

KIC 007040897

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})
007040897-01	OBS	No	0.805932	131.600919	7.4	3.169	14.9	10.8	3.30	7981	1.01	84897.04
007040897-02	OBS	No	190.321123	221.017419	61.5	11.334	10.3	6.1	3.30	7981	2.90	58.16
007040897-03	OBS	No	227.130215	242.292126	116.5	1.403	8.1	5.7	3.30	7981	4.25	45.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040897-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007040897-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007040897-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

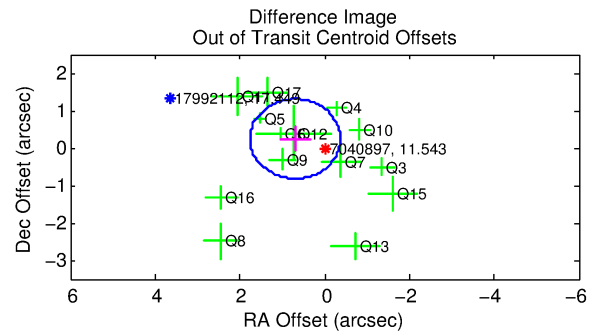
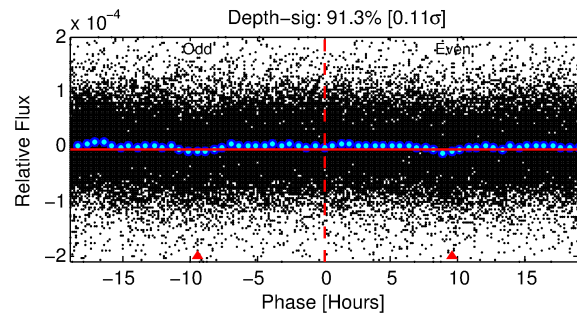
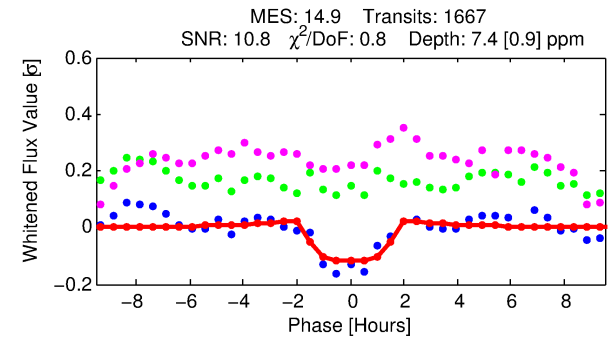
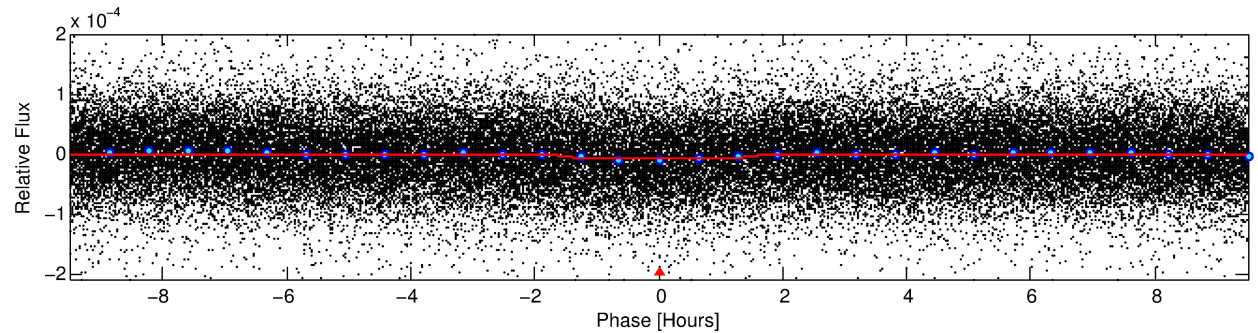
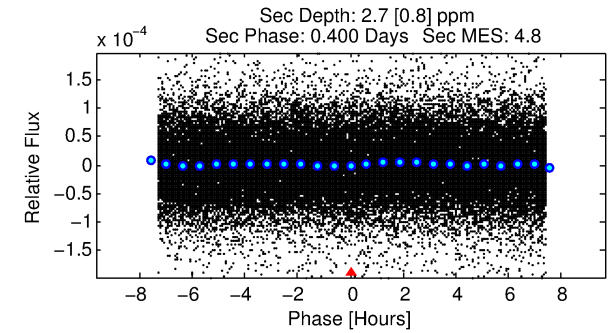
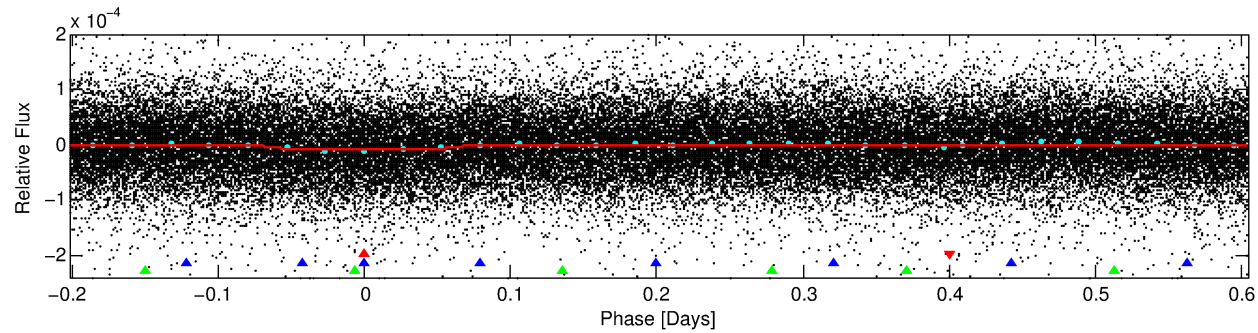
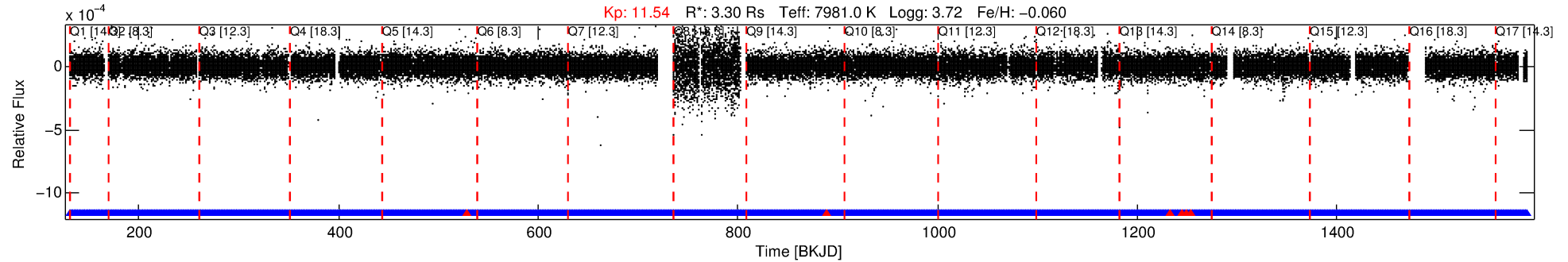
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040897-01

No Significant Match Found

DV One-Page Summary

KIC: 7040897 Candidate: 1 of 3 Period: 0.806 d



DV Fit Results:

Period = 0.80593 [0.00001] d
Epoch = 131.6009 [0.0031] BKJD
 R_p/R^* = 0.0028 [0.0003]
 a/R^* = 1.41 [0.44]
 b = 0.83 [0.23]
 S_{eff} = 84897.04 [66315.12]
 T_{eq} = 4353 [850] K
 R_p = 1.01 [0.50] R_e
 a = 0.0216 [0.0102] AU
 A_g = 0.69 [0.58] [-0.54σ]
 T_{eff} = 6126 [628] K [1.68σ]

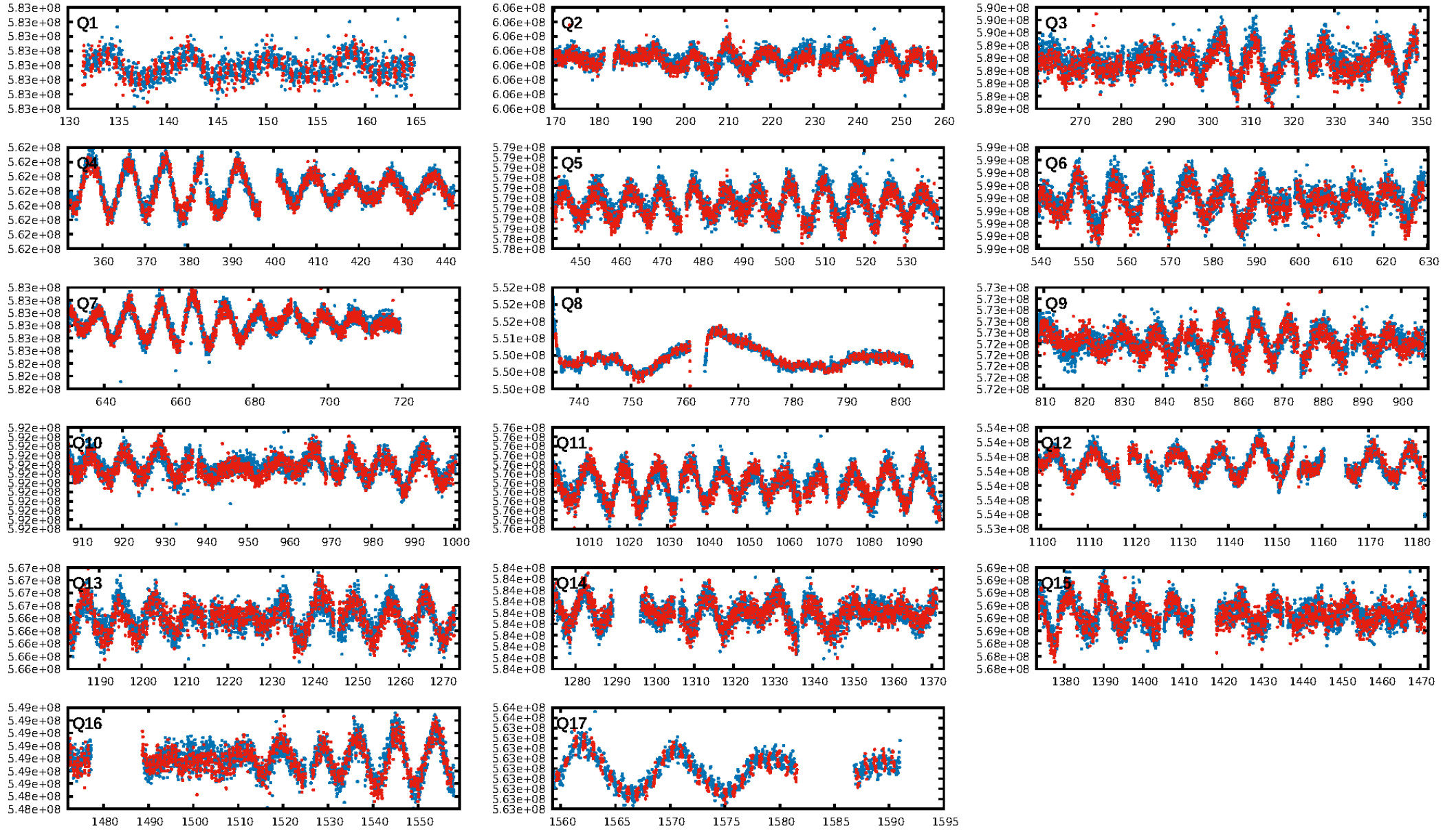
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [386.50σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.44e-37
RollingBand-fgt: 1.00 [1586/1592]
GhostDiagnostic-chr: 4.693
Centroid-sig: 36.7%
Centroid-so: 0.791 arcsec [0.80σ]
OotOffset-rm: 0.739 arcsec [2.08σ]
KicOffset-rm: 0.790 arcsec [2.06σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

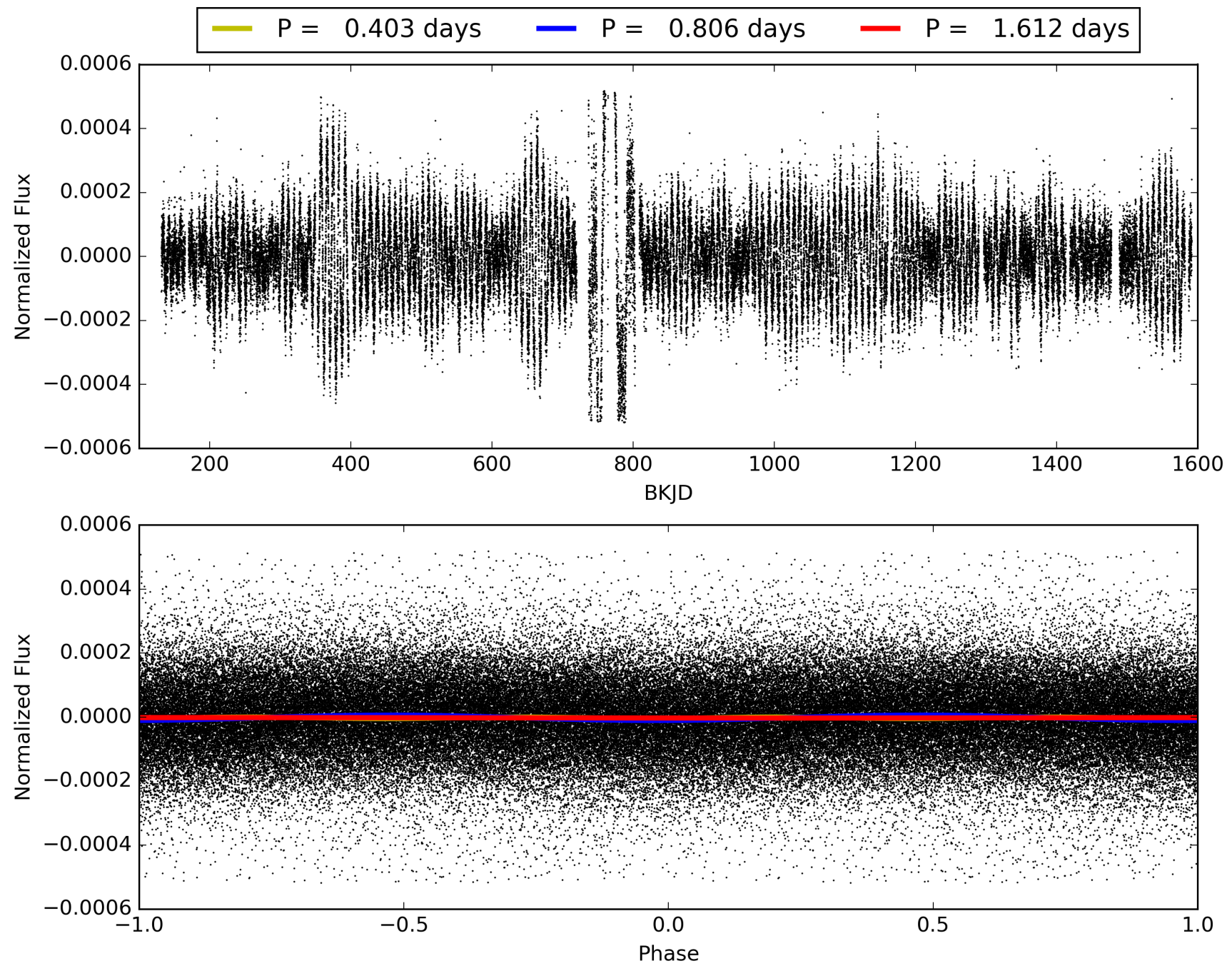
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007040897-01, PDC Light Curves

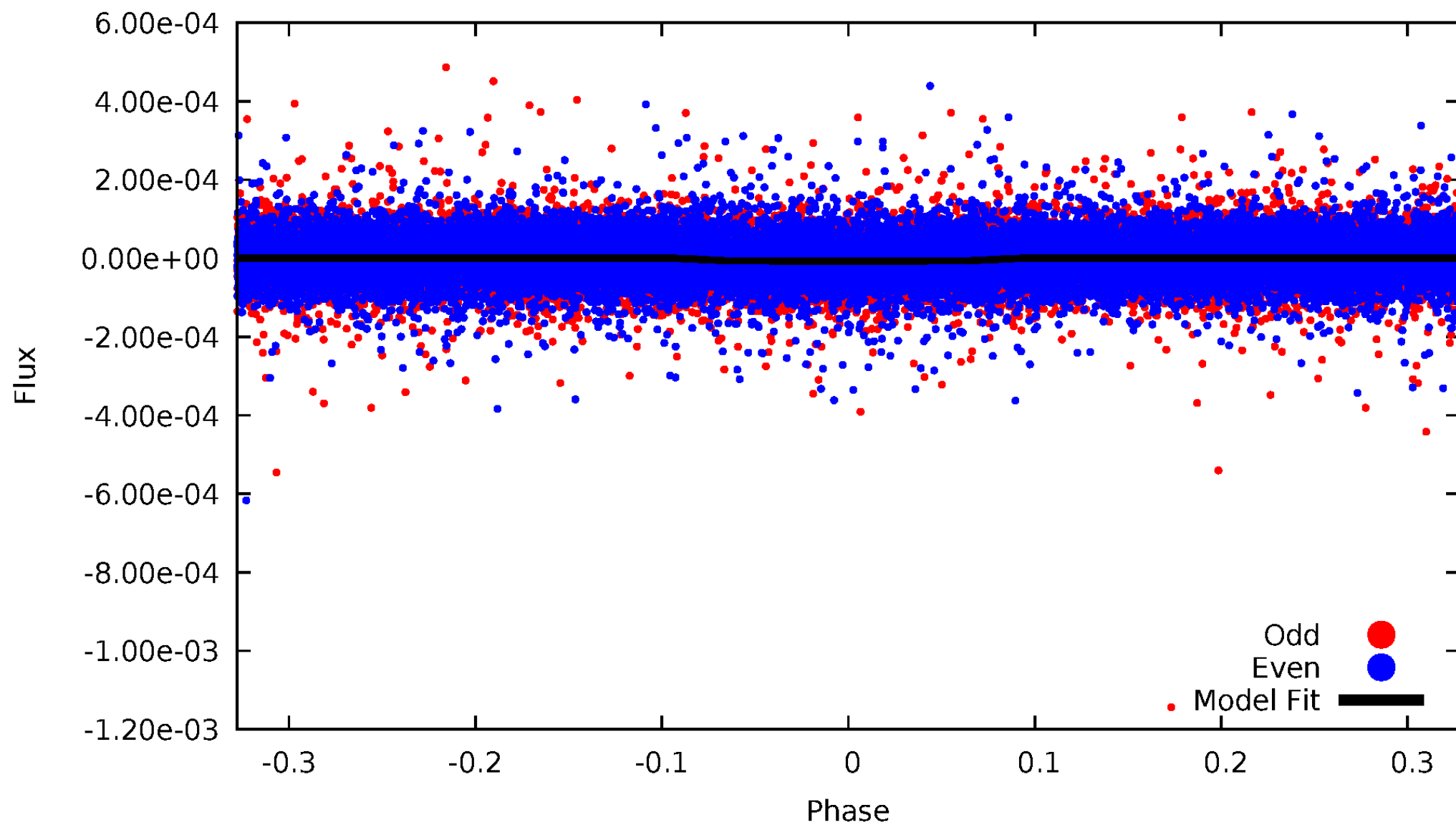


TCE 007040897-01



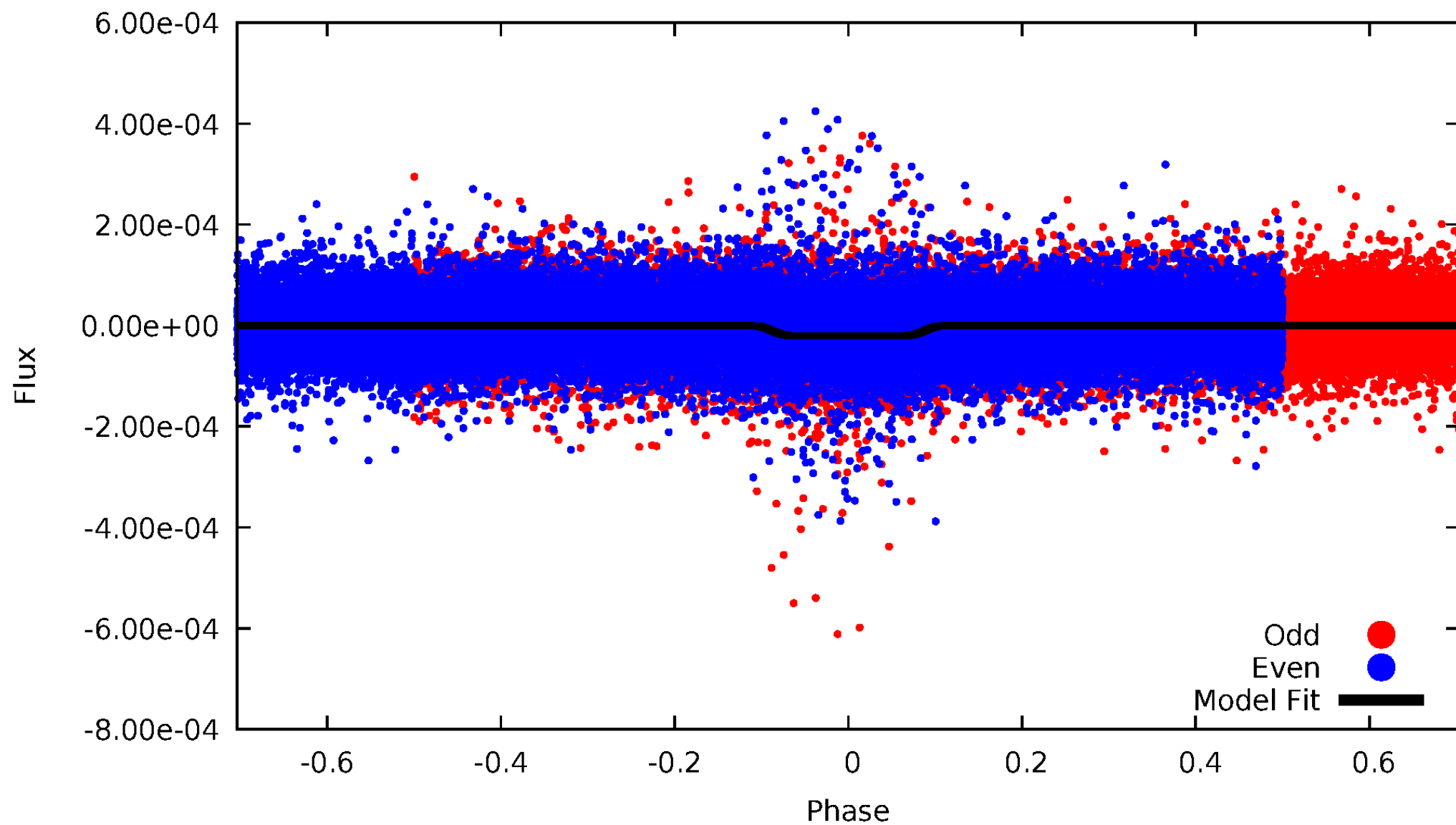
DV Odd/Even

TCE 007040897-01

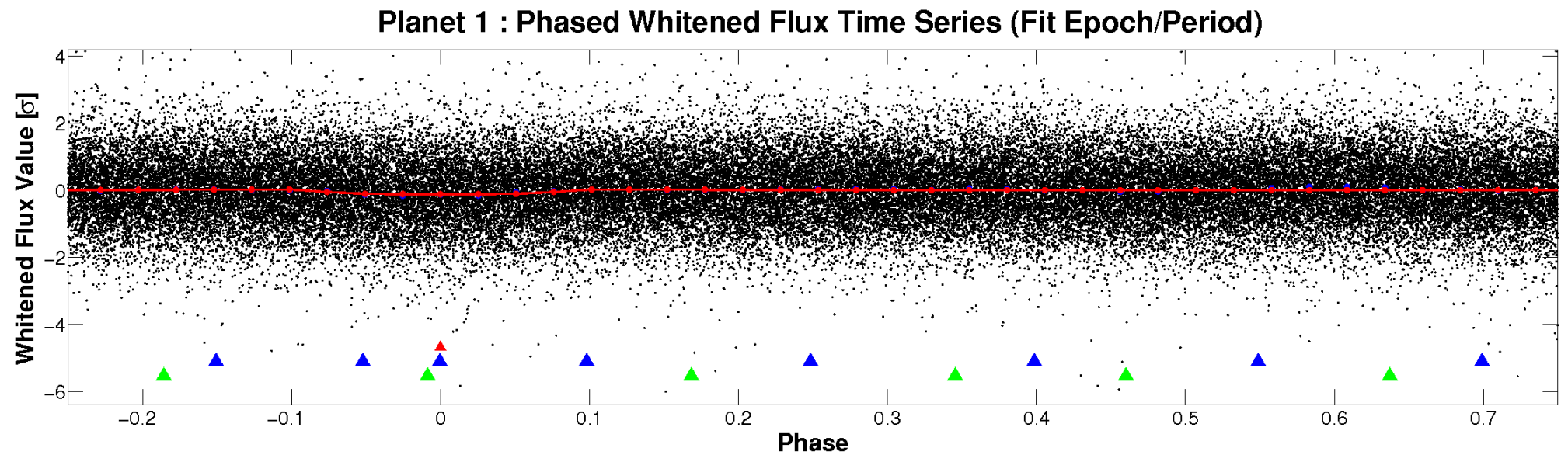
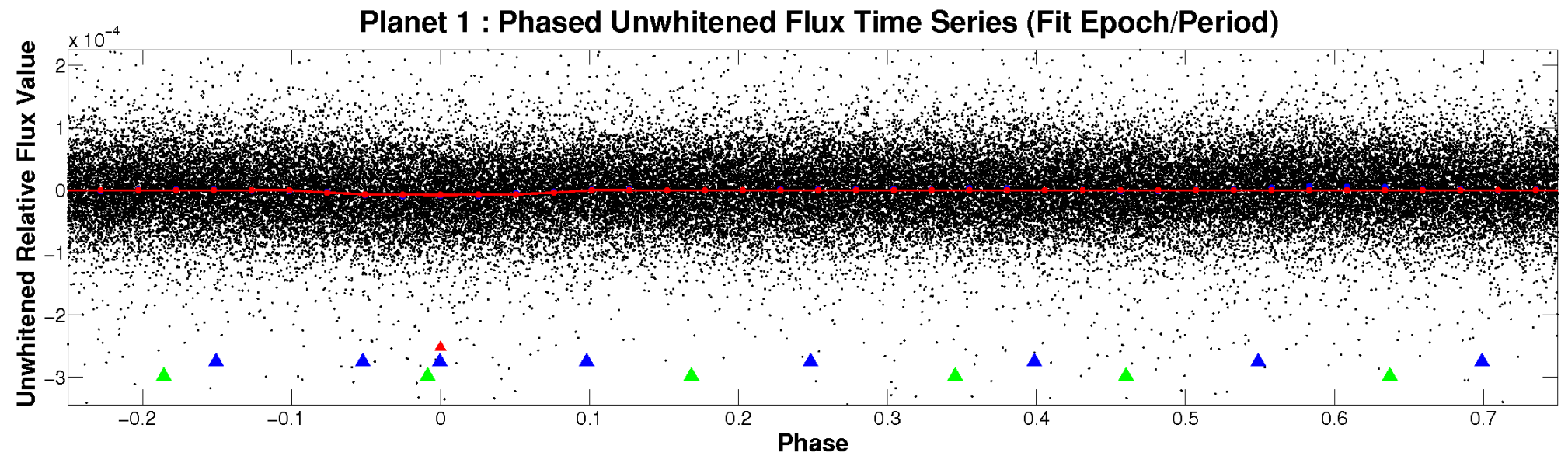


