

KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

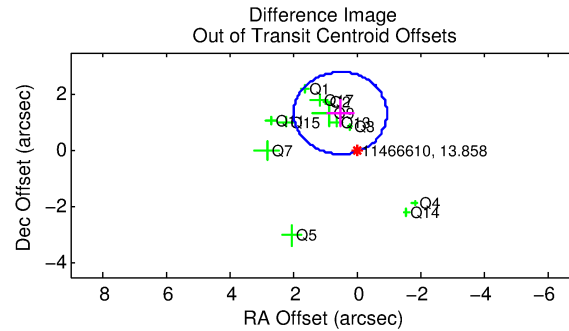
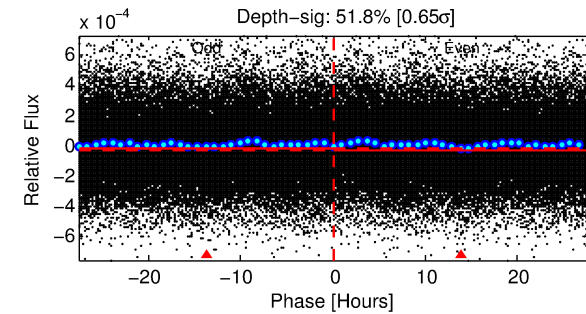
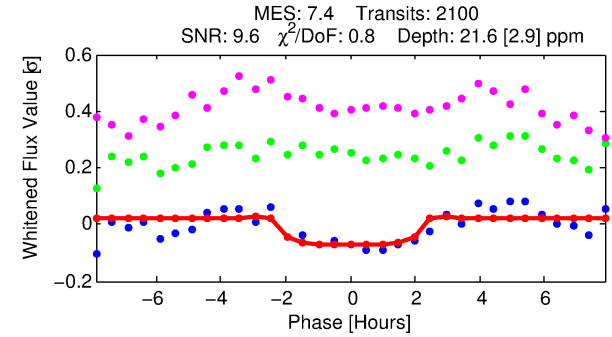
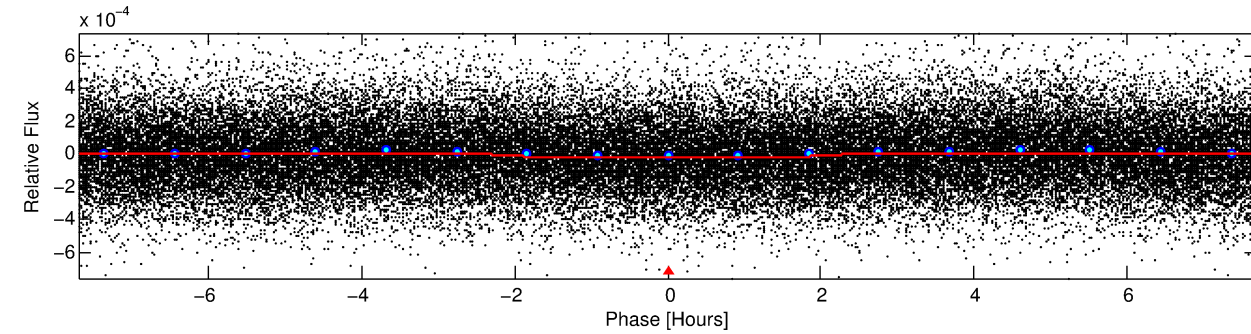
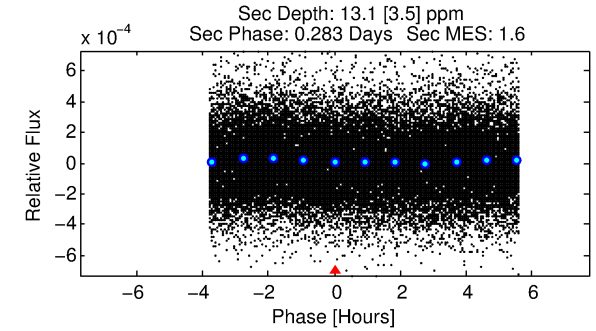
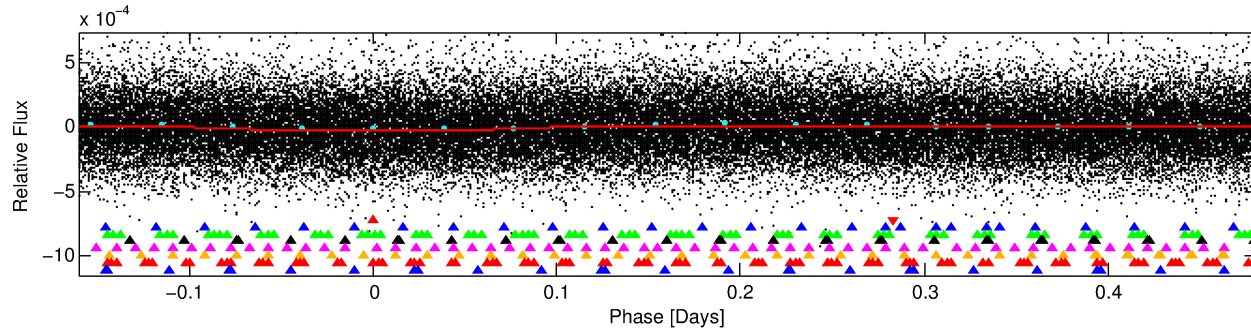
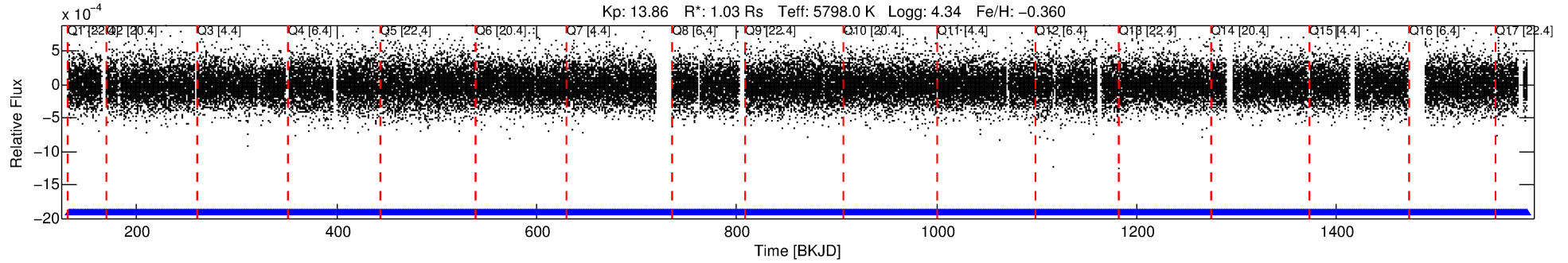
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-01

No Significant Match Found

DV One-Page Summary

KIC: 11466610 Candidate: 1 of 8 Period: 0.642 d



DV Fit Results:

Period = 0.64164 [0.00001] d
Epoch = 131.9567 [0.0040] BKJD
Rp/R* = 0.0050 [0.0031]
a/R* = 1.06 [0.34]
b = 0.90 [0.67]
Seff = 5670.41 [2063.37]
Teq = 2213 [201] K
Rp = 0.57 [0.38] Re
a = 0.0137 [0.0033] AU
Ag = 4.26 [5.52] [0.59σ]
Teffp = 4915 [1539] K [1.74σ]

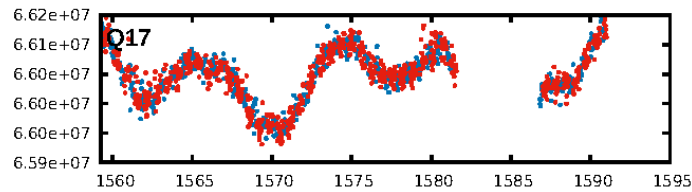
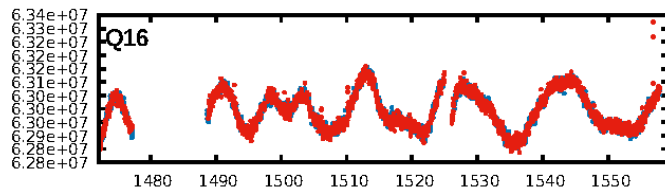
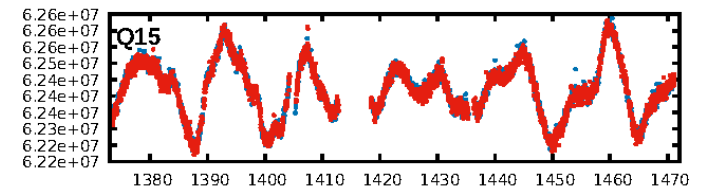
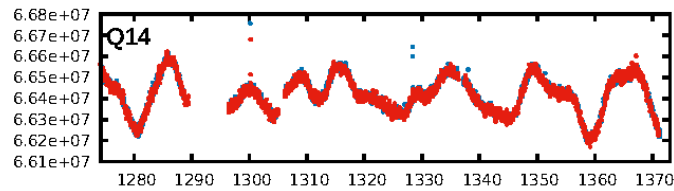
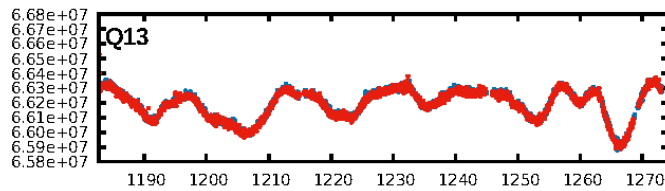
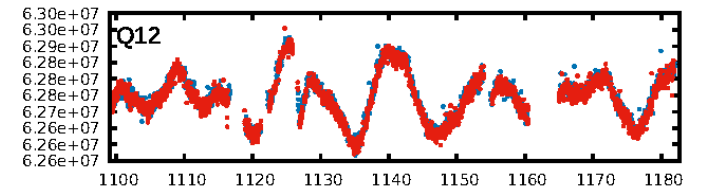
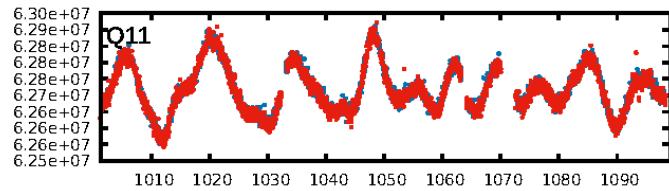
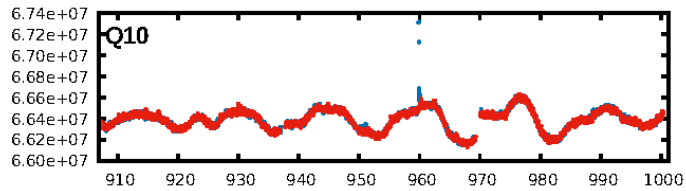
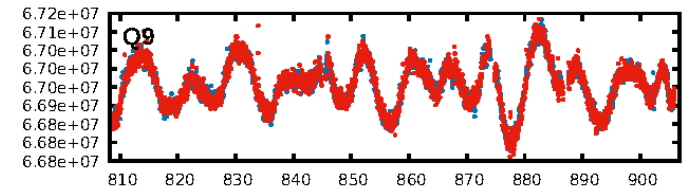
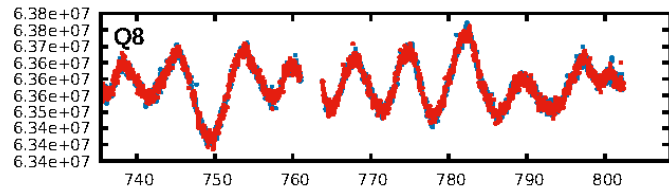
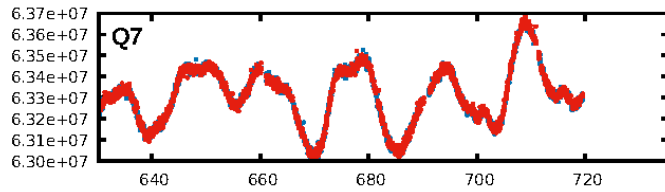
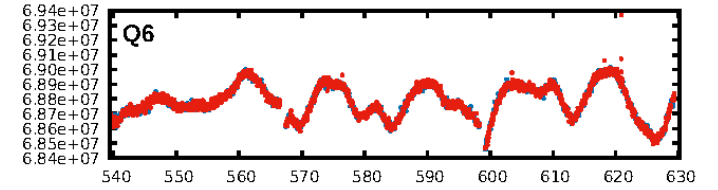
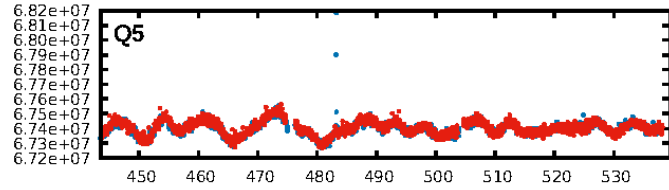
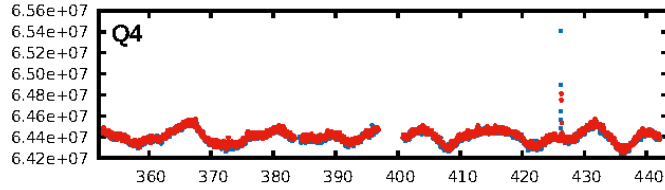
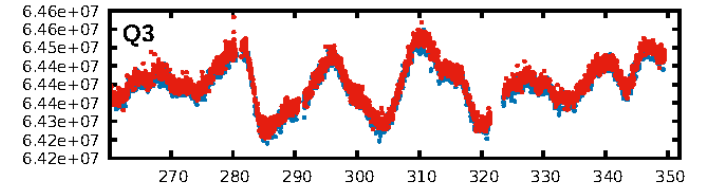
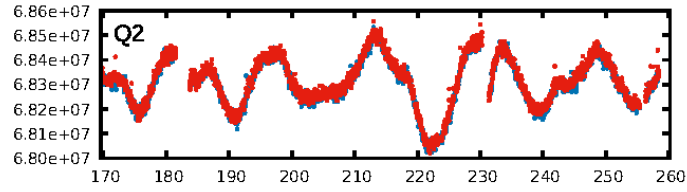
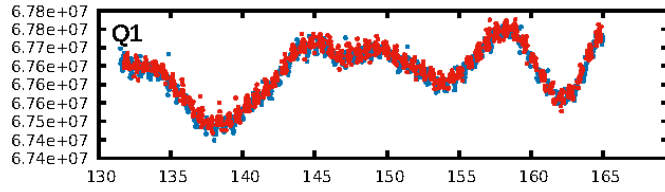
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [78.41σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2006/2006]
GhostDiagnostic-chr: 1.065
Centroid-sig: 96.3%
Centroid-so: 0.507 arcsec [0.53σ]
OotOffset-rm: 1.425 arcsec [2.92σ]
KicOffset-rm: 1.532 arcsec [2.98σ]
OotOffset-st: 2/4/1/5 [12]
KicOffset-st: 2/4/1/5 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

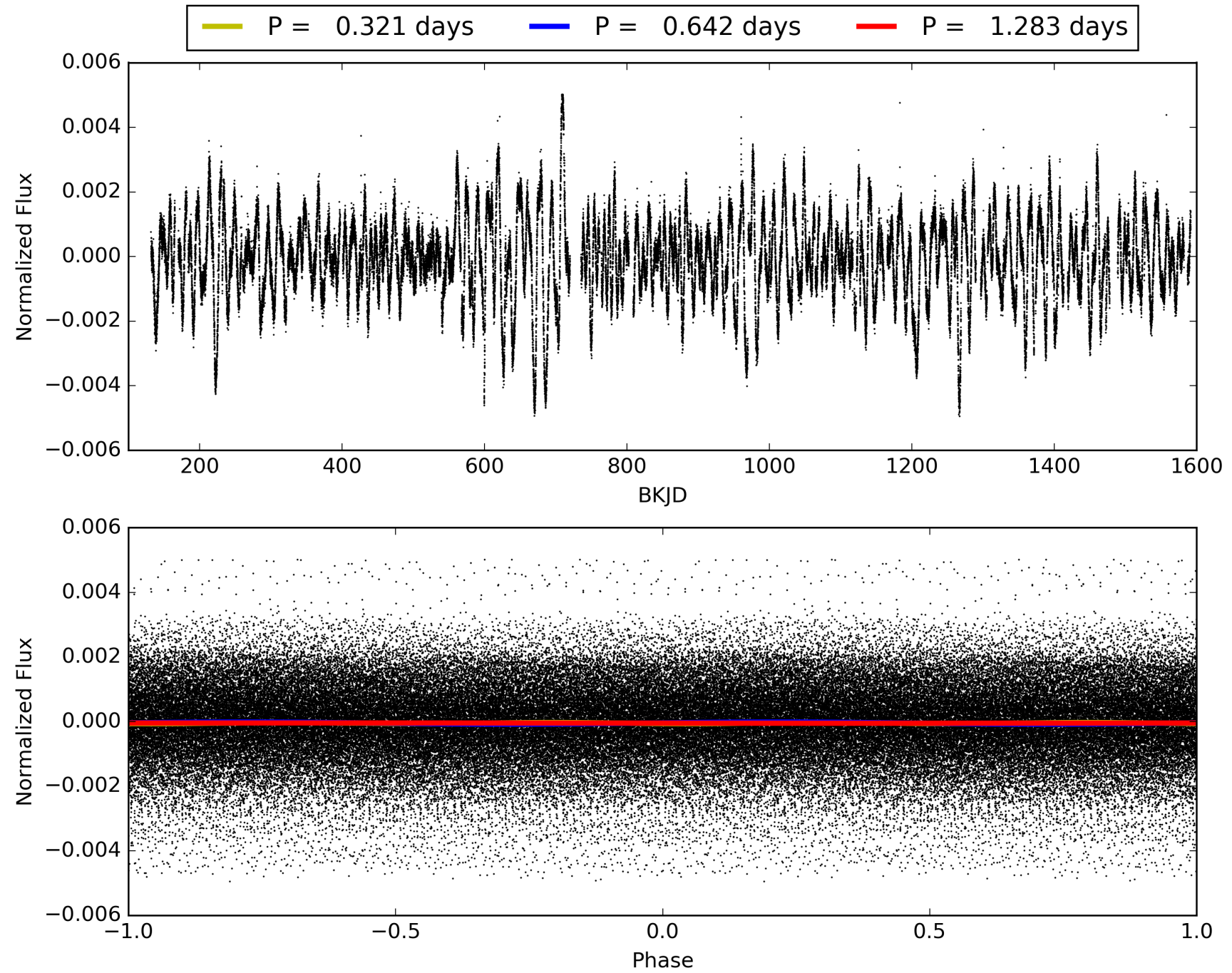
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011466610-01, PDC Light Curves

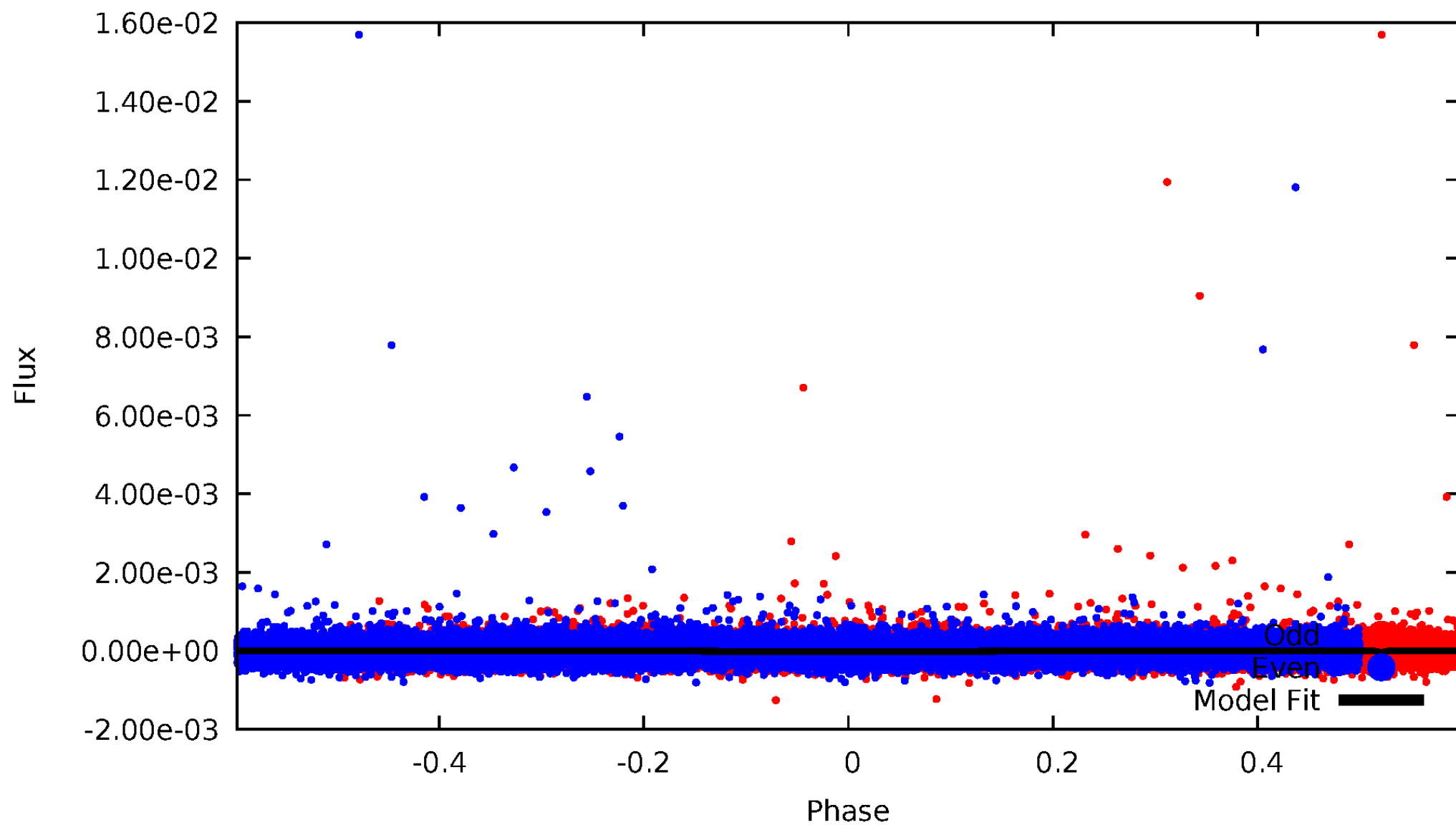


TCE 011466610-01



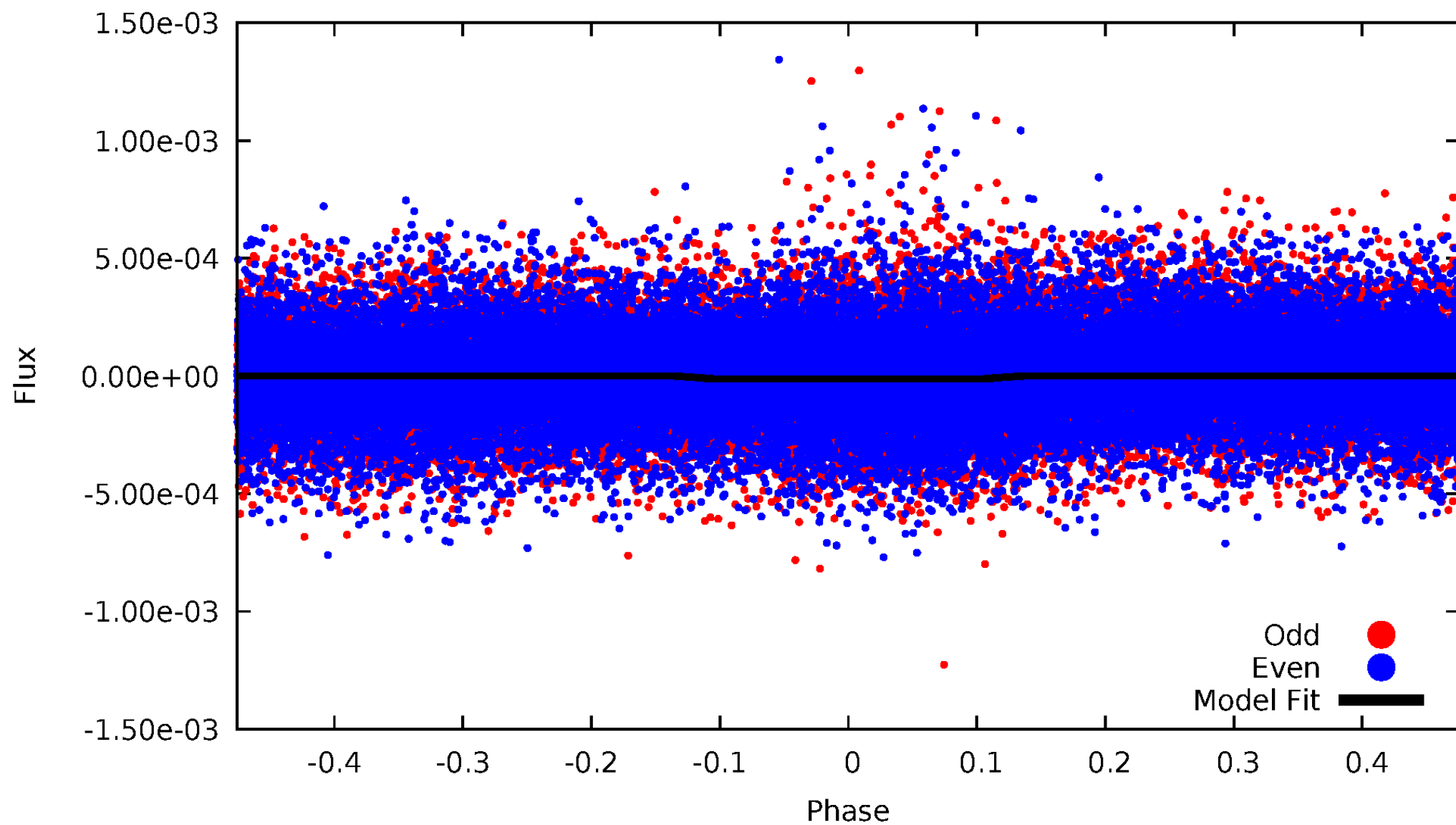
DV Odd/Even

TCE 011466610-01



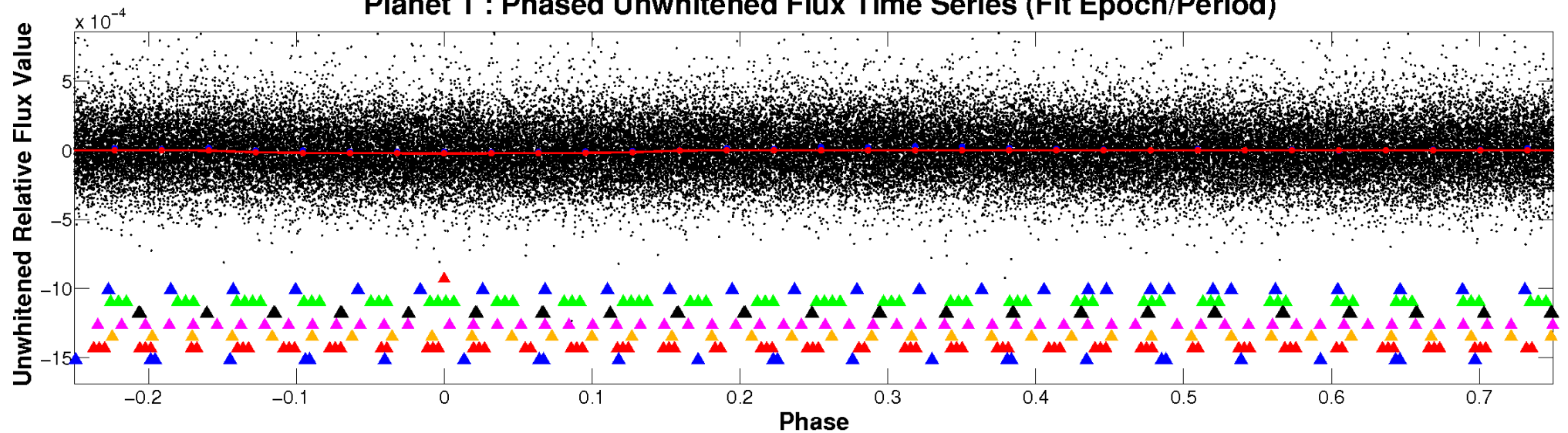
ALT Odd/Even

TCE 011466610-01

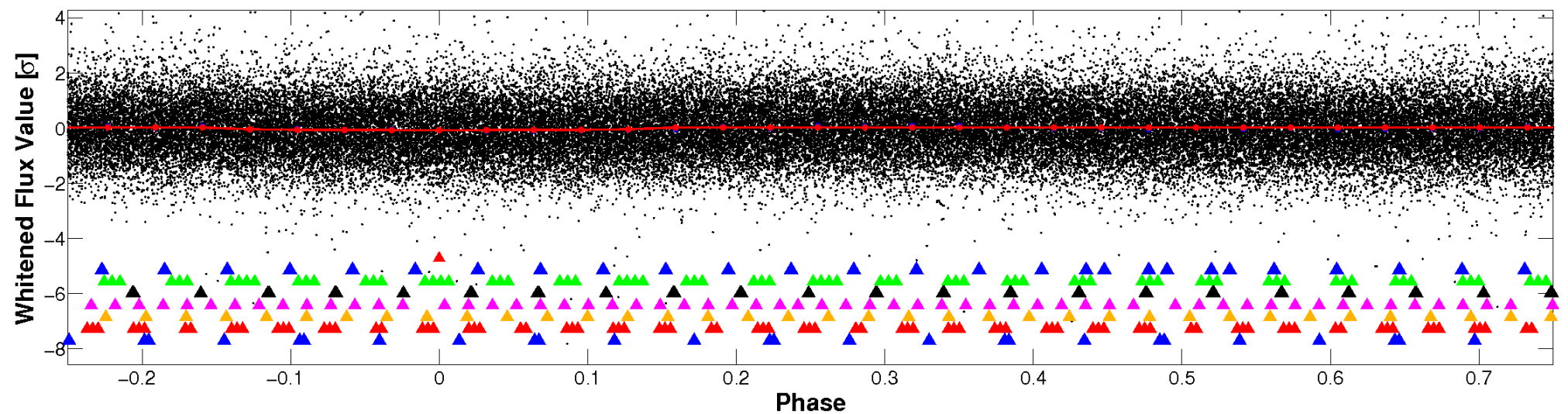


Non-Whitened Vs. Whitened Light Curve

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

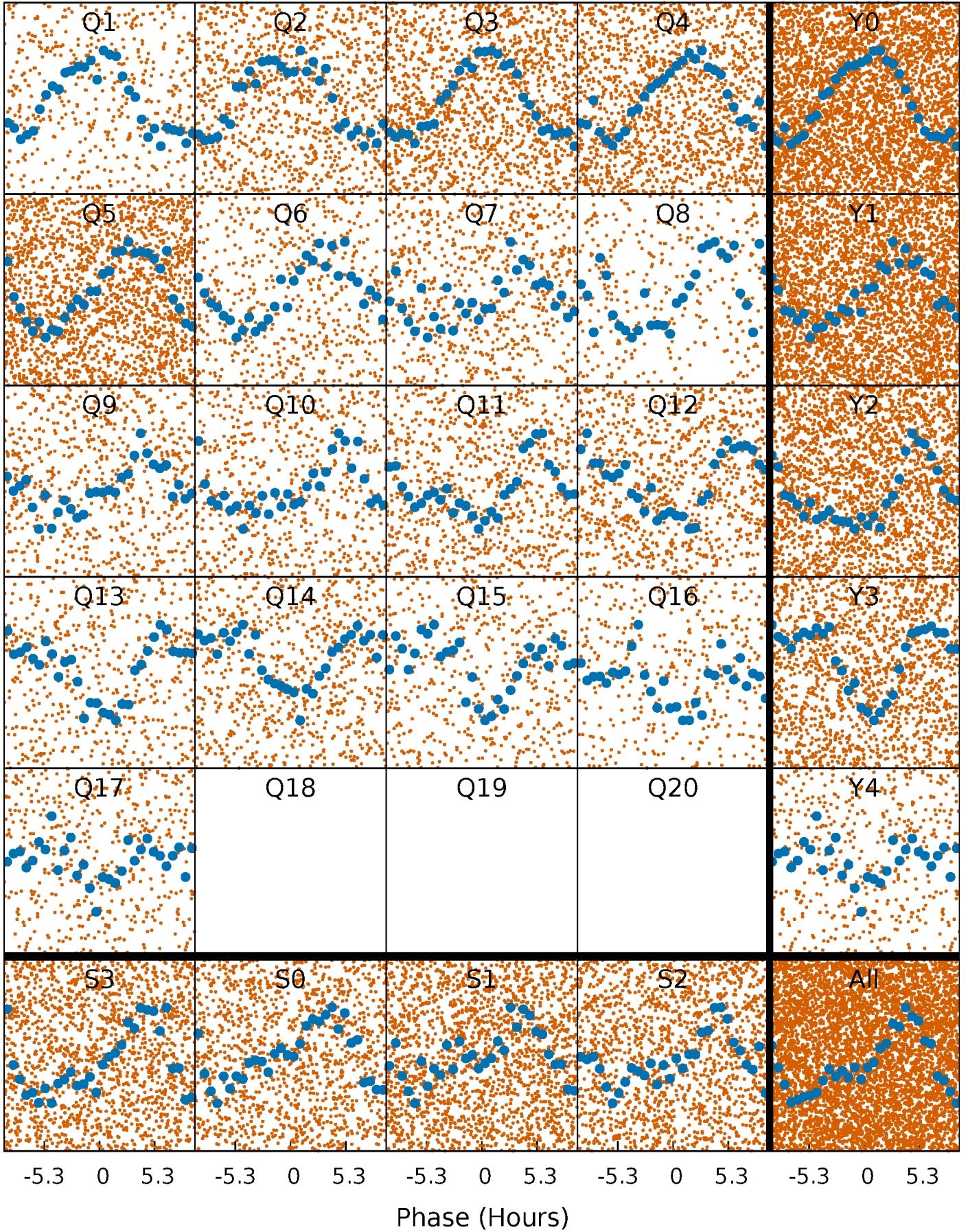


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



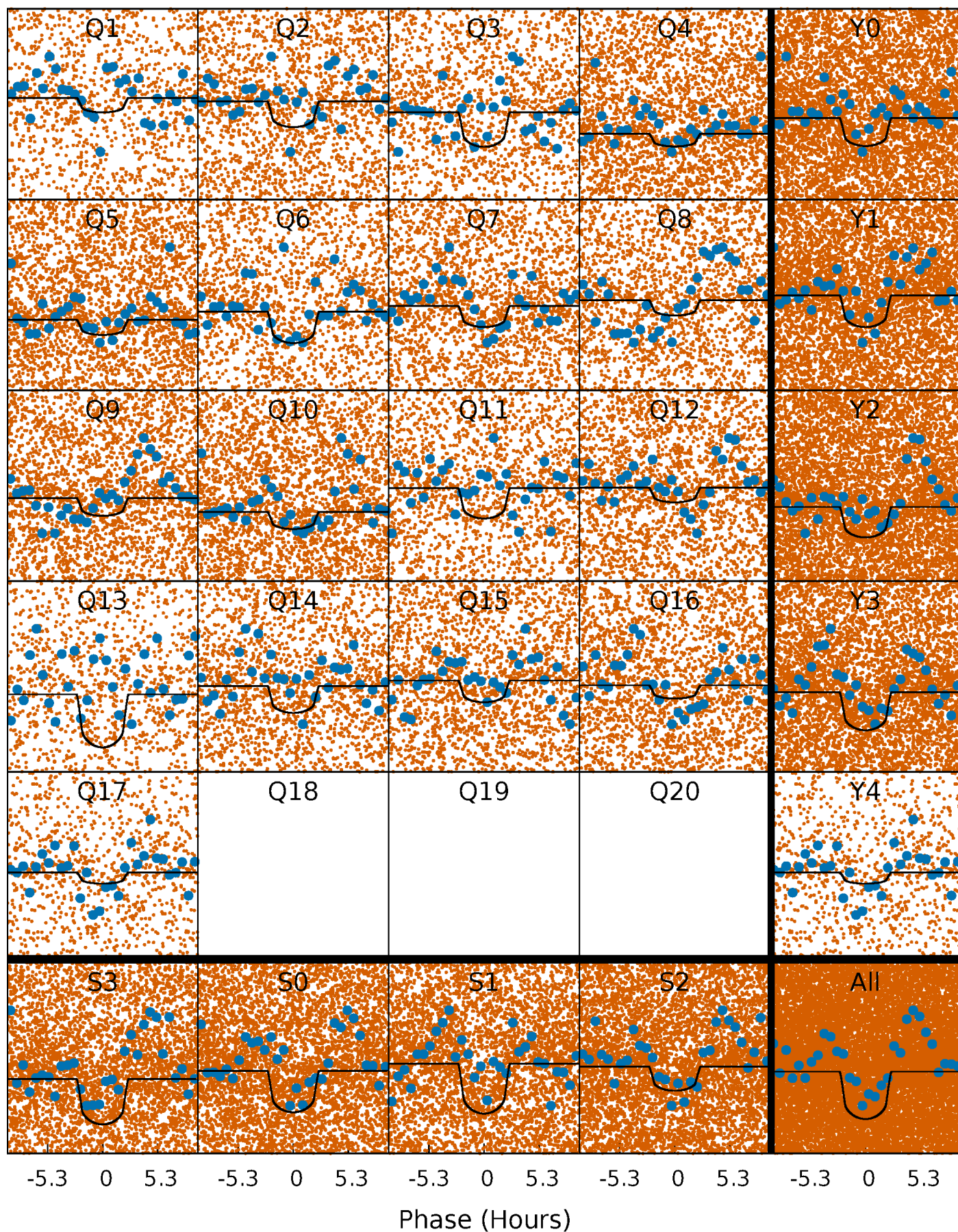
PDC Quarter-Phased Transit Curves

TCE 011466610-01 P= 0.641639 Days $T_0=131.956675$ (BKJD)



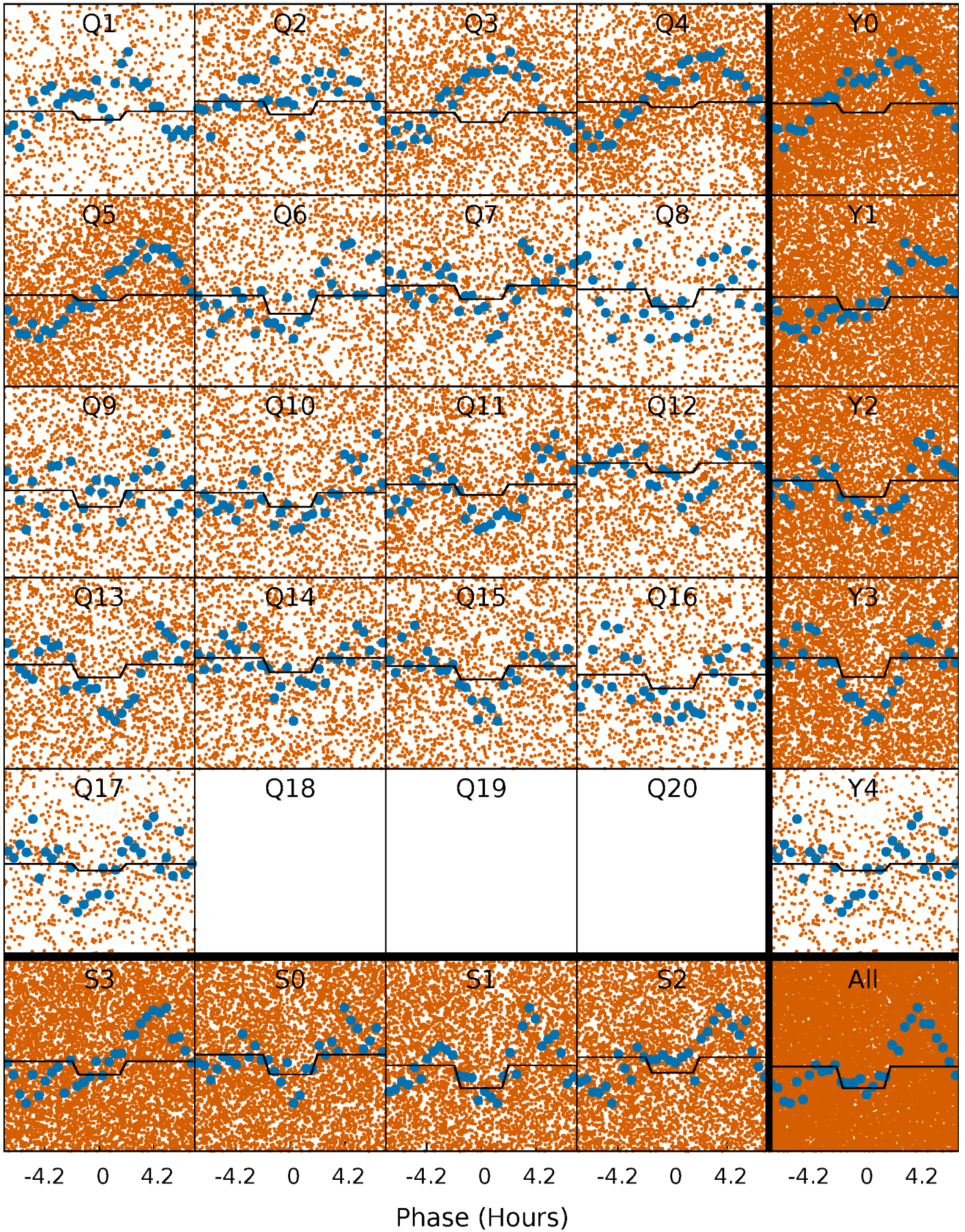
DV Quarter-Phased Transit Curves

TCE 011466610-01 P= 0.641639 Days $T_0=131.956675$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

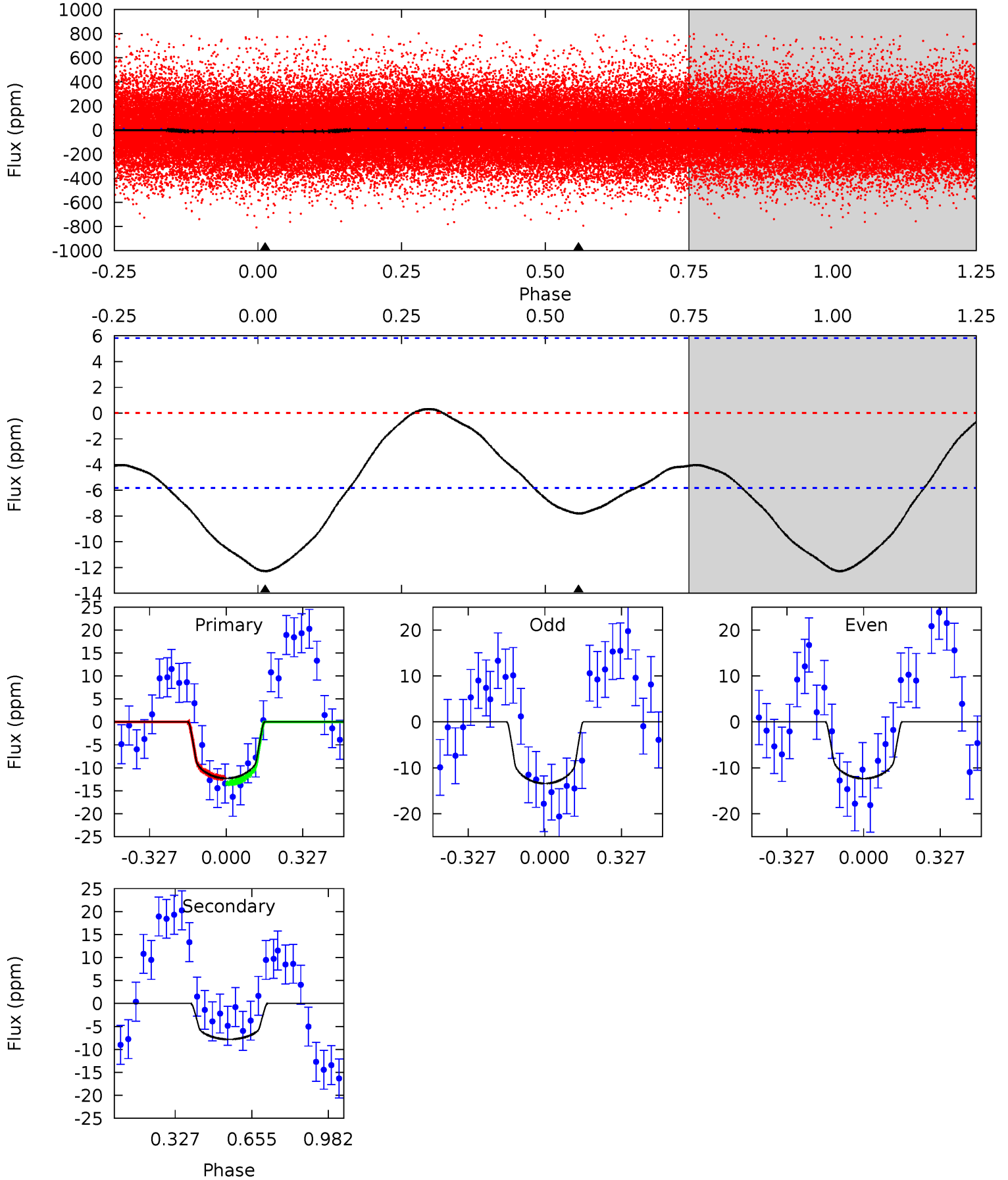
TCE 011466610-01 P= 0.641672 Days $T_0=131.914799$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-01, P = 0.641639 Days, E = 131.315036 Days

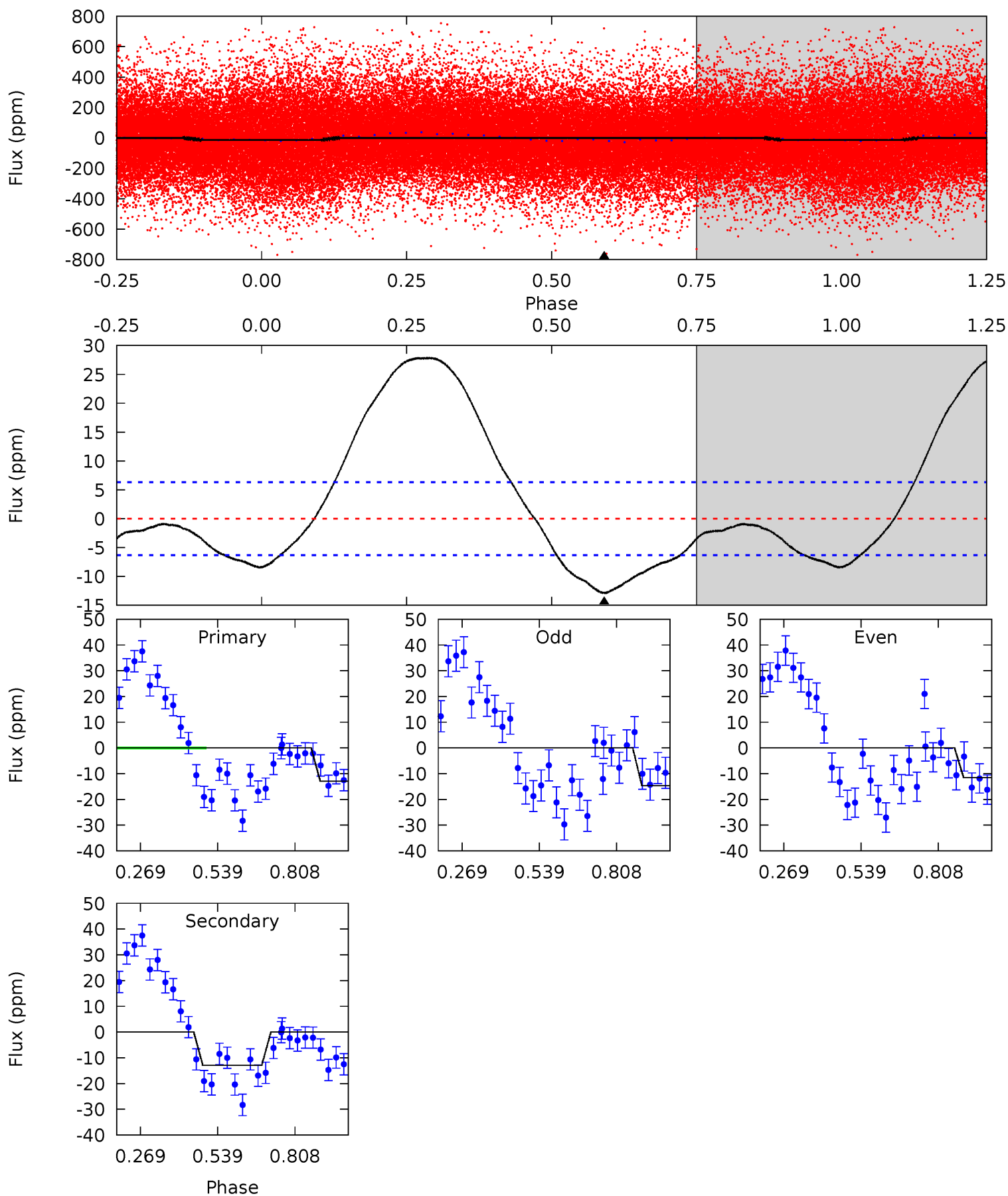
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.10	5.78	0	0	4.31	0.98	0.79	9.10	9.10	5.78	5.78	0.40	0.86	0.02	0.41



Alt Model-Shift Uniqueness Test

011466610-01, P = 0.641672 Days, E = 131.273127 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.88	8.88	0	0	4.35	1.10	9.50	8.88	8.88	8.88	8.88	1.07	0.83	0.68	1.23



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$0.60^{+0.33}_{-0.32}$	3103^{+241}_{-209}	4265^{+1810}_{-732}	$2.266^{+8.036}_{-1.374}$
Alt.	-13 ± 1	$0.48^{+0.33}_{-0.30}$	3086^{+232}_{-187}	5367^{+3732}_{-1149}	$6.046^{+39.505}_{-3.935}$

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

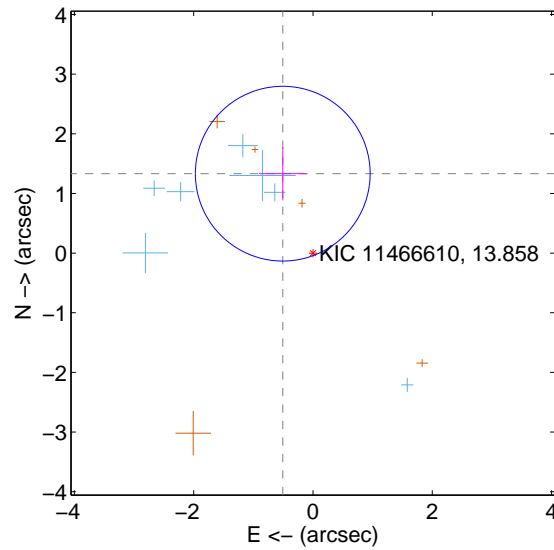
Supplemental centroid analysis for 011466610-01. Kepler magnitude: 13.86. Transit SNR 9.57

There are 7 quarters with good PRF difference image offsets

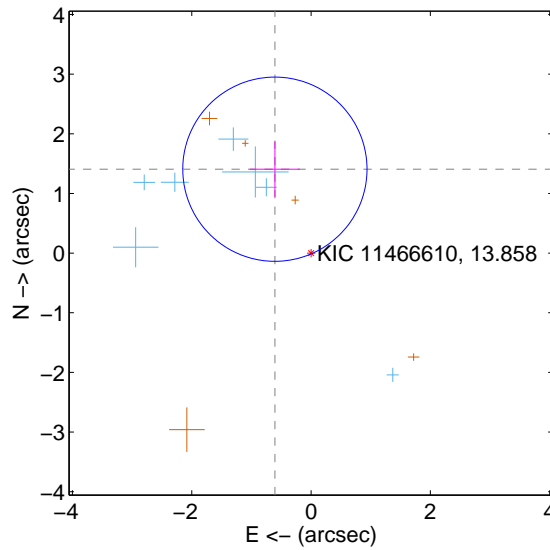
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.425 ± 0.488	2.92	0.507 ± 0.396	1.332 ± 0.445
PRF-fit source offset from KIC position	1.532 ± 0.515	2.98	0.606 ± 0.420	1.407 ± 0.464
photometric centroid source offset	0.51 ± 0.96	0.53	0.45 ± 0.95	0.24 ± 0.99

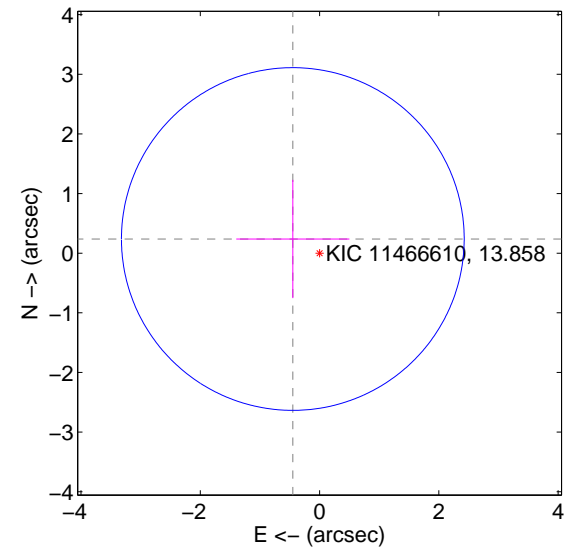
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

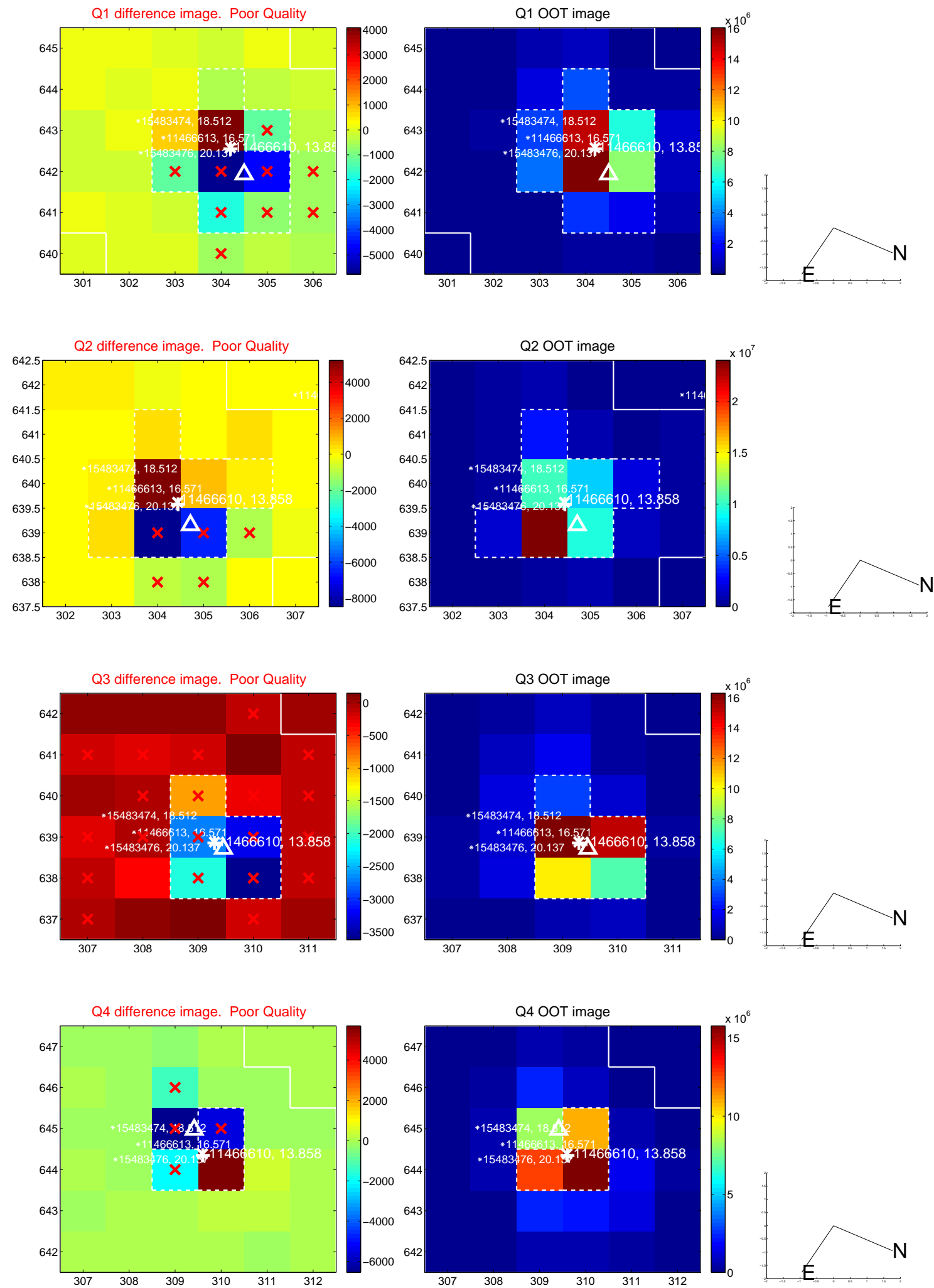


offset from photometric centroids

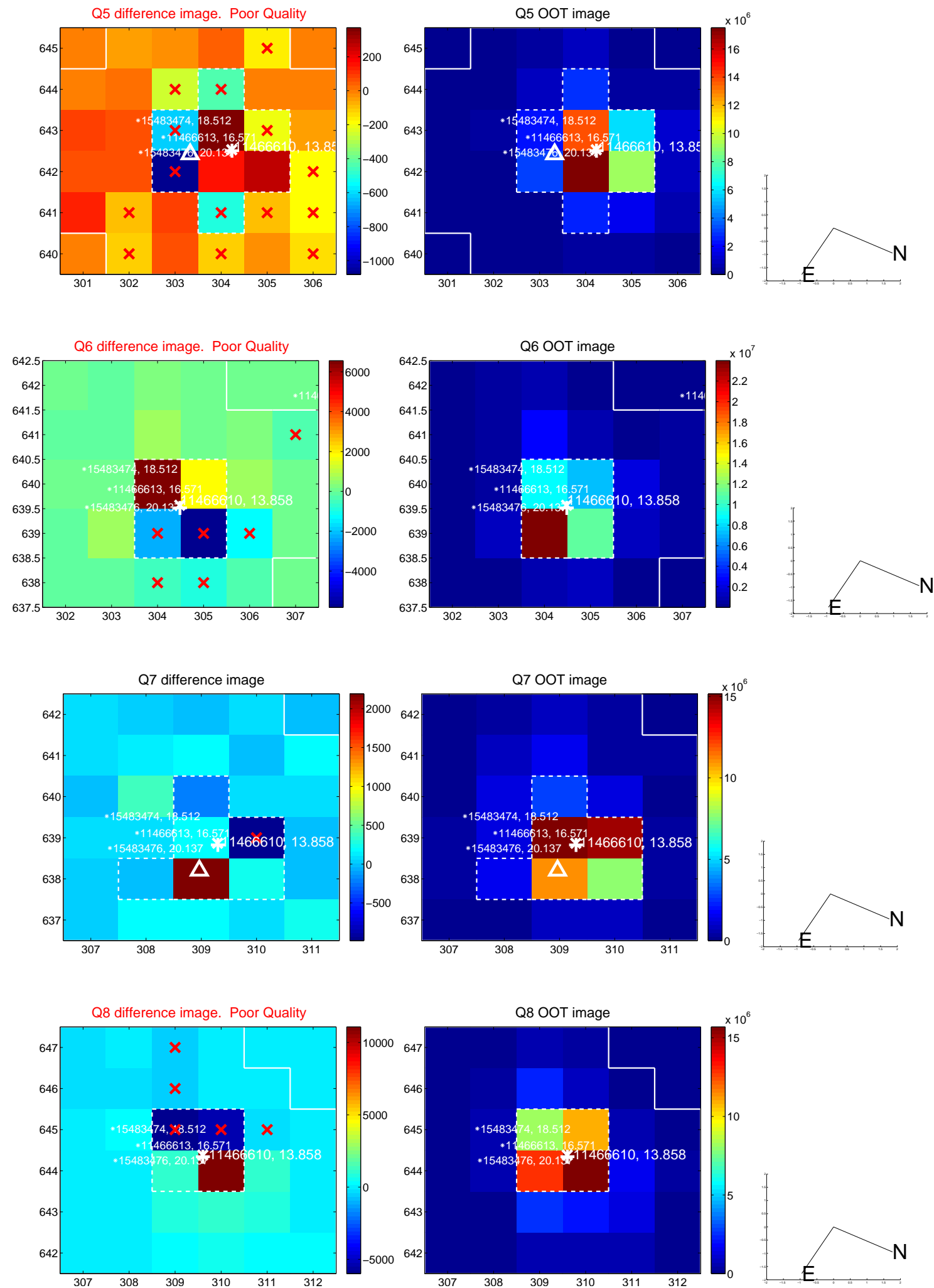


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

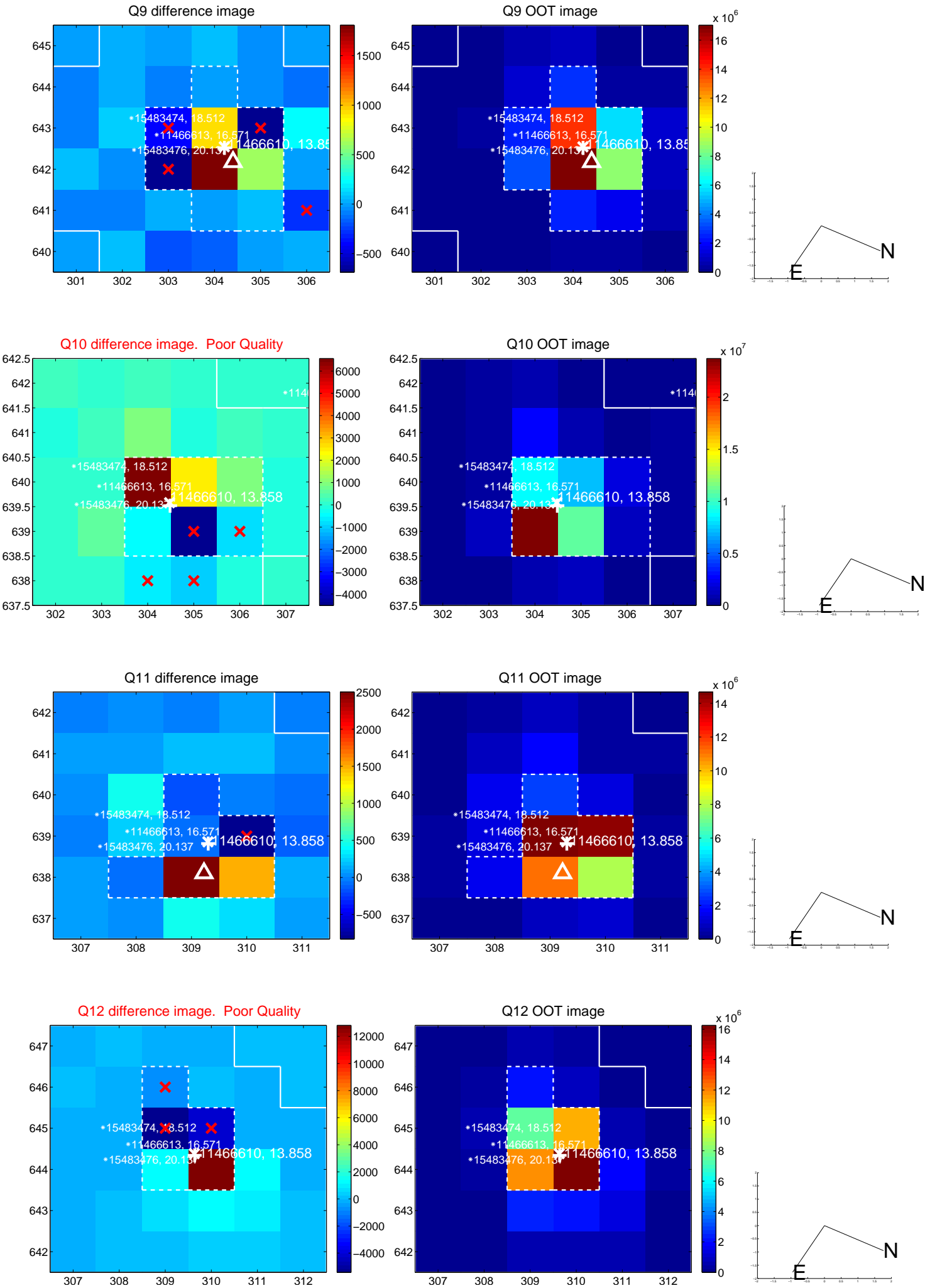
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



