

KIC 000892376

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})
000892376-01	OBS	No	607.710905	207.634885	1049.9	12.577	12.4	6.4	0.60	3973	2.00	0.06
000892376-02	OBS	No	1.021880	131.811576	91.2	5.994	9.8	13.6	0.60	3973	0.69	289.74
000892376-03	OBS	No	85.741133	182.874152	839.5	12.500	21.6	-1.0	0.60	3973	1.70	0.79
000892376-04	OBS	No	405.727244	498.041022	1490.5	4.279	13.1	9.3	0.60	3973	2.31	0.10
000892376-05	OBS	No	126.080798	201.665496	787.6	12.641	11.3	7.4	0.60	3973	1.76	0.47
000892376-06	OBS	No	64.517819	188.638291	675.4	3.000	10.6	-1.0	0.60	3973	1.52	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000892376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

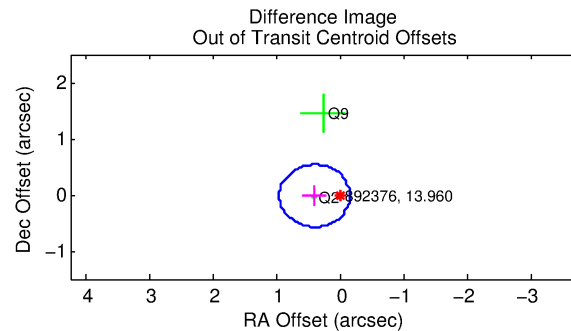
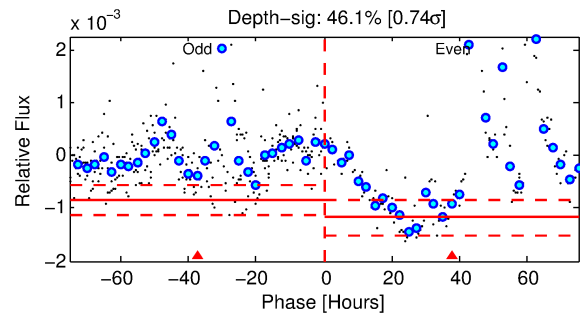
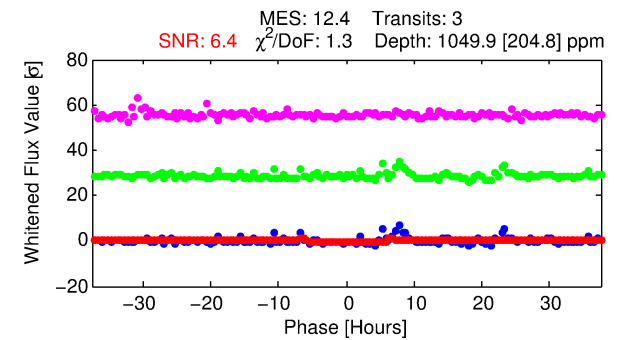
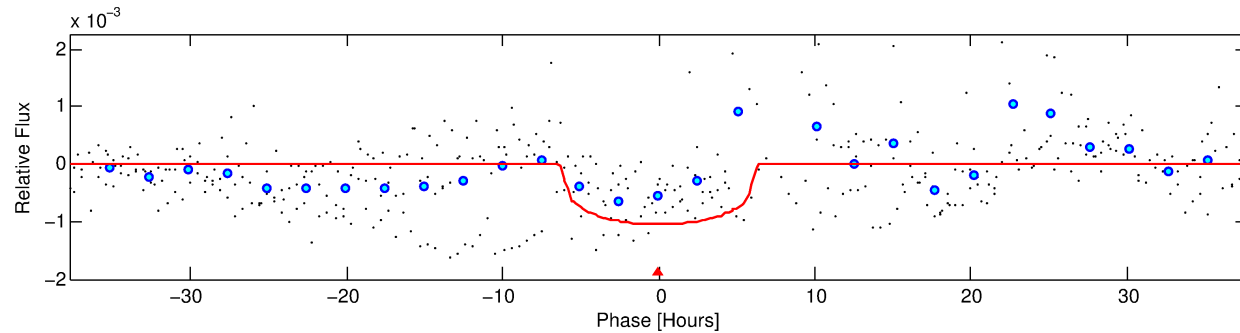
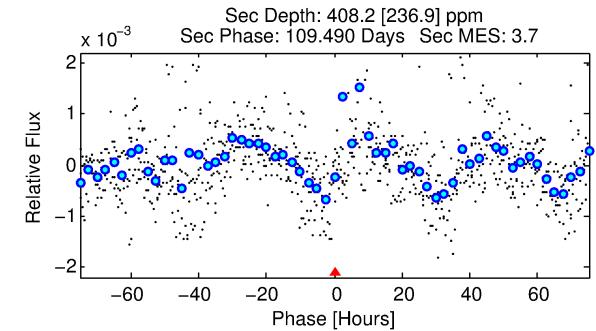
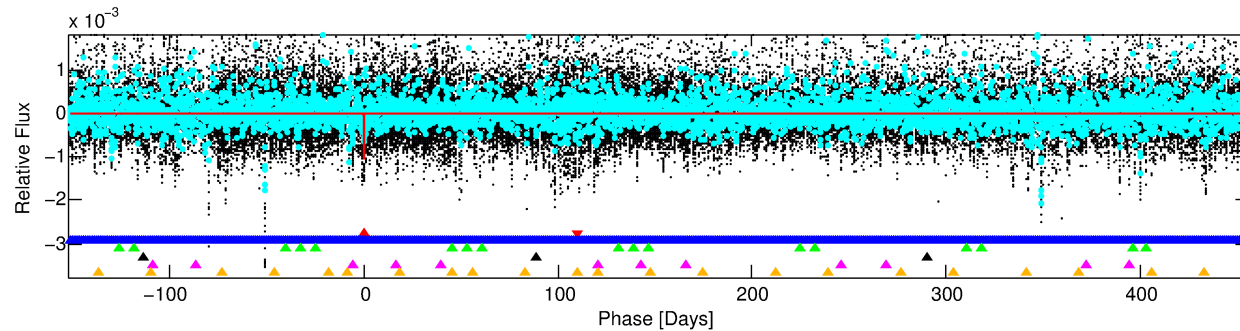
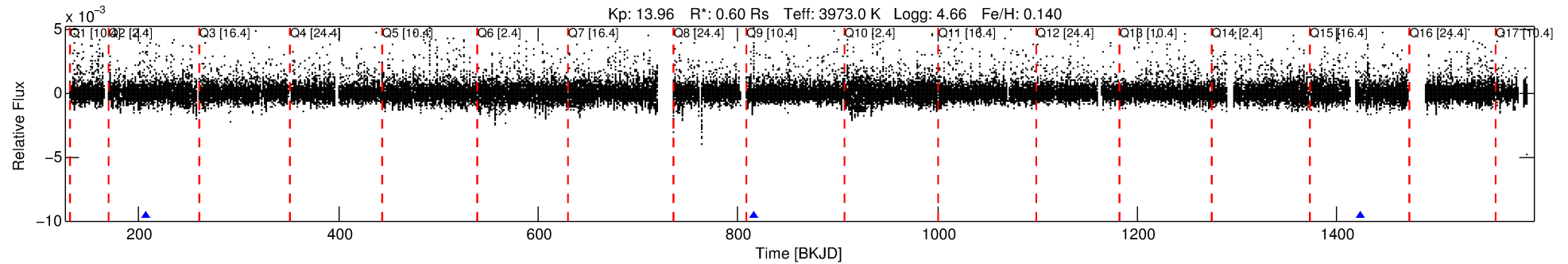
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-01

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 1 of 6 Period: 607.711 d



DV Fit Results:

Period = 607.71090 [0.00898] d
Epoch = 207.6349 [0.0120] BKJD
Rp/R* = 0.0303 [0.0115]
a/R* = 321.47 [399.14]
b = 0.55 [1.58]
Seff = 0.06 [0.01]
Teq = 125 [6] K
Rp = 2.00 [0.80] Re
a = 1.1876 [0.1126] AU
Ag = 79313.85 [76511.54] [1.04 σ]
Teffp = 3246 [786] K [3.97 σ]

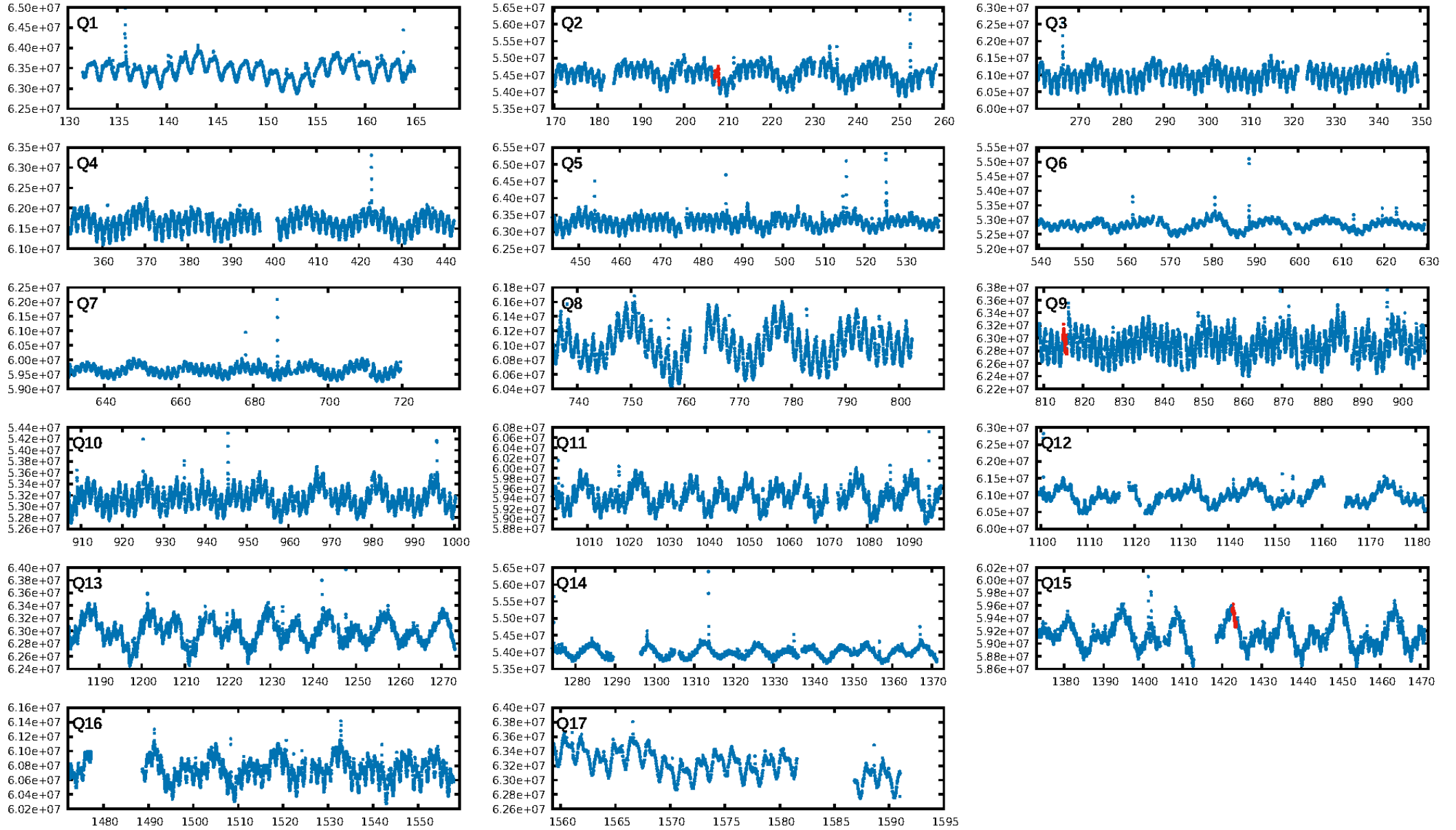
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [364.89 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 9.343
Centroid-sig: 26.3%
Centroid-so: 1.443 arcsec [2.50 σ]
OotOffset-rm: 0.408 arcsec [2.21 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.906 arcsec [2.04 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/3]

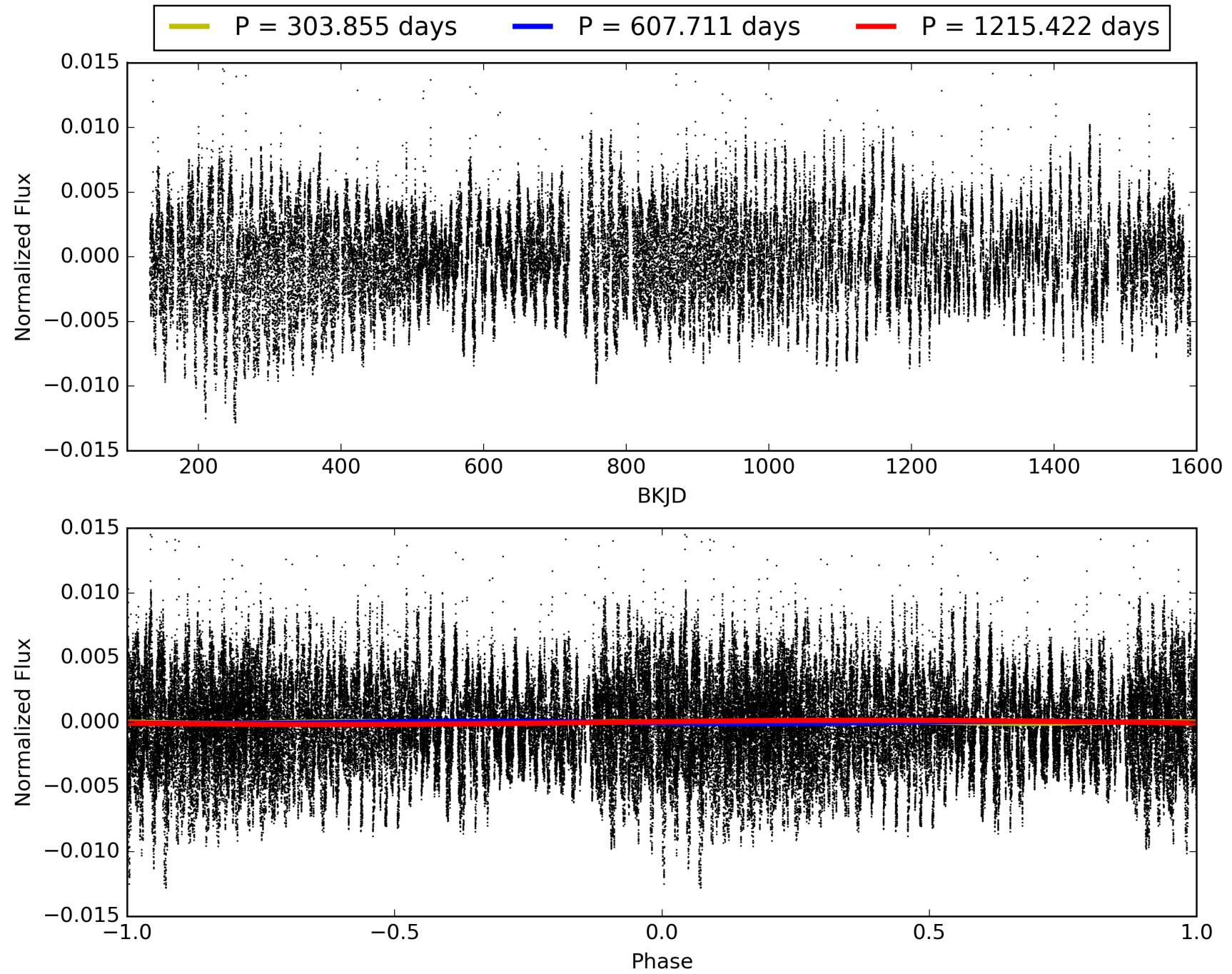
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:46:49 Z

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

TCE 000892376-01, PDC Light Curves

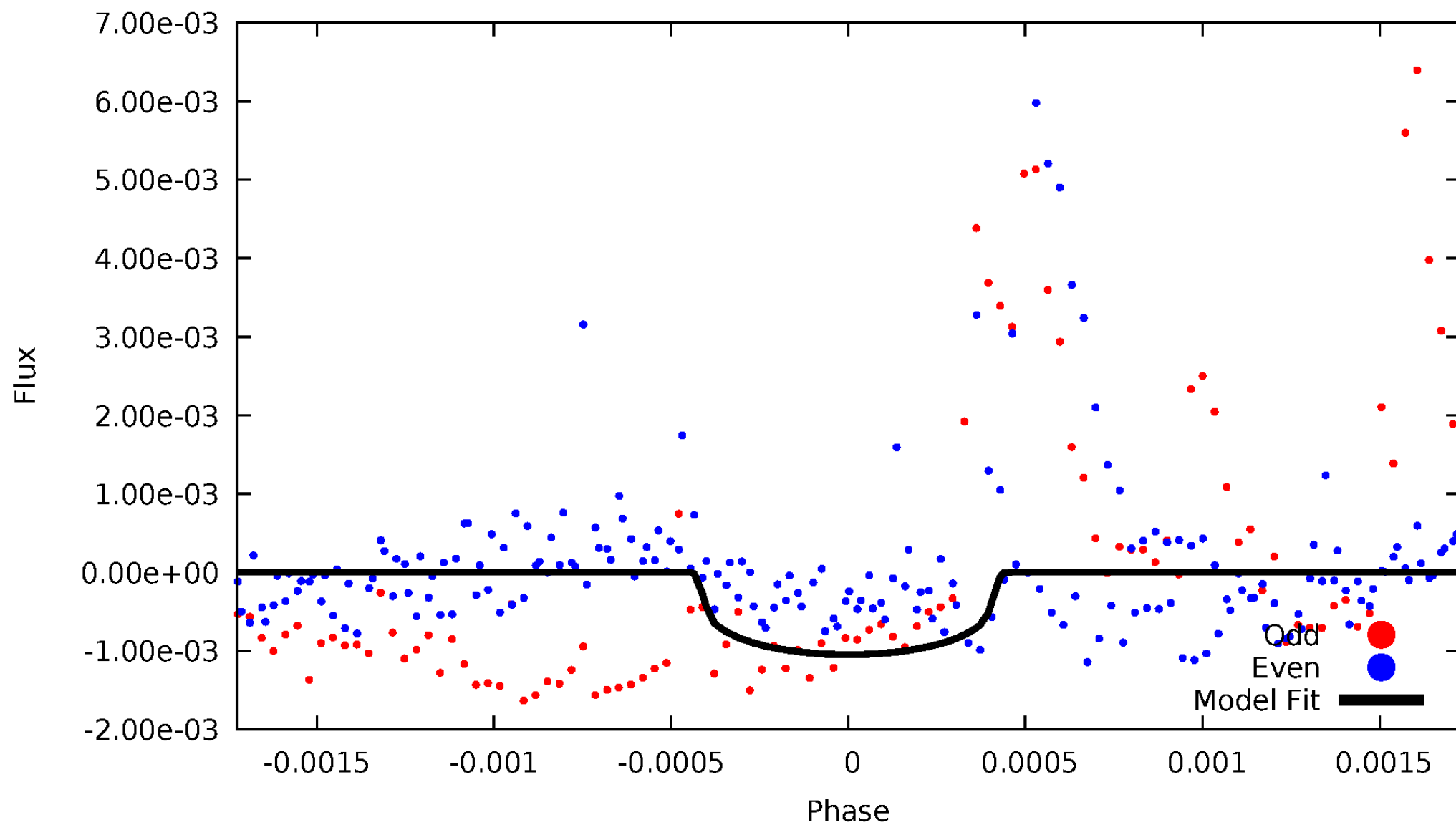


TCE 000892376-01



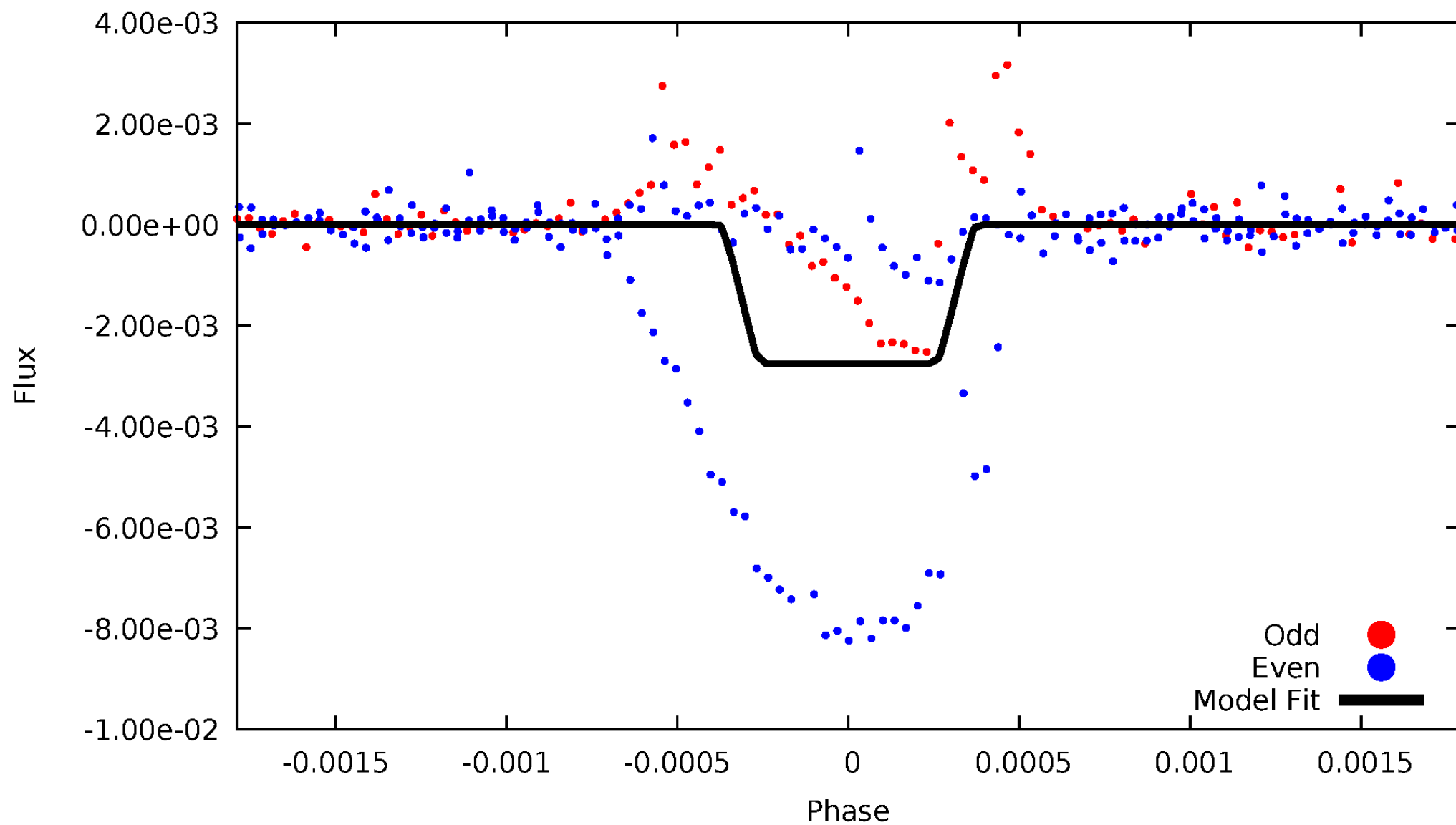
DV Odd/Even

TCE 000892376-01



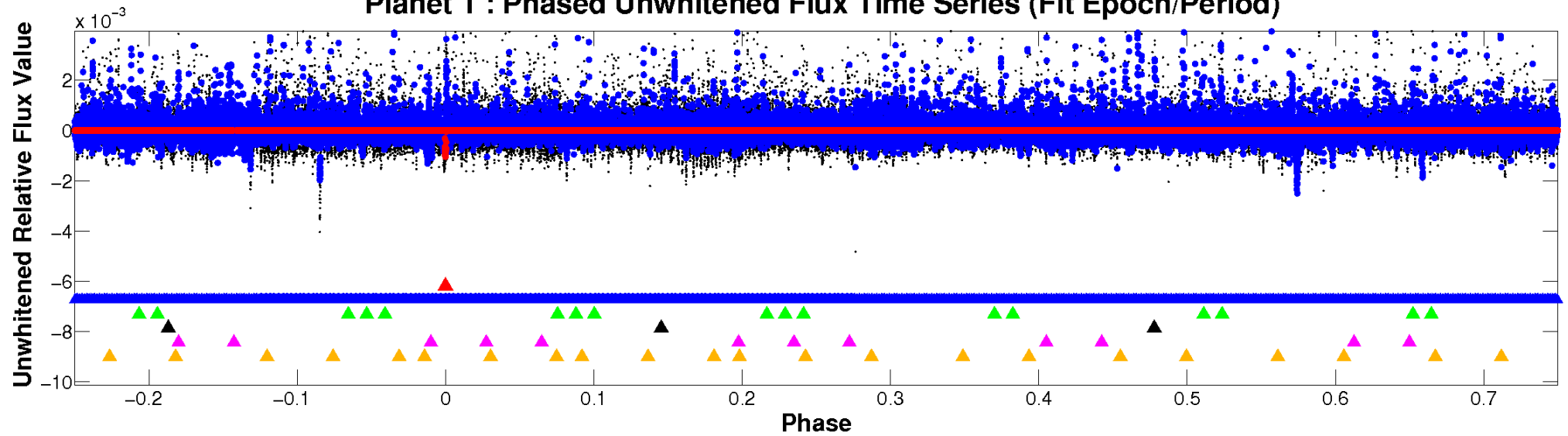
ALT Odd/Even

TCE 000892376-01

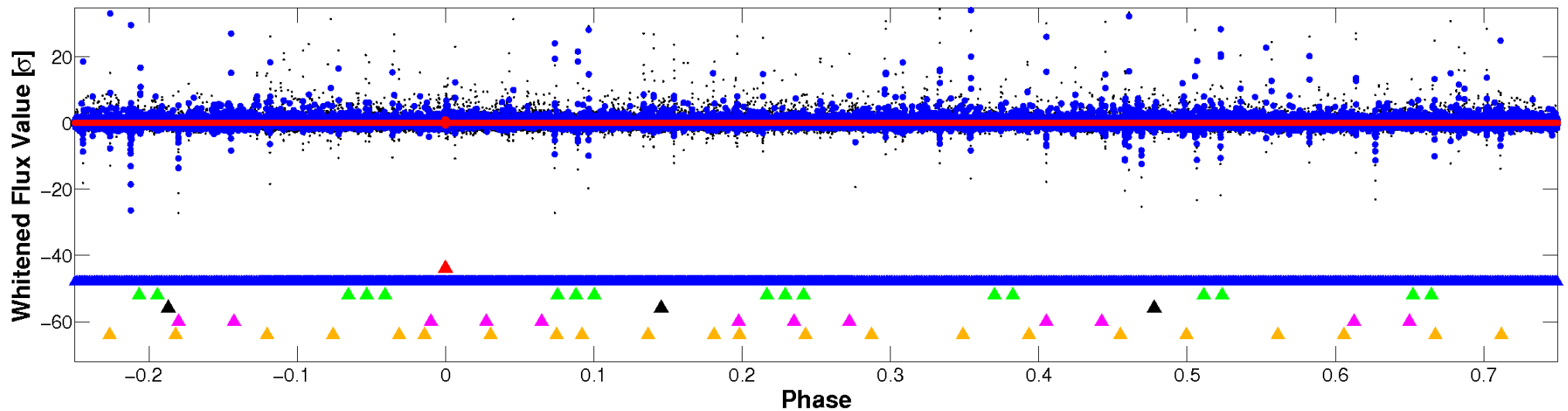


Non-Whitened Vs. Whitened Light Curve

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

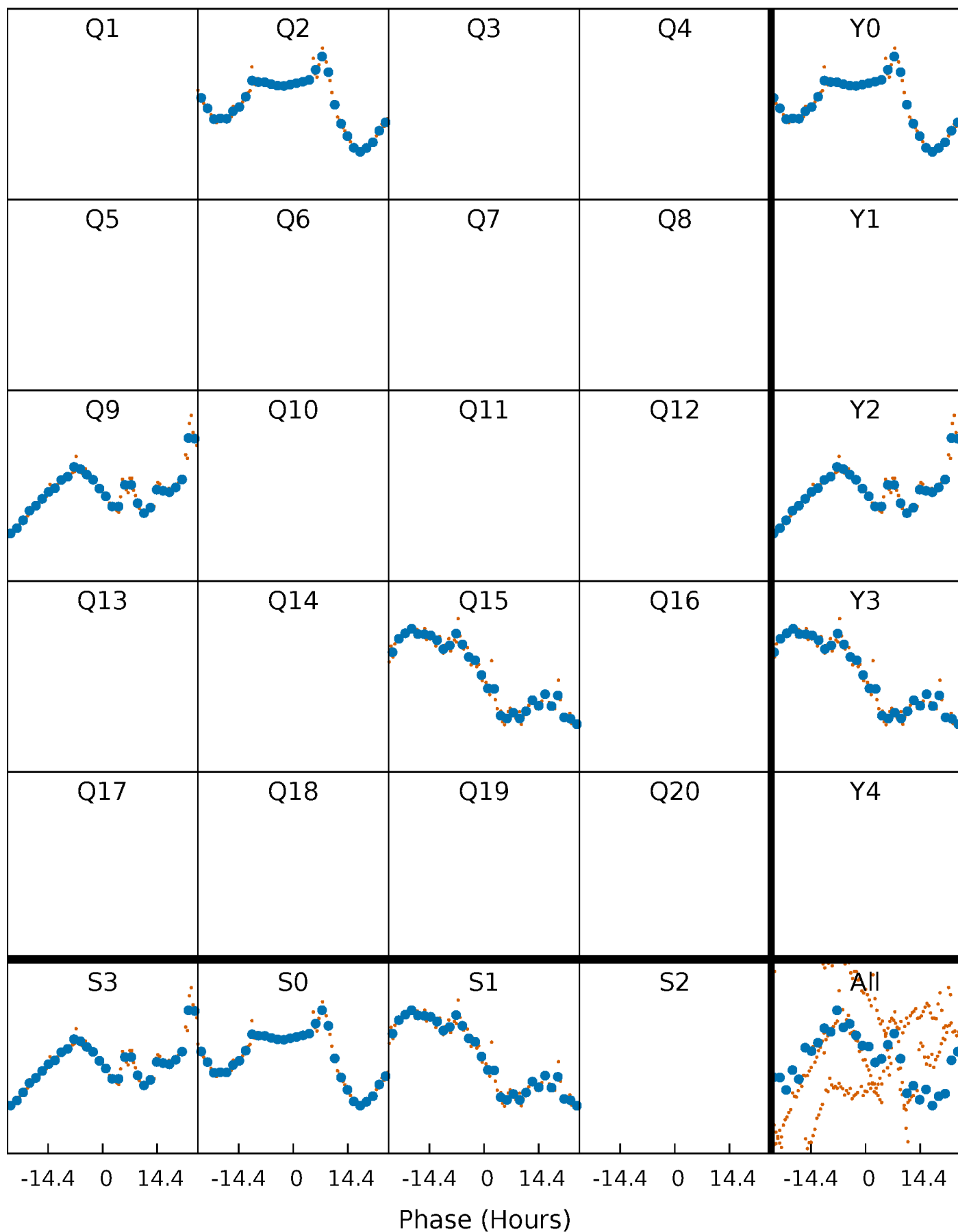


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



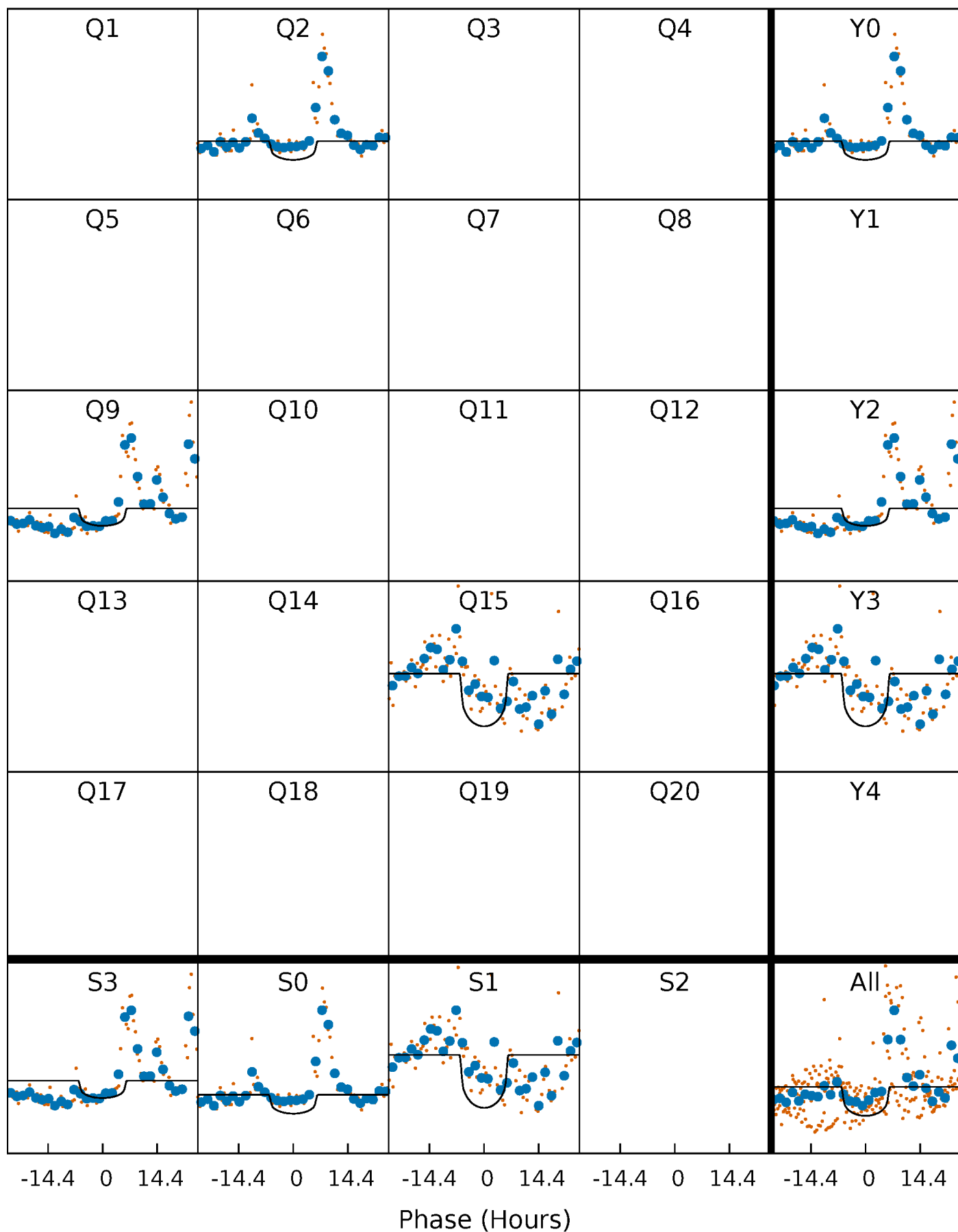
PDC Quarter-Phased Transit Curves

TCE 000892376-01 P=607.710905 Days $T_0=207.634885$ (BKJD)



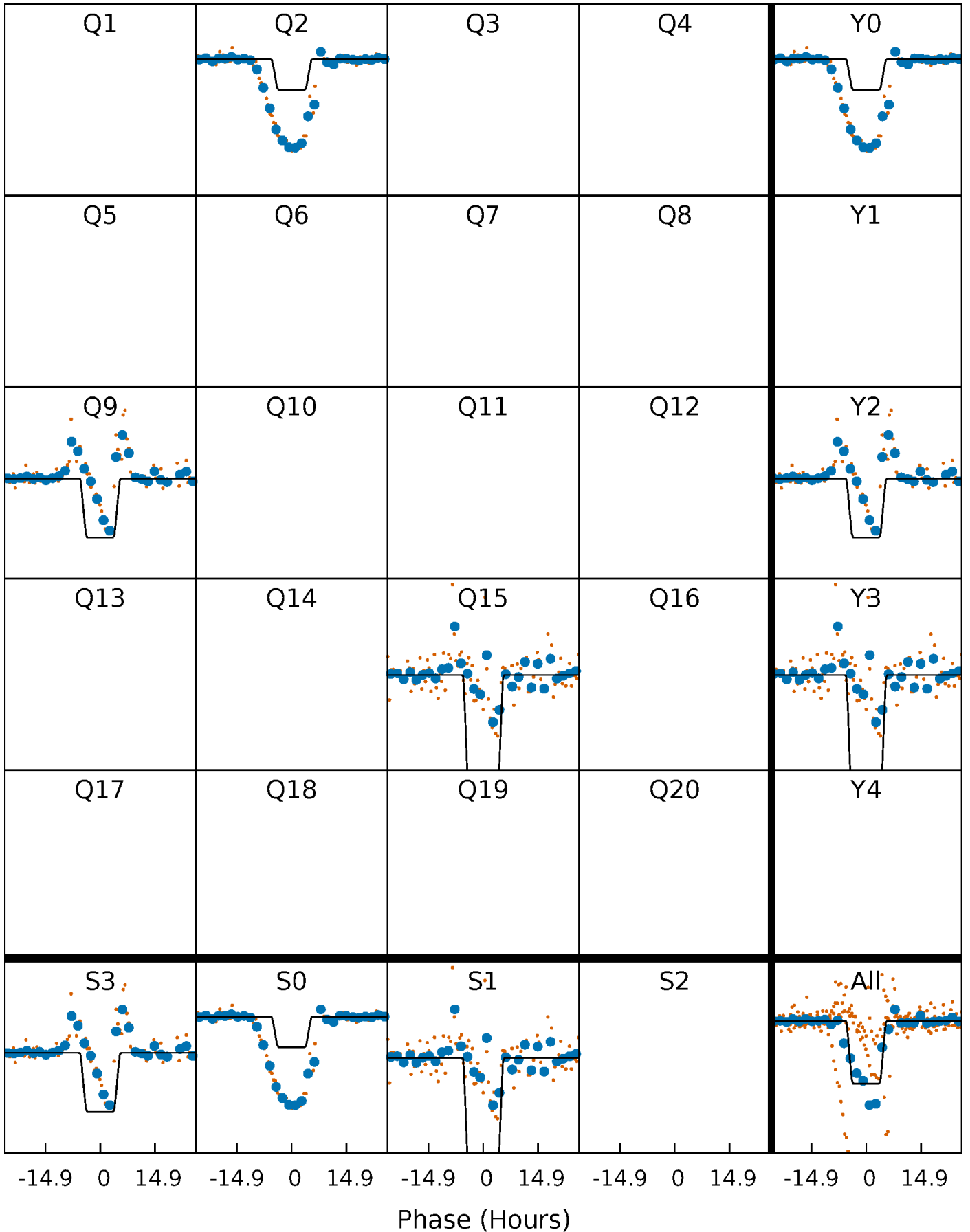
DV Quarter-Phased Transit Curves

TCE 000892376-01 P=607.710905 Days $T_0=207.634885$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

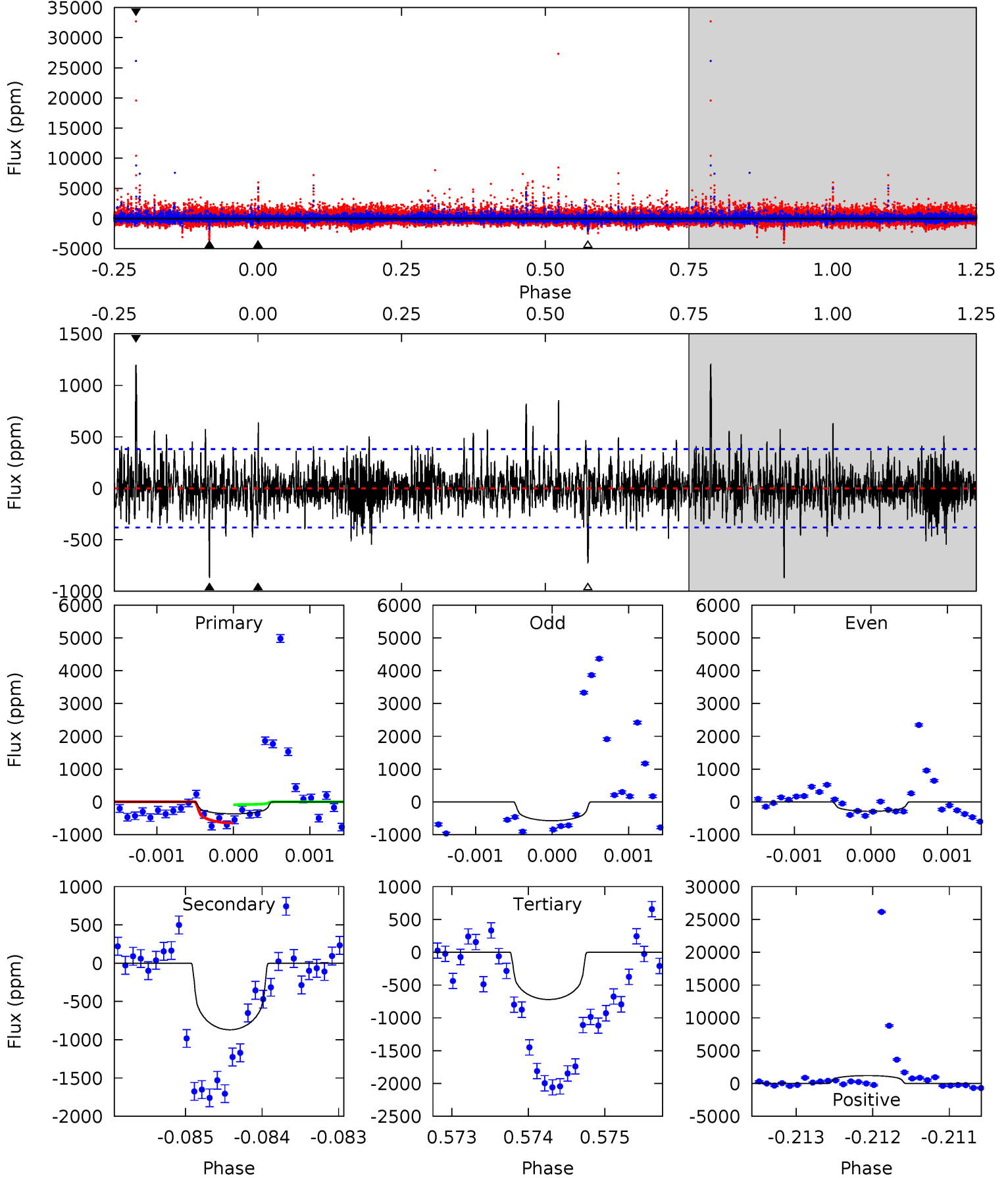
TCE 000892376-01 P=607.734941 Days $T_0=207.650092$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-01, P = 607.710905 Days, E = 207.634885 Days

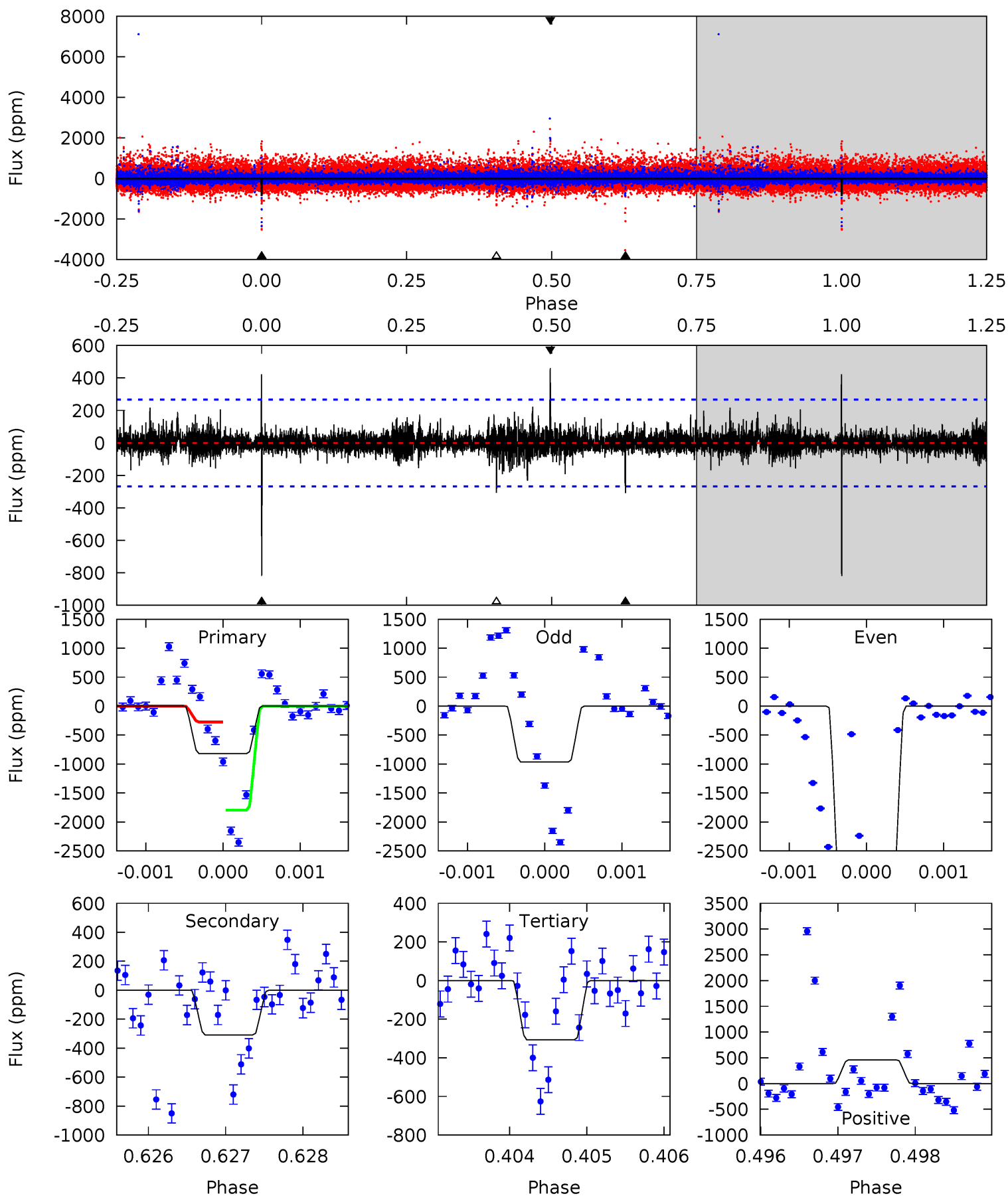
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.24	12.5	10.4	17.2	5.47	3.32	2.24	-5.12	-12.0	2.15	-4.74	1.40	1.06	0.58	4.01



Alt Model-Shift Uniqueness Test

000892376-01, P = 607.734941 Days, E = 207.650092 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	6.35	6.31	9.50	5.50	3.36	0.87	10.5	7.37	0.04	-3.14	33.5	3.14	0.36	15.4



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-870 ± 70	$1.98^{+0.72}_{-0.77}$	173^{+6}_{-8}	3915^{+813}_{-407}	$174356^{+274300}_{-79955}$
Alt.	-309 ± 49	$3.43^{+0.73}_{-0.81}$	173^{+6}_{-8}	2833^{+236}_{-172}	20564^{+15540}_{-6765}

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

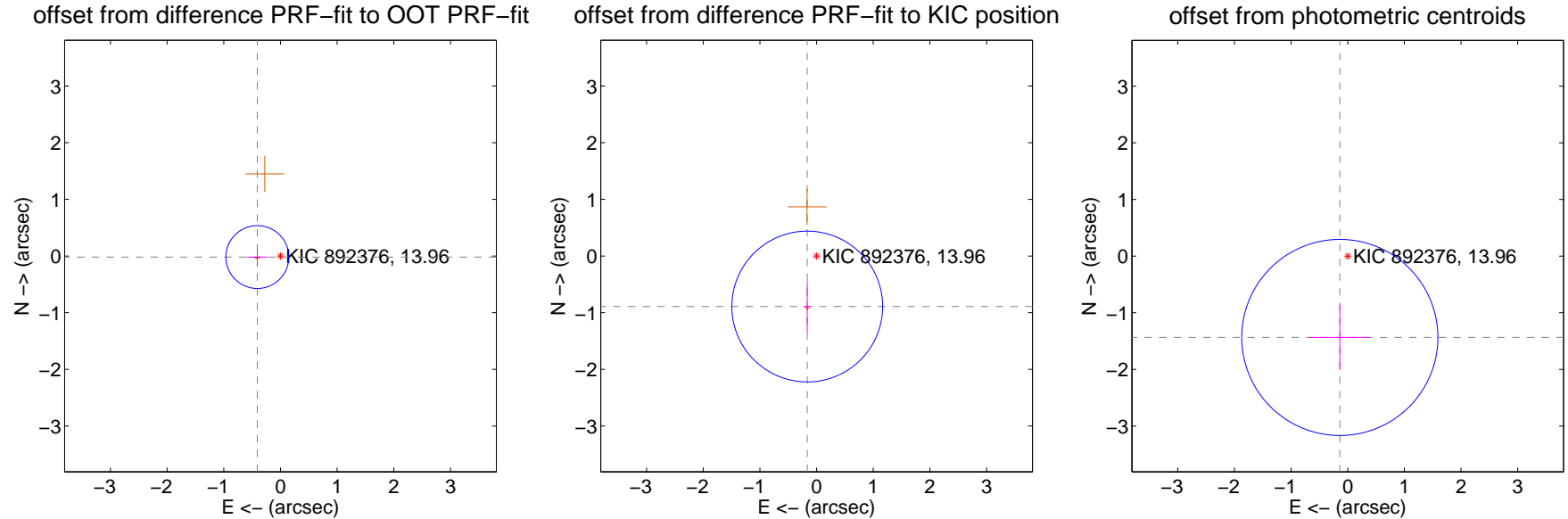
DV Centroid Data

Supplemental centroid analysis for 000892376-01. Kepler magnitude: 13.96. Transit SNR 6.36

There are 0 quarters with good PRF difference image offsets

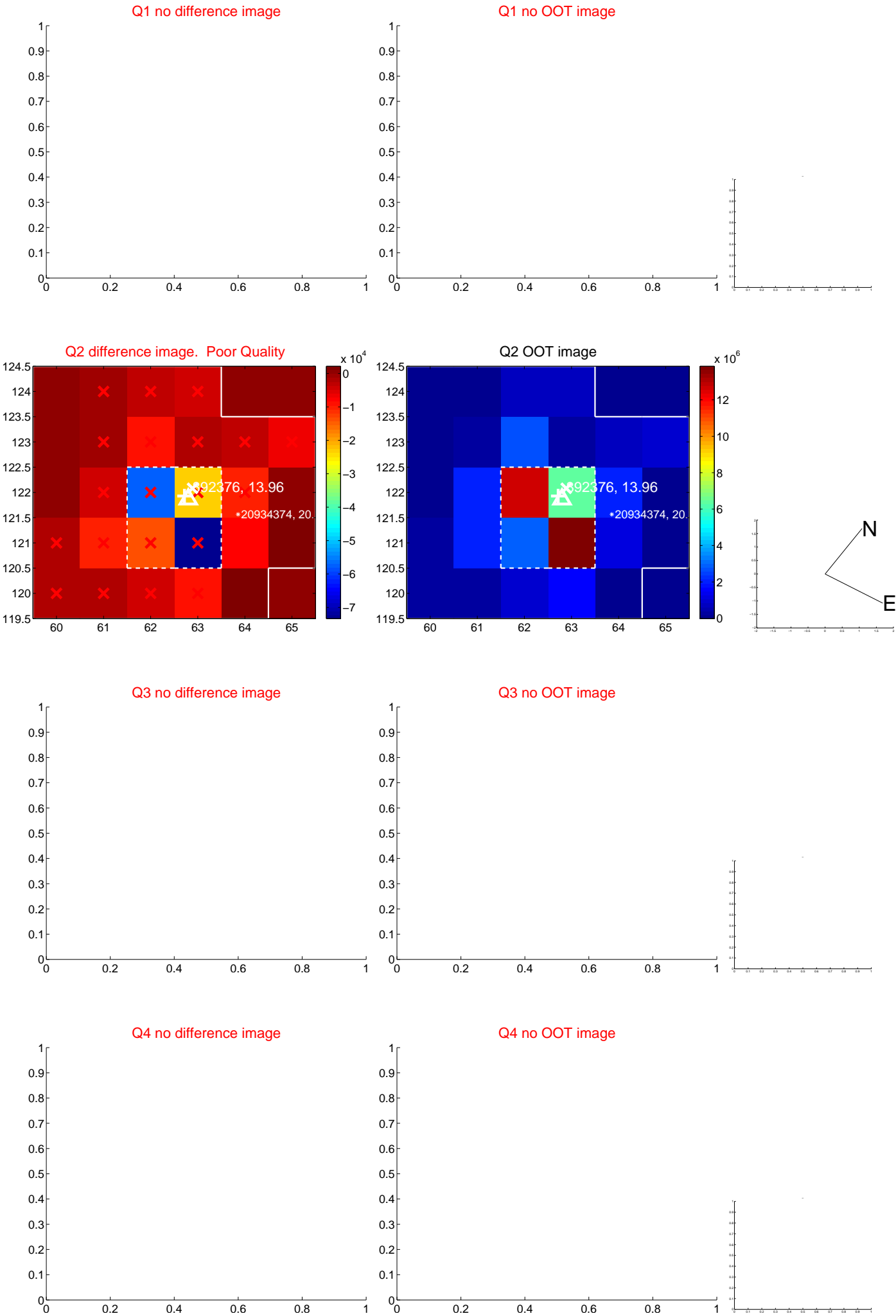
The direct PRF centroid is offset from the target star catalog position by about 0.59 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.408 ± 0.185	2.21	0.408 ± 0.185	-0.018 ± 0.174
PRF-fit source offset from KIC position	0.906 ± 0.443	2.04	0.164 ± 0.067	-0.891 ± 0.451
photometric centroid source offset	1.44 ± 0.58	2.50	0.14 ± 0.53	-1.44 ± 0.58



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

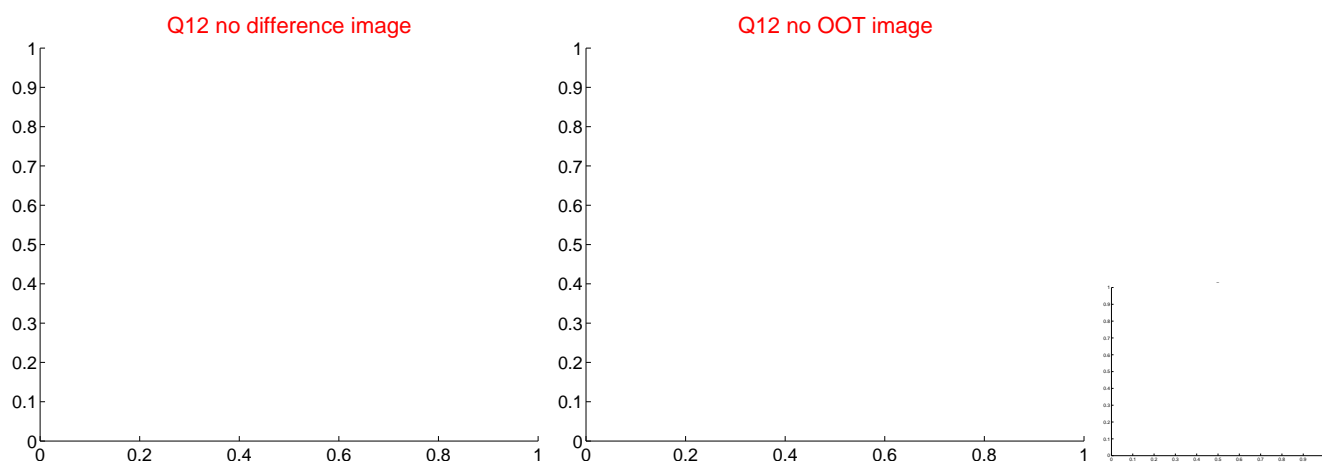
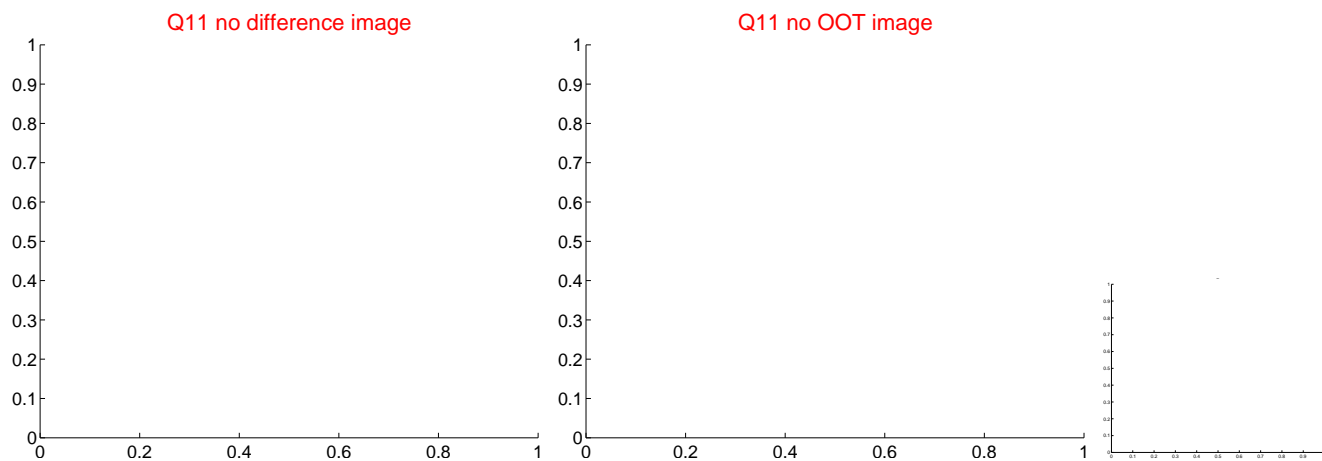
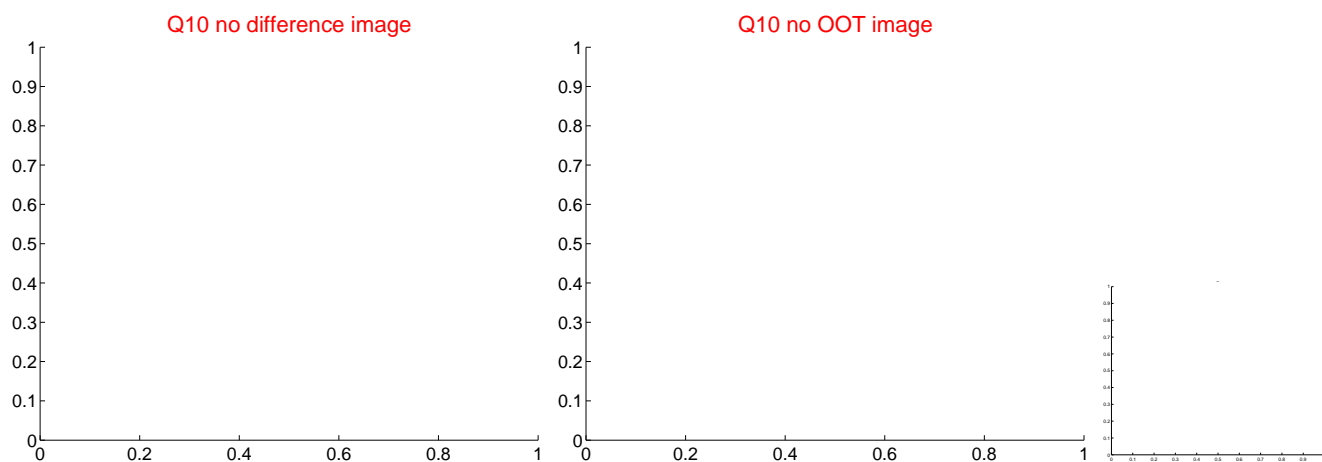
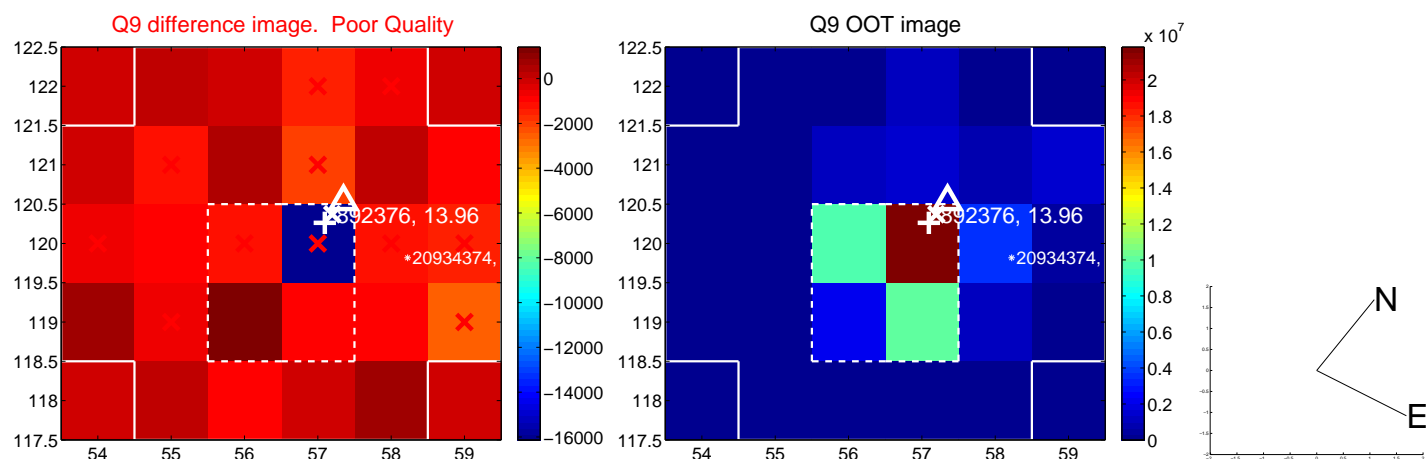
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

