

KIC 011700604

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})
011700604-01	OBS	No	0.551885	131.607609	18.5	1.468	10.1	10.3	2.46	7859	1.07	87406.14
011700604-02	OBS	No	0.551858	131.805409	5.4	3.226	11.5	3.1	2.46	7859	0.58	87411.89
011700604-03	OBS	No	10.129257	135.719710	121.3	1.823	9.9	8.0	2.46	7859	3.21	1805.38
011700604-04	OBS	No	33.709087	143.636283	198.8	2.223	9.5	9.1	2.46	7859	3.97	363.37
011700604-06	OBS	No	7.747454	132.220738	107.2	1.703	9.0	8.8	2.46	7859	2.97	2581.04
011700604-07	OBS	No	26.498446	144.450780	101.9	3.000	8.4	-1.0	2.46	7859	2.51	500.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011700604-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

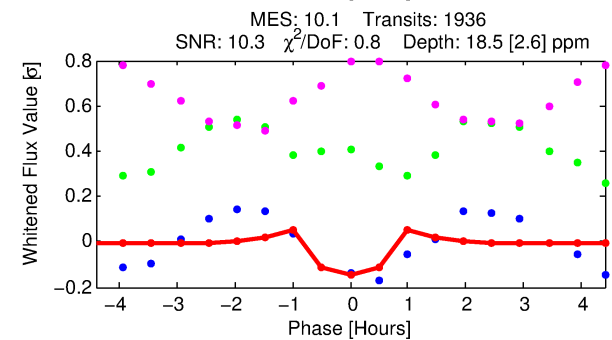
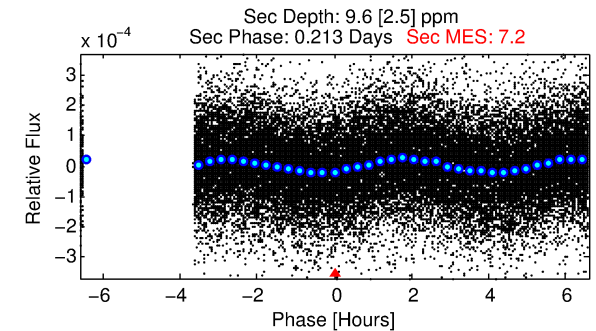
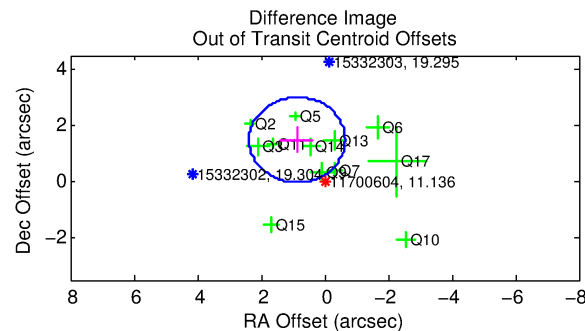
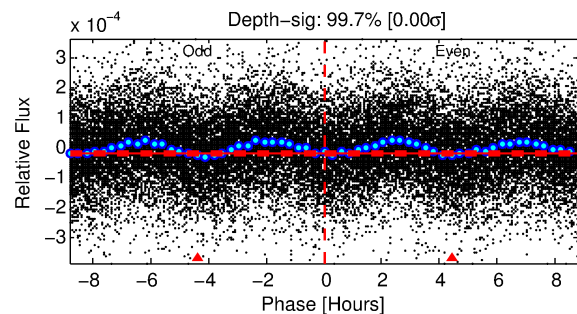
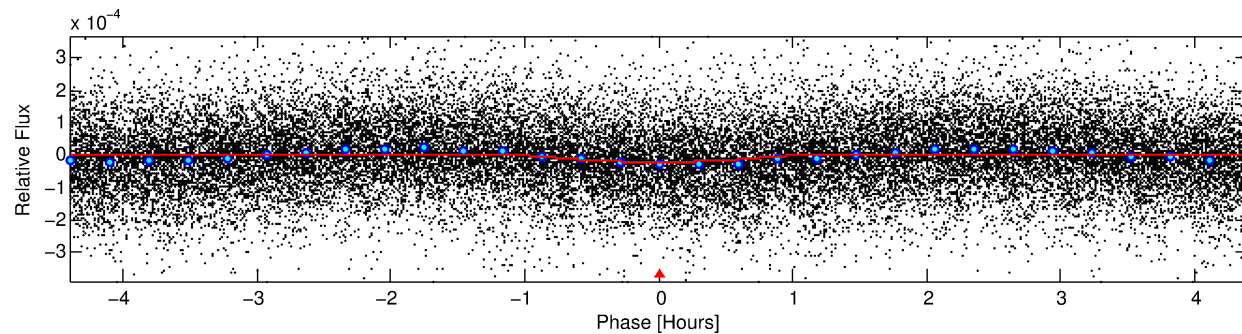
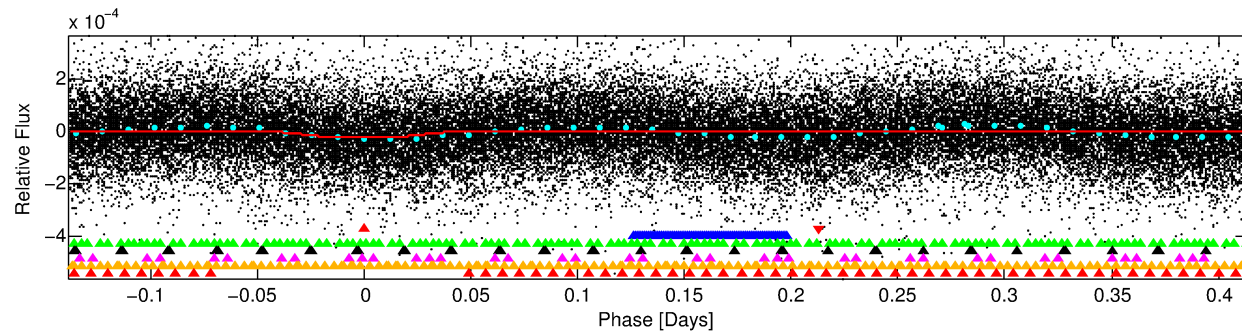
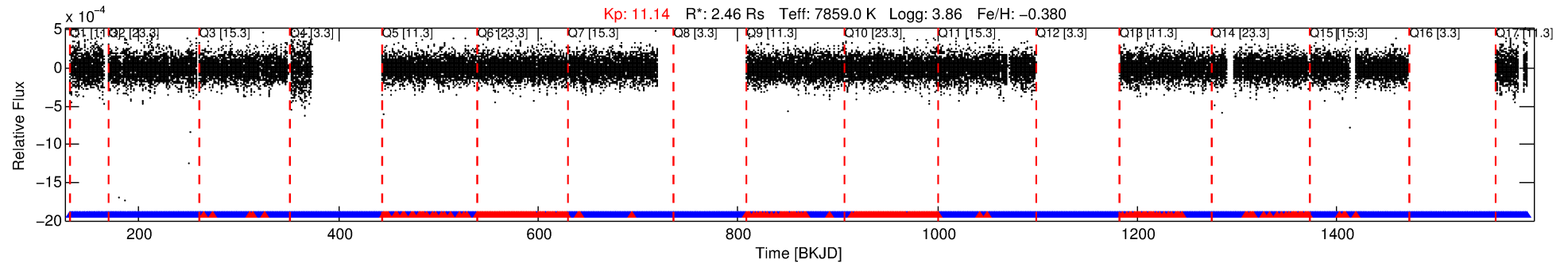
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-01

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 1 of 7 Period: 0.552 d



DV Fit Results:

Period = 0.55188 [0.00001] d
Epoch = 131.6076 [0.0014] BKJD
Rp/R* = 0.0040 [0.0041]
a/R* = 2.93 [14.89]
b = 0.10 [57.75]
Seff = 87406.14 [55410.63]
Teq = 4384 [695] K
Rp = 1.07 [1.17] Re
a = 0.0154 [0.0059] AU
Ag = 1.09 [2.33] [0.04 σ]
Teffp = 6924 [3564] K [0.70 σ]

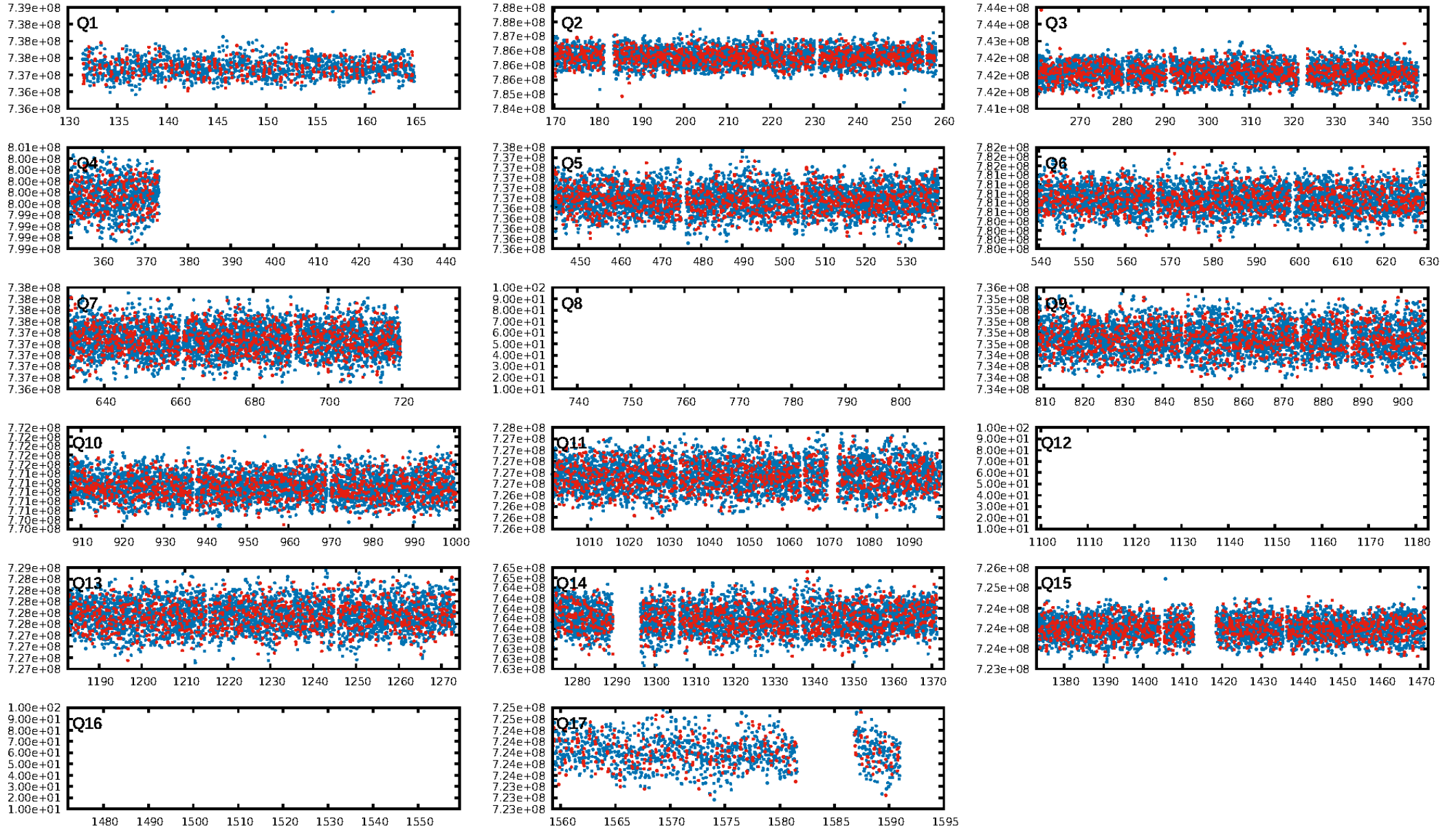
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [76.81 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.35e-07
RollingBand-fgt: 0.78 [1397/1788]
GhostDiagnostic-chr: 9.791
Centroid-sig: 57.7%
Centroid-so: 0.390 arcsec [0.52 σ]
OotOffset-rm: 1.721 arcsec [3.41 σ]
KicOffset-rm: 1.855 arcsec [4.43 σ]
OotOffset-st: 4/4/0/4 [12]
KicOffset-st: 4/4/0/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 0.00 [0/14]

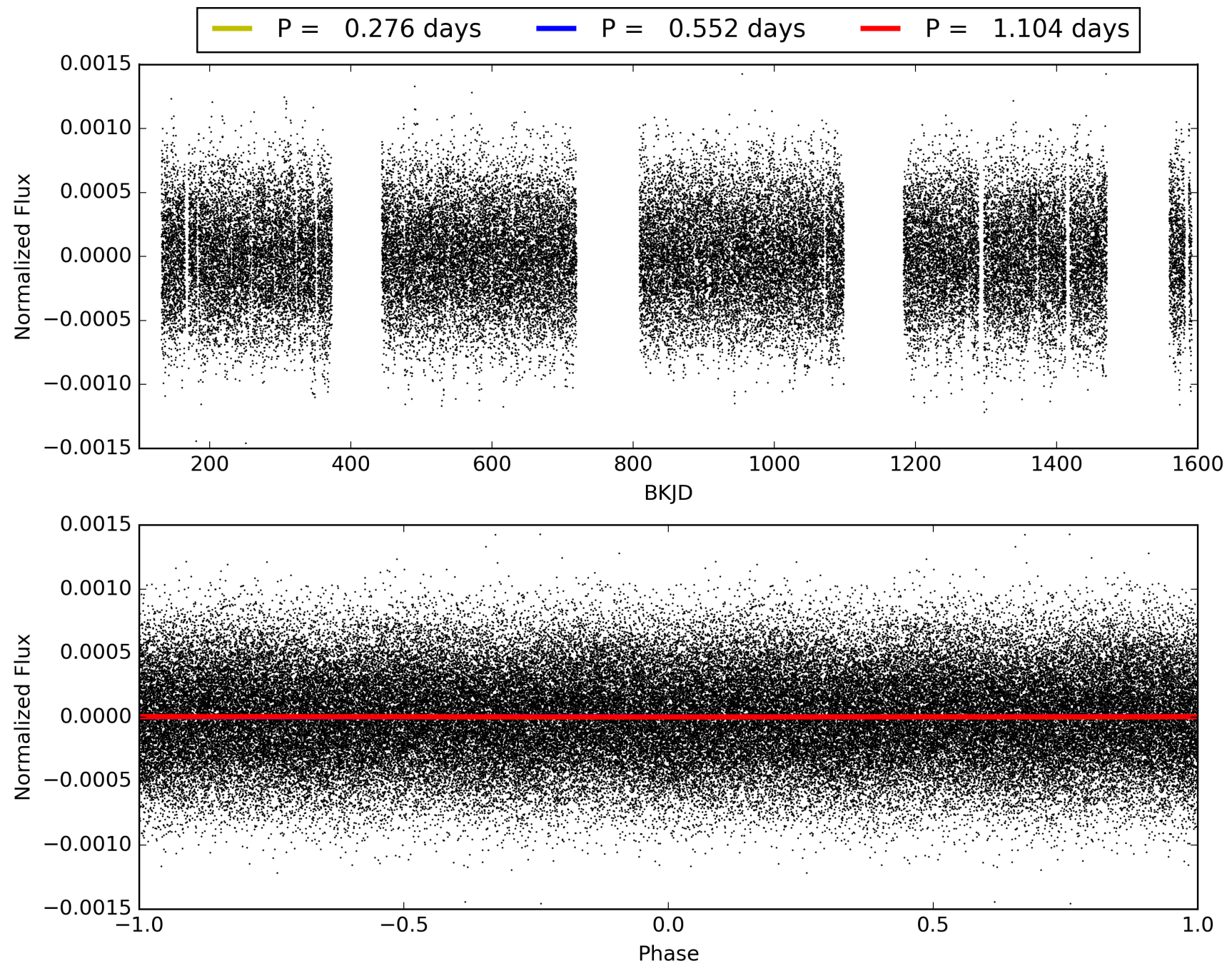
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:38:42 Z

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

TCE 011700604-01, PDC Light Curves

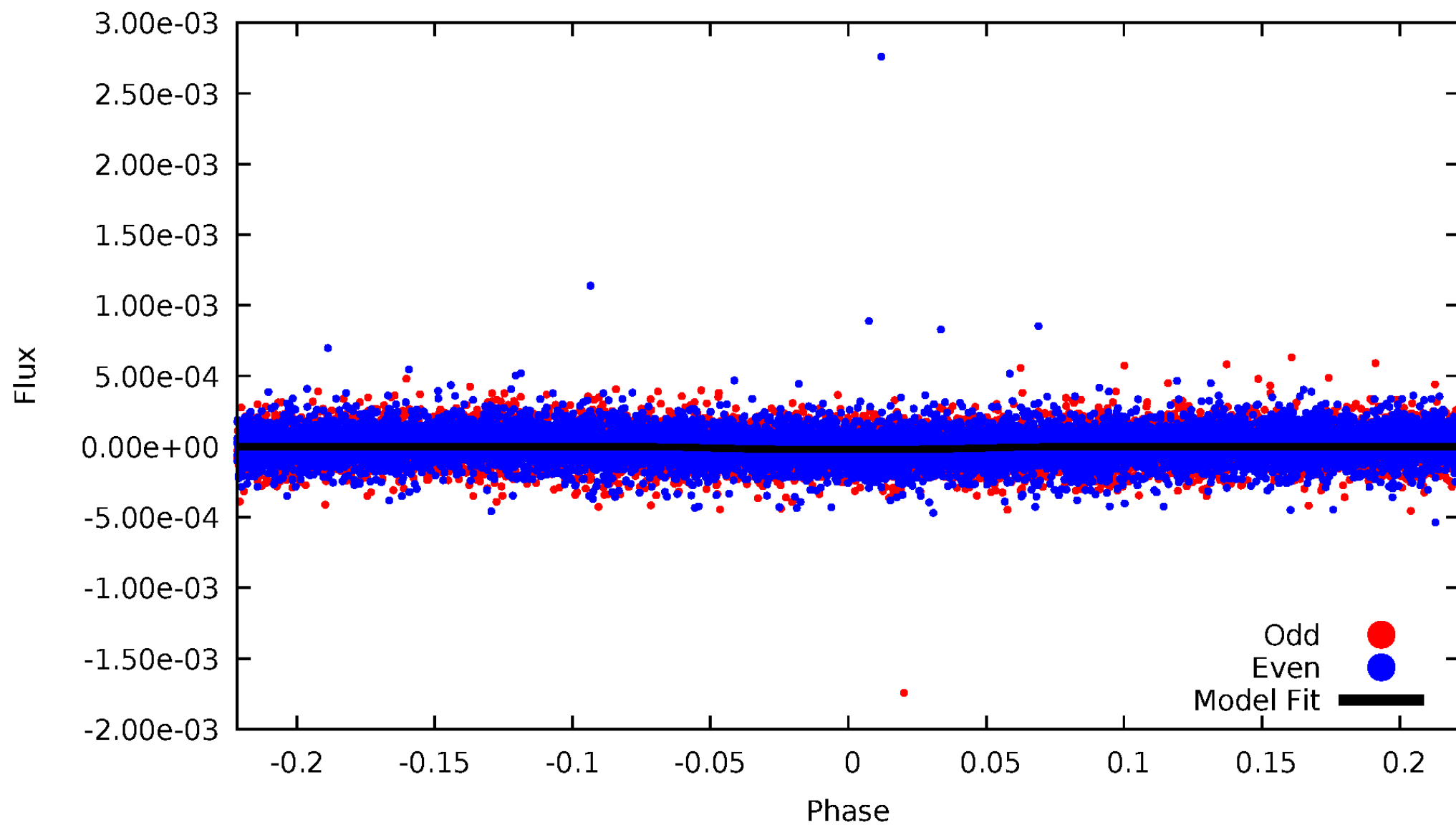


TCE 011700604-01



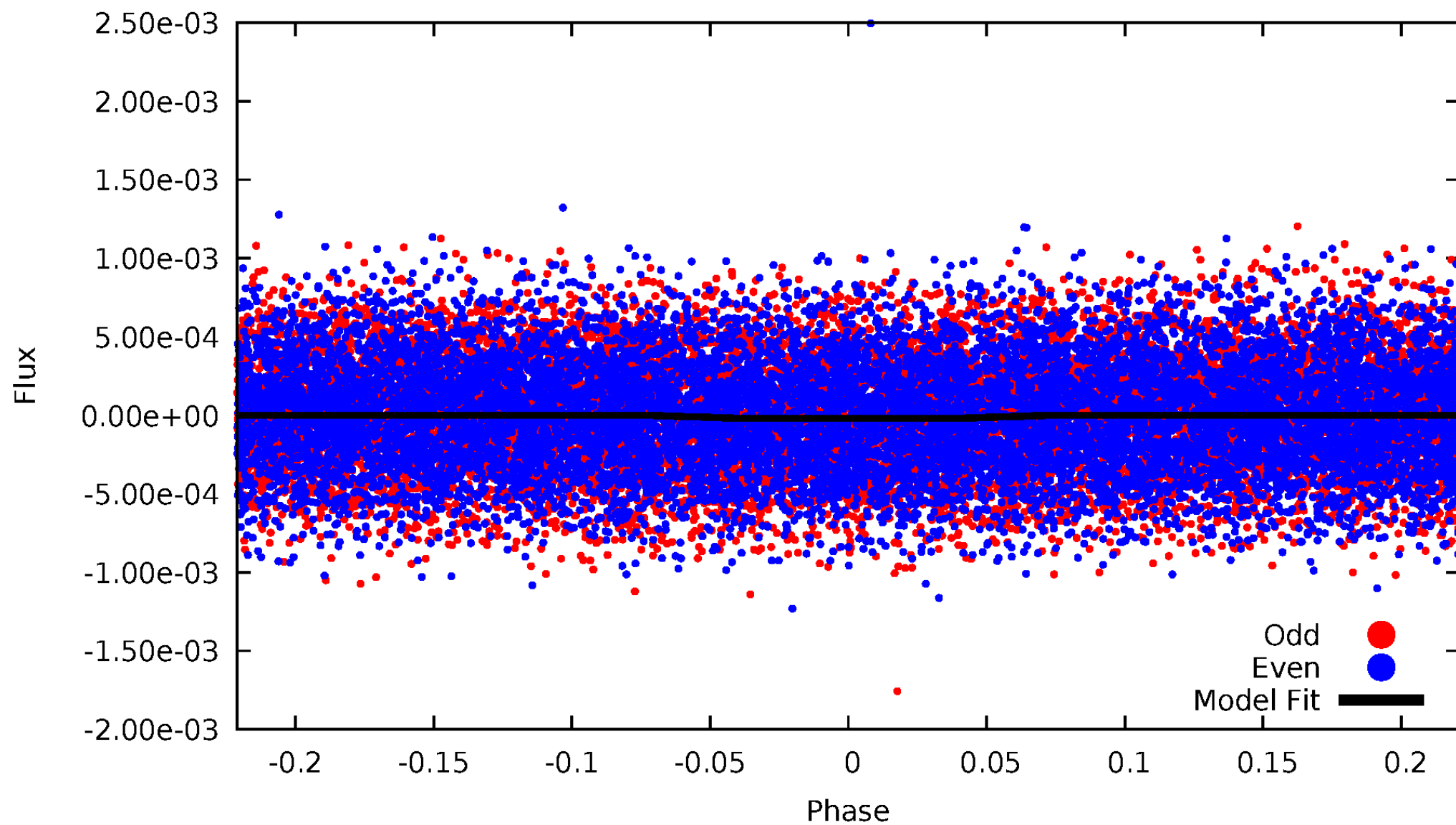
DV Odd/Even

TCE 011700604-01

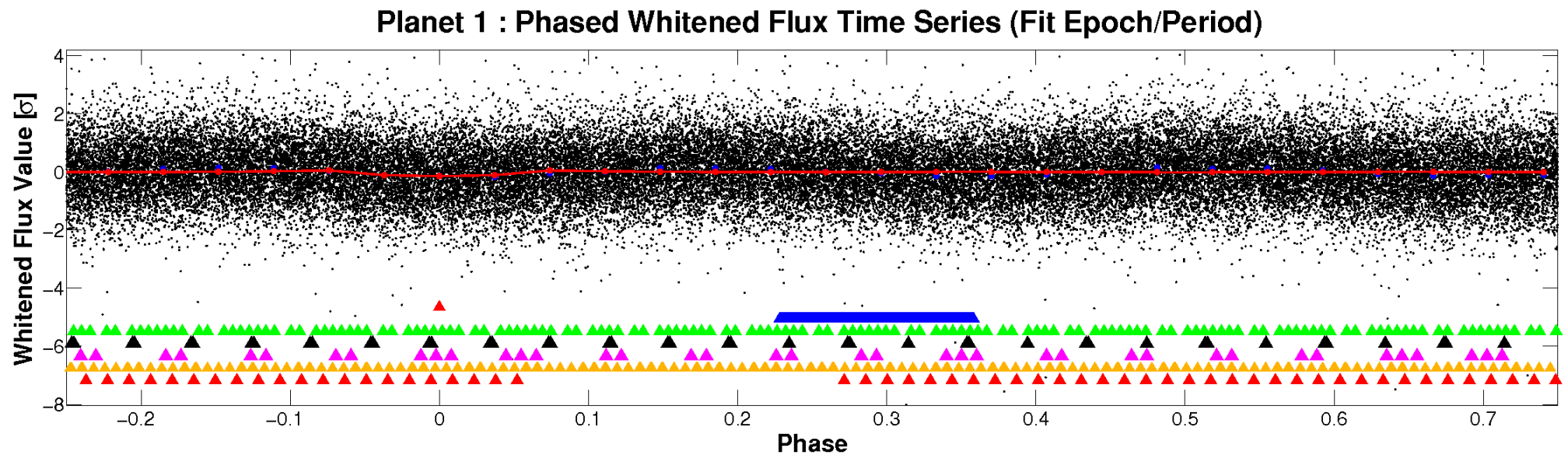
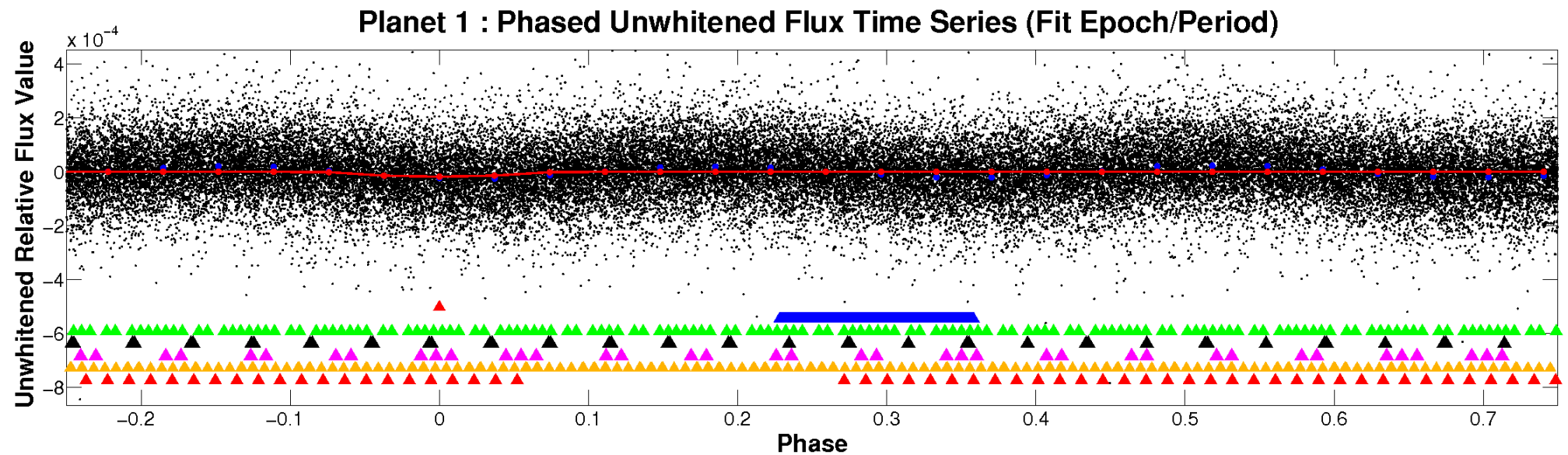


ALT Odd/Even

TCE 011700604-01

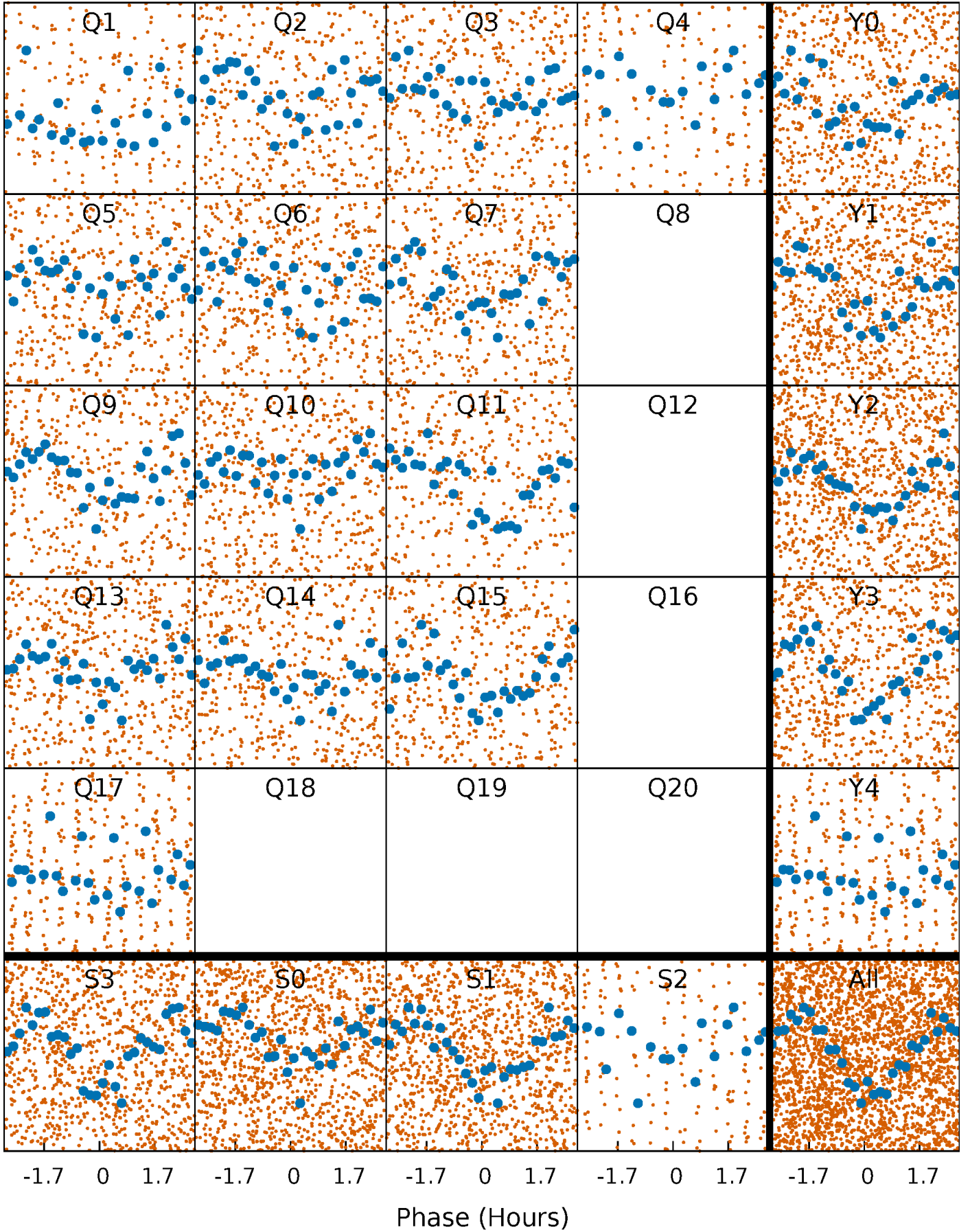


Non-Whitened Vs. Whitened Light Curve



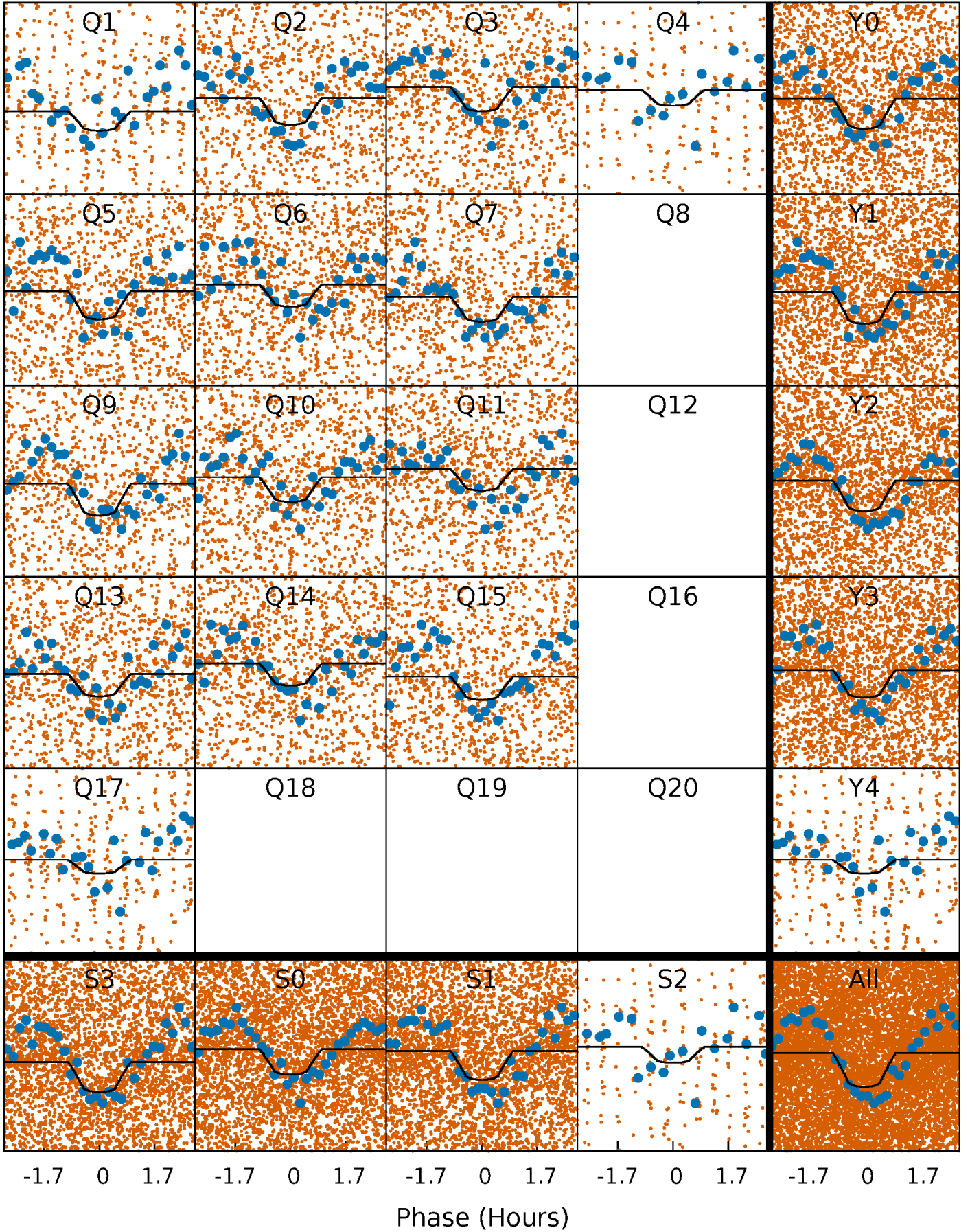
PDC Quarter-Phased Transit Curves

TCE 011700604-01 P= 0.551885 Days $T_0=131.607609$ (BKJD)



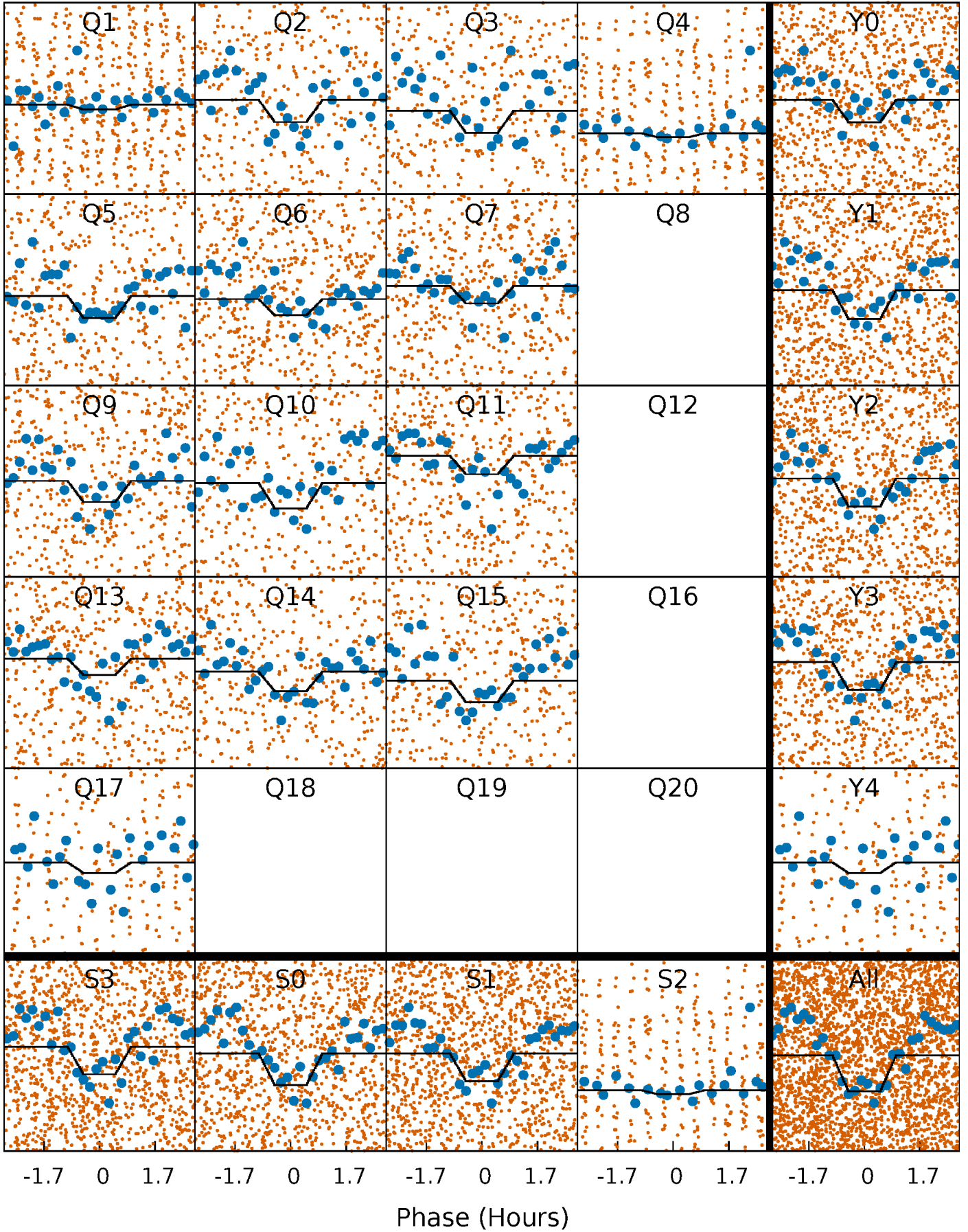
DV Quarter-Phased Transit Curves

TCE 011700604-01 P= 0.551885 Days $T_0=131.607609$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

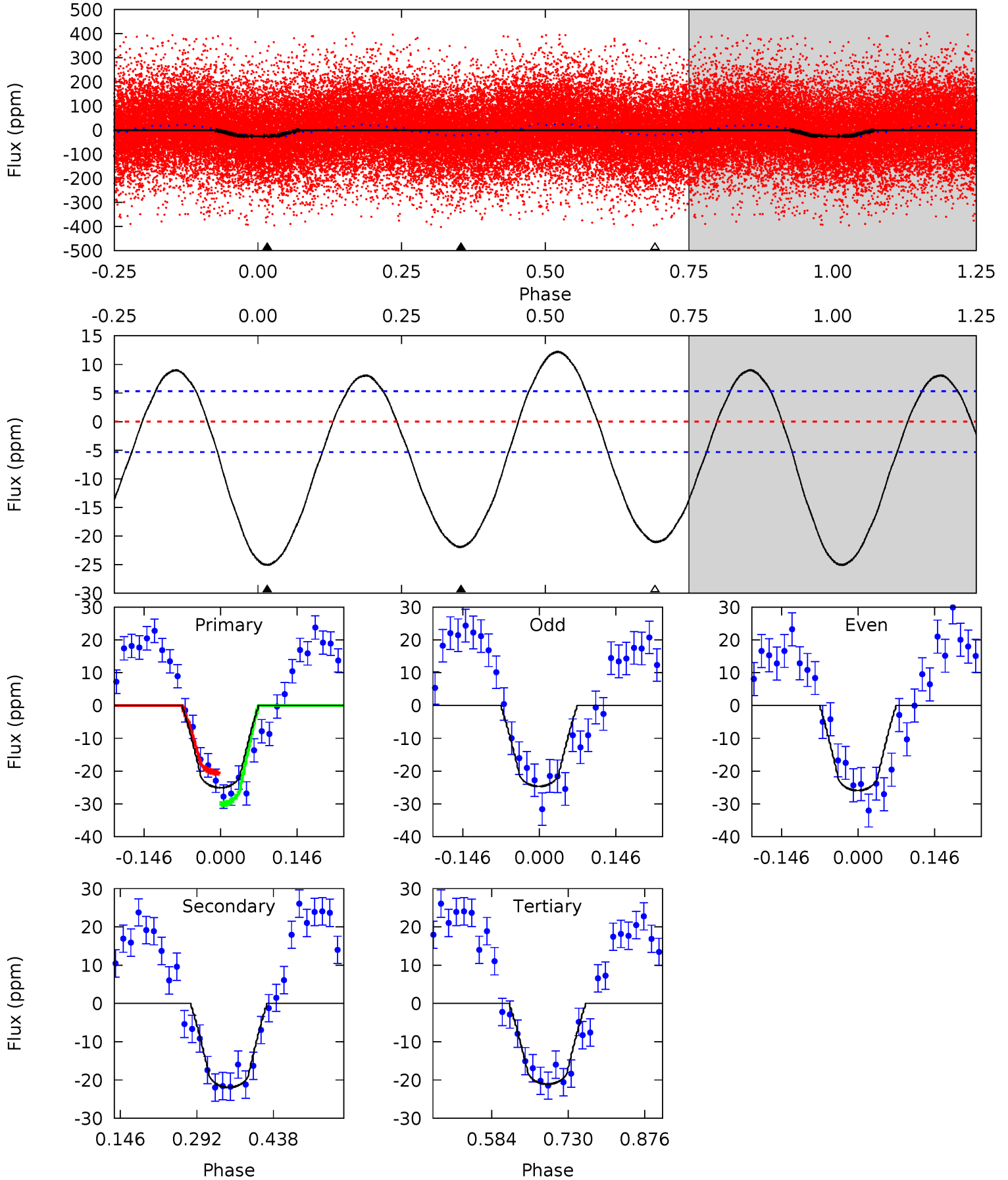
TCE 011700604-01 P= 0.551890 Days $T_0=131.608359$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-01, P = 0.551885 Days, E = 131.055724 Days

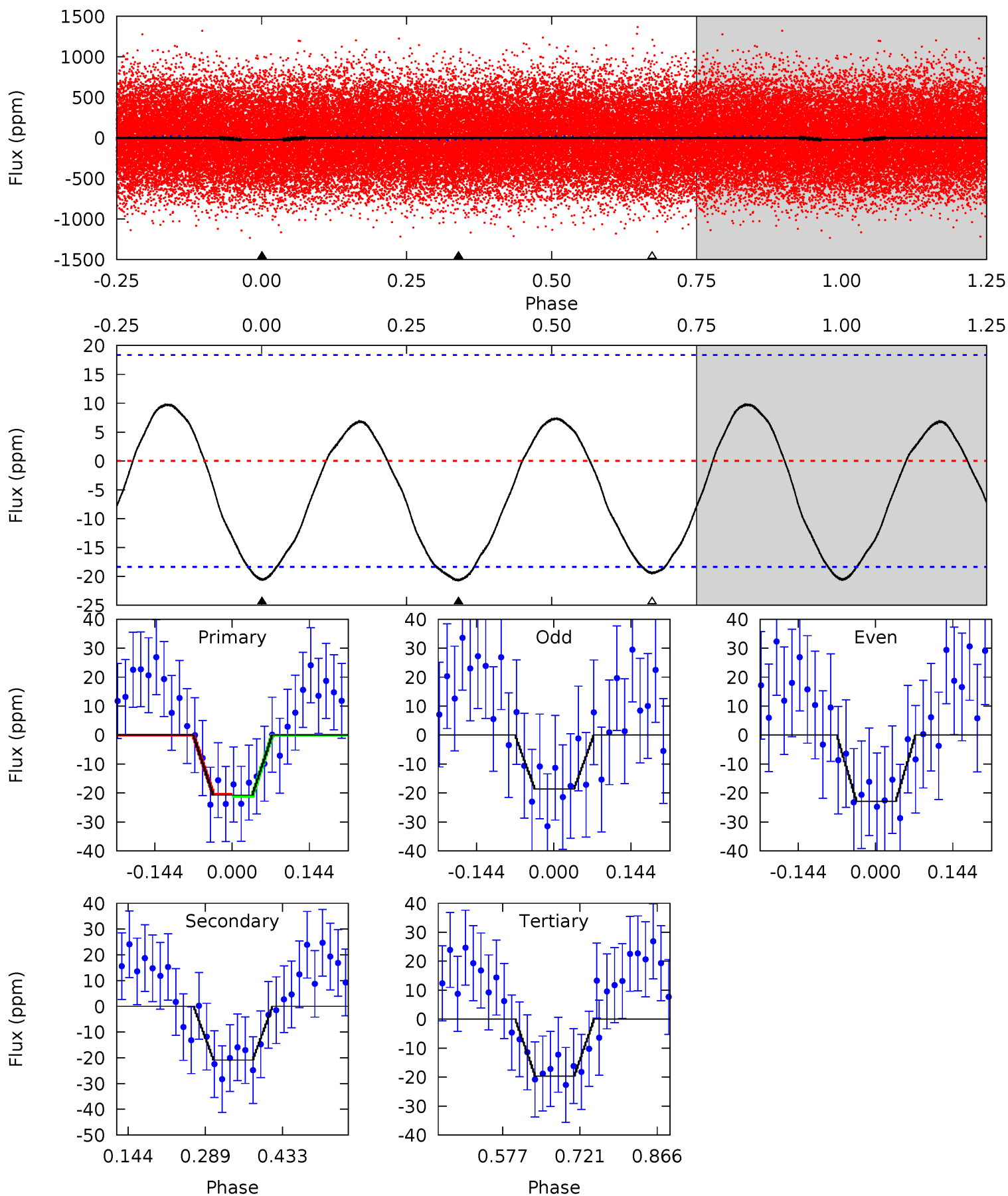
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	18.5	17.8	0	4.48	1.45	9.75	3.37	21.1	0.73	18.5	0.54	0.94	0.33	4.04



Alt Model-Shift Uniqueness Test

011700604-01, P = 0.551890 Days, E = 131.056469 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.08	5.10	4.80	0	4.49	1.46	2.48	0.28	5.08	0.30	5.10	0.53	0.99	0.32	0.09



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22±1	$1.13^{+0.98}_{-0.70}$	5941^{+423}_{-638}	7423^{+9724}_{-2485}	$2.338^{+13.535}_{-1.704}$
Alt.	-21±4	$1.28^{+1.01}_{-0.84}$	5994^{+388}_{-577}	6954^{+8453}_{-2417}	$1.702^{+12.308}_{-1.188}$

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

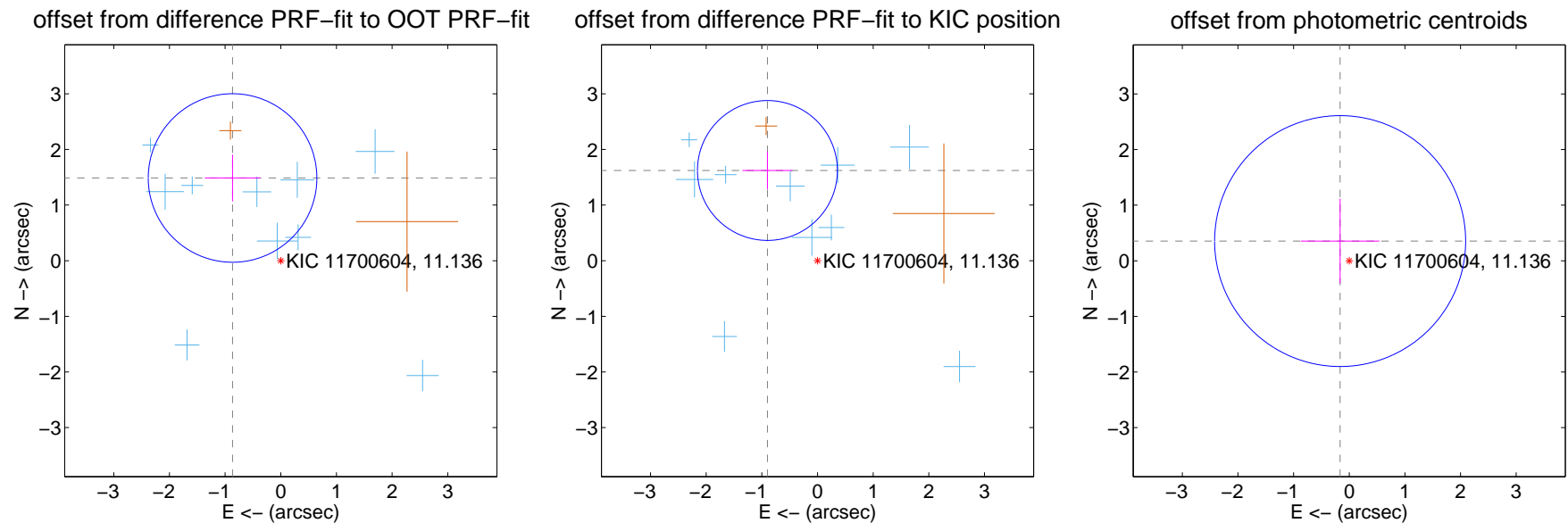
DV Centroid Data

Supplemental centroid analysis for 011700604-01. **Kepler magnitude: 11.14.** Transit SNR 10.31

There are 10 quarters with good PRF difference image offsets

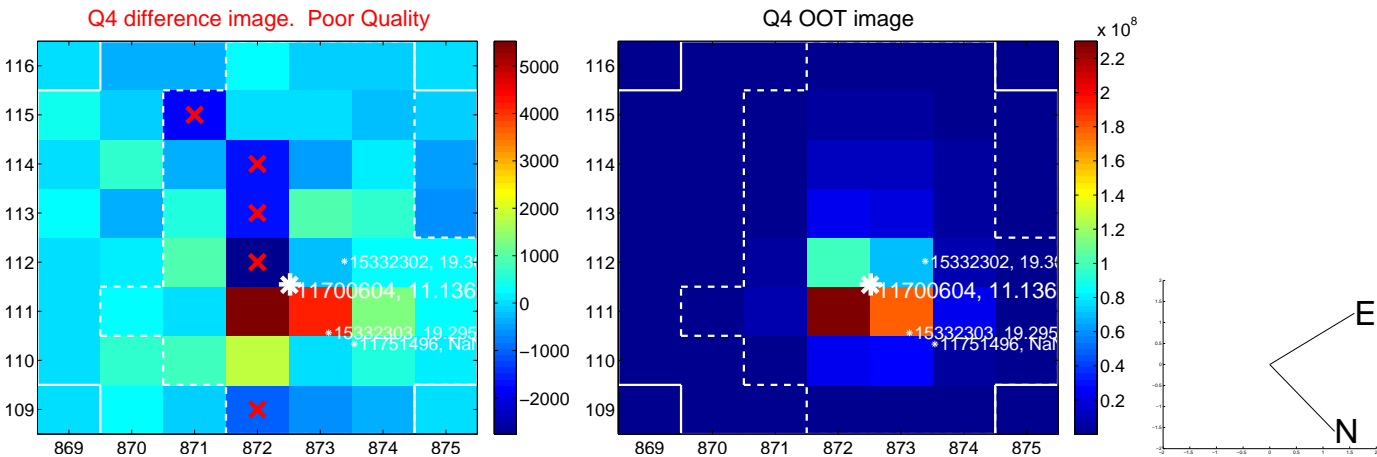
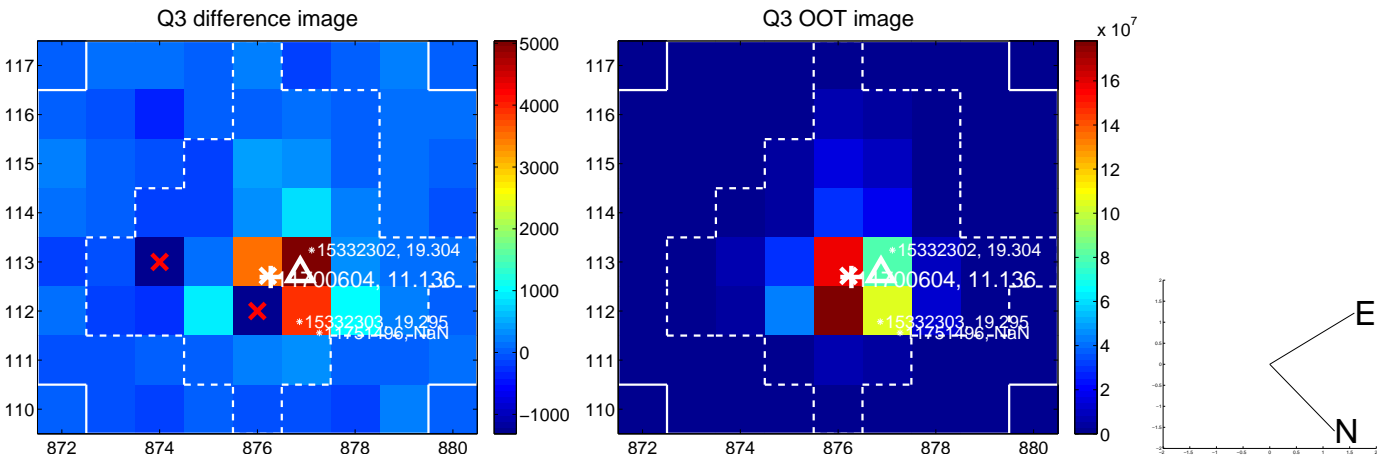
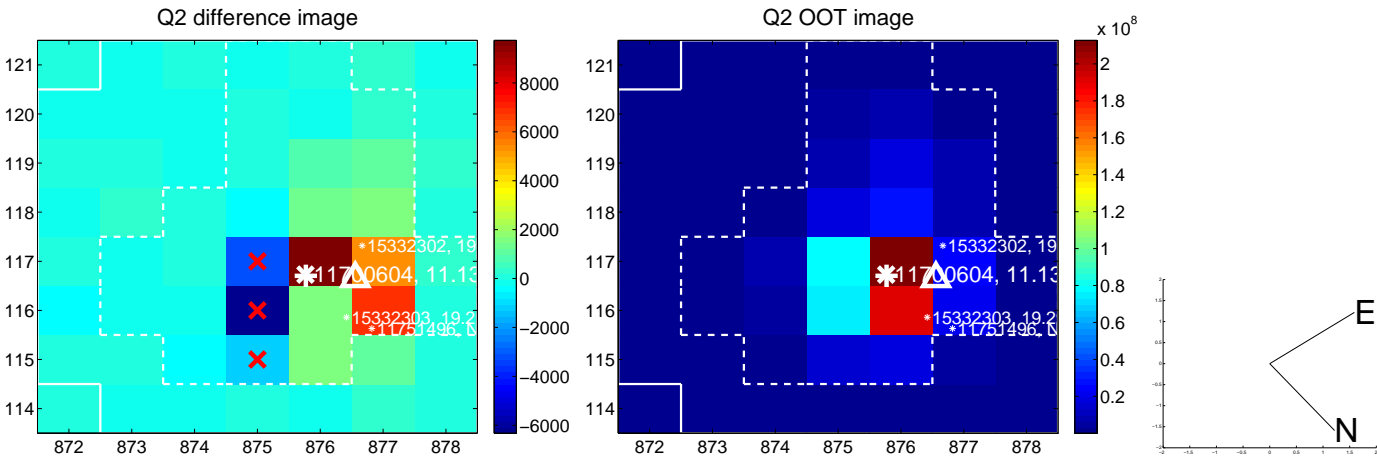
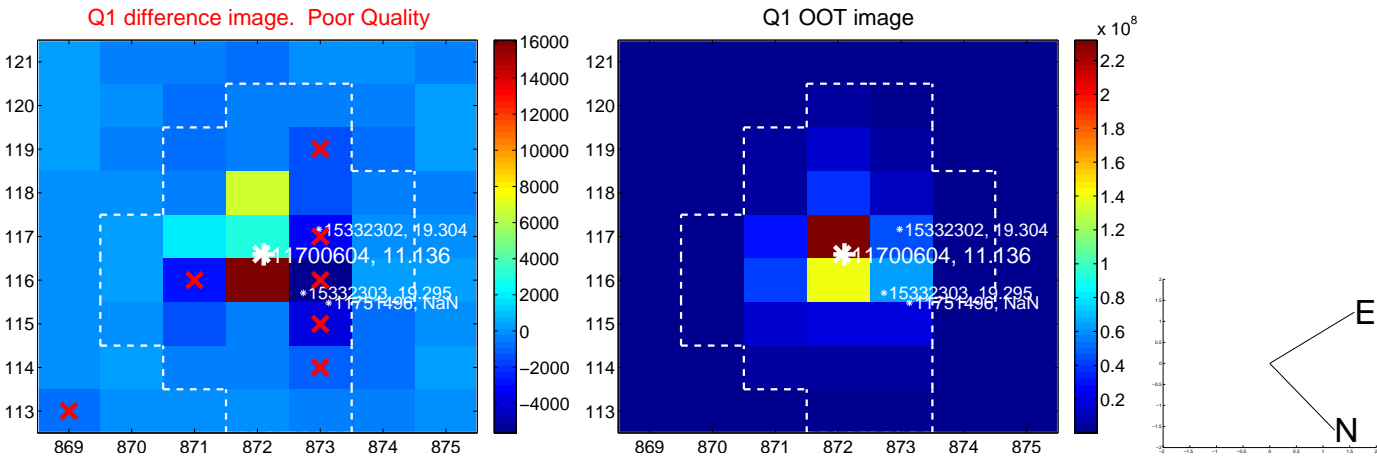
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.721 ± 0.505	3.41	0.866 ± 0.498	1.487 ± 0.420
PRF-fit source offset from KIC position	1.855 ± 0.419	4.43	0.900 ± 0.448	1.622 ± 0.339
photometric centroid source offset	0.39 ± 0.75	0.52	0.16 ± 0.71	0.35 ± 0.76

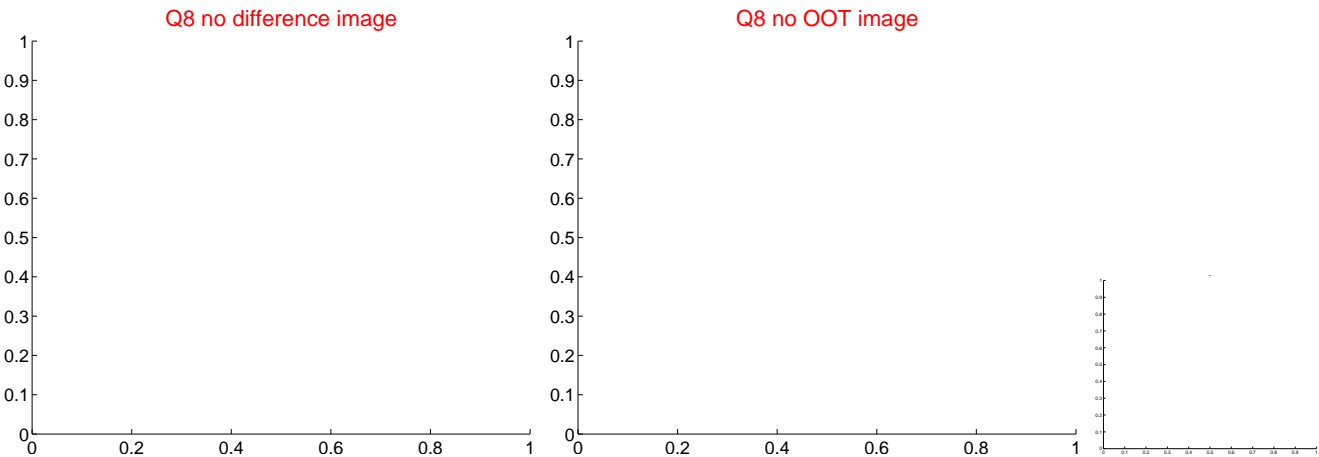
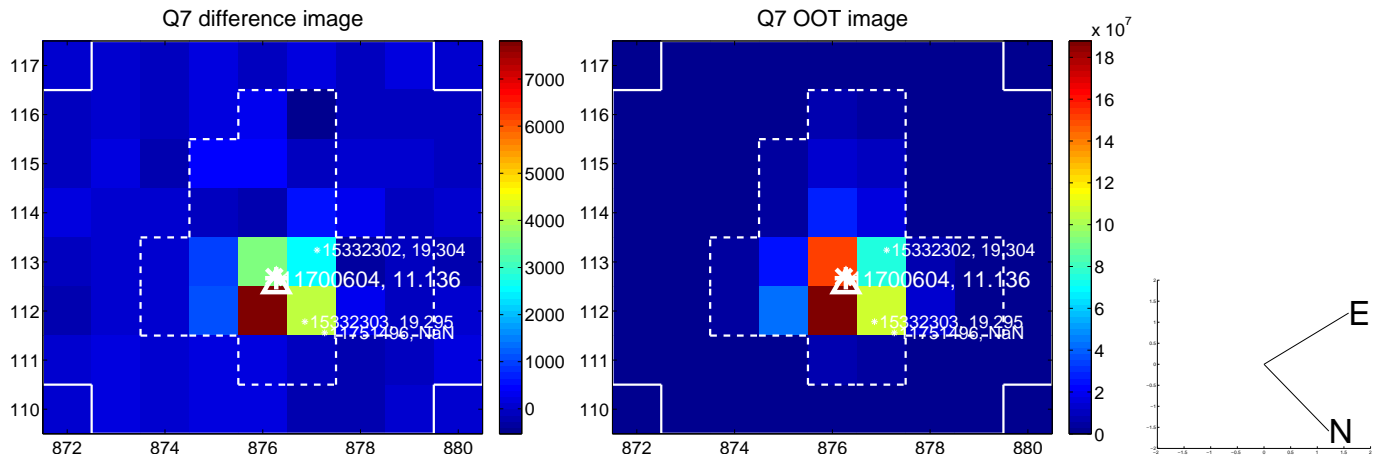
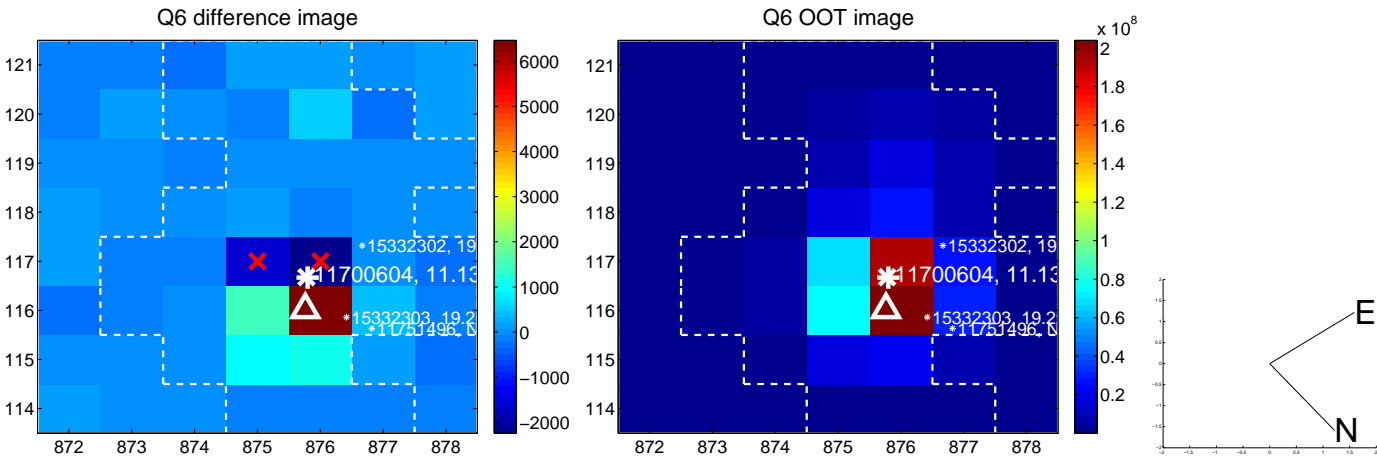
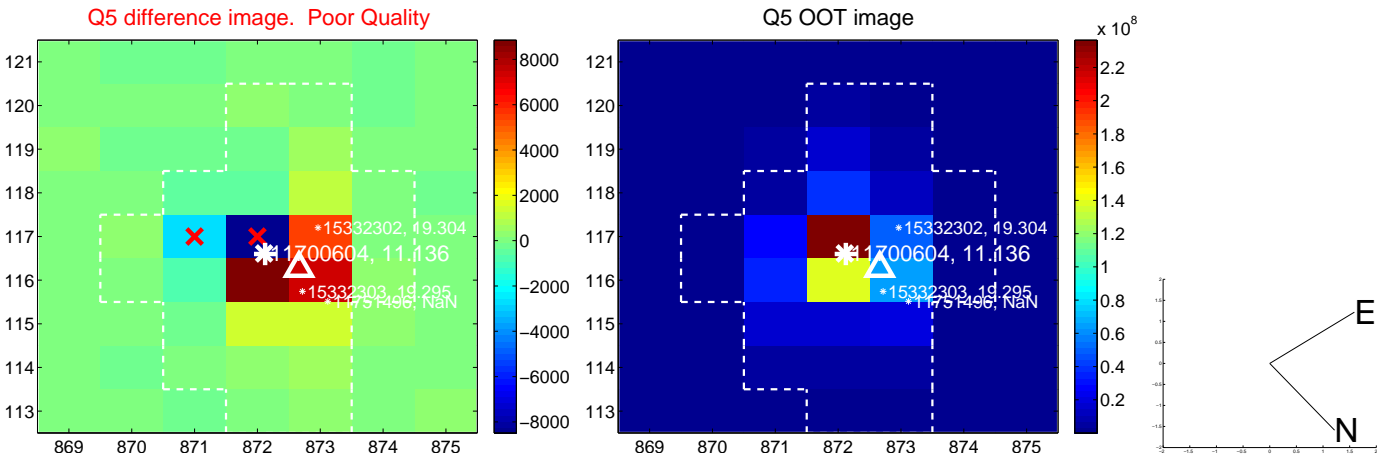