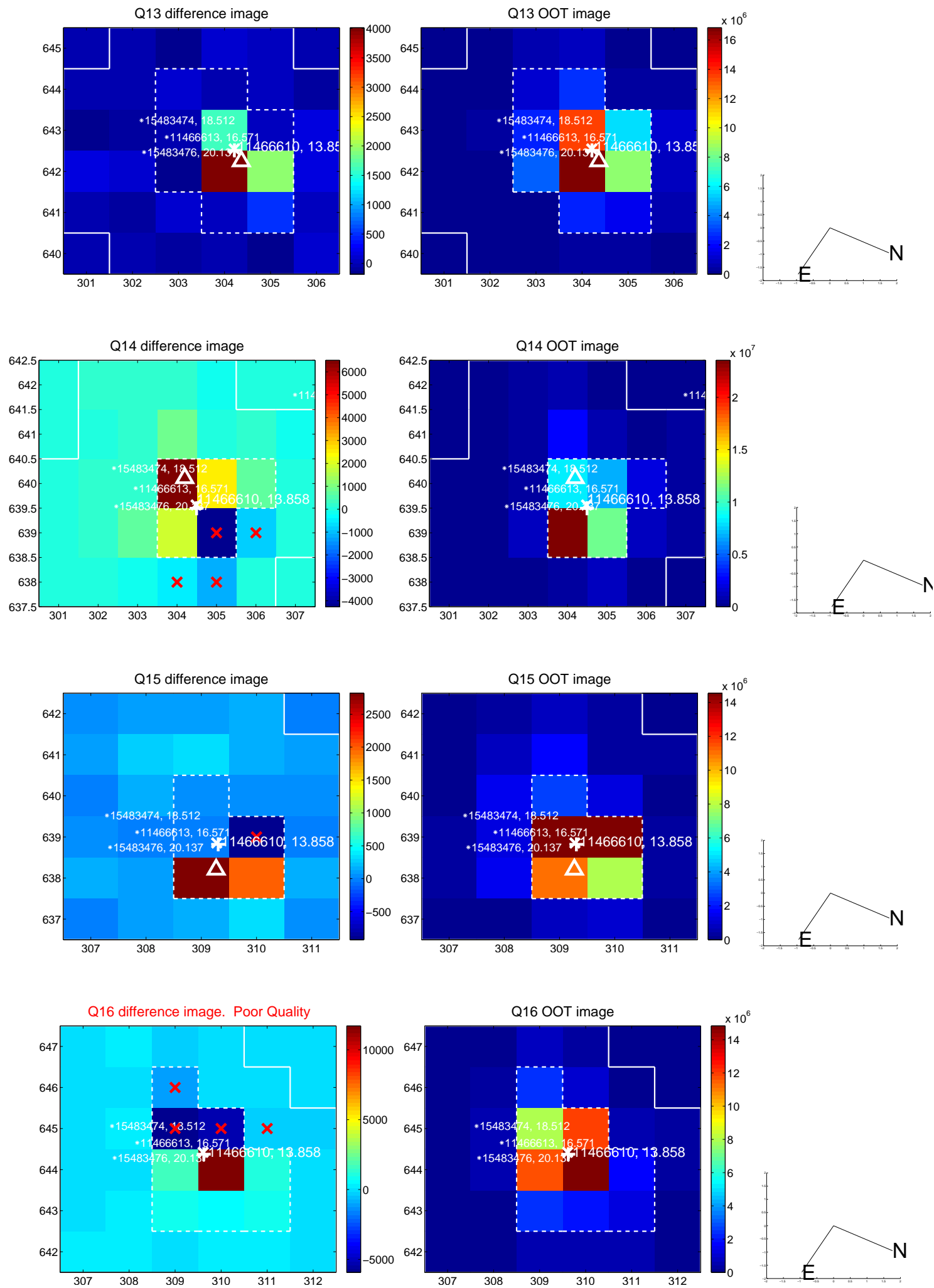
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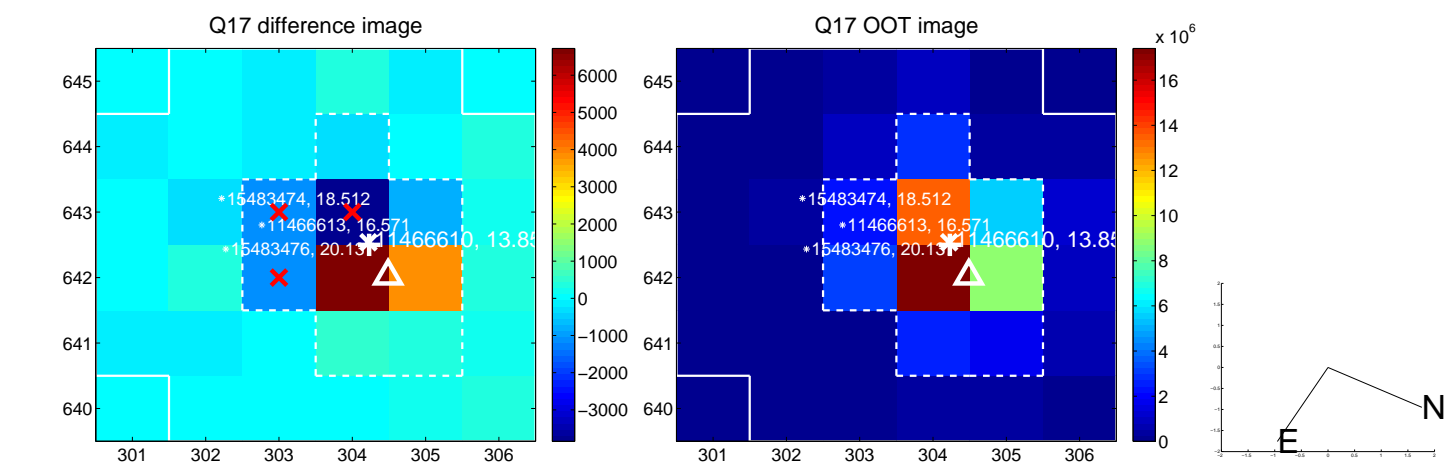
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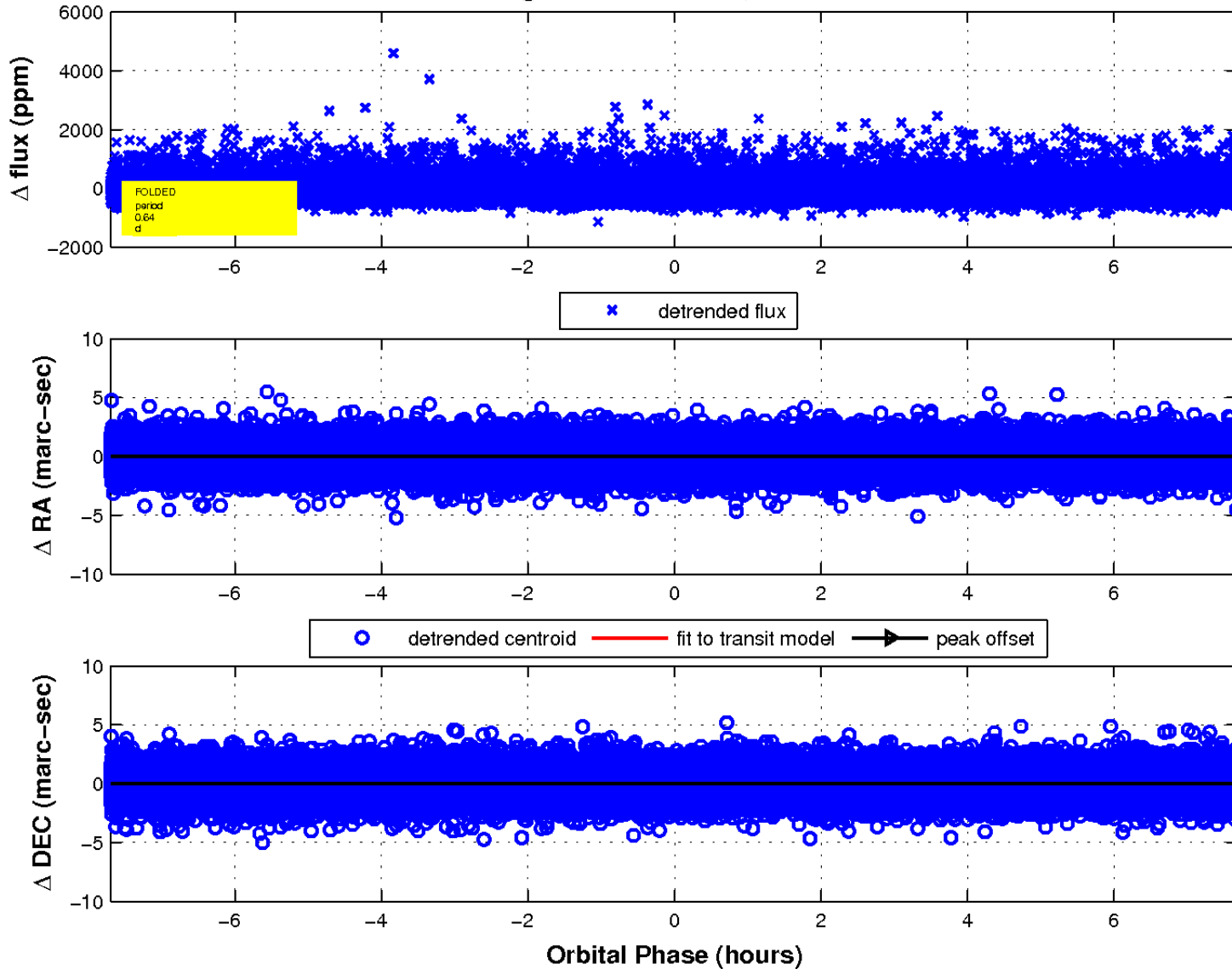
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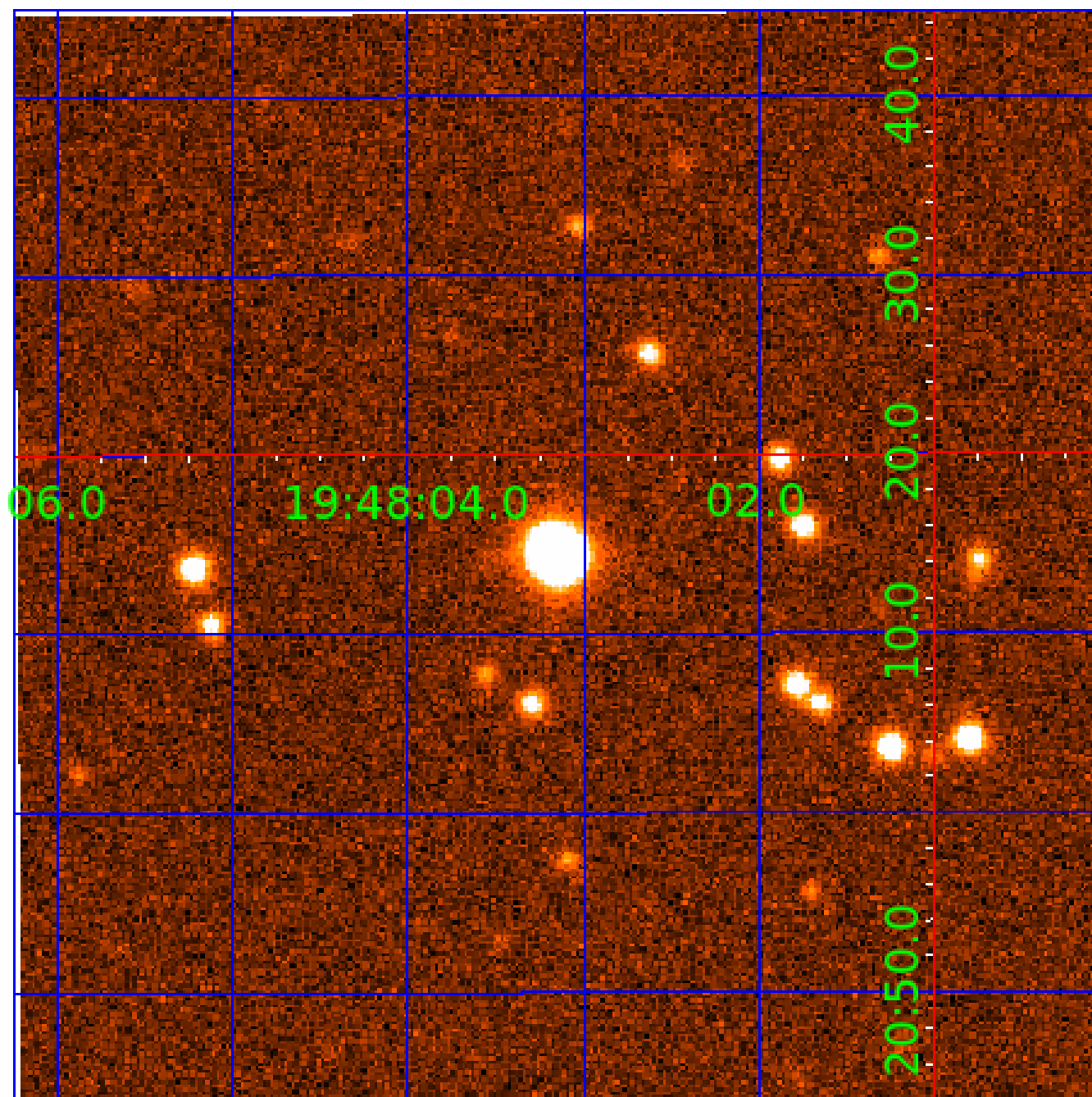


fluxWeightedCentroids, Planet 1 of 8



UKIRT Image

Declination



KIC 011466610

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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011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

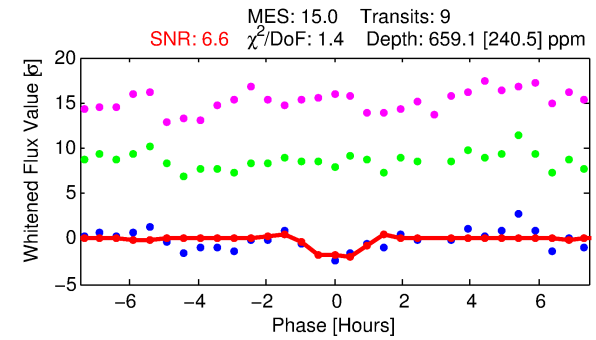
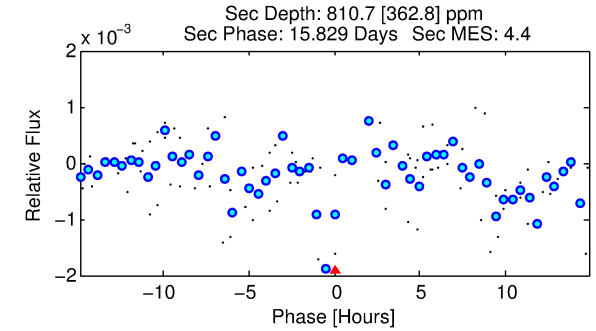
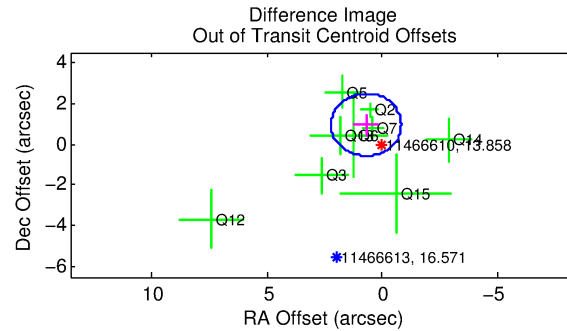
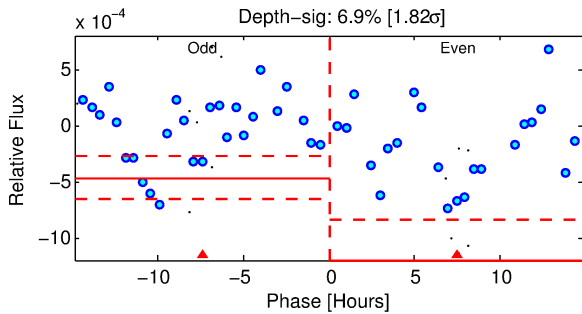
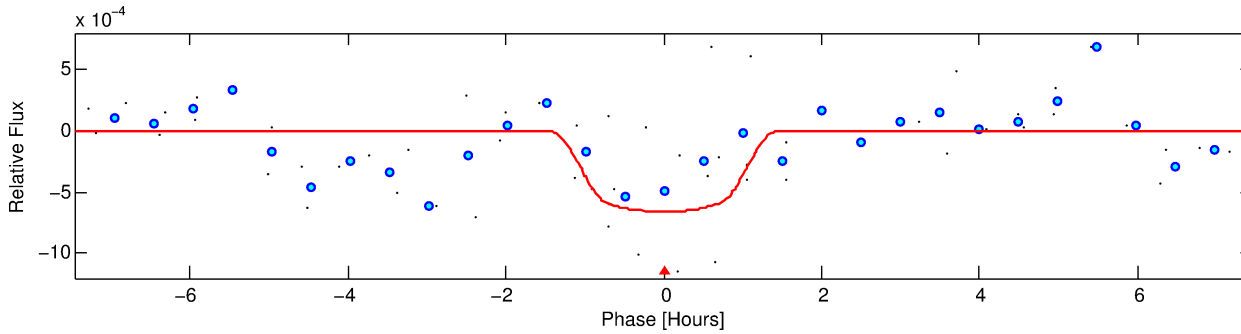
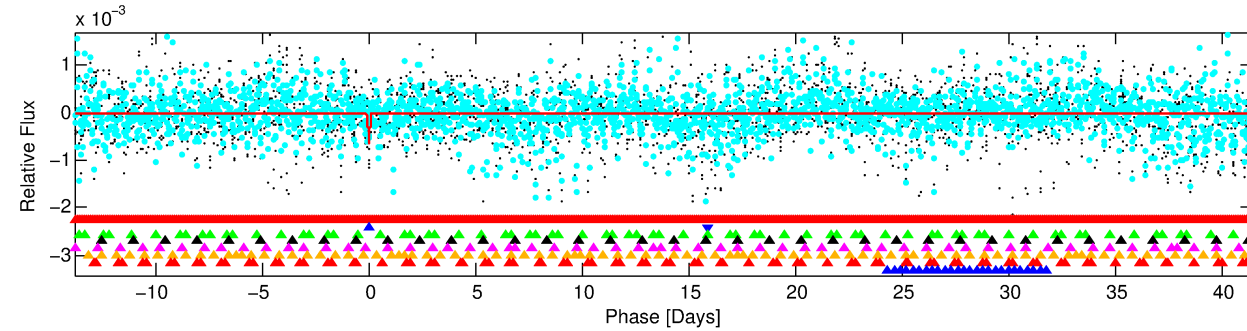
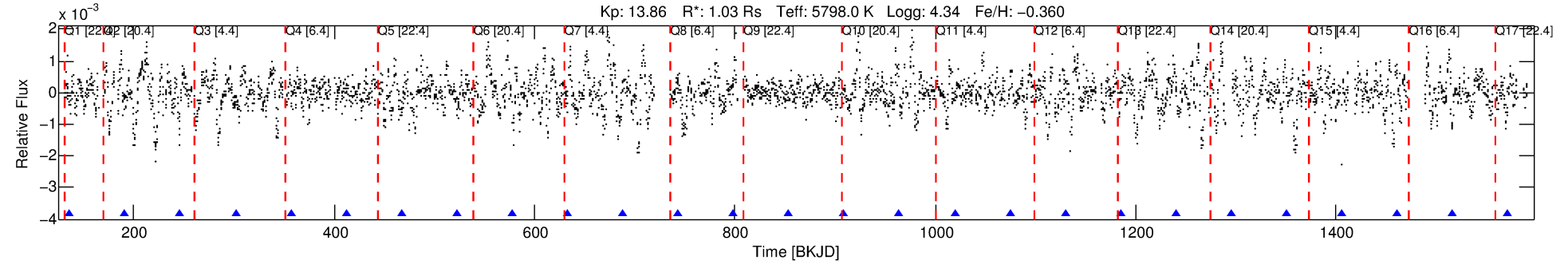
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-02

No Significant Match Found

DV One-Page Summary

KIC: 11466610 Candidate: 2 of 8 Period: 55.208 d



DV Fit Results:

Period = 55.20806 [0.00049] d
Epoch = 136.0860 [0.0057] BKJD
Rp/R* = 0.0277 [0.2723]
a/R* = 86.20 [4233.76]
b = 0.89 [11.39]
Seff = 14.93 [5.43]
Teq = 501 [46] K
Rp = 3.10 [30.56] Re
a = 0.2677 [0.0639] AU
Ag = 3317.84 [65328.70] [0.05σ]
Teffp = 5881 [28947] K [0.19σ]

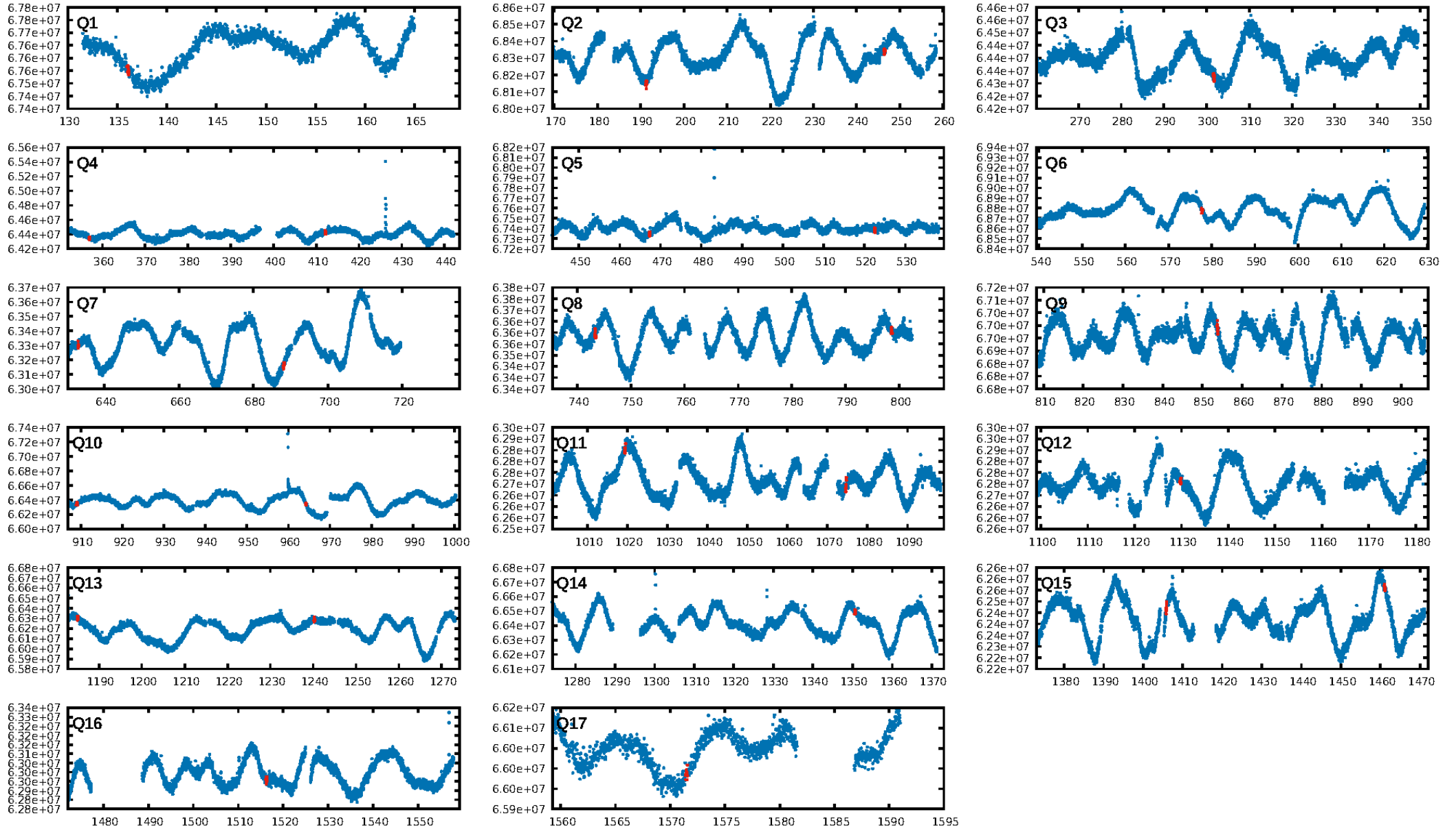
DV Diagnostic Results:

ShortPeriod-sig: 90.3% [1.66σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.8007
Centroid-sig: 19.0%
Centroid-so: 0.591 arcsec [1.50σ]
OotOffset-rm: 1.189 arcsec [2.34σ]
KicOffset-rm: 1.342 arcsec [2.67σ]
OotOffset-st: 3/3/1/2 [9]
KicOffset-st: 3/3/1/2 [9]
DiffImageQuality-fgm: 0.22 [2/9]
DiffImageOverlap-fno: 0.00 [0/17]

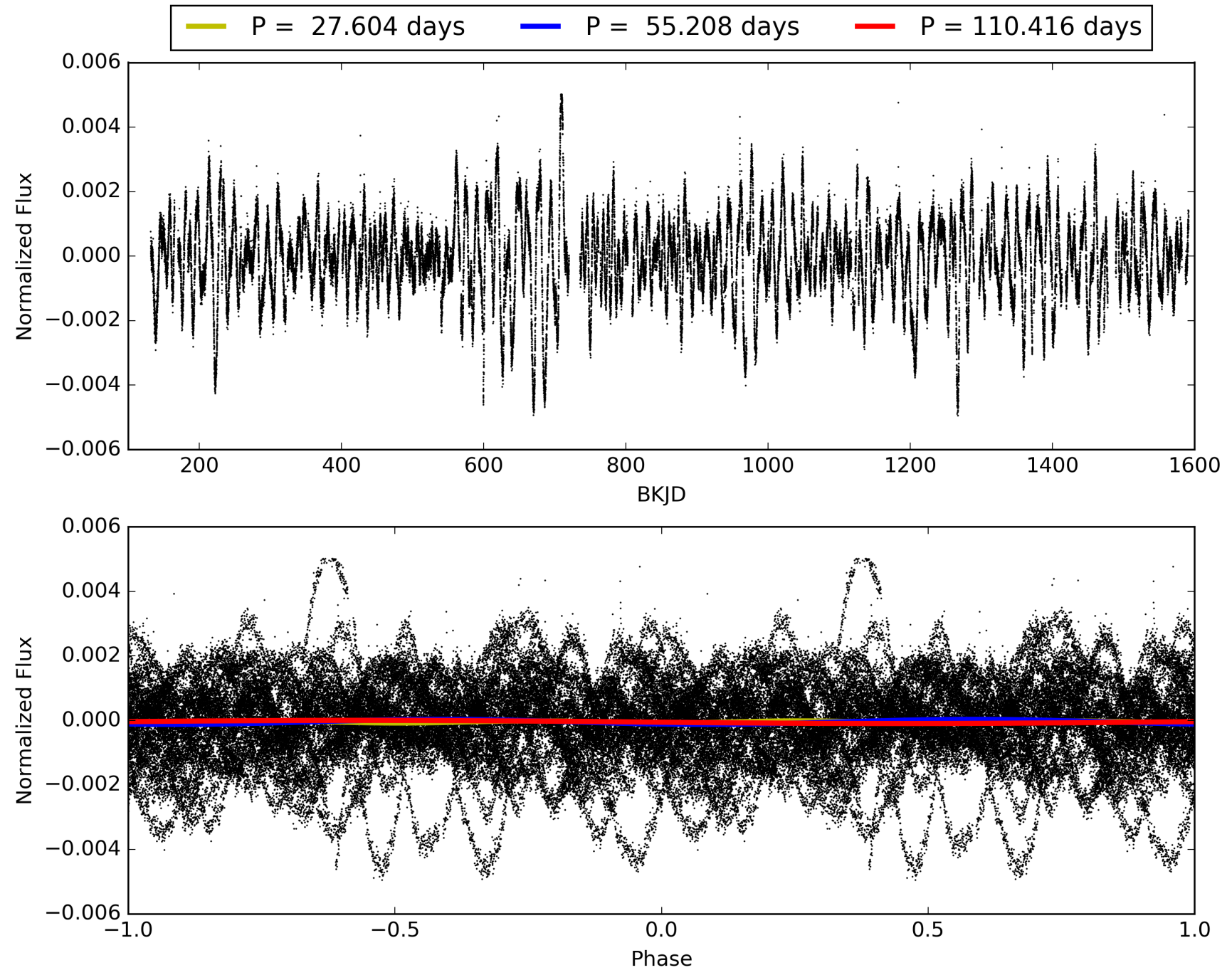
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:36 Z

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

TCE 011466610-02, PDC Light Curves

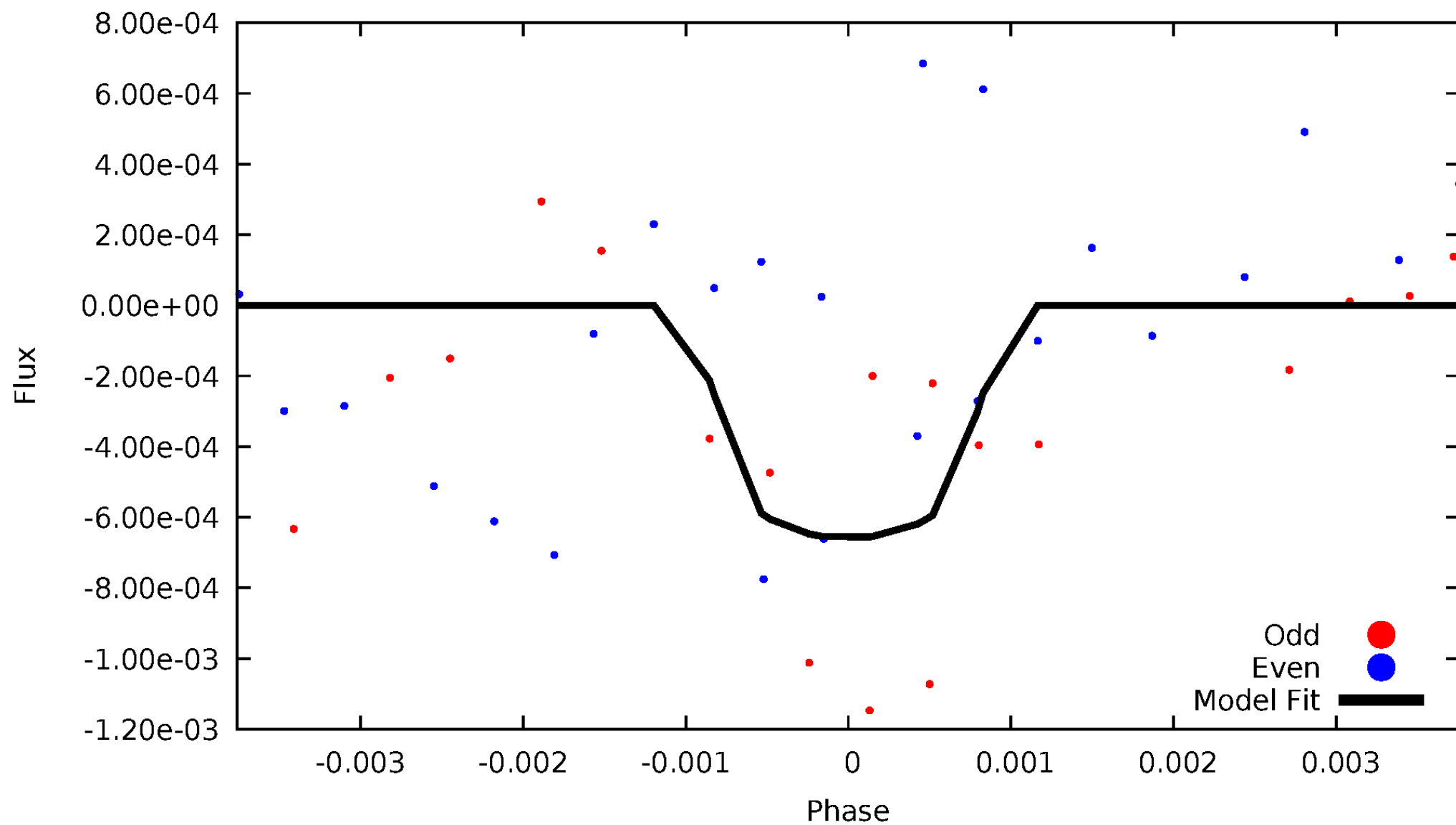


TCE 011466610-02



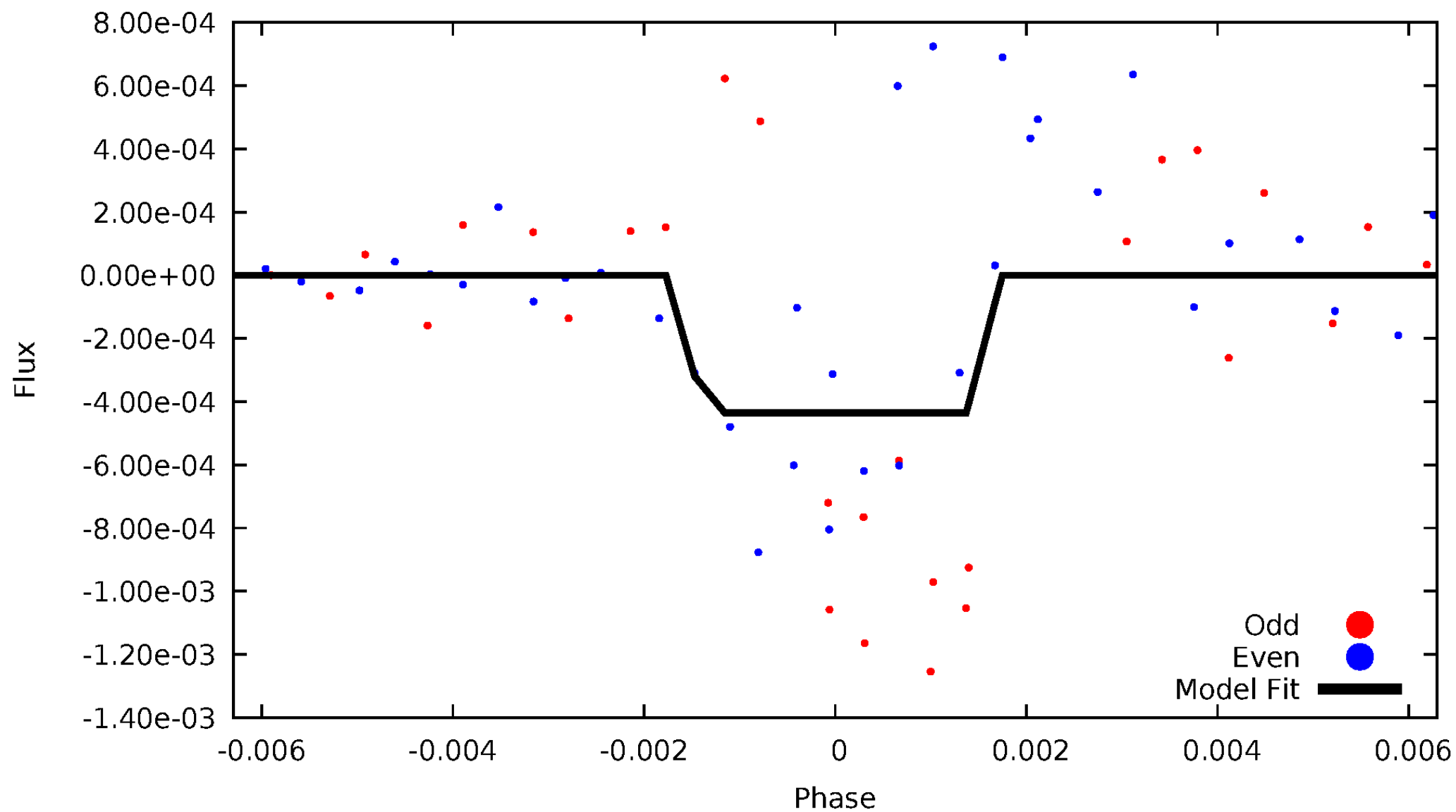
DV Odd/Even

TCE 011466610-02



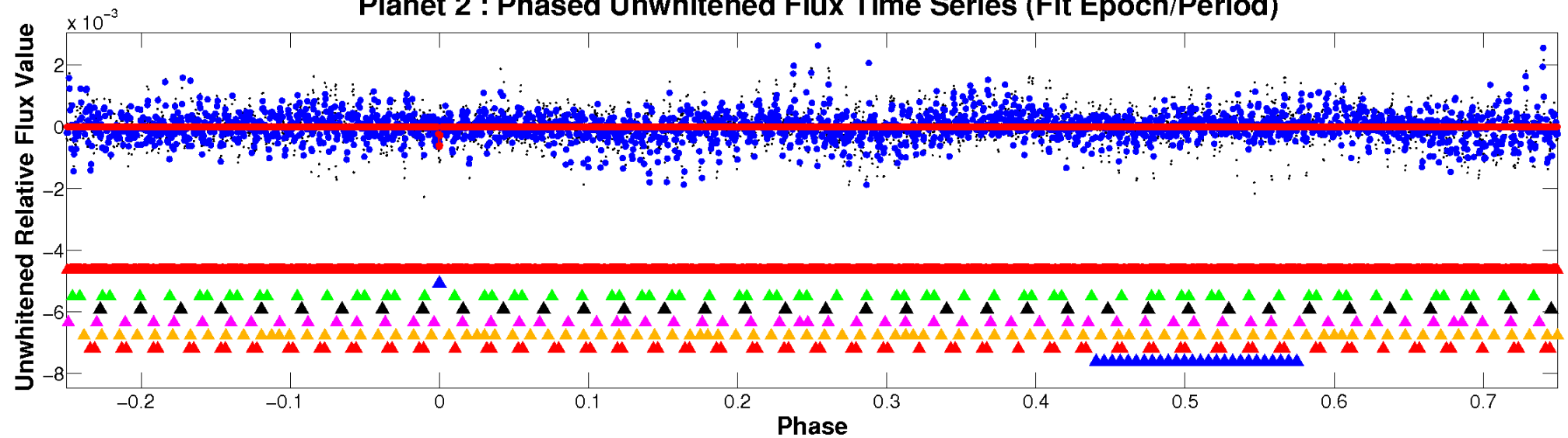
ALT Odd/Even

TCE 011466610-02

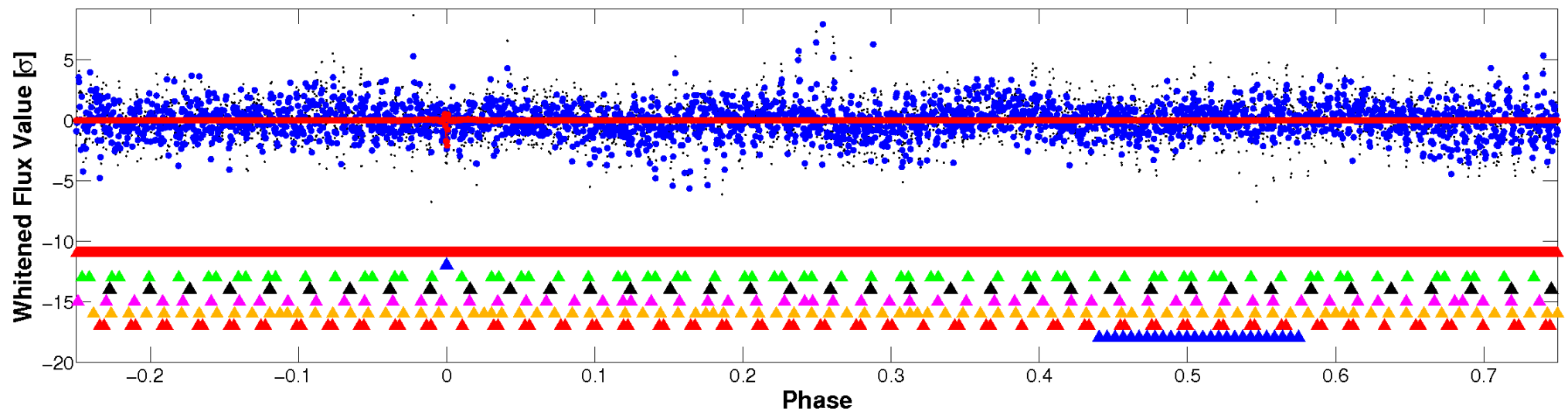


Non-Whitened Vs. Whitened Light Curve

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

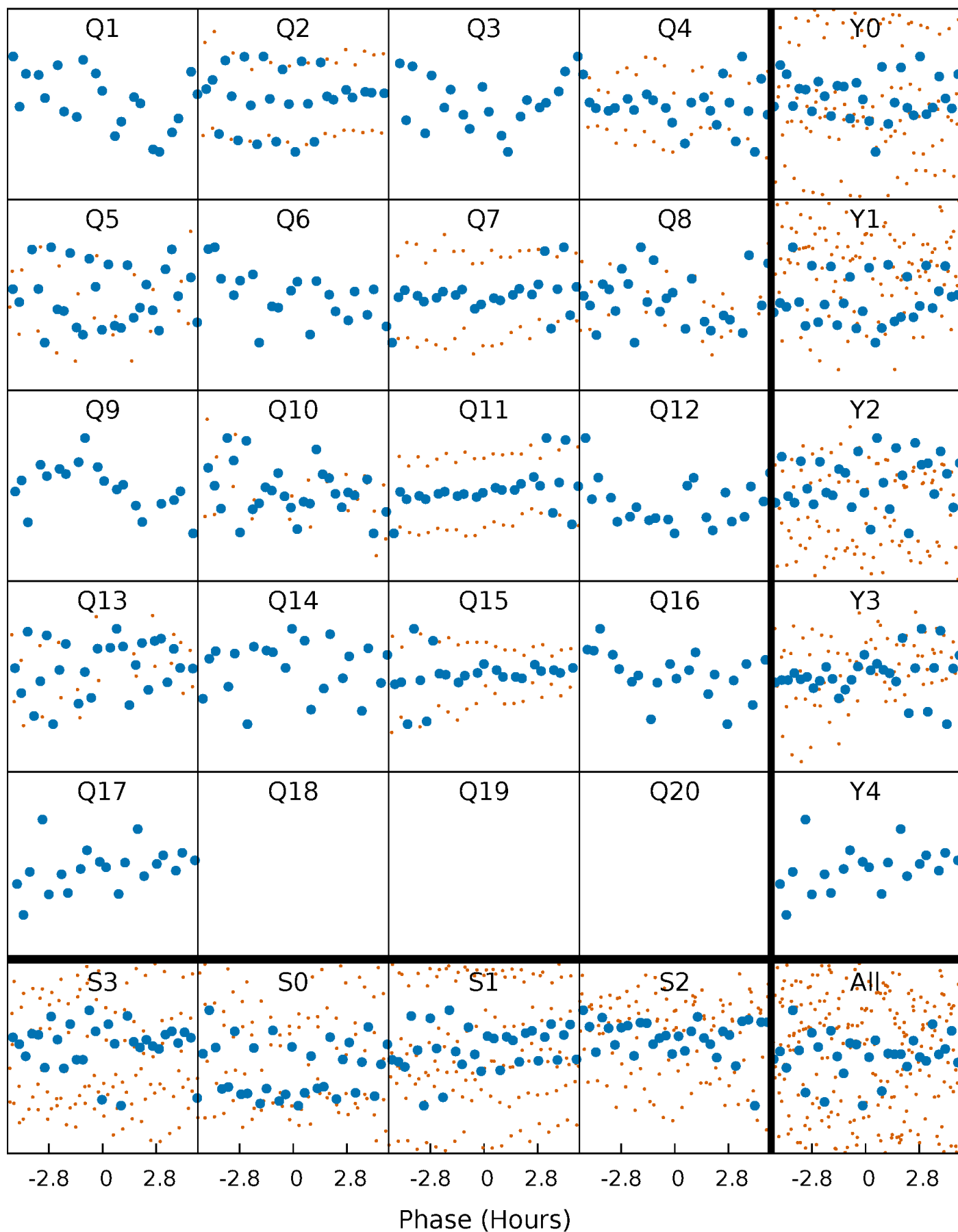


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



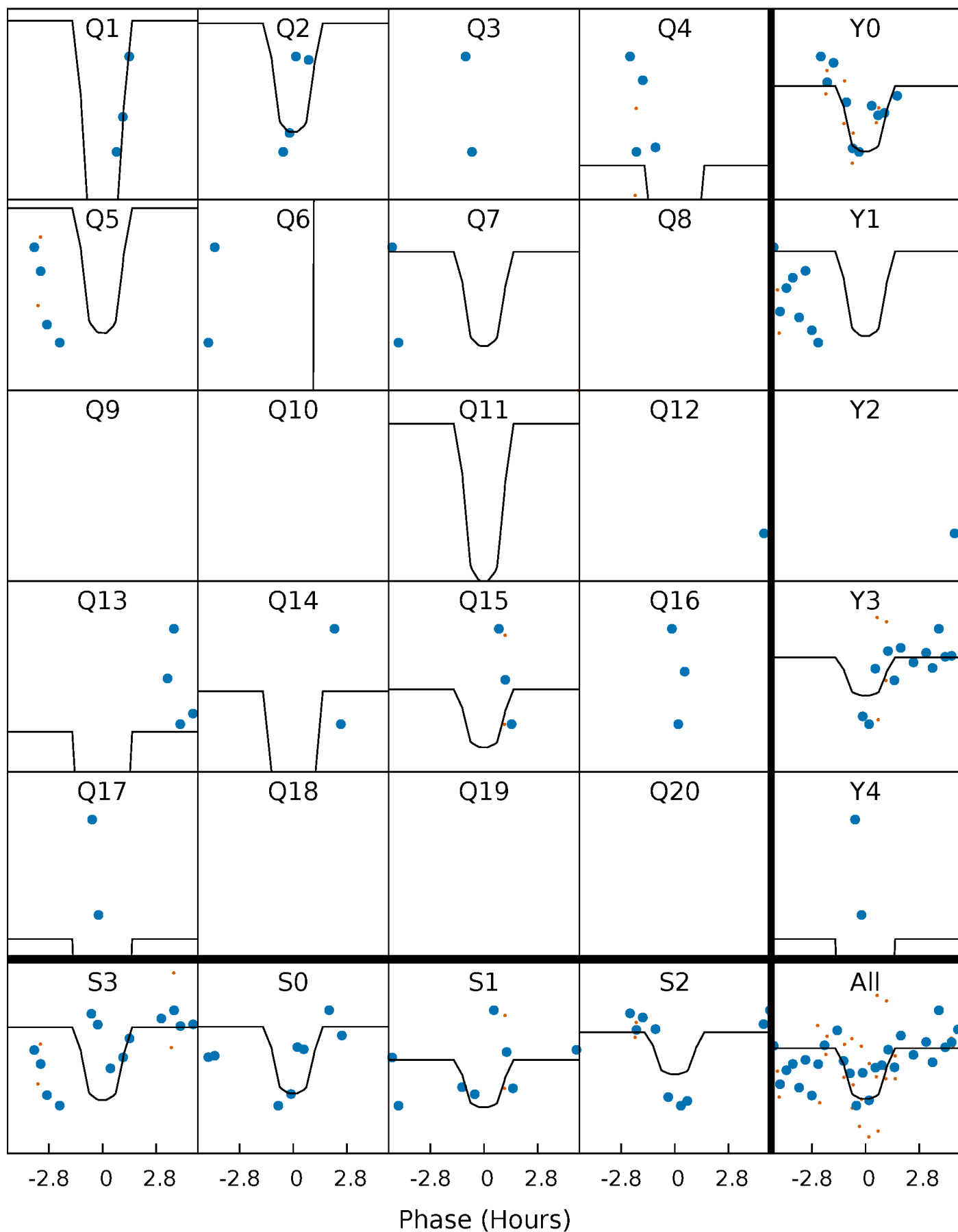
PDC Quarter-Phased Transit Curves

TCE 011466610-02 P= 55.208056 Days $T_0=136.085978$ (BKJD)



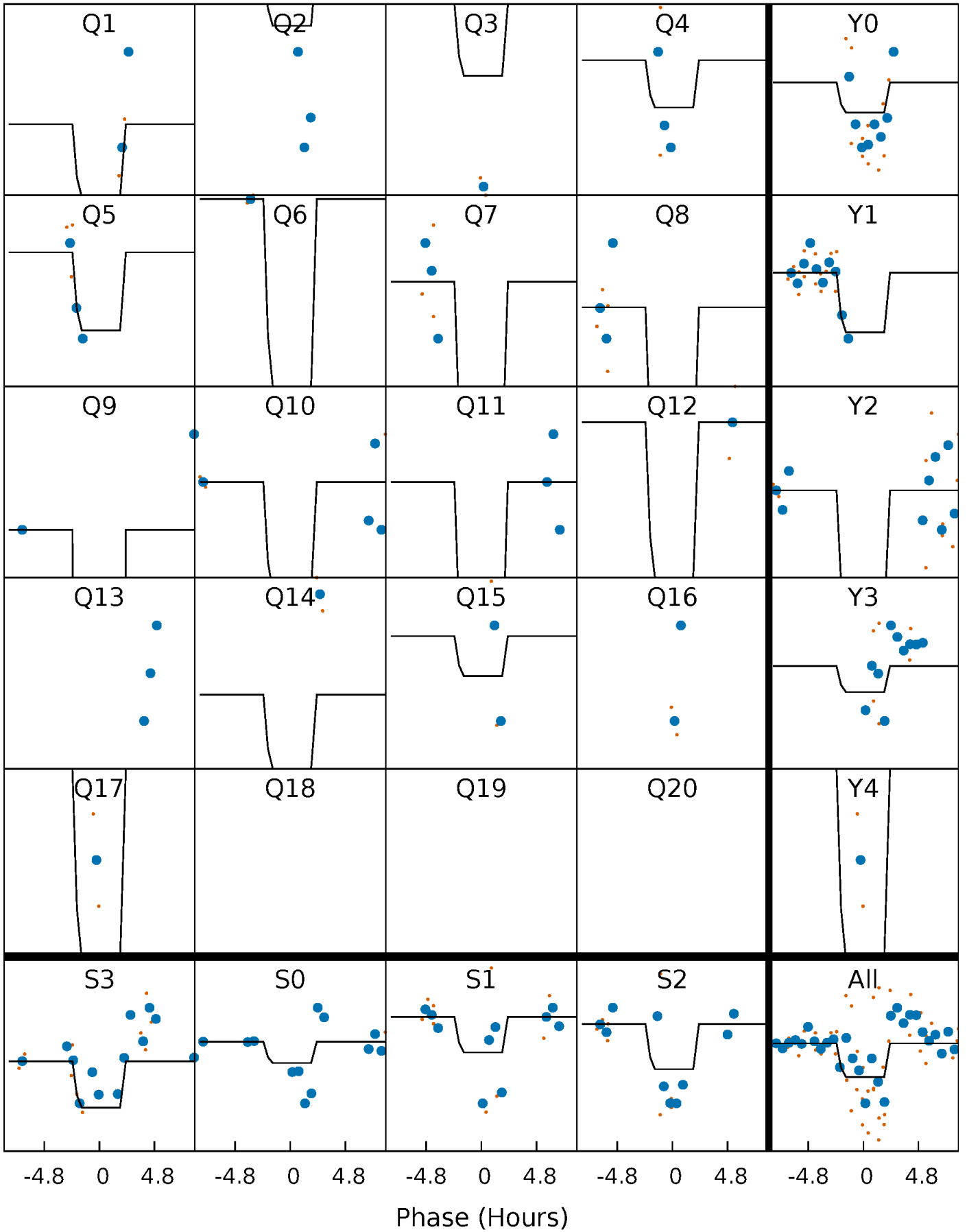
DV Quarter-Phased Transit Curves

TCE 011466610-02 P= 55.208056 Days $T_0=136.085978$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

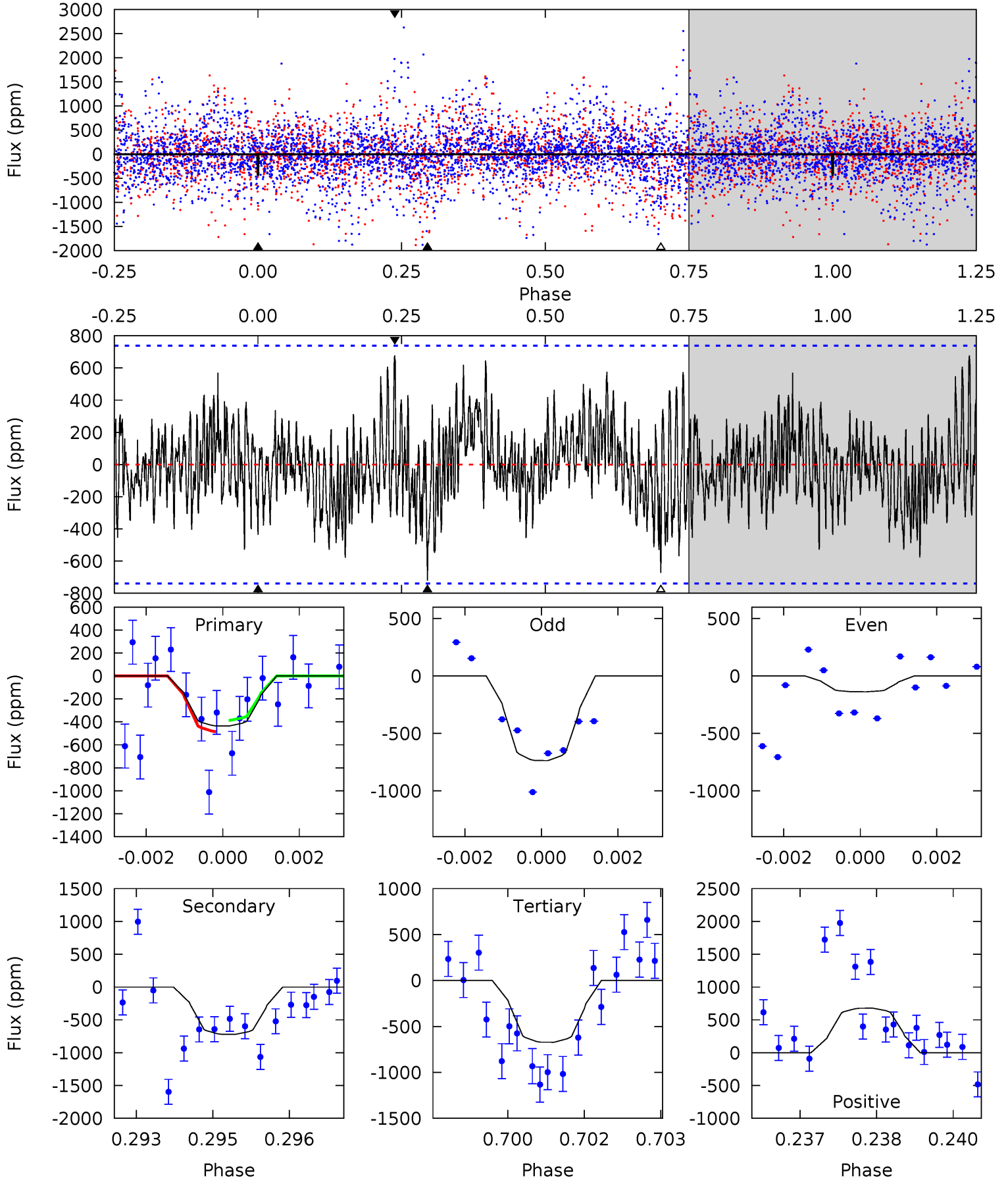
TCE 011466610-02 P= 55.209624 Days $T_0=136.037569$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-02, P = 55.208056 Days, E = 80.877922 Days

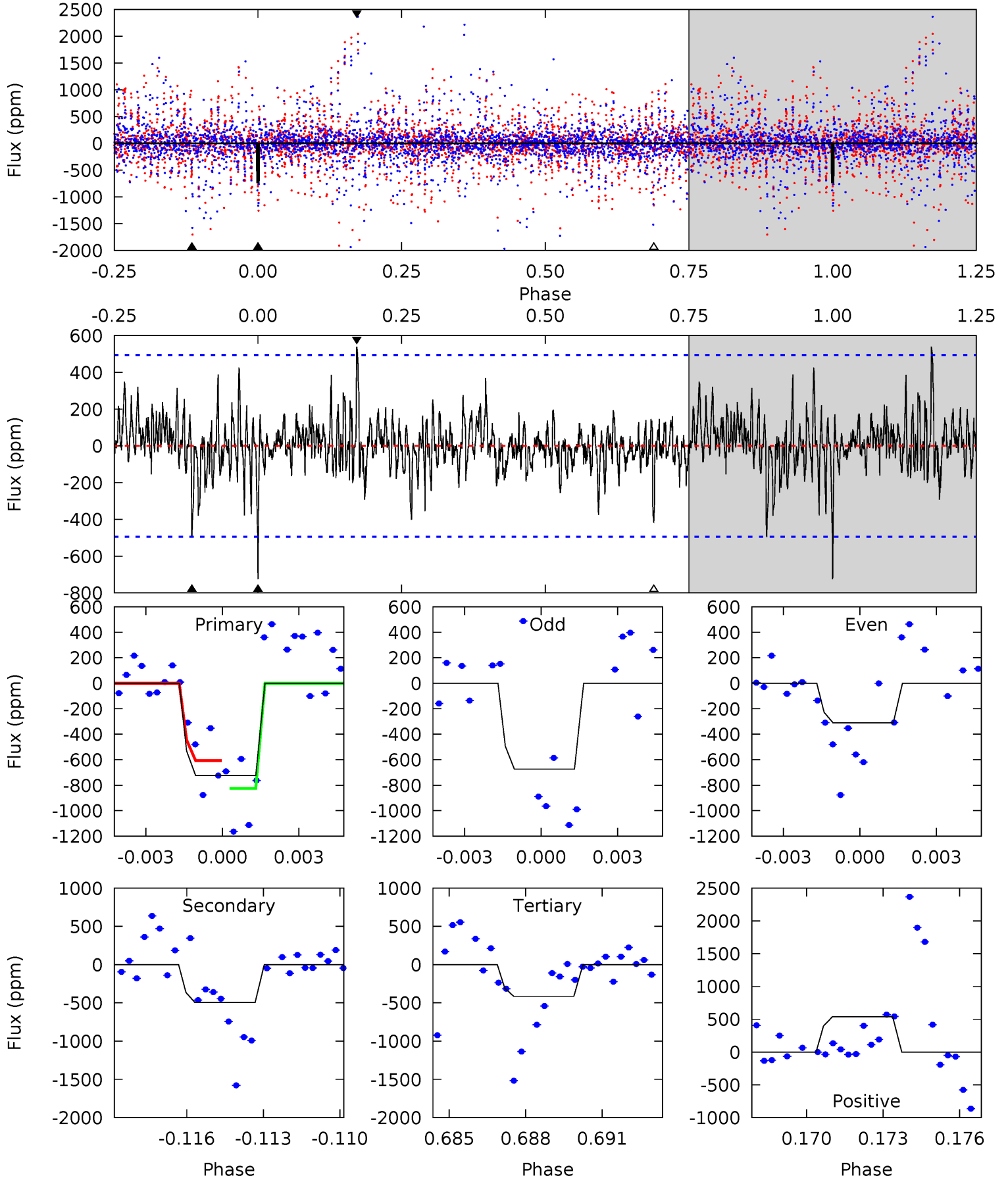
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.16	5.23	4.88	4.92	5.36	3.15	1.53	-1.72	-1.76	0.35	0.31	2.16	0.72	0.48	0.35



Alt Model-Shift Uniqueness Test

011466610-02, P = 55.209624 Days, E = 80.827945 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.68	5.25	4.40	5.73	5.24	2.95	1.23	3.28	1.95	0.85	-0.47	1.88	0.75	0.43	1.17



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-721±138	$21.30^{+23.99}_{-14.65}$	701^{+51}_{-45}	2887^{+1277}_{-500}	61^{+586}_{-47}
Alt.	-496±94	$22.18^{+24.84}_{-15.10}$	699^{+52}_{-45}	2716^{+1124}_{-459}	39^{+365}_{-31}

