

KIC 011014282

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})
011014282-01	OBS	No	1.616110	132.761179	20.1	3.282	10.3	7.7	3.18	6649	1.66	18307.82
011014282-02	OBS	No	1.616490	131.625907	21.9	3.296	9.6	9.0	3.18	6649	1.75	18302.09
011014282-03	OBS	No	1.616513	132.197342	25.4	3.020	10.8	10.9	3.18	6649	2.00	18301.73
011014282-04	OBS	No	32.589379	144.236313	203.8	2.382	8.5	8.9	3.18	6649	4.86	333.55
011014282-05	OBS	No	107.551991	156.265207	274.6	1.673	8.7	7.4	3.18	6649	6.15	67.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011014282-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011014282-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
011014282-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

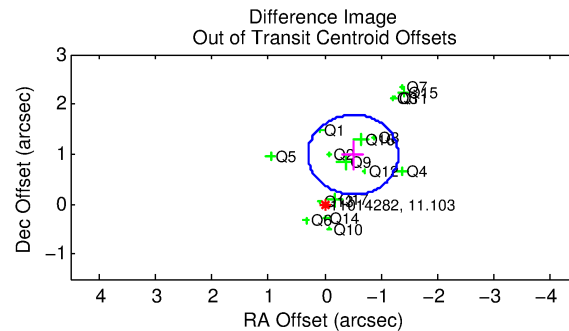
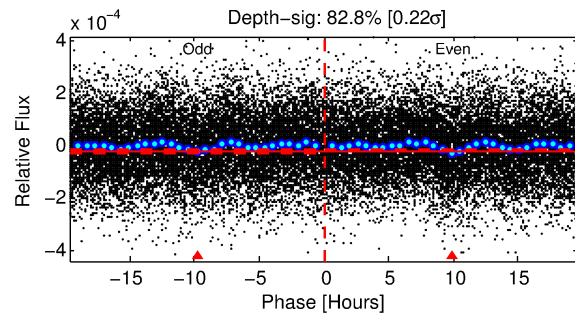
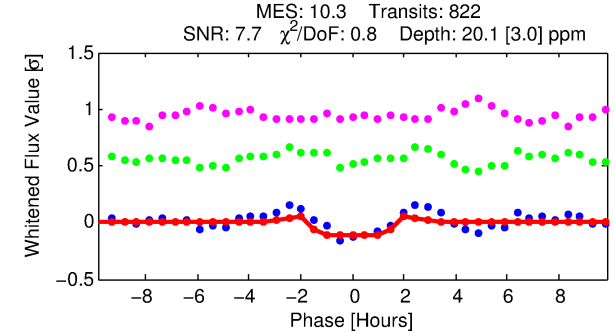
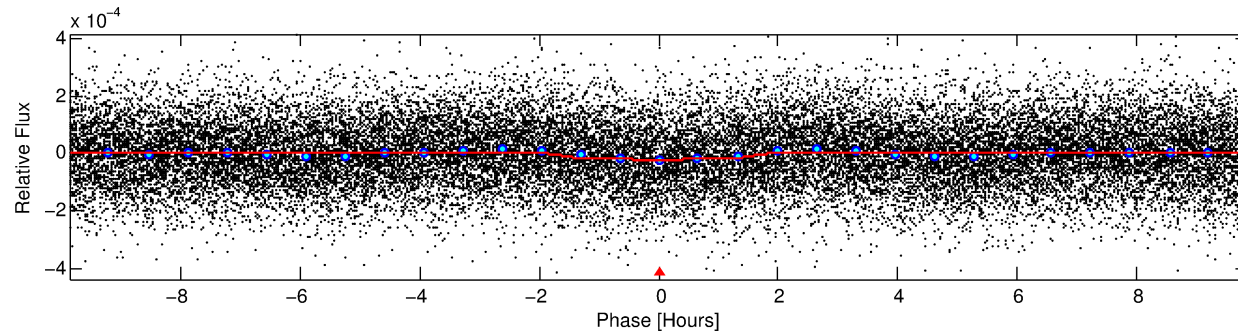
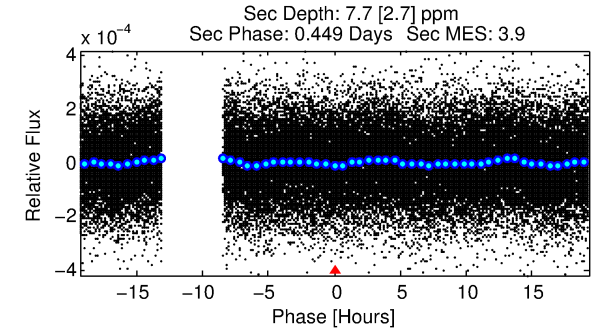
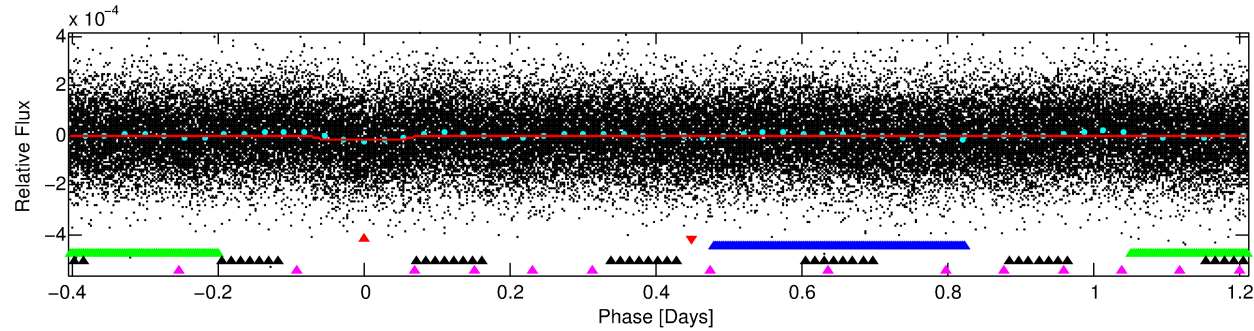
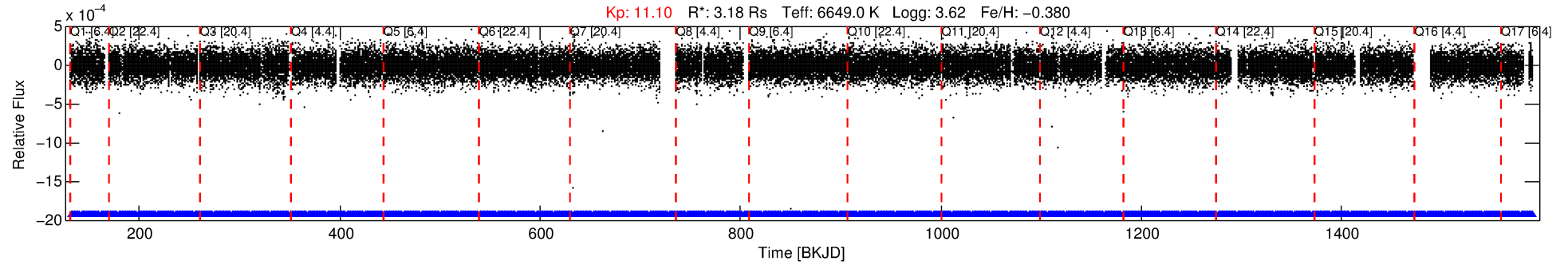
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011014282-01

No Significant Match Found

DV One-Page Summary

KIC: 11014282 Candidate: 1 of 5 Period: 1.616 d



DV Fit Results:

Period = 1.61611 [0.00001] d
Epoch = 132.7612 [0.0031] BKJD
Rp/R* = 0.0048 [0.0010]
a/R* = 1.92 [1.61]
b = 0.90 [0.24]
Seff = 18307.82 [10753.15]
Teq = 2966 [436] K
Rp = 1.66 [0.73] Re
a = 0.0311 [0.0113] AU
Ag = 1.48 [1.17] [0.41σ]
Teffp = 5056 [698] K [2.54σ]

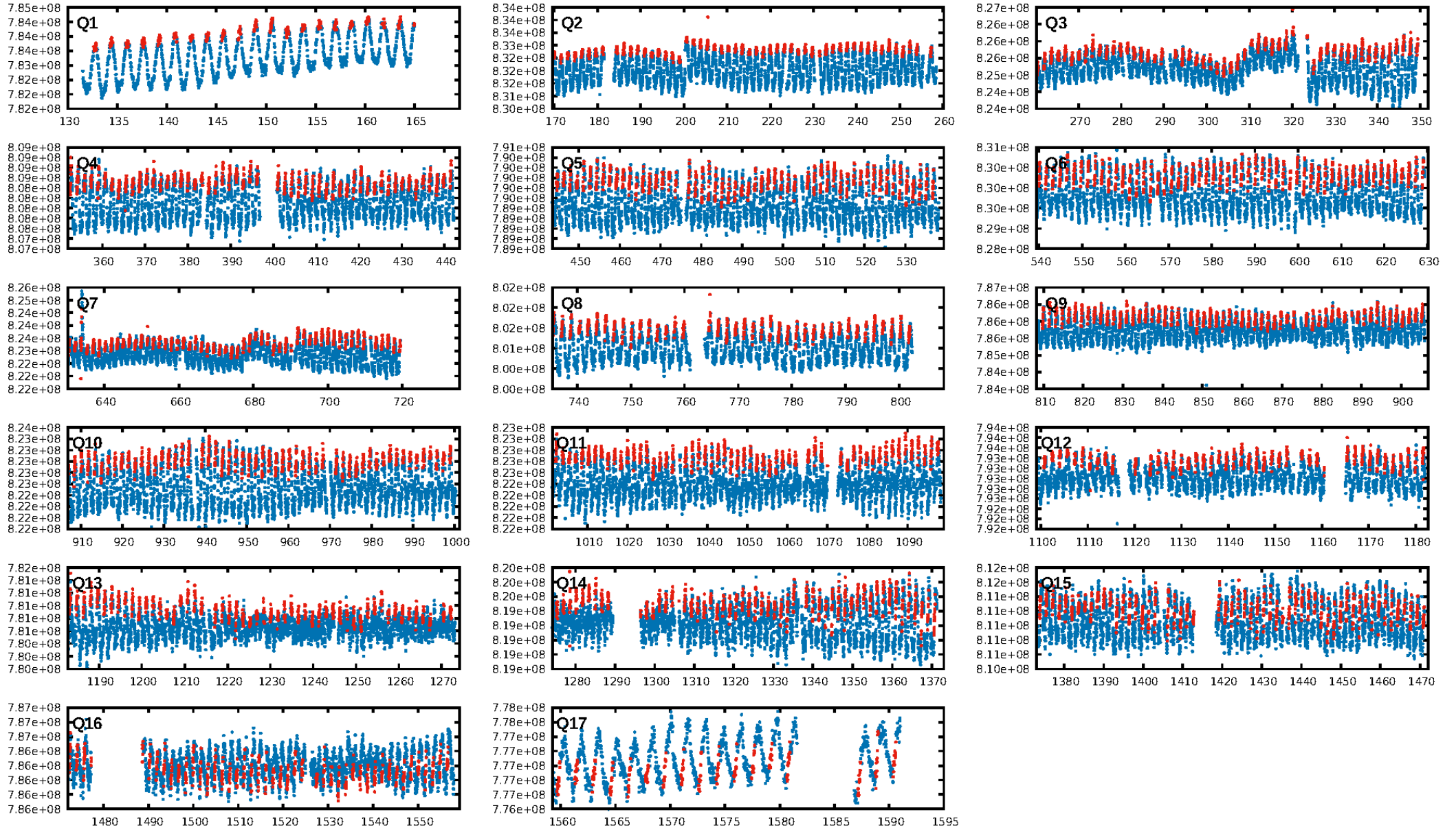
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.18e-19
RollingBand-fgt: 1.00 [785/785]
GhostDiagnostic-chr: -2.537
Centroid-sig: 28.0%
Centroid-so: 0.799 arcsec [1.15σ]
OotOffset-rm: 1.110 arcsec [4.17σ]
KicOffset-rm: 1.200 arcsec [4.17σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 0.53 [9/17]

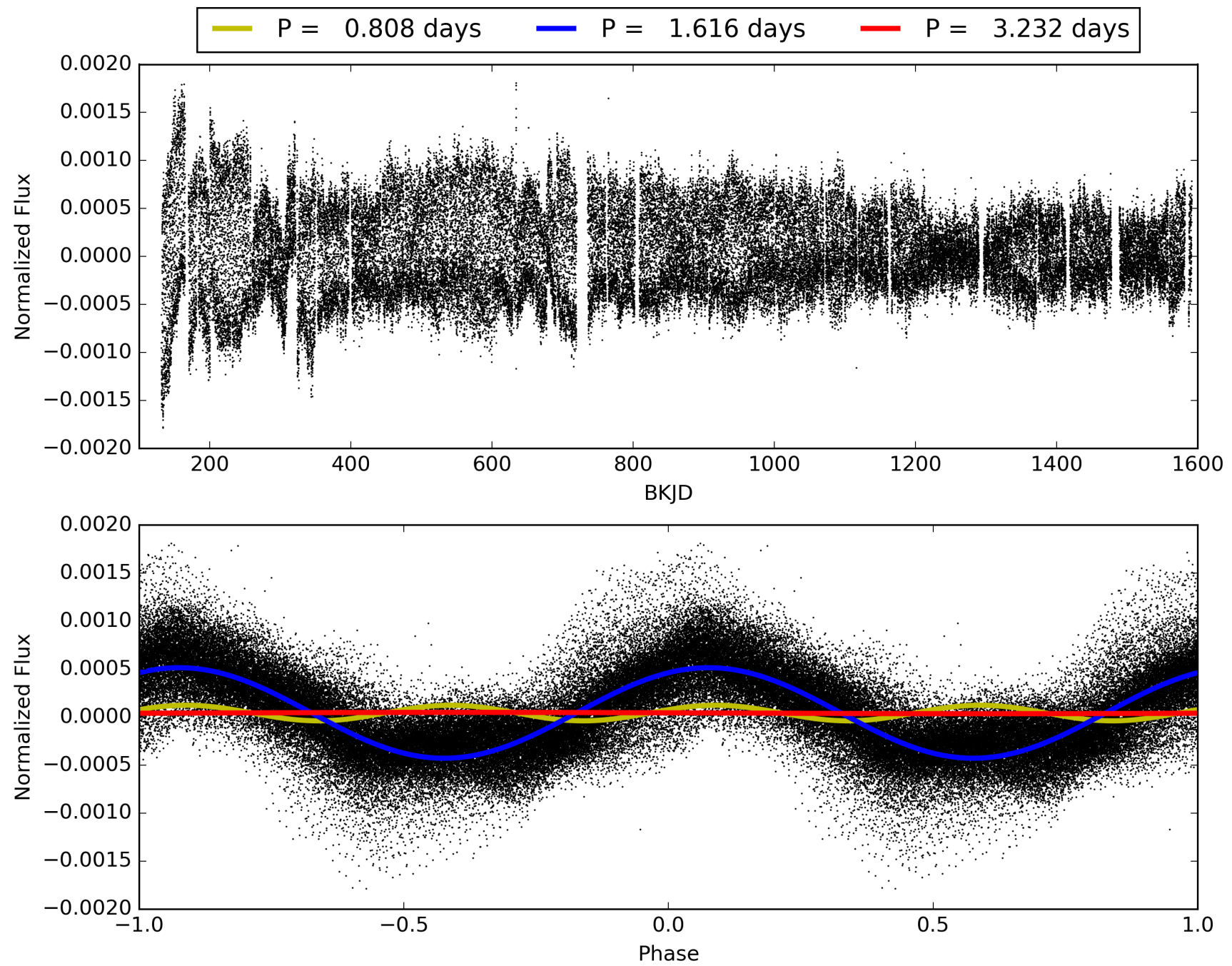
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:51:05 Z

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

TCE 011014282-01, PDC Light Curves

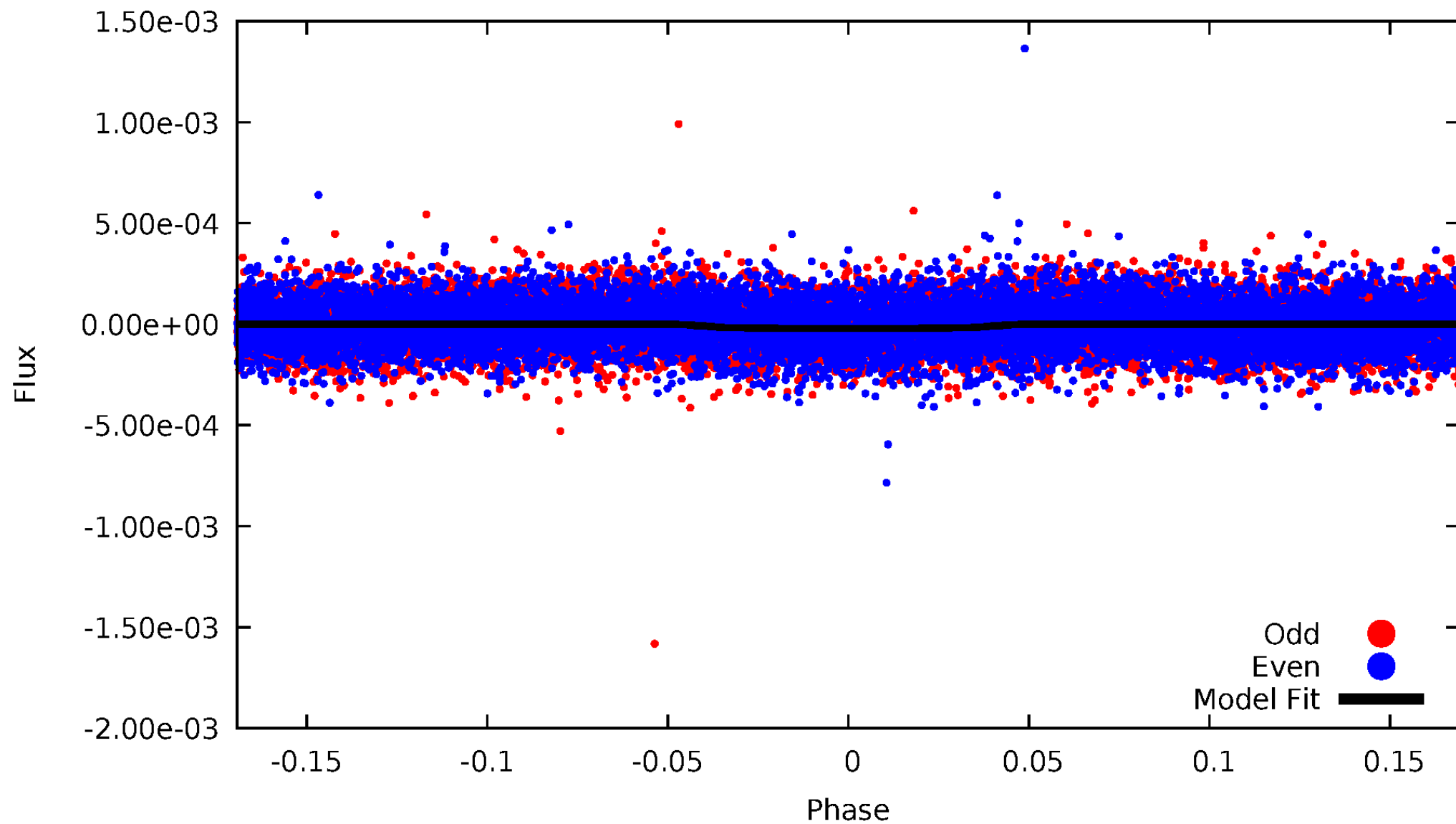


TCE 011014282-01



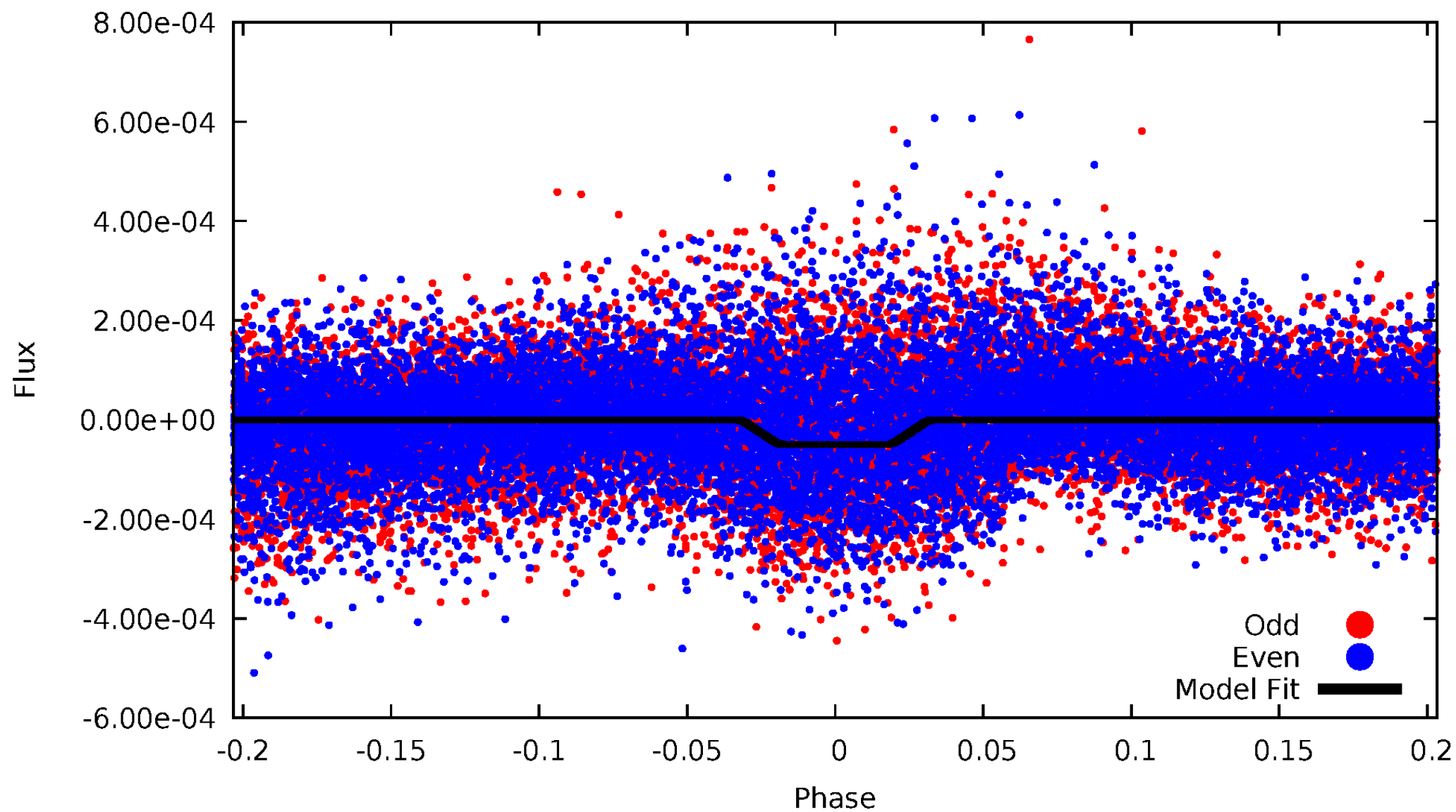
DV Odd/Even

TCE 011014282-01

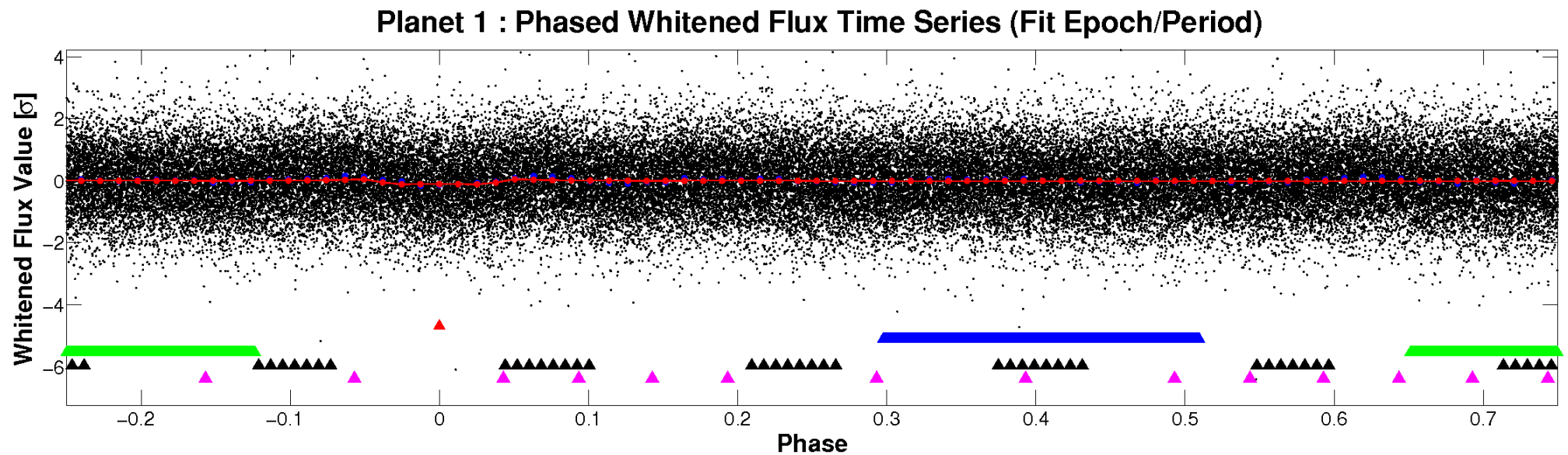
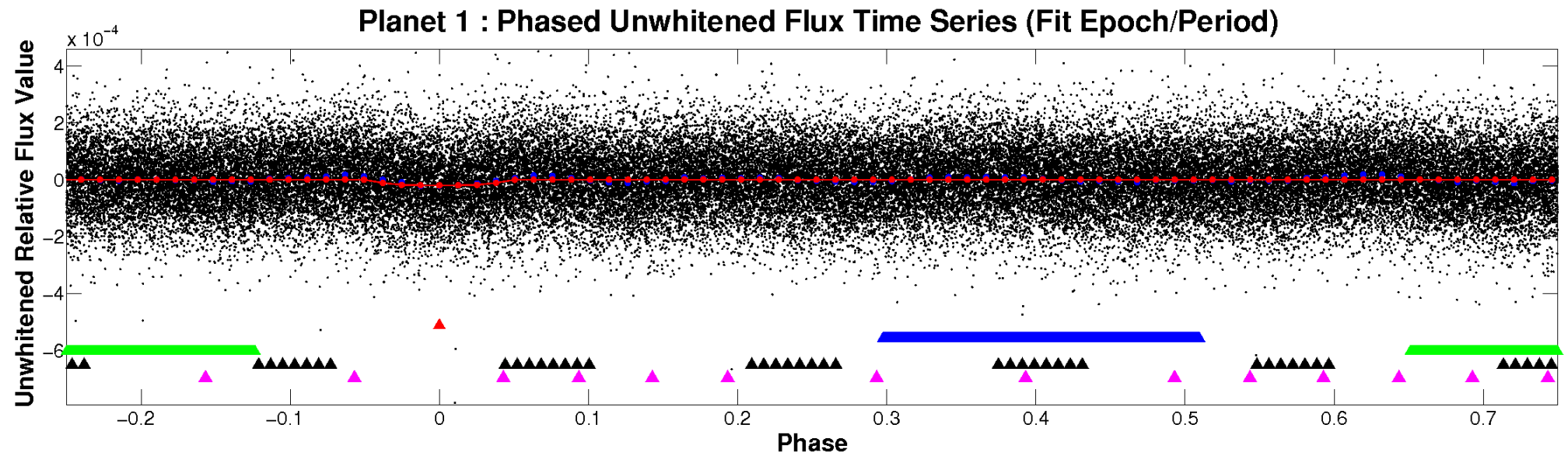


ALT Odd/Even

TCE 011014282-01

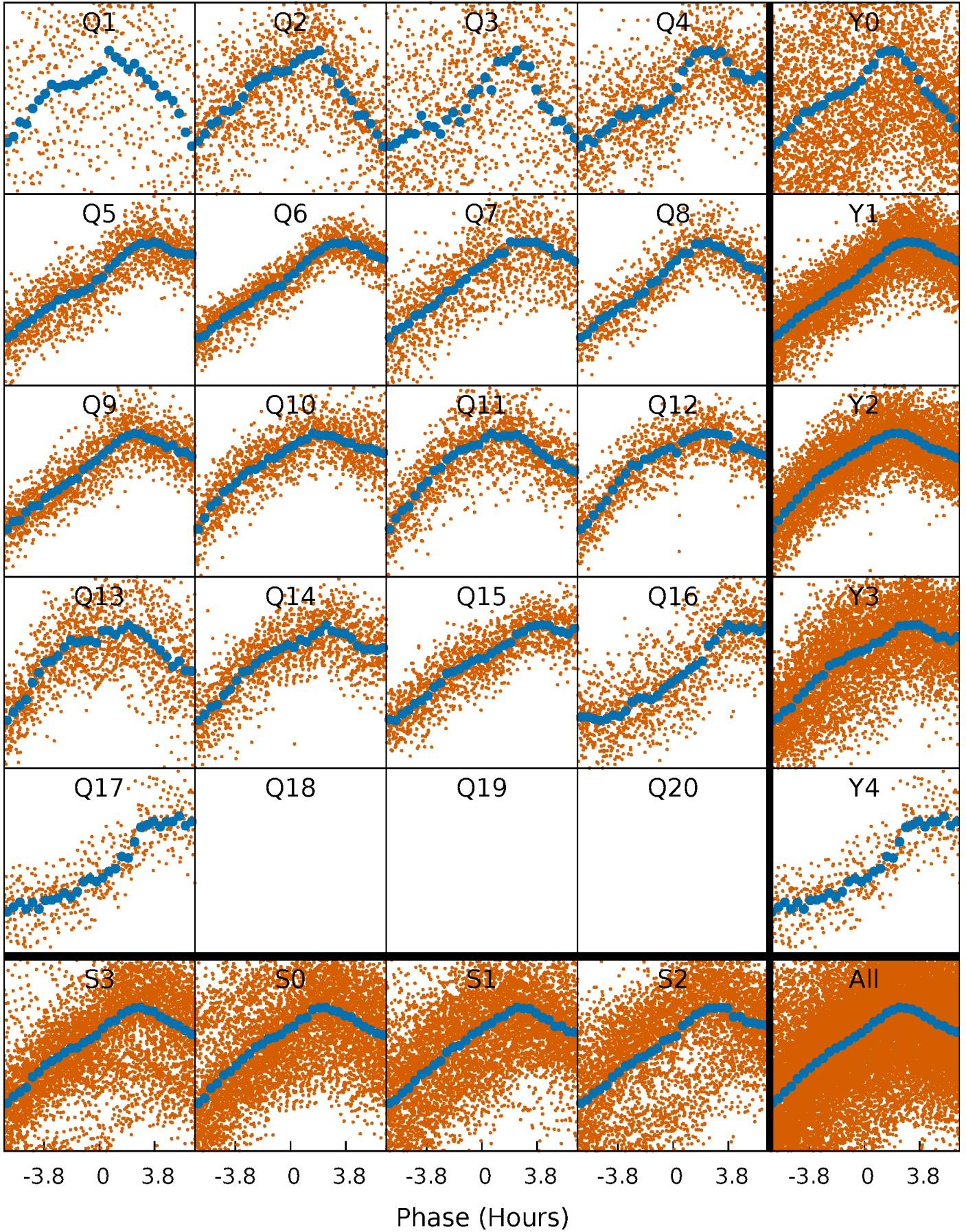


Non-Whitened Vs. Whitened Light Curve



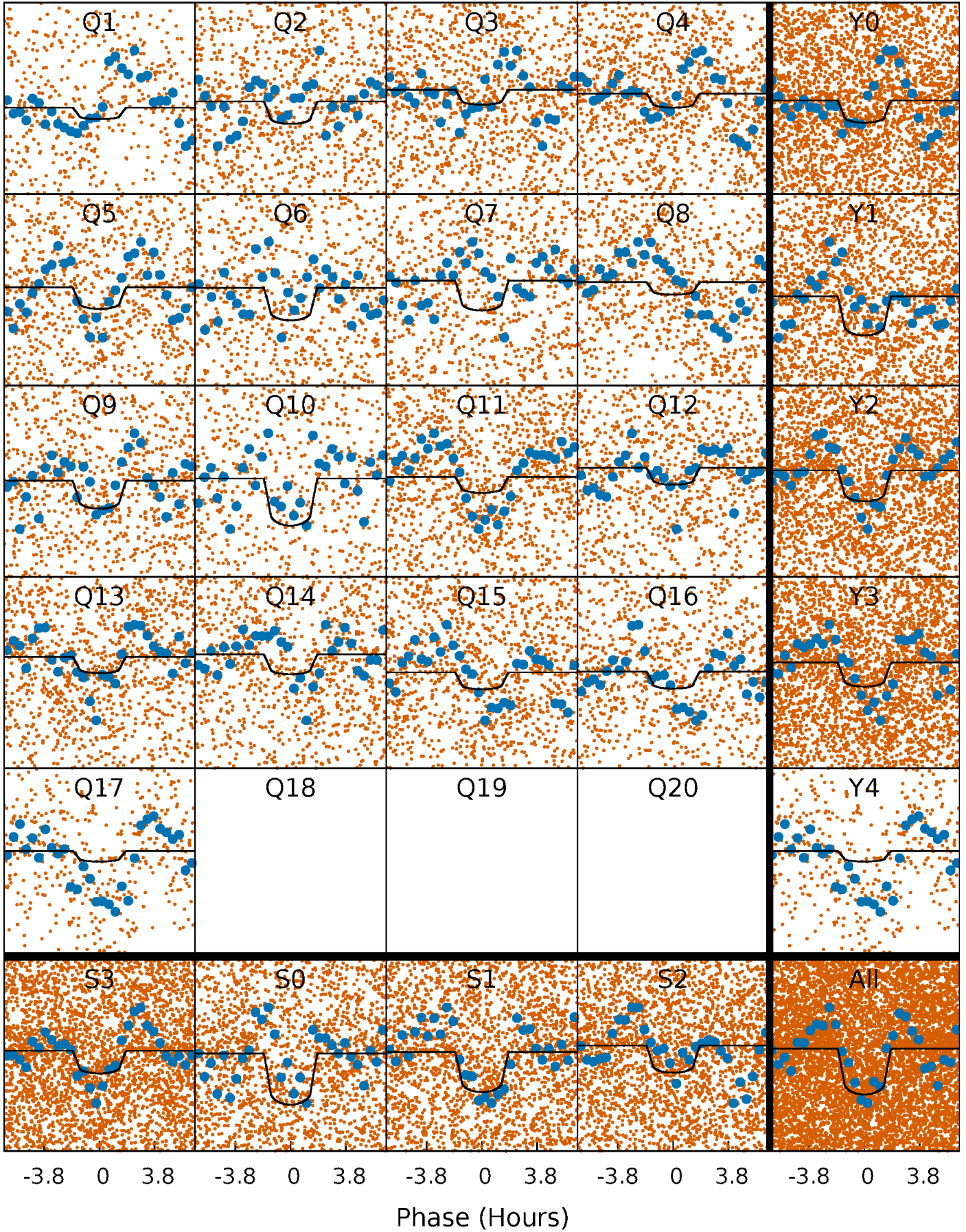
PDC Quarter-Phased Transit Curves

TCE 011014282-01 P= 1.616110 Days $T_0=132.761178$ (BKJD)



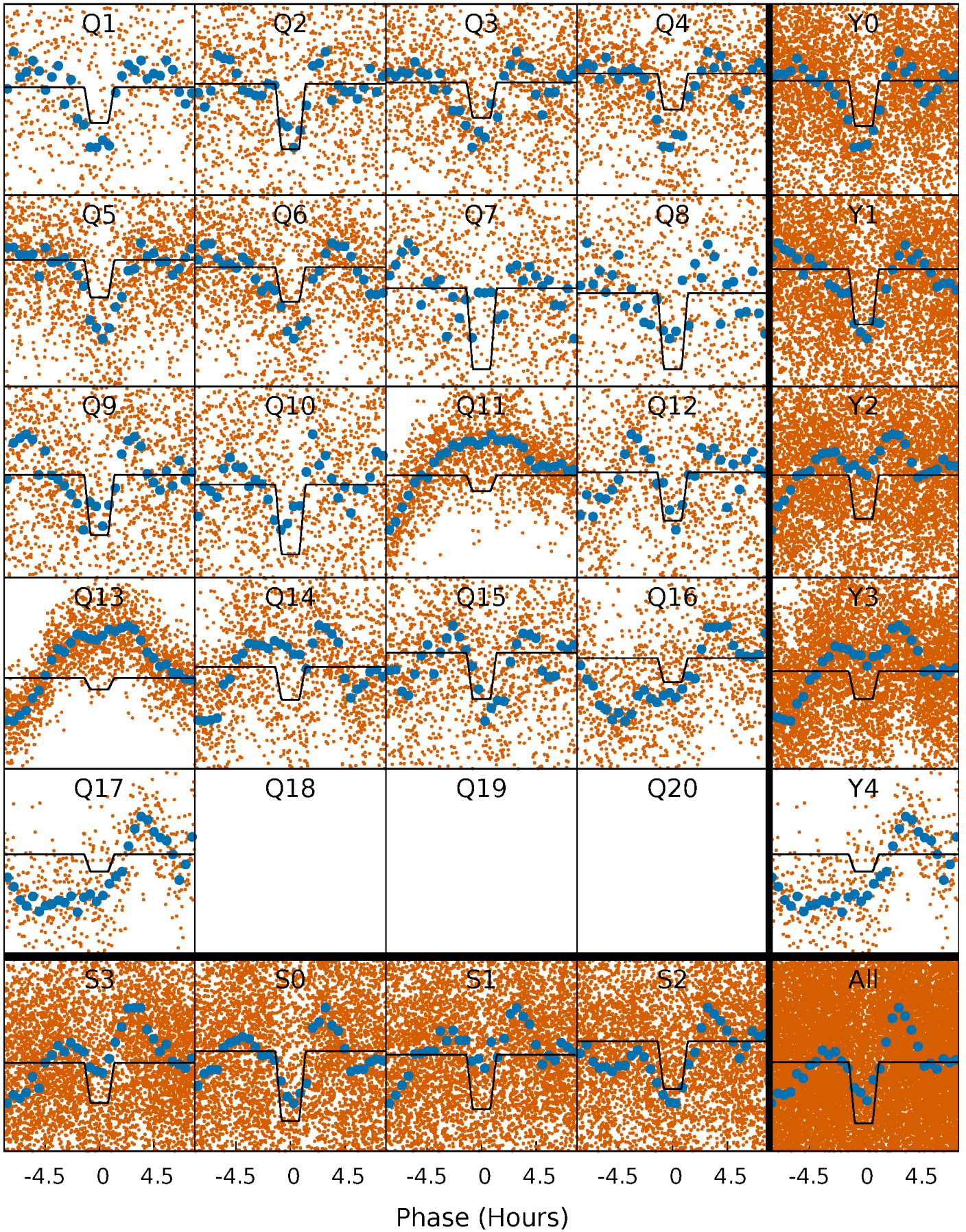
DV Quarter-Phased Transit Curves

TCE 011014282-01 P= 1.616110 Days $T_0=132.761178$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

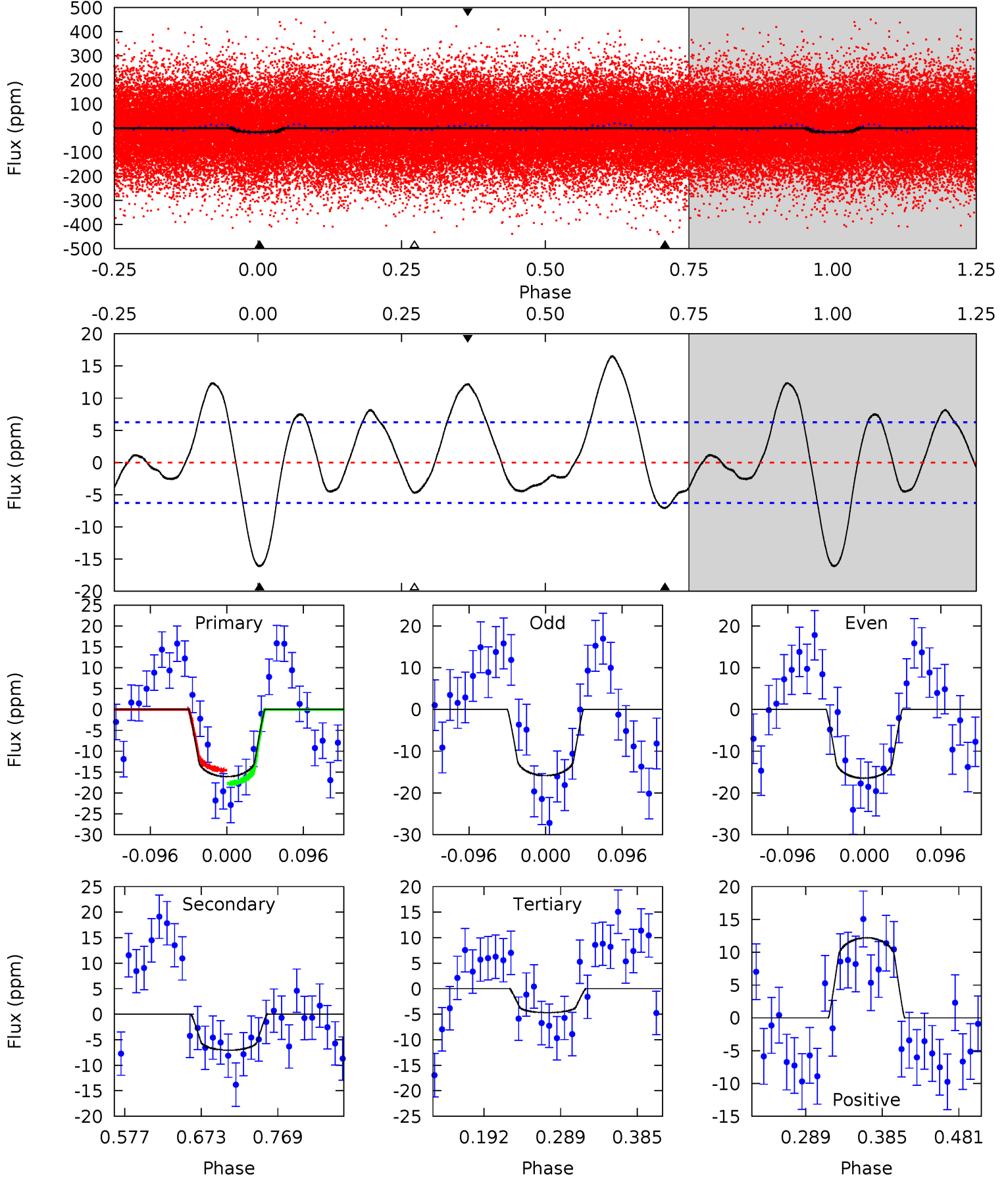
TCE 011014282-01 P= 1.616153 Days $T_0=132.724201$ (BKJD)



DV Model-Shift Uniqueness Test

011014282-01, P = 1.616110 Days, E = 131.145068 Days

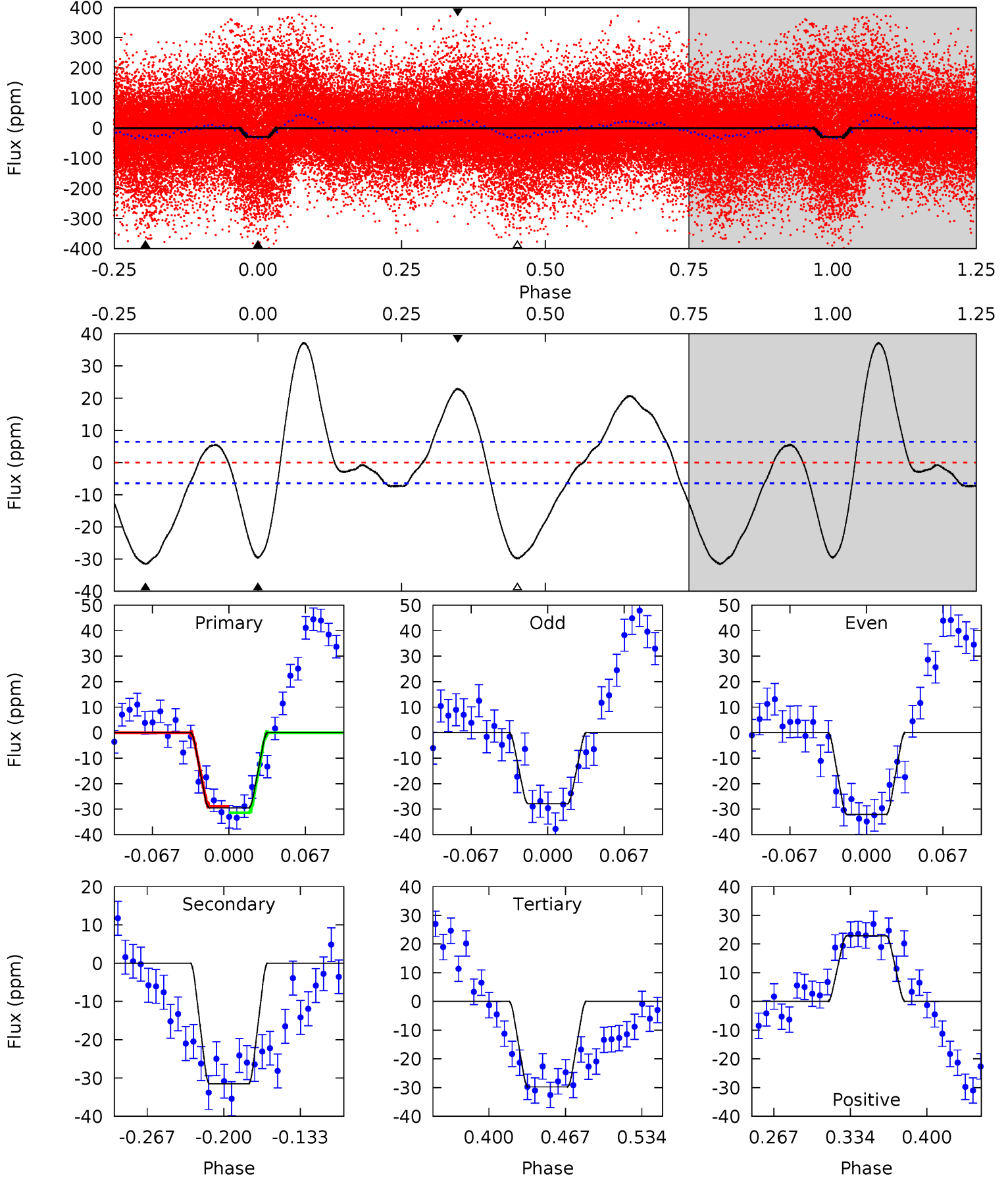
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	5.14	3.42	8.89	4.57	1.66	3.85	8.30	2.84	1.72	-3.75	0.23	0.89	0.51	1.17



Alt Model-Shift Uniqueness Test

011014282-01, P = 1.616153 Days, E = 131.108048 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	22.7	21.5	16.5	4.65	1.83	10.7	-0.19	4.79	1.25	6.22	1.52	0.67	0.54	0.91



Stellar Parameters For KIC 011014282

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6649^{+150}_{-183}	$3.619^{+0.336}_{-0.084}$	$-0.380^{+0.350}_{-0.250}$	$3.177^{+0.411}_{-1.232}$	$1.532^{+0.223}_{-0.334}$	$0.067^{+0.172}_{-0.018}$
	+2%/-3%	+9%/-2%	+92%/-66%	+13%/-39%	+15%/-22%	+255%/-27%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011014282-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 1	$1.58^{+0.42}_{-0.43}$	4054^{+213}_{-394}	4741^{+700}_{-457}	$1.524^{+1.318}_{-0.596}$
Alt.	-31 ± 1	$2.32^{+0.49}_{-0.56}$	4070^{+211}_{-382}	5772^{+532}_{-418}	$3.136^{+1.947}_{-0.954}$

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

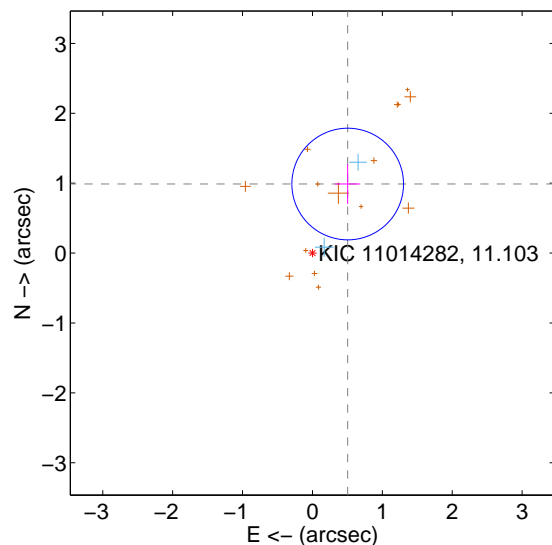
Supplemental centroid analysis for 011014282-01. **Kepler magnitude: 11.10.** Transit SNR 7.69

There are 2 quarters with good PRF difference image offsets

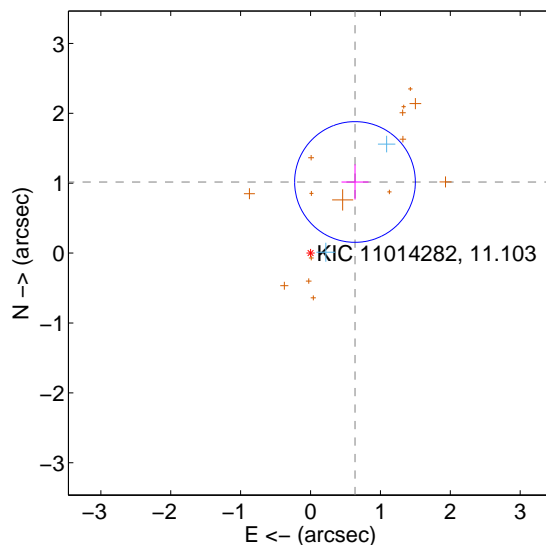
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.110 \pm 0.266	4.17	-0.505 \pm 0.180	0.989 \pm 0.285
PRF-fit source offset from KIC position	1.200 \pm 0.288	4.17	-0.636 \pm 0.193	1.018 \pm 0.252
photometric centroid source offset	0.80 \pm 0.70	1.15	0.47 \pm 0.69	-0.65 \pm 0.70

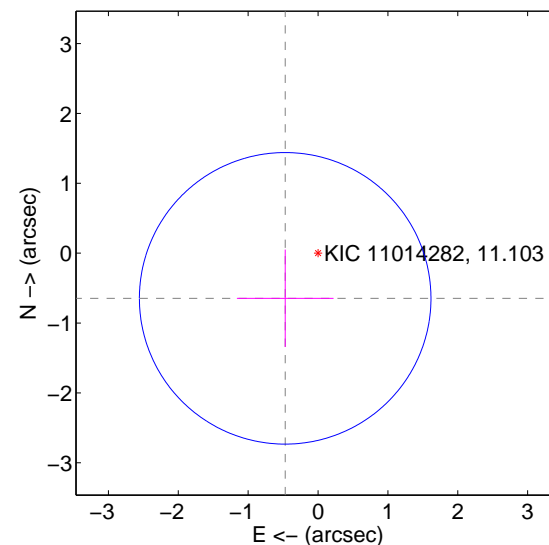
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

