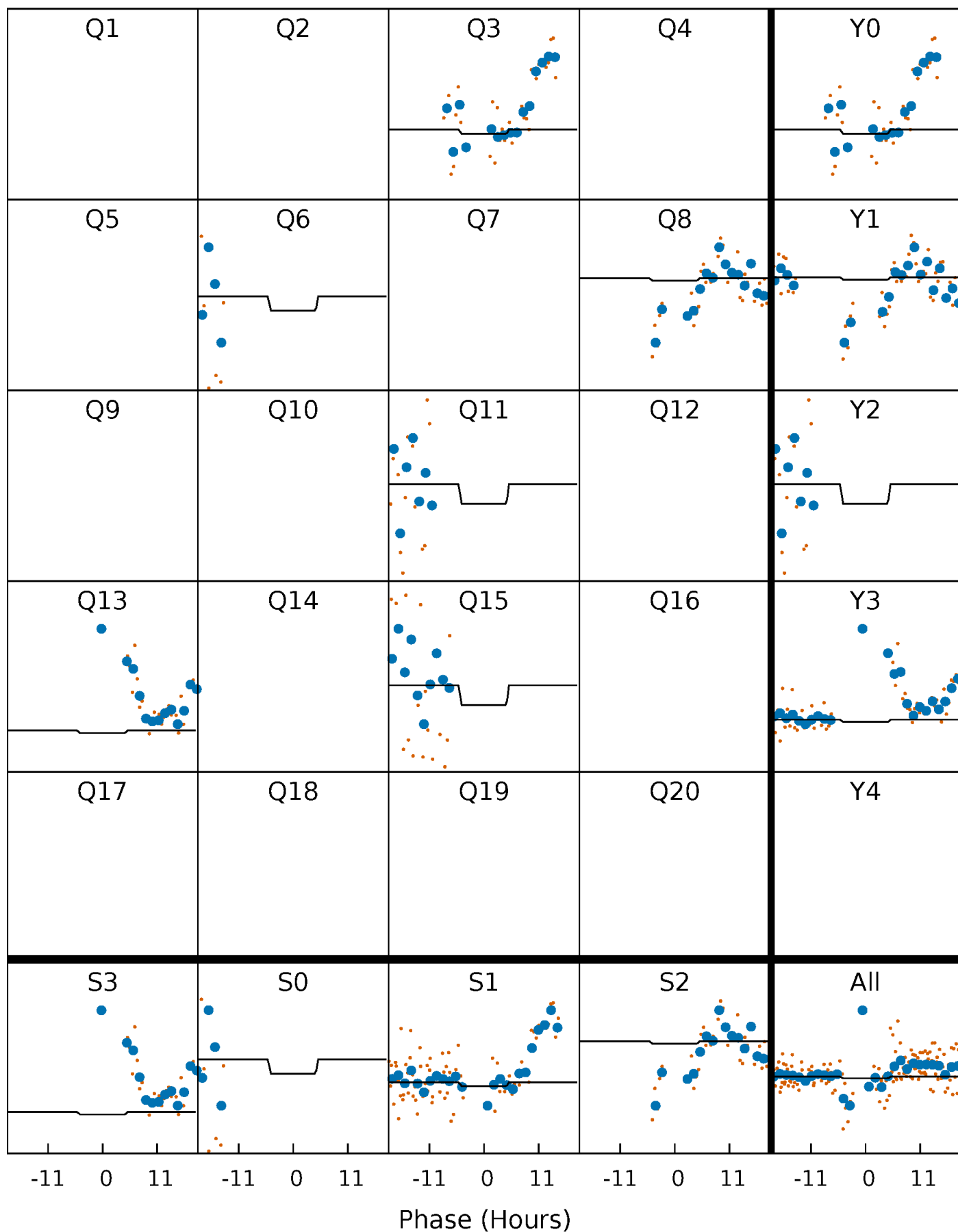
DV Quarter-Phased Transit Curves

TCE 011612611-03 P=223.590825 Days $T_0=343.618158$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

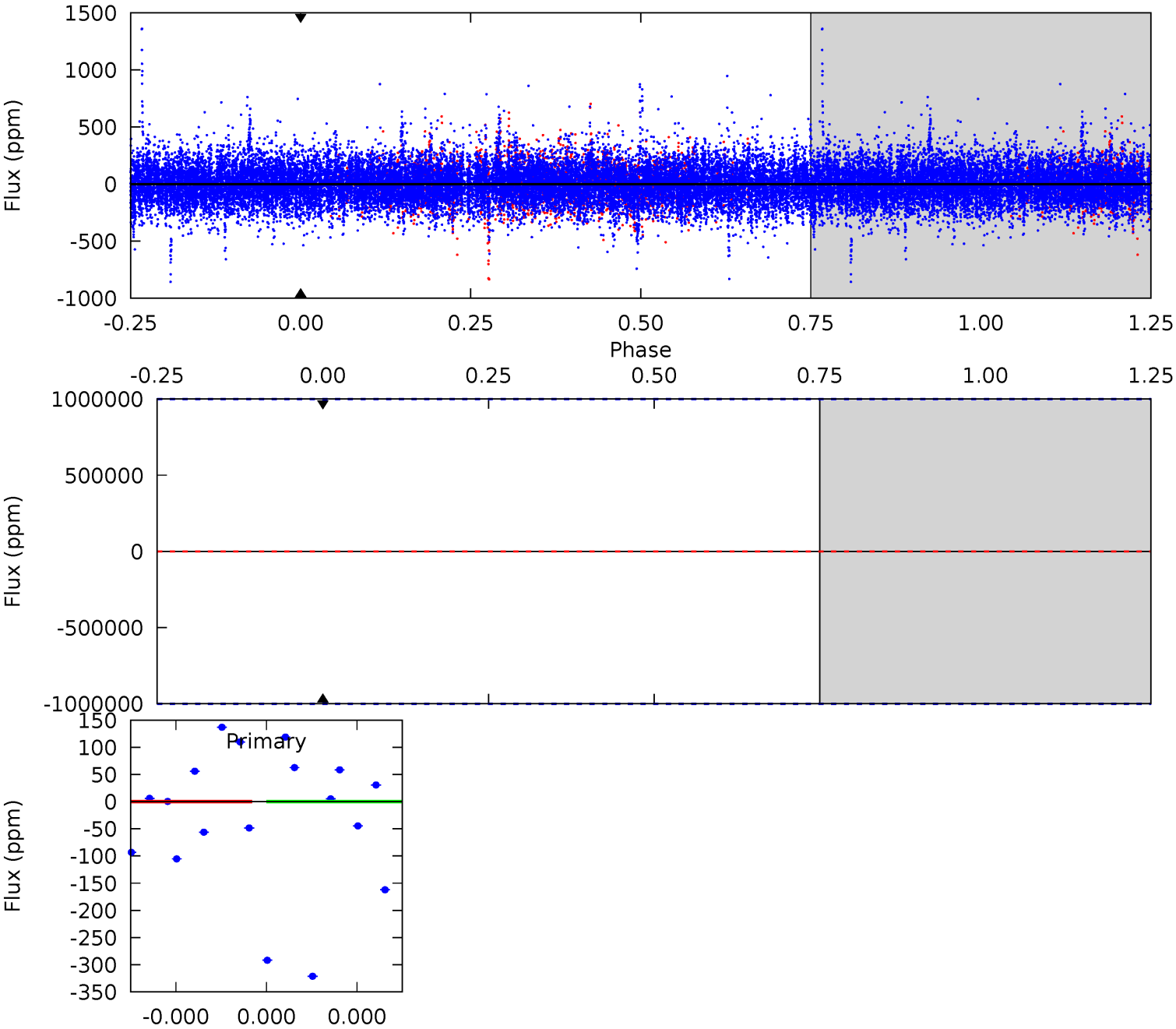
TCE 011612611-03 P=223.590825 Days $T_0=343.070736$ (BKJD)



DV Model-Shift Uniqueness Test

011612611-03, P = 223.590825 Days, E = 120.027333 Days

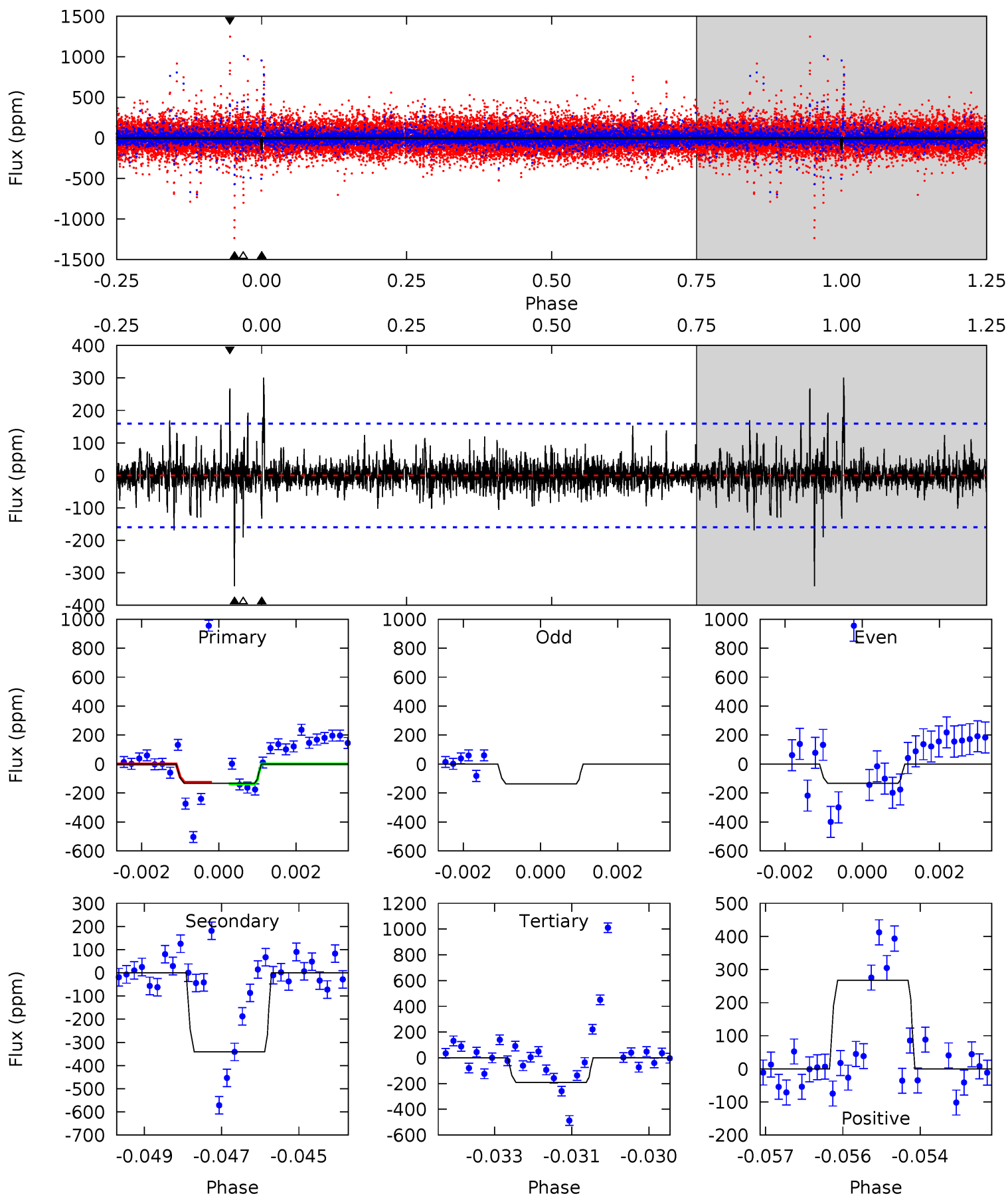
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011612611-03, P = 223.590825 Days, E = 119.479911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.46	11.4	6.40	8.97	5.35	3.13	1.03	-1.94	-4.51	5.04	2.47	0.09	1.00	0.47	0.19



Stellar Parameters For KIC 011612611

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5505^{+164}_{-148}	$4.547^{+0.068}_{-0.110}$	$-0.400^{+0.350}_{-0.300}$	$0.781^{+0.138}_{-0.074}$	$0.783^{+0.095}_{-0.063}$	$2.316^{+0.708}_{-0.763}$
	+3%/-3%	+1%/-2%	+87%/-75%	+18%/-9%	+12%/-8%	+31%/-33%
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 011612611-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$6.40^{+6.48}_{-4.35}$	369^{+17}_{-14}	2764^{+15551}_{-21415}	$515^{+1082979}_{-1094725}$
Alt.	-341 ± 30	$5.93^{+6.40}_{-4.34}$	371^{+17}_{-16}	3380^{+2081}_{-627}	2383^{+28597}_{-1828}

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 $A_{obs} \gg 1.0$

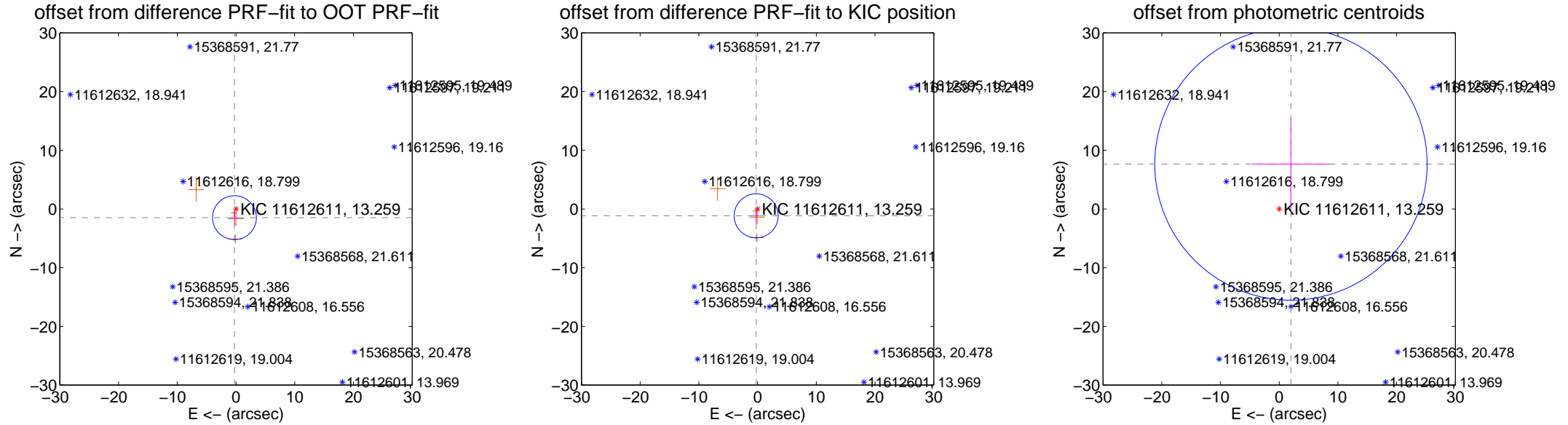
DV Centroid Data

Supplemental centroid analysis for 011612611-03. Kepler magnitude: 13.26. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.504 ± 1.245	1.21	0.260 ± 0.533	-1.482 ± 1.261
PRF-fit source offset from KIC position	1.201 ± 1.249	0.96	0.241 ± 0.535	-1.176 ± 1.270
photometric centroid source offset	7.90 ± 7.73	1.02	-2.00 ± 6.67	7.65 ± 7.80



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



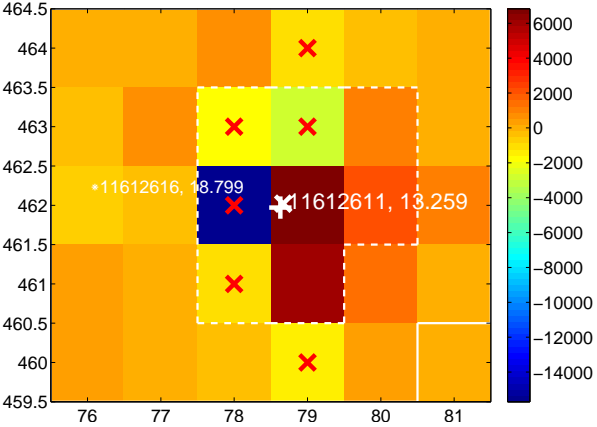
Q2 no difference image



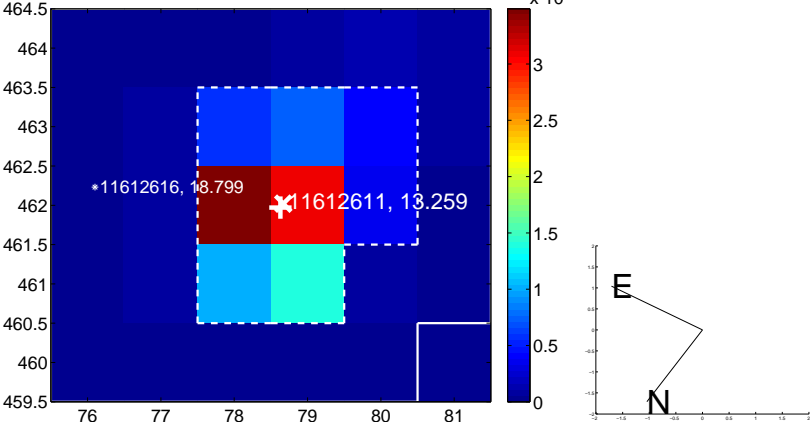
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



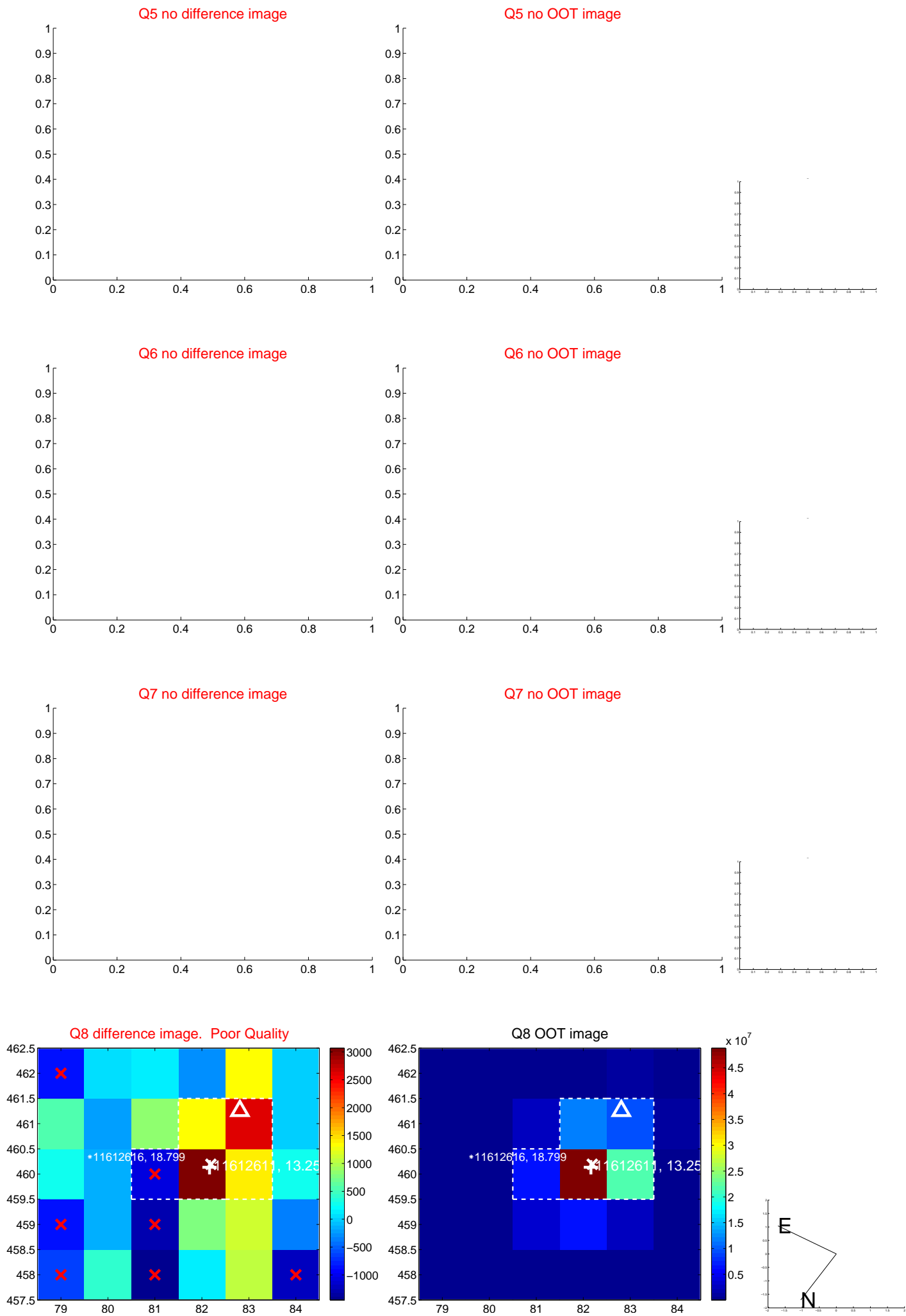
Q4 no difference image



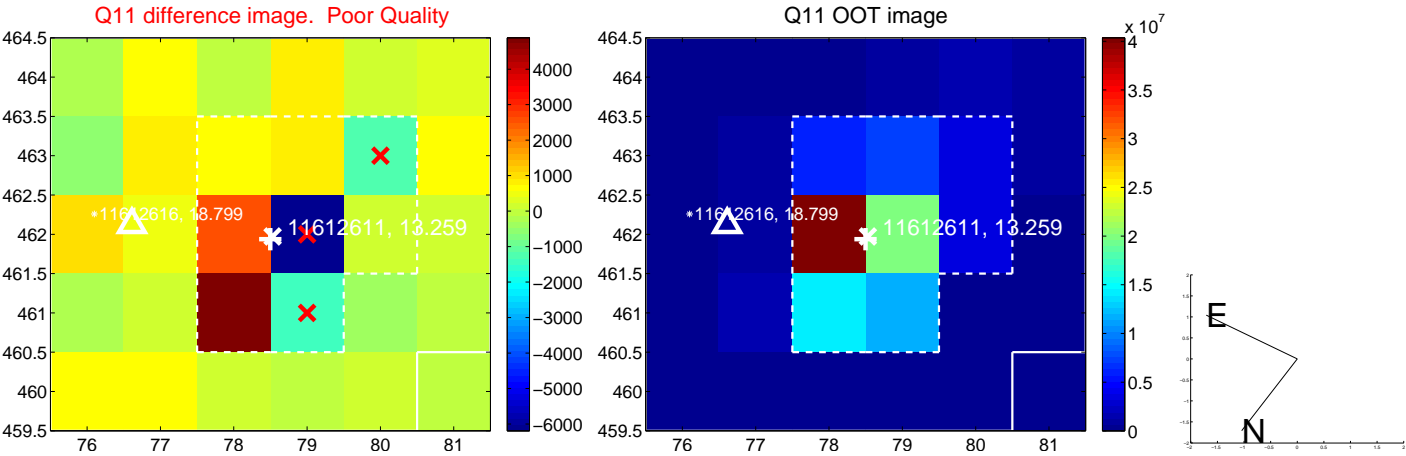
Q4 no OOT image



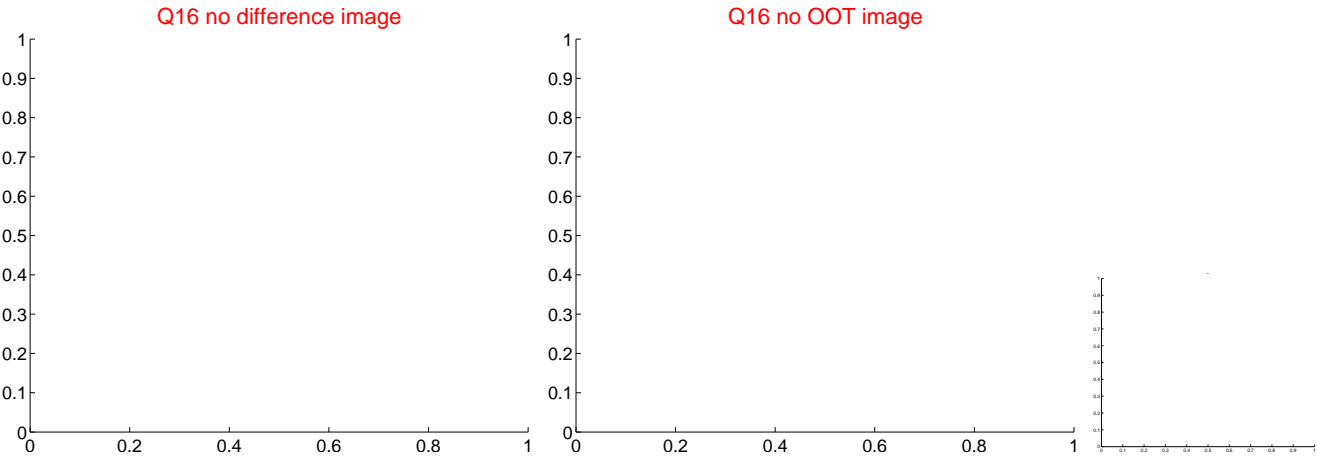
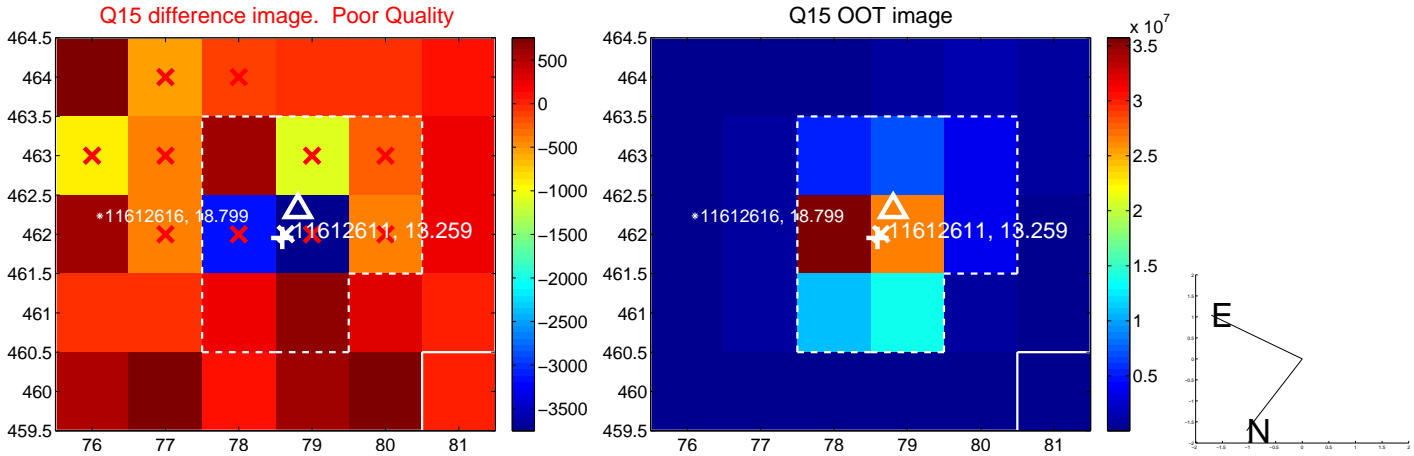
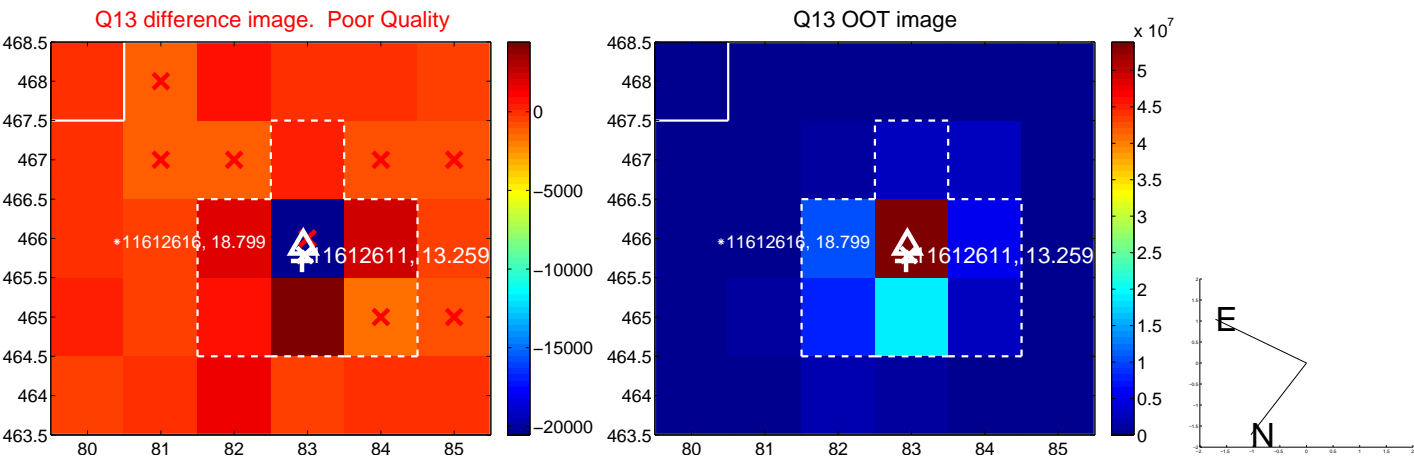
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