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

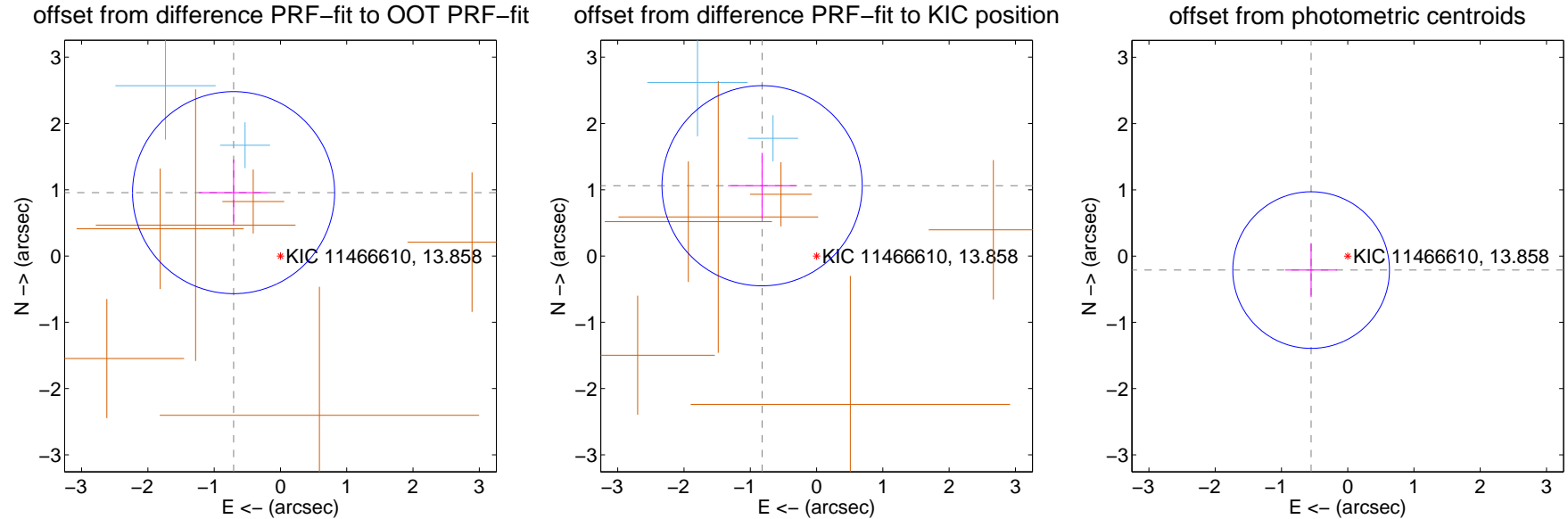
DV Centroid Data

Supplemental centroid analysis for 011466610-02. Kepler magnitude: 13.86. Transit SNR 6.63

There are 2 quarters with good PRF difference image offsets

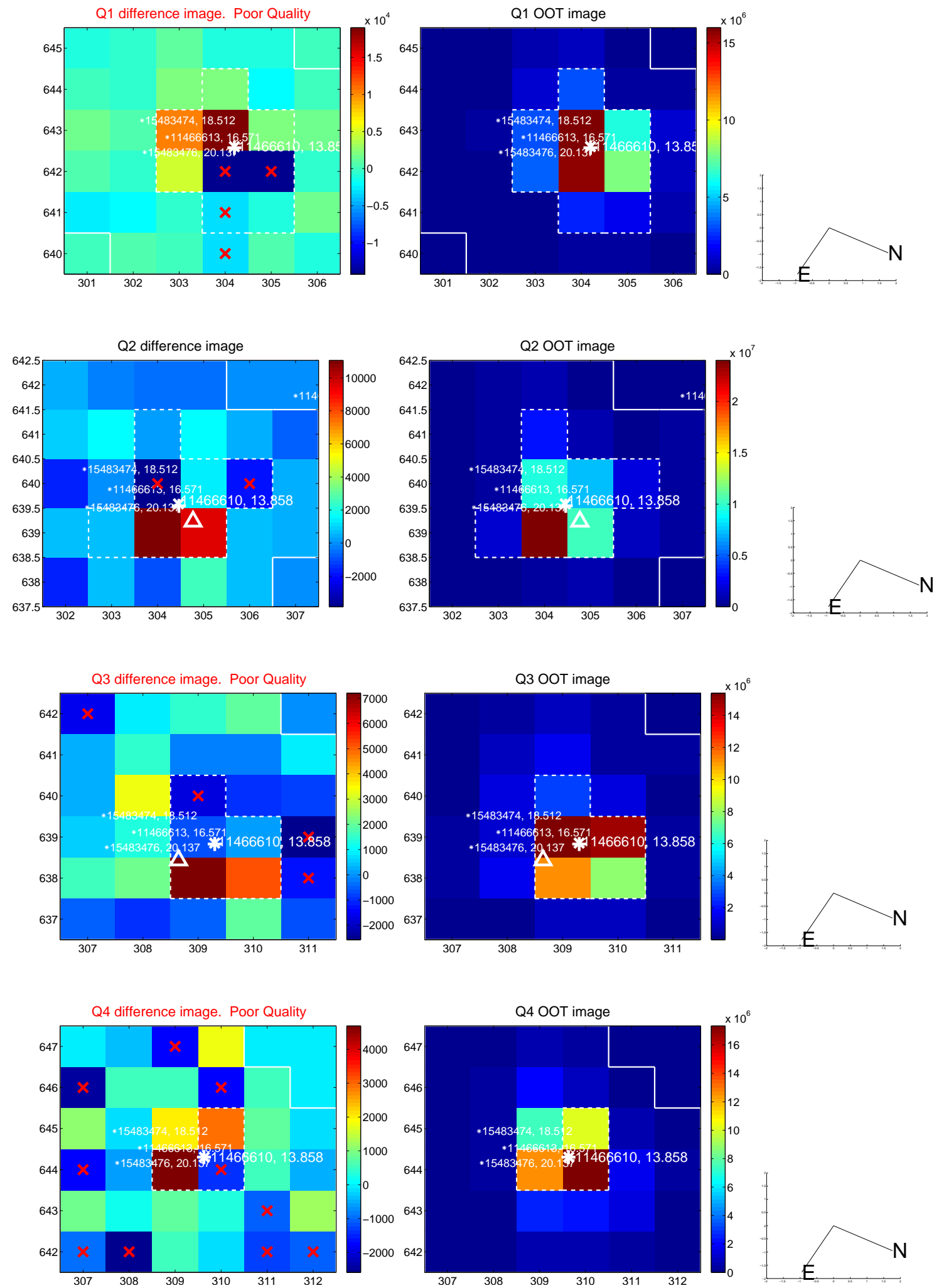
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.189 ± 0.508	2.34	0.707 ± 0.524	0.956 ± 0.499
PRF-fit source offset from KIC position	1.342 ± 0.503	2.67	0.822 ± 0.513	1.060 ± 0.497
photometric centroid source offset	0.59 ± 0.39	1.50	0.55 ± 0.39	-0.21 ± 0.41

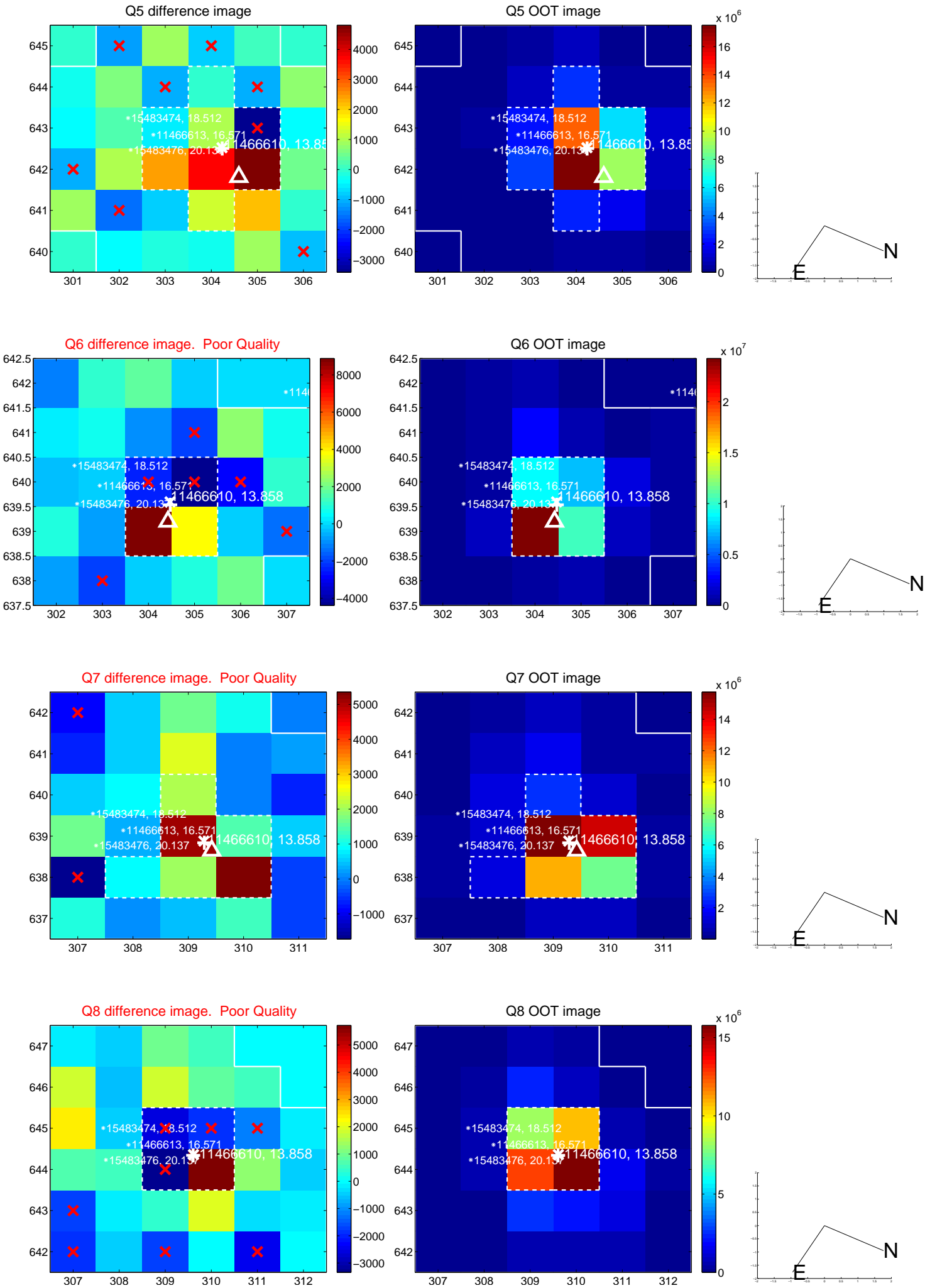


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

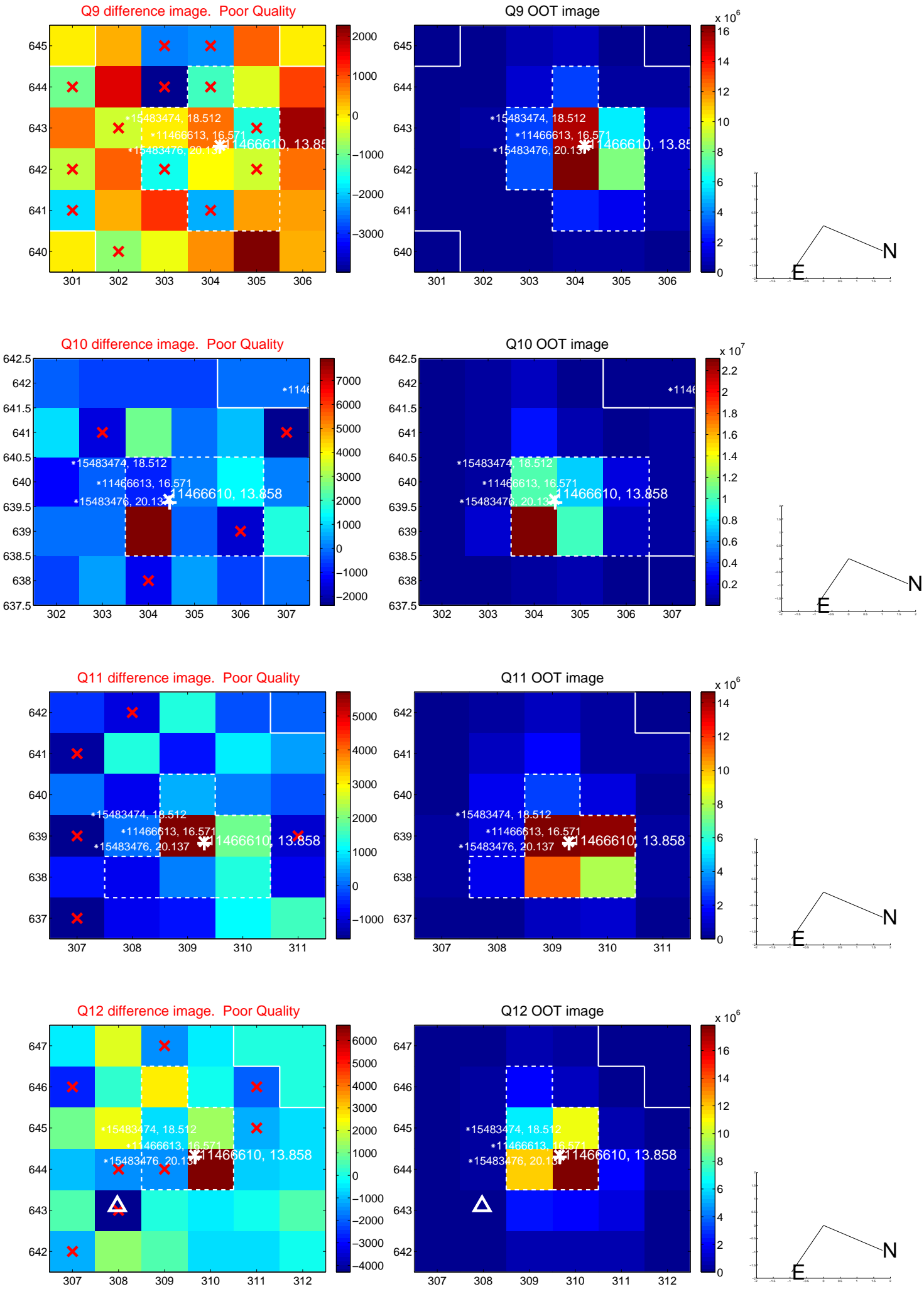
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



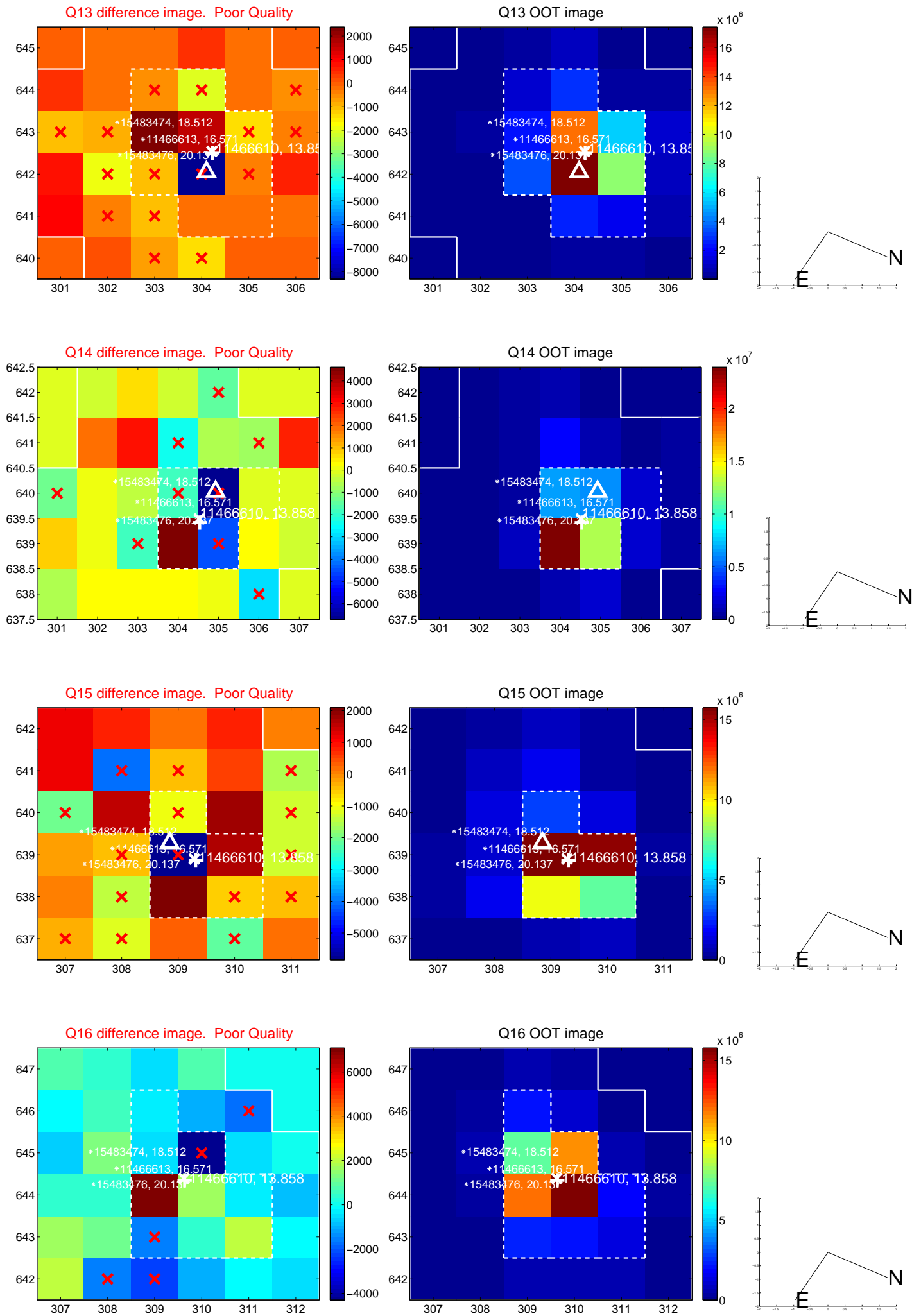
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



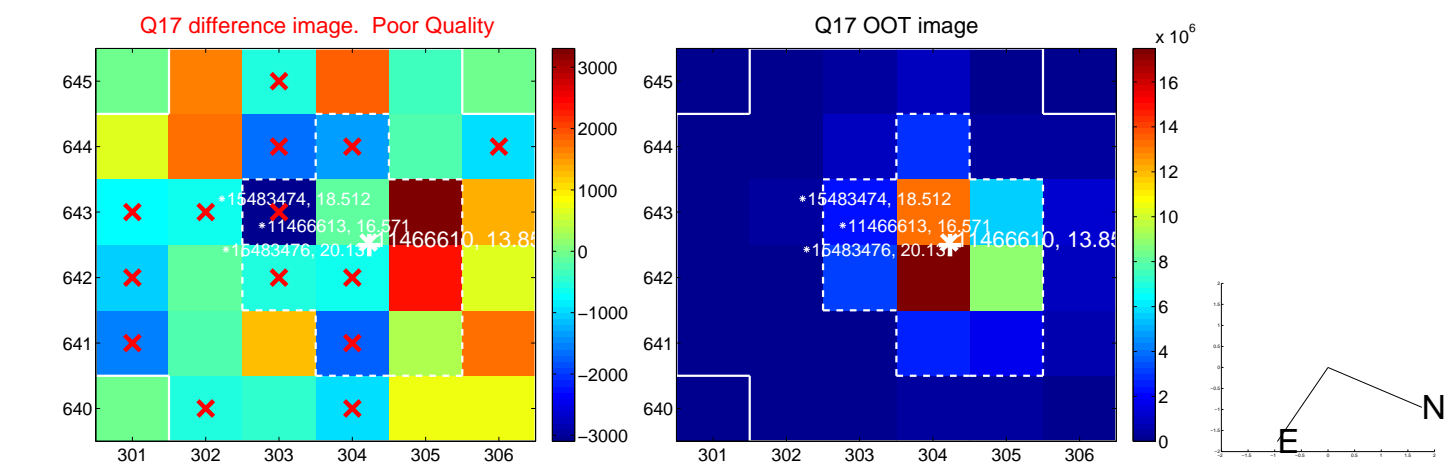
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



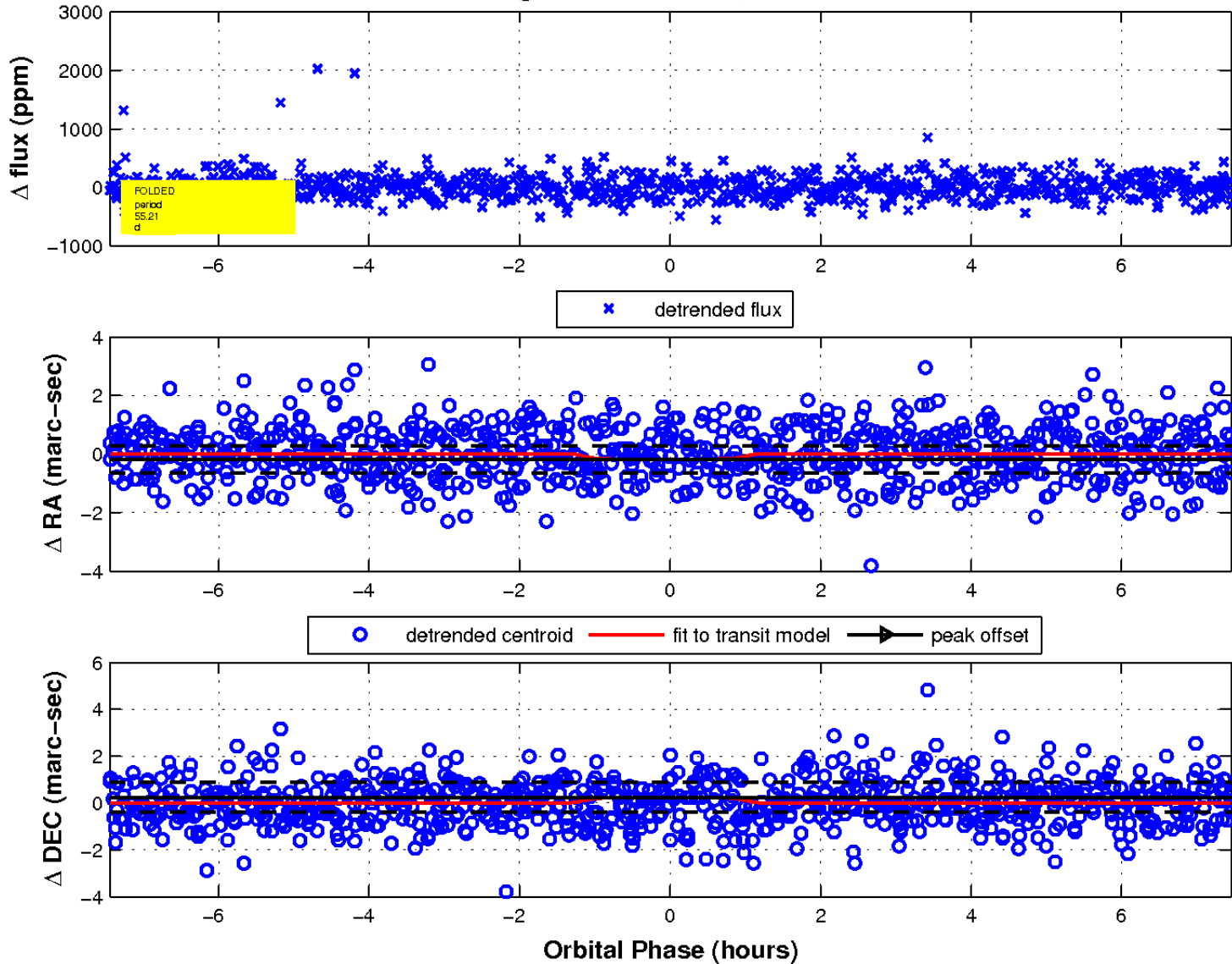
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

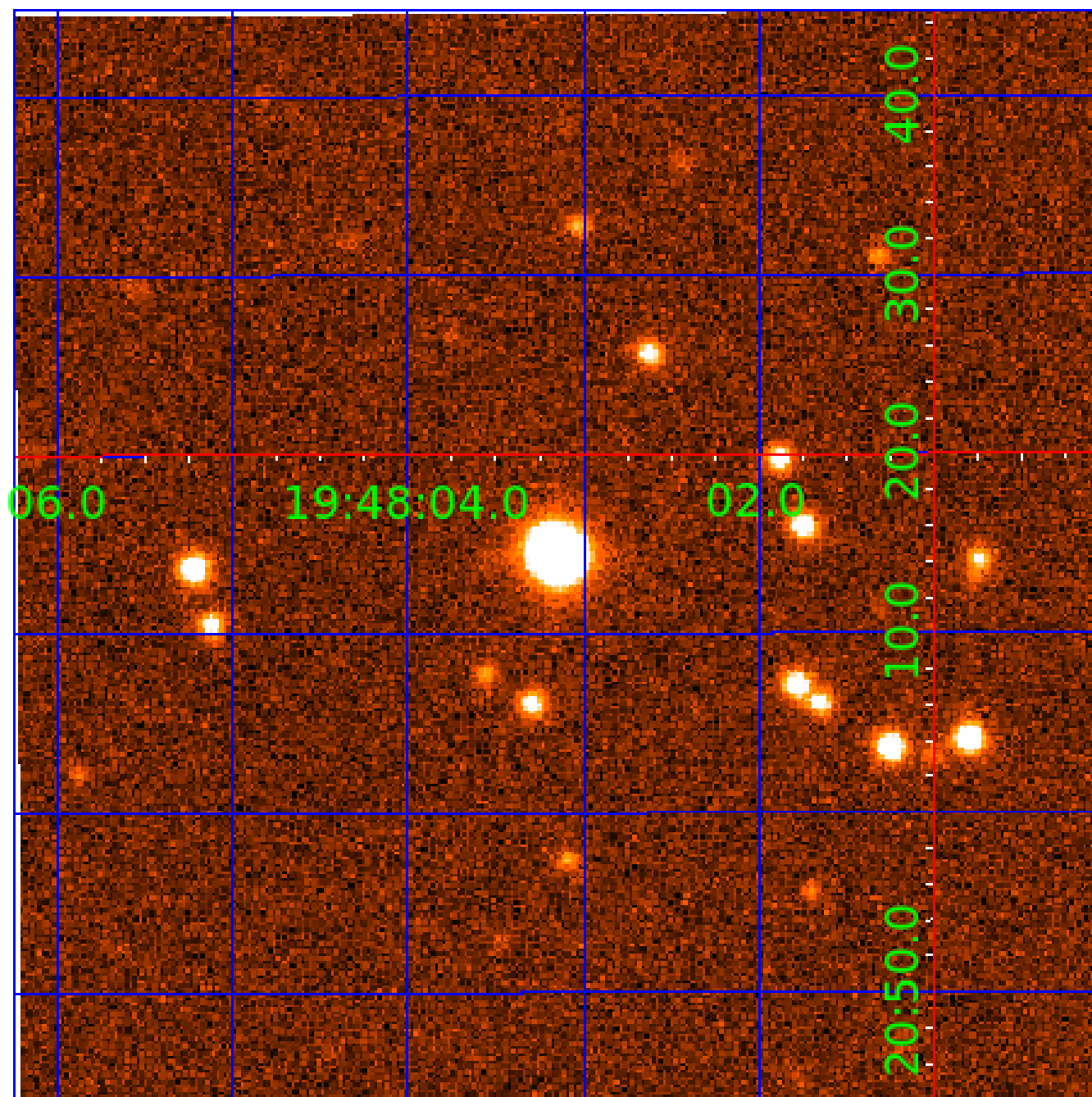


fluxWeightedCentroids, Planet 2 of 8



UKIRT Image

Declination



KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

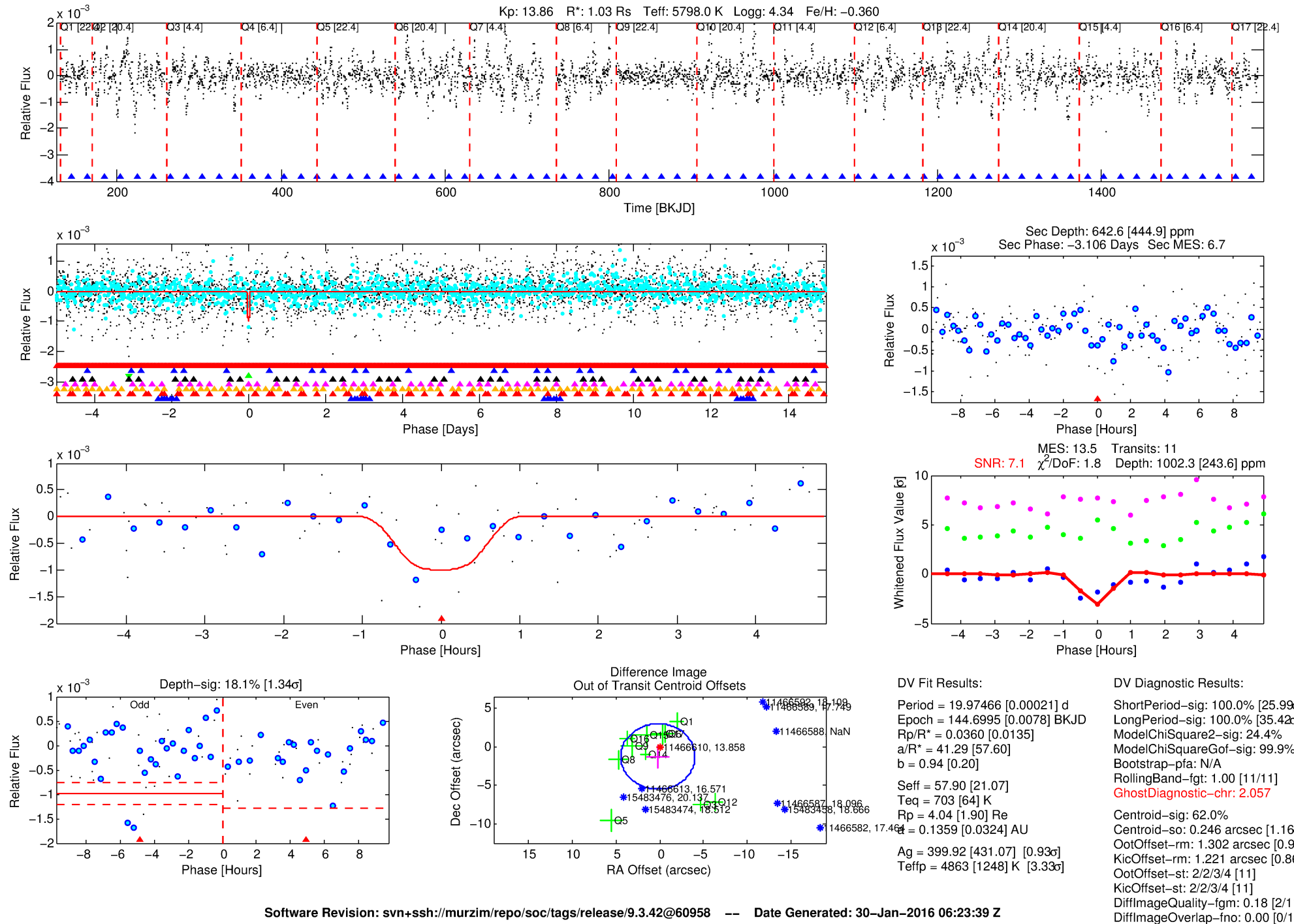
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-03

No Significant Match Found

DV One-Page Summary

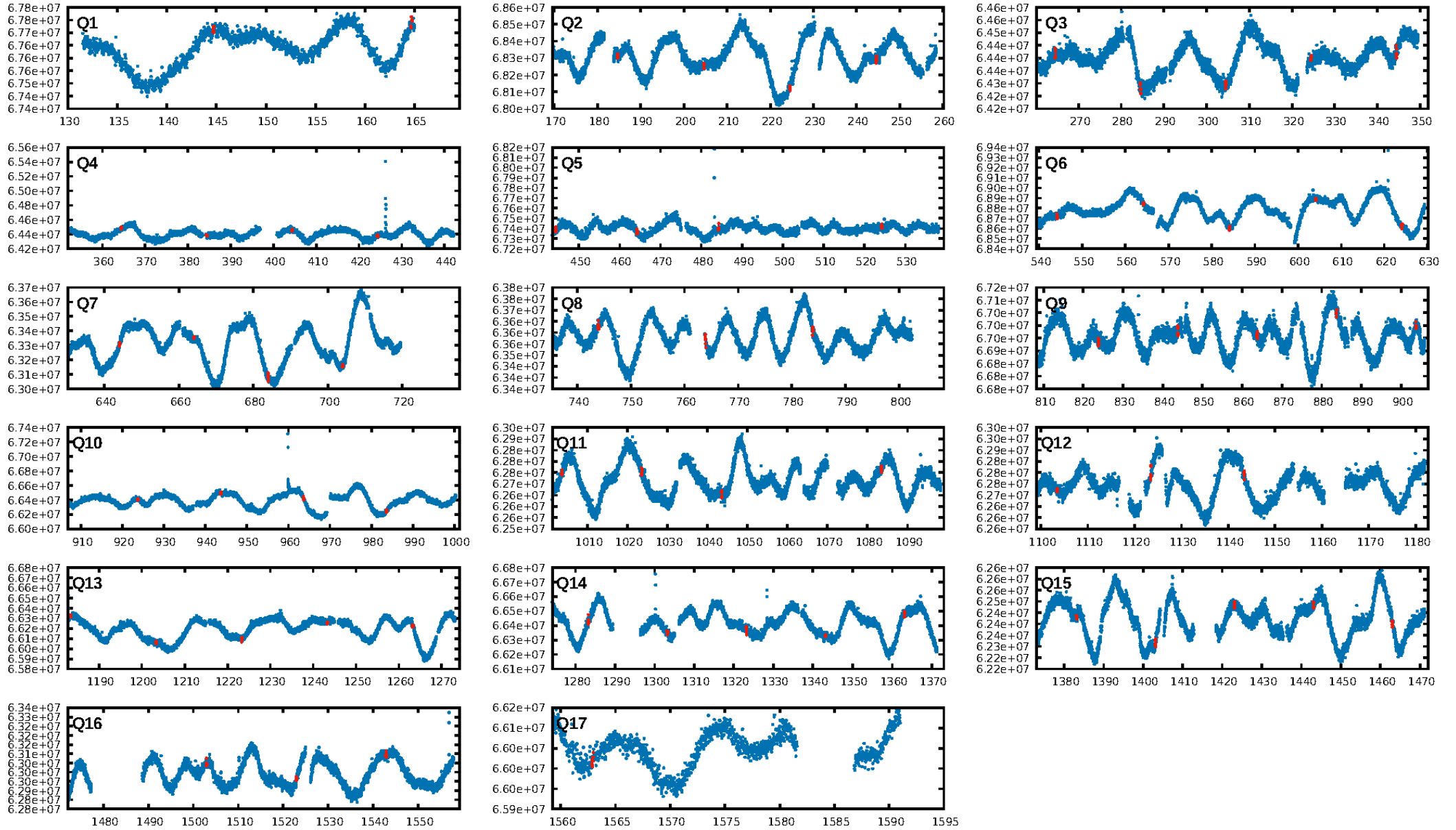
KIC: 11466610 Candidate: 3 of 8 Period: 19.975 d



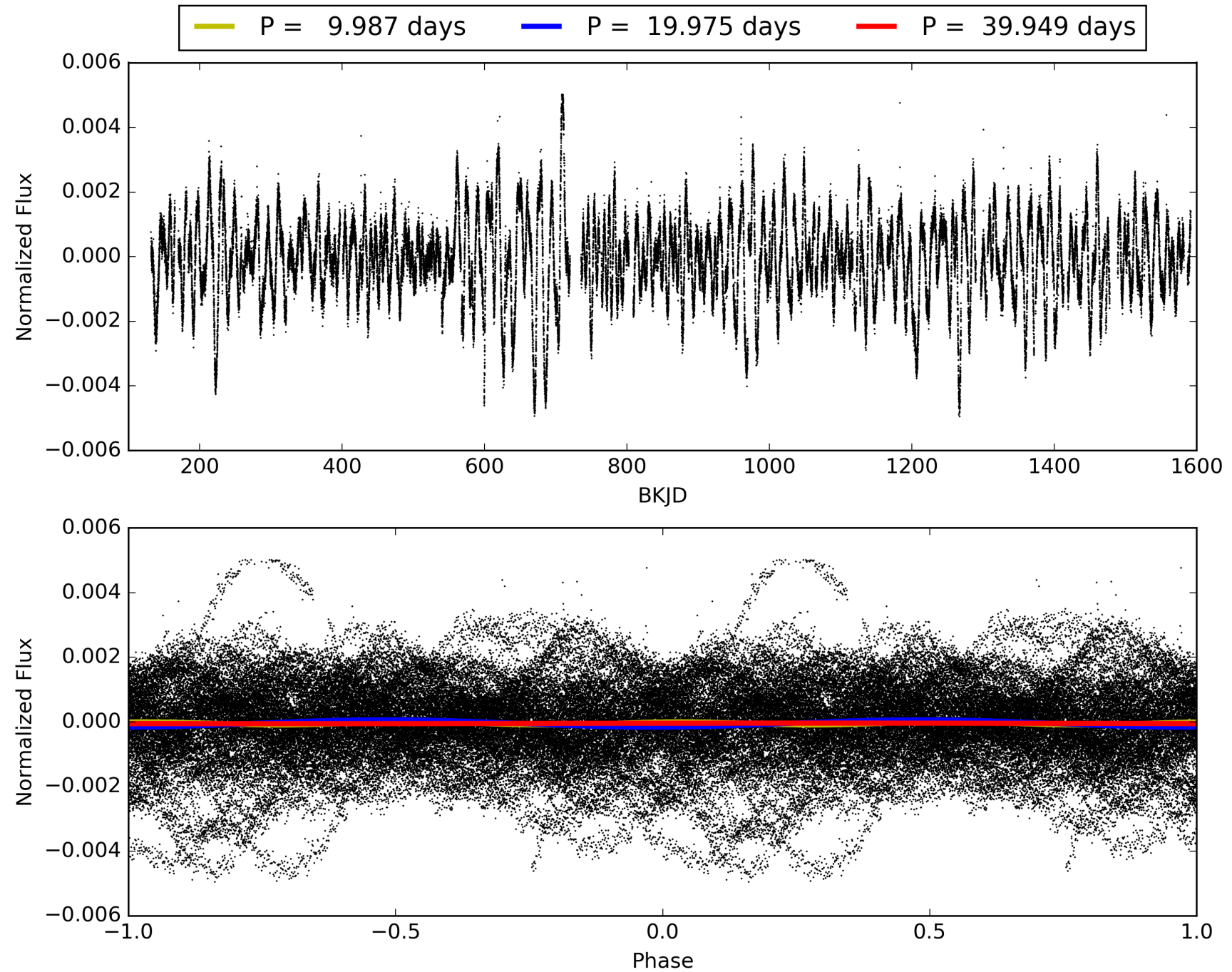
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:39 Z

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

TCE 011466610-03, PDC Light Curves

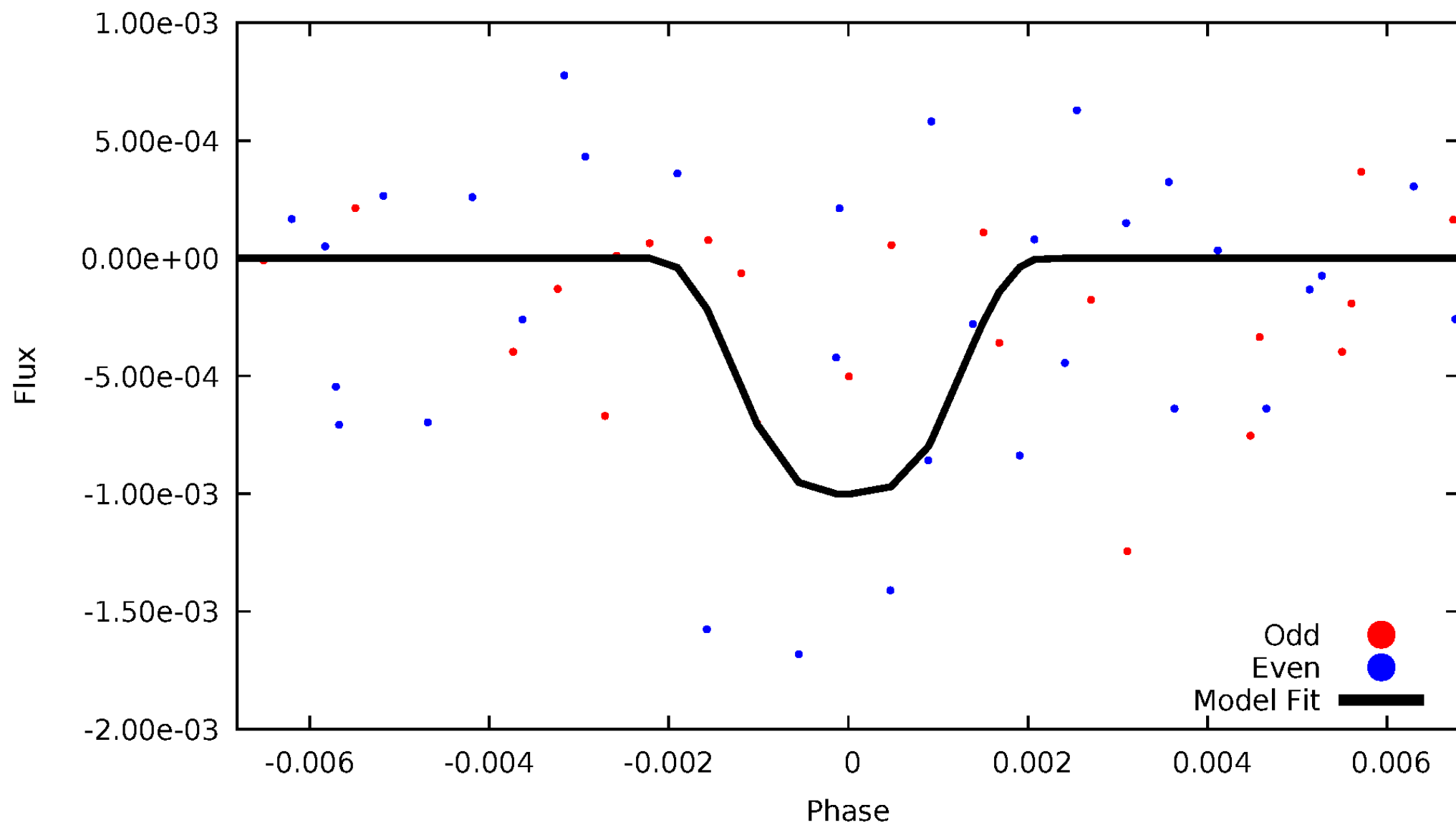


TCE 011466610-03



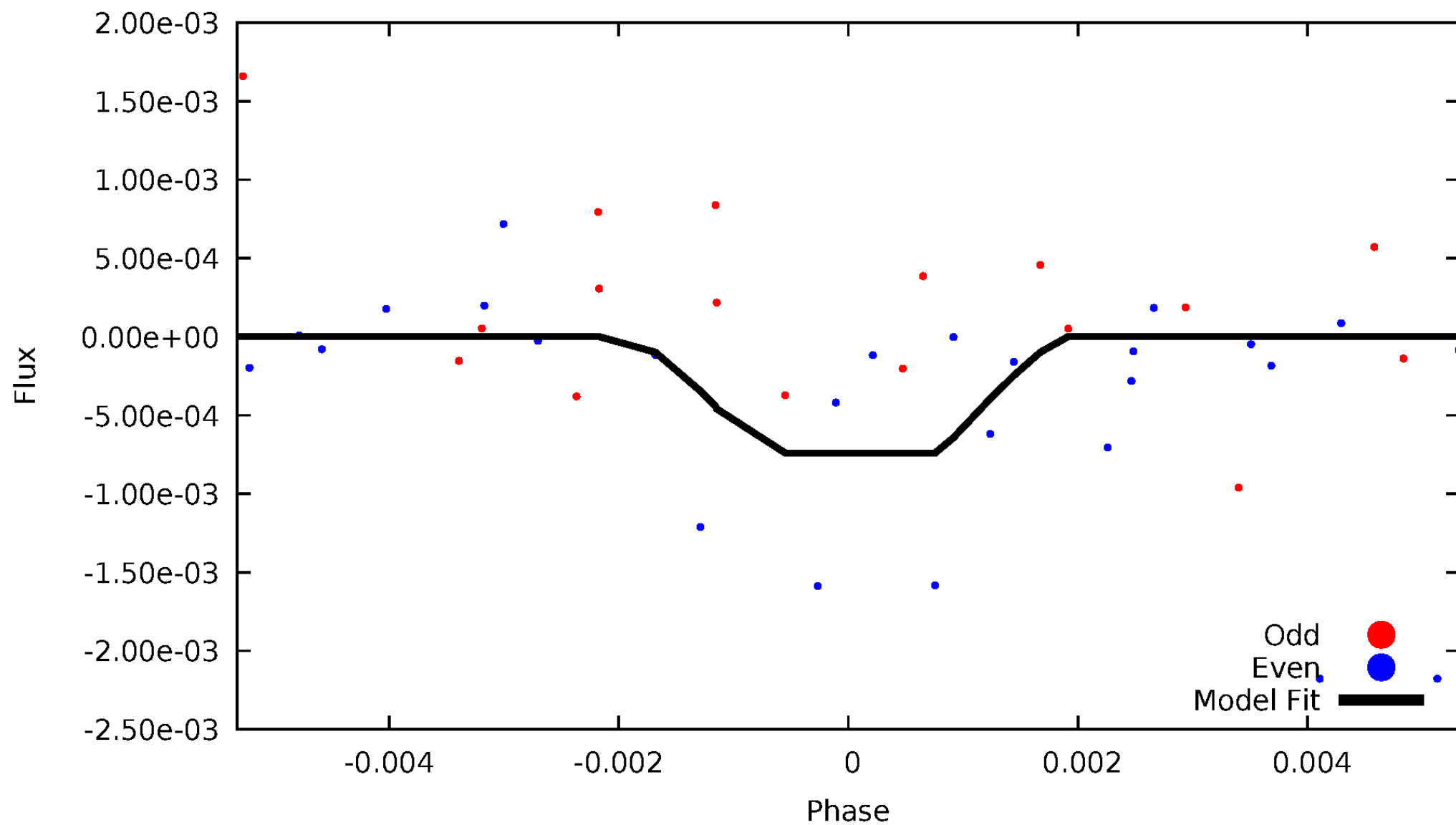
DV Odd/Even

TCE 011466610-03



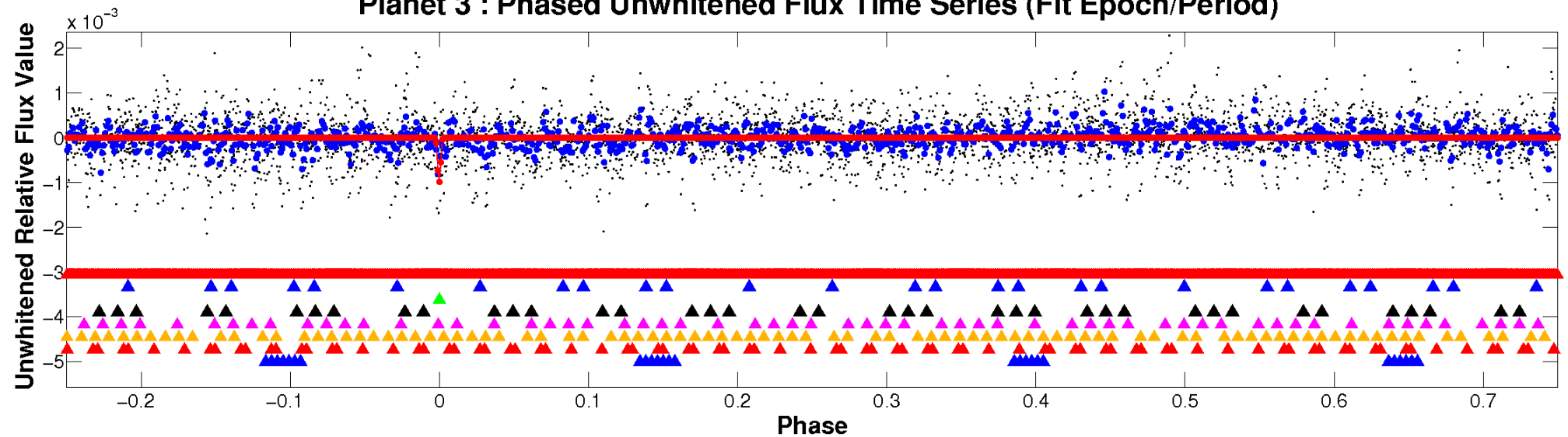
ALT Odd/Even

TCE 011466610-03

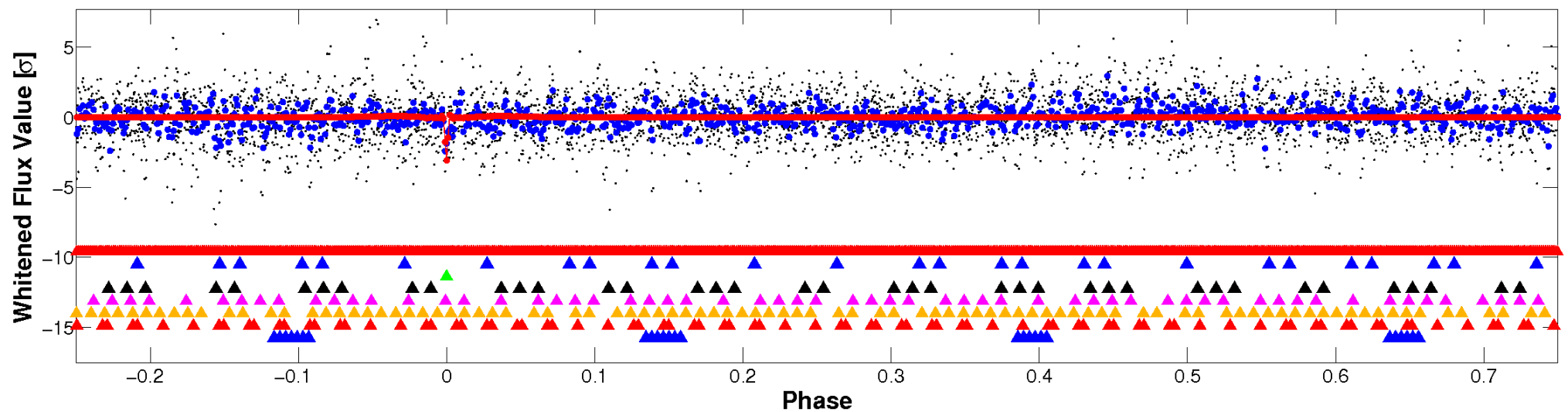


Non-Whitened Vs. Whitened Light Curve

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

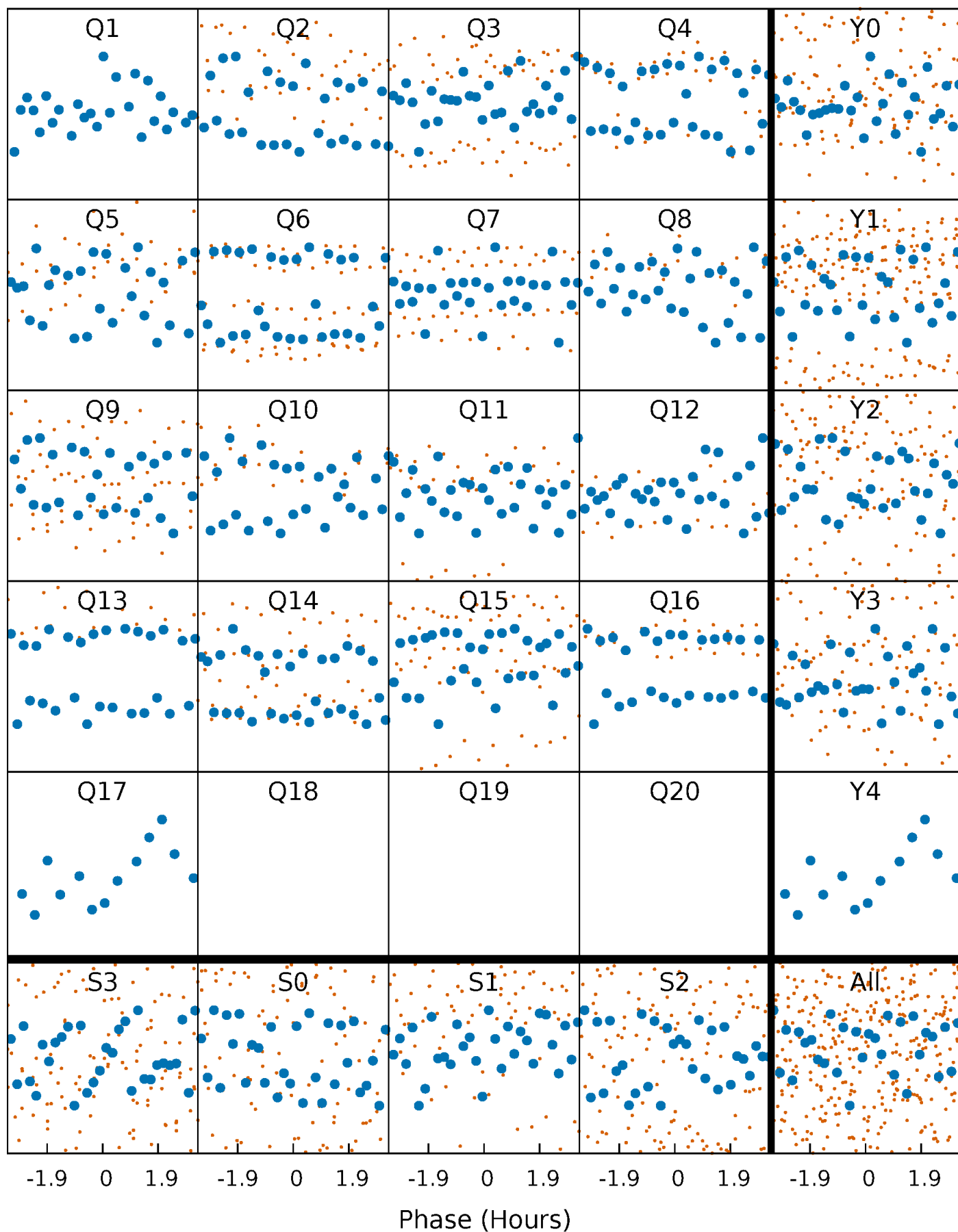


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



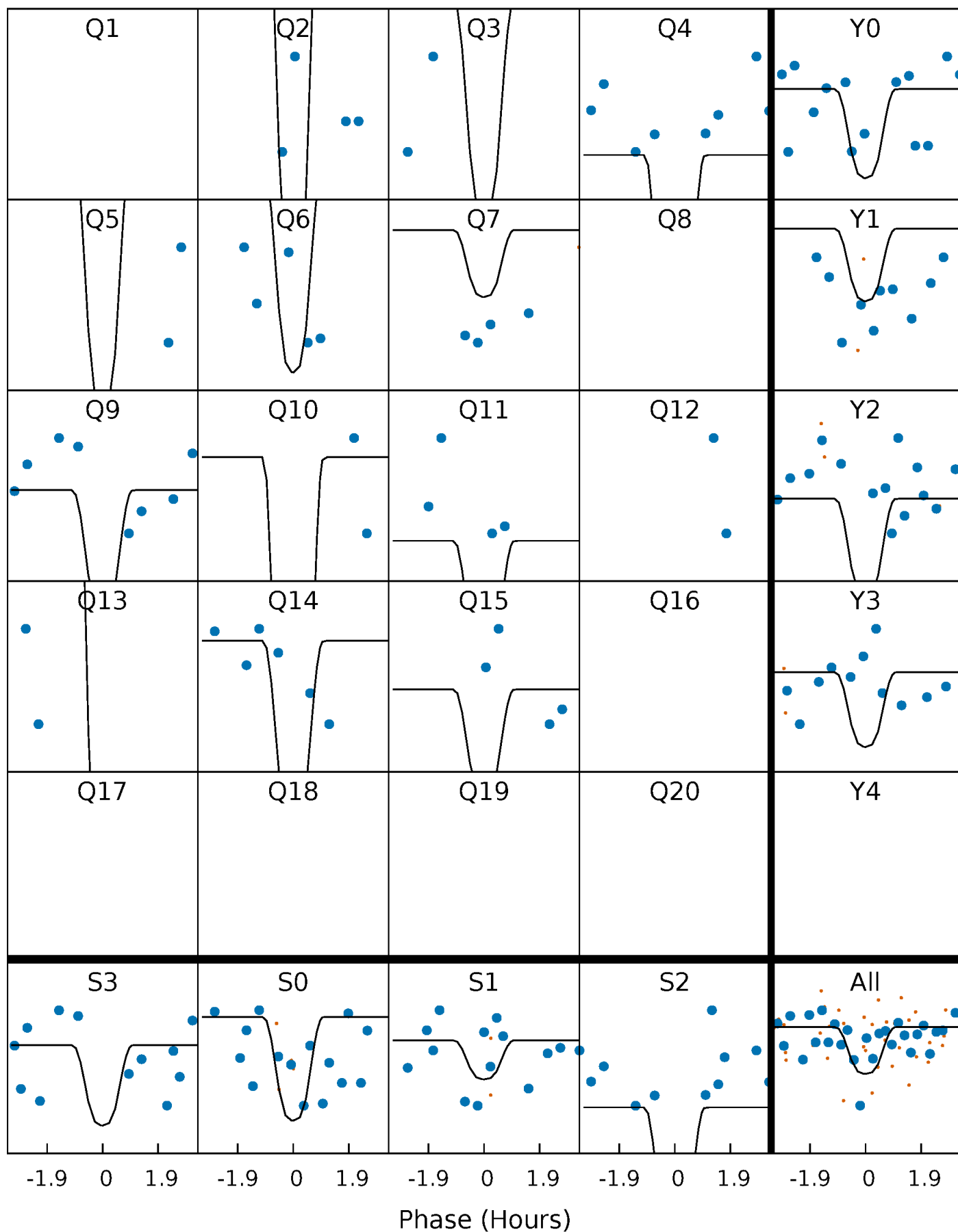
PDC Quarter-Phased Transit Curves

TCE 011466610-03 P= 19.974664 Days $T_0=144.699494$ (BKJD)



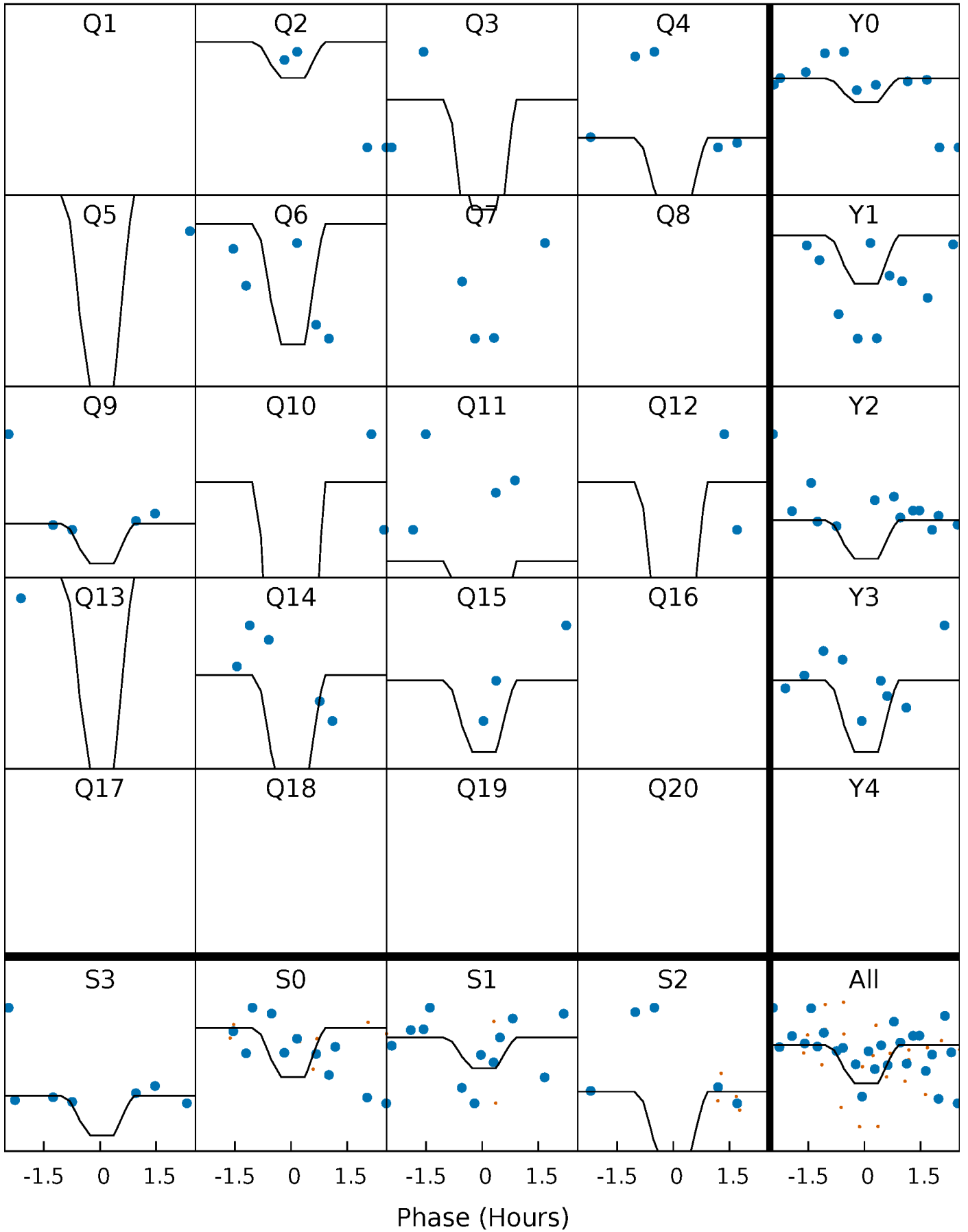
DV Quarter-Phased Transit Curves

TCE 011466610-03 P= 19.974664 Days $T_0=144.699494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