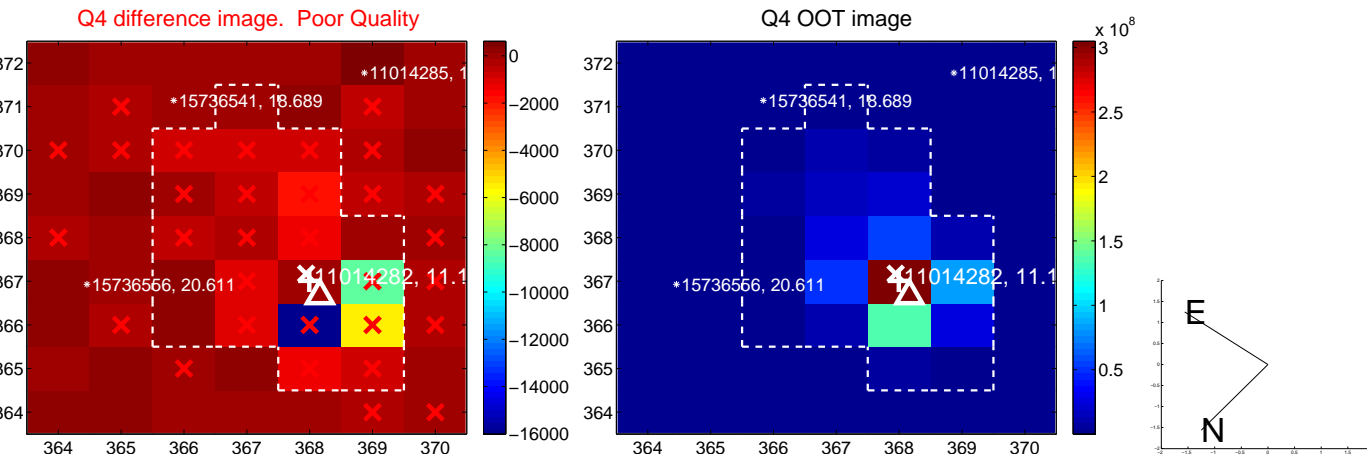
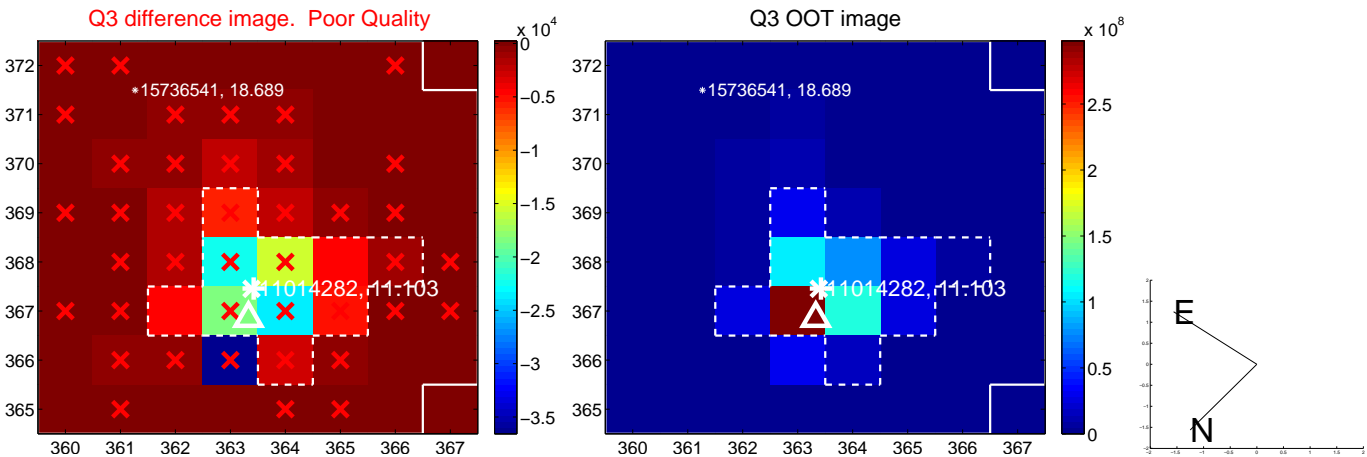
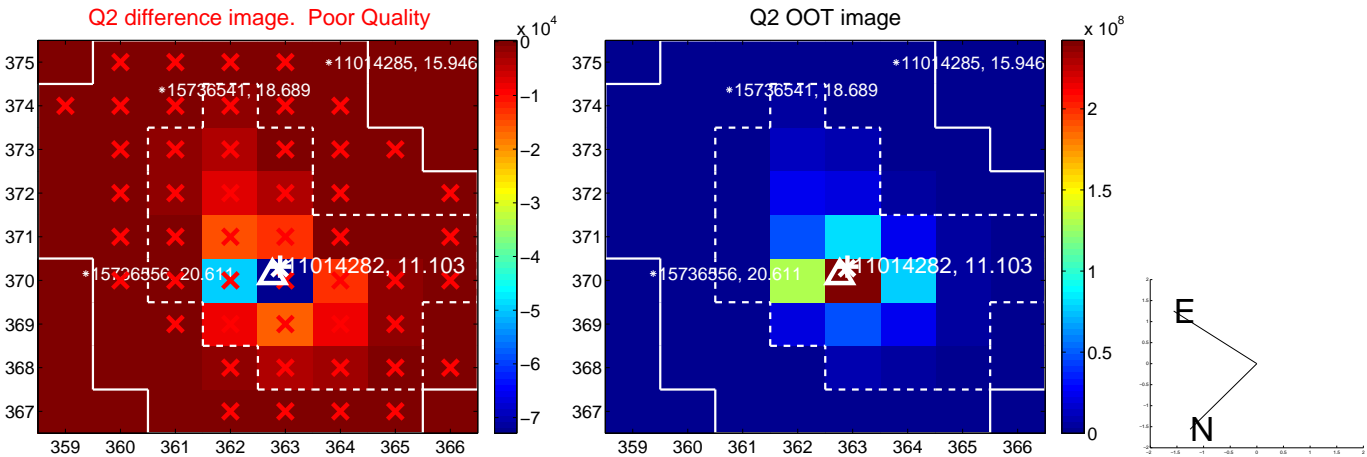
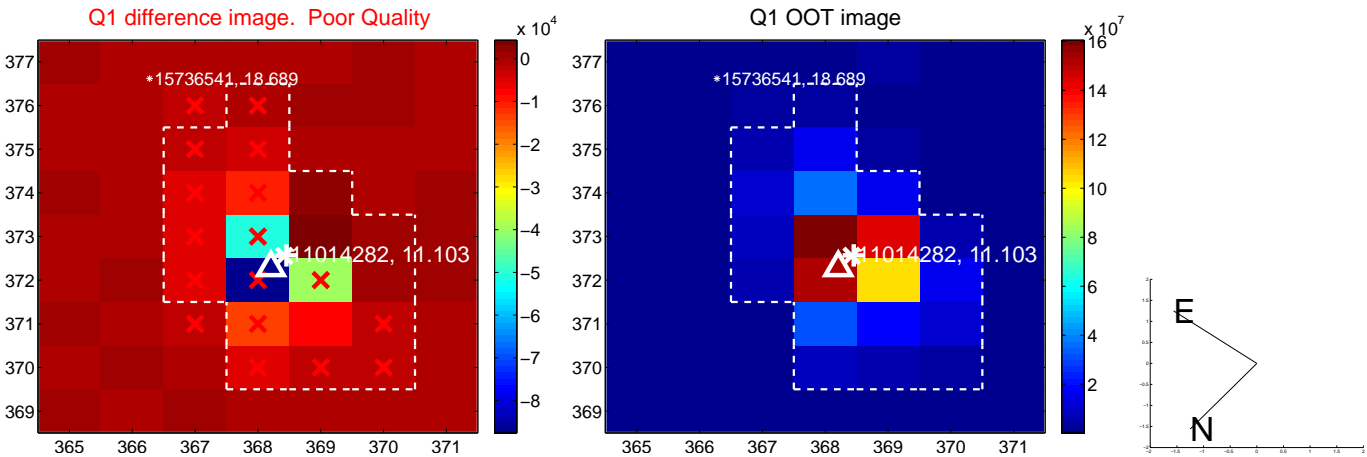


offset from photometric centroids

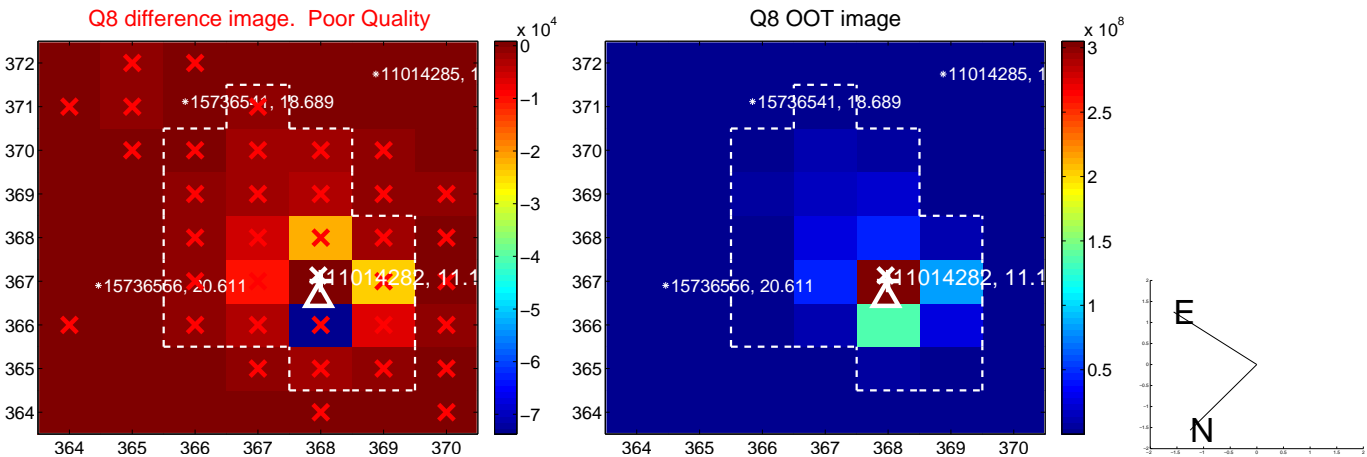
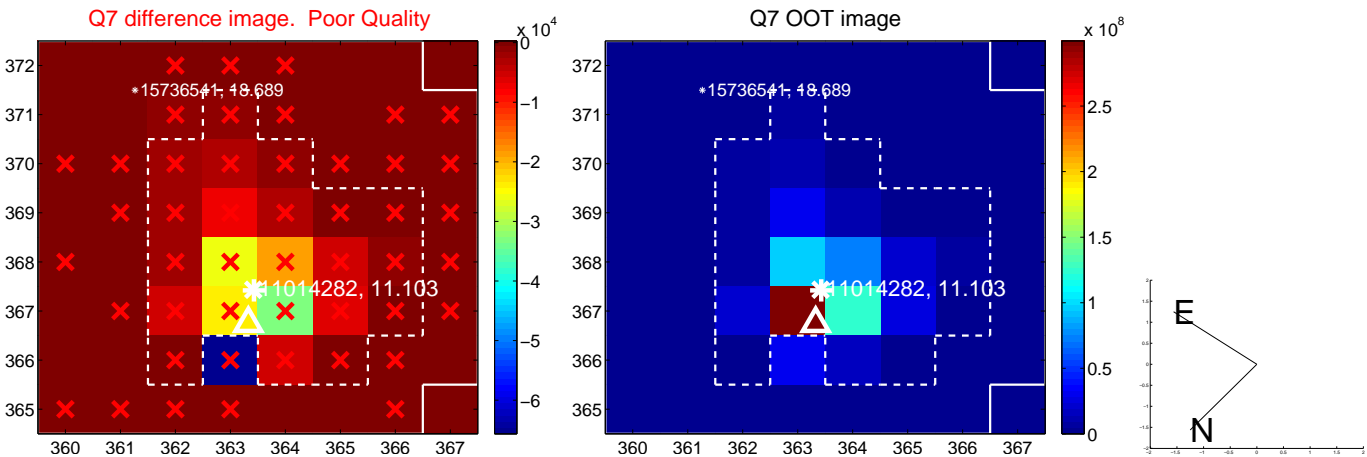
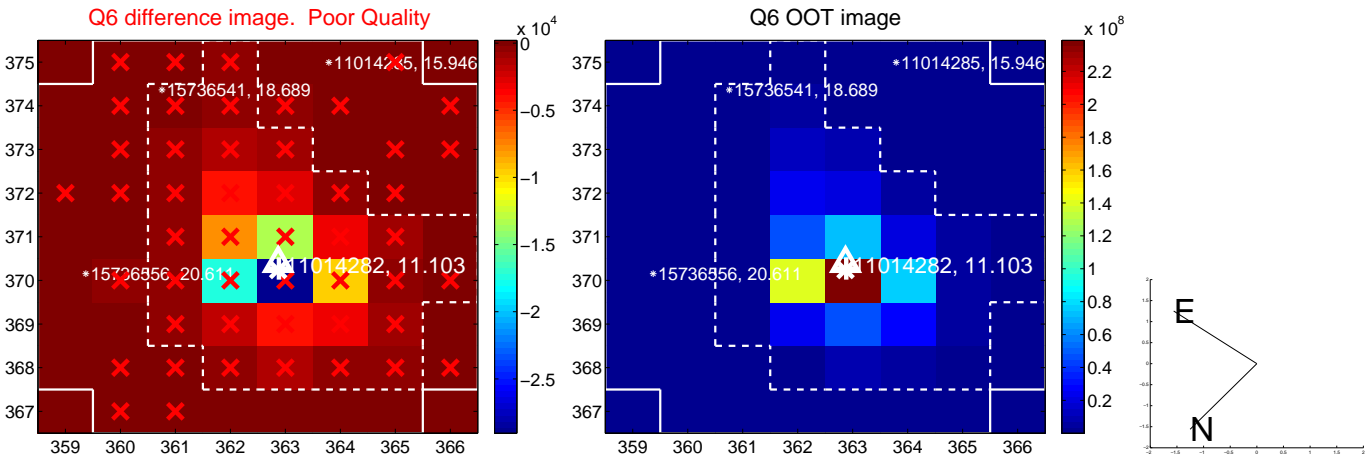
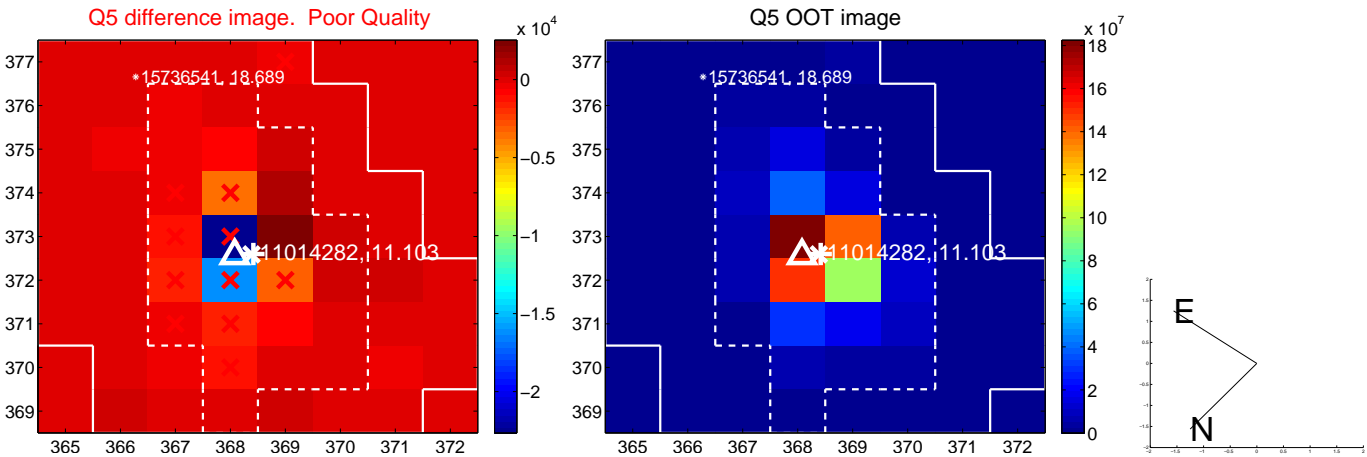


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

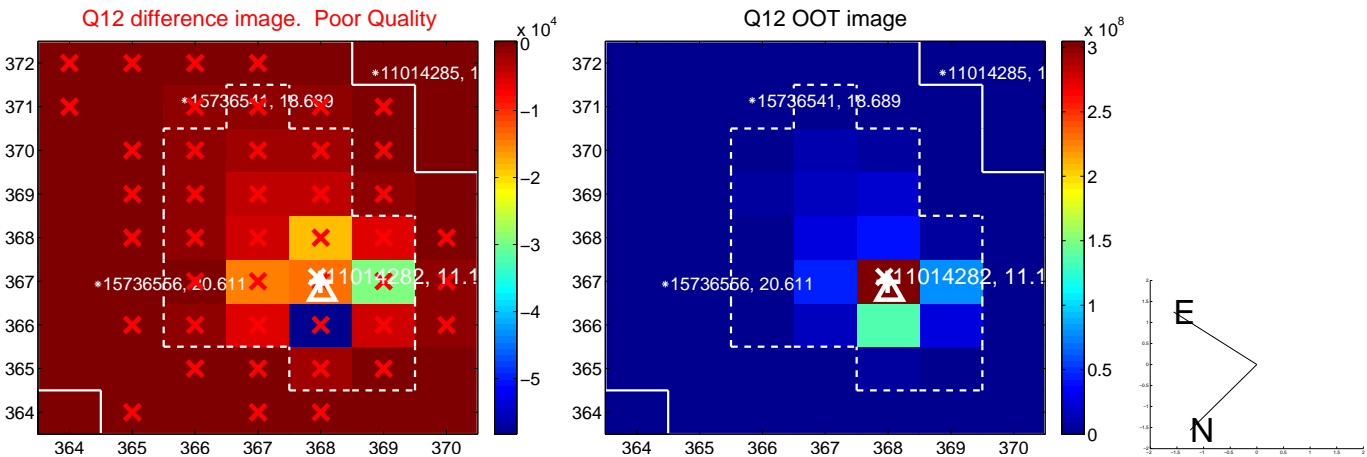
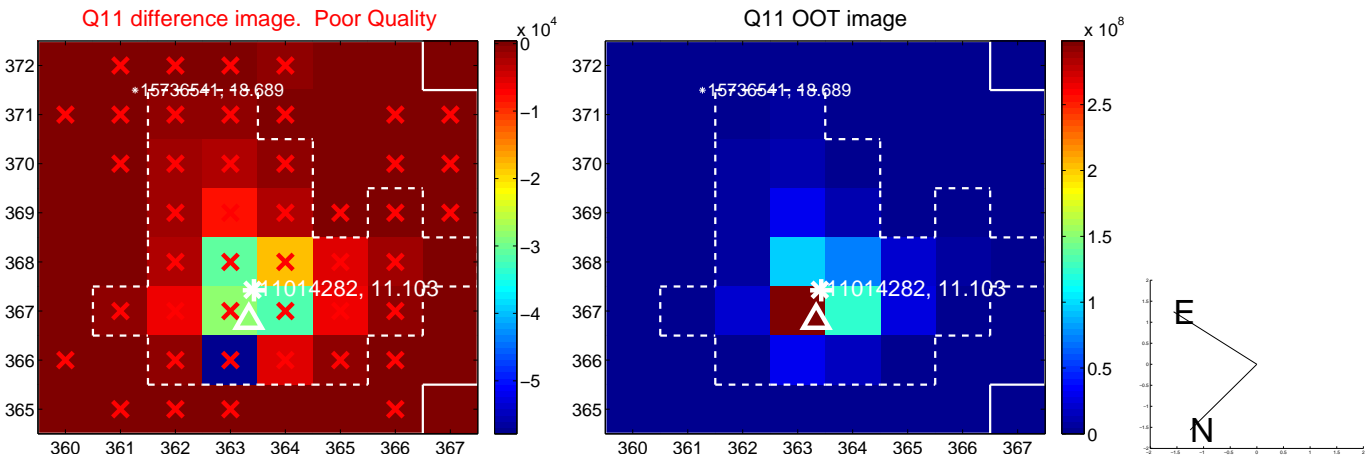
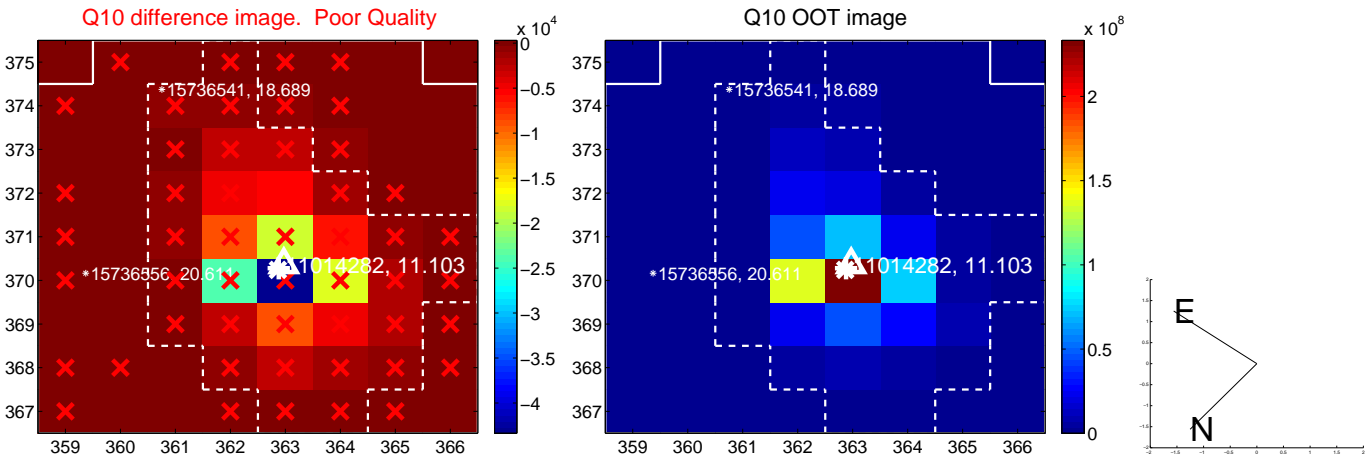
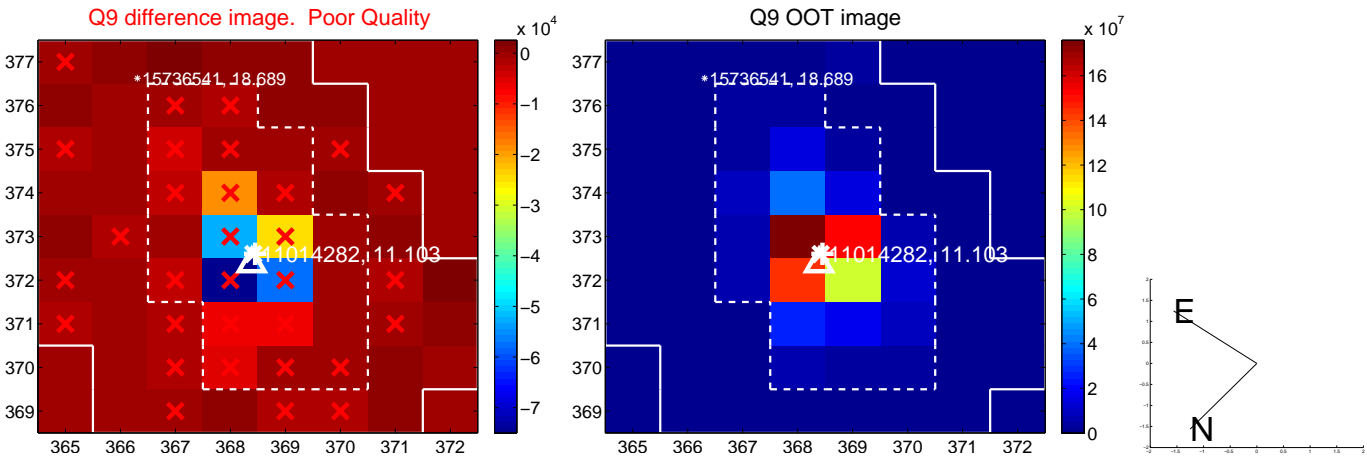
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



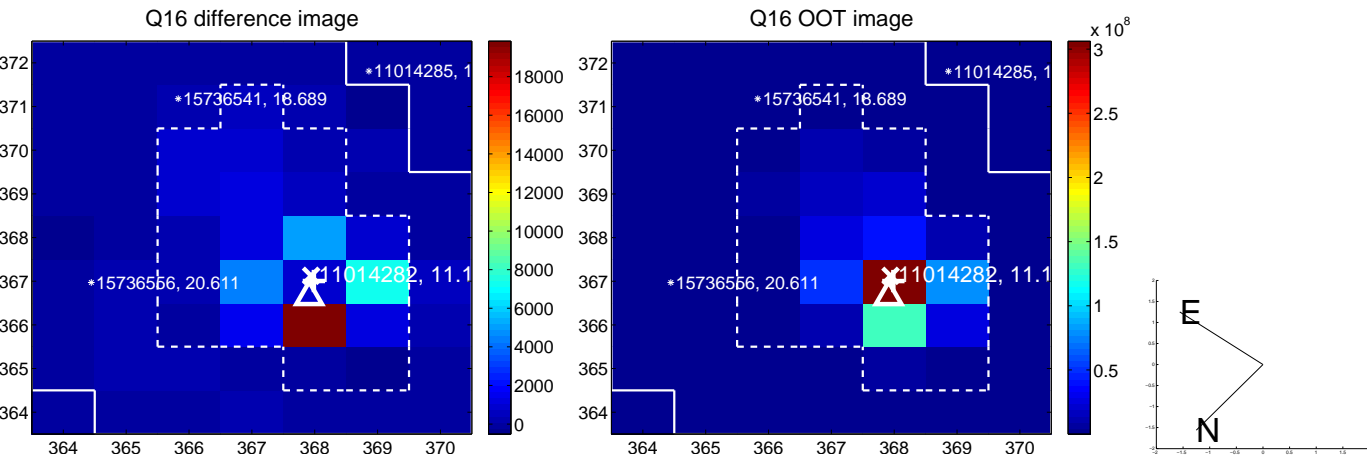
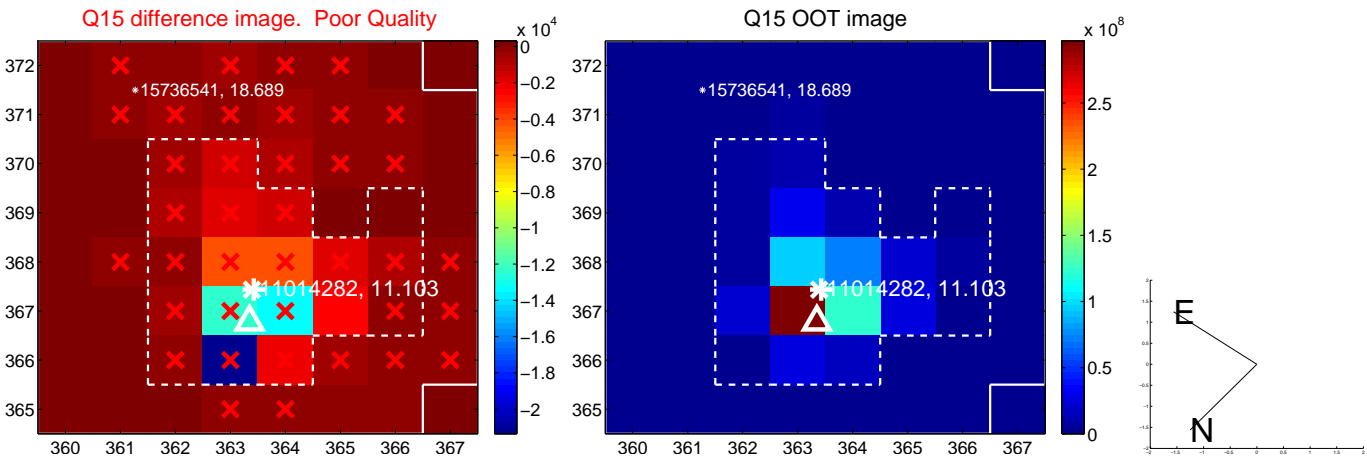
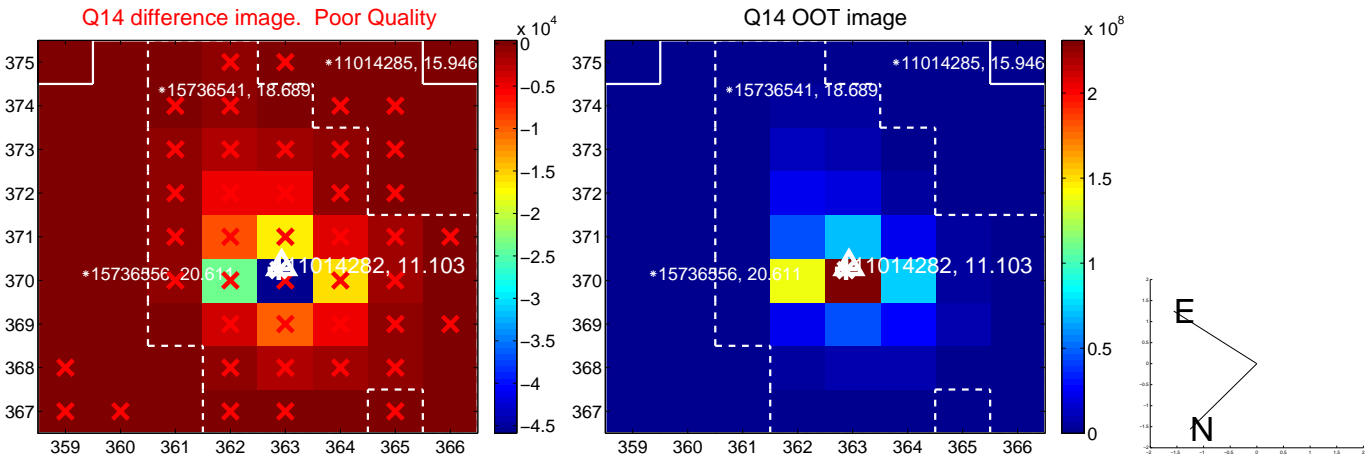
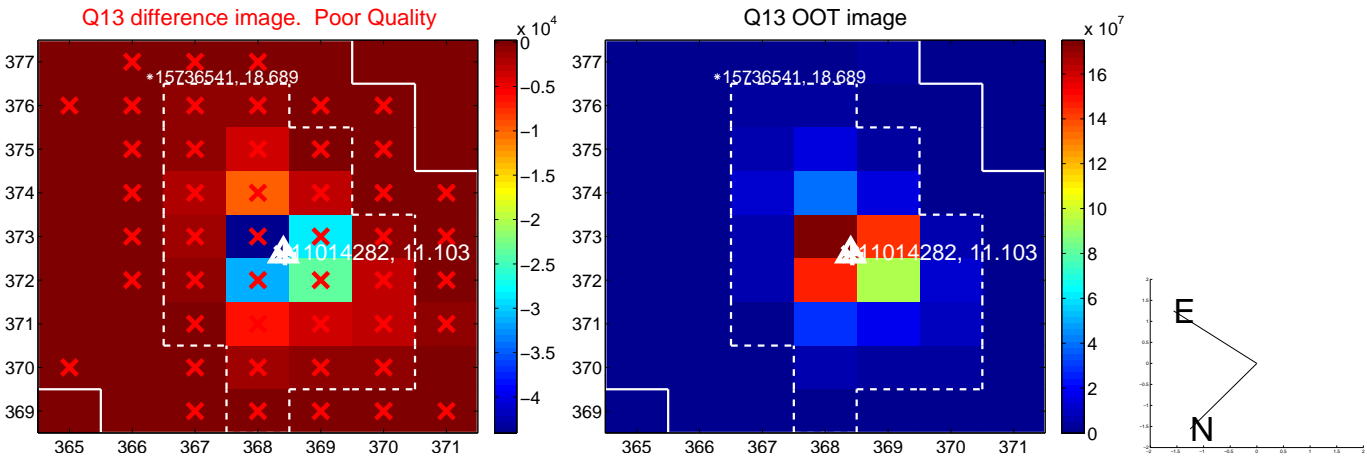
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



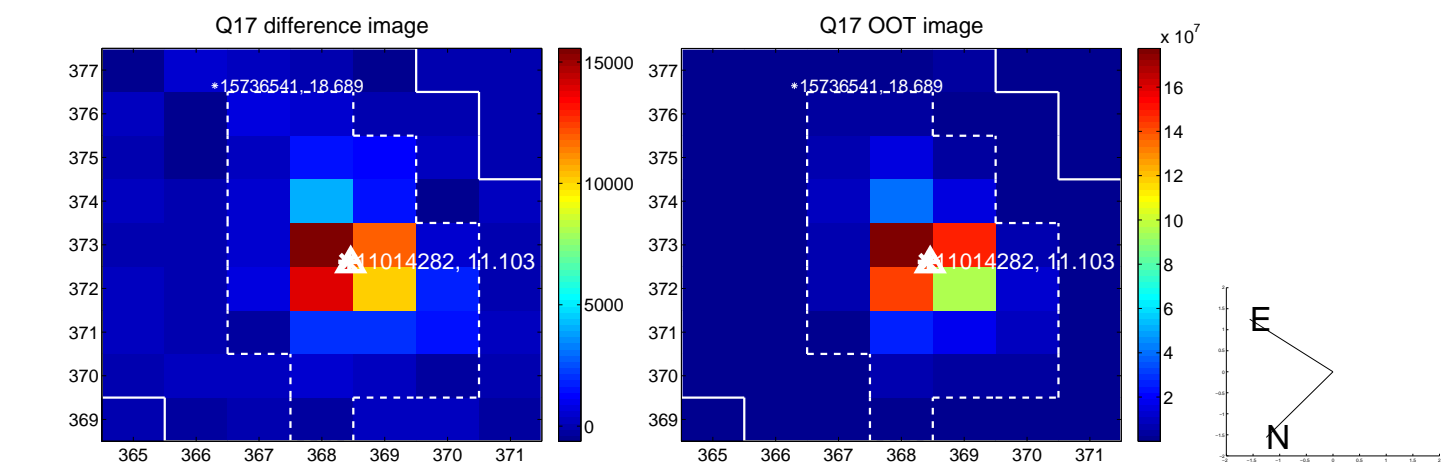
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



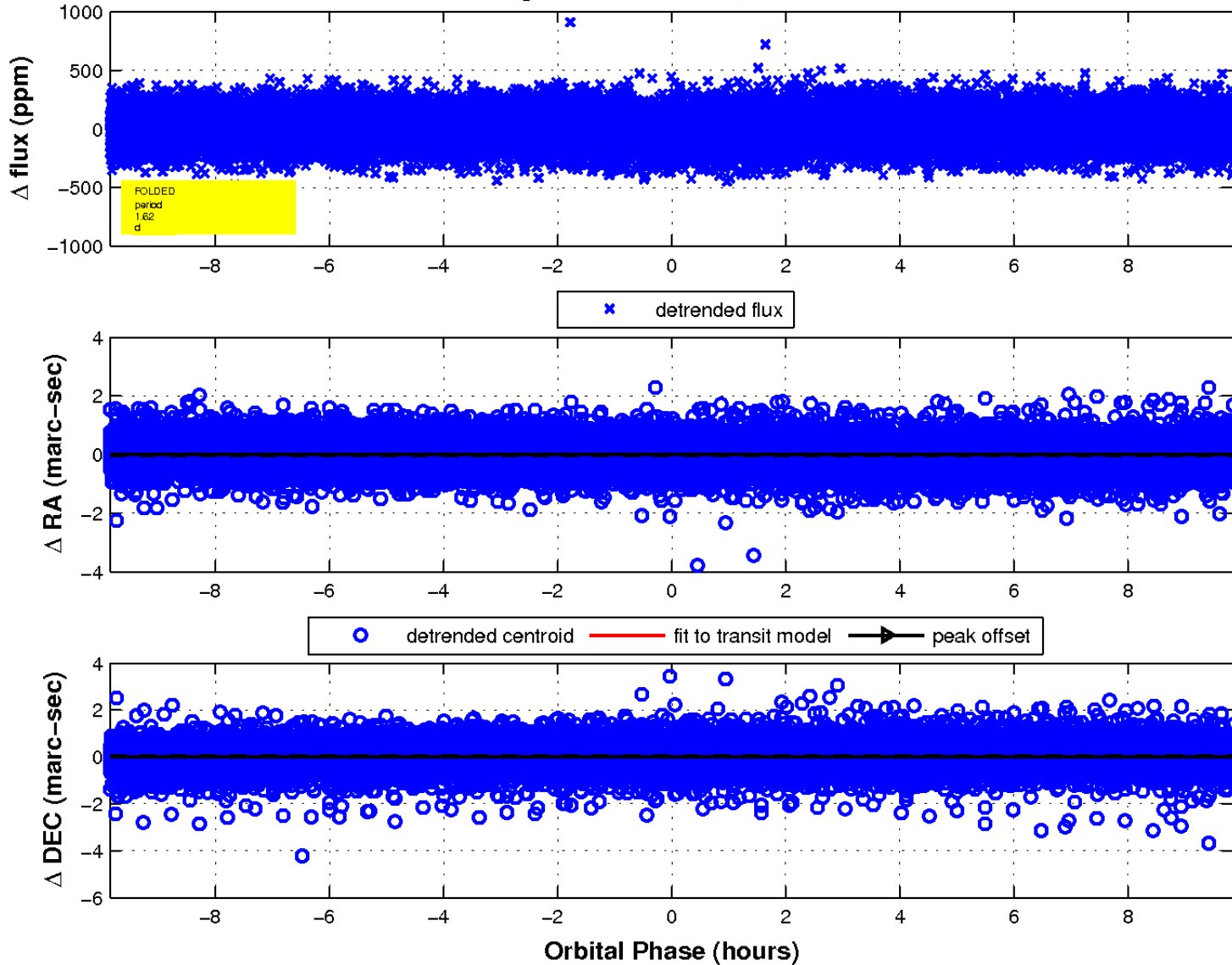
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

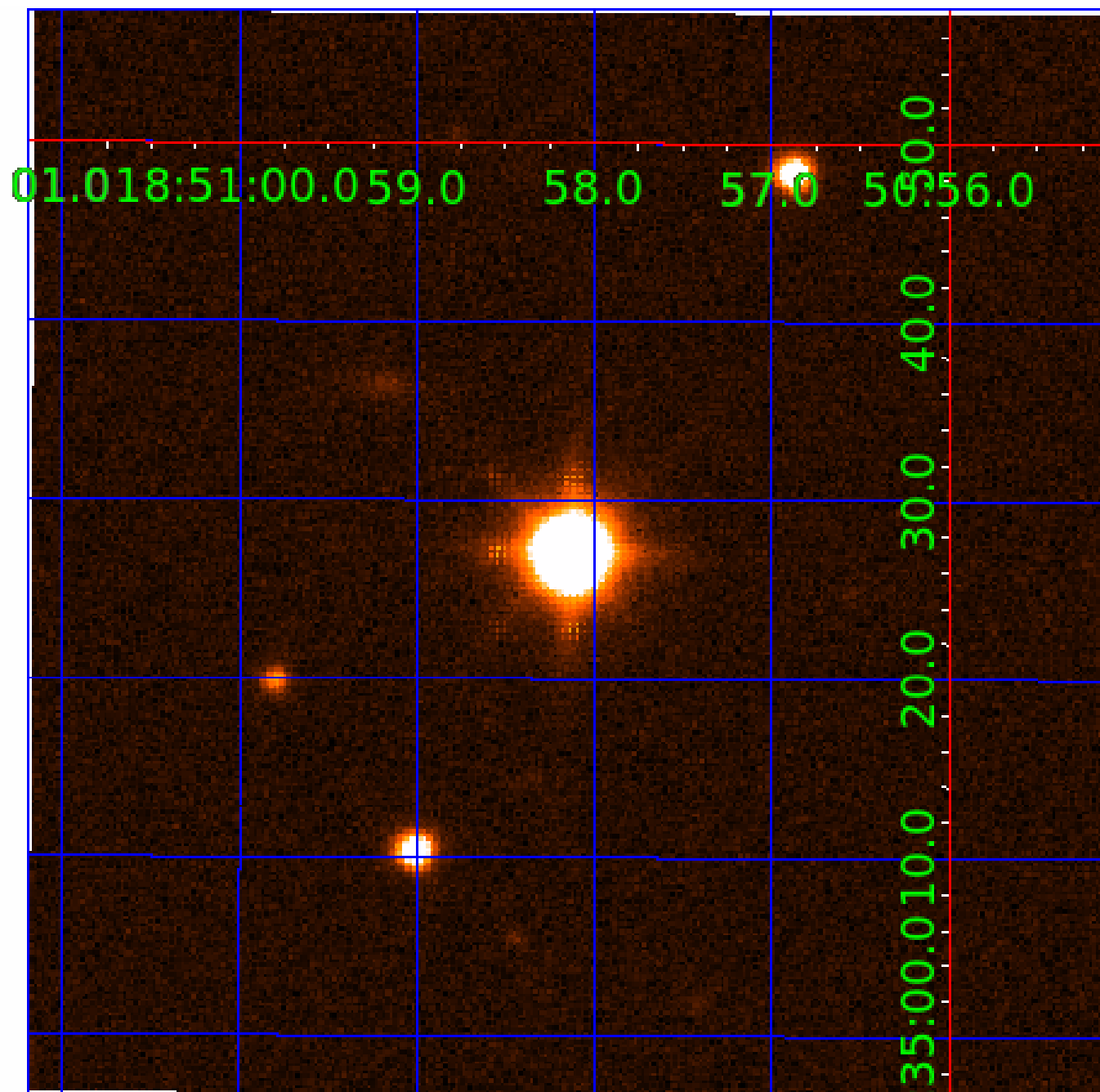


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 011014282

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})
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011014282-02	OBS	No	1.616490	131.625907	21.9	3.296	9.6	9.0	3.18	6649	1.75	18302.09
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011014282-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011014282-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
011014282-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

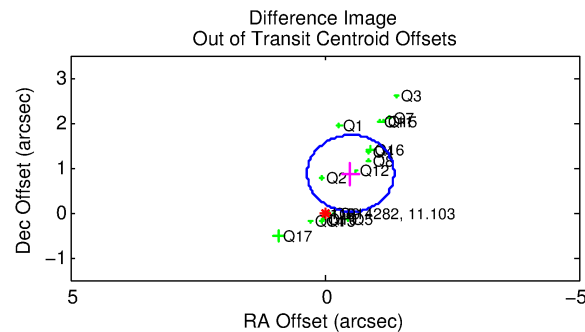
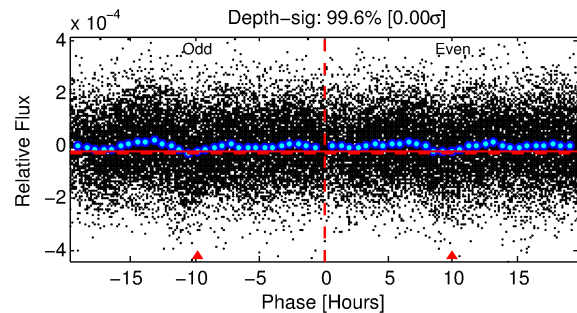
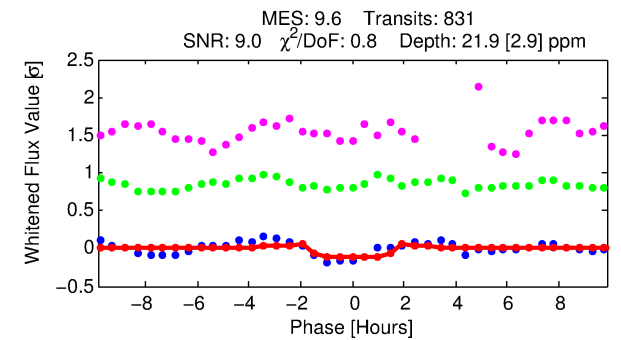
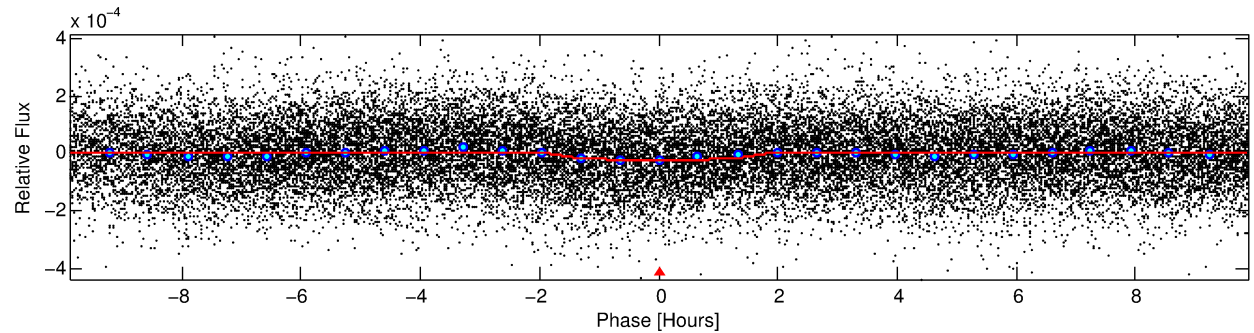
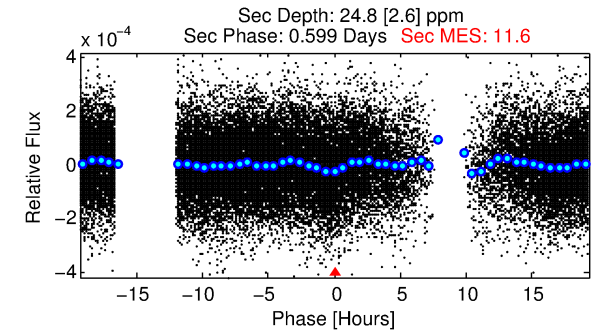
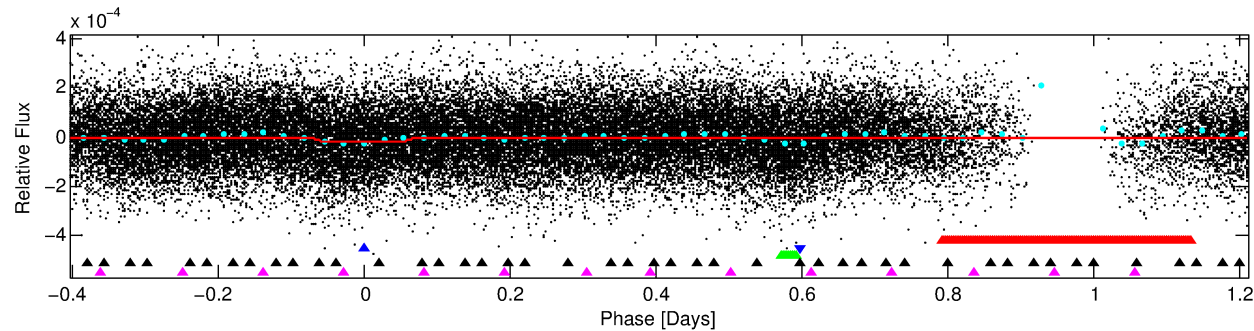
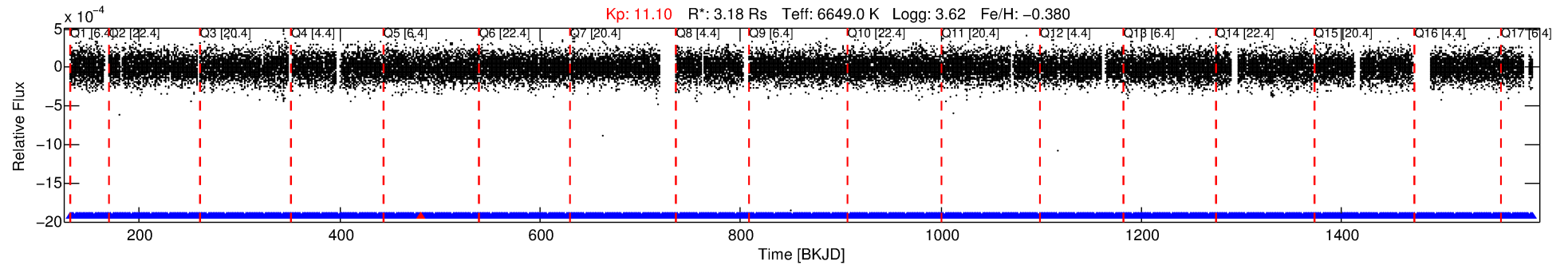
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011014282-02

No Significant Match Found

DV One-Page Summary

KIC: 11014282 Candidate: 2 of 5 Period: 1.616 d



DV Fit Results:

Period = 1.61649 [0.00001] d
Epoch = 131.6259 [0.0029] BKJD
Rp/R* = 0.0051 [0.0013]
a/R* = 1.83 [1.95]
b = 0.91 [0.28]
Seff = 18302.09 [10749.78]
Teq = 2966 [436] K
Rp = 1.75 [0.82] Re
a = 0.0311 [0.0113] AU
Ag = 4.30 [3.37] [0.98σ]
Teffp = 6602 [894] K [3.66σ]

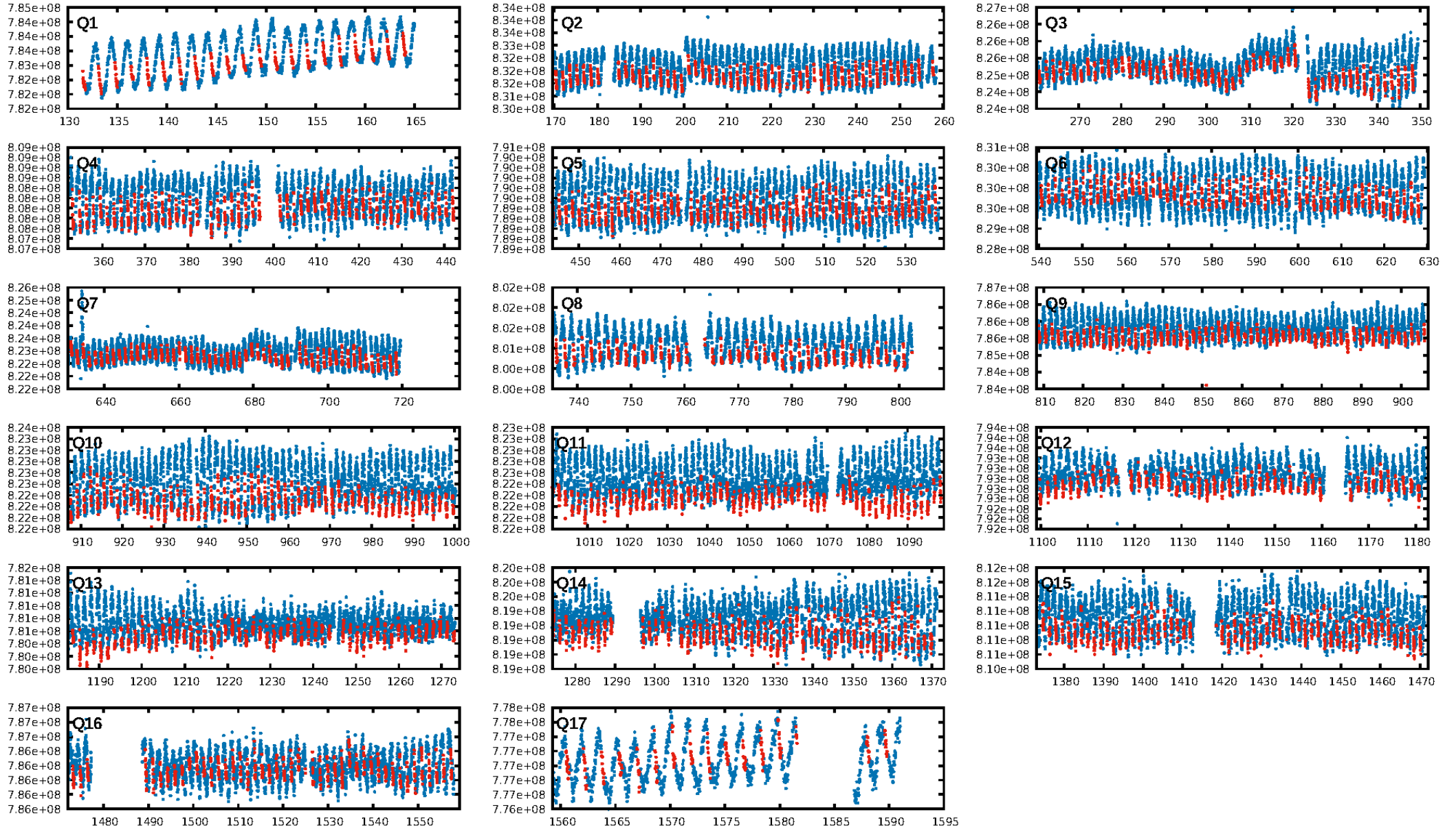
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.81e-17
RollingBand-fgt: 1.00 [793/794]
GhostDiagnostic-chr: 0.2807
Centroid-sig: 1.1%
Centroid-so: 0.850 arcsec [1.34σ]
OotOffset-rm: 1.011 arcsec [3.55σ]
KicOffset-rm: 1.101 arcsec [3.57σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