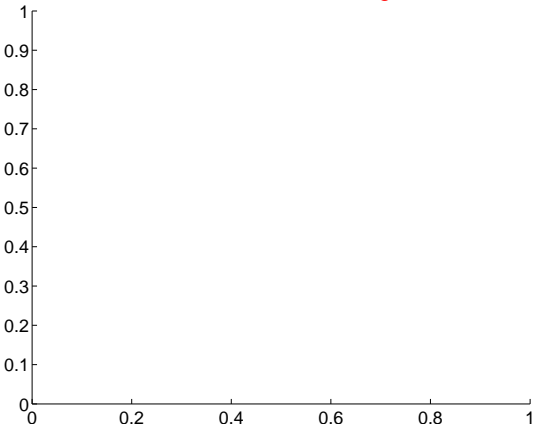


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

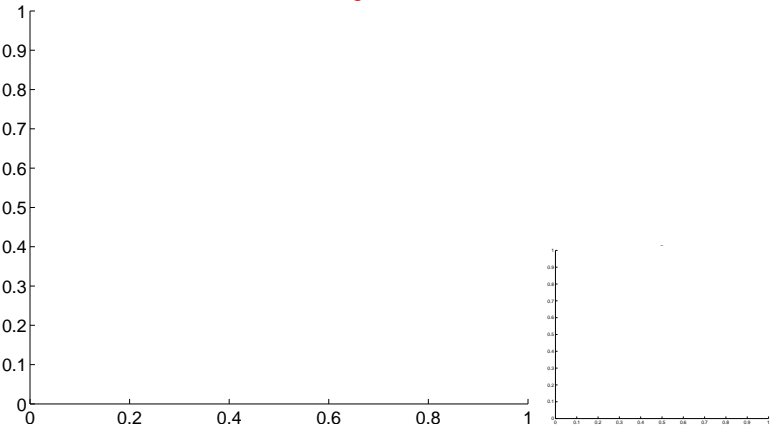


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

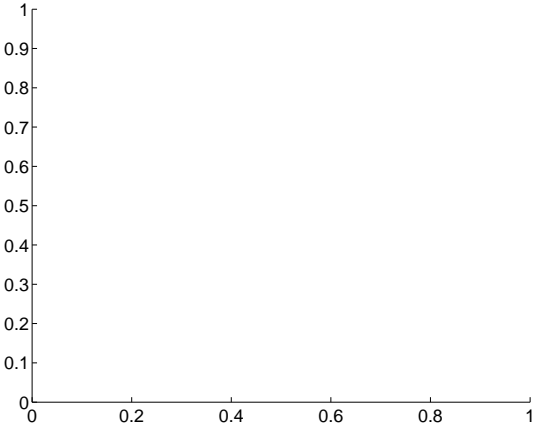
Q13 no difference image



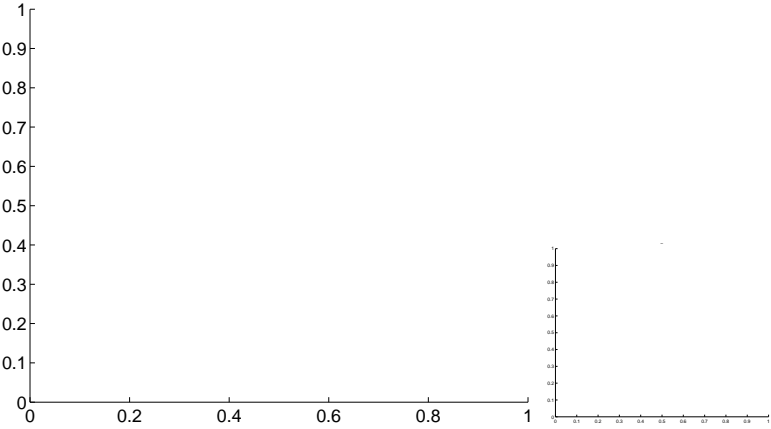
Q13 no OOT image



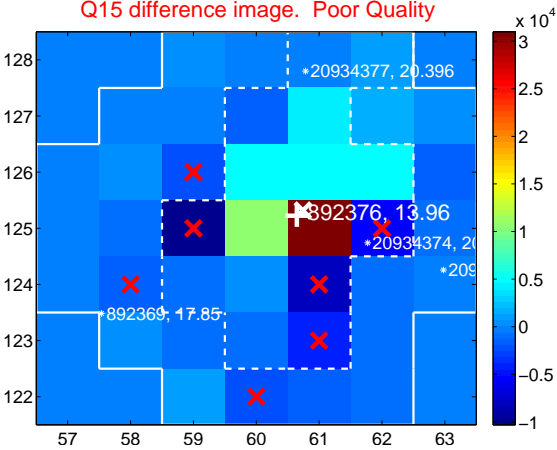
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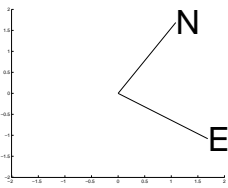
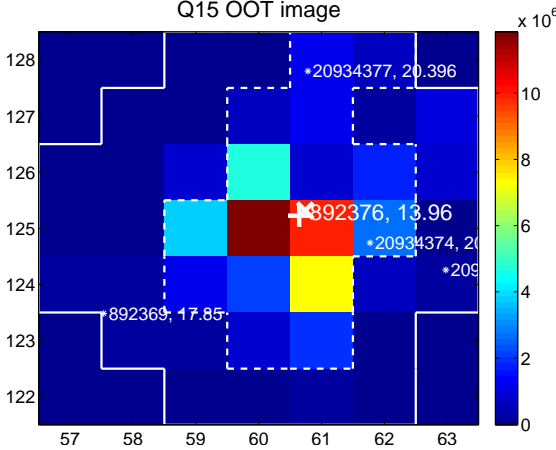
Q14 no OOT image



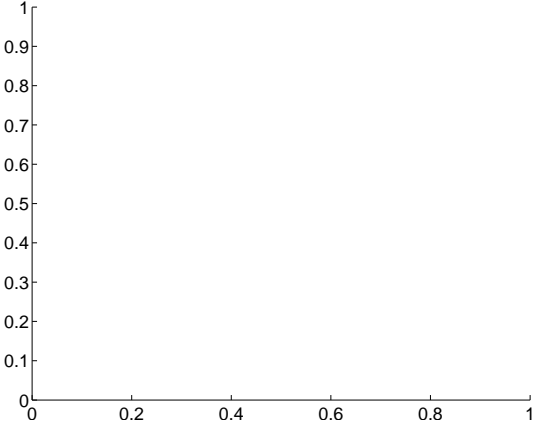
Q15 difference image. Poor Quality



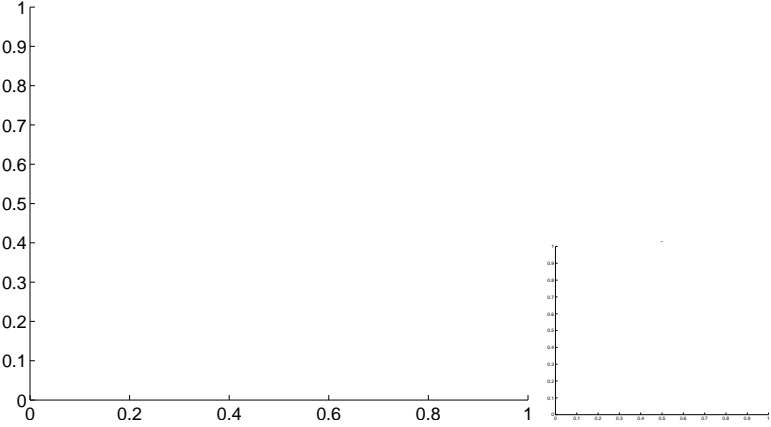
Q15 OOT image



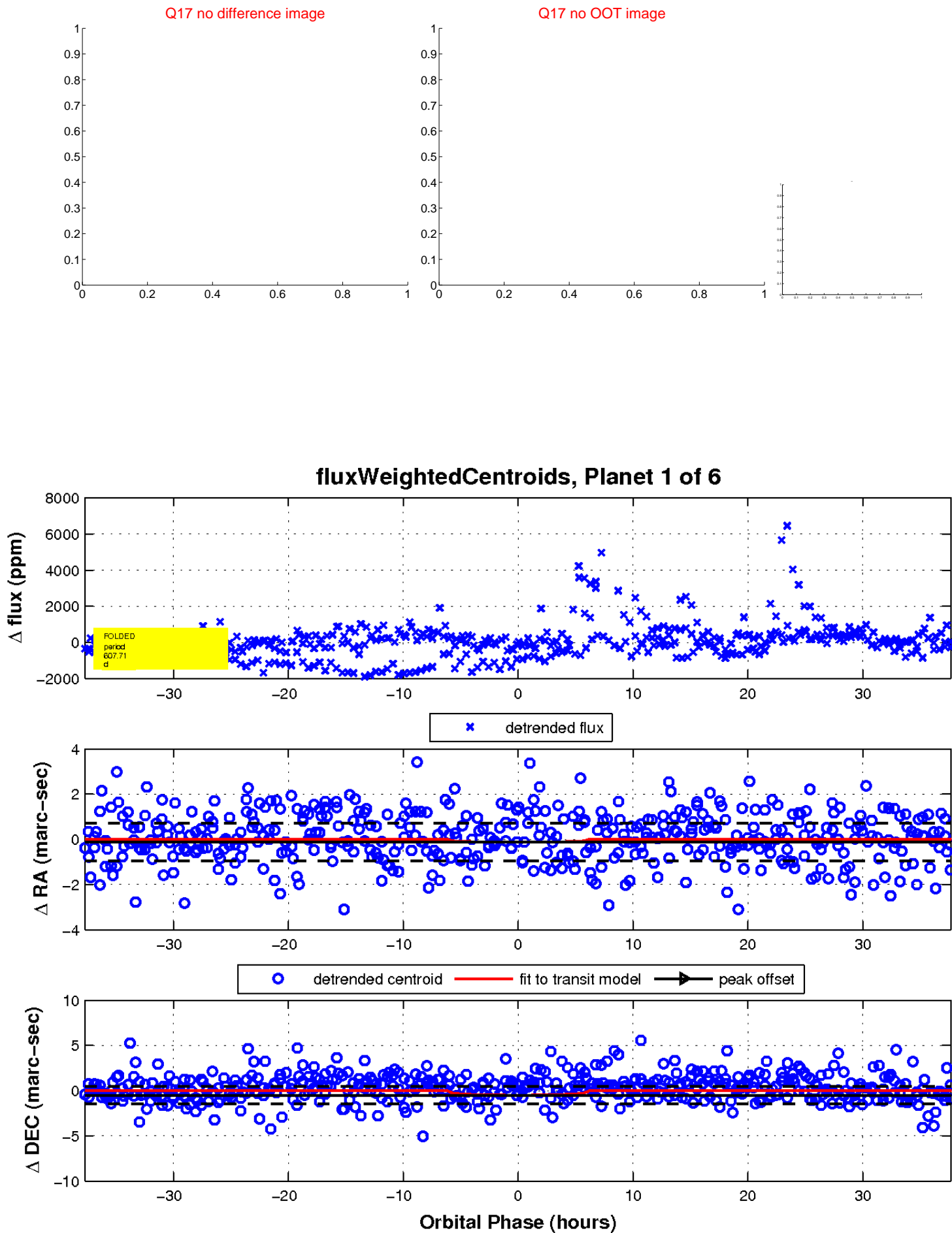
Q16 no difference image



Q16 no OOT image

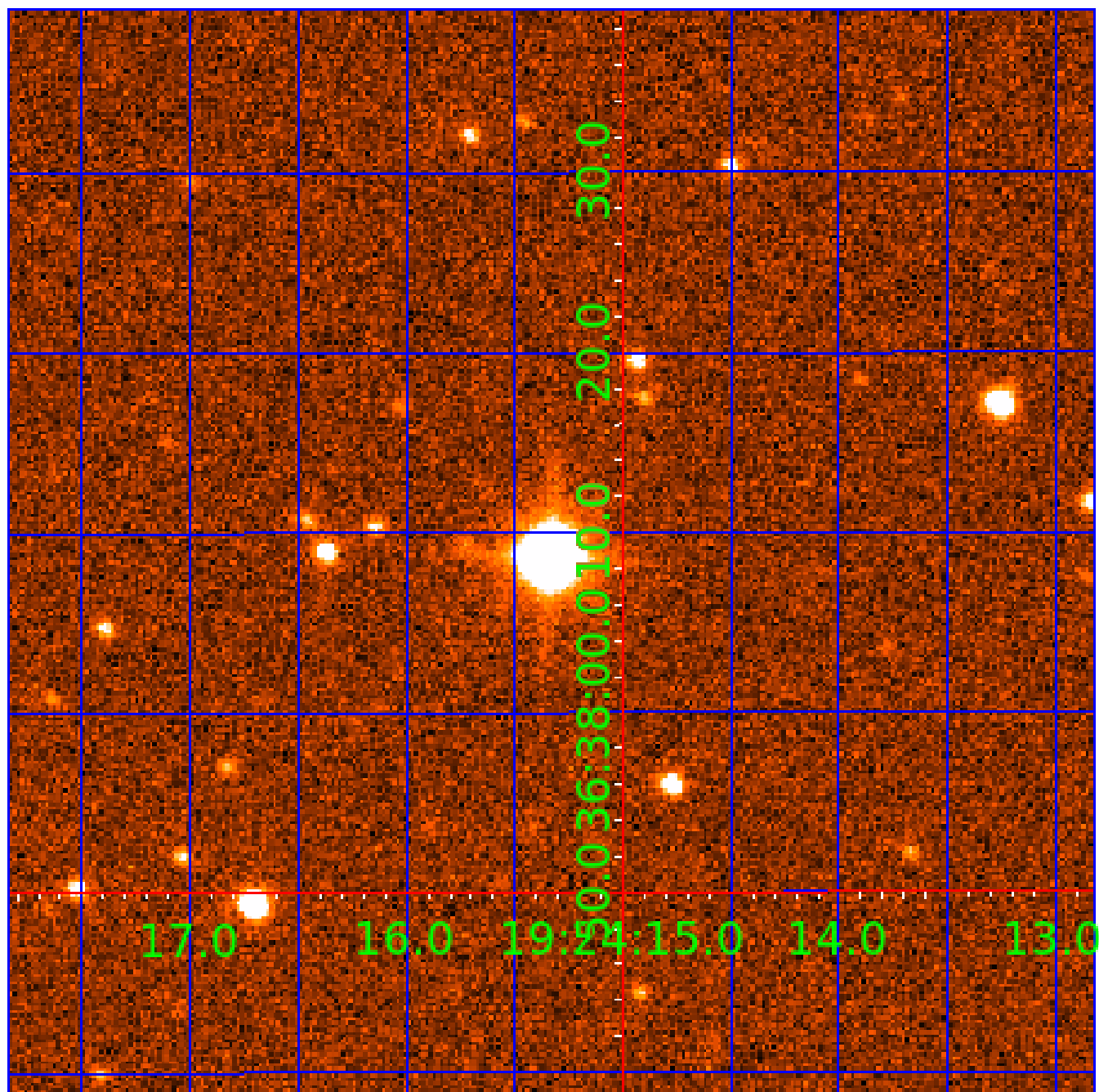


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000892376

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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000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

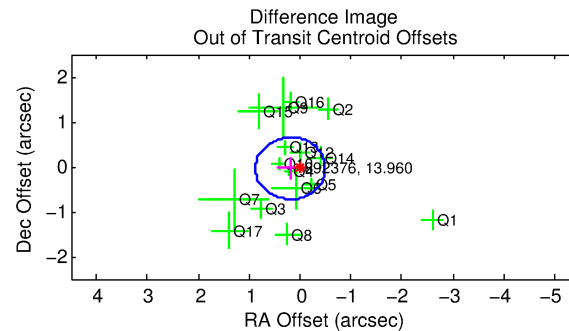
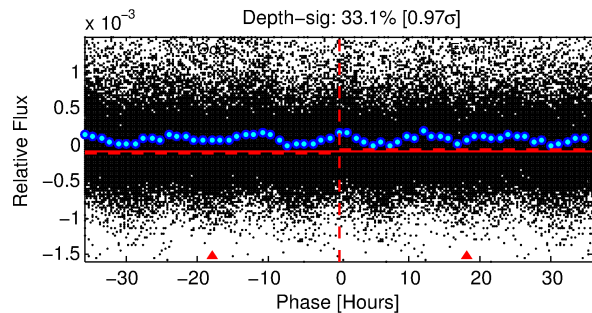
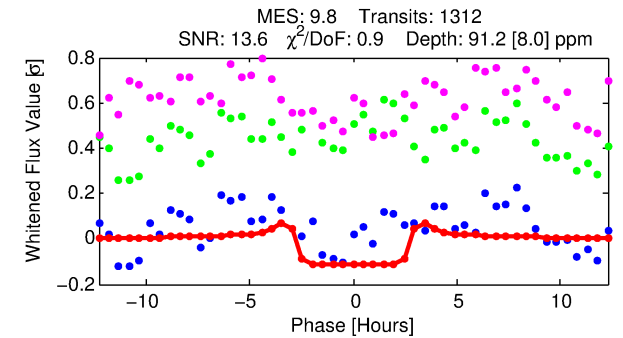
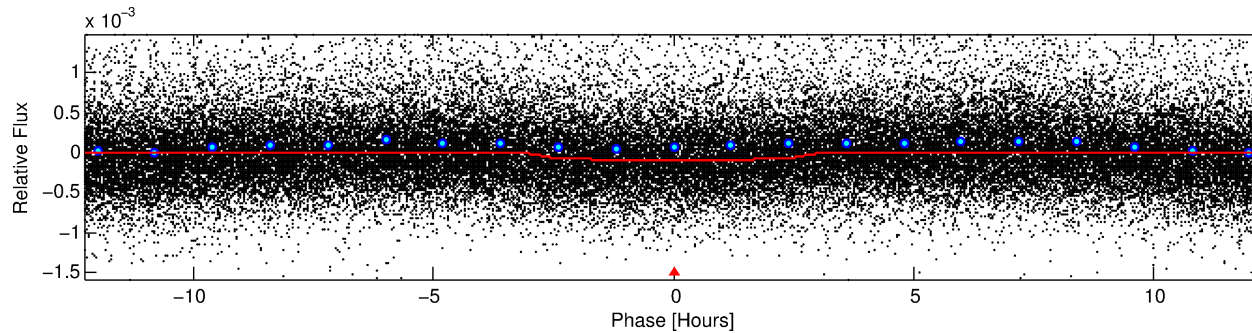
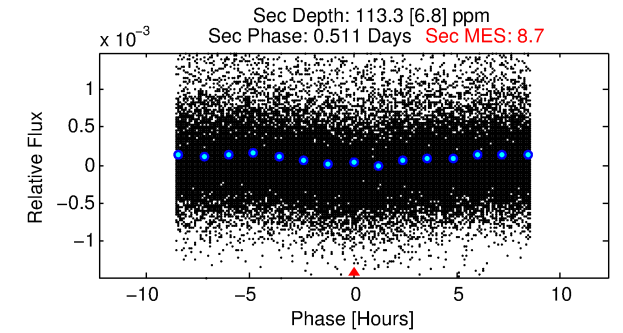
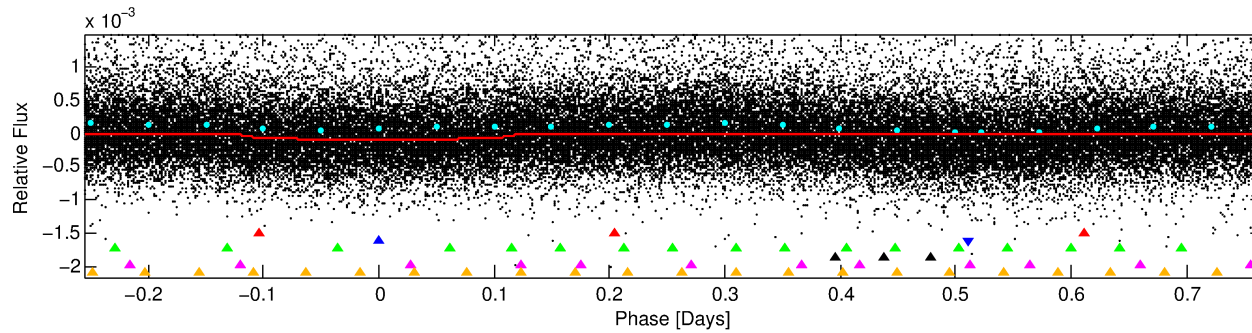
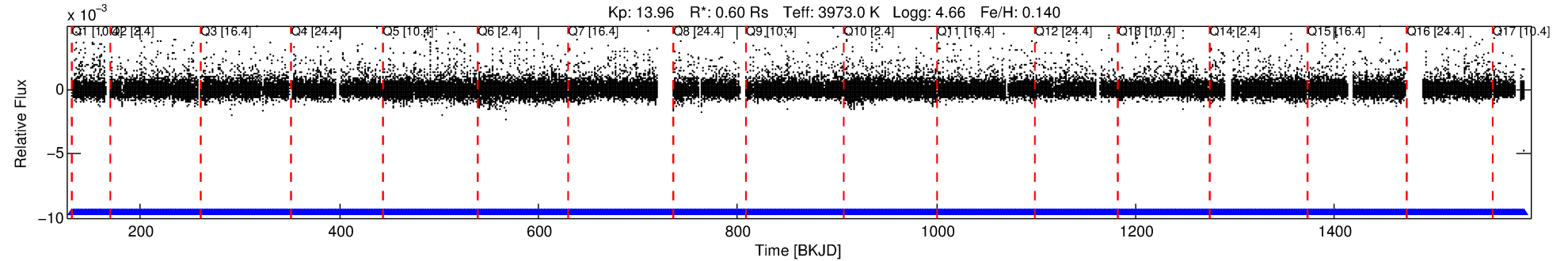
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-02

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 2 of 6 Period: 1.022 d



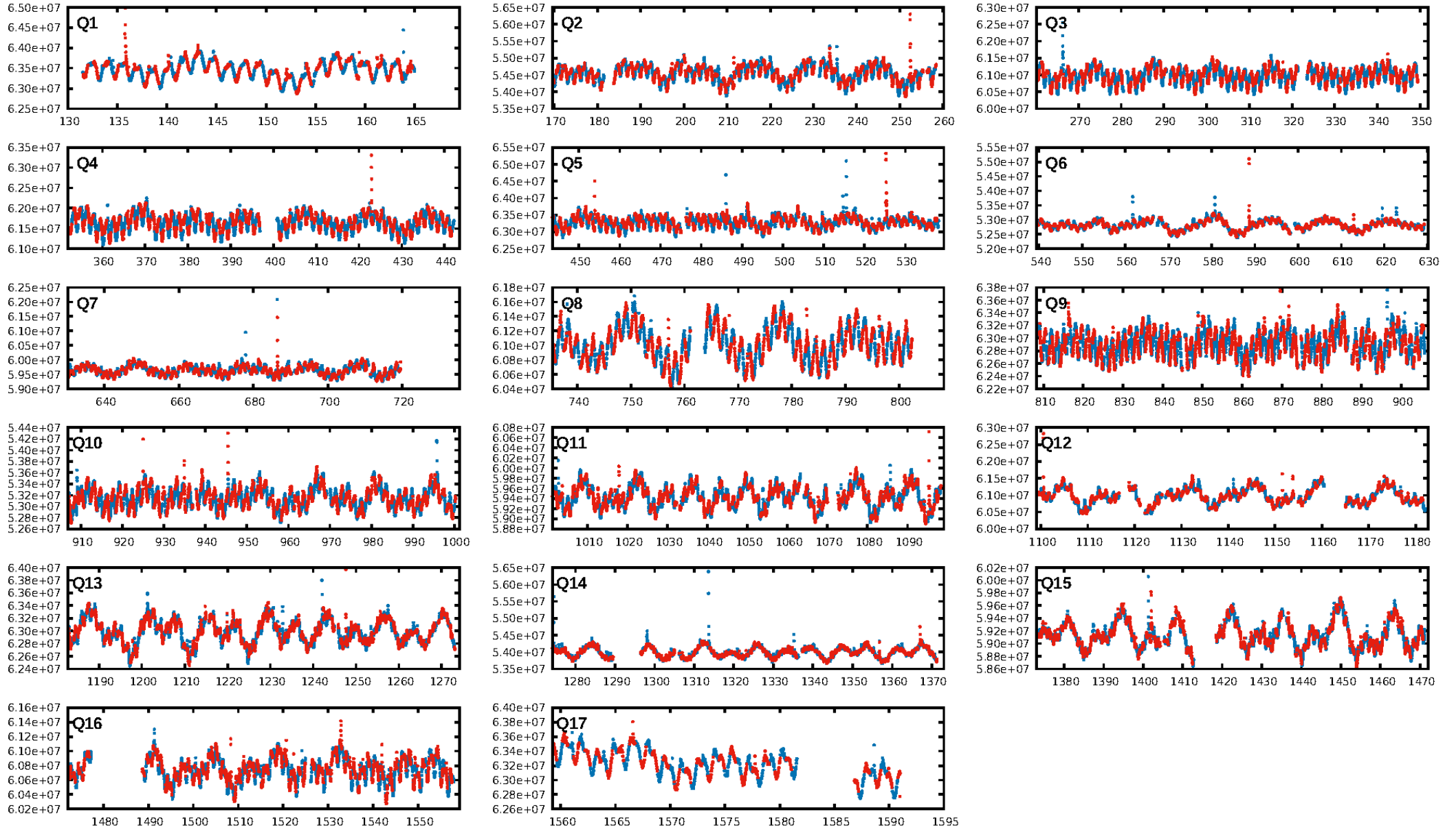
DV Fit Results:

Period = 1.02188 [0.00001] d
Epoch = 131.8116 [0.0027] BKJD
Rp/R* = 0.0105 [0.0021]
a/R* = 1.12 [0.19]
b = 0.89 [0.19]
Seff = 289.74 [57.53]
Teff = 1052 [52] K
Rp = 0.69 [0.17] Re
a = 0.0168 [0.0016] AU
Ag = 36.41 [15.71] [2.25 σ]
Teffp = 3995 [440] K [6.65 σ]

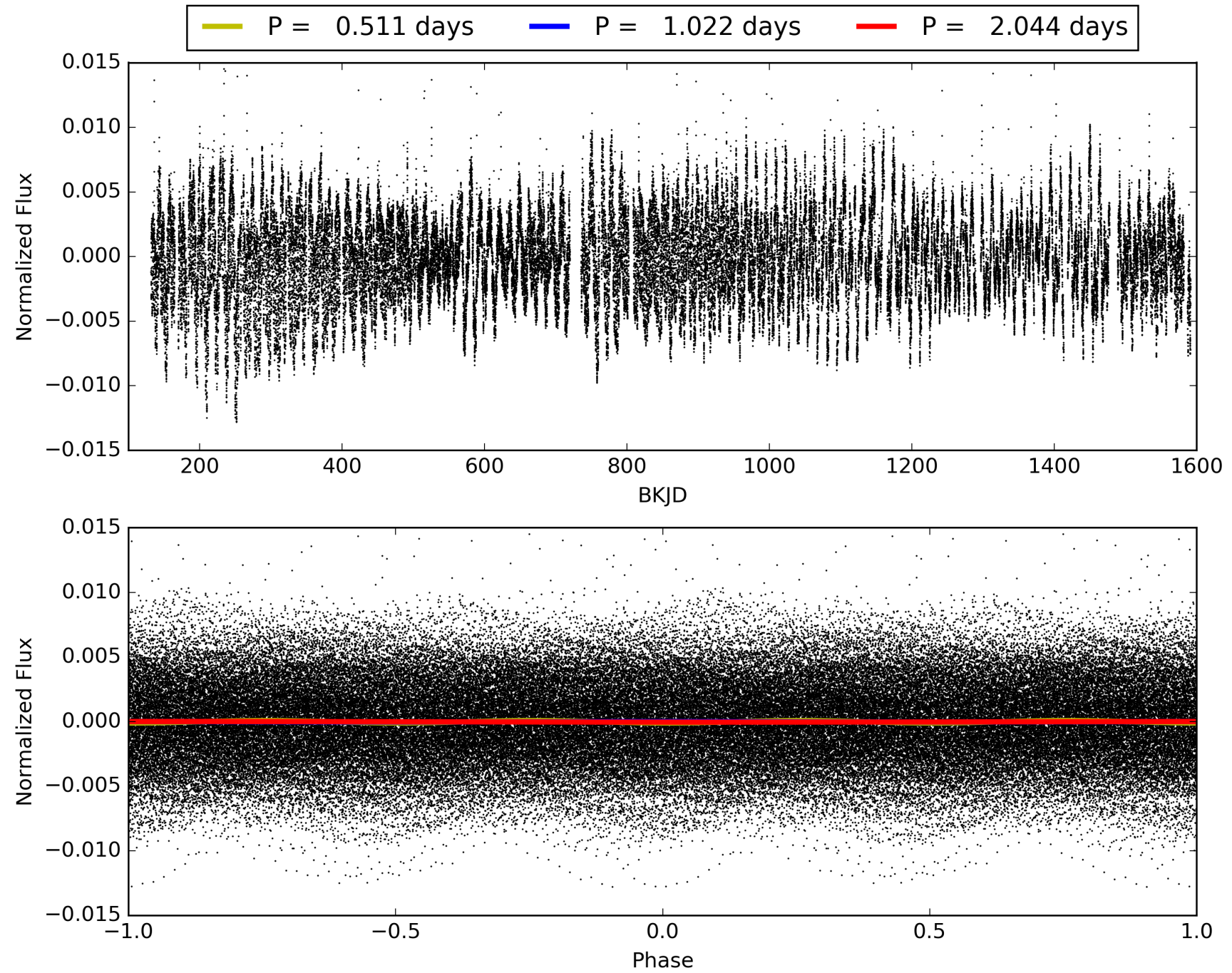
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [227.35 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1252/1252]
GhostDiagnostic-chr: 3.048
Centroid-sig: 19.1%
Centroid-so: 1.558 arcsec [4.06 σ]
OotOffset-rm: 0.196 arcsec [0.85 σ]
KicOffset-rm: 0.589 arcsec [2.36 σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 000892376-02, PDC Light Curves

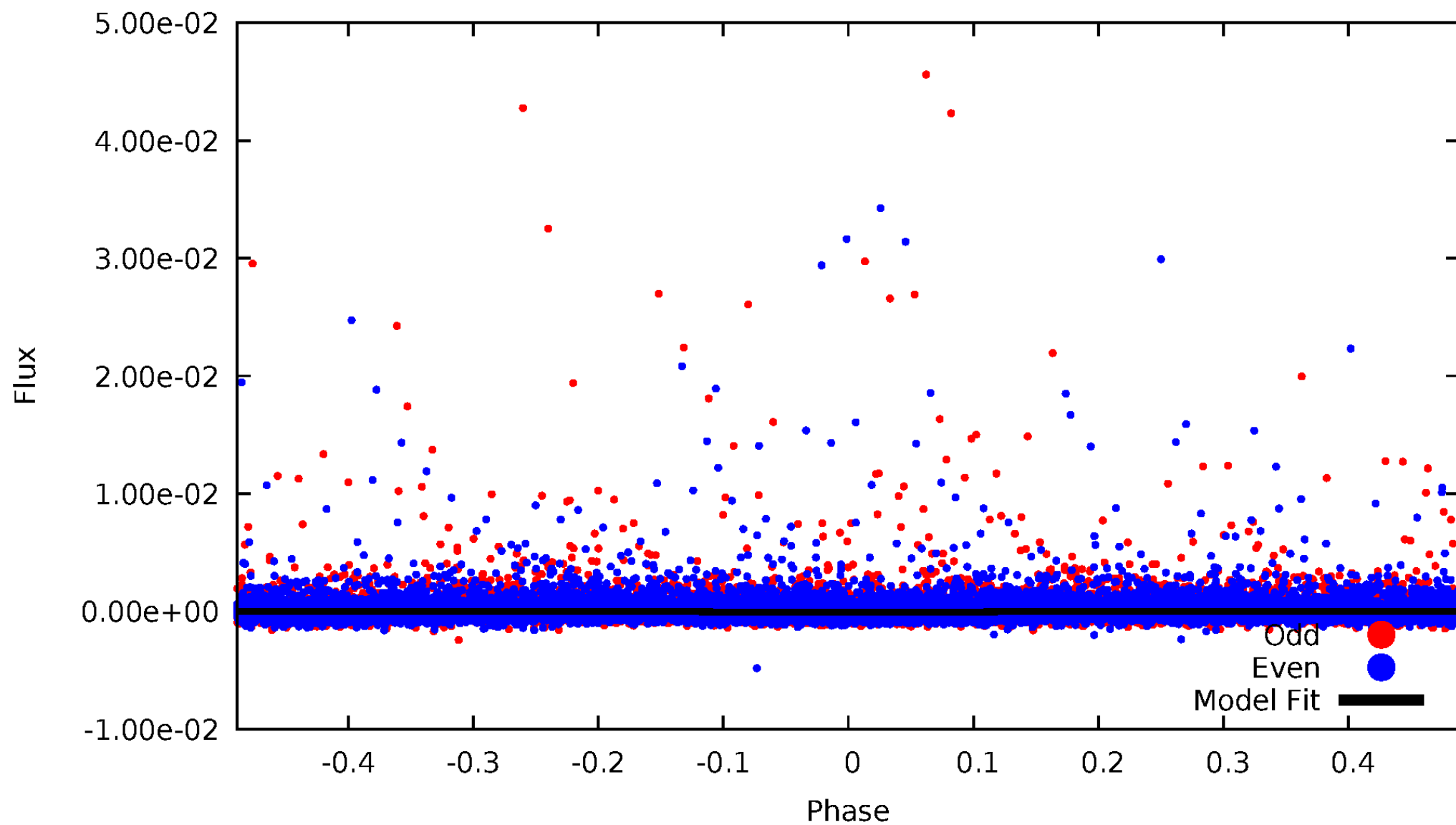


TCE 000892376-02



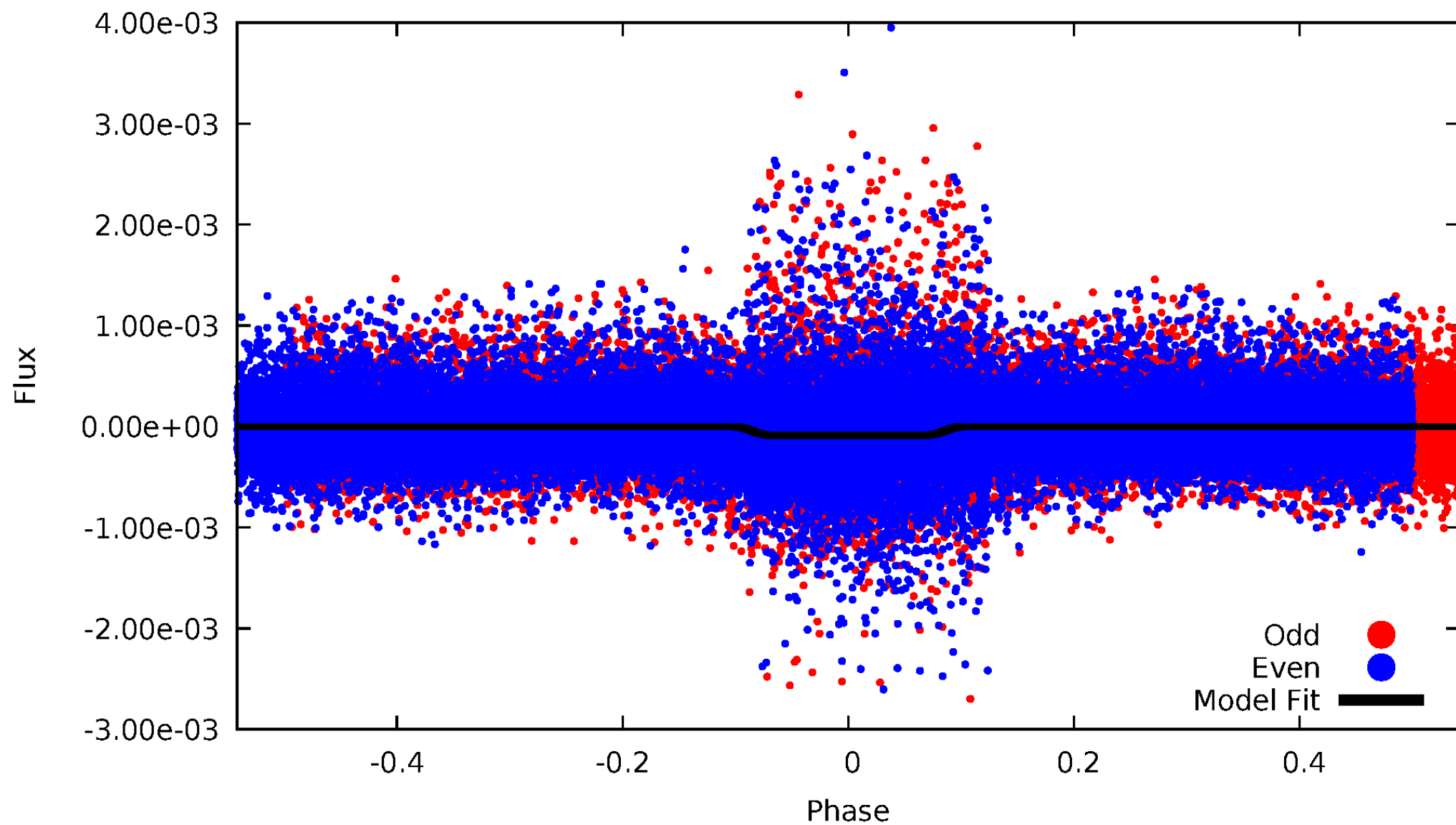
DV Odd/Even

TCE 000892376-02



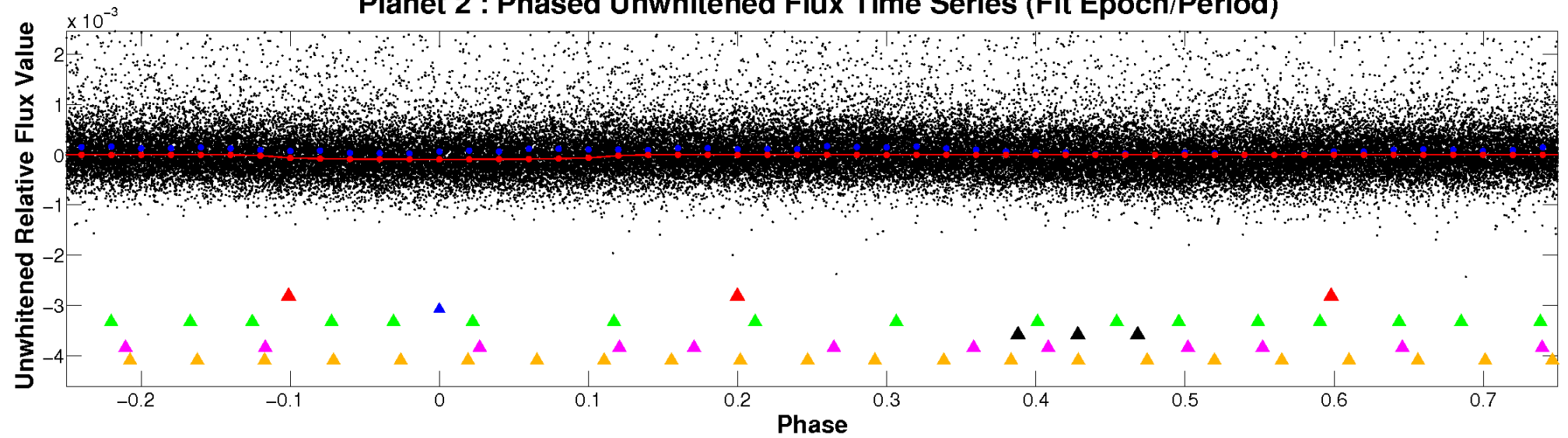
ALT Odd/Even

TCE 000892376-02

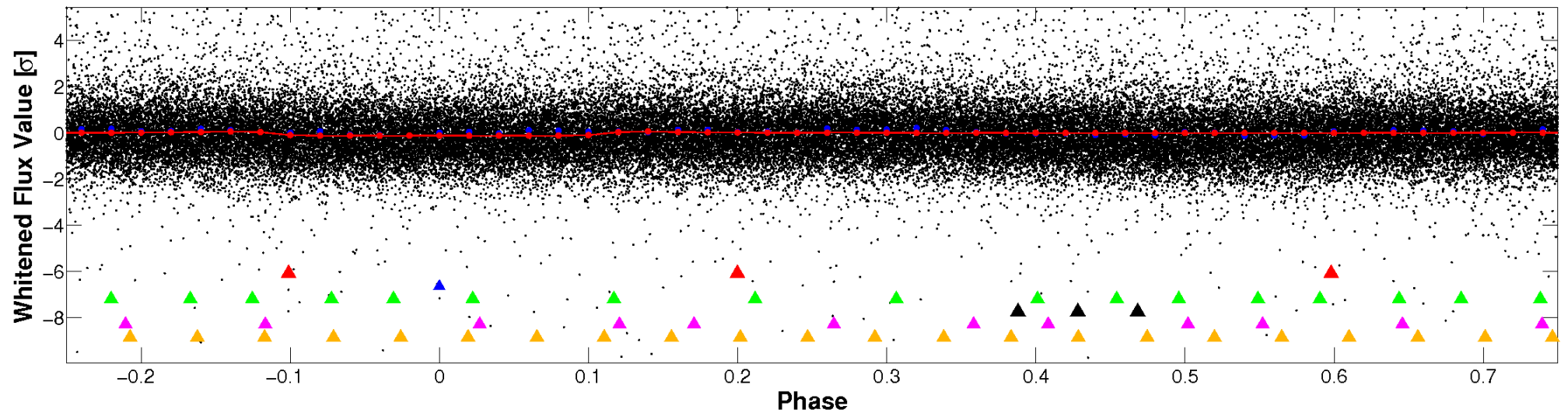


Non-Whitened Vs. Whitened Light Curve

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

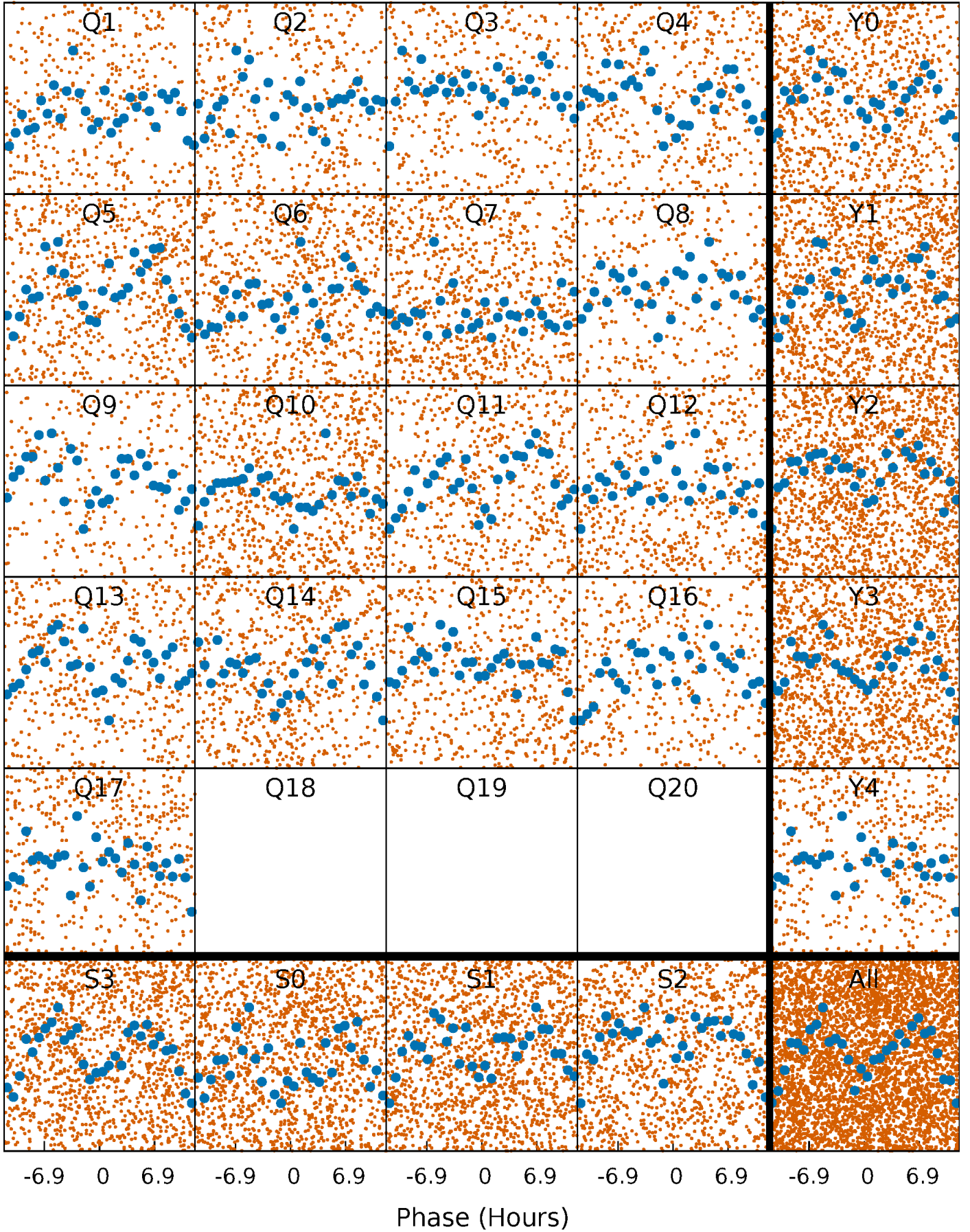


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



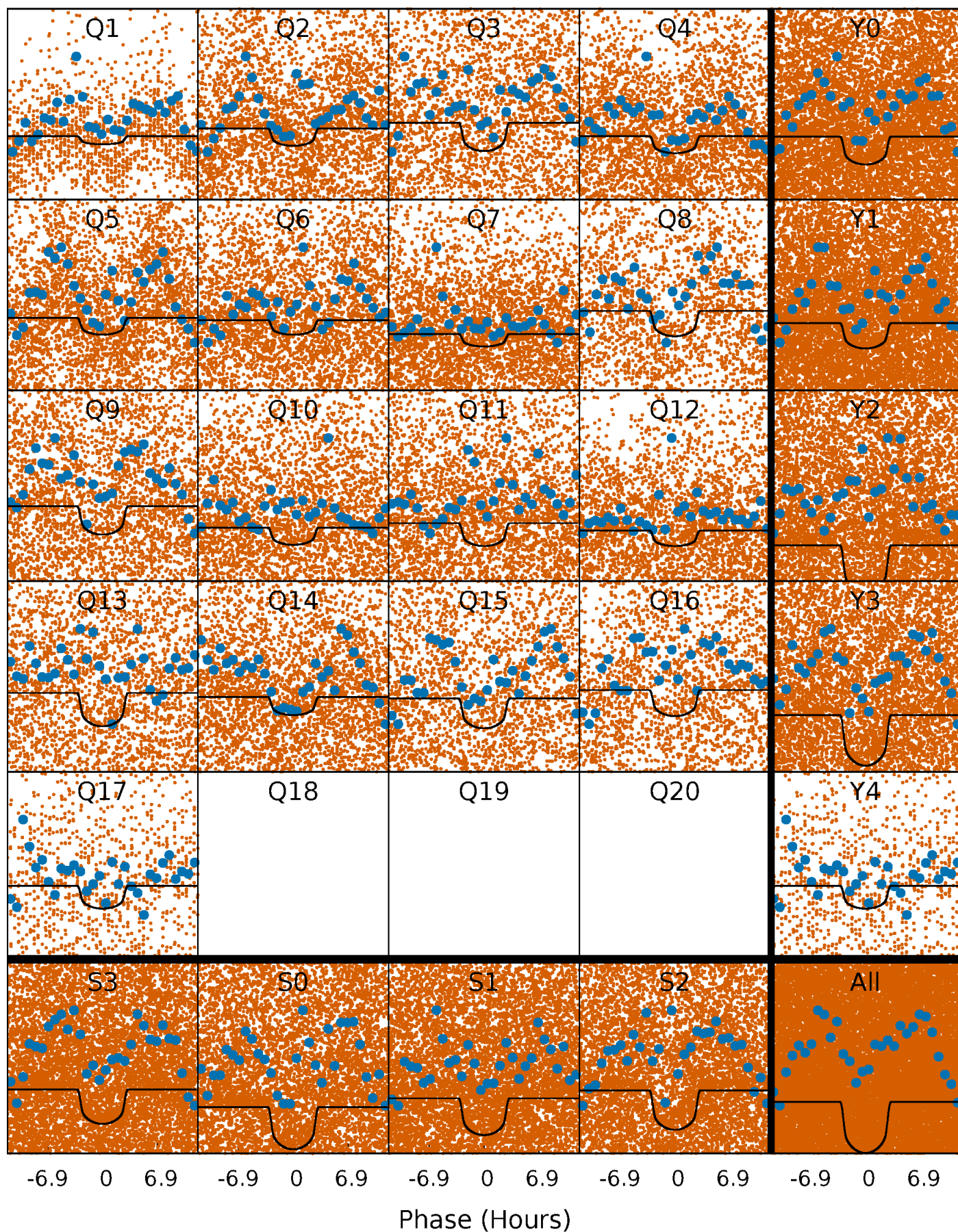
PDC Quarter-Phased Transit Curves

TCE 000892376-02 P= 1.021880 Days $T_0=131.811576$ (BKJD)



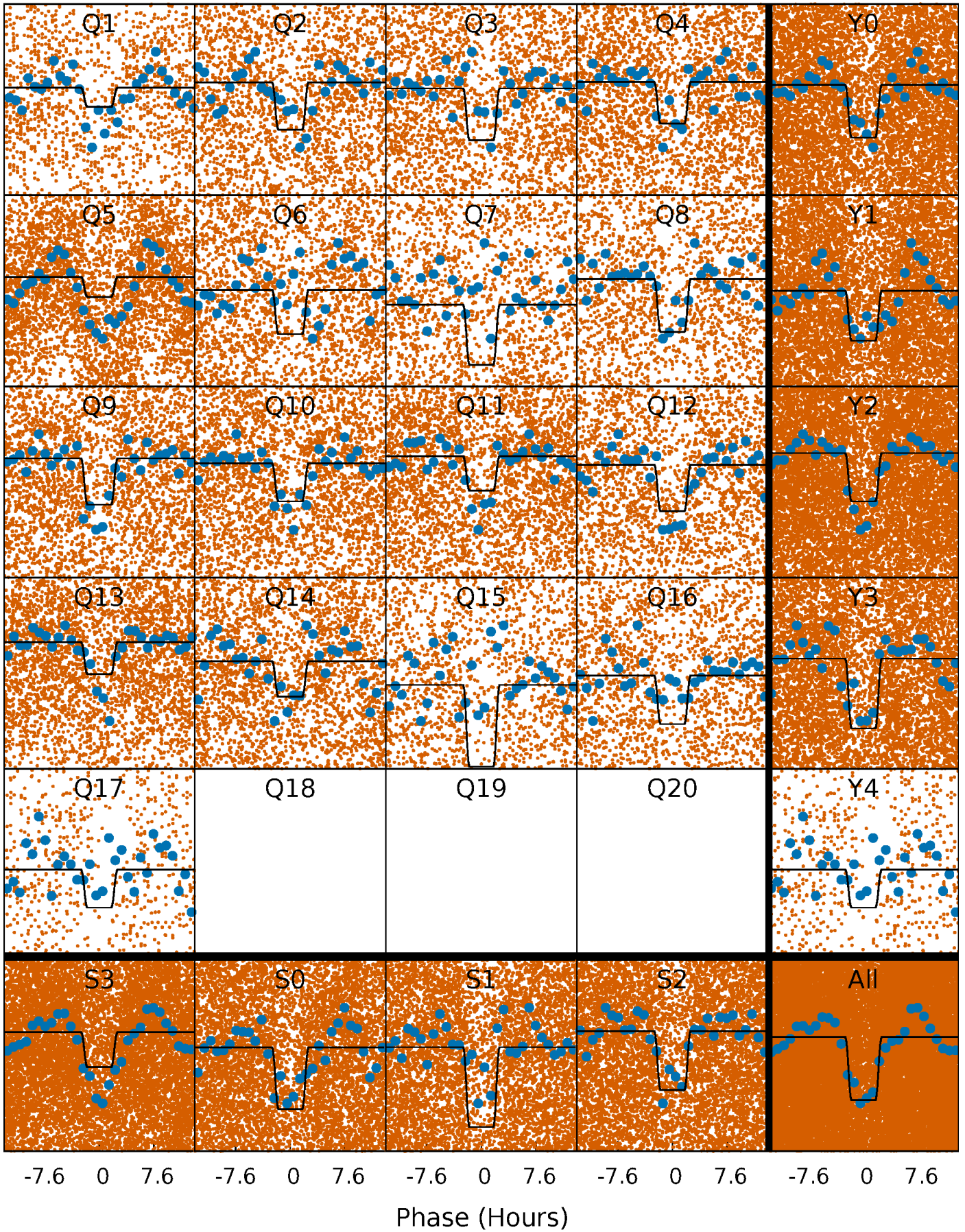
DV Quarter-Phased Transit Curves

TCE 000892376-02 P= 1.021880 Days $T_0=131.811576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

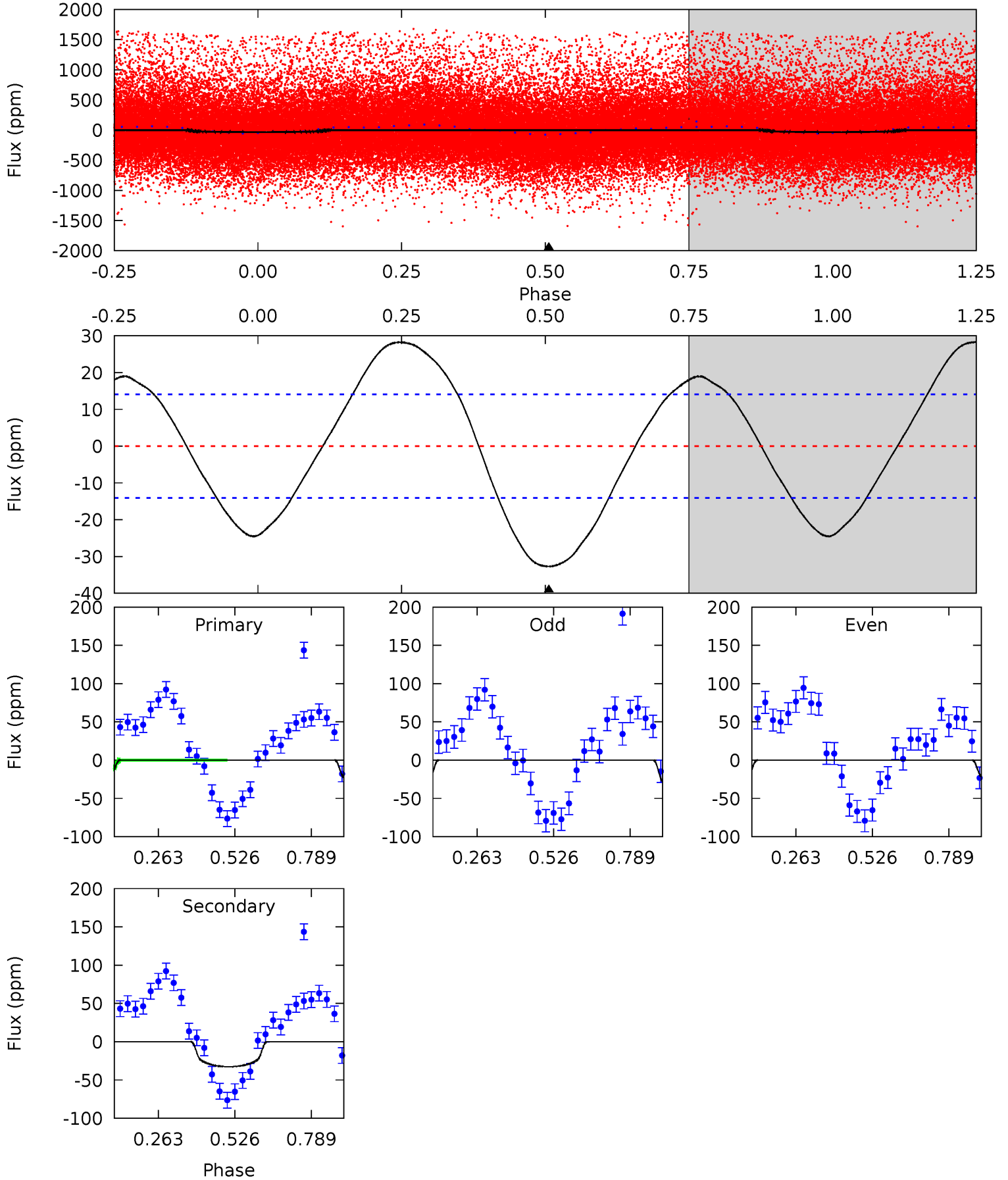
TCE 000892376-02 P= 1.021896 Days $T_0=131.801812$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-02, P = 1.021880 Days, E = 130.789696 Days

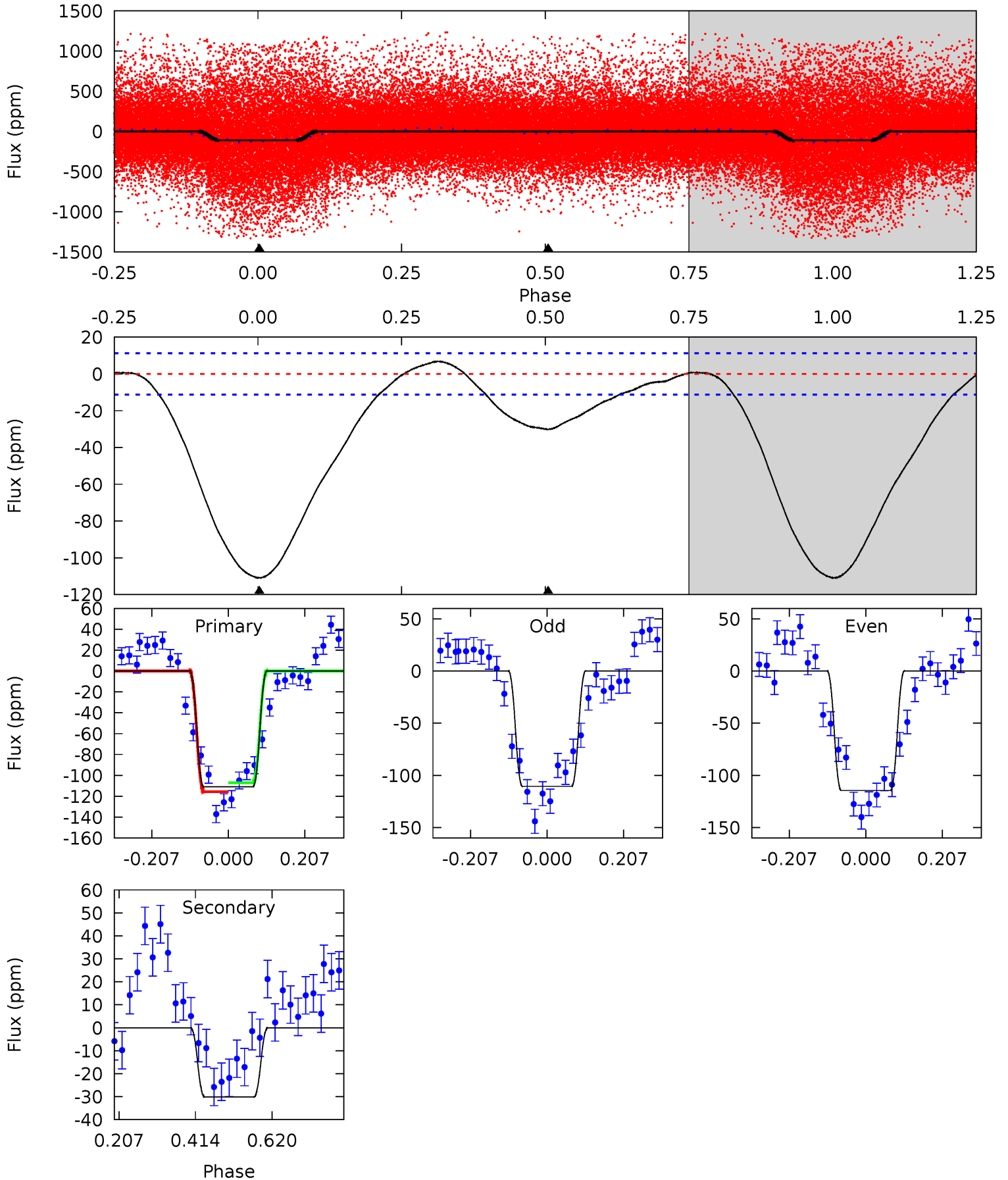
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	10.1	0	0	4.36	1.12	5.10	10.1	10.1	10.1	10.1	1.43	-2.71	0.46	2.51



Alt Model-Shift Uniqueness Test

000892376-02, P = 1.021896 Days, E = 130.779916 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.5	11.8	0	0	4.41	1.26	1.50	43.5	43.5	11.8	11.8	0.78	1.09	0.06	1.66