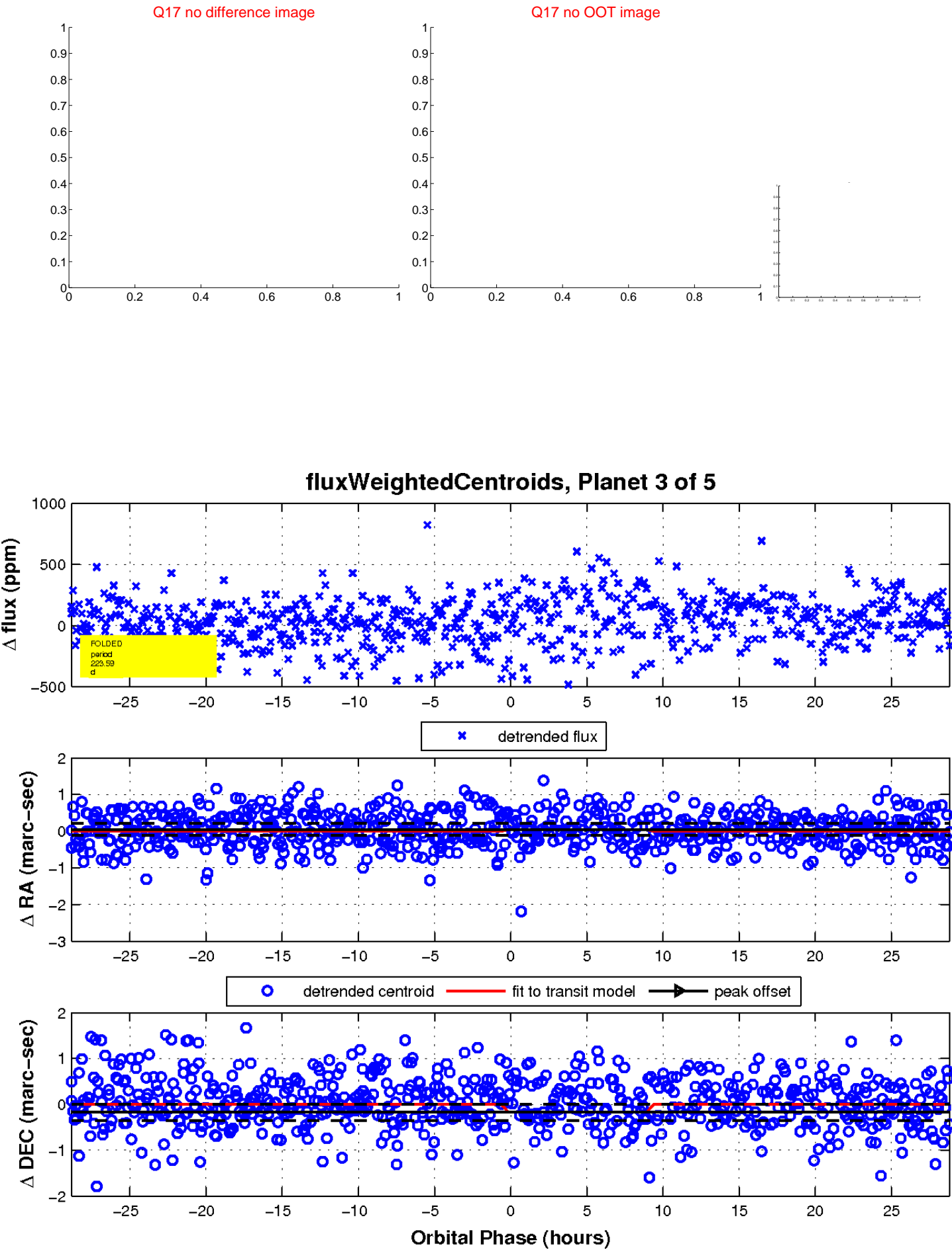
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



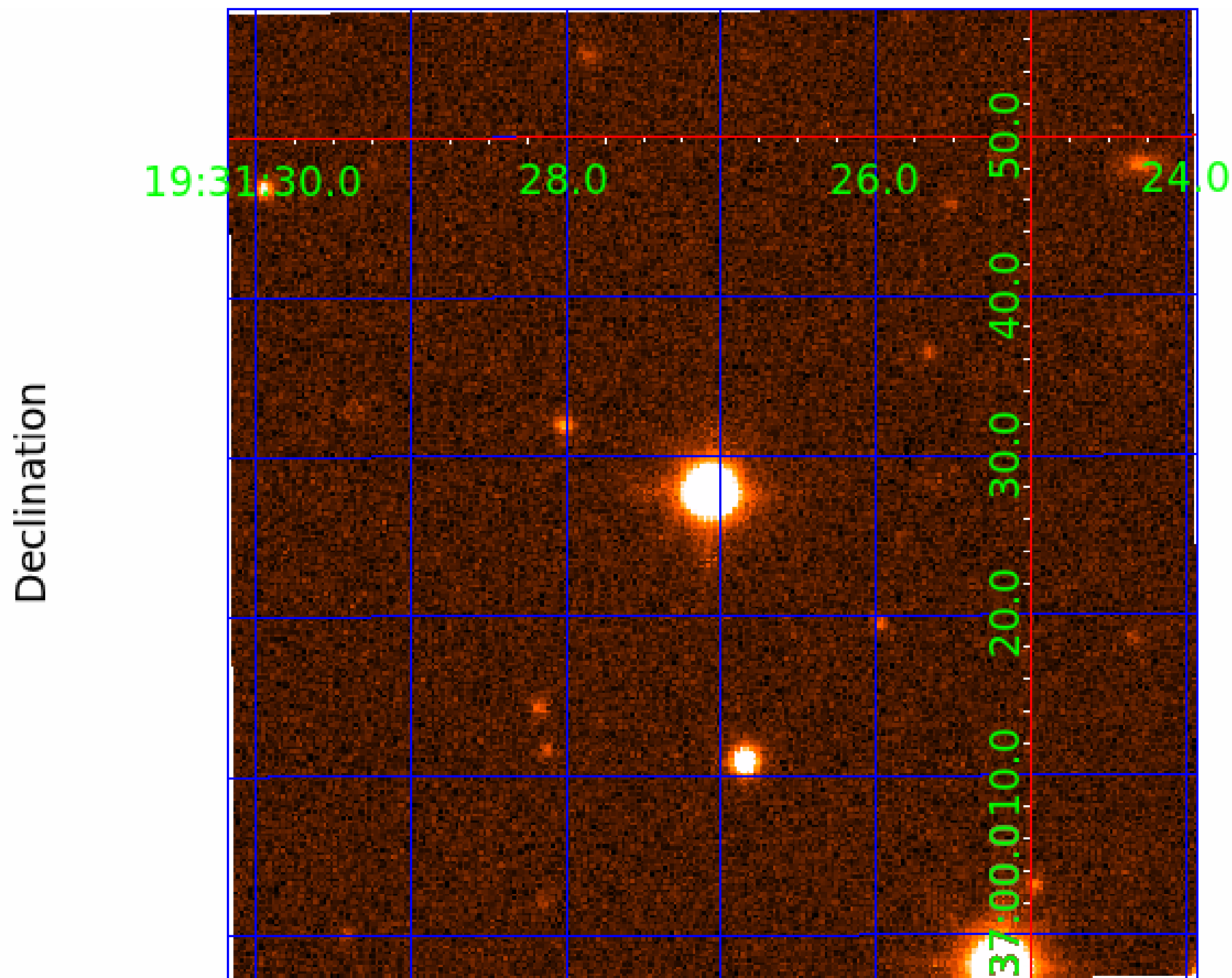
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011612611

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})
011612611-01	OBS	No	2.585749	132.470102	26.3	12.594	9.6	10.0	0.78	5505	0.54	434.09
011612611-02	OBS	No	447.258737	343.002595	240.0	1.075	13.0	3.7	0.78	5505	1.71	0.45
011612611-03	OBS	No	223.590825	343.618158	330.2	15.000	13.7	-1.0	0.78	5505	1.40	1.14
011612611-04	OBS	No	141.835703	184.638165	222.8	21.663	9.1	6.2	0.78	5505	1.55	2.08
011612611-05	OBS	No	2.585609	133.811919	25.6	12.839	8.7	11.2	0.78	5505	0.45	434.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612611-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011612611-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
011612611-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

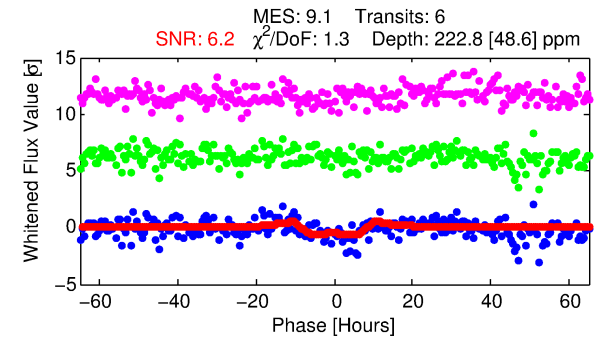
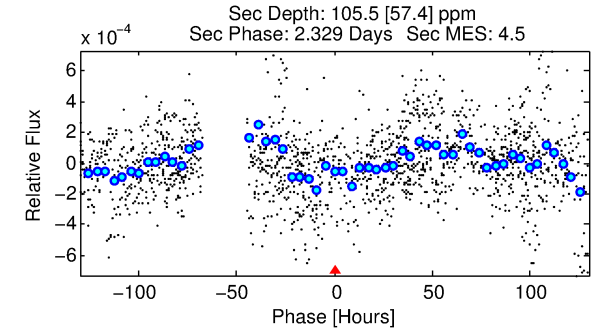
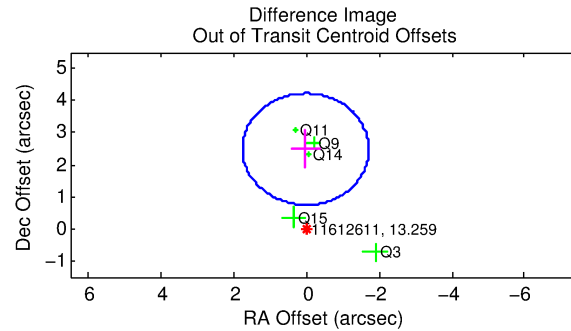
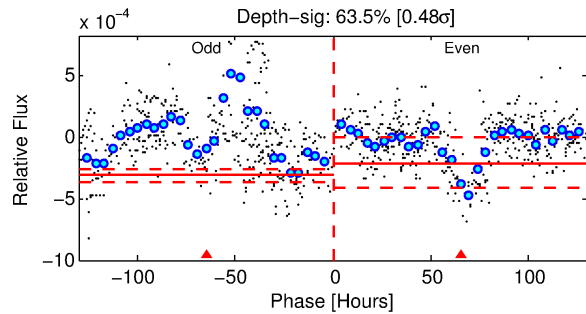
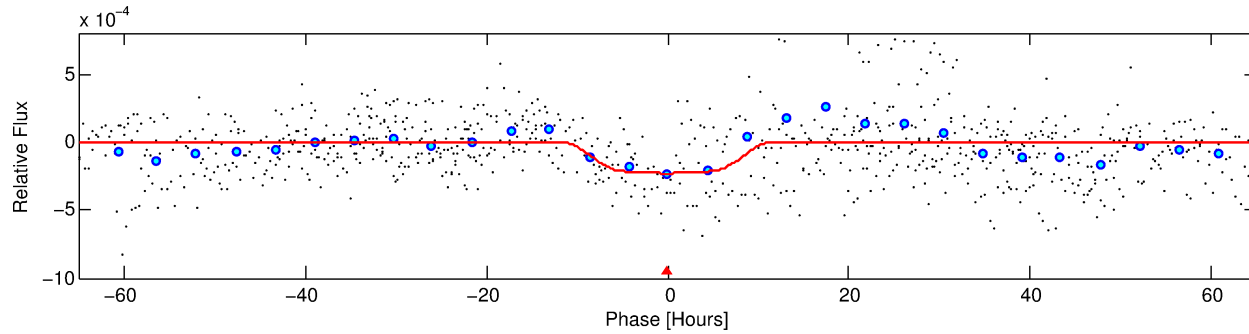
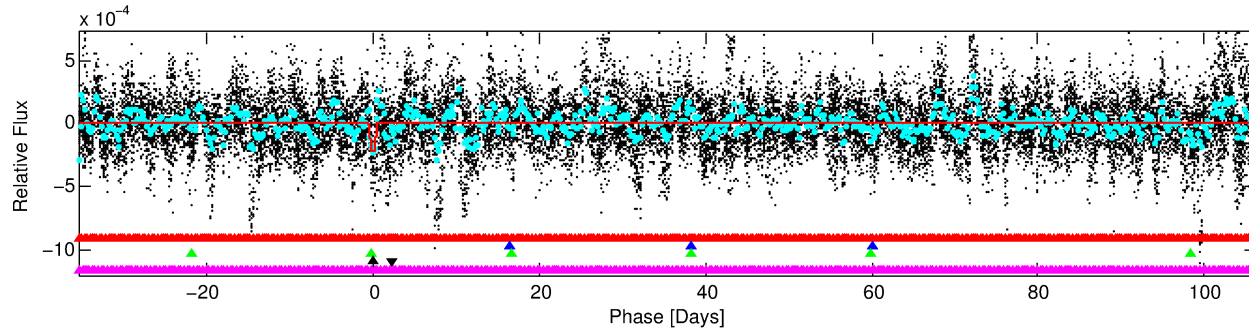
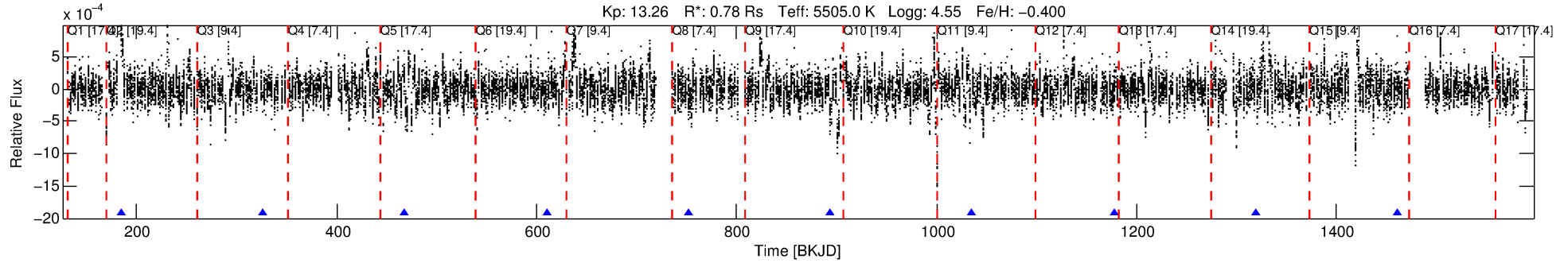
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612611-04

No Significant Match Found

DV One-Page Summary

KIC: 11612611 Candidate: 4 of 5 Period: 141.836 d



DV Fit Results:

Period = 141.83570 [0.01753] d
Epoch = 184.6382 [0.0816] BKJD
Rp/R* = 0.0182 [0.0023]
a/R* = 15.69 [3.77]
b = 0.97 [0.02]
Seff = 2.08 [0.50]
Teq = 306 [18] K
Rp = 1.55 [0.34] Re
a = 0.4909 [0.0711] AU
Ag = 5809.74 [3689.86] [1.57 σ]
Teffp = 4135 [633] K [6.04 σ]

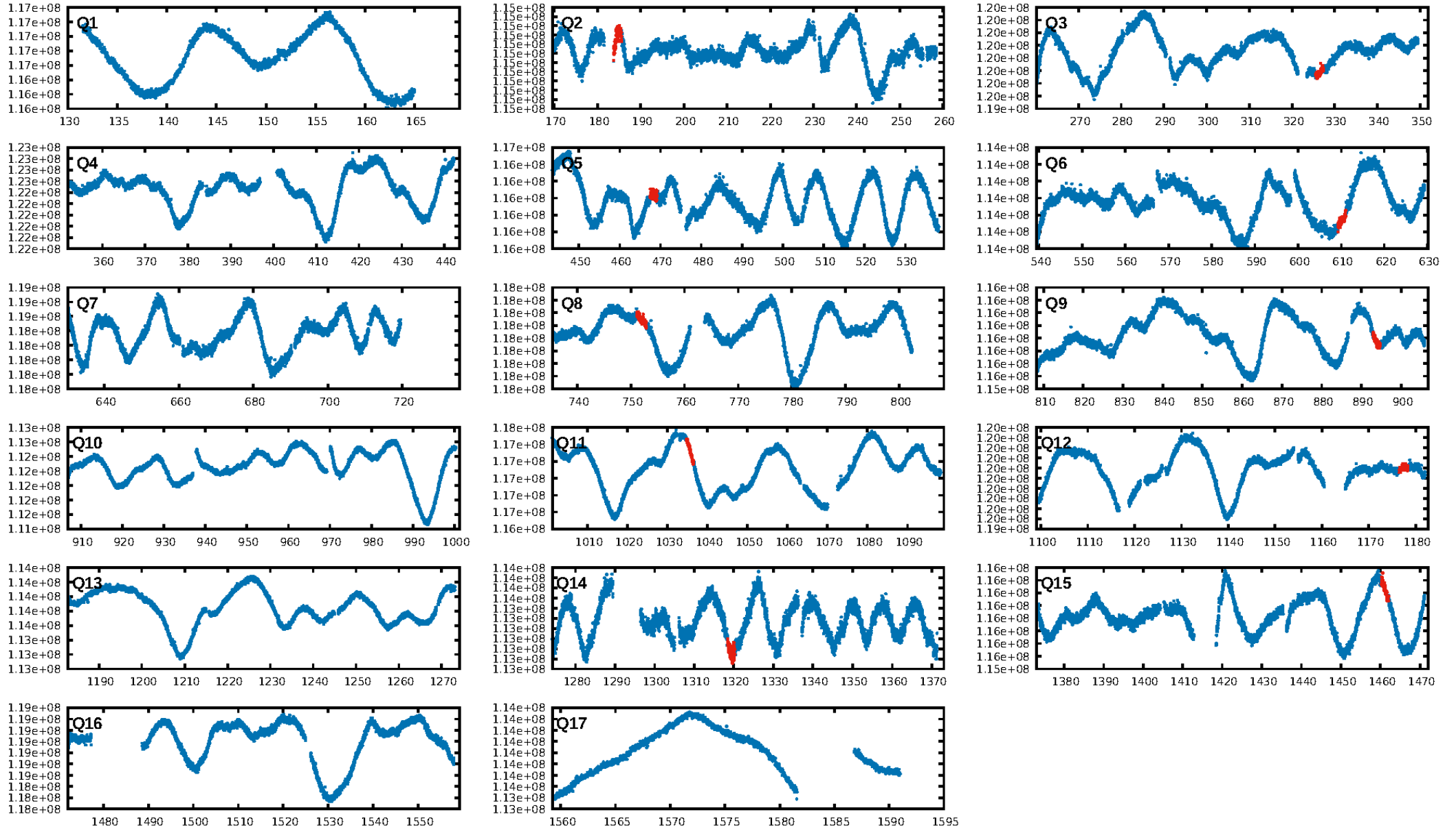
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [133.37 σ]
LongPeriod-sig: 100.0% [74.47 σ]
ModelChiSquare2-sig: 13.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -3.502
Centroid-sig: 70.4%
Centroid-so: 0.156 arcsec [0.30 σ]
OotOffset-rm: 2.481 arcsec [4.28 σ]
KicOffset-rm: 2.683 arcsec [3.90 σ]
OotOffset-st: 1/3/0/1 [5]
KicOffset-st: 1/3/0/1 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.00 [0/8]

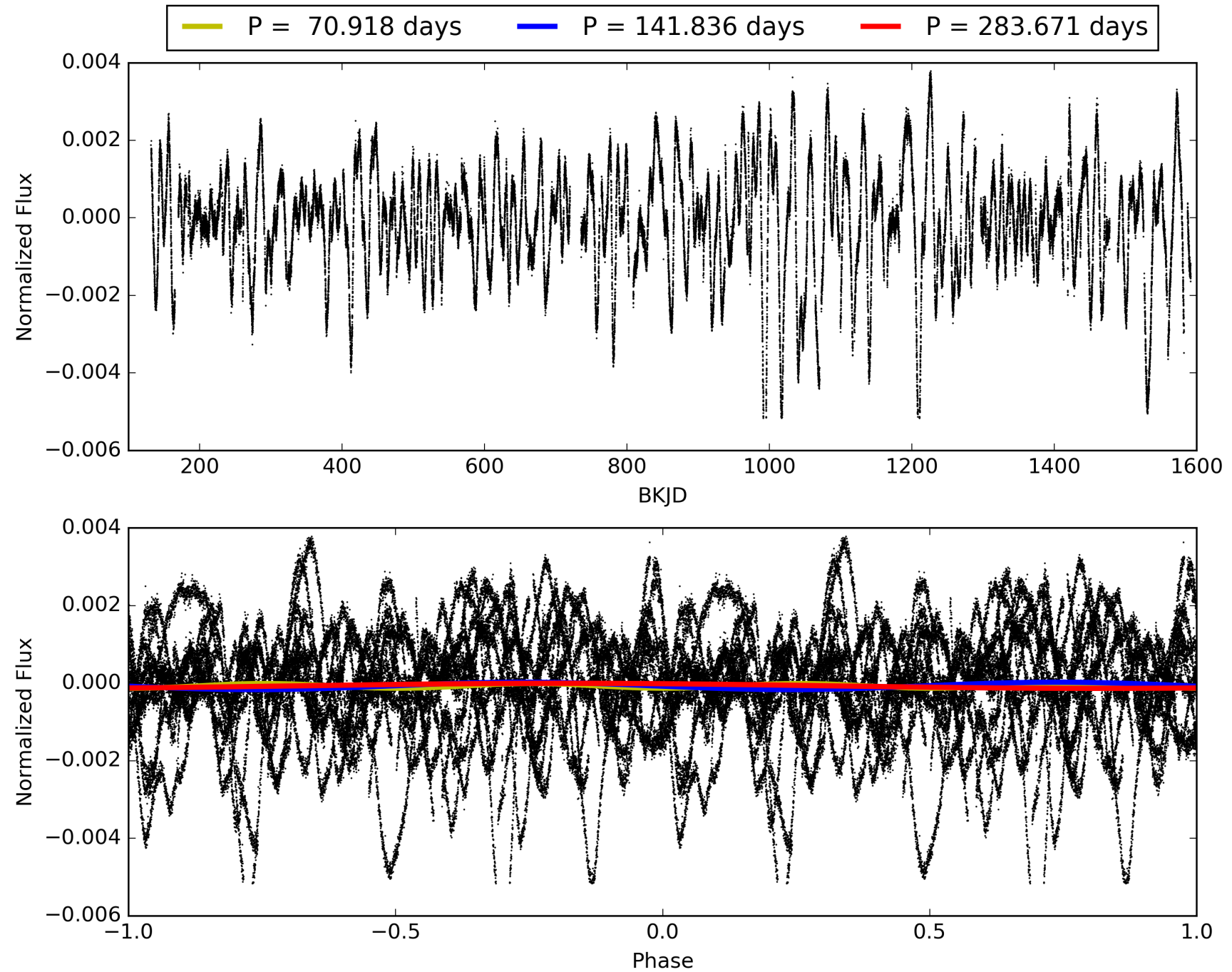
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:50:14 Z

