

KIC 005010302

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})
005010302-01	OBS	No	1.632918	132.277395	6.8	12.300	11.5	9.1	3.46	7854	0.92	34476.54
005010302-02	OBS	No	37.594683	162.354697	182.2	2.798	17.5	14.9	3.46	7854	5.46	526.39
005010302-03	OBS	No	7.508385	137.349000	80.2	0.634	9.6	8.4	3.46	7854	3.31	4509.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005010302-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
005010302-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005010302-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

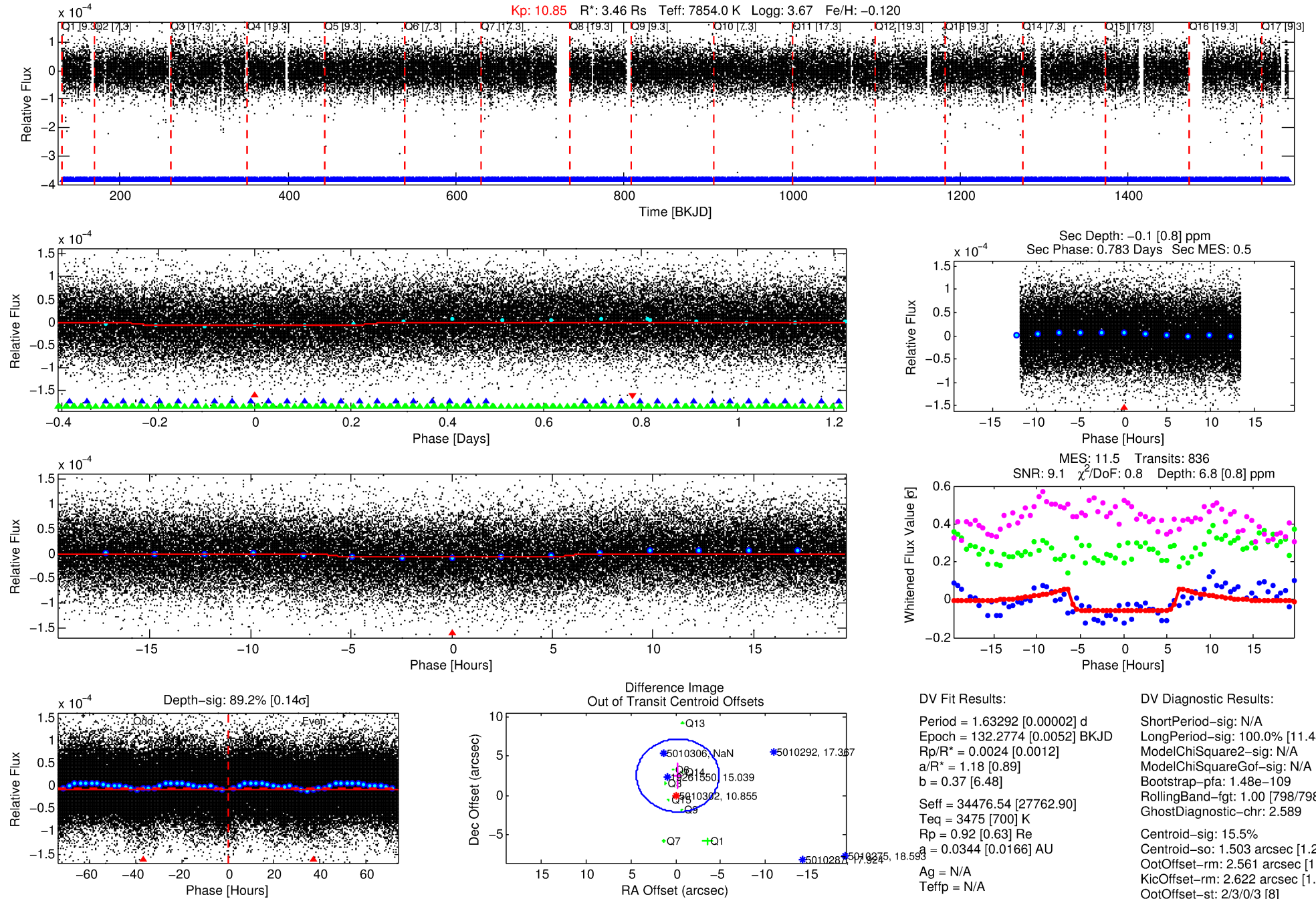
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005010302-01

No Significant Match Found

DV One-Page Summary

KIC: 5010302 Candidate: 1 of 3 Period: 1.633 d



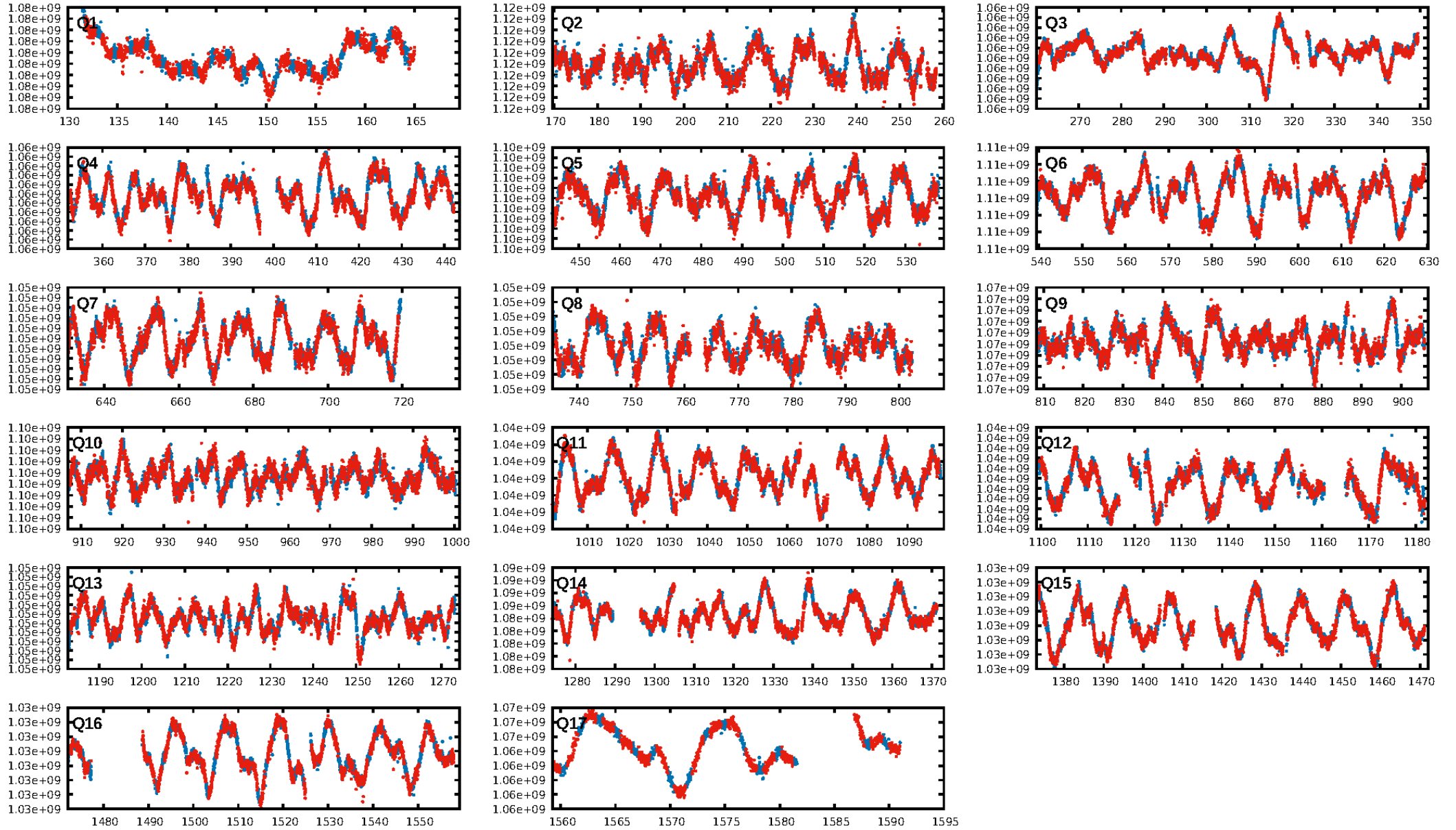
DV Fit Results:

Period = 1.63292 [0.00002] d
Epoch = 132.2774 [0.0052] BKJD
Rp/R* = 0.0024 [0.0012]
a/R* = 1.18 [0.89]
b = 0.37 [6.48]
Seff = 34476.54 [27762.90]
Teq = 3475 [700] K
Rp = 0.92 [0.63] Re
a = 0.0344 [0.0166] AU
Ag = N/A
Teffp = N/A

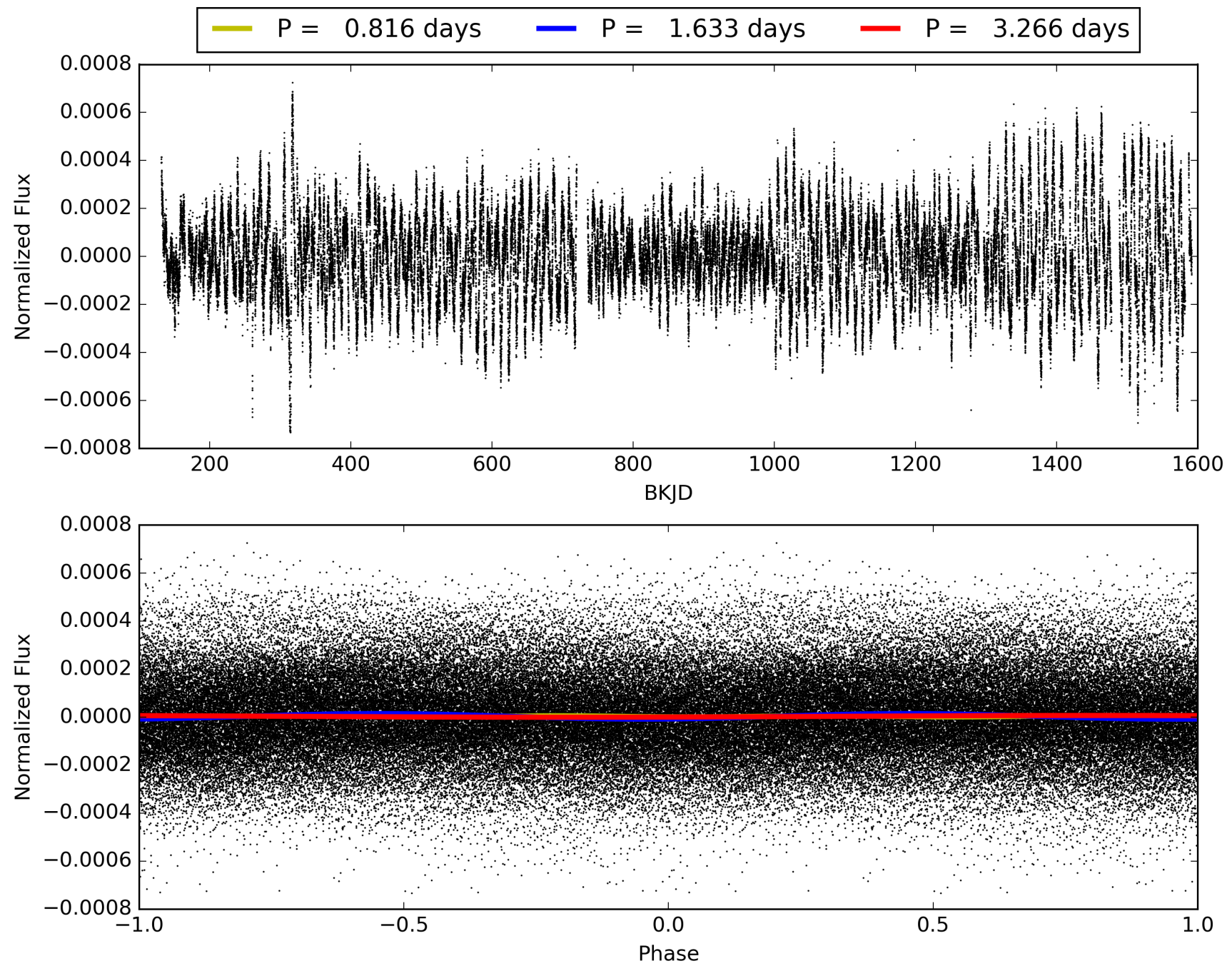
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.48e-109
RollingBand-fgt: 1.00 [798/798]
GhostDiagnostic-chr: 2.589
Centroid-sig: 15.5%
Centroid-so: 1.503 arcsec [1.20σ]
OotOffset-rm: 2.561 arcsec [1.67σ]
KicOffset-rm: 2.622 arcsec [1.57σ]
OotOffset-st: 2/3/0/3 [8]
KicOffset-st: 2/3/0/3 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005010302-01, PDC Light Curves

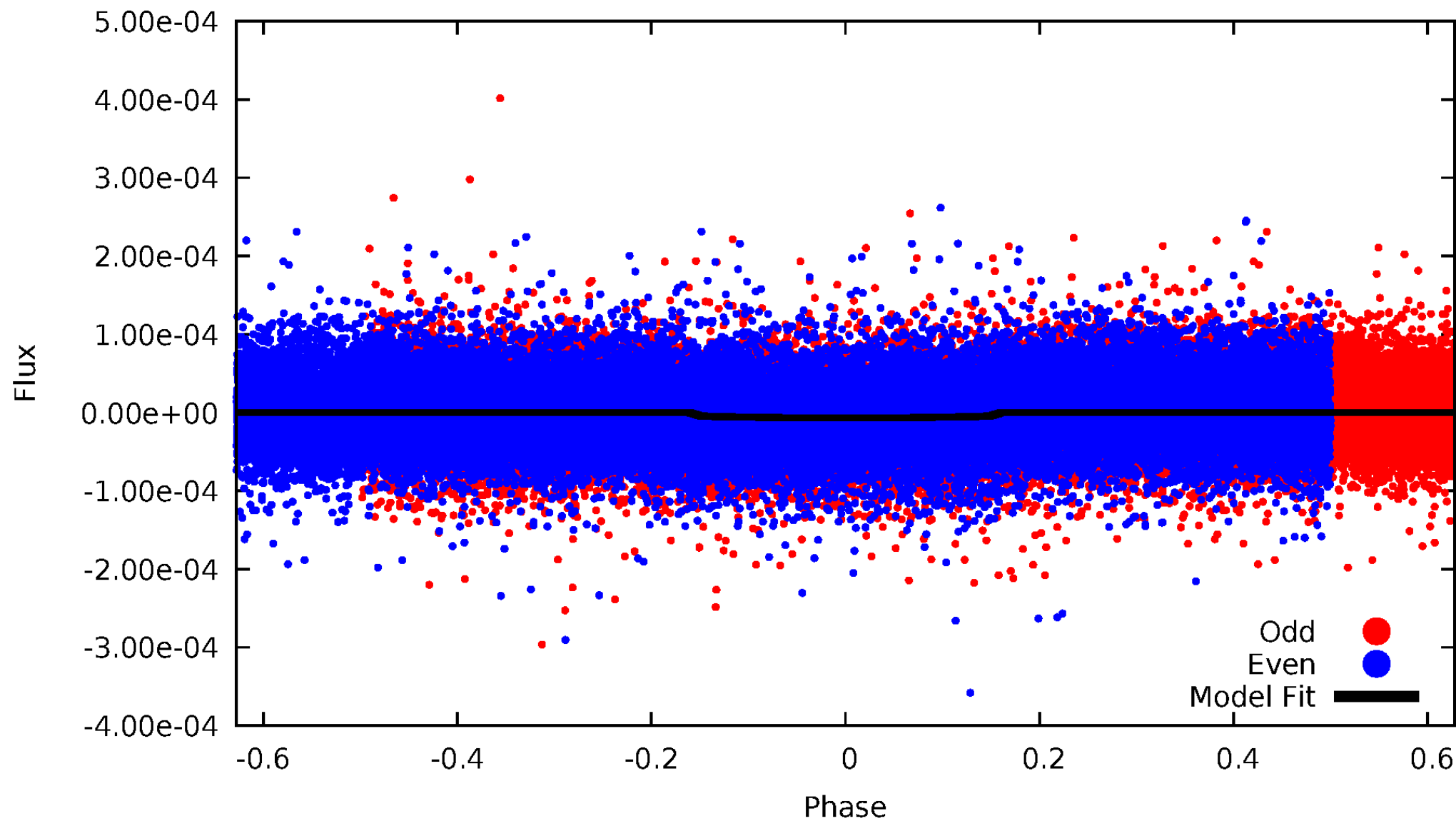


TCE 005010302-01



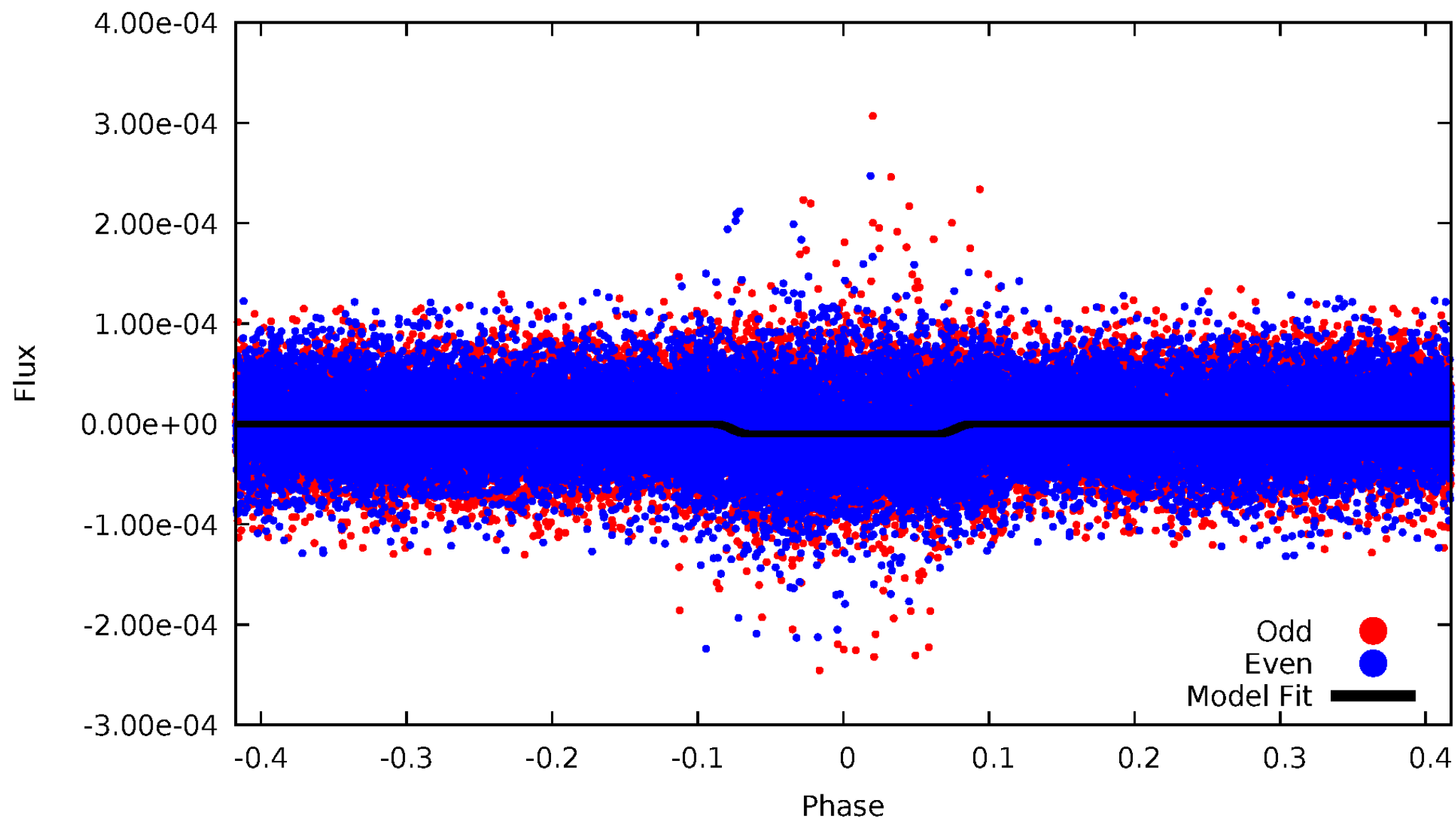
DV Odd/Even

TCE 005010302-01

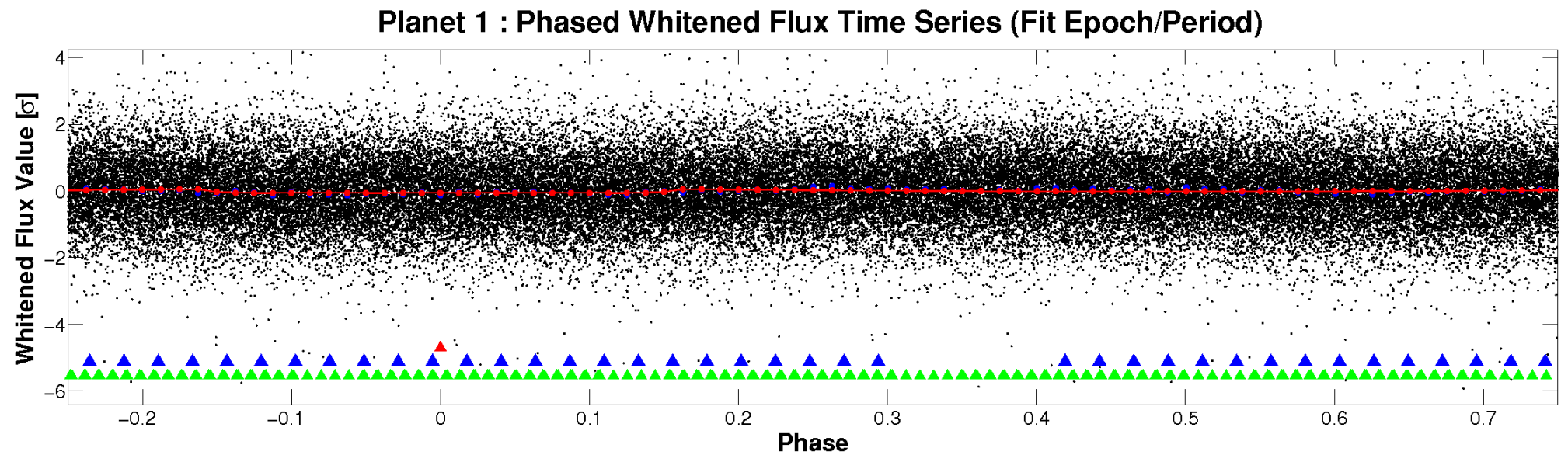
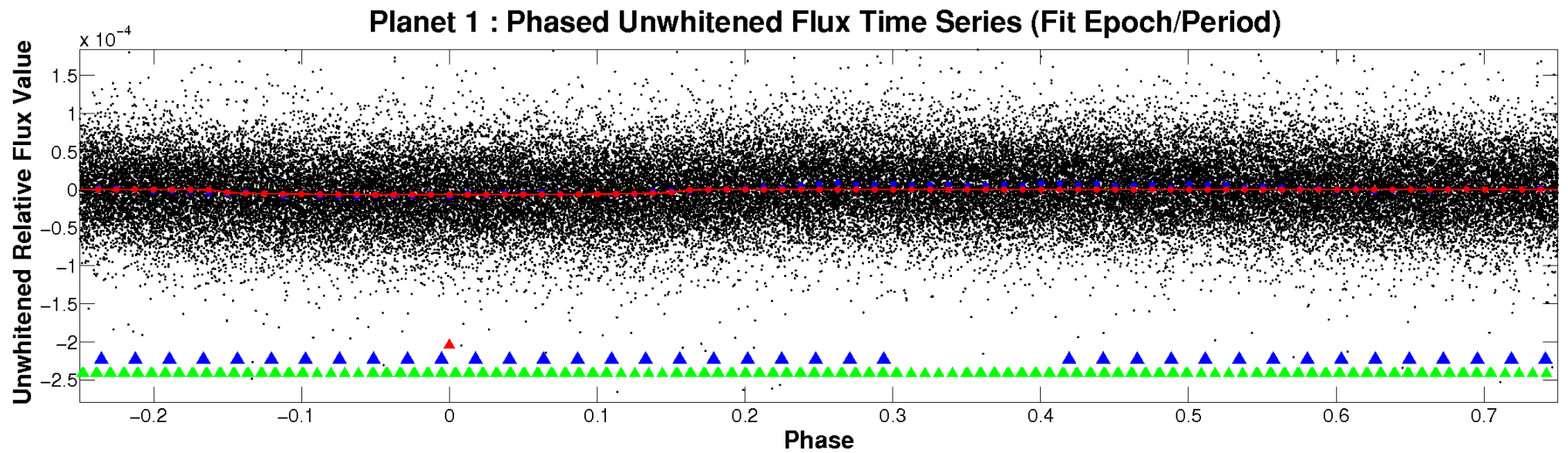


ALT Odd/Even

TCE 005010302-01

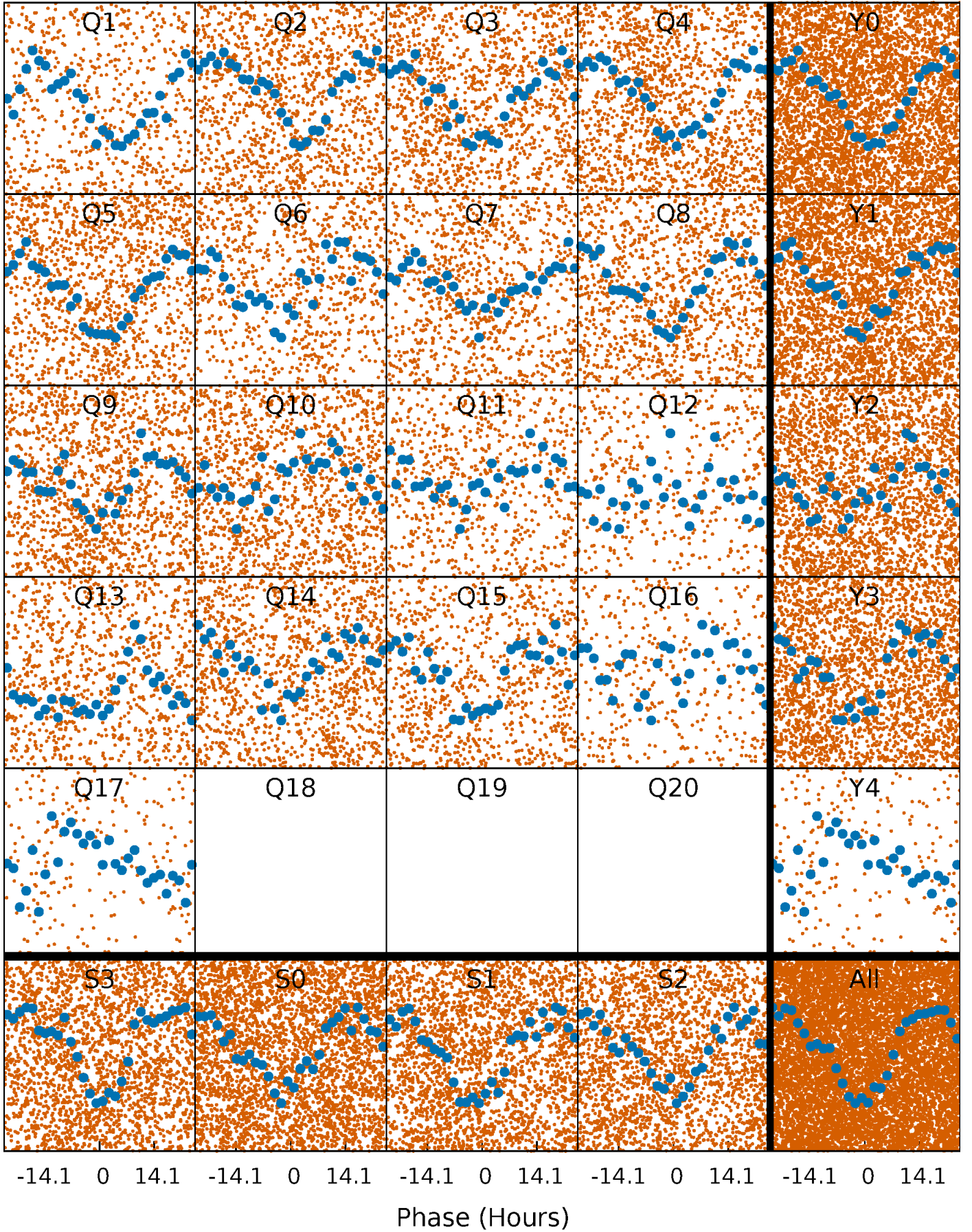


Non-Whitened Vs. Whitened Light Curve



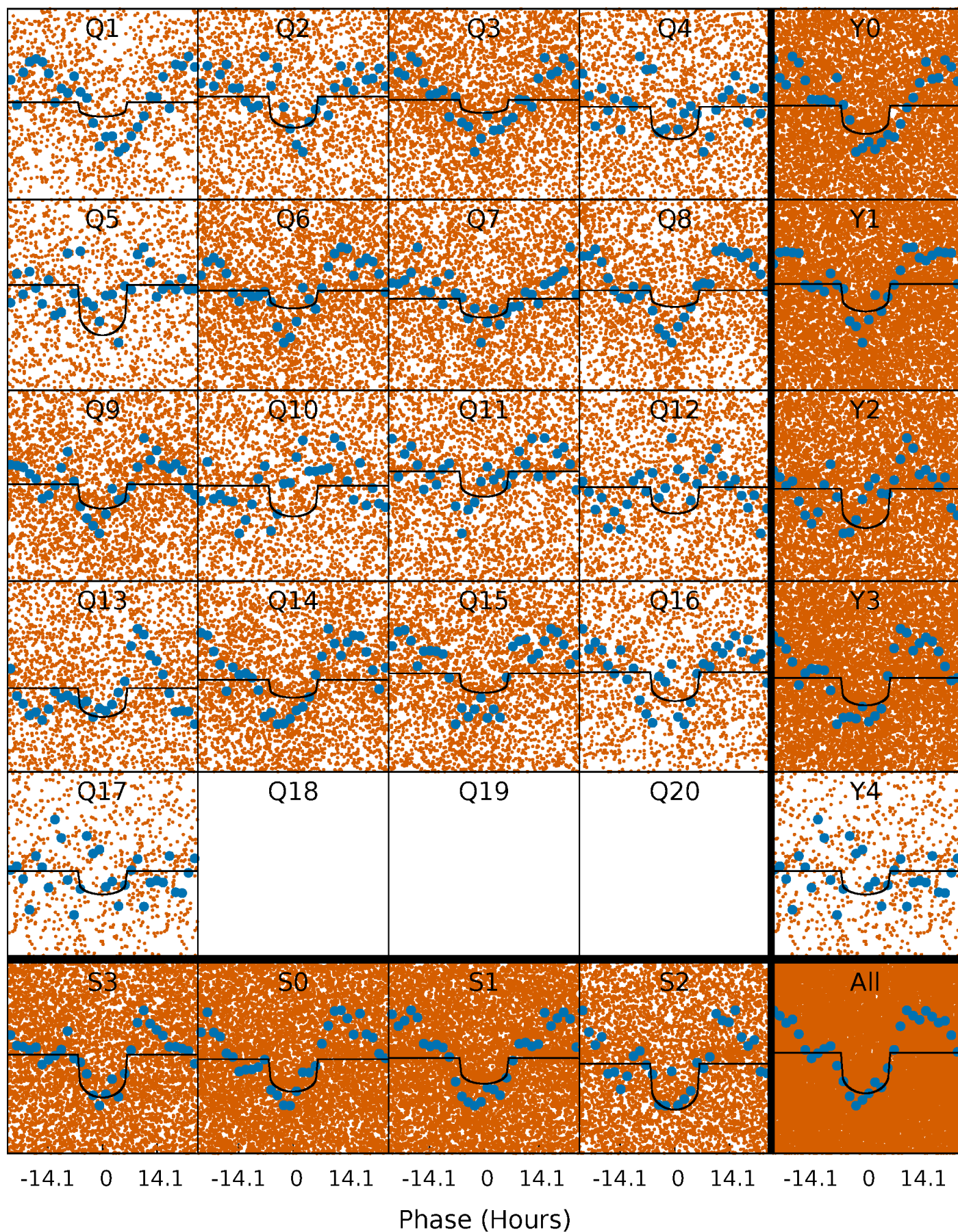
PDC Quarter-Phased Transit Curves

TCE 005010302-01 P= 1.632917 Days $T_0=132.277395$ (BKJD)