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

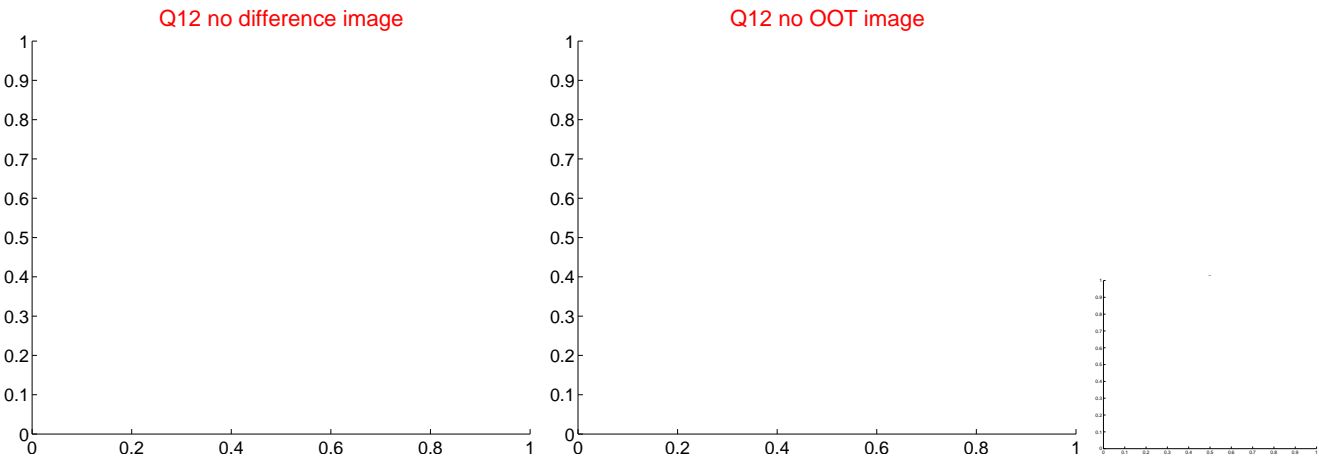
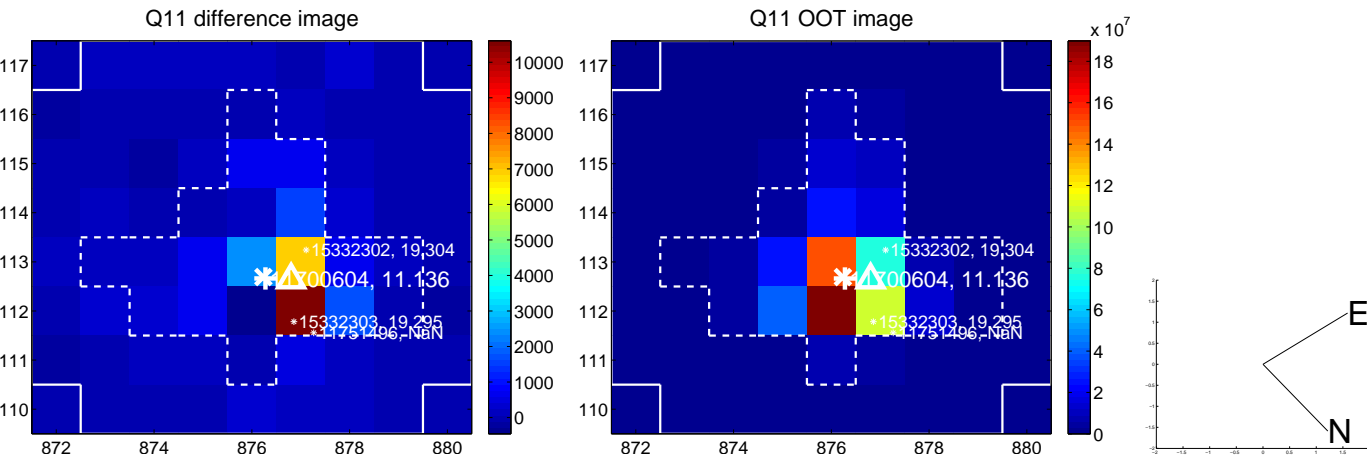
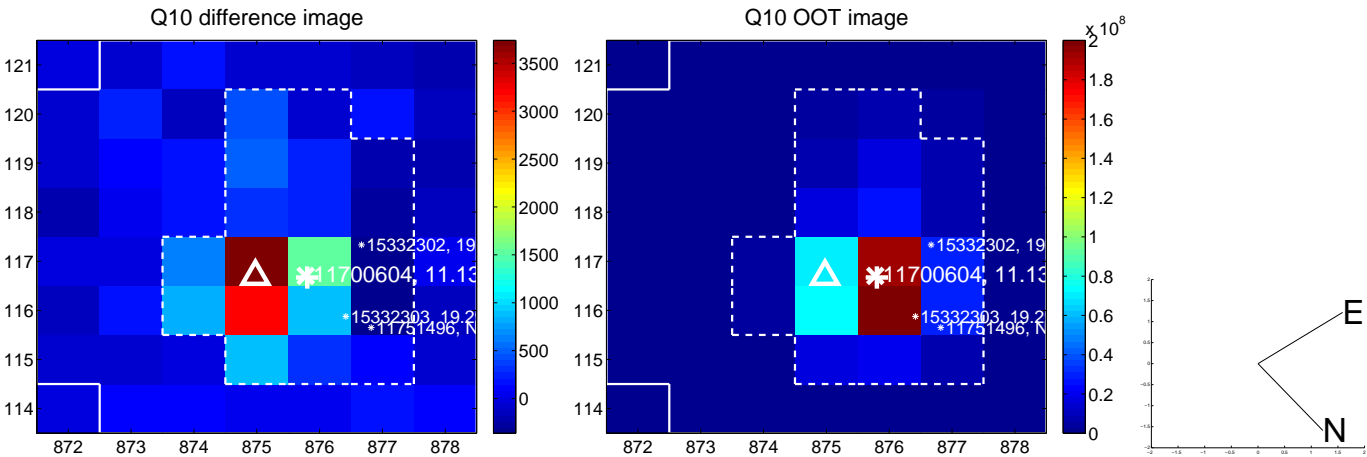
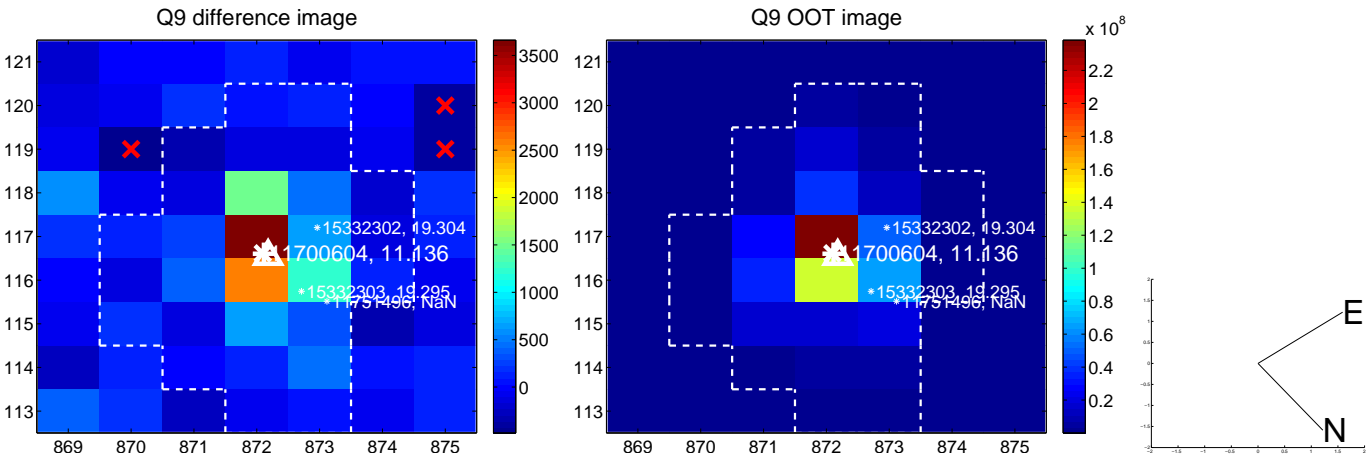
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



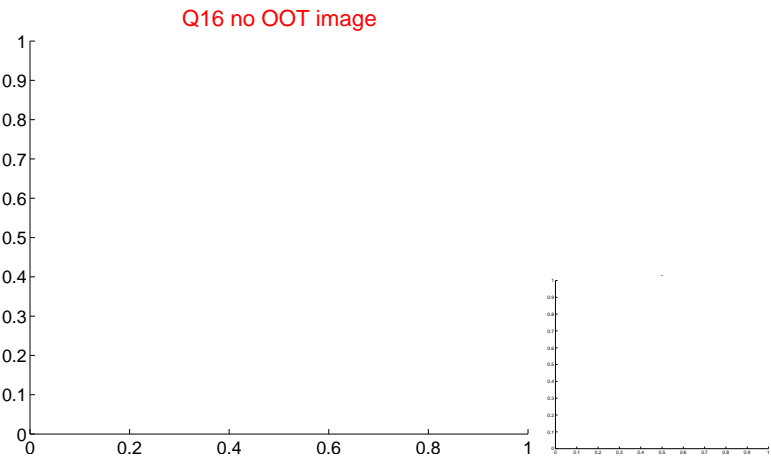
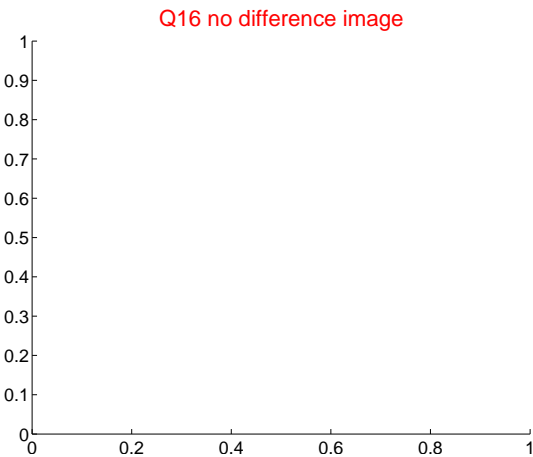
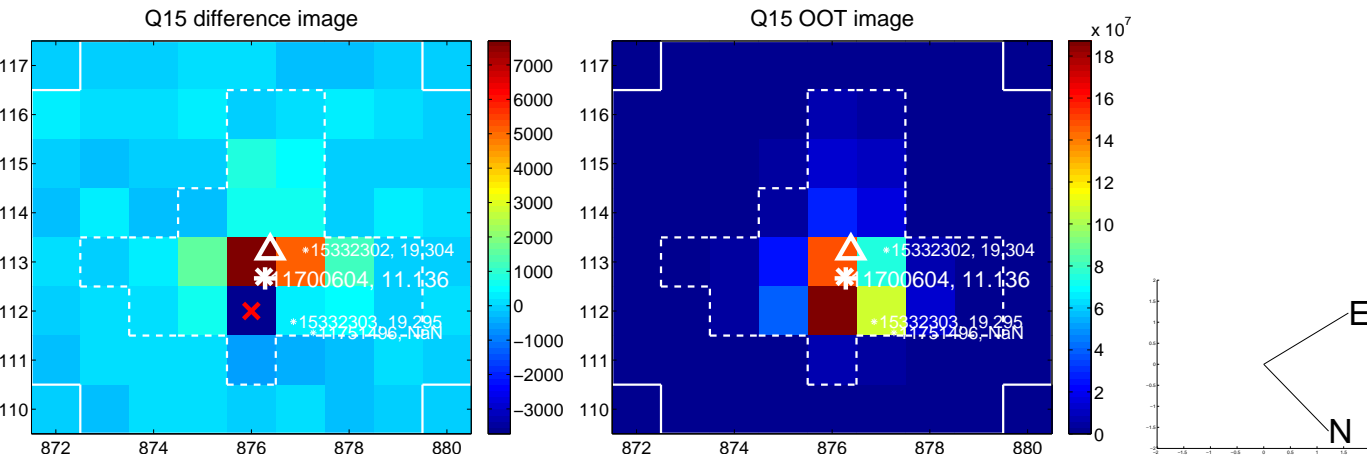
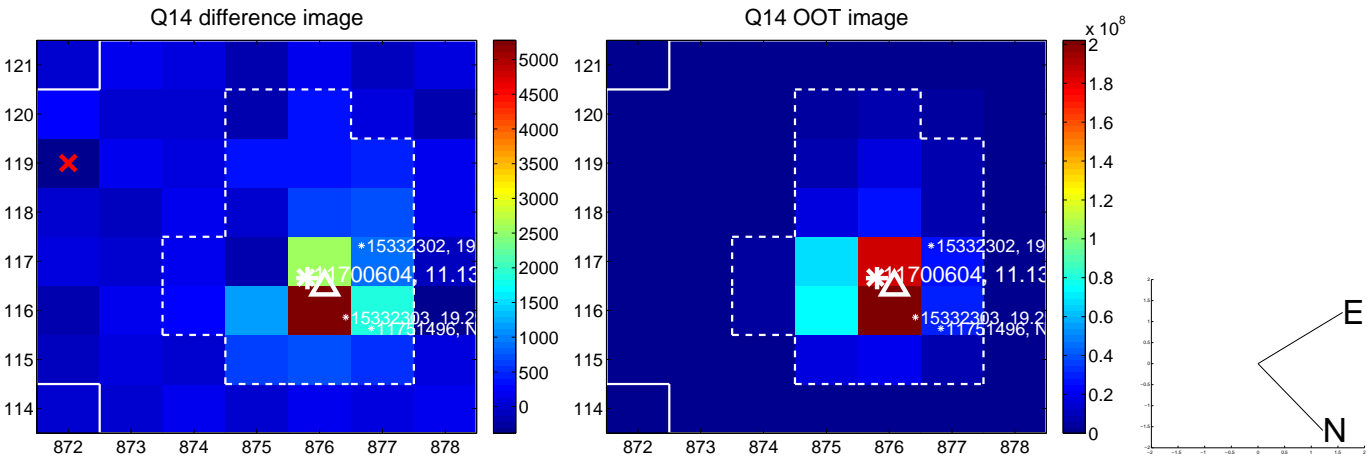
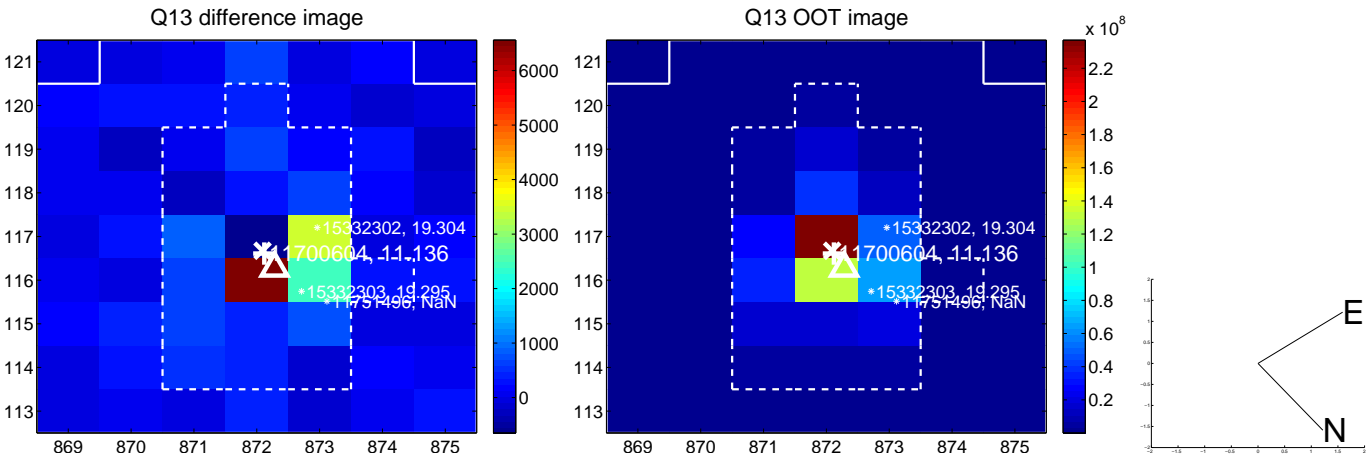
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



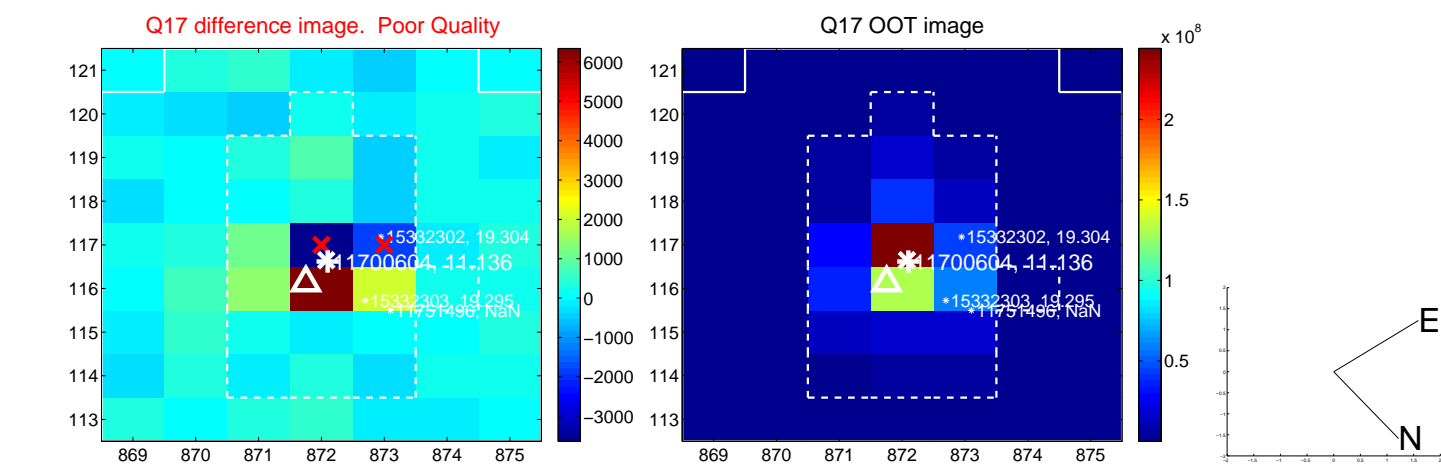
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



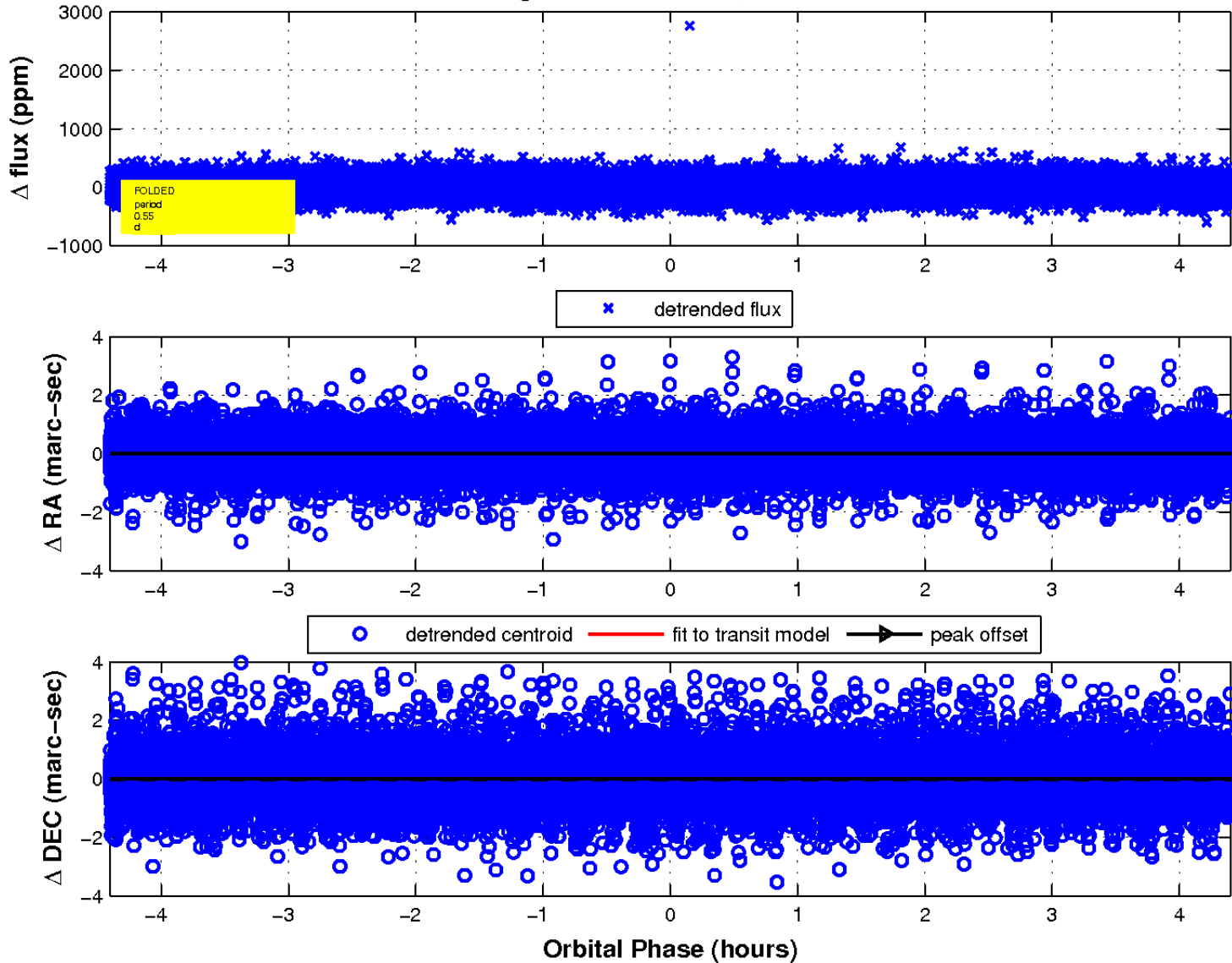
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

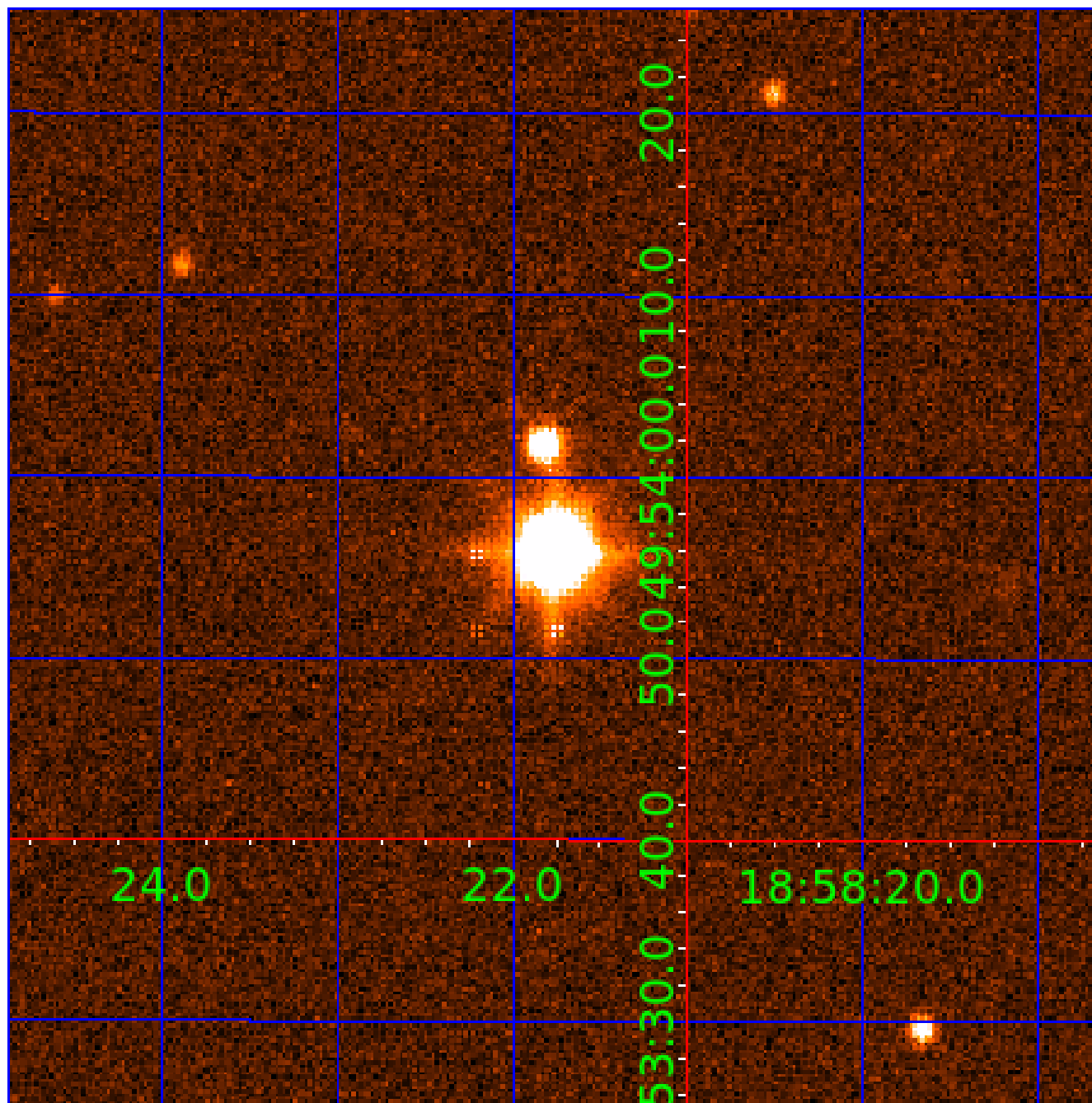


fluxWeightedCentroids, Planet 1 of 7



UKIRT Image

Declination



KIC 011700604

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

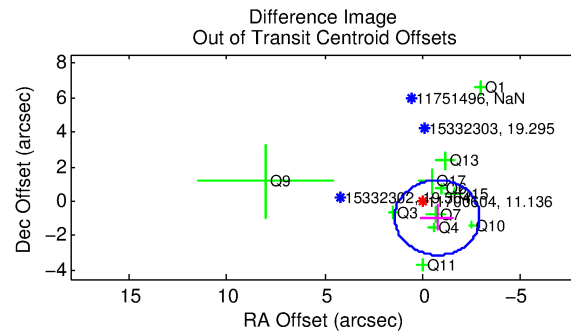
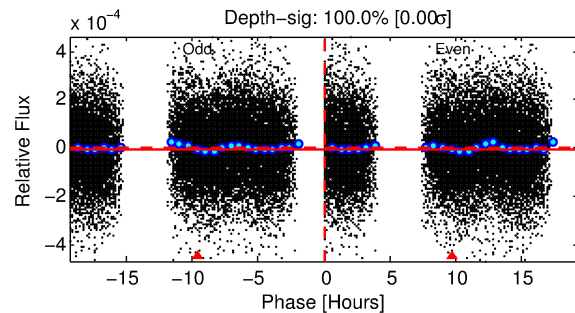
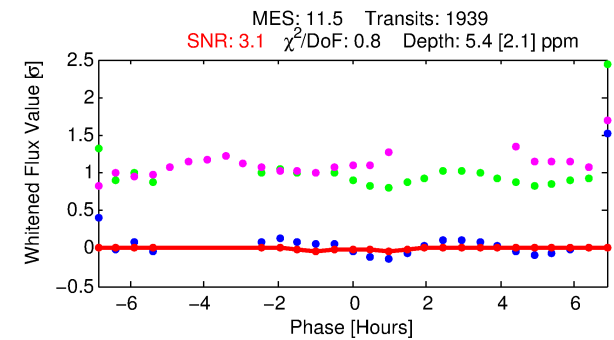
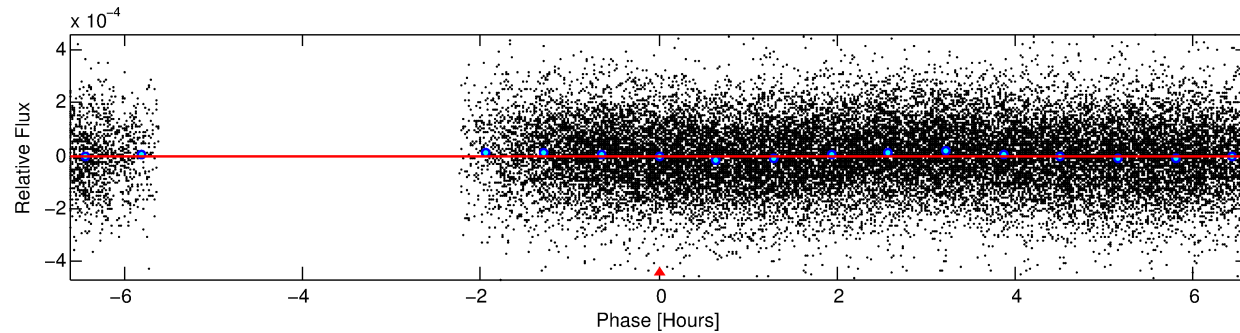
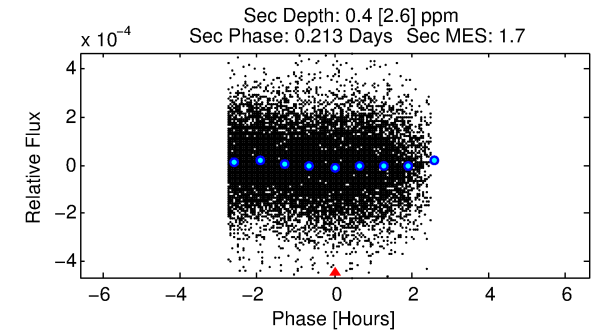
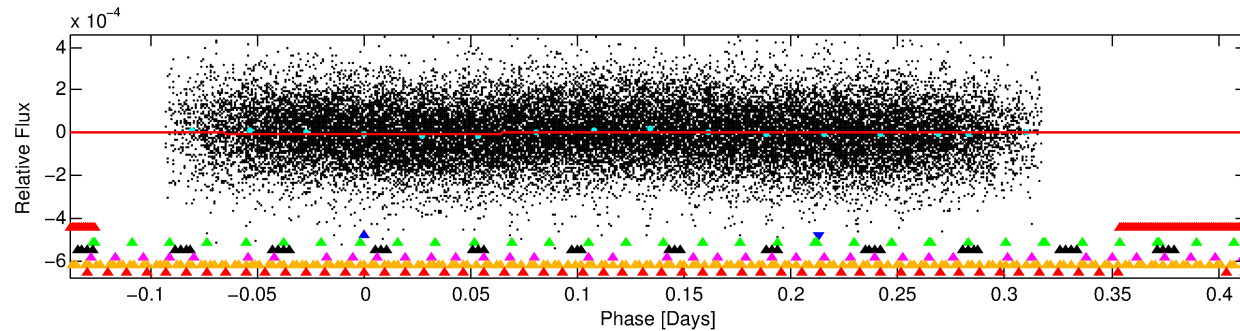
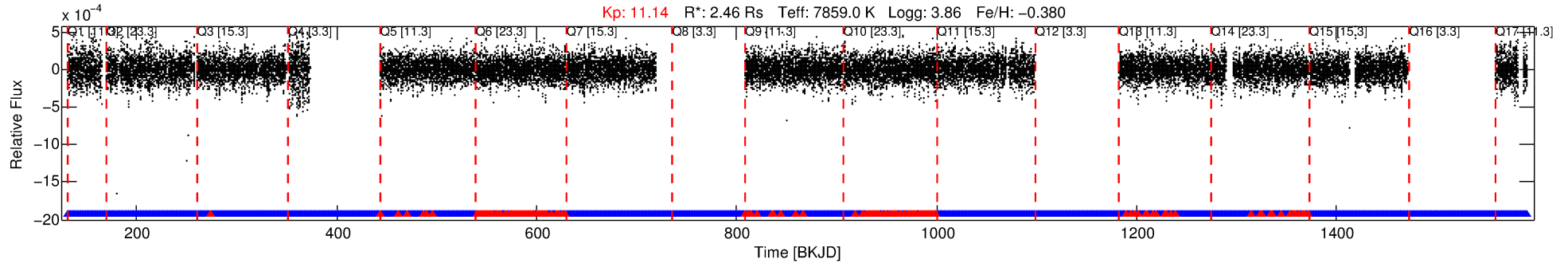
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-02

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 2 of 7 Period: 0.552 d



DV Fit Results:

Period = 0.55186 [0.00003] d
Epoch = 131.8054 [0.0077] BKJD
Rp/R* = 0.0022 [0.0054]
a/R* = 1.44 [10.59]
b = 0.10 [140.36]
Seff = 87411.89 [55414.27]
Teq = 4384 [695] K
Rp = 0.58 [1.46] Re
a = 0.0154 [0.0059] AU
Ag = 0.15 [1.27] [-0.67σ]
Teffp = 4228 [8816] K [-0.02σ]

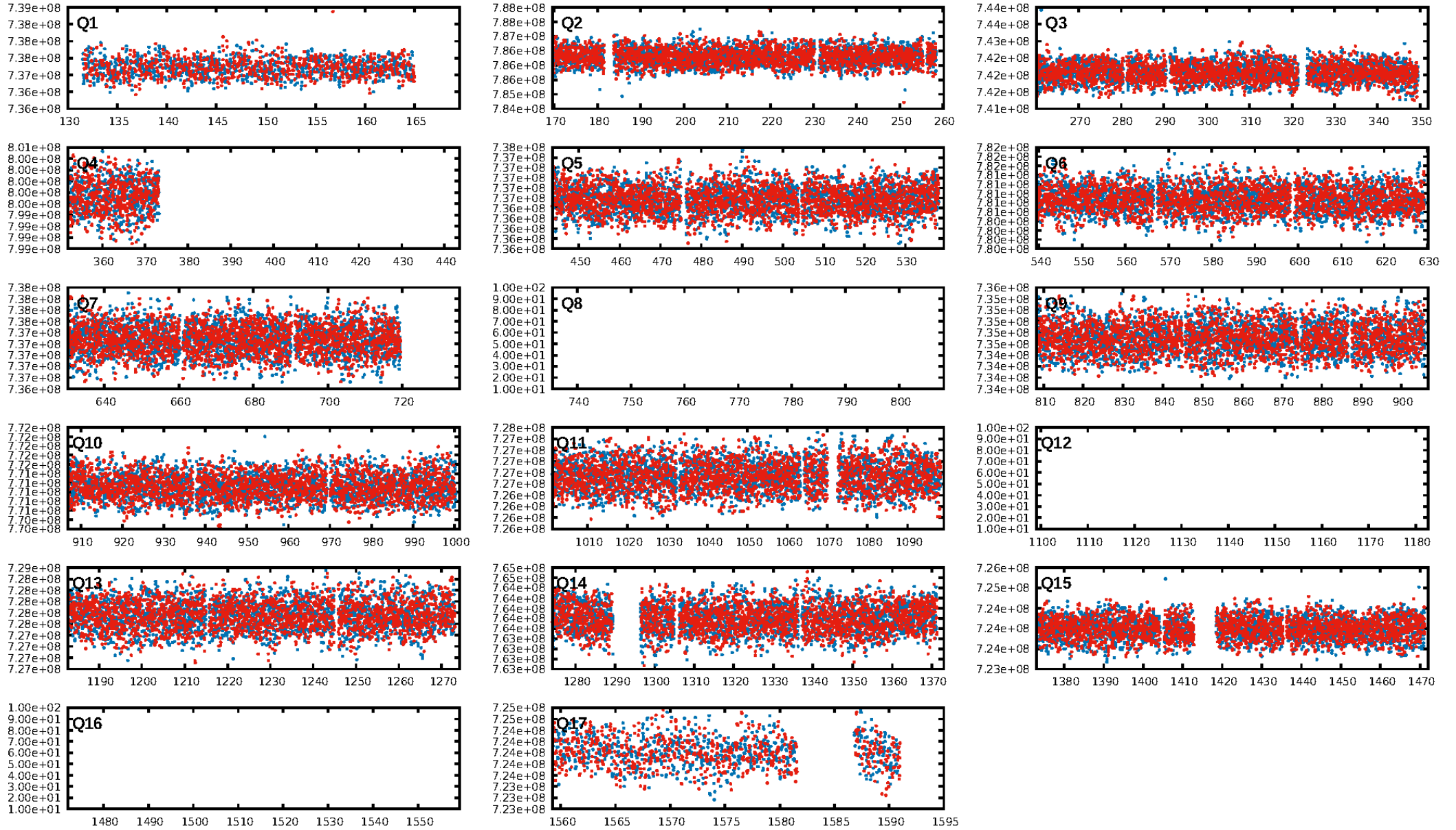
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.80e-10
RollingBand-fgt: 0.88 [1575/1791]
GhostDiagnostic-chr: -1.382
Centroid-sig: 13.1%
Centroid-so: 2.082 arcsec [1.12σ]
OotOffset-rm: 1.209 arcsec [1.67σ]
OotOffset-st: 2/4/1/4 [11]
KicOffset-rm: 1.057 arcsec [1.39σ]
KicOffset-st: 2/4/1/4 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 0.00 [0/14]

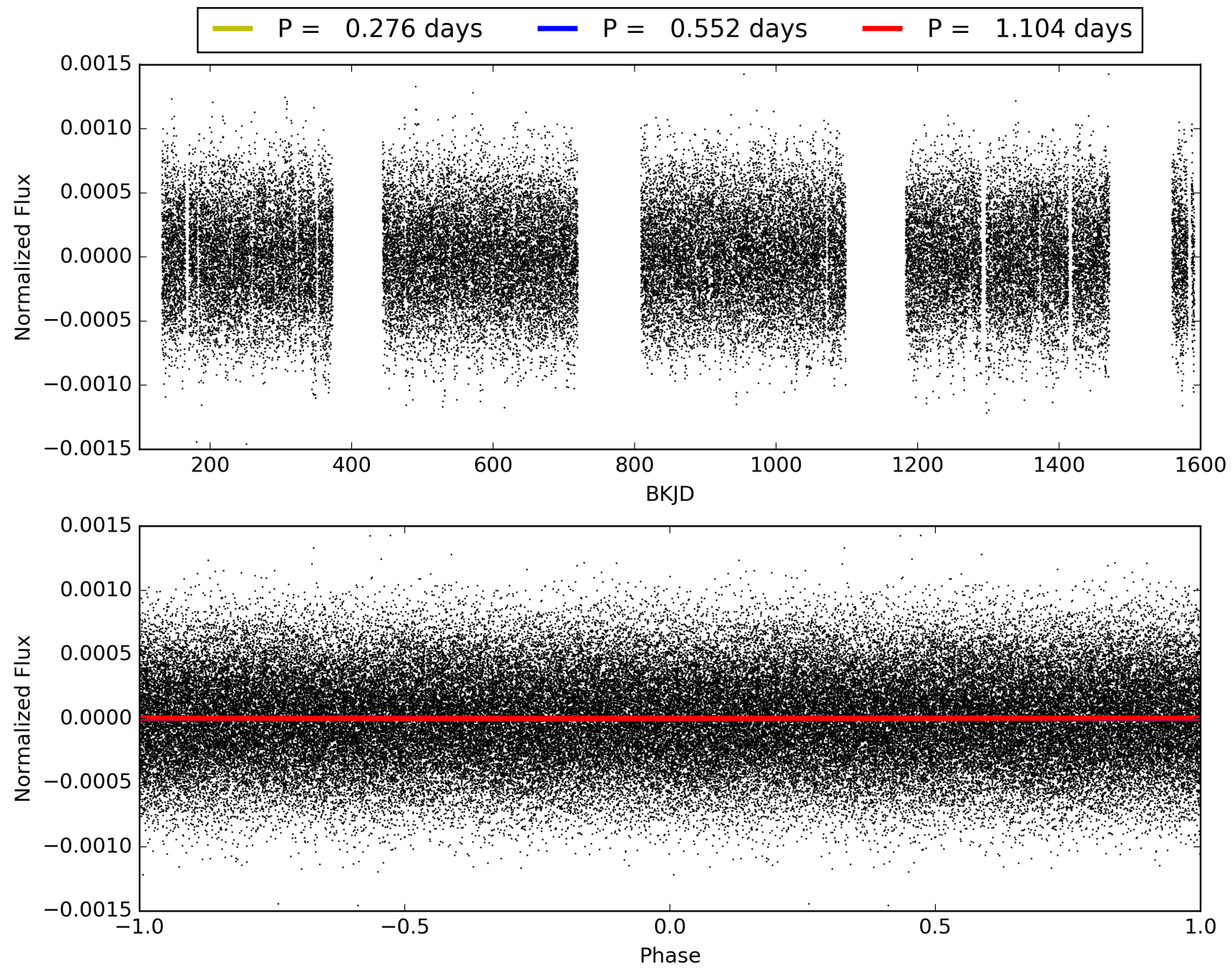
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:38:54 Z

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

TCE 011700604-02, PDC Light Curves

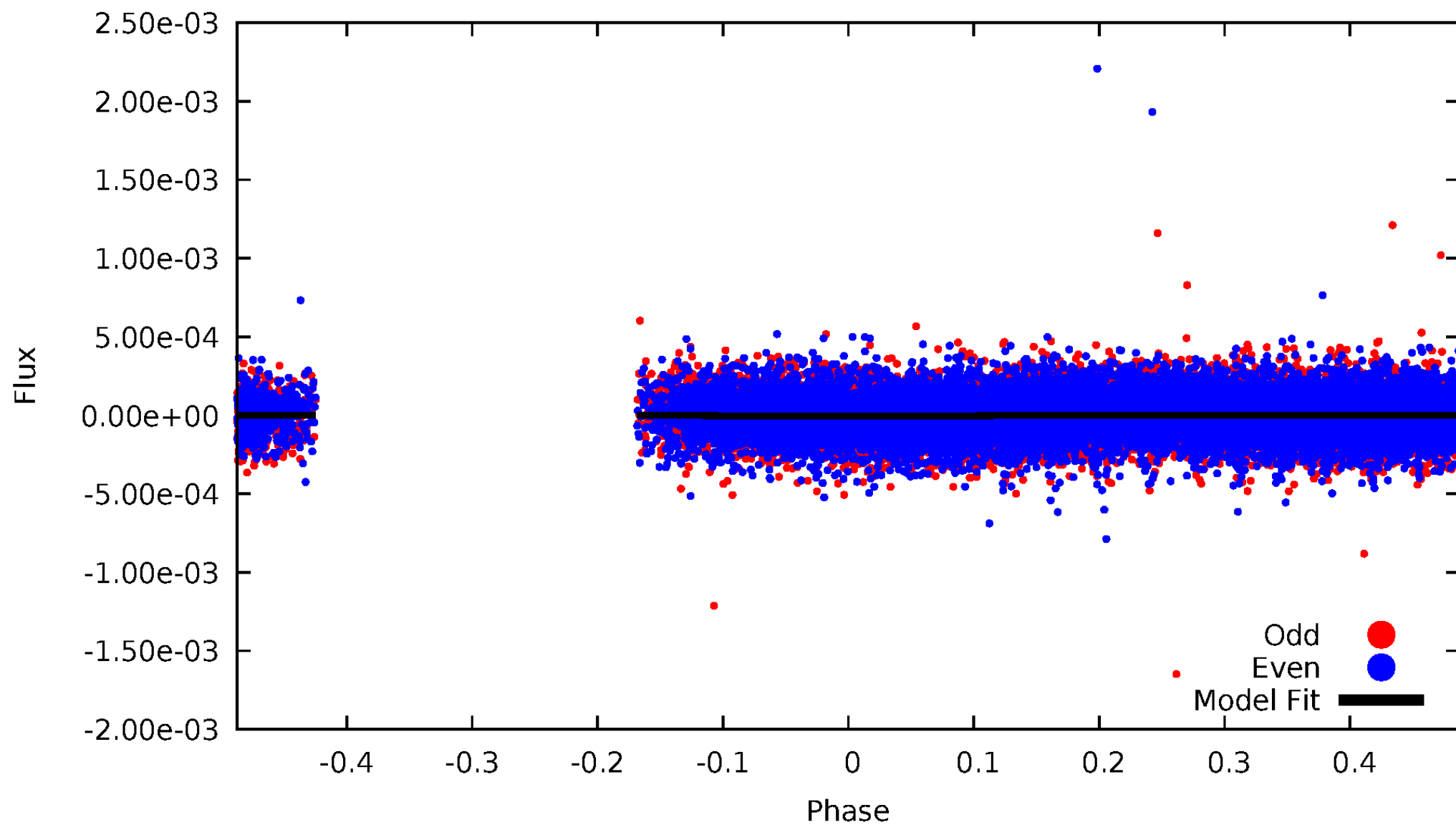


TCE 011700604-02



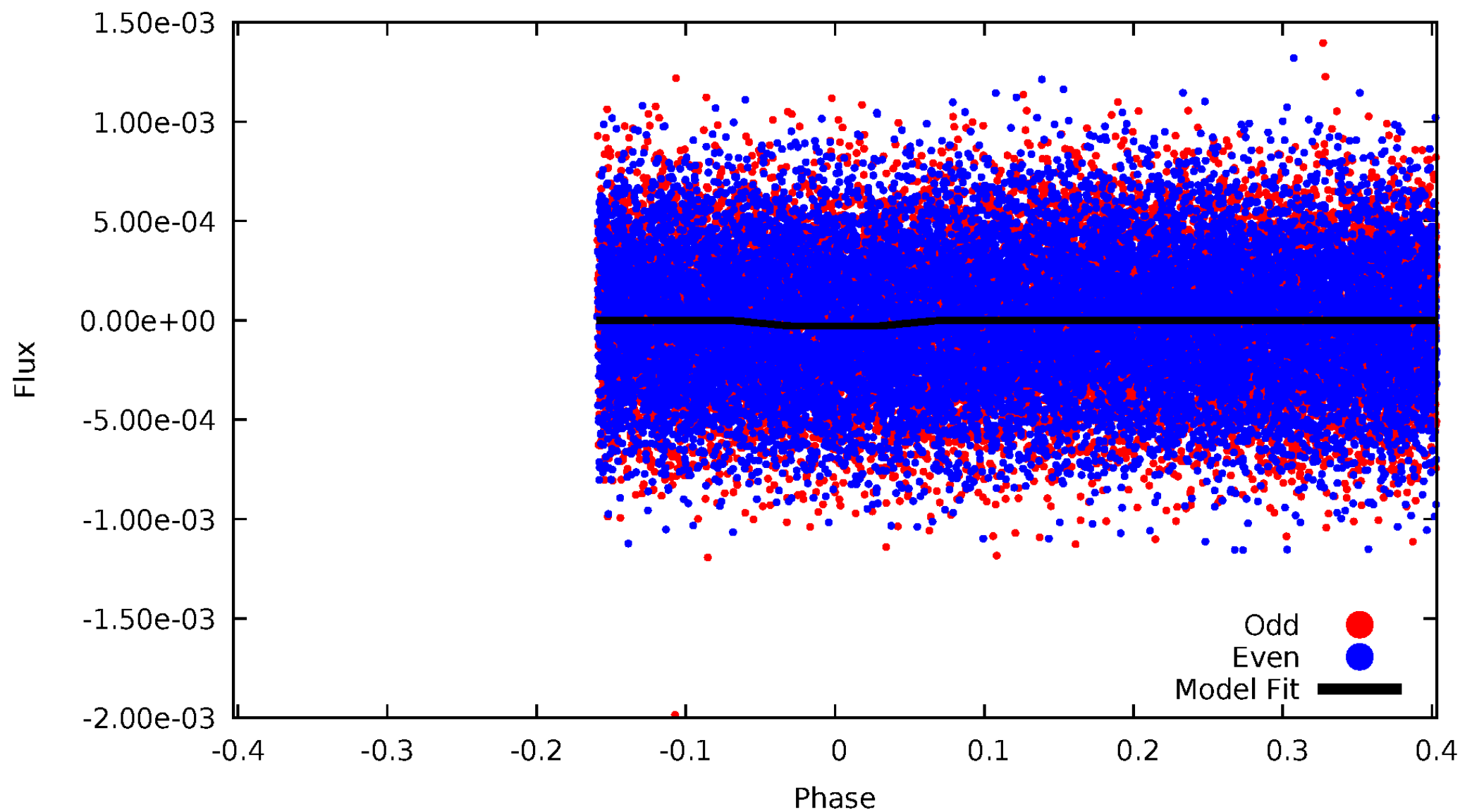
DV Odd/Even

TCE 011700604-02



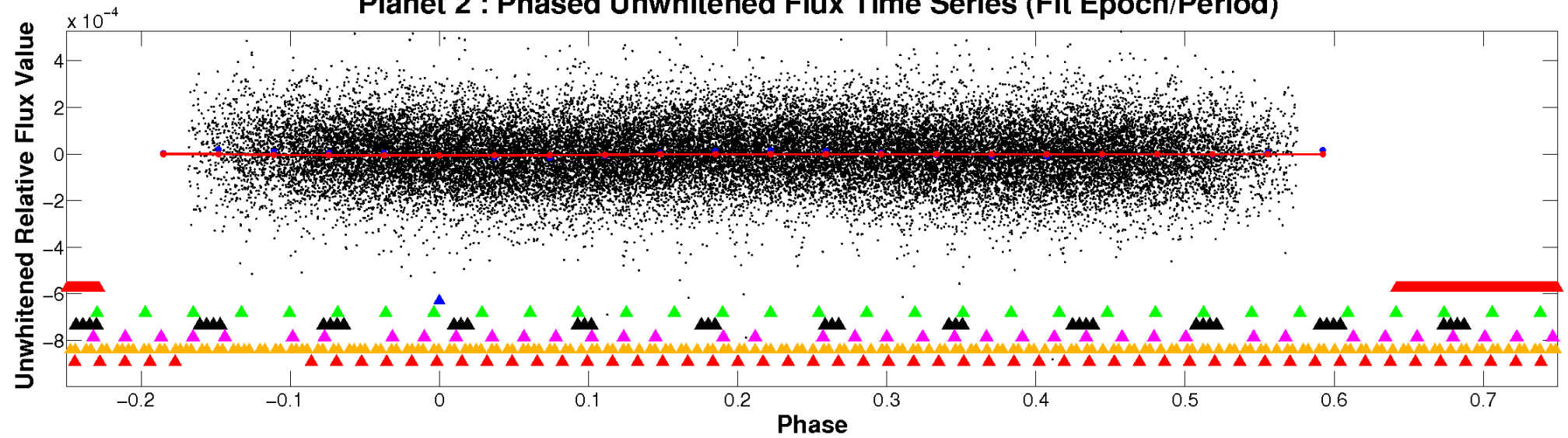
ALT Odd/Even

TCE 011700604-02

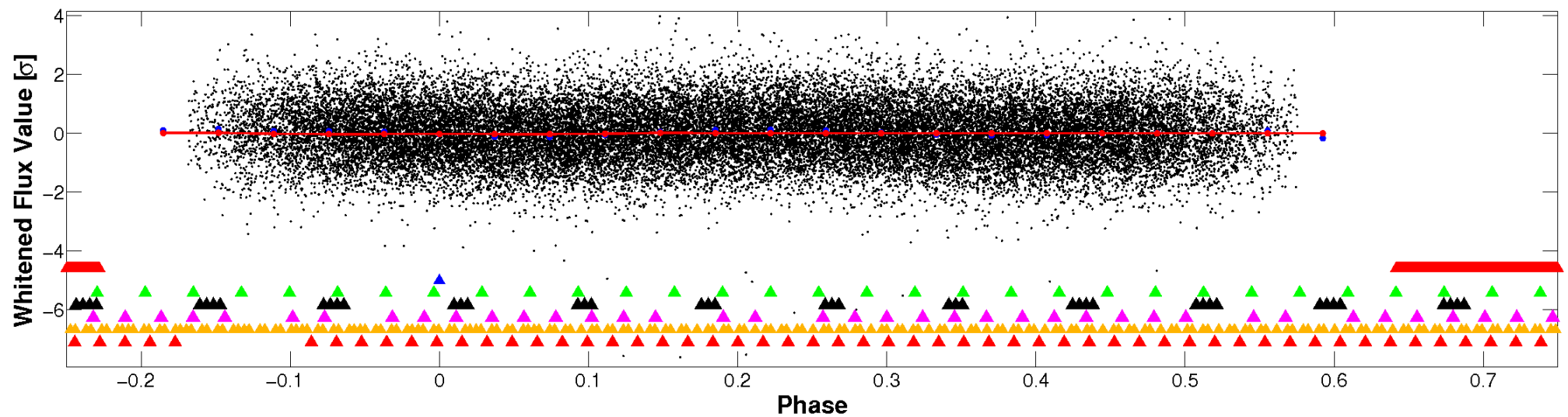


Non-Whitened Vs. Whitened Light Curve

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

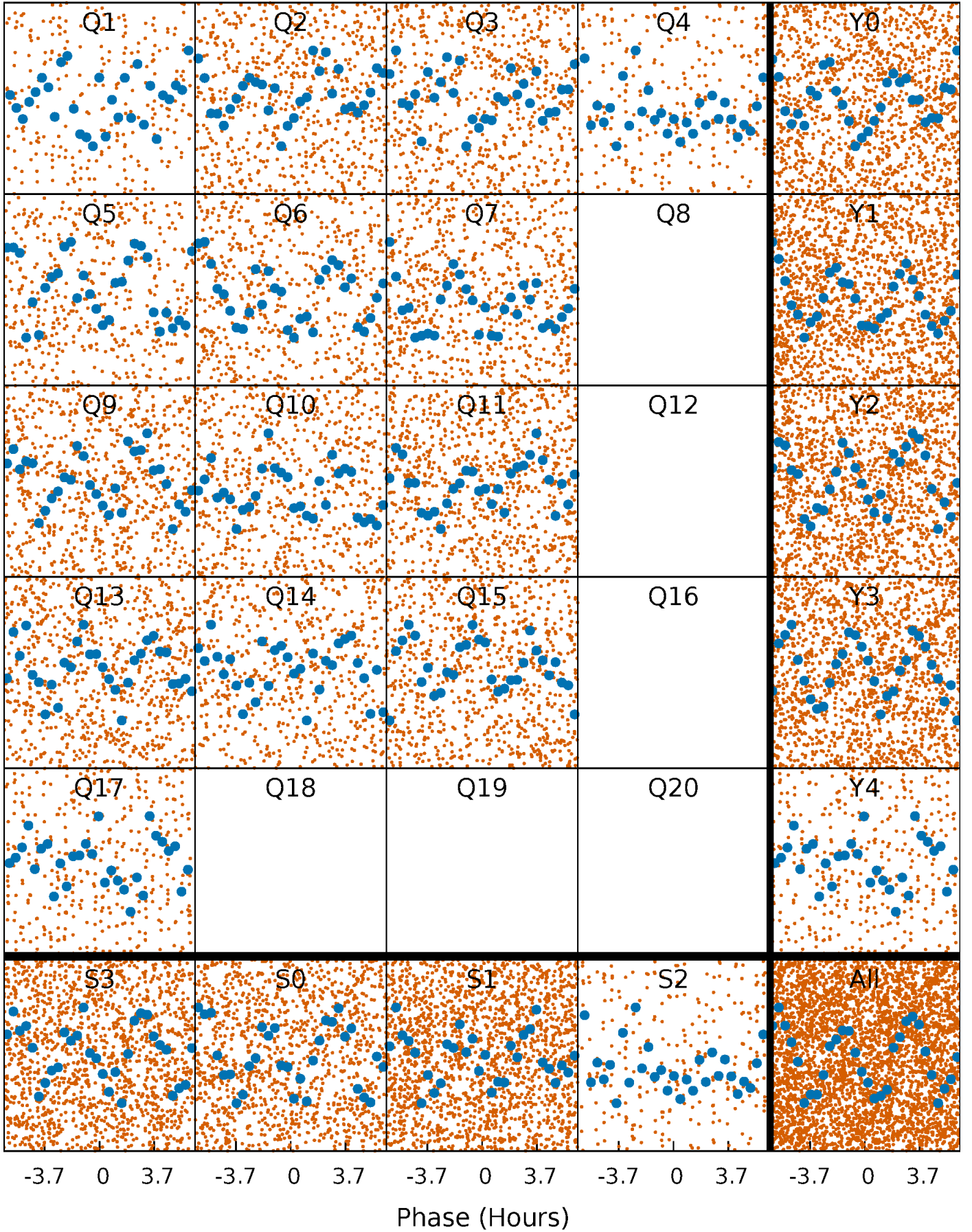


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



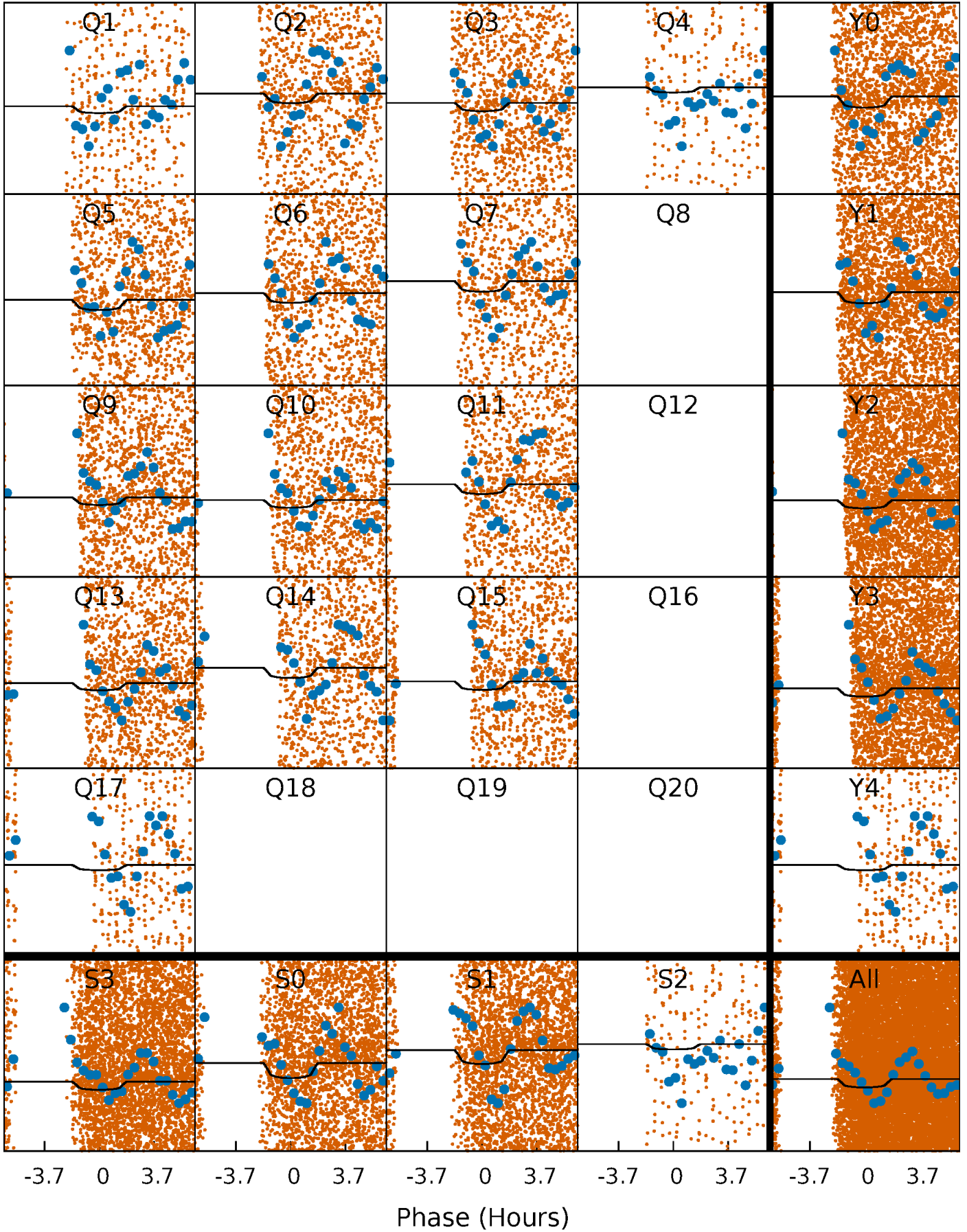
PDC Quarter-Phased Transit Curves

TCE 011700604-02 P= 0.551858 Days $T_0=131.805409$ (BKJD)



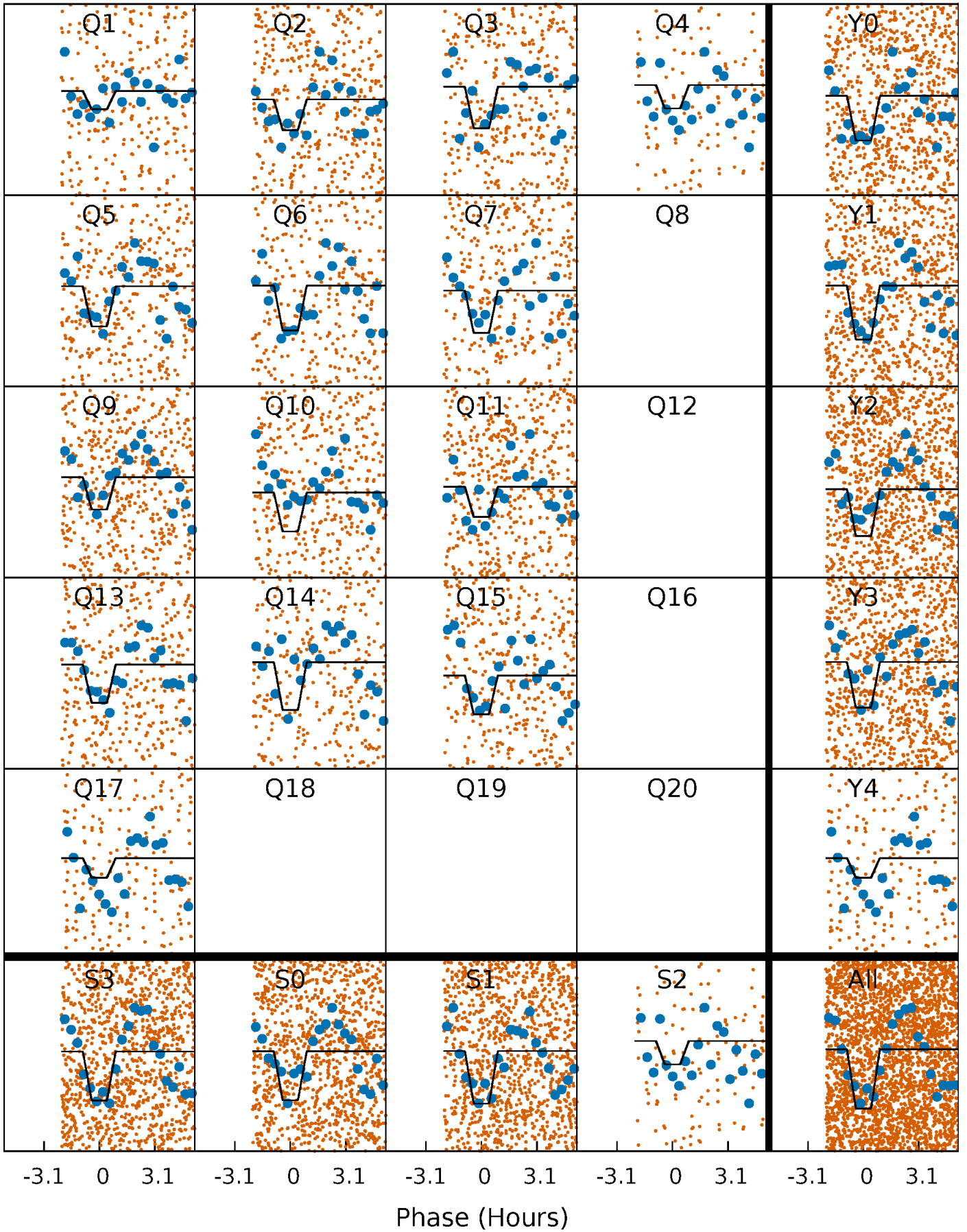
DV Quarter-Phased Transit Curves

TCE 011700604-02 P= 0.551858 Days $T_0=131.805409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

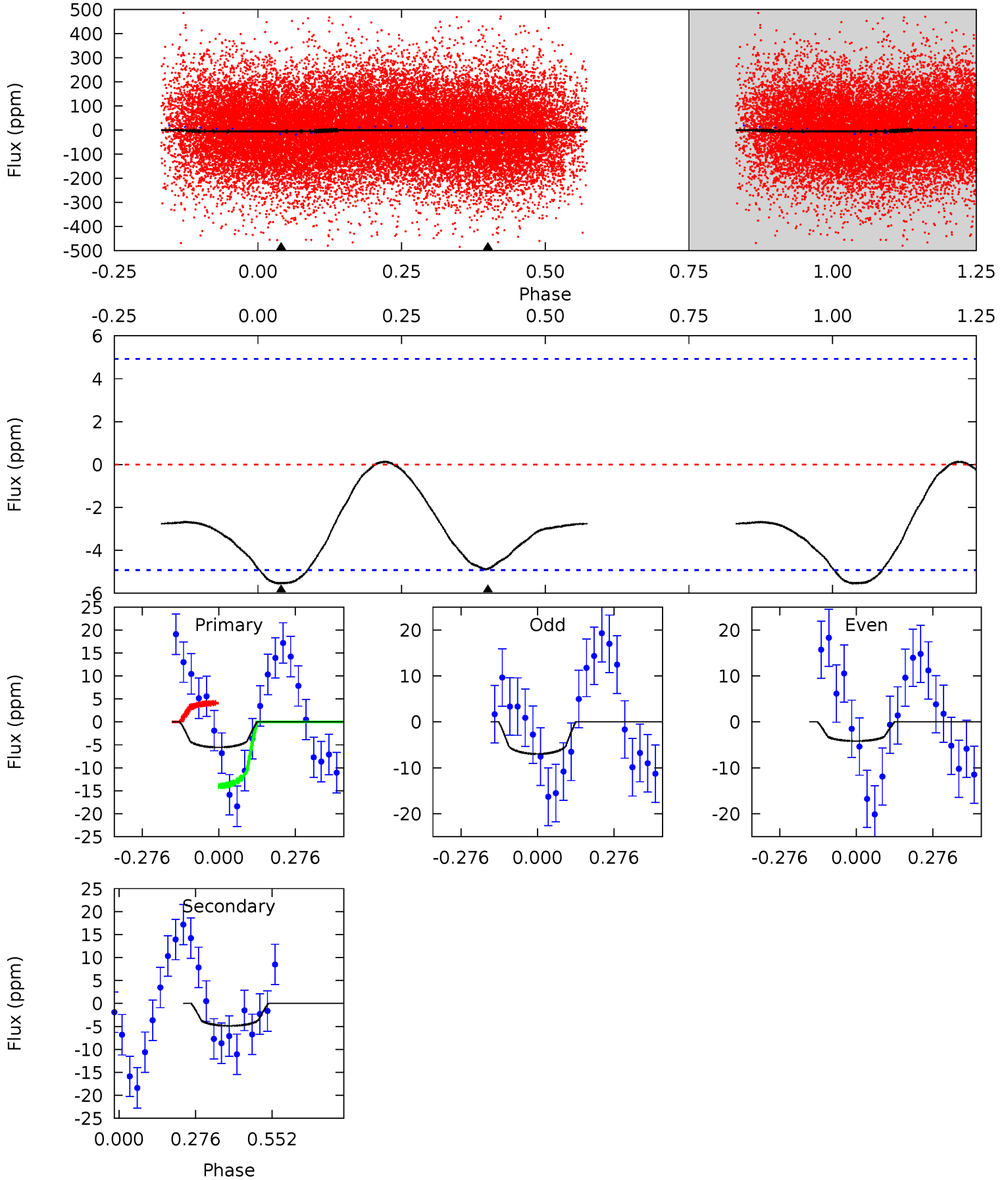
TCE 011700604-02 P= 0.551884 Days $T_0=131.799703$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-02, P = 0.551858 Days, E = 131.253551 Days

