

KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

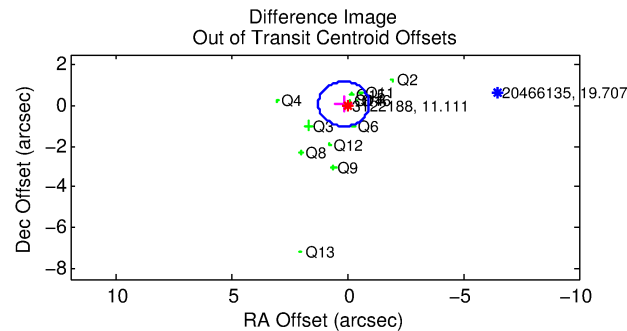
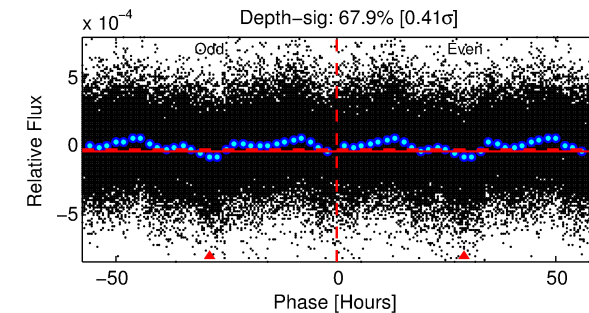
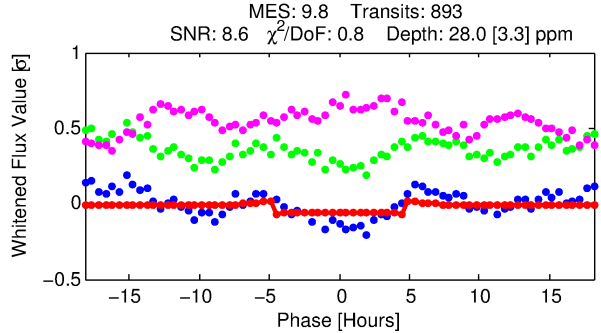
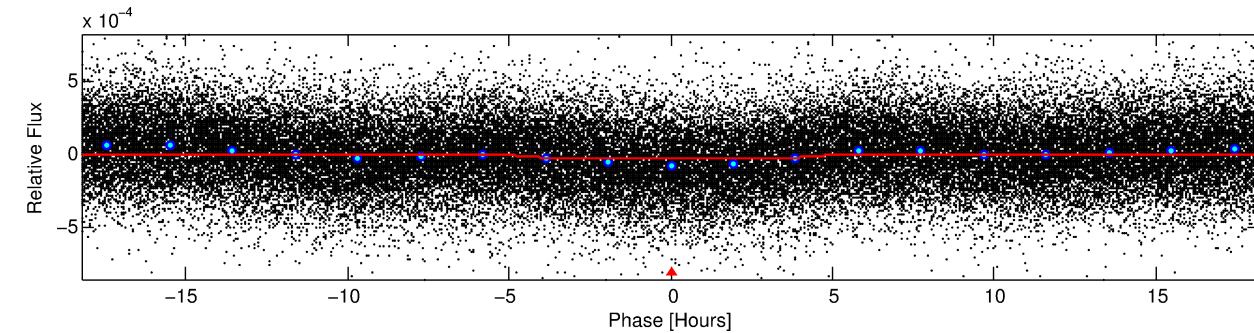
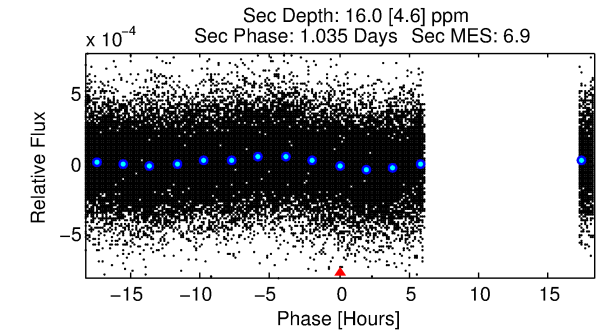
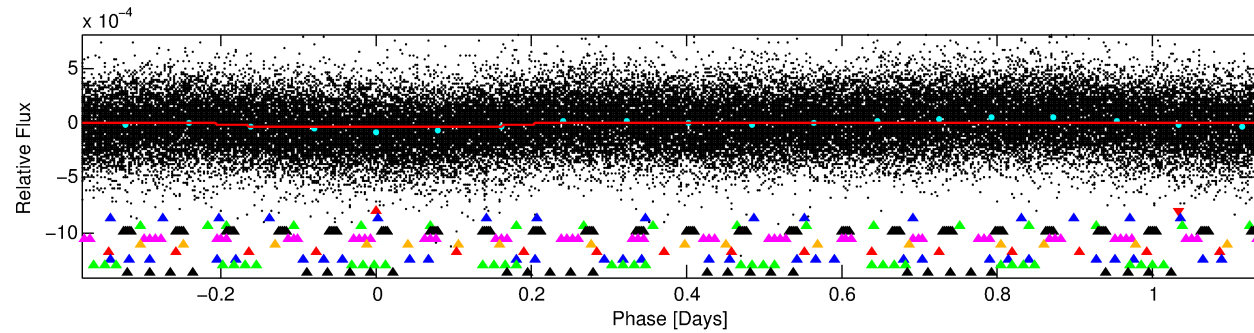
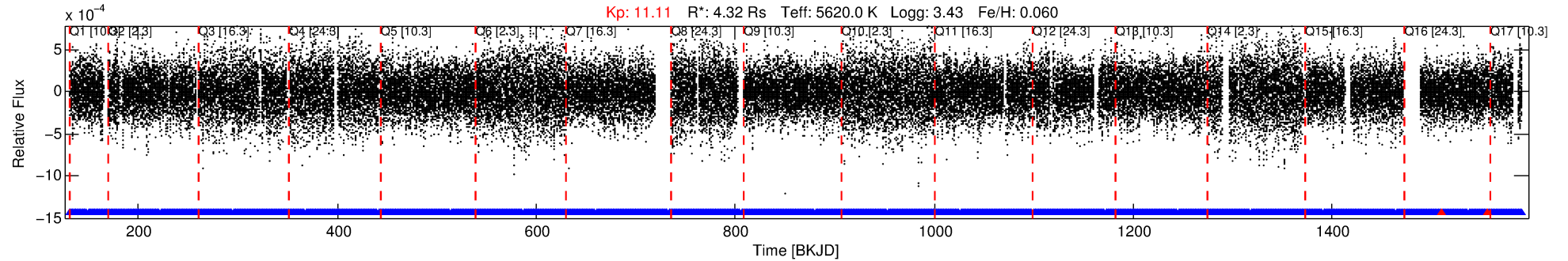
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-01

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 1 of 10 Period: 1.520 d



DV Fit Results:

Period = 1.51984 [0.00002] d
Epoch = 131.6035 [0.0035] BKJD
Rp/R* = 0.0051 [0.0021]
a/R* = 1.23 [0.76]
b = 0.62 [1.79]
Seff = 16625.04 [8094.81]
Teq = 2895 [352] K
Rp = 2.38 [1.32] Re
a = 0.0316 [0.0102] AU
Ag = 1.55 [1.55] [0.36σ]
Teffp = 4998 [1090] K [1.84σ]

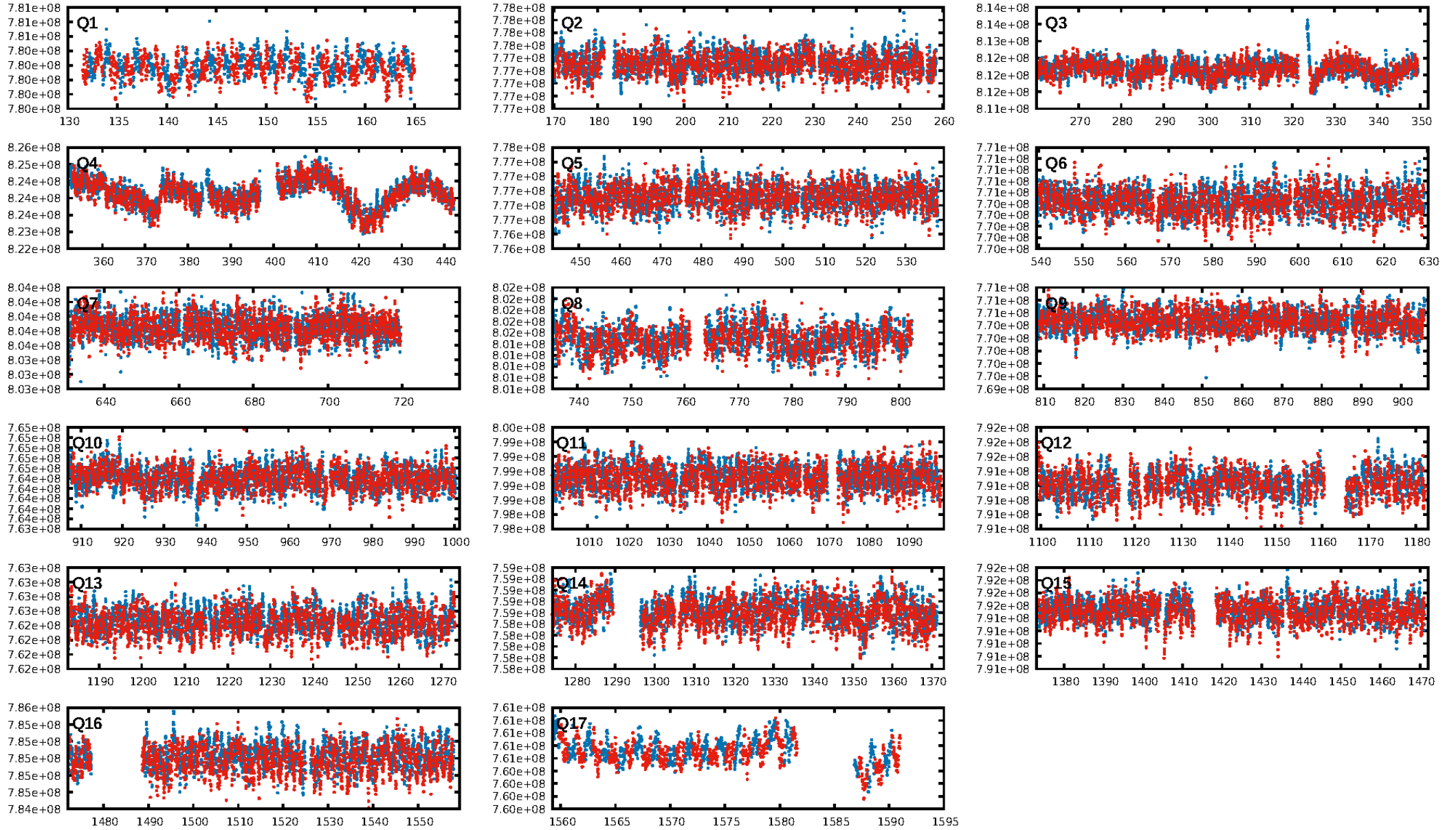
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [22.47σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [850/852]
GhostDiagnostic-chr: 34.67
Centroid-sig: 0.0%
Centroid-so: 4.487 arcsec [3.98σ]
OotOffset-rm: 0.194 arcsec [0.53σ]
KicOffset-rm: 0.177 arcsec [0.51σ]
OotOffset-st: 3/3/4/2 [12]
KicOffset-st: 3/3/4/2 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

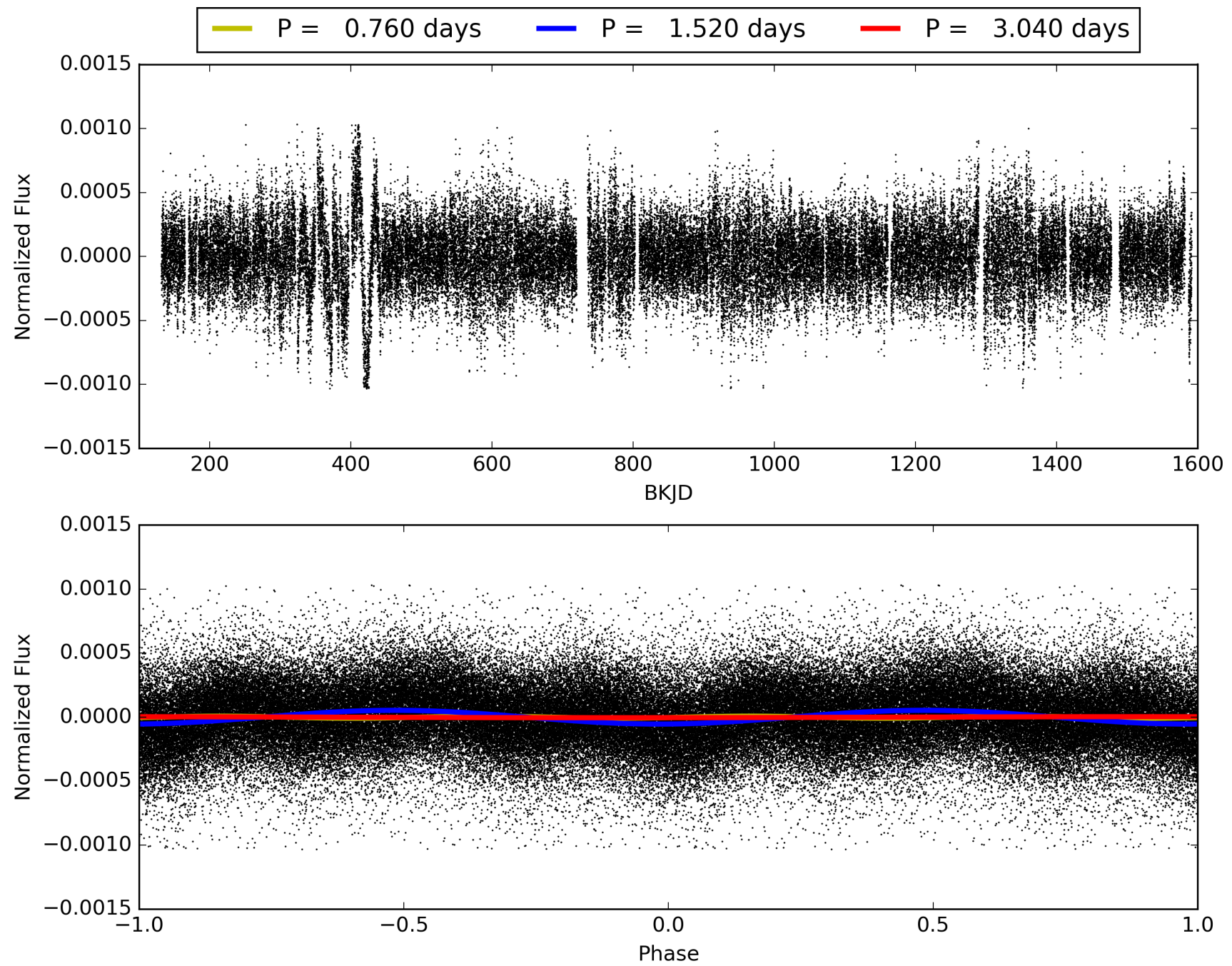
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003122188-01, PDC Light Curves

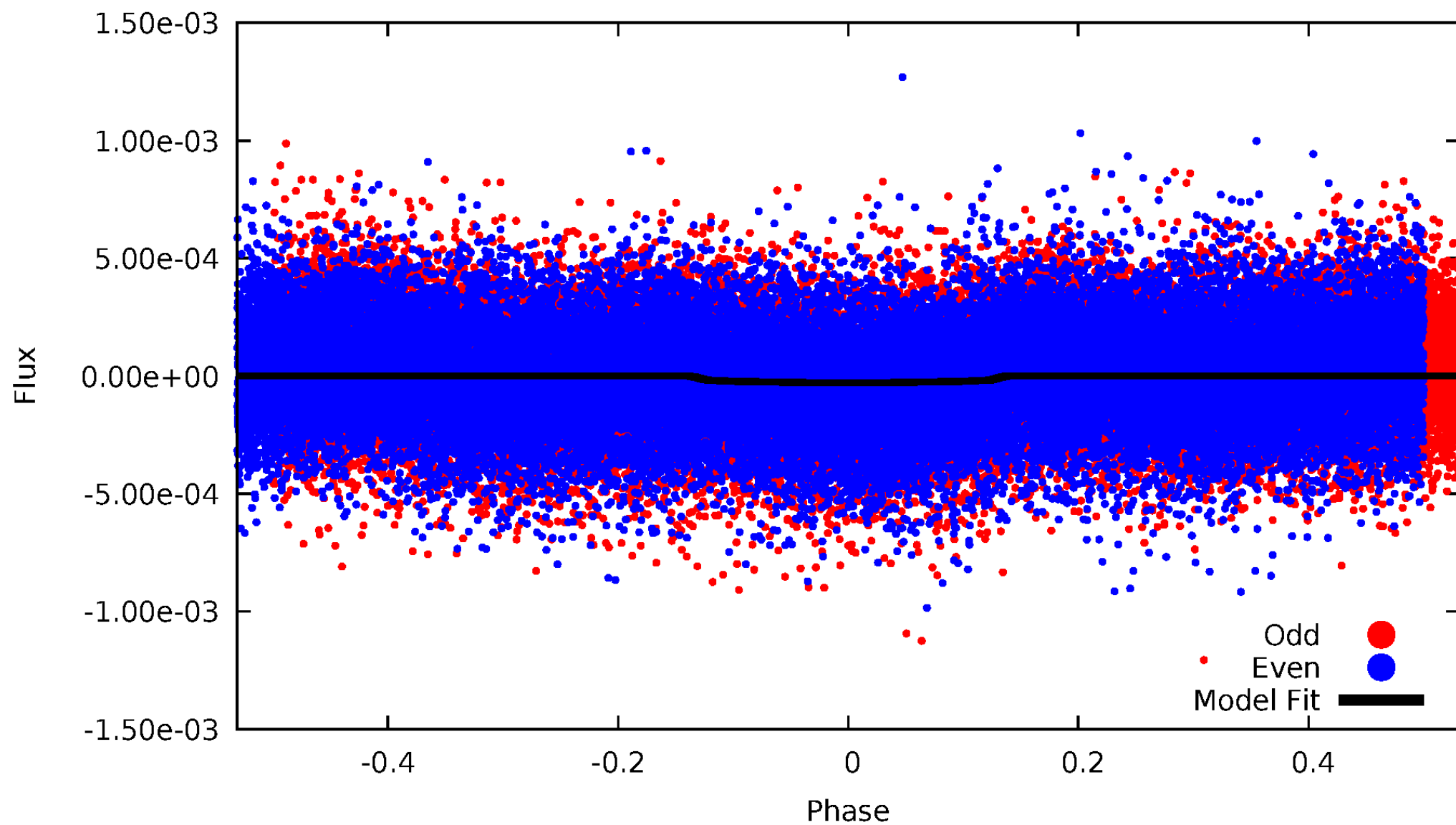


TCE 003122188-01



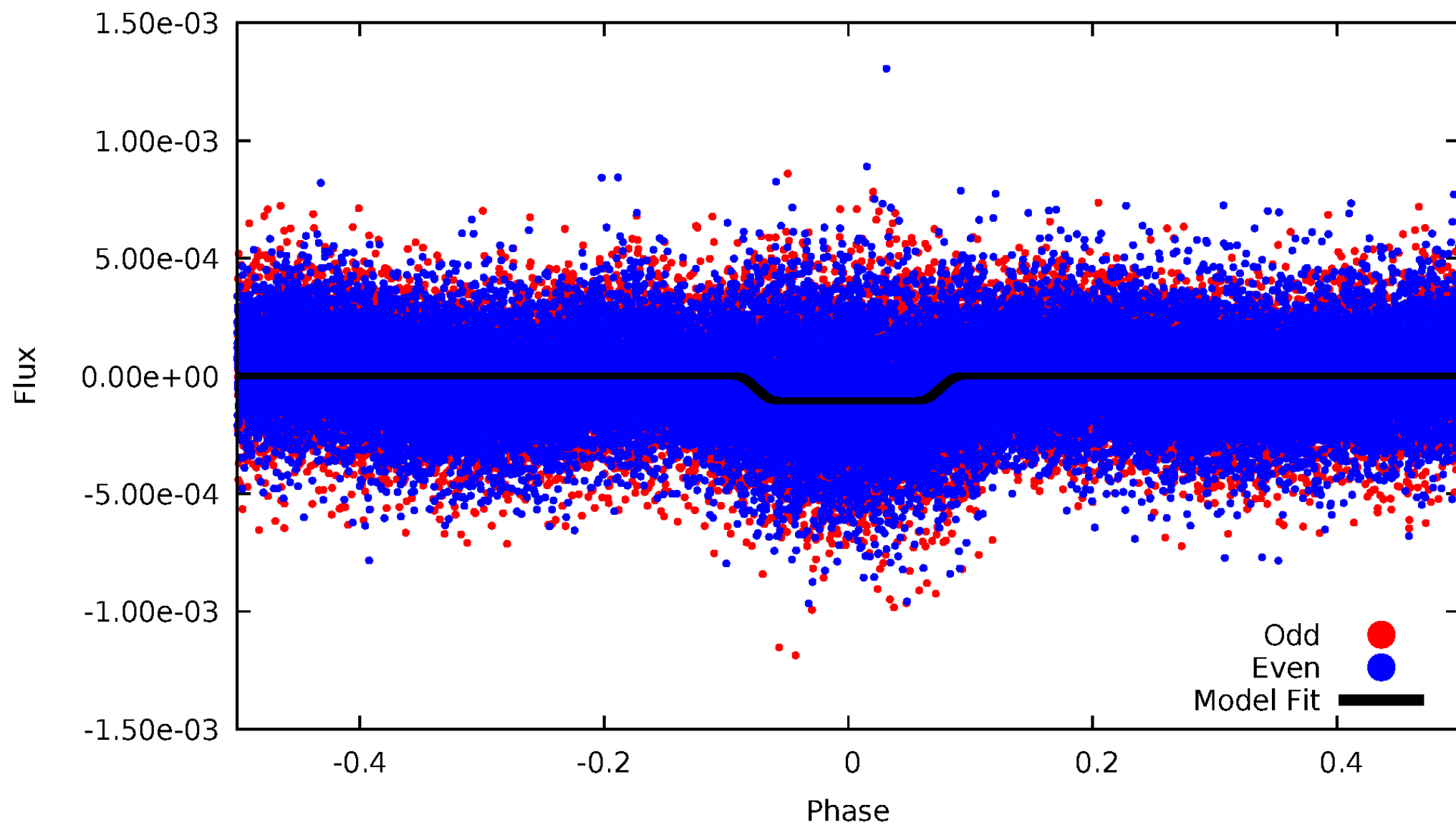
DV Odd/Even

TCE 003122188-01



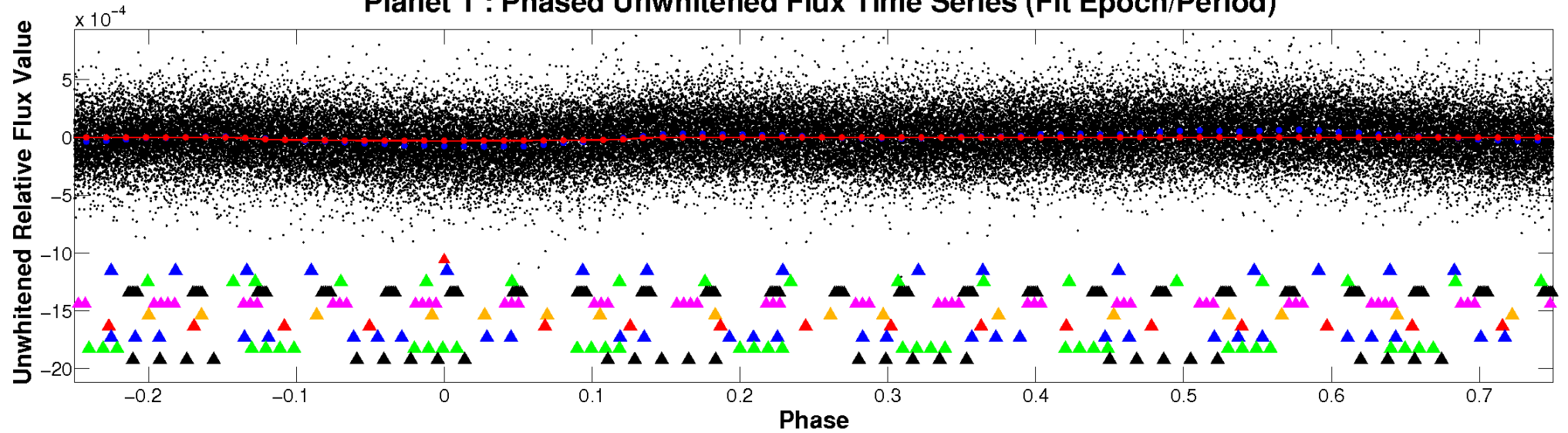
ALT Odd/Even

TCE 003122188-01

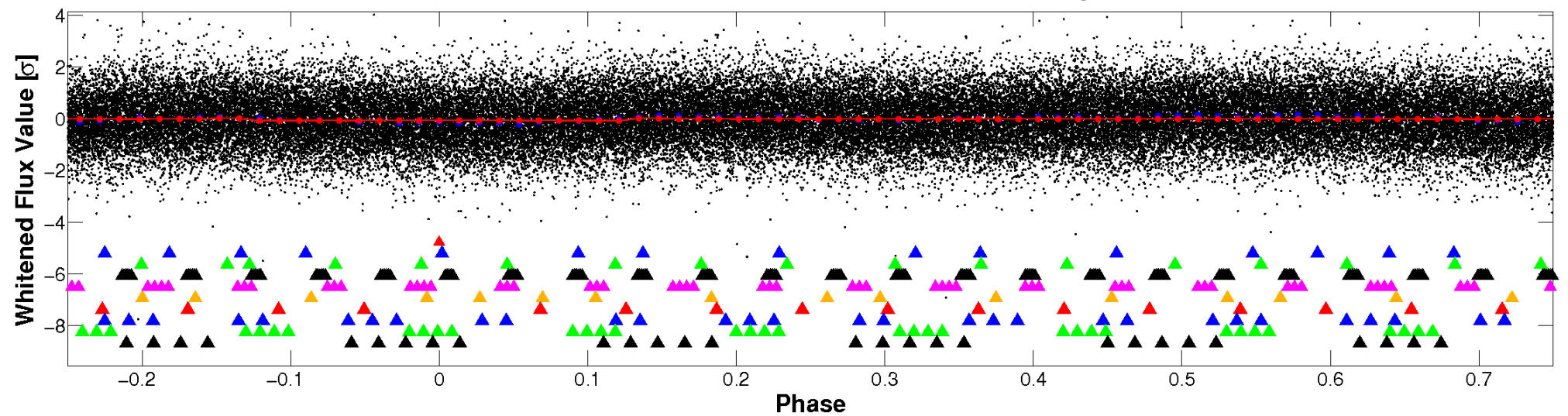


Non-Whitened Vs. Whitened Light Curve

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

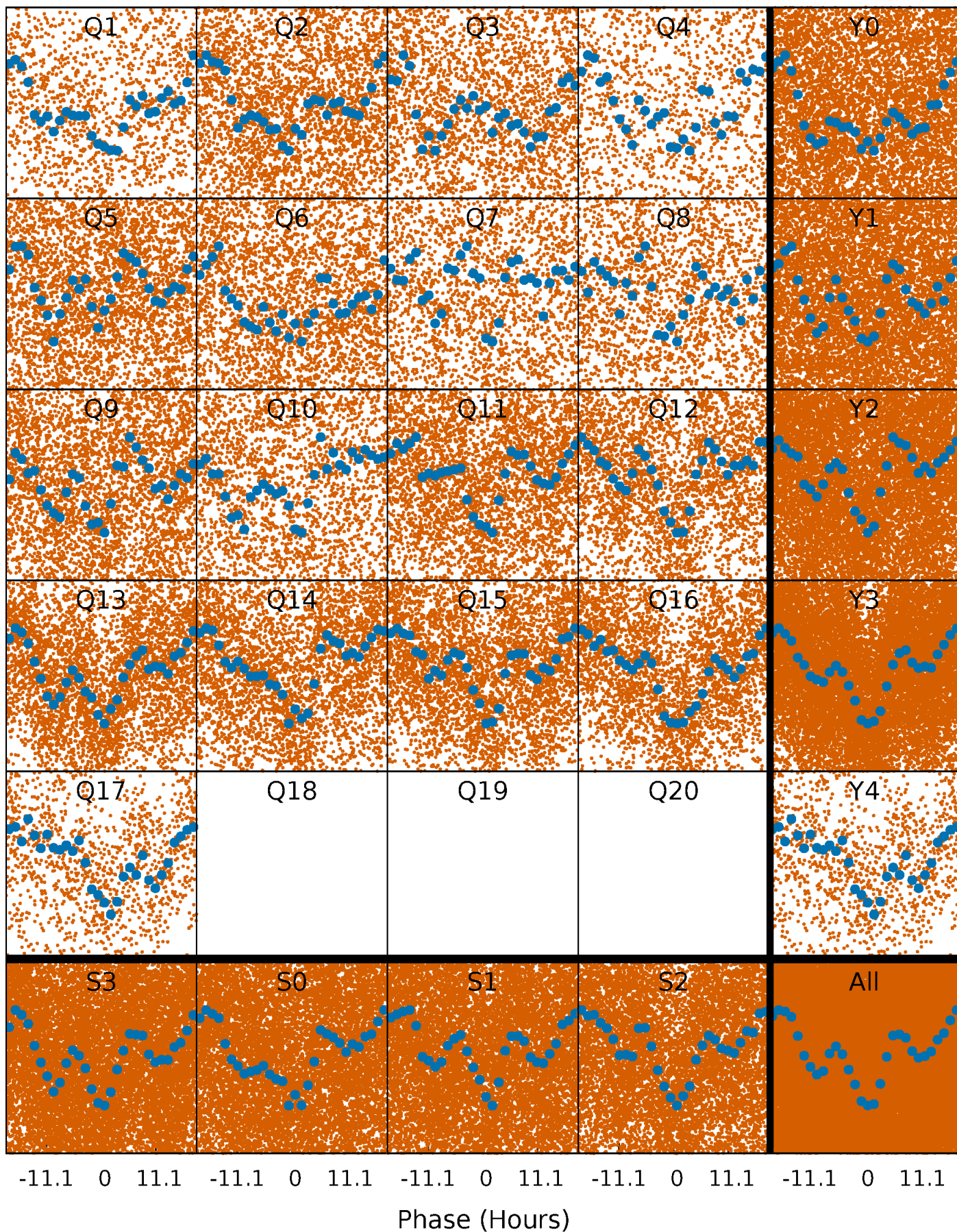


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



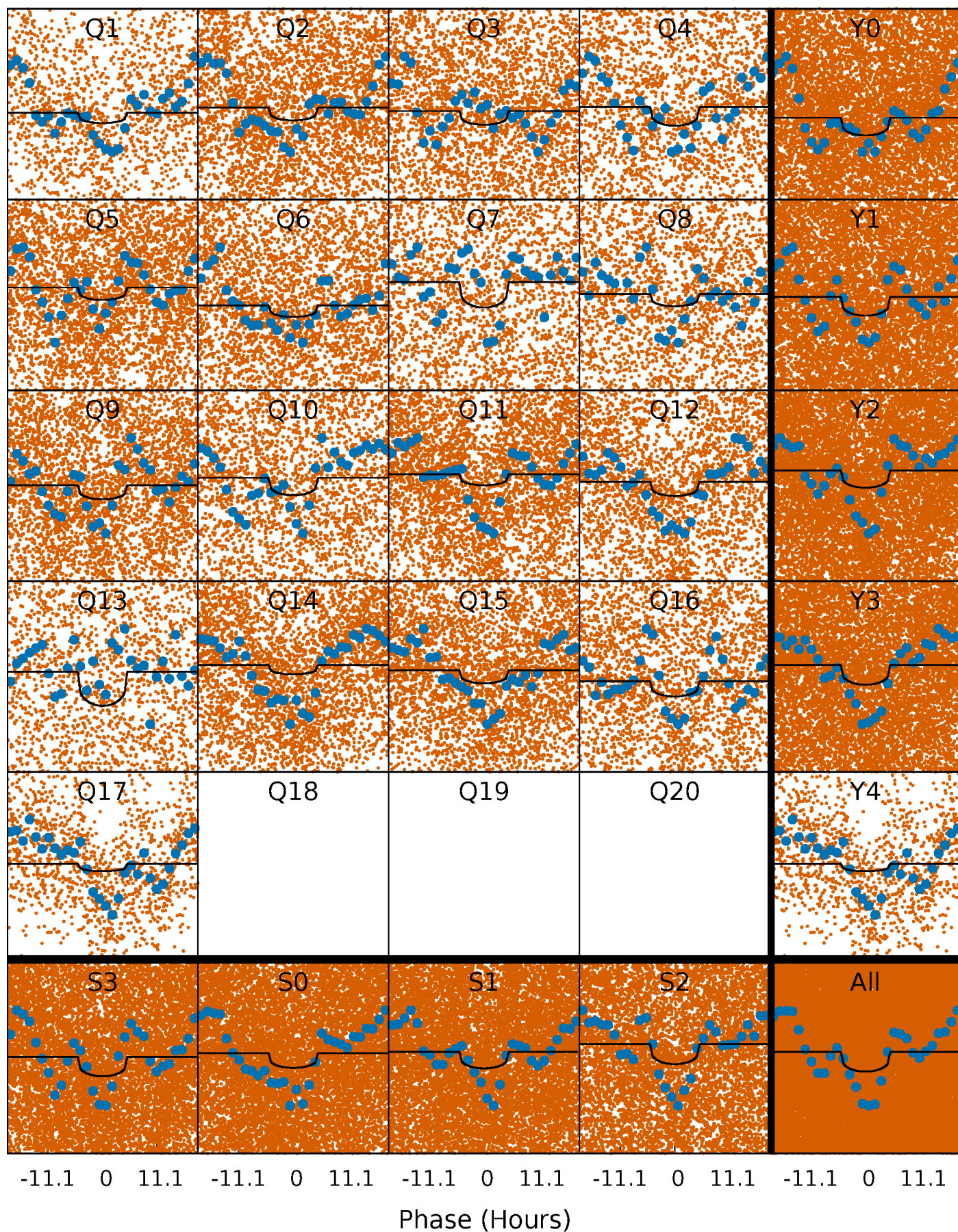
PDC Quarter-Phased Transit Curves

TCE 003122188-01 P= 1.519841 Days $T_0=131.603460$ (BKJD)



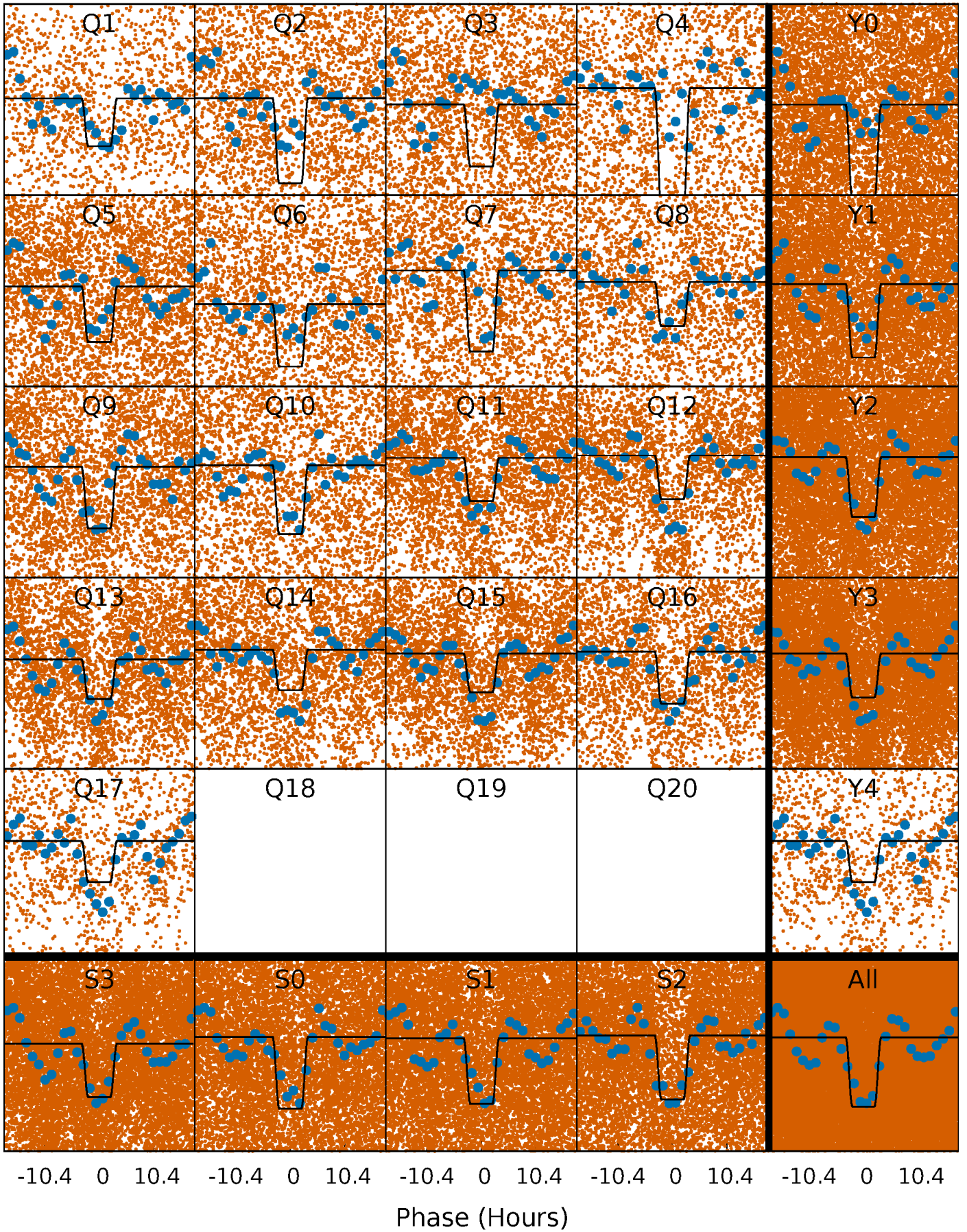
DV Quarter-Phased Transit Curves

TCE 003122188-01 P= 1.519841 Days $T_0=131.603460$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

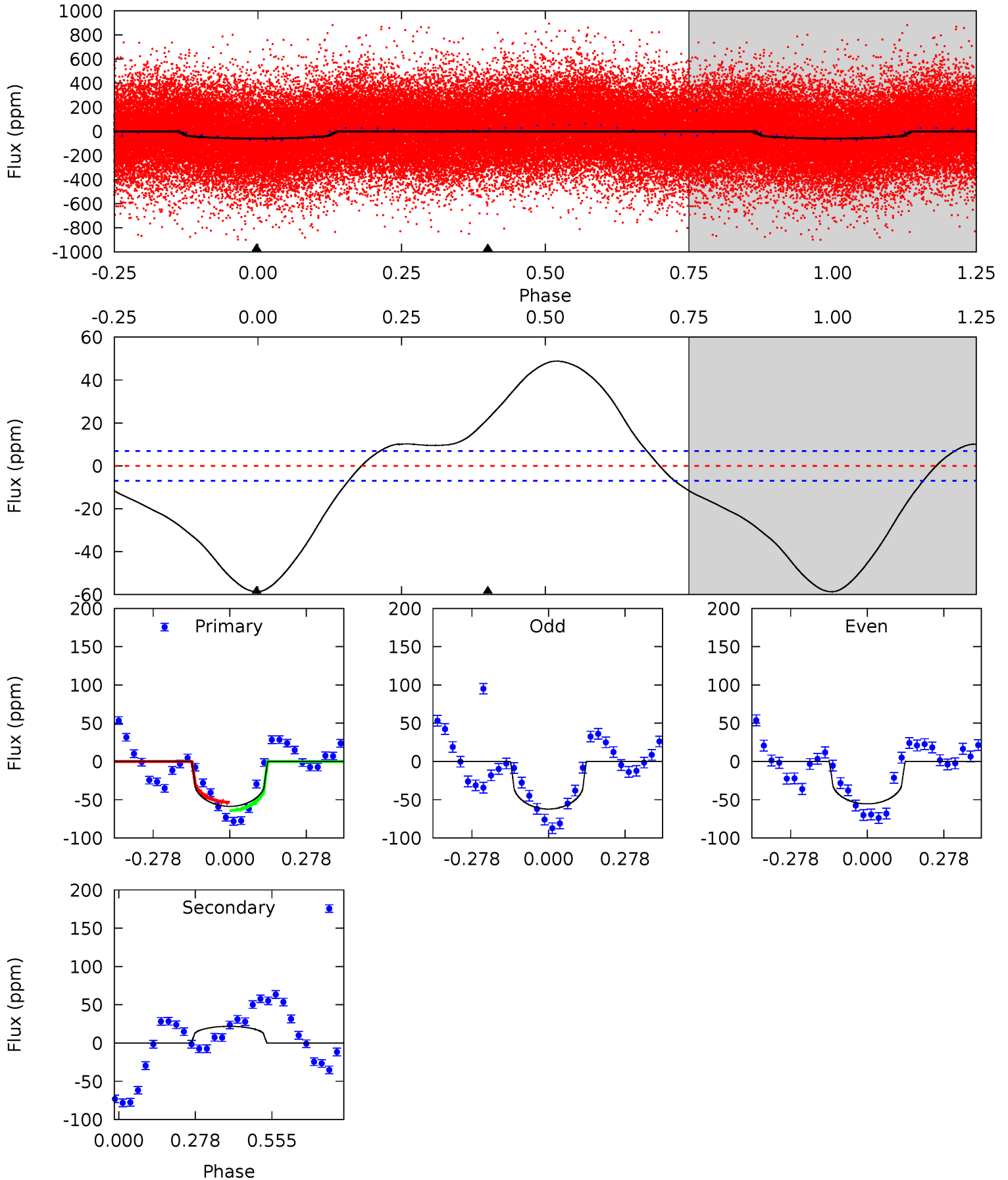
TCE 003122188-01 P= 1.519878 Days $T_0=131.607232$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-01, P = 1.519841 Days, E = 130.083619 Days

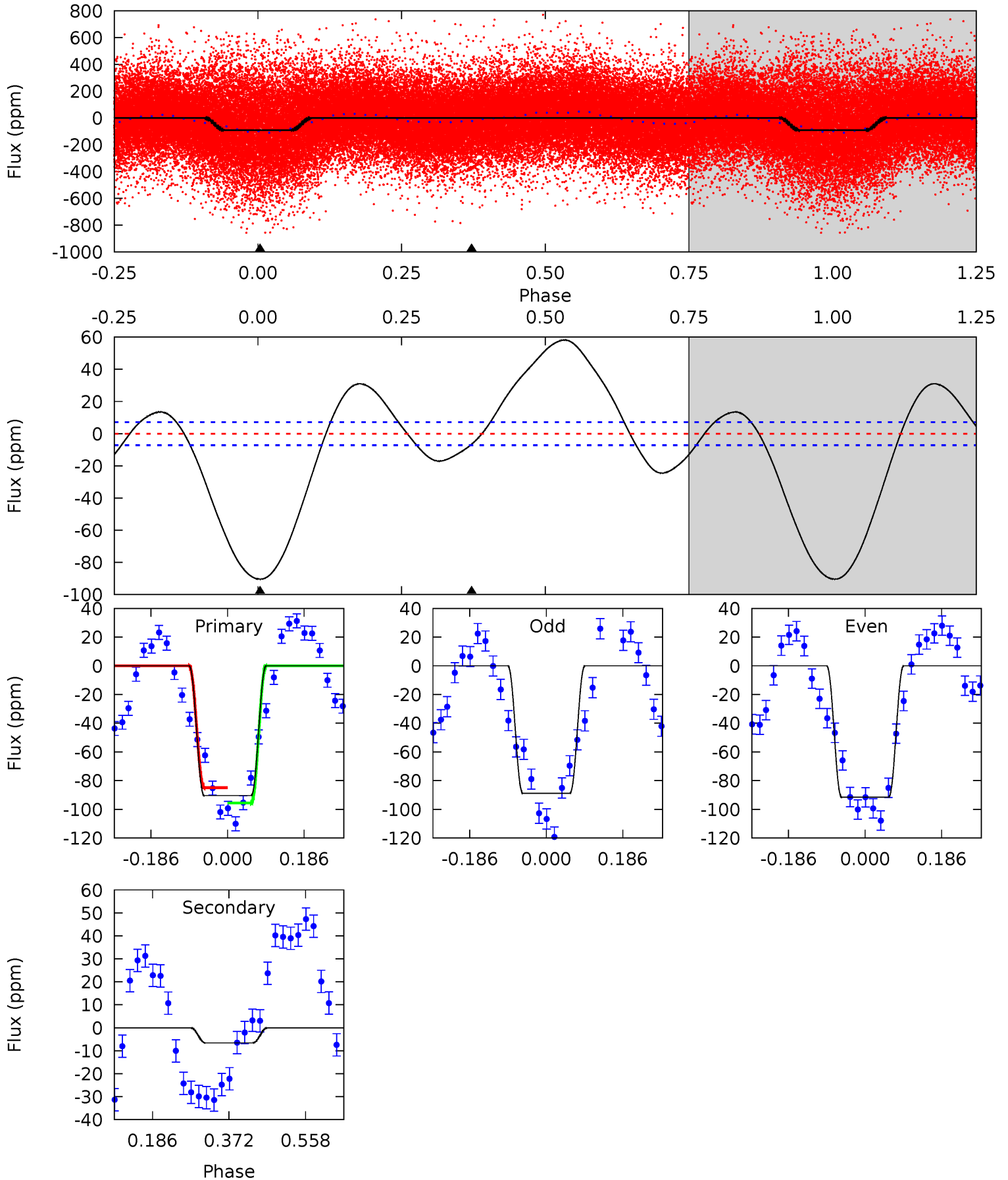
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.8	-13.7	0	0	4.35	1.09	5.21	36.8	36.8	-13.7	-13.7	2.11	0.96	0.45	3.46



Alt Model-Shift Uniqueness Test

003122188-01, P = 1.519878 Days, E = 130.087354 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.1	4.09	0	0	4.43	1.32	14.1	56.1	56.1	4.09	4.09	0.83	0.93	0.39	3.35



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	22 ± 2	$2.23^{+1.04}_{-0.91}$	4022^{+172}_{-322}	-5646^{+735}_{-1406}	$-2.375^{+1.243}_{-4.177}$
Alt.	-7 ± 2	$4.53^{+1.19}_{-1.09}$	4000^{+172}_{-316}	-3172^{+5415}_{-313}	$0.176^{+0.132}_{-0.072}$

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 $A_{obs} \gg 1.0$

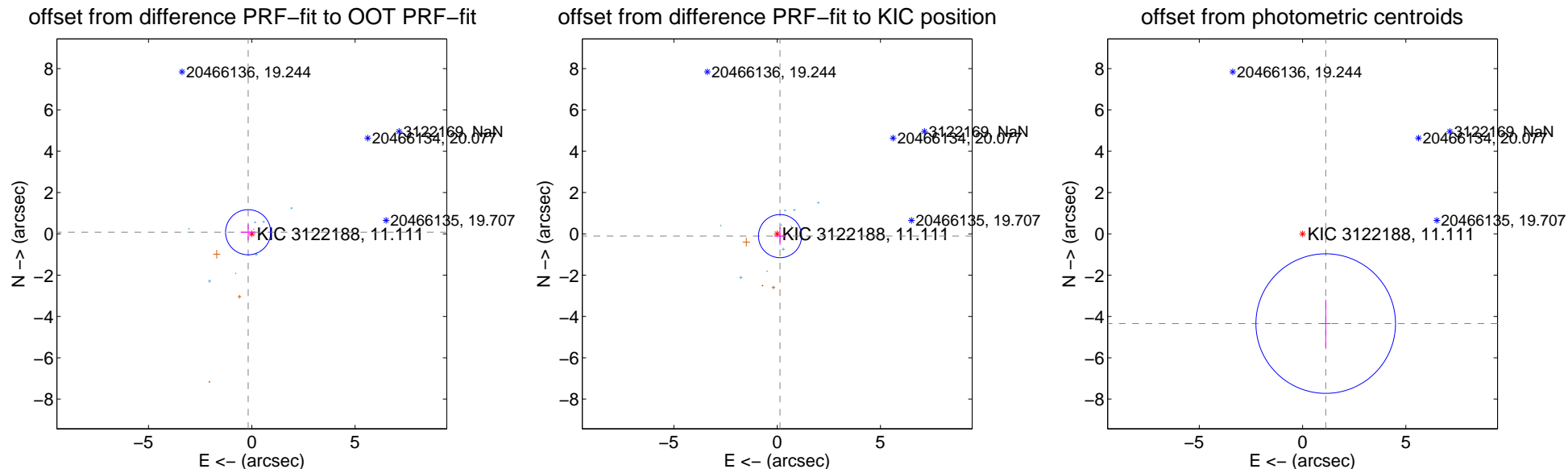
DV Centroid Data

Supplemental centroid analysis for 003122188-01. **Kepler magnitude: 11.11.** Transit SNR 8.59

There are 9 quarters with good PRF difference image offsets

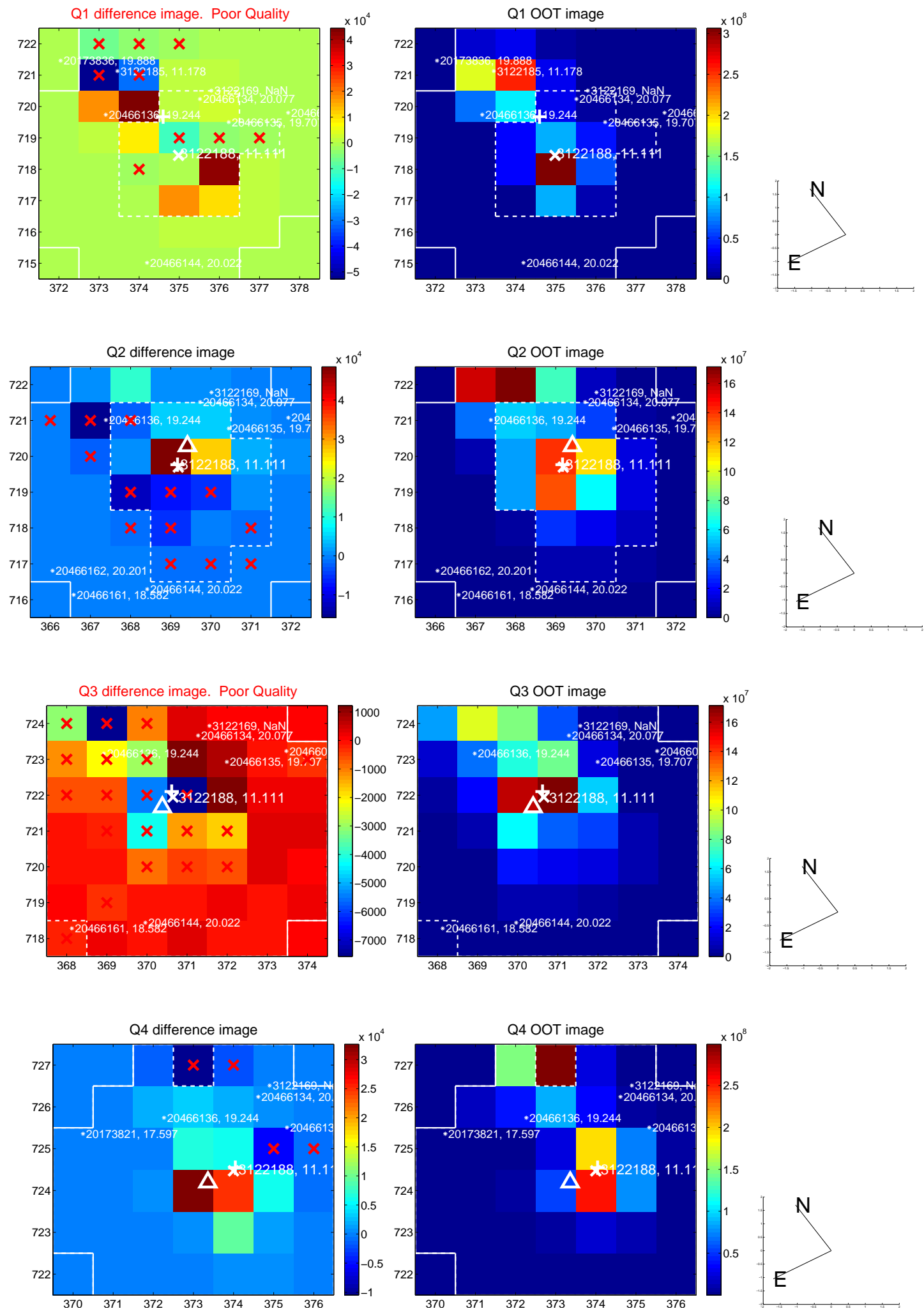
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.194 ± 0.364	0.53	0.178 ± 0.362	0.077 ± 0.376
PRF-fit source offset from KIC position	0.177 ± 0.348	0.51	-0.138 ± 0.287	-0.111 ± 0.426
photometric centroid source offset	4.49 ± 1.13	3.98	-1.12 ± 0.24	-4.34 ± 1.16

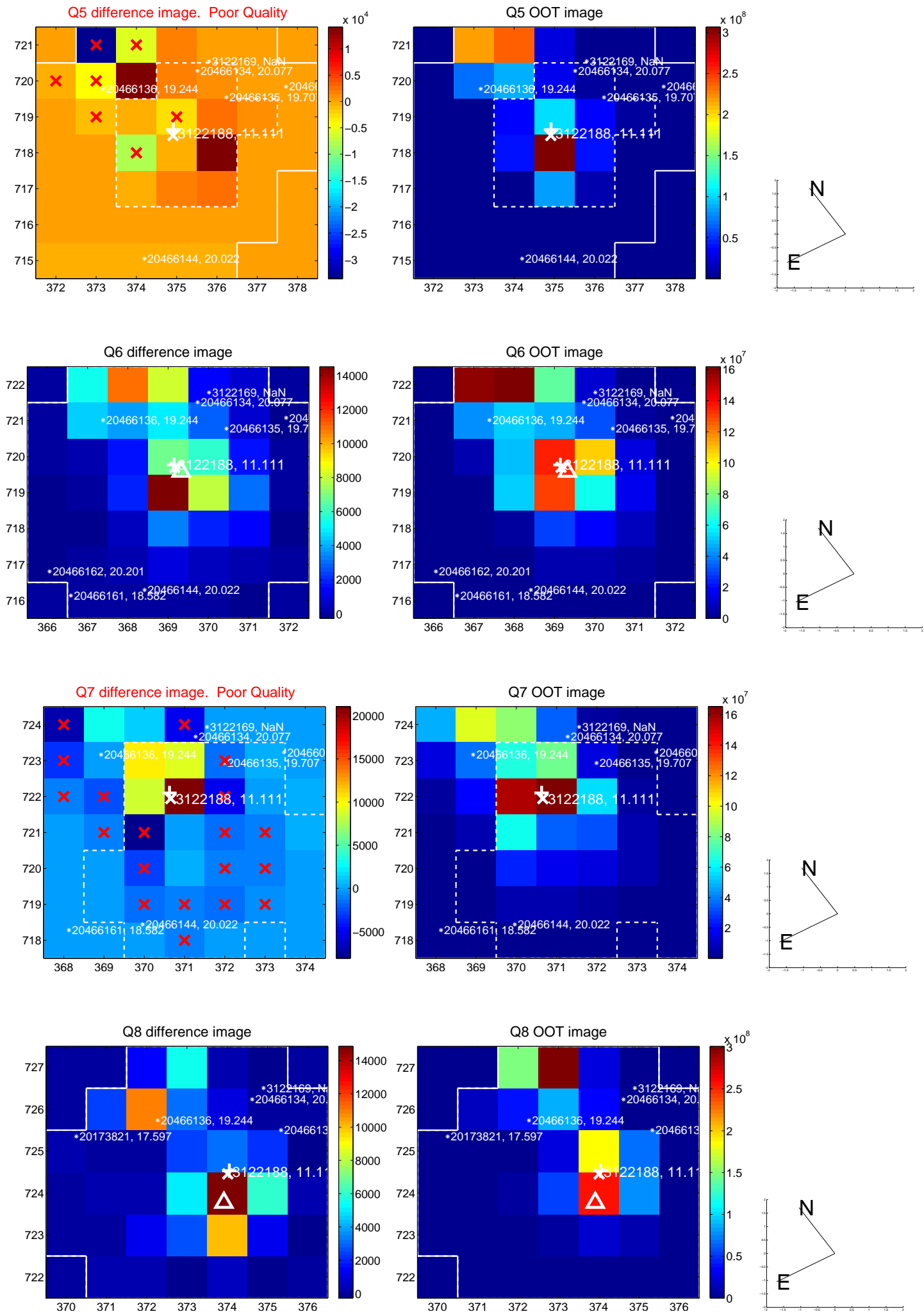


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

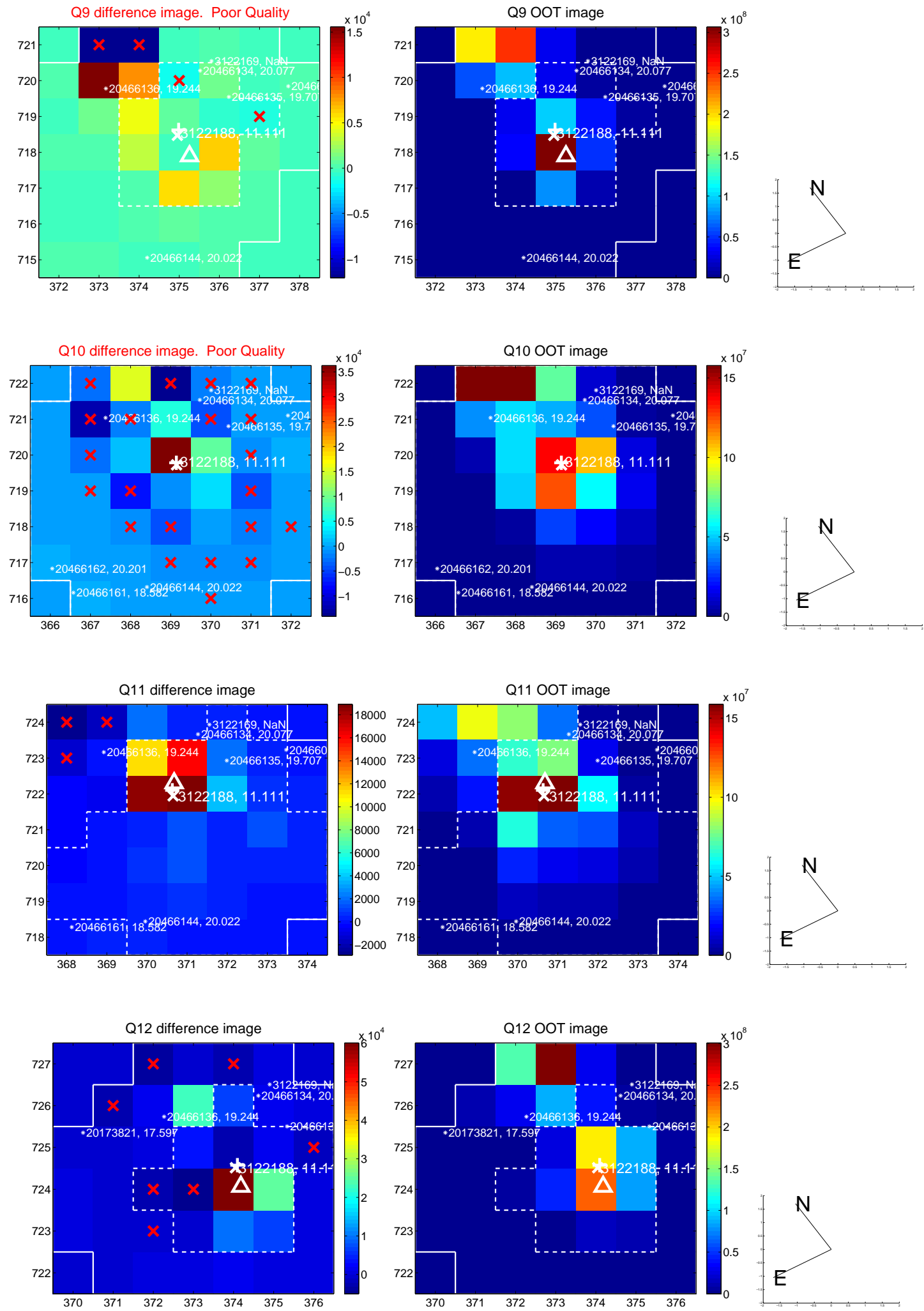
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



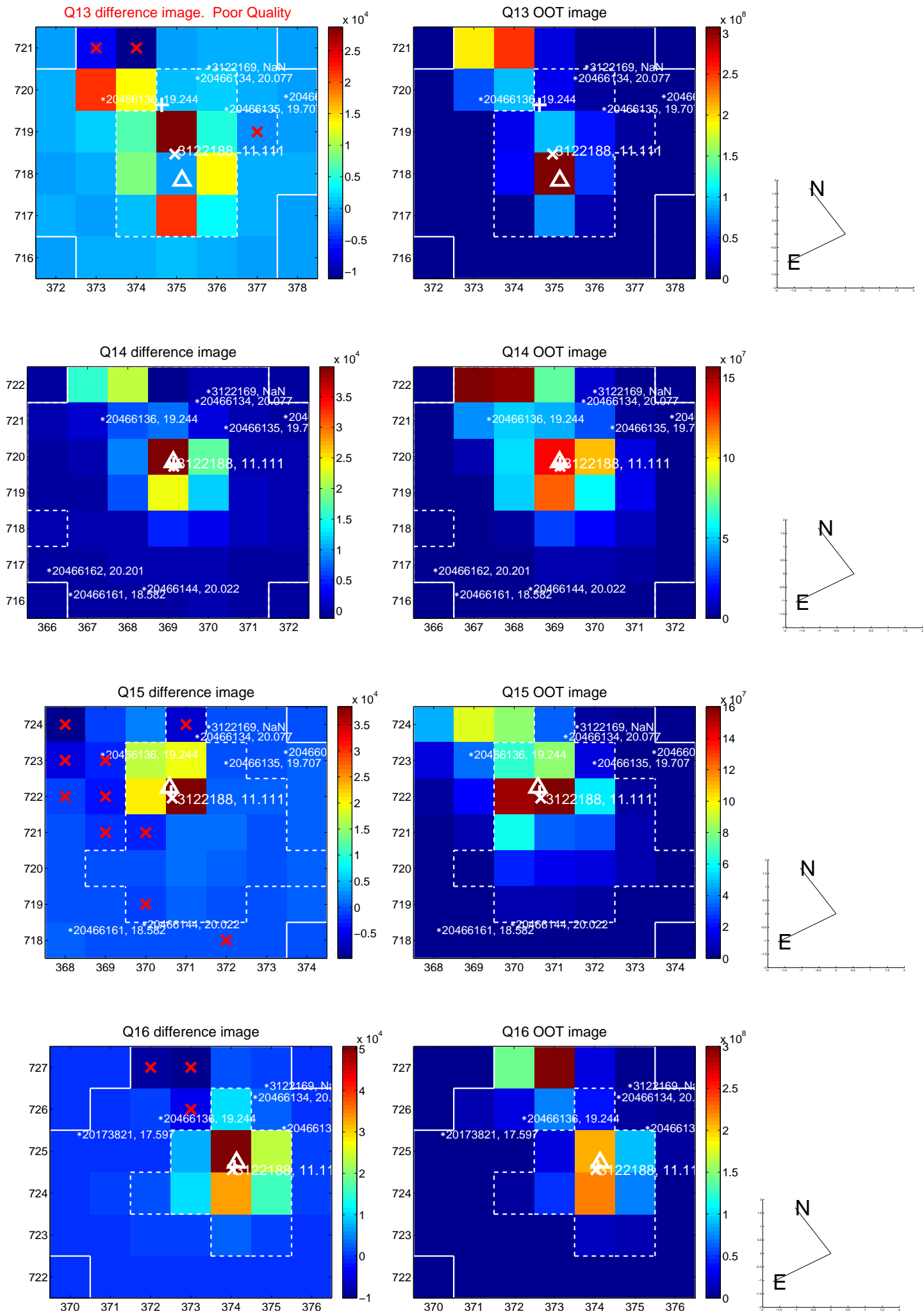
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



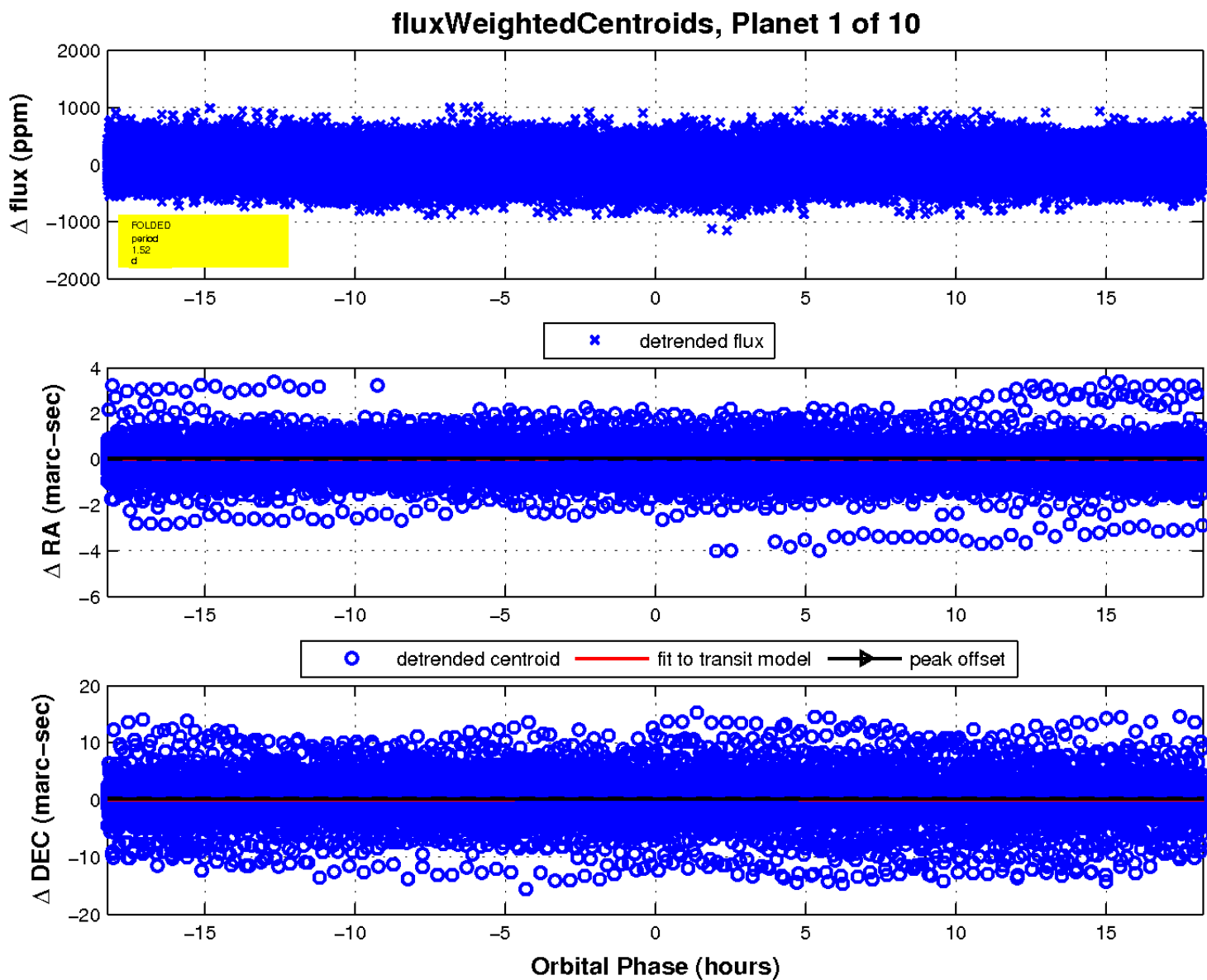
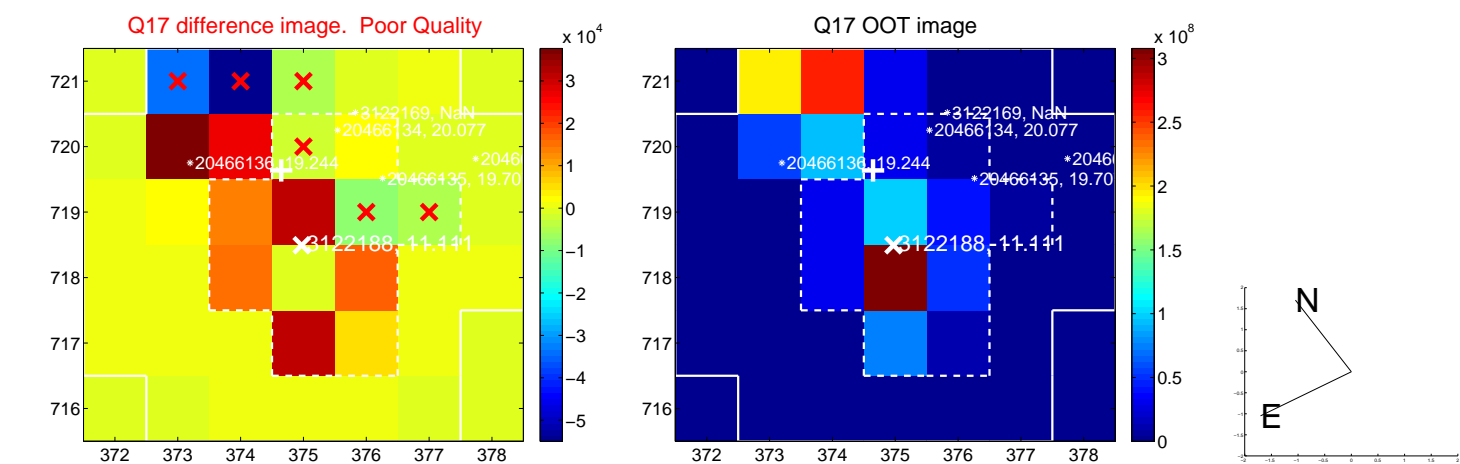
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



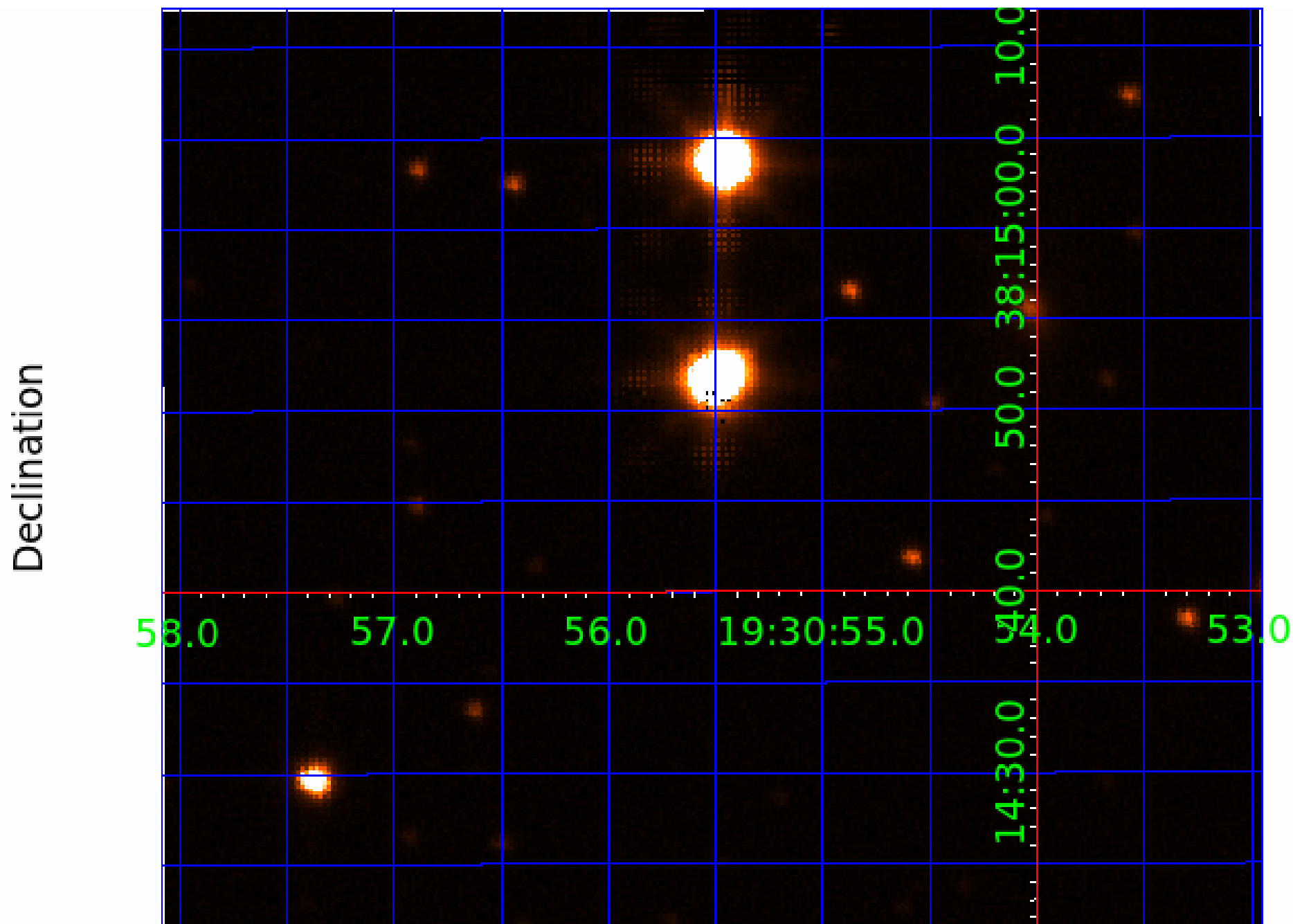
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
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003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