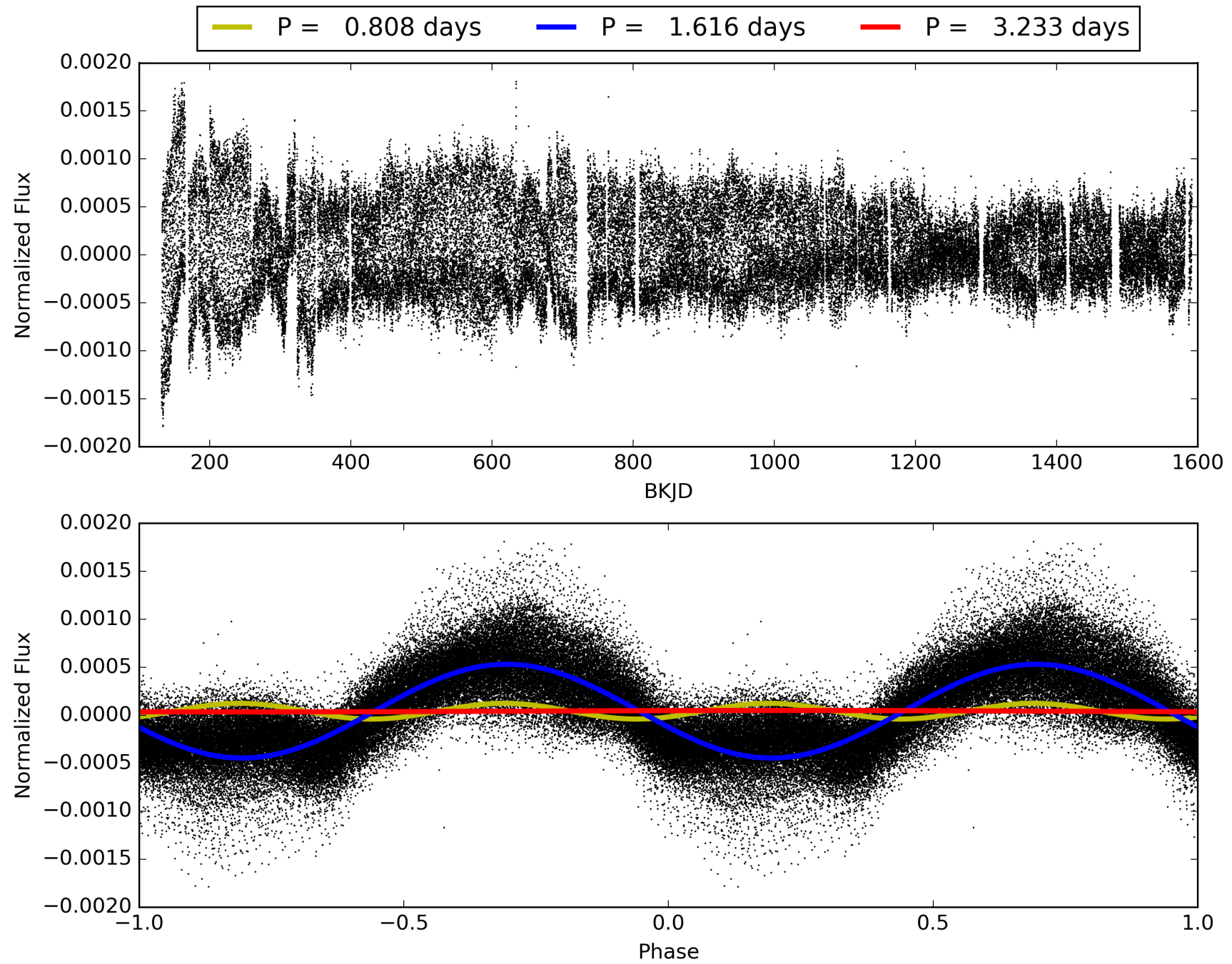
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:51:15 Z

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

TCE 011014282-02, PDC Light Curves

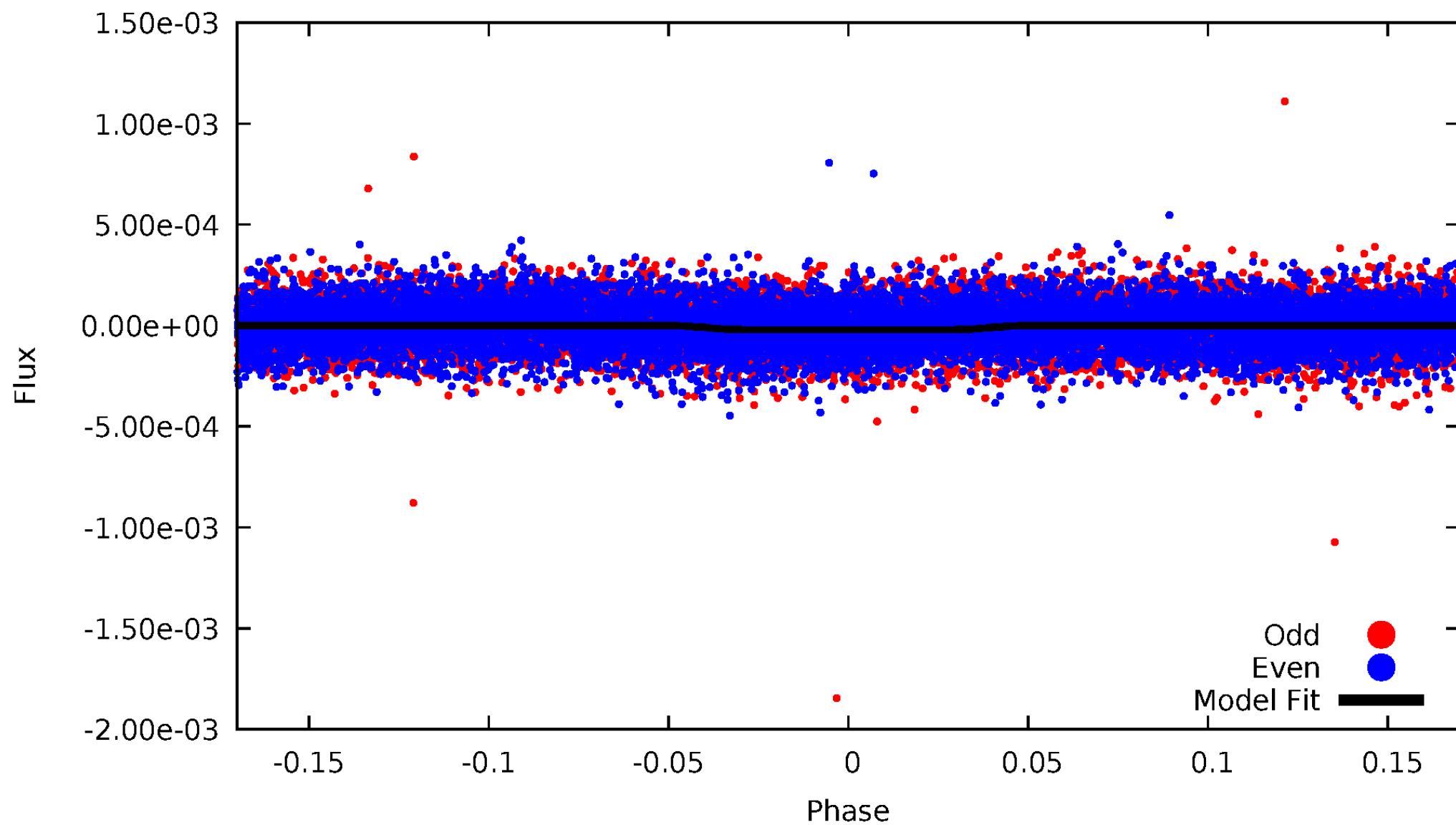


TCE 011014282-02



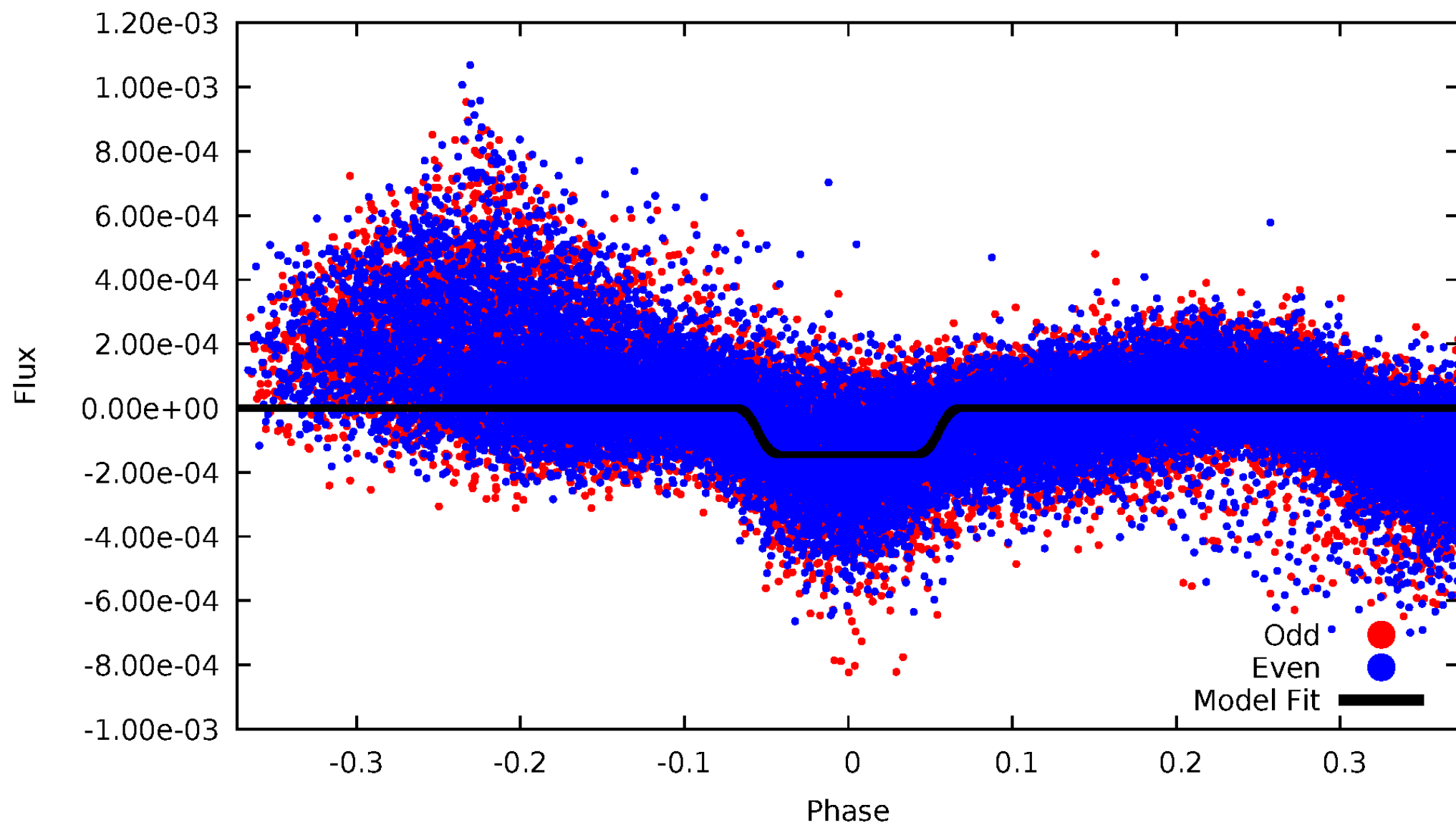
DV Odd/Even

TCE 011014282-02



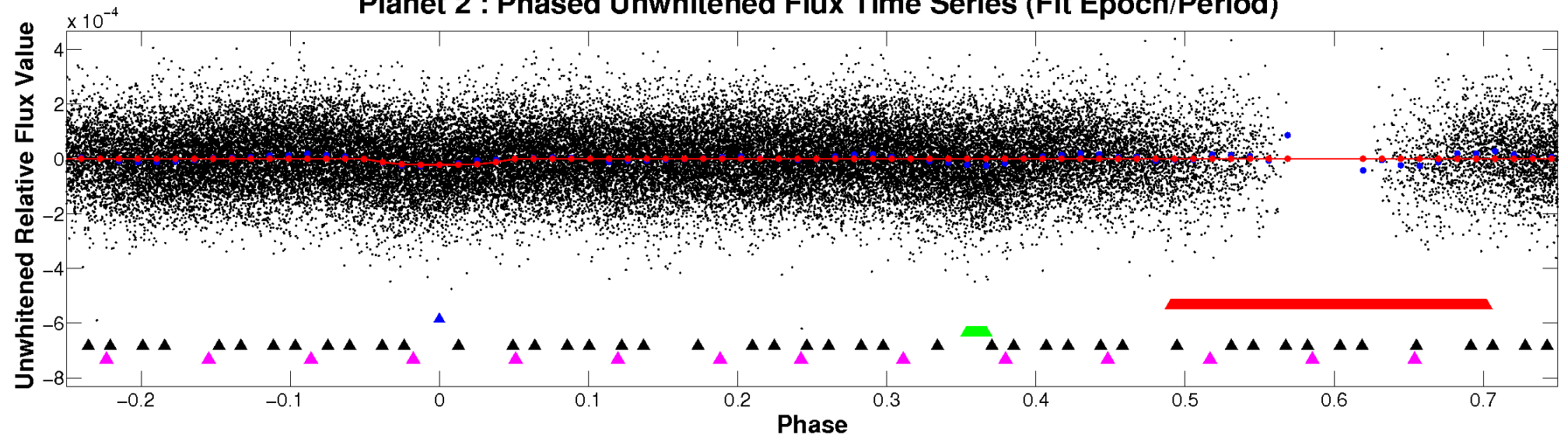
ALT Odd/Even

TCE 011014282-02

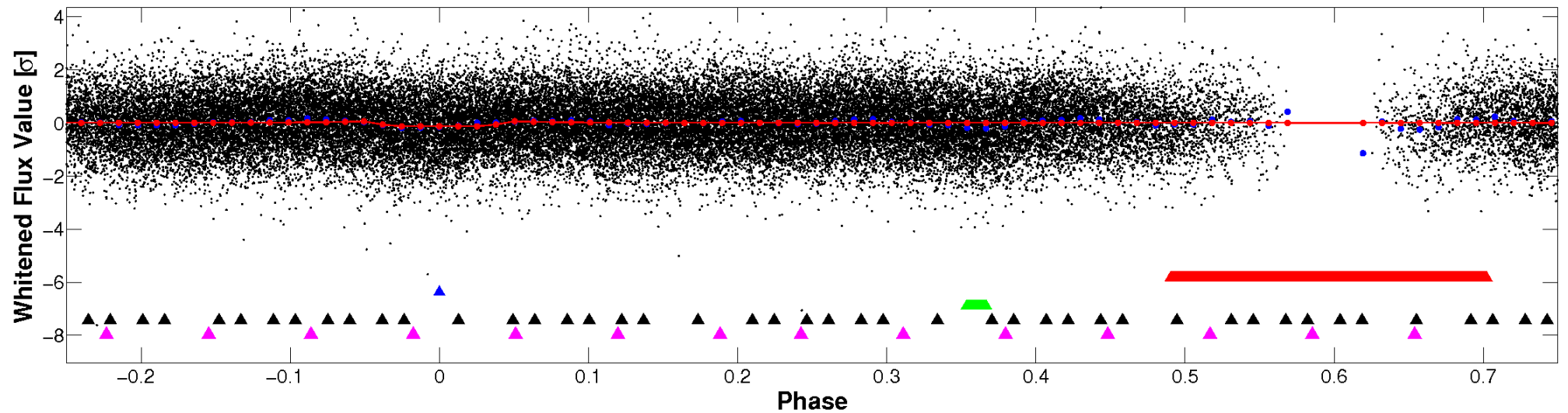


Non-Whitened Vs. Whitened Light Curve

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

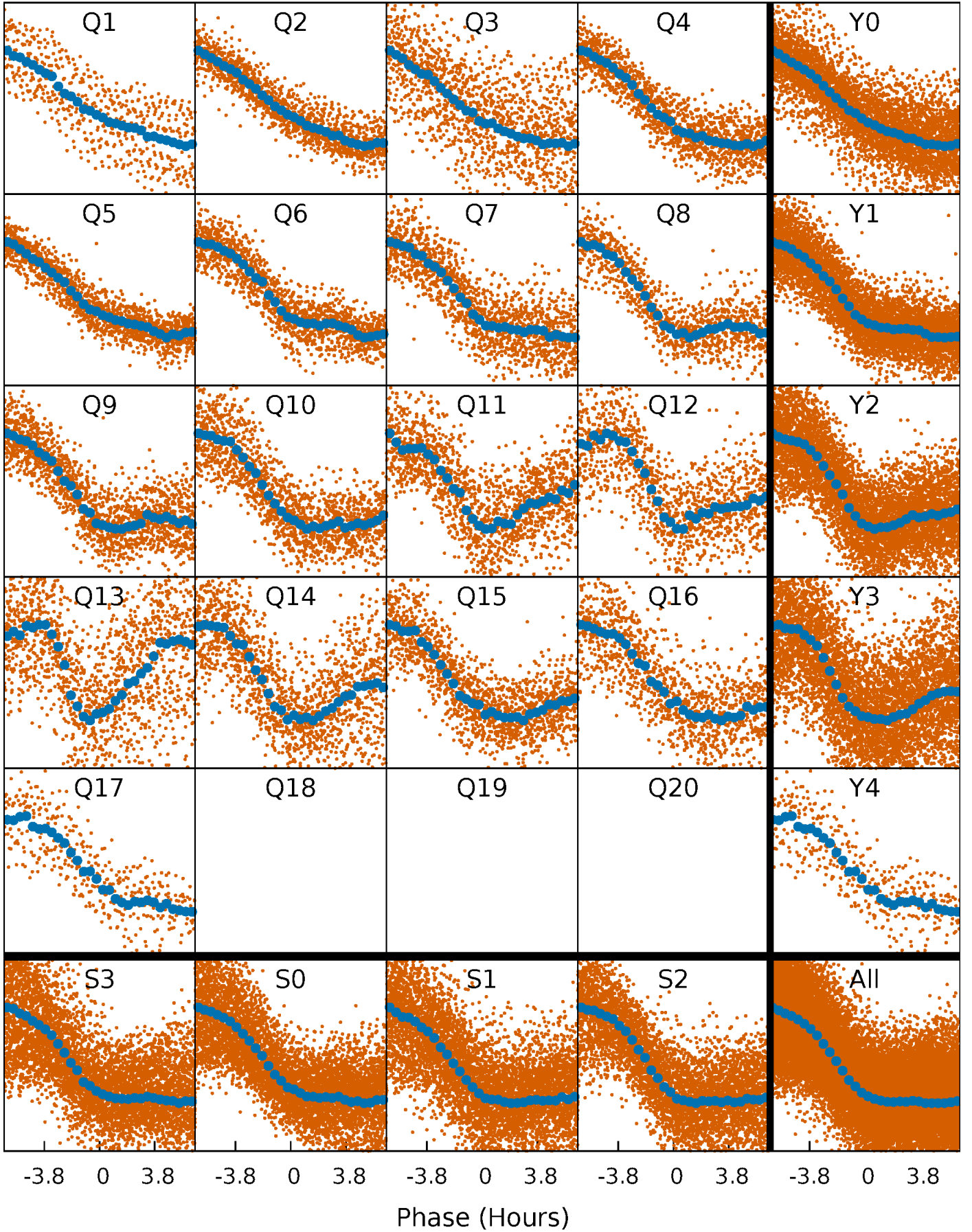


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



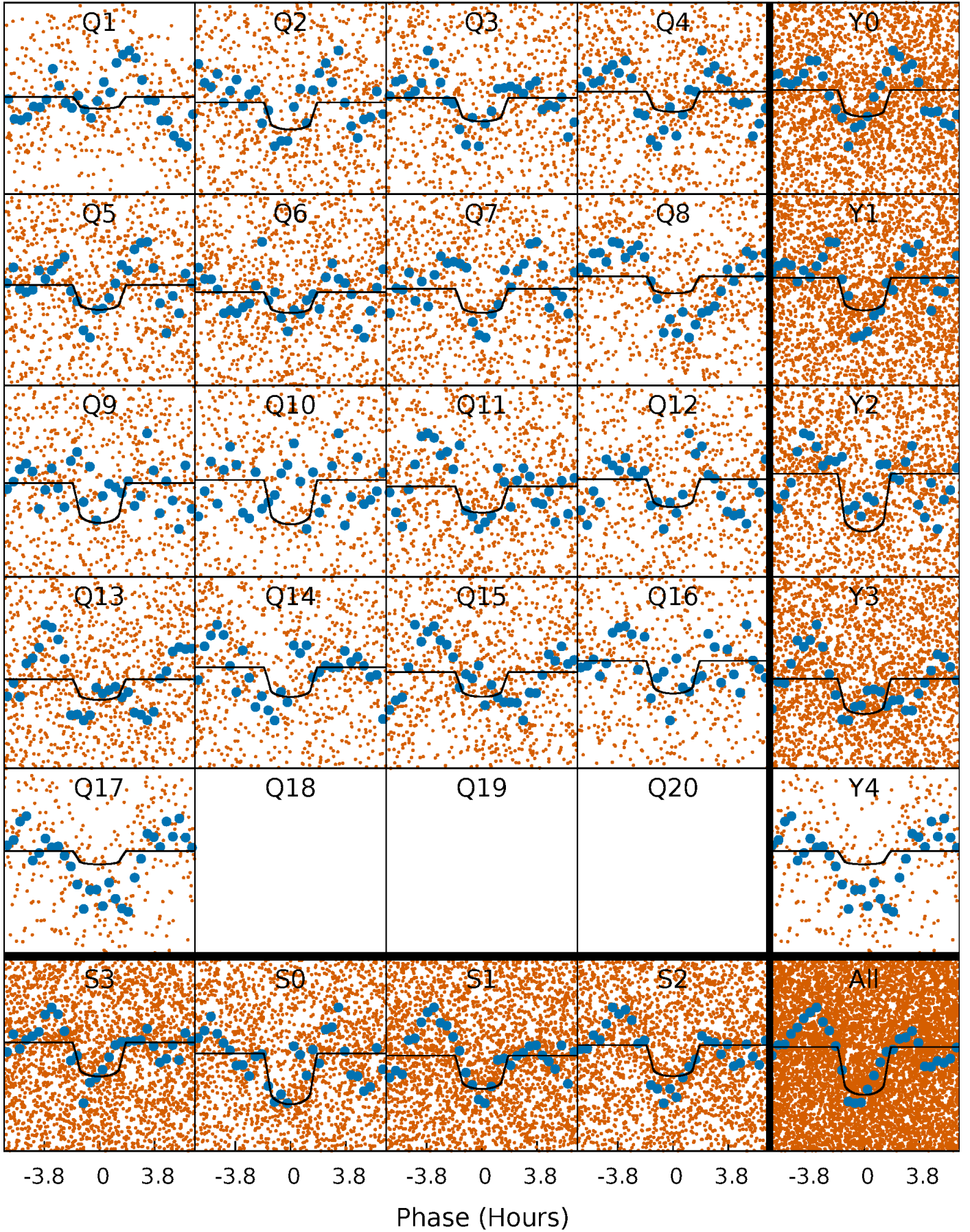
PDC Quarter-Phased Transit Curves

TCE 011014282-02 P= 1.616490 Days $T_0=131.625907$ (BKJD)



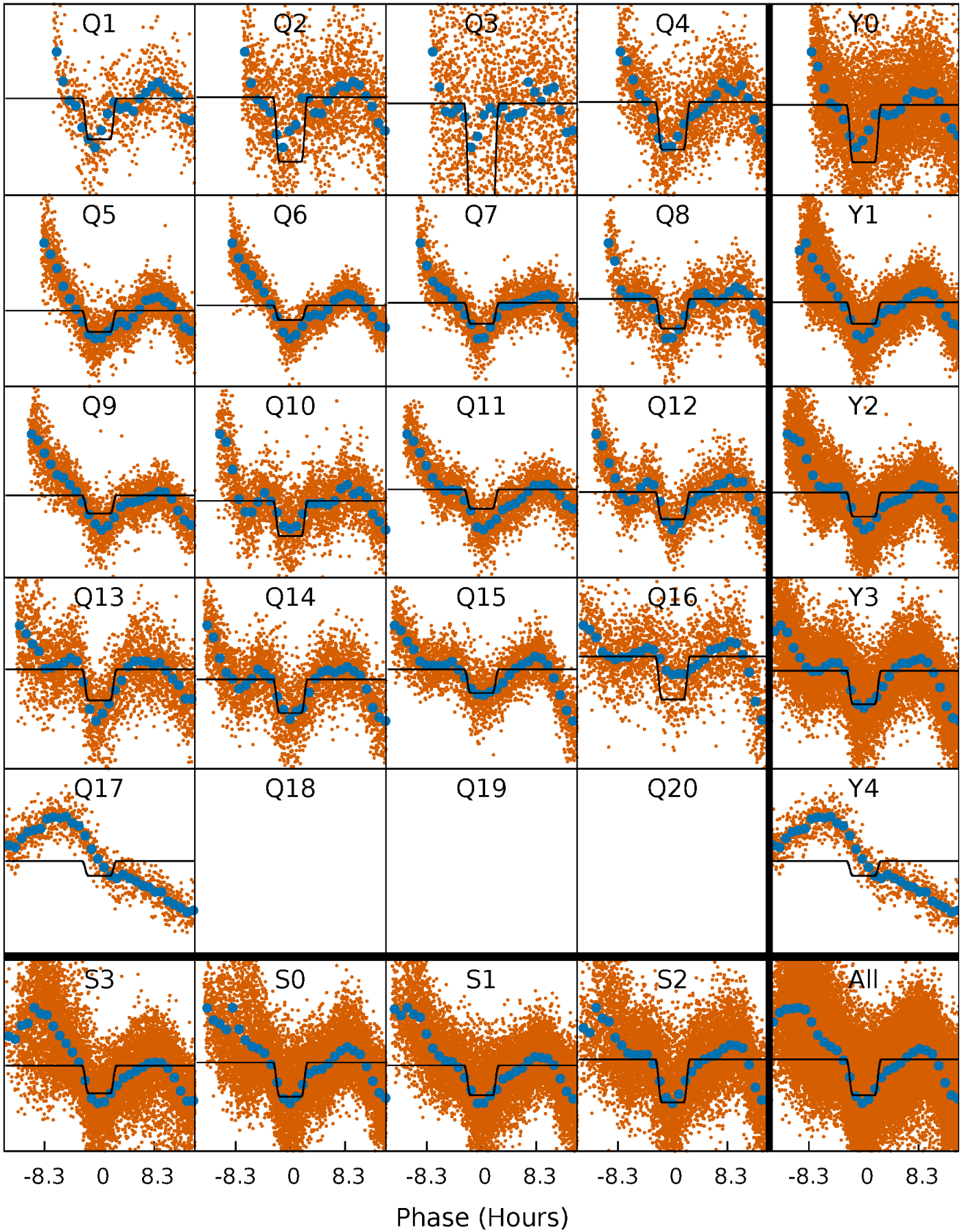
DV Quarter-Phased Transit Curves

TCE 011014282-02 P= 1.616490 Days $T_0=131.625907$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

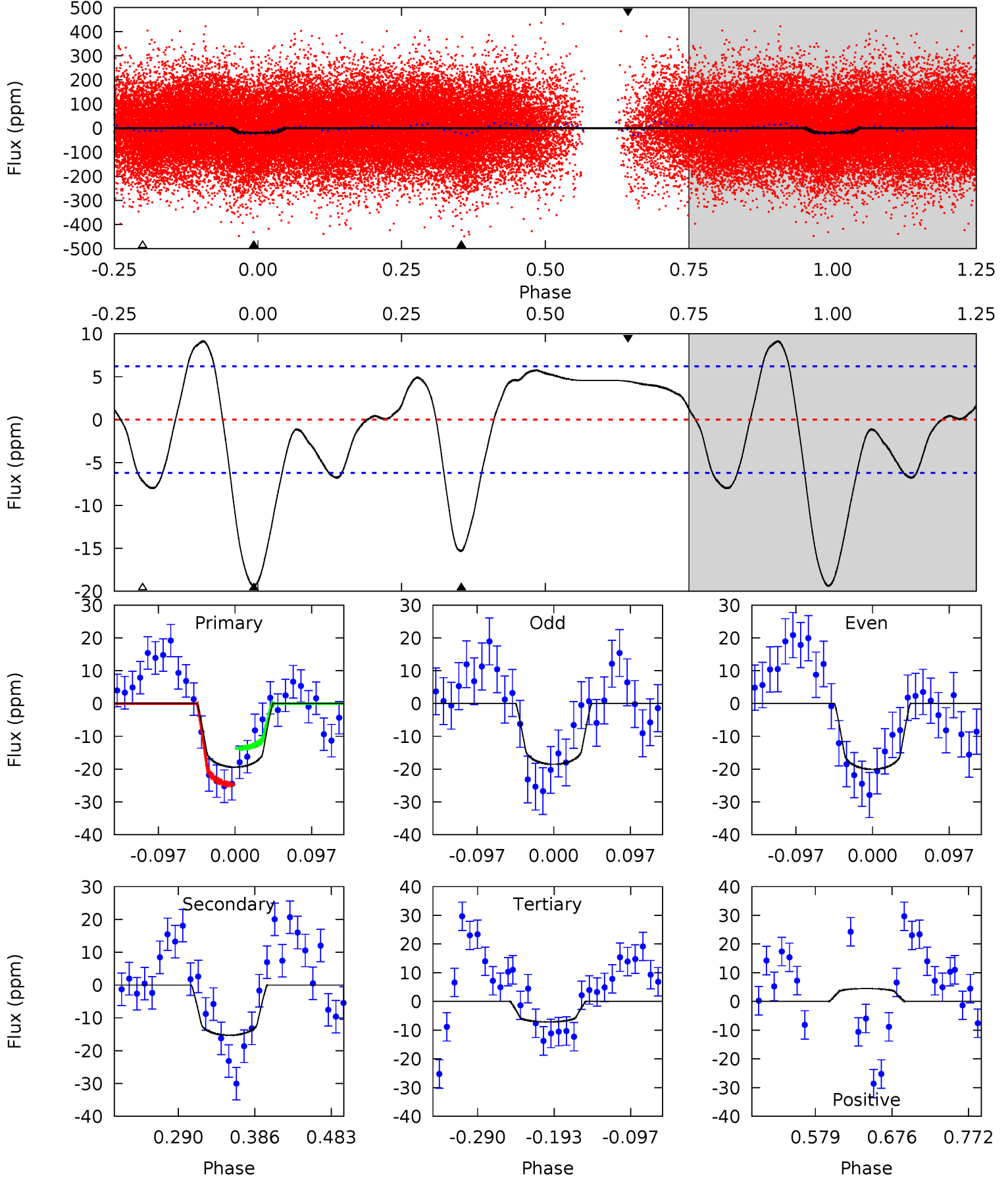
TCE 011014282-02 P= 1.616453 Days $T_0=131.644692$ (BKJD)



DV Model-Shift Uniqueness Test

011014282-02, P = 1.616490 Days, E = 130.009417 Days

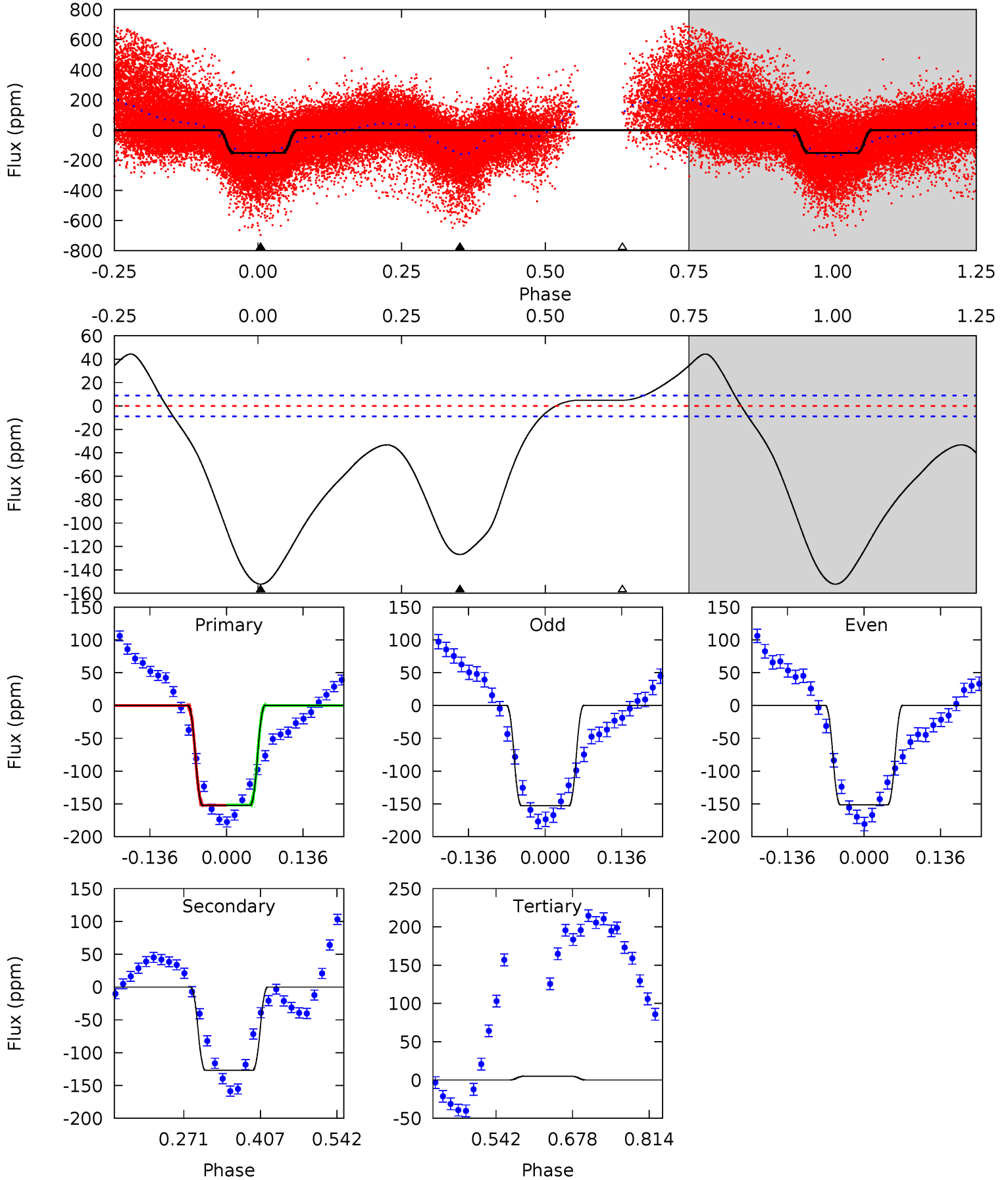
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	11.3	5.26	3.30	4.57	1.66	3.32	9.02	11.0	6.01	7.97	0.56	0.93	0.32	4.09



Alt Model-Shift Uniqueness Test

011014282-02, P = 1.616453 Days, E = 130.028239 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
77.1	64.2	-2.48	0	4.50	1.49	17.2	79.6	77.1	66.7	64.2	0.39	1.03	0.23	0.15



Stellar Parameters For KIC 011014282

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6649^{+150}_{-183}	$3.619^{+0.336}_{-0.084}$	$-0.380^{+0.350}_{-0.250}$	$3.177^{+0.411}_{-1.232}$	$1.532^{+0.223}_{-0.334}$	$0.067^{+0.172}_{-0.018}$
	+2%/-3%	+9%/-2%	+92%/-66%	+13%/-39%	+15%/-22%	+255%/-27%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011014282-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 1	$1.64^{+0.55}_{-0.49}$	4061^{+218}_{-357}	5693^{+1004}_{-667}	$3.147^{+2.727}_{-1.421}$
Alt.	-127 ± 2	$3.95^{+0.73}_{-0.86}$	4043^{+240}_{-392}	6305^{+461}_{-370}	$4.406^{+2.448}_{-1.203}$

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 $A_{obs} \gg 1.0$

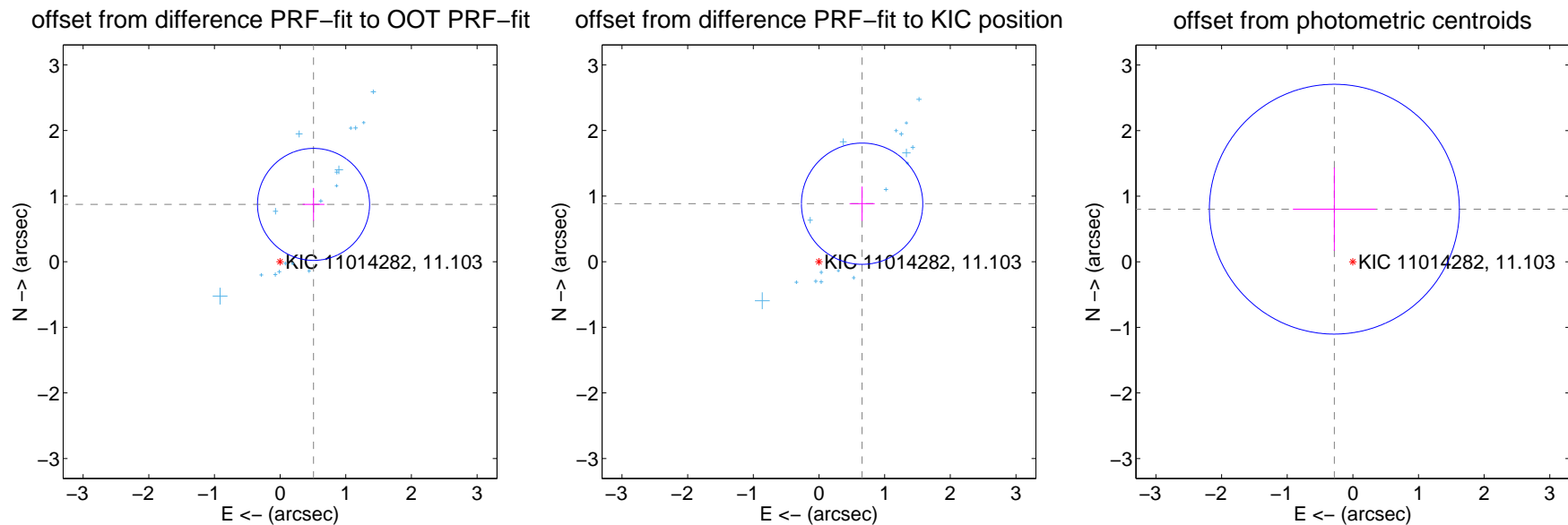
DV Centroid Data

Supplemental centroid analysis for 011014282-02. **Kepler magnitude: 11.10.** Transit SNR 9.05

There are 17 quarters with good PRF difference image offsets

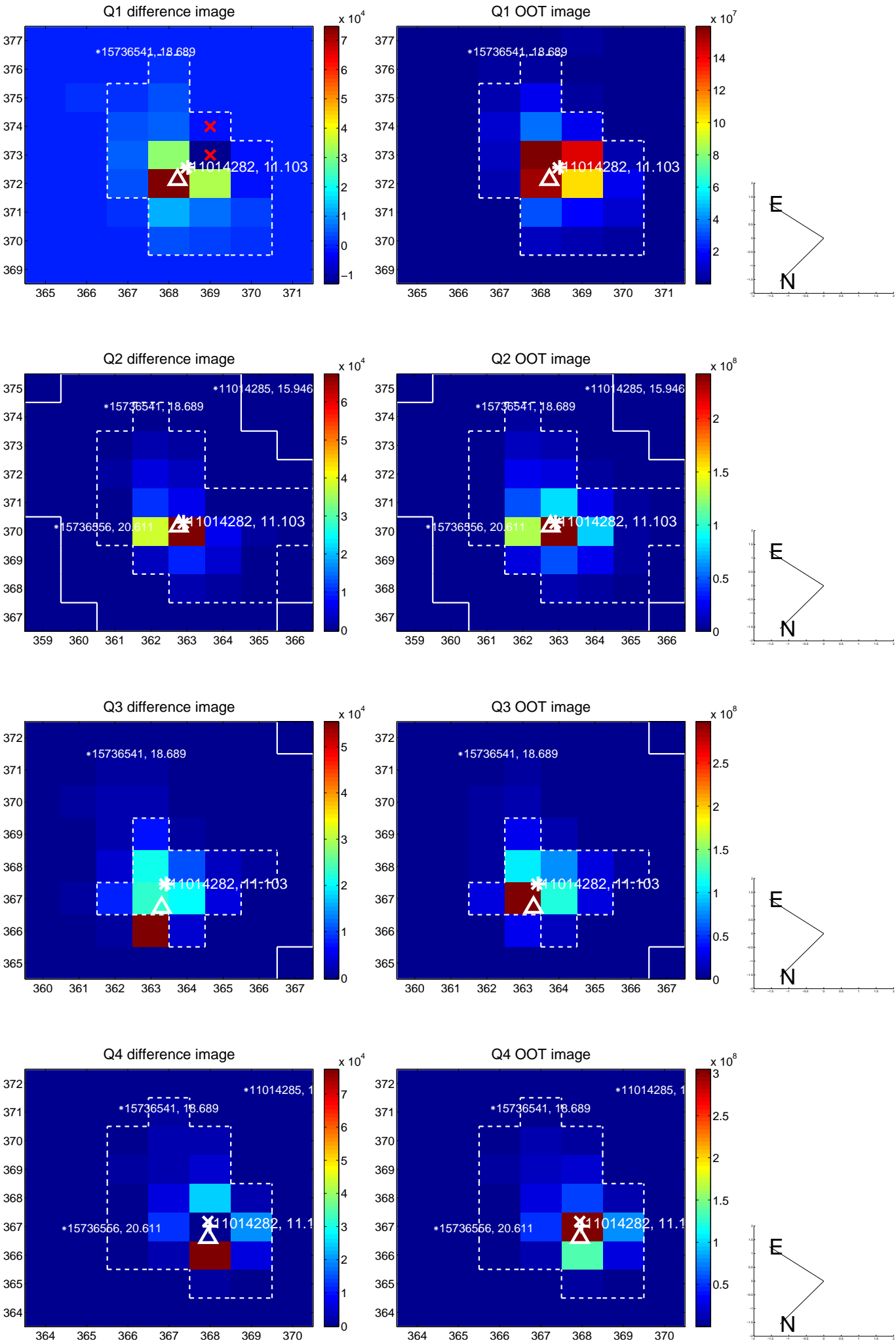
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.011 \pm 0.284	3.55	-0.509 \pm 0.166	0.873 \pm 0.250
PRF-fit source offset from KIC position	1.101 \pm 0.308	3.57	-0.657 \pm 0.192	0.884 \pm 0.262
photometric centroid source offset	0.85 \pm 0.63	1.34	0.28 \pm 0.63	0.80 \pm 0.64

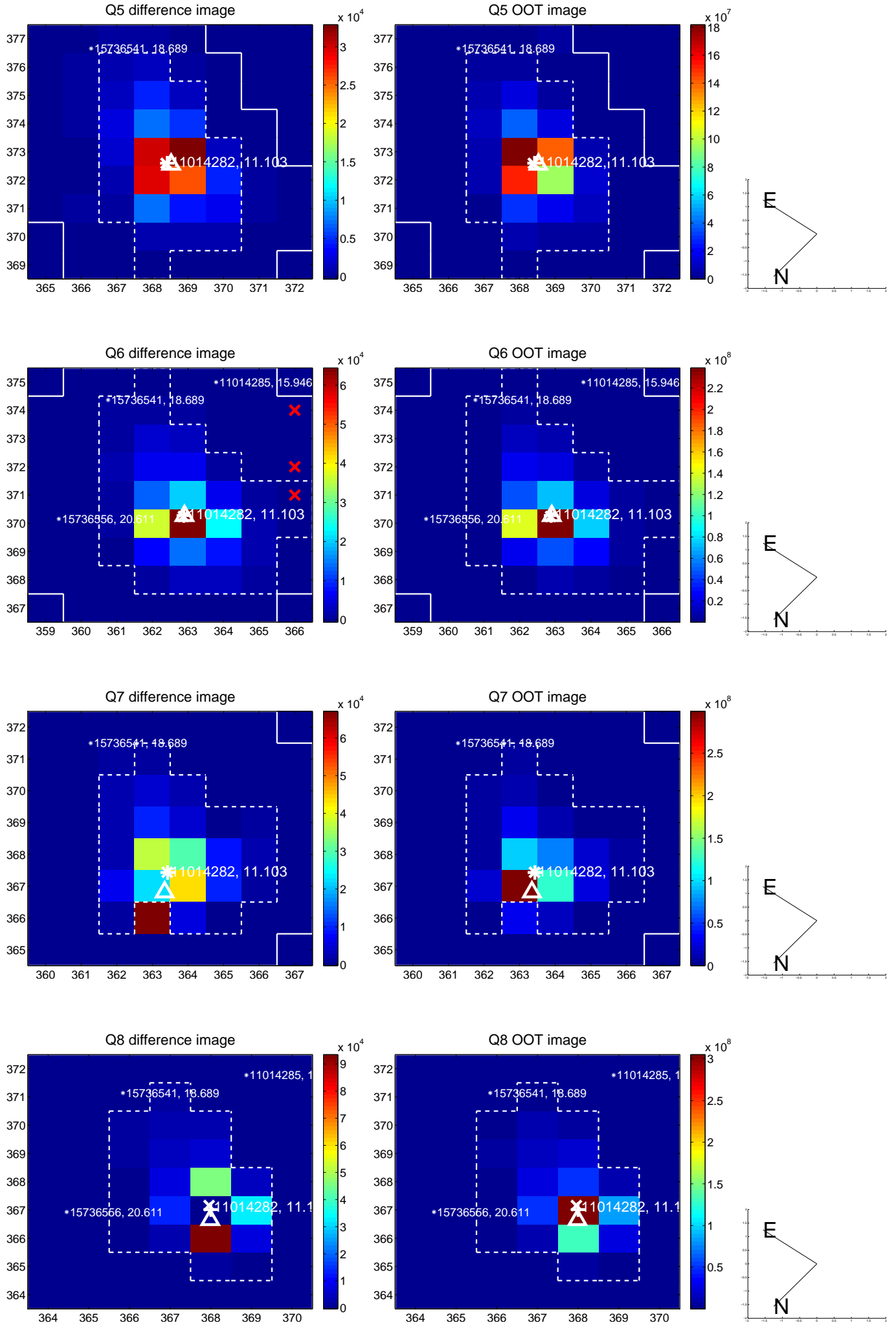


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

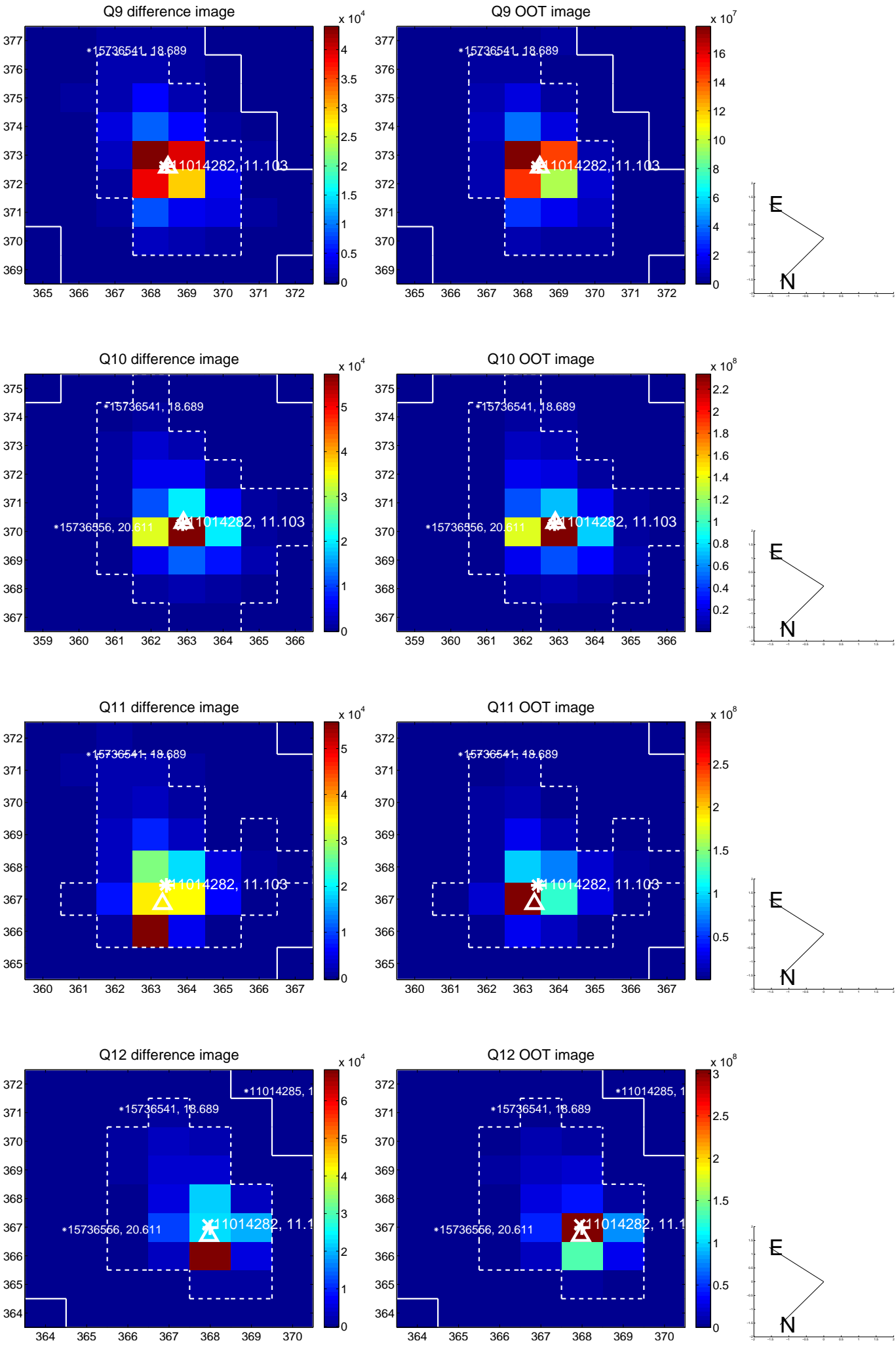
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