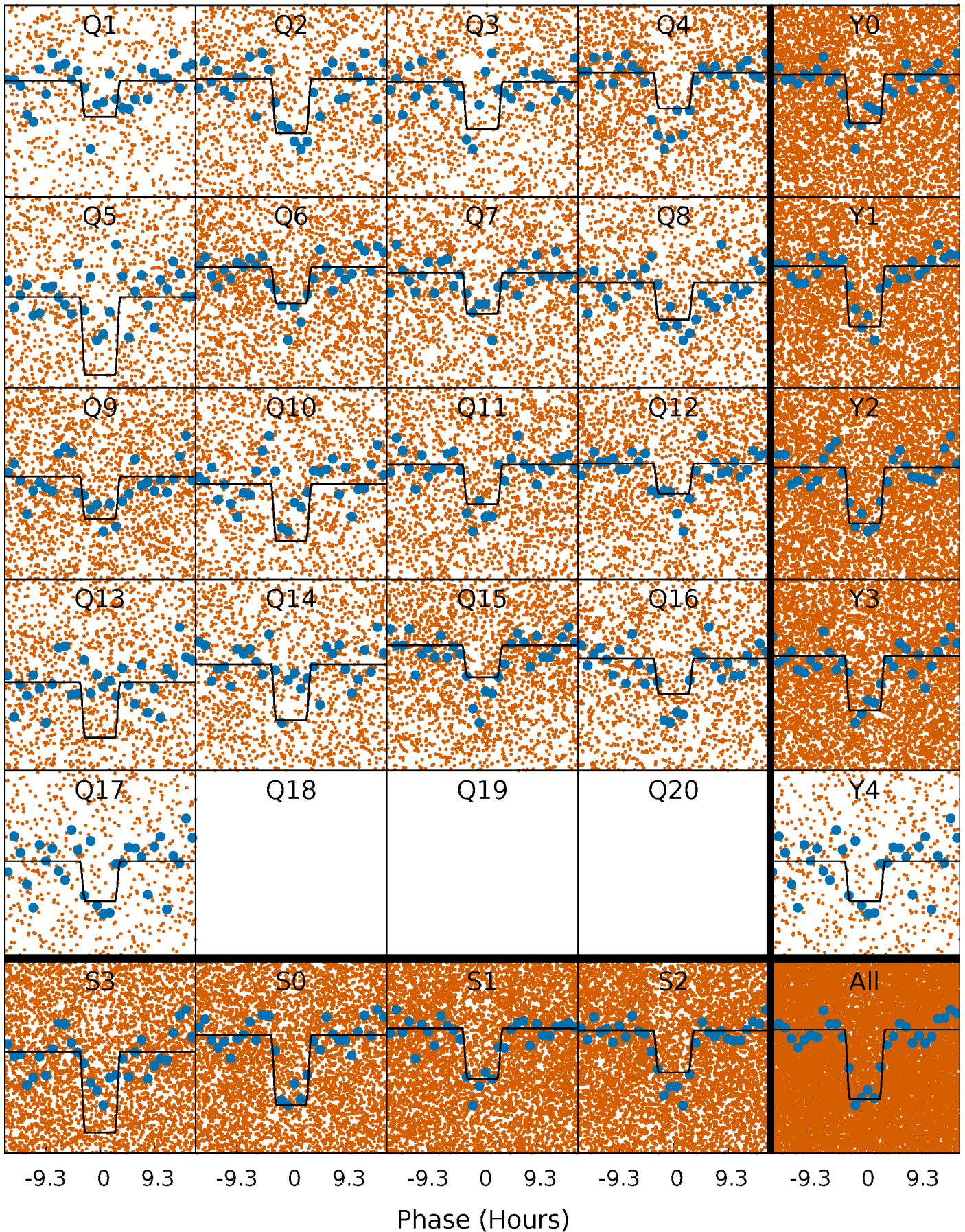
DV Quarter-Phased Transit Curves

TCE 005010302-01 P= 1.632917 Days $T_0=132.277395$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

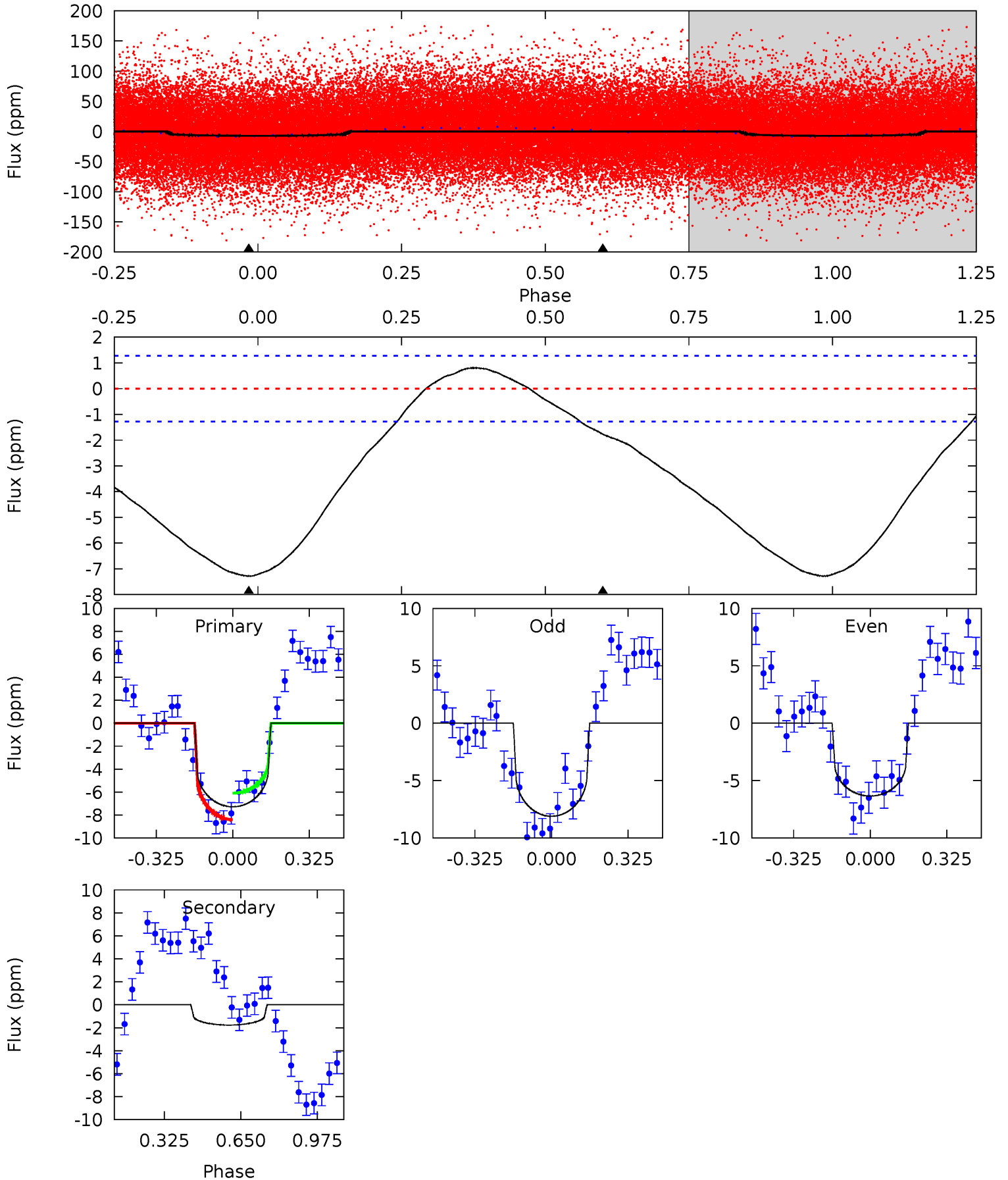
TCE 005010302-01 P= 1.632556 Days $T_0=132.291560$ (BKJD)



DV Model-Shift Uniqueness Test

005010302-01, P = 1.632917 Days, E = 130.644478 Days

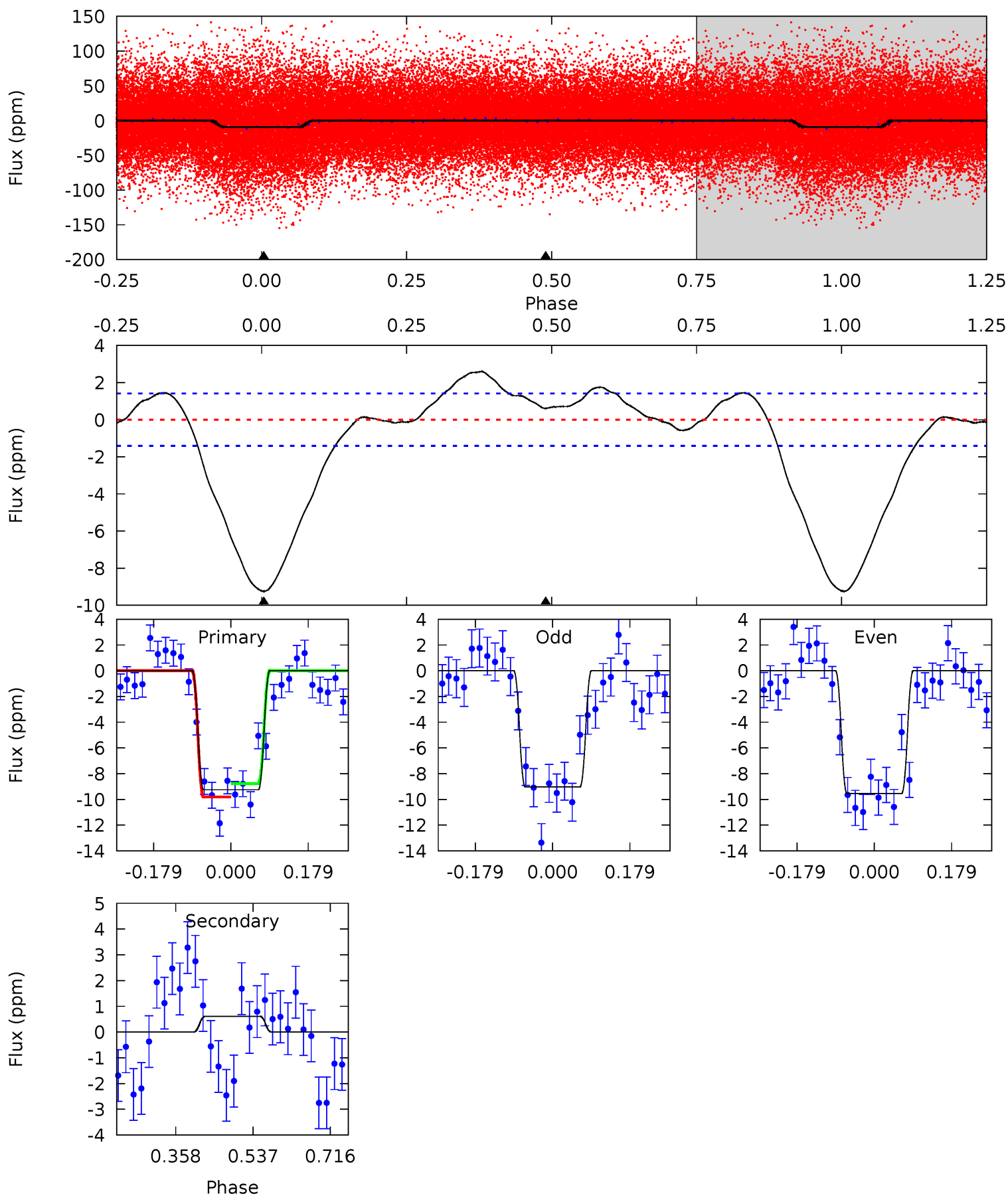
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	5.97	0	0	4.31	0.98	1.90	24.6	24.6	5.97	5.97	2.98	0.96	0.10	4.00



Alt Model-Shift Uniqueness Test

005010302-01, P = 1.632556 Days, E = 130.659004 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	-1.92	0	0	4.44	1.34	1.70	29.0	29.0	-1.92	-1.92	0.79	0.94	0.22	1.63



Stellar Parameters For KIC 005010302

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7854^{+217}_{-326}	$3.669^{+0.468}_{-0.110}$	$-0.120^{+0.200}_{-0.300}$	$3.462^{+0.720}_{-1.681}$	$2.039^{+0.343}_{-0.514}$	$0.069^{+0.321}_{-0.025}$
	+3%/-4%	+13%/-3%	+167%/-250%	+21%/-49%	+17%/-25%	+464%/-36%
Source	KIC0	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 005010302-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 0	$0.84^{+0.49}_{-0.43}$	4729^{+348}_{-598}	5386^{+2281}_{-1142}	$1.674^{+4.655}_{-1.032}$
Alt.	1 ± 0	$1.11^{+0.48}_{-0.43}$	4727^{+342}_{-646}	-4607^{+381}_{-588}	$-0.293^{+0.193}_{-0.584}$

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

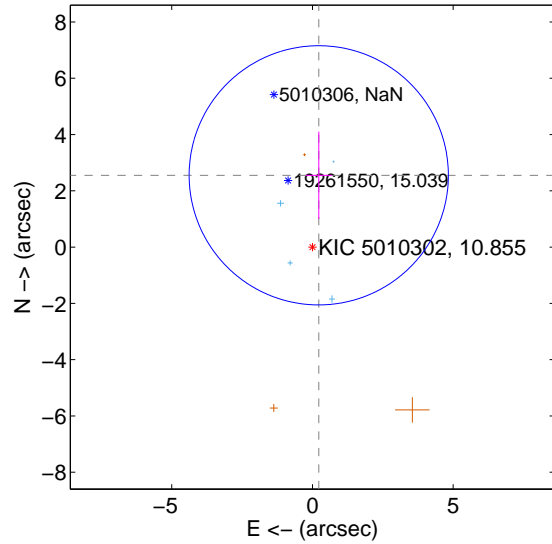
Supplemental centroid analysis for 005010302-01. **Kepler magnitude: 10.86.** Transit SNR 9.08

There are 4 quarters with good PRF difference image offsets

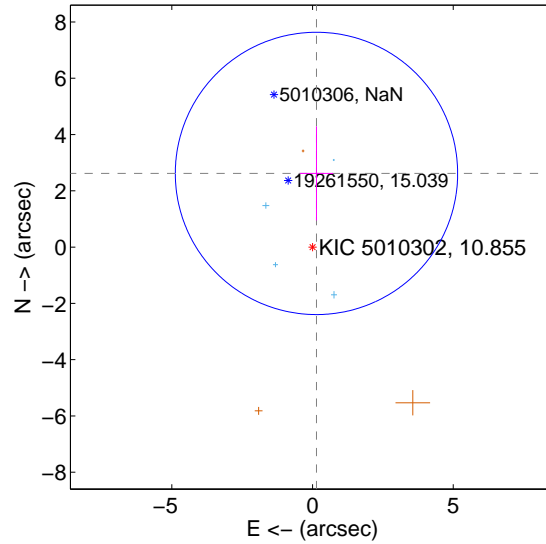
The direct PRF centroid is offset from the target star catalog position by about 0.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.561 ± 1.535	1.67	-0.224 ± 0.465	2.551 ± 1.553
PRF-fit source offset from KIC position	2.622 ± 1.672	1.57	-0.140 ± 0.590	2.618 ± 1.672
photometric centroid source offset	1.50 ± 1.26	1.20	-1.37 ± 1.20	-0.61 ± 1.49

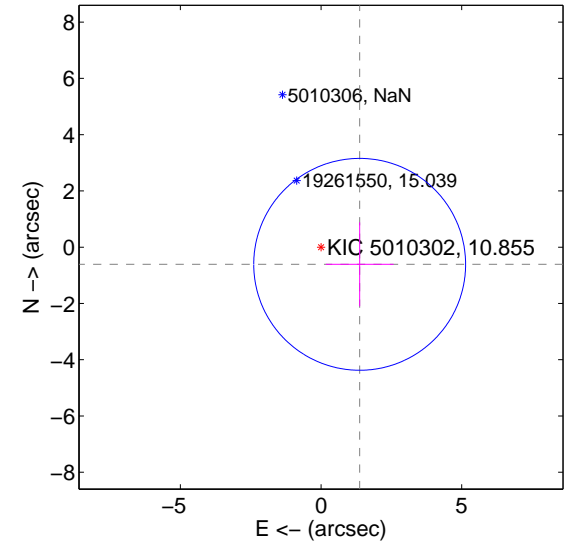
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

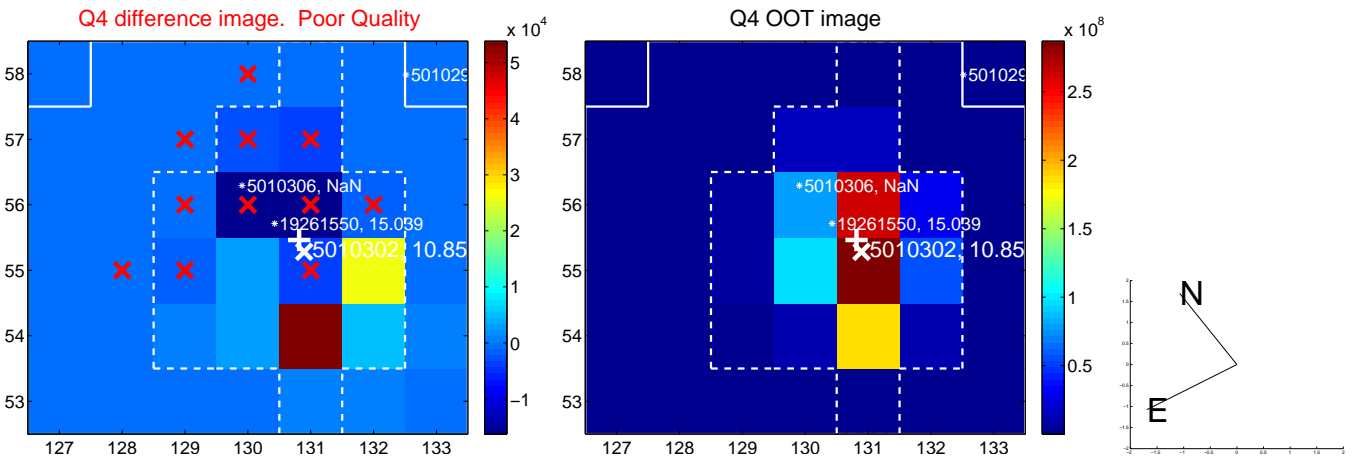
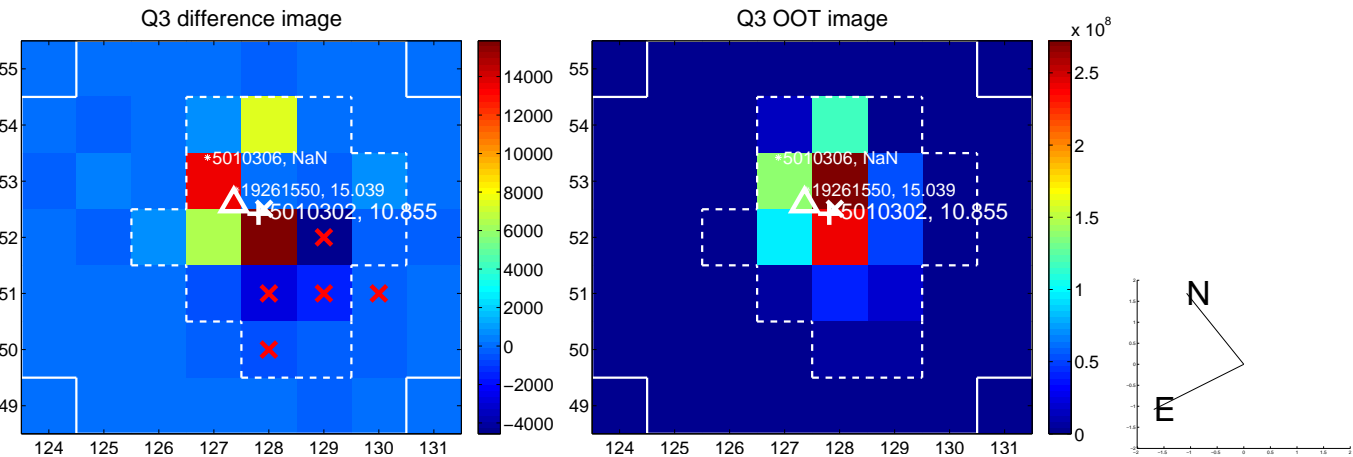
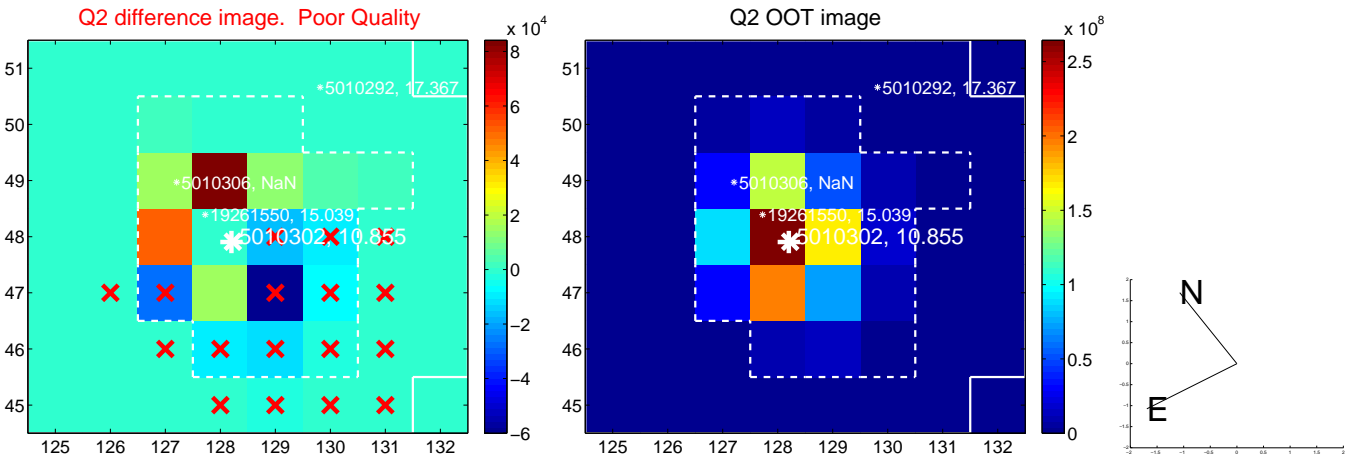
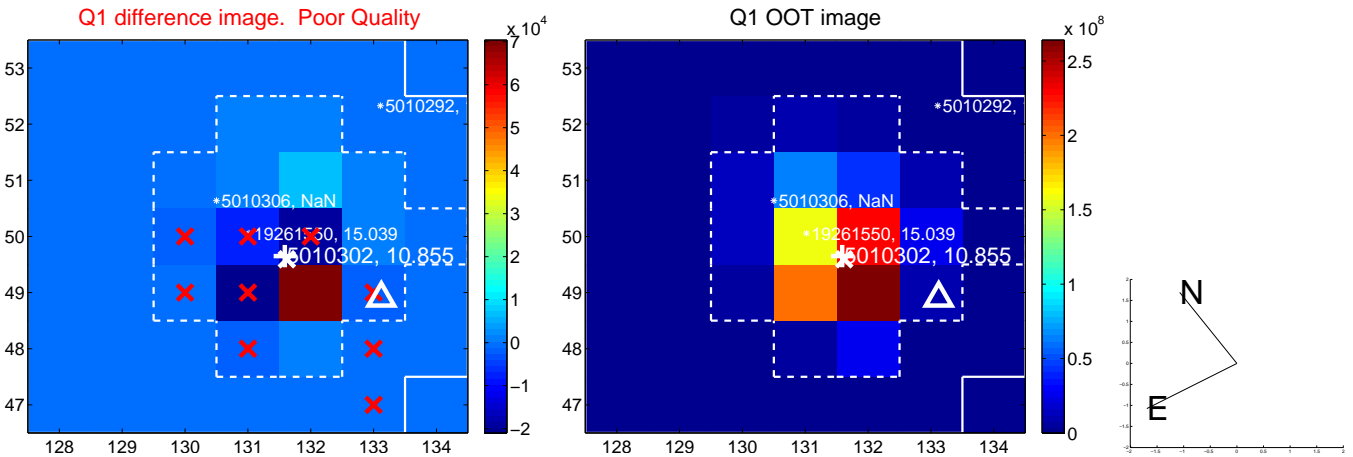


offset from photometric centroids

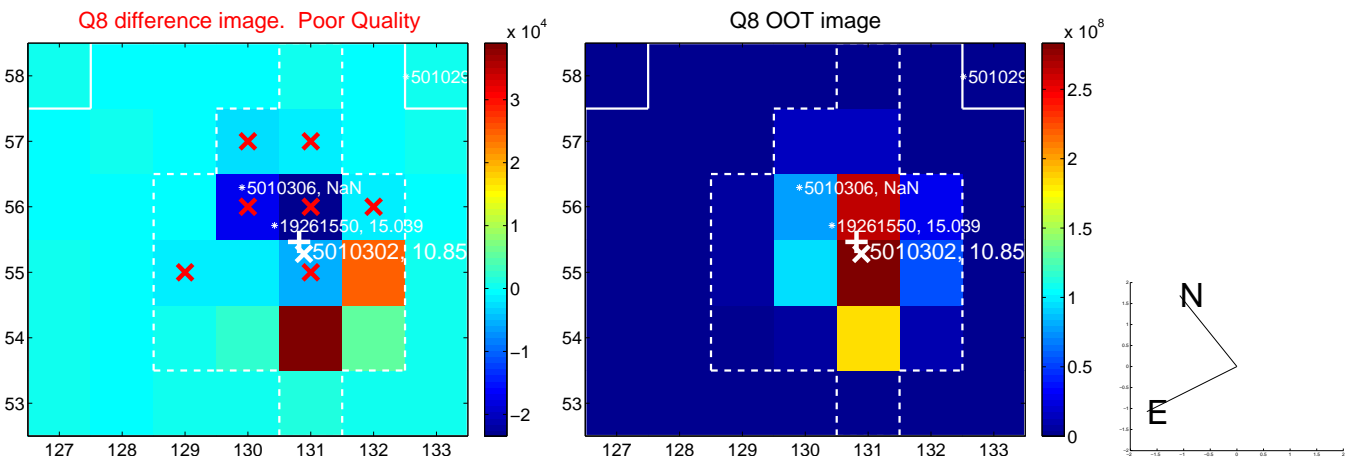
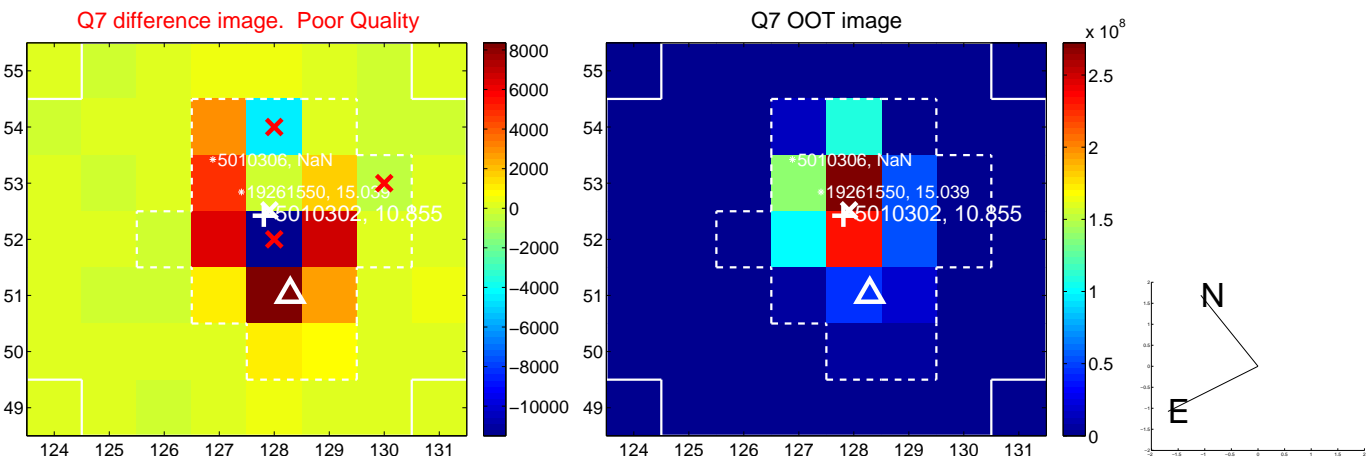
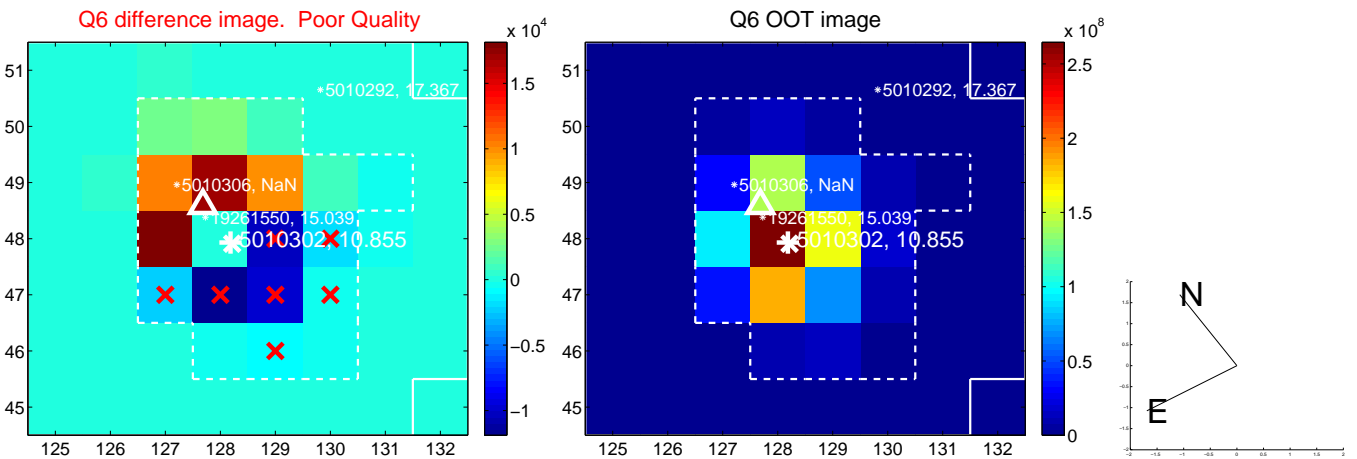
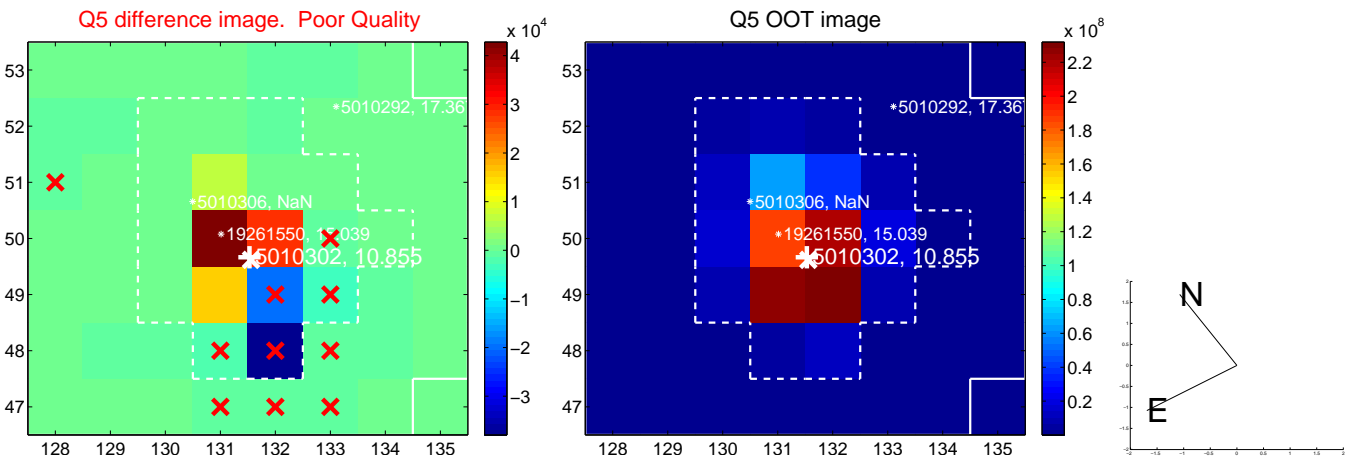