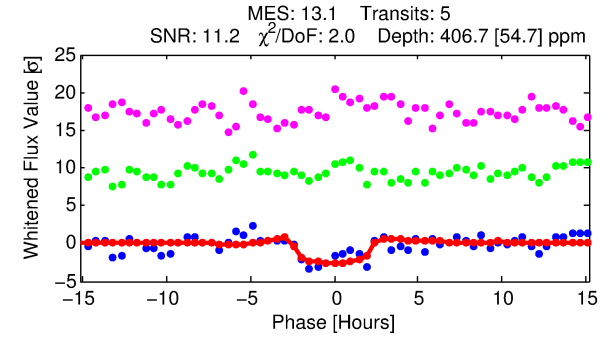
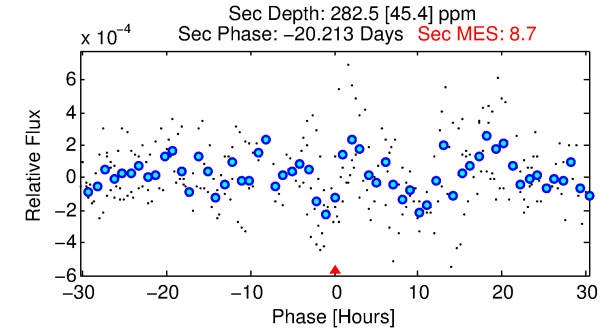
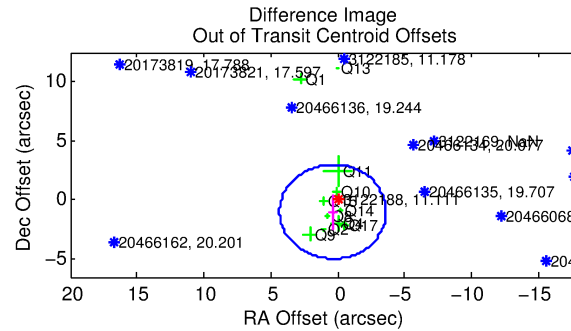
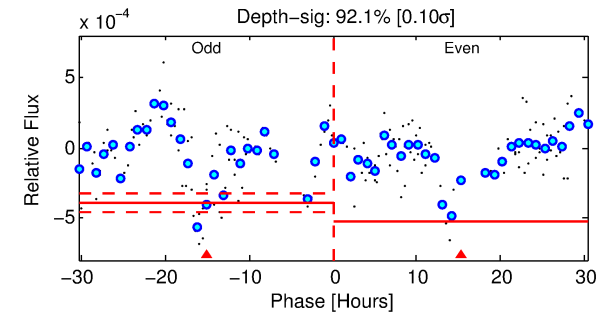
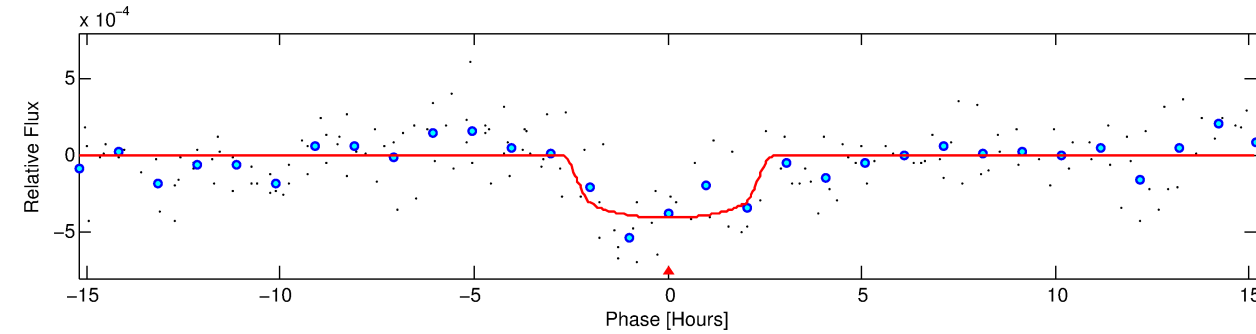
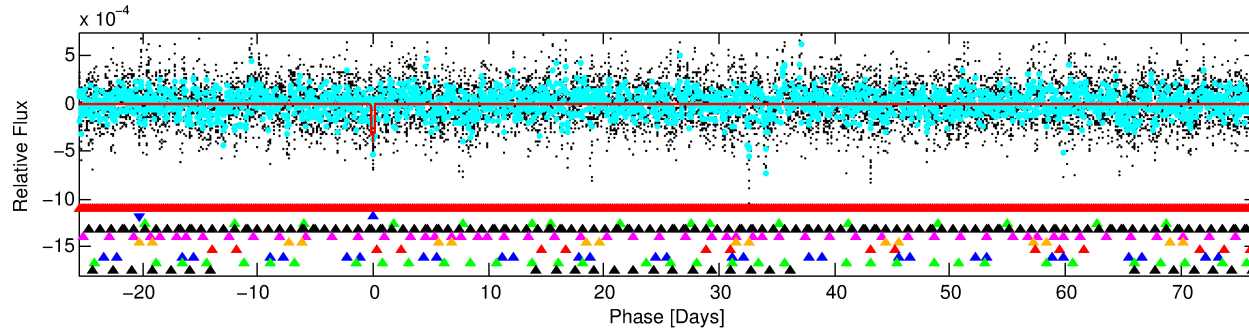
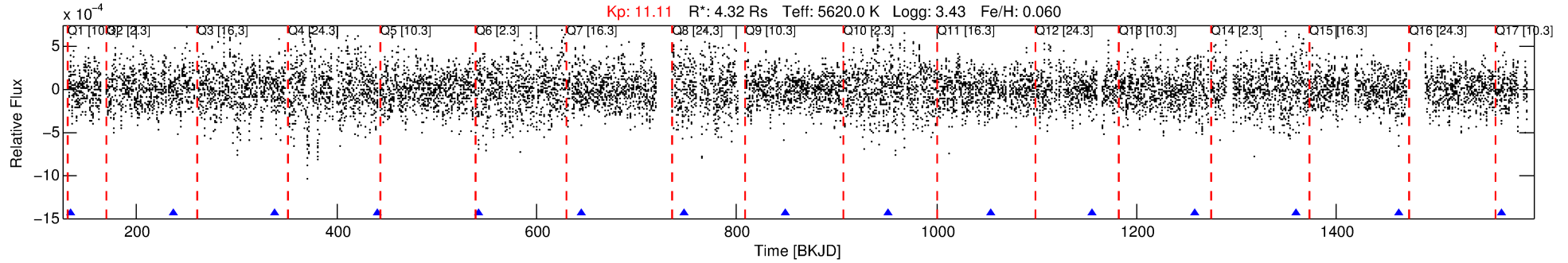
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-02

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 2 of 10 Period: 102.174 d



DV Fit Results:

Period = 102.17444 [0.00107] d
Epoch = 134.0953 [0.0115] BKJD
Rp/R* = 0.0208 [0.0121]
a/R* = 92.00 [233.45]
b = 0.83 [0.98]
Seff = 60.82 [29.61]
Teff = 712 [87] K
Rp = 9.82 [6.76] Re
a = 0.5231 [0.1692] AU
Ag = 441.23 [558.61] [0.79 σ]
Teffp = 5046 [1478] K [2.93 σ]

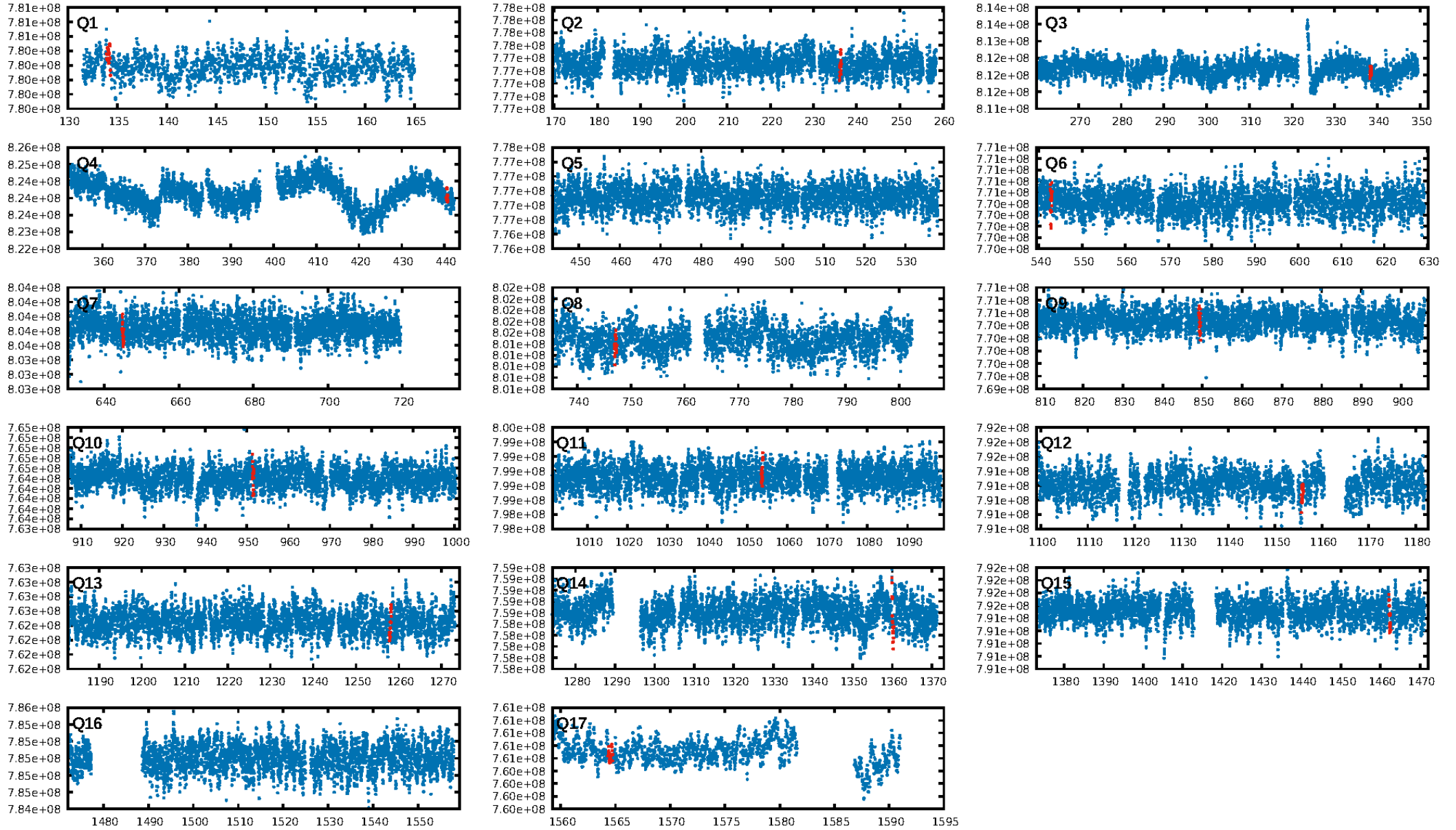
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [27.18 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.7%
ModelChiSquareGof-sig: 62.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -79.14
Centroid-sig: 95.3%
Centroid-so: 2.832 arcsec [3.61 σ]
OotOffset-rm: 1.054 arcsec [0.79 σ]
KicOffset-rm: 0.661 arcsec [0.43 σ]
OotOffset-st: 3/2/2/4 [11]
KicOffset-st: 3/2/2/4 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.14 [2/14]

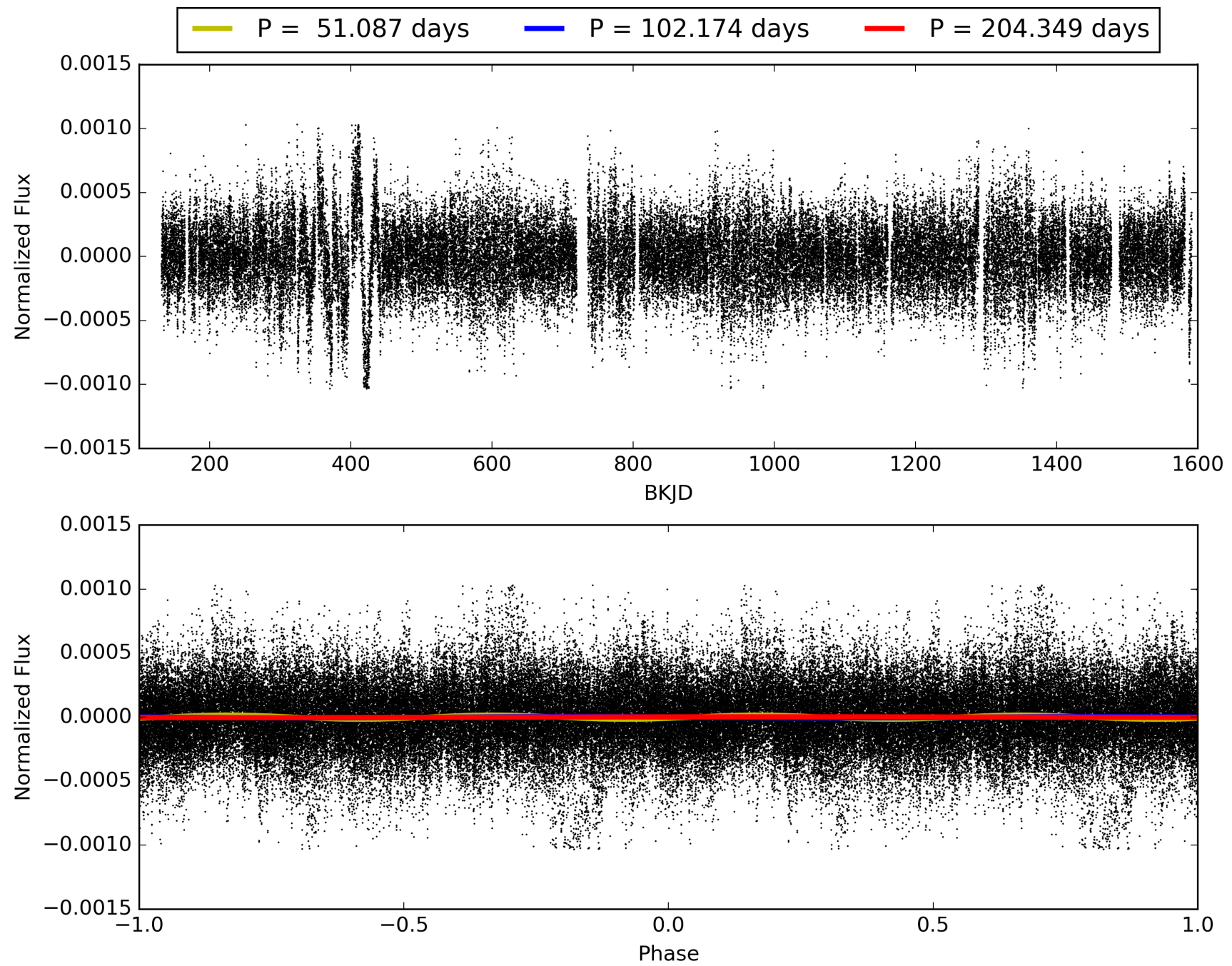
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:30 Z

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

TCE 003122188-02, PDC Light Curves

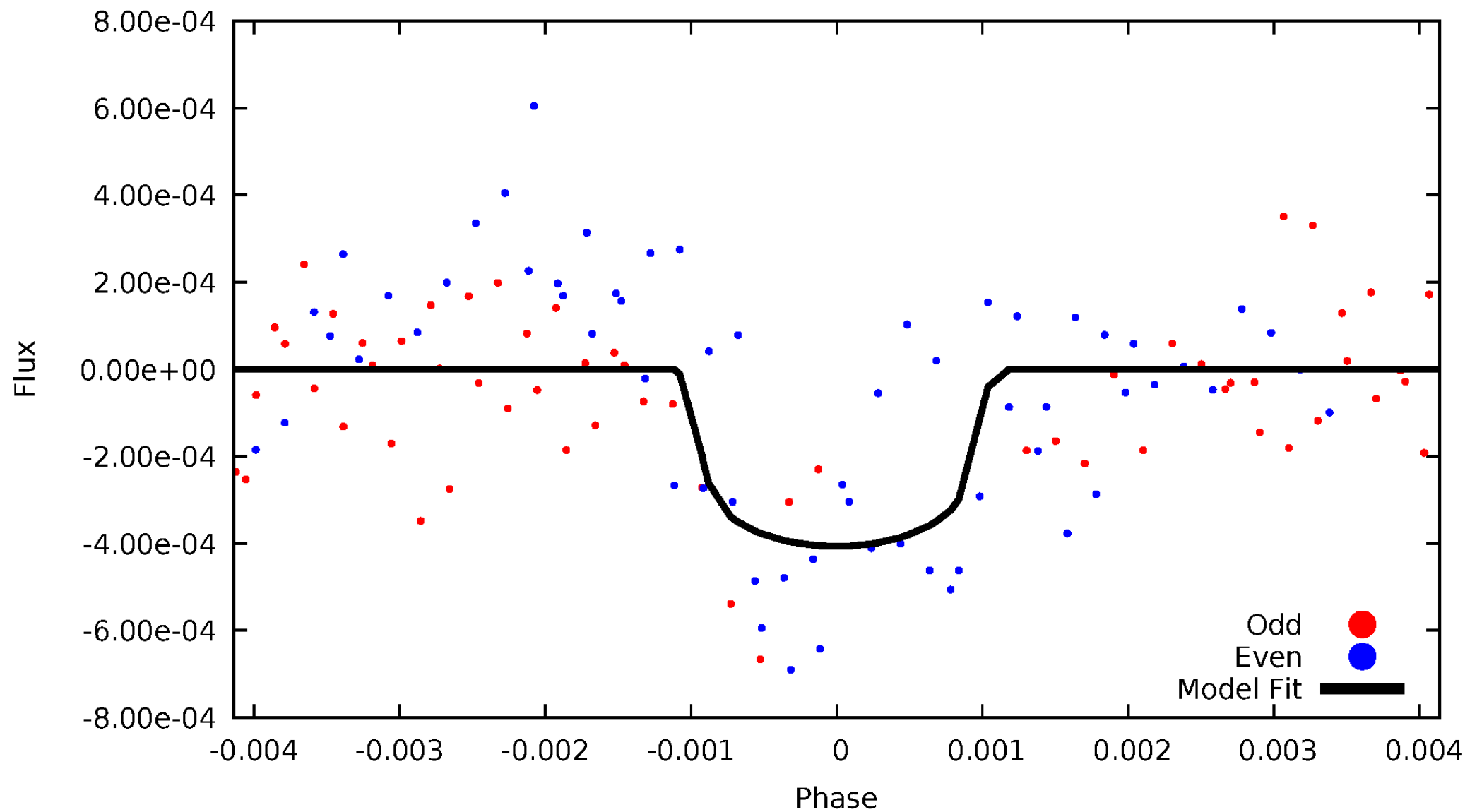


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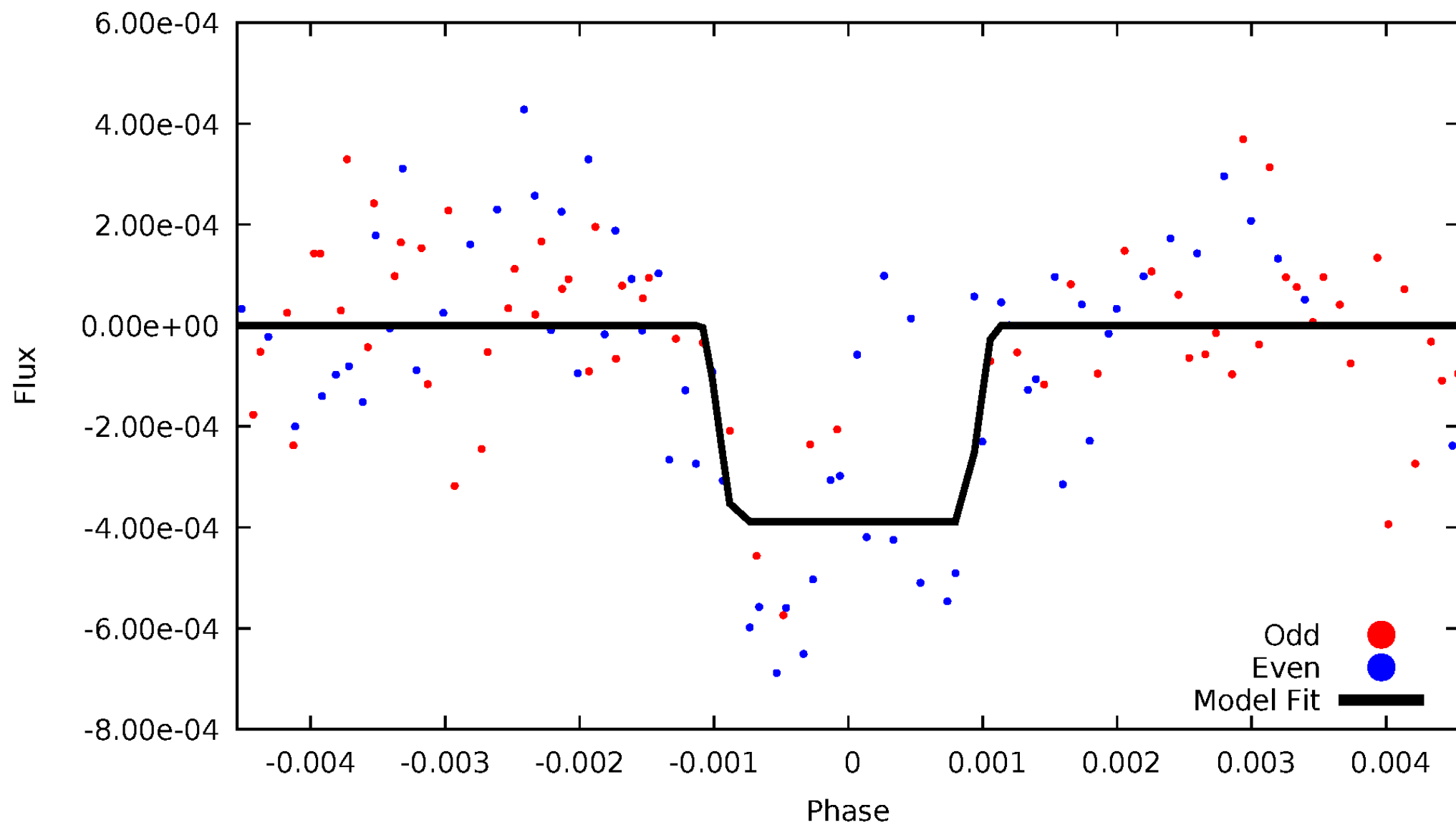
DV Odd/Even

TCE 003122188-02



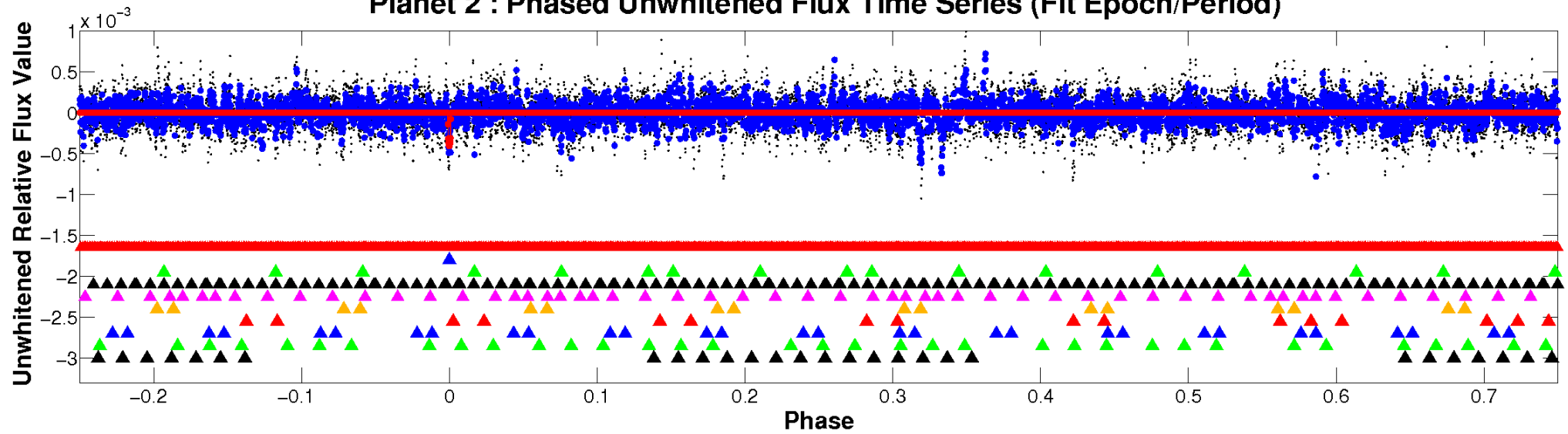
ALT Odd/Even

TCE 003122188-02

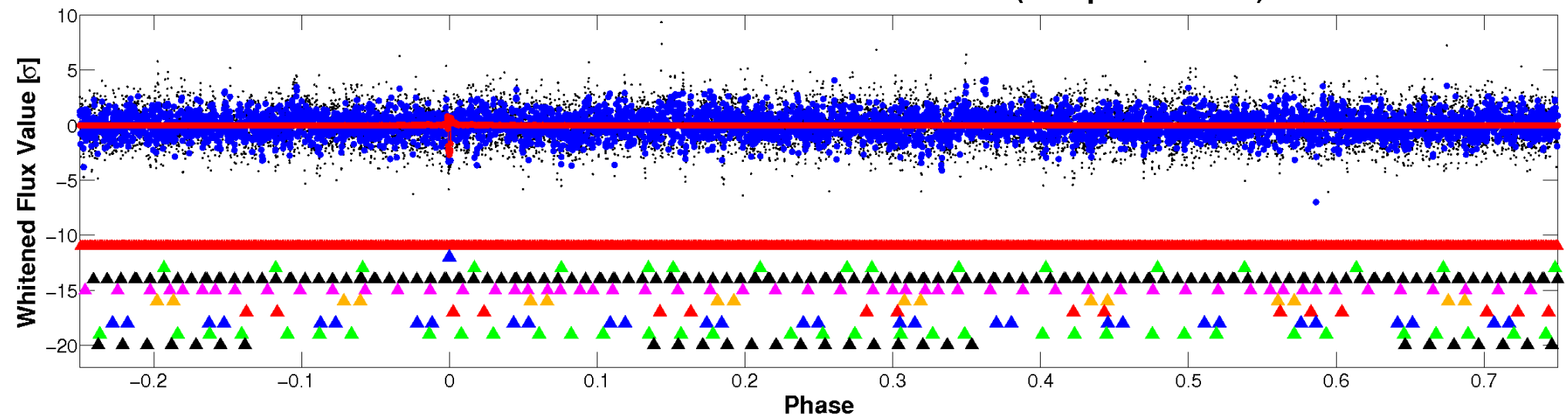


Non-Whitened Vs. Whitened Light Curve

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

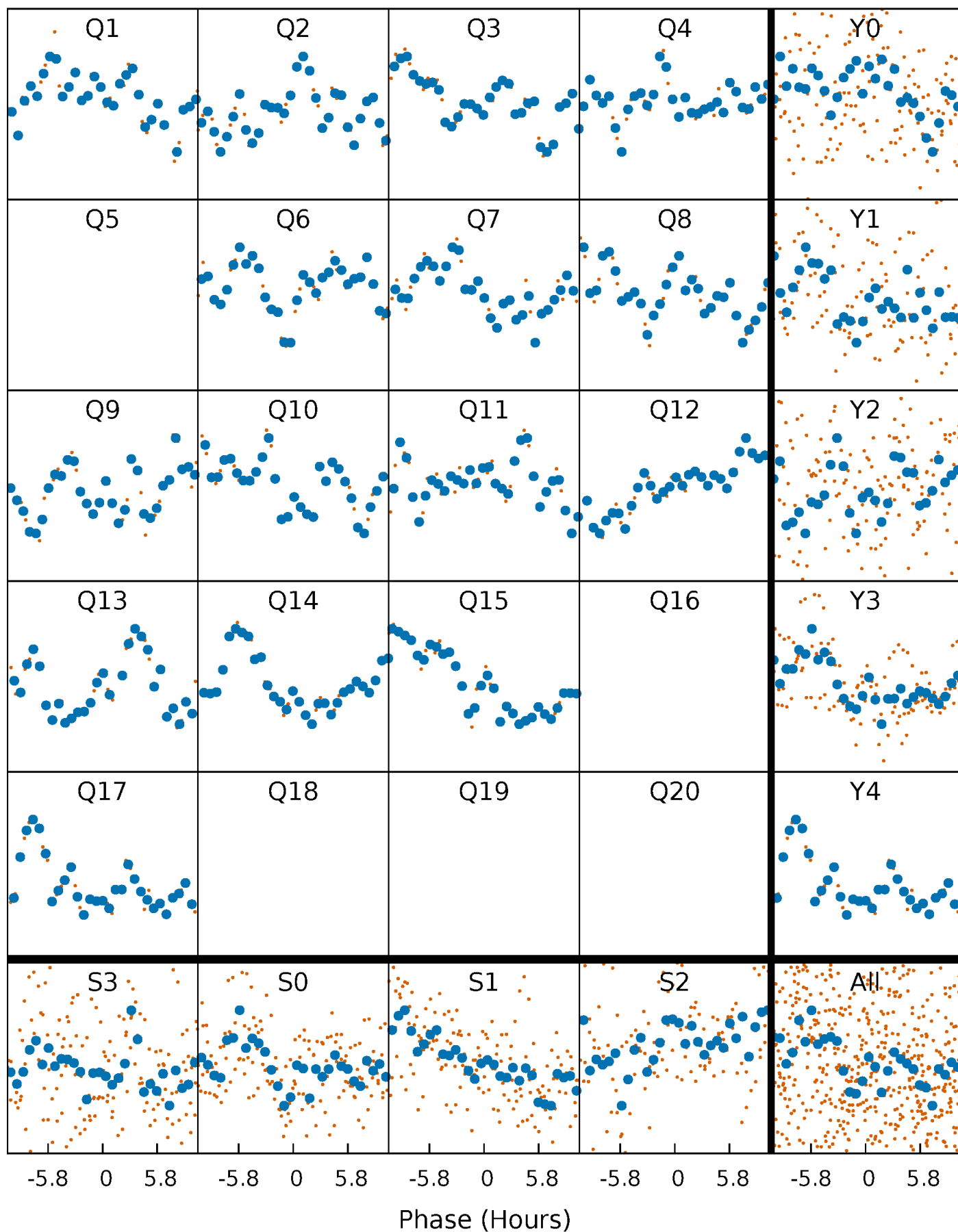


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



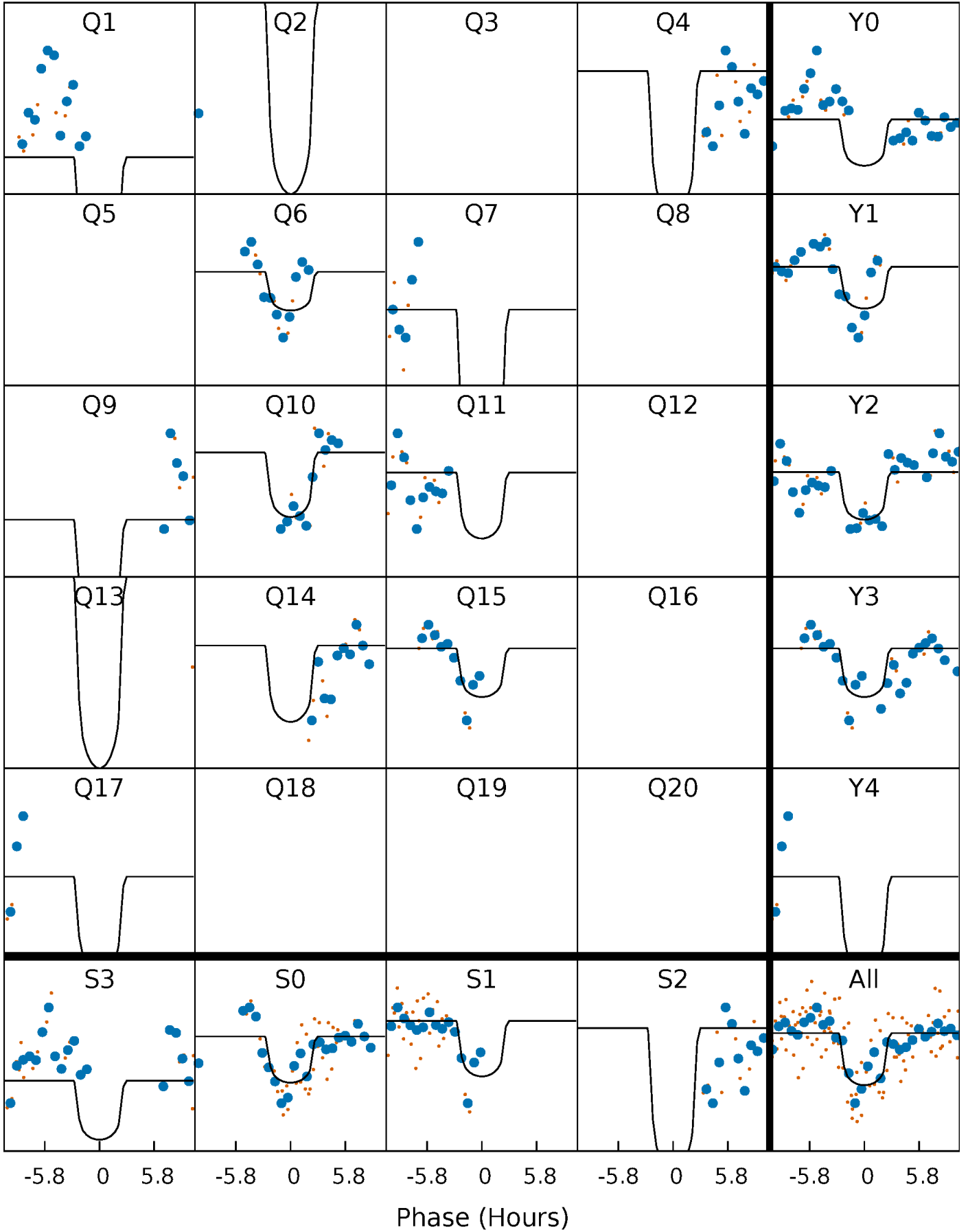
PDC Quarter-Phased Transit Curves

TCE 003122188-02 P=102.174437 Days $T_0=134.095268$ (BKJD)



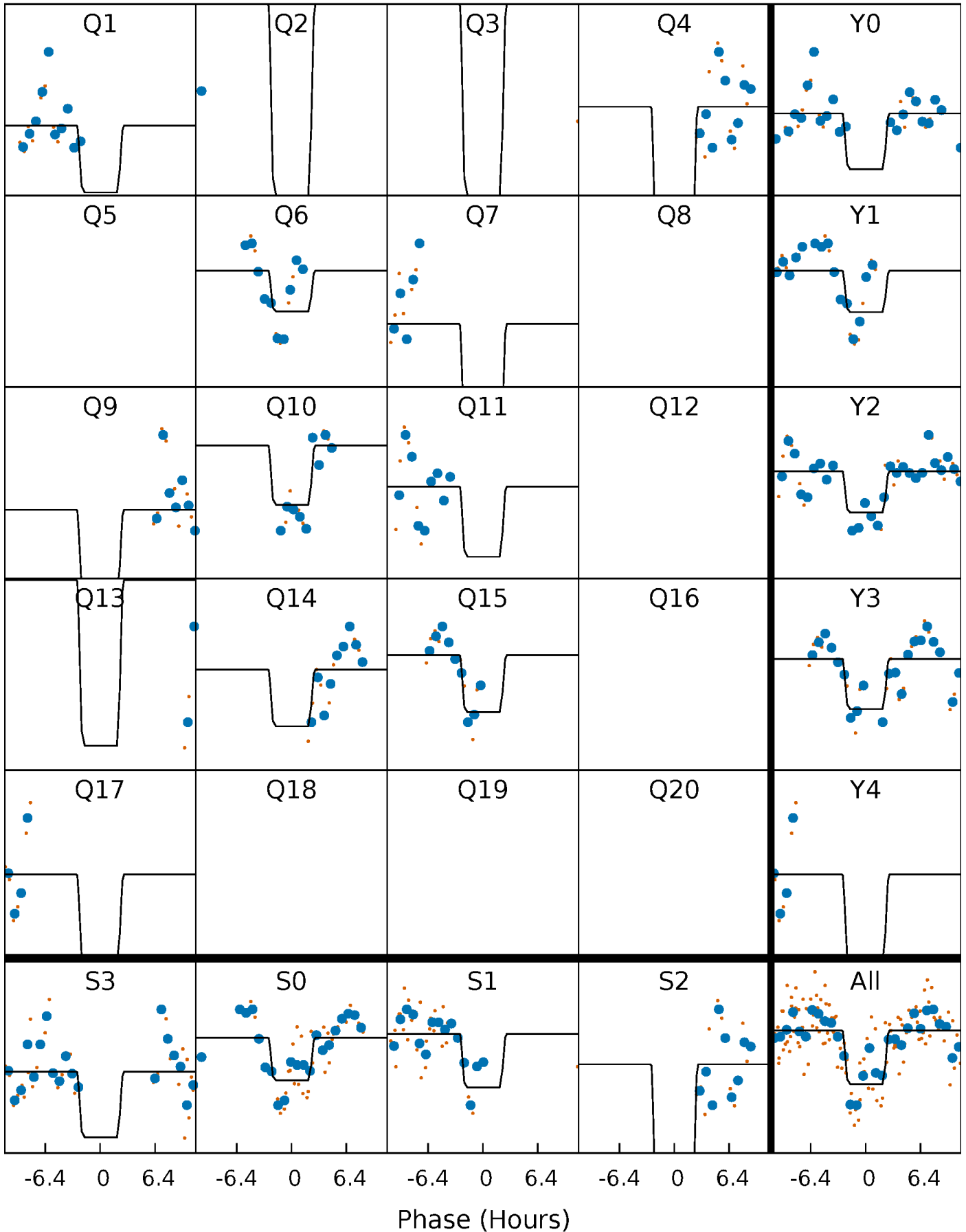
DV Quarter-Phased Transit Curves

TCE 003122188-02 P=102.174437 Days $T_0=134.095268$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

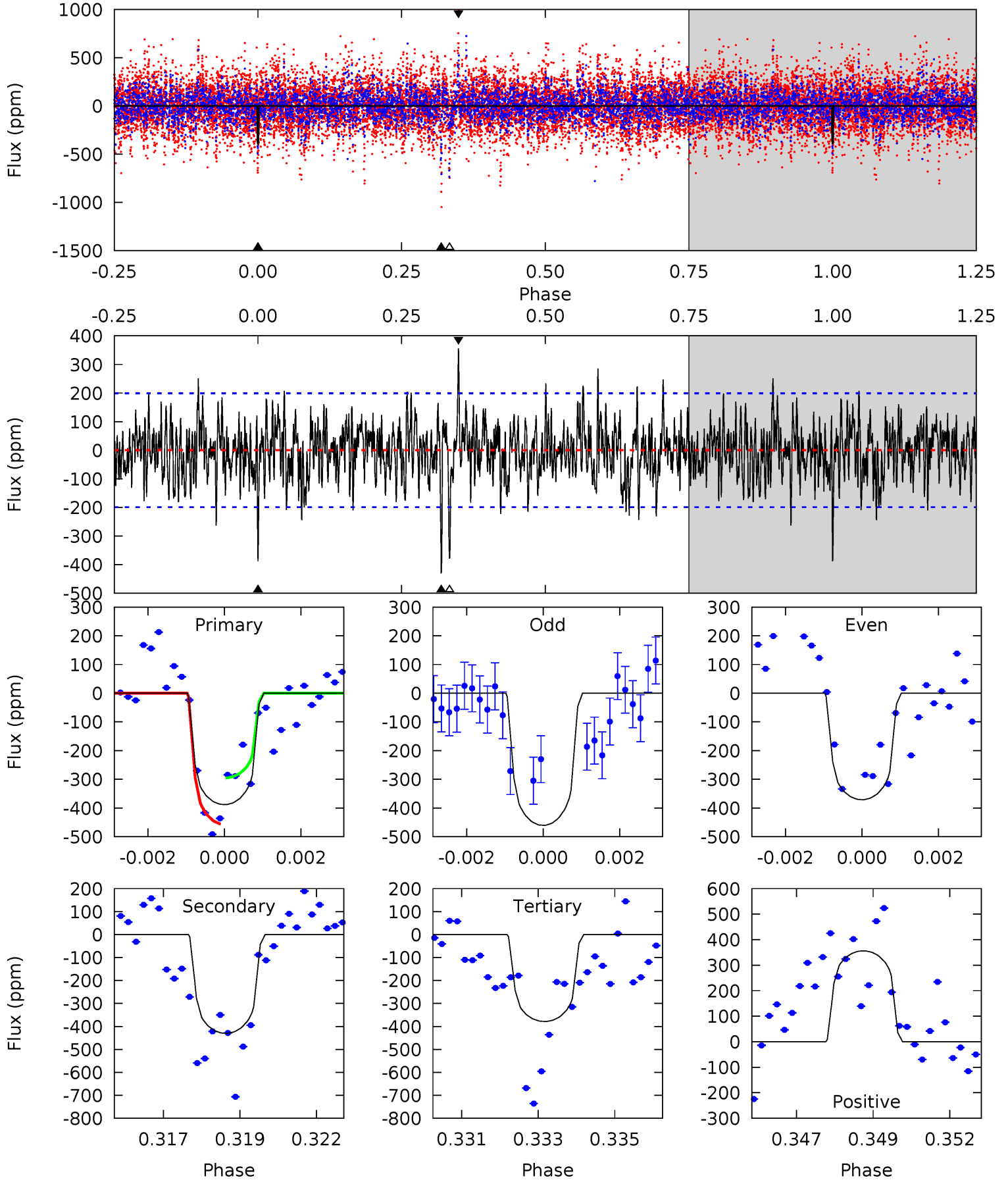
TCE 003122188-02 P=102.171471 Days $T_0=134.129429$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-02, P = 102.174437 Days, E = 31.920831 Days

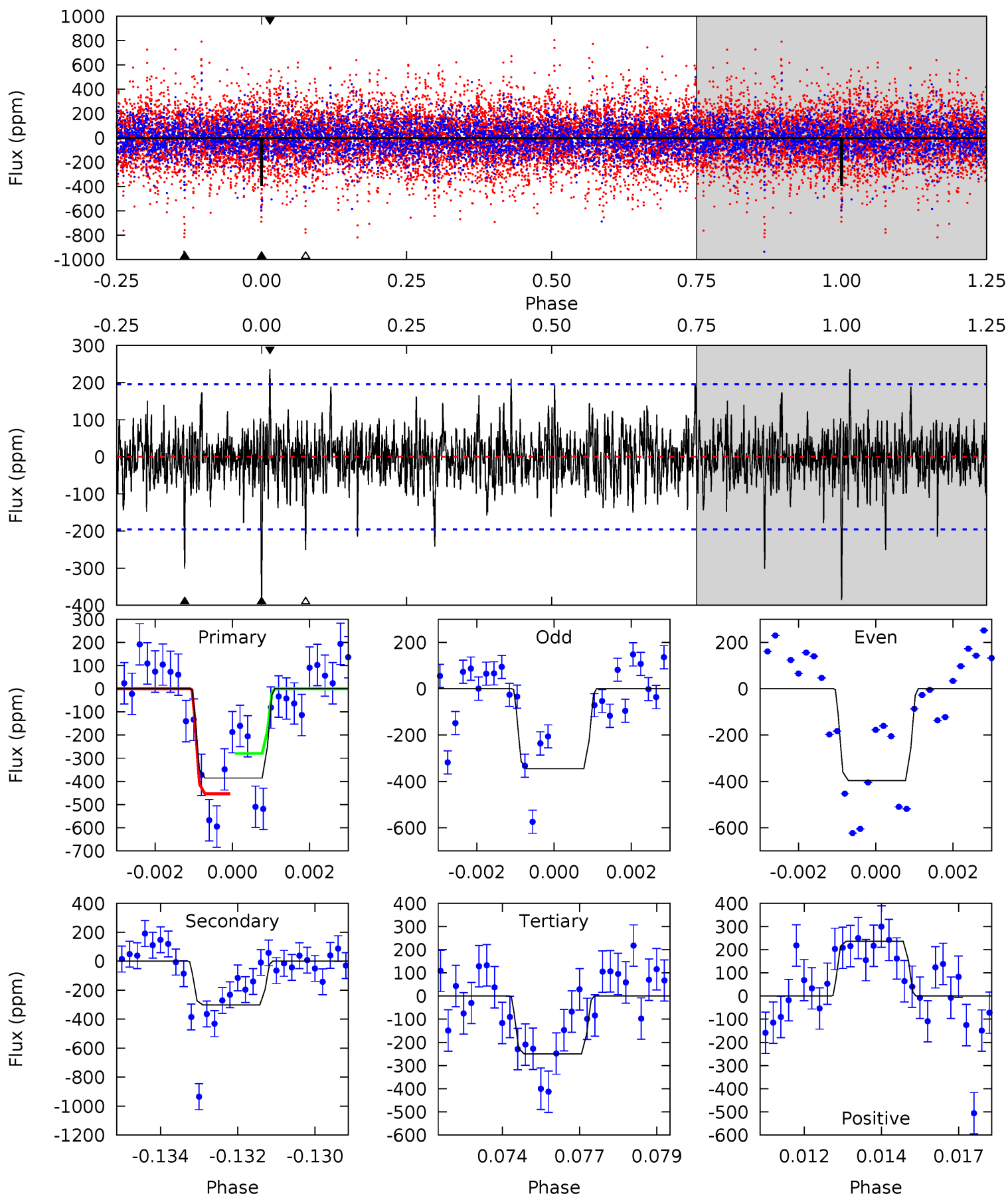
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	11.5	10.1	9.50	5.30	3.05	2.18	0.26	0.86	1.37	1.97	0.96	0.82	0.45	2.11



Alt Model-Shift Uniqueness Test

003122188-02, $P = 102.171471$ Days, $E = 31.957958$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	8.20	6.82	6.42	5.32	3.08	1.57	3.68	4.08	1.39	1.78	0.60	1.02	0.38	2.35



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-430 ± 38	$9.04^{+6.08}_{-5.09}$	987^{+42}_{-86}	5629^{+3413}_{-1083}	767^{+3191}_{-500}
Alt.	-301 ± 37	$8.84^{+5.61}_{-4.75}$	985^{+45}_{-78}	5281^{+2269}_{-936}	586^{+2108}_{-379}

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 $A_{obs} \gg 1.0$

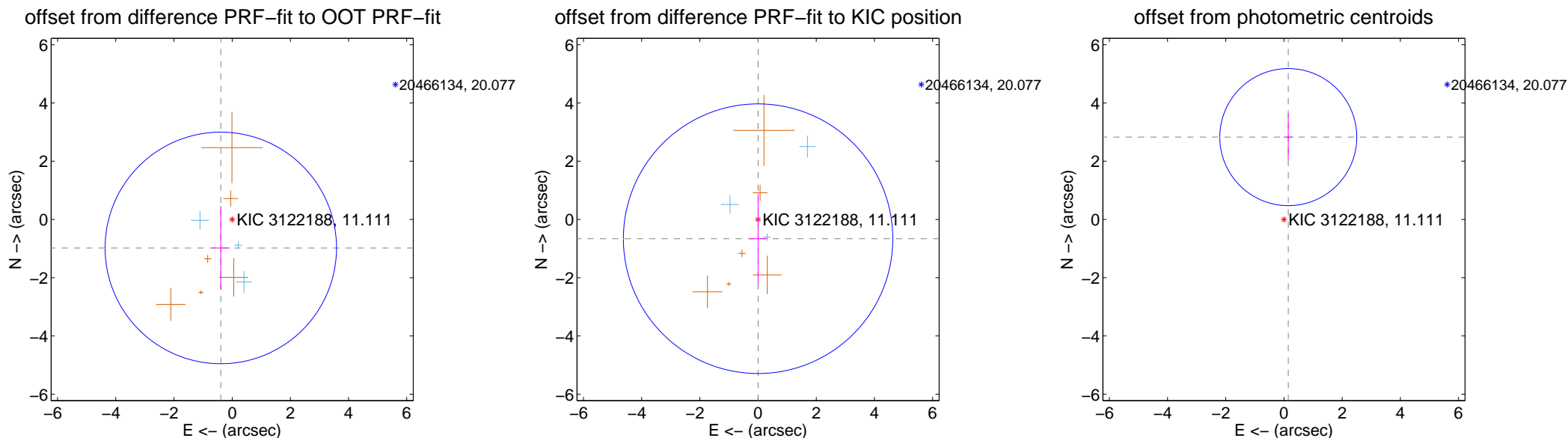
DV Centroid Data

Supplemental centroid analysis for 003122188-02. **Kepler magnitude: 11.11.** Transit SNR 11.18

There are 4 quarters with good PRF difference image offsets

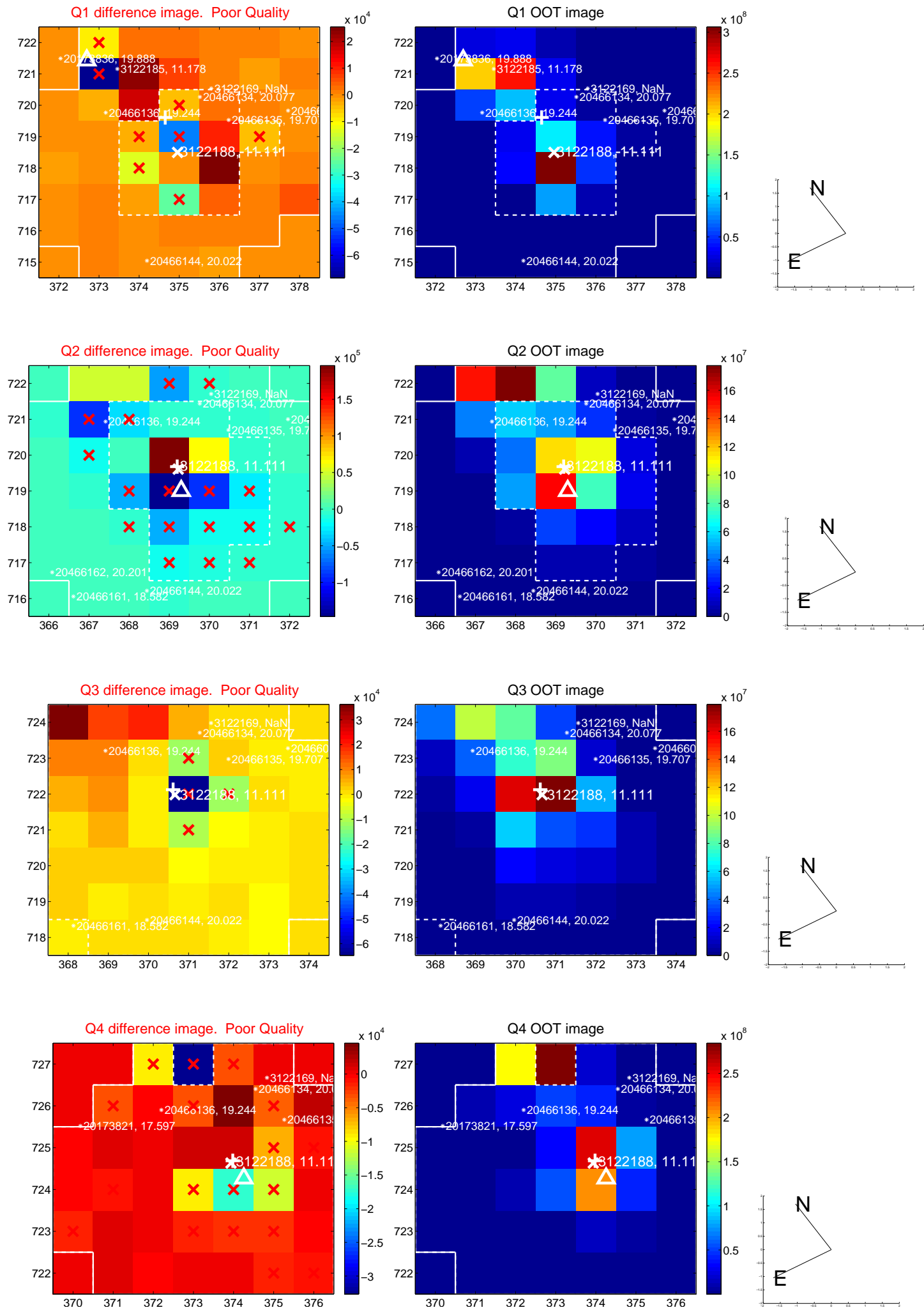
The OOT PRF centroid is offset from the target star catalog position by about 4.83 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.054 ± 1.326	0.79	0.390 ± 0.305	-0.979 ± 1.442
PRF-fit source offset from KIC position	0.661 ± 1.543	0.43	-0.001 ± 0.296	-0.661 ± 1.543
photometric centroid source offset	2.83 ± 0.78	3.61	-0.15 ± 0.17	2.83 ± 0.79

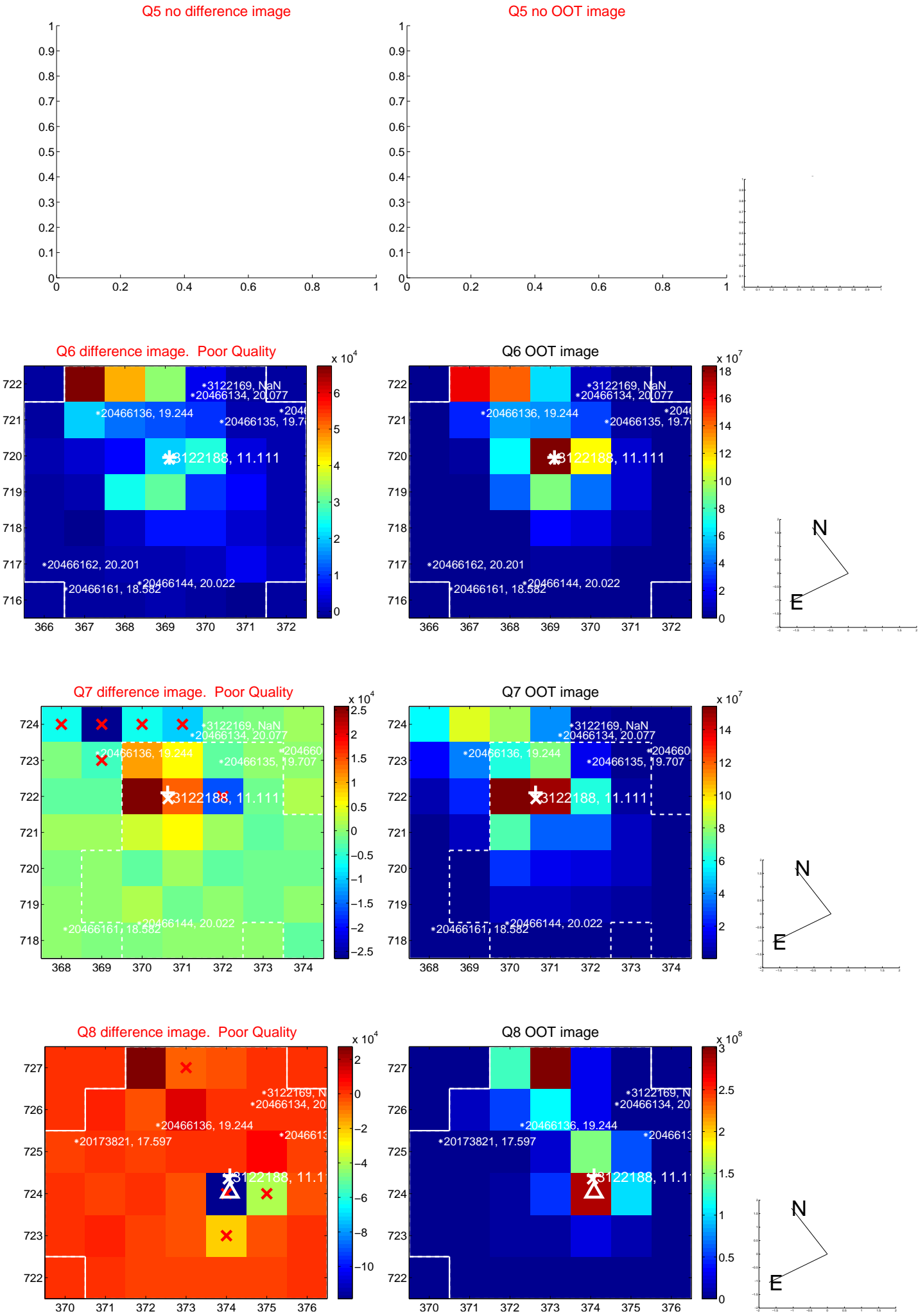


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

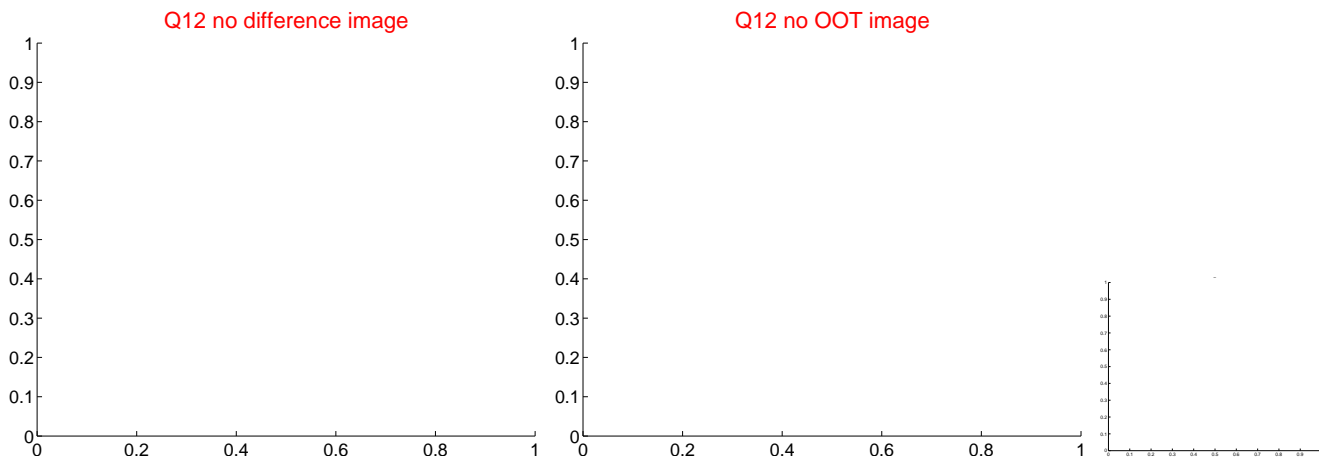
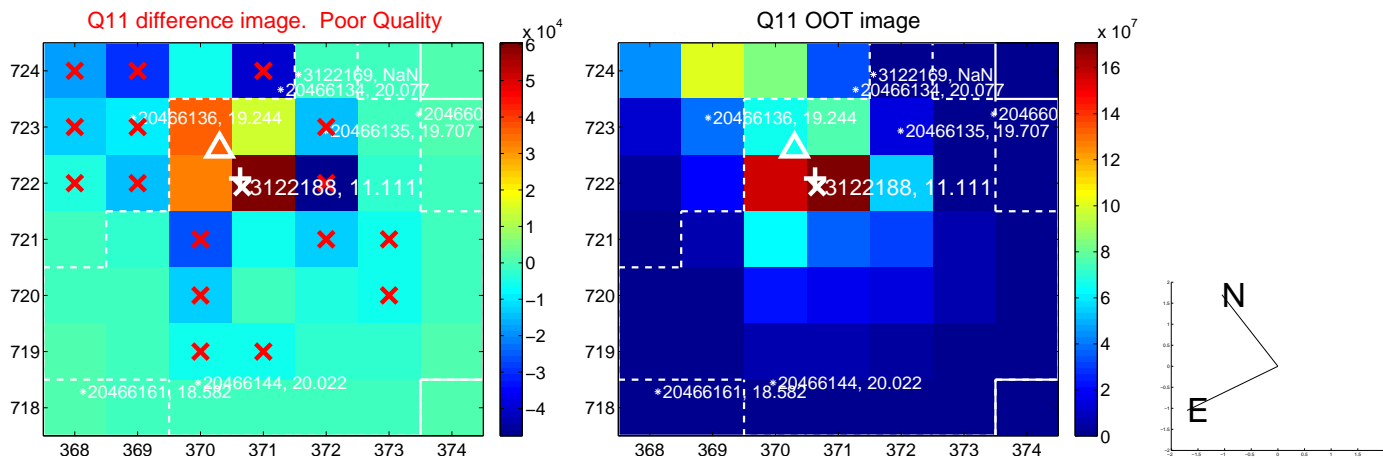
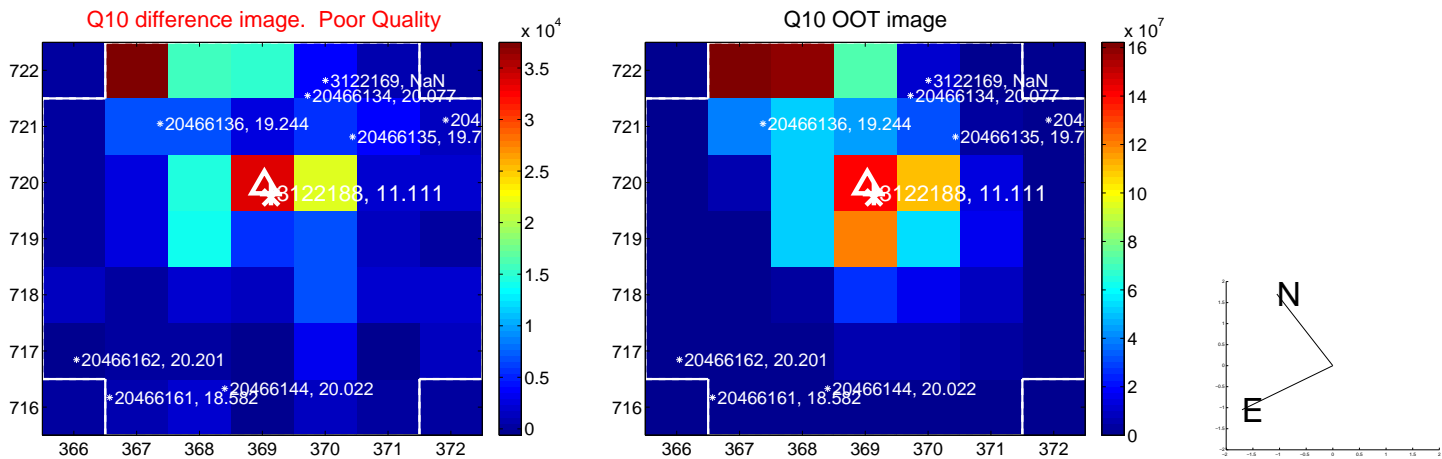
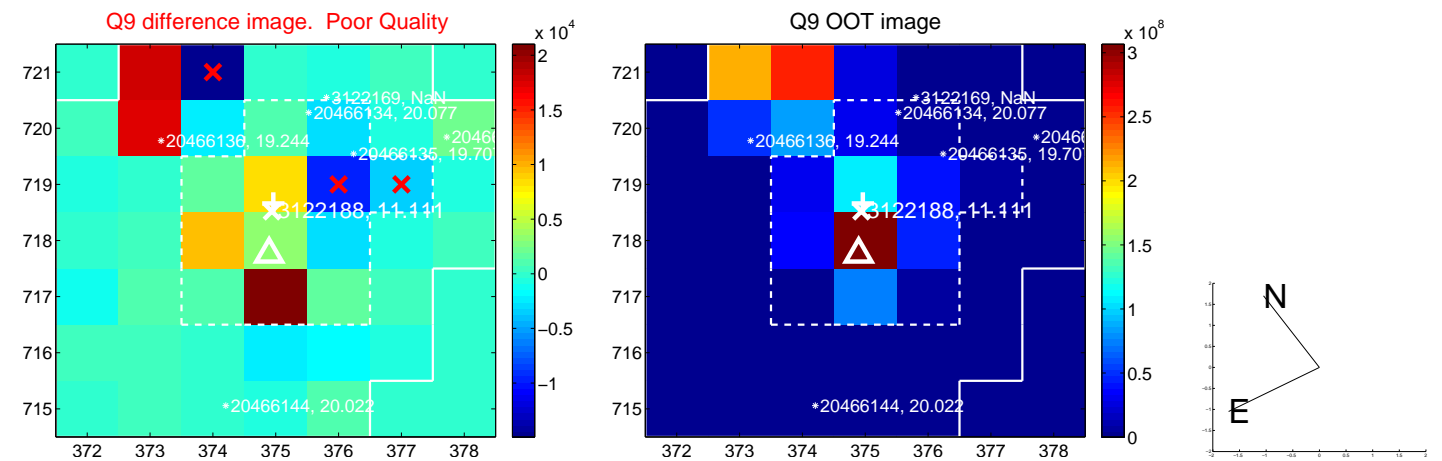
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



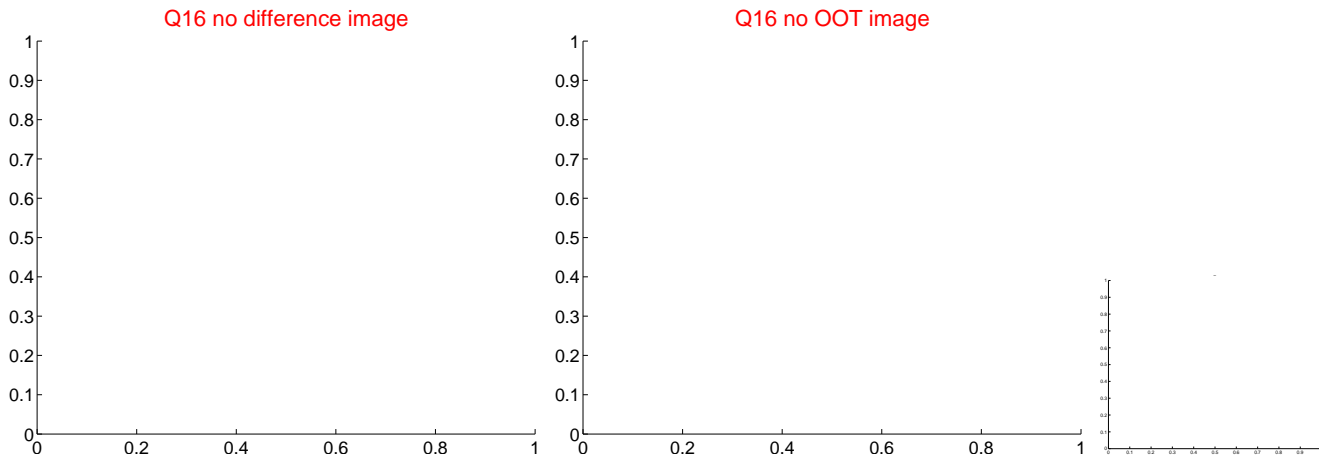
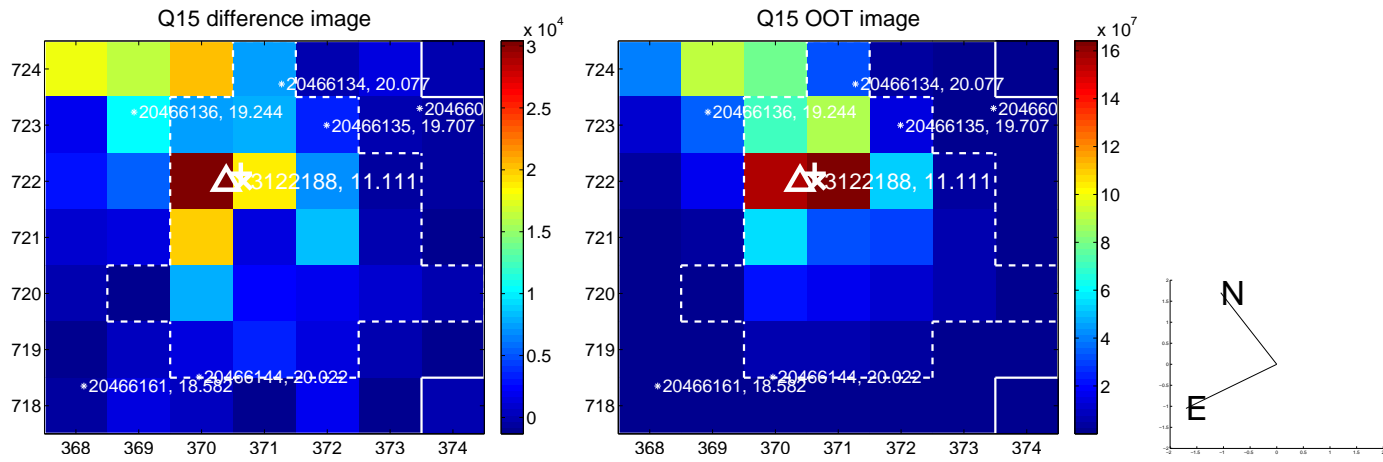
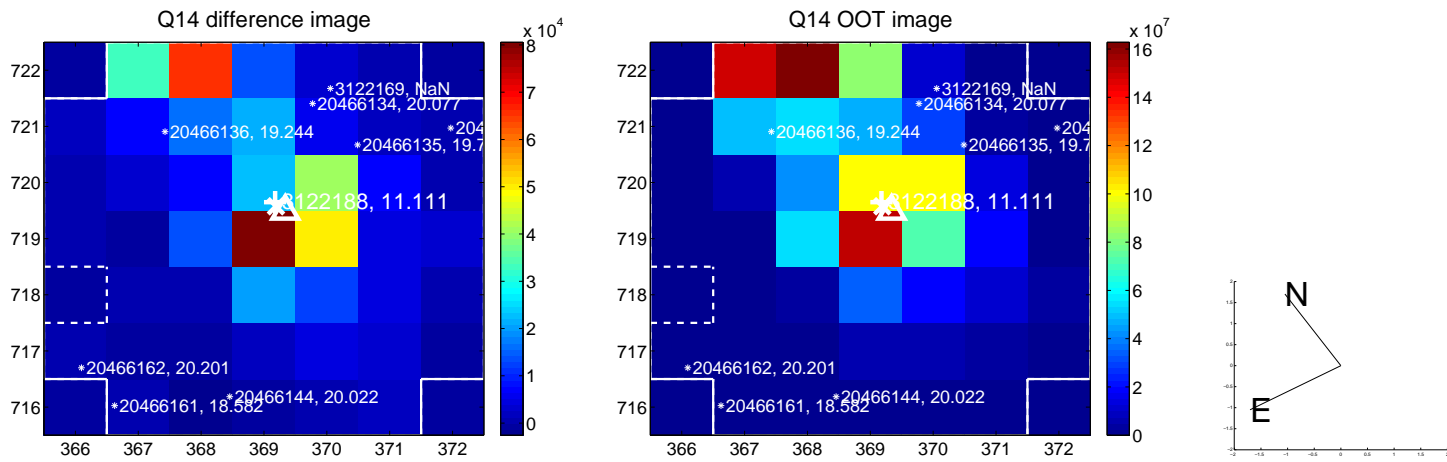
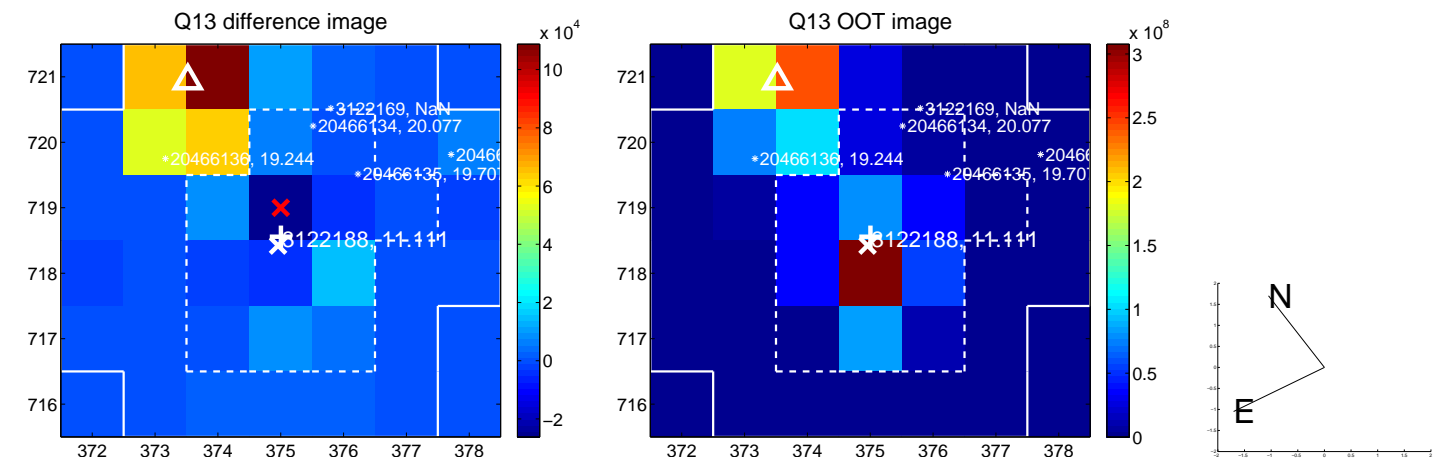
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