ALT Odd/Even

TCE 007040897-01

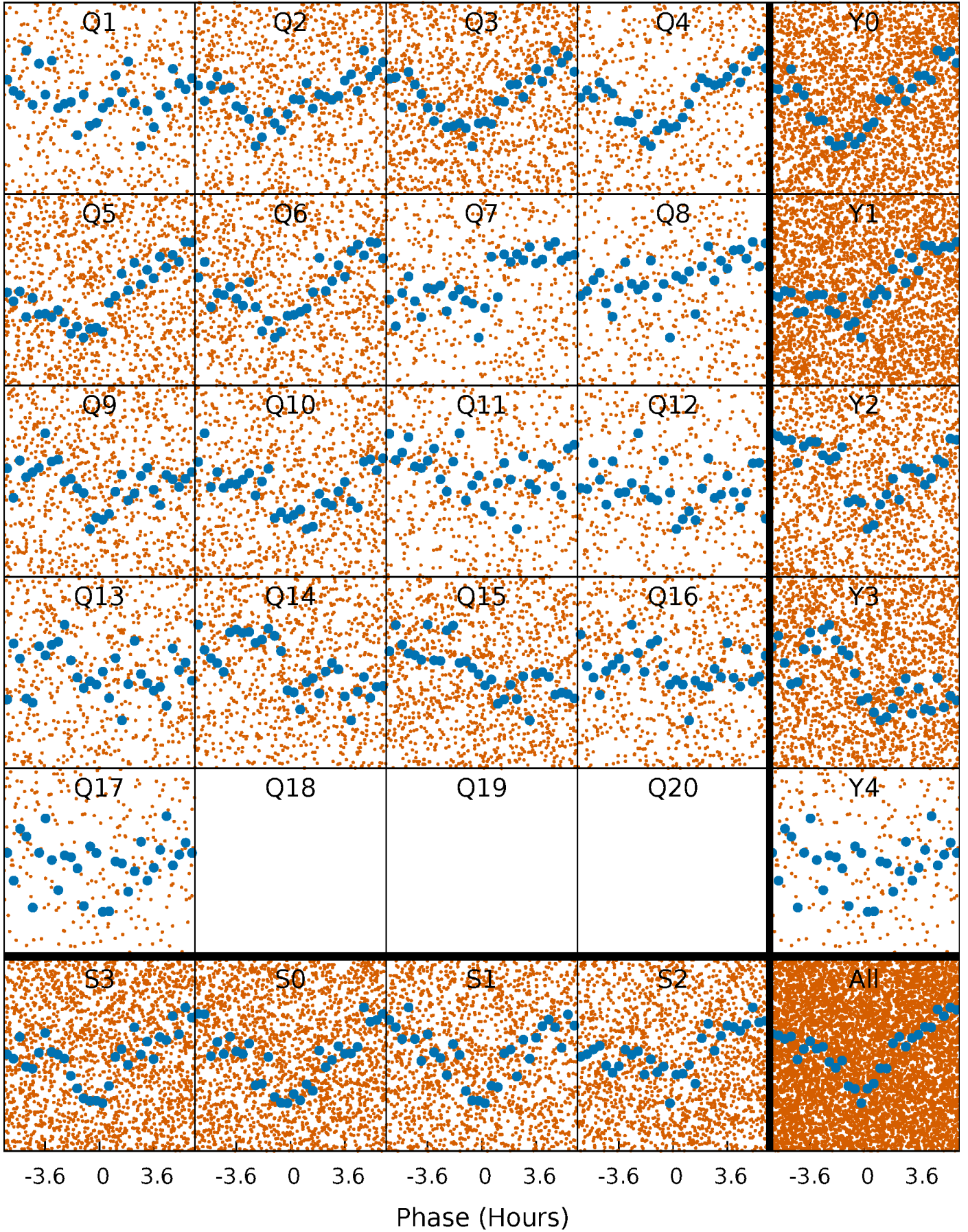


Non-Whitened Vs. Whitened Light Curve



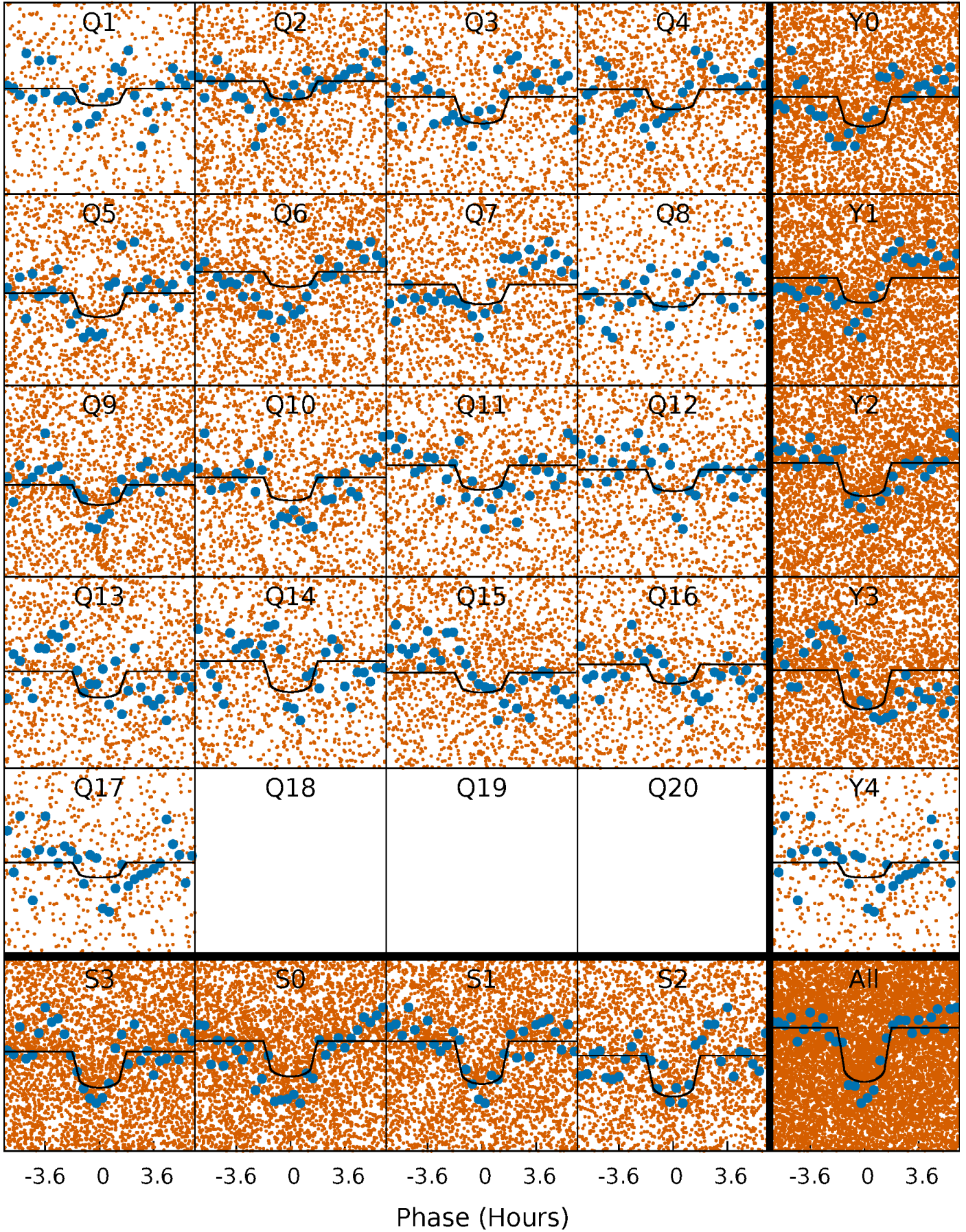
PDC Quarter-Phased Transit Curves

TCE 007040897-01 P= 0.805932 Days $T_0=131.600919$ (BKJD)



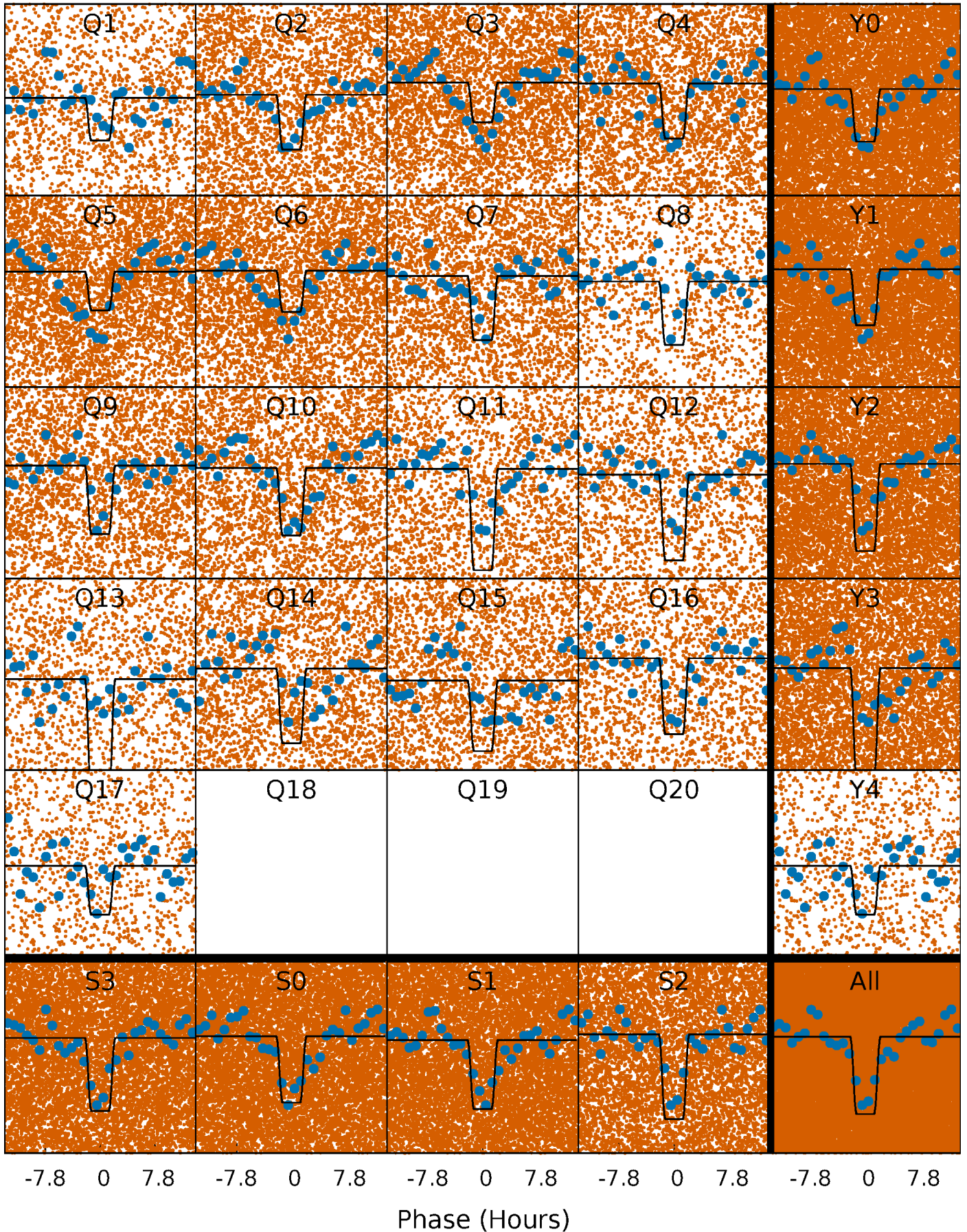
DV Quarter-Phased Transit Curves

TCE 007040897-01 P= 0.805932 Days $T_0=131.600919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

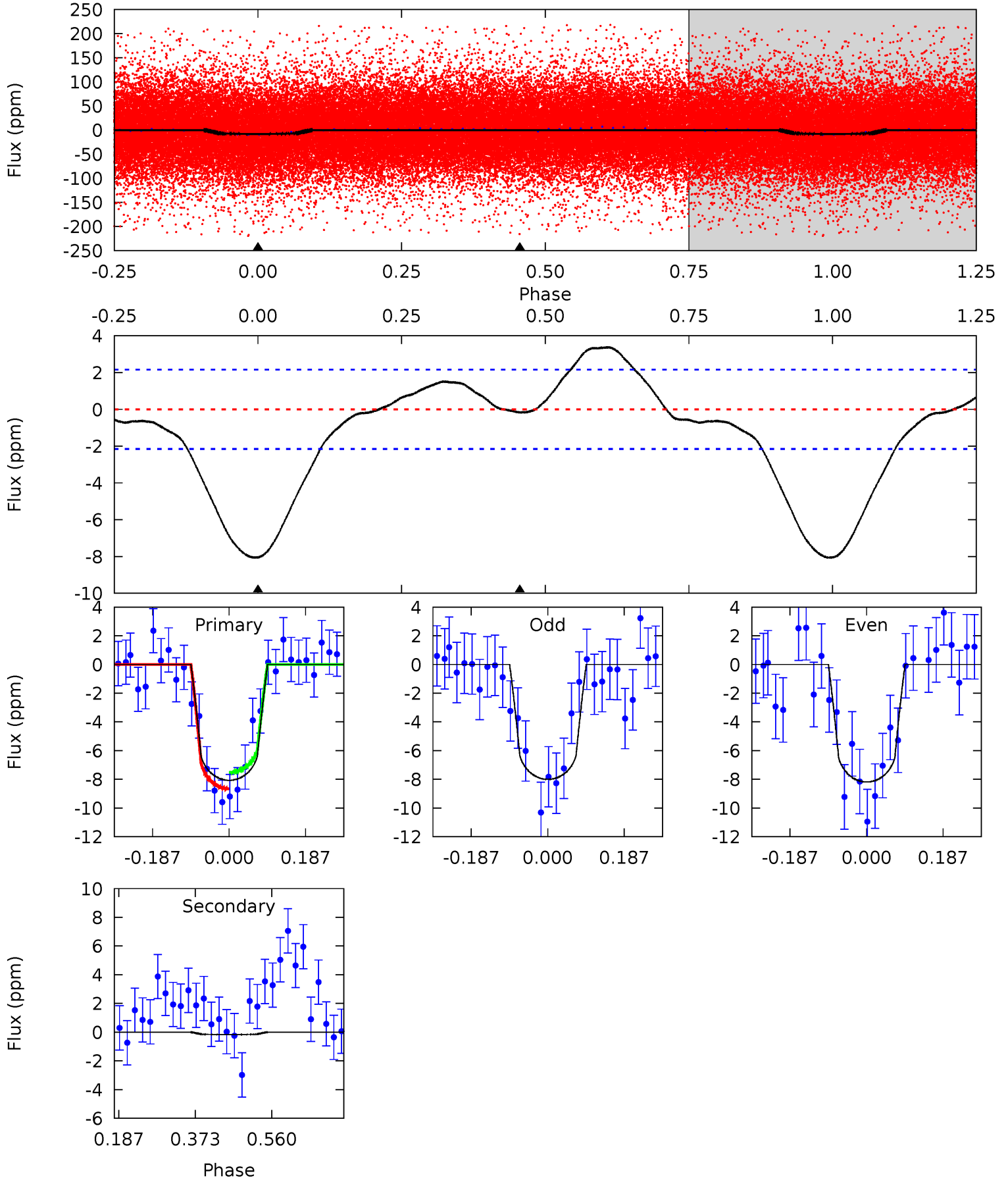
TCE 007040897-01 P= 0.805996 Days $T_0=131.543343$ (BKJD)



DV Model-Shift Uniqueness Test

007040897-01, P = 0.805932 Days, E = 130.794987 Days

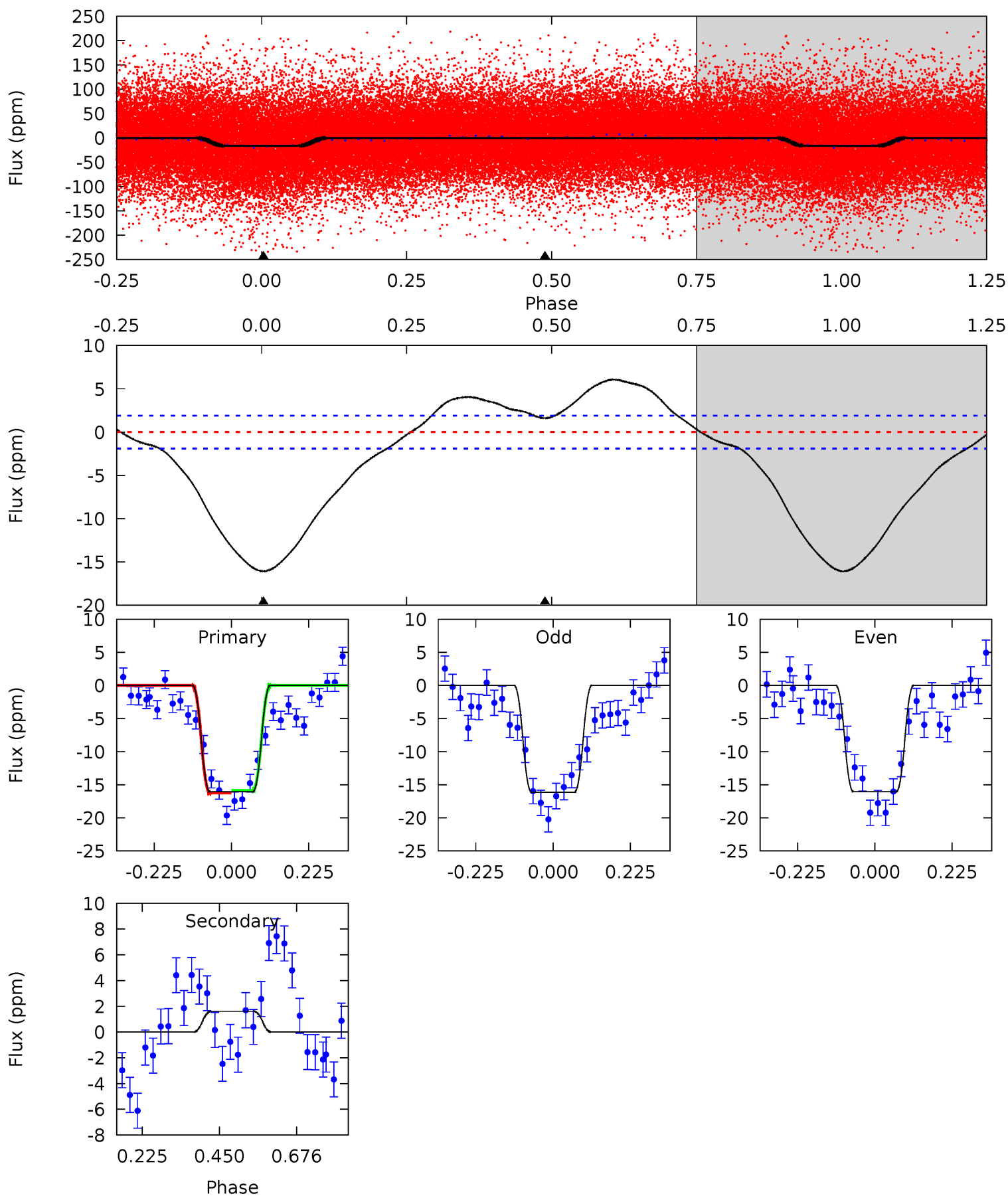
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	0.36	0	0	4.43	1.32	1.87	16.6	16.6	0.36	0.36	0.19	1.06	0.30	1.18



Alt Model-Shift Uniqueness Test

007040897-01, P = 0.805996 Days, E = 130.737347 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.2	-3.72	0	0	4.39	1.21	2.15	37.2	37.2	-3.72	-3.72	0.12	1.00	0.27	0.47



Stellar Parameters For KIC 007040897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7981^{+222}_{-333}	$3.716^{+0.450}_{-0.106}$	$-0.060^{+0.200}_{-0.350}$	$3.298^{+0.688}_{-1.604}$	$2.061^{+0.293}_{-0.545}$	$0.081^{+0.329}_{-0.027}$
	+3%/-4%	+12%/-3%	+333%/-583%	+21%/-49%	+14%/-26%	+406%/-33%
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 007040897-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 ± 0	$0.94^{+0.20}_{-0.25}$	5888^{+417}_{-689}	-4632^{+1032}_{-533}	$0.049^{+0.166}_{-0.145}$
Alt.	2 ± 0	$1.52^{+0.30}_{-0.37}$	5856^{+475}_{-668}	-5309^{+356}_{-280}	$-0.177^{+0.069}_{-0.120}$

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 $A_{obs} \gg 1.0$

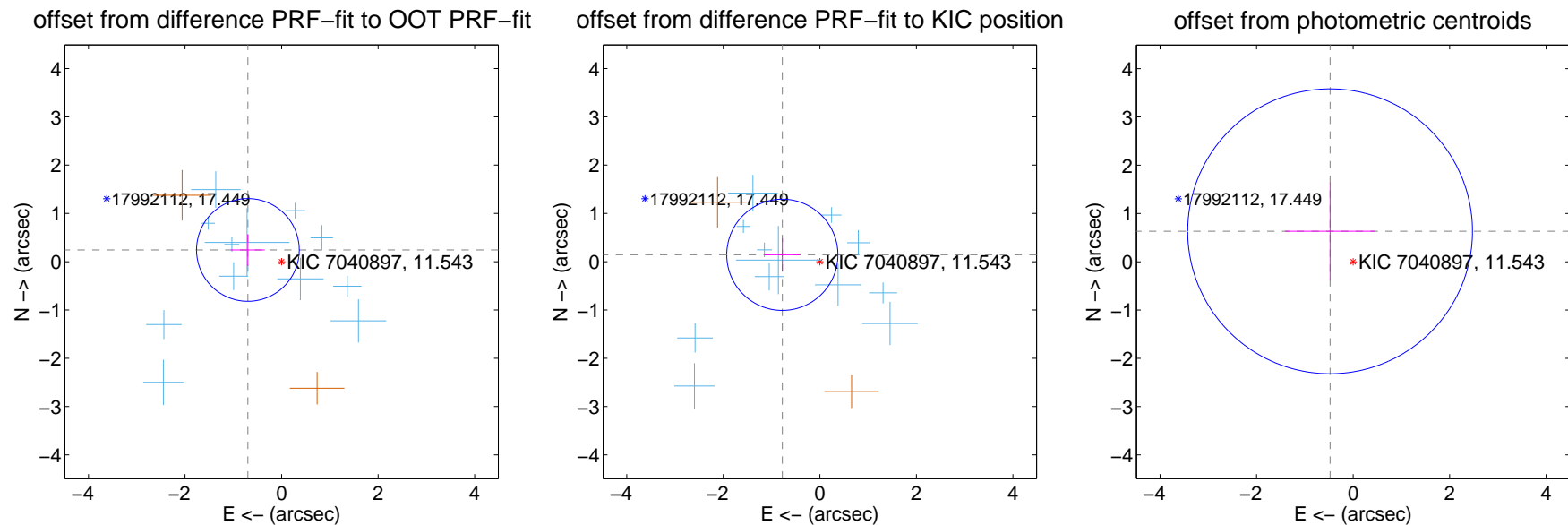
DV Centroid Data

Supplemental centroid analysis for 007040897-01. **Kepler magnitude: 11.54.** Transit SNR 10.79