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

TCE 011612611-04, PDC Light Curves

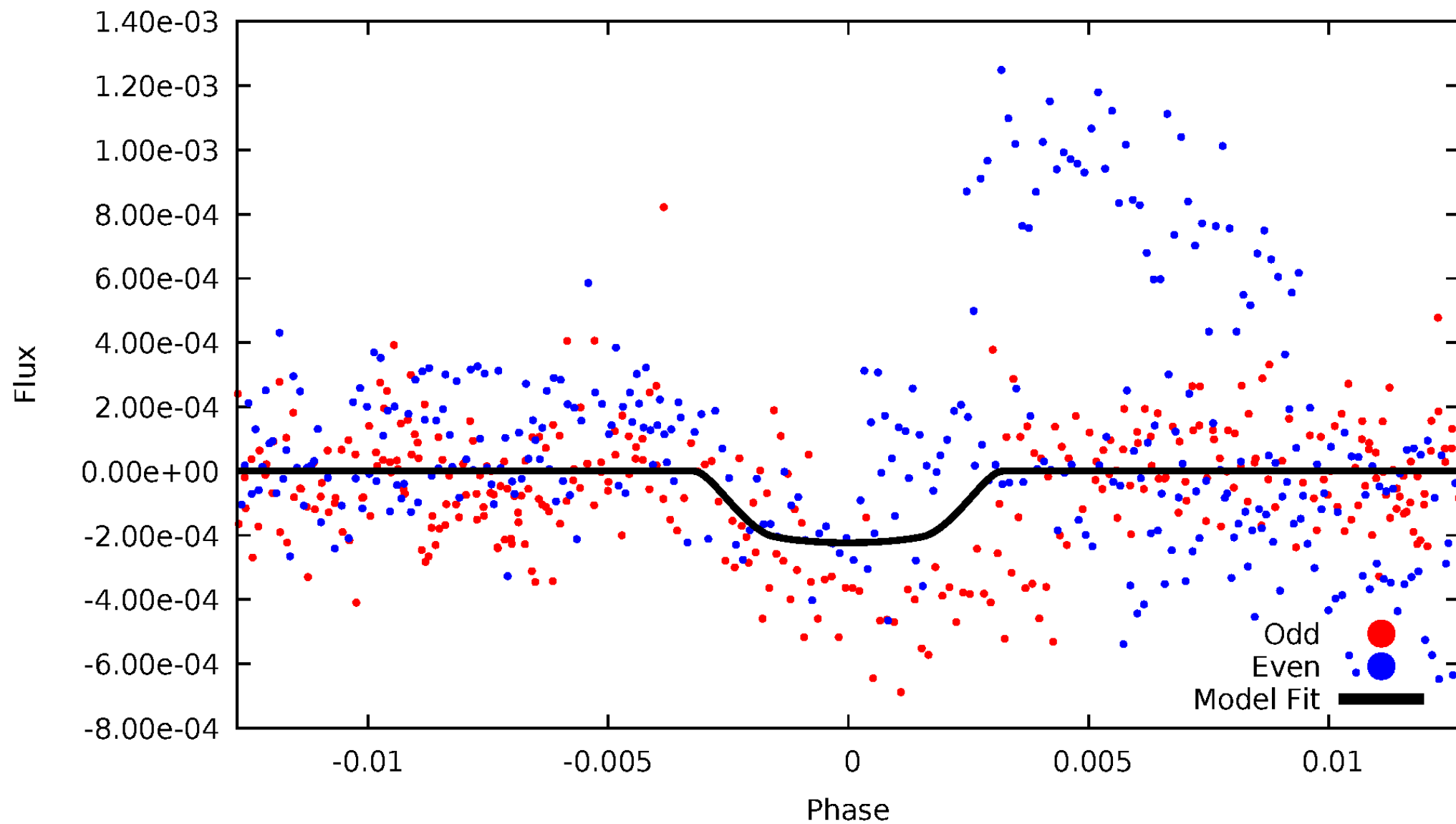


TCE 011612611-04



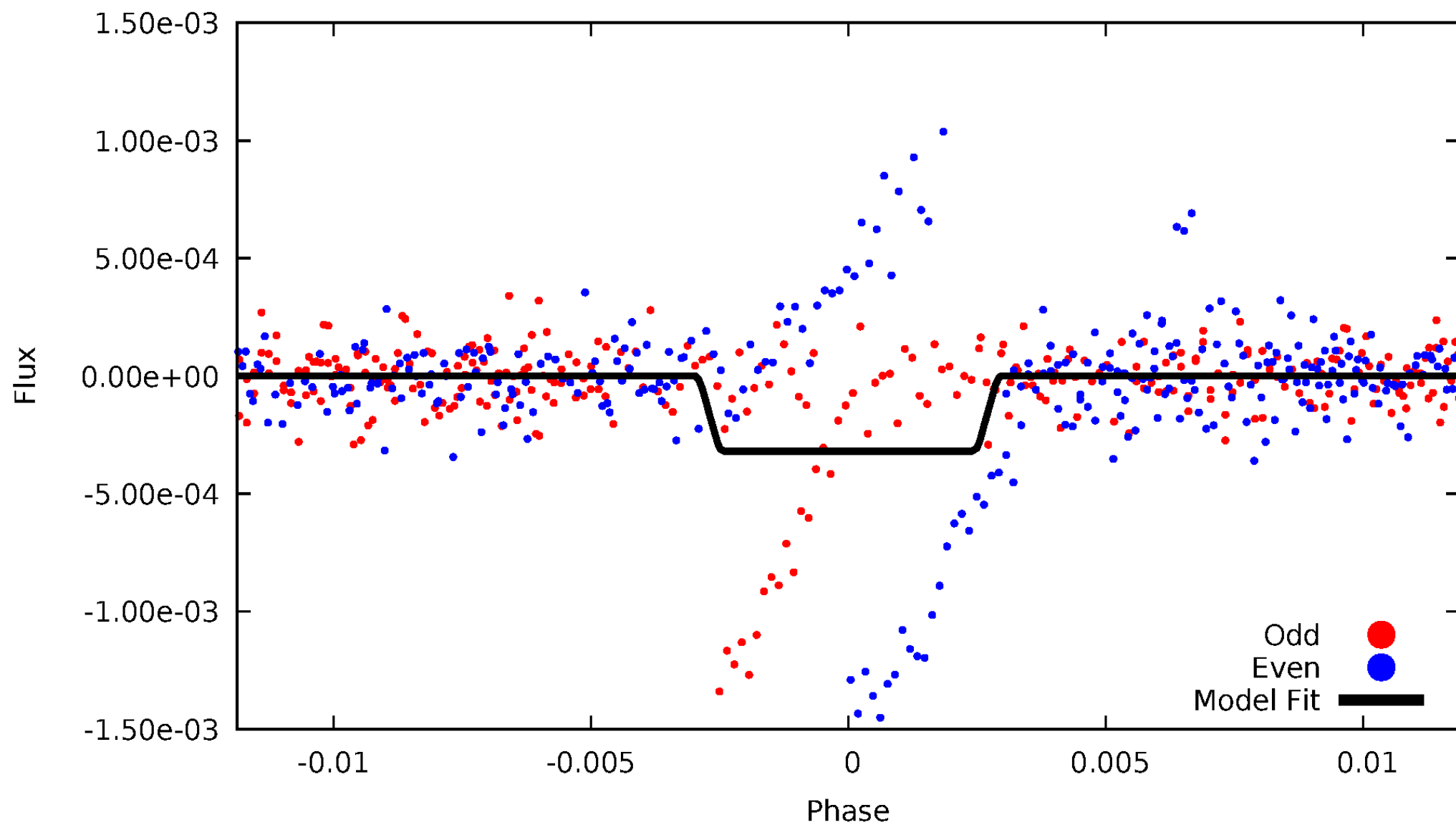
DV Odd/Even

TCE 011612611-04



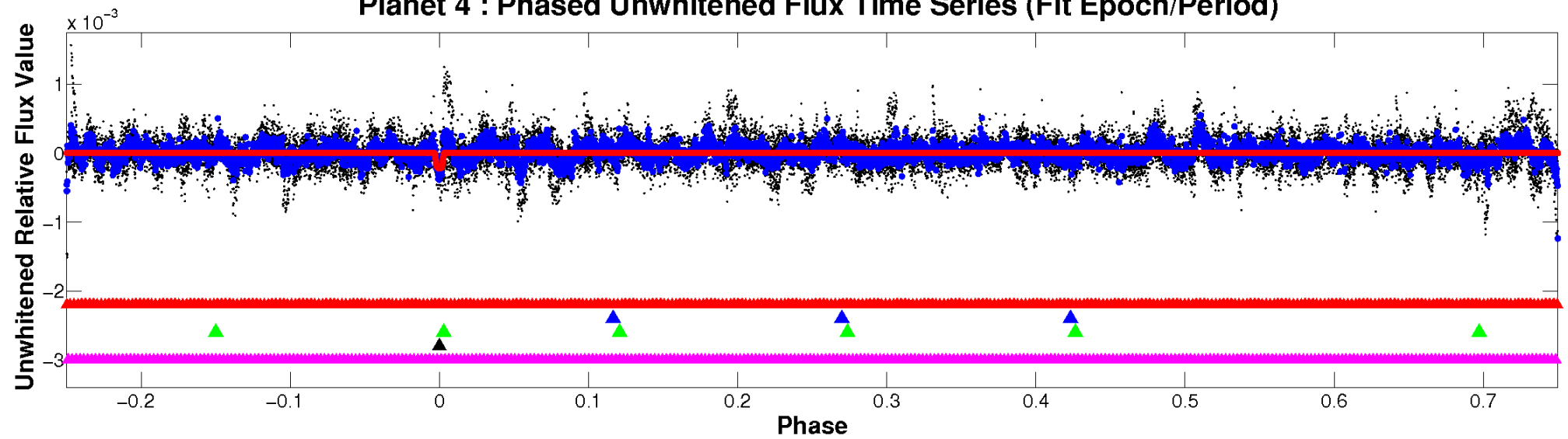
ALT Odd/Even

TCE 011612611-04

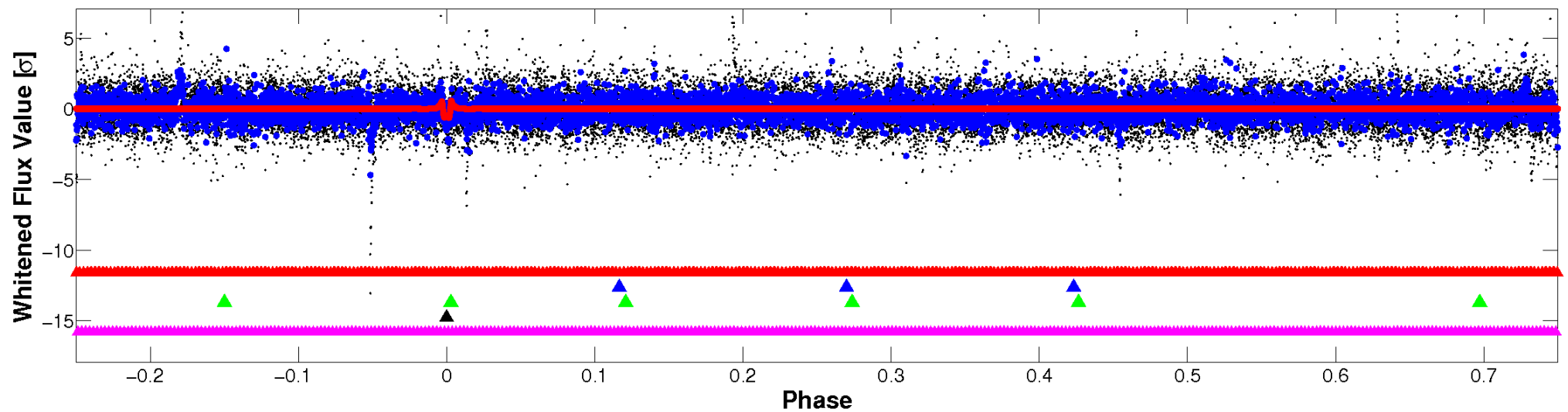


Non-Whitened Vs. Whitened Light Curve

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

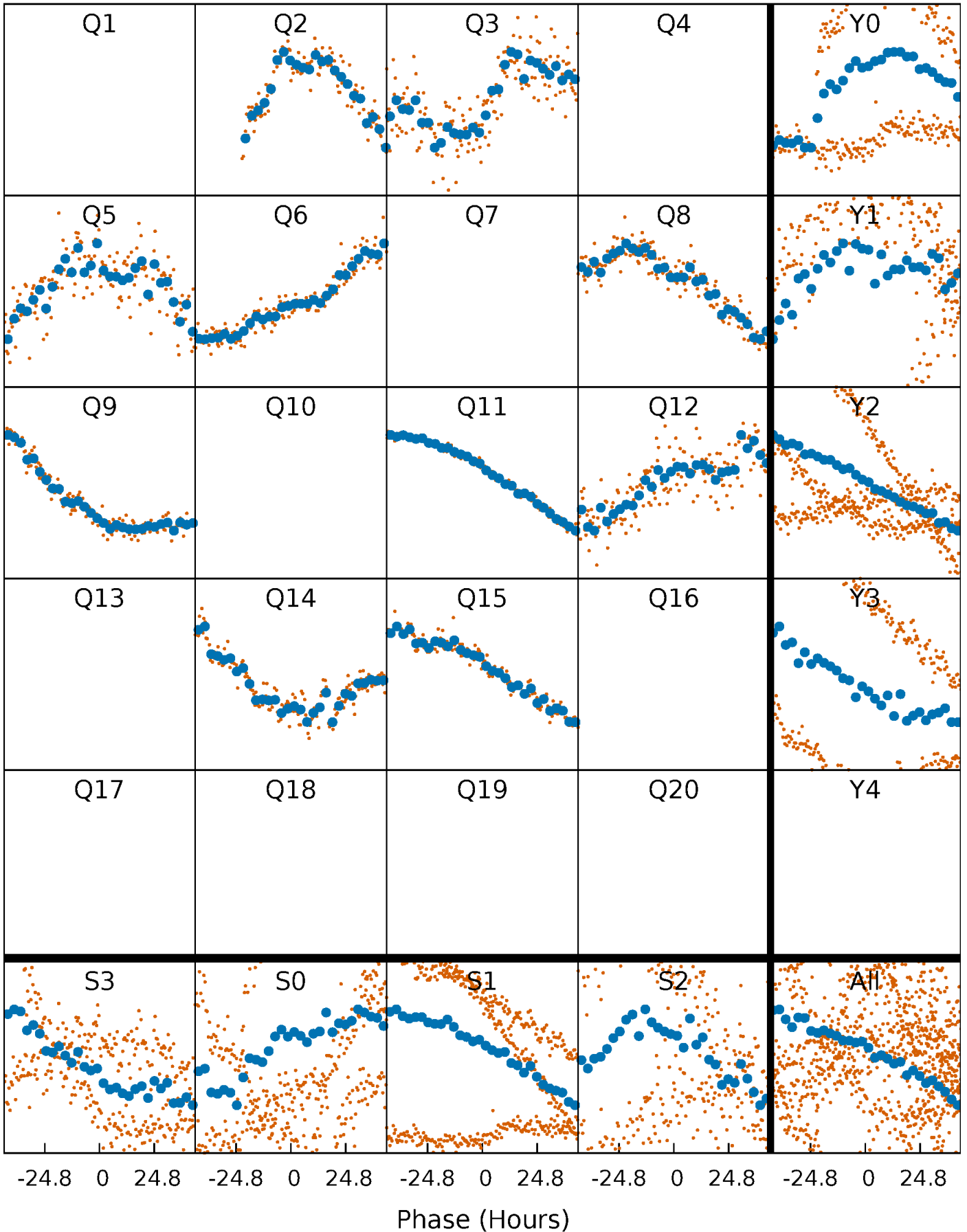


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



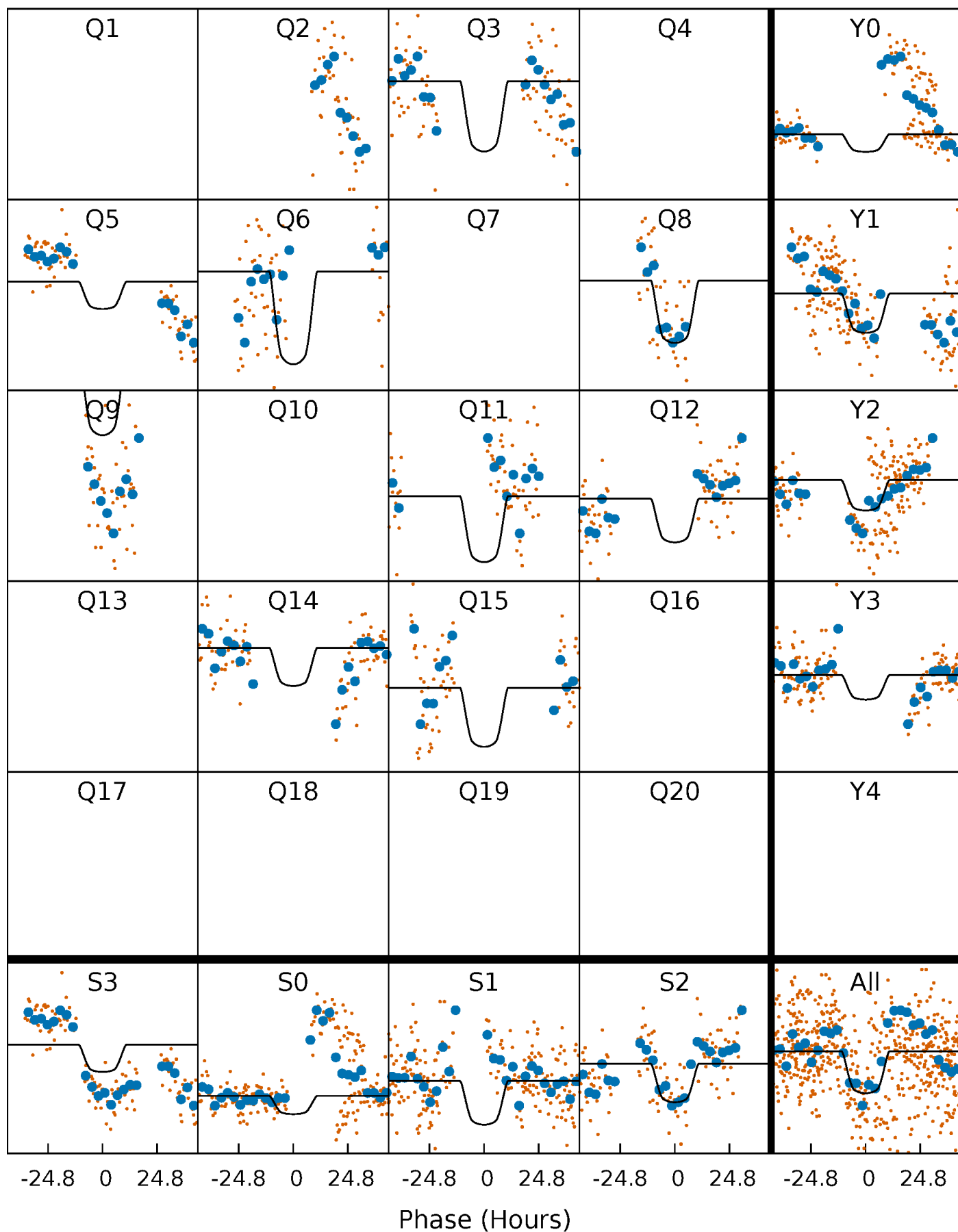
PDC Quarter-Phased Transit Curves

TCE 011612611-04 P=141.835703 Days $T_0=184.638165$ (BKJD)



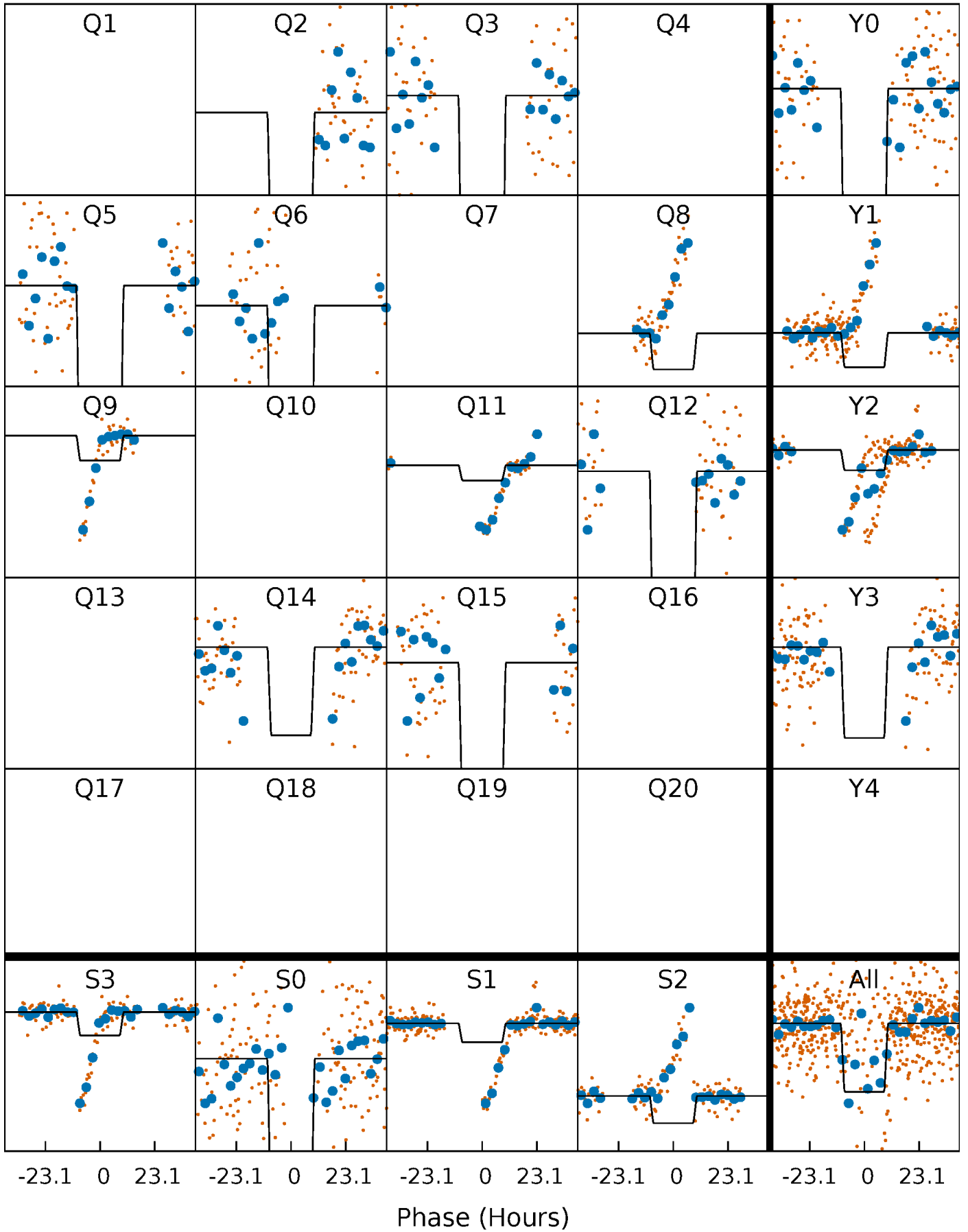
DV Quarter-Phased Transit Curves

TCE 011612611-04 P=141.835703 Days $T_0=184.638165$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

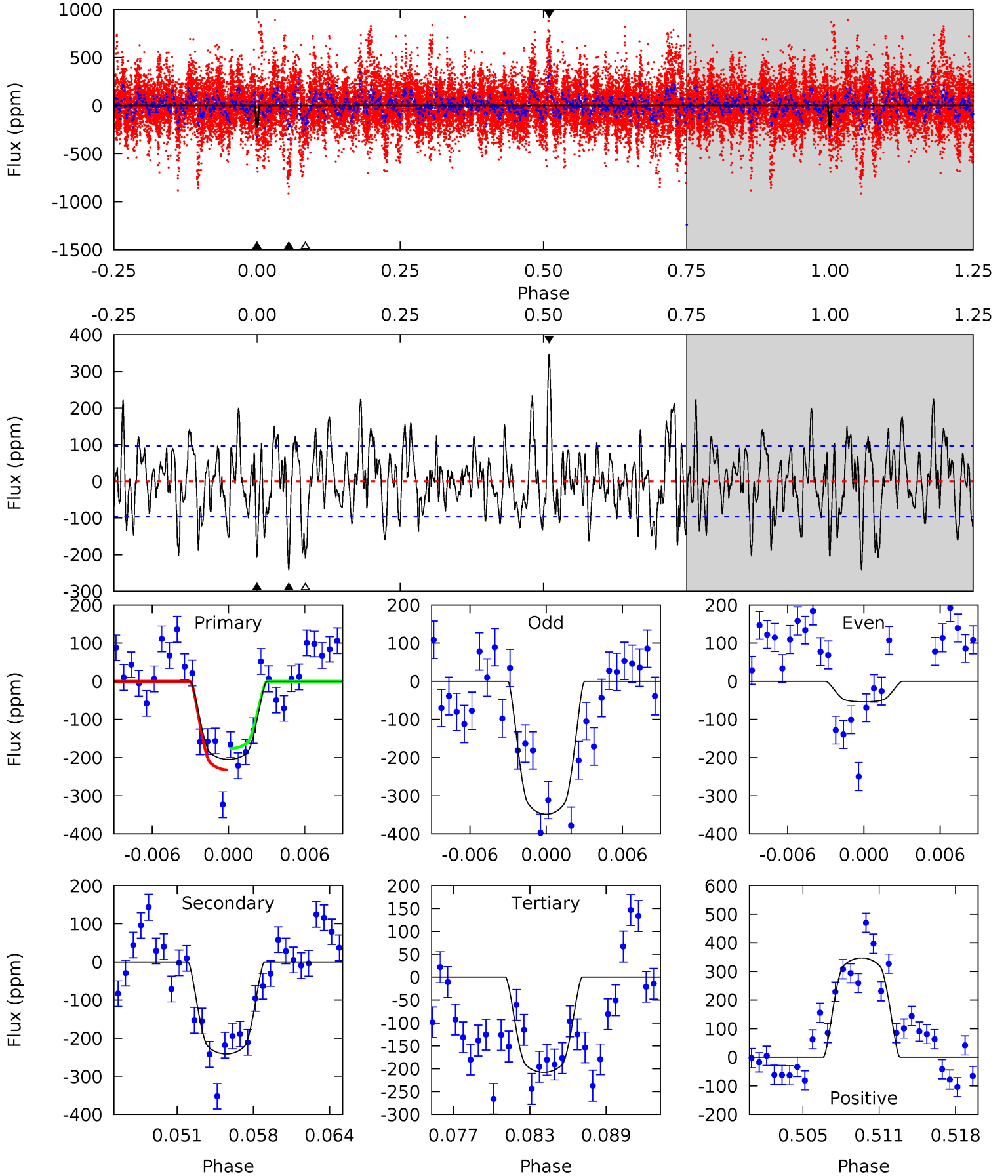
TCE 011612611-04 P=141.856585 Days $T_0=184.553558$ (BKJD)