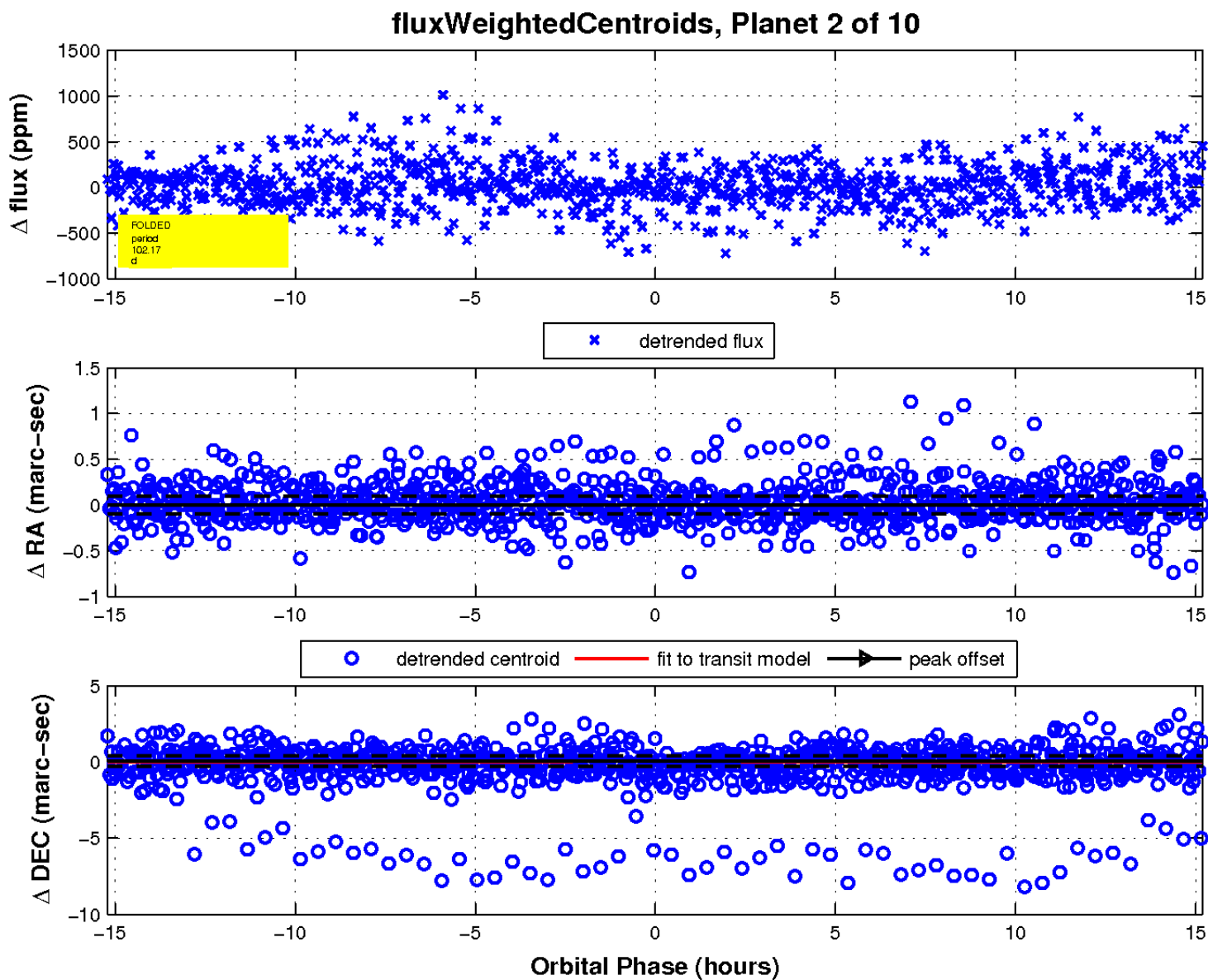
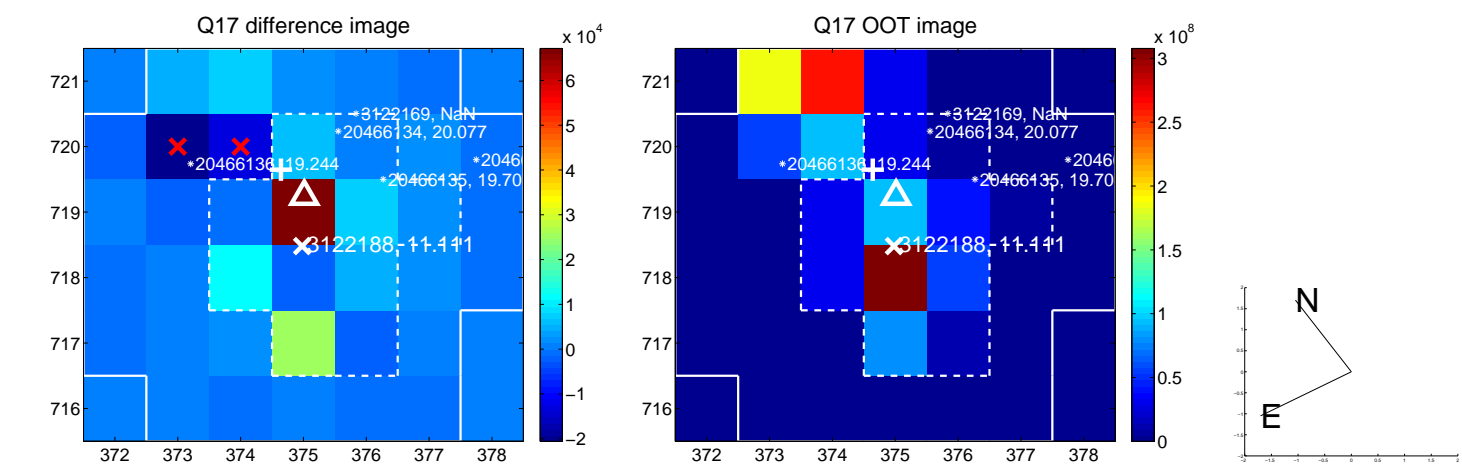
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



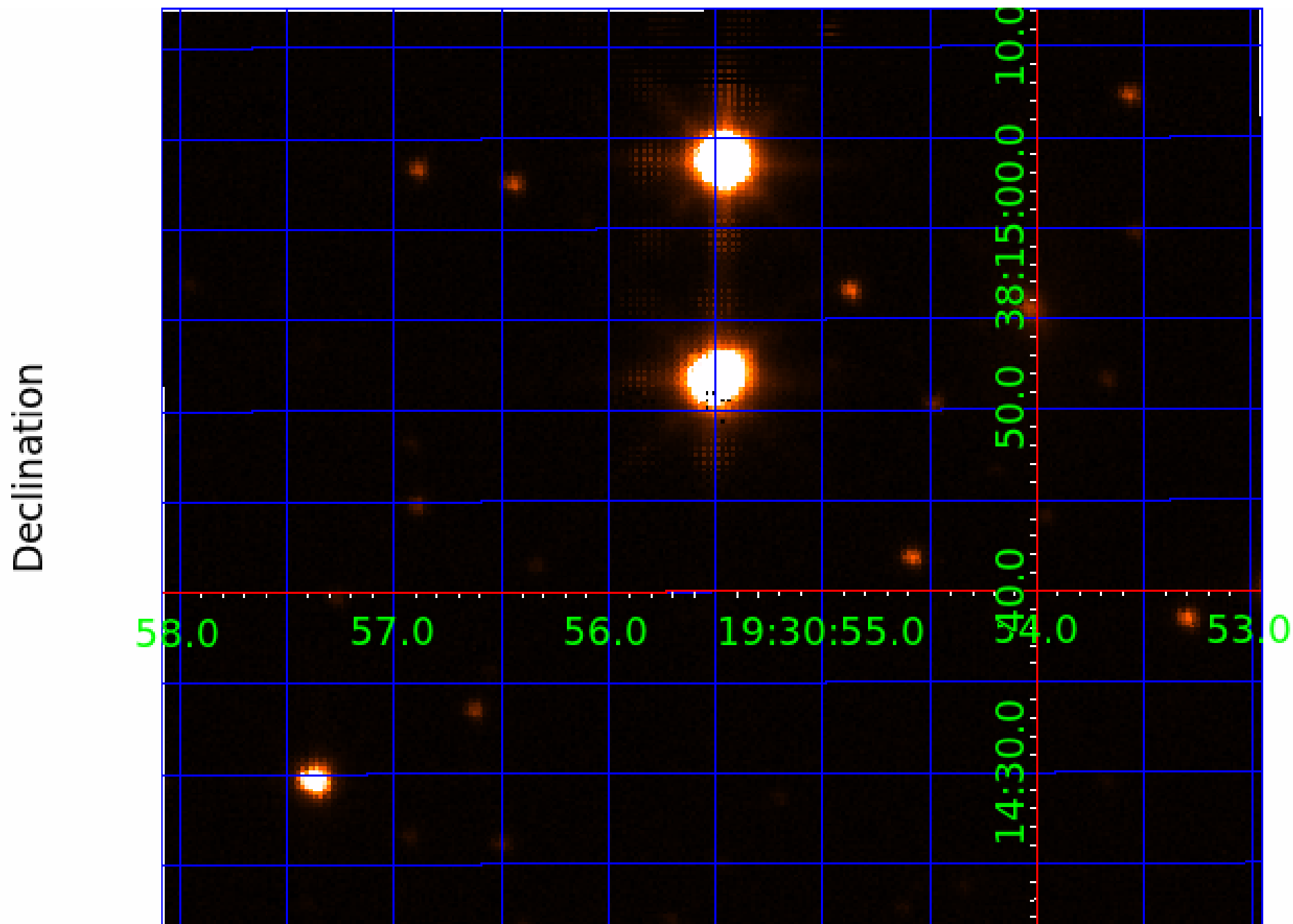
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

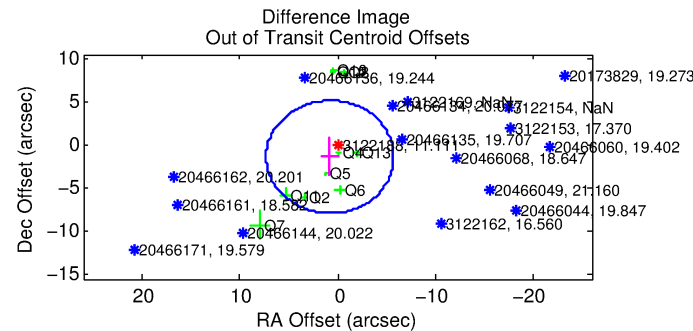
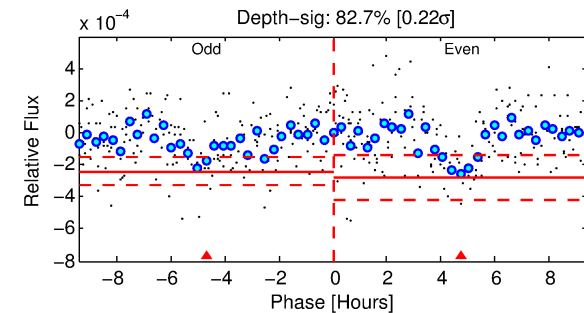
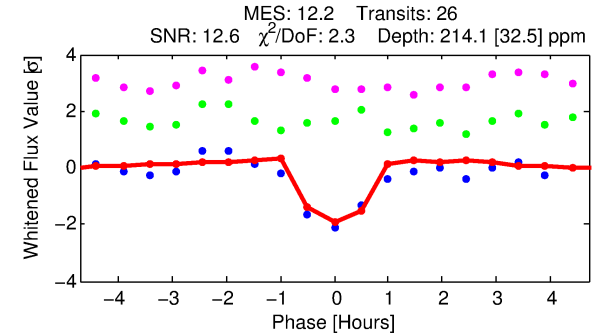
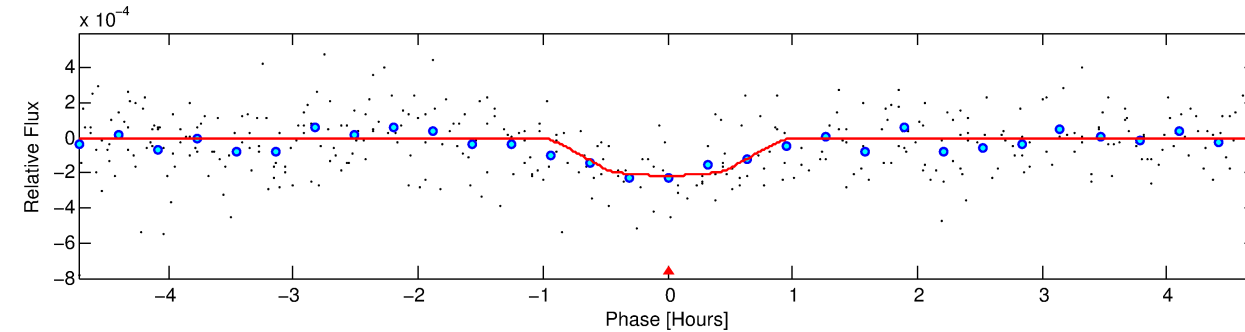
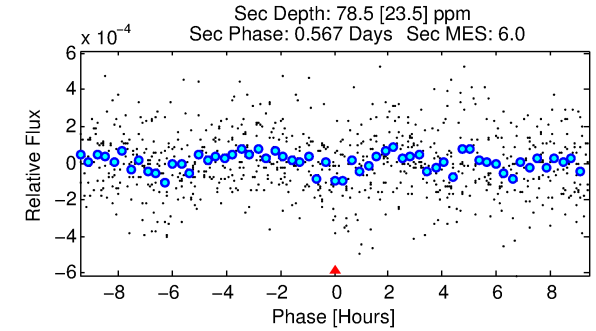
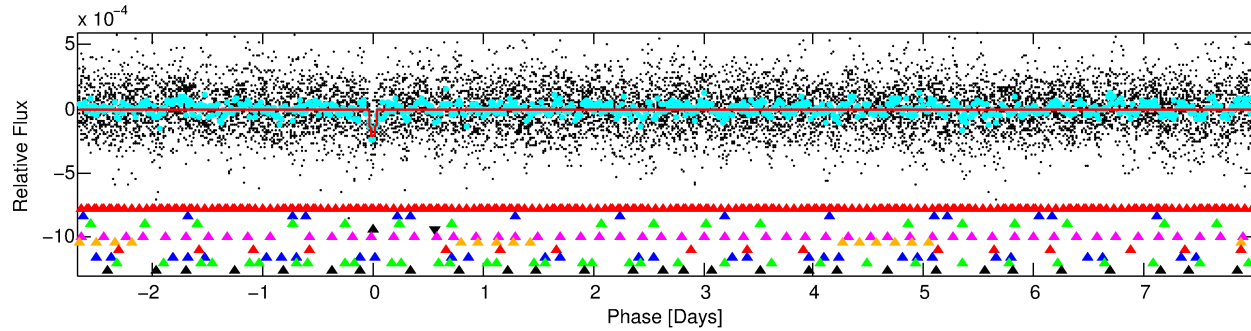
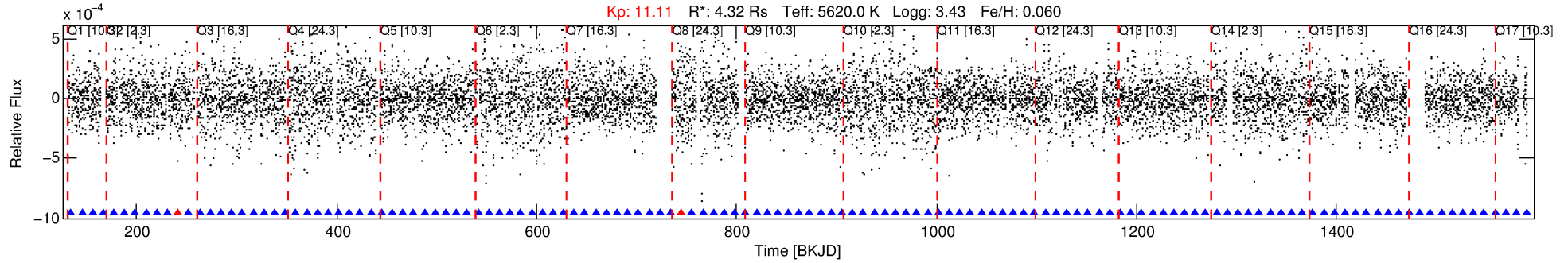
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-04

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 4 of 10 Period: 10.705 d



DV Fit Results:

Period = 10.70505 [0.00006] d
Epoch = 134.7137 [0.0041] BKJD
Rp/R* = 0.0160 [0.0135]
a/R* = 24.53 [94.31]
b = 0.90 [0.83]
Seff = 1231.33 [599.54]
Teff = 1510 [184] K
Rp = 7.55 [6.97] Re
a = 0.1163 [0.0376] AU
Ag = 10.23 [18.23] [0.51σ]
Teffp = 4177 [1792] K [1.48σ]

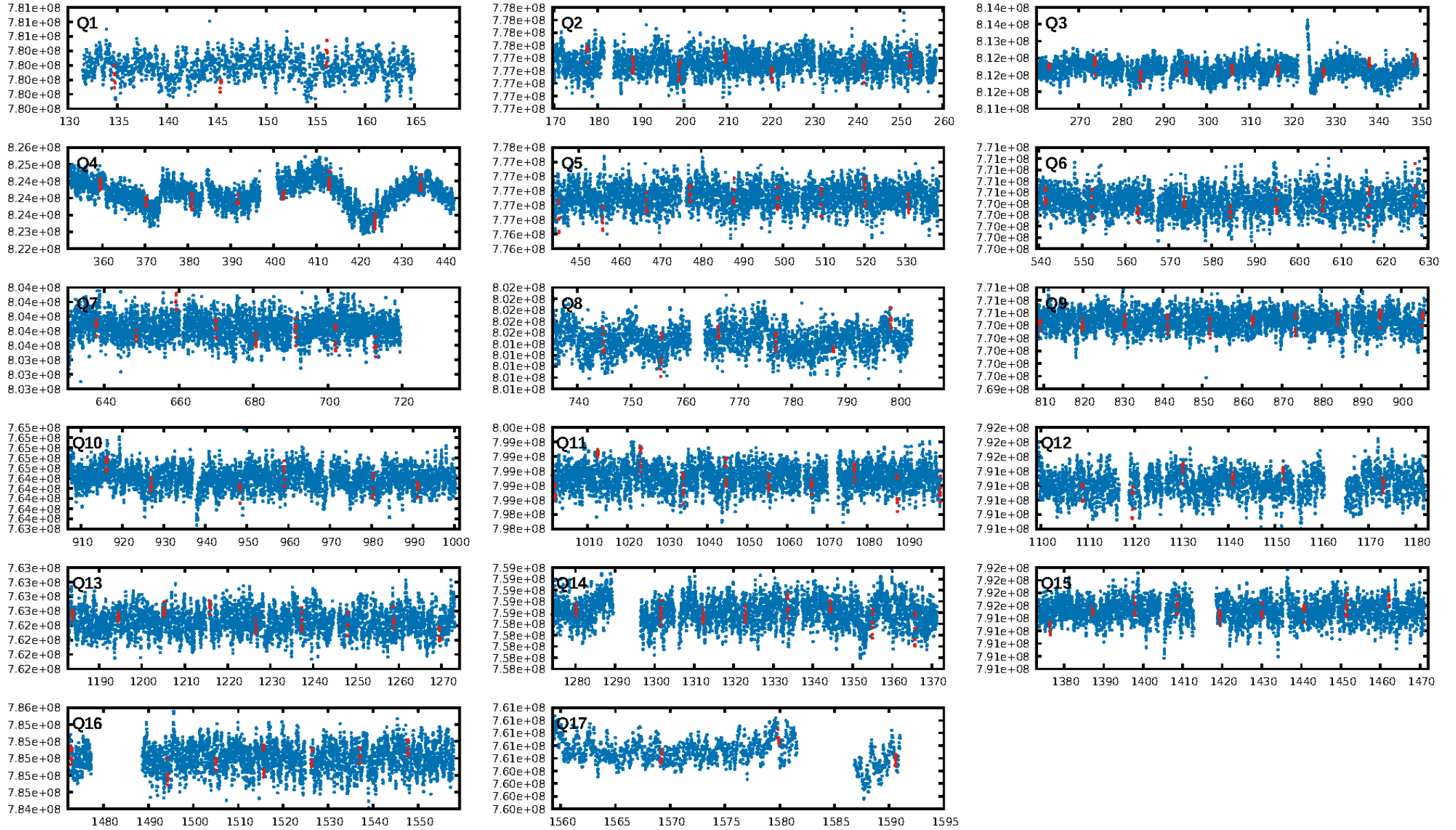
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.47σ]
LongPeriod-sig: 100.0% [167.89σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 28.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [24/26]
GhostDiagnostic-chr: 25.41
Centroid-sig: 77.0%
Centroid-so: 2.736 arcsec [4.53σ]
OotOffset-rm: 1.594 arcsec [0.73σ]
OotOffset-st: 2/2/4/2 [10]
KicOffset-rm: 1.143 arcsec [0.54σ]
KicOffset-st: 2/2/4/2 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.71 [12/17]

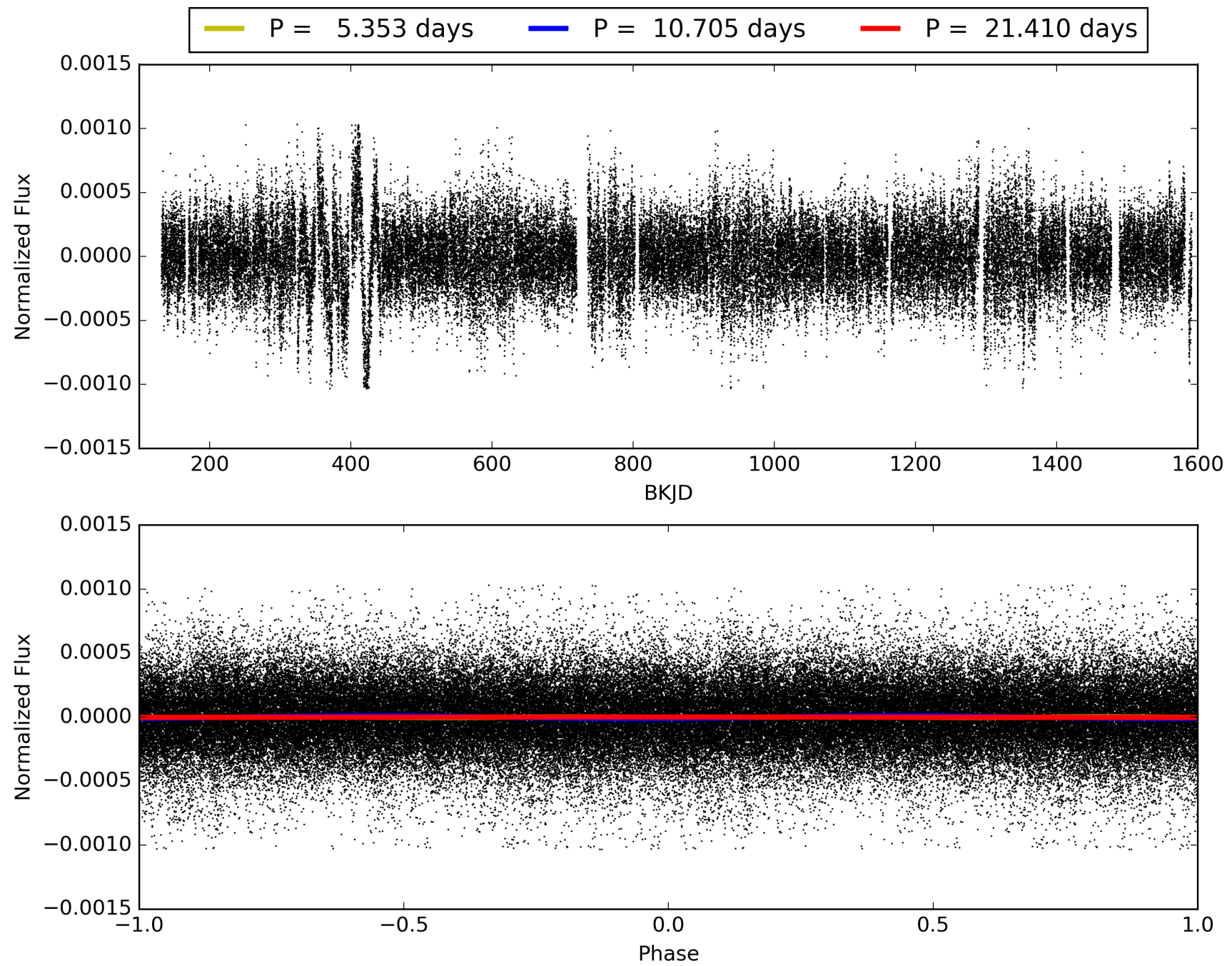
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:39 Z

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

TCE 003122188-04, PDC Light Curves

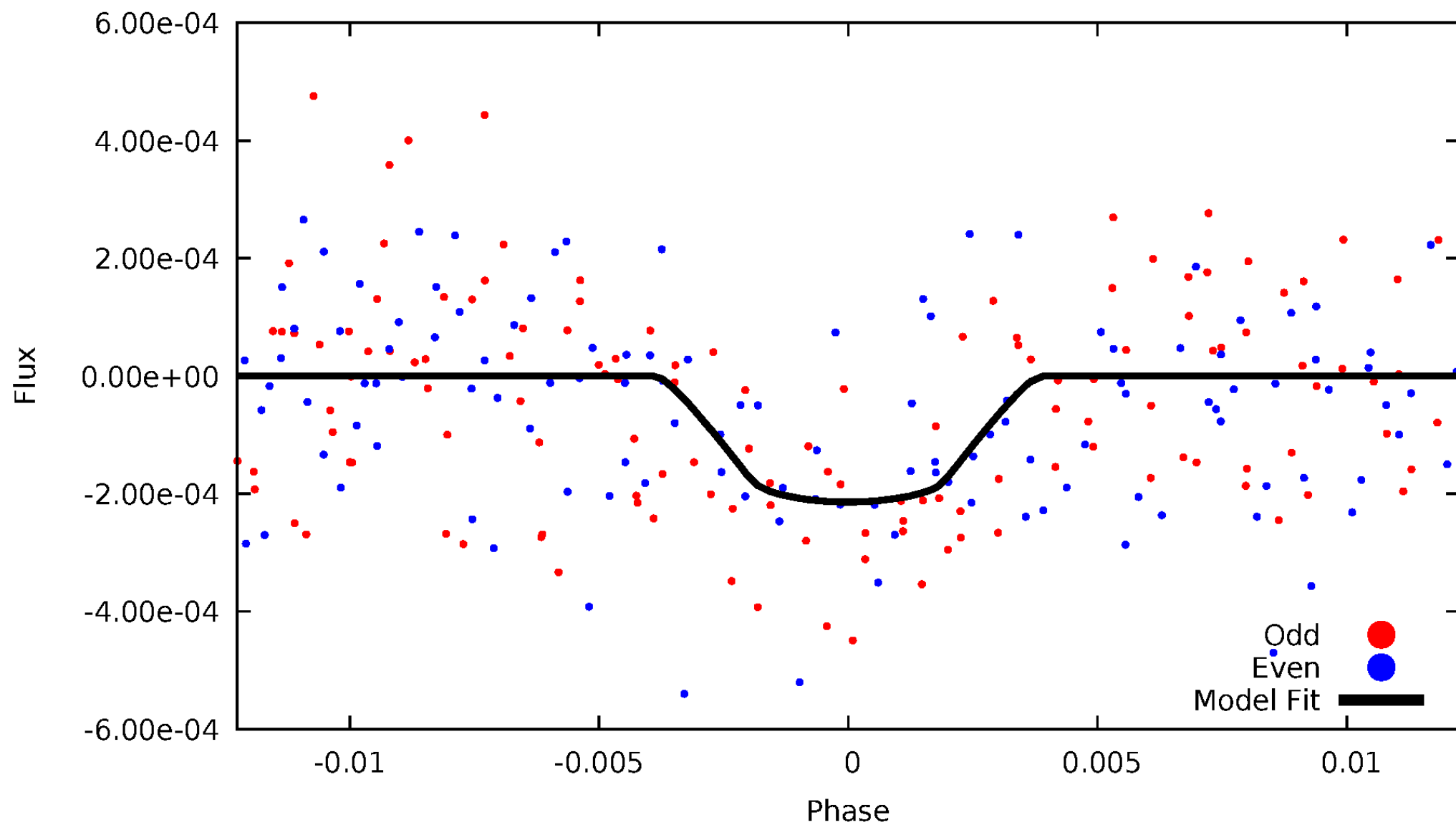


TCE 003122188-04



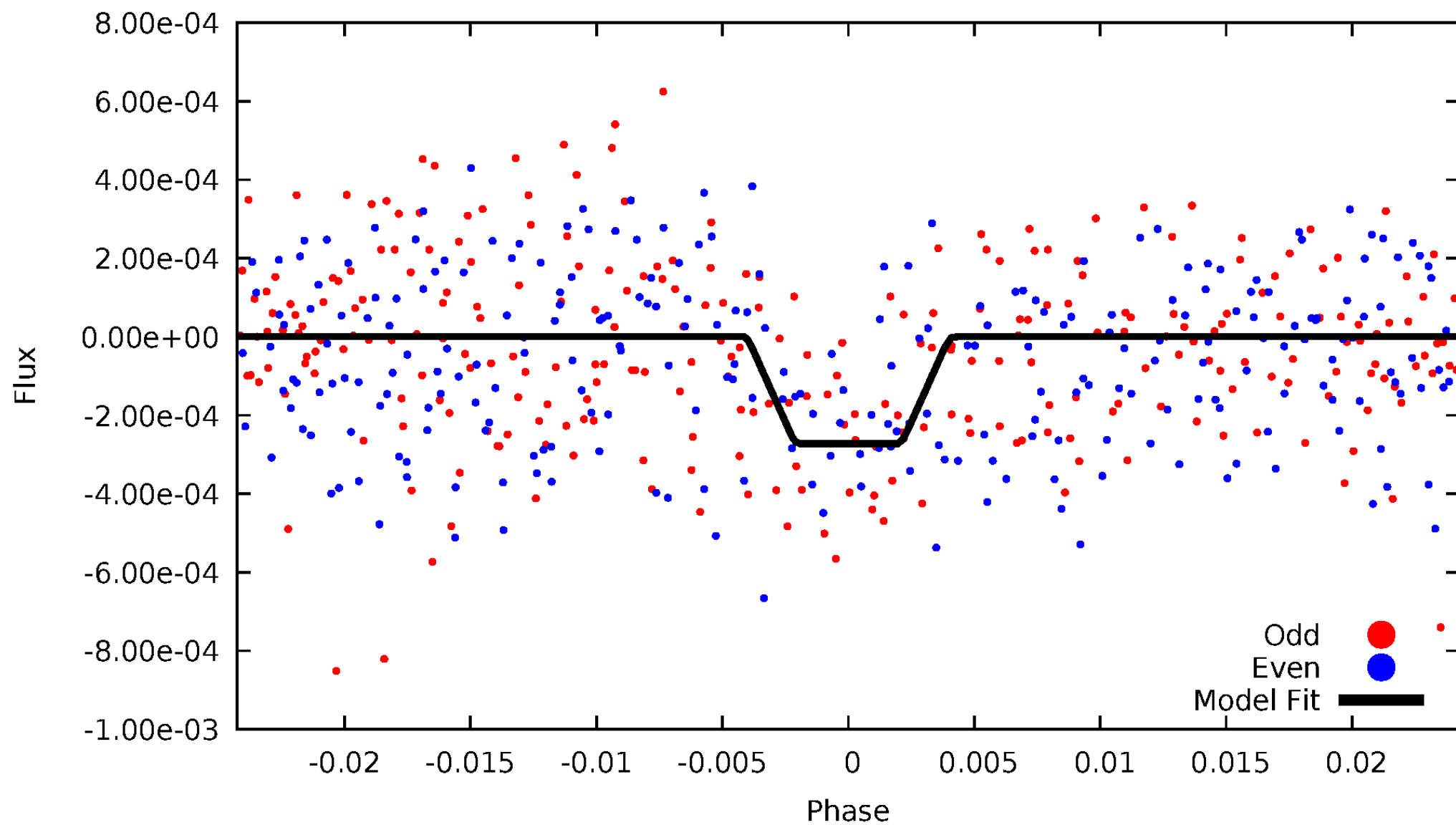
DV Odd/Even

TCE 003122188-04



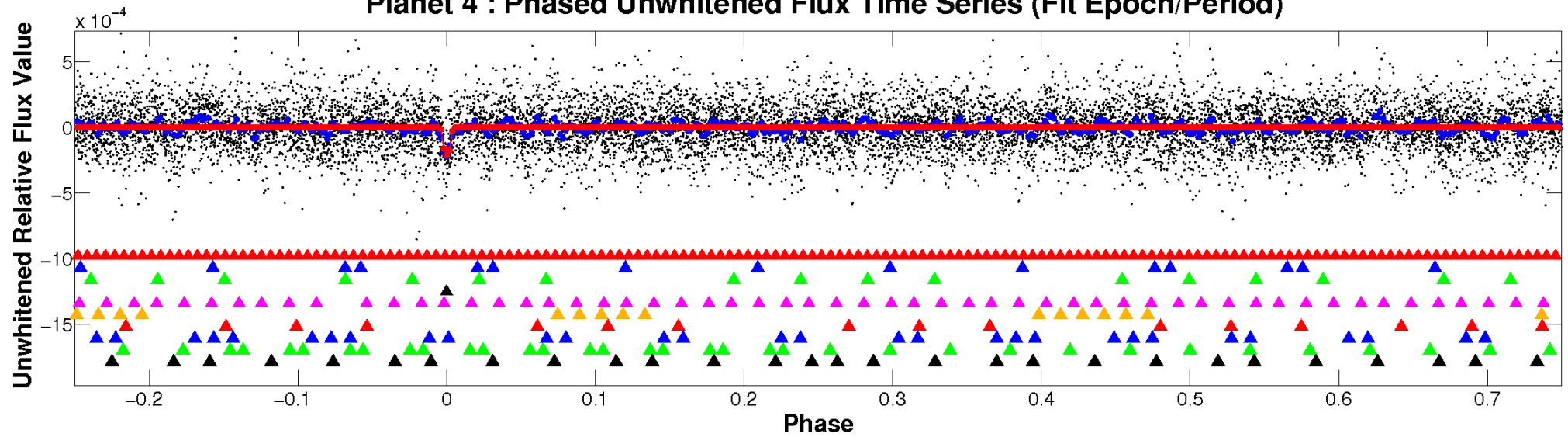
ALT Odd/Even

TCE 003122188-04

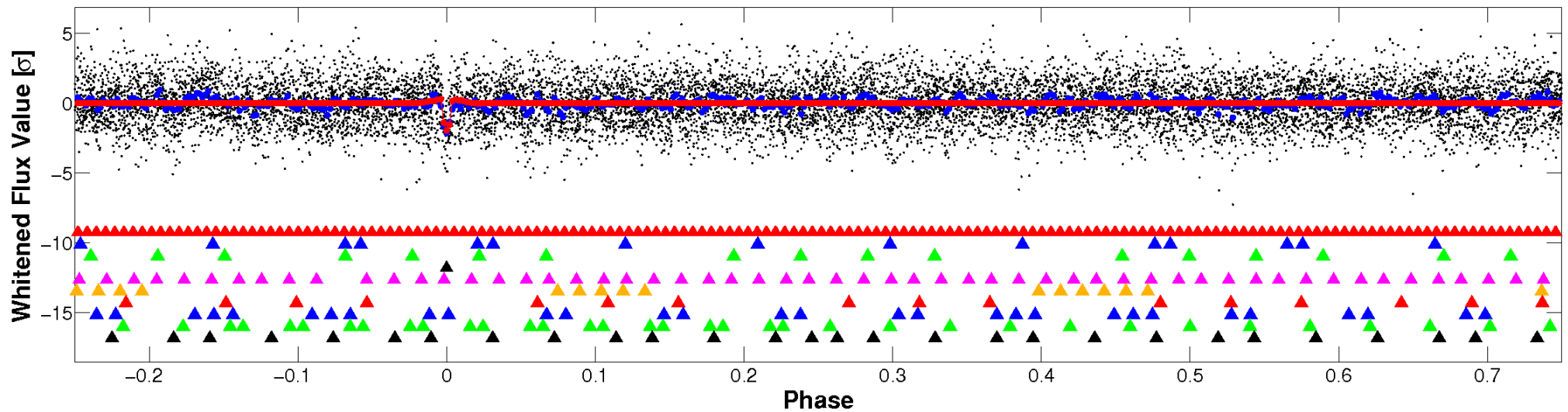


Non-Whitened Vs. Whitened Light Curve

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

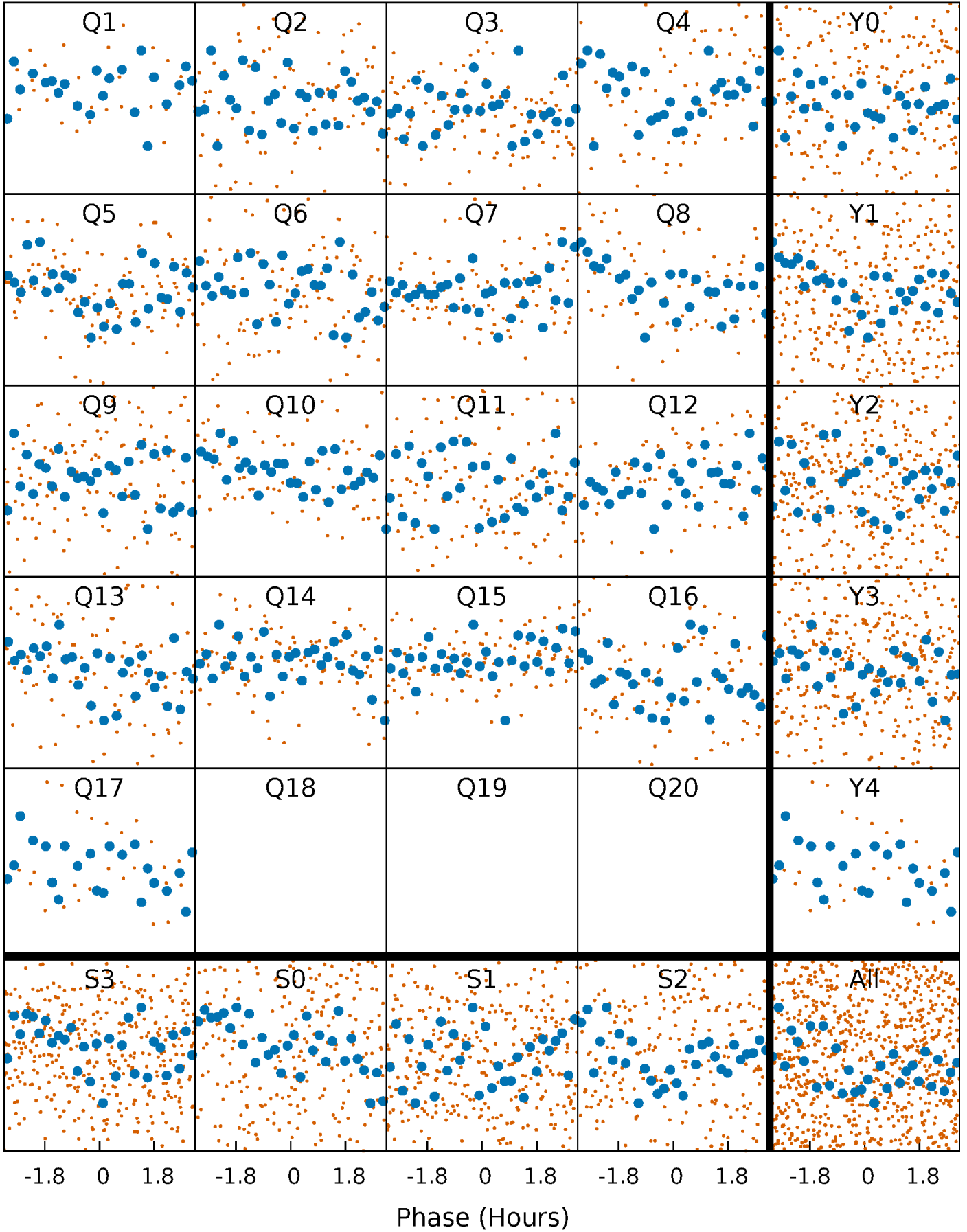


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



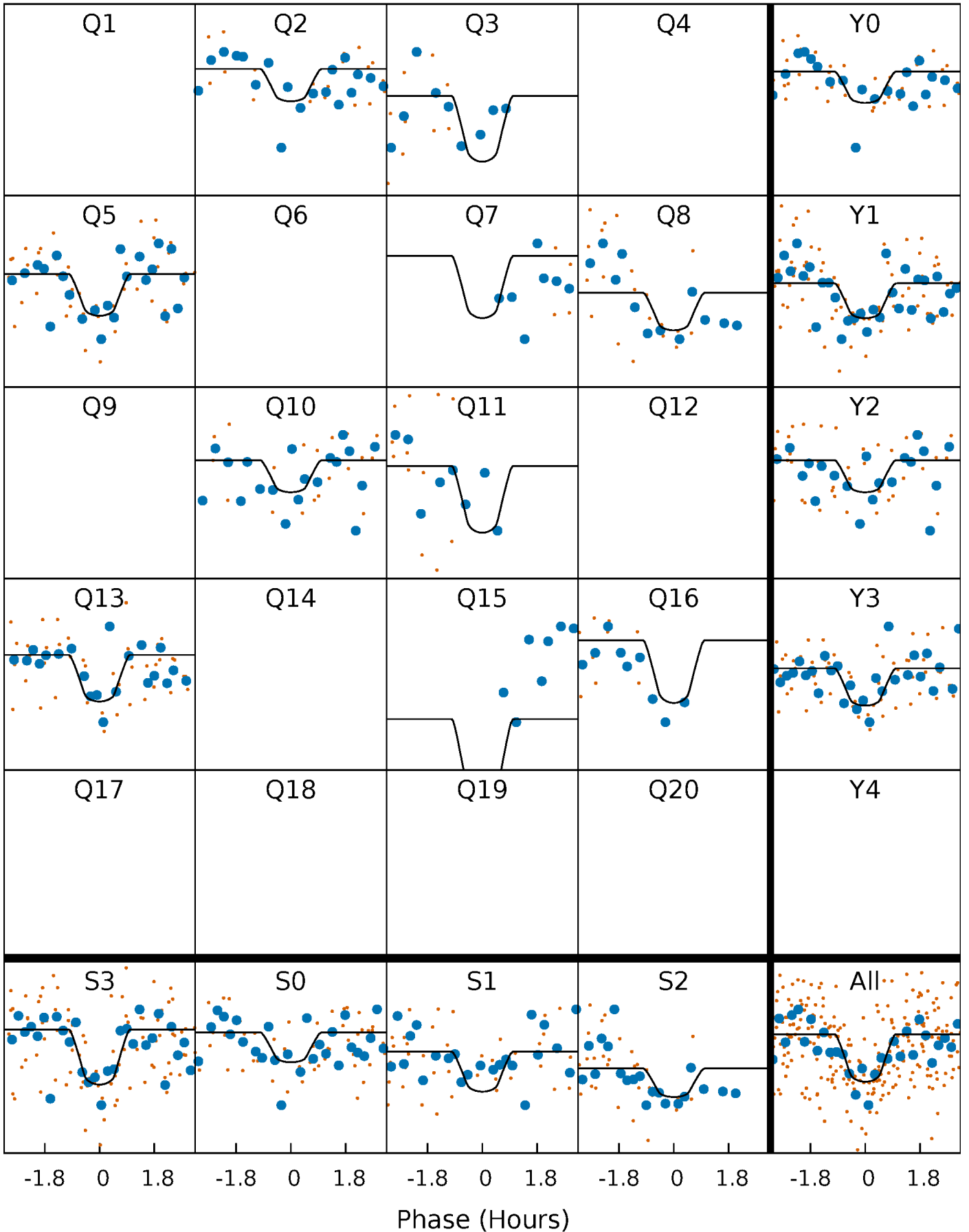
PDC Quarter-Phased Transit Curves

TCE 003122188-04 P= 10.705050 Days $T_0=134.713670$ (BKJD)



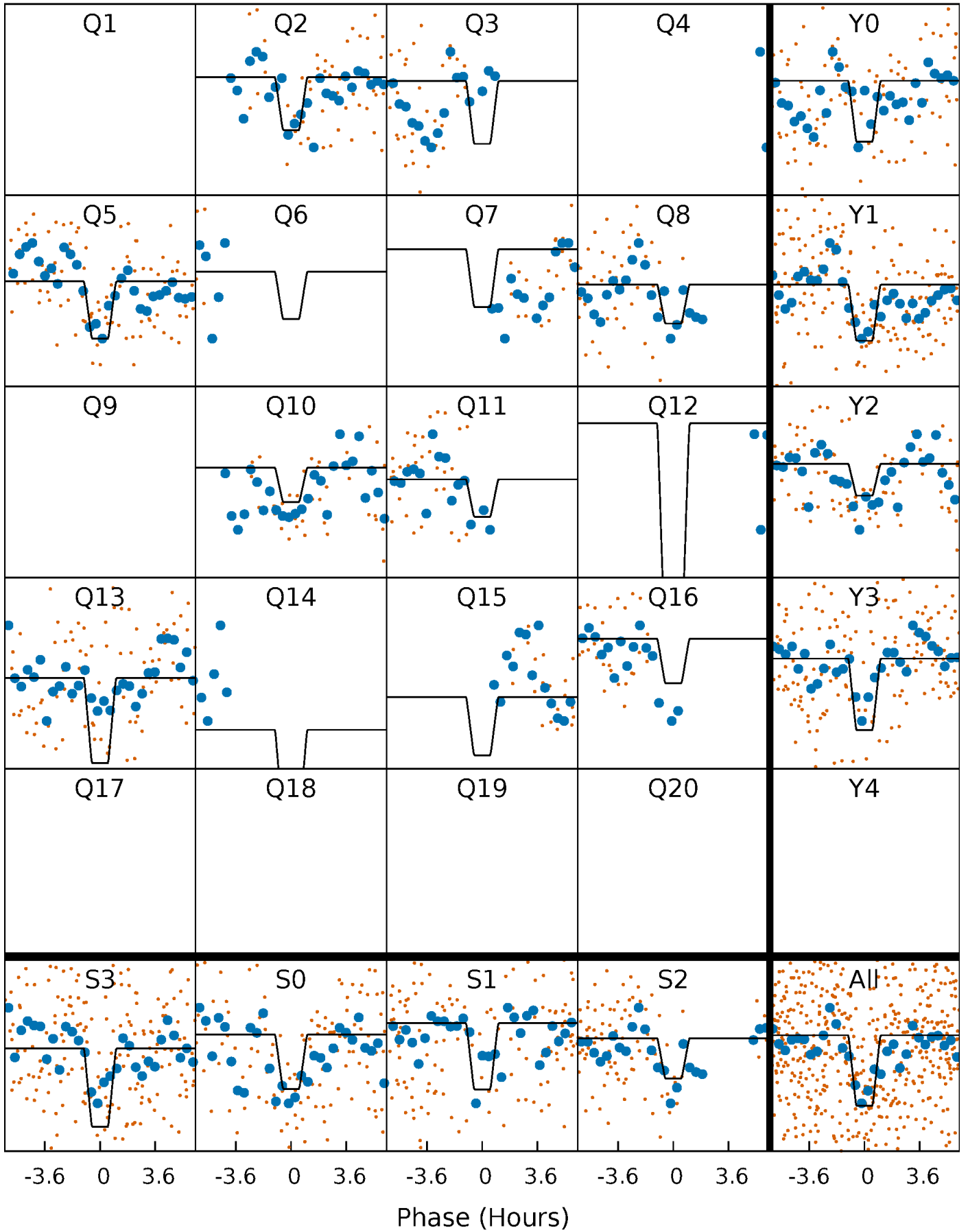
DV Quarter-Phased Transit Curves

TCE 003122188-04 P= 10.705050 Days $T_0=134.713670$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

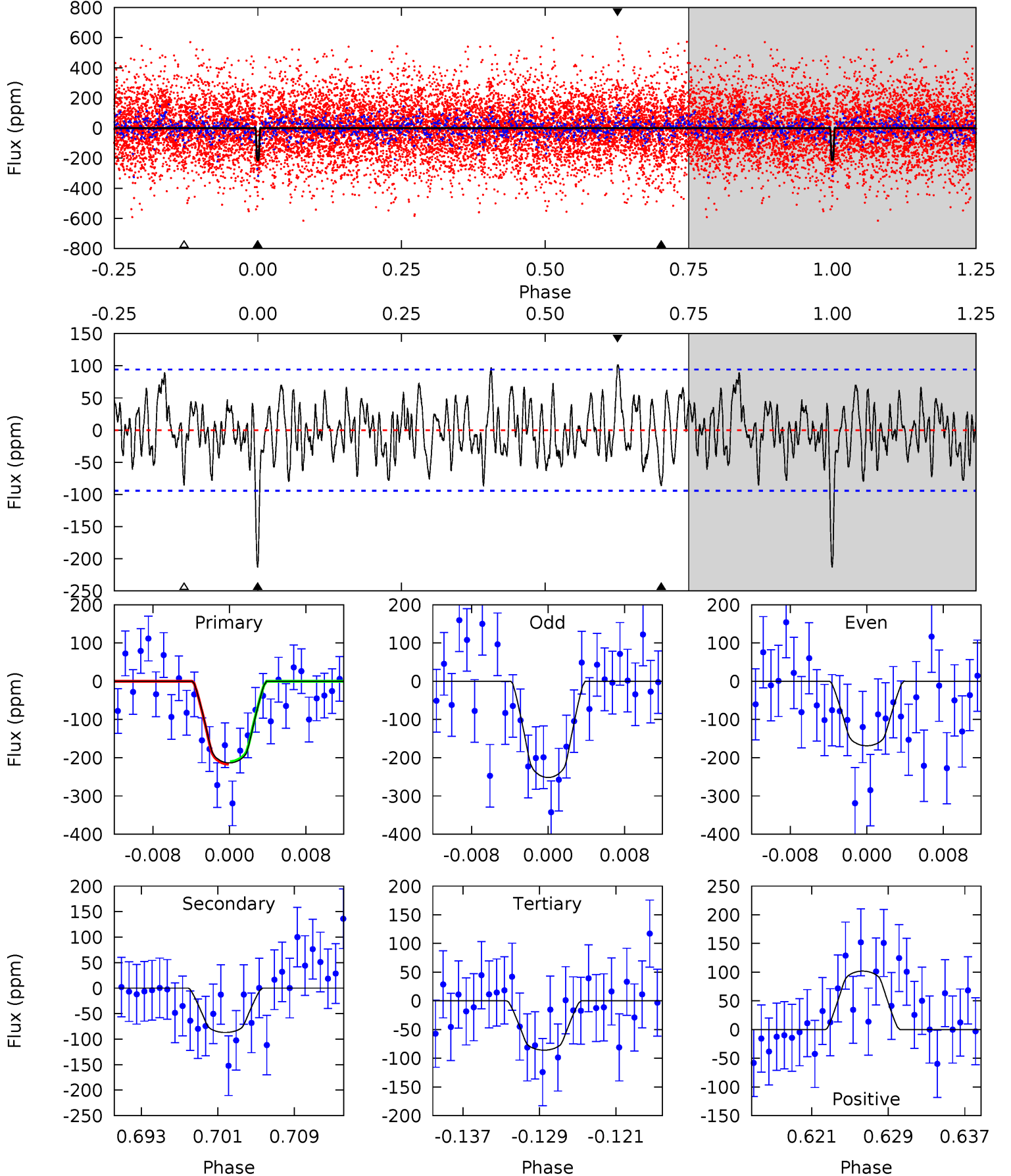
TCE 003122188-04 P= 10.705058 Days $T_0=134.713808$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-04, $P = 10.705050$ Days, $E = 124.008620$ Days

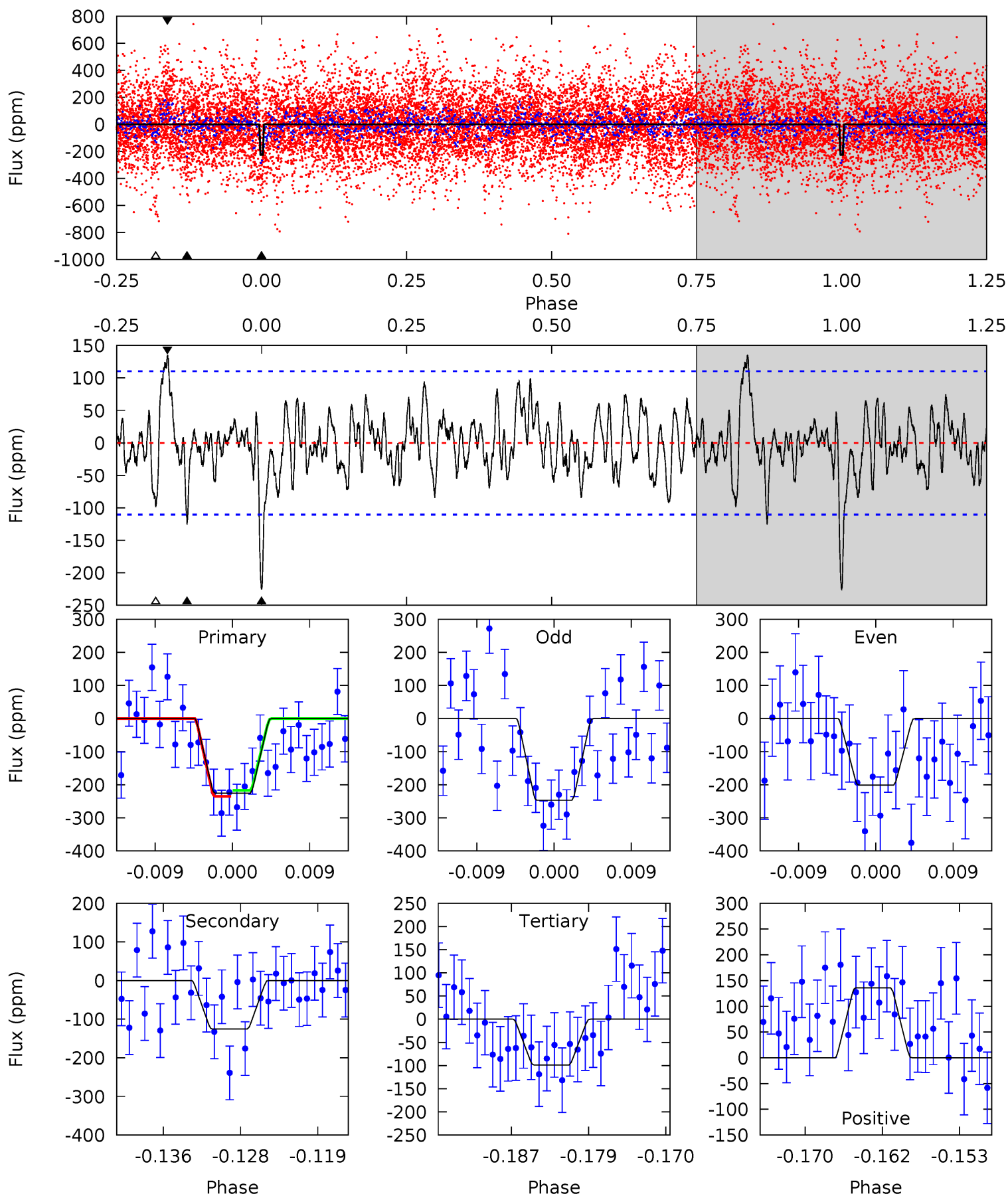
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	4.68	4.62	5.48	5.07	2.65	1.88	6.86	6.00	0.06	-0.80	2.24	1.00	0.32	0.19



Alt Model-Shift Uniqueness Test

003122188-04, P = 10.705058 Days, E = 124.008750 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	5.75	4.52	6.22	5.06	2.63	1.82	5.82	4.12	1.23	-0.47	1.06	0.82	0.38	0.42



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-87 ± 19	$7.91^{+5.91}_{-4.66}$	2088^{+94}_{-179}	4237^{+1846}_{-778}	10^{+47}_{-7}
Alt.	-125 ± 22	$8.11^{+6.05}_{-4.64}$	2096^{+93}_{-180}	4500^{+2176}_{-822}	13^{+56}_{-9}

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 $A_{obs} \gg 1.0$

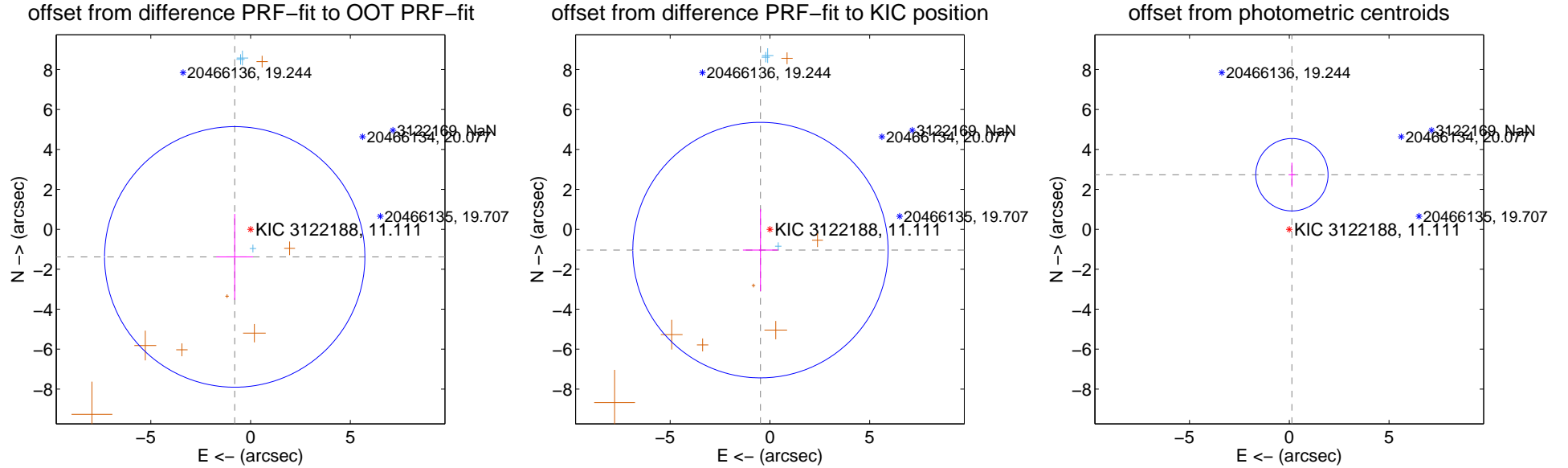
DV Centroid Data

Supplemental centroid analysis for 003122188-04. **Kepler magnitude: 11.11.** Transit SNR 12.60

There are 3 quarters with good PRF difference image offsets

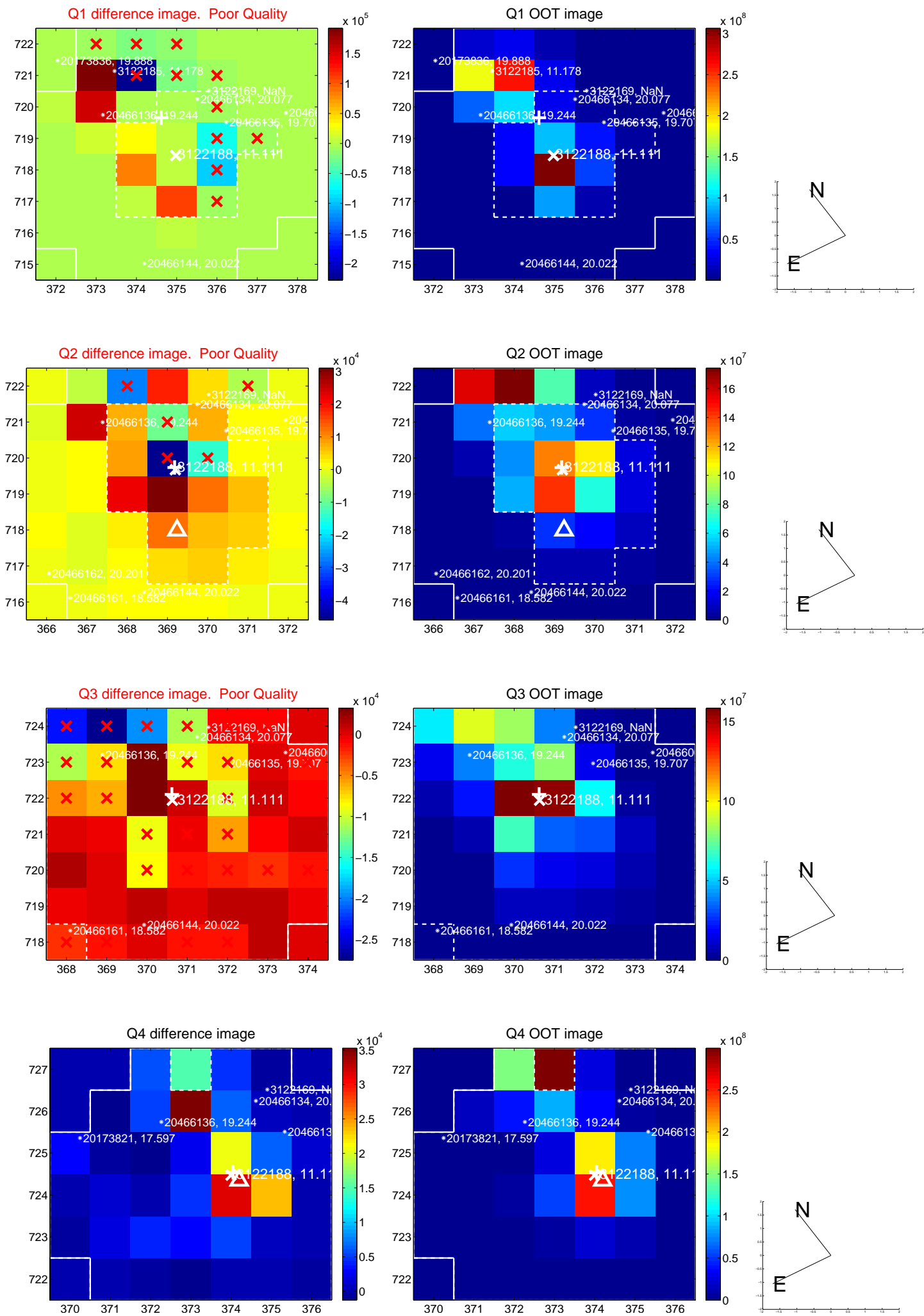
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.594 ± 2.174	0.73	0.794 ± 0.921	-1.382 ± 2.147
PRF-fit source offset from KIC position	1.143 ± 2.132	0.54	0.474 ± 0.879	-1.040 ± 2.063
photometric centroid source offset	2.74 ± 0.60	4.53	-0.13 ± 0.17	2.73 ± 0.60

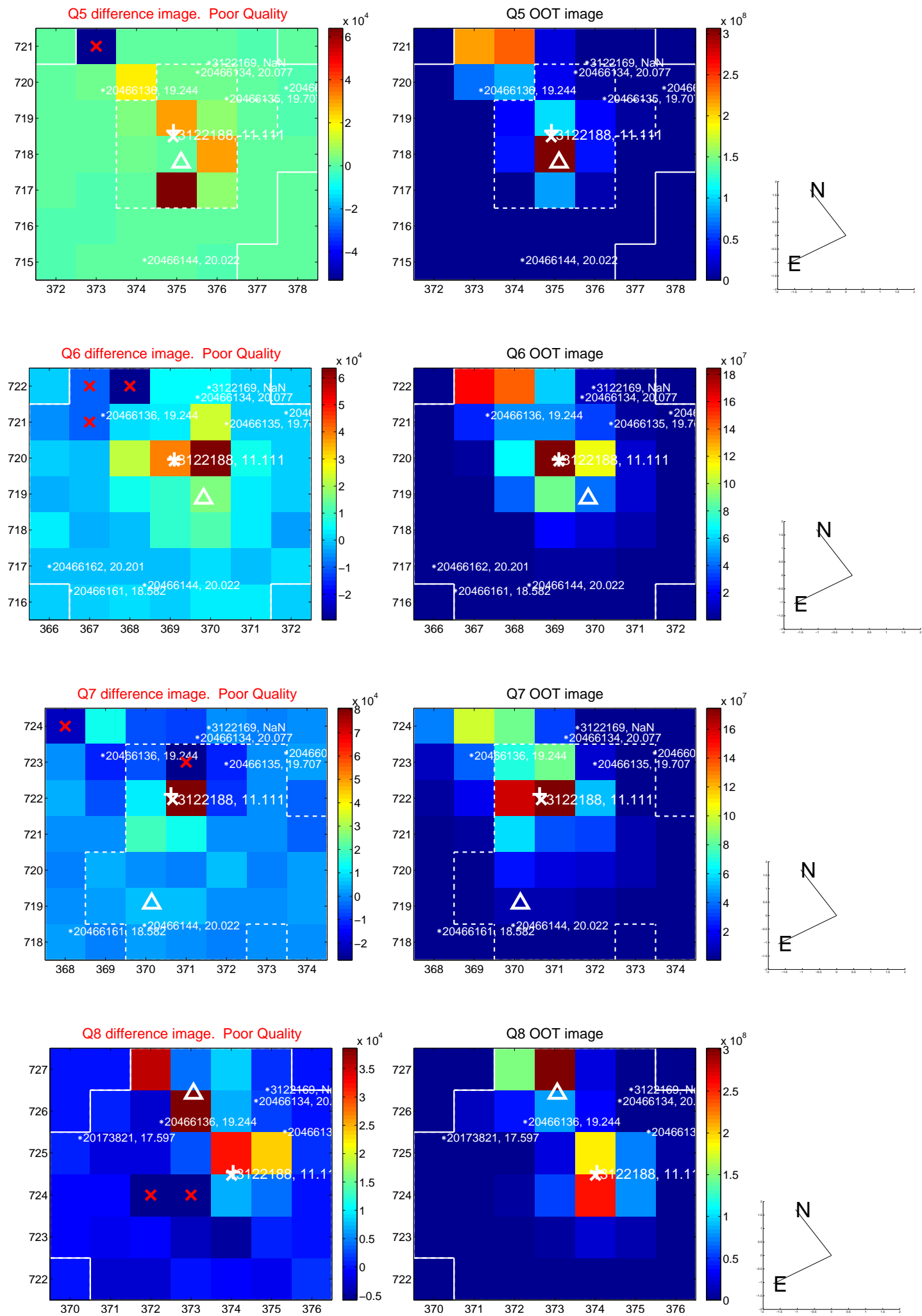


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

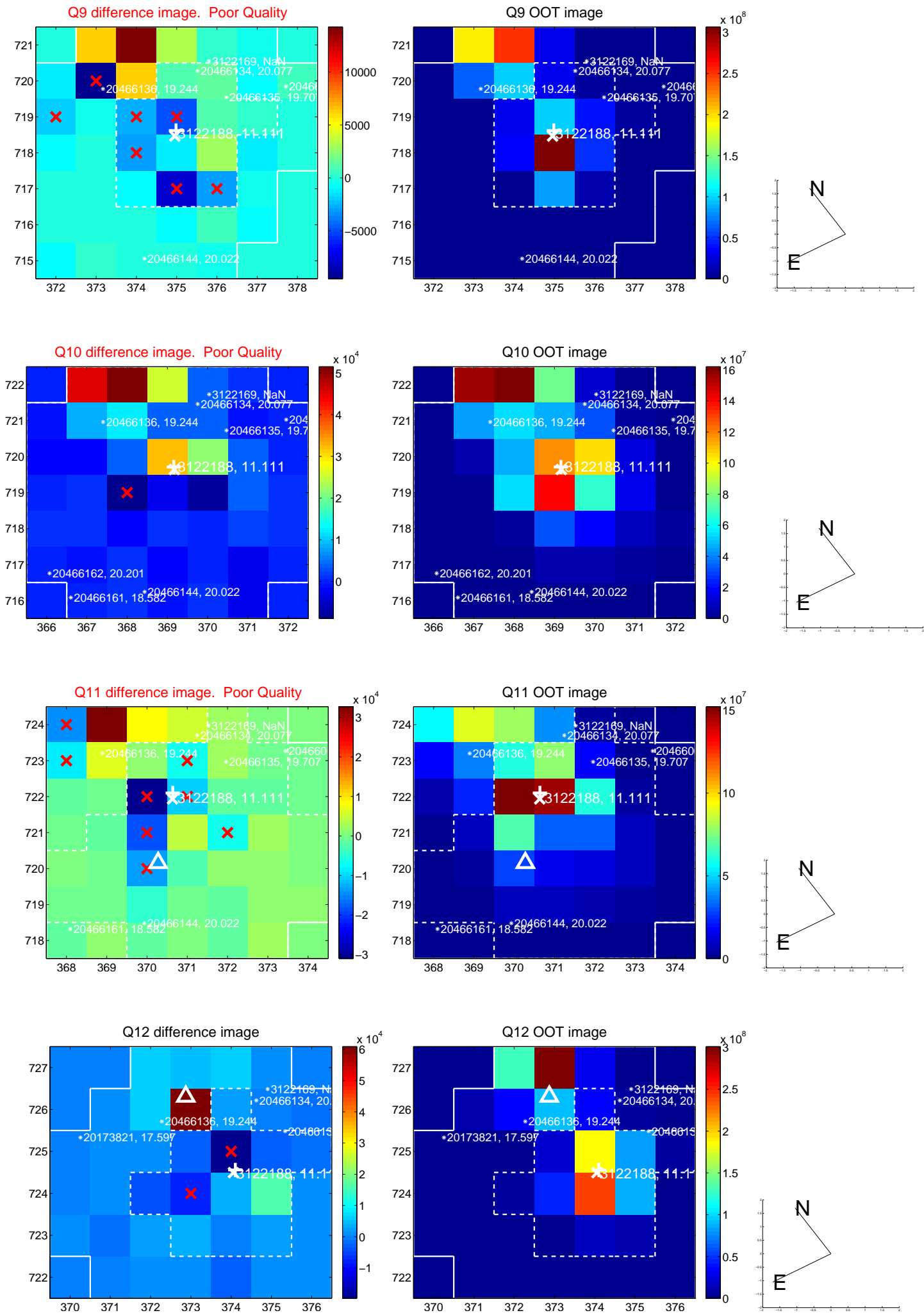
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



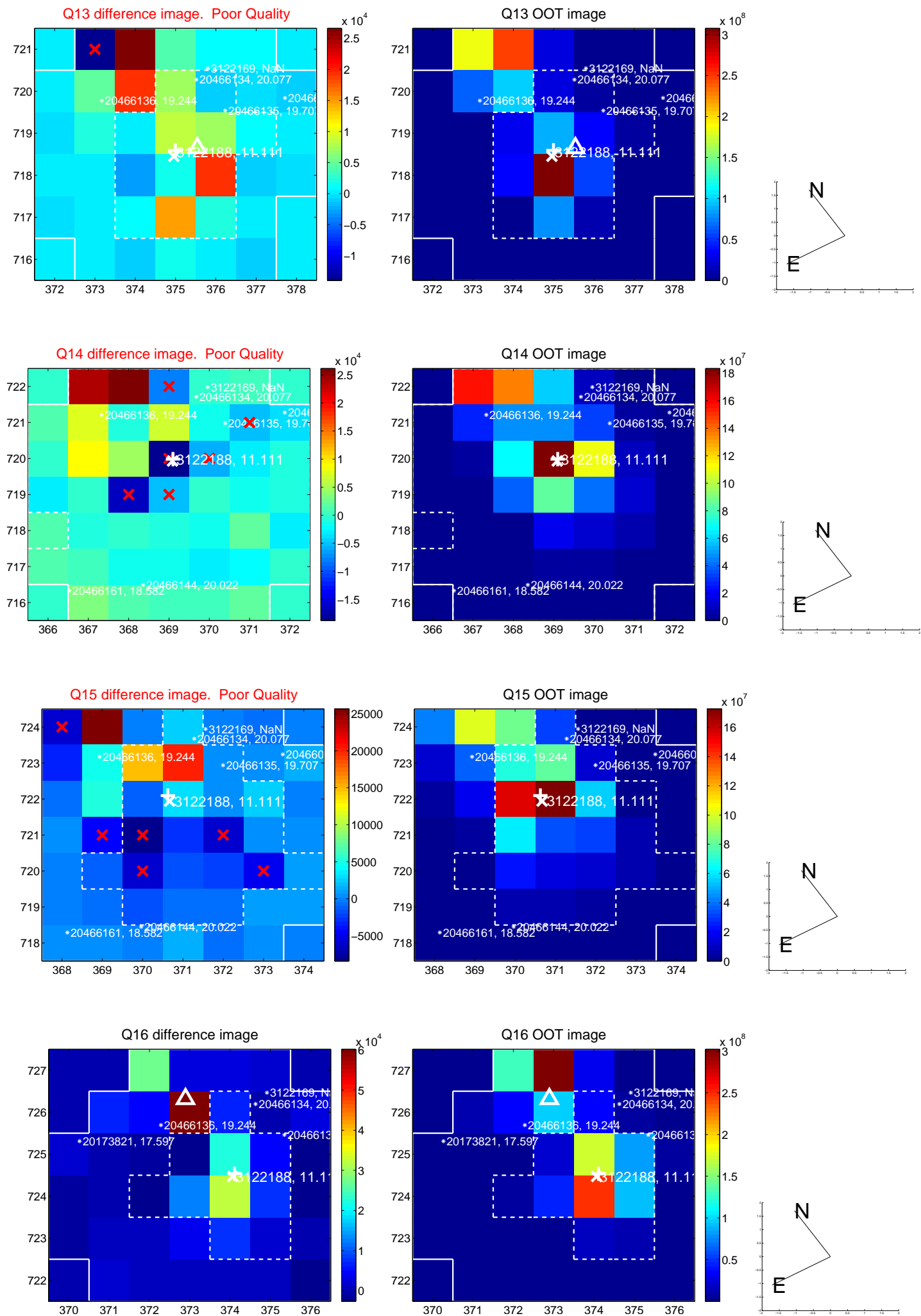
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