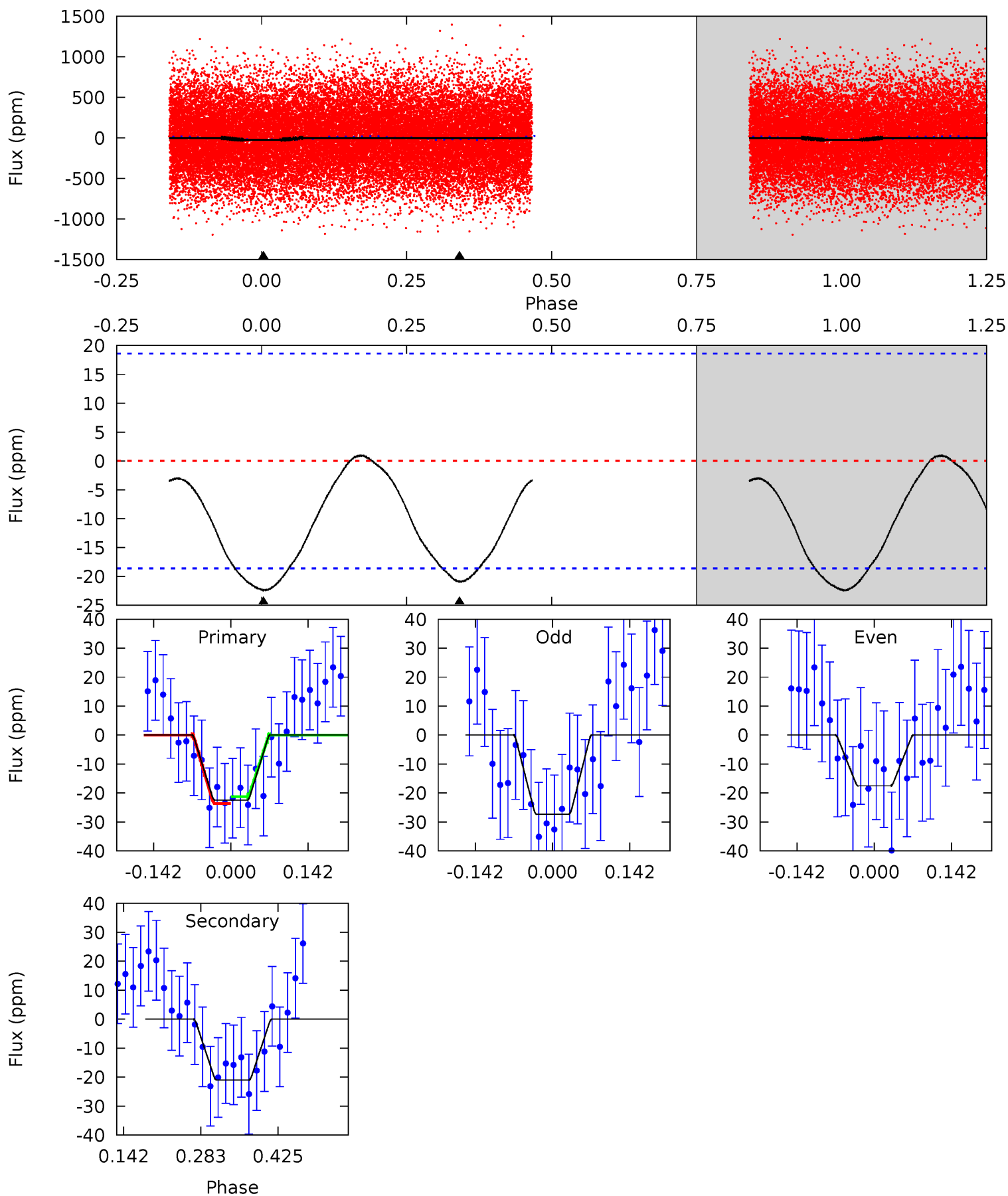
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.89	4.30	0	0	4.35	1.09	1.02	4.89	4.89	4.30	4.30	1.24	1.03	0.02	4.22



Alt Model-Shift Uniqueness Test

011700604-02, P = 0.551884 Days, E = 131.247819 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	5.06	0	0	4.49	1.47	0.38	5.41	5.41	5.06	5.06	1.18	0.87	0.04	0.28



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$1.17^{+1.05}_{-0.84}$	5964^{+375}_{-597}	4205^{+6134}_{-8605}	$0.456^{+4.952}_{-0.338}$
Alt.	-21 ± 4	$1.54^{+1.26}_{-0.96}$	5957^{+410}_{-626}	6021^{+5868}_{-2582}	$1.126^{+6.402}_{-0.782}$

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

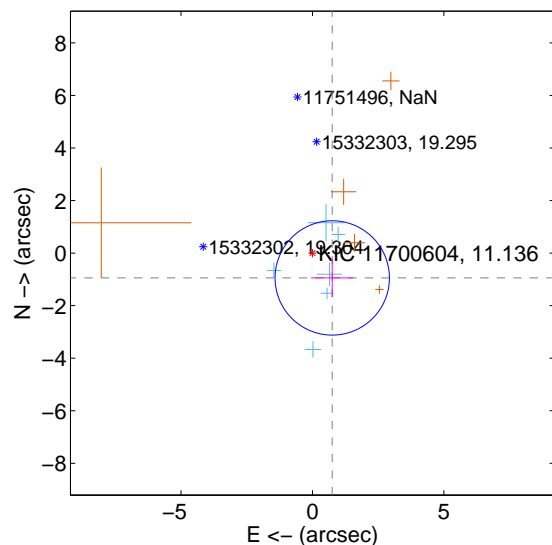
Supplemental centroid analysis for 011700604-02. **Kepler magnitude: 11.14.** Transit SNR 3.05

There are 6 quarters with good PRF difference image offsets

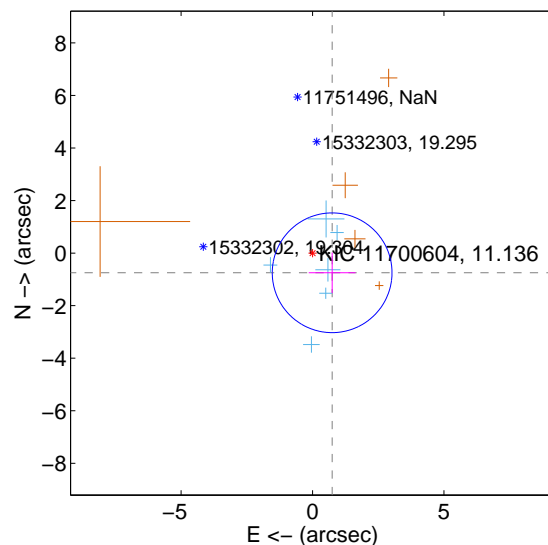
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.209 ± 0.725	1.67	-0.753 ± 0.802	-0.945 ± 0.727
PRF-fit source offset from KIC position	1.057 ± 0.759	1.39	-0.746 ± 0.892	-0.749 ± 0.773
photometric centroid source offset	2.08 ± 1.86	1.12	0.87 ± 1.77	-1.89 ± 1.88

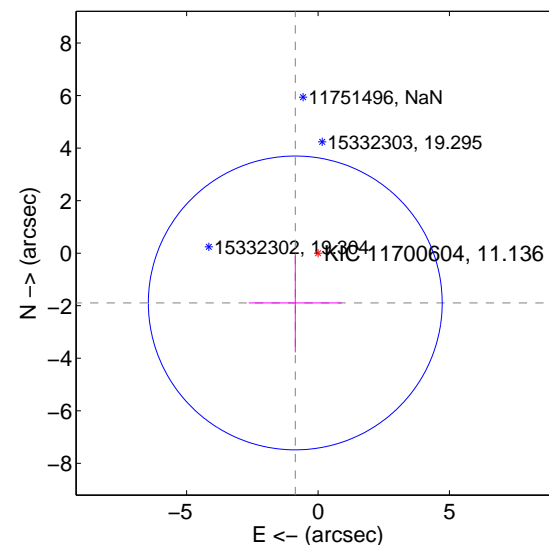
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

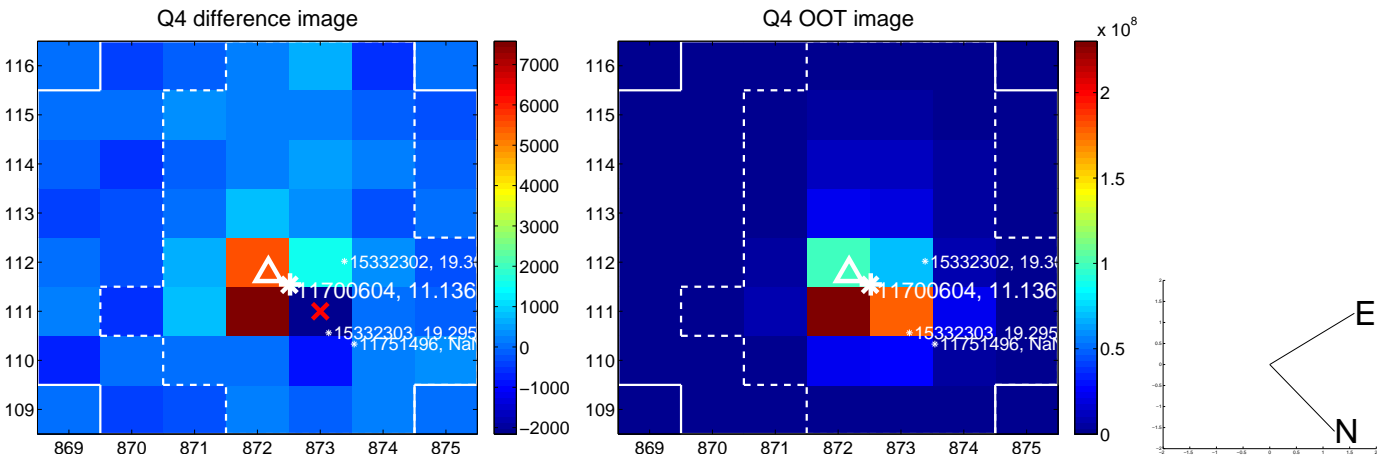
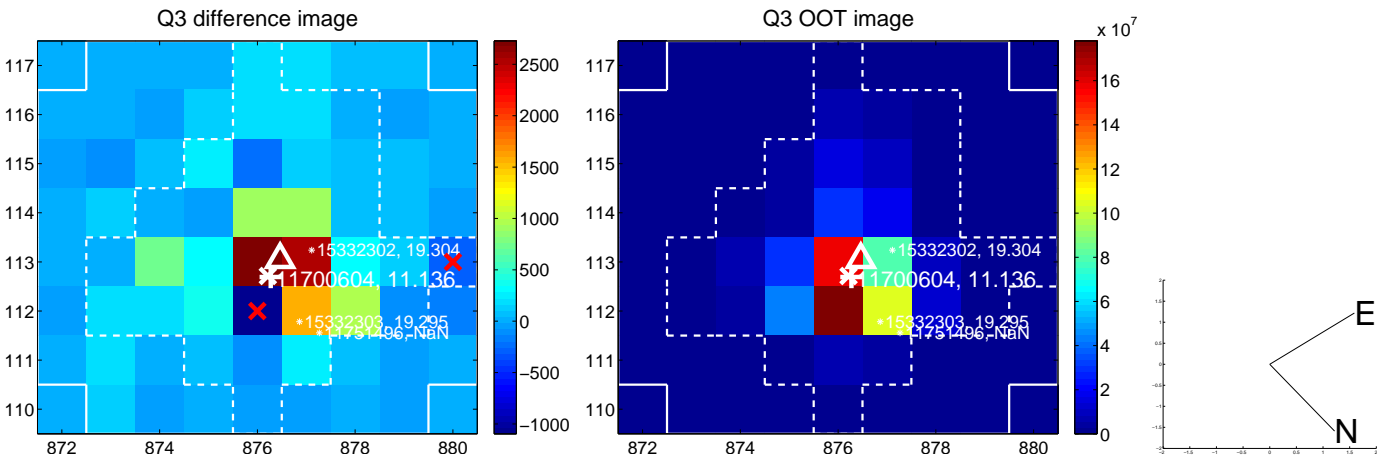
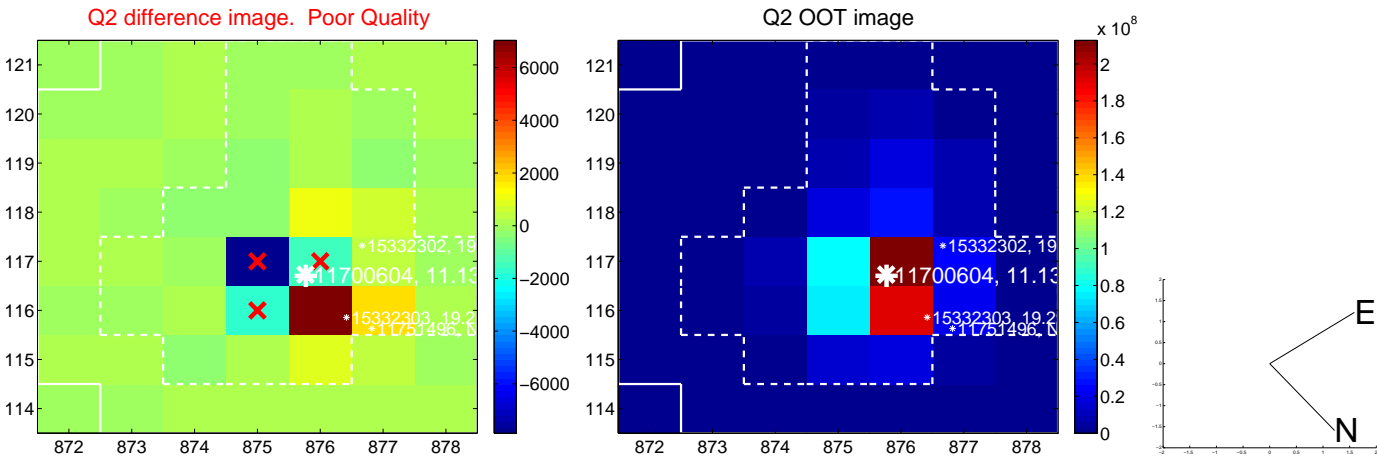
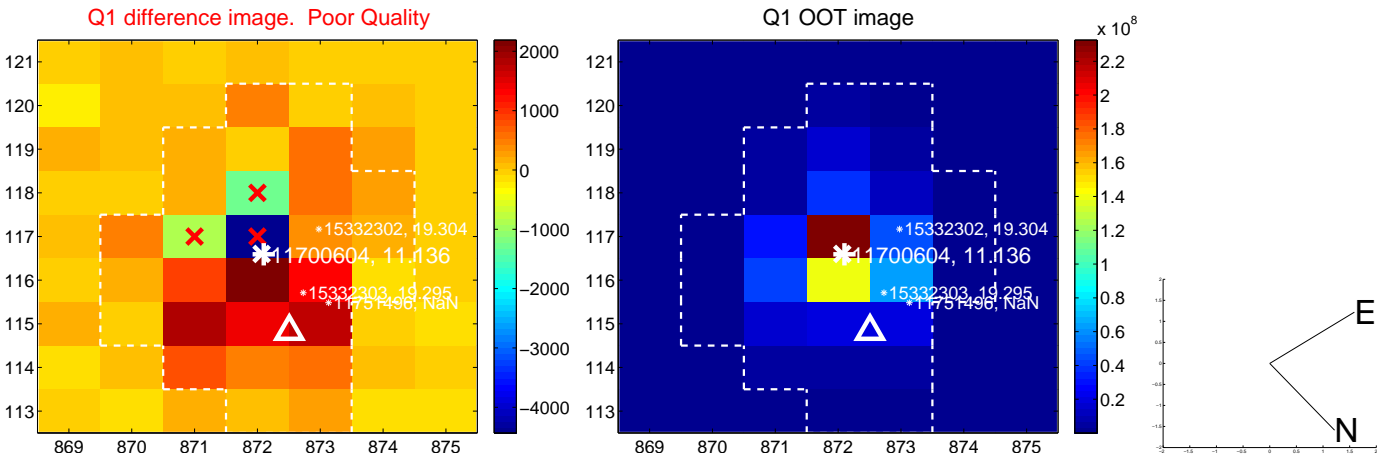


offset from photometric centroids

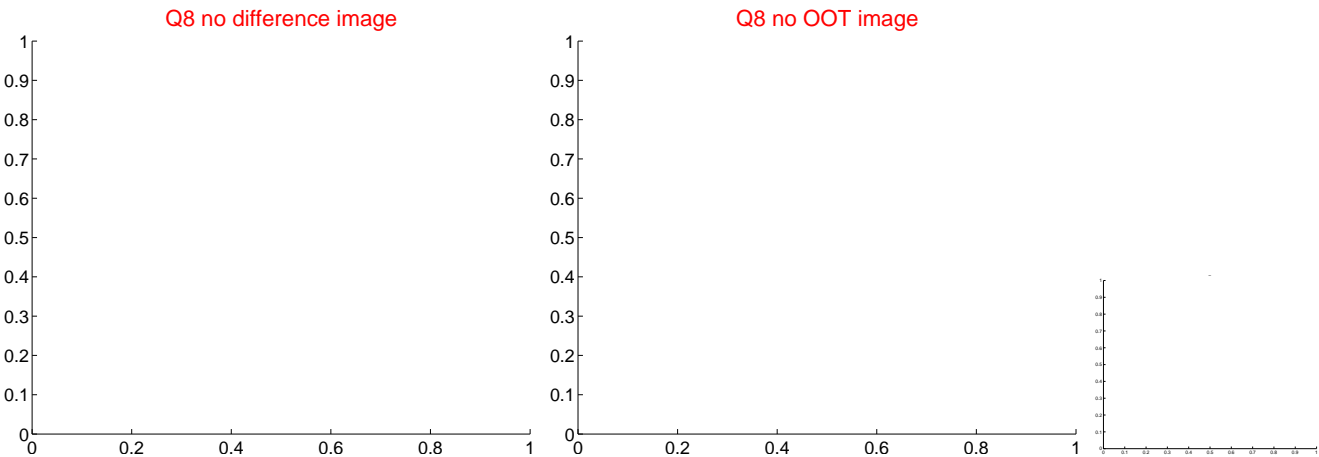
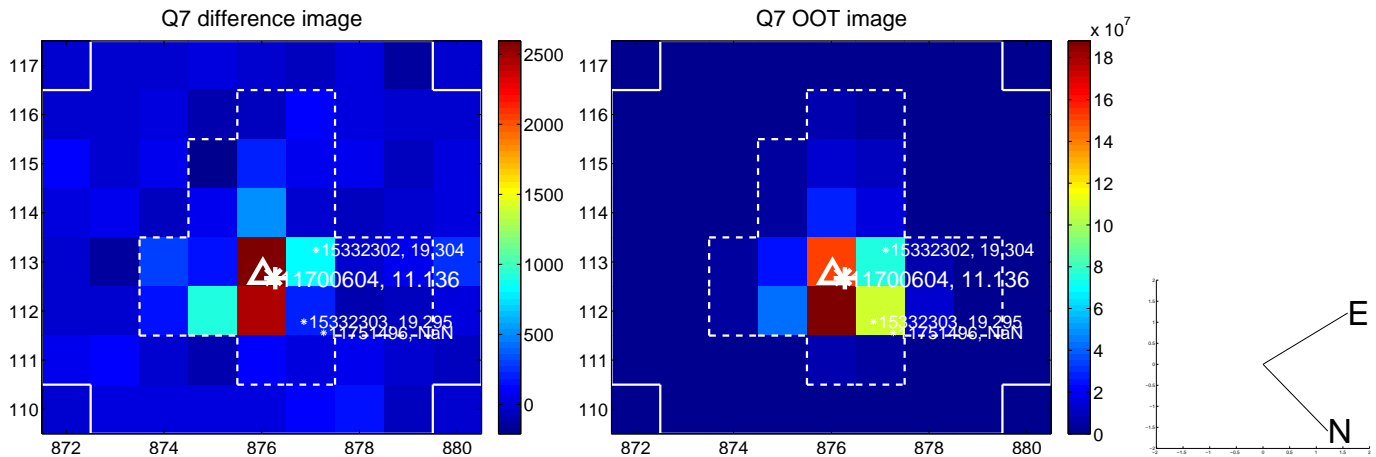
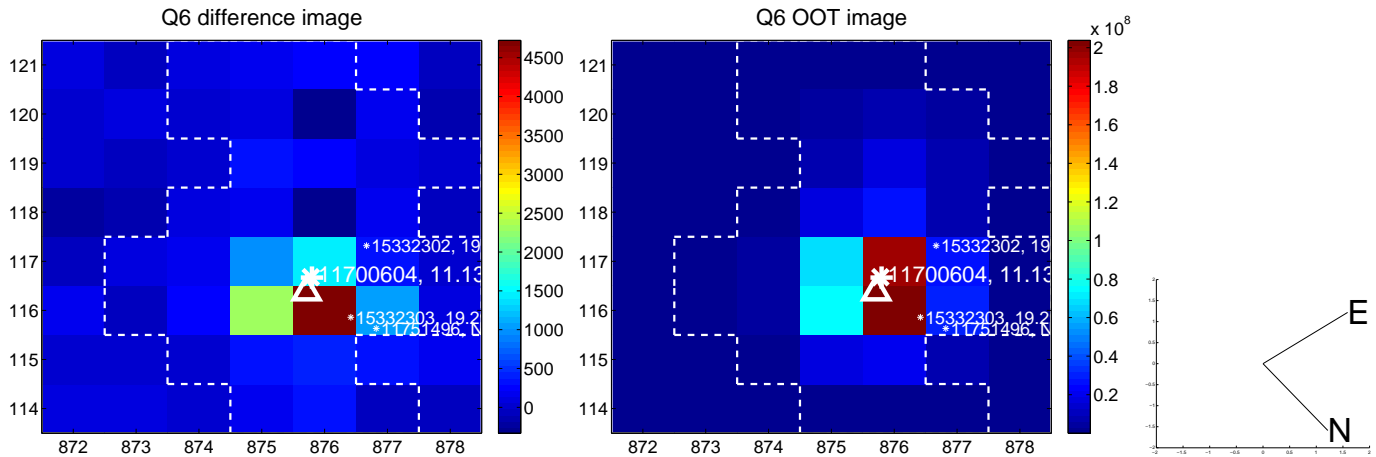
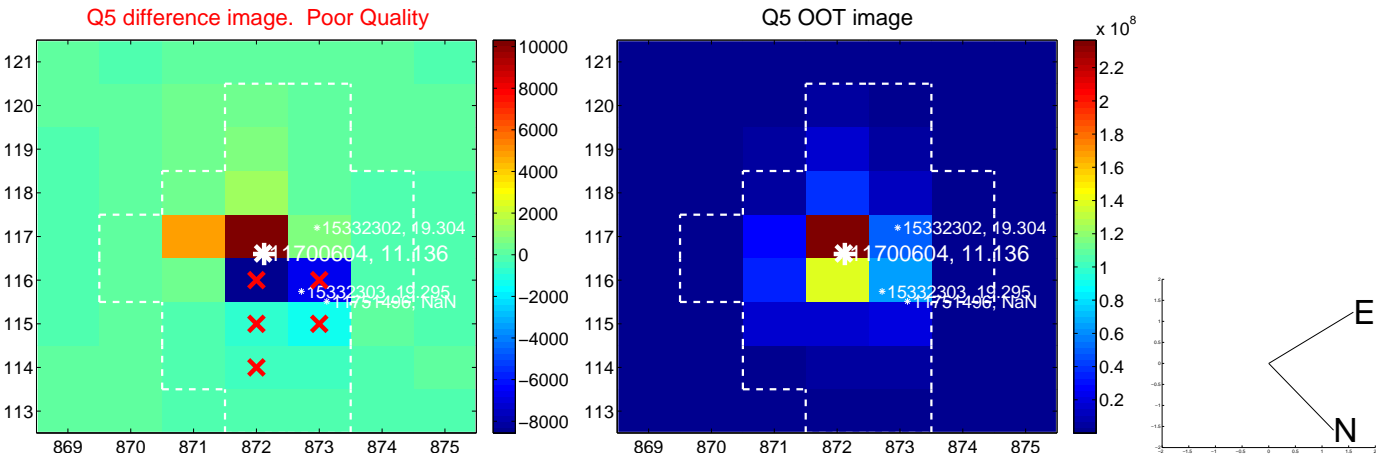


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

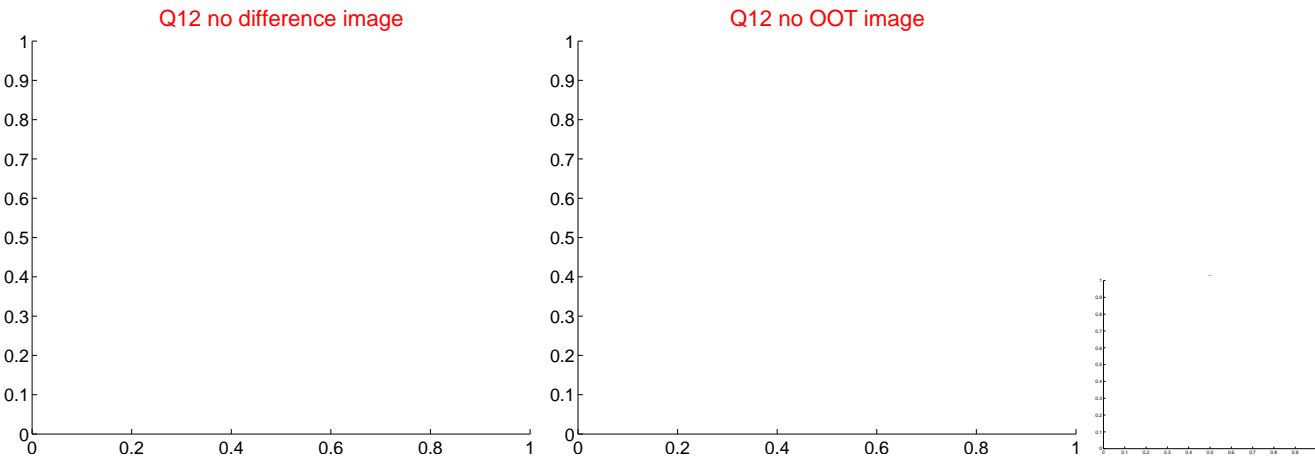
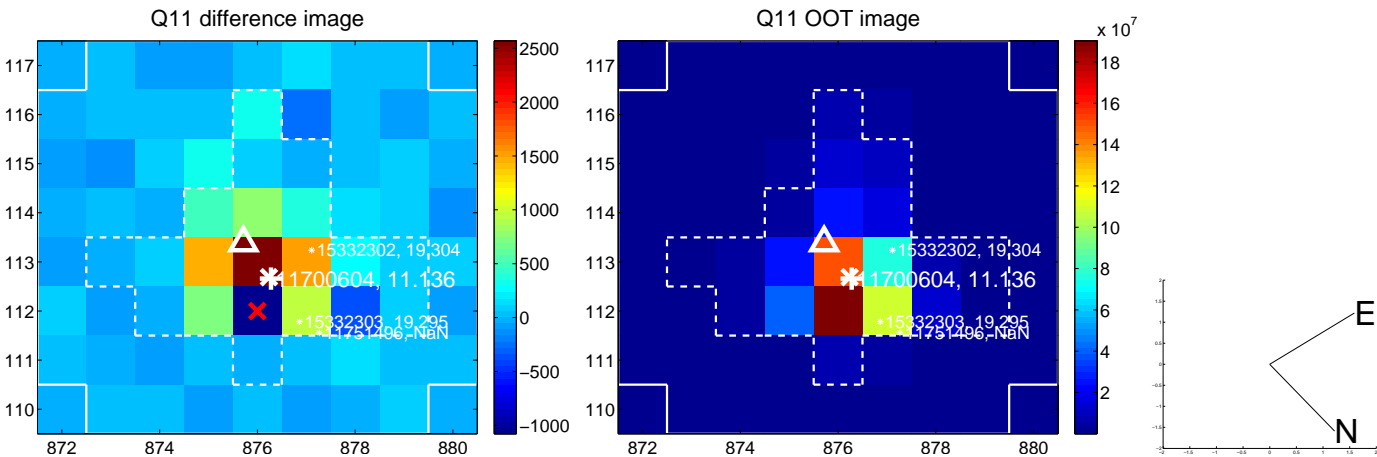
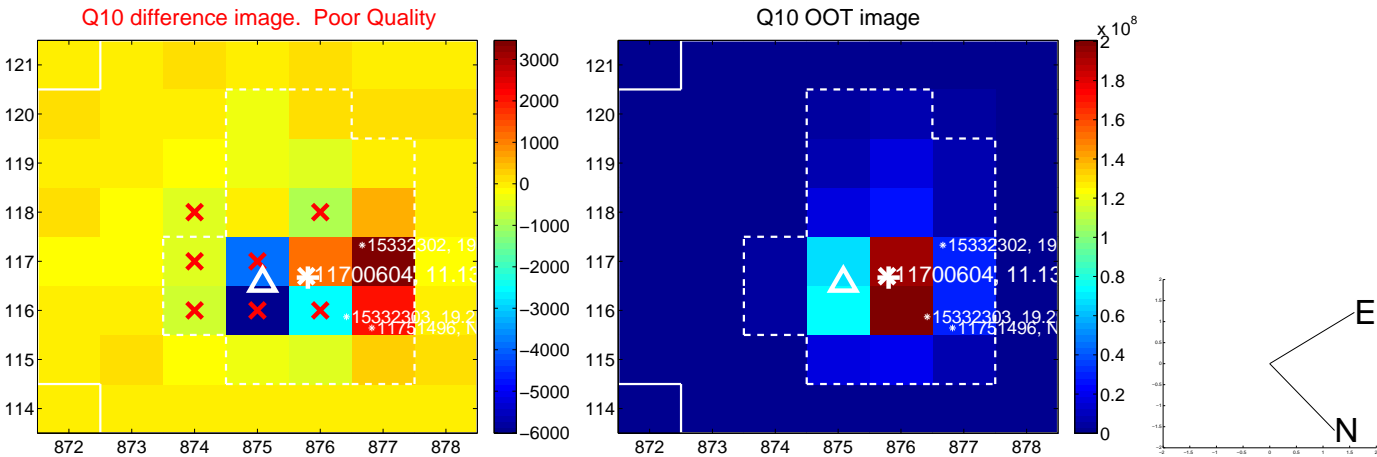
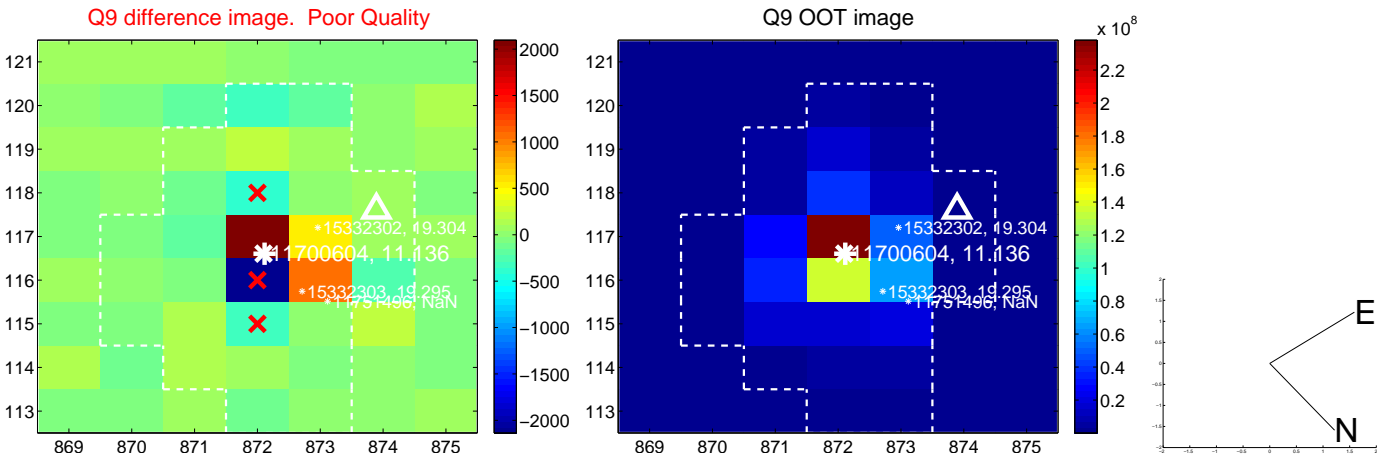
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



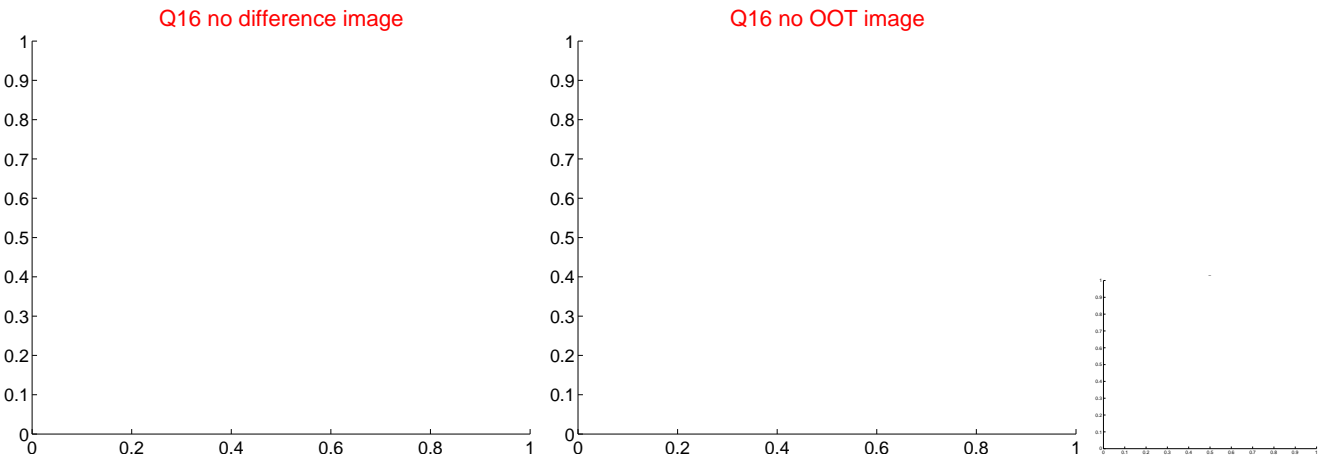
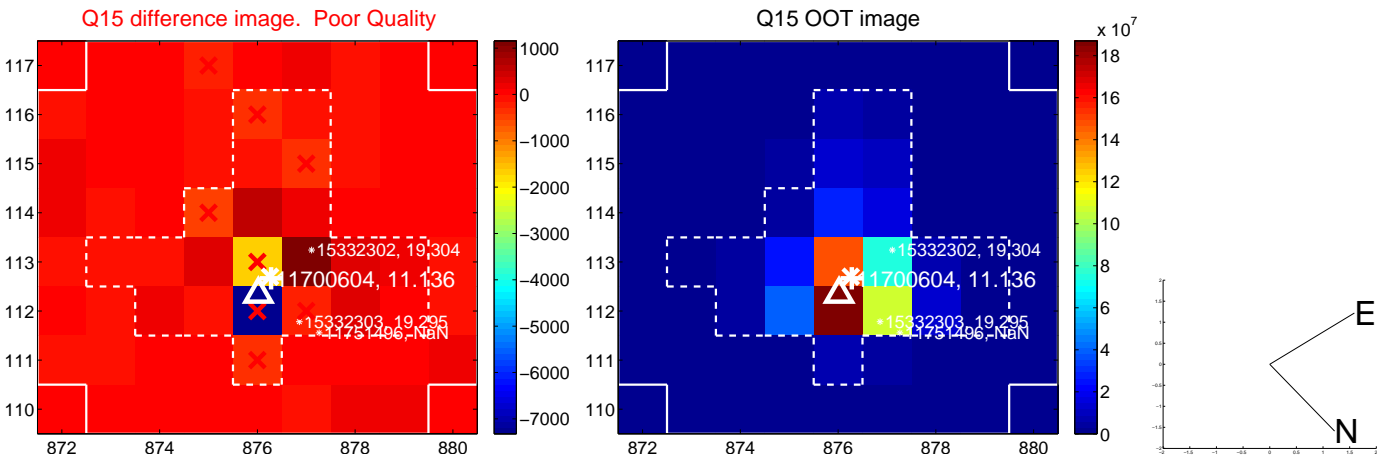
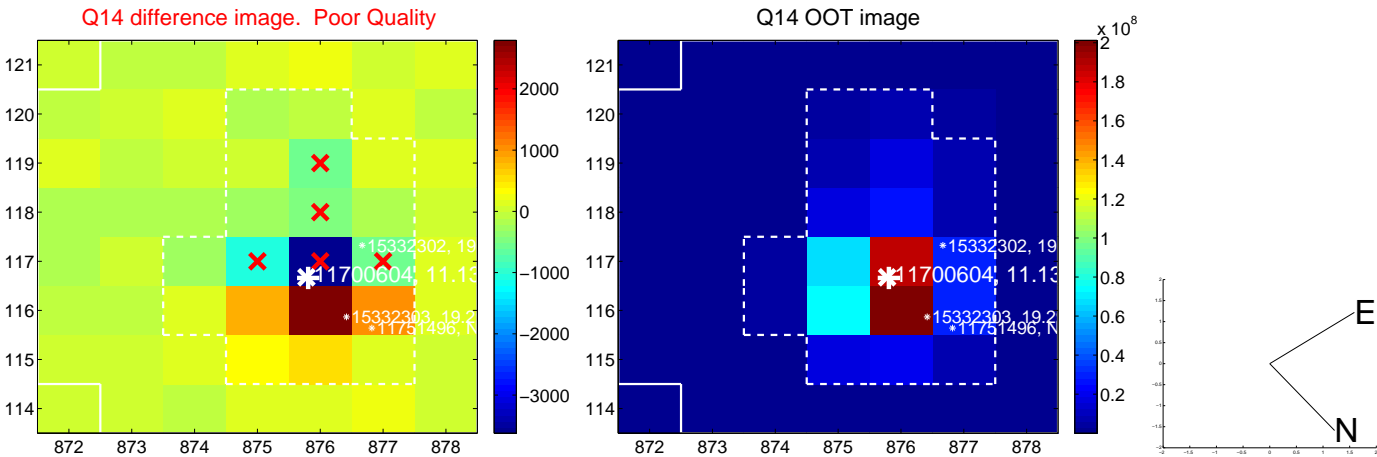
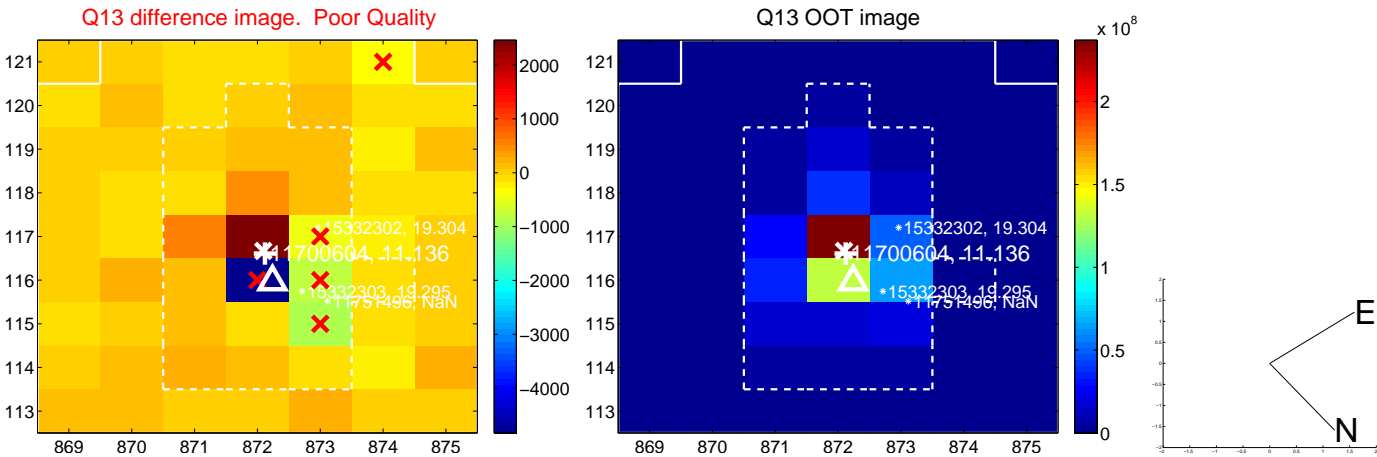
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



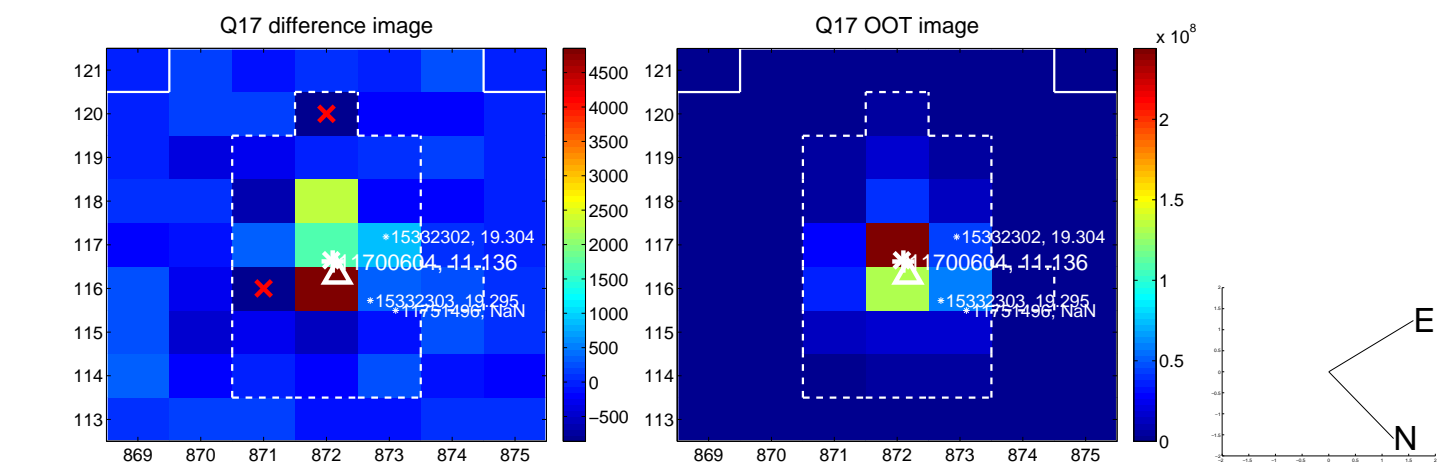
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



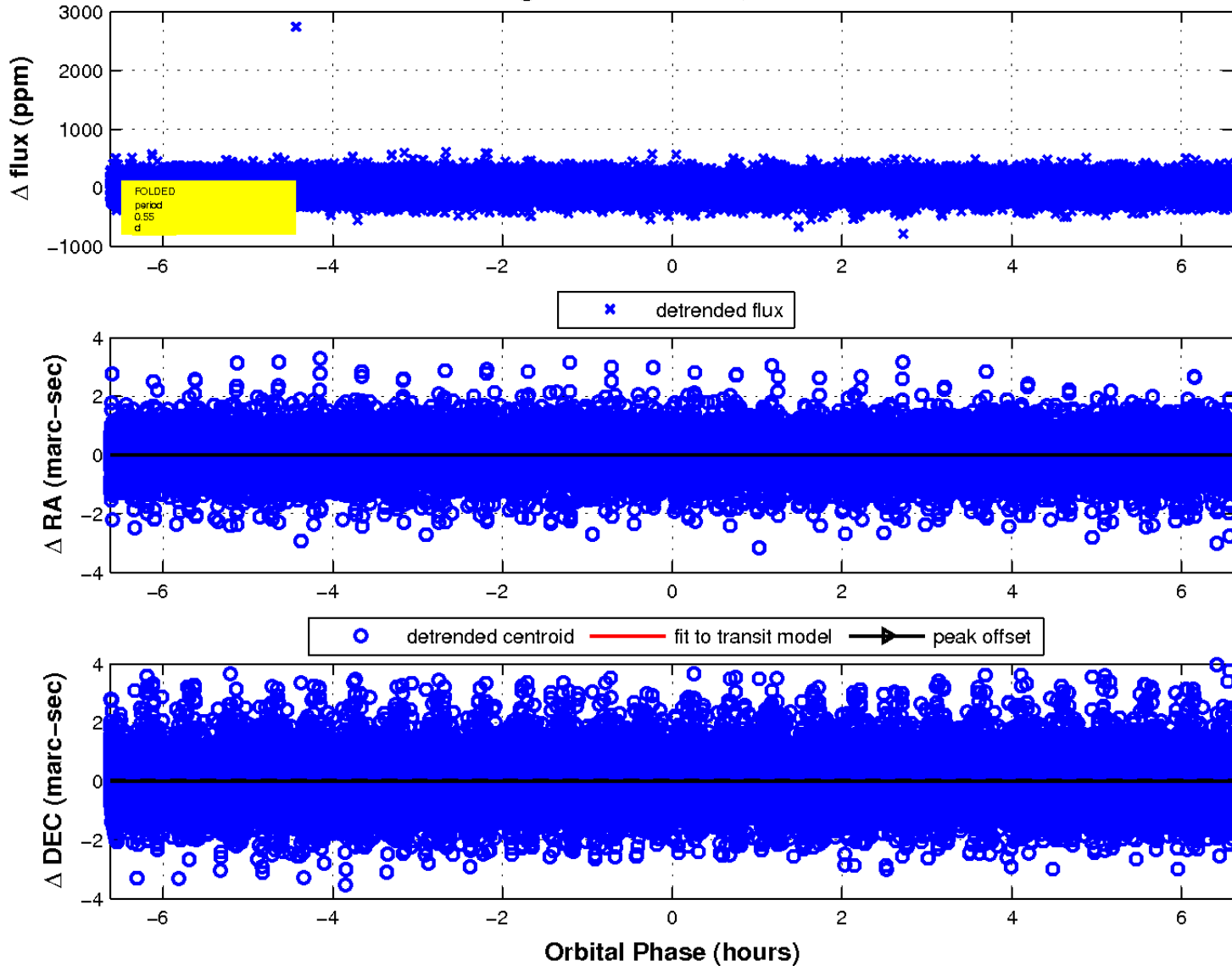
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

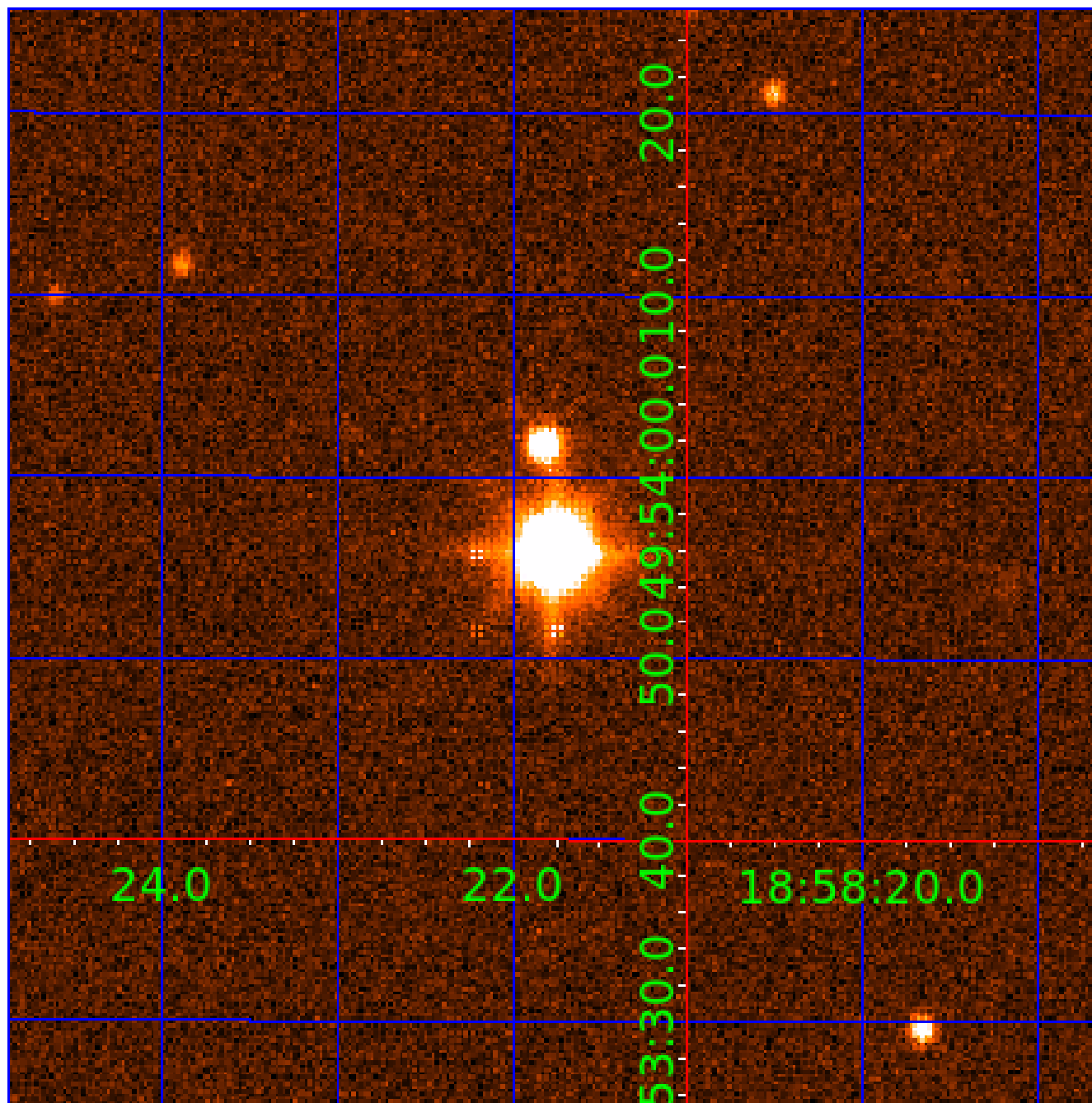


fluxWeightedCentroids, Planet 2 of 7



UKIRT Image

Declination



KIC 011700604

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})
011700604-01	OBS	No	0.551885	131.607609	18.5	1.468	10.1	10.3	2.46	7859	1.07	87406.14
011700604-02	OBS	No	0.551858	131.805409	5.4	3.226	11.5	3.1	2.46	7859	0.58	87411.89
011700604-03	OBS	No	10.129257	135.719710	121.3	1.823	9.9	8.0	2.46	7859	3.21	1805.38
011700604-04	OBS	No	33.709087	143.636283	198.8	2.223	9.5	9.1	2.46	7859	3.97	363.37
011700604-06	OBS	No	7.747454	132.220738	107.2	1.703	9.0	8.8	2.46	7859	2.97	2581.04
011700604-07	OBS	No	26.498446	144.450780	101.9	3.000	8.4	-1.0	2.46	7859	2.51	500.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011700604-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

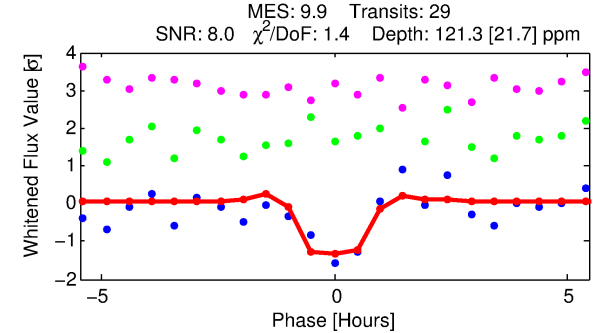
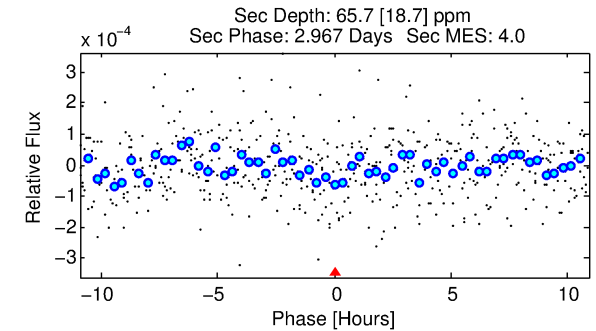
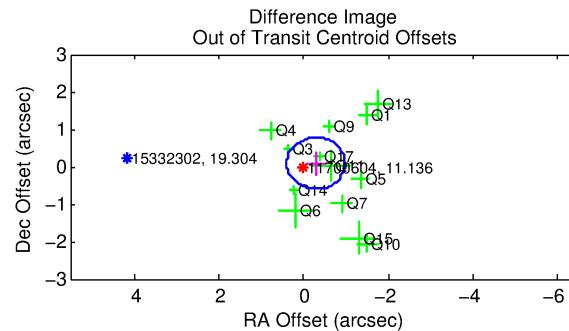
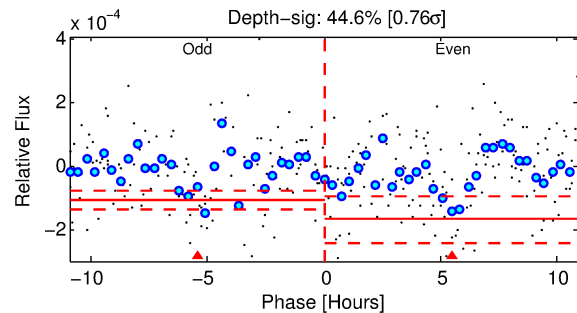
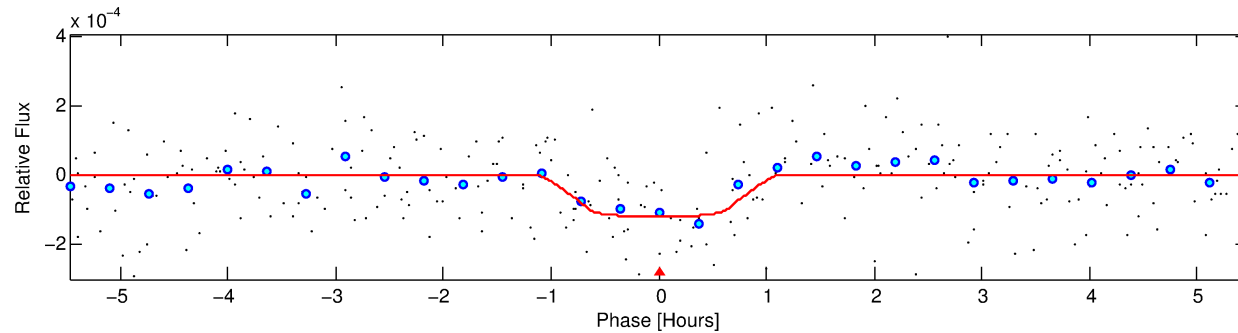
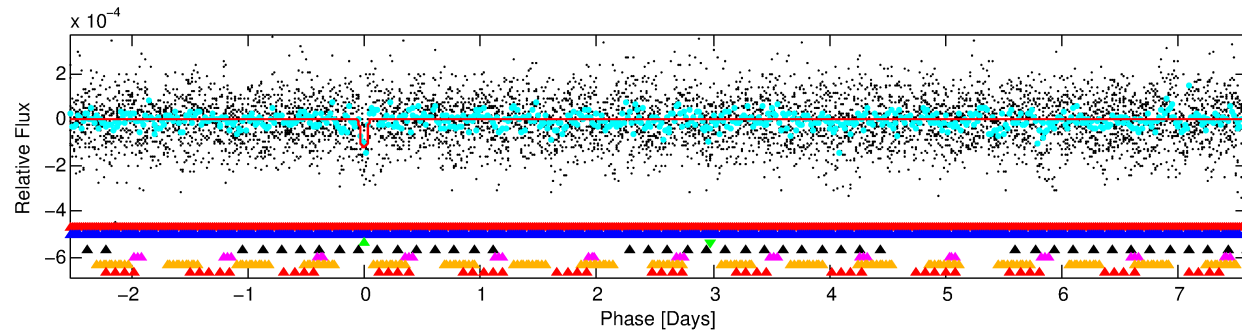
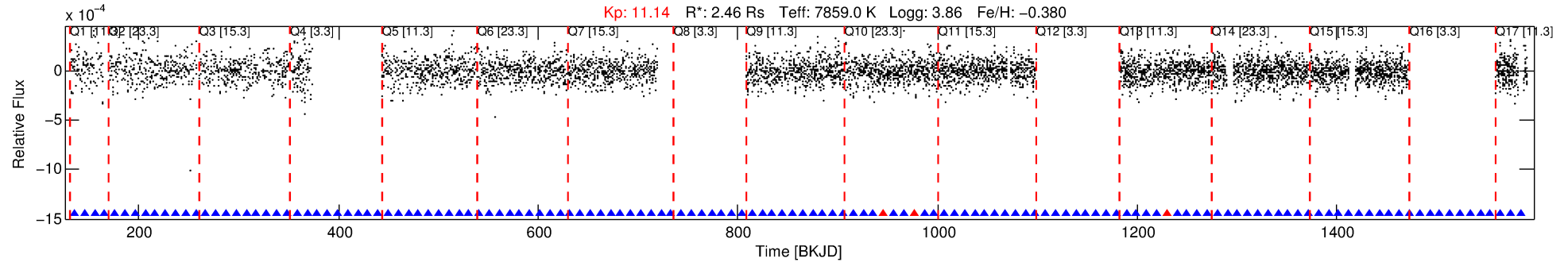
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-03

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 3 of 7 Period: 10.129 d



DV Fit Results:

Period = 10.12926 [0.00008] d
Epoch = 135.7197 [0.0065] BKJD
 $R_p/R^* = 0.0119$ [0.0075]
 $a/R^* = 18.39$ [70.31]
 $b = 0.91$ [0.70]
 $S_{\text{eff}} = 1805.38$ [1144.51]
 $T_{\text{eq}} = 1662$ [263] K
 $R_p = 3.20$ [2.38] R_e
 $a = 0.1072$ [0.0407] AU
 $A_g = 40.43$ [57.98] [0.68 σ]
 $T_{\text{eff}} = 6480$ [2119] K [2.26 σ]

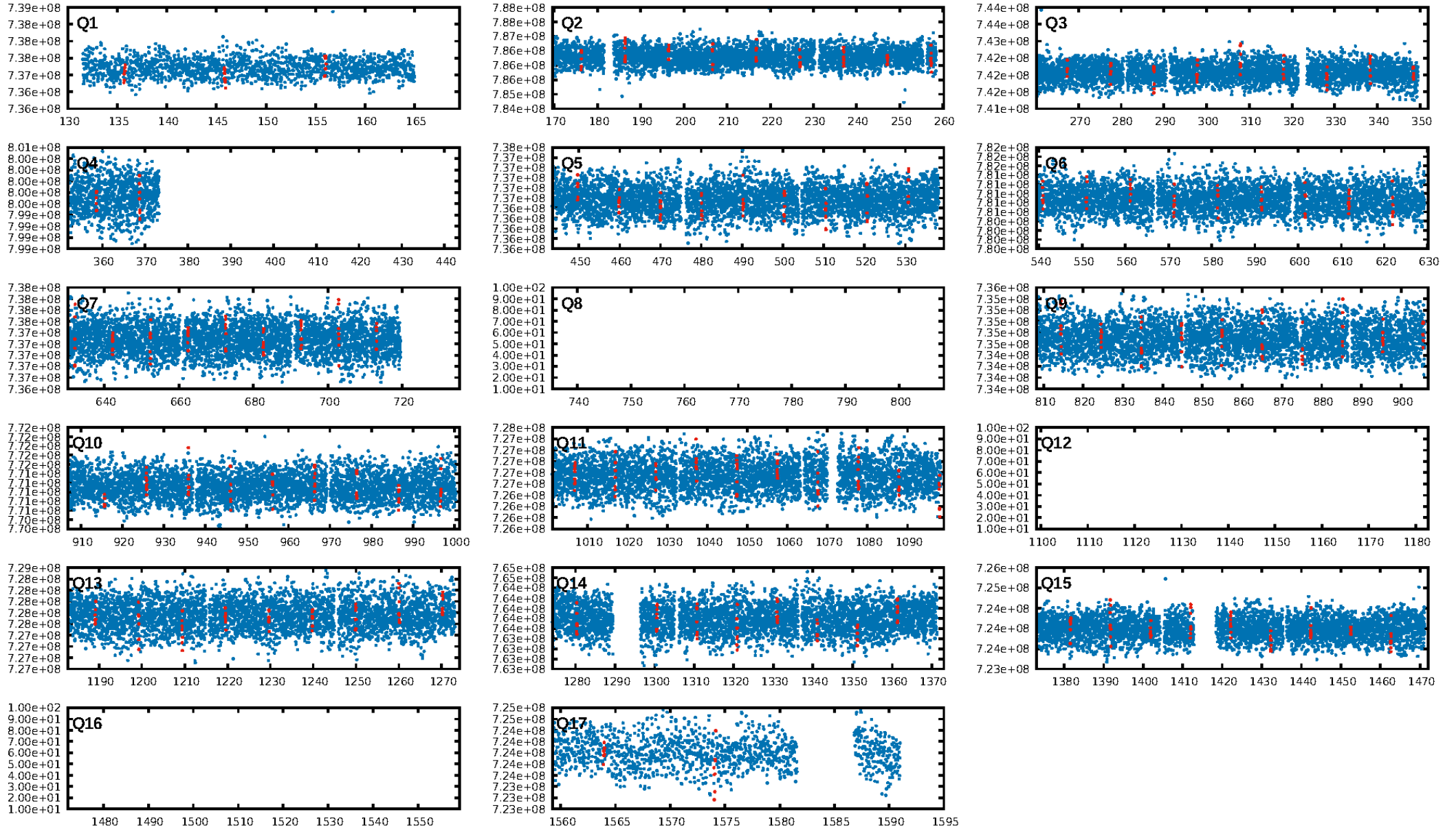
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.91 σ]
LongPeriod-sig: 100.0% [111.90 σ]
ModelChiSquare2-sig: 2.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.14e-11
RollingBand-fgt: 0.89 [24/27]
GhostDiagnostic-chr: -3.155
Centroid-sig: 76.0%
Centroid-so: 0.140 arcsec [0.33 σ]
OotOffset-rm: 0.304 arcsec [1.33 σ]
OotOffset-st: 3/4/1/5 [13]
KicOffset-rm: 0.333 arcsec [1.13 σ]
KicOffset-st: 3/4/1/5 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 0.00 [0/14]

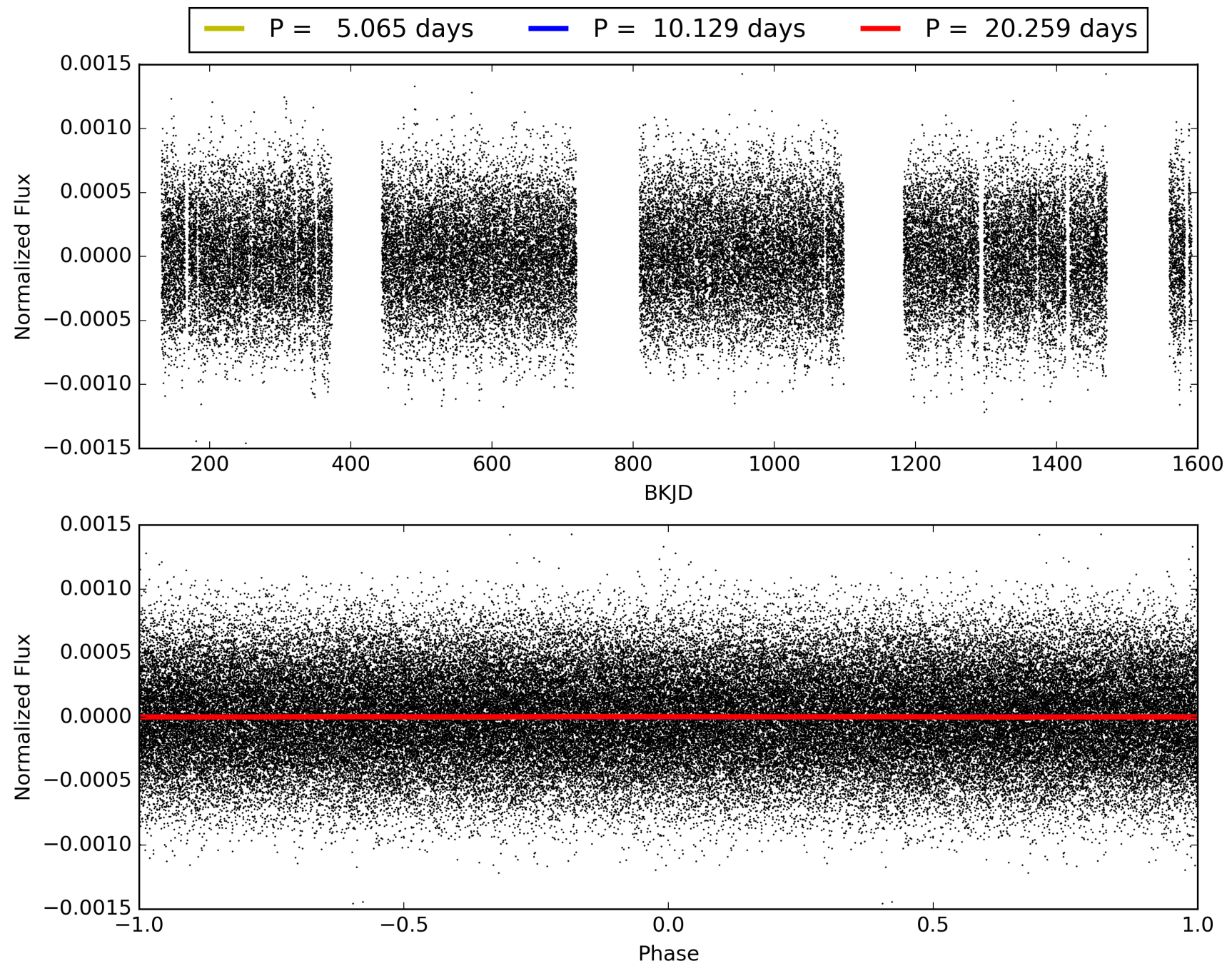
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:01 Z

