

KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

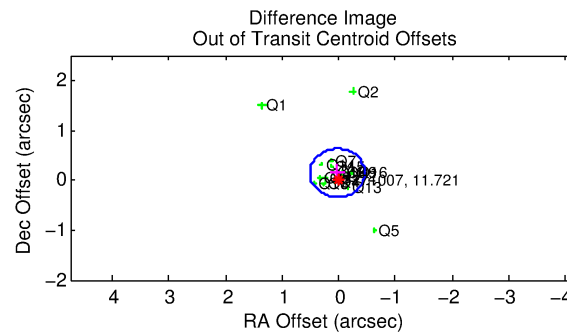
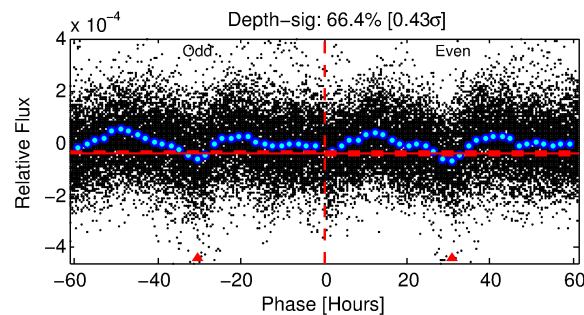
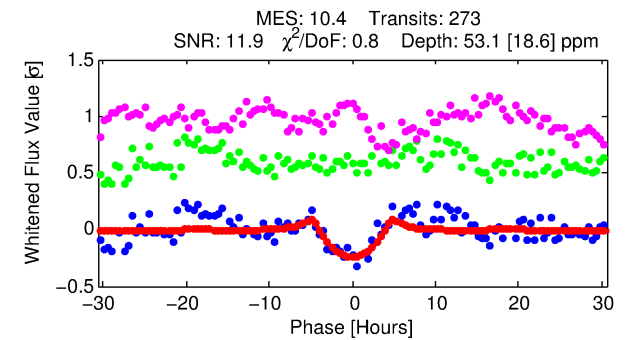
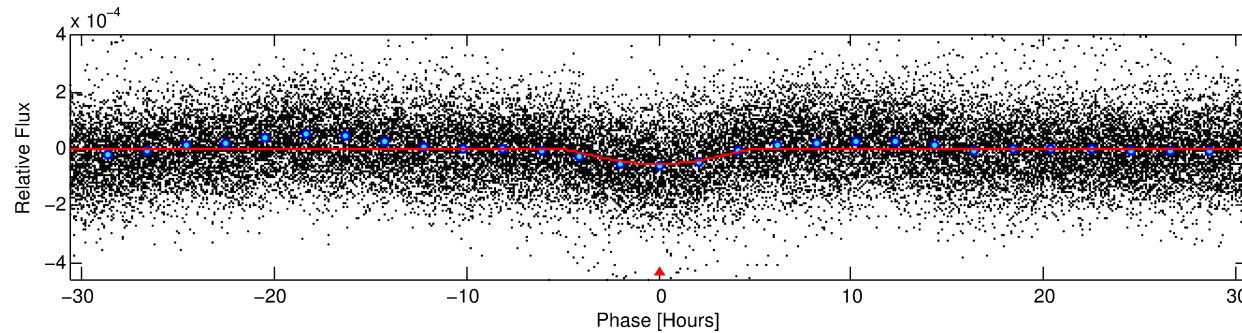
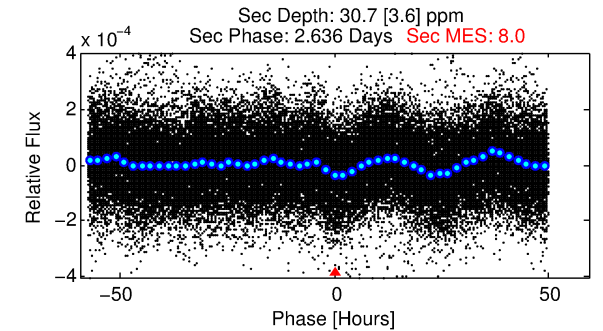
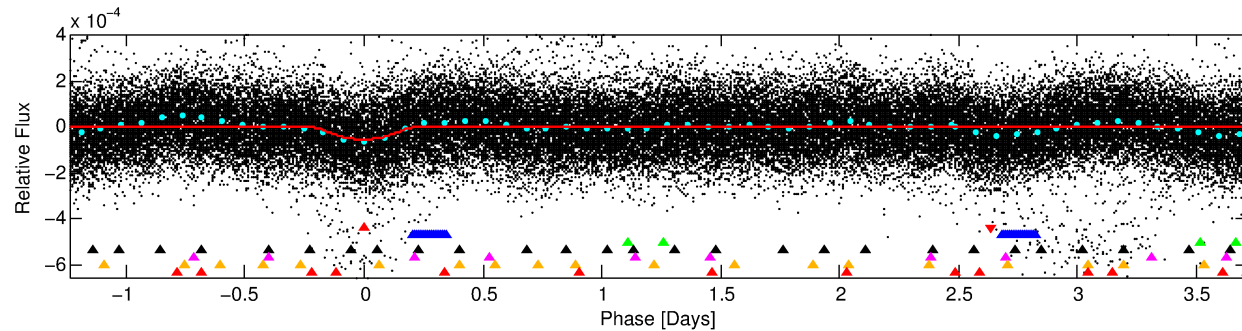
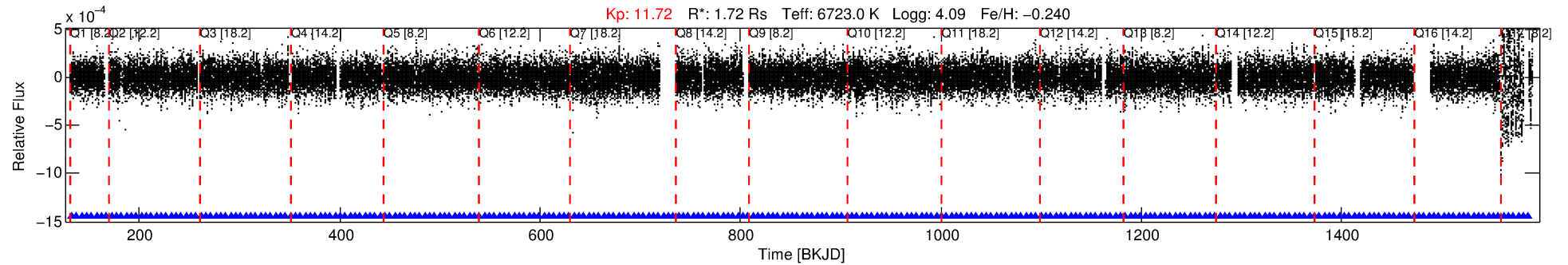
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-01

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 1 of 7 Period: 4.960 d



DV Fit Results:

Period = 4.95995 [0.00008] d
Epoch = 132.8780 [0.0133] BKJD
 R_p/R^* = 0.0112 [0.0059]
 a/R^* = 1.19 [0.06]
 b = 1.00 [0.01]
 S_{eff} = 1384.72 [638.61]
 T_{eq} = 1555 [179] K
 R_p = 2.10 [1.29] R_e
 a = 0.0625 [0.0179] AU
 A_g = 15.00 [17.12] [0.82σ]
 T_{eff} = 4733 [1262] K [2.49σ]

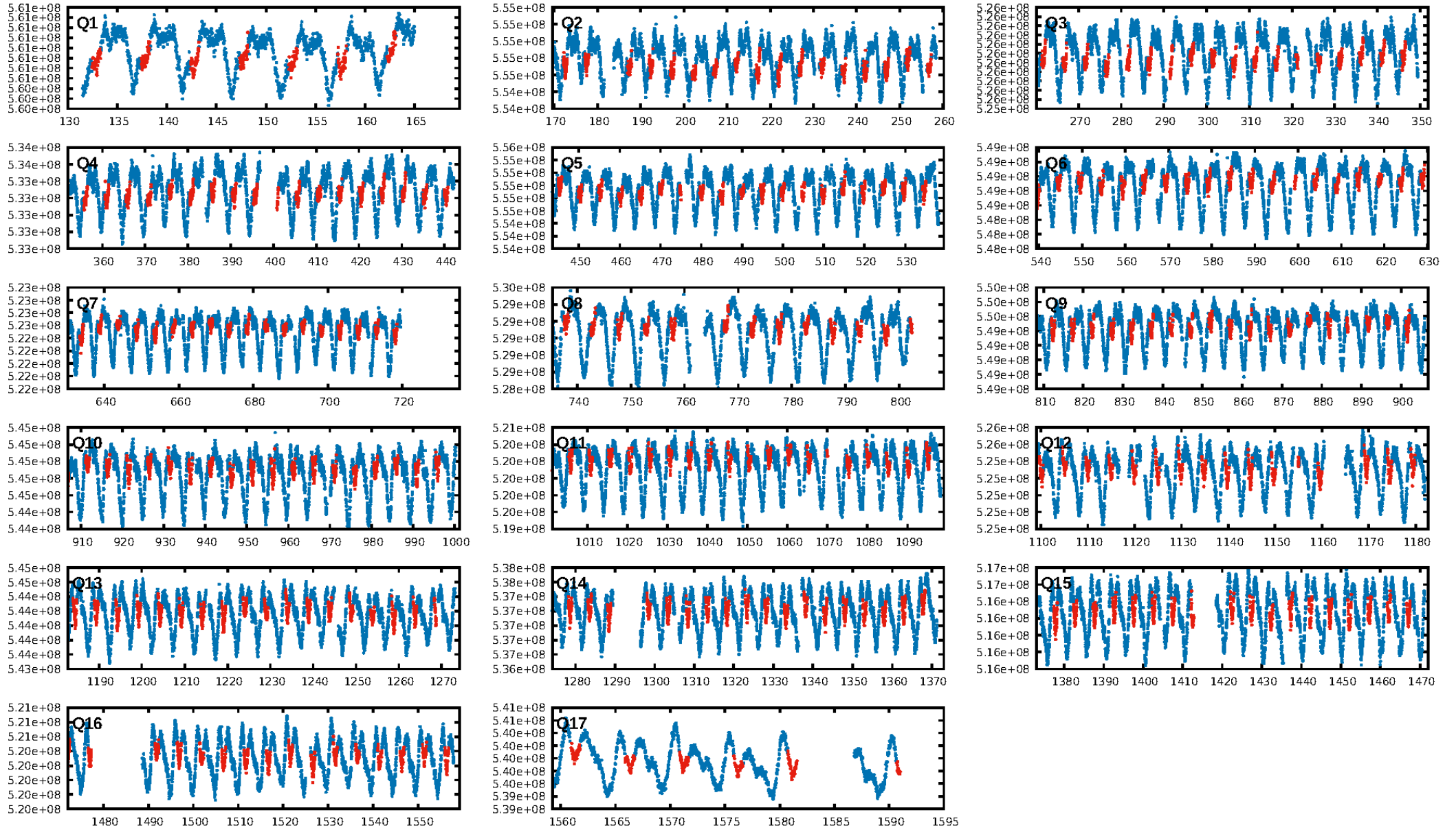
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.83σ]
LongPeriod-sig: 100.0% [102.41σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [260/260]
GhostDiagnostic-chr: 6.003
Centroid-sig: 0.2%
Centroid-so: 0.625 arcsec [1.96σ]
OotOffset-rm: 0.147 arcsec [0.91σ]
KicOffset-rm: 0.175 arcsec [1.03σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

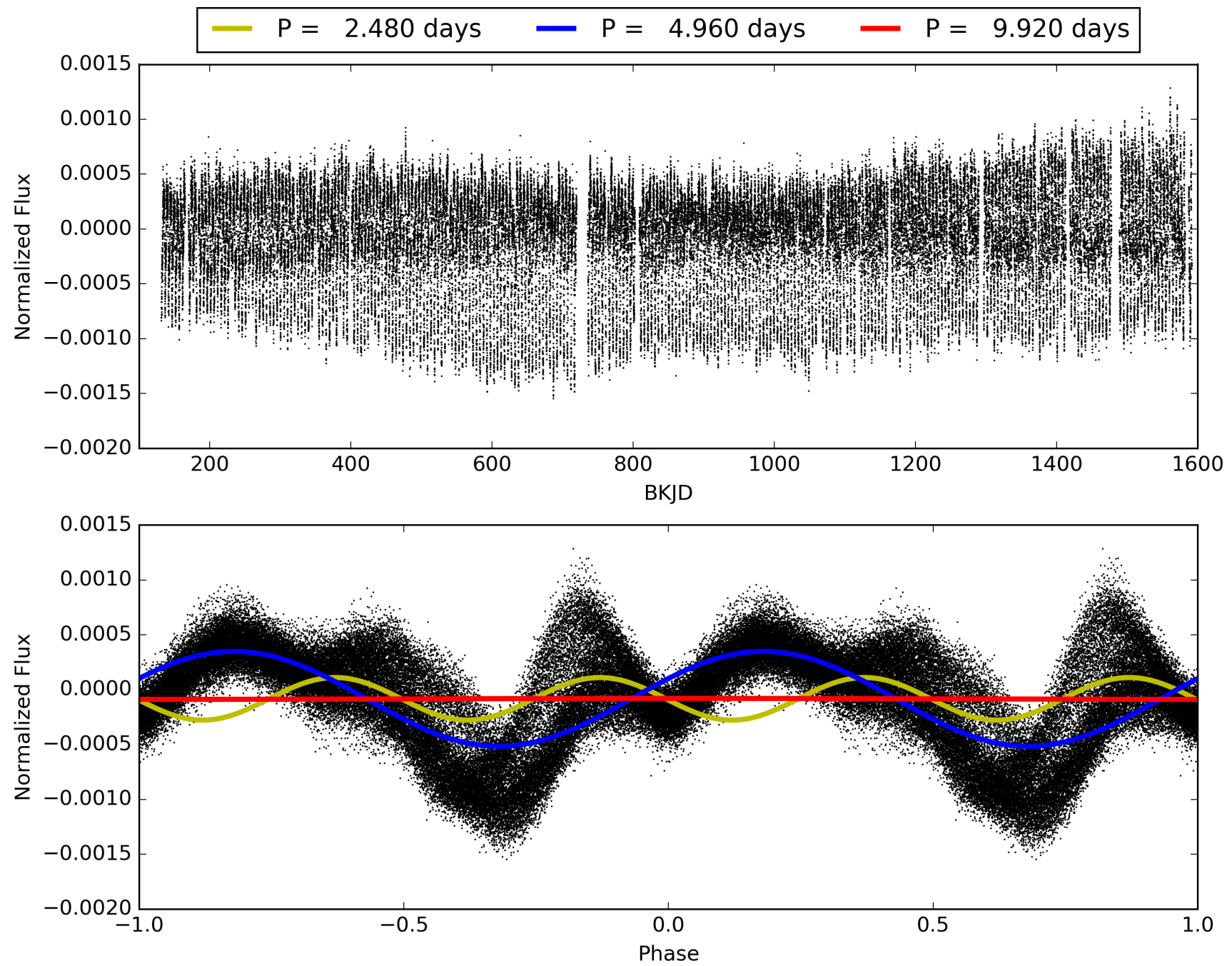
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:41:40 Z

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

TCE 007271007-01, PDC Light Curves

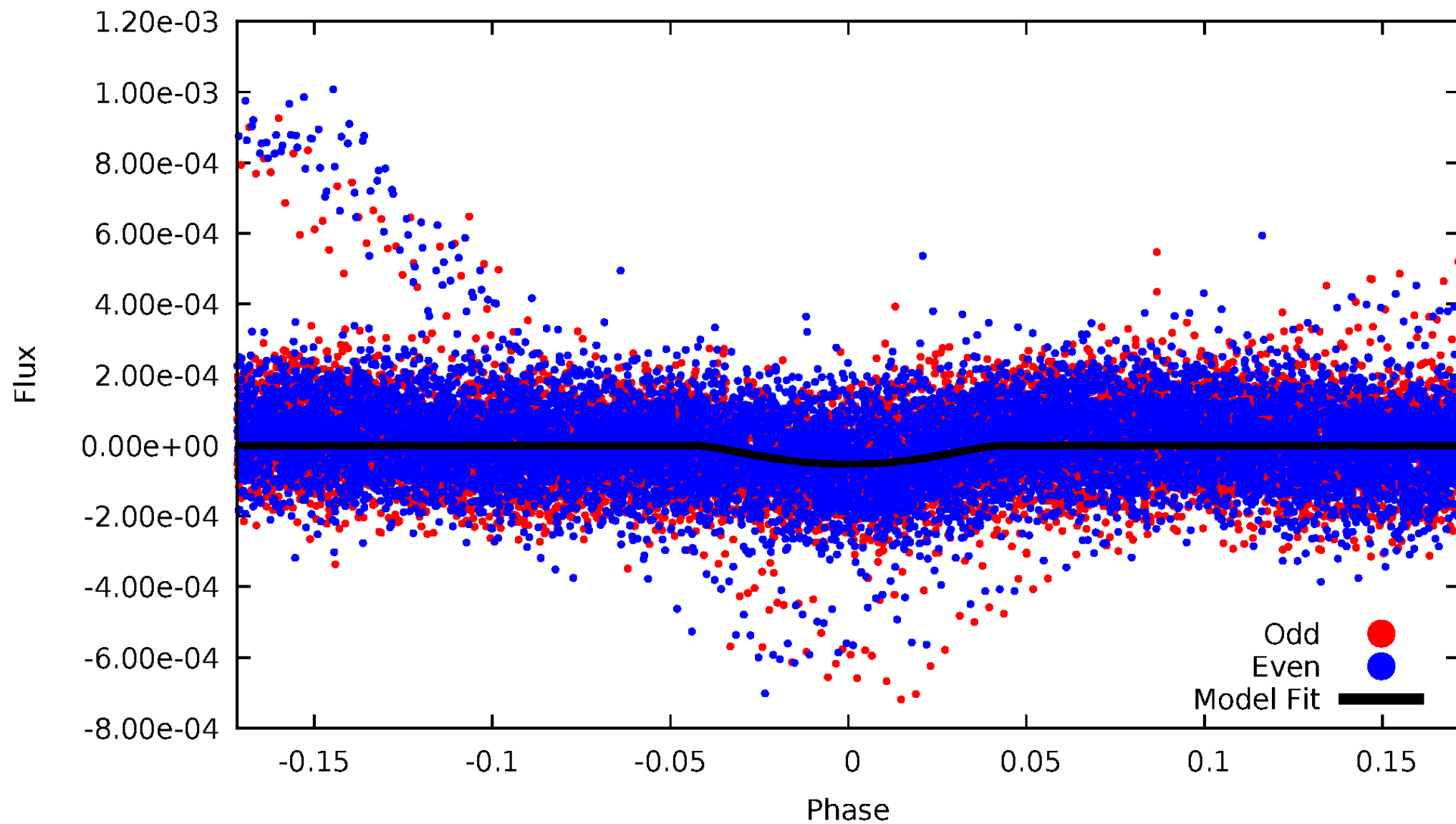


TCE 007271007-01



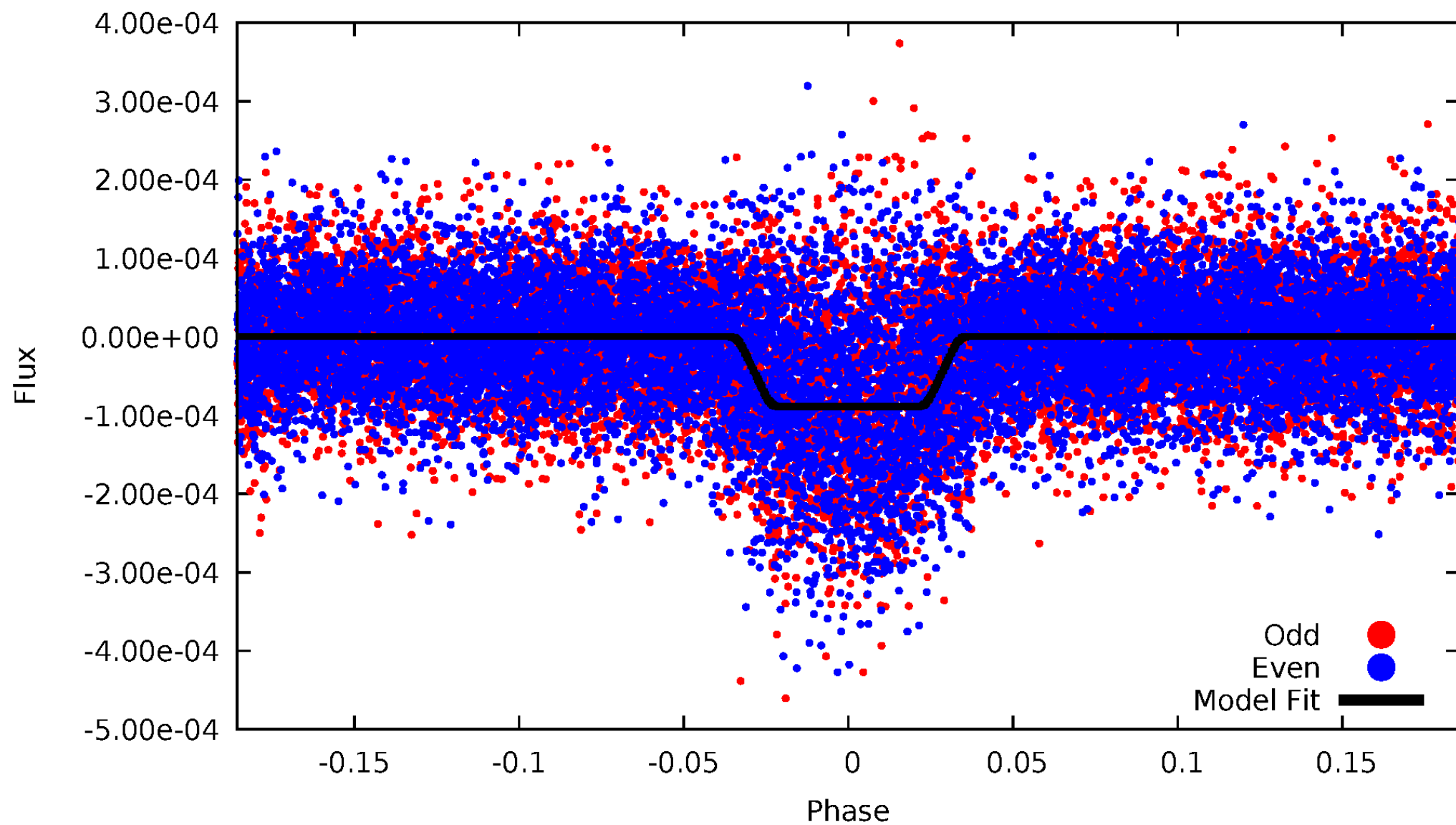
DV Odd/Even

TCE 007271007-01



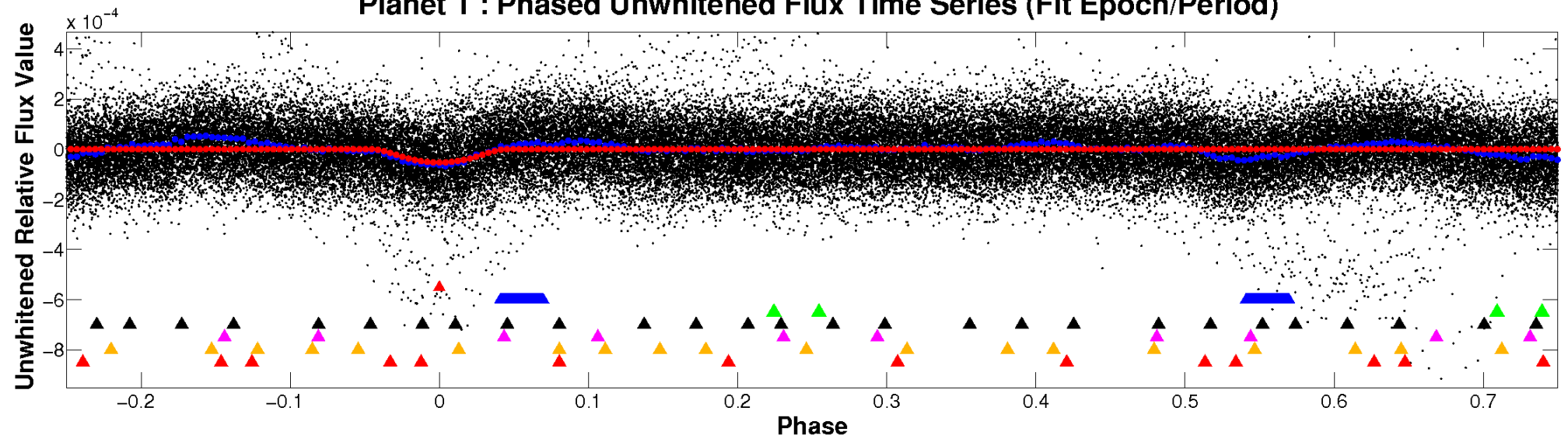
ALT Odd/Even

TCE 007271007-01

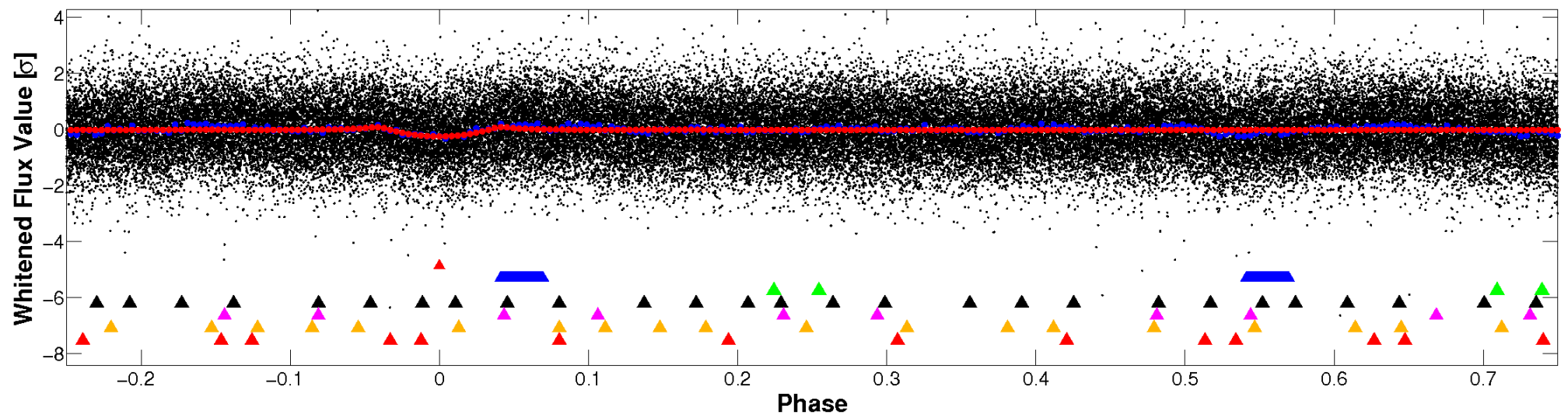


Non-Whitened Vs. Whitened Light Curve

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

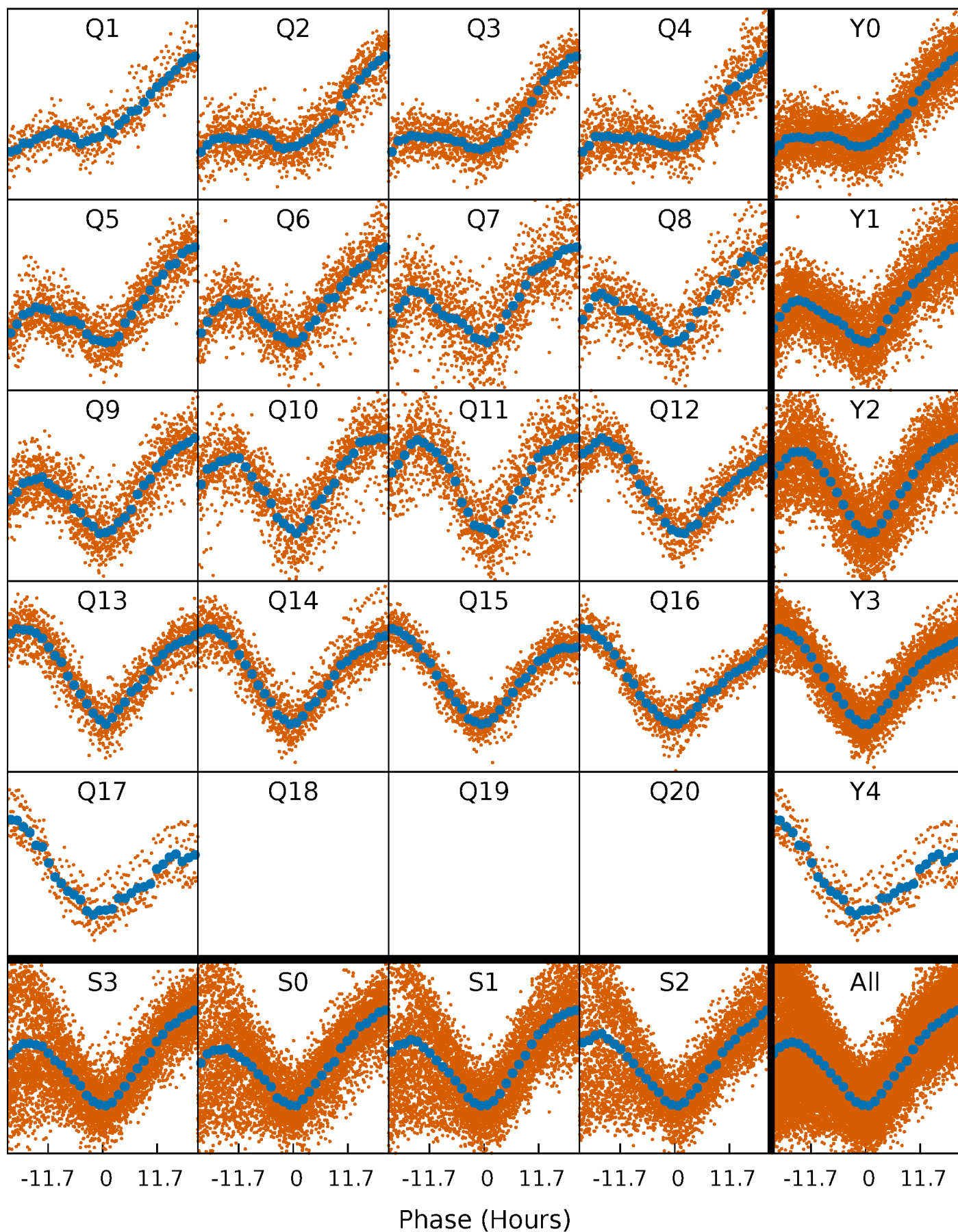


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



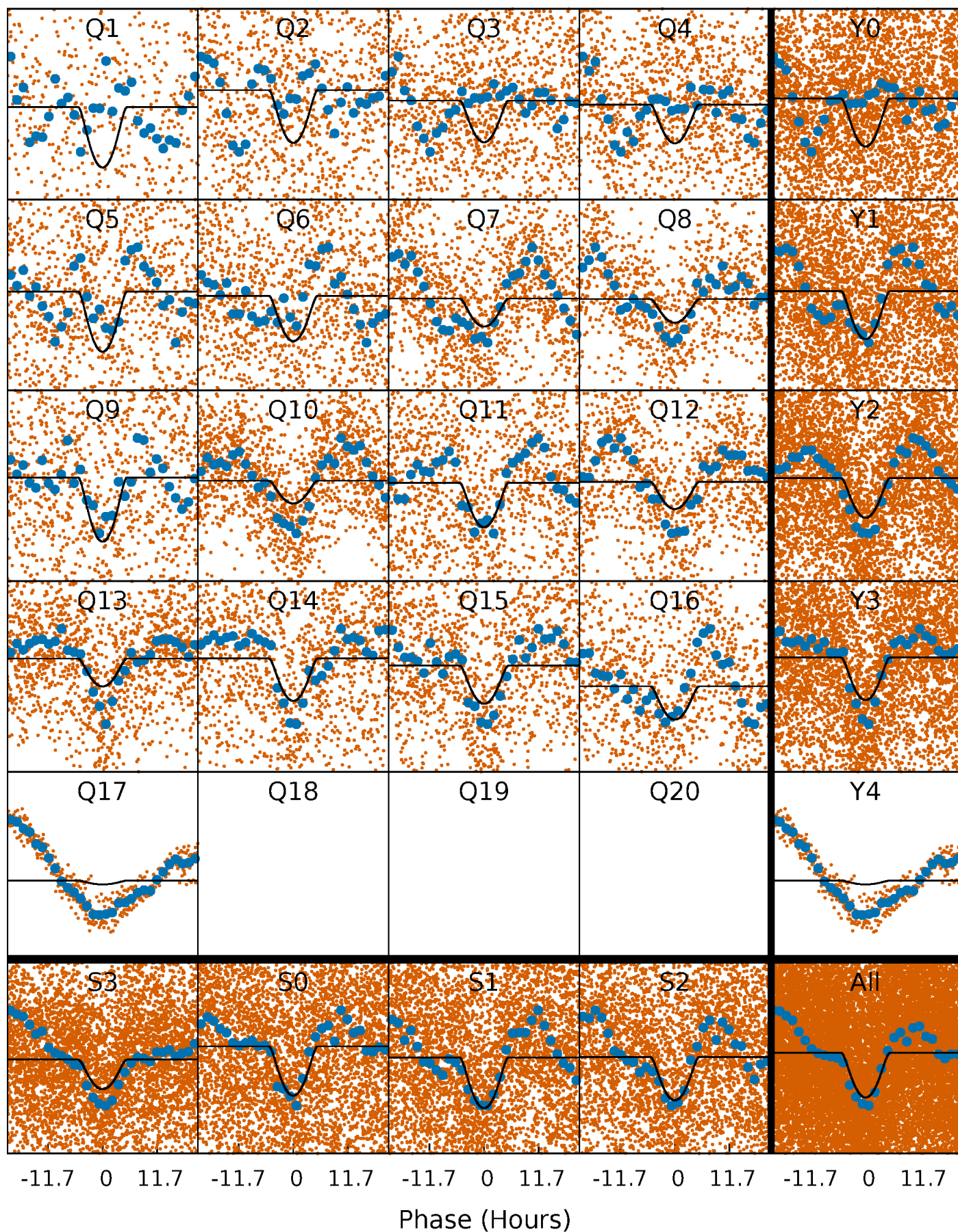
PDC Quarter-Phased Transit Curves

TCE 007271007-01 P= 4.959954 Days $T_0=132.877992$ (BKJD)



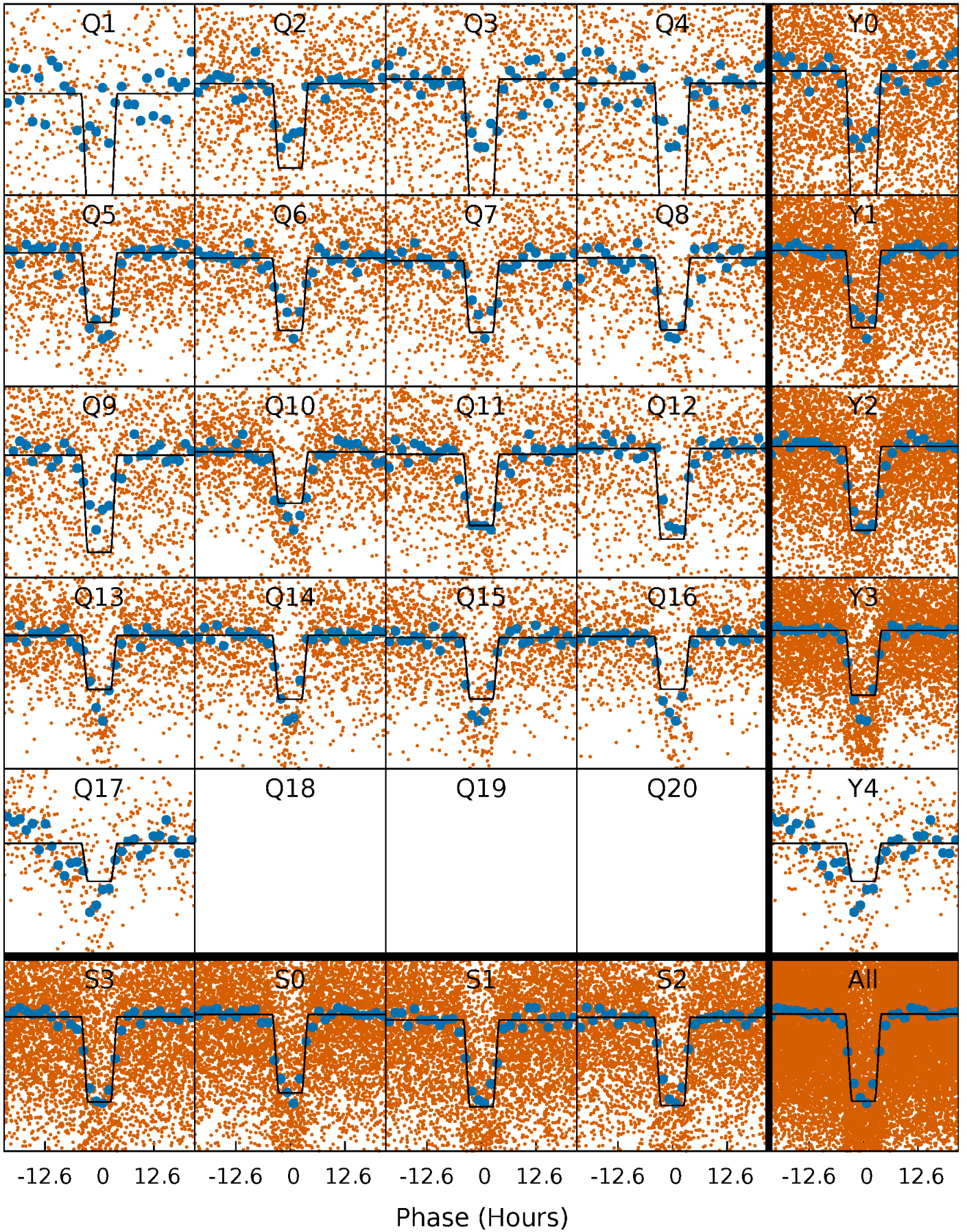
DV Quarter-Phased Transit Curves

TCE 007271007-01 P= 4.959954 Days $T_0=132.877992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

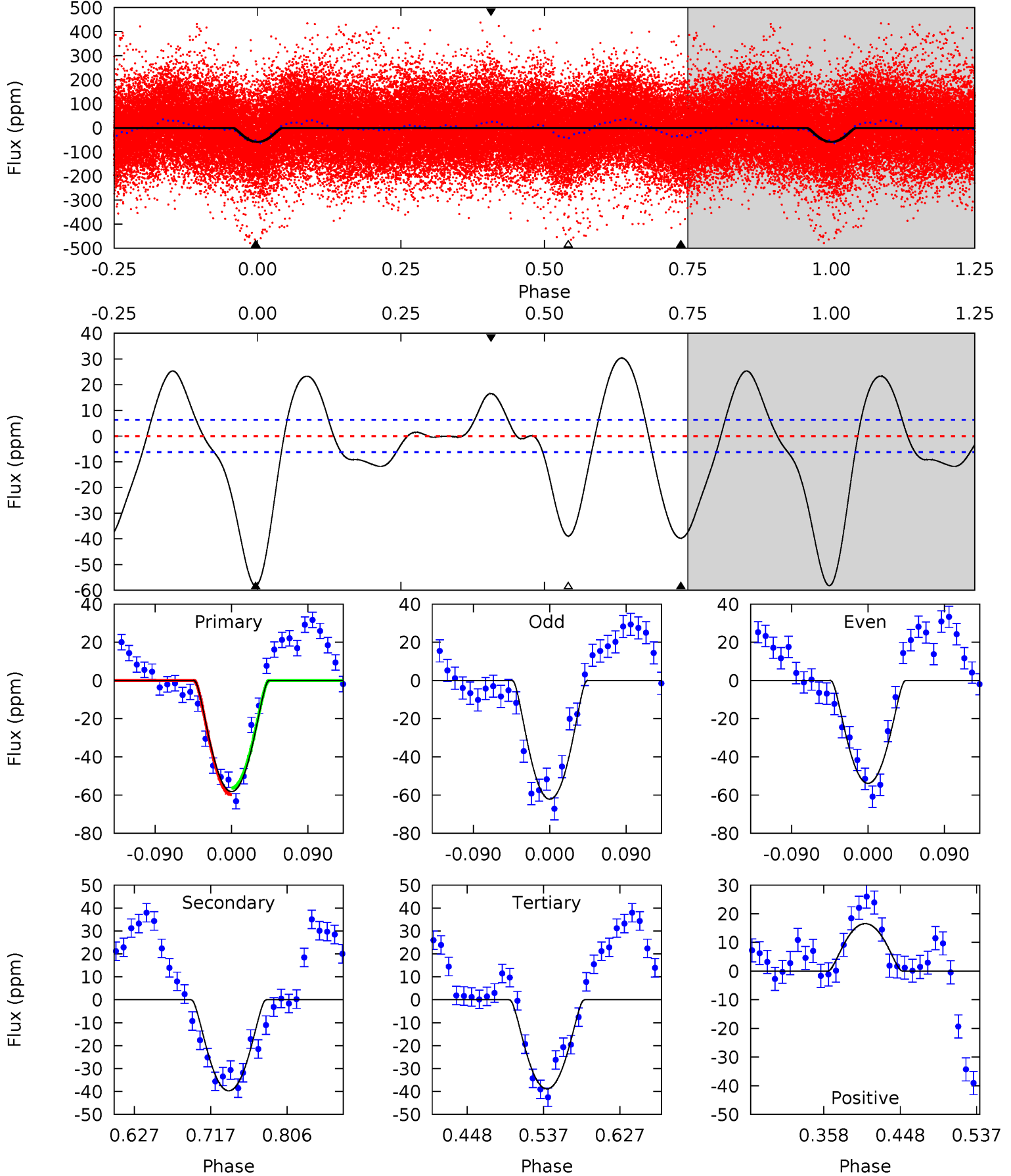
TCE 007271007-01 P= 4.959889 Days $T_0=132.882319$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-01, P = 4.959954 Days, E = 127.918038 Days

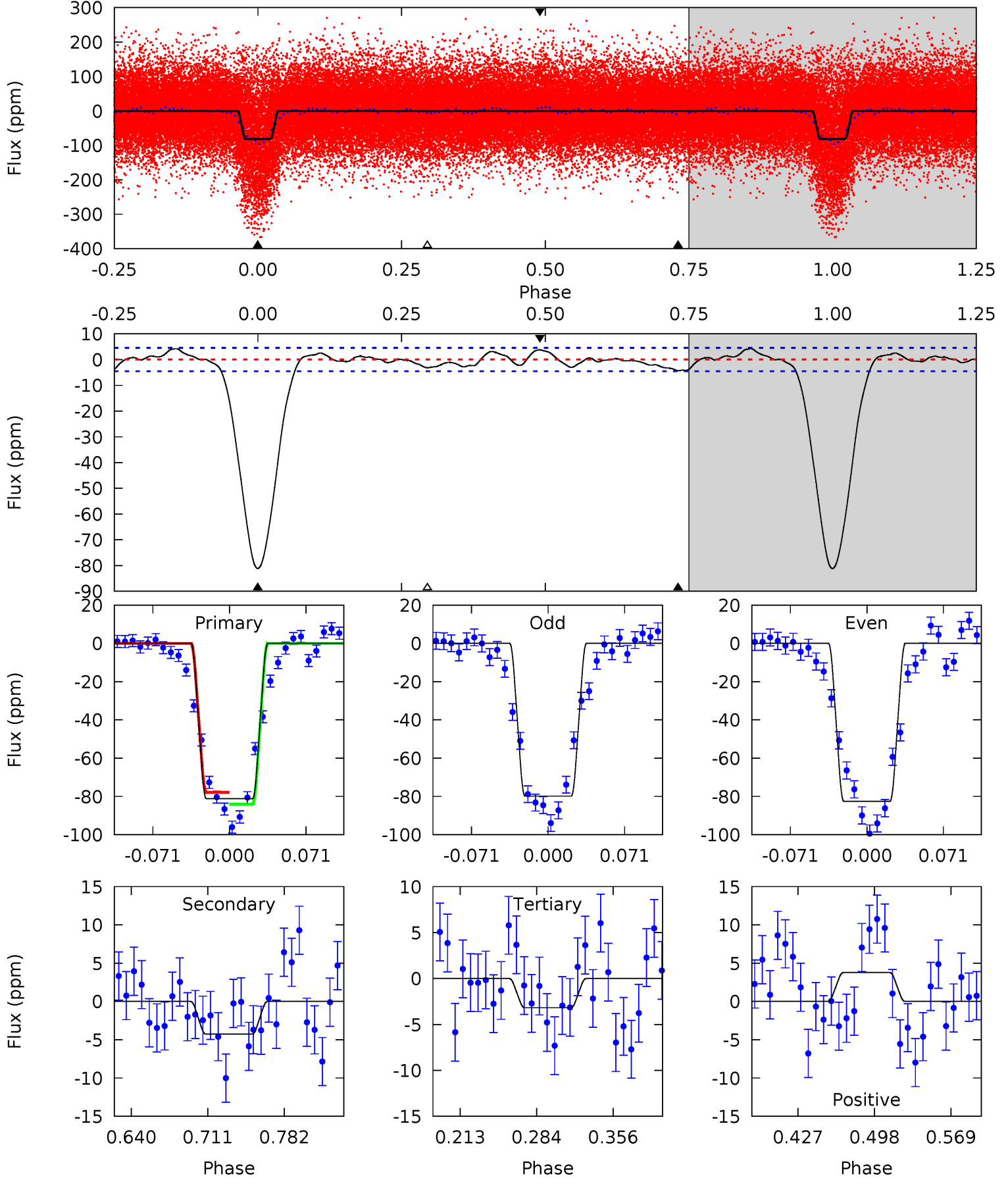
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.5	29.0	28.4	12.1	4.59	1.70	11.4	14.1	30.4	0.60	16.9	3.06	1.08	0.34	1.24