There are 12 quarters with good PRF difference image offsets

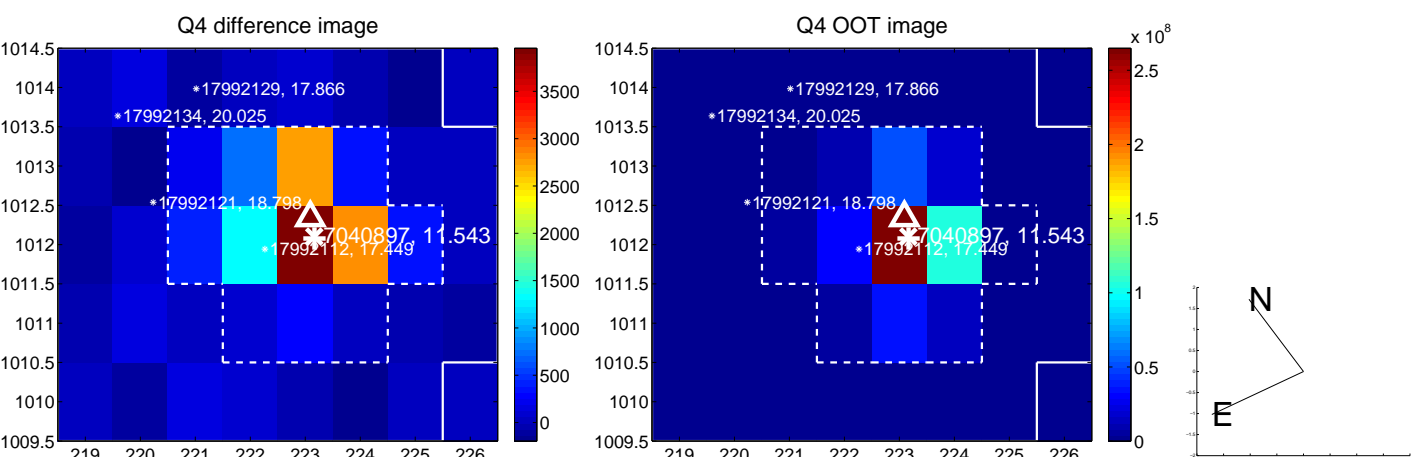
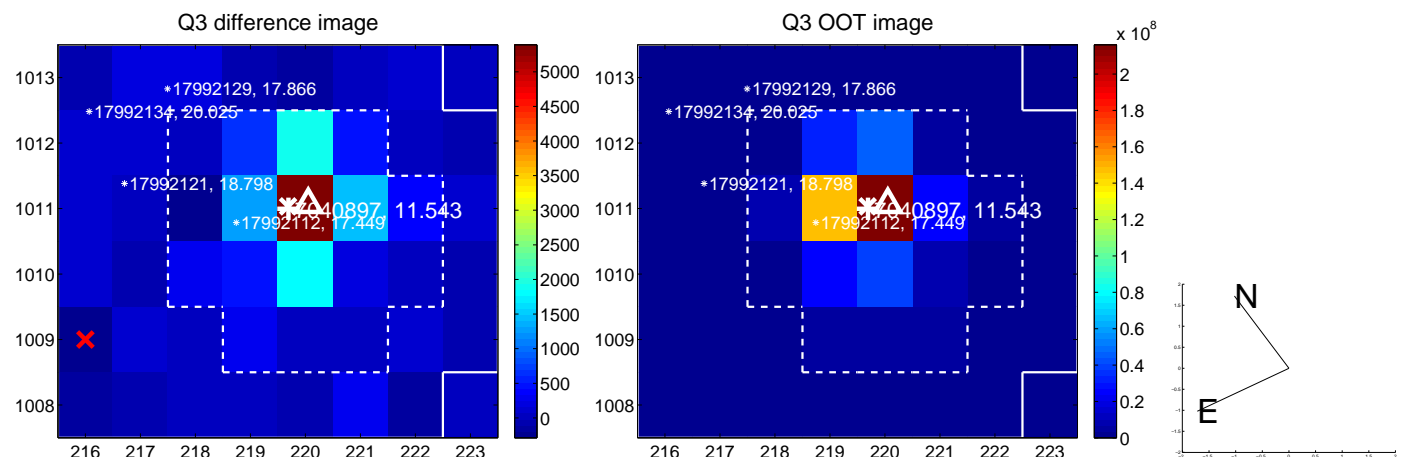
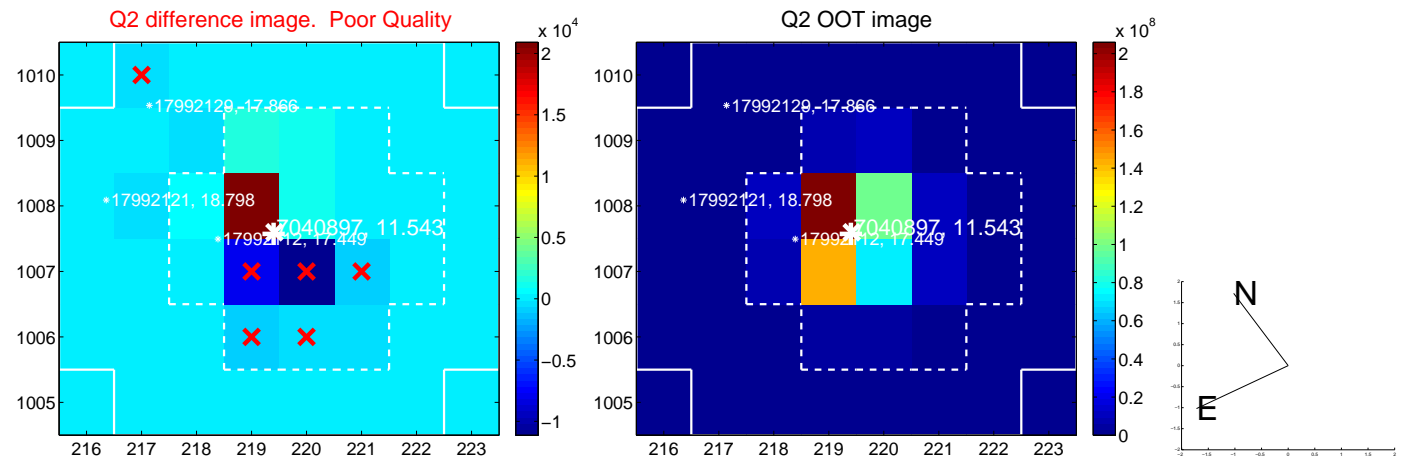
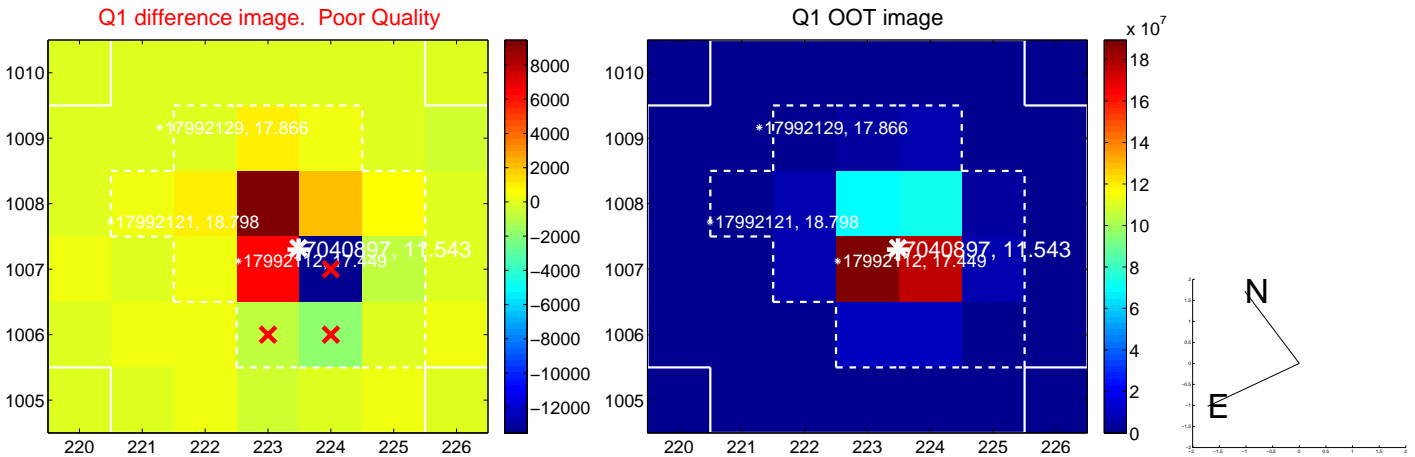
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.739 ± 0.355	2.08	0.698 ± 0.350	0.243 ± 0.328
PRF-fit source offset from KIC position	0.790 ± 0.384	2.06	0.777 ± 0.380	0.143 ± 0.343
photometric centroid source offset	0.79 ± 0.98	0.80	0.48 ± 0.94	0.63 ± 1.01

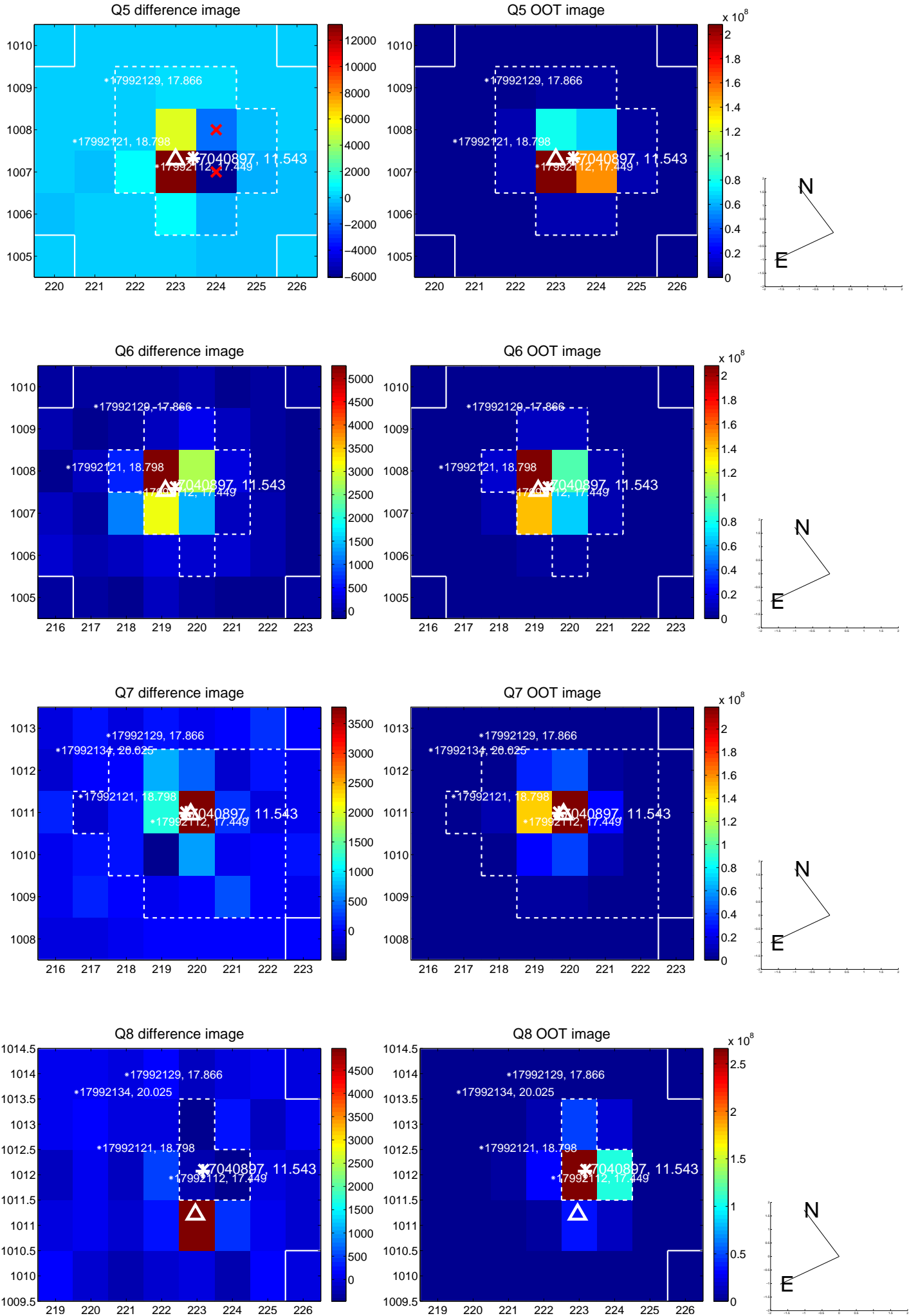


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

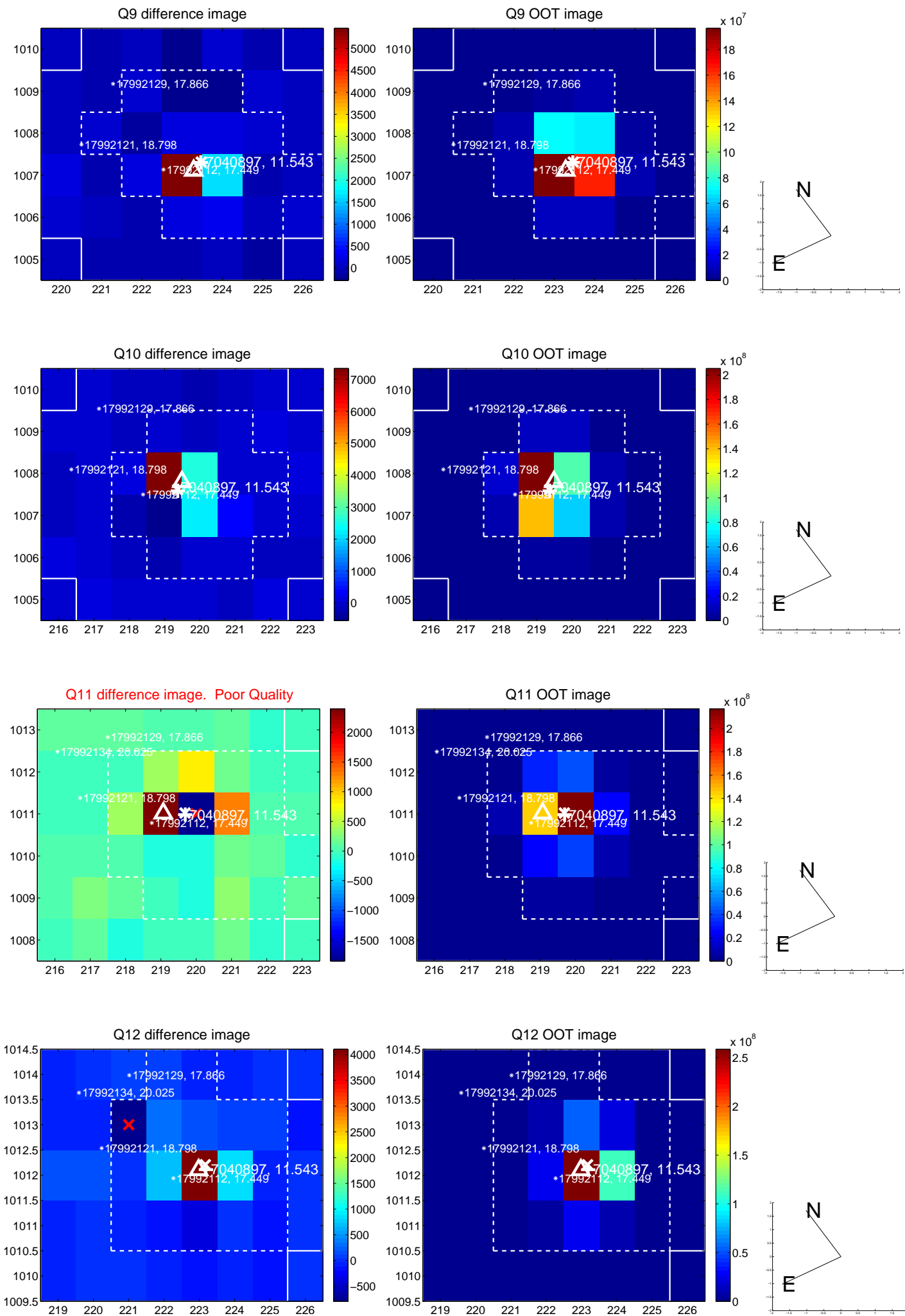
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



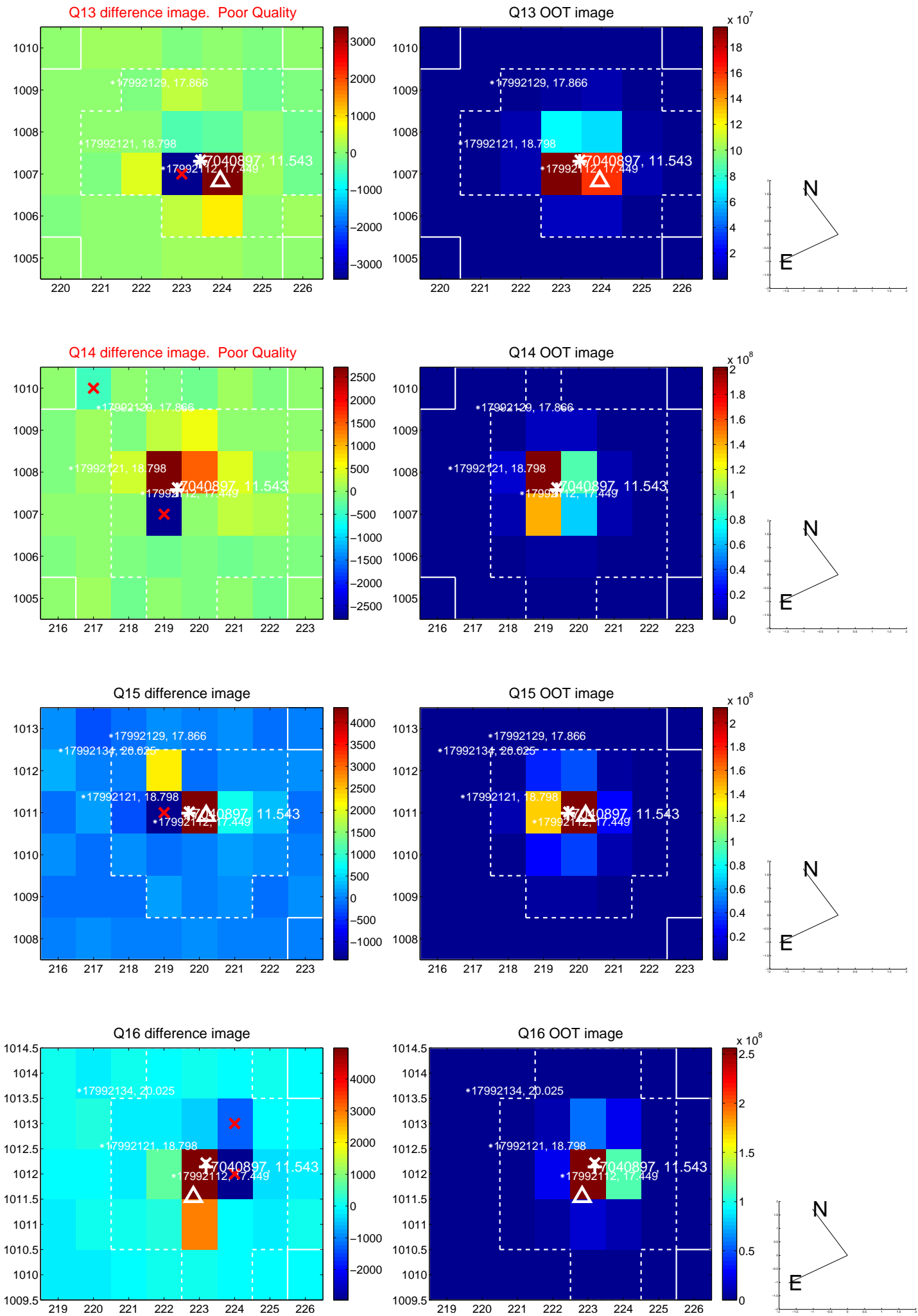
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



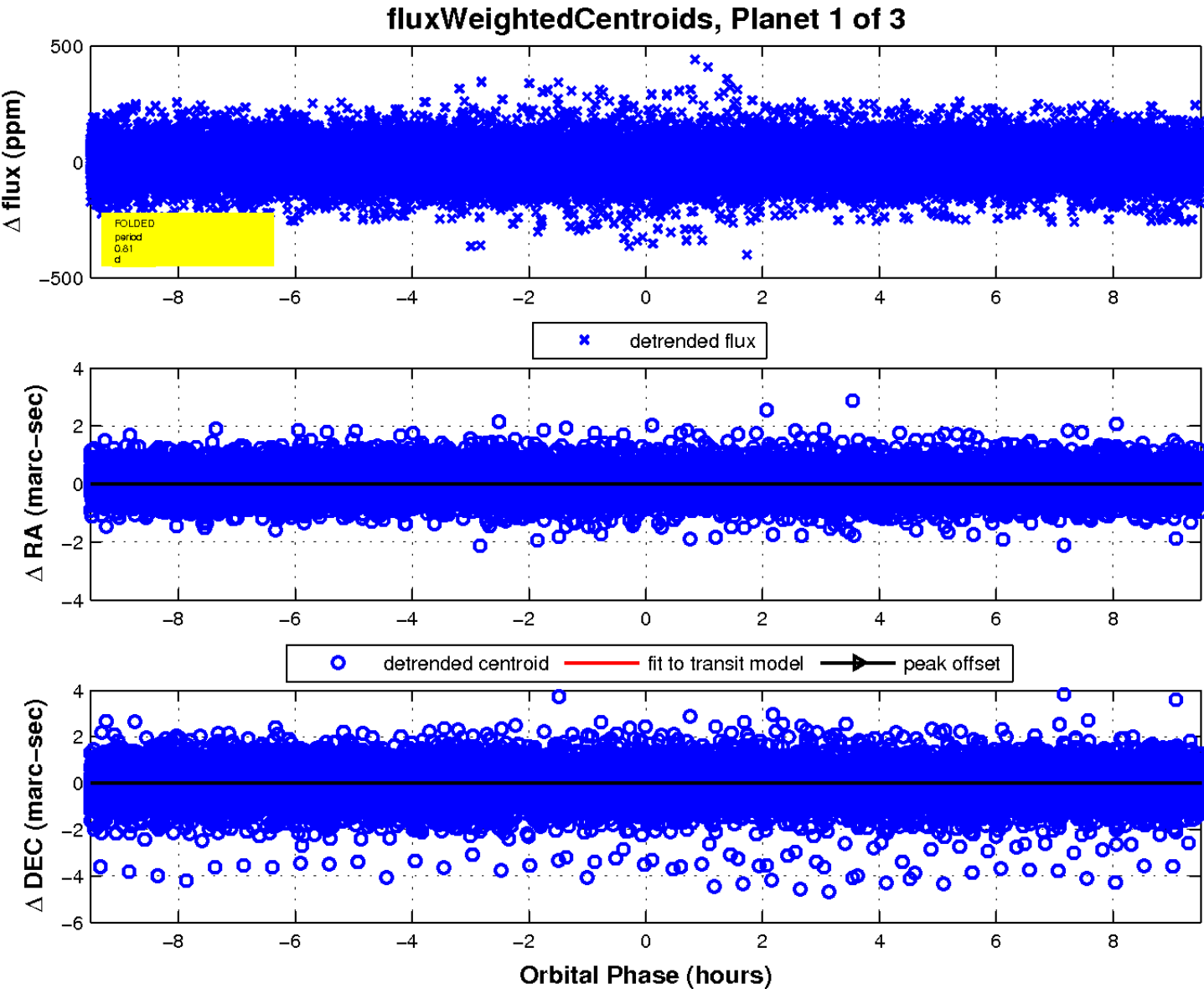
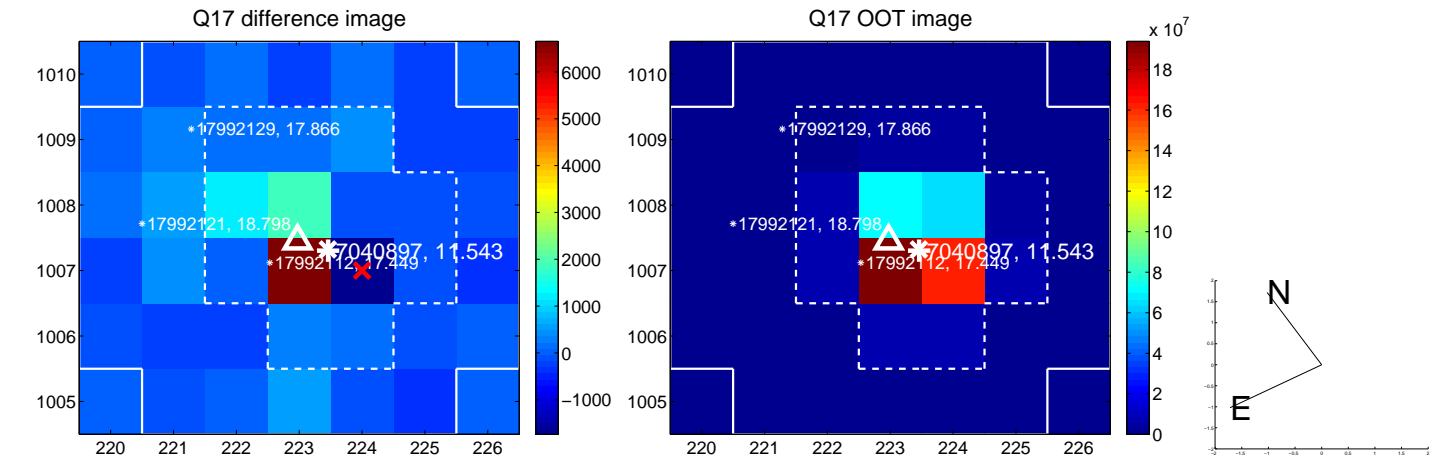
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

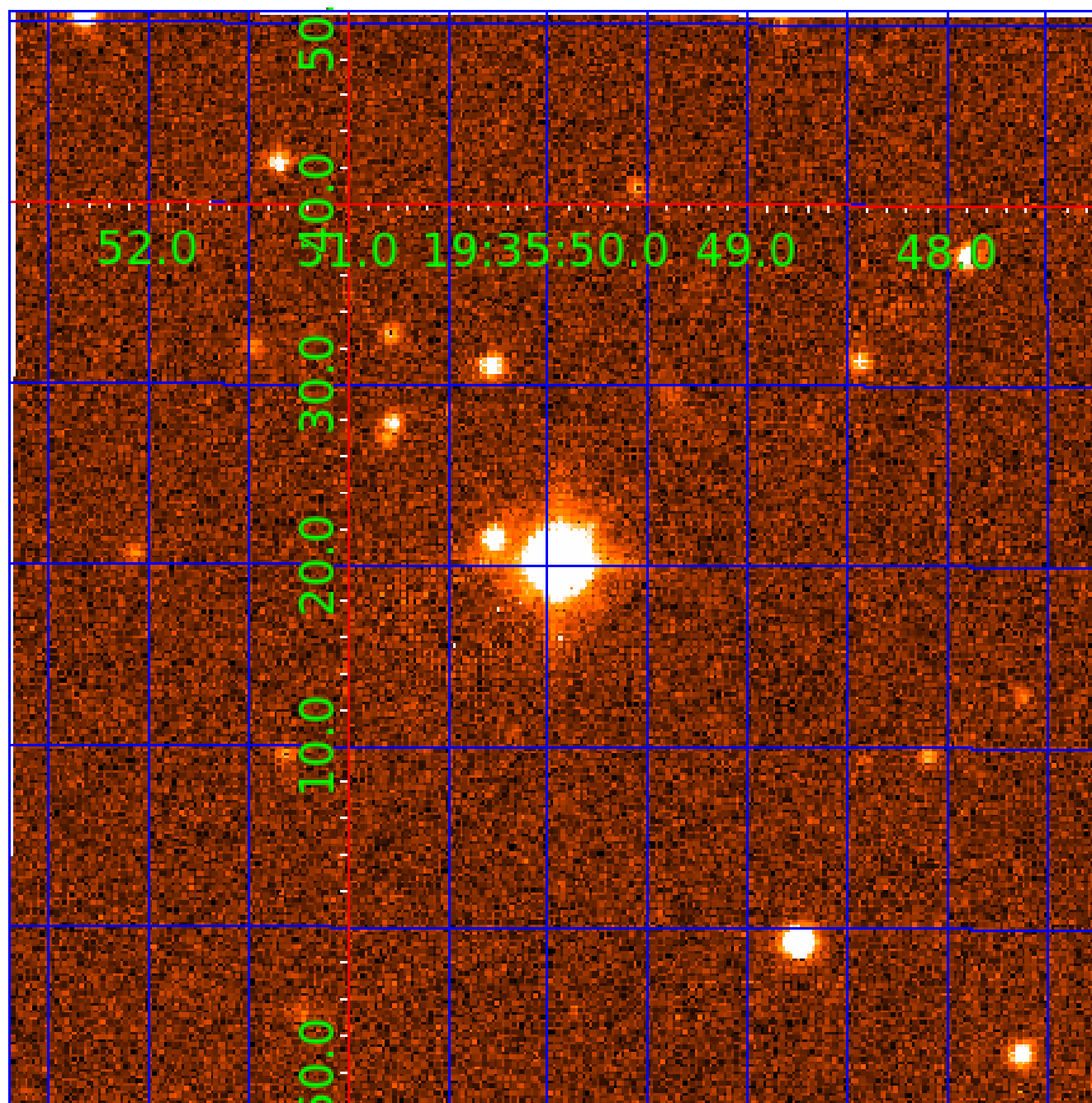


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007040897

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})
007040897-01	OBS	No	0.805932	131.600919	7.4	3.169	14.9	10.8	3.30	7981	1.01	84897.04
007040897-02	OBS	No	190.321123	221.017419	61.5	11.334	10.3	6.1	3.30	7981	2.90	58.16
007040897-03	OBS	No	227.130215	242.292126	116.5	1.403	8.1	5.7	3.30	7981	4.25	45.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040897-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007040897-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007040897-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