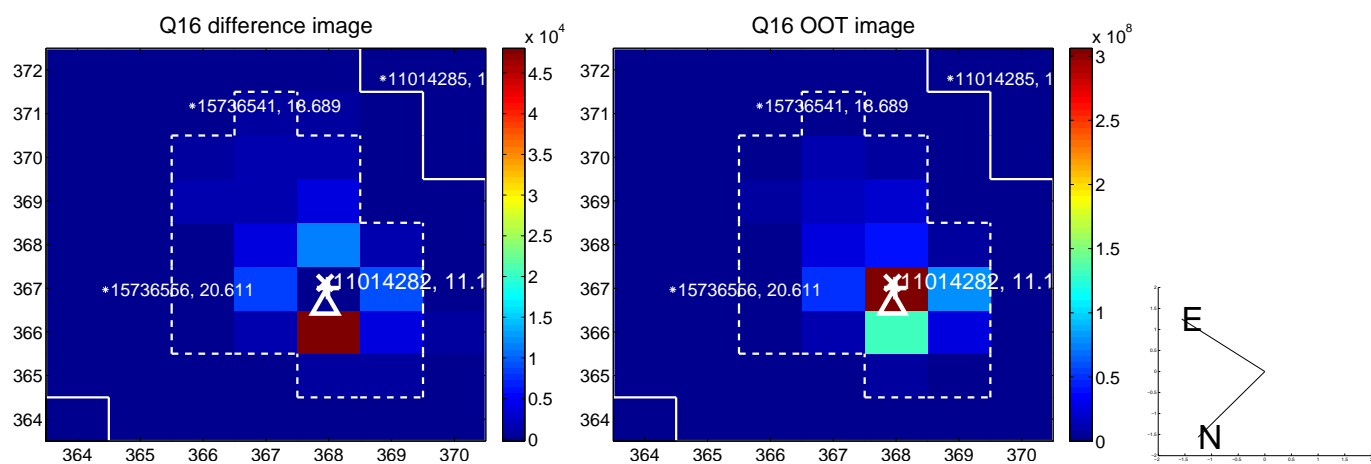
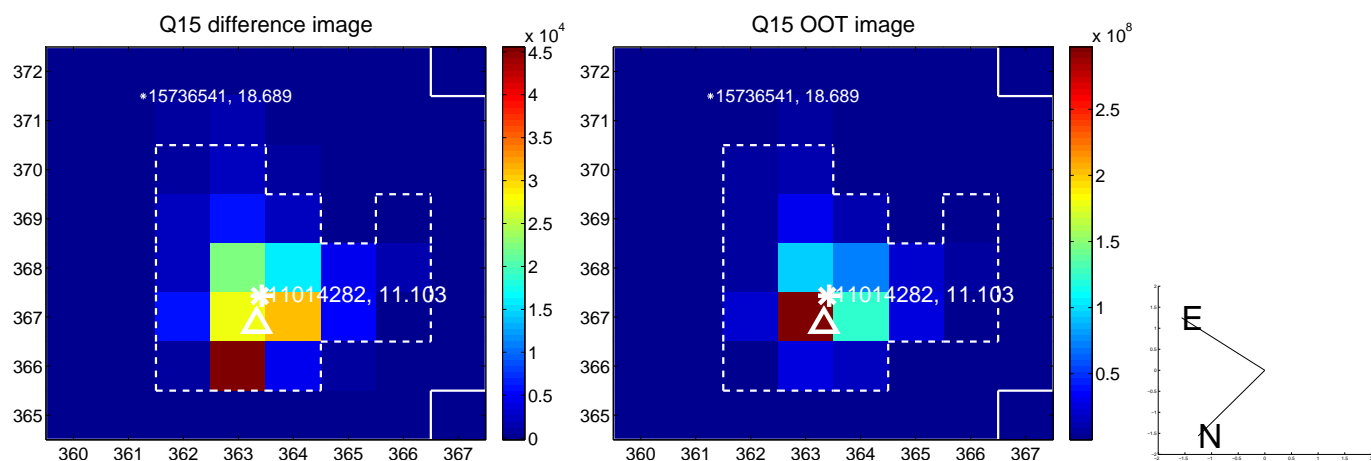
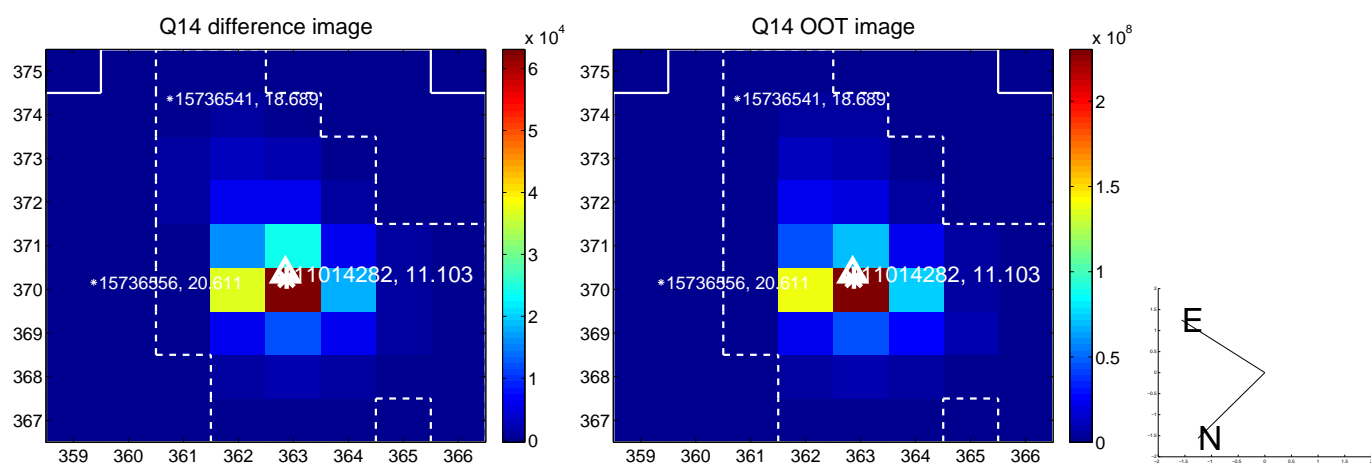
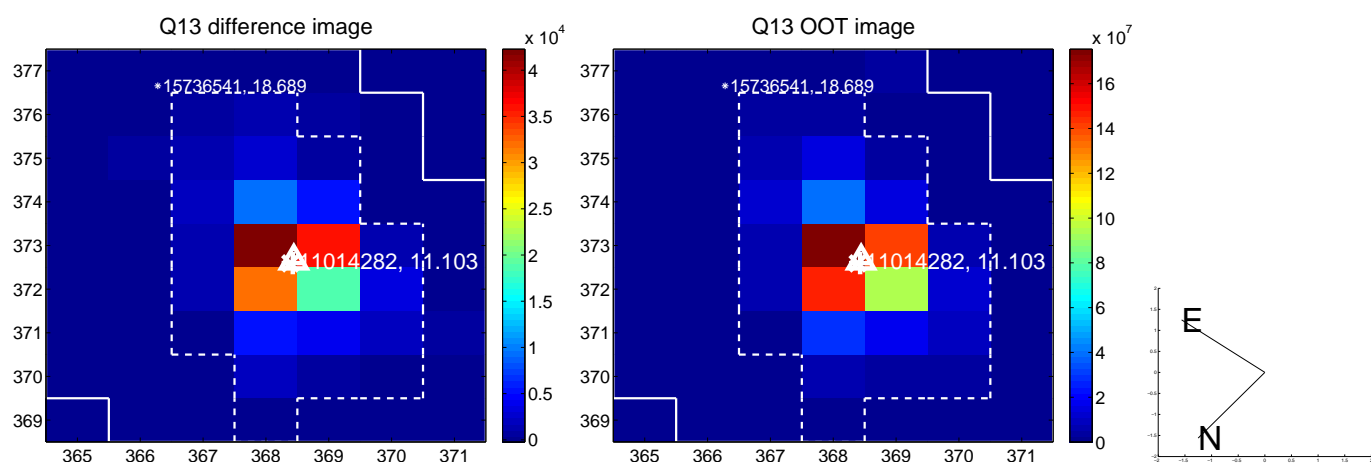
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



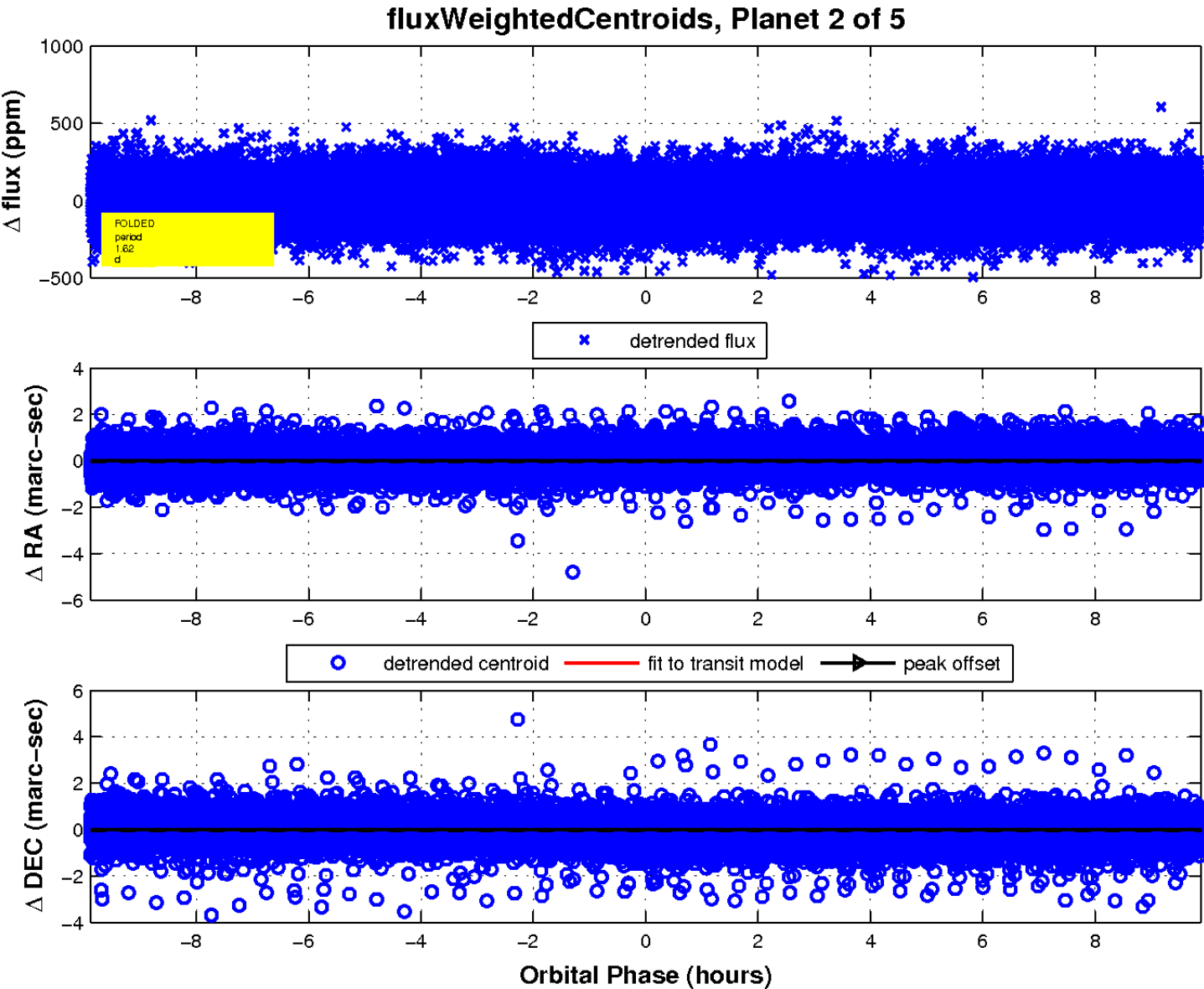
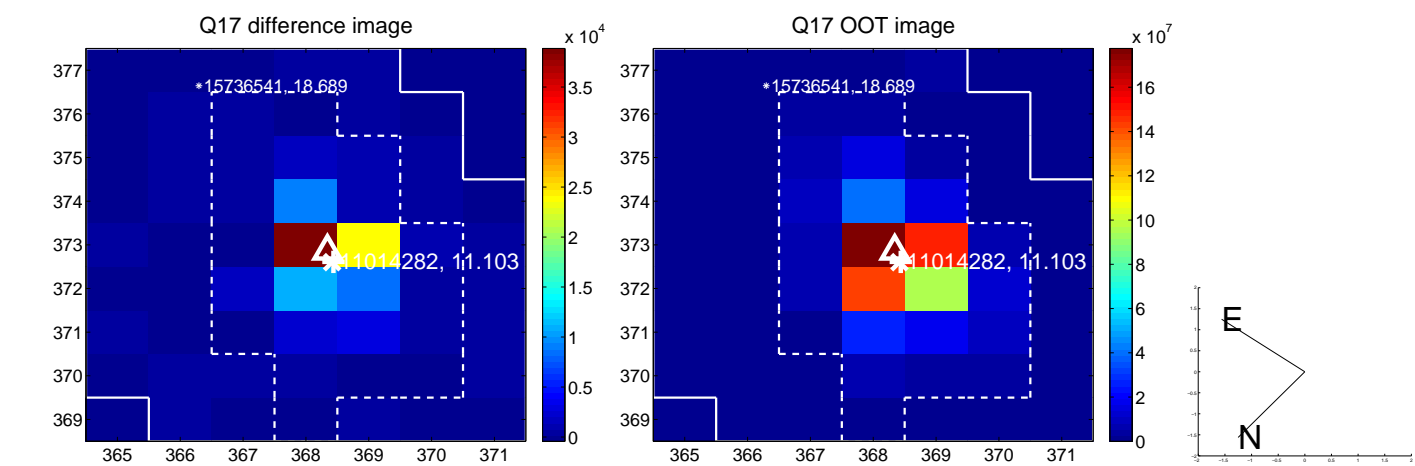
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

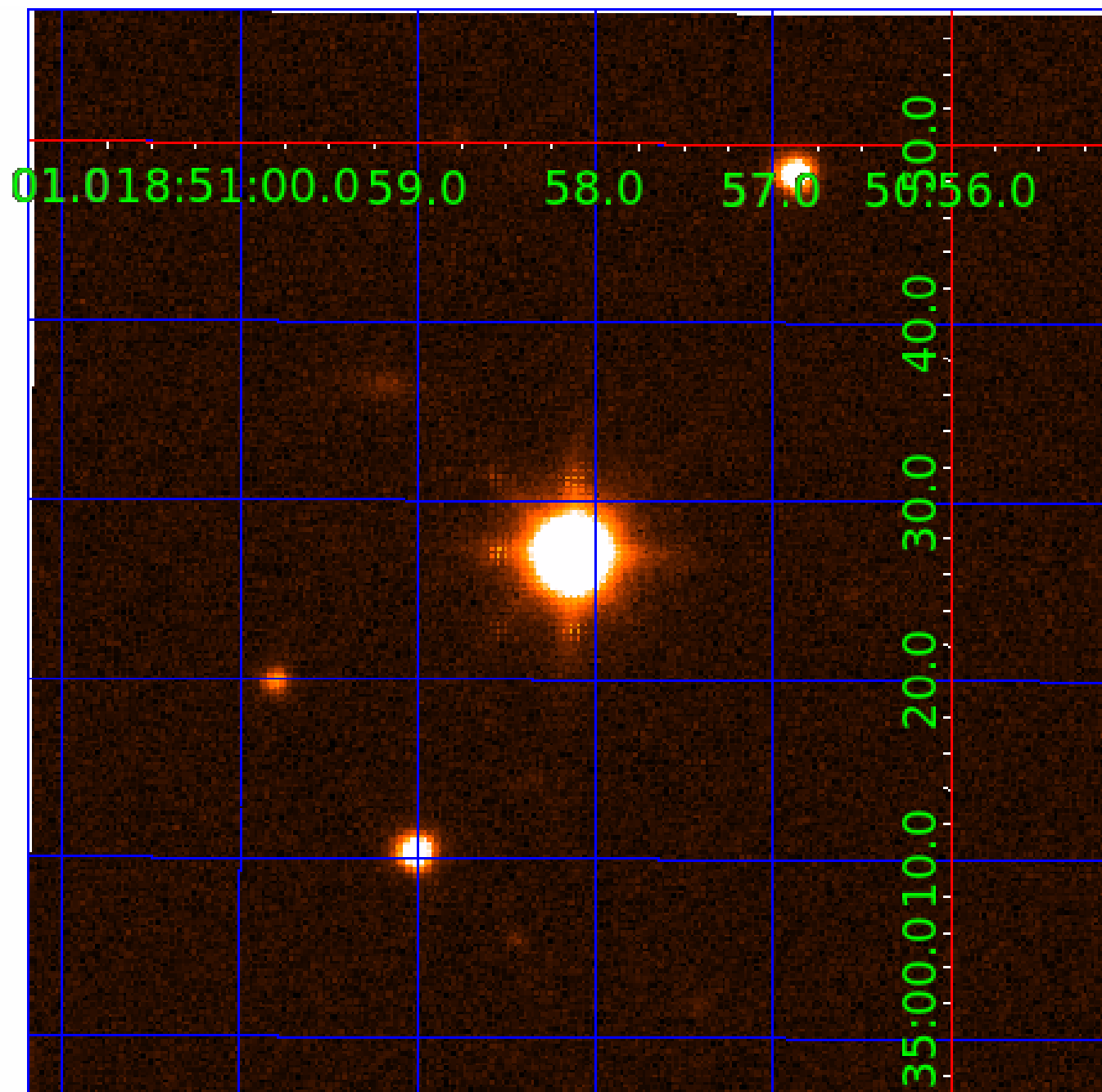


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011014282

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})
011014282-01	OBS	No	1.616110	132.761179	20.1	3.282	10.3	7.7	3.18	6649	1.66	18307.82
011014282-02	OBS	No	1.616490	131.625907	21.9	3.296	9.6	9.0	3.18	6649	1.75	18302.09
011014282-03	OBS	No	1.616513	132.197342	25.4	3.020	10.8	10.9	3.18	6649	2.00	18301.73
011014282-04	OBS	No	32.589379	144.236313	203.8	2.382	8.5	8.9	3.18	6649	4.86	333.55
011014282-05	OBS	No	107.551991	156.265207	274.6	1.673	8.7	7.4	3.18	6649	6.15	67.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011014282-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011014282-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
011014282-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

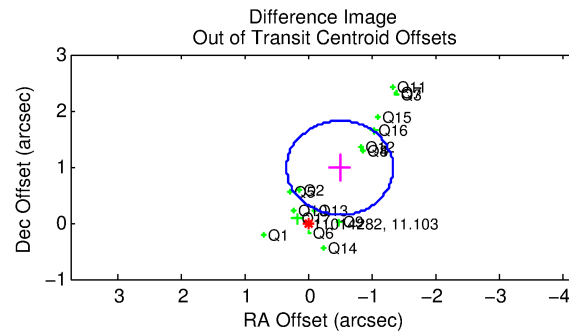
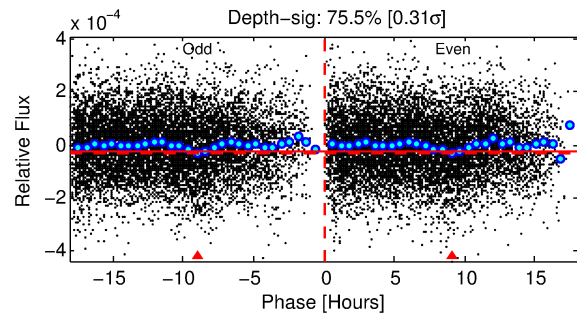
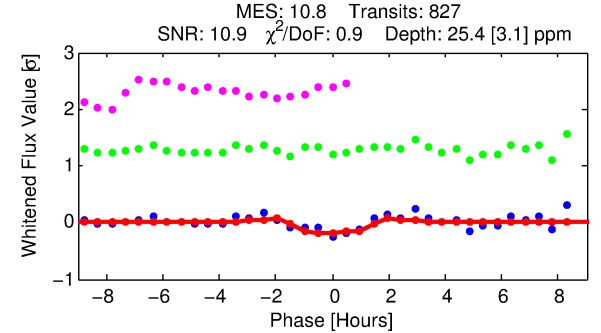
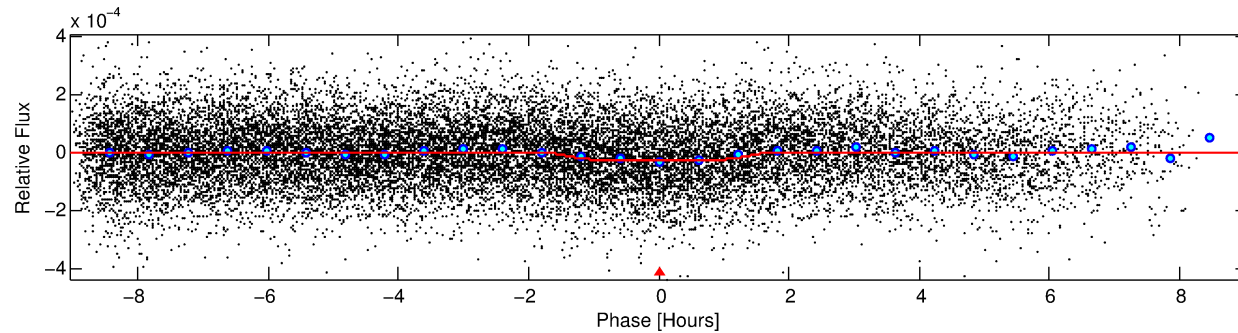
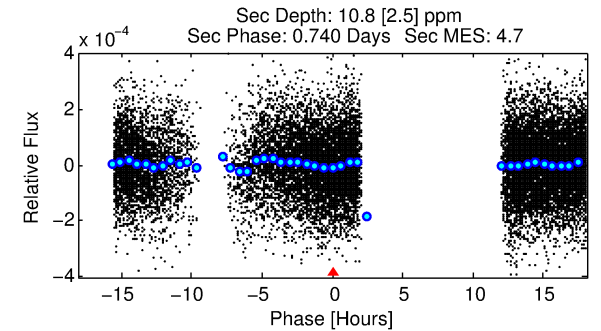
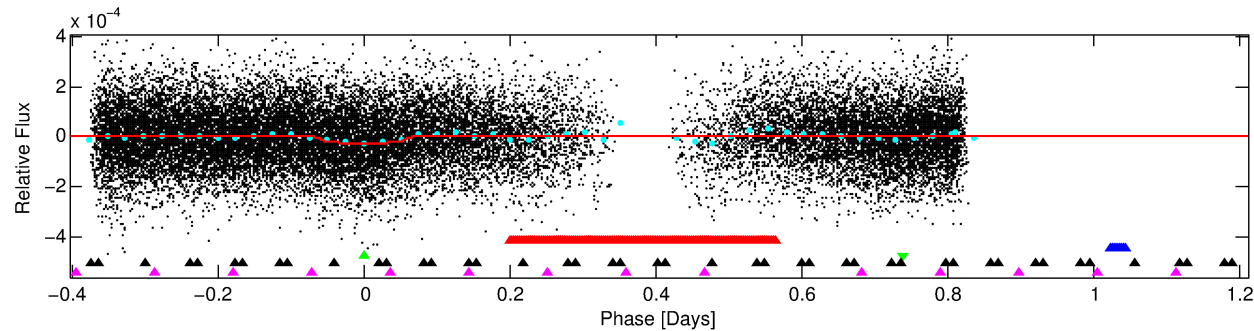
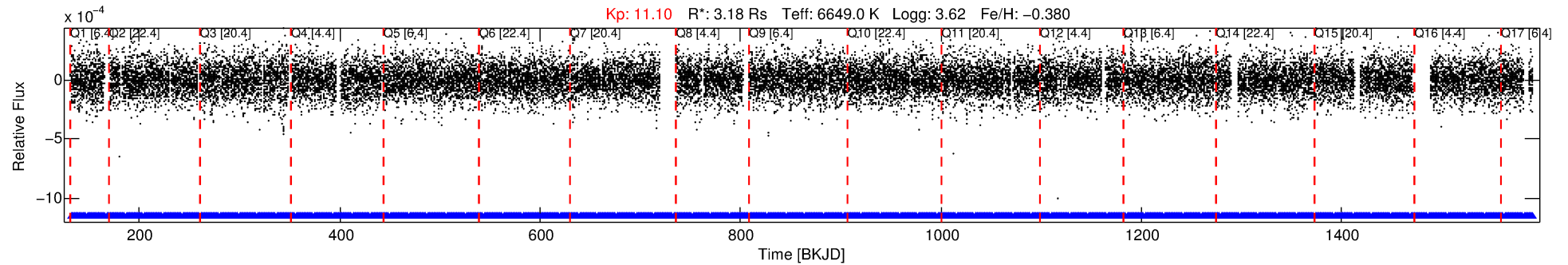
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011014282-03

No Significant Match Found

DV One-Page Summary

KIC: 11014282 Candidate: 3 of 5 Period: 1.617 d



DV Fit Results:

Period = 1.61651 [0.00001] d
Epoch = 132.1973 [0.0029] BKJD
Rp/R* = 0.0058 [0.0013]
a/R* = 1.57 [1.23]
b = 0.96 [0.11]
Seff = 18301.73 [10749.57]
Teq = 2966 [436] K
Rp = 2.00 [0.89] Re
a = 0.0311 [0.0113] AU
Ag = 1.44 [1.09] [0.40σ]
Teffp = 5020 [633] K [2.68σ]

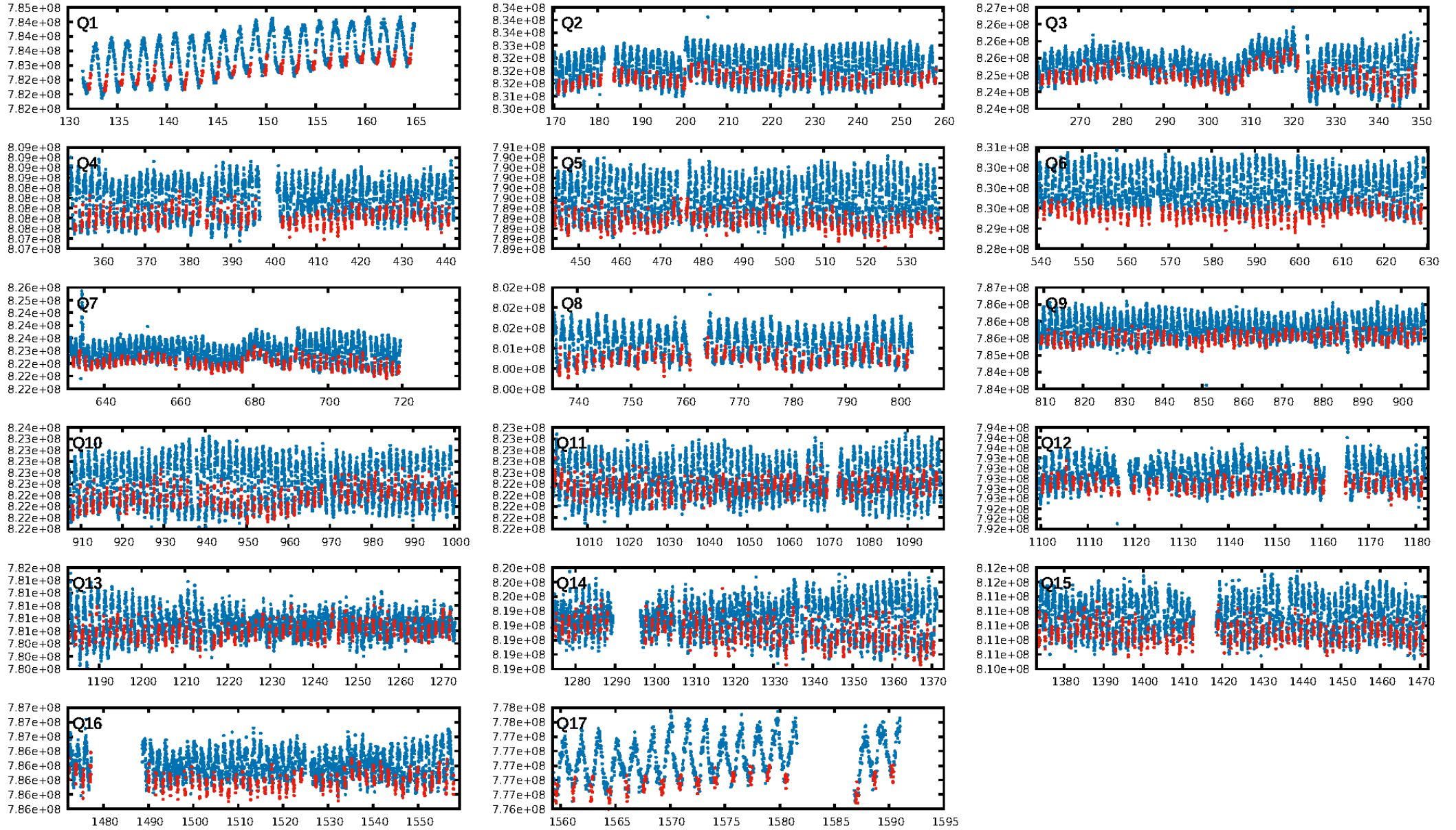
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [193.27σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.30e-20
RollingBand-fgt: 1.00 [789/789]
GhostDiagnostic-chr: 0.4879
Centroid-sig: 0.0%
Centroid-so: 2.935 arcsec [5.15σ]
OotOffset-rm: 1.093 arcsec [3.92σ]
KicOffset-rm: 1.171 arcsec [3.99σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.53 [9/17]

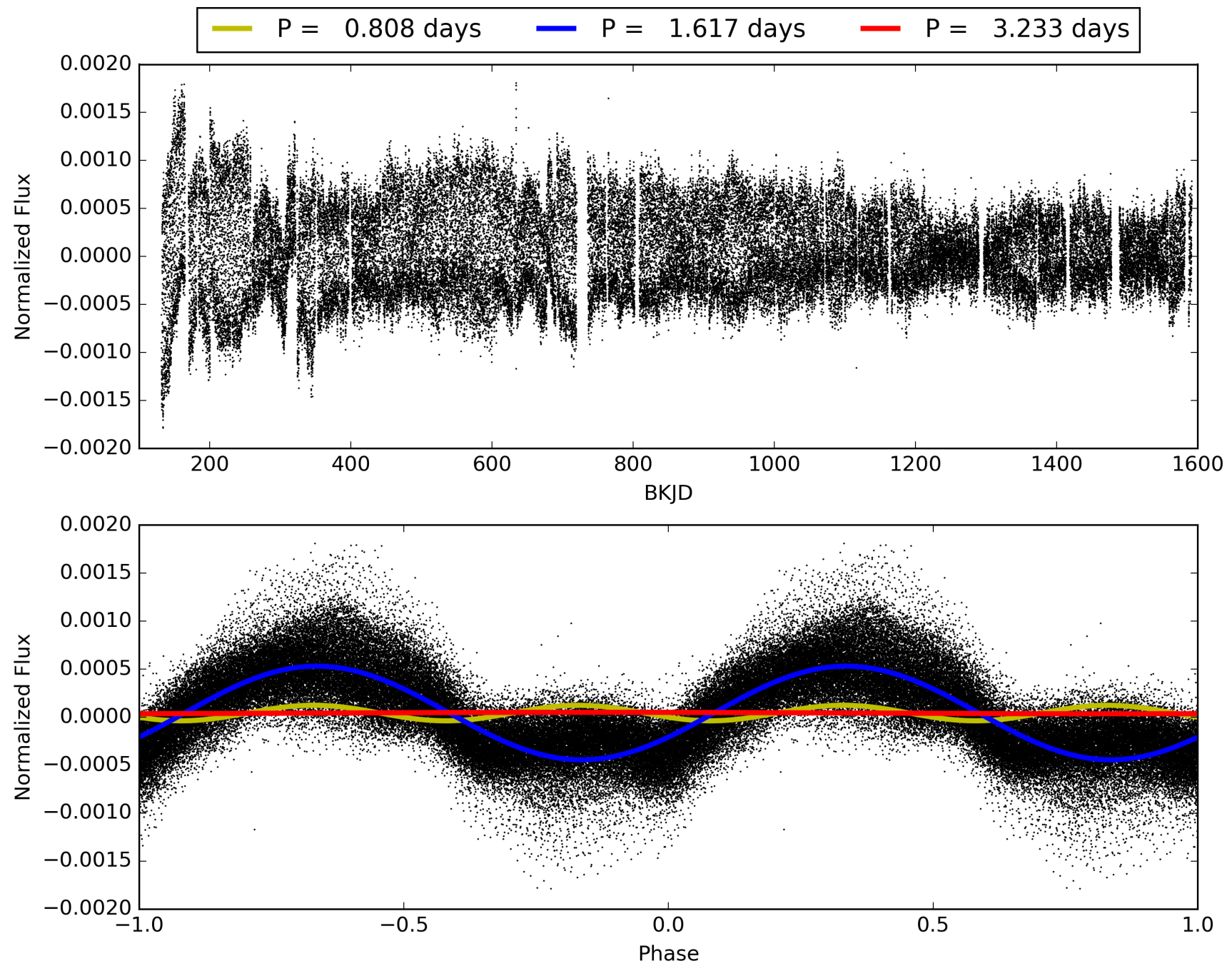
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:51:23 Z

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

TCE 011014282-03, PDC Light Curves

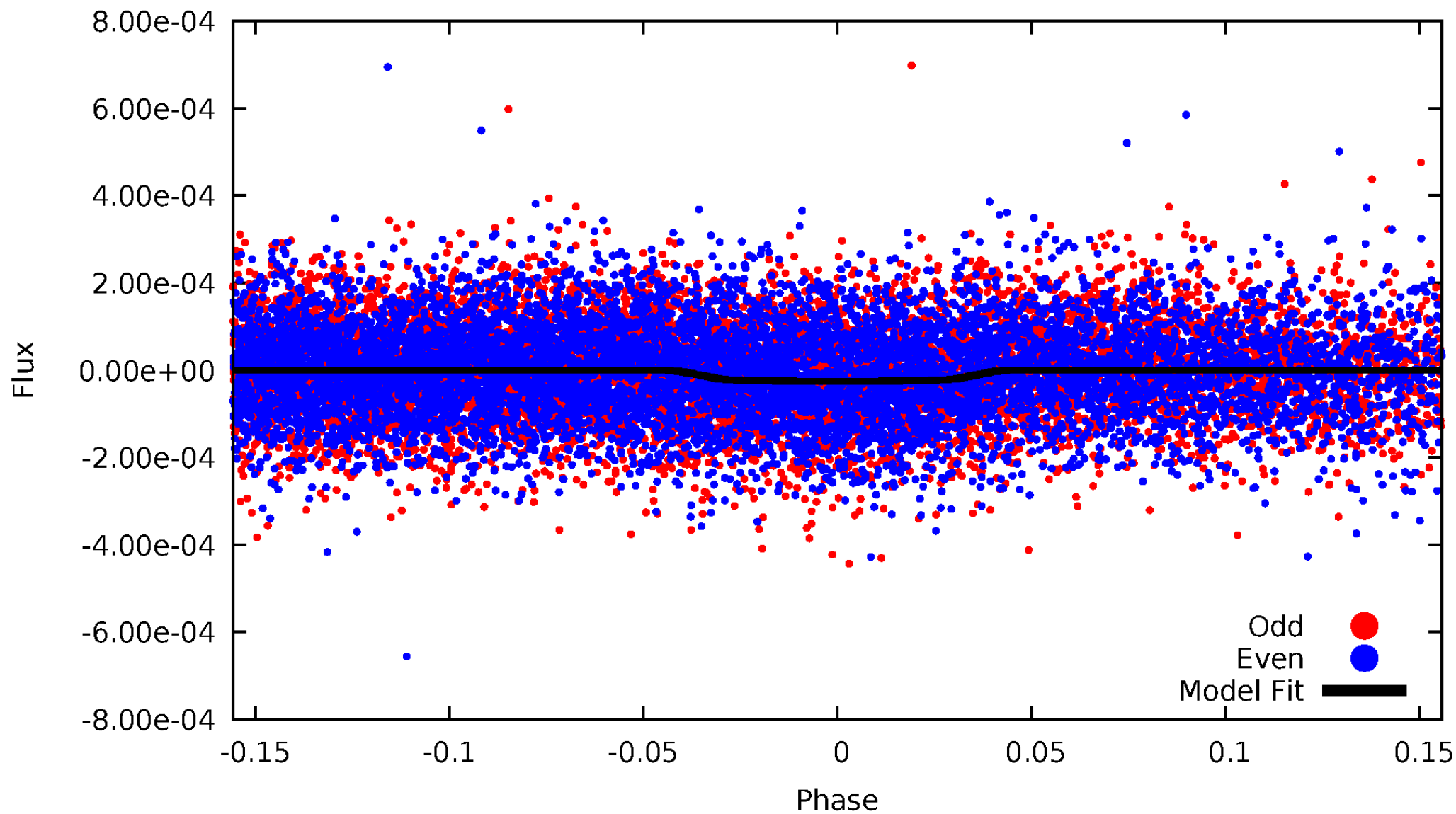


TCE 011014282-03



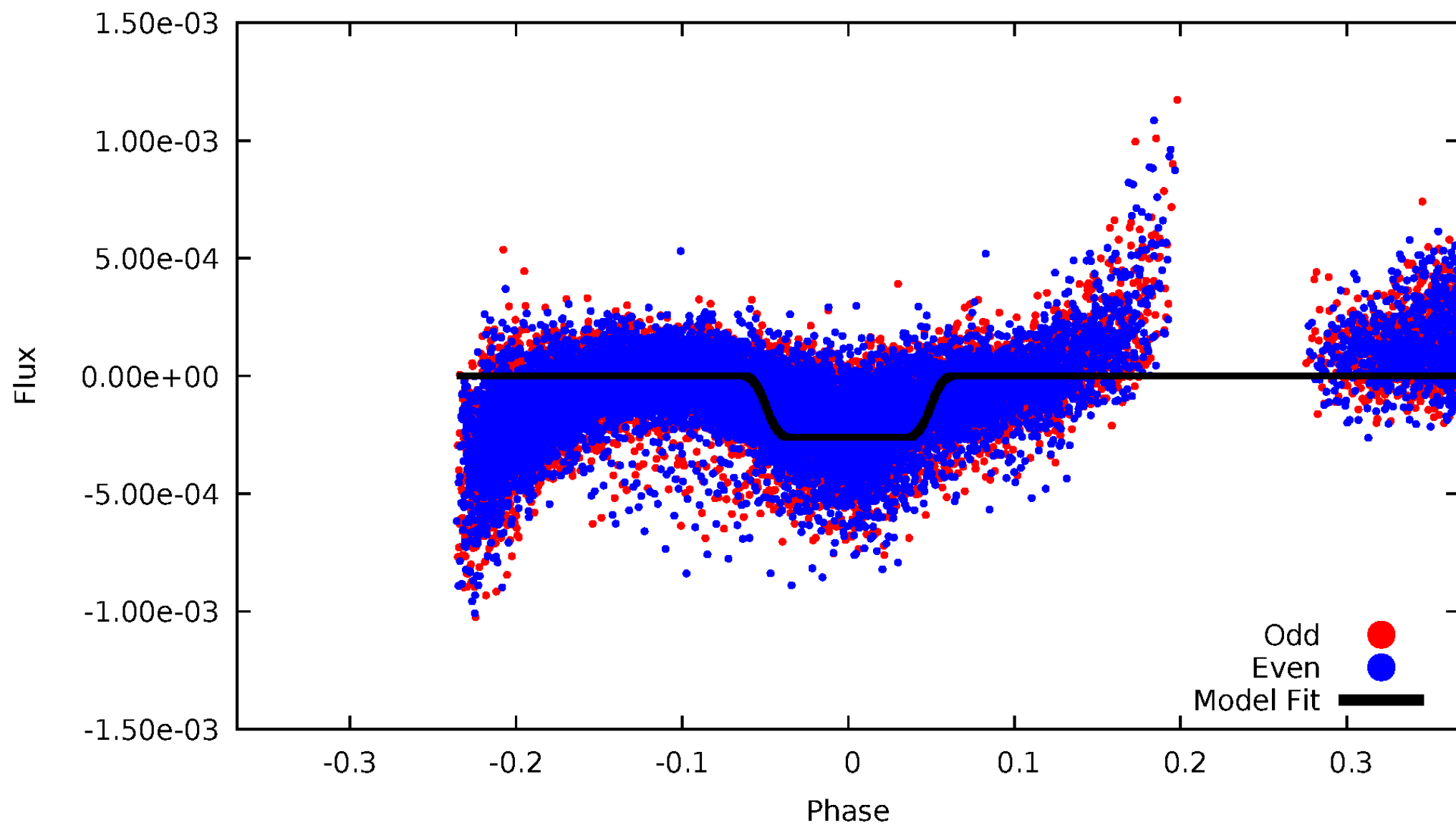
DV Odd/Even

TCE 011014282-03



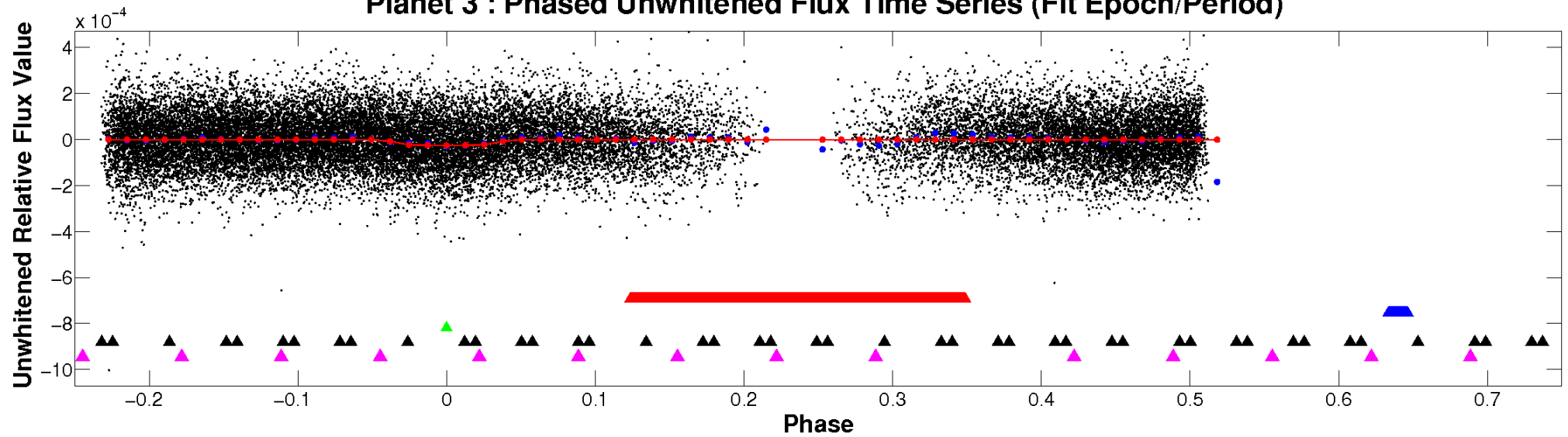
ALT Odd/Even

TCE 011014282-03

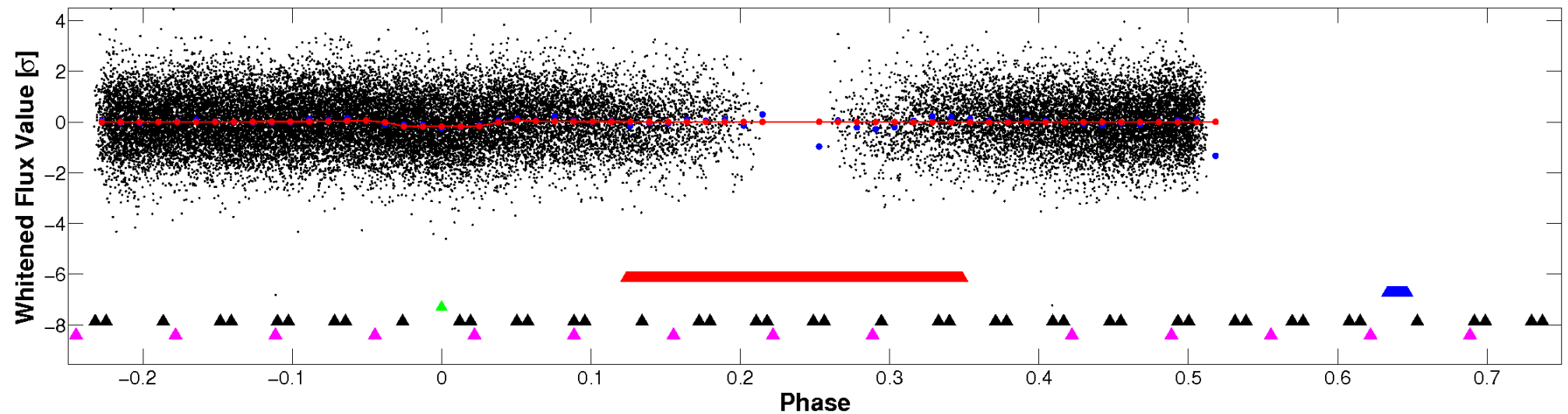


Non-Whitened Vs. Whitened Light Curve

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

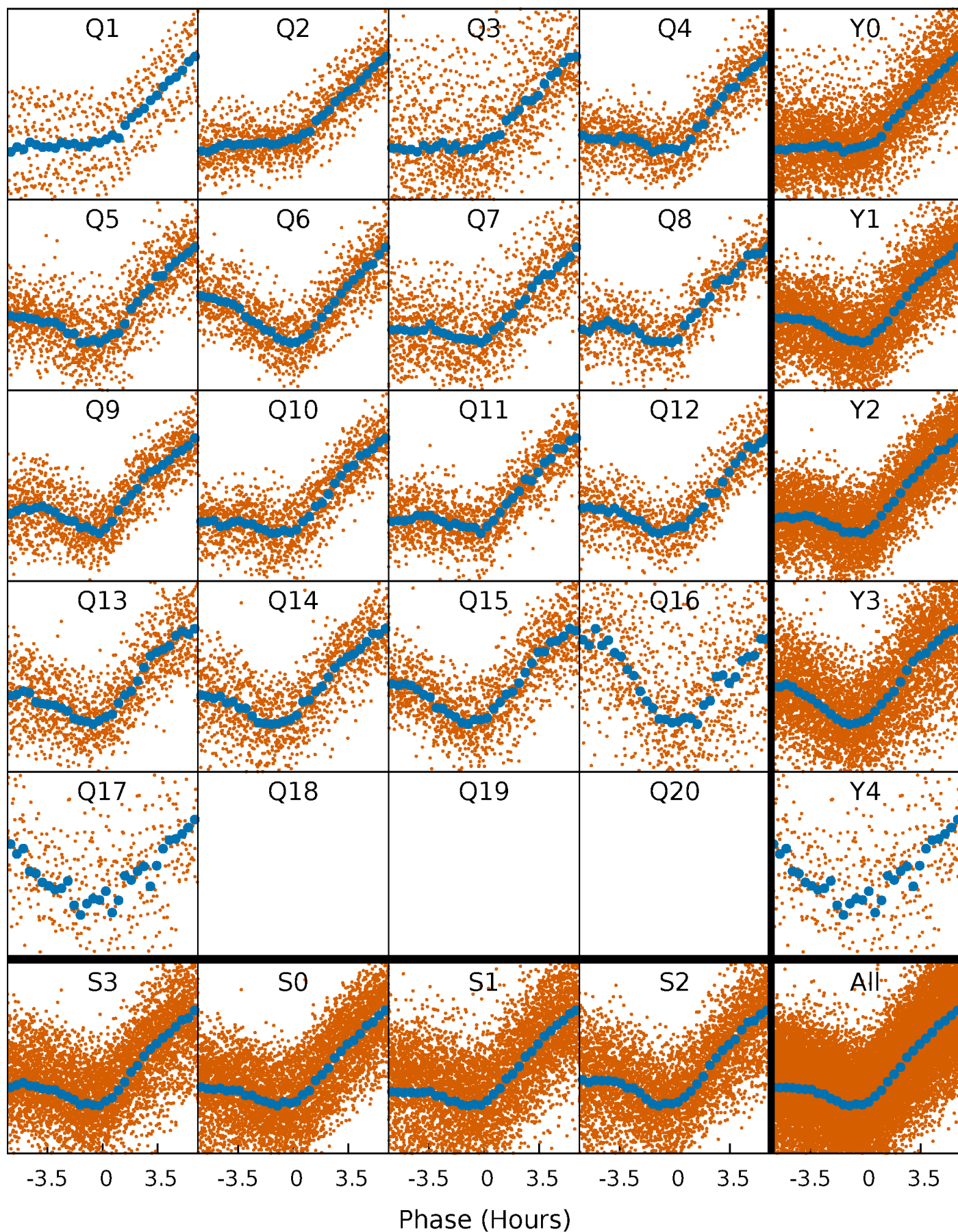


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



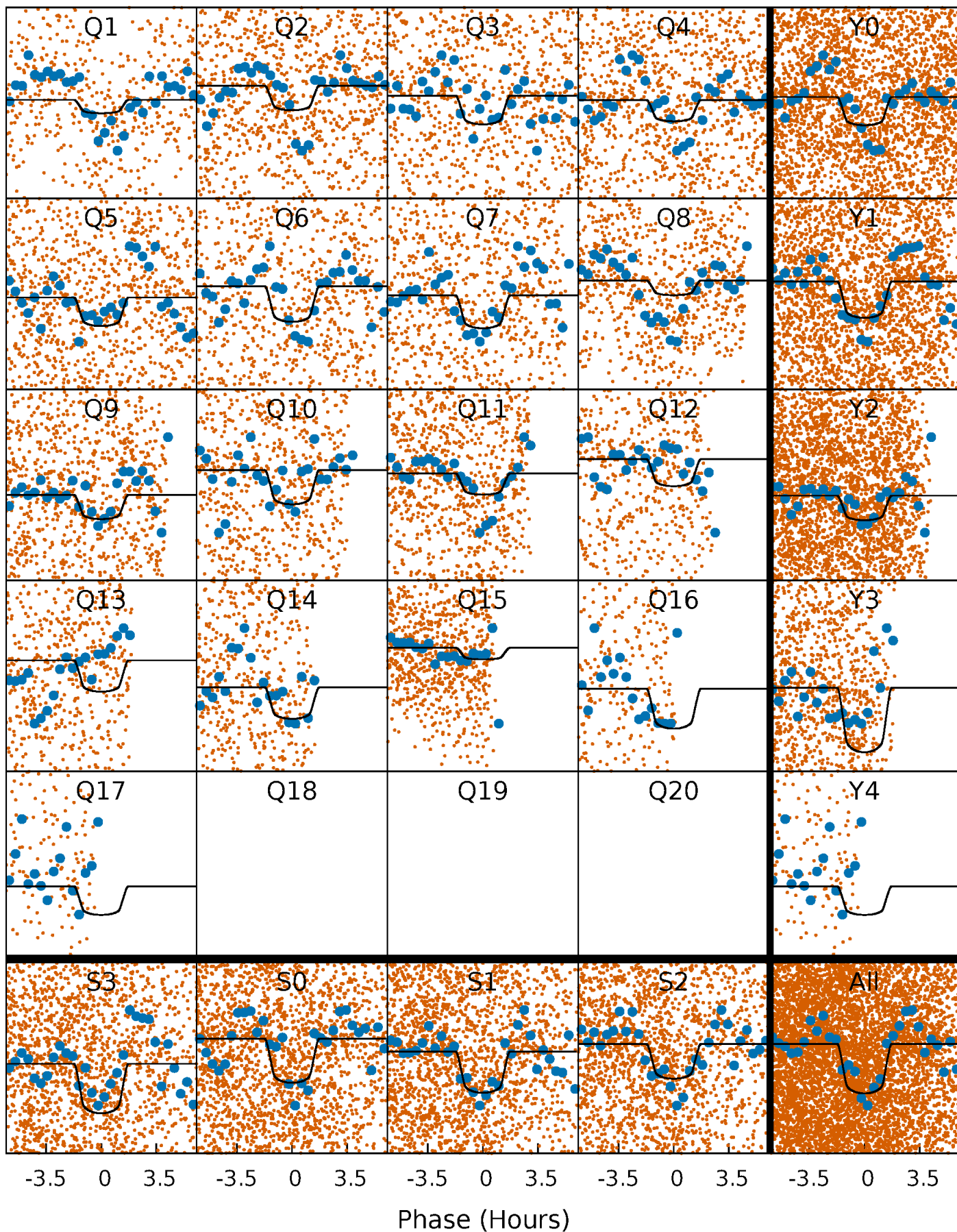
PDC Quarter-Phased Transit Curves

TCE 011014282-03 P= 1.616513 Days $T_0=132.197341$ (BKJD)