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

TCE 011700604-03, PDC Light Curves

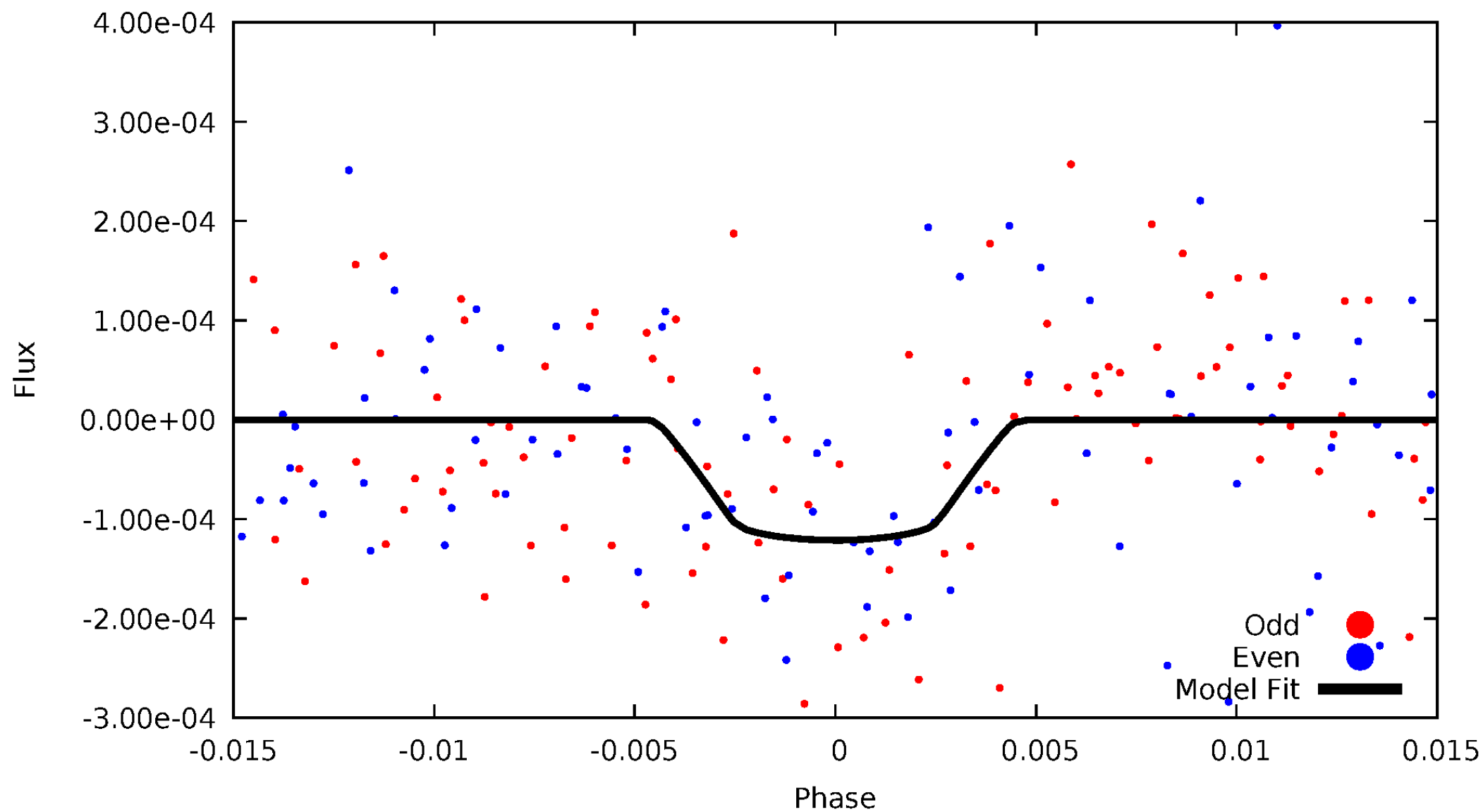


TCE 011700604-03



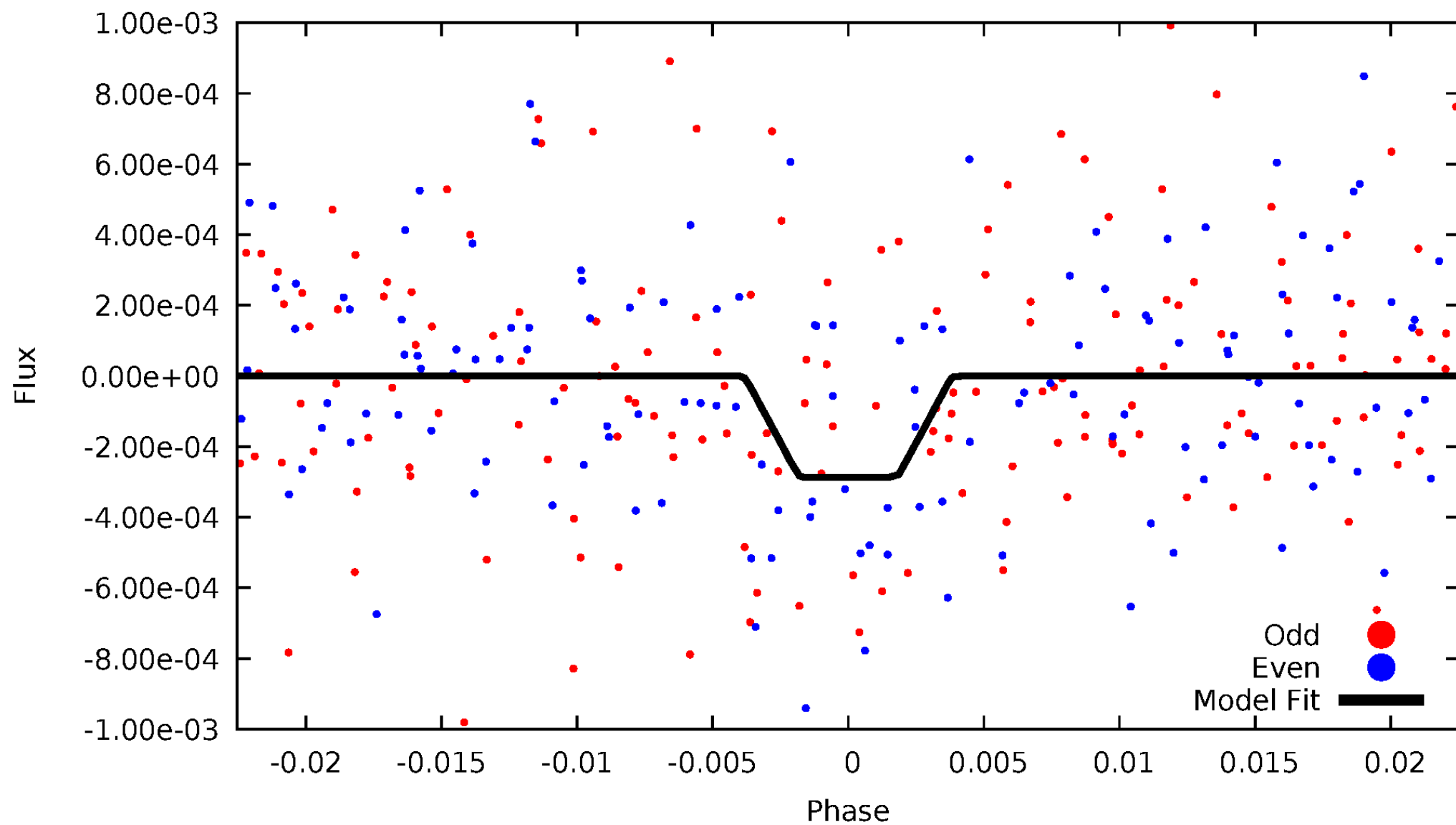
DV Odd/Even

TCE 011700604-03



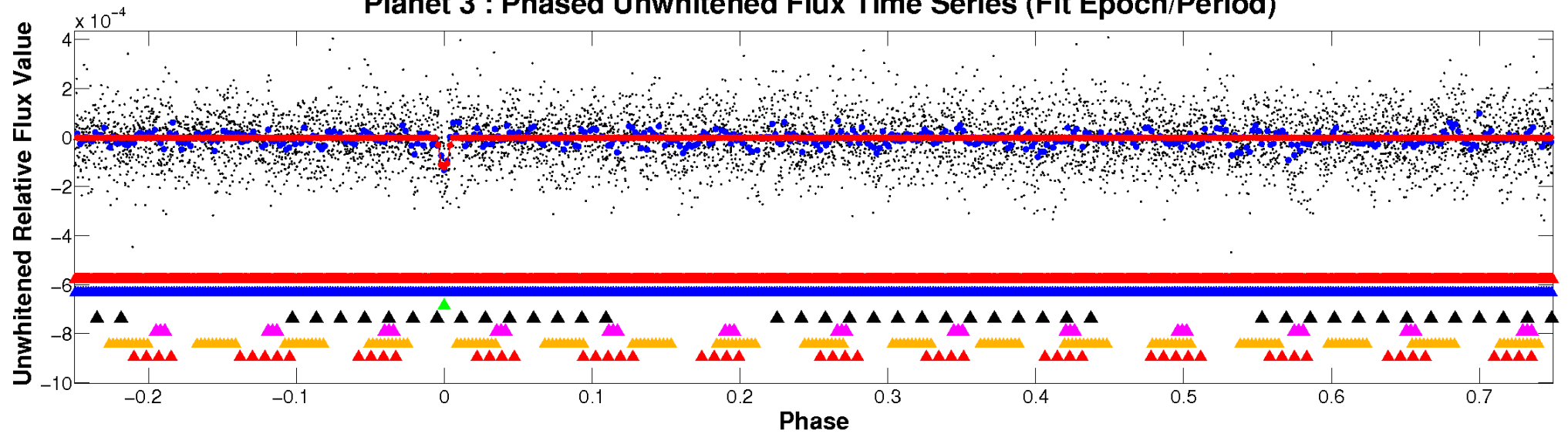
ALT Odd/Even

TCE 011700604-03

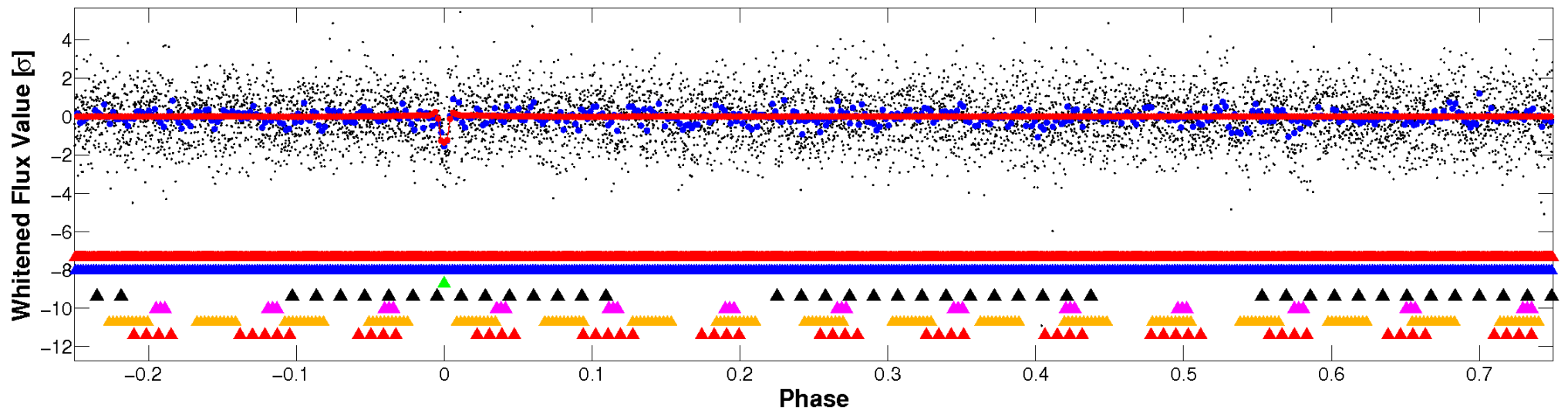


Non-Whitened Vs. Whitened Light Curve

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

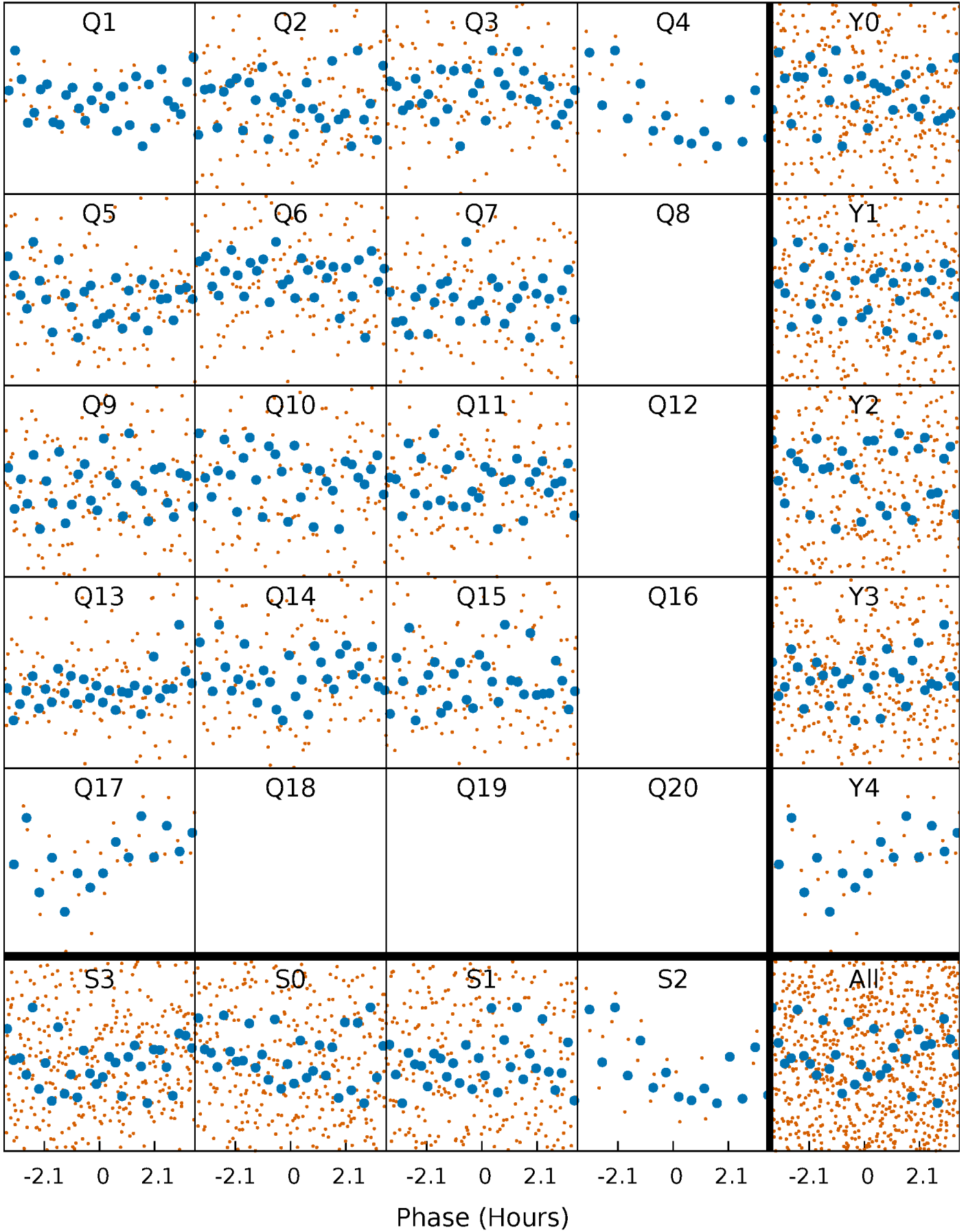


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



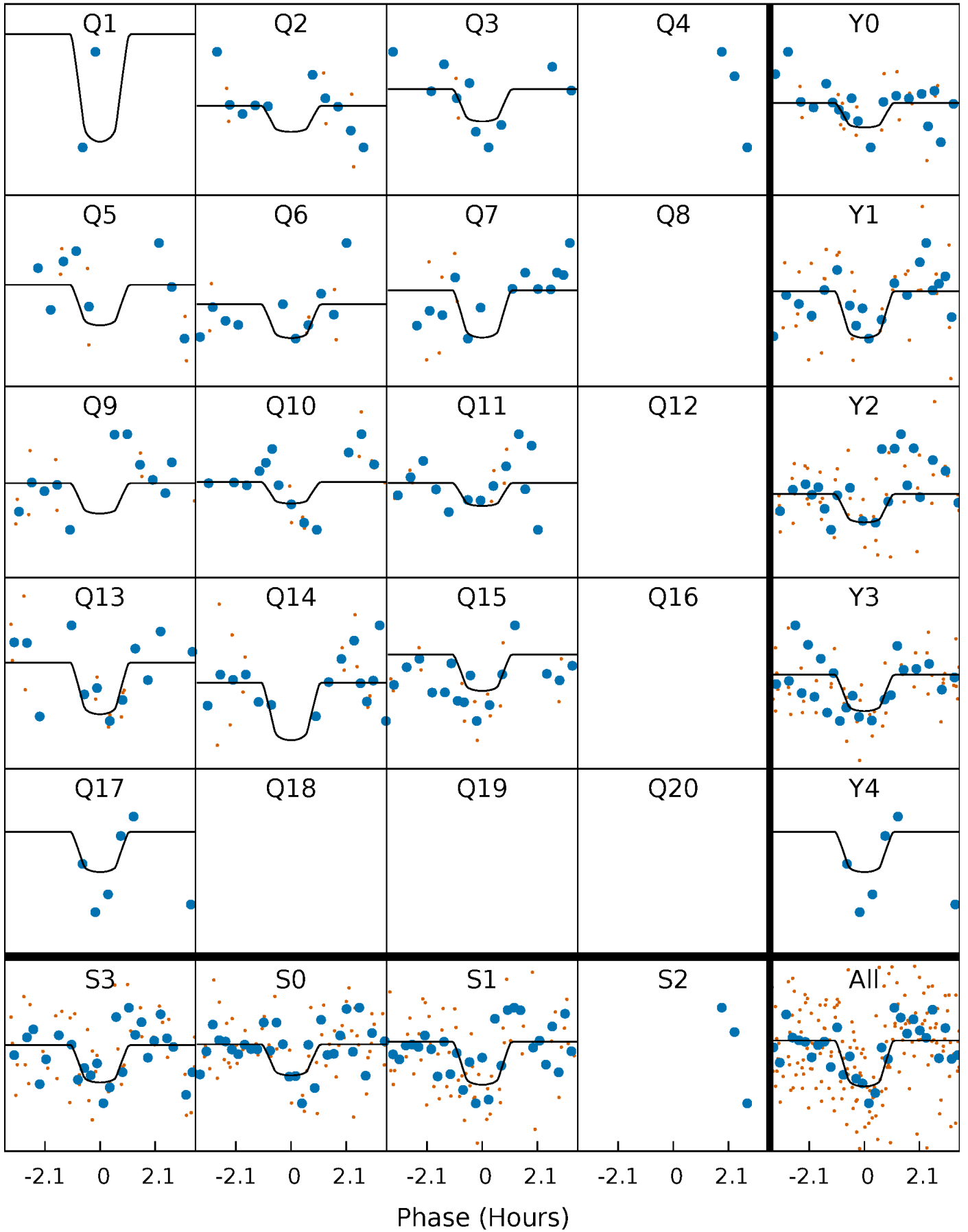
PDC Quarter-Phased Transit Curves

TCE 011700604-03 P= 10.129257 Days $T_0=135.719710$ (BKJD)



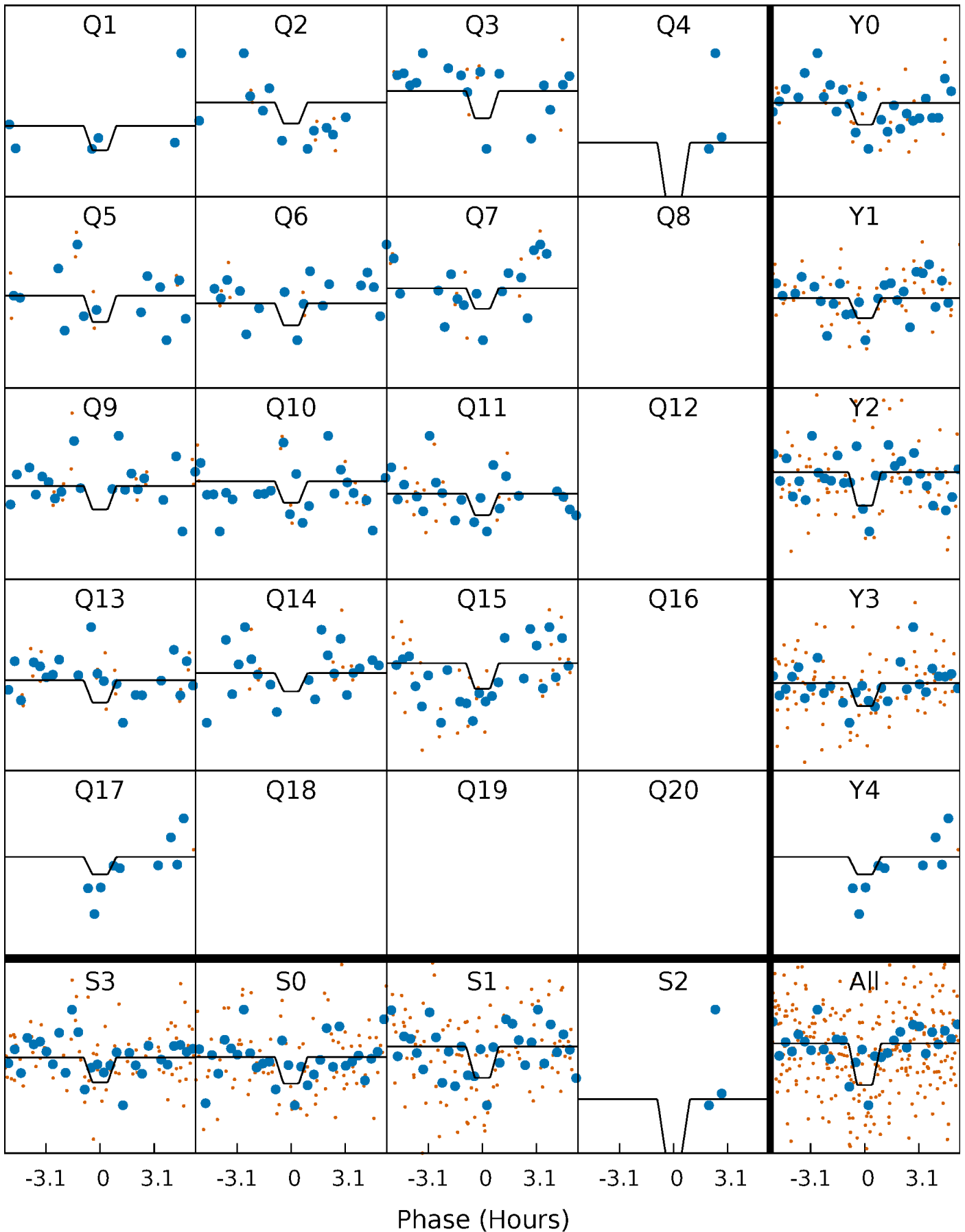
DV Quarter-Phased Transit Curves

TCE 011700604-03 P= 10.129257 Days $T_0=135.719710$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

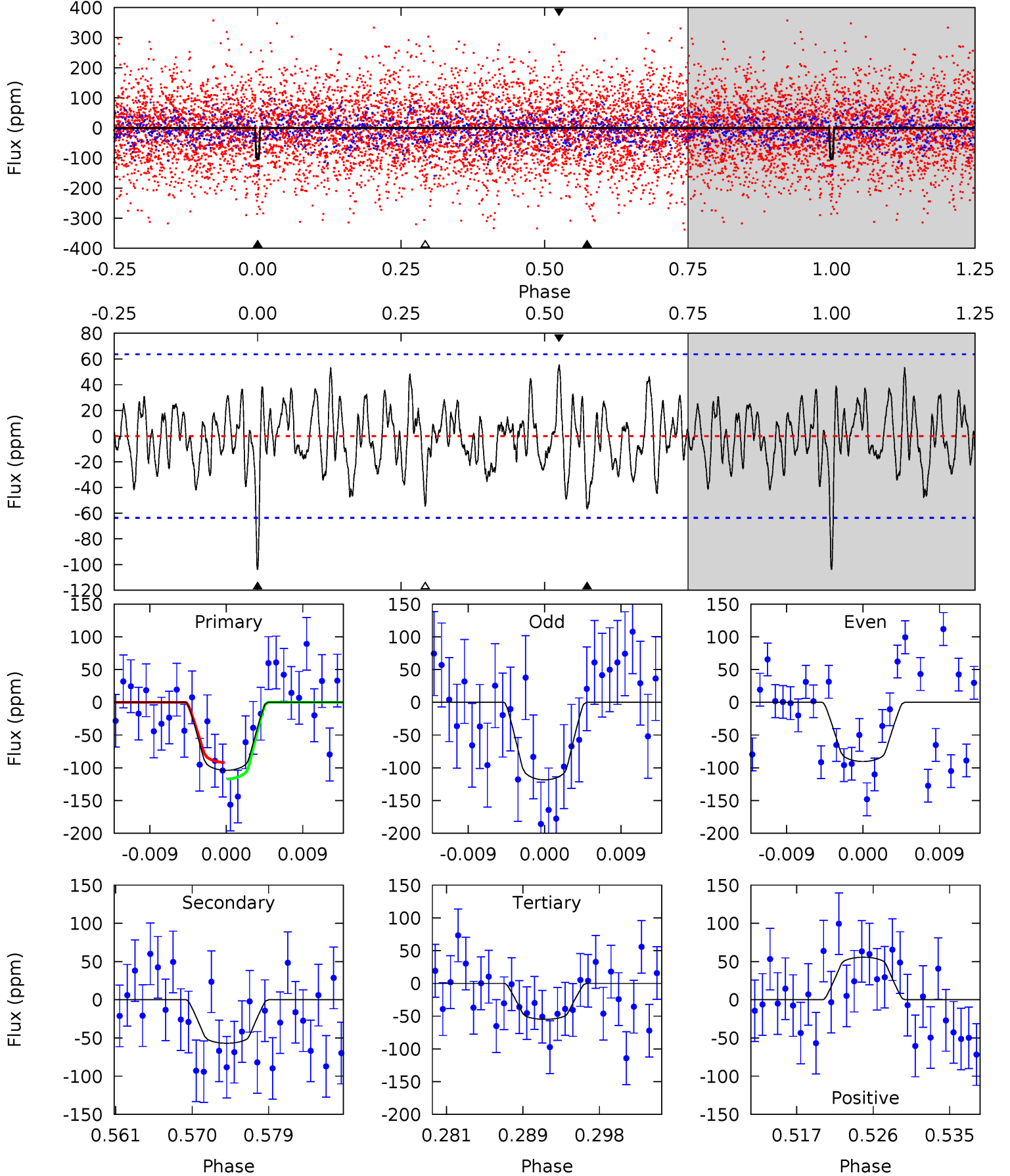
TCE 011700604-03 P= 10.129328 Days $T_0=135.713135$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-03, P = 10.129257 Days, E = 125.590453 Days

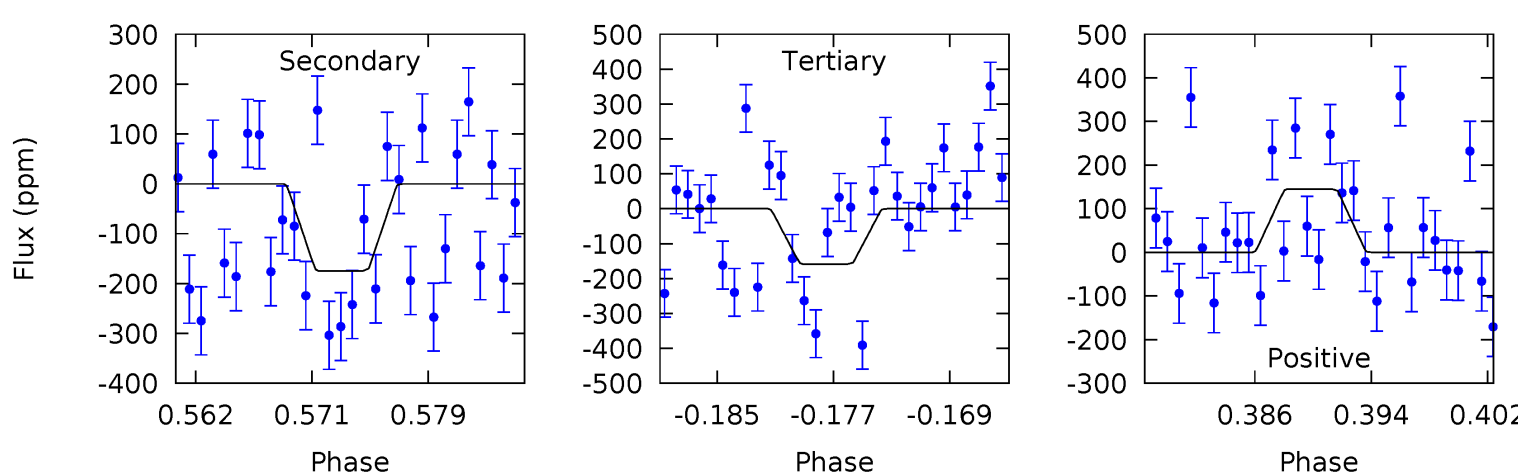
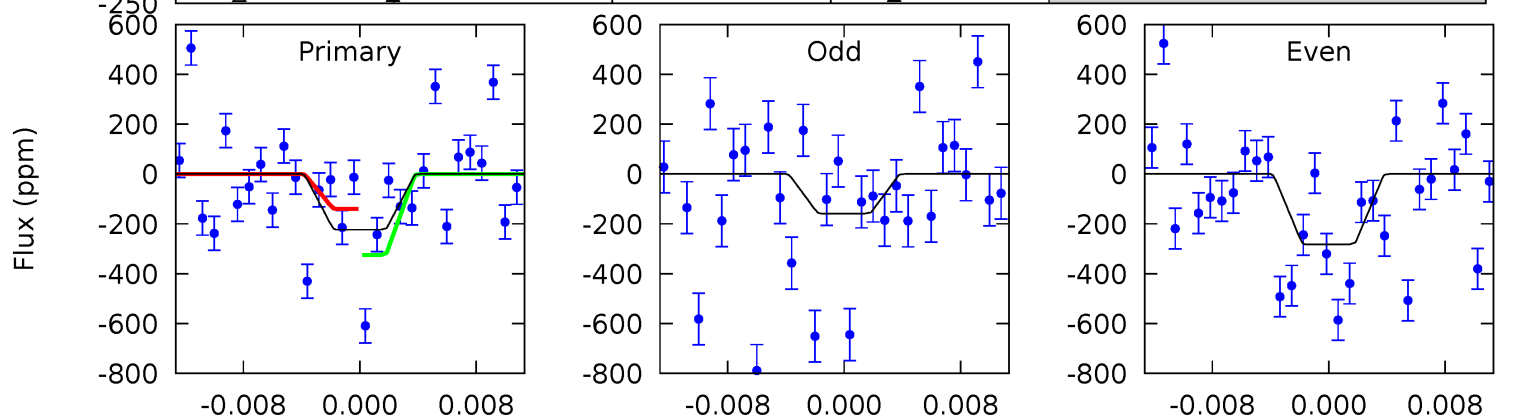
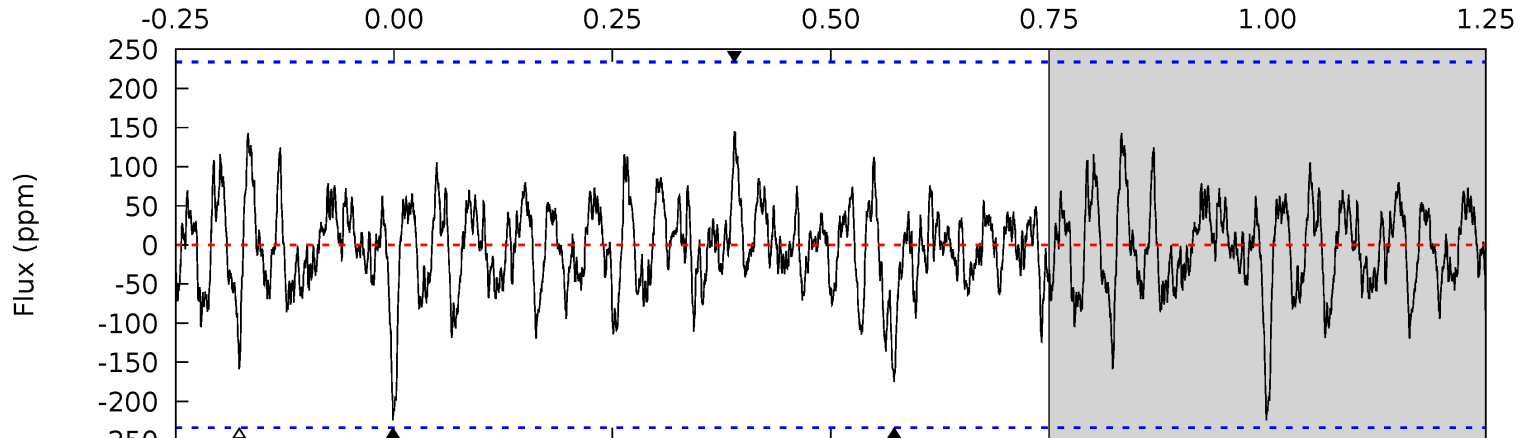
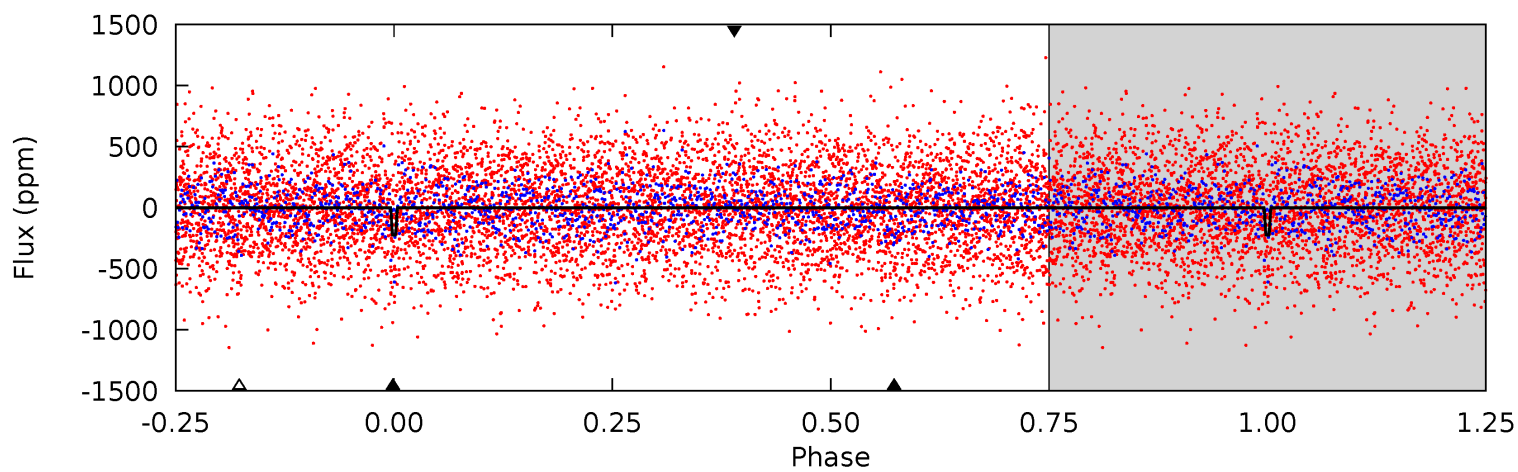
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.25	4.52	4.36	4.42	5.05	2.62	1.55	3.89	3.83	0.16	0.10	1.13	0.74	0.35	1.00



Alt Model-Shift Uniqueness Test

011700604-03, P = 10.129328 Days, E = 125.583807 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	3.79	3.45	3.15	5.07	2.65	1.05	1.41	1.71	0.35	0.64	1.35	1.14	0.39	2.00



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-57 ± 13	$3.01^{+1.93}_{-1.60}$	2260^{+148}_{-216}	5967^{+3385}_{-1193}	40^{+144}_{-26}
Alt.	-175 ± 46	$4.32^{+1.99}_{-1.98}$	2250^{+166}_{-226}	6575^{+2904}_{-1080}	58^{+144}_{-33}

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 $A_{obs} \gg 1.0$

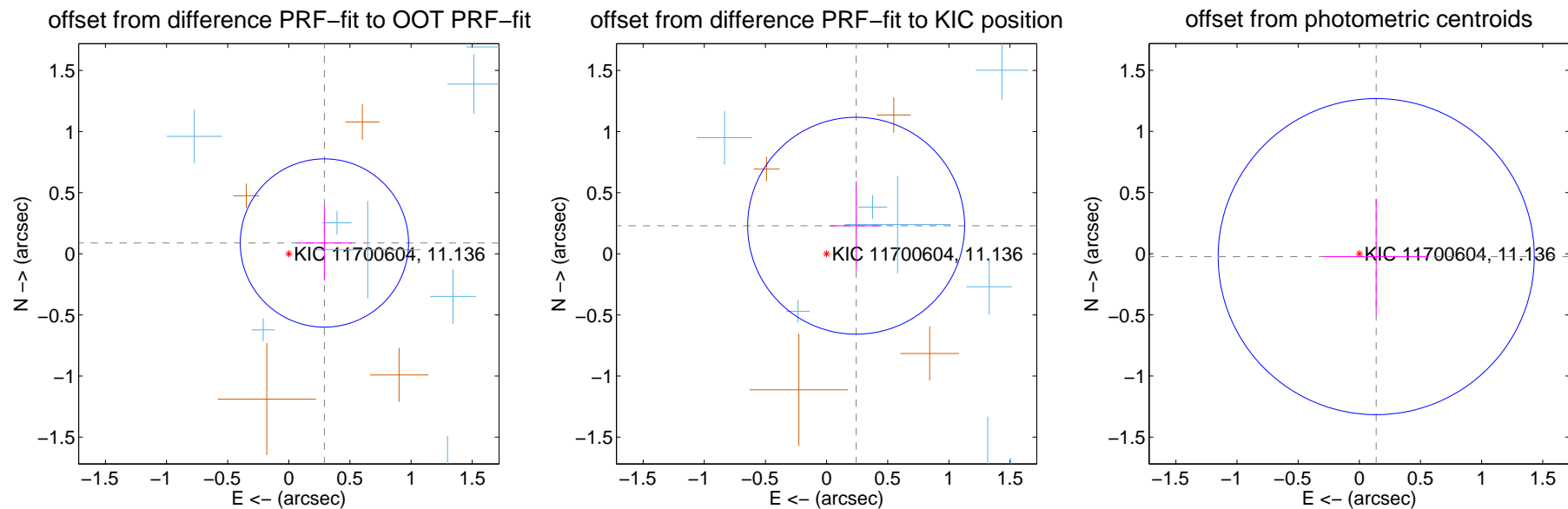
DV Centroid Data

Supplemental centroid analysis for 011700604-03. **Kepler magnitude: 11.14.** Transit SNR 8.03

There are 9 quarters with good PRF difference image offsets

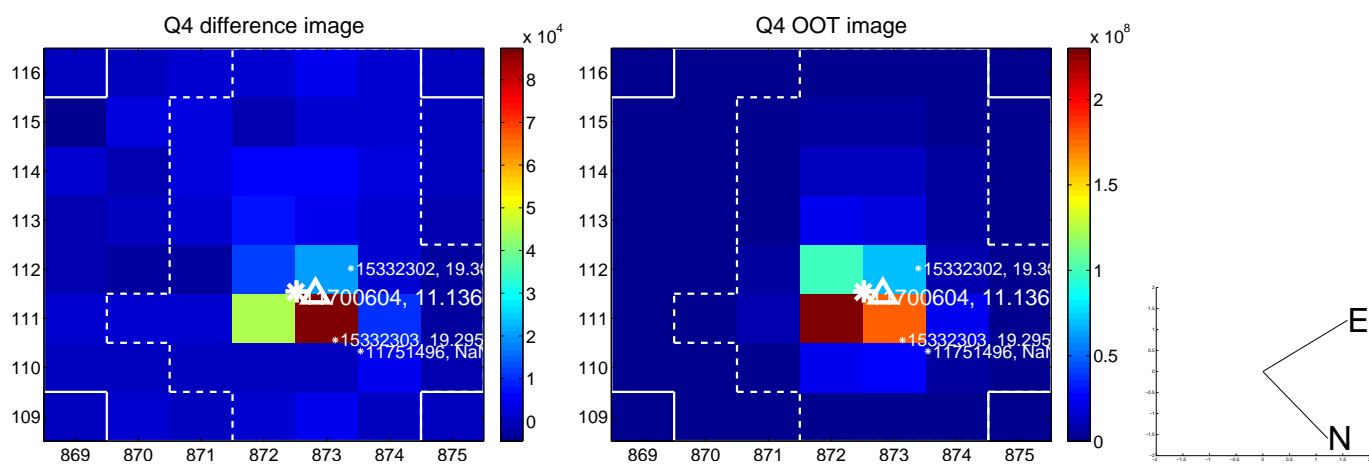
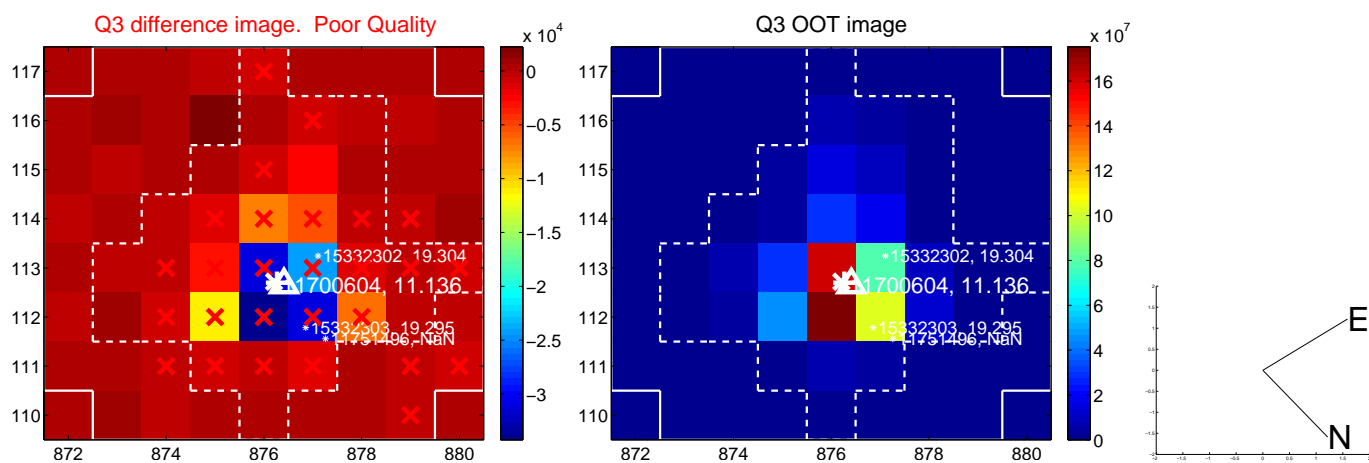
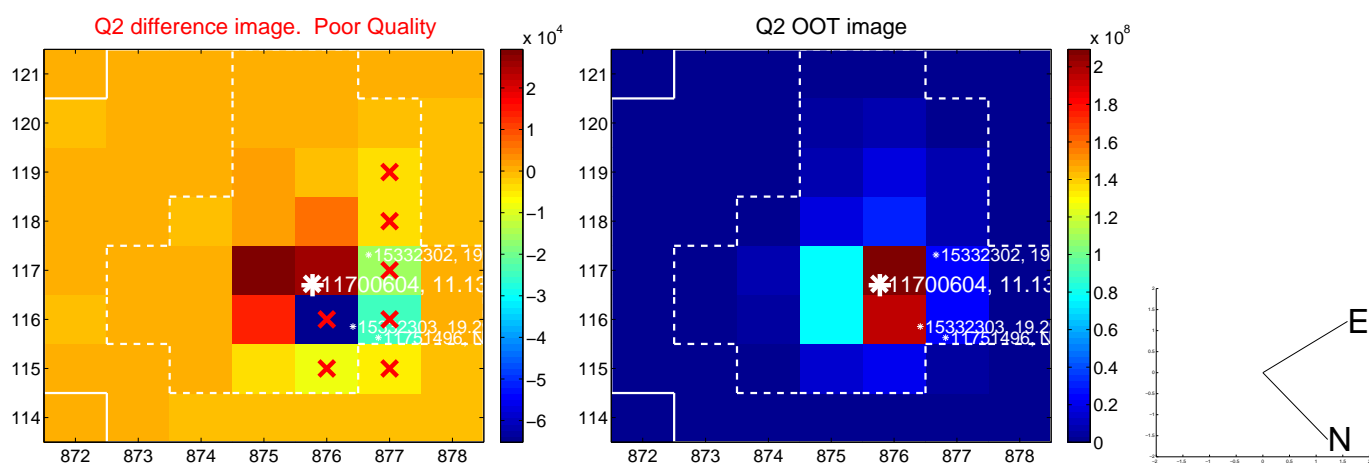
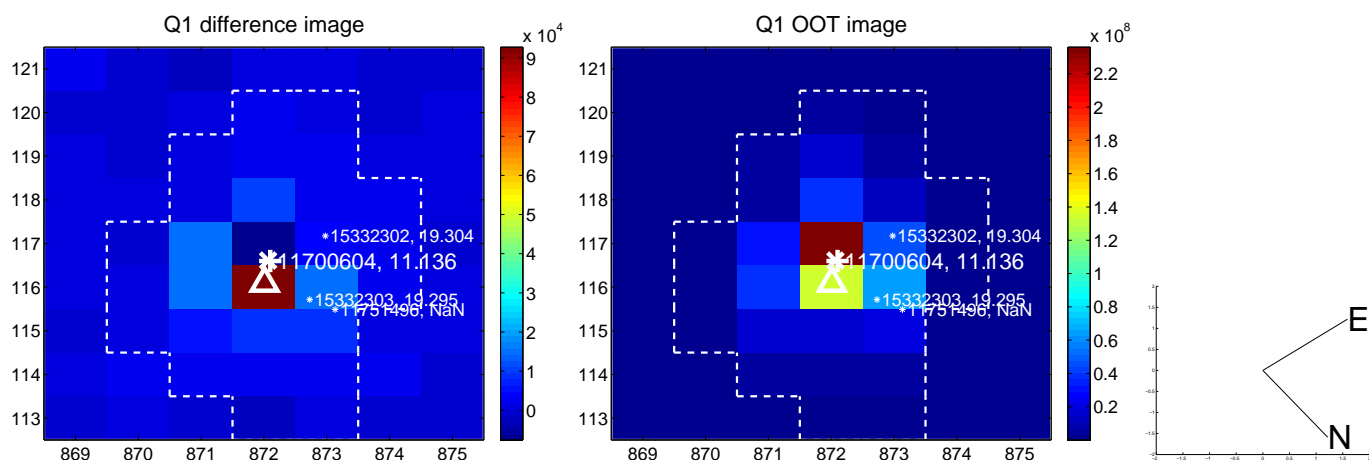
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.304 ± 0.229	1.33	-0.291 ± 0.227	0.088 ± 0.307
PRF-fit source offset from KIC position	0.333 ± 0.296	1.13	-0.242 ± 0.211	0.229 ± 0.364
photometric centroid source offset	0.14 ± 0.43	0.33	-0.14 ± 0.43	-0.02 ± 0.47

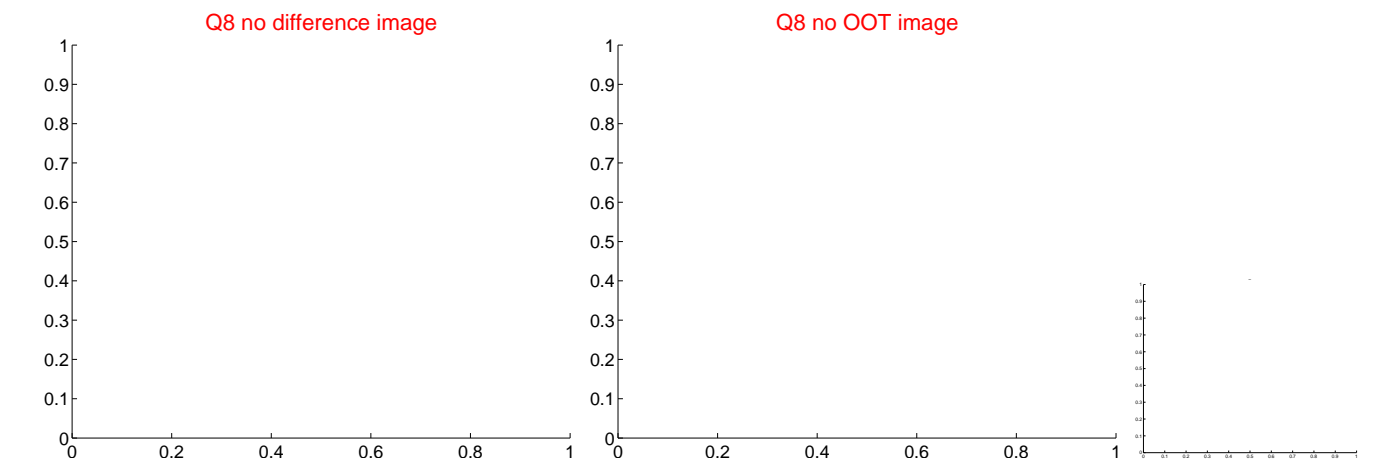
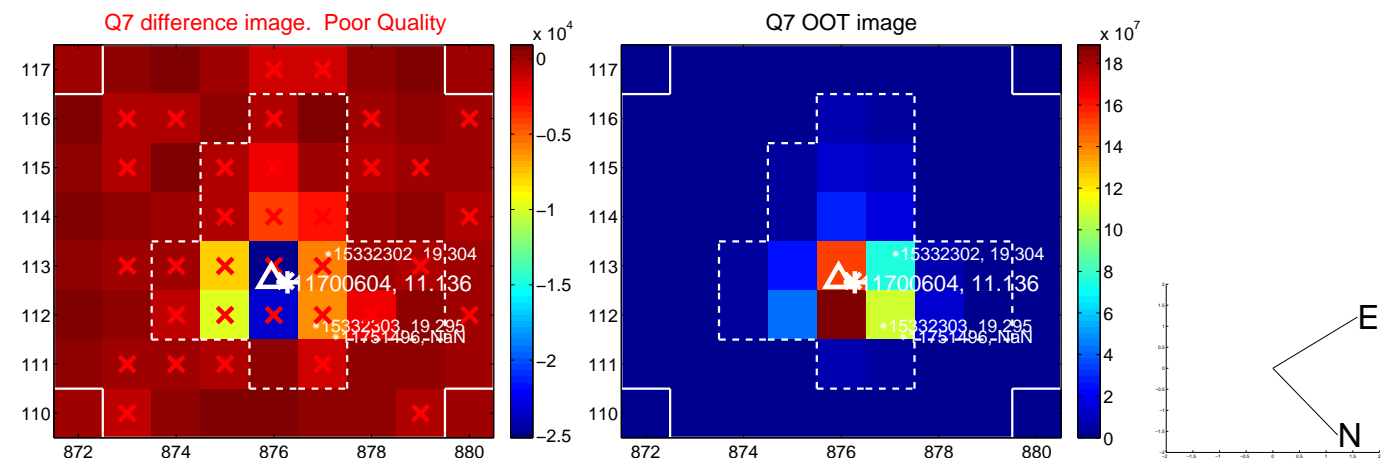
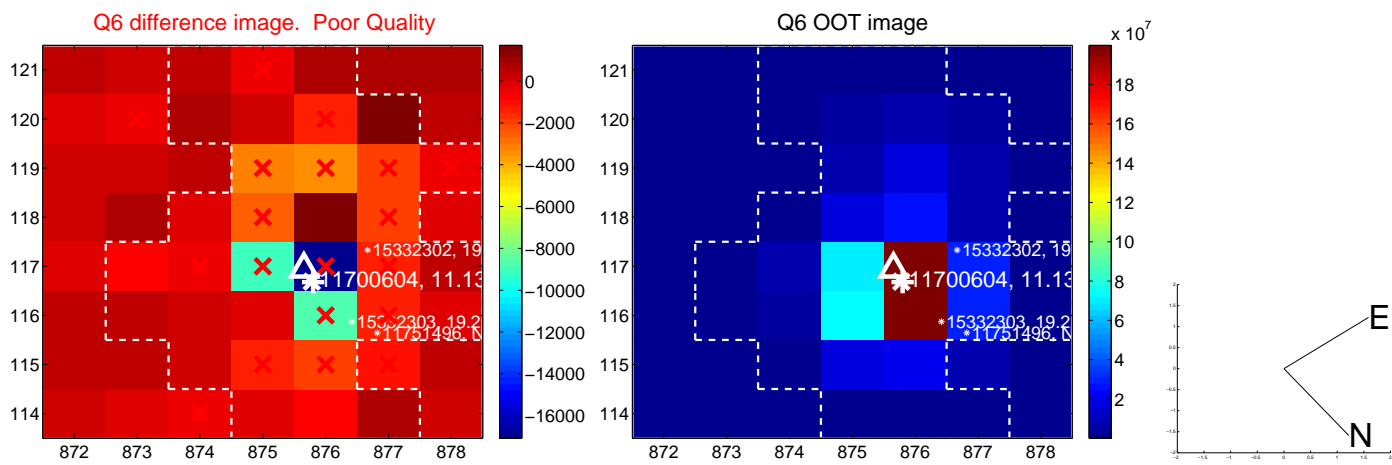
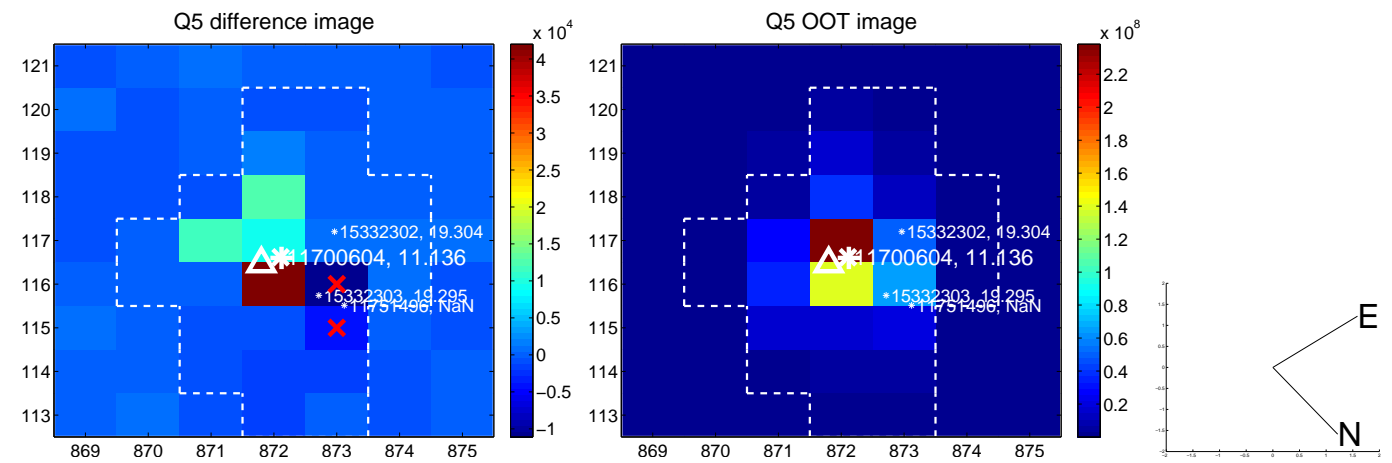


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

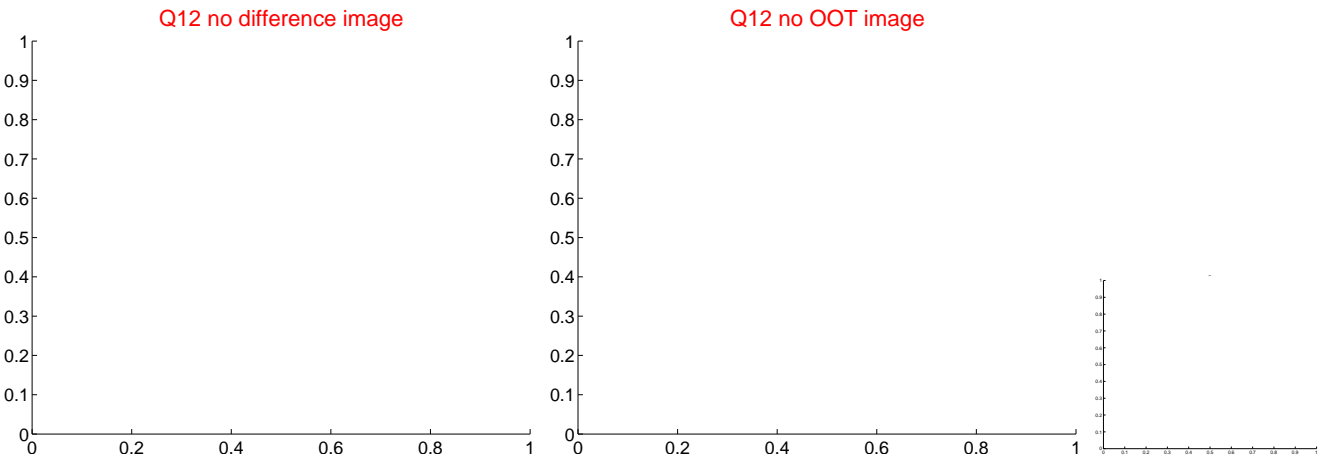
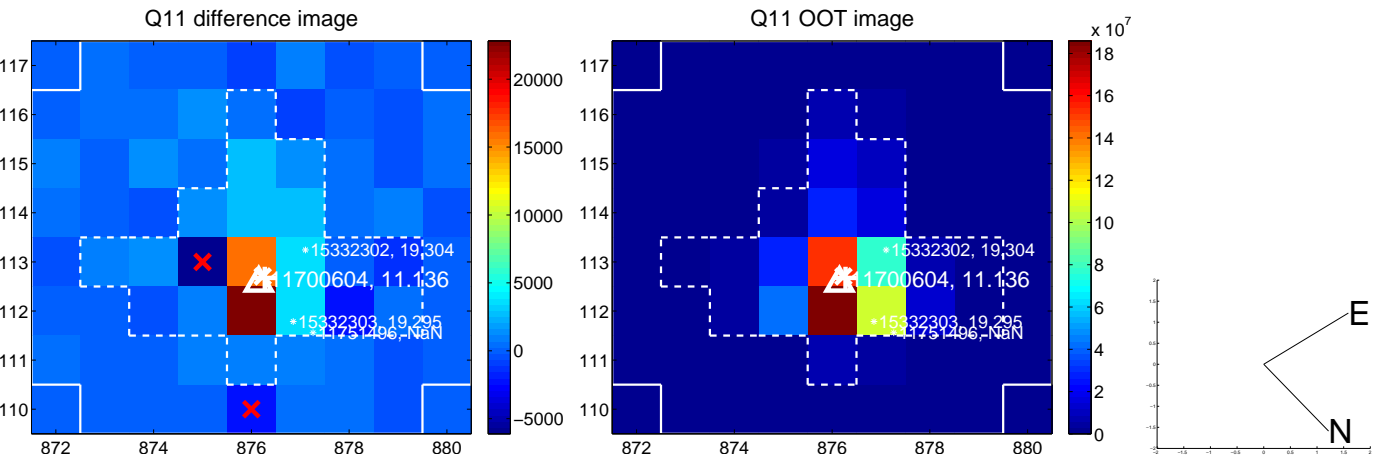
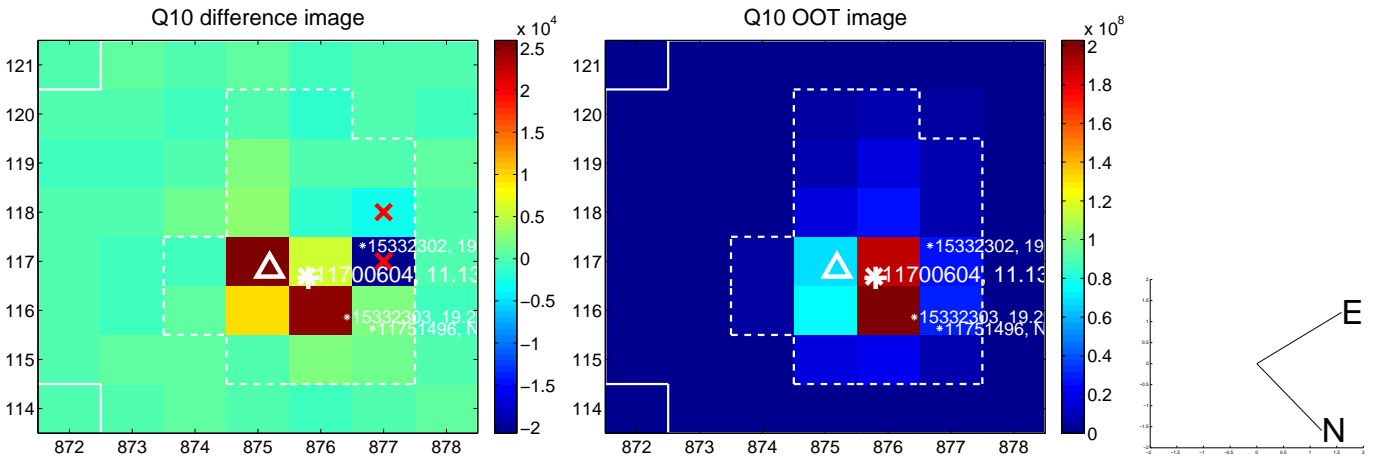
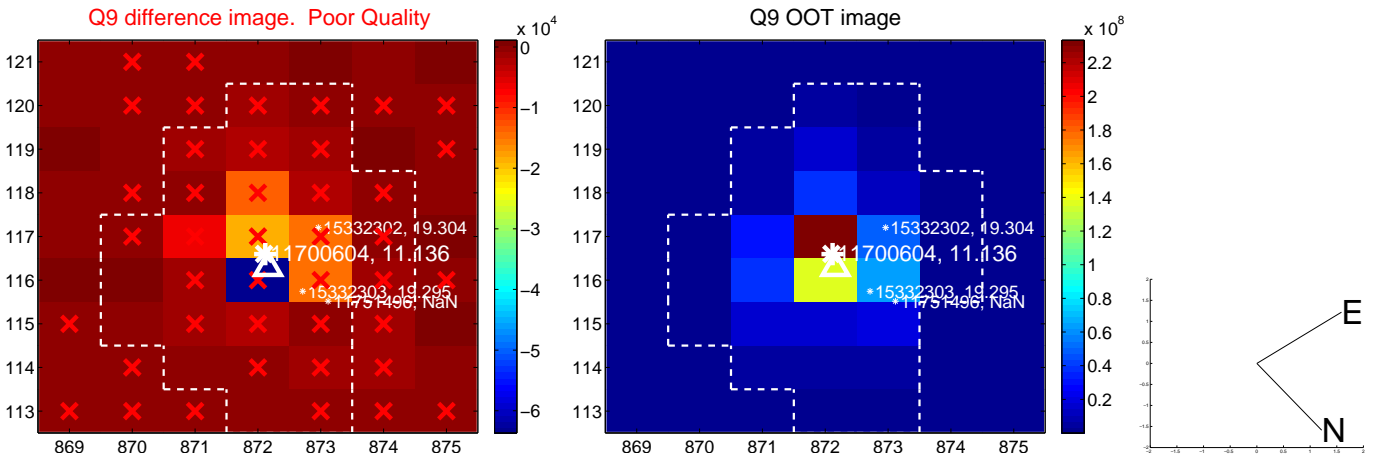
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



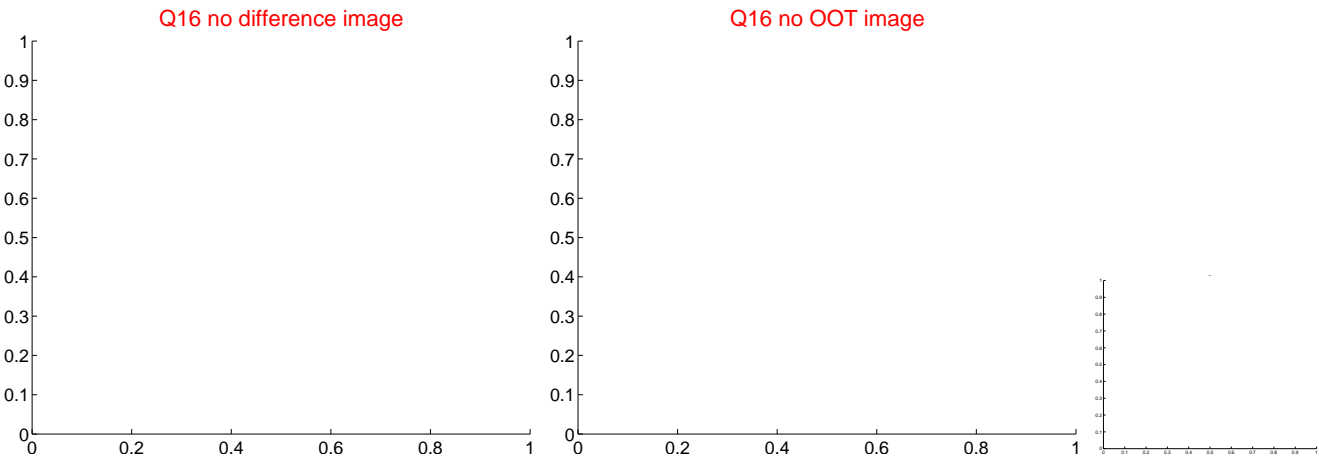
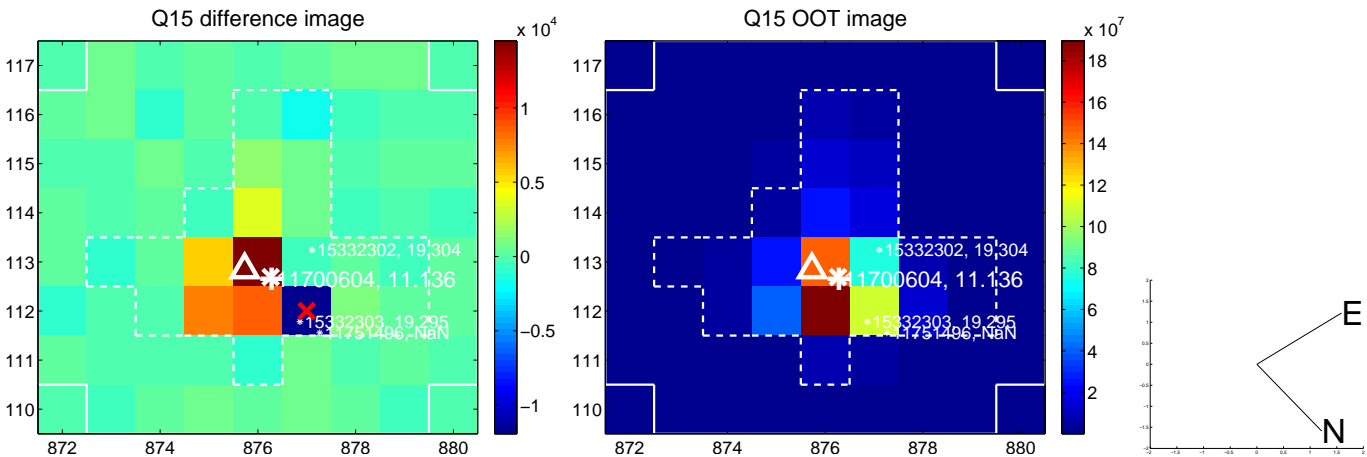
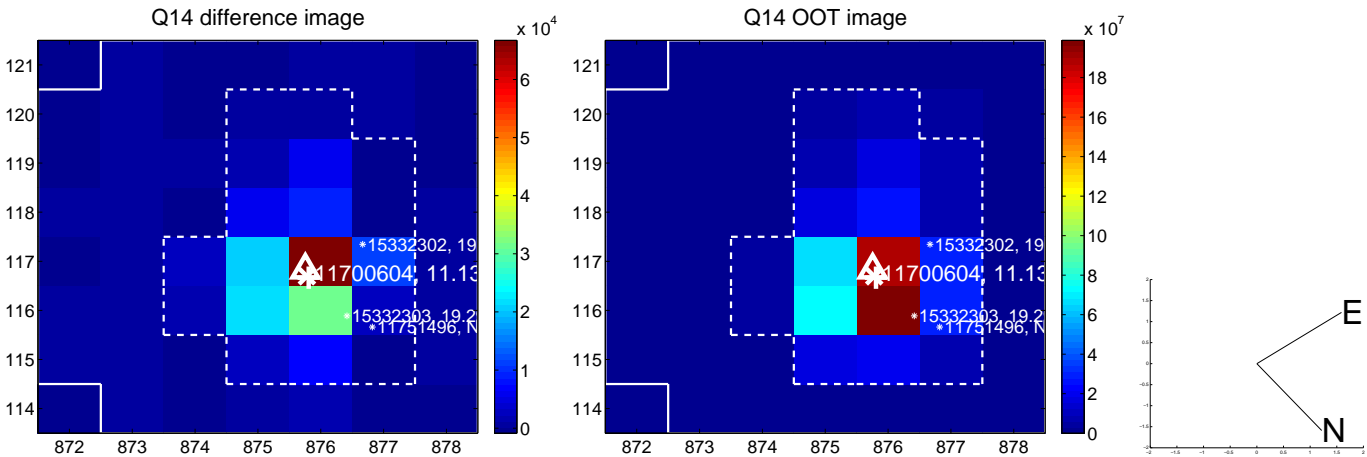
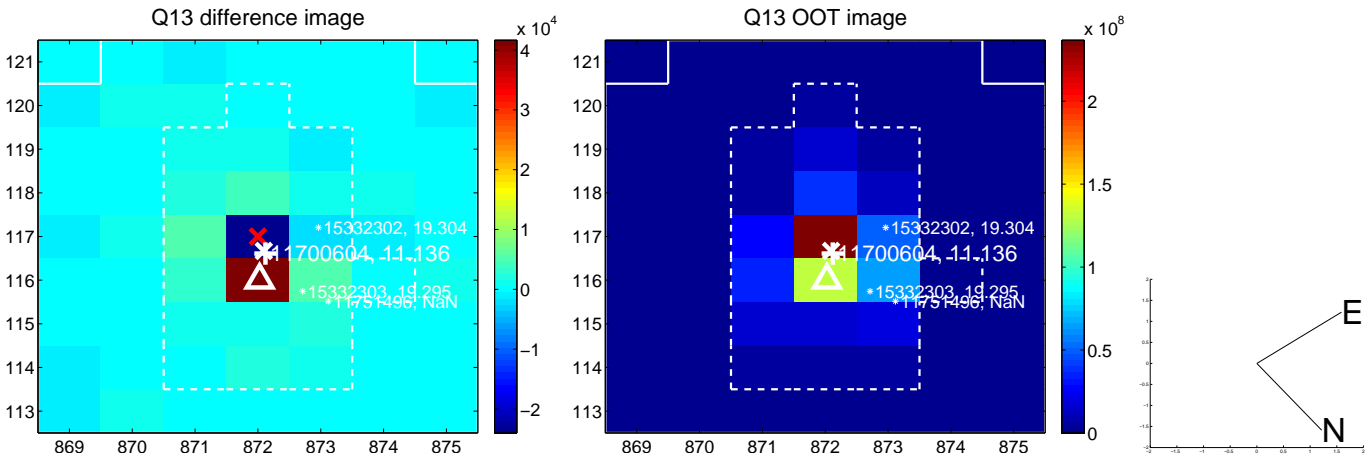
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