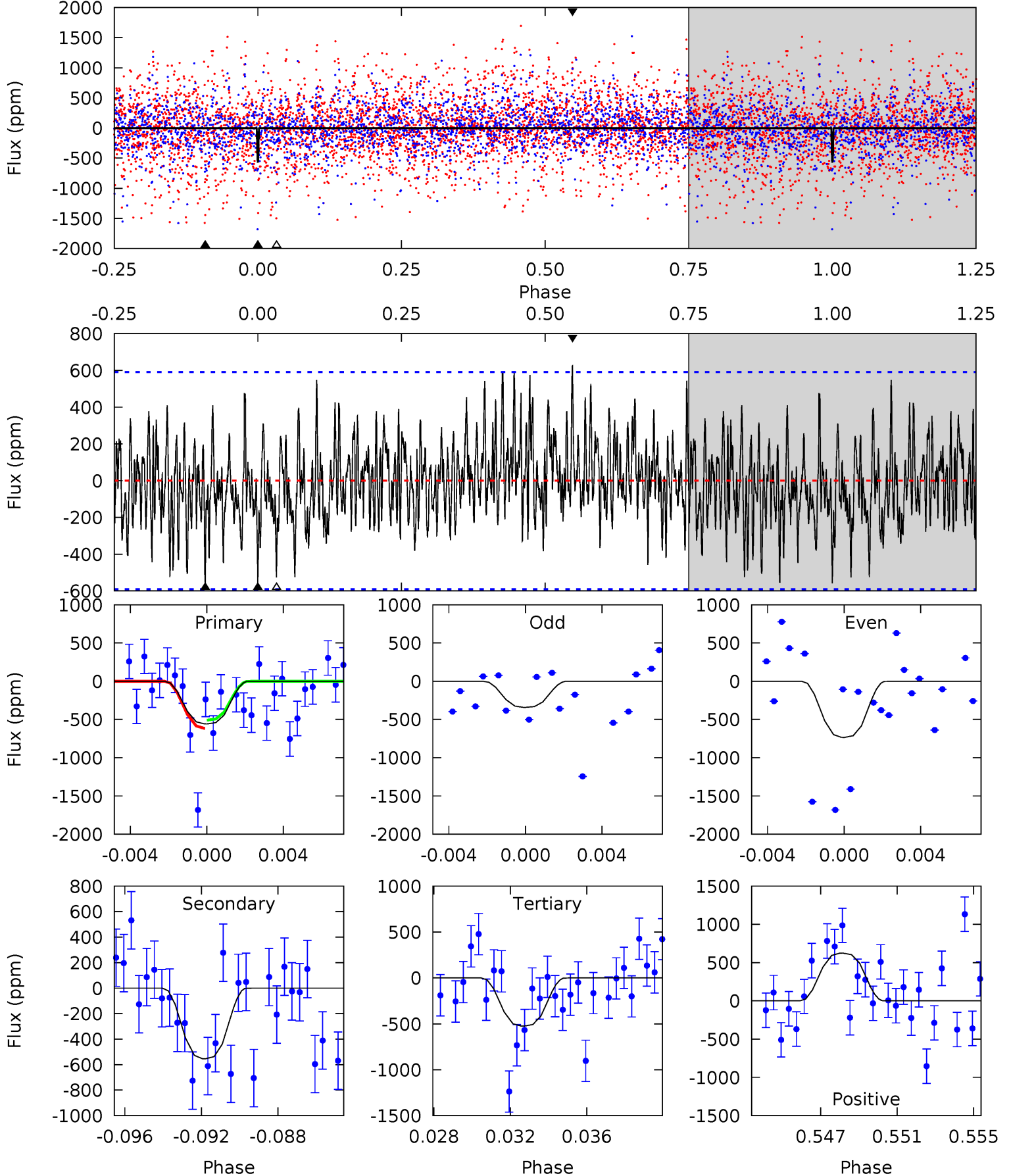
TCE 011466610-03 P= 19.974820 Days $T_0=144.689410$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-03, $P = 19.974664$ Days, $E = 124.724830$ Days

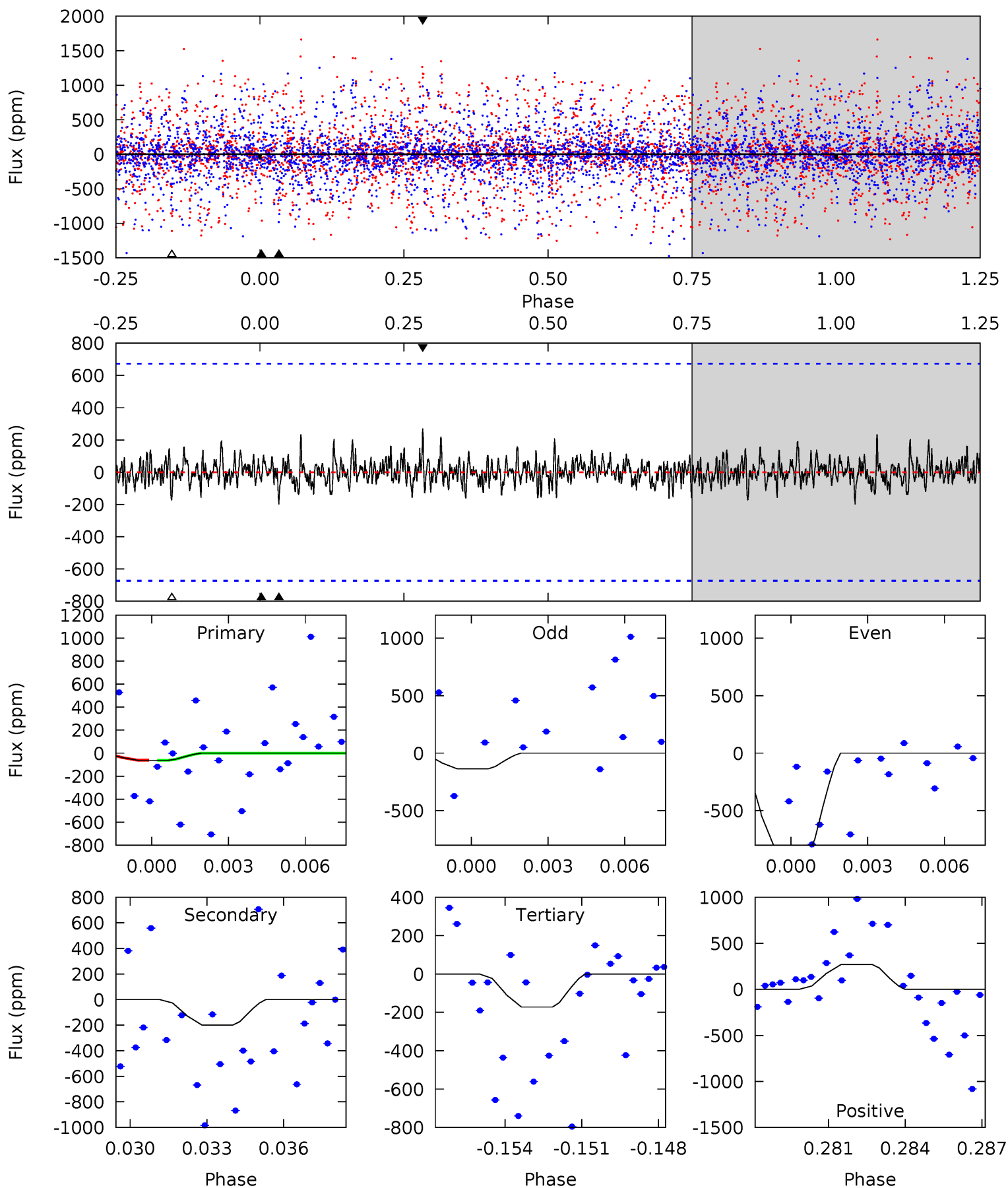
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.91	4.88	4.62	5.50	5.20	2.88	1.64	0.29	-0.58	0.26	-0.62	1.72	0.78	0.53	0.46



Alt Model-Shift Uniqueness Test

011466610-03, P = 19.974820 Days, E = 124.714590 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.48	1.56	1.34	2.11	5.25	2.97	0.47	-0.86	-1.63	0.21	-0.55	2.42	1.47	0.58	0.00



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-555 ± 114	$4.06^{+1.62}_{-1.55}$	980^{+75}_{-61}	4789^{+1140}_{-579}	345^{+597}_{-178}
Alt.	-199 ± 128	$3.12^{+1.56}_{-1.49}$	981^{+71}_{-62}	4258^{+1447}_{-819}	178^{+621}_{-122}

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 $A_{obs} \gg 1.0$

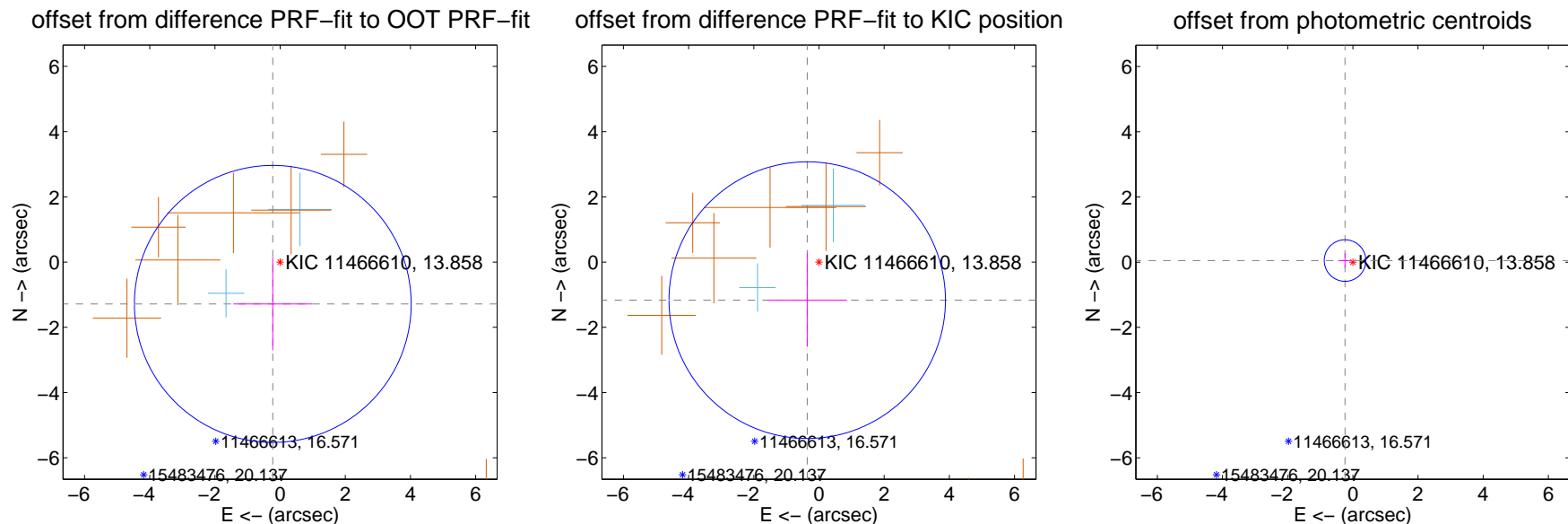
DV Centroid Data

Supplemental centroid analysis for 011466610-03. Kepler magnitude: 13.86. Transit SNR 7.06

There are 2 quarters with good PRF difference image offsets

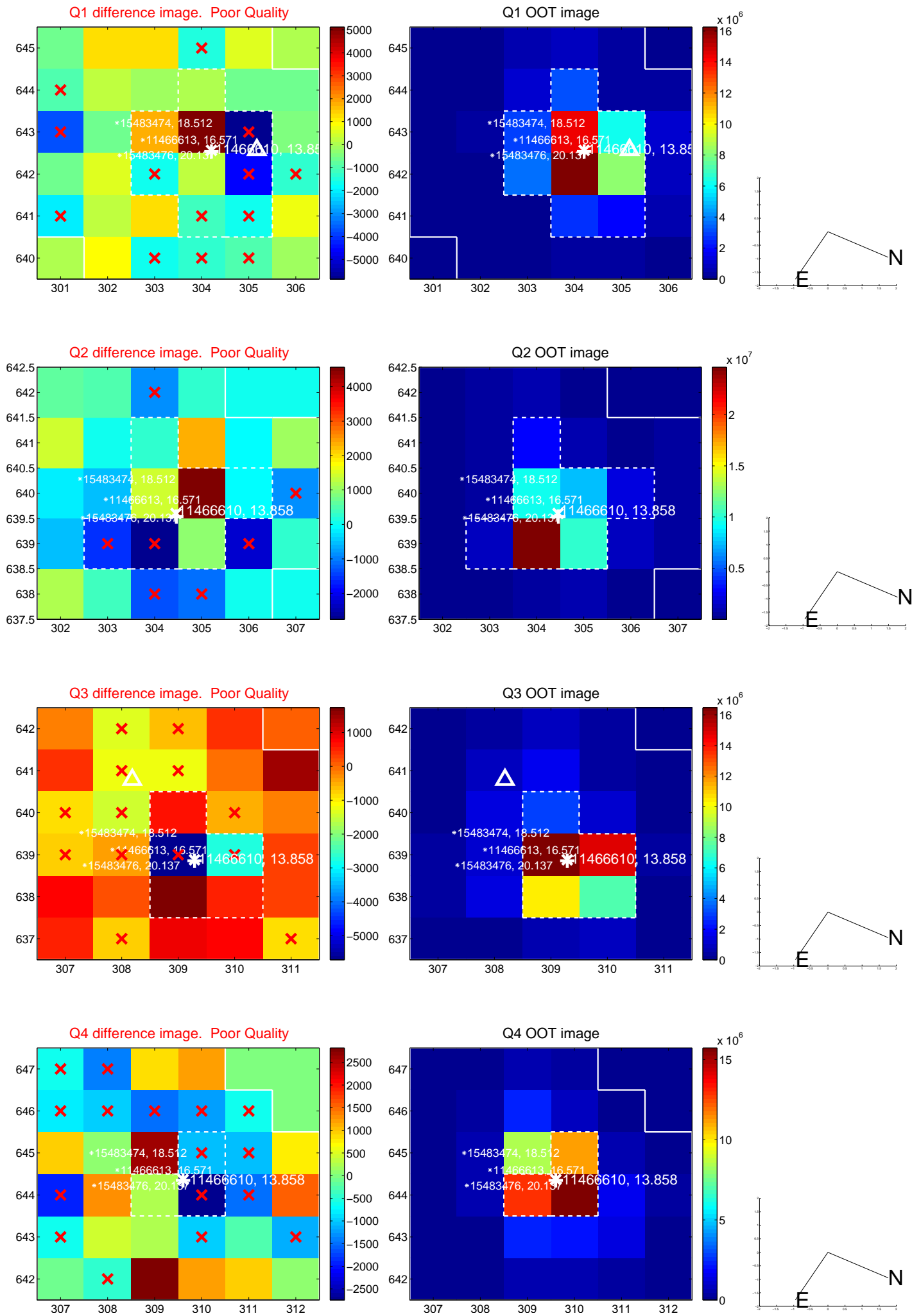
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.302 ± 1.415	0.92	0.224 ± 1.210	-1.283 ± 1.421
PRF-fit source offset from KIC position	1.221 ± 1.414	0.86	0.361 ± 1.216	-1.167 ± 1.431
photometric centroid source offset	0.25 ± 0.21	1.16	0.24 ± 0.21	0.05 ± 0.22

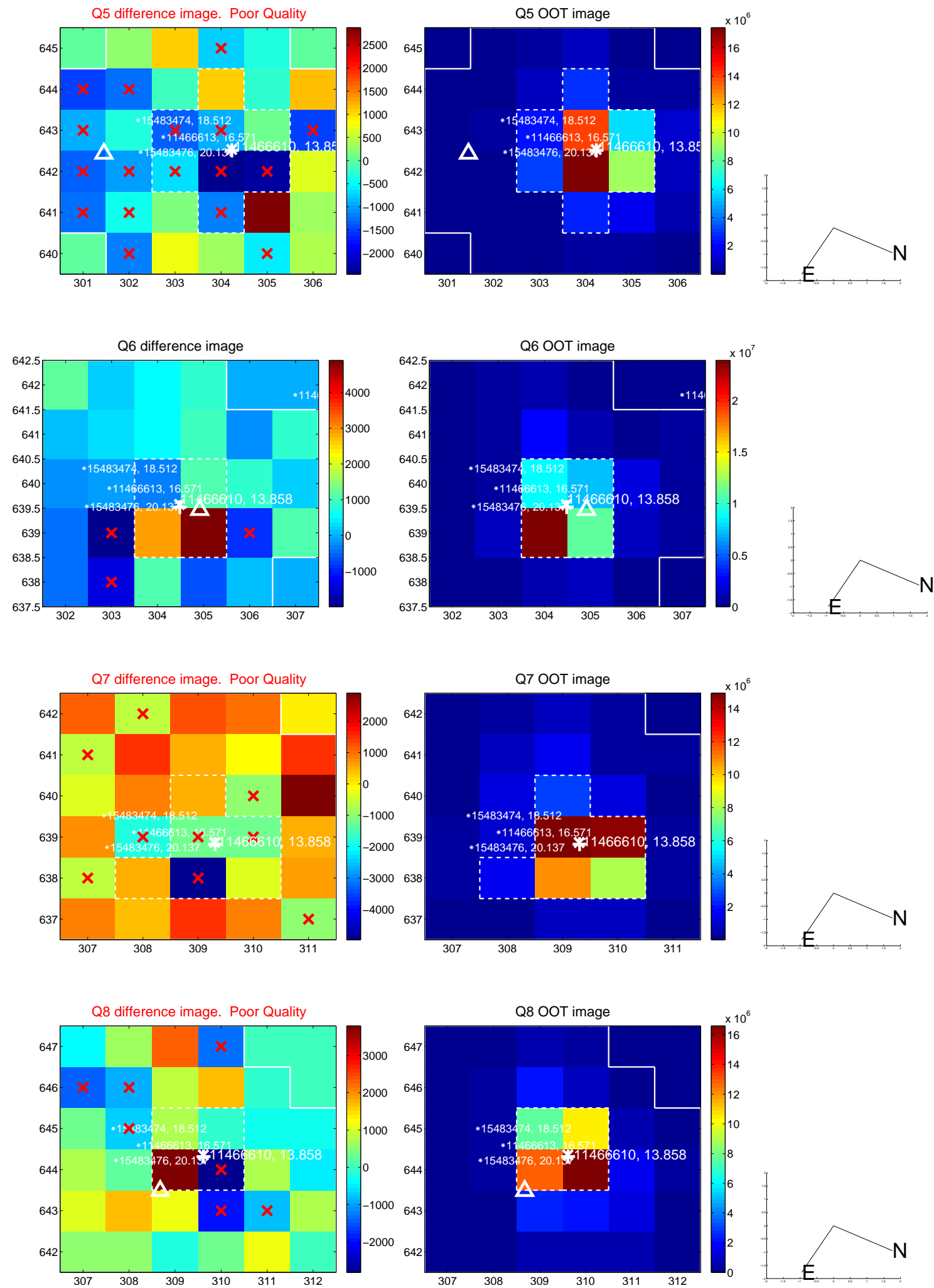


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

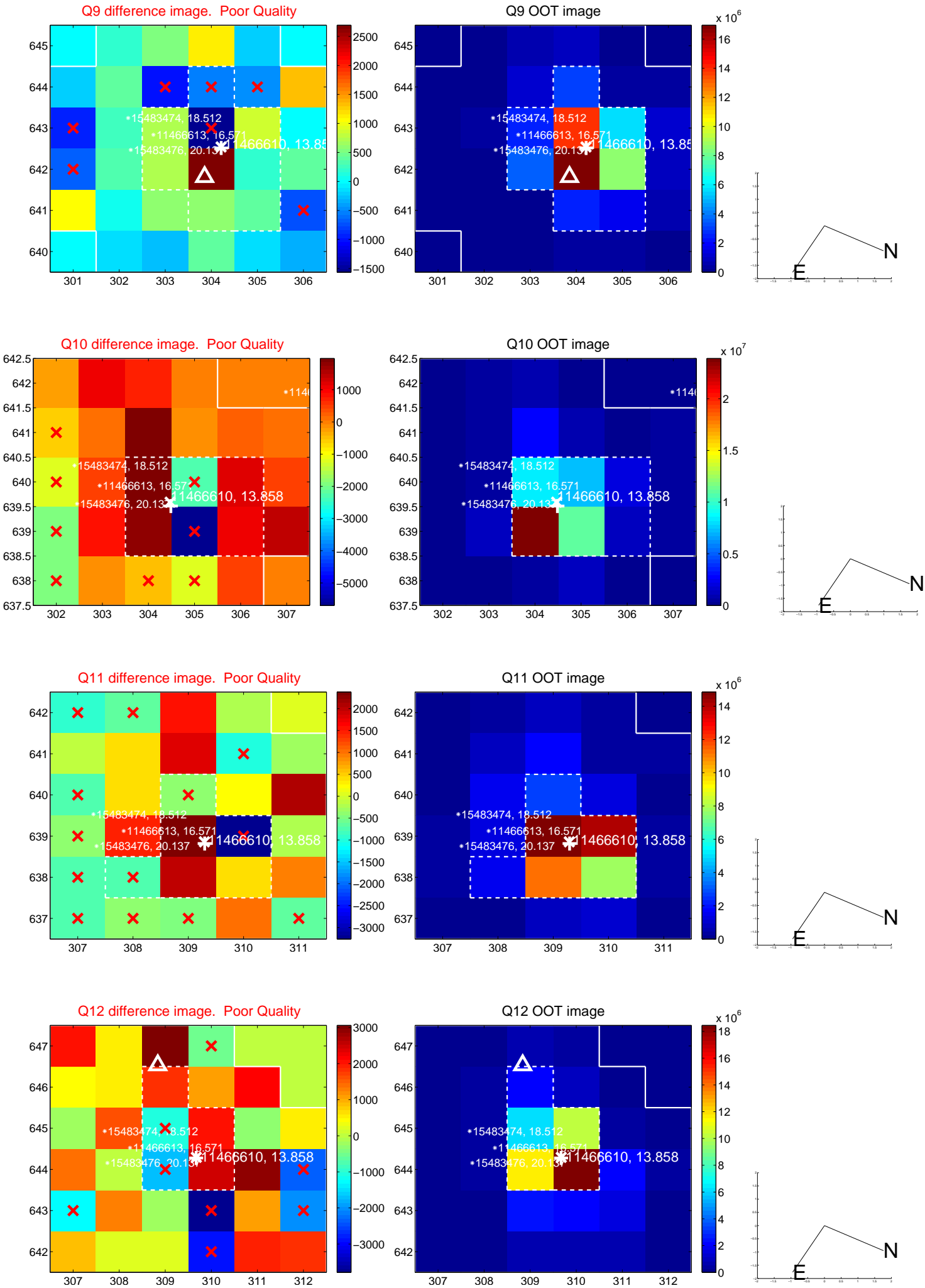
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



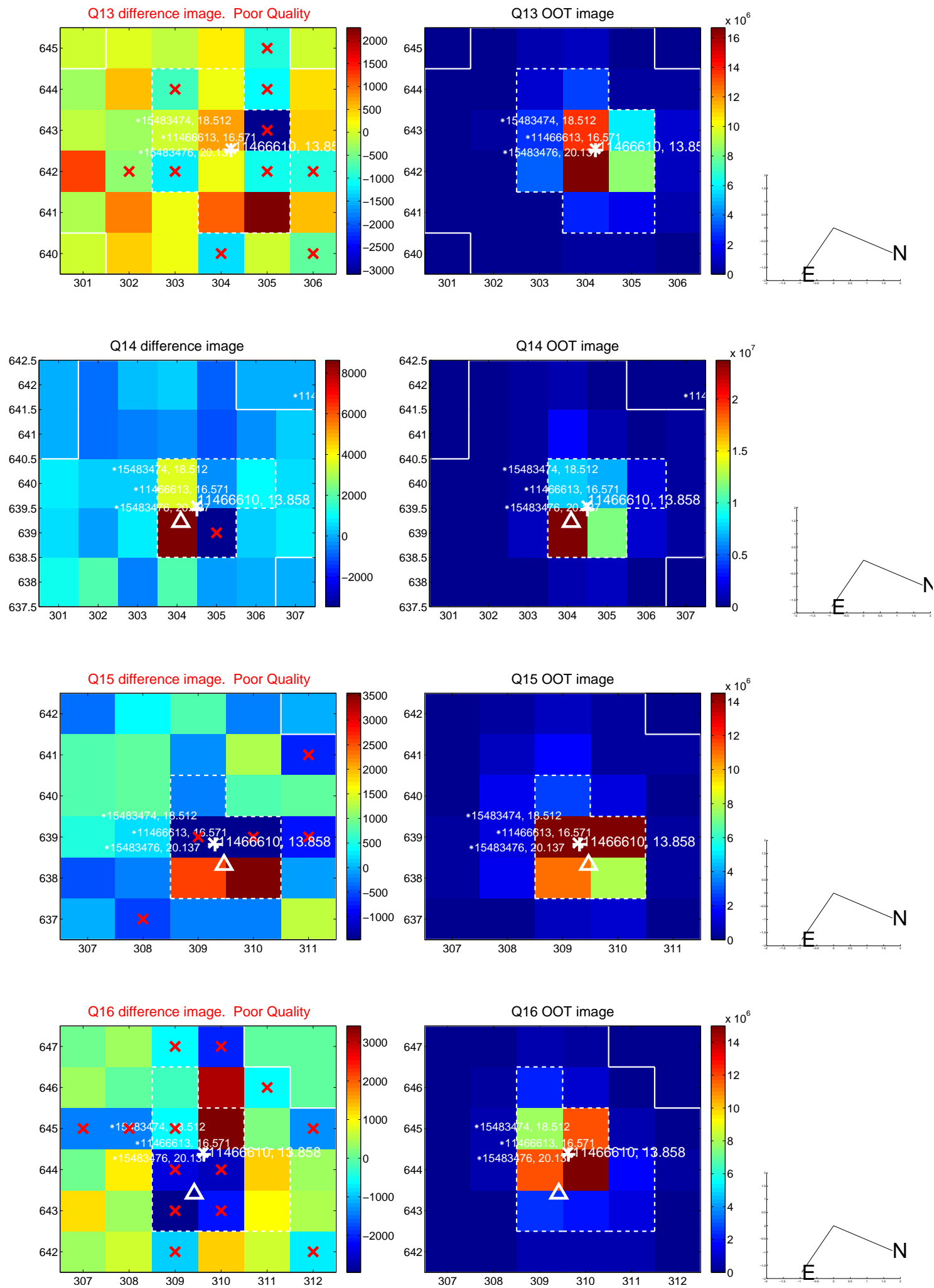
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



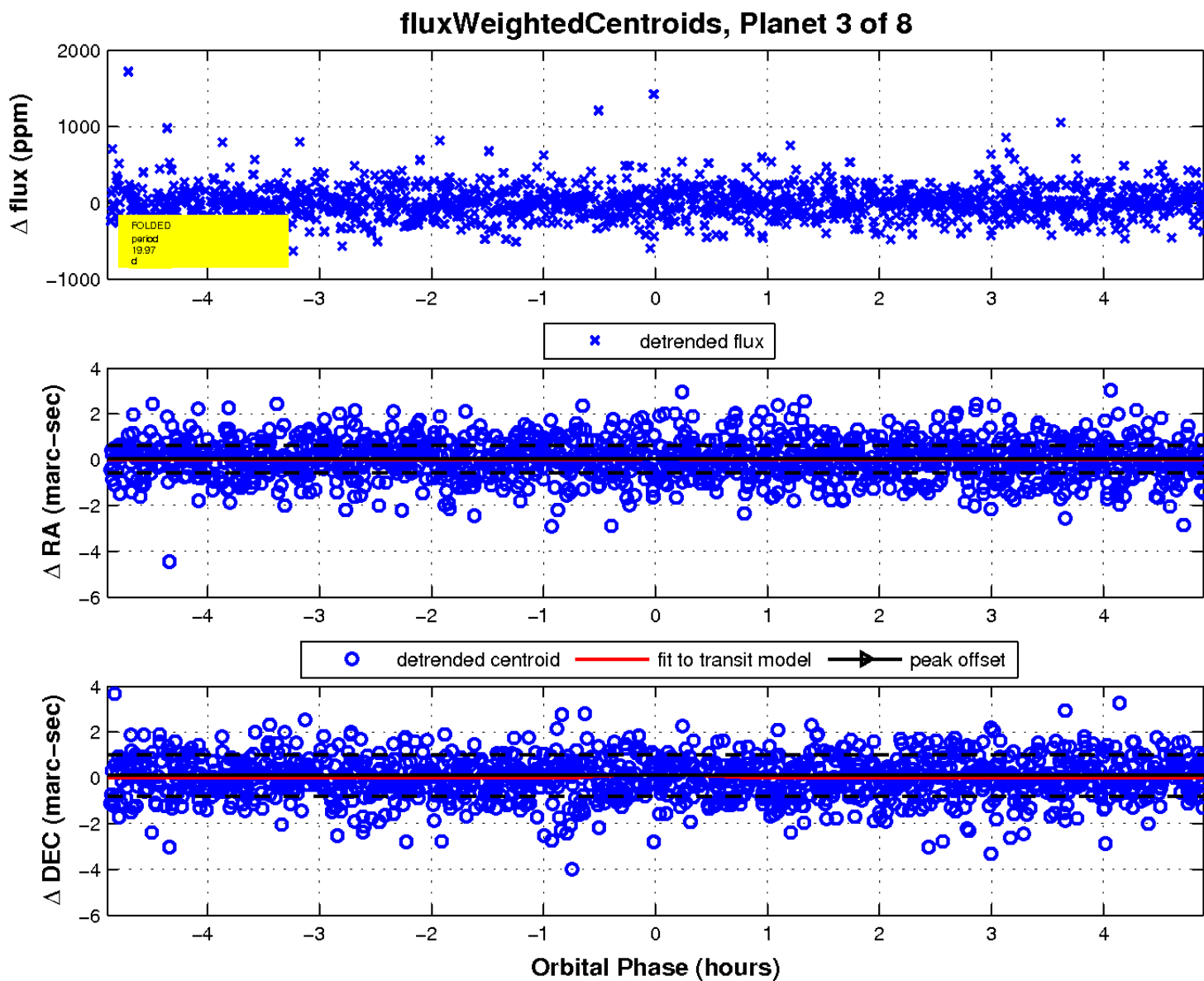
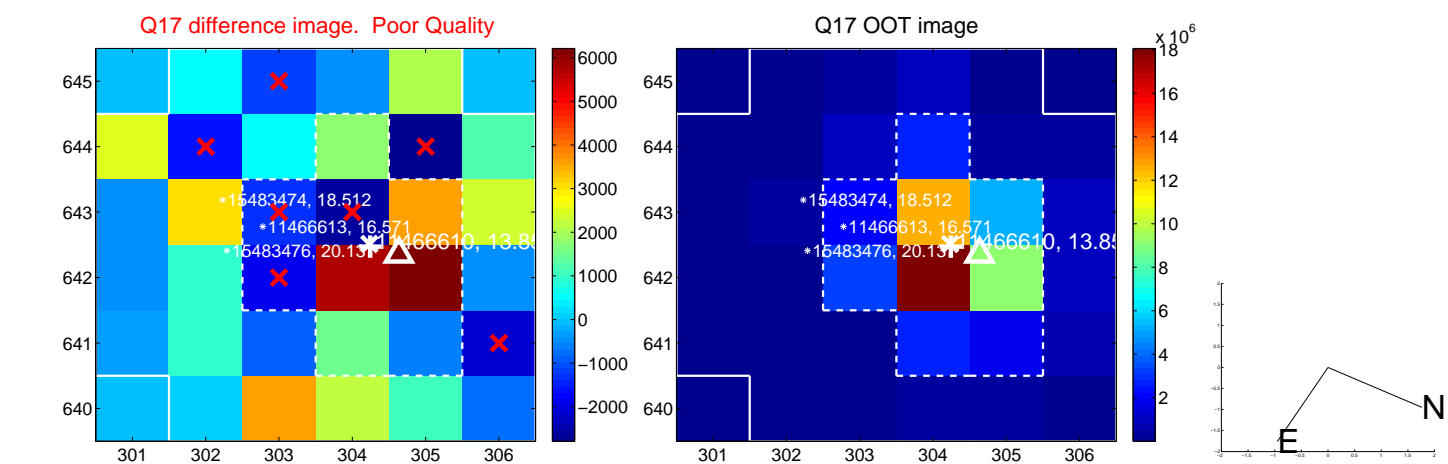
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

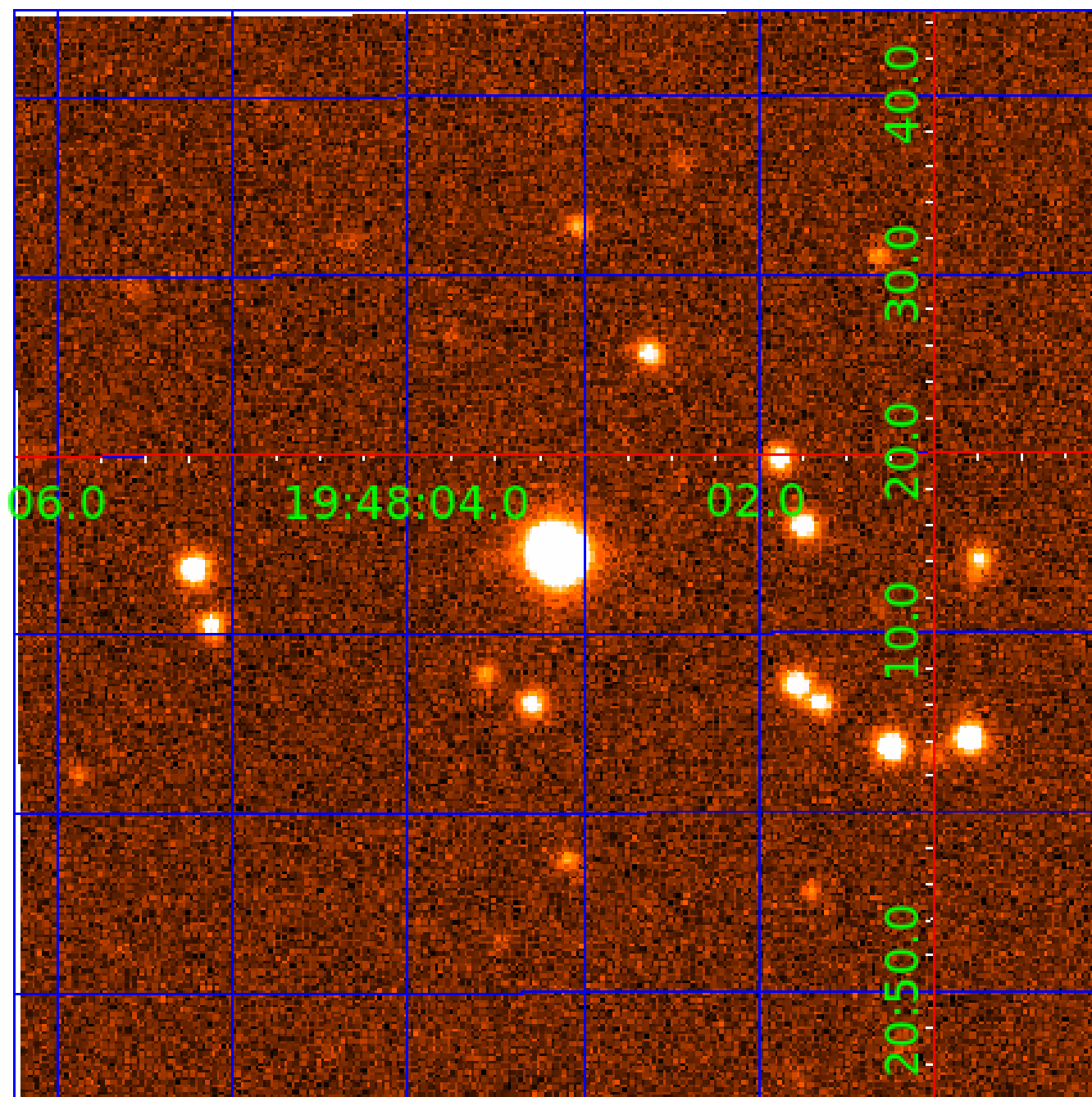


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

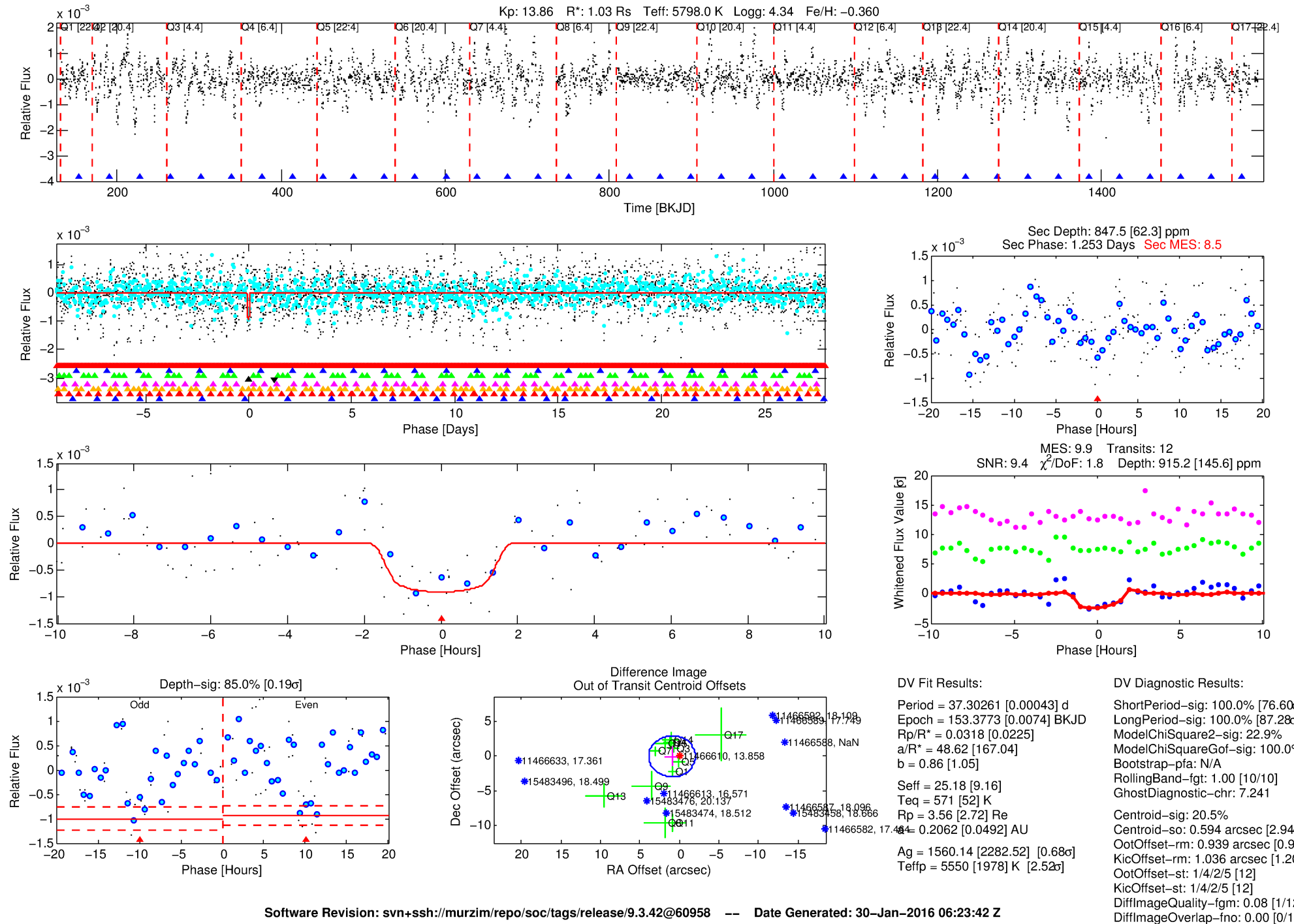
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-04

No Significant Match Found

DV One-Page Summary

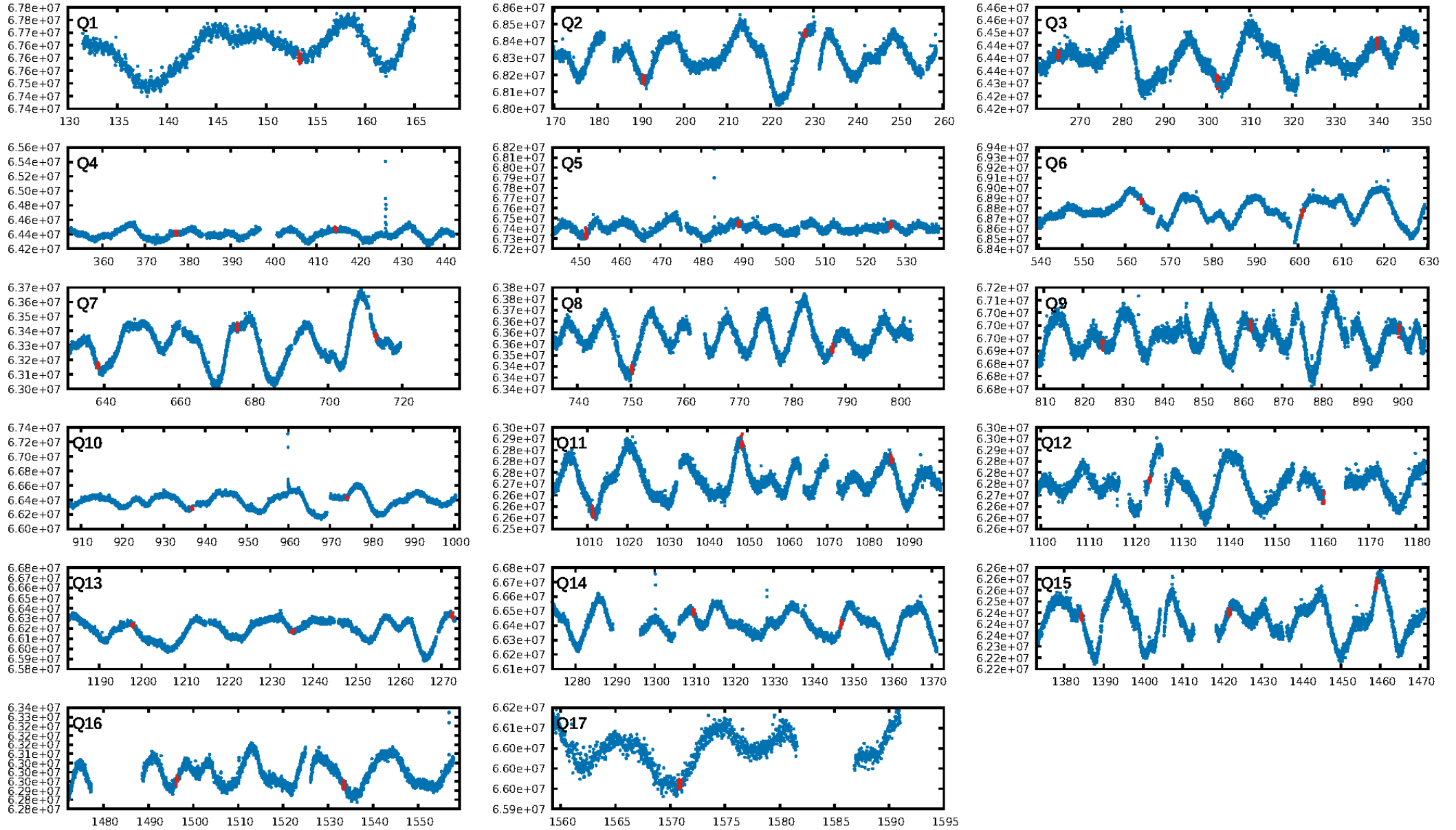
KIC: 11466610 Candidate: 4 of 8 Period: 37.303 d



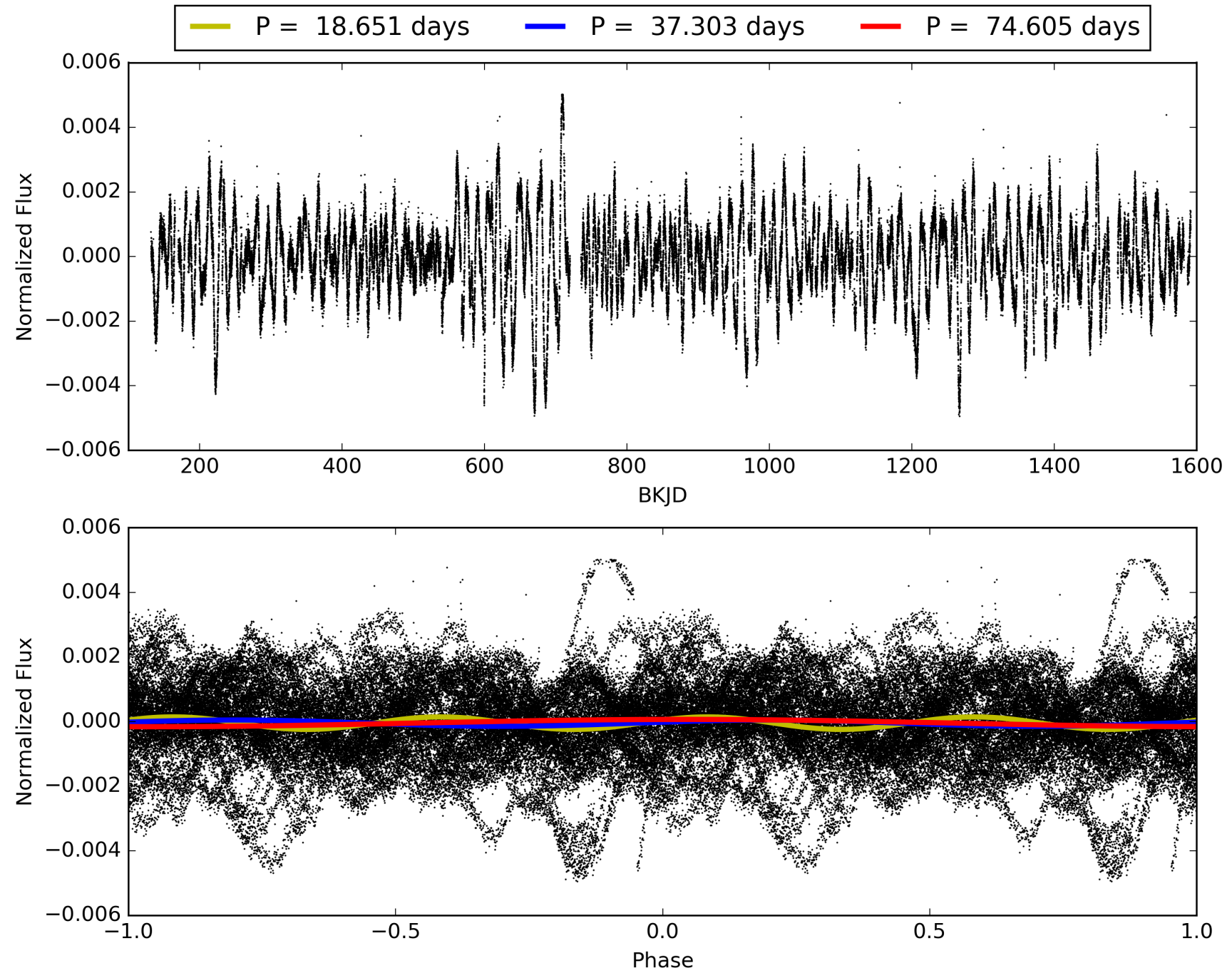
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:42 Z

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

TCE 011466610-04, PDC Light Curves

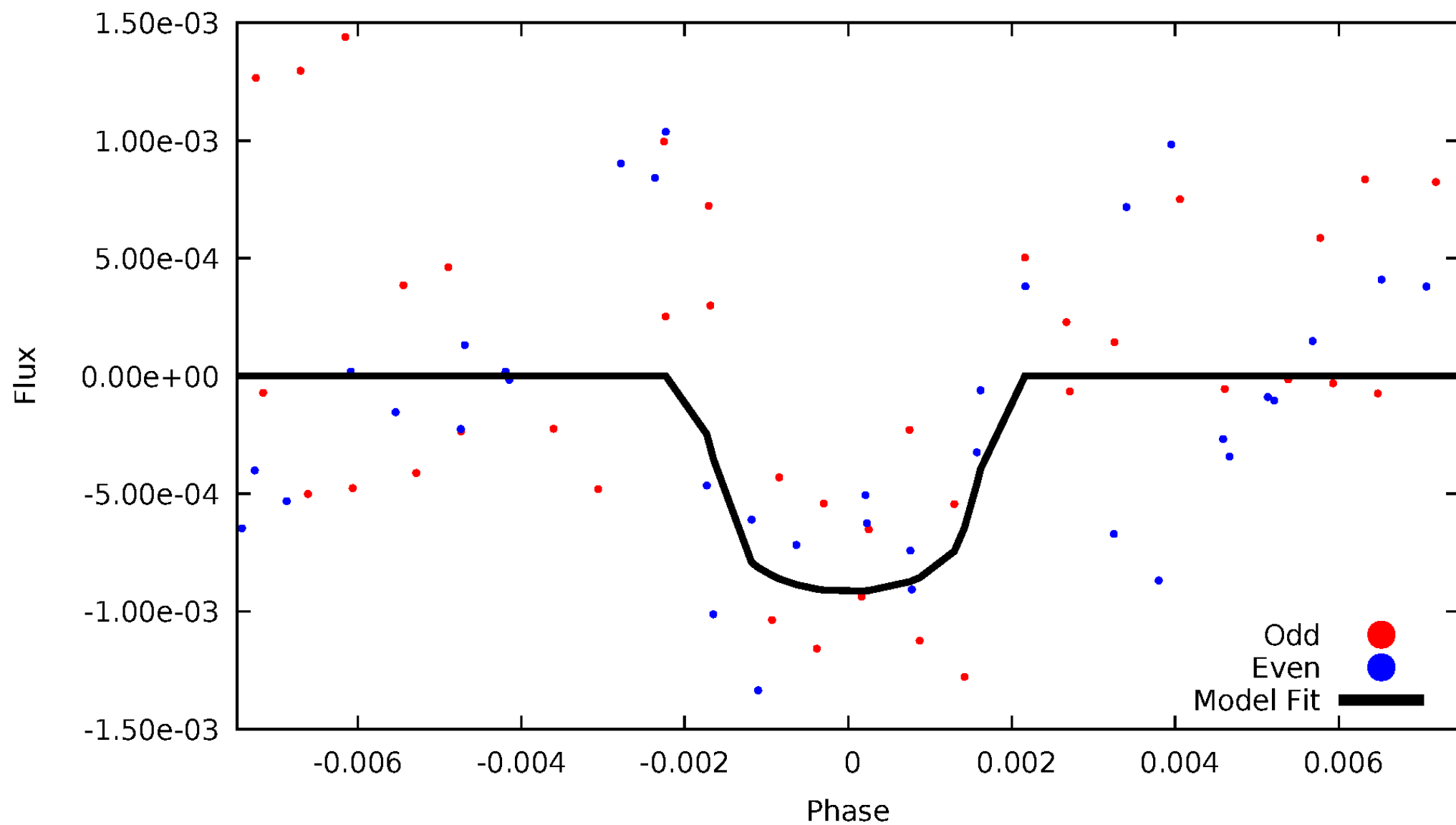


TCE 011466610-04



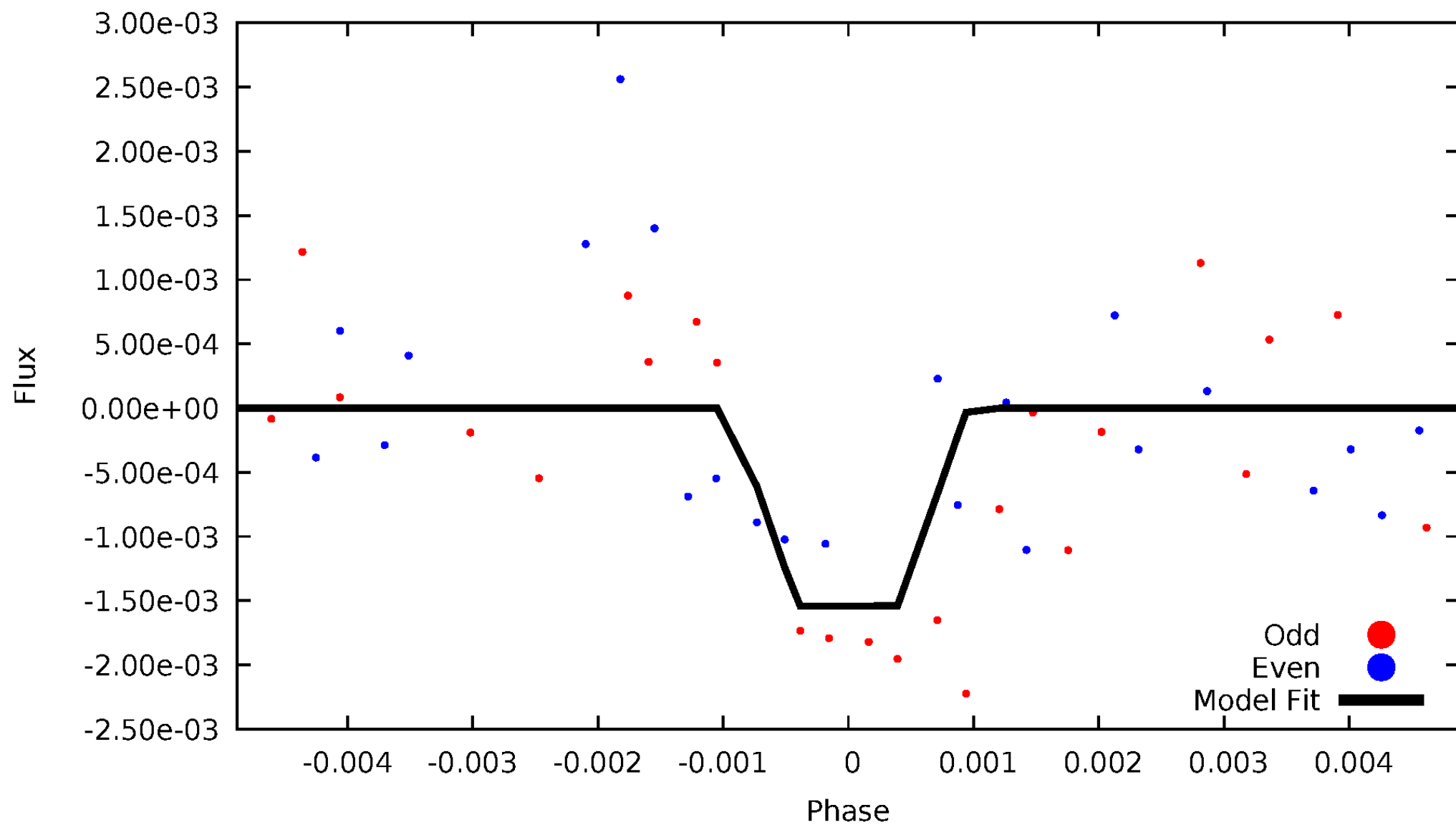
DV Odd/Even

TCE 011466610-04



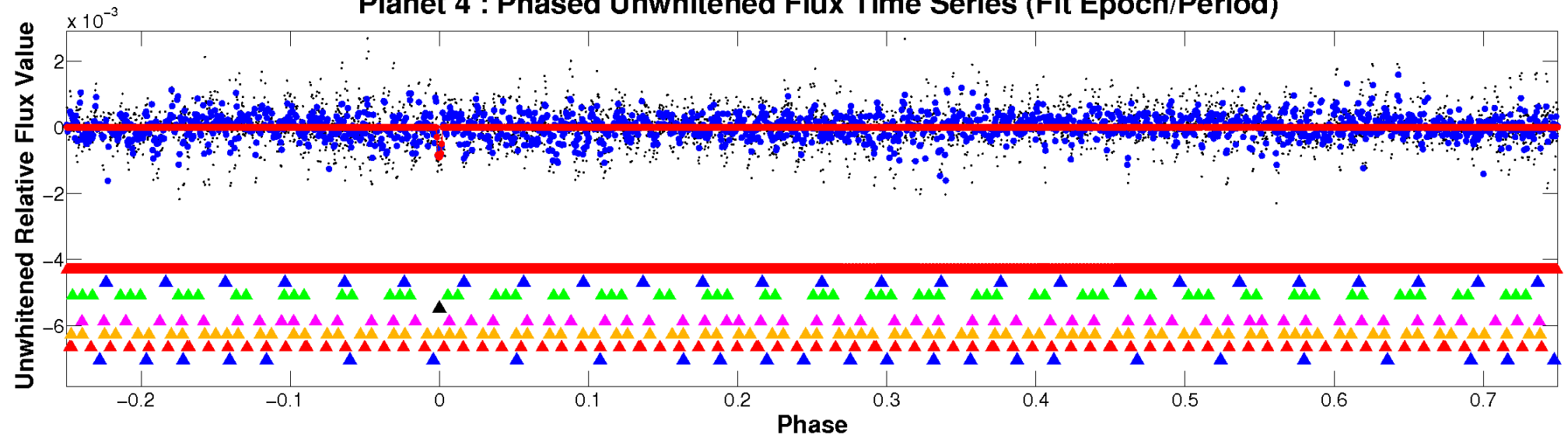
ALT Odd/Even

TCE 011466610-04

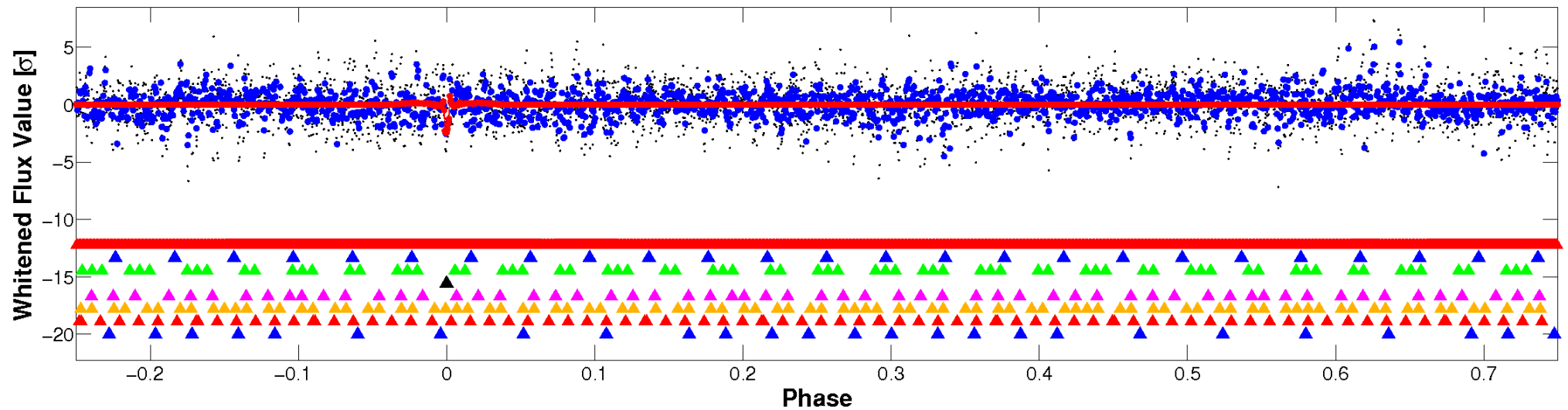


Non-Whitened Vs. Whitened Light Curve

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

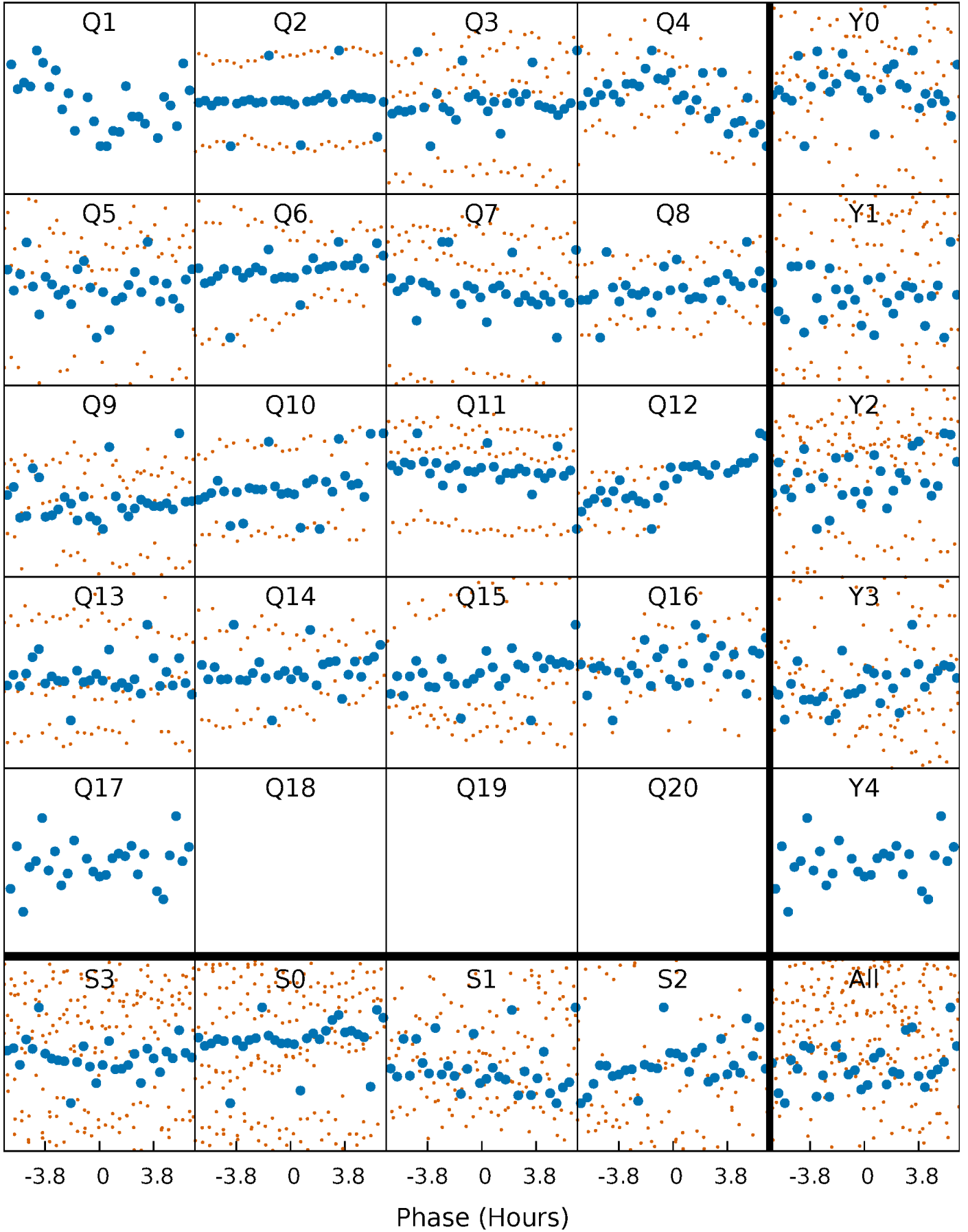


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



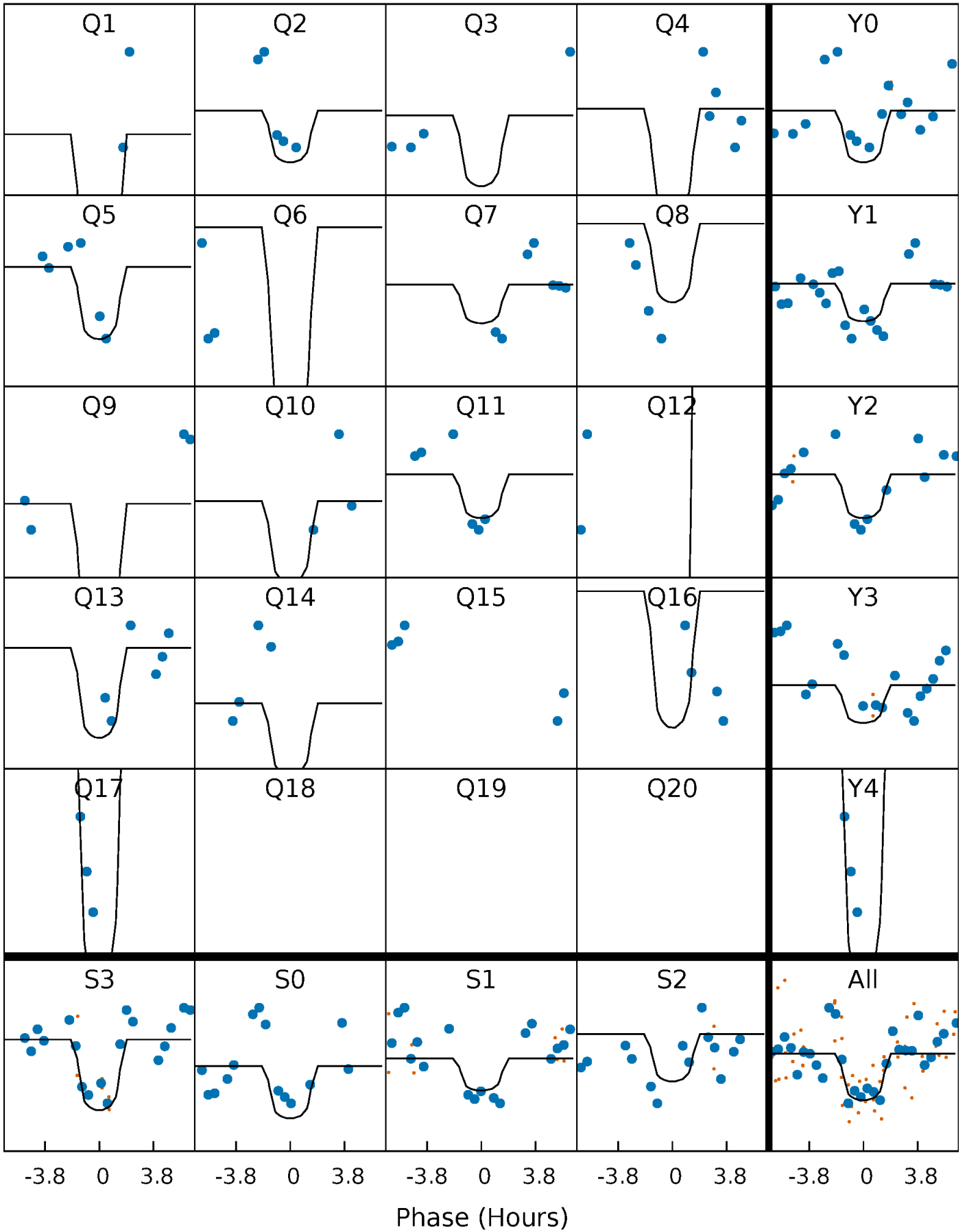
PDC Quarter-Phased Transit Curves

TCE 011466610-04 P= 37.302610 Days $T_0=153.377339$ (BKJD)