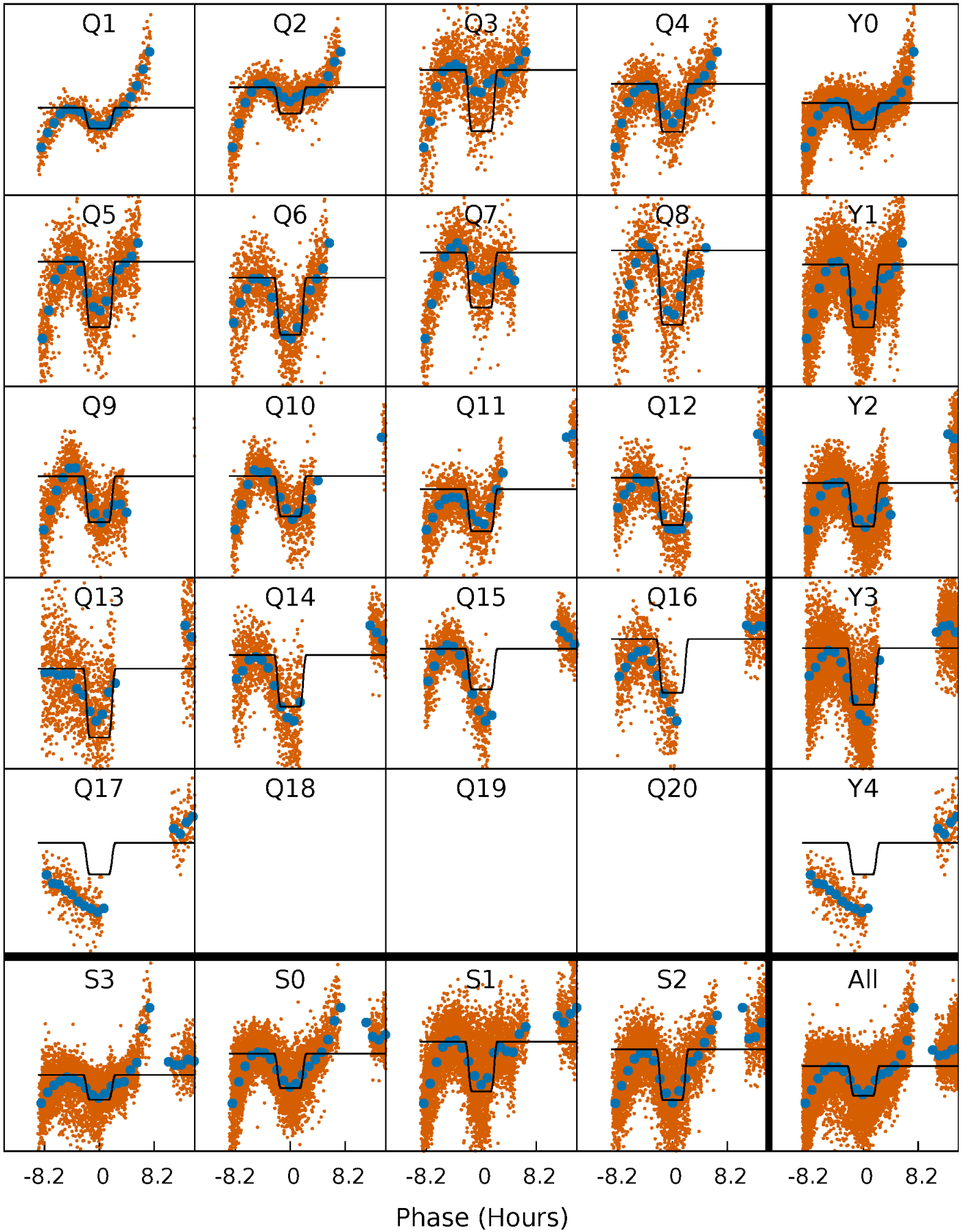
DV Quarter-Phased Transit Curves

TCE 011014282-03 P= 1.616513 Days $T_0=132.197341$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

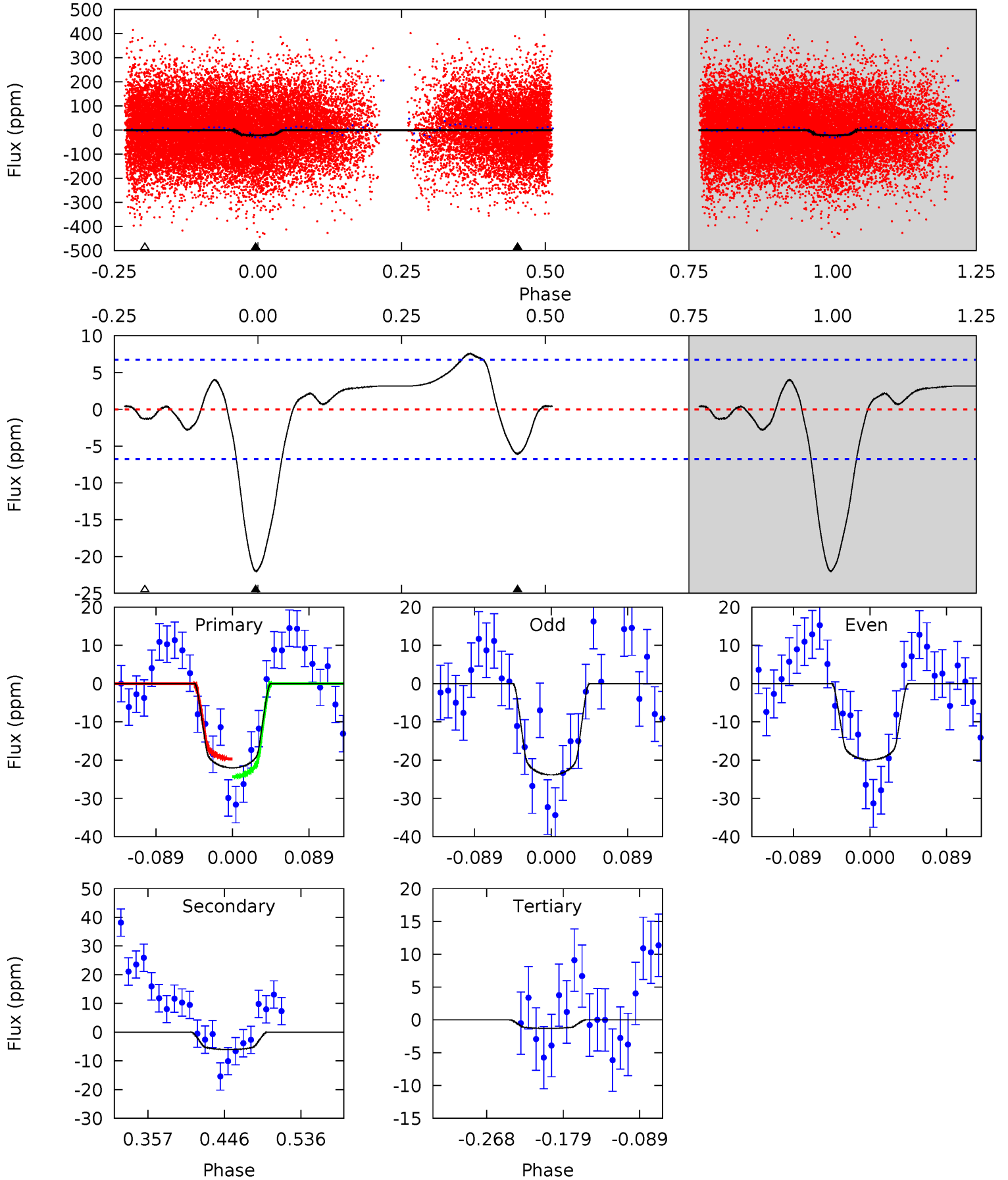
TCE 011014282-03 P= 1.616453 Days $T_0=132.223806$ (BKJD)



DV Model-Shift Uniqueness Test

011014282-03, P = 1.616513 Days, E = 130.580828 Days

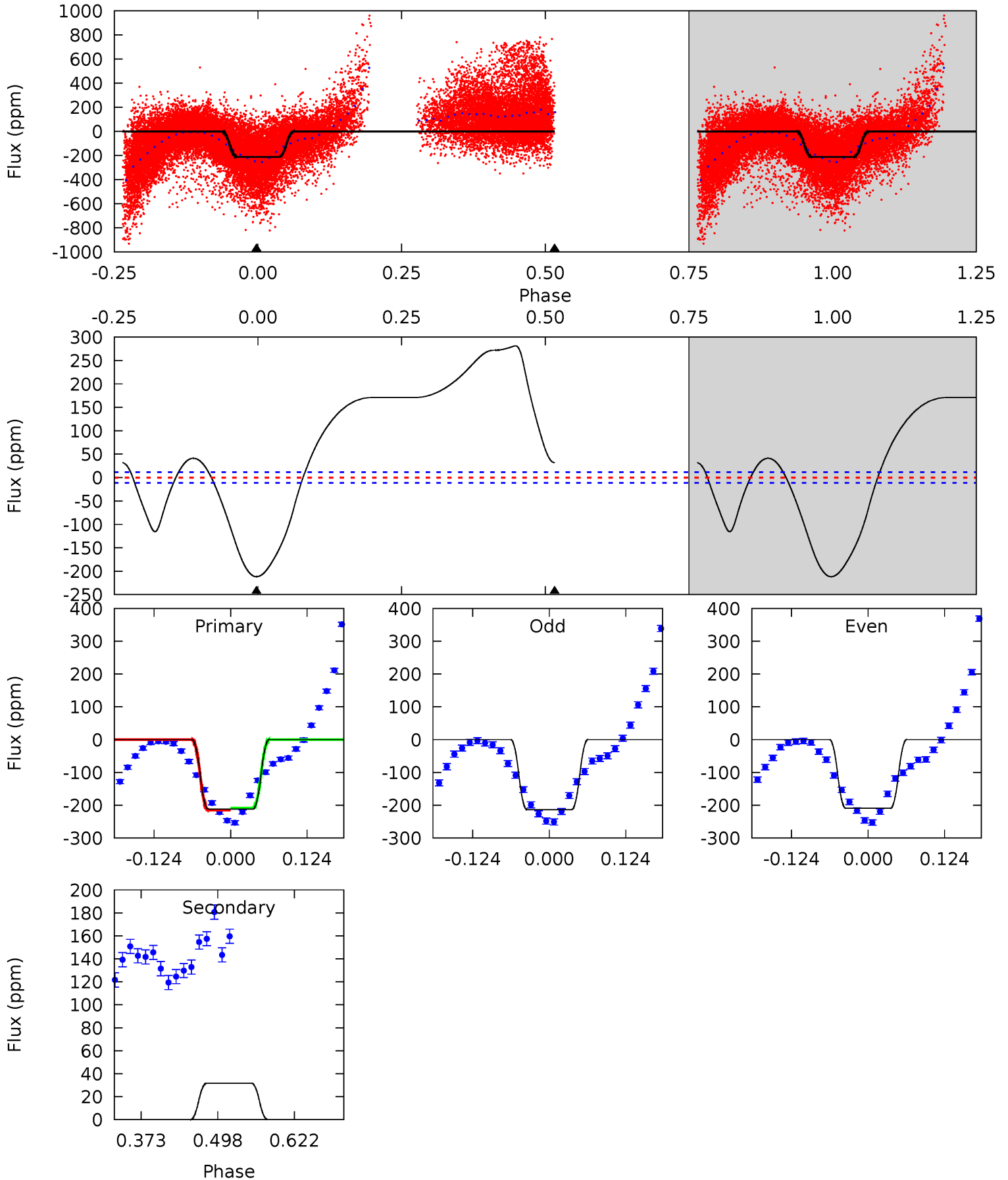
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	4.10	0.88	0	4.59	1.70	1.56	14.1	14.9	3.23	4.10	1.34	1.02	0.26	1.56



Alt Model-Shift Uniqueness Test

011014282-03, P = 1.616453 Days, E = 130.607353 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
83.8	-12.6	0	0	4.52	1.54	48.5	83.8	83.8	-12.6	-12.6	0.79	1.09	0.57	1.48



Stellar Parameters For KIC 011014282

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6649^{+150}_{-183}	$3.619^{+0.336}_{-0.084}$	$-0.380^{+0.350}_{-0.250}$	$3.177^{+0.411}_{-1.232}$	$1.532^{+0.223}_{-0.334}$	$0.067^{+0.172}_{-0.018}$
	+2%/-3%	+9%/-2%	+92%/-66%	+13%/-39%	+15%/-22%	+255%/-27%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011014282-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6 ± 1	$1.87^{+0.51}_{-0.49}$	4049^{+221}_{-368}	4171^{+627}_{-622}	$0.920^{+0.768}_{-0.386}$
Alt.	32 ± 3	$5.36^{+0.86}_{-1.03}$	4079^{+219}_{-382}	-4534^{+161}_{-148}	$-0.590^{+0.138}_{-0.292}$

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 $A_{obs} \gg 1.0$

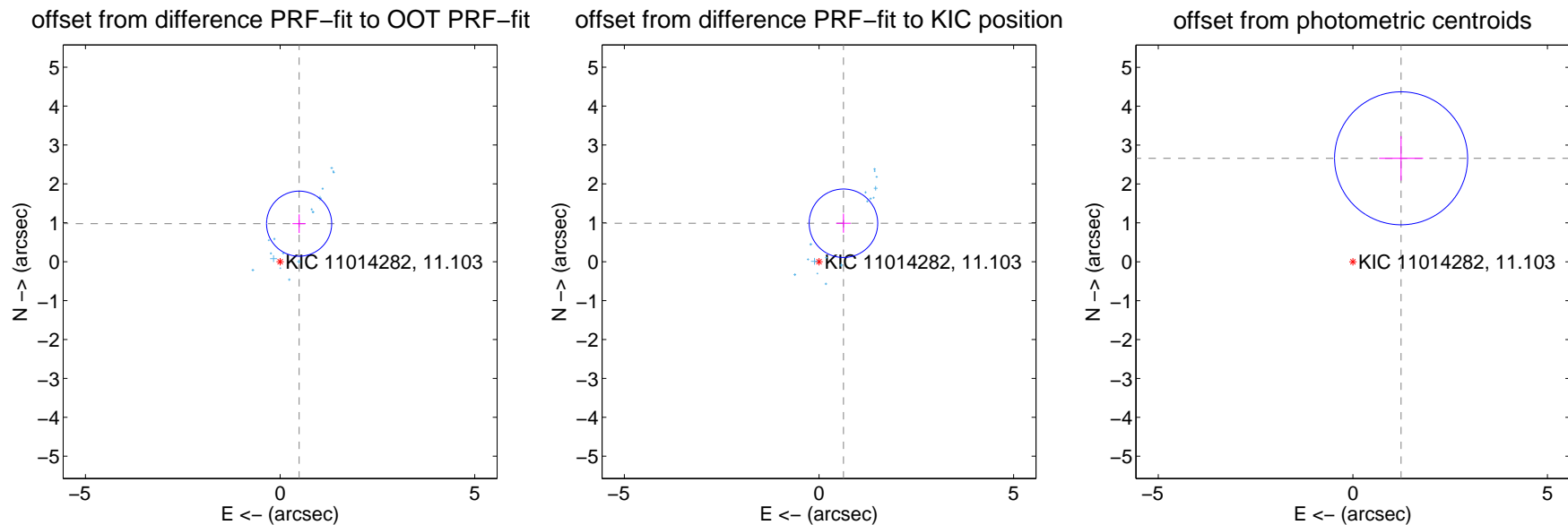
DV Centroid Data

Supplemental centroid analysis for 011014282-03. **Kepler magnitude: 11.10.** Transit SNR 10.91

There are 17 quarters with good PRF difference image offsets

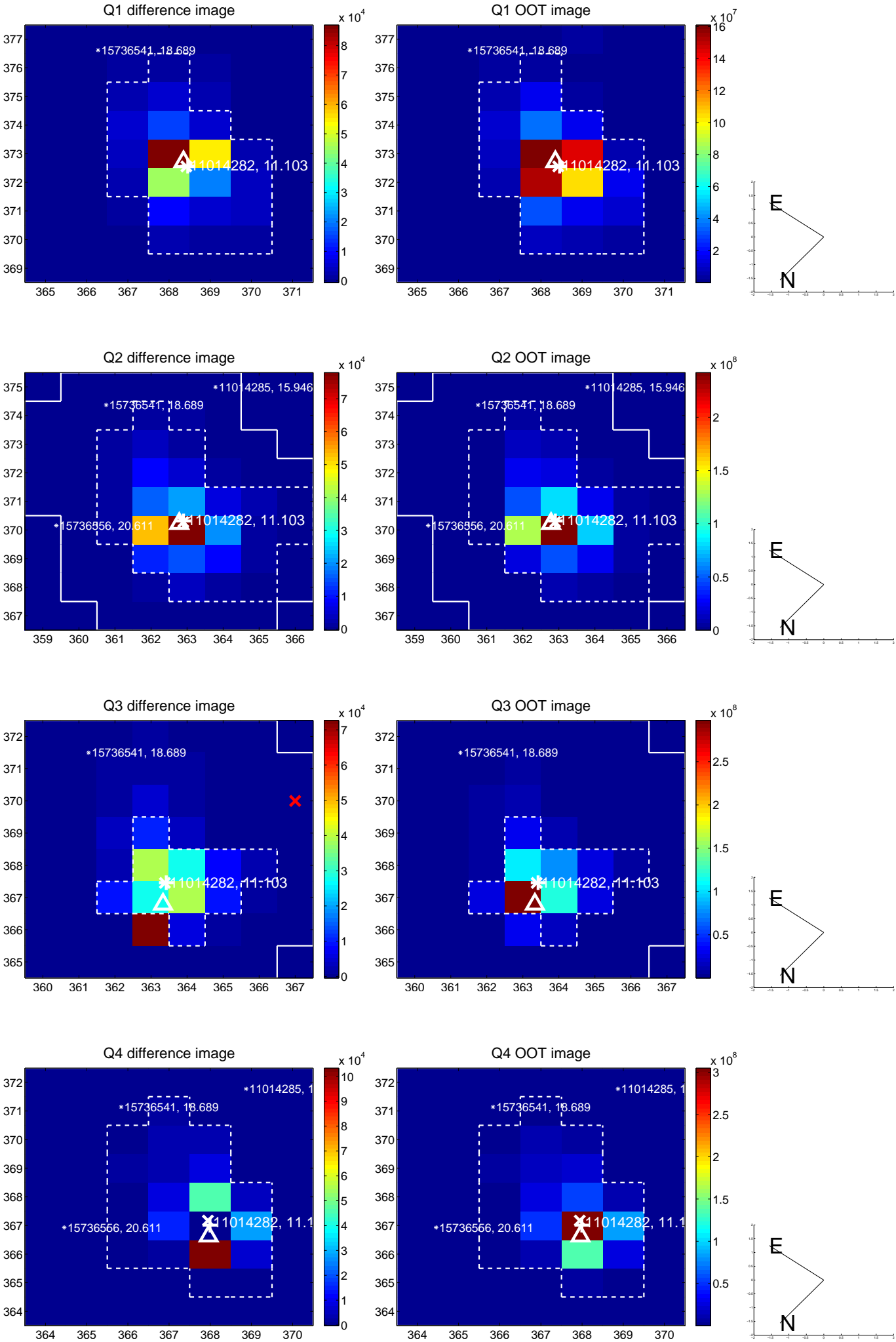
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.093 ± 0.279	3.92	-0.488 ± 0.171	0.978 ± 0.240
PRF-fit source offset from KIC position	1.171 ± 0.293	3.99	-0.629 ± 0.188	0.988 ± 0.244
photometric centroid source offset	2.94 ± 0.57	5.15	-1.24 ± 0.57	2.66 ± 0.57

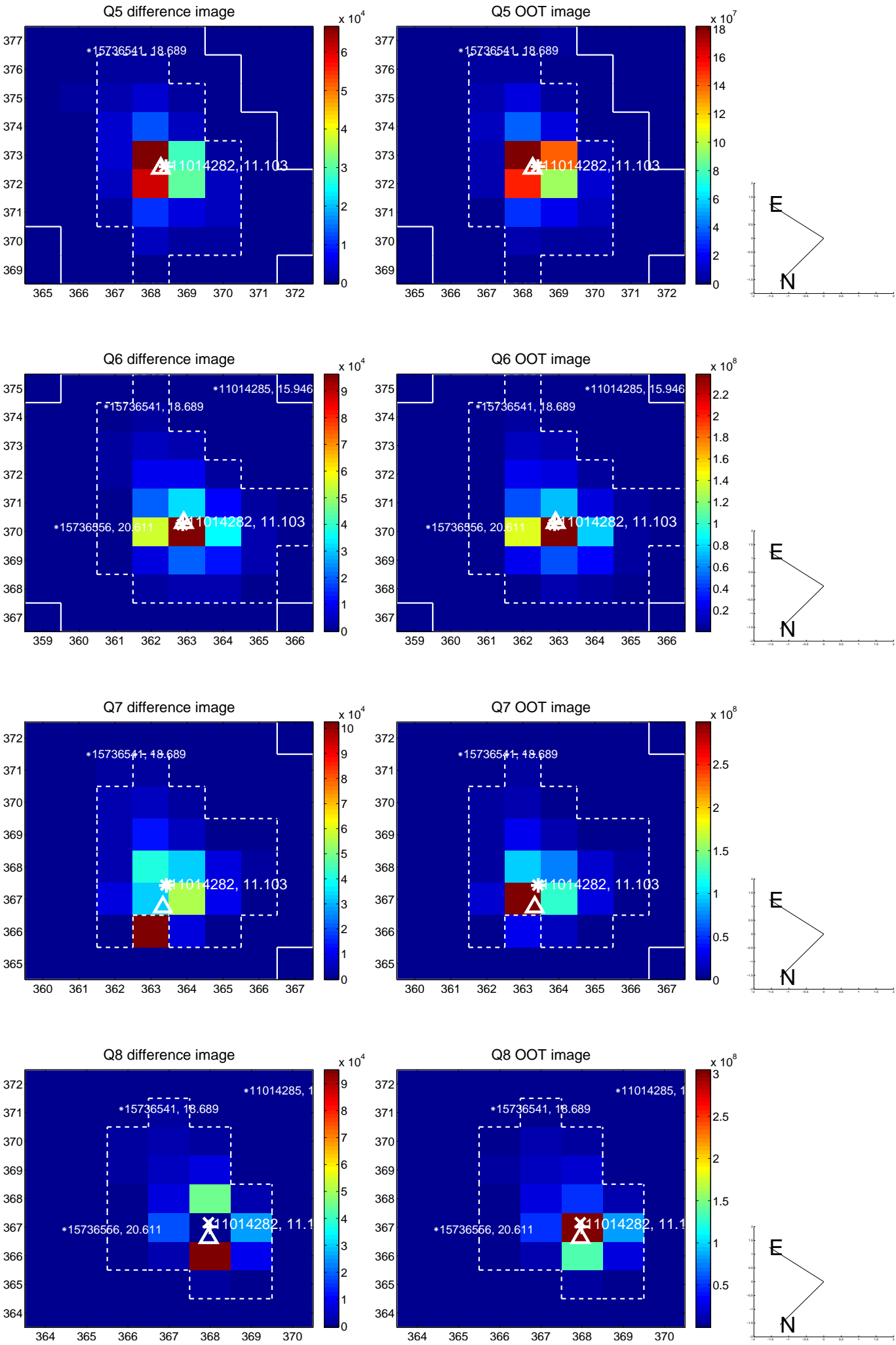


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

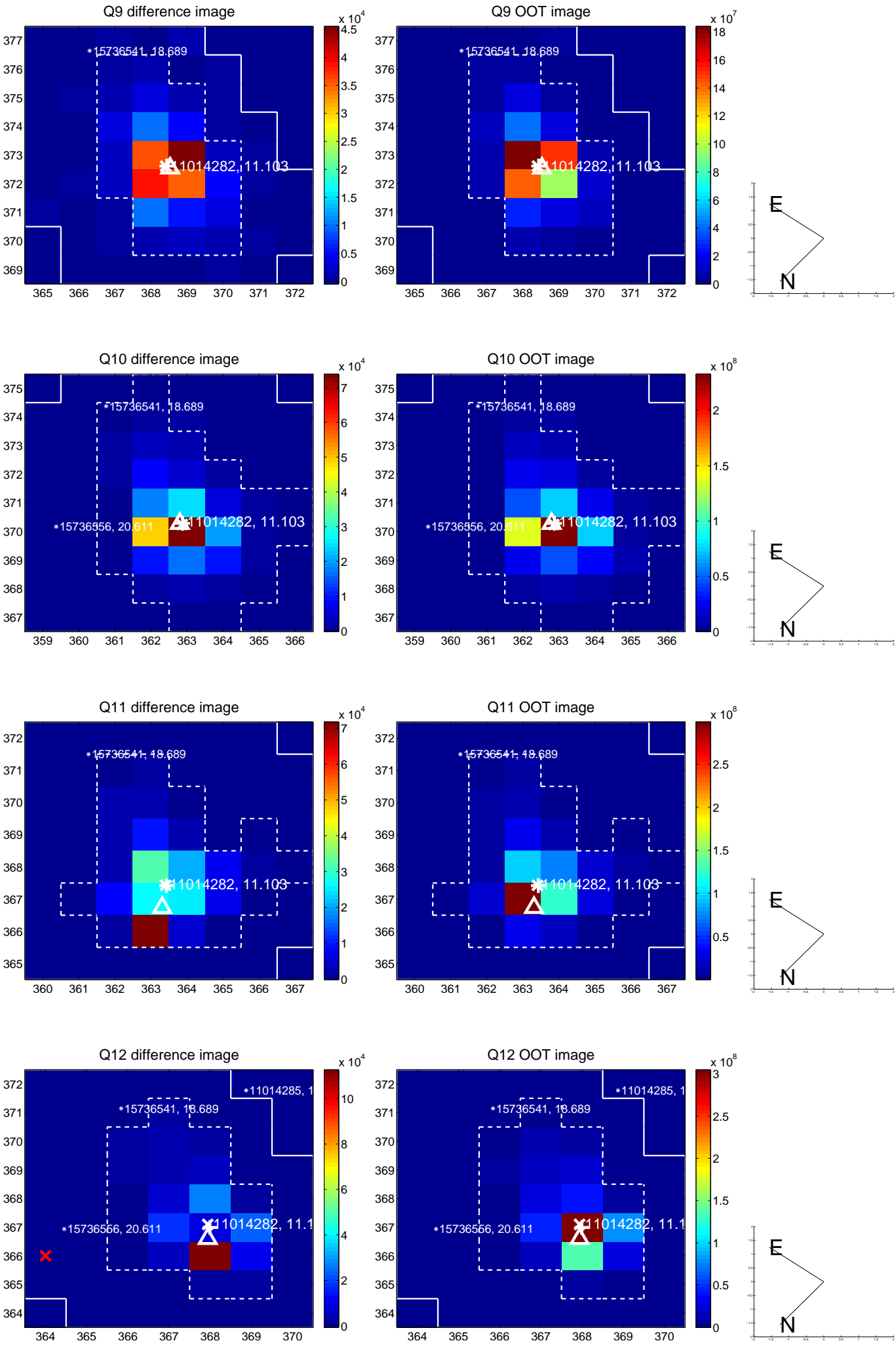
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



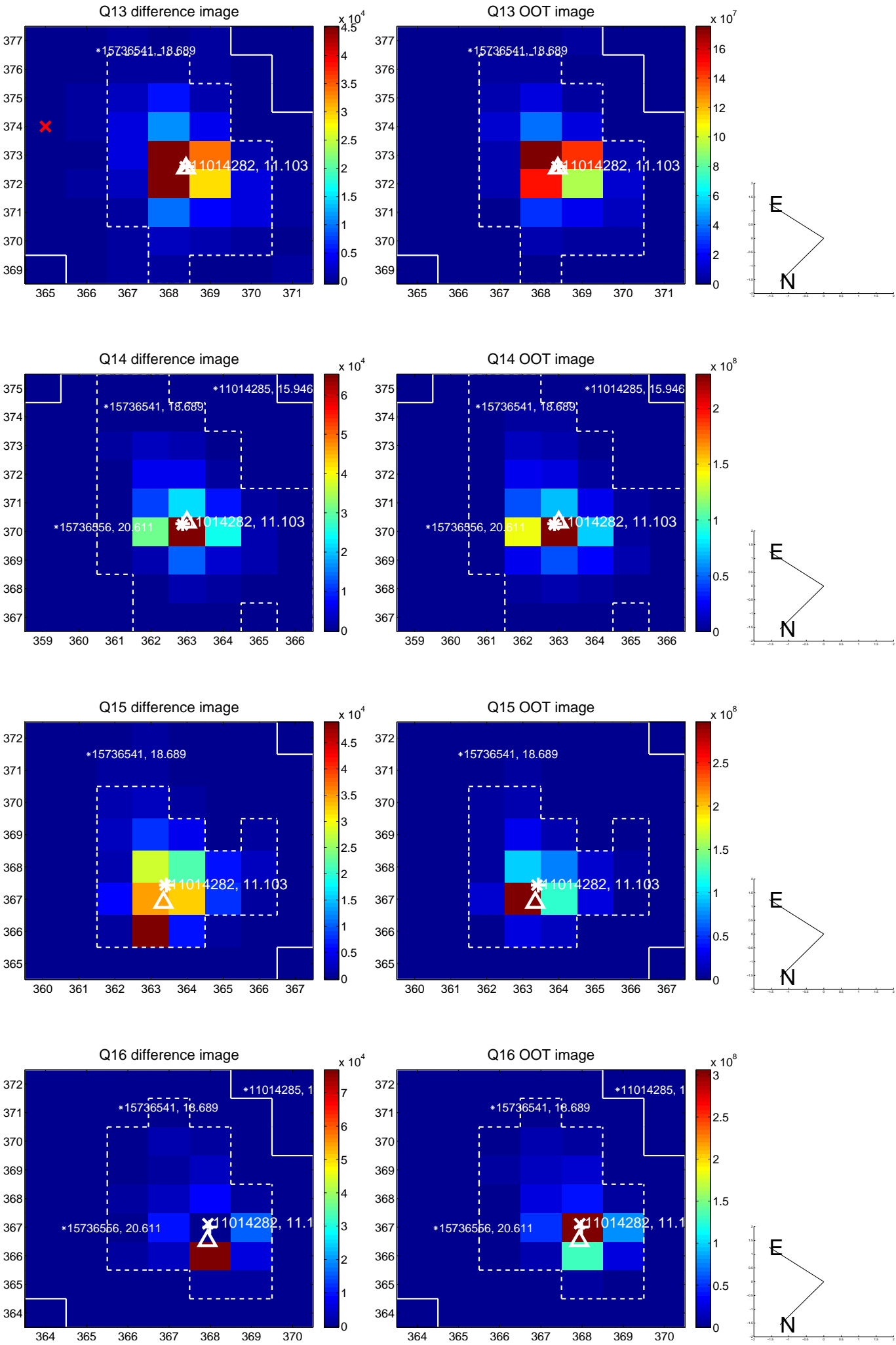
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



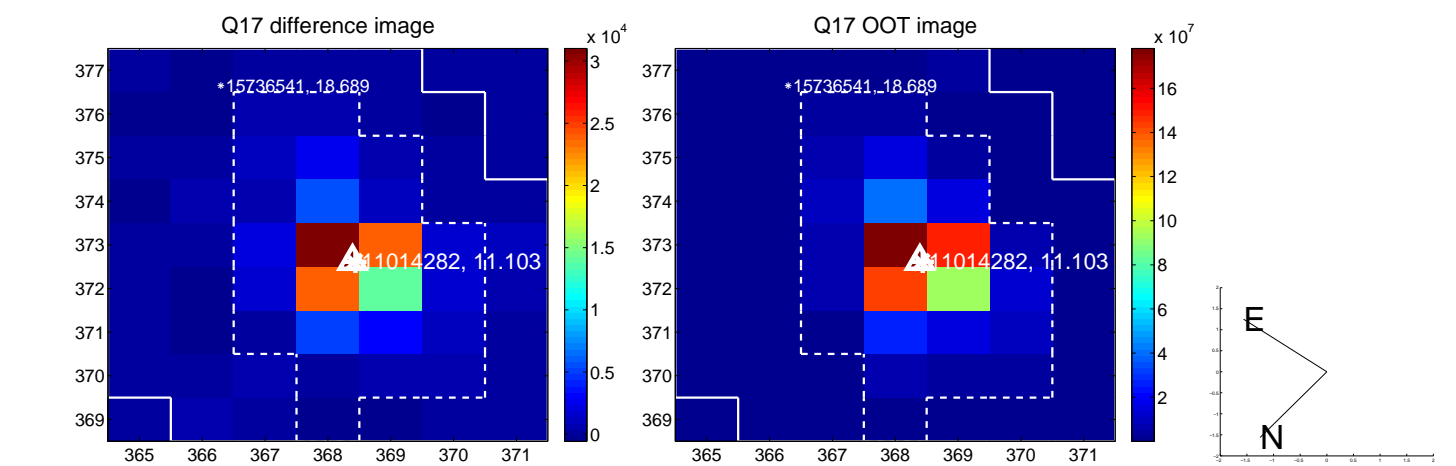
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



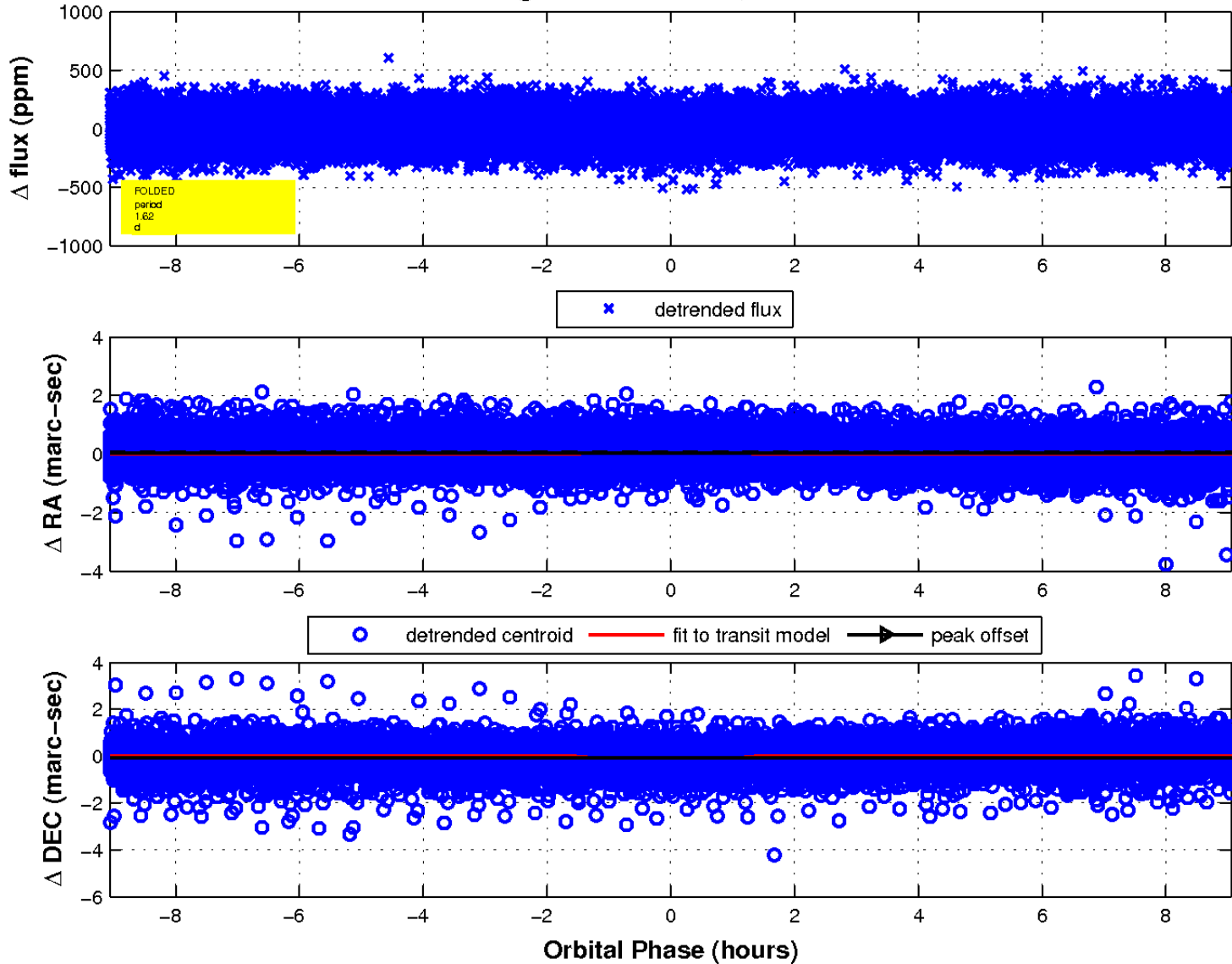
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

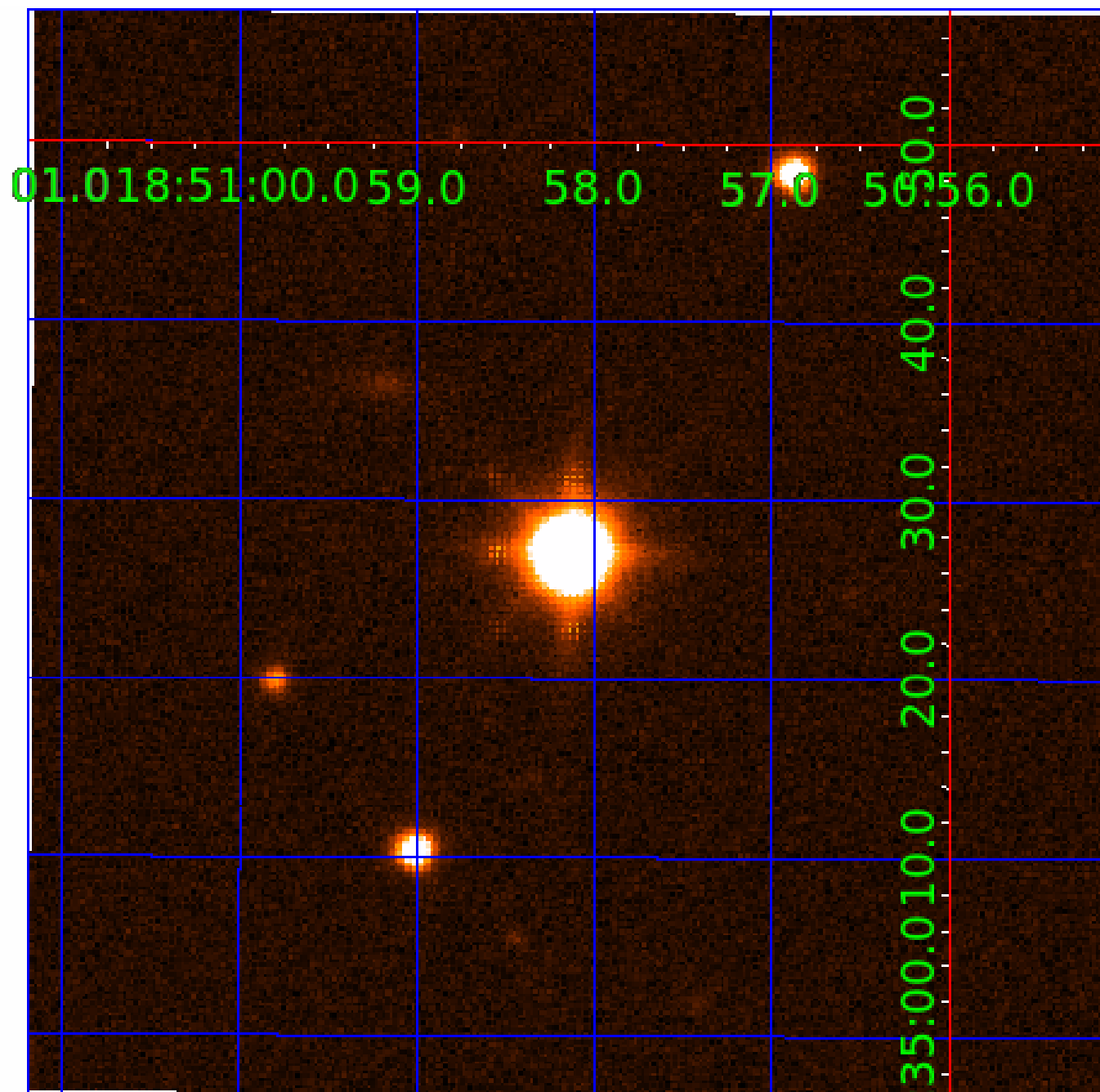


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 011014282

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})
011014282-01	OBS	No	1.616110	132.761179	20.1	3.282	10.3	7.7	3.18	6649	1.66	18307.82
011014282-02	OBS	No	1.616490	131.625907	21.9	3.296	9.6	9.0	3.18	6649	1.75	18302.09
011014282-03	OBS	No	1.616513	132.197342	25.4	3.020	10.8	10.9	3.18	6649	2.00	18301.73
011014282-04	OBS	No	32.589379	144.236313	203.8	2.382	8.5	8.9	3.18	6649	4.86	333.55
011014282-05	OBS	No	107.551991	156.265207	274.6	1.673	8.7	7.4	3.18	6649	6.15	67.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011014282-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011014282-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
011014282-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

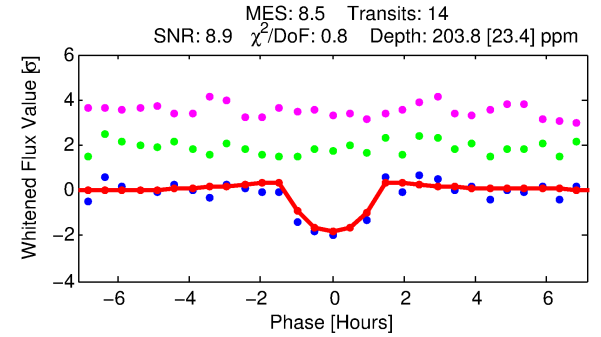
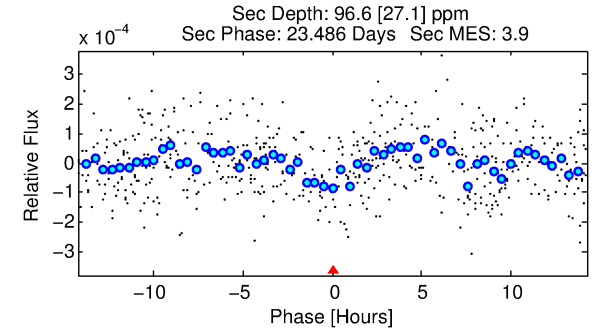
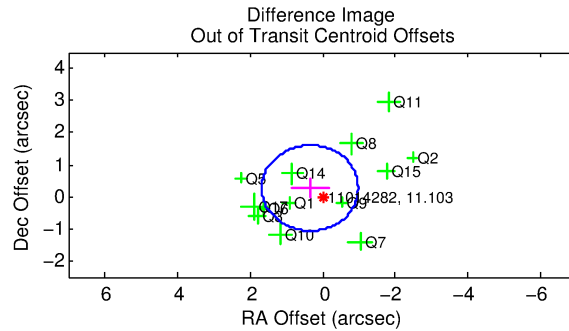
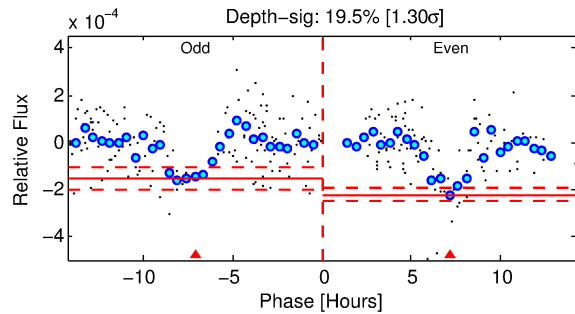
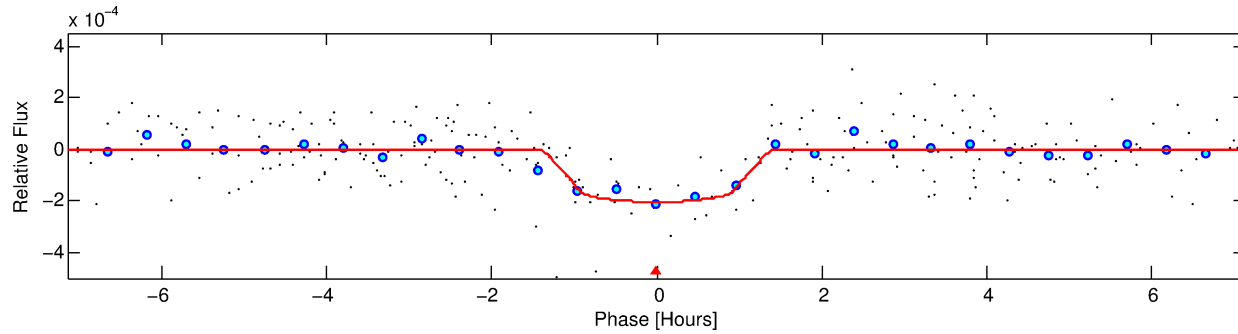
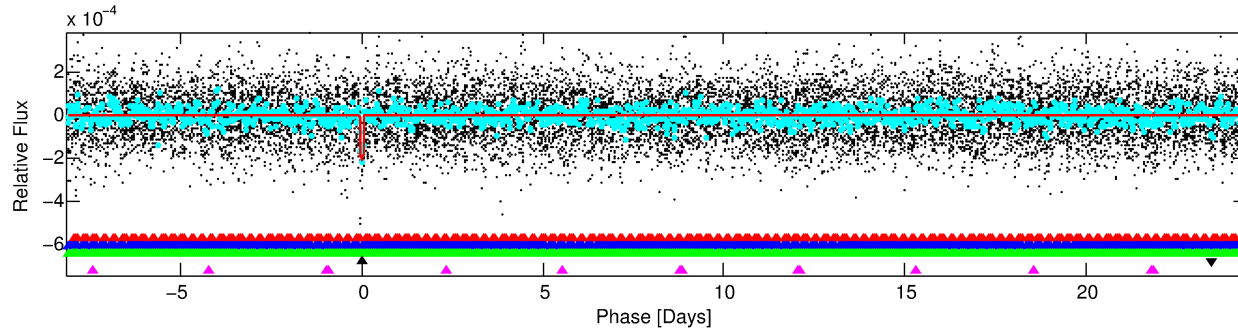
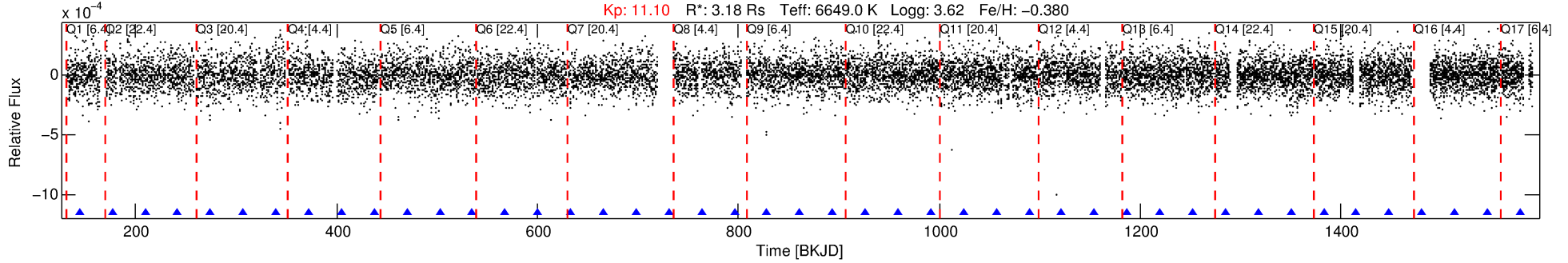
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011014282-04

No Significant Match Found

DV One-Page Summary

KIC: 11014282 Candidate: 4 of 5 Period: 32.589 d



DV Fit Results:

Period = 32.58938 [0.00022] d
Epoch = 144.2363 [0.0063] BKJD
Rp/R* = 0.0140 [0.0115]
a/R* = 77.35 [355.63]
b = 0.69 [3.47]
Seff = 333.55 [195.91]
Teq = 1090 [160] K
Rp = 4.85 [4.40] Re
a = 0.2302 [0.0841] AU
Ag = 119.51 [210.23] [0.56 σ]
Teffp = 5571 [2319] K [1.93 σ]