Alt Model-Shift Uniqueness Test

007271007-01, P = 4.959889 Days, E = 127.922430 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
83.1	4.37	3.26	3.88	4.64	1.80	1.82	79.8	79.2	1.11	0.49	1.37	0.95	0.05	3.19



Stellar Parameters For KIC 007271007

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-40 ± 1	$2.08^{+1.14}_{-1.05}$	2154^{+174}_{-179}	5030^{+2032}_{-790}	20^{+57}_{-11}
Alt.	-4 ± 1	$1.75^{+1.11}_{-0.92}$	2147^{+176}_{-184}	3460^{+1032}_{-525}	$2.819^{+10.151}_{-1.775}$

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 $A_{obs} \gg 1.0$

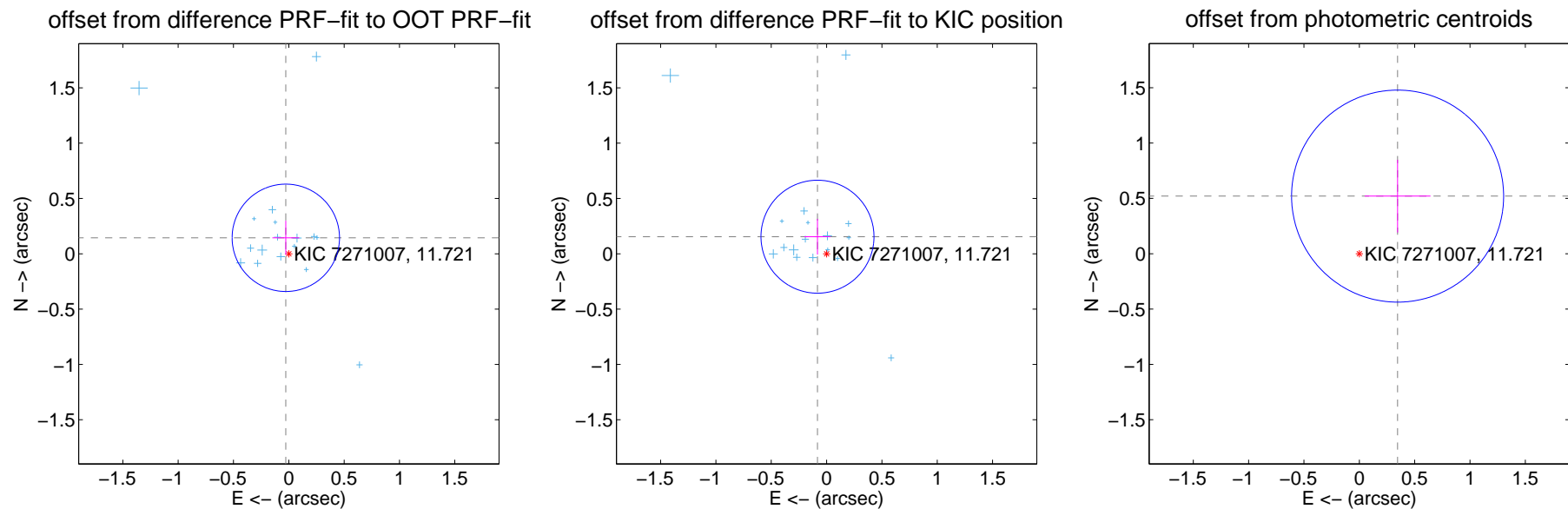
DV Centroid Data

Supplemental centroid analysis for 007271007-01. **Kepler magnitude: 11.72.** Transit SNR 11.91

There are 17 quarters with good PRF difference image offsets

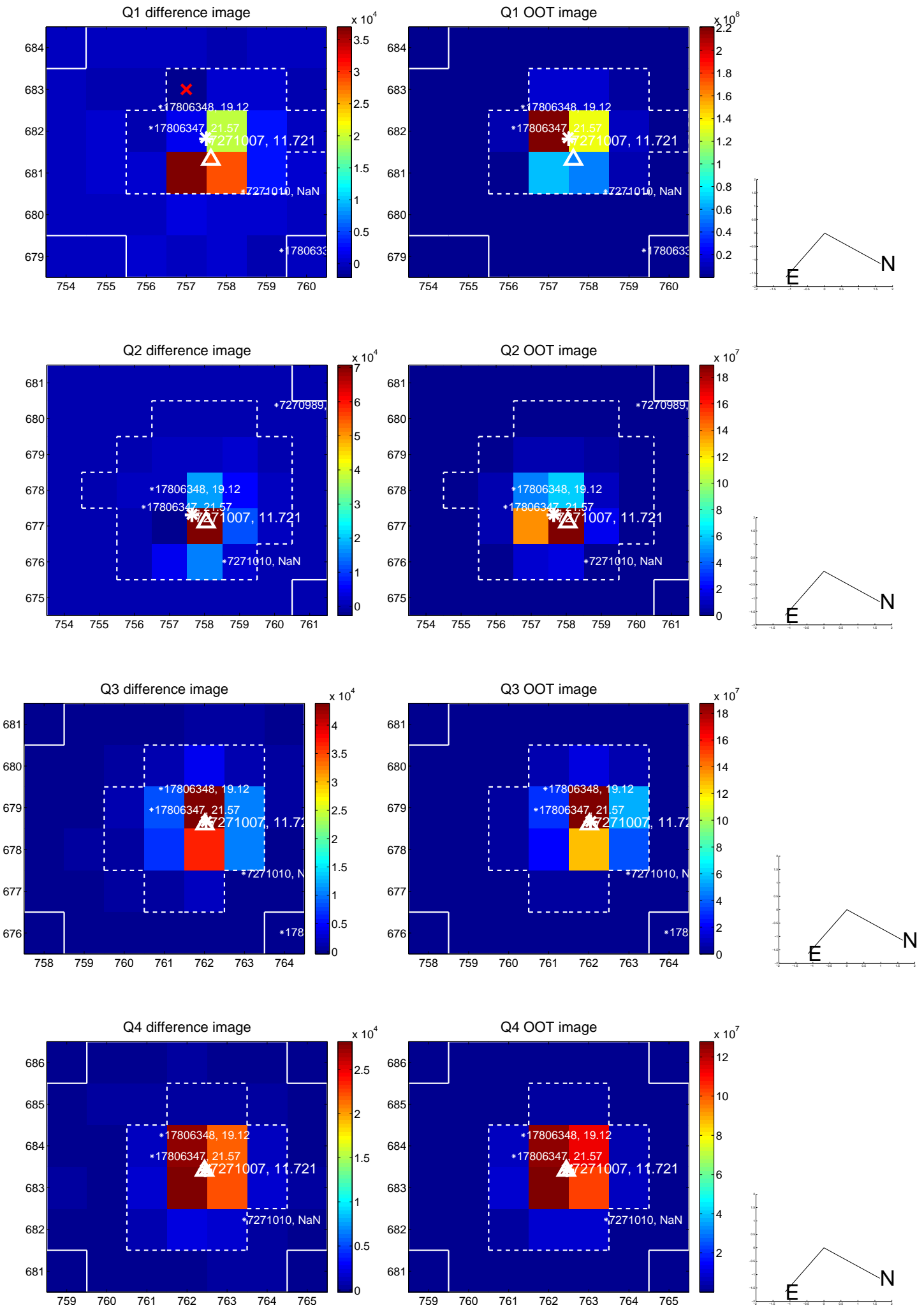
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.147 ± 0.162	0.91	0.027 ± 0.122	0.144 ± 0.154
PRF-fit source offset from KIC position	0.175 ± 0.170	1.03	0.082 ± 0.119	0.154 ± 0.161
photometric centroid source offset	0.63 ± 0.32	1.96	-0.35 ± 0.30	0.52 ± 0.33

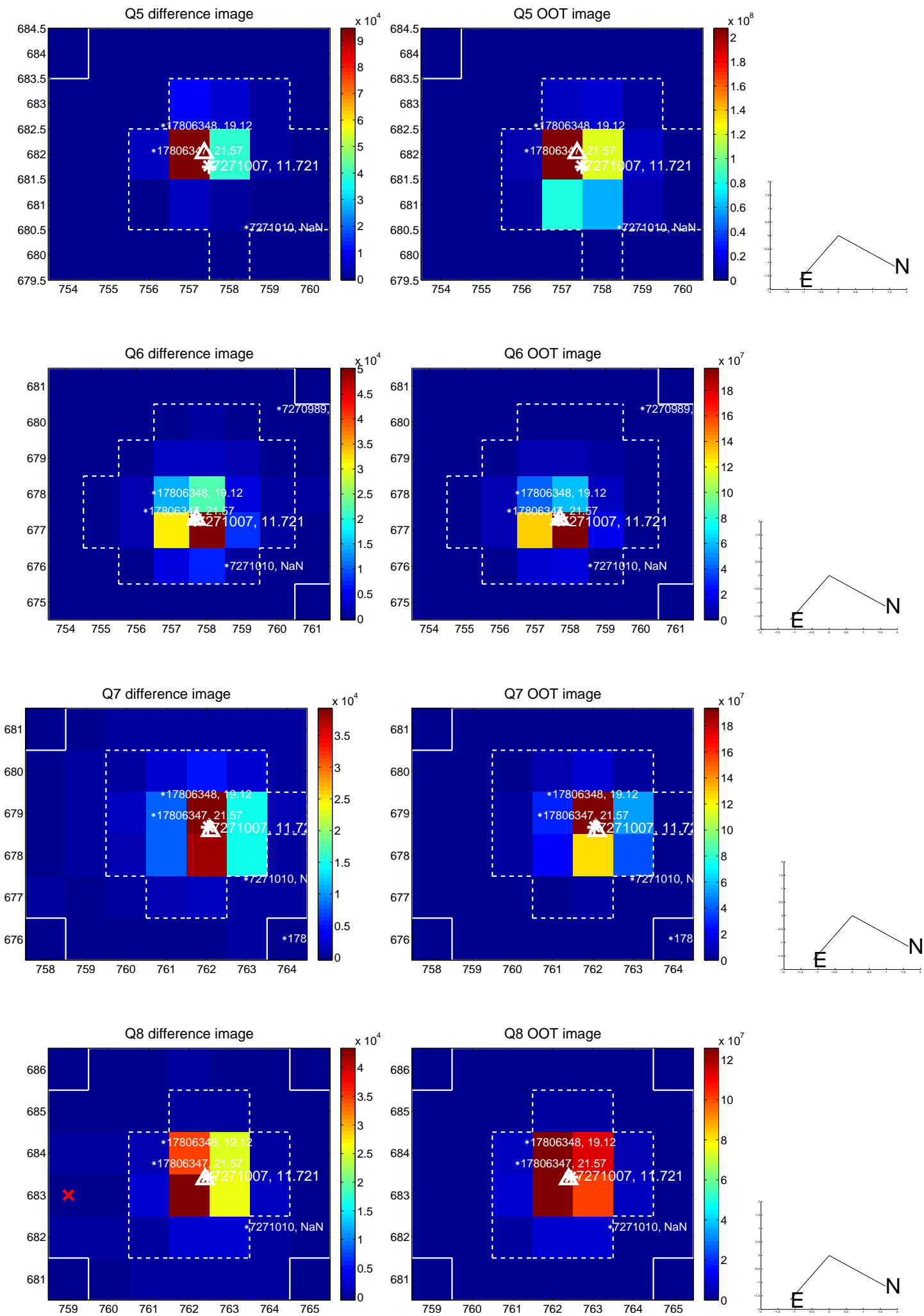


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

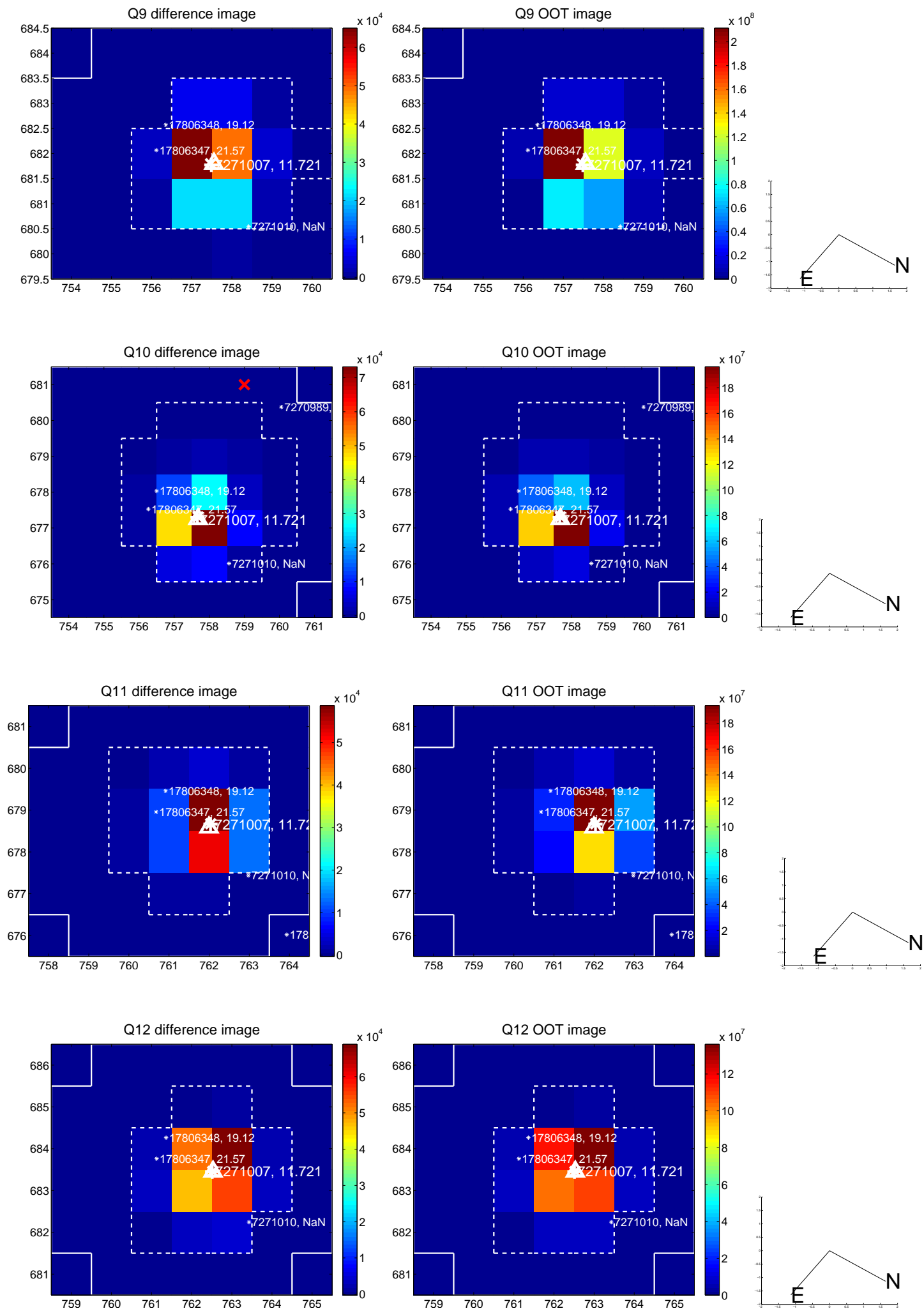
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



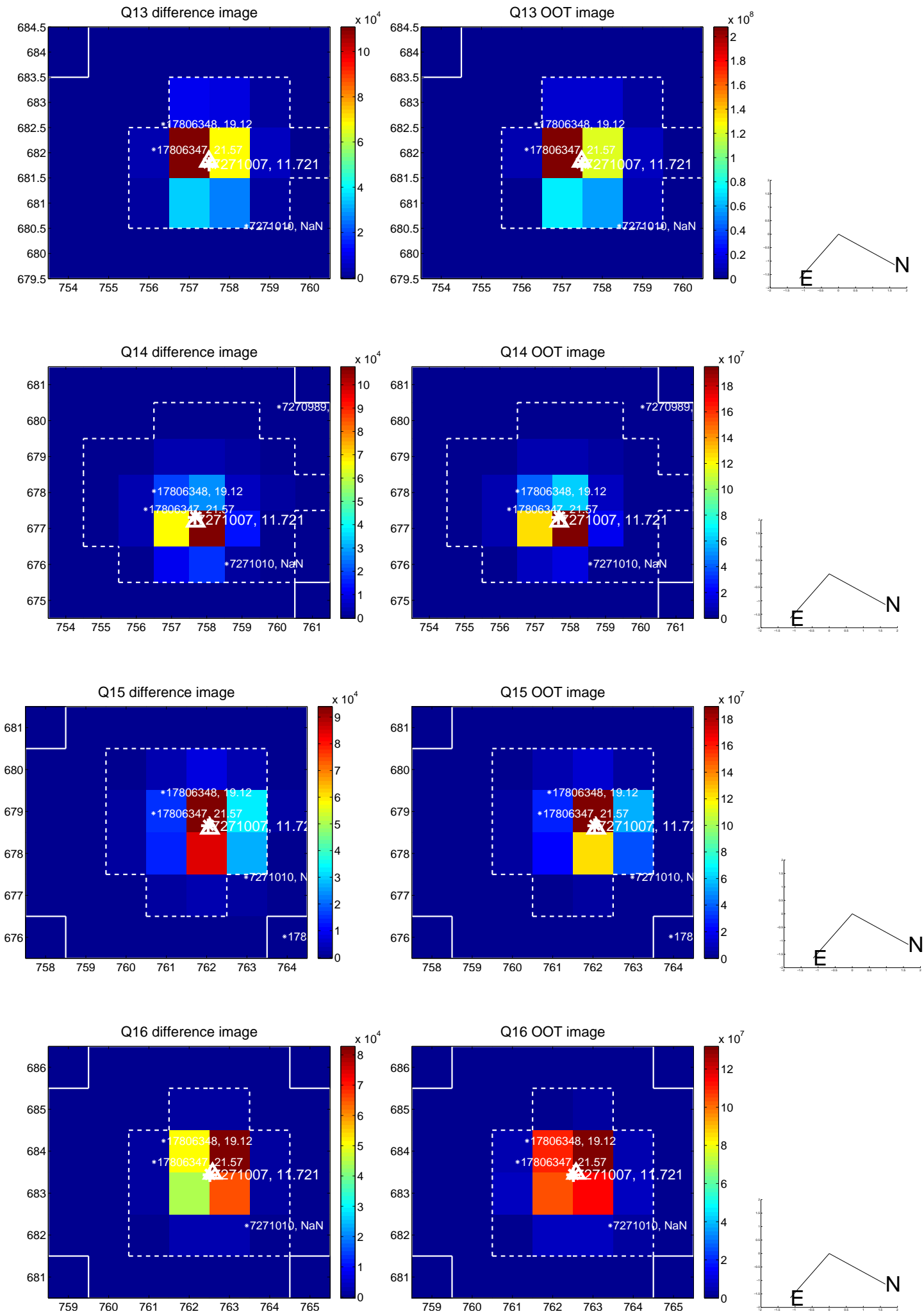
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



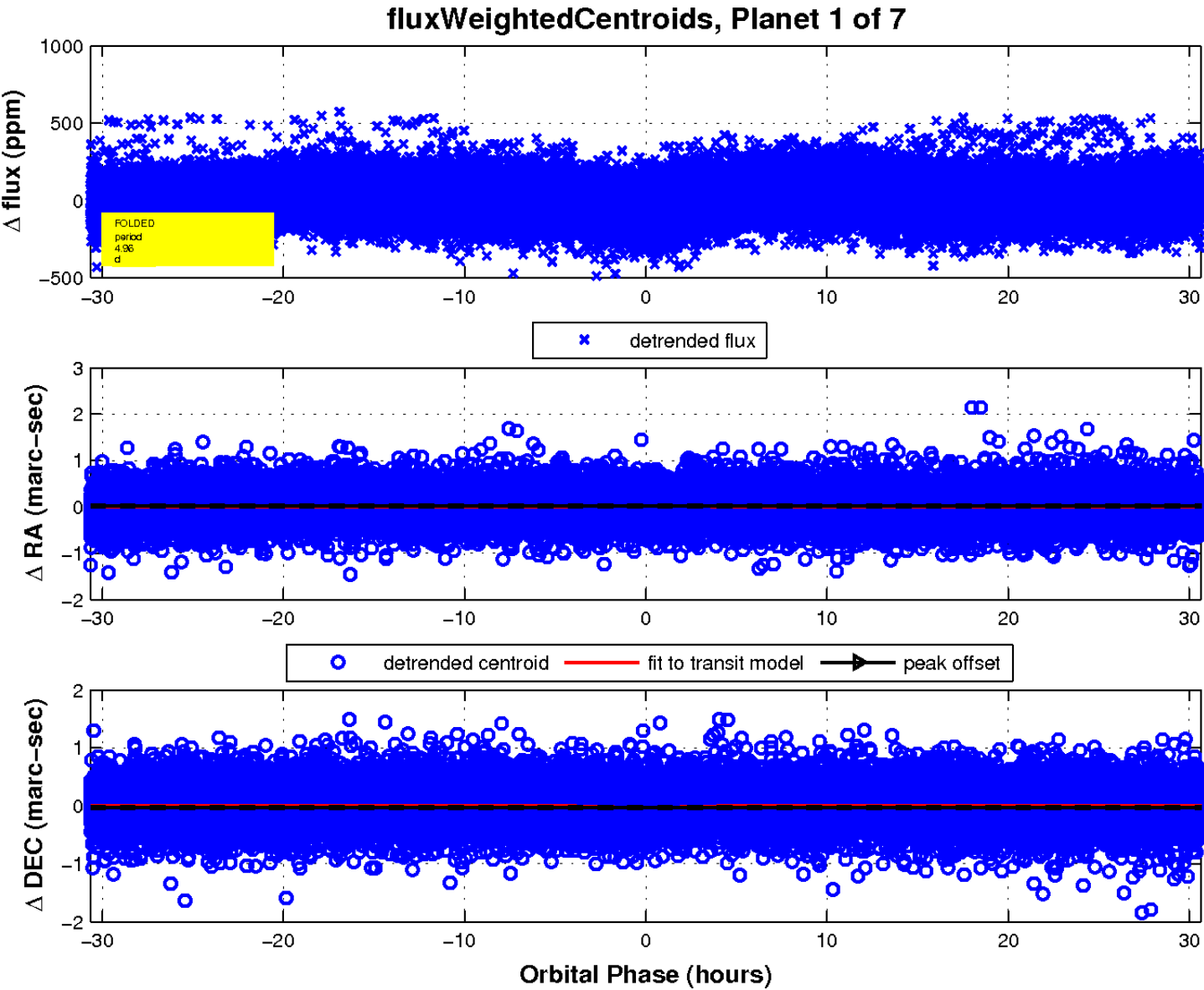
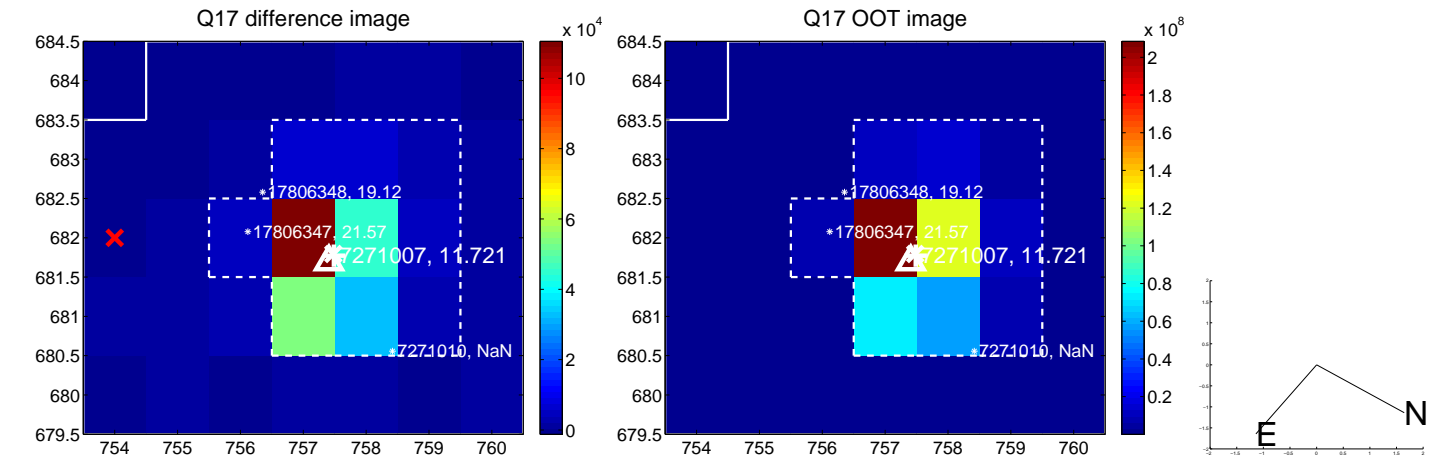
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

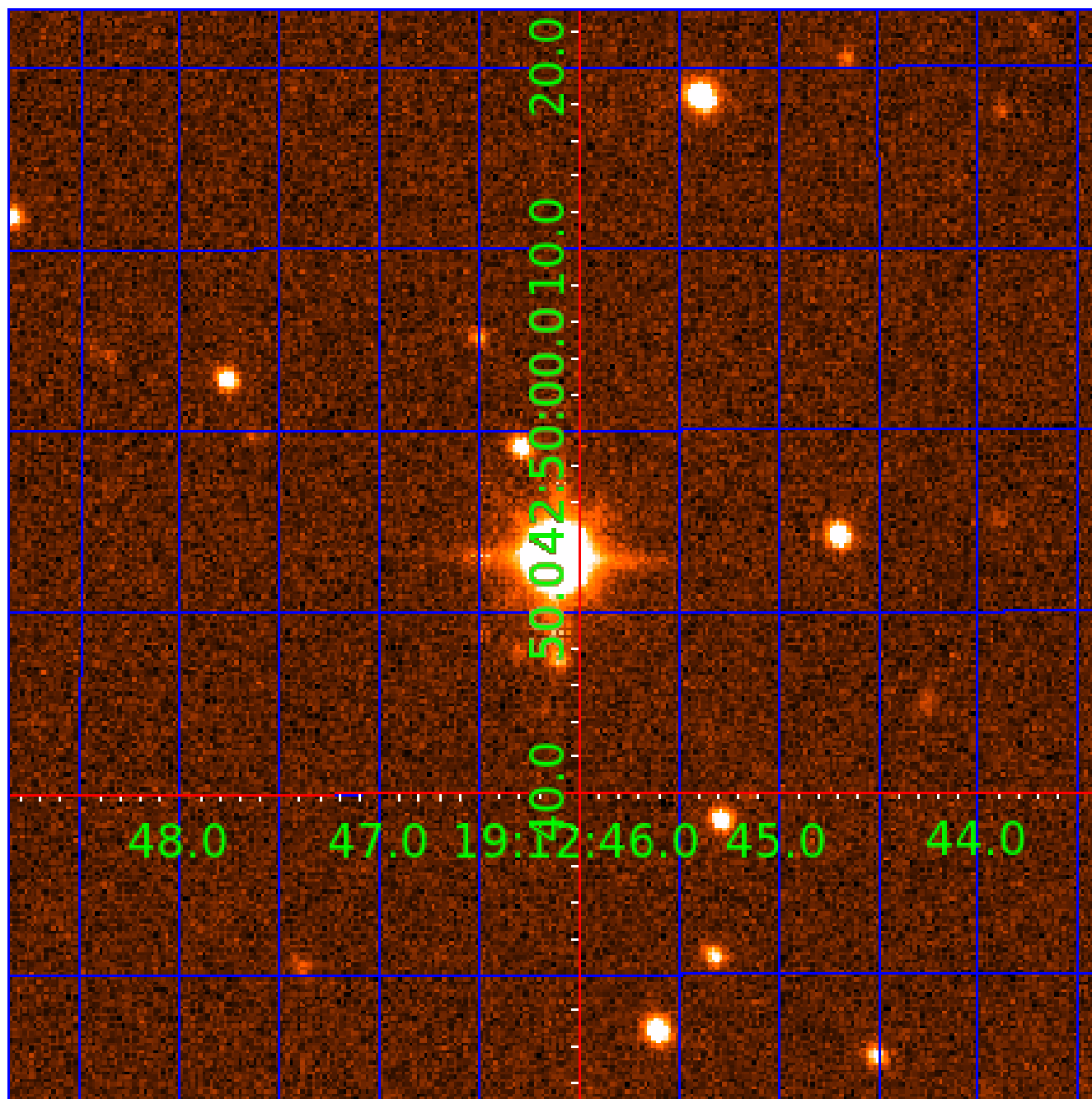


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

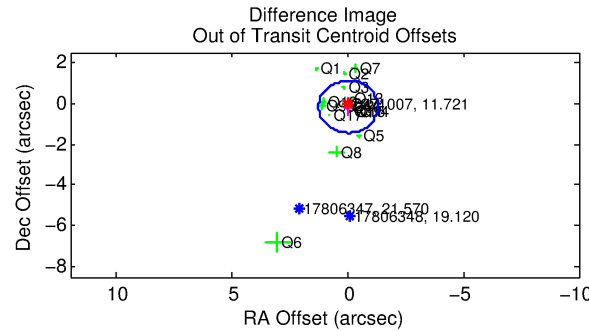
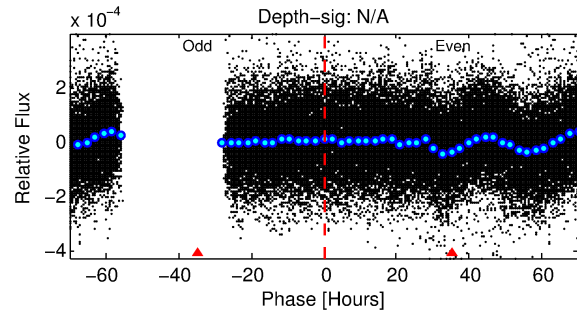
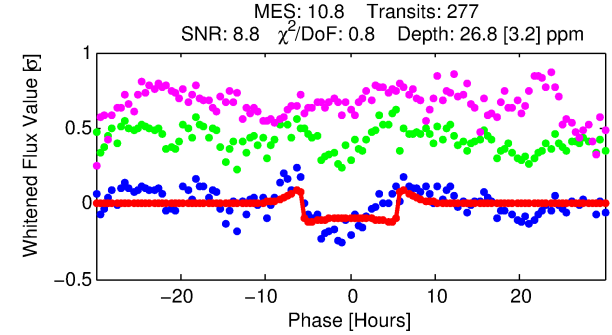
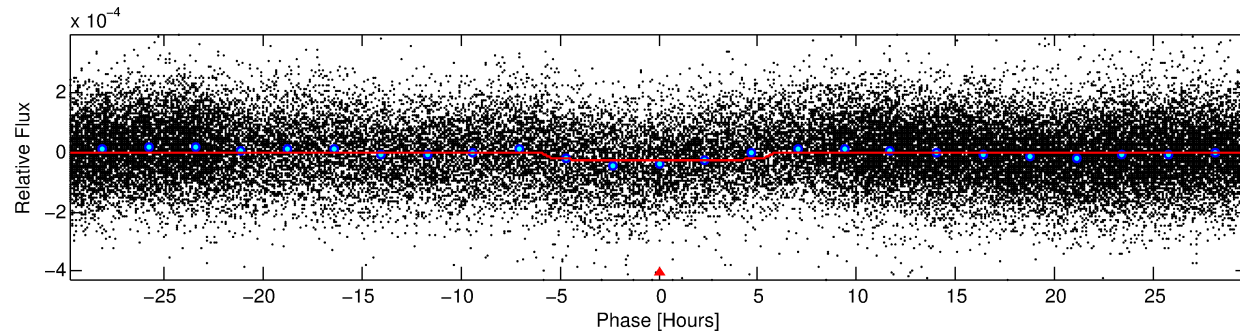
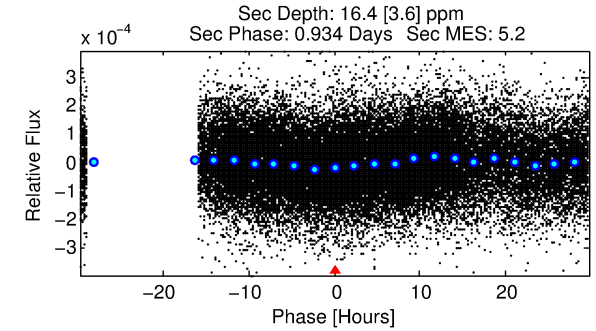
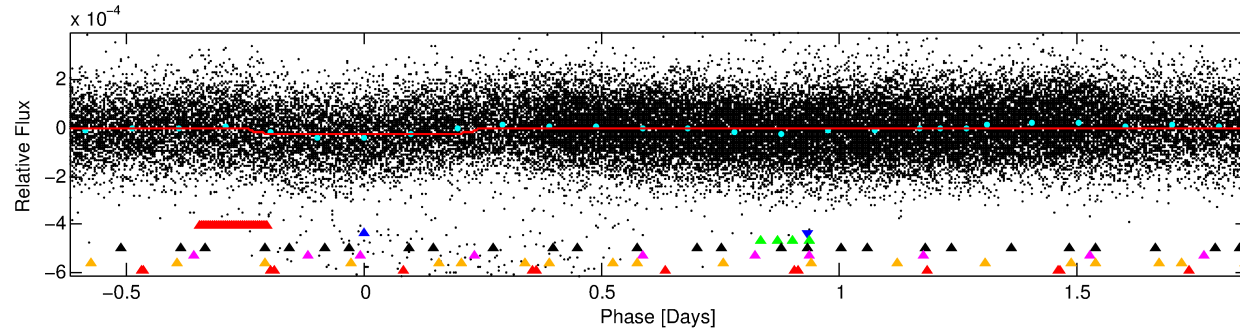
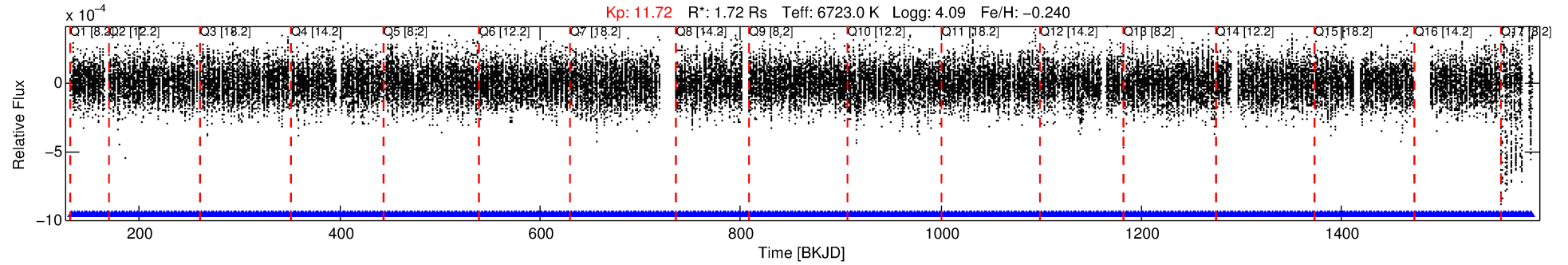
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-02

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 2 of 7 Period: 2.480 d



DV Fit Results:

Period = 2.48022 [0.00002] d
Epoch = 133.0808 [0.0047] BKJD
Rp/R* = 0.0055 [0.0007]
a/R* = 1.19 [0.22]
b = 0.90 [0.14]
Seff = 3488.81 [1608.99]
Teq = 1960 [226] K
Rp = 1.04 [0.36] Re
a = 0.0394 [0.0113] AU
Ag = 13.01 [7.13] [1.69σ]
Teffp = 5755 [529] K [6.60σ]

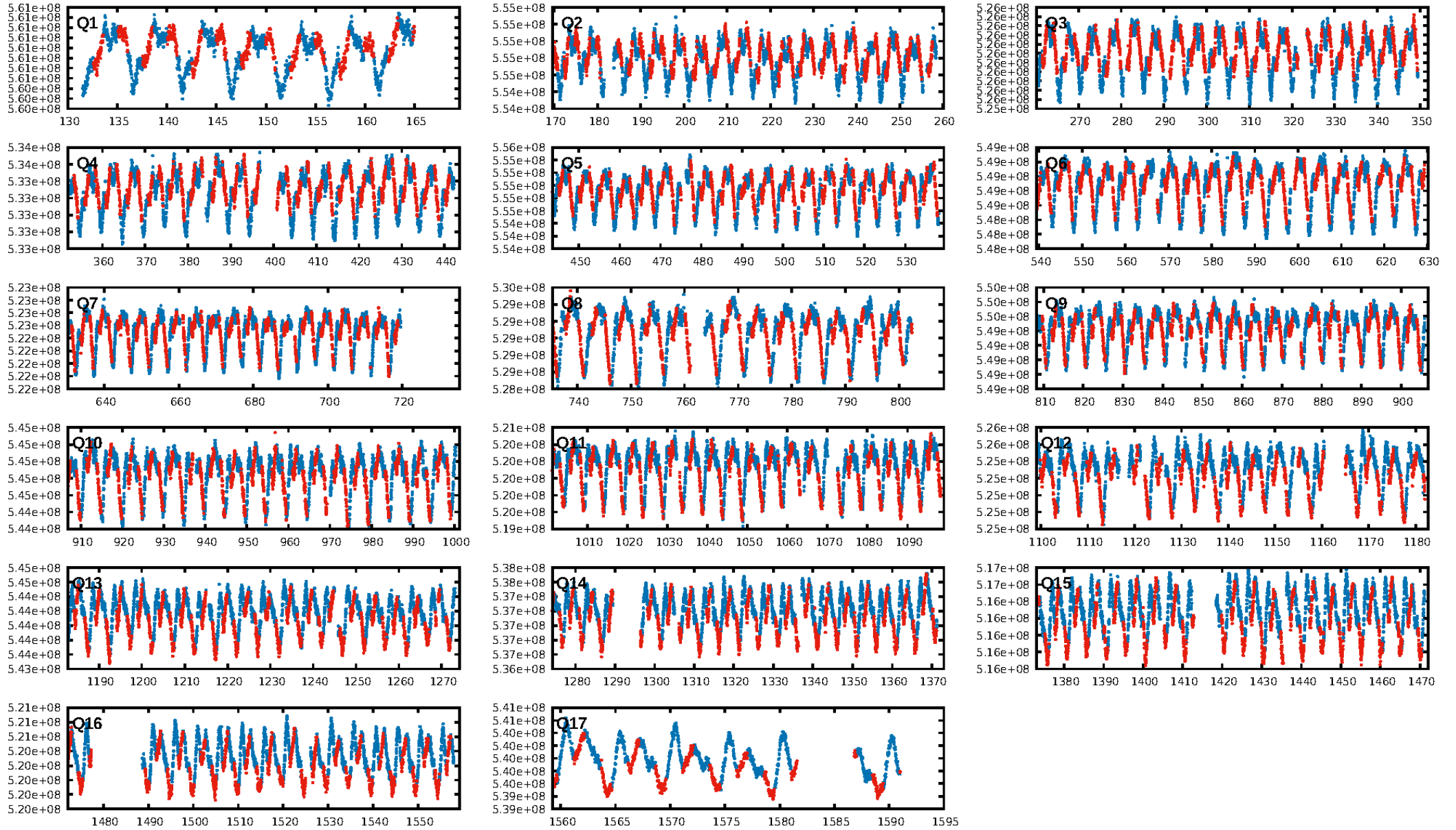
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [3.83σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [265/265]
GhostDiagnostic-chr: -0.2605
Centroid-sig: 25.4%
Centroid-so: 0.293 arcsec [0.89σ]
OotOffset-rm: 0.168 arcsec [0.39σ]
KicOffset-rm: 0.170 arcsec [0.35σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

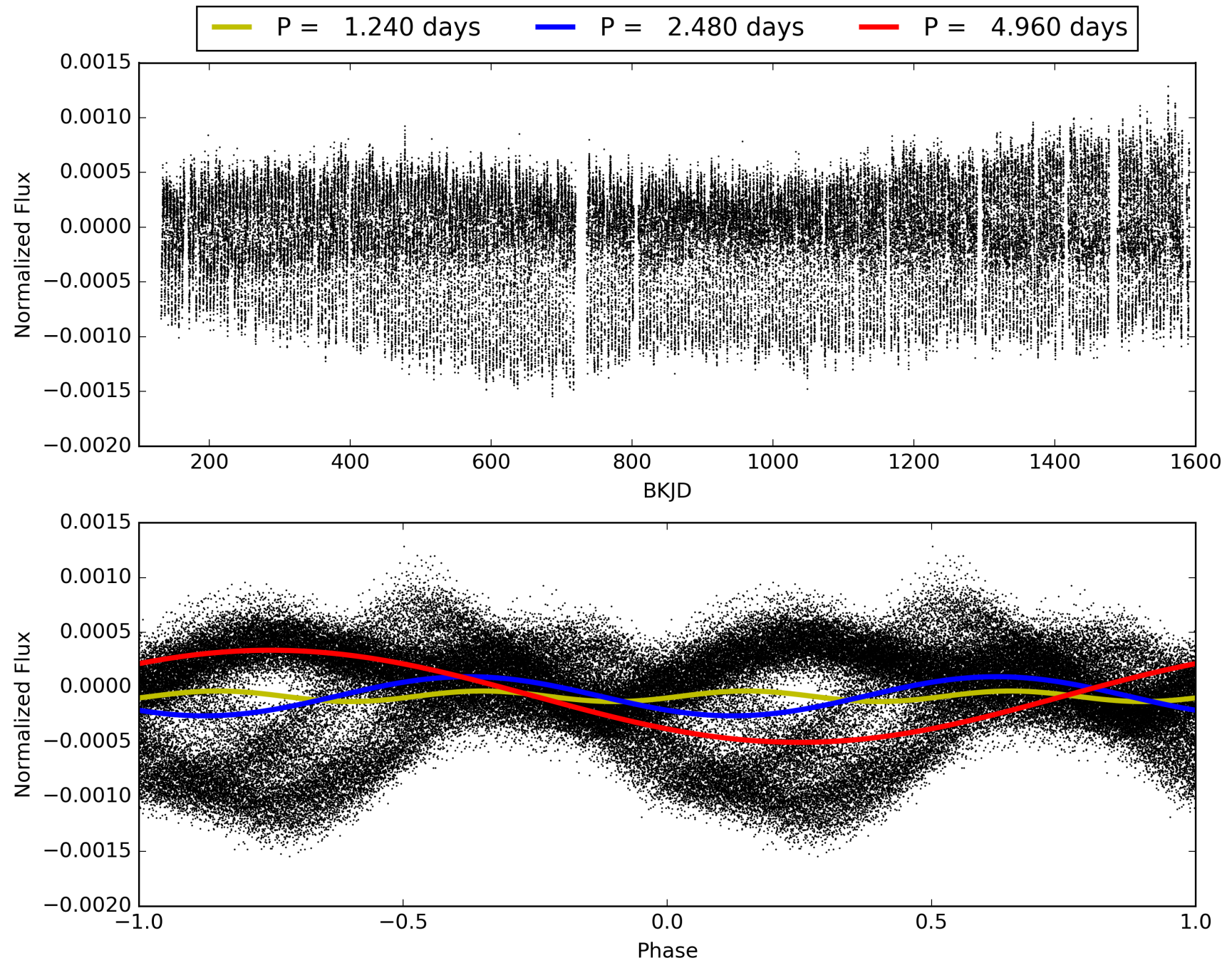
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007271007-02, PDC Light Curves