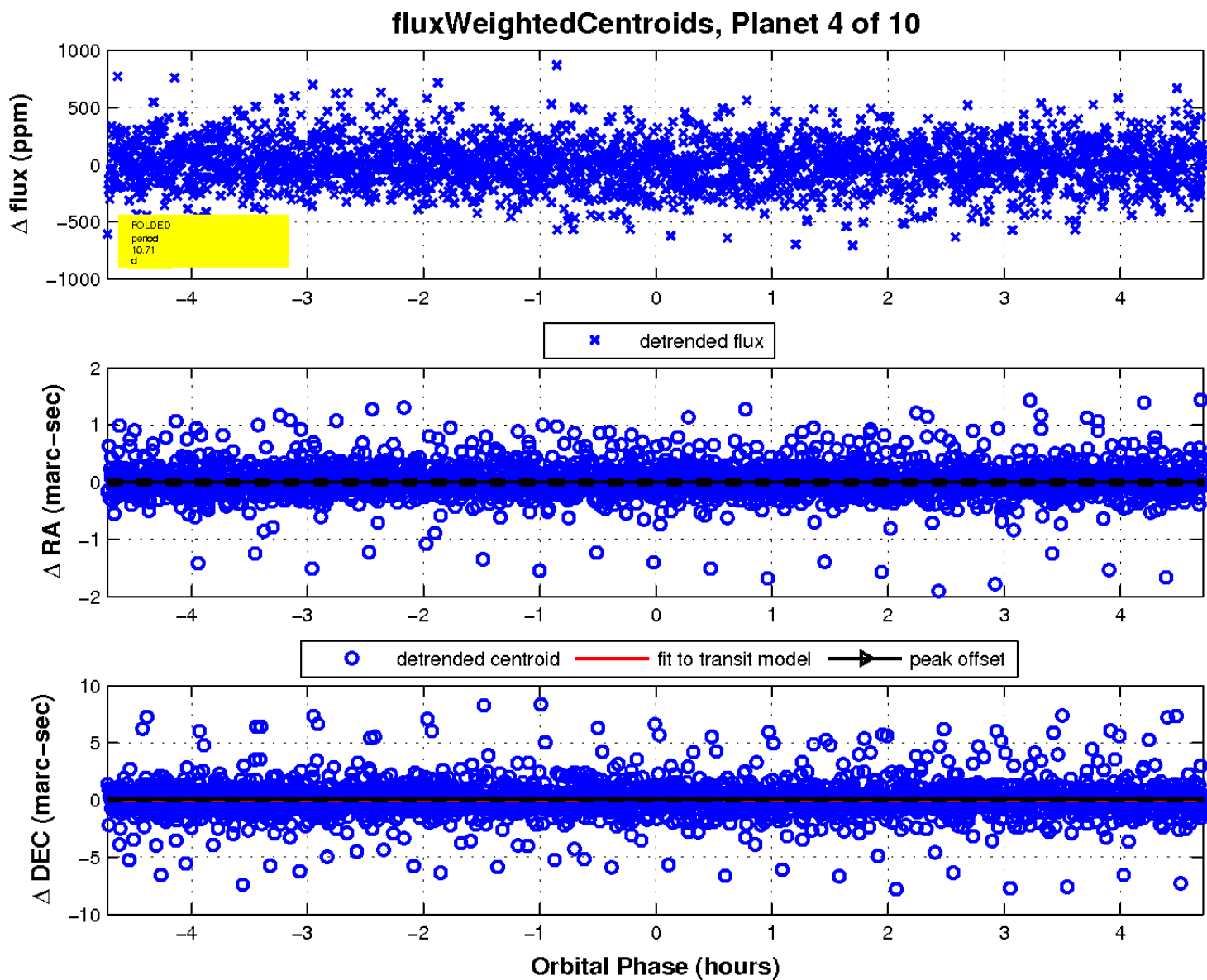
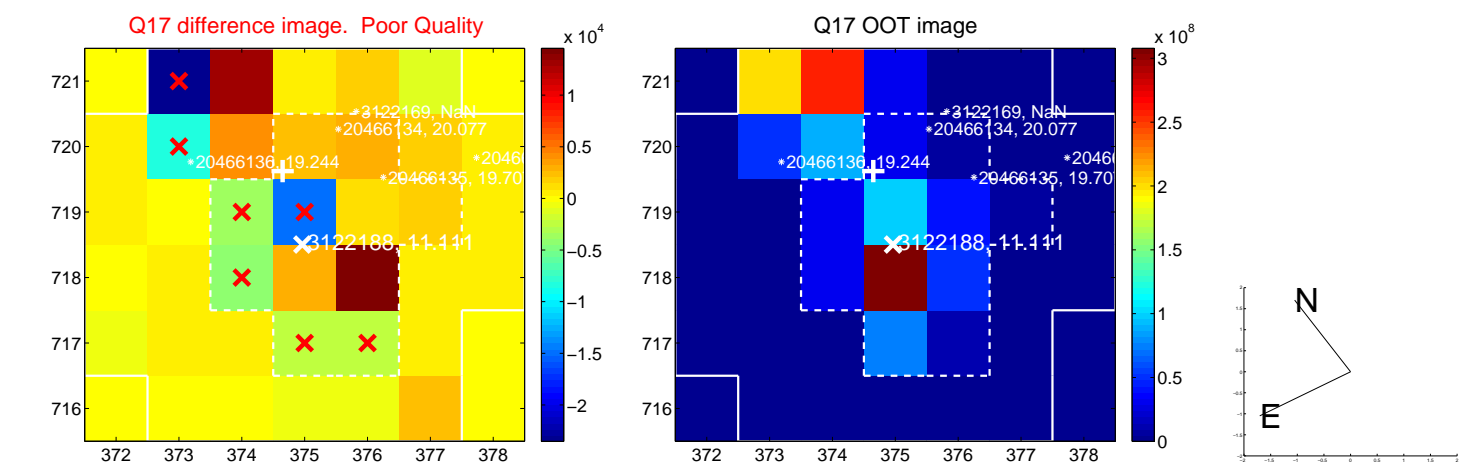
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



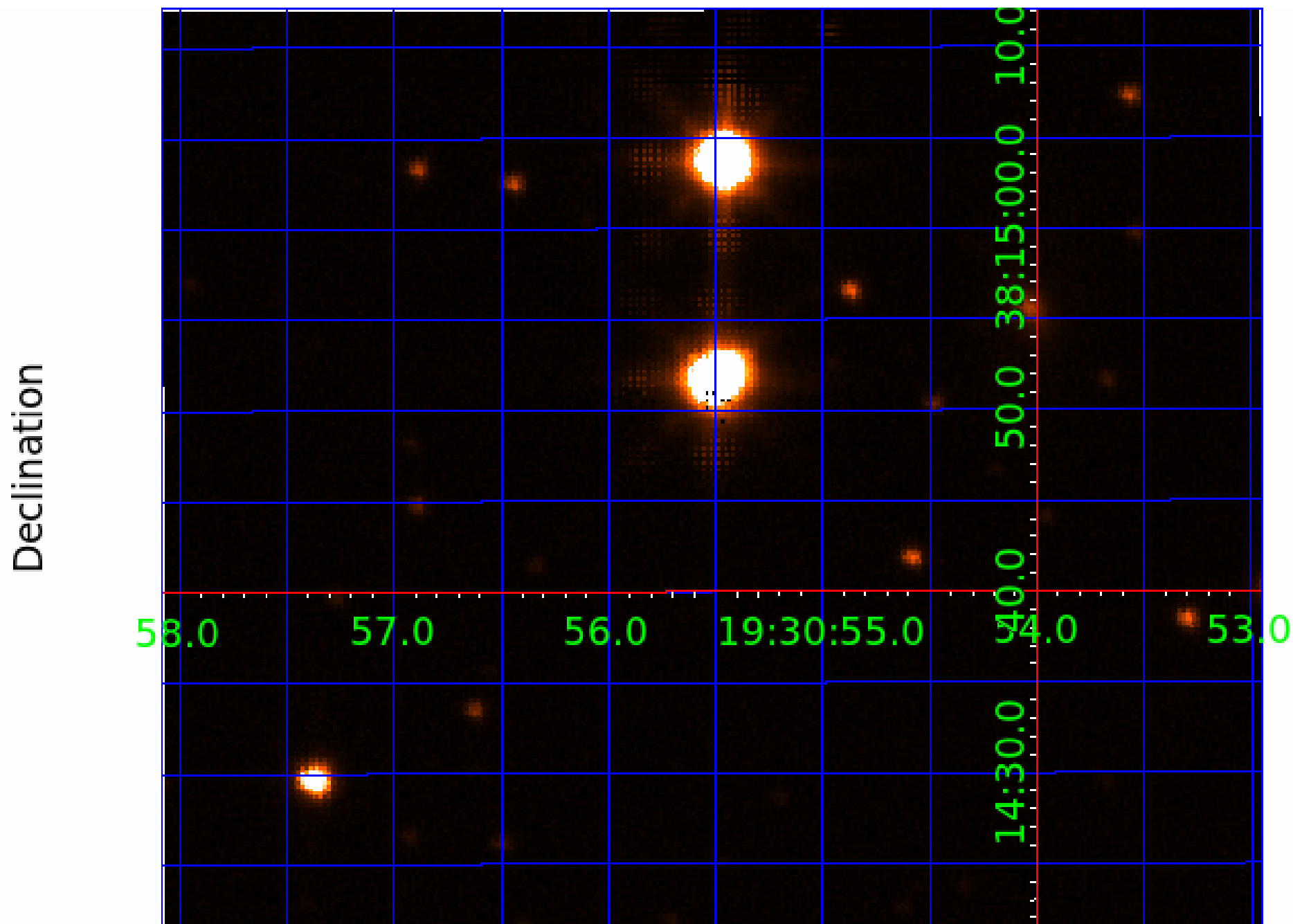
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

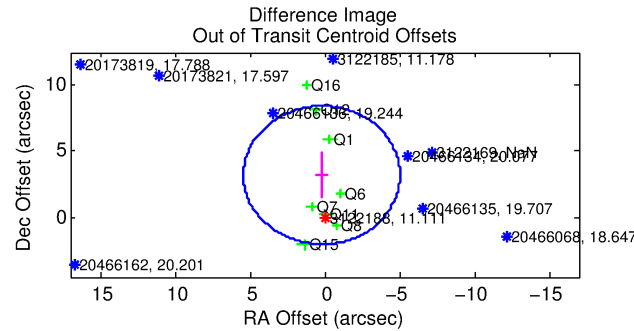
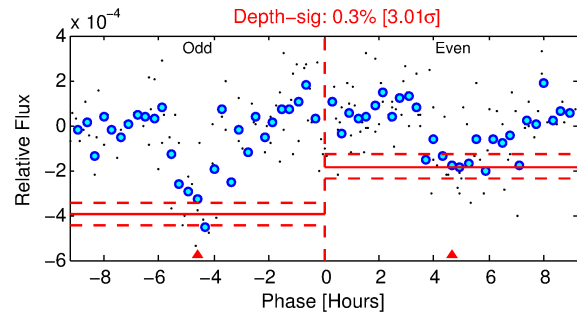
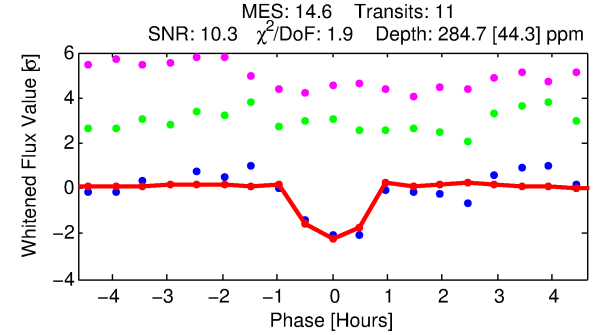
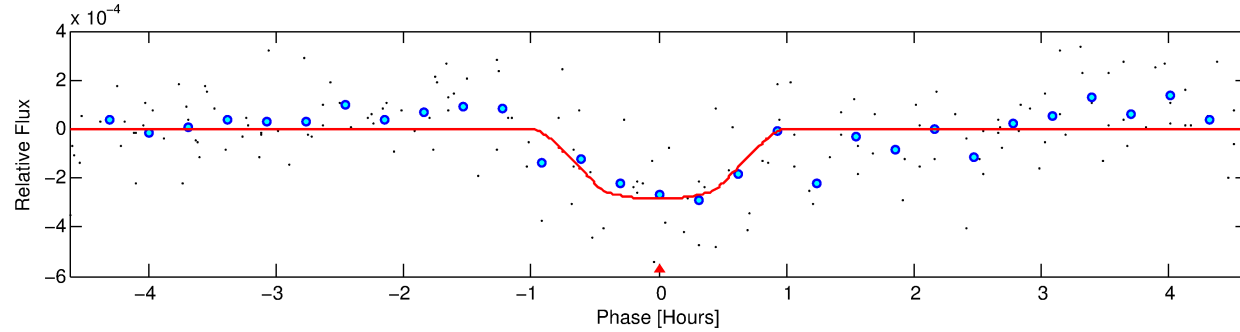
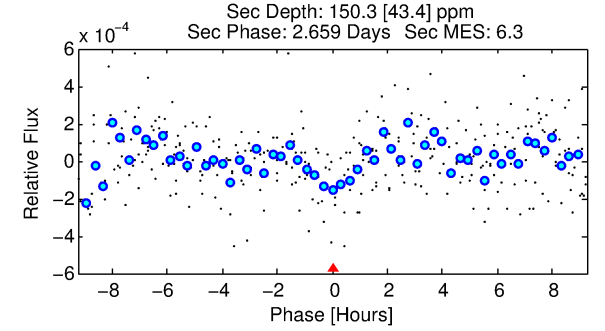
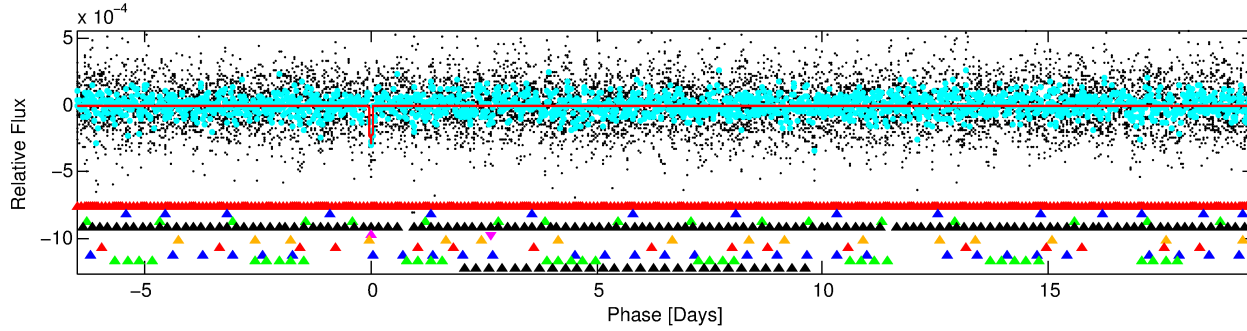
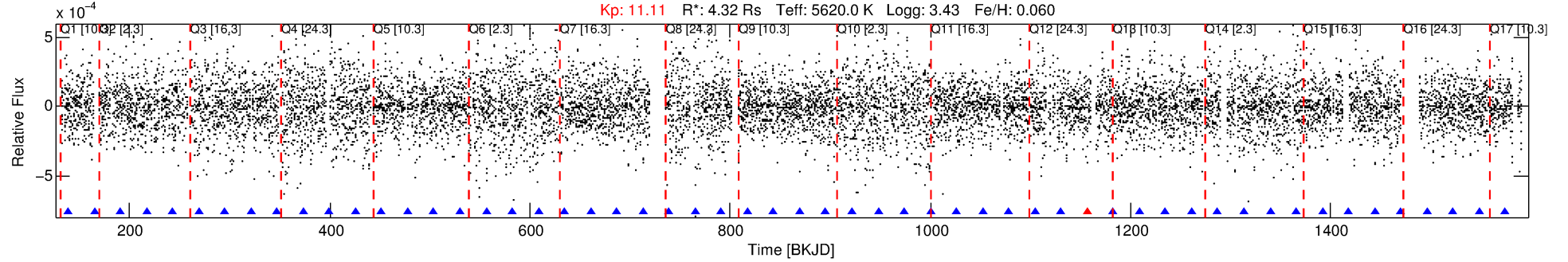
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-05

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 5 of 10 Period: 26.106 d



DV Fit Results:

Period = 26.10592 [0.00021] d
Epoch = 138.6359 [0.0063] BKJD
Rp/R* = 0.0185 [0.0113]
a/R* = 61.73 [168.20]
b = 0.90 [0.59]
Seff = 375.12 [182.65]
Teq = 1122 [137] K
Rp = 8.72 [6.23] Re
a = 0.2106 [0.0681] AU
Ag = 48.24 [64.76] [0.73σ]
Teffp = 4573 [1433] K [2.40σ]

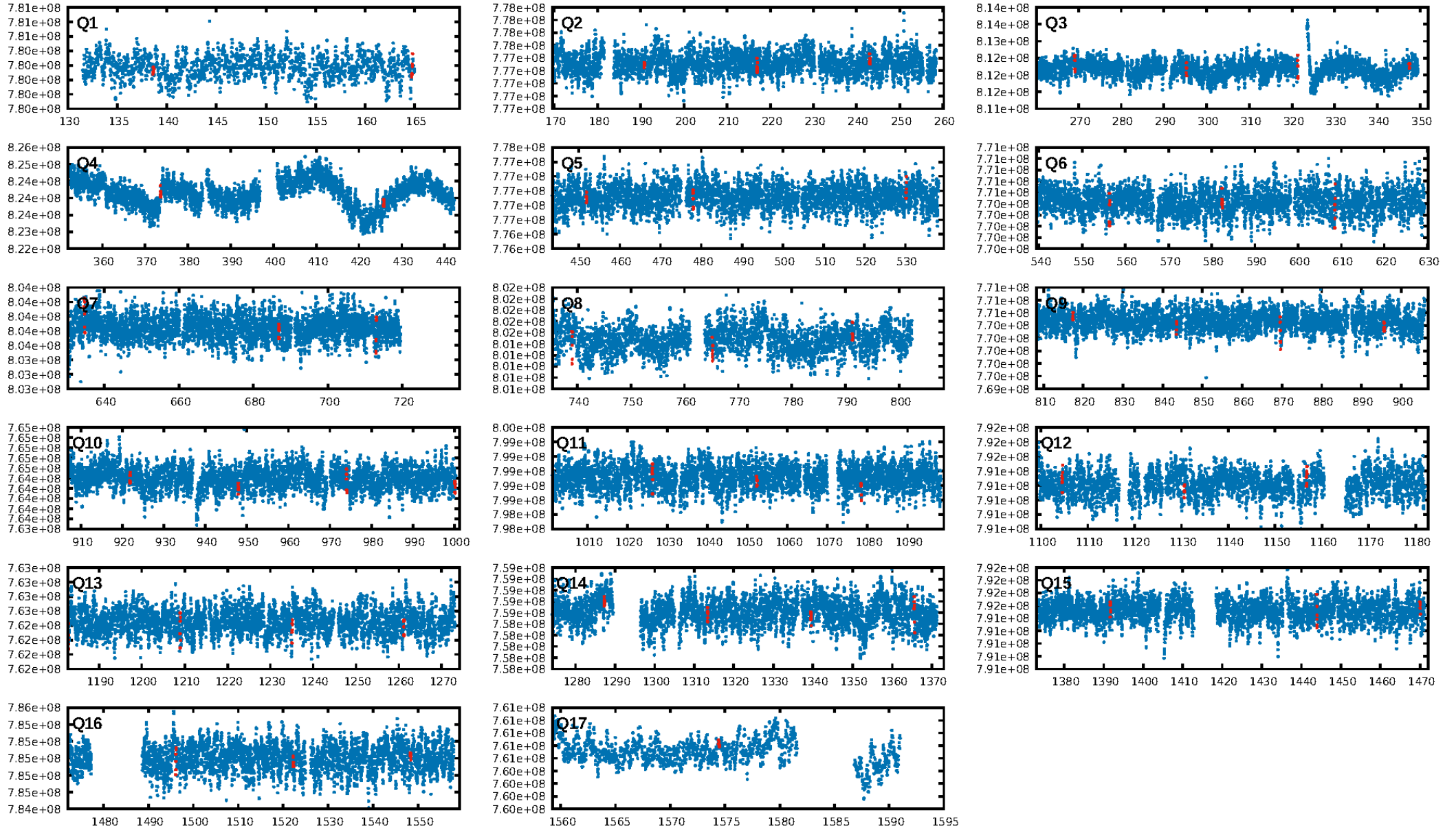
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [167.89σ]
LongPeriod-sig: 100.0% [155.80σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 6.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [10/11]
GhostDiagnostic-chr: -28.03
Centroid-sig: 1.4%
Centroid-so: 3.970 arcsec [5.62σ]
OotOffset-rm: 3.210 arcsec [1.84σ]
KicOffset-rm: 4.160 arcsec [2.10σ]
OotOffset-st: 1/3/3/1 [8]
KicOffset-st: 1/3/3/1 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.82 [14/17]

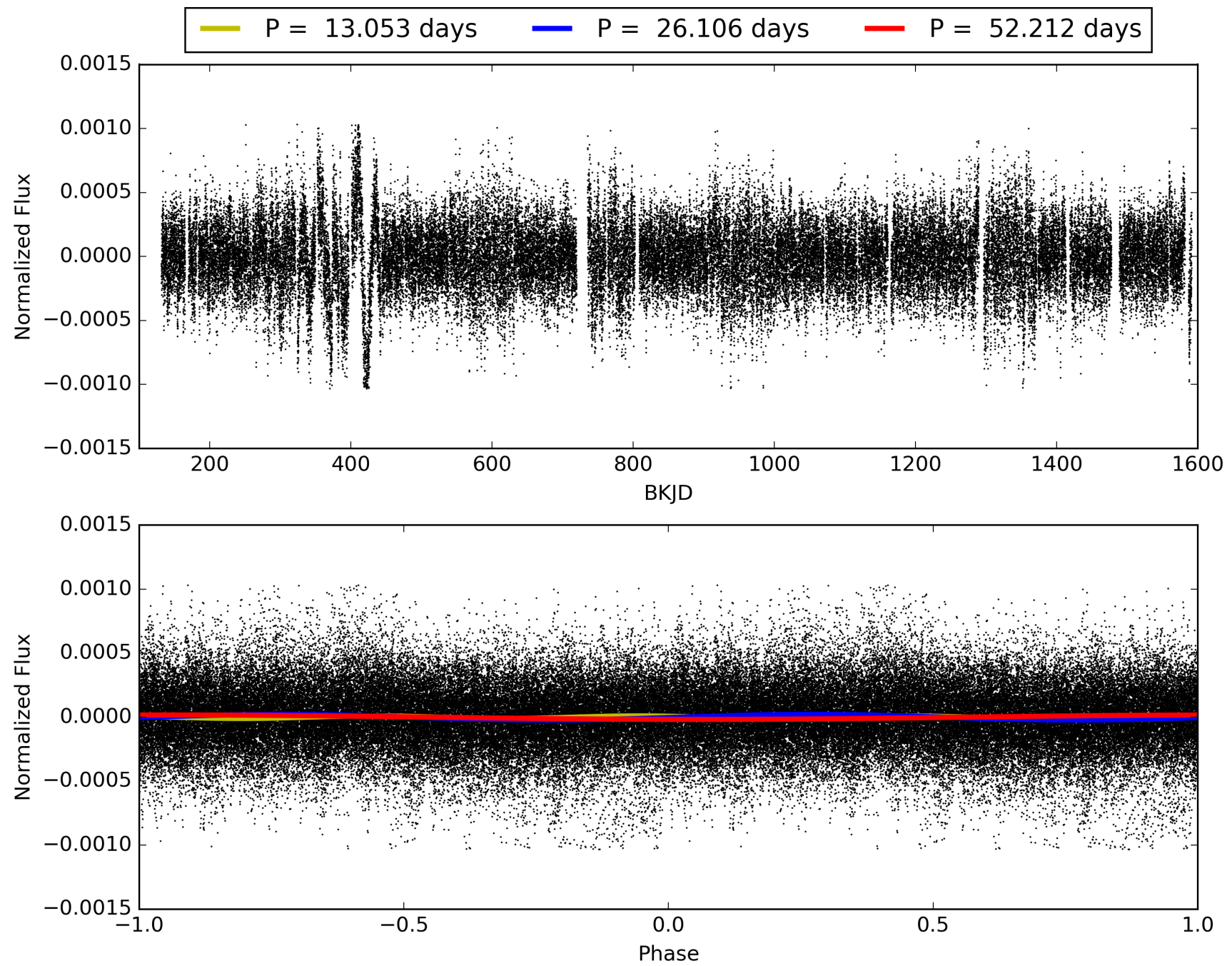
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:43 Z

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

TCE 003122188-05, PDC Light Curves

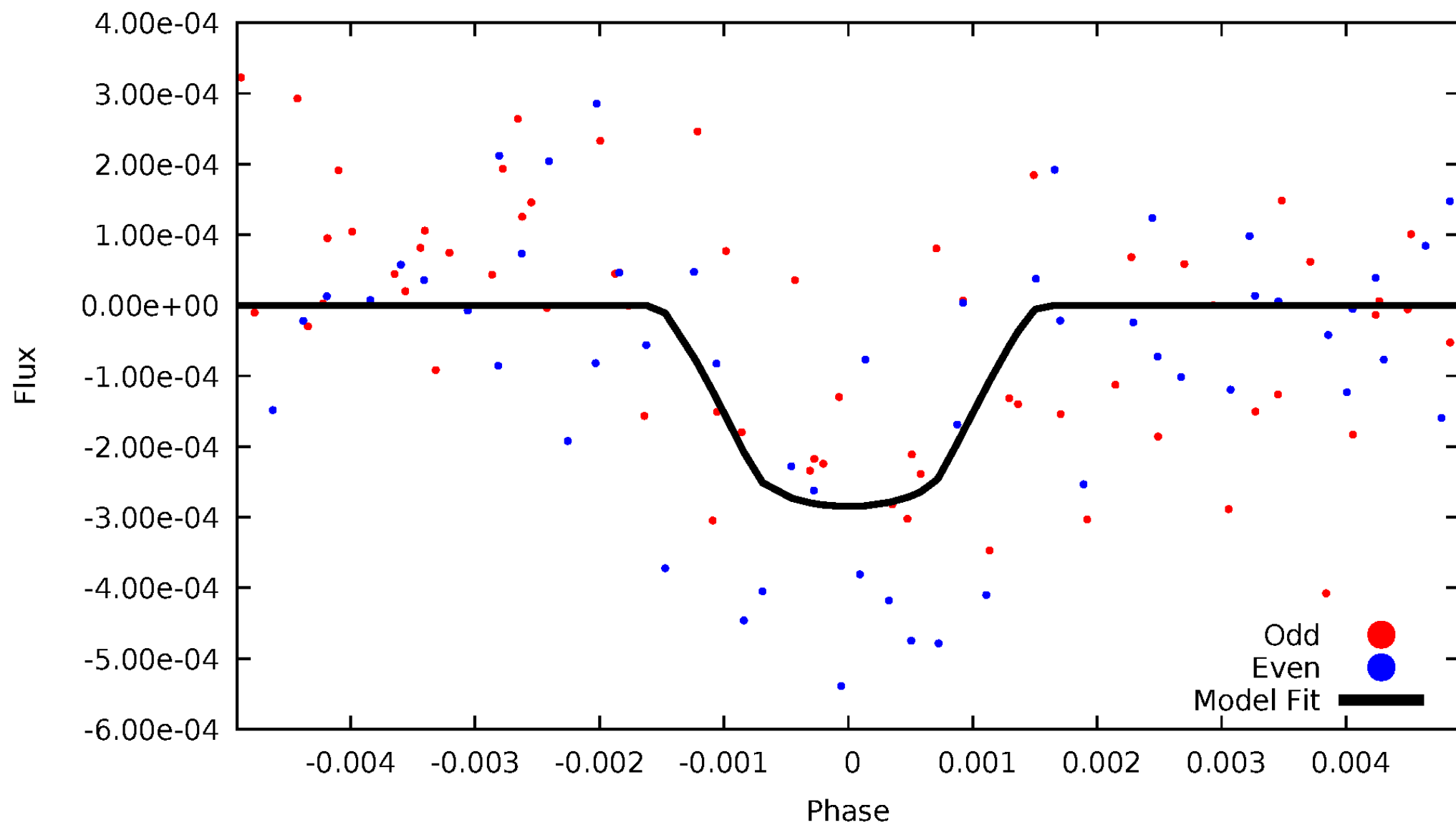


TCE 003122188-05



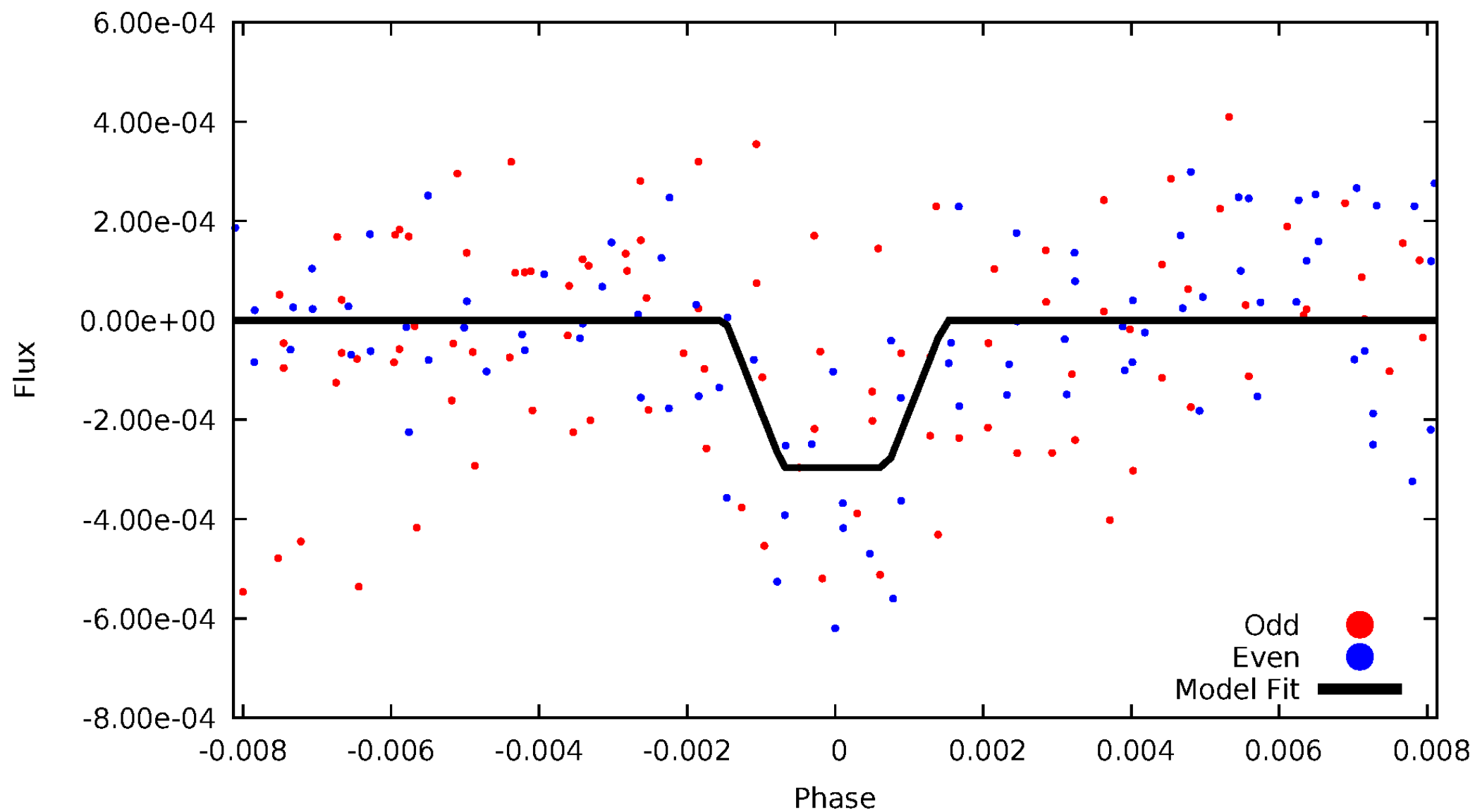
DV Odd/Even

TCE 003122188-05



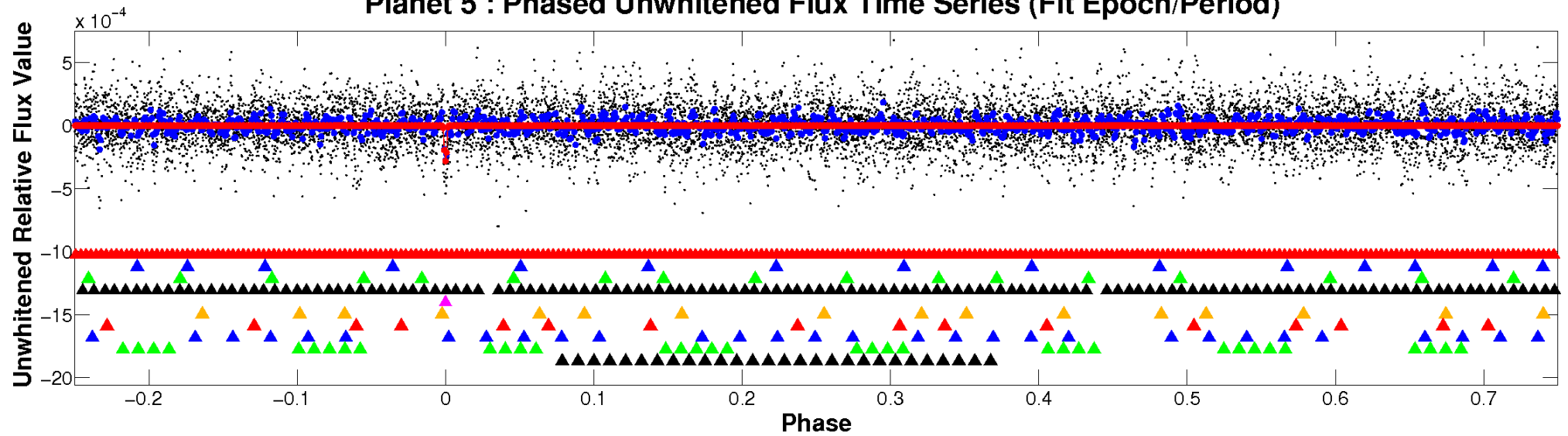
ALT Odd/Even

TCE 003122188-05

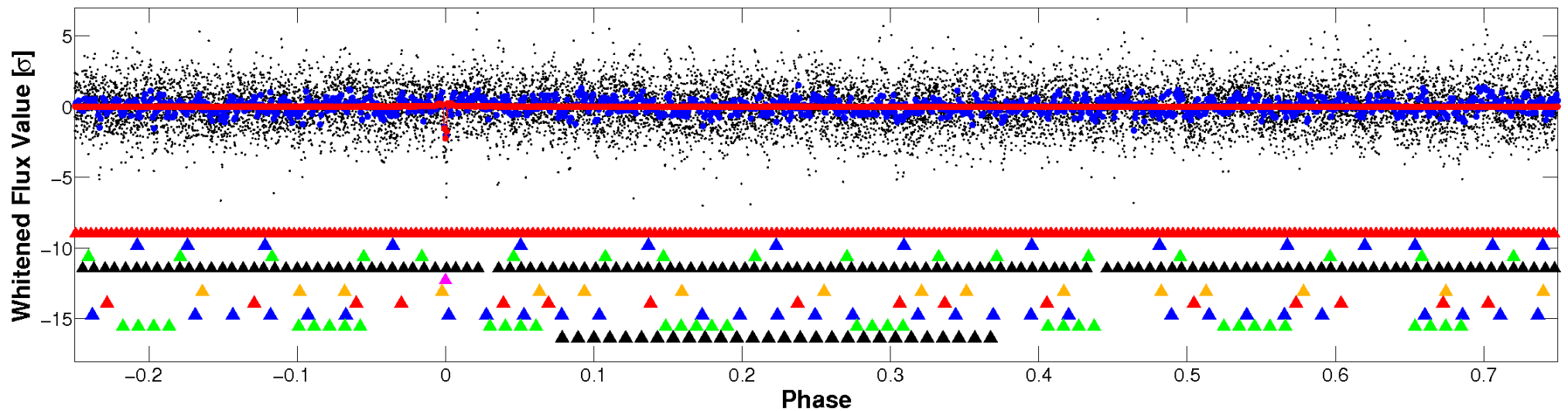


Non-Whitened Vs. Whitened Light Curve

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

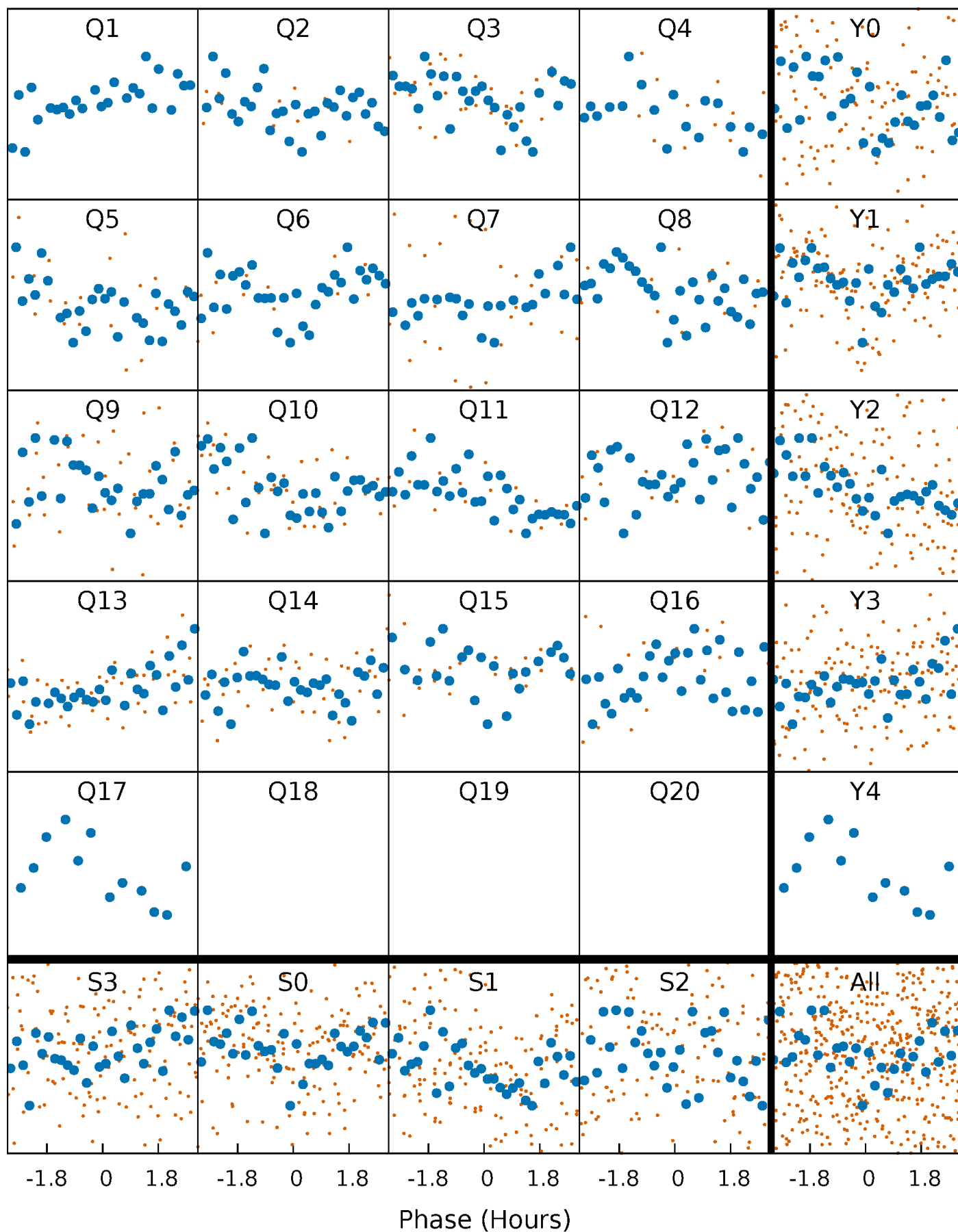


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



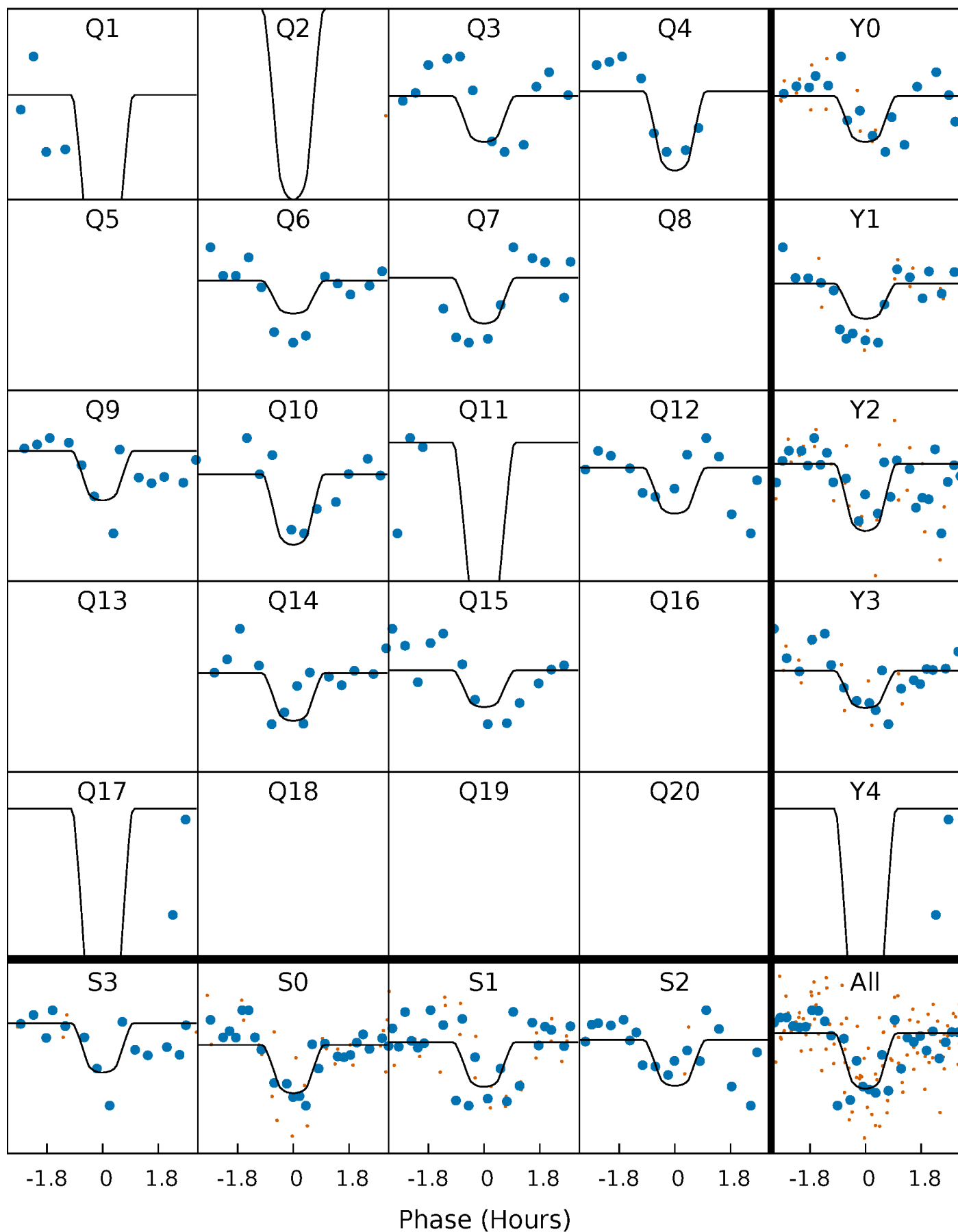
PDC Quarter-Phased Transit Curves

TCE 003122188-05 P= 26.105917 Days $T_0=138.635908$ (BKJD)



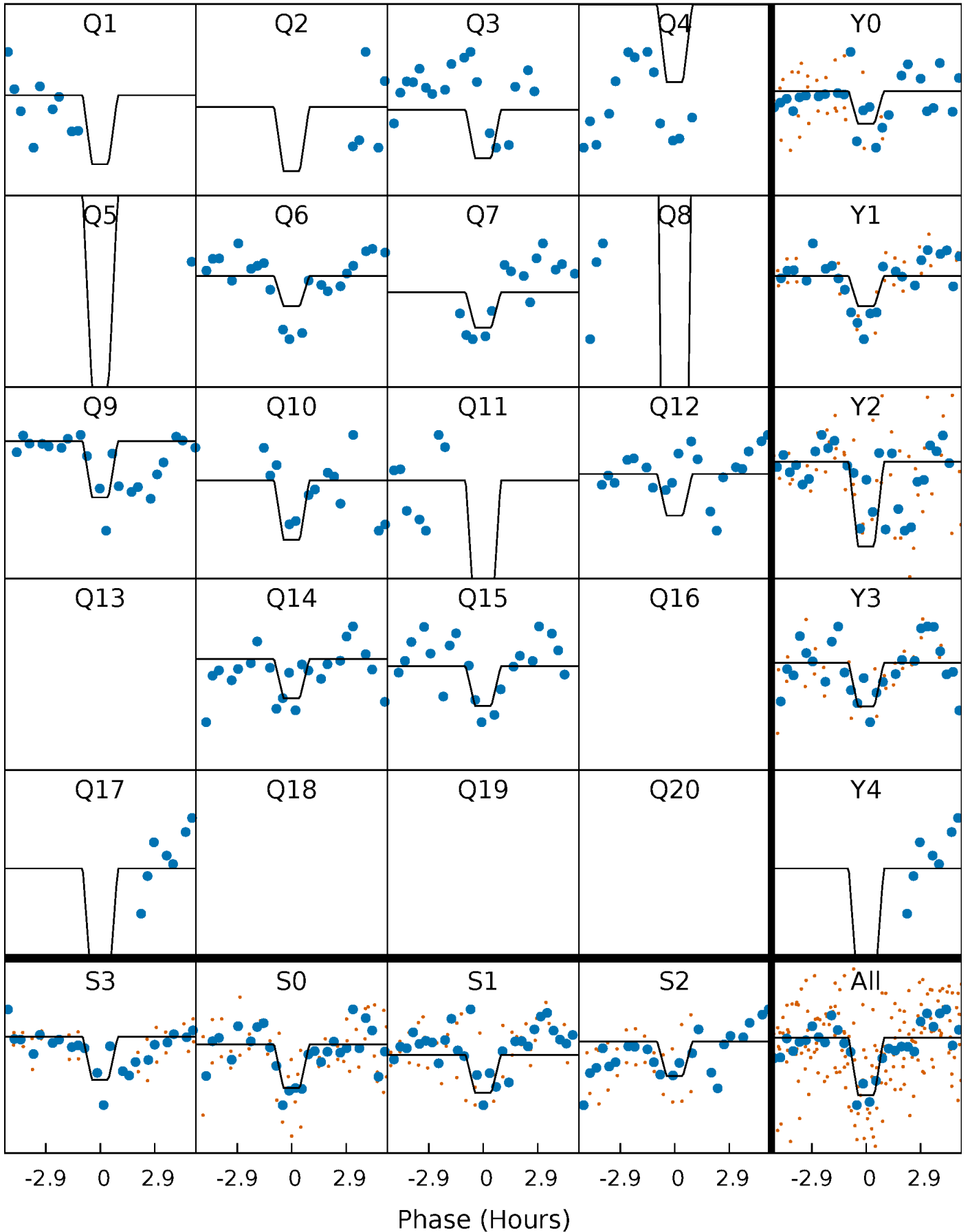
DV Quarter-Phased Transit Curves

TCE 003122188-05 P= 26.105917 Days $T_0=138.635908$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

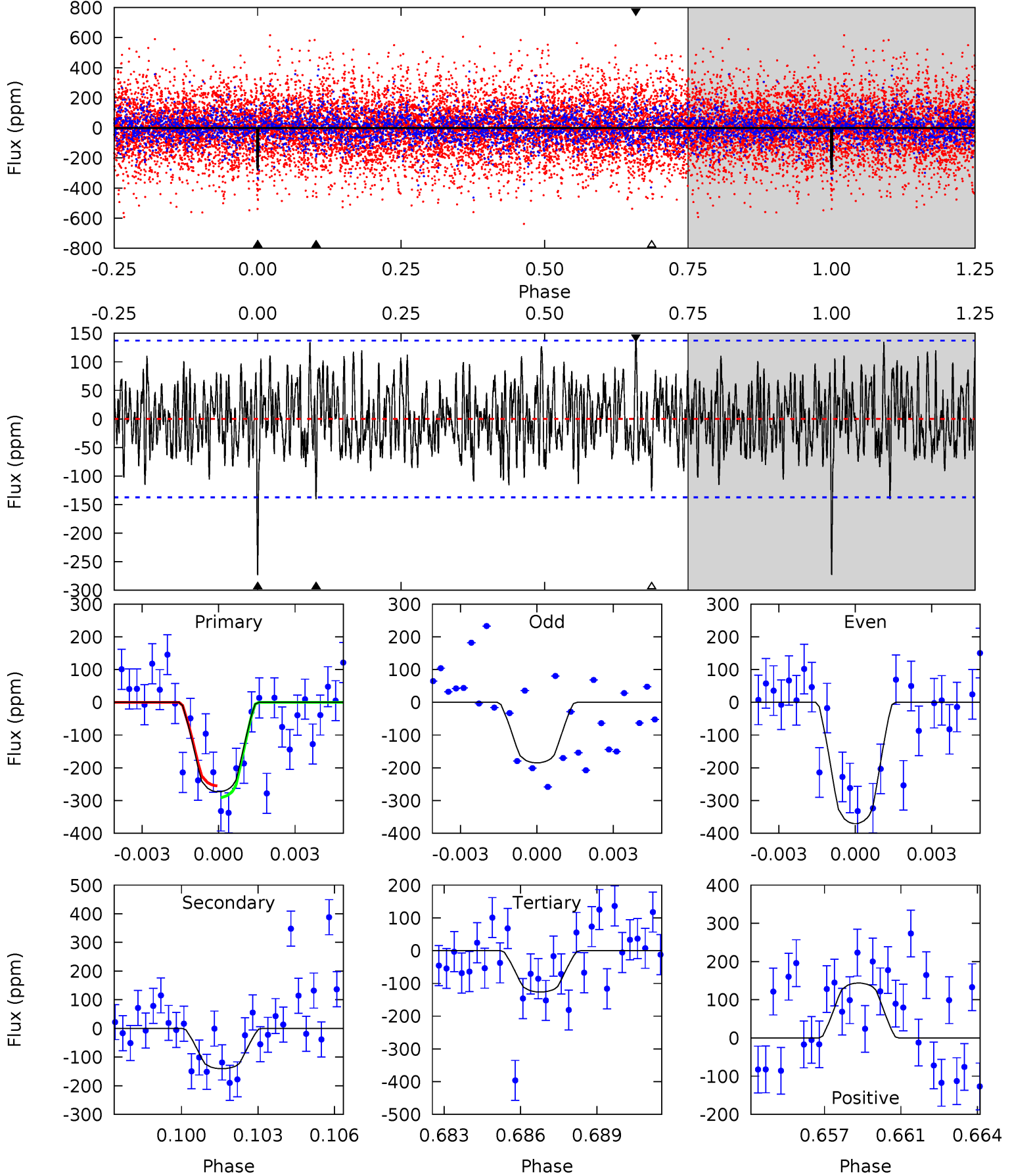
TCE 003122188-05 P= 26.106127 Days $T_0=138.631031$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-05, P = 26.105917 Days, E = 112.529991 Days

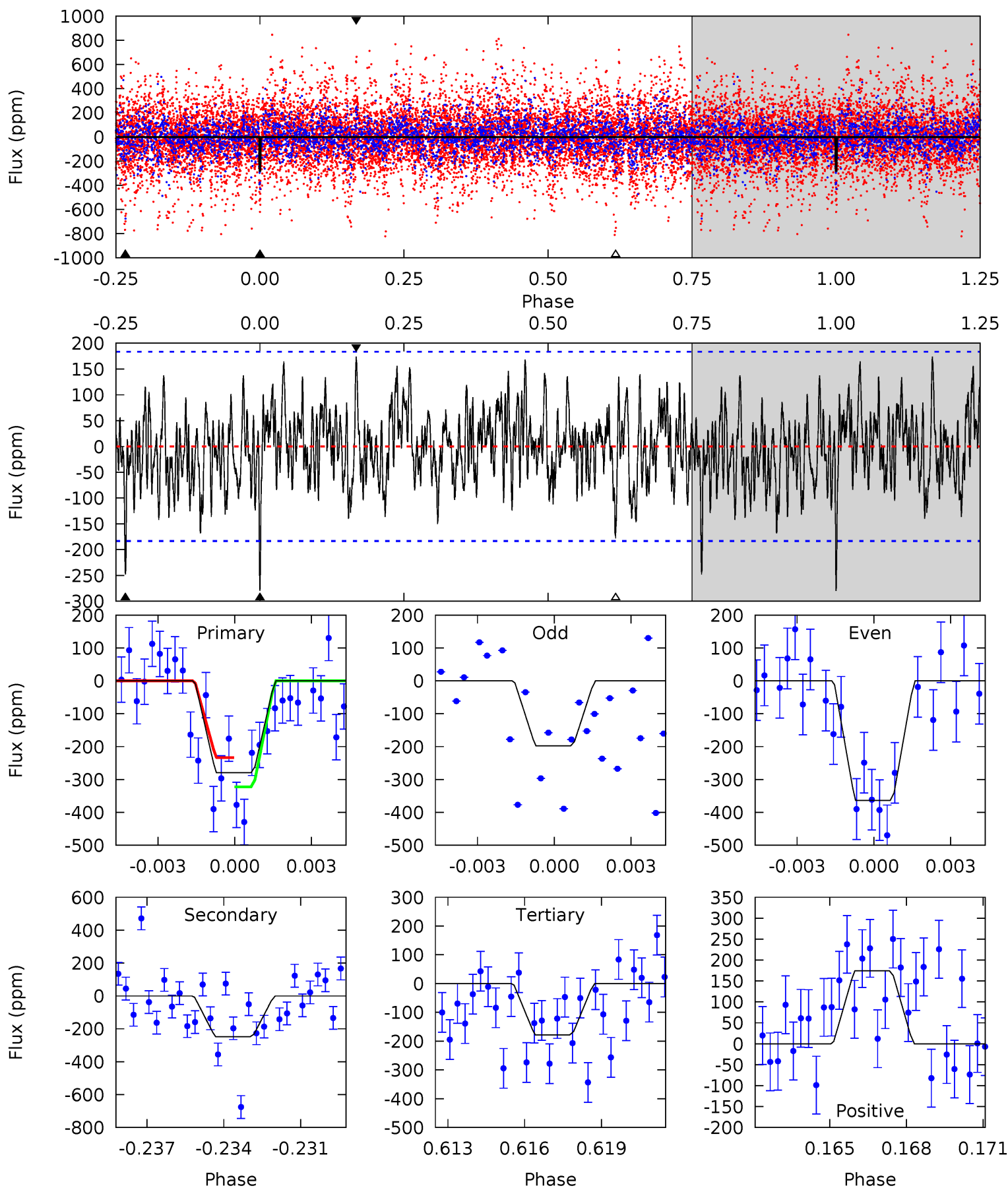
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	5.37	4.83	5.49	5.24	2.95	1.78	5.62	4.95	0.54	-0.12	3.58	0.97	0.34	0.69



Alt Model-Shift Uniqueness Test

003122188-05, P = 26.106127 Days, E = 112.524904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.03	7.11	5.11	5.00	5.26	2.98	1.75	2.93	3.03	2.01	2.11	2.37	0.81	0.38	1.30



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-141 ± 26	$8.38^{+5.58}_{-4.52}$	1558^{+70}_{-126}	4564^{+1864}_{-739}	46^{+178}_{-29}
Alt.	-248 ± 35	$8.09^{+4.83}_{-4.28}$	1558^{+66}_{-120}	5315^{+2336}_{-958}	90^{+330}_{-56}

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

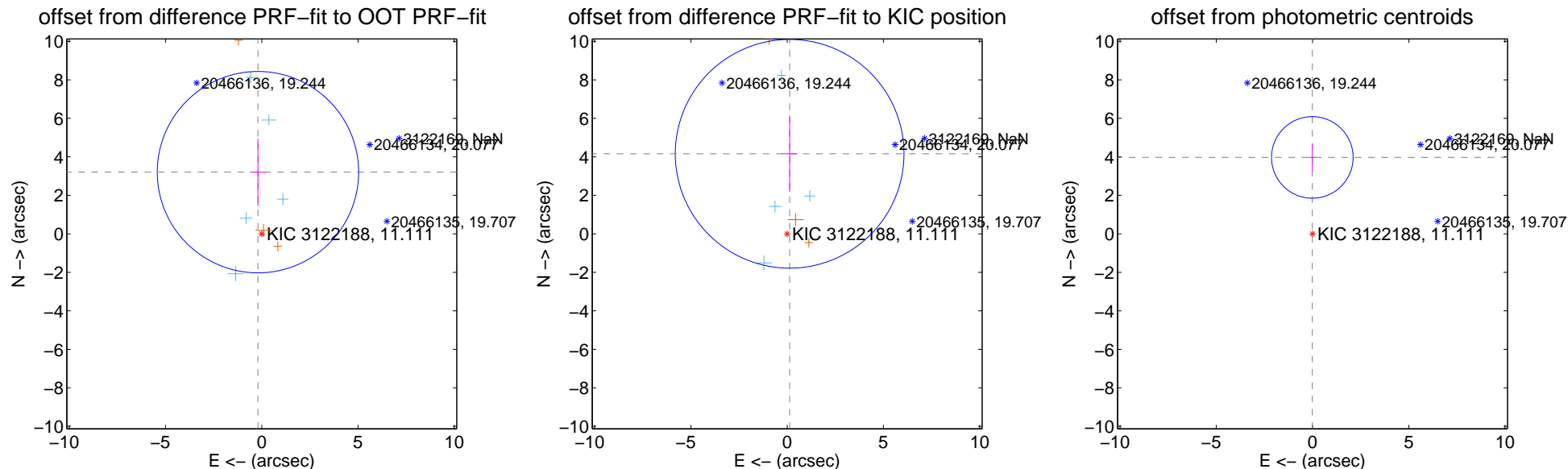
DV Centroid Data

Supplemental centroid analysis for 003122188-05. **Kepler magnitude: 11.11**. Transit SNR 10.35

There are 5 quarters with good PRF difference image offsets

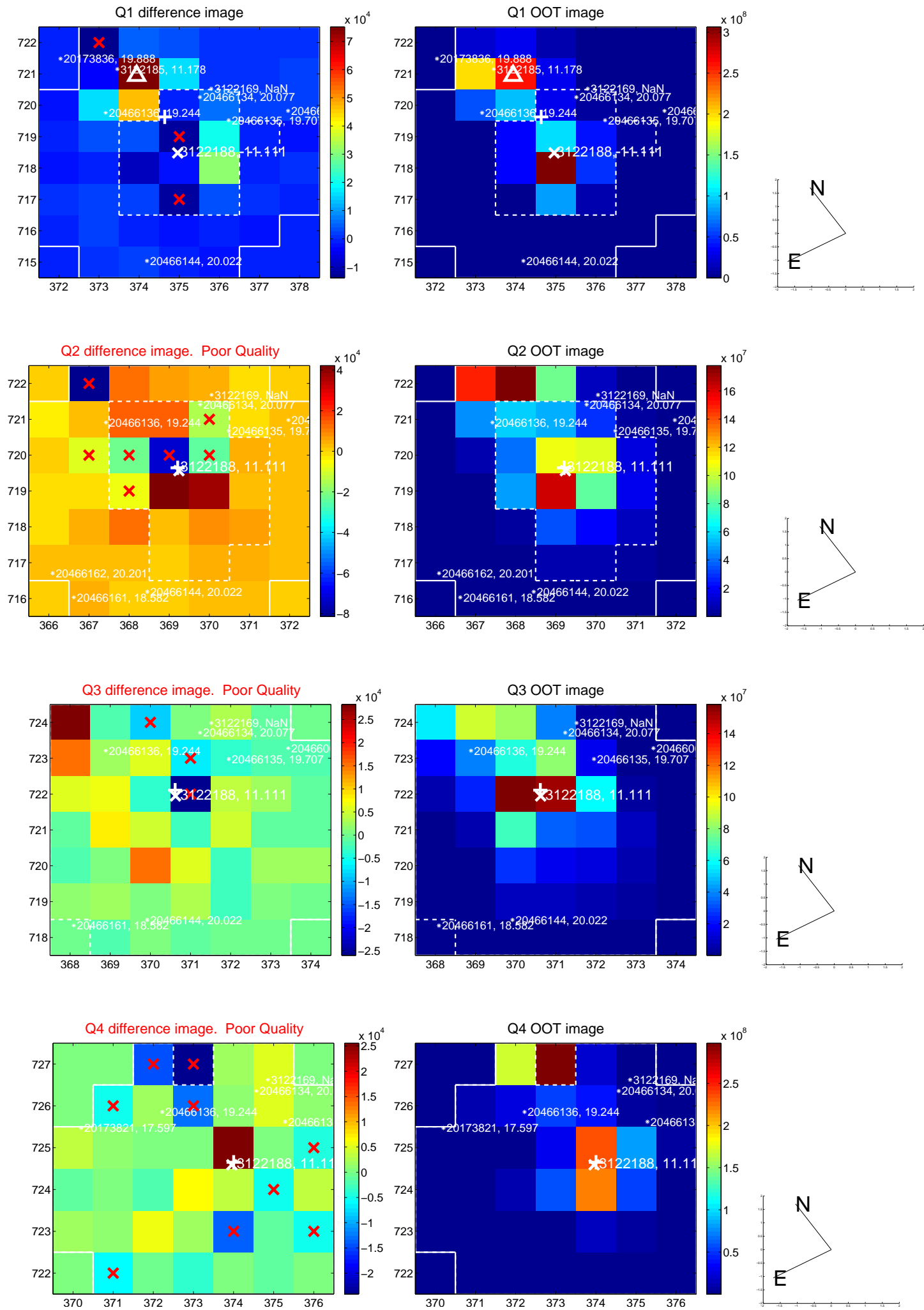
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.210 ± 1.744	1.84	0.198 ± 0.408	3.204 ± 1.747
PRF-fit source offset from KIC position	4.160 ± 1.980	2.10	-0.130 ± 0.406	4.158 ± 1.981
photometric centroid source offset	3.97 ± 0.71	5.62	0.01 ± 0.20	3.97 ± 0.71

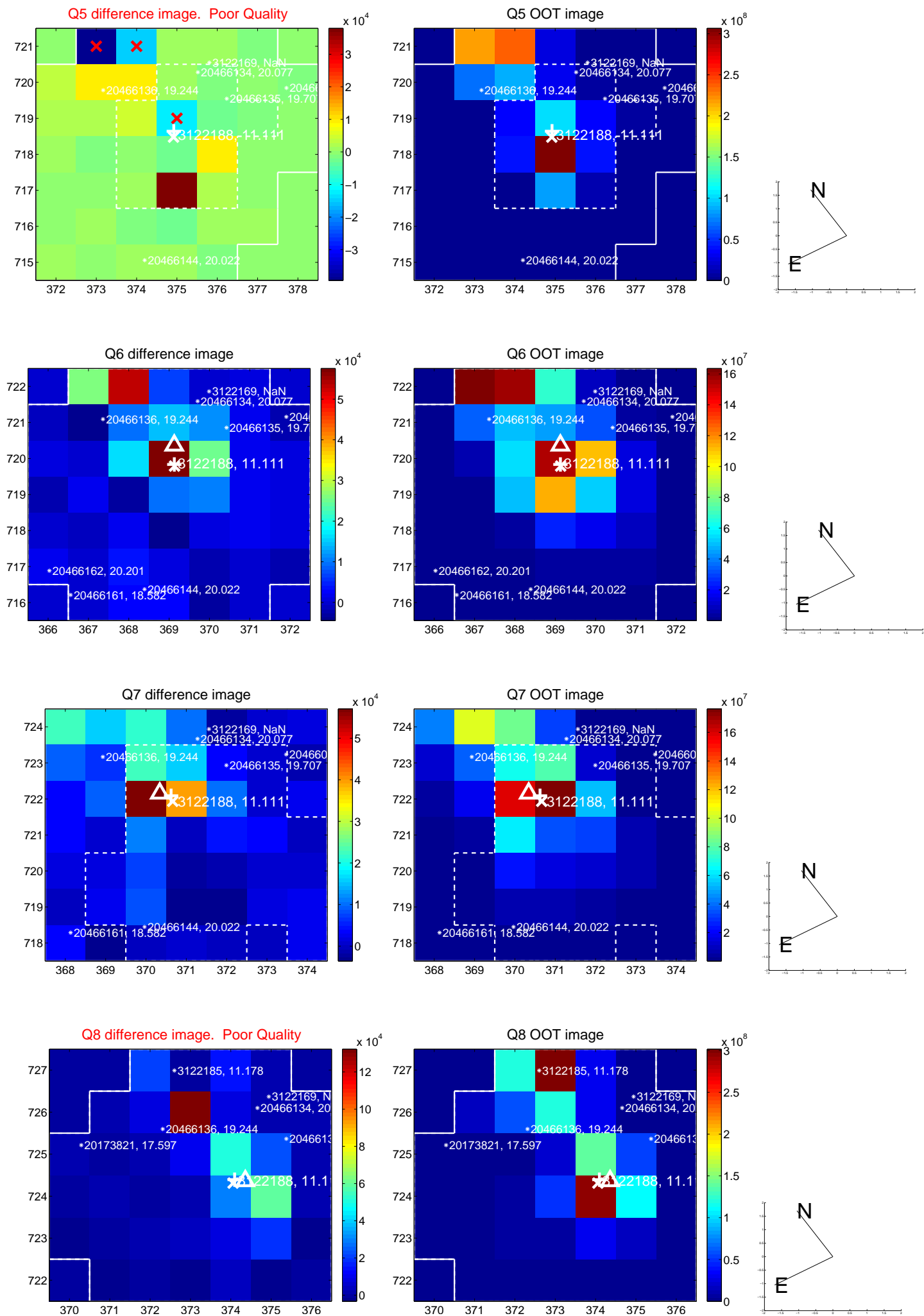


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

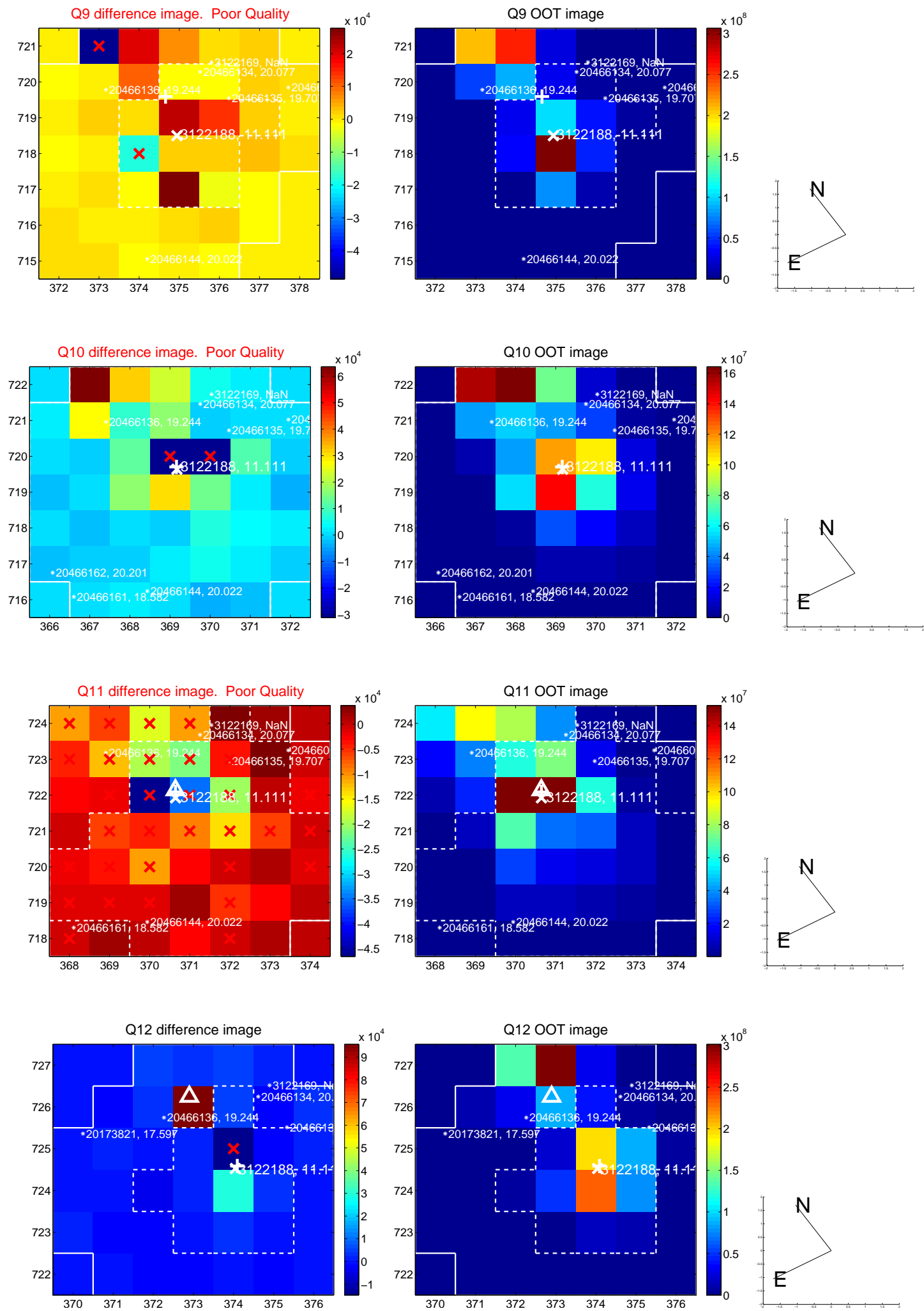
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