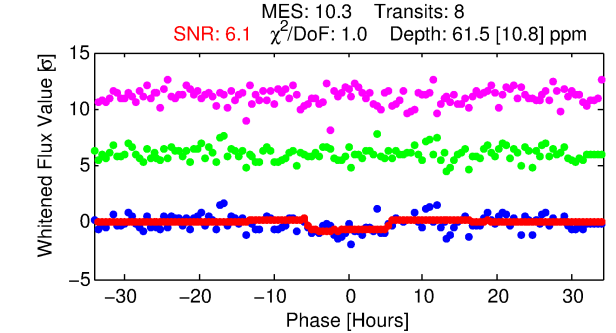
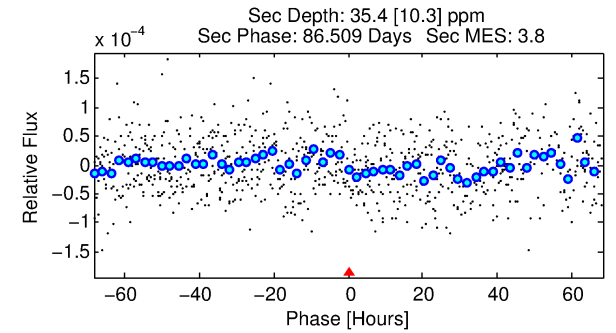
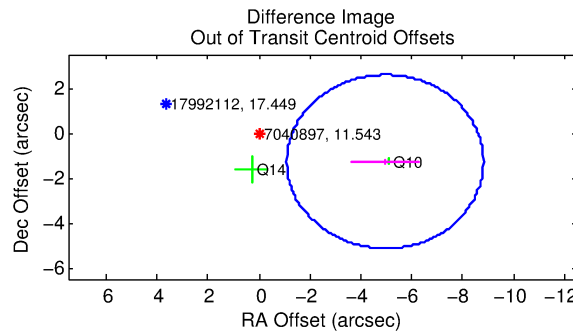
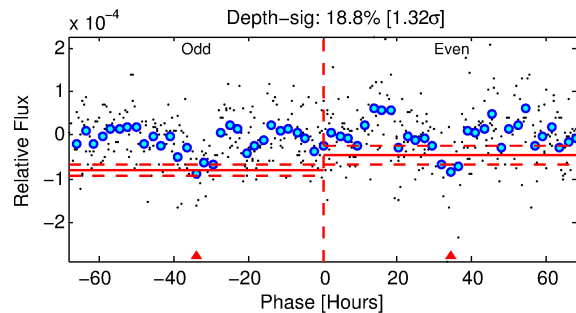
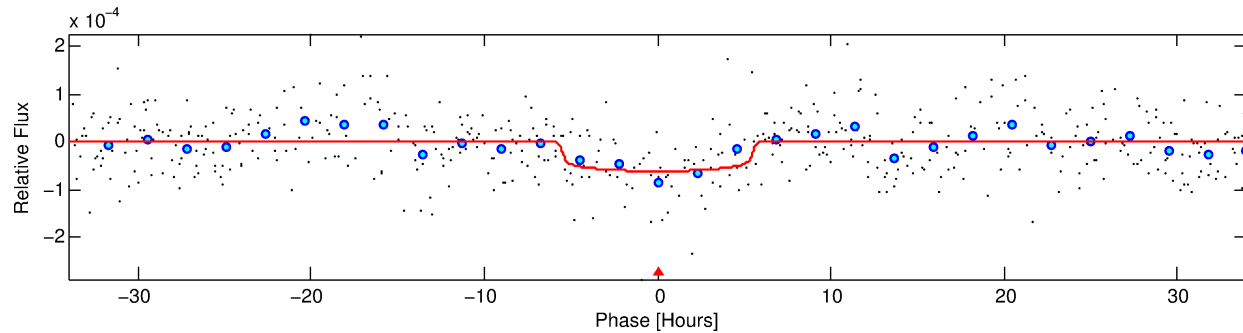
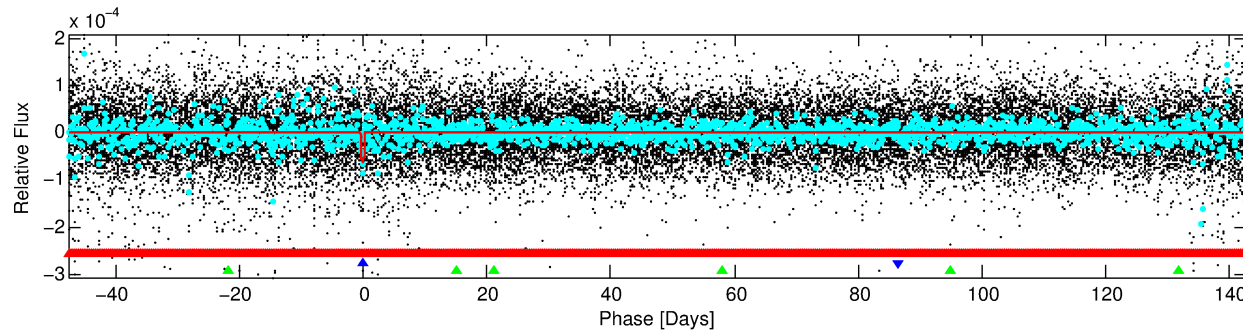
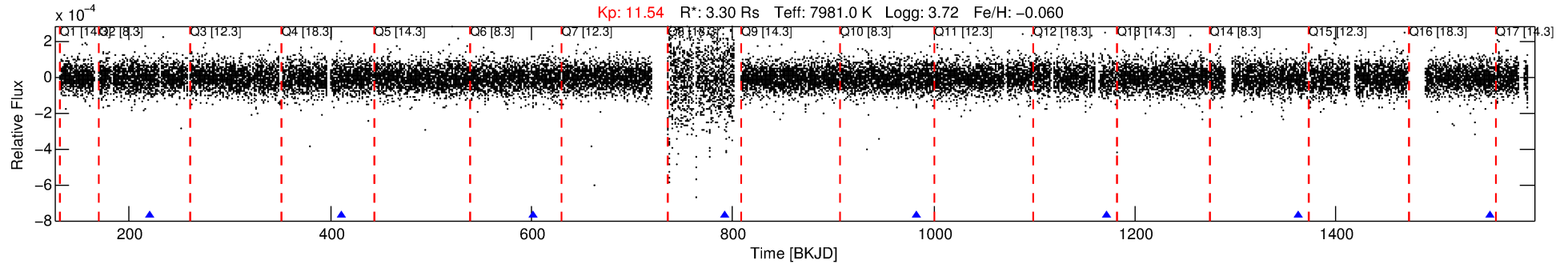
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040897-02

No Significant Match Found

DV One-Page Summary

KIC: 7040897 Candidate: 2 of 3 Period: 190.321 d



DV Fit Results:

Period = 190.32112 [0.00384] d
Epoch = 221.0174 [0.0158] BKJD
Rp/R* = 0.0081 [0.0030]
a/R* = 71.68 [151.61]
b = 0.84 [0.75]
Seff = 58.16 [45.43]
Teff = 704 [138] K
Rp = 2.90 [1.77] Re
a = 0.8245 [0.3906] AU
Ag = 1571.86 [1728.32] [0.91 σ]
Teffp = 6855 [1387] K [4.41 σ]

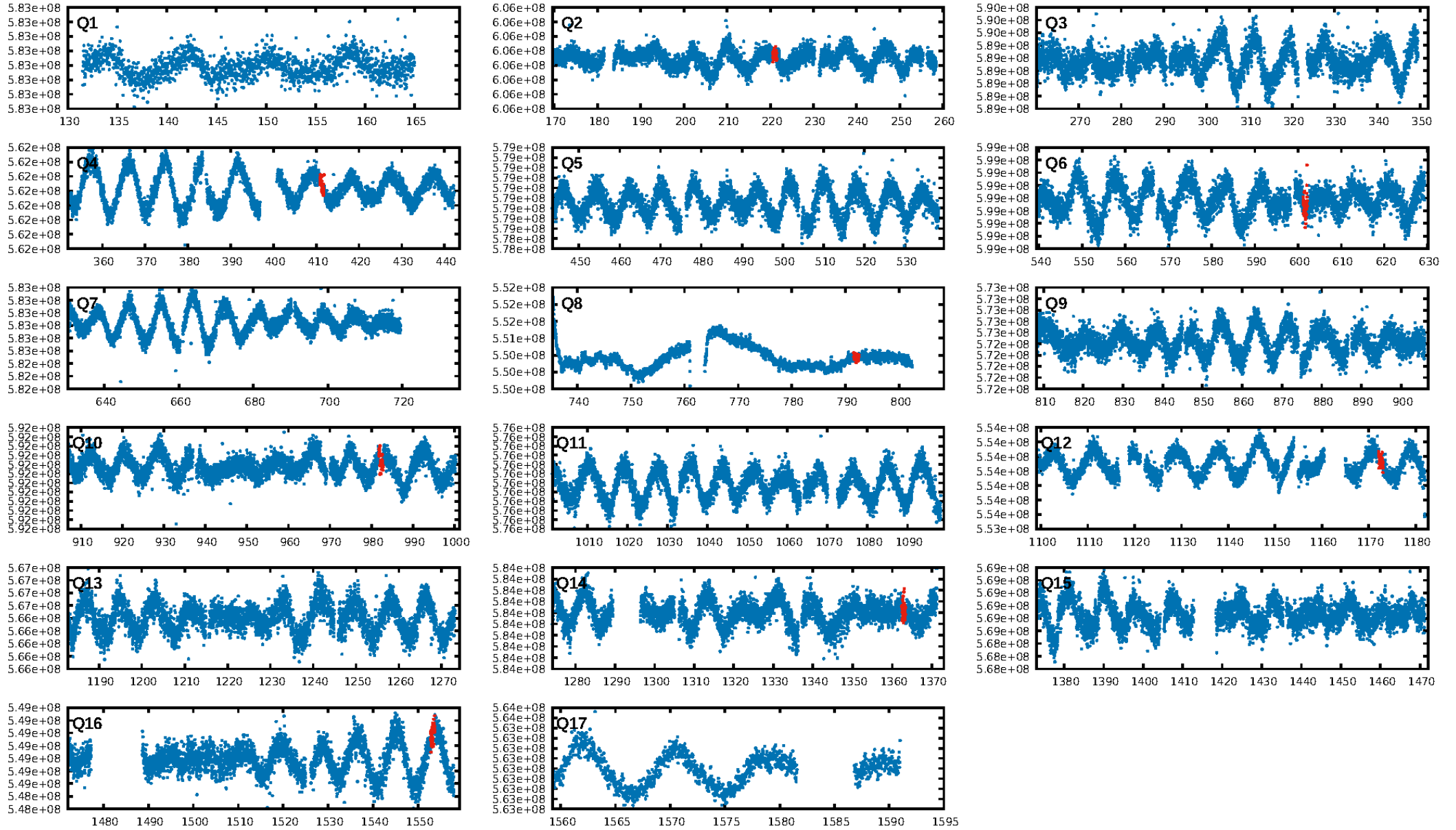
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [386.50 σ]
LongPeriod-sig: 100.0% [77.36 σ]
ModelChiSquare2-sig: 23.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.91e-19
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.6369
Centroid-sig: 0.5%
Centroid-so: 3.361 arcsec [2.32 σ]
OotOffset-rm: 5.123 arcsec [3.98 σ]
KicOffset-rm: 5.102 arcsec [3.93 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/7]

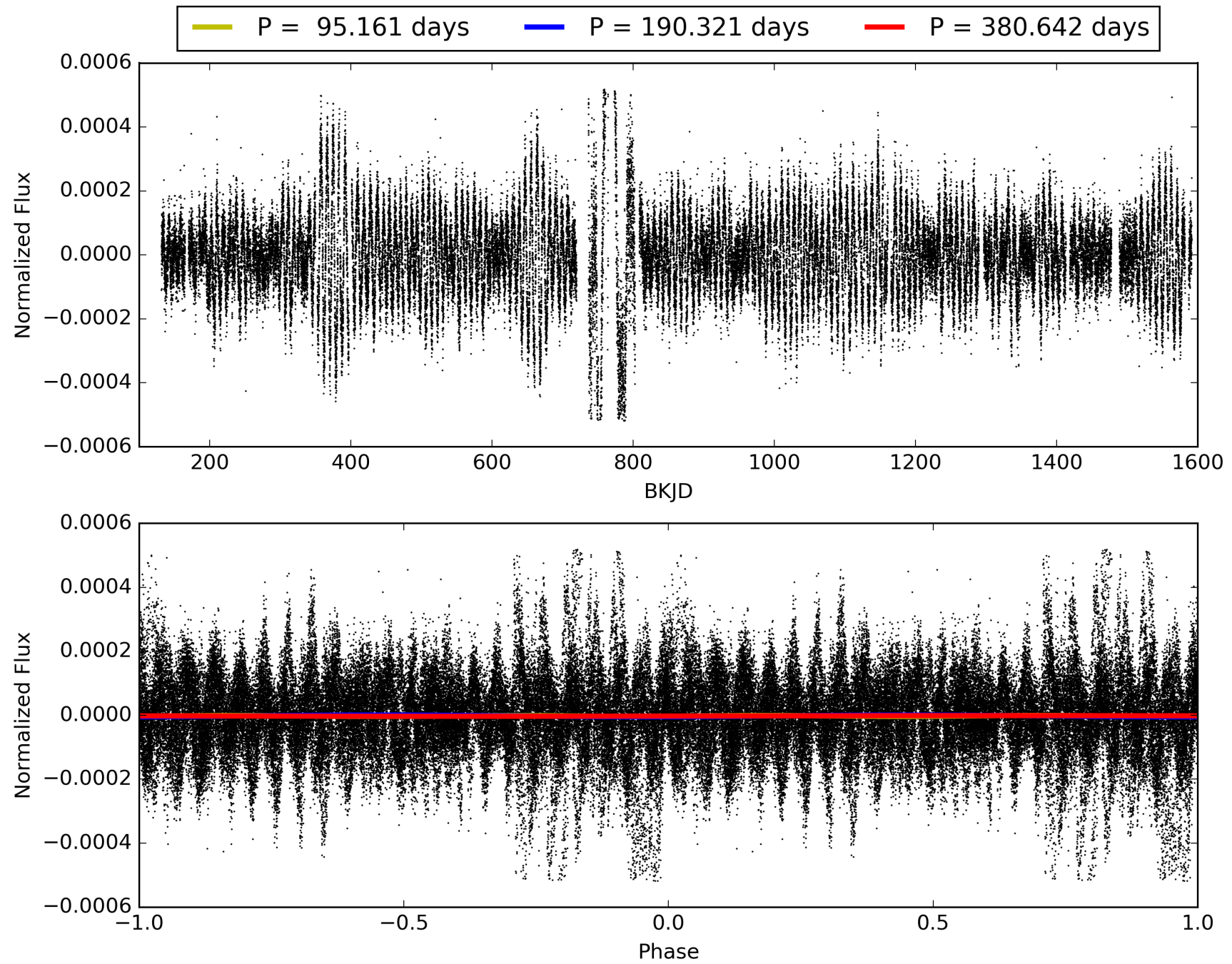
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:43:50 Z