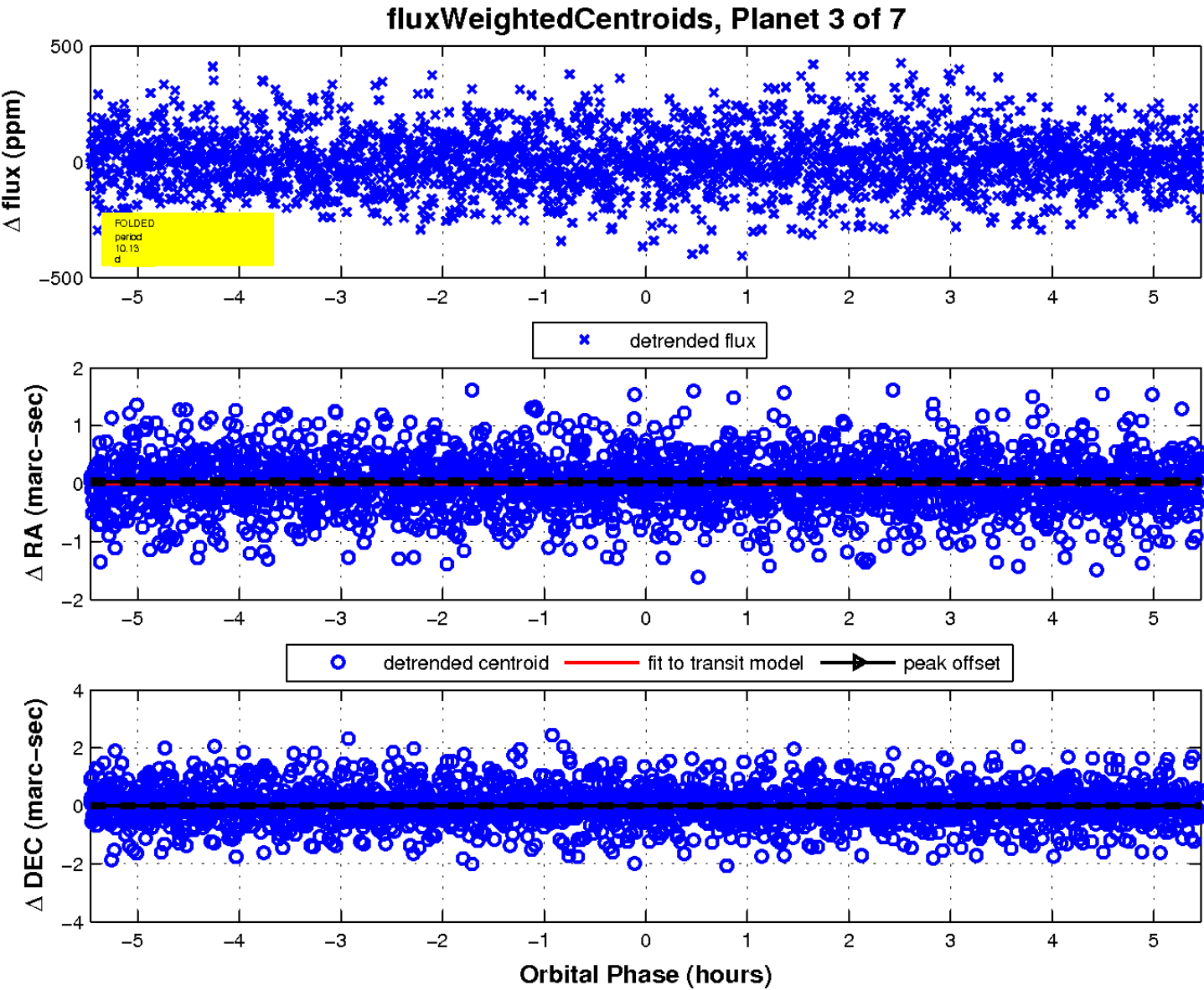
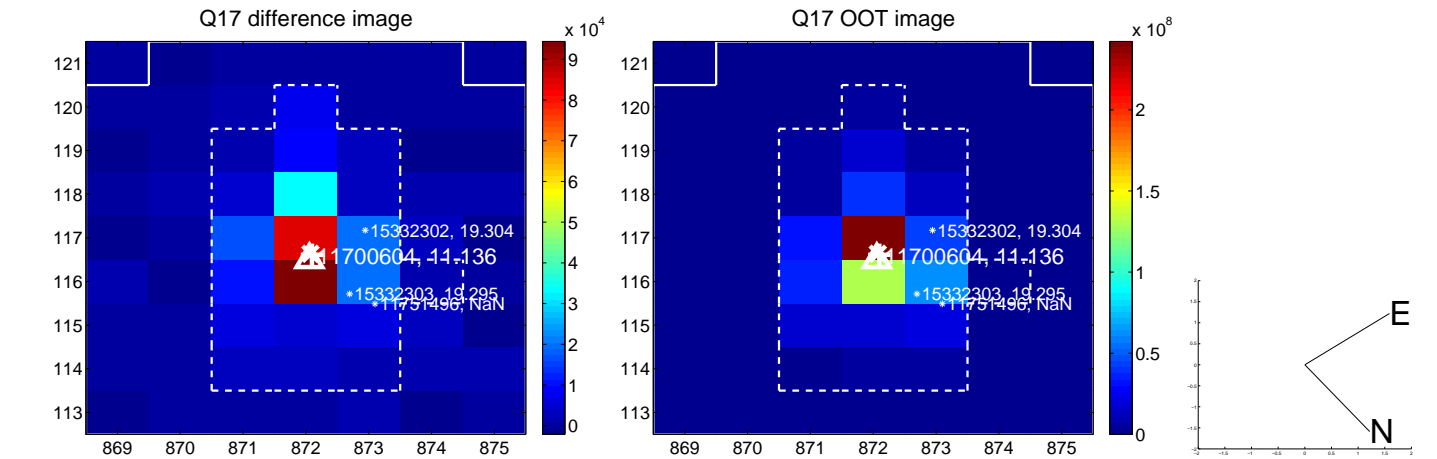
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

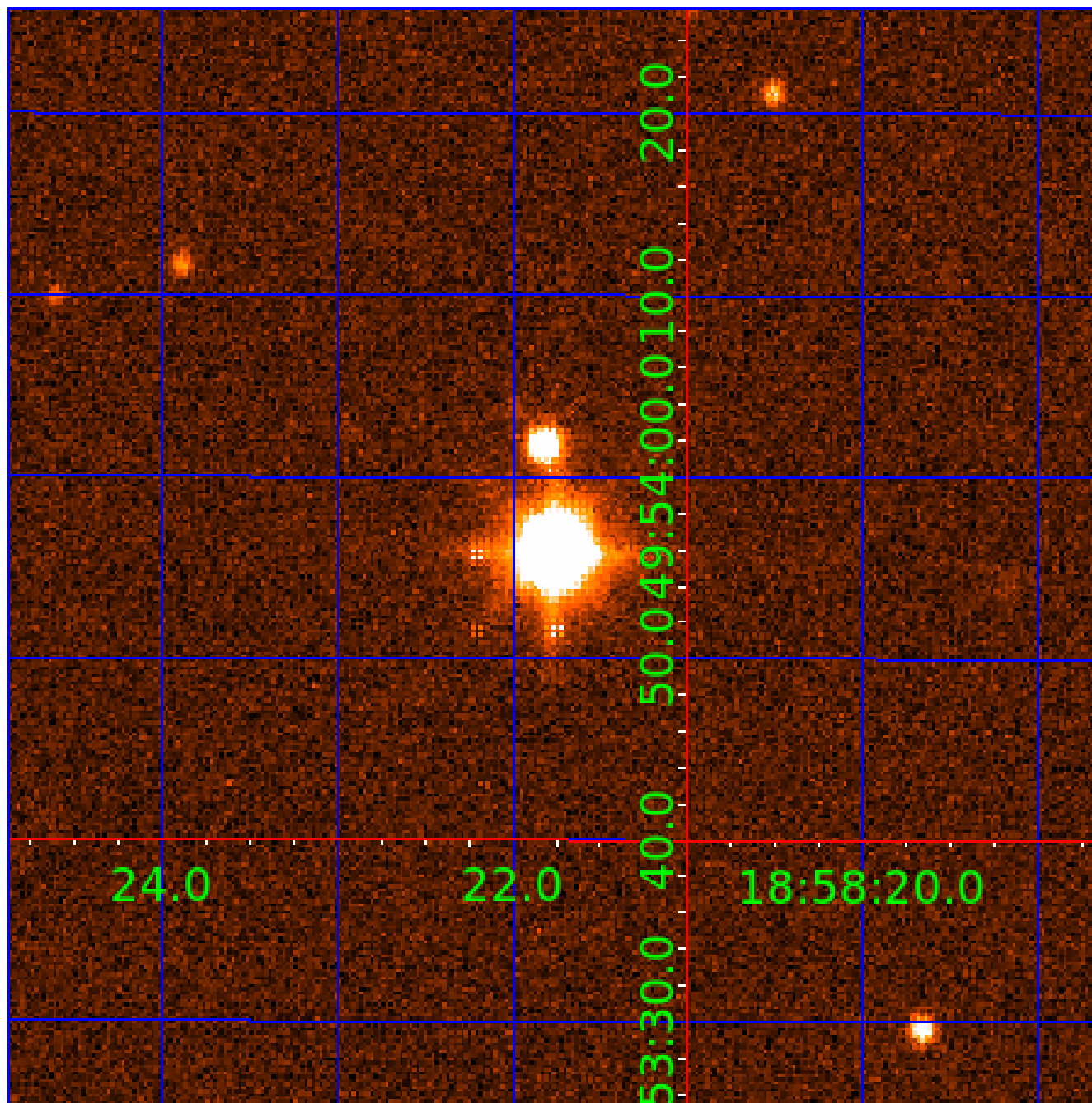


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011700604

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})
011700604-01	OBS	No	0.551885	131.607609	18.5	1.468	10.1	10.3	2.46	7859	1.07	87406.14
011700604-02	OBS	No	0.551858	131.805409	5.4	3.226	11.5	3.1	2.46	7859	0.58	87411.89
011700604-03	OBS	No	10.129257	135.719710	121.3	1.823	9.9	8.0	2.46	7859	3.21	1805.38
011700604-04	OBS	No	33.709087	143.636283	198.8	2.223	9.5	9.1	2.46	7859	3.97	363.37
011700604-06	OBS	No	7.747454	132.220738	107.2	1.703	9.0	8.8	2.46	7859	2.97	2581.04
011700604-07	OBS	No	26.498446	144.450780	101.9	3.000	8.4	-1.0	2.46	7859	2.51	500.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011700604-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

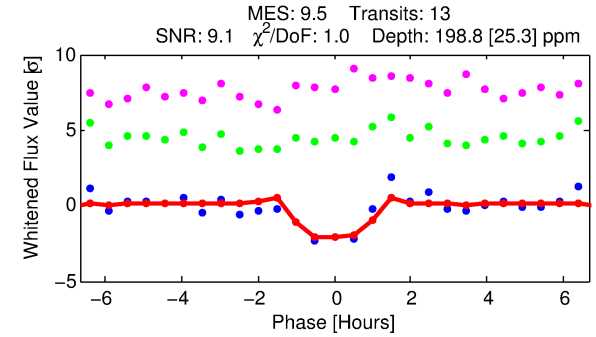
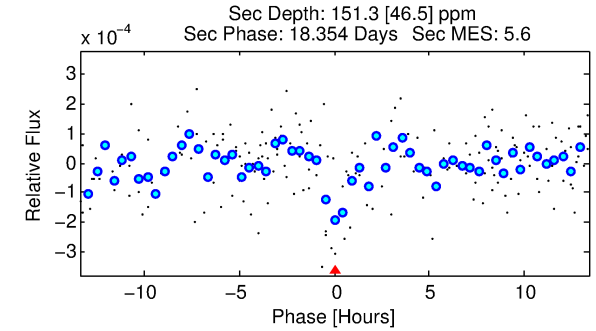
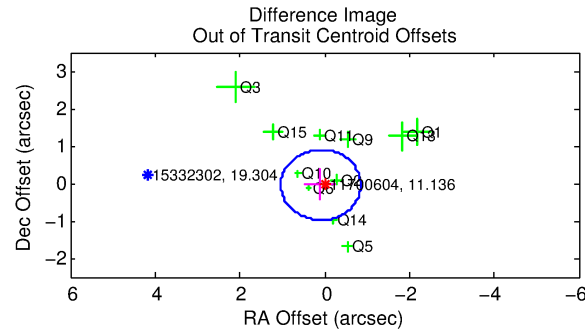
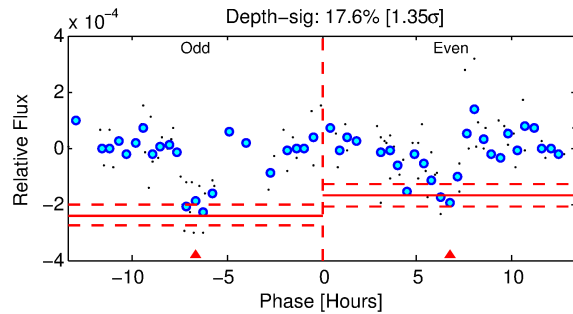
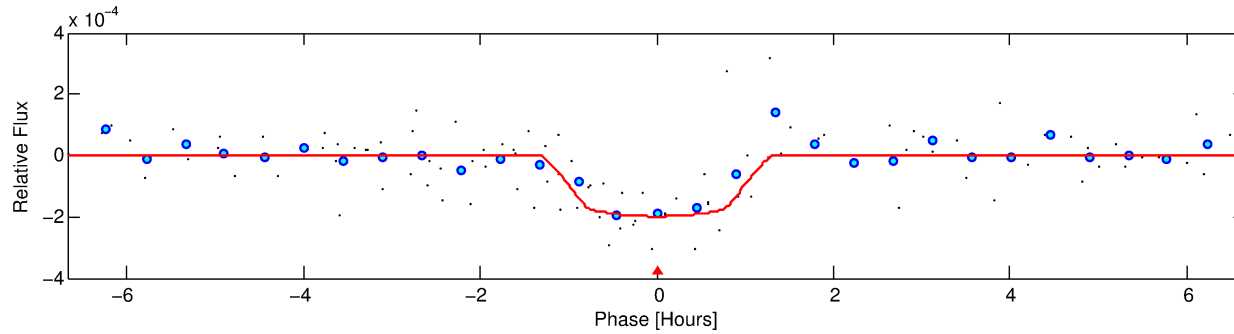
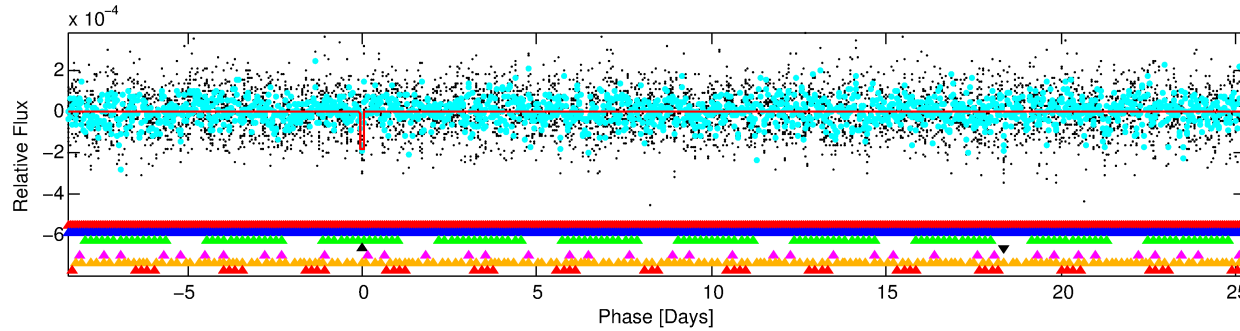
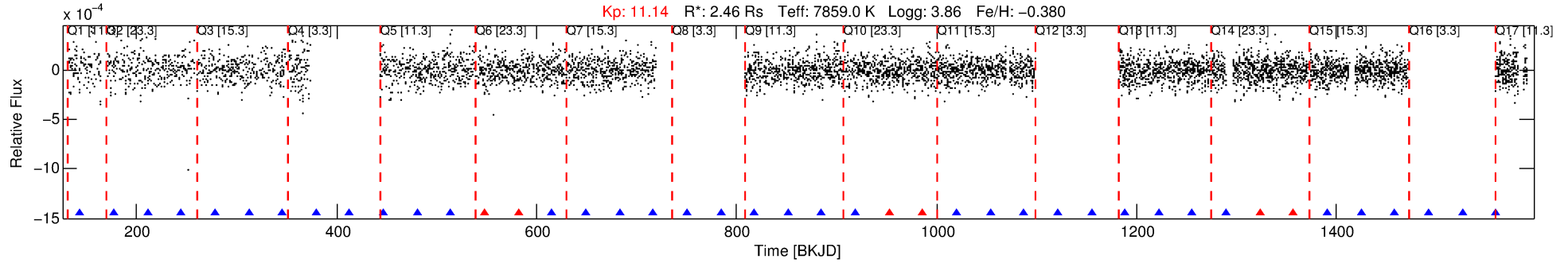
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-04

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 4 of 7 Period: 33.709 d



DV Fit Results:

Period = 33.70909 [0.00027] d
Epoch = 143.6363 [0.0075] BKJD
Rp/R* = 0.0148 [0.0087]
a/R* = 60.62 [208.68]
b = 0.87 [0.98]
Seff = 363.37 [230.35]
Teq = 1113 [176] K
Rp = 3.97 [2.80] Re
a = 0.2389 [0.0907] AU
Ag = 301.64 [409.79] [0.73 σ]
Teffp = 7173 [2197] K [2.75 σ]

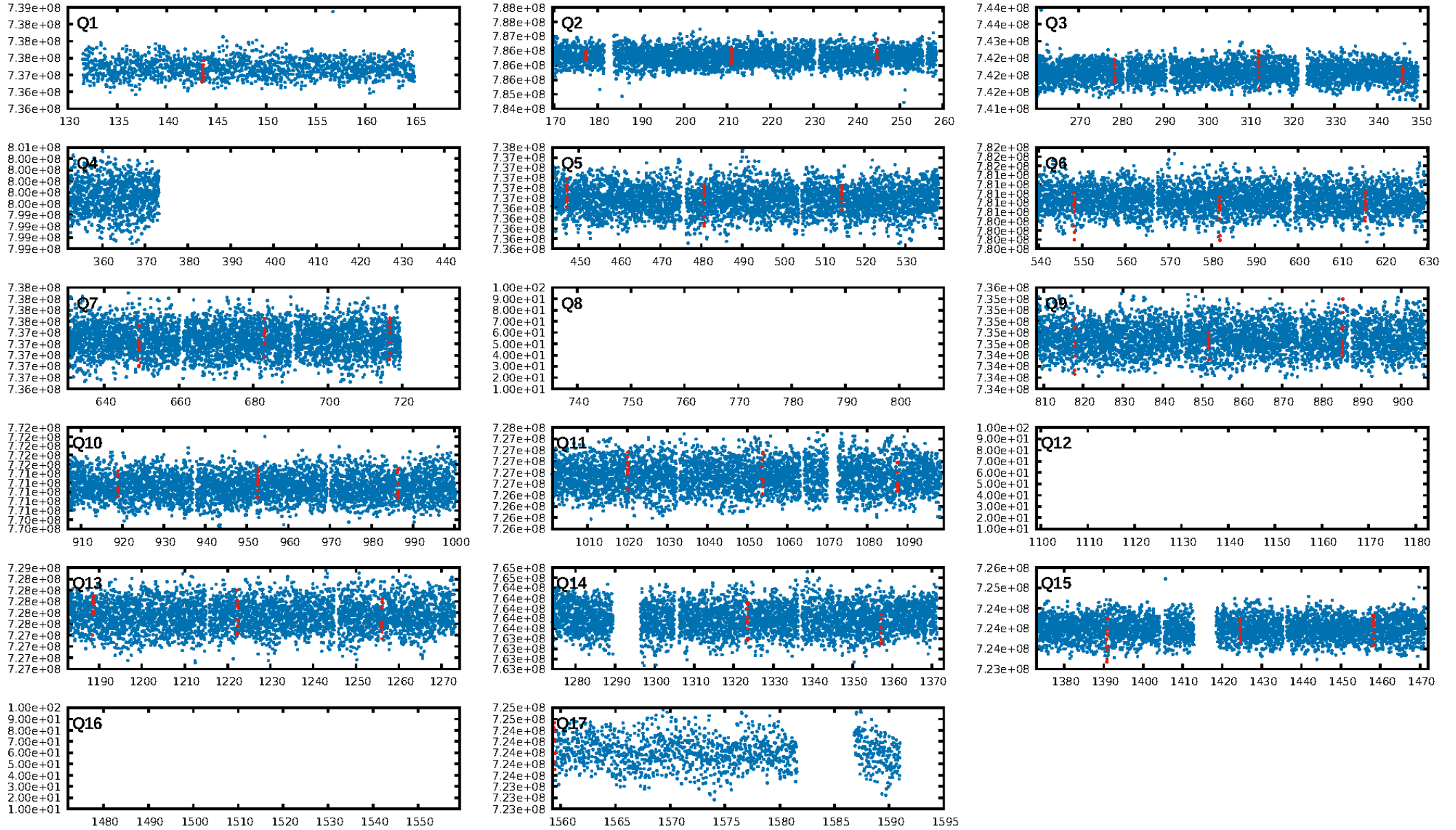
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.35 σ]
LongPeriod-sig: 100.0% [8.36 σ]
ModelChiSquare2-sig: 26.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.67e-10
RollingBand-fgt: 0.50 [6/12]
GhostDiagnostic-chr: 2.111
Centroid-sig: 93.9%
Centroid-so: 0.152 arcsec [0.35 σ]
OotOffset-rm: 0.102 arcsec [0.32 σ]
KicOffset-rm: 0.136 arcsec [0.32 σ]
OotOffset-st: 4/3/0/4 [11]
KicOffset-st: 4/3/0/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.00 [0/12]

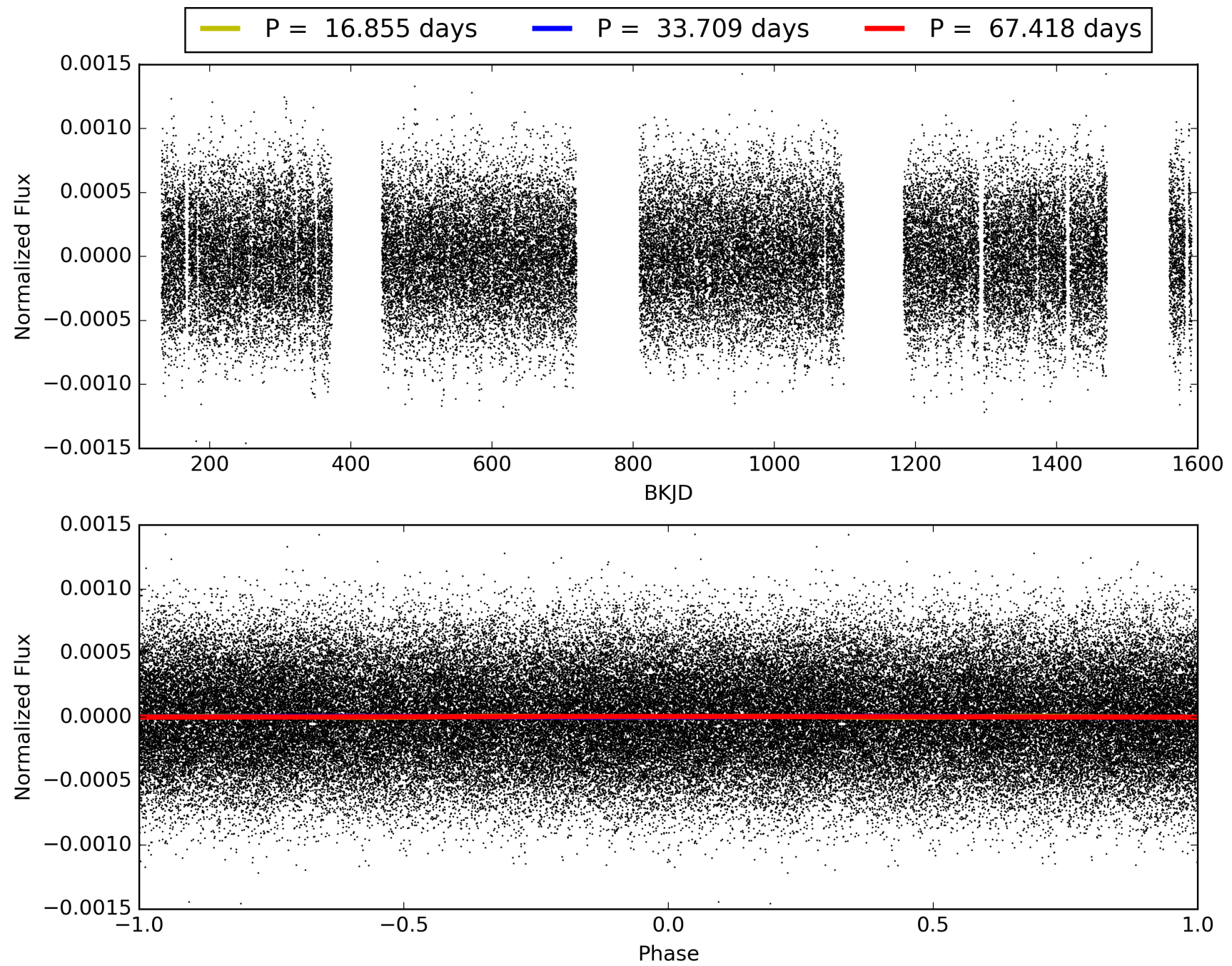
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:04 Z

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

TCE 011700604-04, PDC Light Curves

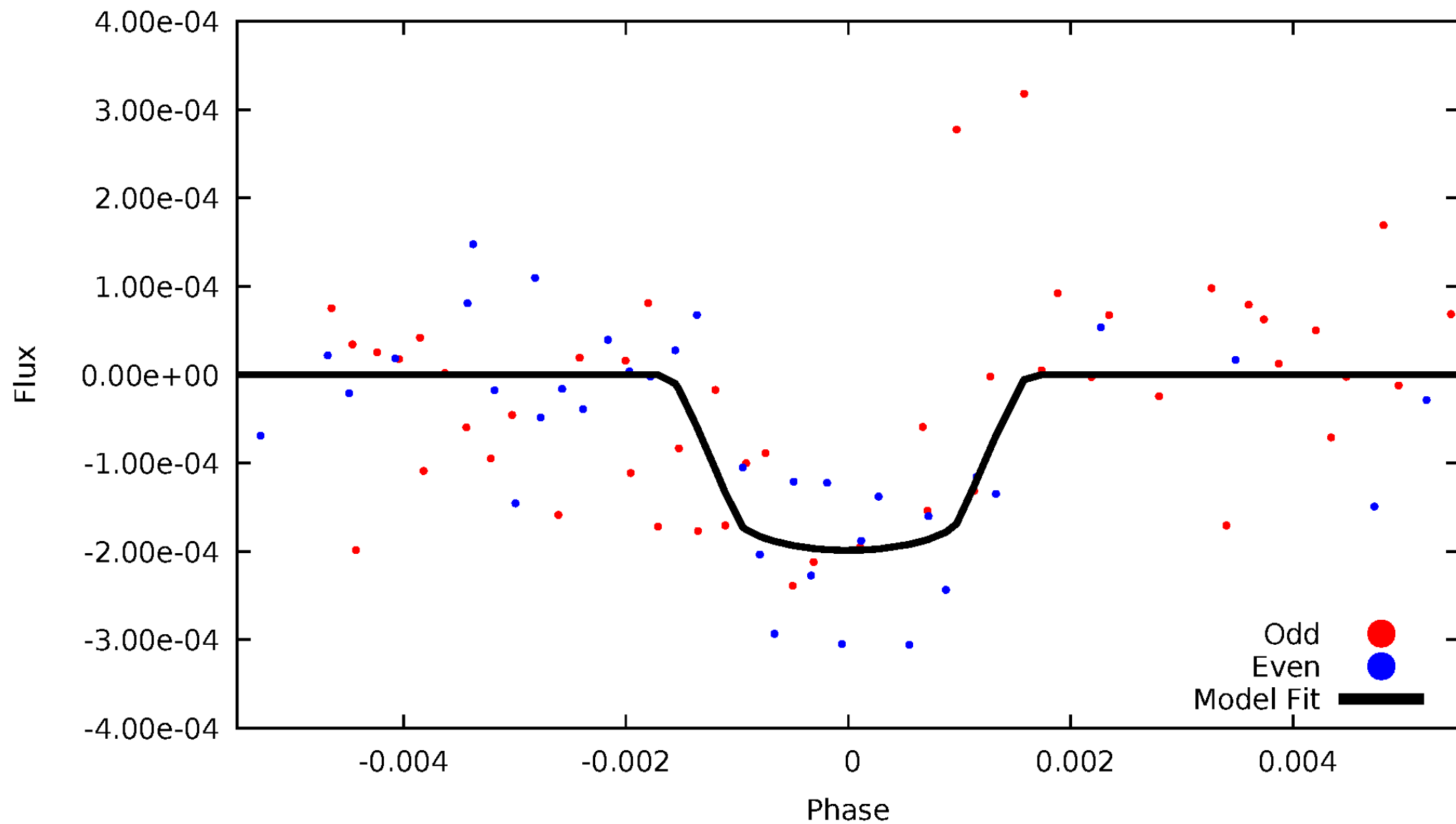


TCE 011700604-04



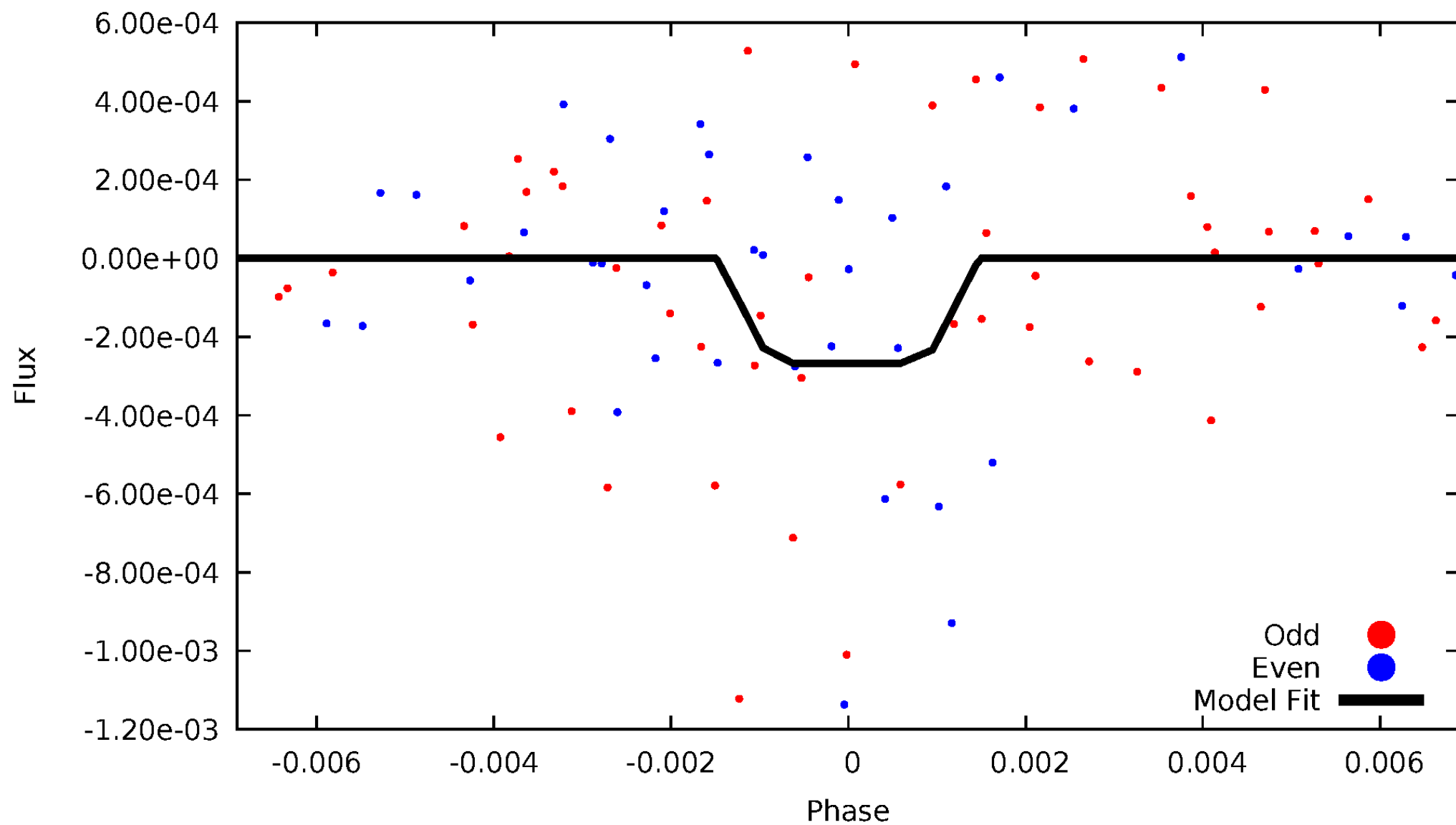
DV Odd/Even

TCE 011700604-04



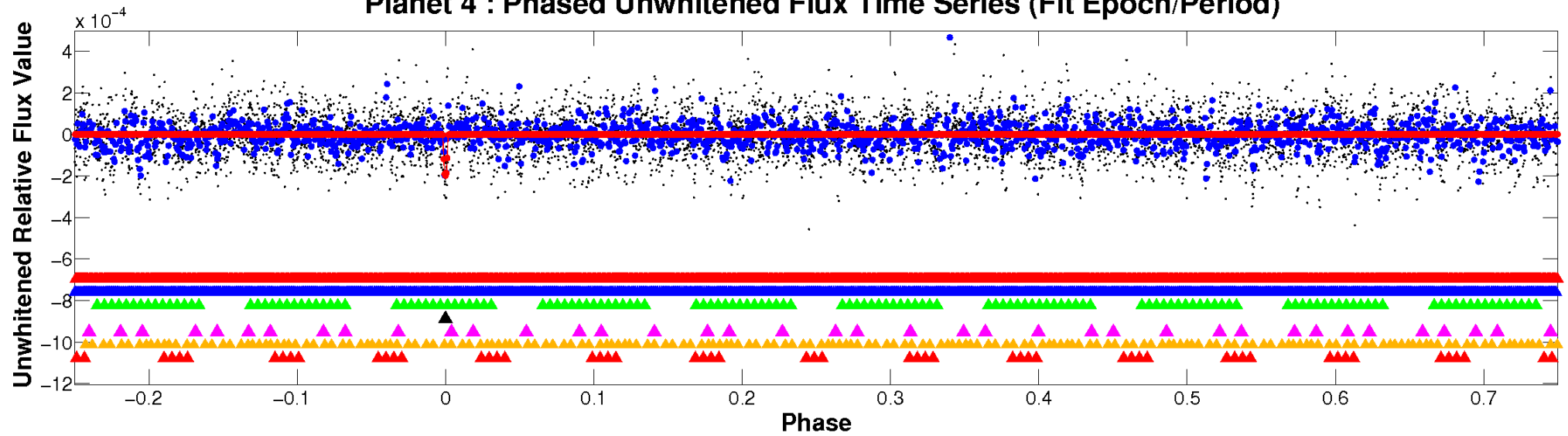
ALT Odd/Even

TCE 011700604-04

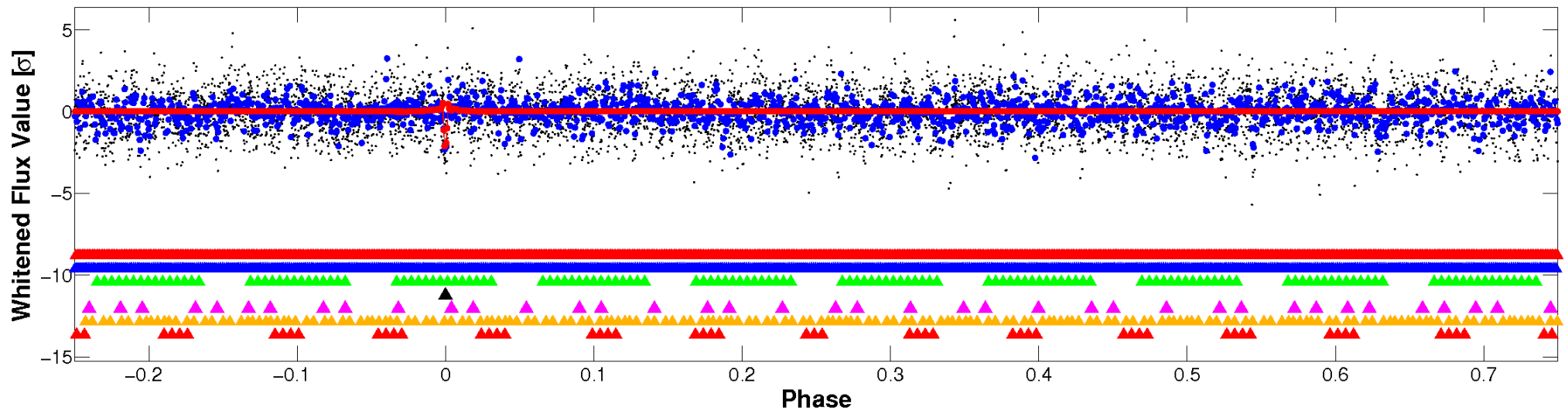


Non-Whitened Vs. Whitened Light Curve

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

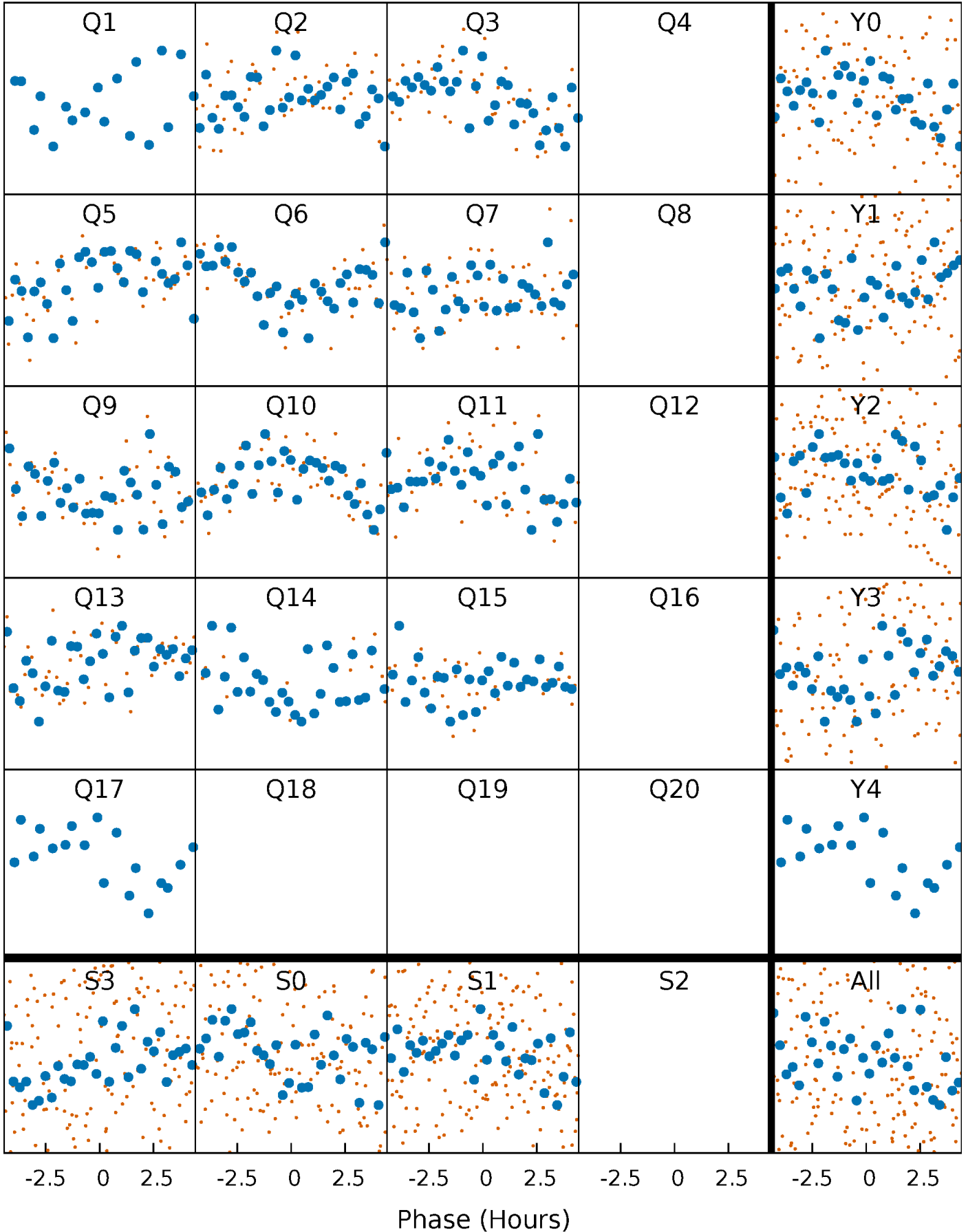


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



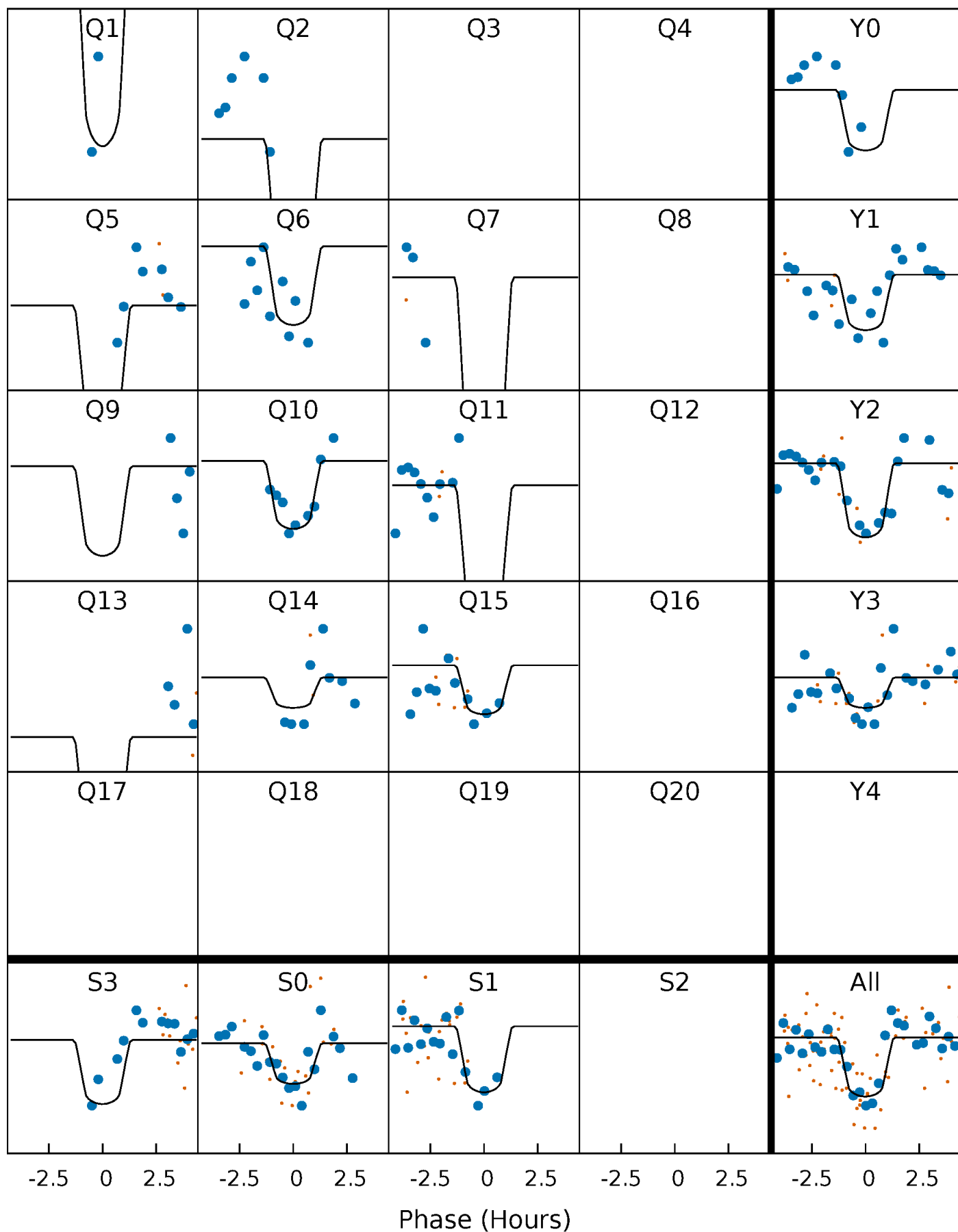
PDC Quarter-Phased Transit Curves

TCE 011700604-04 P= 33.709087 Days $T_0=143.636283$ (BKJD)



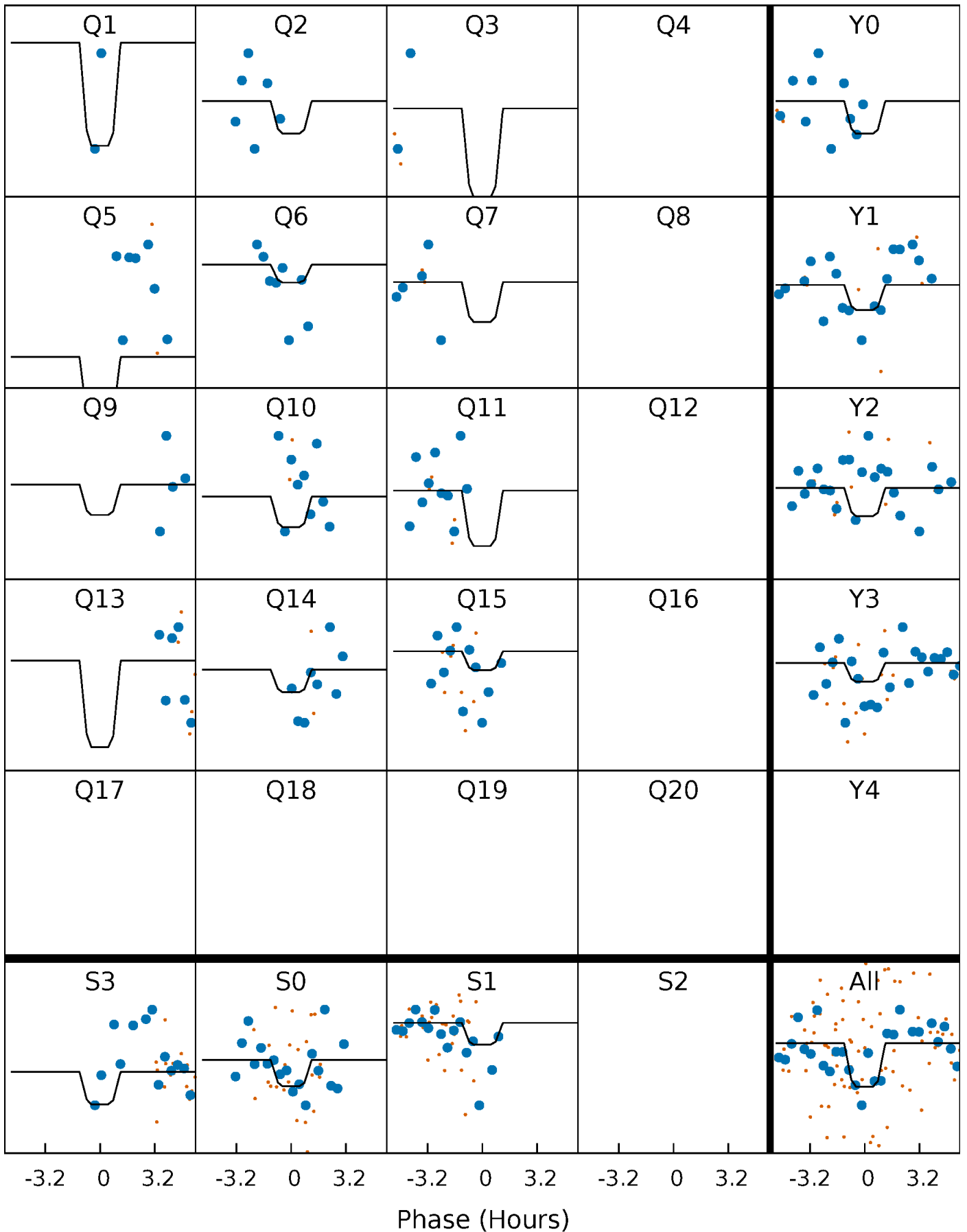
DV Quarter-Phased Transit Curves

TCE 011700604-04 P= 33.709087 Days $T_0=143.636283$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

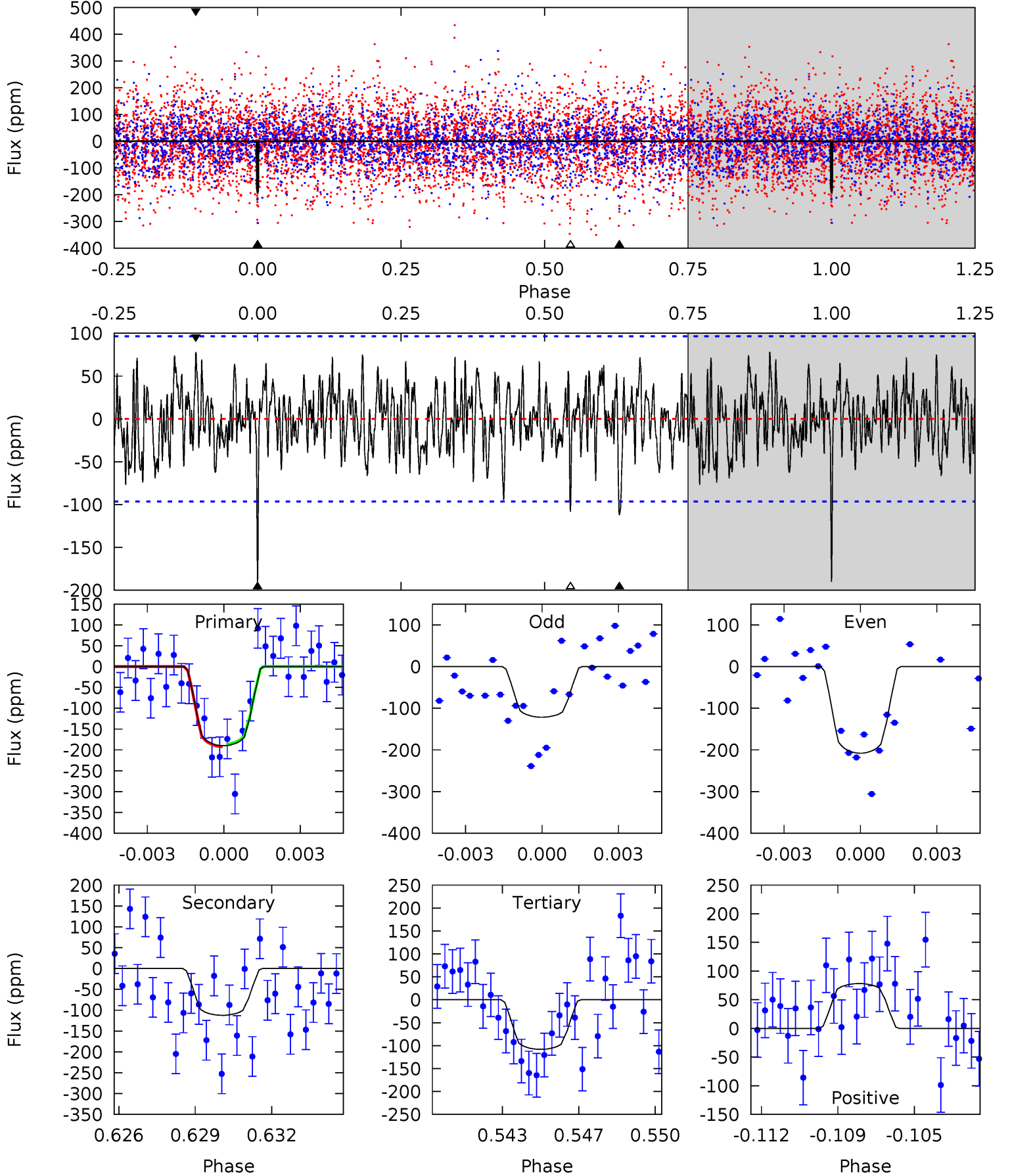
TCE 011700604-04 $P = 33.708827$ Days $T_0 = 143.629673$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-04, P = 33.709087 Days, E = 109.927196 Days

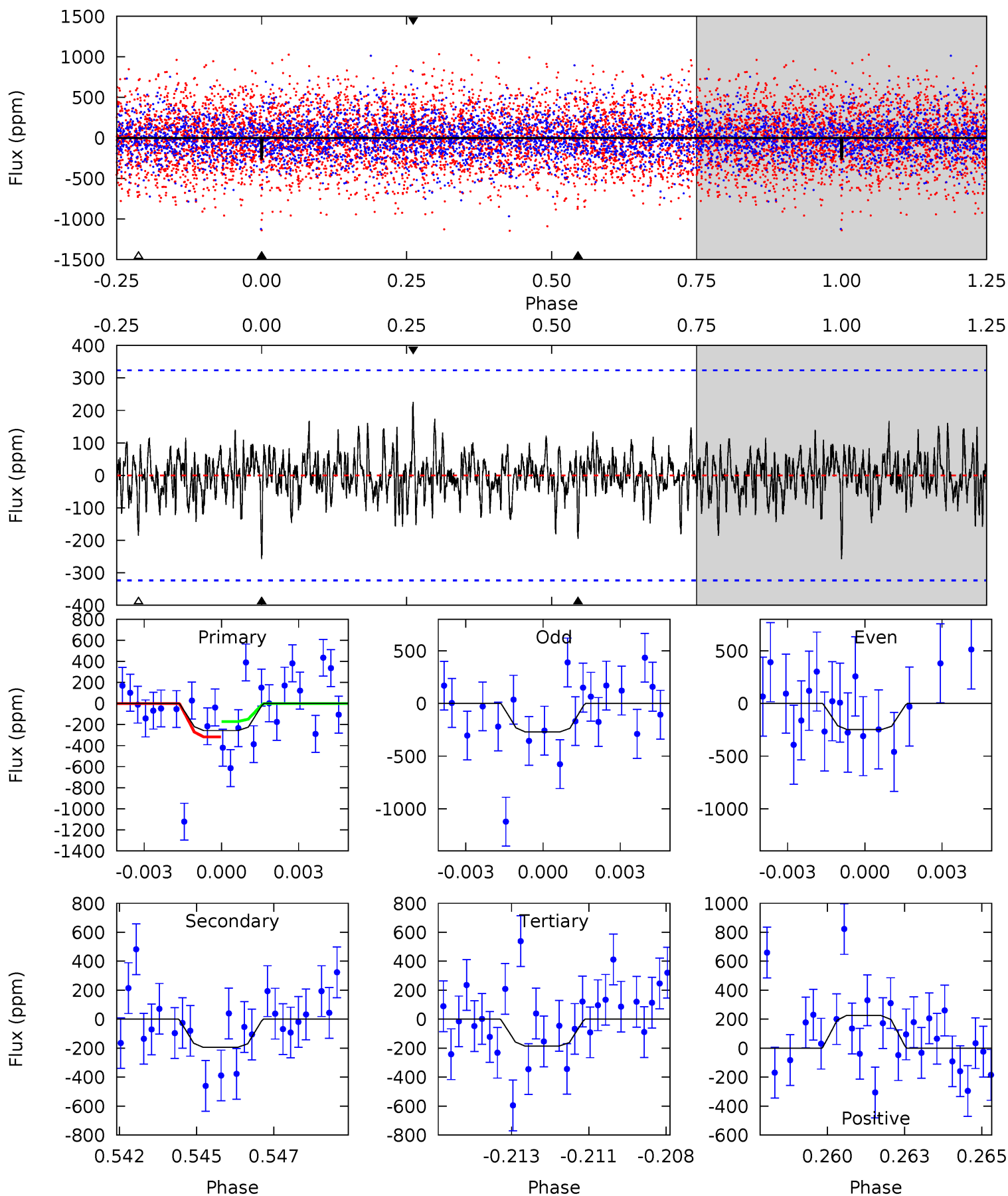
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.09	5.87	4.25	5.24	2.94	1.64	4.43	6.06	0.22	1.85	2.39	0.71	0.29	0.16



Alt Model-Shift Uniqueness Test

011700604-04, P = 33.708827 Days, E = 109.920846 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.20	3.17	3.02	3.68	5.27	3.00	0.94	1.18	0.52	0.16	-0.51	0.19	1.54	0.47	1.20



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-112 ± 18	$3.77^{+2.42}_{-2.00}$	1509^{+108}_{-160}	6324^{+3669}_{-1207}	239^{+859}_{-146}
Alt.	-195 ± 61	$4.06^{+2.42}_{-1.89}$	1512^{+106}_{-148}	6984^{+3485}_{-1406}	356^{+912}_{-220}

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 $A_{obs} \gg 1.0$

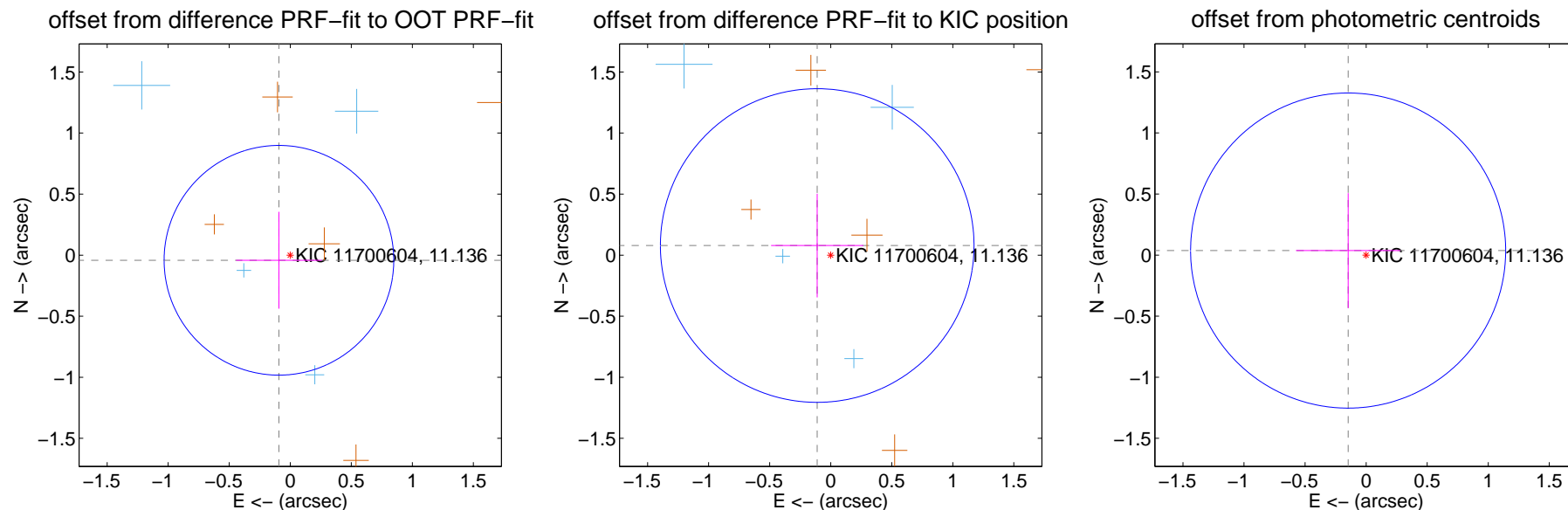
DV Centroid Data

Supplemental centroid analysis for 011700604-04. **Kepler magnitude: 11.14.** Transit SNR 9.07

There are 5 quarters with good PRF difference image offsets

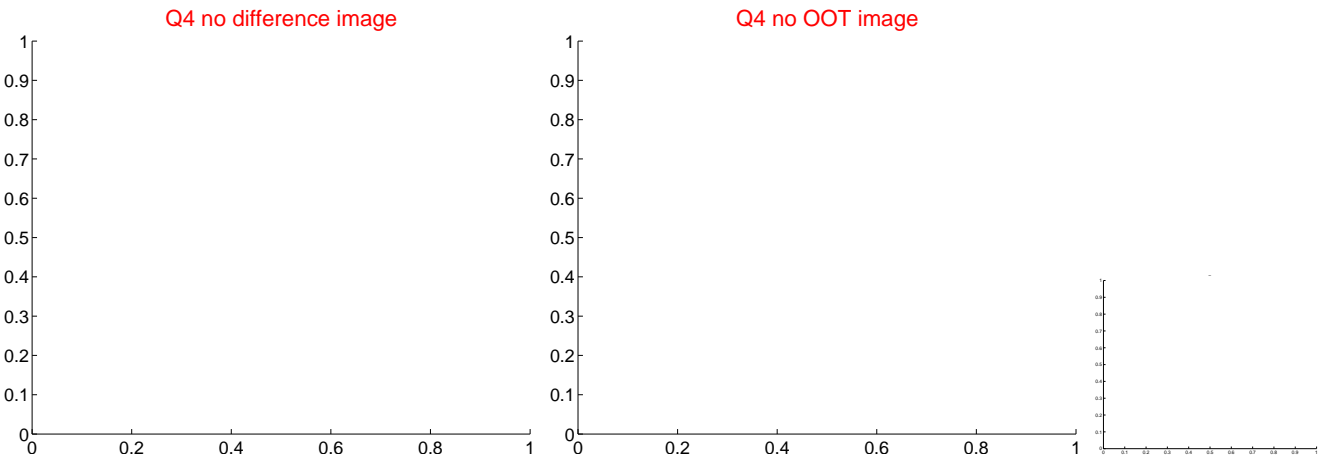
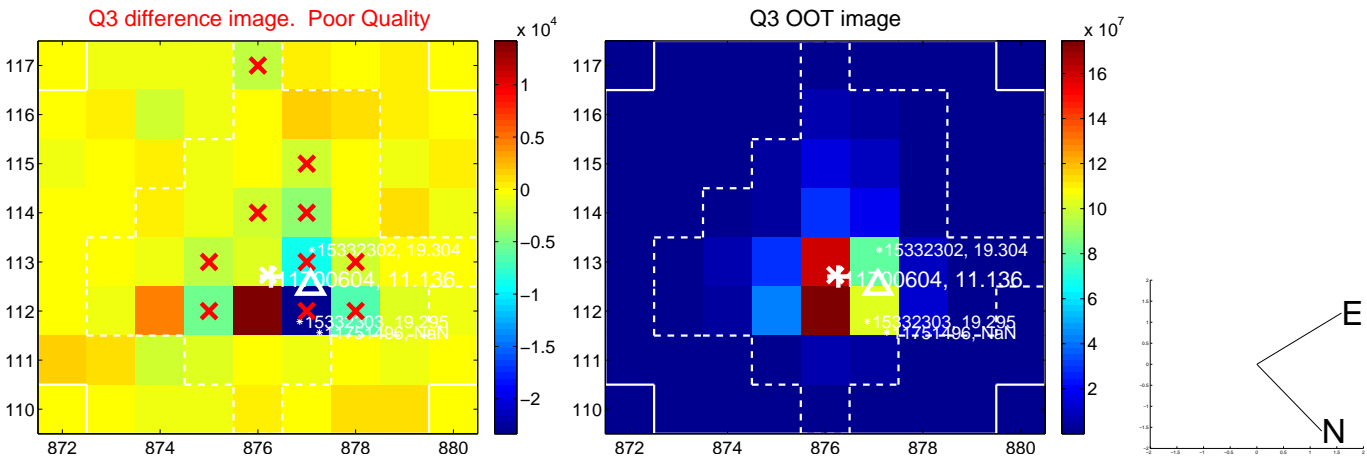
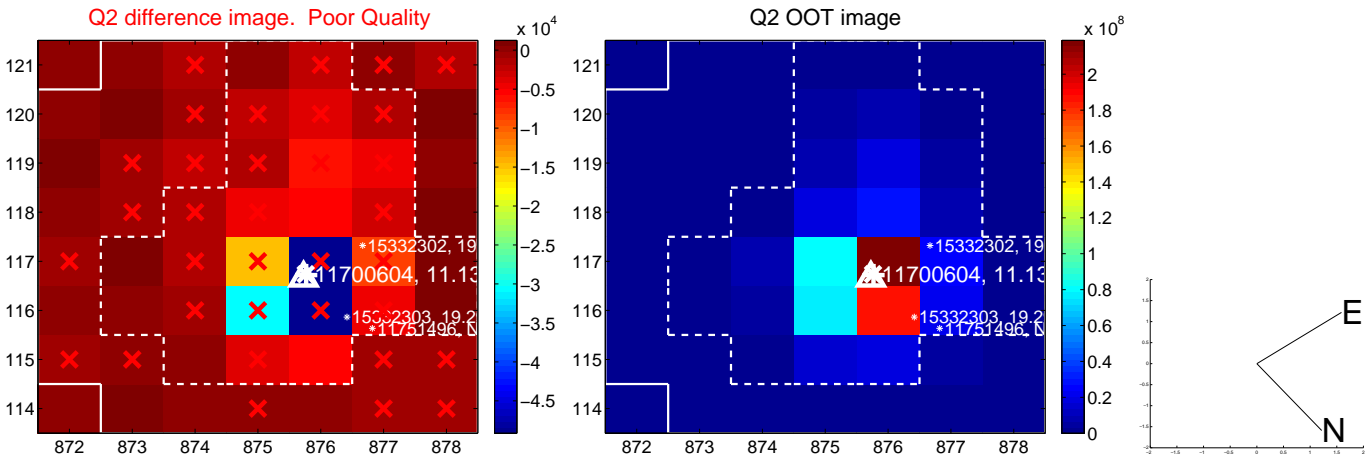
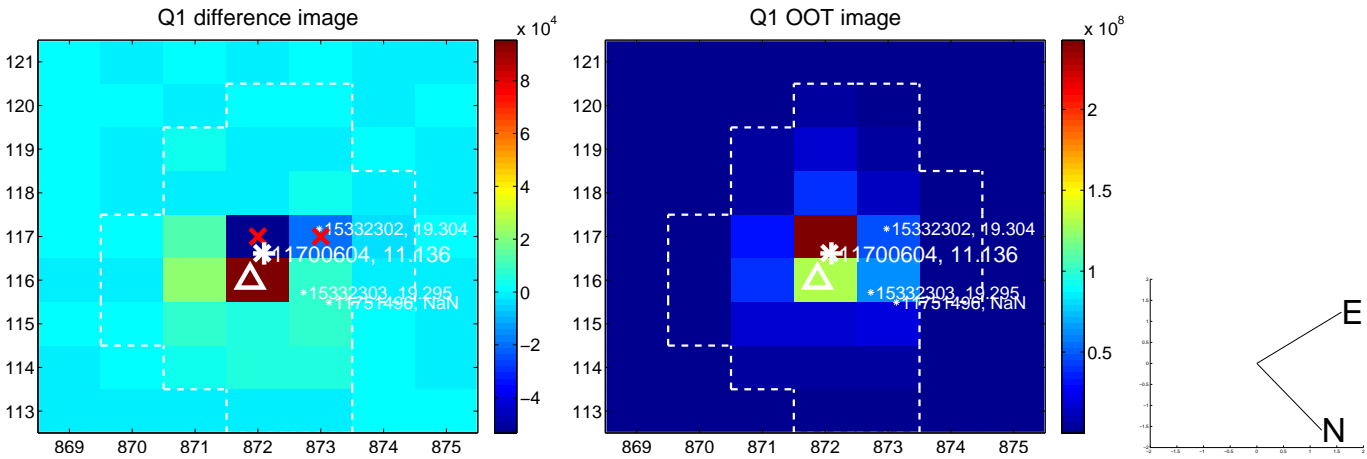
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.102 ± 0.314	0.32	0.093 ± 0.352	-0.042 ± 0.397
PRF-fit source offset from KIC position	0.136 ± 0.428	0.32	0.111 ± 0.378	0.079 ± 0.425
photometric centroid source offset	0.15 ± 0.43	0.35	0.15 ± 0.43	0.04 ± 0.47