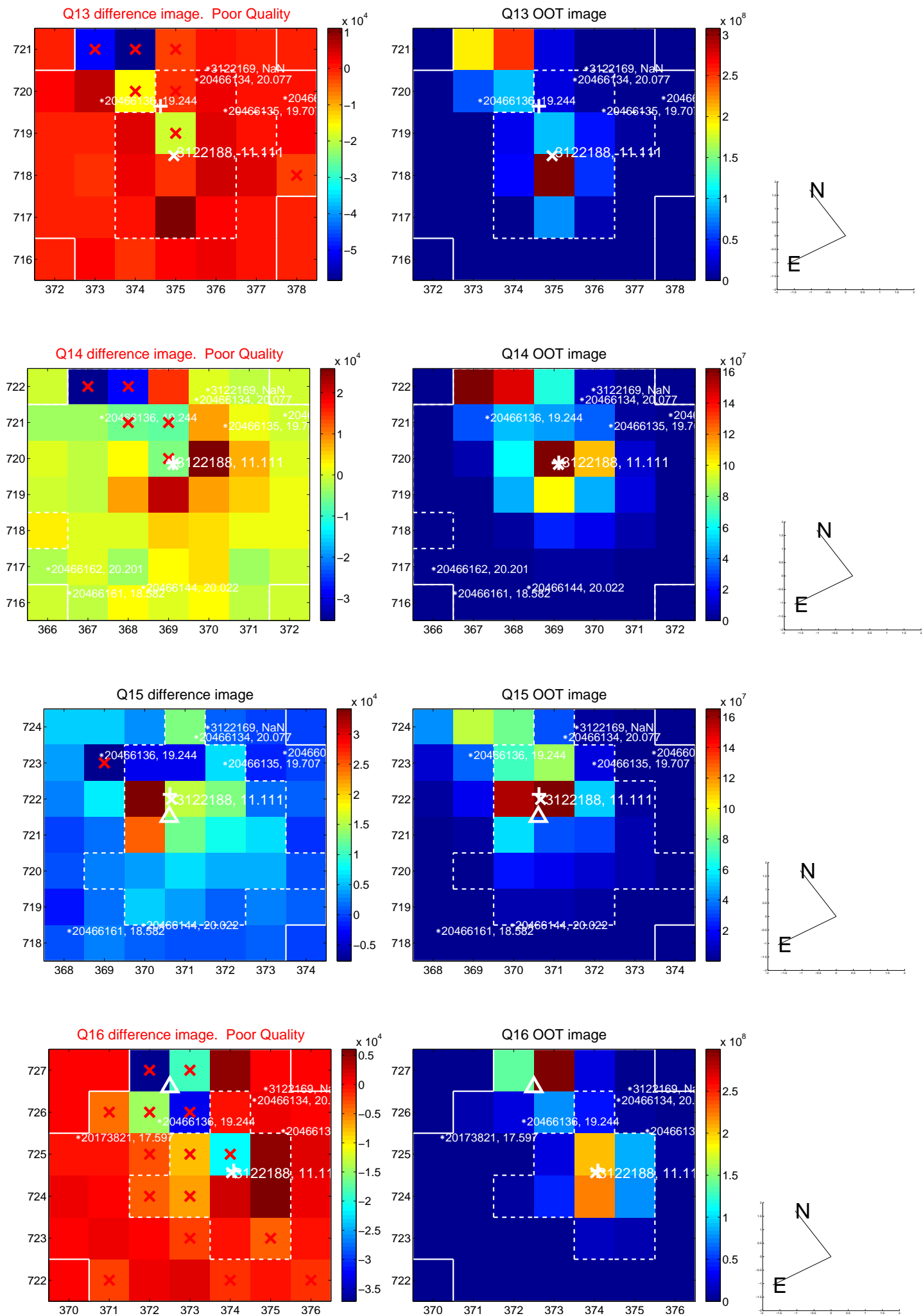
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



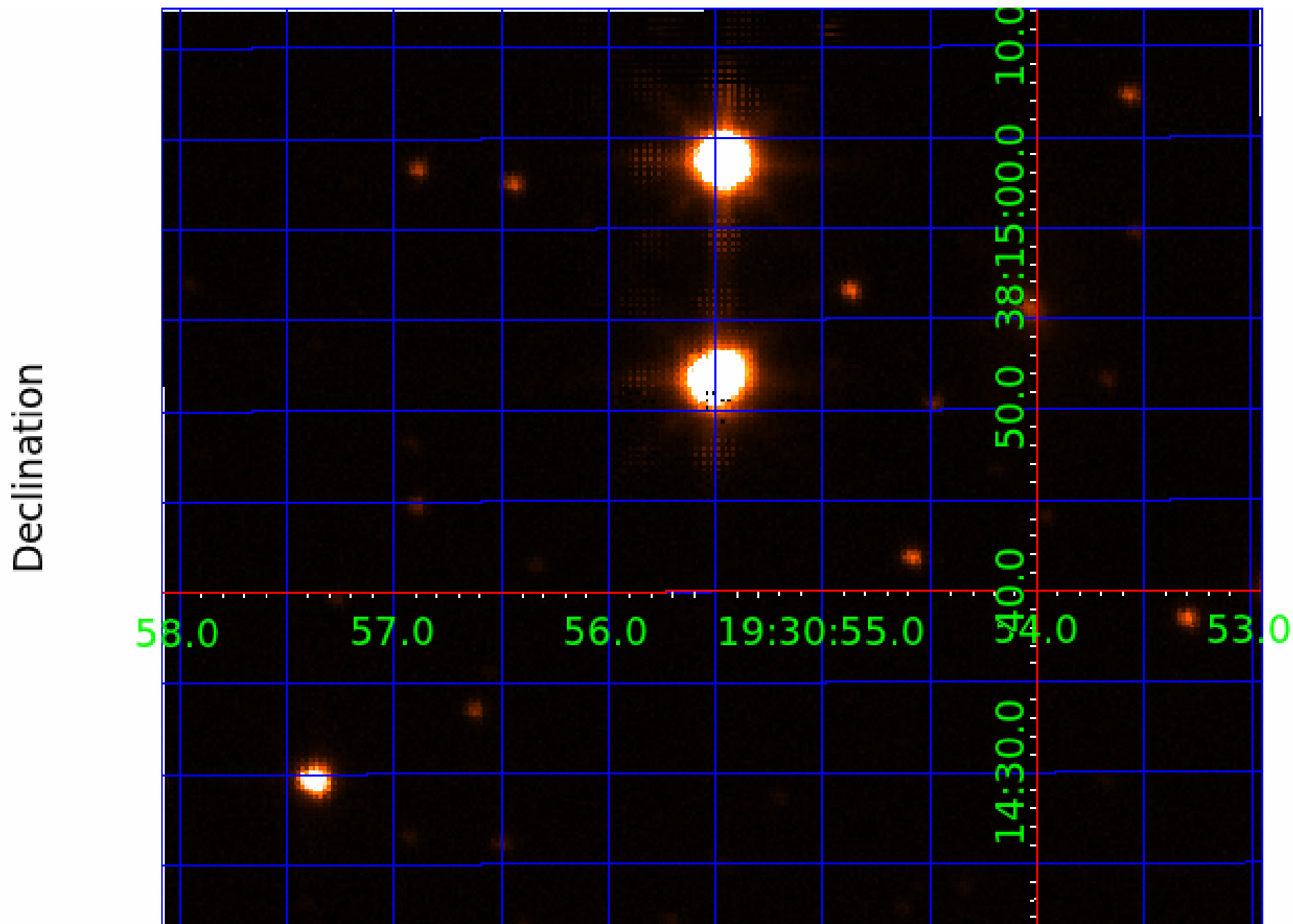
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

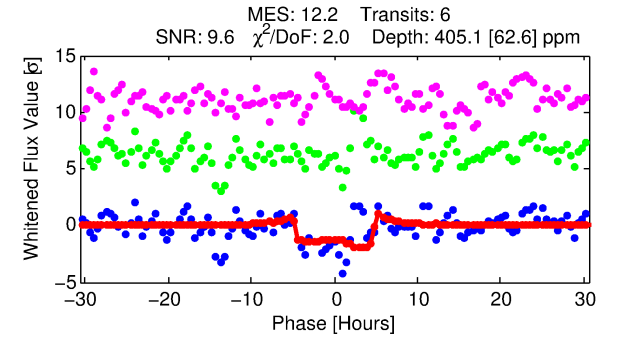
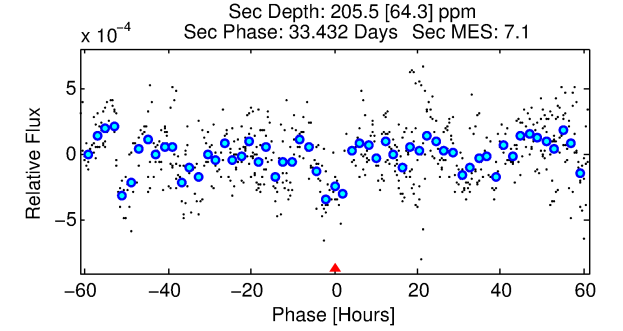
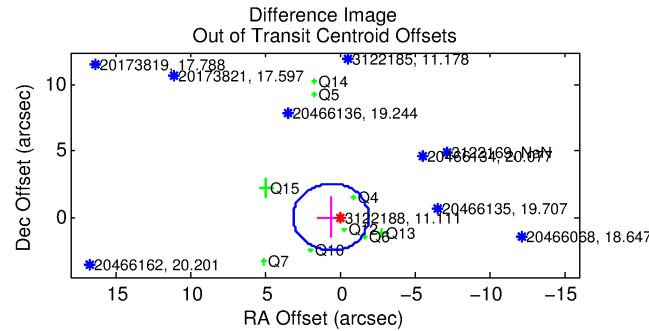
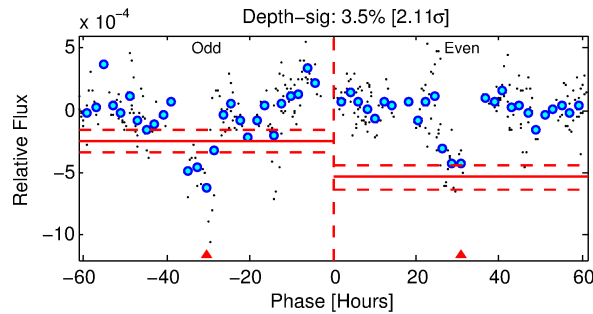
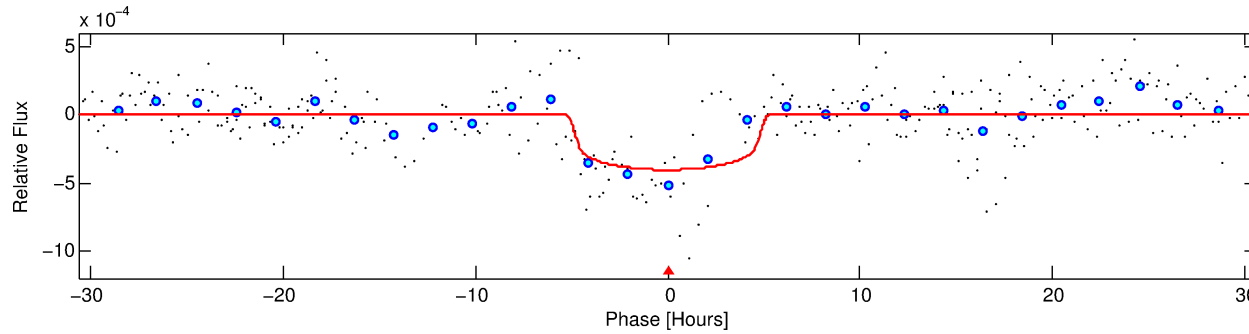
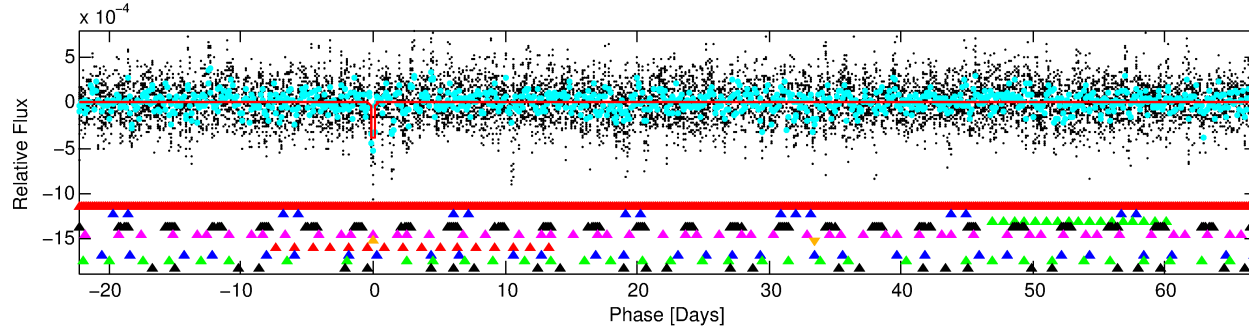
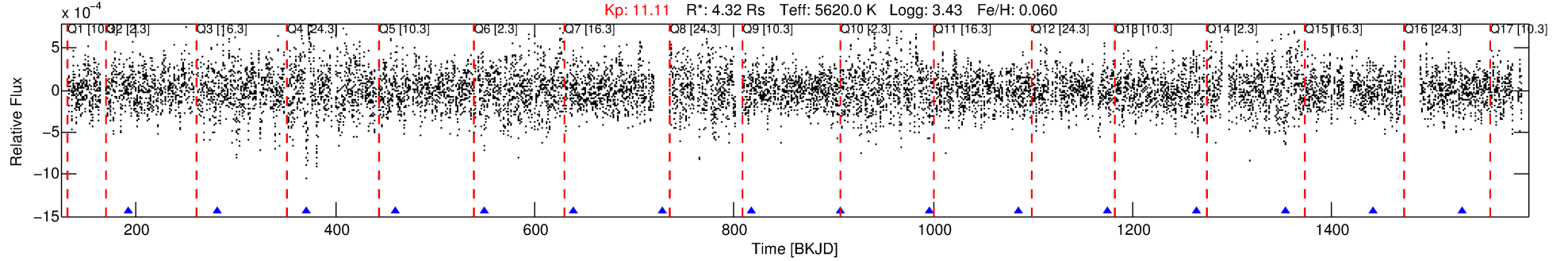
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-06

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 6 of 10 Period: 89.261 d



DV Fit Results:

Period = 89.26104 [0.00241] d
Epoch = 192.5030 [0.0251] BKJD
Rp/R* = 0.0202 [0.0056]
a/R* = 44.93 [50.39]
b = 0.77 [0.61]
Seff = 72.82 [35.46]
Teq = 745 [91] K
Rp = 9.50 [4.41] Re
a = 0.4780 [0.1547] AU
Ag = 286.17 [228.46] [1.25 σ]
Teffp = 4737 [756] K [5.24 σ]

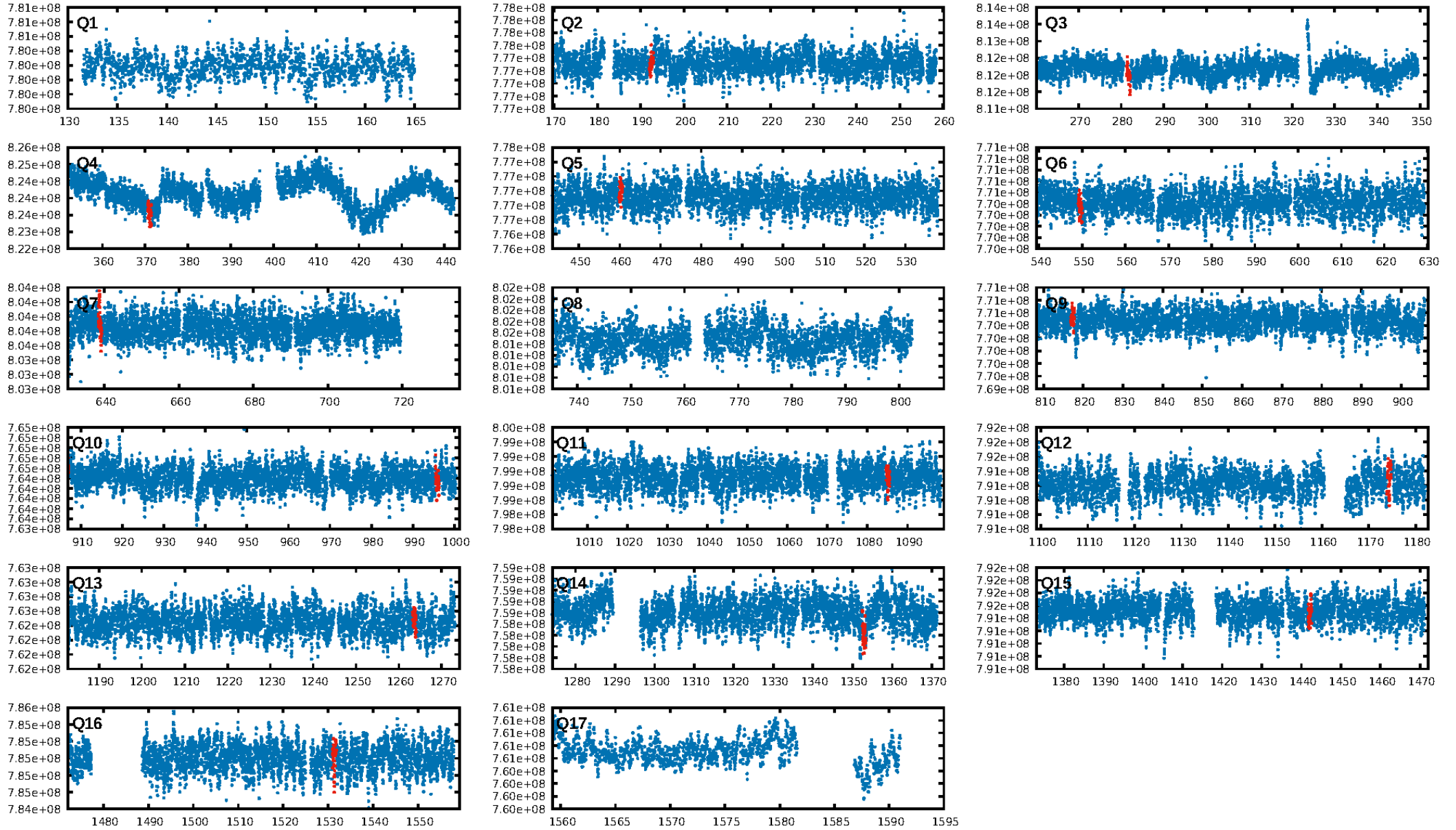
DV Diagnostic Results:

ShortPeriod-sig: 94.2% [1.89 σ]
LongPeriod-sig: 100.0% [27.18 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 24.72
Centroid-sig: 0.3%
Centroid-so: 4.434 arcsec [5.70 σ]
OotOffset-rm: 0.579 arcsec [0.69 σ]
KicOffset-rm: 1.046 arcsec [0.67 σ]
OotOffset-st: 3/2/2/2 [9]
KicOffset-st: 3/2/2/2 [9]
DiffImageQuality-fgm: 0.11 [1/9]
DiffImageOverlap-fno: 0.00 [0/13]

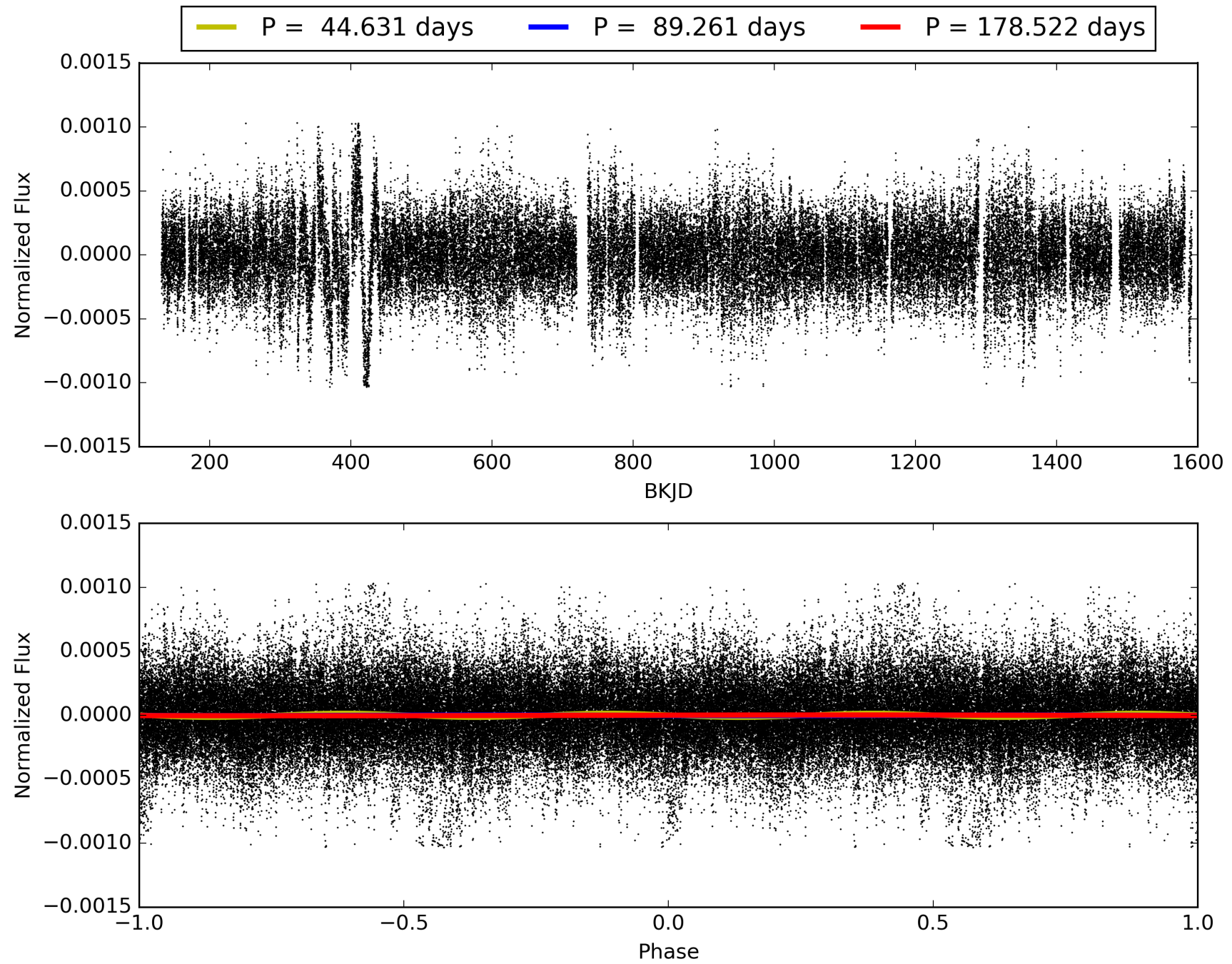
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:47 Z

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

TCE 003122188-06, PDC Light Curves

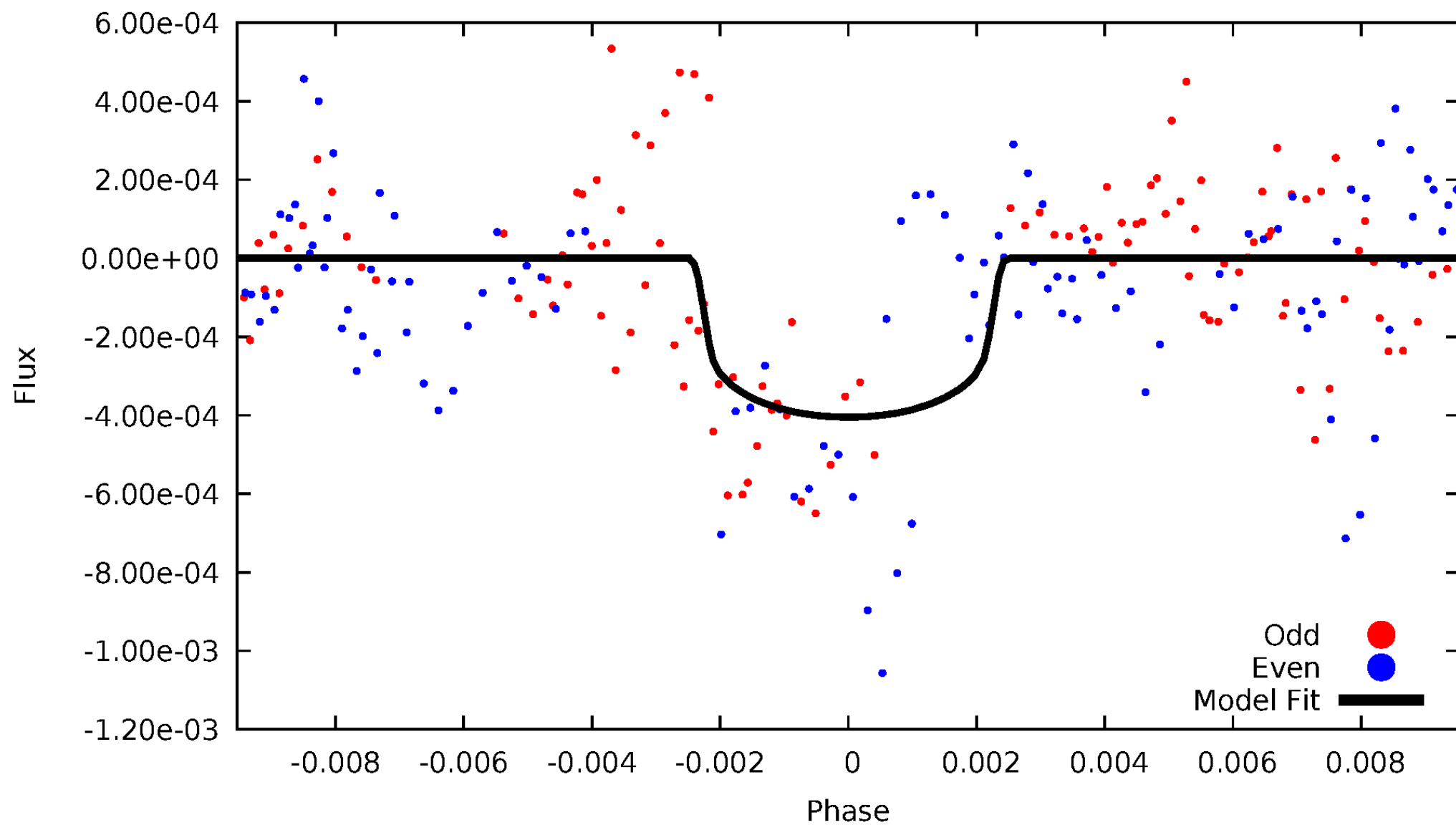


TCE 003122188-06



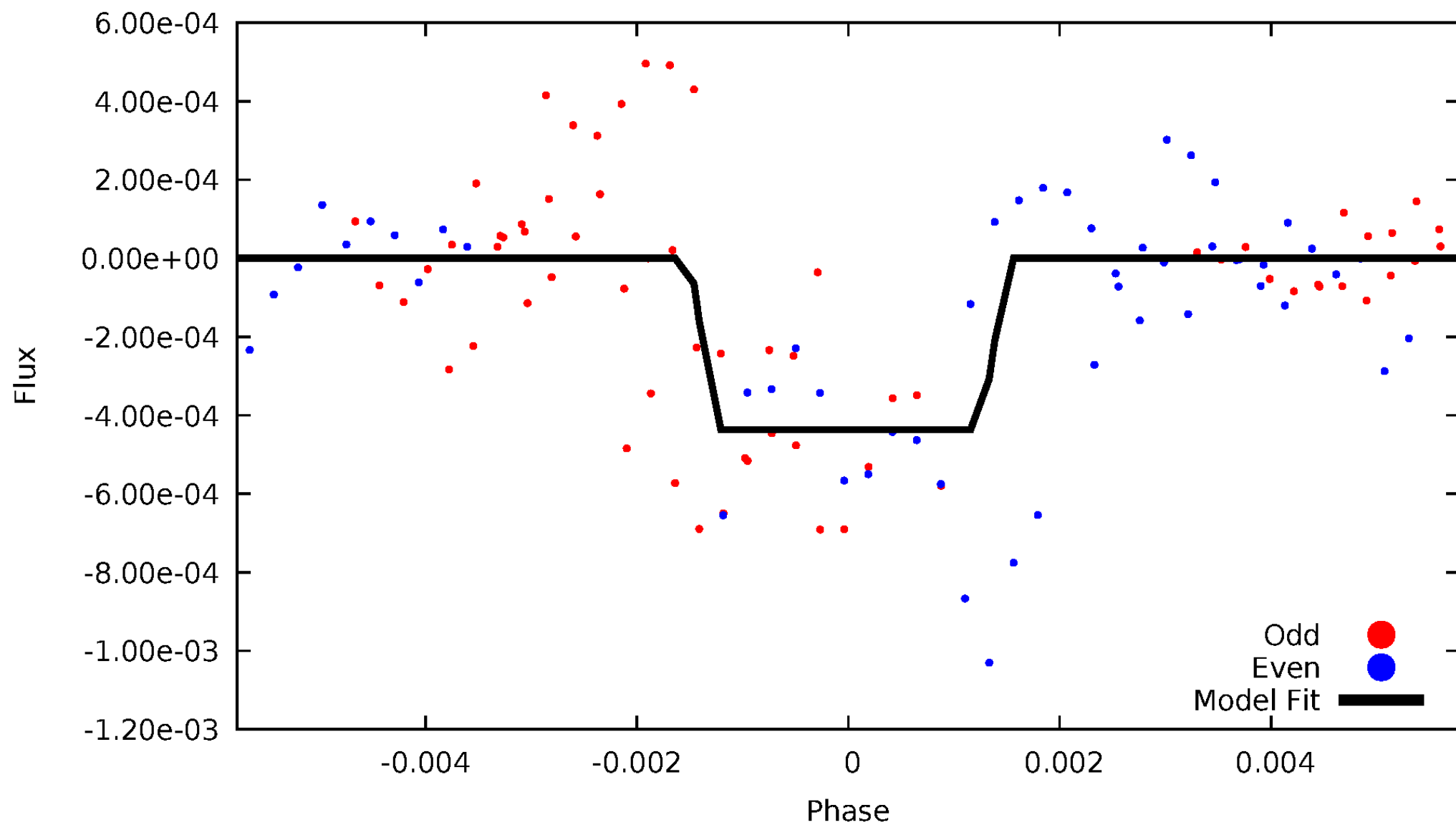
DV Odd/Even

TCE 003122188-06



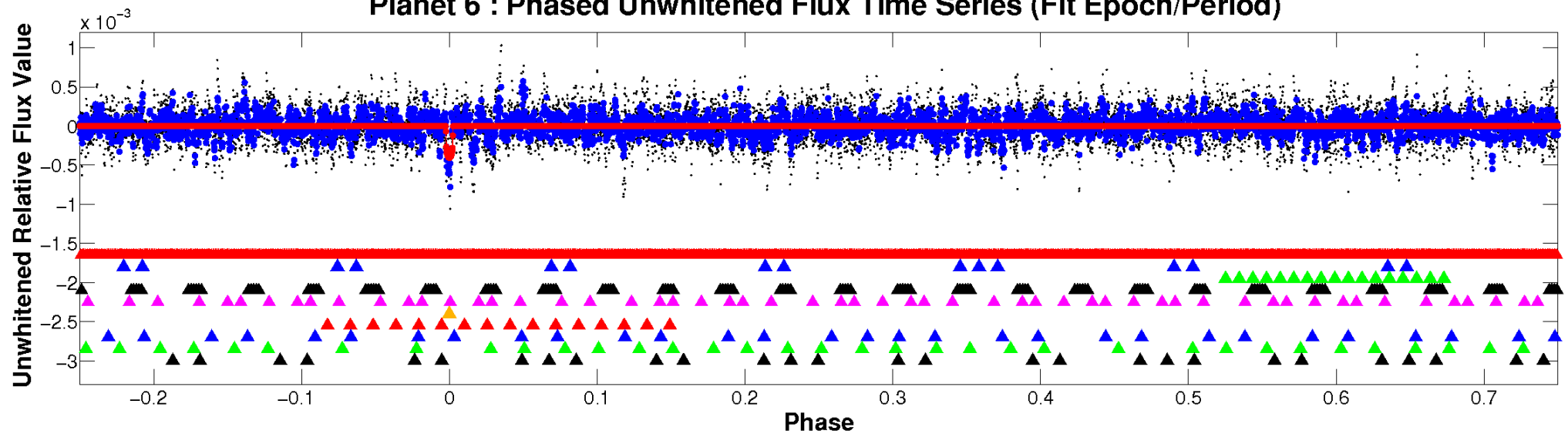
ALT Odd/Even

TCE 003122188-06

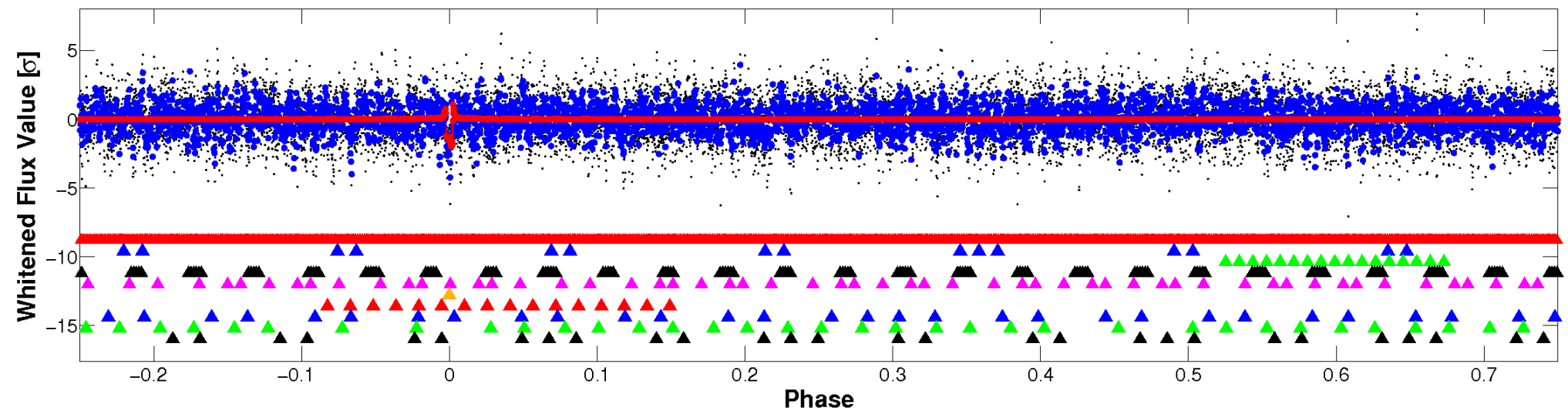


Non-Whitened Vs. Whitened Light Curve

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

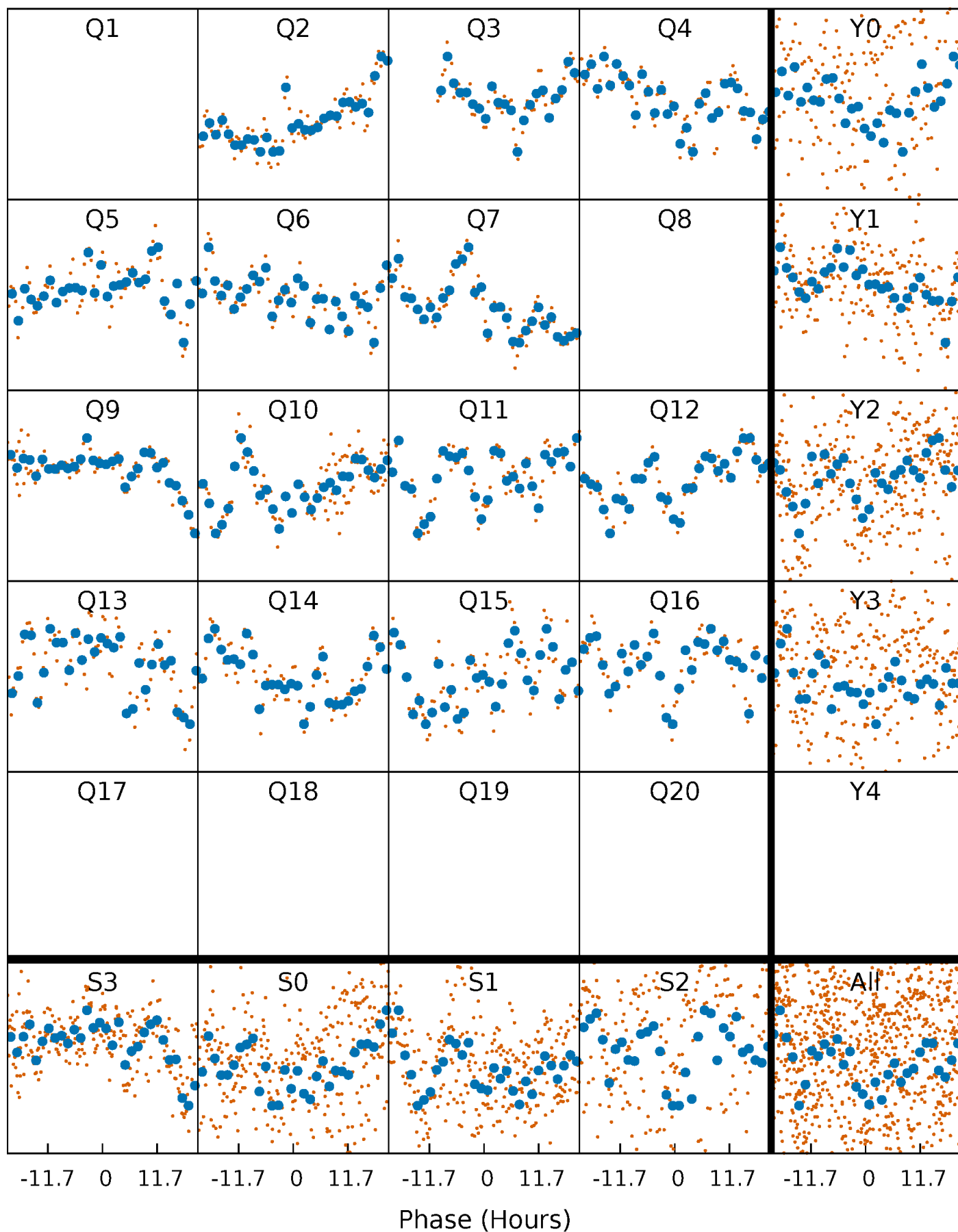


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



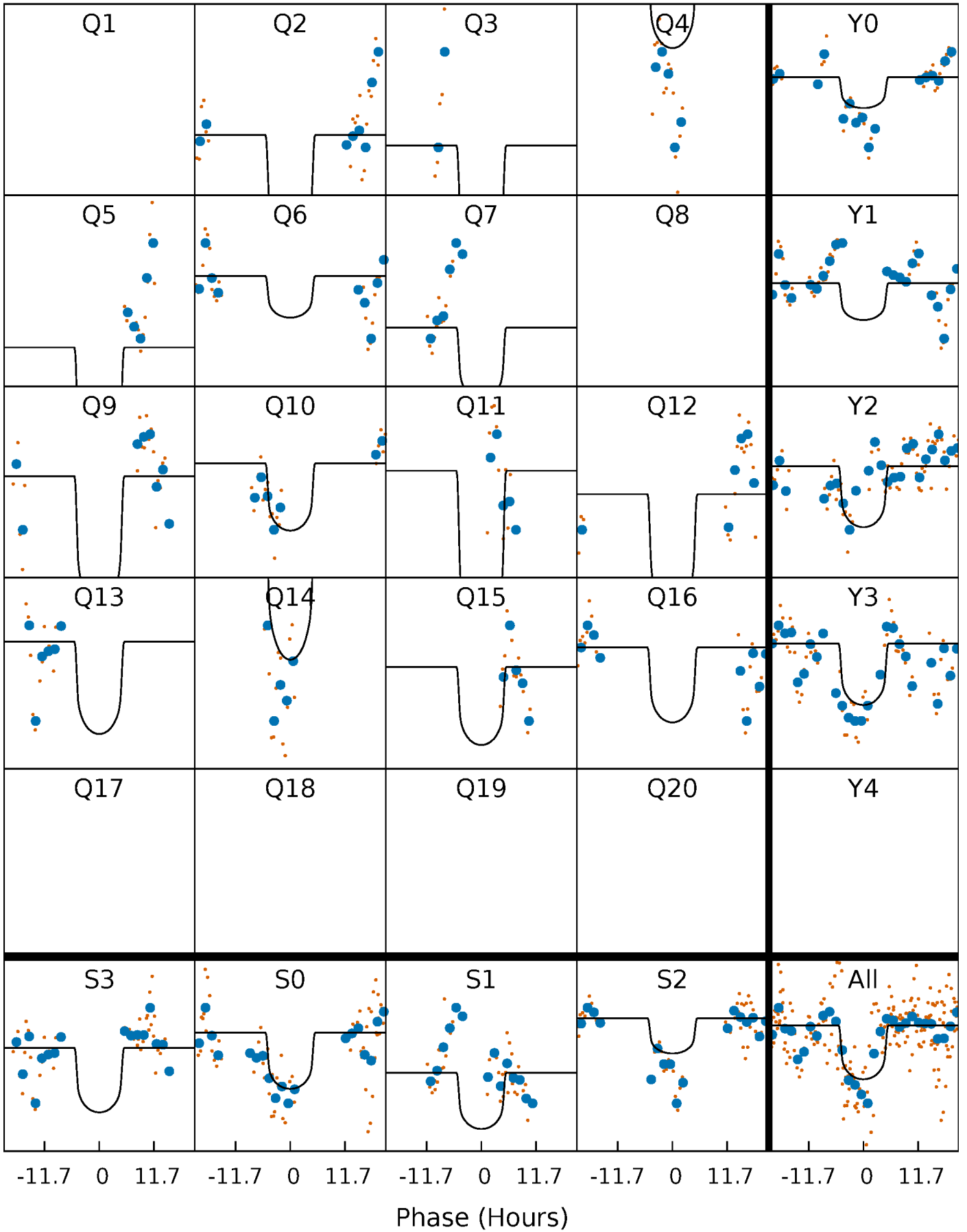
PDC Quarter-Phased Transit Curves

TCE 003122188-06 P= 89.261039 Days $T_0=192.502994$ (BKJD)



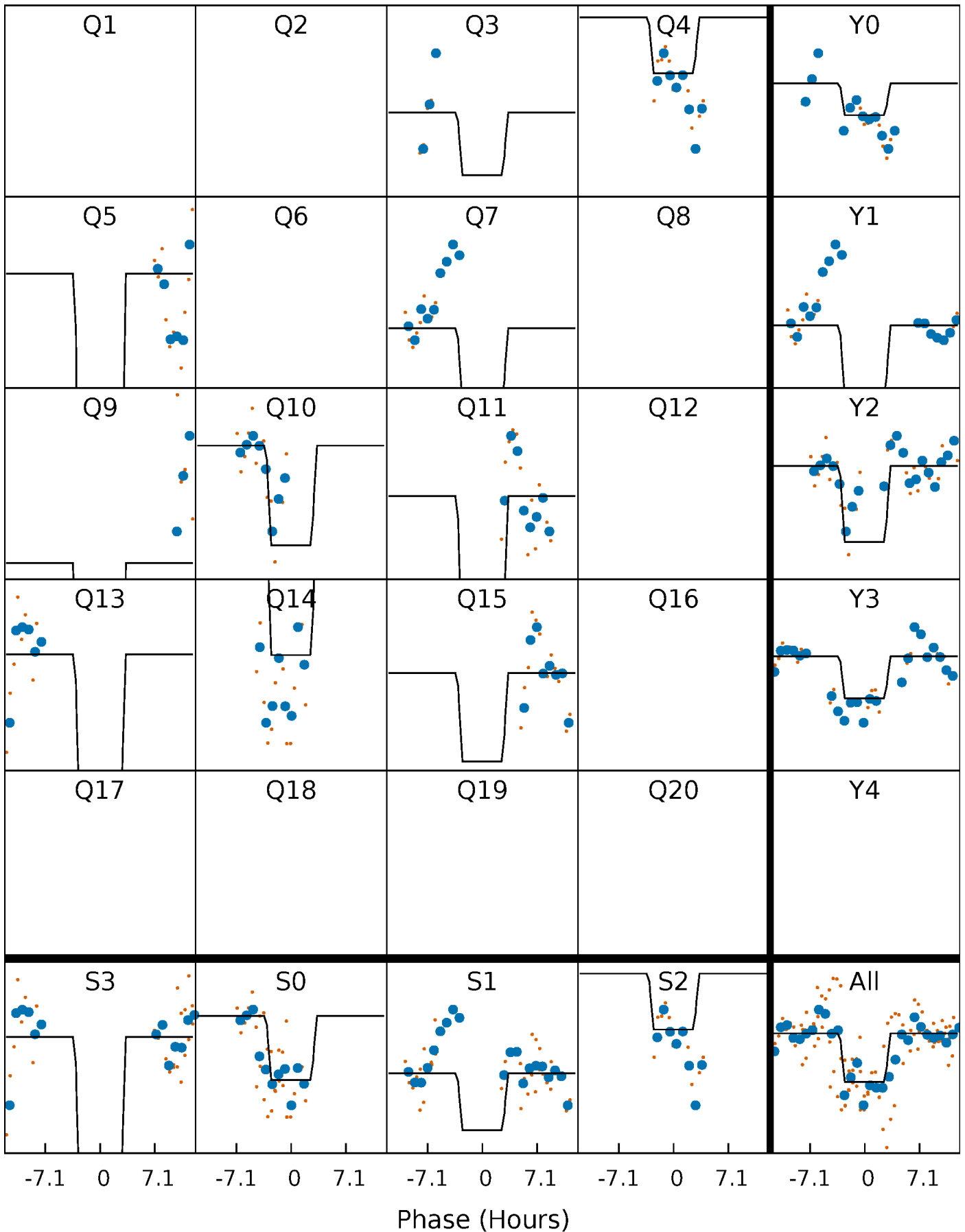
DV Quarter-Phased Transit Curves

TCE 003122188-06 P= 89.261039 Days $T_0=192.502994$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

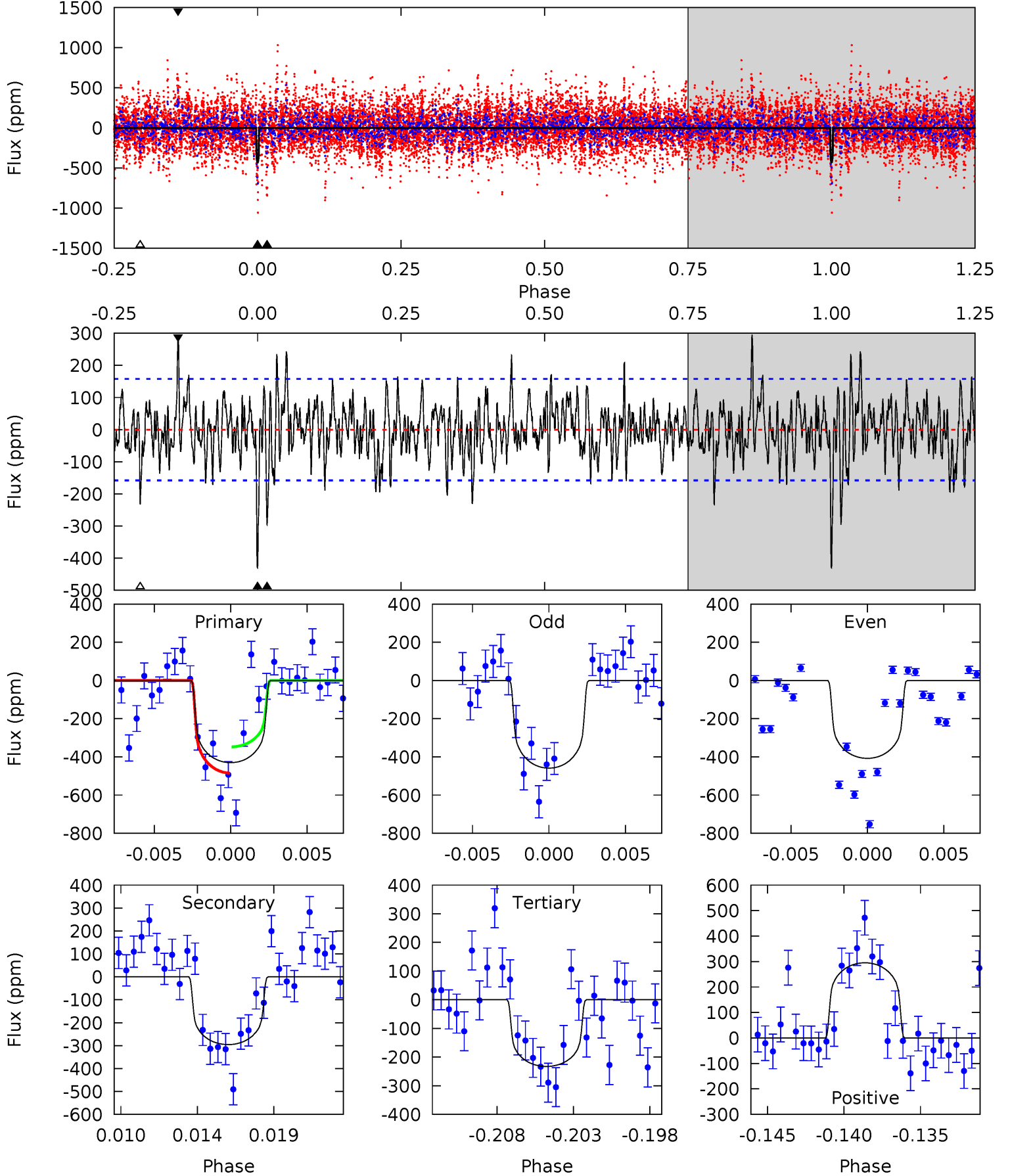
TCE 003122188-06 P= 89.263737 Days $T_0=192.425967$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-06, P = 89.261039 Days, E = 103.241955 Days

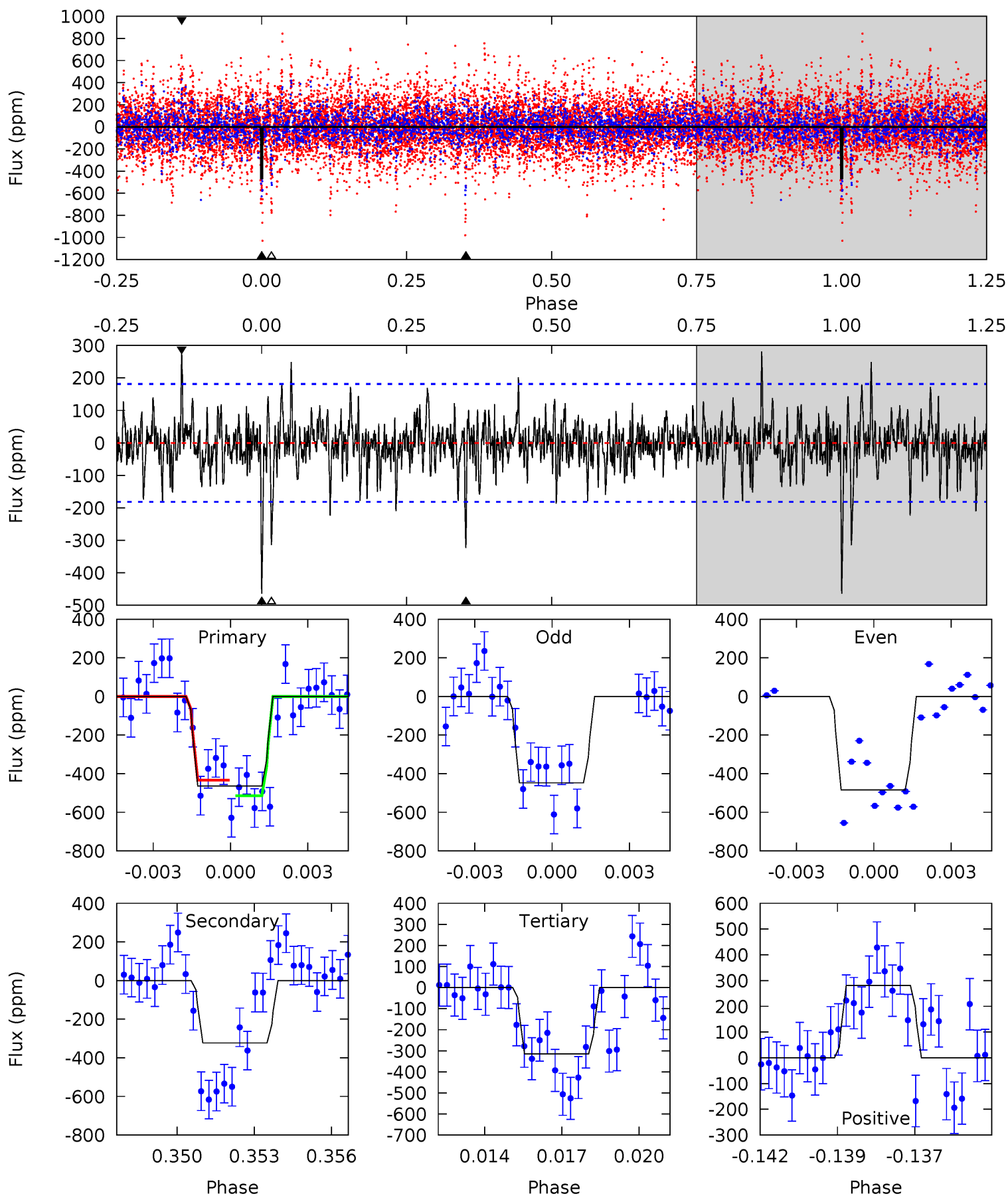
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	9.66	7.60	9.65	5.16	2.82	2.30	6.46	4.42	2.05	0.01	0.84	0.53	0.41	2.19



Alt Model-Shift Uniqueness Test

003122188-06, P = 89.263737 Days, E = 103.162230 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	9.37	9.12	8.16	5.26	2.98	1.70	4.34	5.30	0.25	1.21	0.54	0.88	0.38	1.13



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-295 ± 31	$9.06^{+2.92}_{-2.89}$	1034^{+40}_{-80}	5234^{+915}_{-561}	456^{+497}_{-197}
Alt.	-323 ± 34	$9.41^{+2.84}_{-3.05}$	1033^{+46}_{-88}	5237^{+861}_{-496}	454^{+517}_{-189}

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 $A_{obs} \gg 1.0$

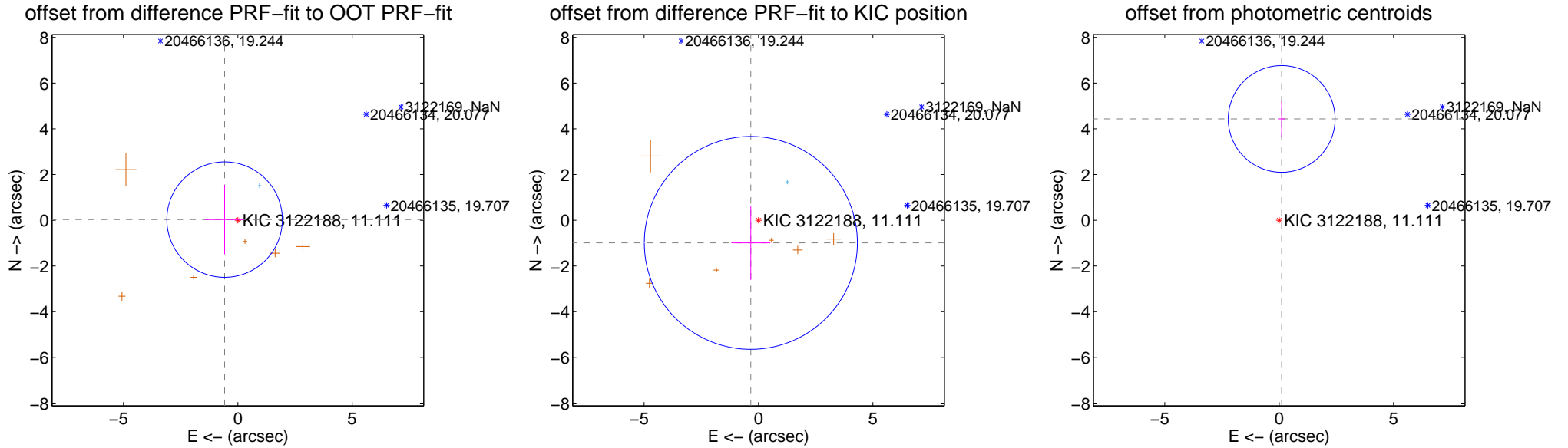
DV Centroid Data

Supplemental centroid analysis for 003122188-06. **Kepler magnitude: 11.11.** Transit SNR 9.64

There are 1 quarters with good PRF difference image offsets

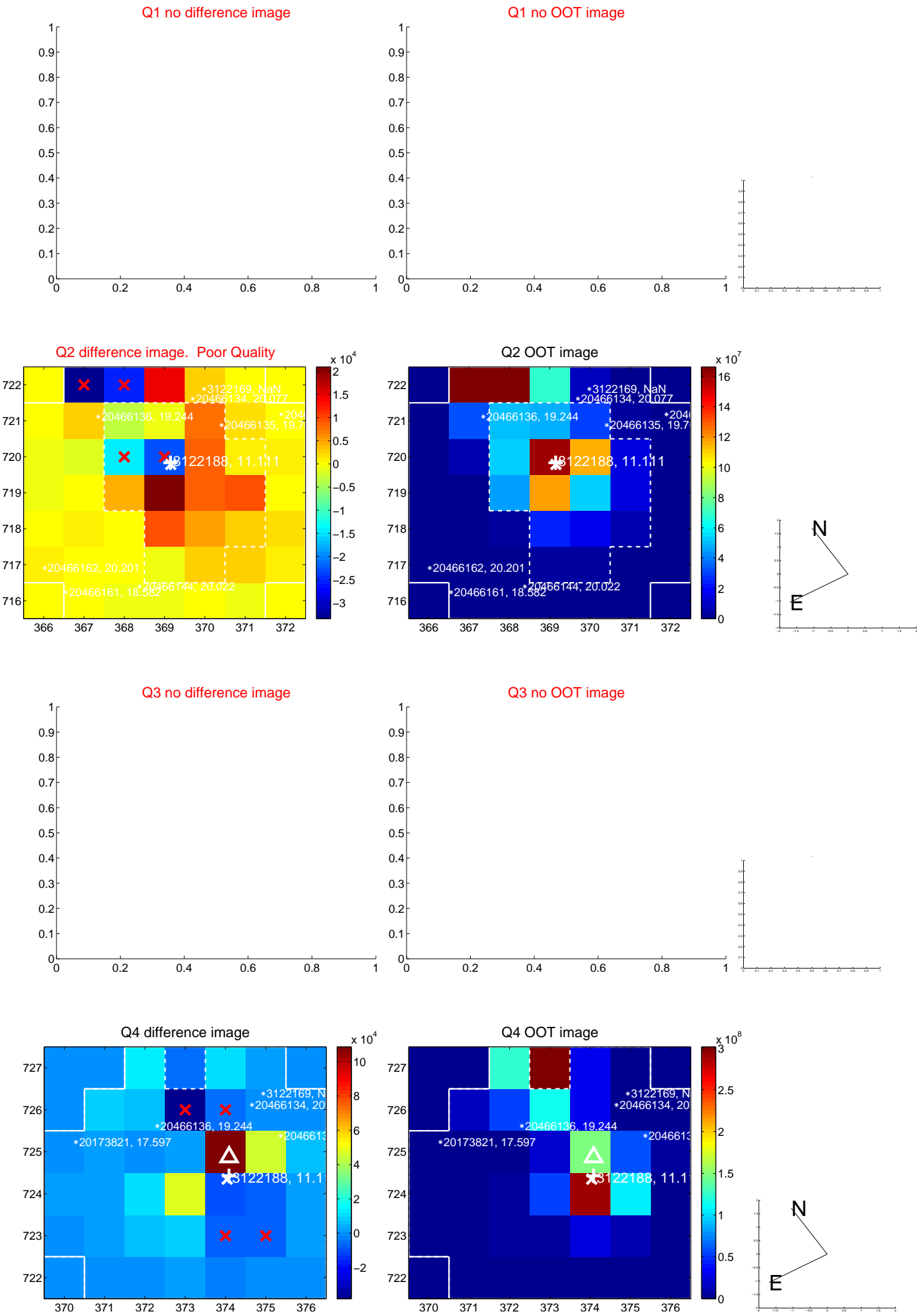
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.579 ± 0.841	0.69	0.578 ± 0.852	0.029 ± 1.517
PRF-fit source offset from KIC position	1.046 ± 1.552	0.67	0.335 ± 0.853	-0.991 ± 1.618
photometric centroid source offset	4.43 ± 0.78	5.70	-0.11 ± 0.16	4.43 ± 0.78

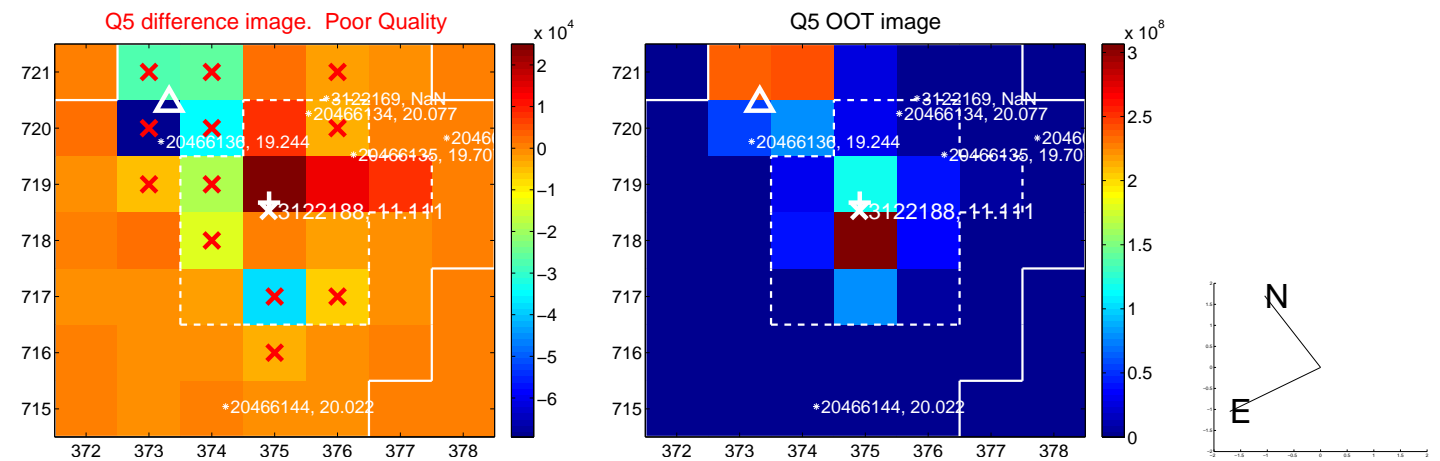


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

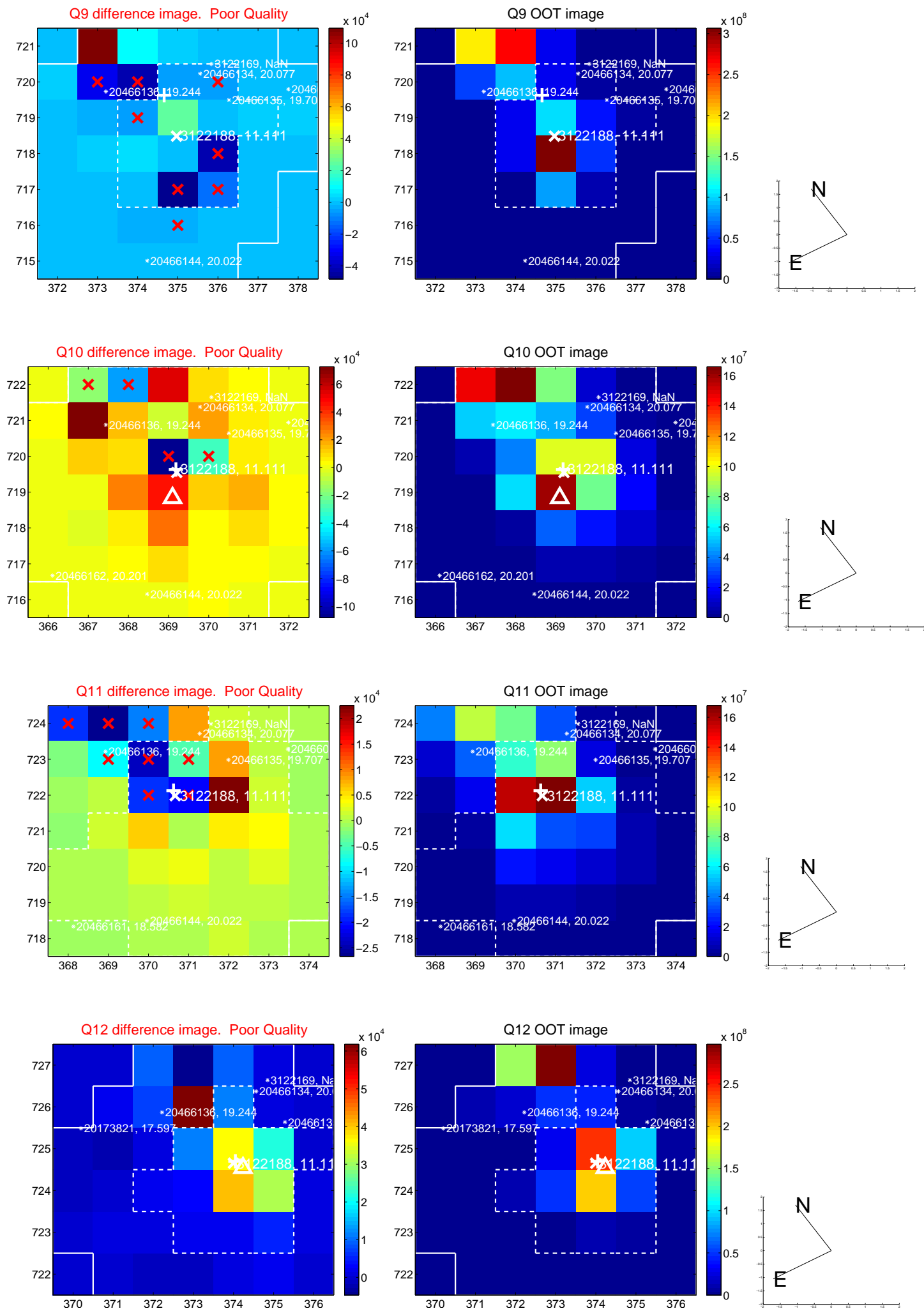
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



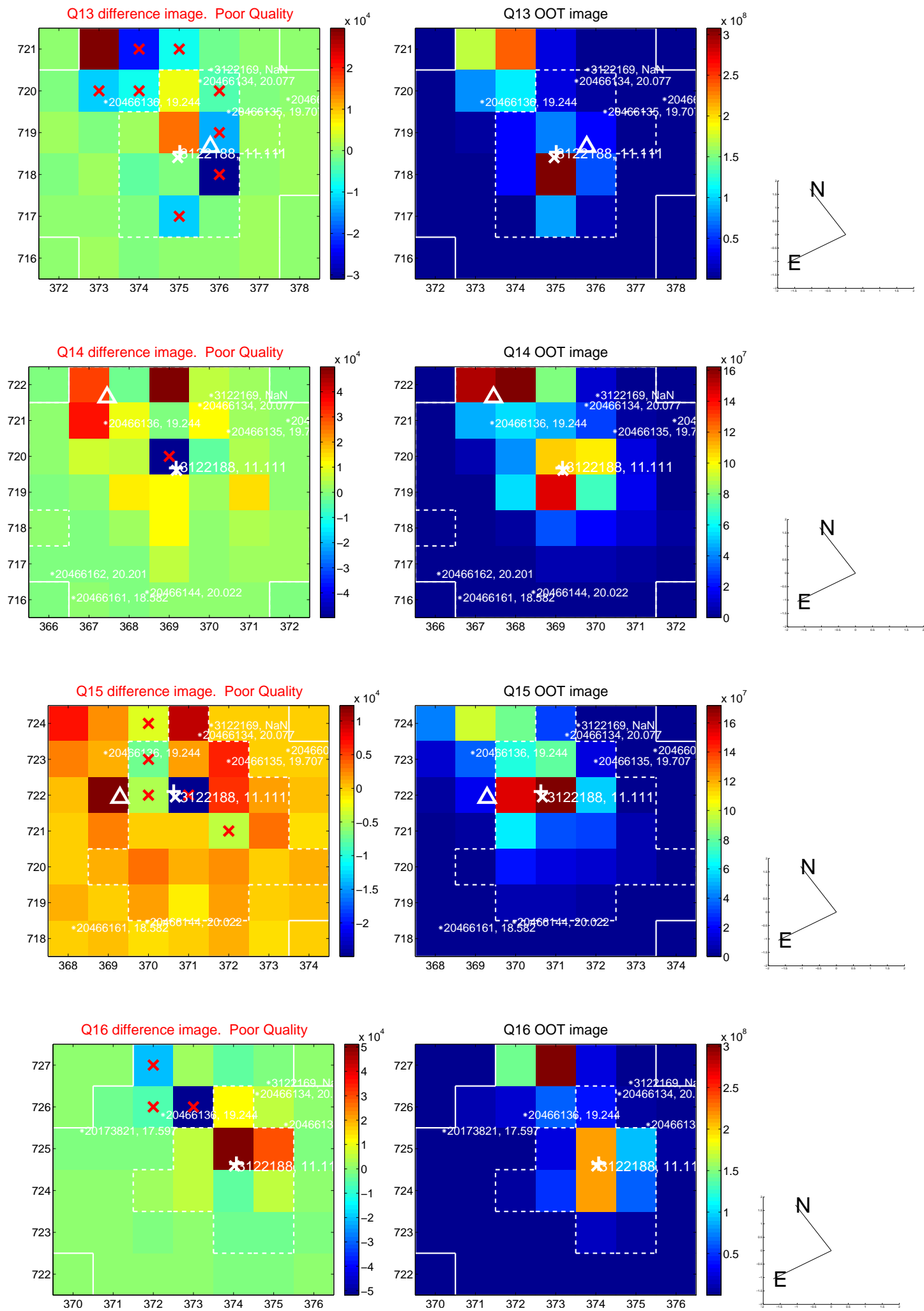
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



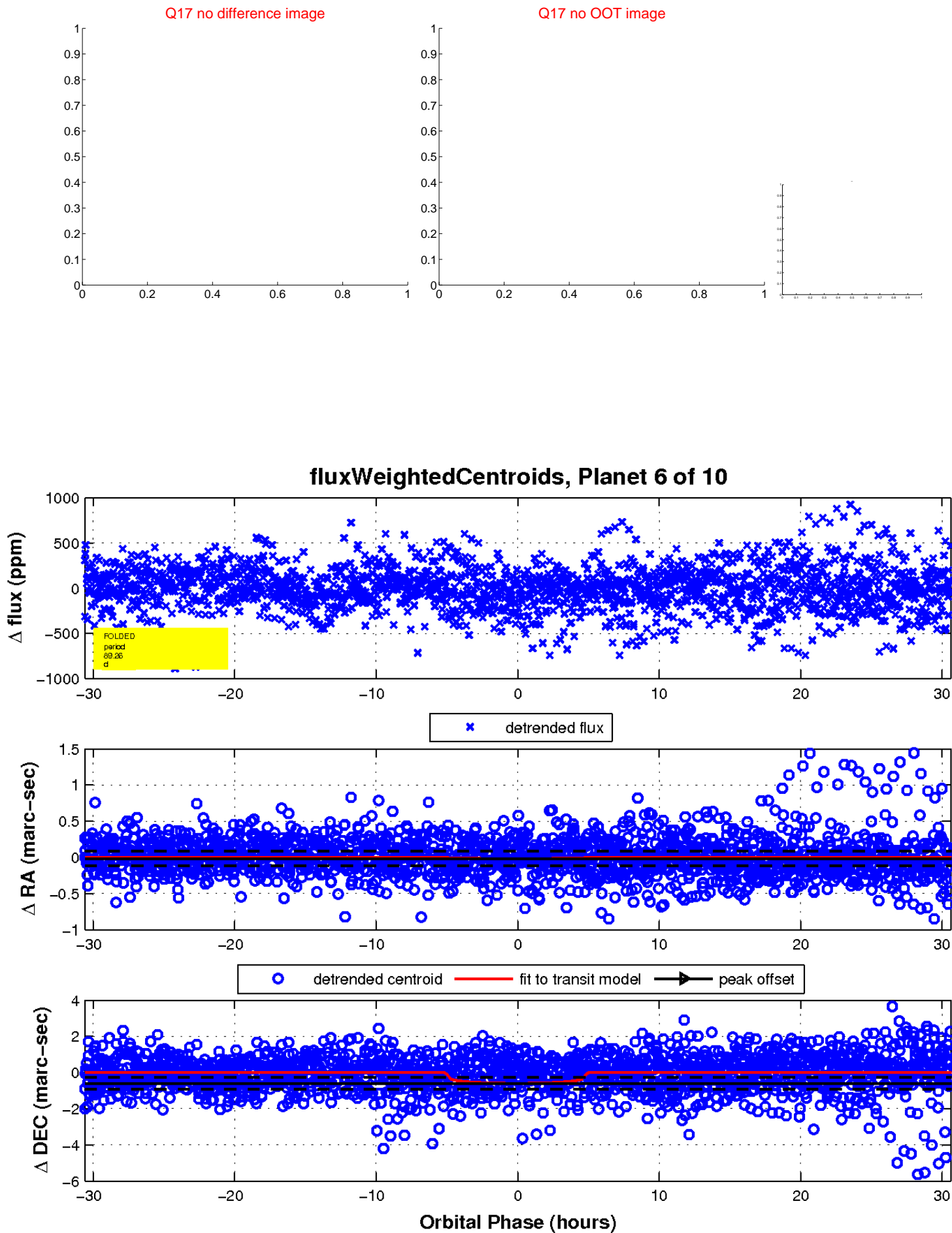
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