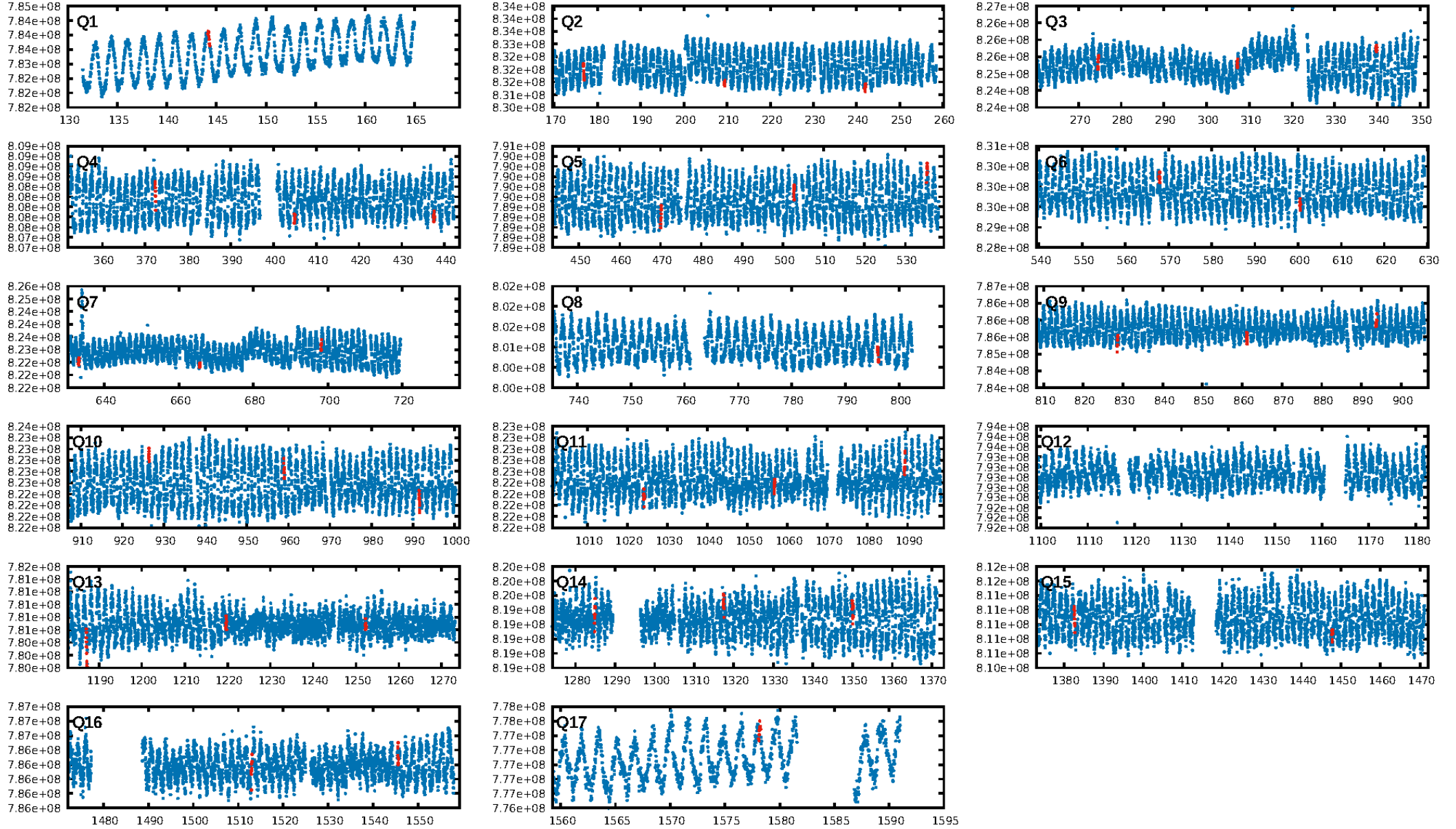
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [193.27 σ]
LongPeriod-sig: 100.0% [618.09 σ]
ModelChiSquare2-sig: 77.1%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 2.93e-12
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -1.585
Centroid-sig: 34.3%
Centroid-so: 0.396 arcsec [1.11 σ]
OotOffset-rm: 0.443 arcsec [1.00 σ]
KicOffset-rm: 0.308 arcsec [0.67 σ]
OotOffset-st: 4/4/1/4 [13]
KicOffset-st: 4/4/1/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/16]

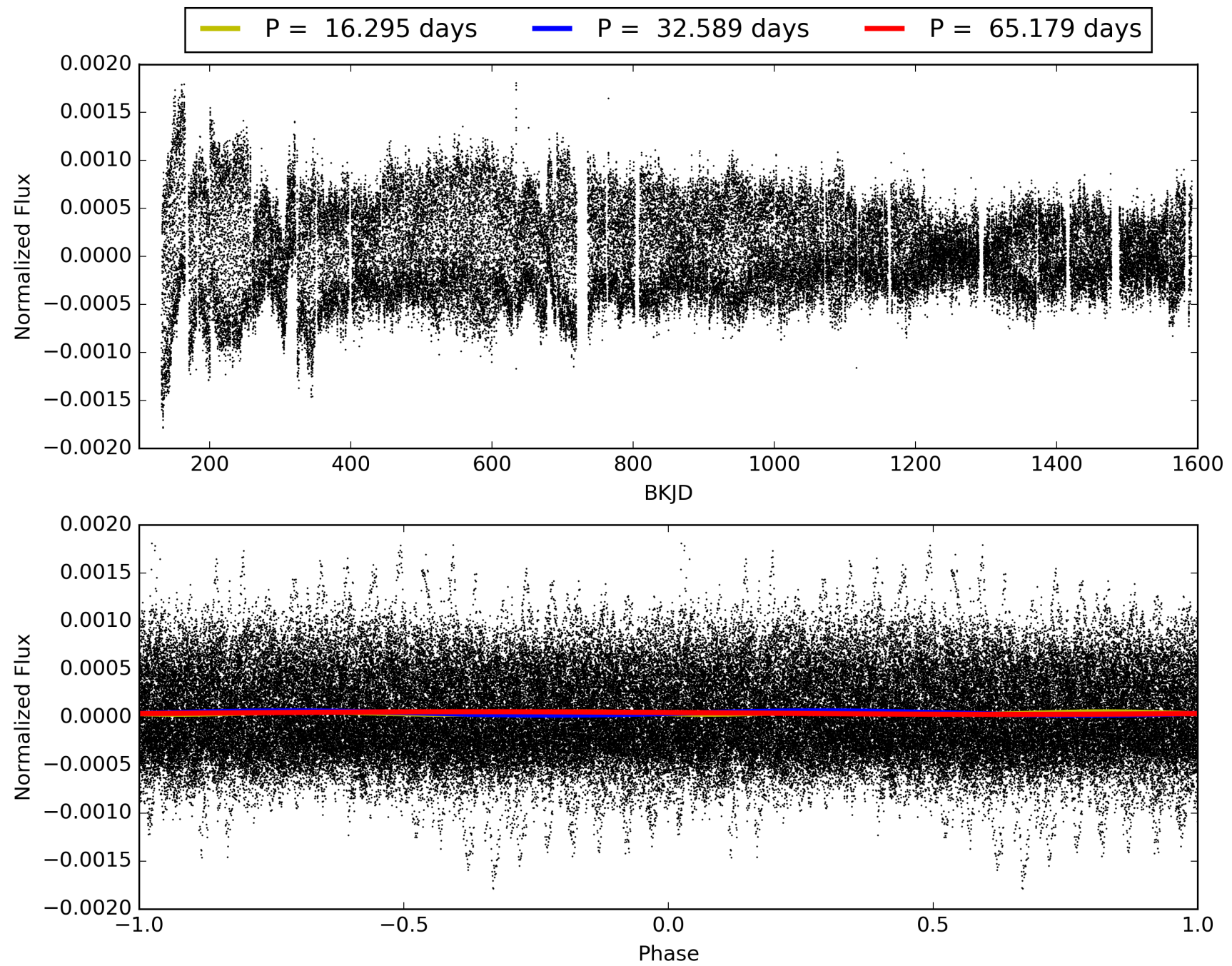
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:51:33 Z

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

TCE 011014282-04, PDC Light Curves

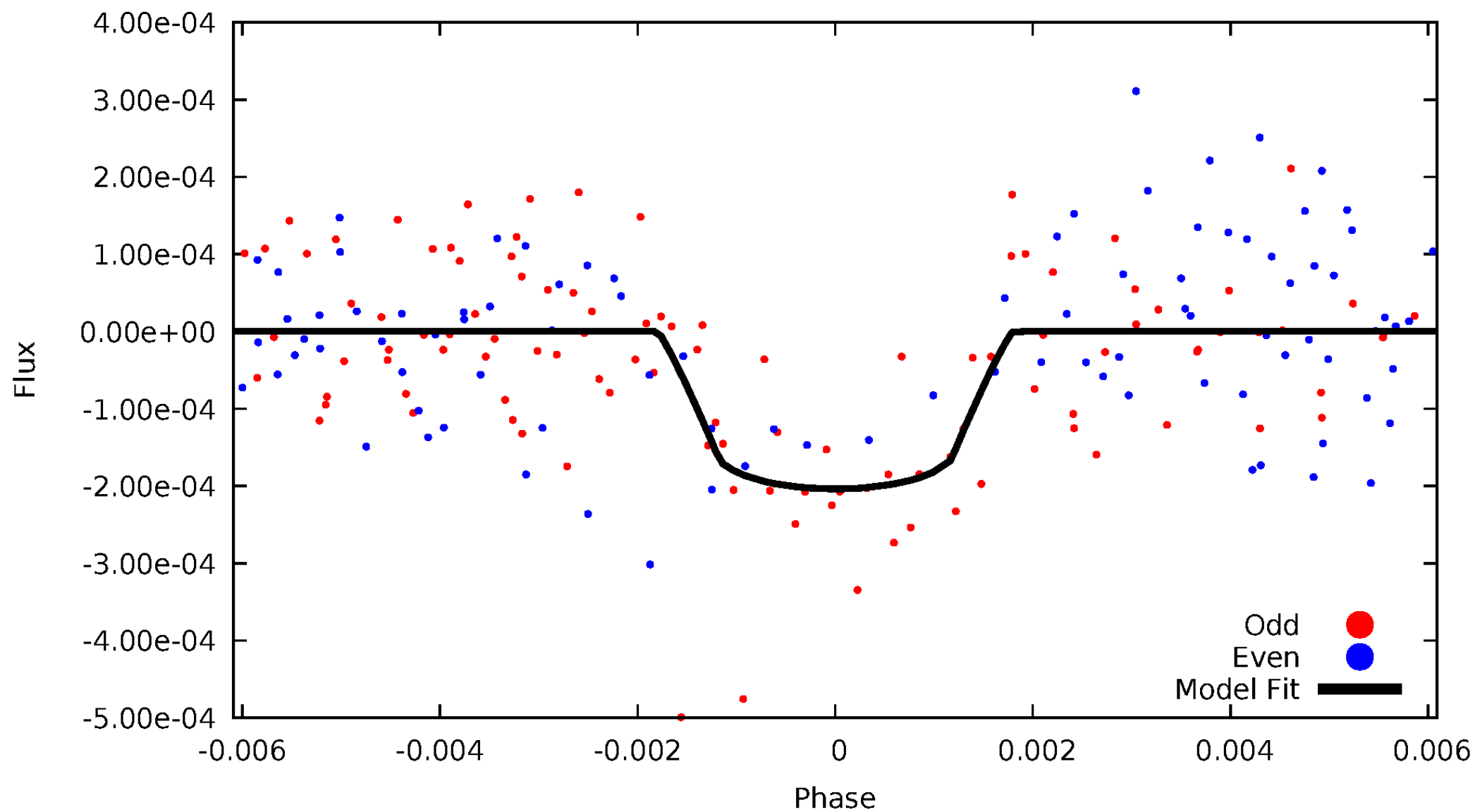


TCE 011014282-04



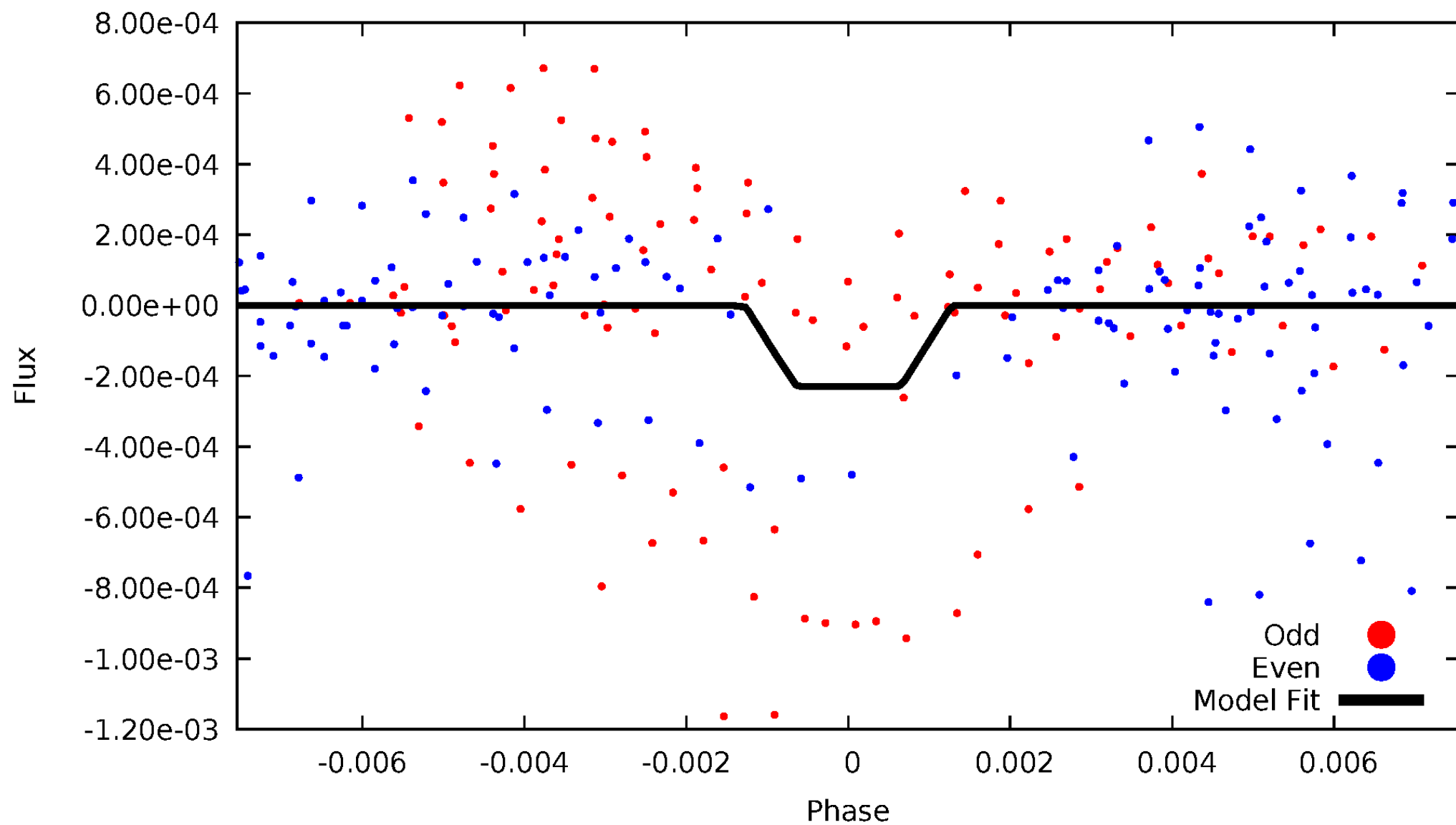
DV Odd/Even

TCE 011014282-04



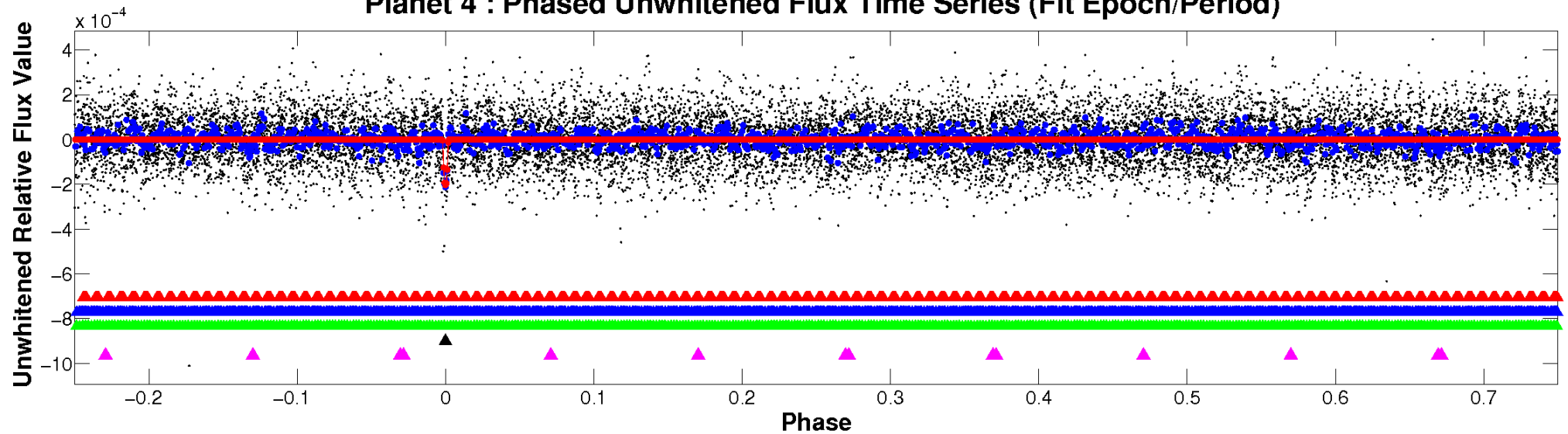
ALT Odd/Even

TCE 011014282-04

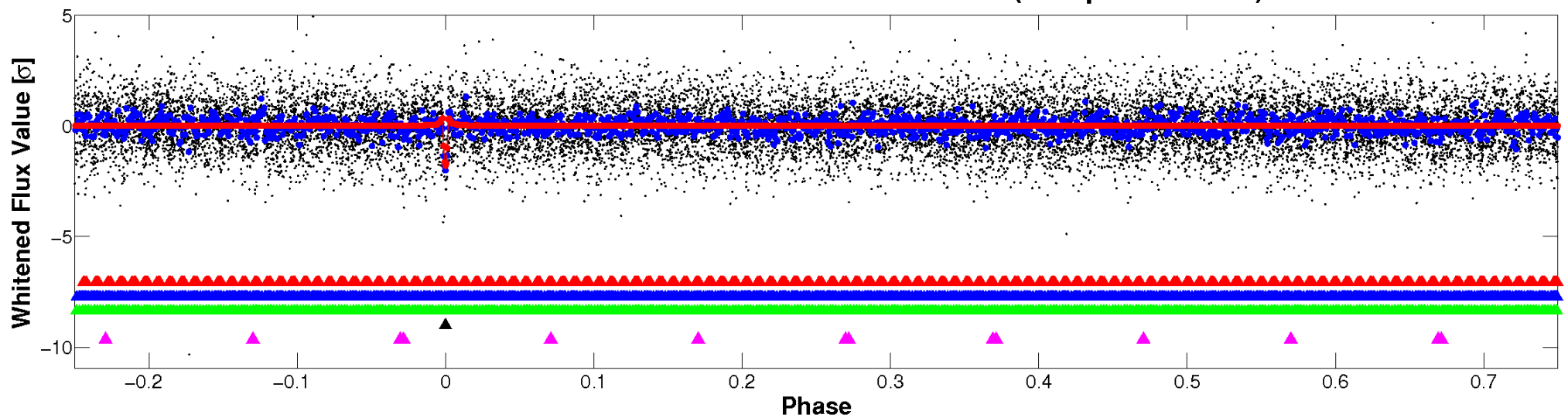


Non-Whitened Vs. Whitened Light Curve

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

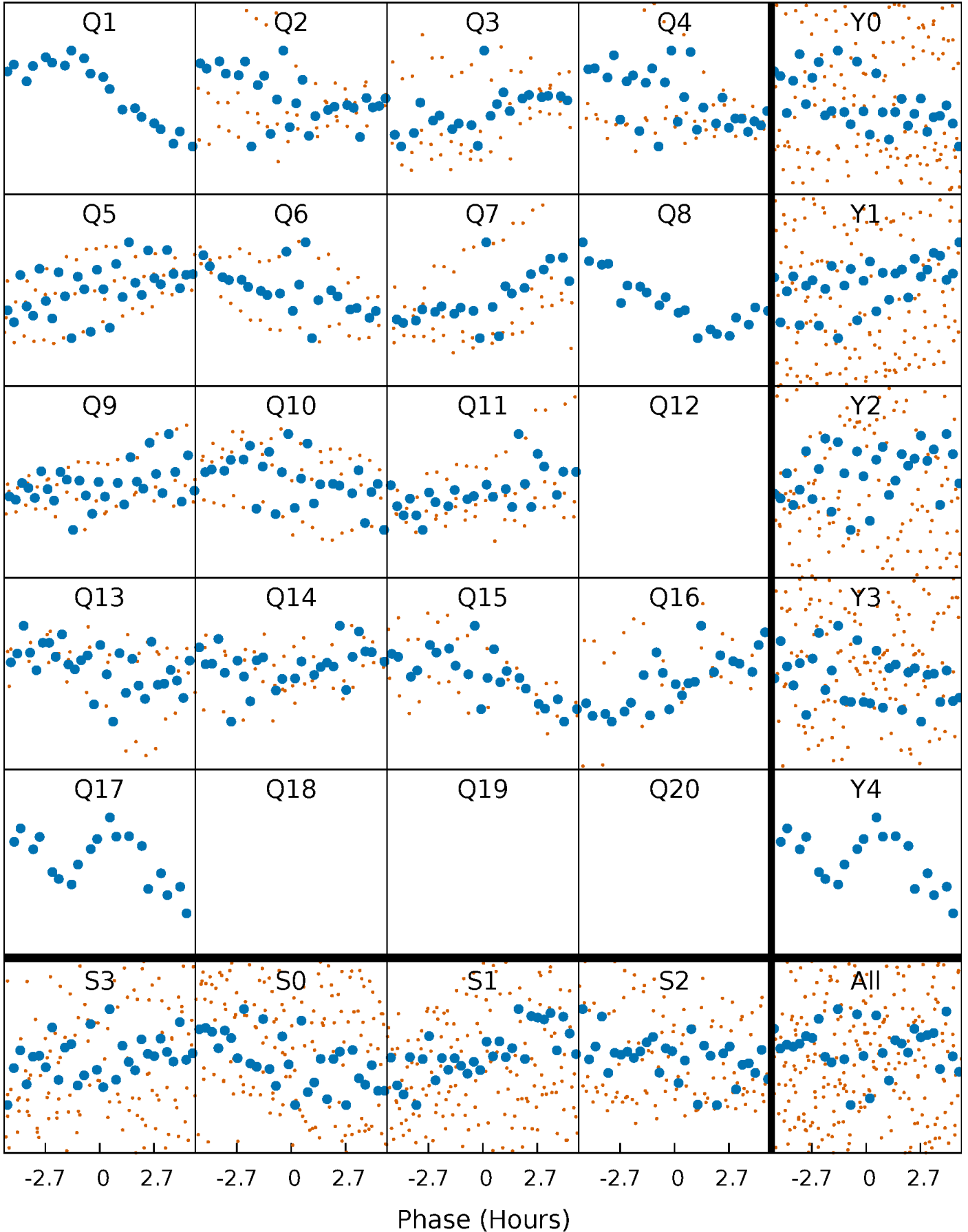


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



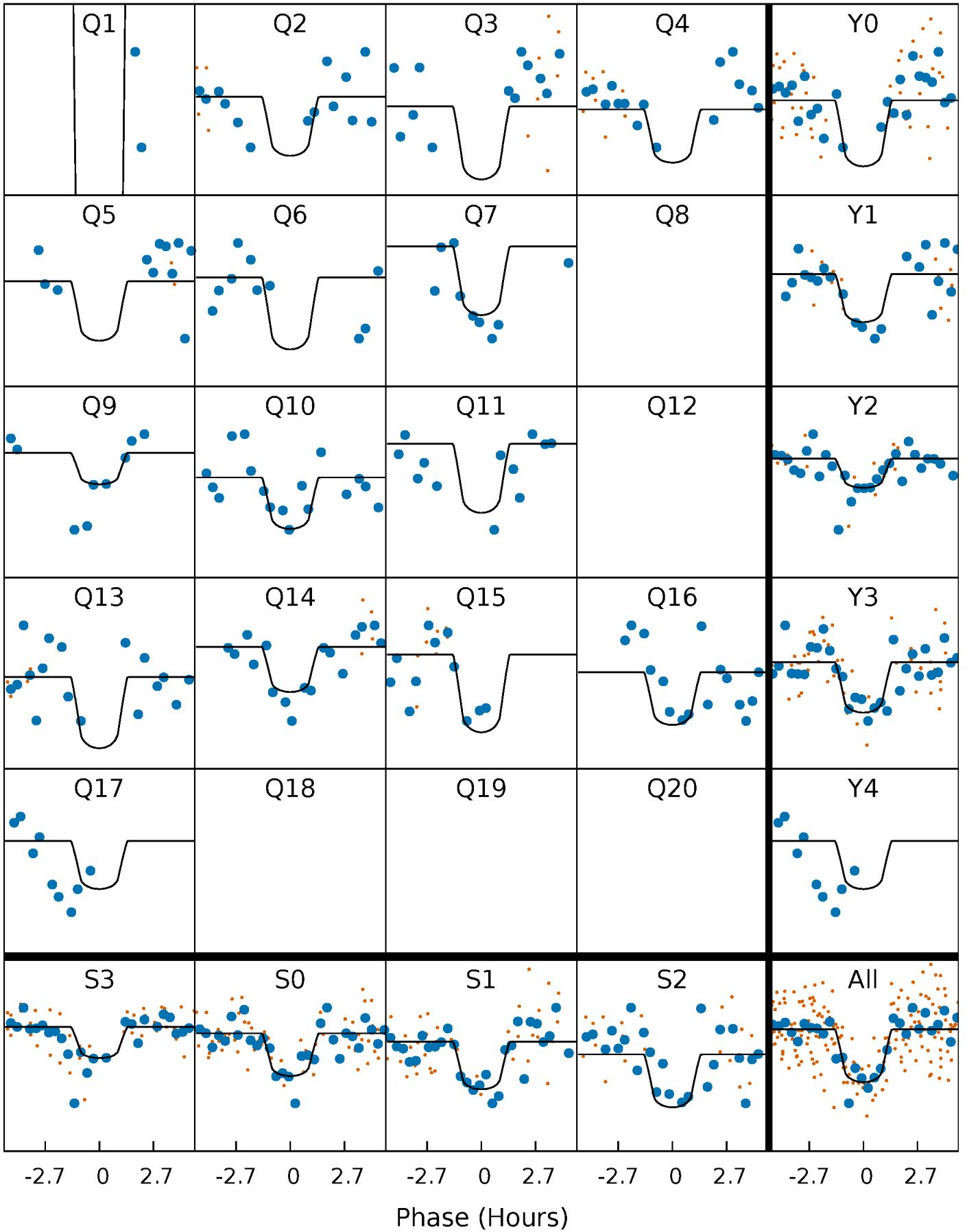
PDC Quarter-Phased Transit Curves

TCE 011014282-04 $P = 32.589379$ Days $T_0 = 144.236313$ (BKJD)



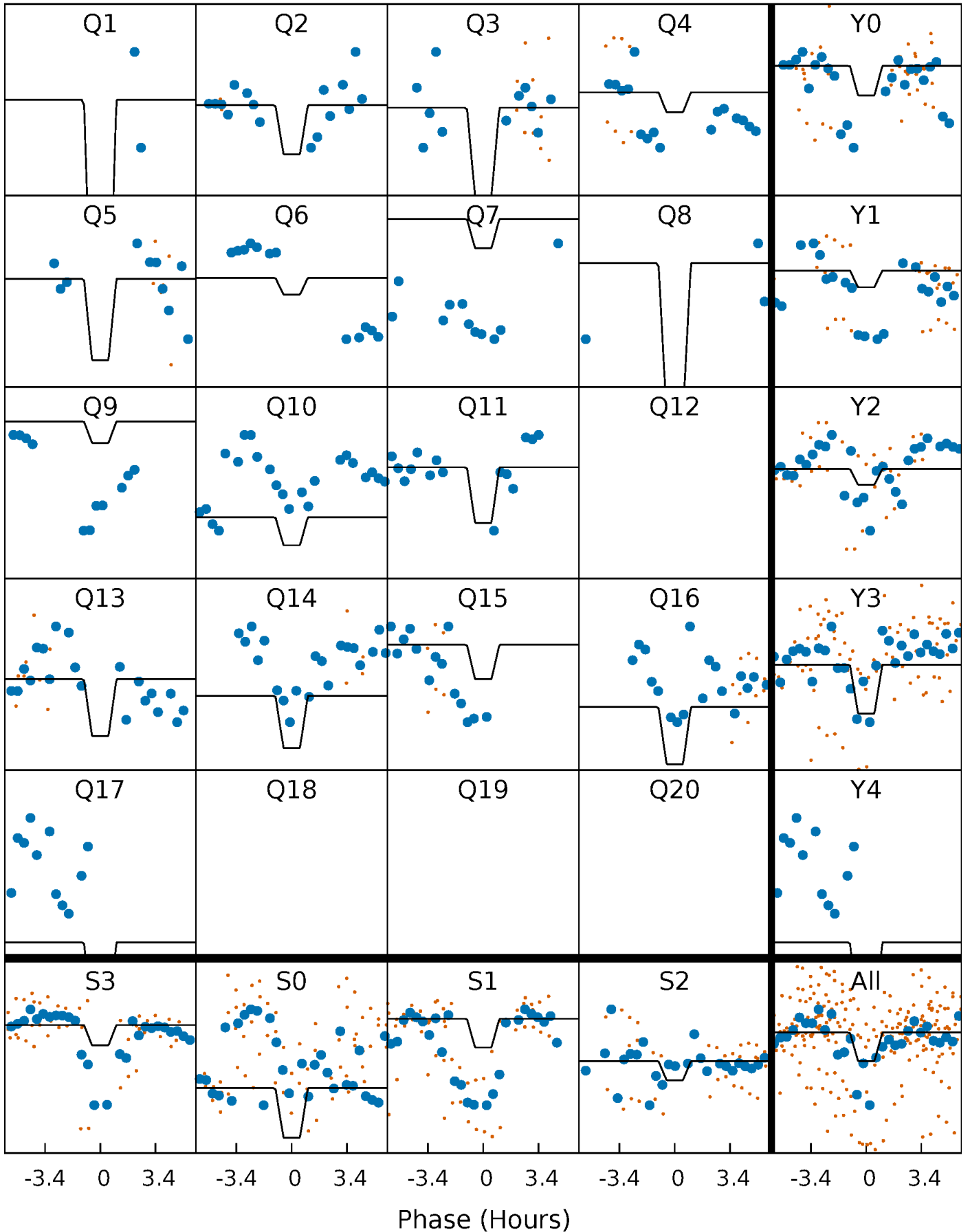
DV Quarter-Phased Transit Curves

TCE 011014282-04 P= 32.589379 Days $T_0=144.236313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

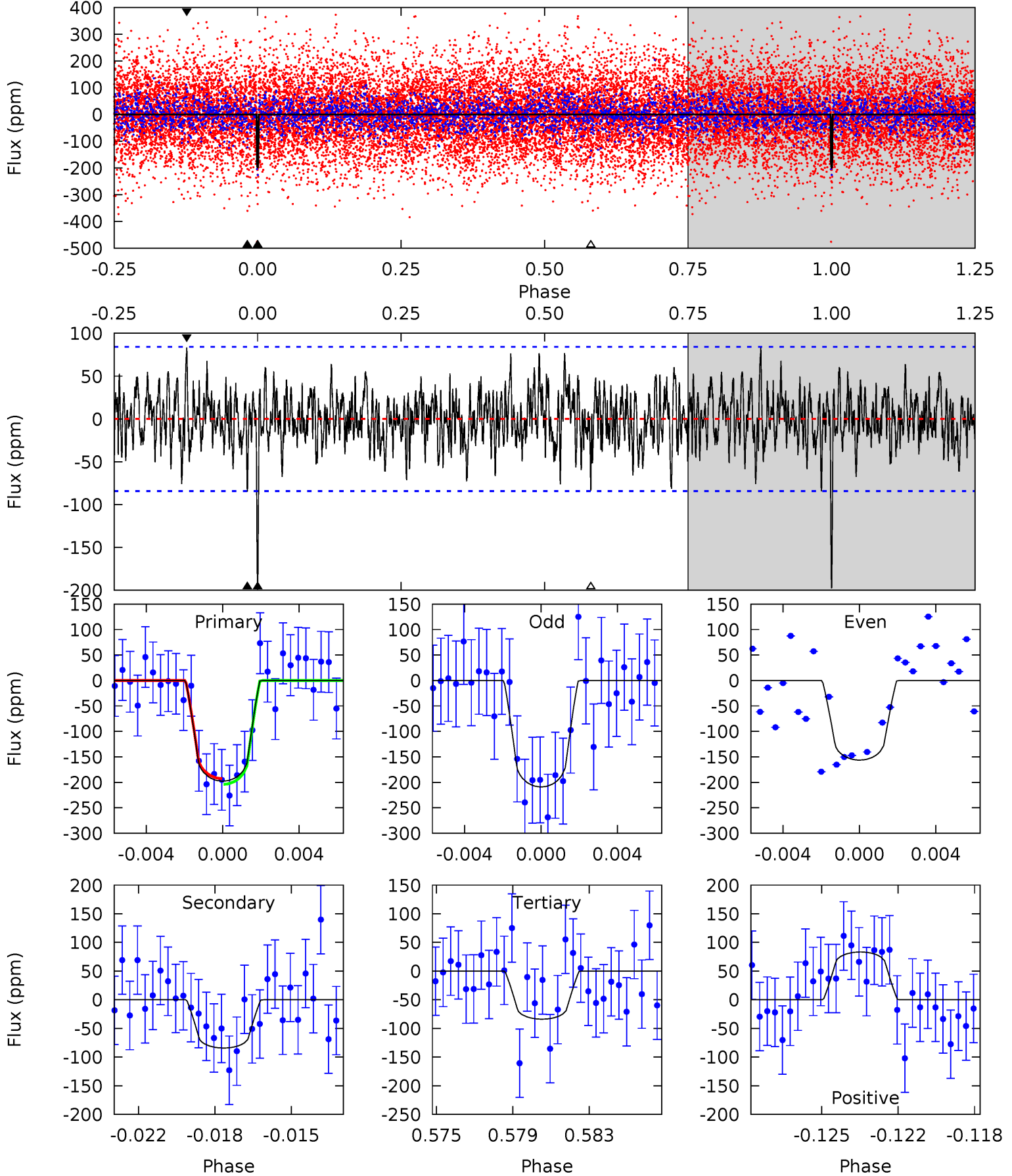
TCE 011014282-04 P= 32.589929 Days $T_0=144.224087$ (BKJD)



DV Model-Shift Uniqueness Test

011014282-04, P = 32.589379 Days, E = 111.646934 Days

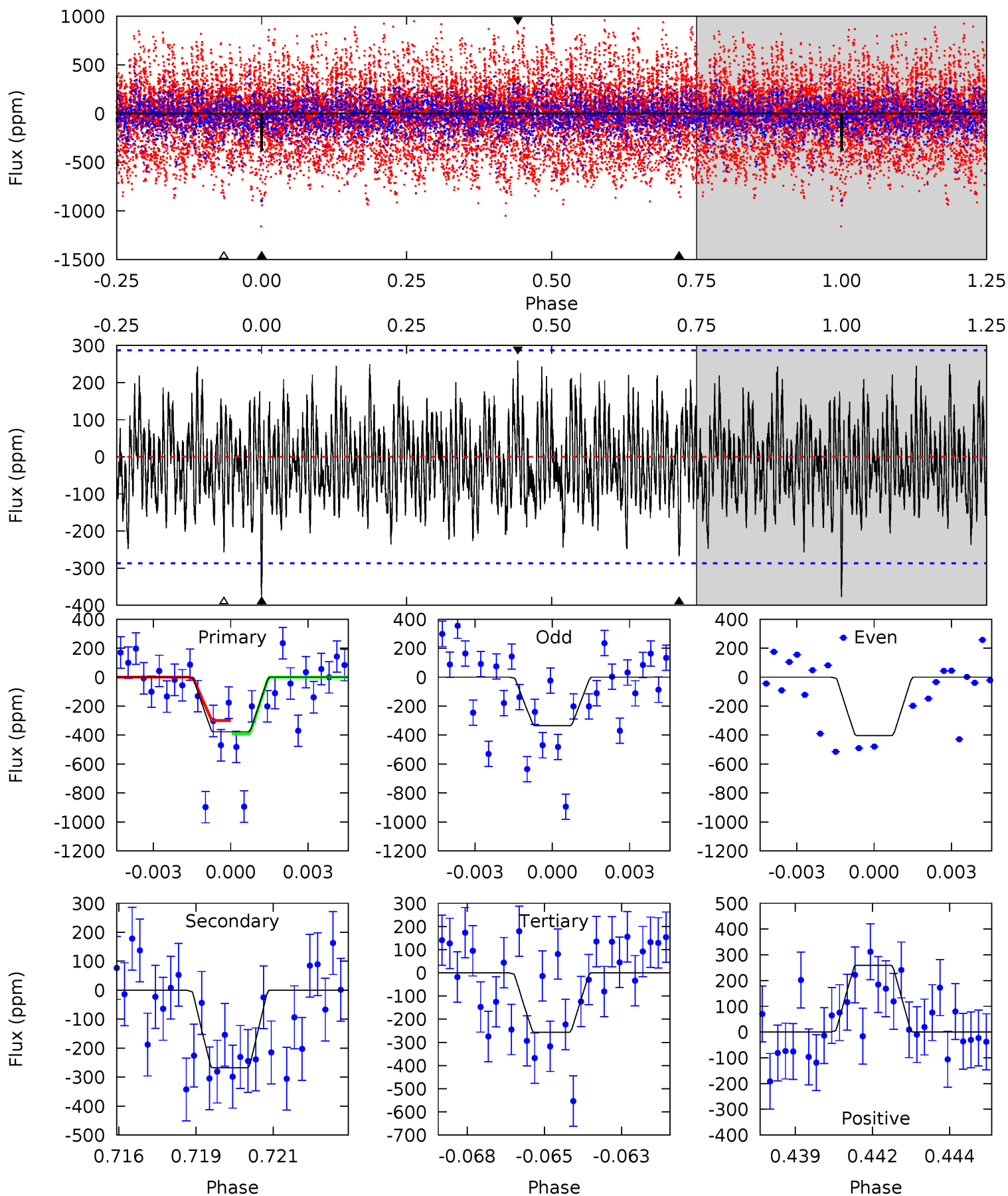
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	5.22	5.20	5.16	5.21	2.90	1.60	7.05	7.09	0.02	0.06	1.39	1.09	0.30	0.35



Alt Model-Shift Uniqueness Test

011014282-04, P = 32.589929 Days, E = 111.634158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.94	4.92	4.72	4.77	5.28	3.01	1.66	2.22	2.16	0.21	0.15	0.45	1.41	0.41	0.83



Stellar Parameters For KIC 011014282

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6649^{+150}_{-183}	$3.619^{+0.336}_{-0.084}$	$-0.380^{+0.350}_{-0.250}$	$3.177^{+0.411}_{-1.232}$	$1.532^{+0.223}_{-0.334}$	$0.067^{+0.172}_{-0.018}$
	+2%/-3%	+9%/-2%	+92%/-66%	+13%/-39%	+15%/-22%	+255%/-27%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011014282-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-84 ± 16	$4.89^{+3.72}_{-3.03}$	1503^{+72}_{-148}	5222^{+3788}_{-1044}	106^{+622}_{-73}
Alt.	-268 ± 54	$5.19^{+3.80}_{-2.88}$	1496^{+82}_{-145}	6666^{+5209}_{-1499}	290^{+1351}_{-194}

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 $A_{obs} \gg 1.0$

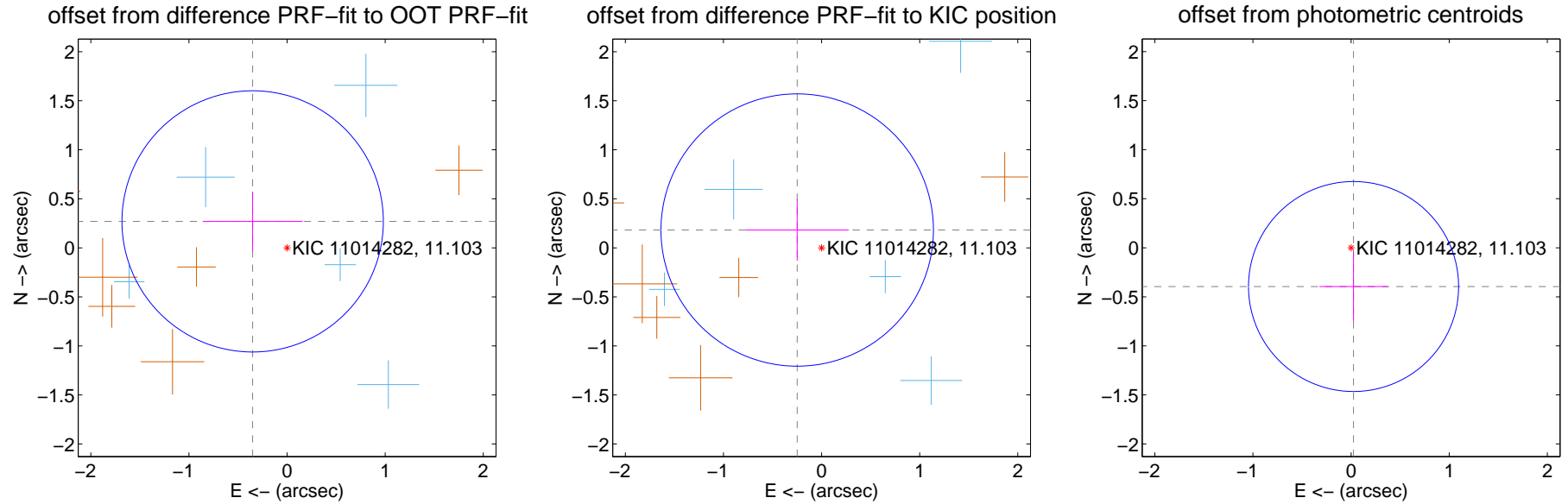
DV Centroid Data

Supplemental centroid analysis for 011014282-04. **Kepler magnitude: 11.10.** Transit SNR 8.87

There are 7 quarters with good PRF difference image offsets

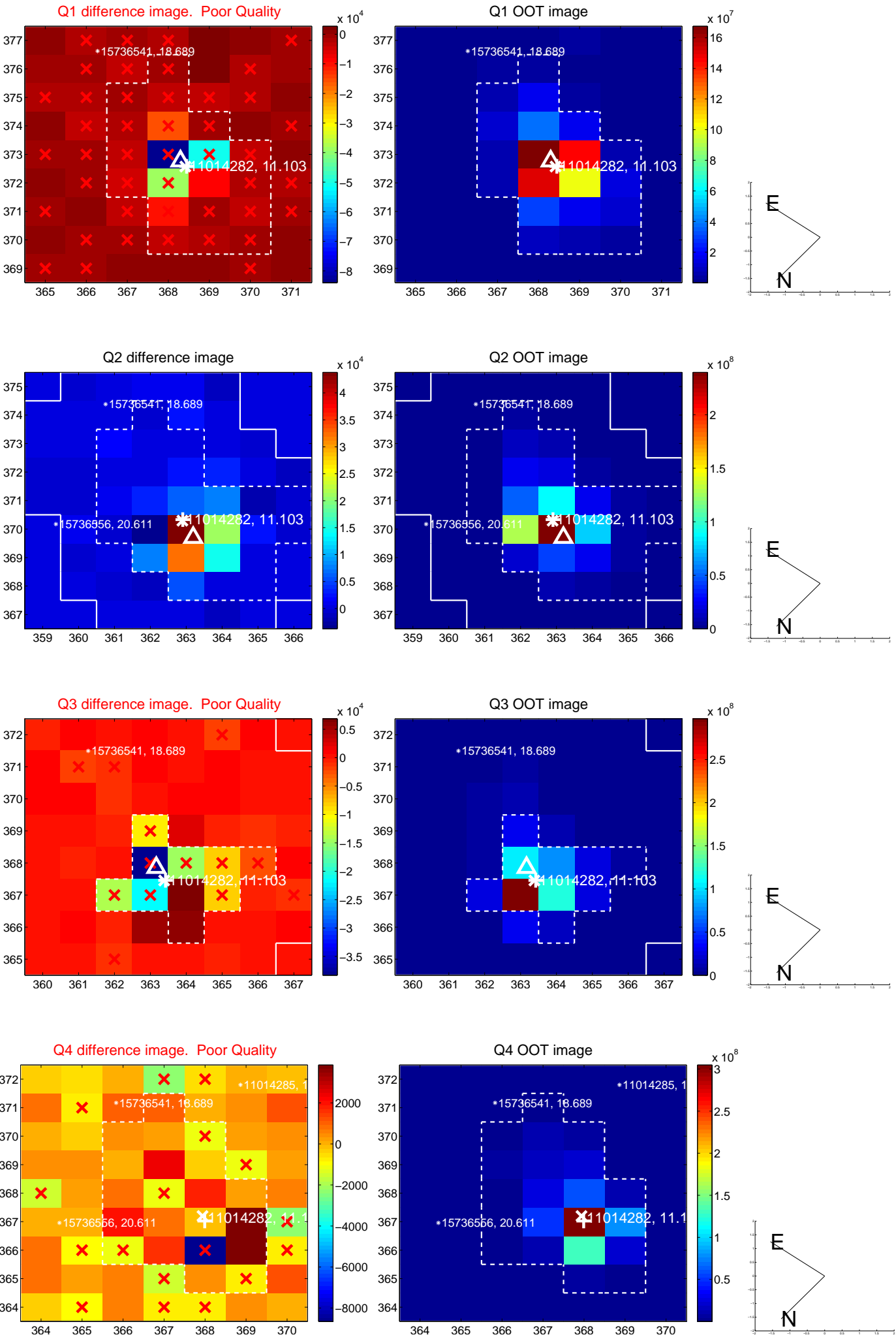
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.443 ± 0.444	1.00	0.351 ± 0.509	0.270 ± 0.304
PRF-fit source offset from KIC position	0.308 ± 0.463	0.67	0.249 ± 0.526	0.182 ± 0.314
photometric centroid source offset	0.40 ± 0.36	1.11	-0.03 ± 0.35	-0.40 ± 0.36