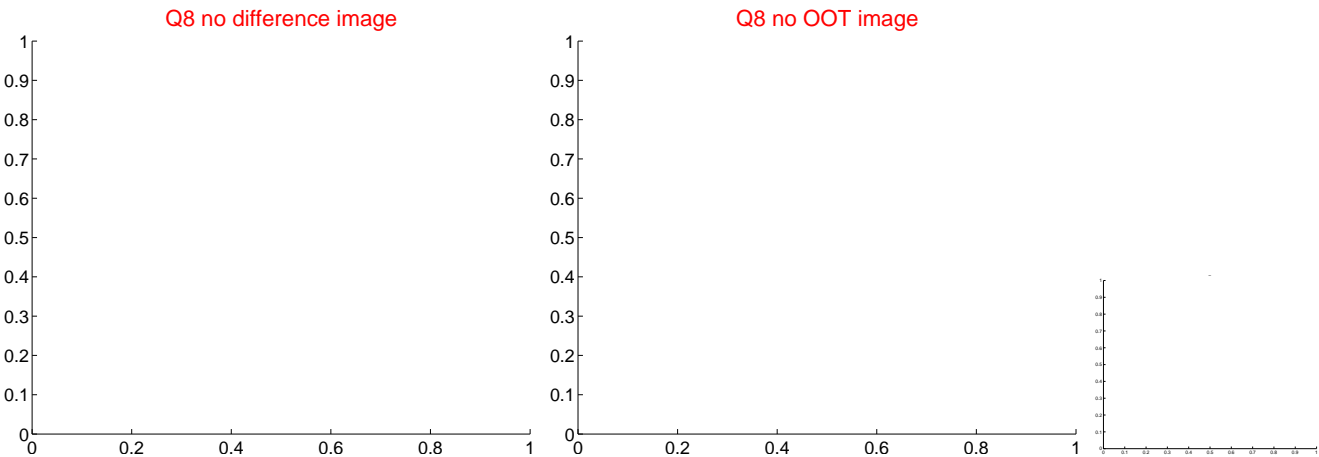
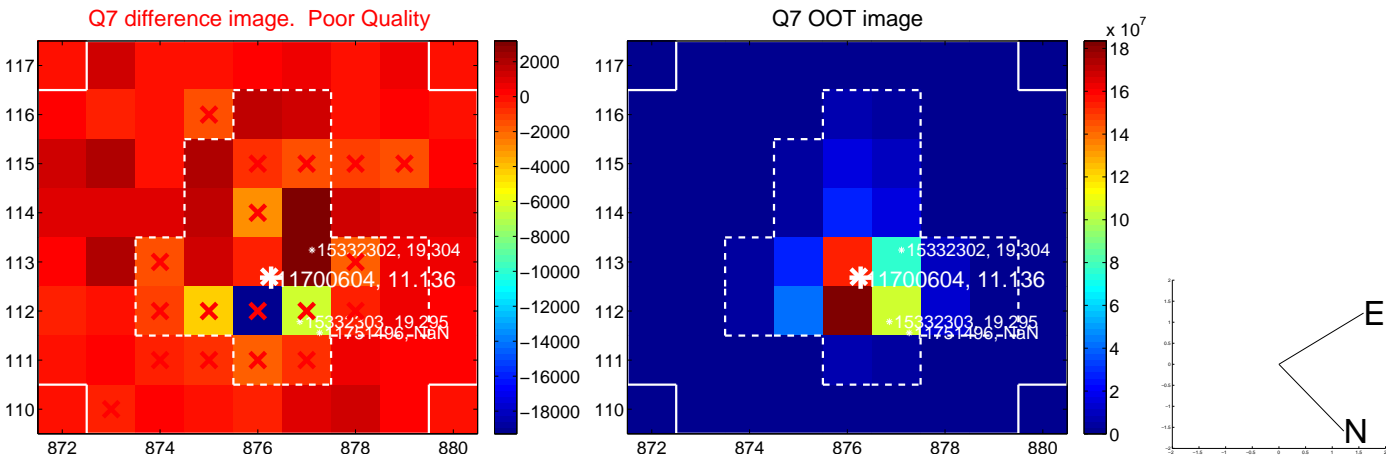
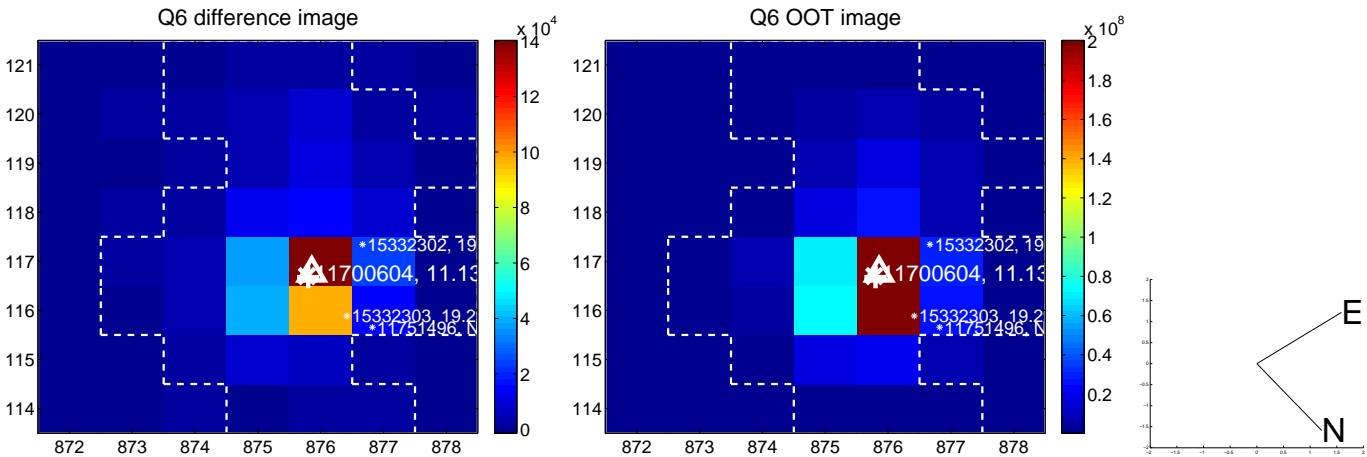
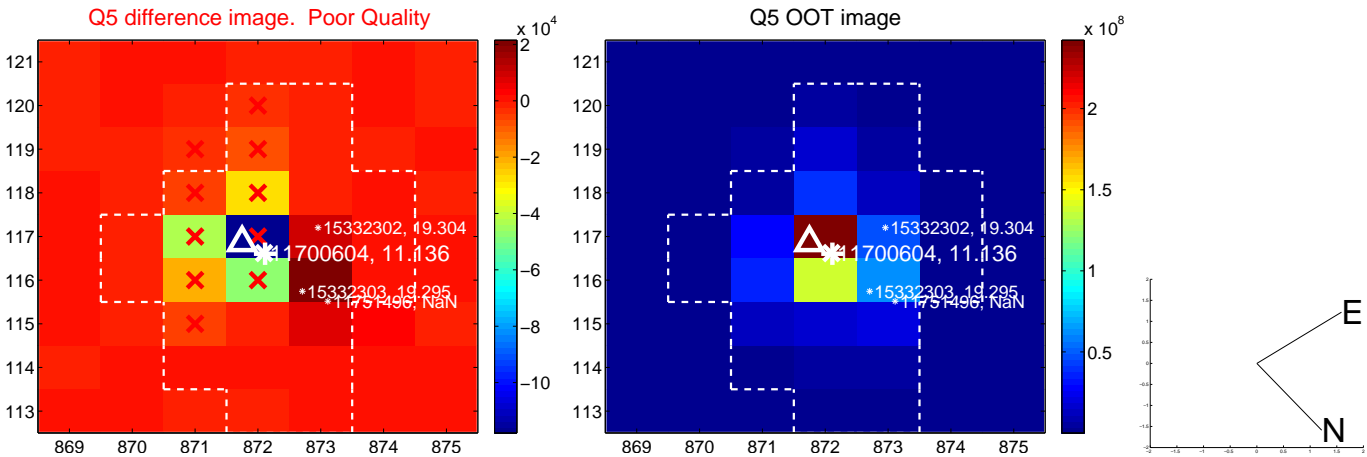


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

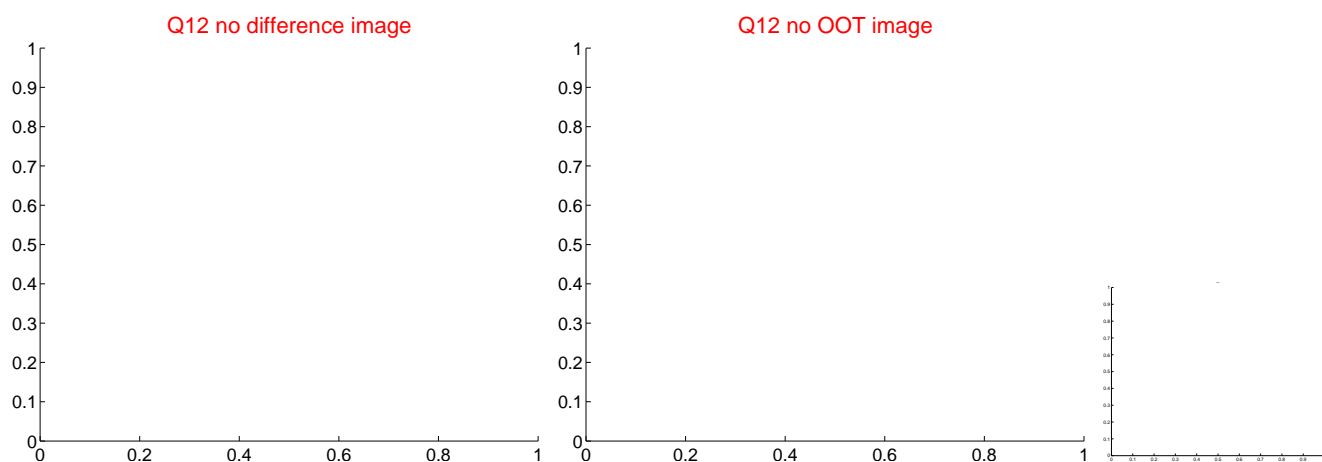
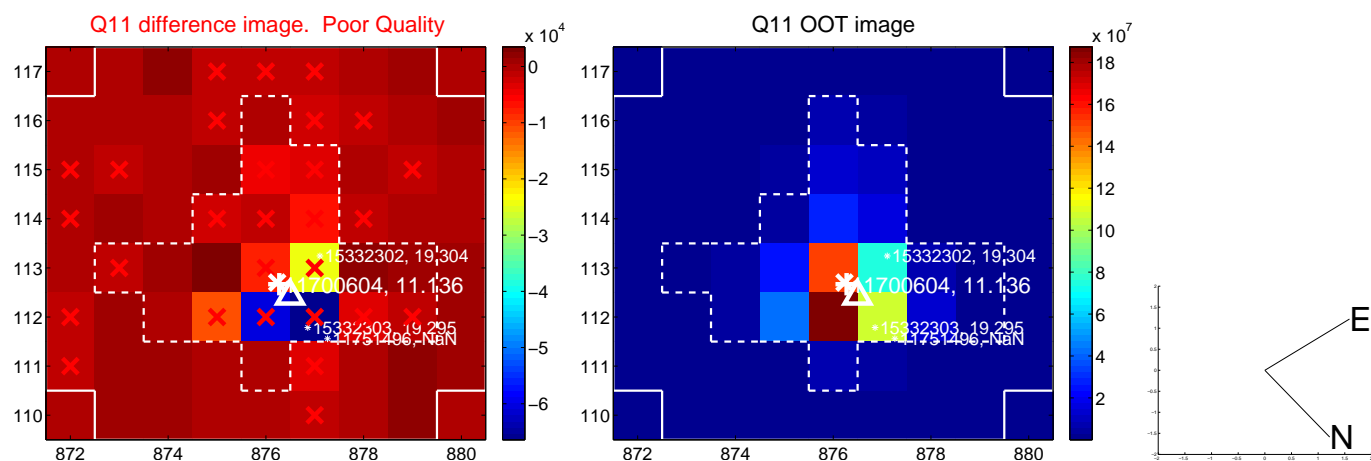
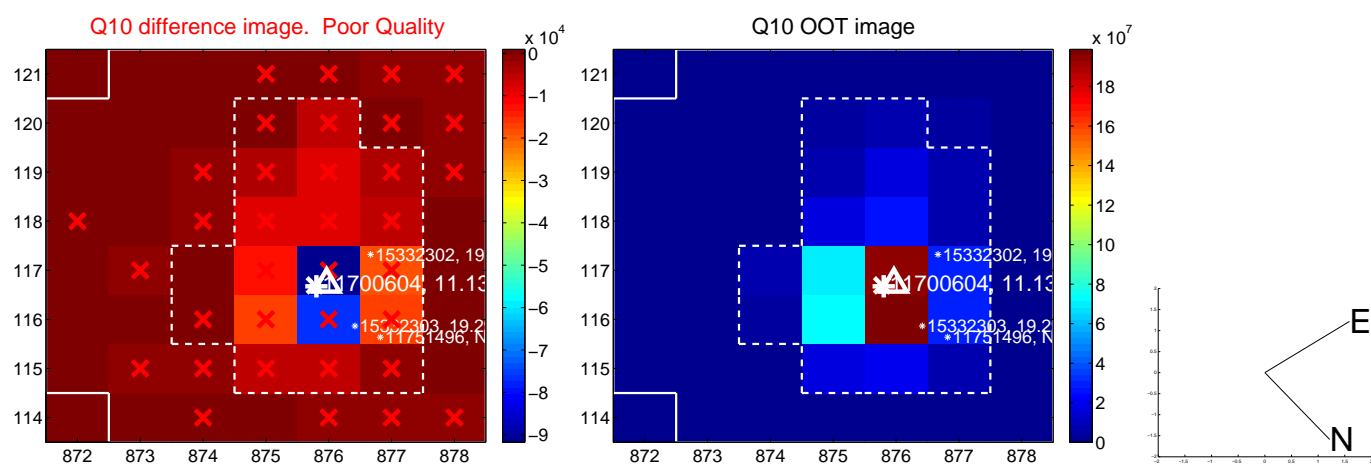
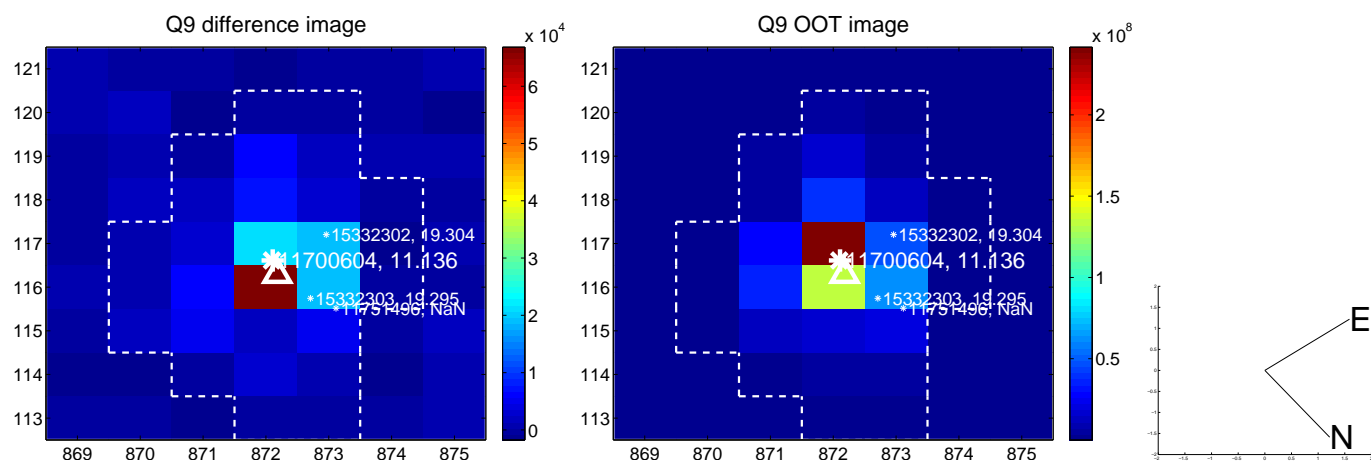
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



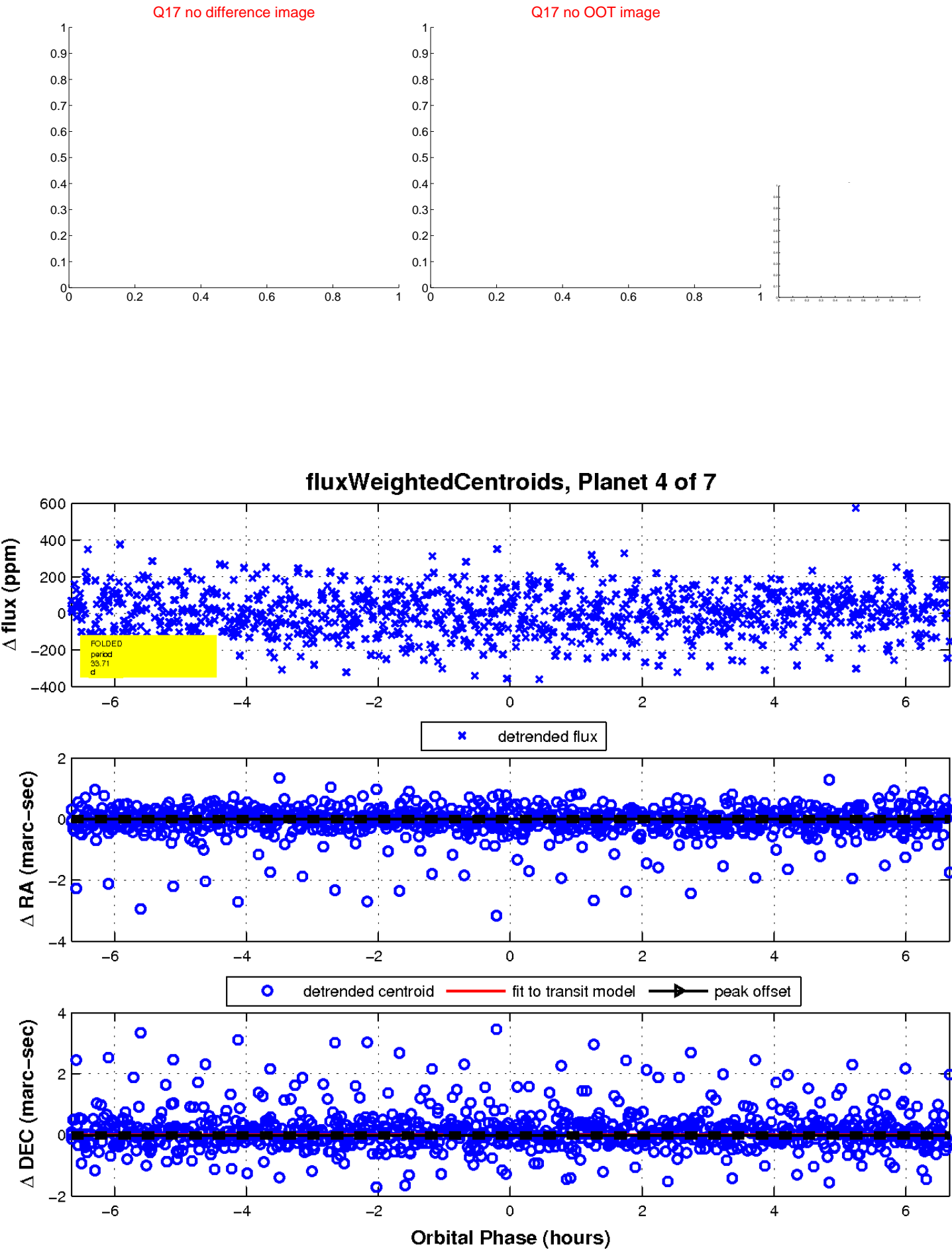
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

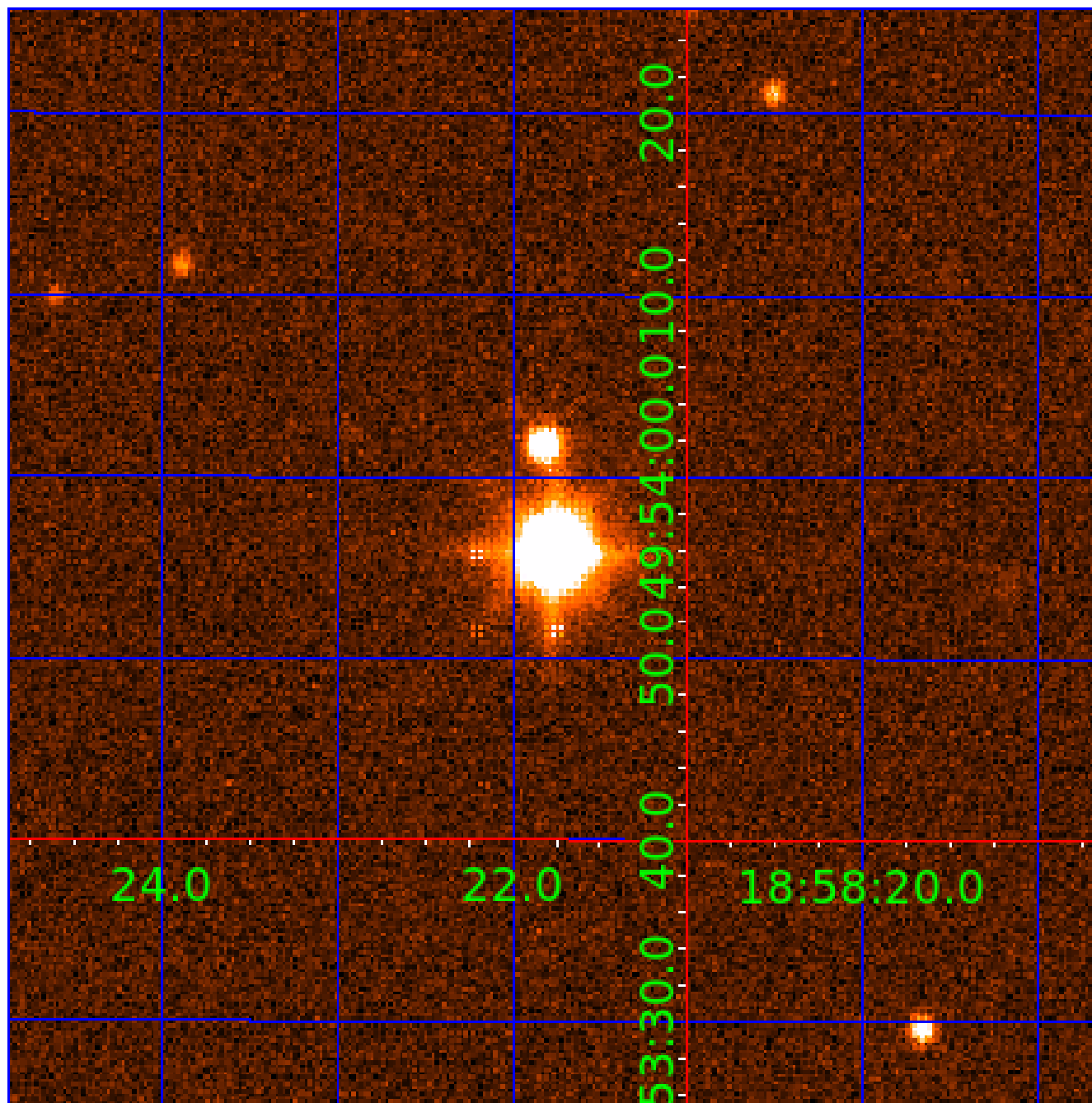


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011700604

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})
011700604-01	OBS	No	0.551885	131.607609	18.5	1.468	10.1	10.3	2.46	7859	1.07	87406.14
011700604-02	OBS	No	0.551858	131.805409	5.4	3.226	11.5	3.1	2.46	7859	0.58	87411.89
011700604-03	OBS	No	10.129257	135.719710	121.3	1.823	9.9	8.0	2.46	7859	3.21	1805.38
011700604-04	OBS	No	33.709087	143.636283	198.8	2.223	9.5	9.1	2.46	7859	3.97	363.37
011700604-06	OBS	No	7.747454	132.220738	107.2	1.703	9.0	8.8	2.46	7859	2.97	2581.04
011700604-07	OBS	No	26.498446	144.450780	101.9	3.000	8.4	-1.0	2.46	7859	2.51	500.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011700604-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

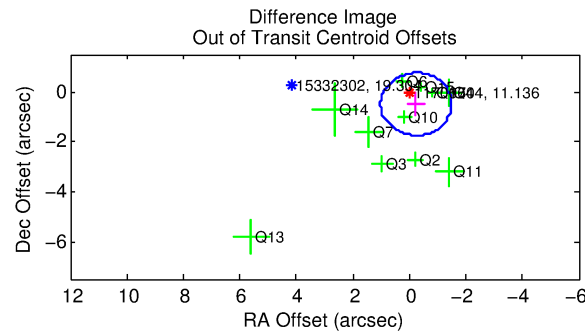
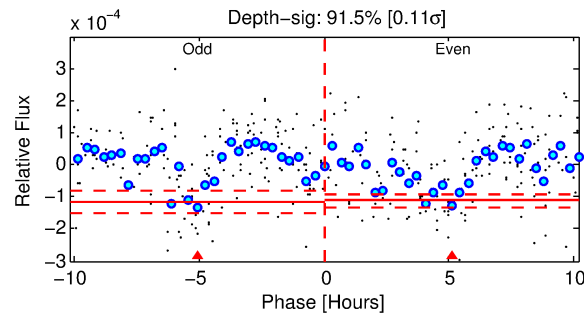
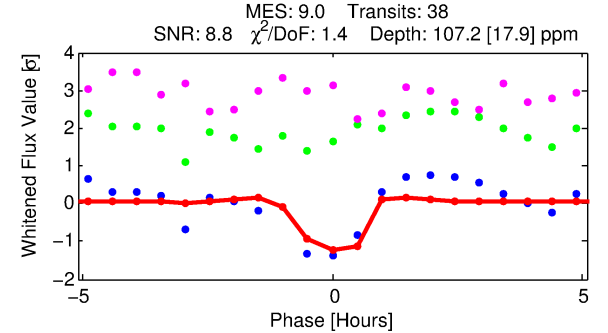
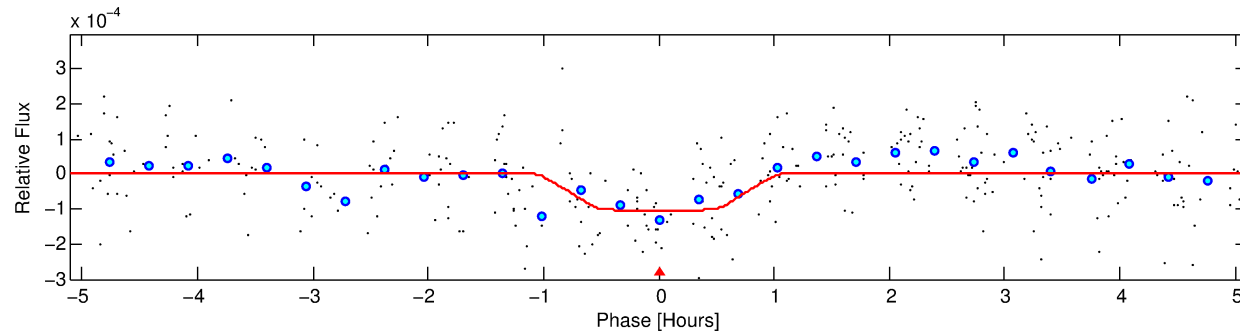
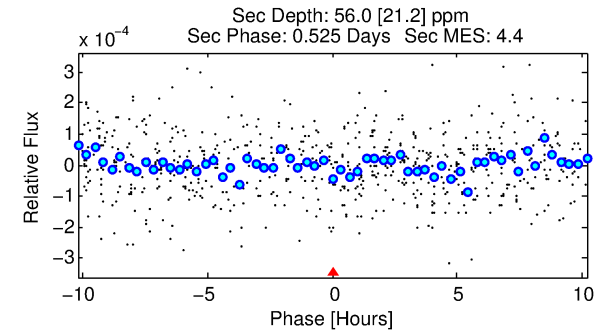
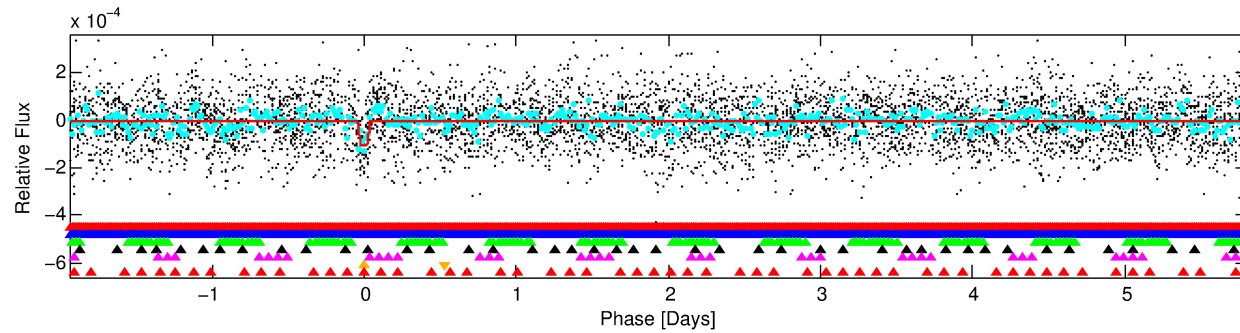
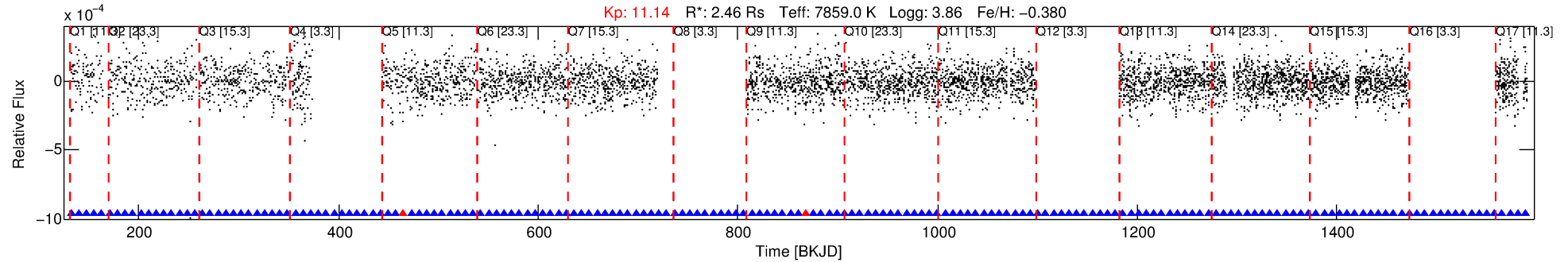
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-06

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 6 of 7 Period: 7.747 d



DV Fit Results:

Period = 7.74745 [0.00005] d
Epoch = 132.2207 [0.0061] BKJD
Rp/R* = 0.0111 [0.0087]
a/R* = 16.14 [75.53]
b = 0.90 [1.02]
Seff = 2581.04 [1636.23]
Teq = 1818 [288] K
Rp = 2.97 [2.60] Re
a = 0.0896 [0.0340] AU
Ag = 27.97 [48.15] [0.56σ]
Teffp = 6462 [2615] K [1.77σ]

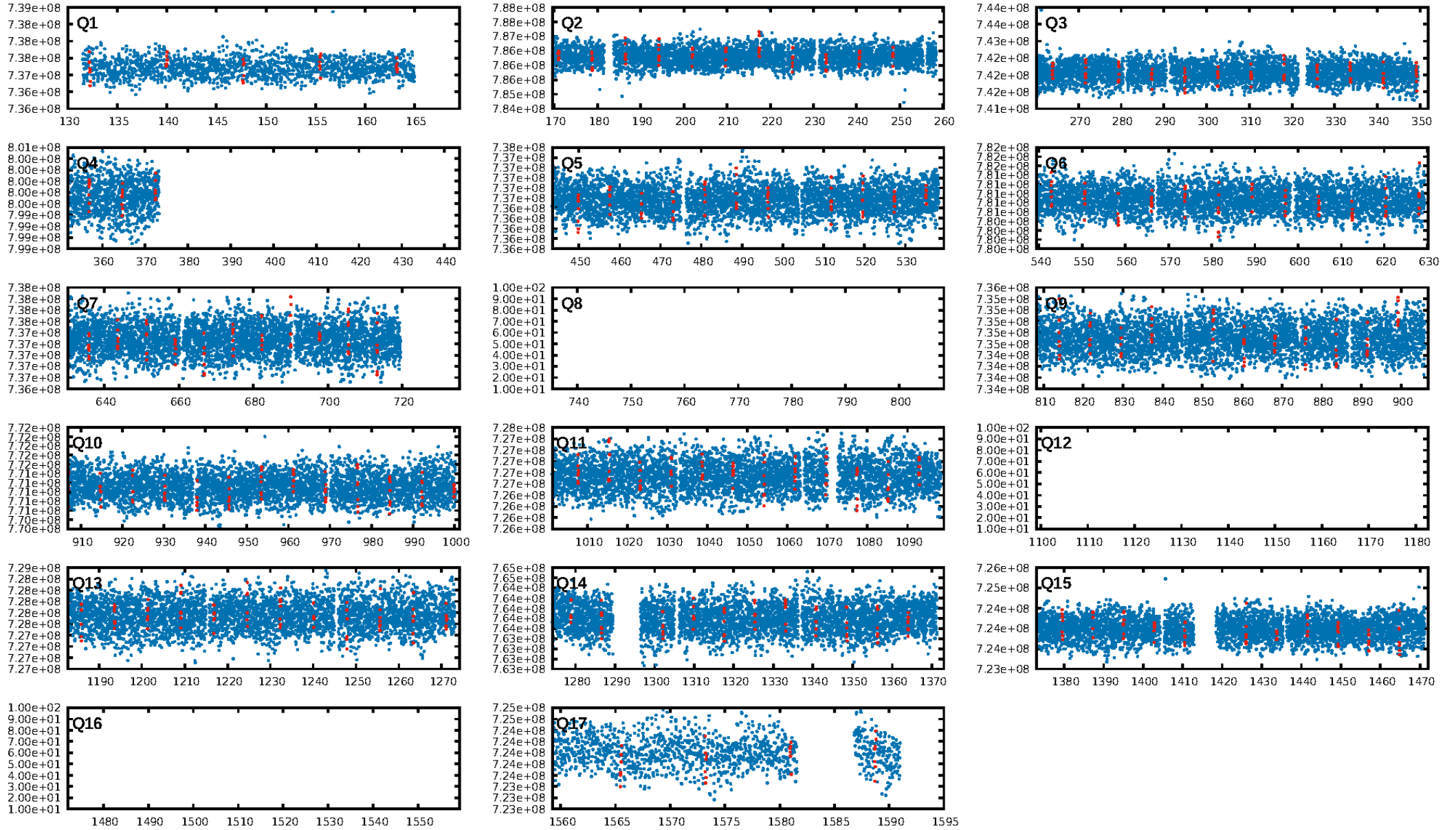
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.81σ]
LongPeriod-sig: 100.0% [22.91σ]
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.59e-08
RollingBand-fgt: 0.95 [36/38]
GhostDiagnostic-chr: -0.6753
Centroid-sig: 2.4%
Centroid-so: 0.650 arcsec [1.38σ]
OotOffset-rm: 0.549 arcsec [1.31σ]
OotOffset-st: 4/4/1/2 [11]
KicOffset-rm: 0.424 arcsec [1.05σ]
KicOffset-st: 4/4/1/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.00 [0/14]

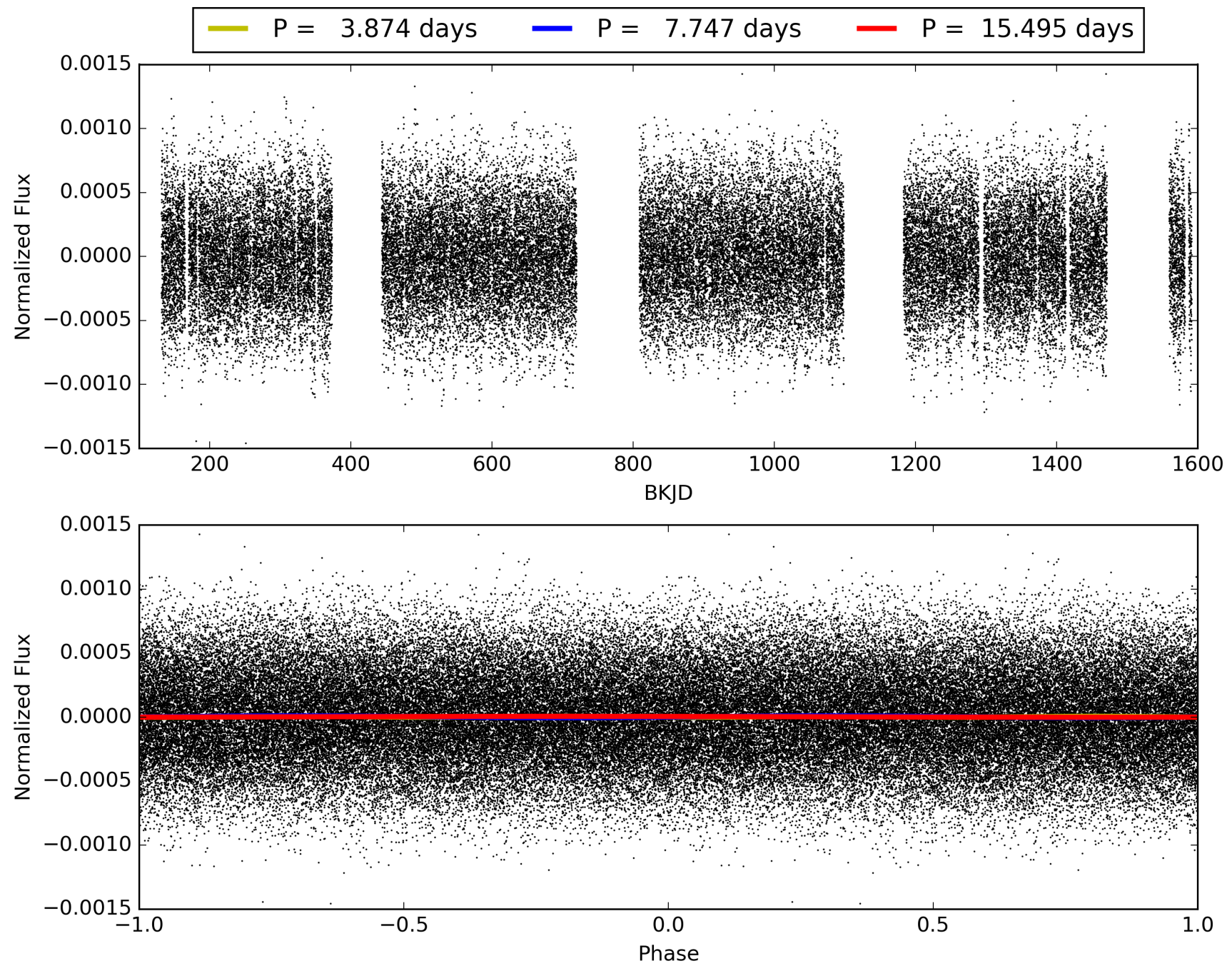
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:10 Z

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

TCE 011700604-06, PDC Light Curves

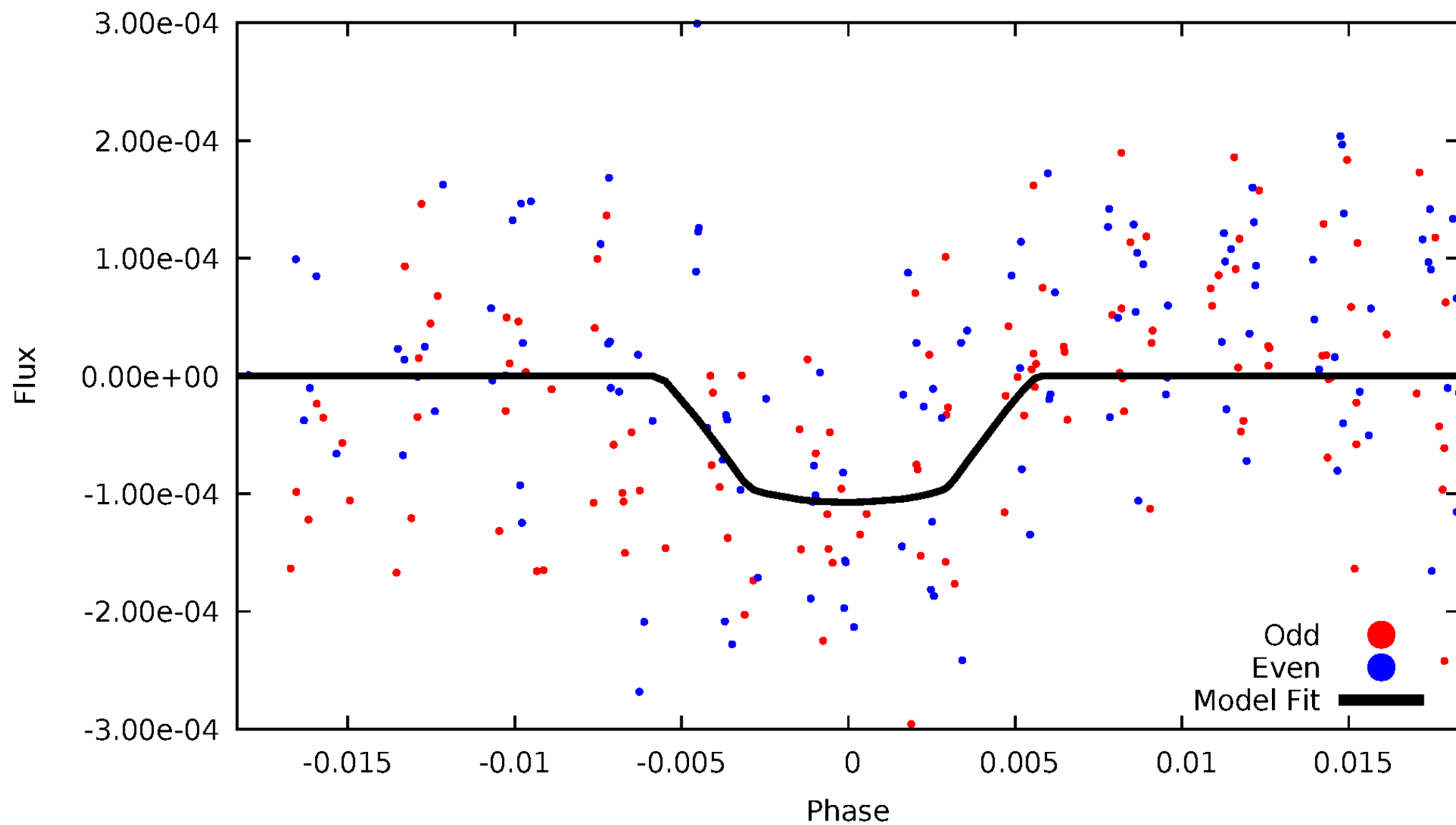


TCE 011700604-06



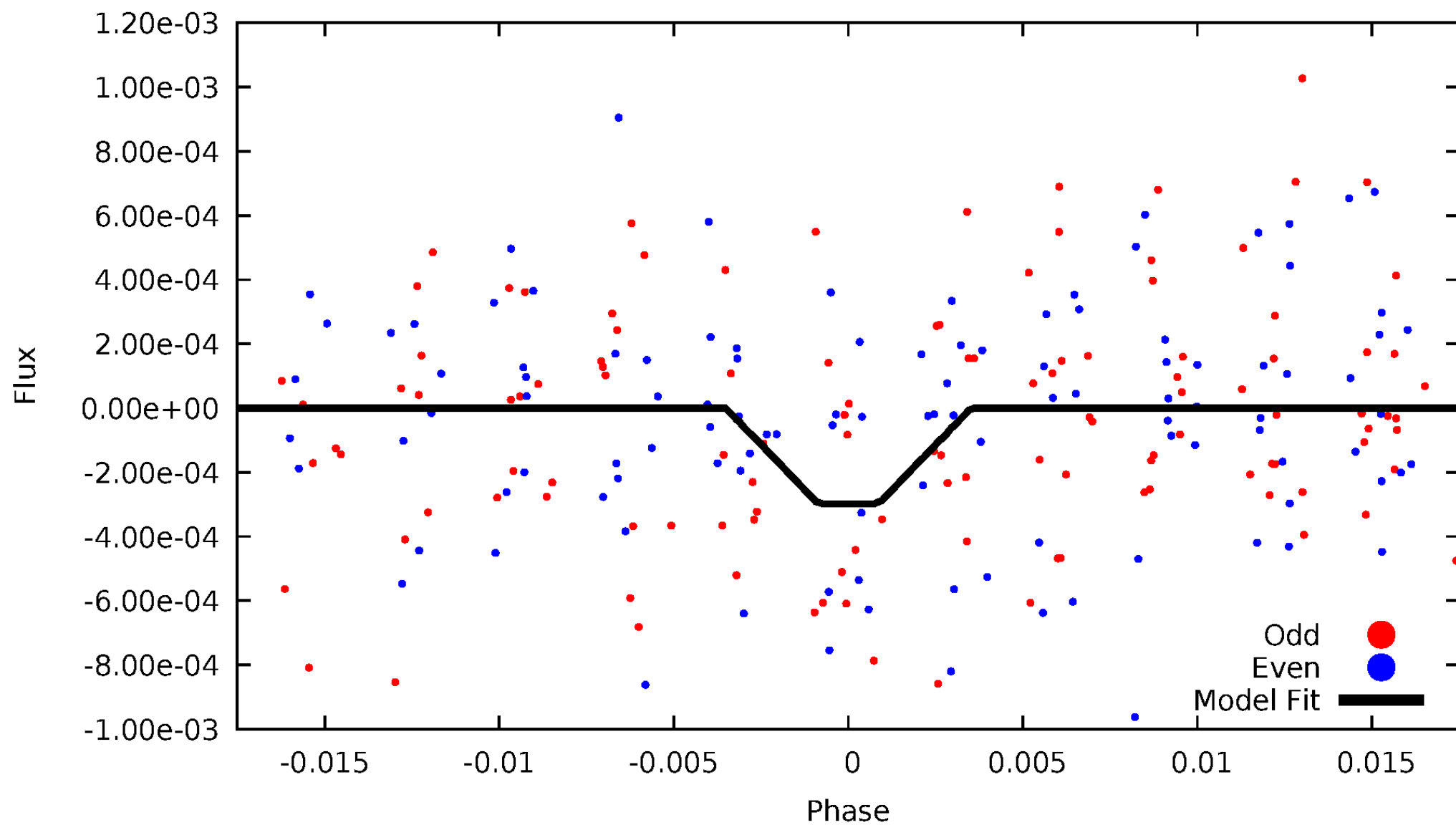
DV Odd/Even

TCE 011700604-06



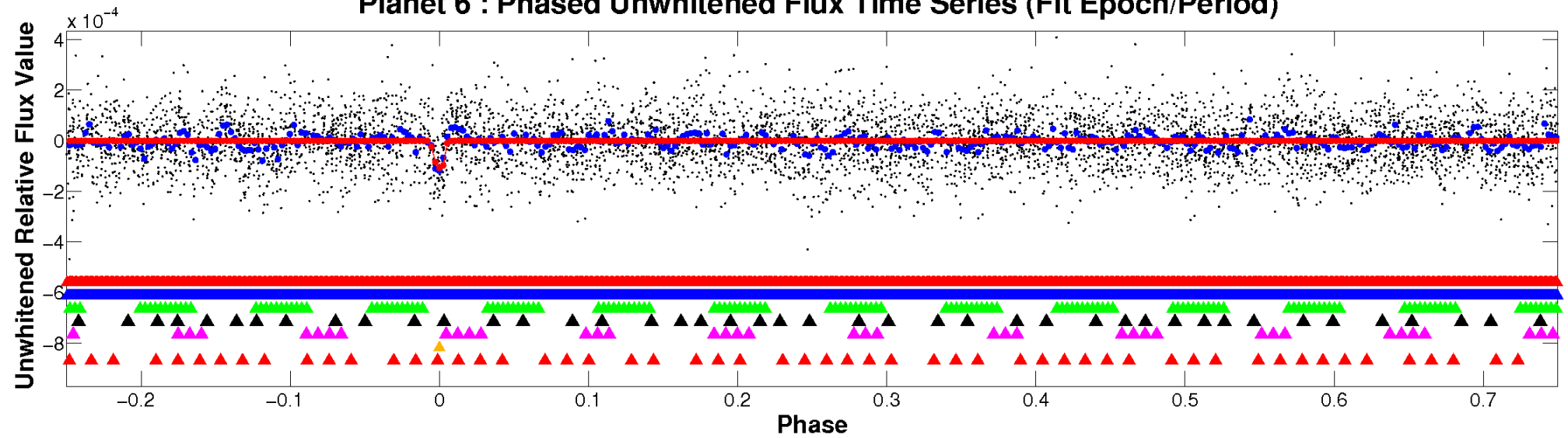
ALT Odd/Even

TCE 011700604-06

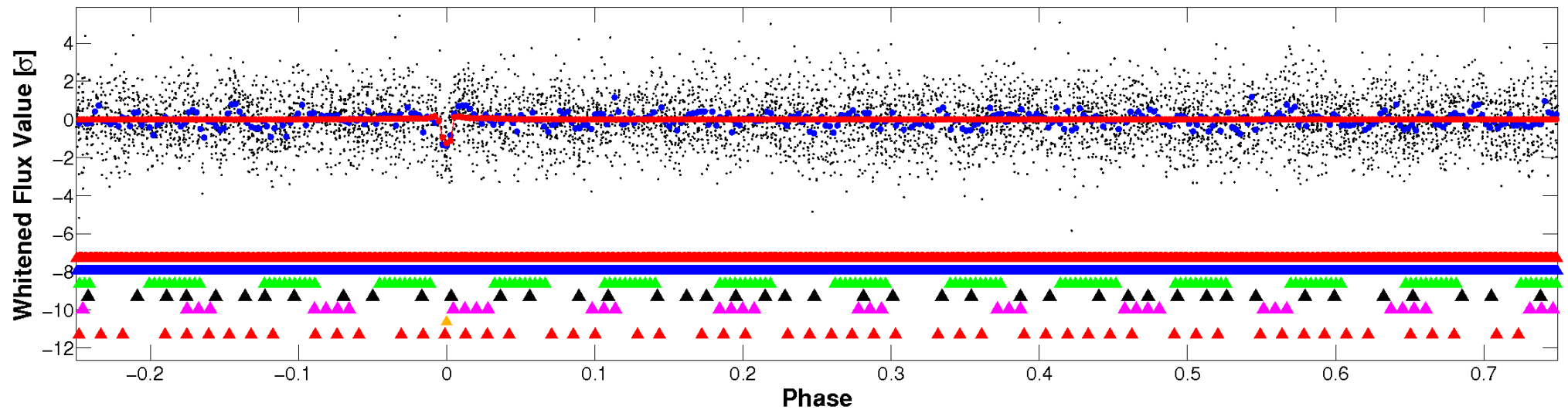


Non-Whitened Vs. Whitened Light Curve

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

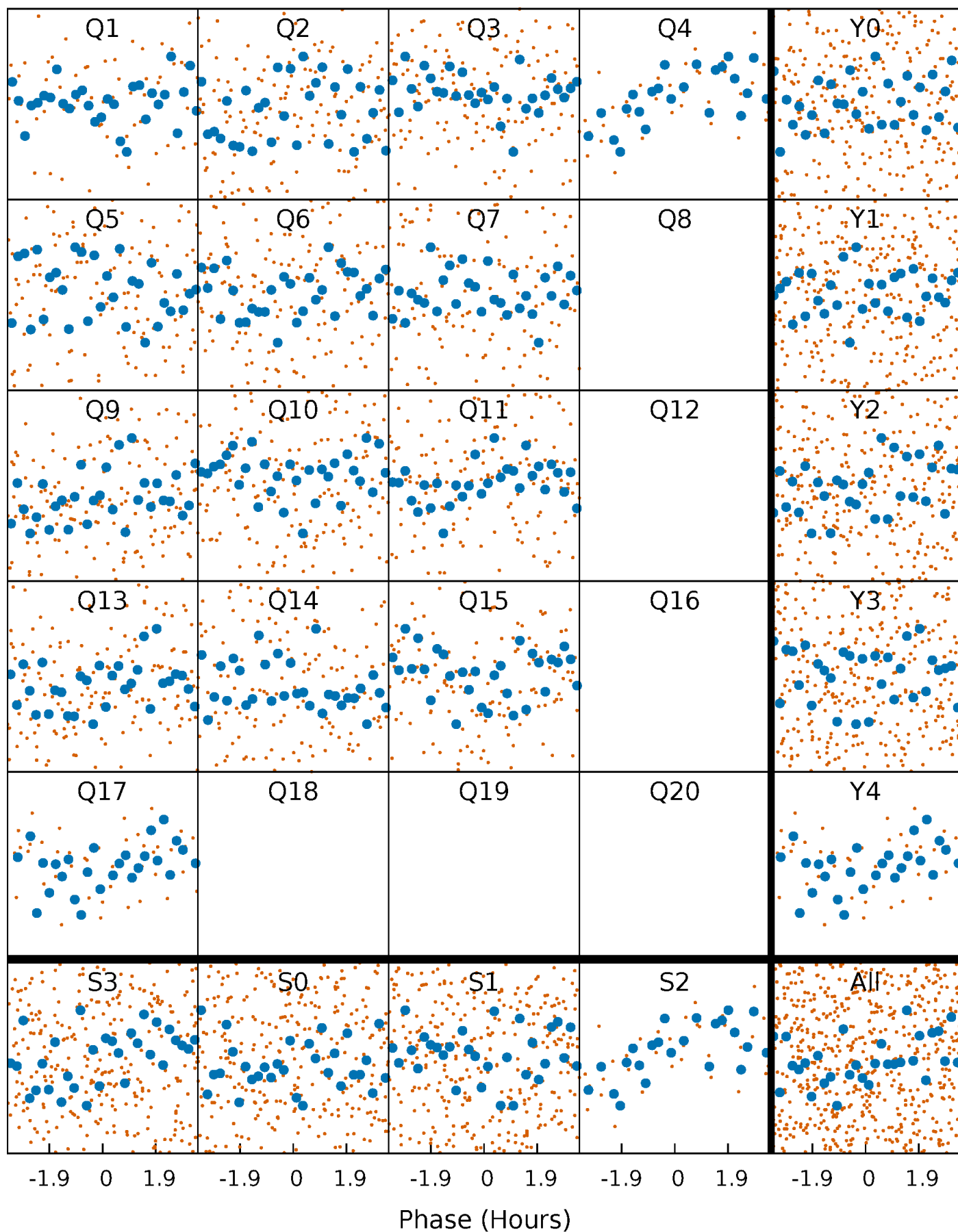


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



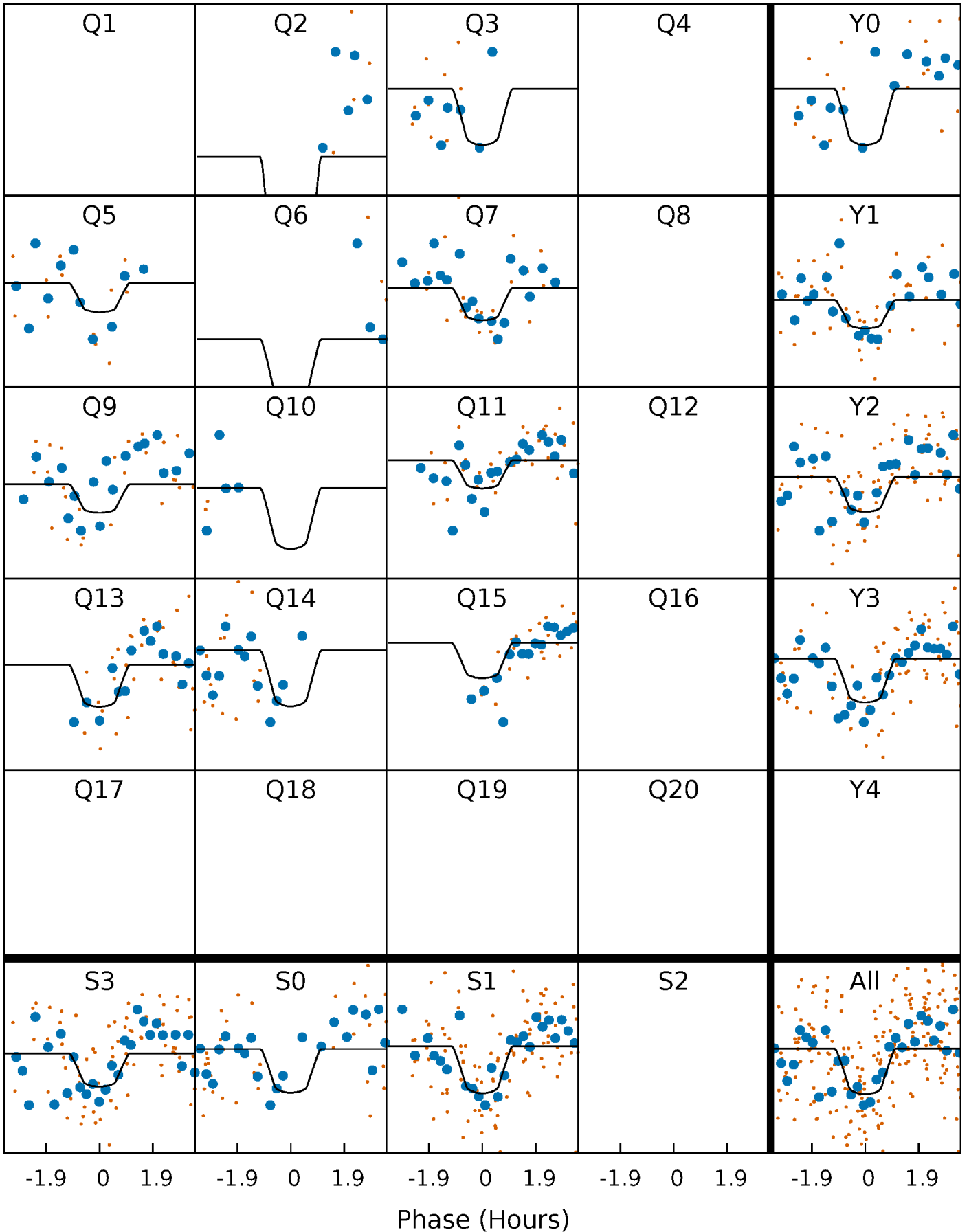
PDC Quarter-Phased Transit Curves

TCE 011700604-06 P= 7.747454 Days $T_0=132.220738$ (BKJD)



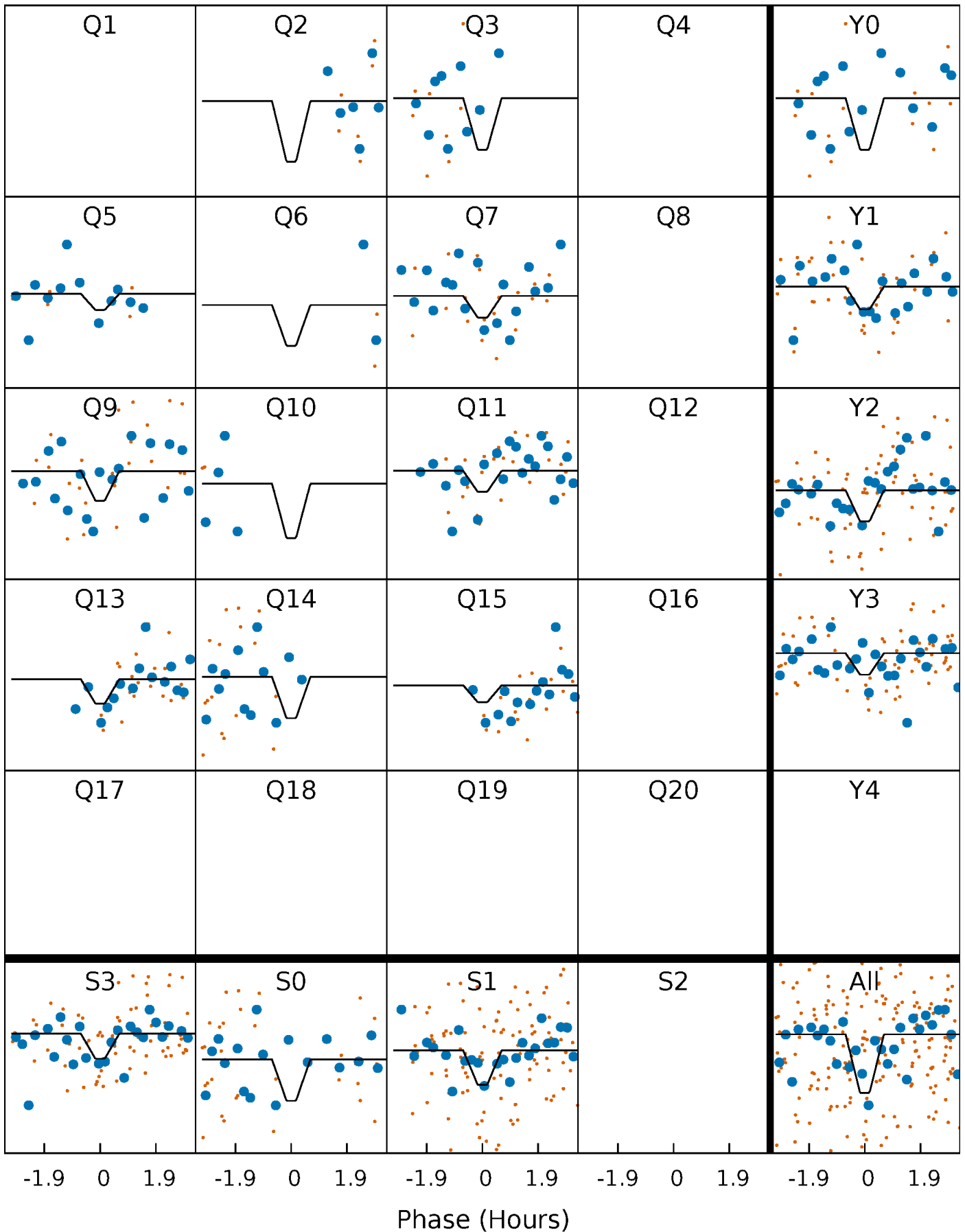
DV Quarter-Phased Transit Curves

TCE 011700604-06 P= 7.747454 Days $T_0=132.220738$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

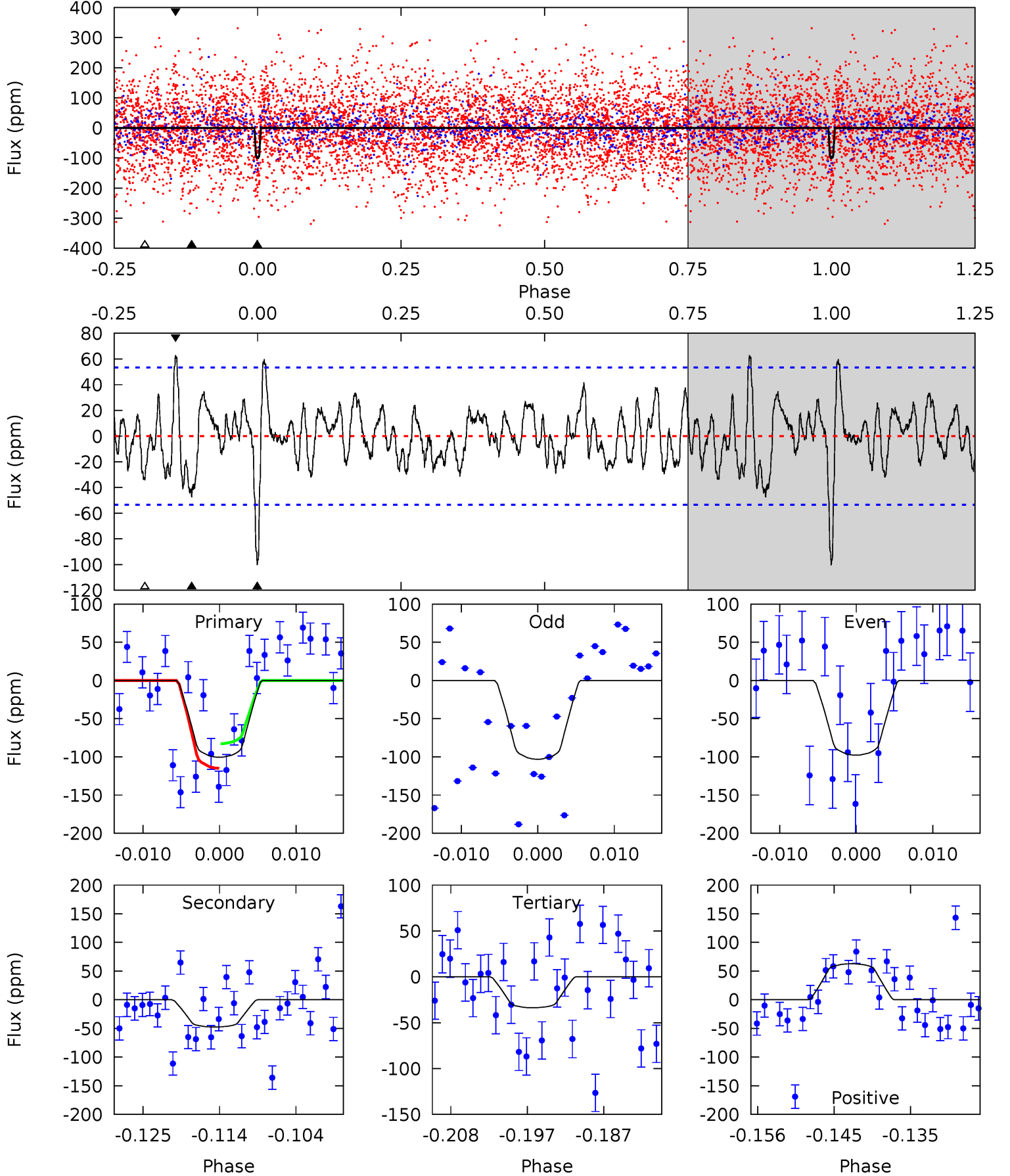
TCE 011700604-06 P= 7.747466 Days $T_0=132.215810$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-06, P = 7.747454 Days, E = 124.473284 Days