DV Model-Shift Uniqueness Test

011612611-04, P = 141.835703 Days, E = 42.802462 Days

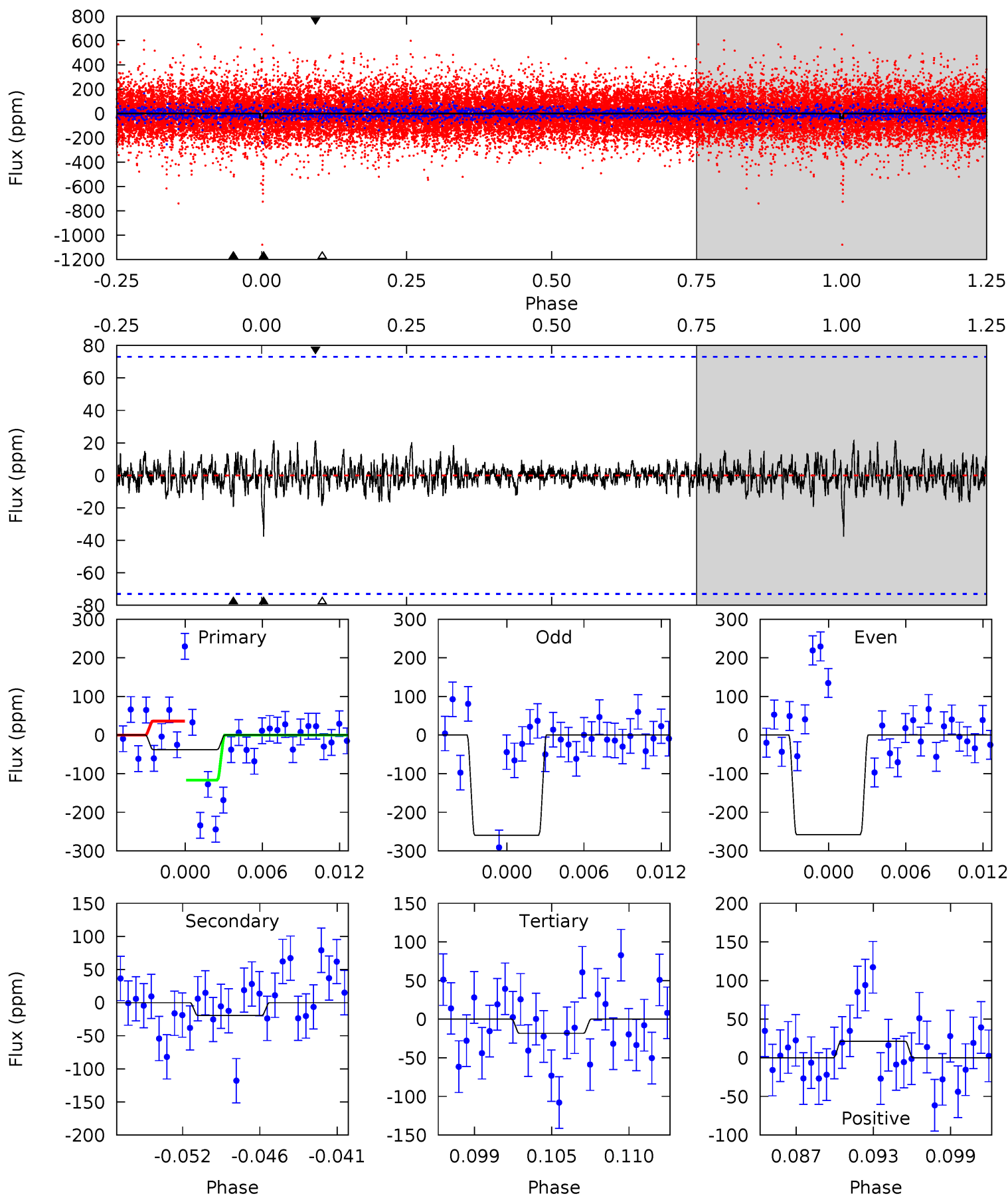
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	12.8	11.0	18.4	5.11	2.73	4.27	-0.17	-7.53	1.77	-5.59	7.74	22.5	0.59	1.49



Alt Model-Shift Uniqueness Test

011612611-04, P = 141.856585 Days, E = 42.696973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.65	1.36	1.29	1.50	5.13	2.76	0.37	1.36	1.14	0.07	-0.14	0.06	22.3	0.36	2.79



Stellar Parameters For KIC 011612611

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5505^{+164}_{-148}	$4.547^{+0.068}_{-0.110}$	$-0.400^{+0.350}_{-0.300}$	$0.781^{+0.138}_{-0.074}$	$0.783^{+0.095}_{-0.063}$	$2.316^{+0.708}_{-0.763}$
	+3%/-3%	+1%/-2%	+87%/-75%	+18%/-9%	+12%/-8%	+31%/-33%
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 011612611-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-241 ± 19	$1.58^{+0.22}_{-0.22}$	430^{+20}_{-17}	5115^{+364}_{-280}	12778^{+4533}_{-2927}
Alt.	-19 ± 14	$1.55^{+0.25}_{-0.23}$	431^{+20}_{-19}	3286^{+352}_{-655}	1064^{+916}_{-839}

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 $A_{obs} \gg 1.0$

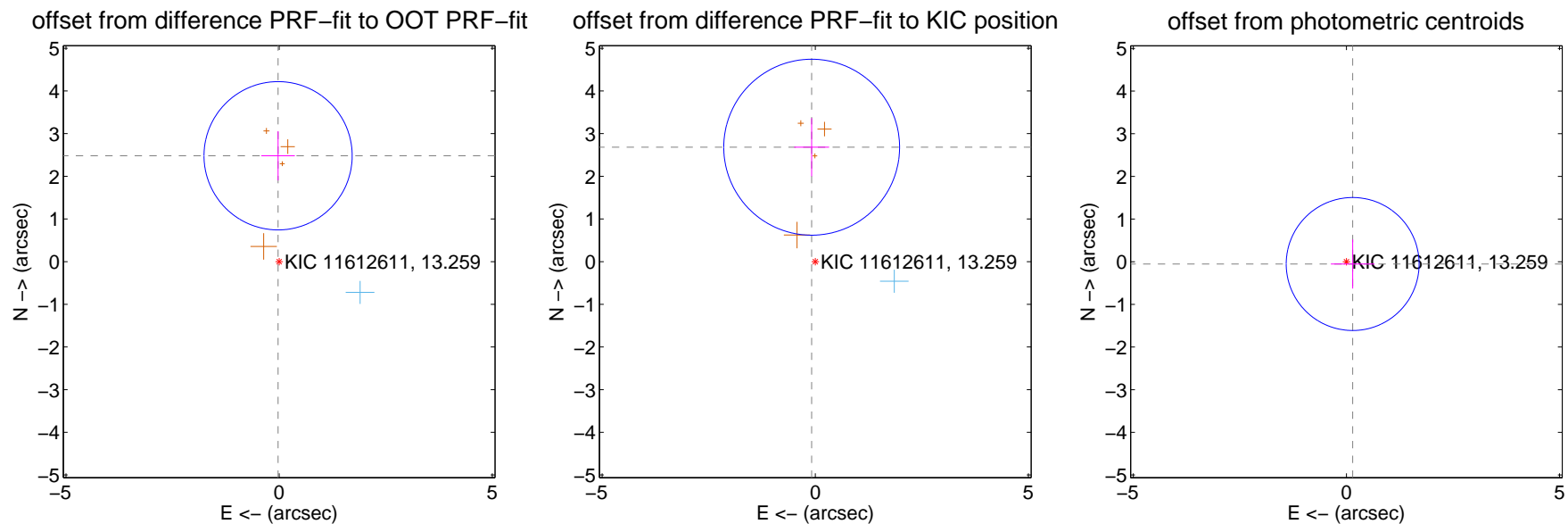
DV Centroid Data

Supplemental centroid analysis for 011612611-04. Kepler magnitude: 13.26. Transit SNR 6.19

There are 1 quarters with good PRF difference image offsets

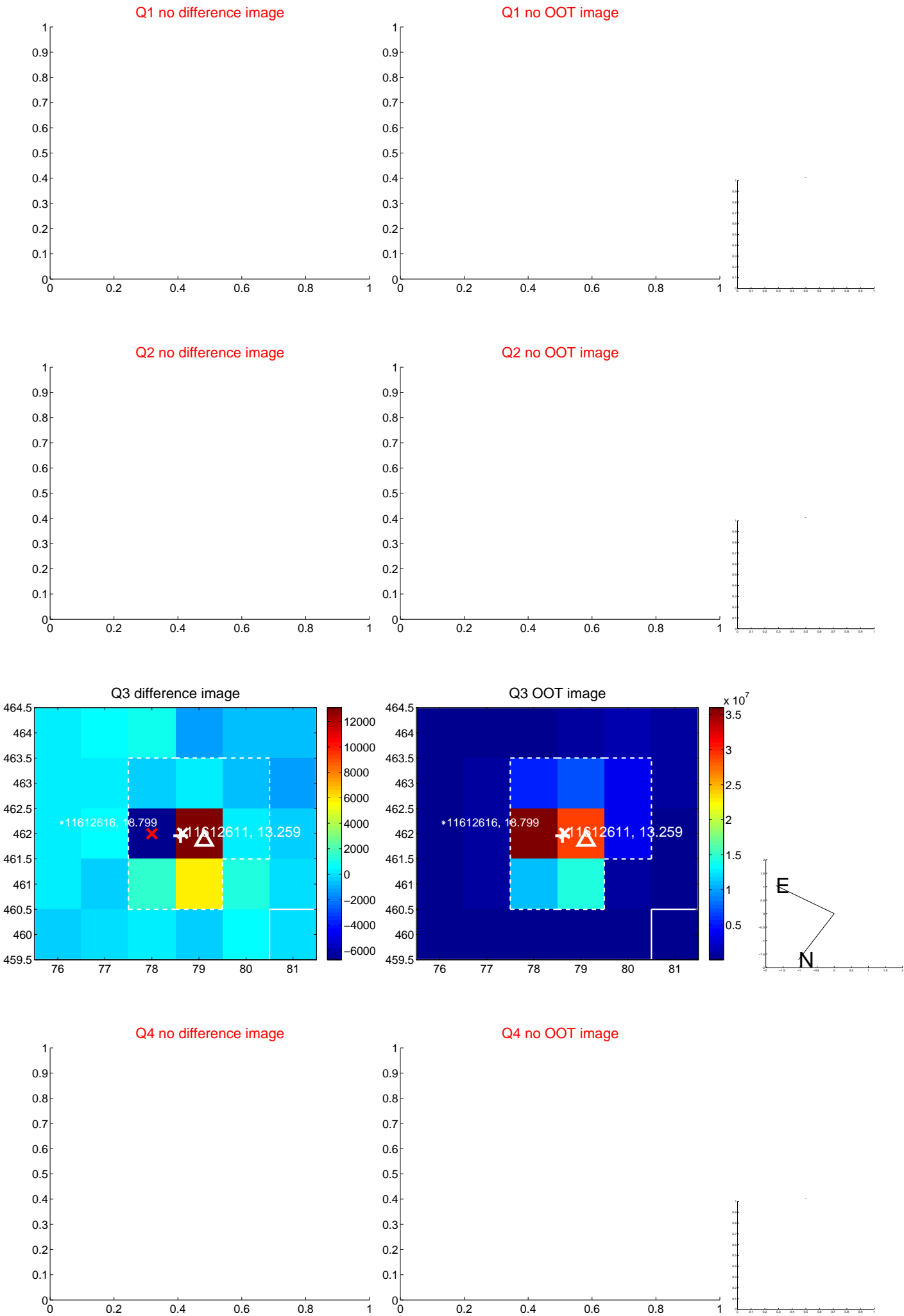
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.481 ± 0.579	4.28	0.025 ± 0.392	2.481 ± 0.577
PRF-fit source offset from KIC position	2.683 ± 0.687	3.90	0.084 ± 0.410	2.682 ± 0.680
photometric centroid source offset	0.16 ± 0.52	0.30	-0.15 ± 0.51	-0.05 ± 0.58

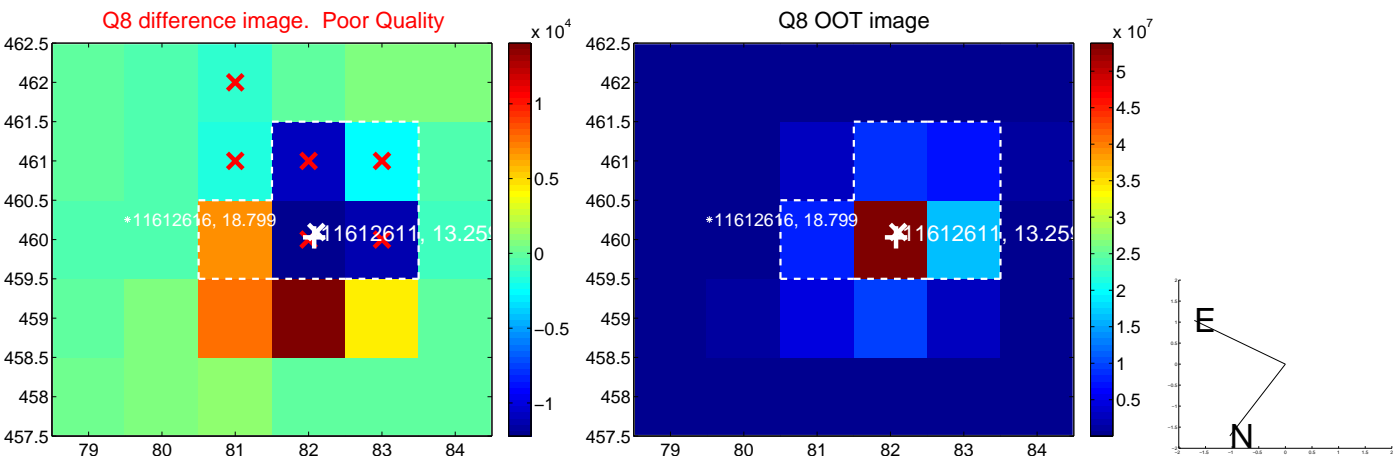
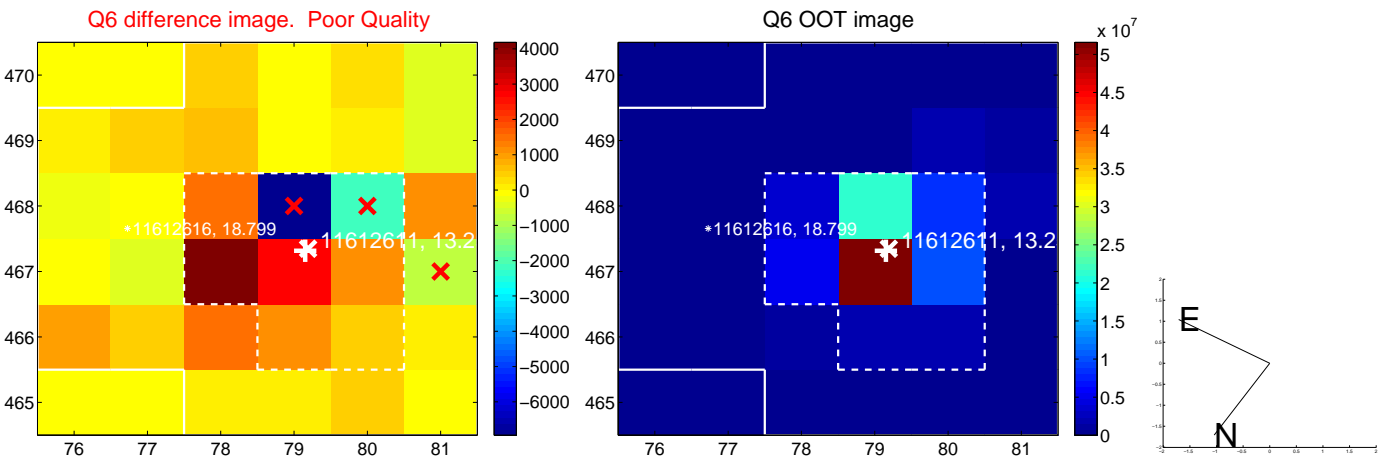
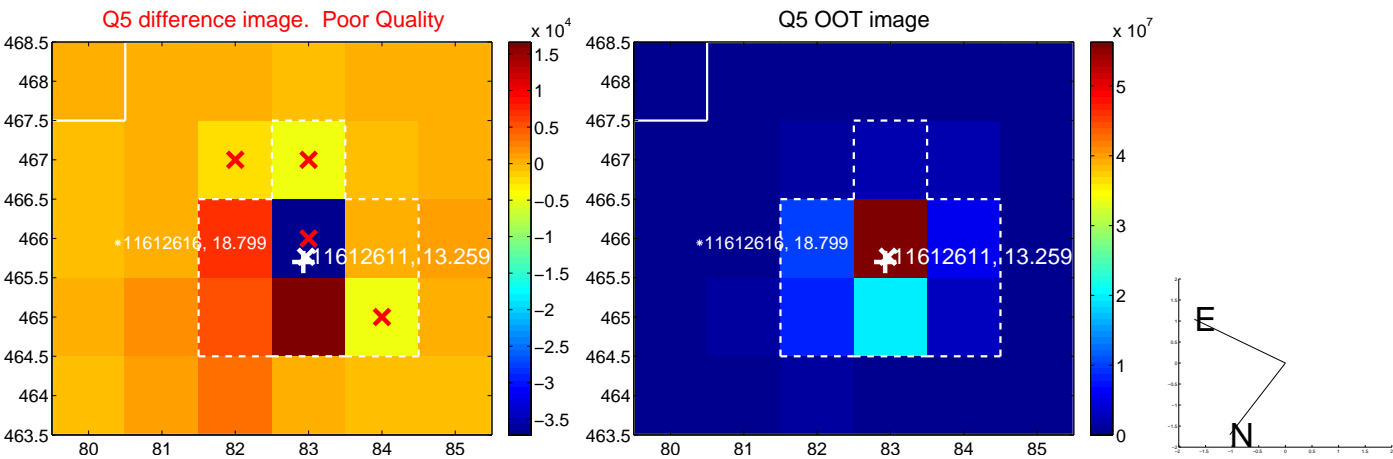


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

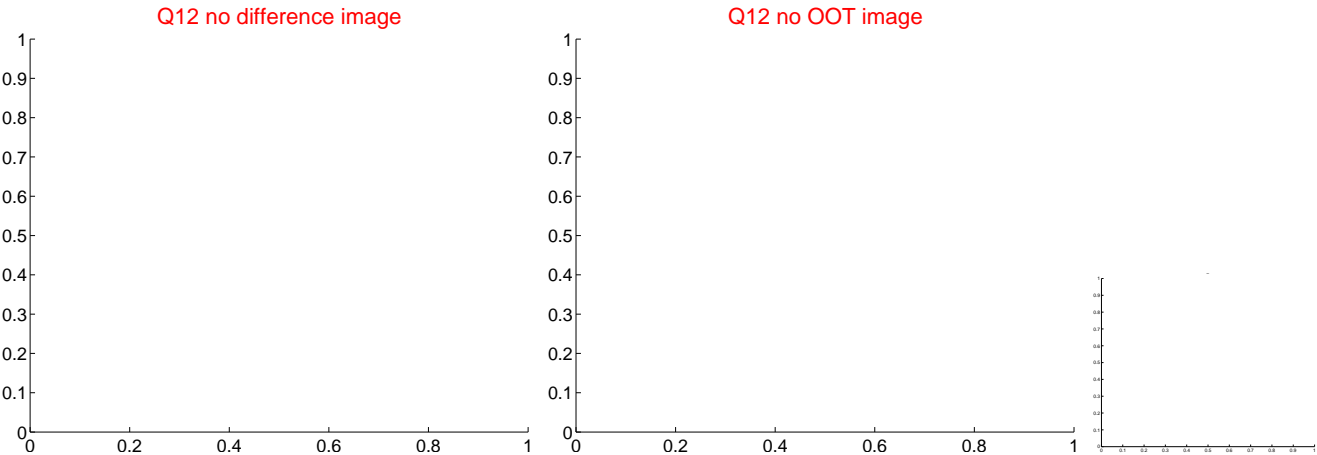
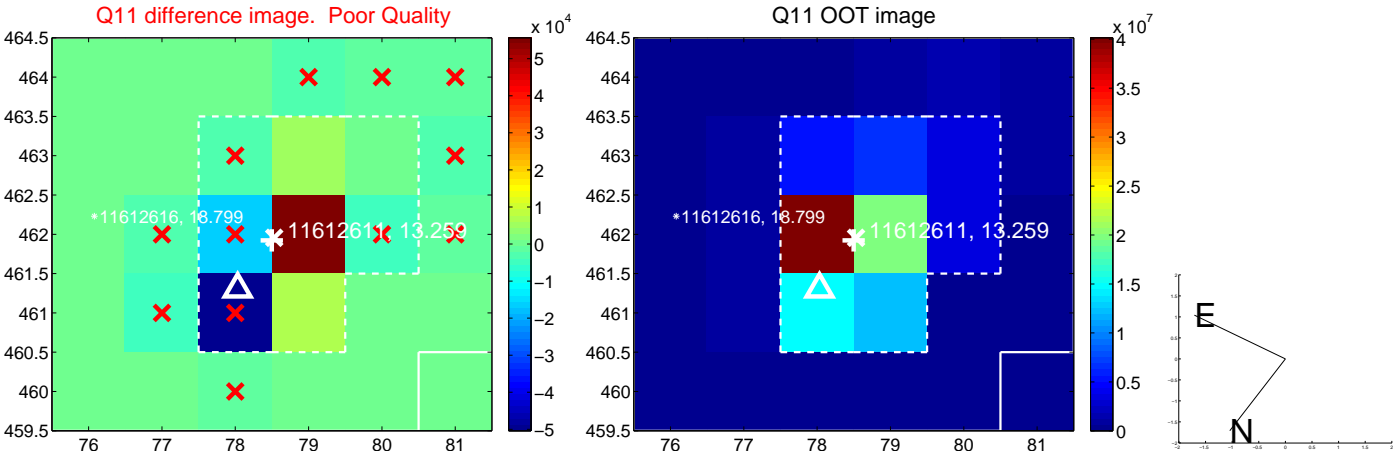
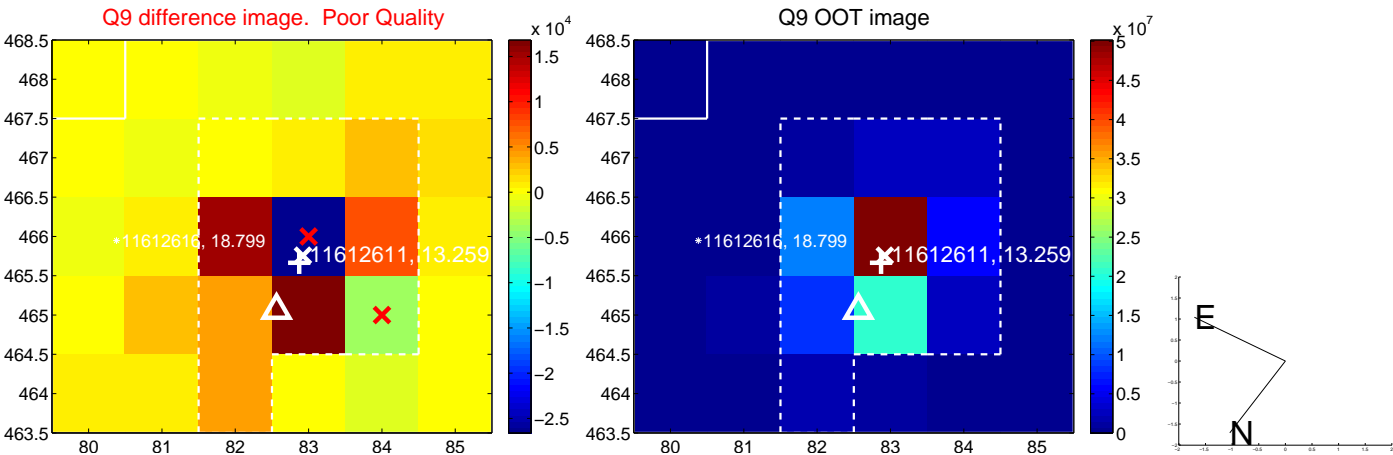
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