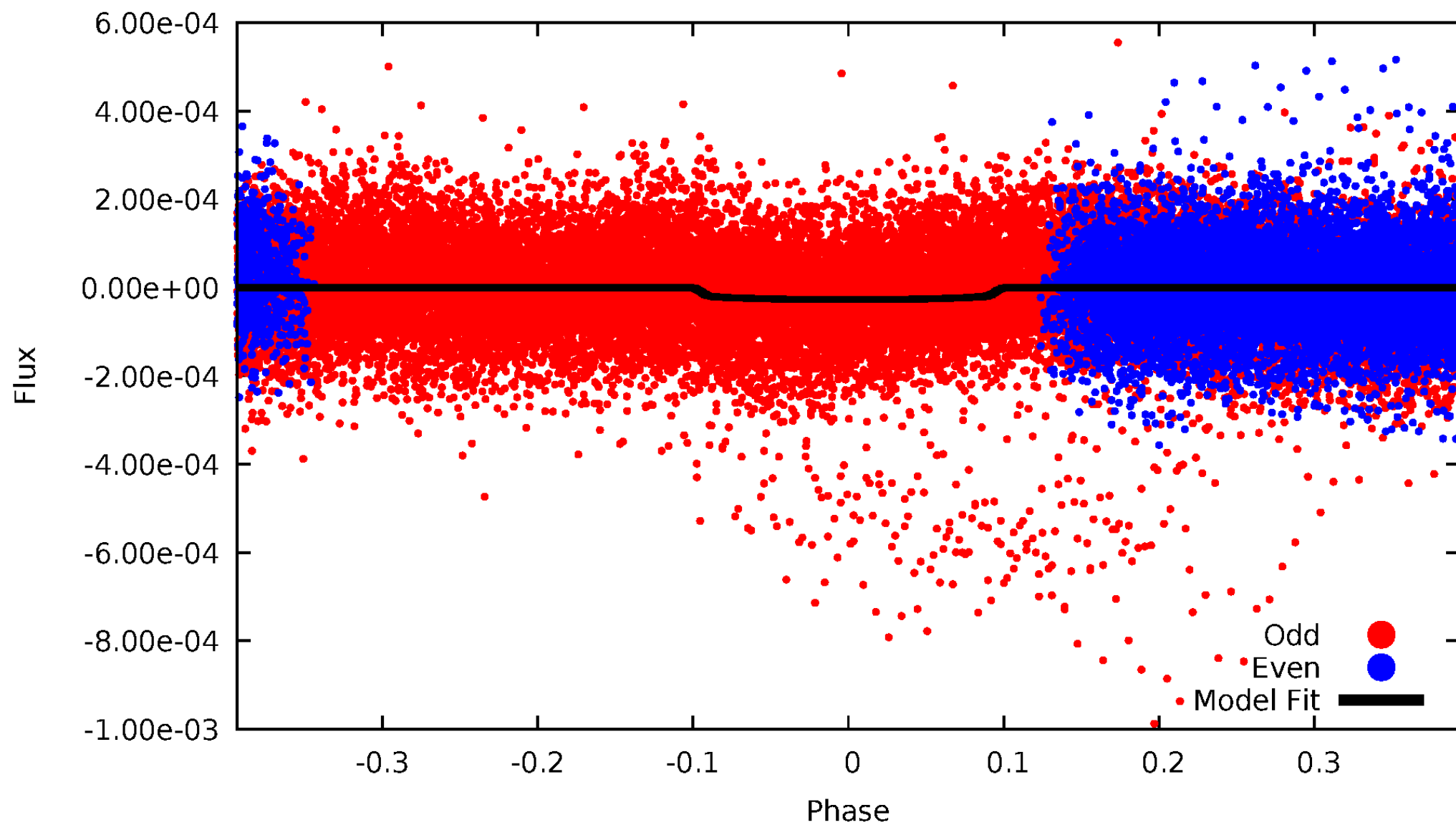


TCE 007271007-02



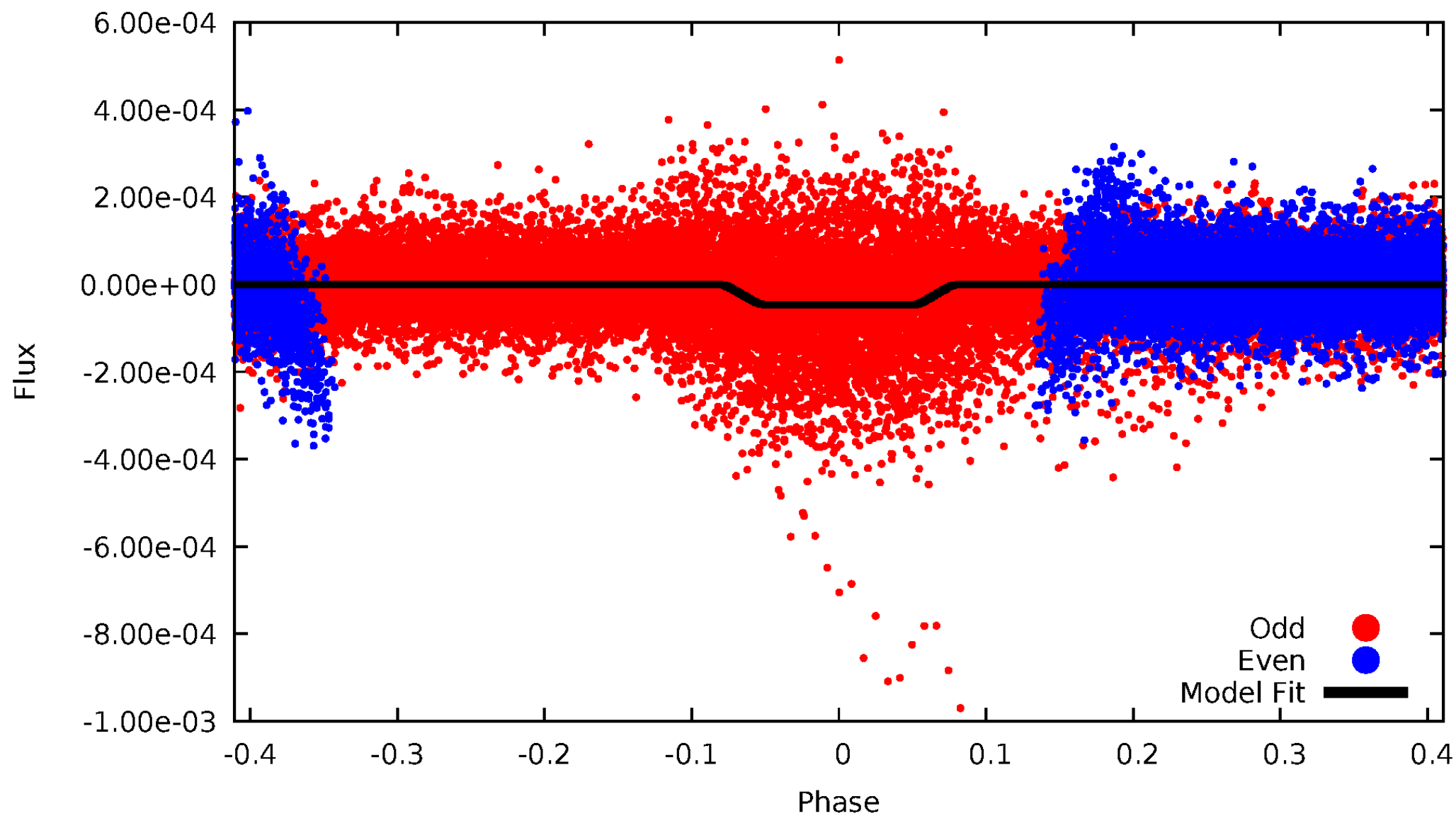
DV Odd/Even

TCE 007271007-02



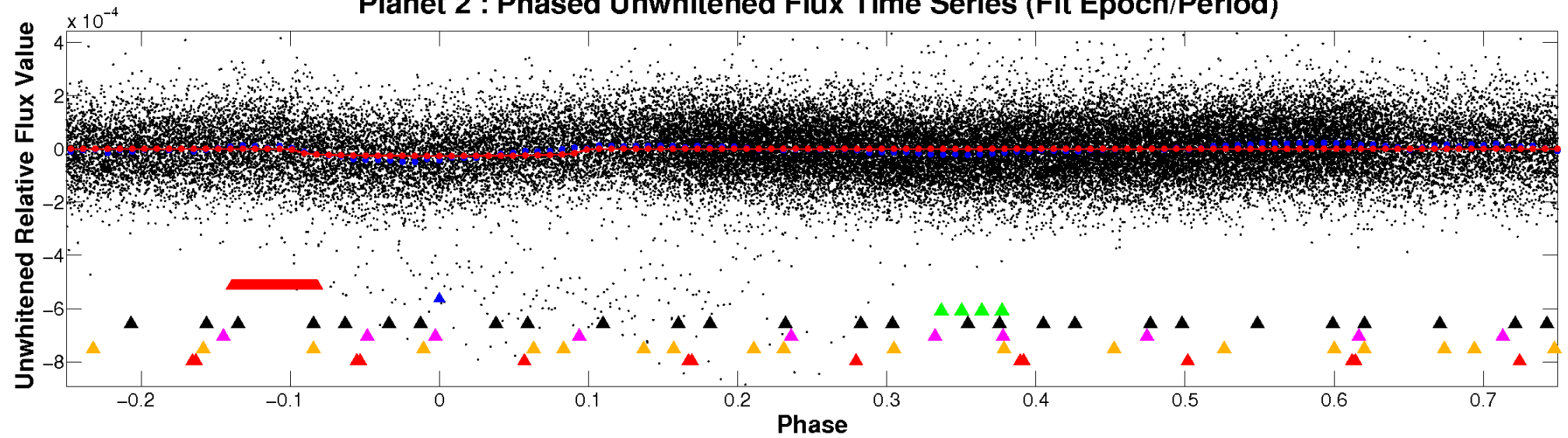
ALT Odd/Even

TCE 007271007-02

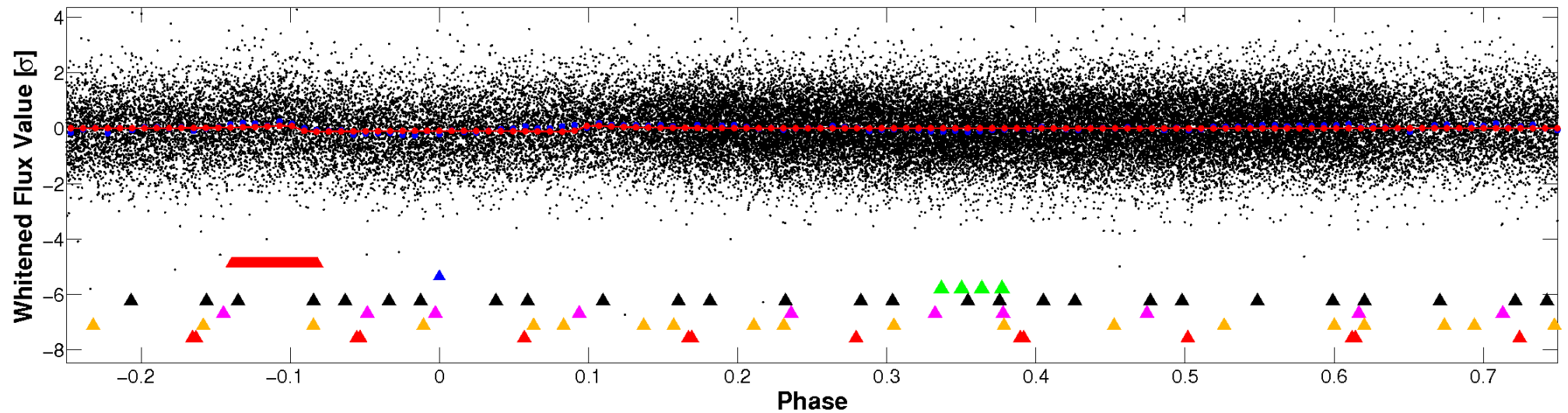


Non-Whitened Vs. Whitened Light Curve

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

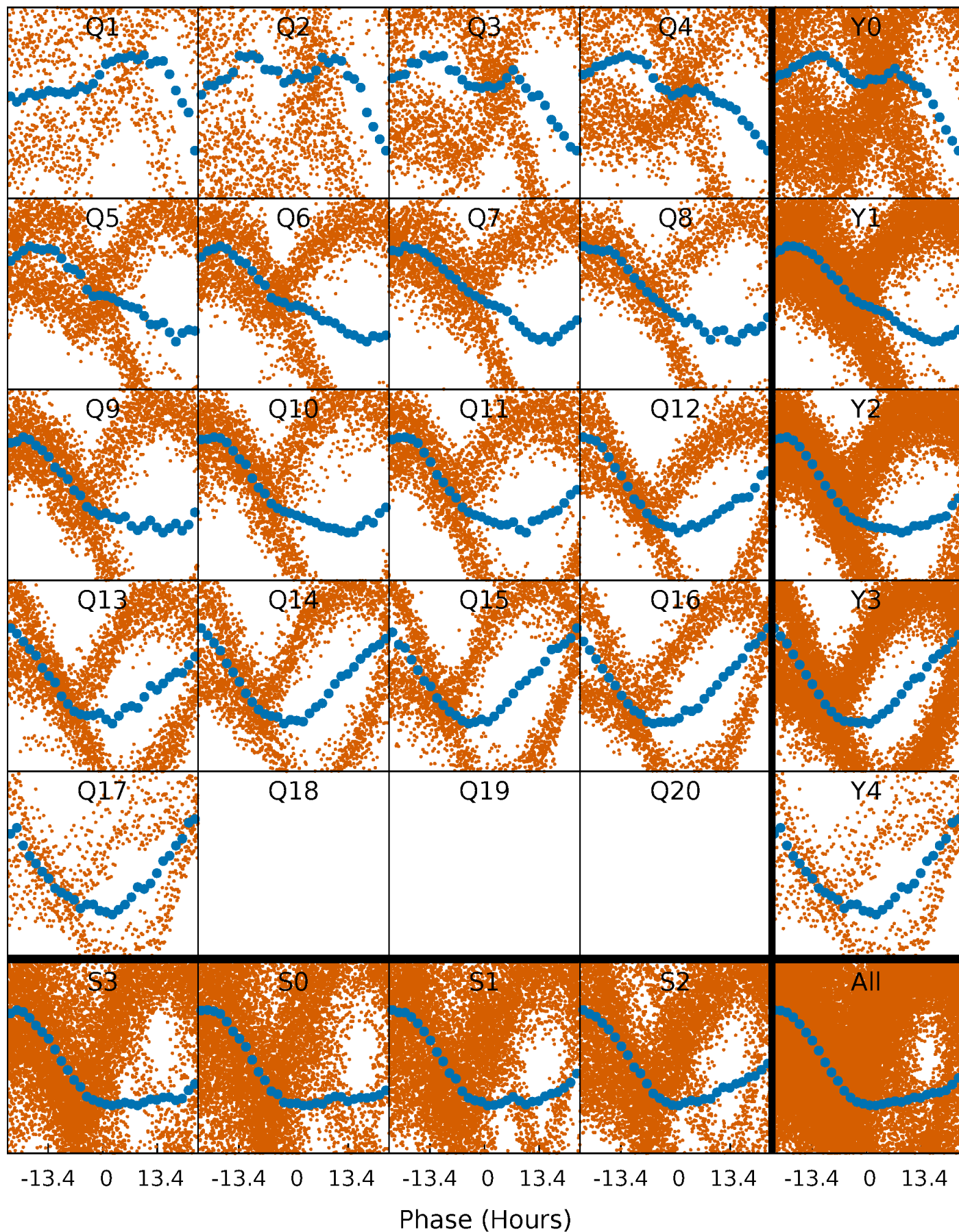


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



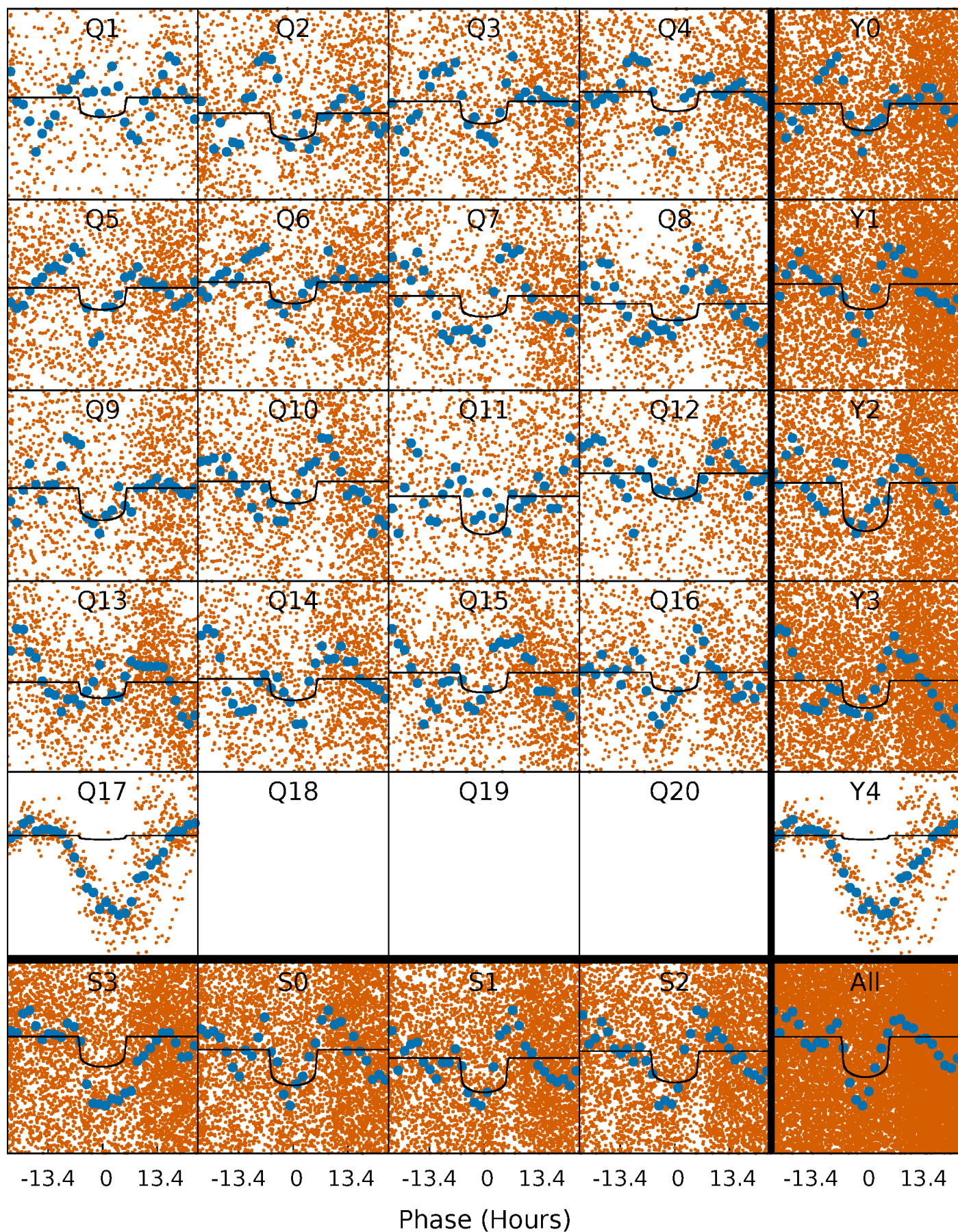
PDC Quarter-Phased Transit Curves

TCE 007271007-02 P= 2.480220 Days $T_0=133.080790$ (BKJD)



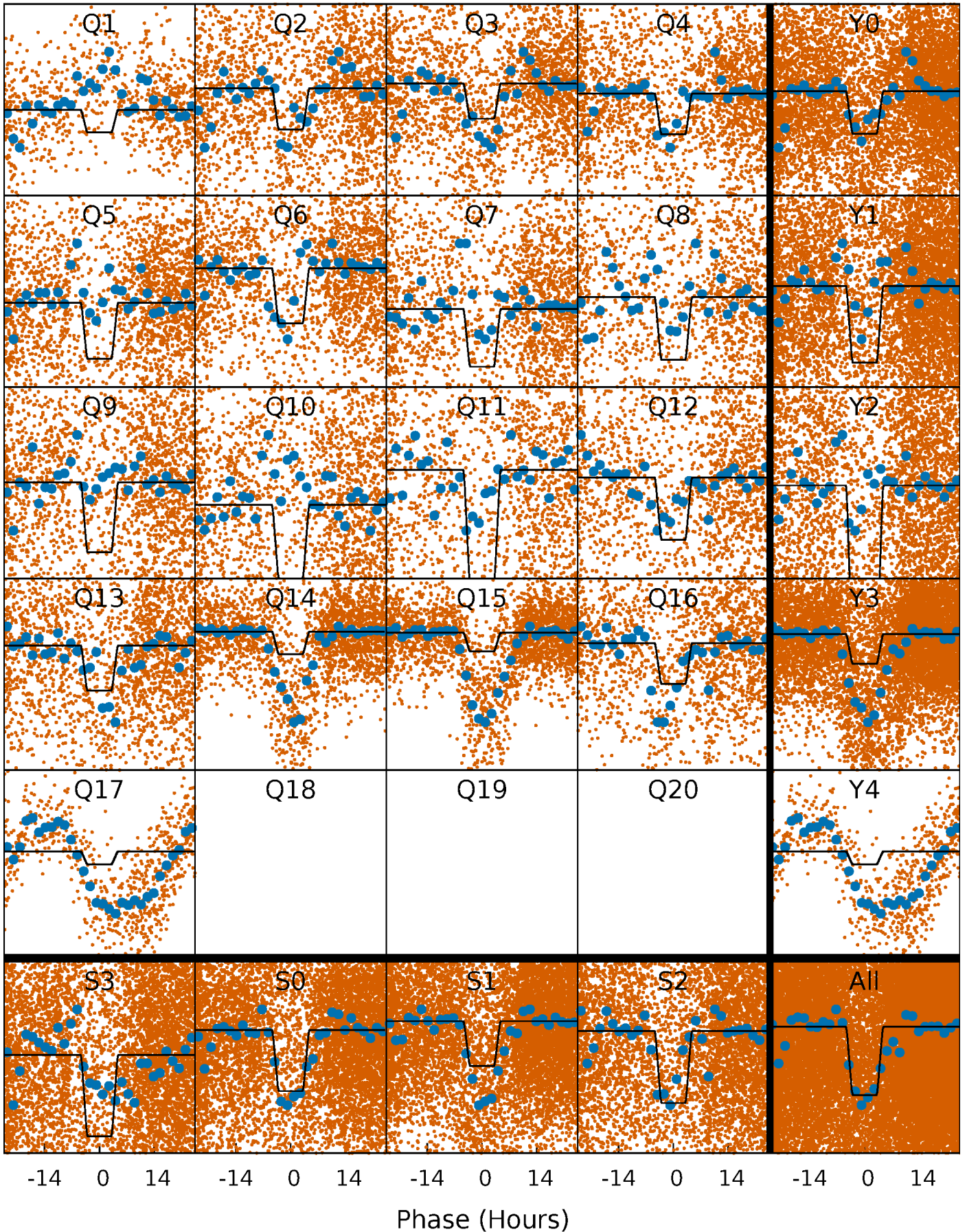
DV Quarter-Phased Transit Curves

TCE 007271007-02 P= 2.480220 Days $T_0=133.080790$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

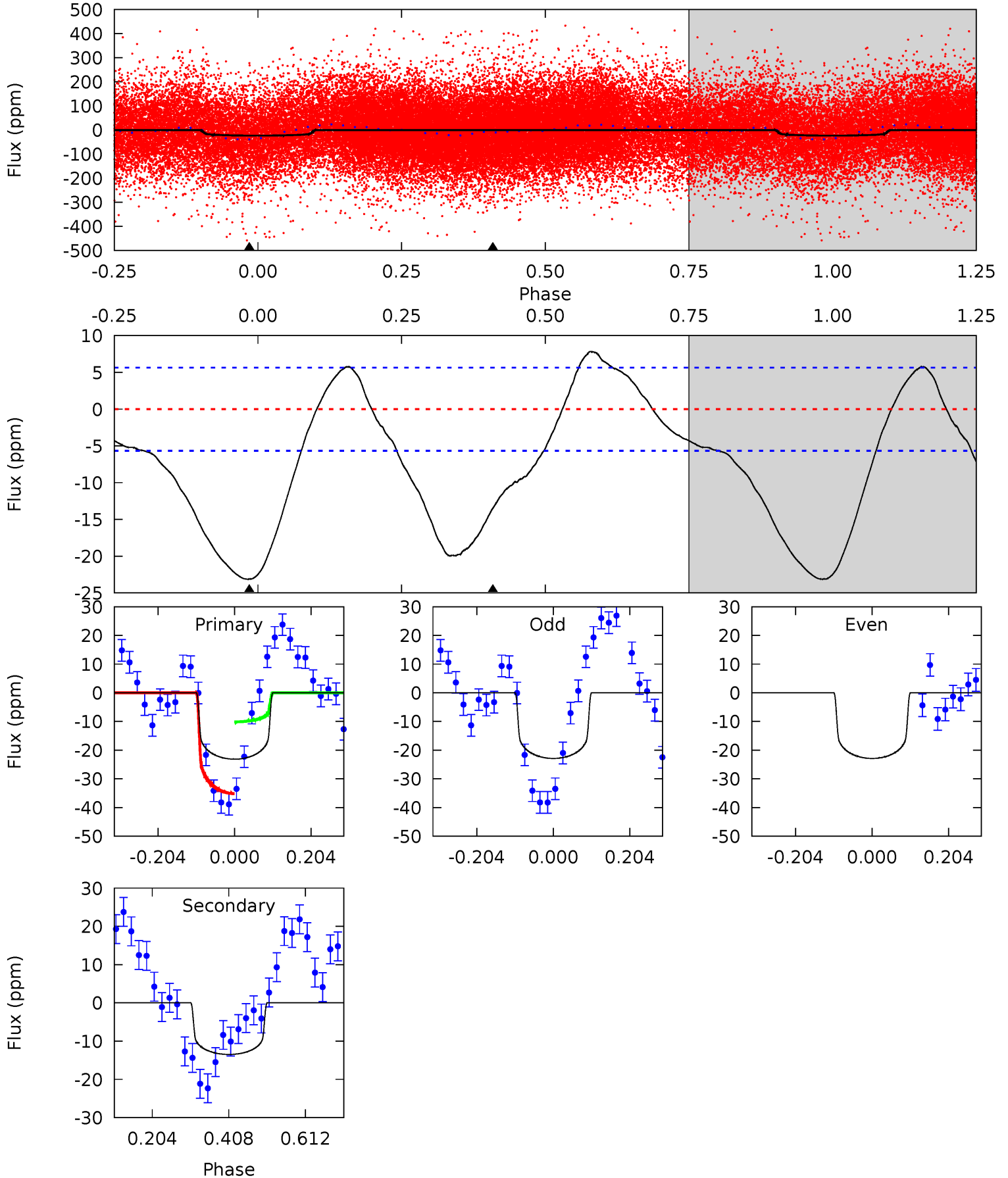
TCE 007271007-02 P= 2.480184 Days $T_0=133.077347$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-02, P = 2.480220 Days, E = 130.600570 Days

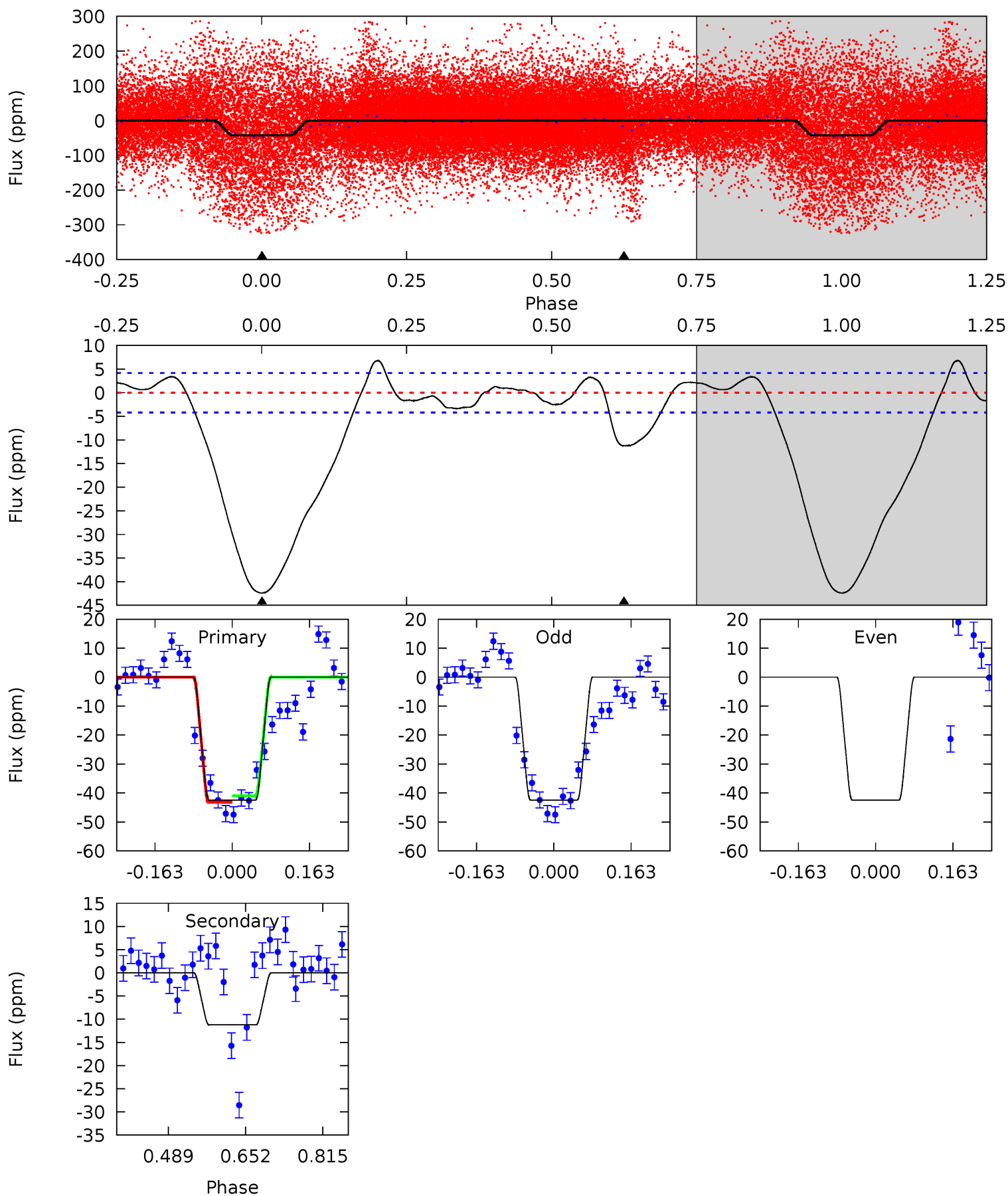
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.1	10.5	0	0	4.41	1.27	2.85	18.1	18.1	10.5	10.5	0	1.25	0.25	10.1



Alt Model-Shift Uniqueness Test

007271007-02, P = 2.480184 Days, E = 130.597163 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.3	12.0	0	0	4.46	1.39	2.68	45.3	45.3	12.0	12.0	0	1.22	0.14	1.18



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-13 ± 1	$1.01^{+0.23}_{-0.20}$	2707^{+231}_{-201}	5435^{+449}_{-328}	11^{+6}_{-4}
Alt.	-11 ± 1	$1.26^{+0.26}_{-0.23}$	2720^{+216}_{-217}	4754^{+270}_{-254}	$6.008^{+2.686}_{-1.747}$

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

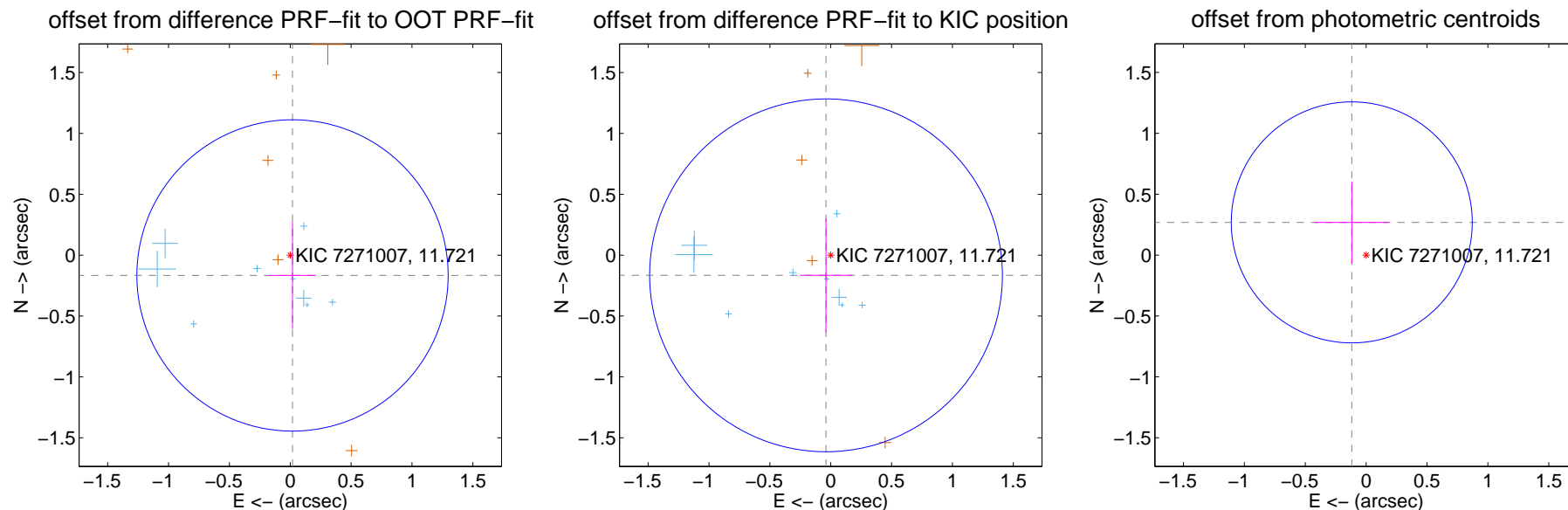
DV Centroid Data

Supplemental centroid analysis for 007271007-02. **Kepler magnitude: 11.72.** Transit SNR 8.81

There are 10 quarters with good PRF difference image offsets

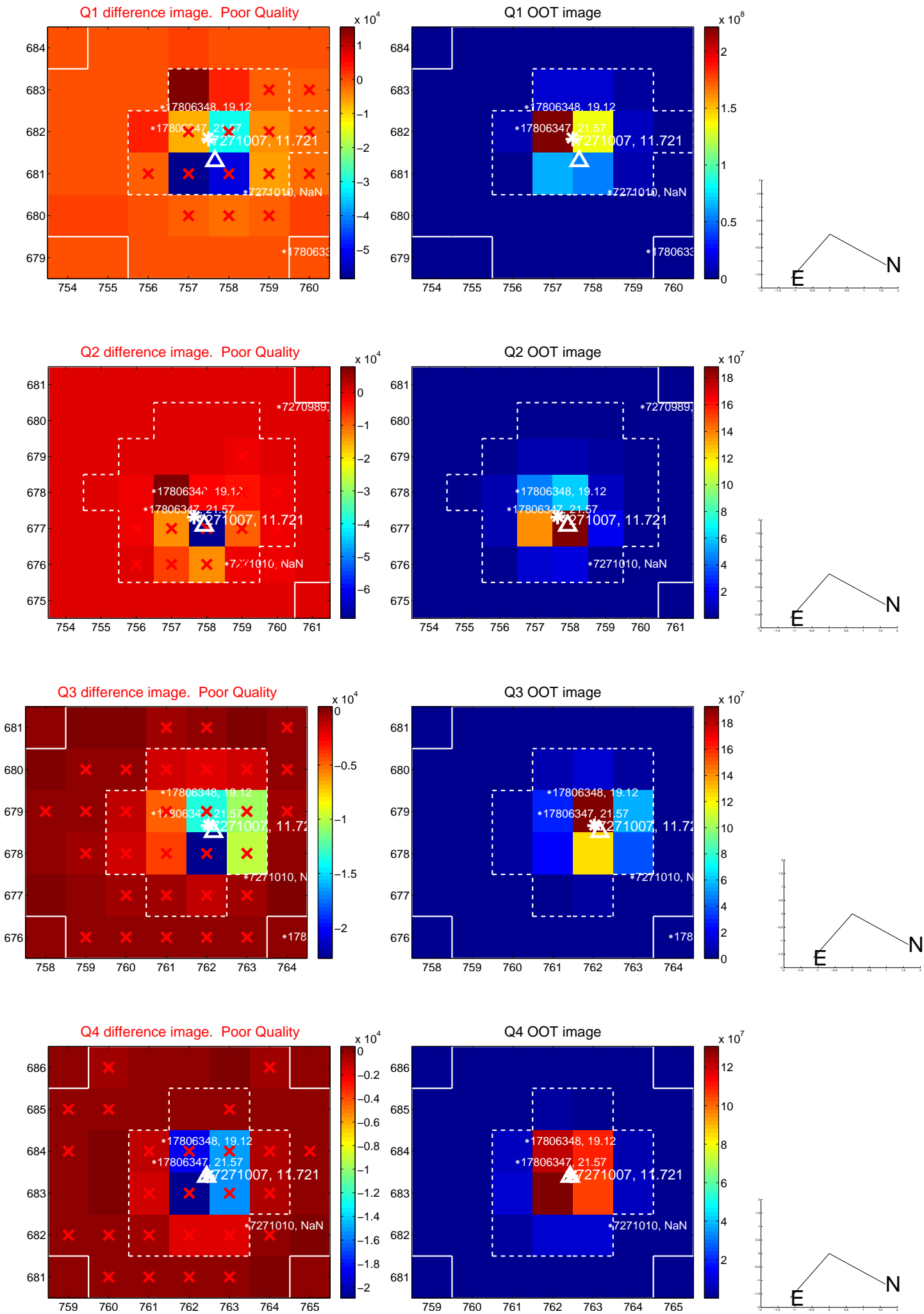
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.168 ± 0.426	0.39	-0.018 ± 0.193	-0.167 ± 0.440
PRF-fit source offset from KIC position	0.170 ± 0.483	0.35	0.039 ± 0.214	-0.166 ± 0.467
photometric centroid source offset	0.29 ± 0.33	0.89	0.12 ± 0.30	0.27 ± 0.33

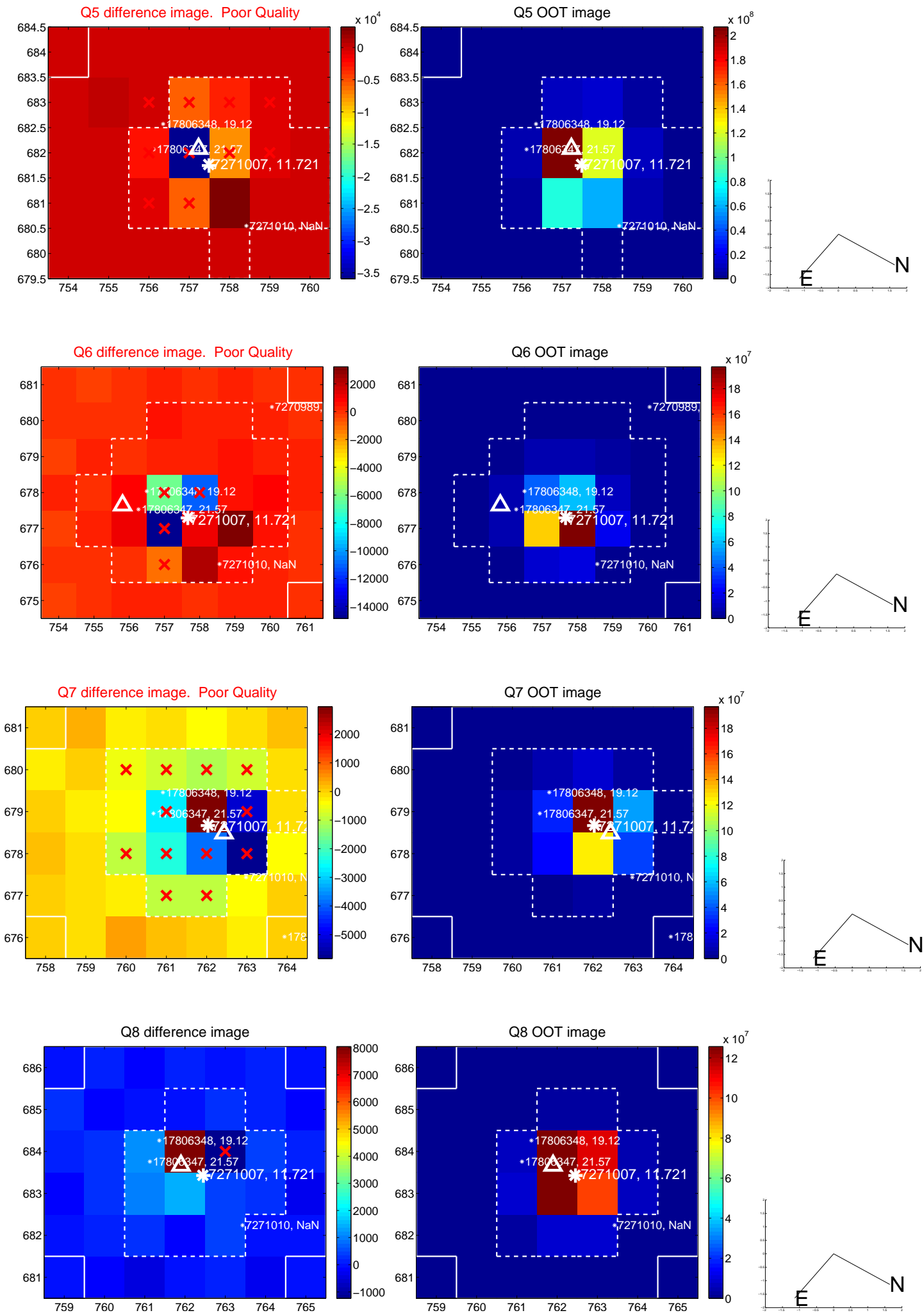


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

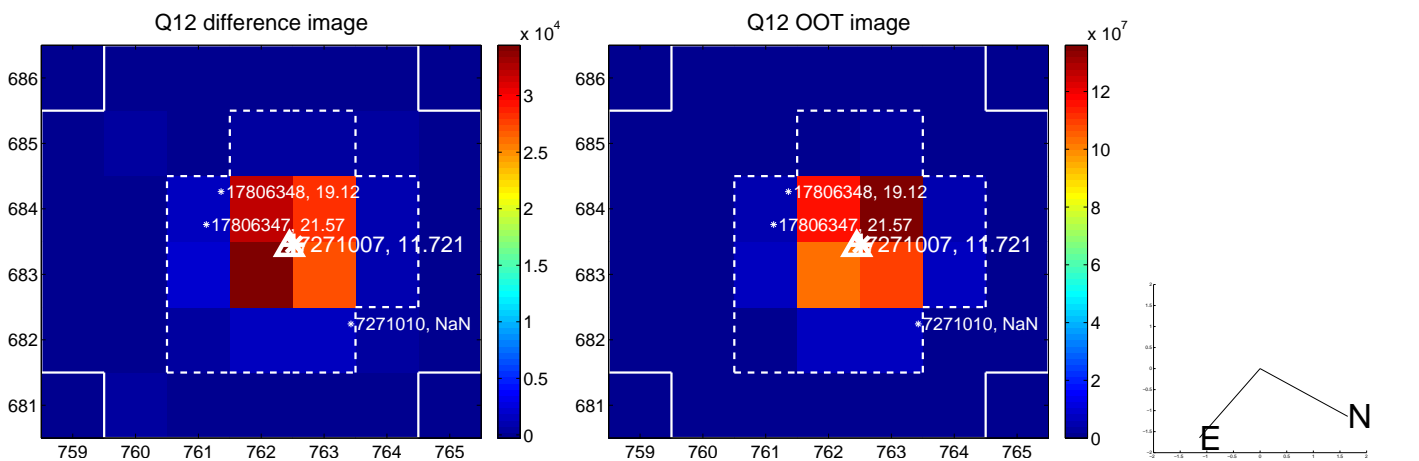
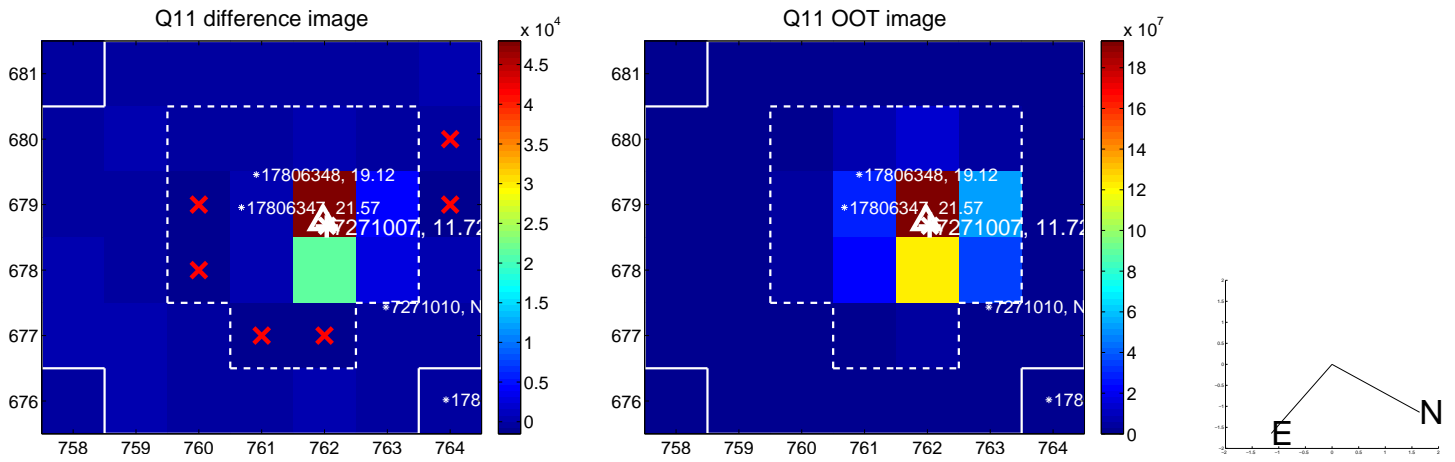
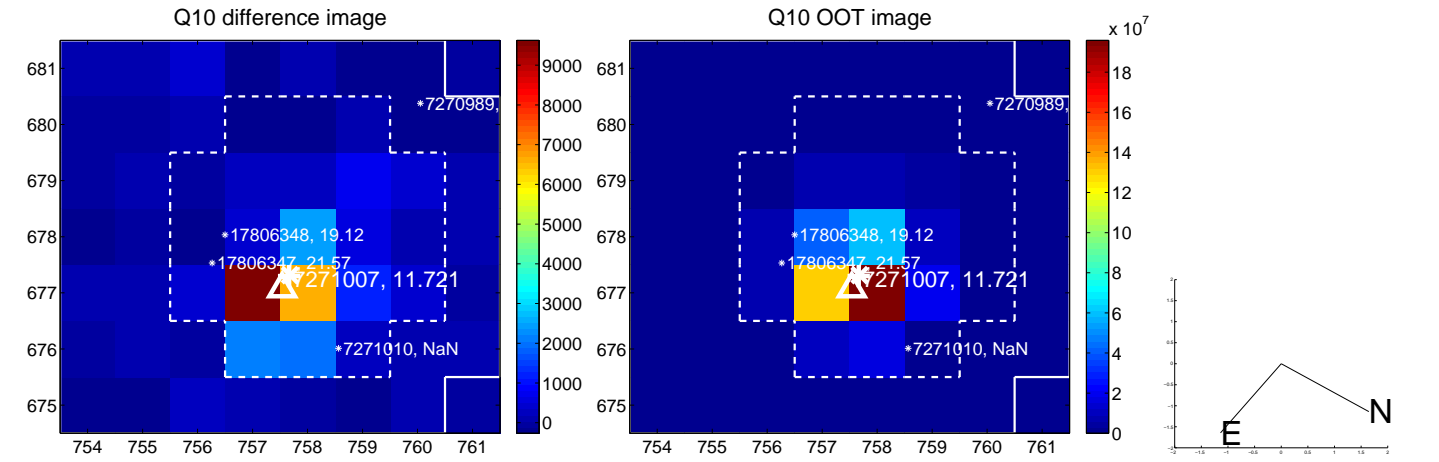
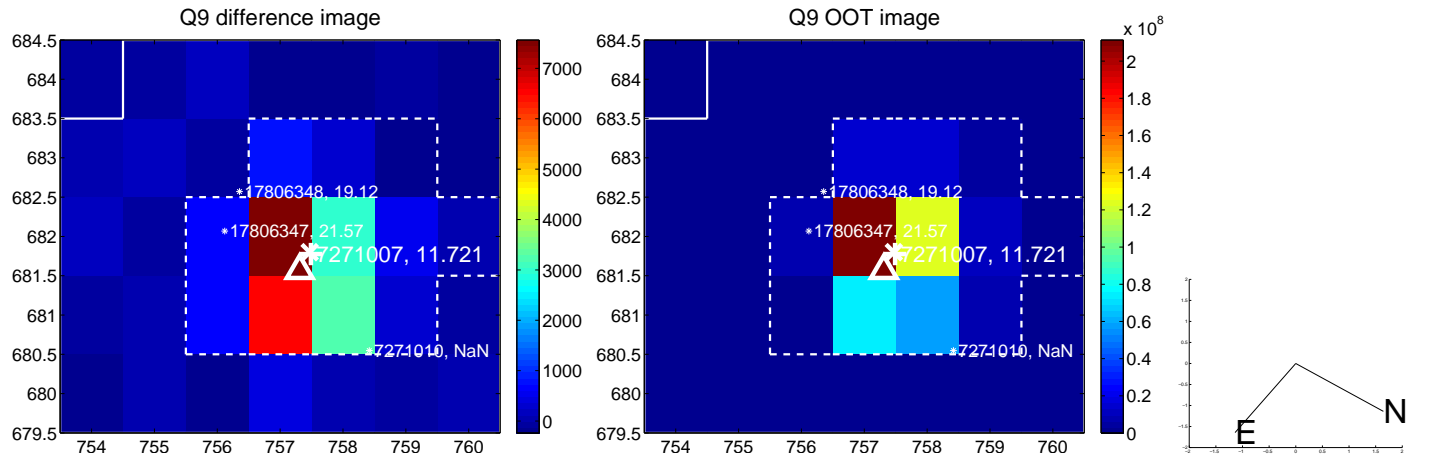
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