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

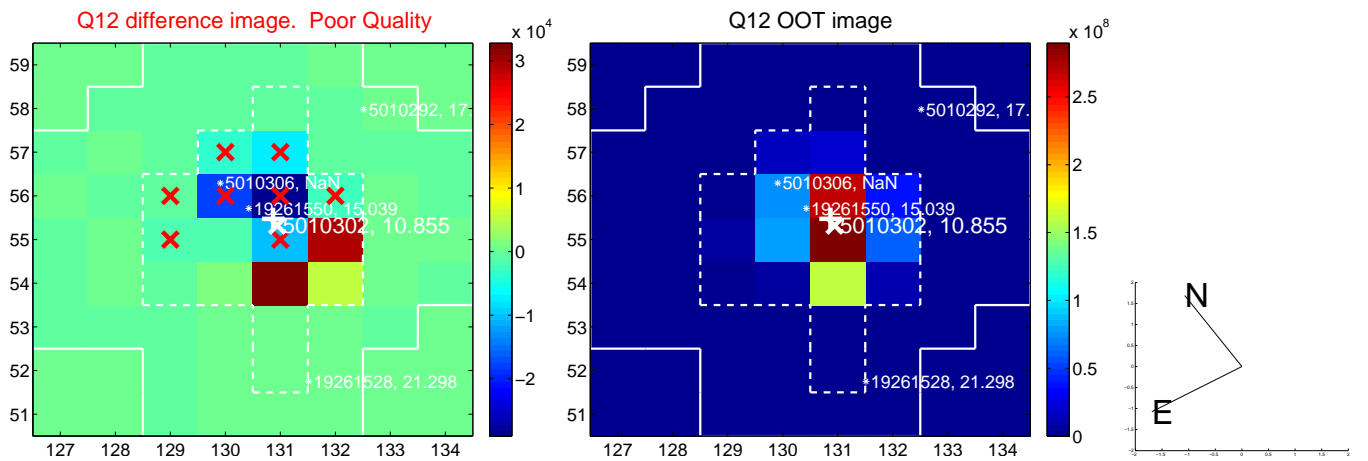
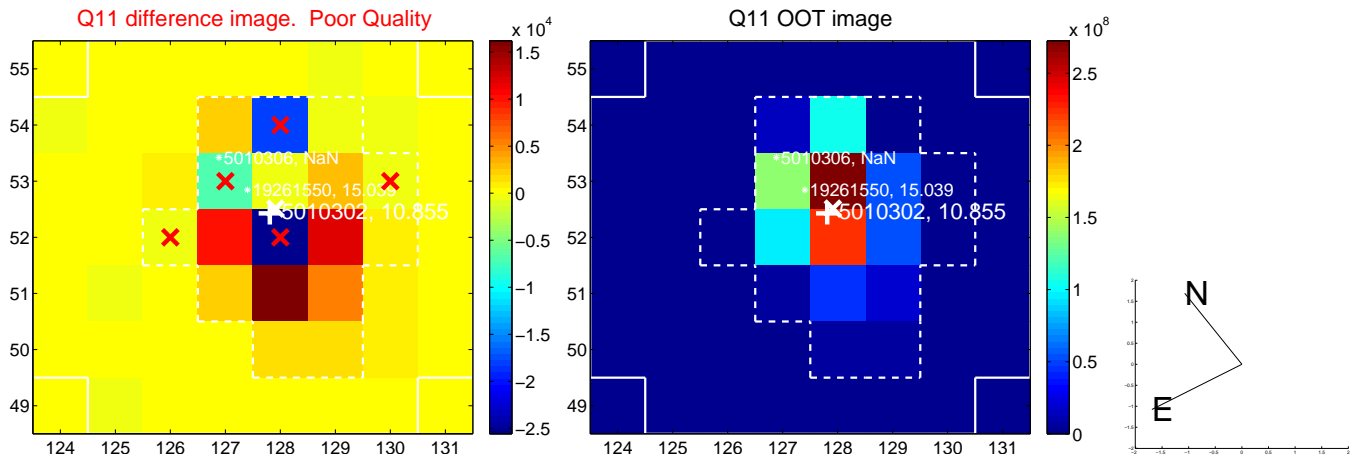
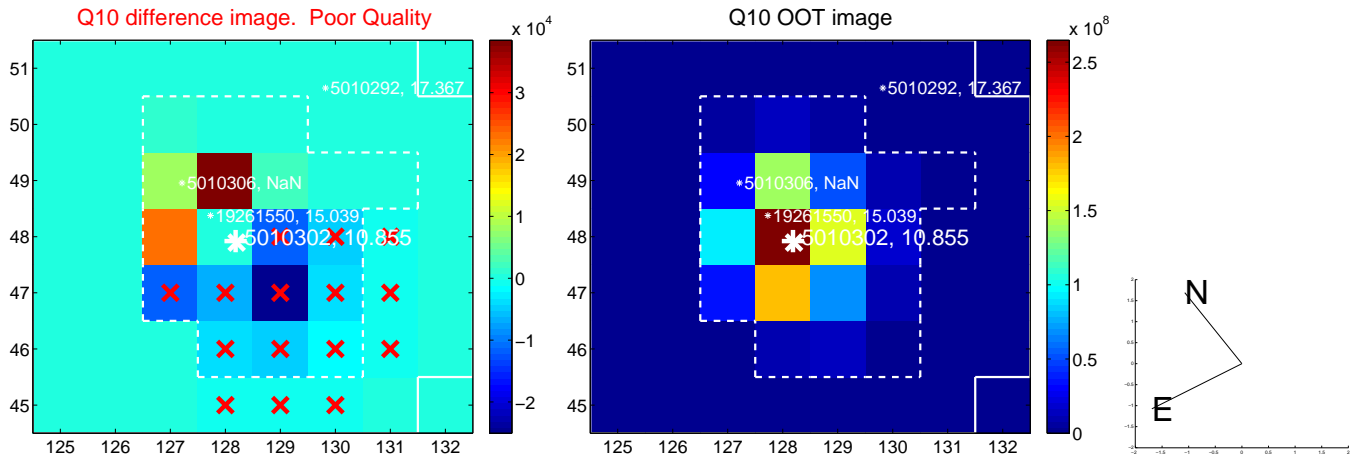
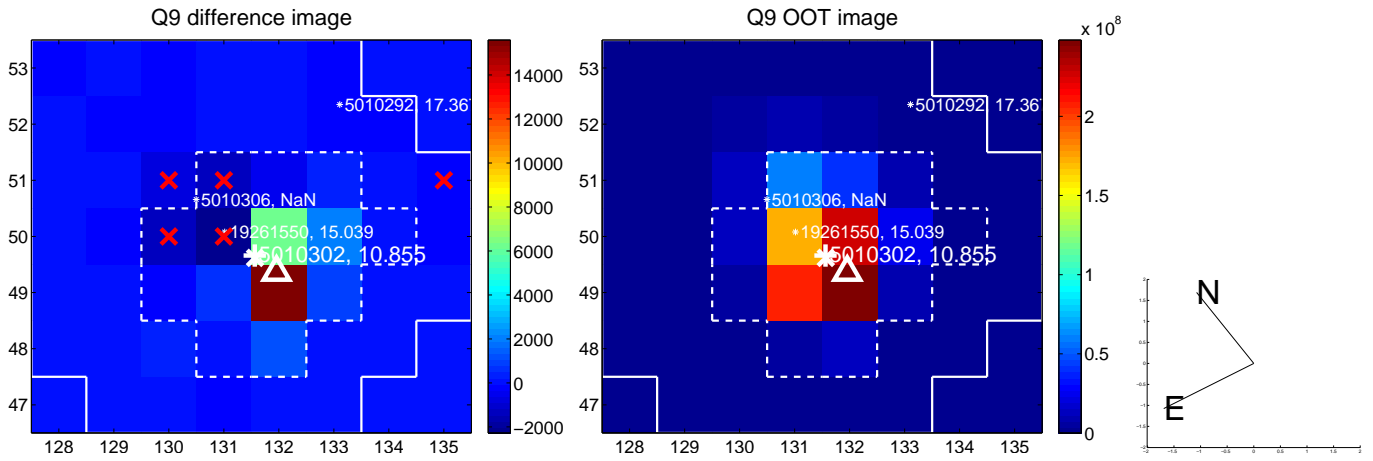
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



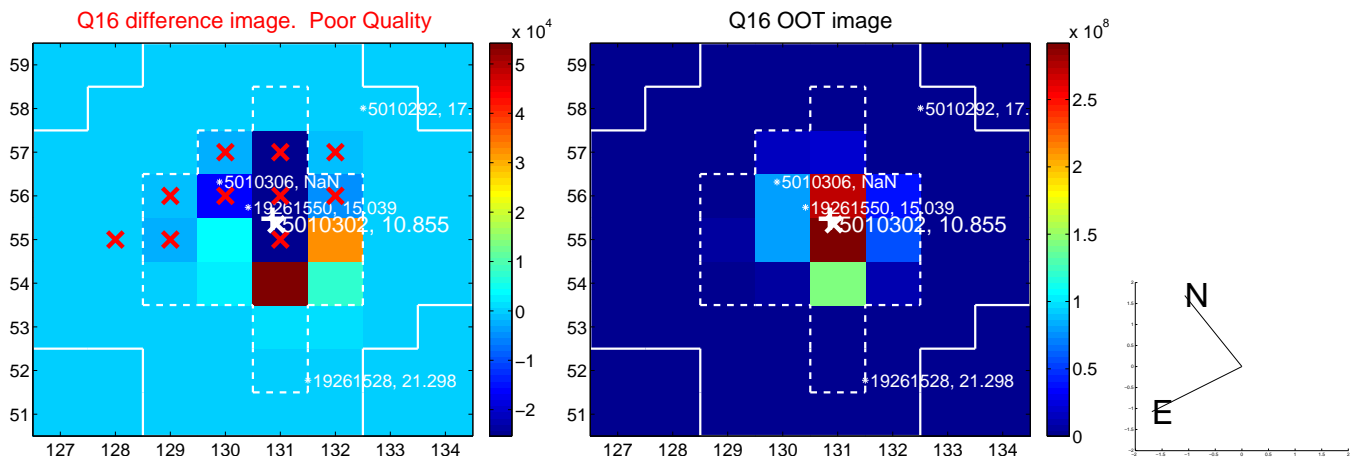
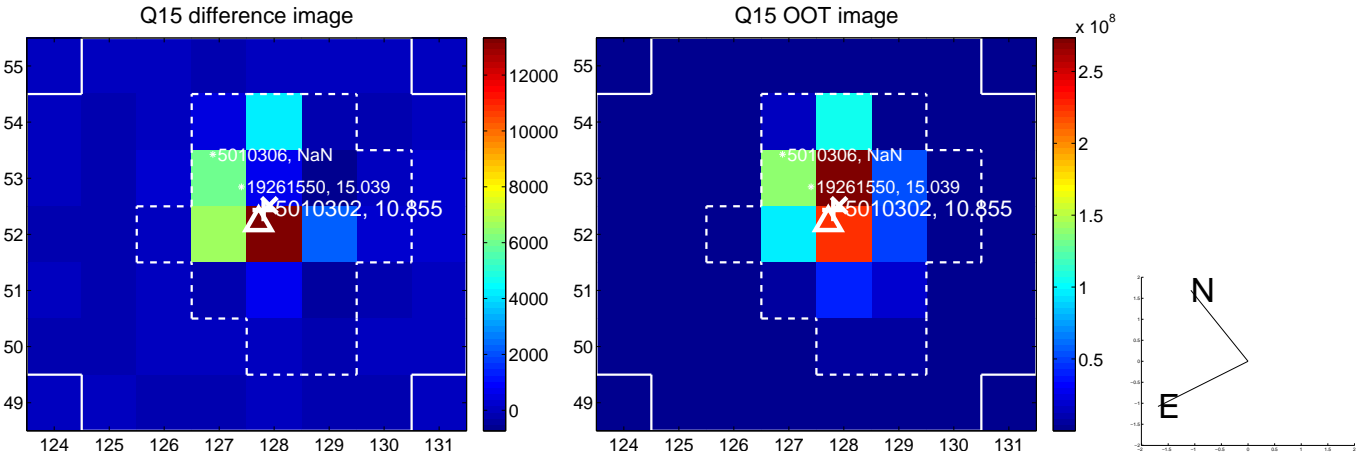
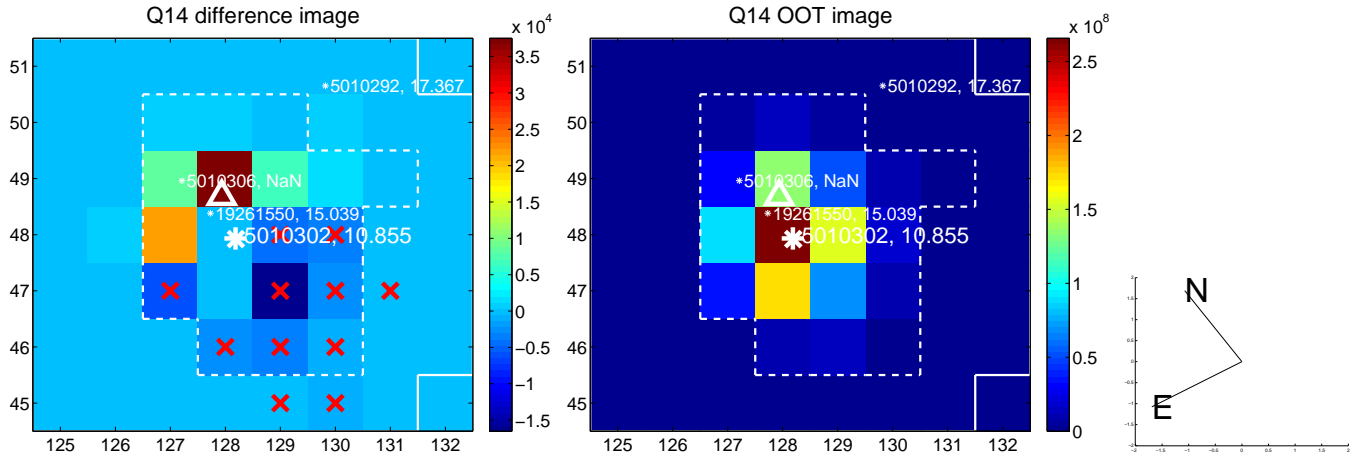
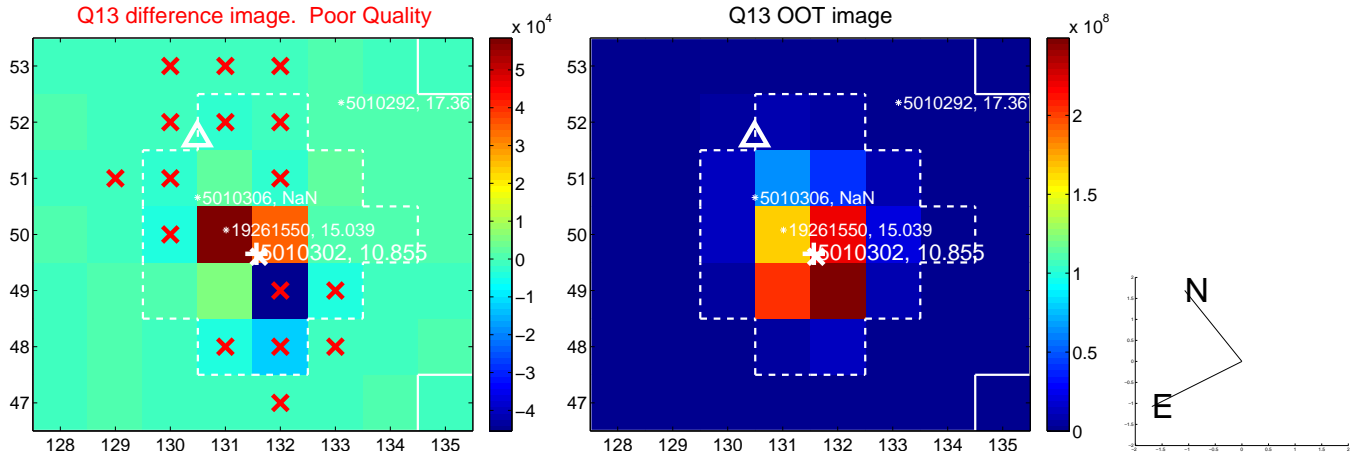
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



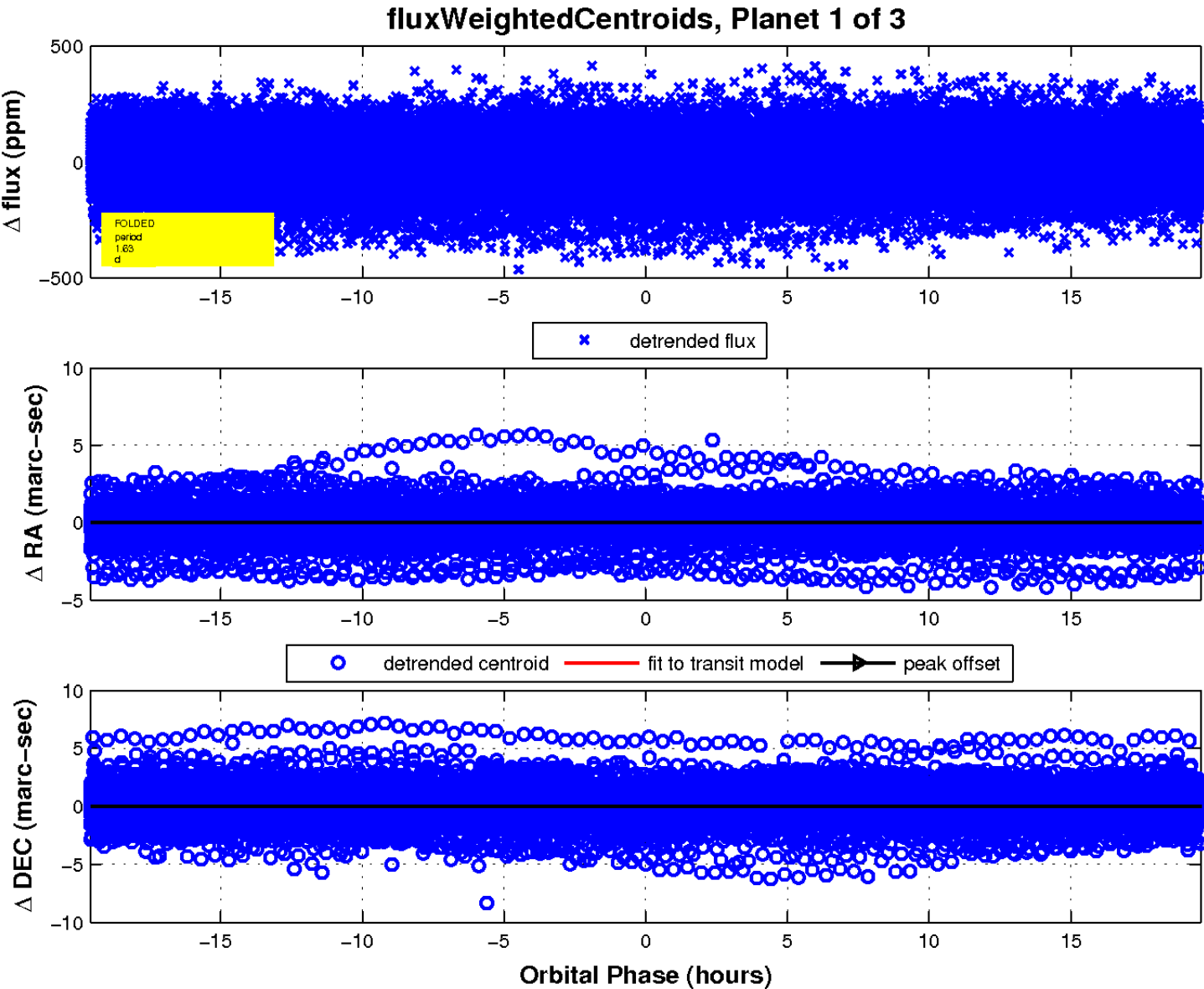
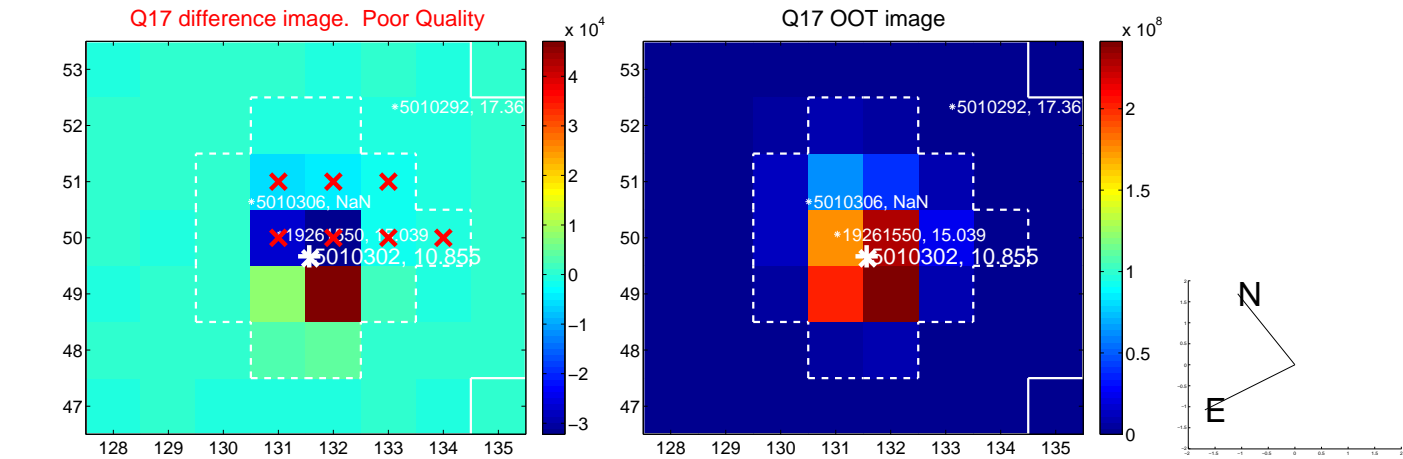
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

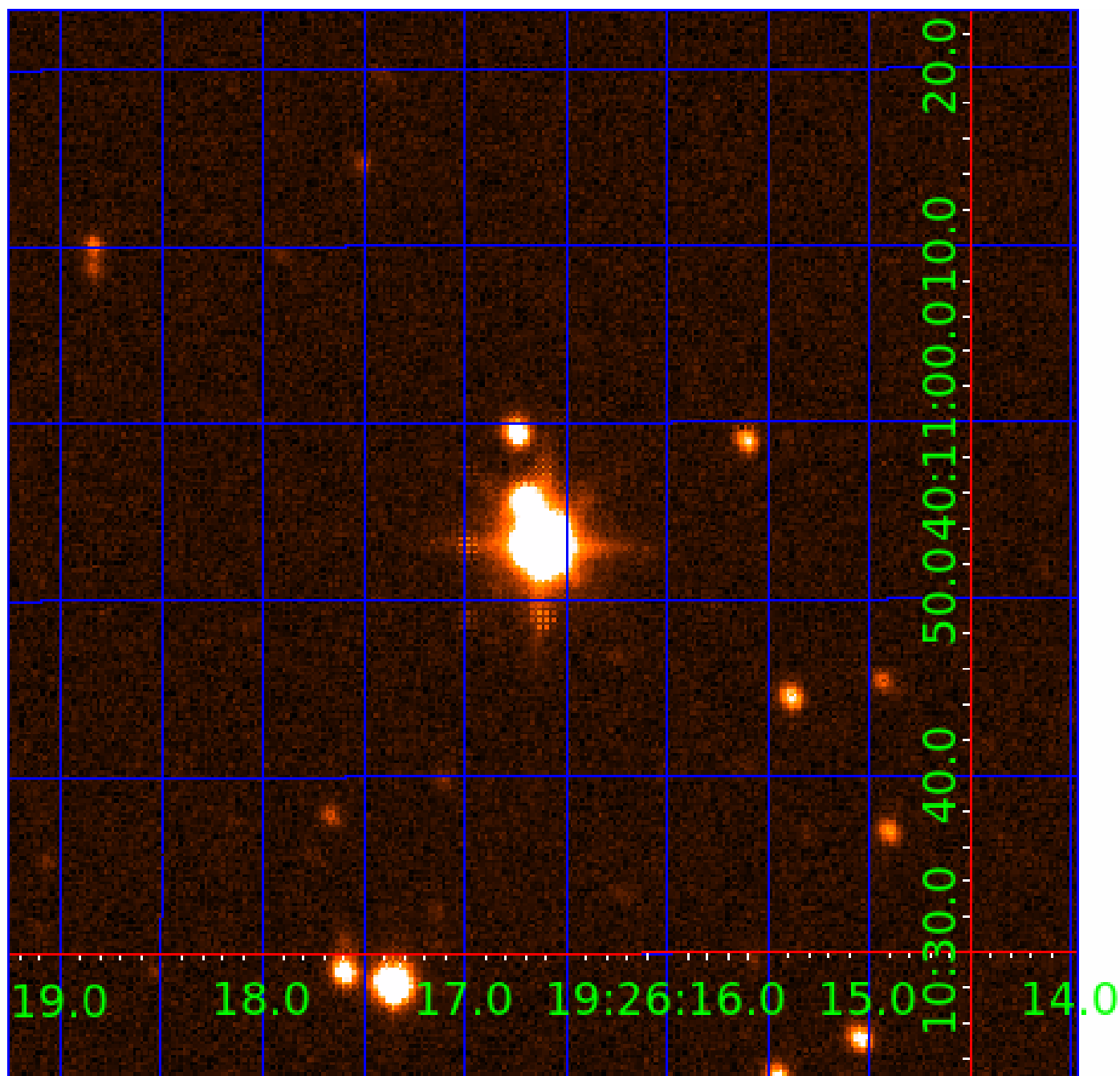


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005010302

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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Robovetter Results

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005010302-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005010302-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

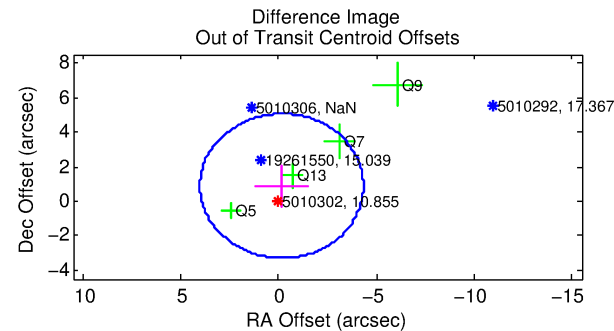
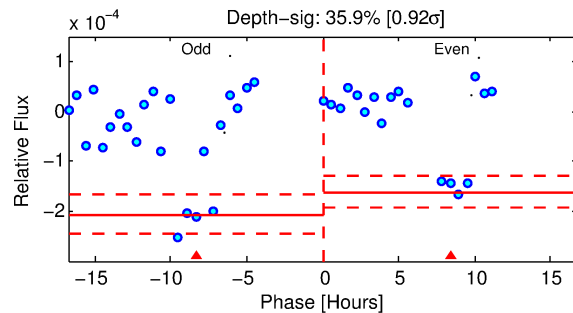
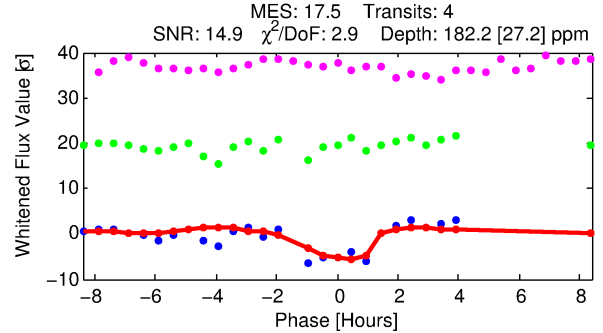
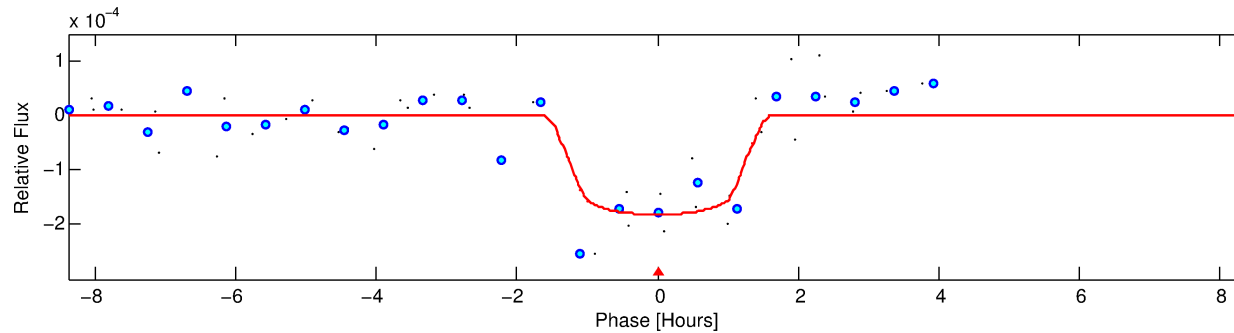
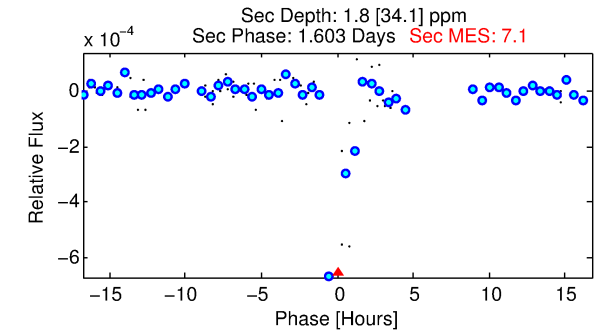
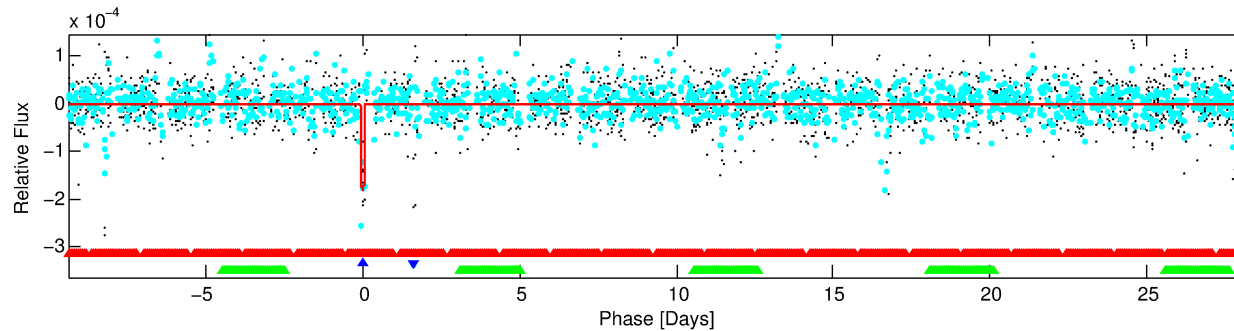
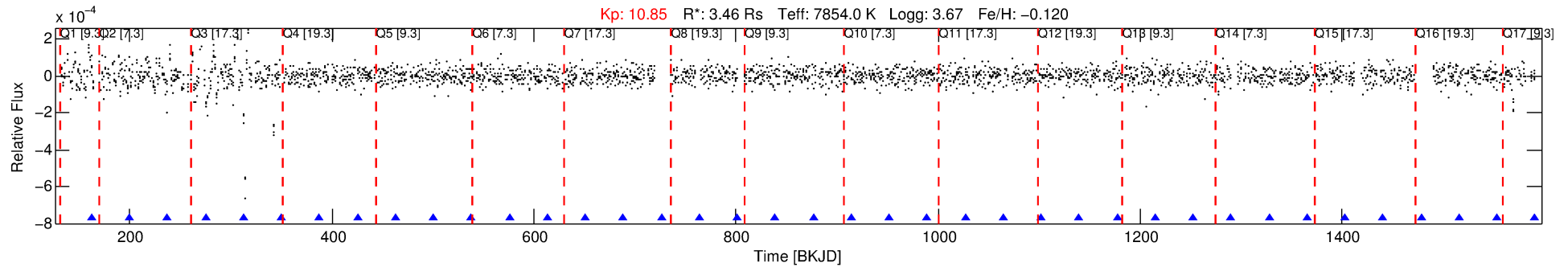
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005010302-02

No Significant Match Found

DV One-Page Summary

KIC: 5010302 Candidate: 2 of 3 Period: 37.595 d



DV Fit Results:

Period = 37.59468 [0.00432] d
Epoch = 162.3547 [0.0163] BKJD
Rp/R* = 0.0145 [0.0095]
a/R* = 47.25 [188.77]
b = 0.90 [0.81]
Seff = 526.39 [423.89]
Teq = 1221 [246] K
Rp = 5.46 [4.46] Re
a = 0.2786 [0.1347] AU
Ag = 2.59 [48.95] [0.03σ]
Teffp = 2396 [11298] K [0.10σ]

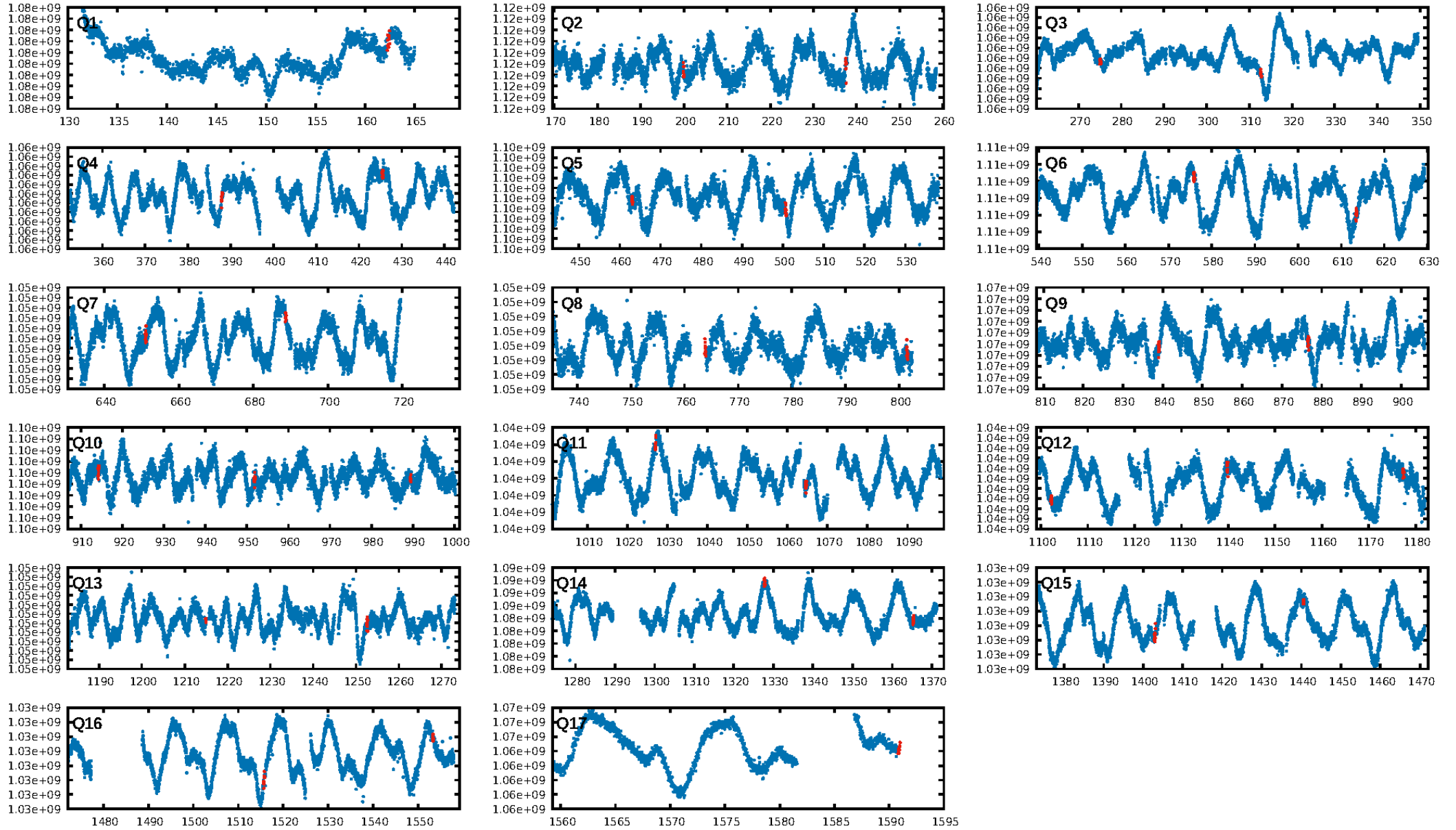
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [251.68σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 87.5%
Bootstrap-pfa: 5.53e-39
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.286
Centroid-sig: 0.0%
Centroid-so: 0.703 arcsec [2.27σ]
OotOffset-rm: 0.894 arcsec [0.64σ]
KicOffset-rm: 1.060 arcsec [0.76σ]
OotOffset-st: 0/1/0/3 [4]
KicOffset-st: 0/1/0/3 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.33 [5/15]

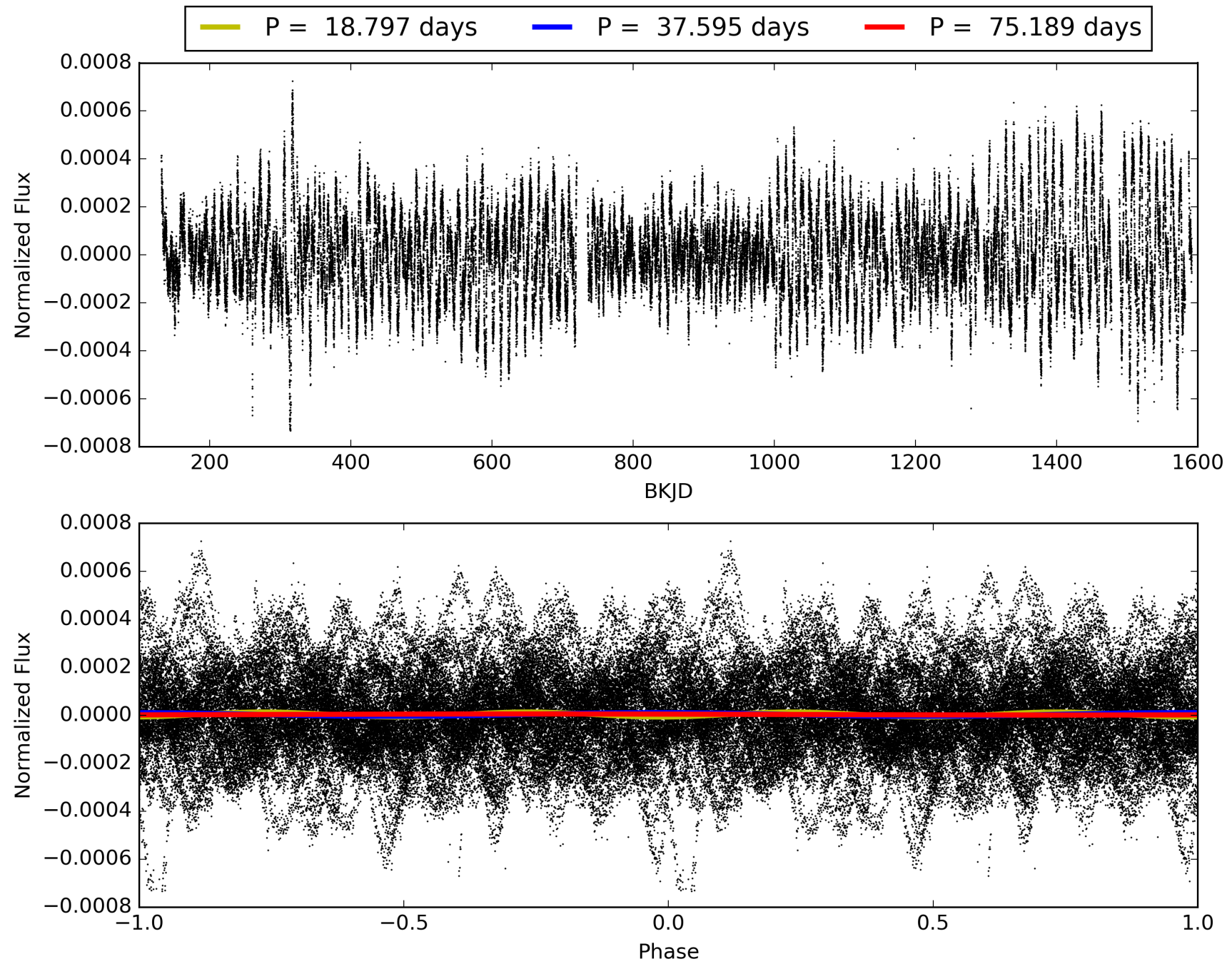
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:39:10 Z

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

TCE 005010302-02, PDC Light Curves

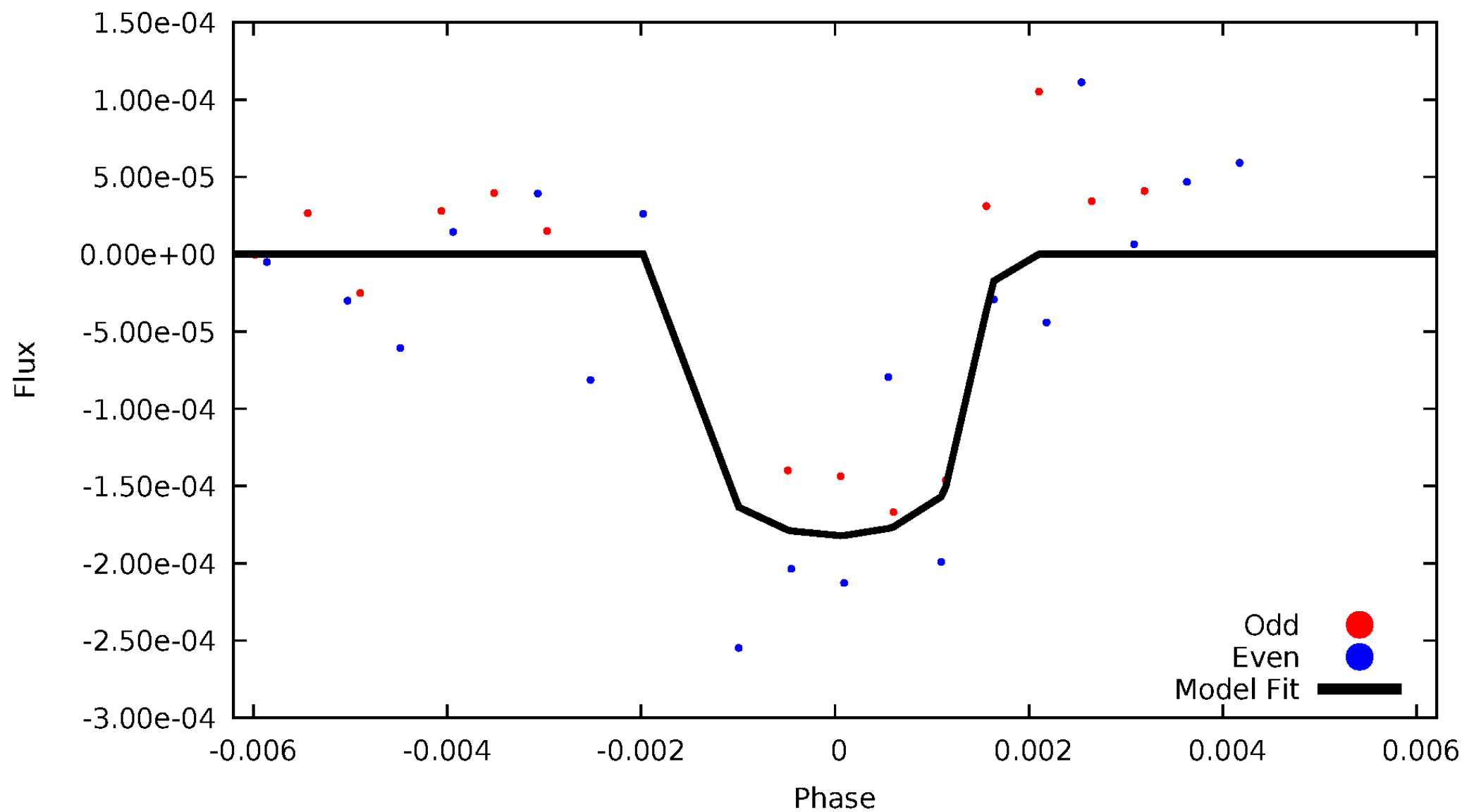


TCE 005010302-02



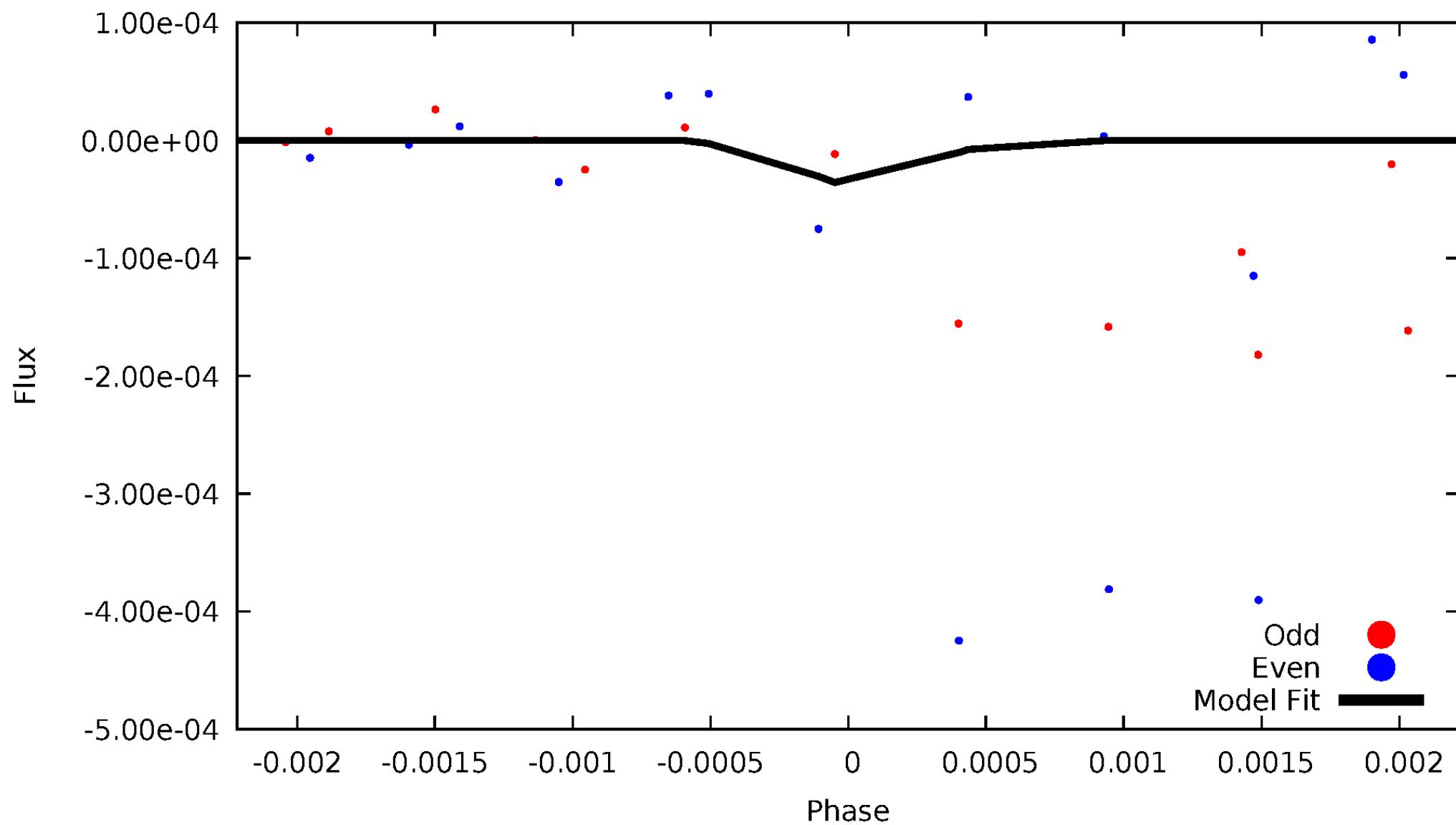
DV Odd/Even

TCE 005010302-02



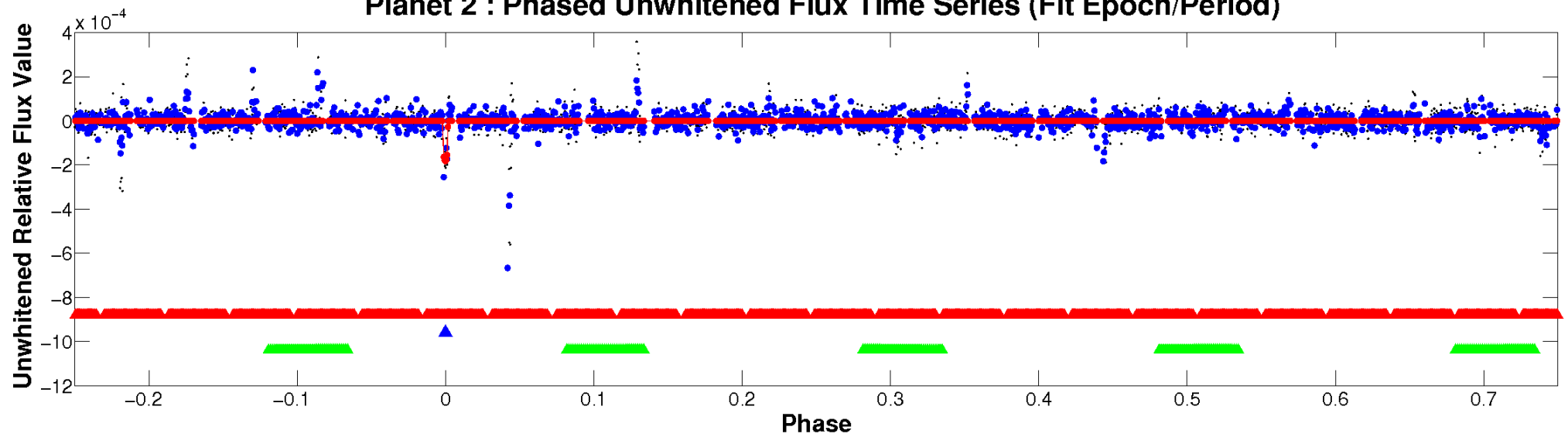
ALT Odd/Even

TCE 005010302-02

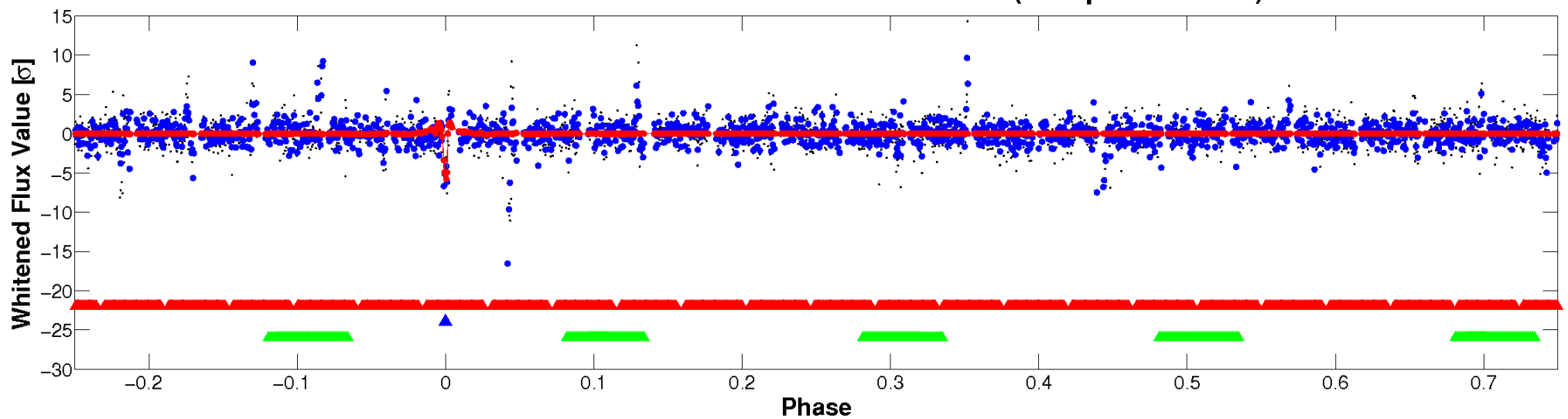


Non-Whitened Vs. Whitened Light Curve

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

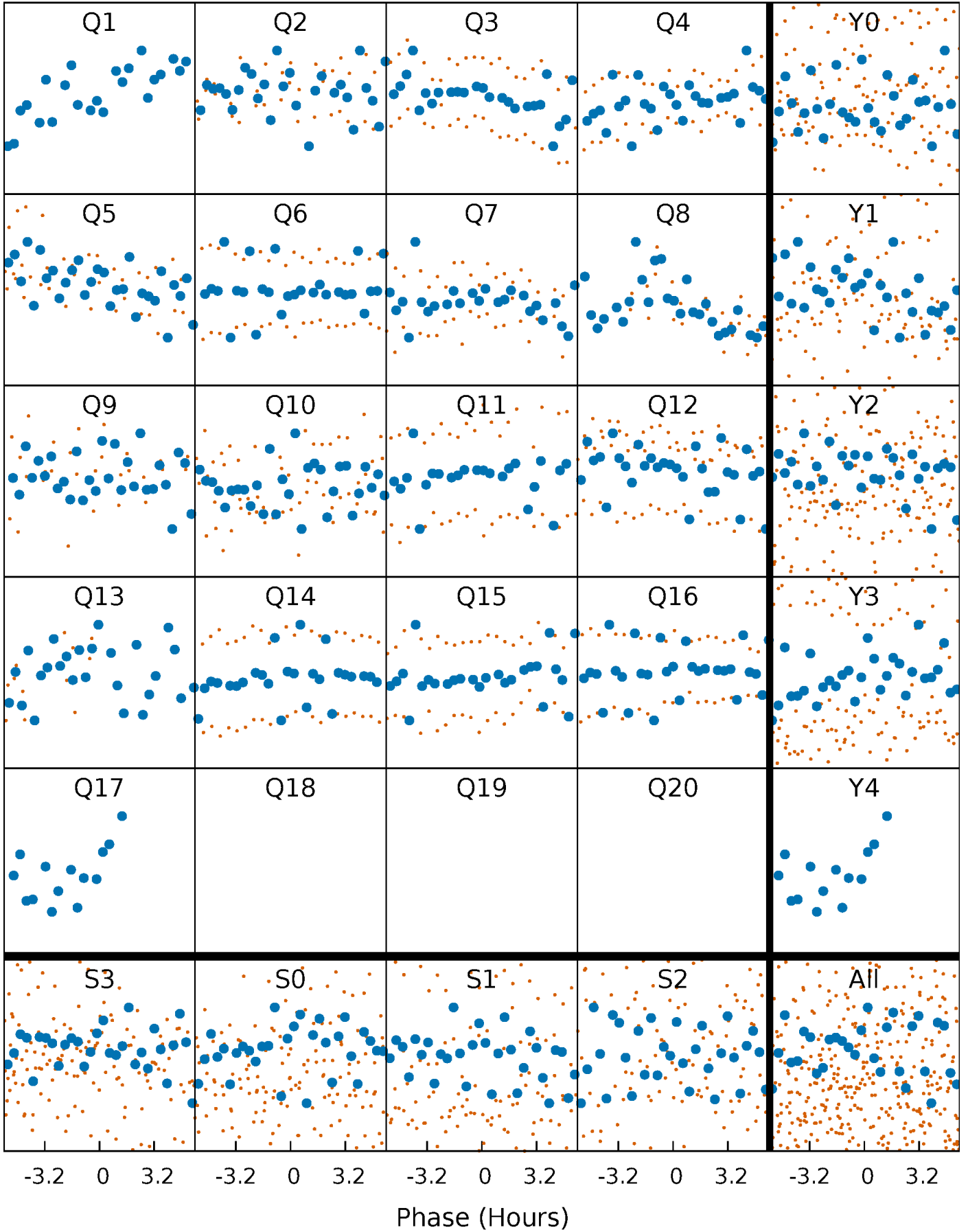


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



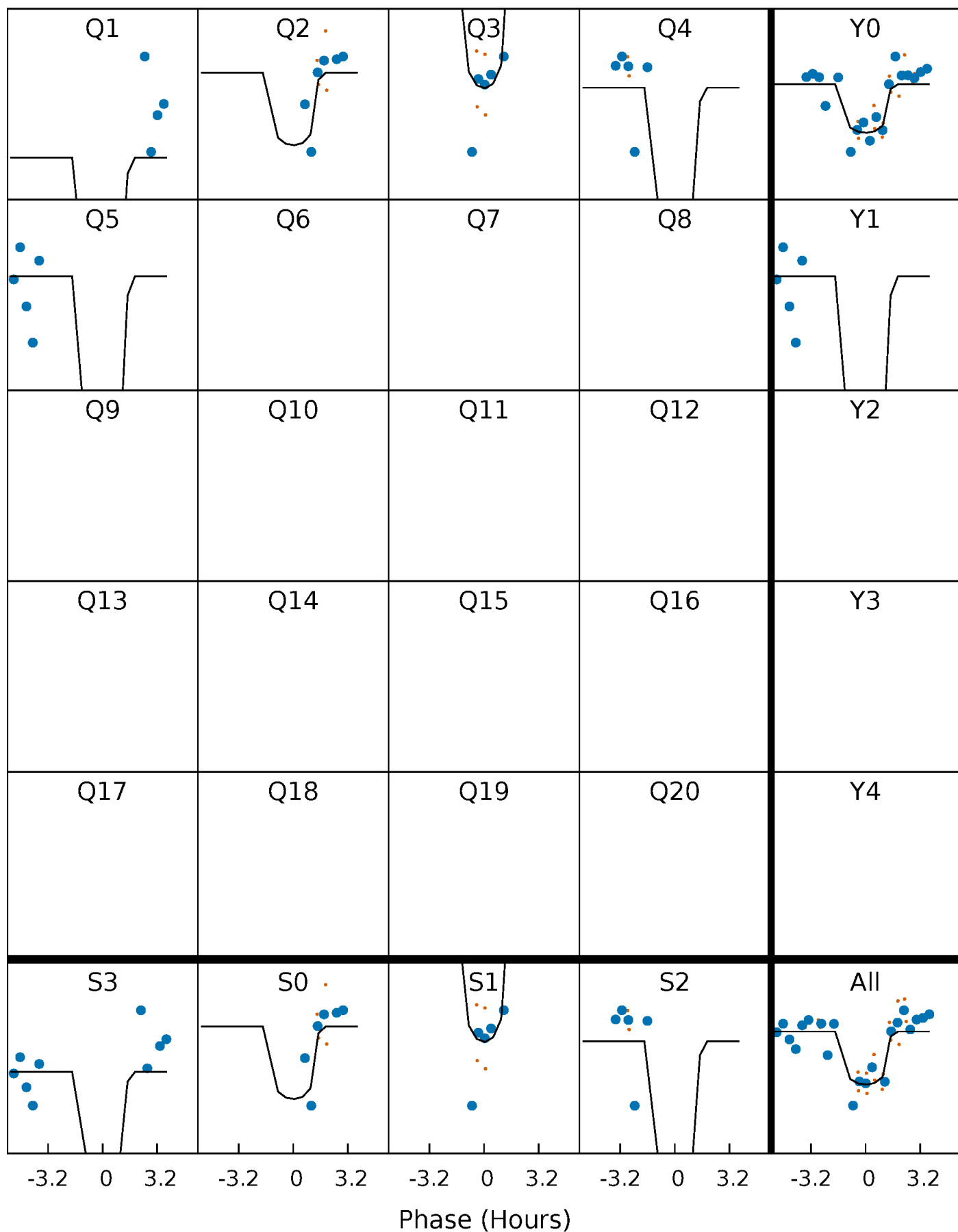
PDC Quarter-Phased Transit Curves

TCE 005010302-02 P= 37.594683 Days $T_0=162.354697$ (BKJD)



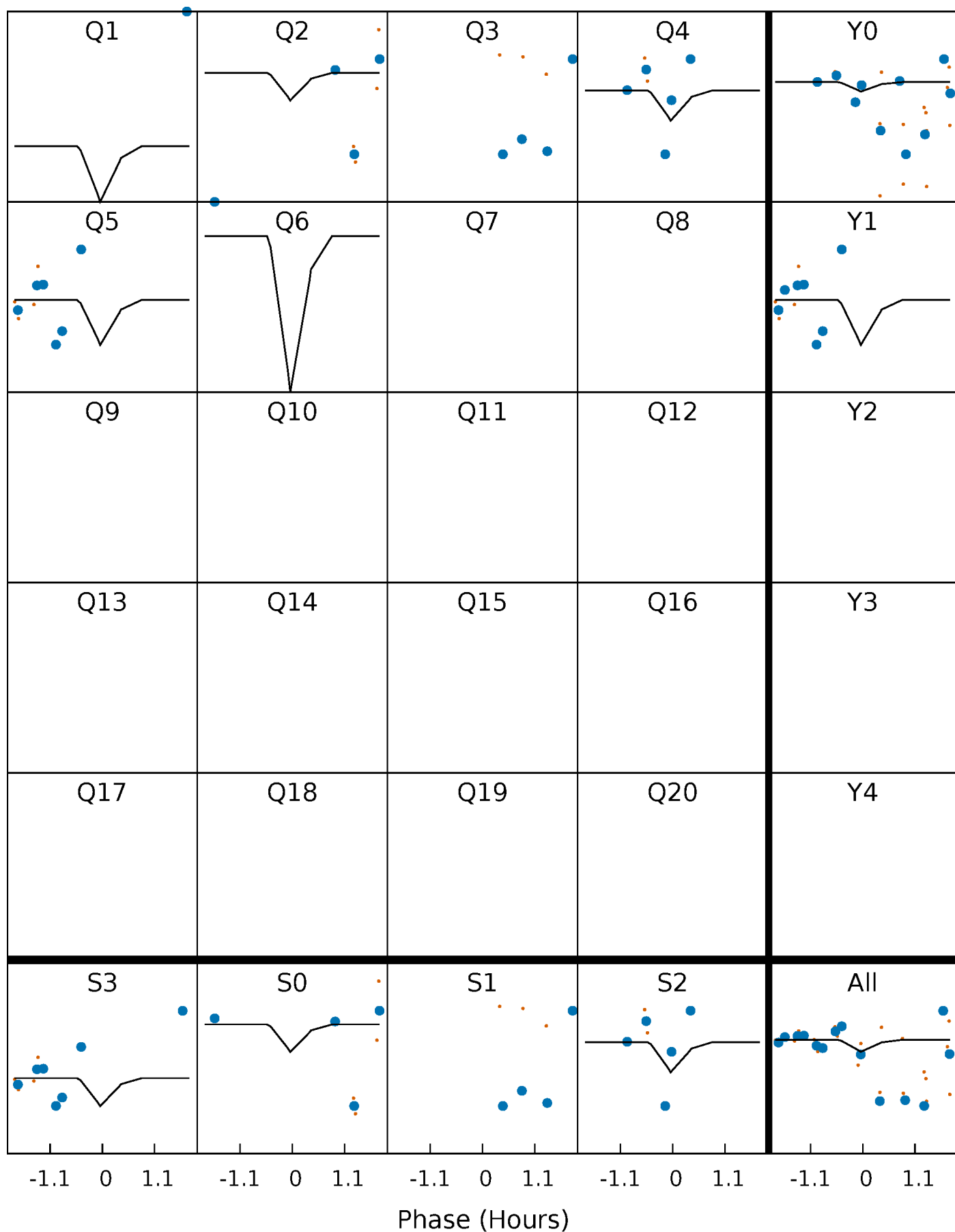
DV Quarter-Phased Transit Curves

TCE 005010302-02 $P = 37.594683$ Days $T_0 = 162.354697$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