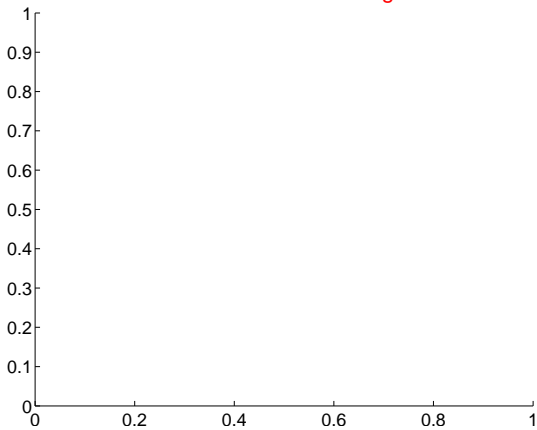


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

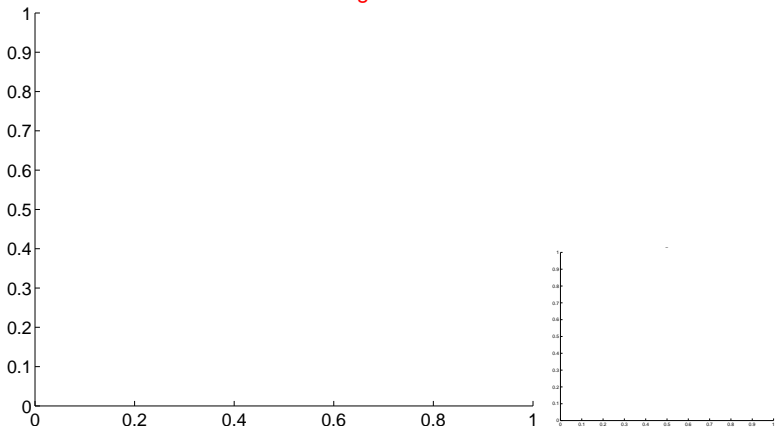


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

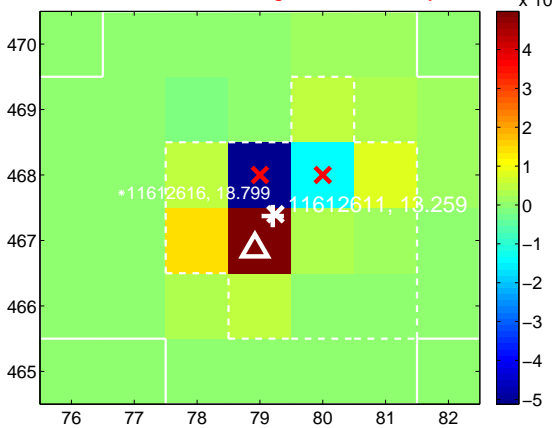
Q13 no difference image



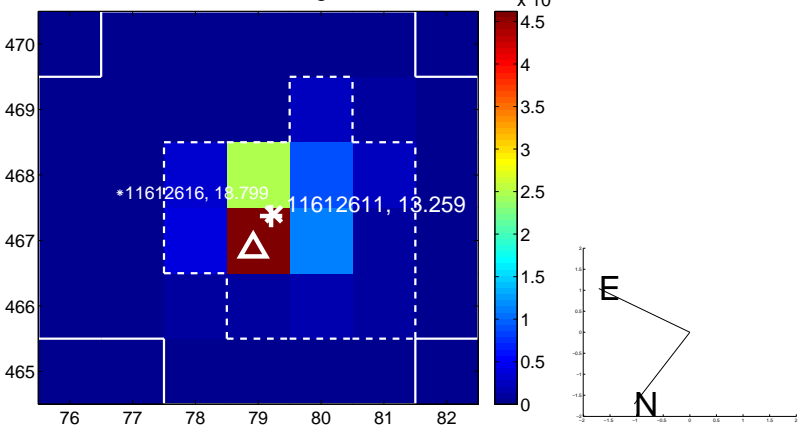
Q13 no OOT image



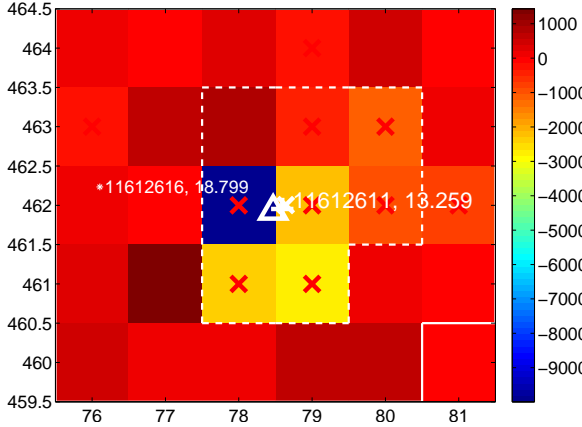
Q14 difference image. Poor Quality



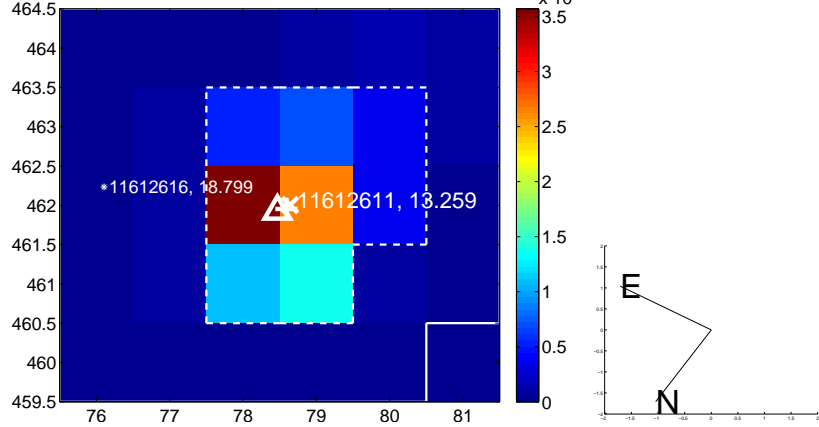
Q14 OOT image



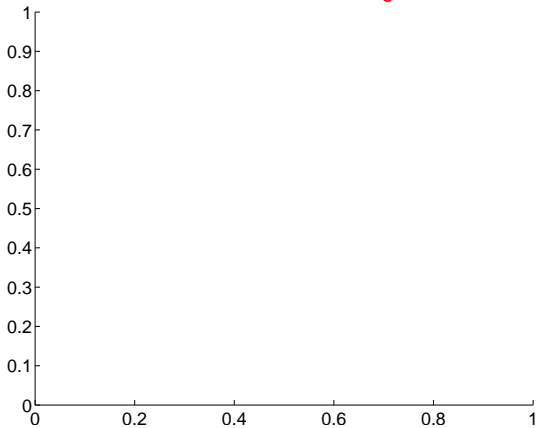
Q15 difference image. Poor Quality



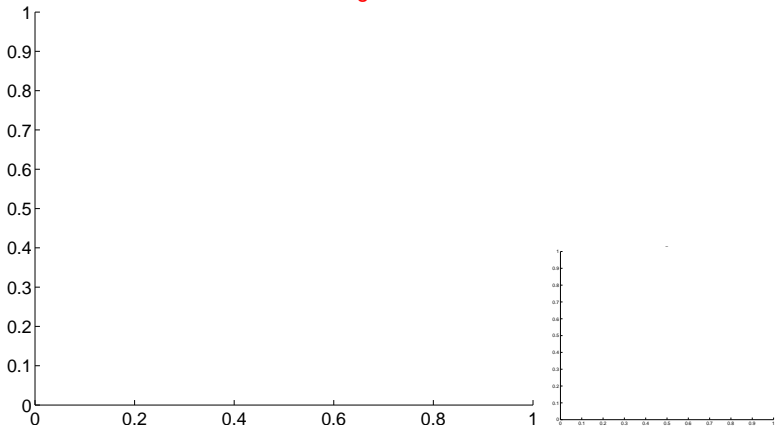
Q15 OOT image



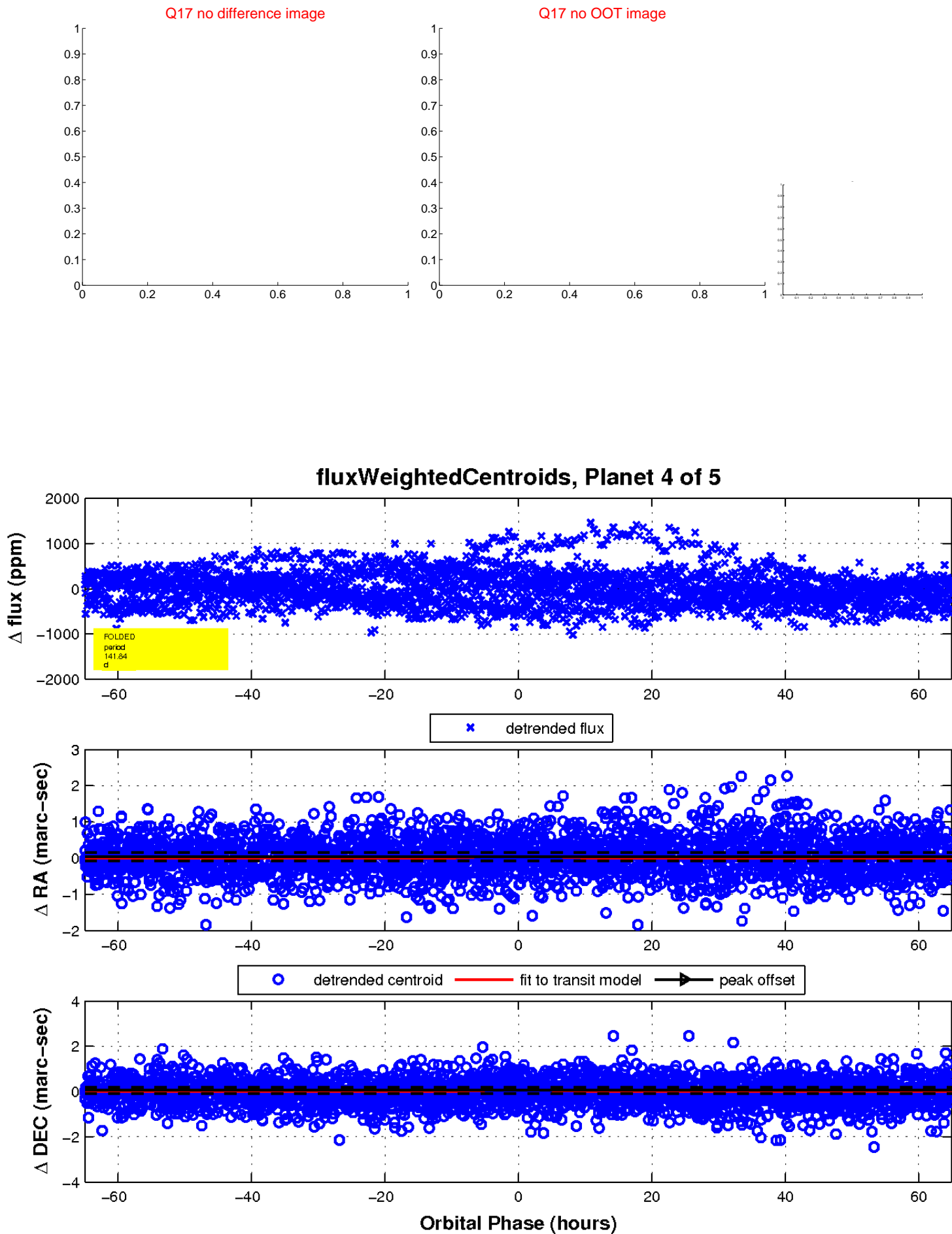
Q16 no difference image



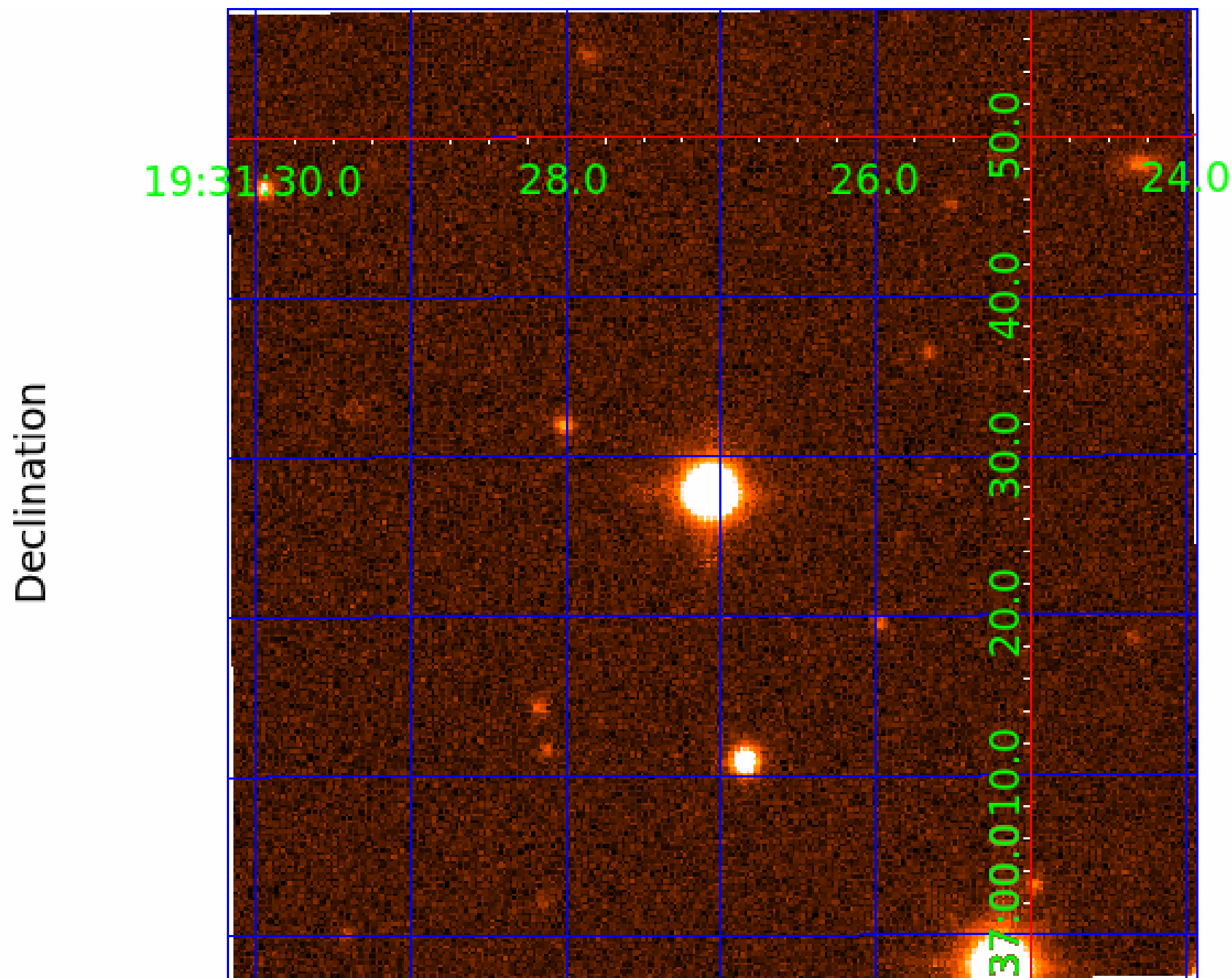
Q16 no OOT image



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



UKIRT Image



KIC 011612611

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})
011612611-01	OBS	No	2.585749	132.470102	26.3	12.594	9.6	10.0	0.78	5505	0.54	434.09
011612611-02	OBS	No	447.258737	343.002595	240.0	1.075	13.0	3.7	0.78	5505	1.71	0.45
011612611-03	OBS	No	223.590825	343.618158	330.2	15.000	13.7	-1.0	0.78	5505	1.40	1.14
011612611-04	OBS	No	141.835703	184.638165	222.8	21.663	9.1	6.2	0.78	5505	1.55	2.08
011612611-05	OBS	No	2.585609	133.811919	25.6	12.839	8.7	11.2	0.78	5505	0.45	434.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011612611-01	OBS	FP	0.00	1	0	0	0	LPP_DV
011612611-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—SAME_NTL_PERIOD—CENT_NOFITS
011612611-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011612611-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD

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

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

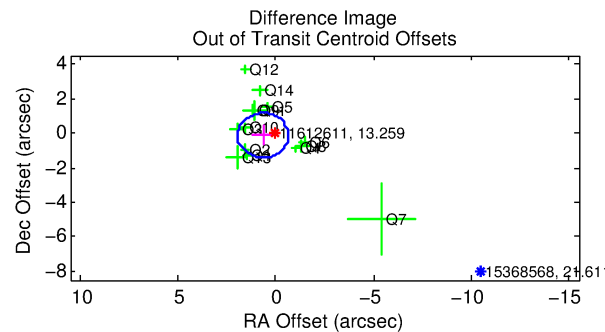
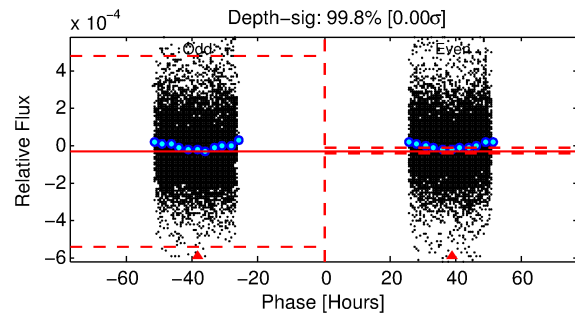
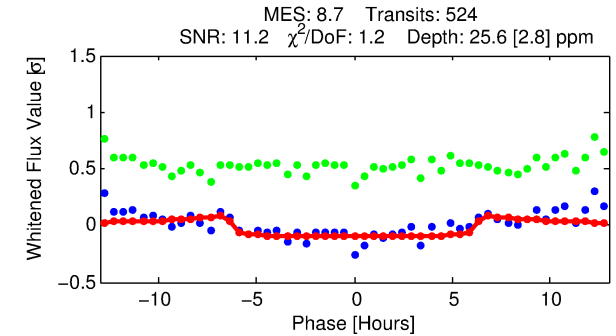
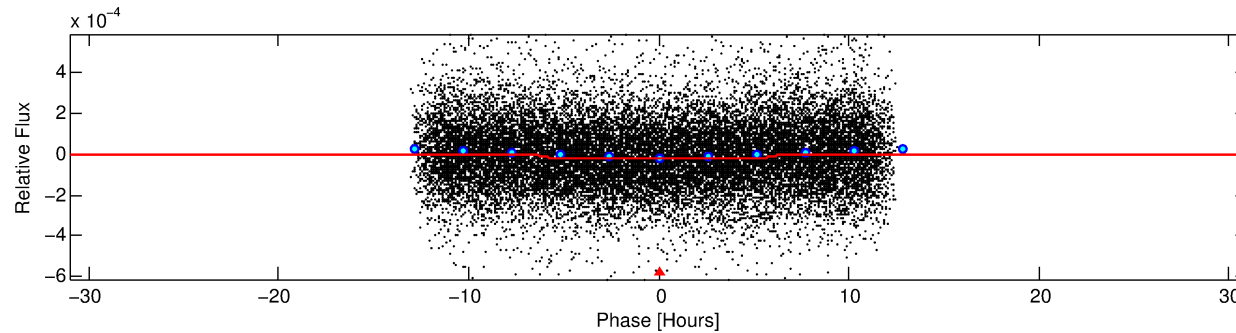
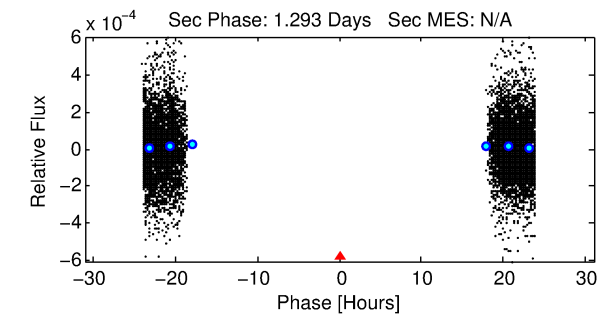
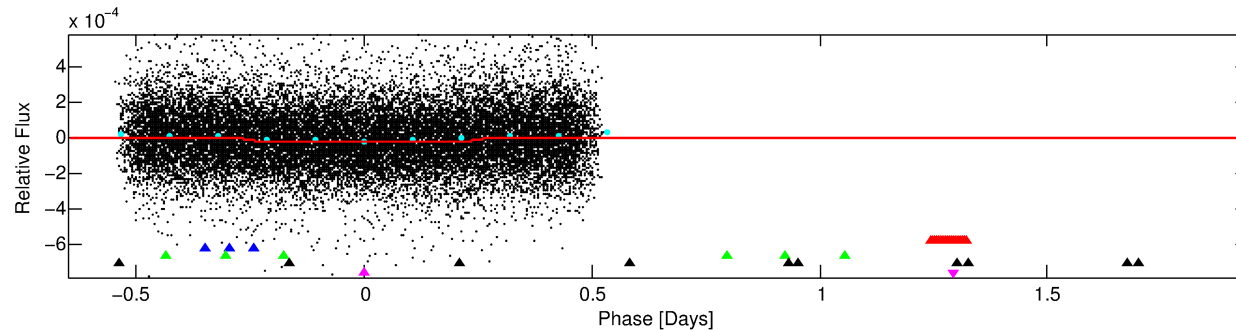
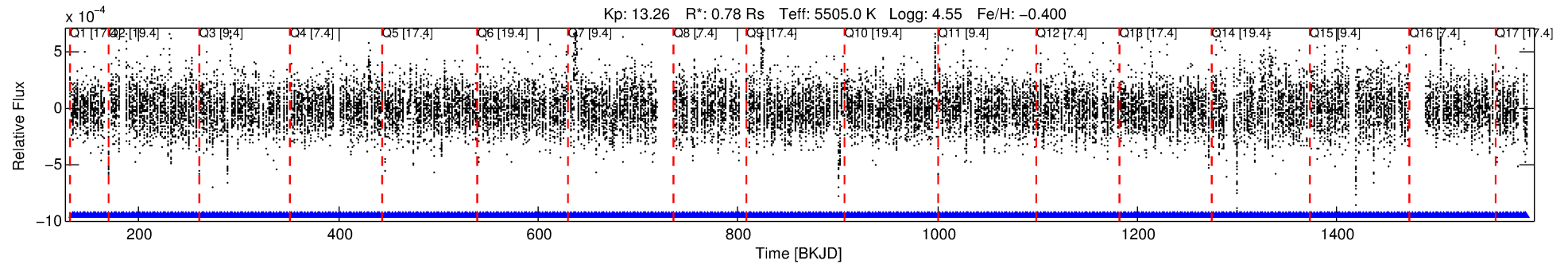
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011612611-05

No Significant Match Found

DV One-Page Summary

KIC: 11612611 Candidate: 5 of 5 Period: 2.586 d



DV Fit Results:

Period = 2.58561 [0.00003] d
Epoch = 133.8119 [0.0072] BKJD
Rp/R* = 0.0053 [0.0014]
a/R* = 1.23 [0.51]
b = 0.85 [0.41]
Seff = 434.12 [103.27]
Teq = 1164 [69] K
Rp = 0.45 [0.15] Re
a = 0.0340 [0.0049] AU

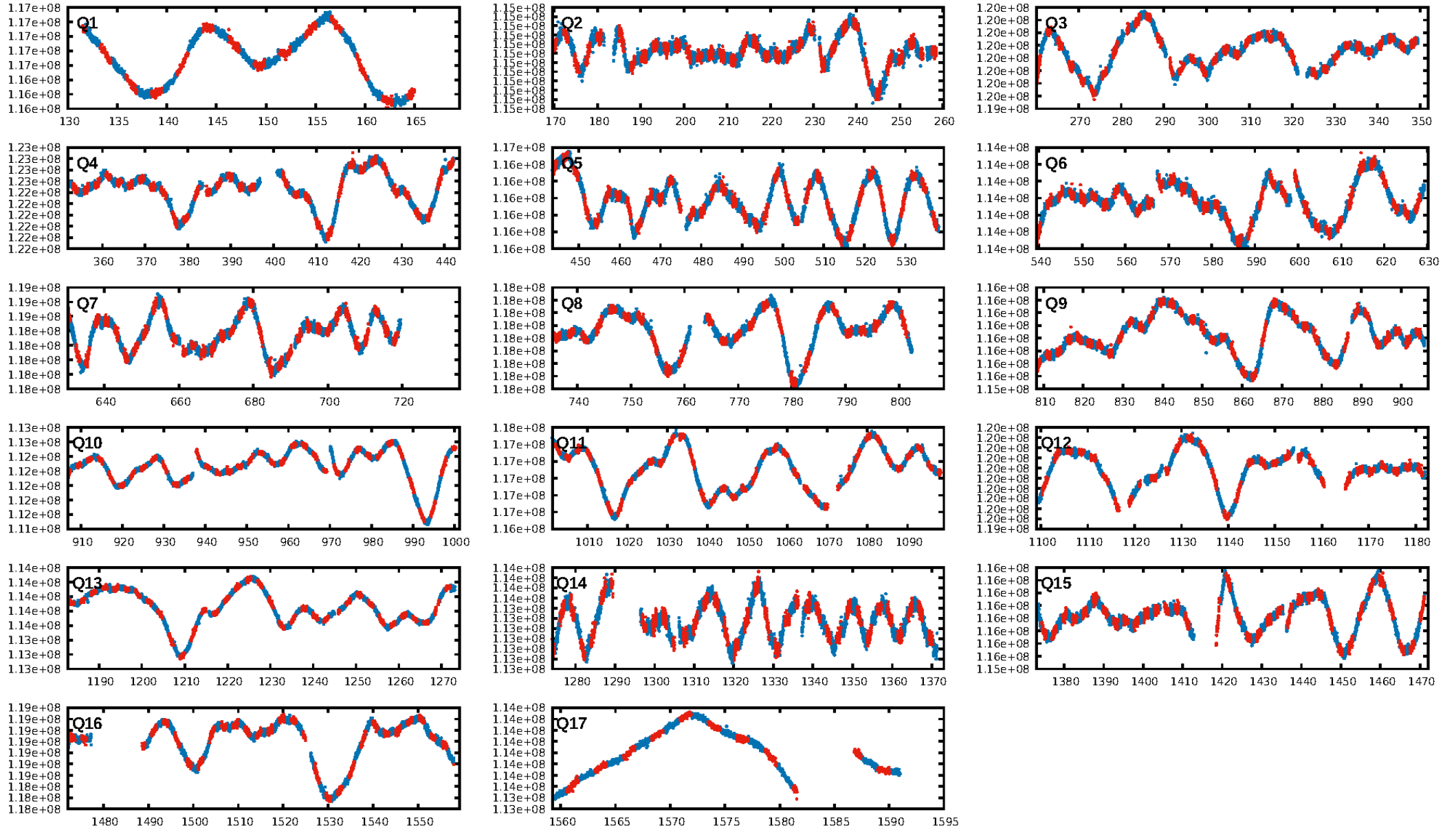
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [500/500]
GhostDiagnostic-chr: 2.214
Centroid-sig: 44.7%
Centroid-so: 0.527 arcsec [0.84σ]
OotOffset-rm: 0.667 arcsec [1.54σ]
KicOffset-rm: 0.697 arcsec [1.26σ]
OotOffset-st: 4/3/3/4 [14]
KicOffset-st: 4/3/3/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