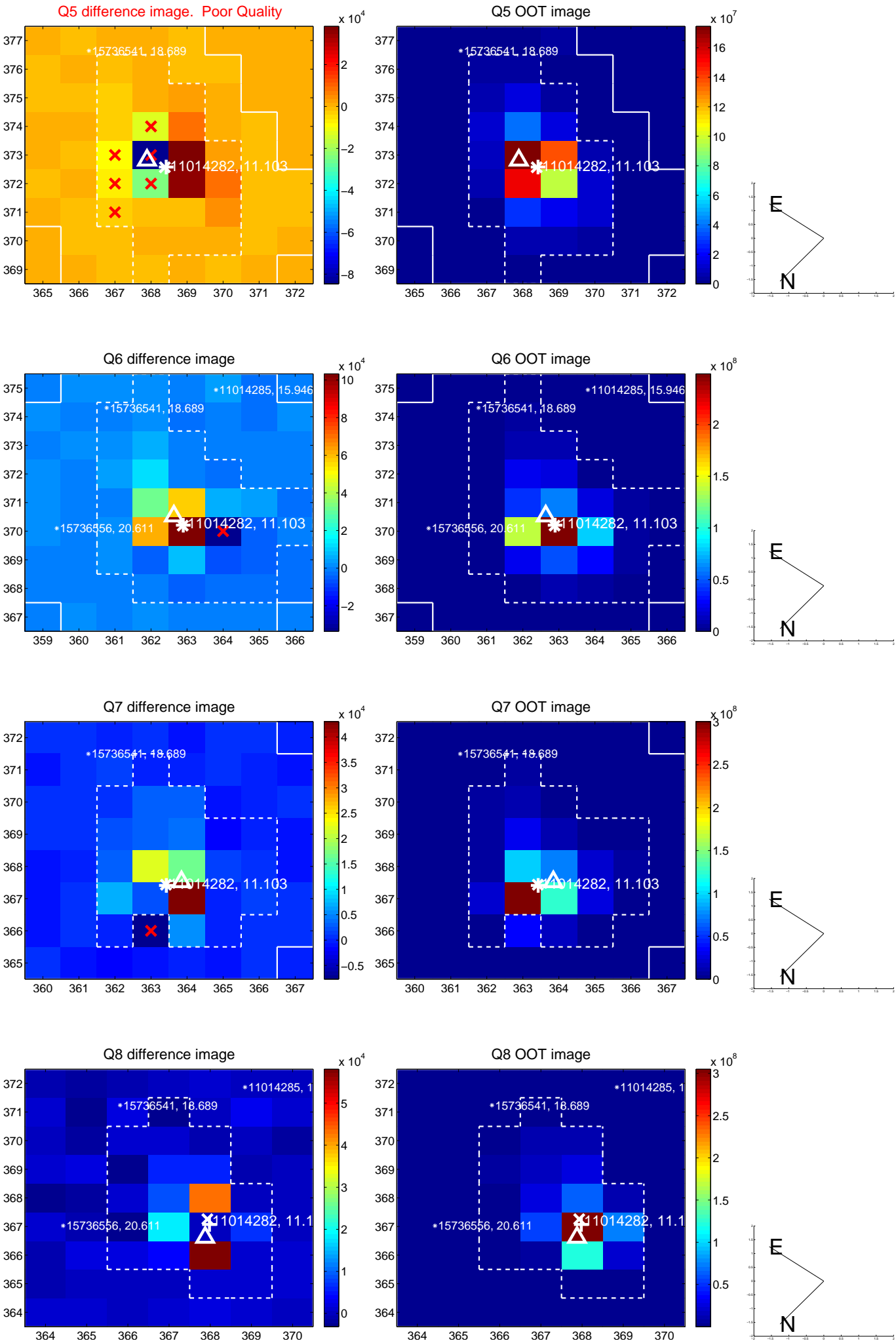


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

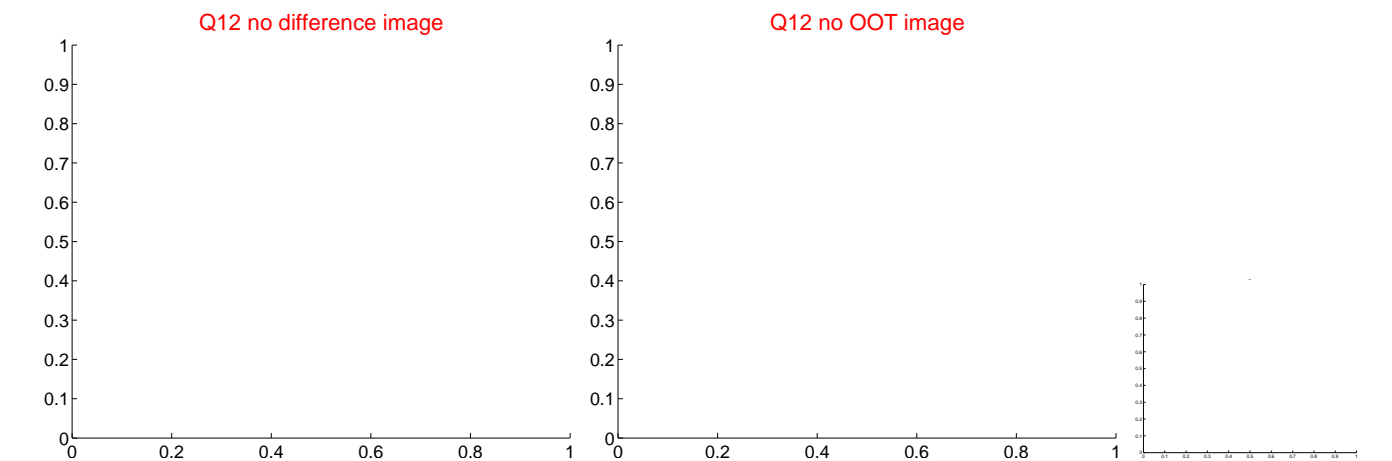
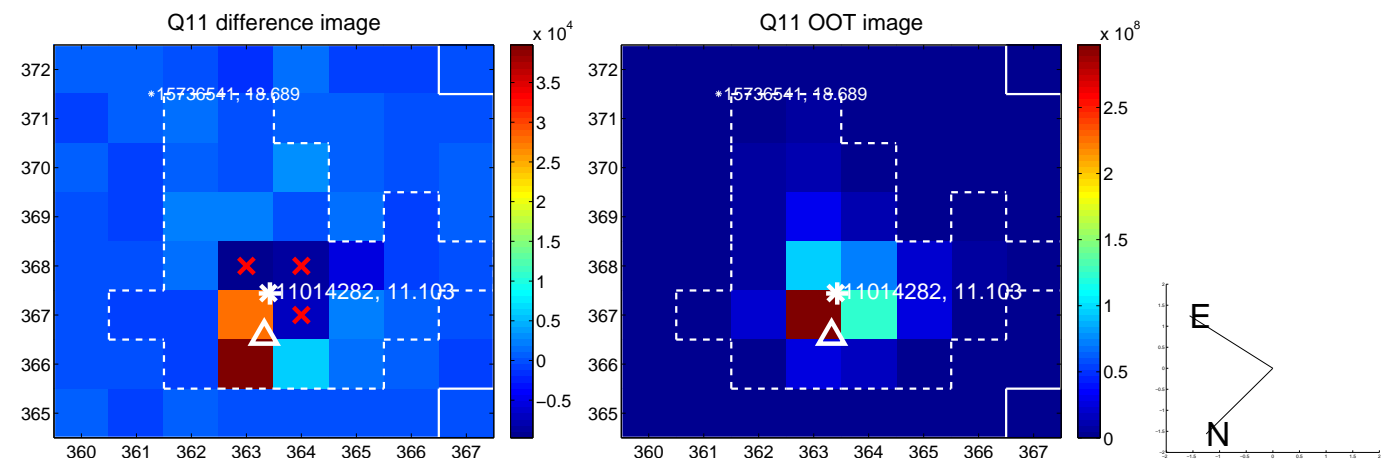
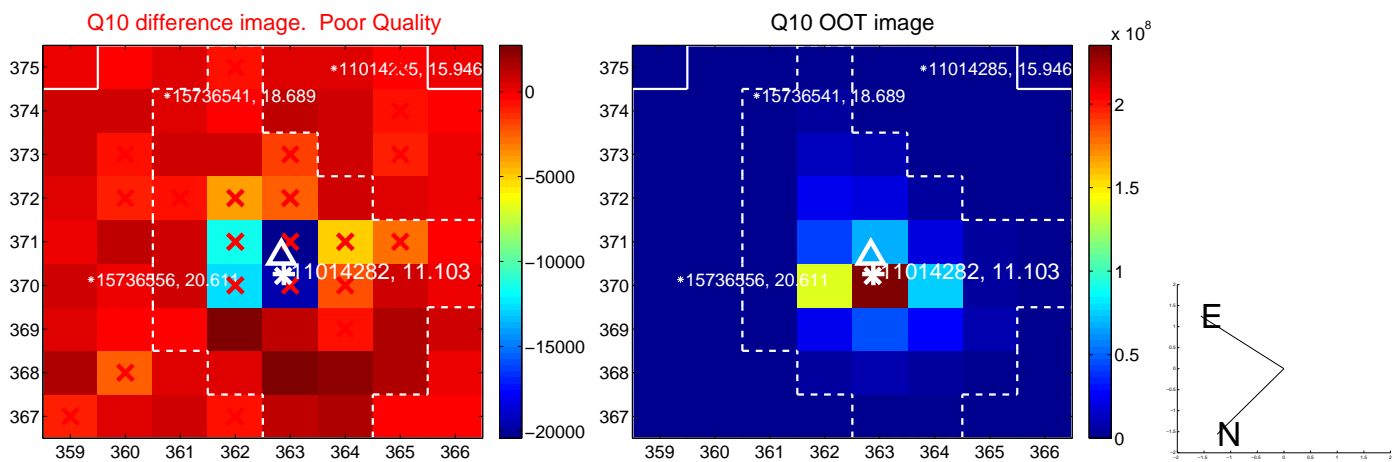
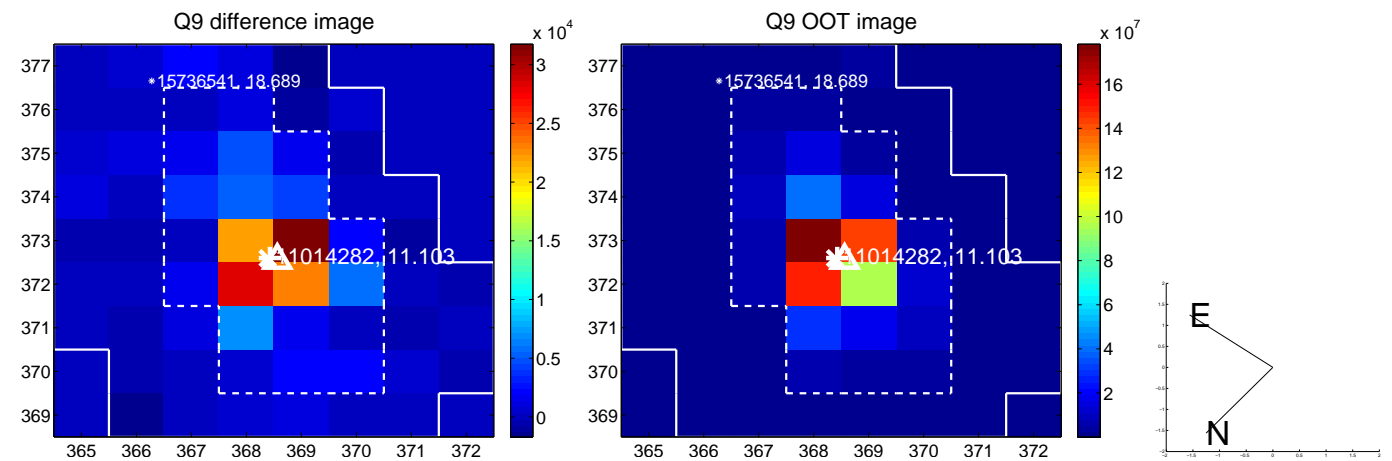
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



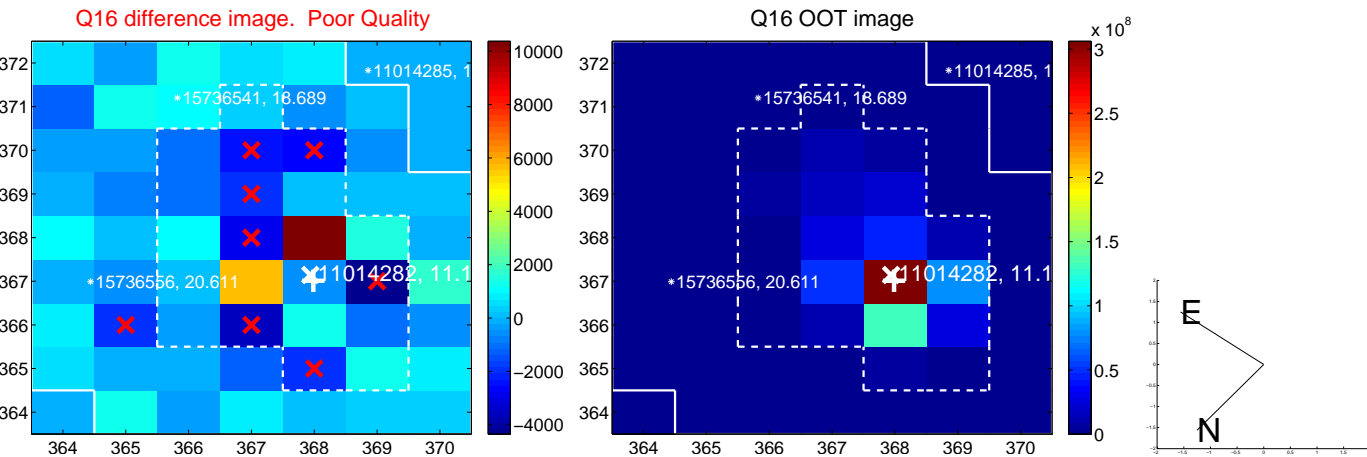
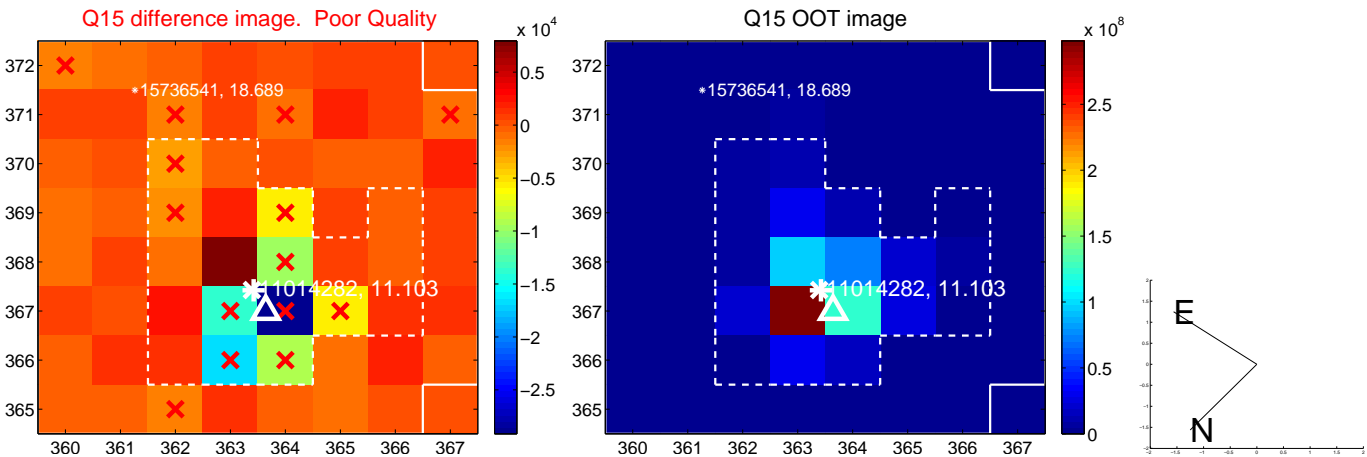
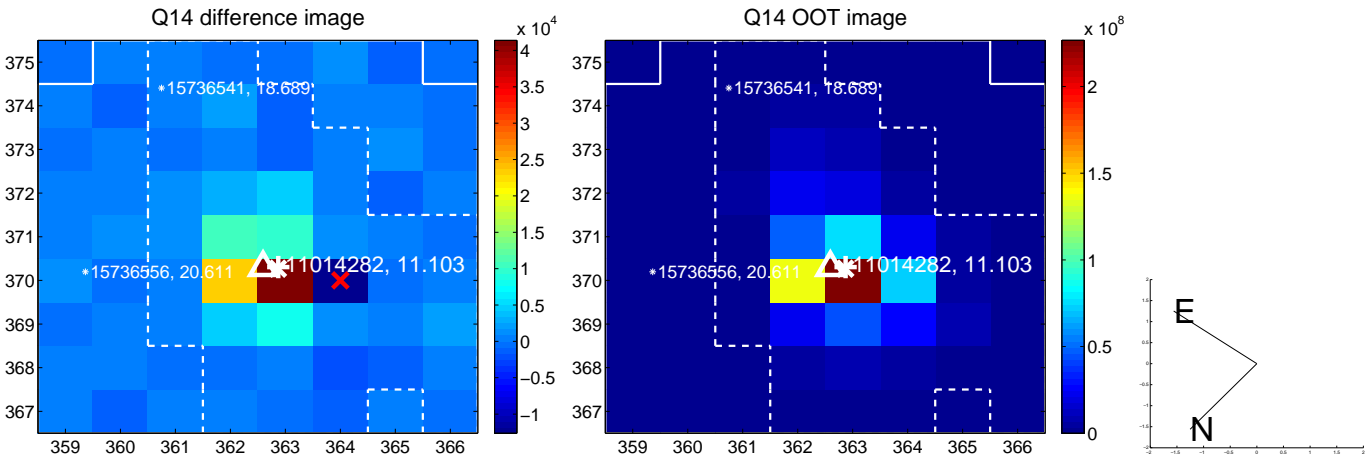
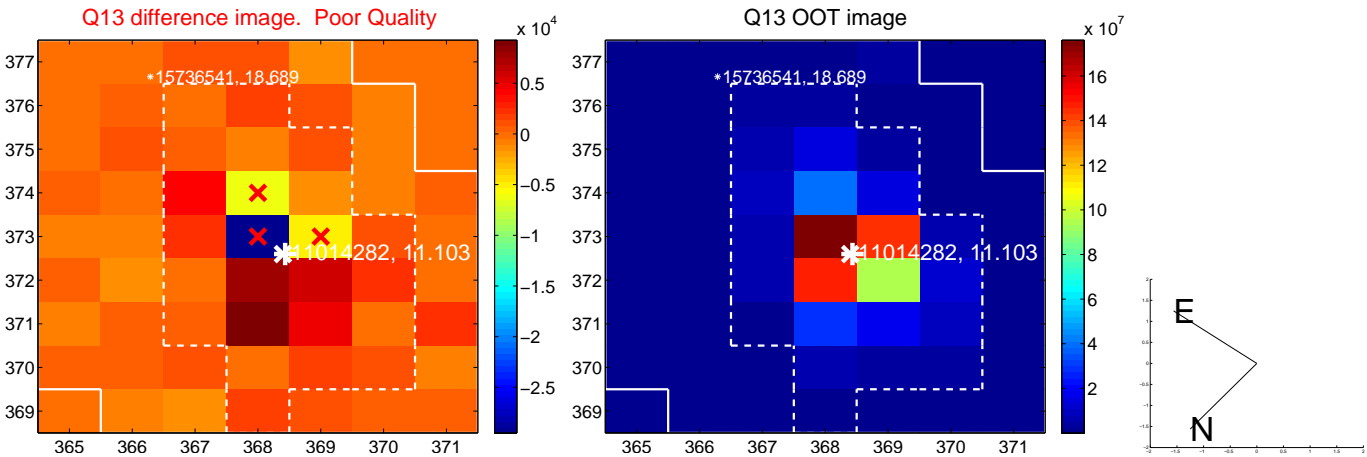
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



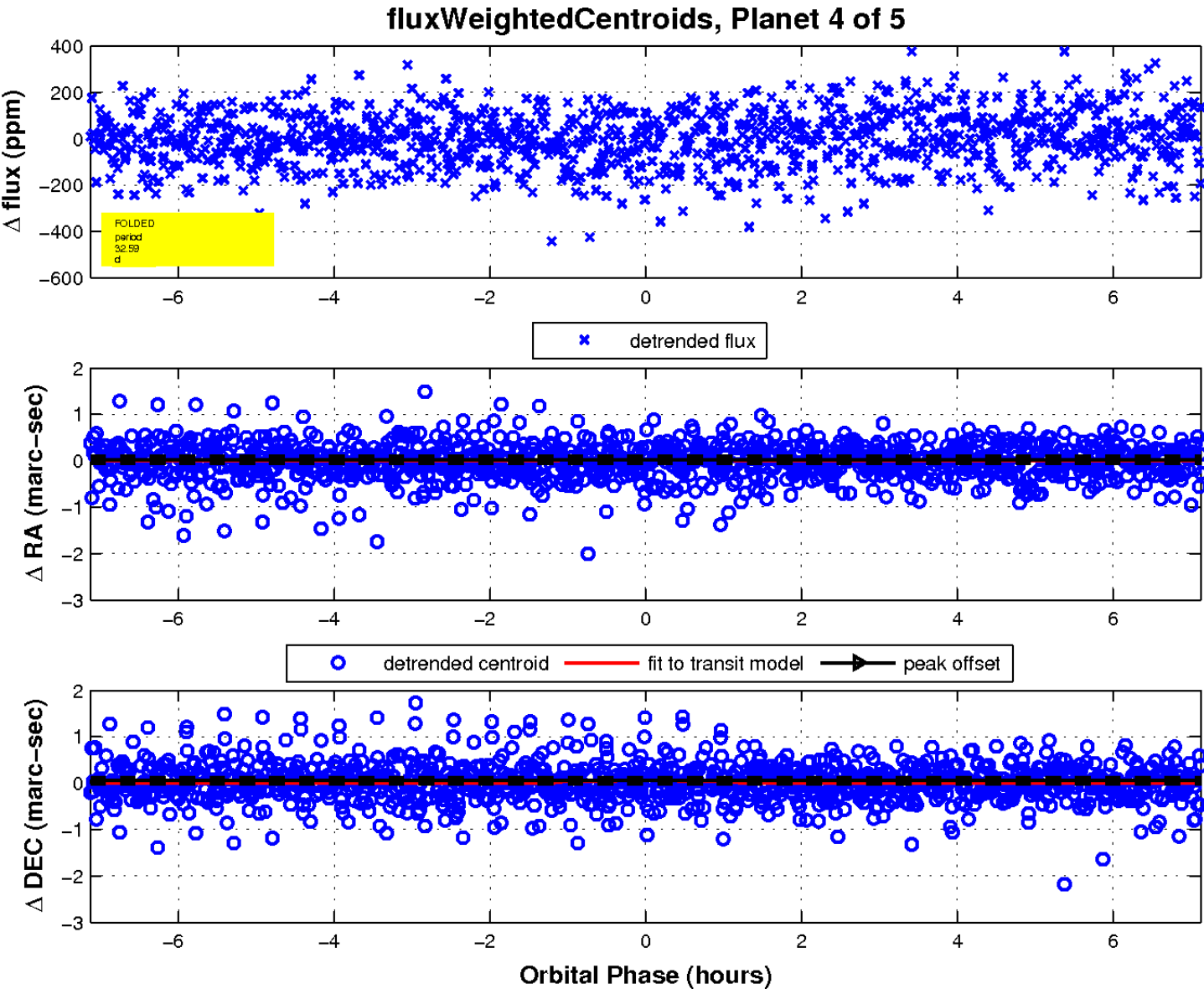
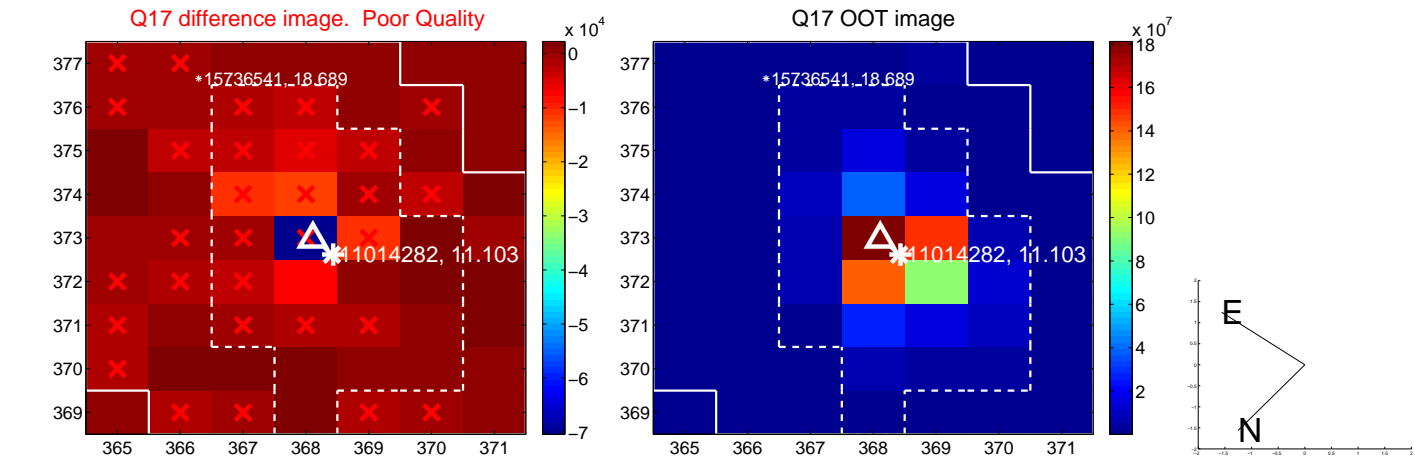
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

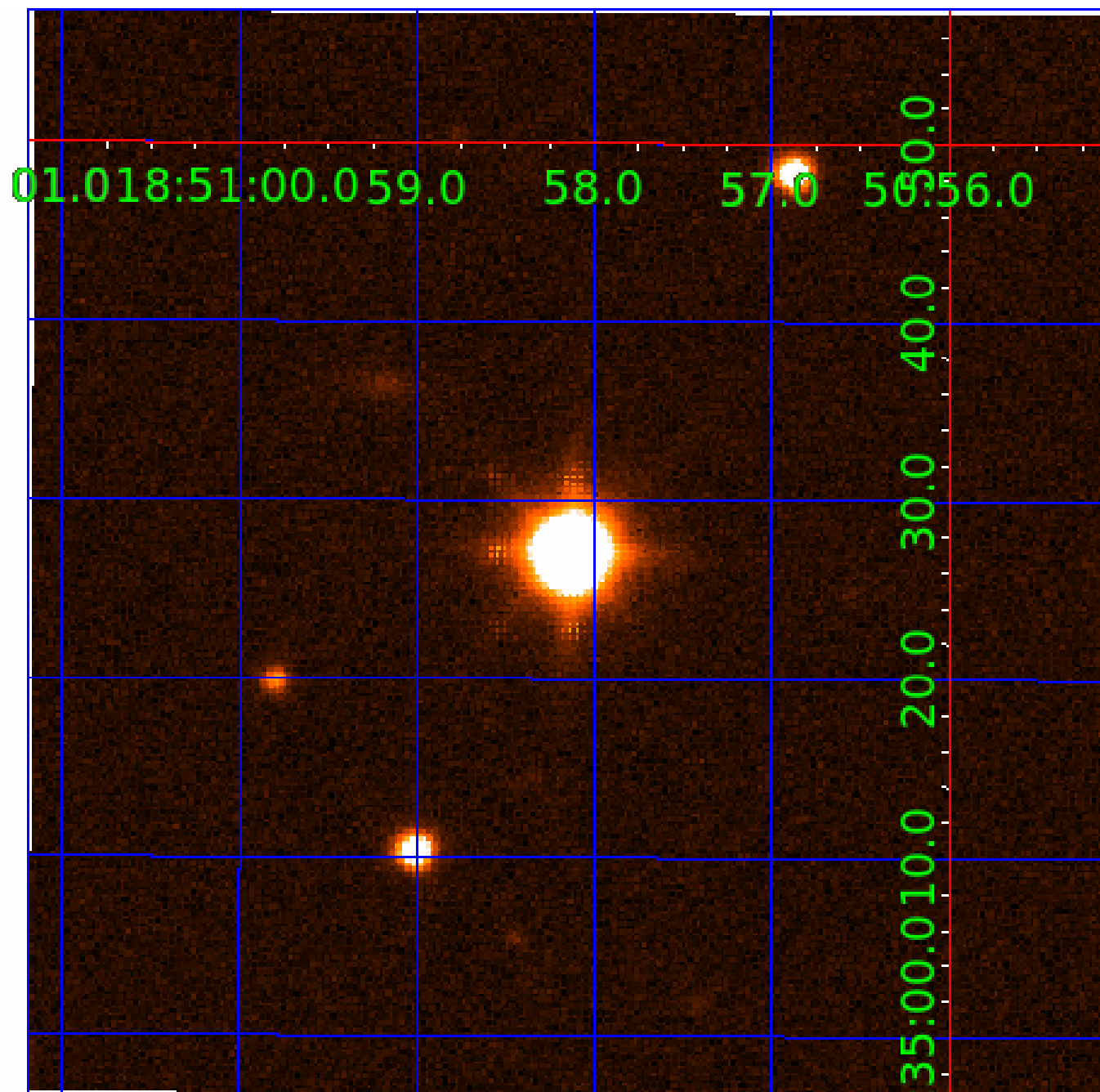


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011014282

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})
011014282-01	OBS	No	1.616110	132.761179	20.1	3.282	10.3	7.7	3.18	6649	1.66	18307.82
011014282-02	OBS	No	1.616490	131.625907	21.9	3.296	9.6	9.0	3.18	6649	1.75	18302.09
011014282-03	OBS	No	1.616513	132.197342	25.4	3.020	10.8	10.9	3.18	6649	2.00	18301.73
011014282-04	OBS	No	32.589379	144.236313	203.8	2.382	8.5	8.9	3.18	6649	4.86	333.55
011014282-05	OBS	No	107.551991	156.265207	274.6	1.673	8.7	7.4	3.18	6649	6.15	67.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011014282-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011014282-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011014282-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_SATURATED
011014282-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

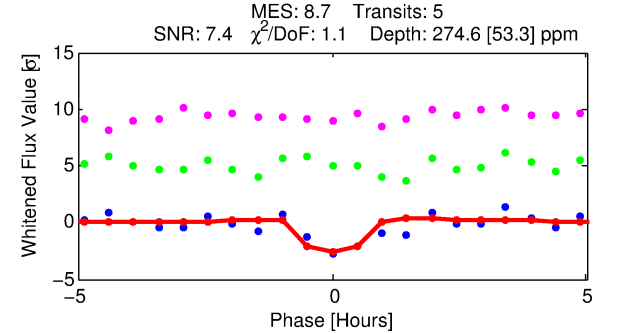
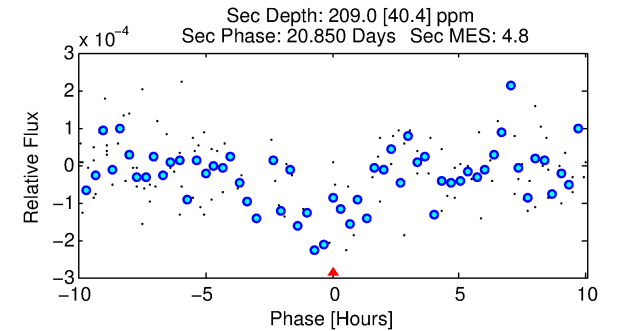
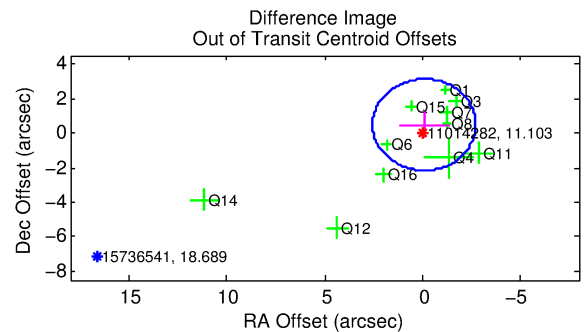
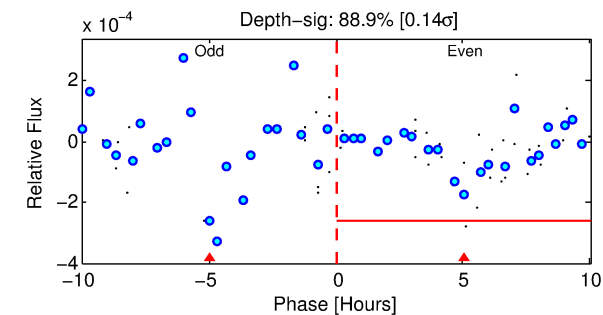
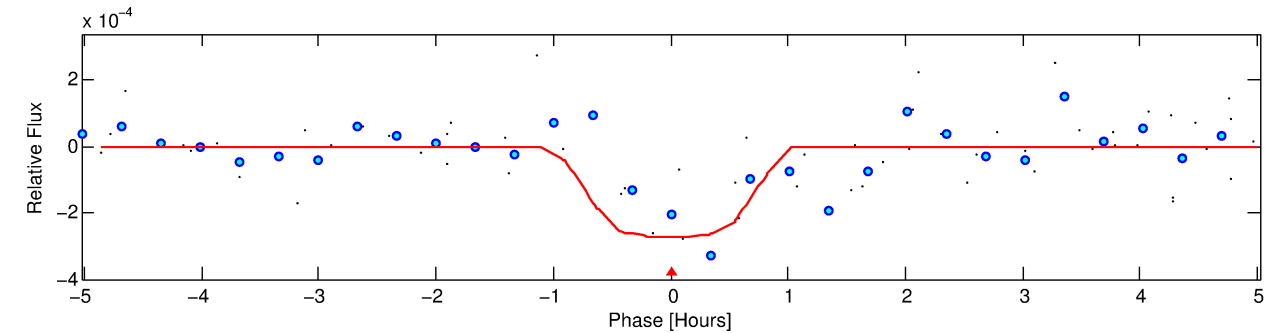
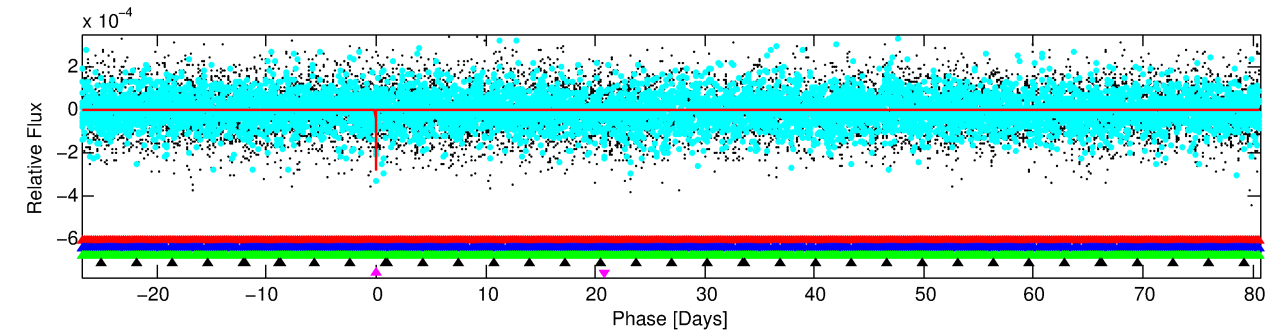
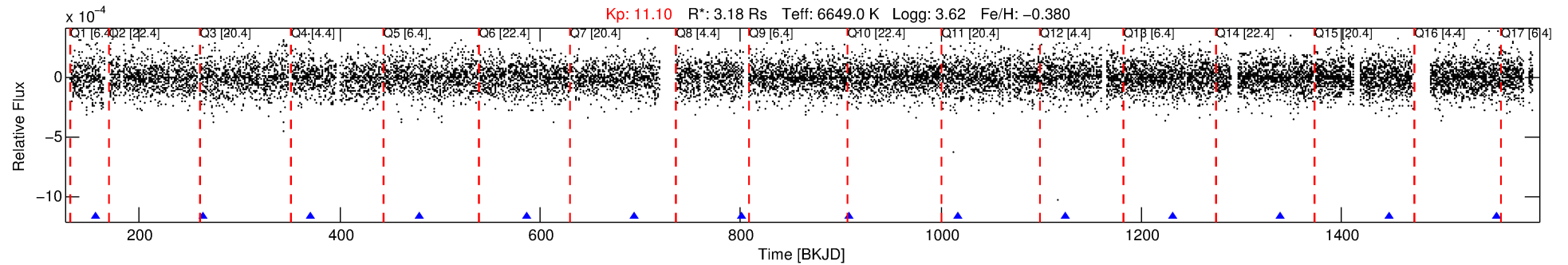
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011014282-05

No Significant Match Found

DV One-Page Summary

KIC: 11014282 Candidate: 5 of 5 Period: 107.552 d



DV Fit Results:

Period = 107.55199 [0.00097] d
Epoch = 156.2652 [0.0085] BKJD
Rp/R* = 0.0177 [0.0312]
a/R* = 233.48 [2504.29]
b = 0.90 [2.27]
Seff = 67.88 [39.87]
Teq = 732 [107] K
Rp = 6.15 [11.09] Re
a = 0.5103 [0.1863] AU
Ag = 791.16 [2827.42] [0.28 σ]
Teffp = 6002 [5294] K [1.00 σ]

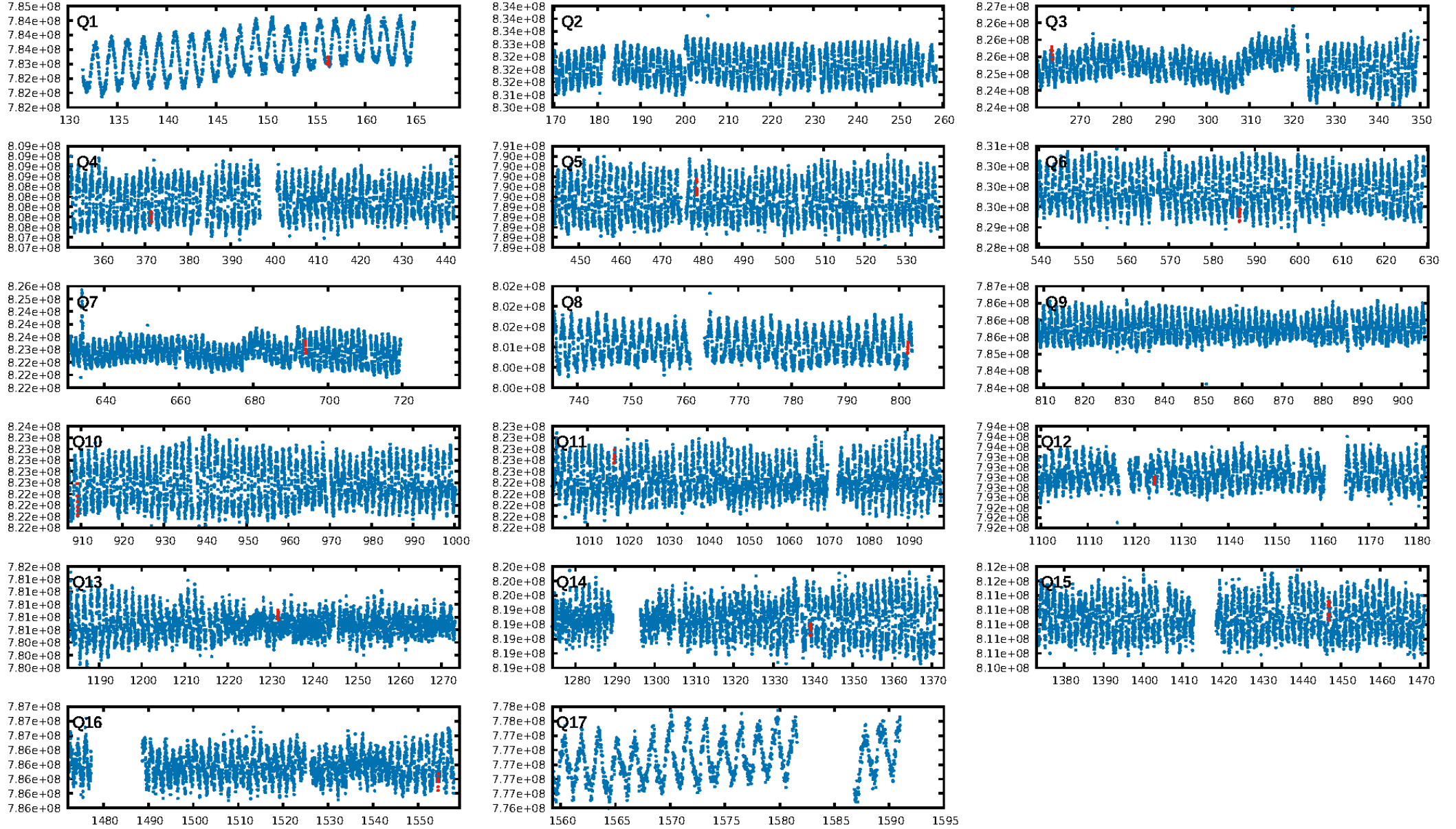
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [618.09 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 41.7%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.69e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.4894
Centroid-sig: 3.2%
Centroid-so: 1.086 arcsec [2.08 σ]
OotOffset-rm: 0.491 arcsec [0.56 σ]
OotOffset-st: 2/4/4/1 [11]
KicOffset-rm: 0.640 arcsec [0.60 σ]
KicOffset-st: 2/4/4/1 [11]
DiffImageQuality-fgm: 0.18 [2/11]
DiffImageOverlap-fno: 0.00 [0/13]

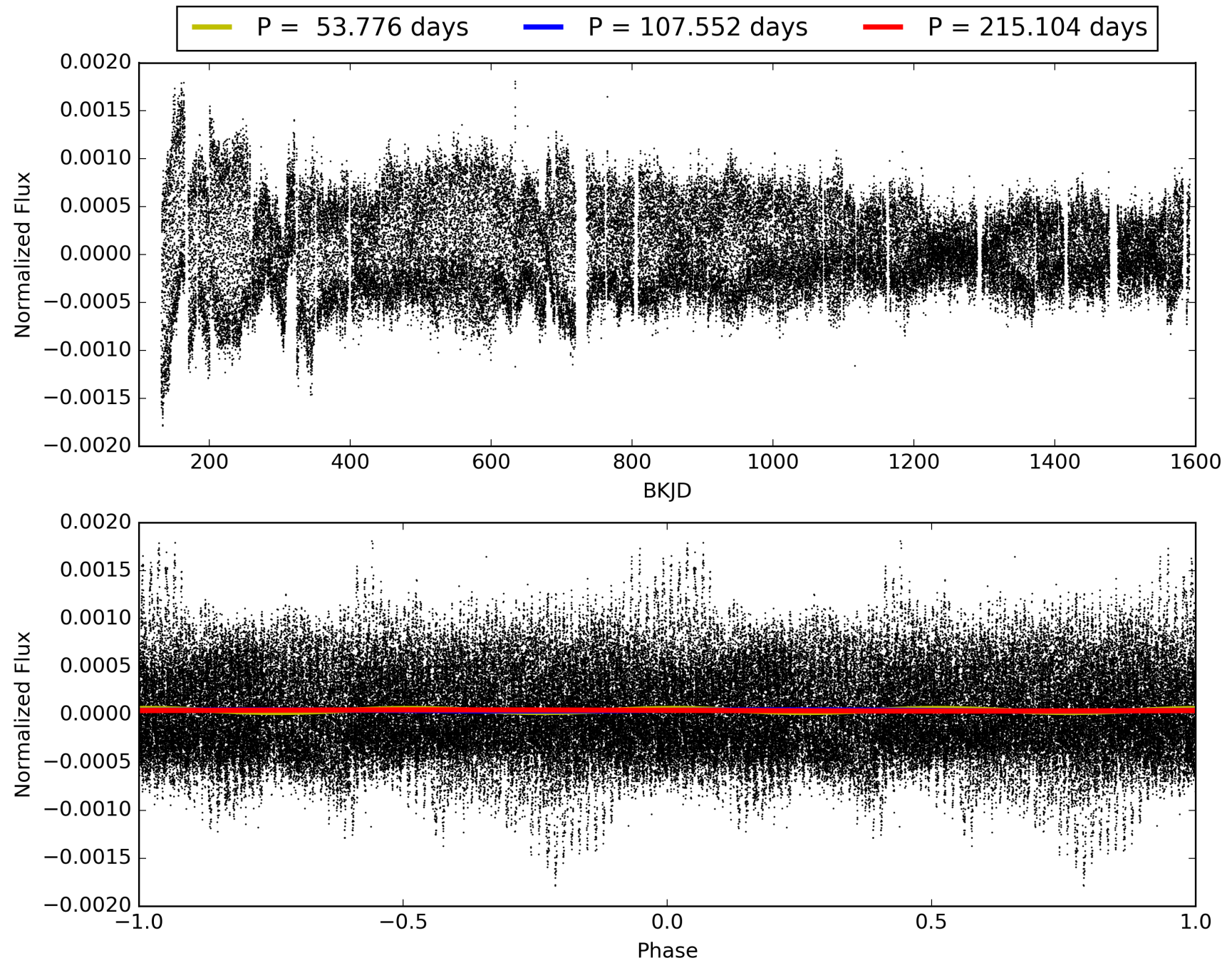
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:51:39 Z

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

TCE 011014282-05, PDC Light Curves

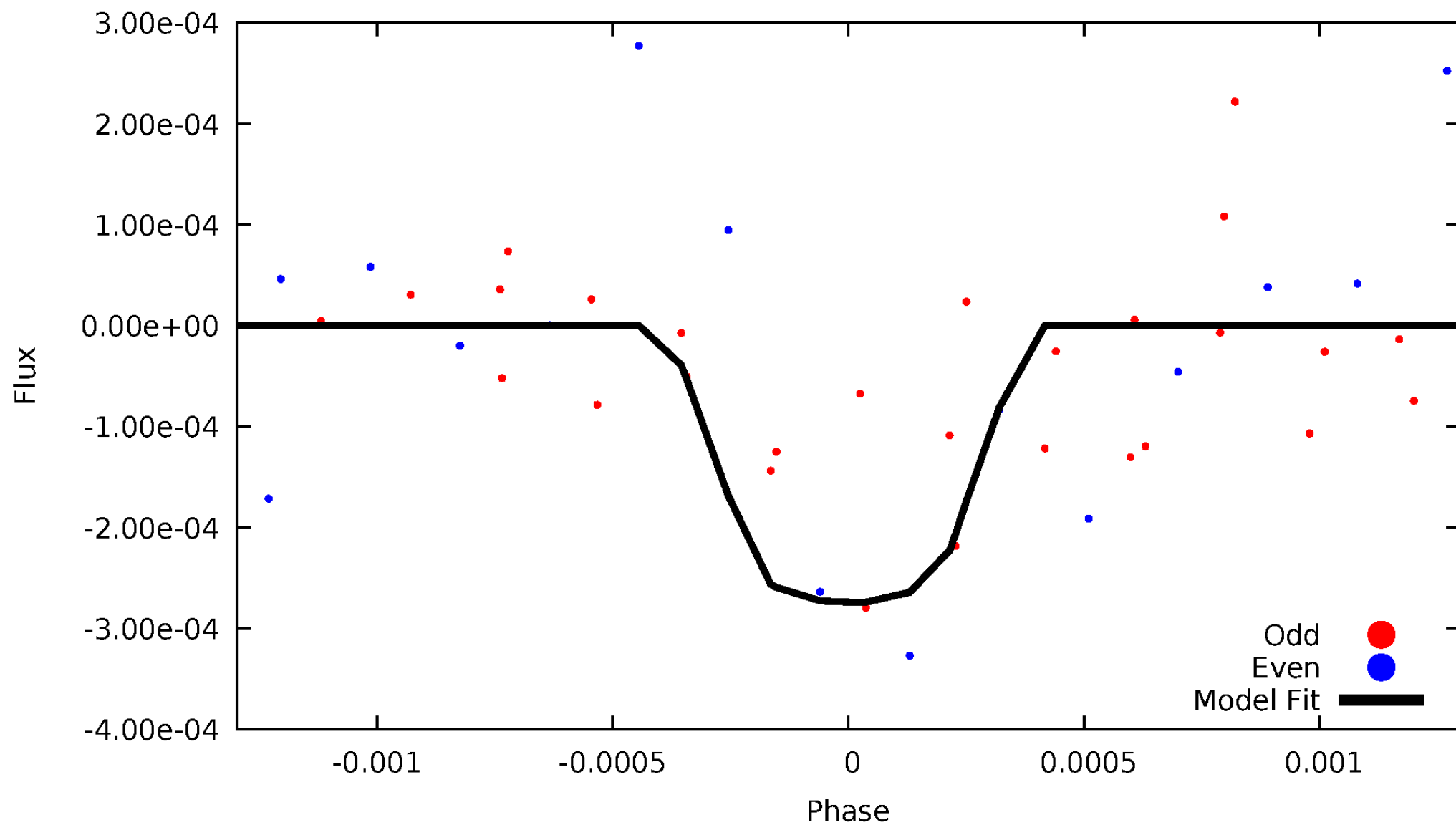


TCE 011014282-05



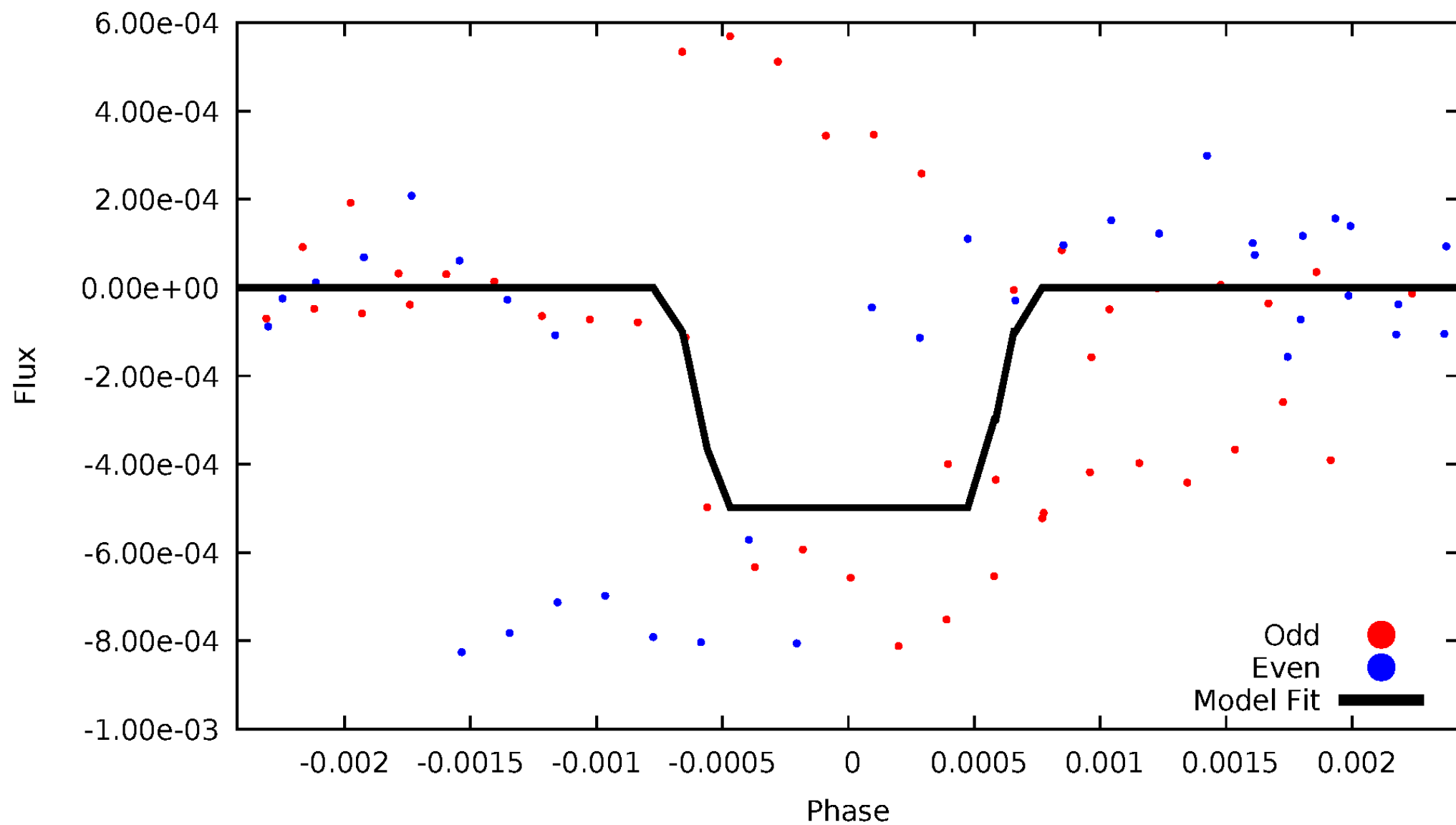
DV Odd/Even

TCE 011014282-05

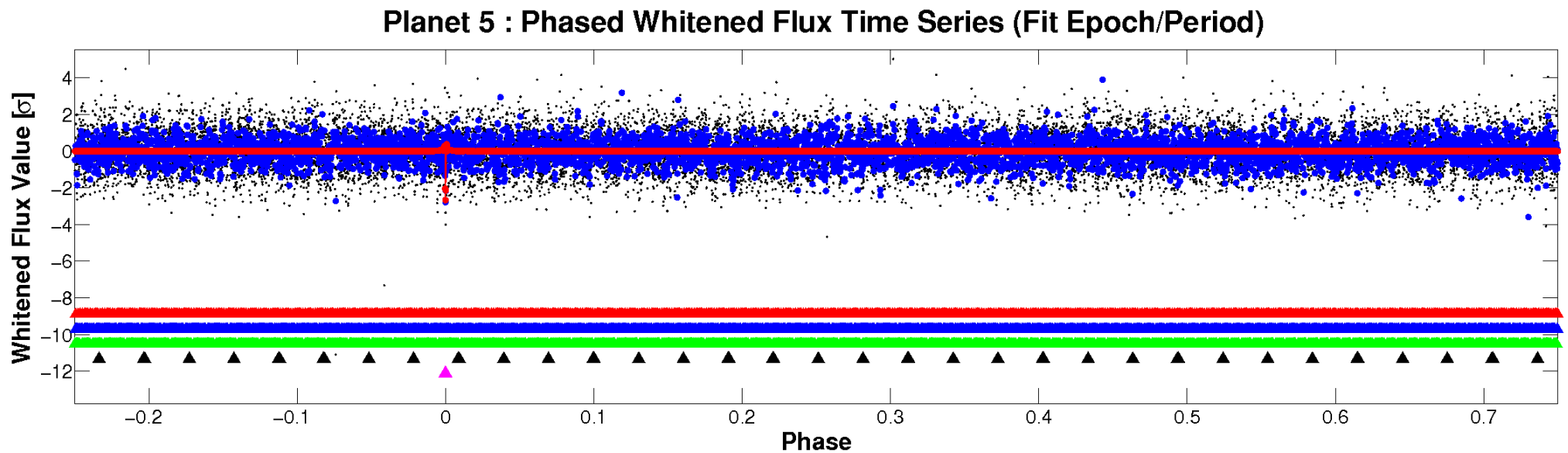
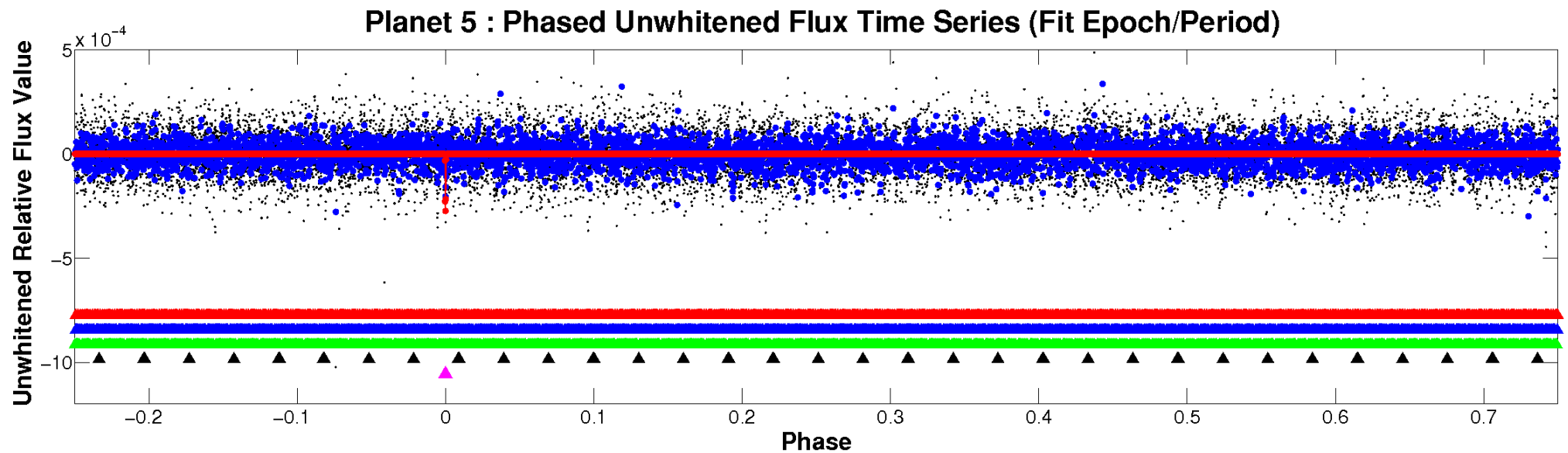