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 3	$0.69^{+0.15}_{-0.14}$	1455^{+56}_{-62}	3233^{+270}_{-217}	11^{+7}_{-3}
Alt.	-30 ± 3	$0.62^{+0.15}_{-0.14}$	1455^{+57}_{-61}	3301^{+316}_{-236}	12^{+9}_{-4}

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

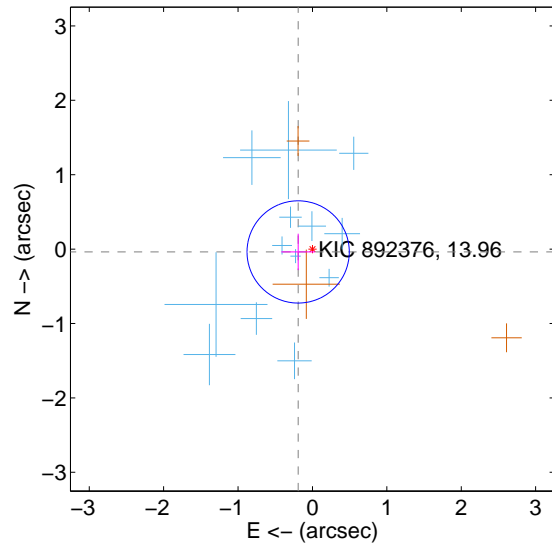
Supplemental centroid analysis for 000892376-02. Kepler magnitude: 13.96. Transit SNR 13.64

There are 13 quarters with good PRF difference image offsets

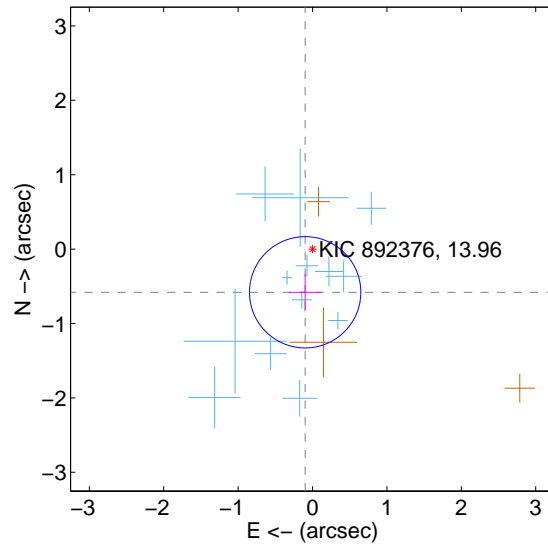
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.196 ± 0.229	0.85	0.192 ± 0.227	-0.038 ± 0.245
PRF-fit source offset from KIC position	0.589 ± 0.249	2.36	0.099 ± 0.221	-0.581 ± 0.251
photometric centroid source offset	1.56 ± 0.38	4.06	-0.13 ± 0.41	-1.55 ± 0.38

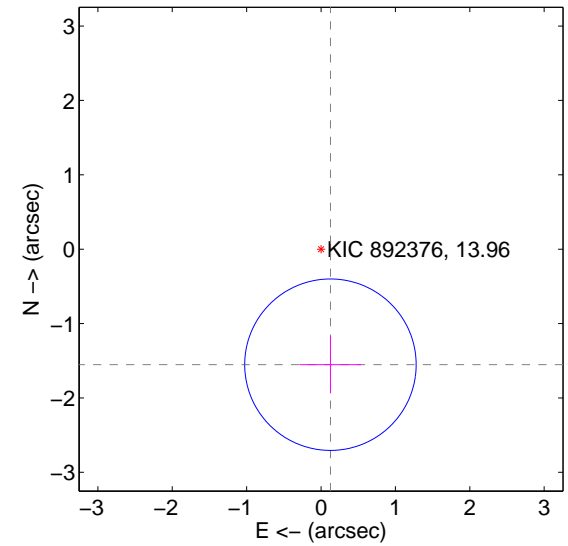
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

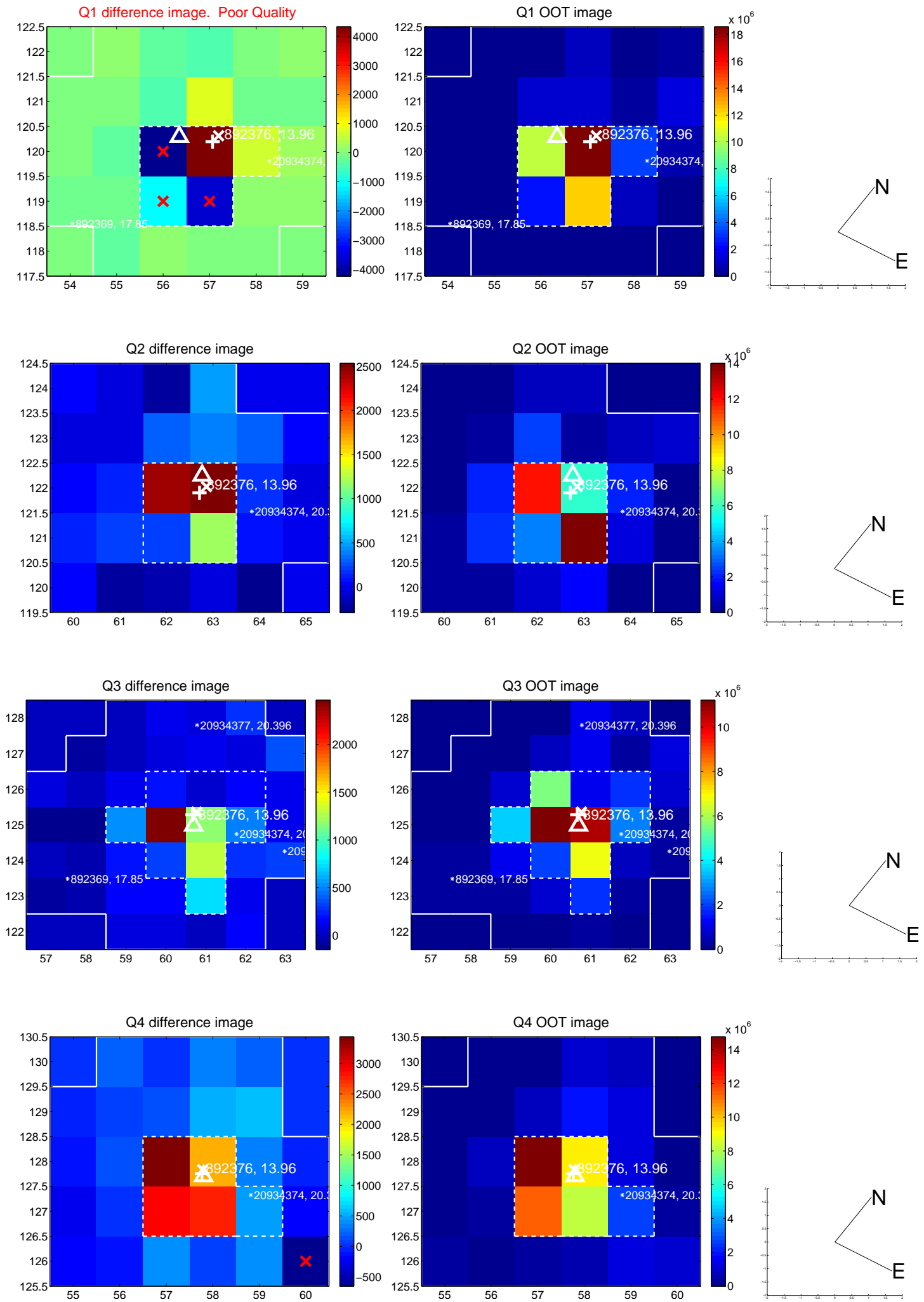


offset from photometric centroids

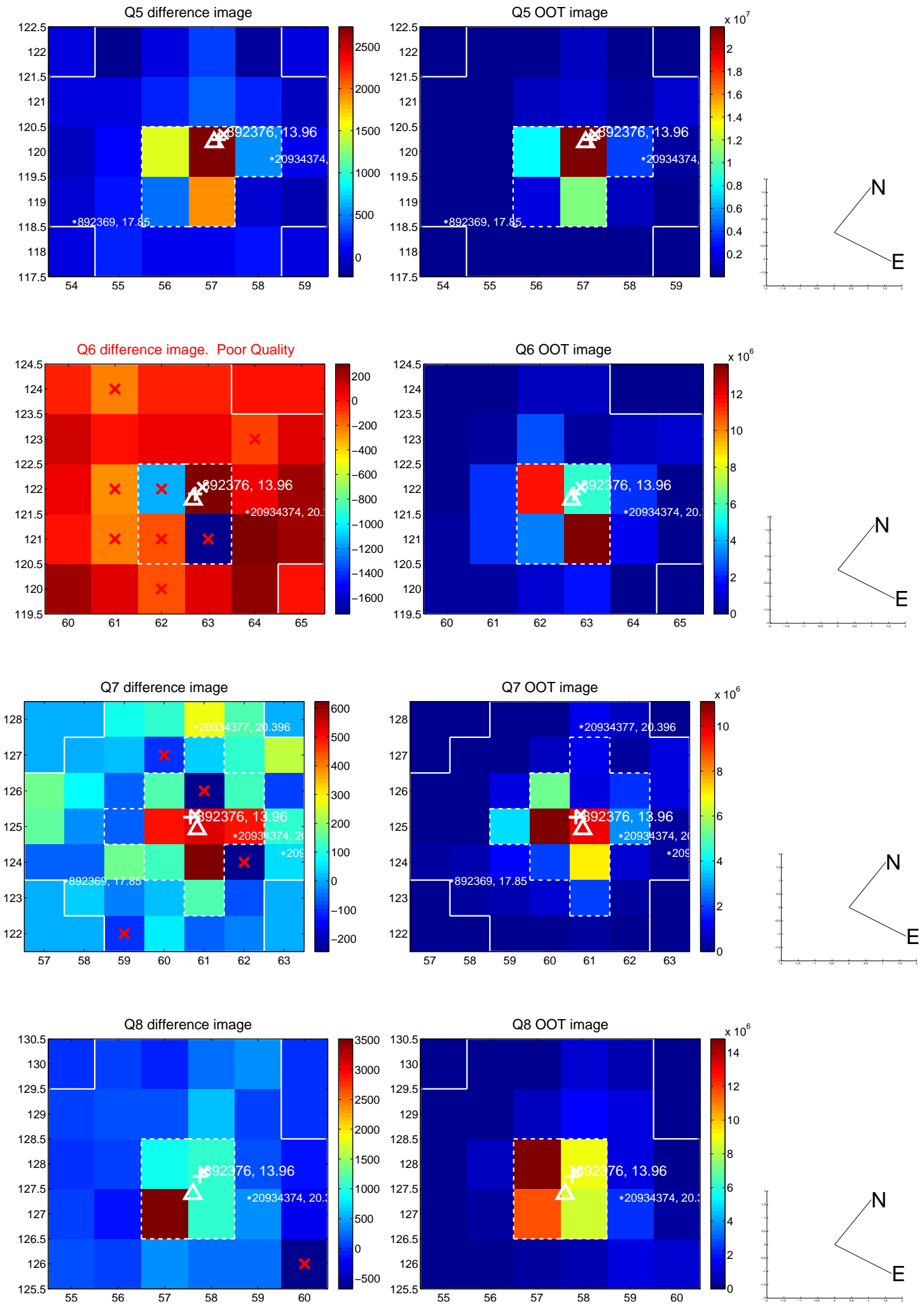


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

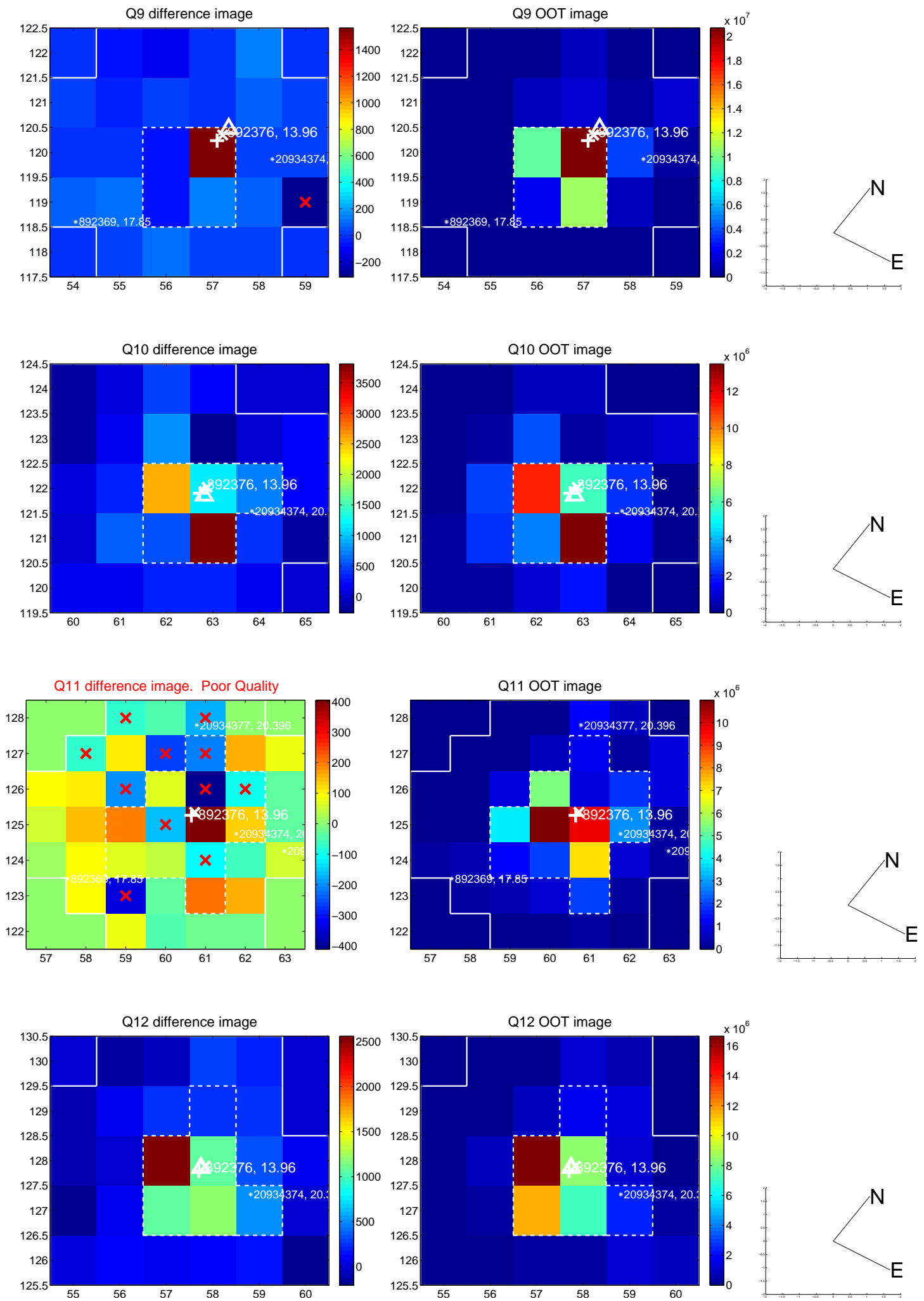
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



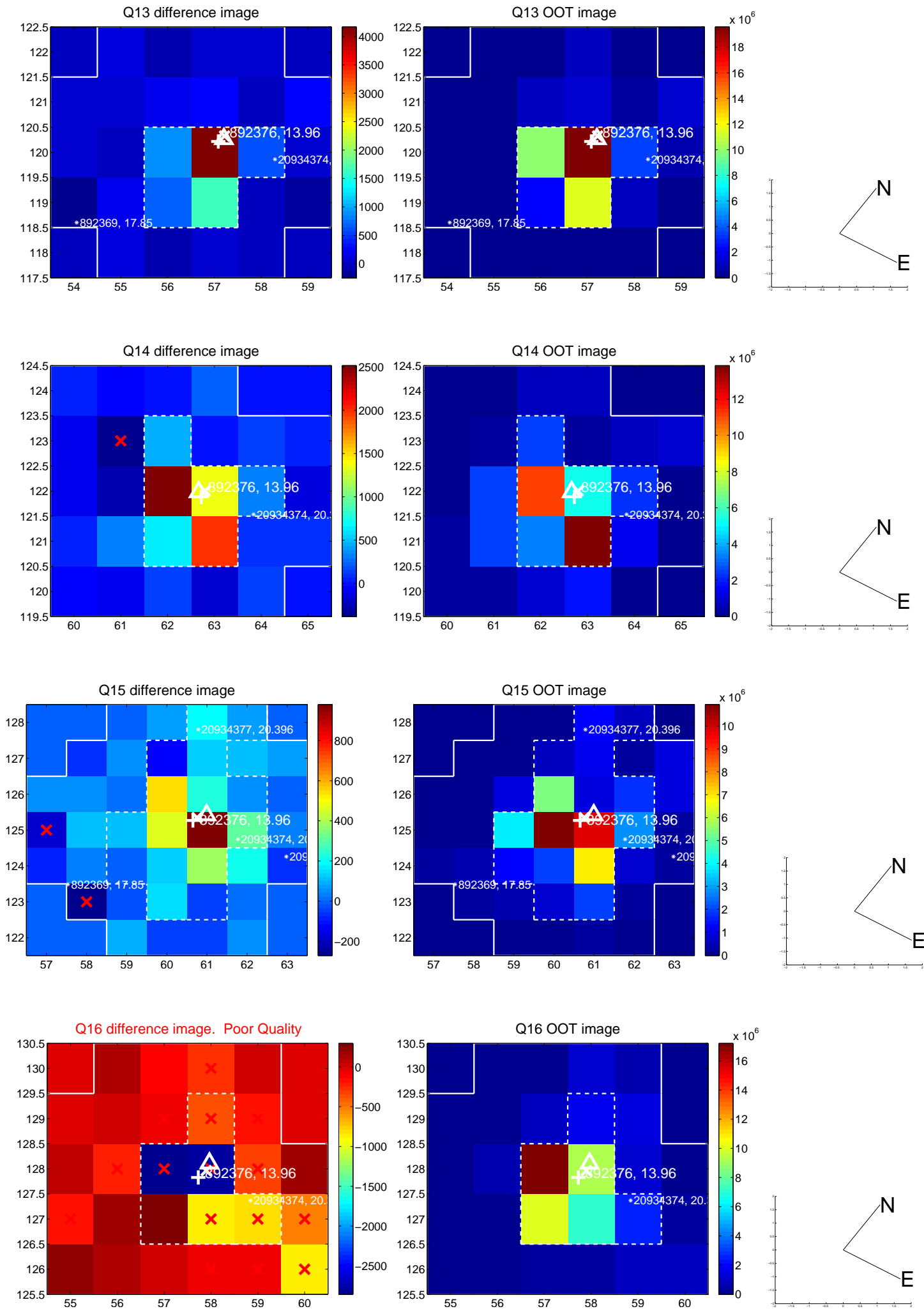
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



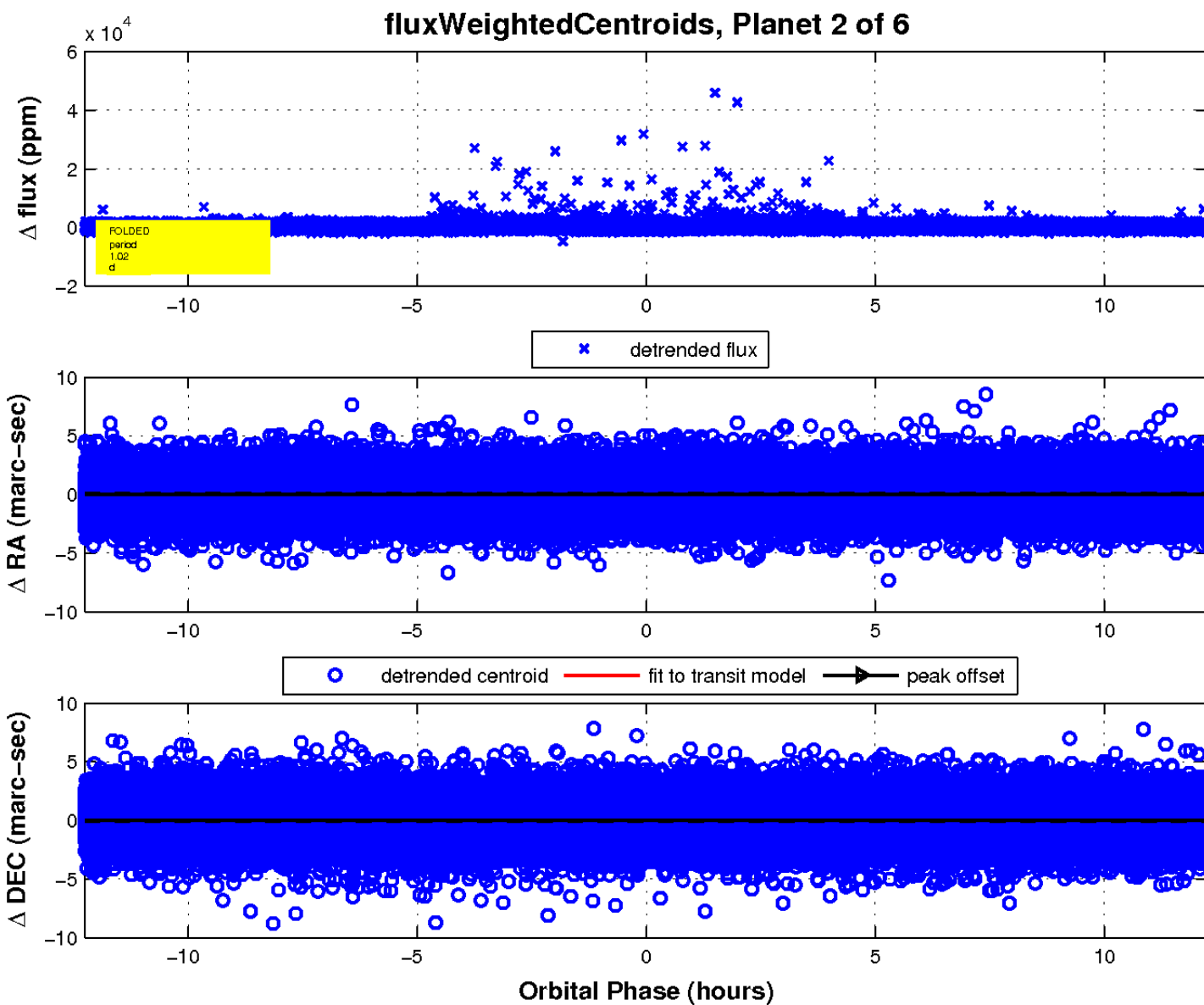
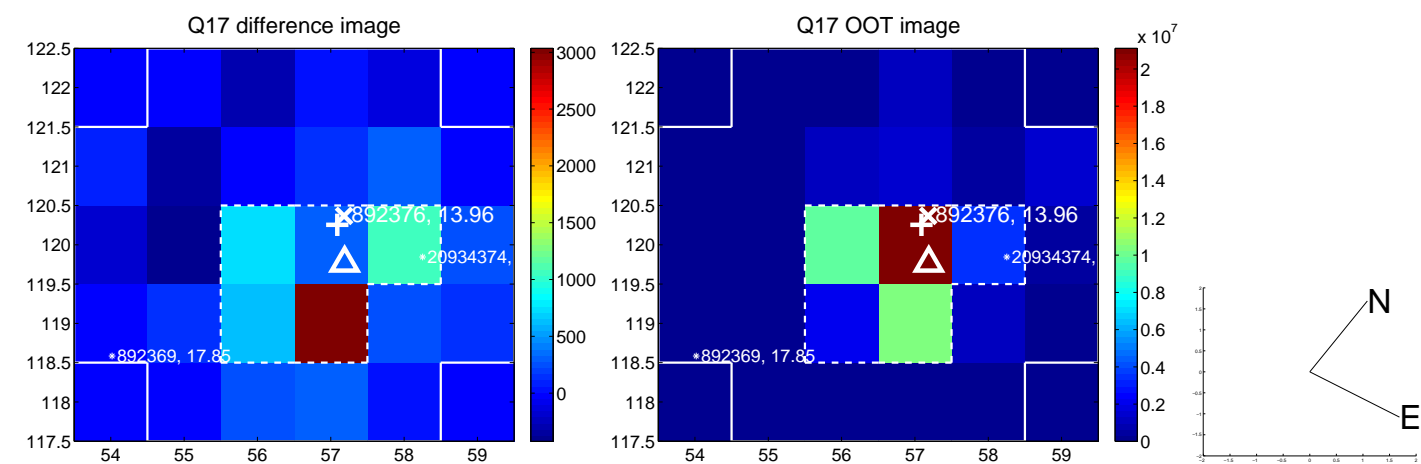
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

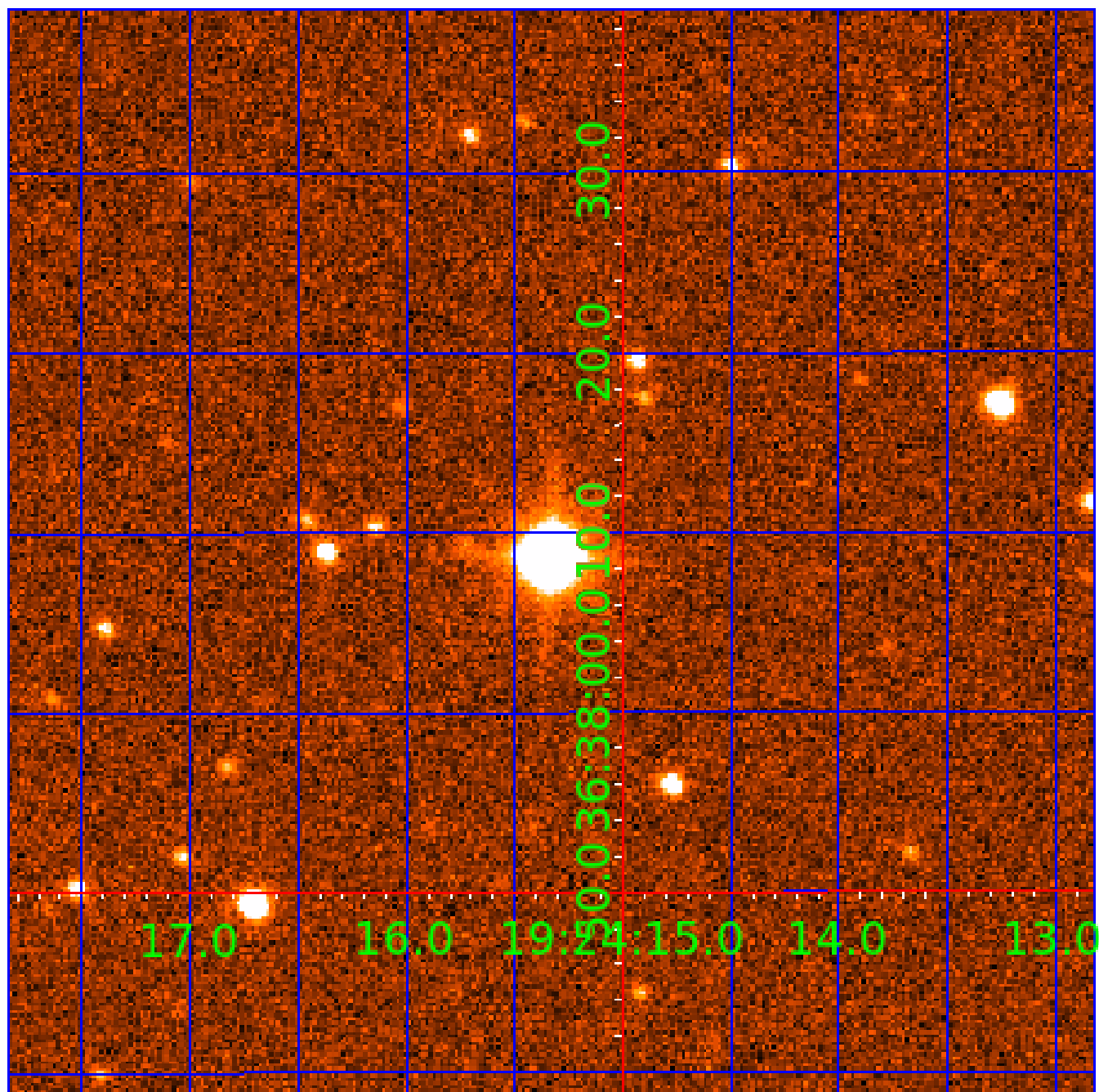


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000892376

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})
000892376-01	OBS	No	607.710905	207.634885	1049.9	12.577	12.4	6.4	0.60	3973	2.00	0.06
000892376-02	OBS	No	1.021880	131.811576	91.2	5.994	9.8	13.6	0.60	3973	0.69	289.74
000892376-03	OBS	No	85.741133	182.874152	839.5	12.500	21.6	-1.0	0.60	3973	1.70	0.79
000892376-04	OBS	No	405.727244	498.041022	1490.5	4.279	13.1	9.3	0.60	3973	2.31	0.10
000892376-05	OBS	No	126.080798	201.665496	787.6	12.641	11.3	7.4	0.60	3973	1.76	0.47
000892376-06	OBS	No	64.517819	188.638291	675.4	3.000	10.6	-1.0	0.60	3973	1.52	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000892376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

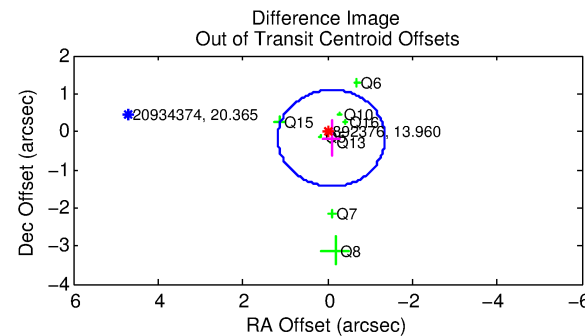
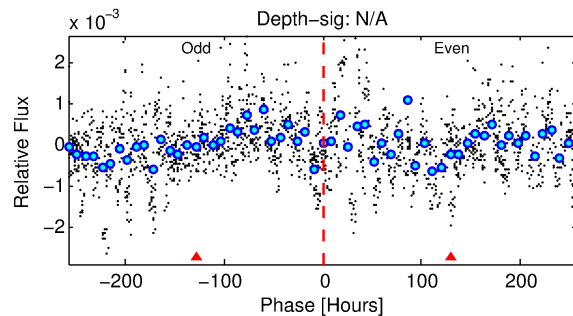
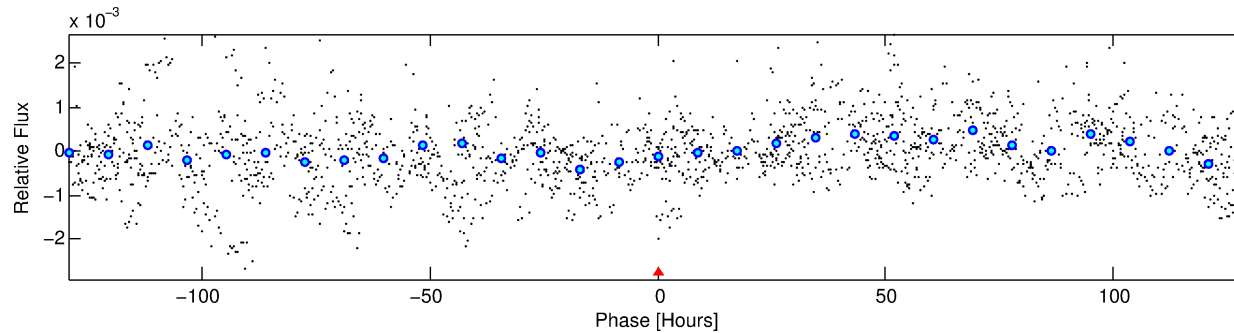
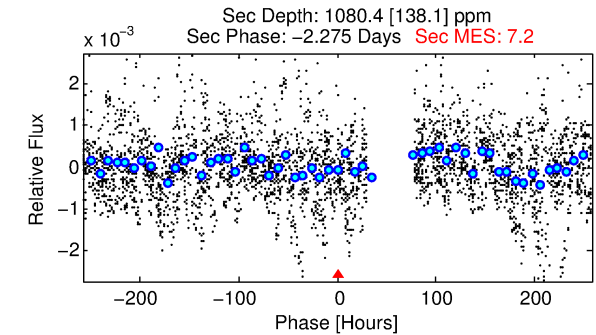
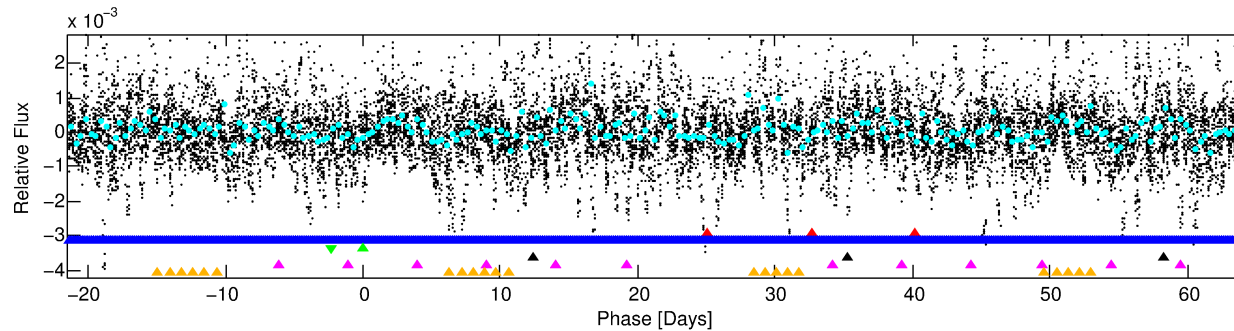
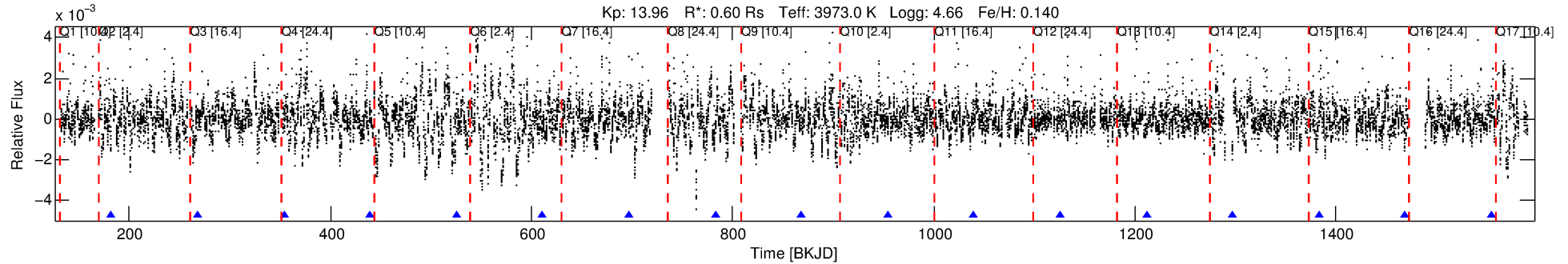
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-03

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 3 of 6 Period: 85.741 d



TPS TCE Results:

Period = 85.74113 d
Epoch = 182.8742 BKJD

DV fit results are unavailable

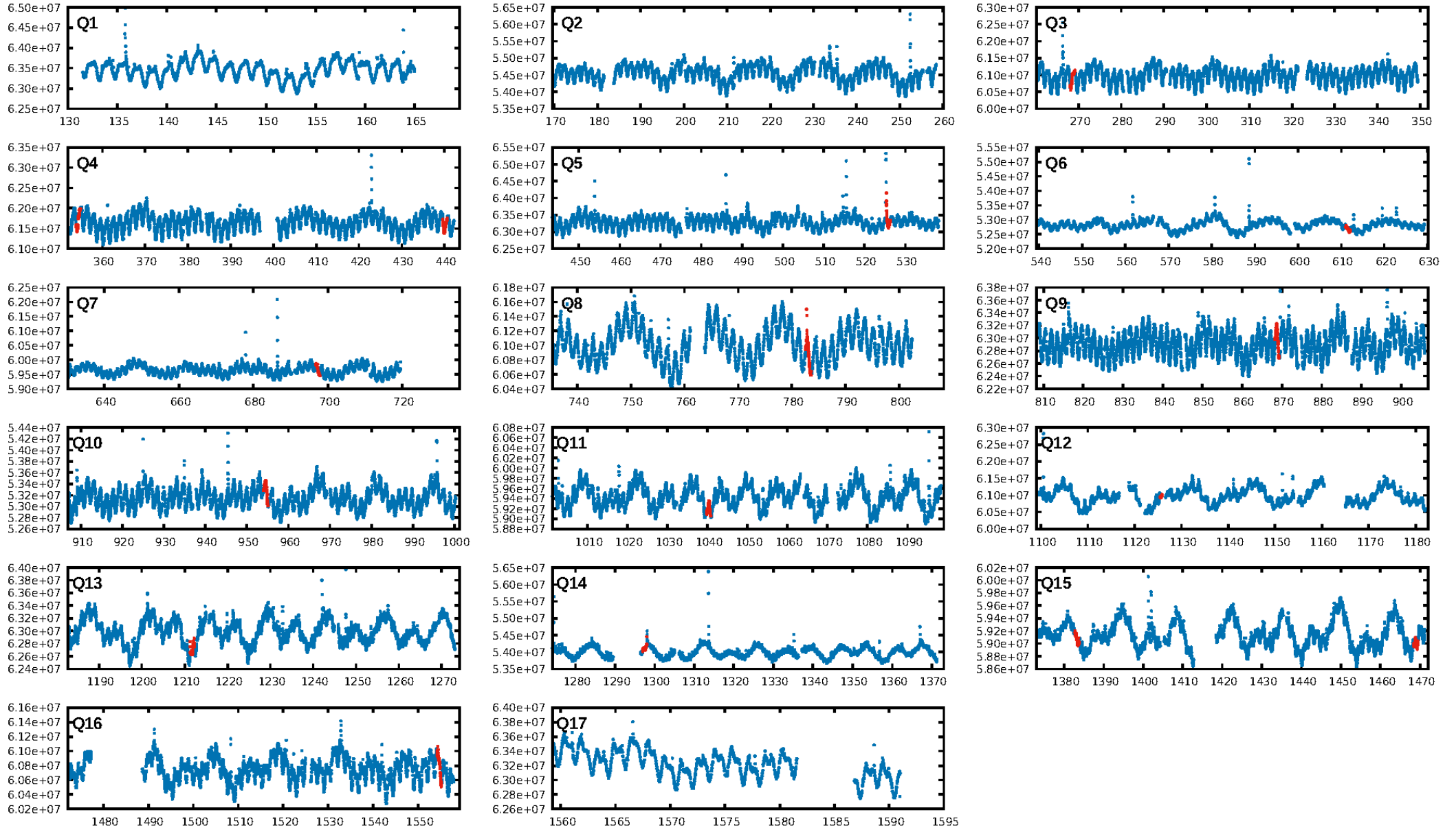
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [39.62σ]
LongPeriod-sig: 100.0% [54.46σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 2.344
Centroid-sig: 0.0%
Centroid-so: 1.755 arcsec [2.77σ]
OotOffset-rm: 0.190 arcsec [0.45σ]
KicOffset-rm: 0.854 arcsec [2.01σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.00 [0/9]

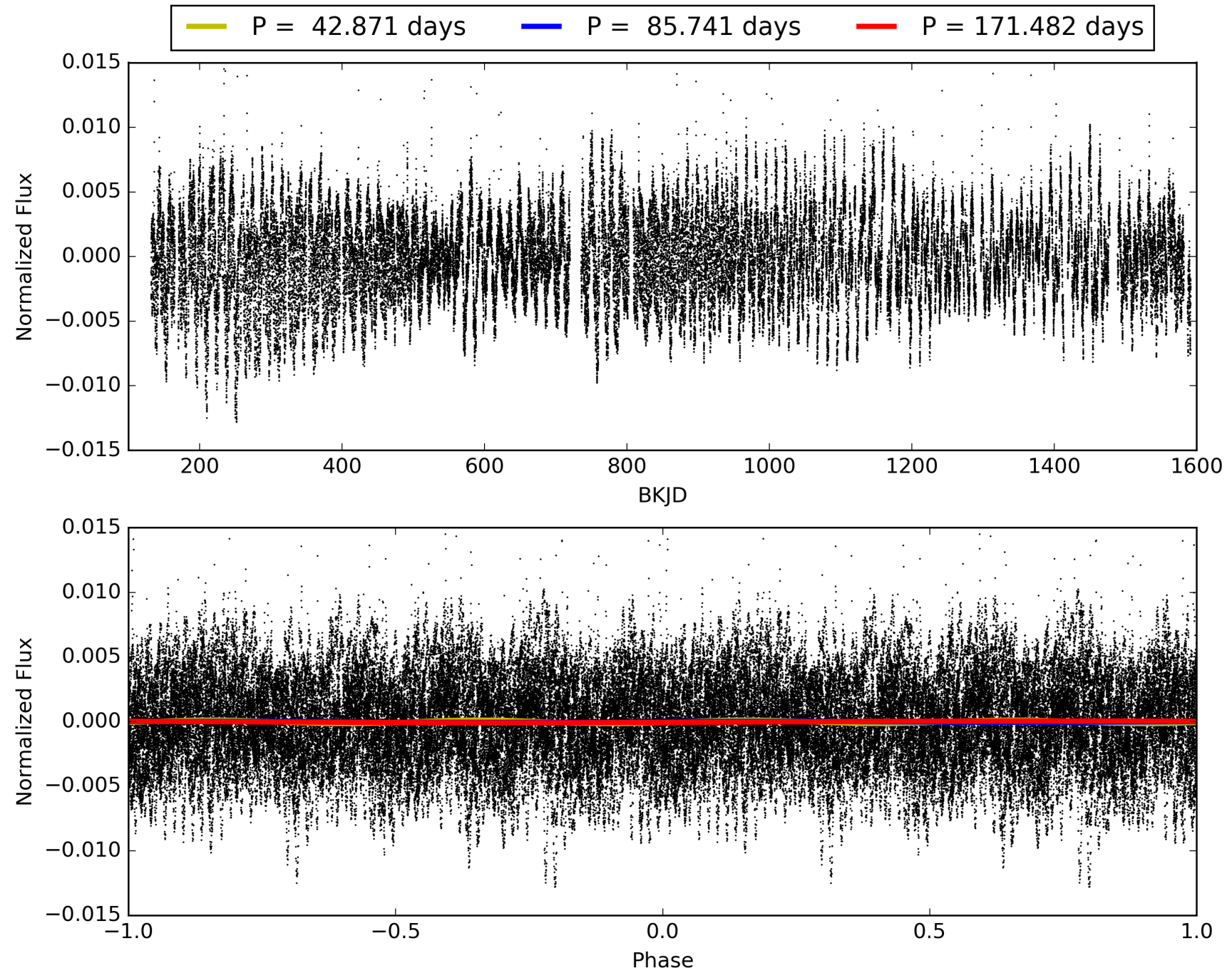
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:47:10 Z

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

TCE 000892376-03, PDC Light Curves

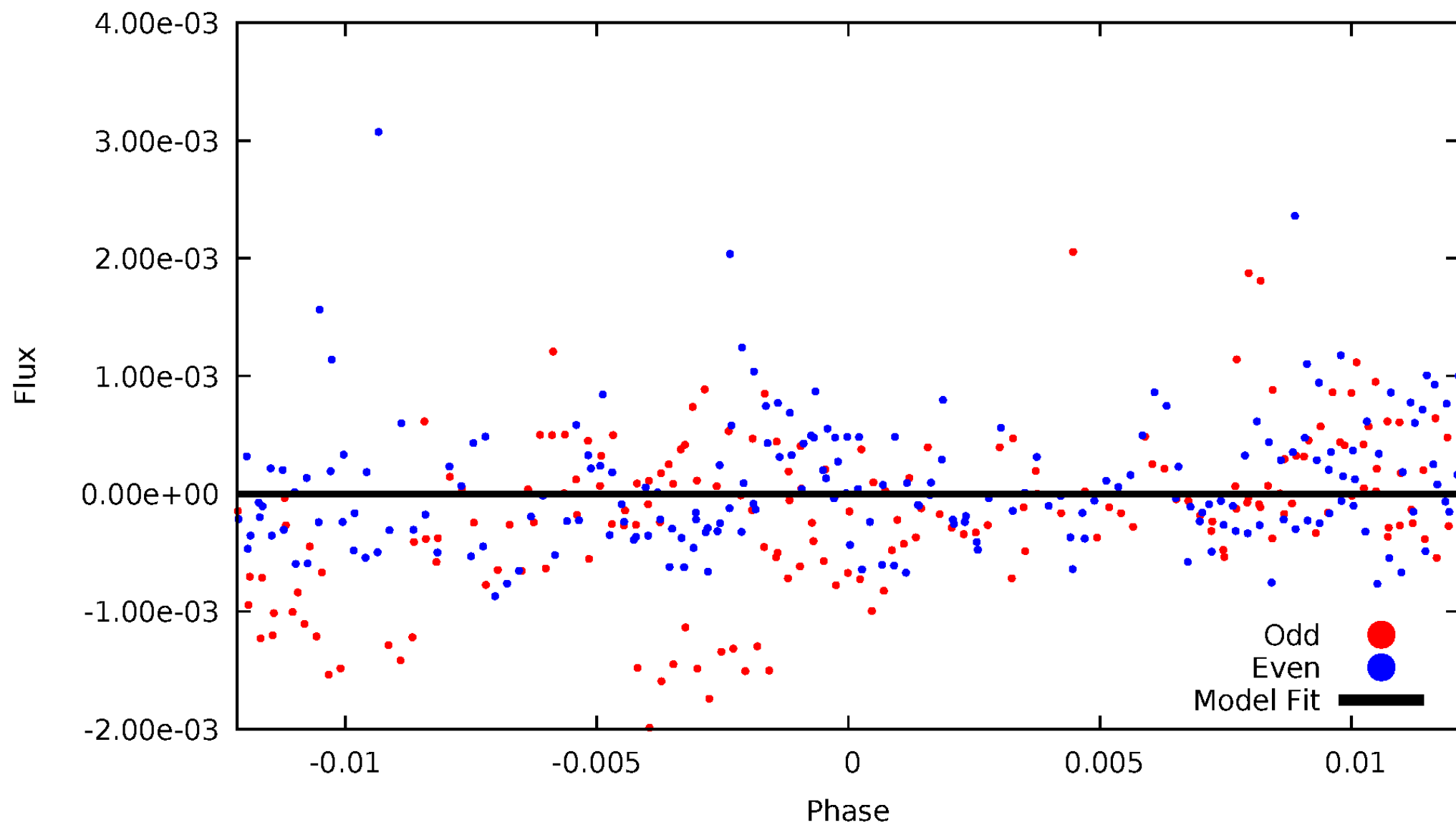


TCE 000892376-03



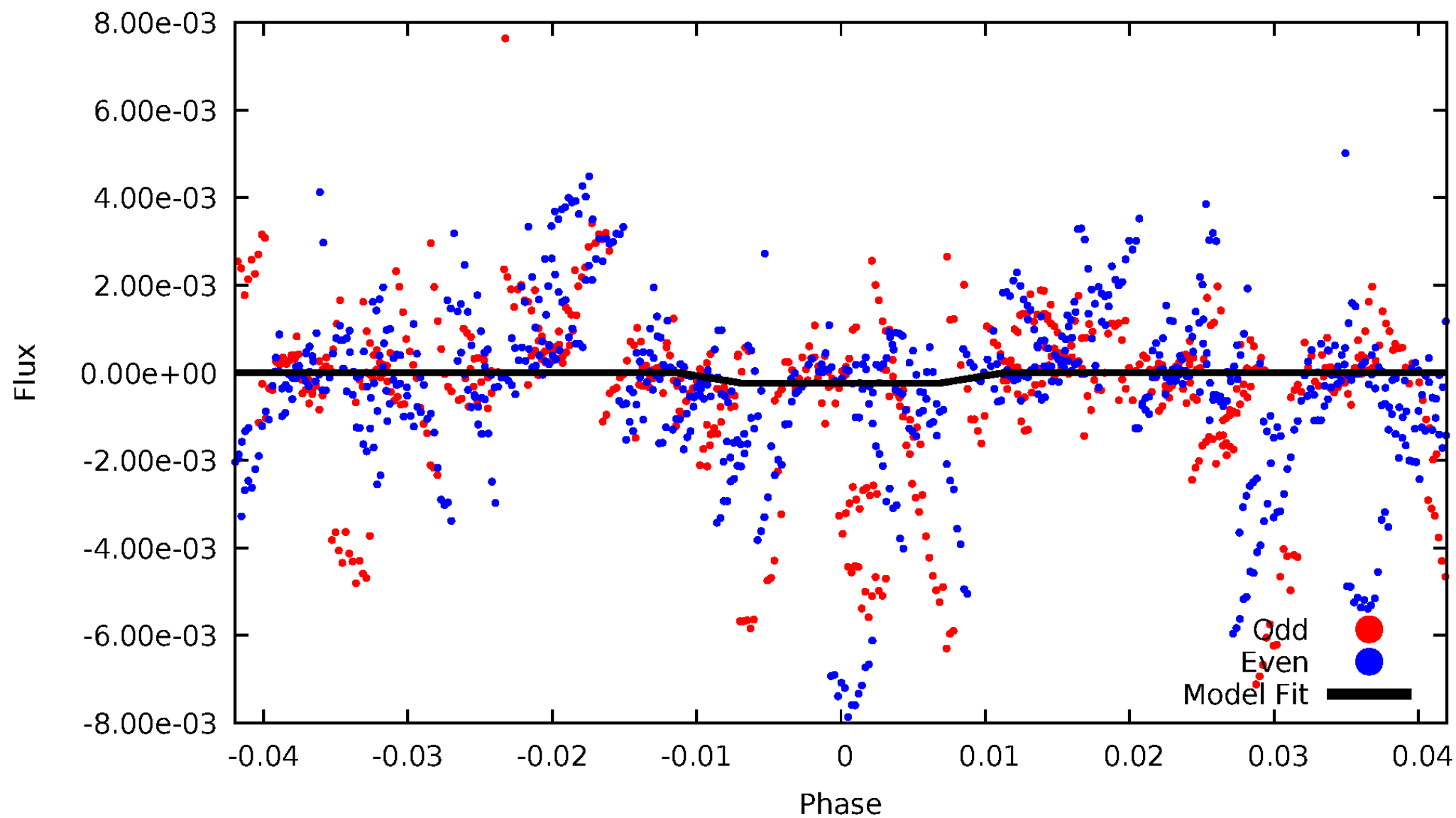
DV Odd/Even

TCE 000892376-03

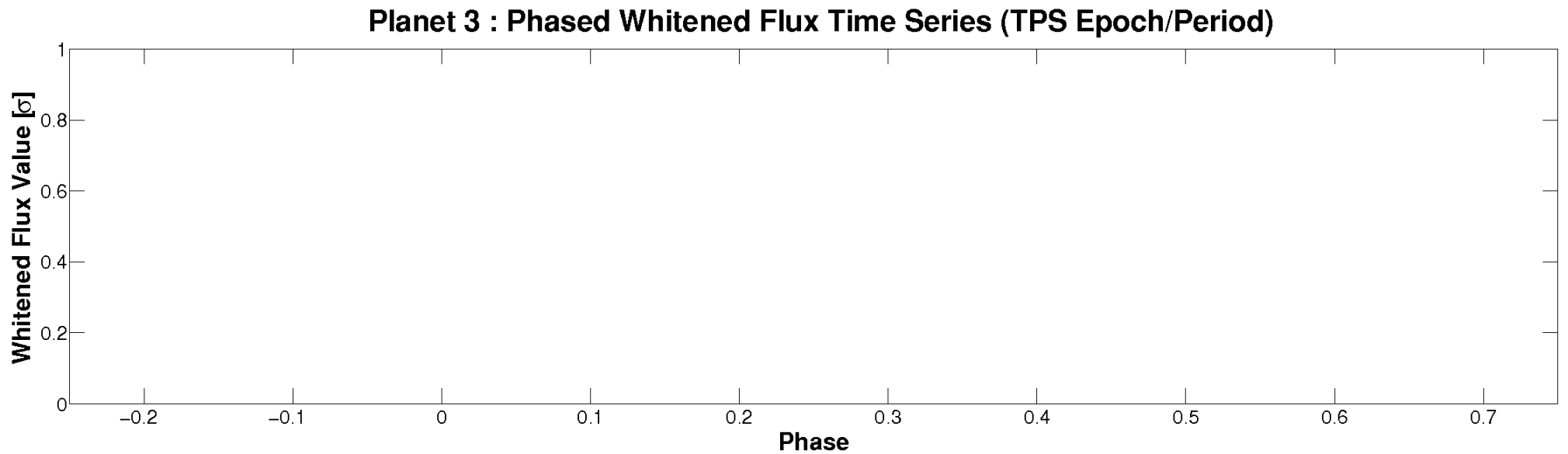
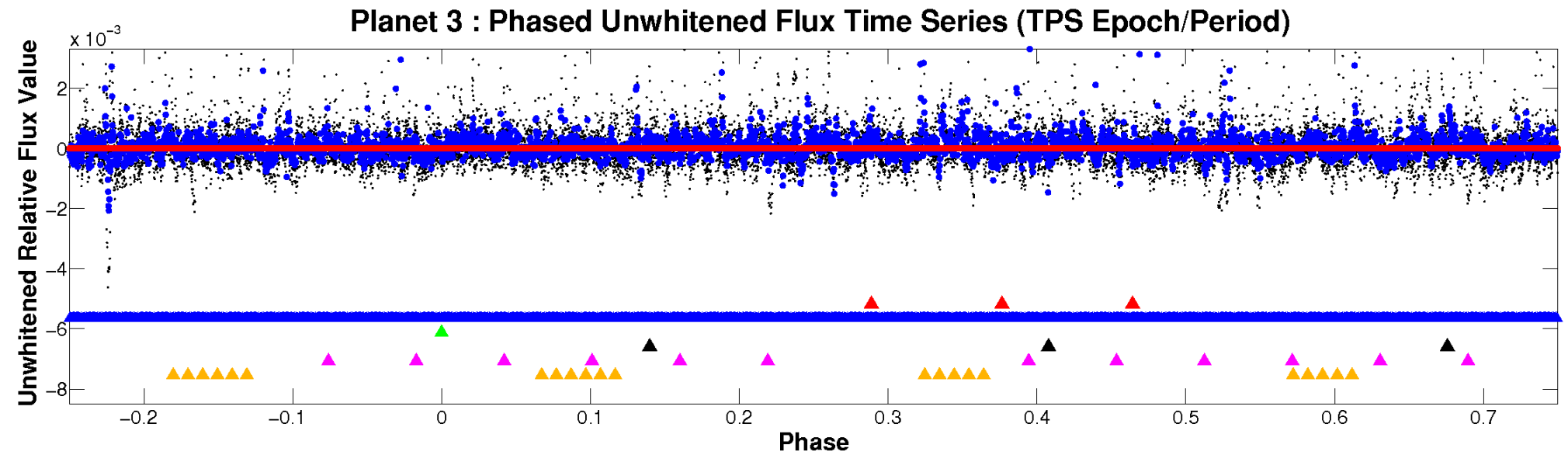


ALT Odd/Even

TCE 000892376-03

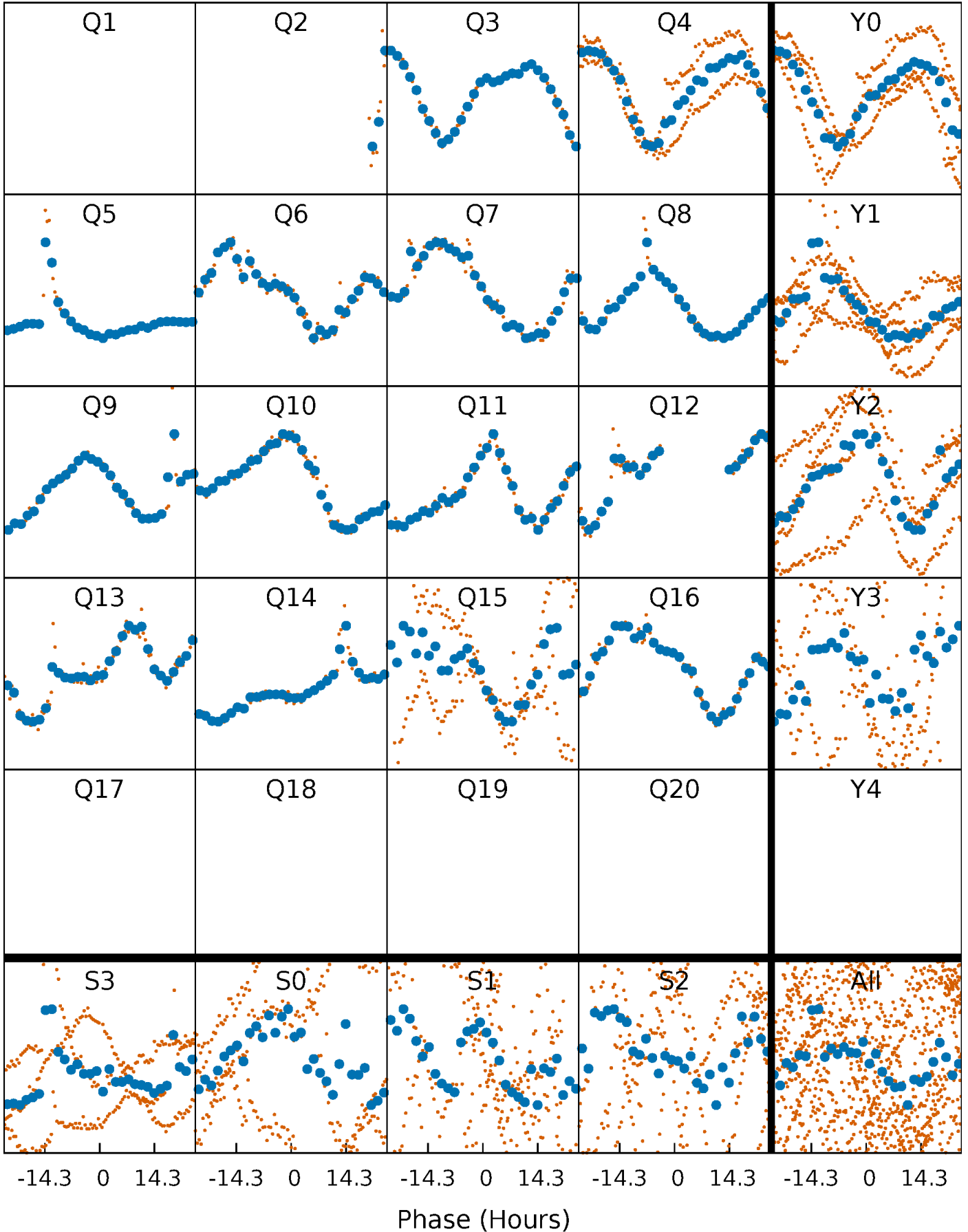


Non-Whitened Vs. Whitened Light Curve



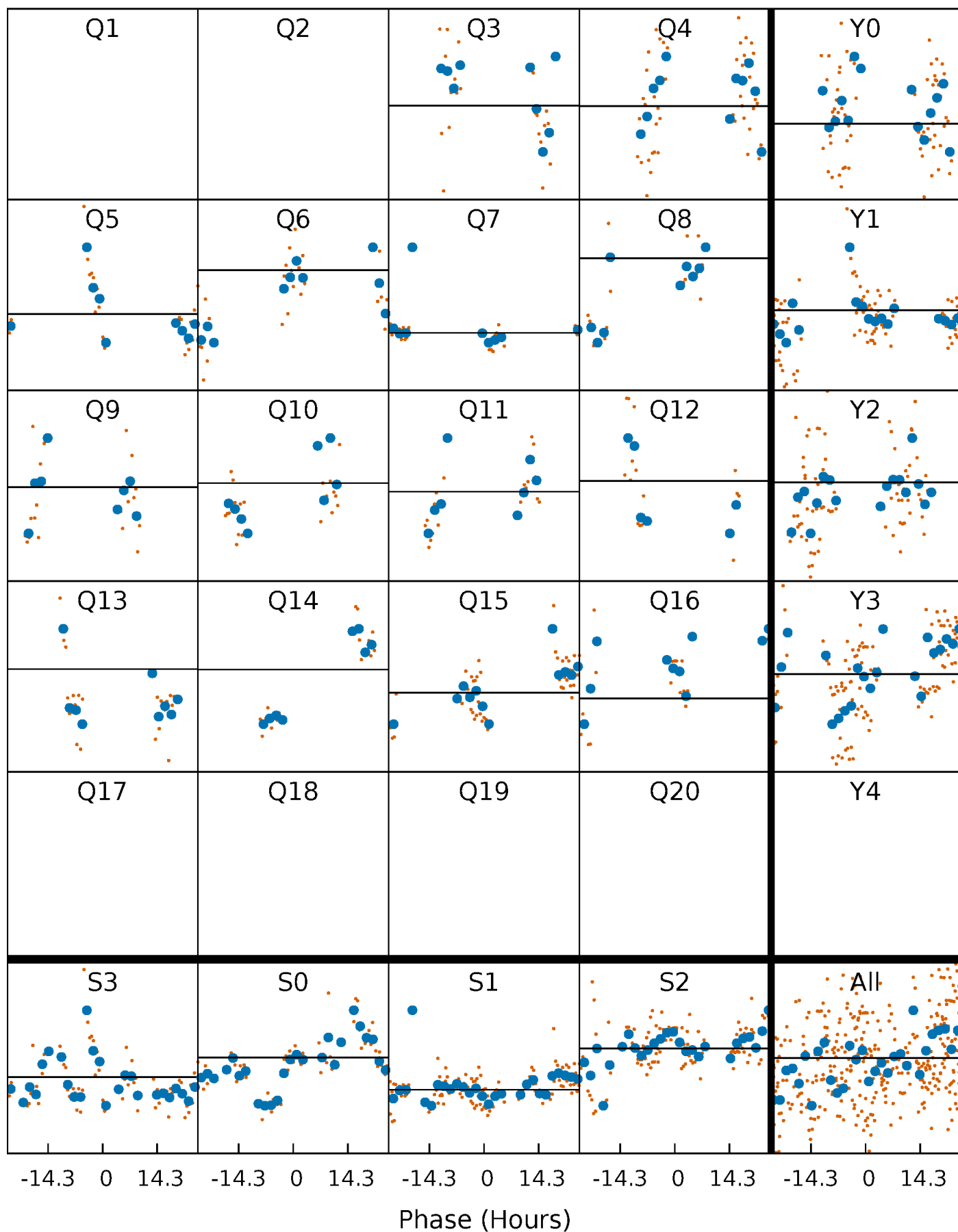
PDC Quarter-Phased Transit Curves

TCE 000892376-03 P= 85.741133 Days $T_0=182.874153$ (BKJD)