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

TCE 007040897-02, PDC Light Curves

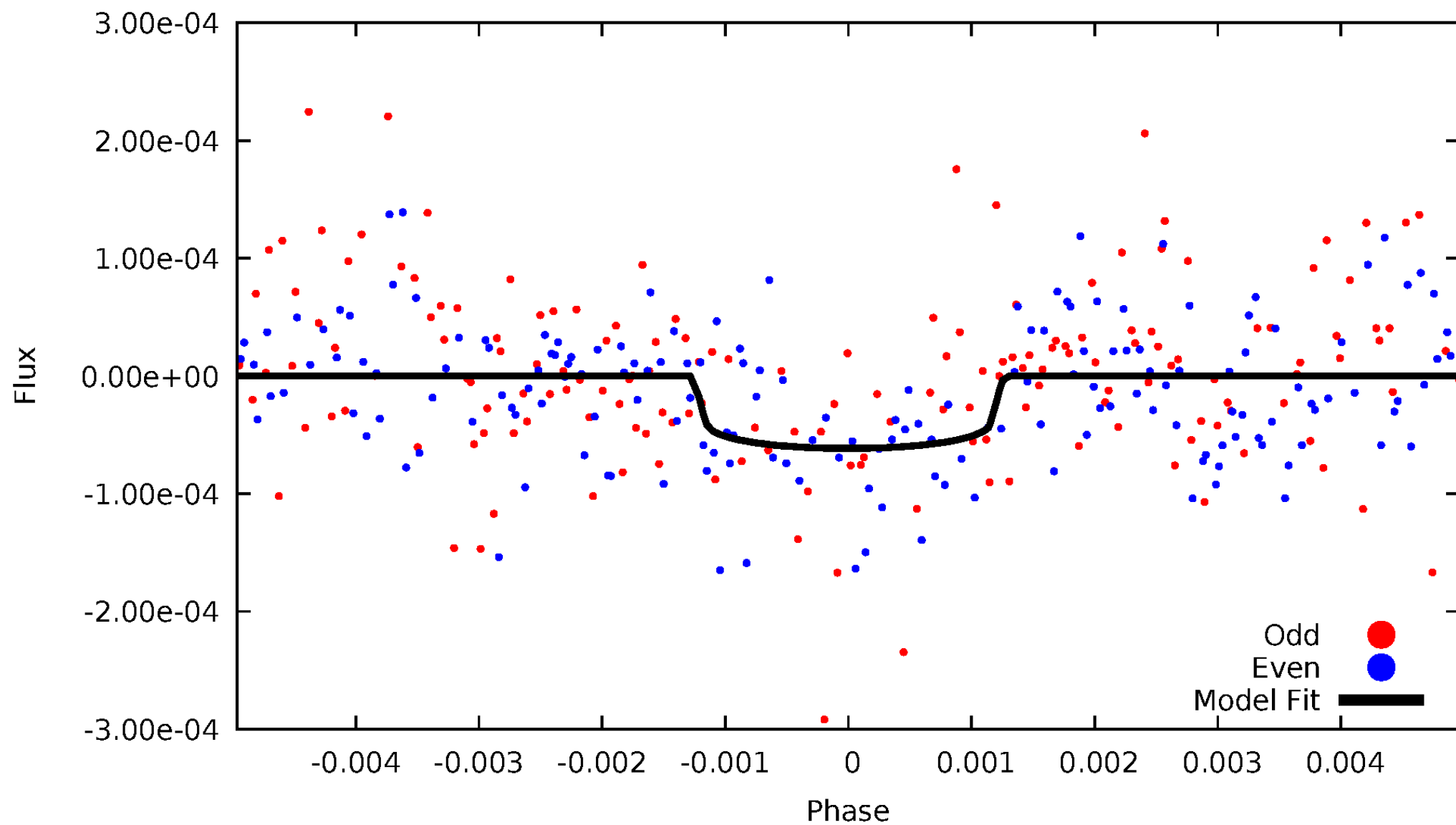


TCE 007040897-02



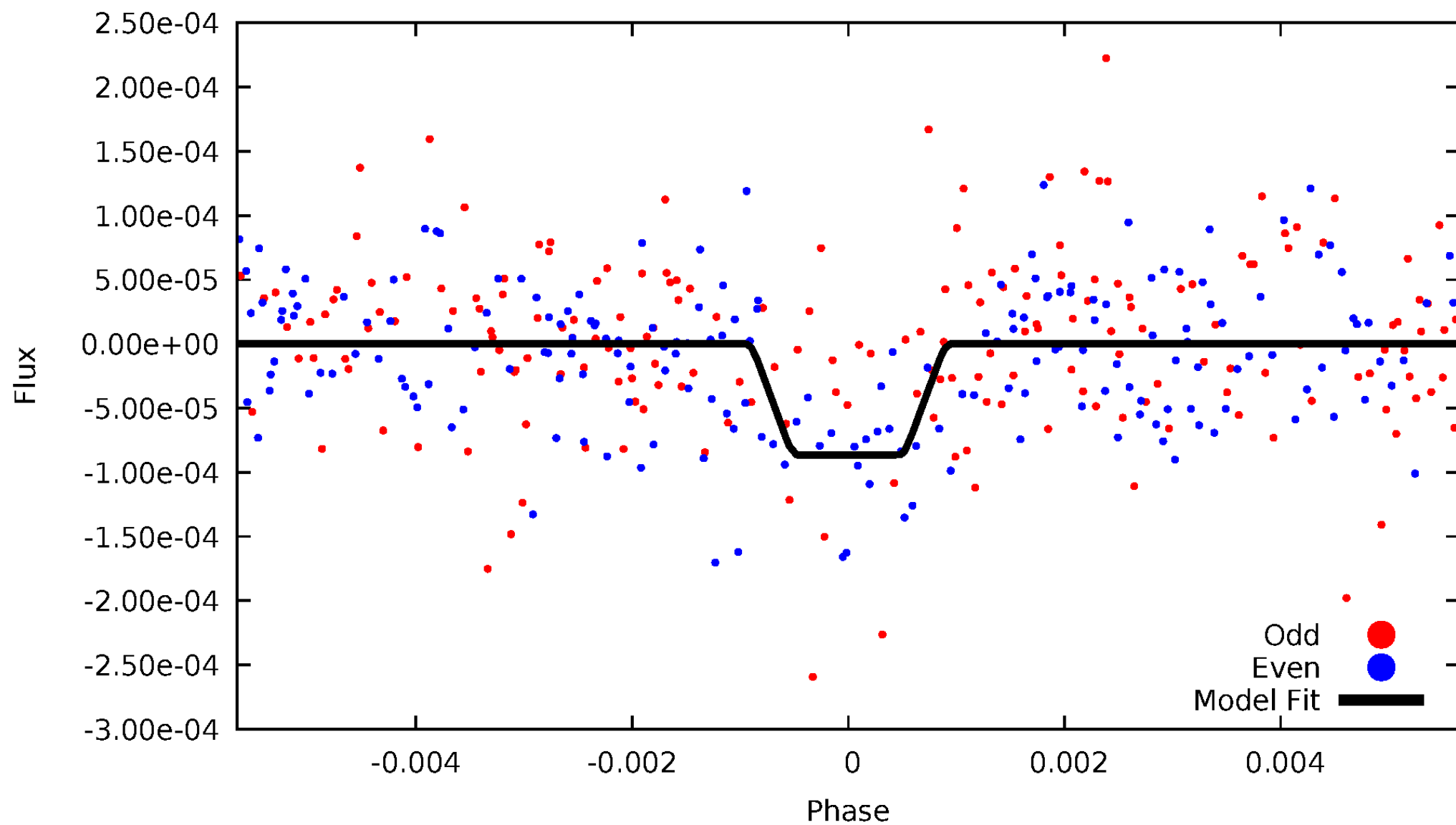
DV Odd/Even

TCE 007040897-02



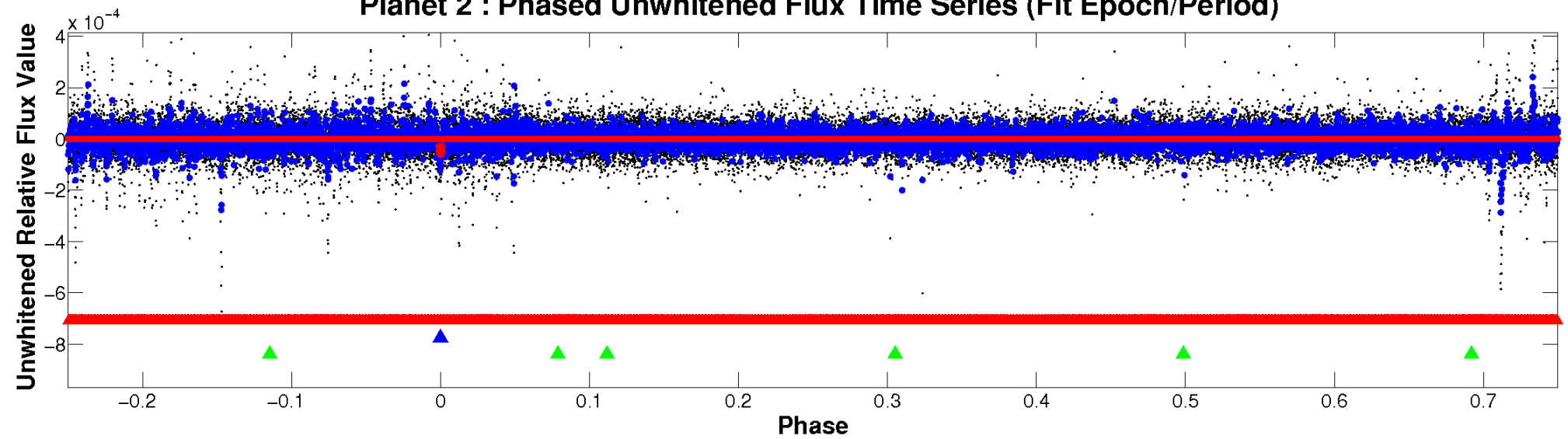
ALT Odd/Even

TCE 007040897-02

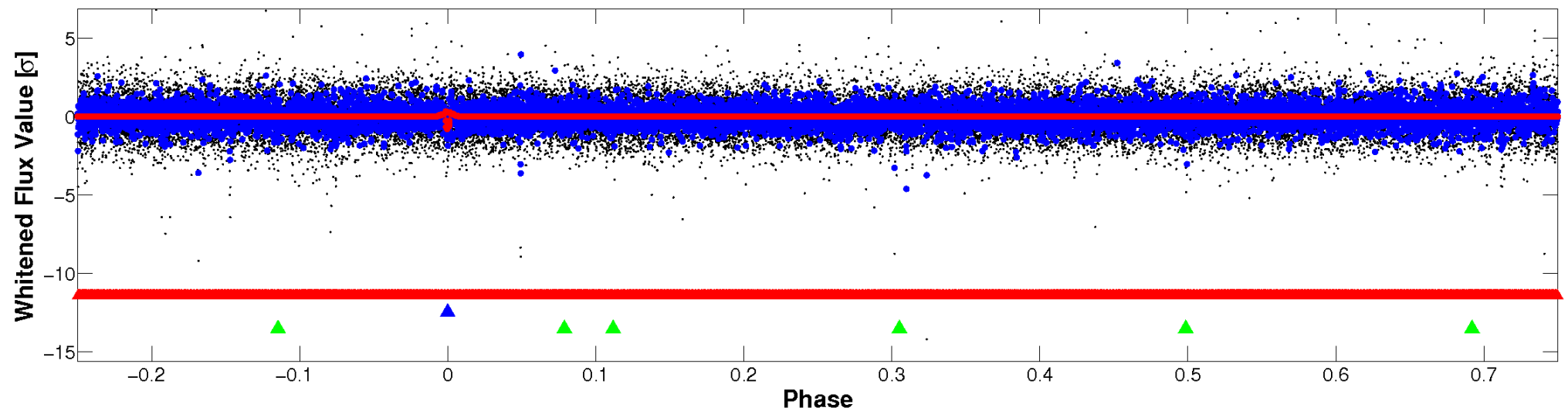


Non-Whitened Vs. Whitened Light Curve

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

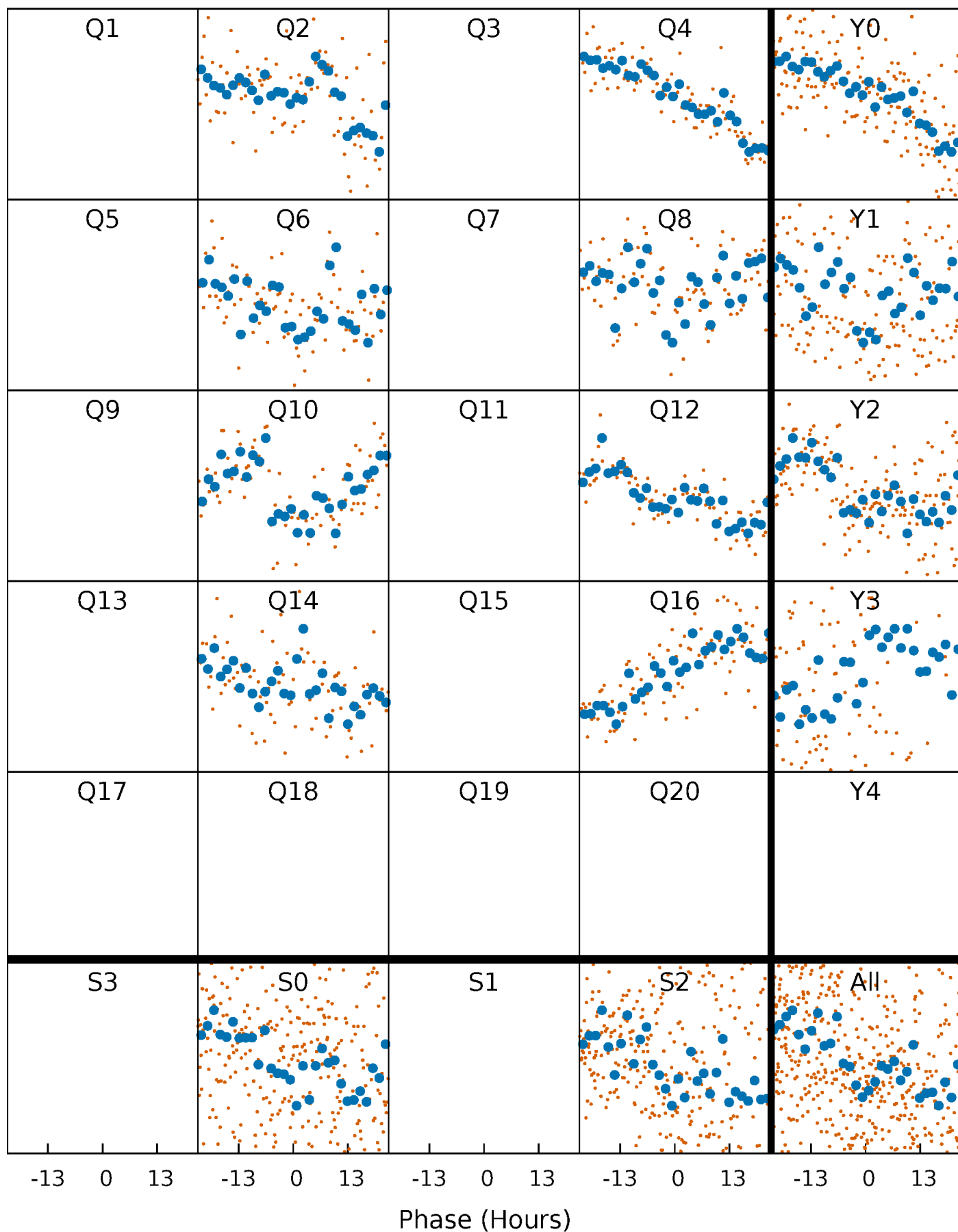


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



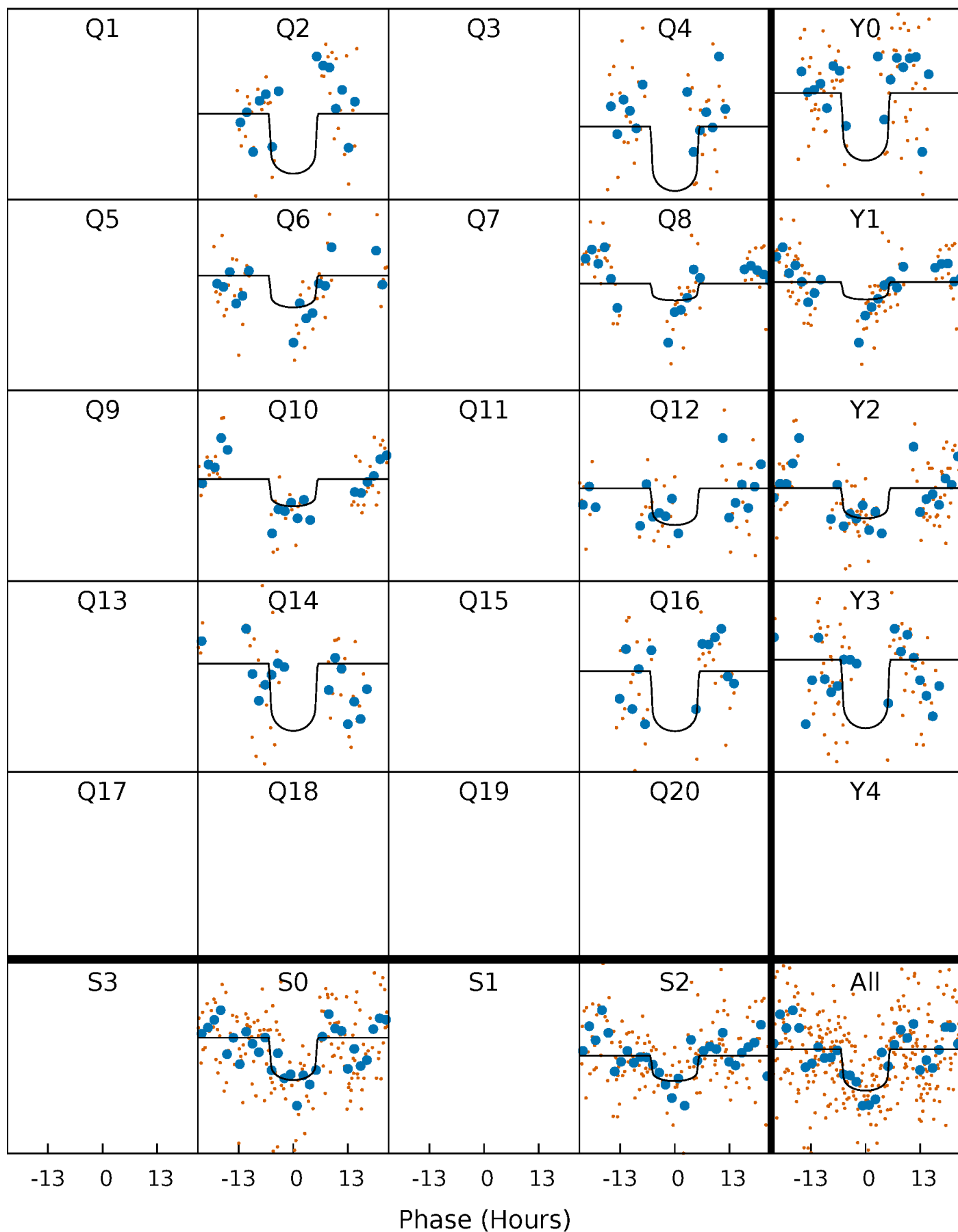
PDC Quarter-Phased Transit Curves

TCE 007040897-02 $P=190.321123$ Days $T_0=221.017419$ (BKJD)



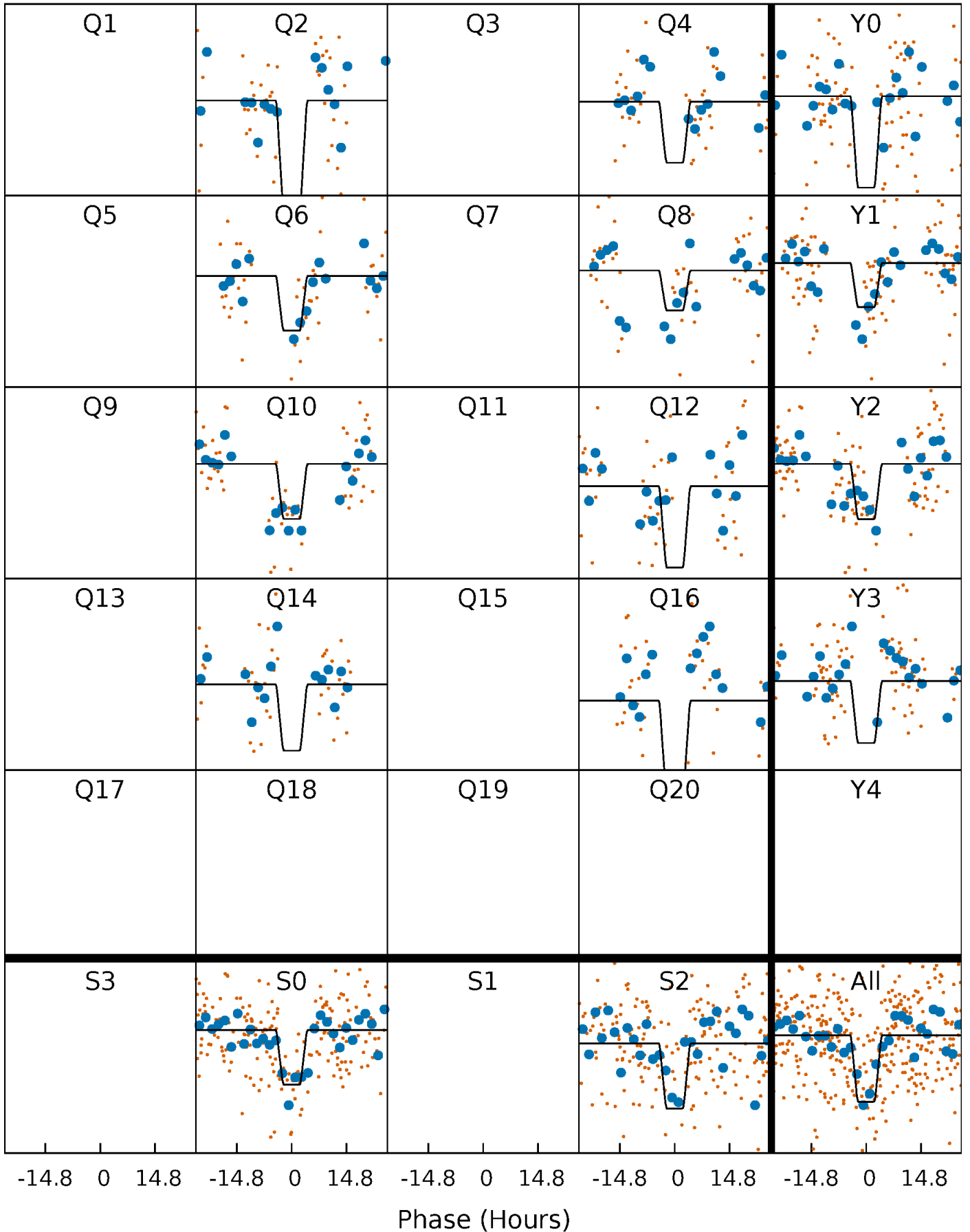
DV Quarter-Phased Transit Curves

TCE 007040897-02 P=190.321123 Days $T_0=221.017419$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

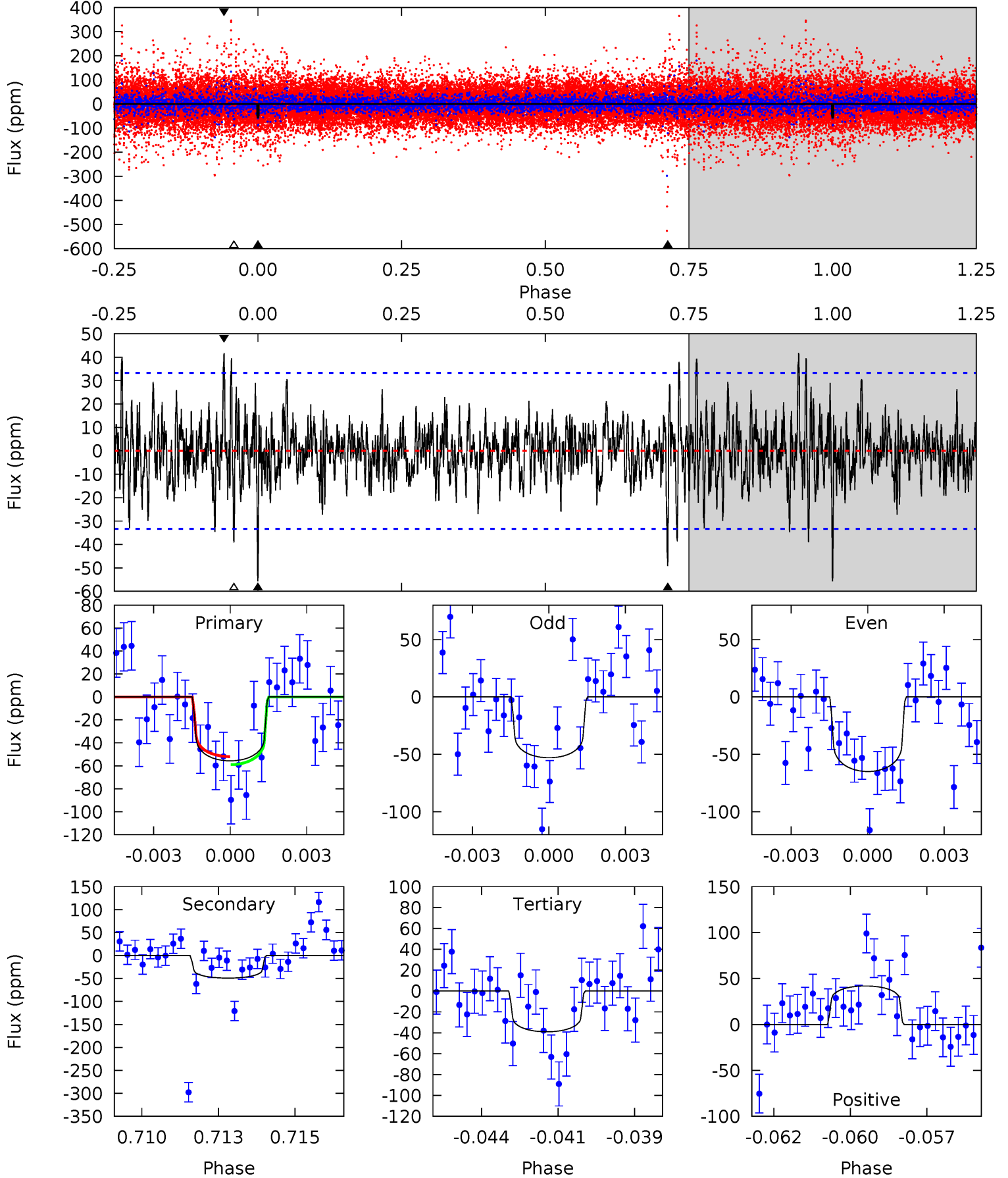
TCE 007040897-02 P=190.331800 Days $T_0=221.010956$ (BKJD)



DV Model-Shift Uniqueness Test

007040897-02, P = 190.321123 Days, E = 30.696296 Days

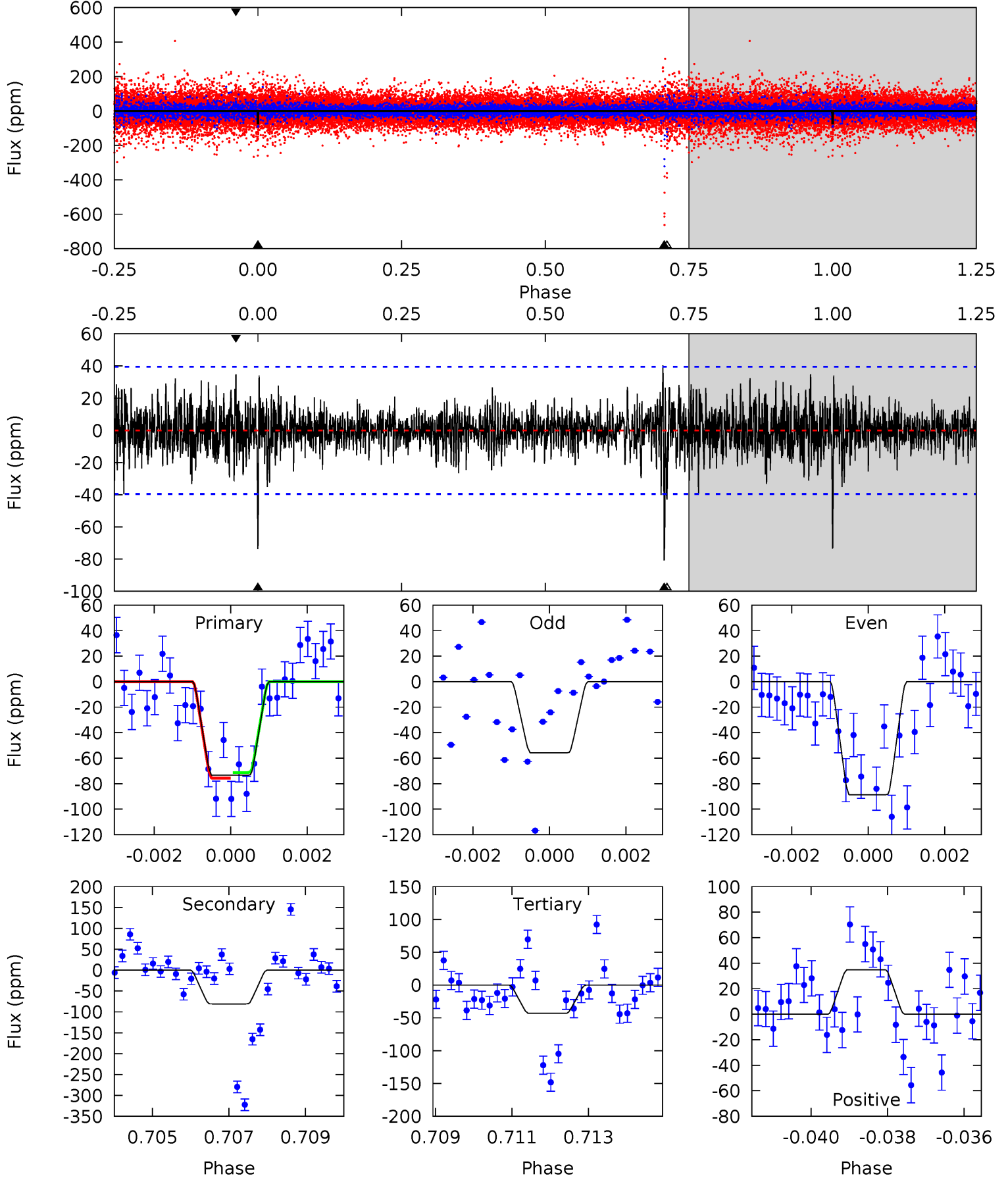
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.82	7.80	6.19	6.64	5.28	3.01	1.59	2.63	2.19	1.60	1.16	0.92	1.05	0.43	0.55



Alt Model-Shift Uniqueness Test

007040897-02, $P = 190.331800$ Days, $E = 30.679156$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.91	10.9	5.80	4.72	5.34	3.11	1.29	4.11	5.20	5.12	6.21	2.17	0.38	0.33	0.29



Stellar Parameters For KIC 007040897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7981^{+222}_{-333}	$3.716^{+0.450}_{-0.106}$	$-0.060^{+0.200}_{-0.350}$	$3.298^{+0.688}_{-1.604}$	$2.061^{+0.293}_{-0.545}$	$0.081^{+0.329}_{-0.027}$
	+3%/-4%	+12%/-3%	+333%/-583%	+21%/-49%	+14%/-26%	+406%/-33%
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 007040897-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-49 ± 6	$2.58^{+1.19}_{-0.99}$	952^{+78}_{-117}	7340^{+2231}_{-1182}	2667^{+4399}_{-1399}
Alt.	-81 ± 7	$3.01^{+1.37}_{-1.11}$	957^{+65}_{-119}	7704^{+2320}_{-1131}	3301^{+4648}_{-1704}

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

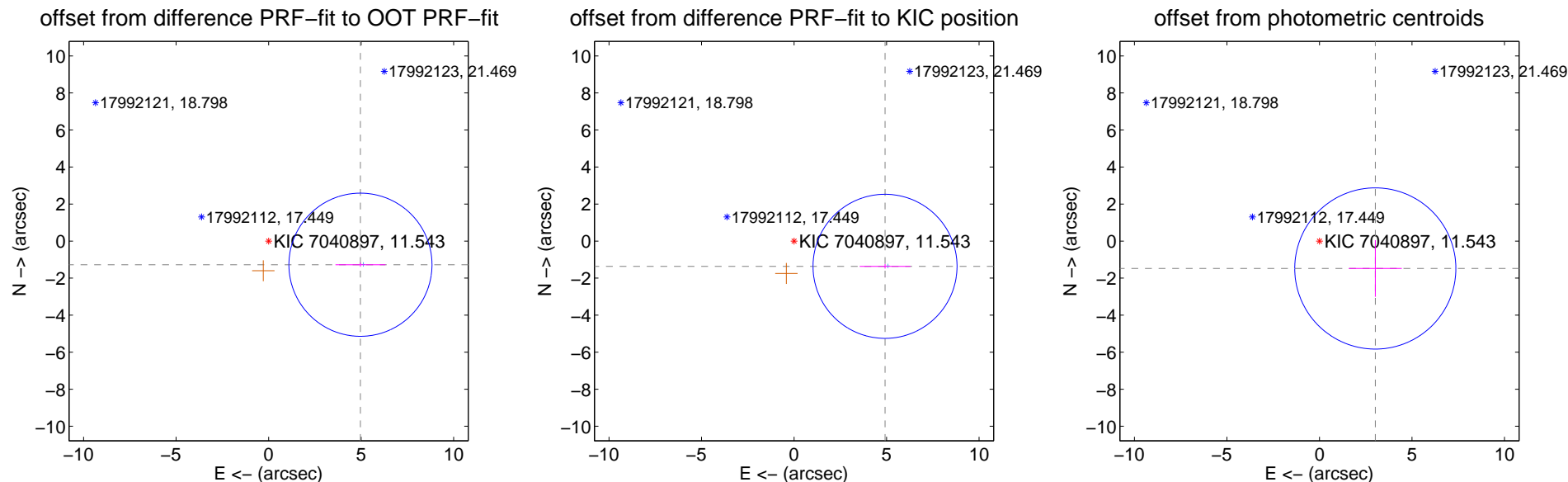
DV Centroid Data

Supplemental centroid analysis for 007040897-02. **Kepler magnitude: 11.54.** Transit SNR 6.11

There are 1 quarters with good PRF difference image offsets

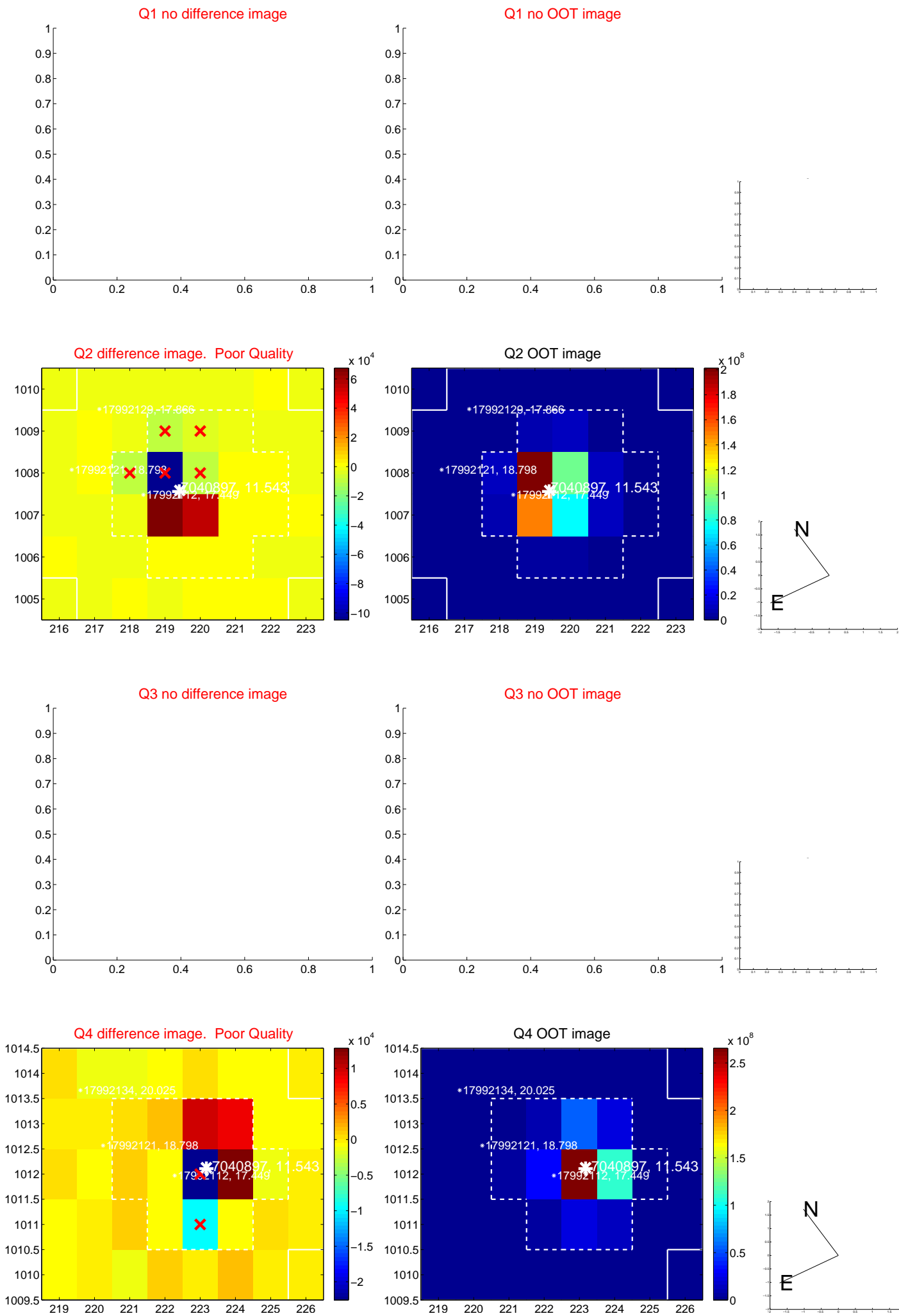
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.123 ± 1.289	3.98	-4.962 ± 1.352	-1.277 ± 0.108
PRF-fit source offset from KIC position	5.102 ± 1.297	3.93	-4.916 ± 1.374	-1.363 ± 0.121
photometric centroid source offset	3.36 ± 1.45	2.32	-3.02 ± 1.43	-1.48 ± 1.53