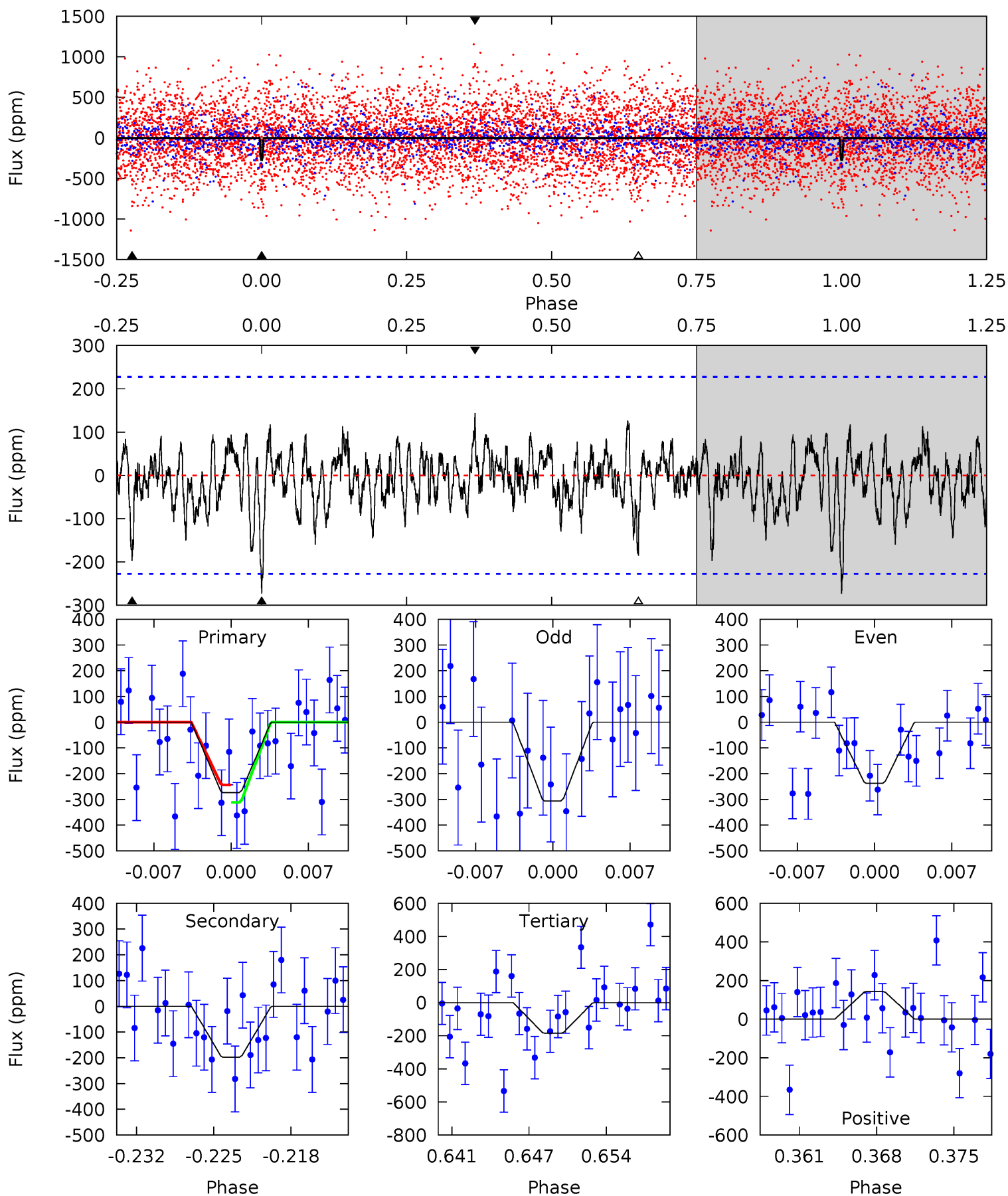
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	4.47	3.17	5.90	5.02	2.56	1.65	6.27	3.54	1.30	-1.43	0.25	0.97	0.38	1.51



Alt Model-Shift Uniqueness Test

011700604-06, P = 7.747466 Days, E = 124.468344 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.12	4.43	4.14	3.21	5.10	2.71	1.15	1.97	2.90	0.28	1.21	0.77	1.11	0.34	0.76



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-48 ± 11	$2.80^{+2.26}_{-1.79}$	2463^{+175}_{-273}	5866^{+5057}_{-1300}	26^{+180}_{-18}
Alt.	-198 ± 45	$4.24^{+2.32}_{-2.09}$	2467^{+175}_{-240}	6982^{+3540}_{-1444}	49^{+135}_{-30}

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 $A_{obs} \gg 1.0$

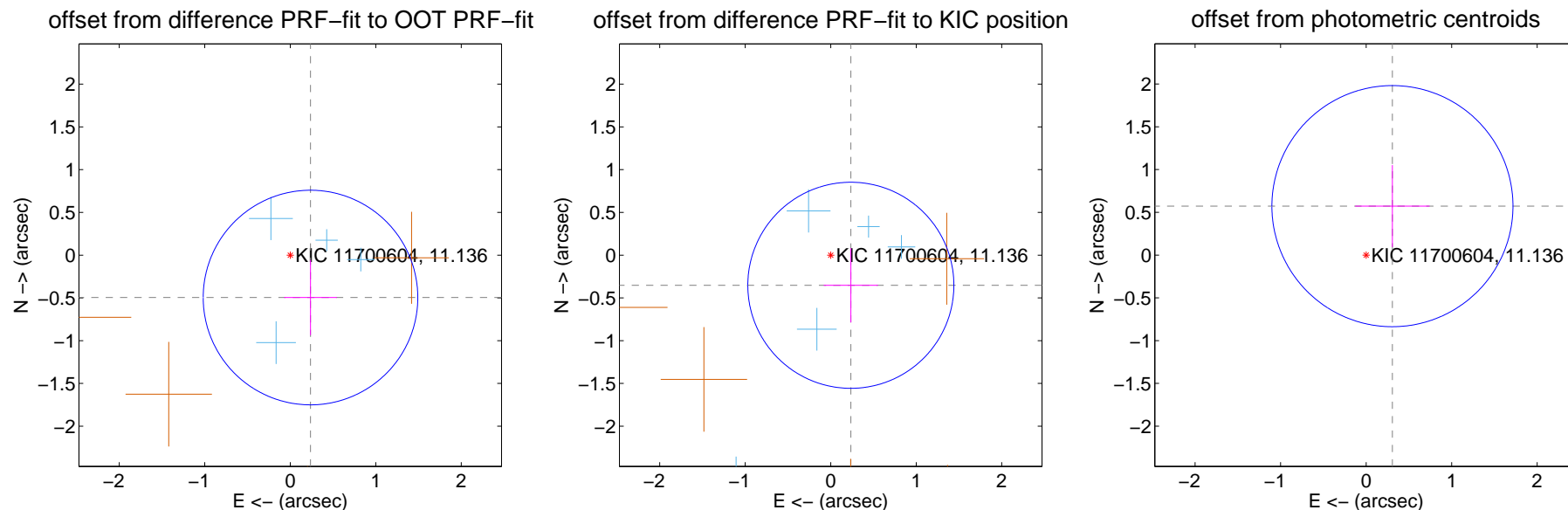
DV Centroid Data

Supplemental centroid analysis for 011700604-06. **Kepler magnitude: 11.14.** Transit SNR 8.75

There are 5 quarters with good PRF difference image offsets

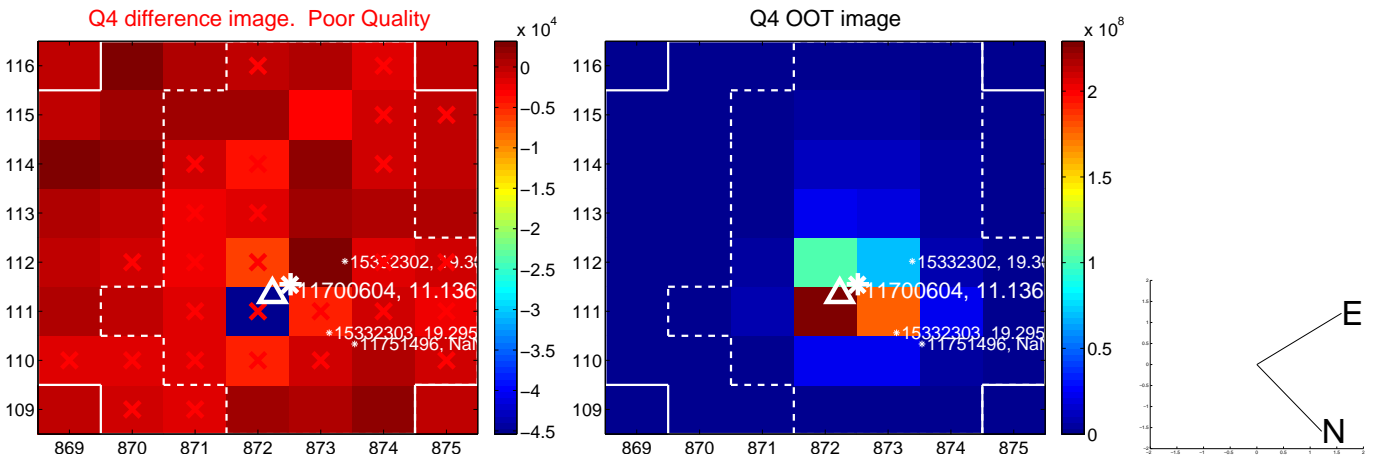
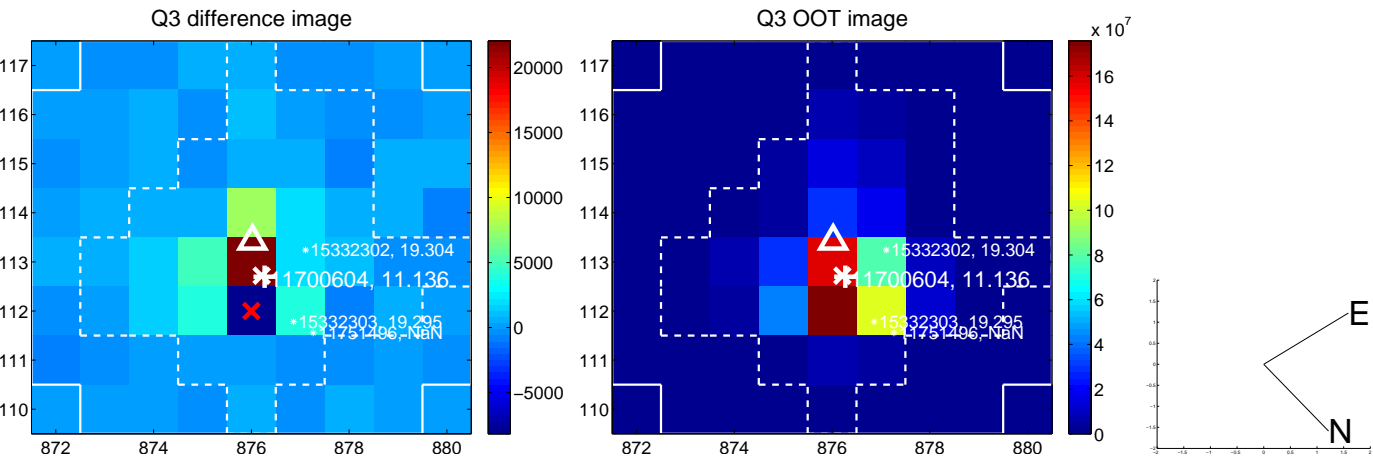
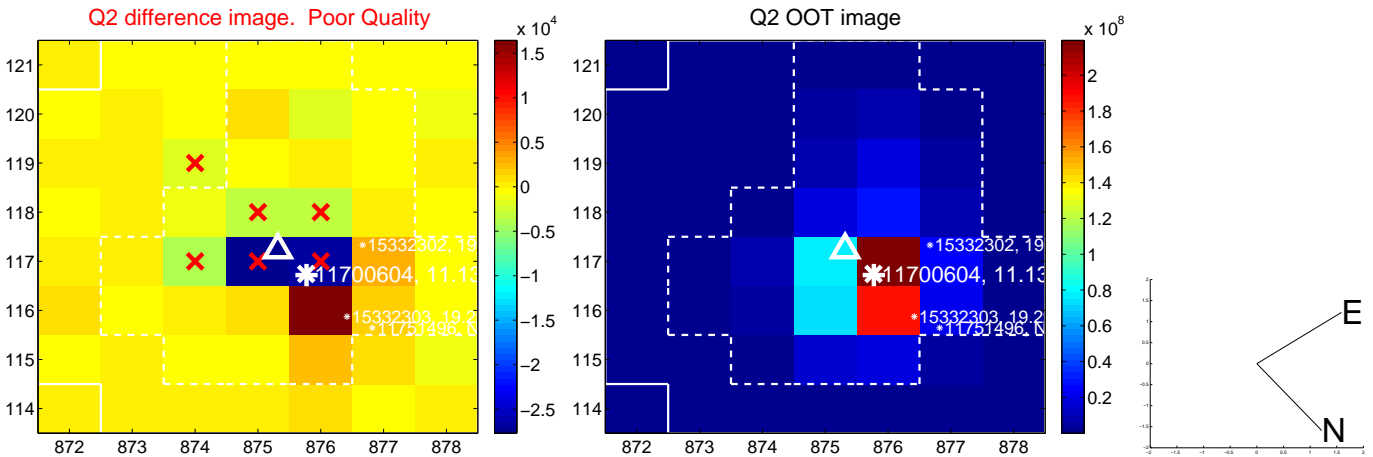
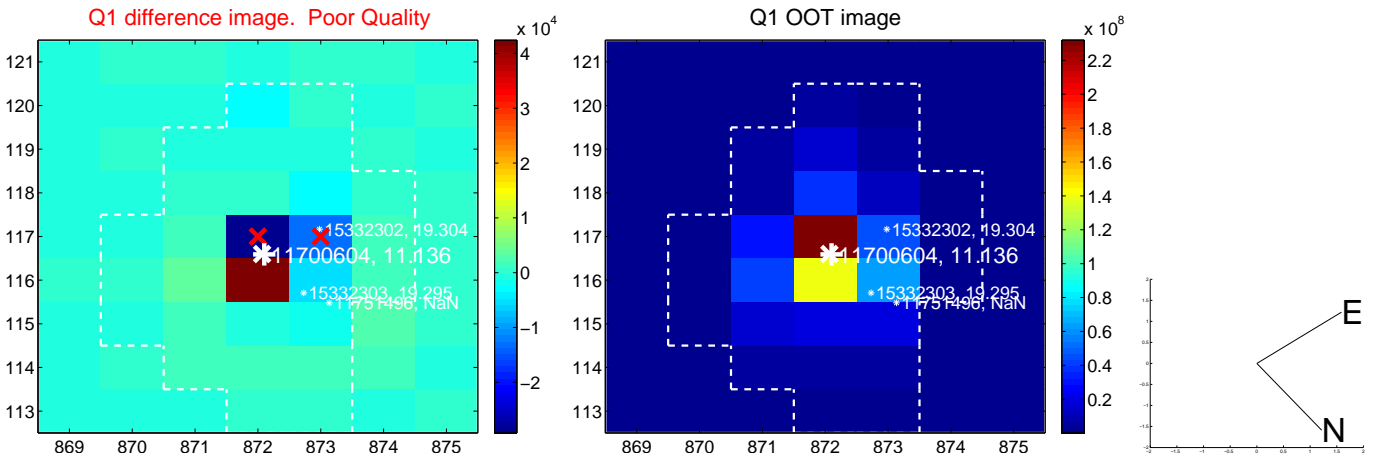
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.549 ± 0.418	1.31	-0.237 ± 0.309	-0.496 ± 0.439
PRF-fit source offset from KIC position	0.424 ± 0.402	1.05	-0.235 ± 0.317	-0.352 ± 0.434
photometric centroid source offset	0.65 ± 0.47	1.38	-0.31 ± 0.43	0.57 ± 0.48

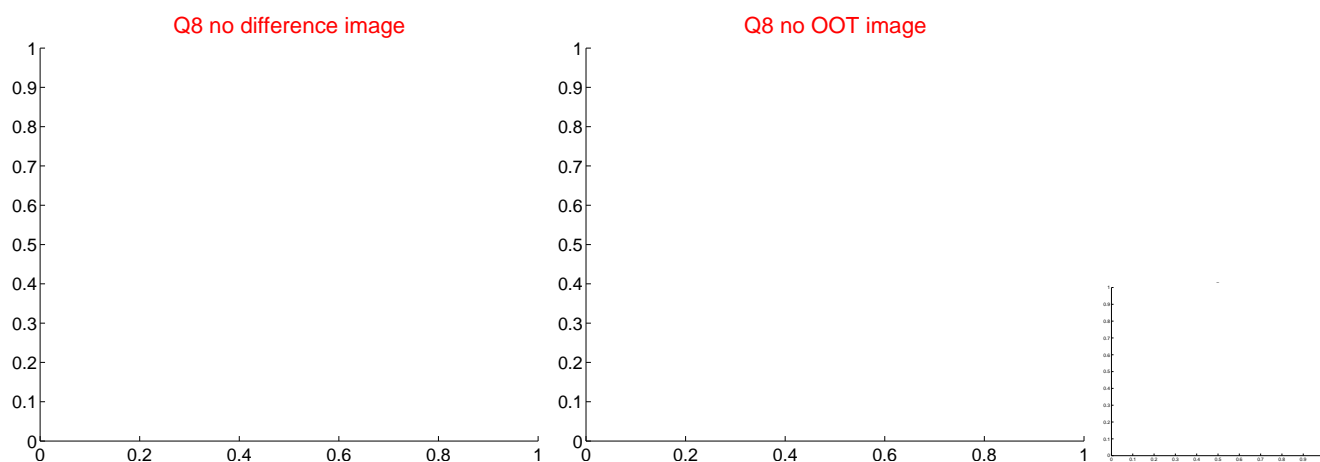
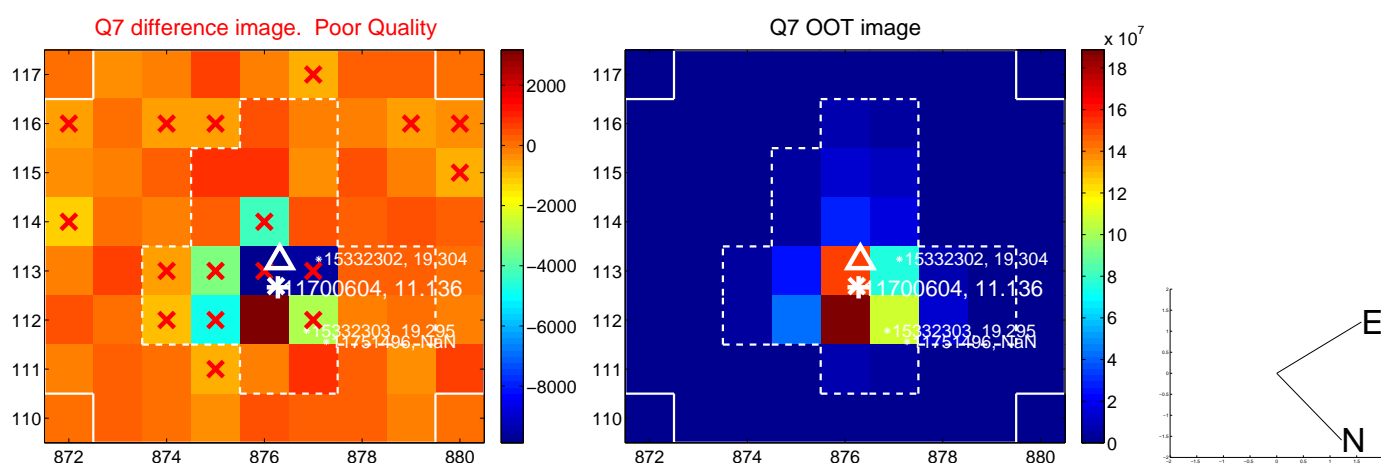
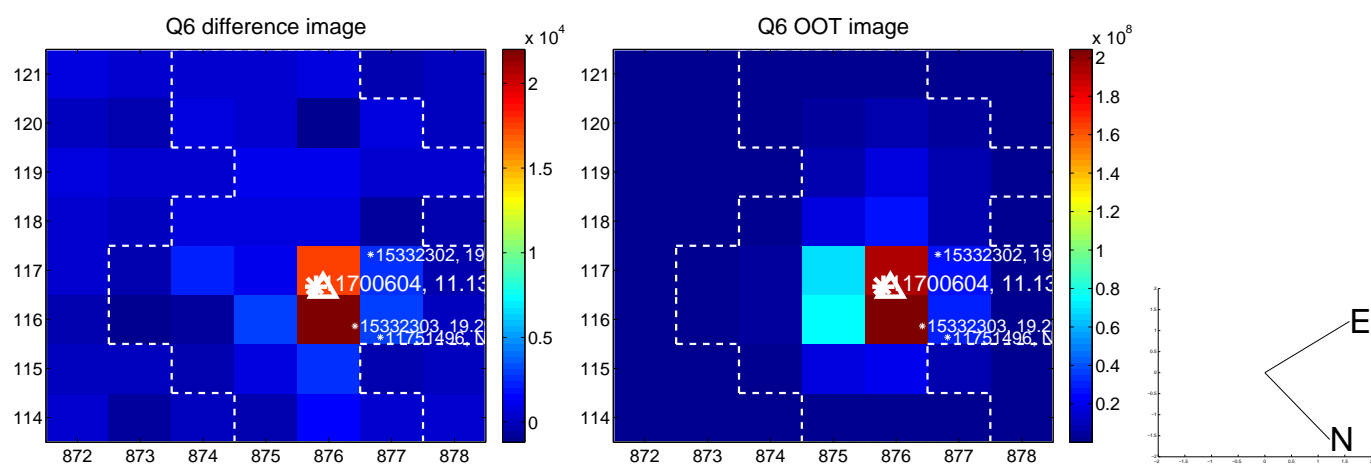
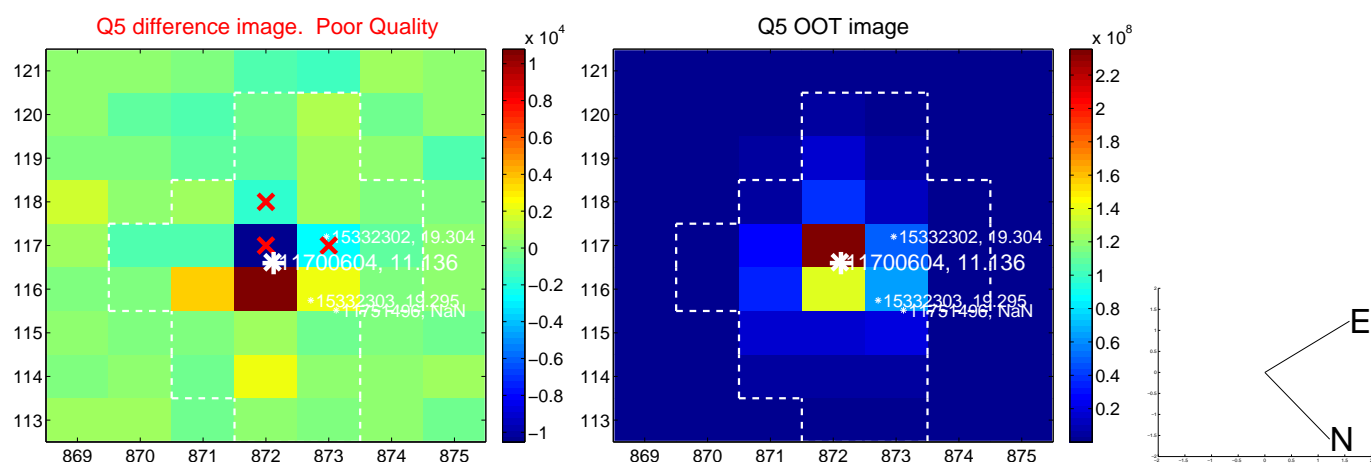


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

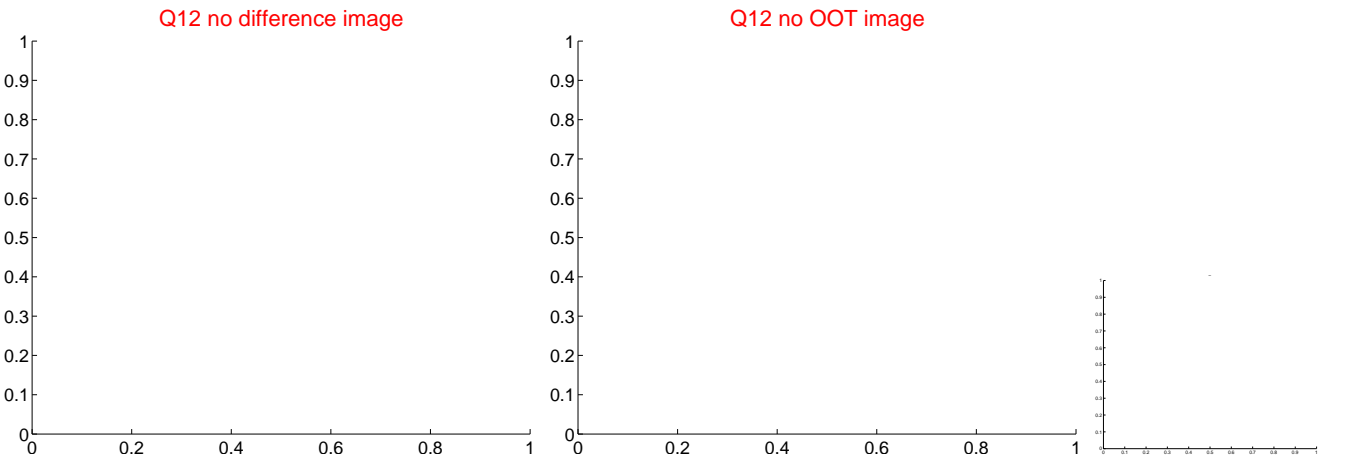
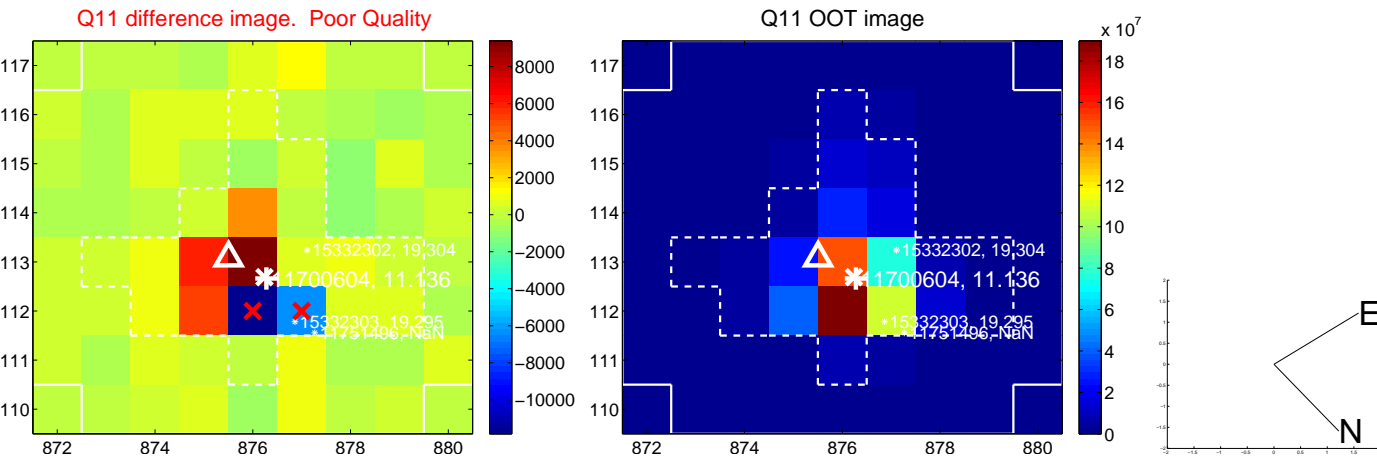
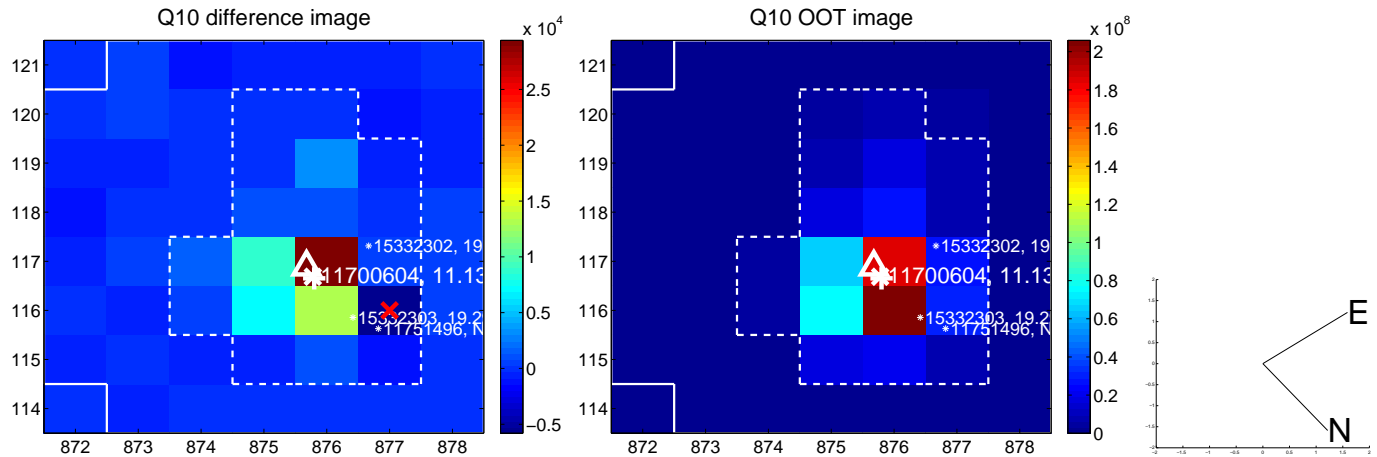
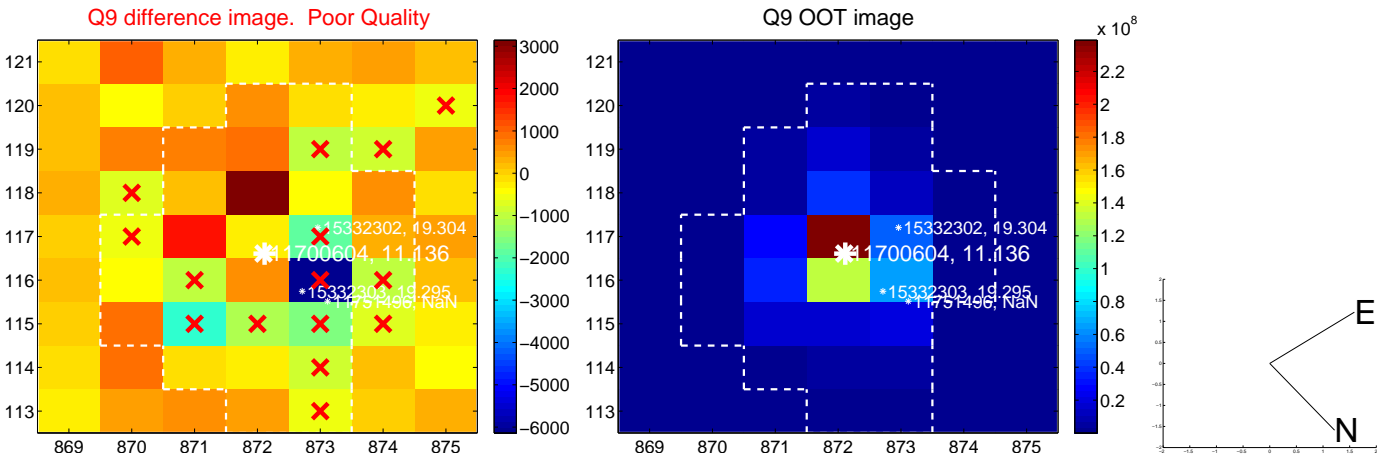
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



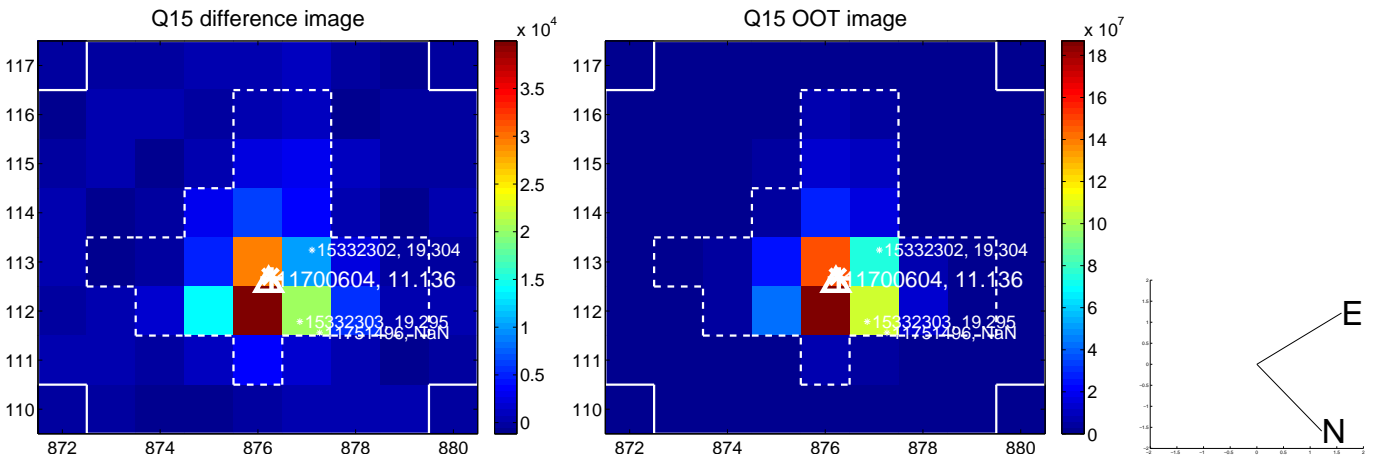
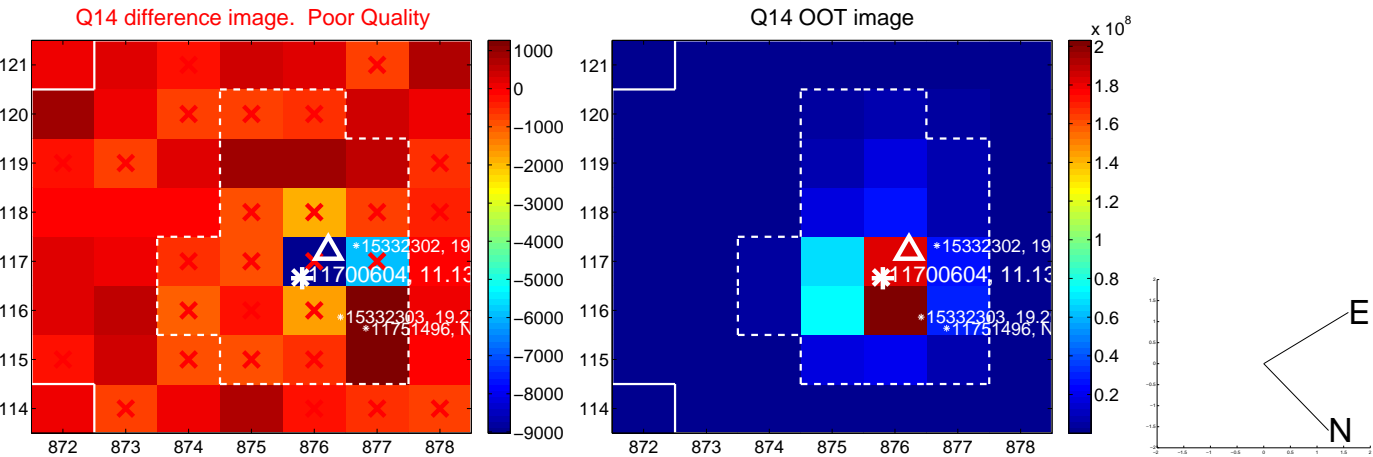
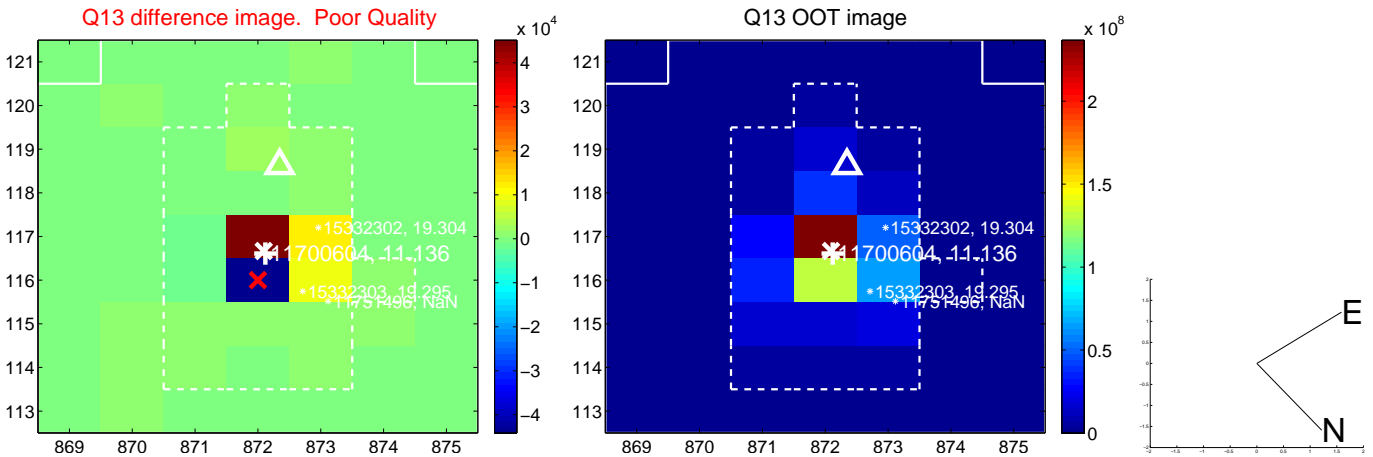
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



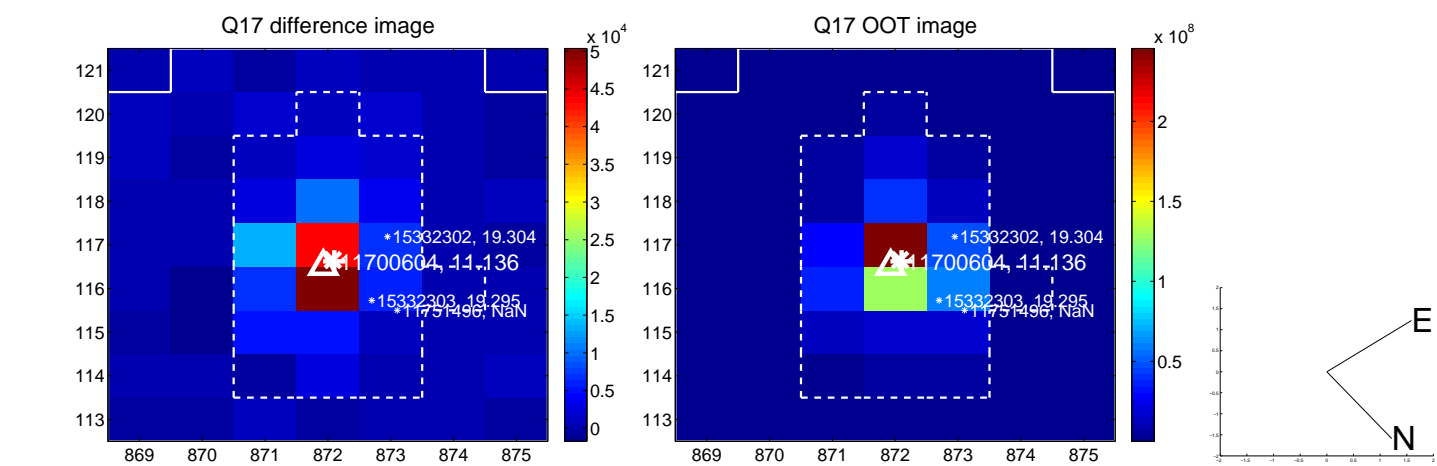
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



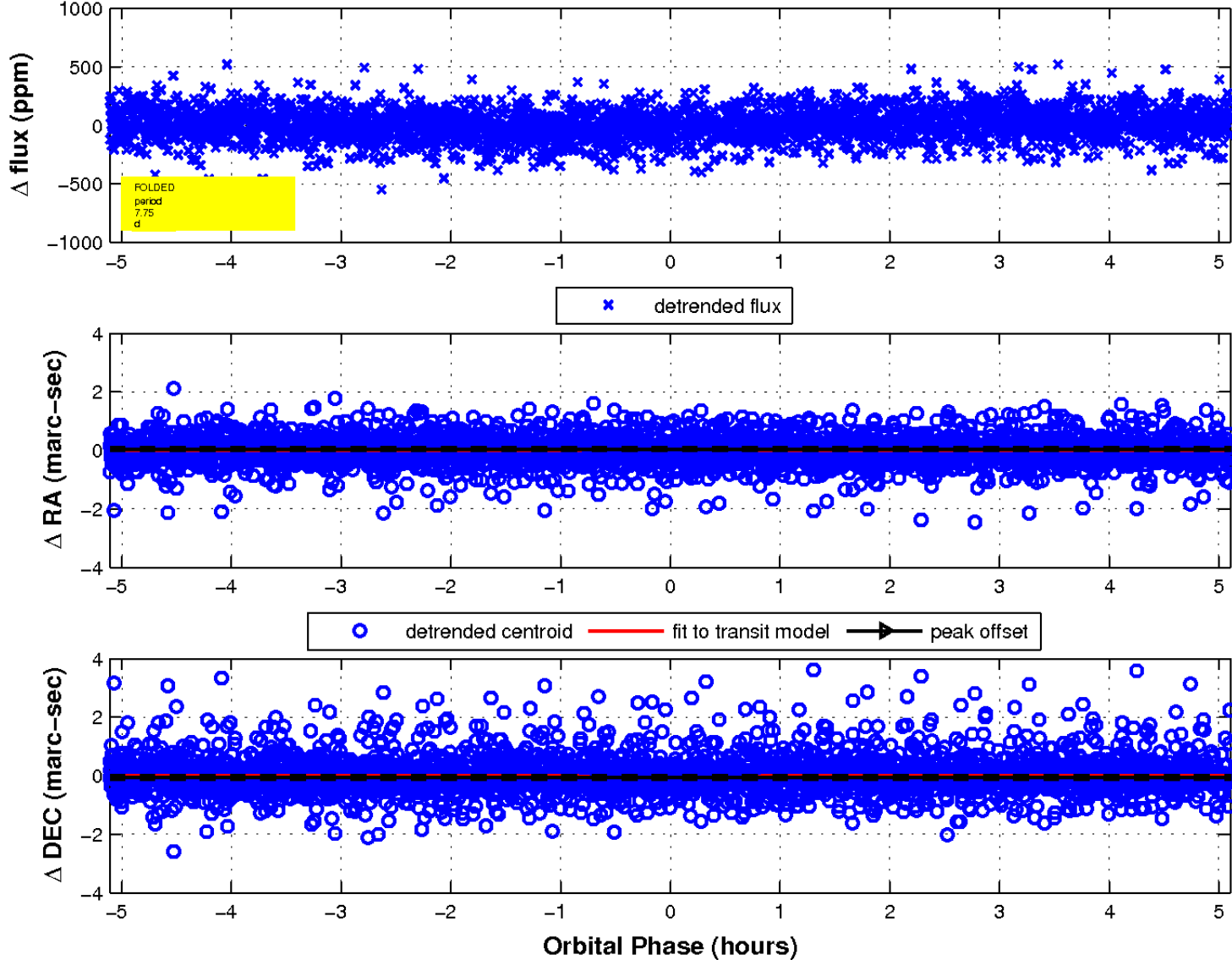
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

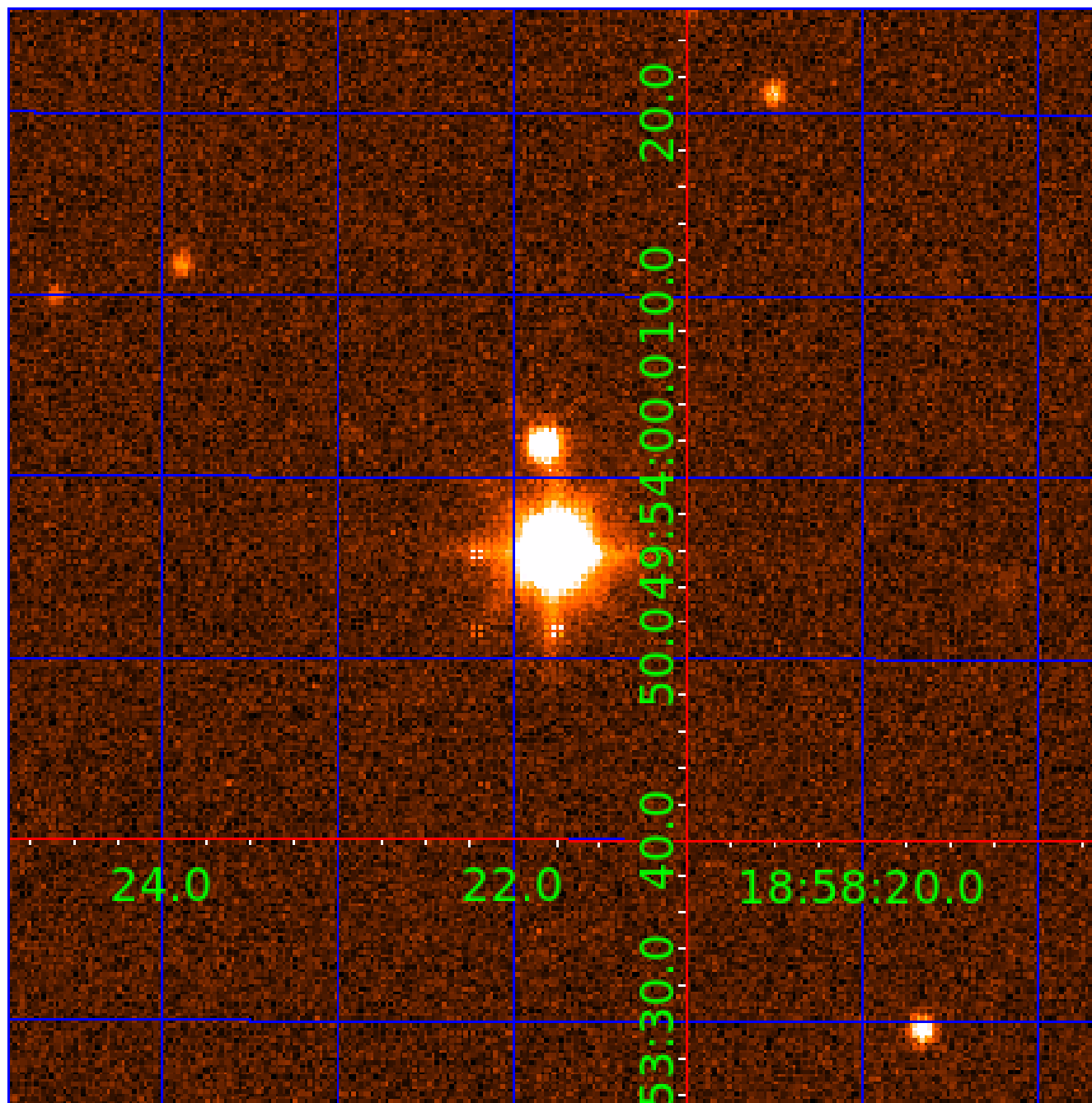


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 011700604

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})
011700604-01	OBS	No	0.551885	131.607609	18.5	1.468	10.1	10.3	2.46	7859	1.07	87406.14
011700604-02	OBS	No	0.551858	131.805409	5.4	3.226	11.5	3.1	2.46	7859	0.58	87411.89
011700604-03	OBS	No	10.129257	135.719710	121.3	1.823	9.9	8.0	2.46	7859	3.21	1805.38
011700604-04	OBS	No	33.709087	143.636283	198.8	2.223	9.5	9.1	2.46	7859	3.97	363.37
011700604-06	OBS	No	7.747454	132.220738	107.2	1.703	9.0	8.8	2.46	7859	2.97	2581.04
011700604-07	OBS	No	26.498446	144.450780	101.9	3.000	8.4	-1.0	2.46	7859	2.51	500.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011700604-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_SATURATED
011700604-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED
011700604-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011700604-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011700604-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

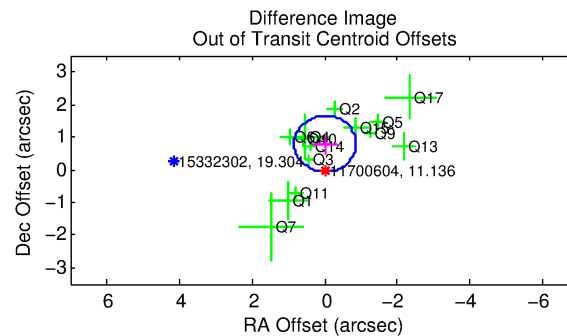
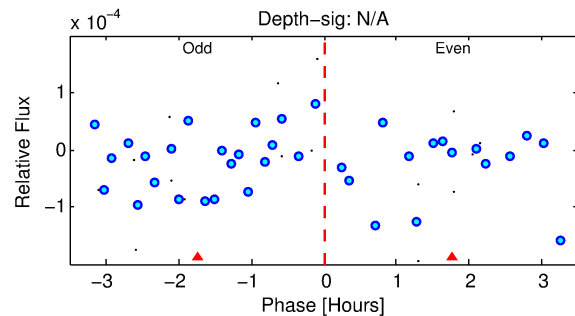
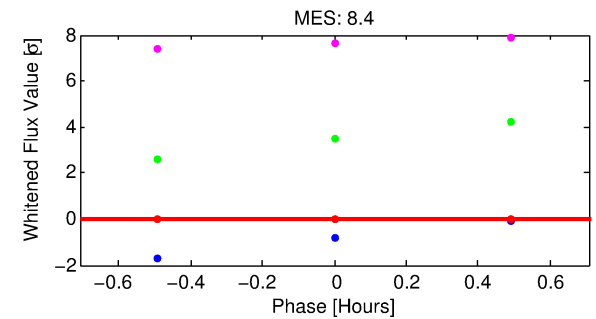
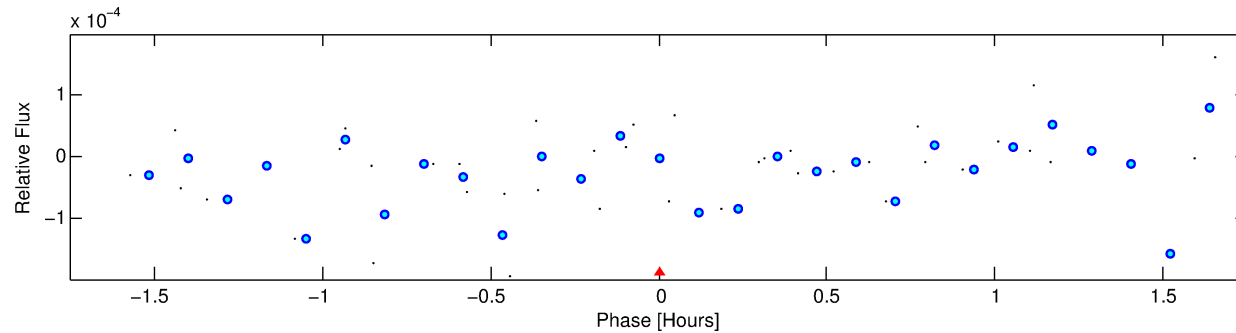
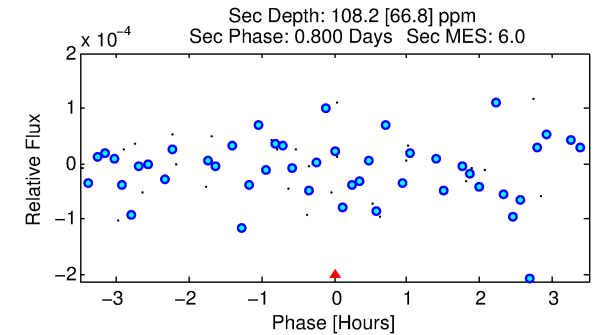
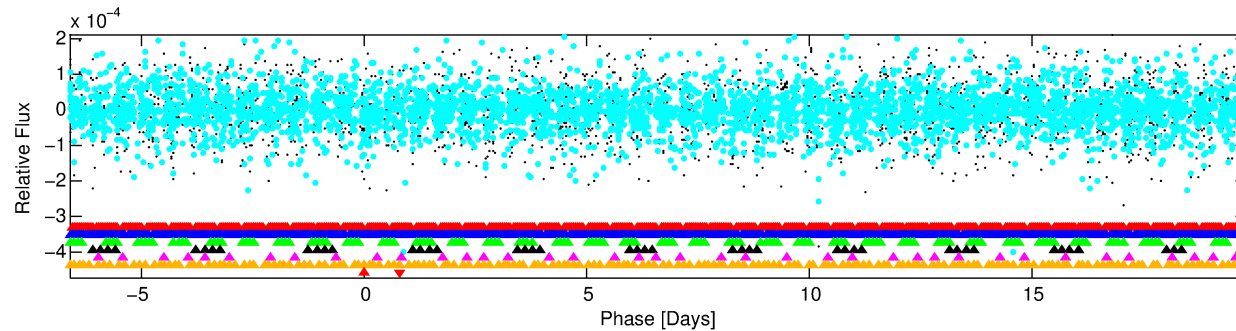
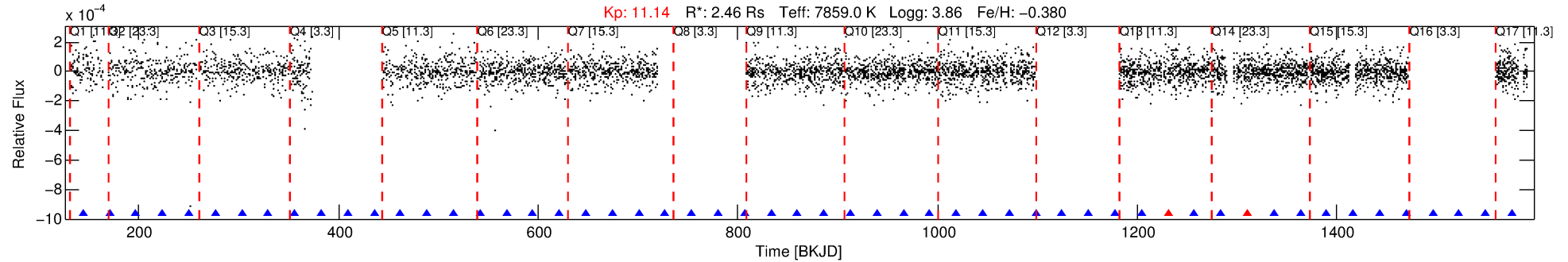
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011700604-07

No Significant Match Found

DV One-Page Summary

KIC: 11700604 Candidate: 7 of 7 Period: 26.498 d



TPS TCE Results:

Period = 26.49845 d
Epoch = 144.4508 BKJD

DV fit results are unavailable

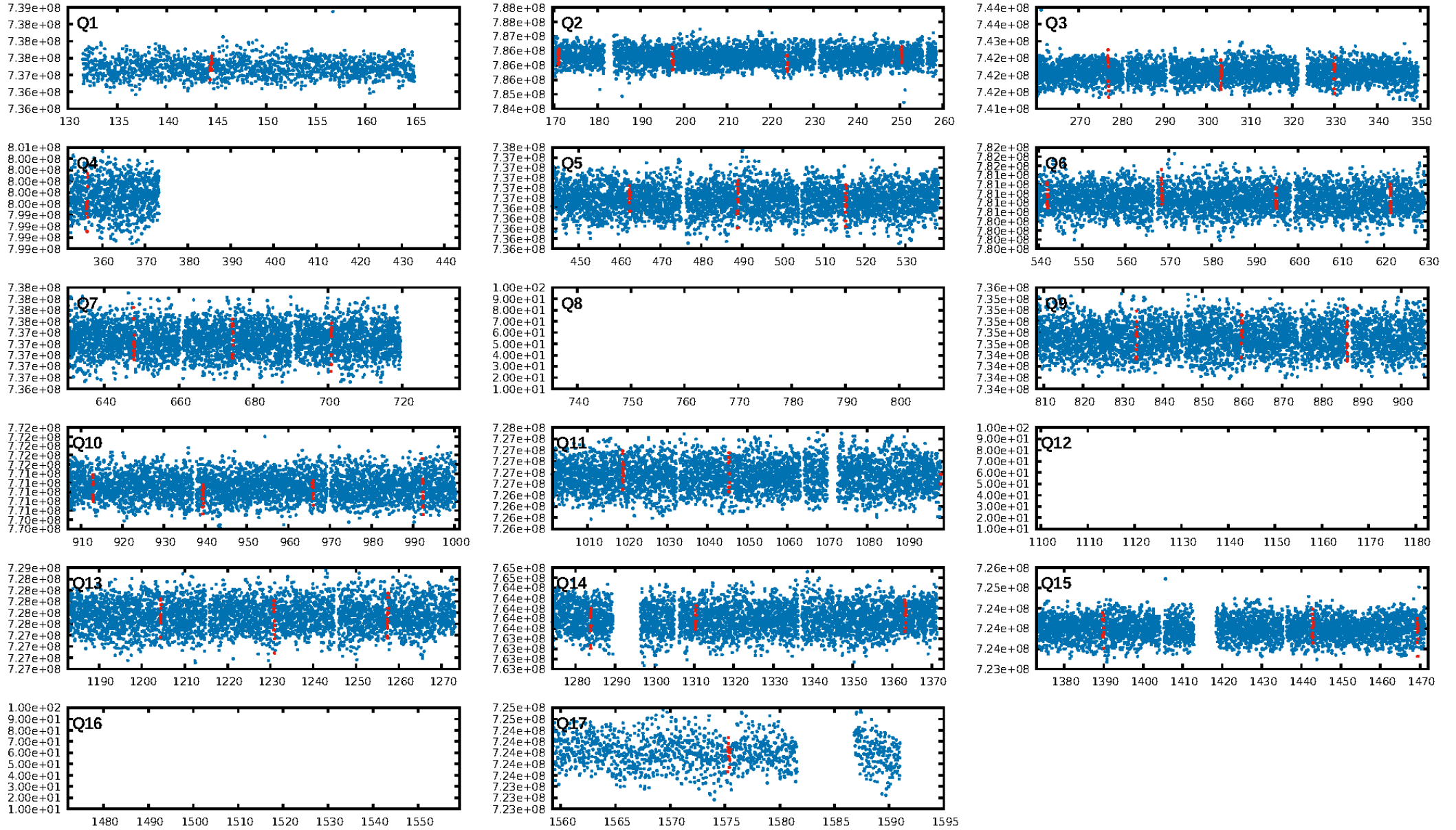
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [111.90σ]
LongPeriod-sig: 100.0% [46.35σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.28e-08
RollingBand-fgt: 0.80 [8/10]
GhostDiagnostic-chr: -0.6787
Centroid-sig: 71.1%
Centroid-so: 0.775 arcsec [0.72σ]
OotOffset-rm: 0.795 arcsec [2.78σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-rm: 0.947 arcsec [3.58σ]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.00 [0/14]

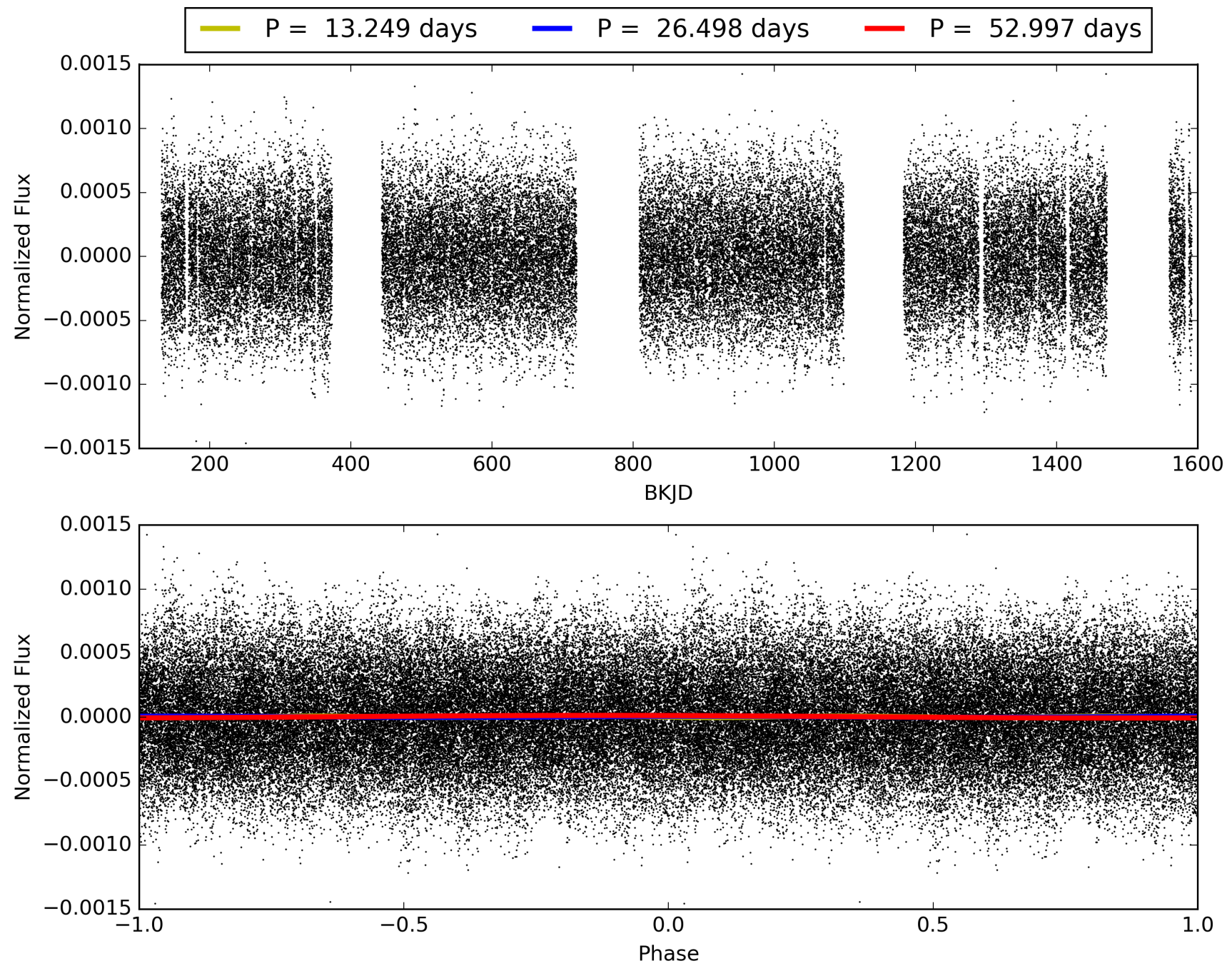
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 01:39:14 Z