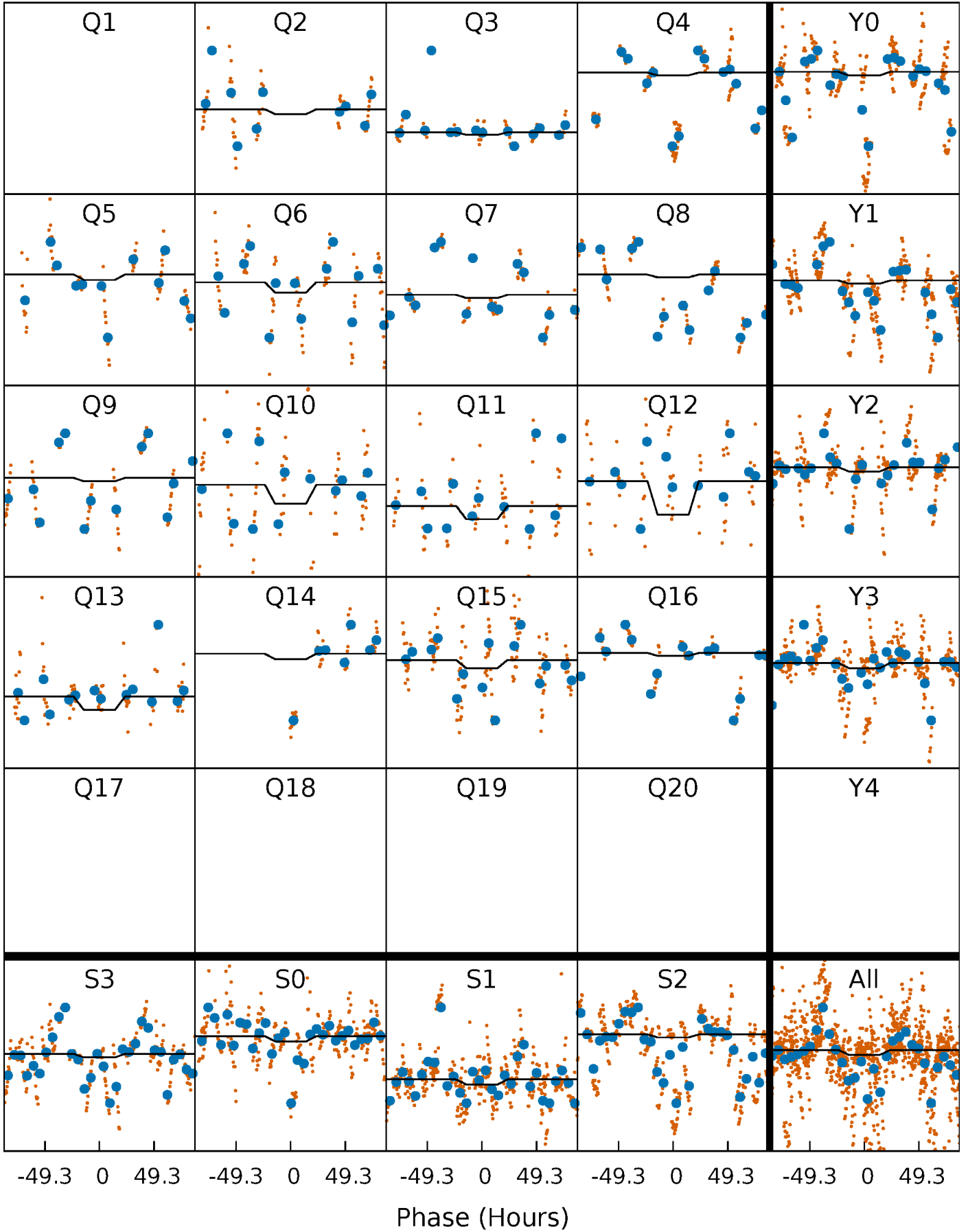
DV Quarter-Phased Transit Curves

TCE 000892376-03 P= 85.741133 Days $T_0=182.874153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

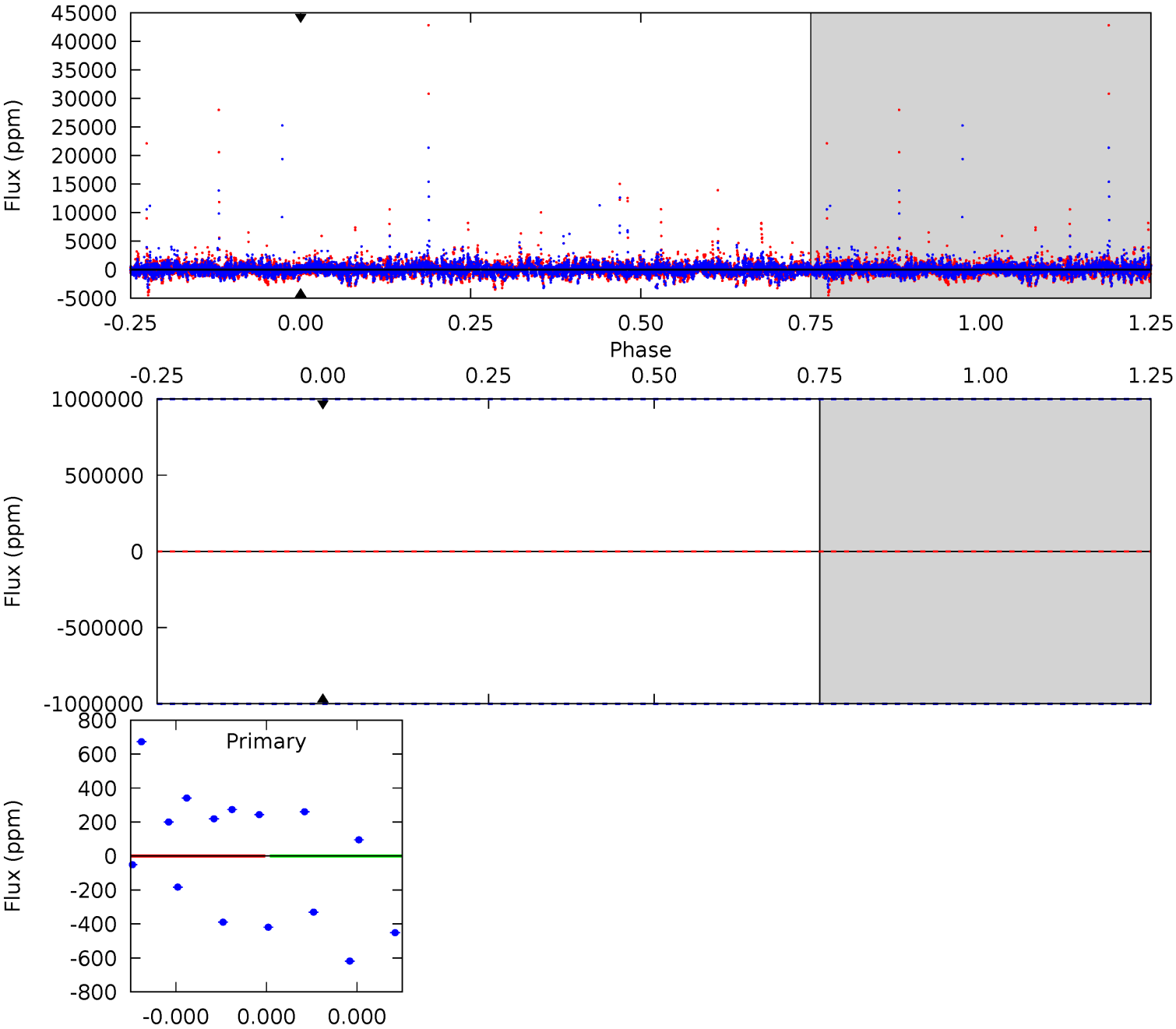
TCE 000892376-03 P= 85.741133 Days $T_0=182.525609$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-03, P = 85.741133 Days, E = 97.133020 Days

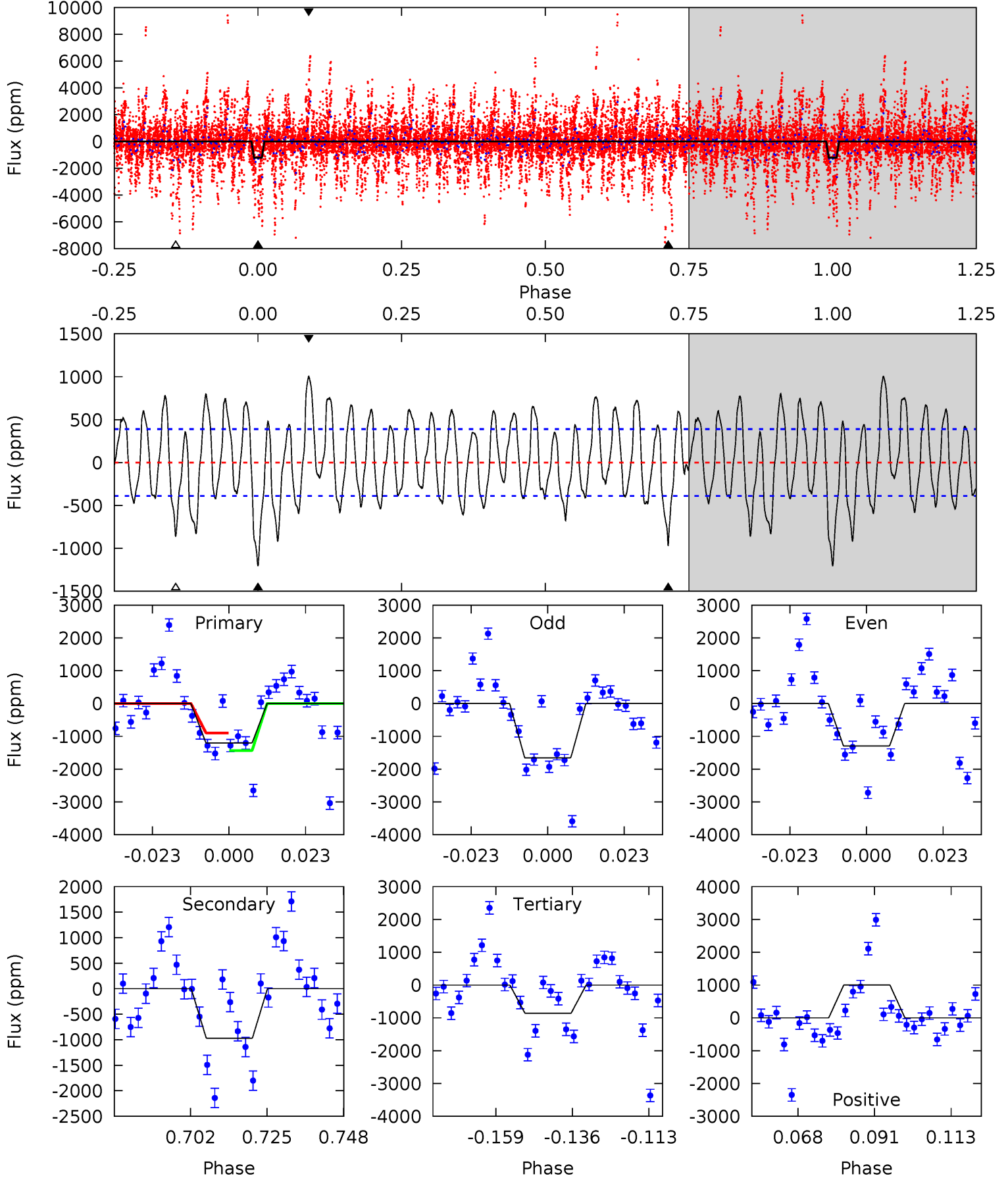
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

000892376-03, P = 85.741133 Days, E = 96.784476 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	12.1	10.8	12.6	4.87	2.28	5.08	4.31	2.51	1.38	-0.41	2.12	2.47	0.45	3.40



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$4.88^{+5.11}_{-3.34}$	333^{+12}_{-14}	-2309^{+11598}_{-6124}	$-298.361^{+451365.101}_{-342645.162}$
Alt.	-971 ± 80	$4.47^{+5.21}_{-3.07}$	333^{+13}_{-13}	3073^{+1465}_{-559}	2766^{+26285}_{-2185}

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

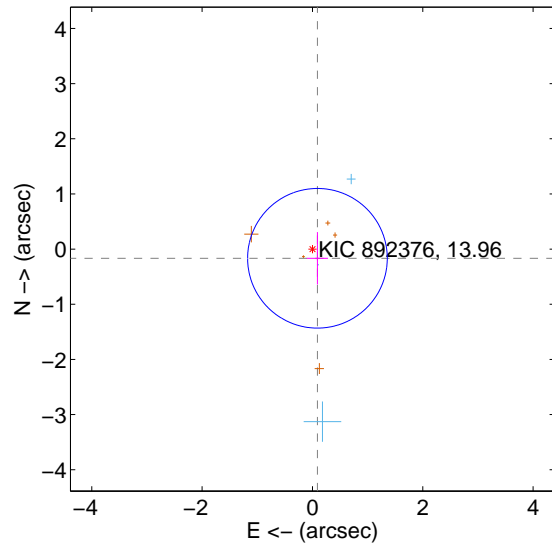
Supplemental centroid analysis for 000892376-03. Kepler magnitude: 13.96. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

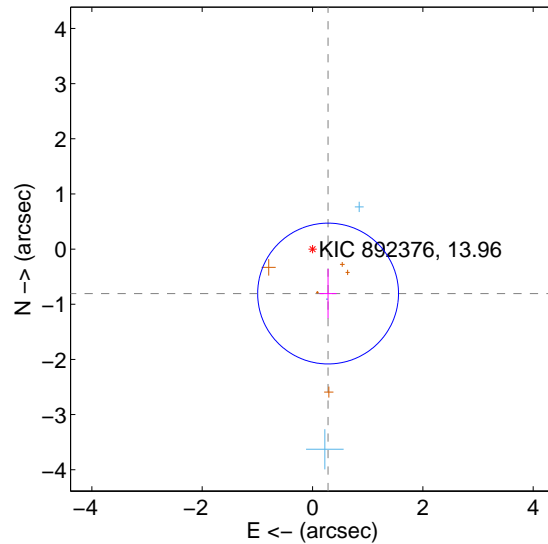
The direct PRF centroid is offset from the target star catalog position by about 0.71 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.190 ± 0.422	0.45	-0.091 ± 0.192	-0.167 ± 0.476
PRF-fit source offset from KIC position	0.854 ± 0.426	2.01	-0.282 ± 0.153	-0.806 ± 0.448
photometric centroid source offset	1.75 ± 0.63	2.77	-1.38 ± 0.65	-1.09 ± 0.61

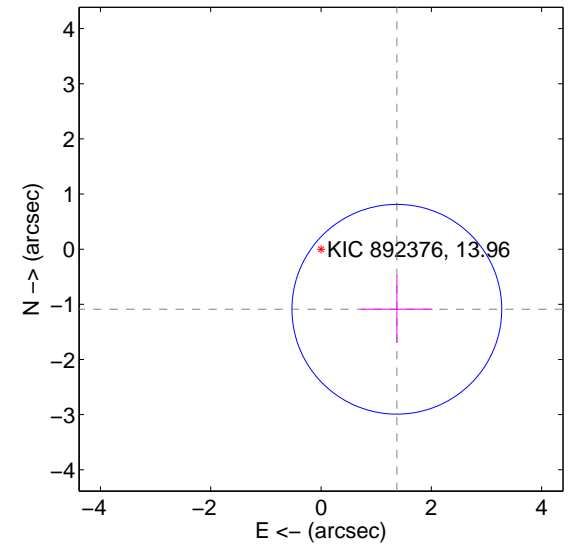
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

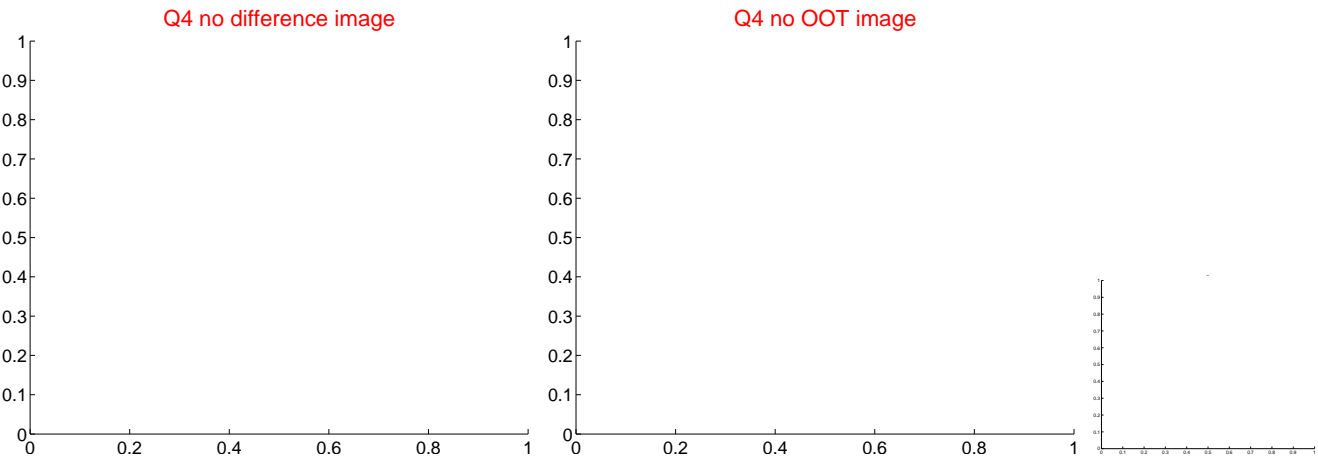
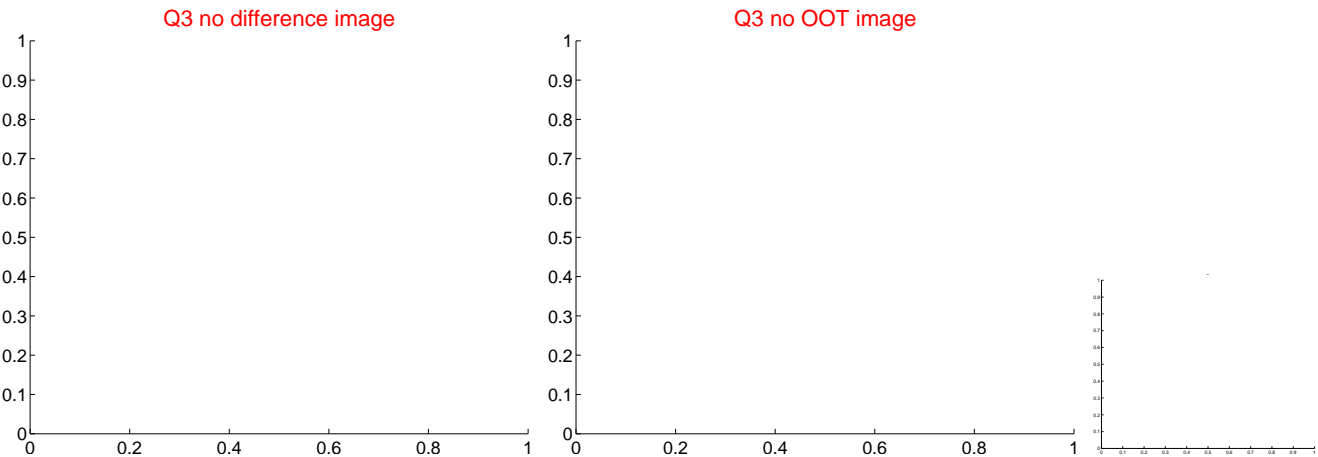
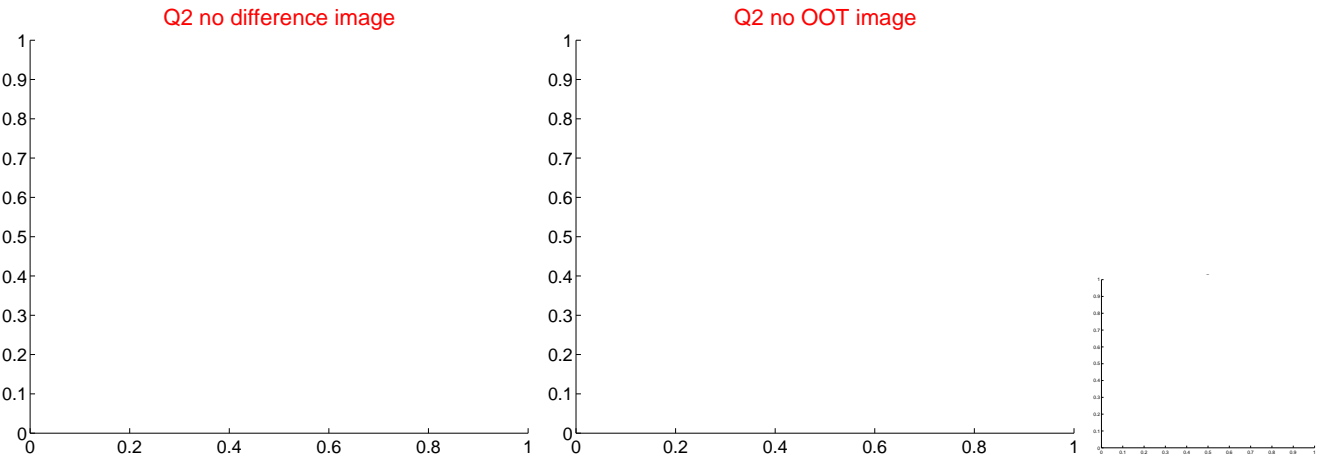
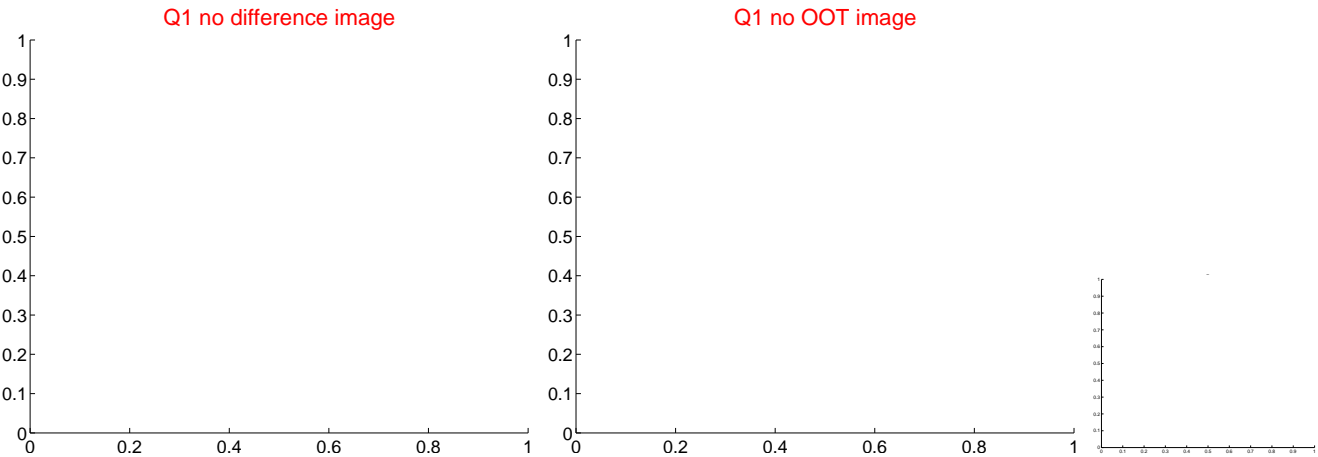


offset from photometric centroids

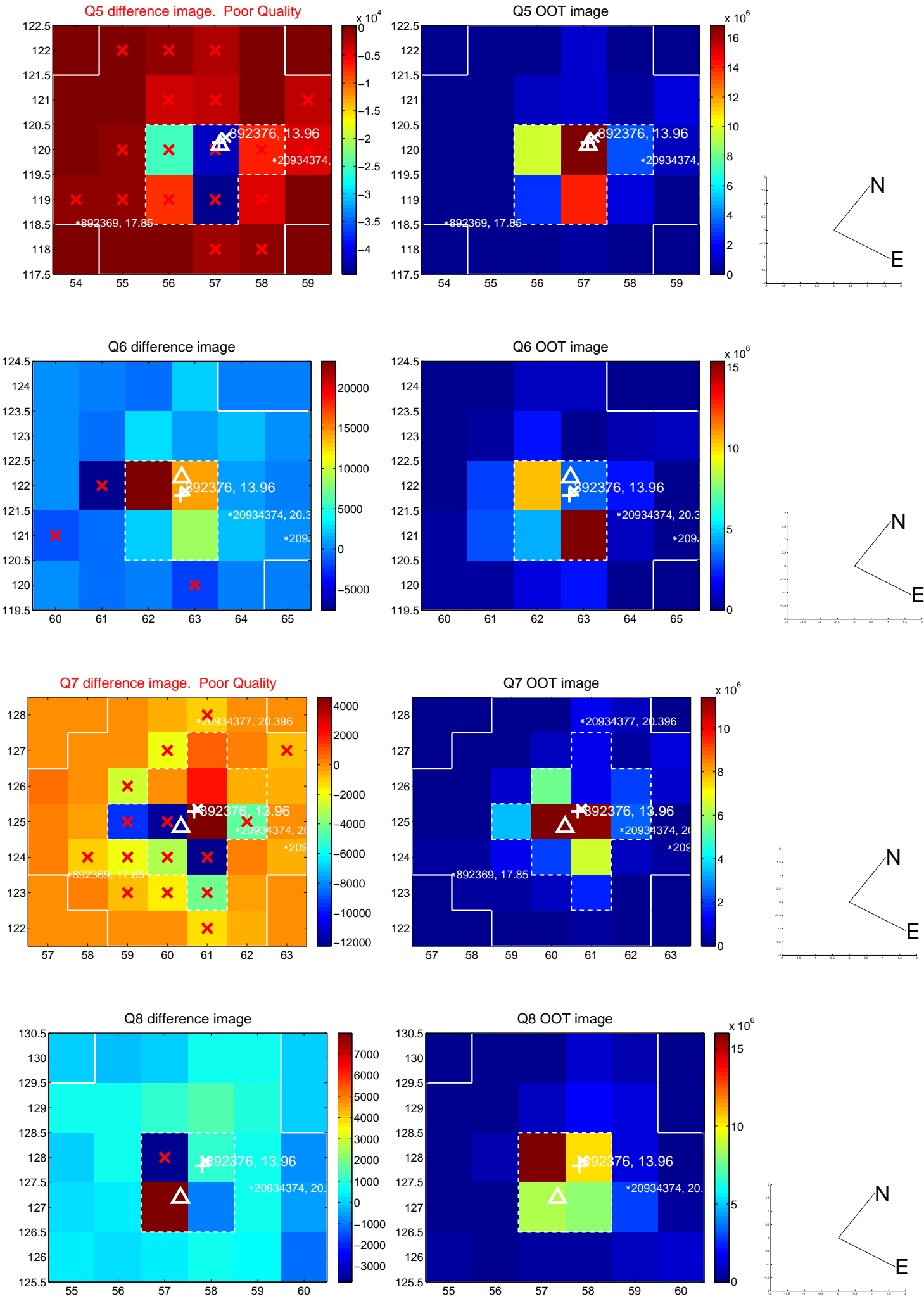


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

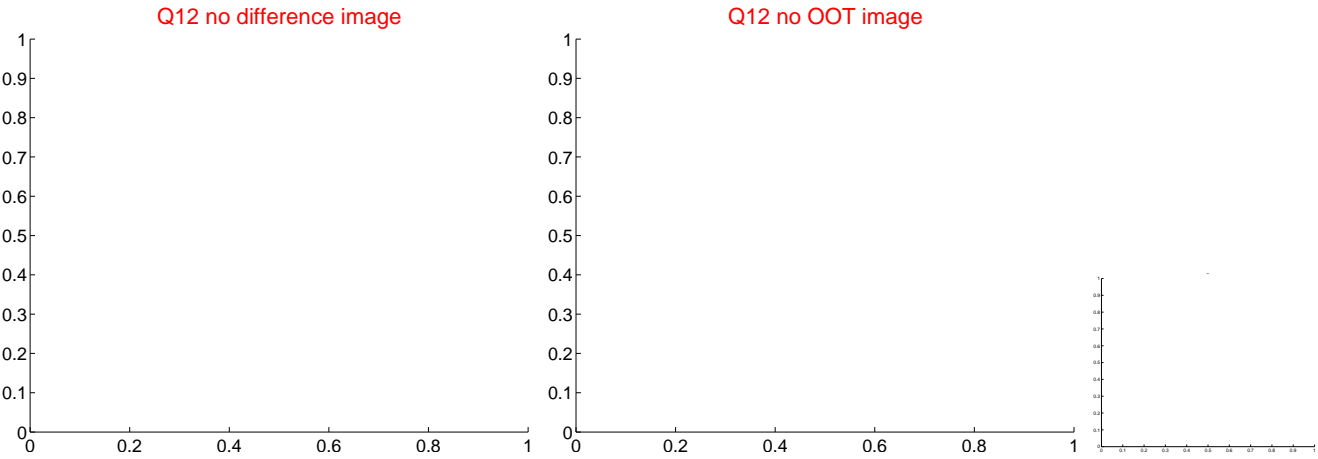
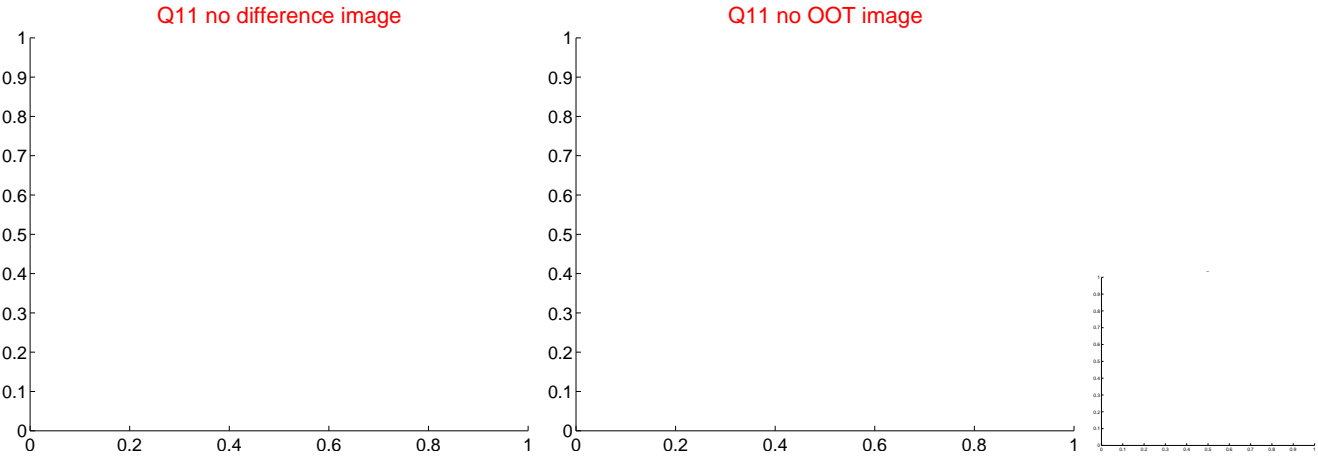
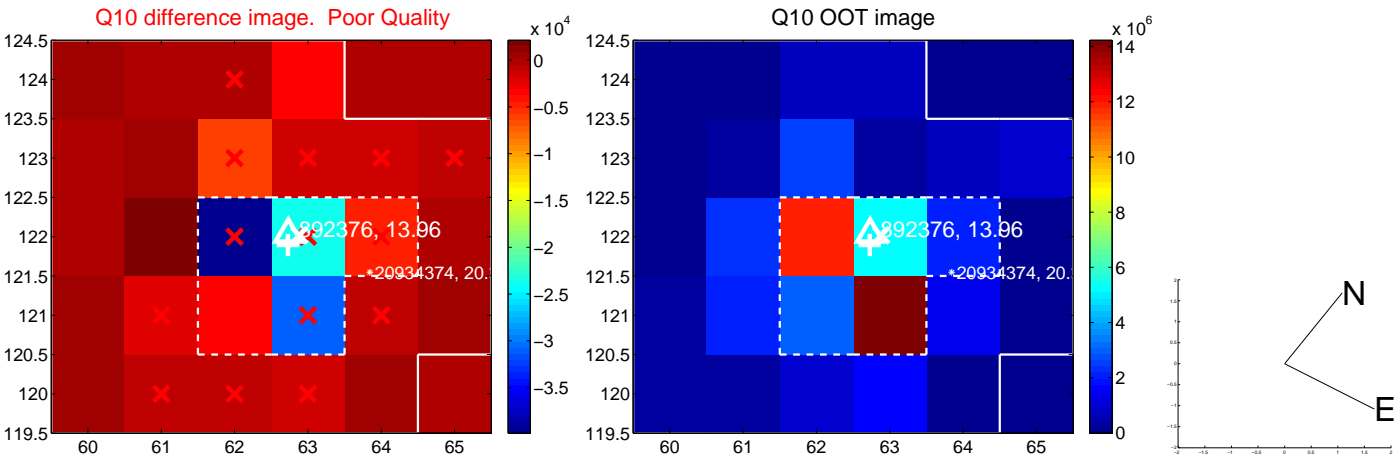
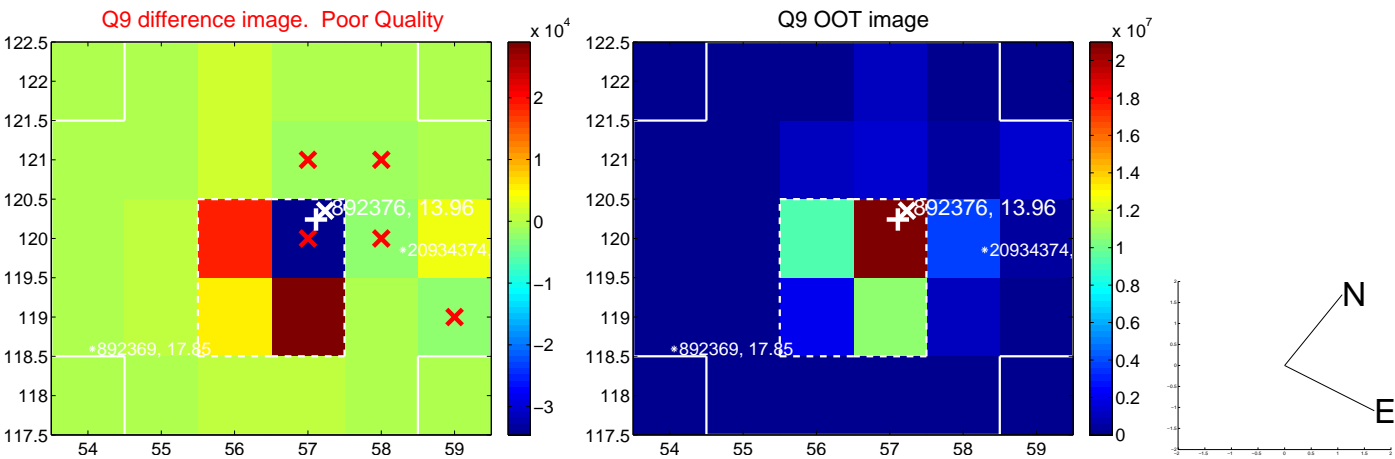
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



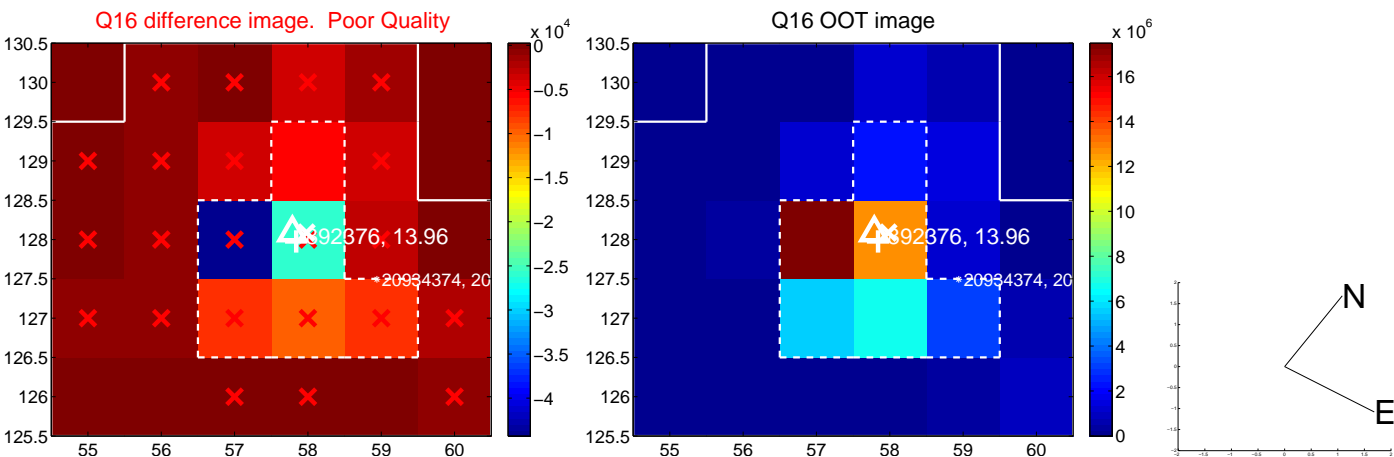
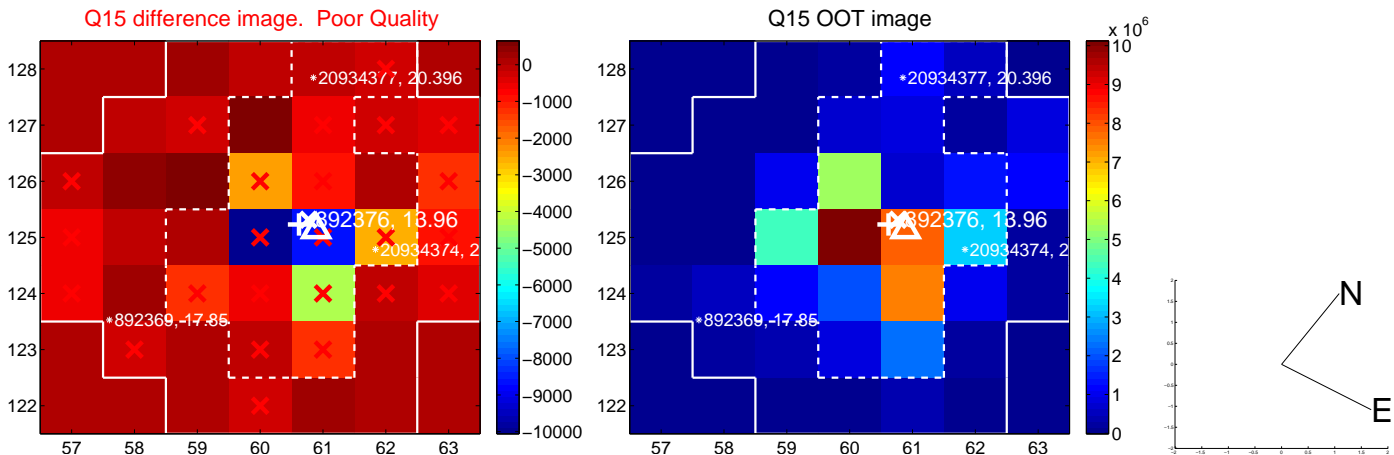
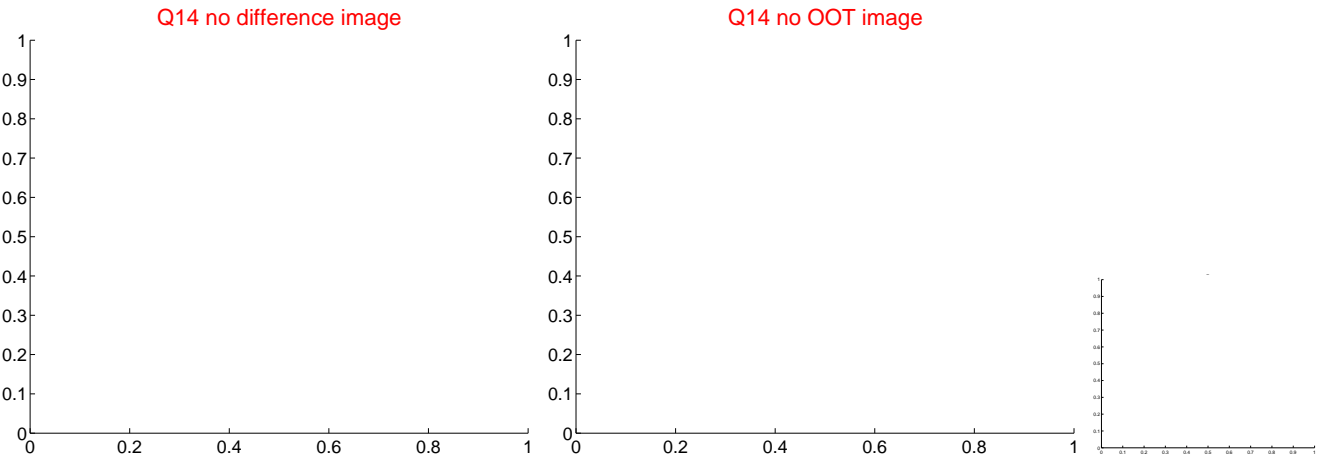
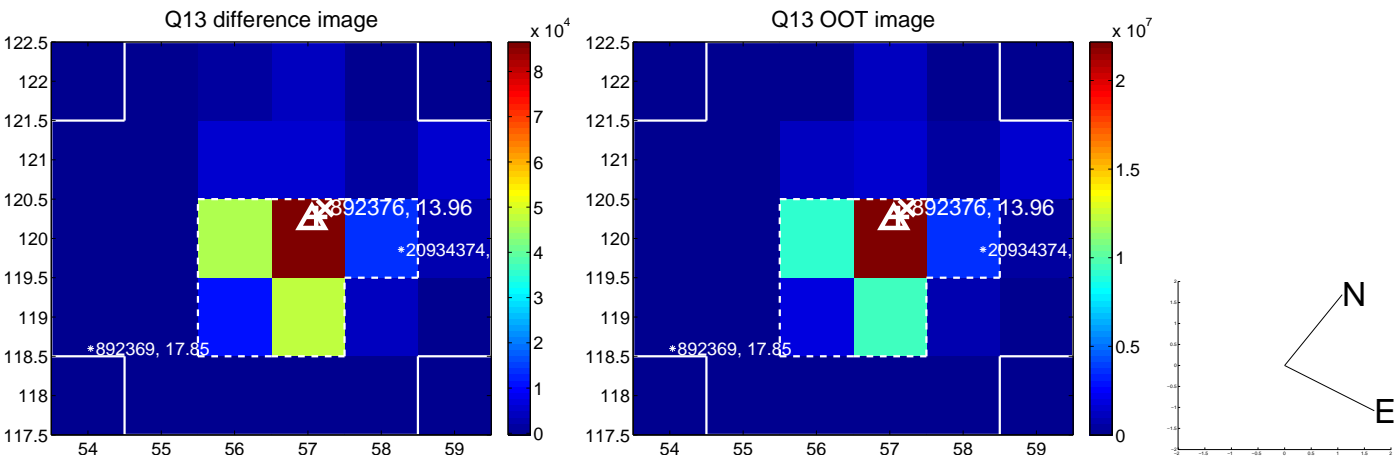
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



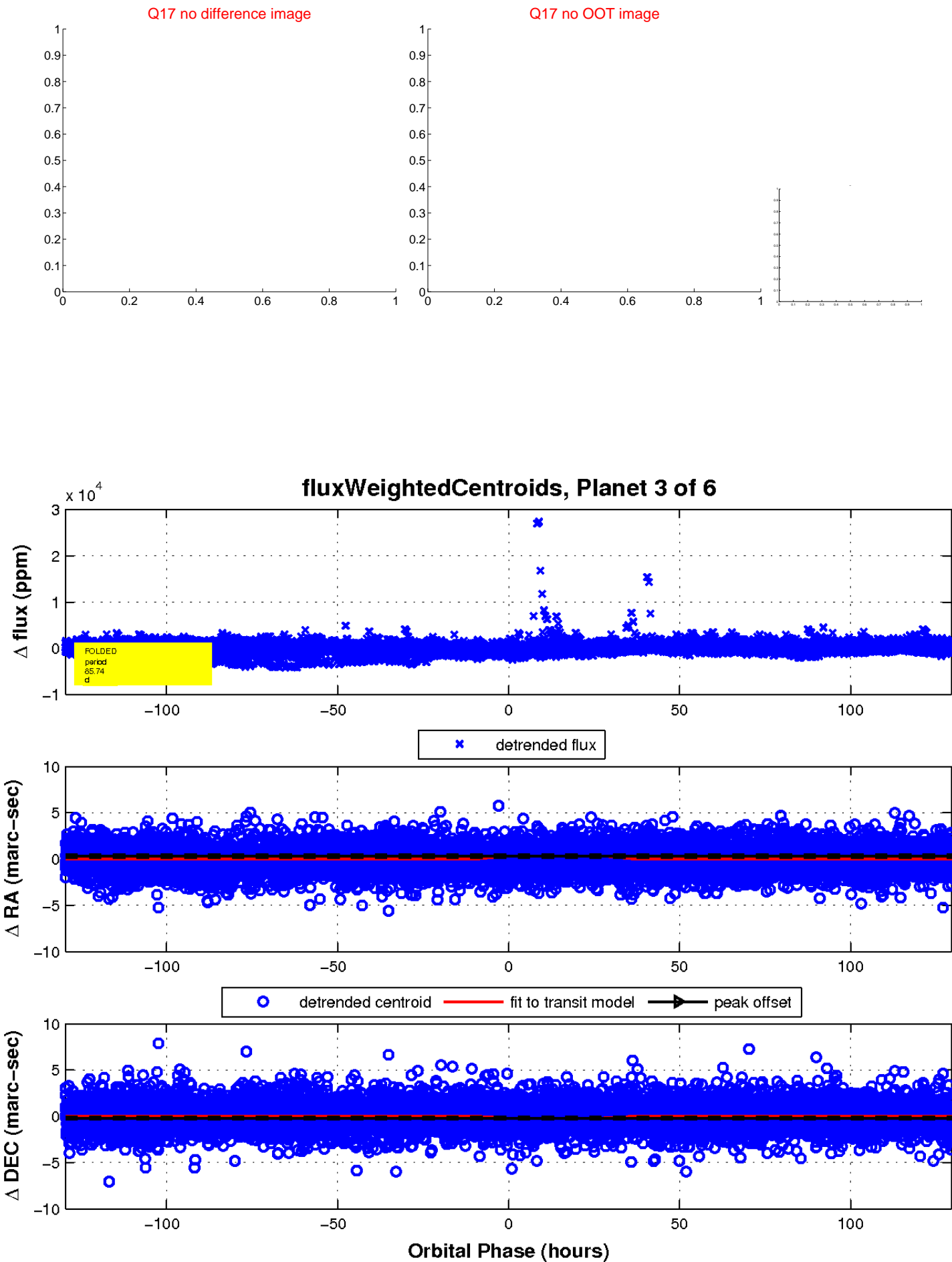
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

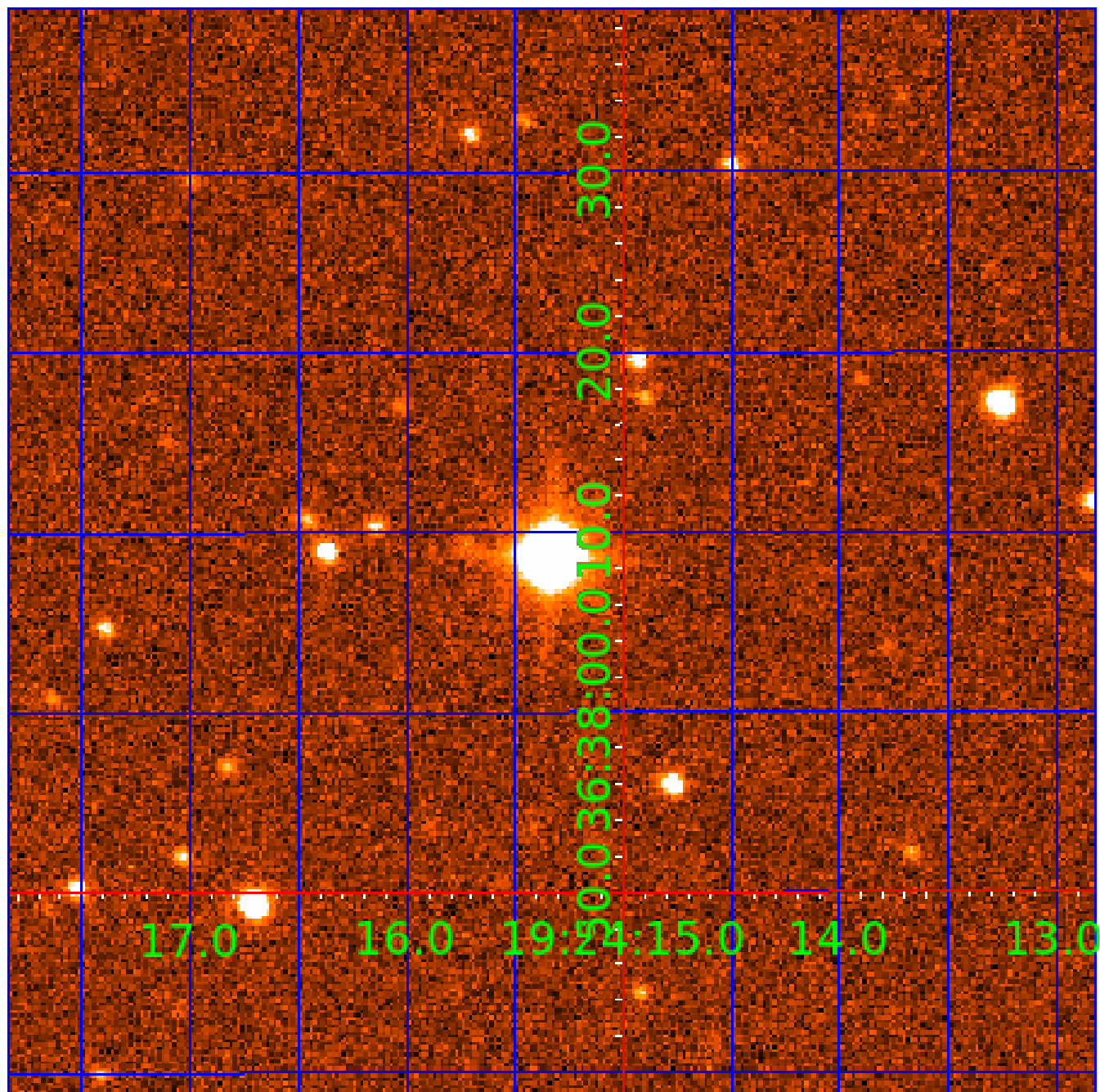


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000892376

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})
000892376-01	OBS	No	607.710905	207.634885	1049.9	12.577	12.4	6.4	0.60	3973	2.00	0.06
000892376-02	OBS	No	1.021880	131.811576	91.2	5.994	9.8	13.6	0.60	3973	0.69	289.74
000892376-03	OBS	No	85.741133	182.874152	839.5	12.500	21.6	-1.0	0.60	3973	1.70	0.79
000892376-04	OBS	No	405.727244	498.041022	1490.5	4.279	13.1	9.3	0.60	3973	2.31	0.10
000892376-05	OBS	No	126.080798	201.665496	787.6	12.641	11.3	7.4	0.60	3973	1.76	0.47
000892376-06	OBS	No	64.517819	188.638291	675.4	3.000	10.6	-1.0	0.60	3973	1.52	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000892376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

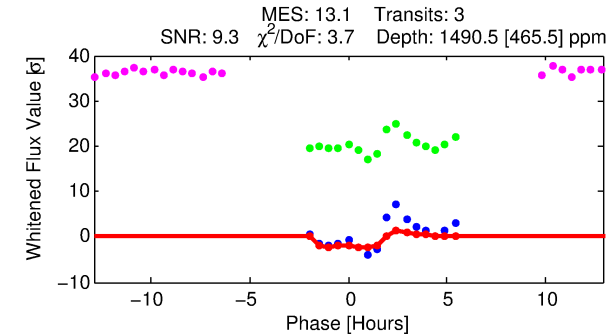
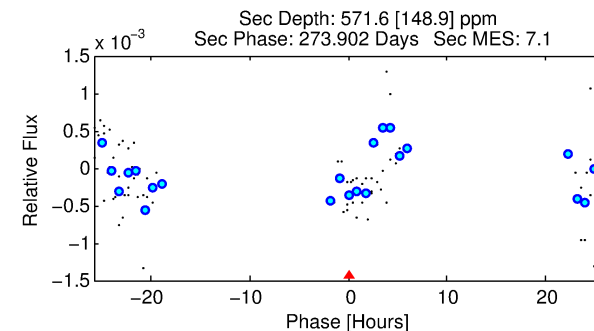
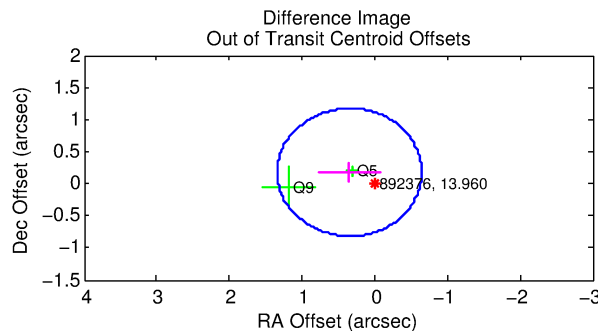
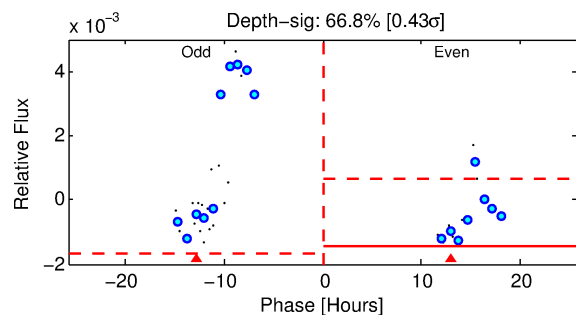
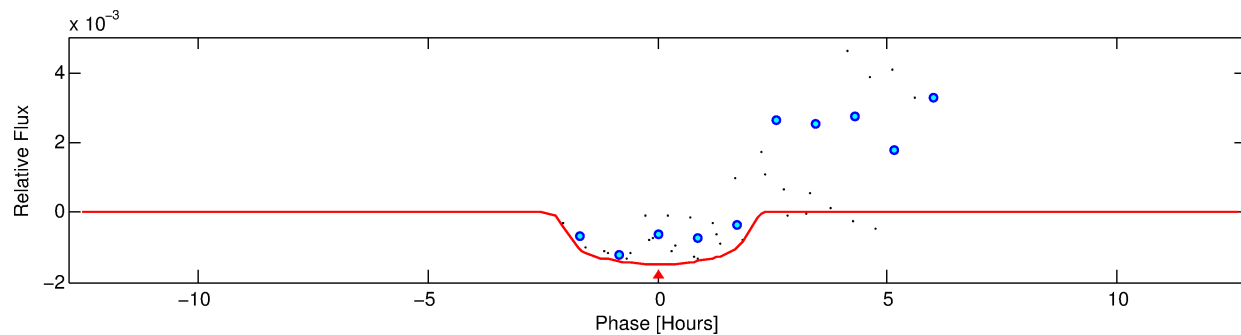
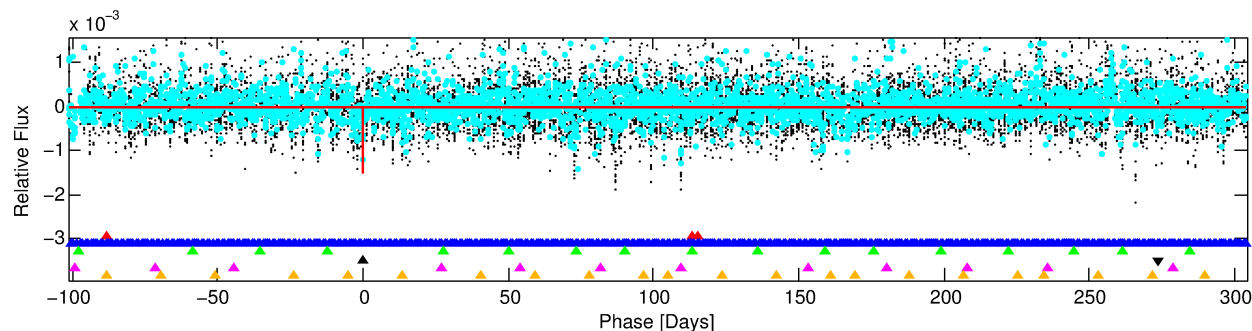
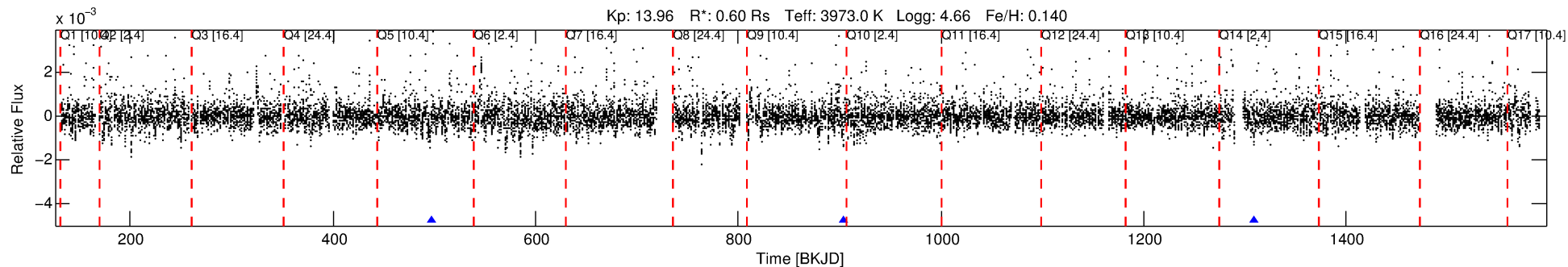
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-04

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 4 of 6 Period: 405.727 d



DV Fit Results:

Period = 405.72724 [0.01118] d
Epoch = 498.0410 [0.0199] BKJD
Rp/R* = 0.0350 [0.1021]
a/R* = 698.54 [6774.03]
b = 0.38 [22.59]
Seff = 0.10 [0.02]
Teq = 143 [7] K
Rp = 2.31 [6.75] Re
a = 0.9072 [0.0860] AU
Ag = 48473.85 [283257.05] [0.17 σ]
Teffp = 3284 [4798] K [0.65 σ]