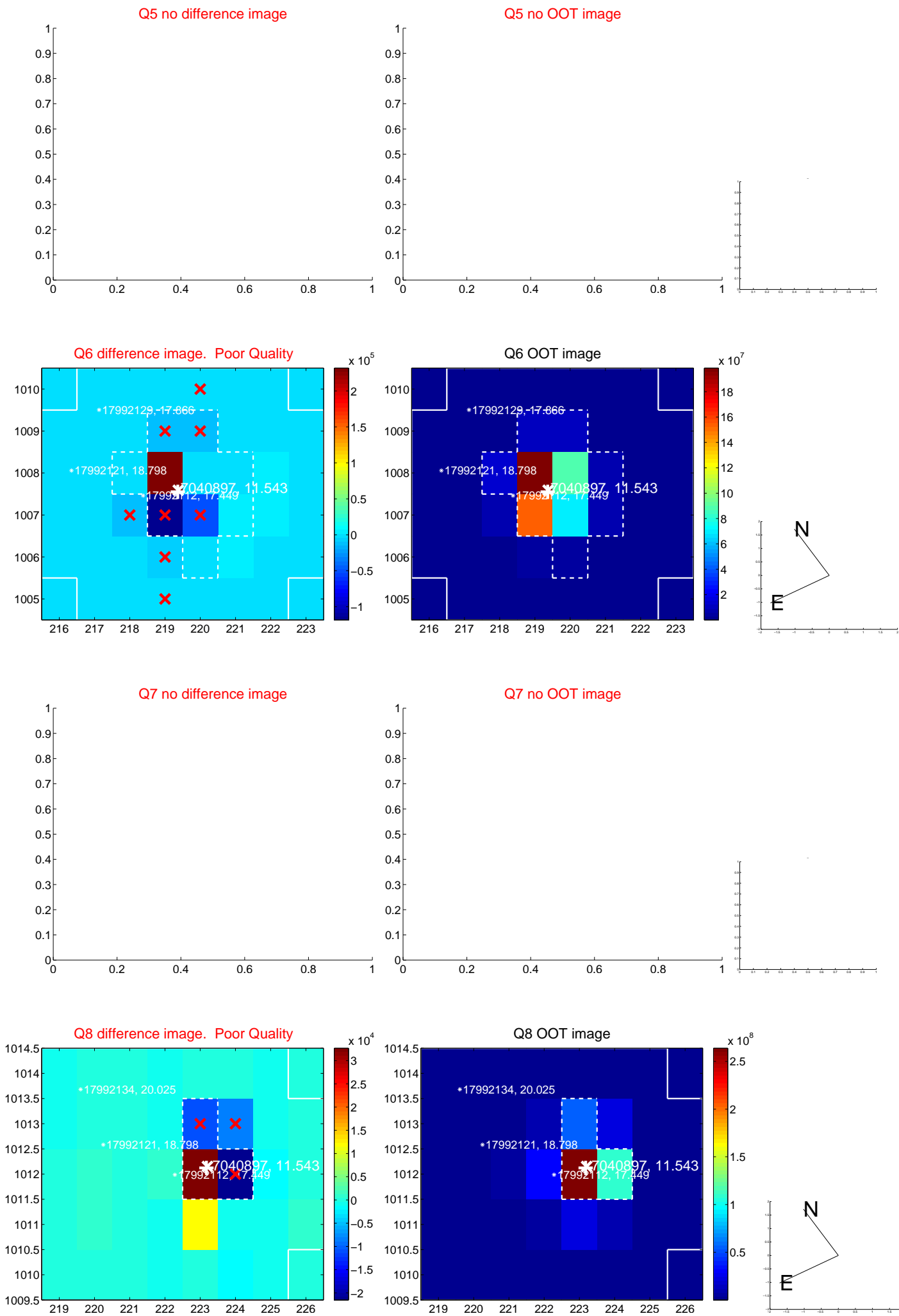


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

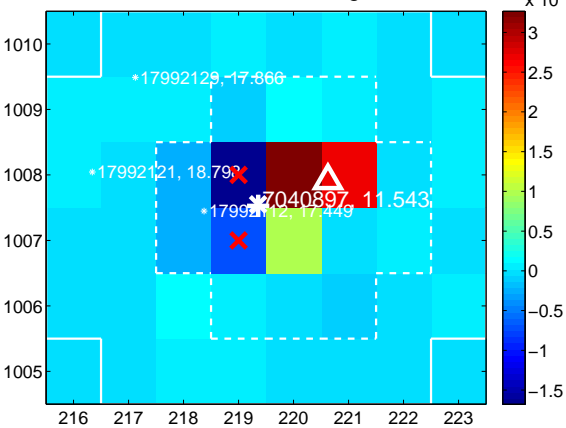
Q9 no difference image



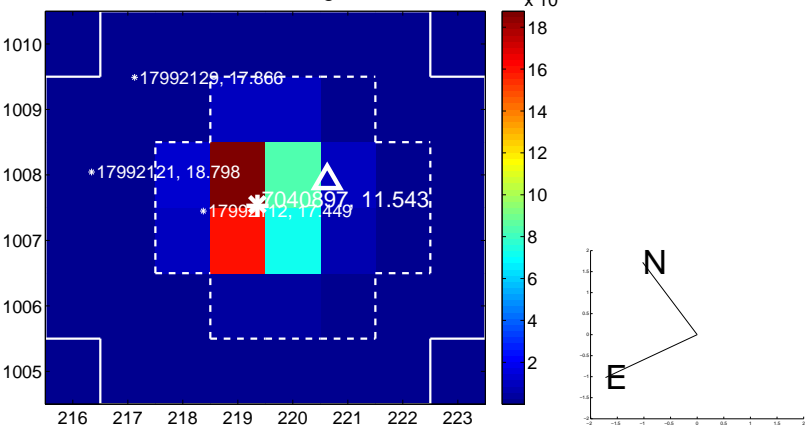
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



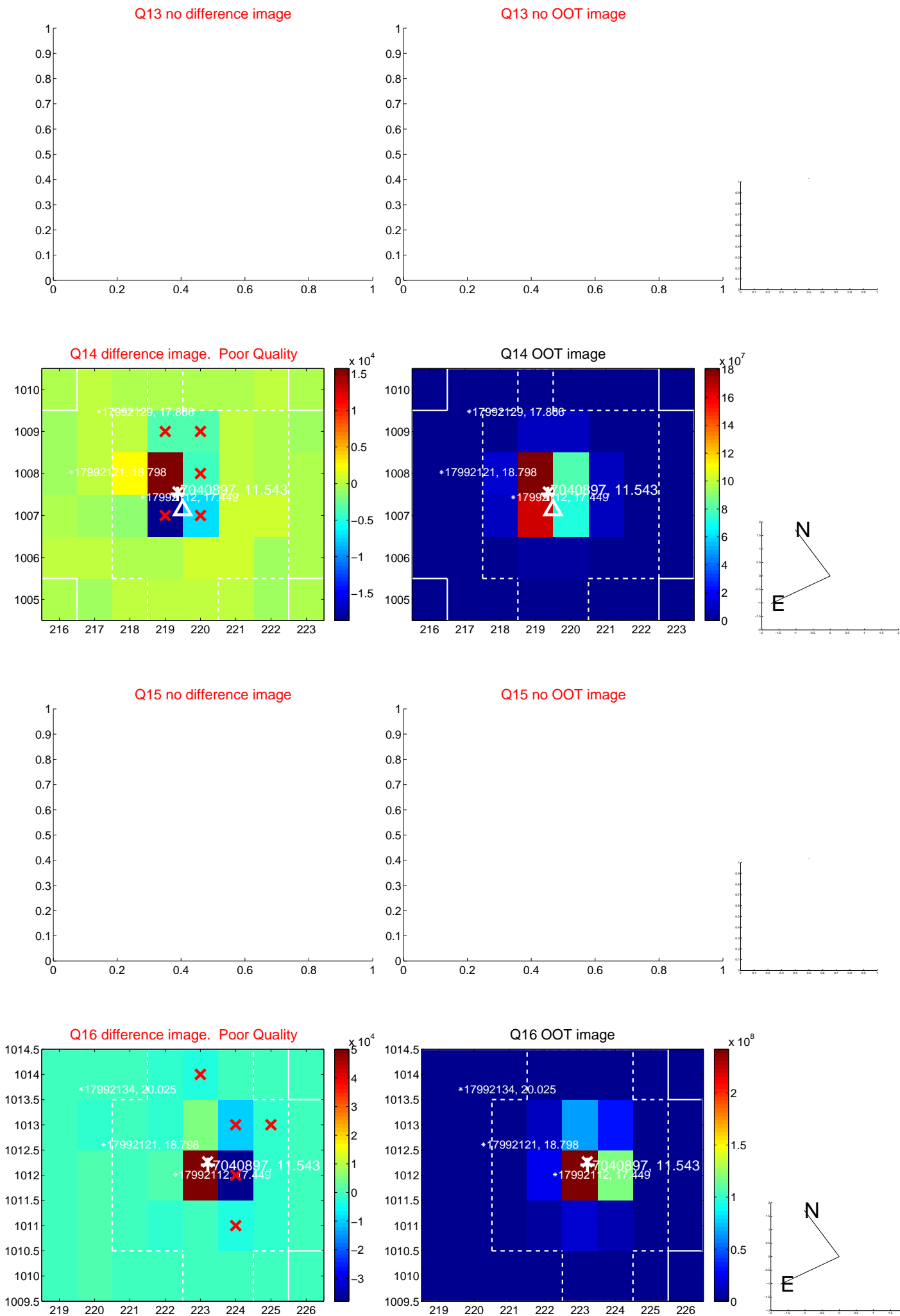
Q12 no difference image



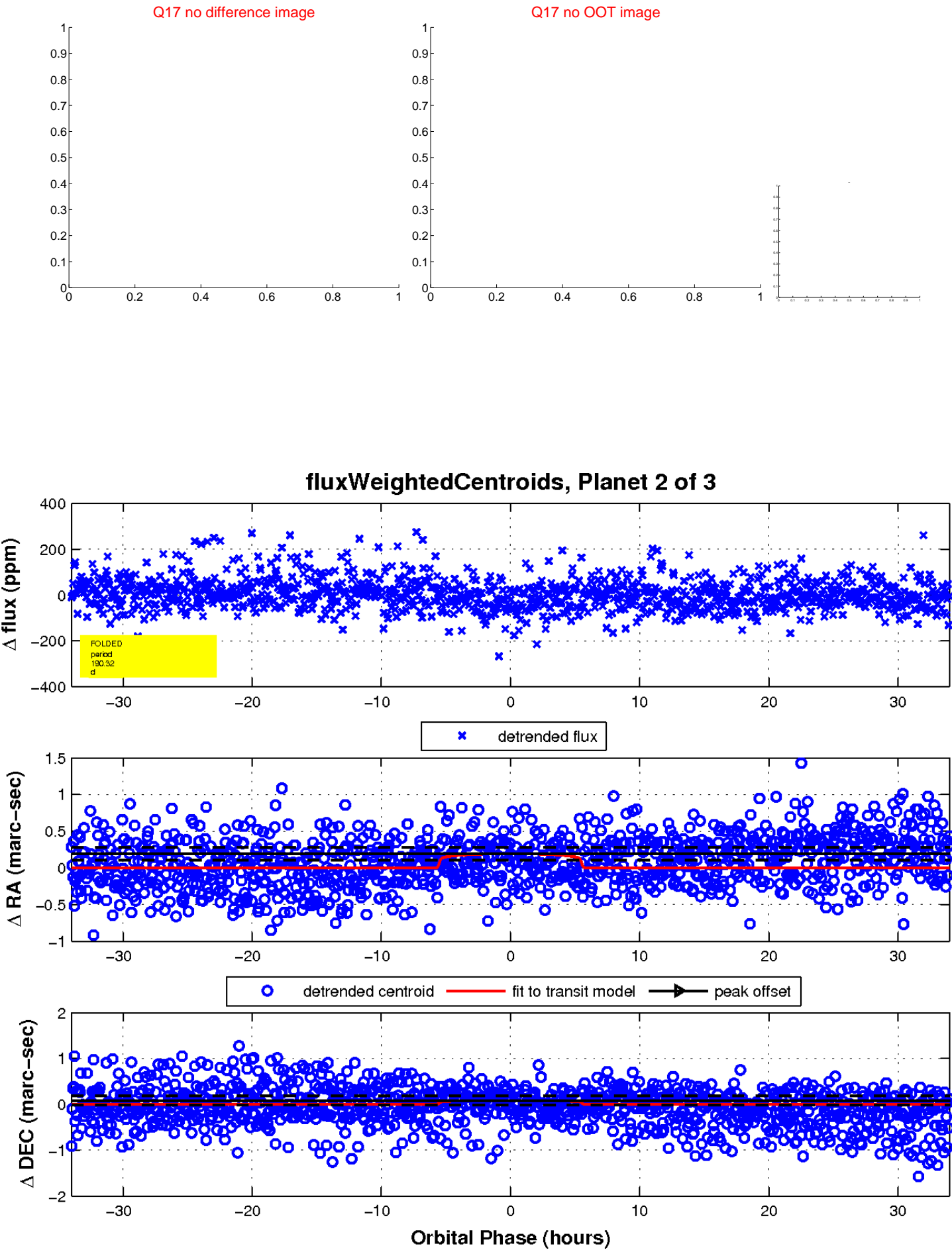
Q12 no OOT image



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

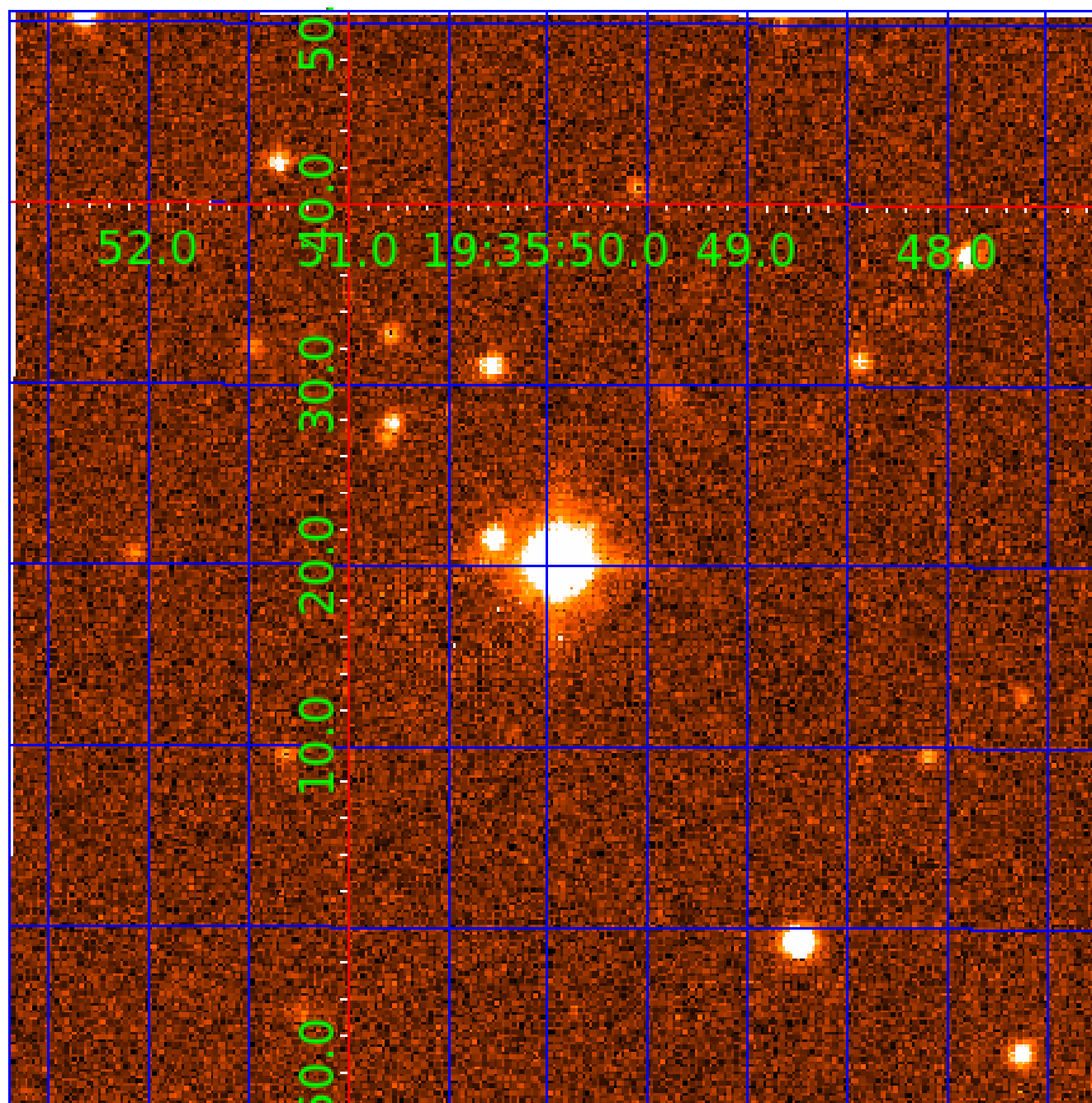


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007040897

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})
007040897-01	OBS	No	0.805932	131.600919	7.4	3.169	14.9	10.8	3.30	7981	1.01	84897.04
007040897-02	OBS	No	190.321123	221.017419	61.5	11.334	10.3	6.1	3.30	7981	2.90	58.16
007040897-03	OBS	No	227.130215	242.292126	116.5	1.403	8.1	5.7	3.30	7981	4.25	45.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040897-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007040897-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007040897-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

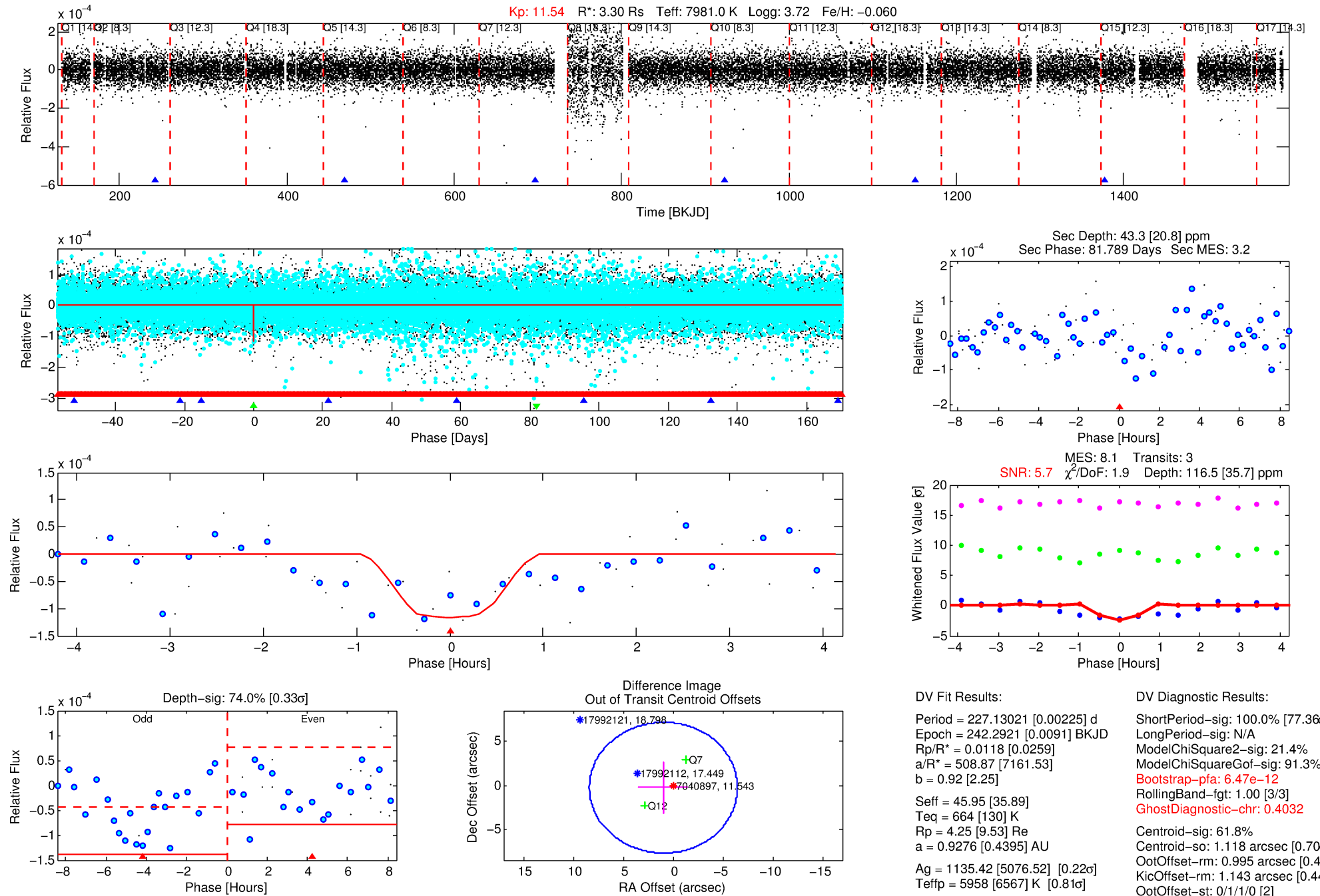
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040897-03

No Significant Match Found

DV One-Page Summary

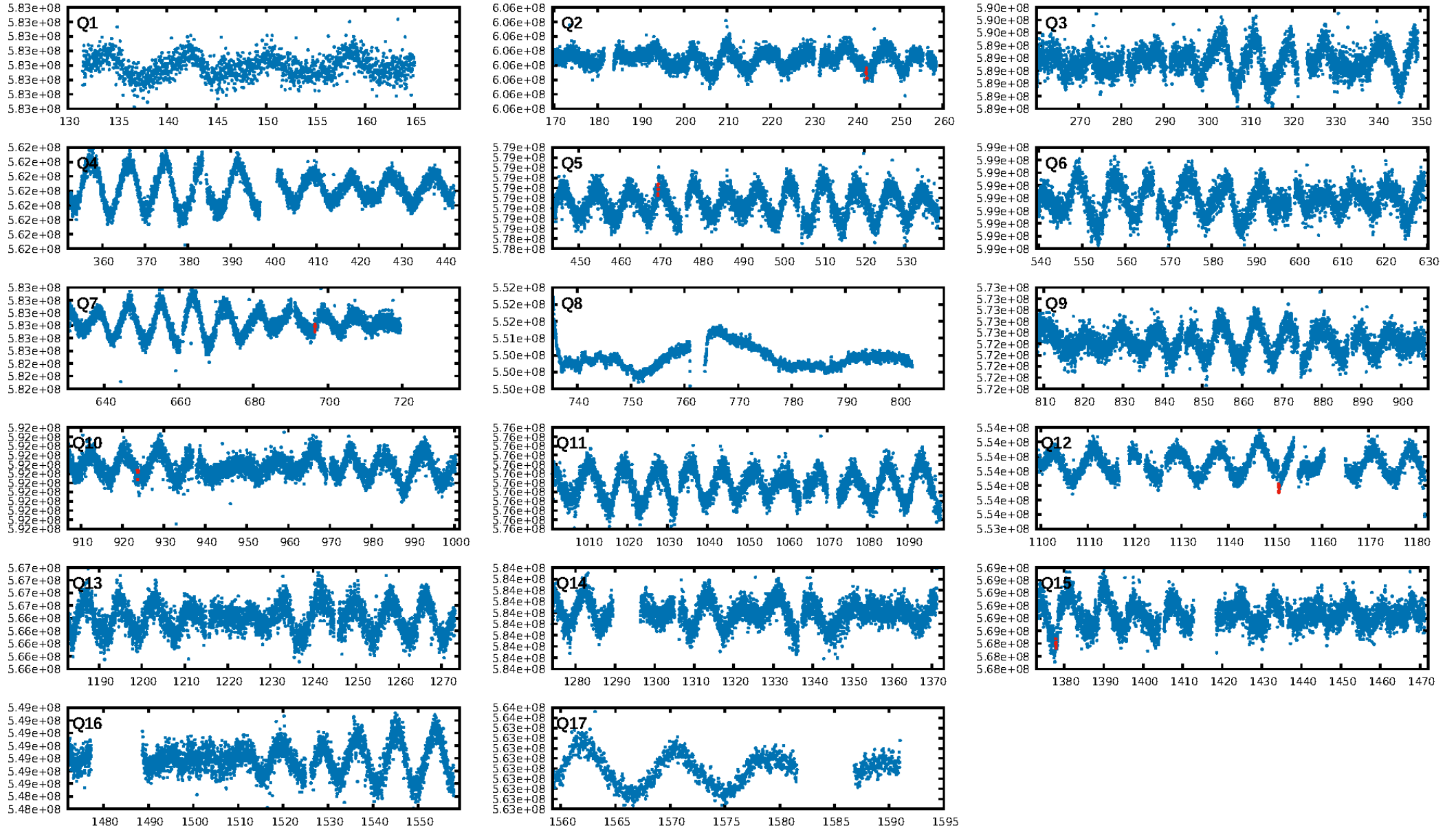
KIC: 7040897 Candidate: 3 of 3 Period: 227.130 d



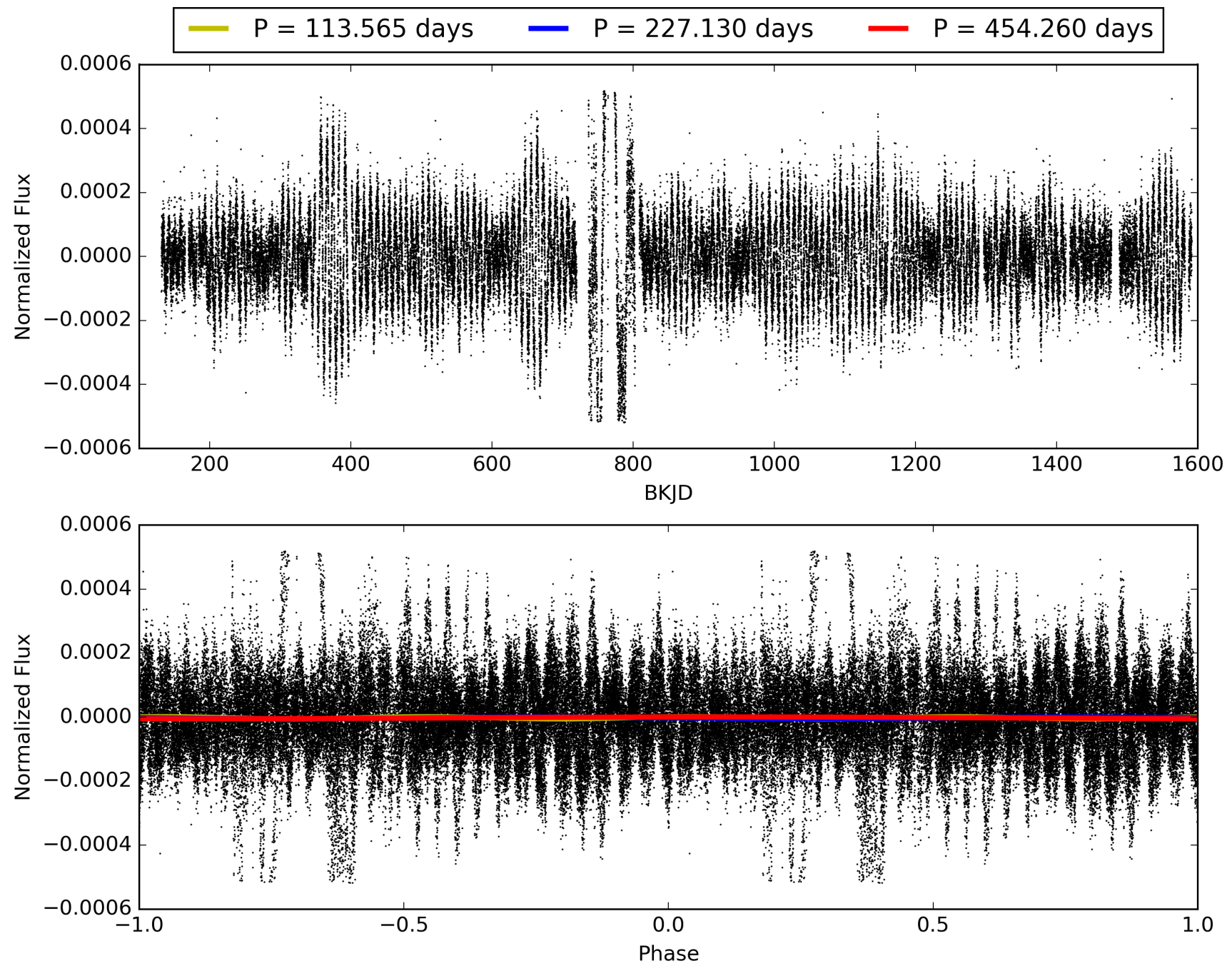
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:44:03 Z