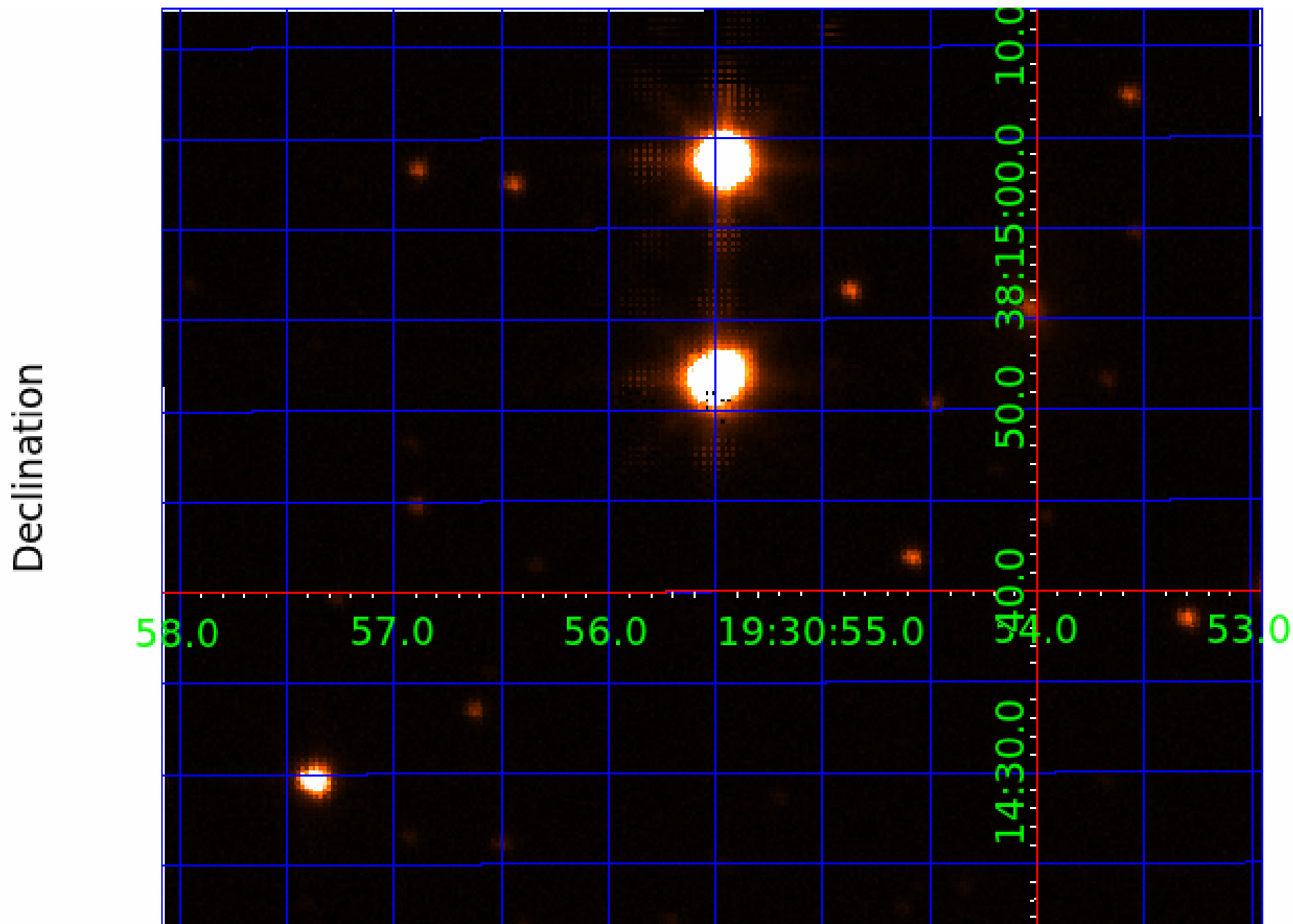
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

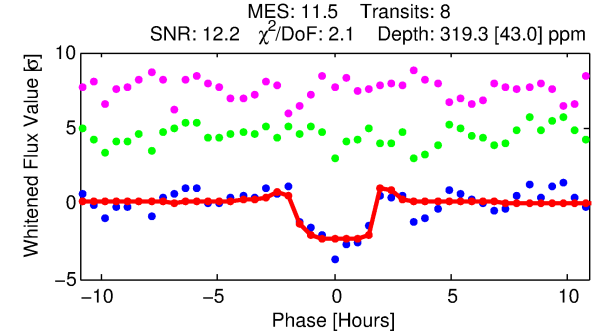
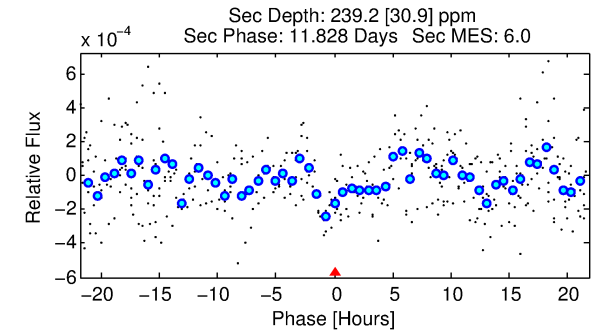
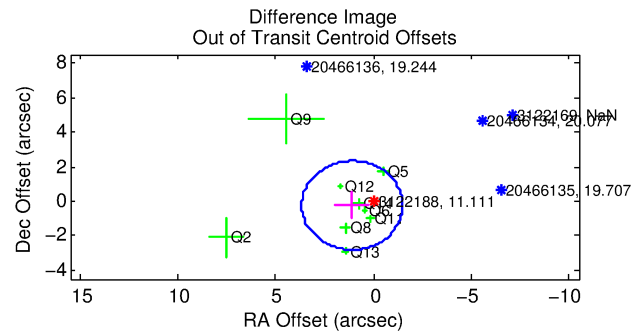
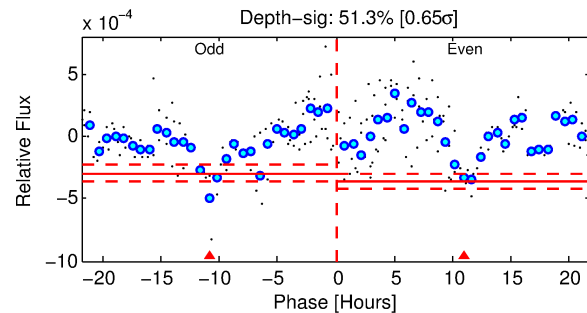
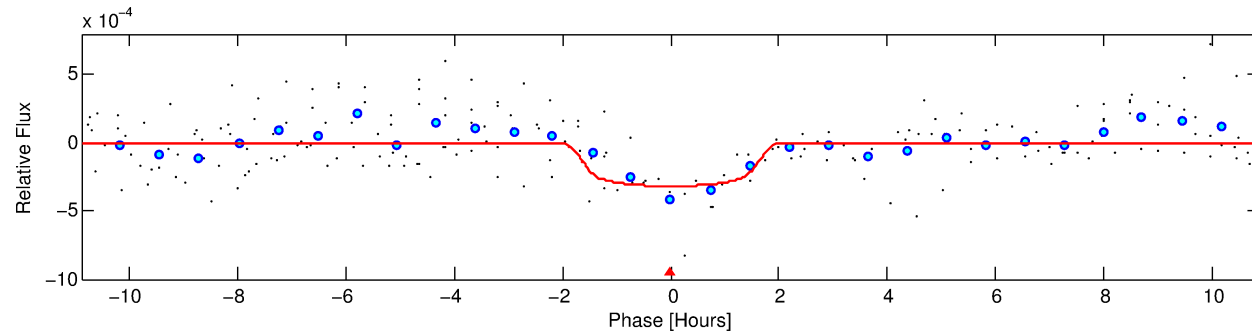
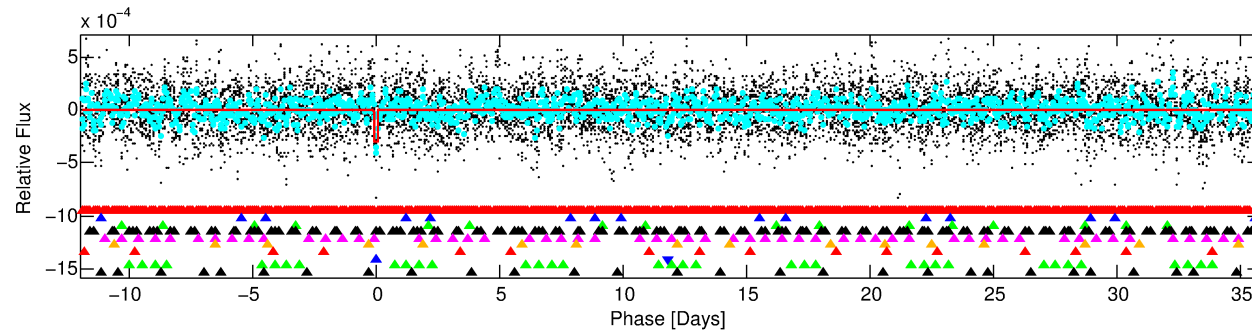
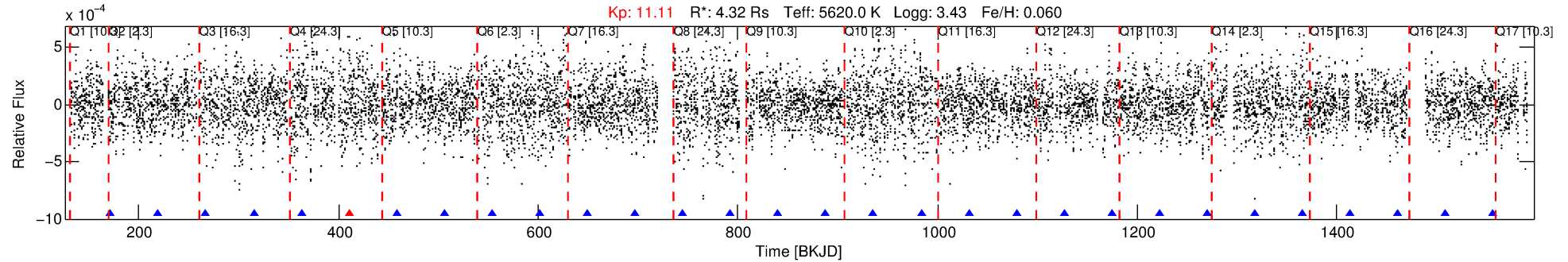
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-08

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 8 of 10 Period: 47.750 d



DV Fit Results:

Period = 47.75039 [0.00044] d
Epoch = 171.9108 [0.0057] BKJD
Rp/R* = 0.0192 [0.0059]
a/R* = 51.69 [67.74]
b = 0.88 [0.34]
Seff = 167.70 [81.65]
Teq = 918 [112] K
Rp = 9.03 [4.36] Re
a = 0.3150 [0.1019] AU
Ag = 160.20 [126.71] [1.26 σ]
Teffp = 5047 [794] K [5.15 σ]

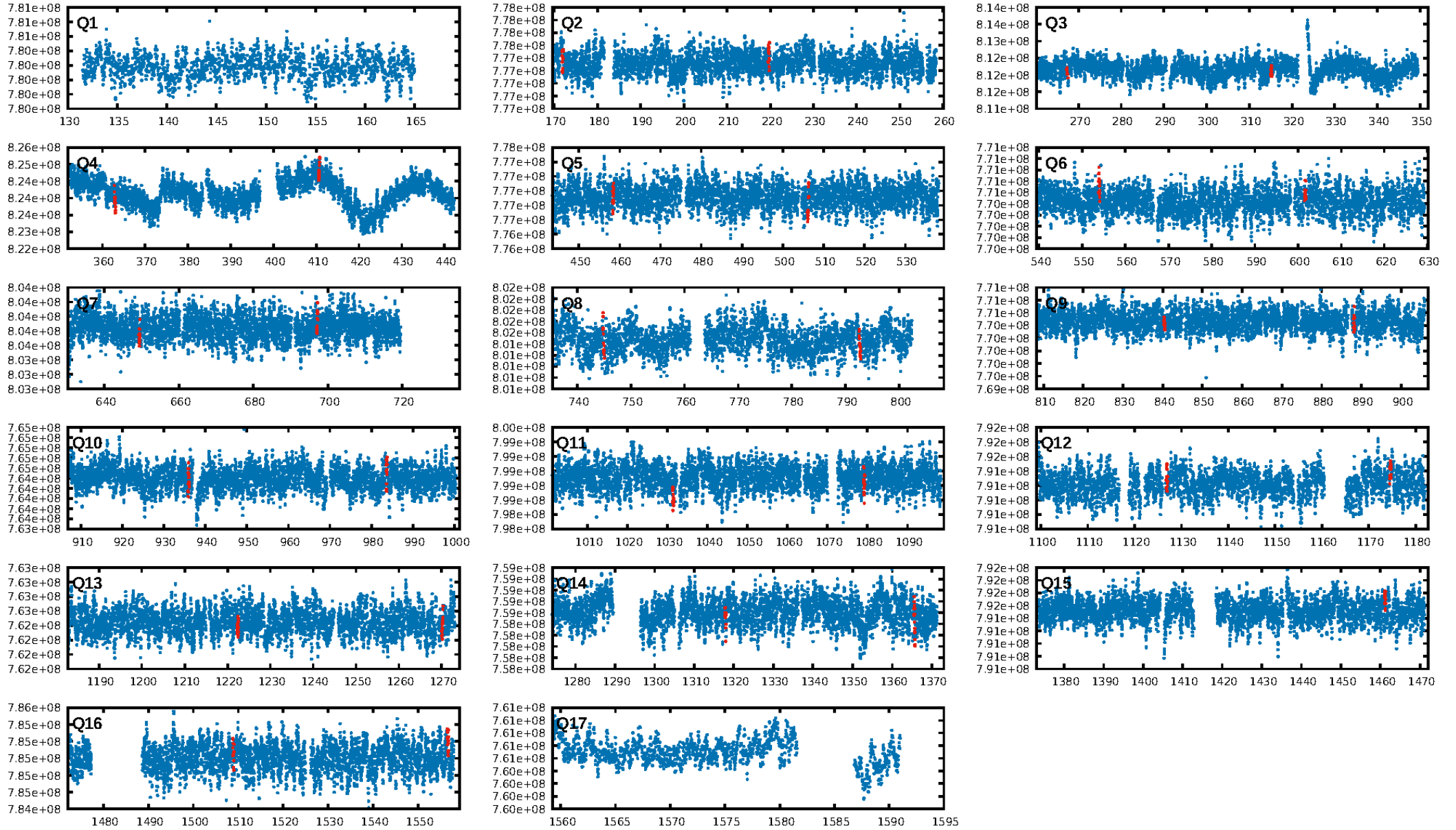
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [31.11 σ]
LongPeriod-sig: 100.0% [16.43 σ]
ModelChiSquare2-sig: 17.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.88 [7/8]
GhostDiagnostic-chr: -24.8
Centroid-sig: 0.9%
Centroid-so: 2.643 arcsec [3.45 σ]
OotOffset-rm: 1.122 arcsec [1.31 σ]
KicOffset-rm: 0.839 arcsec [1.01 σ]
OotOffset-st: 3/1/2/3 [9]
KicOffset-st: 3/1/2/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 0.43 [6/14]

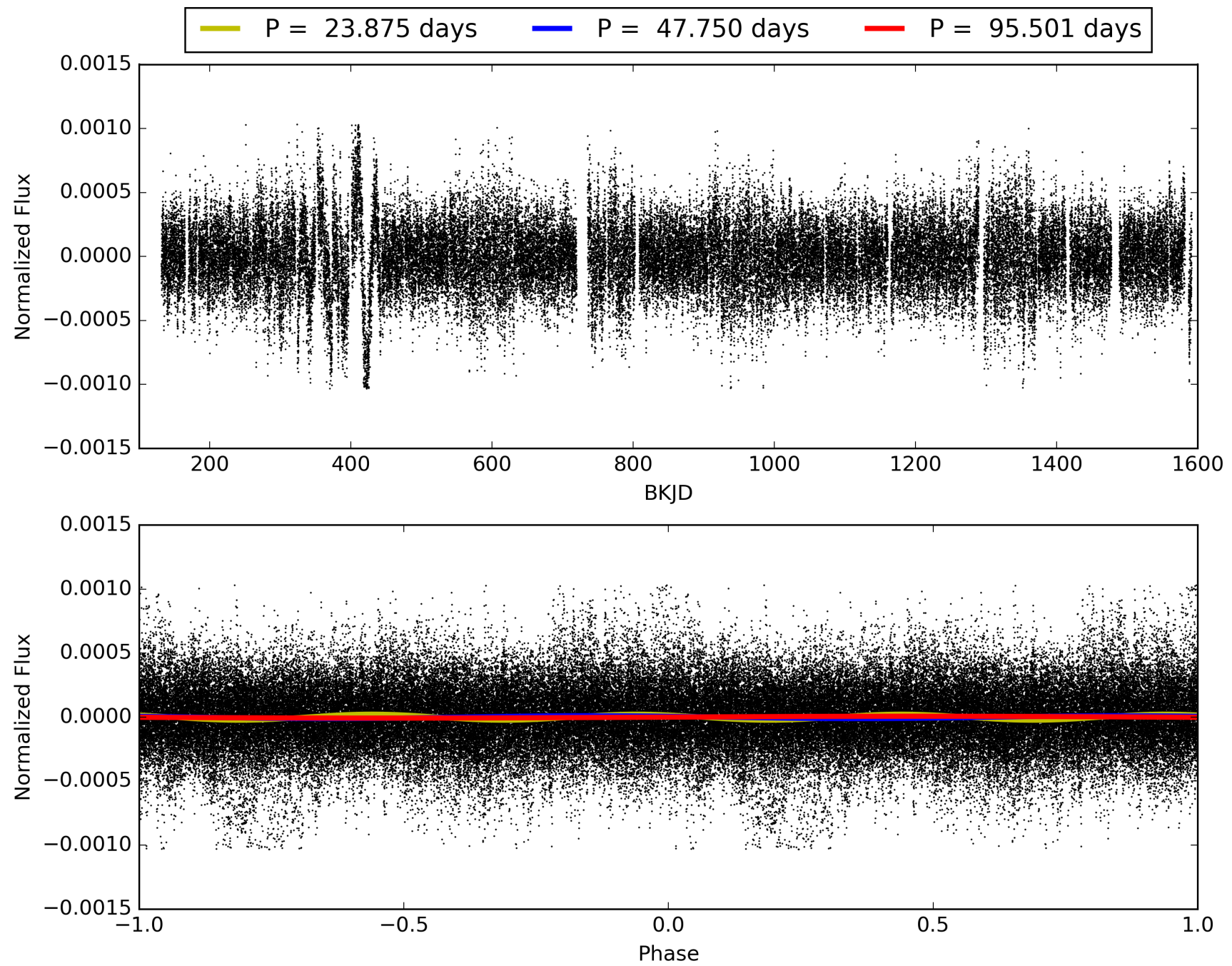
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:55 Z

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

TCE 003122188-08, PDC Light Curves

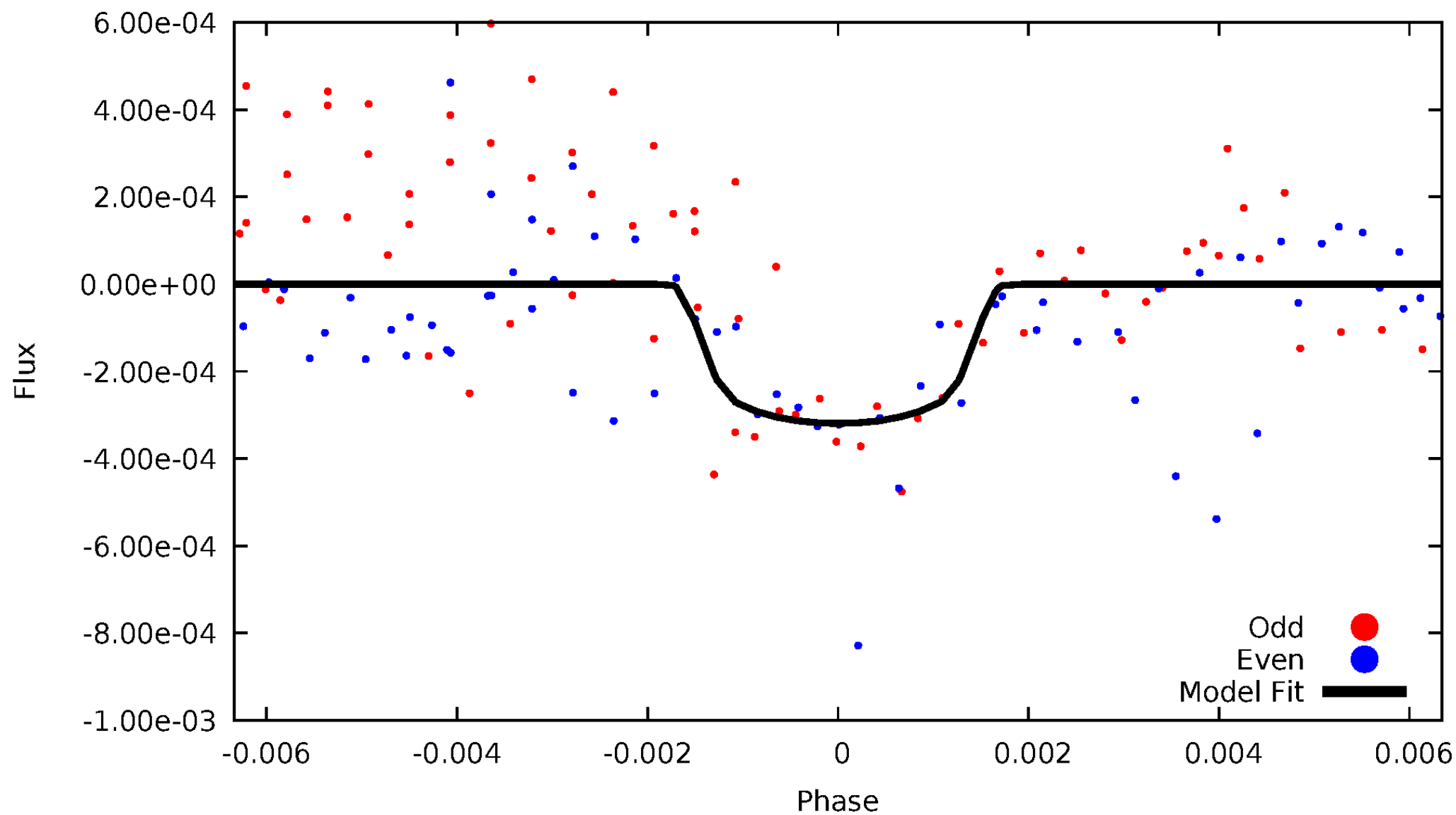


TCE 003122188-08



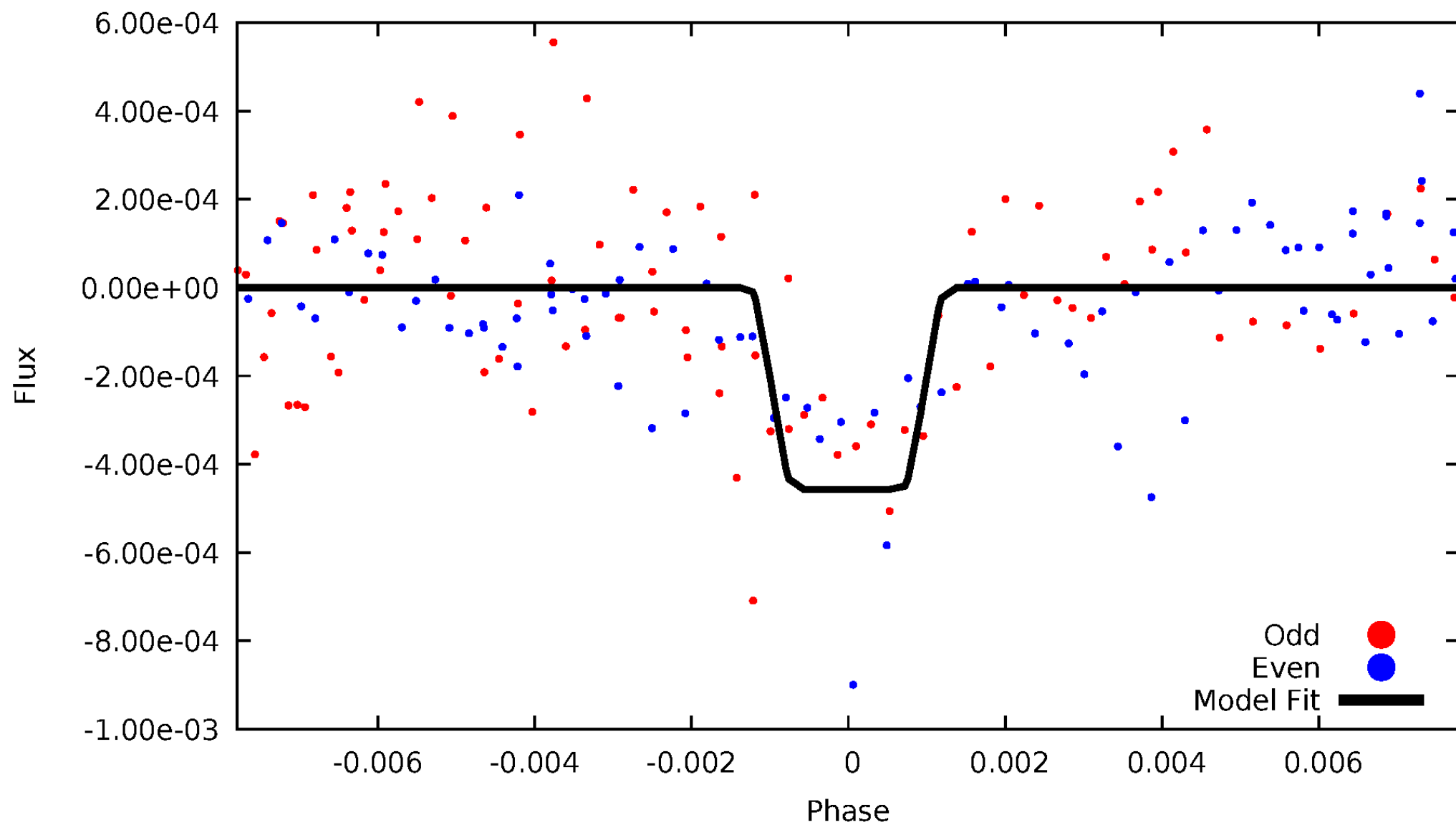
DV Odd/Even

TCE 003122188-08



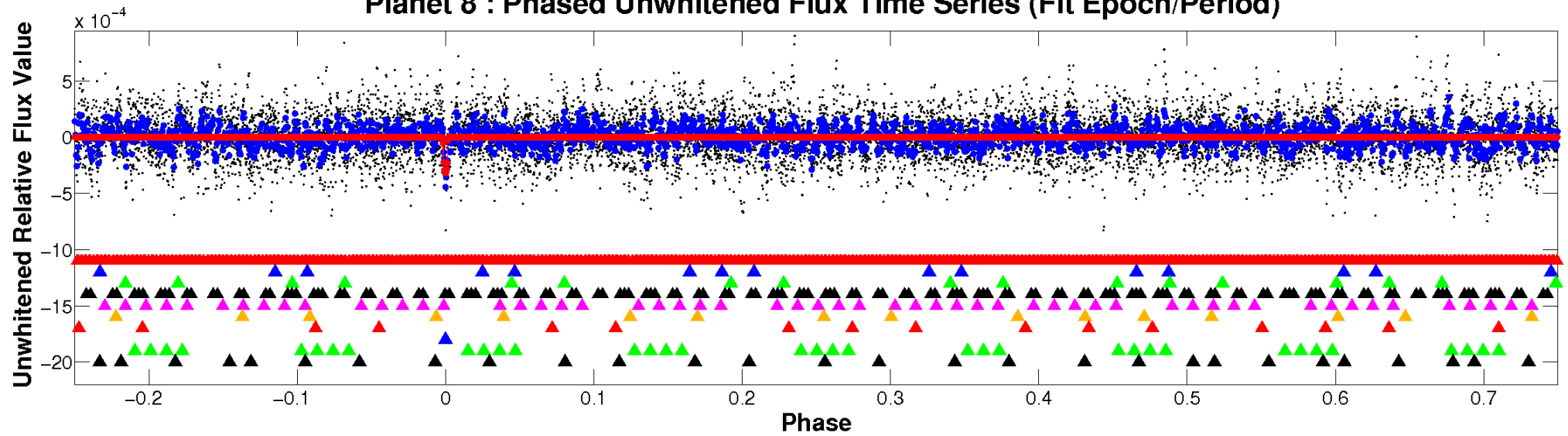
ALT Odd/Even

TCE 003122188-08

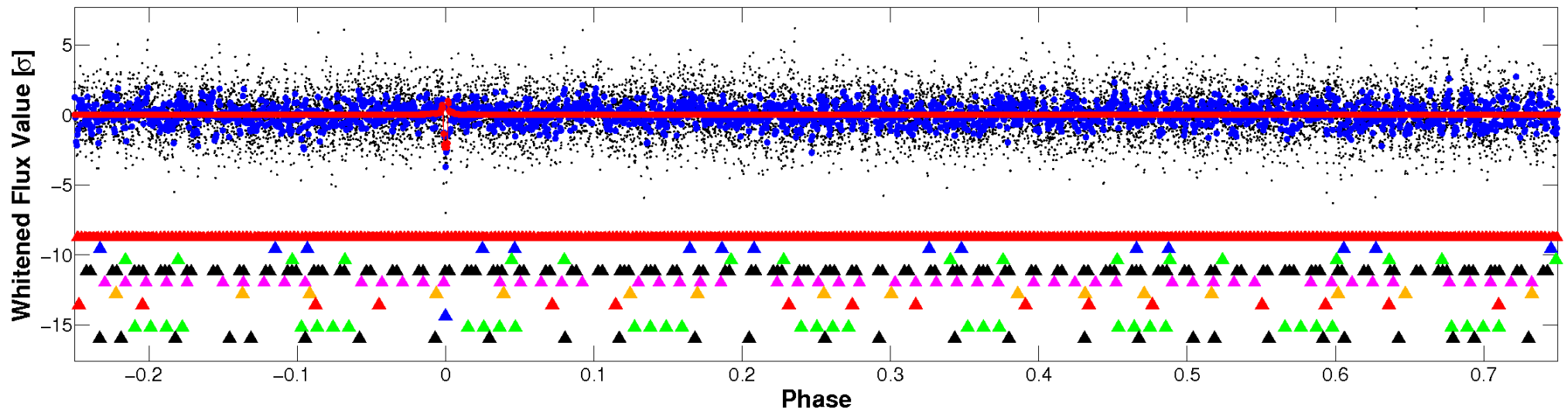


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

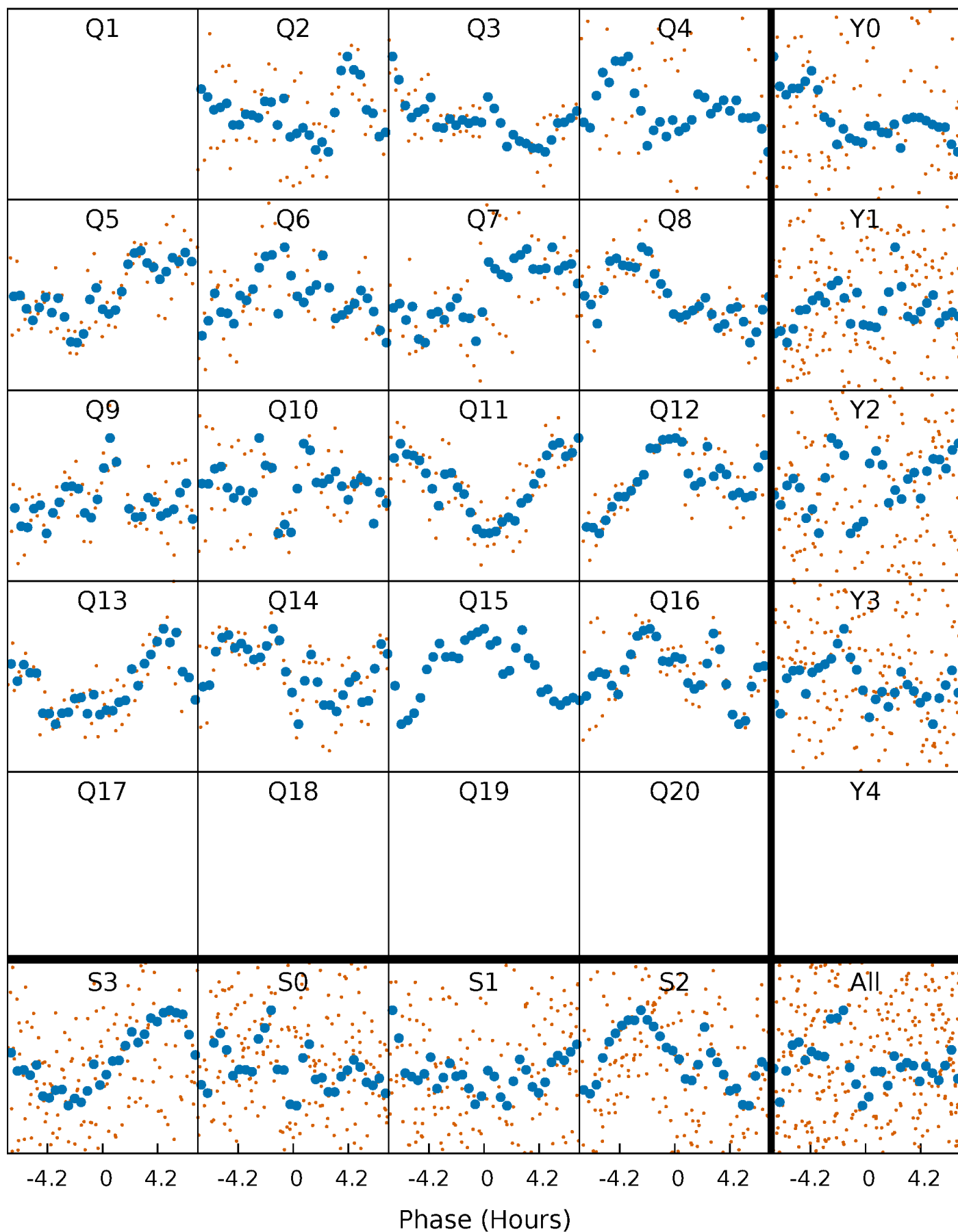


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



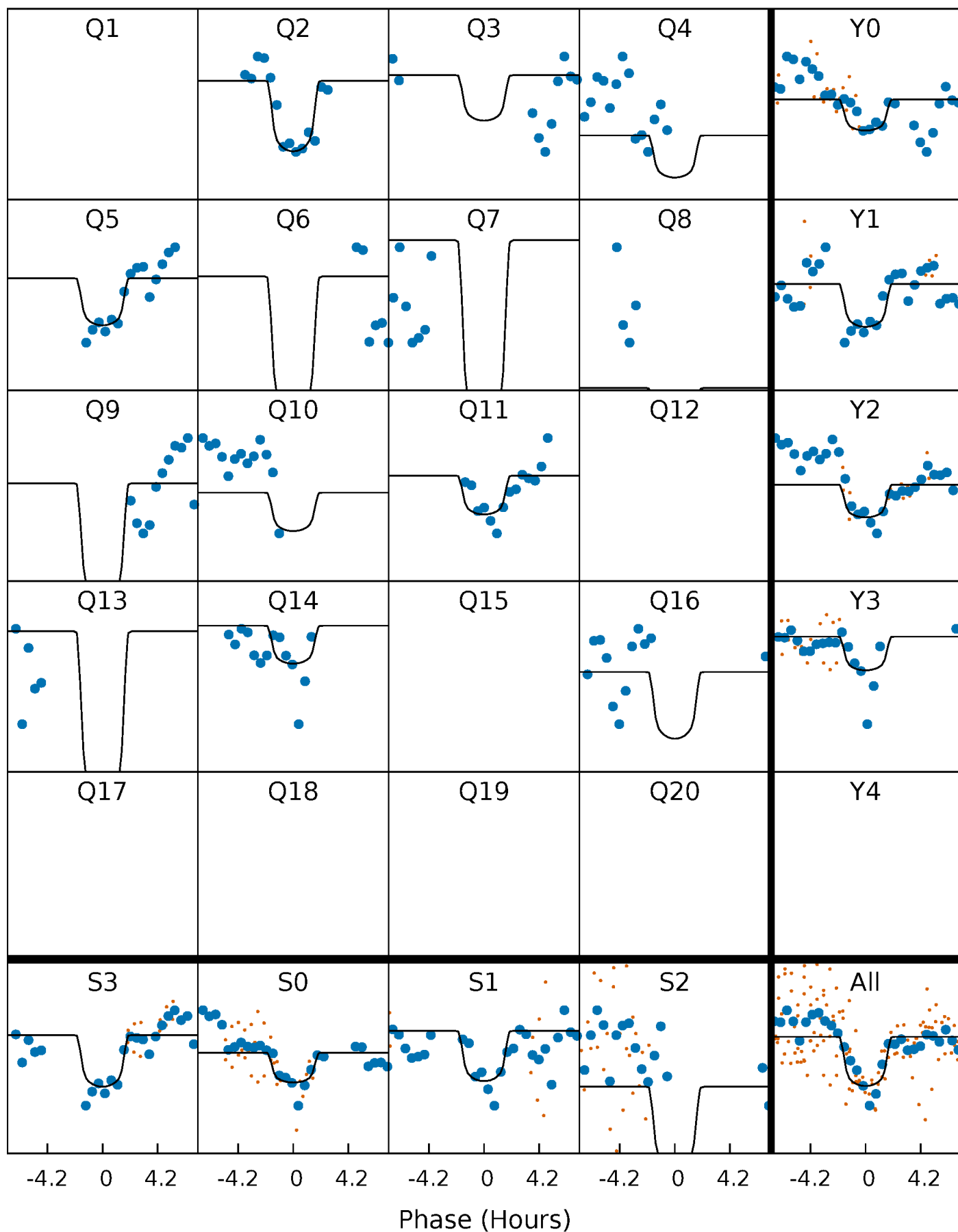
PDC Quarter-Phased Transit Curves

TCE 003122188-08 P= 47.750394 Days $T_0=171.910844$ (BKJD)



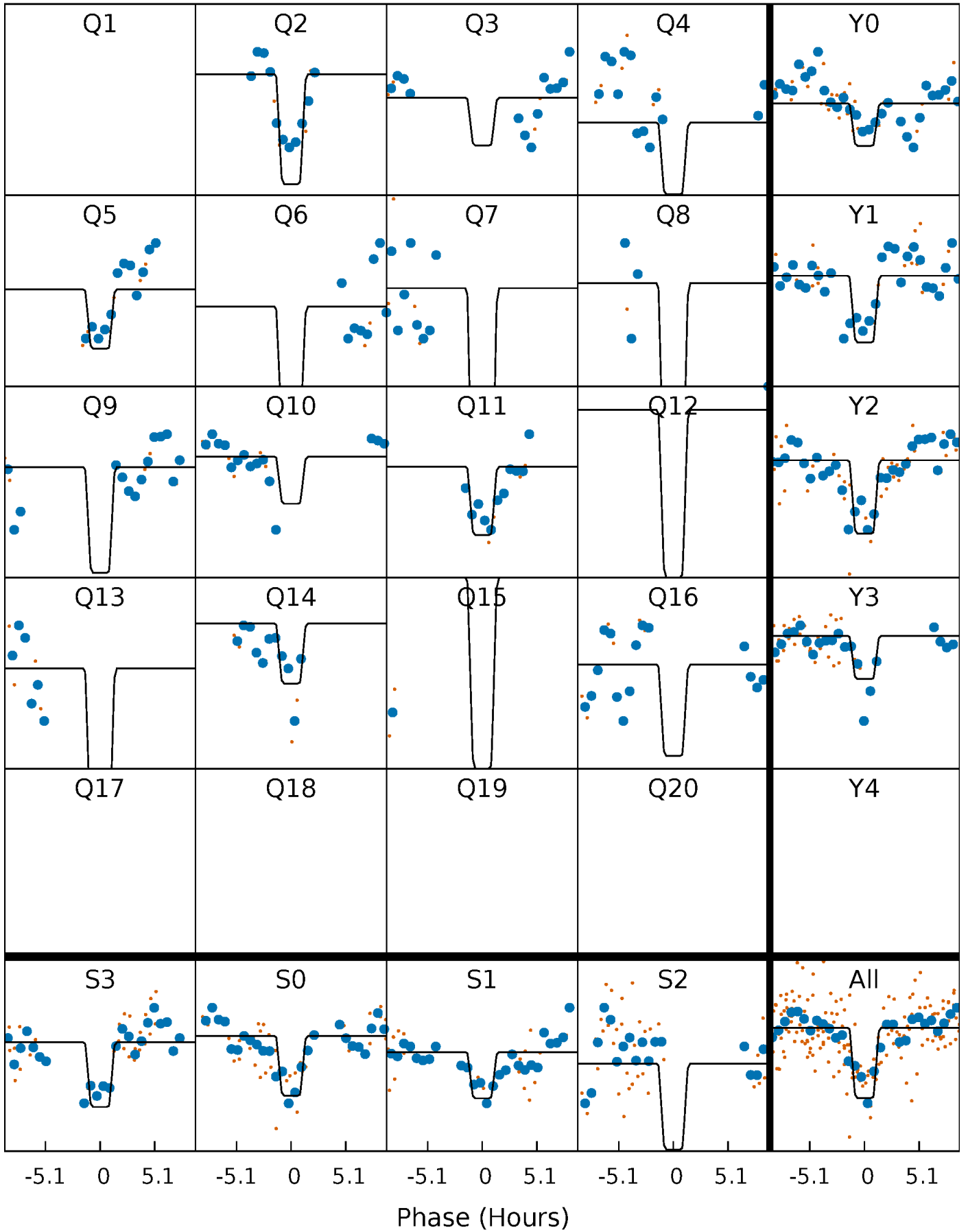
DV Quarter-Phased Transit Curves

TCE 003122188-08 P= 47.750394 Days $T_0=171.910844$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

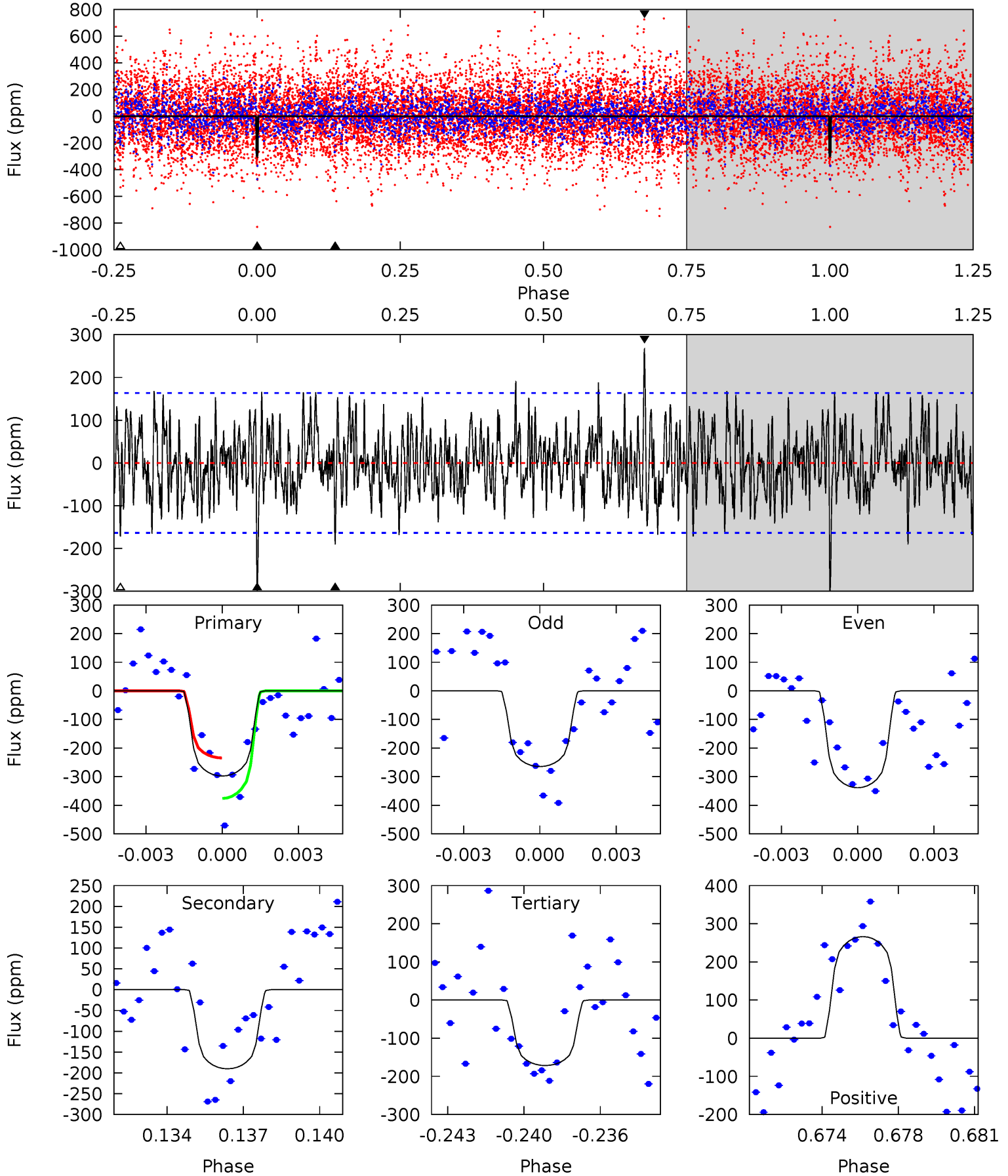
TCE 003122188-08 $P = 47.750478$ Days $T_0 = 171.915945$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-08, P = 47.750394 Days, E = 124.160450 Days

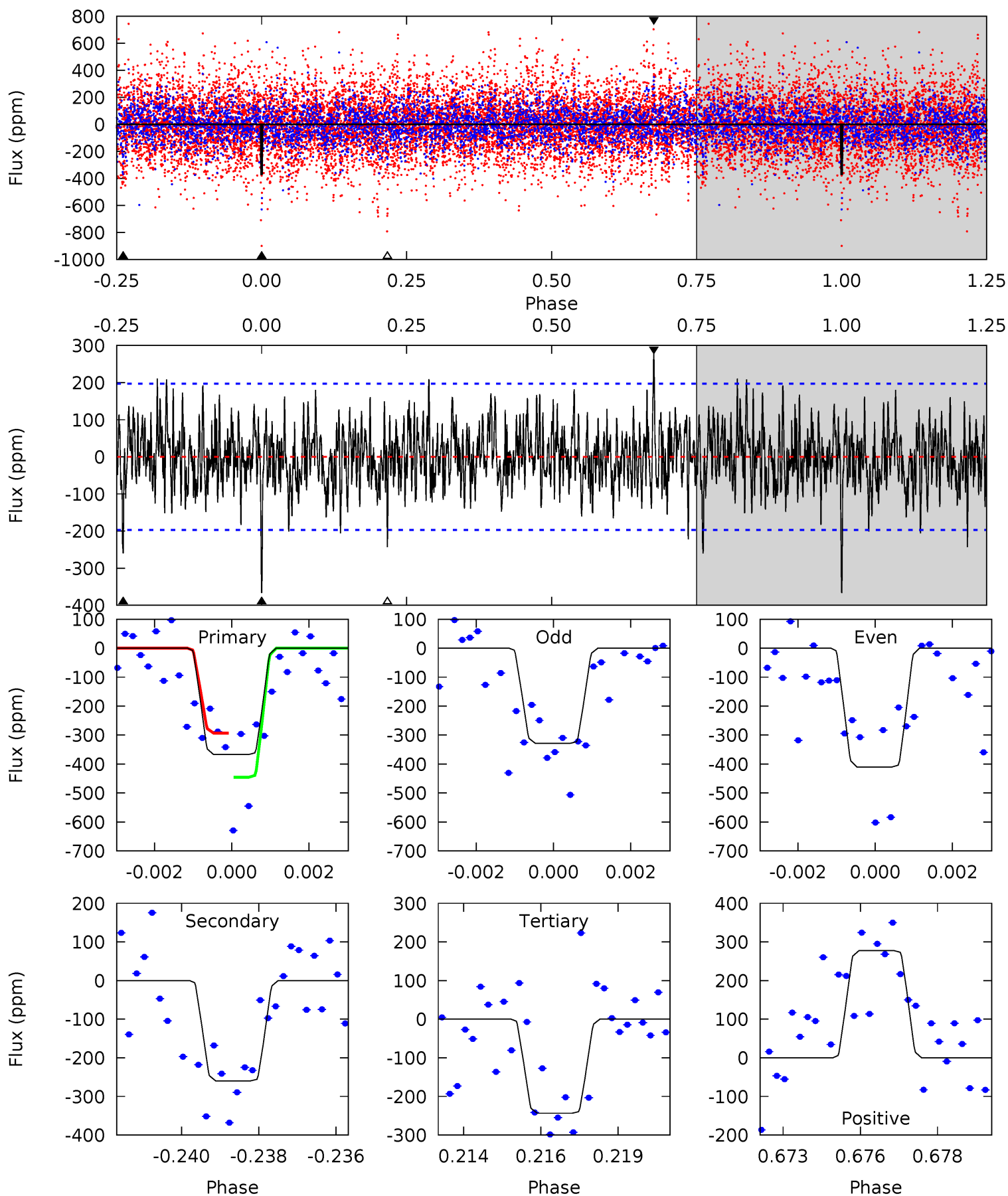
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.52	6.08	5.49	8.51	5.23	2.93	2.06	4.03	1.01	0.59	-2.43	1.16	0.79	0.47	2.25



Alt Model-Shift Uniqueness Test

003122188-08, P = 47.750478 Days, E = 124.165467 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.86	6.97	6.54	7.46	5.29	3.04	1.86	3.33	2.41	0.44	-0.48	1.08	0.88	0.43	2.05



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-190 ± 31	$8.46^{+3.04}_{-2.74}$	1271^{+55}_{-94}	4868^{+902}_{-524}	141^{+171}_{-65}
Alt.	-260 ± 37	$9.41^{+3.11}_{-2.87}$	1273^{+51}_{-104}	4956^{+789}_{-475}	156^{+159}_{-68}

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 $A_{obs} \gg 1.0$

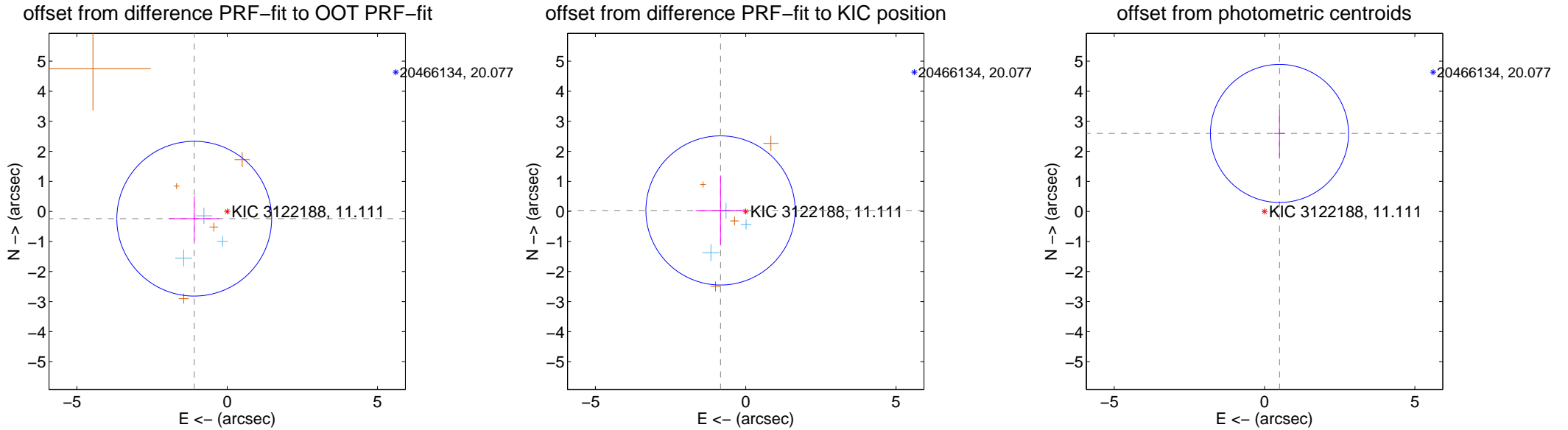
DV Centroid Data

Supplemental centroid analysis for 003122188-08. **Kepler magnitude: 11.11.** Transit SNR 12.22

There are 3 quarters with good PRF difference image offsets

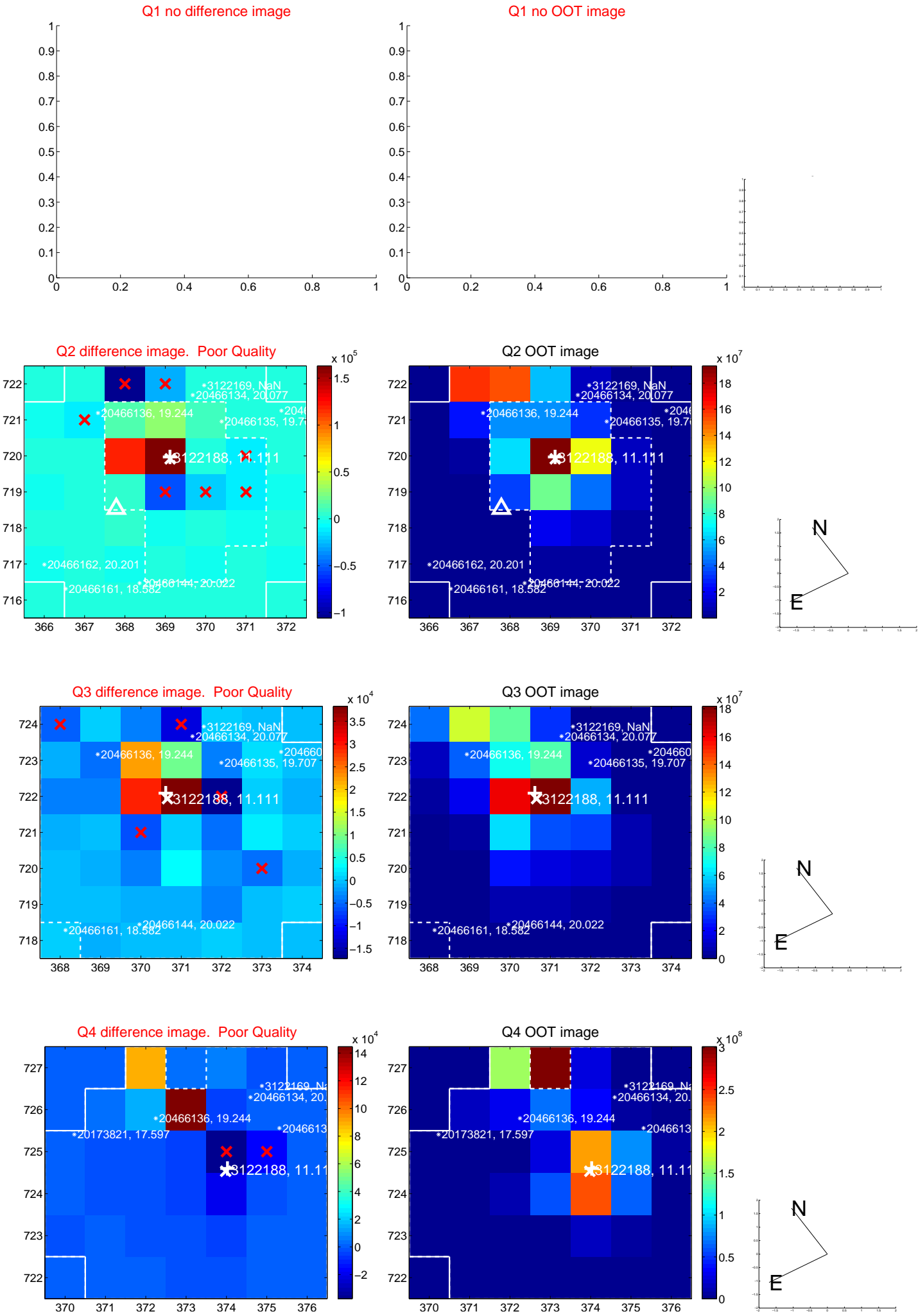
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.122 ± 0.858	1.31	1.095 ± 0.847	-0.241 ± 0.752
PRF-fit source offset from KIC position	0.839 ± 0.827	1.01	0.838 ± 0.826	0.033 ± 1.165
photometric centroid source offset	2.64 ± 0.77	3.45	-0.50 ± 0.18	2.60 ± 0.78

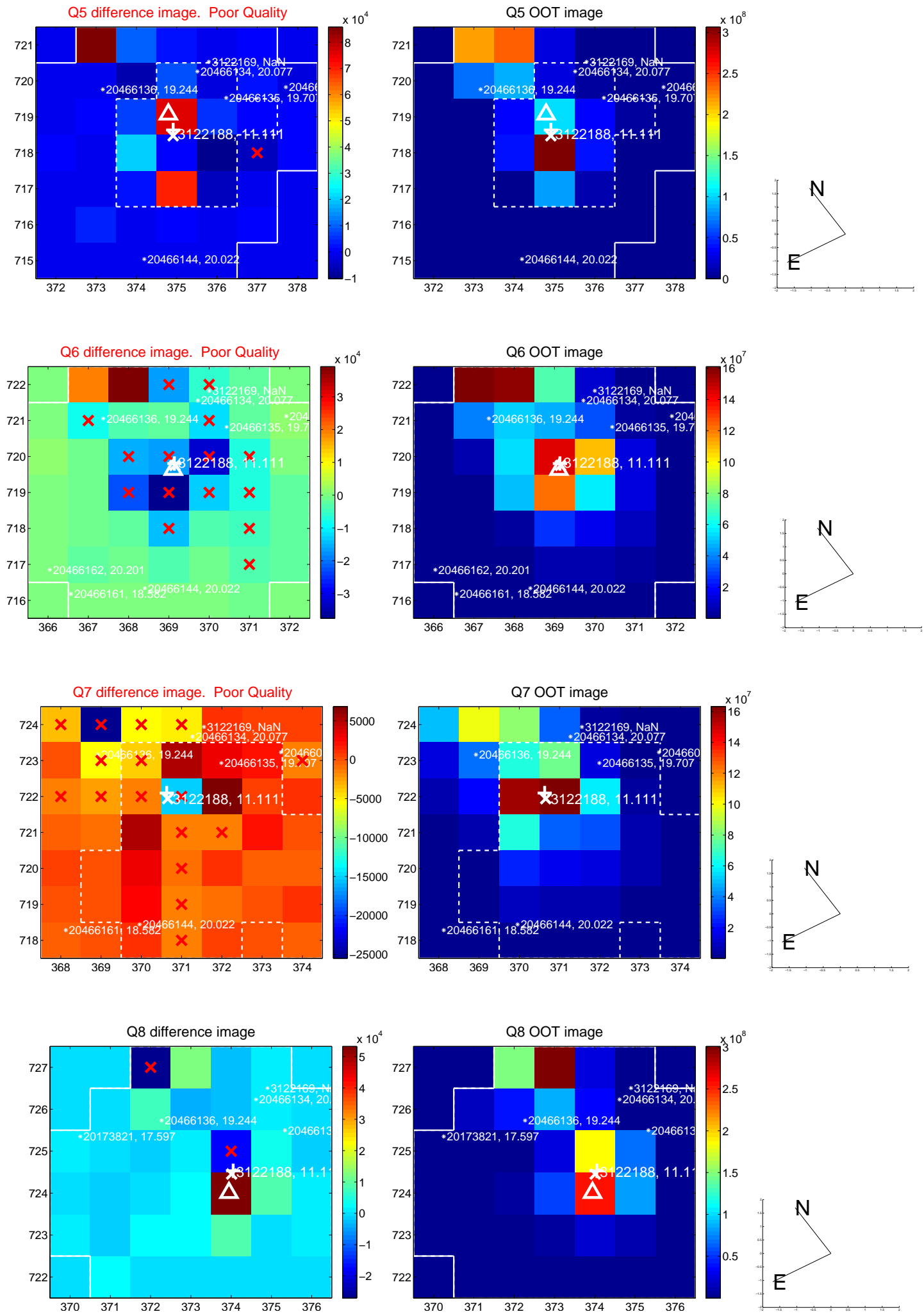


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

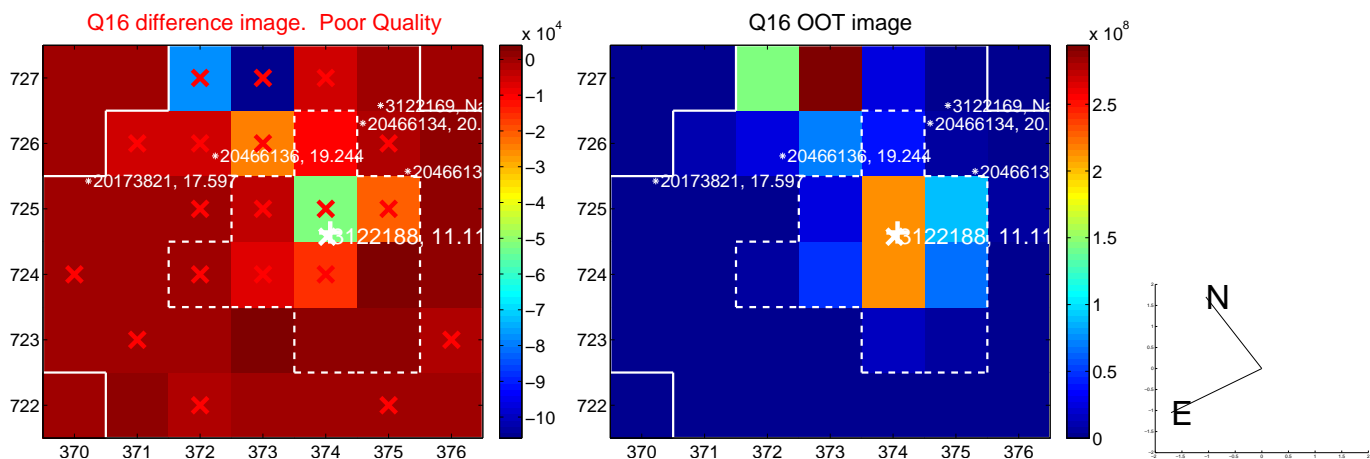
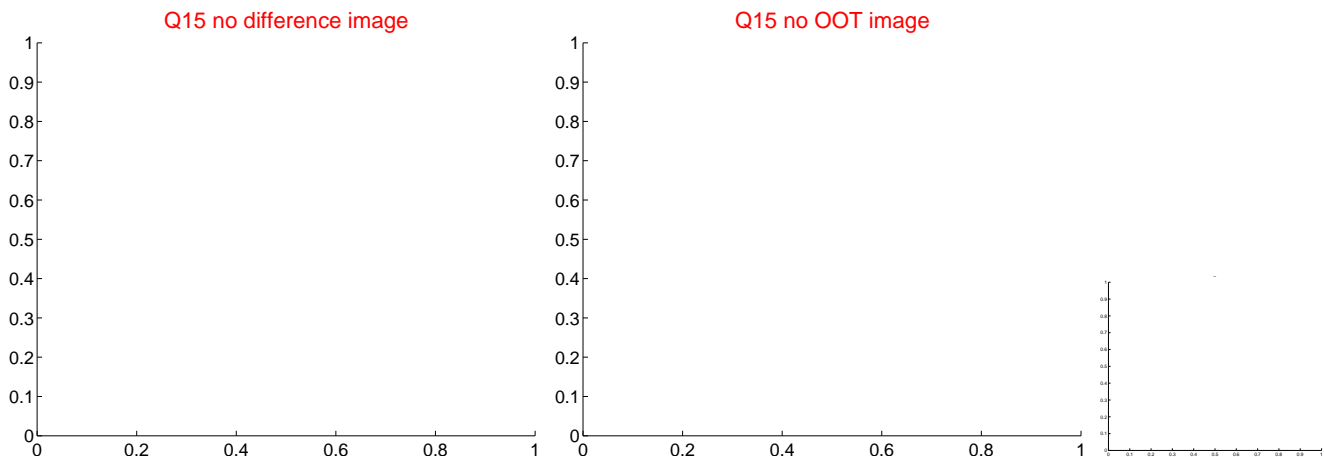
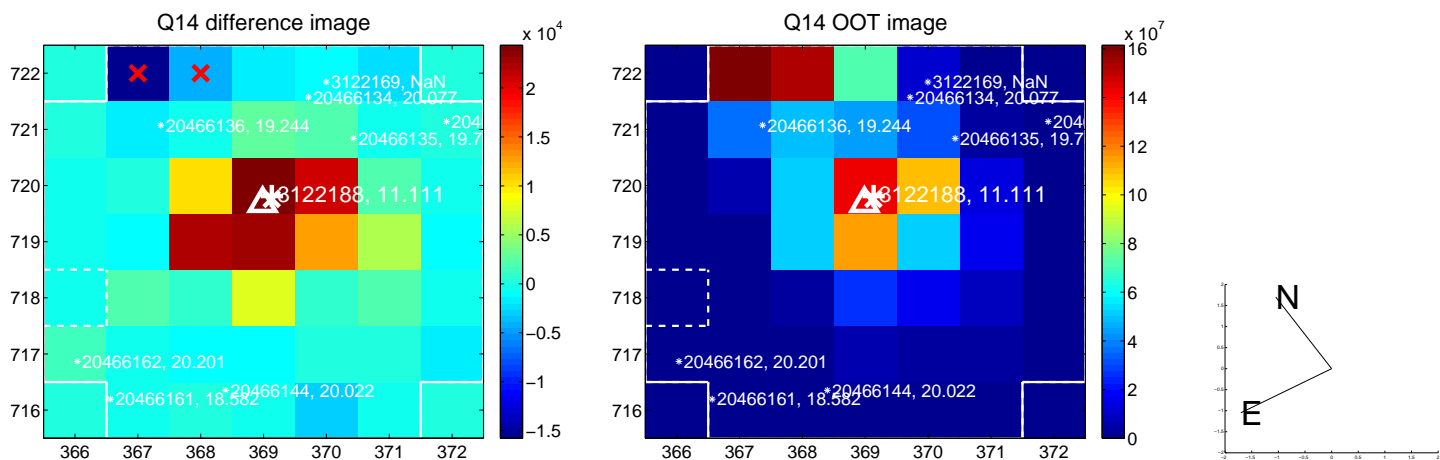
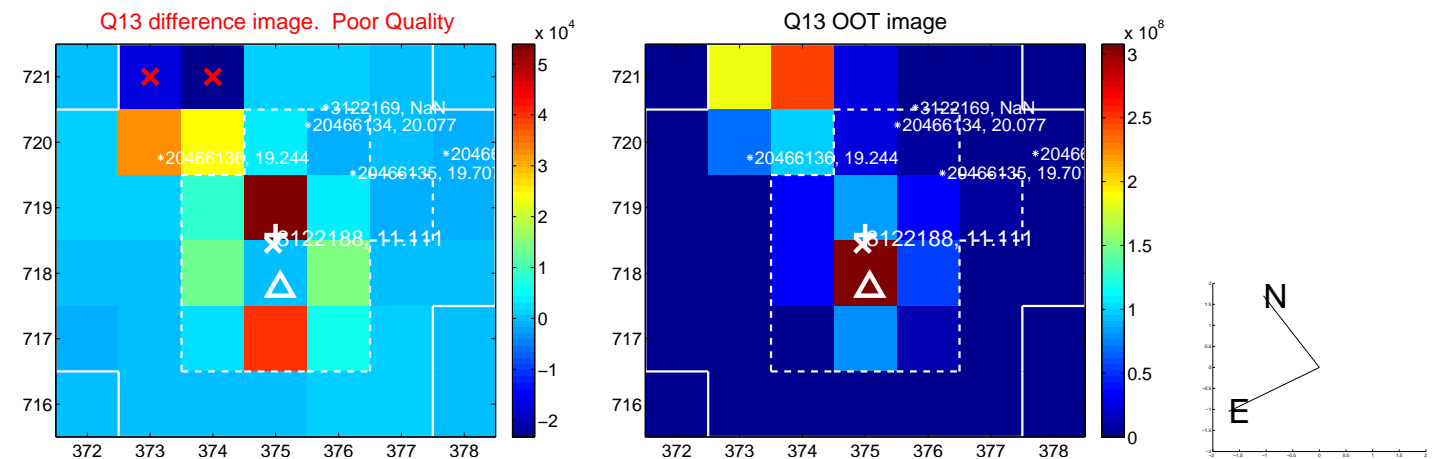
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



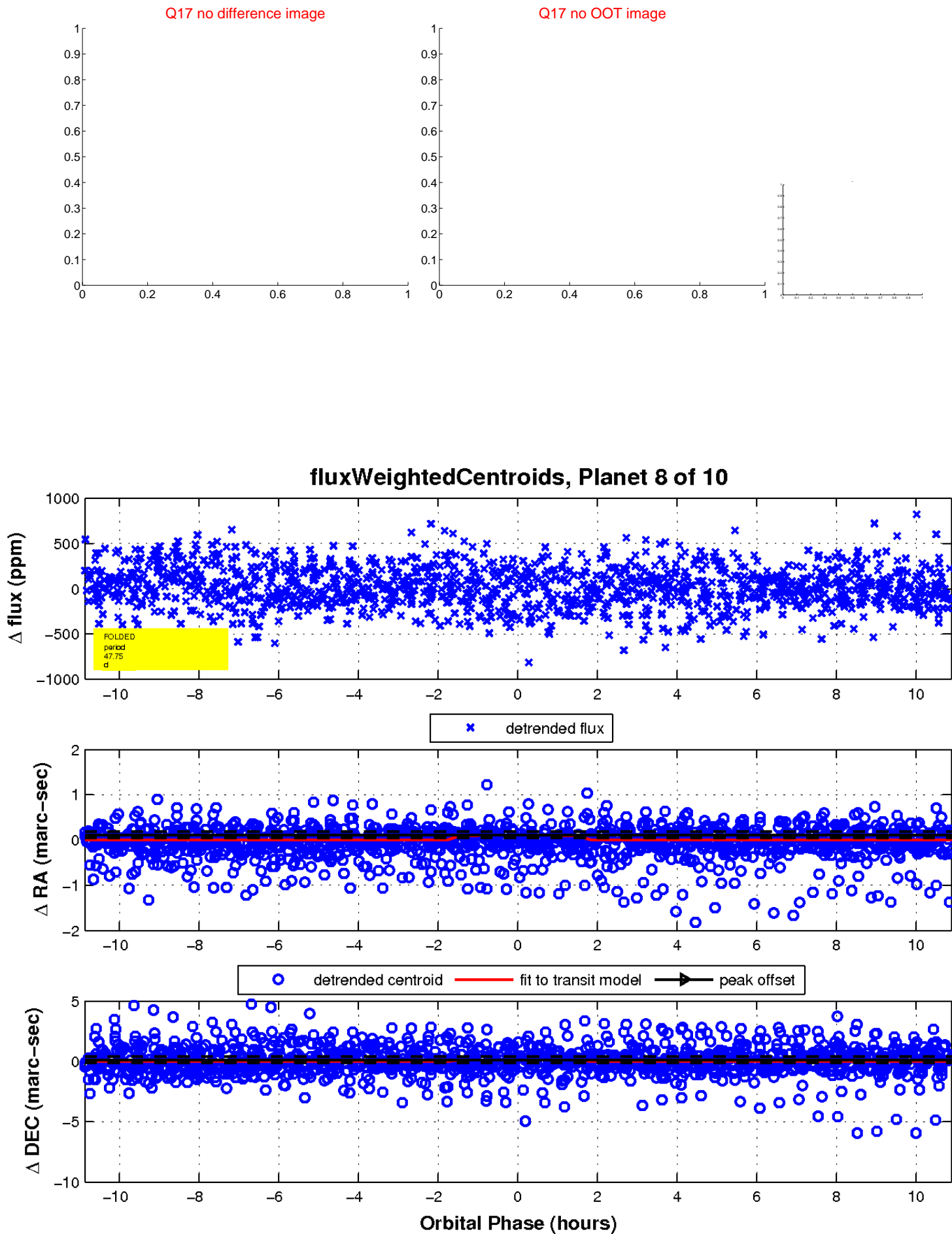
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