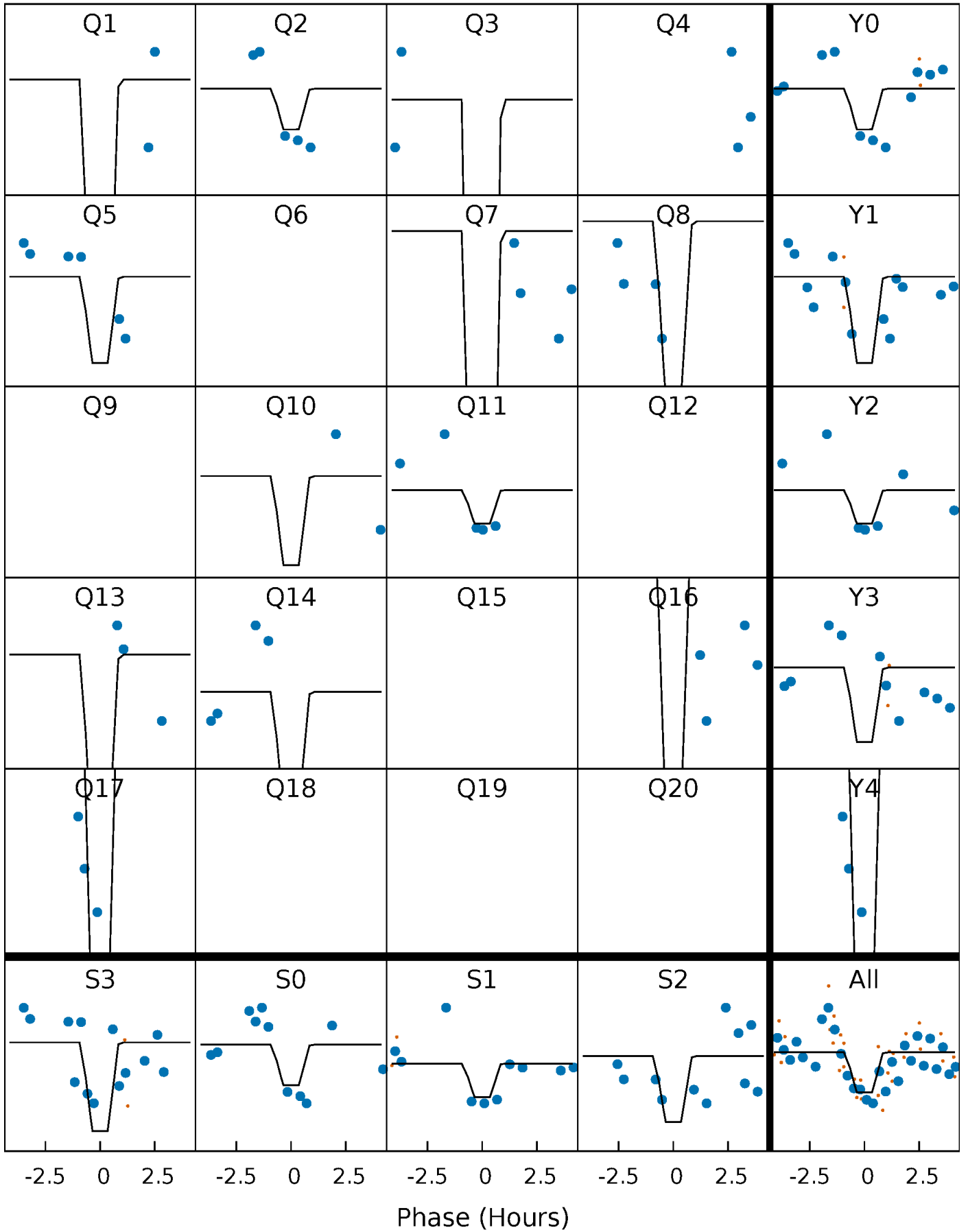
DV Quarter-Phased Transit Curves

TCE 011466610-04 P= 37.302610 Days $T_0=153.377339$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

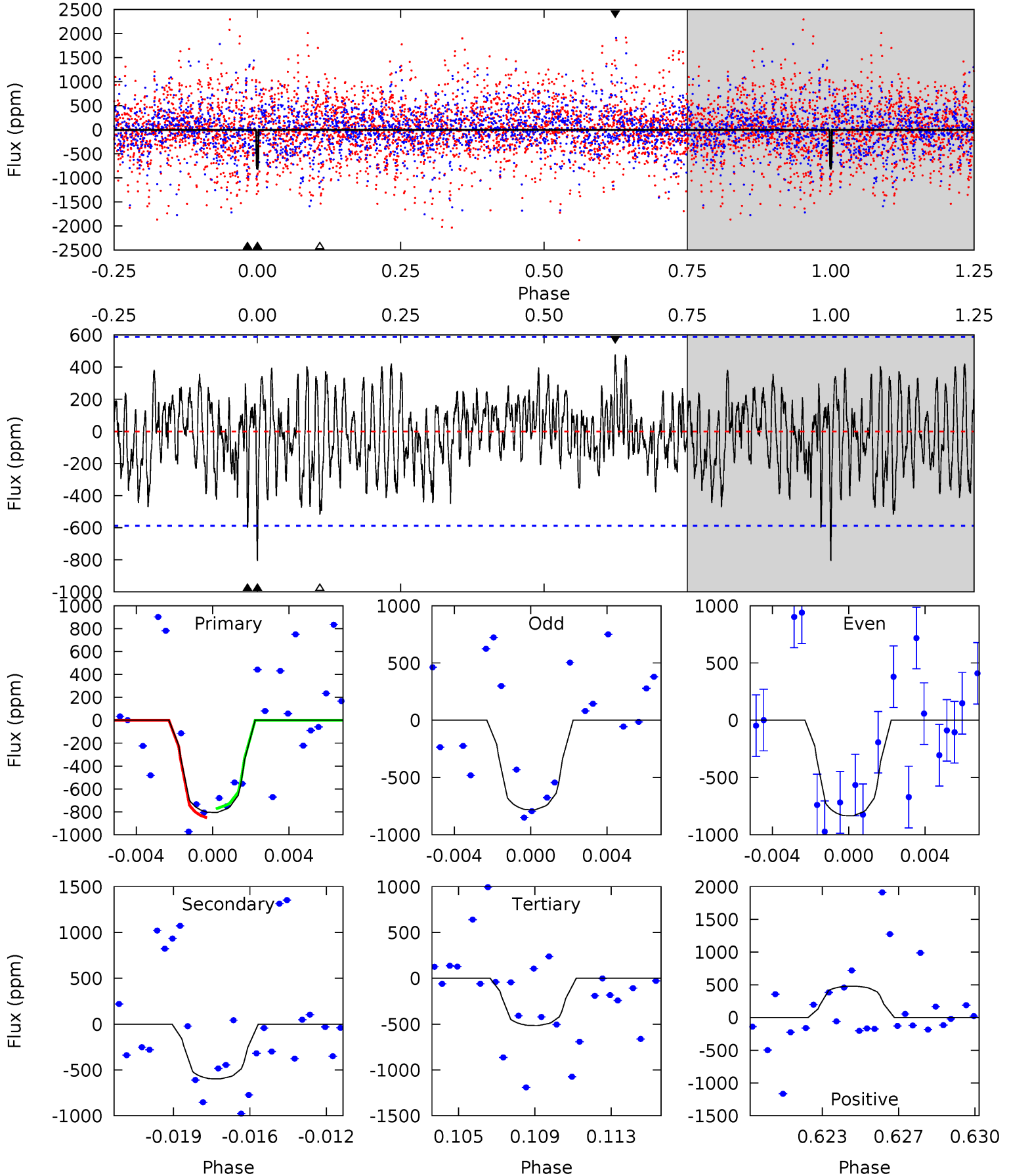
TCE 011466610-04 P= 37.302852 Days $T_0=153.351306$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-04, P = 37.302610 Days, E = 116.074729 Days

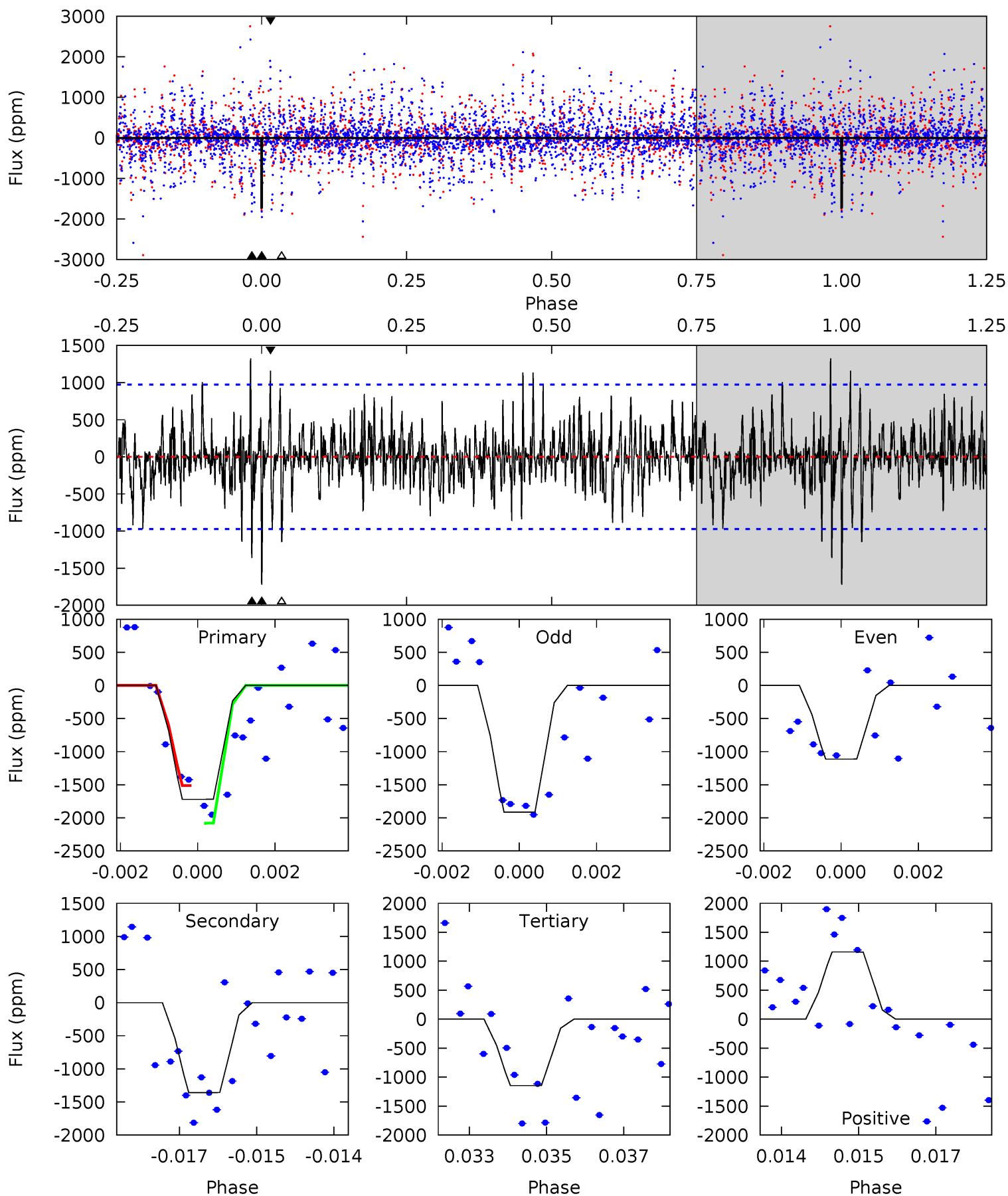
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.14	5.30	4.58	4.24	5.20	2.89	1.63	2.56	2.89	0.73	1.06	0.23	1.18	0.37	0.35



Alt Model-Shift Uniqueness Test

011466610-04, P = 37.302852 Days, E = 116.048454 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	7.45	6.28	6.36	5.33	3.10	1.62	3.15	3.07	1.17	1.08	2.00	0.89	0.43	1.59



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-599±113	$3.91^{+2.29}_{-2.17}$	797^{+56}_{-55}	4943^{+2300}_{-829}	929^{+3526}_{-576}
Alt.	-1359±182	$4.36^{+2.81}_{-2.21}$	795^{+61}_{-54}	5624^{+2563}_{-982}	1664^{+5382}_{-1039}

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

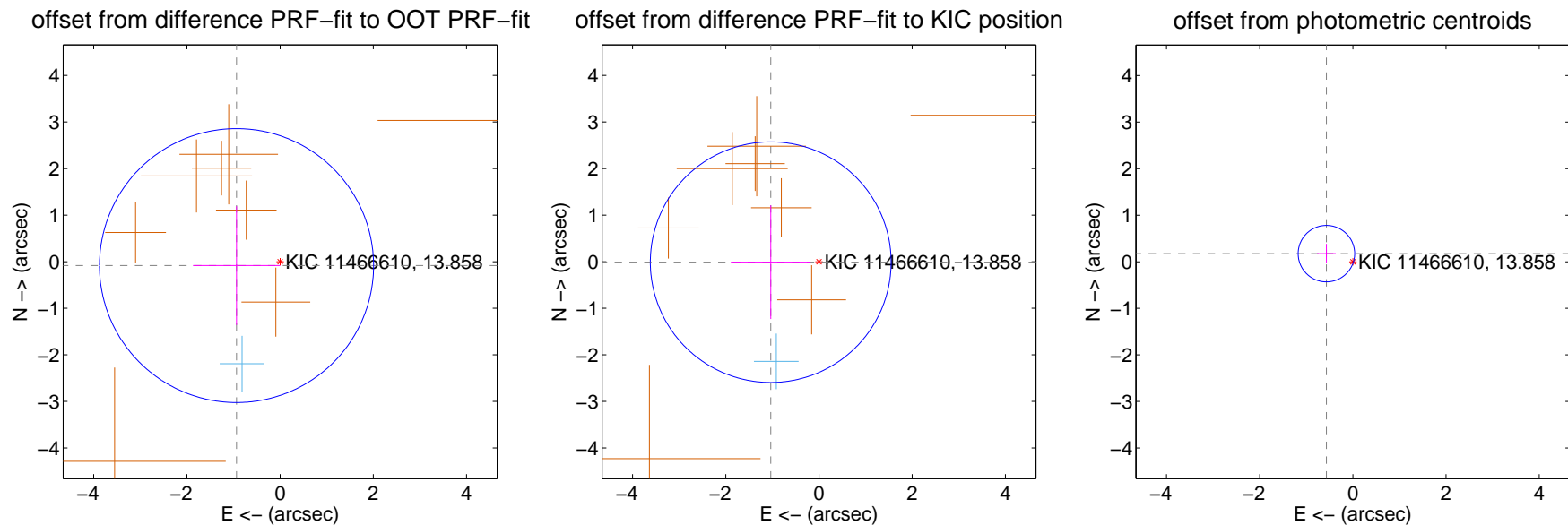
DV Centroid Data

Supplemental centroid analysis for 011466610-04. Kepler magnitude: 13.86. Transit SNR 9.43

There are 1 quarters with good PRF difference image offsets

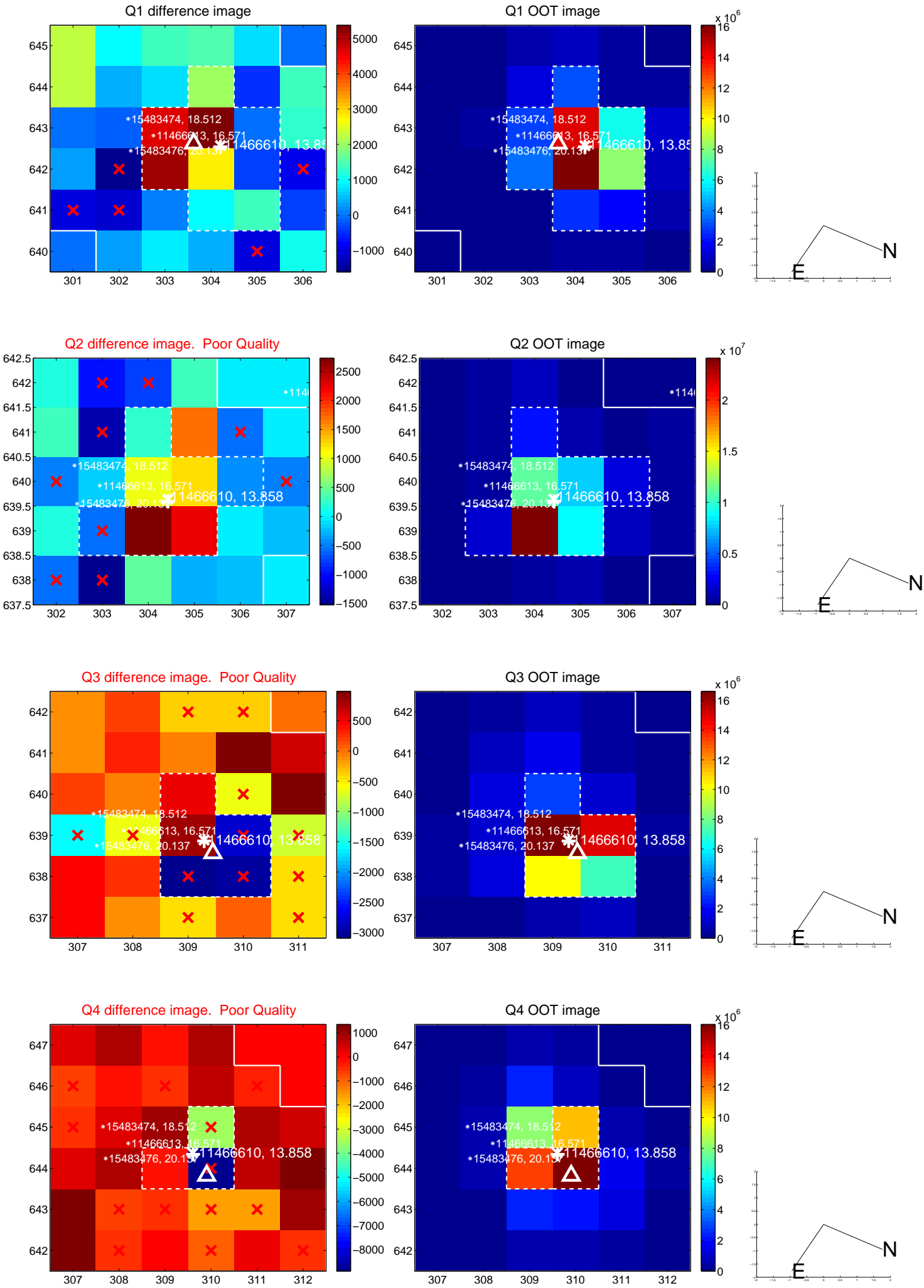
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.939 ± 0.980	0.96	0.935 ± 0.935	-0.083 ± 1.274
PRF-fit source offset from KIC position	1.036 ± 0.861	1.20	1.036 ± 0.856	-0.010 ± 1.221
photometric centroid source offset	0.59 ± 0.20	2.94	0.57 ± 0.20	0.17 ± 0.21

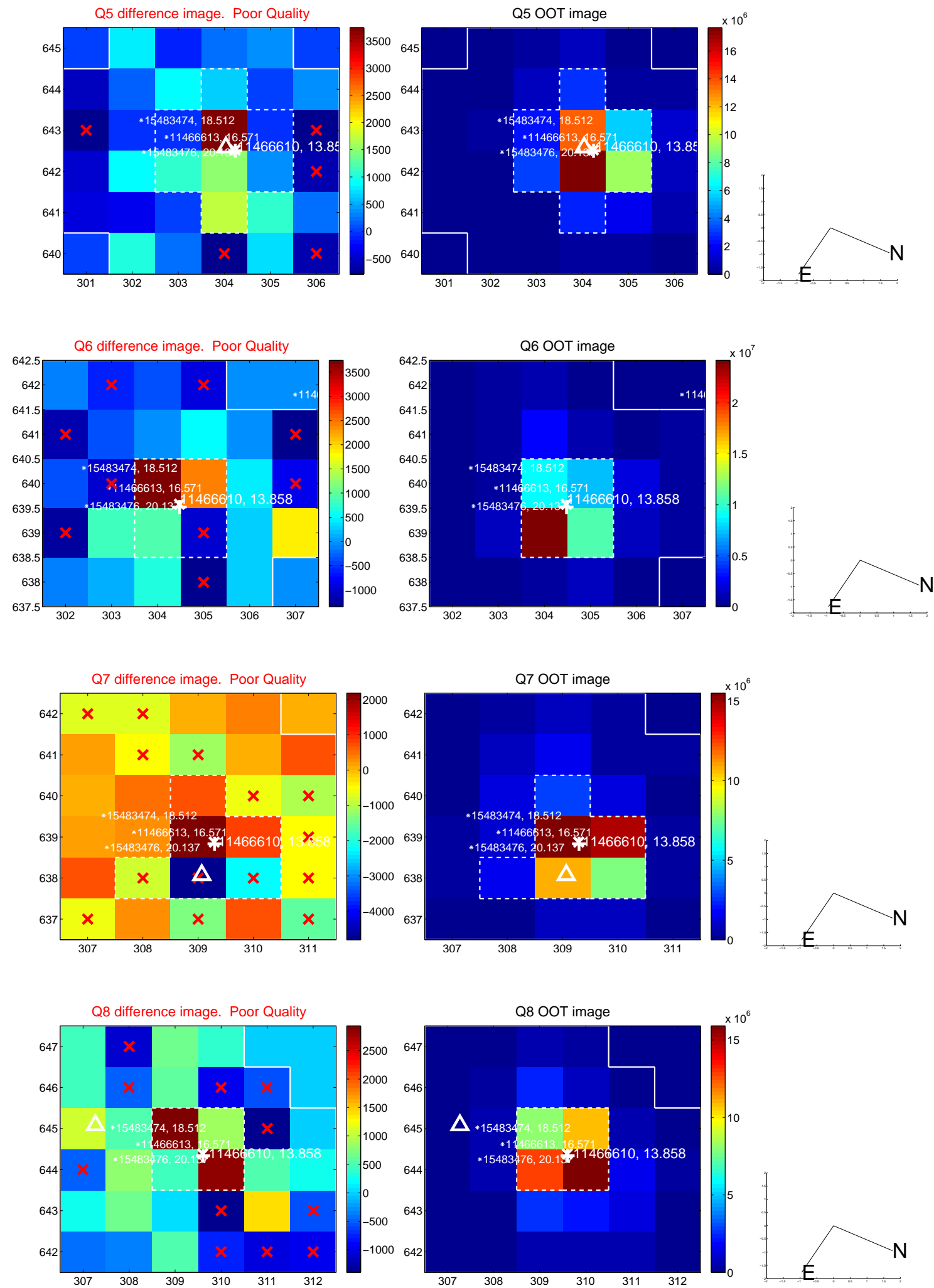


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

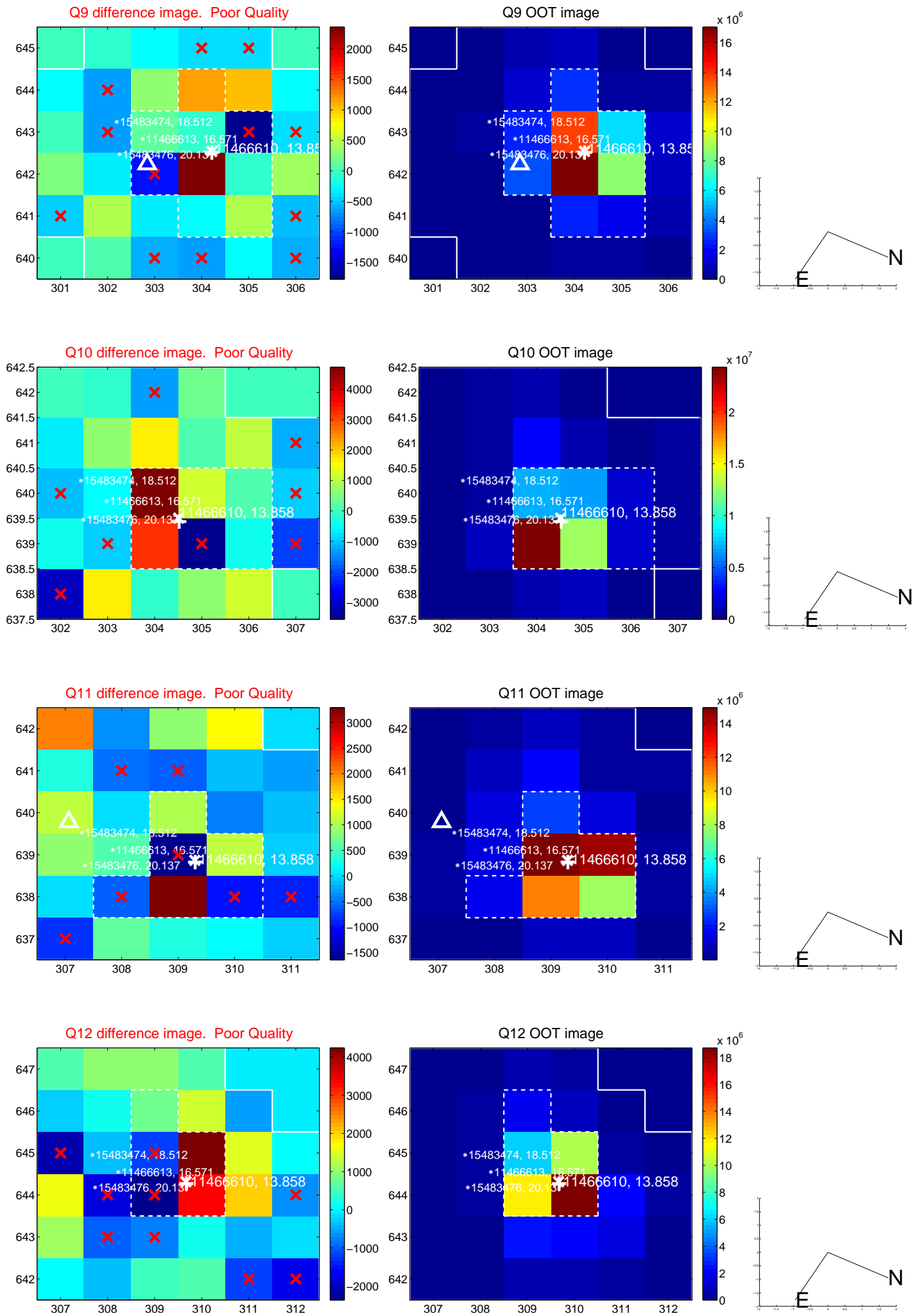
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



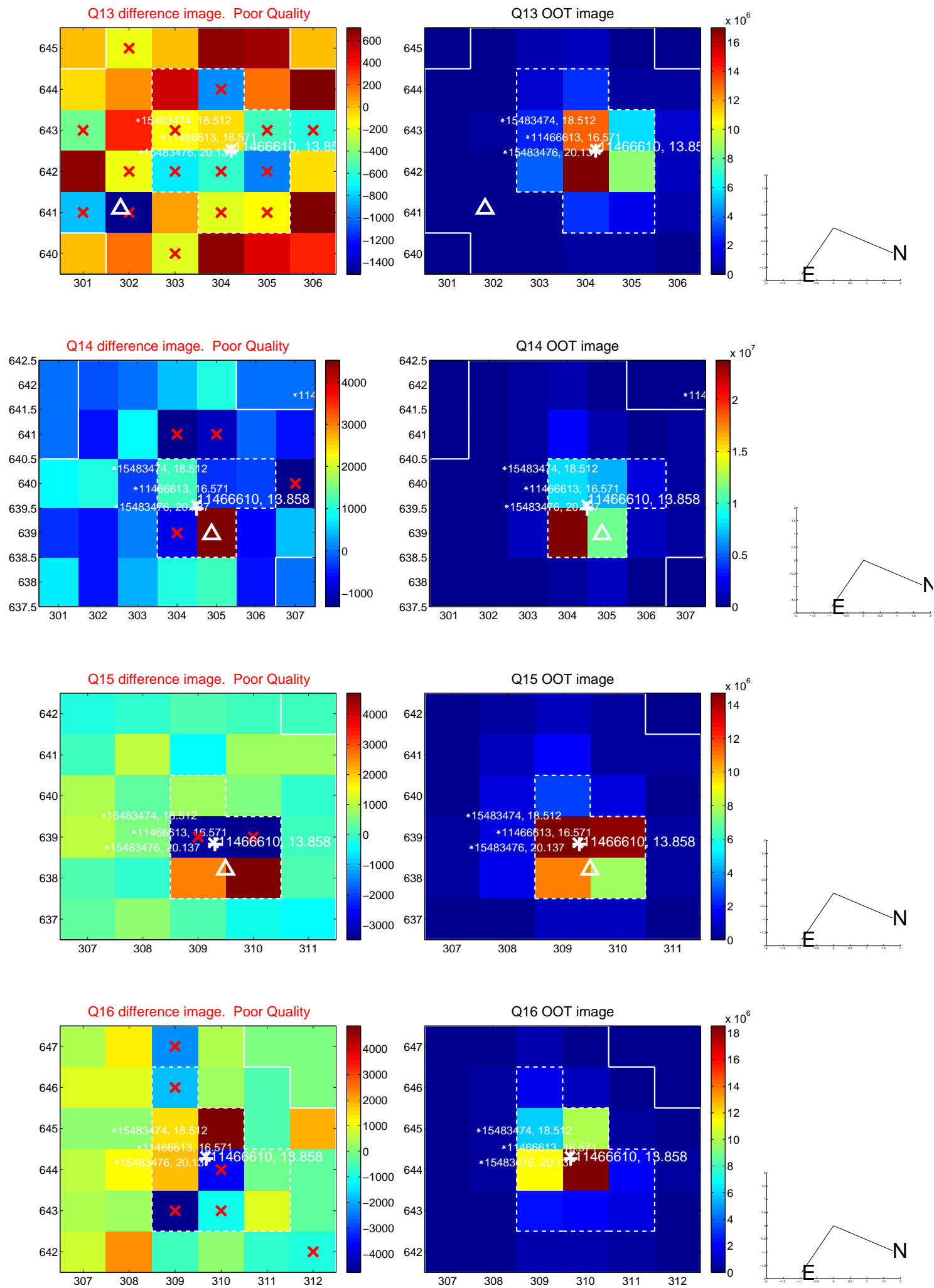
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



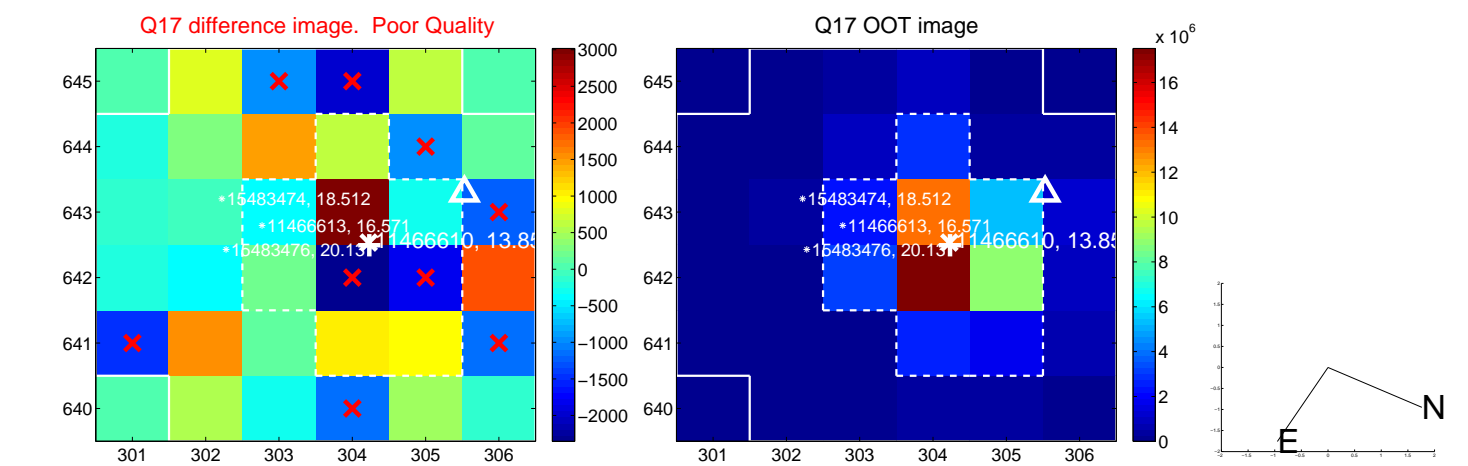
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



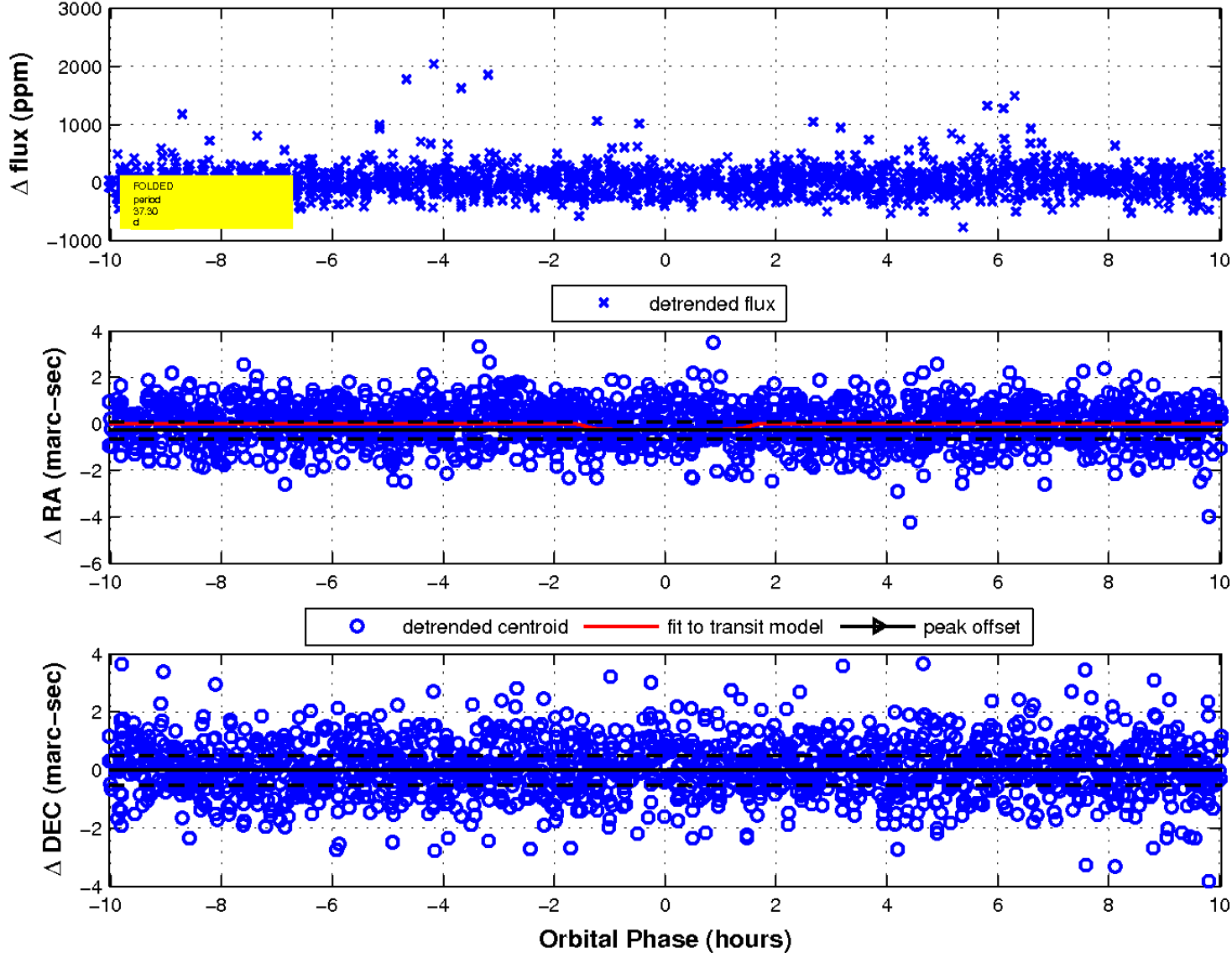
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

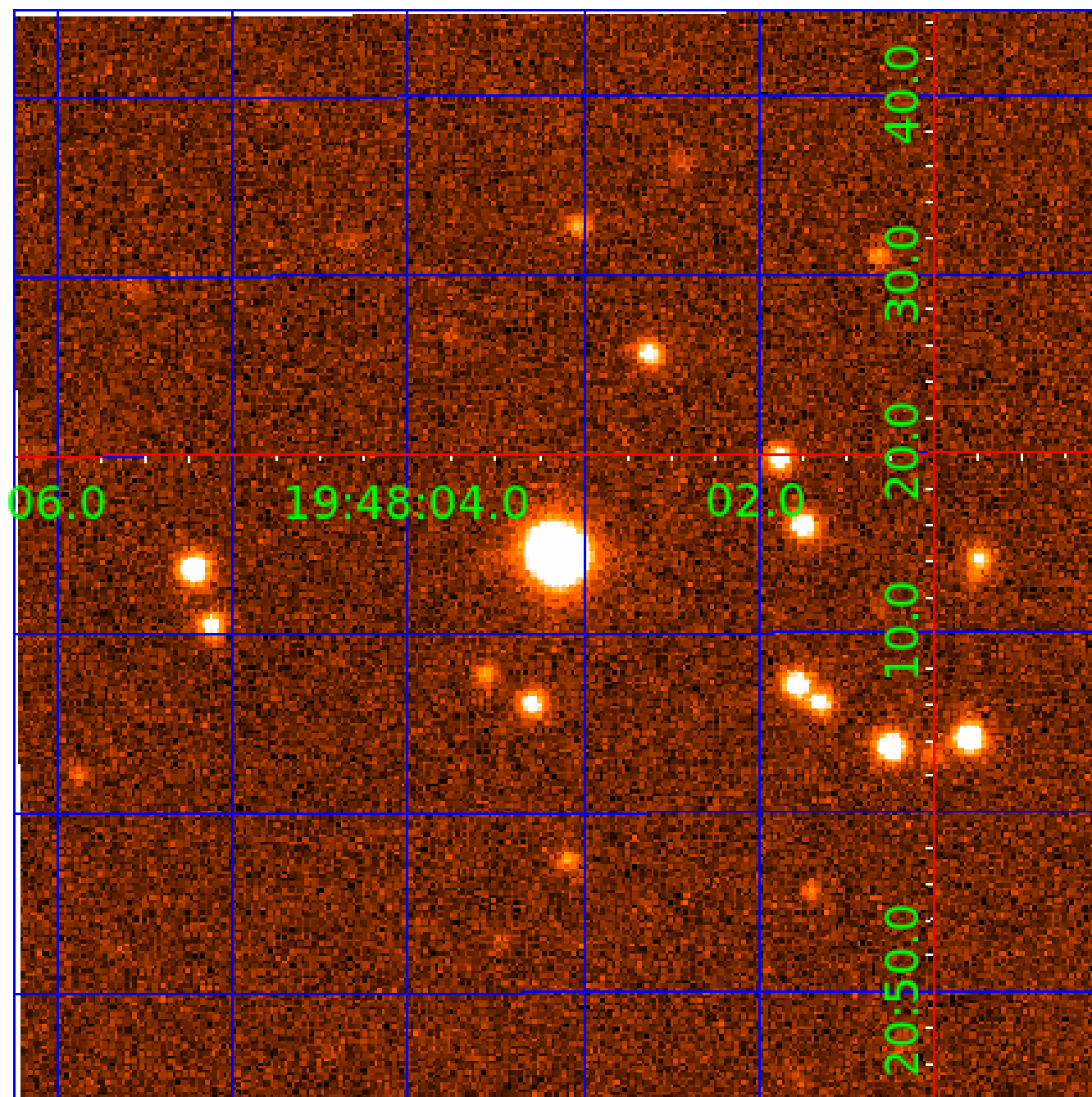


fluxWeightedCentroids, Planet 4 of 8



UKIRT Image

Declination



KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

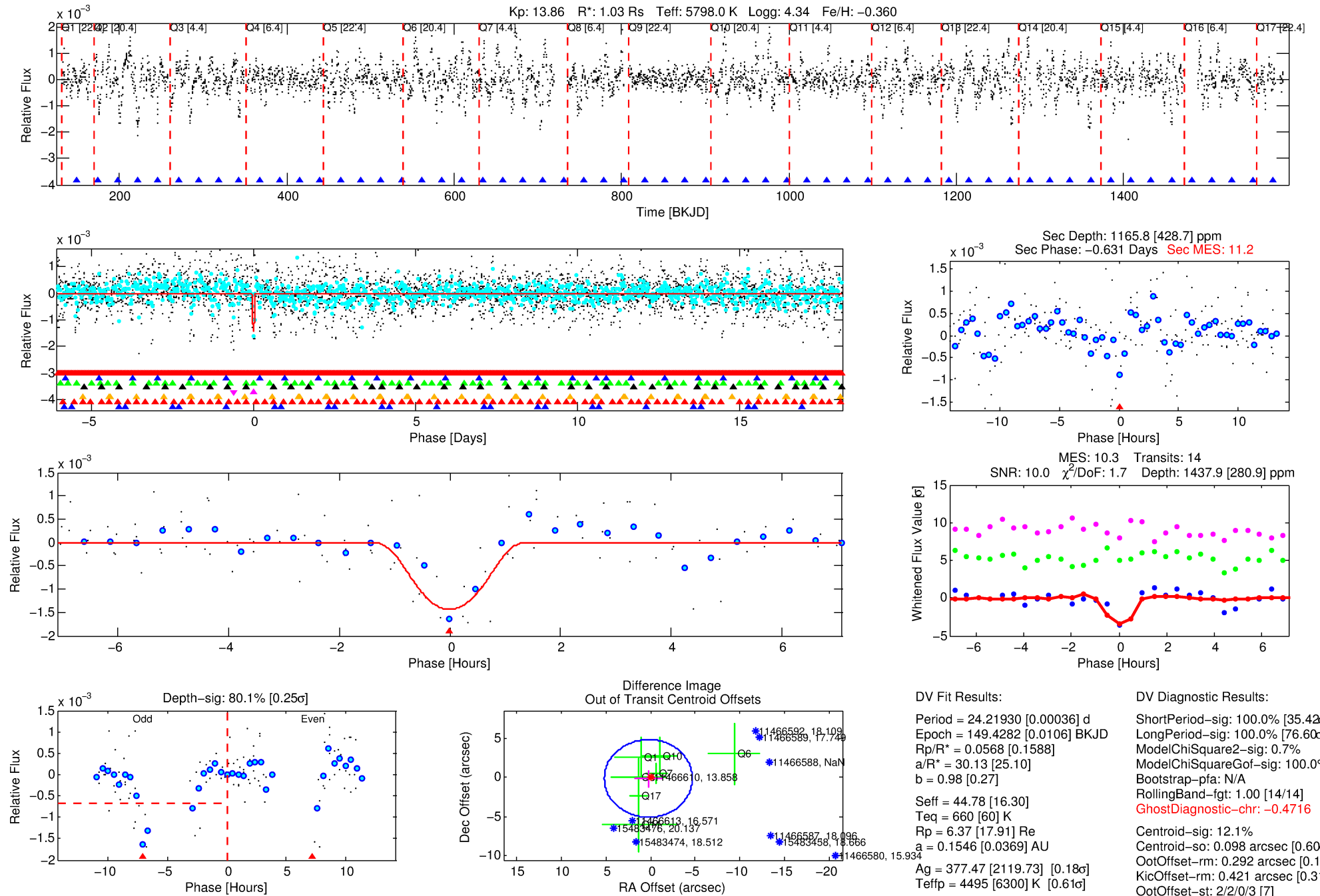
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-05

No Significant Match Found

DV One-Page Summary

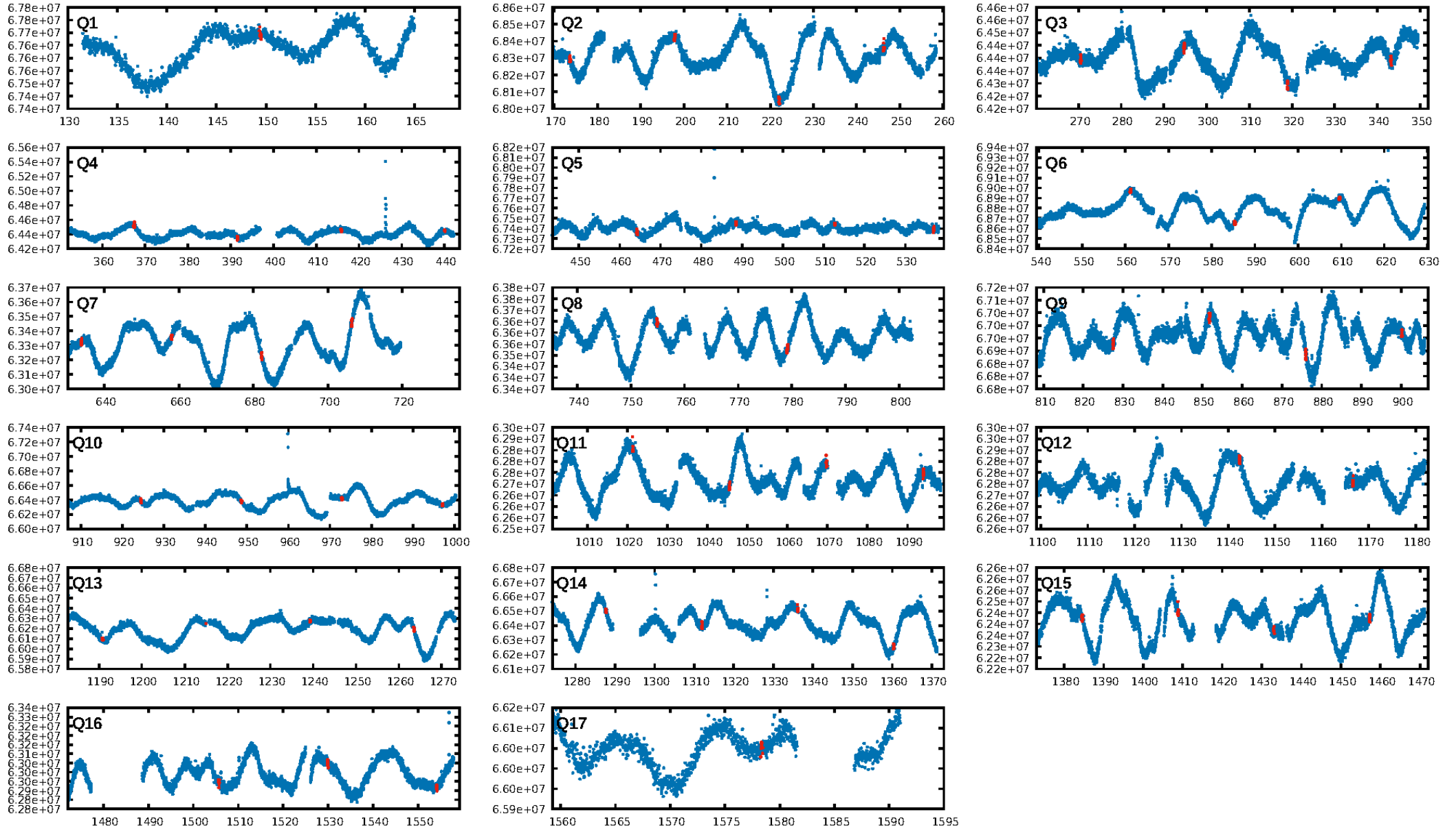
KIC: 11466610 Candidate: 5 of 8 Period: 24.219 d



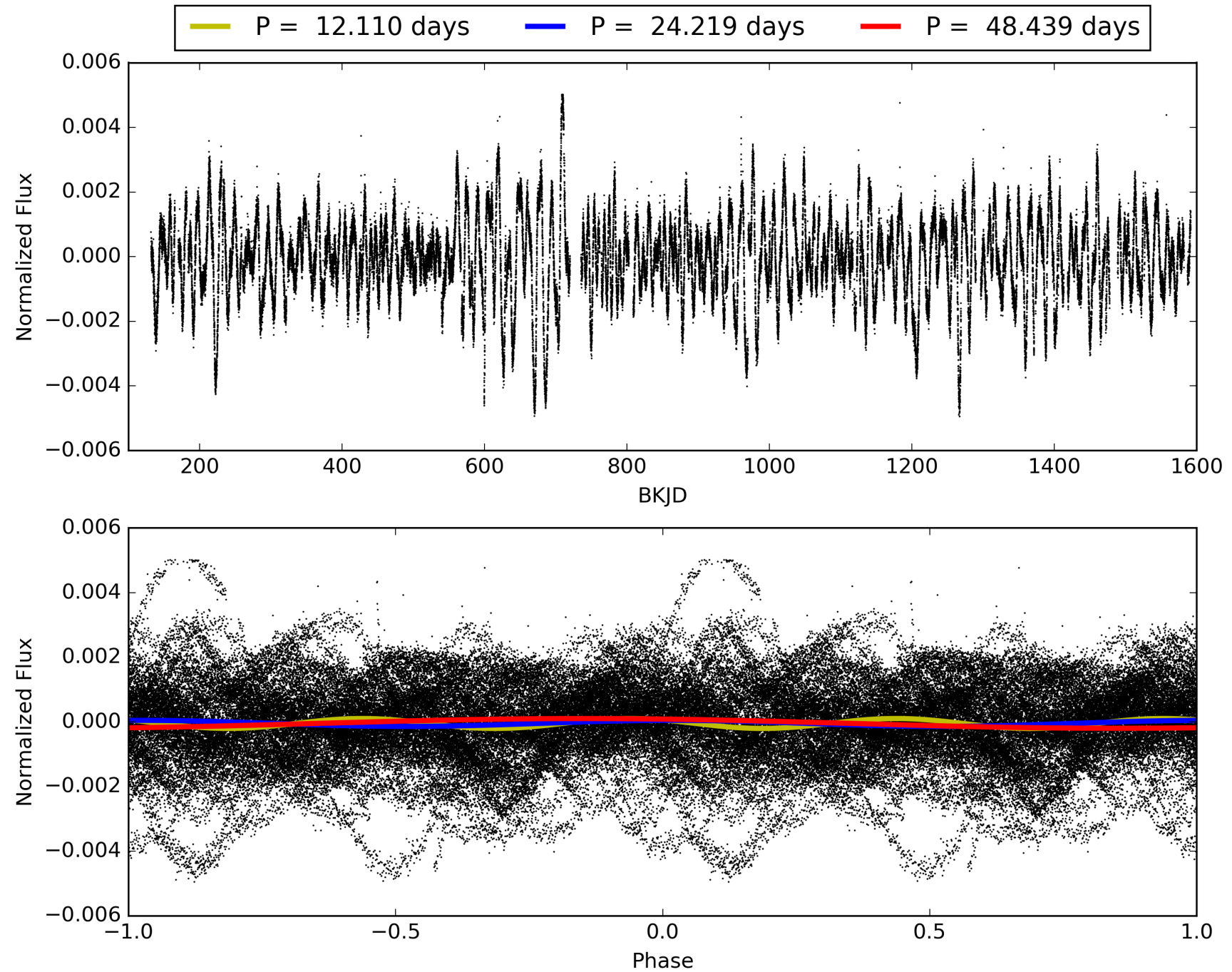
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:45 Z