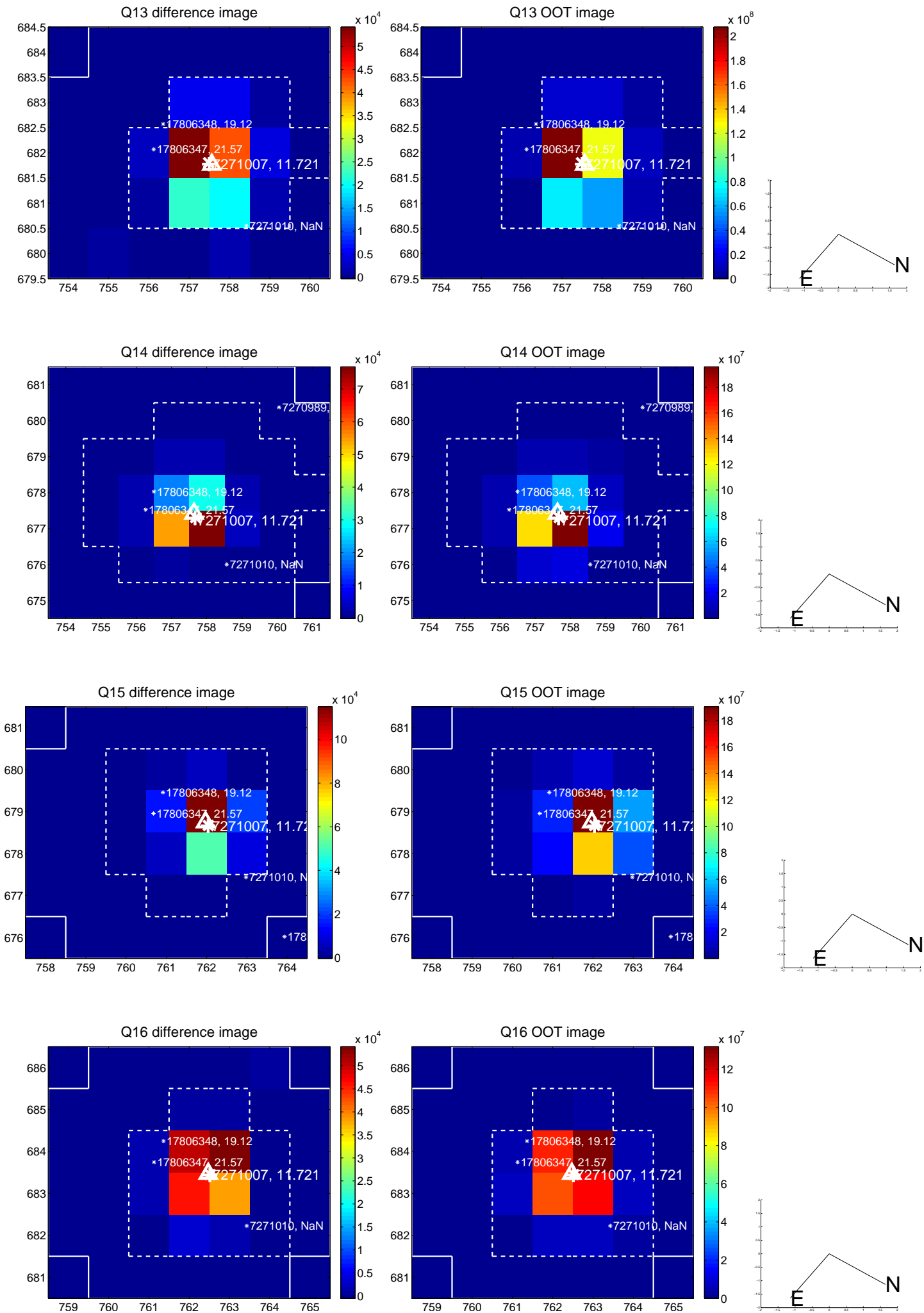
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



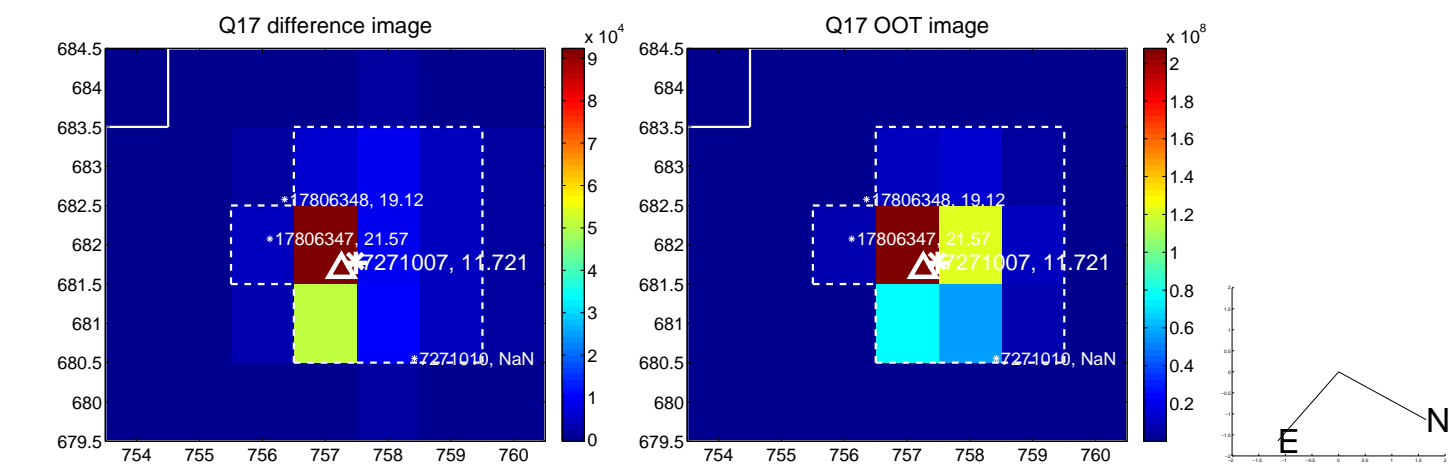
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



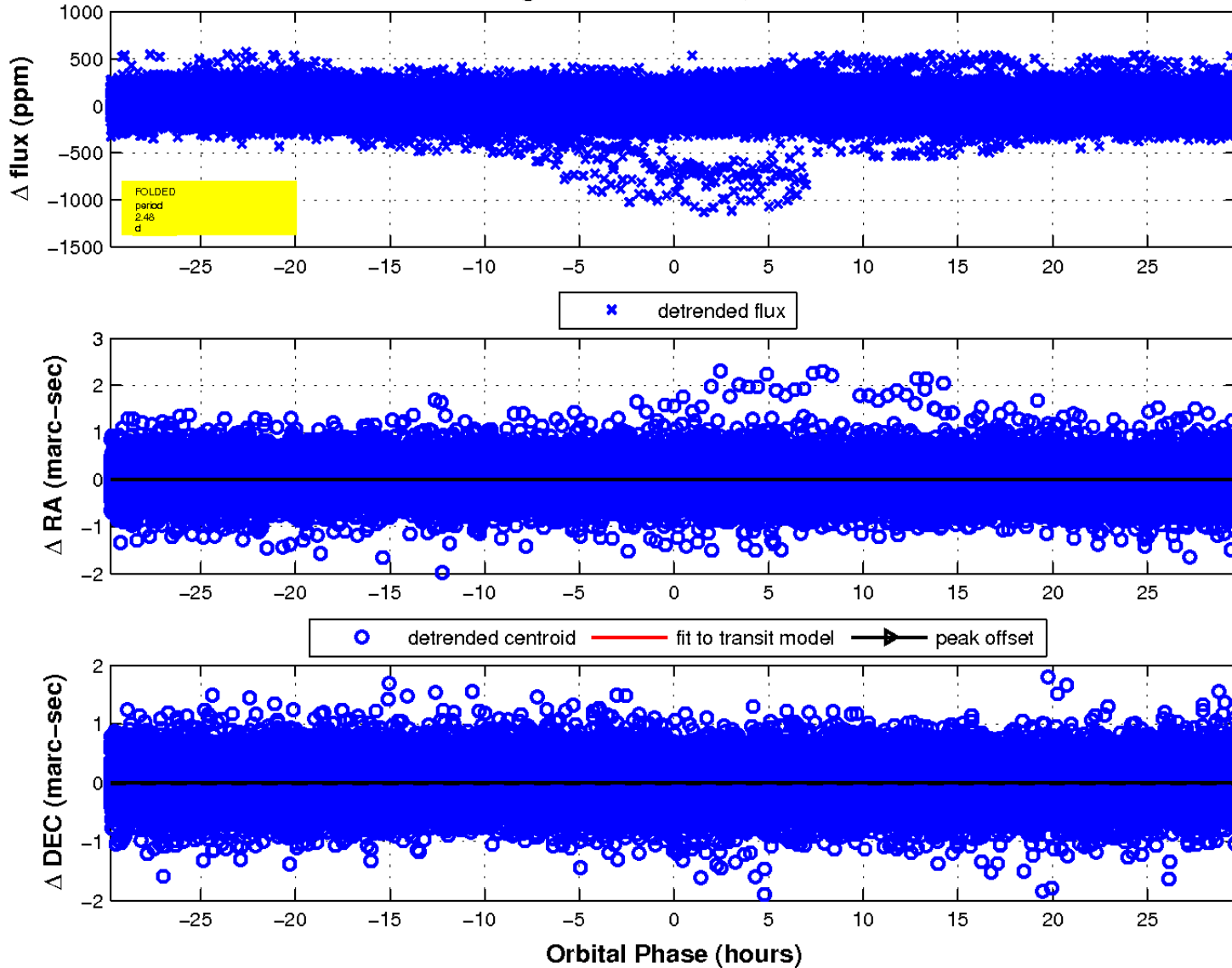
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

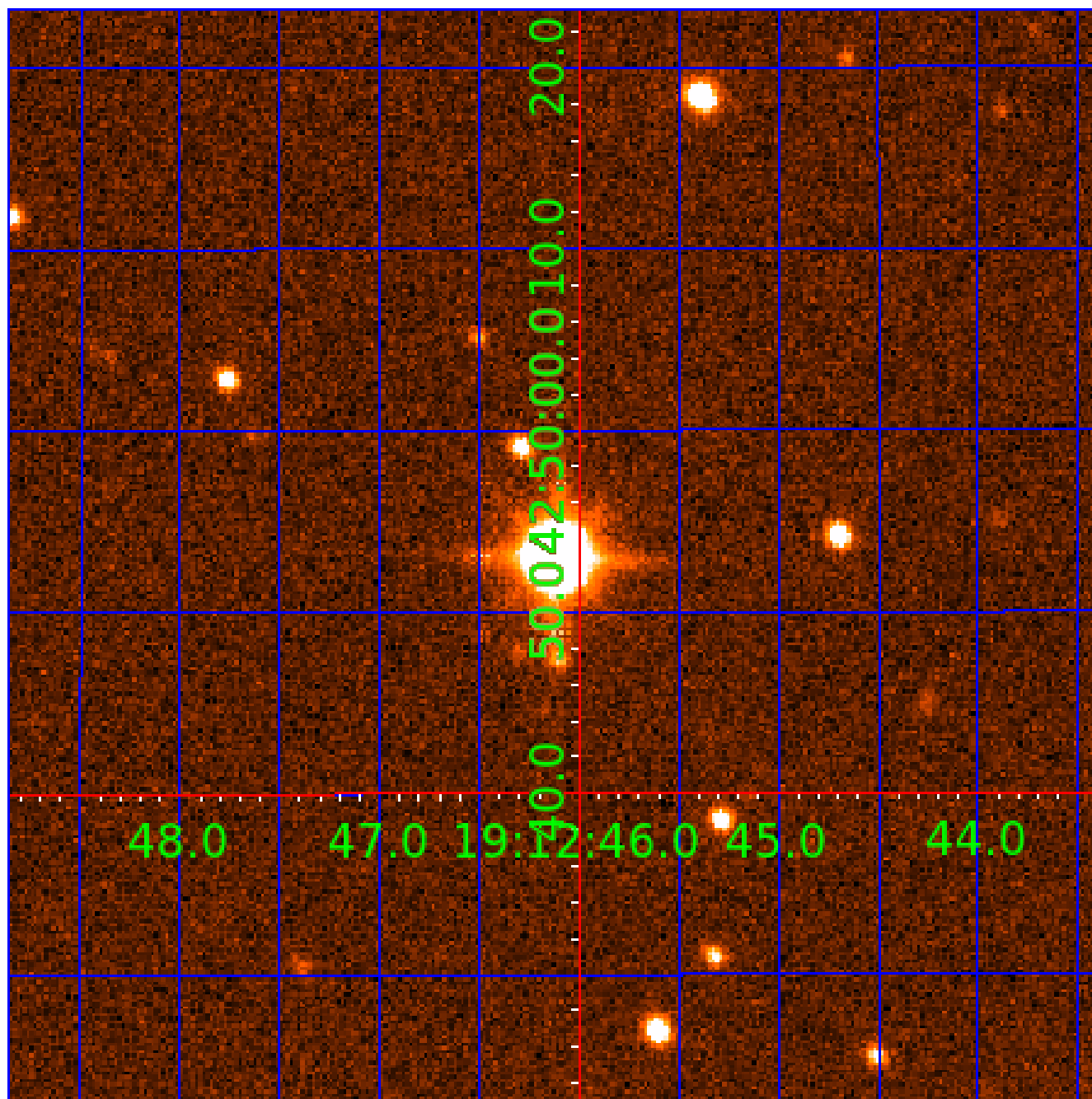


fluxWeightedCentroids, Planet 2 of 7



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

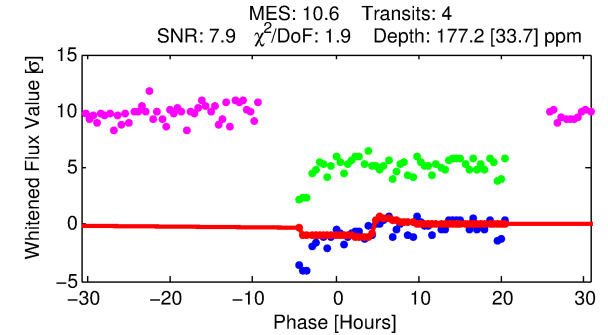
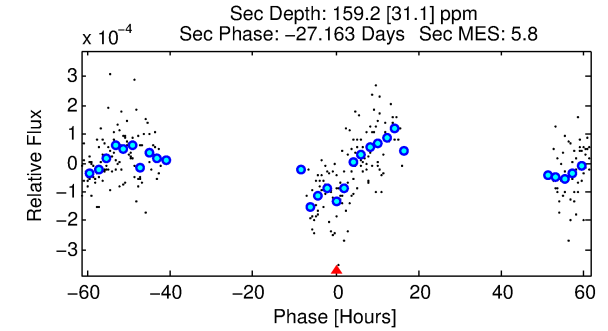
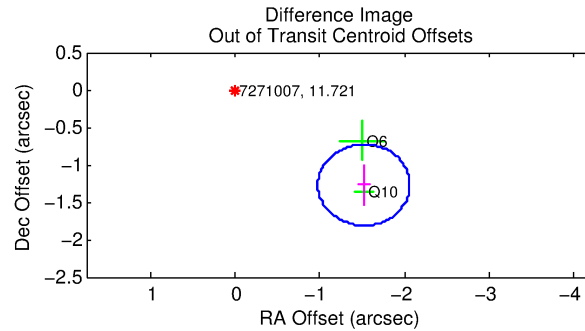
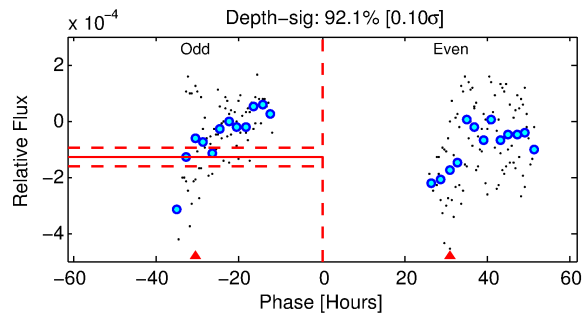
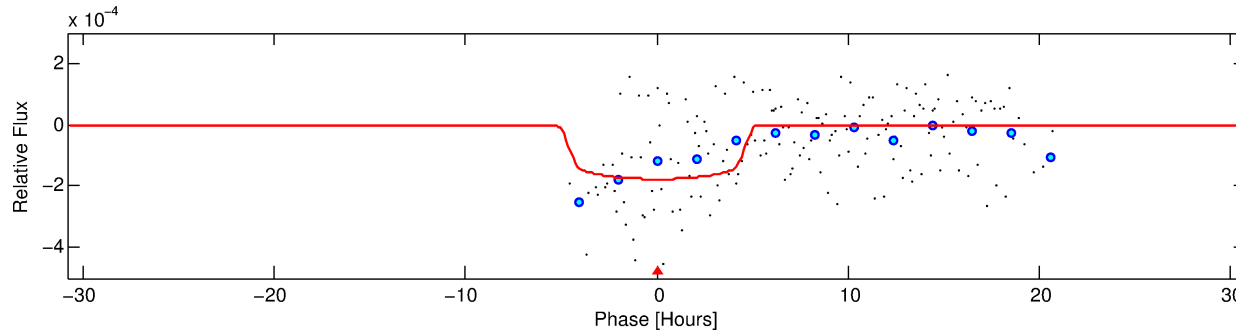
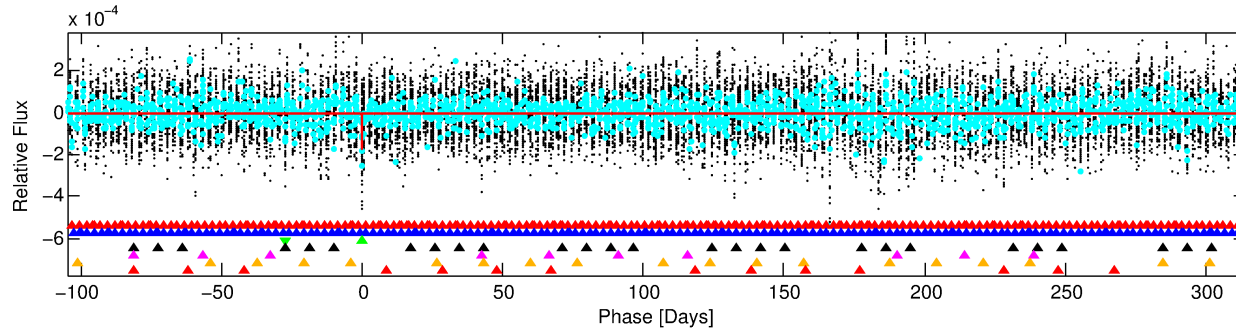
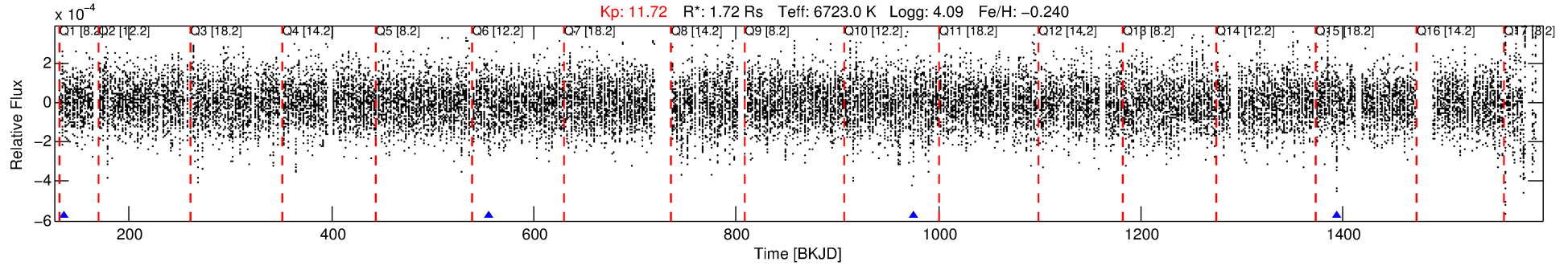
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-03

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 3 of 7 Period: 419.191 d



DV Fit Results:

Period = 419.19086 [0.01081] d
Epoch = 136.3960 [0.0276] BKJD
Rp/R* = 0.0145 [0.0023]
a/R* = 128.60 [92.37]
b = 0.93 [0.11]
Seff = 3.73 [1.72]
Teq = 354 [41] K
Rp = 2.73 [0.98] Re
a = 1.2036 [0.3443] AU
Ag = 17032.92 [9796.70] [1.74 σ]
Teff = 6261 [638] K [9.24 σ]

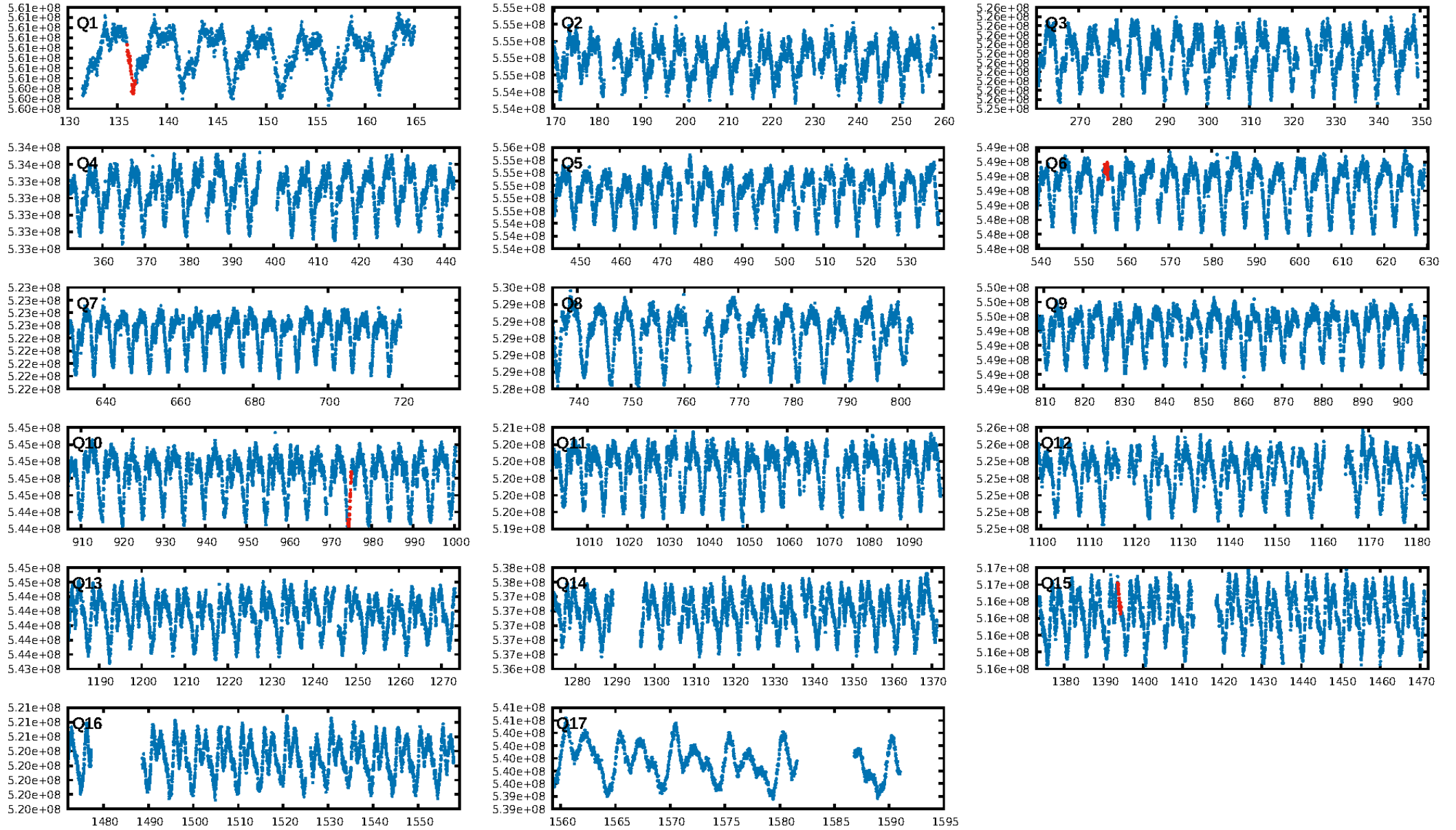
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [579.42 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 44.4
Centroid-sig: 23.1%
Centroid-so: 0.600 arcsec [0.91 σ]
OotOffset-rm: 1.983 arcsec [10.99 σ]
KicOffset-rm: 1.946 arcsec [9.99 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

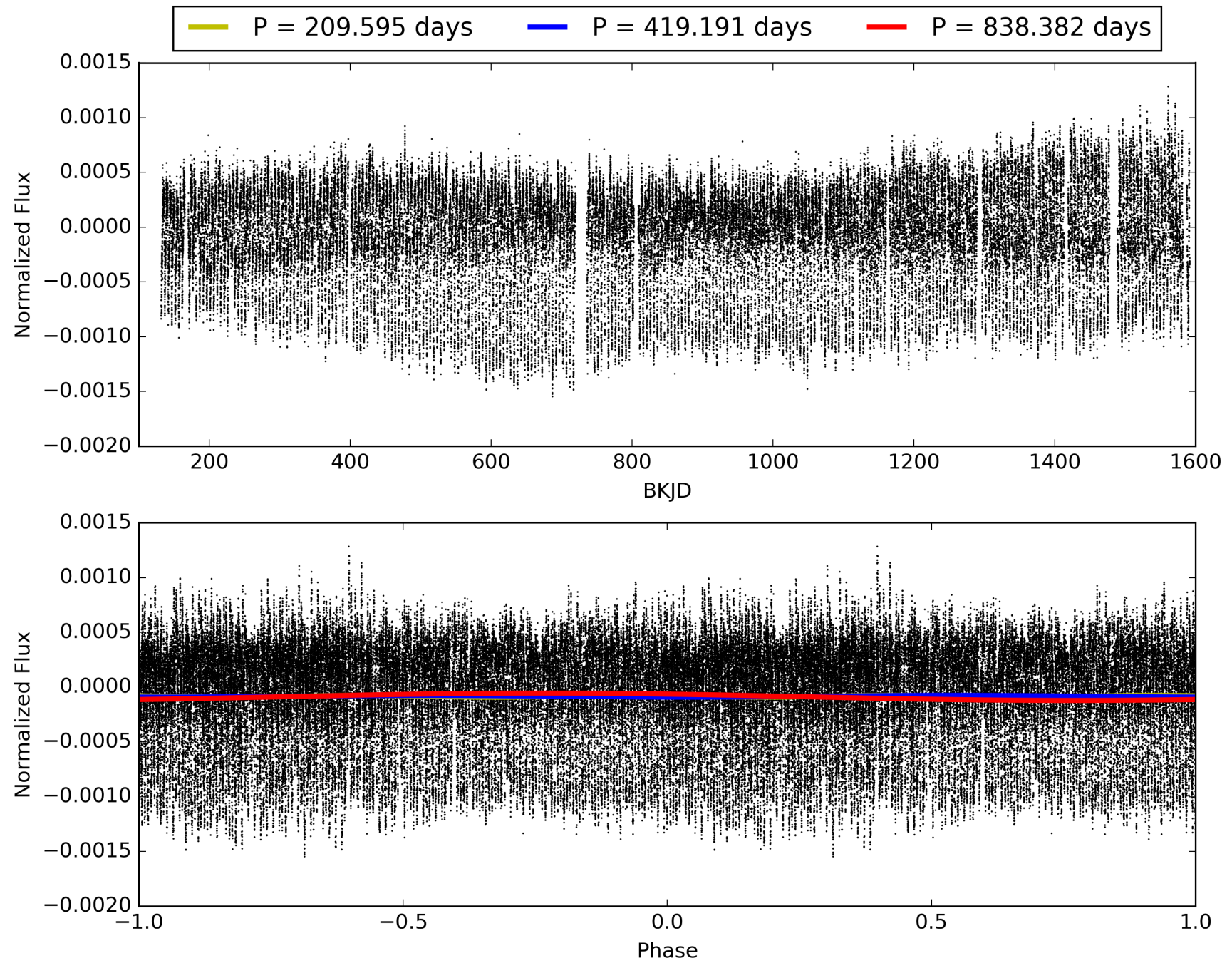
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:42:02 Z

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

TCE 007271007-03, PDC Light Curves

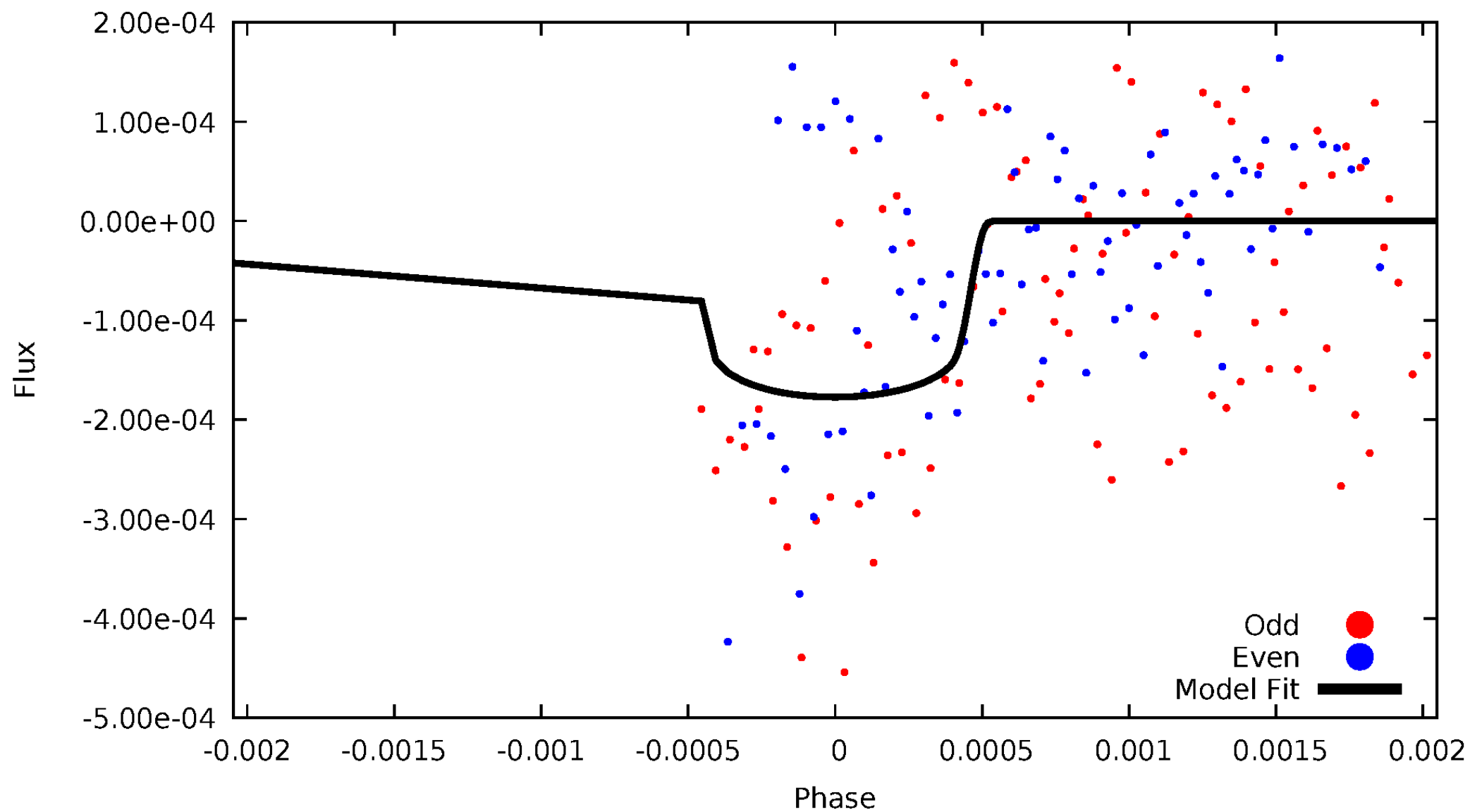


TCE 007271007-03



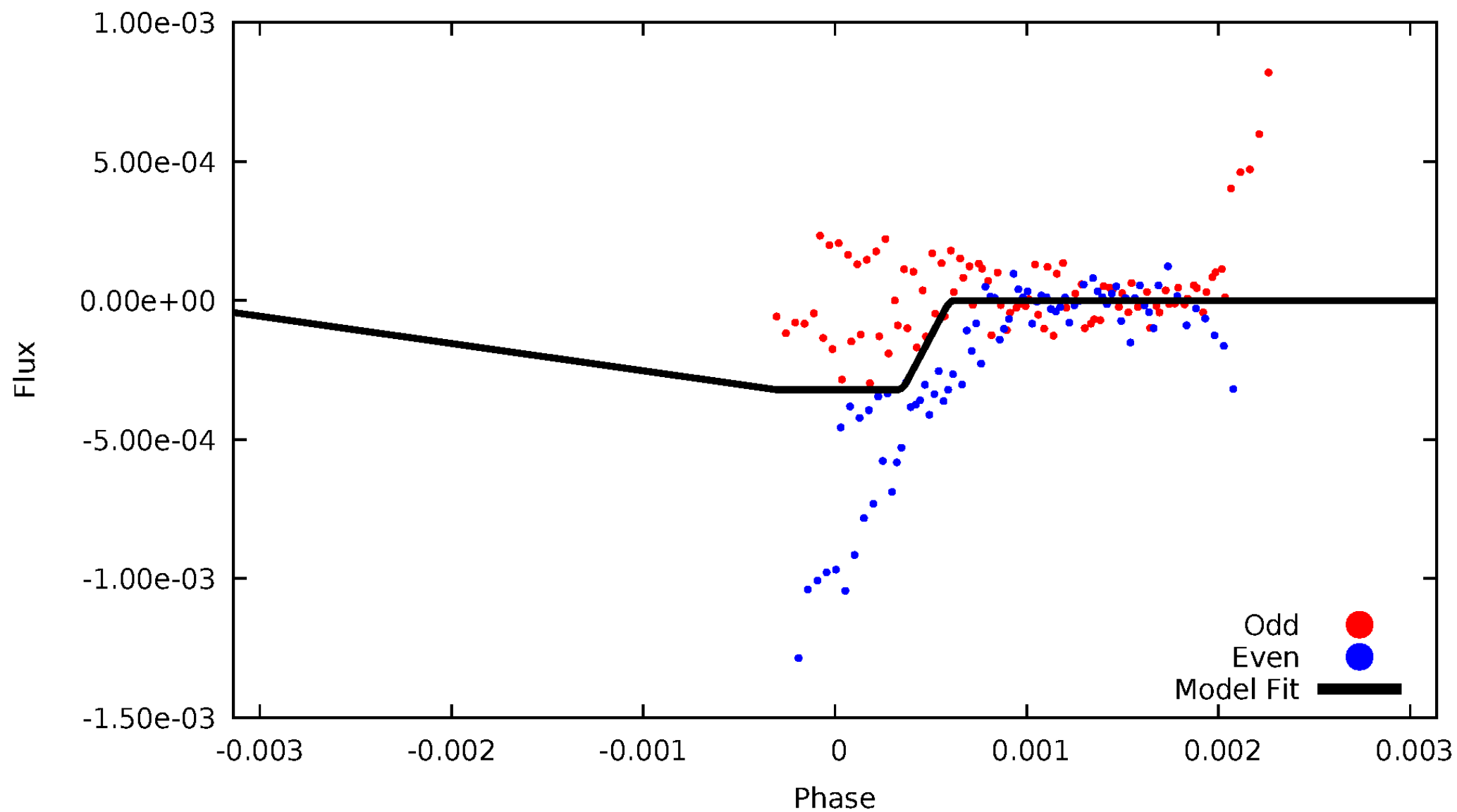
DV Odd/Even

TCE 007271007-03



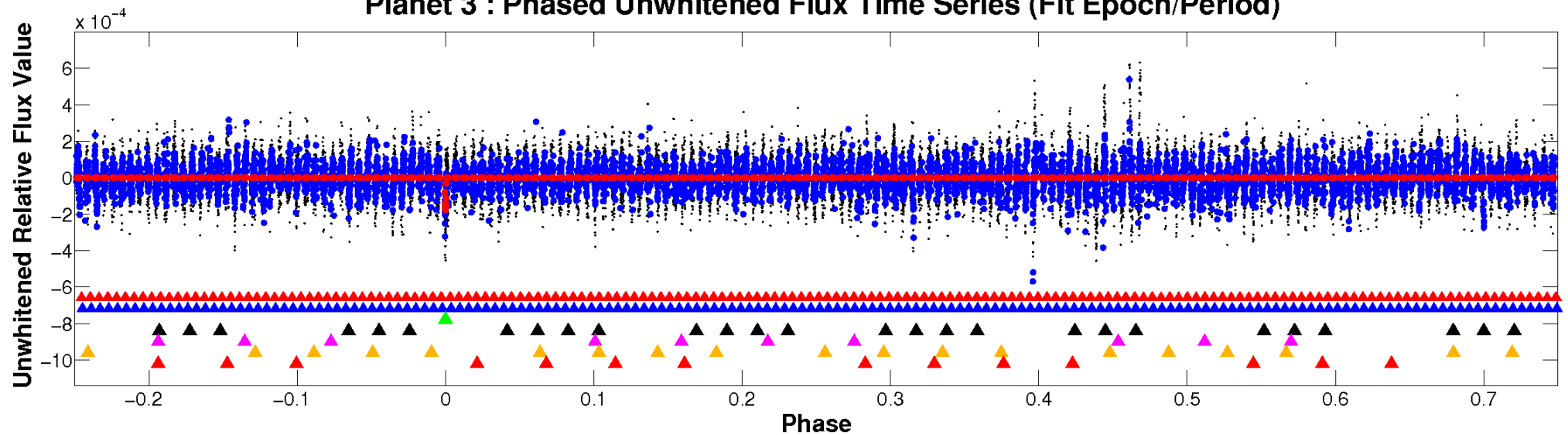
ALT Odd/Even

TCE 007271007-03

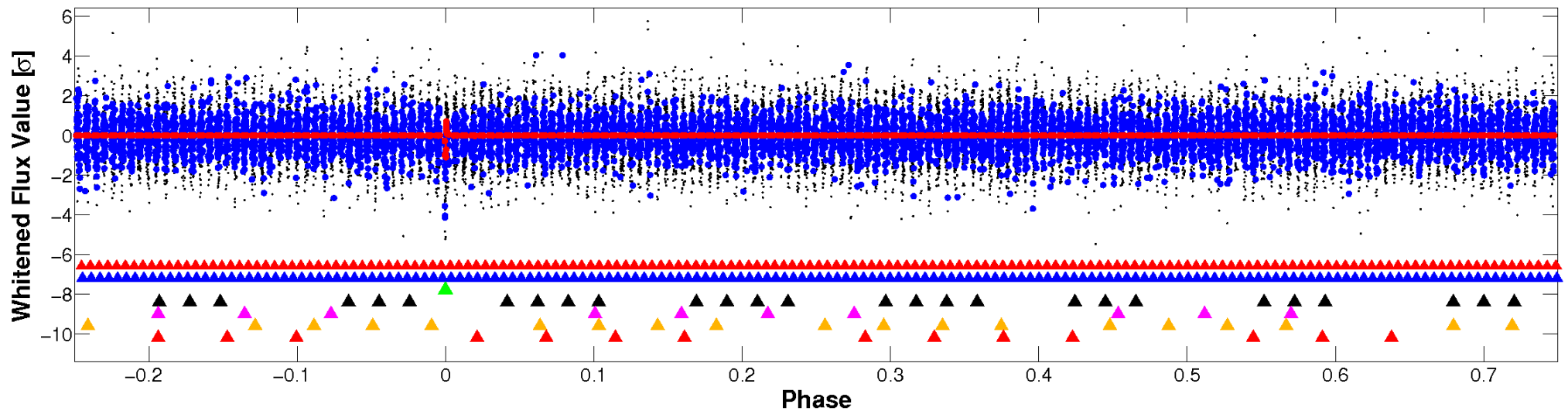


Non-Whitened Vs. Whitened Light Curve

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

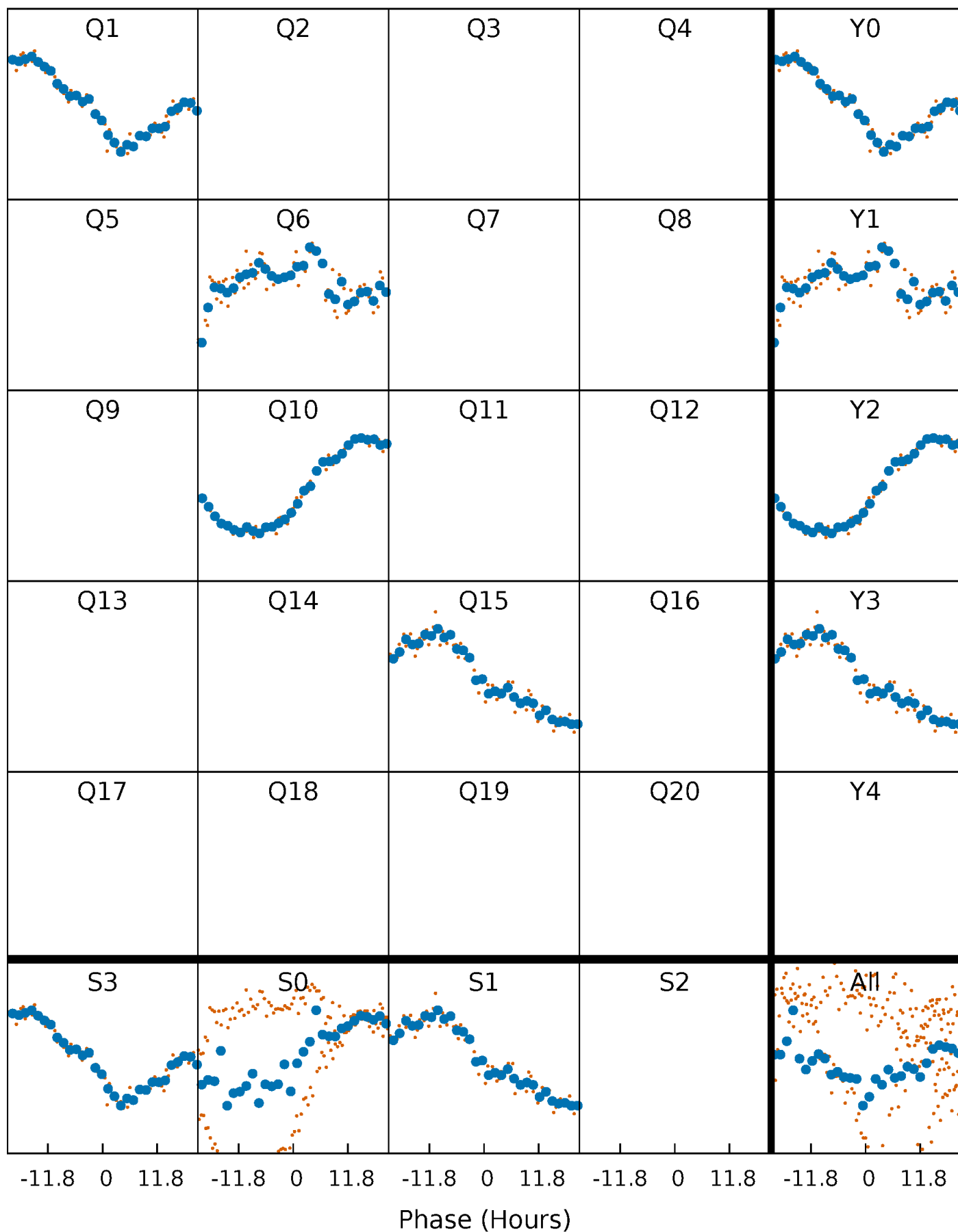


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



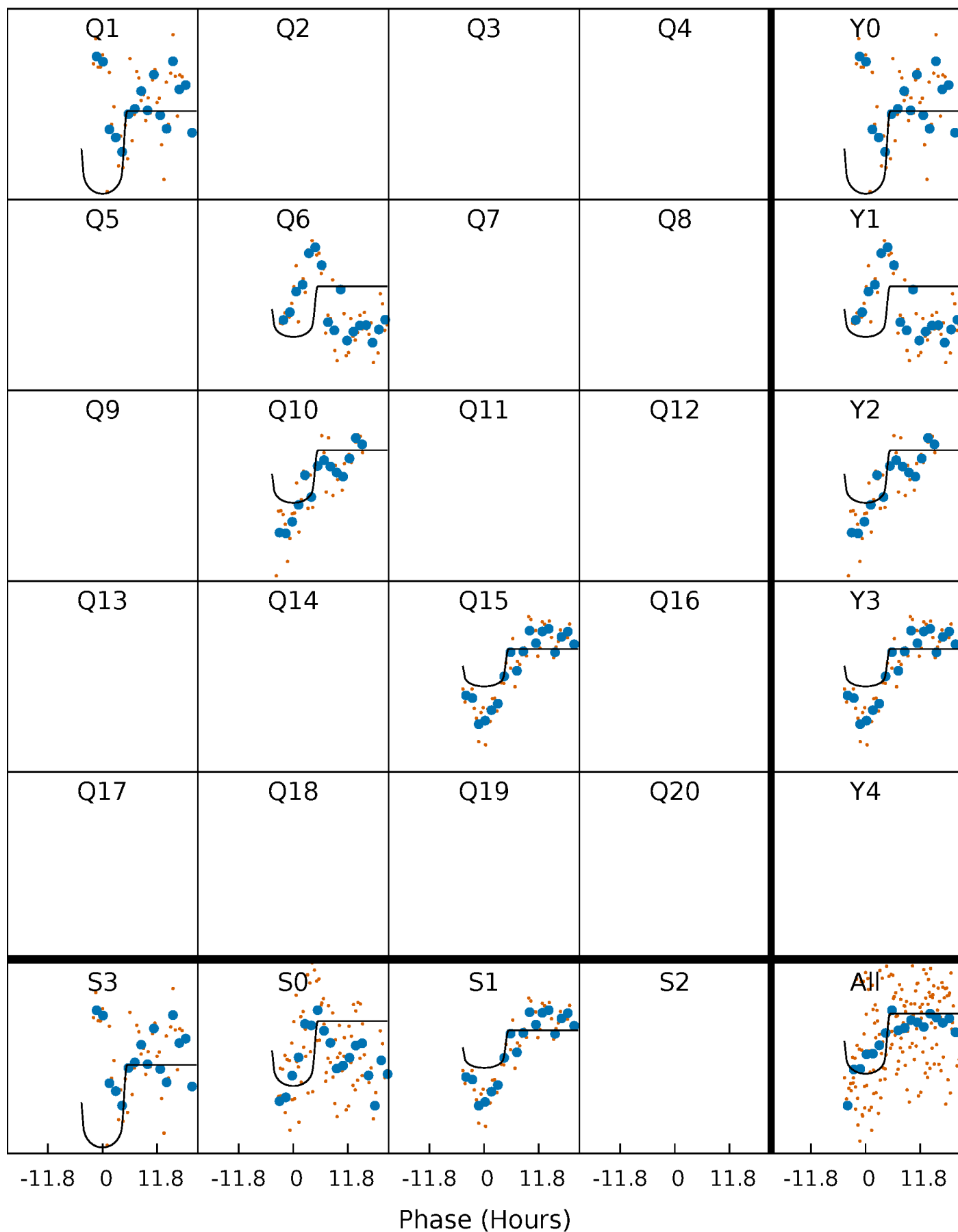
PDC Quarter-Phased Transit Curves

TCE 007271007-03 $P=419.190865$ Days $T_0=136.396007$ (BKJD)