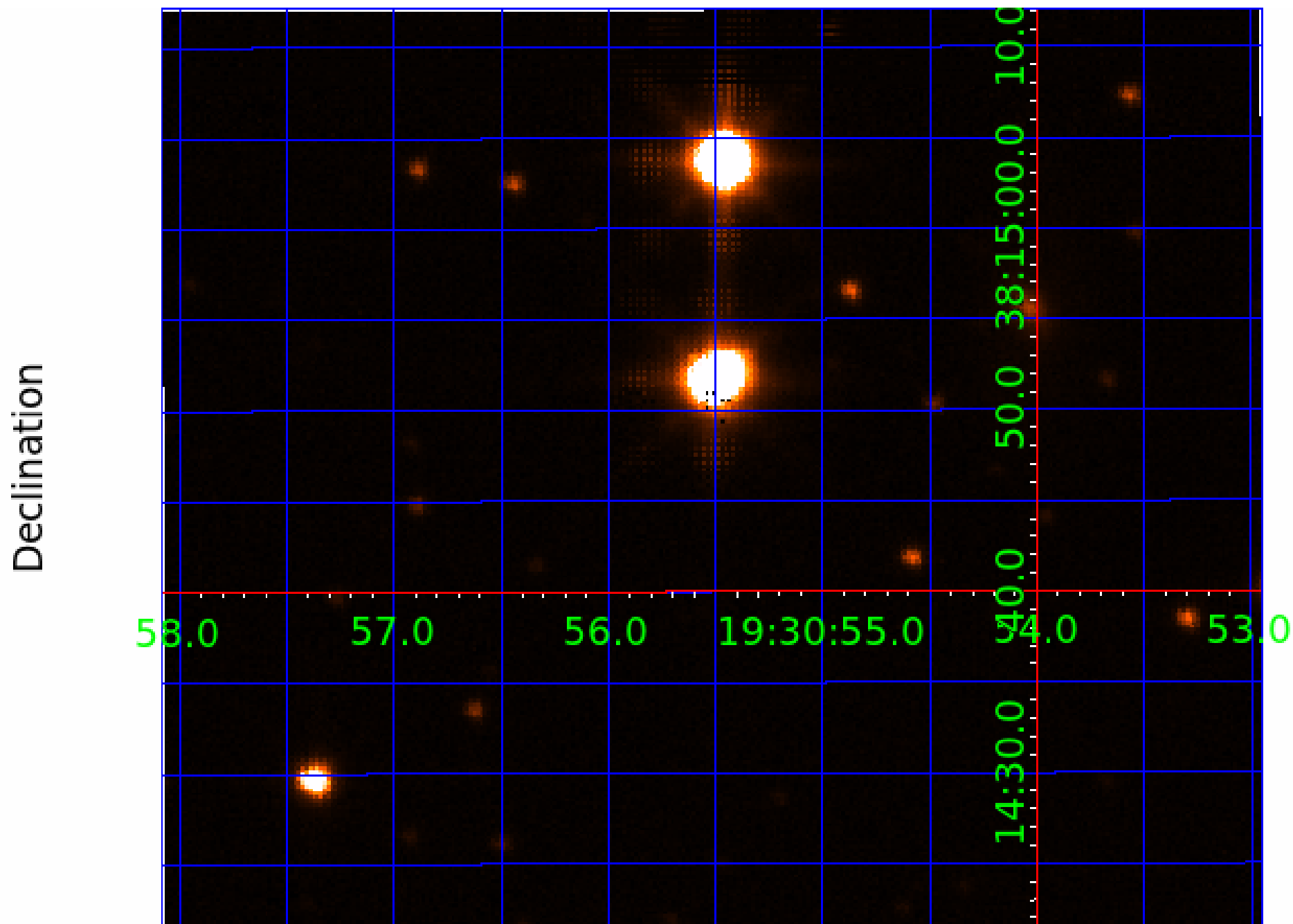
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

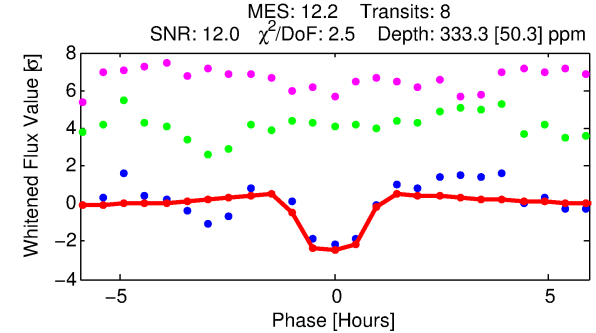
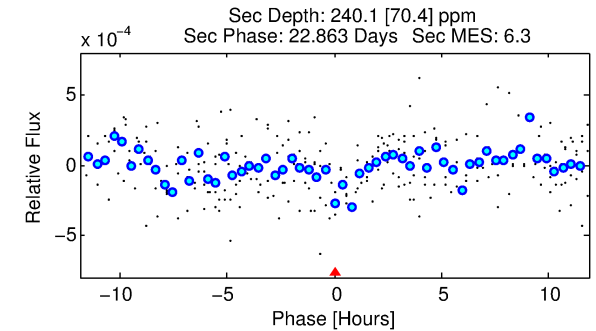
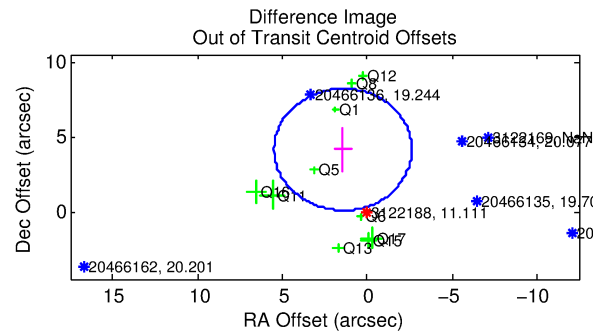
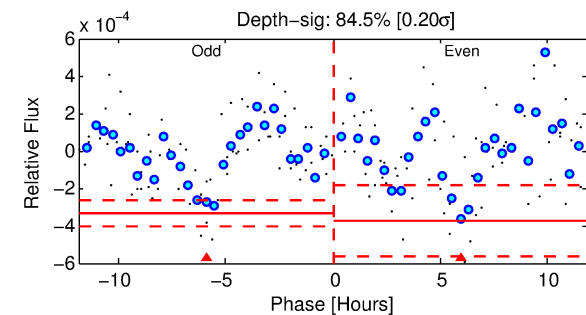
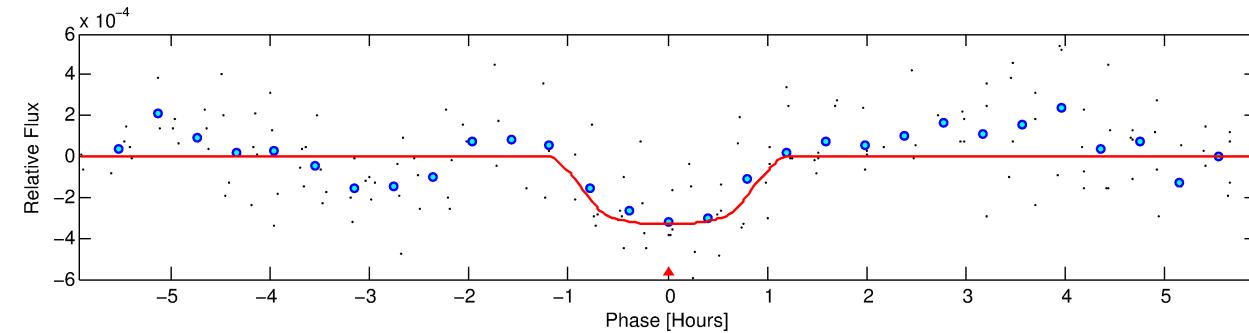
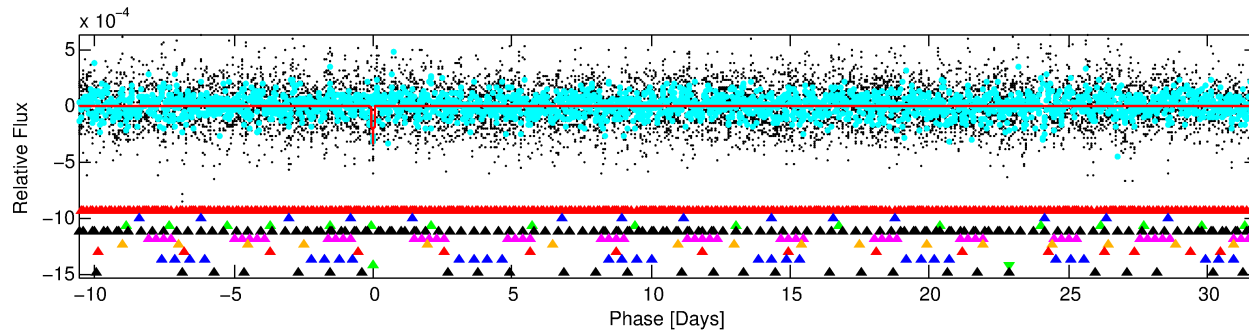
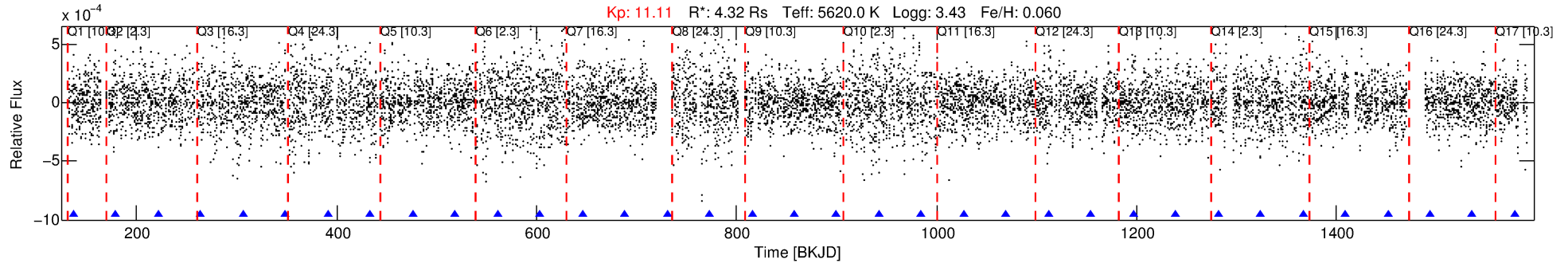
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-09

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 9 of 10 Period: 42.388 d



DV Fit Results:

Period = 42.38829 [0.00034] d
Epoch = 137.1360 [0.0069] BKJD
Rp/R* = 0.0196 [0.0223]
a/R* = 84.47 [435.98]
b = 0.88 [1.36]
Seff = 196.56 [95.71]
Teq = 955 [116] K
Rp = 9.23 [11.04] Re
a = 0.2910 [0.0941] AU
Ag = 131.15 [306.91] [0.42 σ]
Teffp = 4996 [2861] K [1.41 σ]

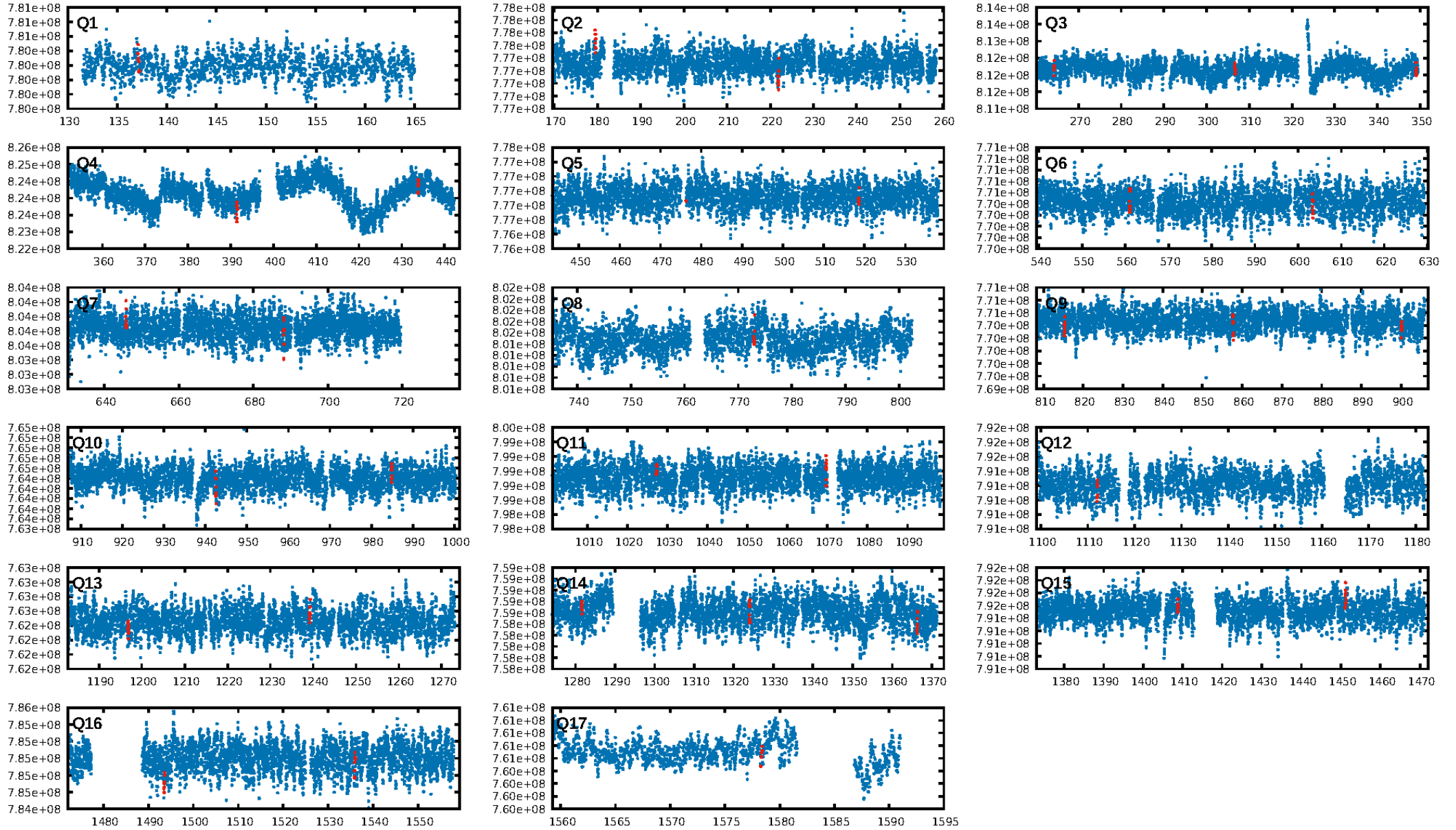
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [155.80 σ]
LongPeriod-sig: 100.0% [31.11 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 3.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -52.95
Centroid-sig: 6.3%
Centroid-so: 3.836 arcsec [5.07 σ]
OotOffset-rm: 4.378 arcsec [3.24 σ]
KicOffset-rm: 3.522 arcsec [2.64 σ]
OotOffset-st: 1/2/3/4 [10]
KicOffset-st: 1/2/3/4 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.53 [9/17]

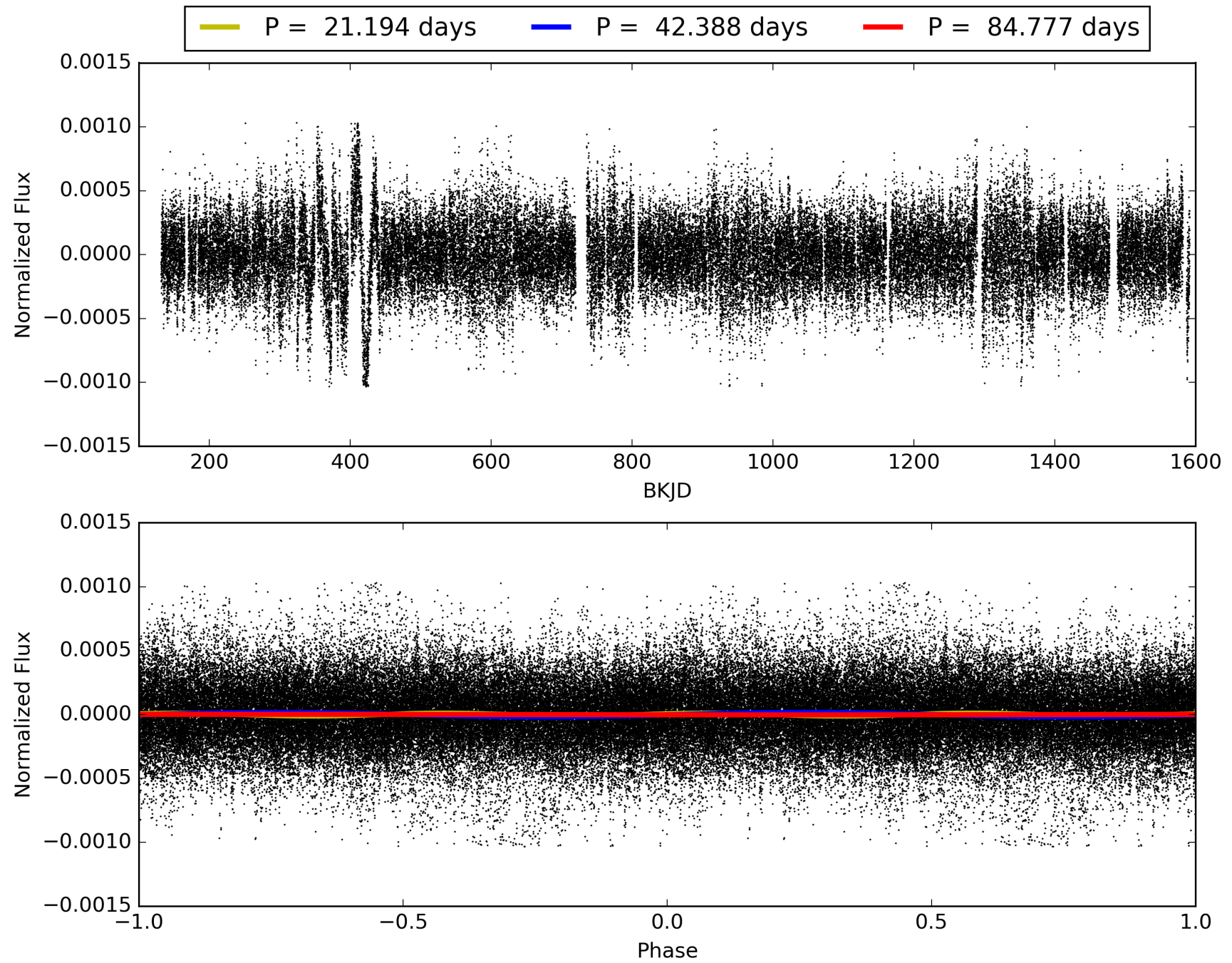
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:50:58 Z

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

TCE 003122188-09, PDC Light Curves

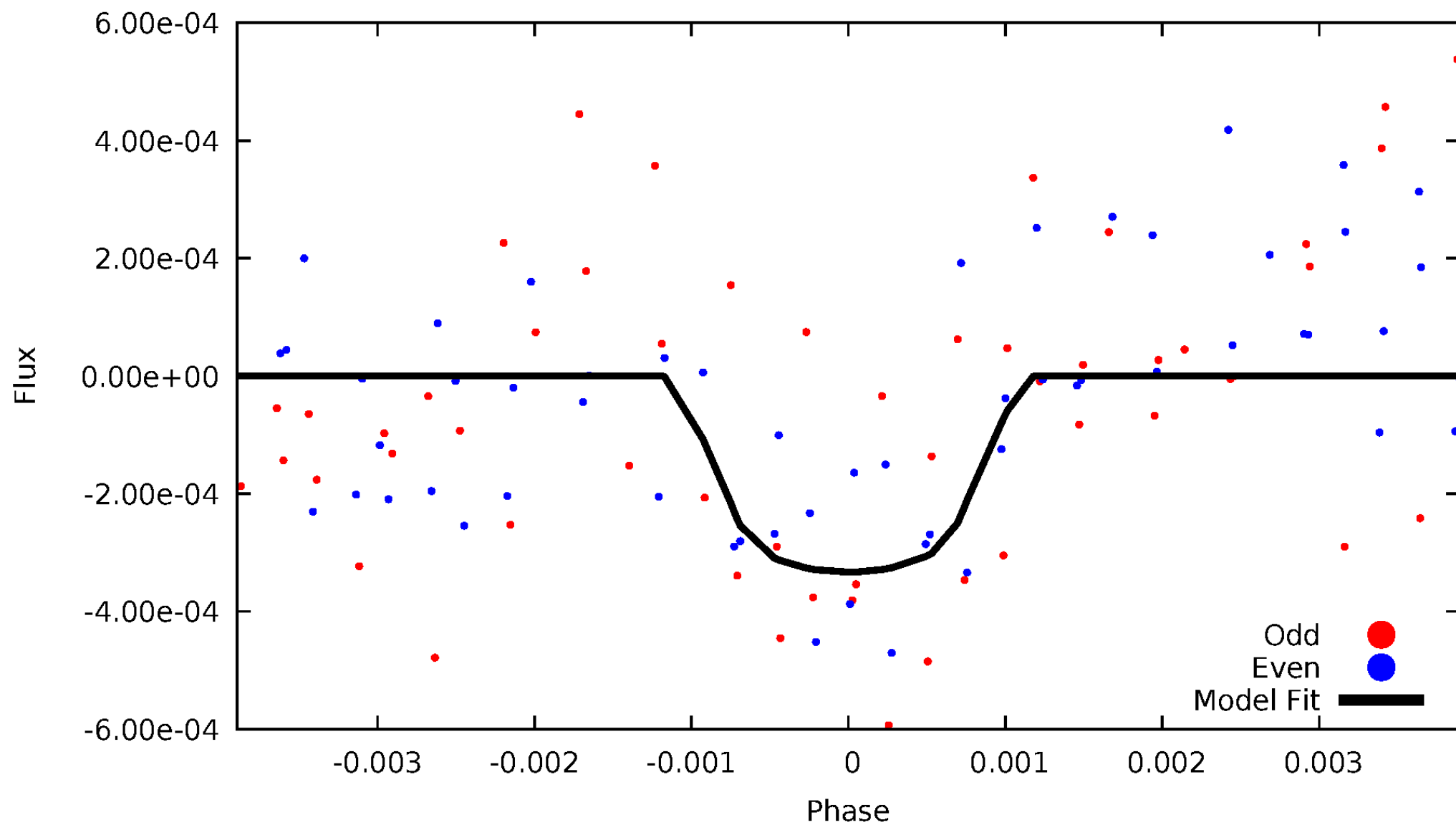


TCE 003122188-09



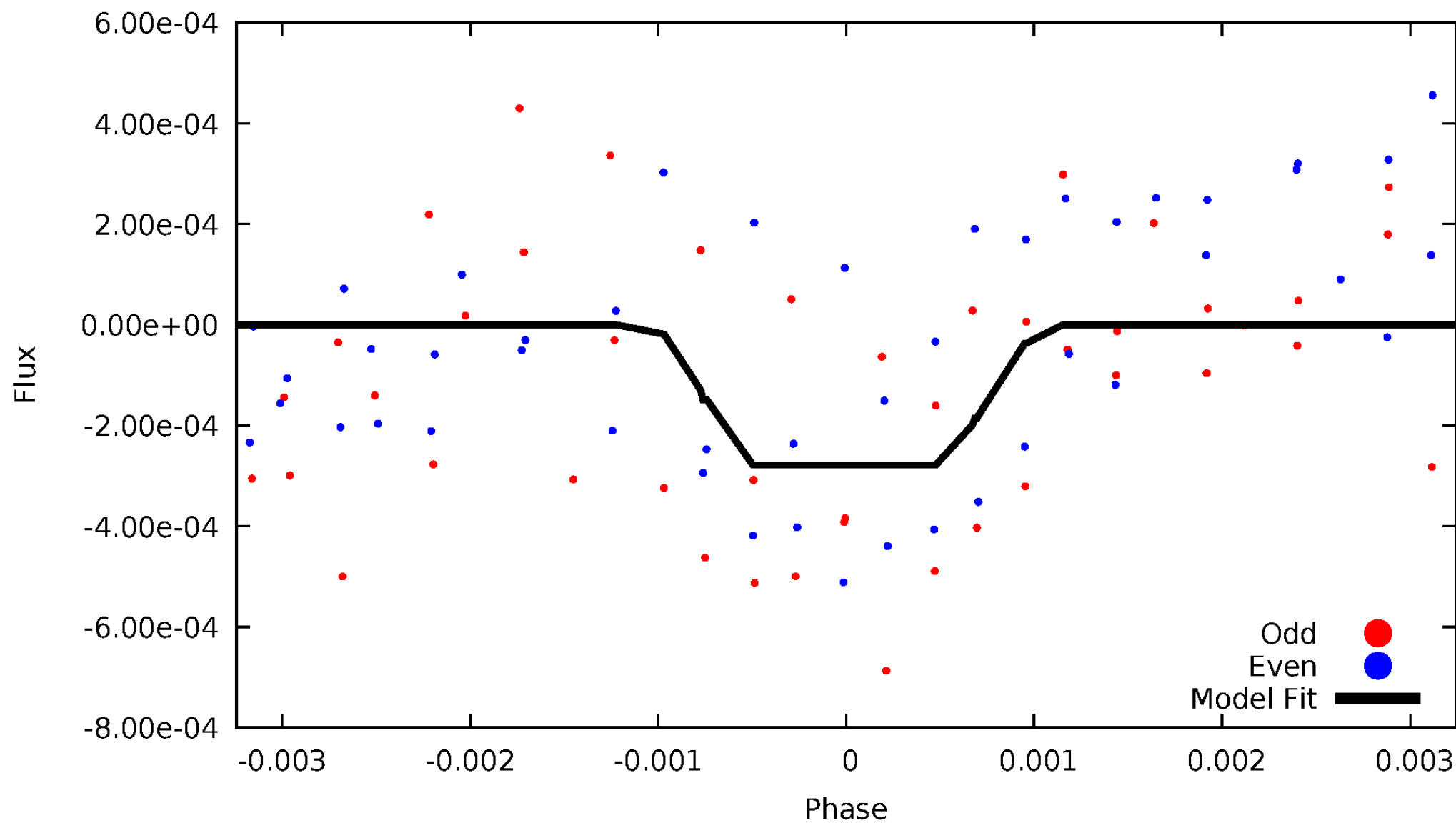
DV Odd/Even

TCE 003122188-09

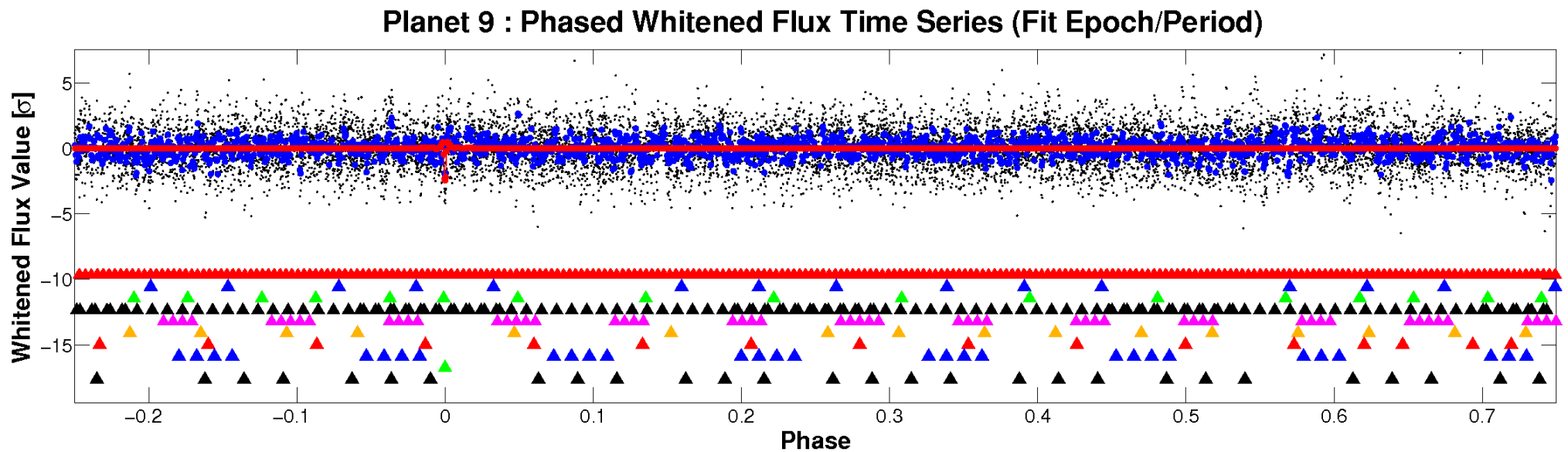
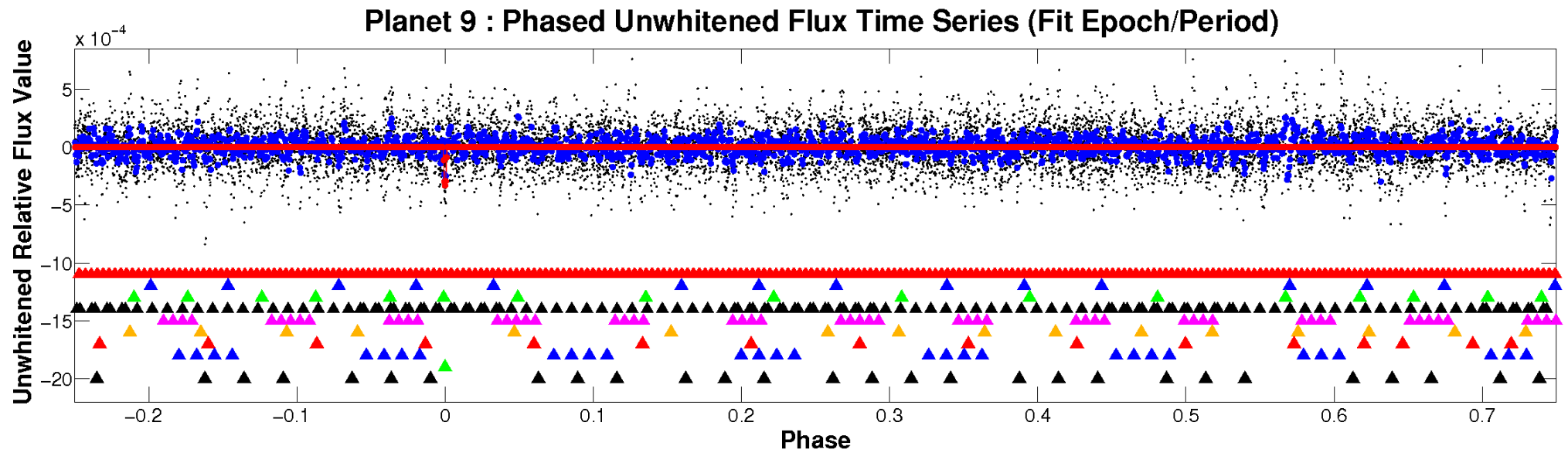


ALT Odd/Even

TCE 003122188-09

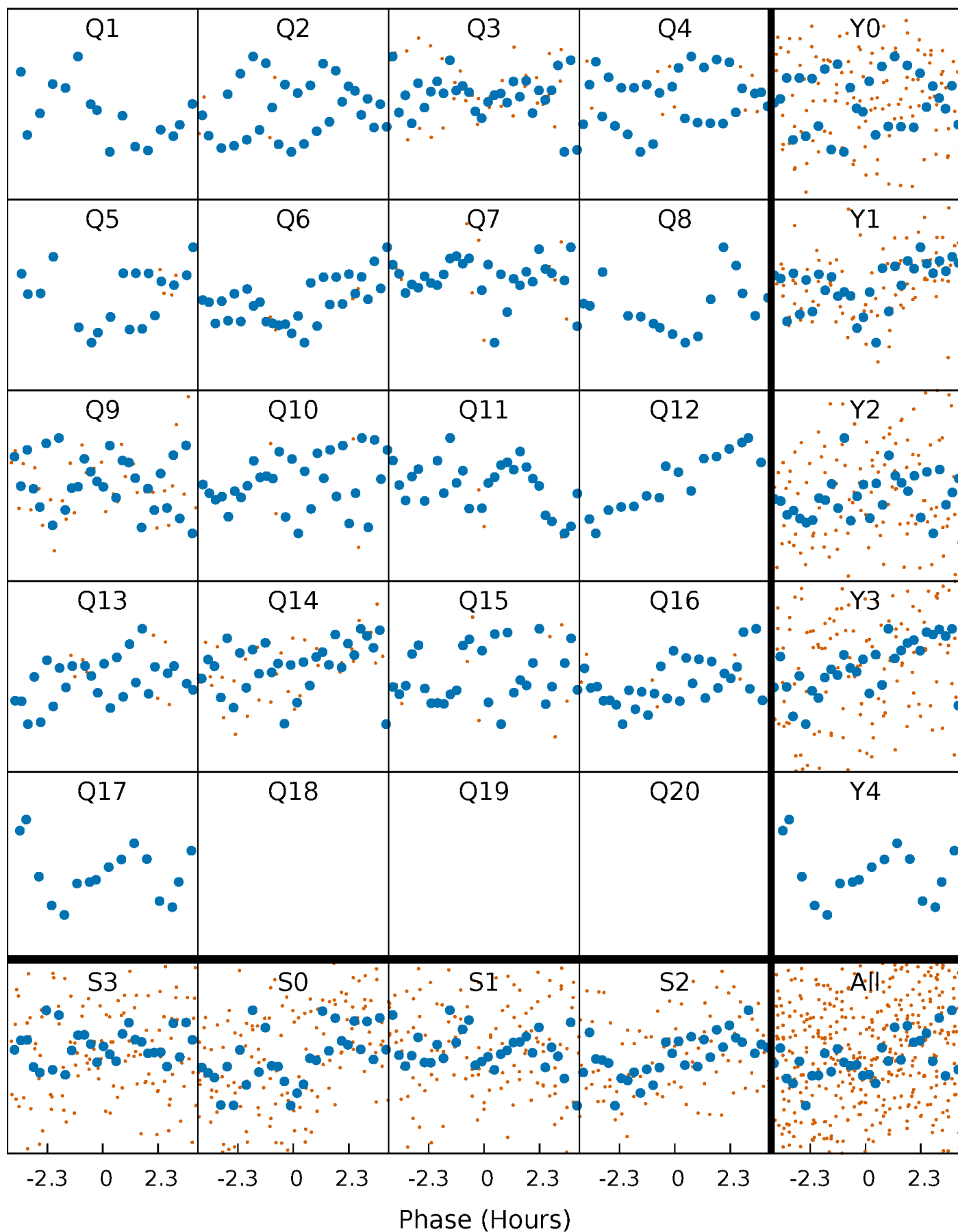


Non-Whitened Vs. Whitened Light Curve



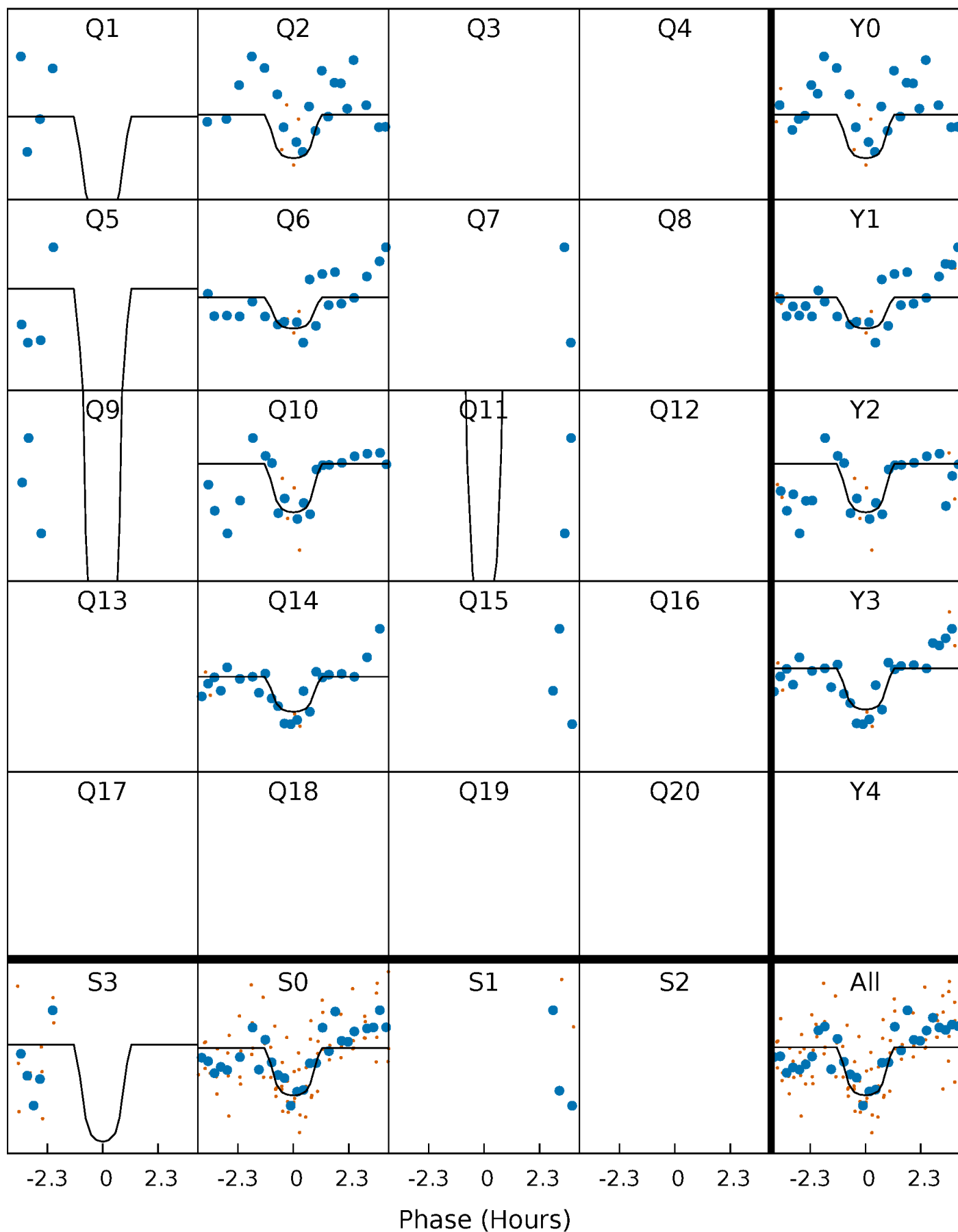
PDC Quarter-Phased Transit Curves

TCE 003122188-09 P= 42.388286 Days $T_0=137.135986$ (BKJD)



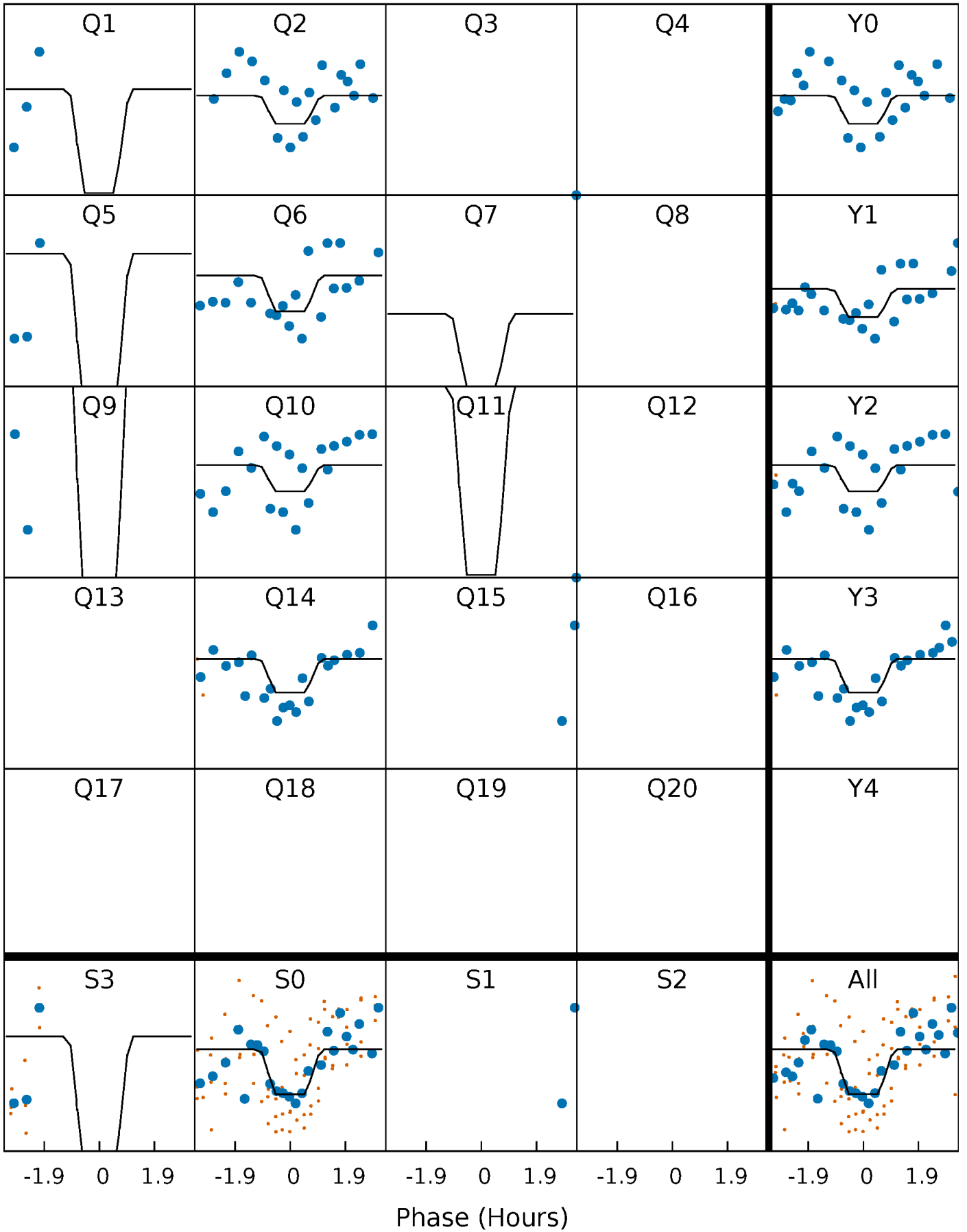
DV Quarter-Phased Transit Curves

TCE 003122188-09 P= 42.388286 Days $T_0=137.135986$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

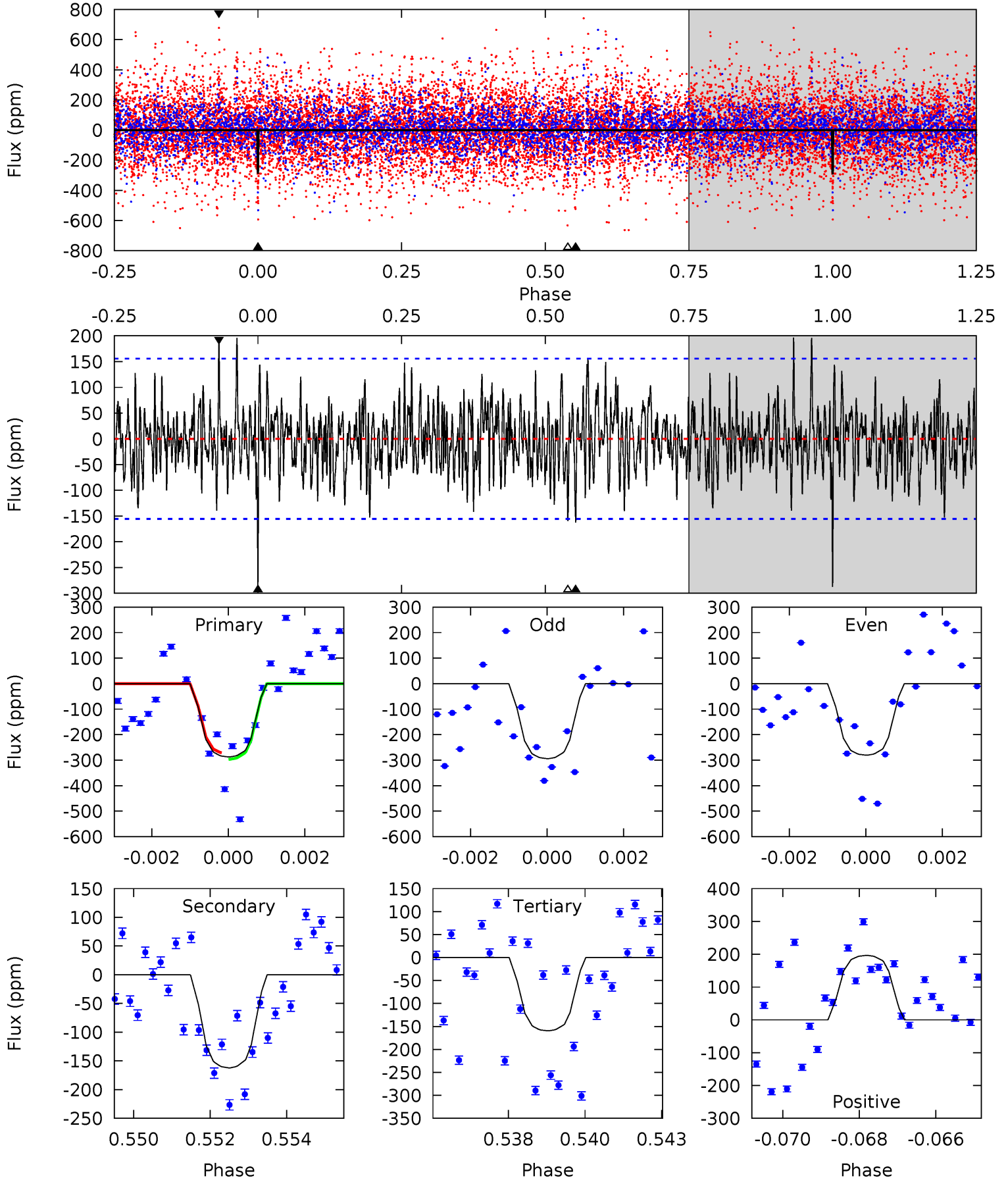
TCE 003122188-09 P= 42.388331 Days $T_0=137.136998$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-09, P = 42.388286 Days, E = 94.747700 Days

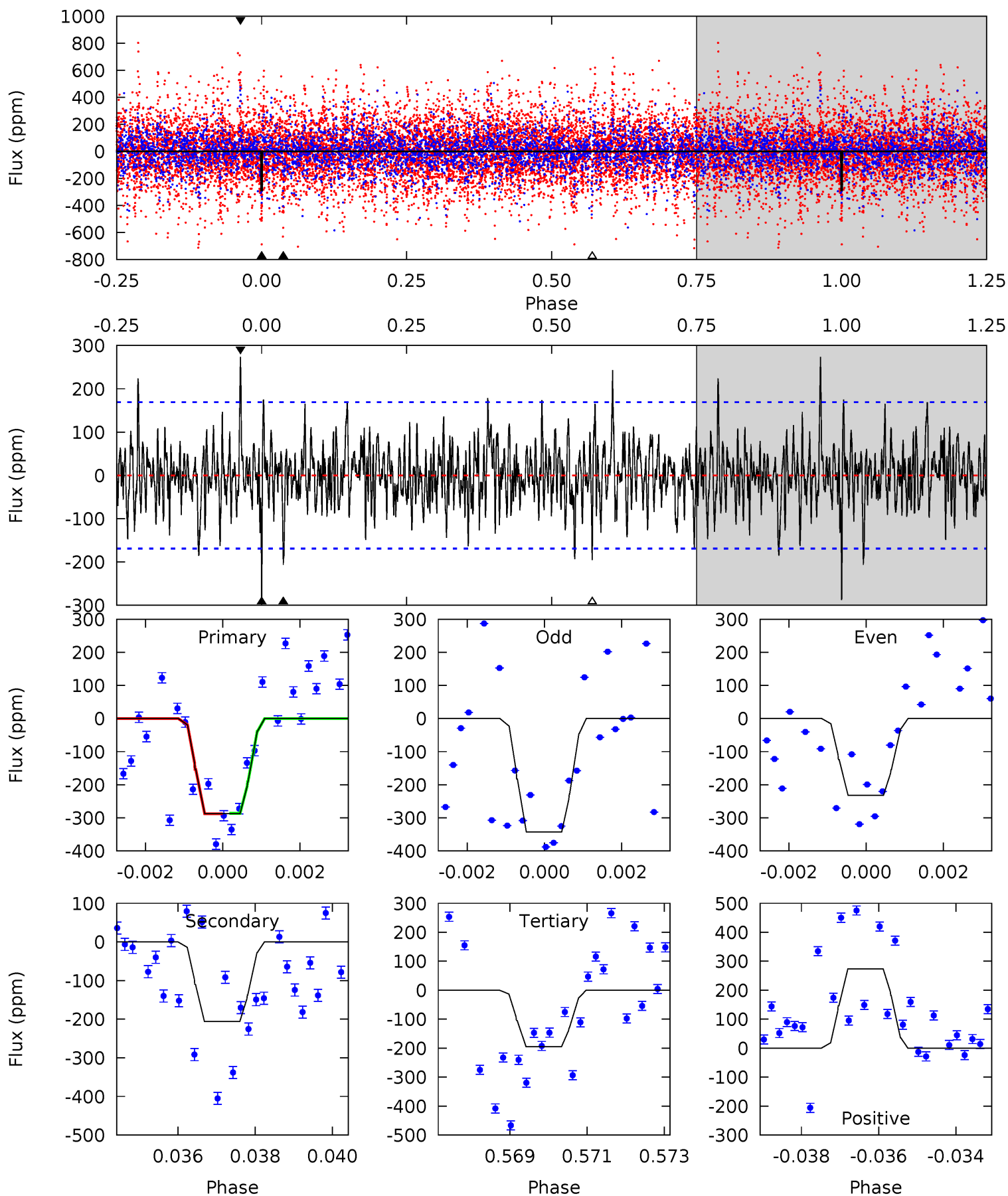
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	5.52	5.43	6.69	5.30	3.04	1.81	4.35	3.09	0.09	-1.17	0.23	0.86	0.41	0.43



Alt Model-Shift Uniqueness Test

003122188-09, P = 42.388331 Days, E = 94.748667 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.03	6.47	6.14	8.58	5.32	3.07	1.87	2.89	0.44	0.34	-2.11	1.73	0.75	0.49	0.02



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-162 ± 29	$10.73^{+9.32}_{-6.94}$	1324^{+57}_{-110}	4291^{+2597}_{-794}	65^{+473}_{-47}
Alt.	-206 ± 32	$10.13^{+9.08}_{-6.52}$	1322^{+62}_{-107}	4577^{+2862}_{-926}	90^{+647}_{-65}

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 $A_{obs} \gg 1.0$

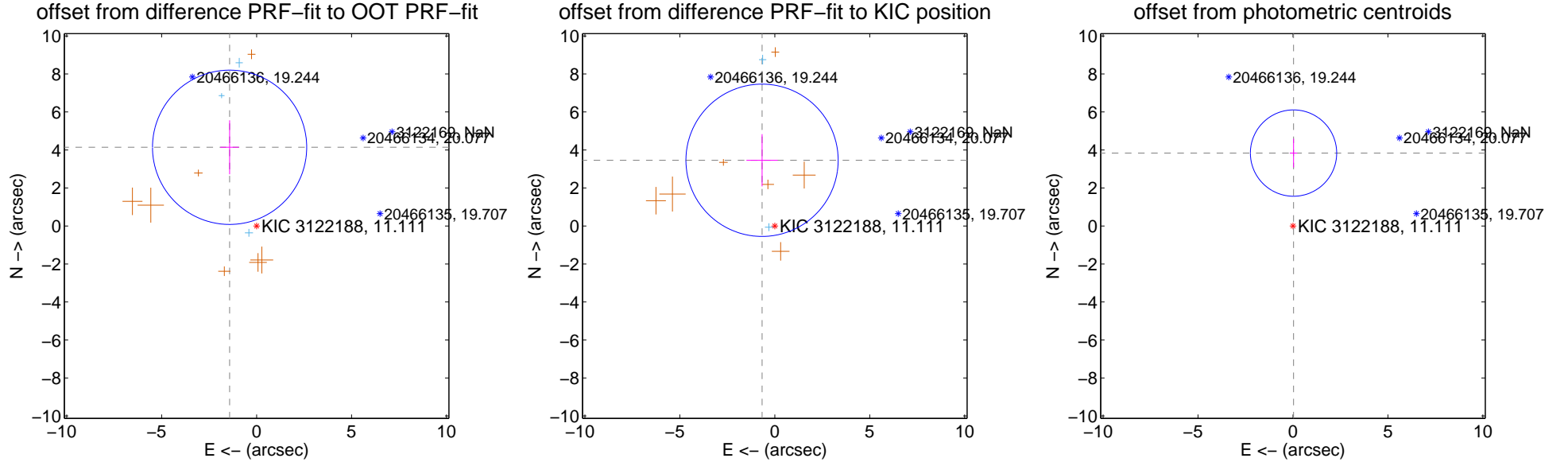
DV Centroid Data

Supplemental centroid analysis for 003122188-09. **Kepler magnitude: 11.11.** Transit SNR 12.02

There are 3 quarters with good PRF difference image offsets

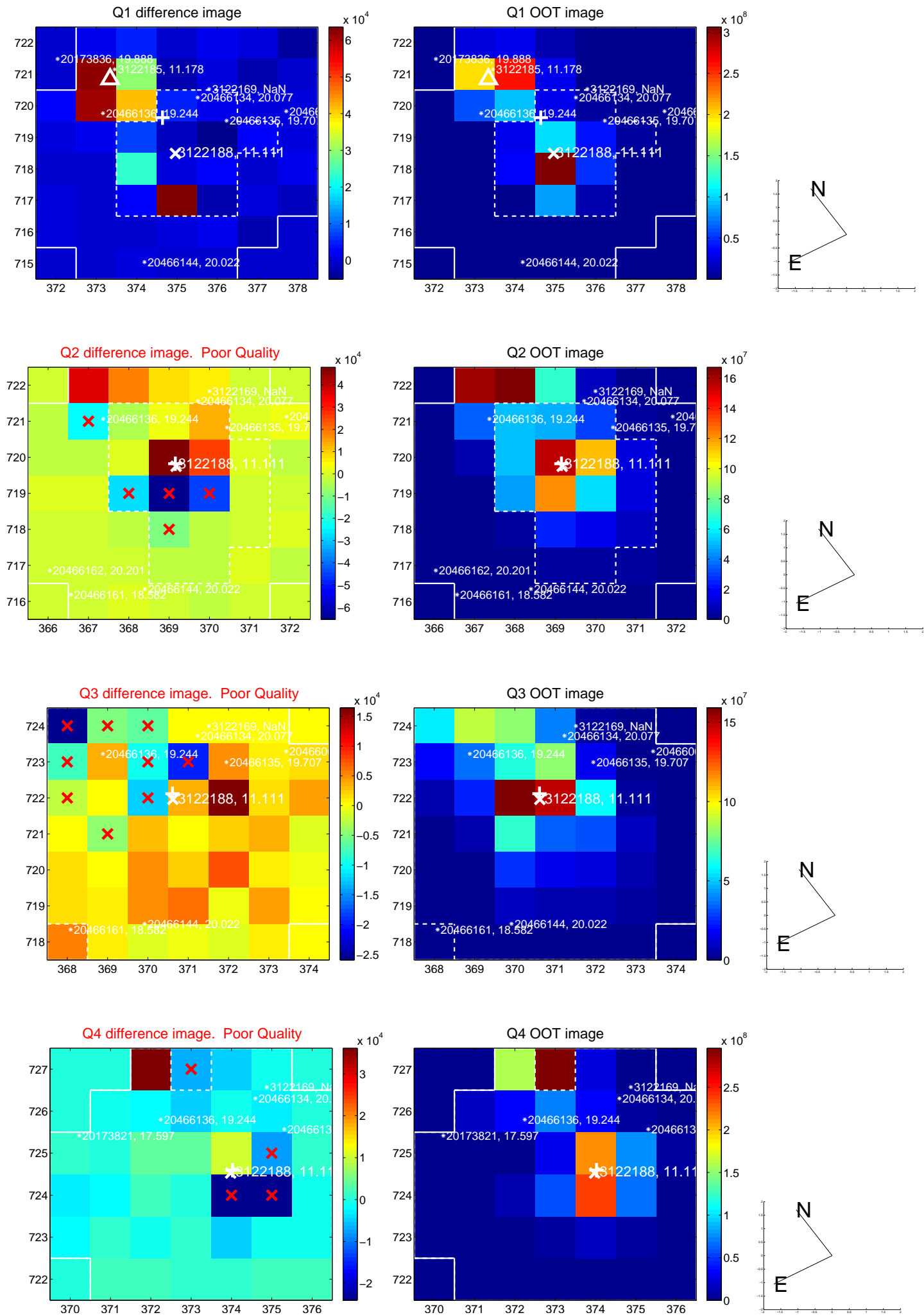
The OOT PRF centroid is offset from the target star catalog position by about 4.65 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.378 ± 1.353	3.24	1.422 ± 0.492	4.141 ± 1.421
PRF-fit source offset from KIC position	3.522 ± 1.336	2.64	0.670 ± 0.825	3.457 ± 1.377
photometric centroid source offset	3.84 ± 0.76	5.07	-0.03 ± 0.19	3.84 ± 0.76

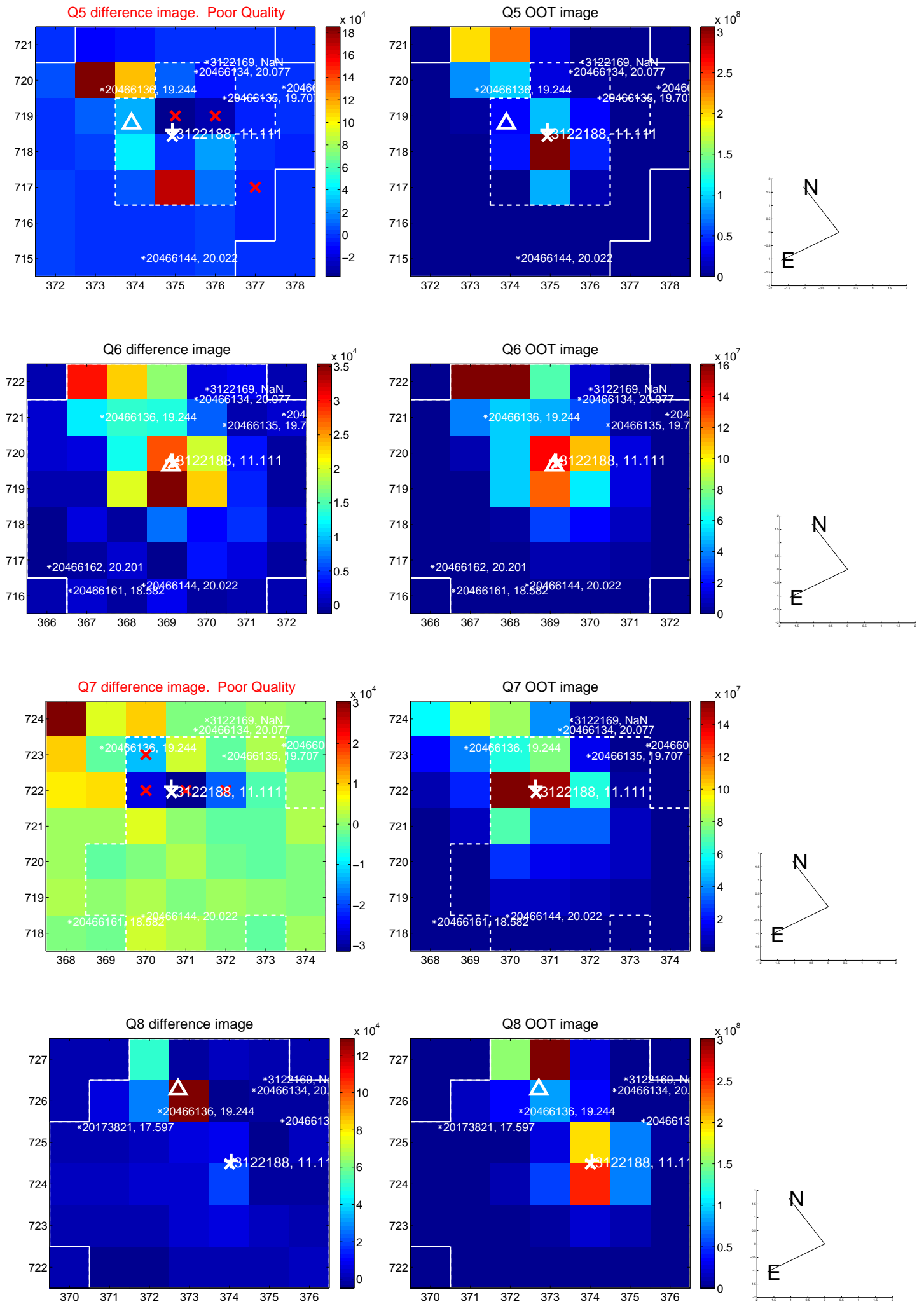


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

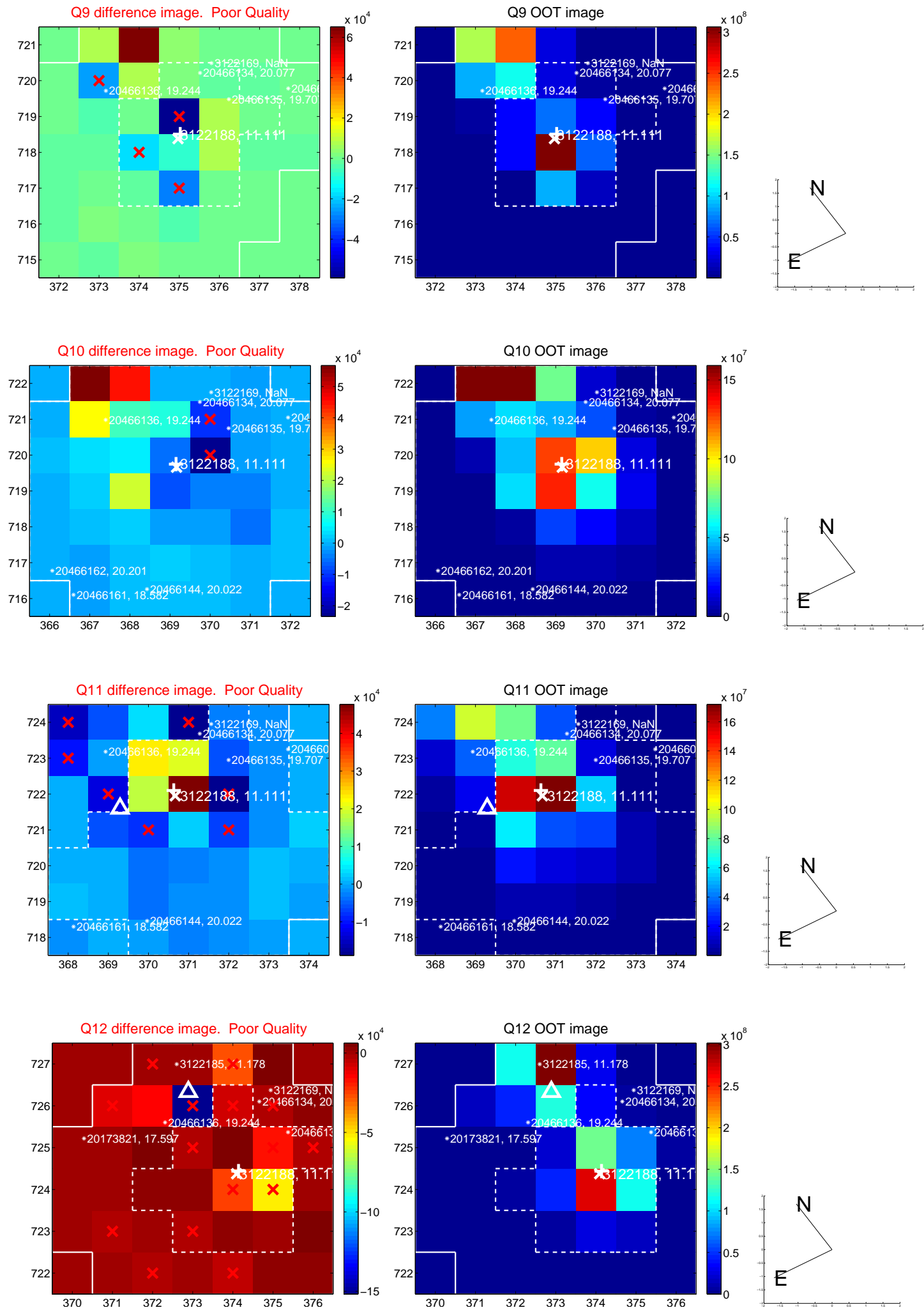
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



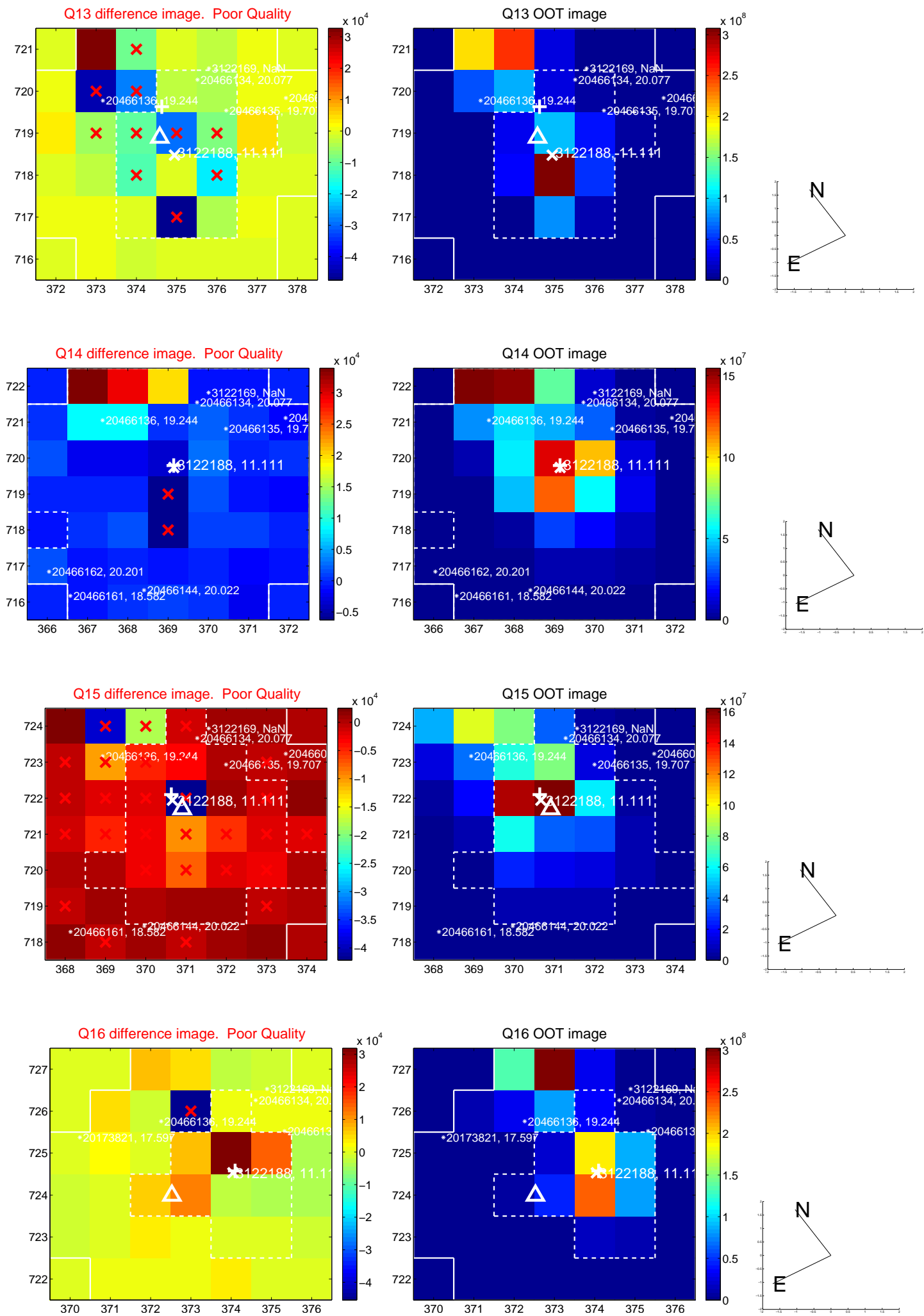
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



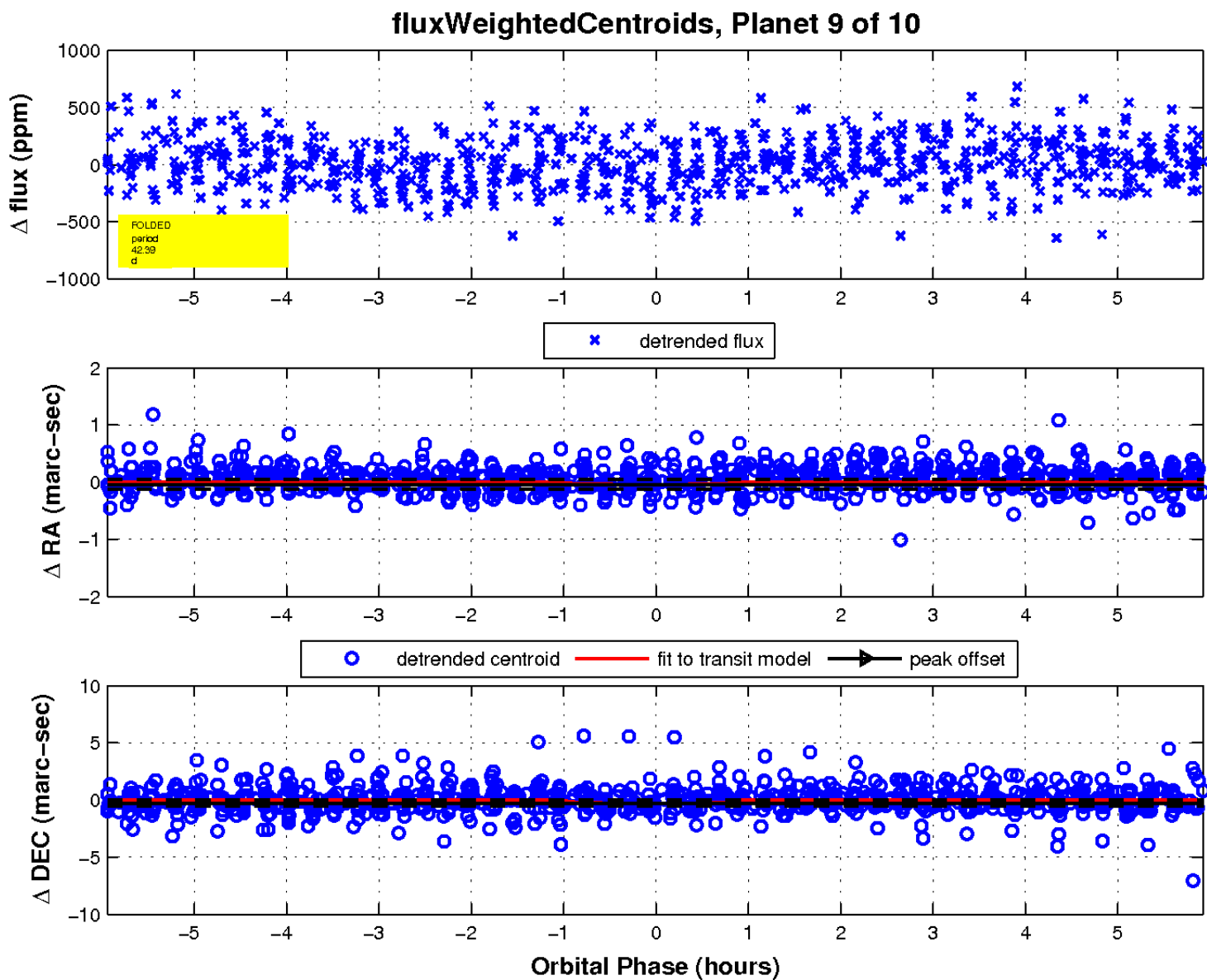
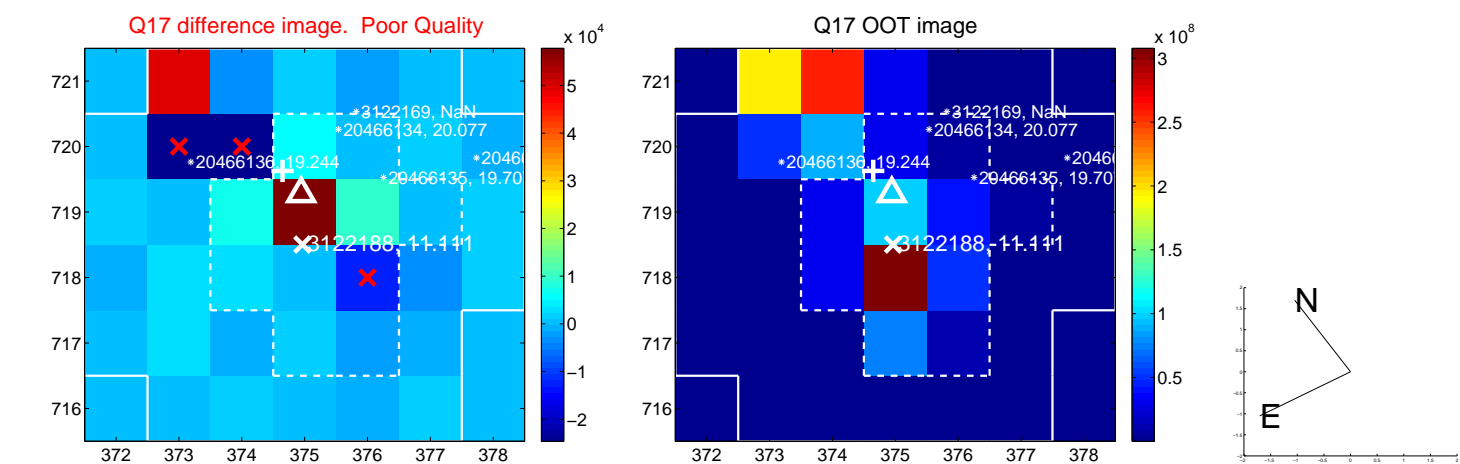
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