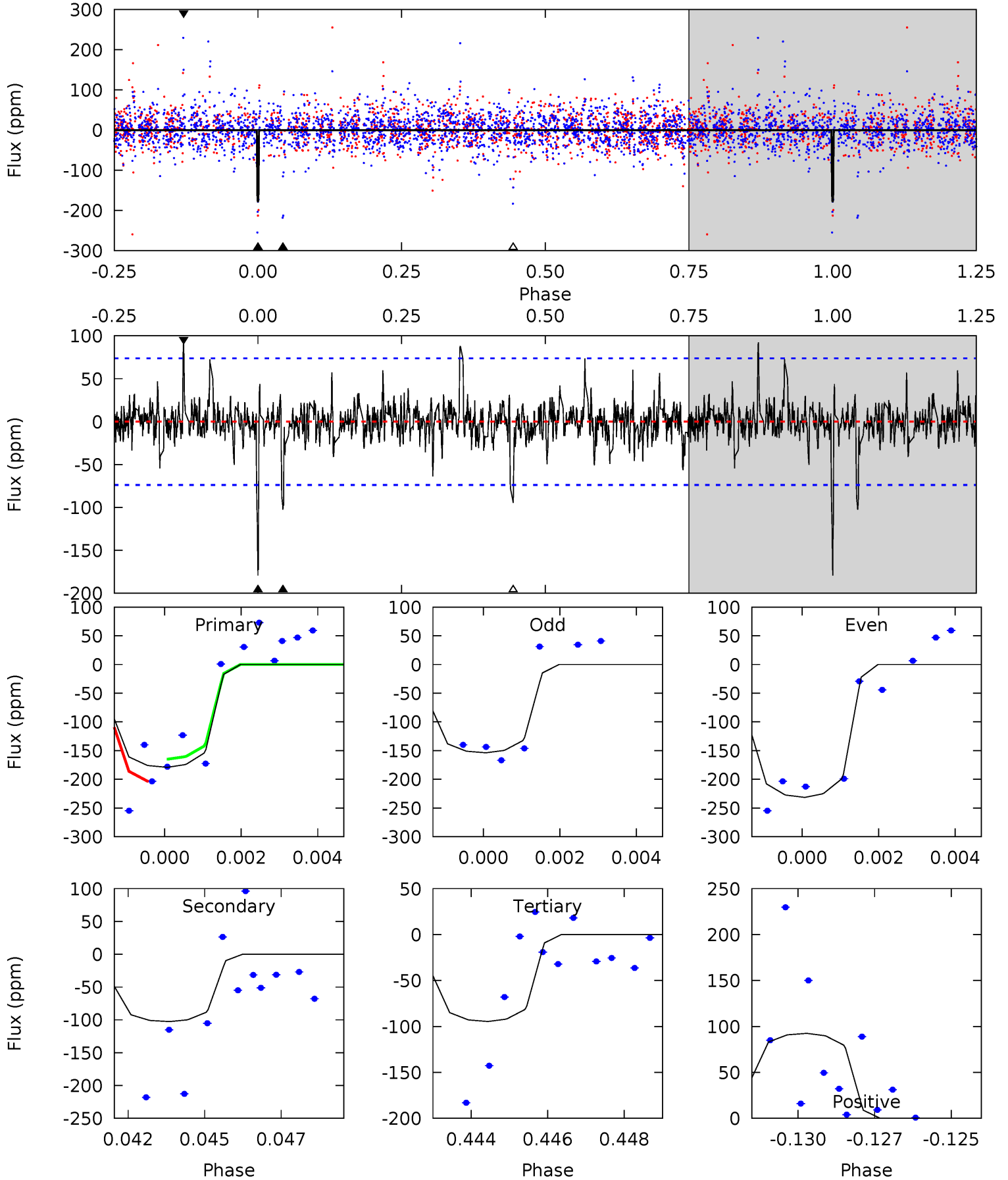
TCE 005010302-02 P= 37.575538 Days $T_0=162.378851$ (BKJD)



DV Model-Shift Uniqueness Test

005010302-02, P = 37.594683 Days, E = 124.760014 Days

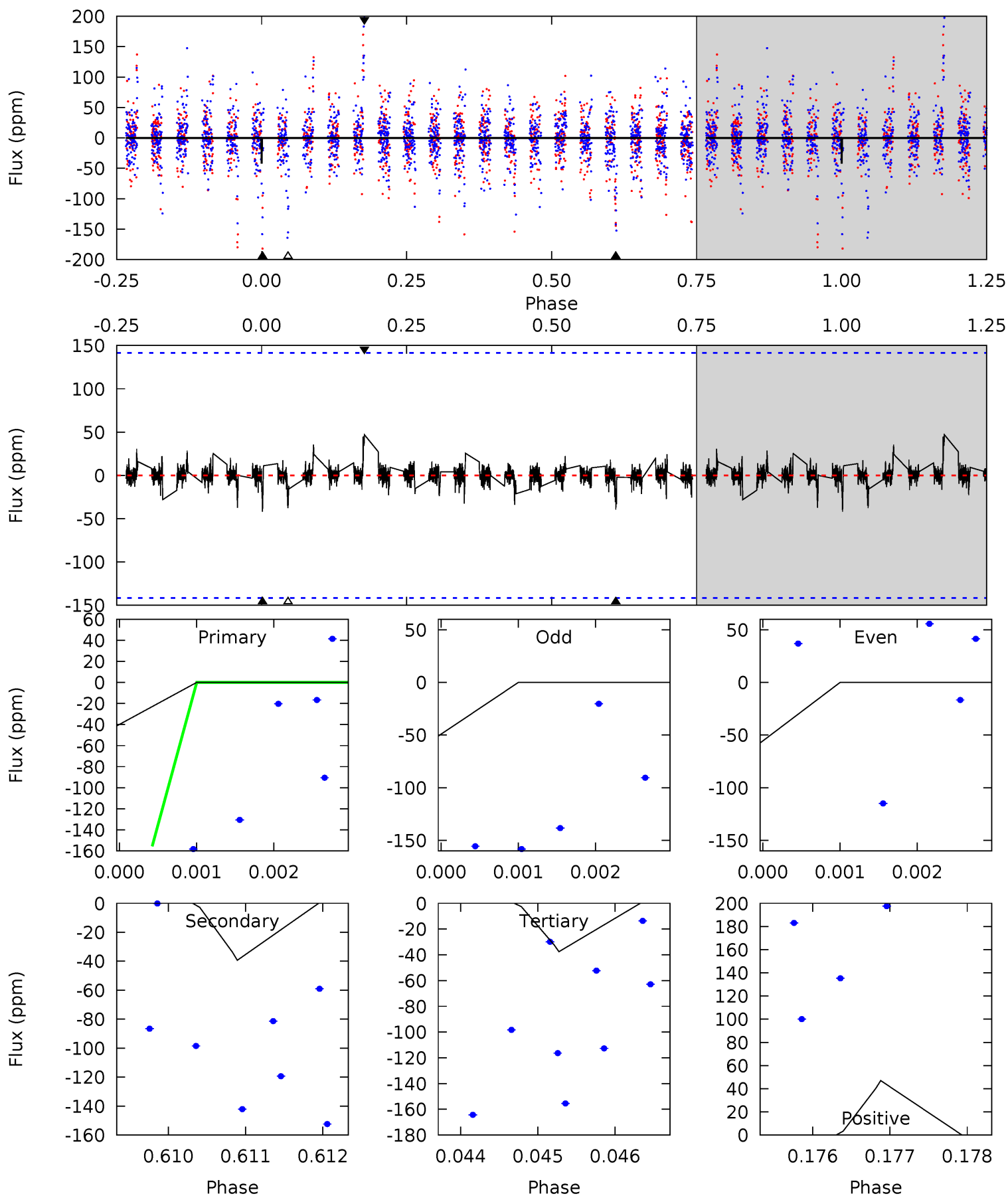
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	7.40	6.82	6.66	5.32	3.07	1.25	6.09	6.25	0.58	0.74	2.57	1.14	0.34	0.91



Alt Model-Shift Uniqueness Test

005010302-02, P = 37.575538 Days, E = 124.803313 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.62	1.52	1.45	1.81	5.46	3.31	0.29	0.17	-0.19	0.07	-0.30	0.12	1.00	0.53	2.51



Stellar Parameters For KIC 005010302

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7854^{+217}_{-326}	$3.669^{+0.468}_{-0.110}$	$-0.120^{+0.200}_{-0.300}$	$3.462^{+0.720}_{-1.681}$	$2.039^{+0.343}_{-0.514}$	$0.069^{+0.321}_{-0.025}$
	+3%/-4%	+13%/-3%	+167%/-250%	+21%/-49%	+17%/-25%	+464%/-36%
Source	KIC0	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 005010302-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-103 ± 14	$5.16^{+3.38}_{-2.99}$	1641^{+131}_{-185}	6193^{+4017}_{-1217}	165^{+756}_{-108}
Alt.	-39 ± 26	$3.27^{+2.96}_{-2.28}$	1648^{+135}_{-190}	5885^{+5894}_{-1775}	129^{+1112}_{-108}

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

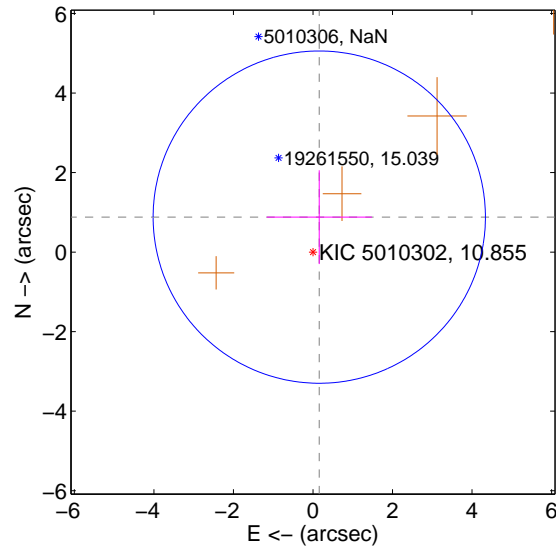
Supplemental centroid analysis for 005010302-02. **Kepler magnitude: 10.86.** Transit SNR 14.86

There are 0 quarters with good PRF difference image offsets

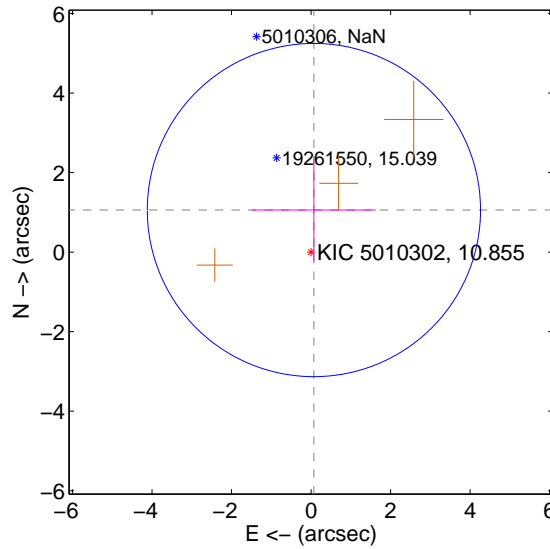
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.894 ± 1.393	0.64	-0.158 ± 1.322	0.879 ± 1.179
PRF-fit source offset from KIC position	1.060 ± 1.397	0.76	-0.072 ± 1.556	1.057 ± 1.295
photometric centroid source offset	0.70 ± 0.31	2.27	-0.55 ± 0.29	-0.44 ± 0.34

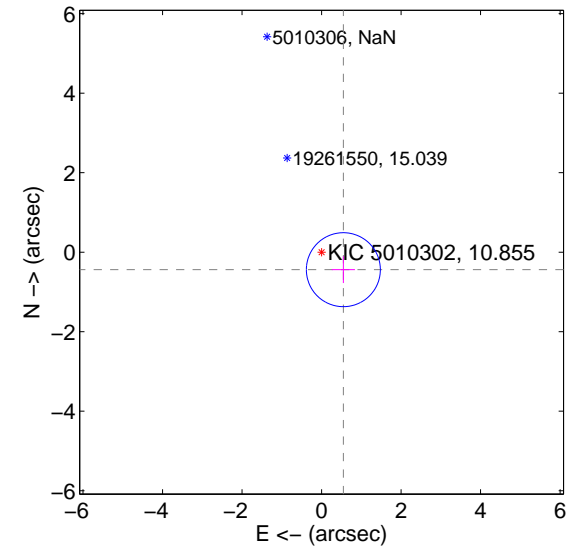
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

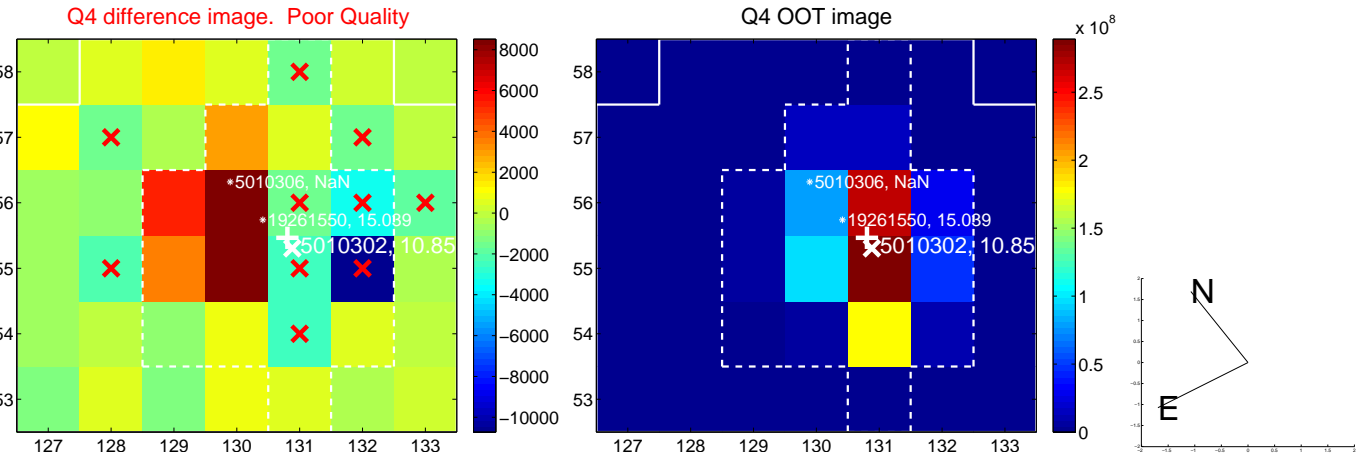
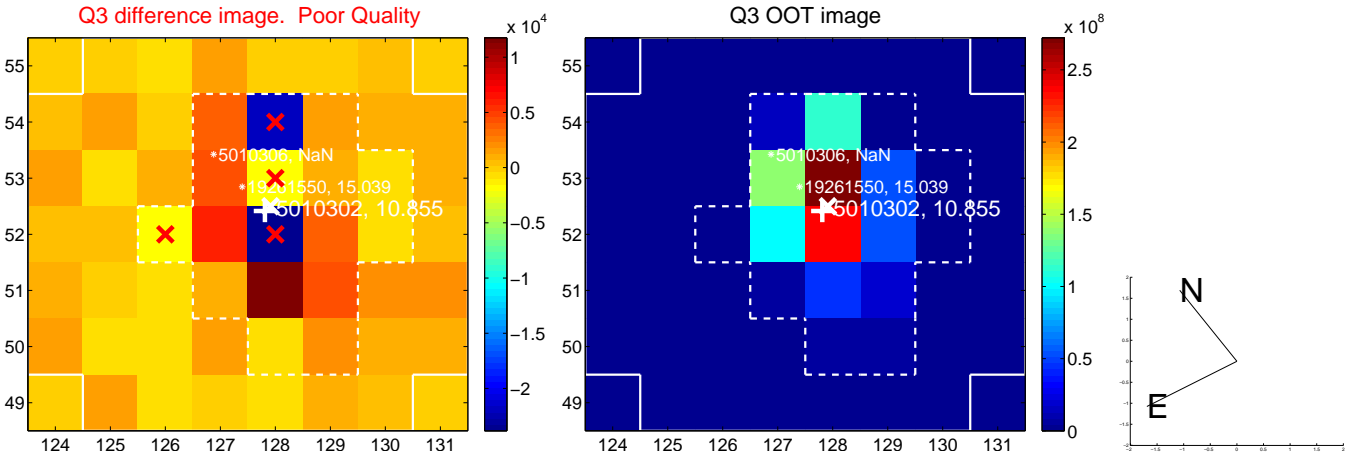
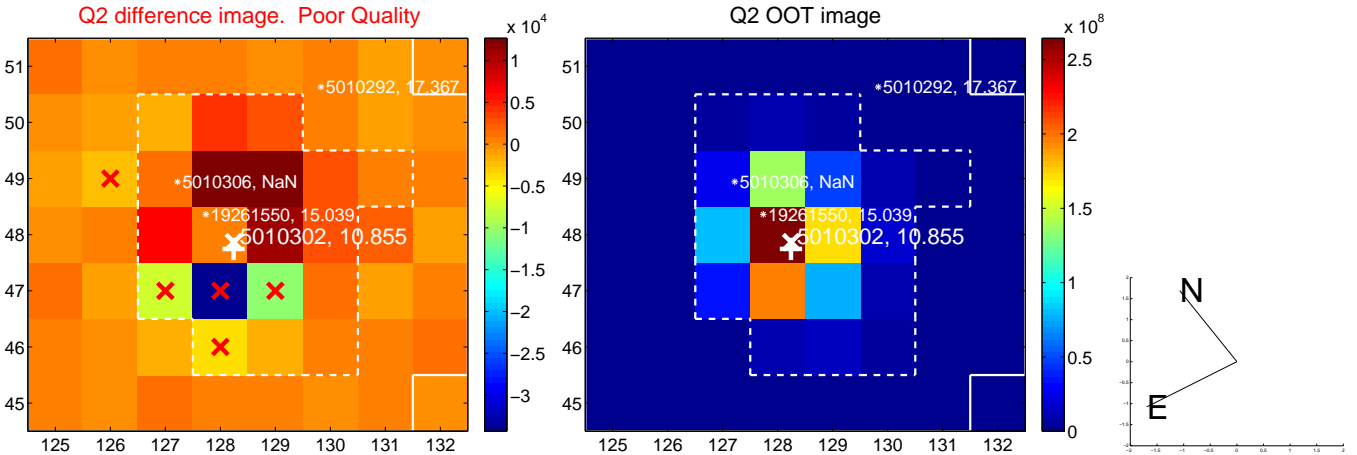
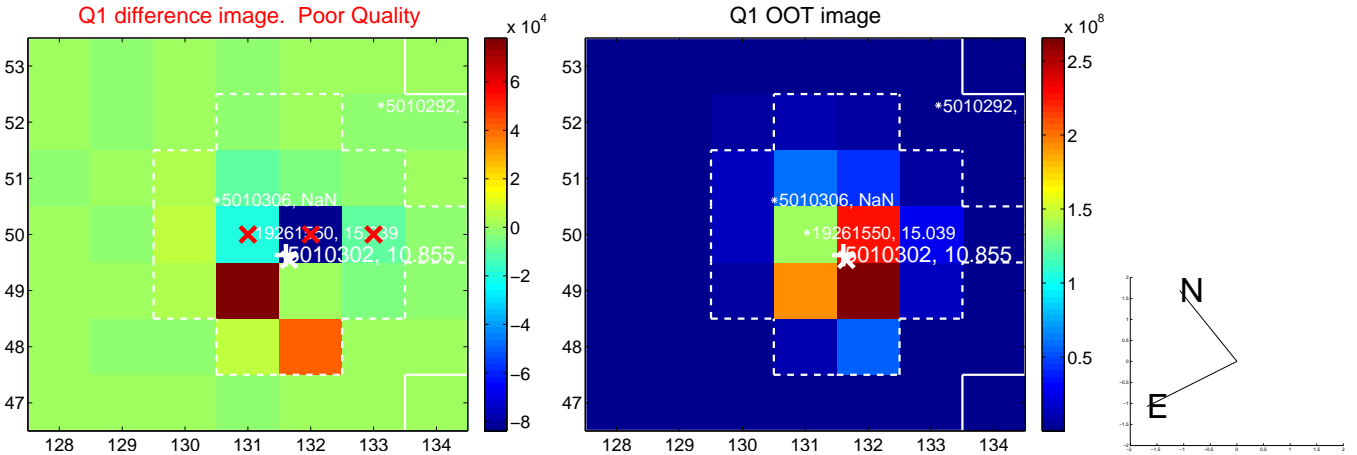


offset from photometric centroids

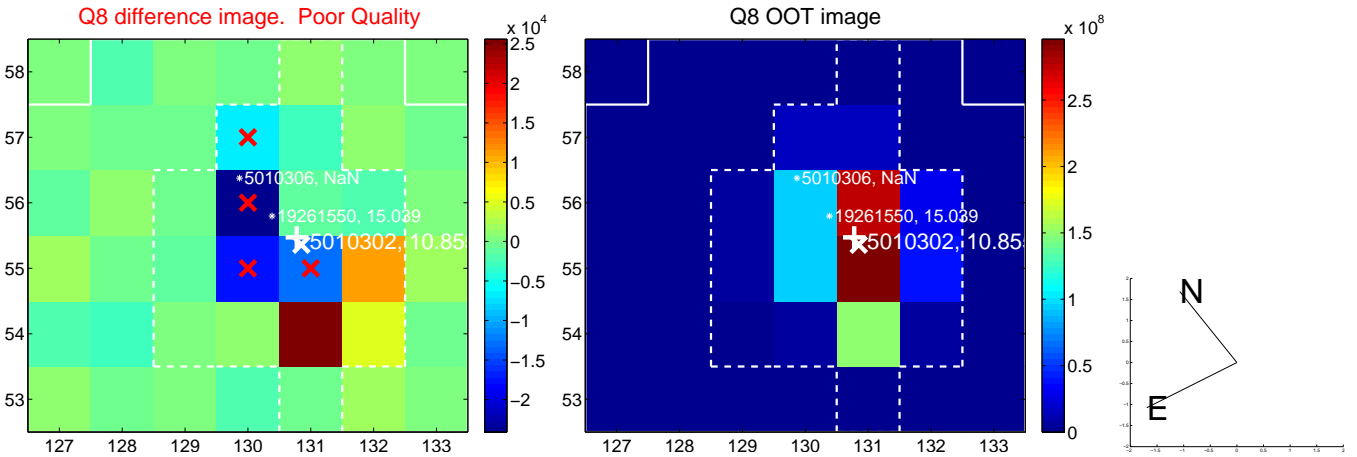
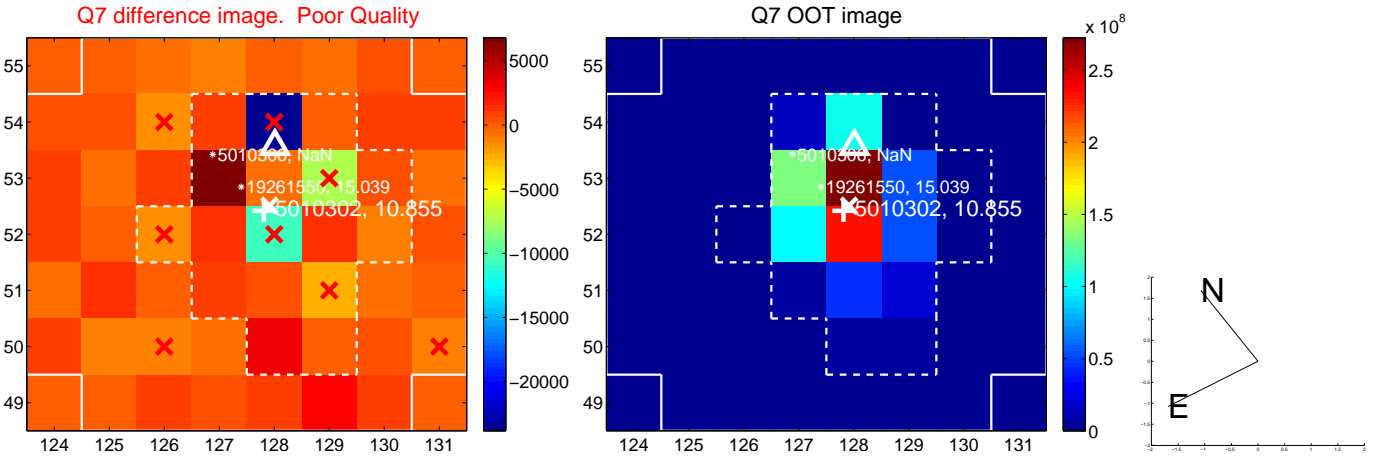
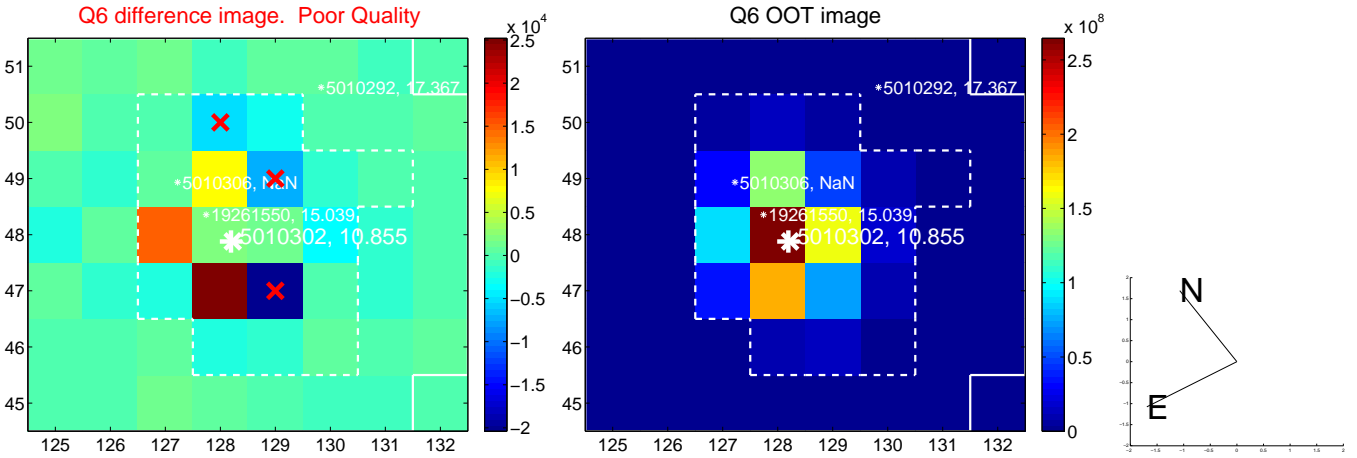
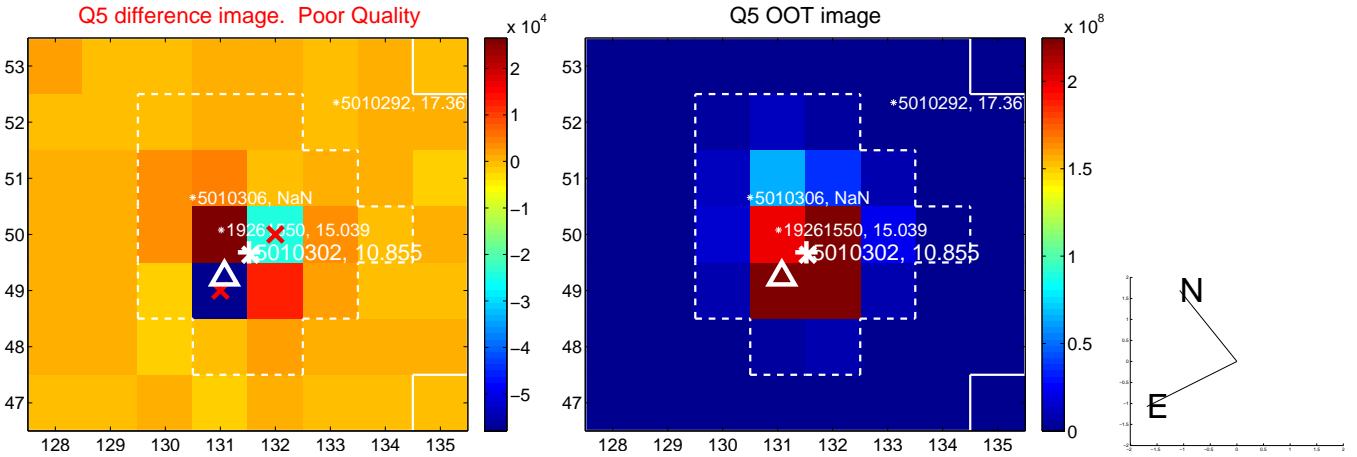


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

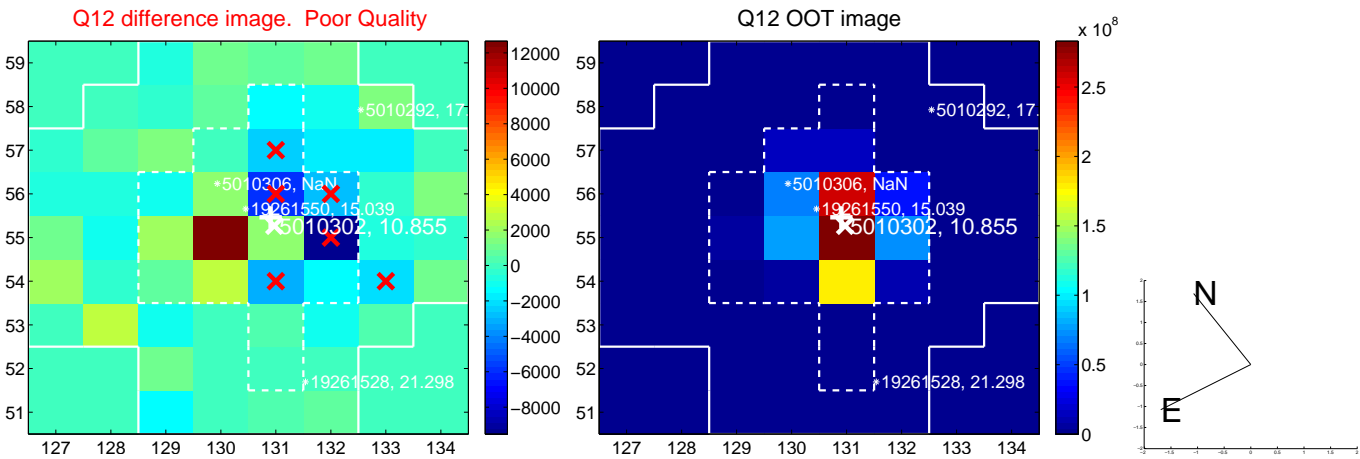
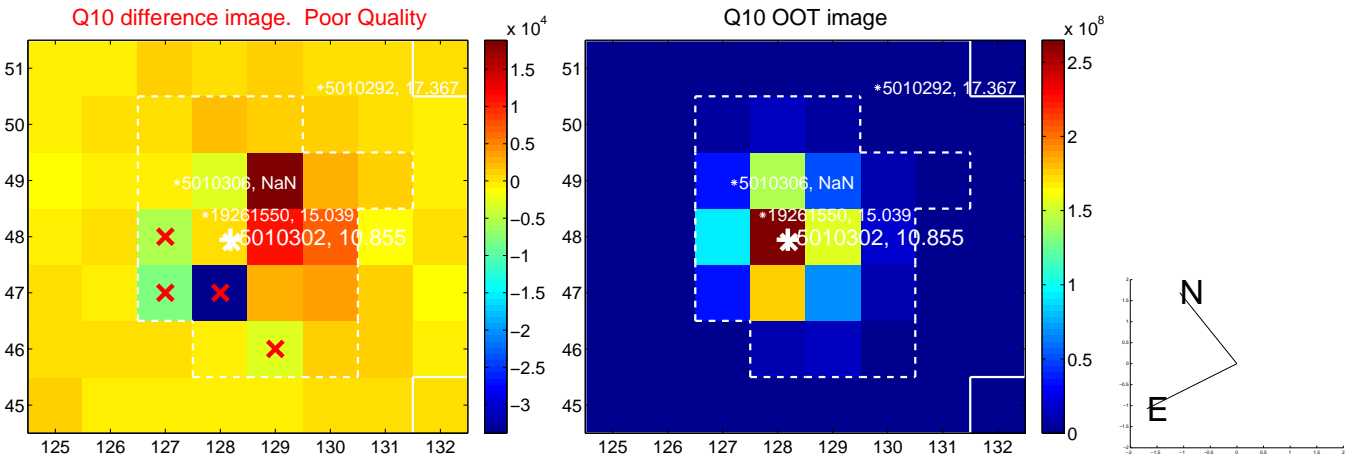
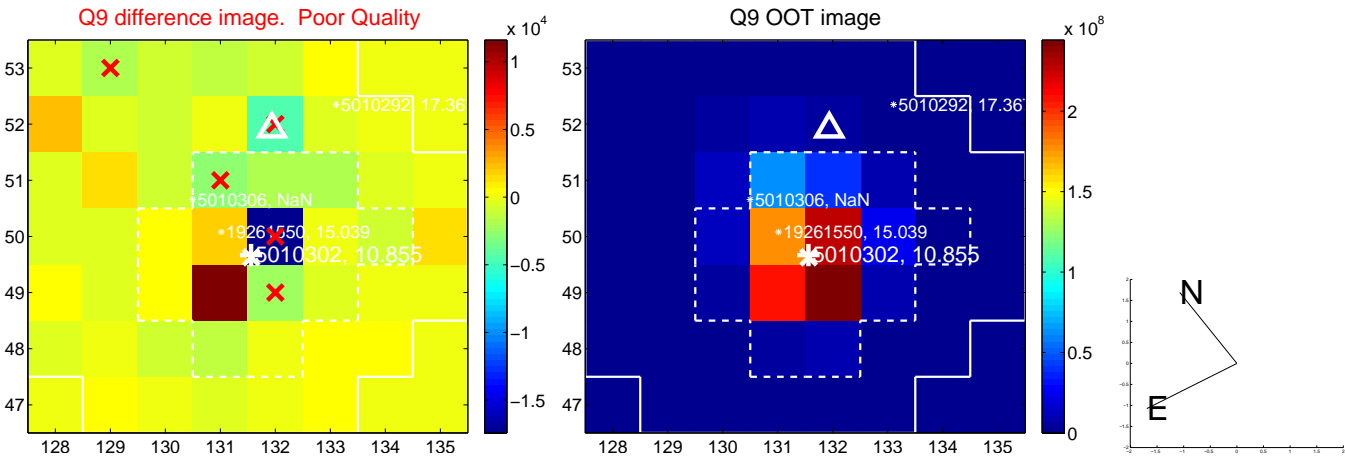
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