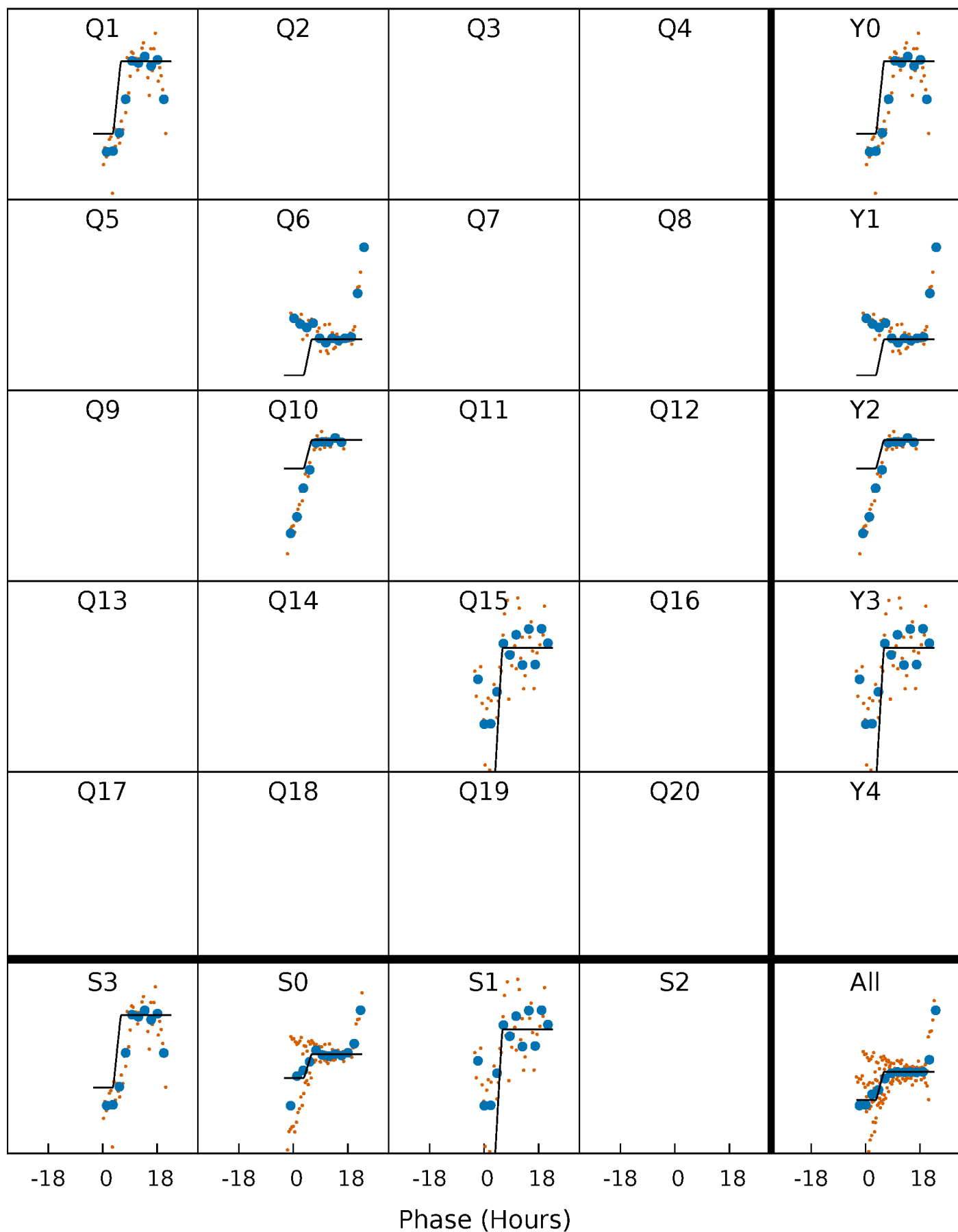
DV Quarter-Phased Transit Curves

TCE 007271007-03 P=419.190865 Days $T_0=136.396007$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

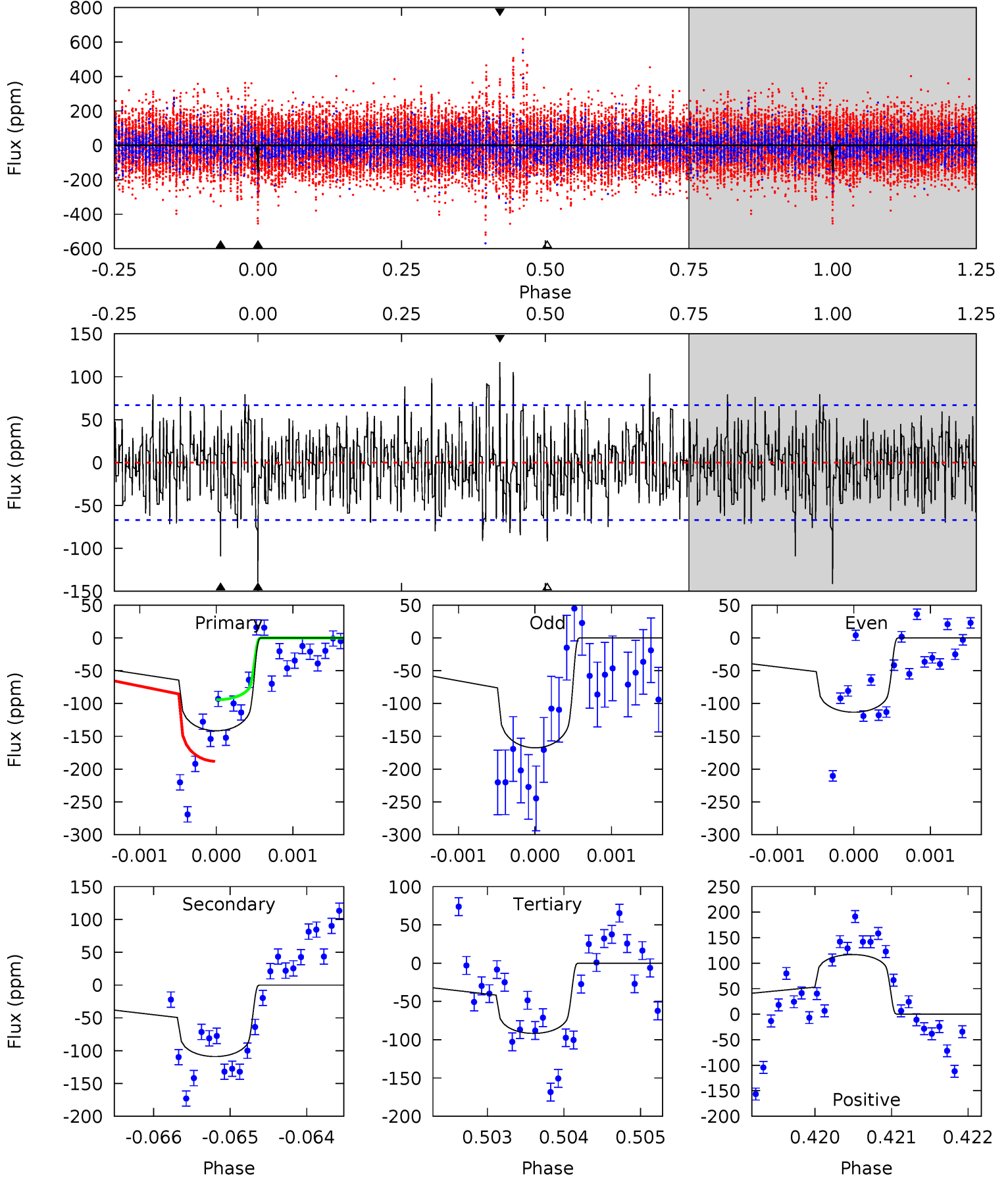
TCE 007271007-03 P=419.201295 Days $T_0=136.301841$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-03, P = 419.190865 Days, E = 136.396007 Days

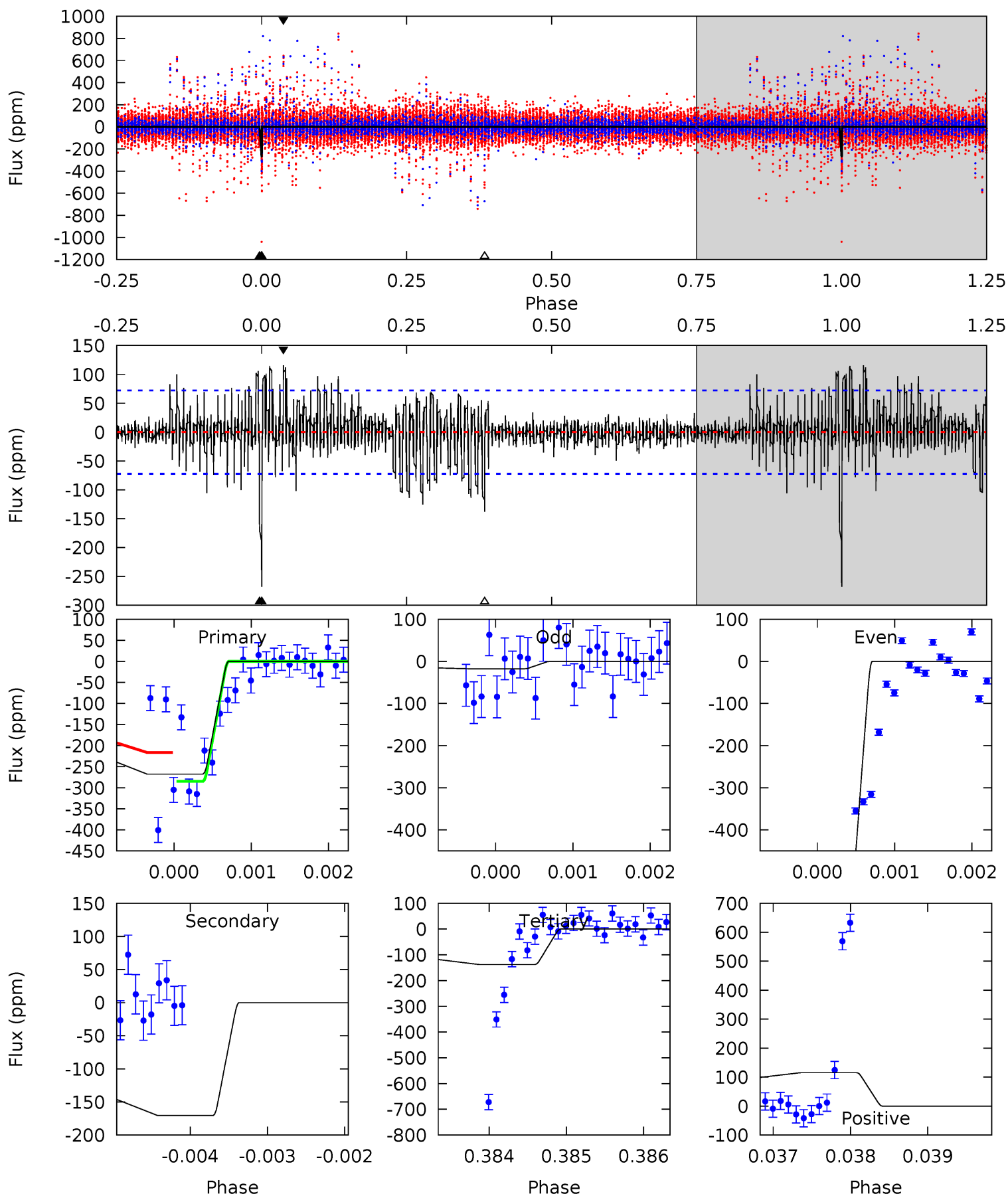
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	8.90	7.49	9.54	5.46	3.31	2.51	4.07	2.02	1.41	-0.65	2.20	1.07	0.45	3.73



Alt Model-Shift Uniqueness Test

007271007-03, P = 419.201295 Days, E = 136.301841 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	12.9	10.4	8.74	5.47	3.33	1.73	9.84	11.5	2.47	4.16	28.4	1.10	0.30	1.88



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-109±12	$2.67^{+0.71}_{-0.55}$	491^{+38}_{-40}	5650^{+613}_{-431}	12139^{+7134}_{-4676}
Alt.	-170±13	$3.30^{+0.75}_{-0.69}$	489^{+43}_{-42}	5692^{+459}_{-348}	12391^{+7636}_{-4202}

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

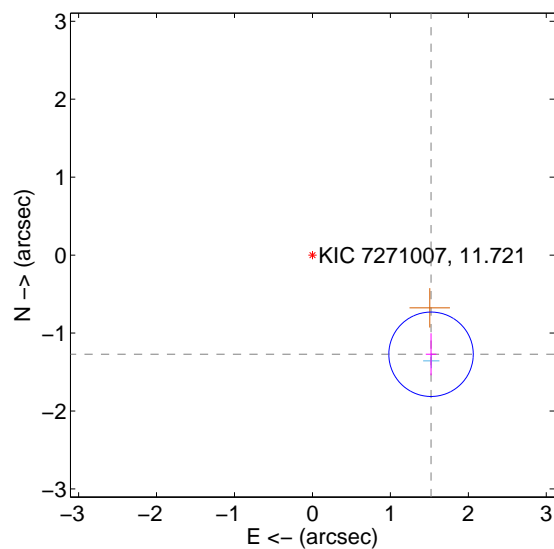
Supplemental centroid analysis for 007271007-03. **Kepler magnitude: 11.72.** Transit SNR 7.91

There are 1 quarters with good PRF difference image offsets

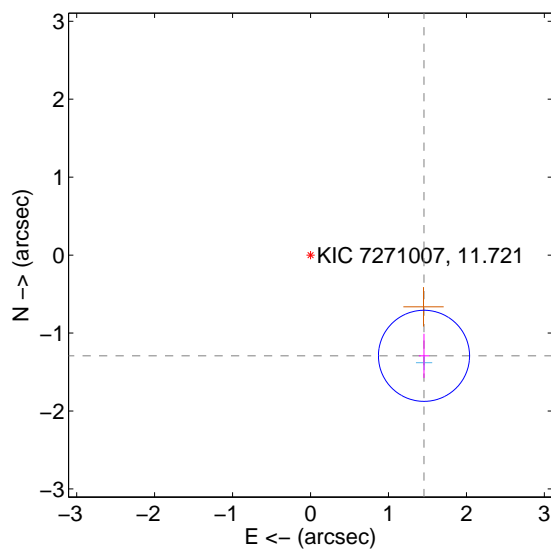
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.983 ± 0.180	10.99	-1.522 ± 0.067	-1.272 ± 0.270
PRF-fit source offset from KIC position	1.946 ± 0.195	9.99	-1.456 ± 0.067	-1.292 ± 0.284
photometric centroid source offset	0.60 ± 0.66	0.91	0.02 ± 0.61	-0.60 ± 0.66

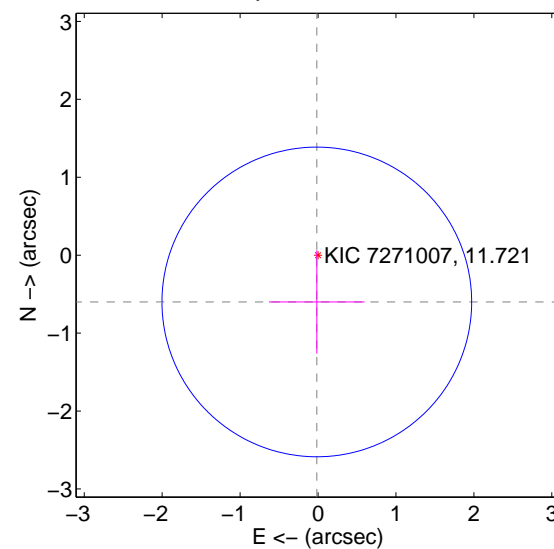
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

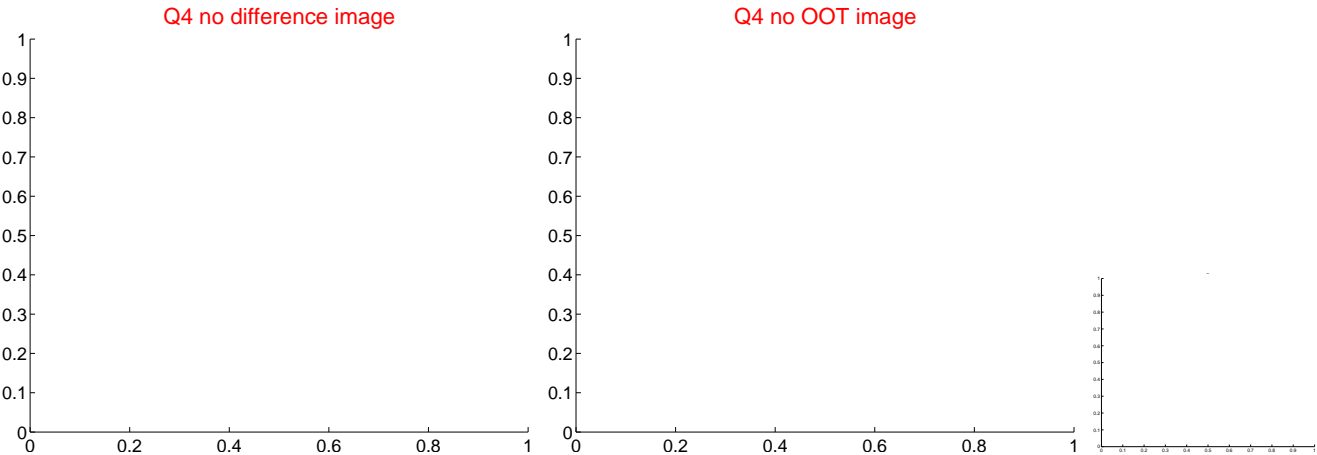
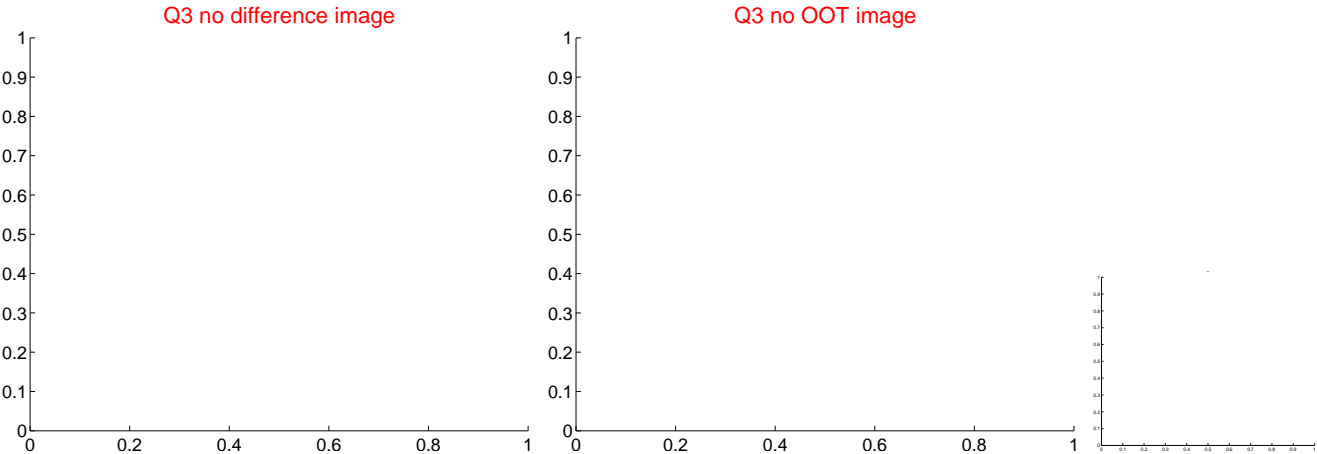
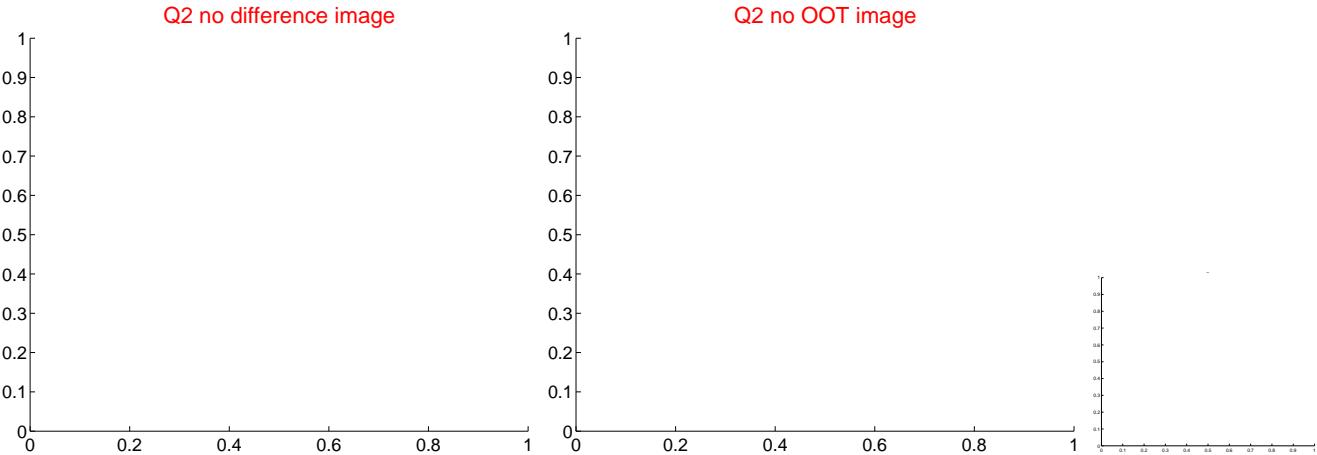
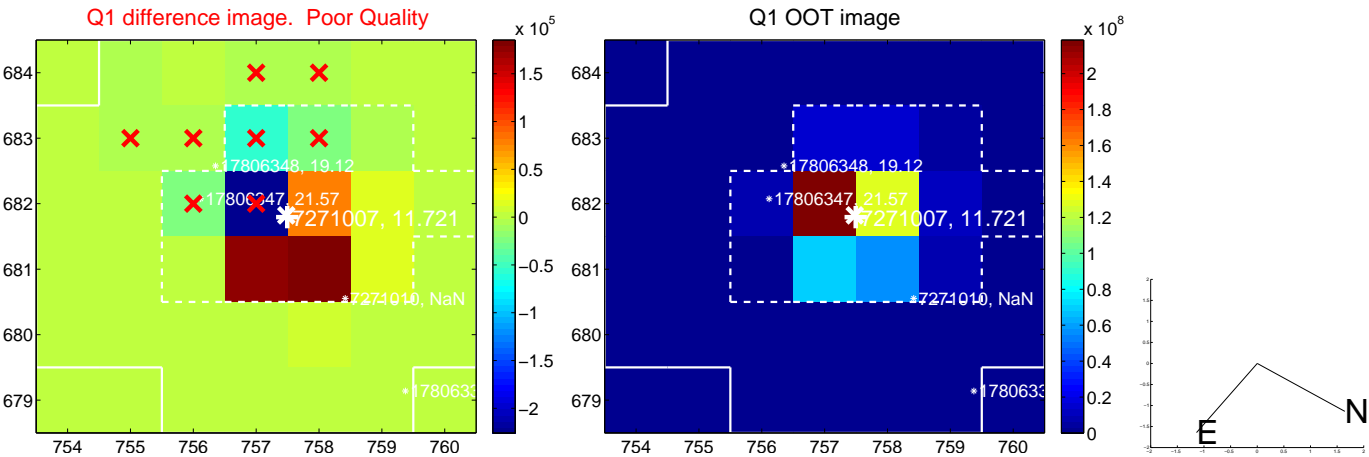


offset from photometric centroids

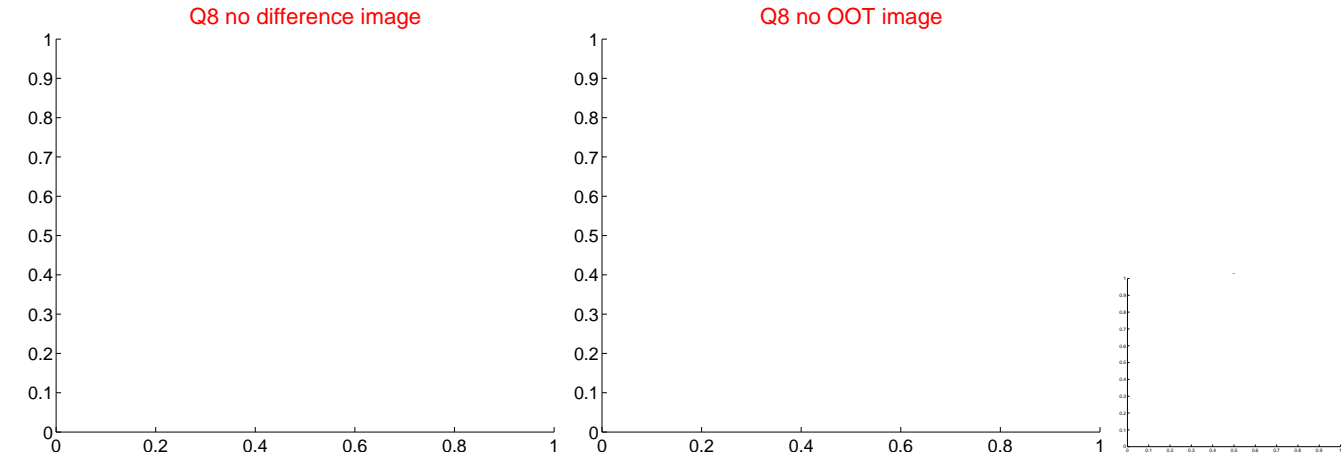
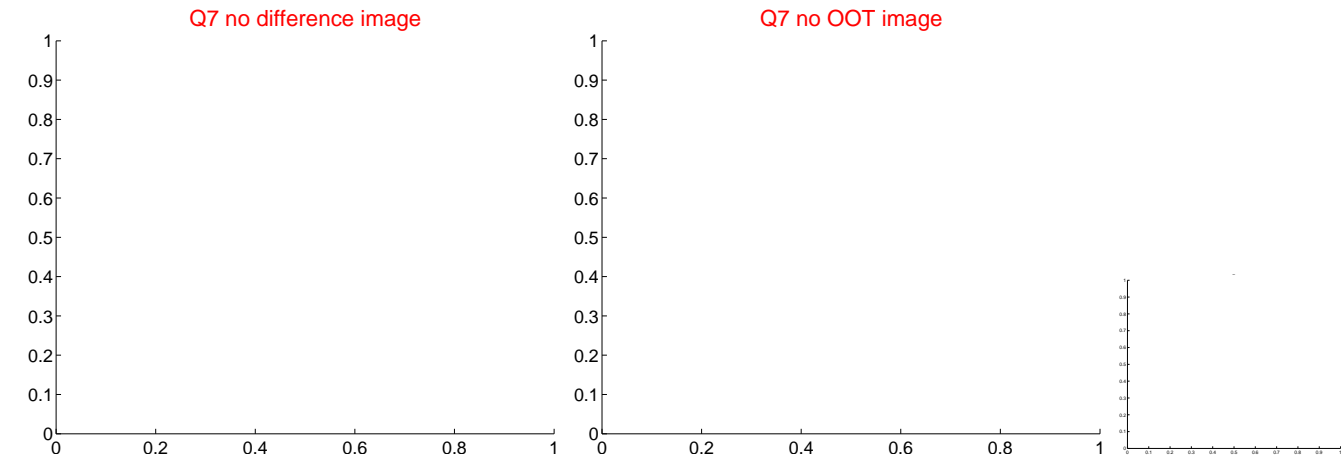
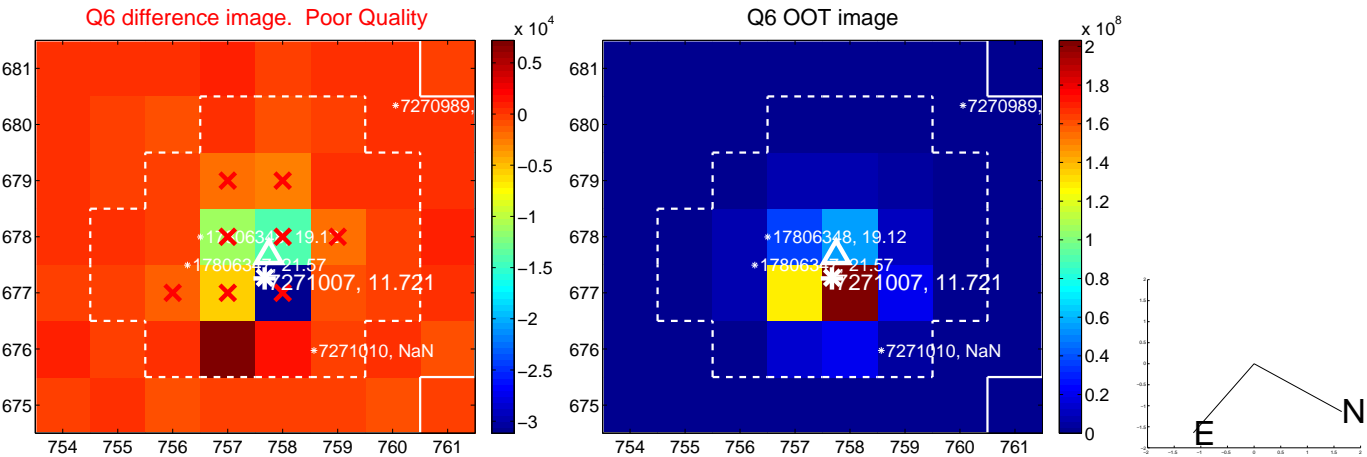
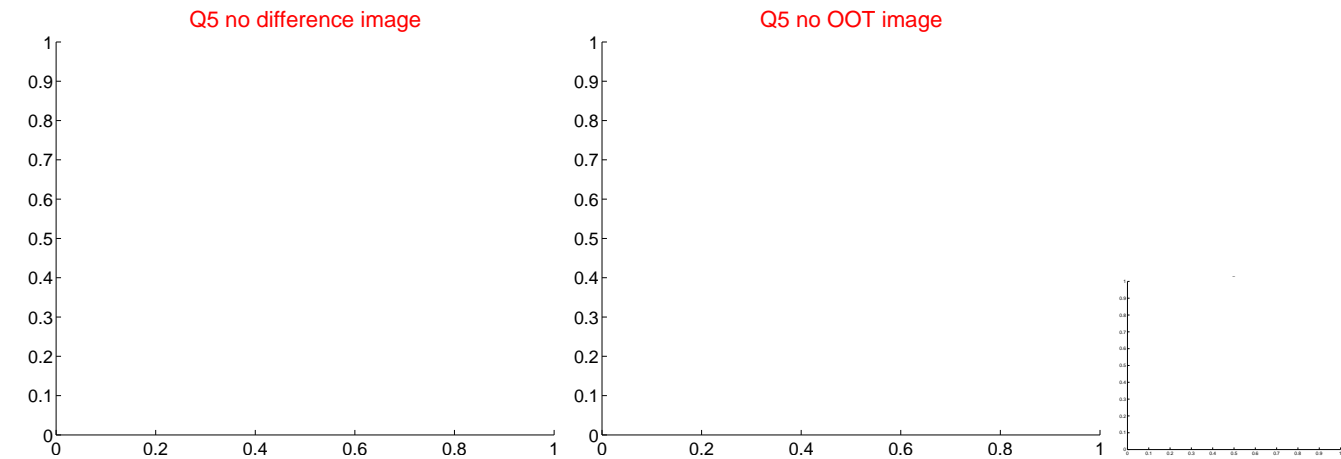


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

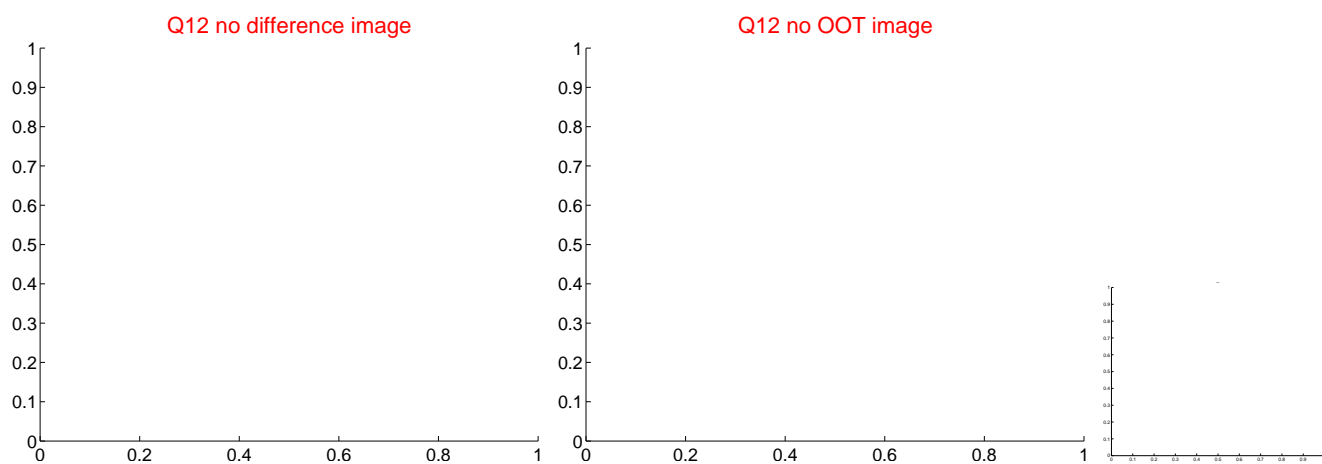
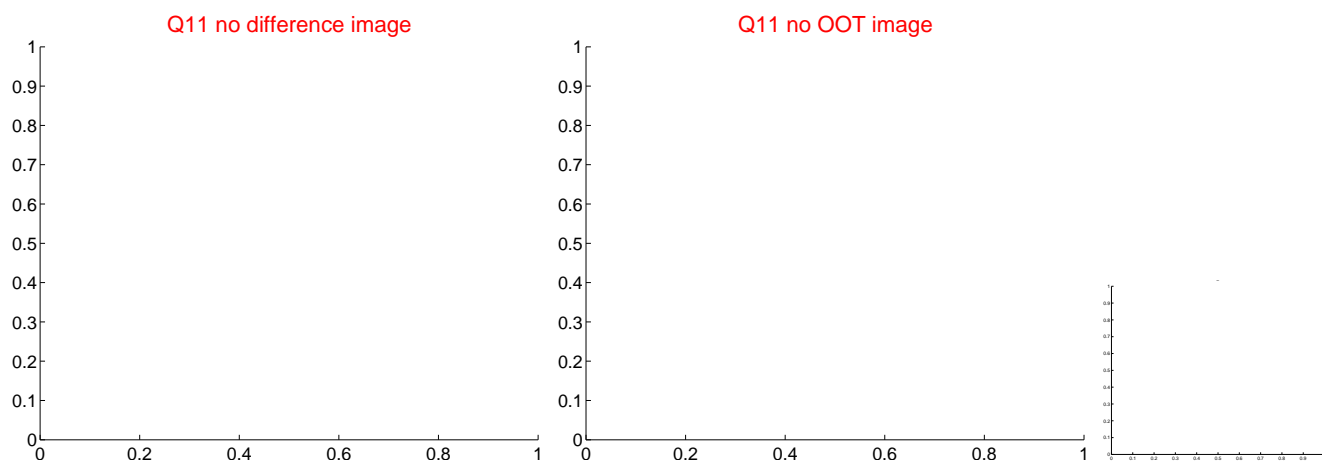
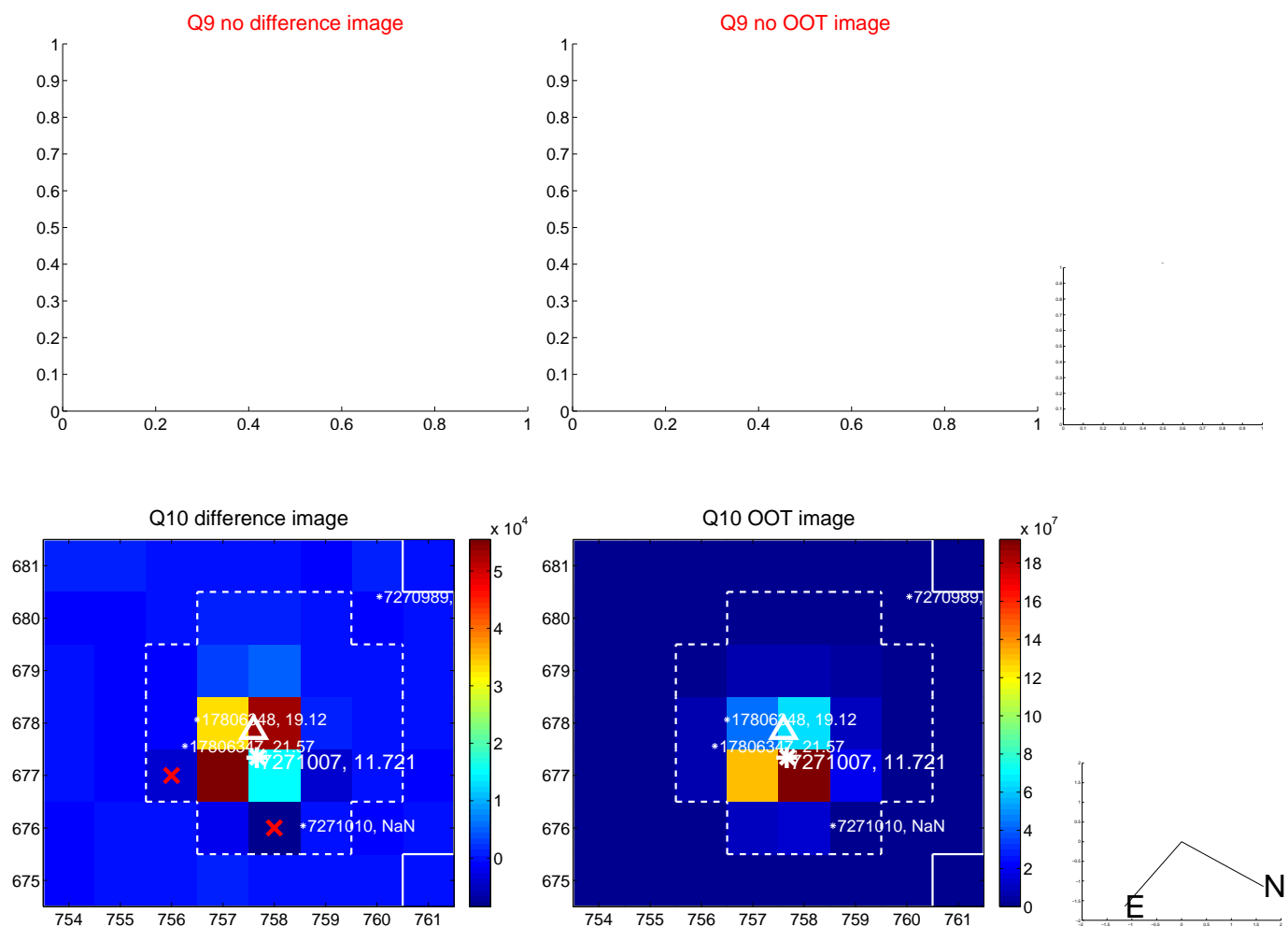
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