ALT Odd/Even

TCE 011014282-05

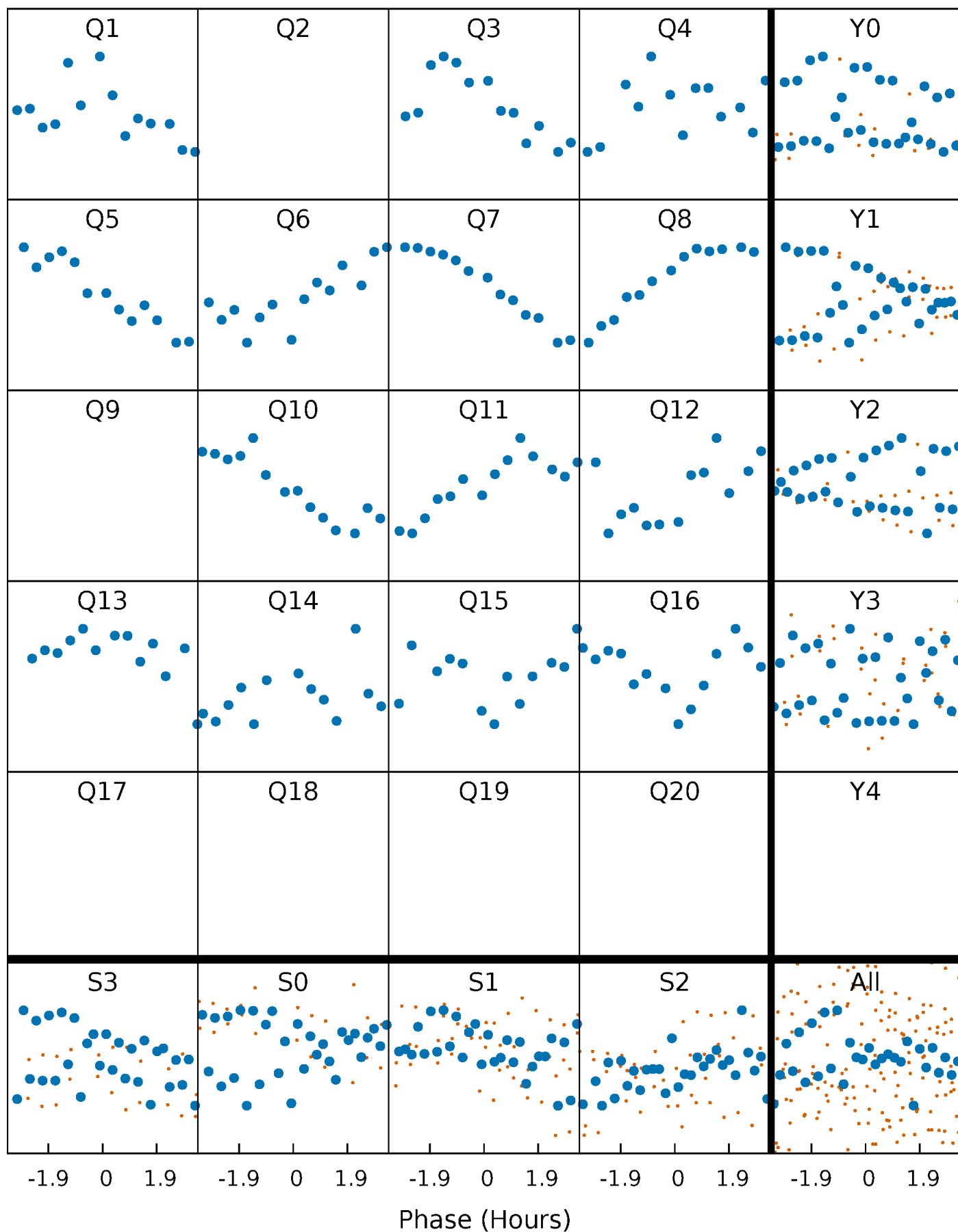


Non-Whitened Vs. Whitened Light Curve



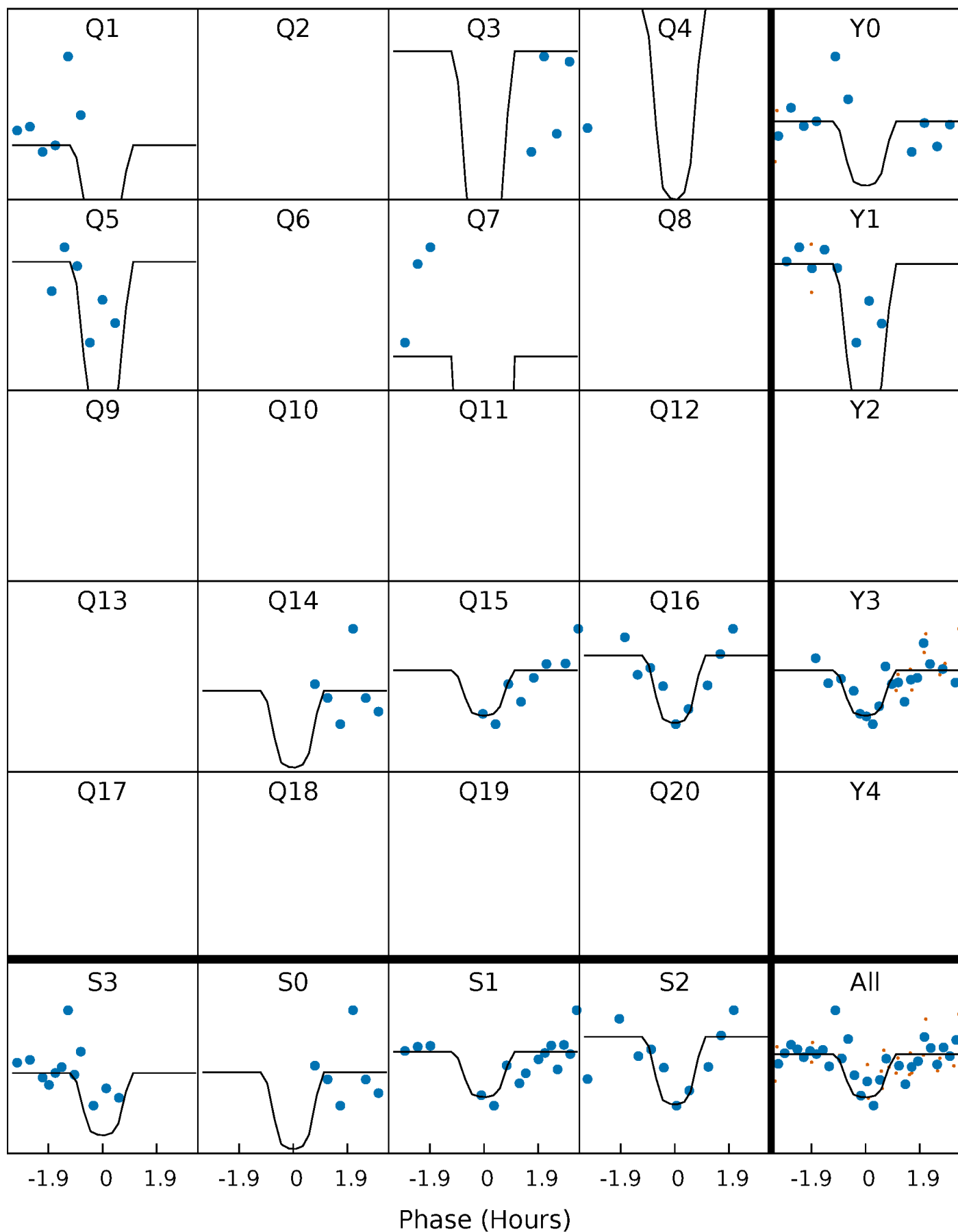
PDC Quarter-Phased Transit Curves

TCE 011014282-05 $P=107.551991$ Days $T_0=156.265207$ (BKJD)



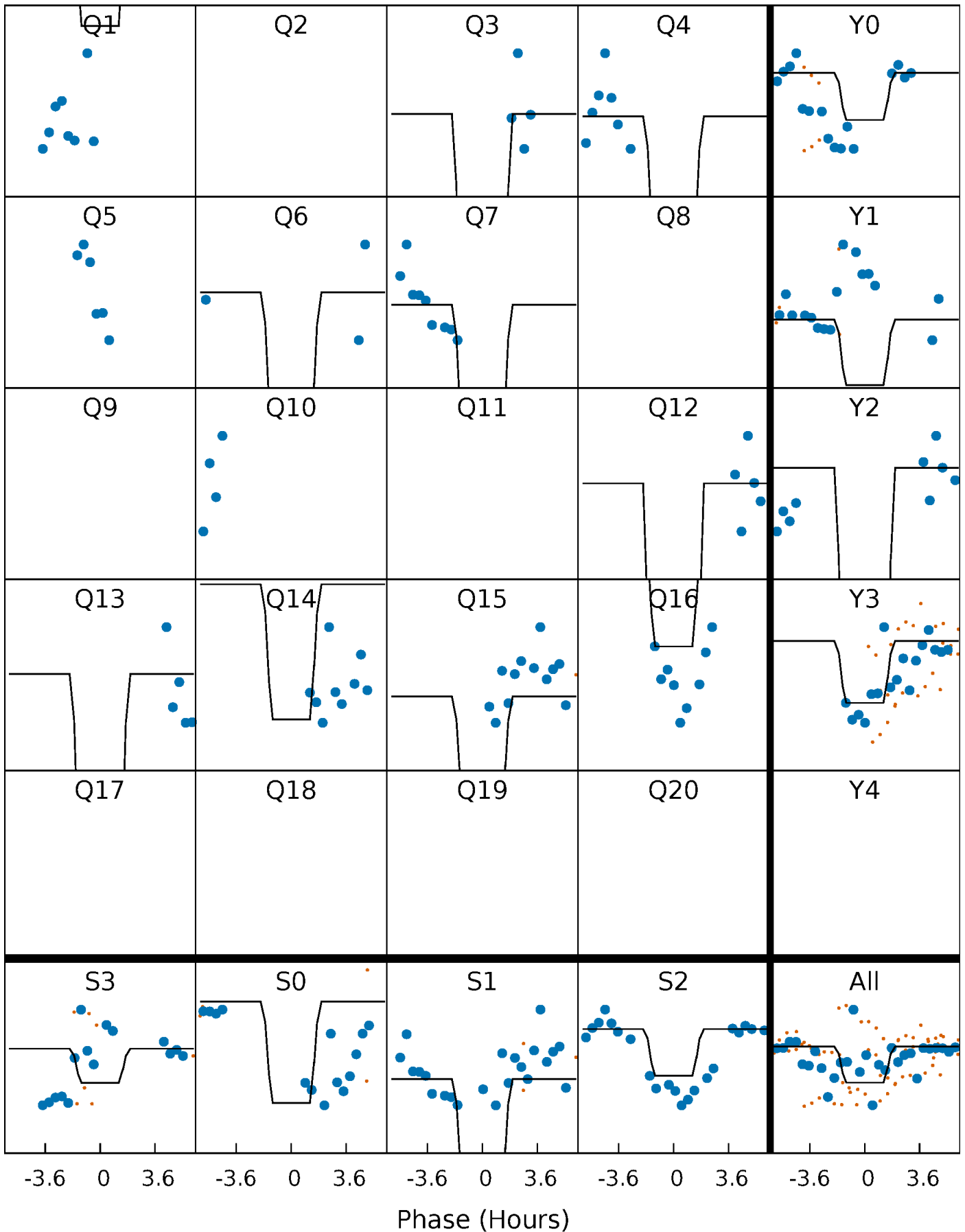
DV Quarter-Phased Transit Curves

TCE 011014282-05 $P=107.551991$ Days $T_0=156.265207$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

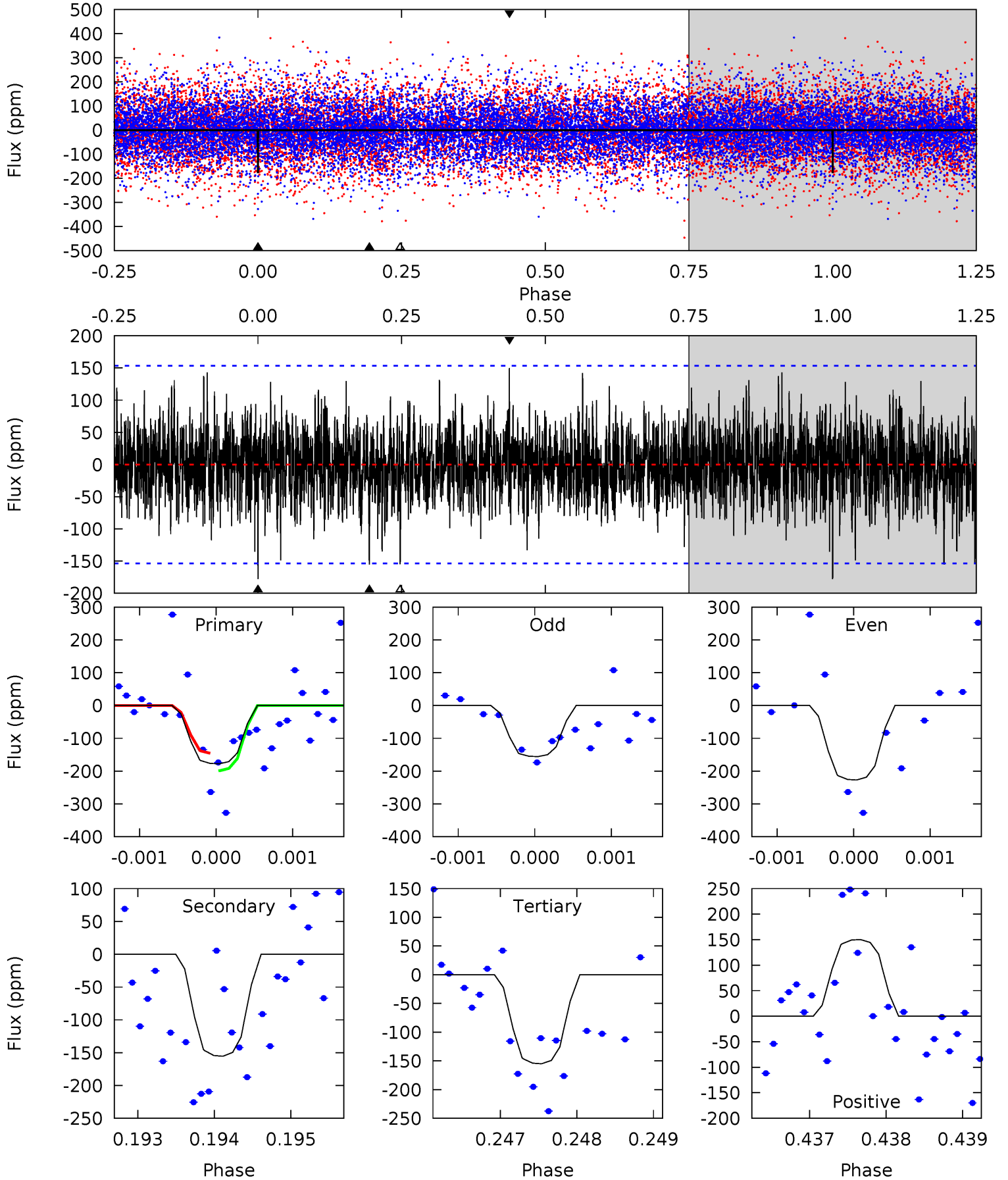
TCE 011014282-05 P=107.551059 Days $T_0=156.259883$ (BKJD)



DV Model-Shift Uniqueness Test

011014282-05, P = 107.551991 Days, E = 48.713216 Days

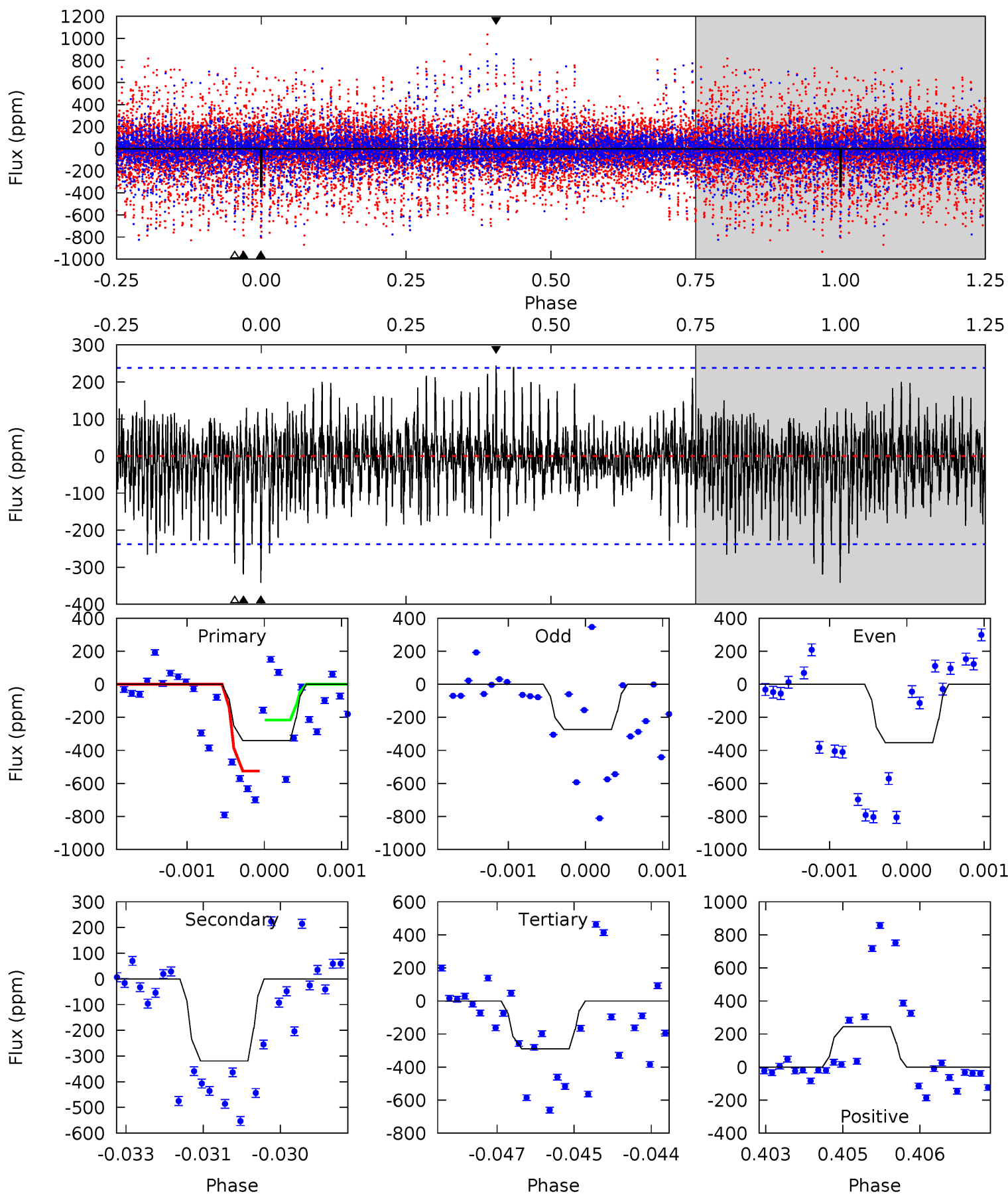
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.37	5.56	5.55	5.38	5.50	3.36	1.43	0.82	0.99	0.01	0.19	1.20	0.94	0.46	0.95



Alt Model-Shift Uniqueness Test

011014282-05, P = 107.551059 Days, E = 48.708824 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.74	7.23	6.57	5.53	5.39	3.19	1.43	1.17	2.21	0.66	1.70	0.87	0.65	0.42	3.42



Stellar Parameters For KIC 011014282

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6649^{+150}_{-183}	$3.619^{+0.336}_{-0.084}$	$-0.380^{+0.350}_{-0.250}$	$3.177^{+0.411}_{-1.232}$	$1.532^{+0.223}_{-0.334}$	$0.067^{+0.172}_{-0.018}$
	+2%/-3%	+9%/-2%	+92%/-66%	+13%/-39%	+15%/-22%	+255%/-27%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011014282-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-155 ± 28	$9.11^{+8.23}_{-6.34}$	1000^{+54}_{-92}	4620^{+3472}_{-1026}	277^{+2360}_{-208}
Alt.	-319 ± 44	$9.87^{+9.37}_{-6.79}$	1007^{+52}_{-90}	5098^{+4214}_{-1107}	471^{+4275}_{-347}

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

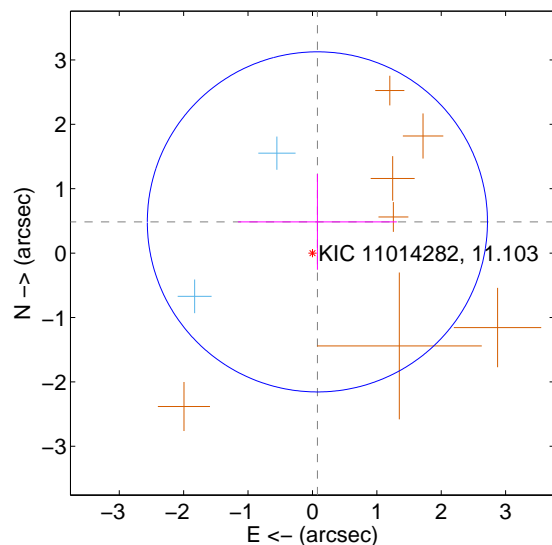
Supplemental centroid analysis for 011014282-05. **Kepler magnitude: 11.10.** Transit SNR 7.35

There are 2 quarters with good PRF difference image offsets

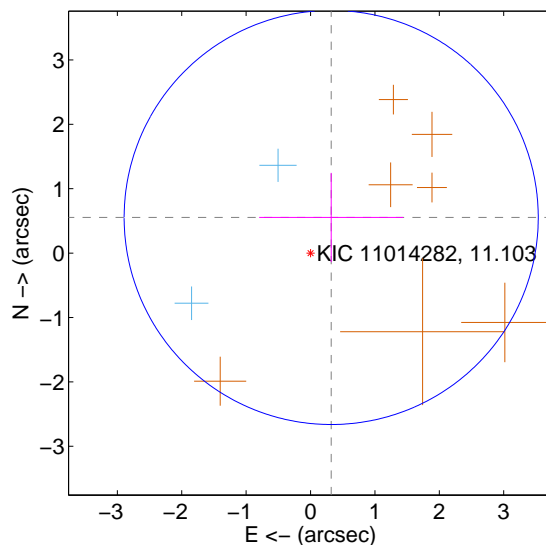
The direct PRF centroid is offset from the target star catalog position by about 0.71 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.491 ± 0.880	0.56	-0.077 ± 1.234	0.485 ± 0.744
PRF-fit source offset from KIC position	0.640 ± 1.072	0.60	-0.321 ± 1.120	0.553 ± 0.693
photometric centroid source offset	1.09 ± 0.52	2.08	0.91 ± 0.53	-0.58 ± 0.51

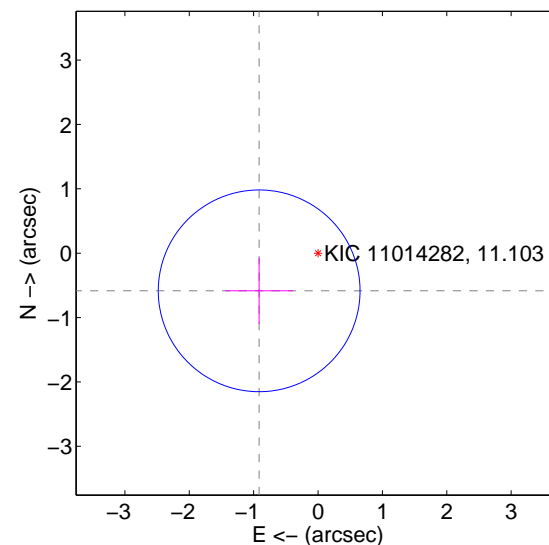
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

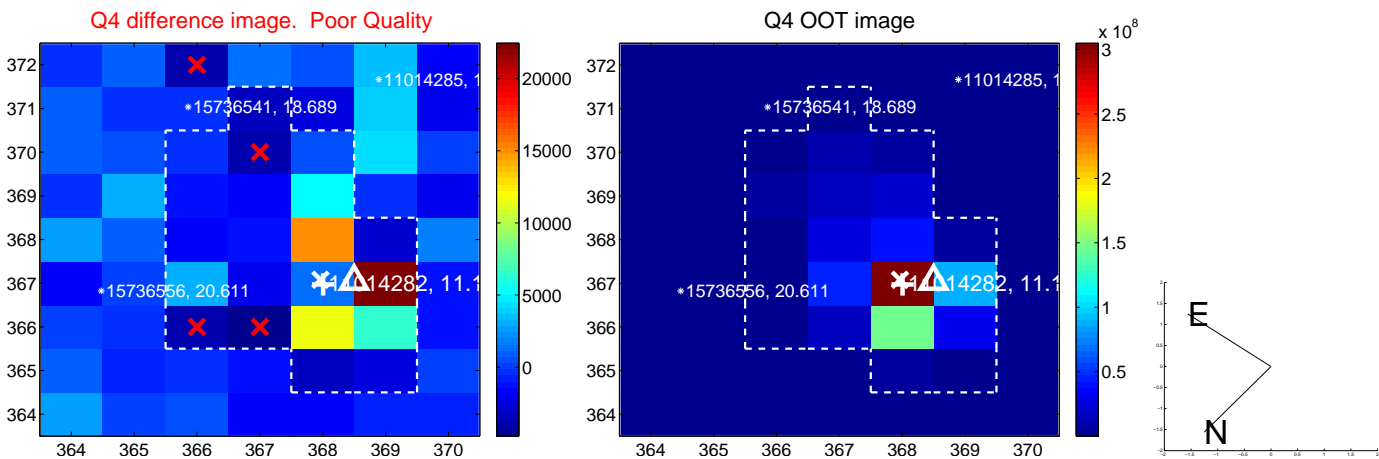
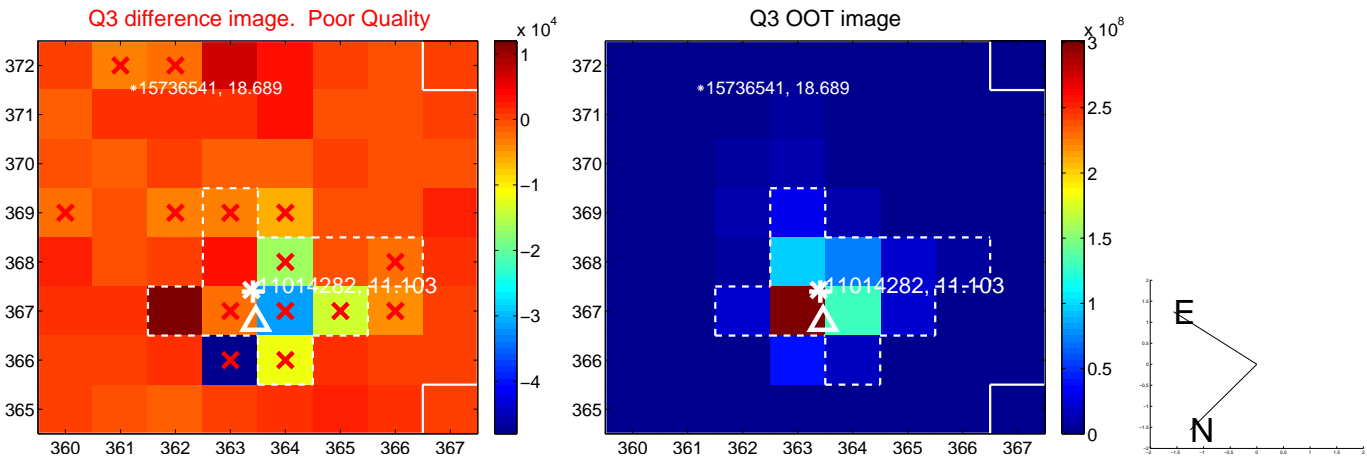
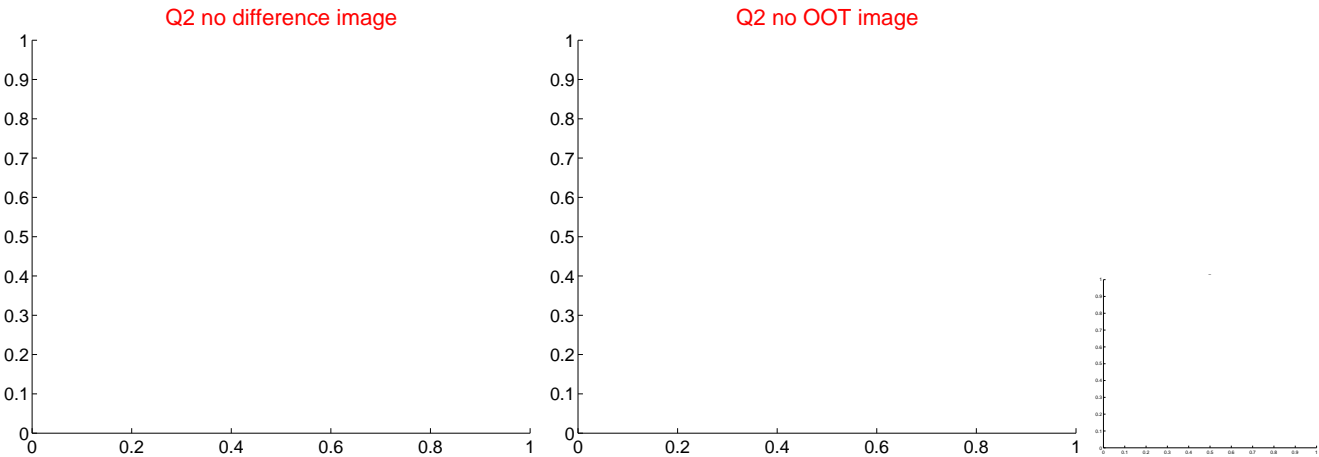
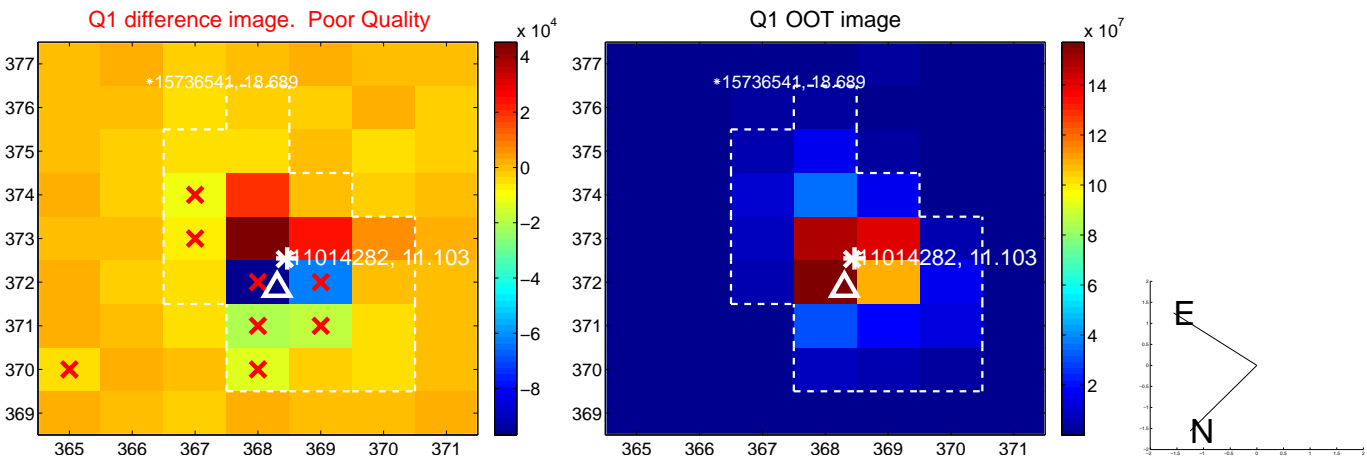


offset from photometric centroids

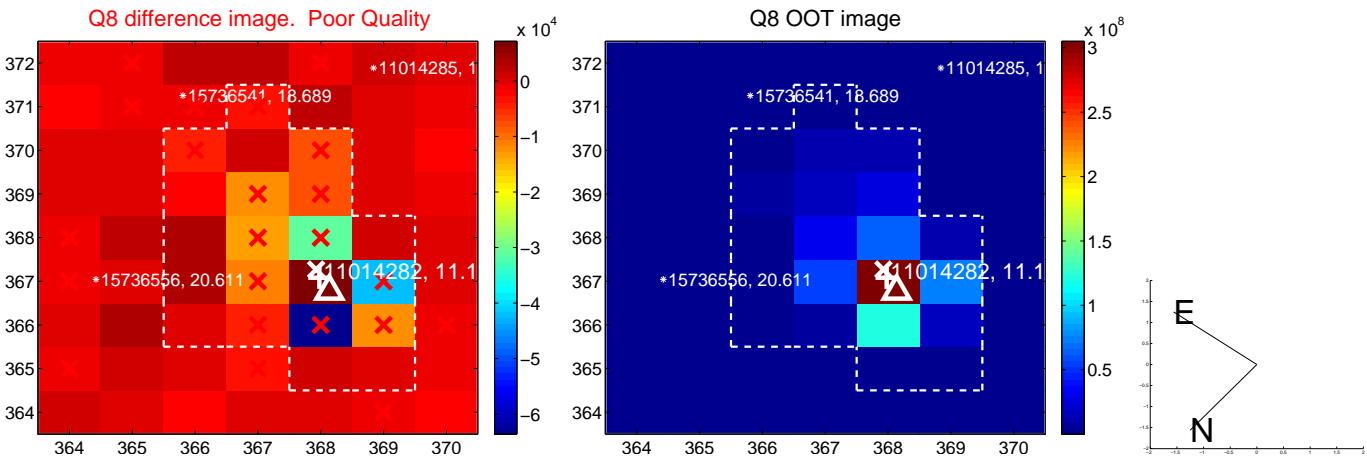
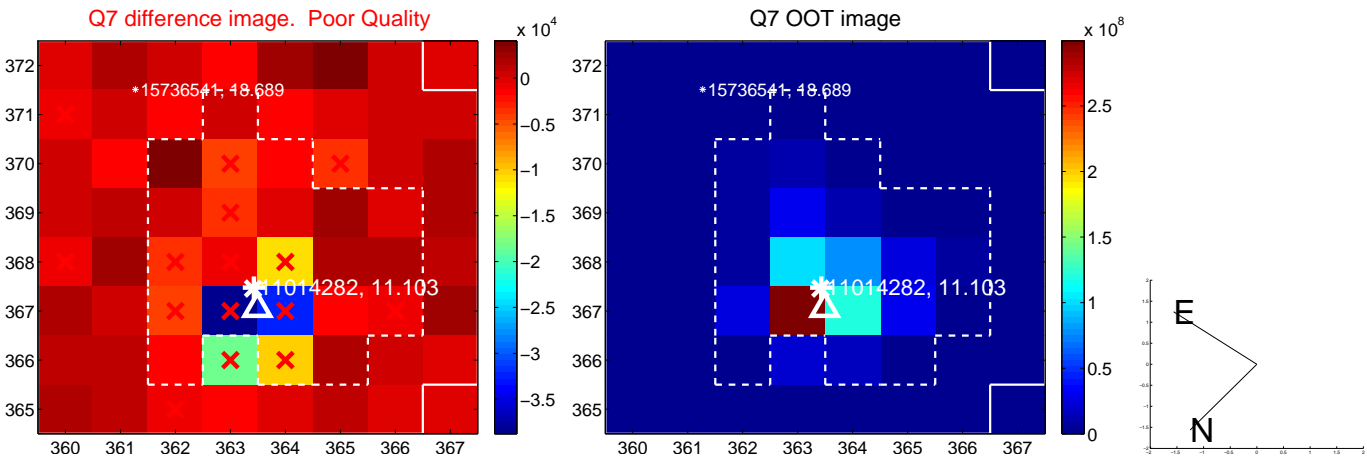
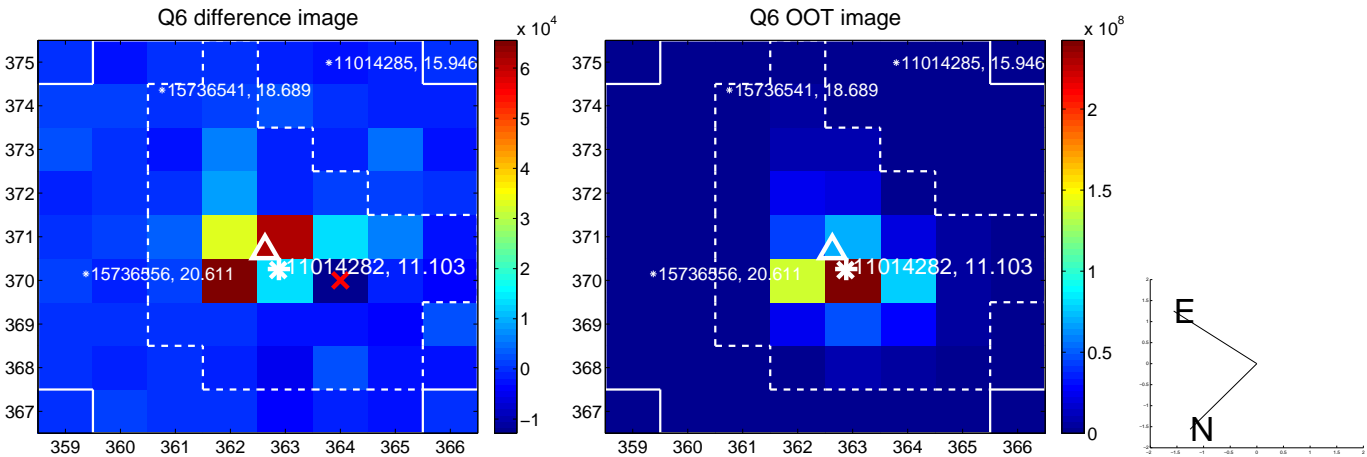
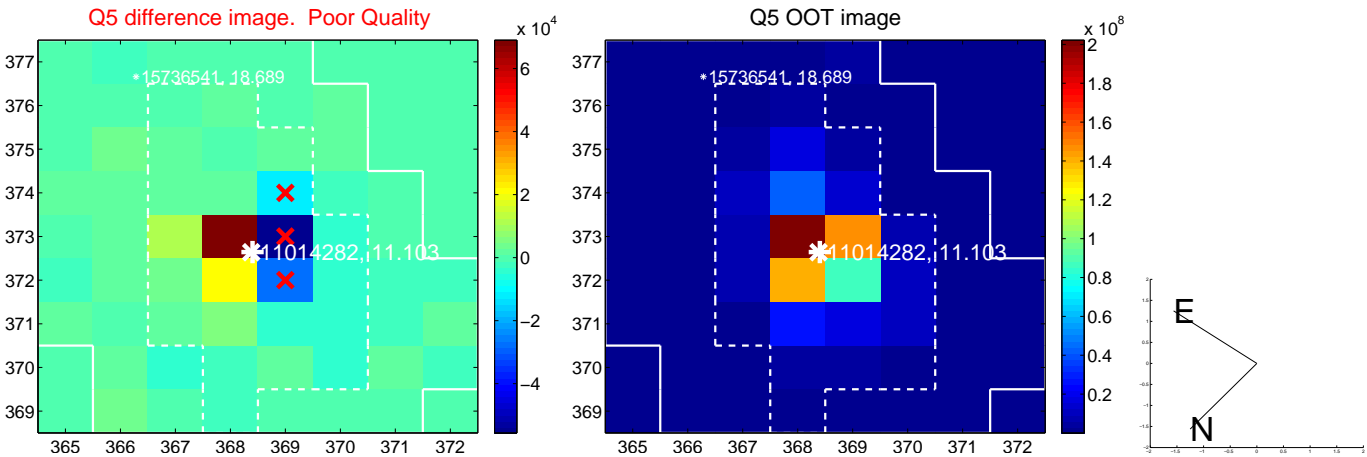


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

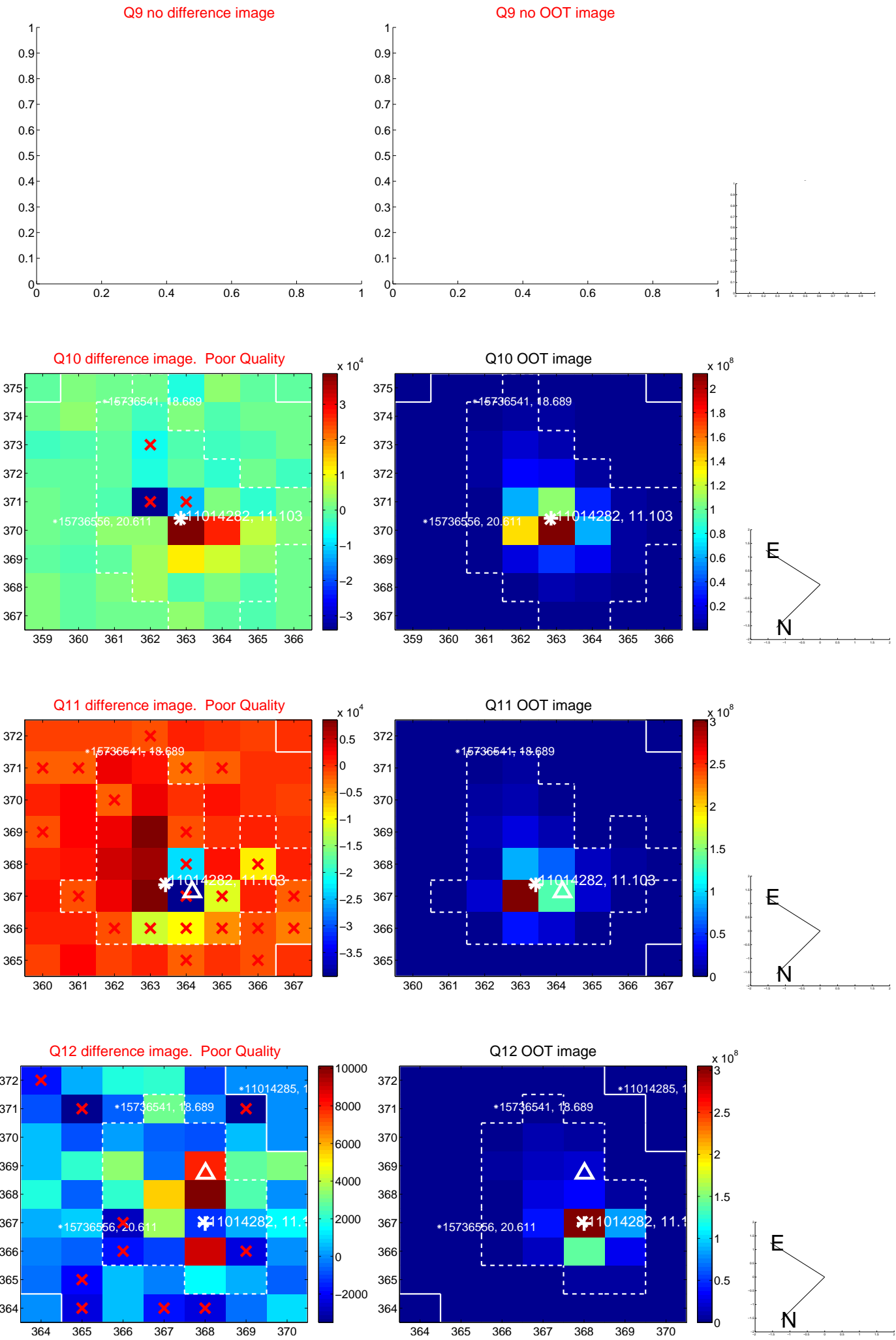
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



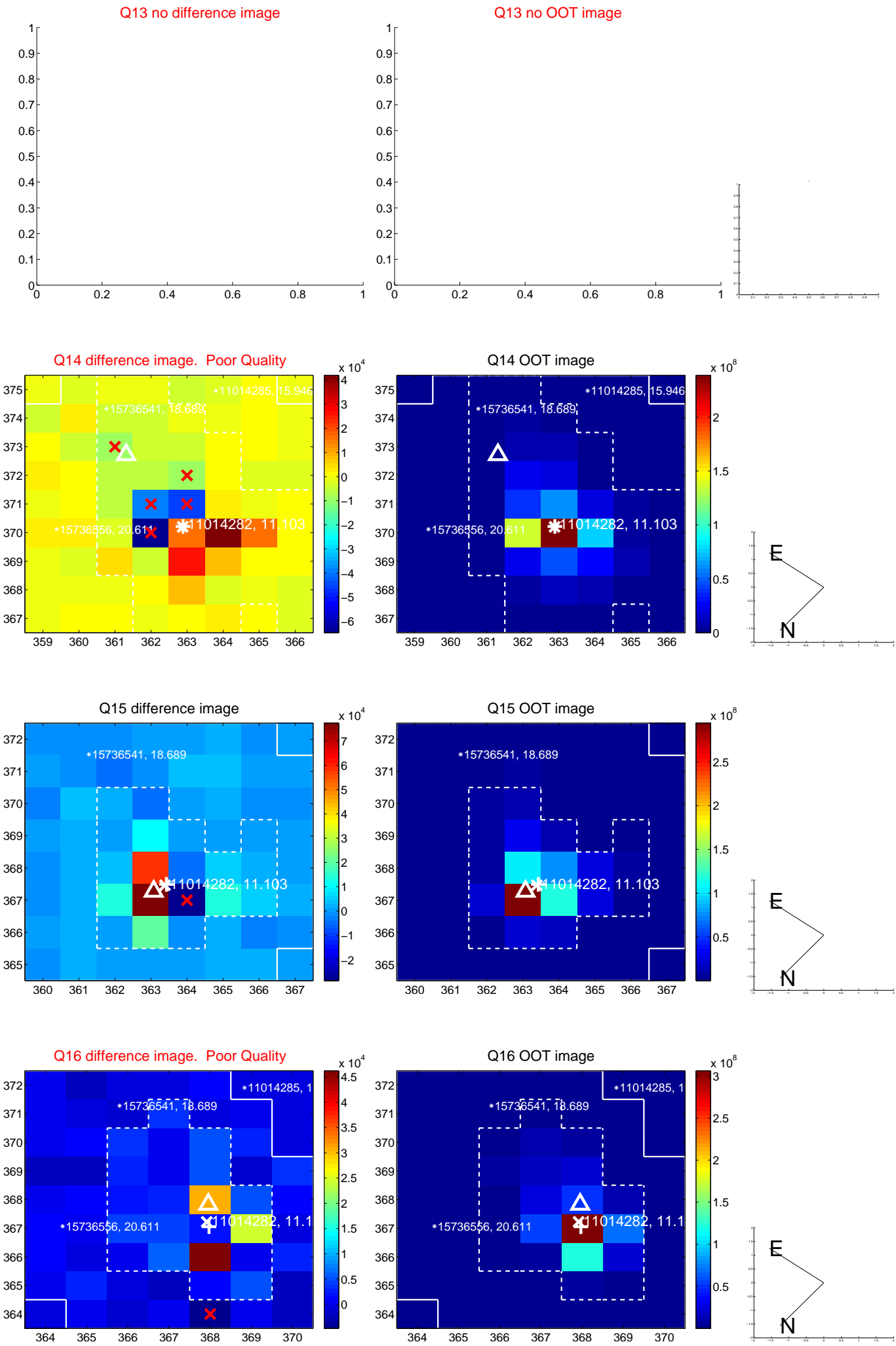
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



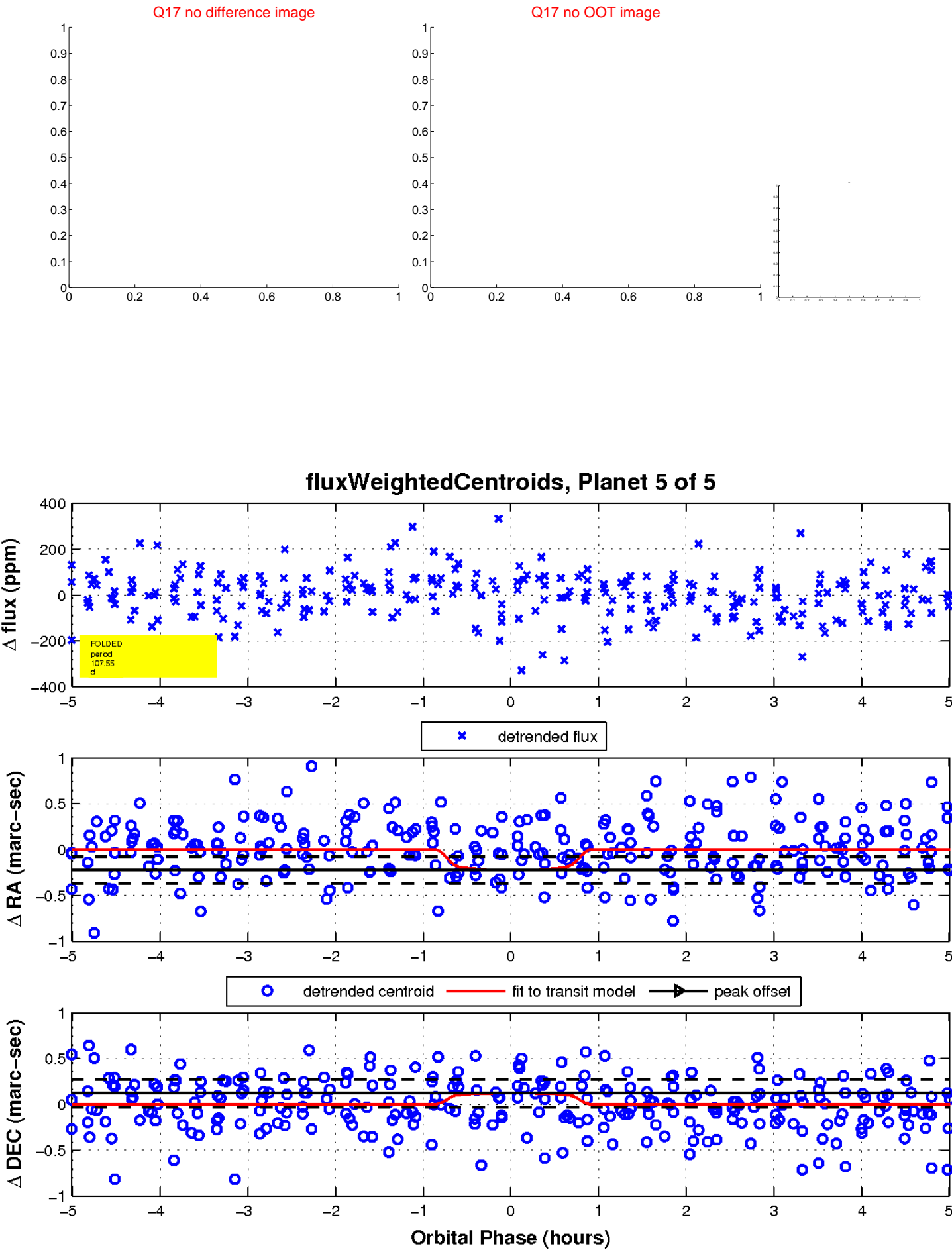
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