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

TCE 011466610-05, PDC Light Curves

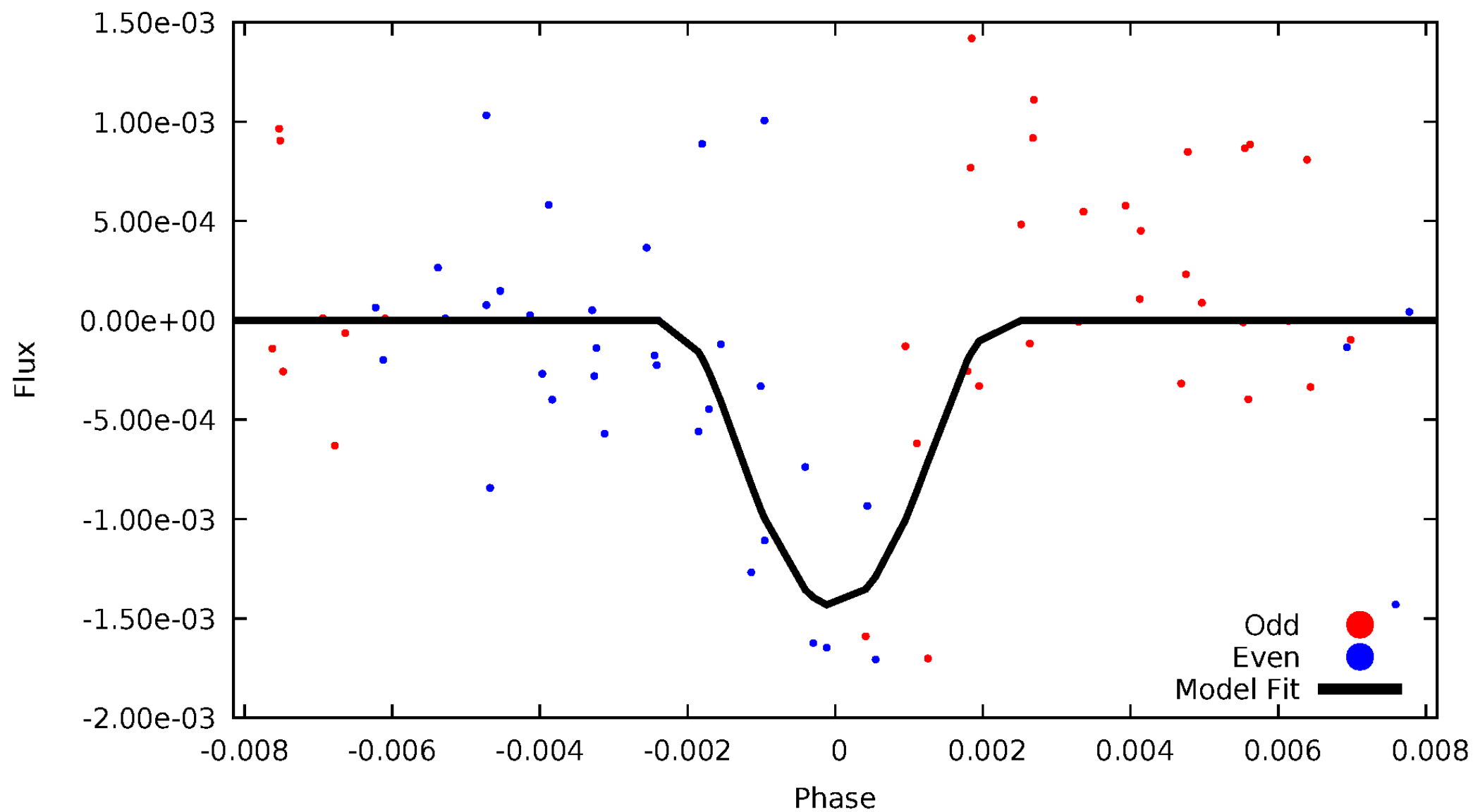


TCE 011466610-05



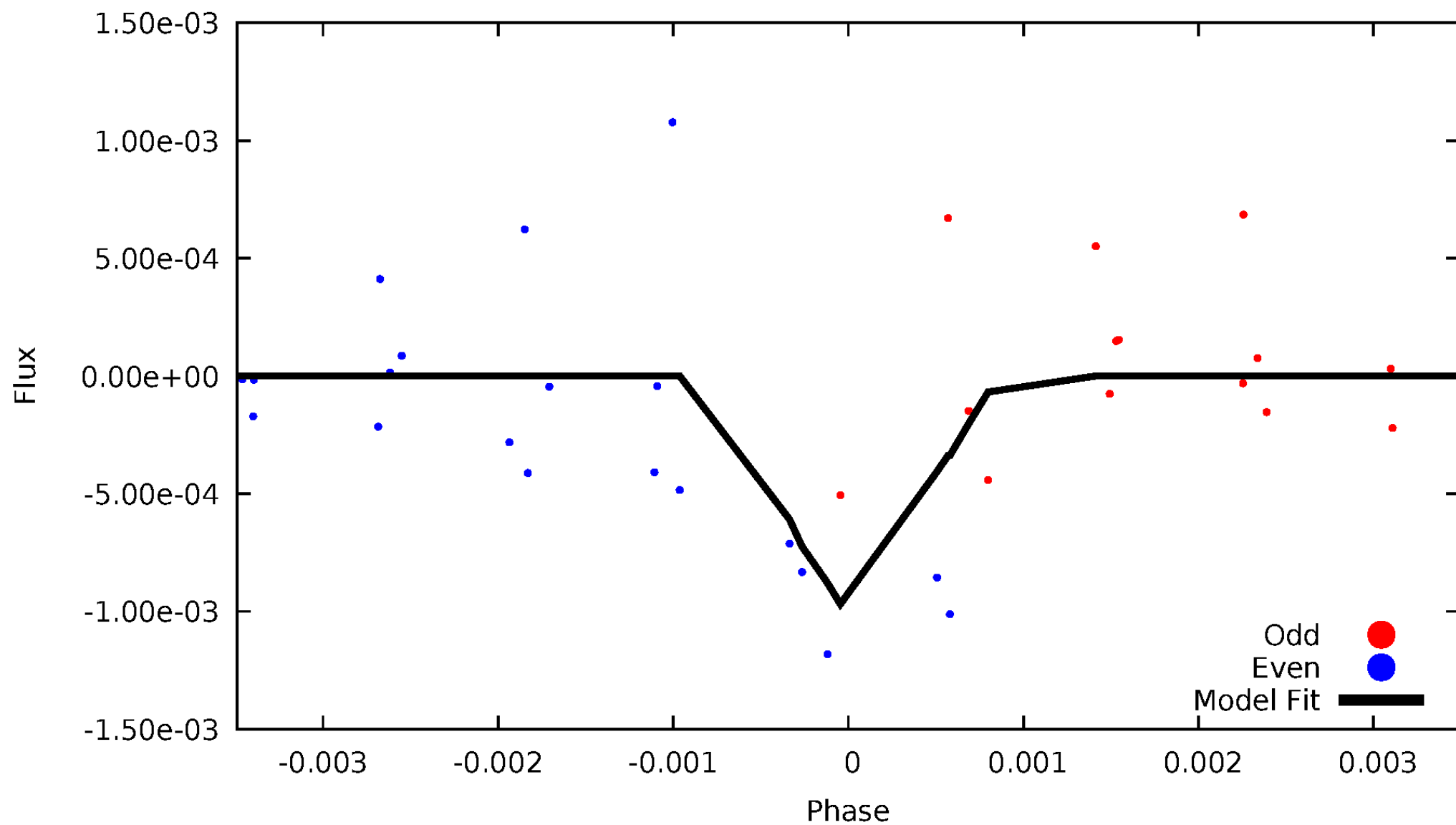
DV Odd/Even

TCE 011466610-05



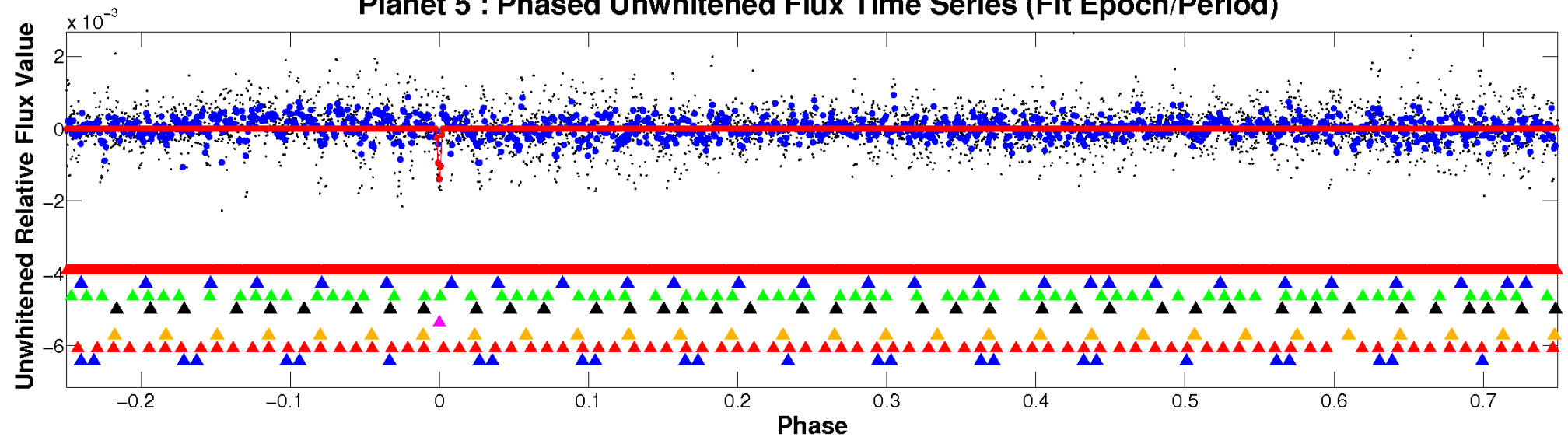
ALT Odd/Even

TCE 011466610-05

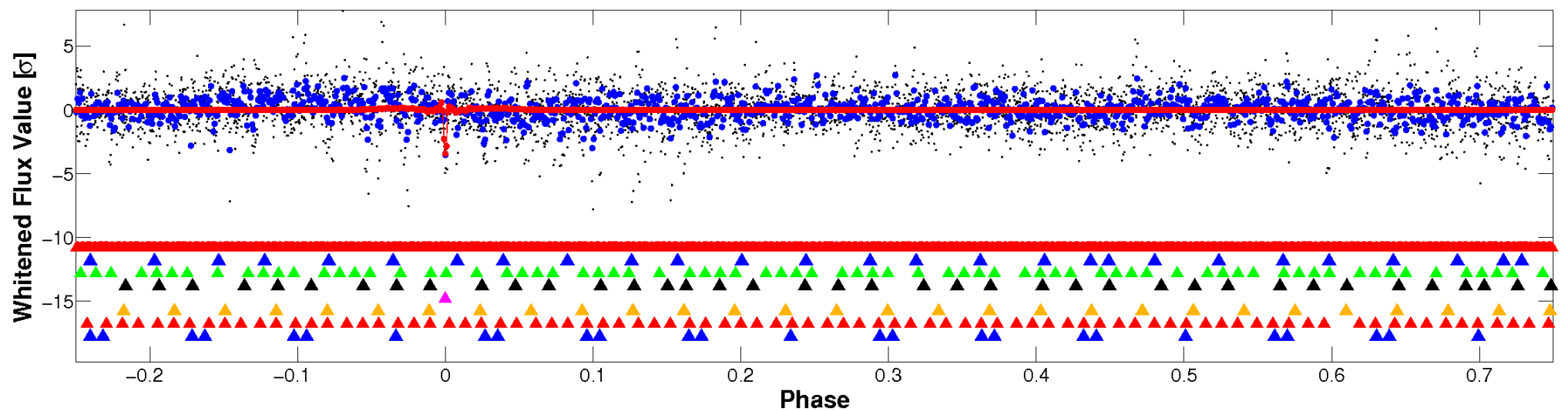


Non-Whitened Vs. Whitened Light Curve

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

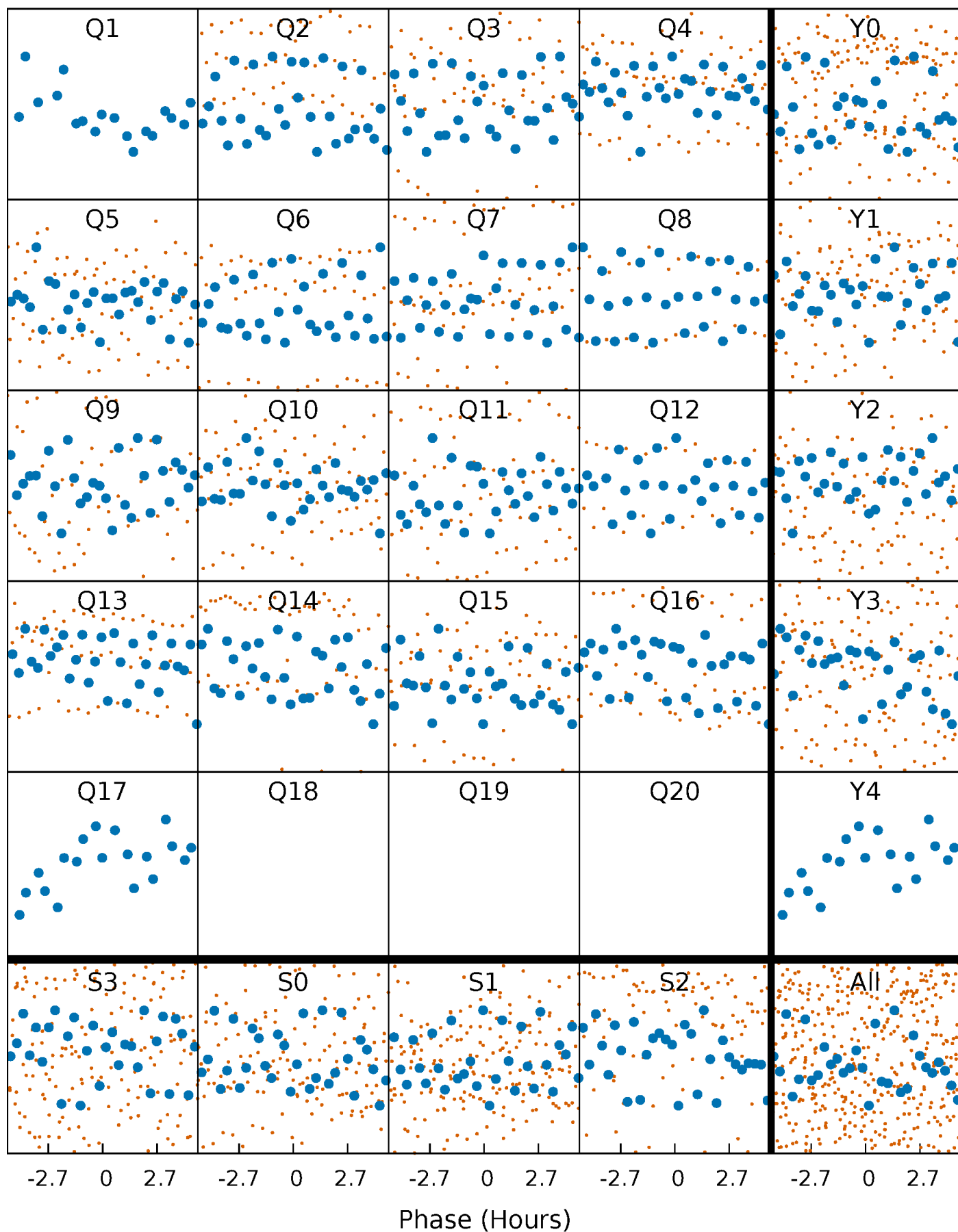


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



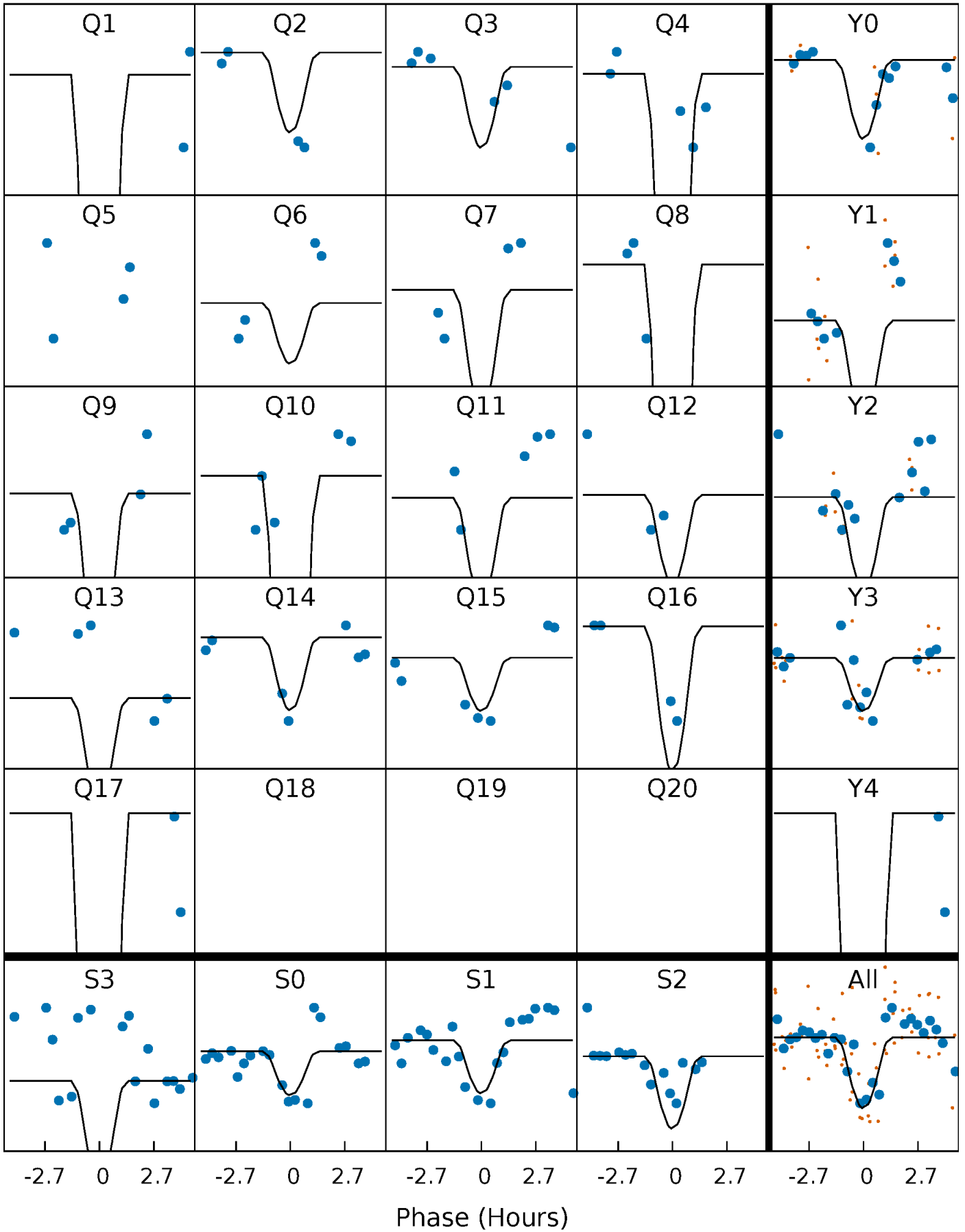
PDC Quarter-Phased Transit Curves

TCE 011466610-05 P= 24.219301 Days $T_0=149.428216$ (BKJD)



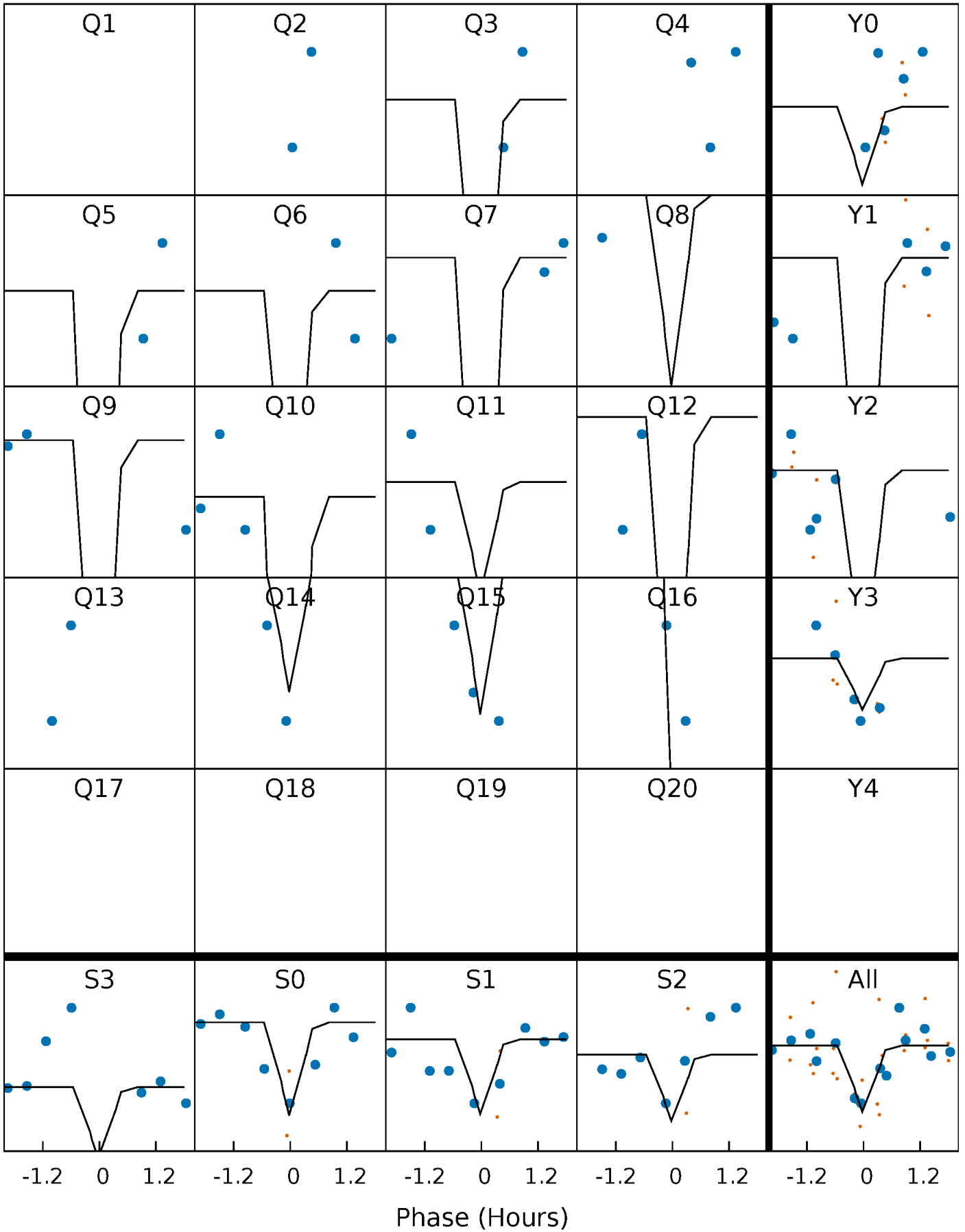
DV Quarter-Phased Transit Curves

TCE 011466610-05 P= 24.219301 Days $T_0=149.428216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

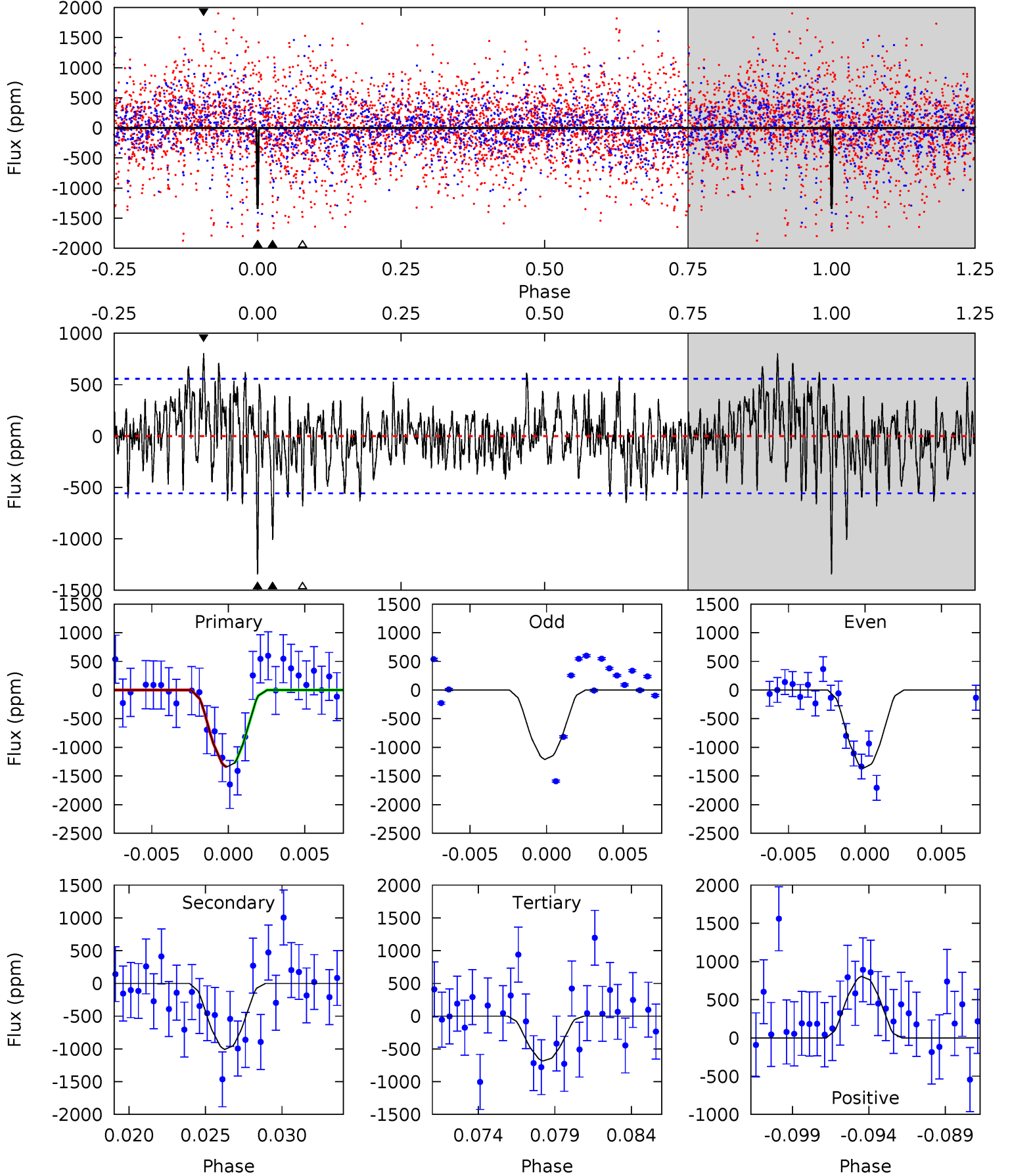
TCE 011466610-05 P= 24.219069 Days $T_0=149.439981$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-05, P = 24.219301 Days, E = 125.208915 Days

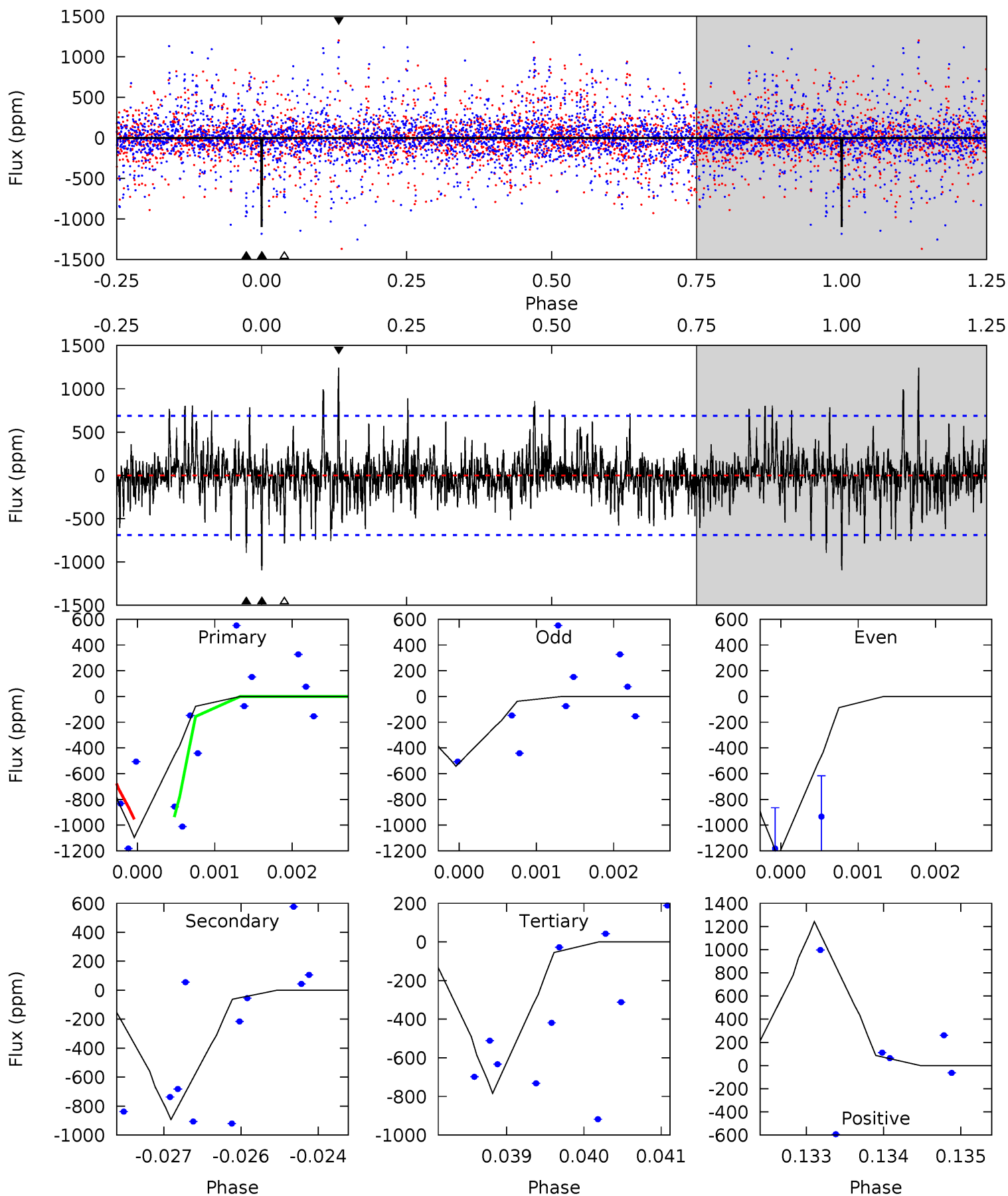
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	9.33	6.32	7.46	5.16	2.81	2.10	6.12	4.99	3.01	1.87	0.71	0.90	0.37	0.33



Alt Model-Shift Uniqueness Test

011466610-05, P = 24.219069 Days, E = 125.220912 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	7.06	6.20	9.82	5.44	3.27	1.62	2.46	-1.16	0.86	-2.77	2.61	0.80	0.53	0.07



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1008 ± 108	$15.22^{+14.99}_{-10.14}$	919^{+70}_{-57}	3322^{+1652}_{-569}	57^{+476}_{-42}
Alt.	-893 ± 127	$14.04^{+14.97}_{-9.86}$	916^{+75}_{-58}	3362^{+1797}_{-614}	60^{+572}_{-46}

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 $A_{obs} \gg 1.0$

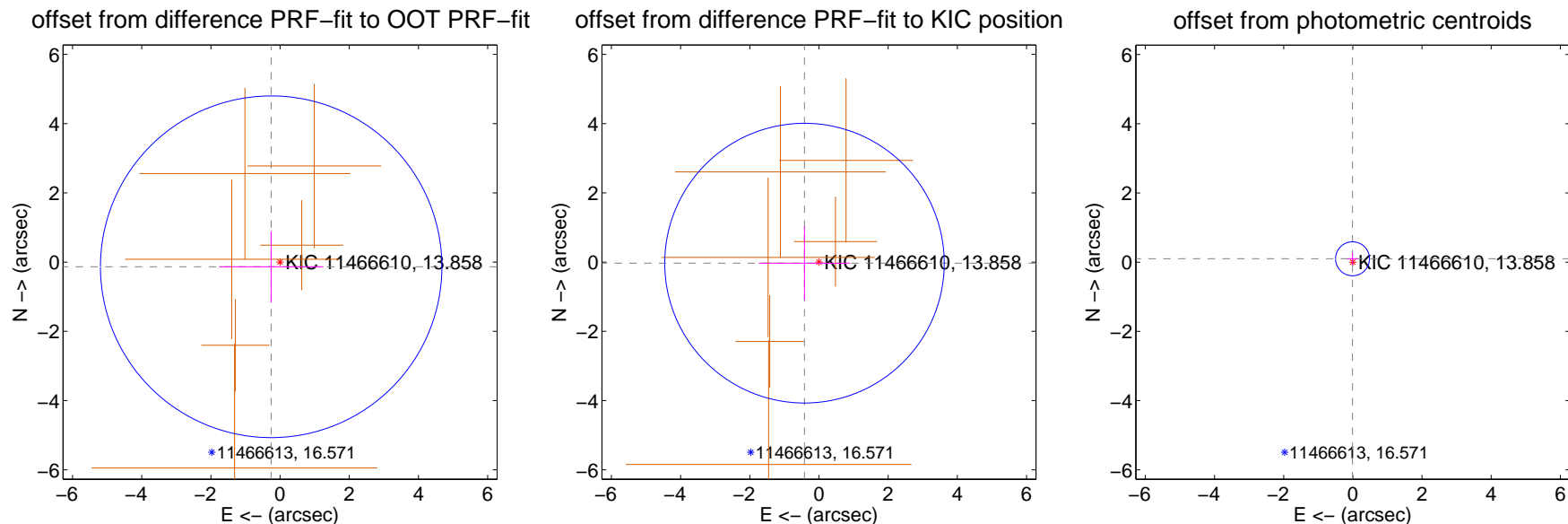
DV Centroid Data

Supplemental centroid analysis for 011466610-05. Kepler magnitude: 13.86. Transit SNR 9.96

There are 0 quarters with good PRF difference image offsets

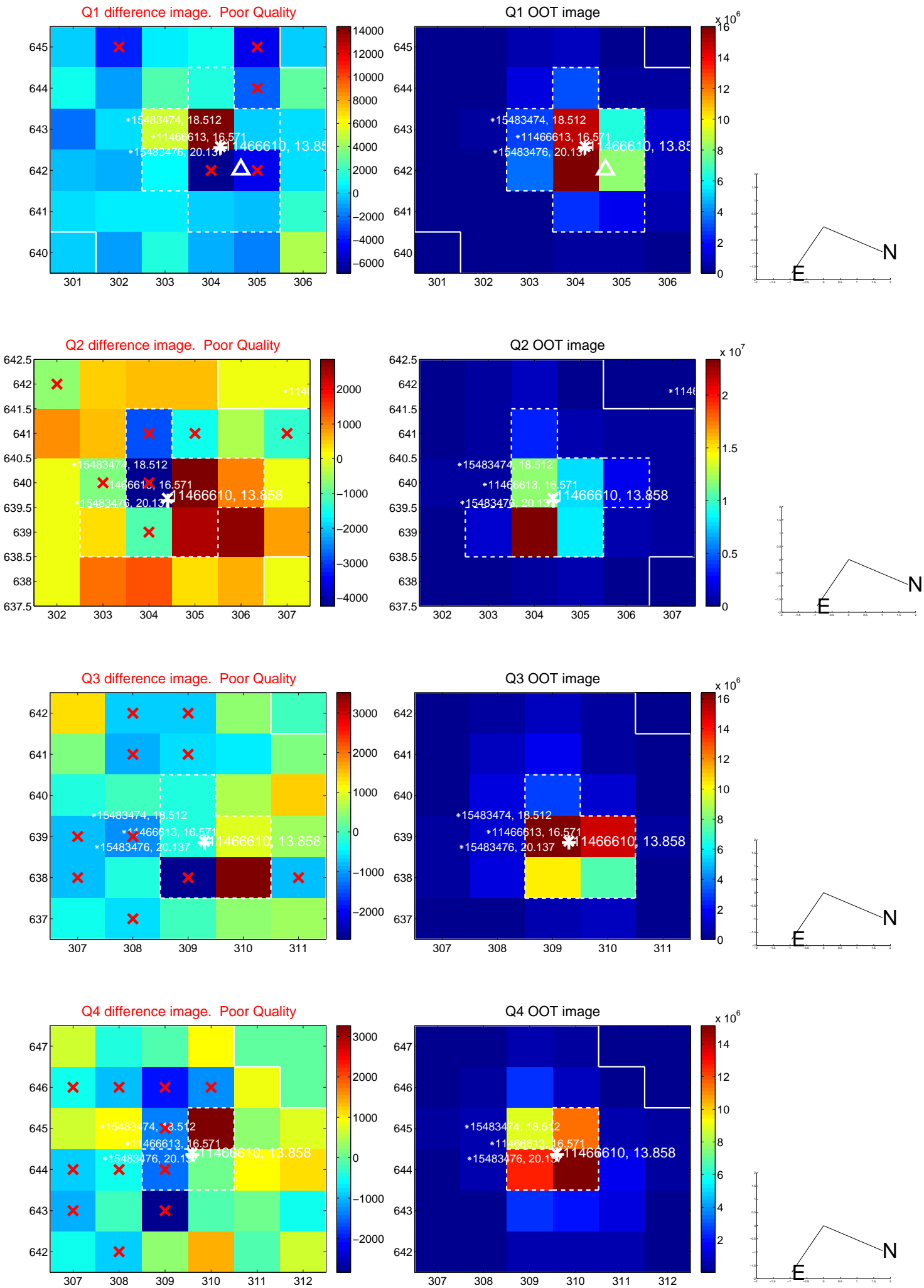
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.292 ± 1.645	0.18	0.258 ± 1.506	-0.135 ± 1.029
PRF-fit source offset from KIC position	0.421 ± 1.347	0.31	0.419 ± 1.318	-0.031 ± 1.061
photometric centroid source offset	0.10 ± 0.16	0.60	0.01 ± 0.15	0.10 ± 0.16

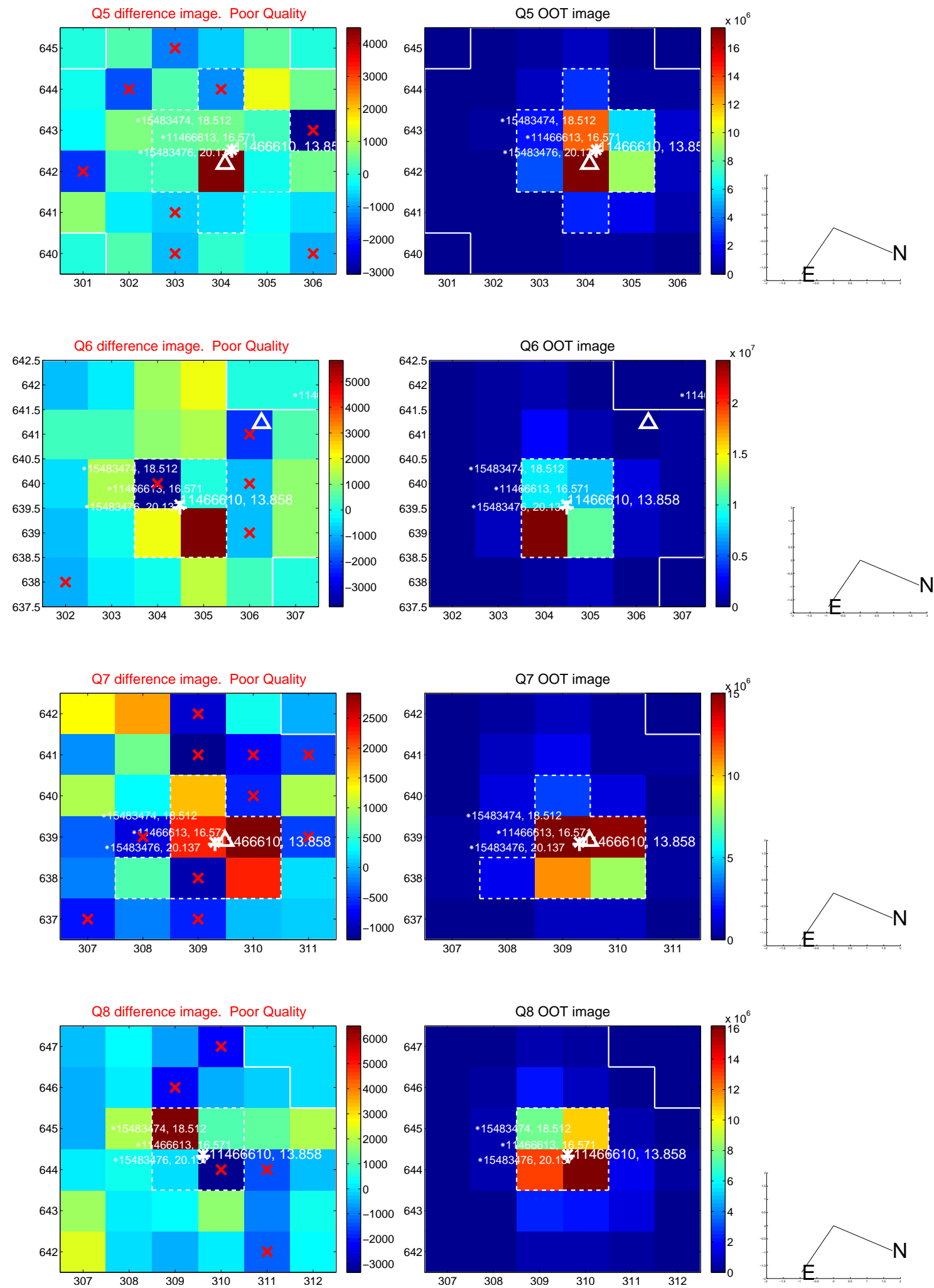


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

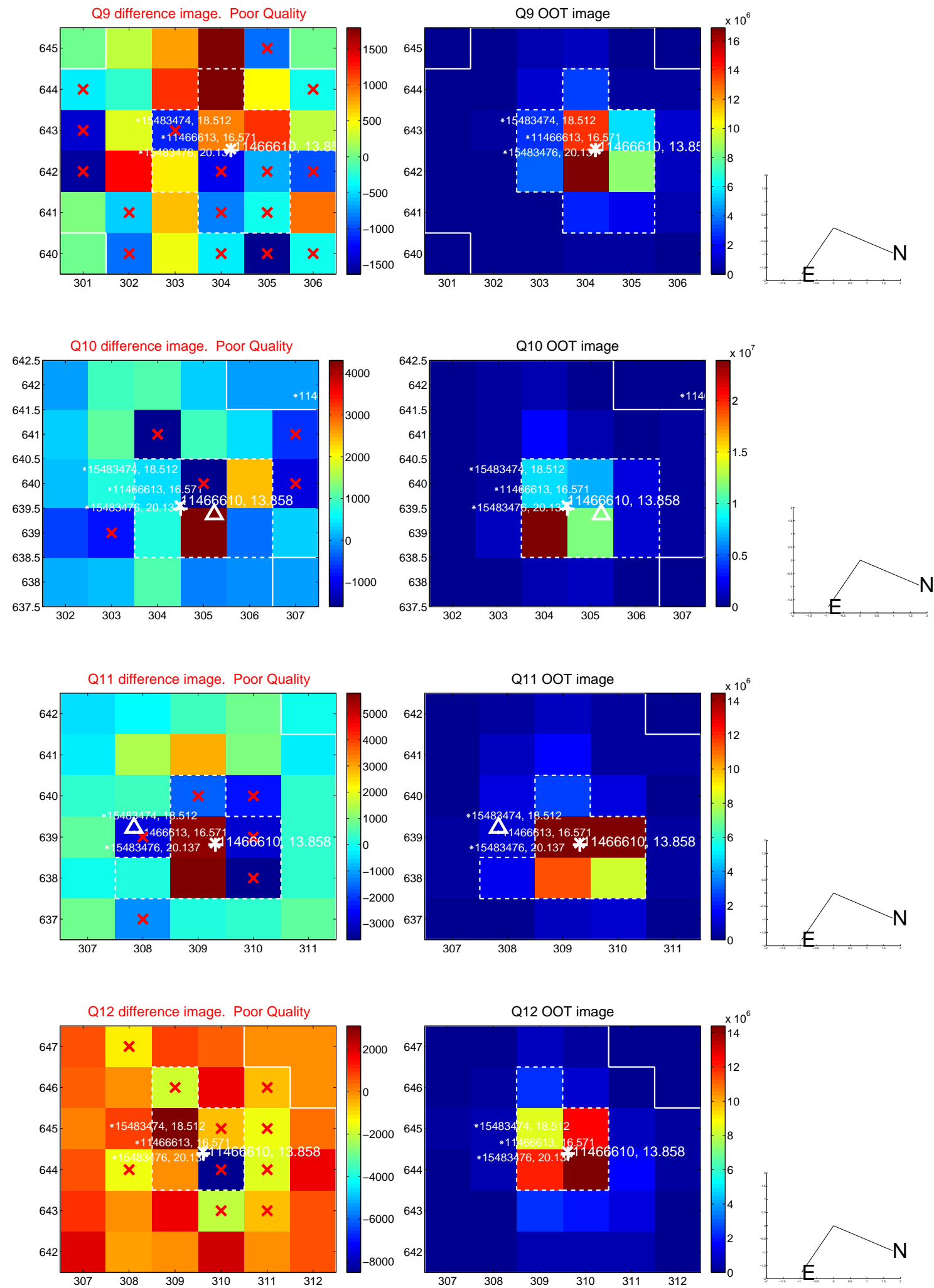
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



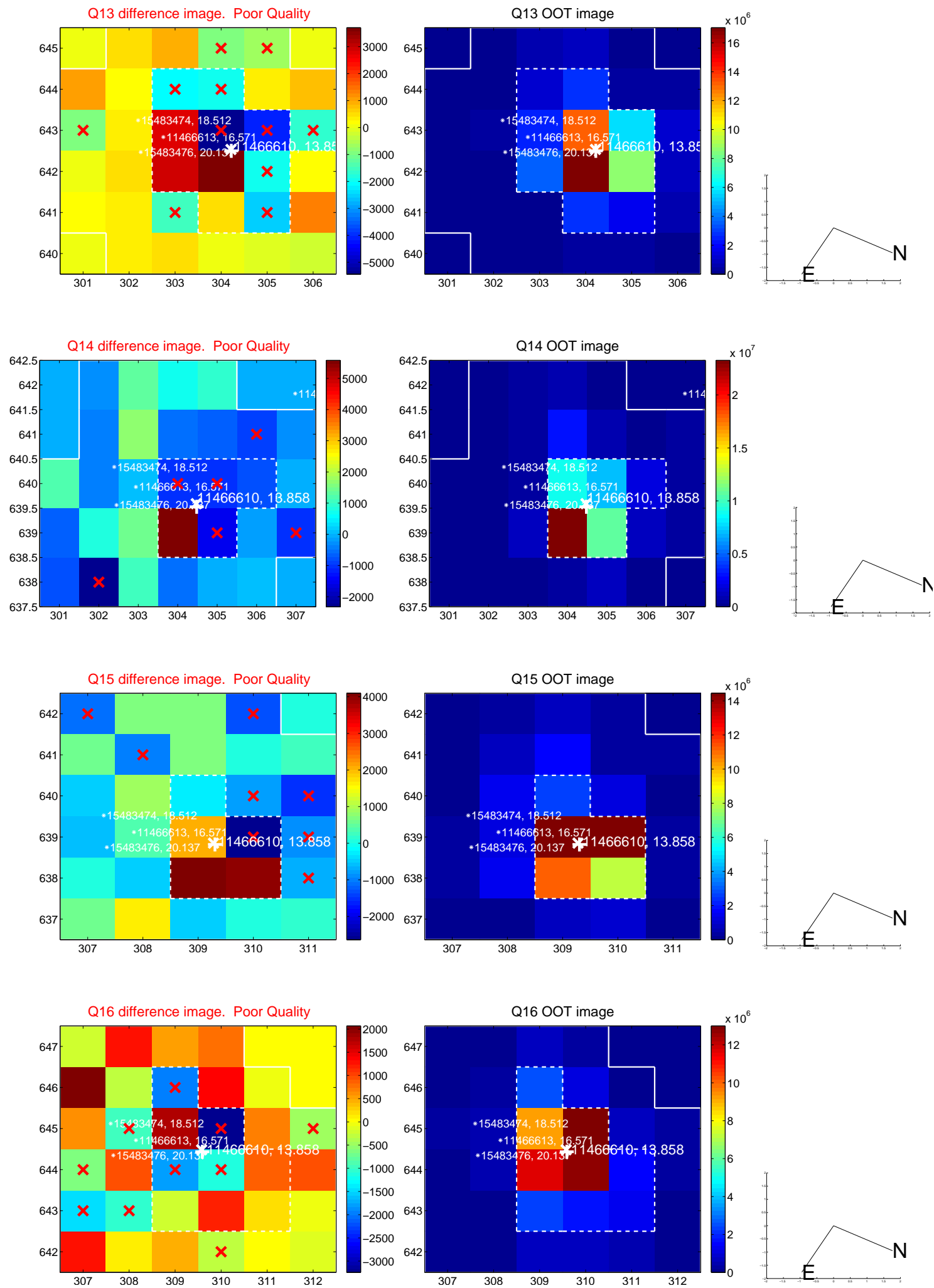
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



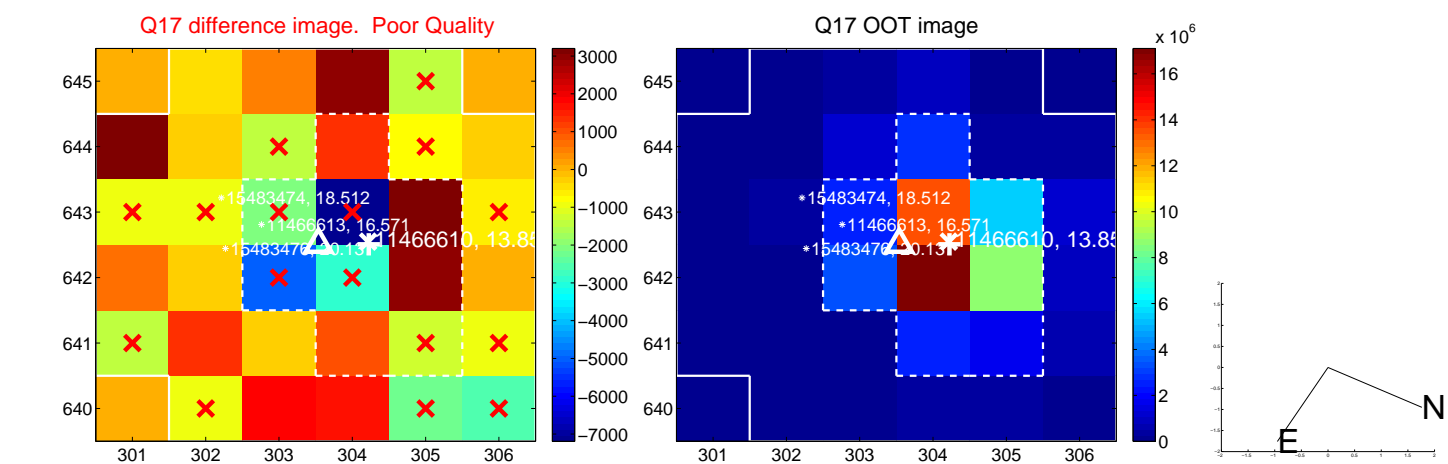
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



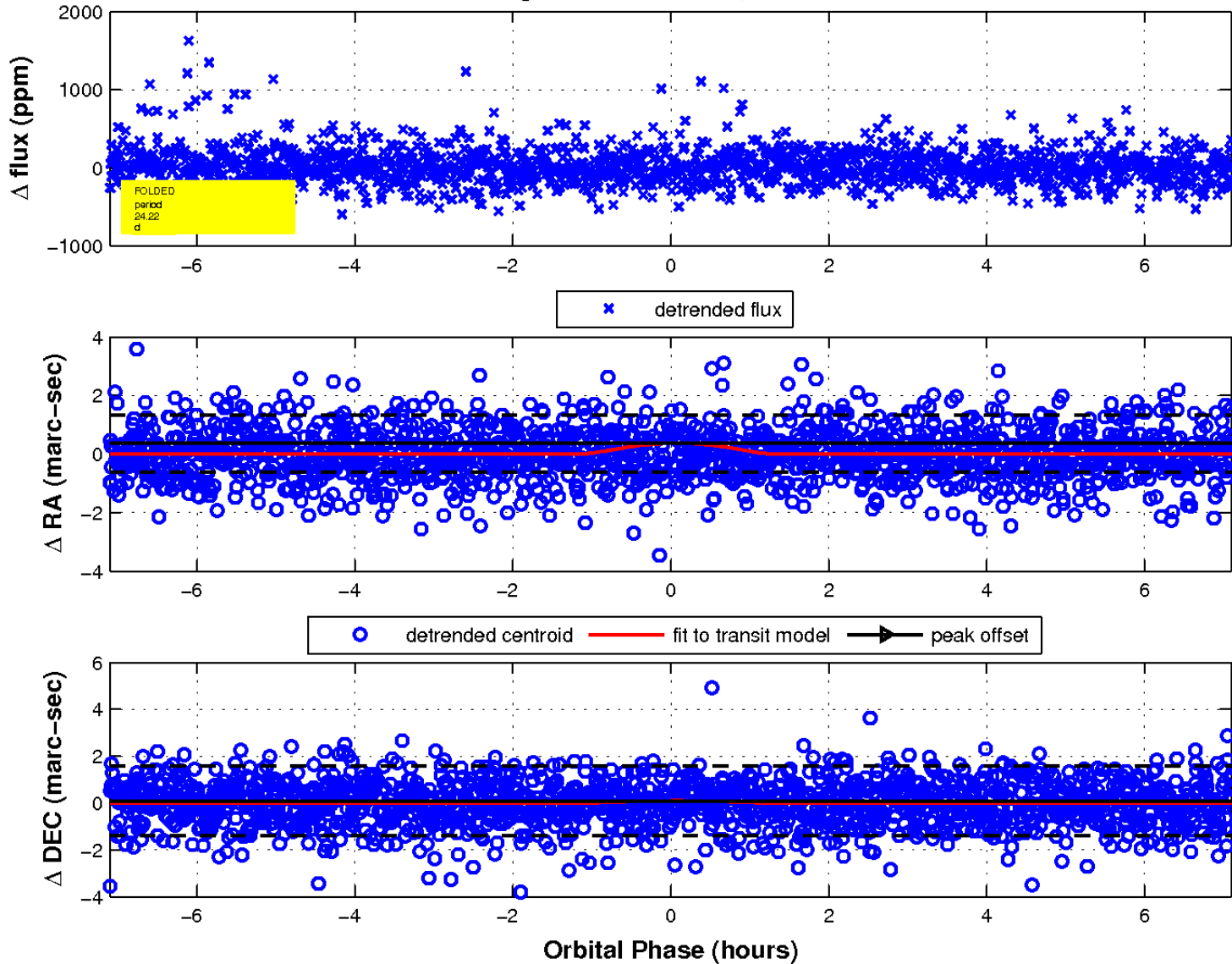
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

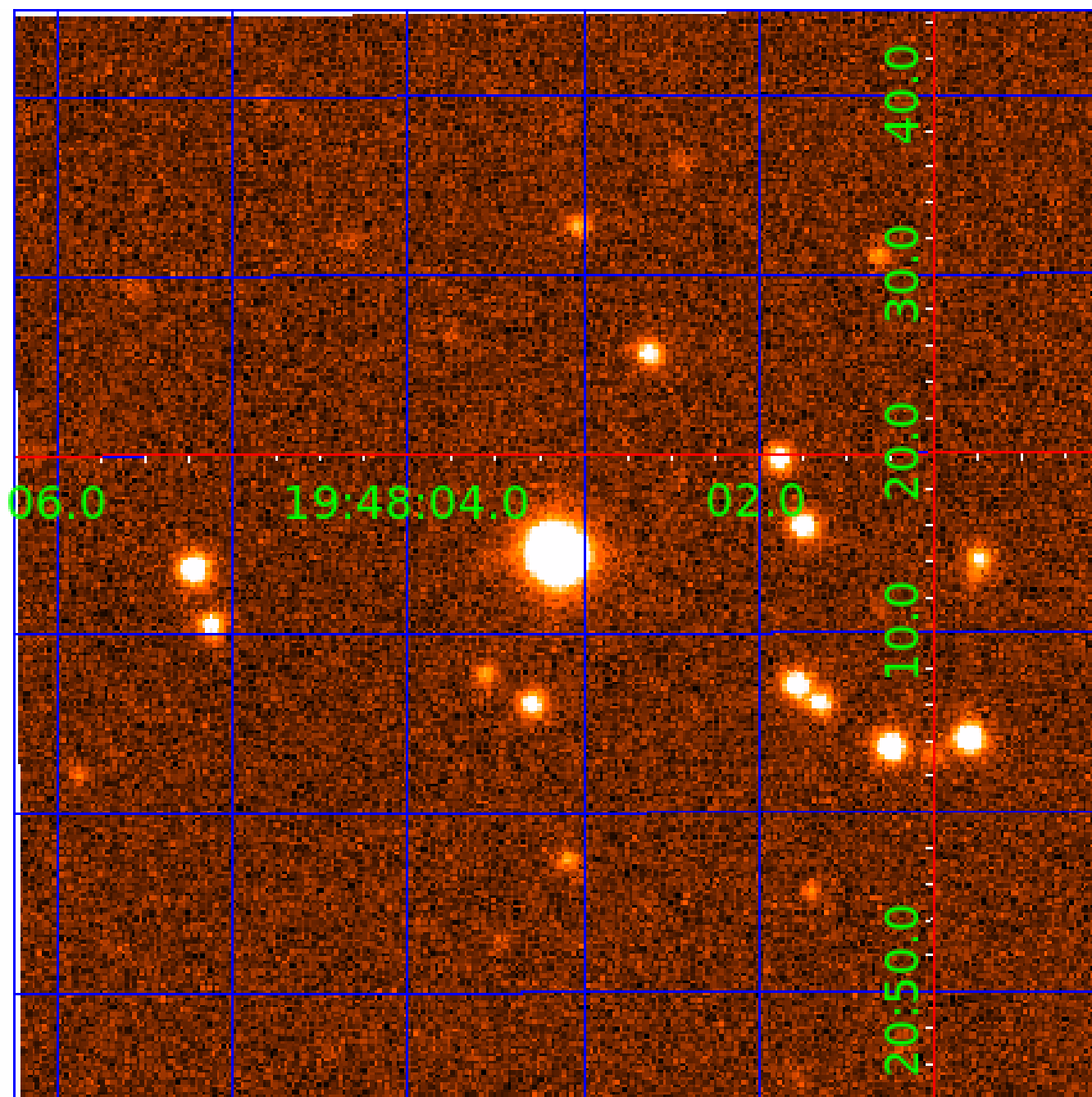


fluxWeightedCentroids, Planet 5 of 8



UKIRT Image

Declination



KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

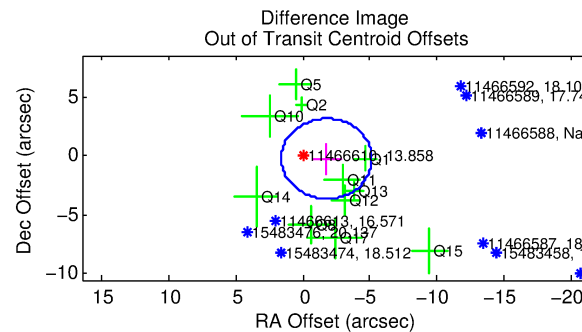
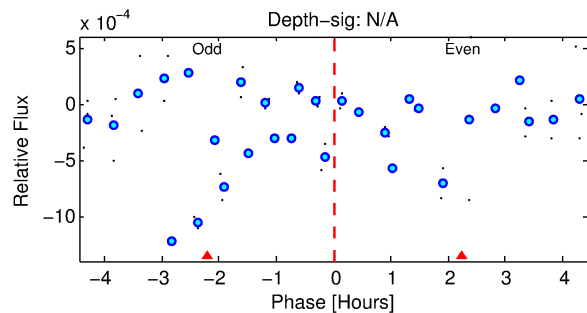
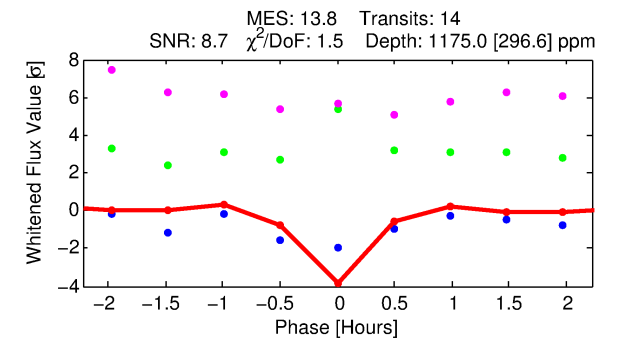
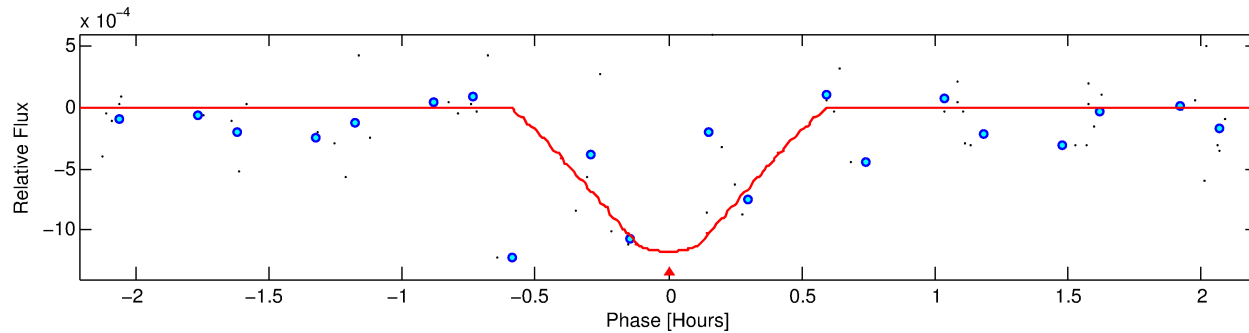
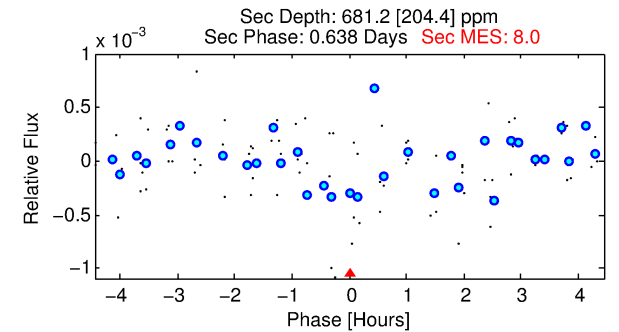
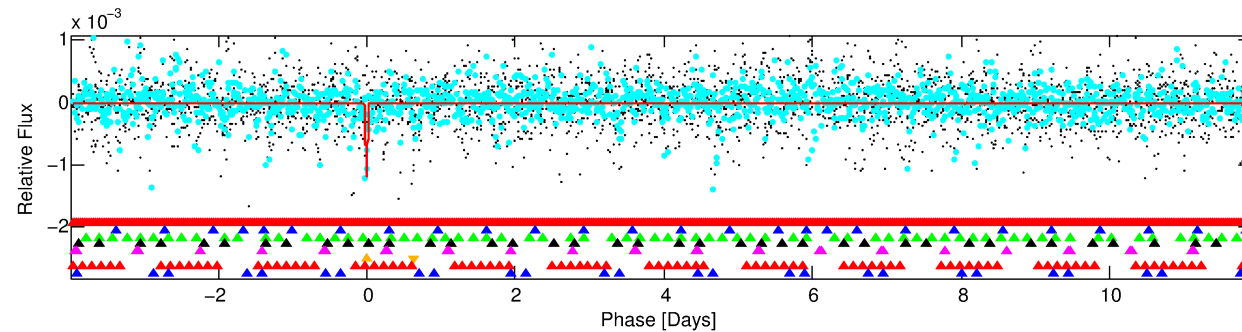
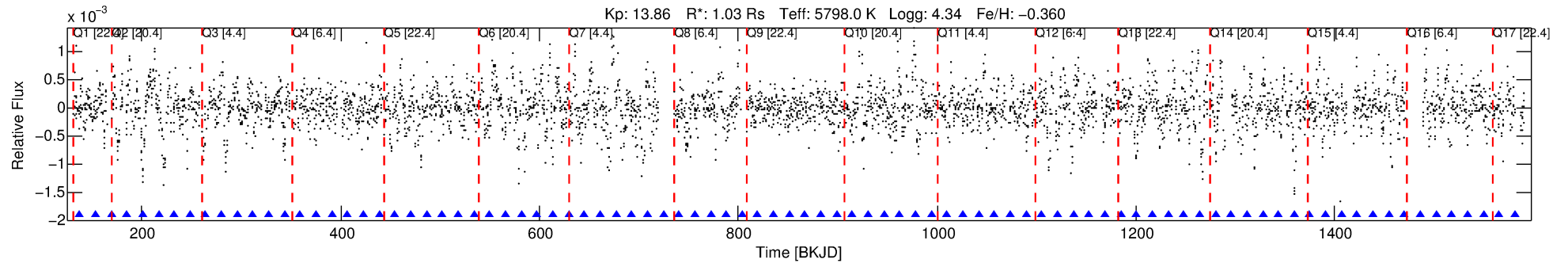
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-06

No Significant Match Found

DV One-Page Summary

KIC: 11466610 Candidate: 6 of 8 Period: 15.868 d



DV Fit Results:

Period = 15.86757 [0.00007] d
Epoch = 137.4832 [0.0034] BKJD
Rp/R* = 0.0318 [0.0483]
a/R* = 169.17 [1230.72]
b = 0.01 [573.97]
Seff = 78.70 [28.64]
Teq = 759 [69] K
Rp = 3.57 [5.51] Re
a = 0.1166 [0.0278] AU
Ag = 399.48 [1224.71] [0.33σ]
Teff = 5250 [4000] K [1.12σ]

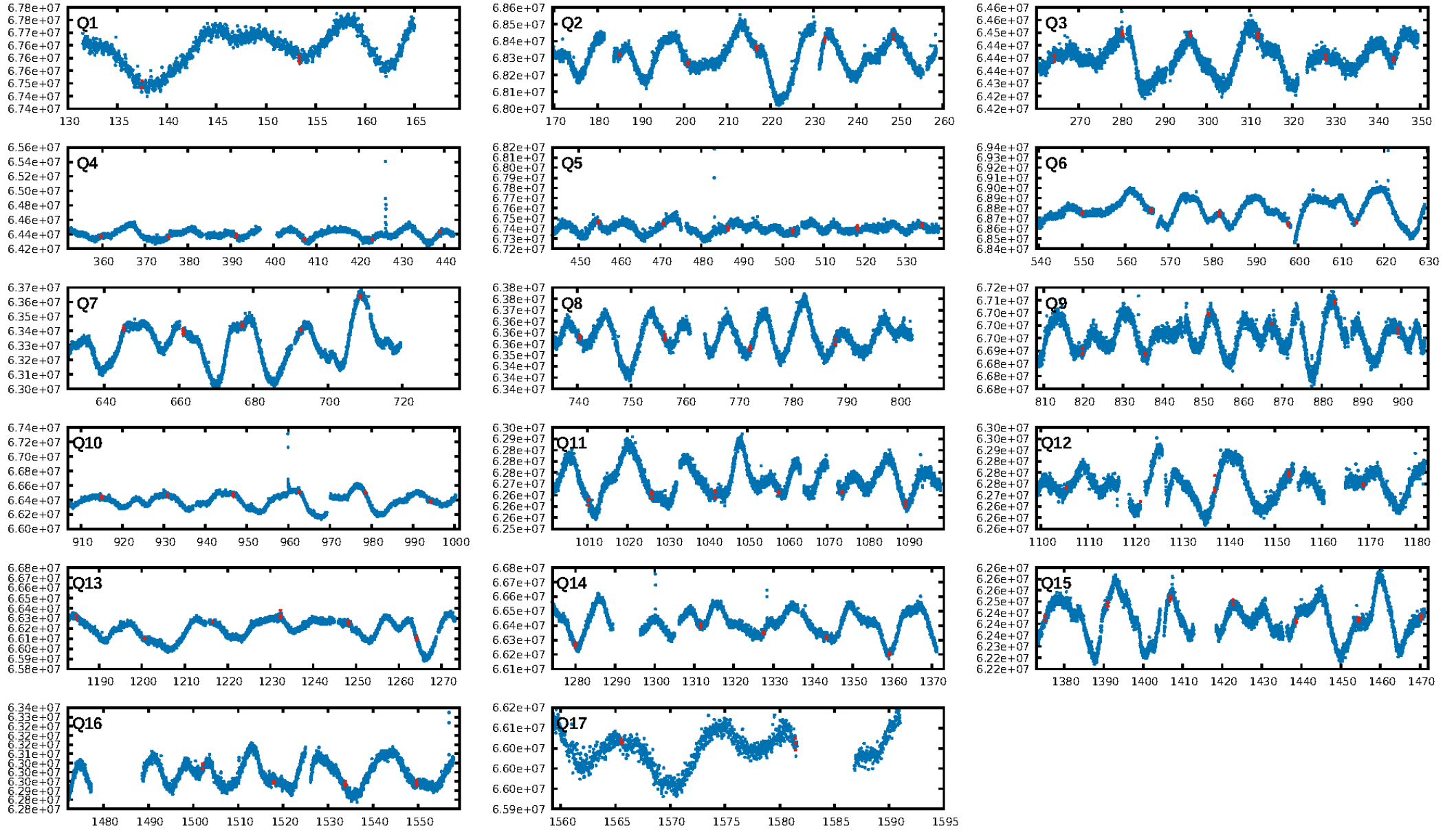
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [78.41σ]
LongPeriod-sig: 100.0% [14.77σ]
ModelChiSquare2-sig: 27.6%
ModelChiSquareGof-sig: 98.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: -1.537
Centroid-sig: 39.5%
Centroid-so: 0.292 arcsec [1.35σ]
OotOffset-rm: 1.770 arcsec [1.57σ]
KicOffset-rm: 1.631 arcsec [1.50σ]
OotOffset-st: 3/2/2/4 [11]
KicOffset-st: 3/2/2/4 [11]
DiffImageQuality-fgm: 0.09 [1/11]
DiffImageOverlap-fno: 0.00 [0/17]

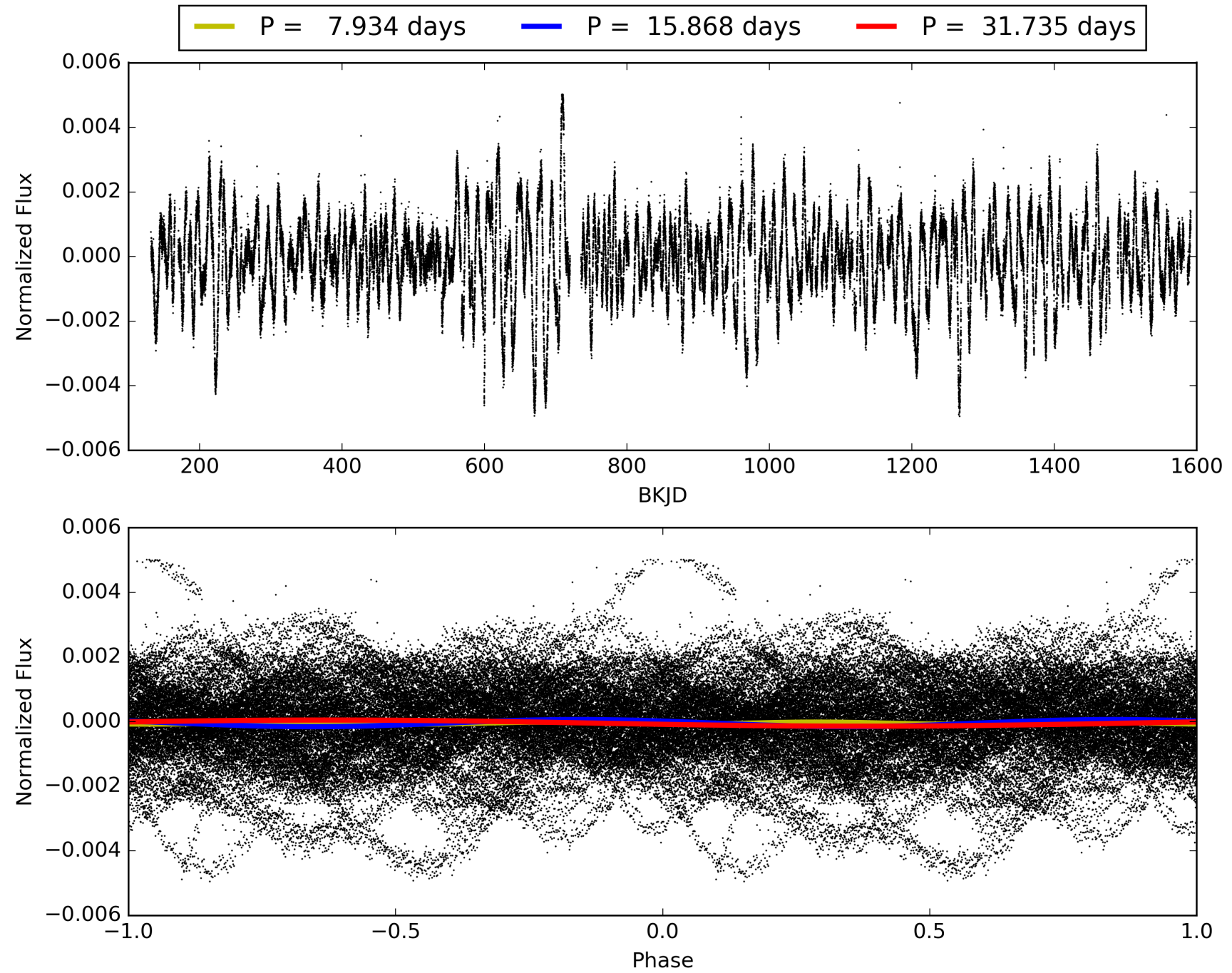
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:48 Z