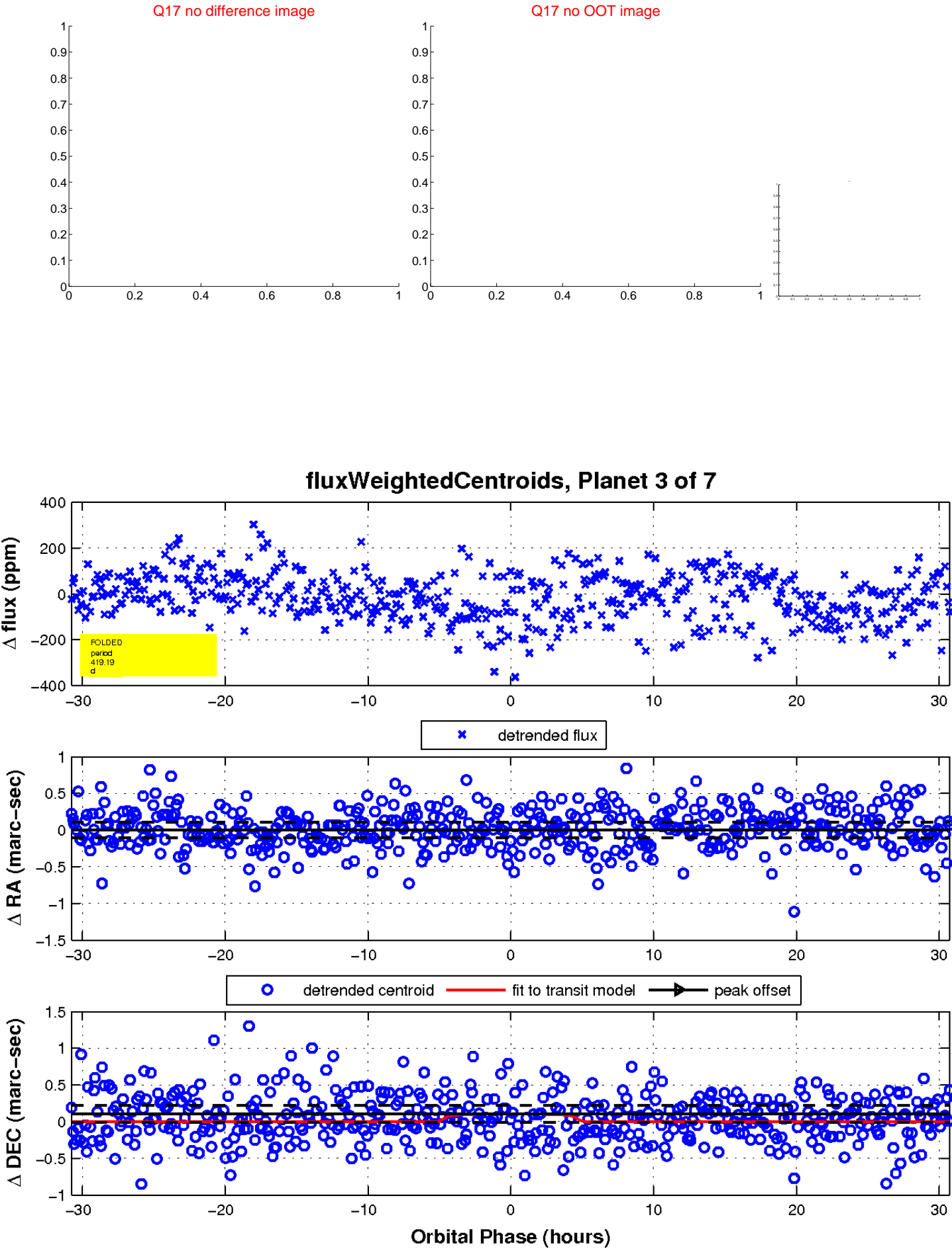
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

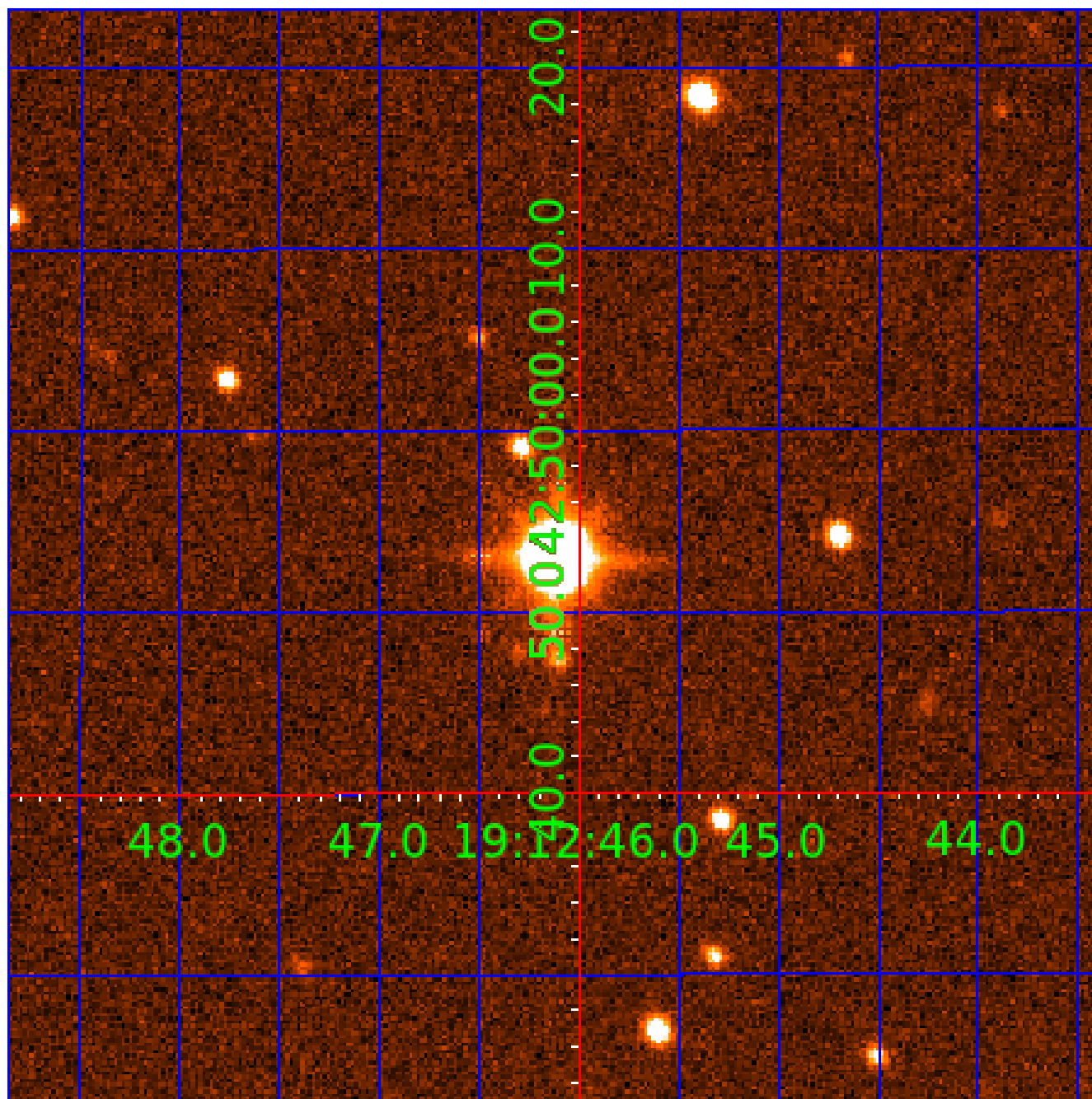


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

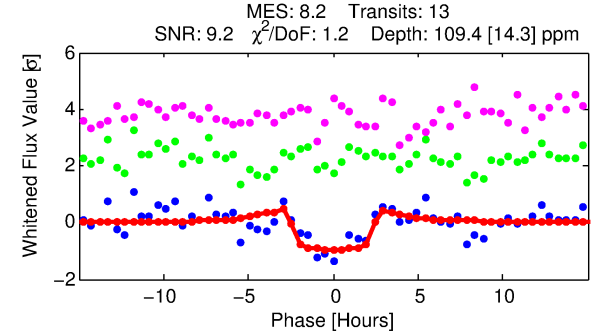
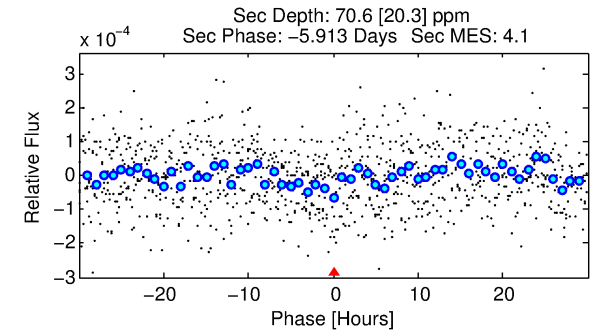
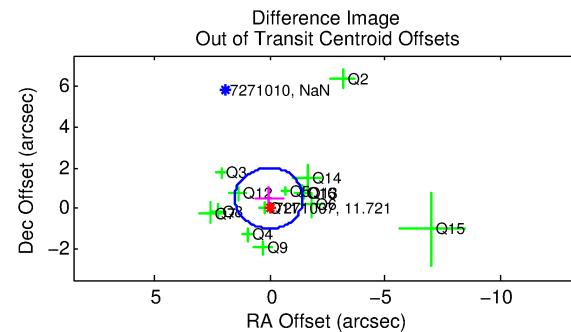
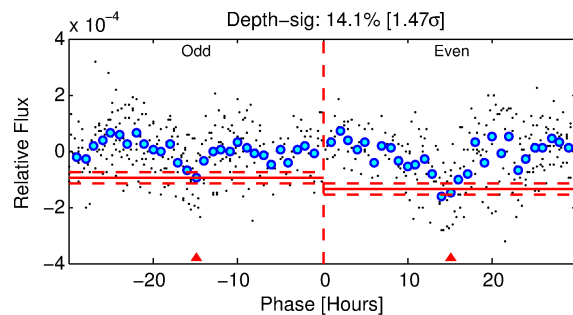
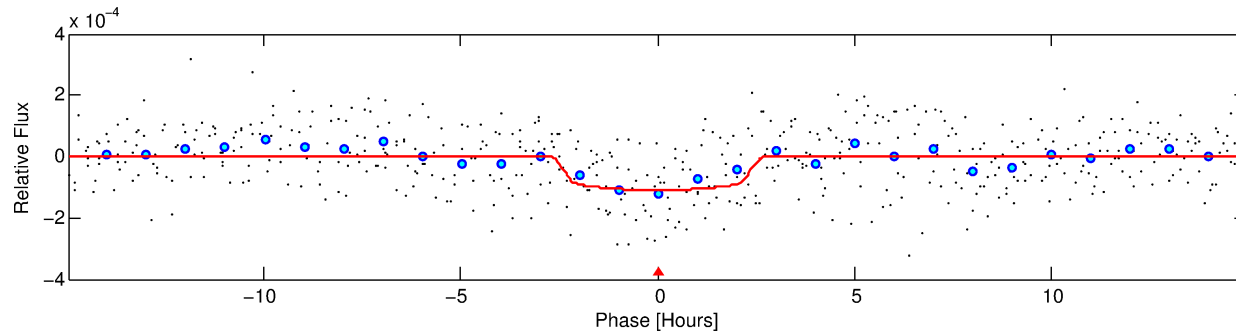
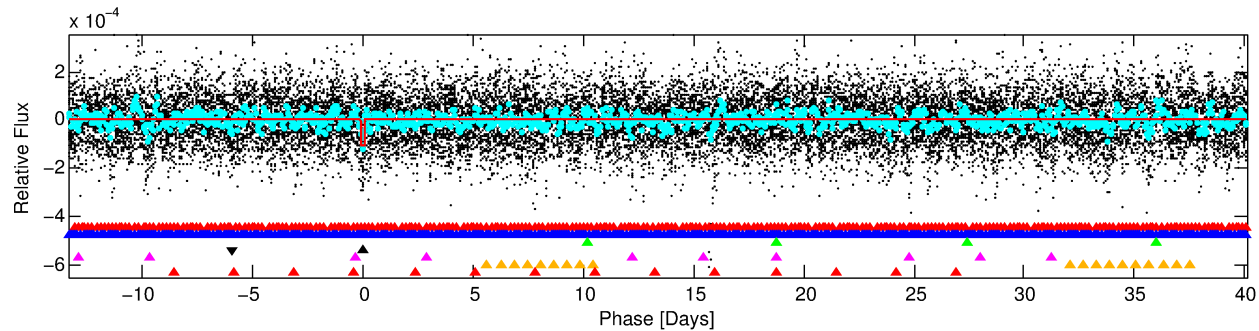
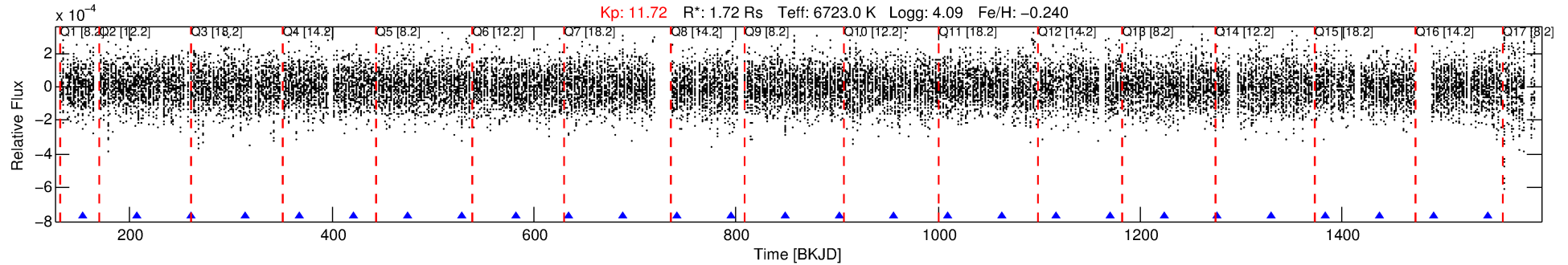
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-04

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 4 of 7 Period: 53.476 d



DV Fit Results:

Period = 53.47647 [0.00060] d
Epoch = 153.8543 [0.0089] BKJD
Rp/R* = 0.0106 [0.0053]
a/R* = 49.00 [139.62]
b = 0.81 [1.19]
Seff = 58.14 [26.81]
Teq = 704 [81] K
Rp = 2.00 [1.19] Re
a = 0.3050 [0.0872] AU
Ag = 907.53 [1021.29] [0.89 σ]
Teff = 5975 [1568] K [3.36 σ]

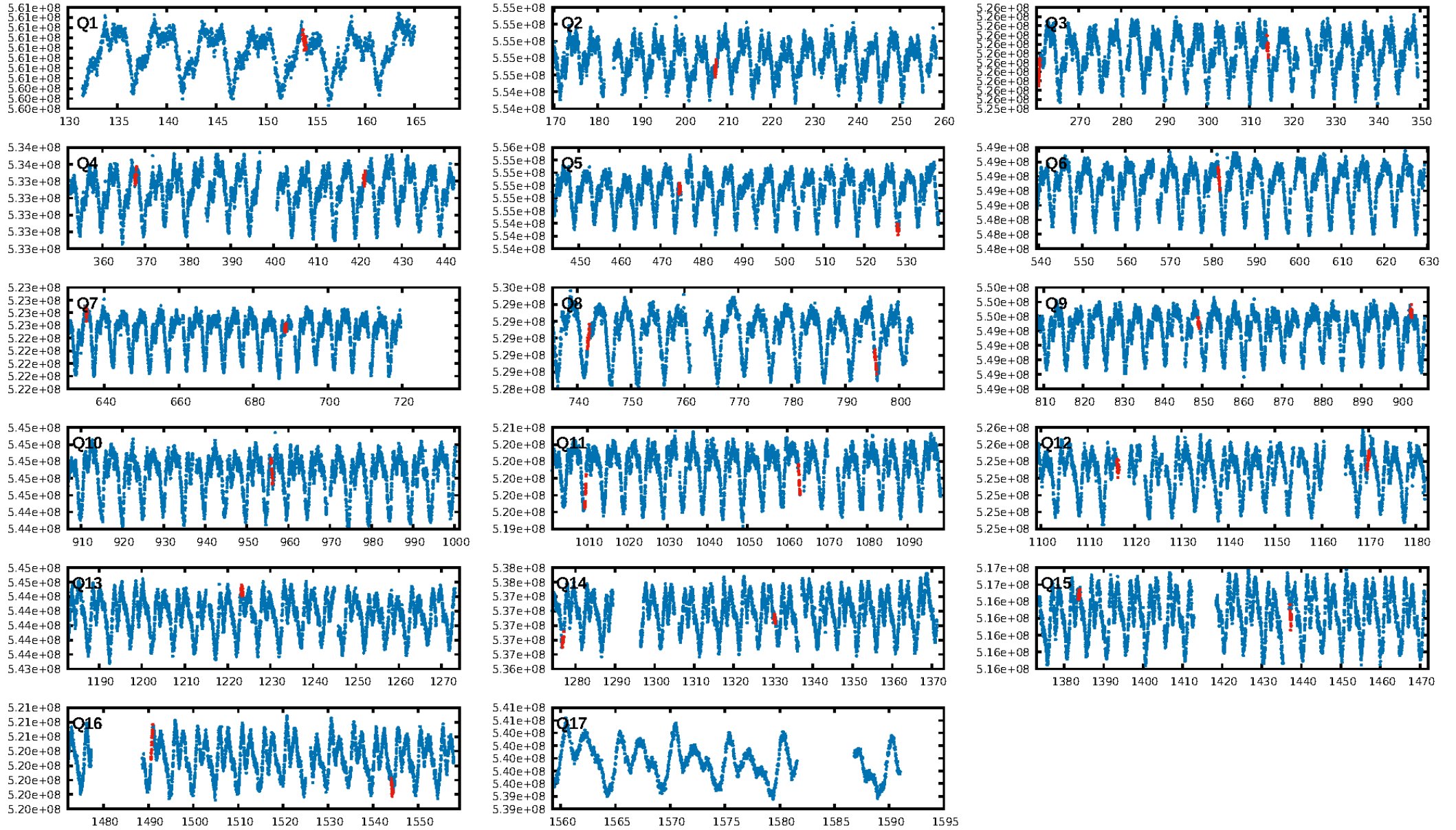
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [102.41 σ]
LongPeriod-sig: 100.0% [125.28 σ]
ModelChiSquare2-sig: 44.1%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 1.531
Centroid-sig: 31.0%
Centroid-so: 0.483 arcsec [1.04 σ]
OotOffset-rm: 0.507 arcsec [1.02 σ]
KicOffset-rm: 0.558 arcsec [1.17 σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 0.69 [11/16]

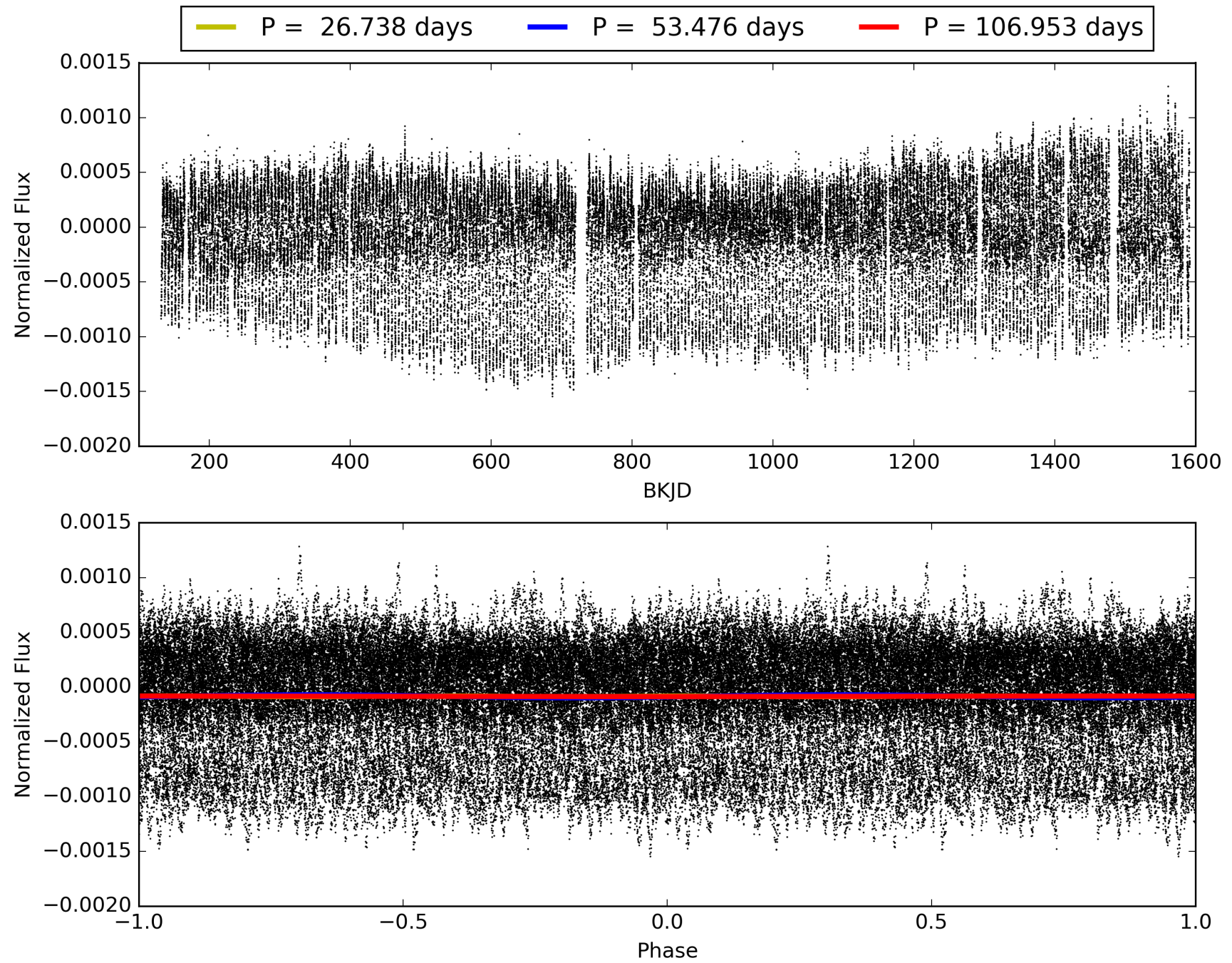
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:42:07 Z

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

TCE 007271007-04, PDC Light Curves

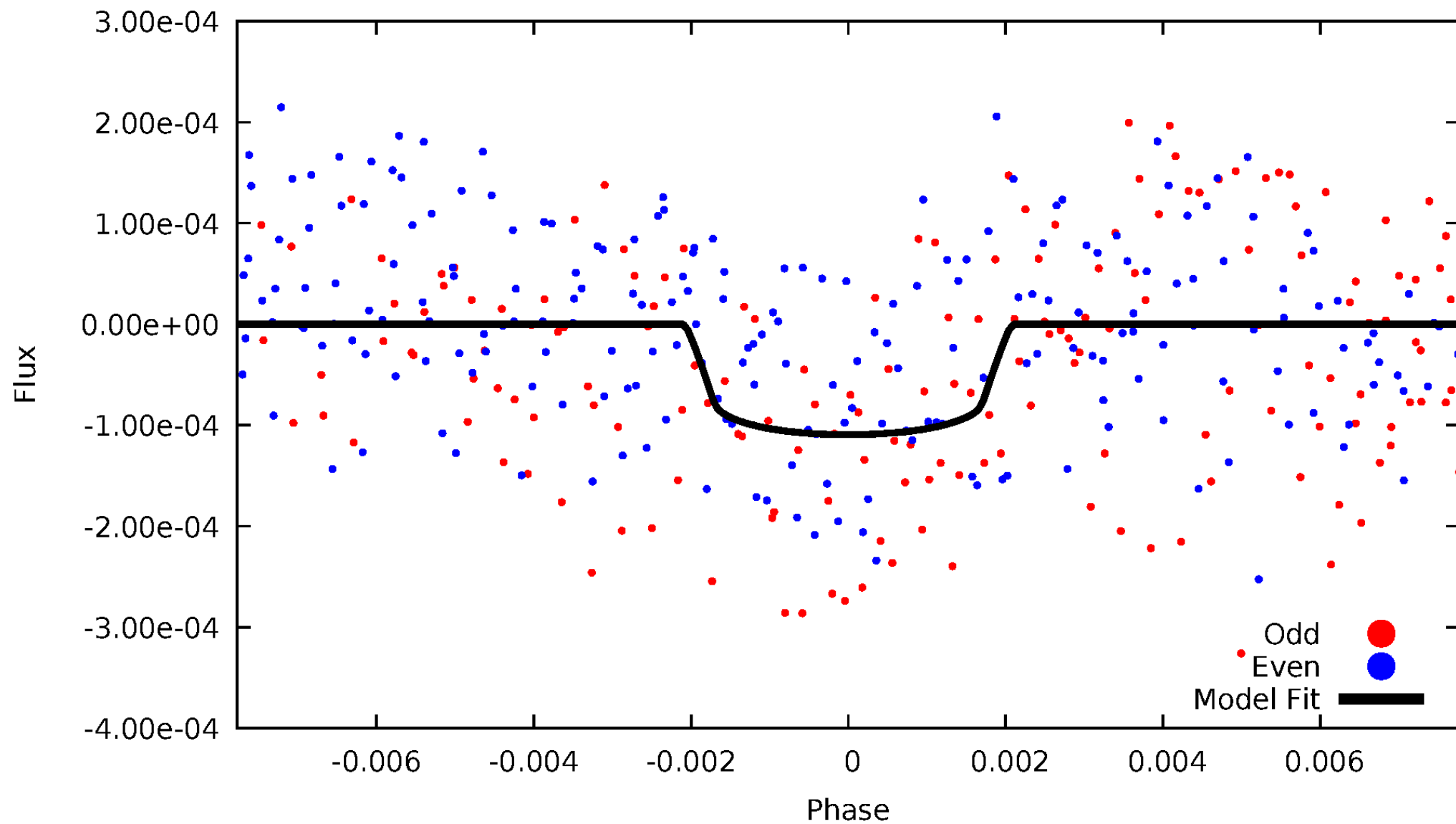


TCE 007271007-04



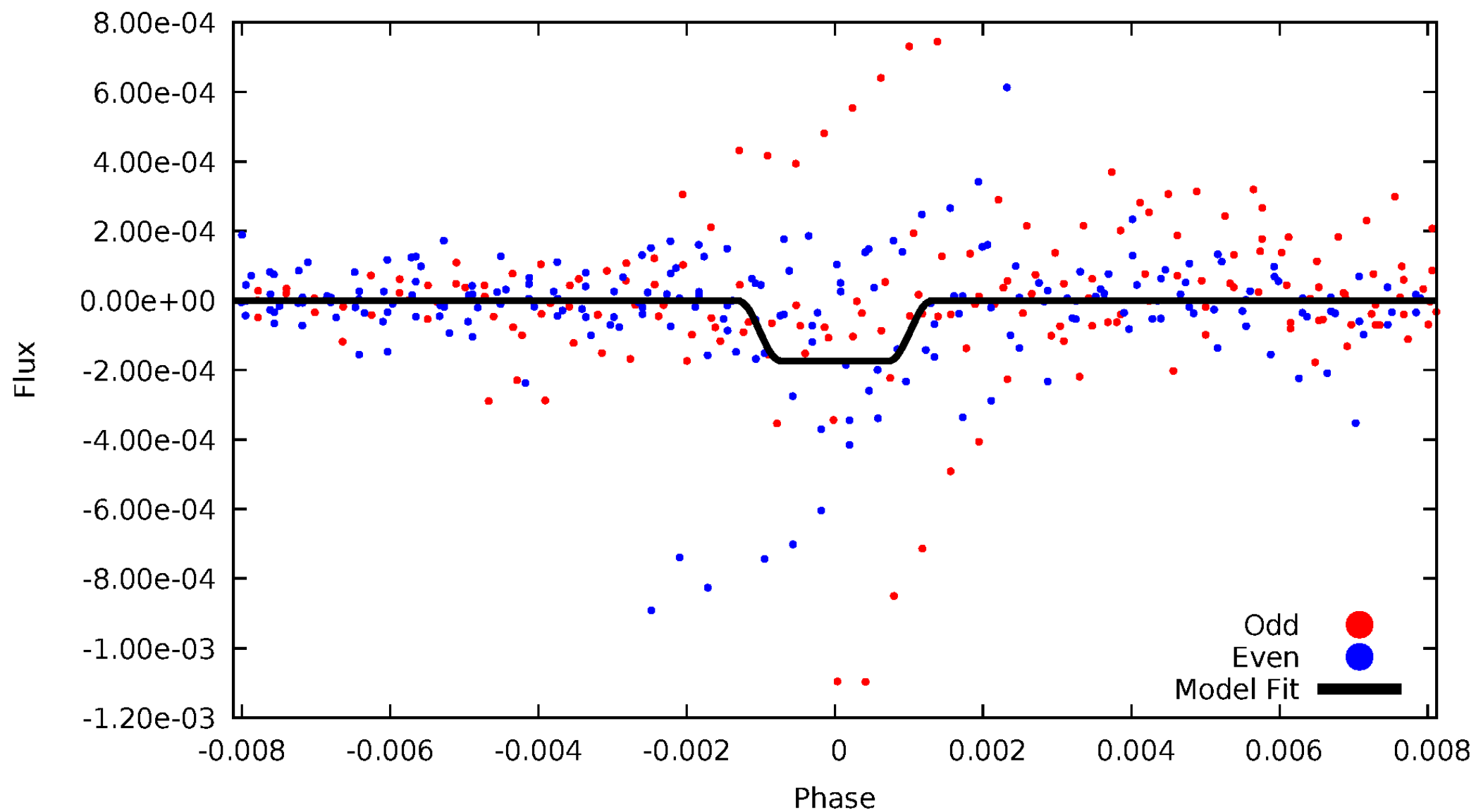
DV Odd/Even

TCE 007271007-04



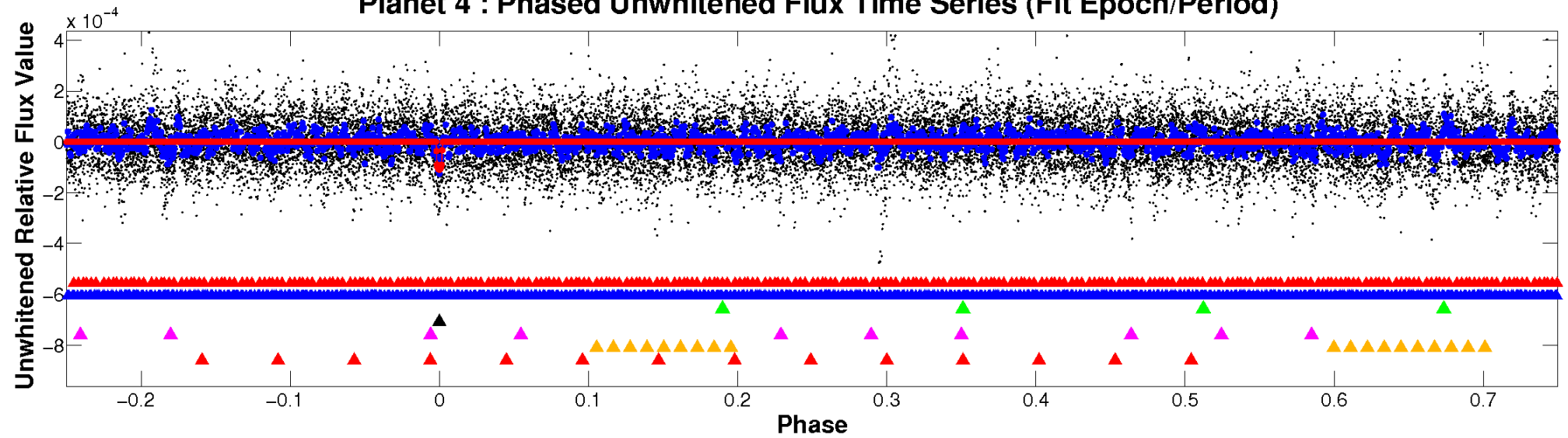
ALT Odd/Even

TCE 007271007-04

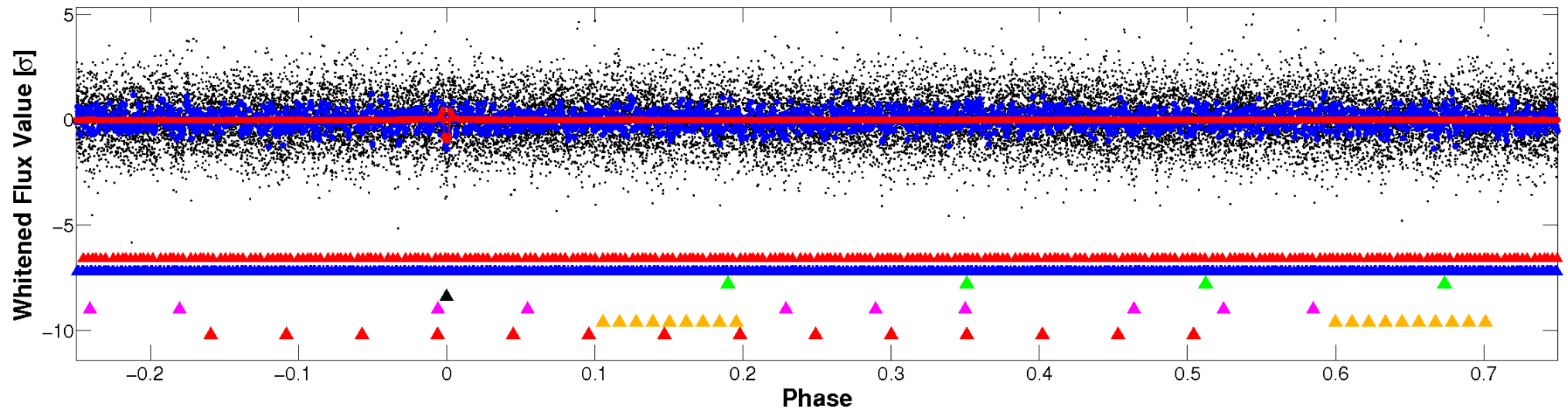


Non-Whitened Vs. Whitened Light Curve

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

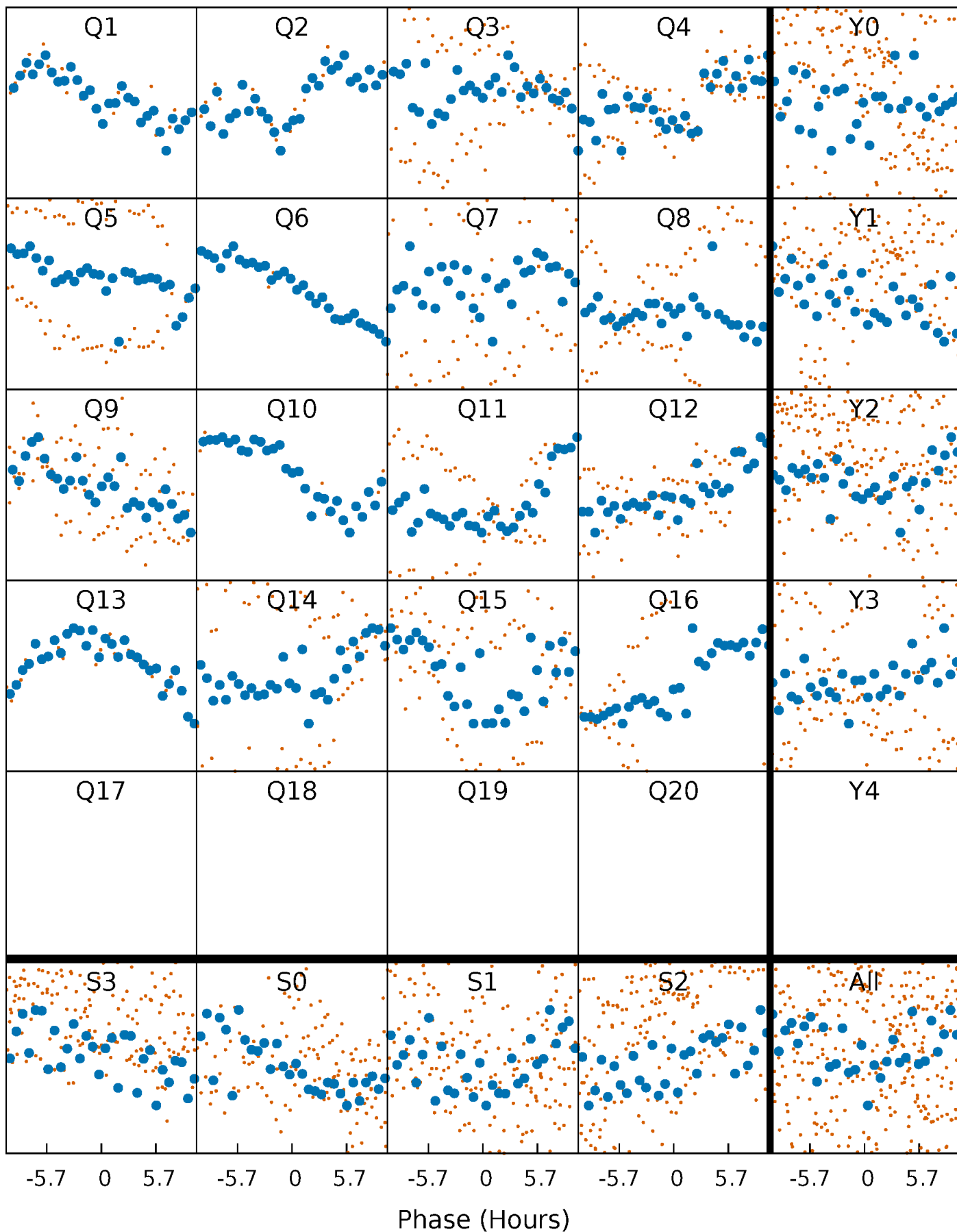


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



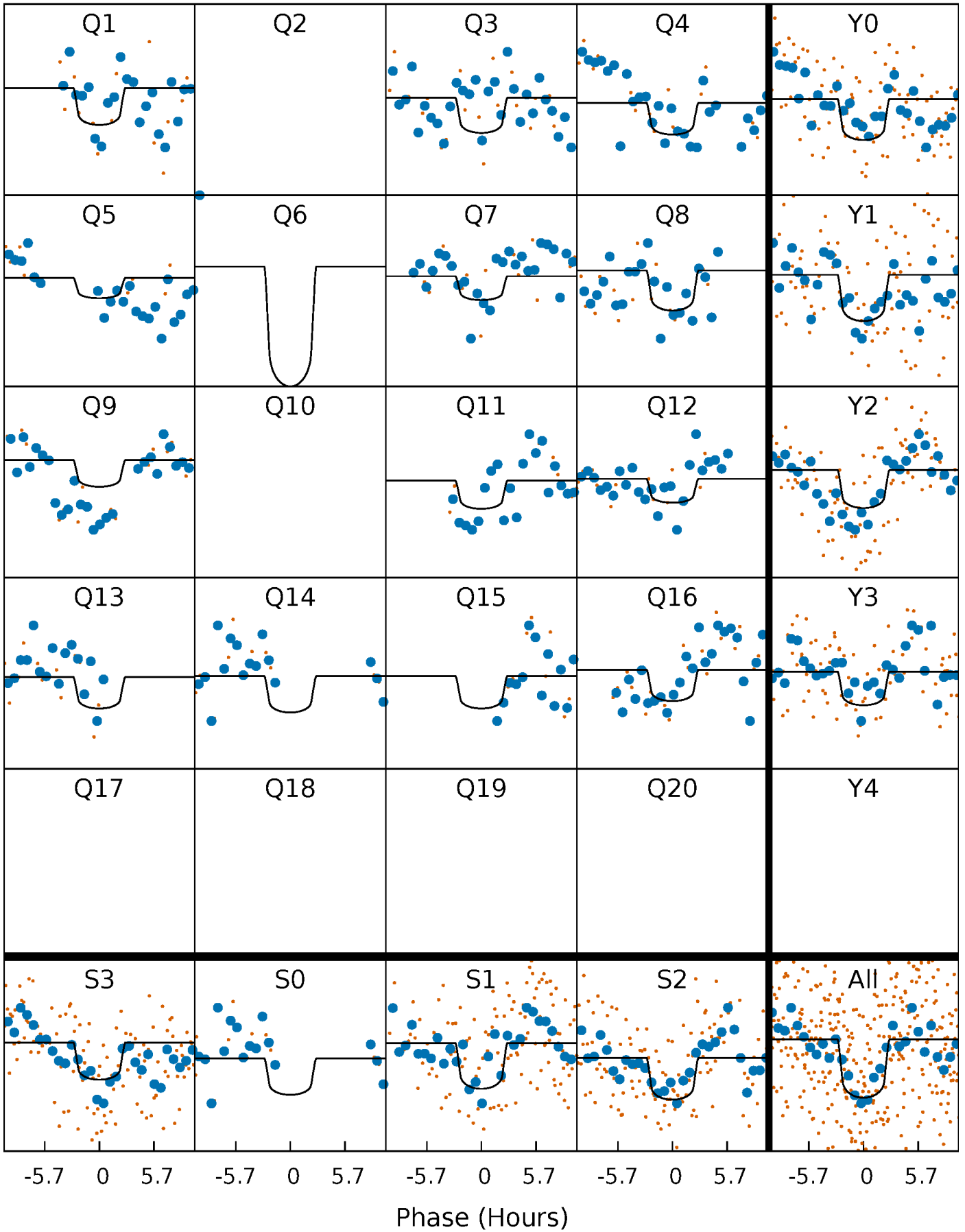
PDC Quarter-Phased Transit Curves

TCE 007271007-04 P= 53.476467 Days $T_0=153.854254$ (BKJD)



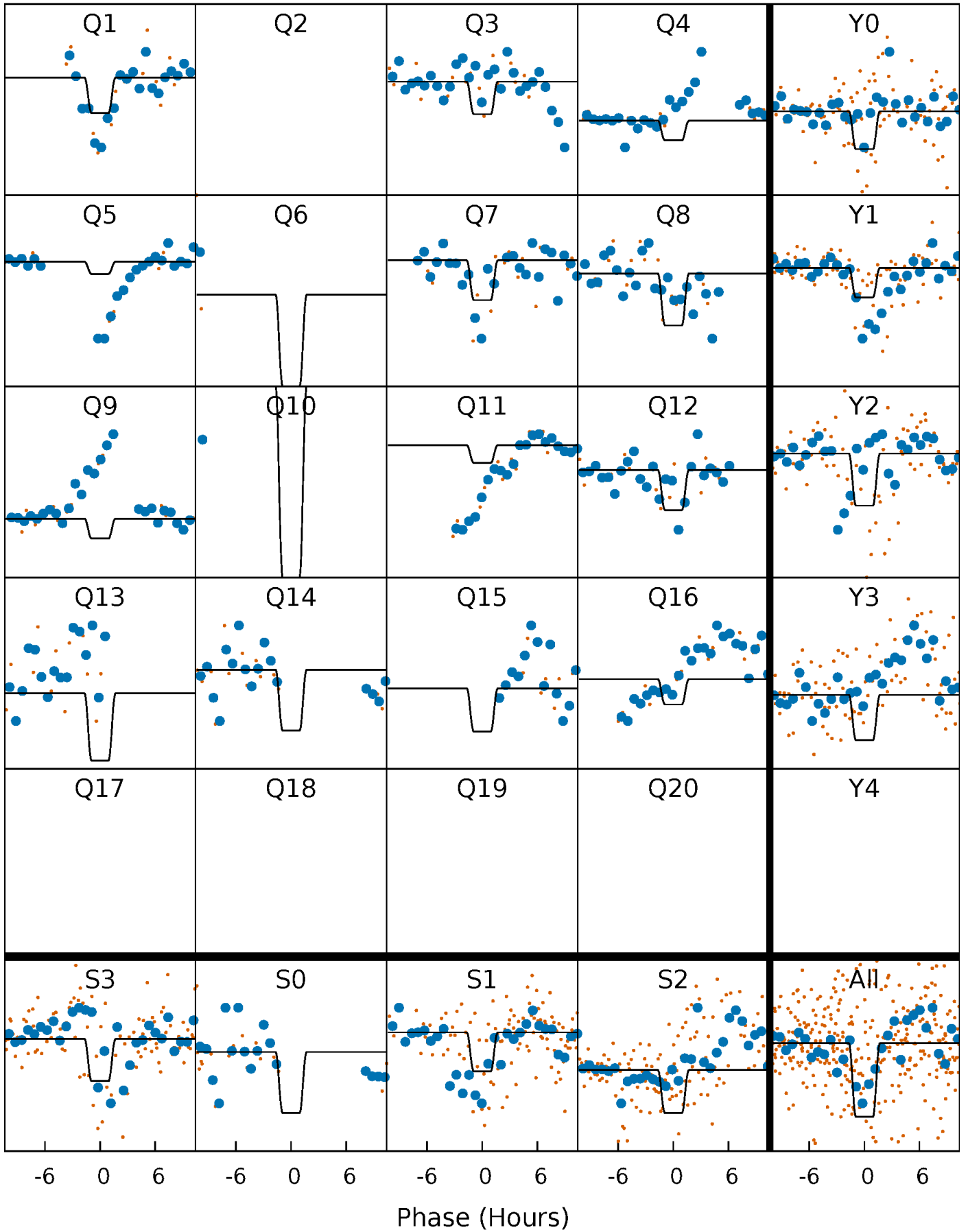
DV Quarter-Phased Transit Curves

TCE 007271007-04 P= 53.476467 Days $T_0=153.854254$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