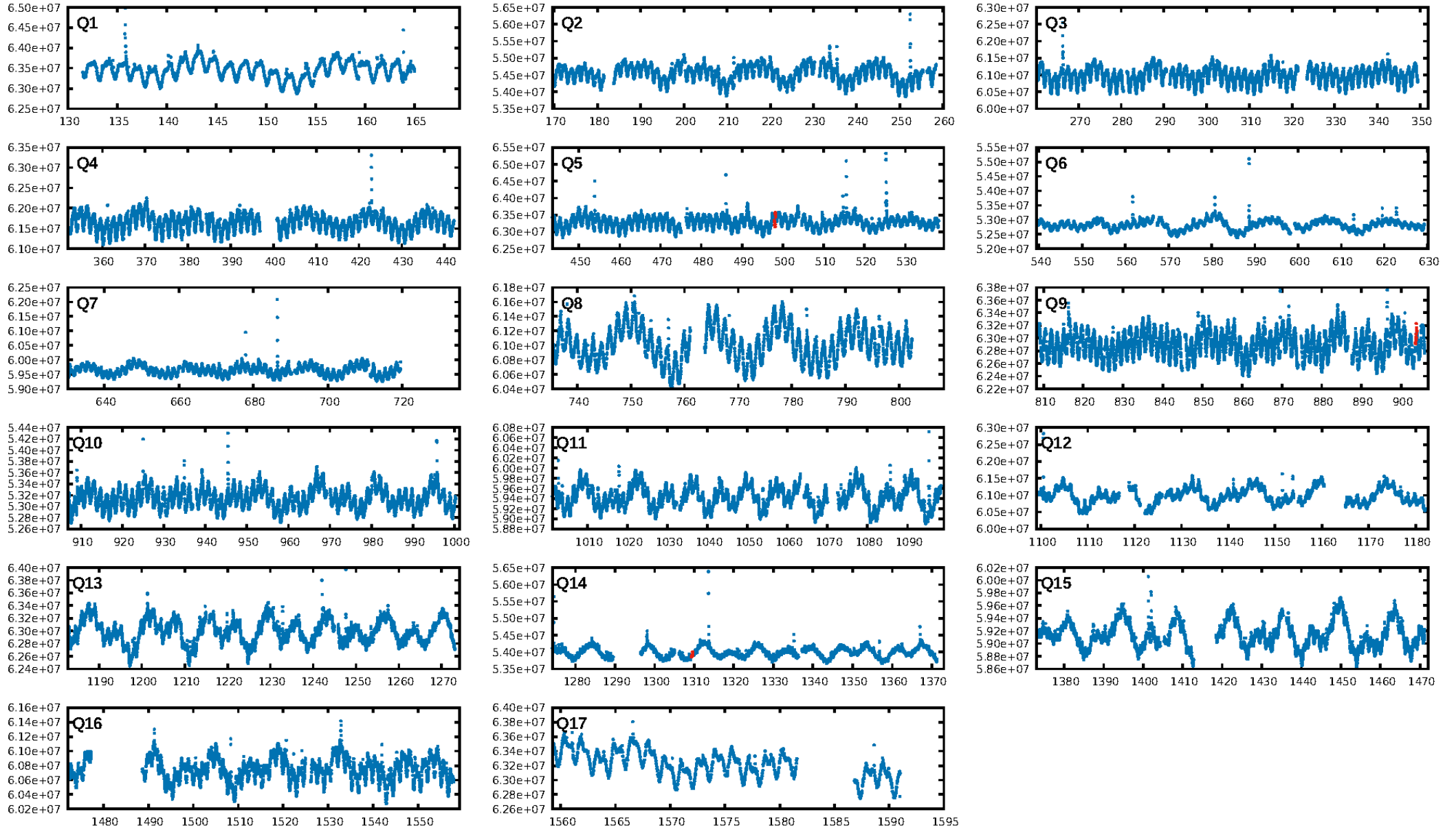
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [502.91 σ]
LongPeriod-sig: 100.0% [364.89 σ]
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 16.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 9.046
Centroid-sig: 38.3%
Centroid-so: 1.585 arcsec [3.11 σ]
OotOffset-rm: 0.392 arcsec [1.18 σ]
KicOffset-rm: 0.465 arcsec [2.58 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

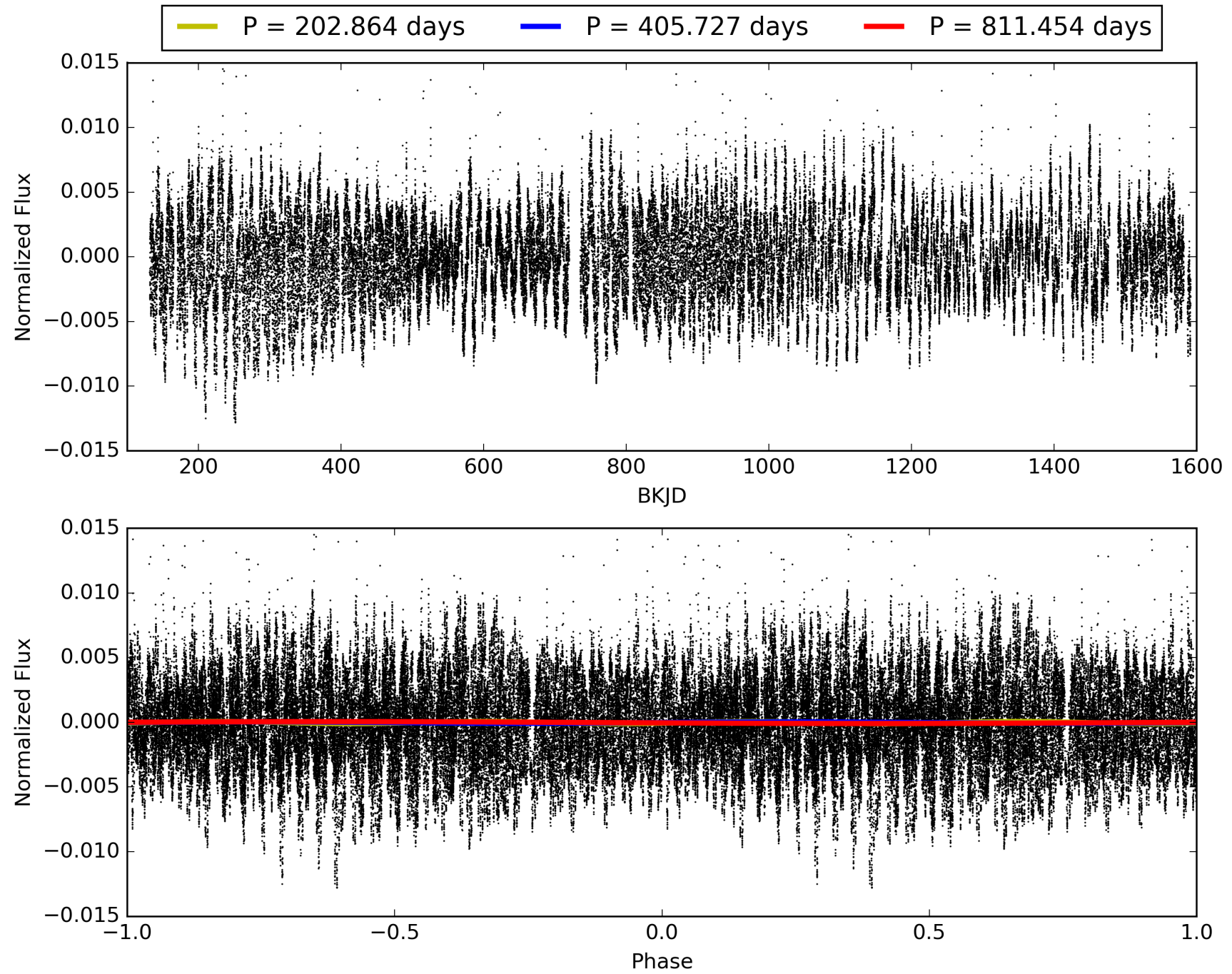
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:47:16 Z

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

TCE 000892376-04, PDC Light Curves

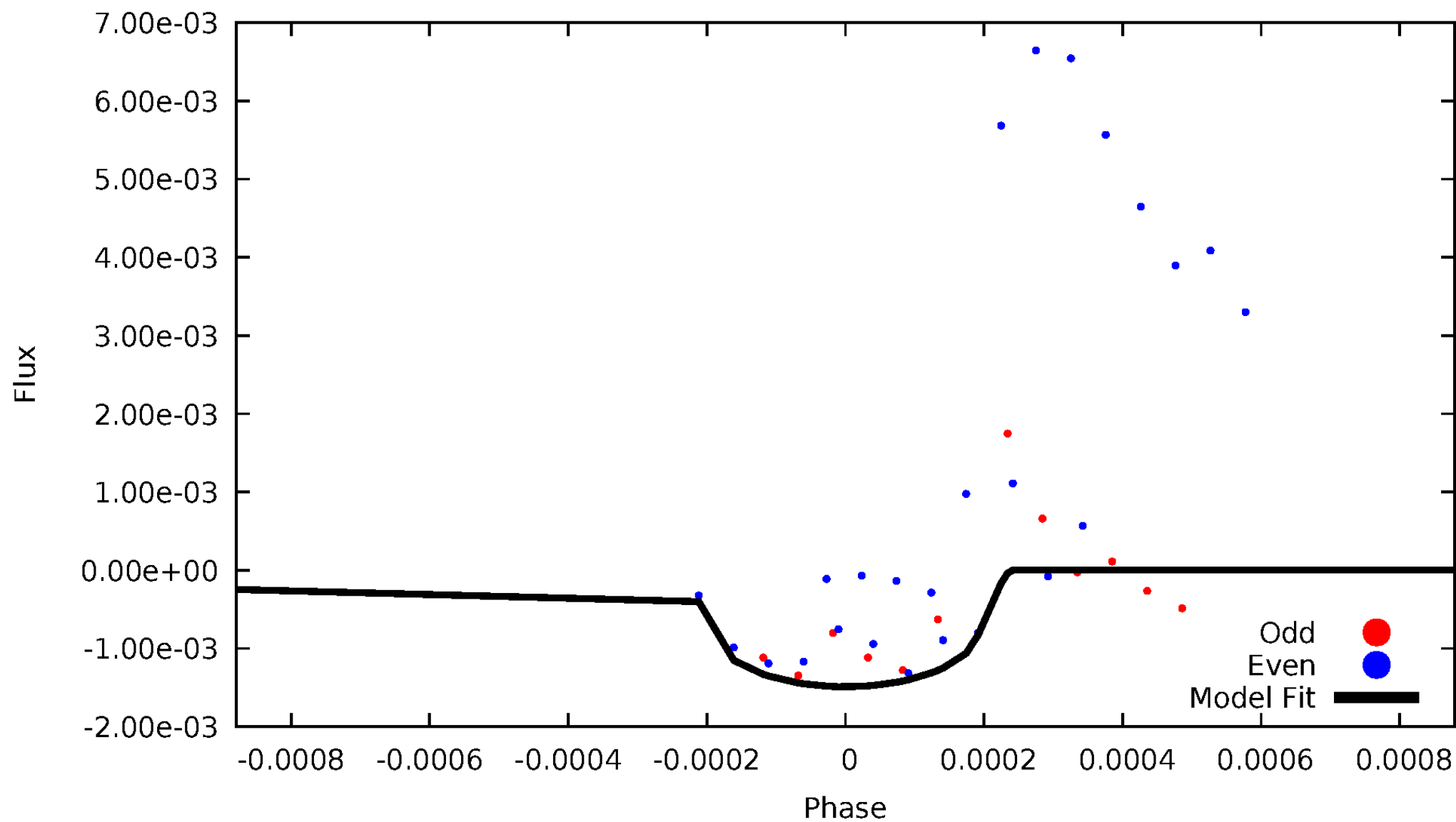


TCE 000892376-04



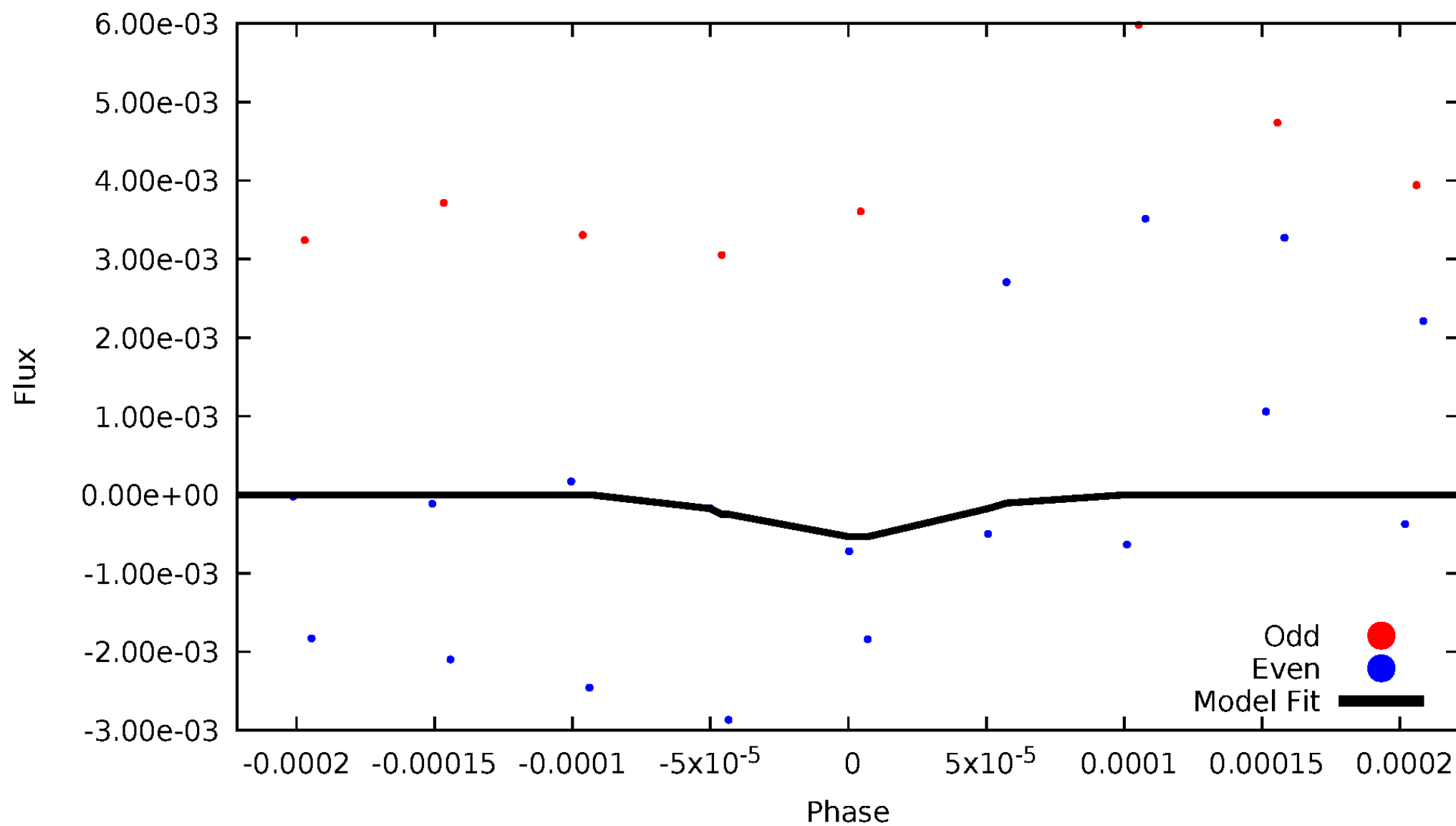
DV Odd/Even

TCE 000892376-04



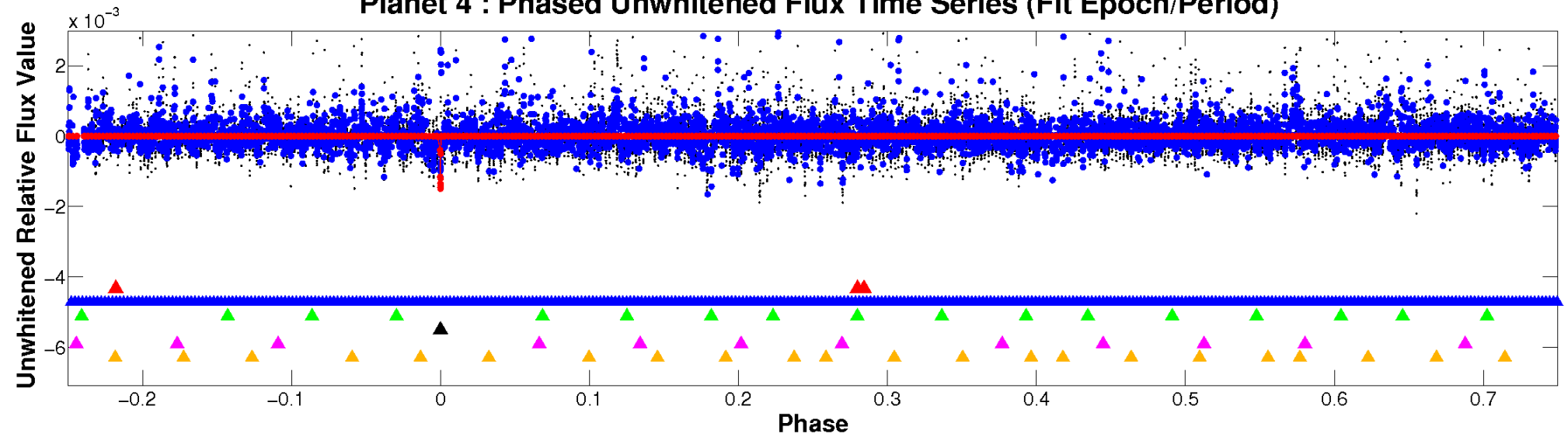
ALT Odd/Even

TCE 000892376-04

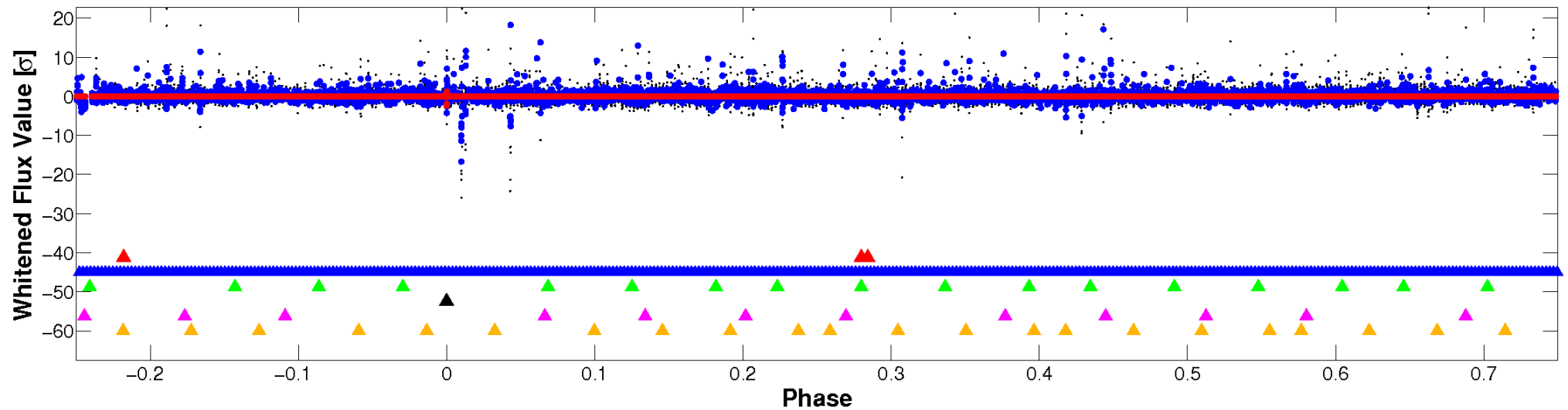


Non-Whitened Vs. Whitened Light Curve

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

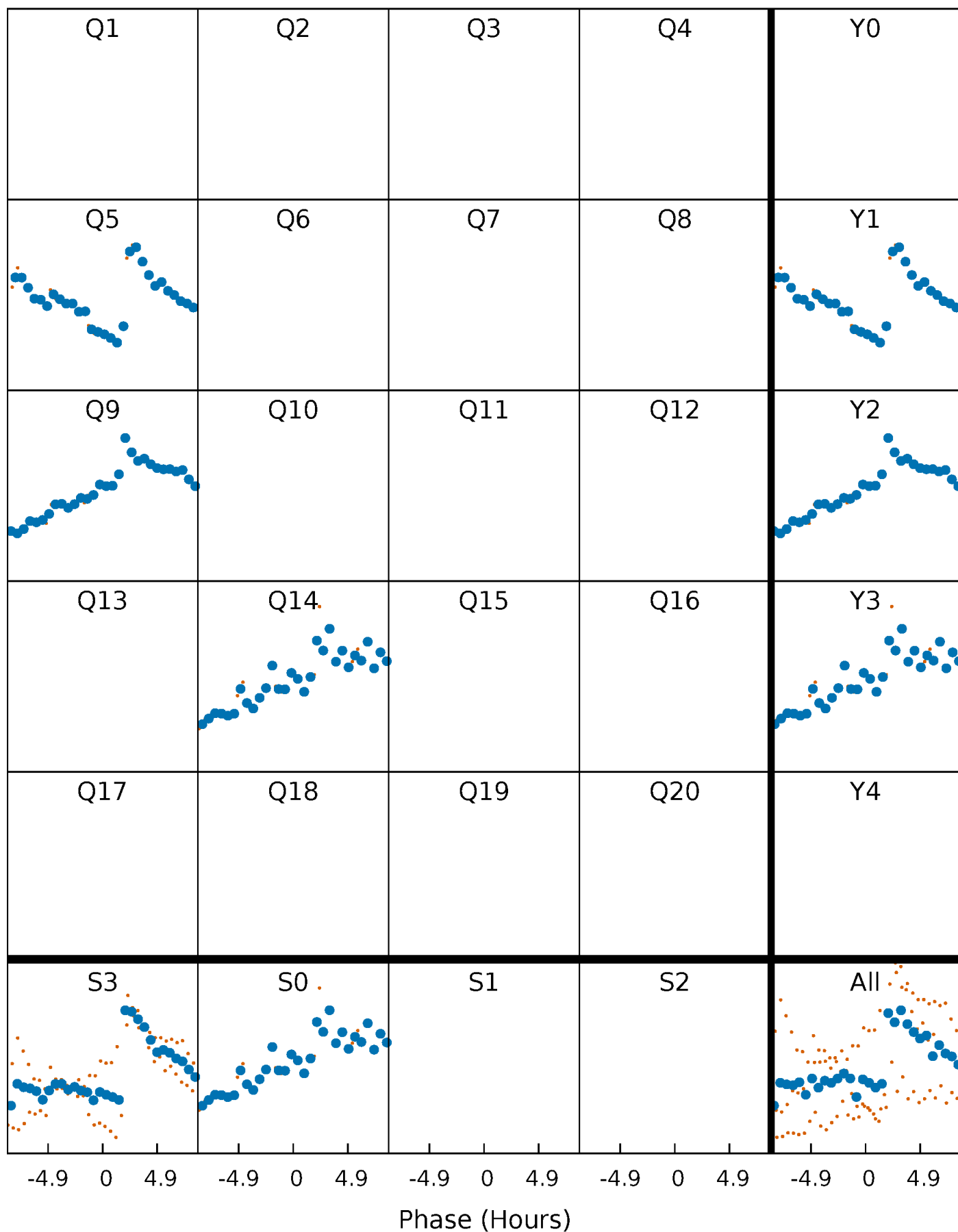


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



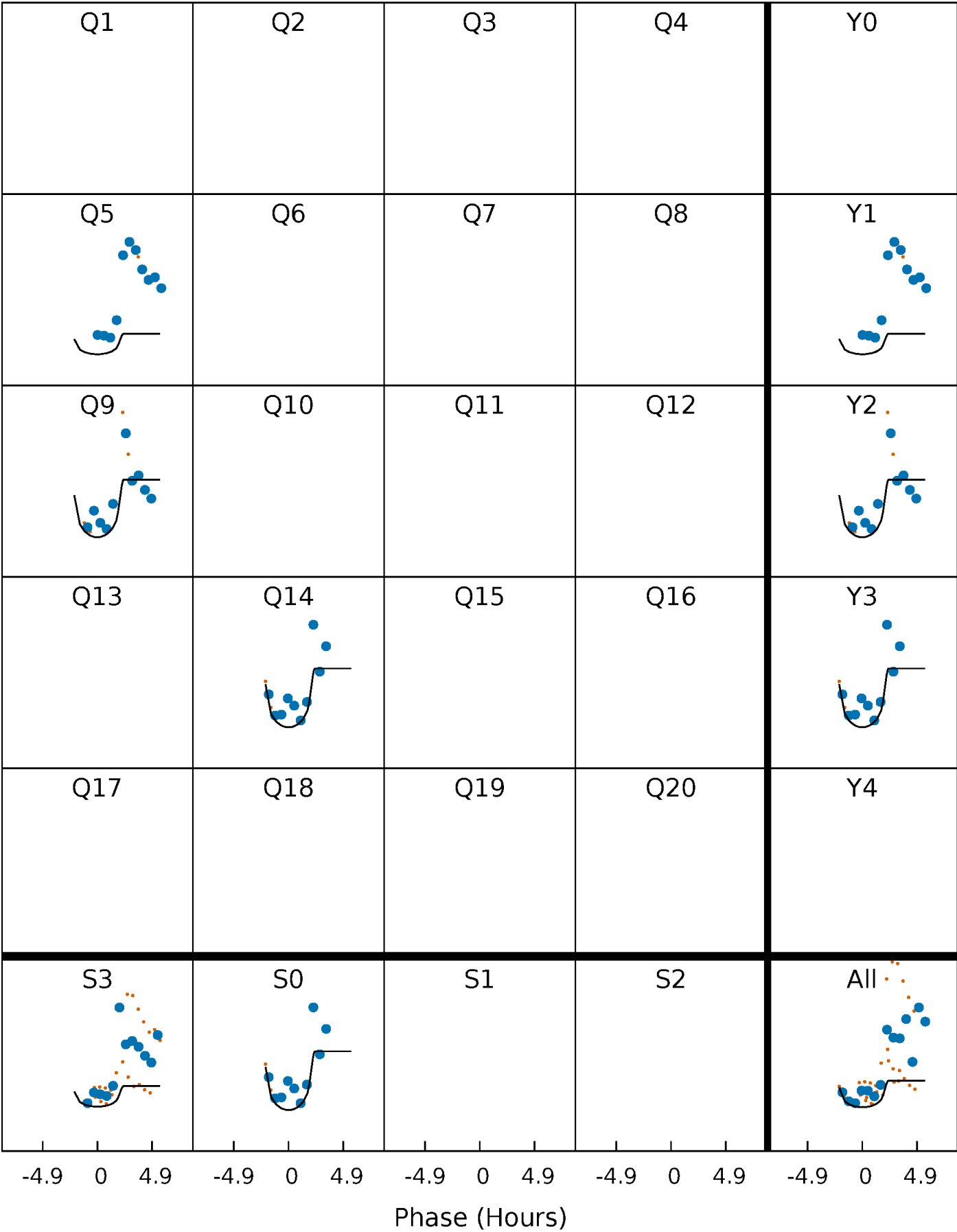
PDC Quarter-Phased Transit Curves

TCE 000892376-04 $P=405.727244$ Days $T_0=498.041022$ (BKJD)



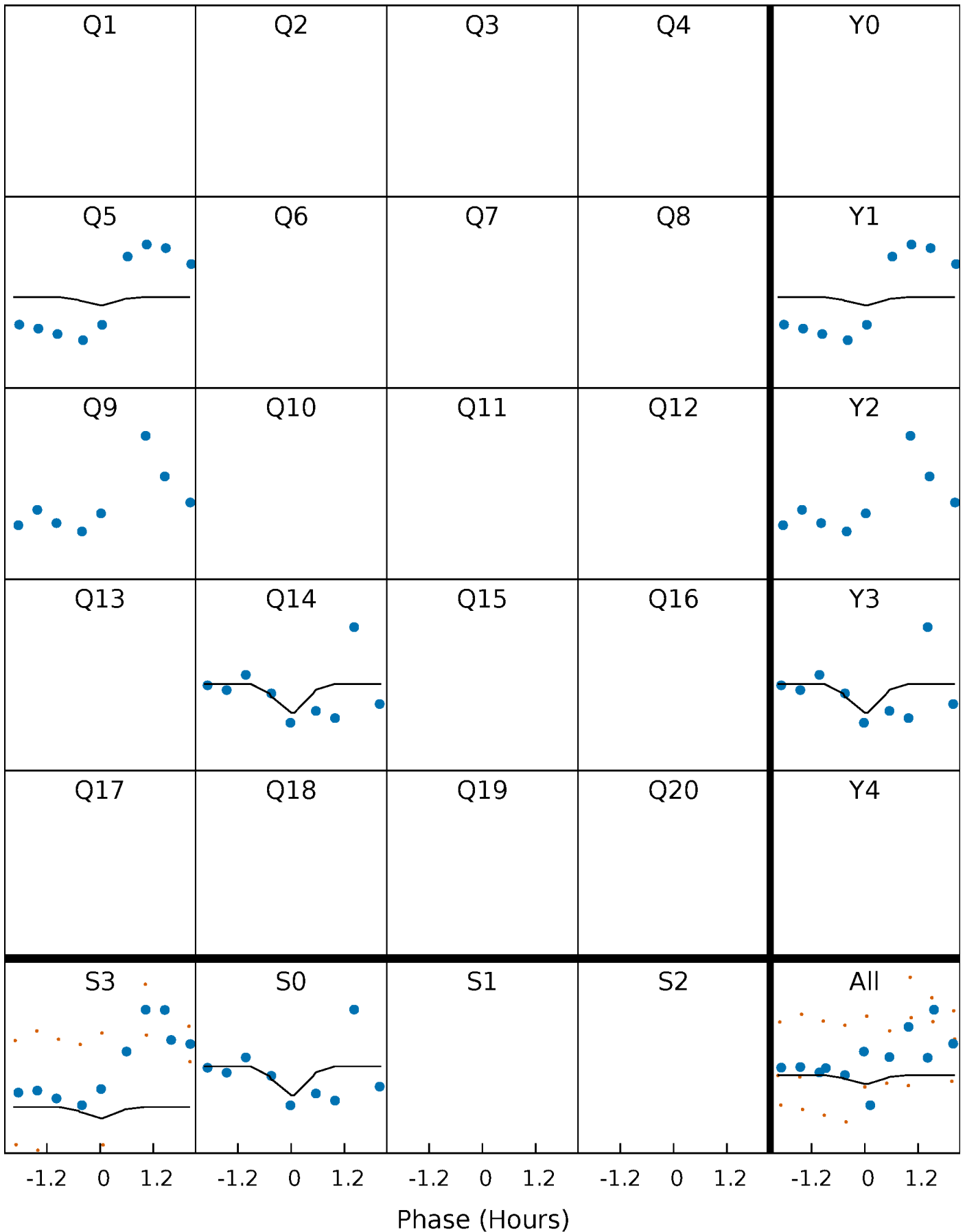
DV Quarter-Phased Transit Curves

TCE 000892376-04 P=405.727244 Days T₀=498.041022 (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

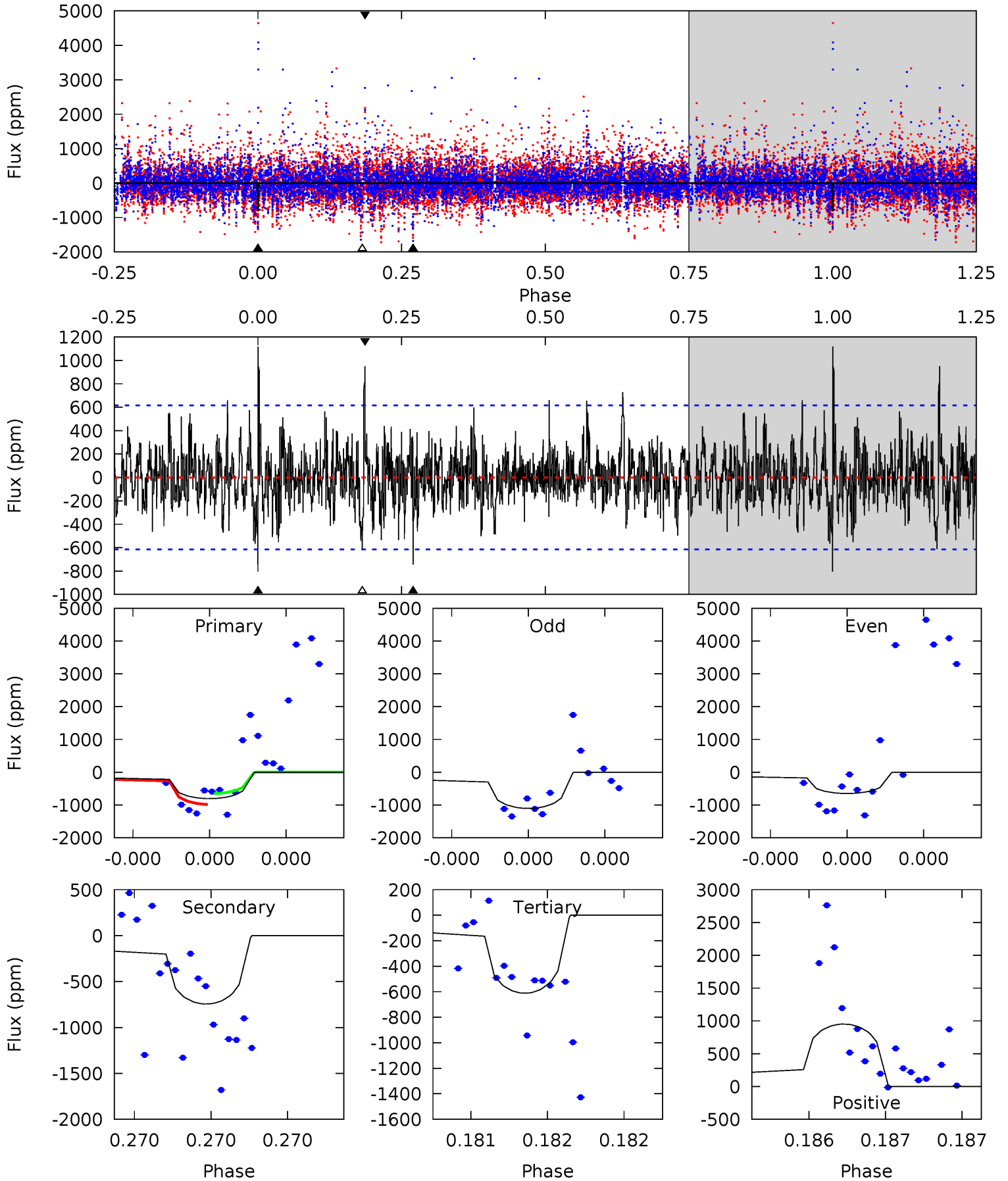
TCE 000892376-04 P=405.711625 Days $T_0=498.108905$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-04, P = 405.727244 Days, E = 92.313778 Days

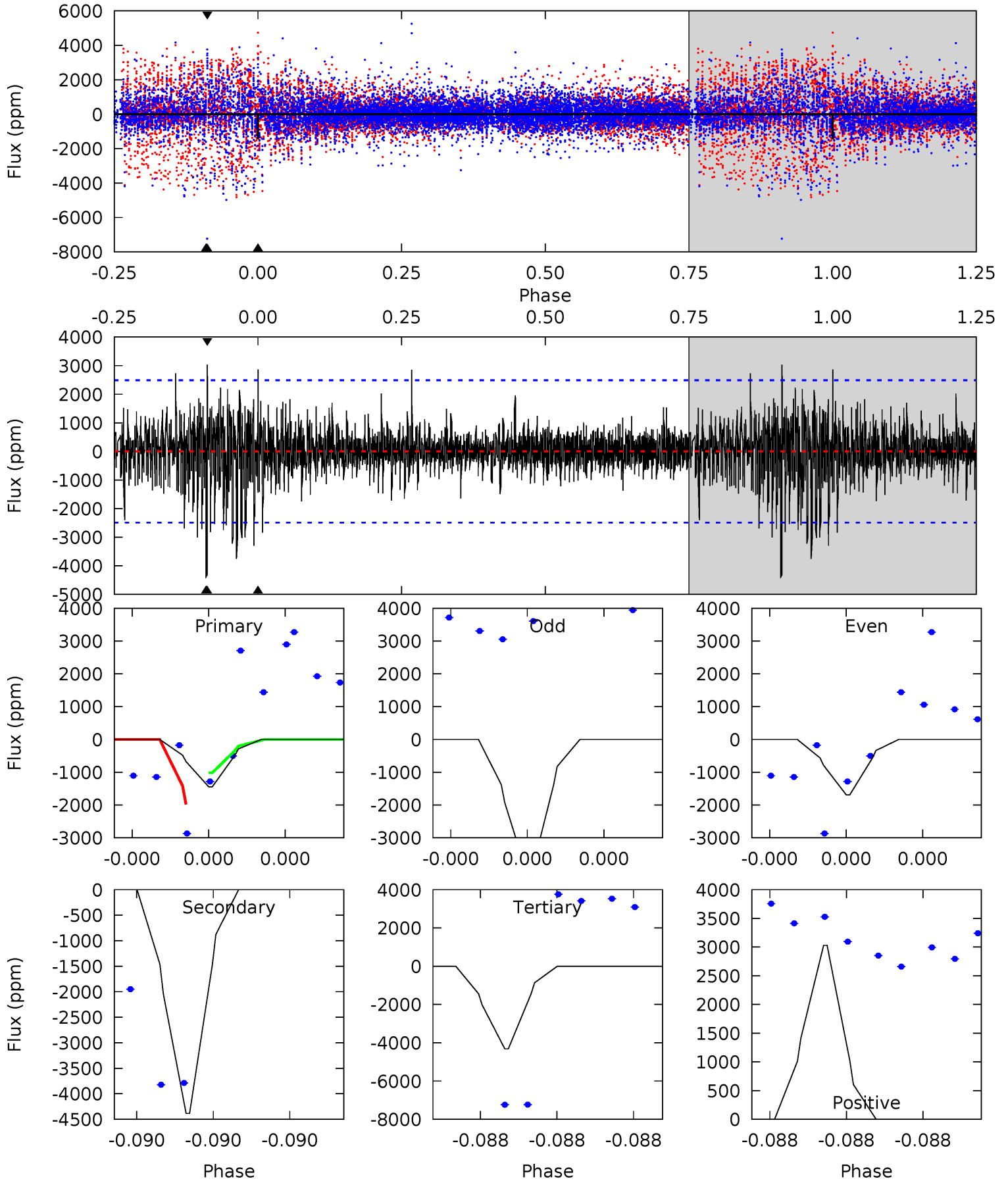
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.34	6.78	5.57	8.67	5.61	3.54	1.65	1.77	-1.32	1.21	-1.88	1.77	0.62	0.58	1.50



Alt Model-Shift Uniqueness Test

000892376-04, P = 405.711625 Days, E = 92.397280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.36	10.2	10.0	7.04	5.78	3.80	1.11	-6.68	-3.68	0.15	3.15	2.00	-0.54	0.41	0.79



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-744 ± 110	$5.50^{+5.23}_{-3.60}$	199^{+7}_{-8}	2828^{+1045}_{-436}	11456^{+84369}_{-8497}
Alt.	-4384 ± 430	$5.15^{+5.16}_{-3.38}$	199^{+7}_{-9}	3761^{+1974}_{-740}	$76350^{+557843}_{-57444}$

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

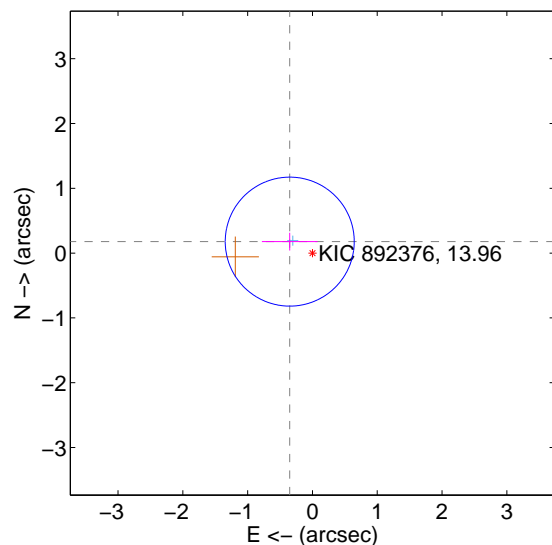
Supplemental centroid analysis for 000892376-04. Kepler magnitude: 13.96. Transit SNR 9.33

There are 1 quarters with good PRF difference image offsets

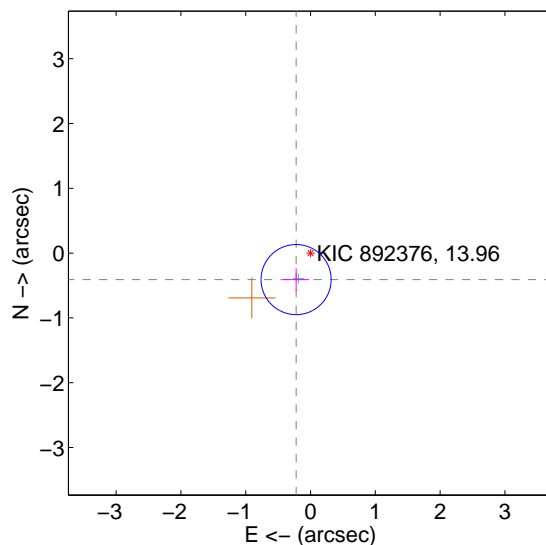
The direct PRF centroid is offset from the target star catalog position by about 0.70 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.392 ± 0.332	1.18	0.350 ± 0.430	0.177 ± 0.137
PRF-fit source offset from KIC position	0.465 ± 0.180	2.58	0.222 ± 0.198	-0.409 ± 0.175
photometric centroid source offset	1.58 ± 0.51	3.11	-0.24 ± 0.54	-1.57 ± 0.51

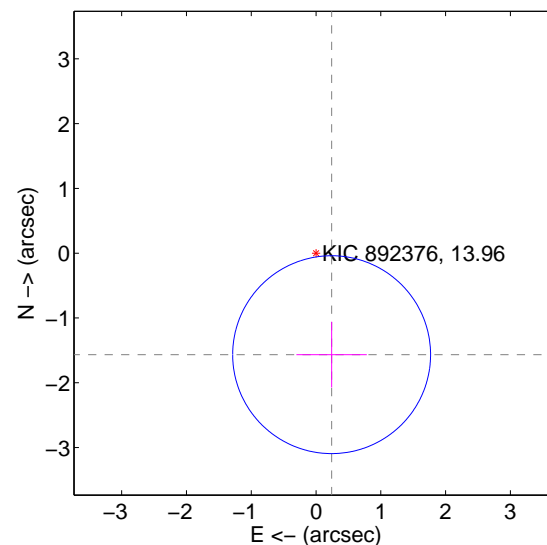
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

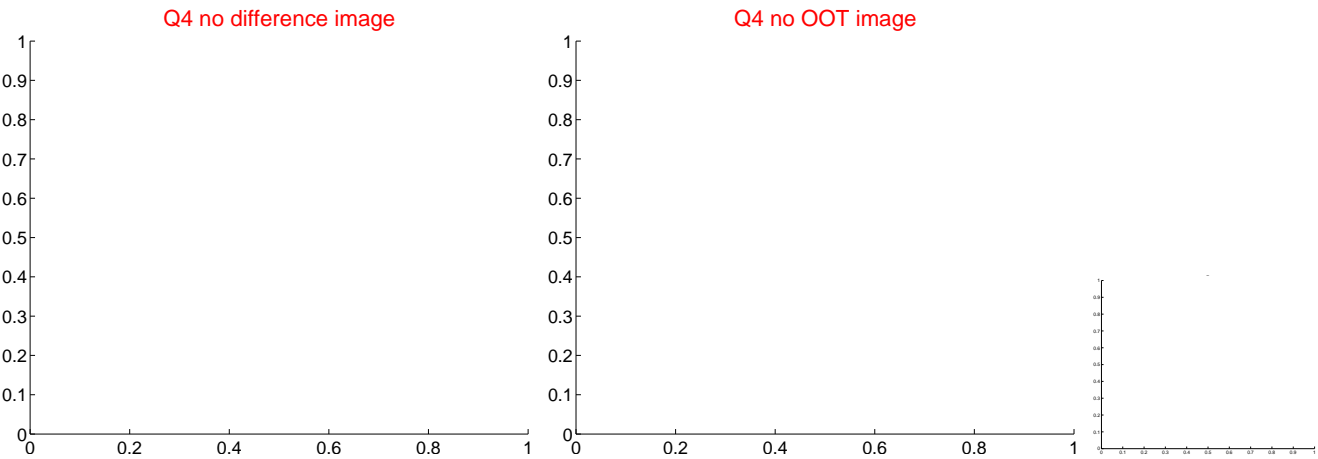
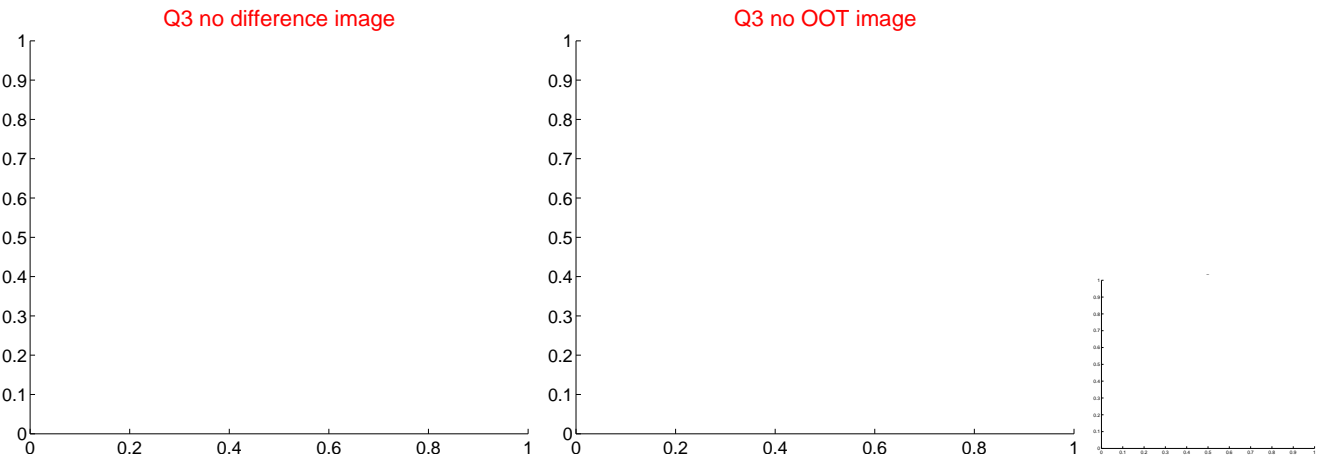
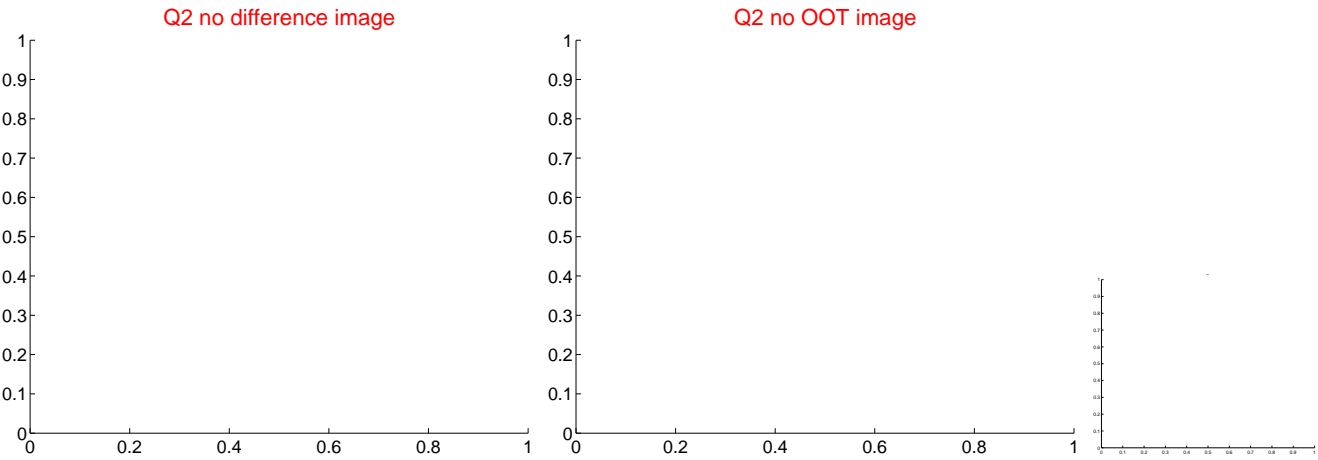
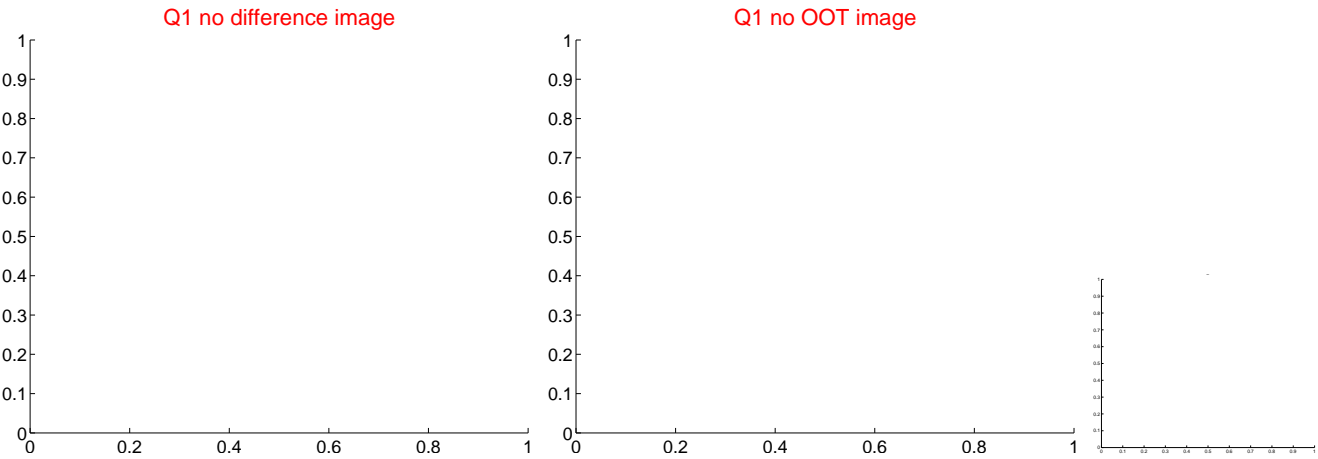


offset from photometric centroids

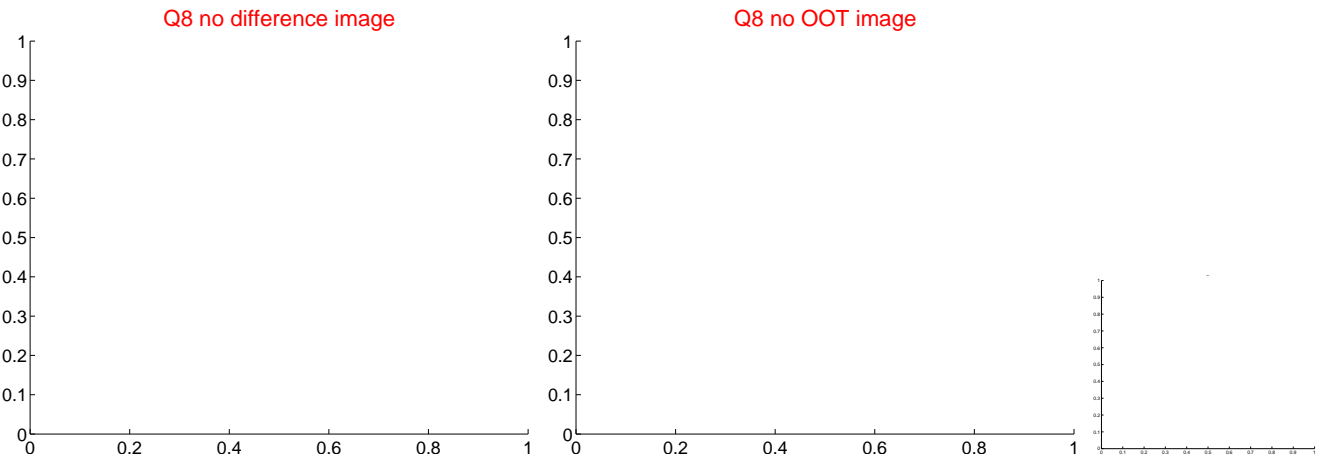
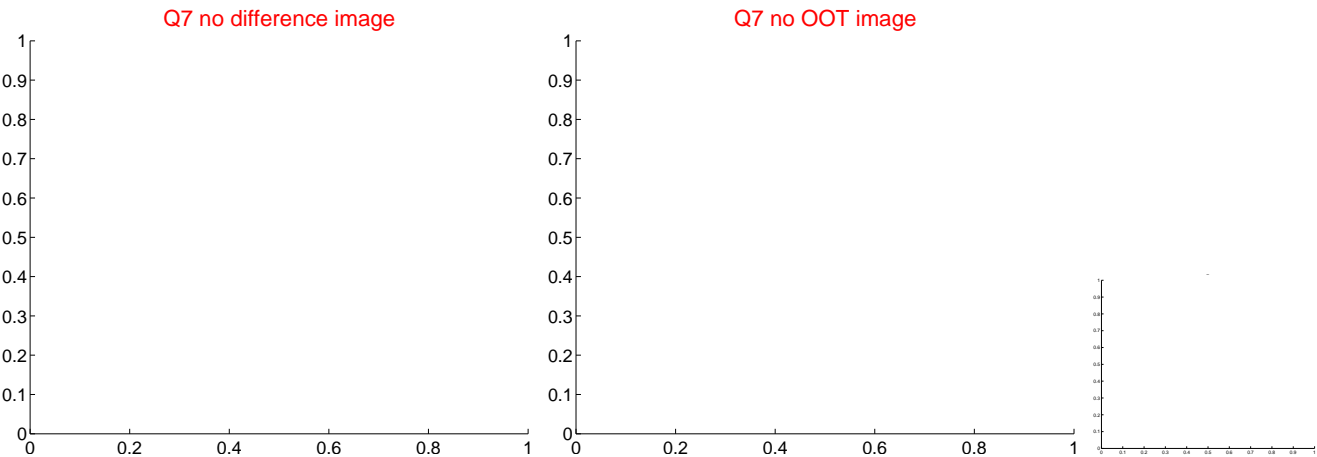
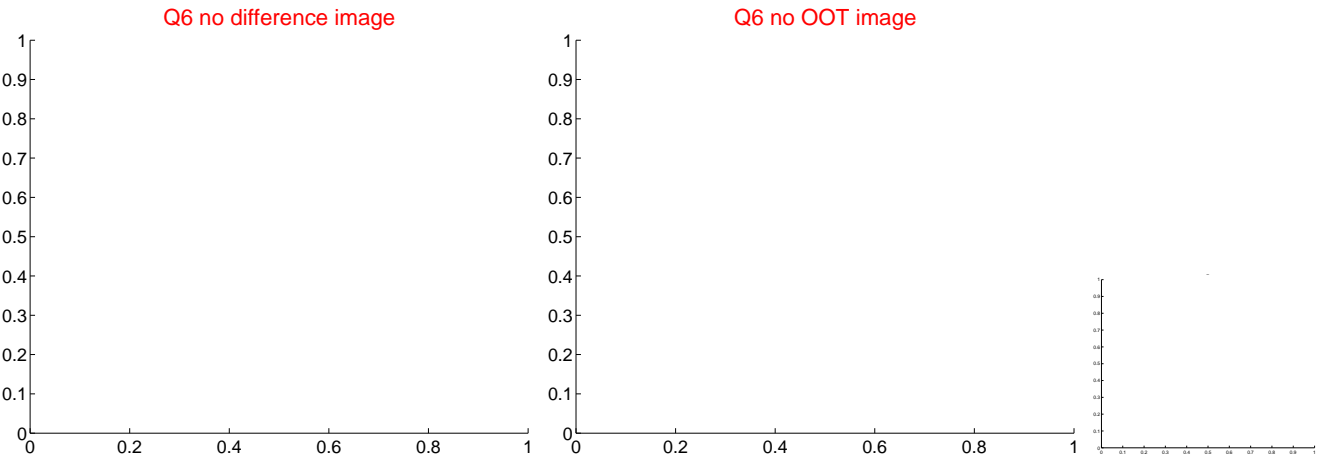
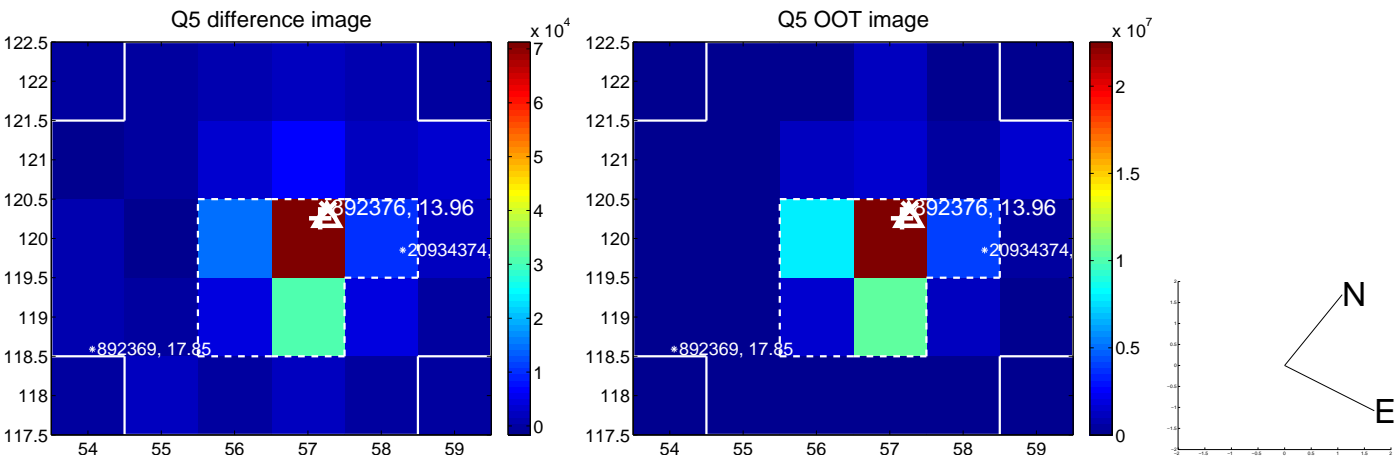


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

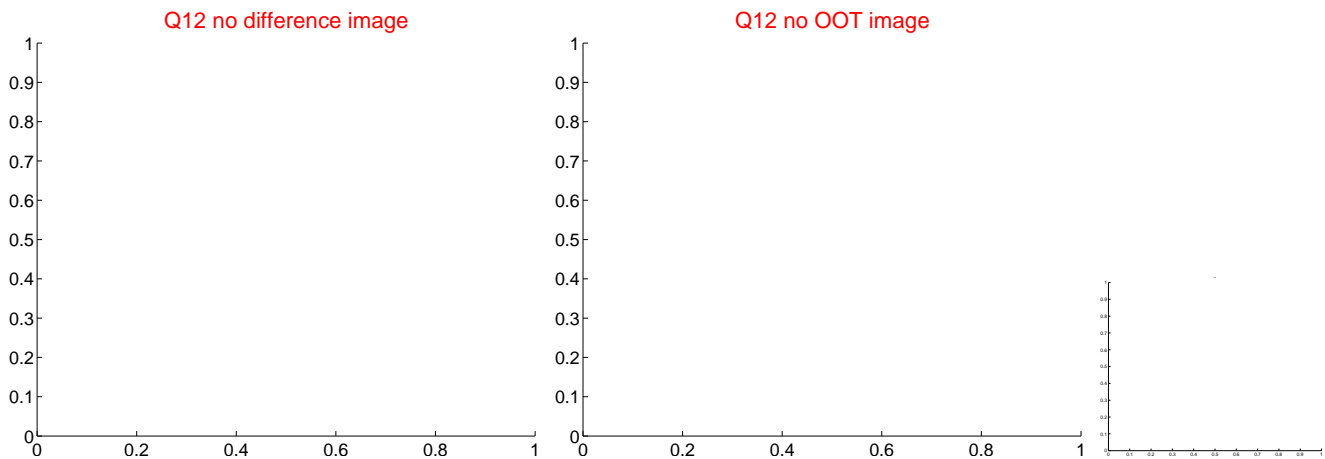
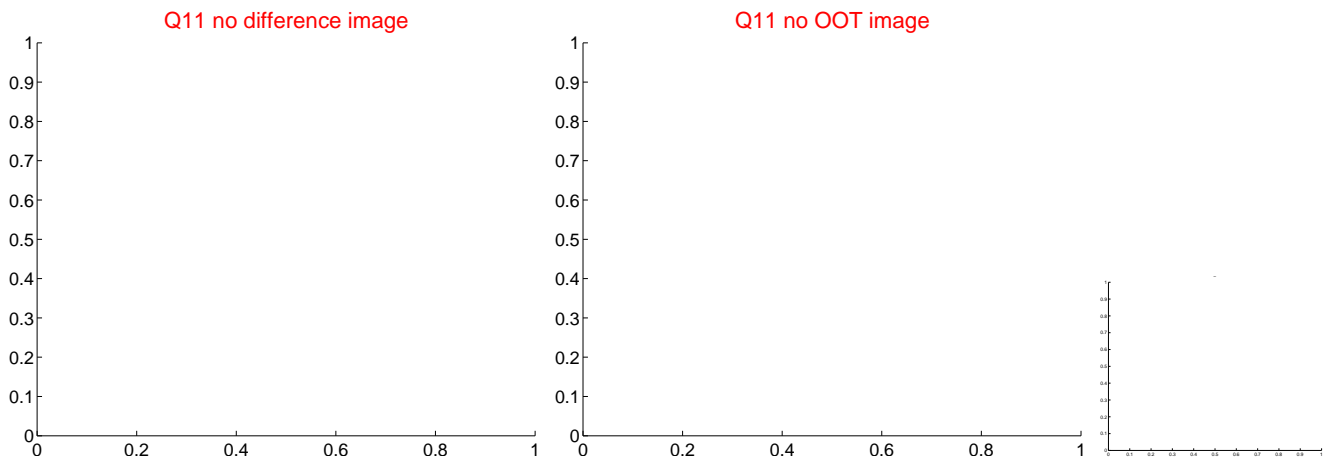
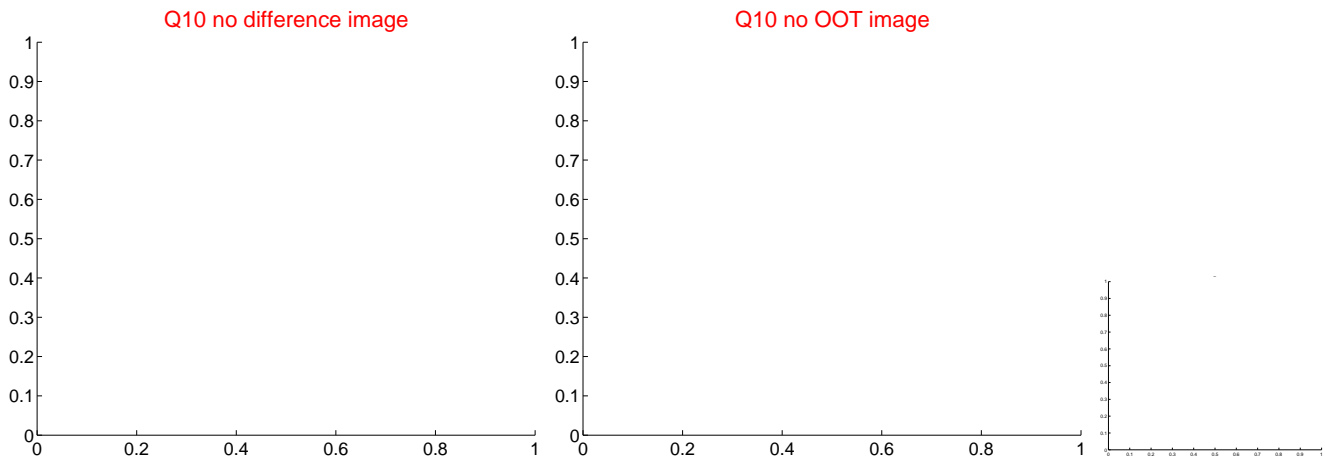
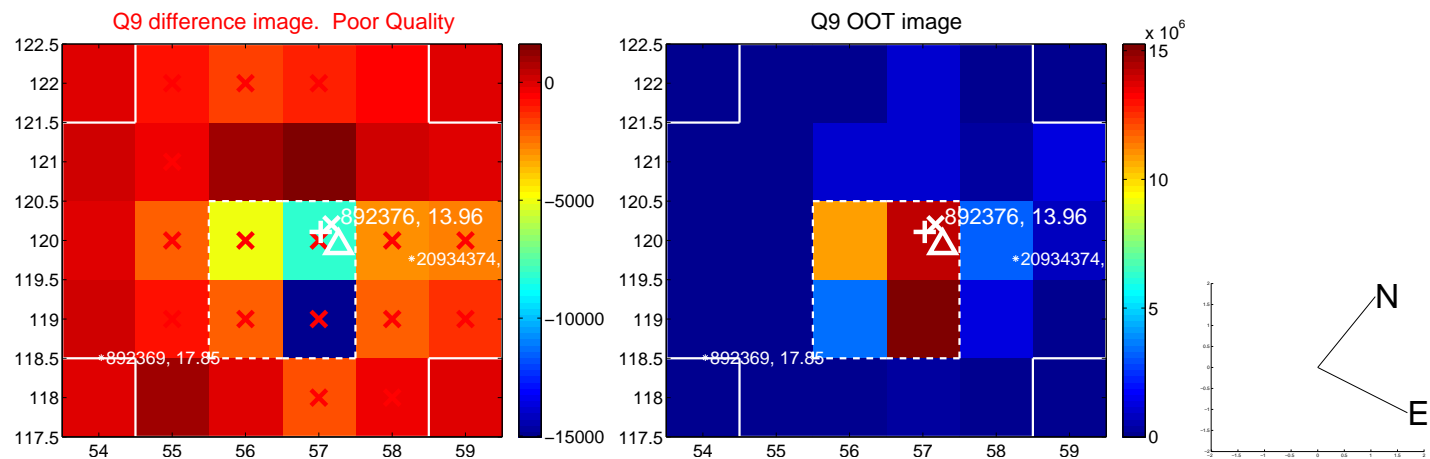
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