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

TCE 007040897-03, PDC Light Curves

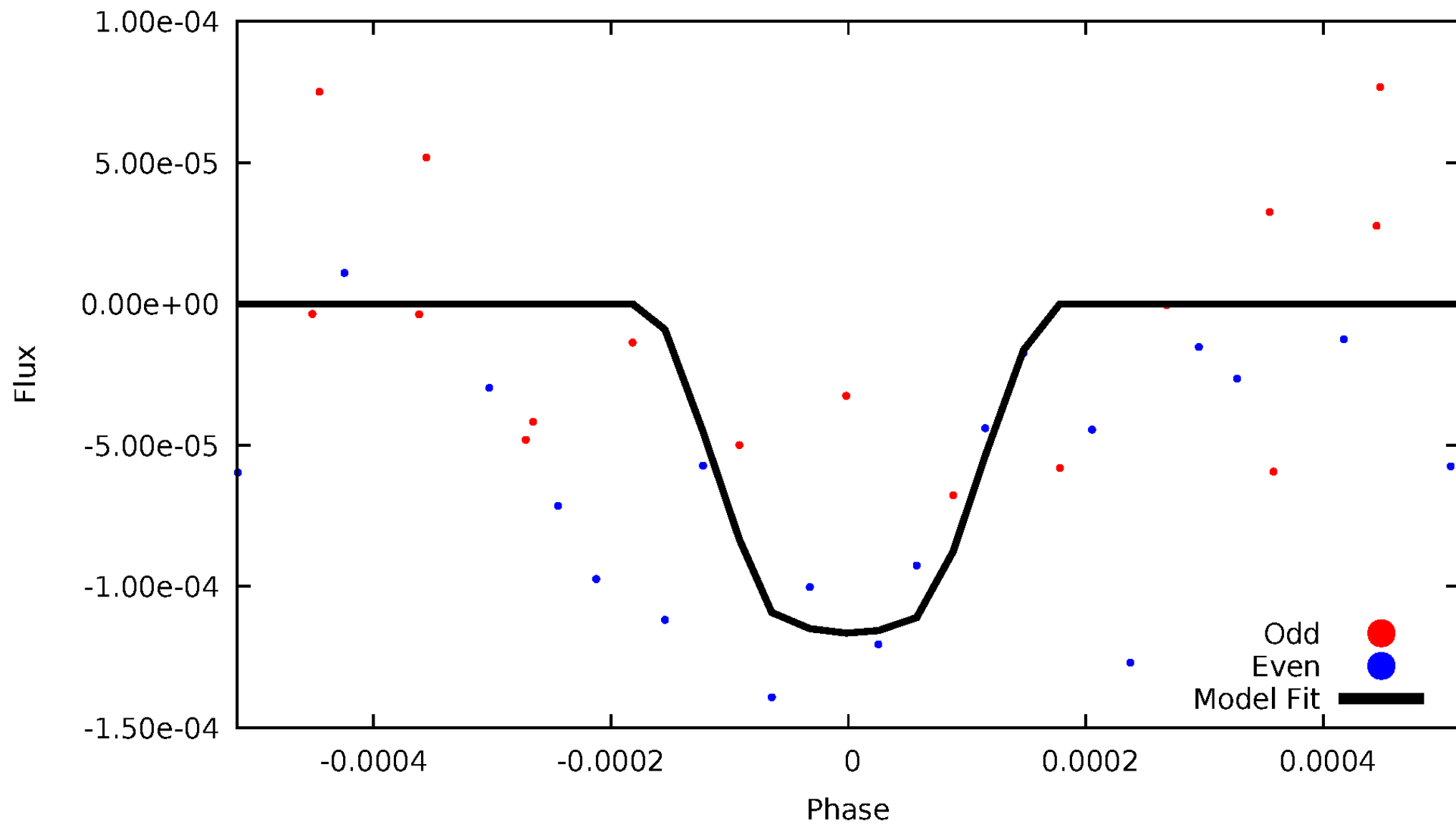


TCE 007040897-03



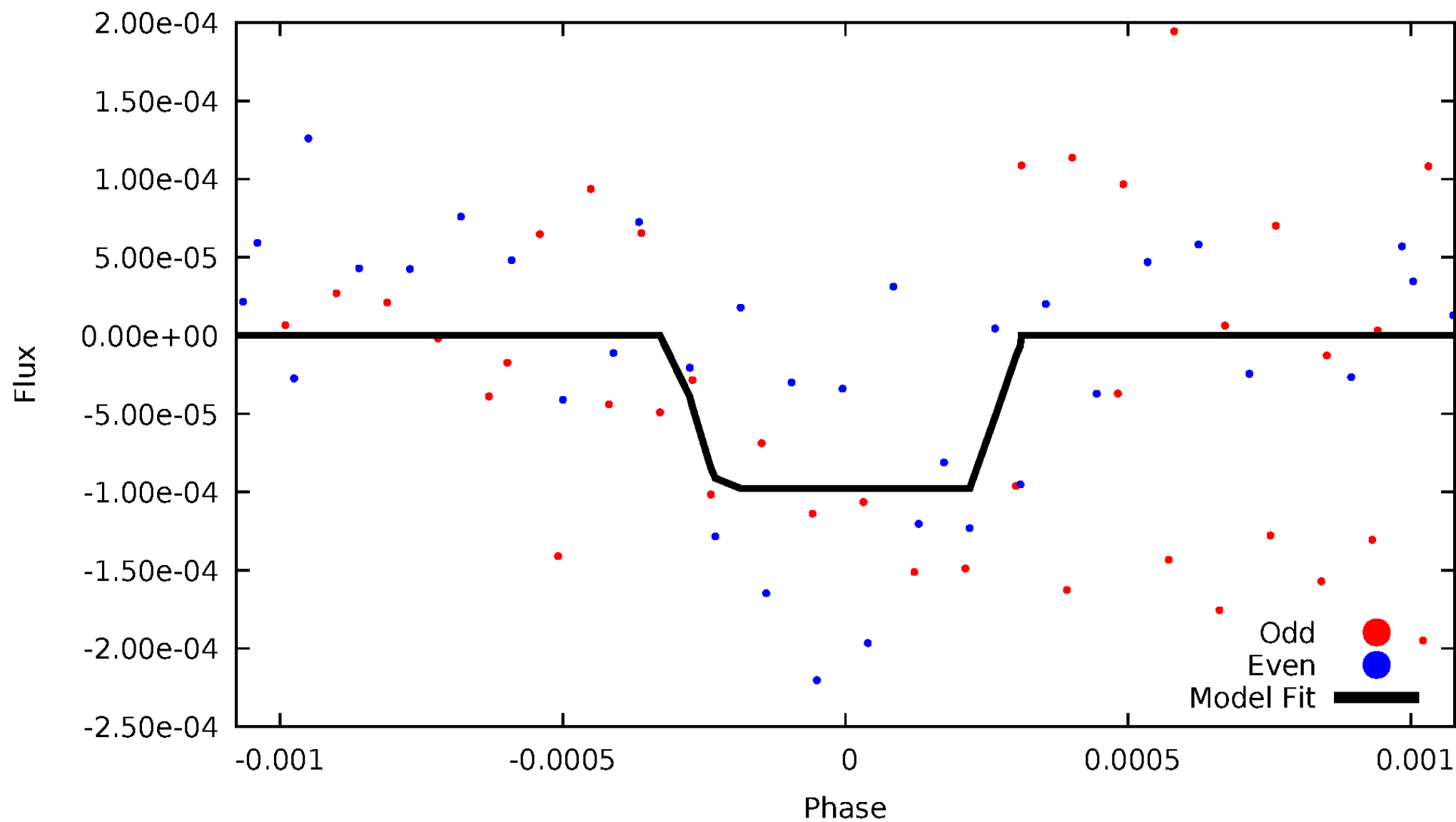
DV Odd/Even

TCE 007040897-03



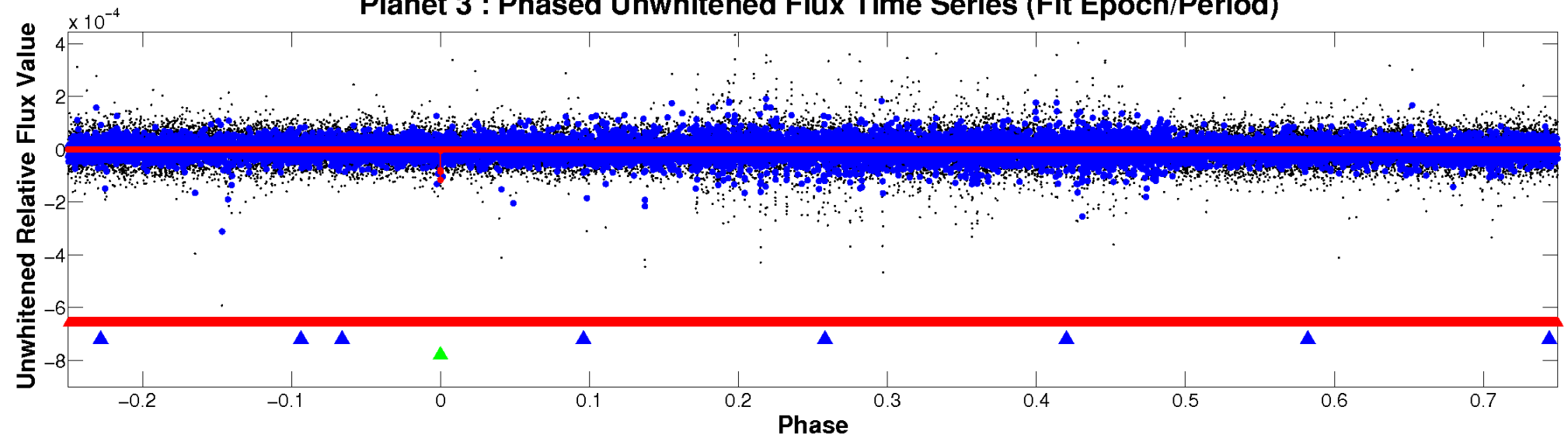
ALT Odd/Even

TCE 007040897-03

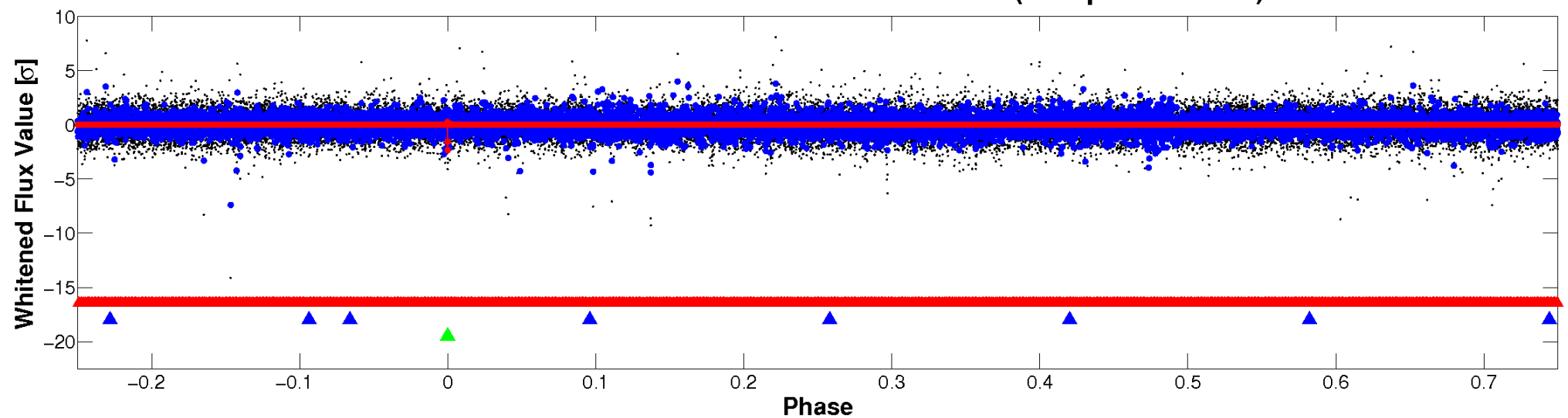


Non-Whitened Vs. Whitened Light Curve

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

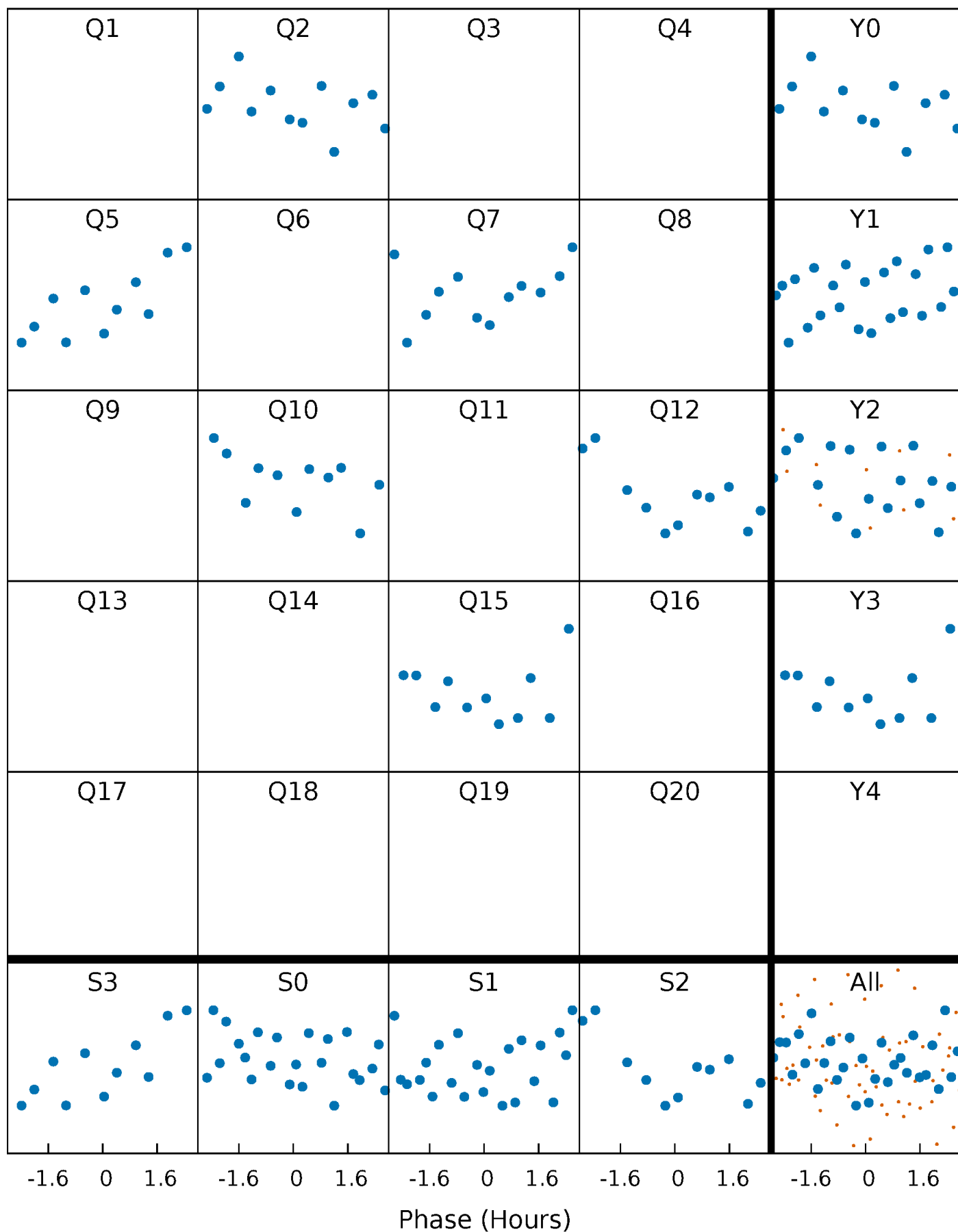


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



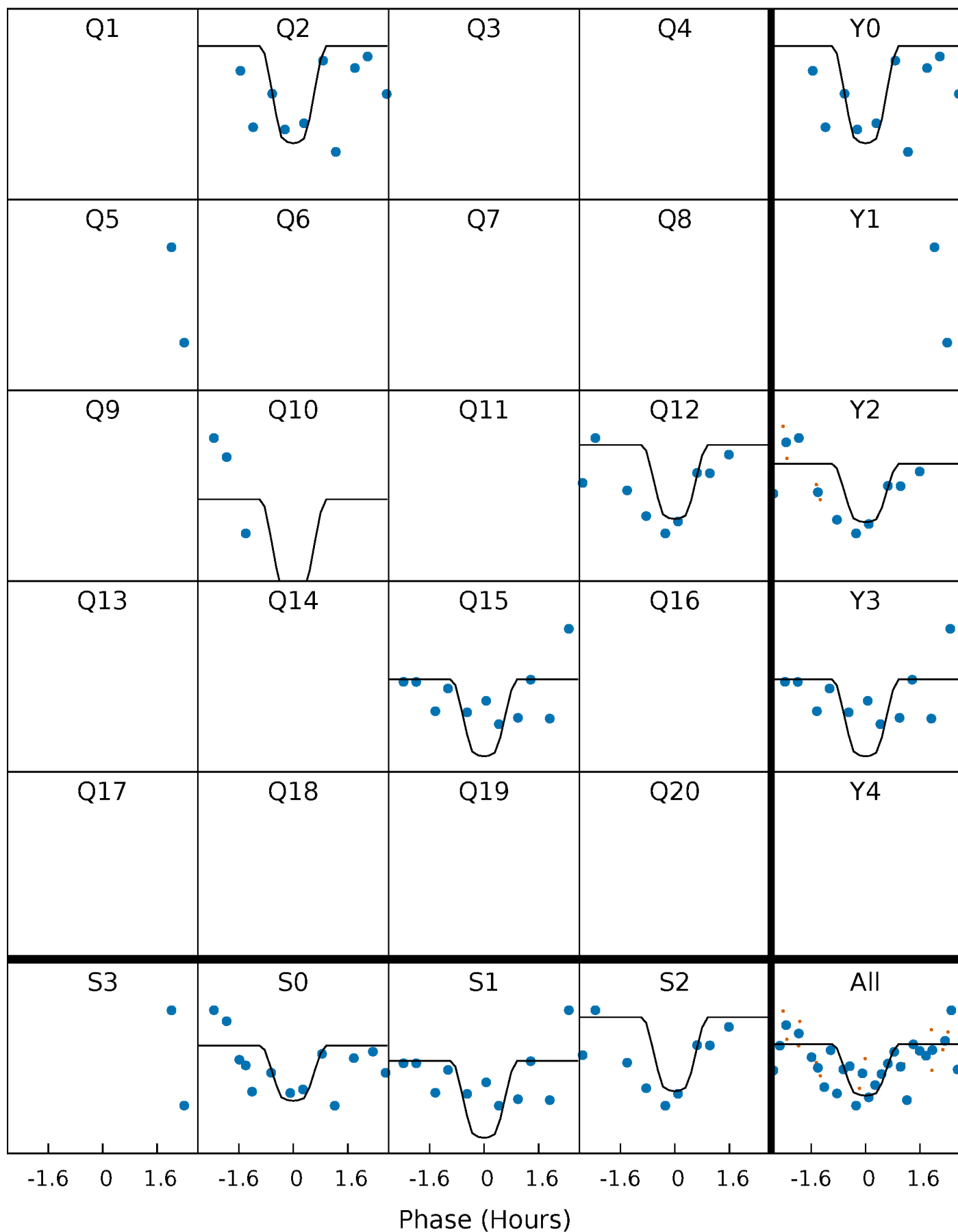
PDC Quarter-Phased Transit Curves

TCE 007040897-03 $P=227.130214$ Days $T_0=242.292126$ (BKJD)



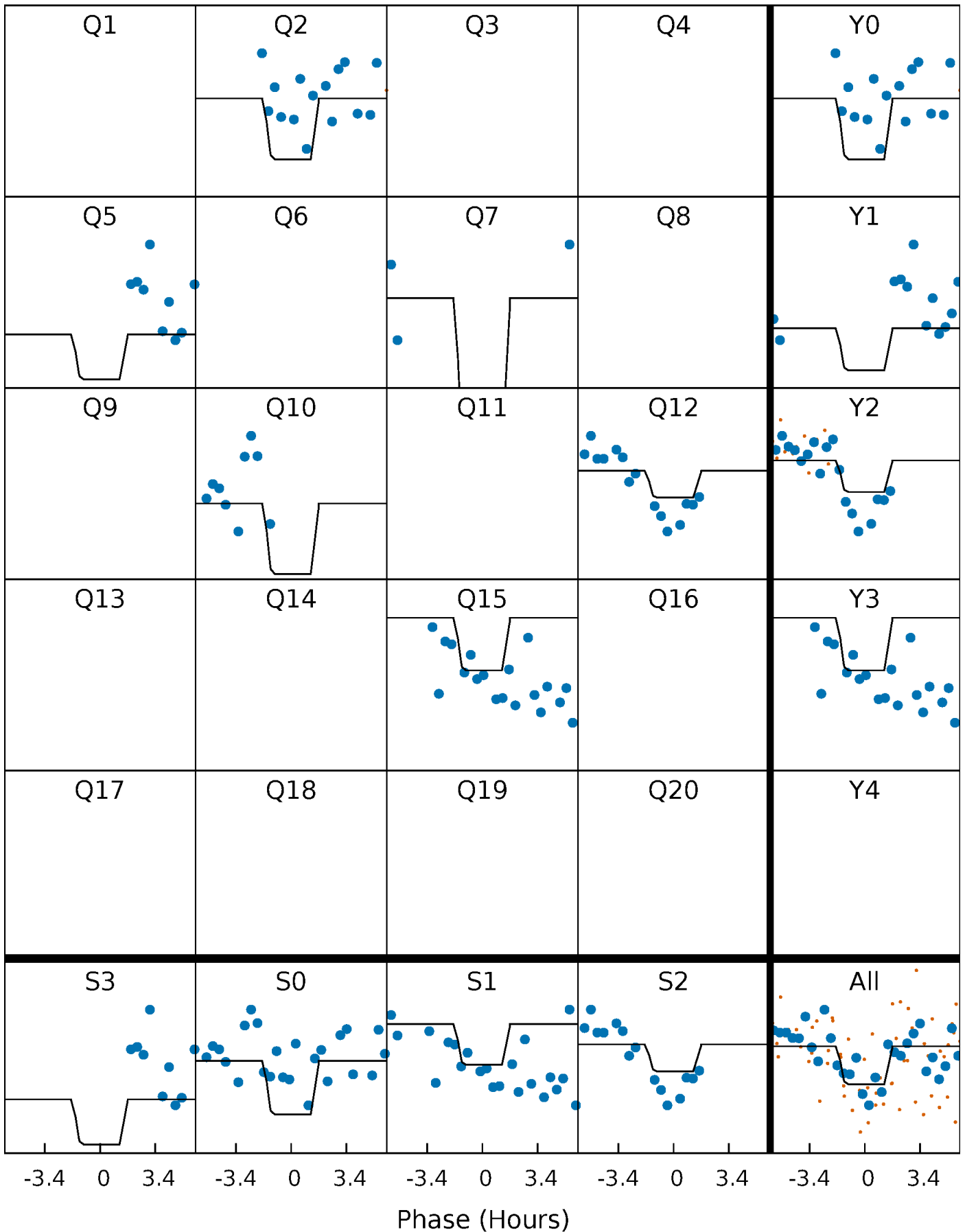
DV Quarter-Phased Transit Curves

TCE 007040897-03 P=227.130214 Days $T_0=242.292126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

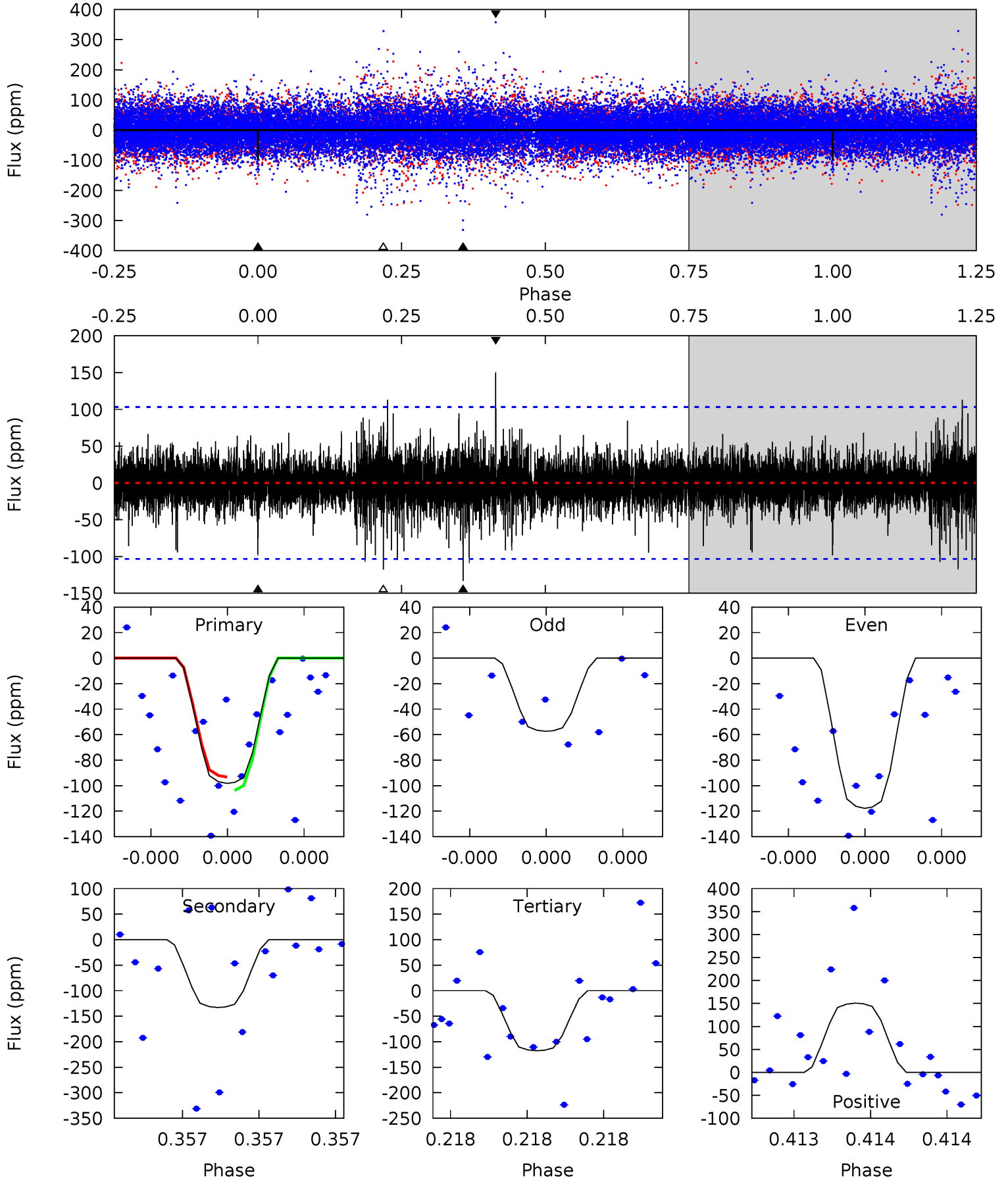
TCE 007040897-03 P=227.125831 Days $T_0=242.306416$ (BKJD)