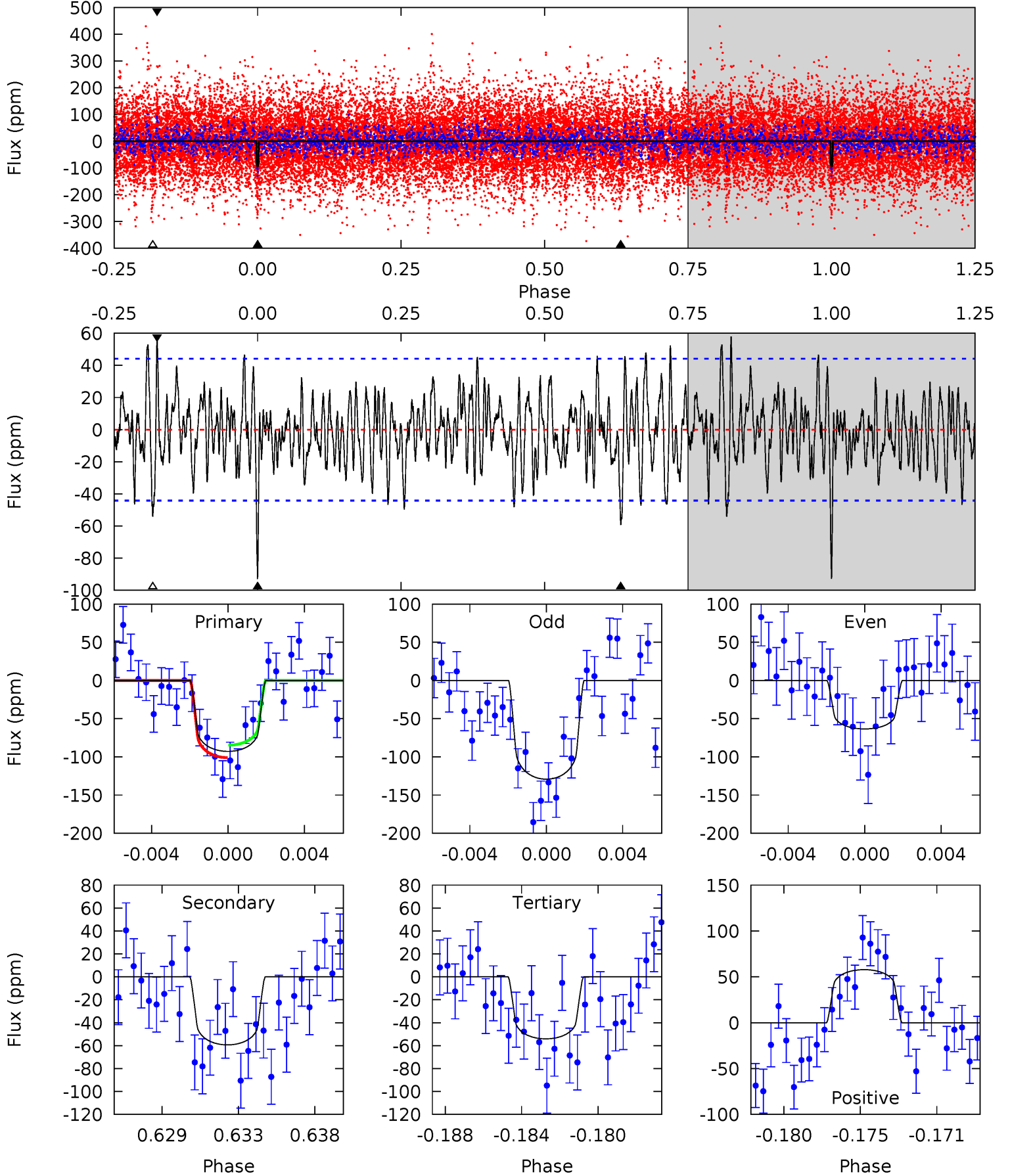
TCE 007271007-04 P= 53.475982 Days $T_0=153.857383$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-04, P = 53.476467 Days, E = 100.377787 Days

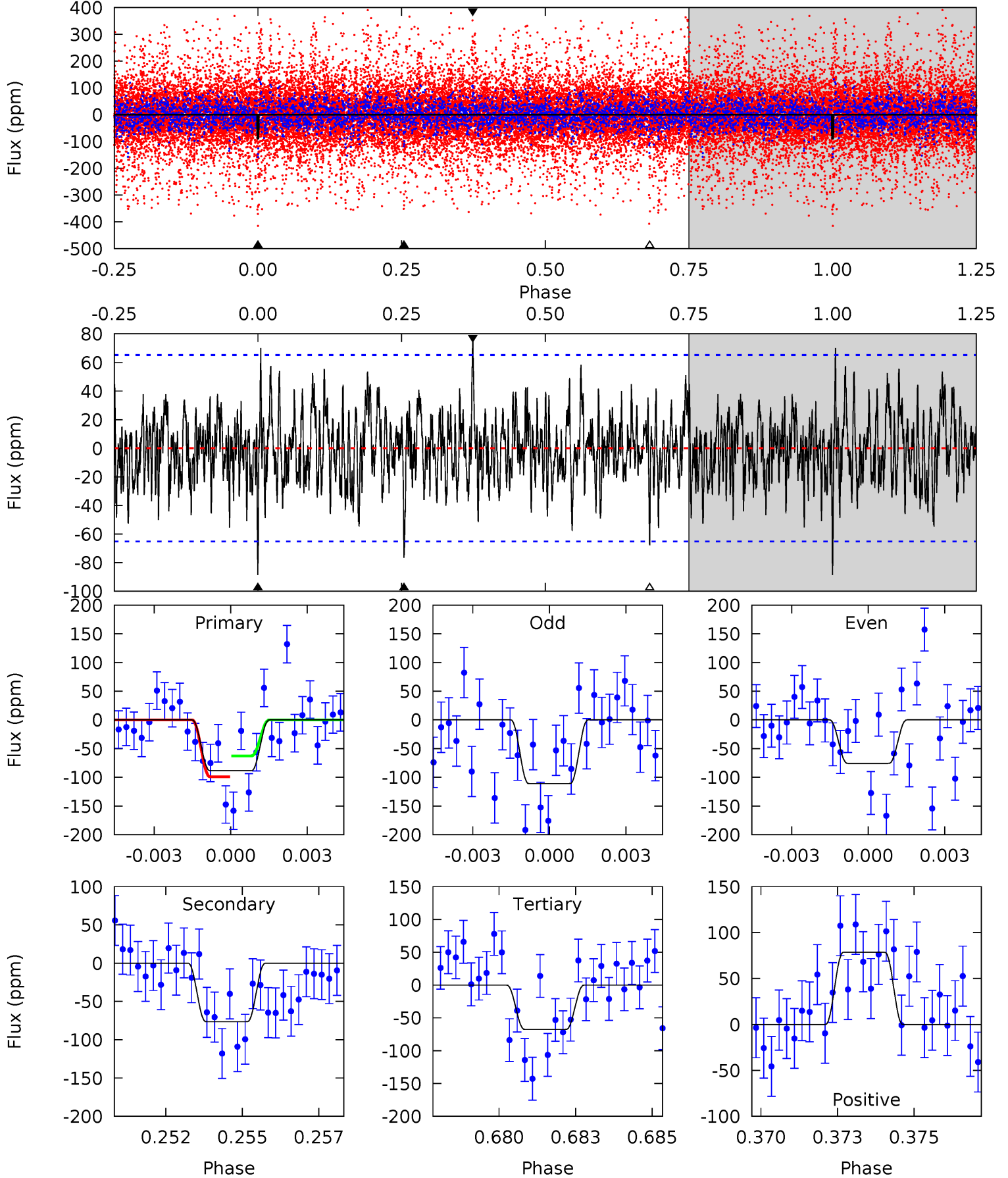
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	6.97	6.35	6.79	5.19	2.86	2.16	4.55	4.11	0.62	0.18	3.83	1.02	0.38	0.96



Alt Model-Shift Uniqueness Test

007271007-04, P = 53.475982 Days, E = 100.381401 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.16	6.19	5.48	6.36	5.28	3.01	1.66	1.68	0.80	0.70	-0.17	1.36	1.65	0.47	1.48



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-59 ± 9	$2.00^{+1.07}_{-0.91}$	977^{+70}_{-92}	5588^{+1964}_{-866}	737^{+1787}_{-416}
Alt.	-76 ± 12	$2.45^{+1.19}_{-1.00}$	978^{+69}_{-85}	5411^{+1506}_{-748}	630^{+1139}_{-331}

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

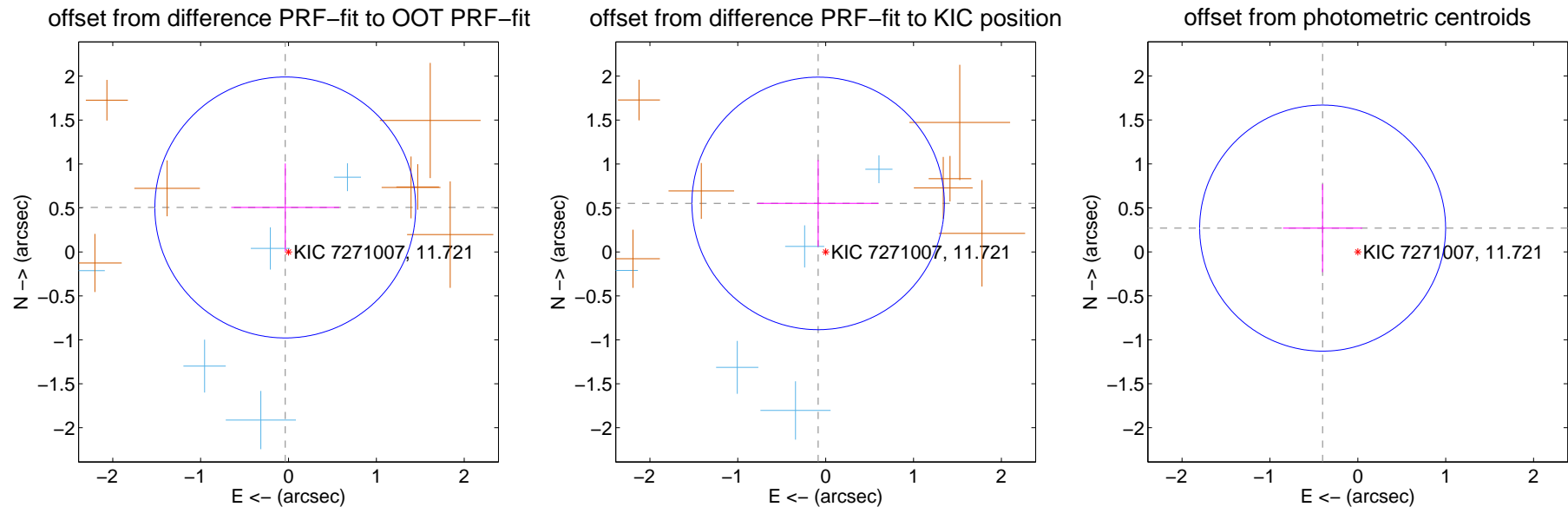
DV Centroid Data

Supplemental centroid analysis for 007271007-04. **Kepler magnitude: 11.72.** Transit SNR 9.23

There are 5 quarters with good PRF difference image offsets

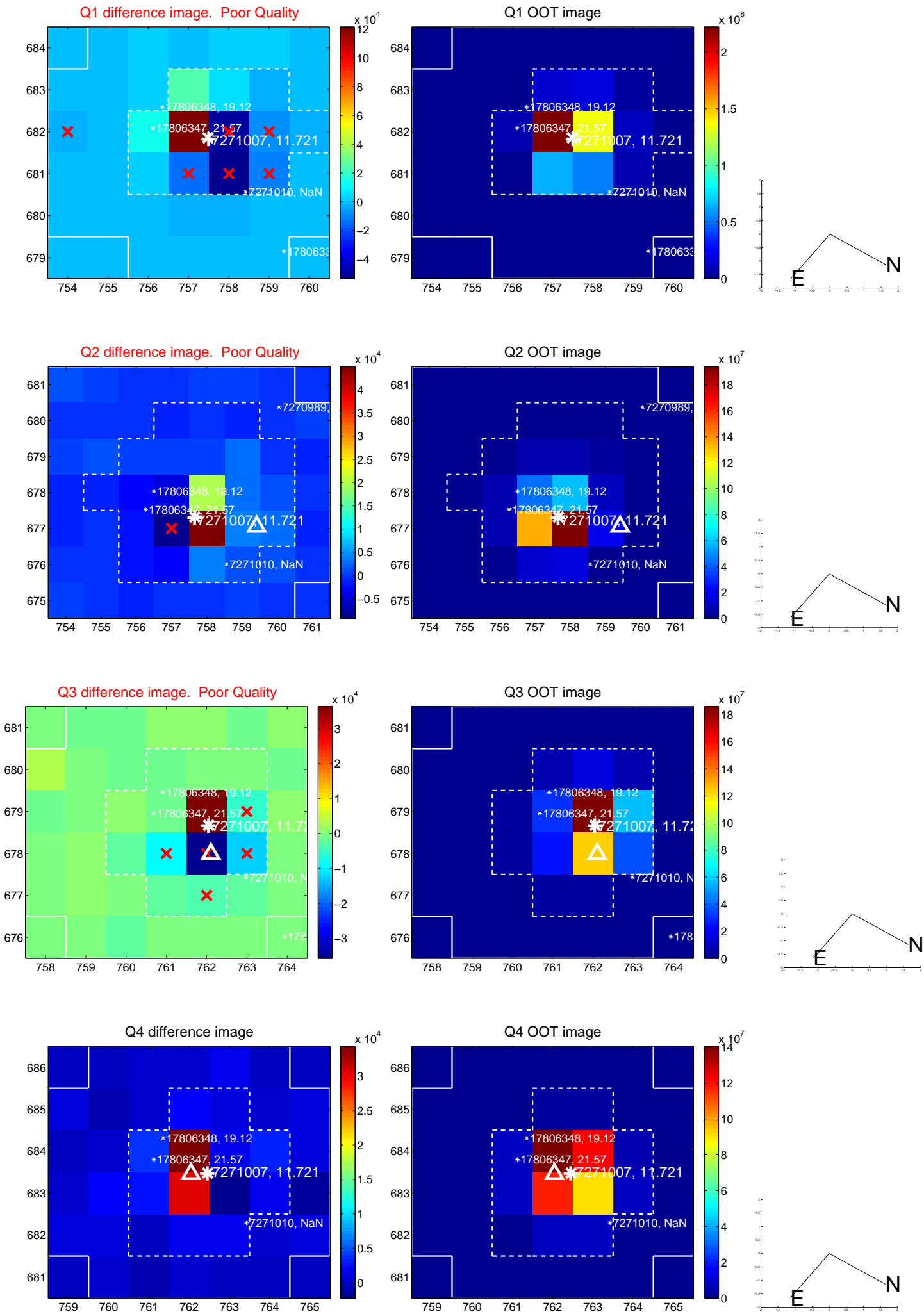
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.507 ± 0.495	1.02	0.037 ± 0.615	0.506 ± 0.500
PRF-fit source offset from KIC position	0.558 ± 0.479	1.17	0.086 ± 0.690	0.552 ± 0.492
photometric centroid source offset	0.48 ± 0.47	1.04	0.40 ± 0.45	0.27 ± 0.50

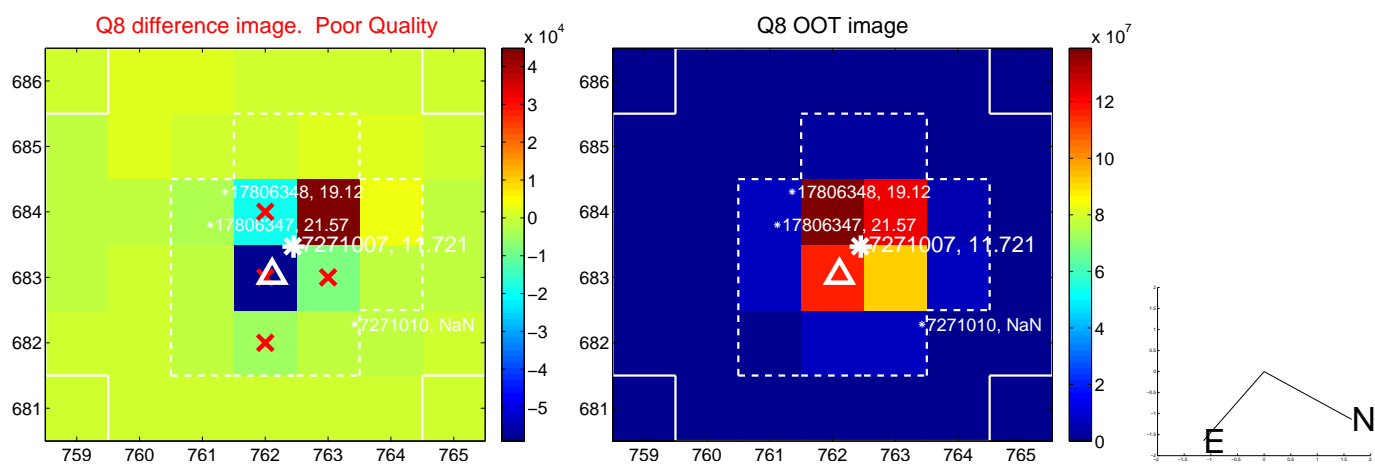
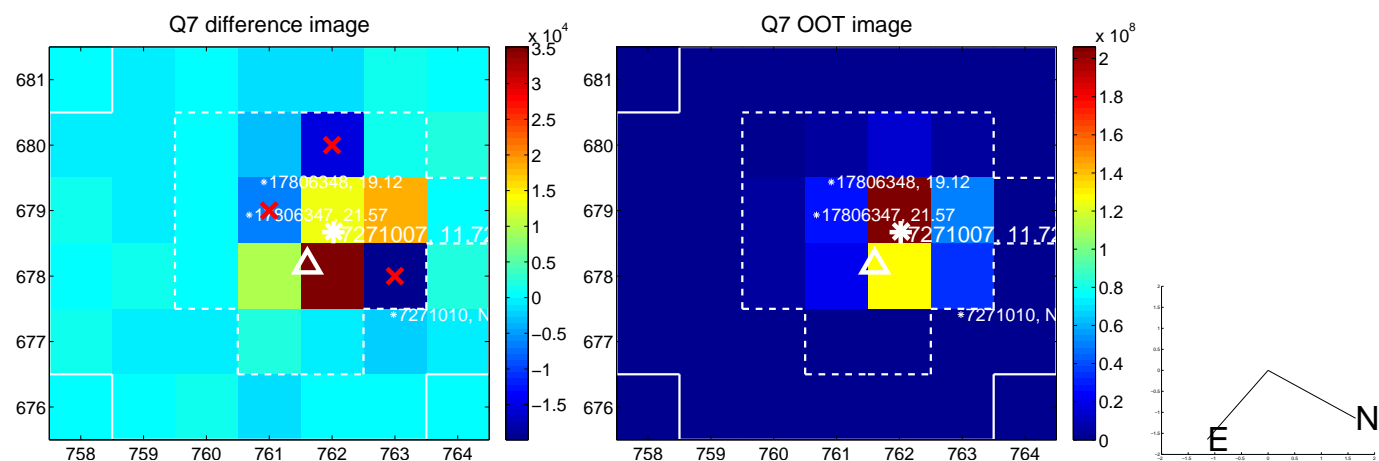
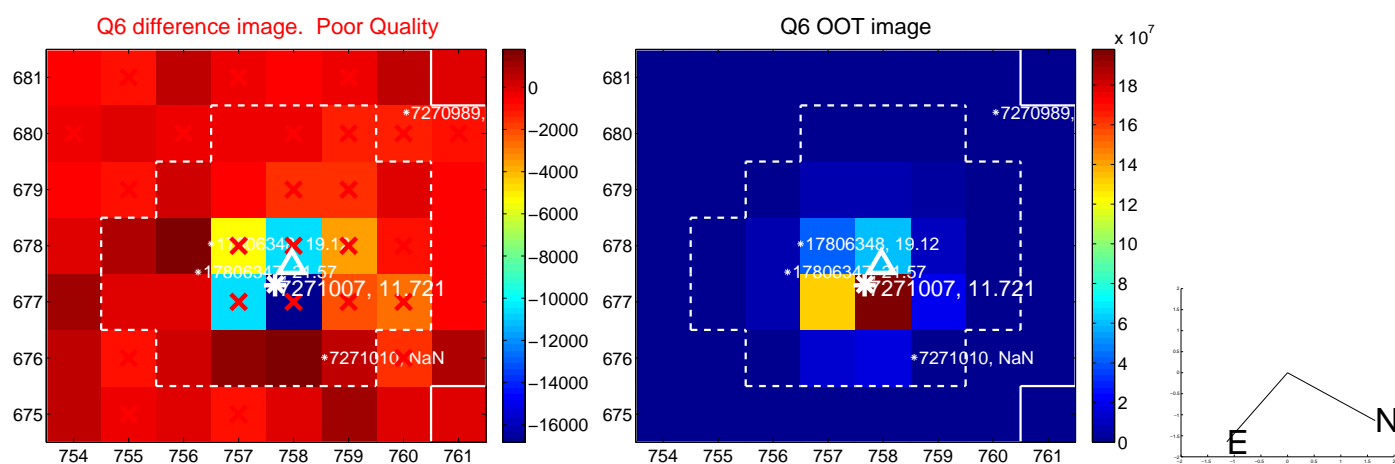
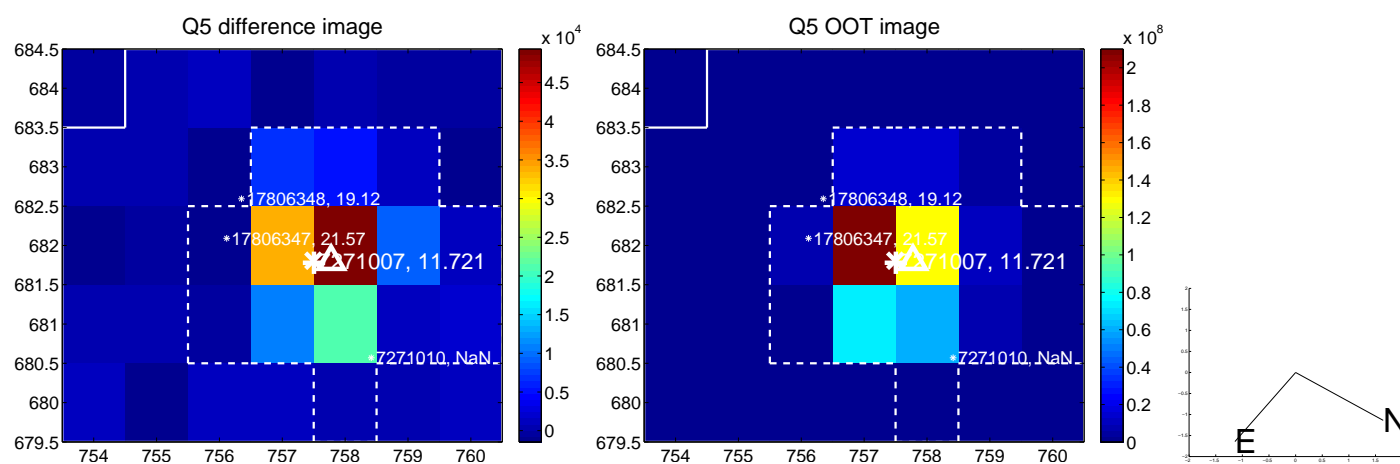


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

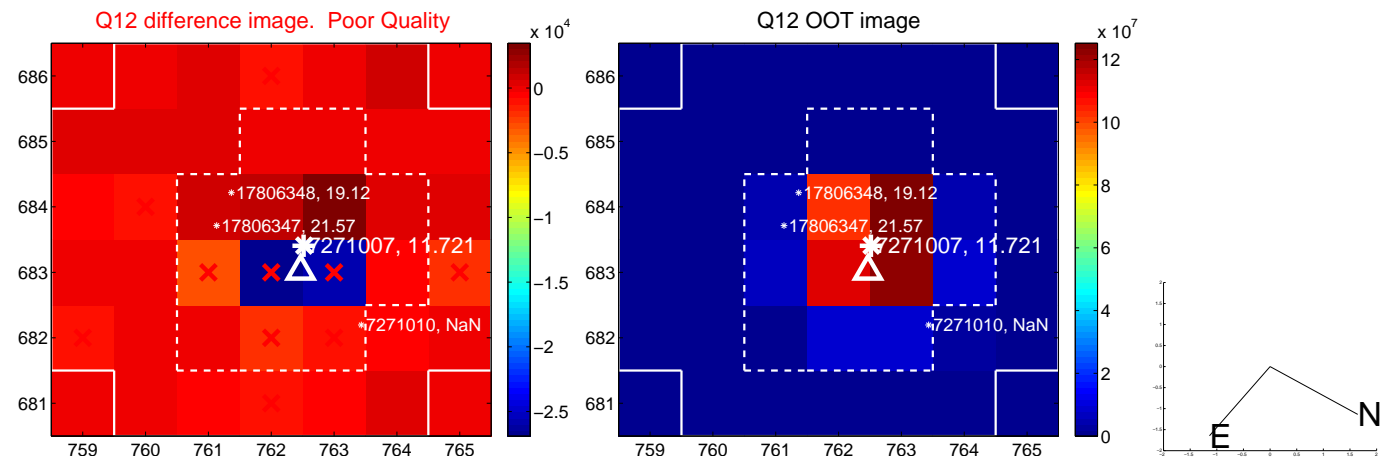
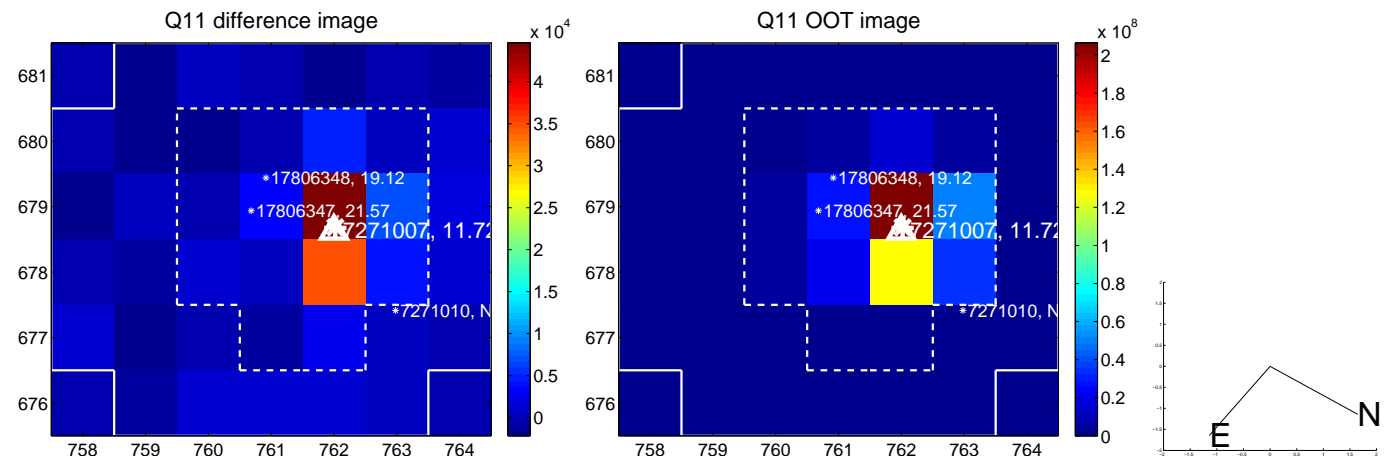
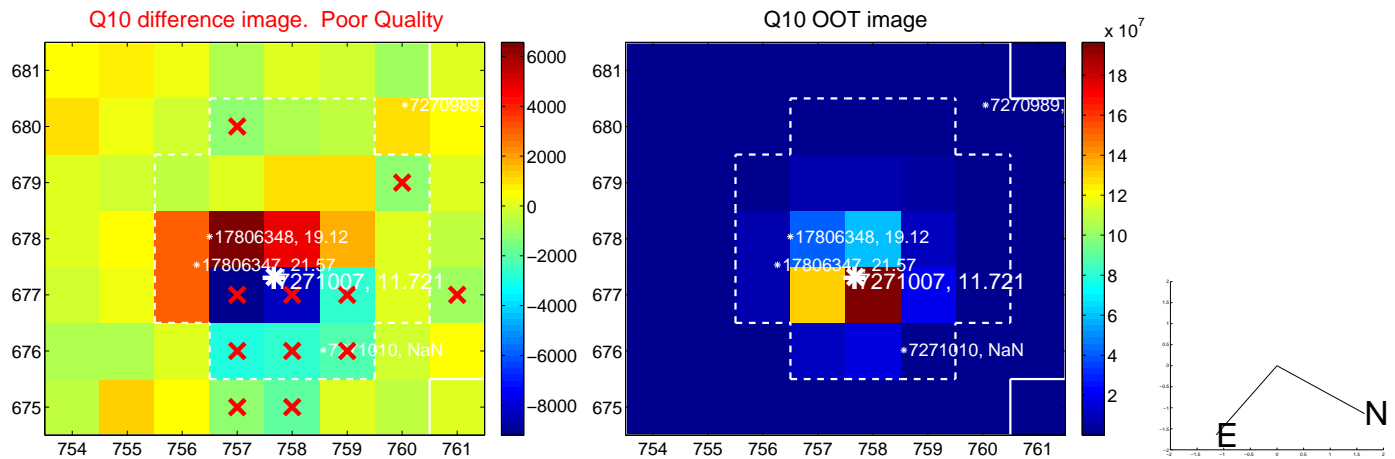
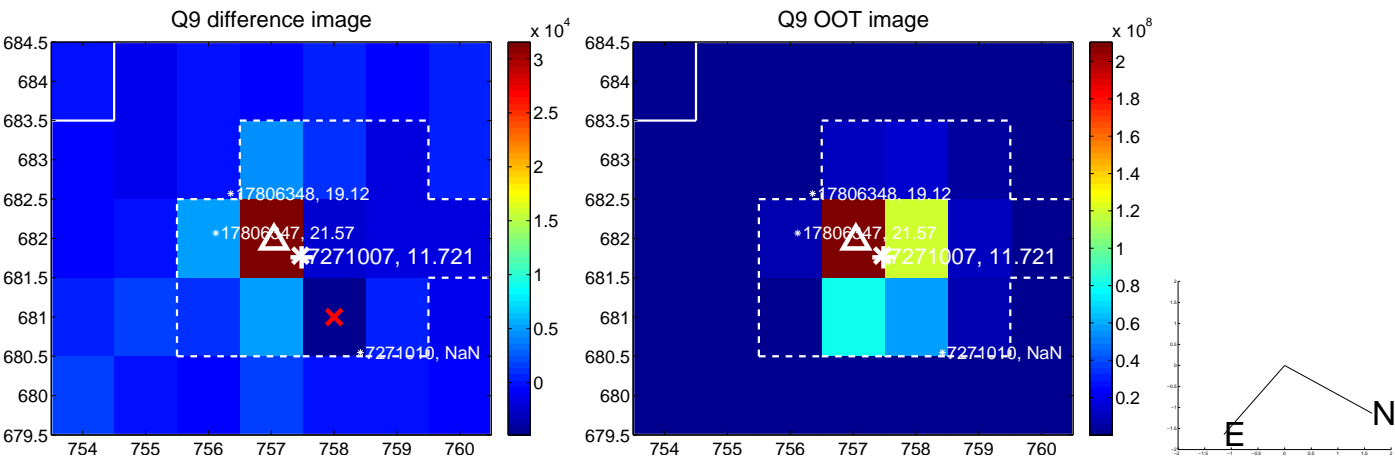
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



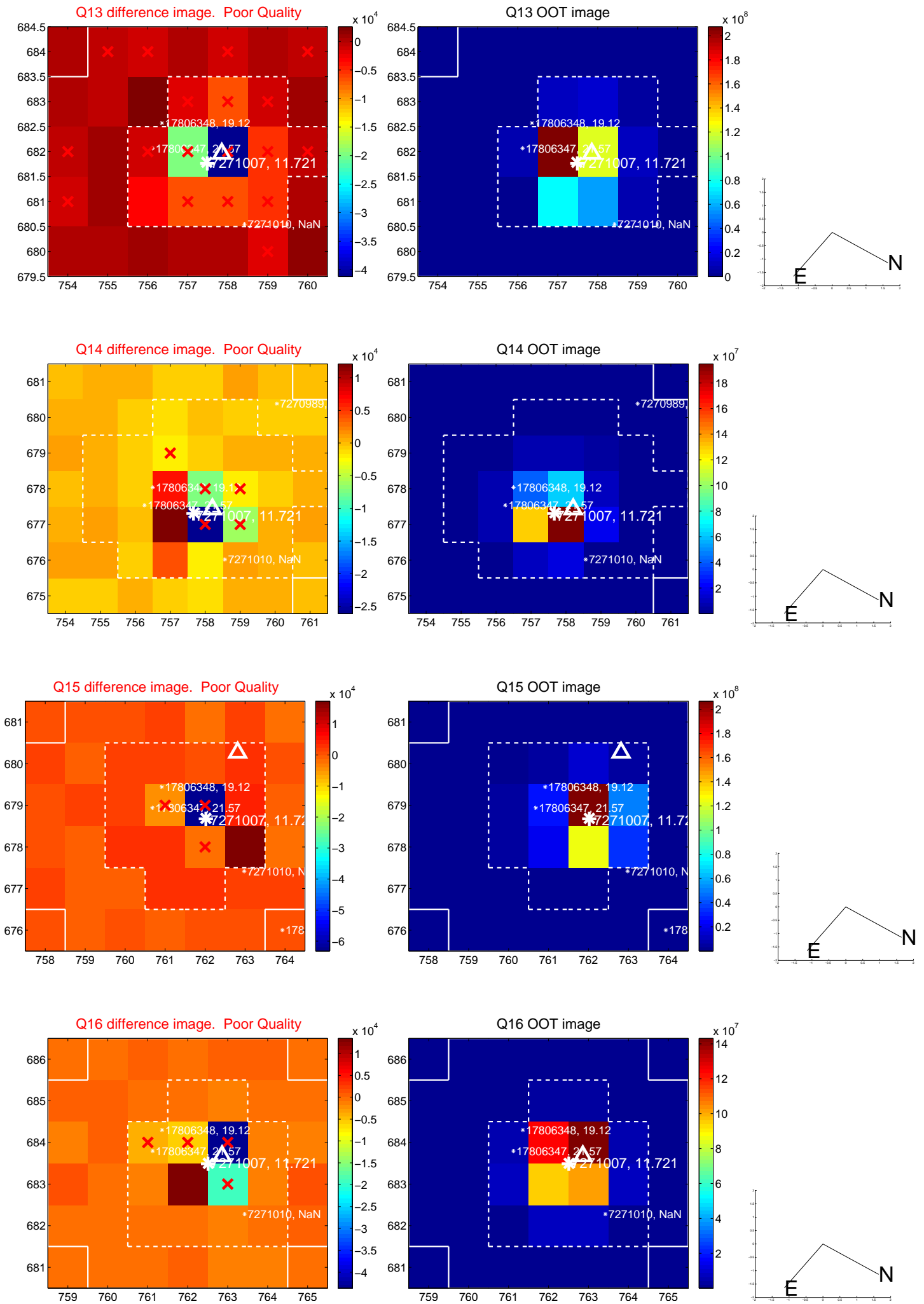
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



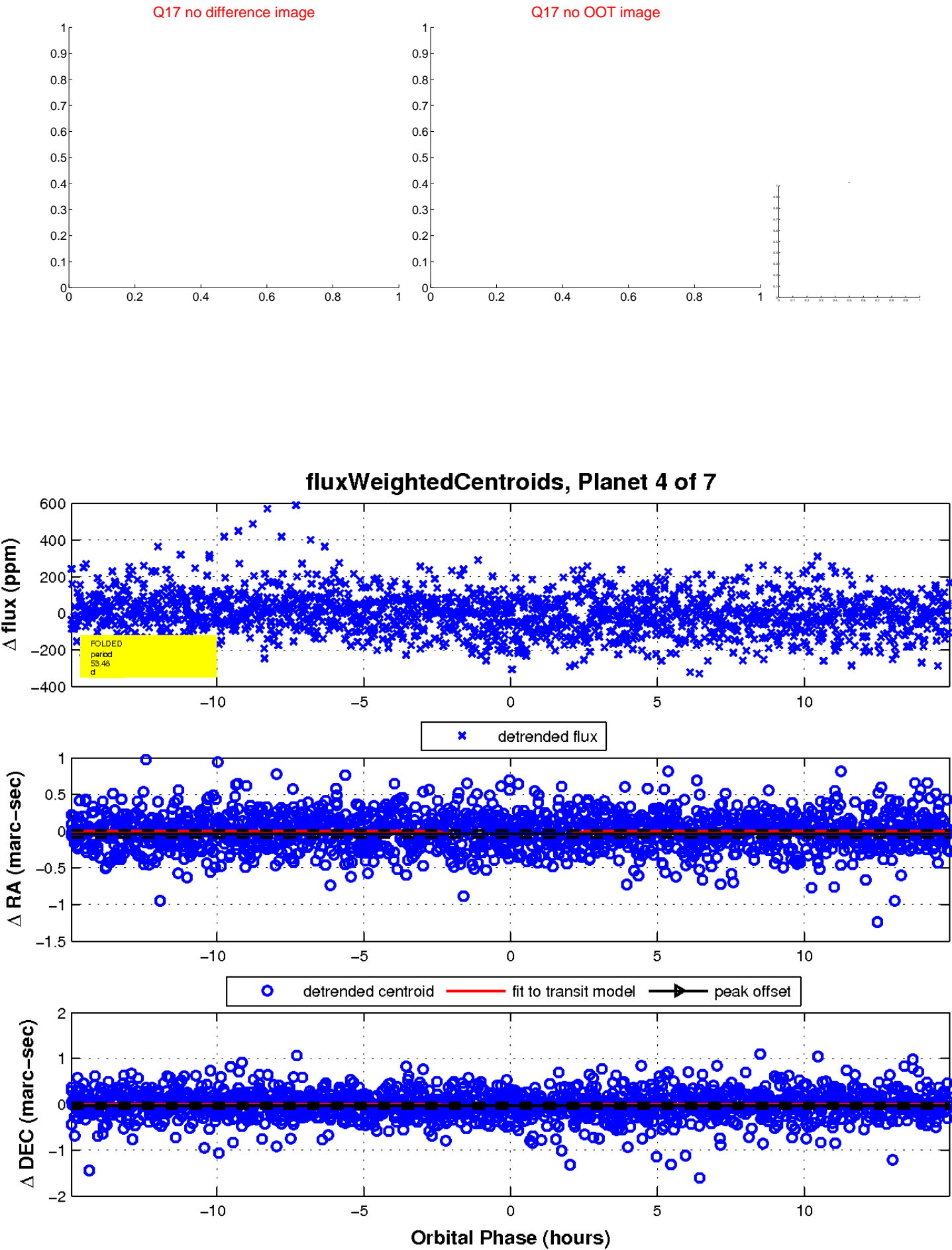
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

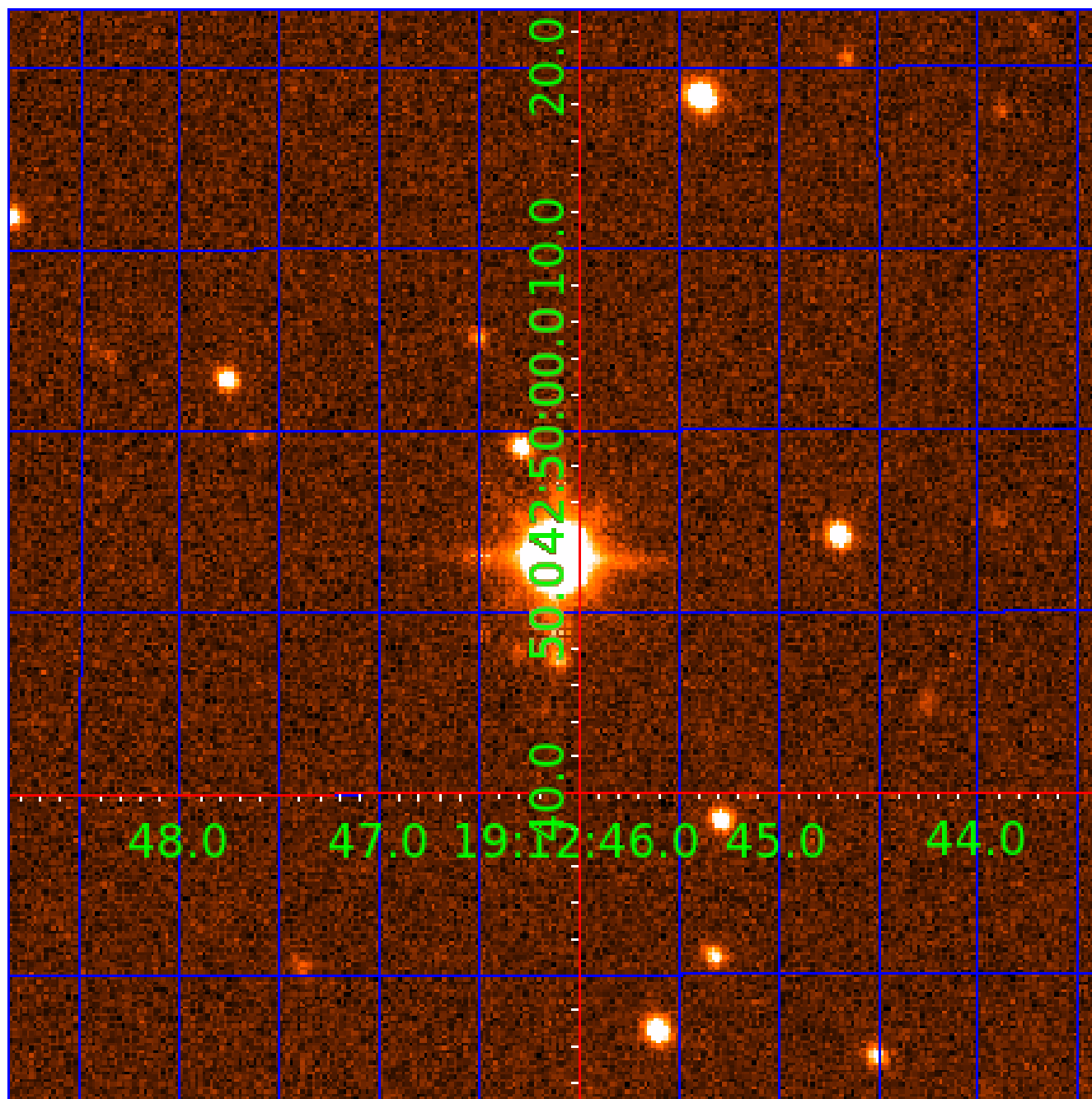


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

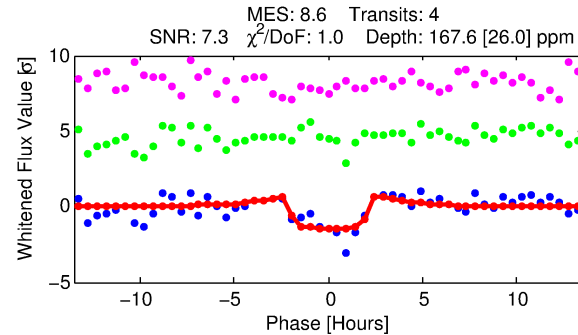
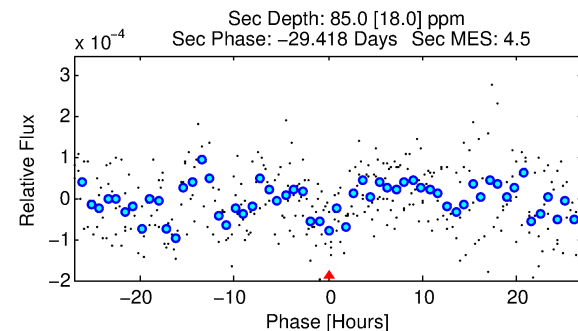
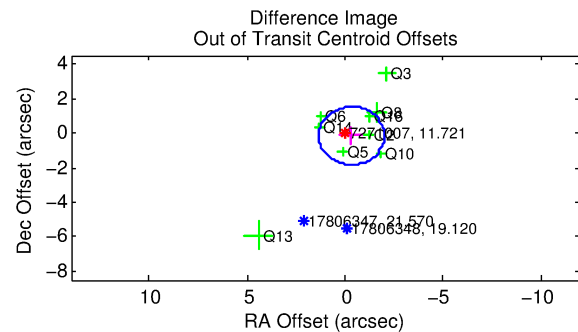
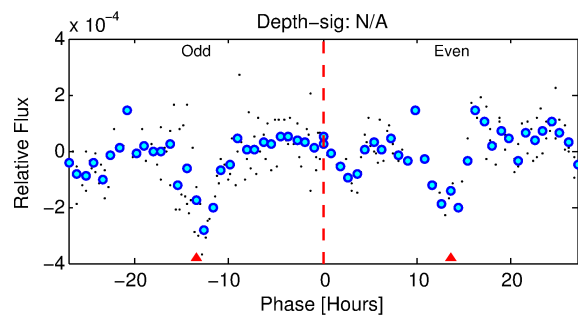
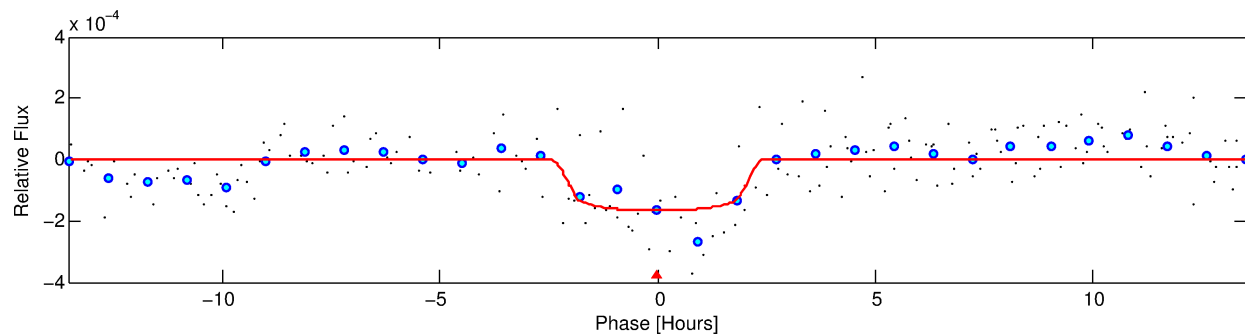
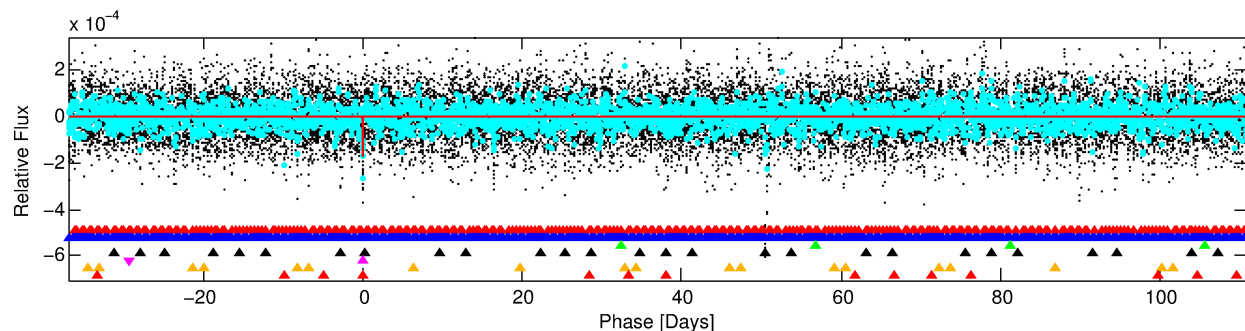
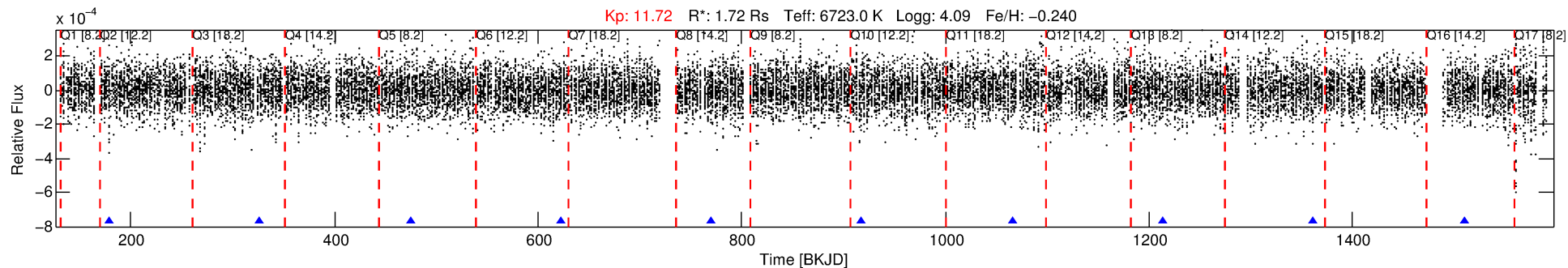
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-05