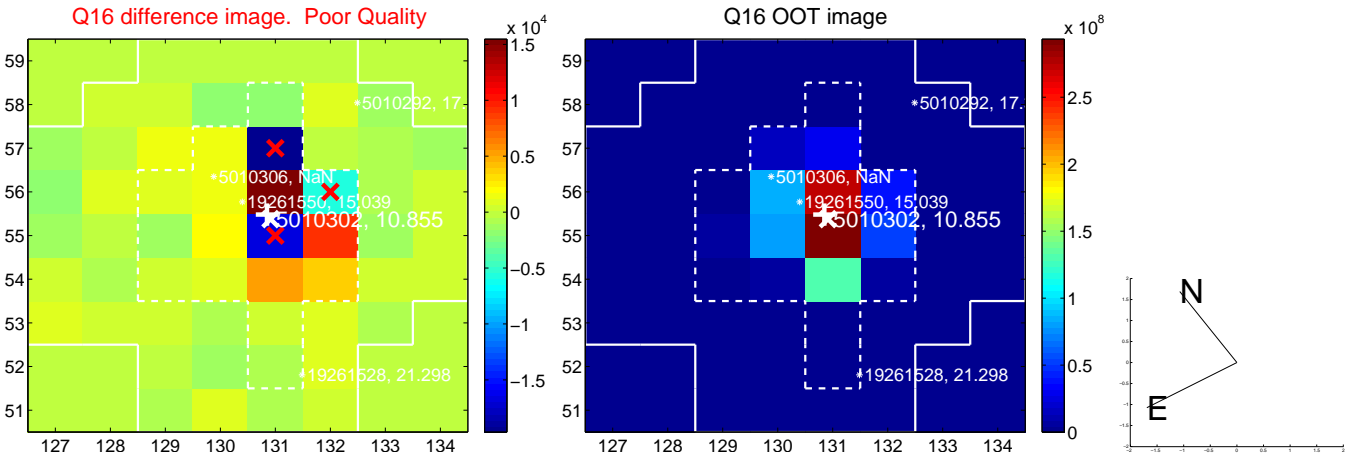
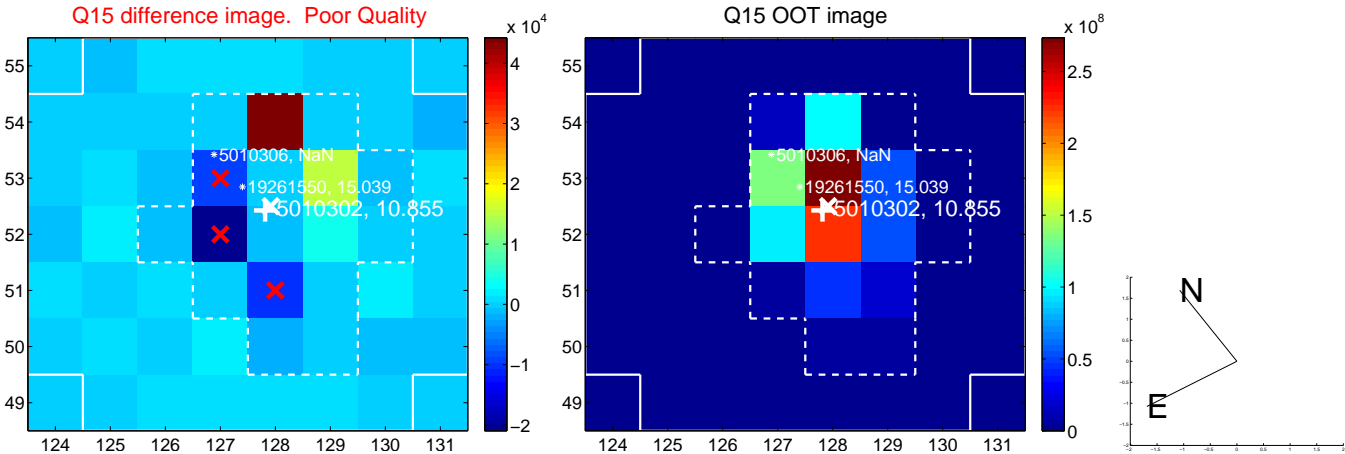
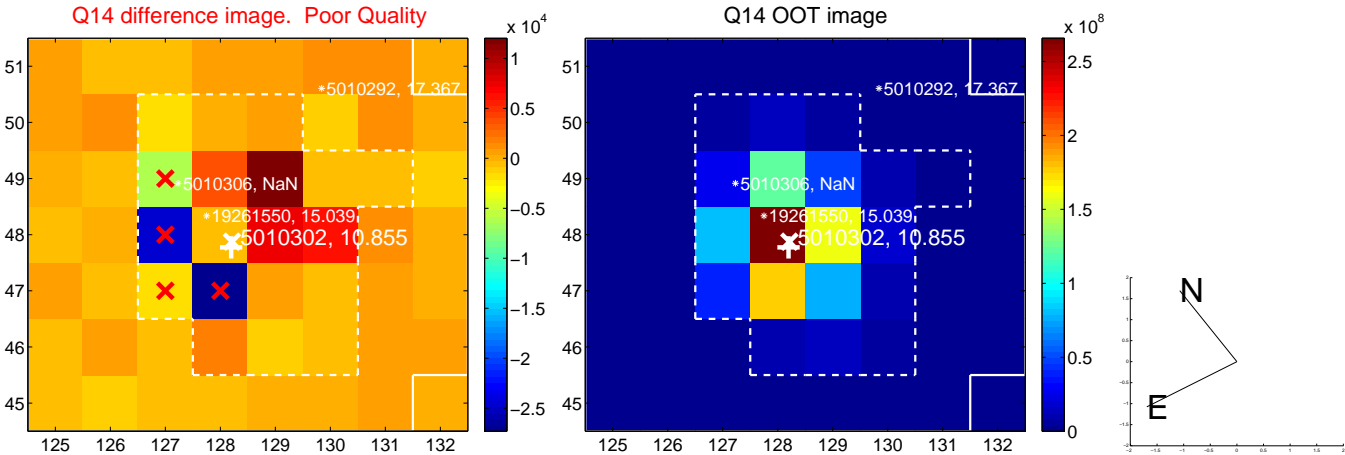
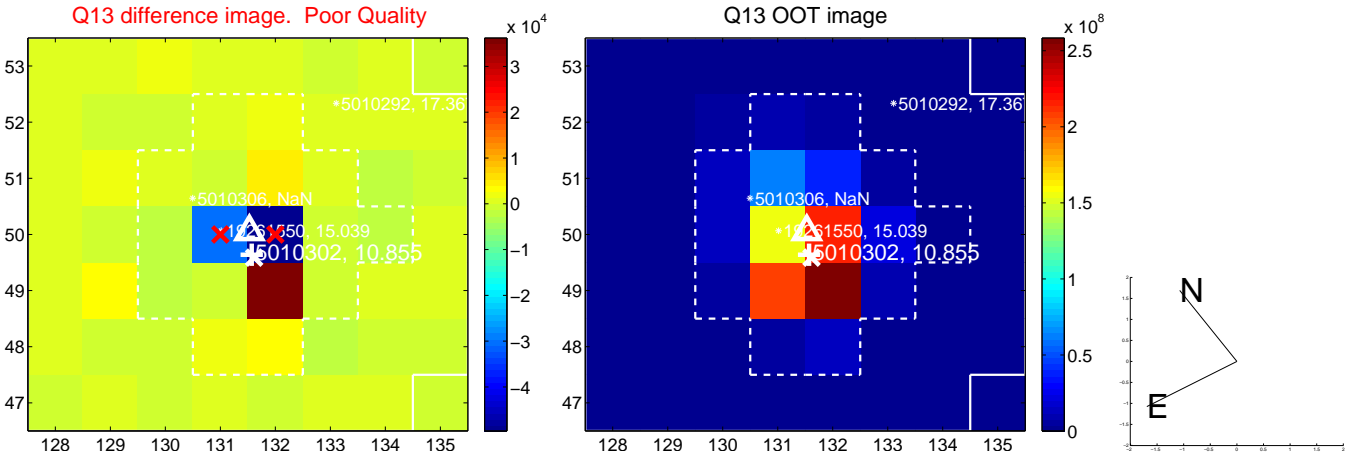
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



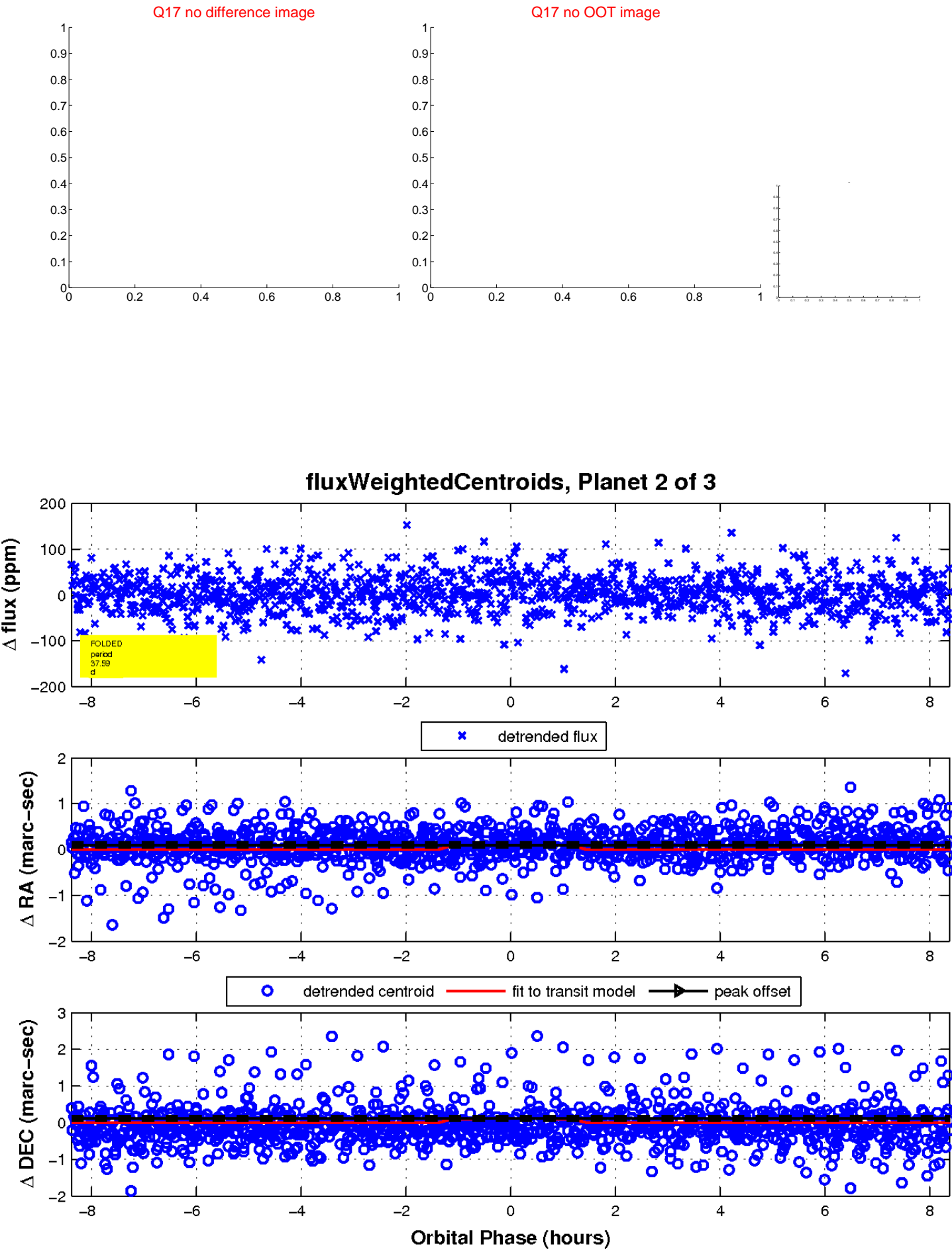
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

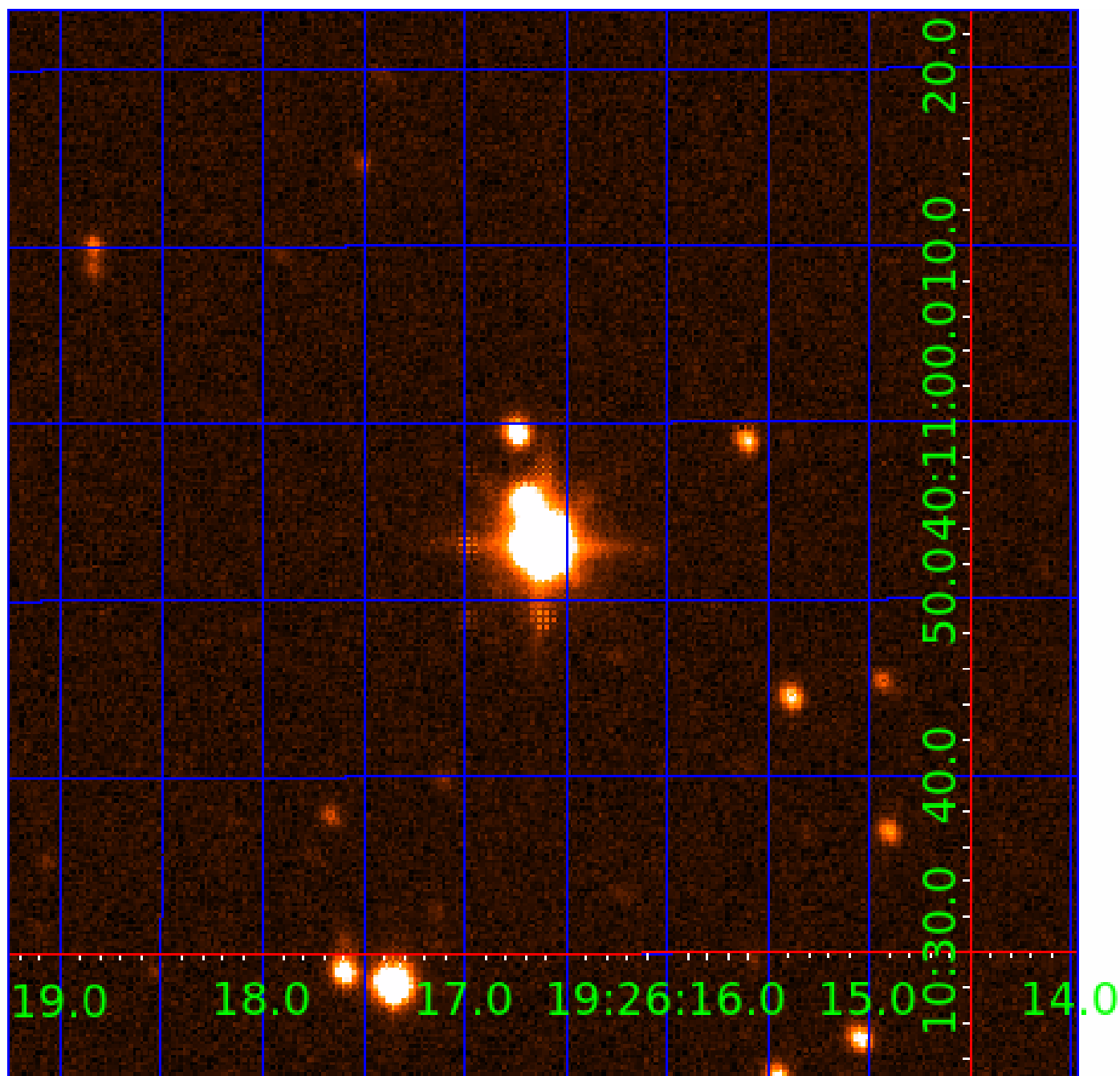


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005010302

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})
005010302-01	OBS	No	1.632918	132.277395	6.8	12.300	11.5	9.1	3.46	7854	0.92	34476.54
005010302-02	OBS	No	37.594683	162.354697	182.2	2.798	17.5	14.9	3.46	7854	5.46	526.39
005010302-03	OBS	No	7.508385	137.349000	80.2	0.634	9.6	8.4	3.46	7854	3.31	4509.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005010302-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
005010302-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005010302-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

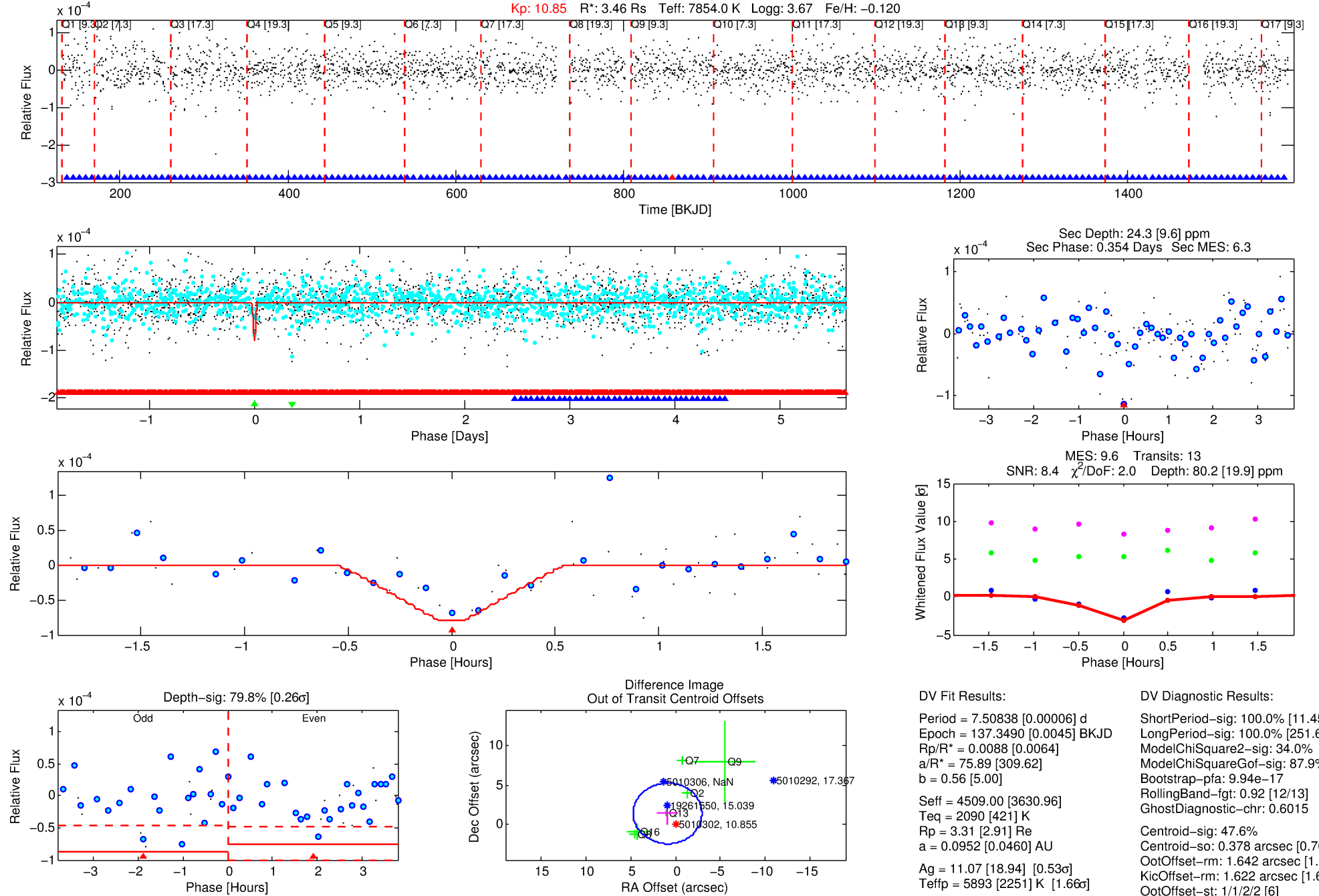
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005010302-03

No Significant Match Found

DV One-Page Summary

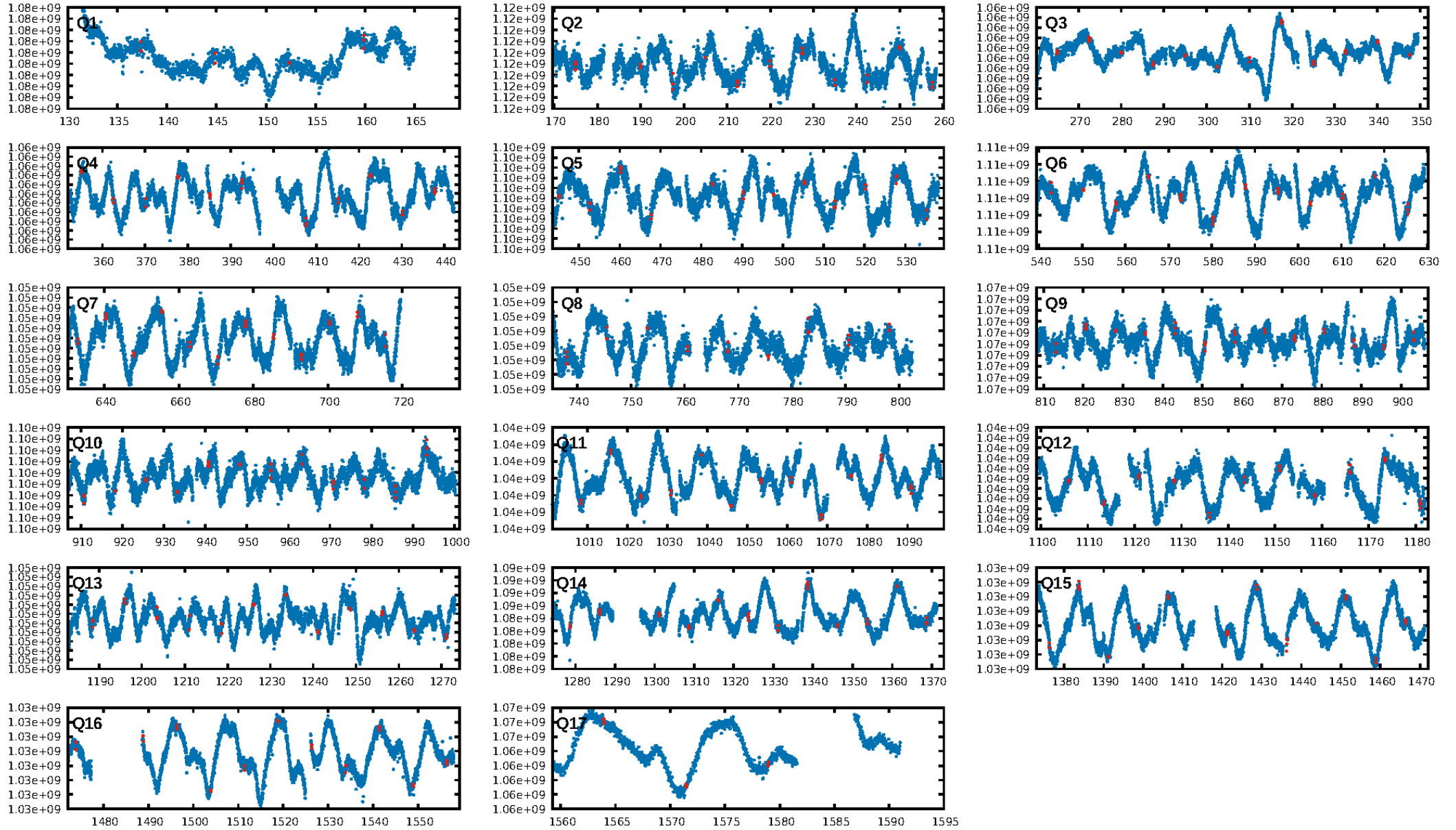
KIC: 5010302 Candidate: 3 of 3 Period: 7.508 d



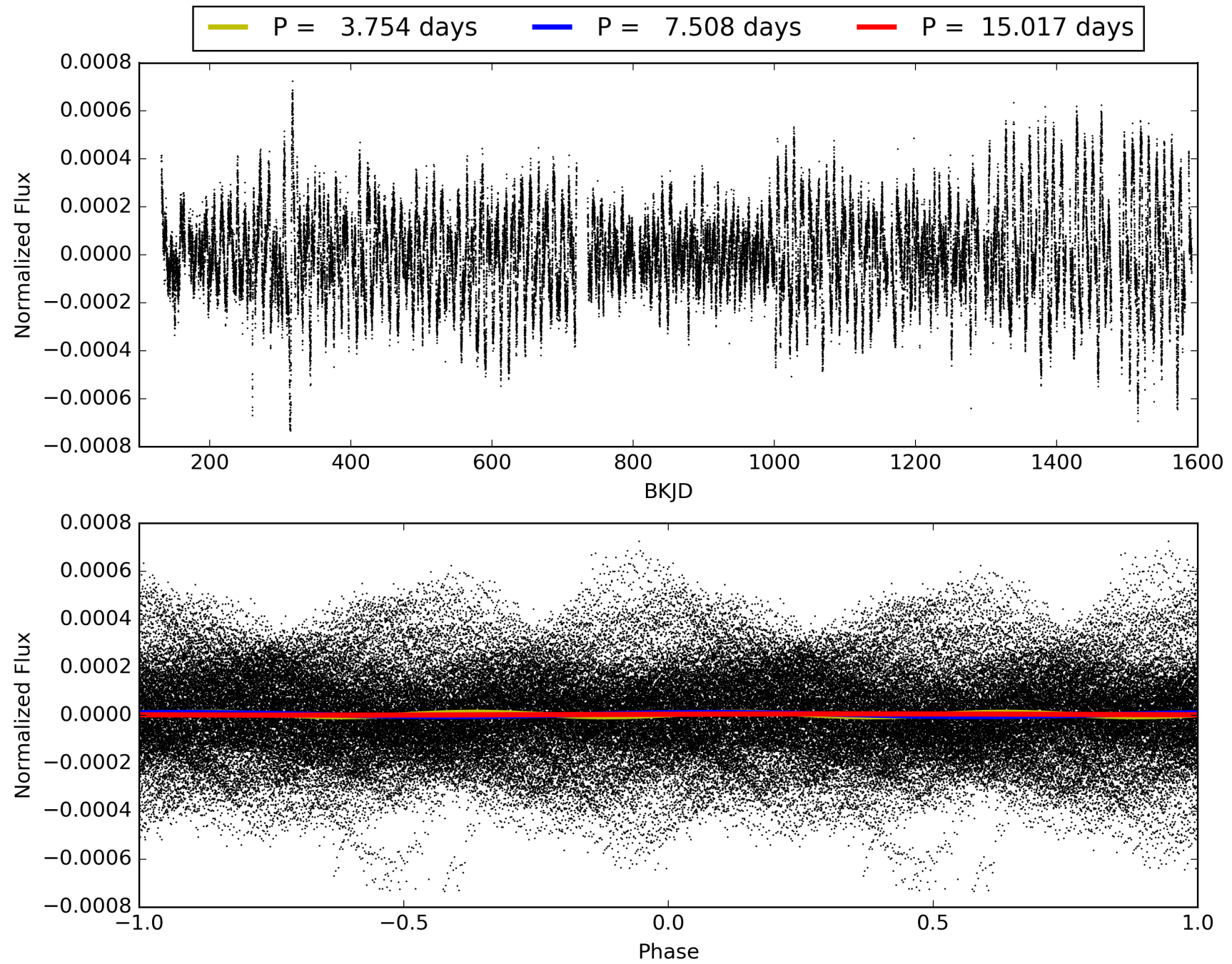
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:39:13 Z