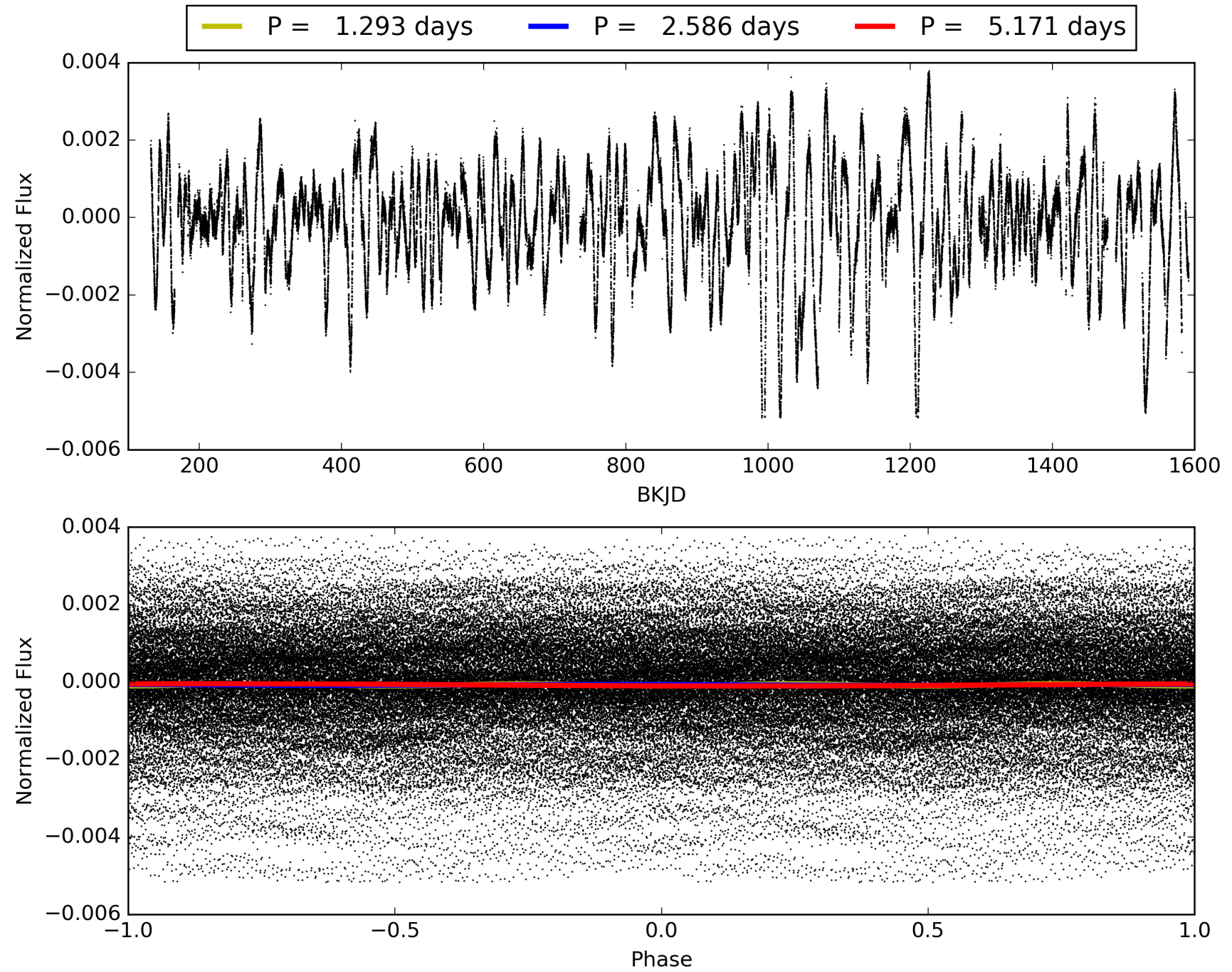
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:50:21 Z

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

TCE 011612611-05, PDC Light Curves

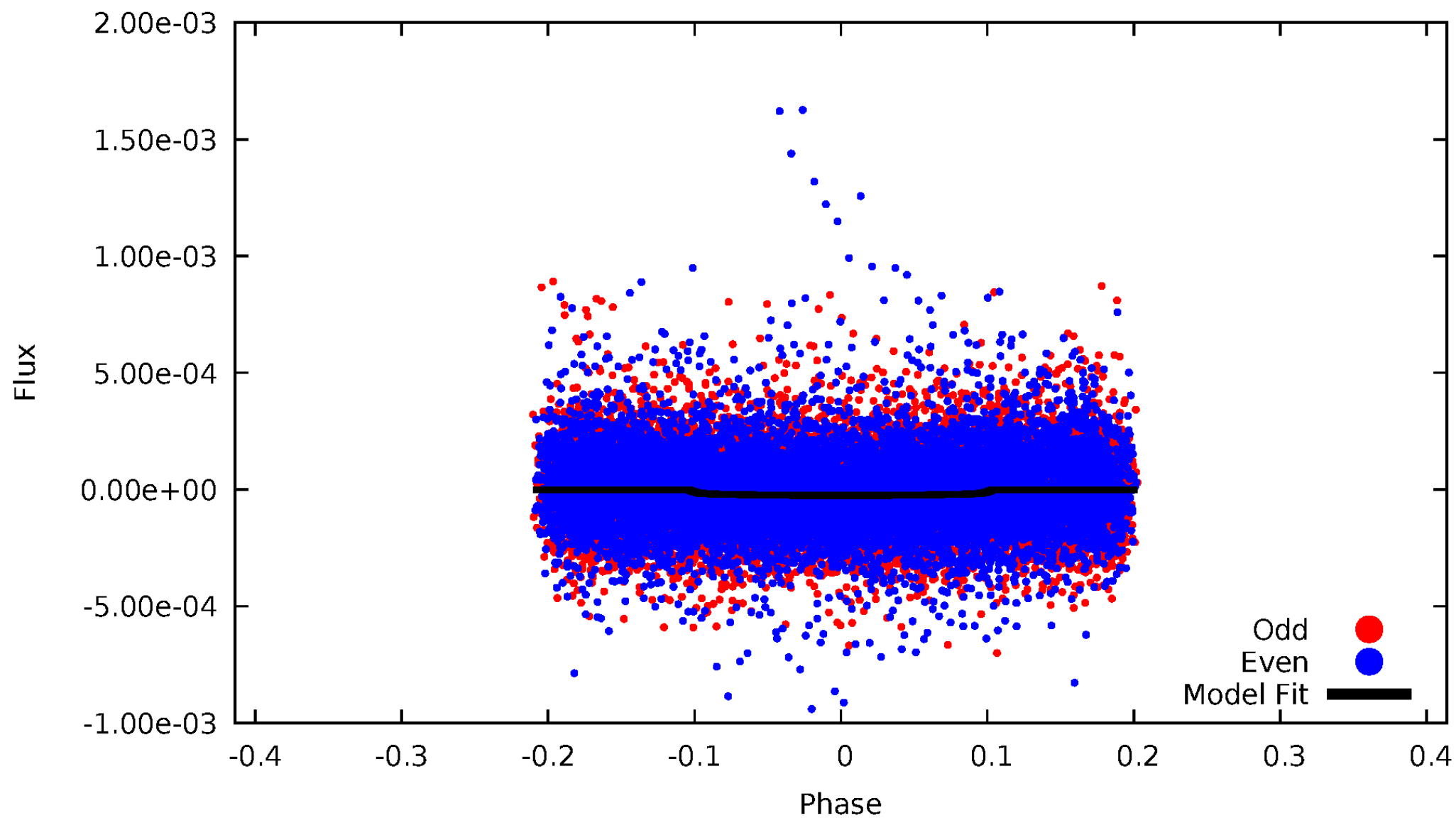


TCE 011612611-05



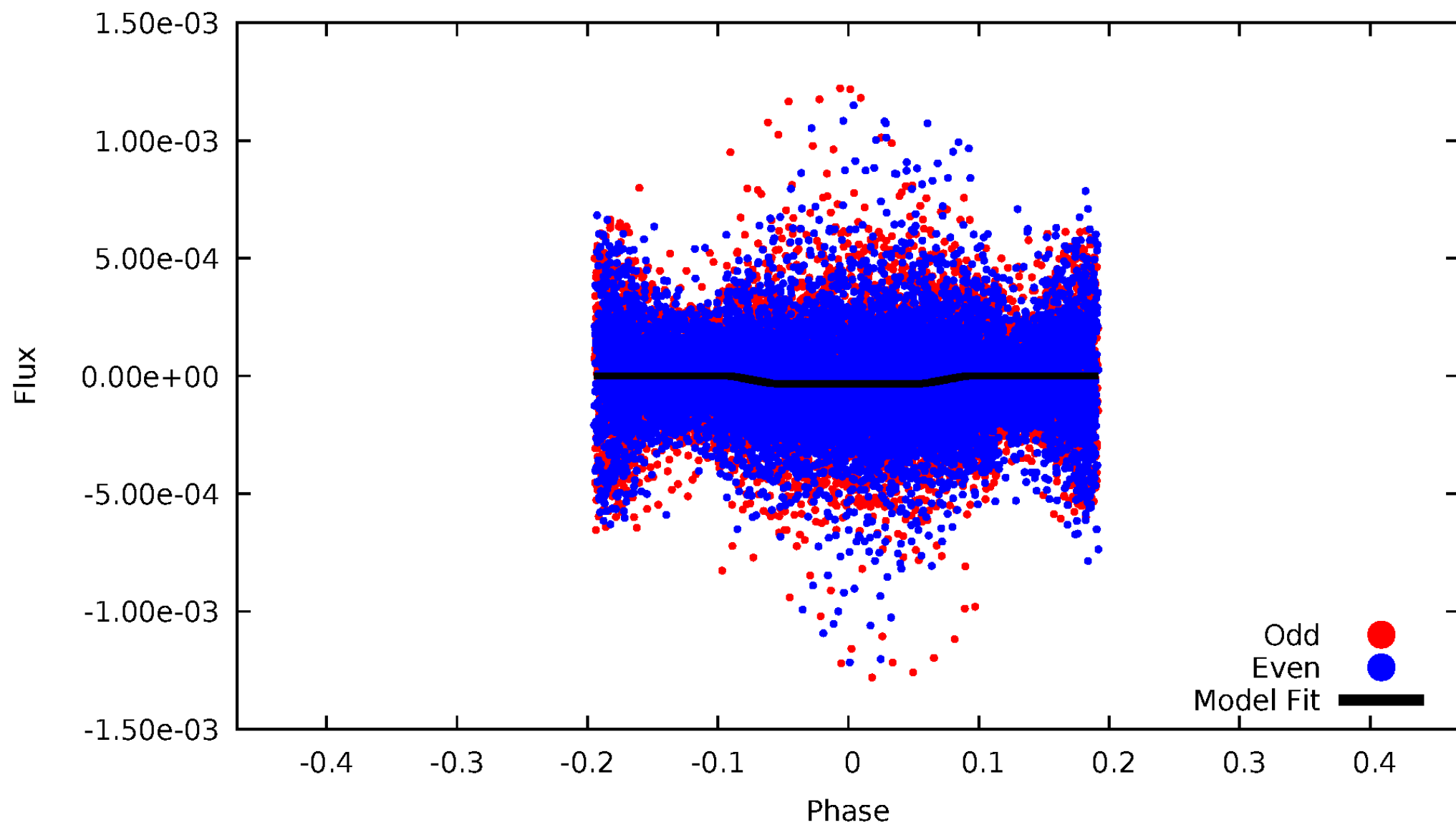
DV Odd/Even

TCE 011612611-05



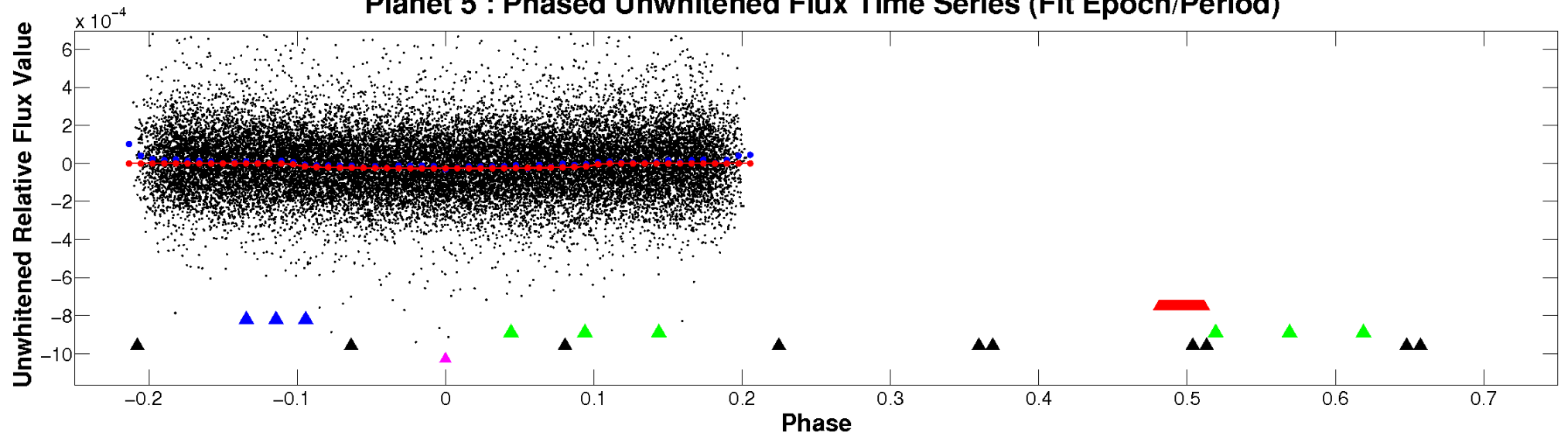
ALT Odd/Even

TCE 011612611-05

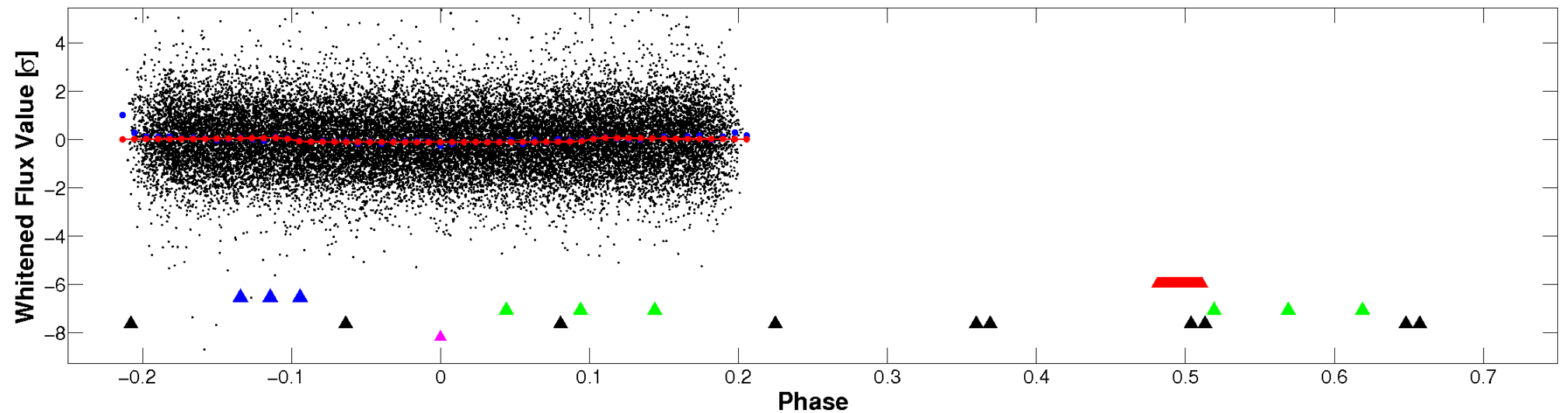


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

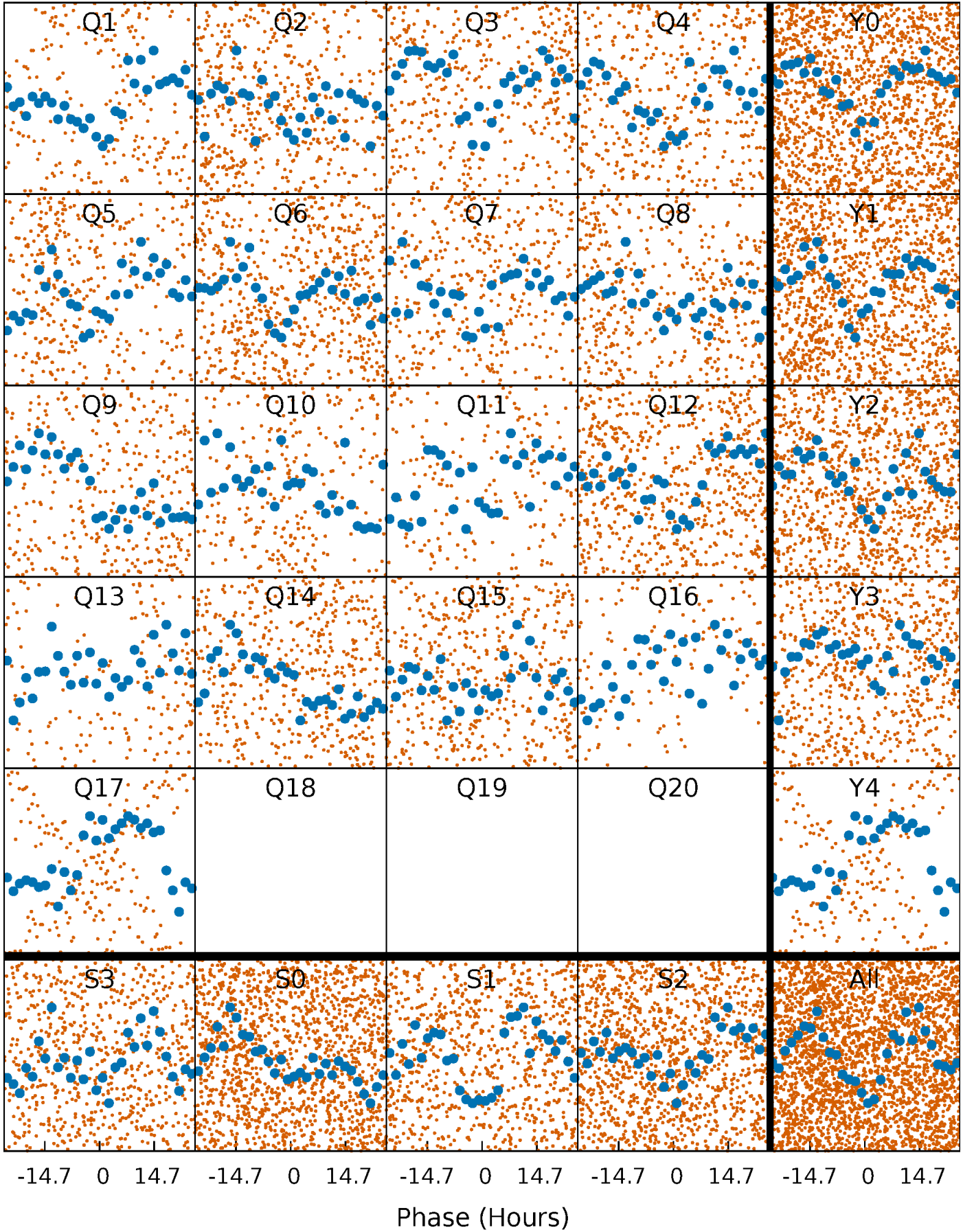


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



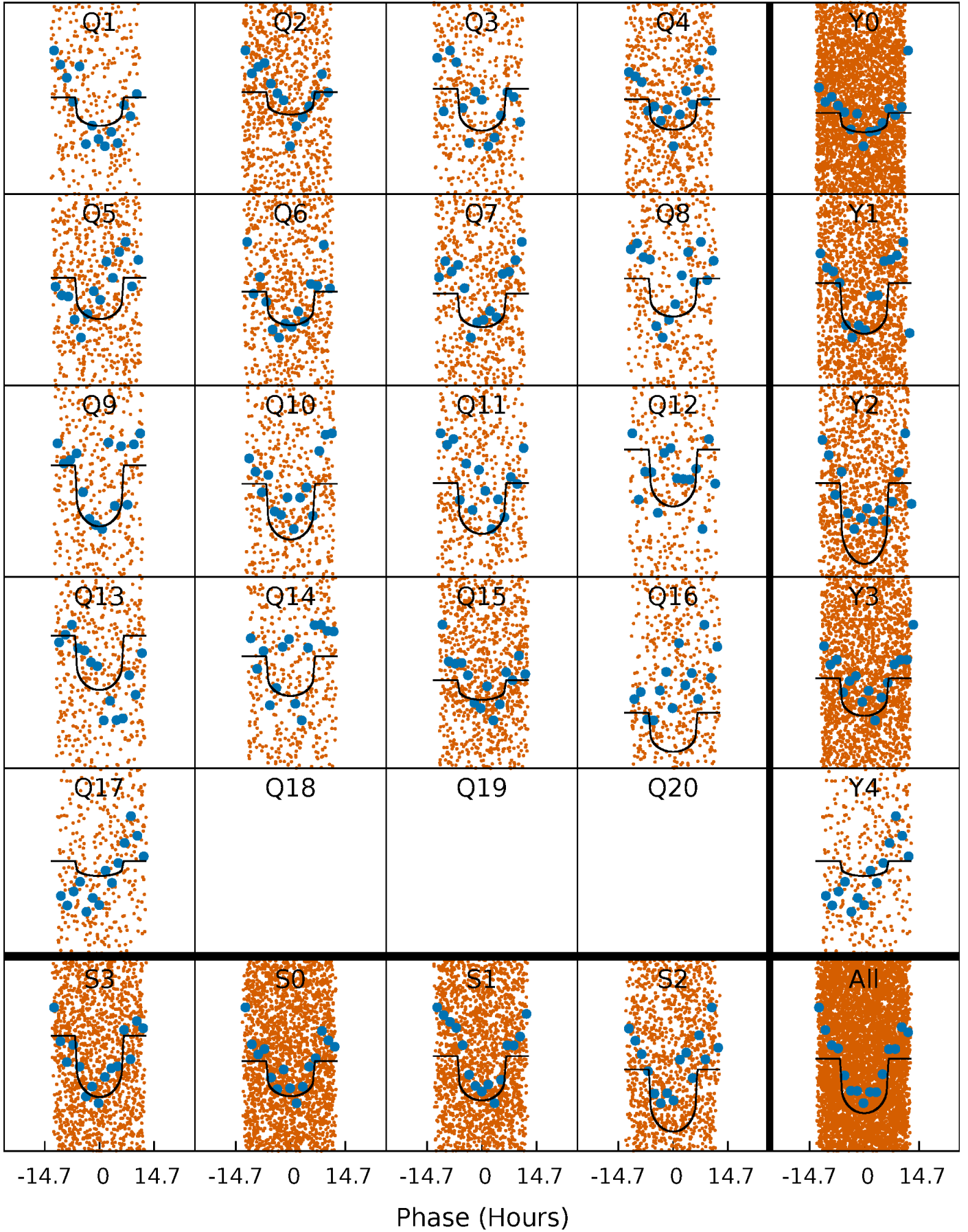
PDC Quarter-Phased Transit Curves

TCE 011612611-05 P= 2.585609 Days $T_0=133.811919$ (BKJD)



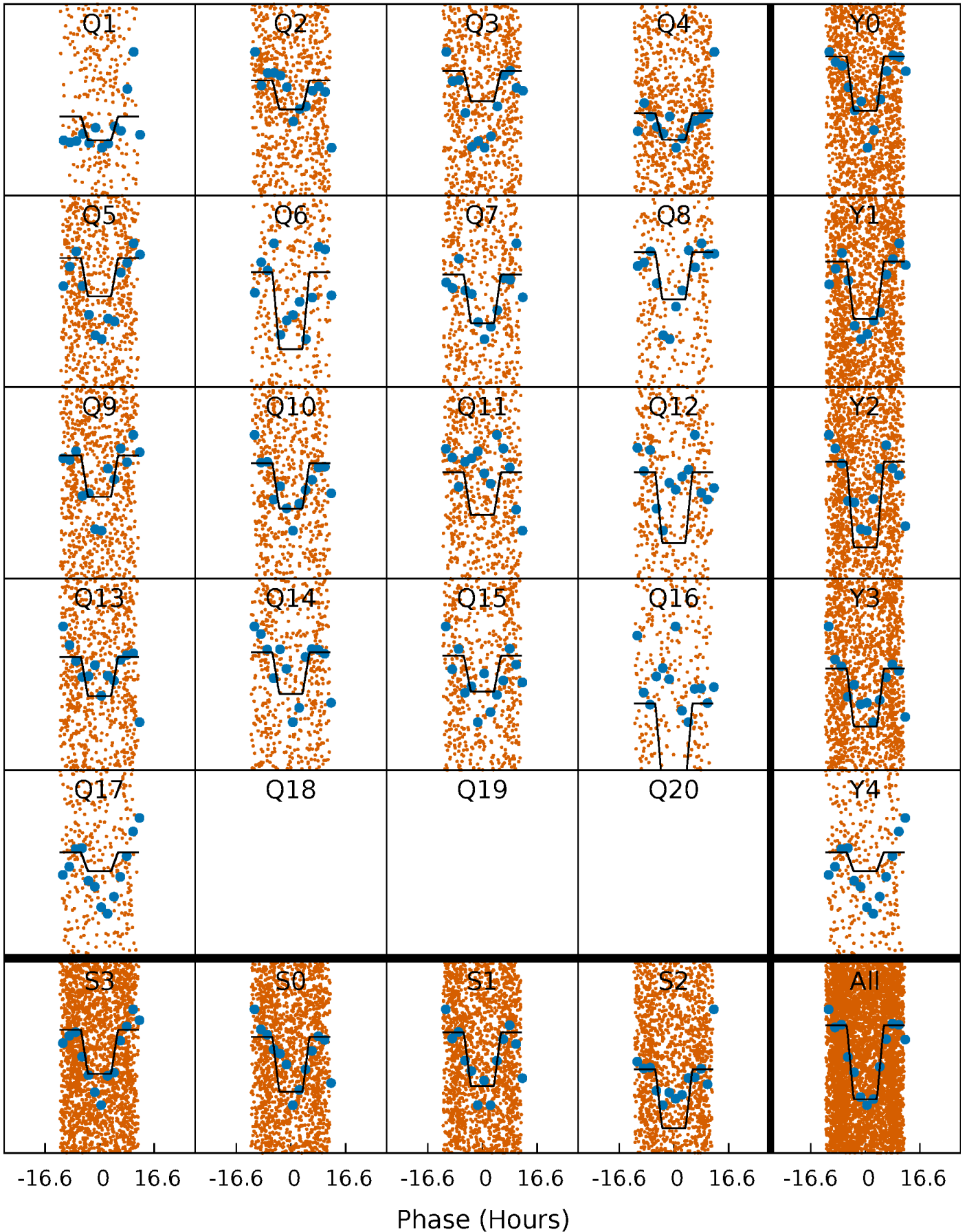
DV Quarter-Phased Transit Curves

TCE 011612611-05 P= 2.585609 Days $T_0=133.811919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