DV Model-Shift Uniqueness Test

007040897-03, P = 227.130214 Days, E = 15.161912 Days

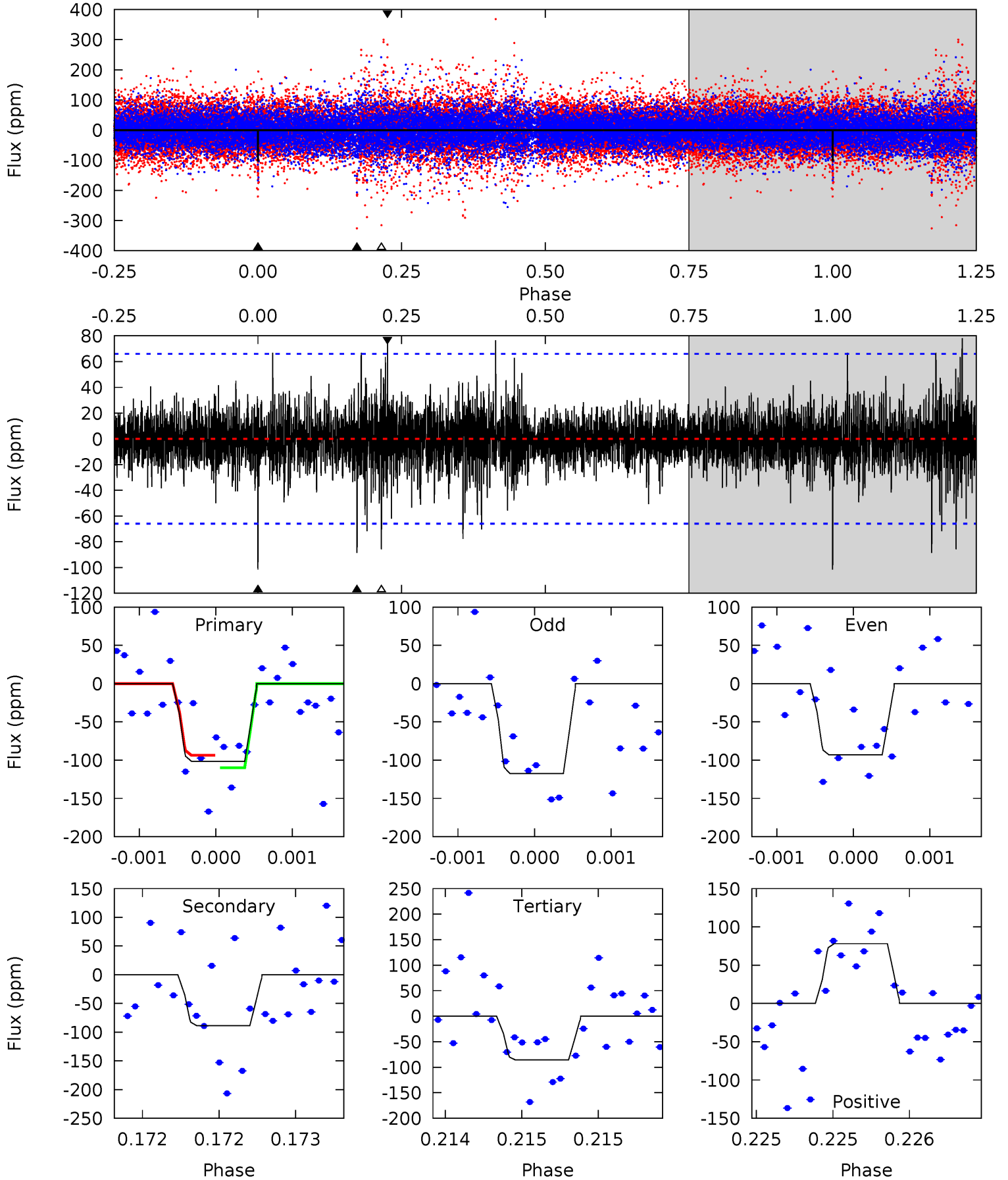
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.40	7.31	6.47	8.29	5.68	3.64	1.20	-1.07	-2.89	0.84	-0.98	1.67	0.95	0.53	0.29



Alt Model-Shift Uniqueness Test

007040897-03, $P = 227.125831$ Days, $E = 15.180585$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.54	7.45	7.21	6.57	5.55	3.44	1.22	1.33	1.97	0.24	0.88	1.00	0.84	0.43	0.68



Stellar Parameters For KIC 007040897

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7981^{+222}_{-333}	$3.716^{+0.450}_{-0.106}$	$-0.060^{+0.200}_{-0.350}$	$3.298^{+0.688}_{-1.604}$	$2.061^{+0.293}_{-0.545}$	$0.081^{+0.329}_{-0.027}$
	+3%/-4%	+12%/-3%	+333%/-583%	+21%/-49%	+14%/-26%	+406%/-33%
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 007040897-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-133 ± 18	$7.54^{+6.69}_{-5.06}$	899^{+68}_{-111}	5520^{+4888}_{-1289}	1130^{+8751}_{-816}
Alt.	-89 ± 12	$7.24^{+7.66}_{-5.03}$	900^{+70}_{-107}	5078^{+4471}_{-1156}	799^{+7166}_{-609}

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

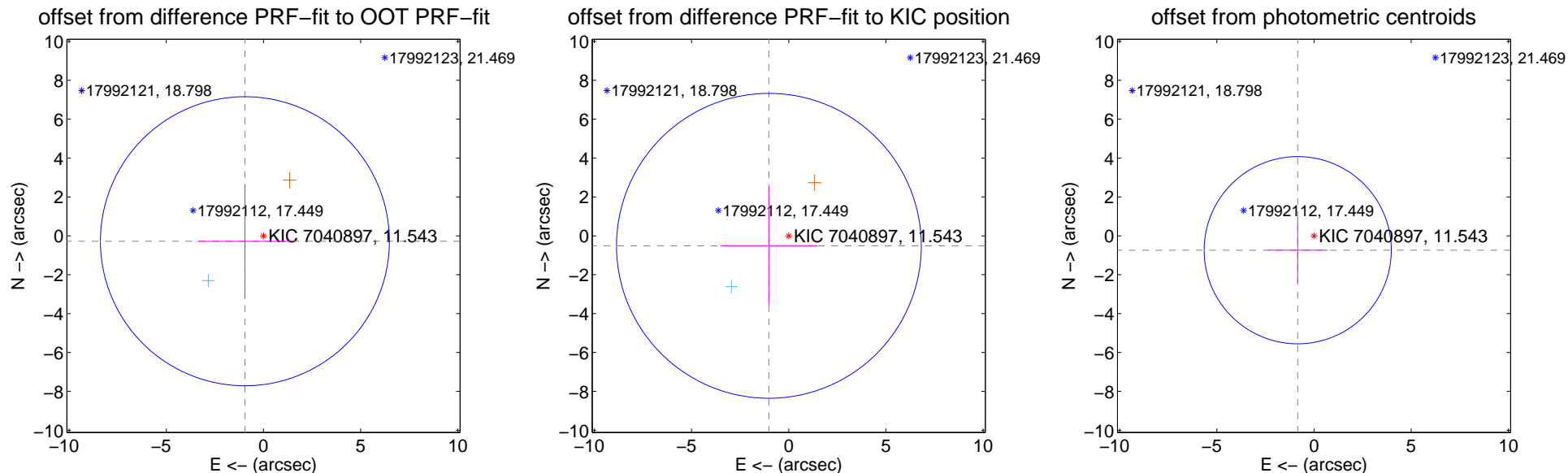
DV Centroid Data

Supplemental centroid analysis for 007040897-03. **Kepler magnitude: 11.54.** Transit SNR 5.75

There are 1 quarters with good PRF difference image offsets

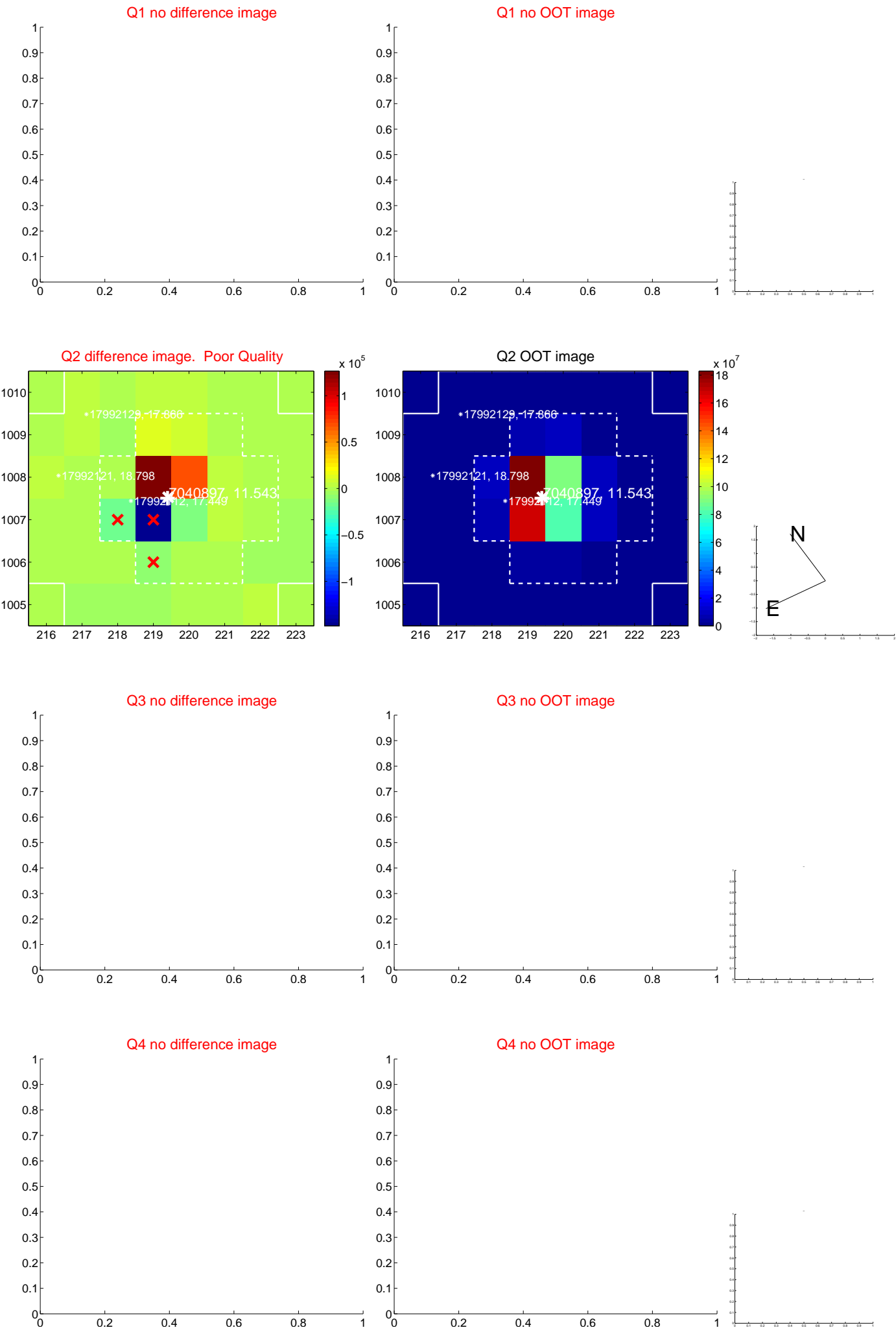
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.995 ± 2.478	0.40	0.955 ± 2.434	-0.278 ± 2.949
PRF-fit source offset from KIC position	1.143 ± 2.613	0.44	1.020 ± 2.490	-0.515 ± 3.049
photometric centroid source offset	1.12 ± 1.60	0.70	0.84 ± 1.55	-0.74 ± 1.68

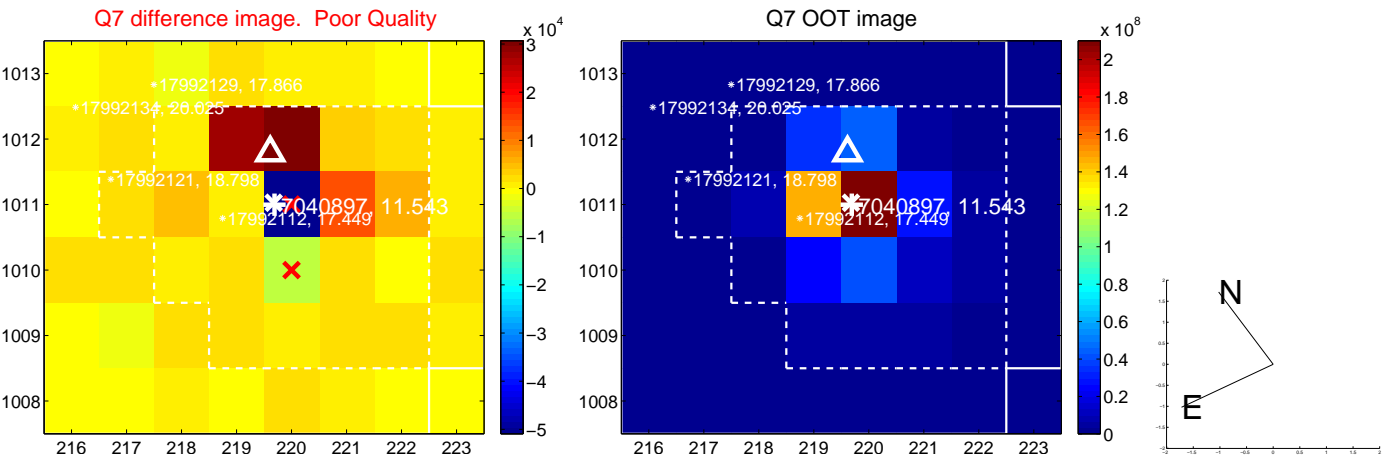
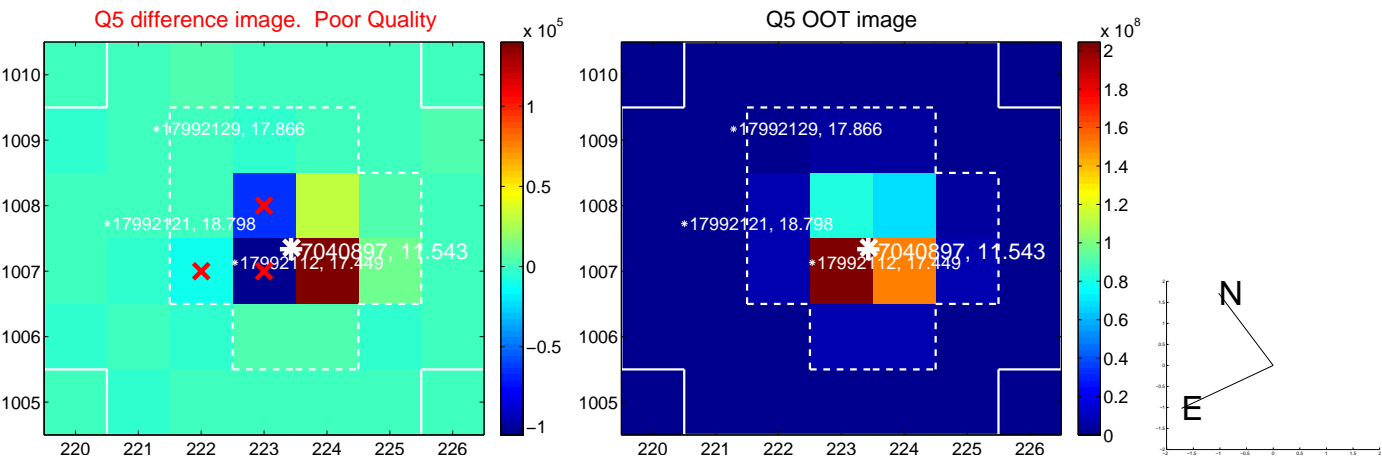


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

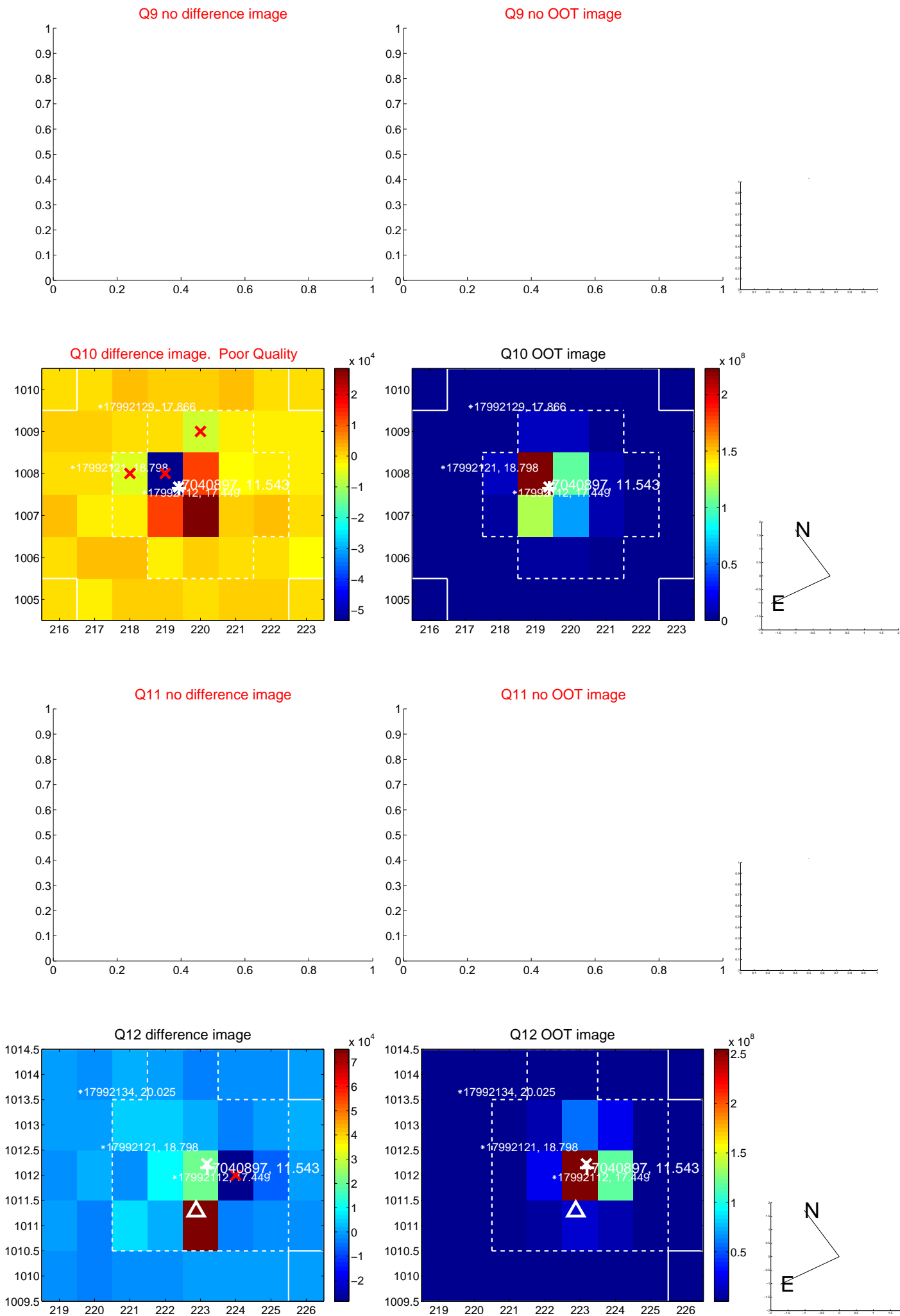
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



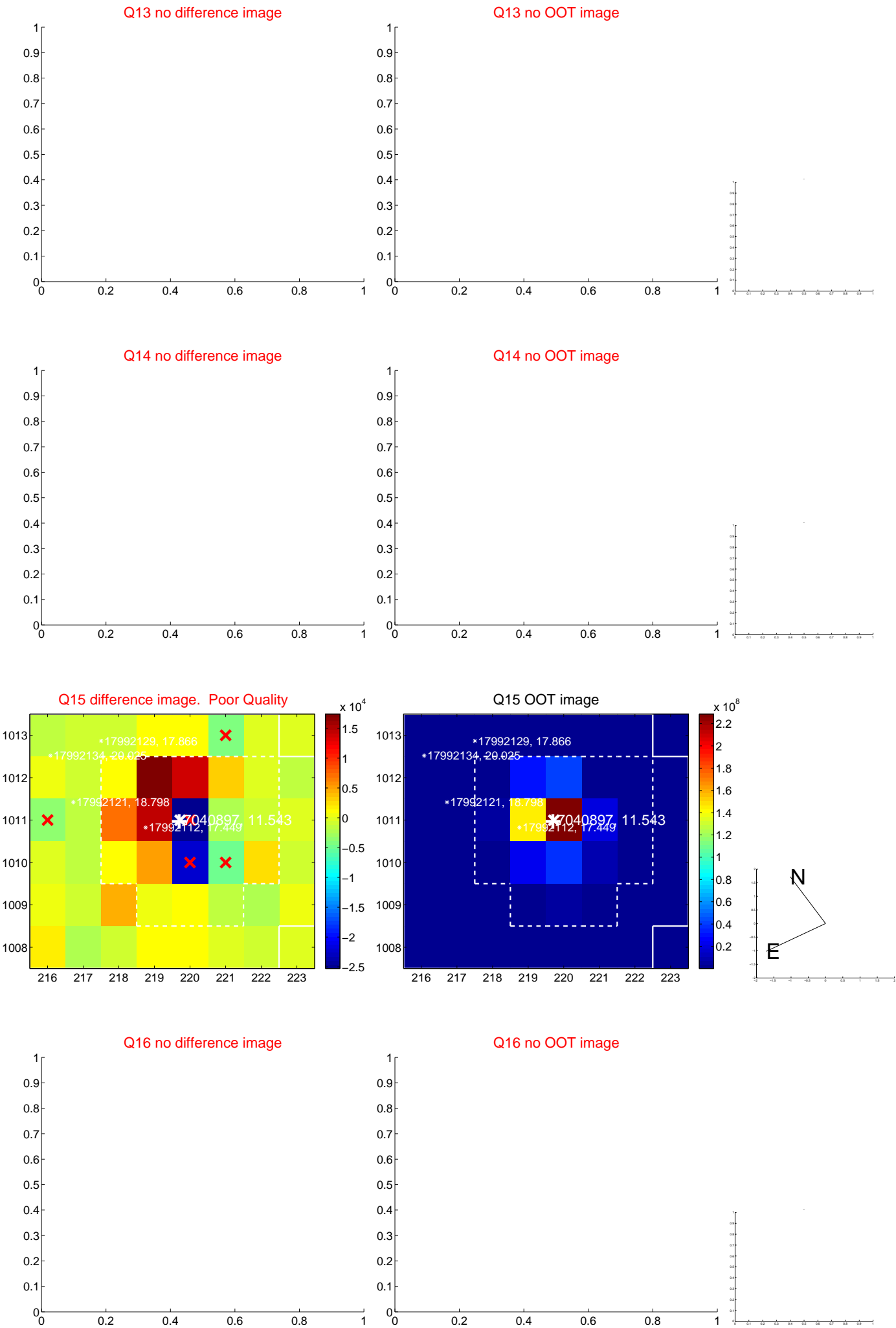
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



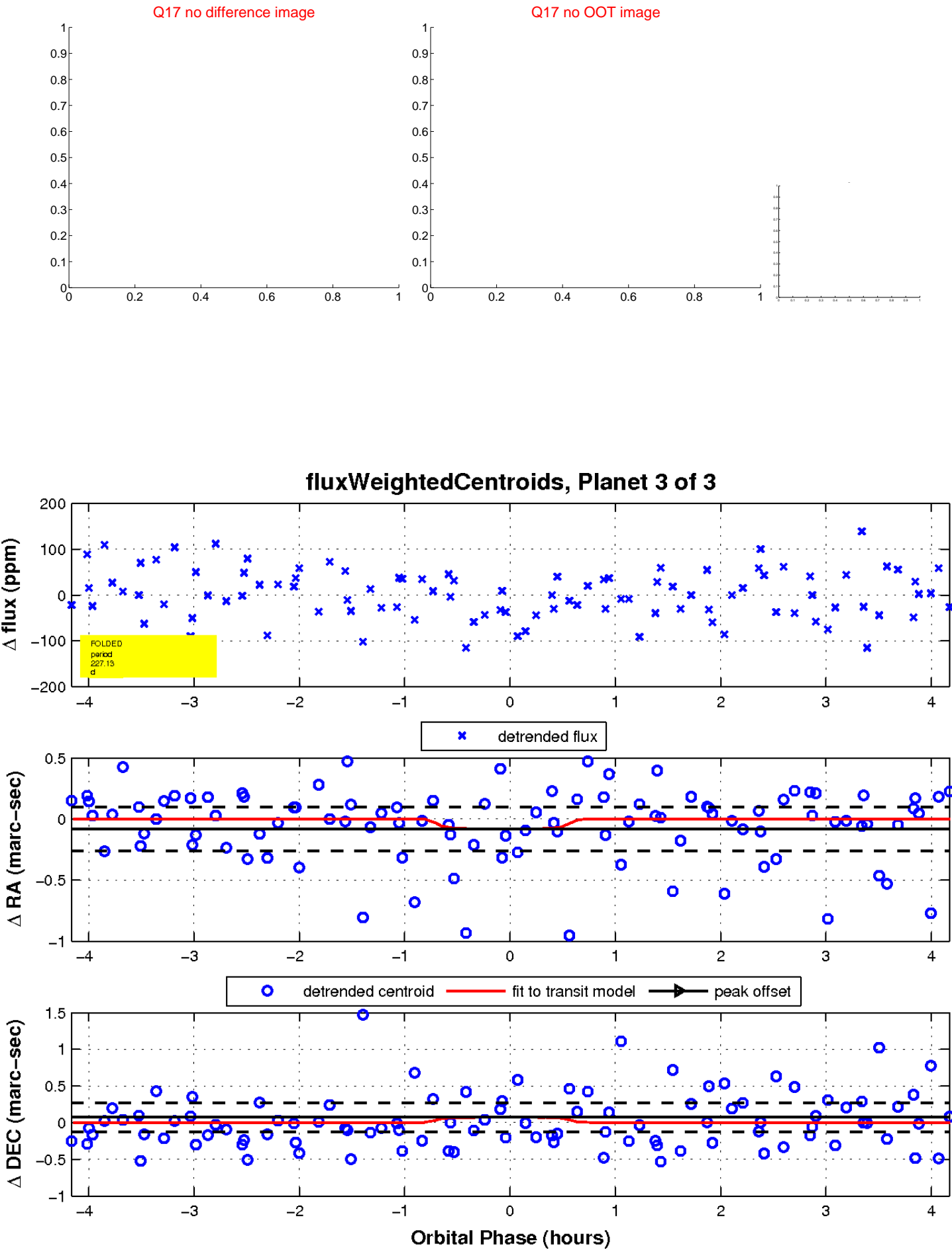
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