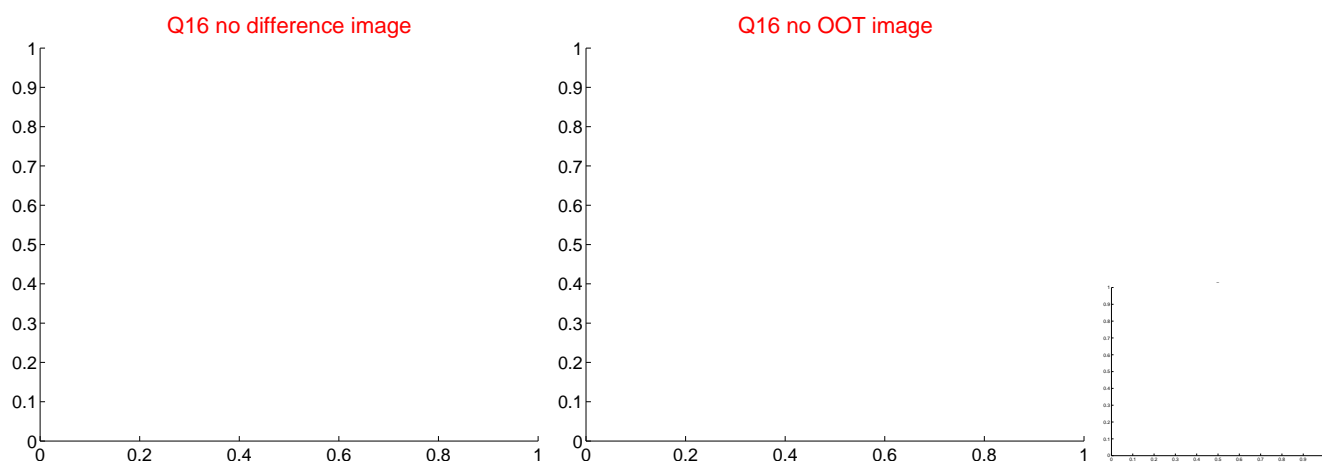
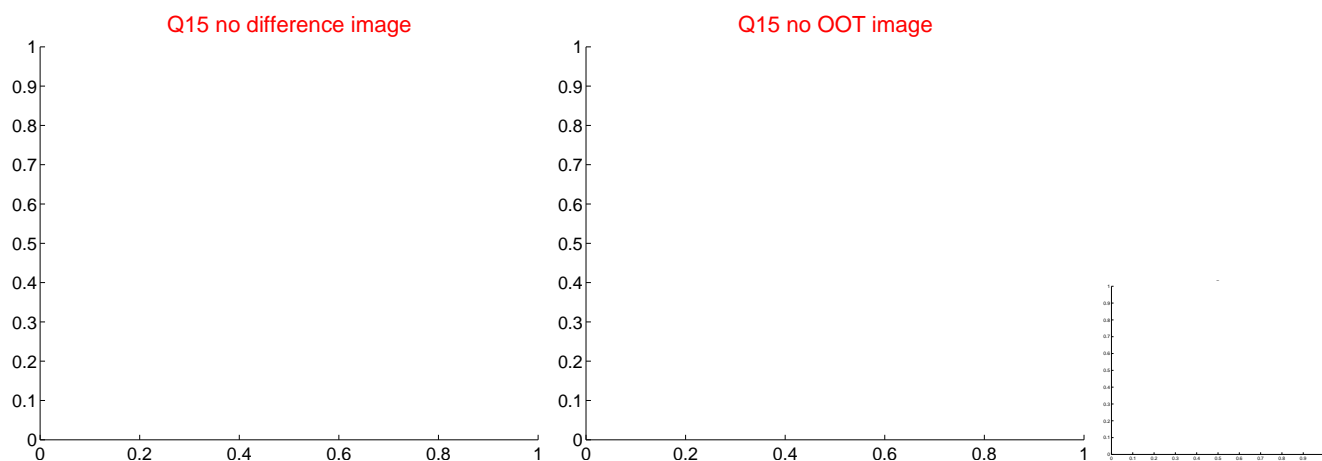
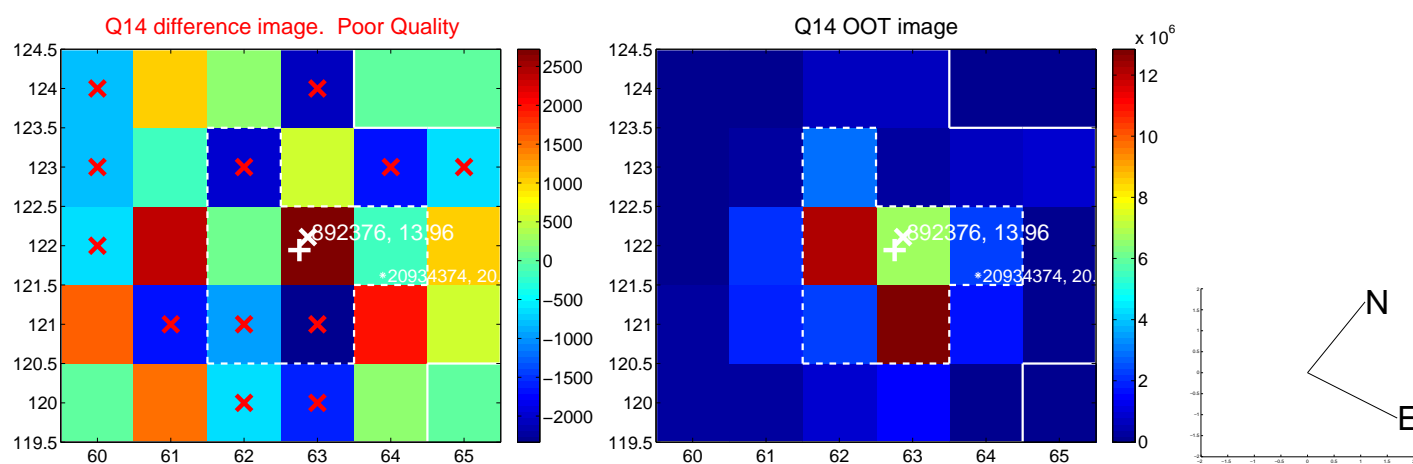
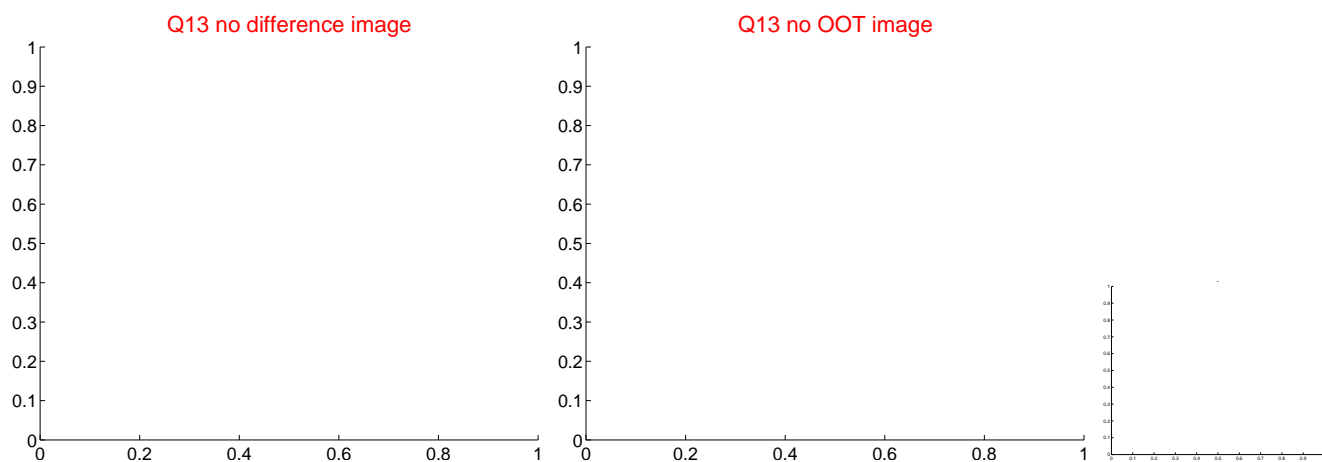
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



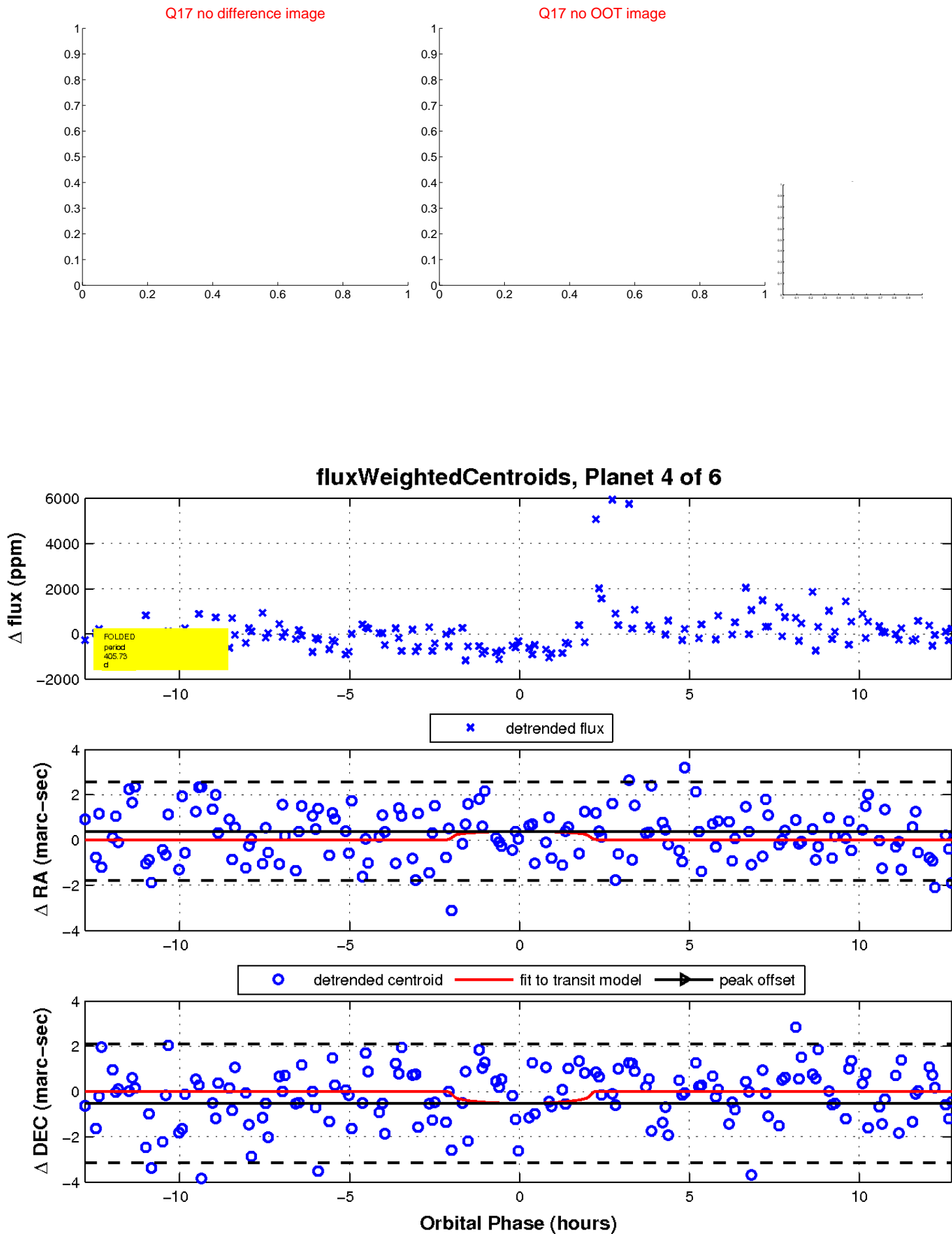
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

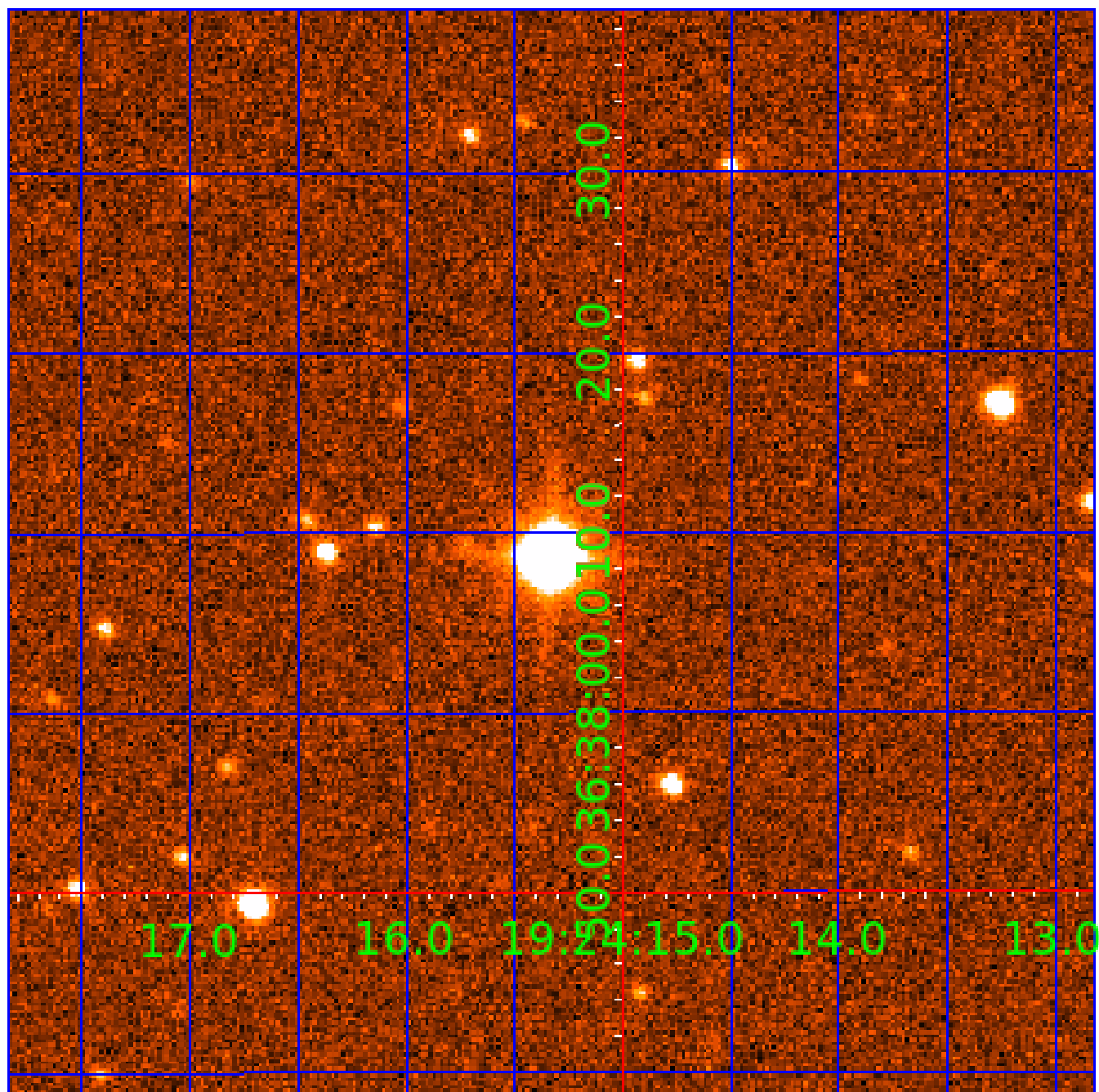


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000892376

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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000892376-02	OBS	No	1.021880	131.811576	91.2	5.994	9.8	13.6	0.60	3973	0.69	289.74
000892376-03	OBS	No	85.741133	182.874152	839.5	12.500	21.6	-1.0	0.60	3973	1.70	0.79
000892376-04	OBS	No	405.727244	498.041022	1490.5	4.279	13.1	9.3	0.60	3973	2.31	0.10
000892376-05	OBS	No	126.080798	201.665496	787.6	12.641	11.3	7.4	0.60	3973	1.76	0.47
000892376-06	OBS	No	64.517819	188.638291	675.4	3.000	10.6	-1.0	0.60	3973	1.52	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000892376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

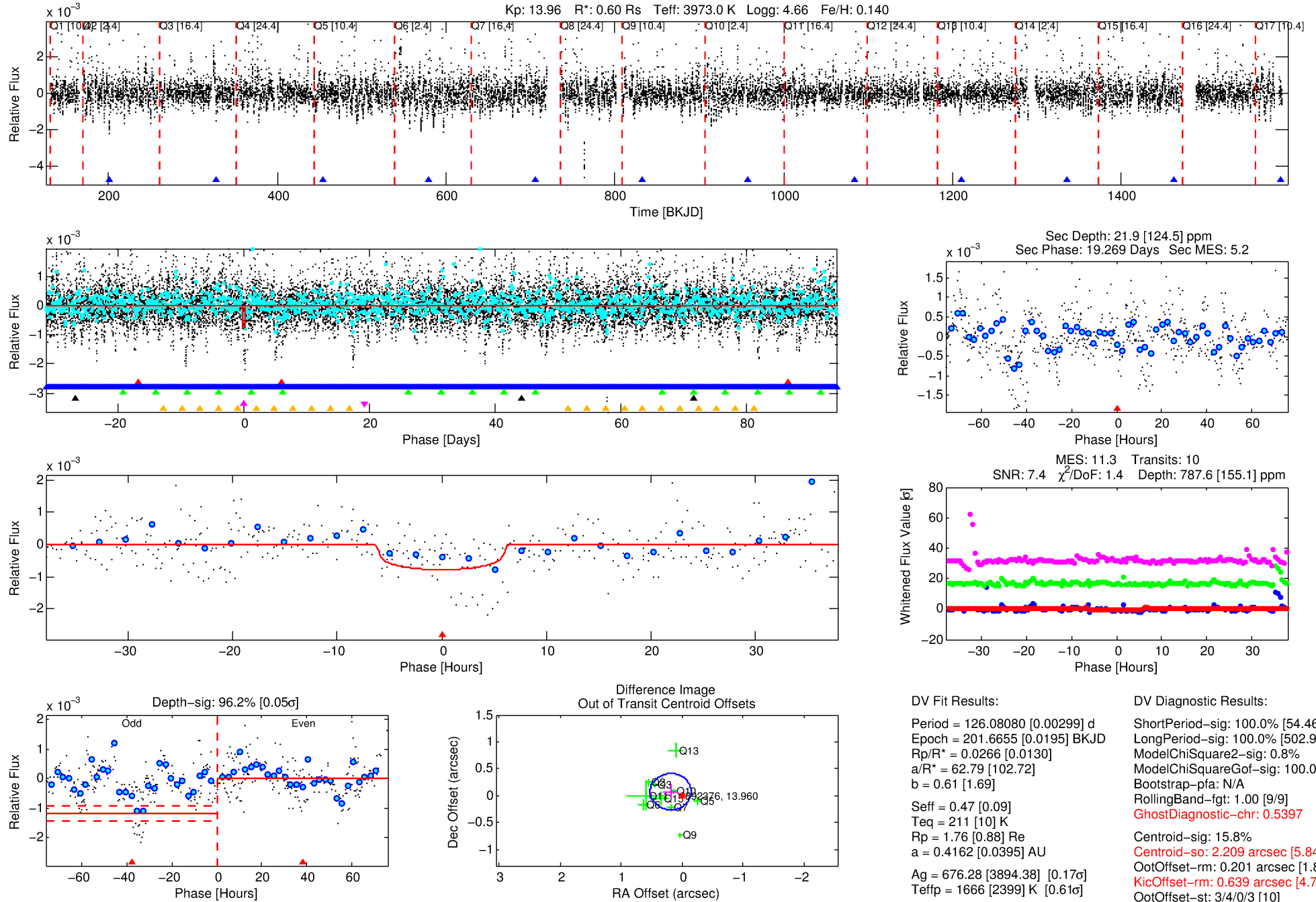
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-05

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 5 of 6 Period: 126.081 d



DV Fit Results:

Period = 126.0800 [0.00299] d
Epoch = 201.6655 [0.0195] BKJD
Rp/R* = 0.0266 [0.0130]
a/R* = 62.79 [102.72]
b = 0.61 [1.69]
Seff = 0.47 [0.09]
Teq = 211 [10] K
Rp = 1.76 [0.88] Re
a = 0.4162 [0.0395] AU
Ag = 676.28 [3894.38] [0.17 σ]
Teffp = 1666 [2399] K [0.61 σ]

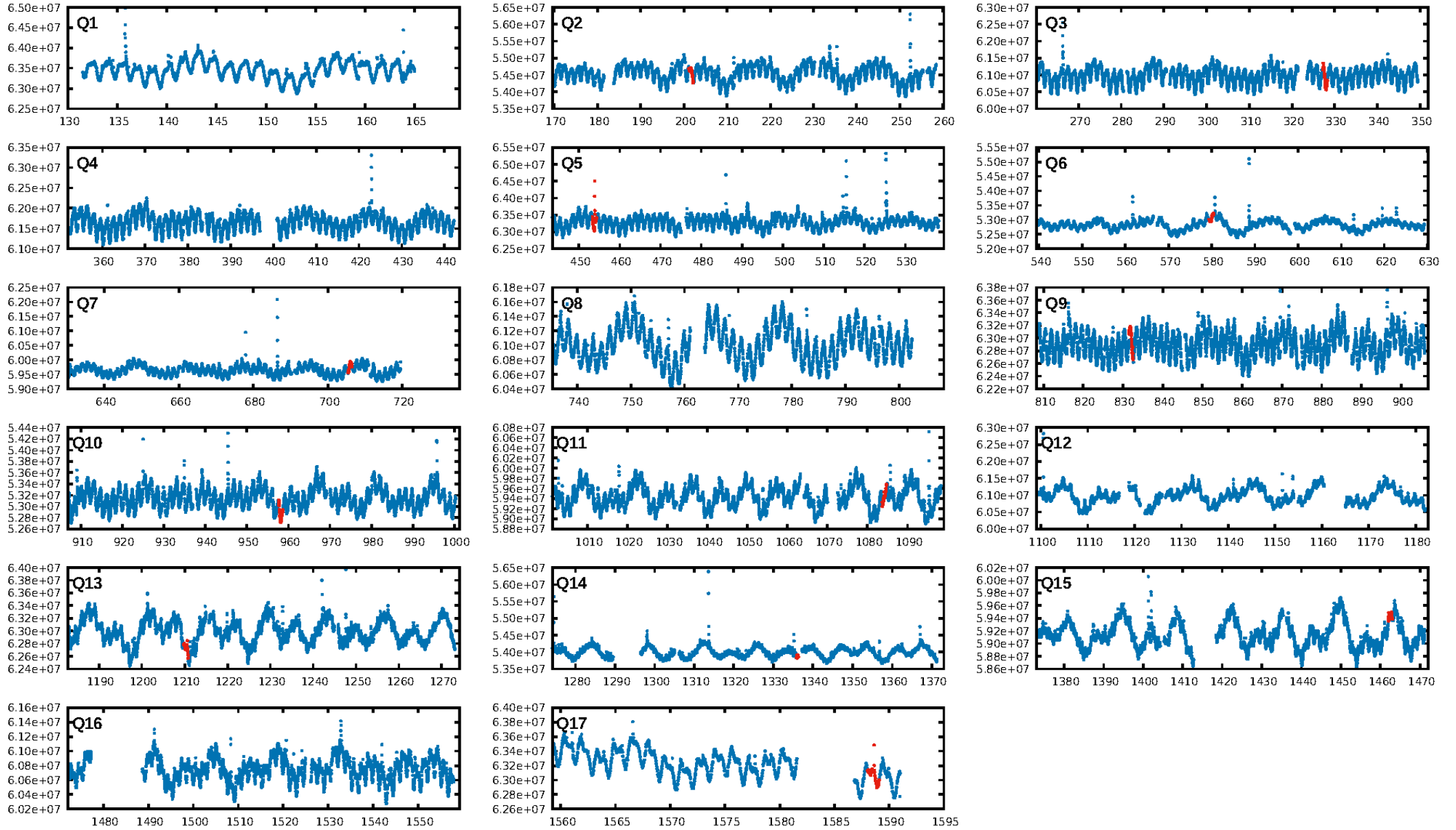
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [54.46 σ]
LongPeriod-sig: 100.0% [502.91 σ]
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.5397
Centroid-sig: 15.8%
Centroid-so: 2.209 arcsec [5.84 σ]
OotOffset-rm: 0.201 arcsec [1.80 σ]
KicOffset-rm: 0.639 arcsec [4.71 σ]
OotOffset-st: 3/4/0/3 [10]
KicOffset-st: 3/4/0/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.00 [0/10]

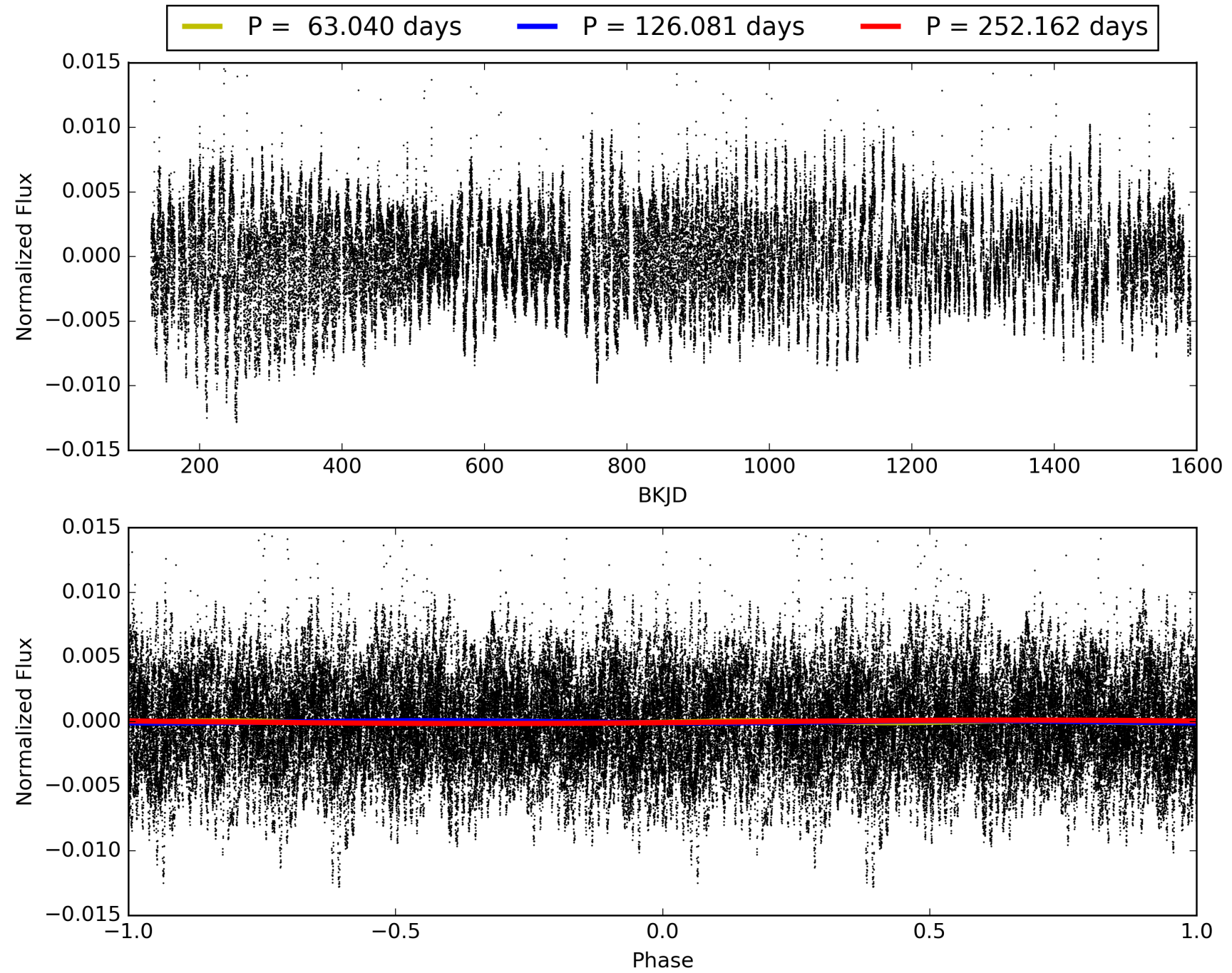
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:47:20 Z

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

TCE 000892376-05, PDC Light Curves

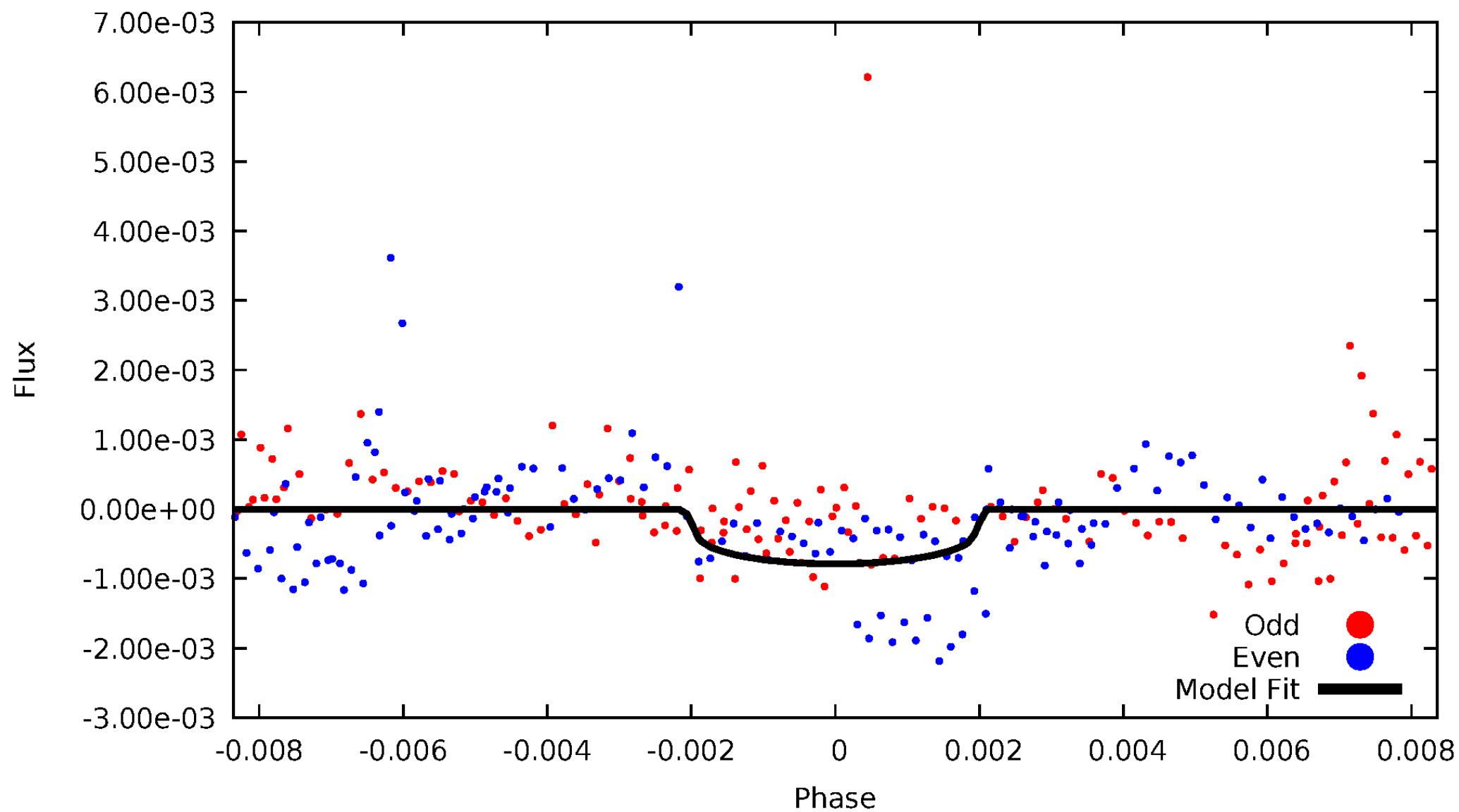


TCE 000892376-05



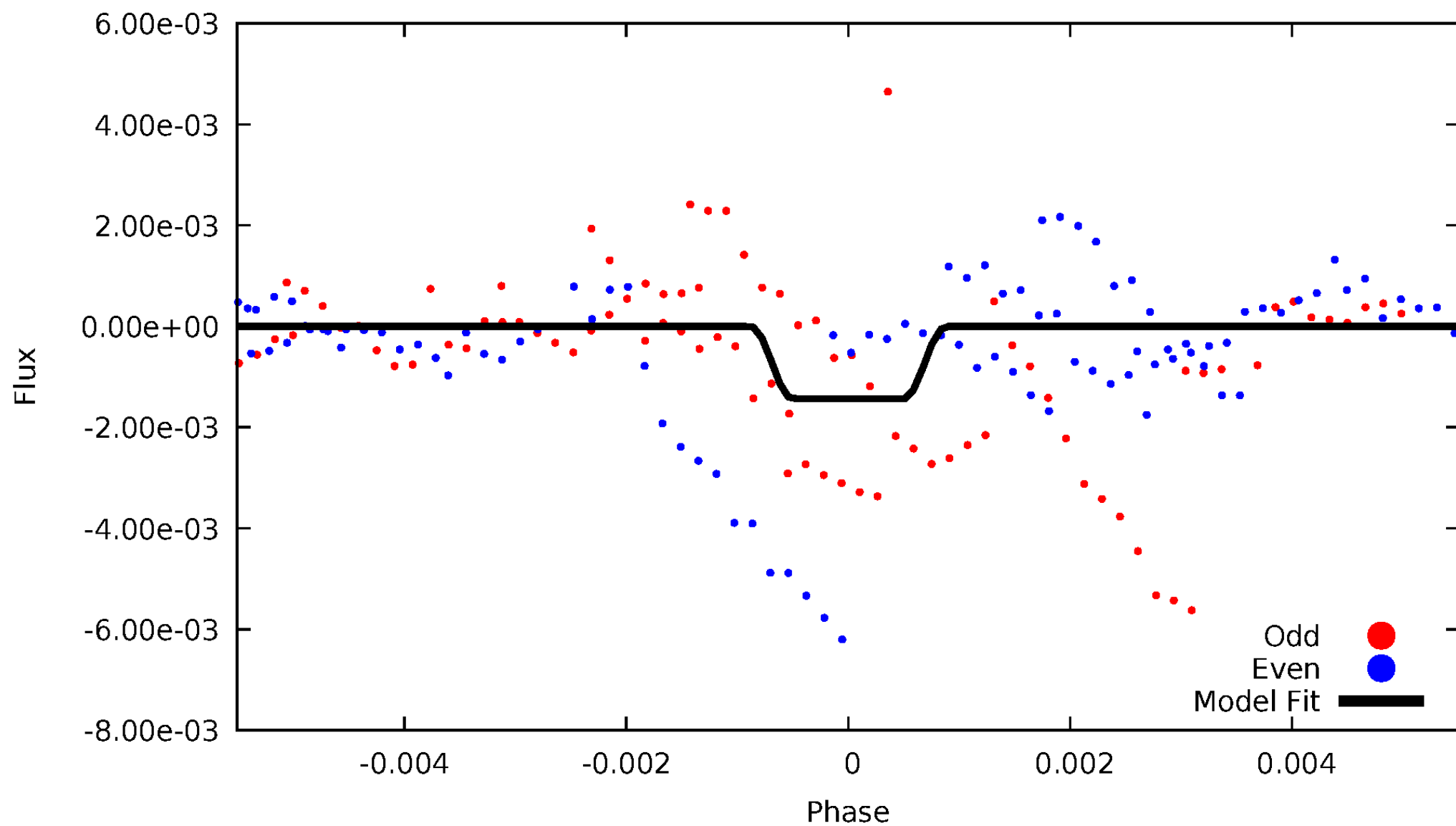
DV Odd/Even

TCE 000892376-05



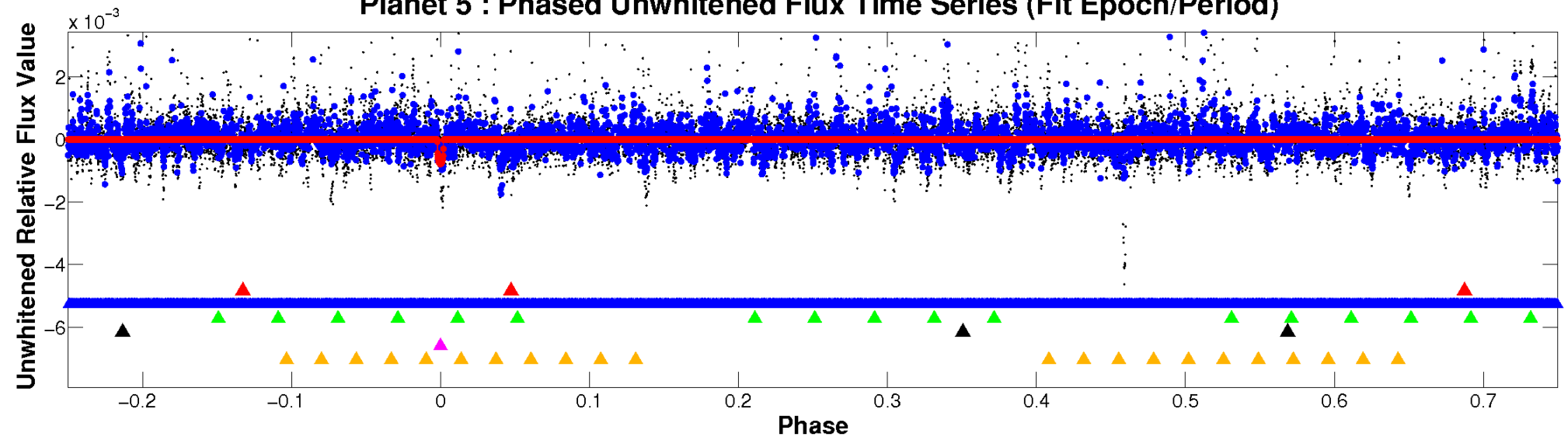
ALT Odd/Even

TCE 000892376-05

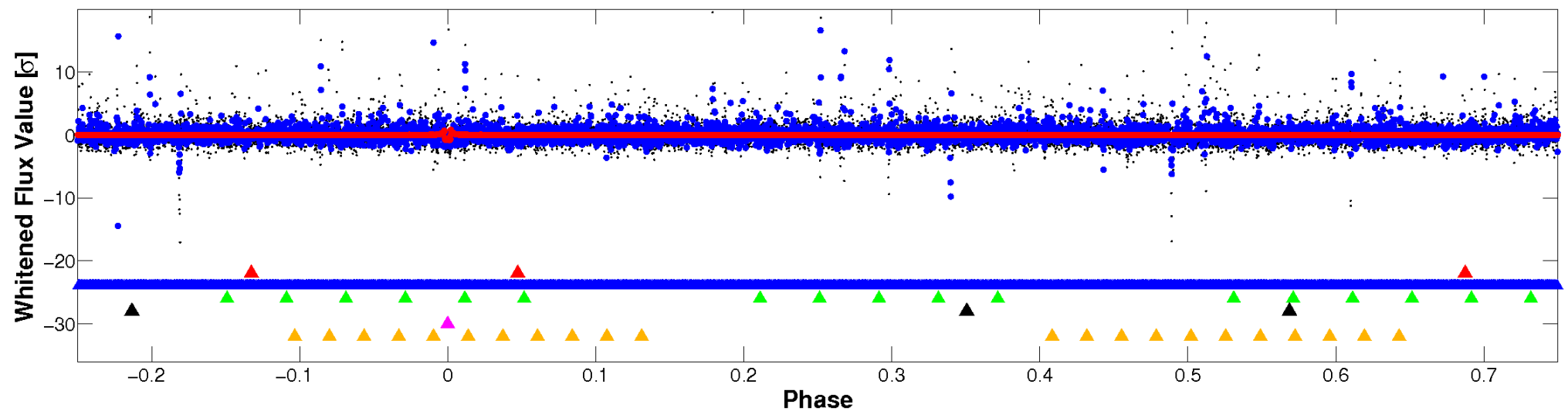


Non-Whitened Vs. Whitened Light Curve

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

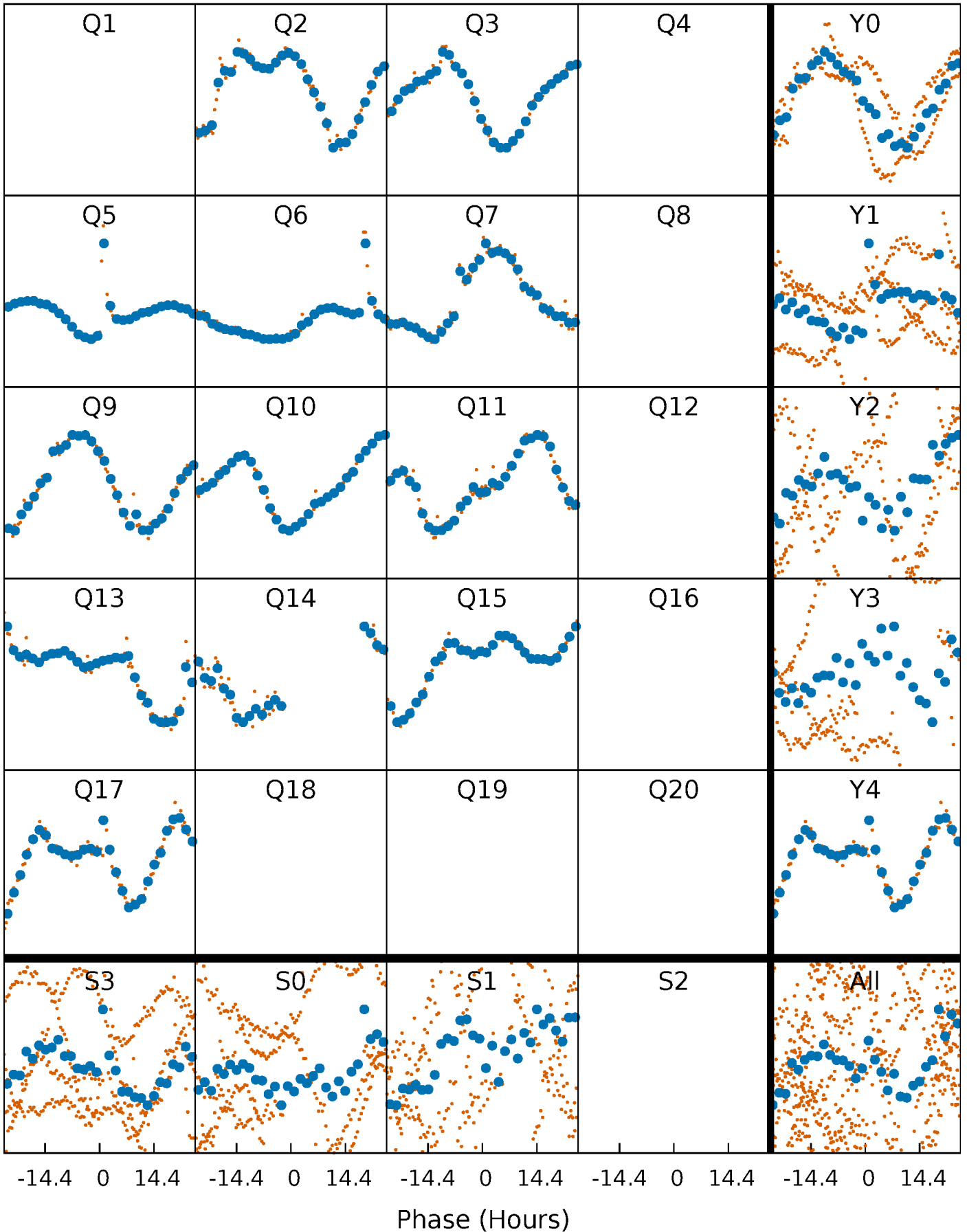


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



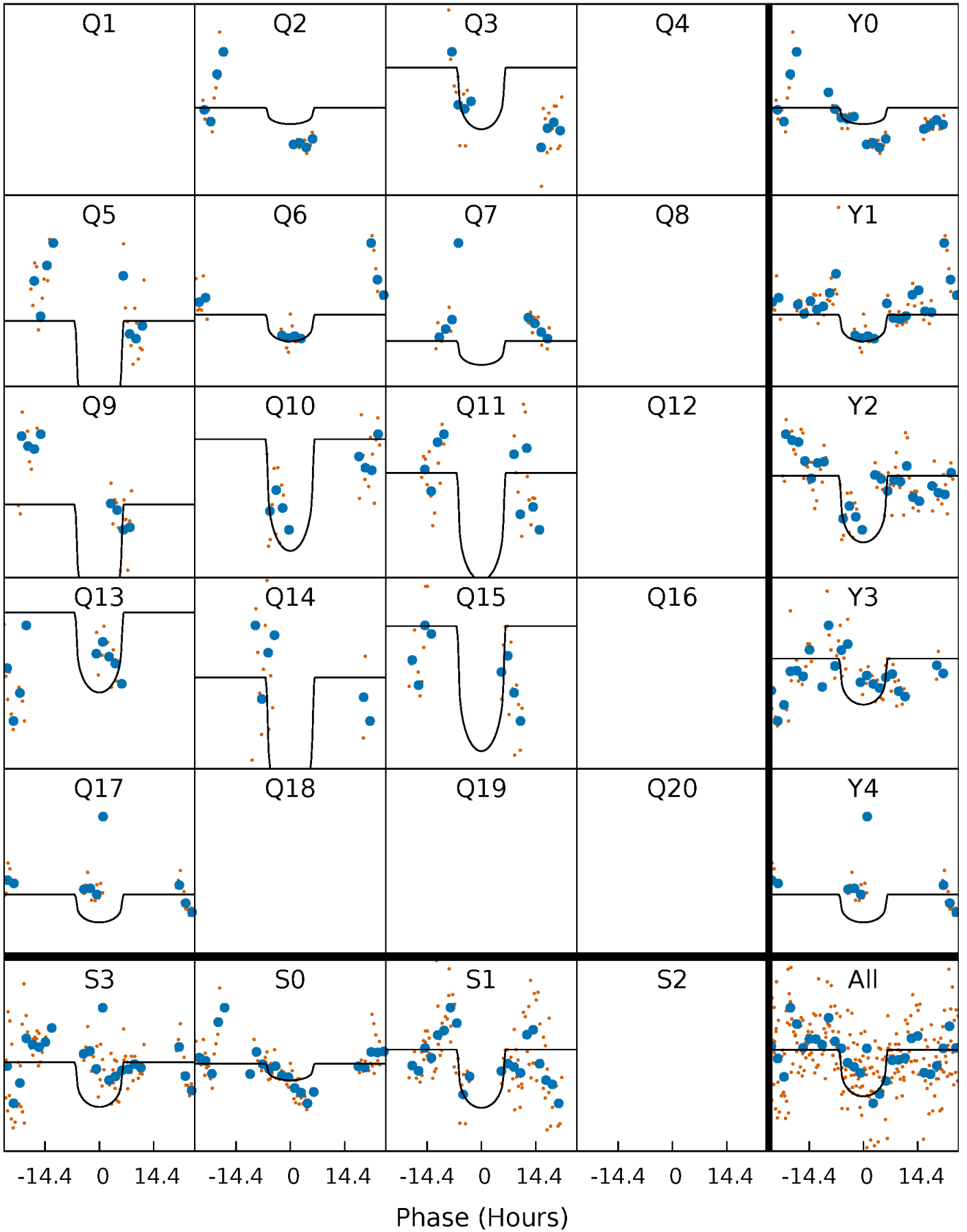
PDC Quarter-Phased Transit Curves

TCE 000892376-05 $P=126.080798$ Days $T_0=201.665496$ (BKJD)



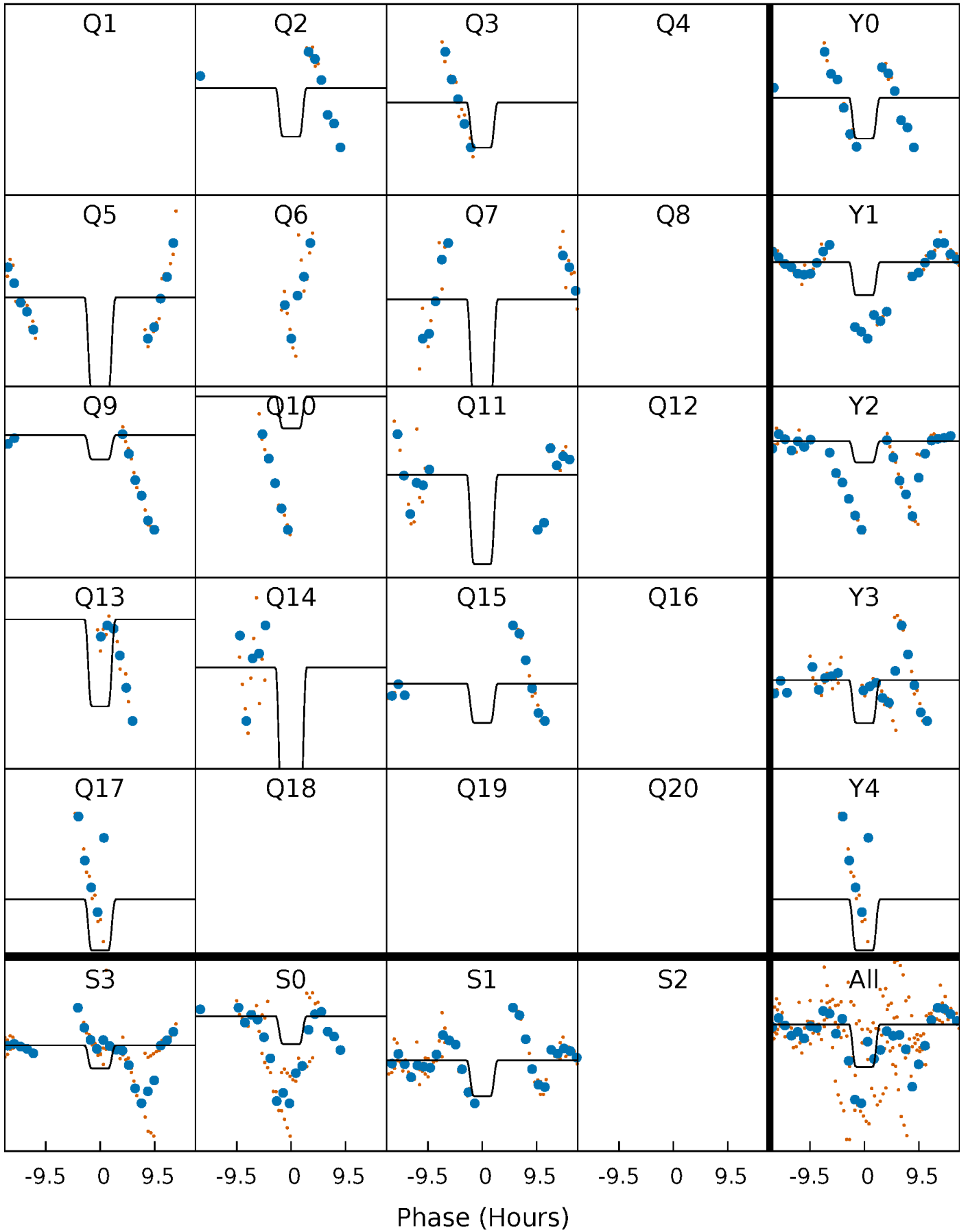
DV Quarter-Phased Transit Curves

TCE 000892376-05 $P=126.080798$ Days $T_0=201.665496$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

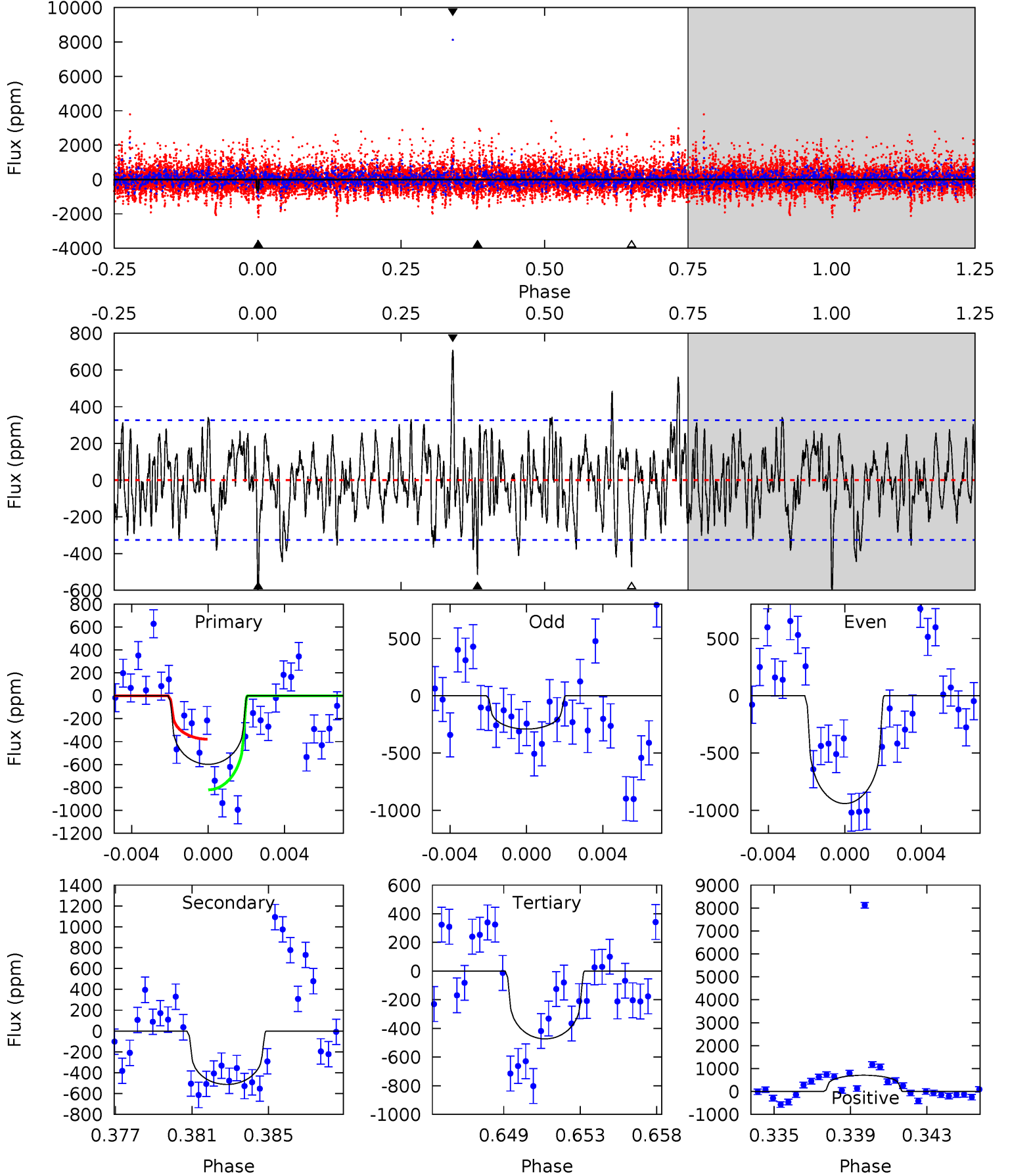
TCE 000892376-05 $P=126.088688$ Days $T_0=201.590057$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-05, $P = 126.080798$ Days, $E = 75.584698$ Days

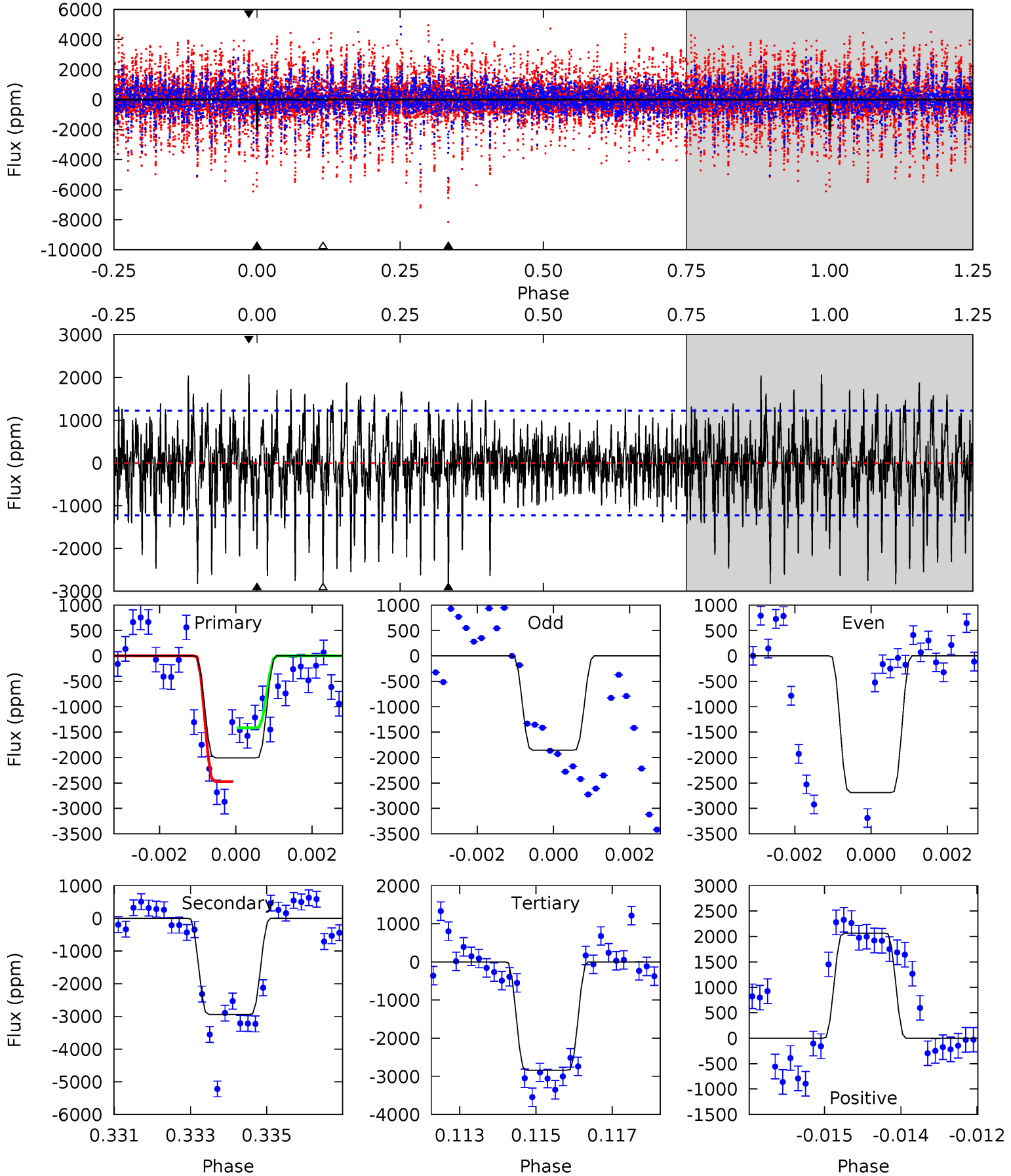
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.53	8.16	7.53	11.3	5.19	2.86	2.54	2.00	-1.75	0.63	-3.12	4.55	0.84	0.54	3.55