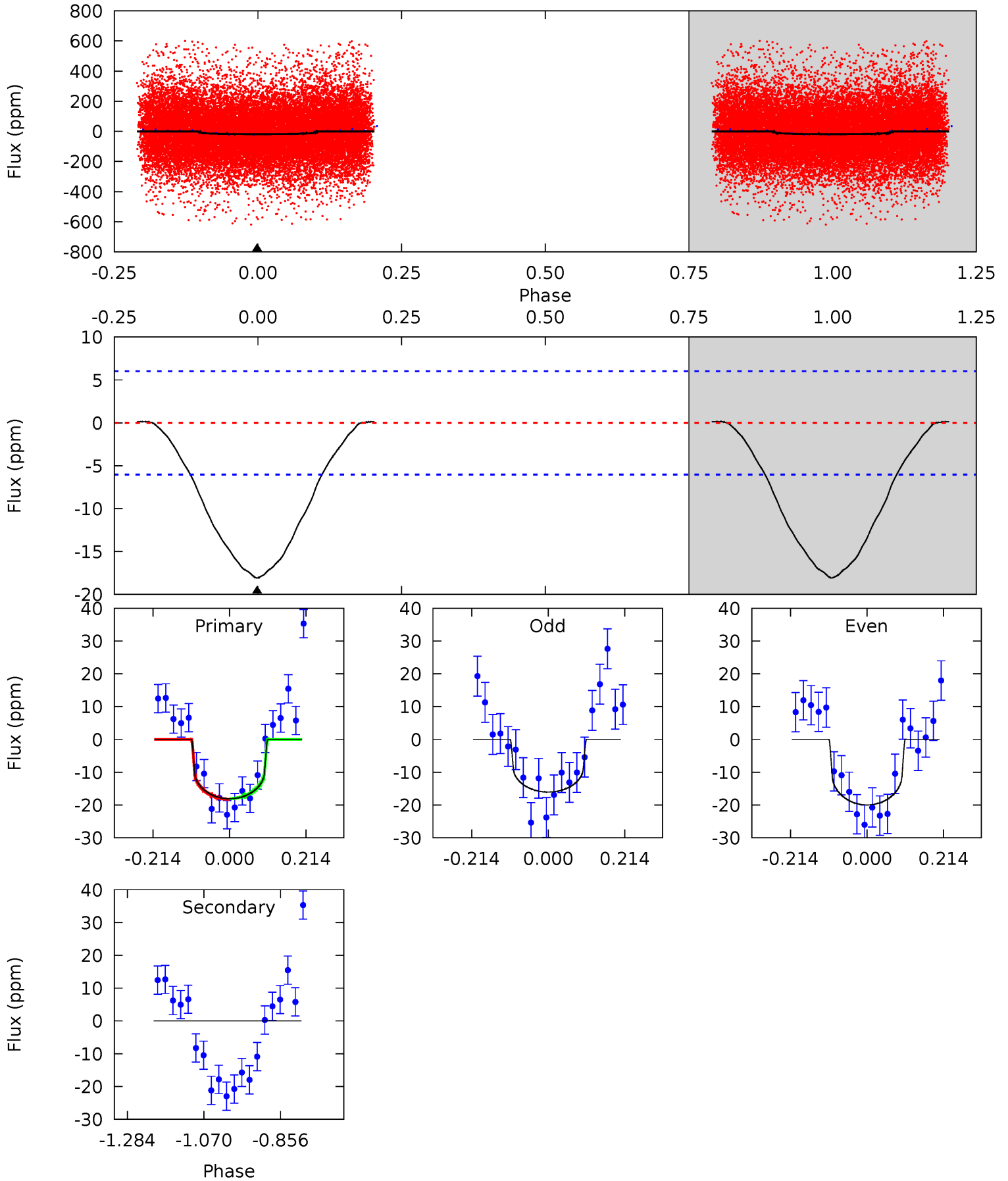
TCE 011612611-05 P= 2.585766 Days $T_0=133.762144$ (BKJD)



DV Model-Shift Uniqueness Test

011612611-05, P = 2.585609 Days, E = 131.226310 Days

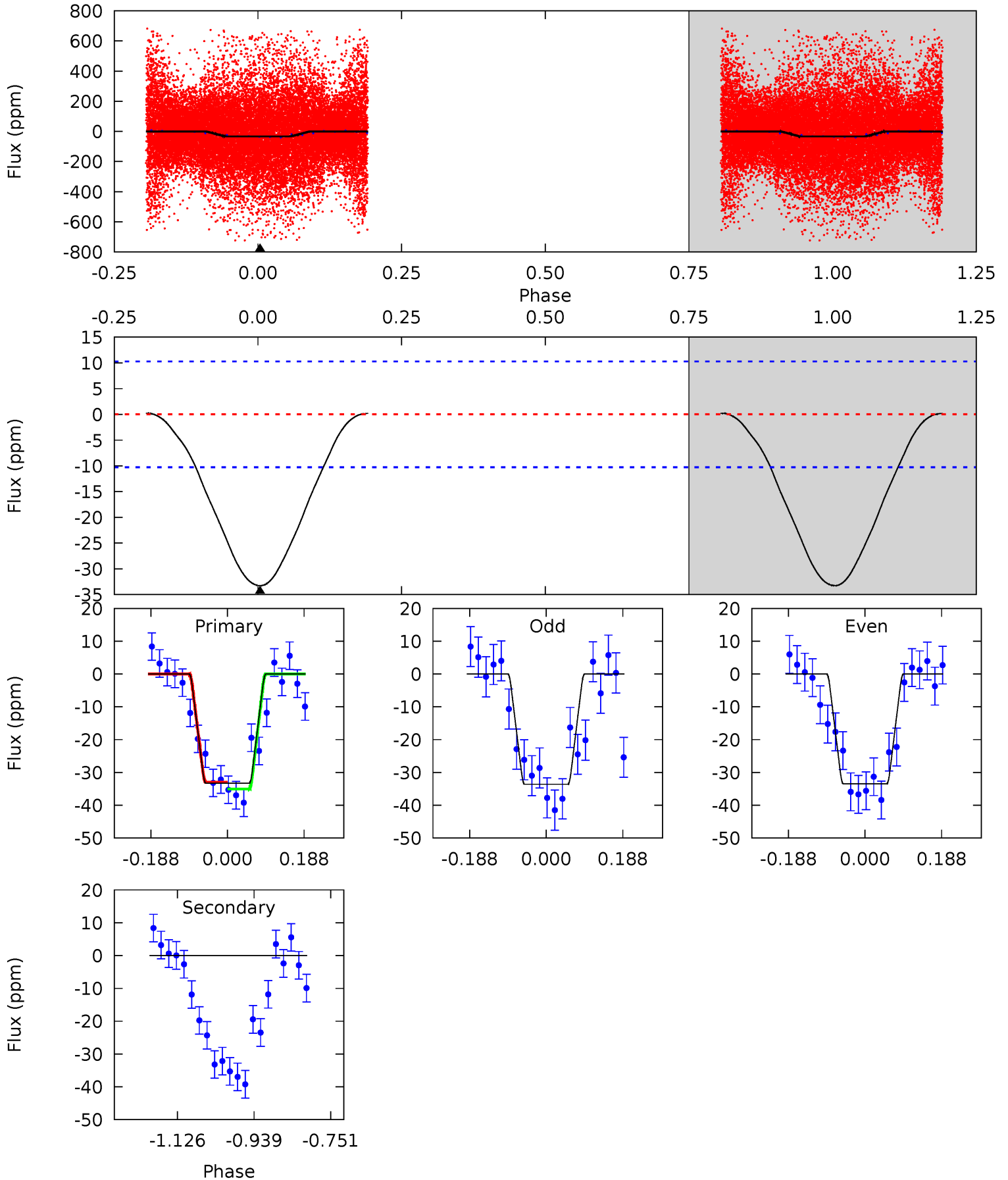
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	0	0	0	4.40	1.24	0.14	13.2	13.2	0	0	1.44	0.89	0.01	0.08



Alt Model-Shift Uniqueness Test

011612611-05, P = 2.585766 Days, E = 131.176378 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	0	0	0	4.43	1.32	0.13	14.3	14.3	0	0	0.03	0.99	0.01	0.48



Stellar Parameters For KIC 011612611

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5505^{+164}_{-148}	$4.547^{+0.068}_{-0.110}$	$-0.400^{+0.350}_{-0.300}$	$0.781^{+0.138}_{-0.074}$	$0.783^{+0.095}_{-0.063}$	$2.316^{+0.708}_{-0.763}$
	+3%/-3%	+1%/-2%	+87%/-75%	+18%/-9%	+12%/-8%	+31%/-33%
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 011612611-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1	$0.46^{+0.13}_{-0.14}$	1633^{+77}_{-62}	-2028^{+5231}_{-1223}	$0.215^{+4.532}_{-4.538}$
Alt.	0 ± 2	$0.50^{+0.13}_{-0.12}$	1639^{+81}_{-65}	-2256^{+5633}_{-1186}	$0.024^{+6.403}_{-6.406}$

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 $A_{obs} \gg 1.0$

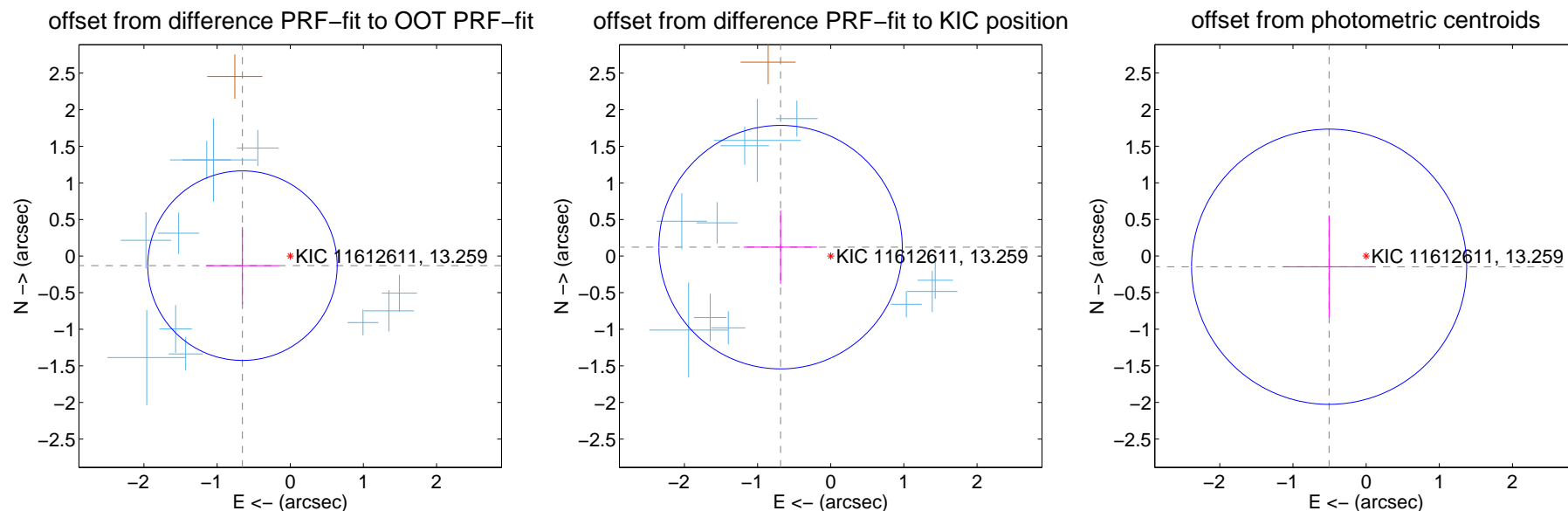
DV Centroid Data

Supplemental centroid analysis for 011612611-05. Kepler magnitude: 13.26. Transit SNR 11.16

There are 11 quarters with good PRF difference image offsets

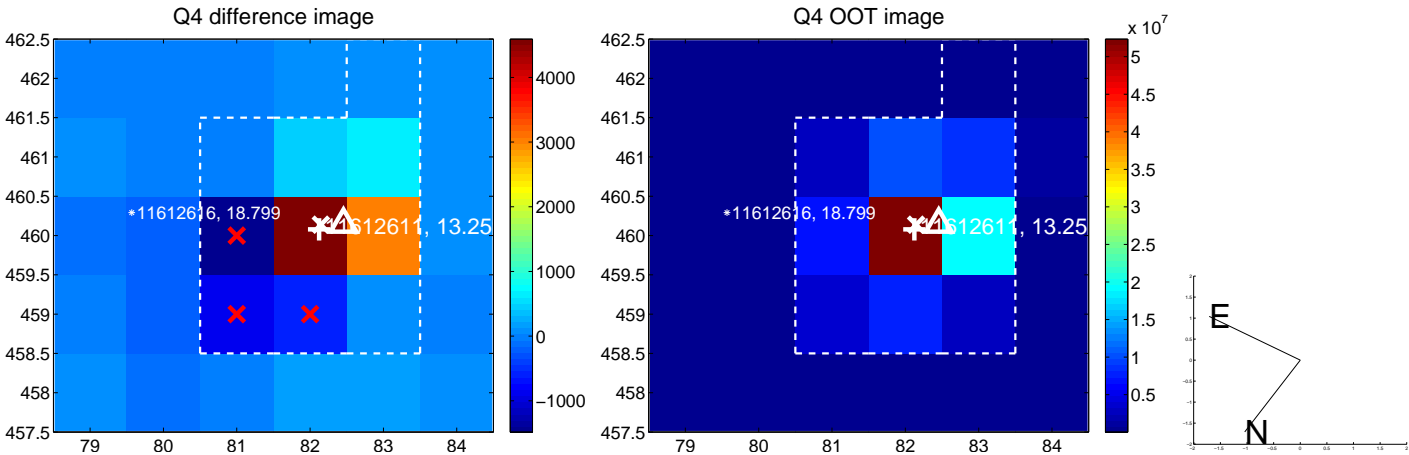
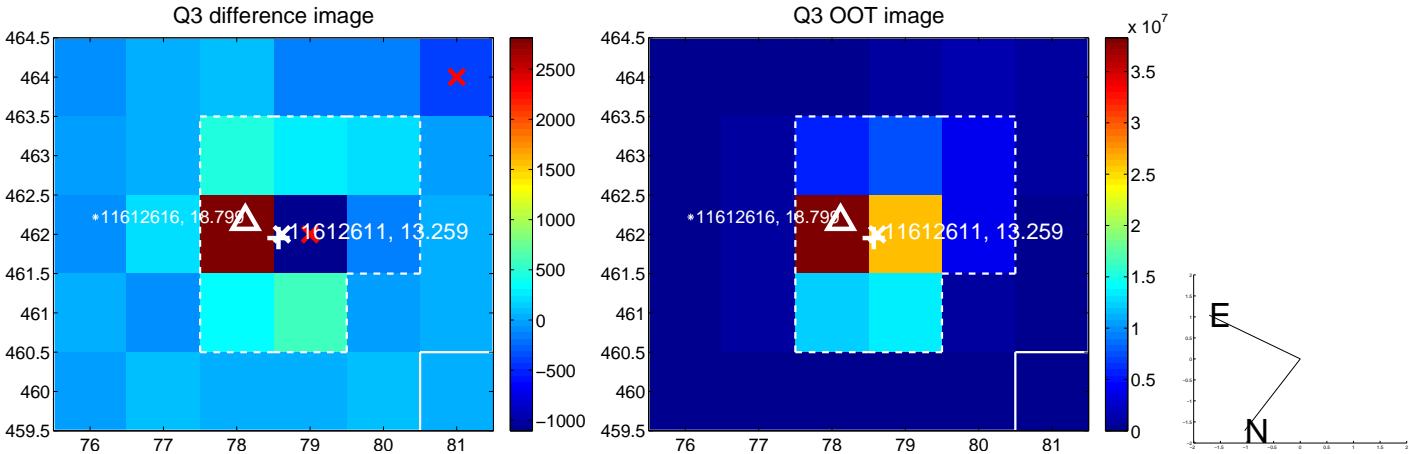
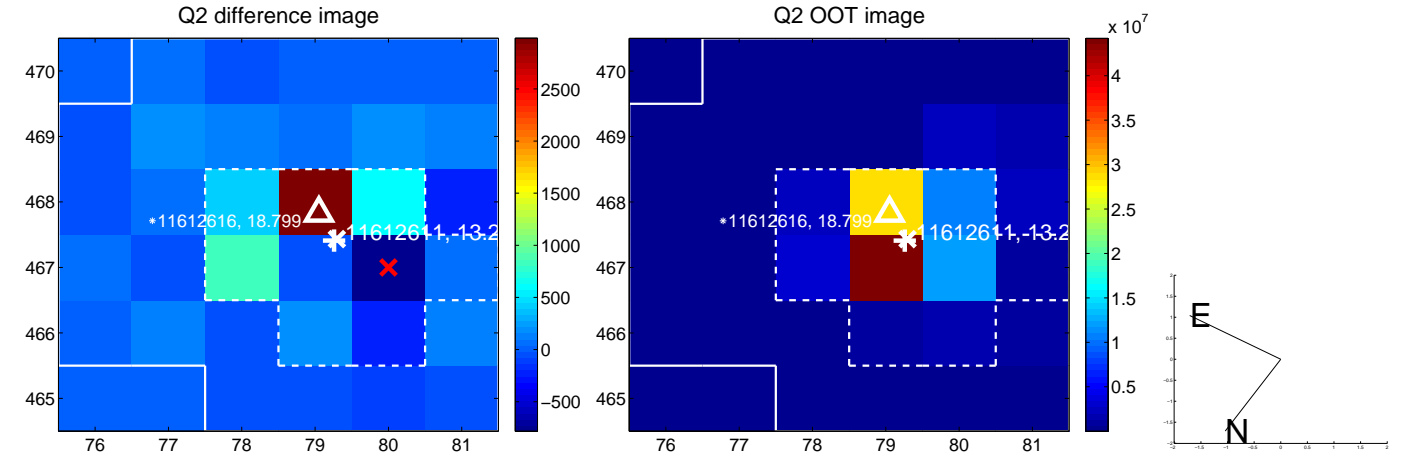
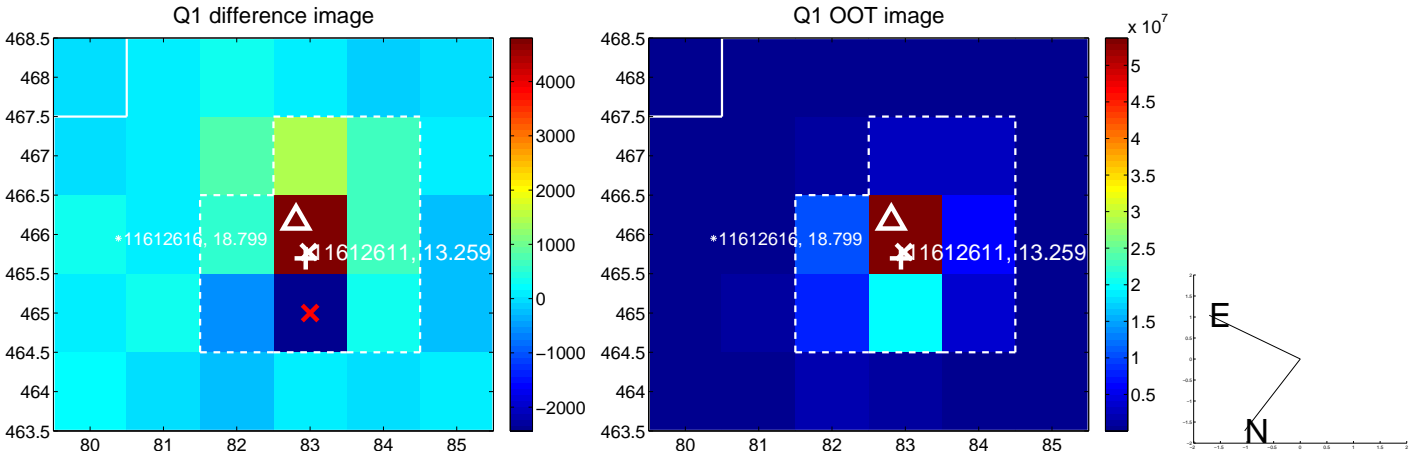
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.667 ± 0.432	1.54	0.654 ± 0.498	-0.131 ± 0.528
PRF-fit source offset from KIC position	0.697 ± 0.554	1.26	0.686 ± 0.504	0.122 ± 0.502
photometric centroid source offset	0.53 ± 0.63	0.84	0.51 ± 0.62	-0.15 ± 0.69

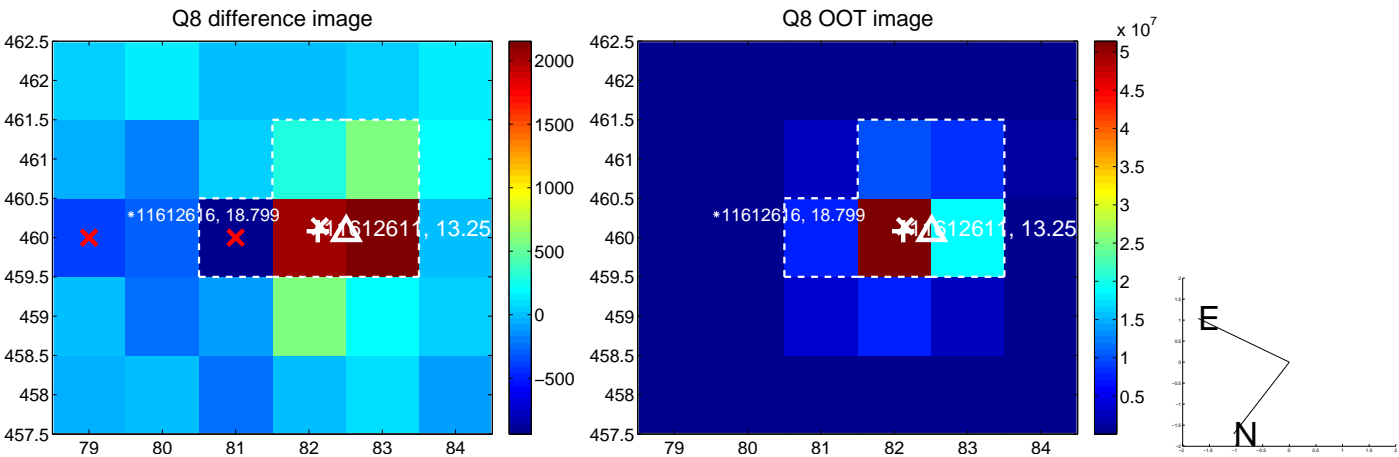
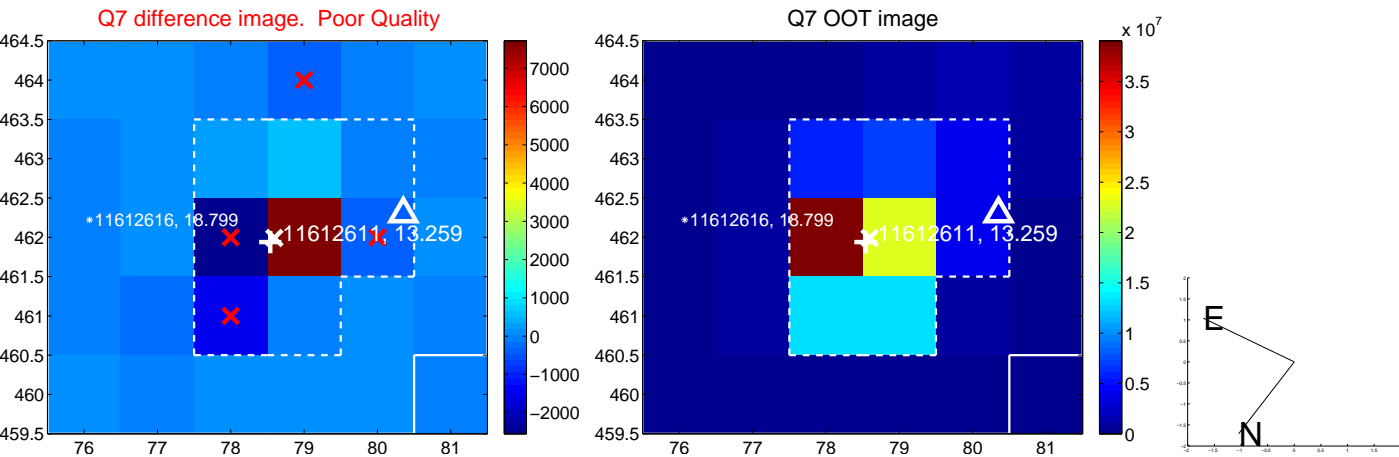
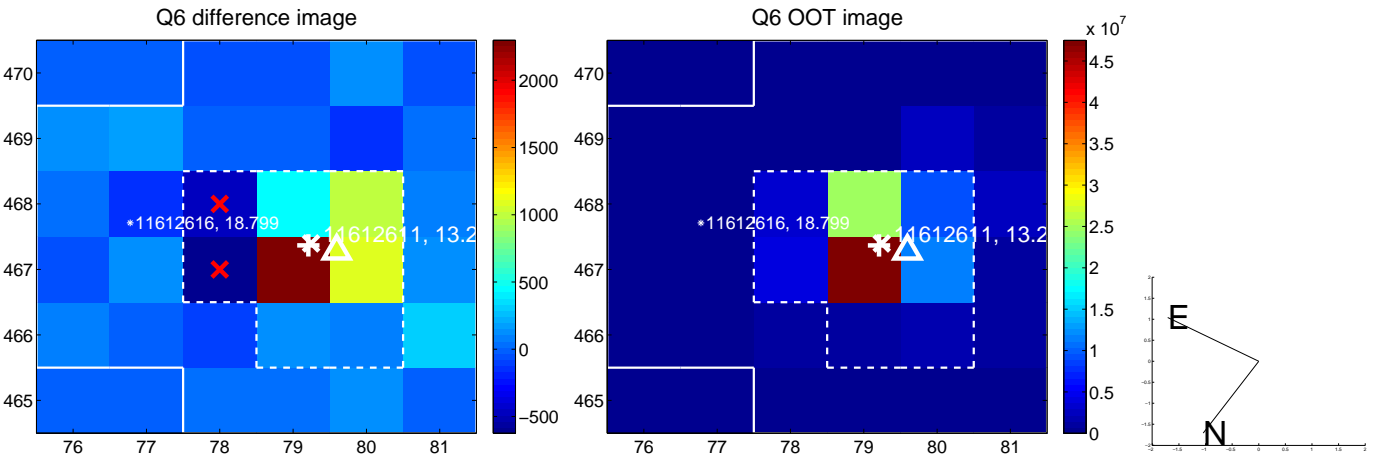
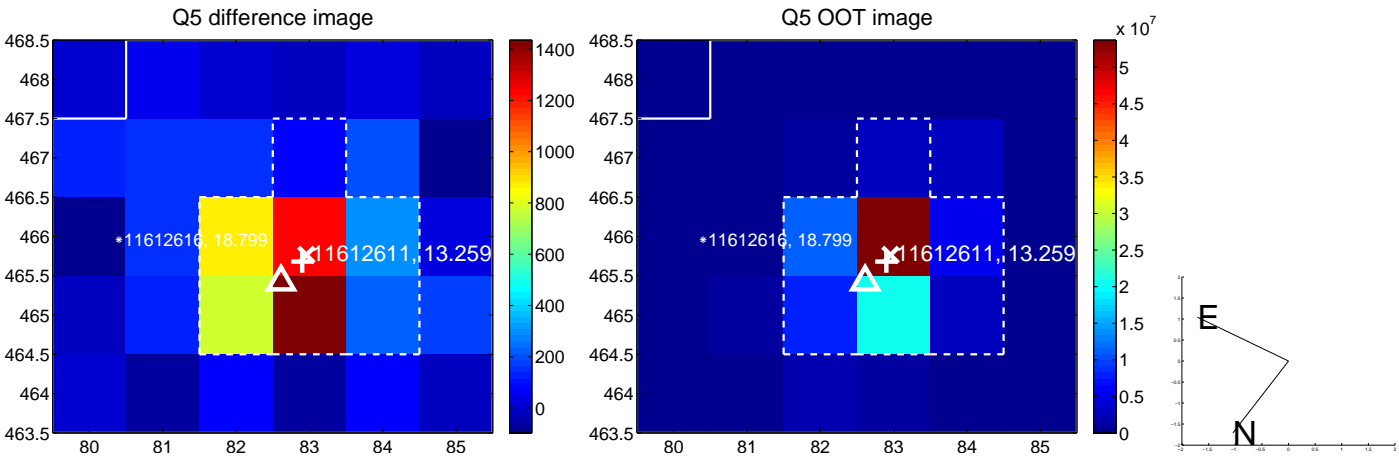