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

TCE 005010302-03, PDC Light Curves

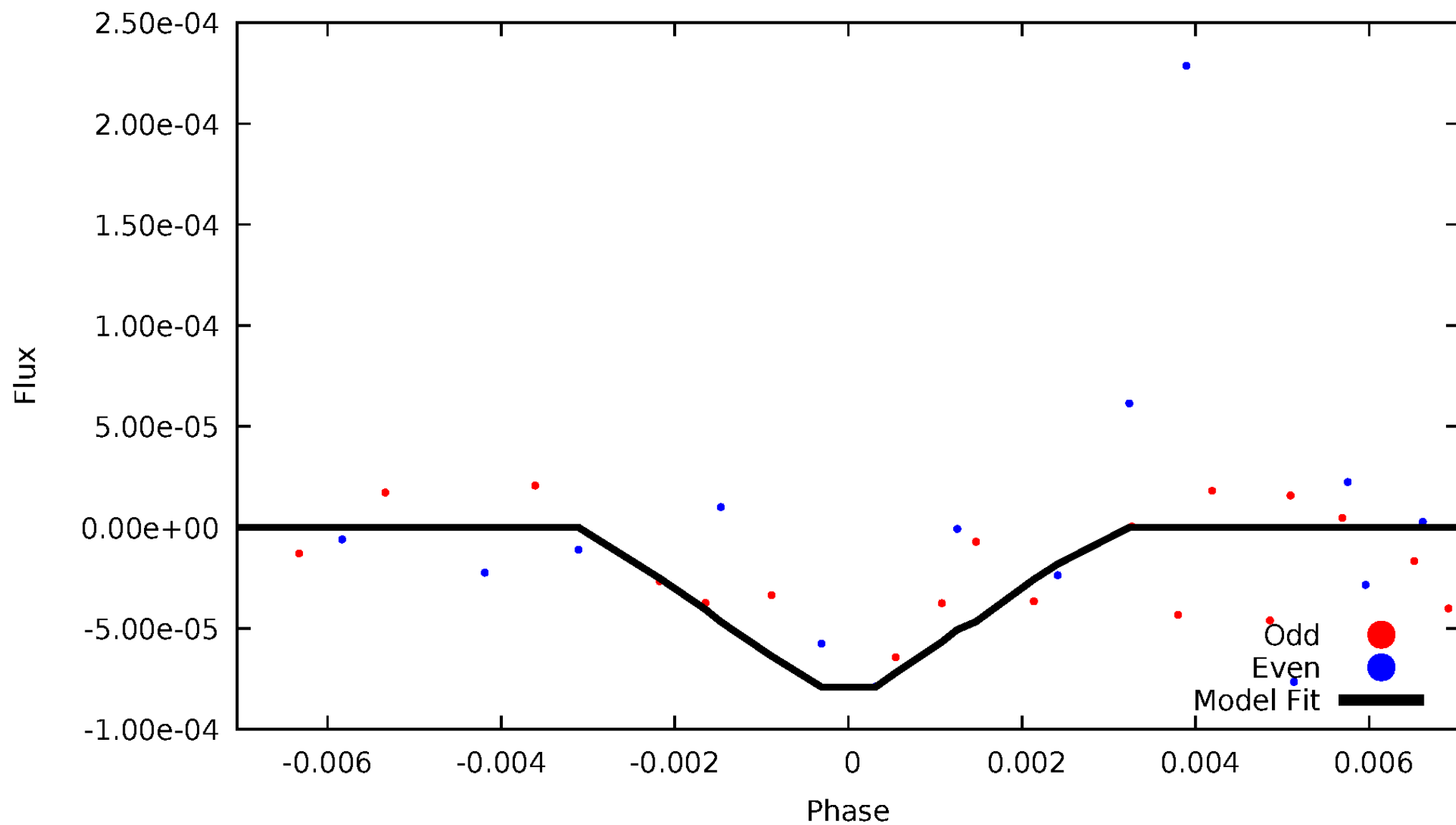


TCE 005010302-03



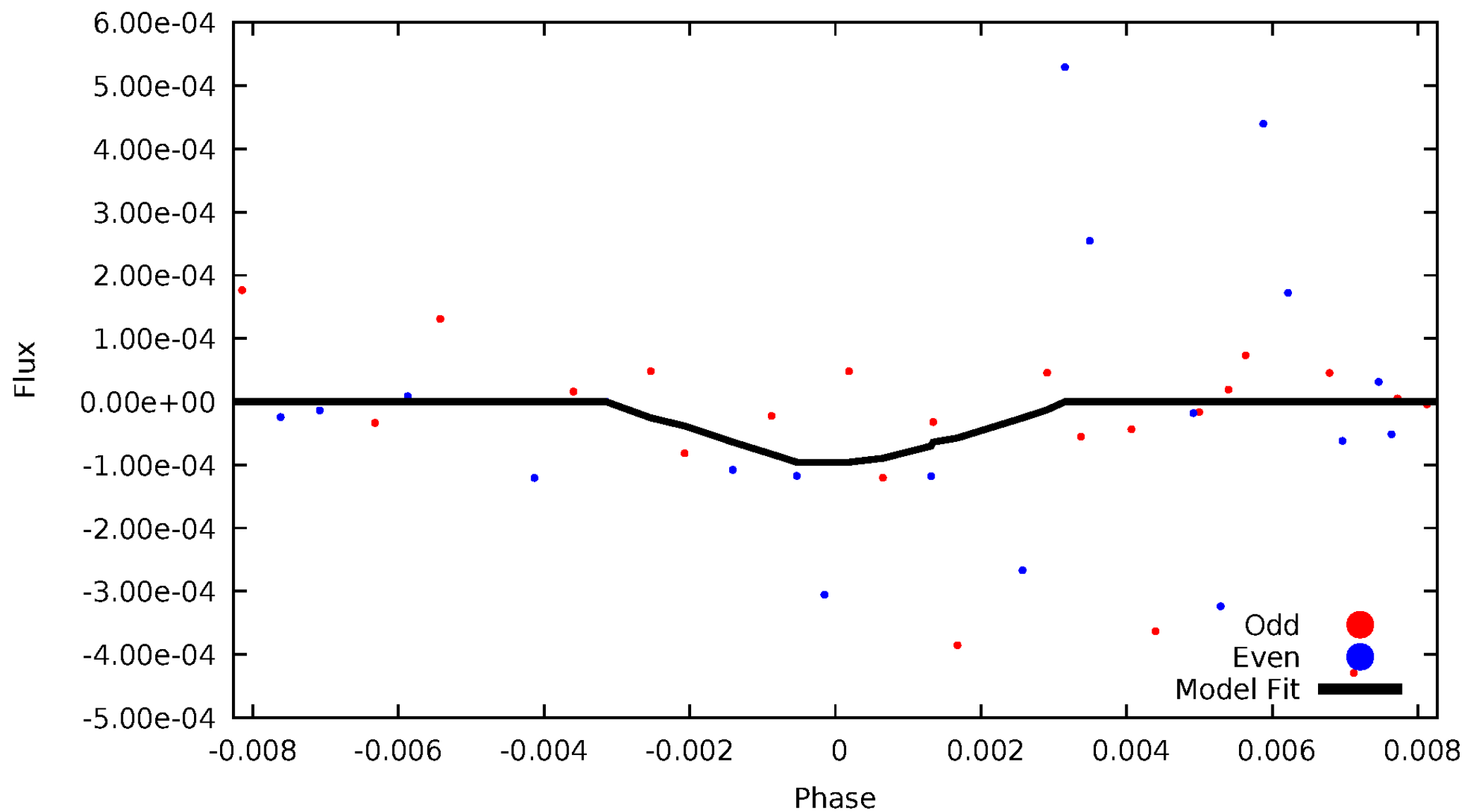
DV Odd/Even

TCE 005010302-03



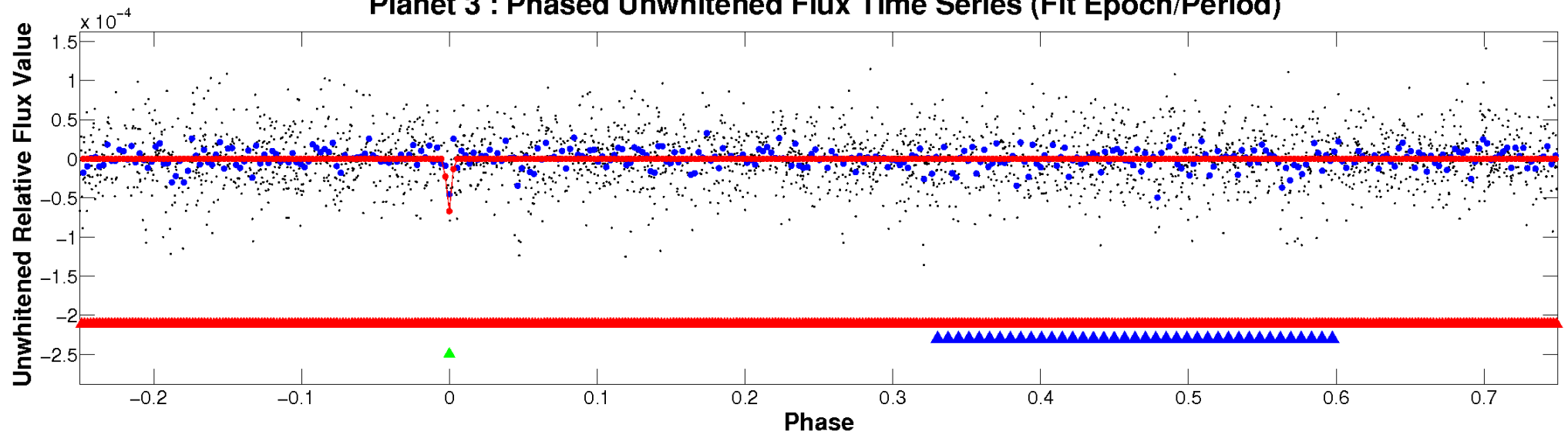
ALT Odd/Even

TCE 005010302-03

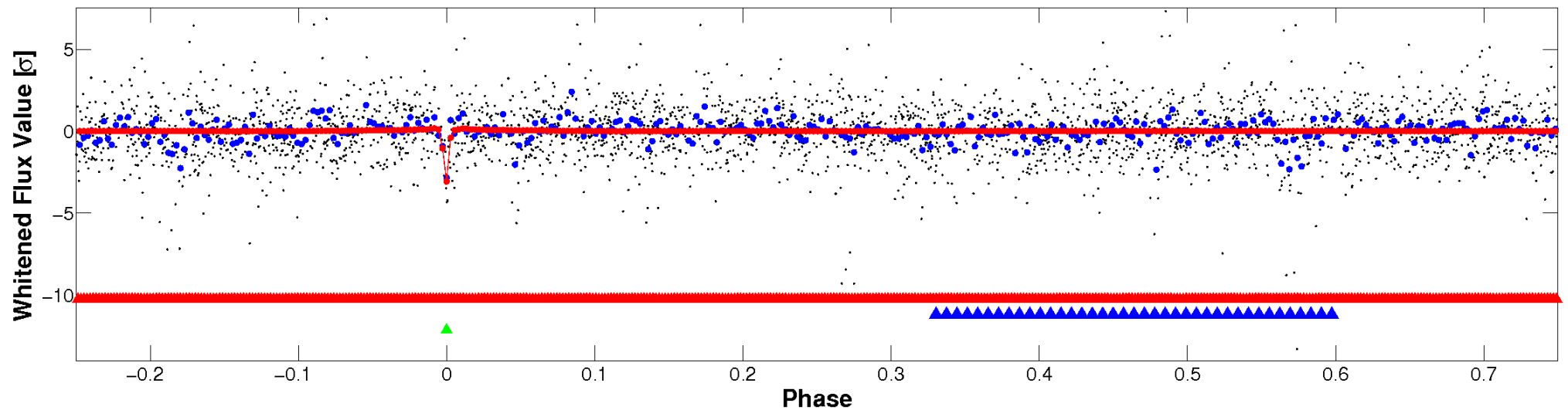


Non-Whitened Vs. Whitened Light Curve

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

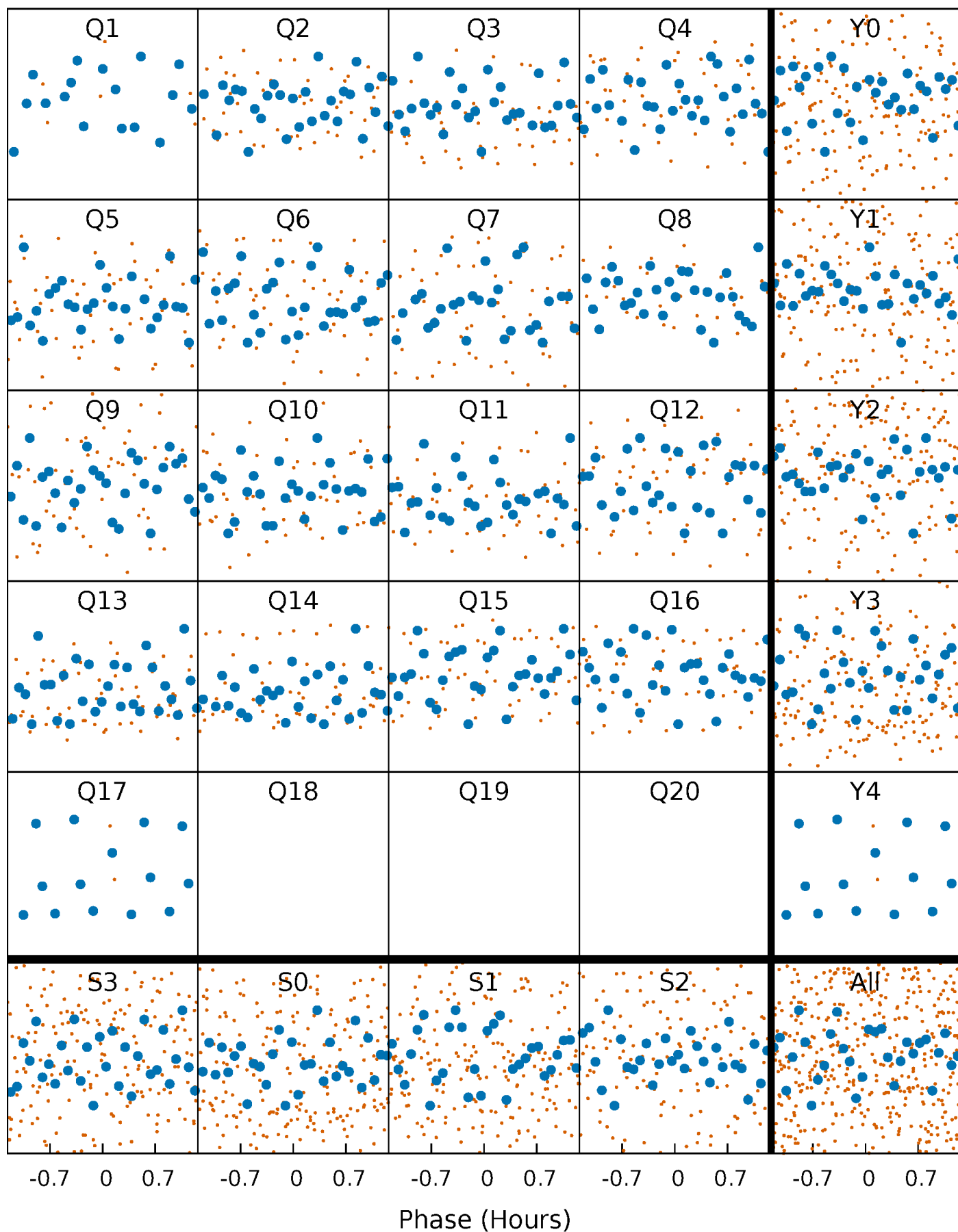


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



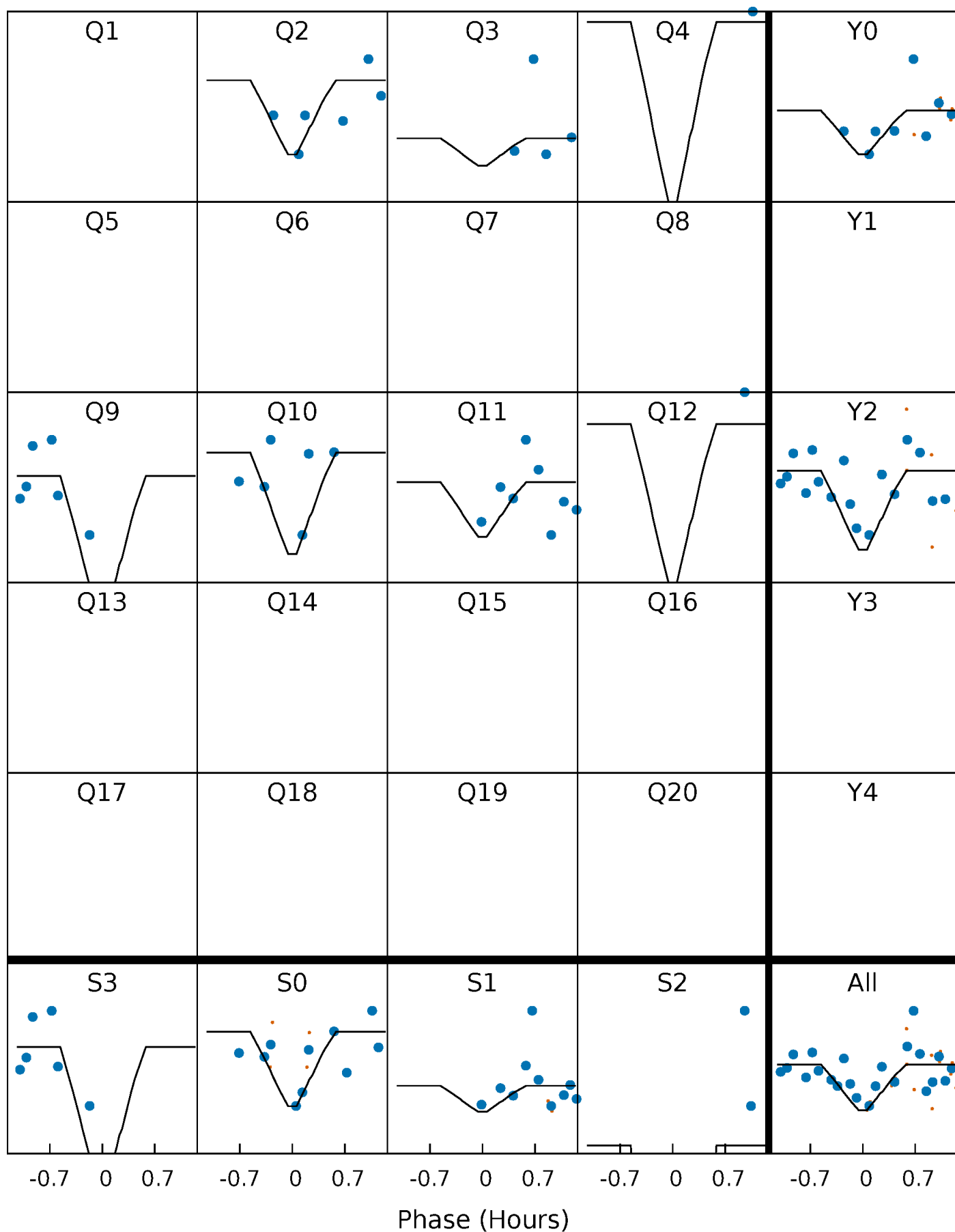
PDC Quarter-Phased Transit Curves

TCE 005010302-03 $P = 7.508385$ Days $T_0 = 137.349000$ (BKJD)



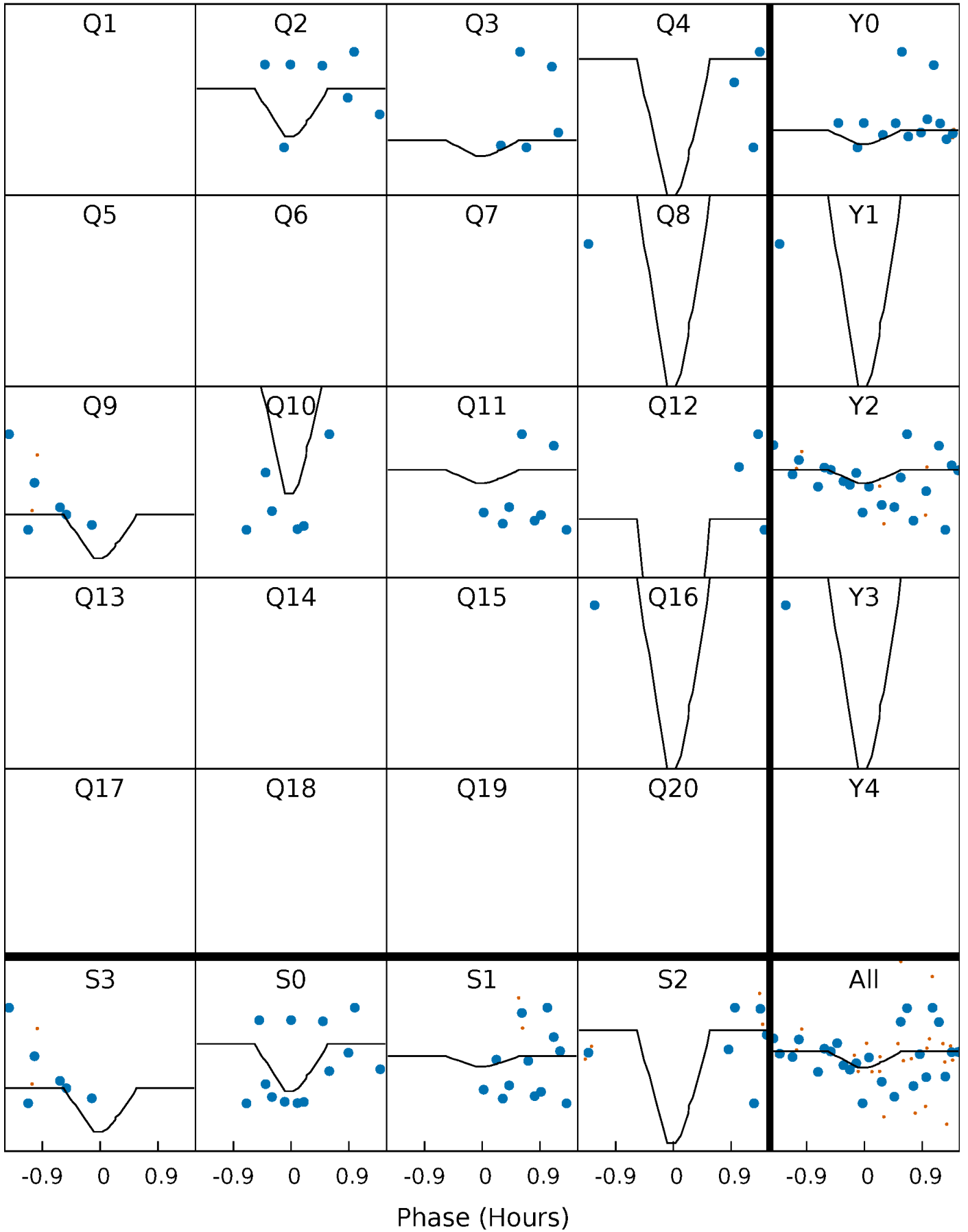
DV Quarter-Phased Transit Curves

TCE 005010302-03 P= 7.508385 Days $T_0=137.349000$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

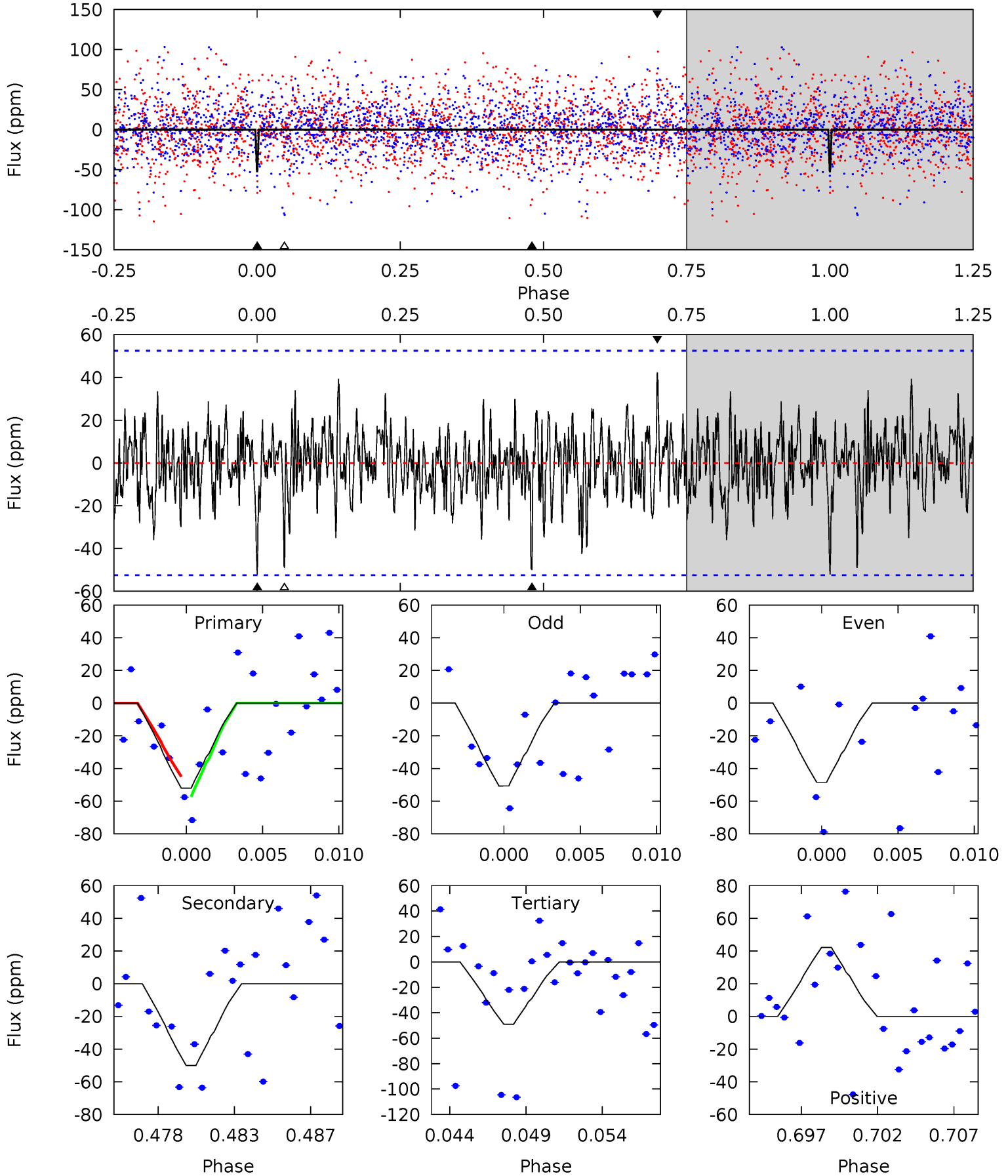
TCE 005010302-03 $P = 7.508311$ Days $T_0 = 137.356342$ (BKJD)



DV Model-Shift Uniqueness Test

005010302-03, P = 7.508385 Days, E = 129.840615 Days

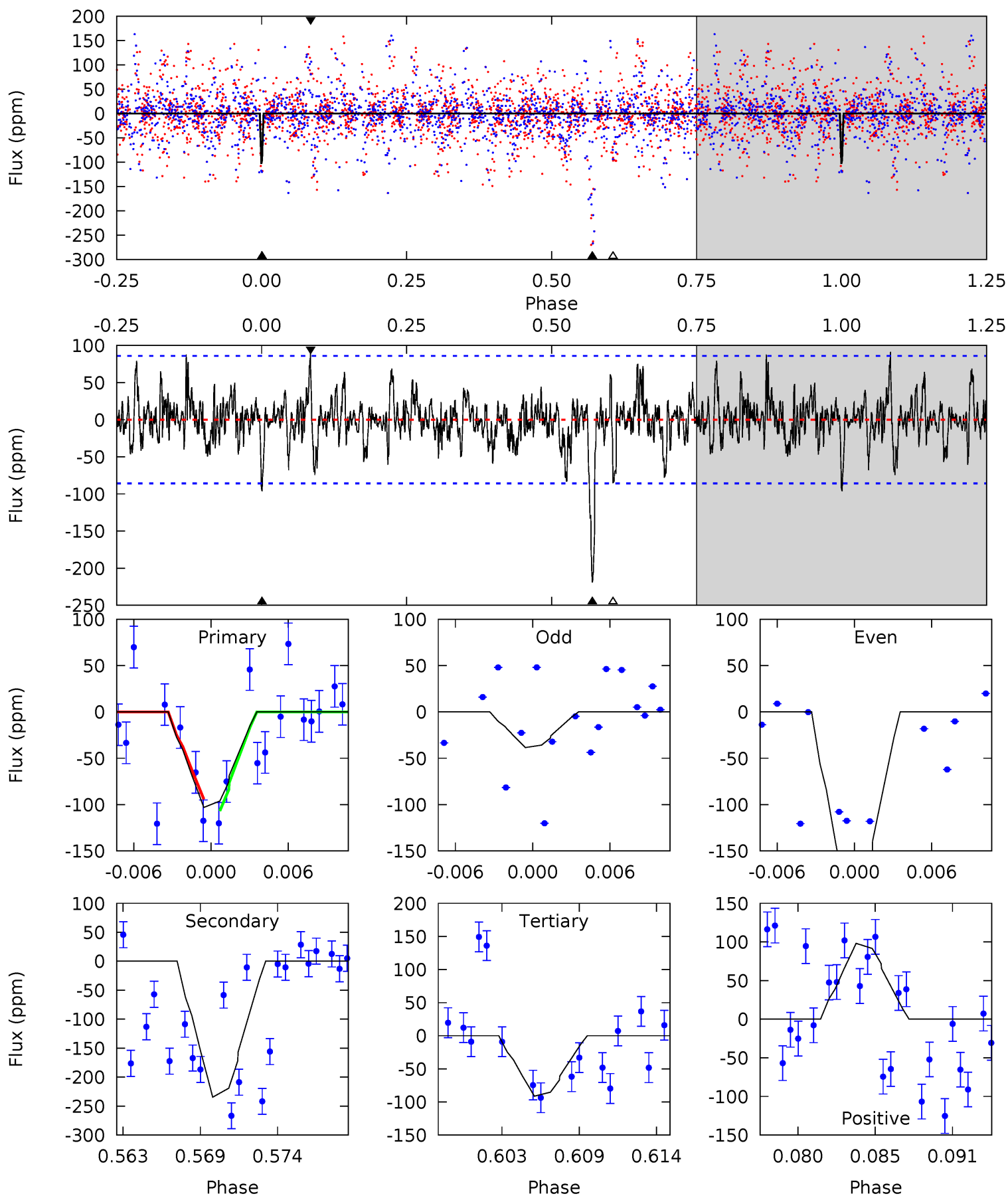
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.12	4.92	4.83	4.15	5.16	2.82	1.28	0.30	0.97	0.10	0.77	0.11	0.77	0.45	0.56



Alt Model-Shift Uniqueness Test

005010302-03, P = 7.508311 Days, E = 129.848031 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.75	13.1	5.09	5.47	5.13	2.77	1.41	0.66	0.27	8.00	7.61	4.58	0.98	0.29	0



Stellar Parameters For KIC 005010302

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7854^{+217}_{-326}	$3.669^{+0.468}_{-0.110}$	$-0.120^{+0.200}_{-0.300}$	$3.462^{+0.720}_{-1.681}$	$2.039^{+0.343}_{-0.514}$	$0.069^{+0.321}_{-0.025}$
	+3%/-4%	+13%/-3%	+167%/-250%	+21%/-49%	+17%/-25%	+464%/-36%
Source	KIC0	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 005010302-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-50 ± 10	$3.02^{+2.68}_{-1.81}$	2839^{+214}_{-401}	6581^{+5788}_{-1519}	26^{+139}_{-18}
Alt.	-219 ± 17	$3.66^{+2.35}_{-2.14}$	2820^{+224}_{-338}	9748^{+9874}_{-2534}	83^{+368}_{-52}

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

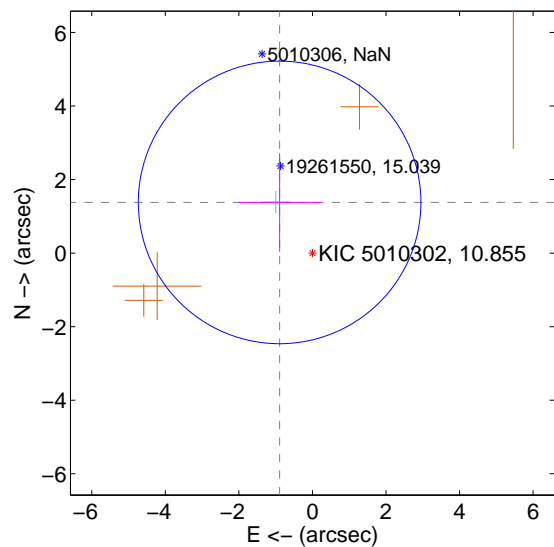
Supplemental centroid analysis for 005010302-03. **Kepler magnitude: 10.86.** Transit SNR 8.44

There are 1 quarters with good PRF difference image offsets

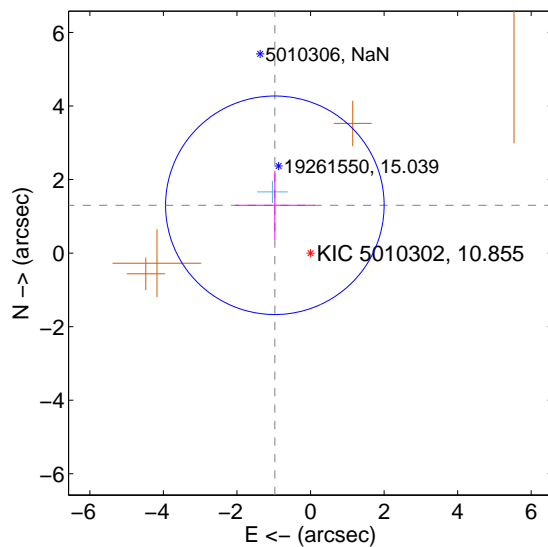
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.642 ± 1.280	1.28	0.892 ± 1.128	1.378 ± 1.339
PRF-fit source offset from KIC position	1.622 ± 0.990	1.64	0.970 ± 1.084	1.301 ± 0.934
photometric centroid source offset	0.38 ± 0.54	0.70	-0.37 ± 0.54	-0.05 ± 0.60

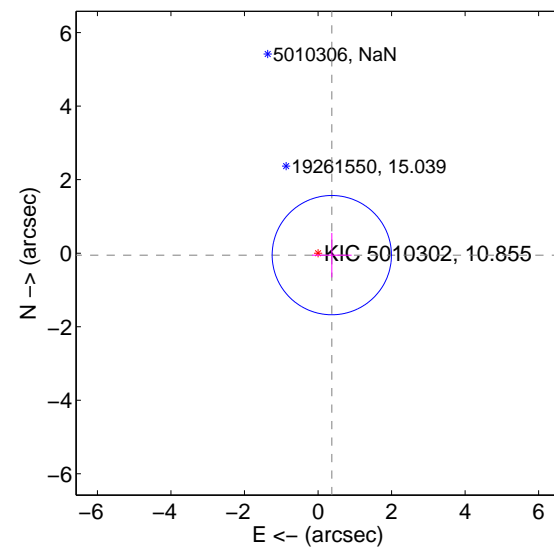
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