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

TCE 011700604-07, PDC Light Curves

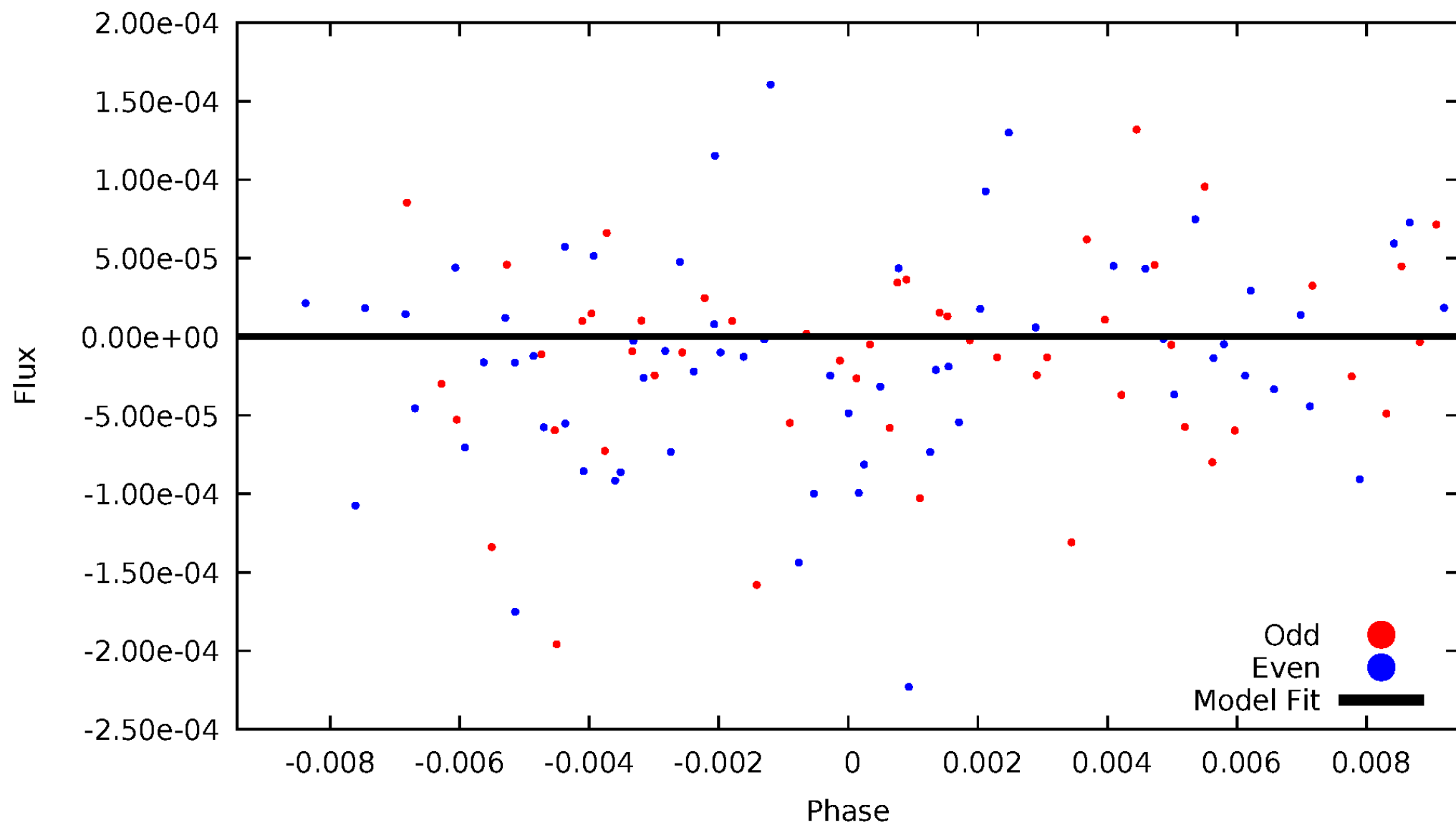


TCE 011700604-07



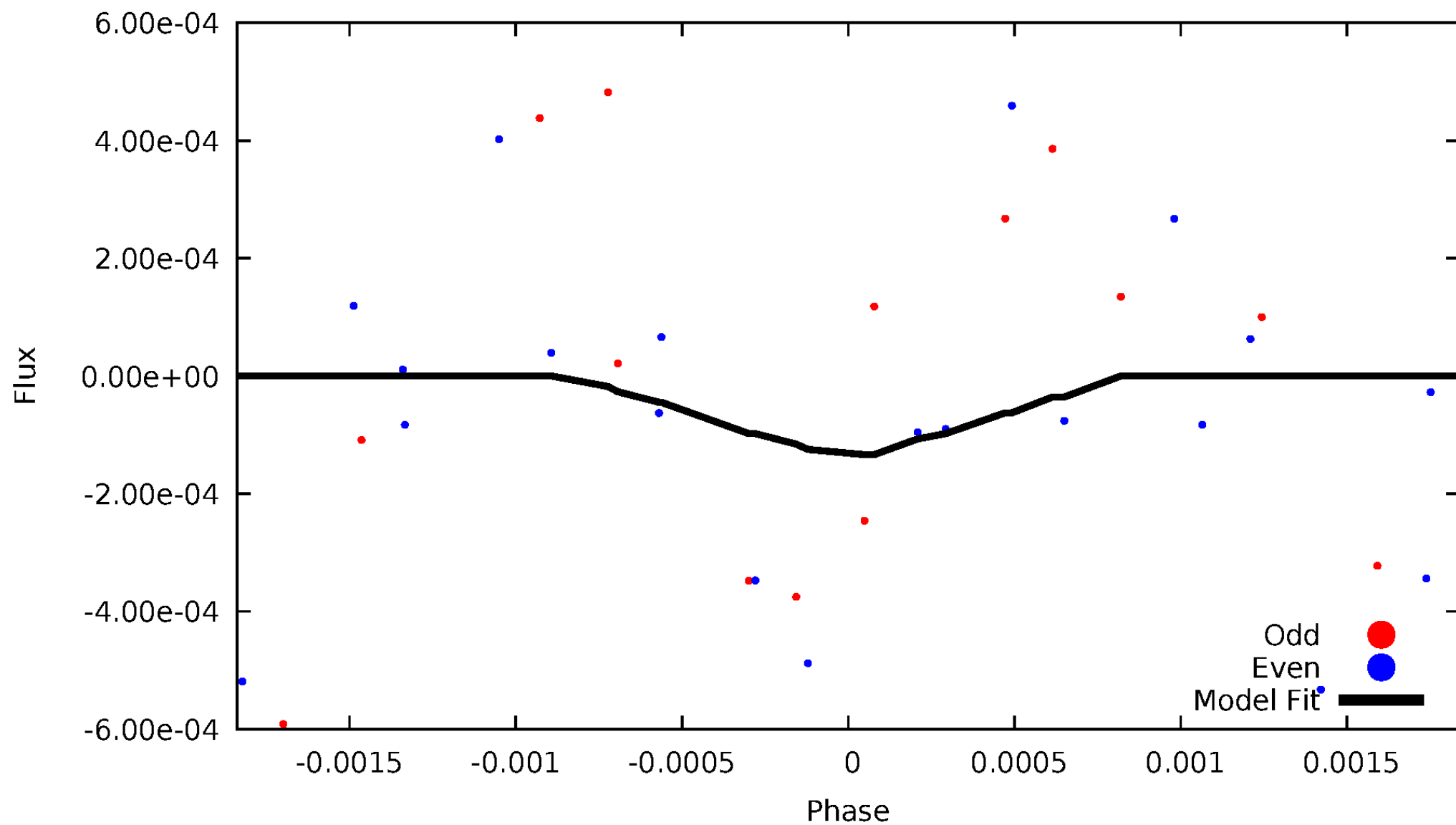
DV Odd/Even

TCE 011700604-07

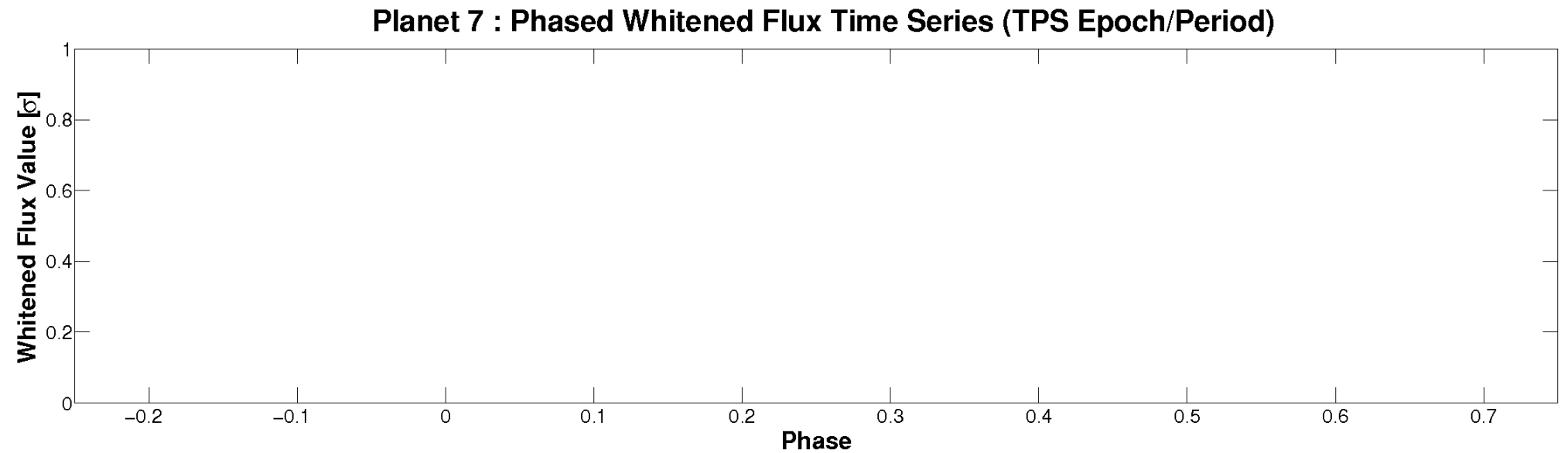
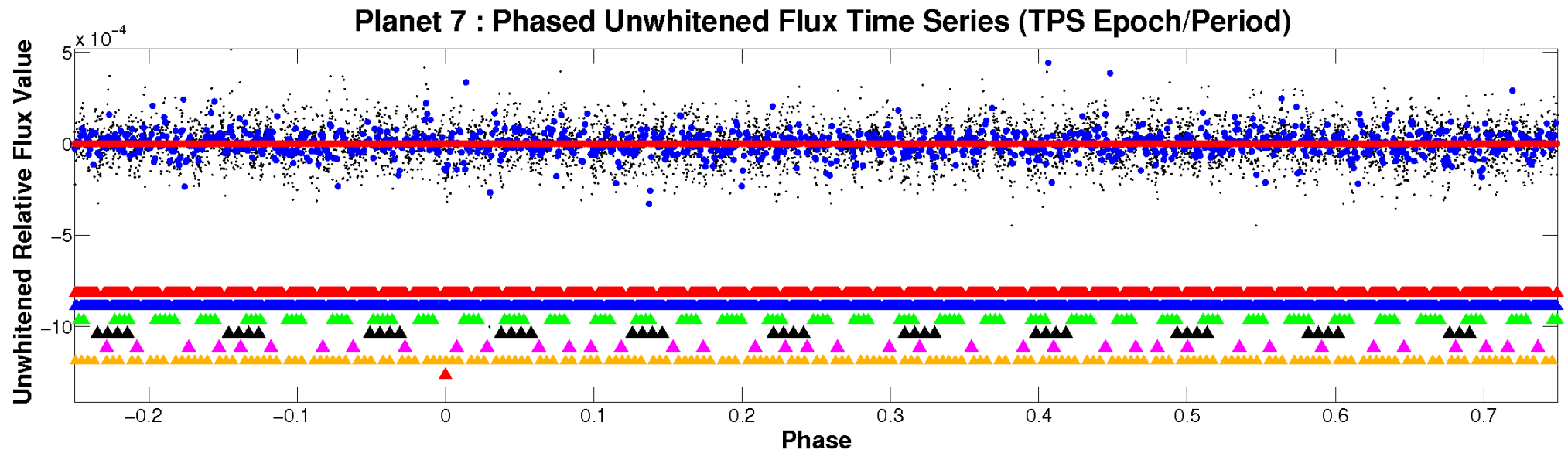


ALT Odd/Even

TCE 011700604-07

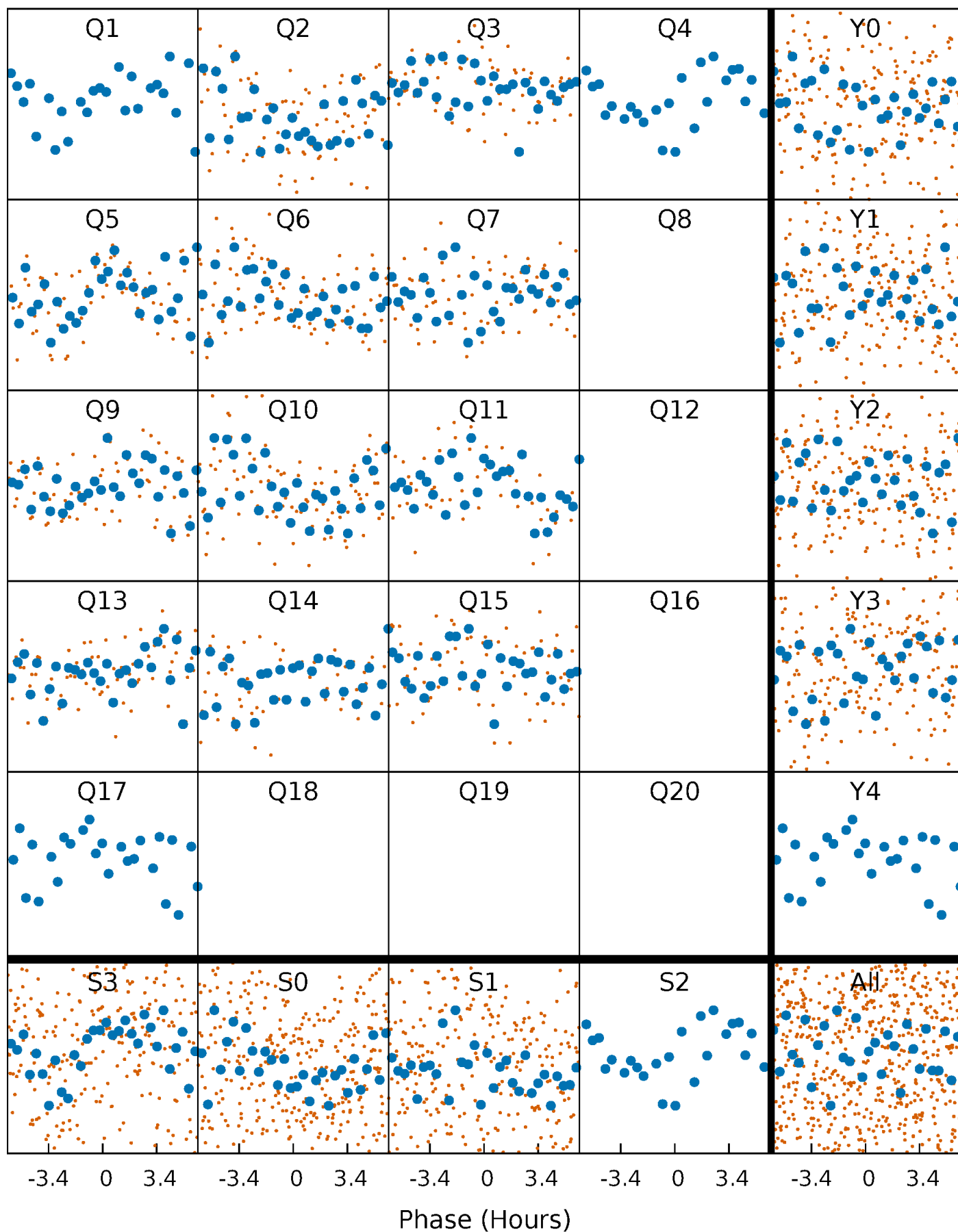


Non-Whitened Vs. Whitened Light Curve



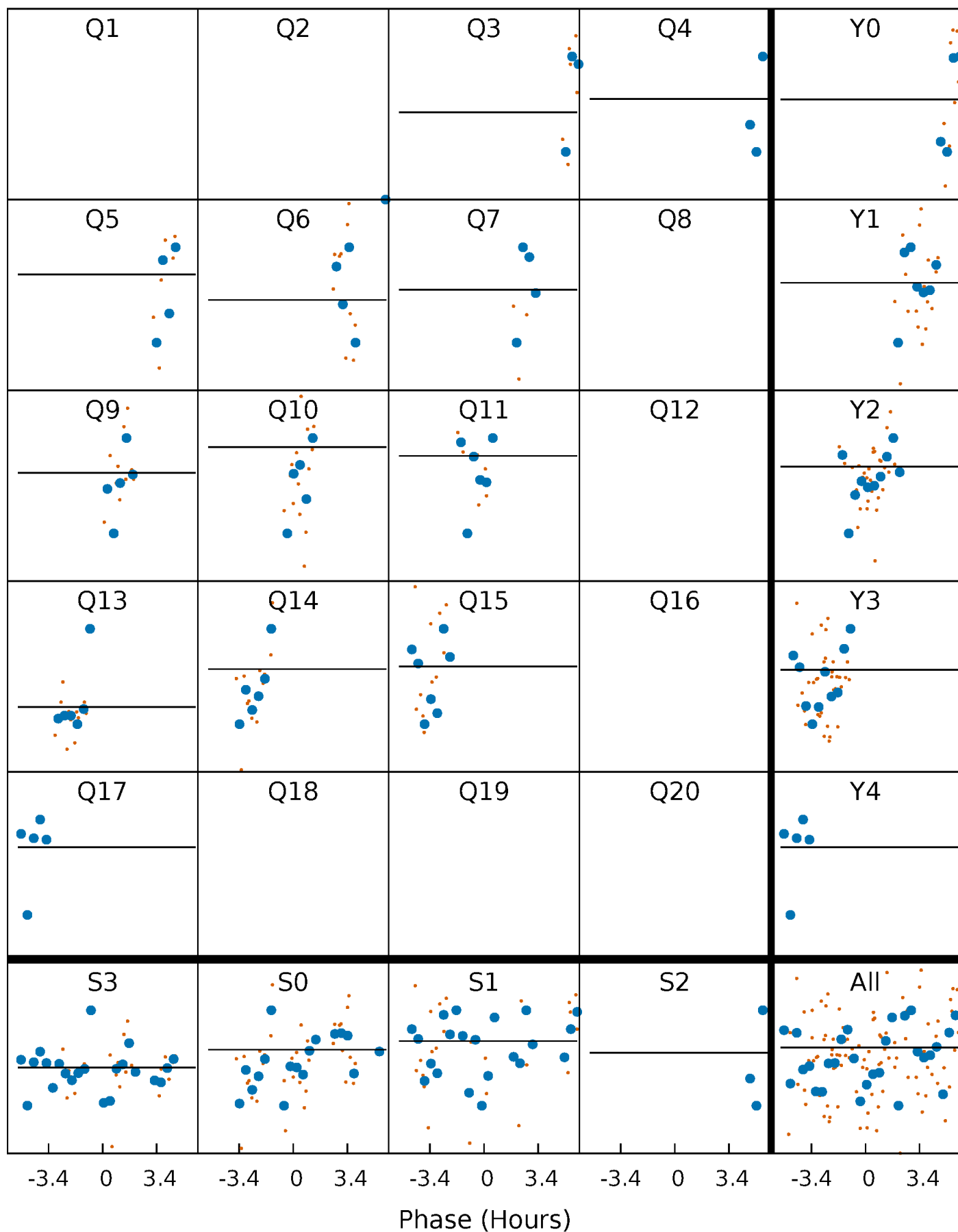
PDC Quarter-Phased Transit Curves

TCE 011700604-07 P= 26.498446 Days $T_0=144.450780$ (BKJD)



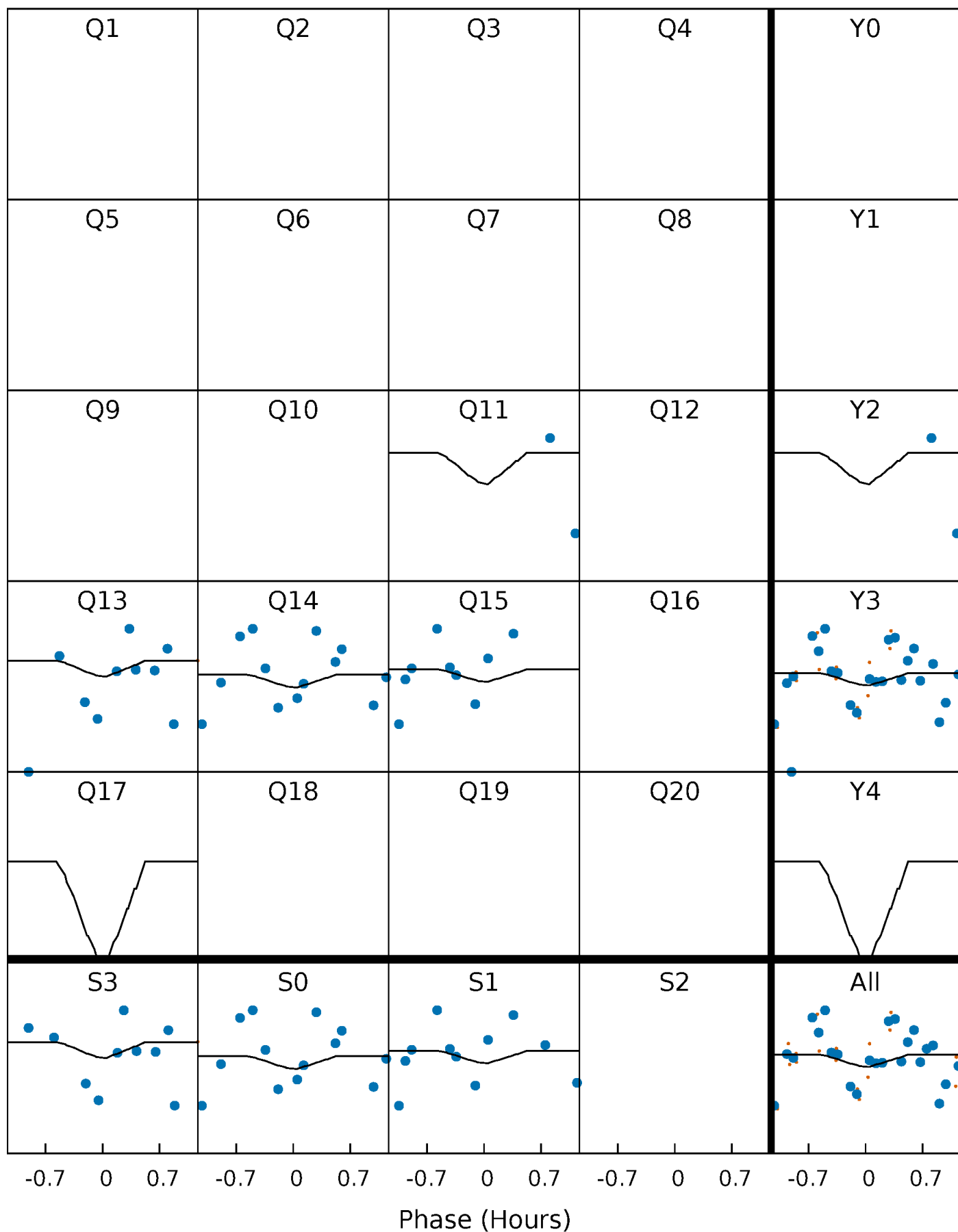
DV Quarter-Phased Transit Curves

TCE 011700604-07 P= 26.498446 Days $T_0=144.450780$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

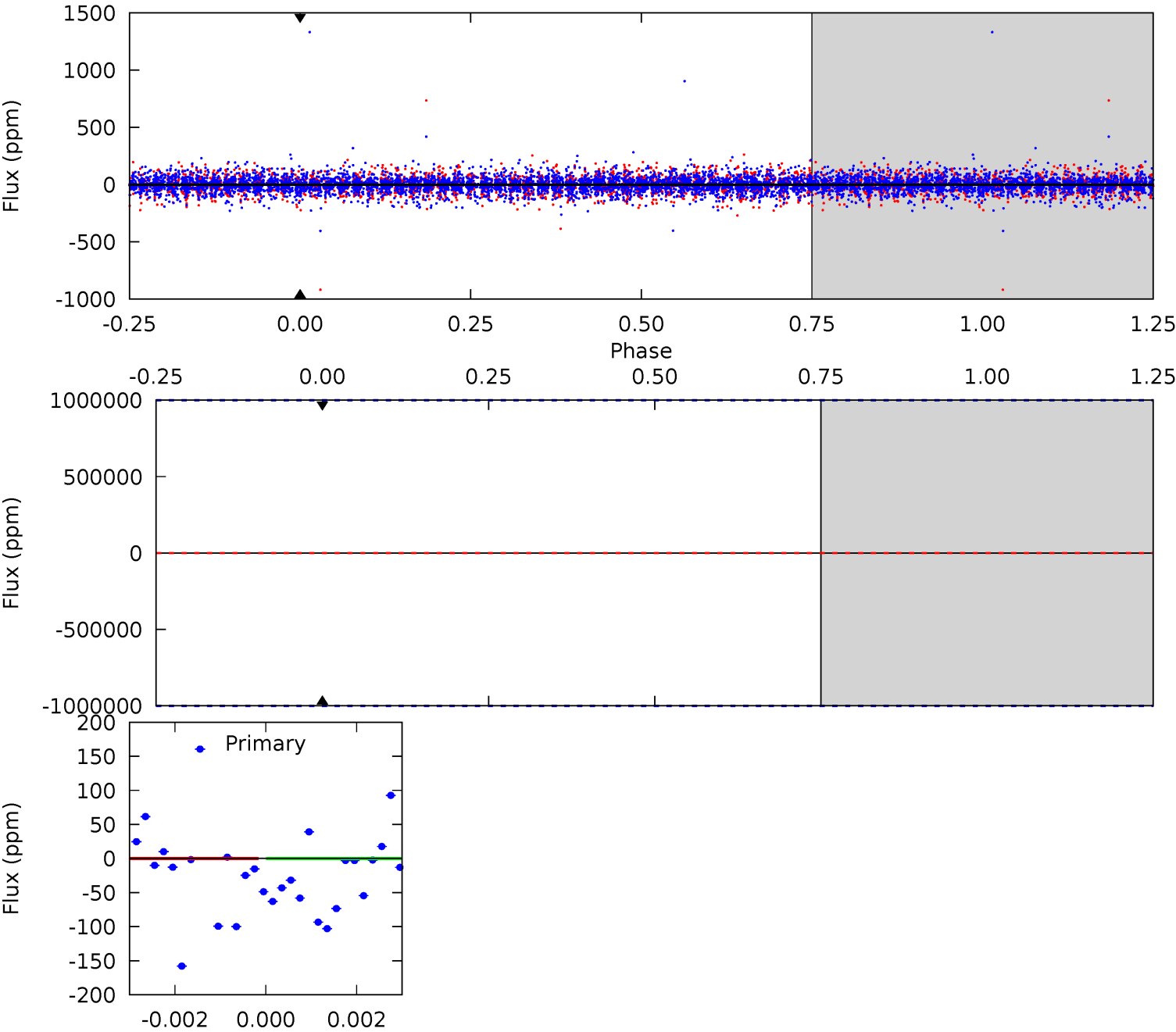
TCE 011700604-07 $P = 26.498446$ Days $T_0 = 144.349864$ (BKJD)



DV Model-Shift Uniqueness Test

011700604-07, P = 26.498446 Days, E = 117.952334 Days

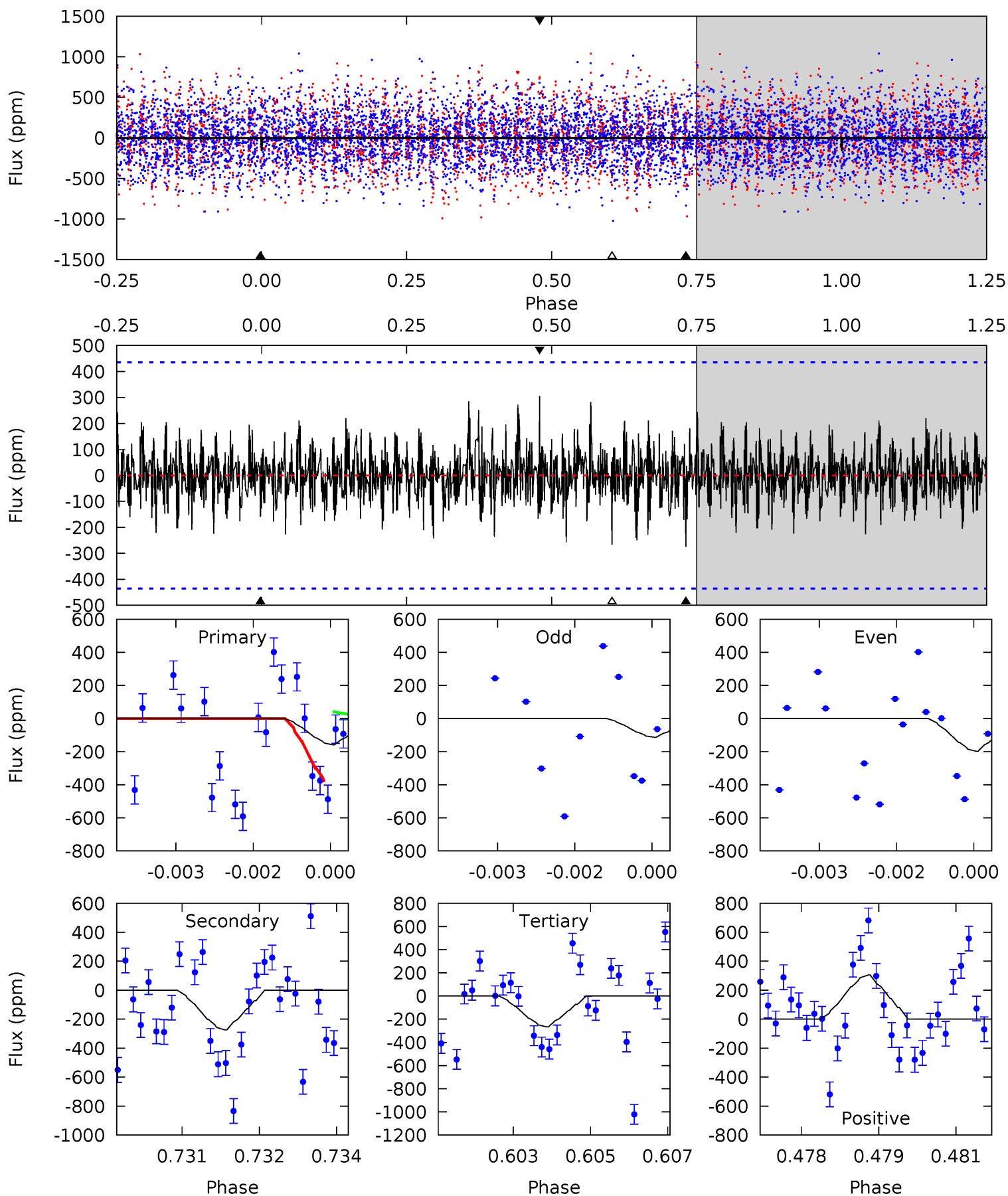
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011700604-07, P = 26.498446 Days, E = 117.851418 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.96	3.40	3.30	3.78	5.38	3.17	0.99	-1.33	-1.82	0.10	-0.38	0.52	0.94	0.53	2.10



Stellar Parameters For KIC 011700604

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7859^{+221}_{-332}	$3.859^{+0.360}_{-0.090}$	$-0.380^{+0.200}_{-0.300}$	$2.463^{+0.413}_{-0.963}$	$1.599^{+0.183}_{-0.275}$	$0.151^{+0.434}_{-0.044}$
	+3%/-4%	+9%/-2%	+53%/-79%	+17%/-39%	+11%/-17%	+288%/-29%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011700604-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$17.69^{+17.20}_{-13.08}$	1644^{+111}_{-165}	-5762^{+55221}_{-44867}	$-93.690^{+15424.300}_{-15609.142}$
Alt.	-275 ± 81	$16.88^{+18.85}_{-11.80}$	1636^{+119}_{-164}	4049^{+2715}_{-919}	22^{+220}_{-18}

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

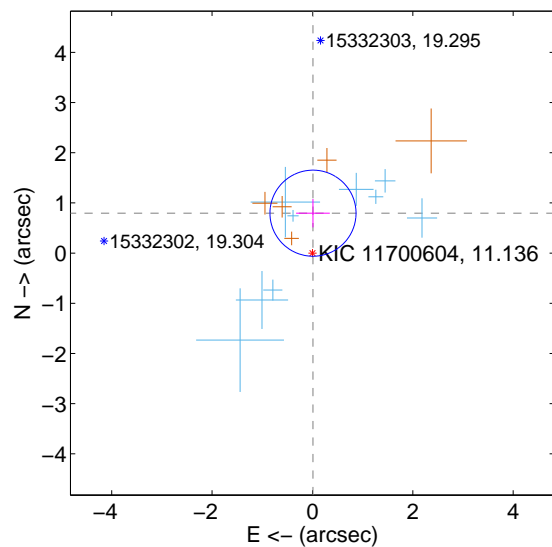
Supplemental centroid analysis for 011700604-07. **Kepler magnitude: 11.14.** Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

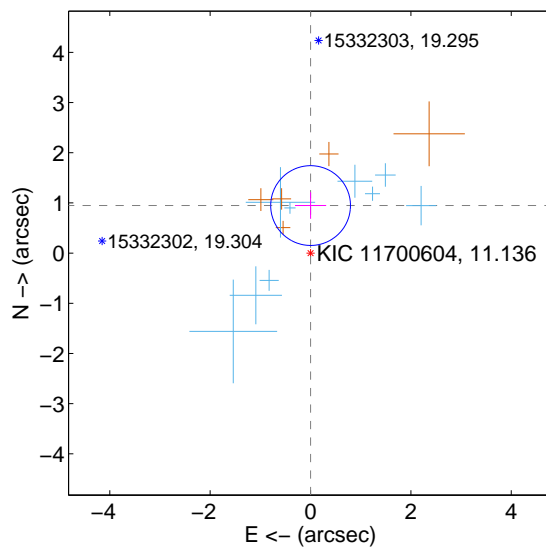
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.795 ± 0.286	2.78	-0.011 ± 0.335	0.795 ± 0.283
PRF-fit source offset from KIC position	0.947 ± 0.265	3.58	-0.001 ± 0.309	0.947 ± 0.265
photometric centroid source offset	0.77 ± 1.08	0.72	0.77 ± 1.08	0.02 ± 1.16

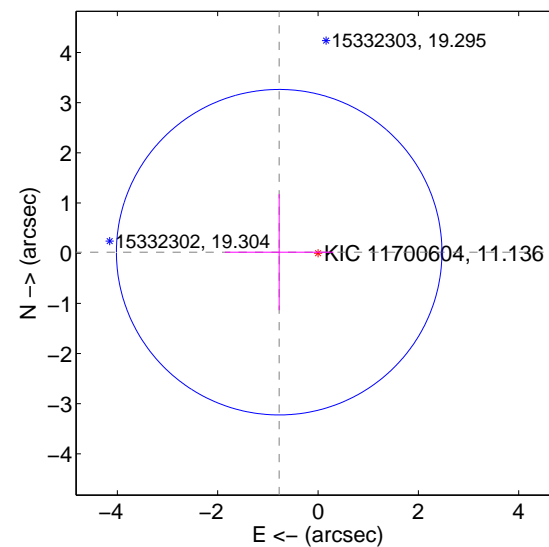
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

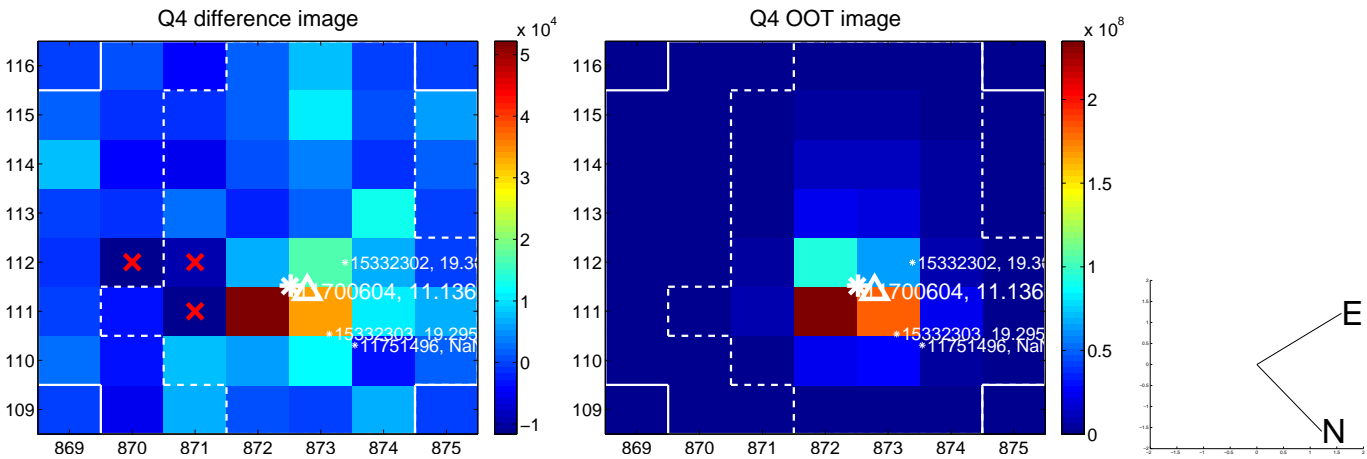
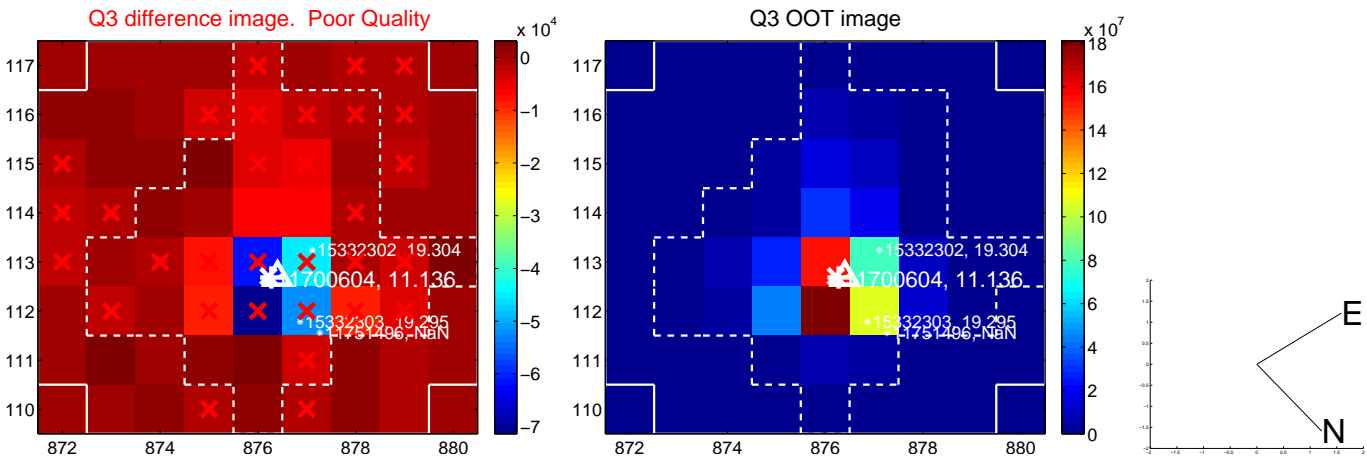
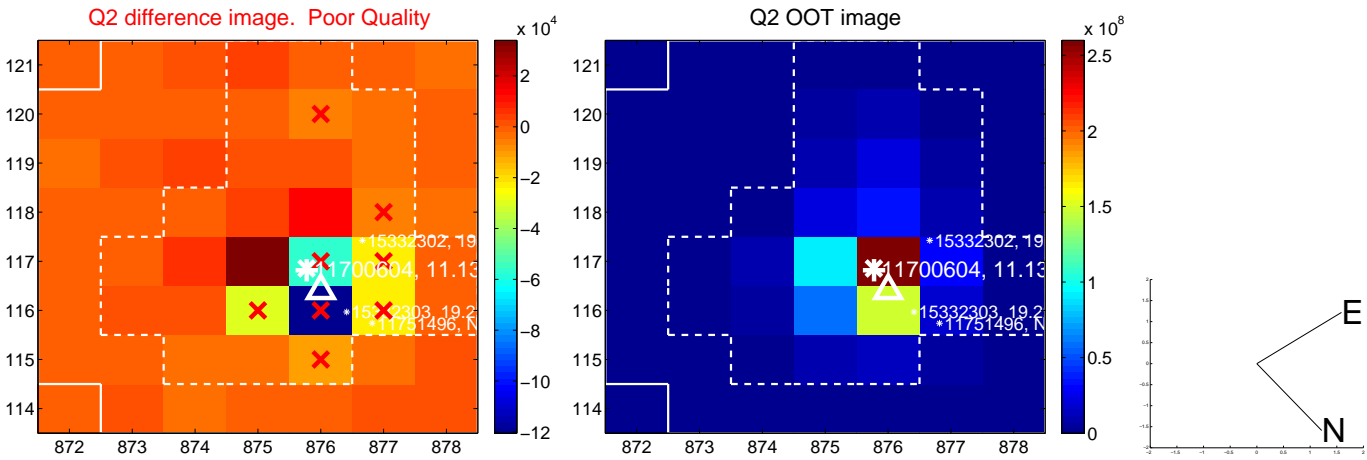
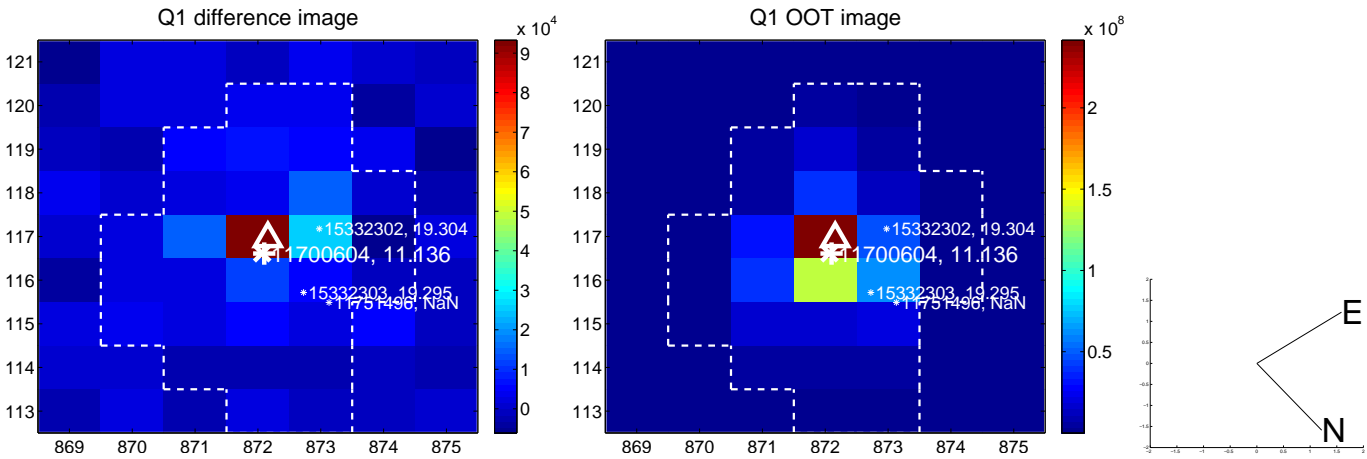


offset from photometric centroids

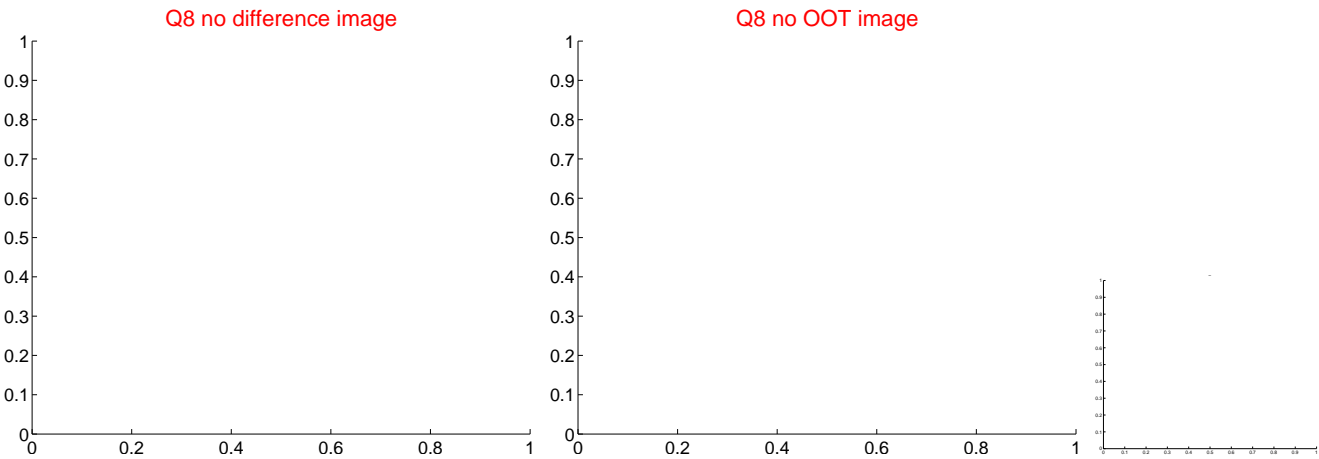
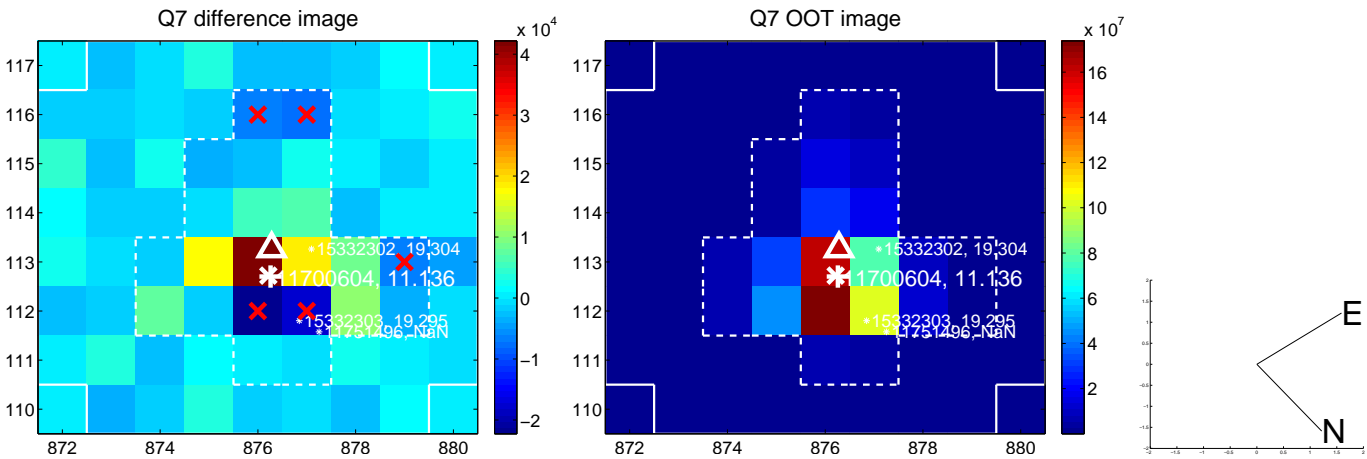
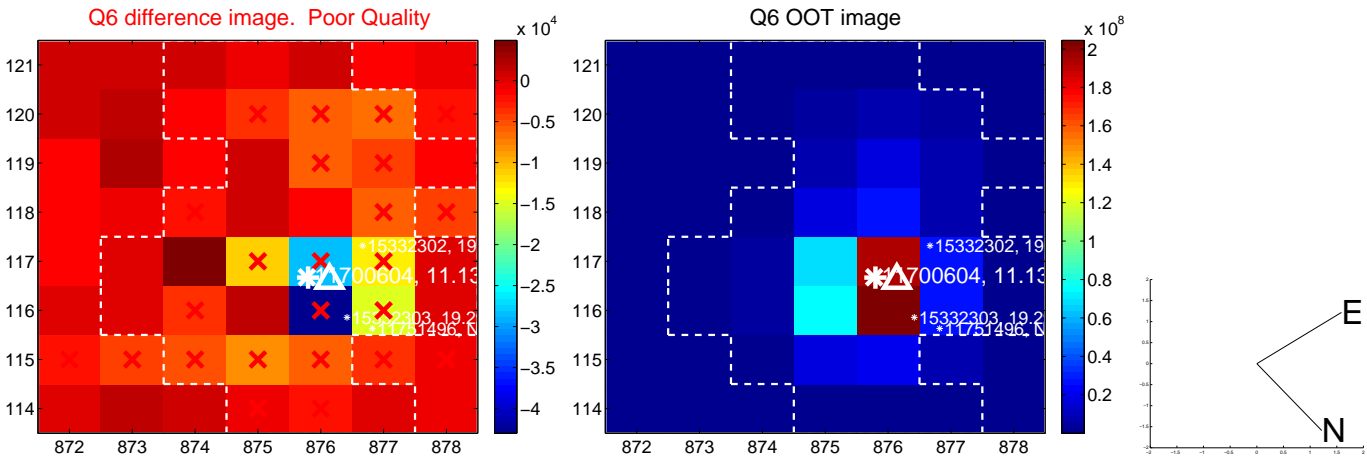
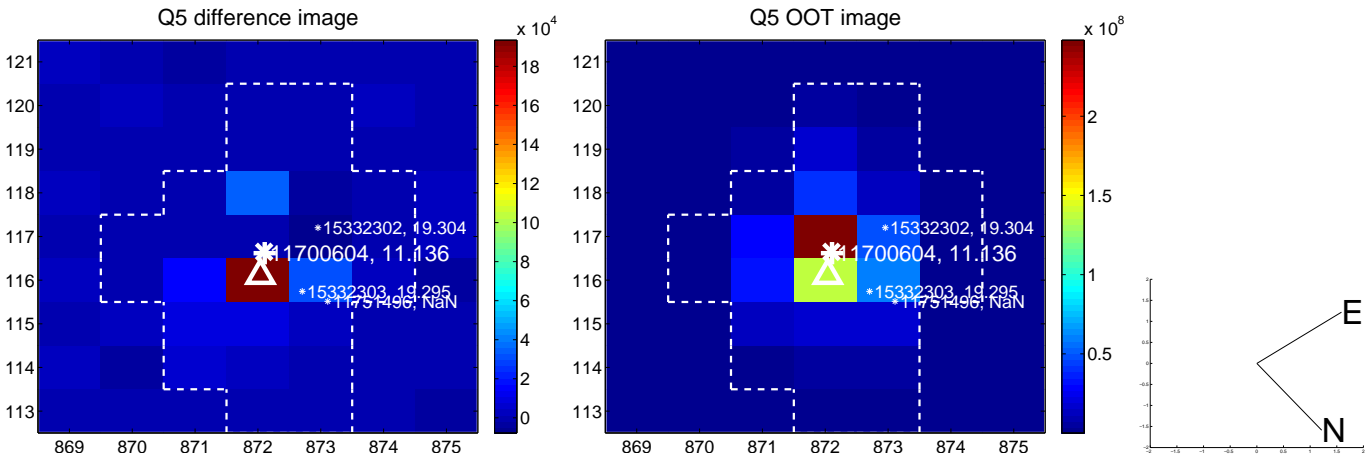


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

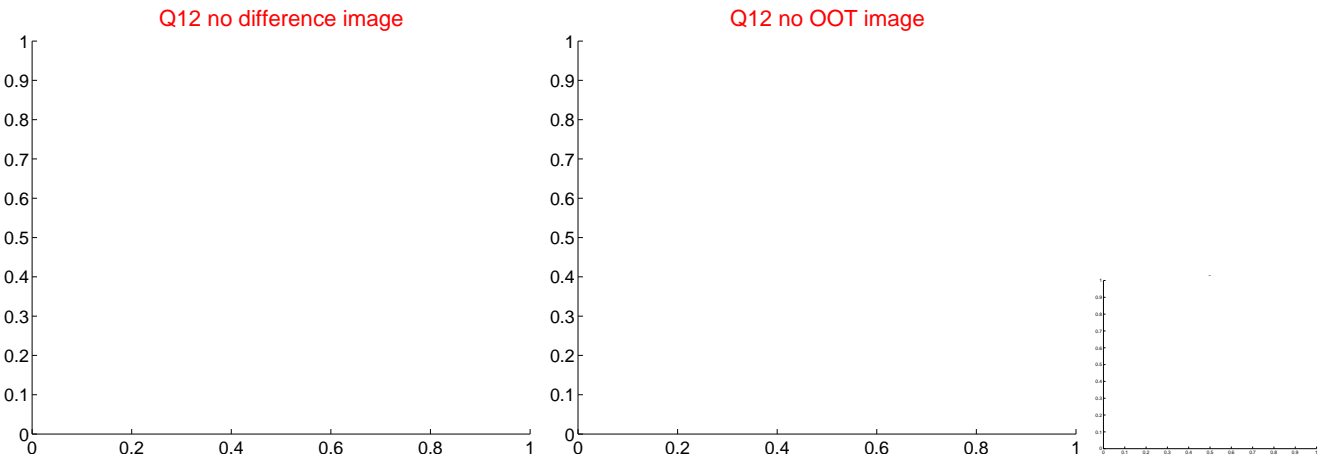
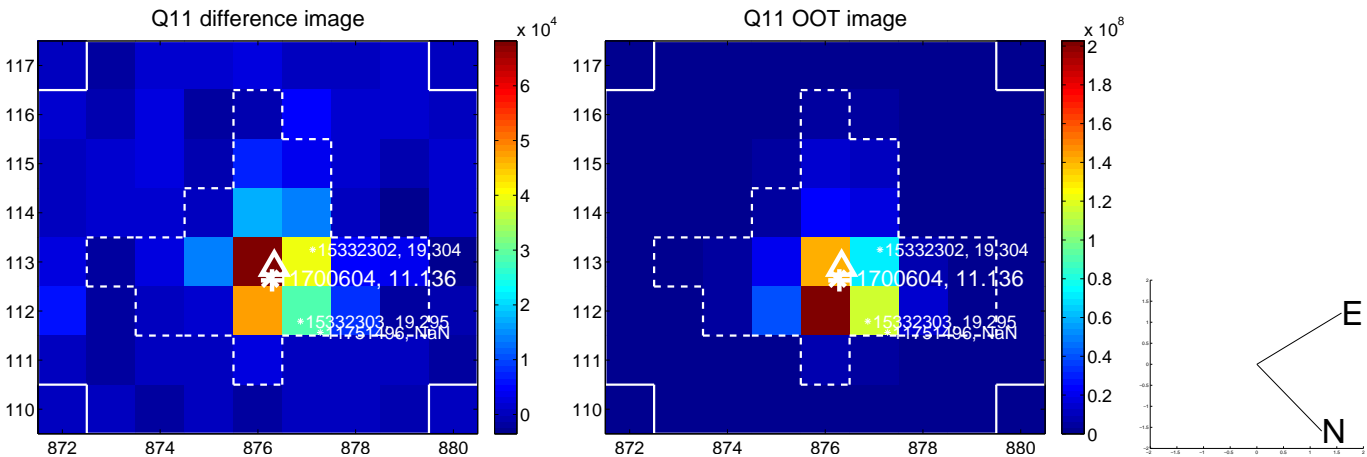
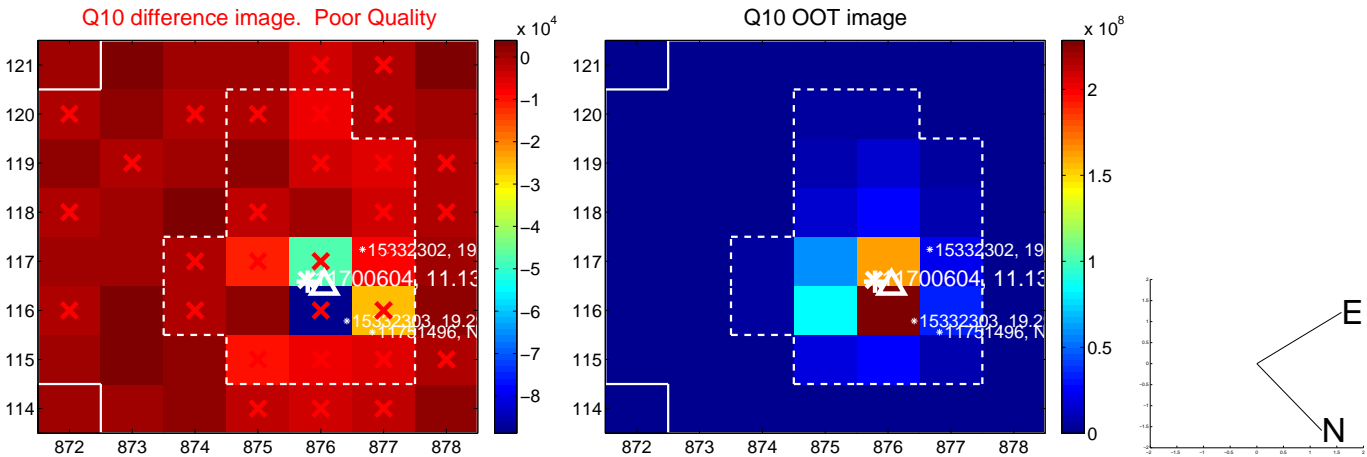
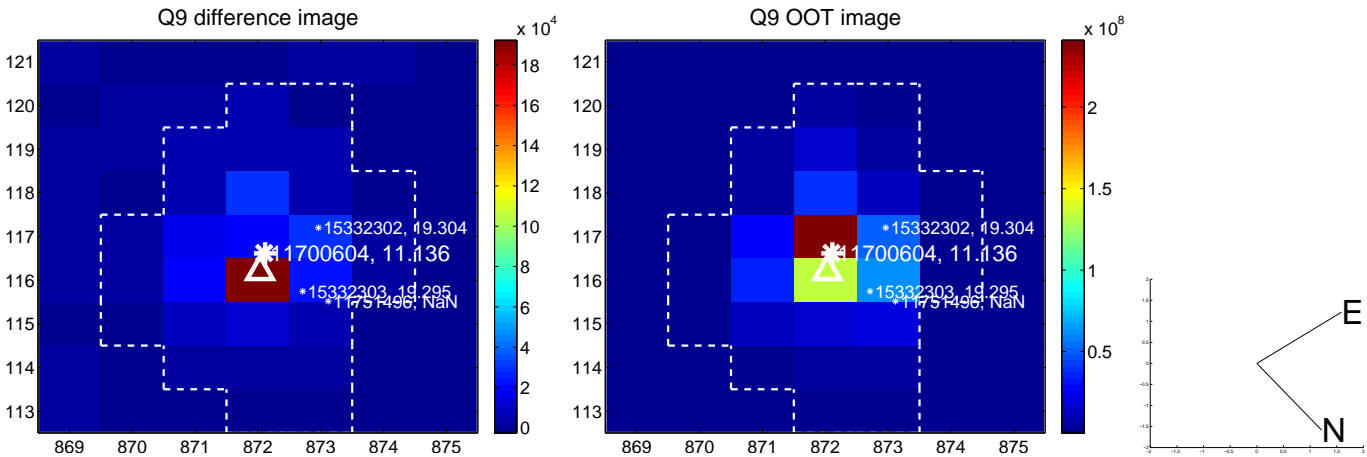
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



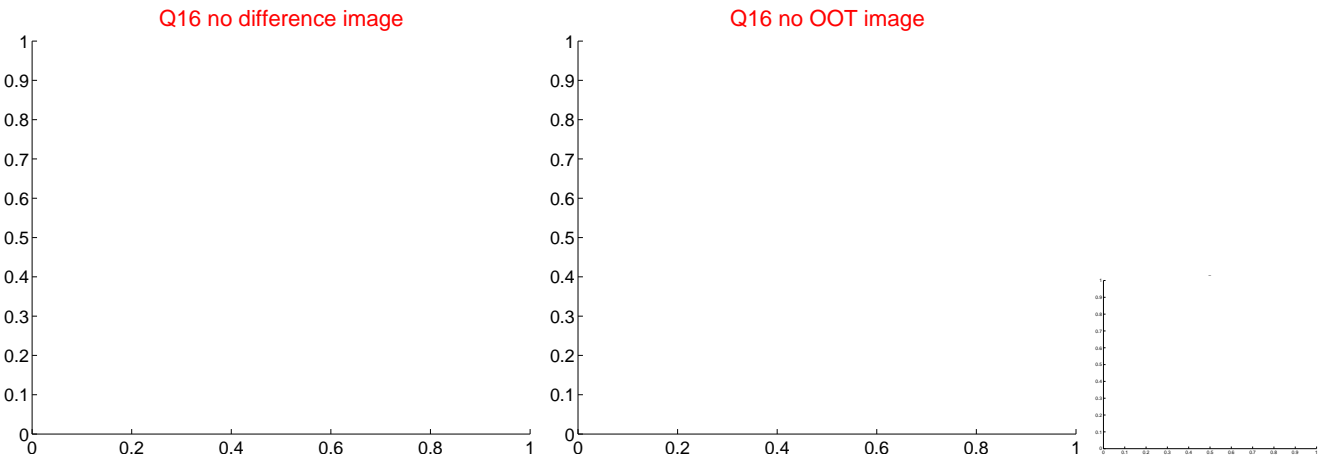
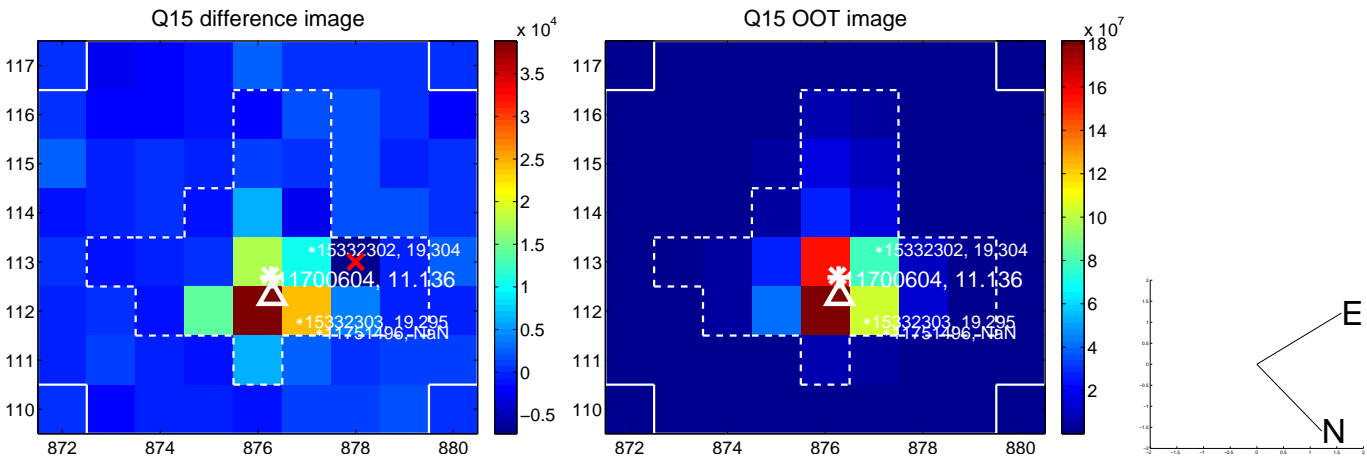
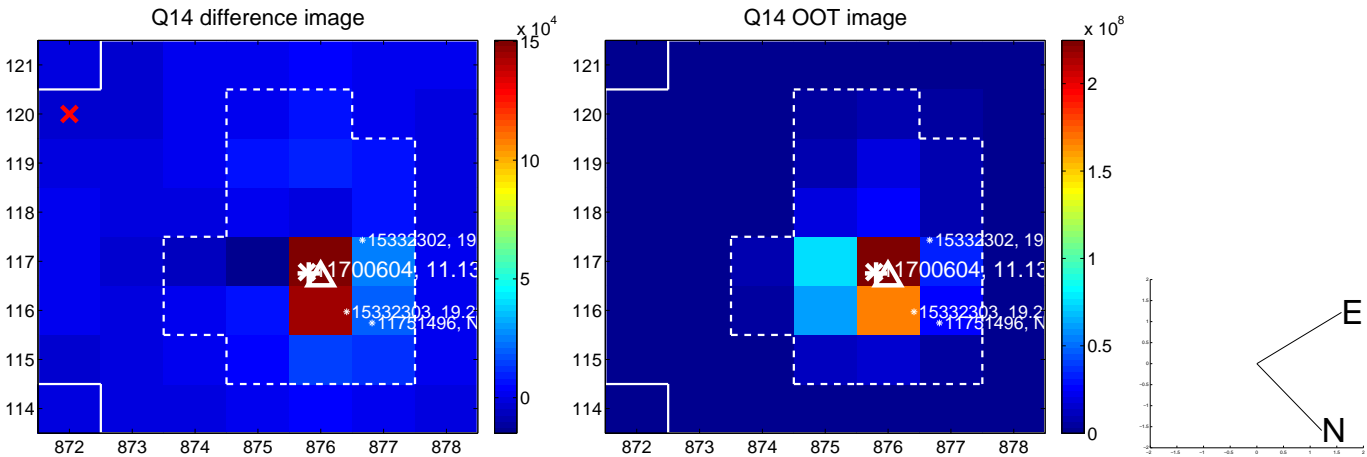
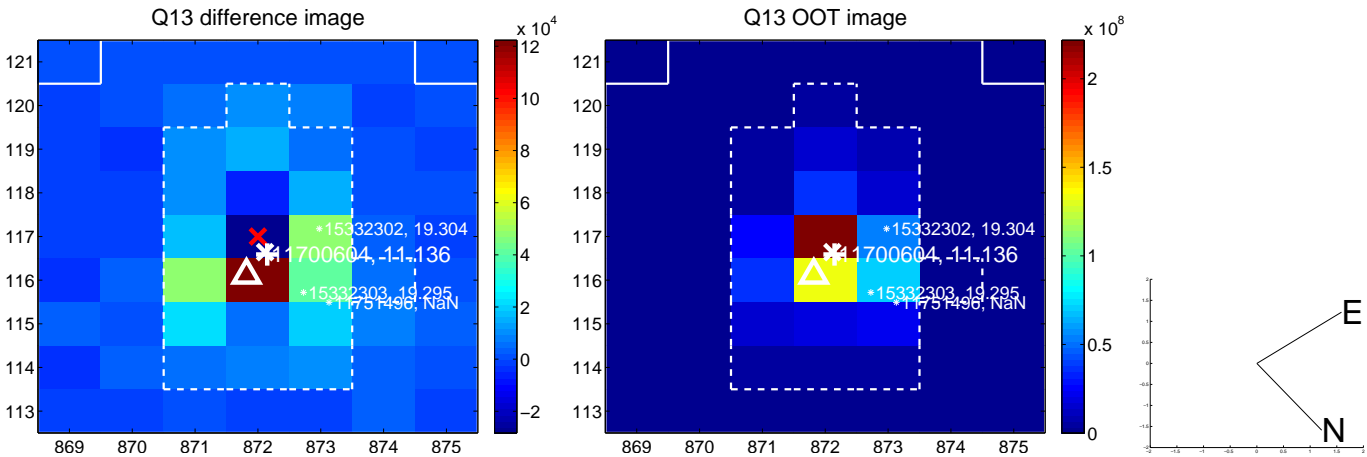
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



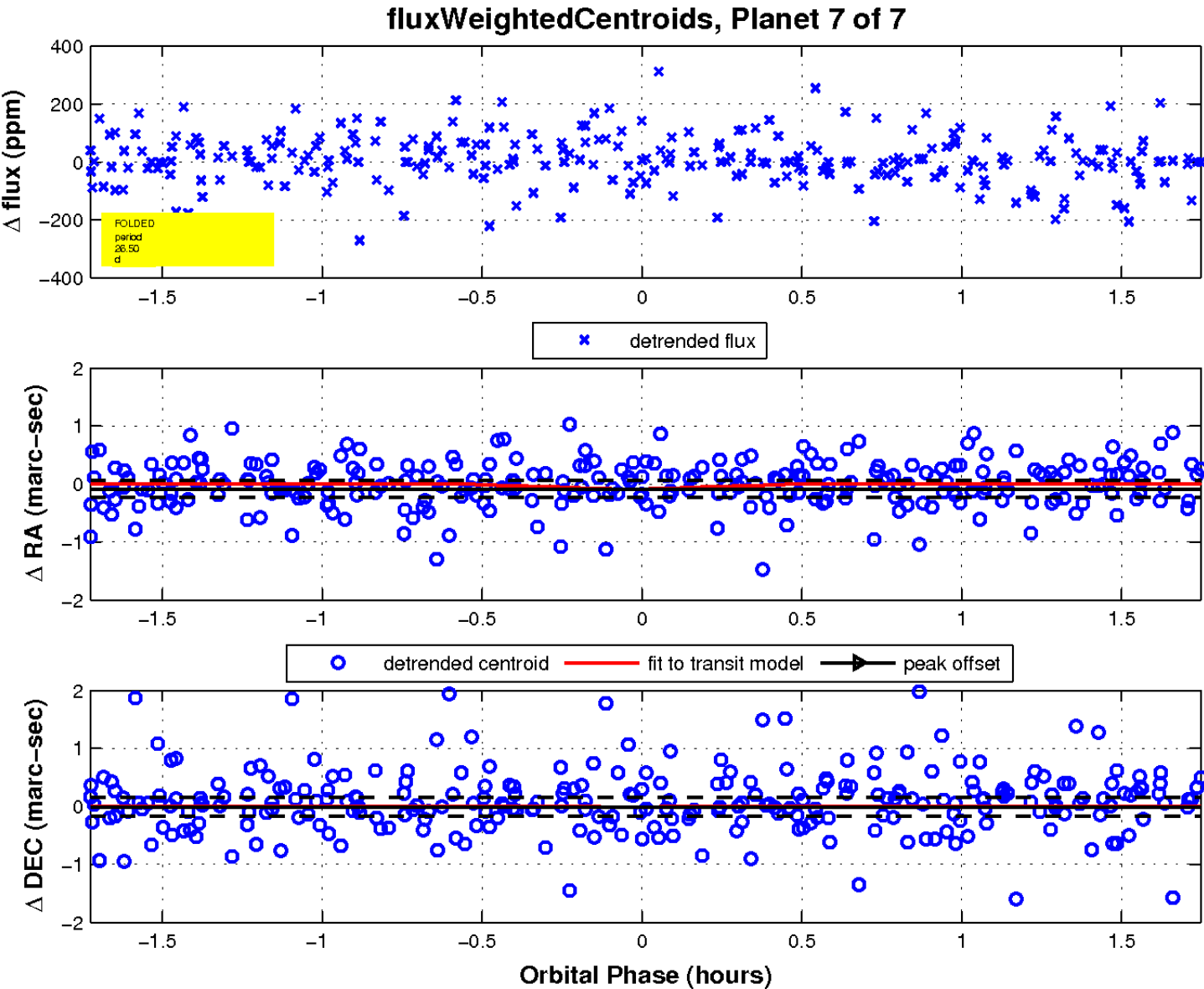
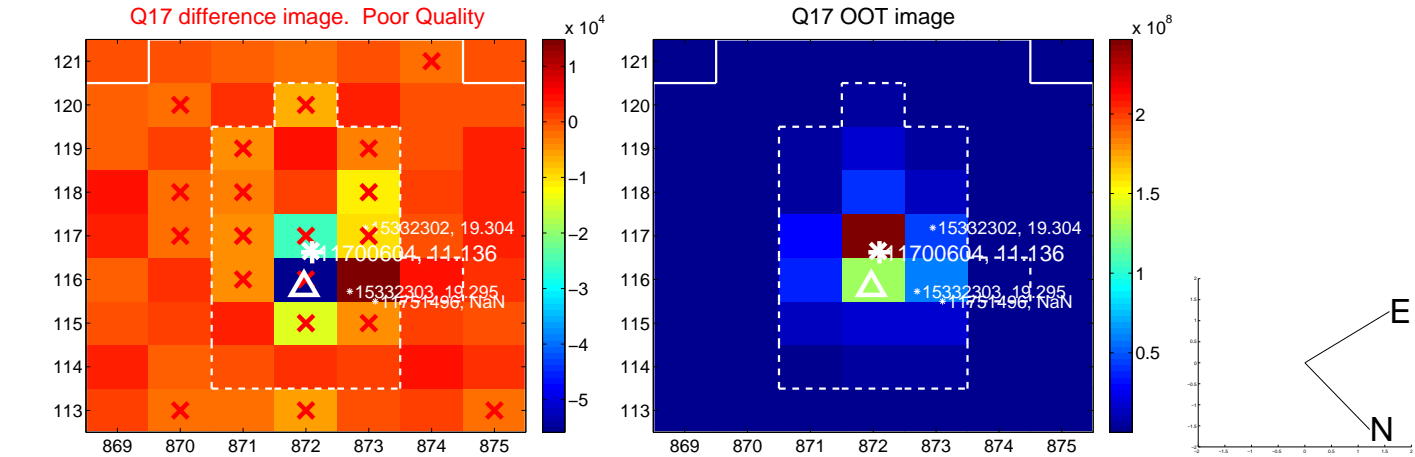
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