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

TCE 011466610-06, PDC Light Curves

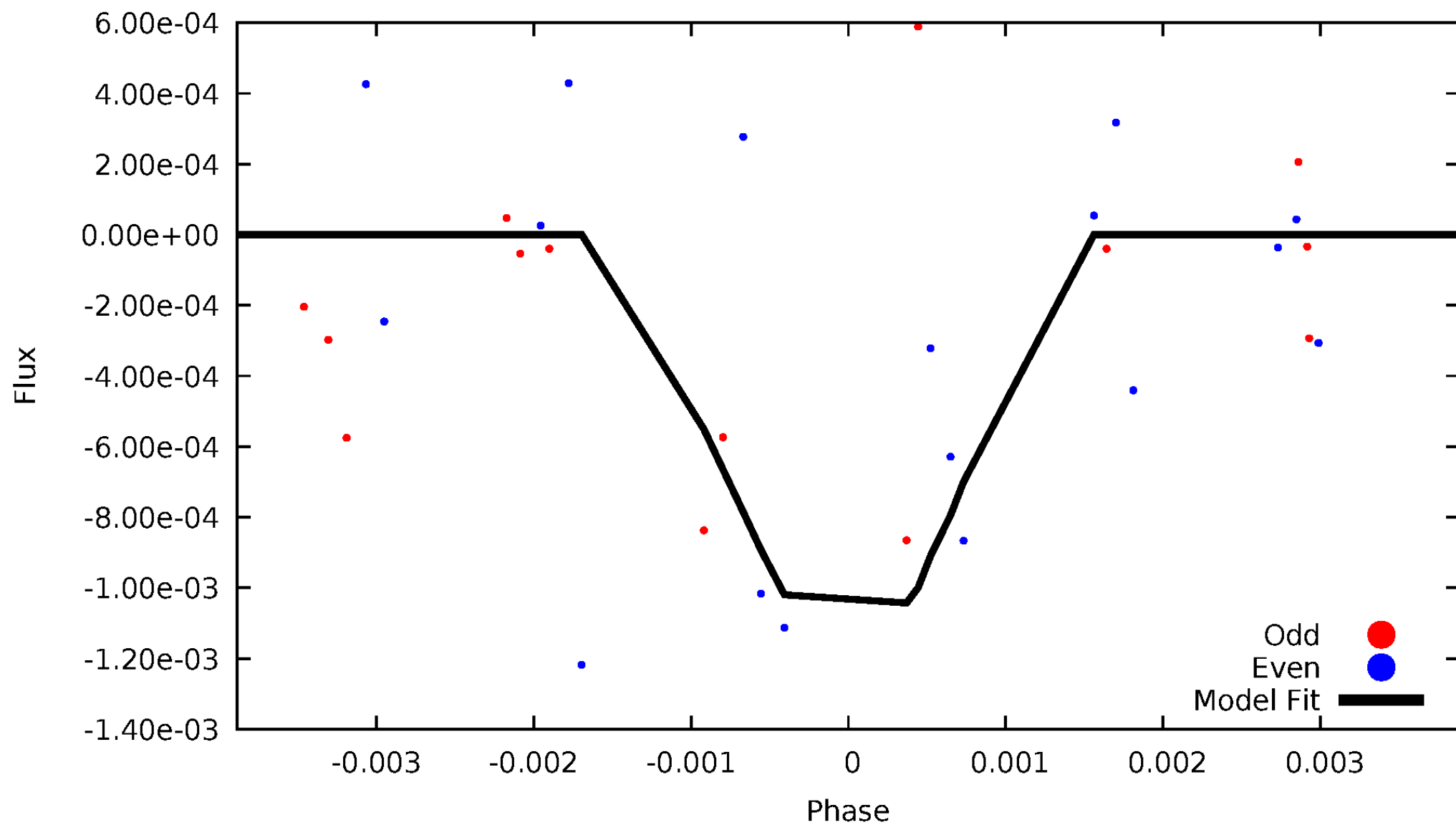


TCE 011466610-06



DV Odd/Even

TCE 011466610-06

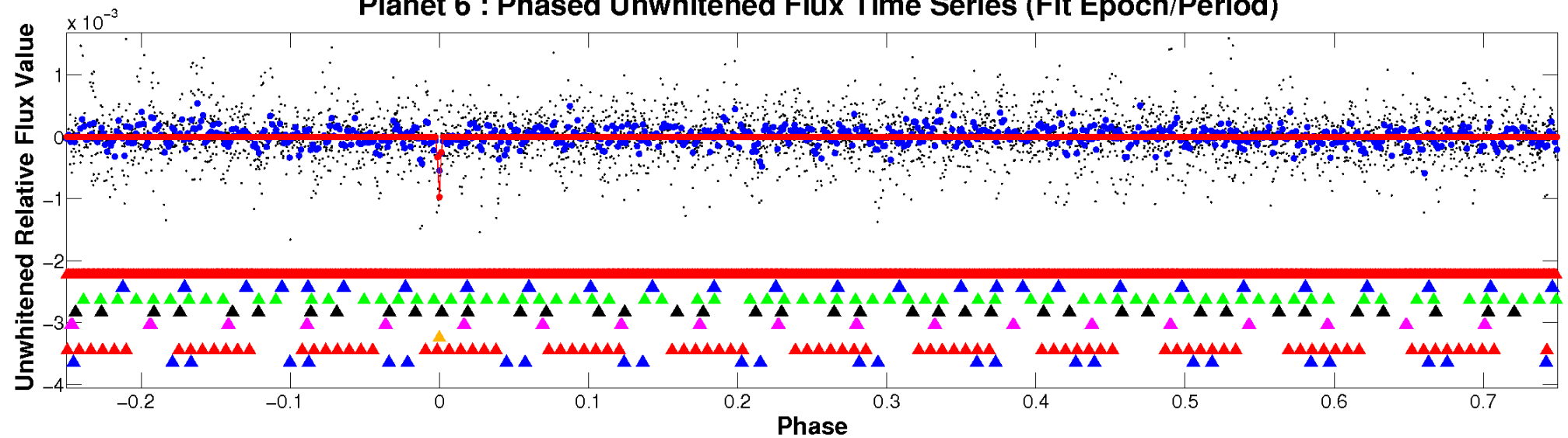


ALT Odd/Even

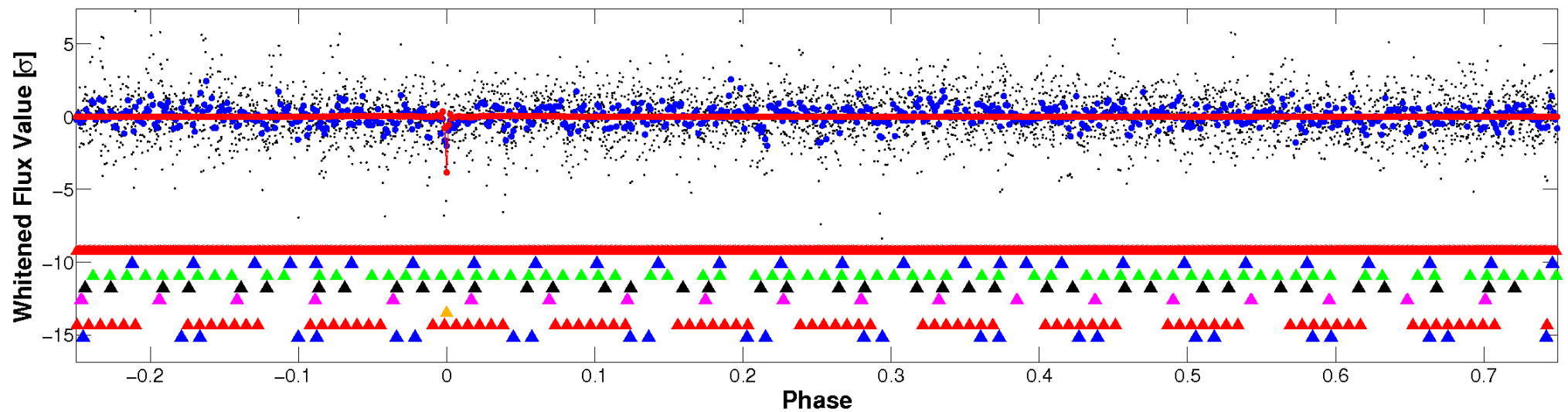
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

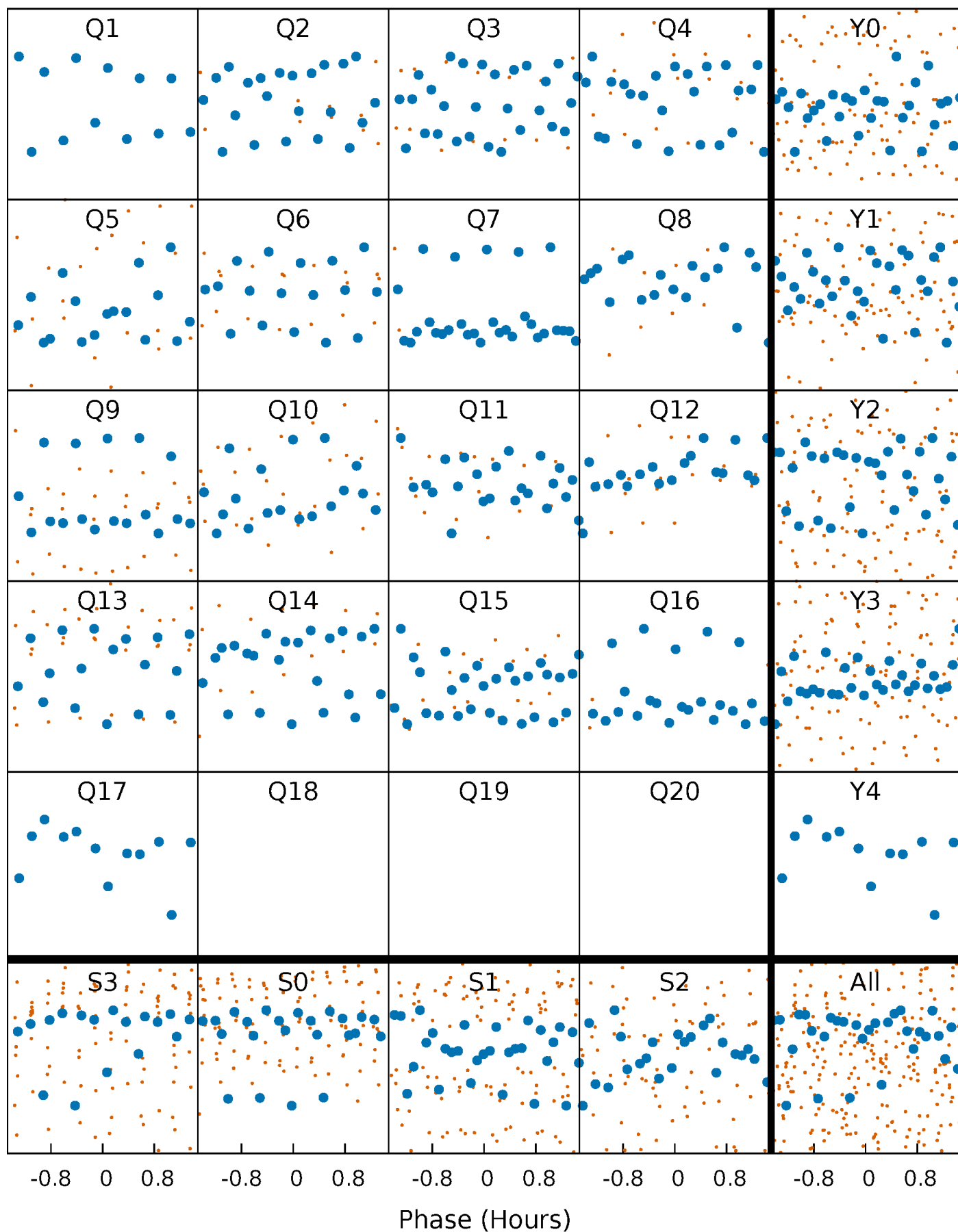


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



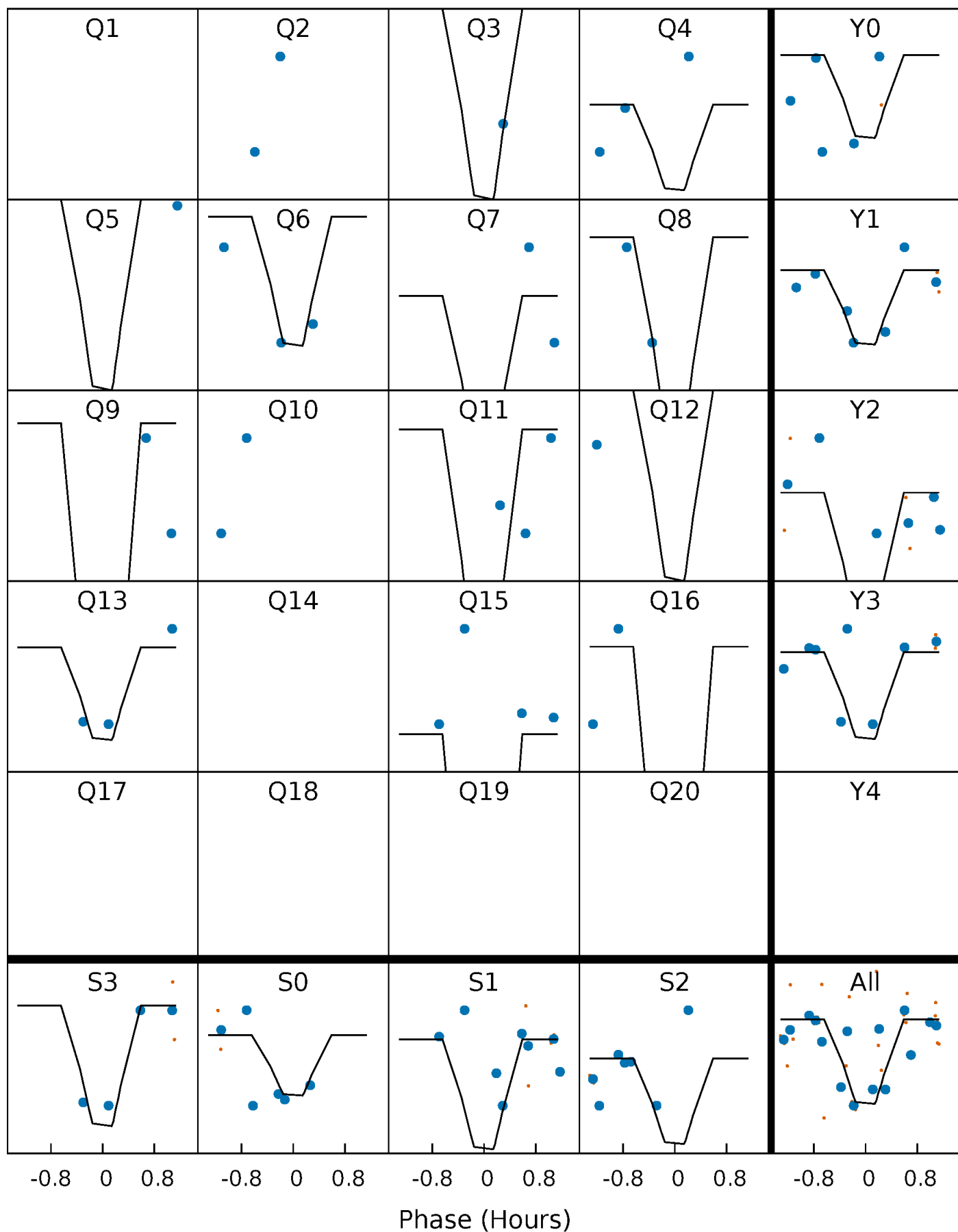
PDC Quarter-Phased Transit Curves

TCE 011466610-06 P= 15.867573 Days $T_0=137.483250$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011466610-06 P= 15.867573 Days $T_0=137.483250$ (BKJD)

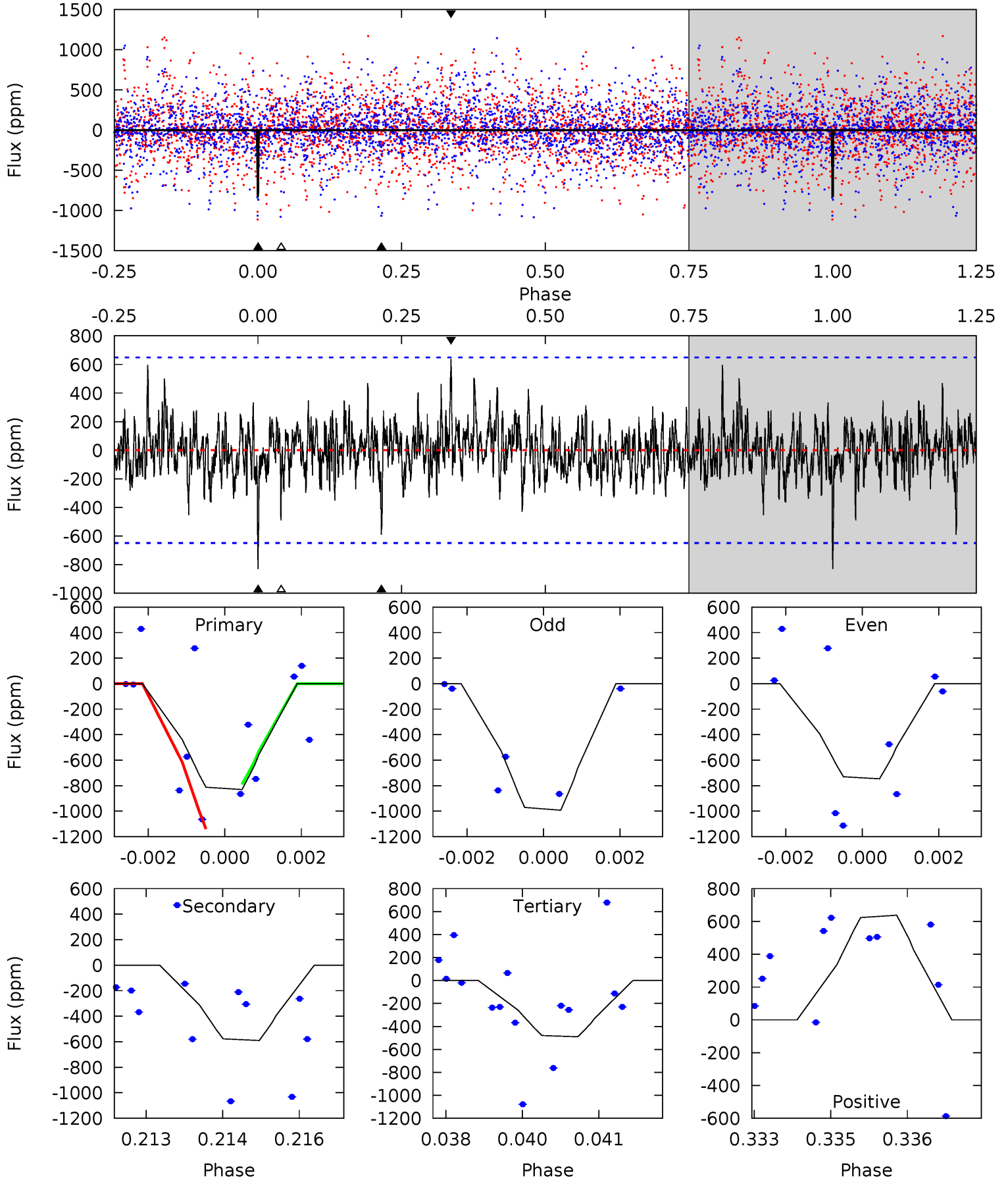


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

011466610-06, $P = 15.867573$ Days, $E = 121.615677$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.86	4.87	4.05	5.27	5.36	3.15	1.18	2.81	1.60	0.83	-0.39	0.91	1.00	0.43	1.35



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-590 ± 121	$5.30^{+5.03}_{-3.43}$	1061^{+83}_{-72}	4320^{+2737}_{-836}	152^{+1068}_{-112}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

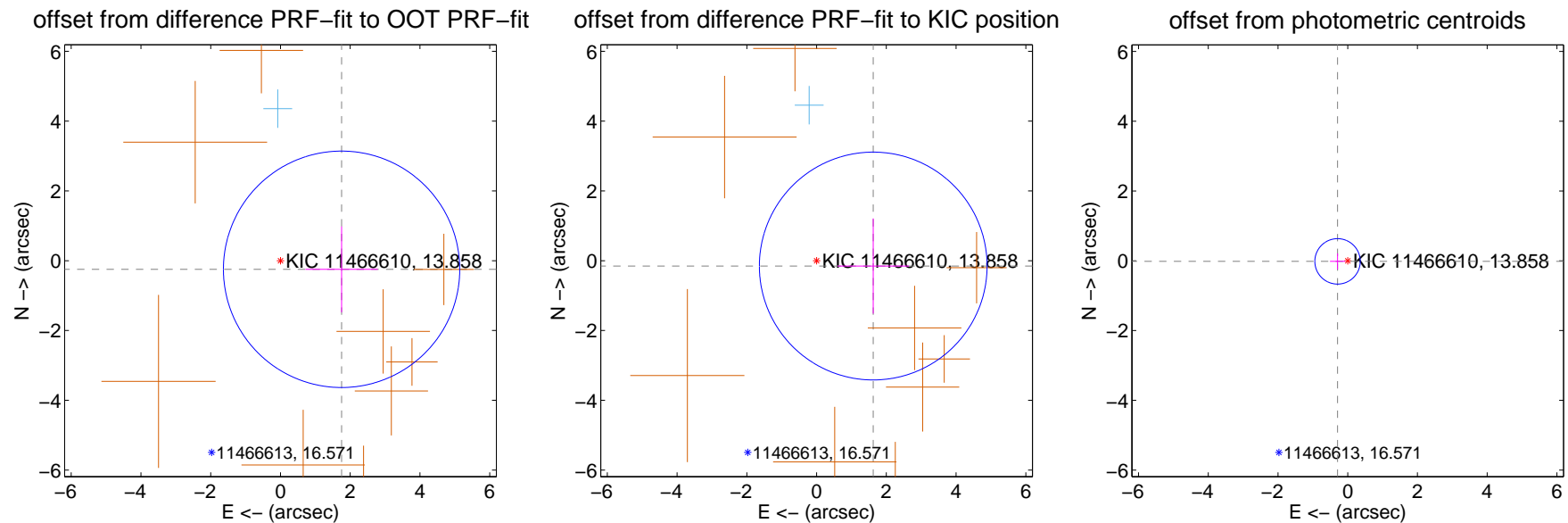
DV Centroid Data

Supplemental centroid analysis for 011466610-06. Kepler magnitude: 13.86. Transit SNR 8.66

There are 1 quarters with good PRF difference image offsets

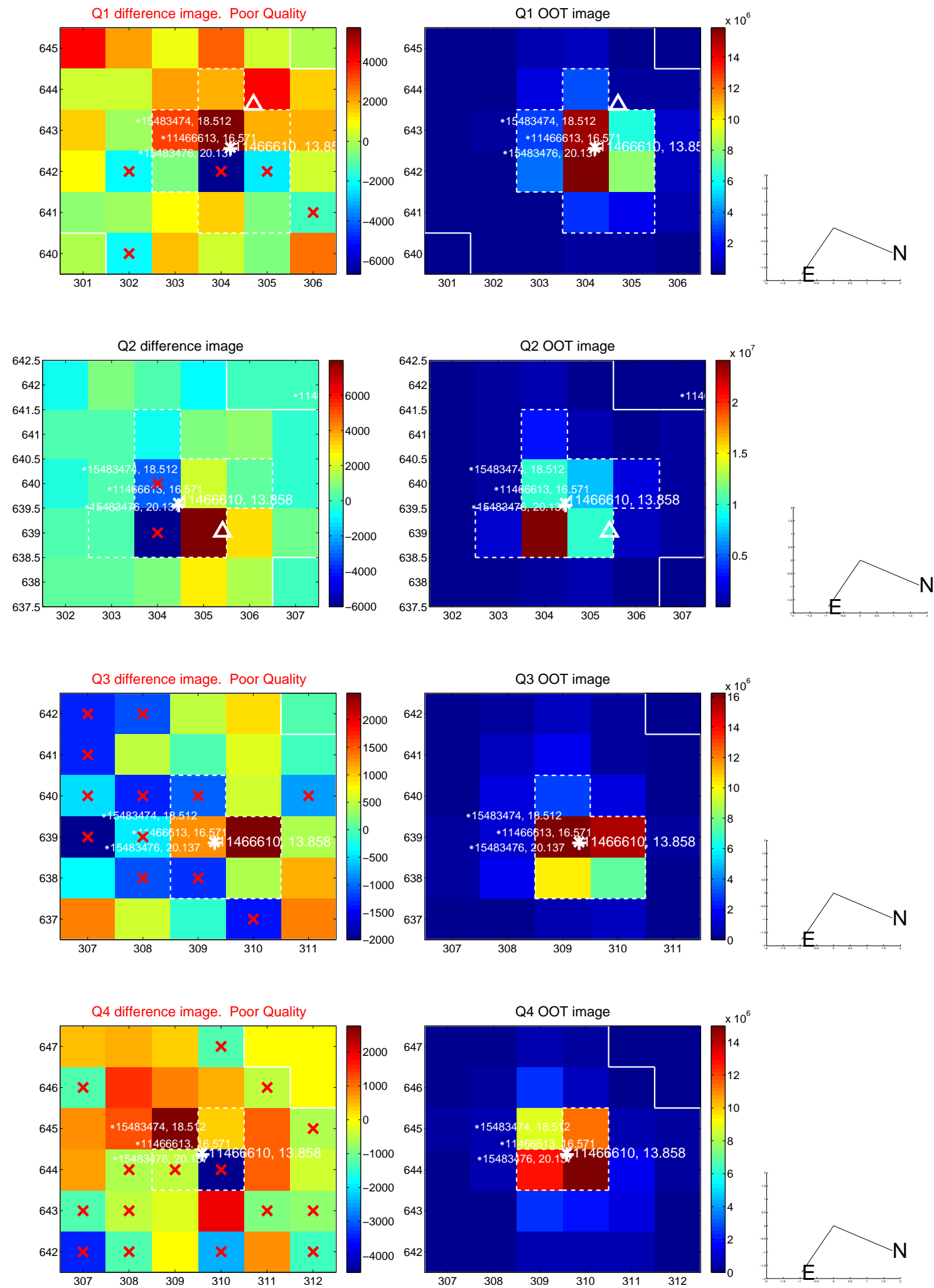
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.770 ± 1.129	1.57	-1.752 ± 1.037	-0.247 ± 1.230
PRF-fit source offset from KIC position	1.631 ± 1.088	1.50	-1.624 ± 1.023	-0.153 ± 1.363
photometric centroid source offset	0.29 ± 0.22	1.35	0.29 ± 0.22	-0.02 ± 0.23

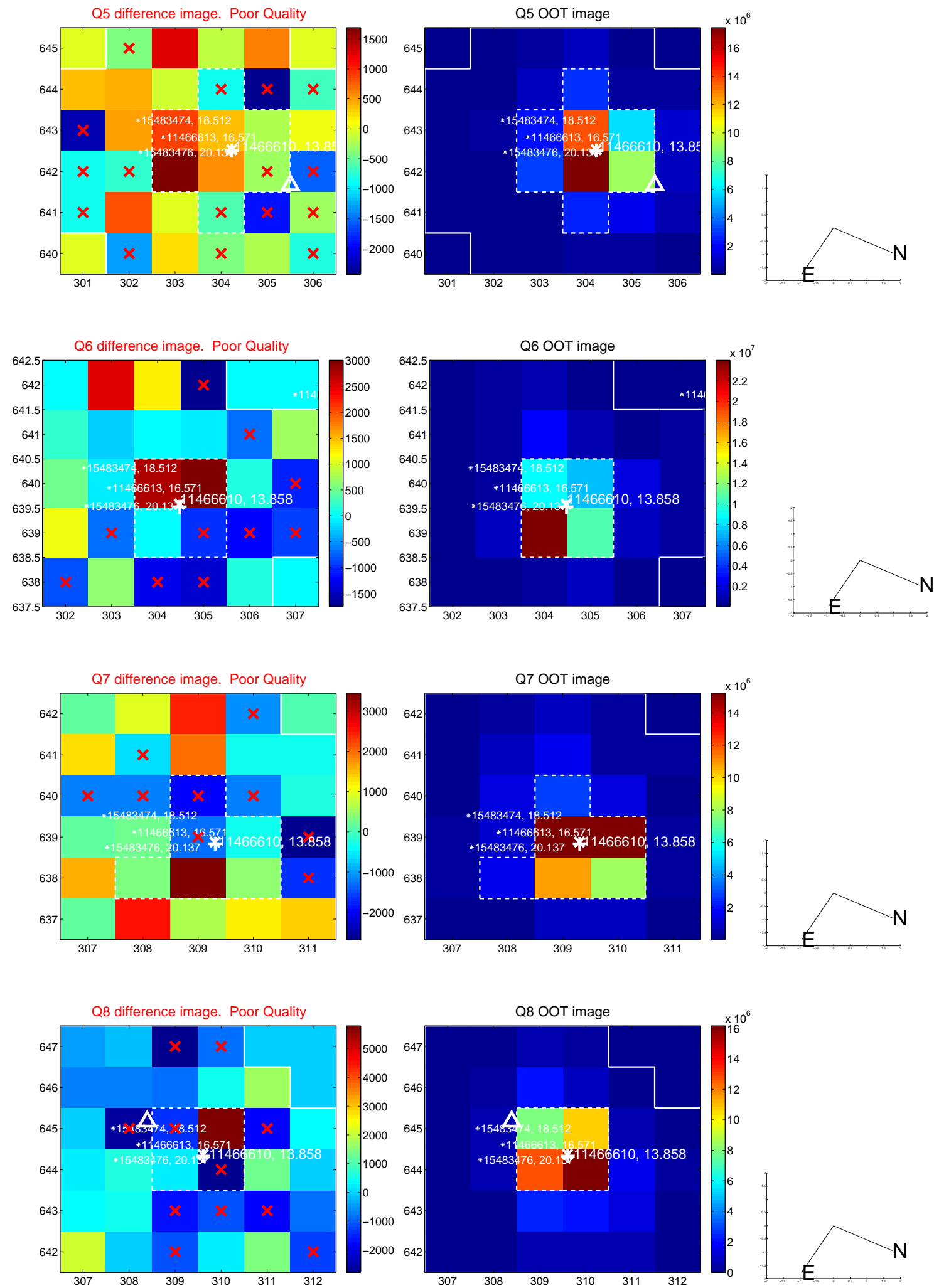


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

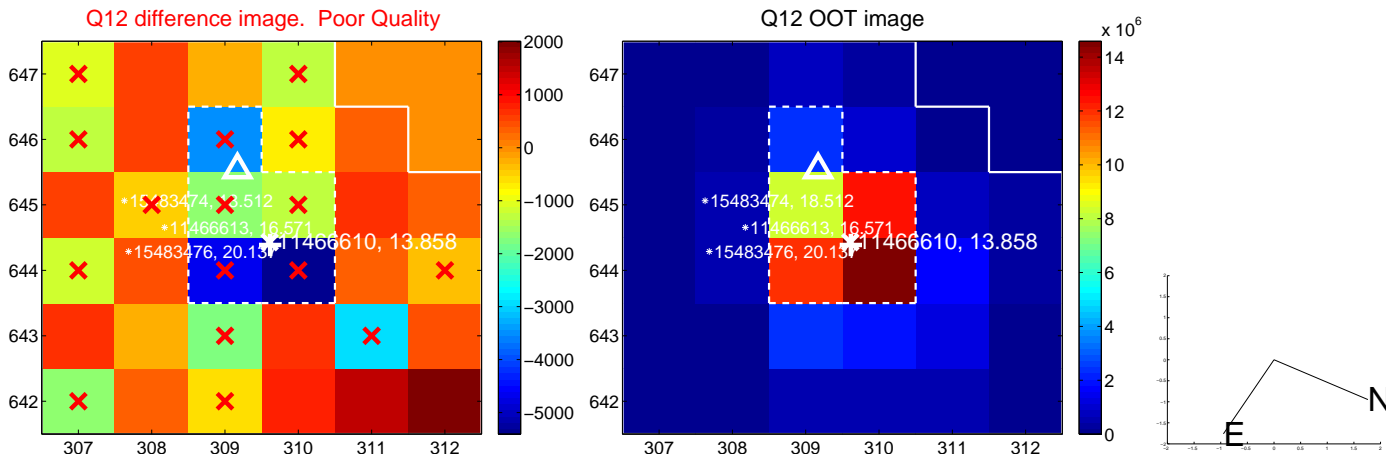
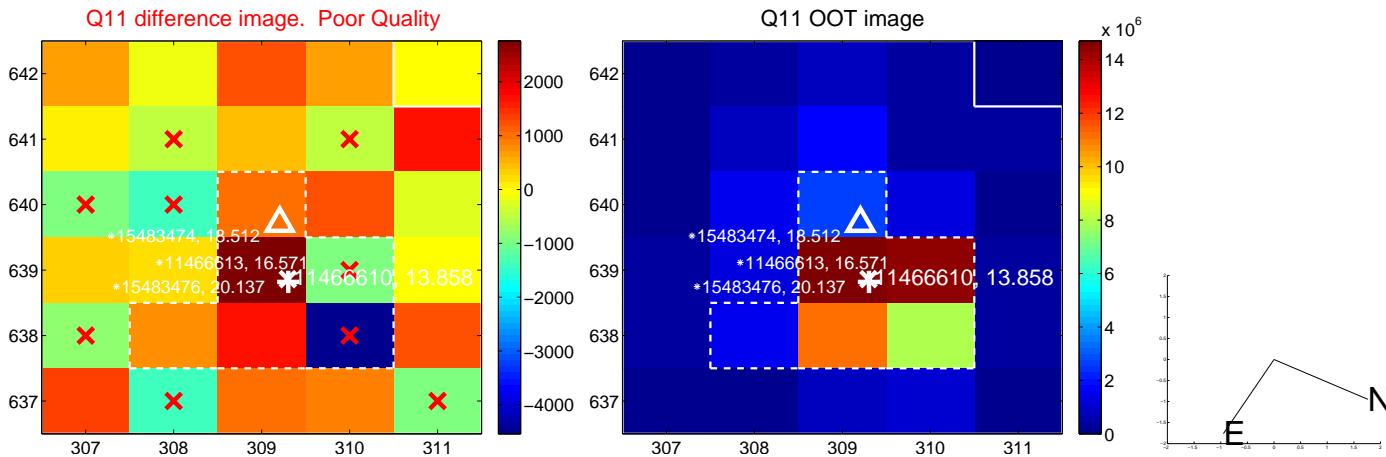
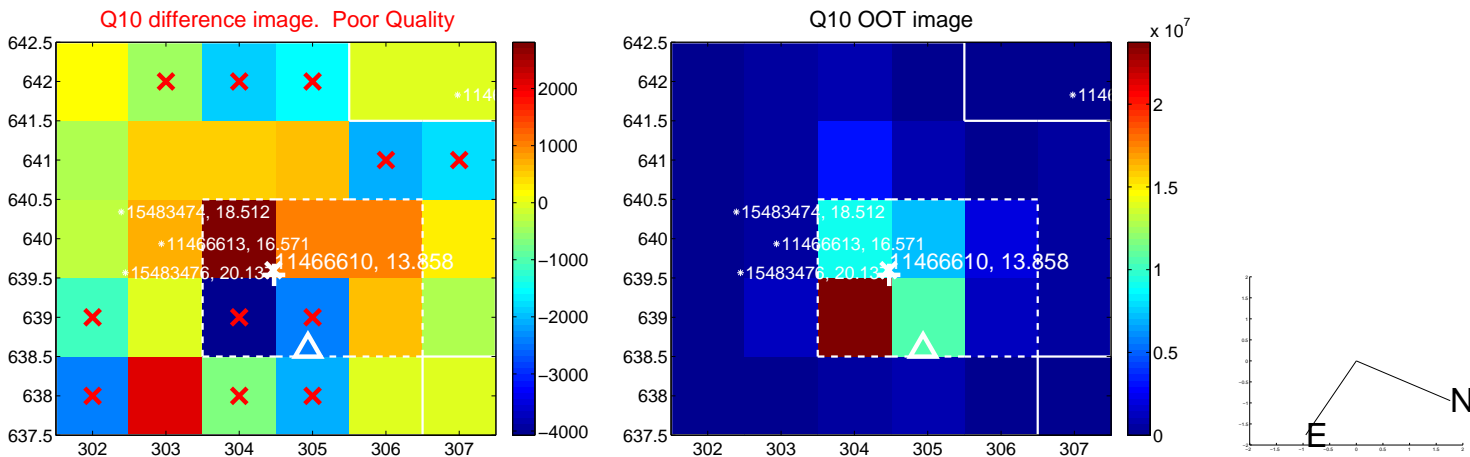
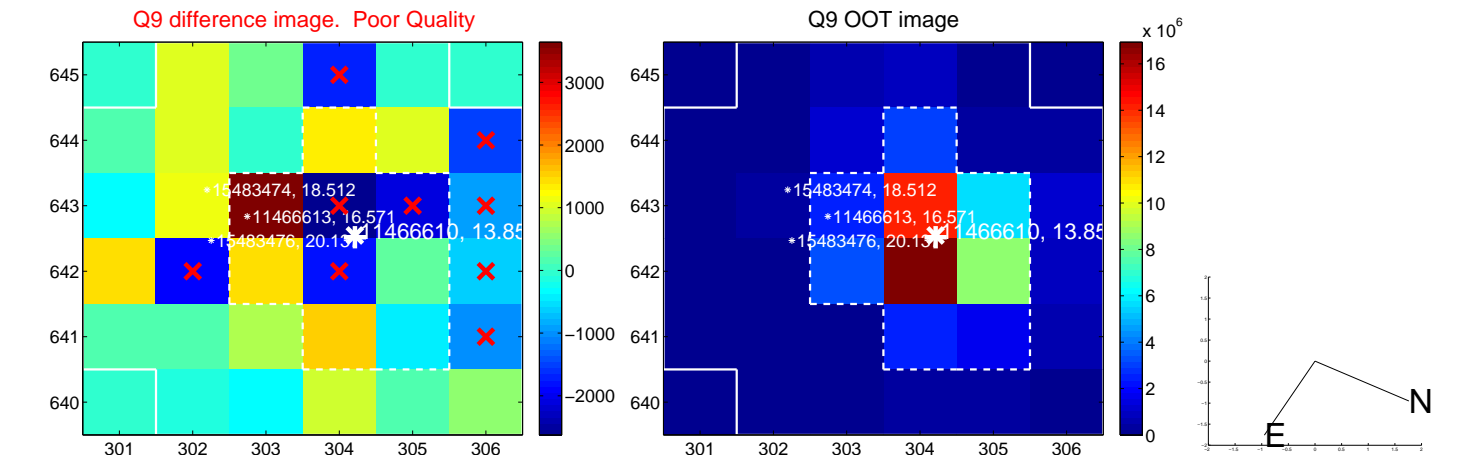
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



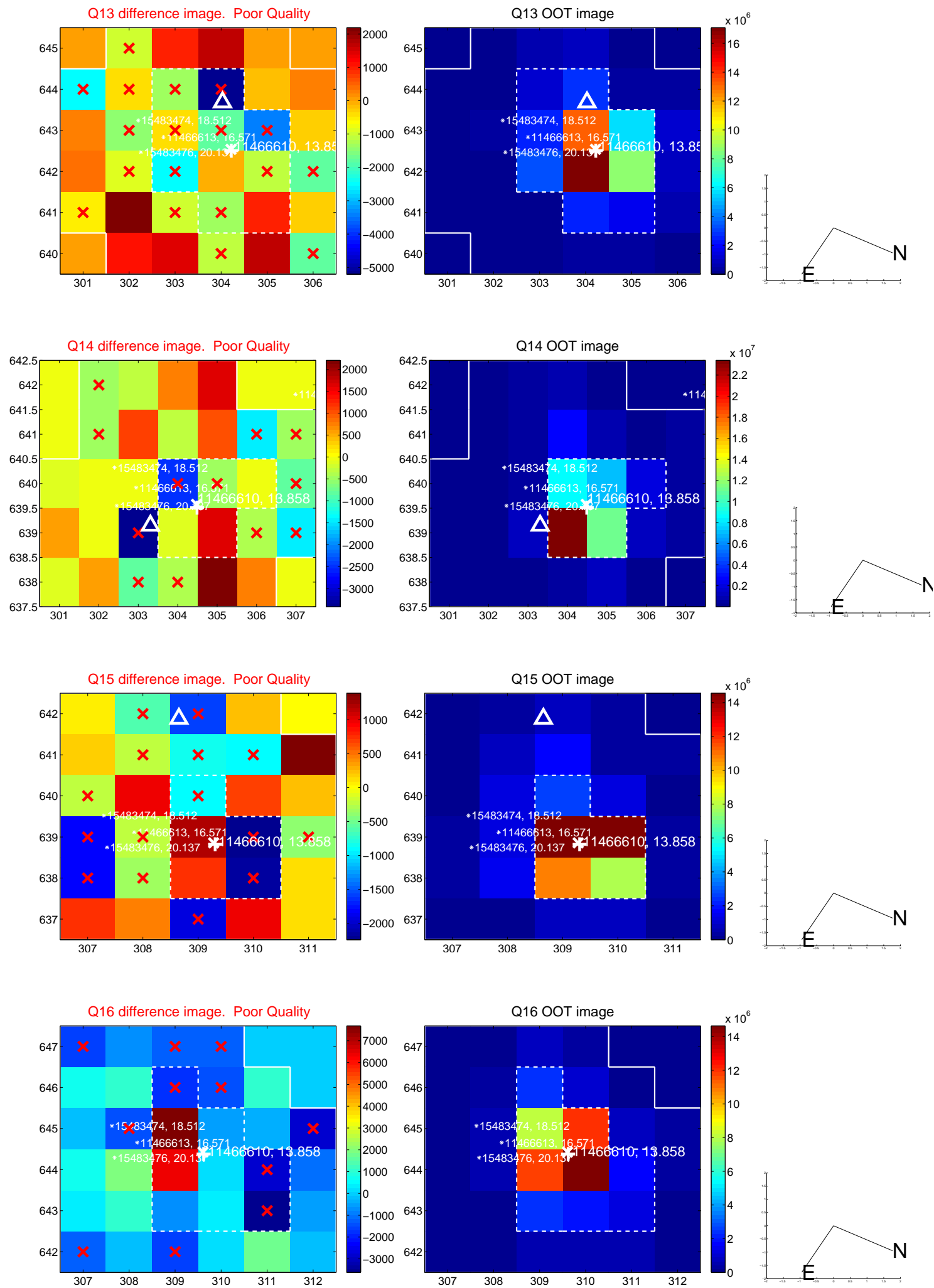
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



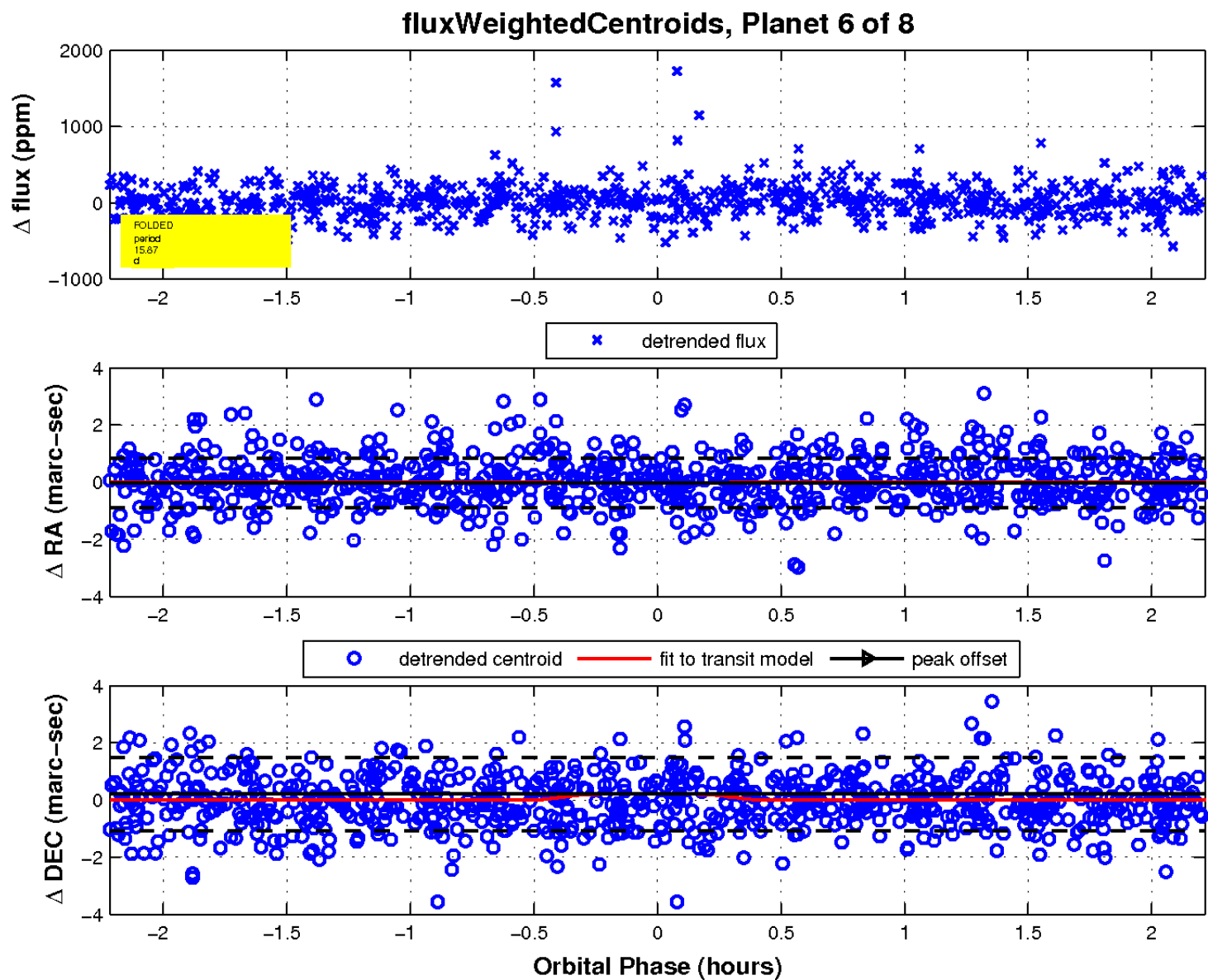
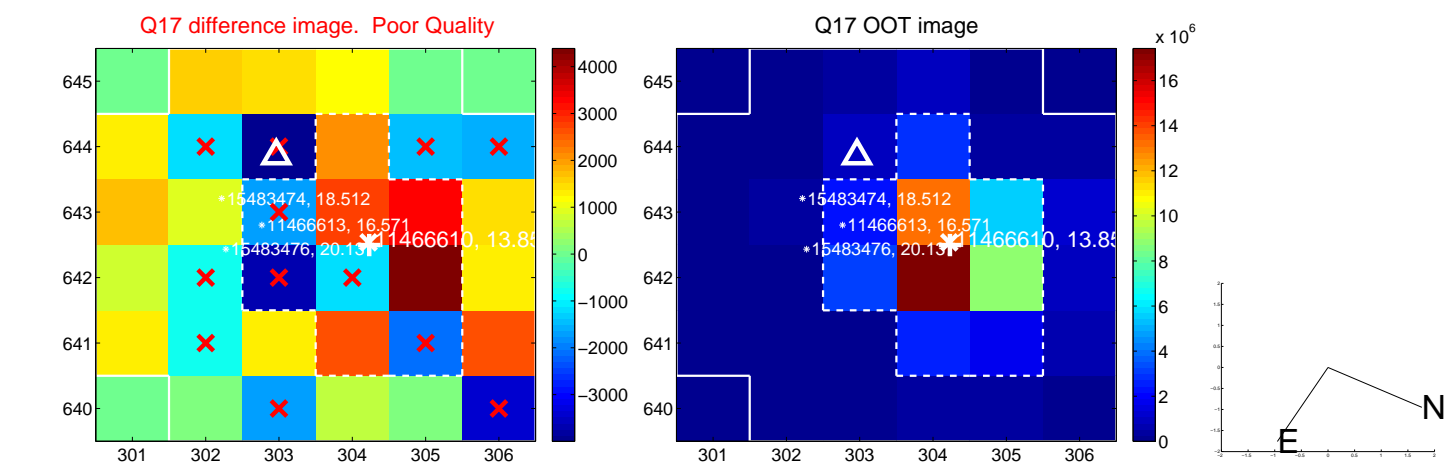
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

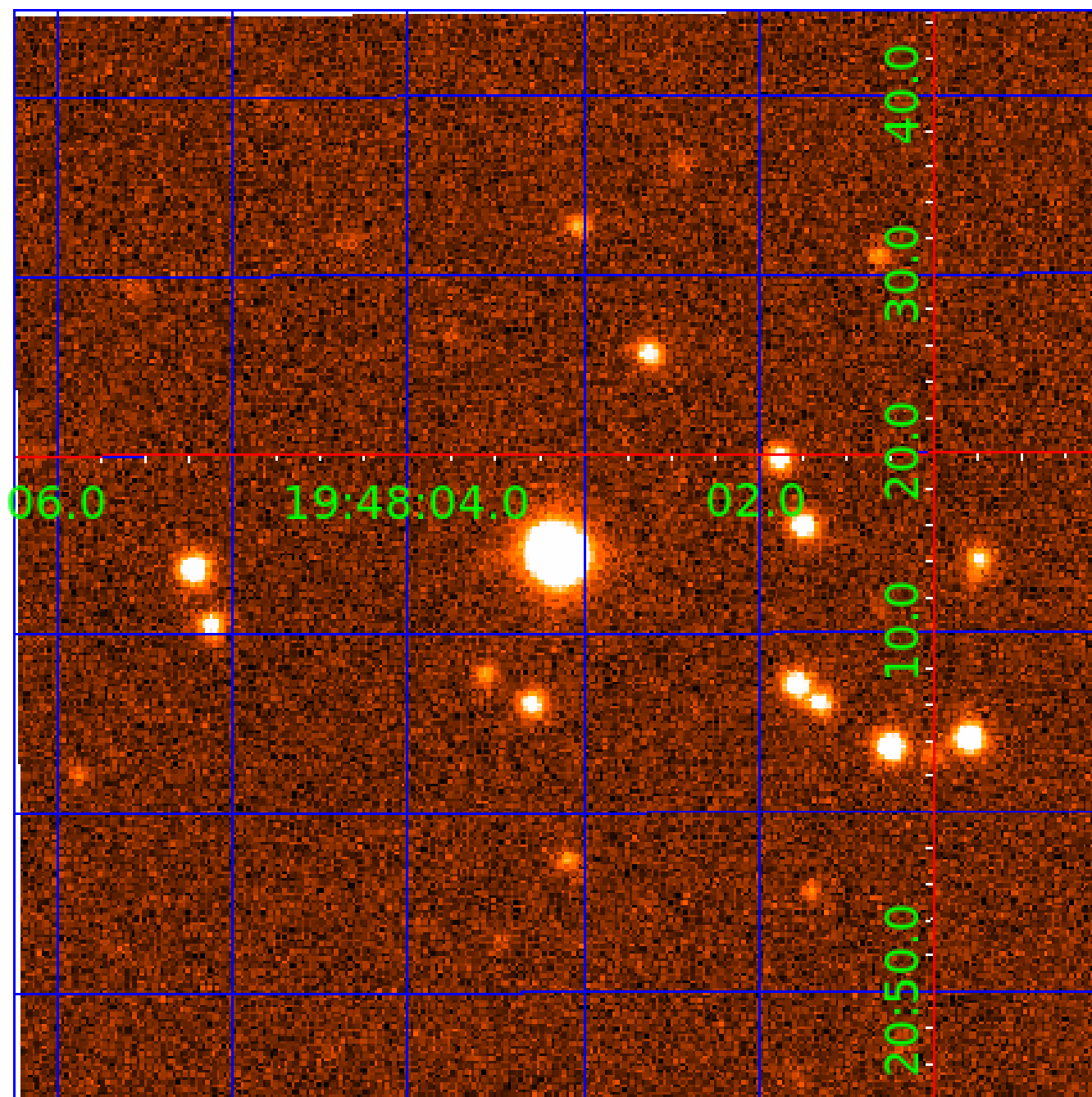


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011466610

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})
011466610-01	OBS	No	0.641639	131.956675	21.6	4.601	7.4	9.6	1.03	5798	0.57	5670.41
011466610-02	OBS	No	55.208056	136.085978	659.1	2.490	15.0	6.6	1.03	5798	3.10	14.93
011466610-03	OBS	No	19.974664	144.699494	1002.3	1.632	13.5	7.1	1.03	5798	4.04	57.90
011466610-04	OBS	No	37.302610	153.377339	915.2	3.346	9.9	9.4	1.03	5798	3.56	25.18
011466610-05	OBS	No	24.219301	149.428216	1437.9	2.368	10.3	10.0	1.03	5798	6.37	44.78
011466610-06	OBS	No	15.867573	137.483250	1175.0	0.739	13.8	8.7	1.03	5798	3.57	78.70
011466610-07	OBS	No	17.179456	132.838277	812.6	2.000	10.3	-1.0	1.03	5798	2.92	70.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011466610-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
011466610-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS
011466610-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011466610-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
011466610-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
011466610-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
011466610-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

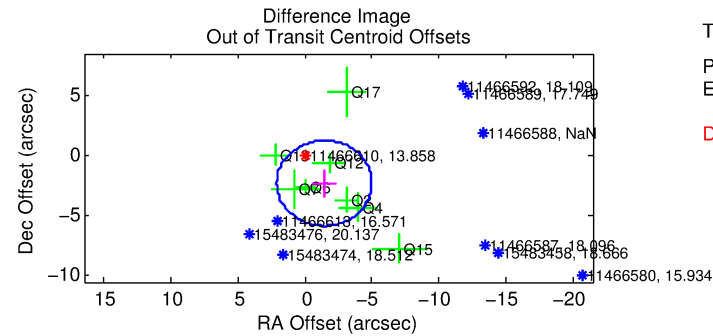
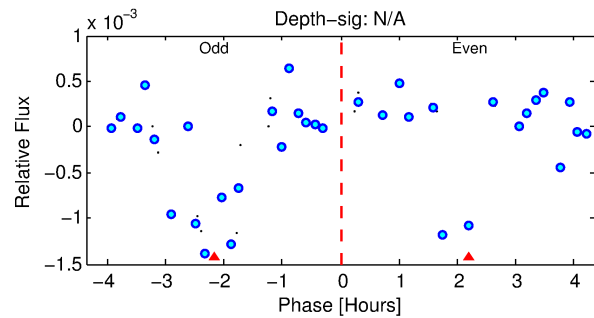
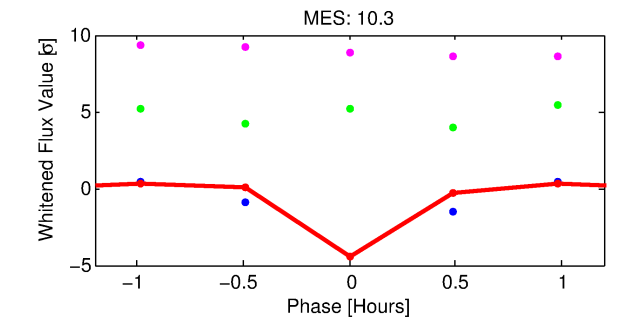
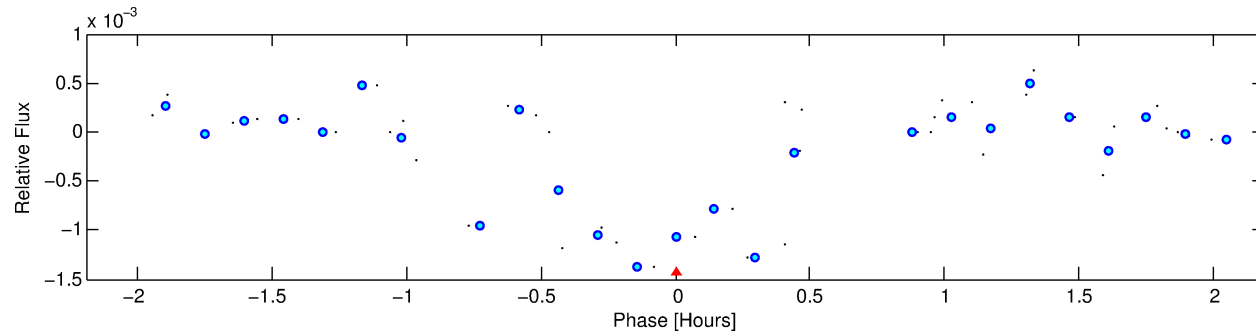
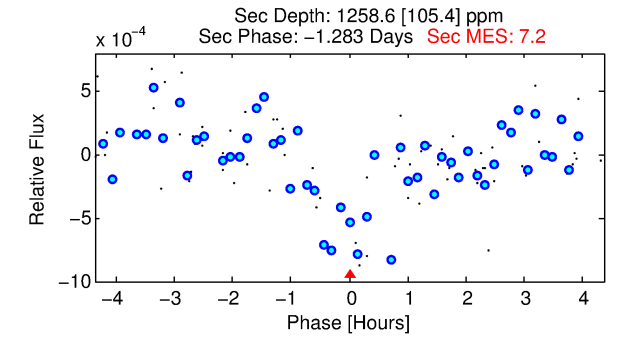
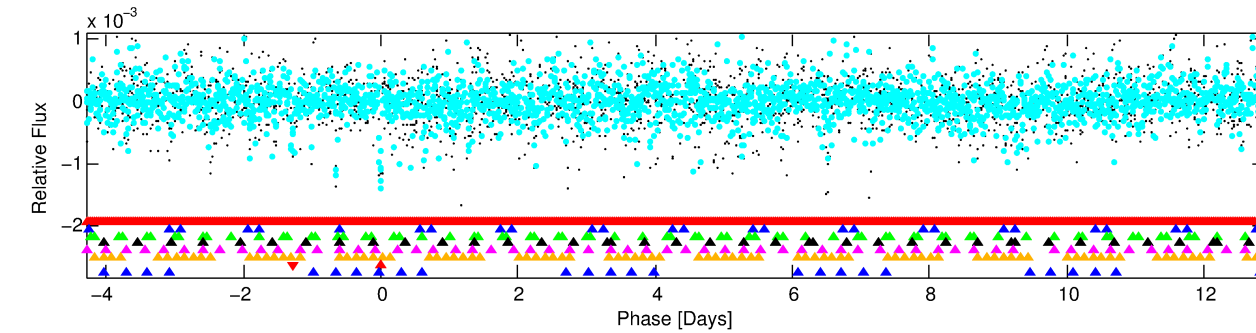
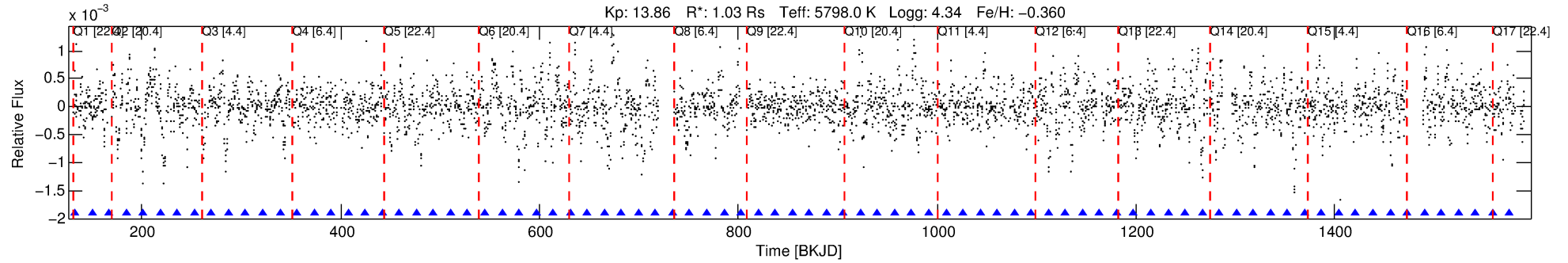
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011466610-07

No Significant Match Found

DV One-Page Summary

KIC: 11466610 Candidate: 7 of 8 Period: 17.179 d



TPS TCE Results:

Period = 17.17946 d
Epoch = 132.8383 BKJD

DV fit results are unavailable

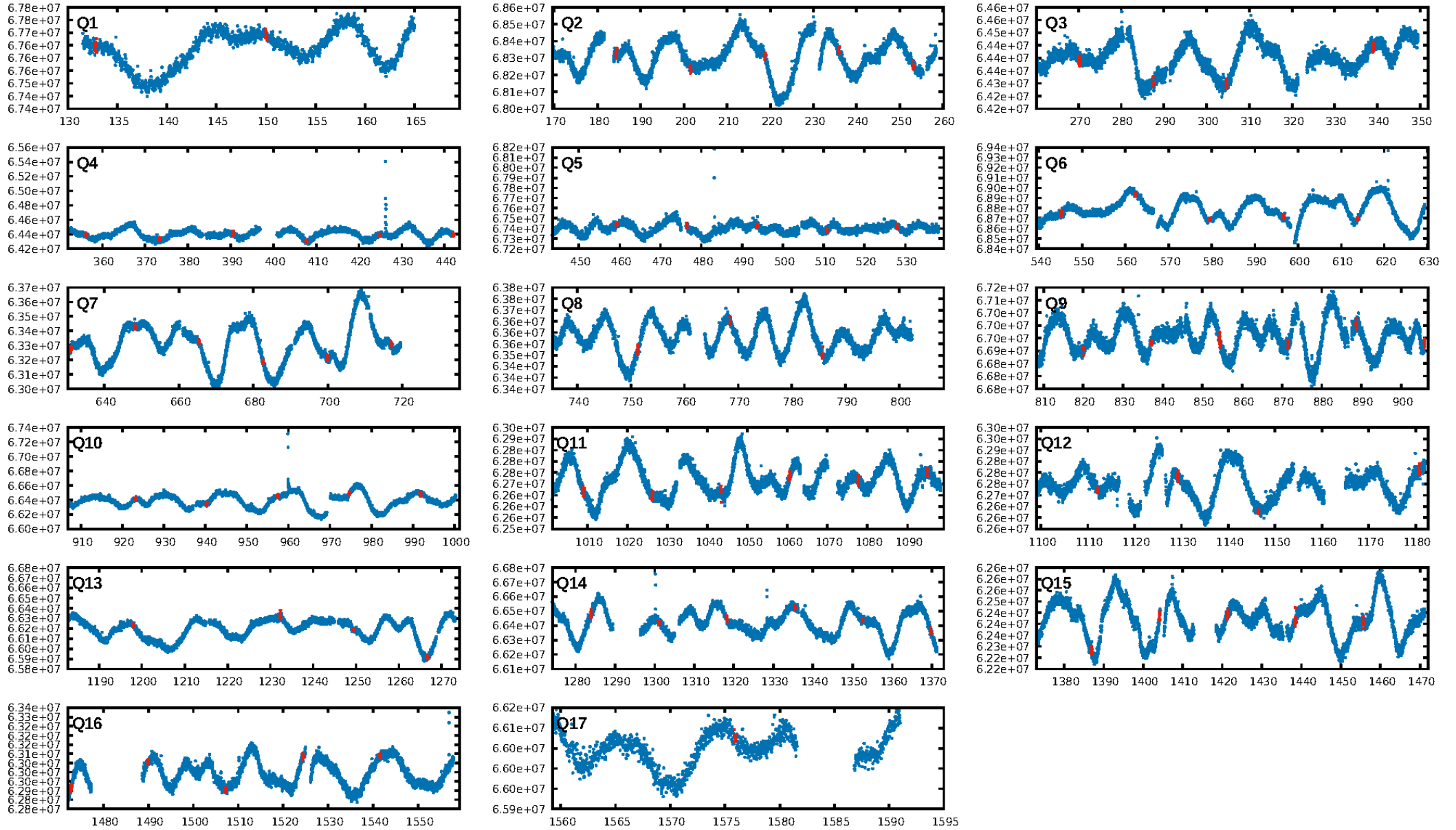
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.77σ]
LongPeriod-sig: 100.0% [25.99σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 2.714
Centroid-sig: 0.1%
Centroid-so: 0.356 arcsec [1.88σ]
OotOffset-rm: 2.696 arcsec [2.28σ]
KicOffset-rm: 2.528 arcsec [1.87σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/17]

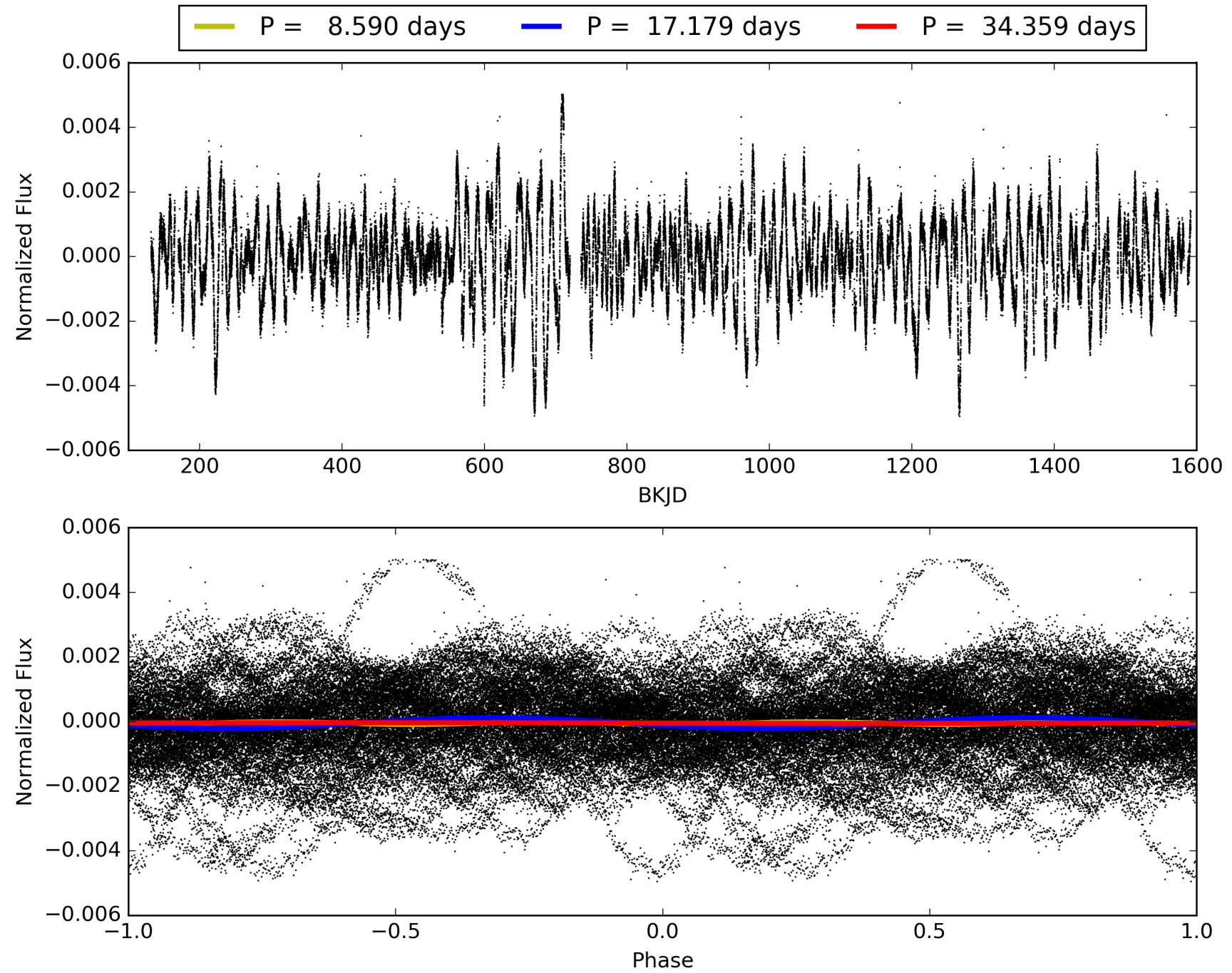
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:23:51 Z

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

TCE 011466610-07, PDC Light Curves

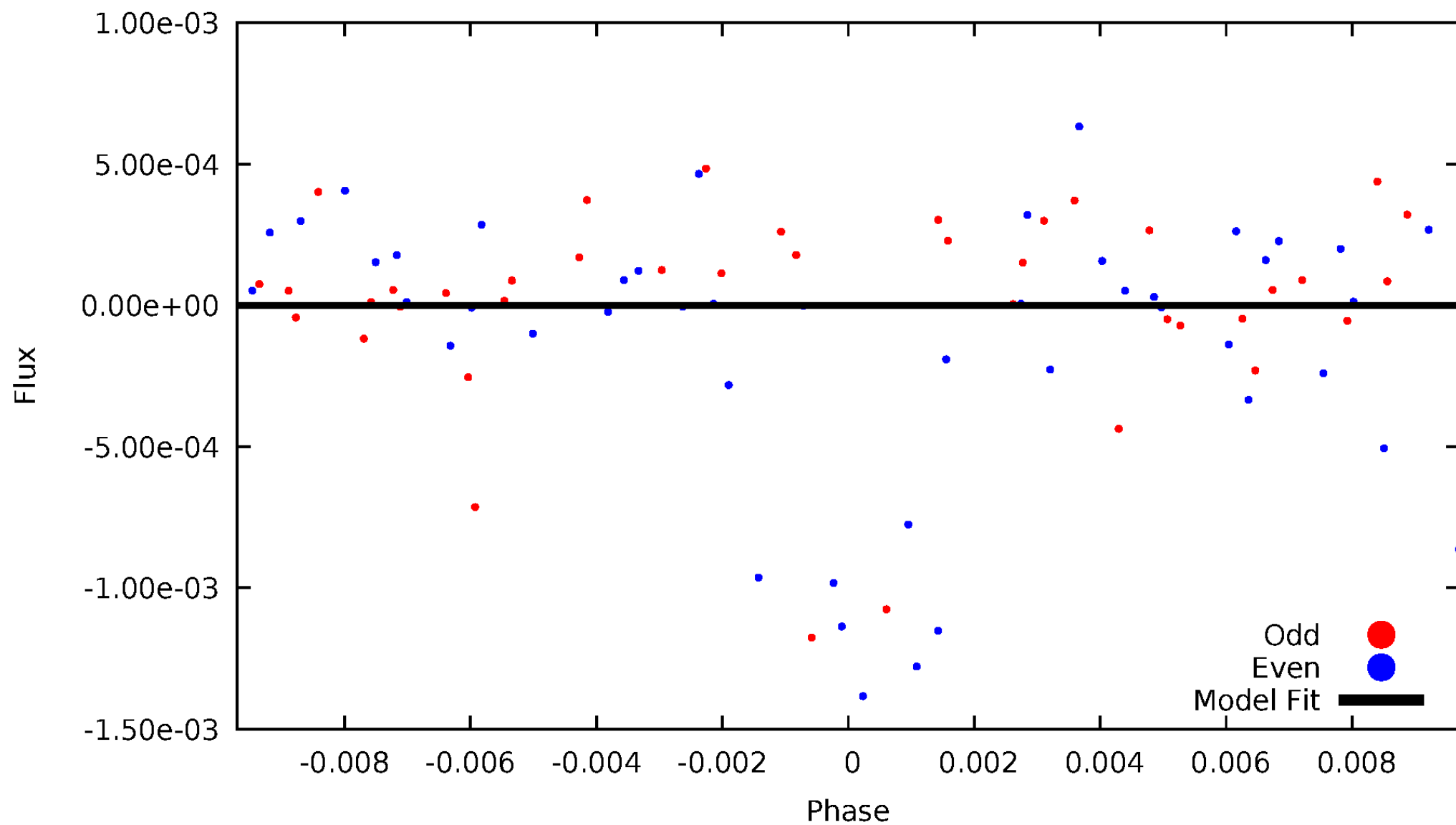


TCE 011466610-07



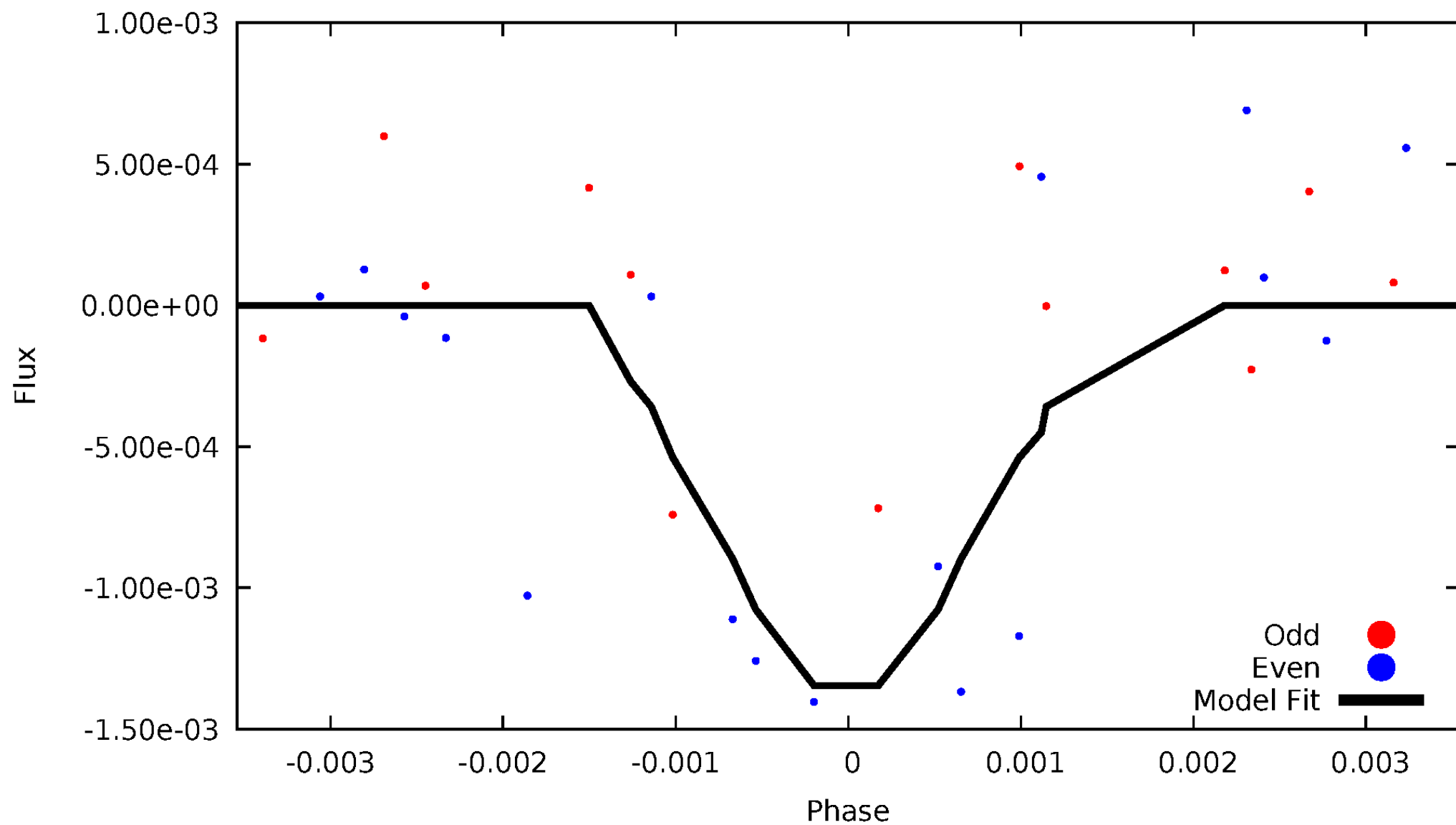
DV Odd/Even

TCE 011466610-07



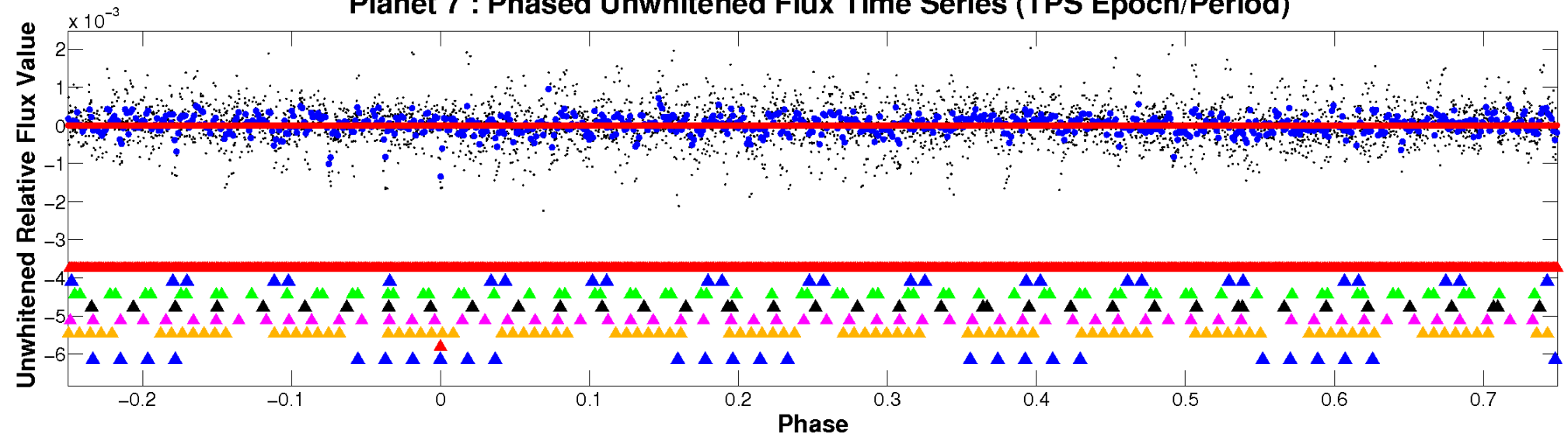
ALT Odd/Even

TCE 011466610-07

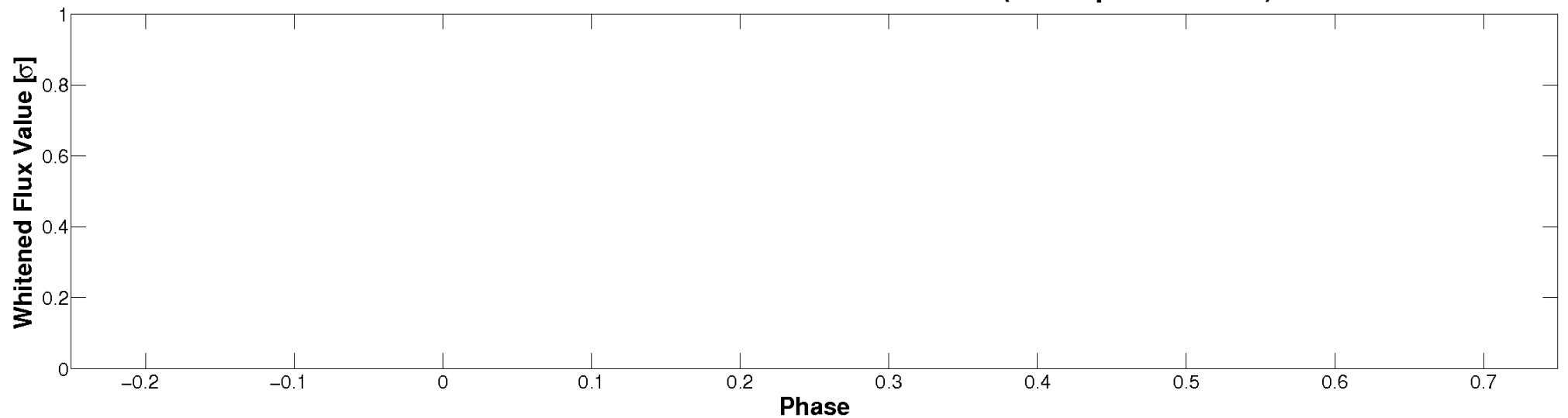


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

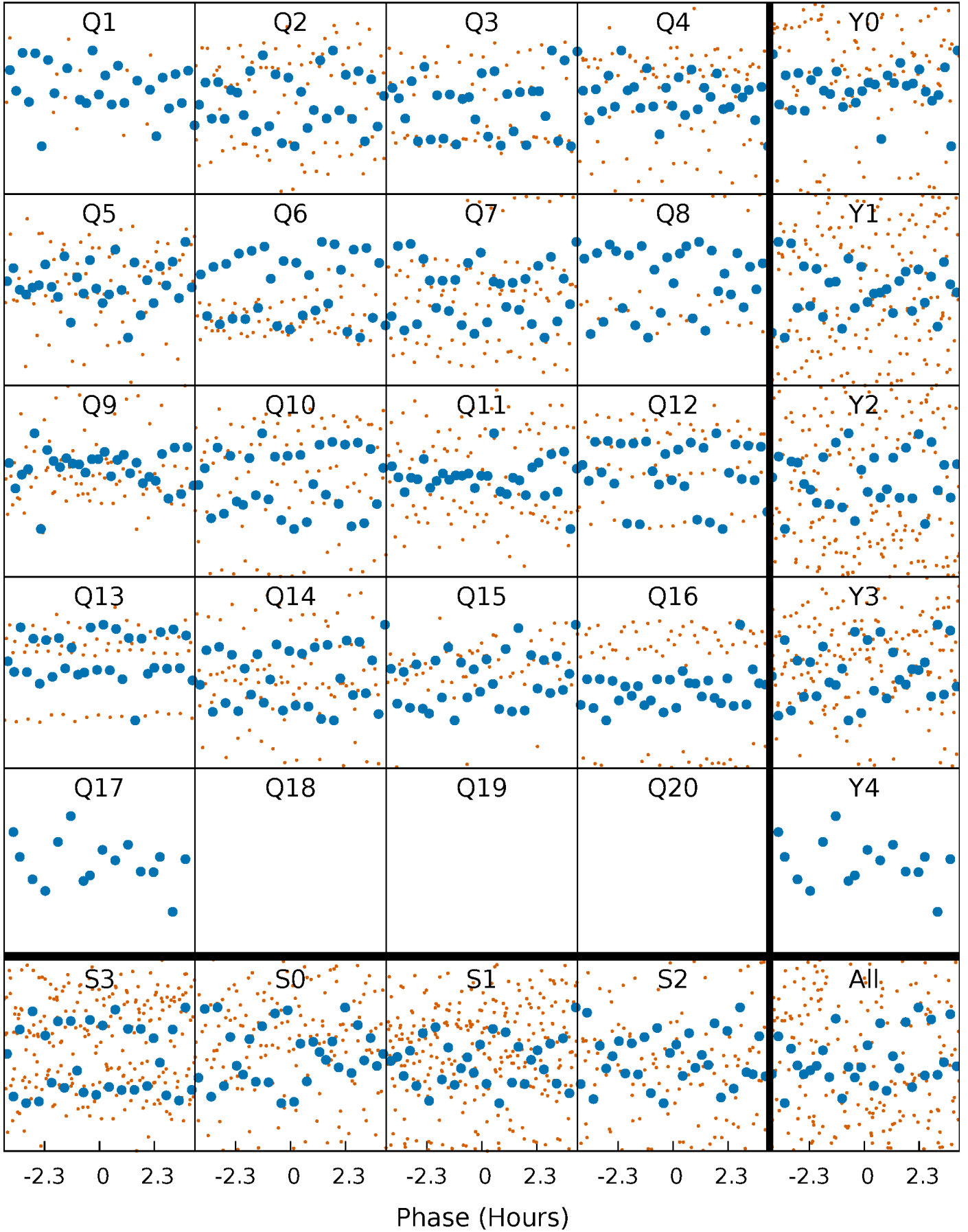


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



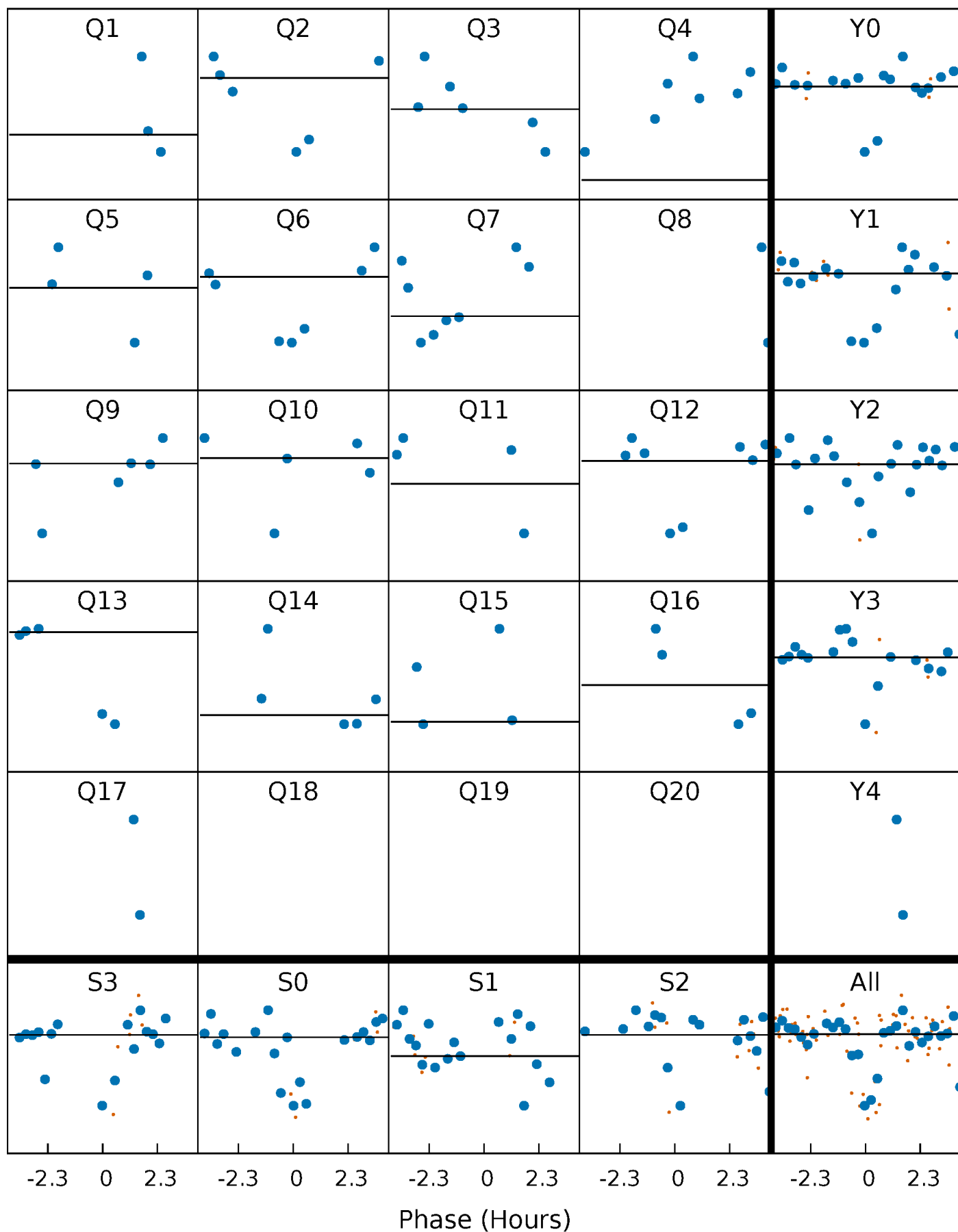
PDC Quarter-Phased Transit Curves

TCE 011466610-07 P= 17.179456 Days $T_0=132.838277$ (BKJD)



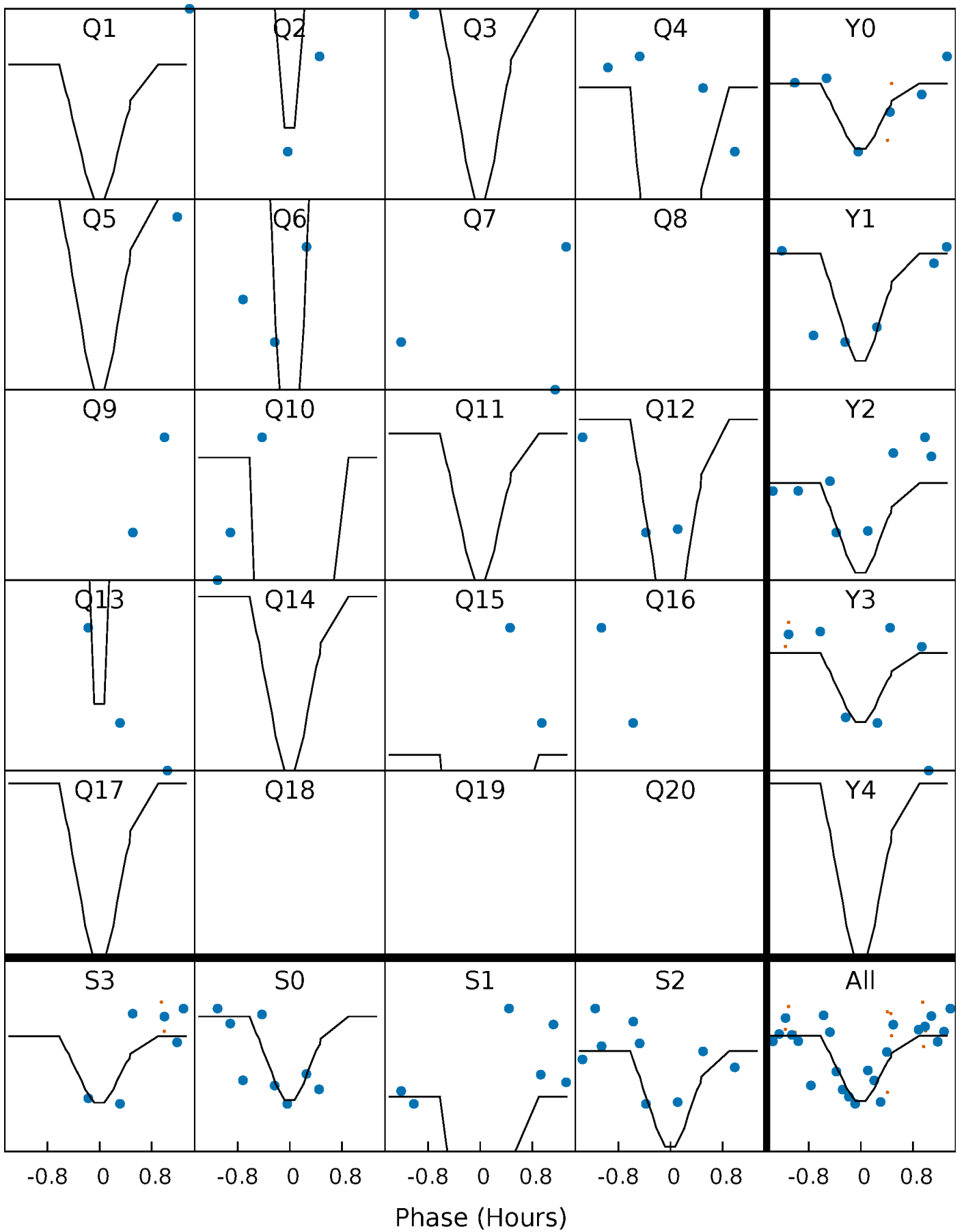
DV Quarter-Phased Transit Curves

TCE 011466610-07 P= 17.179456 Days $T_0=132.838277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

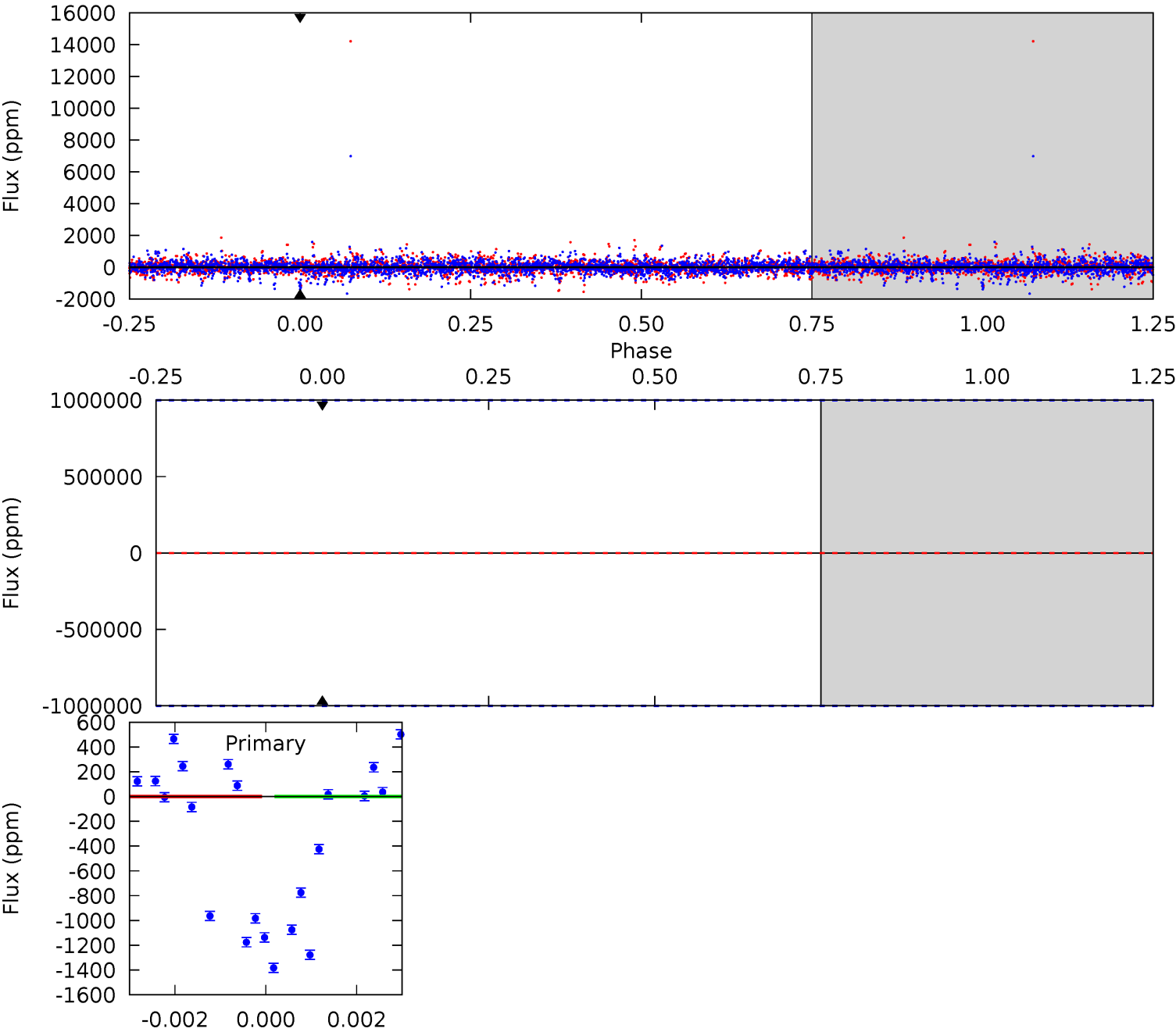
TCE 011466610-07 P= 17.179456 Days $T_0=132.845707$ (BKJD)



DV Model-Shift Uniqueness Test

011466610-07, P = 17.179456 Days, E = 115.658821 Days

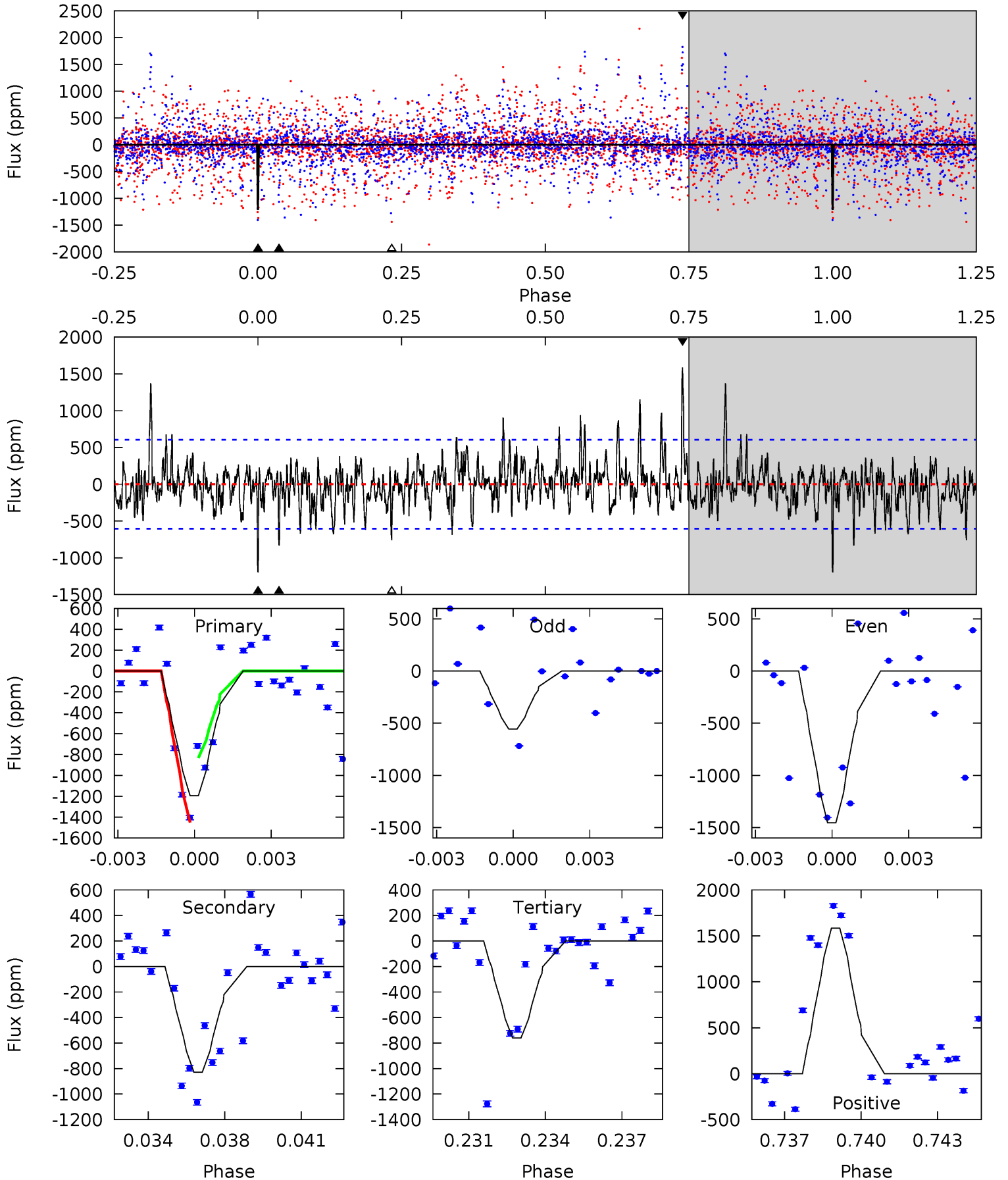
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011466610-07, $P = 17.179456$ Days, $E = 115.666251$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	7.17	6.58	13.7	5.23	2.93	2.15	3.75	-3.37	0.59	-6.53	3.10	0.94	0.57	2.60



Stellar Parameters For KIC 011466610

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5798^{+157}_{-157}	$4.338^{+0.190}_{-0.190}$	$-0.360^{+0.300}_{-0.300}$	$1.028^{+0.291}_{-0.194}$	$0.839^{+0.119}_{-0.064}$	$1.088^{+1.026}_{-0.526}$
	+3%/-3%	+4%/-4%	+83%/-83%	+28%/-19%	+14%/-8%	+94%/-48%
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 011466610-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$8.80^{+9.47}_{-6.15}$	1035^{+77}_{-67}	4032^{+15425}_{-22768}	108^{+18326}_{-18463}
Alt.	-830 ± 116	$9.95^{+8.68}_{-6.79}$	1037^{+79}_{-74}	3780^{+2110}_{-715}	71^{+606}_{-51}

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

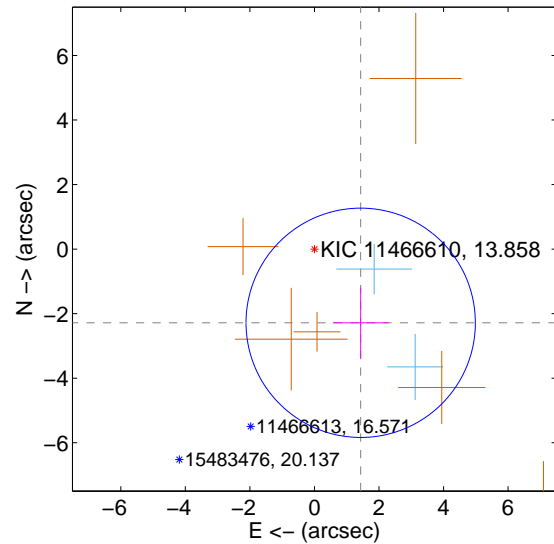
Supplemental centroid analysis for 011466610-07. Kepler magnitude: 13.86. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

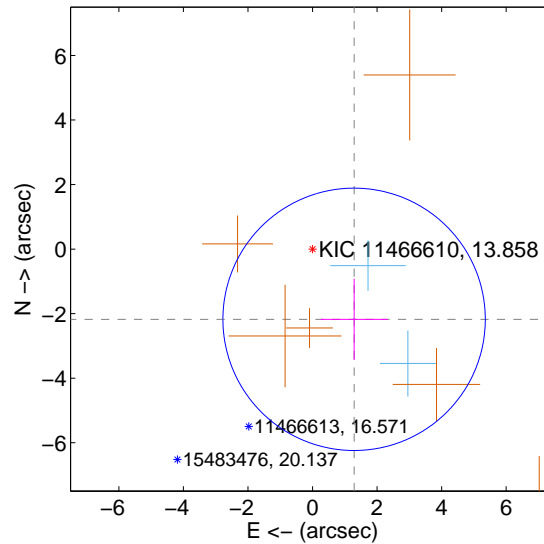
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.696 ± 1.184	2.28	-1.433 ± 0.862	-2.284 ± 1.094
PRF-fit source offset from KIC position	2.528 ± 1.355	1.87	-1.288 ± 1.036	-2.176 ± 1.259
photometric centroid source offset	0.36 ± 0.19	1.88	0.29 ± 0.19	-0.21 ± 0.20

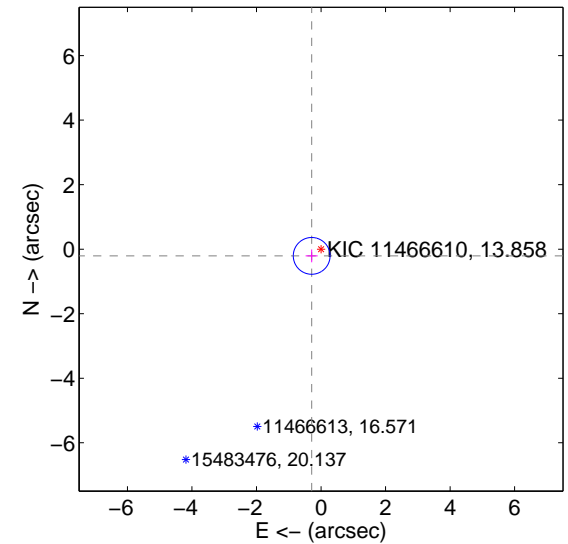
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

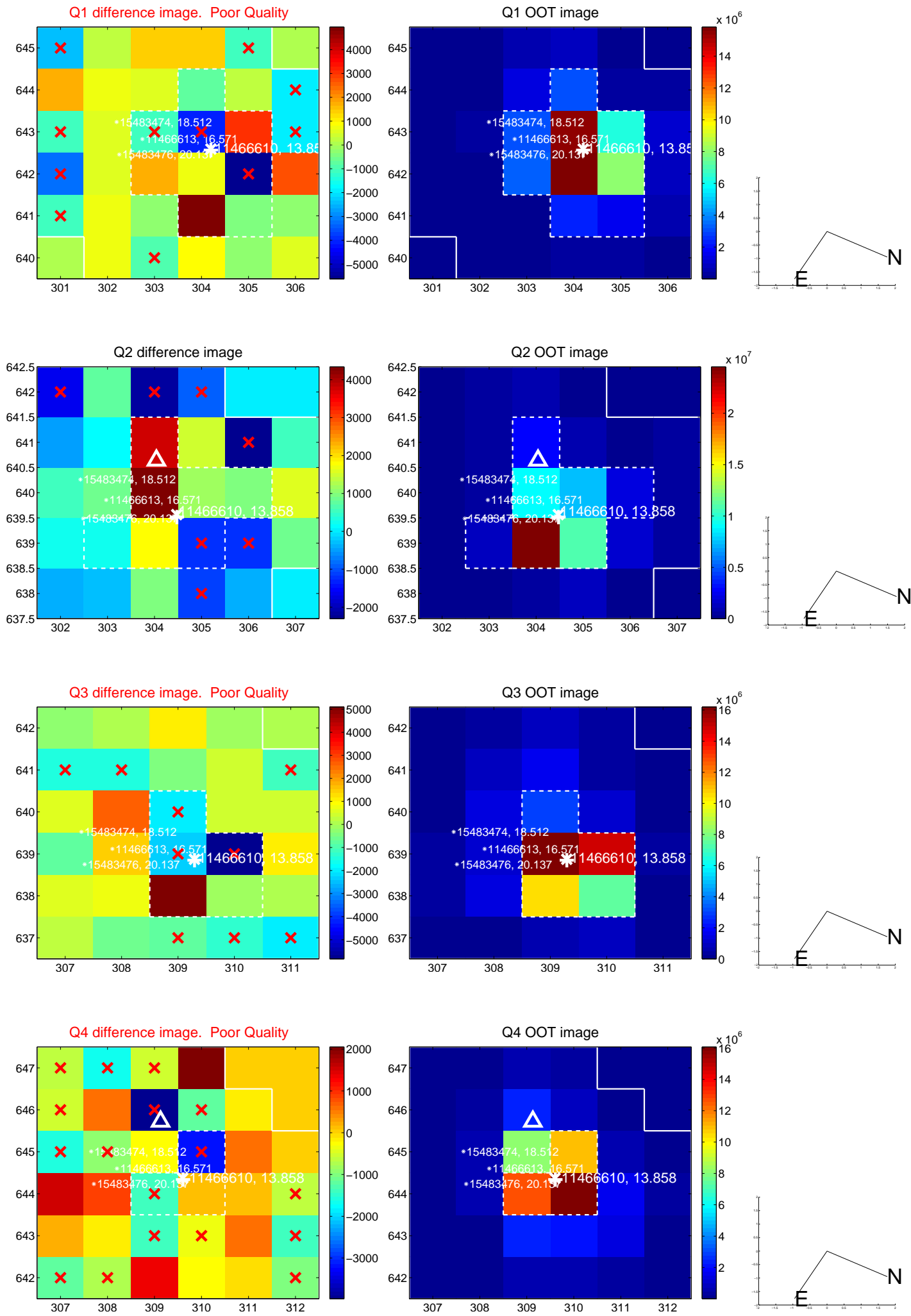


offset from photometric centroids

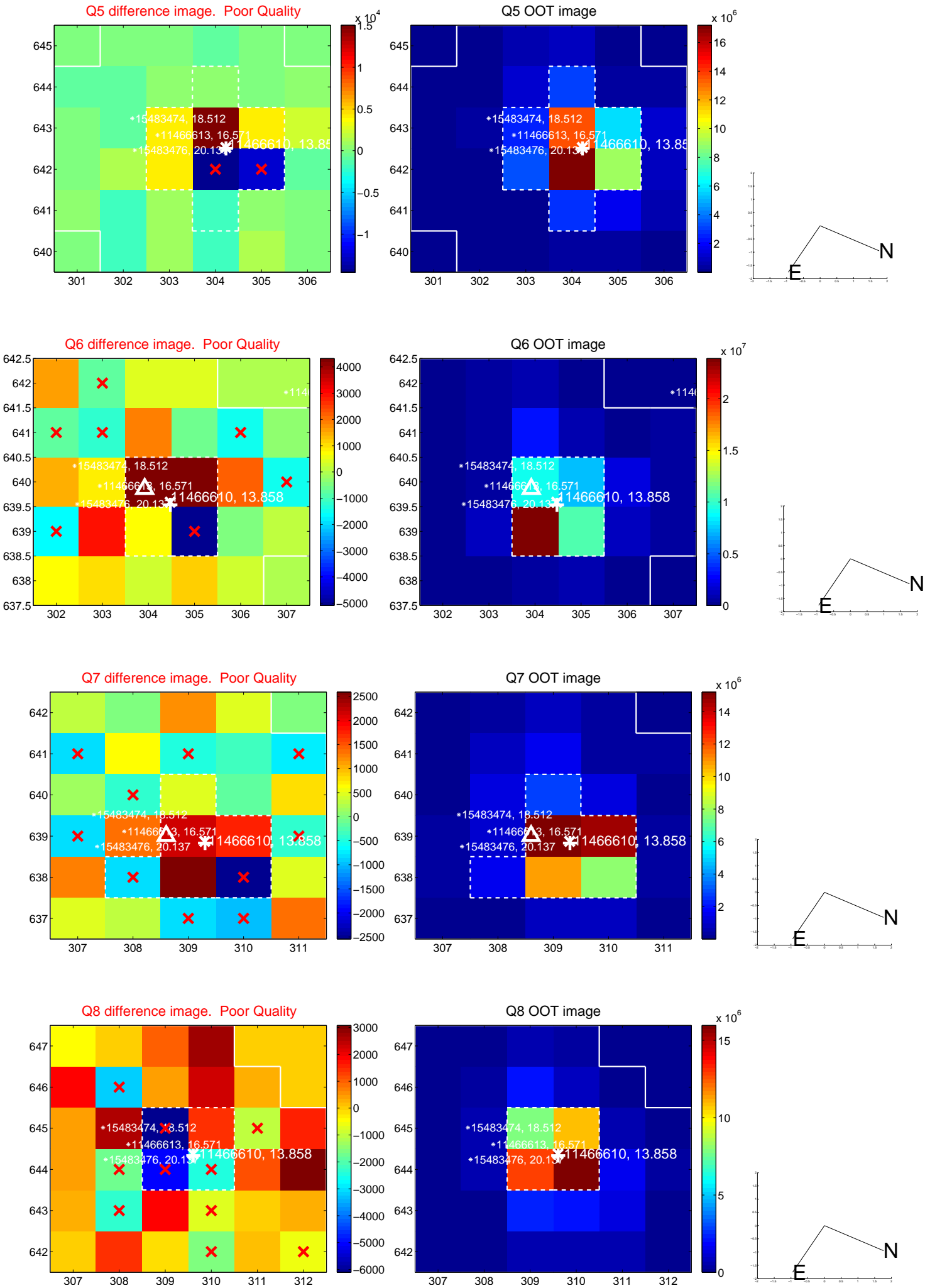


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

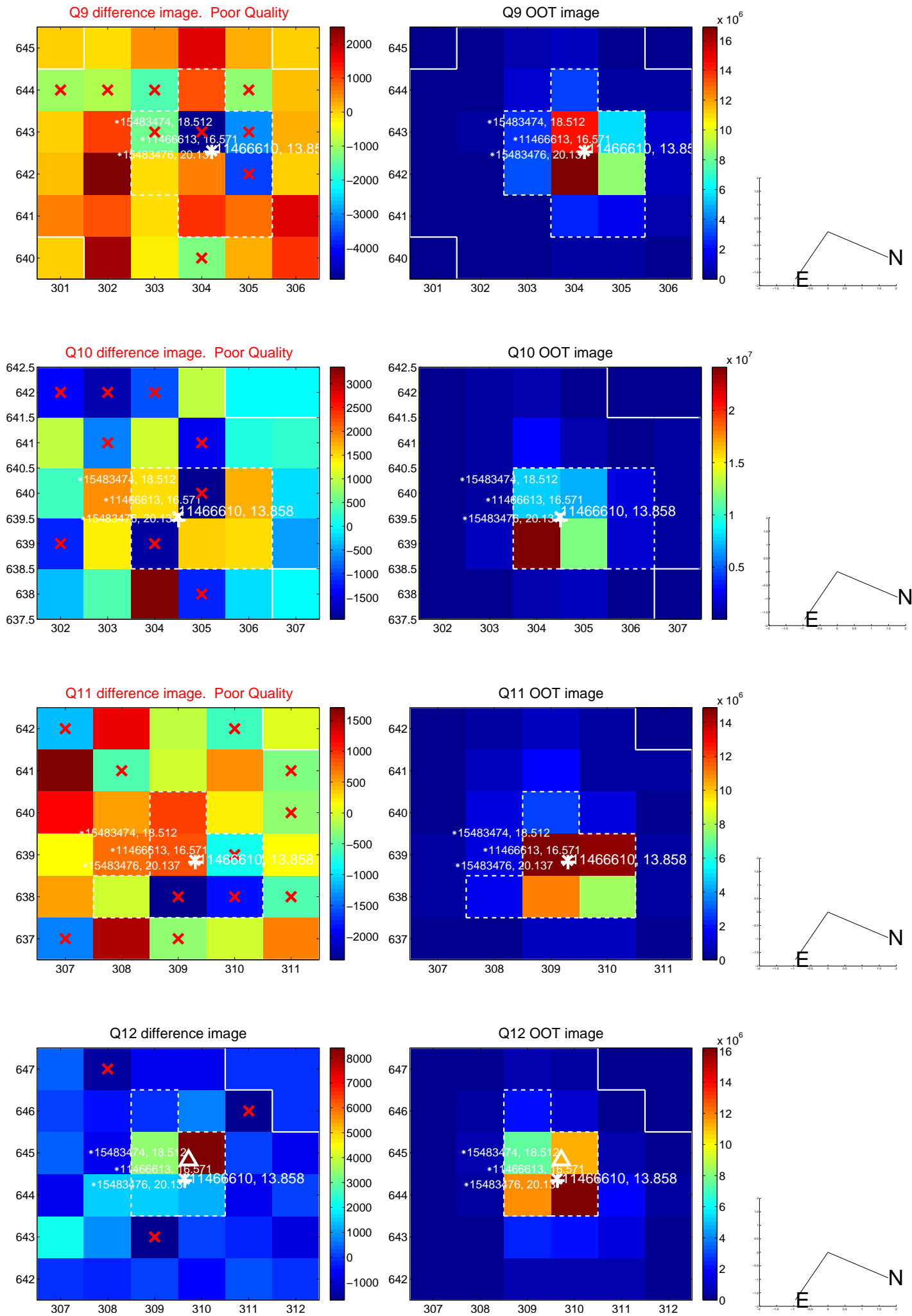
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



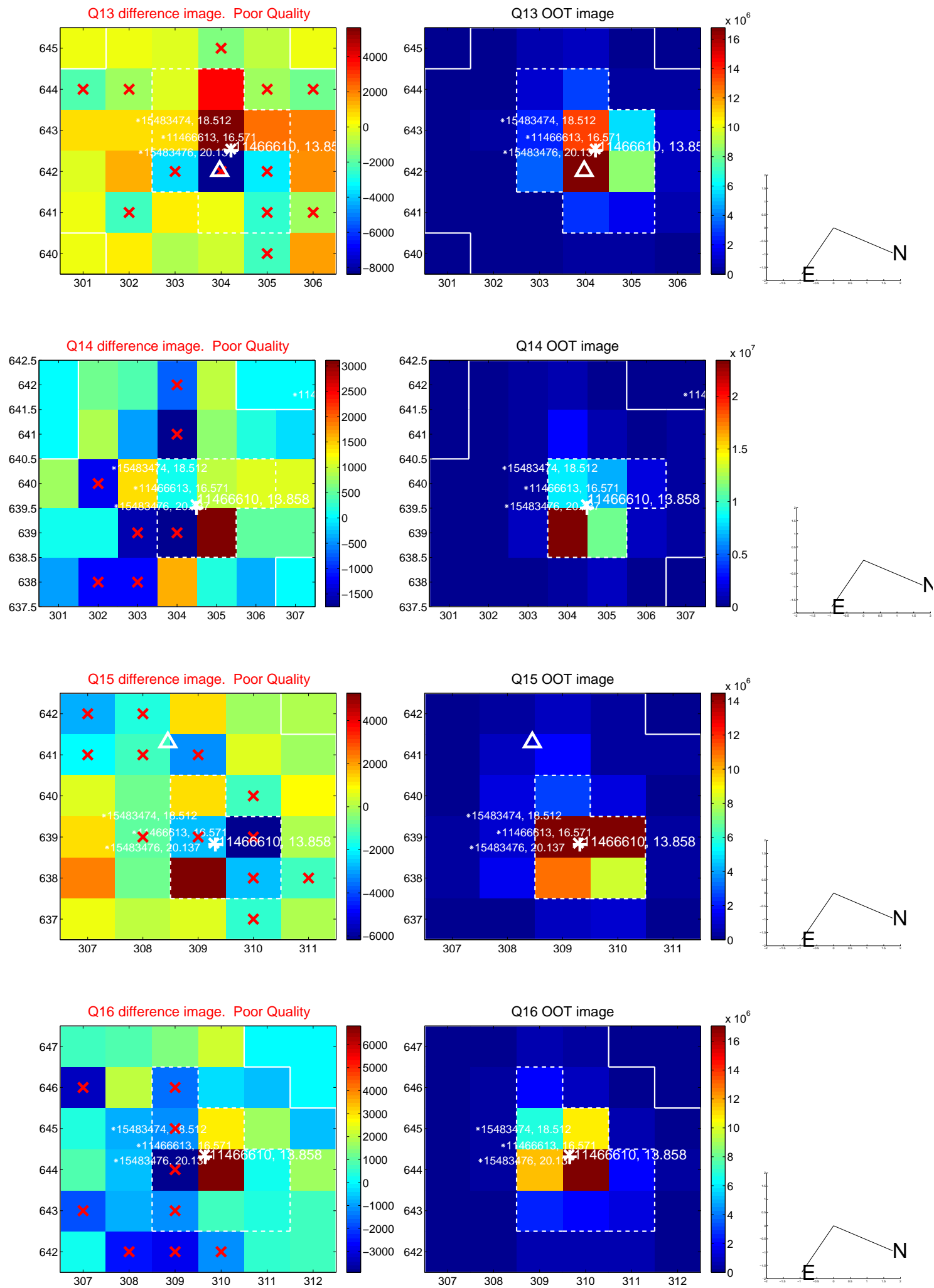
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



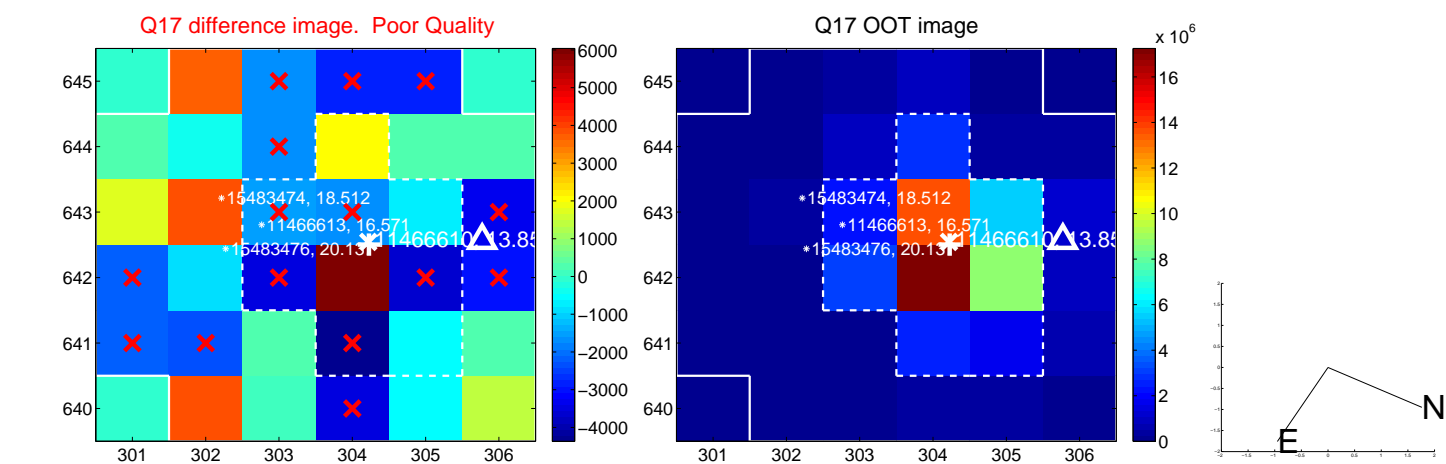
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



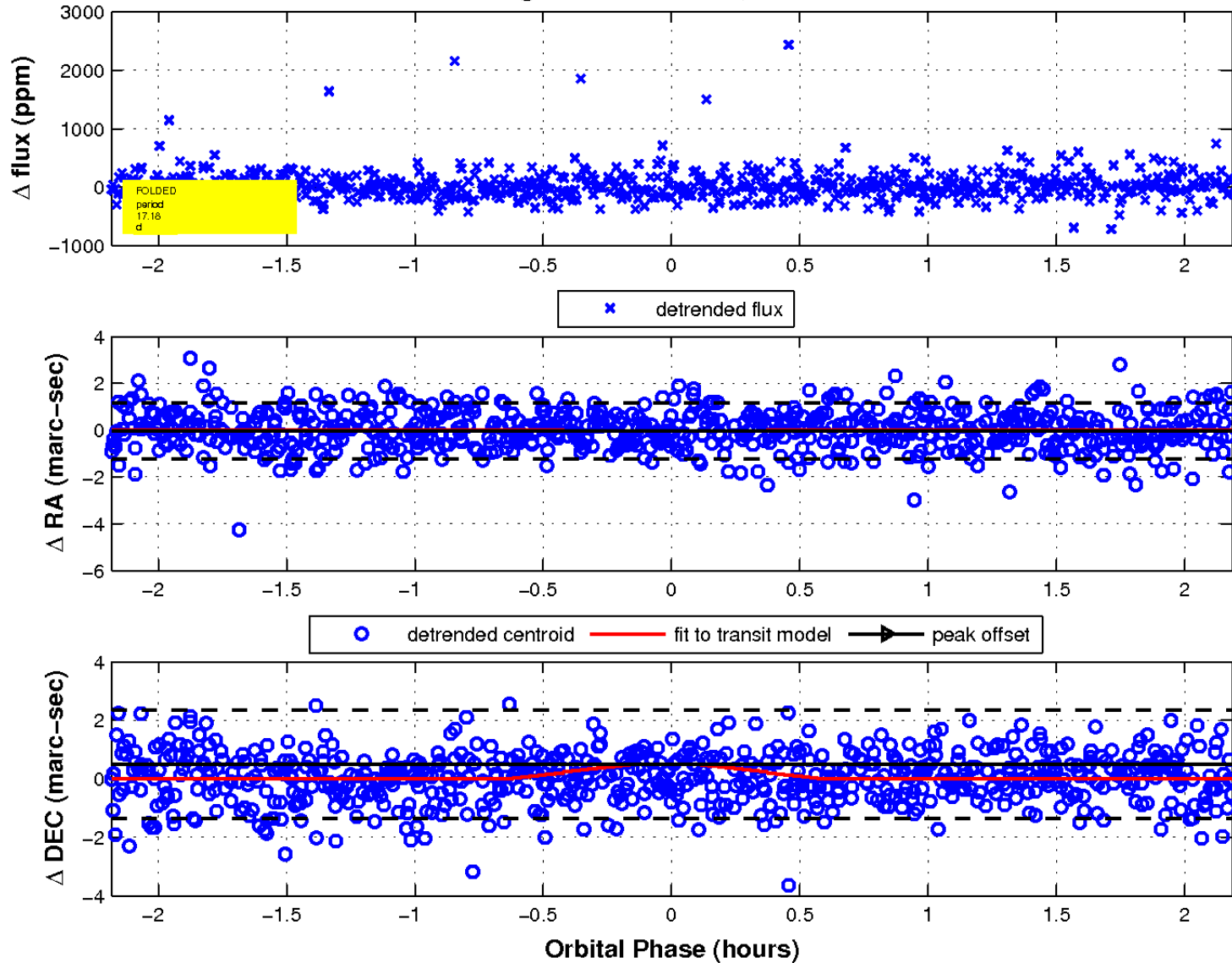
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 7 of 8



UKIRT Image

Declination