Alt Model-Shift Uniqueness Test

000892376-05, P = 126.088688 Days, E = 75.501369 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.79	12.9	12.4	9.05	5.36	3.14	2.96	-3.63	-0.25	0.45	3.83	1.62	1.11	0.41	0



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-513 ± 63	$1.74^{+0.87}_{-0.88}$	292^{+11}_{-13}	3733^{+1104}_{-468}	16430^{+48619}_{-9397}
Alt.	-2940 ± 228	$2.43^{+0.89}_{-0.91}$	292^{+11}_{-13}	4537^{+969}_{-508}	47631^{+70769}_{-21890}

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

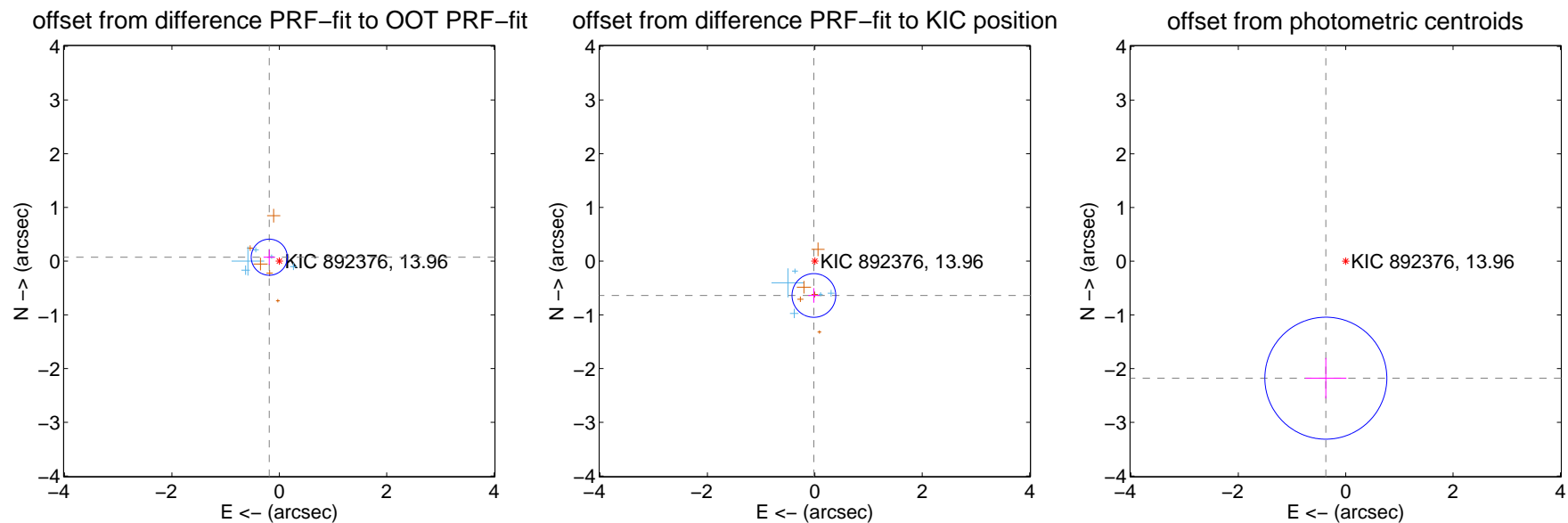
DV Centroid Data

Supplemental centroid analysis for 000892376-05. Kepler magnitude: 13.96. Transit SNR 7.37

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

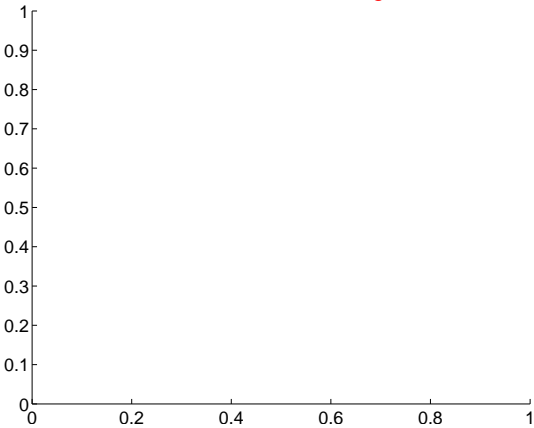
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.201 ± 0.112	1.80	0.187 ± 0.107	0.073 ± 0.143
PRF-fit source offset from KIC position	0.639 ± 0.136	4.71	0.017 ± 0.104	-0.639 ± 0.136
photometric centroid source offset	2.21 ± 0.38	5.84	0.37 ± 0.38	-2.18 ± 0.38



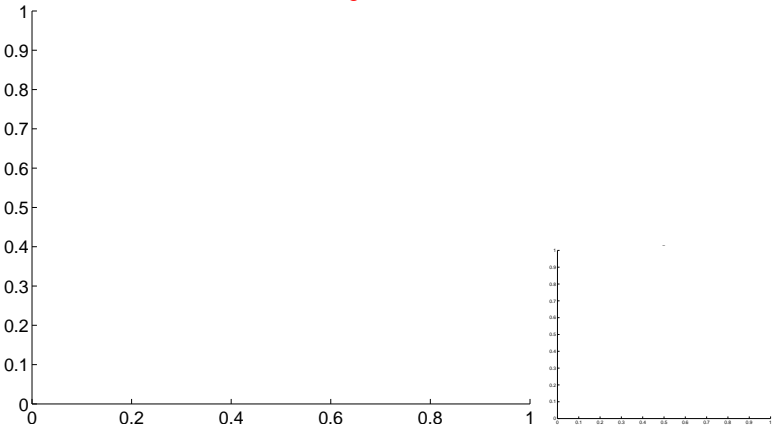
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

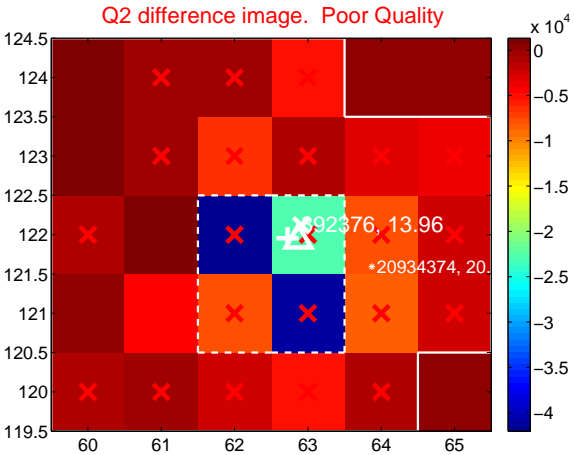
Q1 no difference image



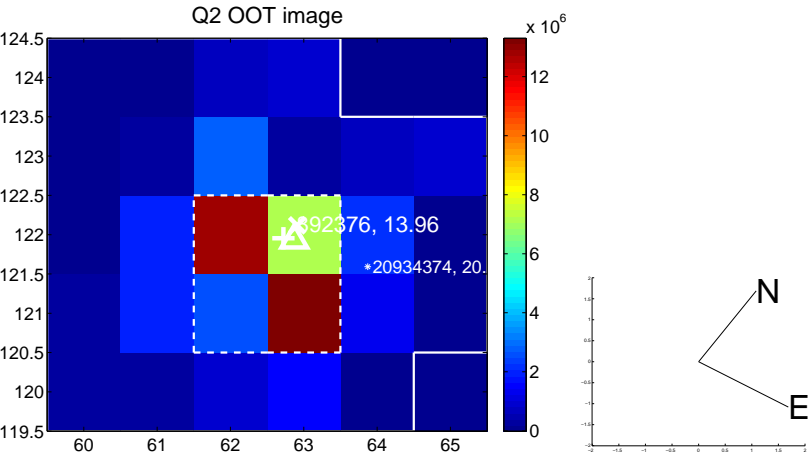
Q1 no OOT image



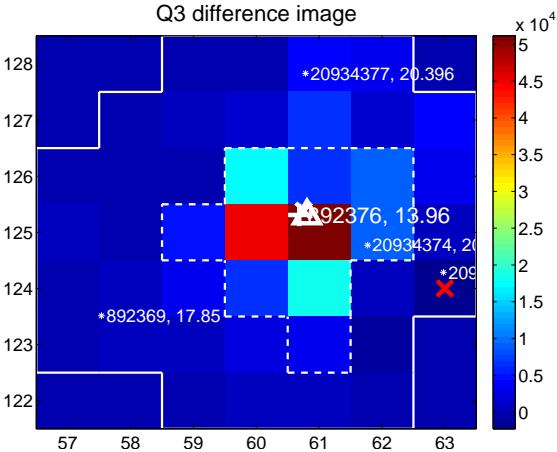
Q2 difference image. Poor Quality



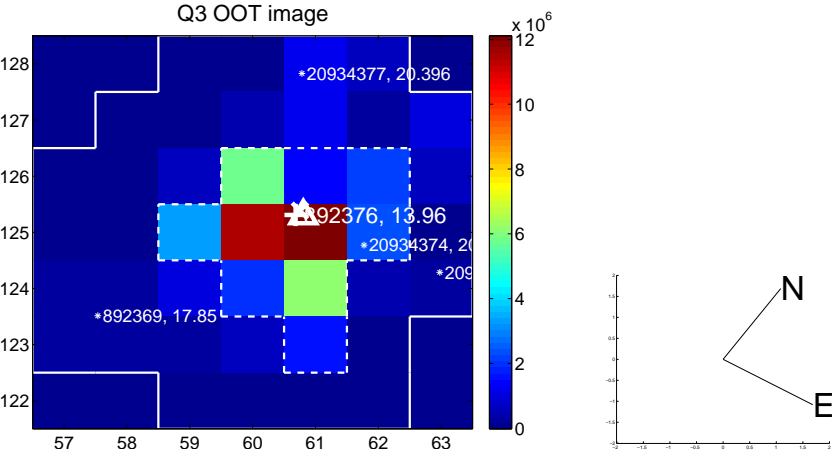
Q2 OOT image



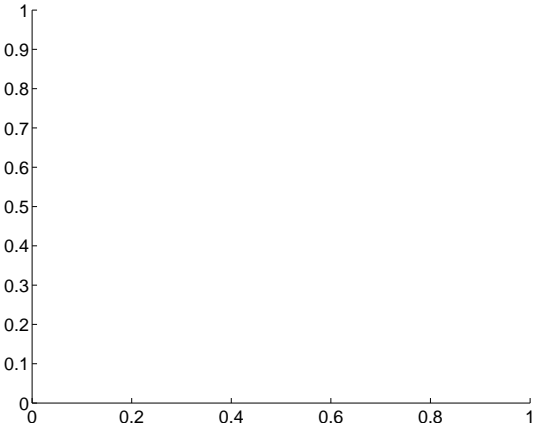
Q3 difference image



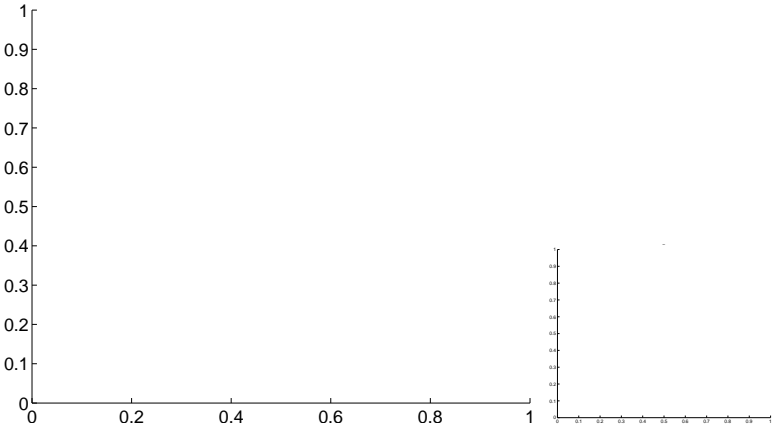
Q3 OOT image



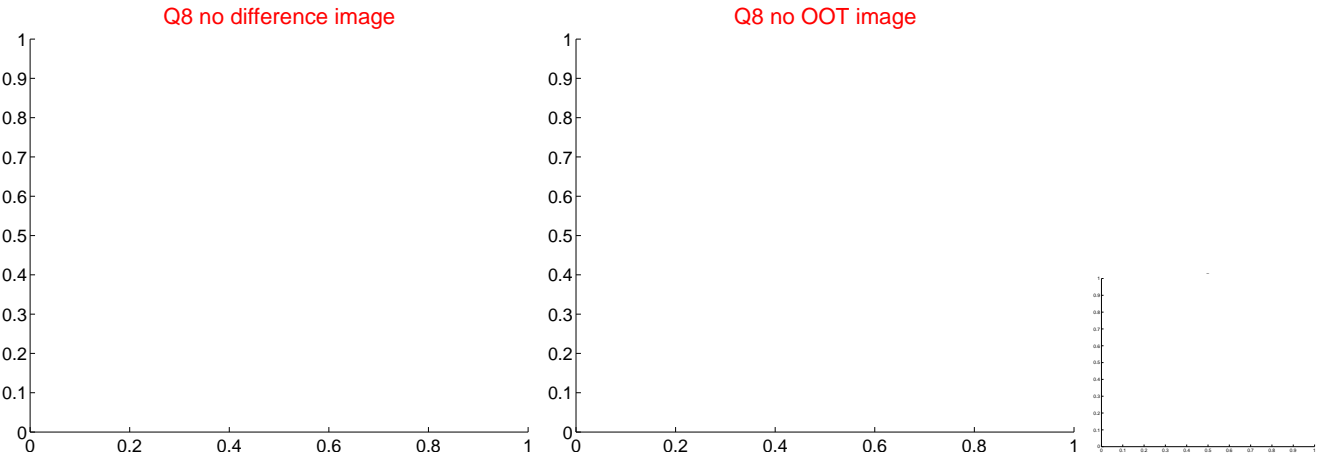
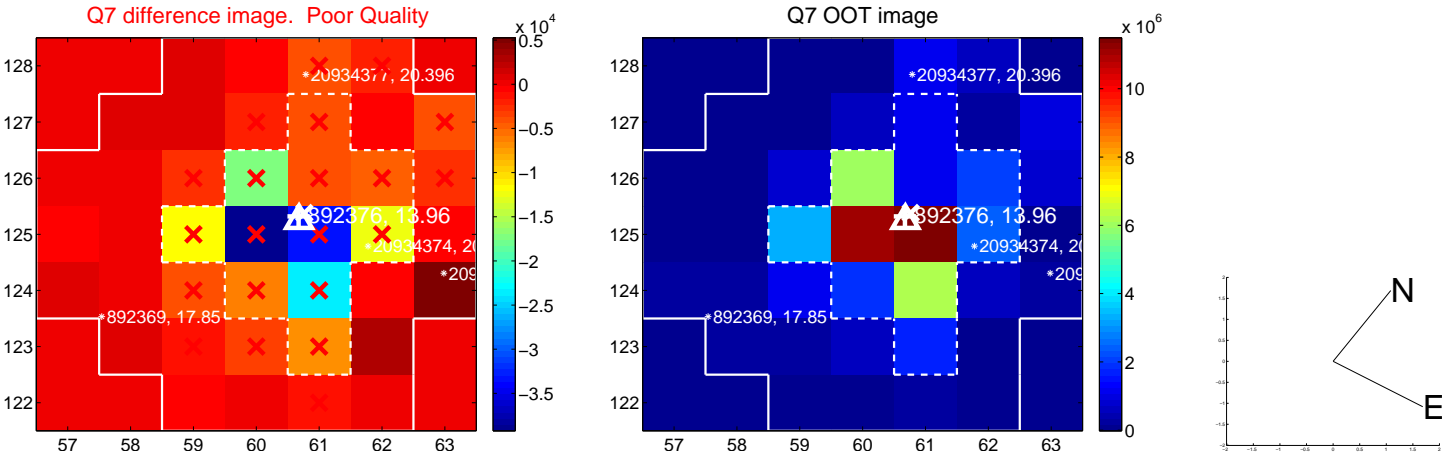
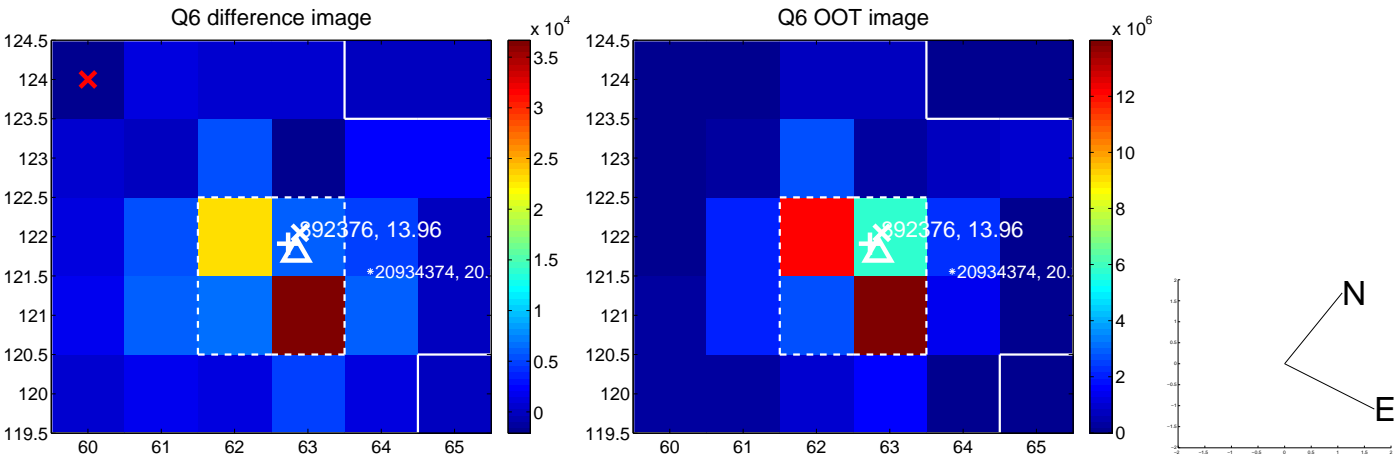
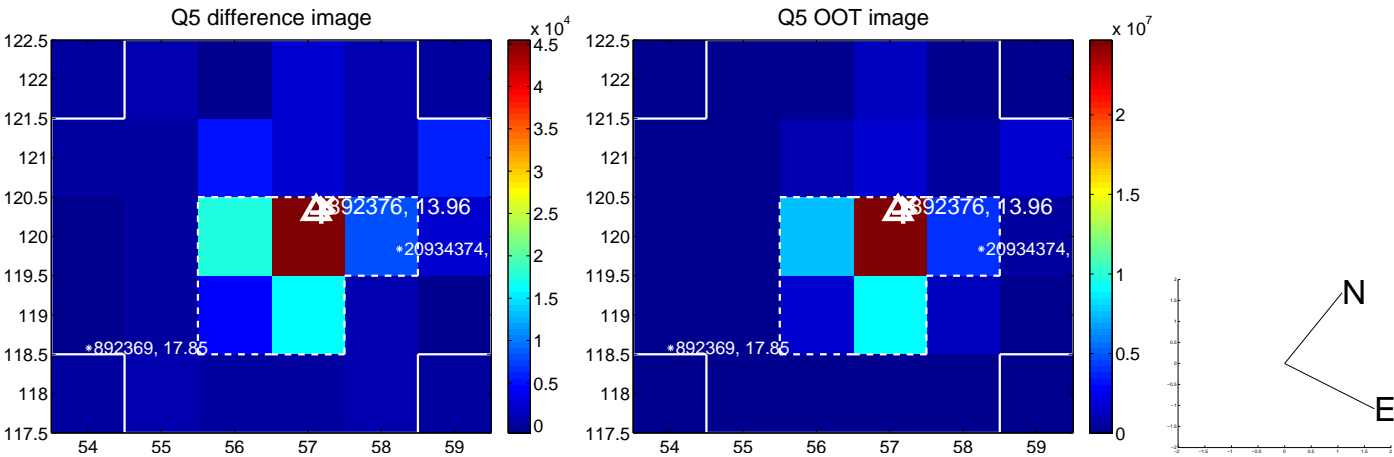
Q4 no difference image



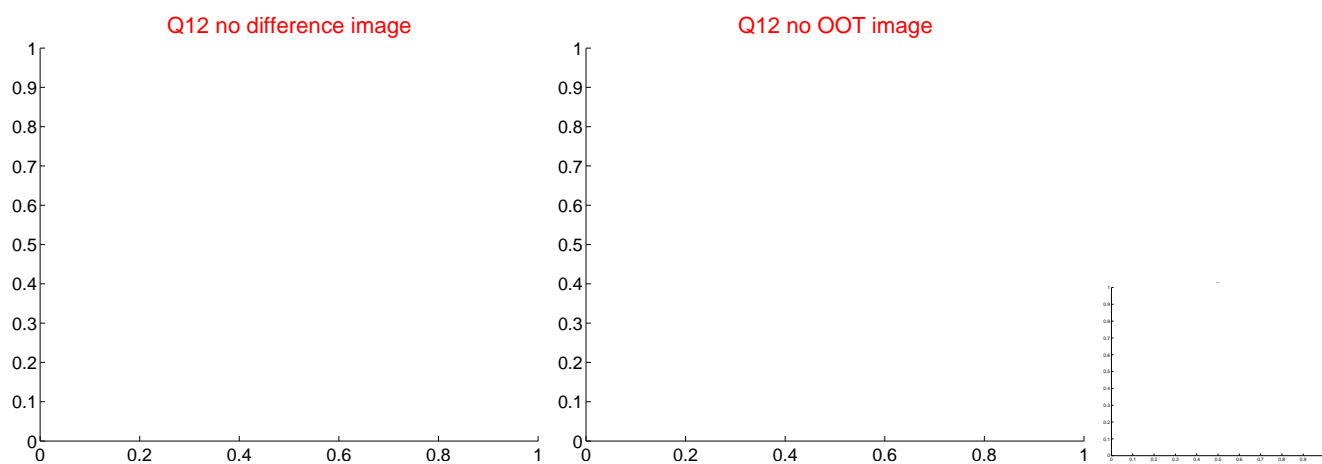
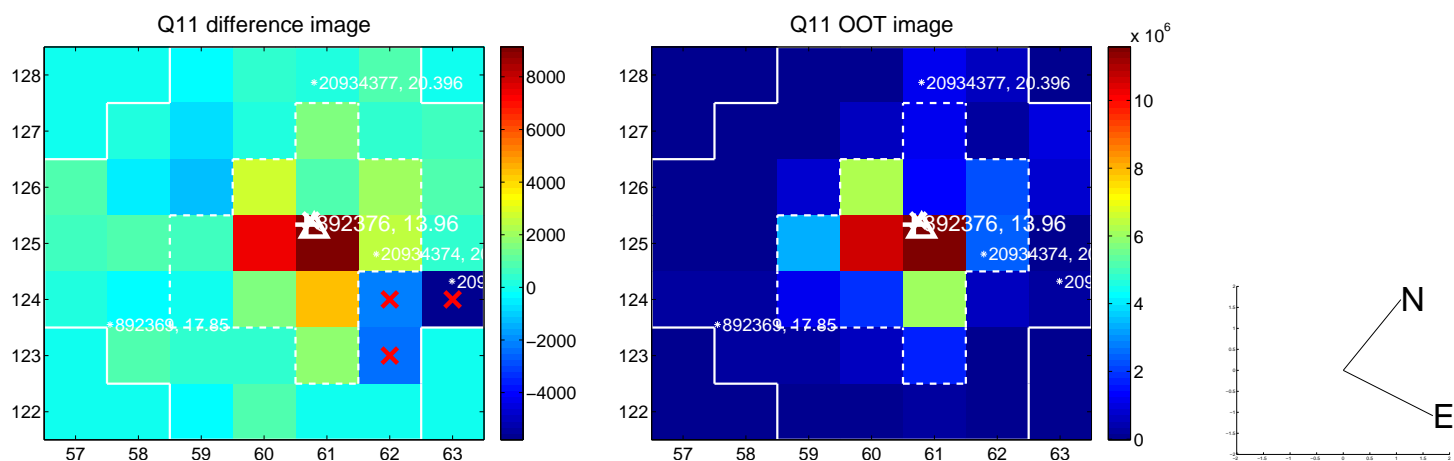
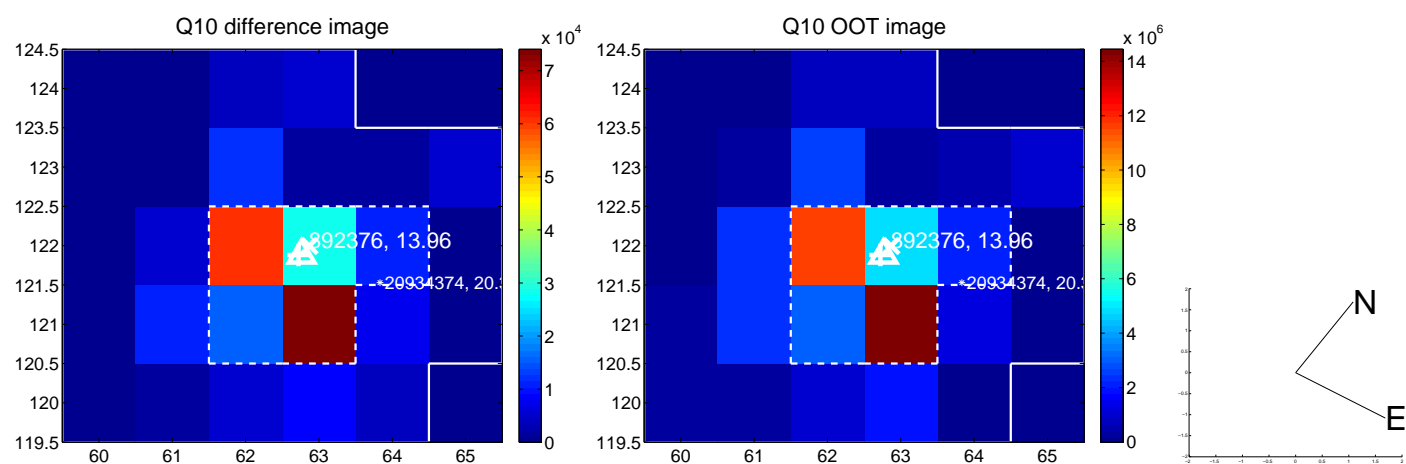
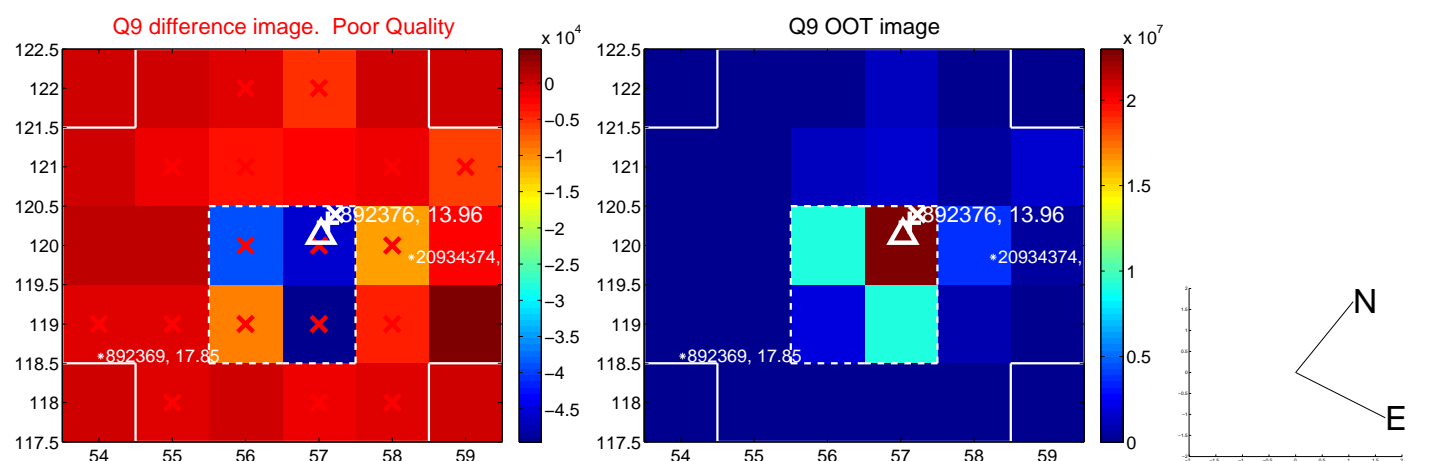
Q4 no OOT image



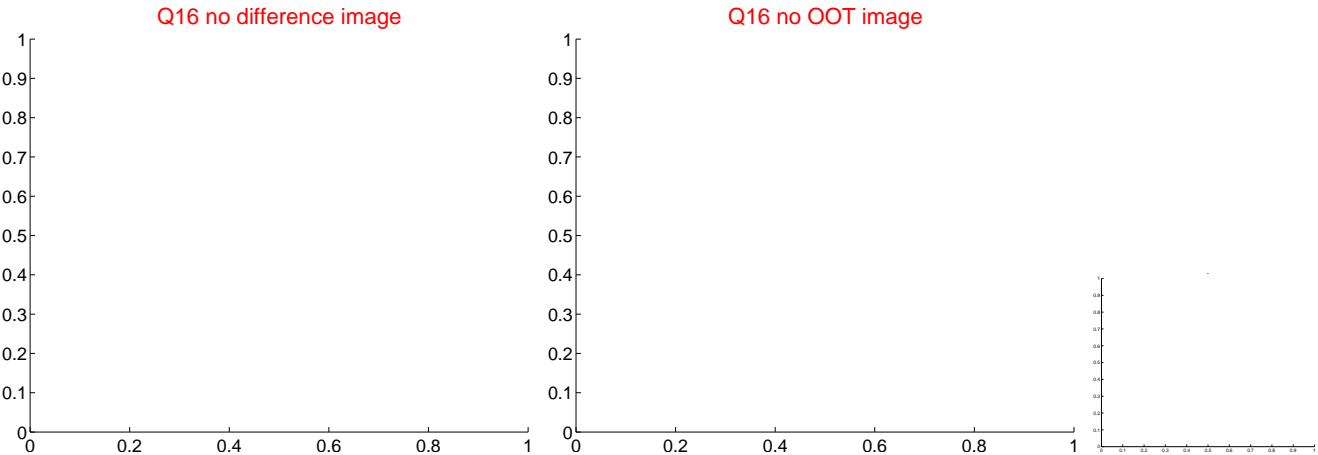
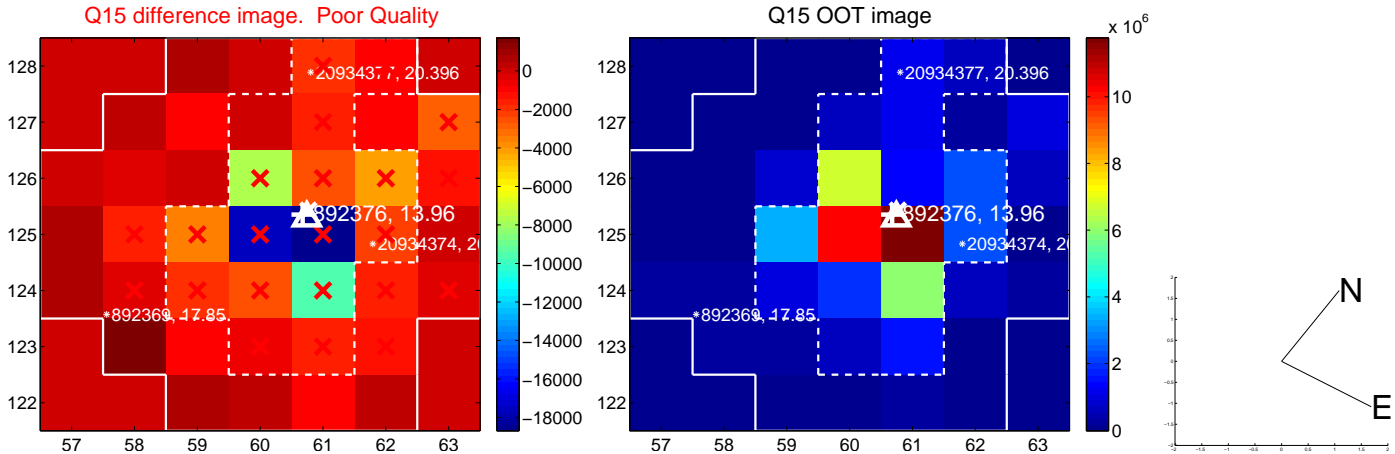
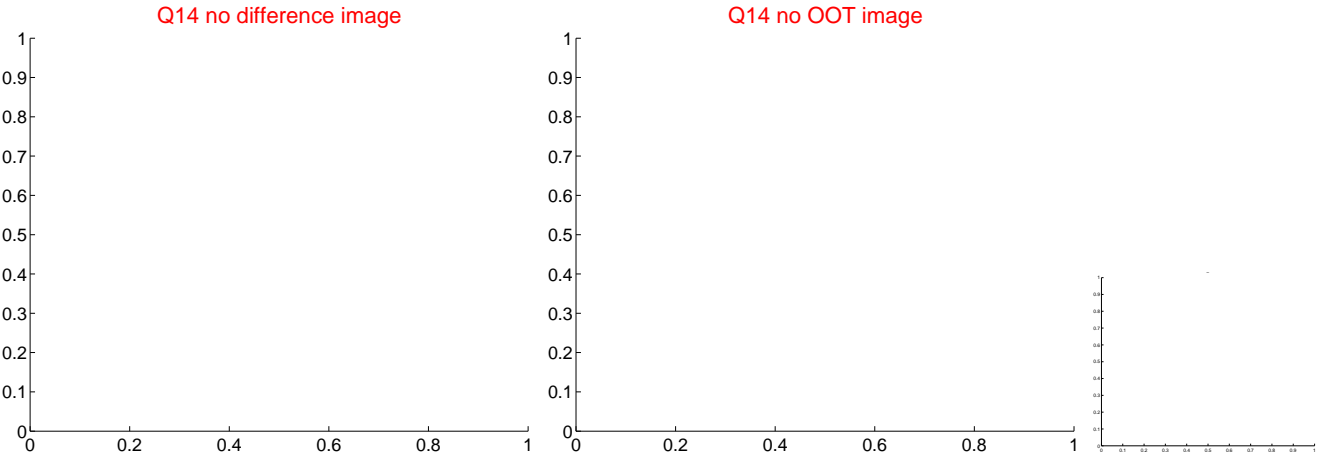
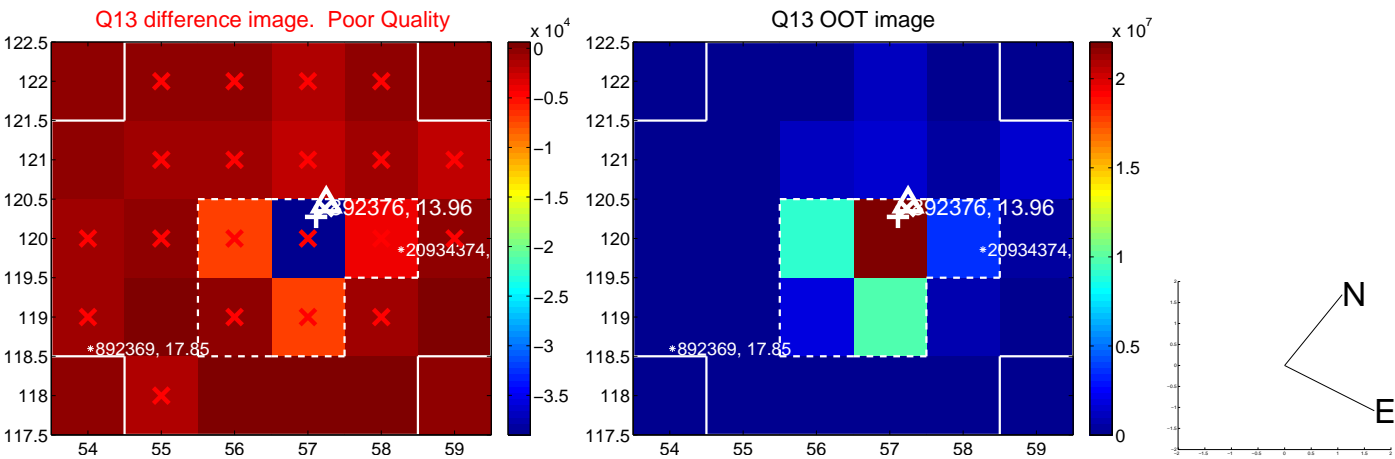
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



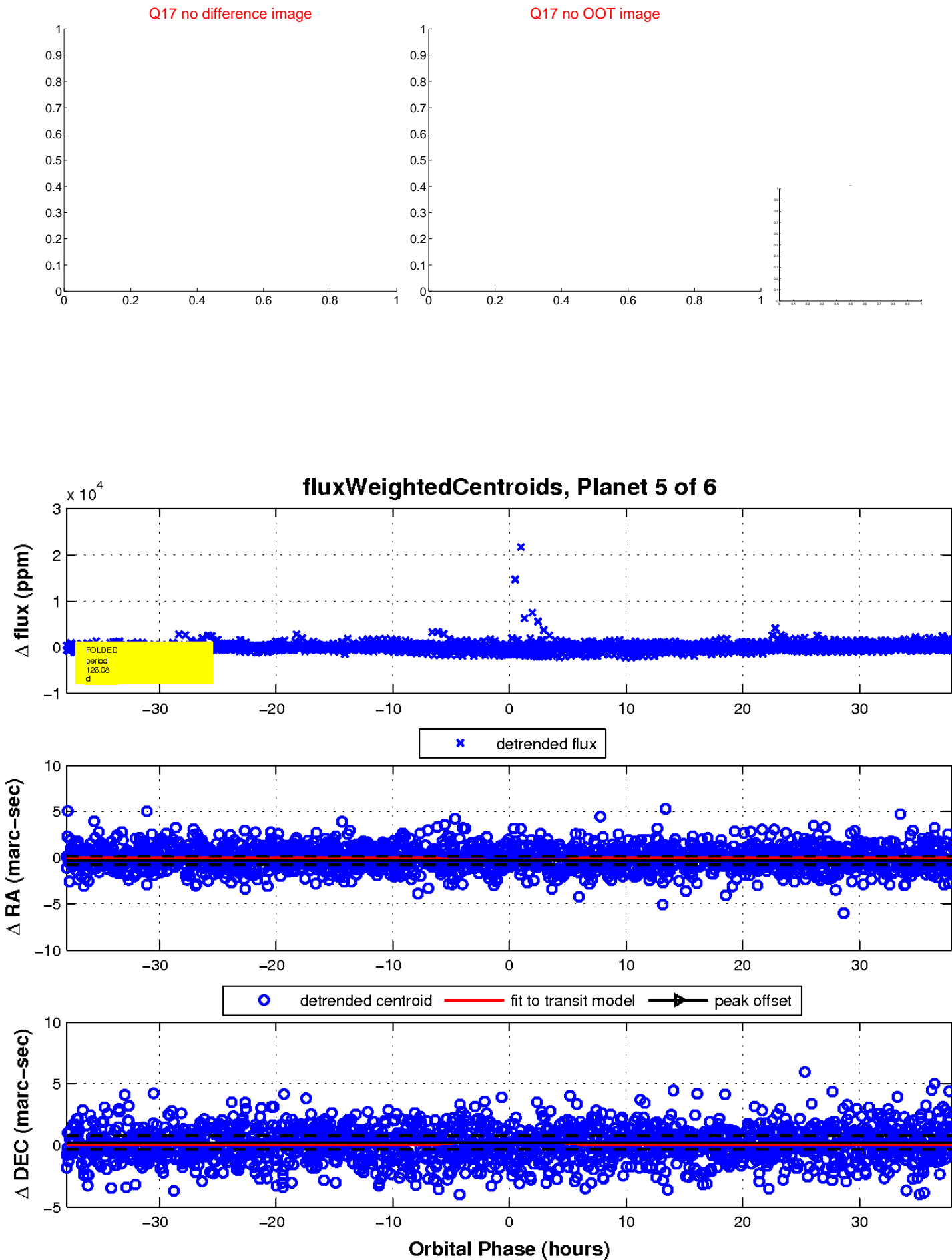
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

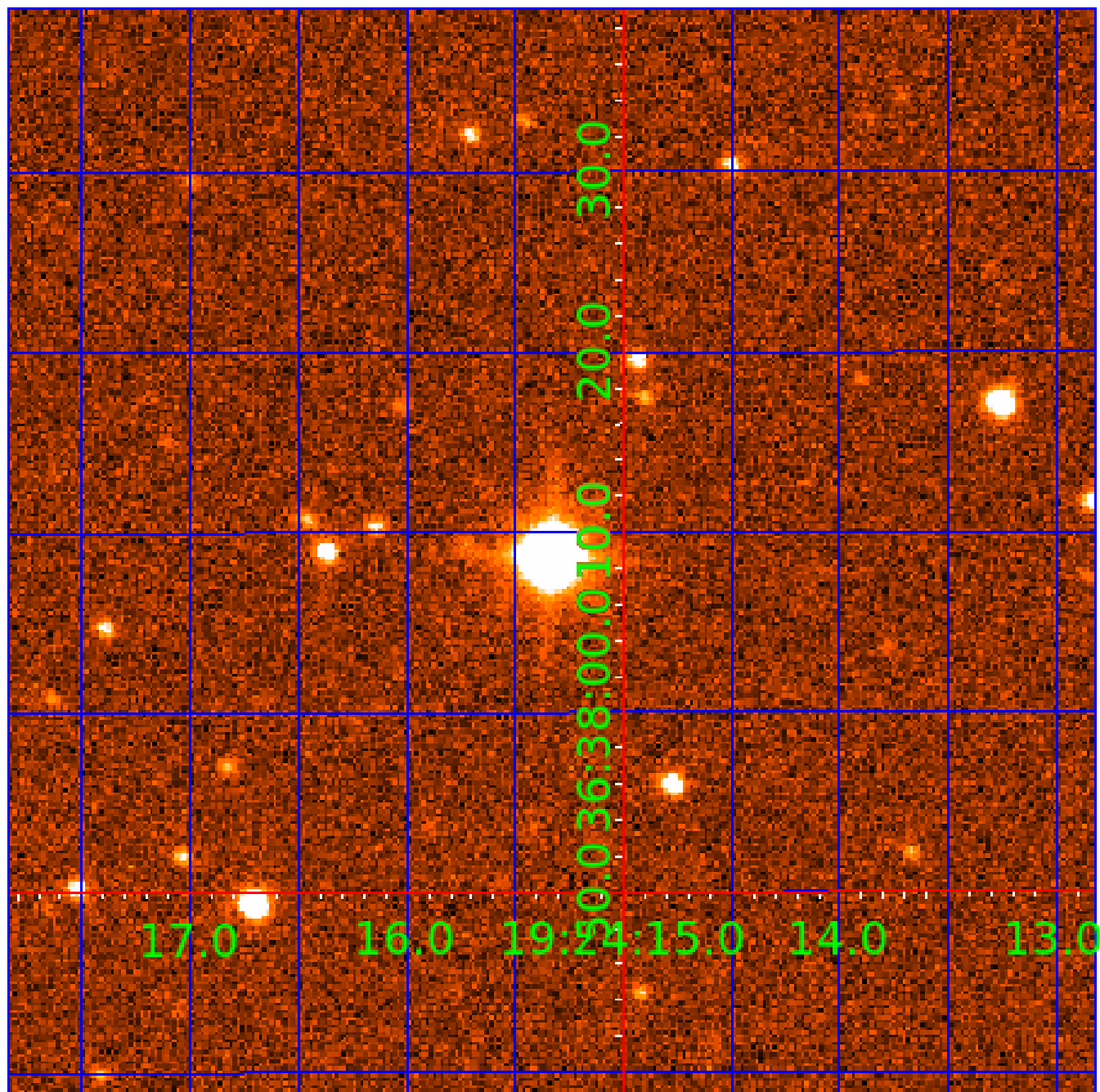


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 000892376

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})
000892376-01	OBS	No	607.710905	207.634885	1049.9	12.577	12.4	6.4	0.60	3973	2.00	0.06
000892376-02	OBS	No	1.021880	131.811576	91.2	5.994	9.8	13.6	0.60	3973	0.69	289.74
000892376-03	OBS	No	85.741133	182.874152	839.5	12.500	21.6	-1.0	0.60	3973	1.70	0.79
000892376-04	OBS	No	405.727244	498.041022	1490.5	4.279	13.1	9.3	0.60	3973	2.31	0.10
000892376-05	OBS	No	126.080798	201.665496	787.6	12.641	11.3	7.4	0.60	3973	1.76	0.47
000892376-06	OBS	No	64.517819	188.638291	675.4	3.000	10.6	-1.0	0.60	3973	1.52	1.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
000892376-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
000892376-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
000892376-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS
000892376-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
000892376-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
000892376-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

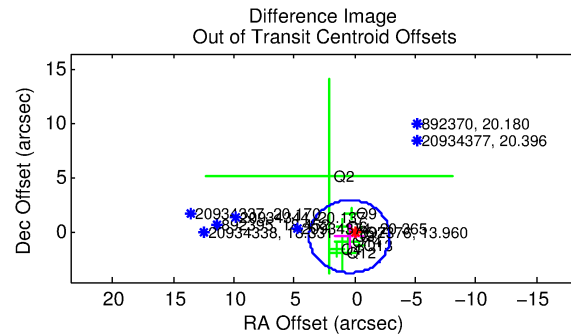
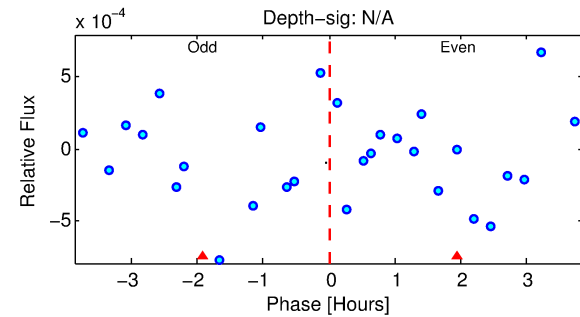
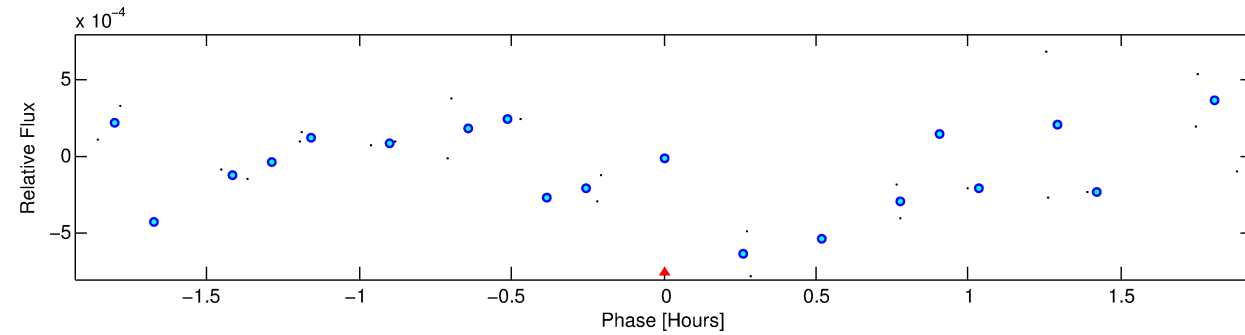
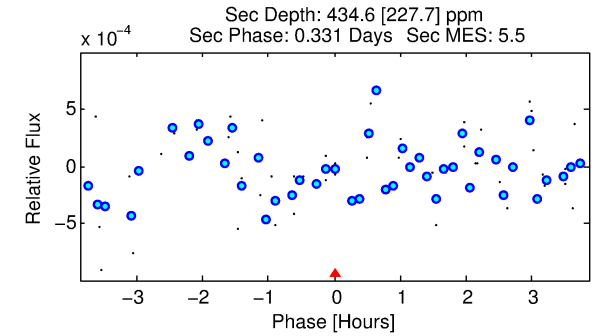
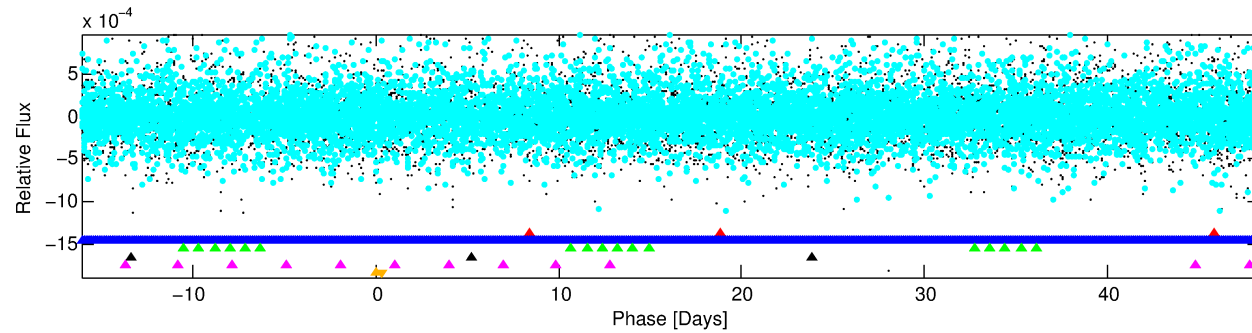
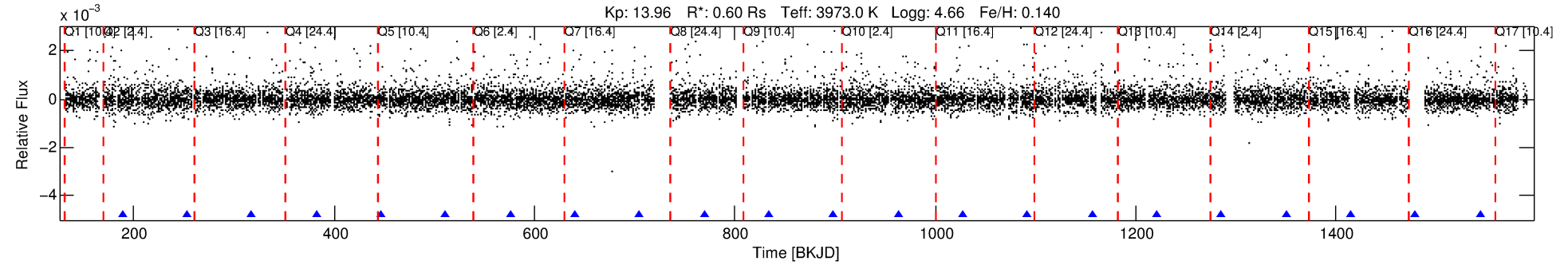
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 000892376-06

No Significant Match Found

DV One-Page Summary

KIC: 892376 Candidate: 6 of 6 Period: 64.518 d



TPS TCE Results:

Period = 64.51782 d
Epoch = 188.6383 BKJD

DV fit results are unavailable

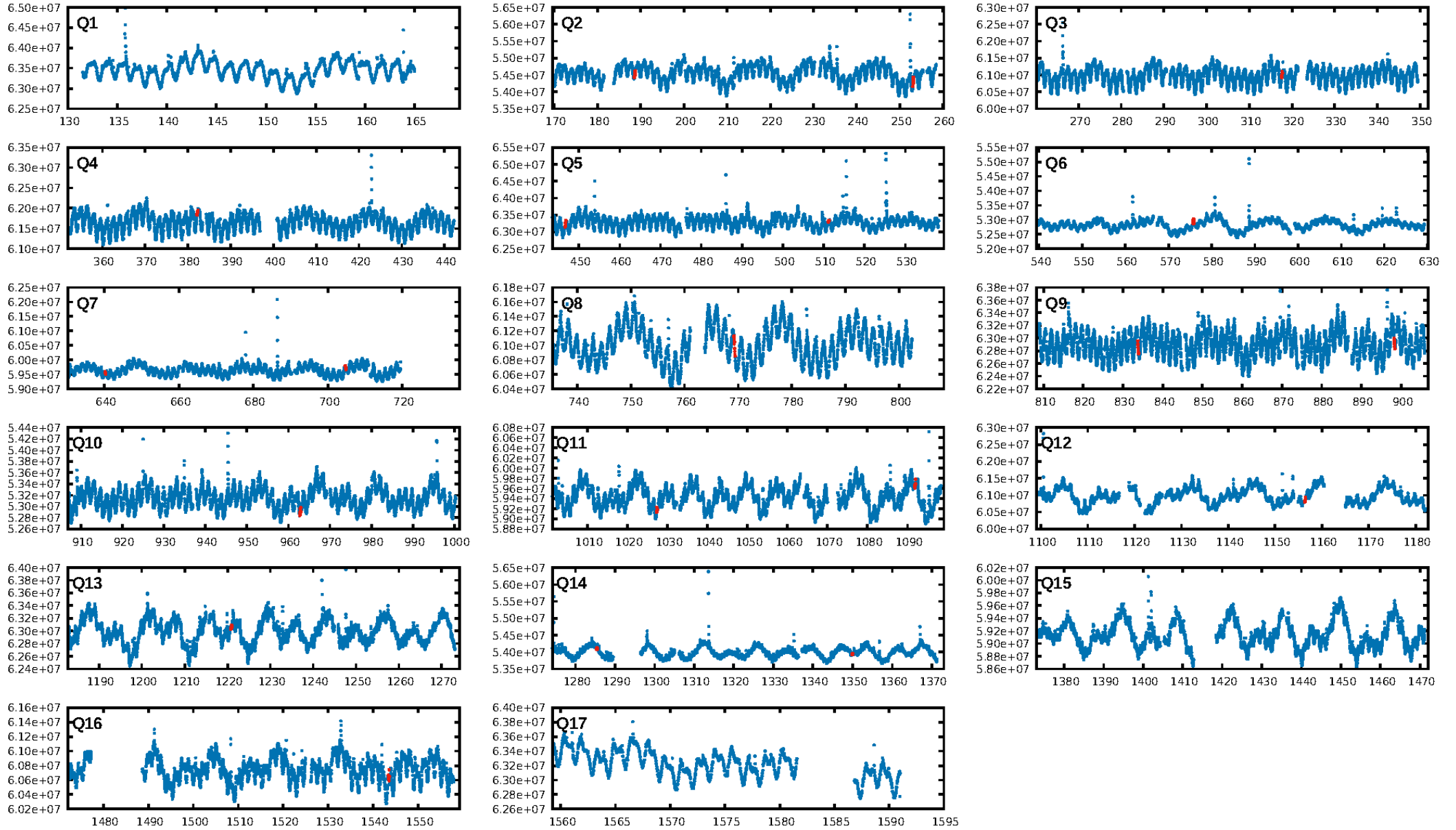
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [227.35 σ]
LongPeriod-sig: 100.0% [39.62 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -1.87
Centroid-sig: 30.8%
Centroid-so: 2.914 arcsec [1.59 σ]
OotOffset-rm: 0.552 arcsec [0.50 σ]
KicOffset-rm: 0.860 arcsec [0.81 σ]
OotOffset-st: 3/2/2 [9]
KicOffset-st: 3/2/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.27 [3/11]

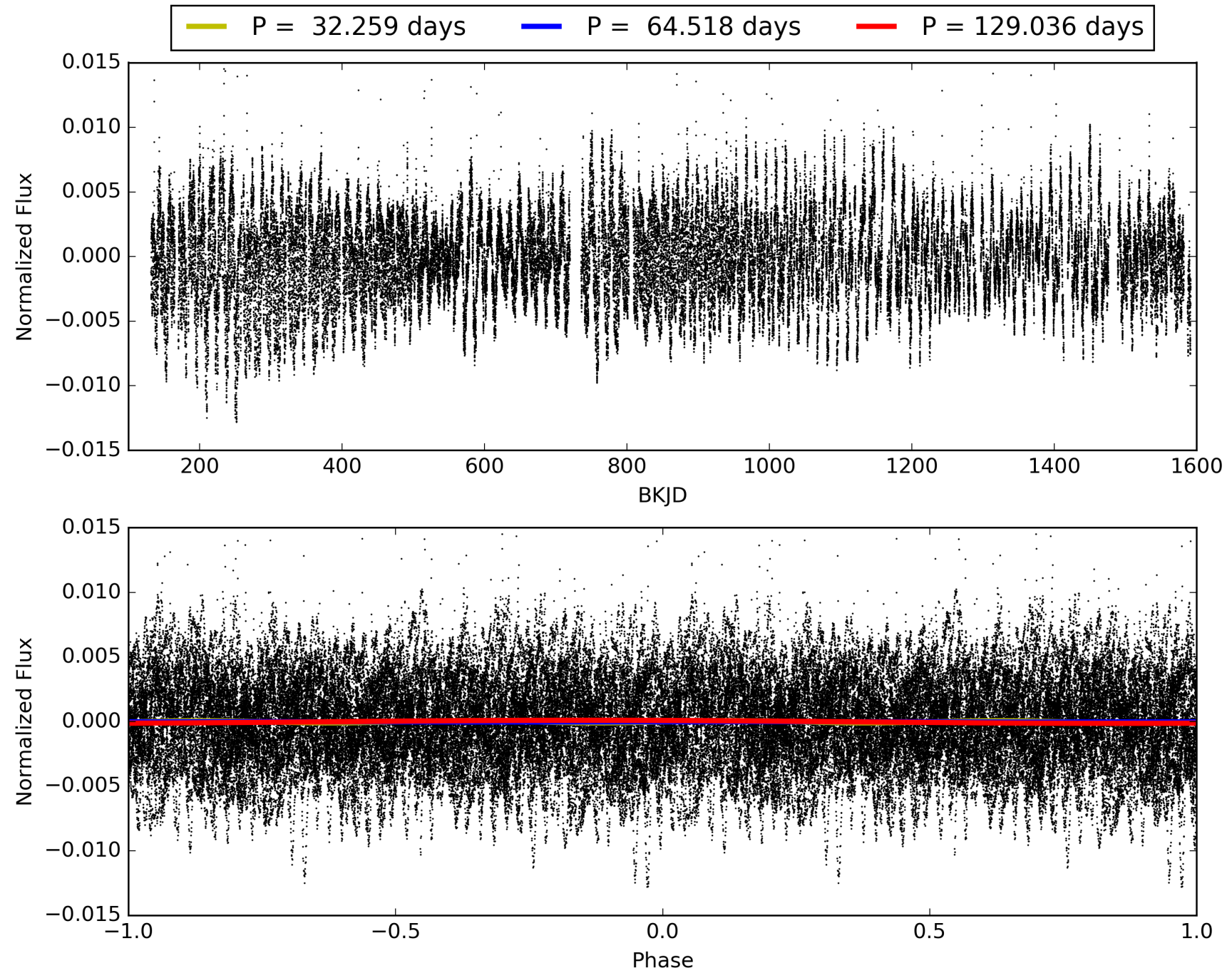
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:47:26 Z