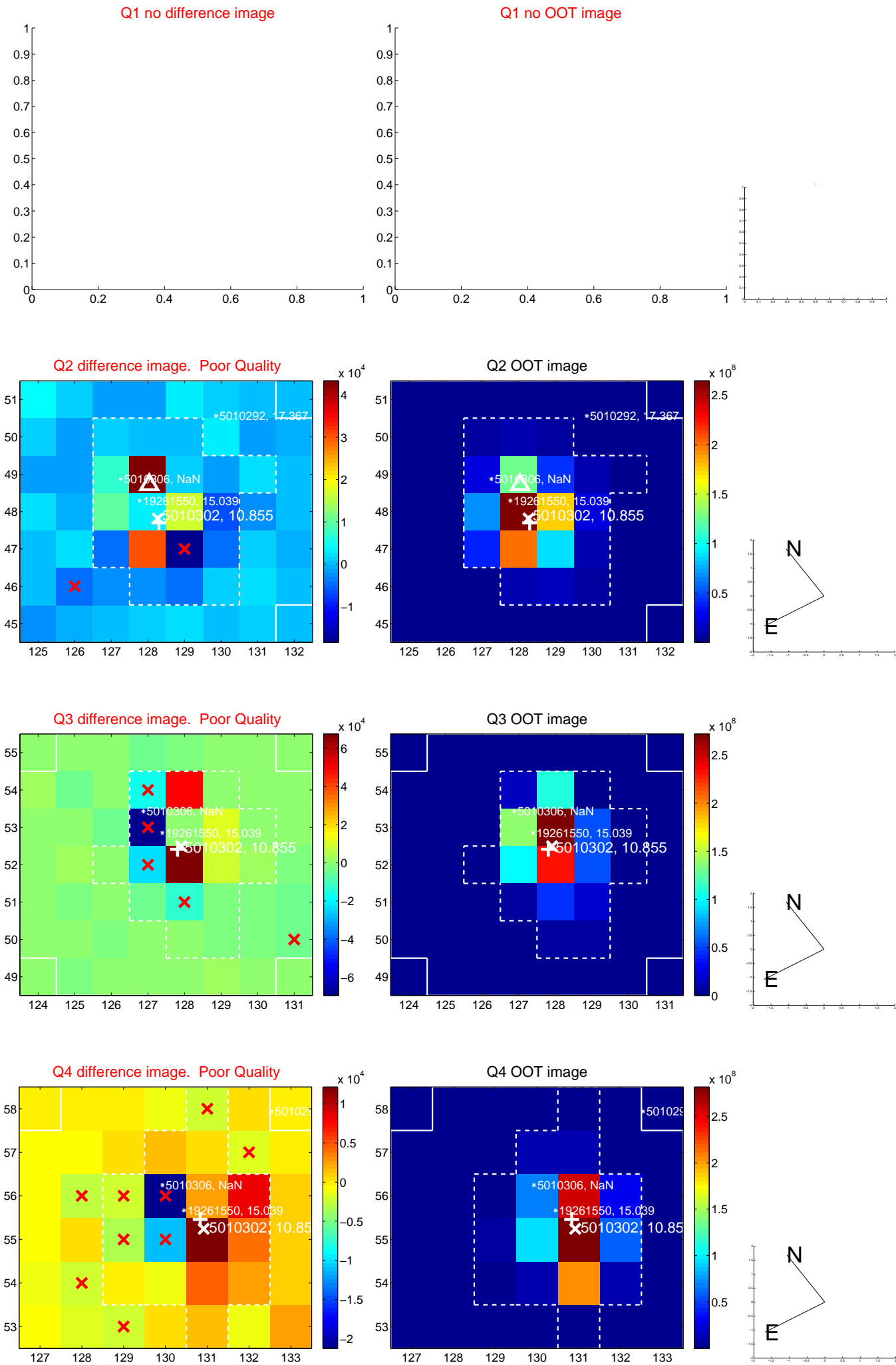


offset from photometric centroids

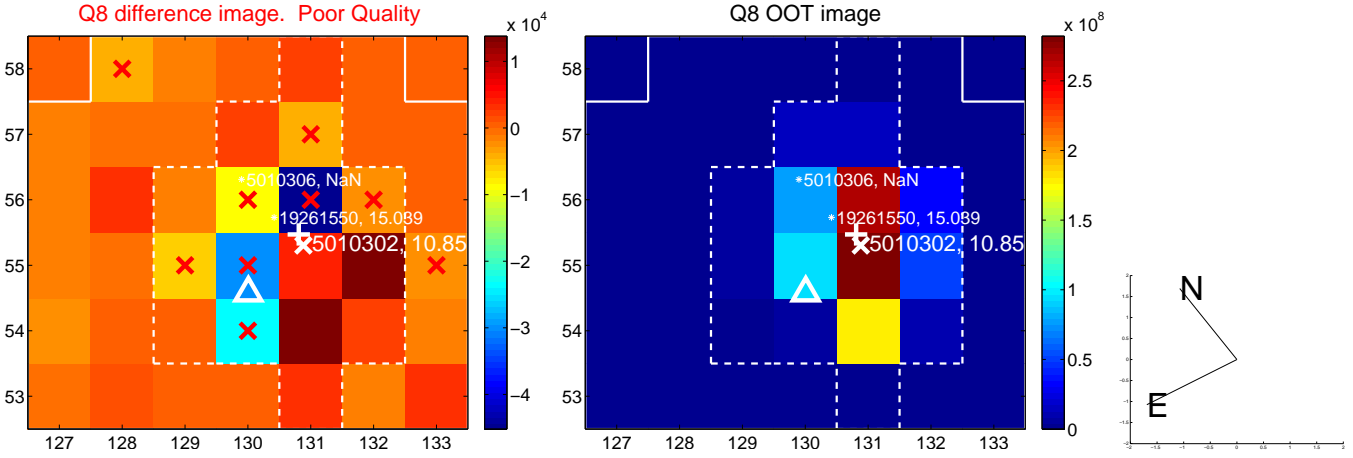
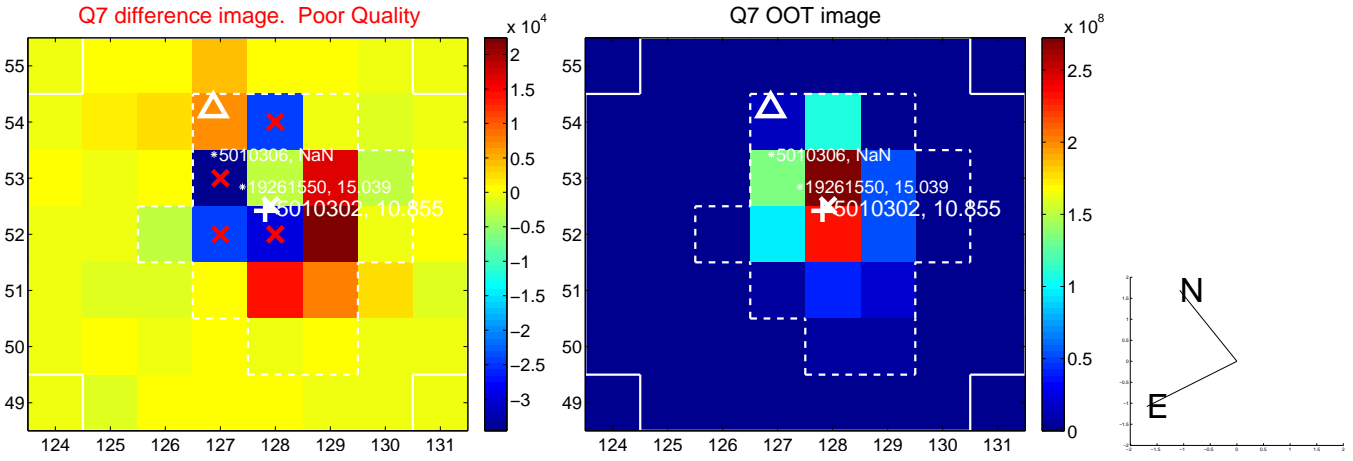
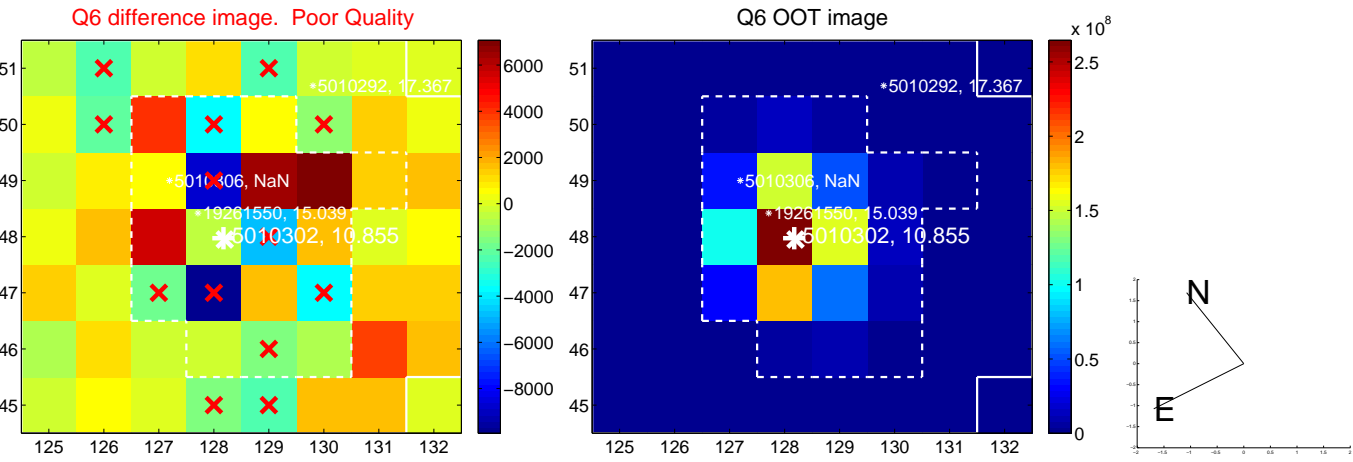
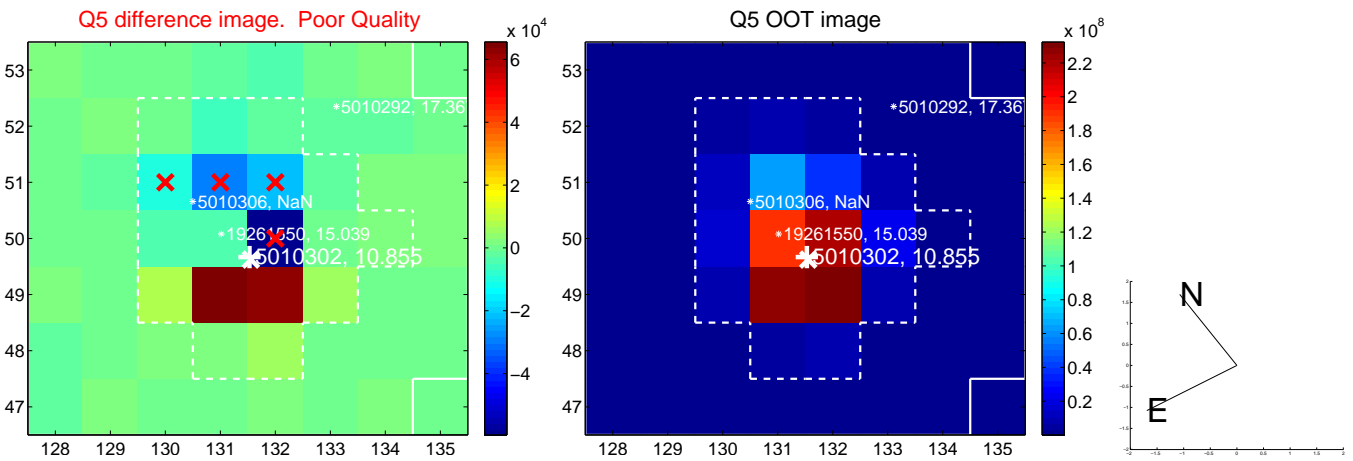


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

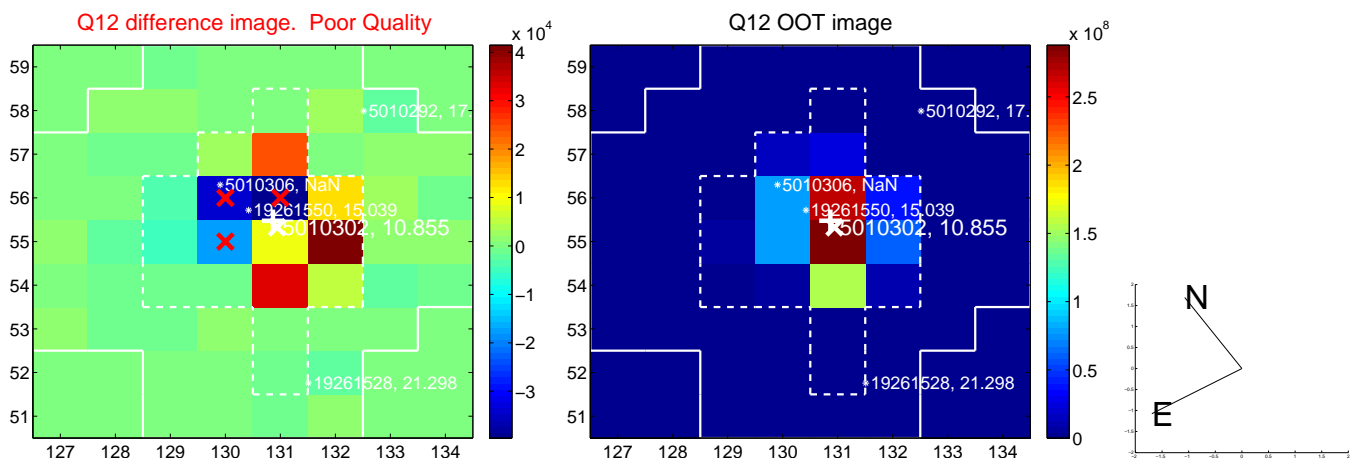
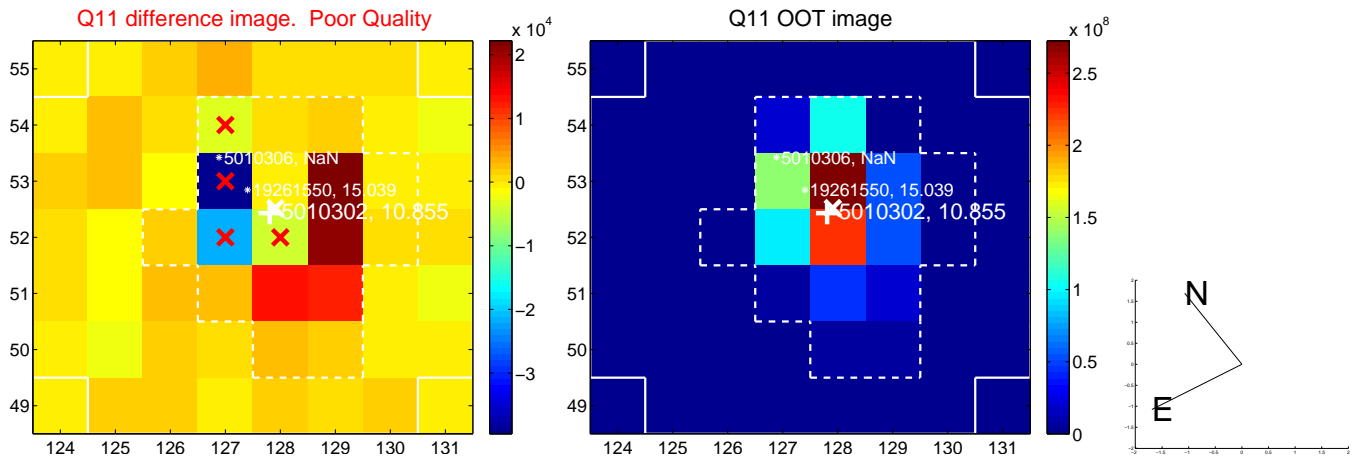
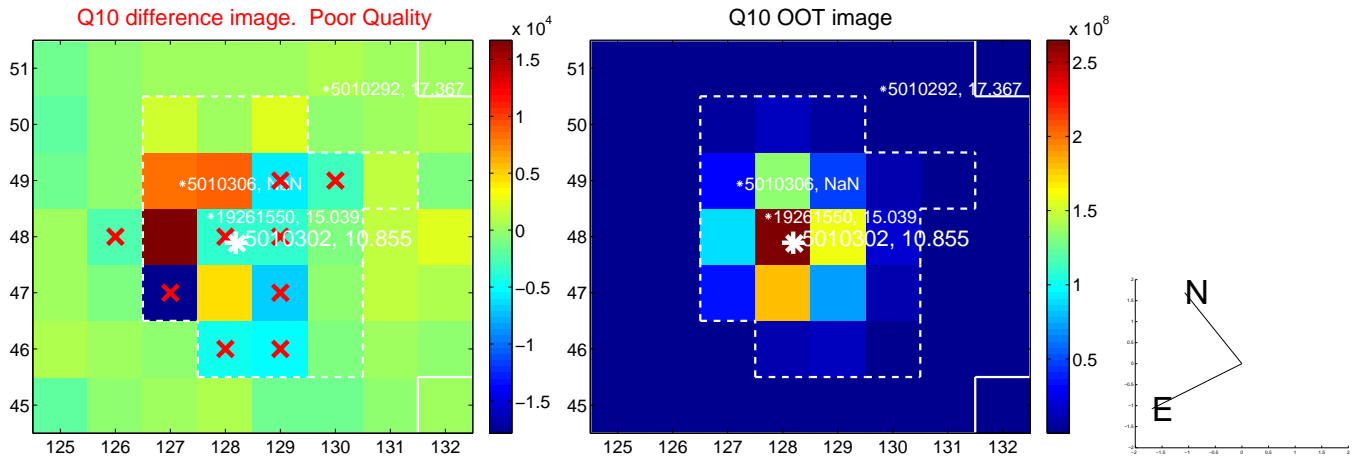
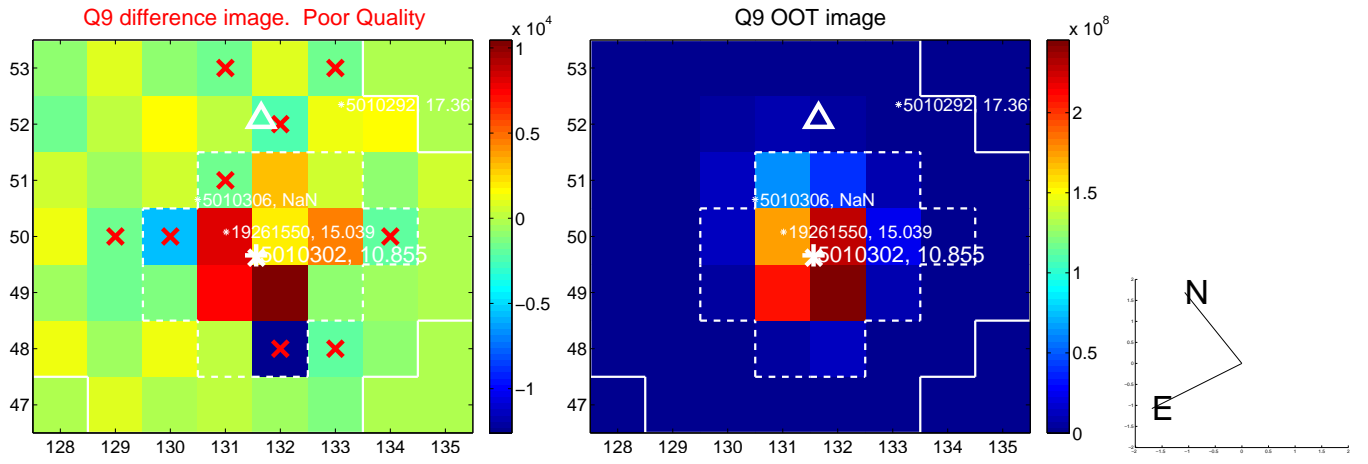
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



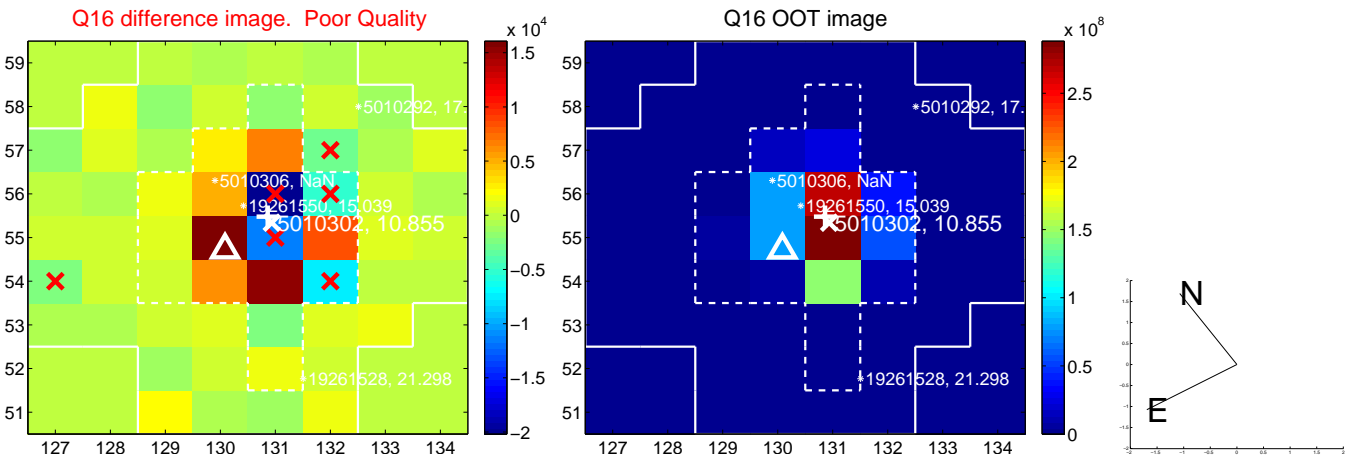
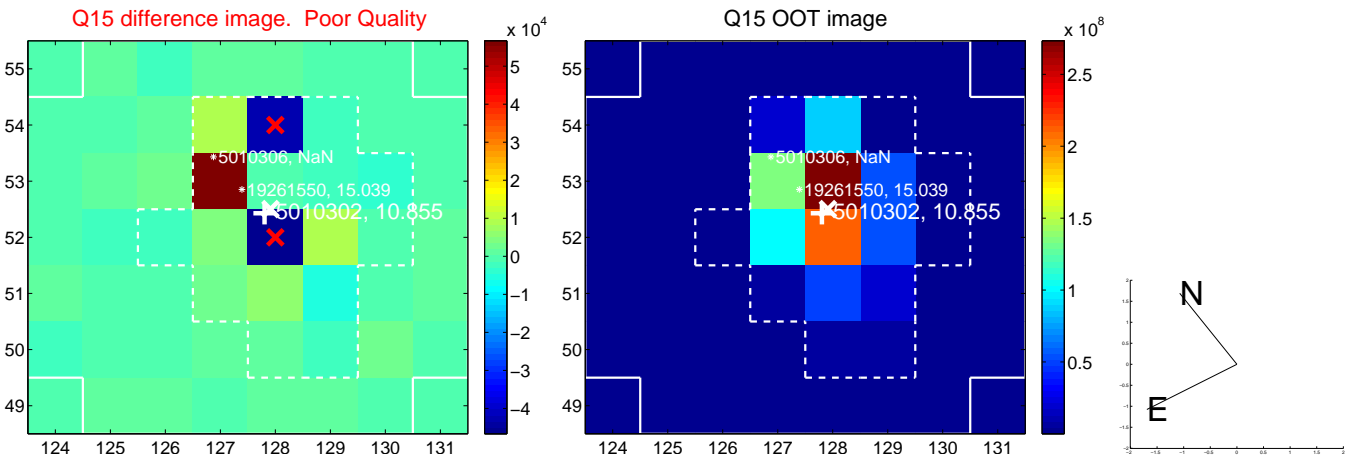
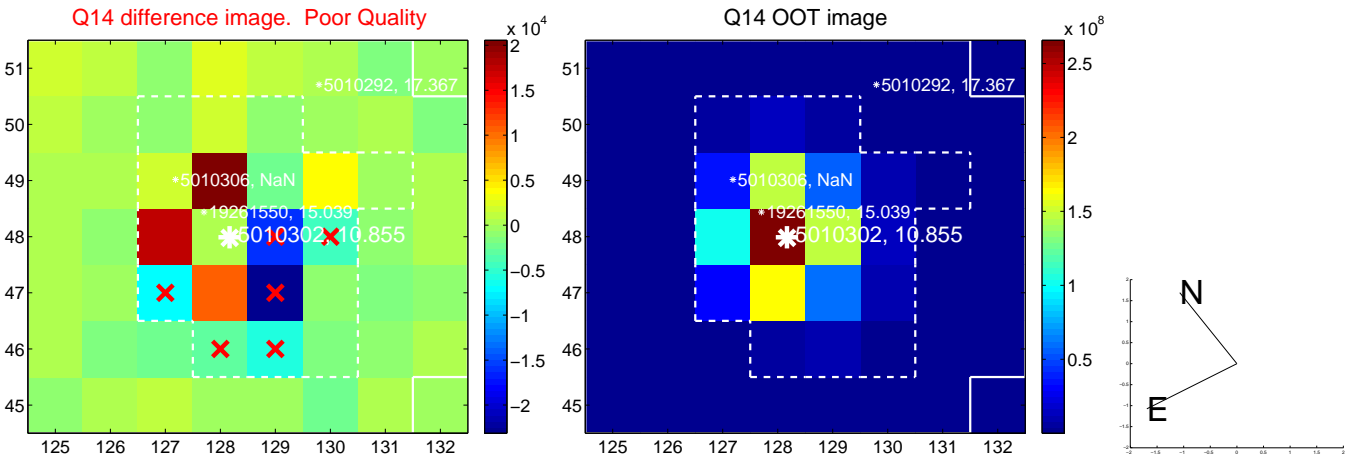
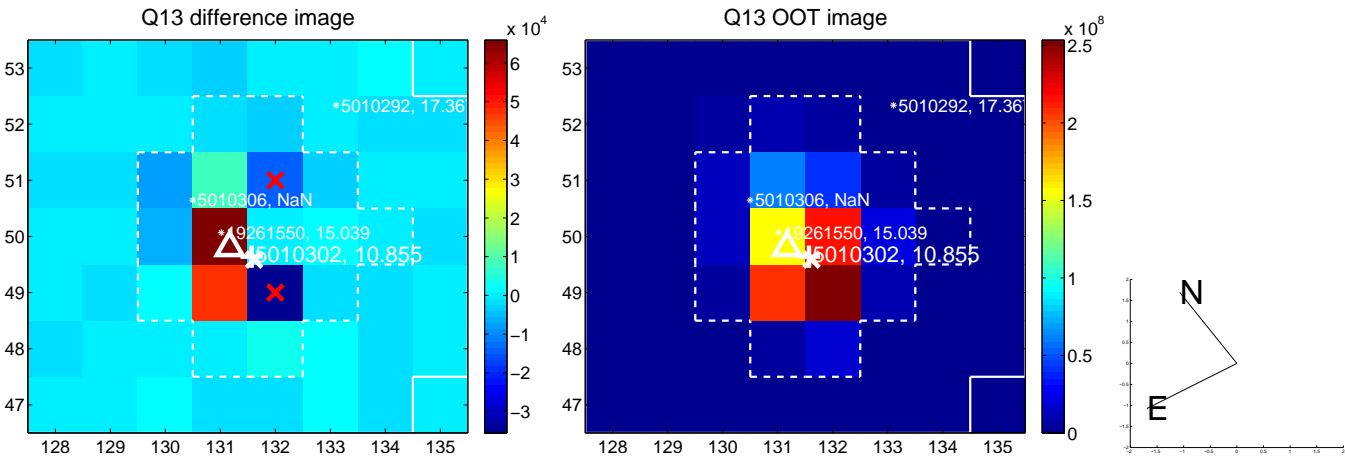
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



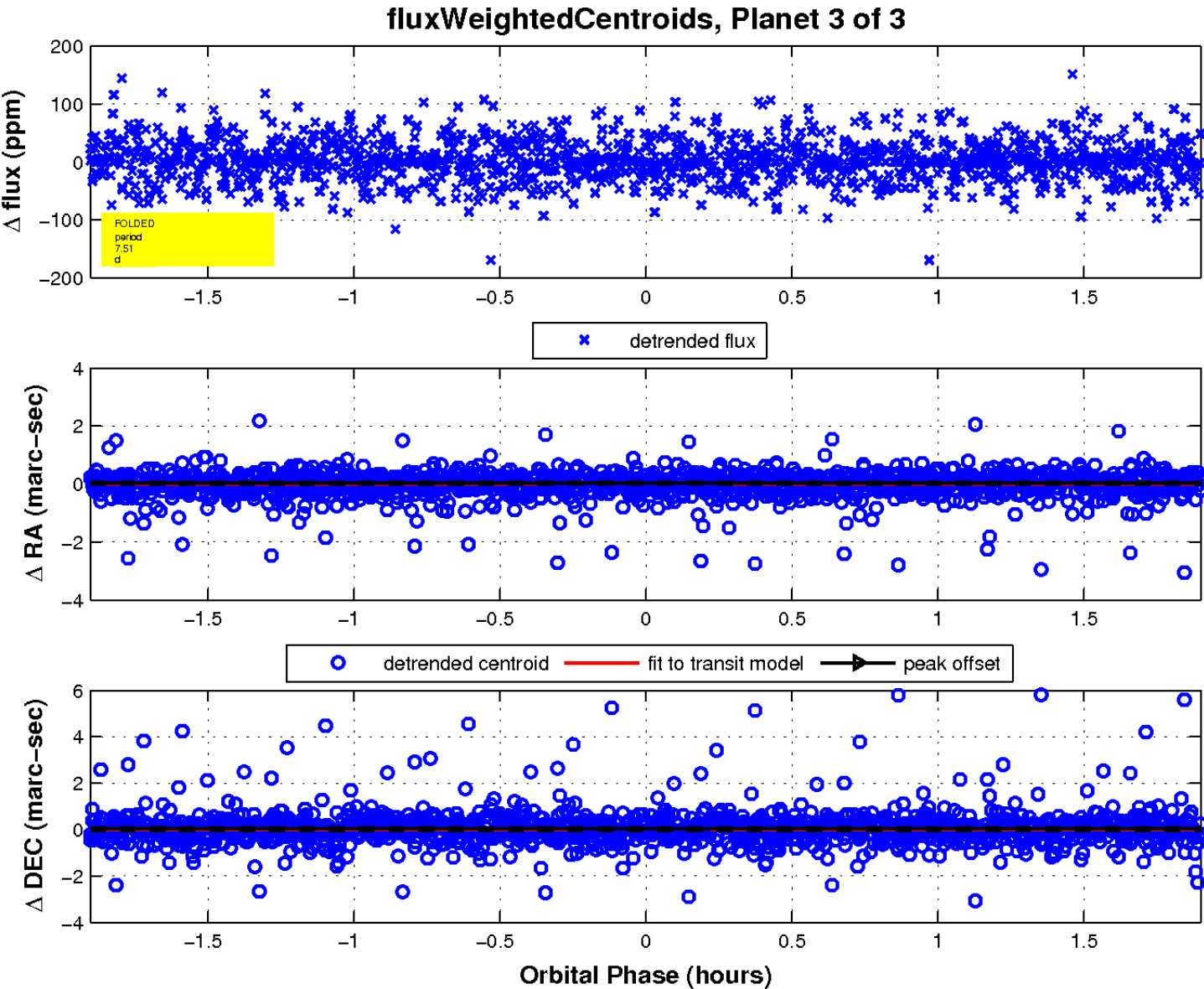
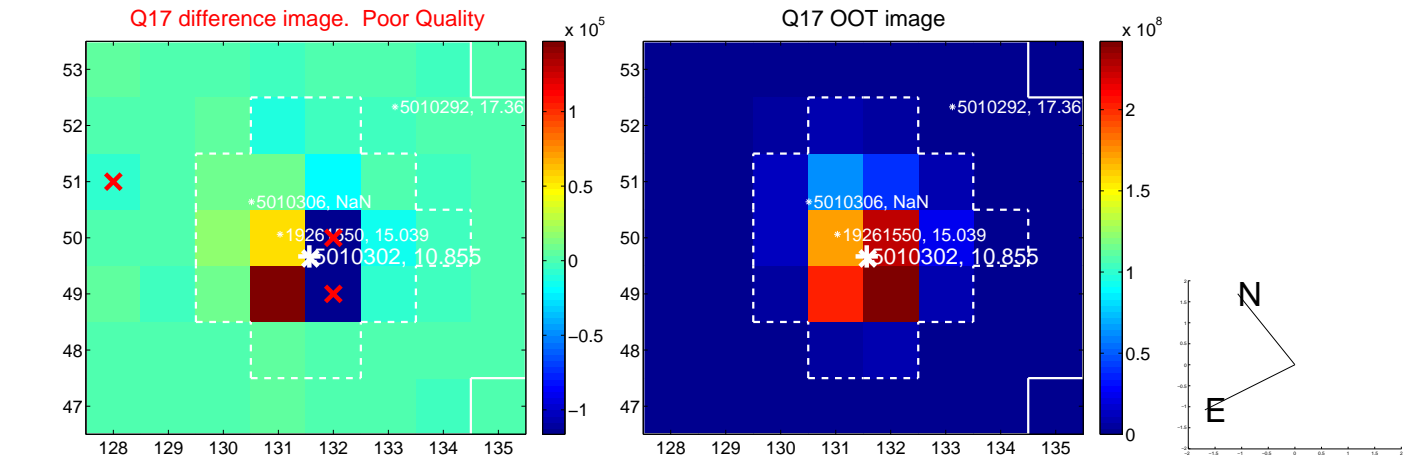
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