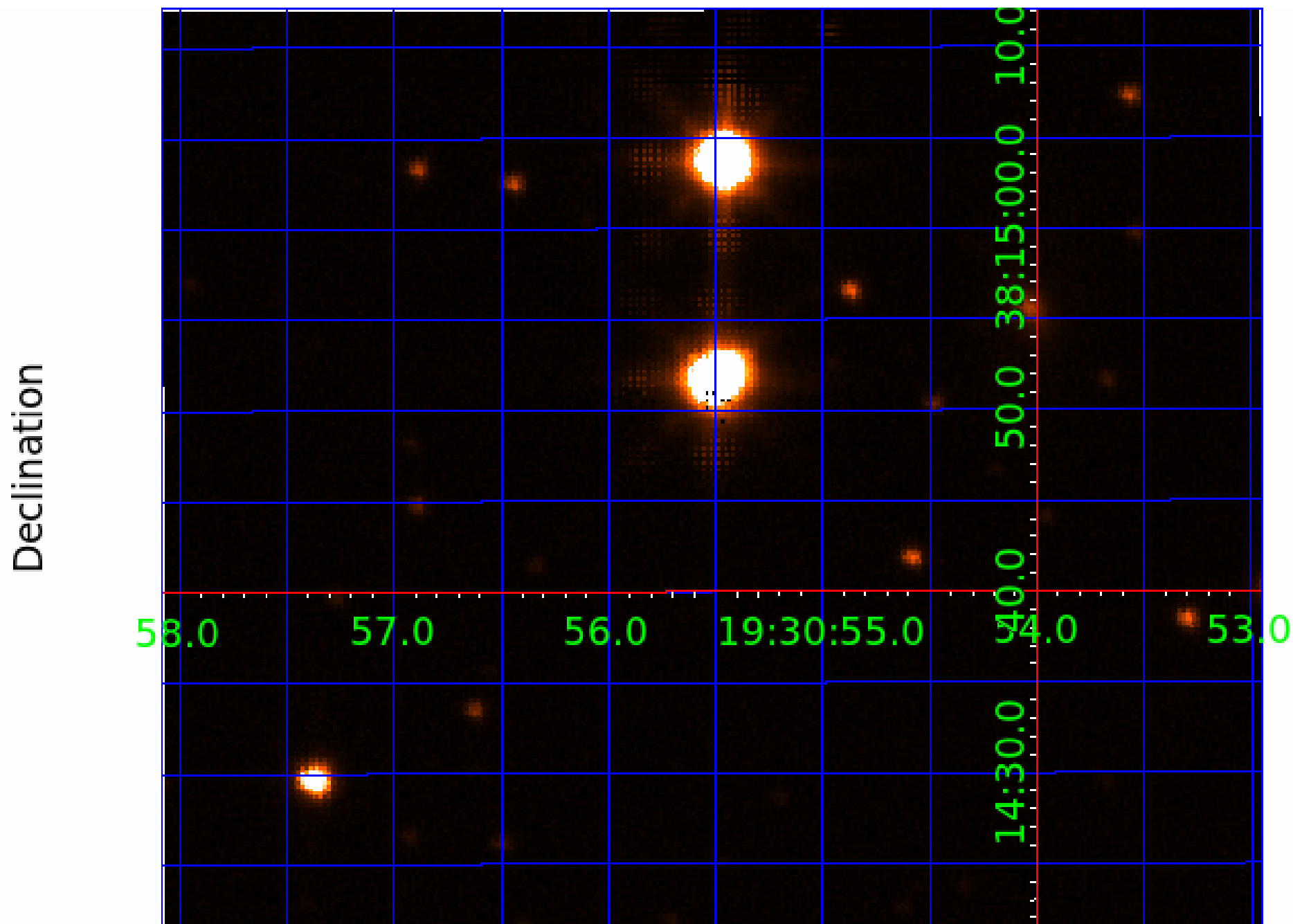
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003122188

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})
003122188-01	OBS	No	1.519841	131.603460	28.0	9.685	9.8	8.6	4.32	5620	2.38	16625.04
003122188-02	OBS	No	102.174437	134.095268	406.7	5.072	13.1	11.2	4.32	5620	9.82	60.82
003122188-04	OBS	No	10.705050	134.713670	214.1	1.575	12.2	12.6	4.32	5620	7.55	1231.33
003122188-05	OBS	No	26.105917	138.635908	284.7	1.538	14.6	10.3	4.32	5620	8.72	375.12
003122188-06	OBS	No	89.261039	192.502994	405.1	10.213	12.2	9.6	4.32	5620	9.50	72.83
003122188-08	OBS	No	47.750394	171.910844	319.3	3.631	11.5	12.2	4.32	5620	9.03	167.70
003122188-09	OBS	No	42.388286	137.135986	333.3	1.981	12.2	12.0	4.32	5620	9.23	196.56
003122188-10	OBS	No	51.932513	148.232029	238.4	4.912	11.3	9.0	4.32	5620	8.03	149.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122188-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003122188-09	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_SATURATED
003122188-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

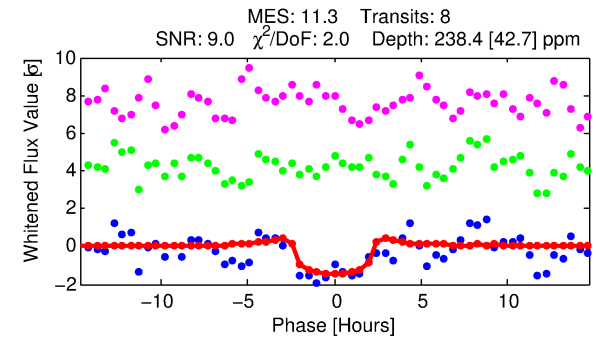
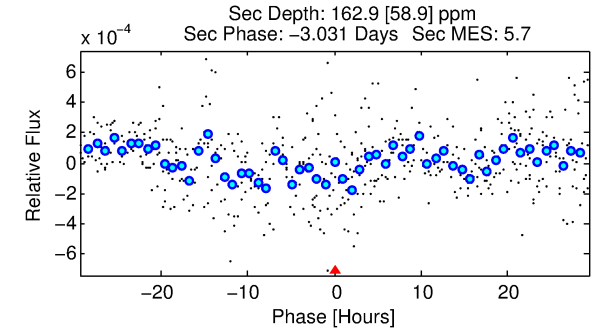
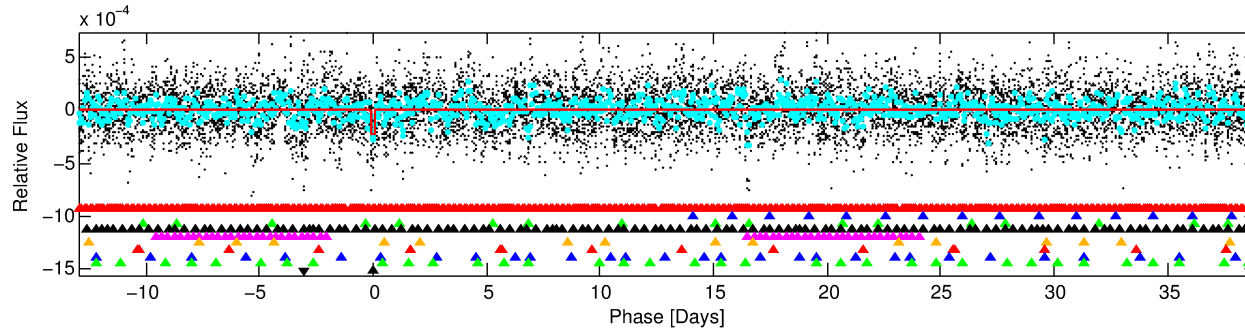
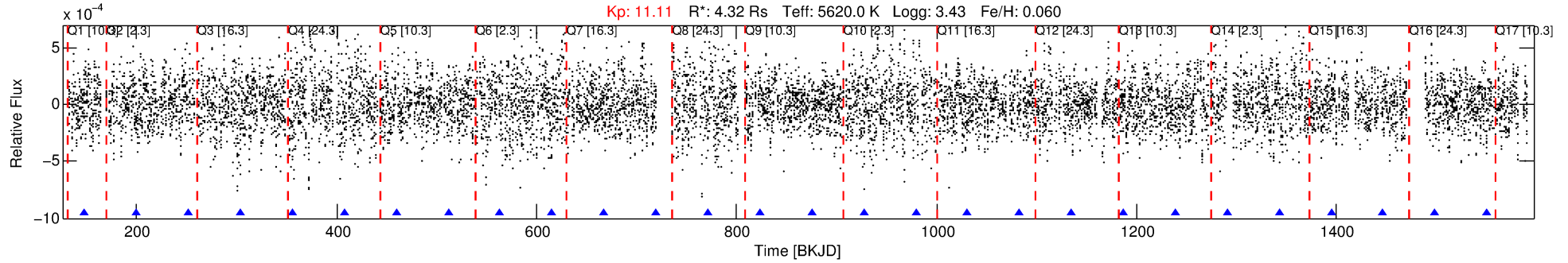
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122188-10

No Significant Match Found

DV One-Page Summary

KIC: 3122188 Candidate: 10 of 10 Period: 51.933 d

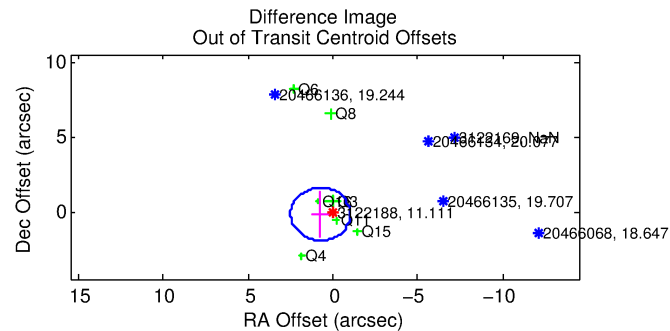
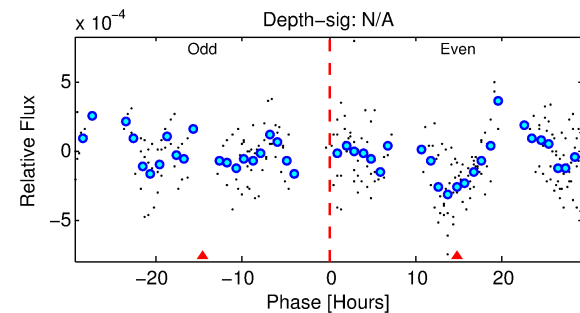
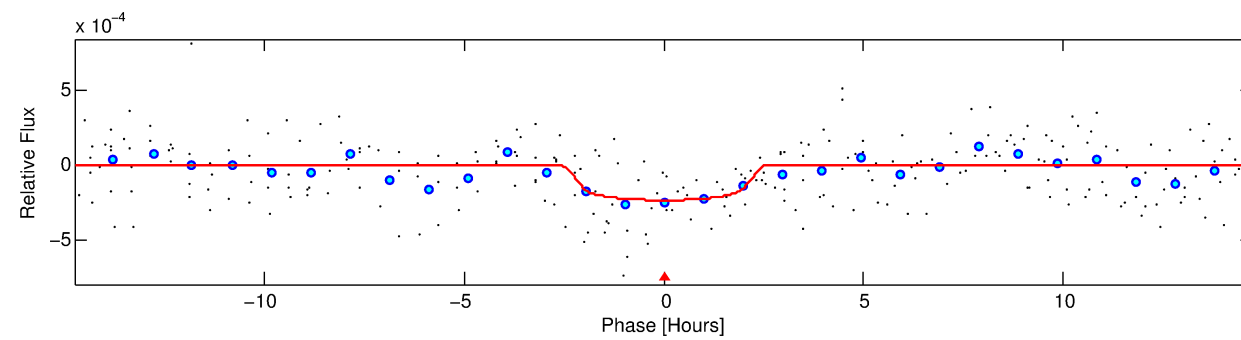


DV Fit Results:

Period = 51.93251 [0.00082] d
Epoch = 148.2320 [0.0164] BKJD
Rp/R* = 0.0170 [0.0063]
a/R* = 36.70 [60.51]
b = 0.91 [0.32]
Seff = 149.94 [73.00]
Teq = 892 [109] K
Rp = 8.03 [4.22] Re
a = 0.3332 [0.1078] AU
Ag = 154.29 [147.39] [1.04σ]
Teff = 4862 [1004] K [3.93σ]

DV Diagnostic Results:

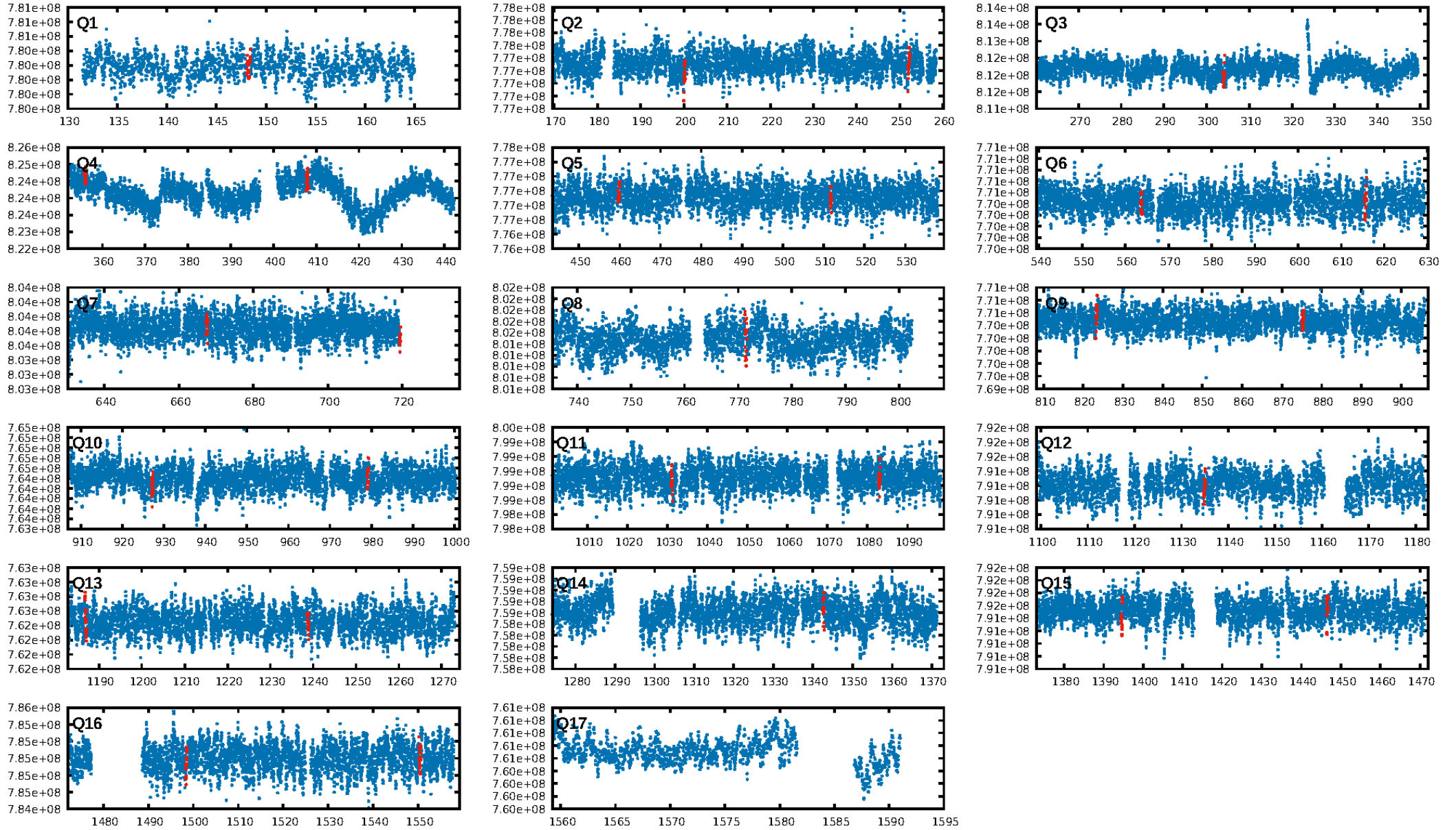
ShortPeriod-sig: 100.0% [16.43σ]
LongPeriod-sig: 100.0% [116.34σ]
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 94.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -3.236
Centroid-sig: 2.3%
Centroid-so: 1.456 arcsec [1.43σ]
OotOffset-rm: 0.769 arcsec [1.31σ]
KicOffset-rm: 0.473 arcsec [0.86σ]
OotOffset-st: 1/3/3/0 [7]
KicOffset-st: 1/3/3/0 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.19 [3/16]



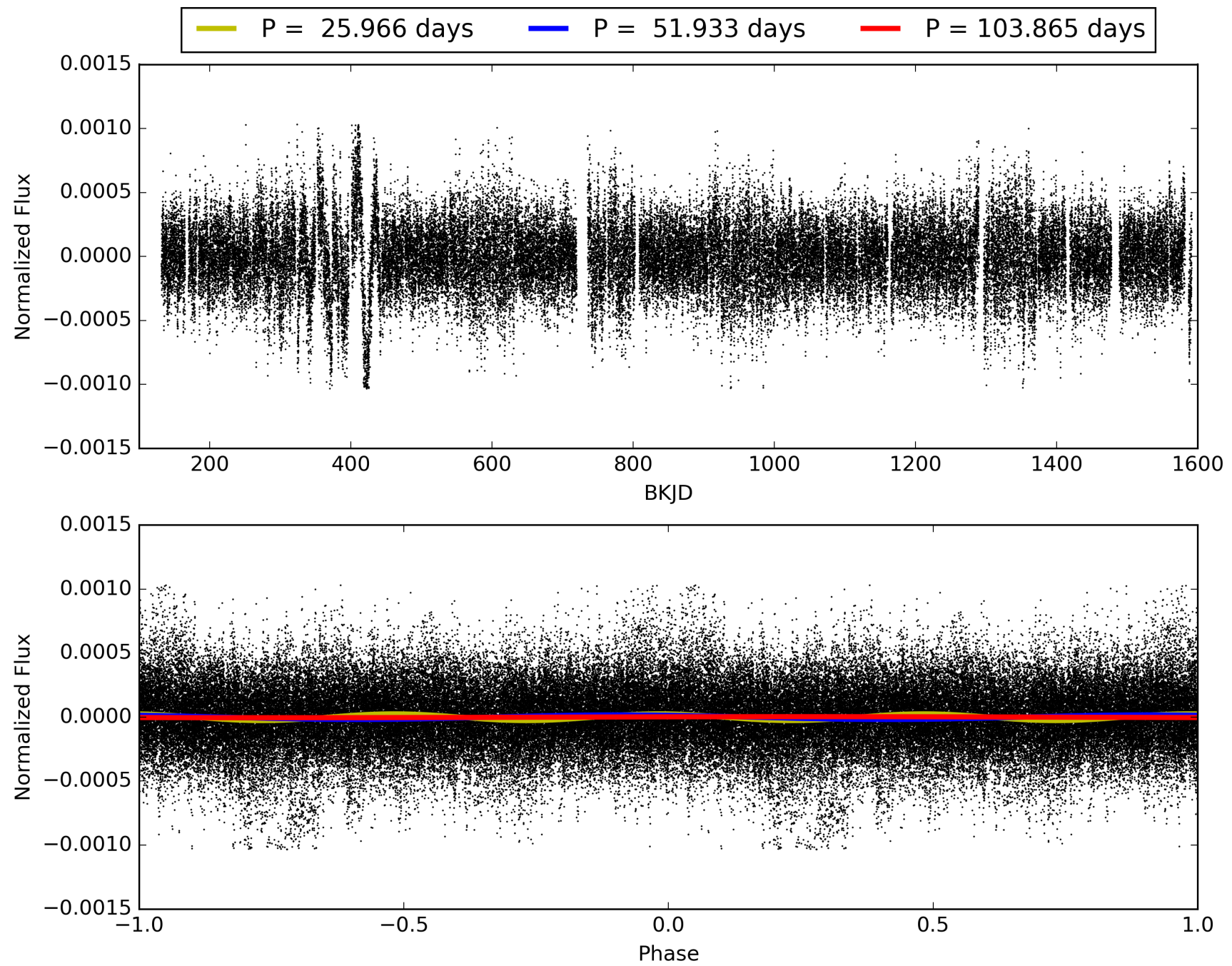
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:51:02 Z

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

TCE 003122188-10, PDC Light Curves

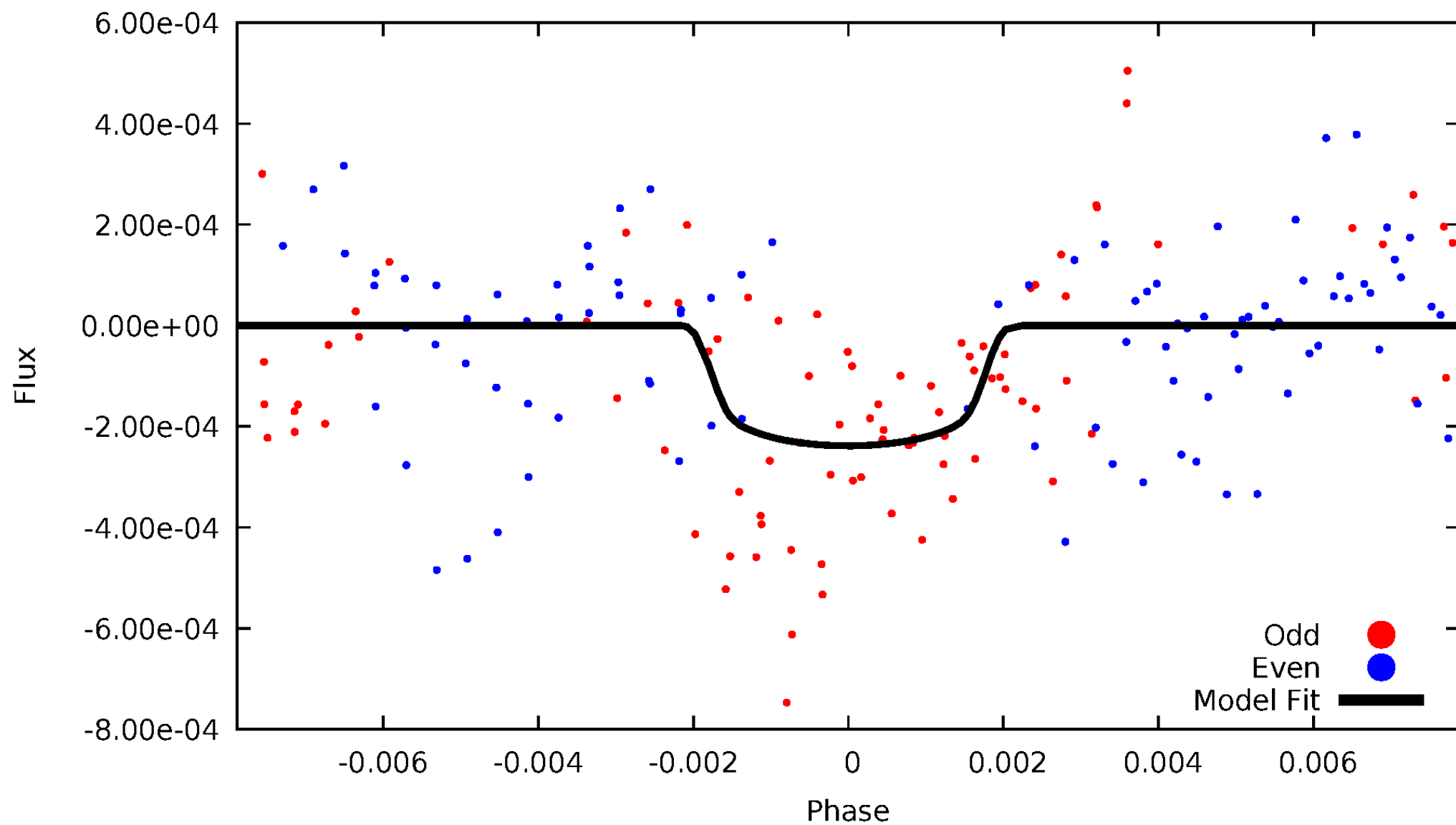


TCE 003122188-10



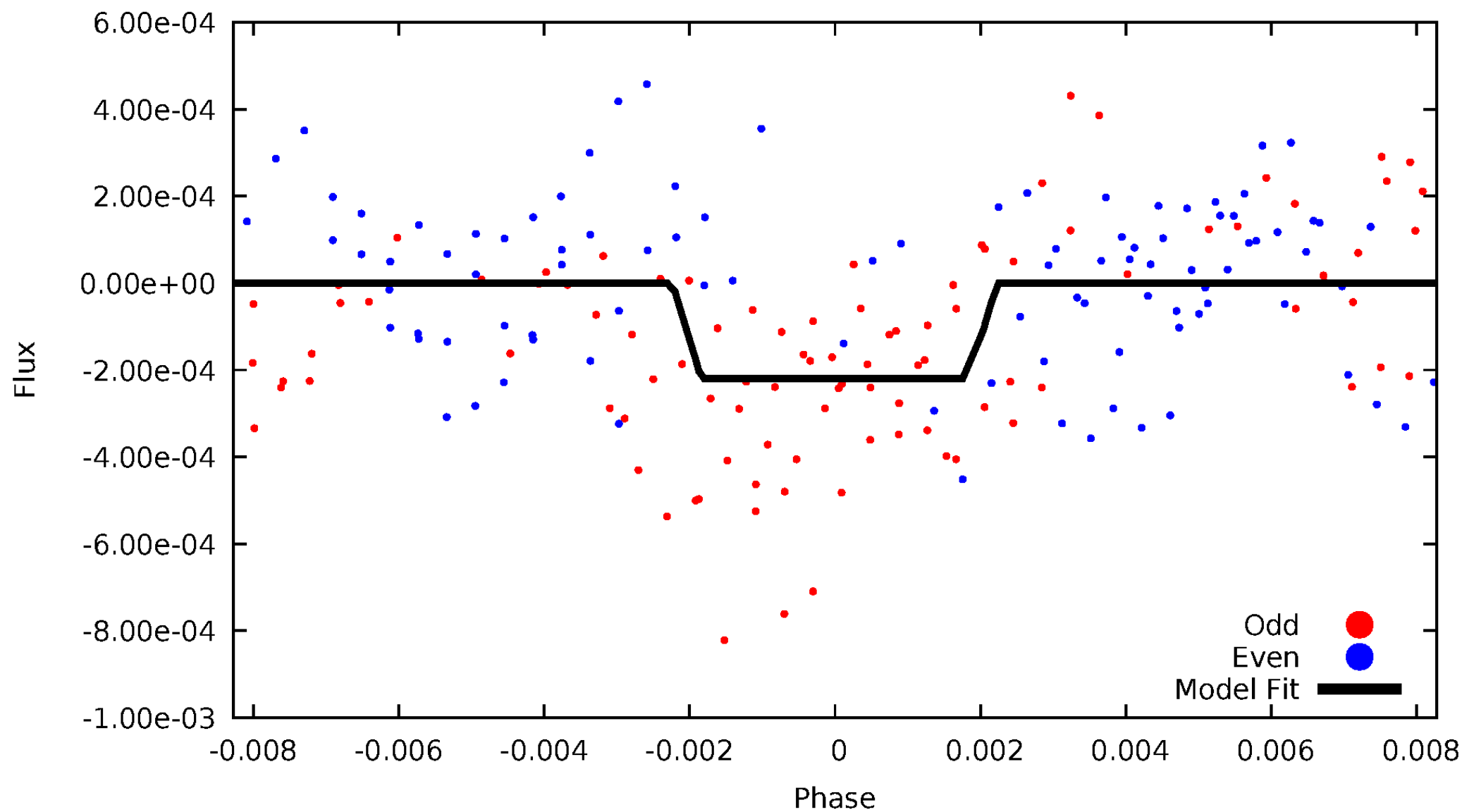
DV Odd/Even

TCE 003122188-10



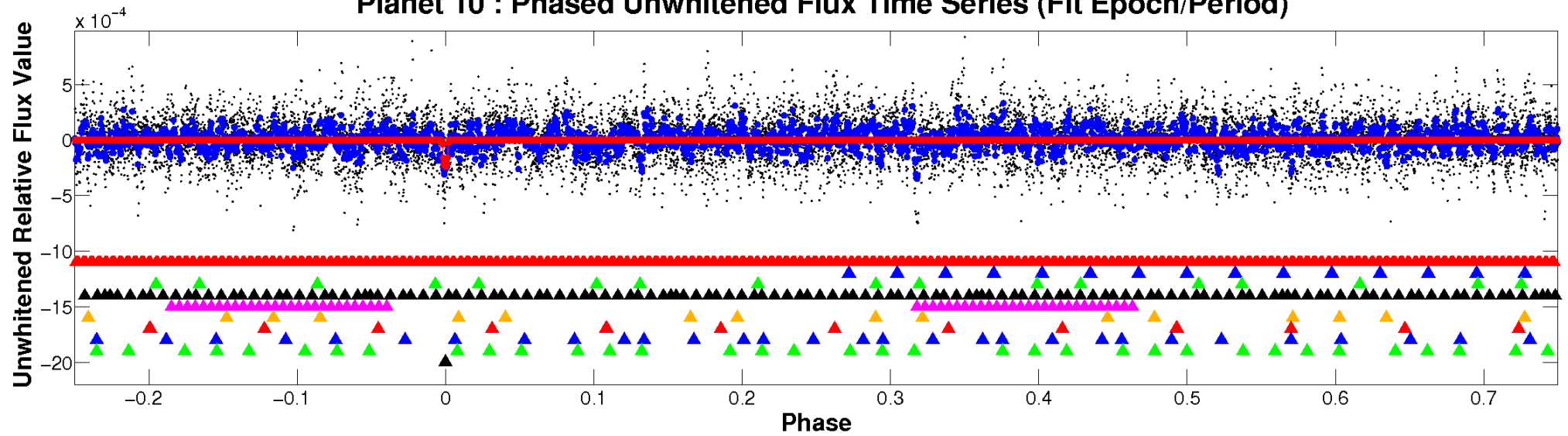
ALT Odd/Even

TCE 003122188-10

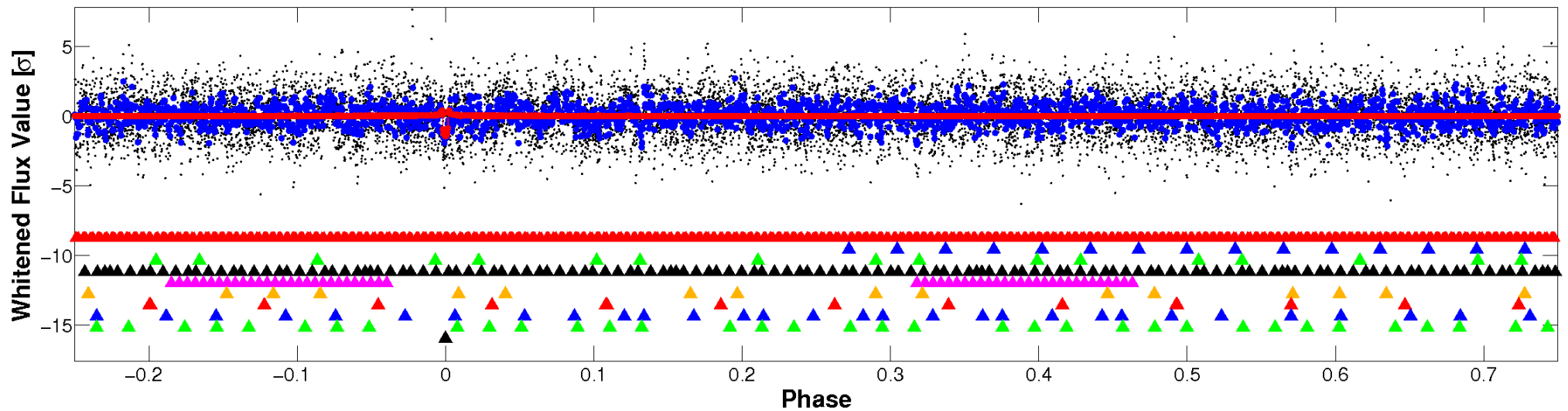


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

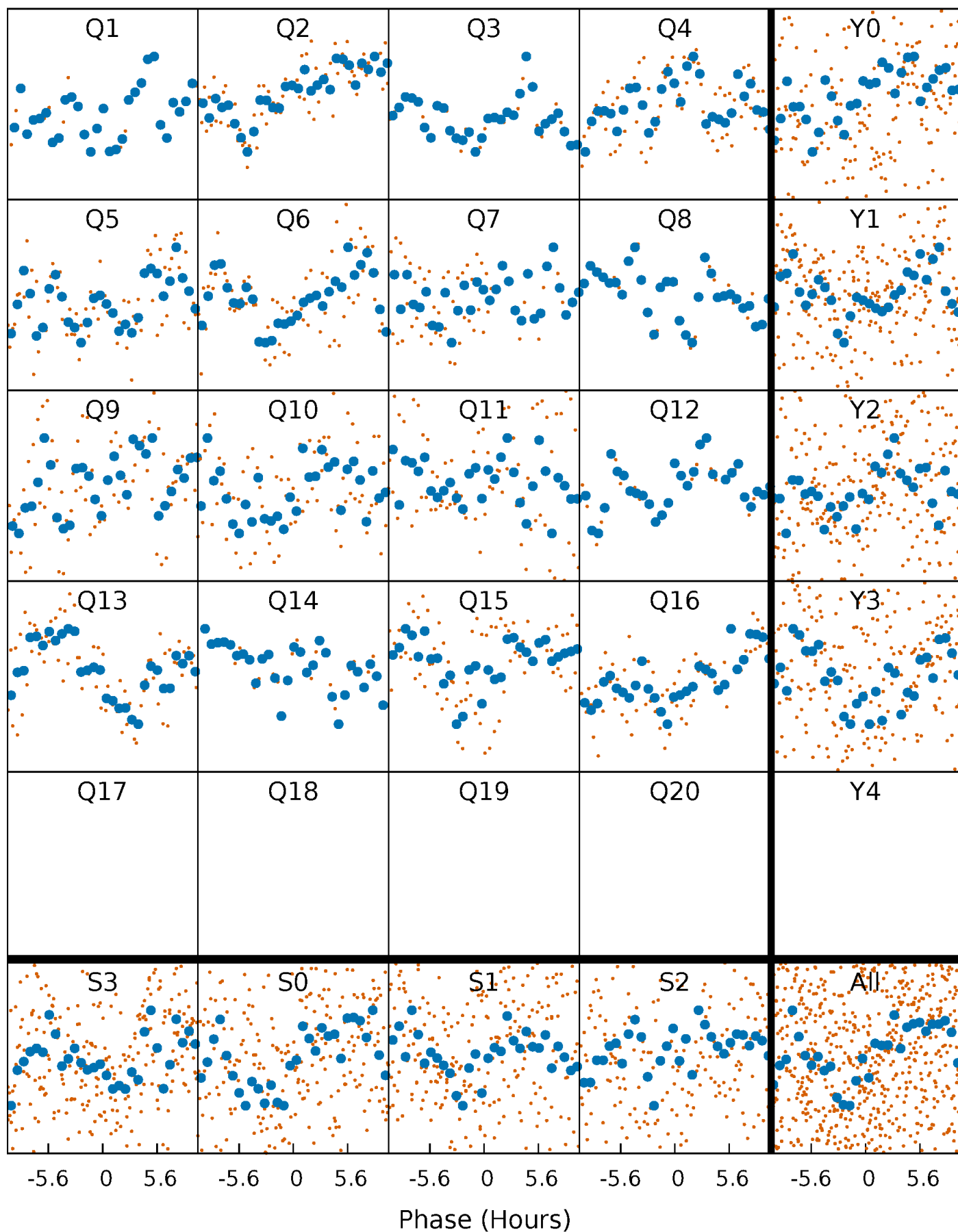


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



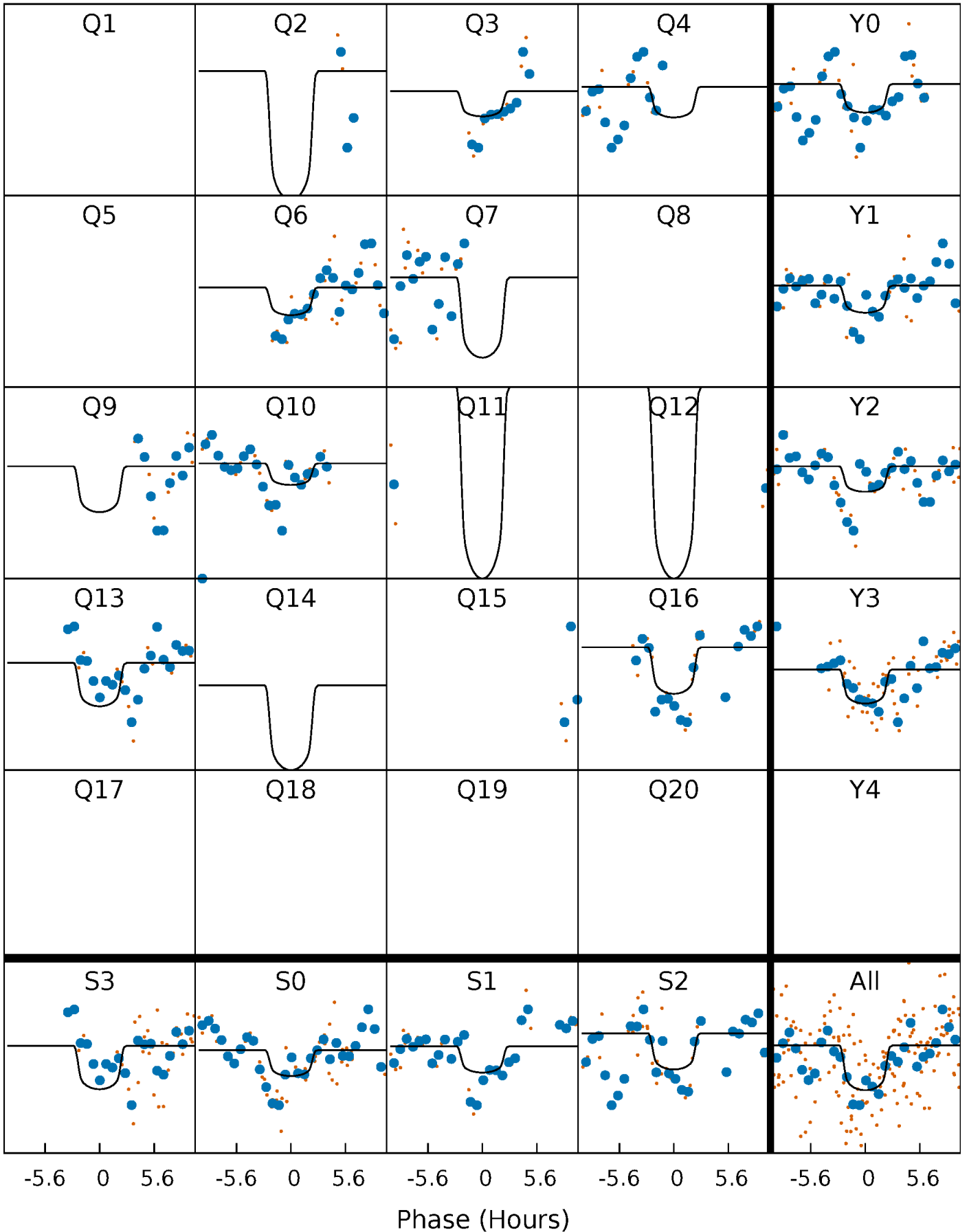
PDC Quarter-Phased Transit Curves

TCE 003122188-10 P= 51.932513 Days $T_0=148.232029$ (BKJD)



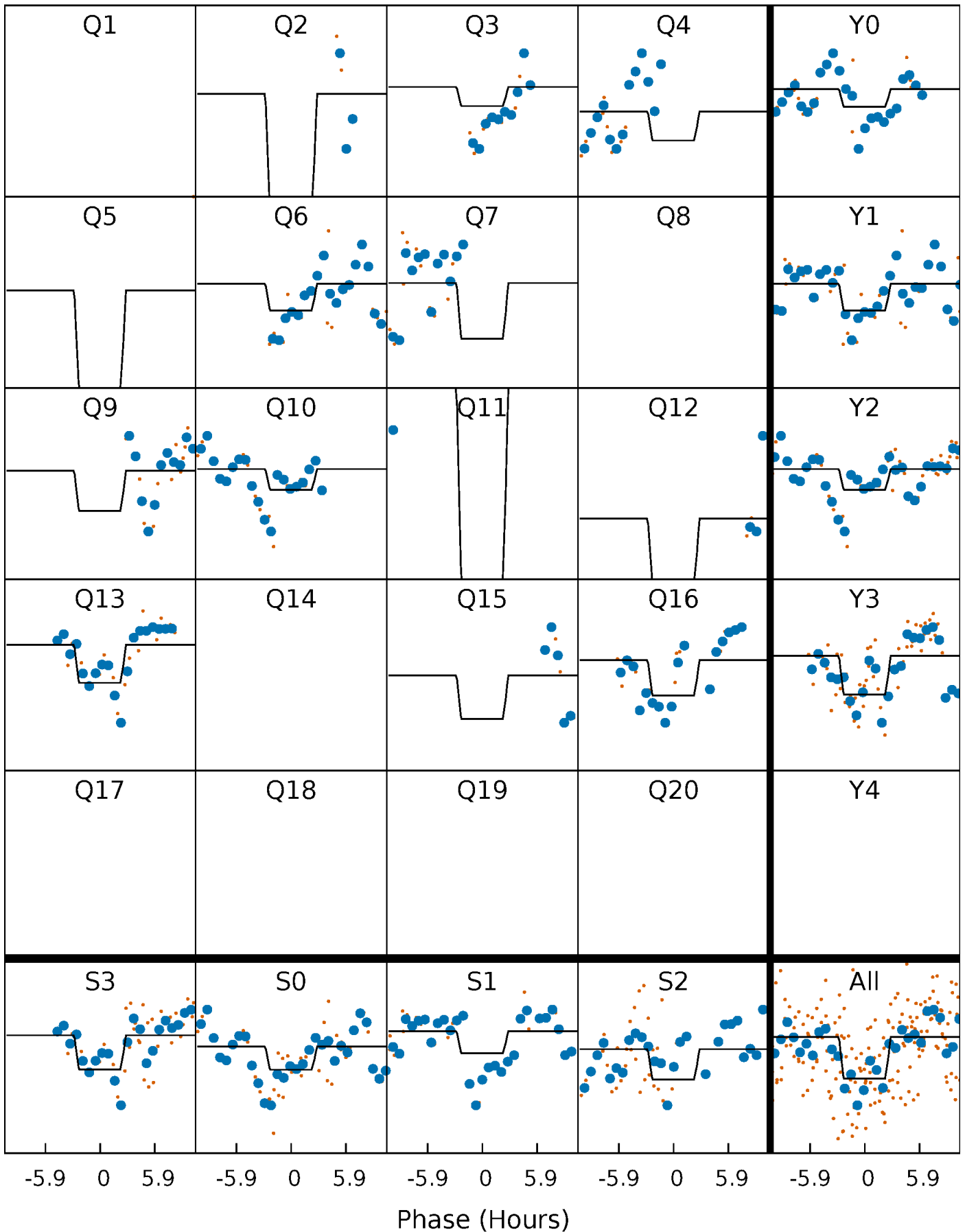
DV Quarter-Phased Transit Curves

TCE 003122188-10 P= 51.932513 Days $T_0=148.232029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

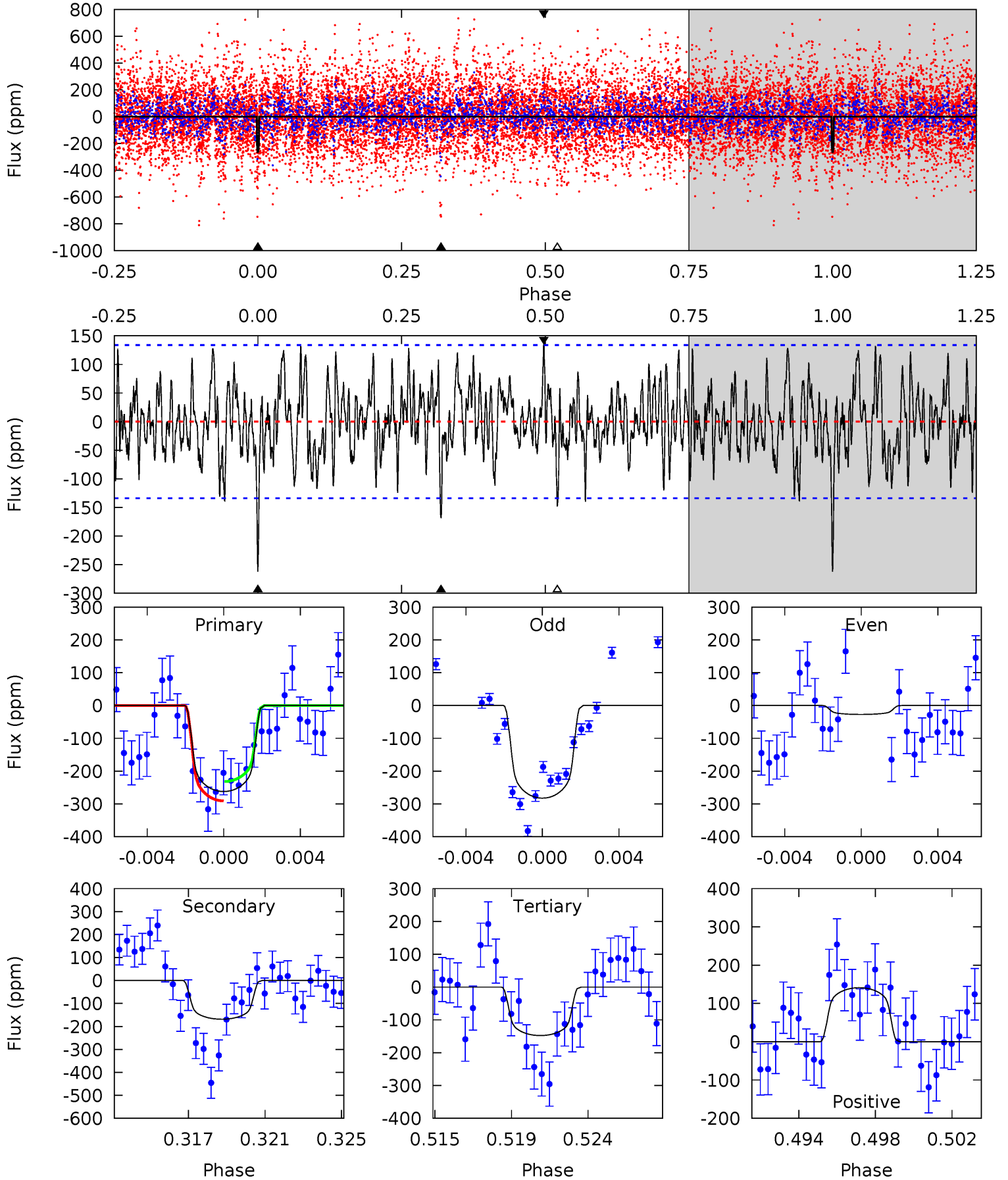
TCE 003122188-10 P= 51.935788 Days $T_0=148.220675$ (BKJD)



DV Model-Shift Uniqueness Test

003122188-10, P = 51.932513 Days, E = 96.299516 Days

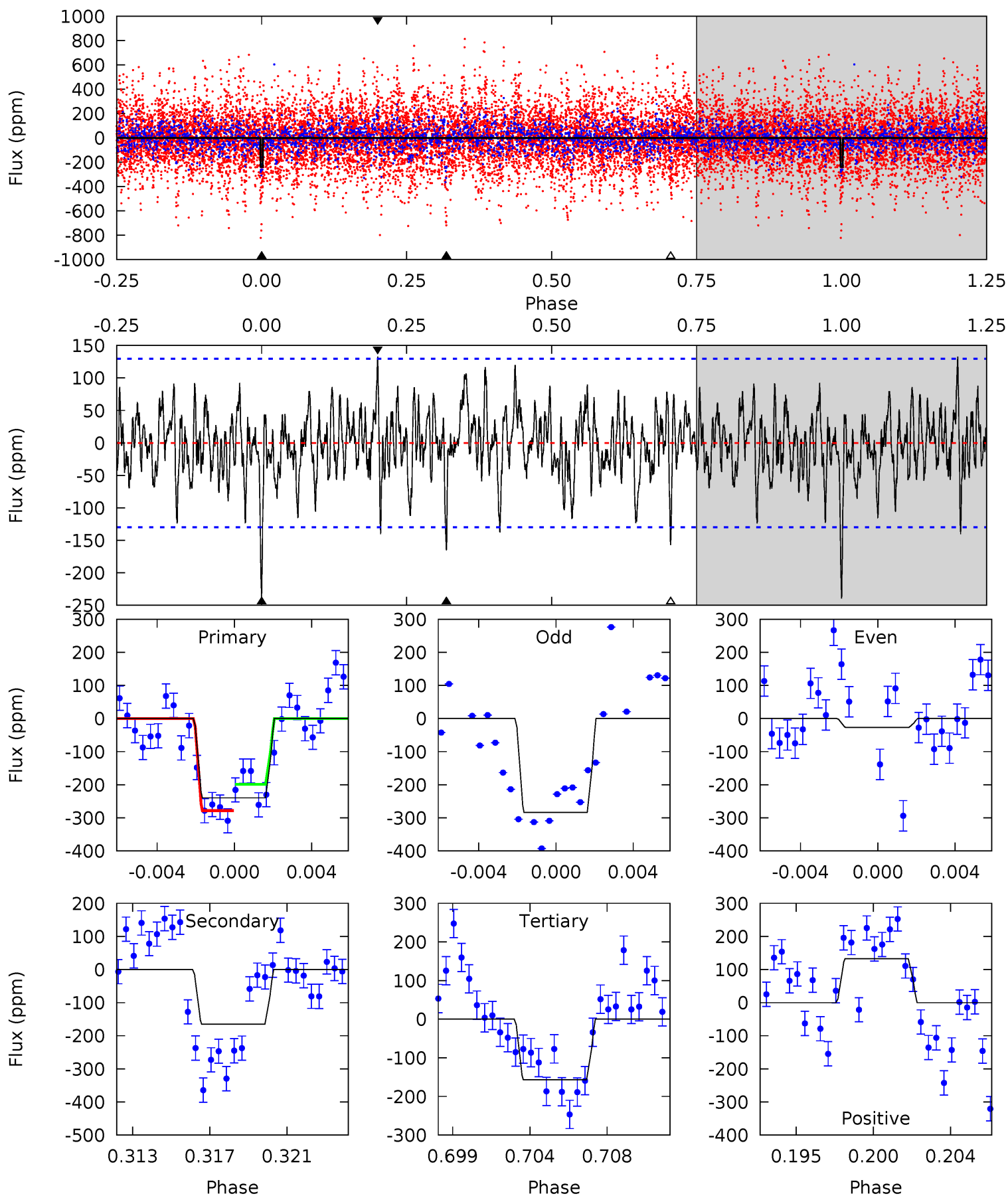
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.54	5.73	5.47	5.19	2.86	1.95	4.44	4.70	0.81	1.07	3.27	0.78	0.35	1.15



Alt Model-Shift Uniqueness Test

003122188-10, P = 51.935788 Days, E = 96.284887 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.57	6.61	6.28	5.31	5.18	2.85	1.73	3.30	4.27	0.33	1.31	3.85	0.76	0.36	1.59



Stellar Parameters For KIC 003122188

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+75}_{-84}	$3.430^{+0.270}_{-0.090}$	$0.060^{+0.150}_{-0.150}$	$4.315^{+0.536}_{-1.608}$	$1.829^{+0.139}_{-0.417}$	$0.032^{+0.064}_{-0.008}$
	+1%/-1%	+8%/-3%	+250%/-250%	+12%/-37%	+8%/-23%	+201%/-24%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 003122188-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-169 ± 26	$7.49^{+3.06}_{-2.82}$	1238^{+53}_{-97}	5029^{+1109}_{-658}	182^{+278}_{-94}
Alt.	-165 ± 25	$6.70^{+2.99}_{-2.63}$	1236^{+56}_{-101}	5221^{+1372}_{-748}	225^{+364}_{-123}

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

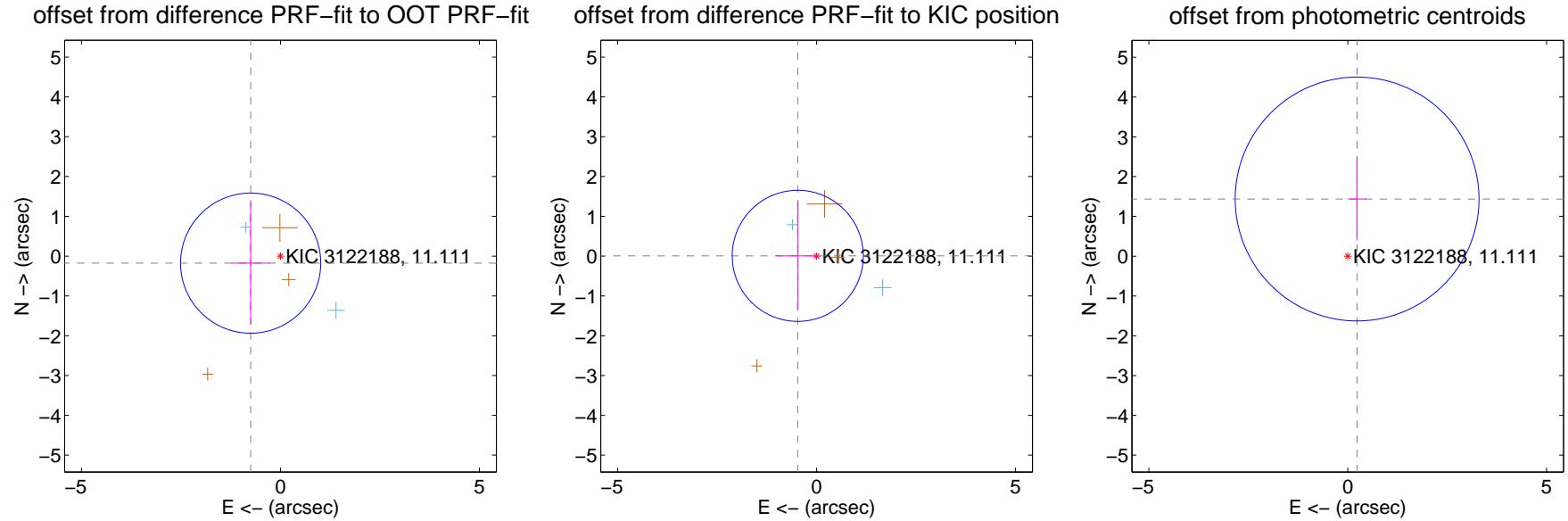
DV Centroid Data

Supplemental centroid analysis for 003122188-10. **Kepler magnitude: 11.11.** Transit SNR 8.99

There are 2 quarters with good PRF difference image offsets

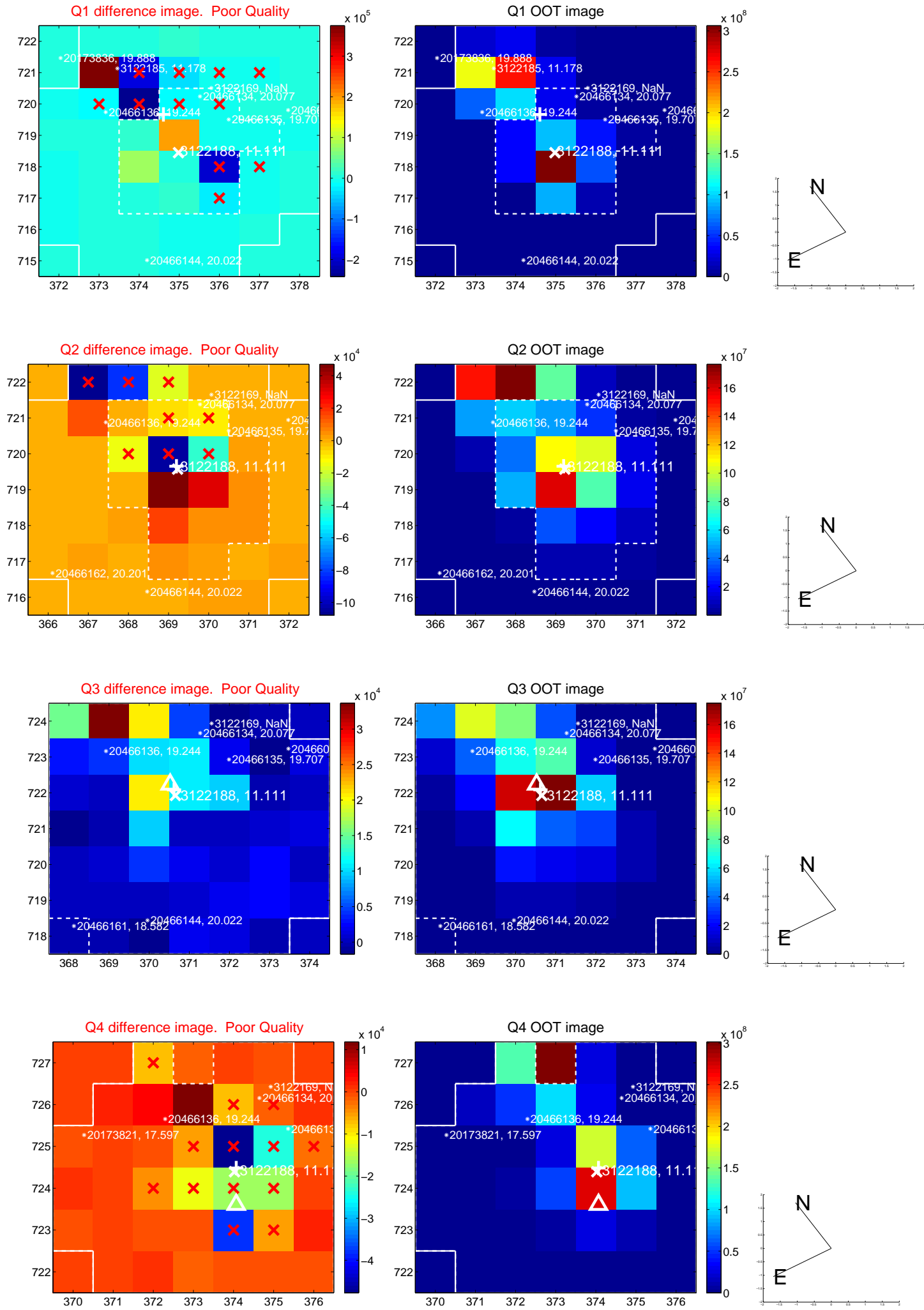
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.769 ± 0.587	1.31	0.749 ± 0.484	-0.176 ± 1.530
PRF-fit source offset from KIC position	0.473 ± 0.549	0.86	0.473 ± 0.542	0.007 ± 1.367
photometric centroid source offset	1.46 ± 1.02	1.43	-0.24 ± 0.23	1.44 ± 1.03

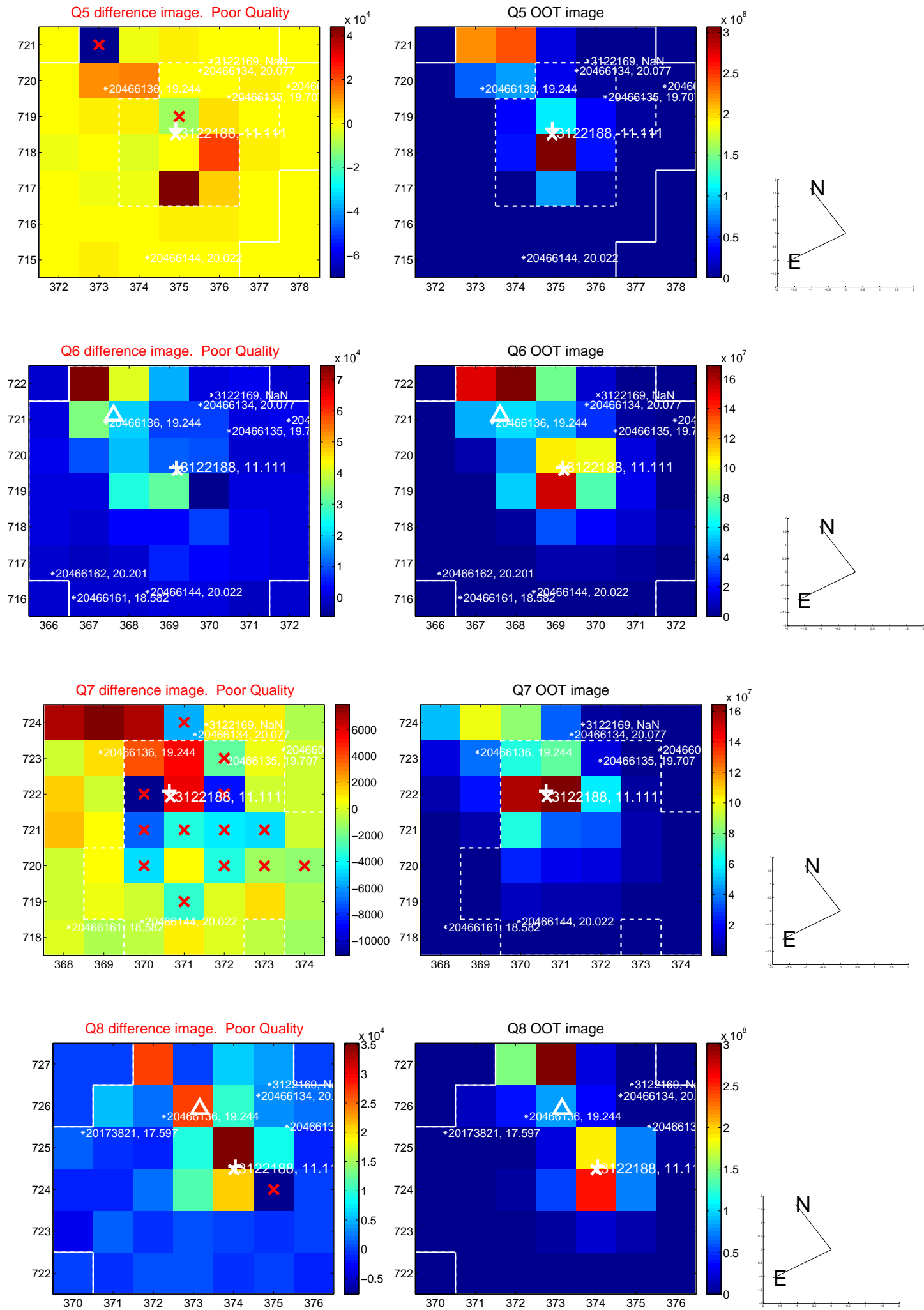


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

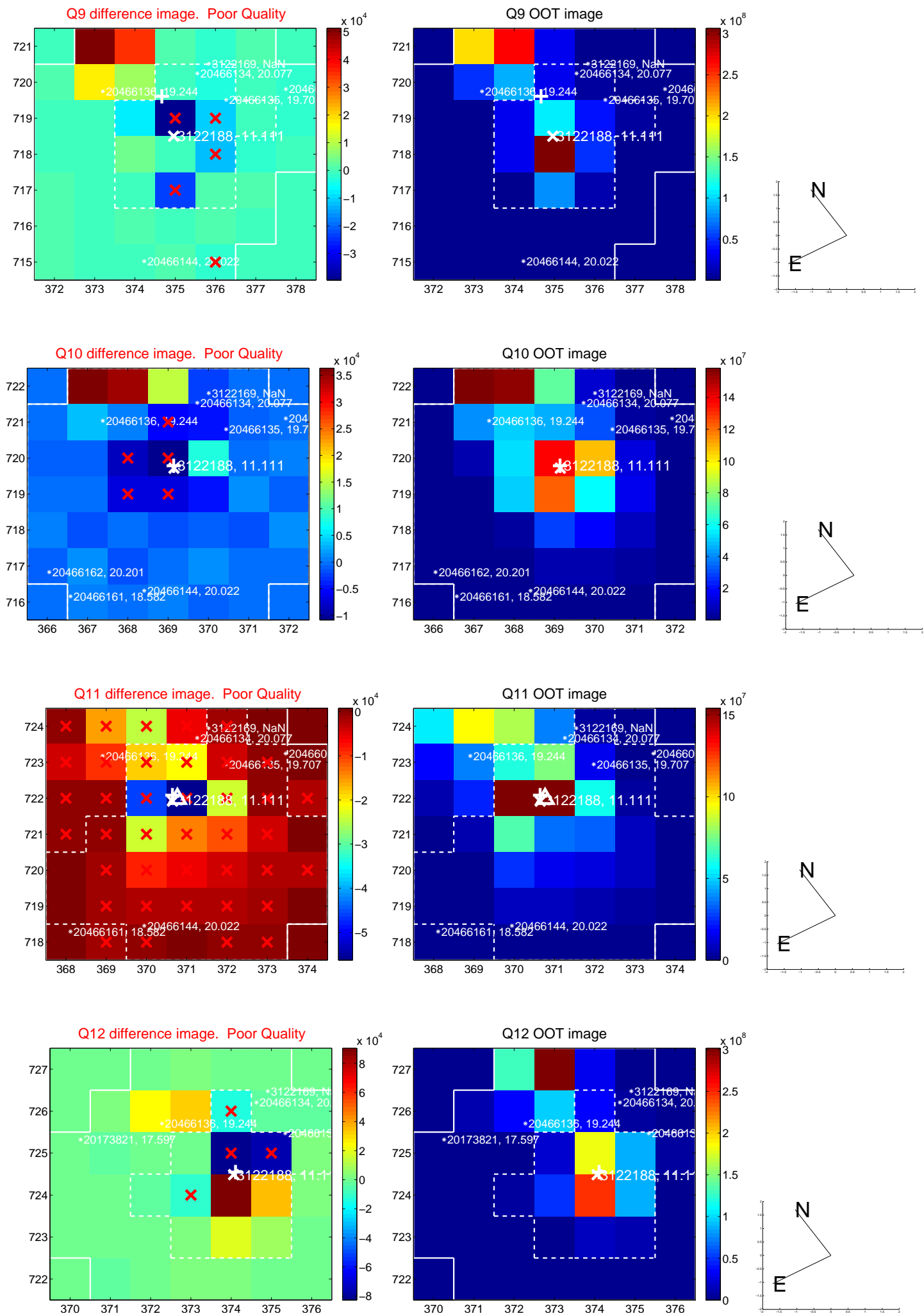
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



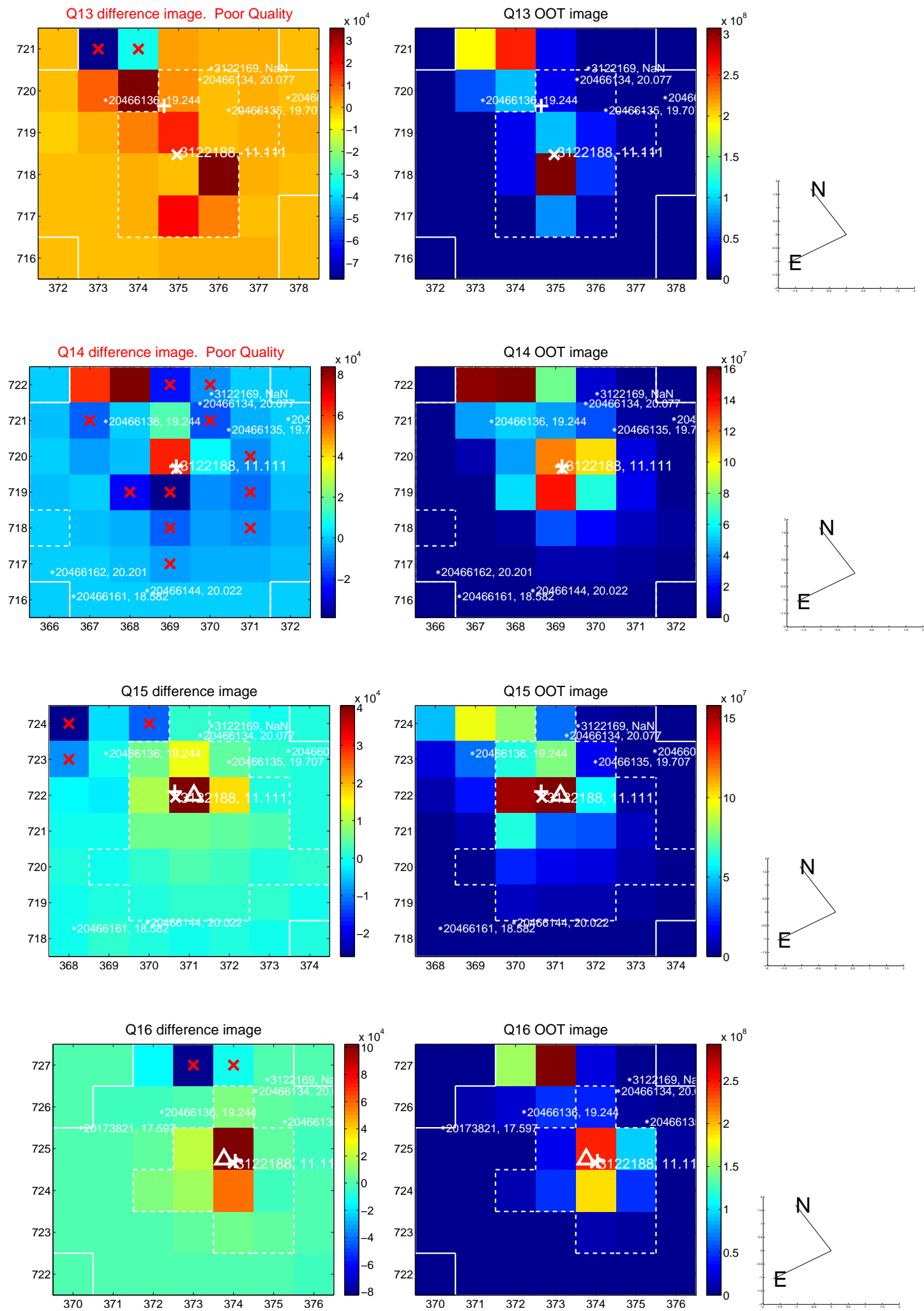
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



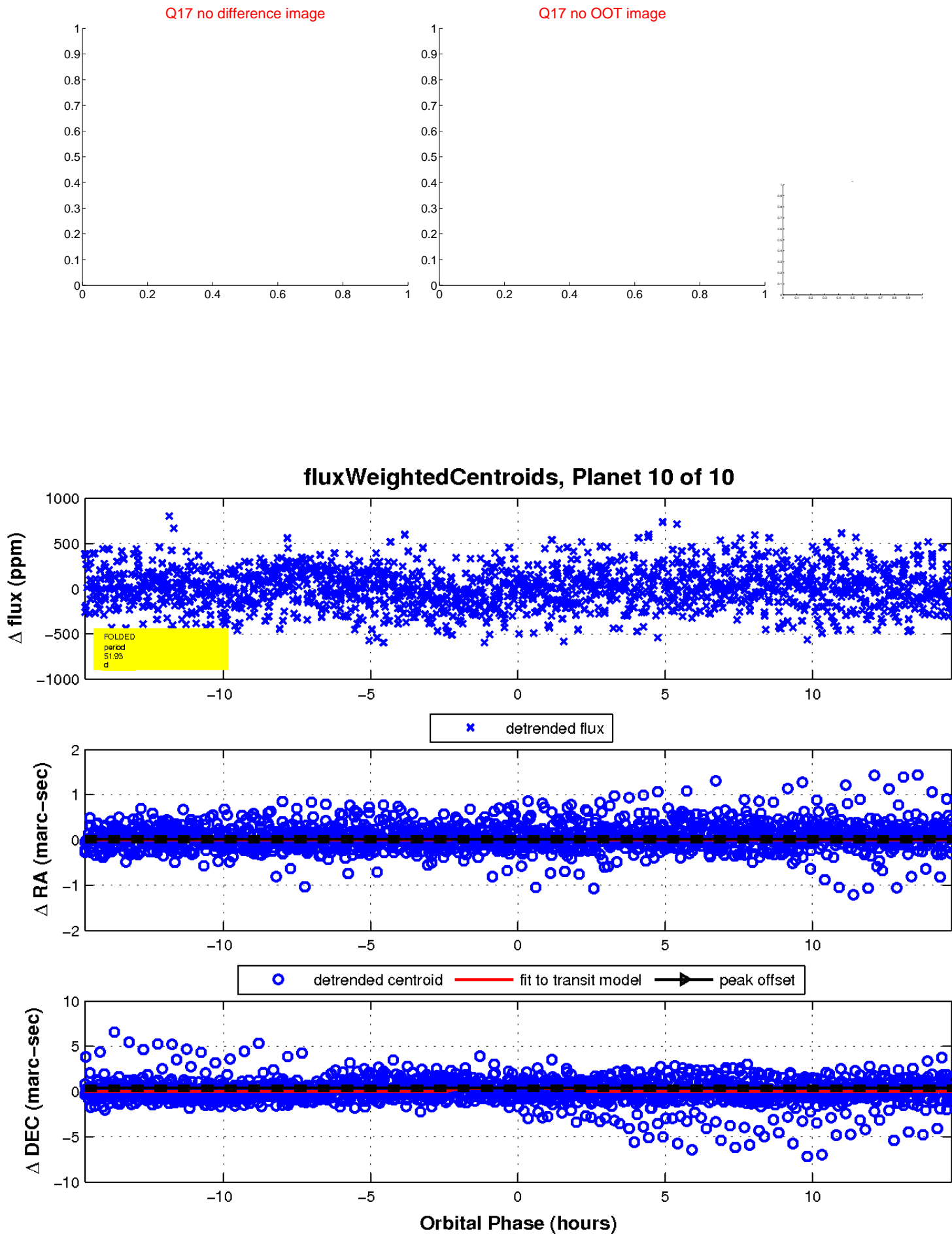
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