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

TCE 000892376-06, PDC Light Curves

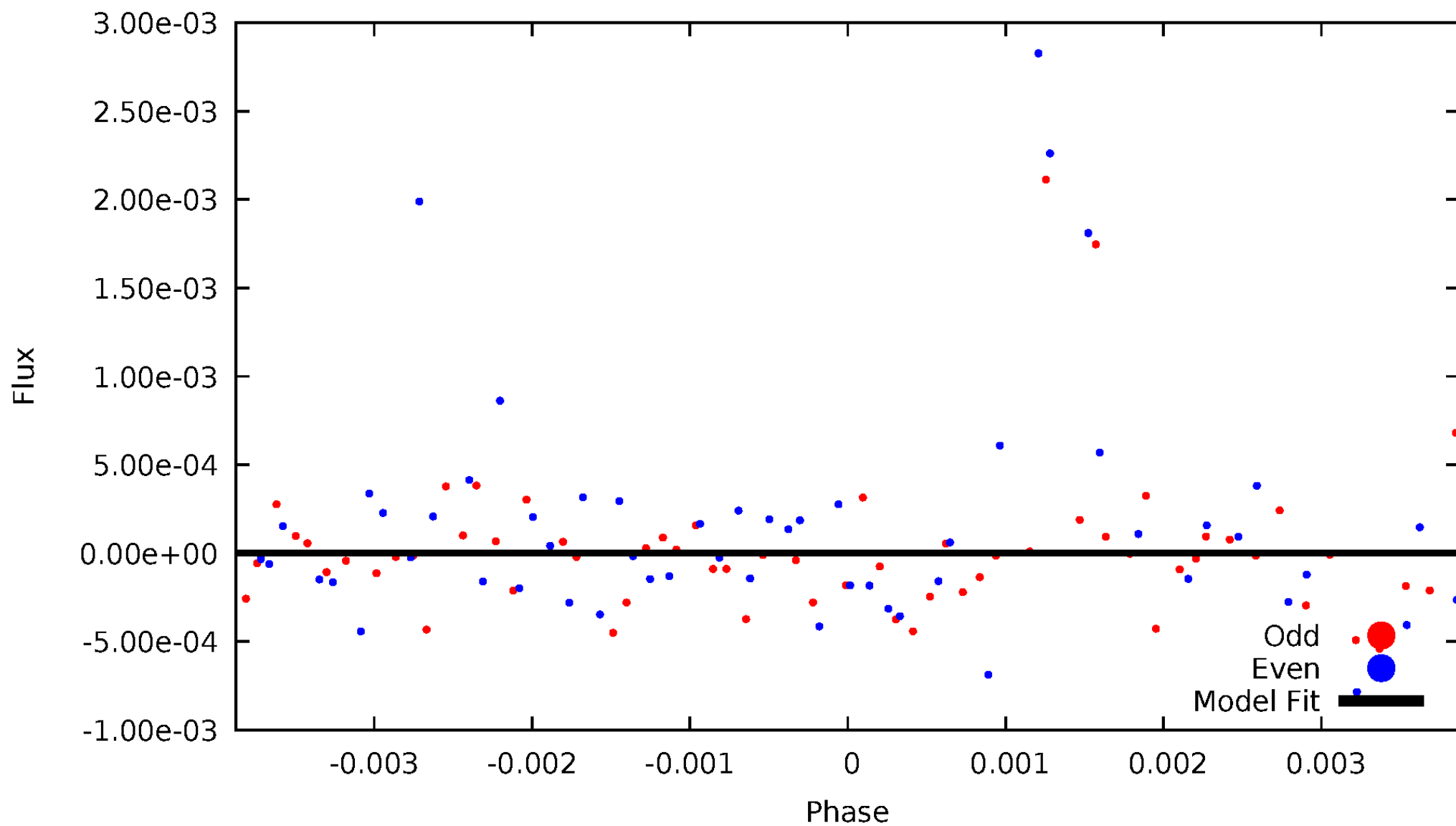


TCE 000892376-06



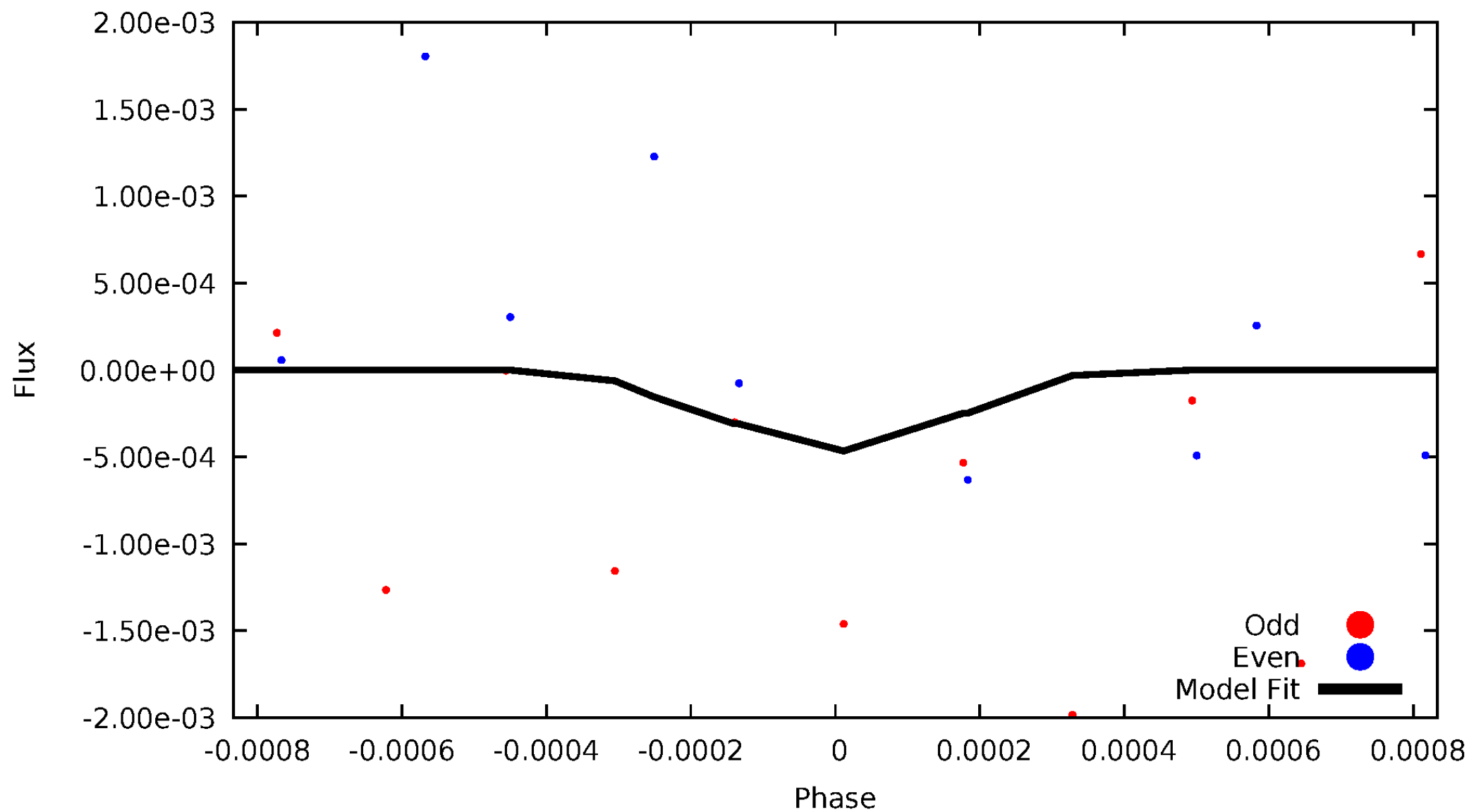
DV Odd/Even

TCE 000892376-06



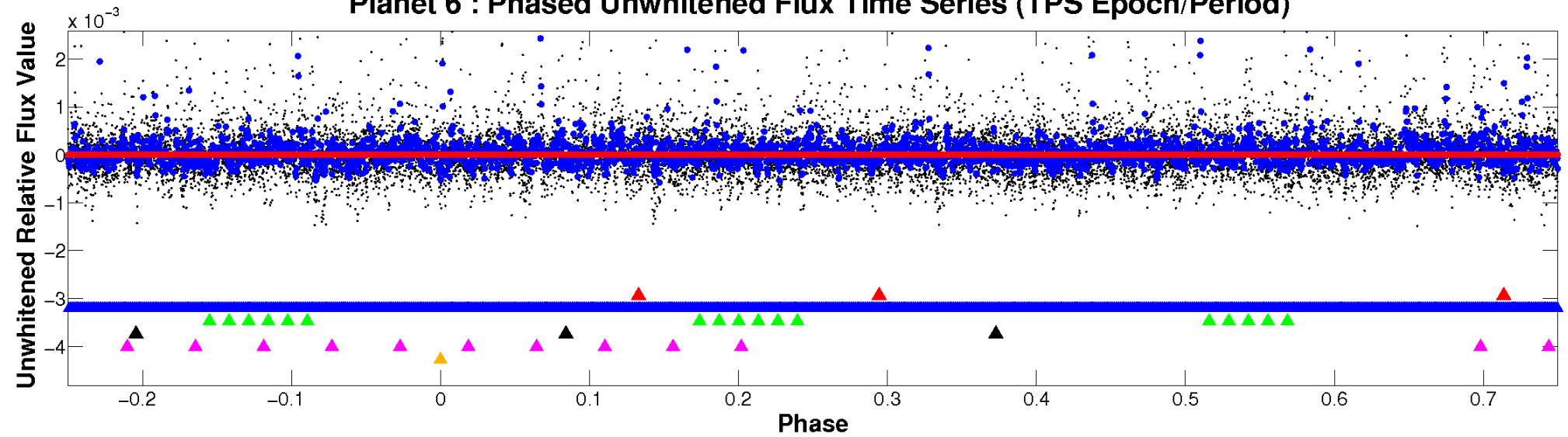
ALT Odd/Even

TCE 000892376-06

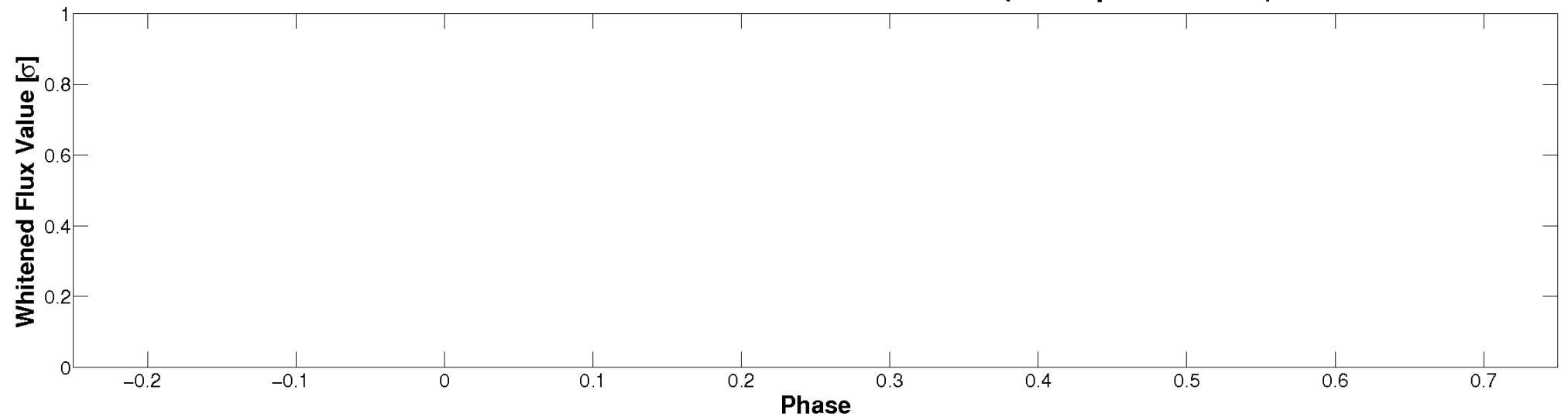


Non-Whitened Vs. Whitened Light Curve

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

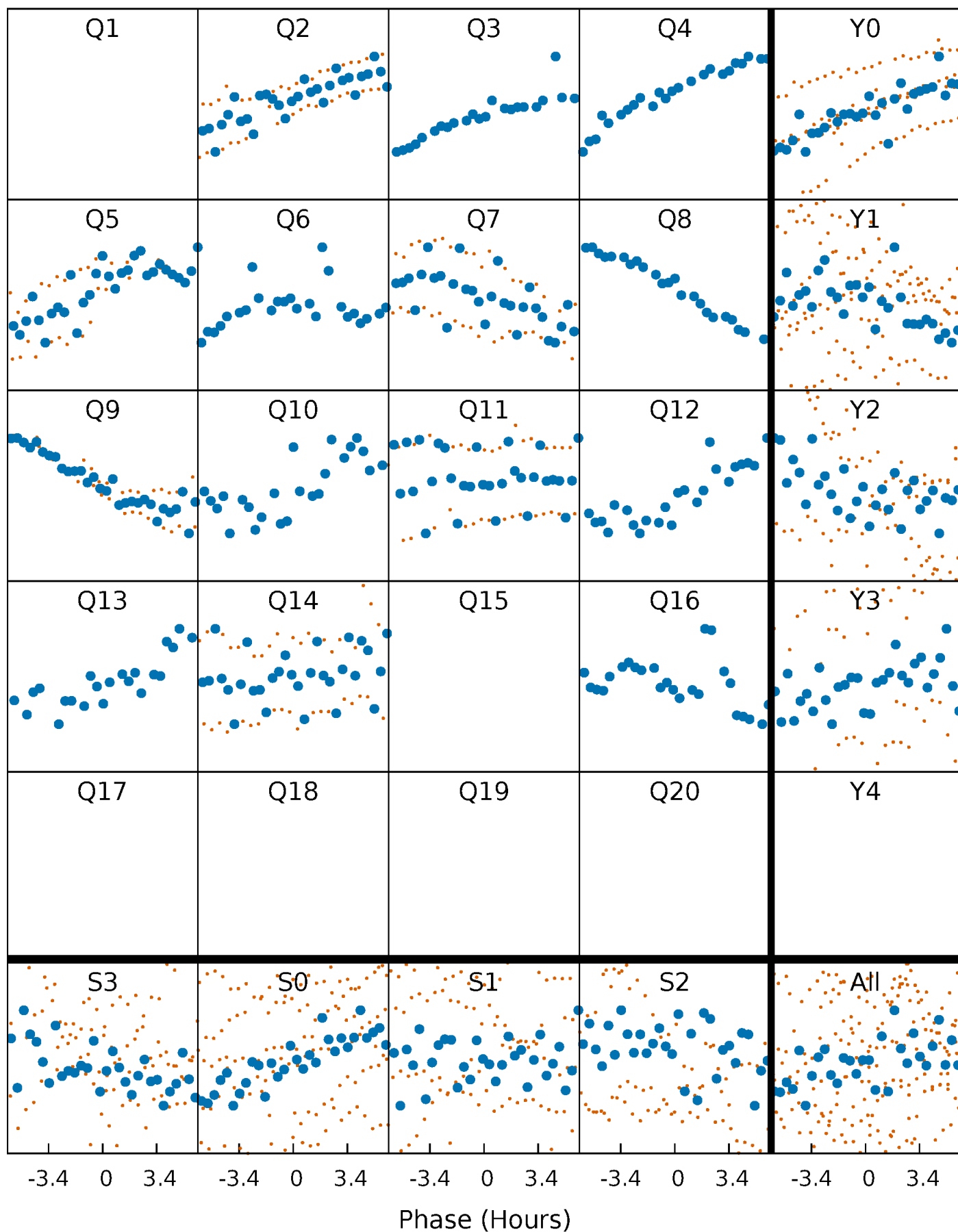


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



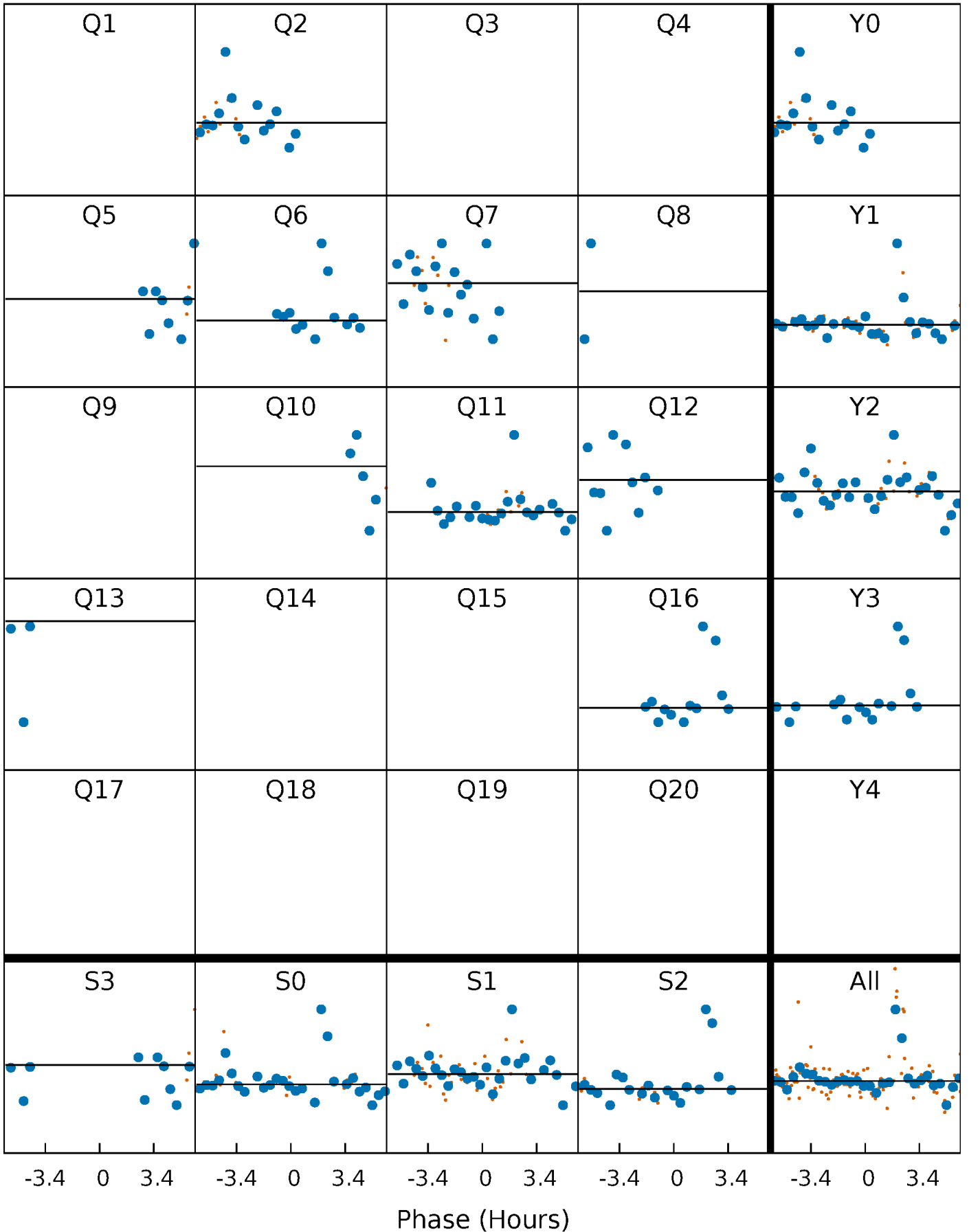
PDC Quarter-Phased Transit Curves

TCE 000892376-06 P= 64.517819 Days $T_0=188.638291$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 000892376-06 P= 64.517819 Days $T_0=188.638291$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

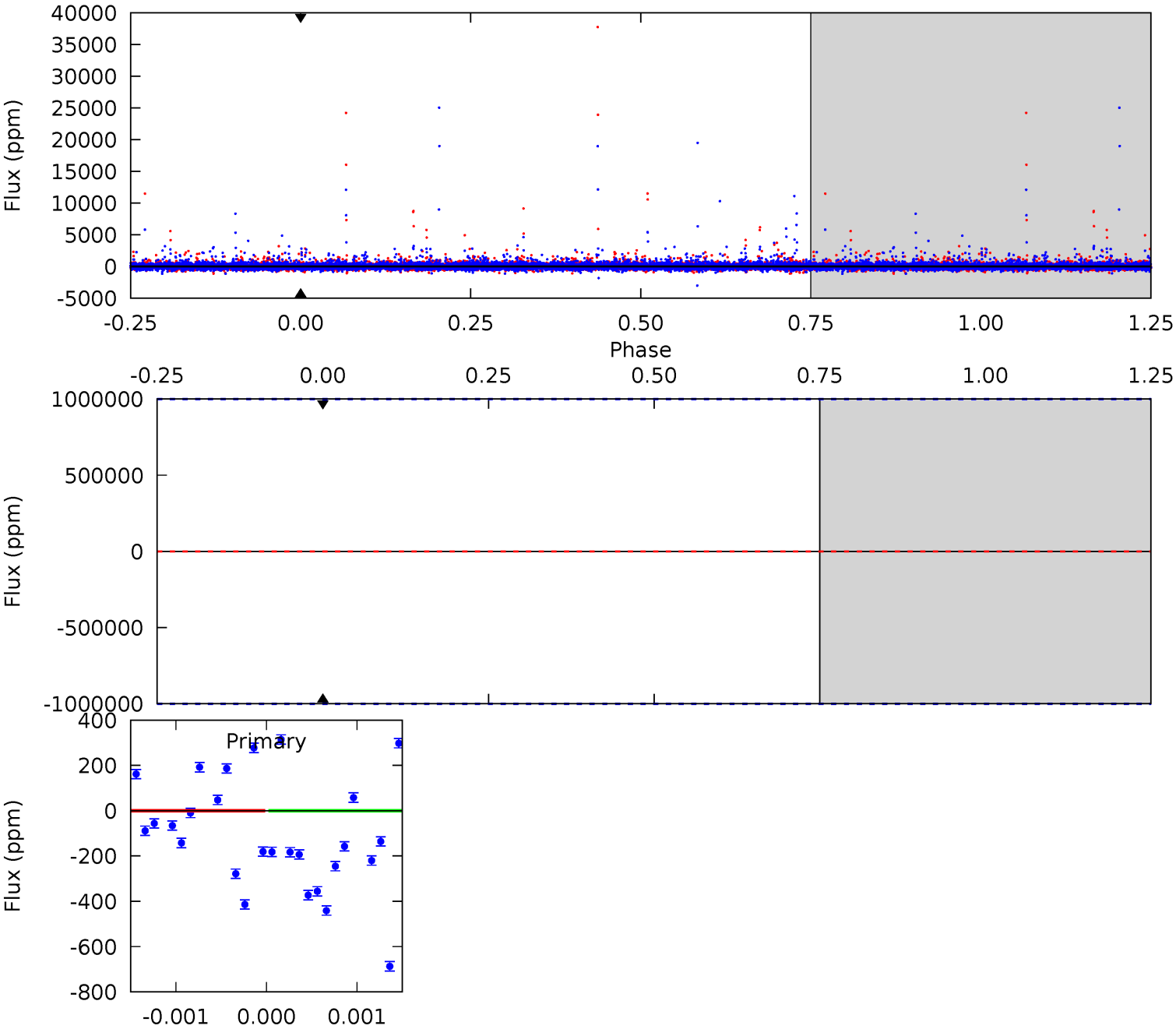
TCE 000892376-06 P= 64.517819 Days $T_0=188.834549$ (BKJD)



DV Model-Shift Uniqueness Test

000892376-06, P = 64.517819 Days, E = 124.120472 Days

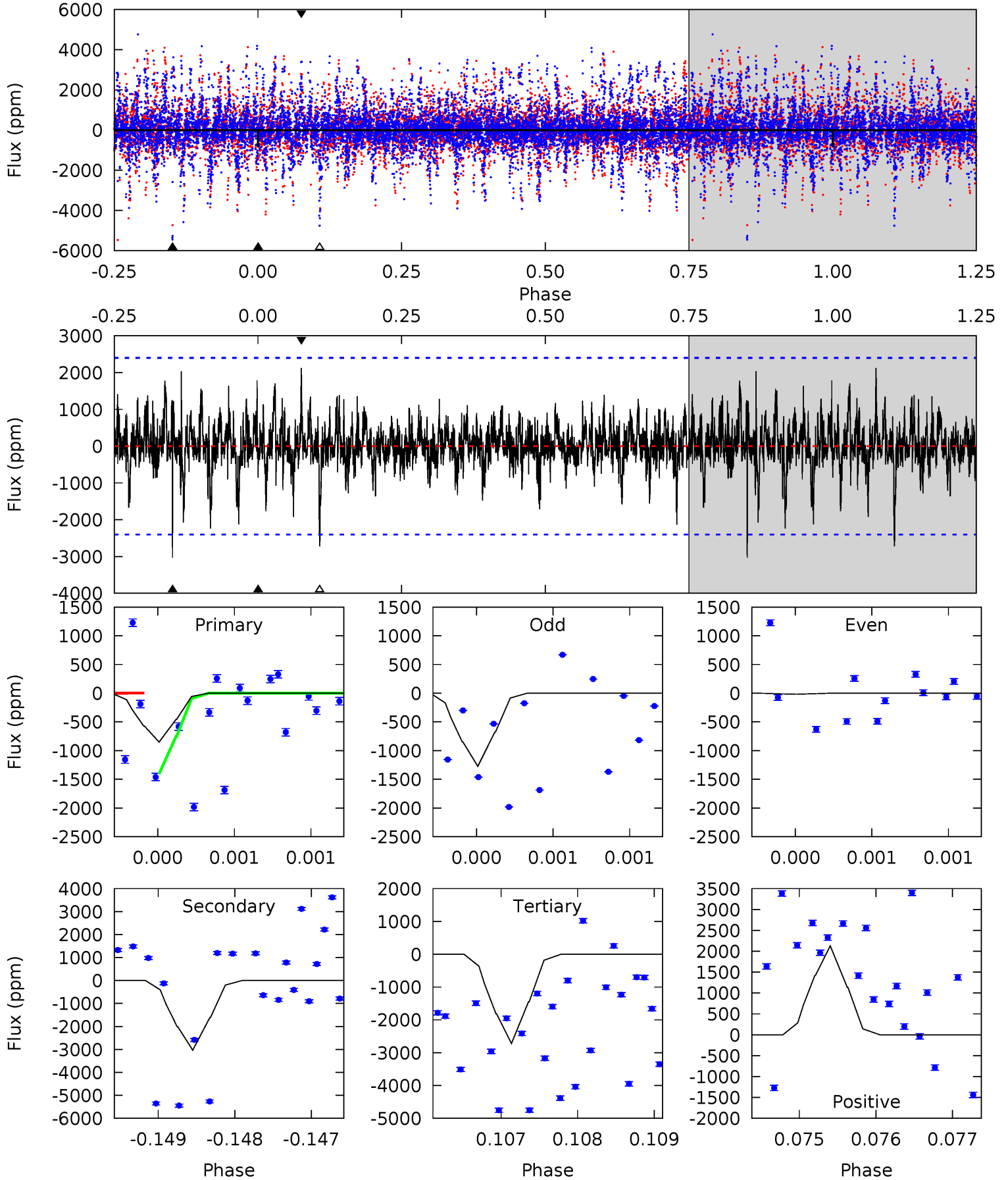
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

000892376-06, P = 64.517819 Days, E = 124.316730 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.95	6.95	6.24	4.88	5.50	3.37	1.11	-4.28	-2.92	0.71	2.07	1.19	1.46	0.41	1.52



Stellar Parameters For KIC 000892376

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3973^{+124}_{-152}	$4.656^{+0.063}_{-0.022}$	$0.140^{+0.250}_{-0.300}$	$0.605^{+0.032}_{-0.074}$	$0.604^{+0.045}_{-0.067}$	$3.845^{+1.141}_{-0.406}$
	+3%/-4%	+1%/-0%	+179%/-214%	+5%/-12%	+7%/-11%	+30%/-11%
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 000892376-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$4.95^{+5.21}_{-3.66}$	366^{+14}_{-15}	3181^{+6131}_{-12072}	$2590^{+305966}_{-267923}$
Alt.	-3033 ± 436	$4.88^{+5.04}_{-3.55}$	366^{+14}_{-15}	3581^{+2424}_{-674}	4907^{+69701}_{-3672}

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 $A_{obs} \gg 1.0$

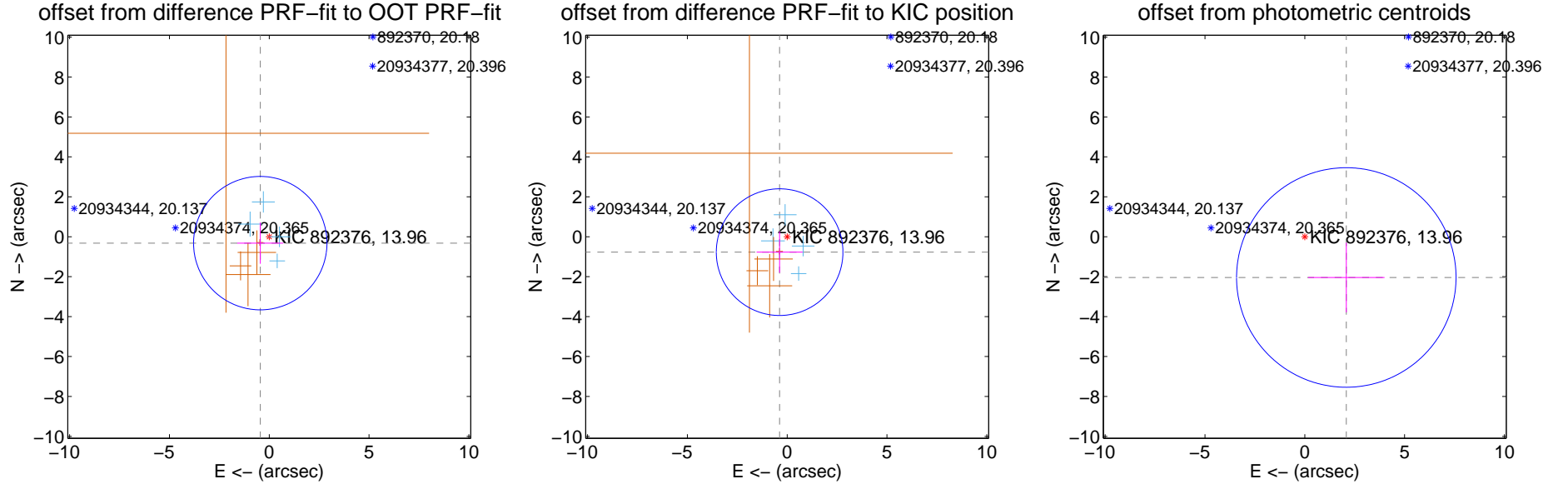
DV Centroid Data

Supplemental centroid analysis for 000892376-06. Kepler magnitude: 13.96. Transit SNR -1.00

There are 4 quarters with good PRF difference image offsets

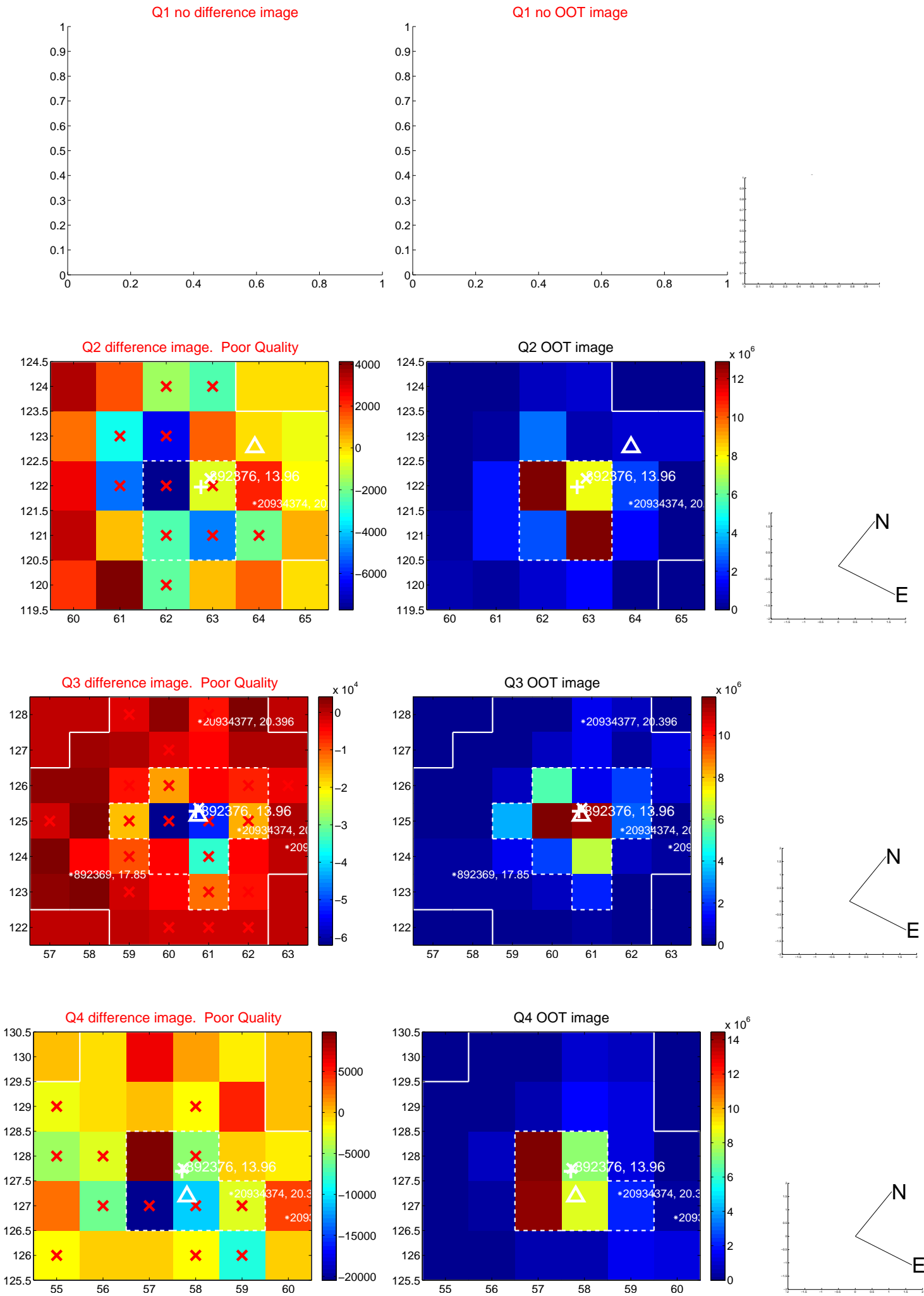
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.552 ± 1.114	0.50	0.449 ± 1.153	-0.321 ± 1.033
PRF-fit source offset from KIC position	0.860 ± 1.057	0.81	0.378 ± 1.153	-0.772 ± 1.033
photometric centroid source offset	2.91 ± 1.83	1.59	-2.08 ± 1.91	-2.04 ± 1.74

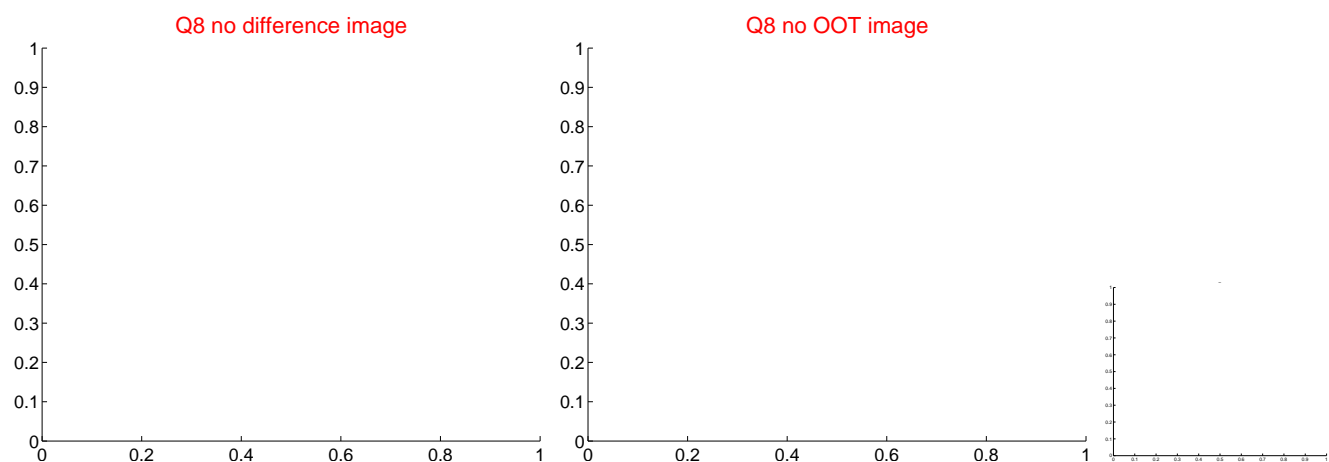
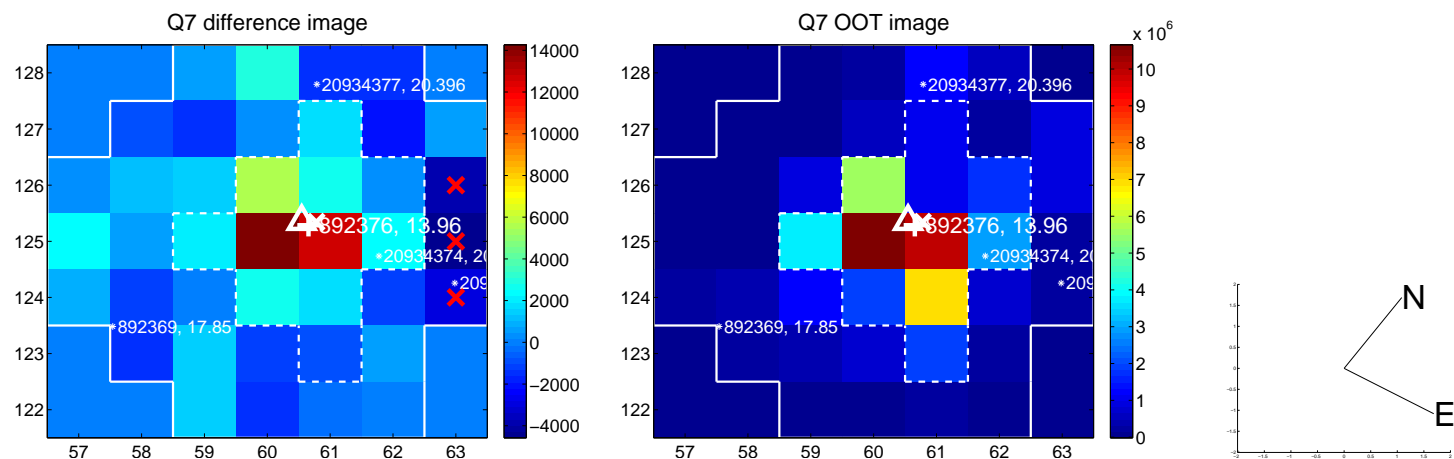
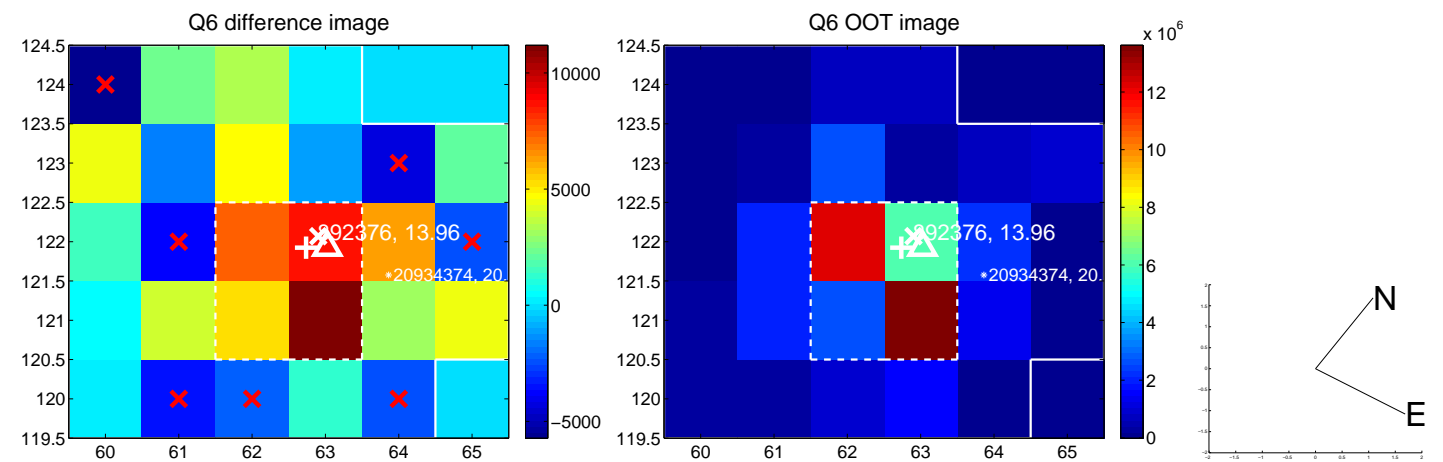
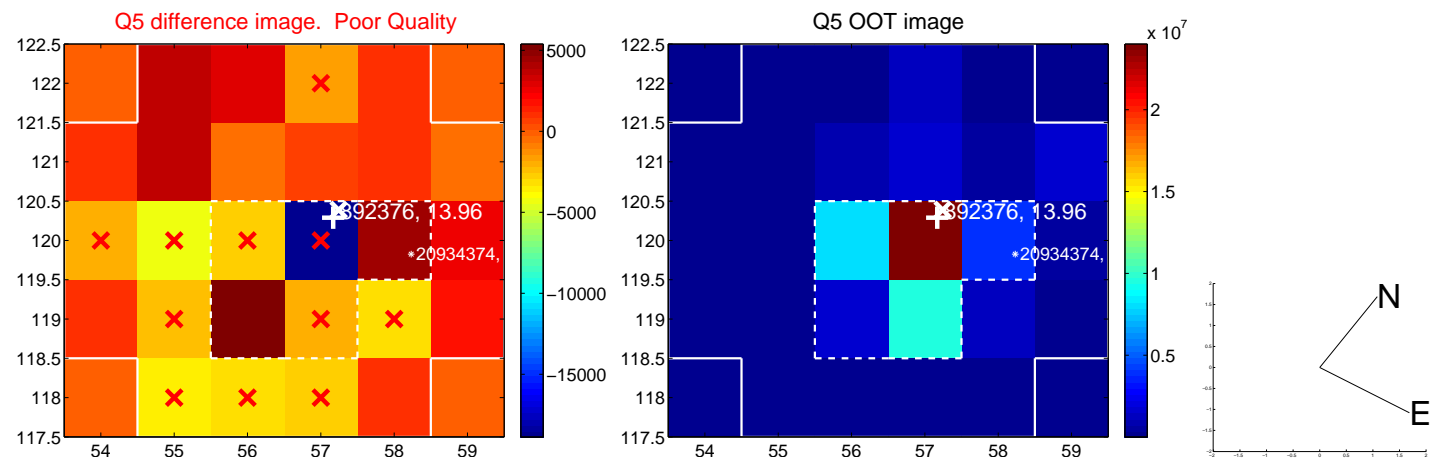


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

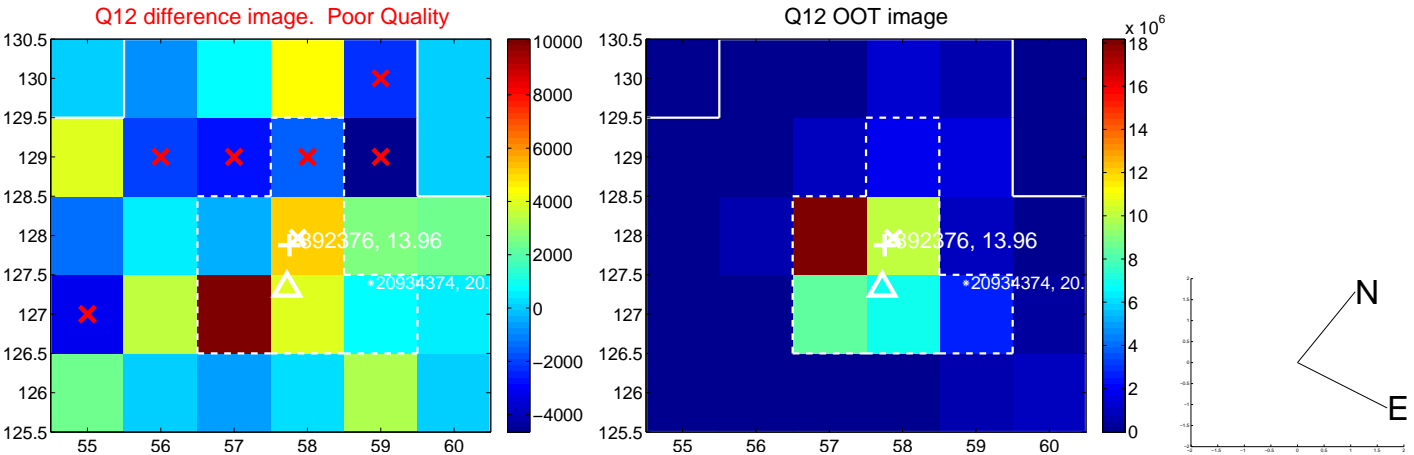
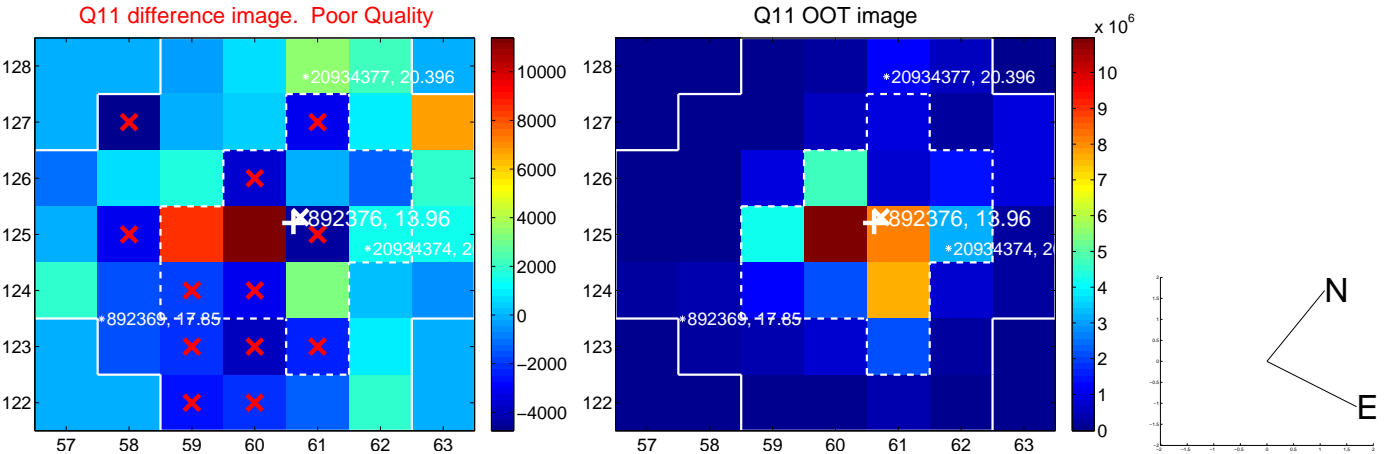
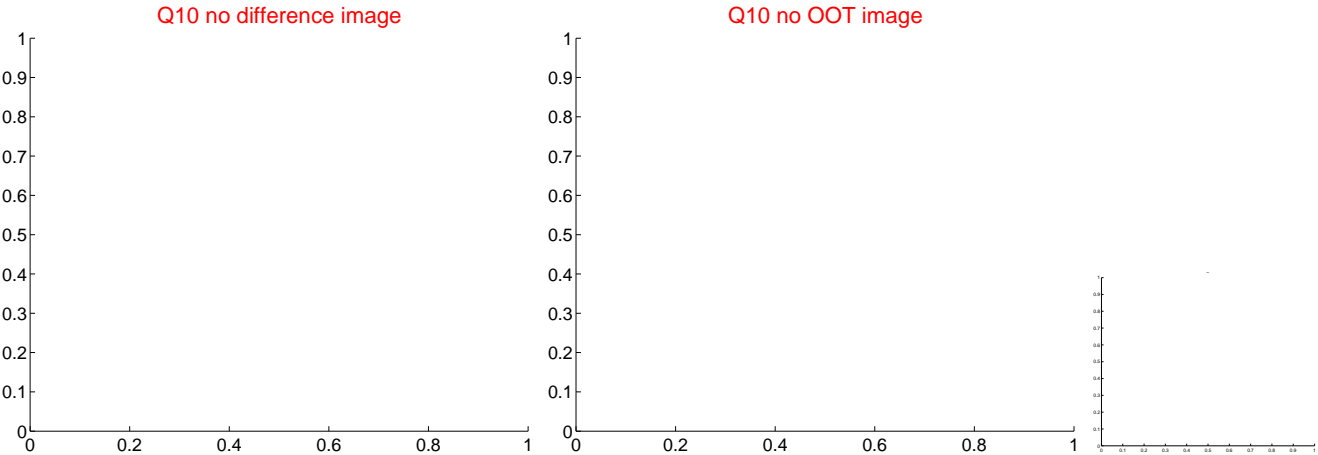
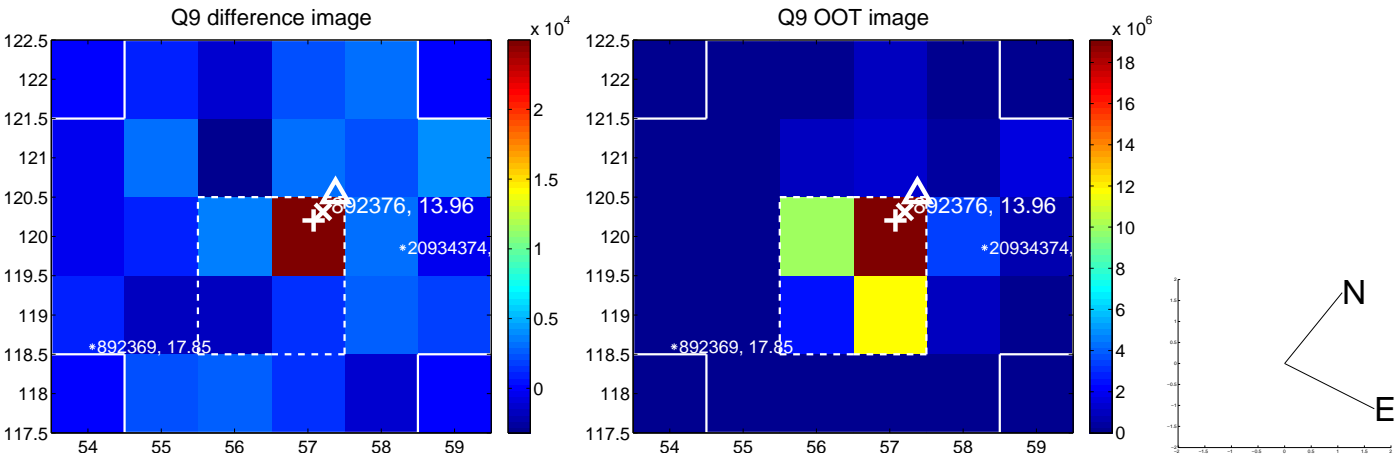
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



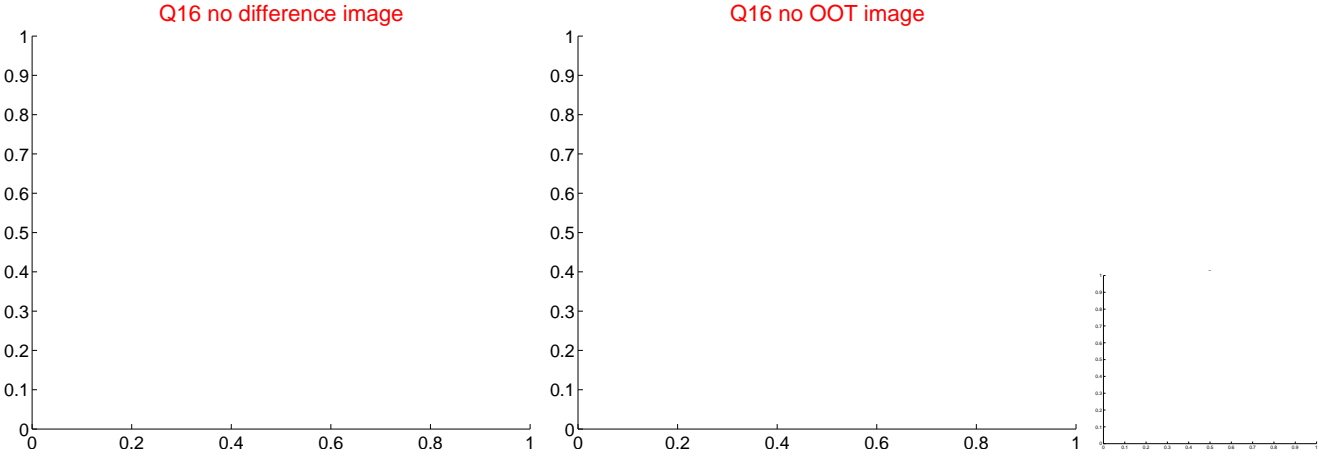
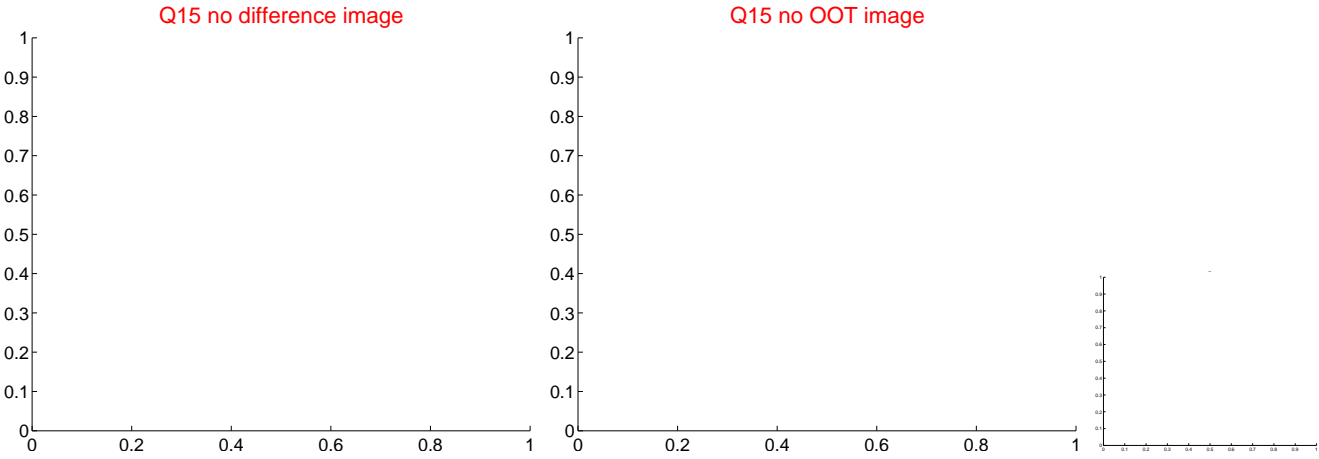
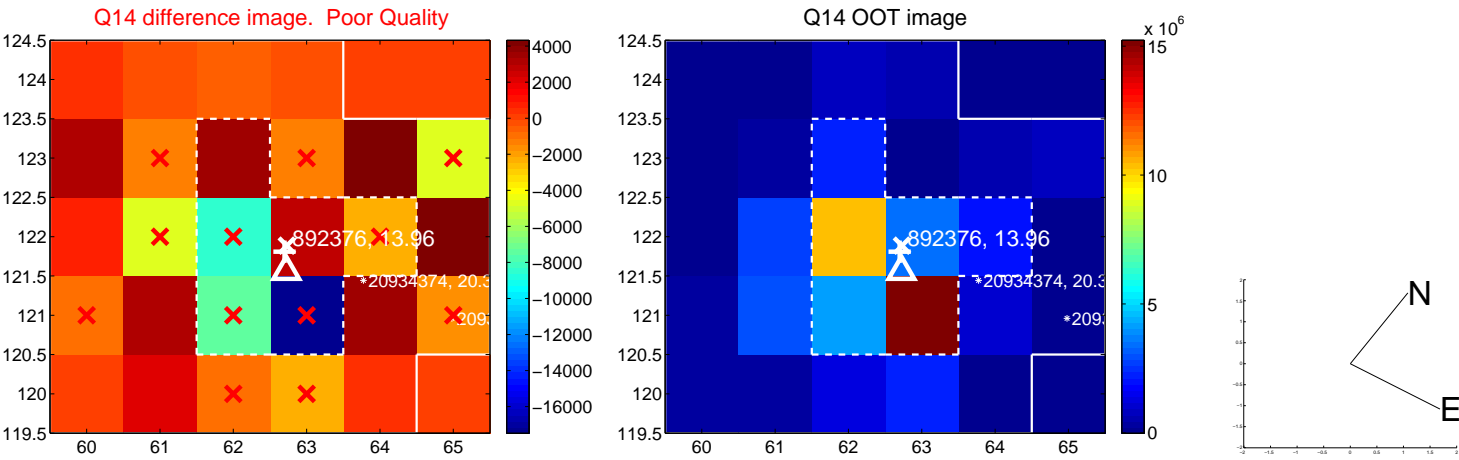
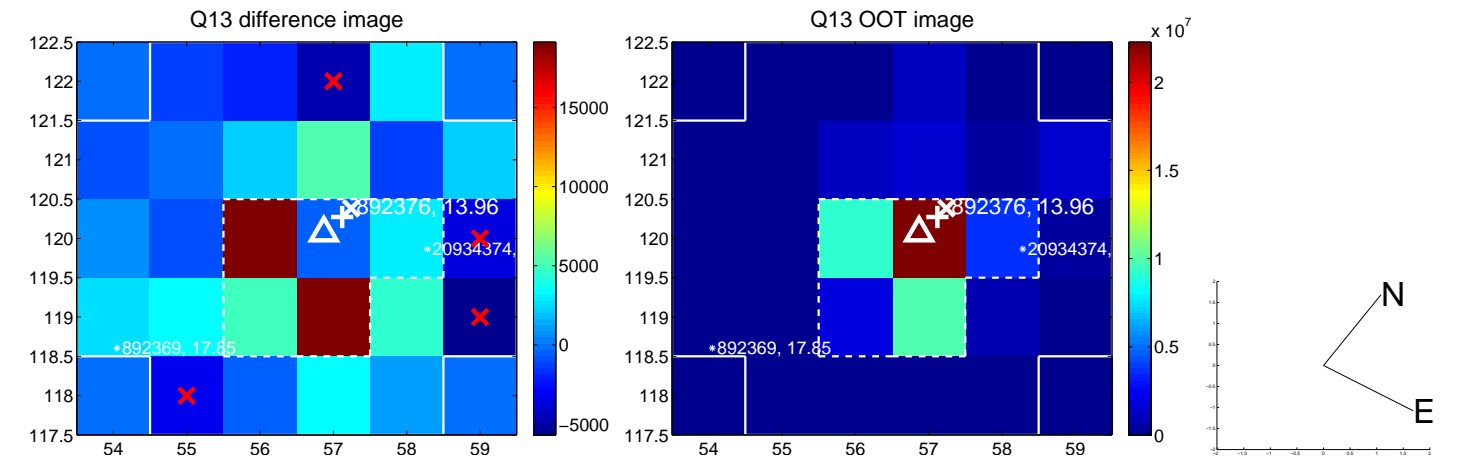
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



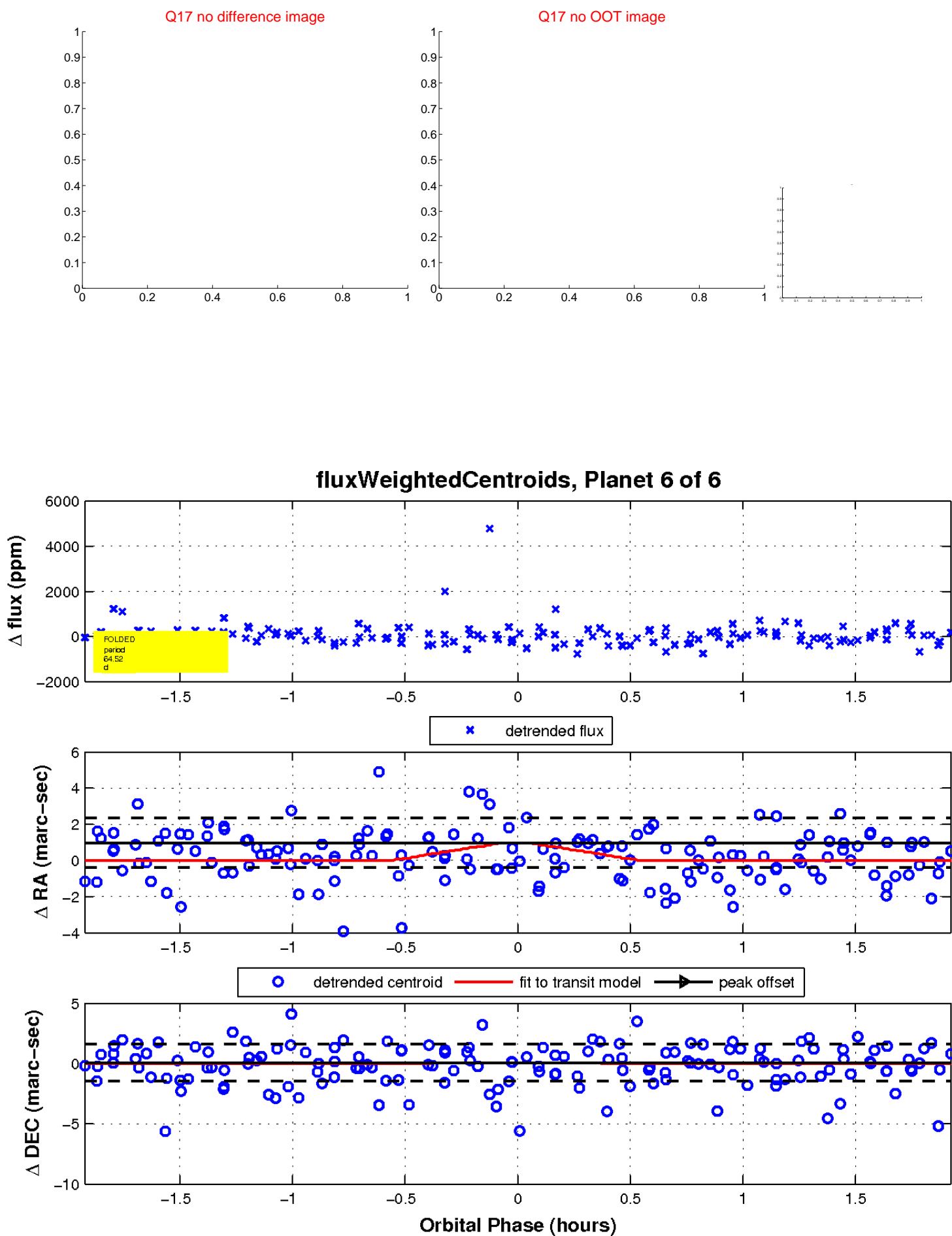
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