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

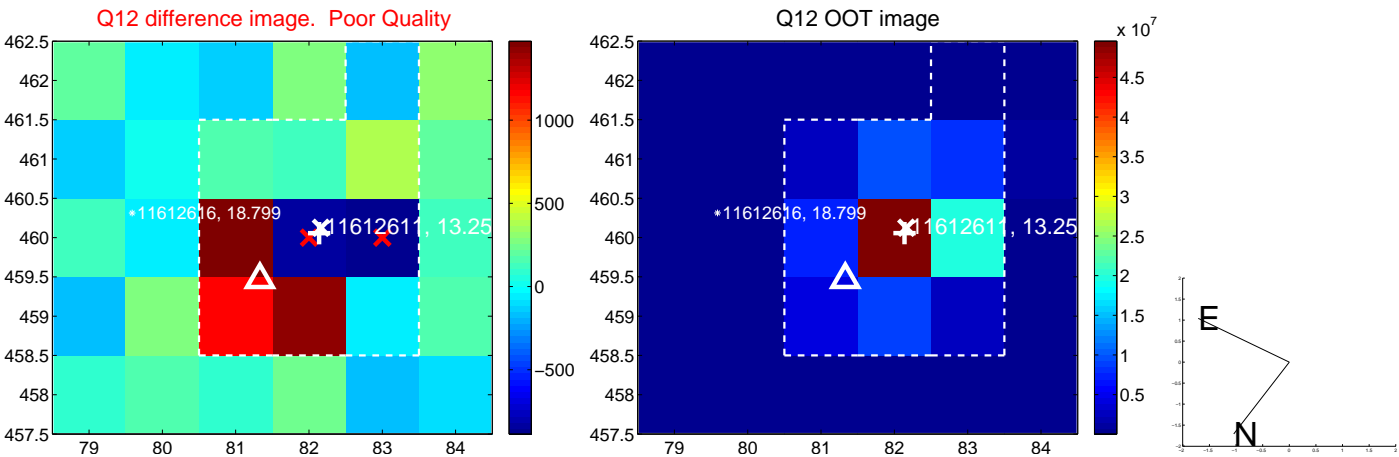
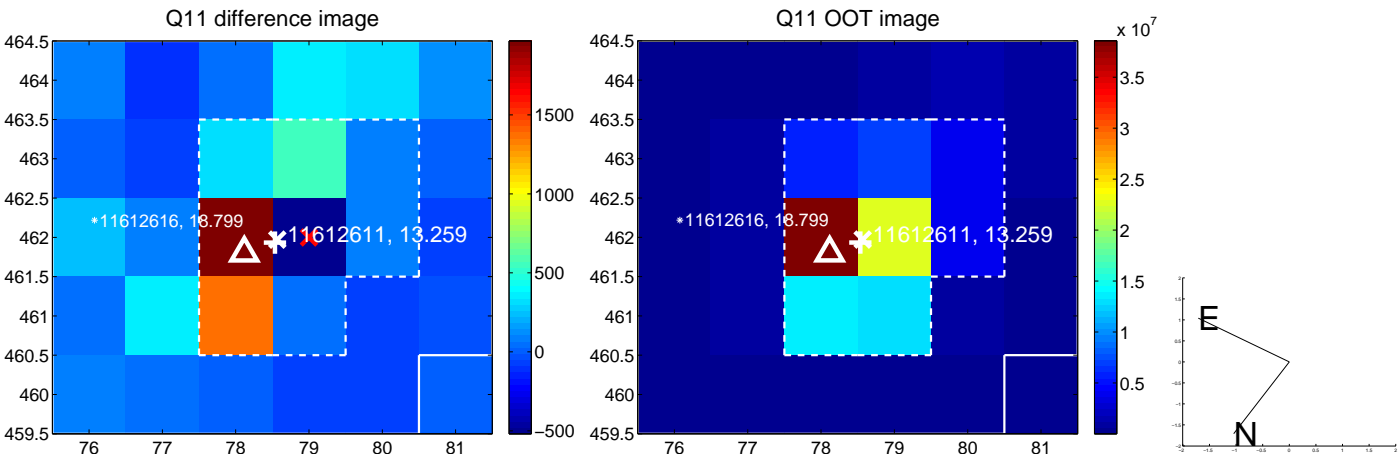
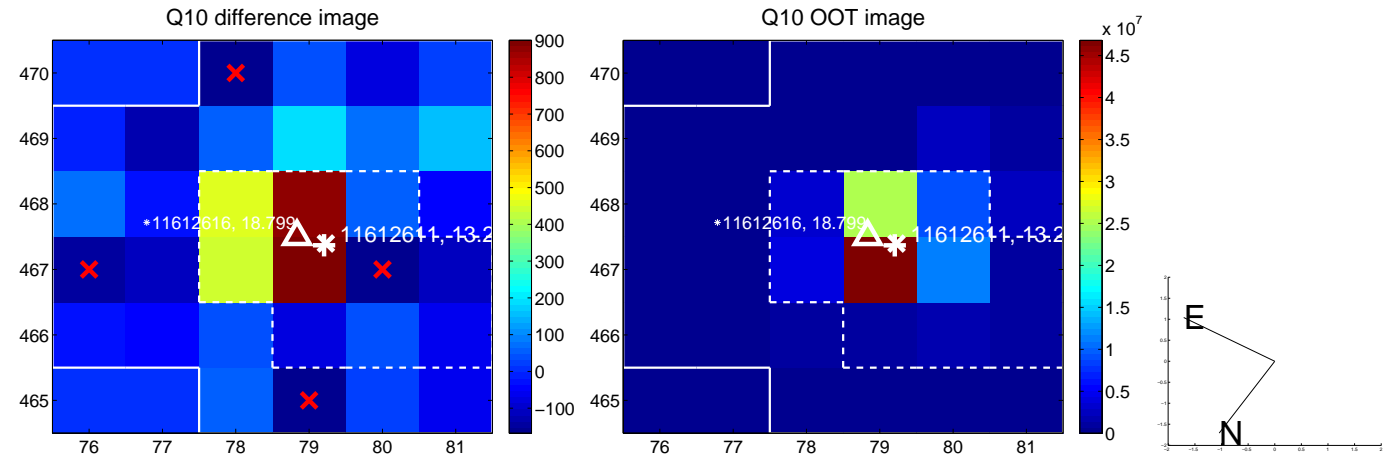
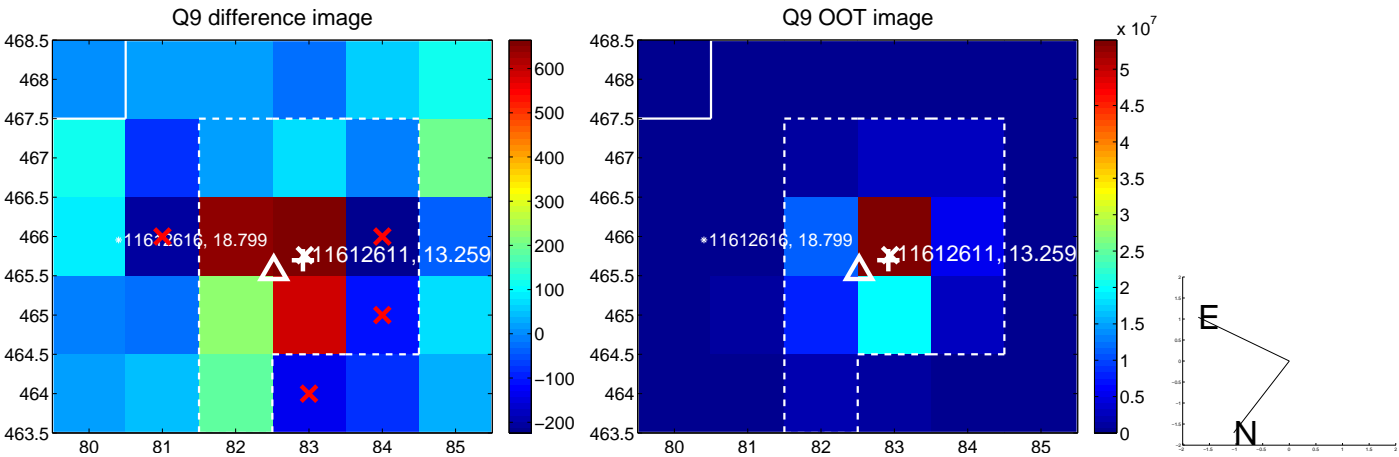
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



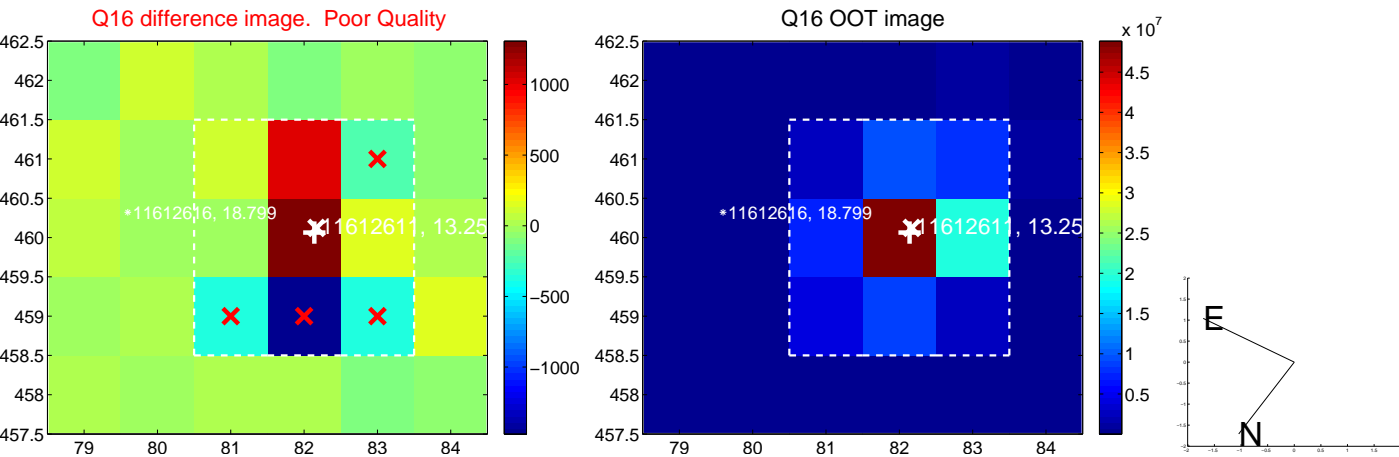
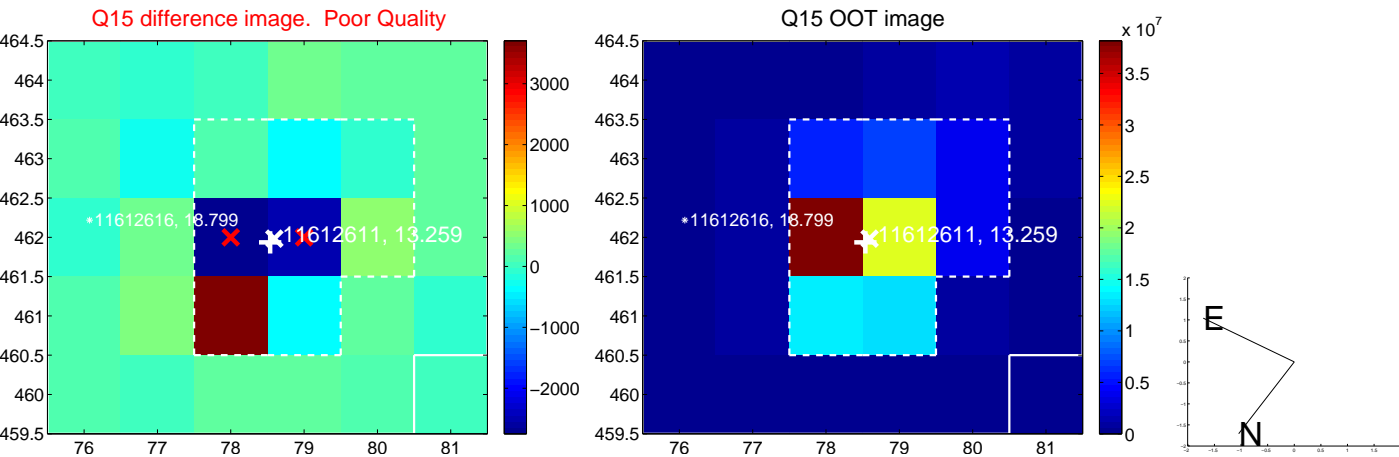
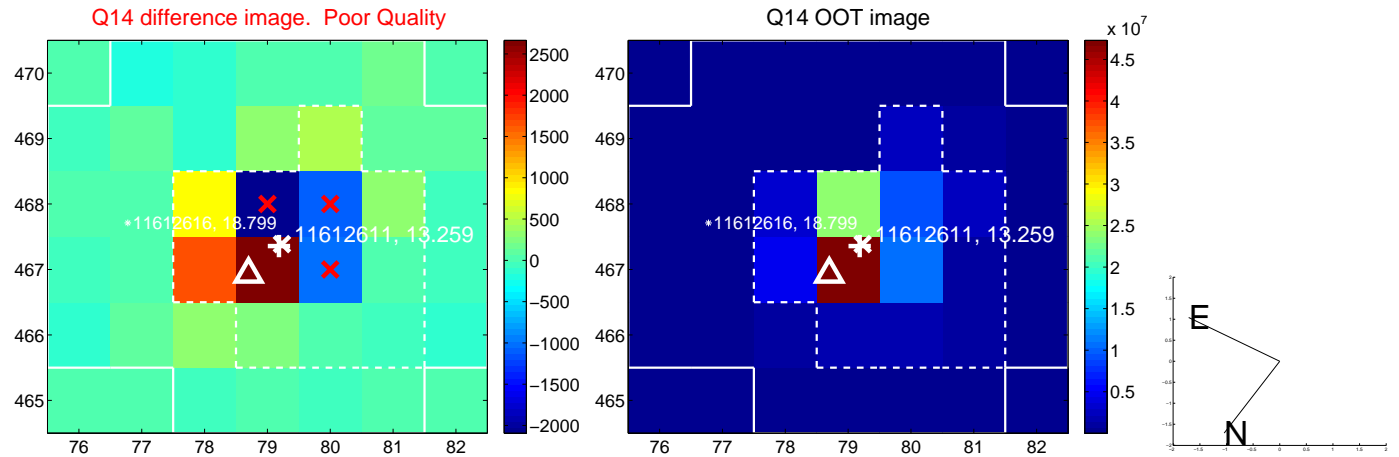
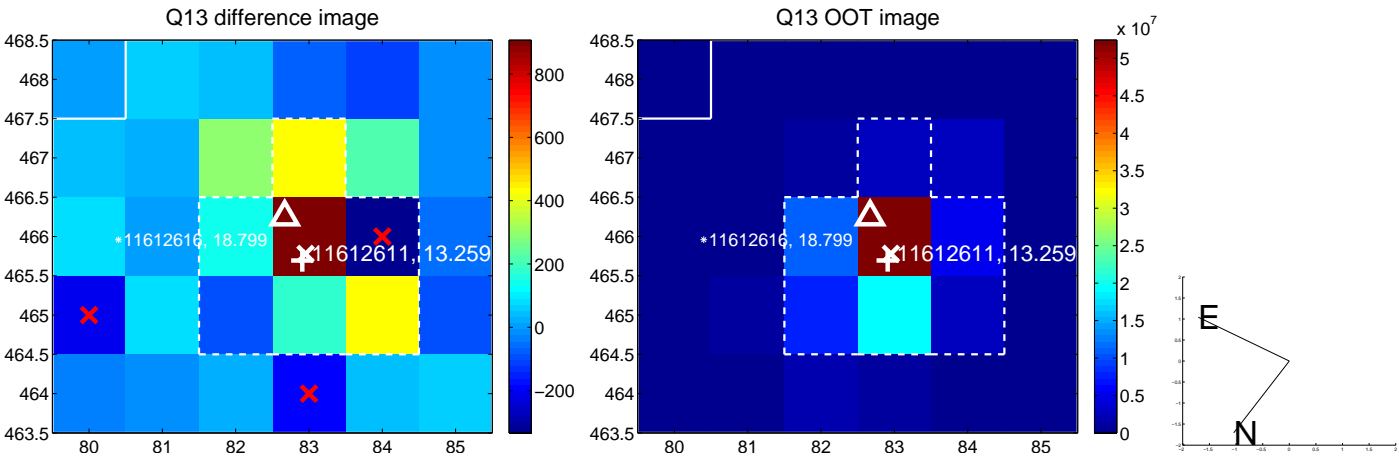
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



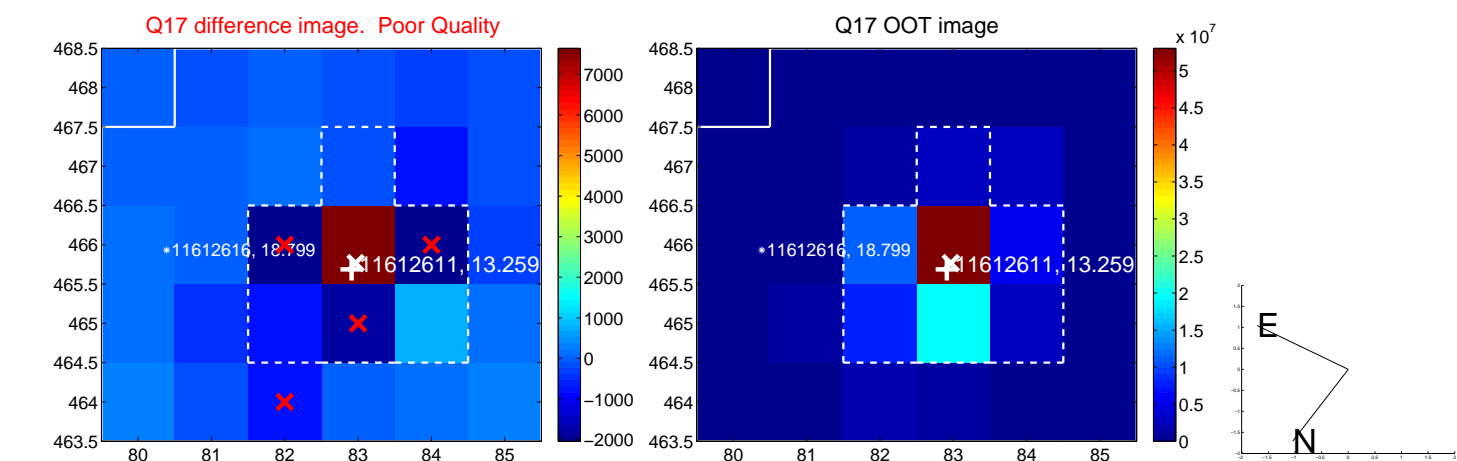
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



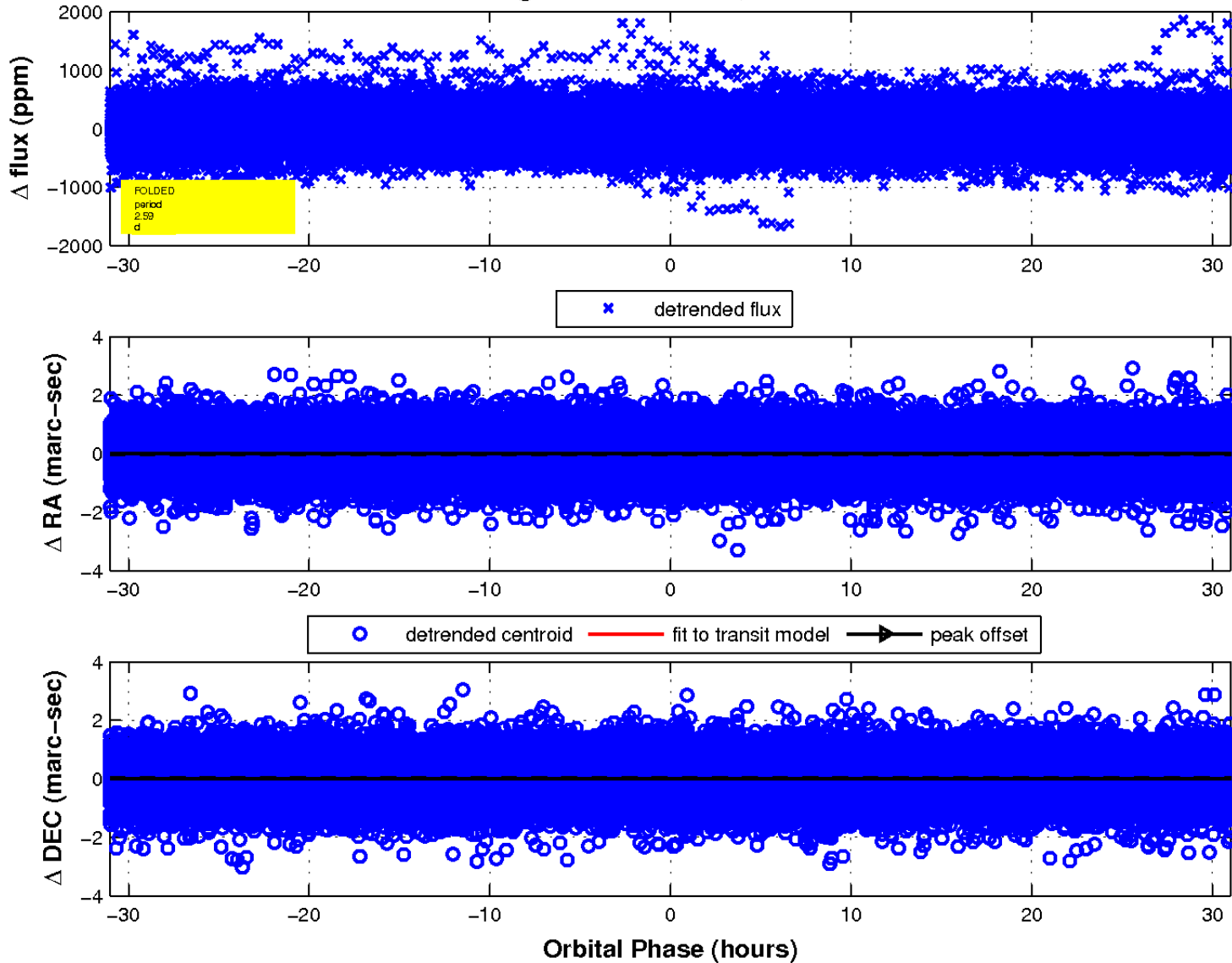
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 5 of 5



UKIRT Image