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 5 of 7 Period: 147.869 d



DV Fit Results:

Period = 147.86900 [0.00152] d
Epoch = 178.6624 [0.0085] BKJD
 $R_p/R^* = 0.0138$ [0.0050]
 $a/R^* = 118.39$ [241.63]
 $b = 0.90$ [0.45]
 $\text{Seff} = 14.98$ [6.91]
 $T_{\text{eq}} = 502$ [58] K
 $R_p = 2.59$ [1.25] R_e
 $a = 0.6009$ [0.1719] AU
 $A_g = 2524.42$ [2198.14] [1.15] σ
 $T_{\text{eff}} = 5498$ [1059] K [4.71] σ

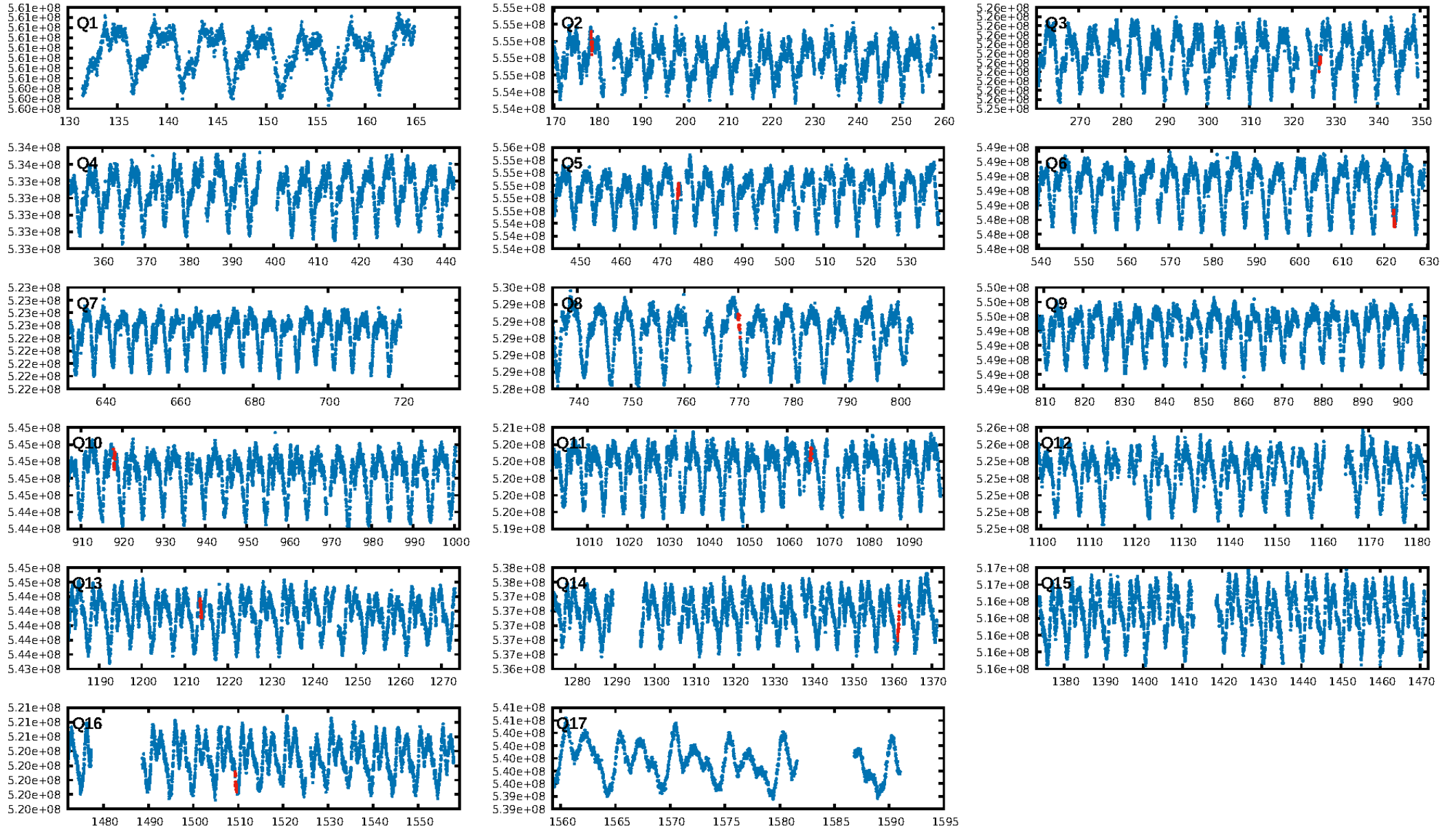
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [143.85] σ
LongPeriod-sig: 100.0% [579.42] σ
ModelChiSquare2-sig: 2.9%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.848
Centroid-sig: 97.4%
Centroid-so: 0.108 arcsec [0.20] σ
OotOffset-rm: 0.361 arcsec [0.65] σ
KicOffset-rm: 0.315 arcsec [0.57] σ
OotOffset-st: 4/1/2/2 [9]
KicOffset-st: 4/1/2/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.30 [3/10]

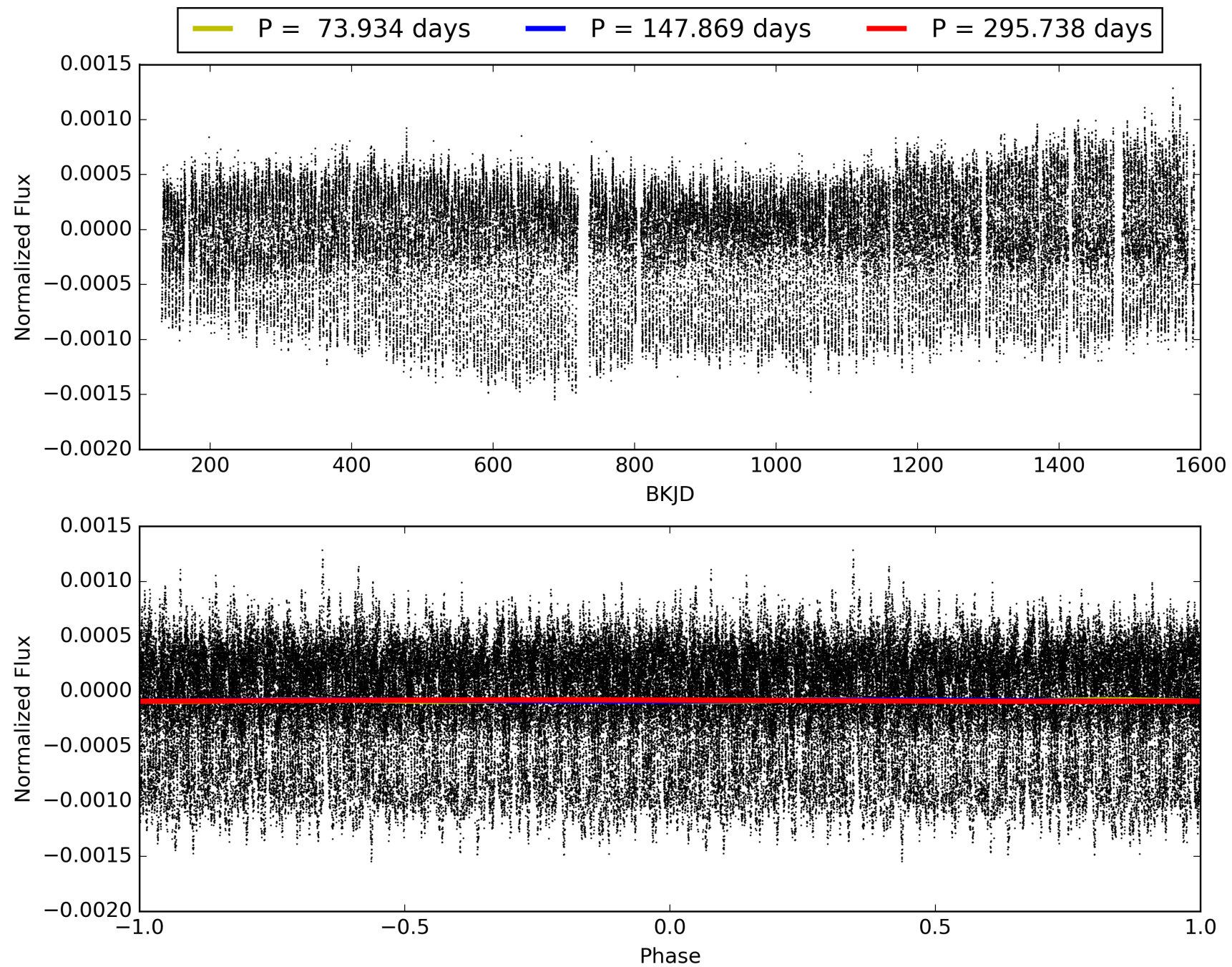
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:42:12 Z

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

TCE 007271007-05, PDC Light Curves

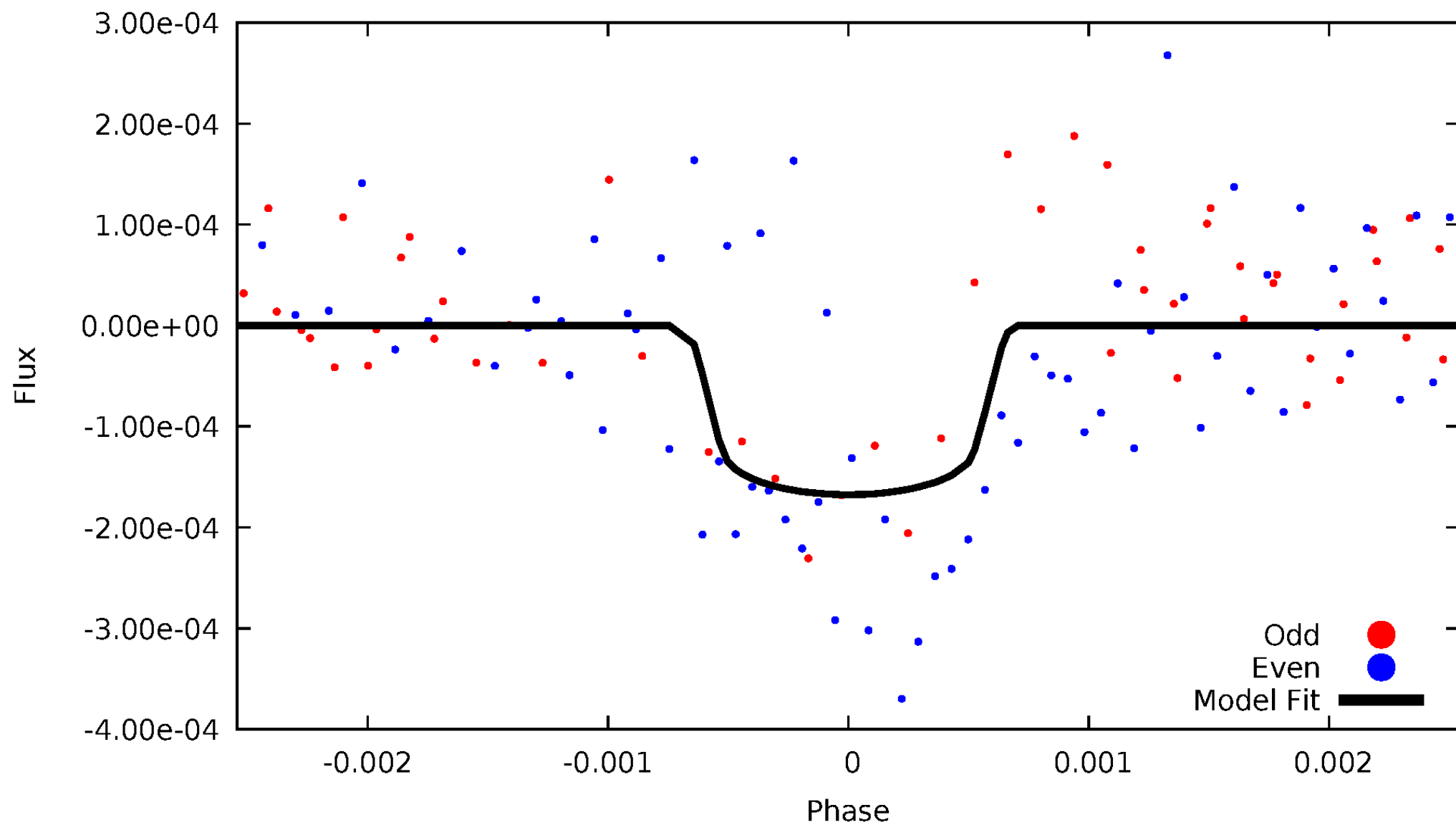


TCE 007271007-05



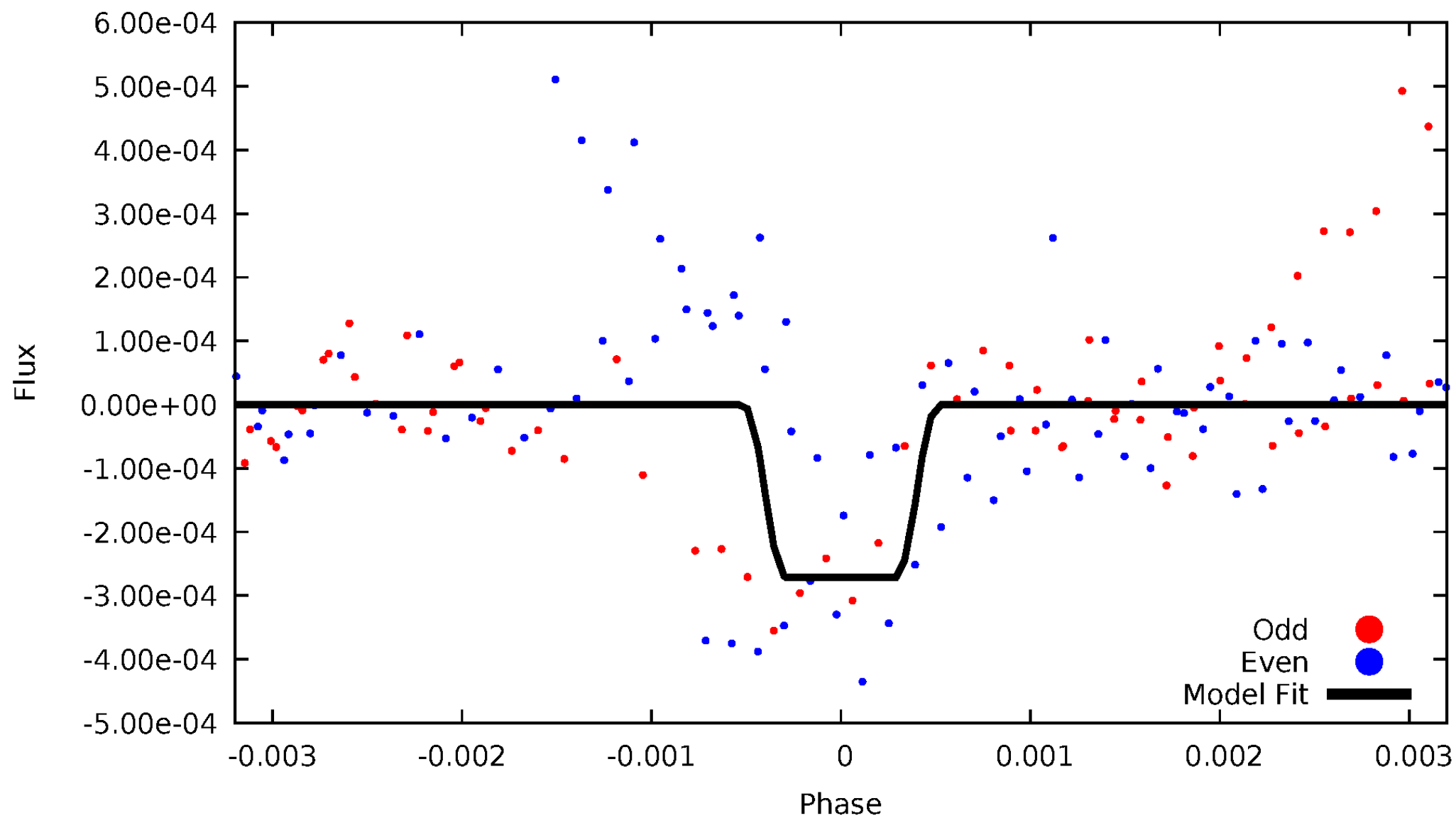
DV Odd/Even

TCE 007271007-05

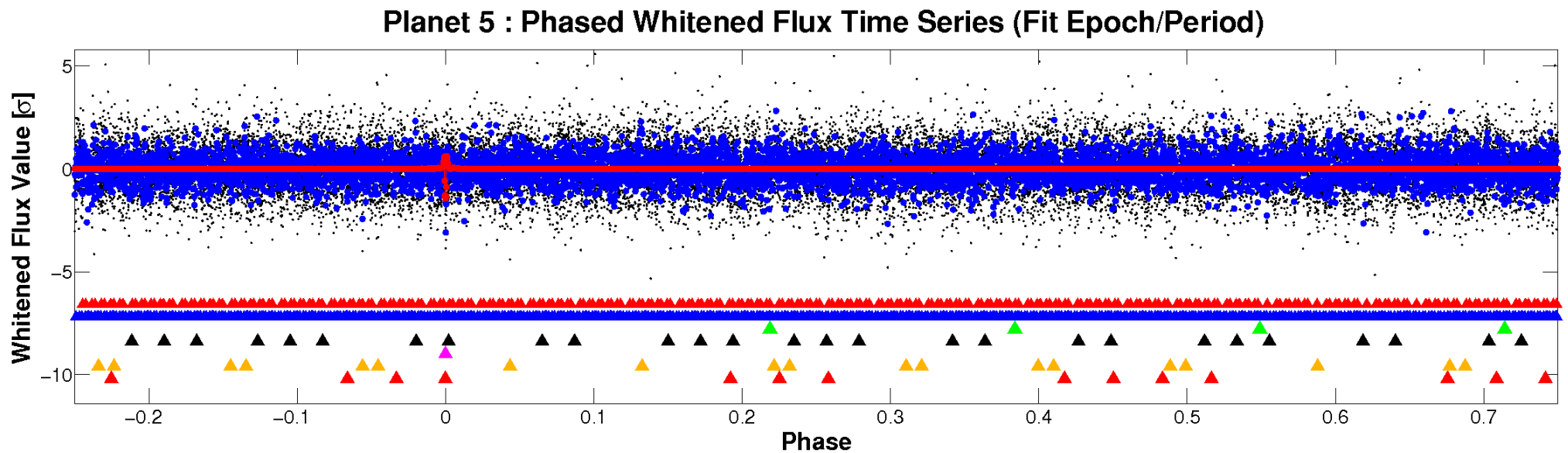
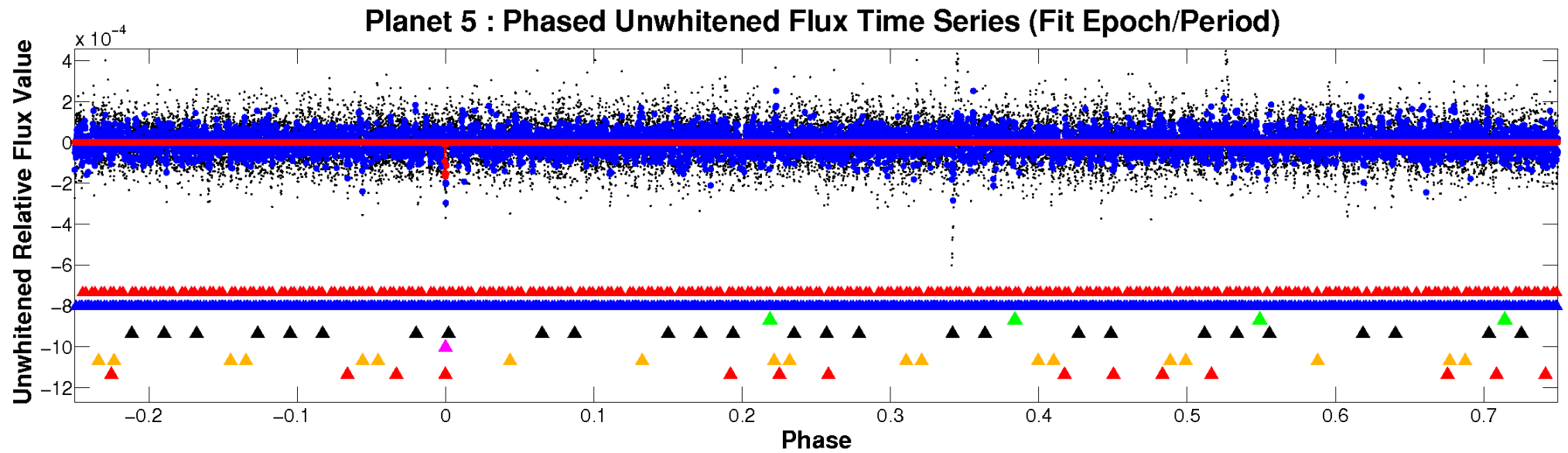


ALT Odd/Even

TCE 007271007-05

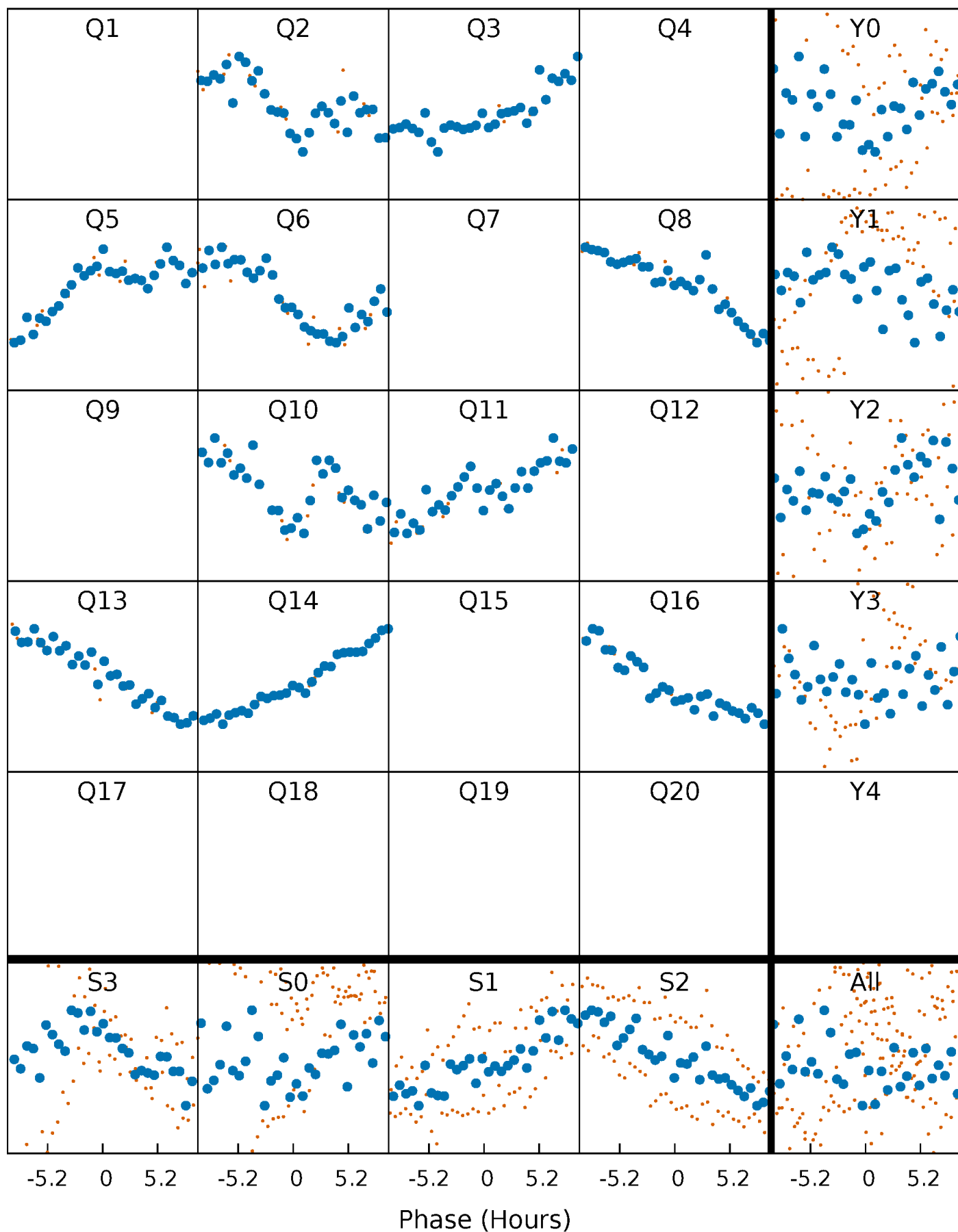


Non-Whitened Vs. Whitened Light Curve



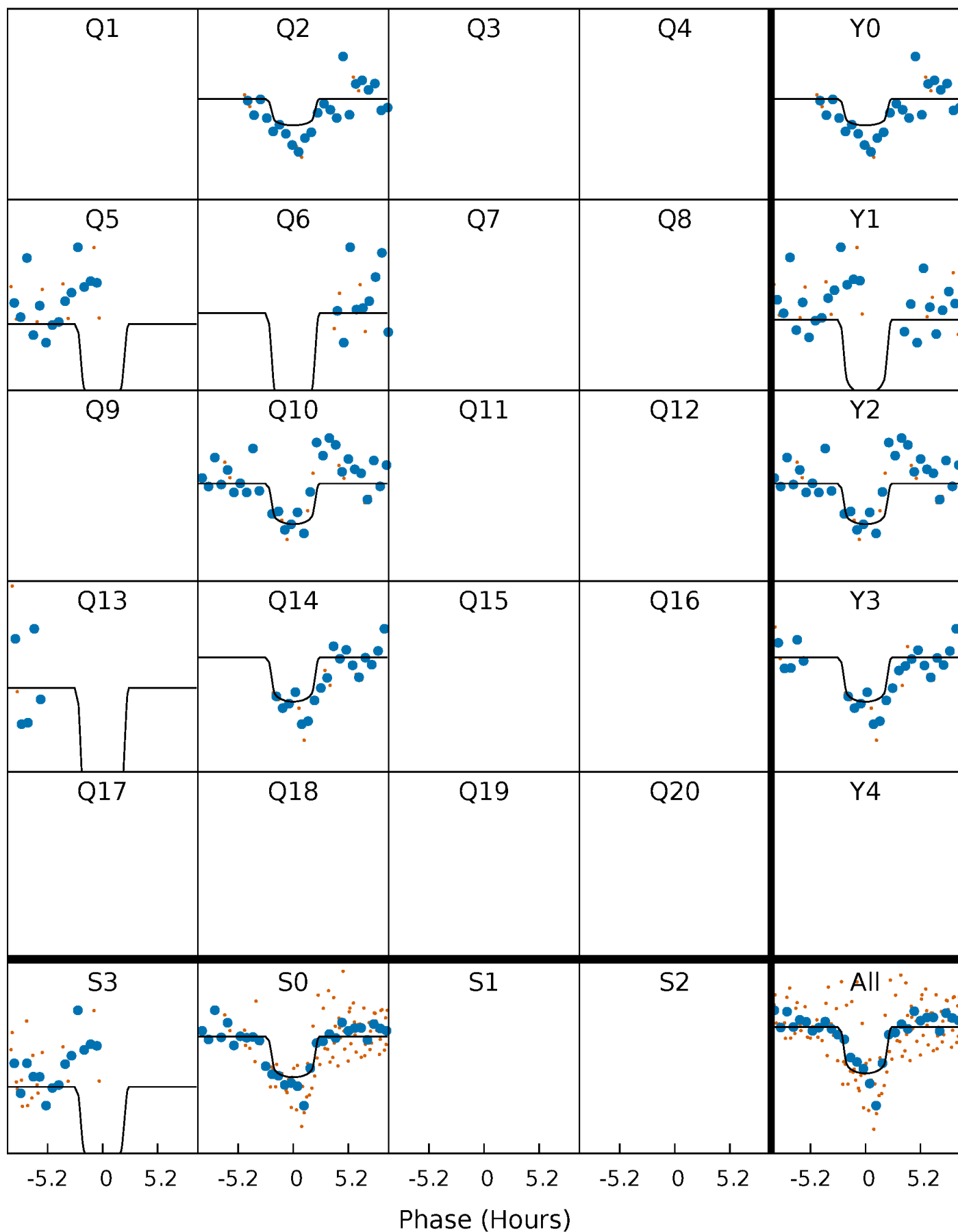
PDC Quarter-Phased Transit Curves

TCE 007271007-05 $P=147.868996$ Days $T_0=178.662354$ (BKJD)



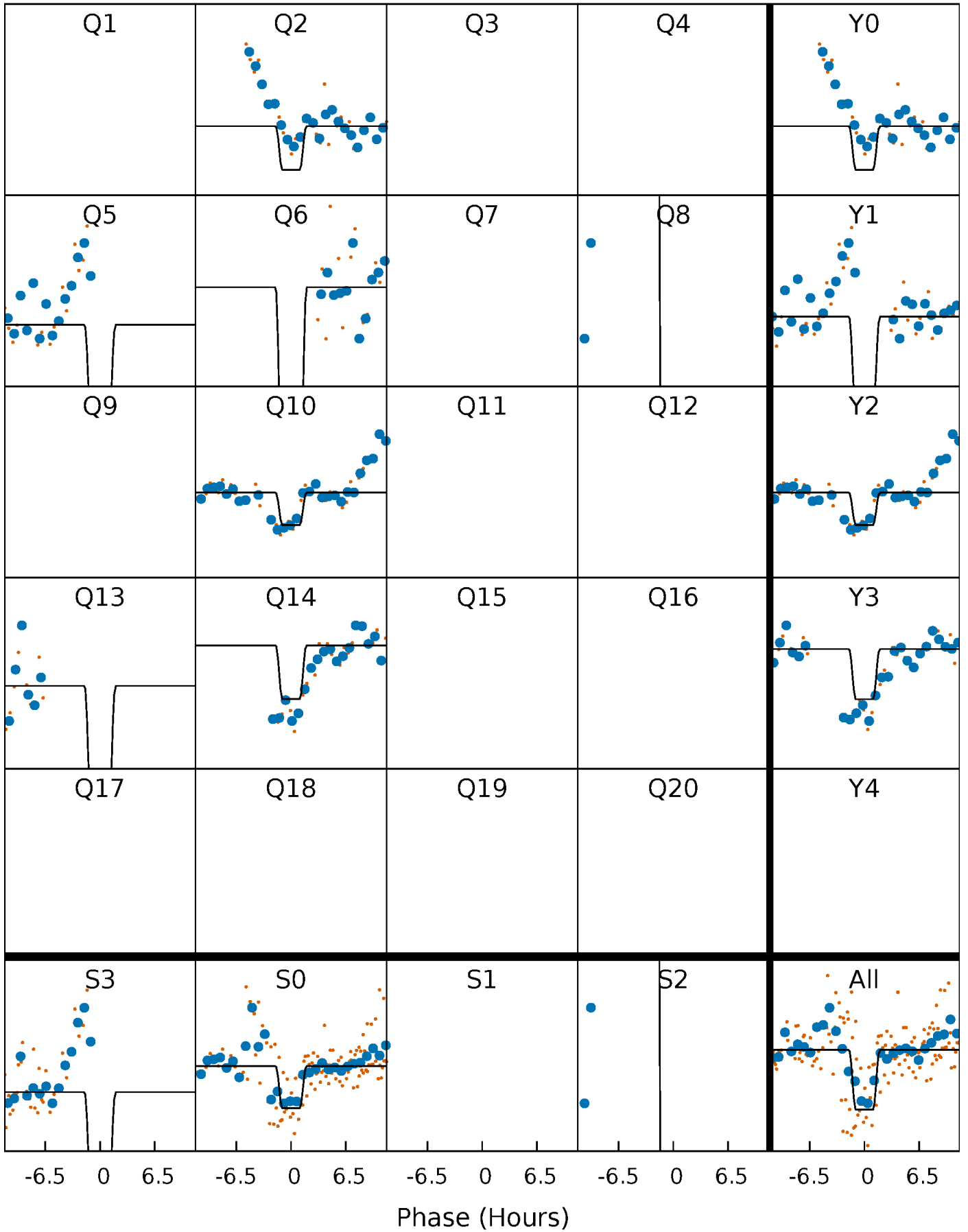
DV Quarter-Phased Transit Curves

TCE 007271007-05 $P=147.868996$ Days $T_0=178.662354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

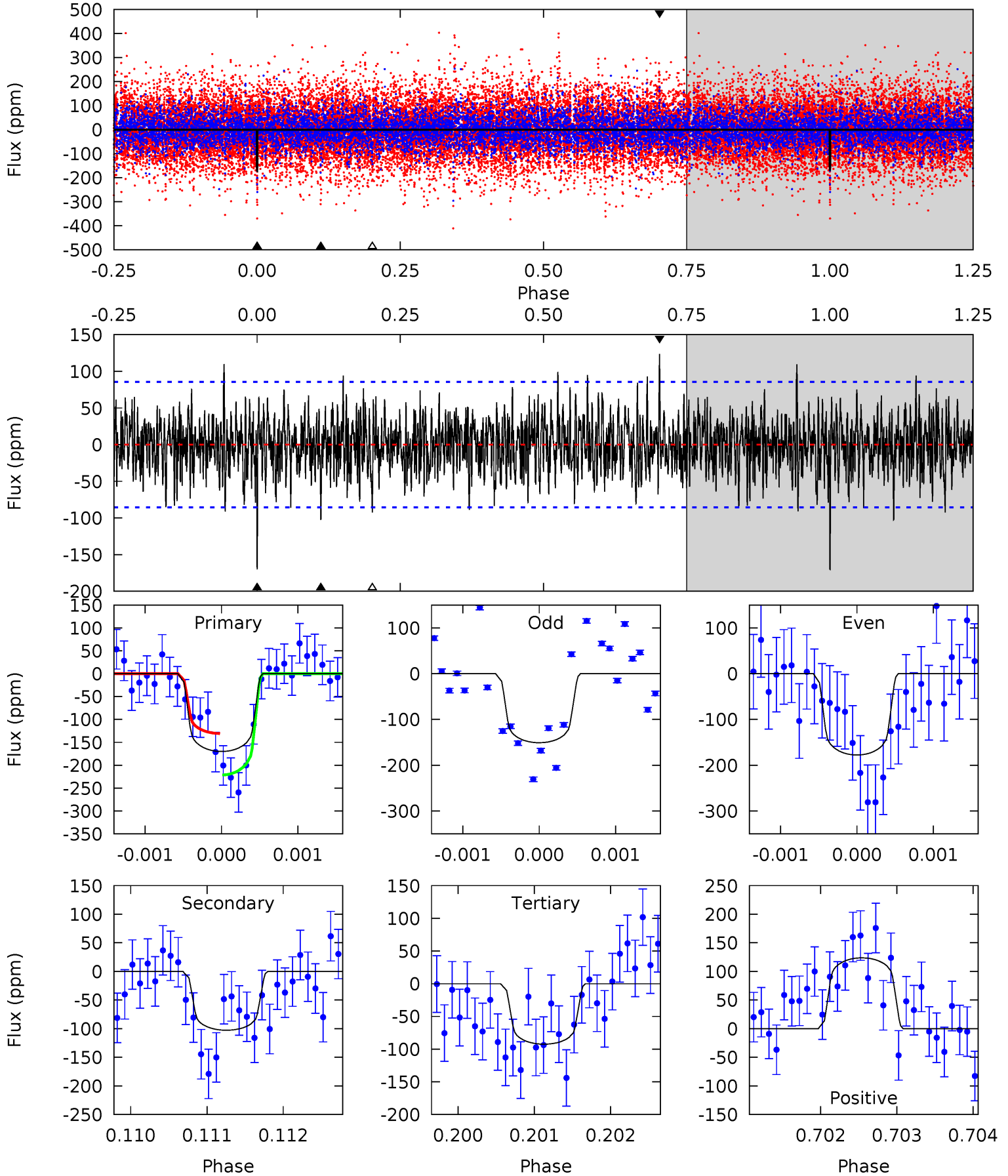
TCE 007271007-05 $P=147.868409$ Days $T_0=178.693108$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-05, $P = 147.868996$ Days, $E = 30.793358$ Days

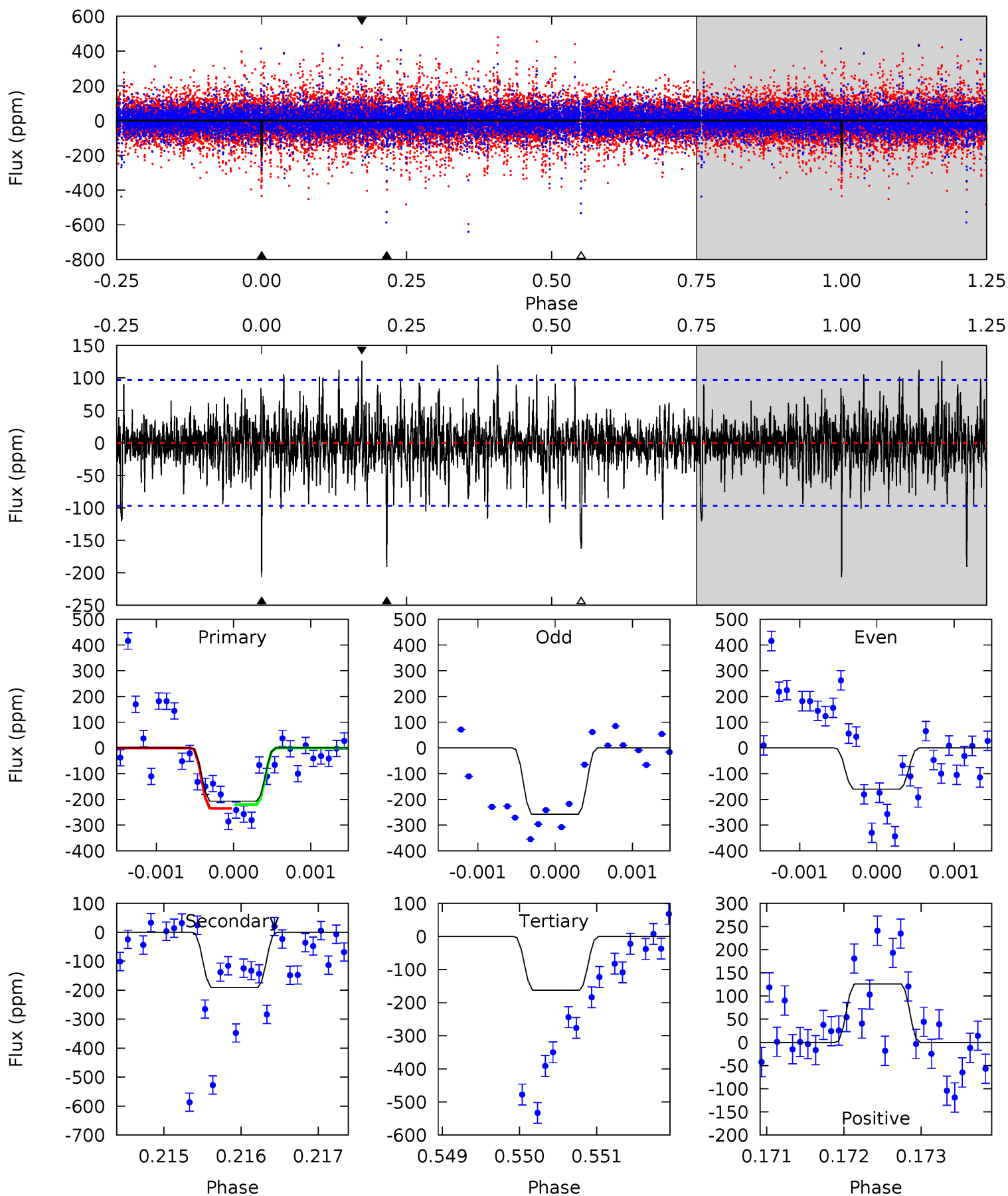
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	6.49	5.85	7.82	5.40	3.21	1.93	4.90	2.92	0.65	-1.33	0.76	0.75	0.42	2.84



Alt Model-Shift Uniqueness Test

007271007-05, $P = 147.868409$ Days, $E = 30.824699$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	10.8	9.18	7.12	5.46	3.30	1.64	2.49	4.55	1.58	3.64	2.20	0.76	0.38	0.40



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-103 ± 16	$2.50^{+1.09}_{-1.01}$	696^{+51}_{-59}	5794^{+1485}_{-873}	3199^{+5634}_{-1695}
Alt.	-191 ± 18	$2.98^{+1.10}_{-0.97}$	692^{+53}_{-56}	6154^{+1295}_{-799}	4223^{+5142}_{-2004}

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

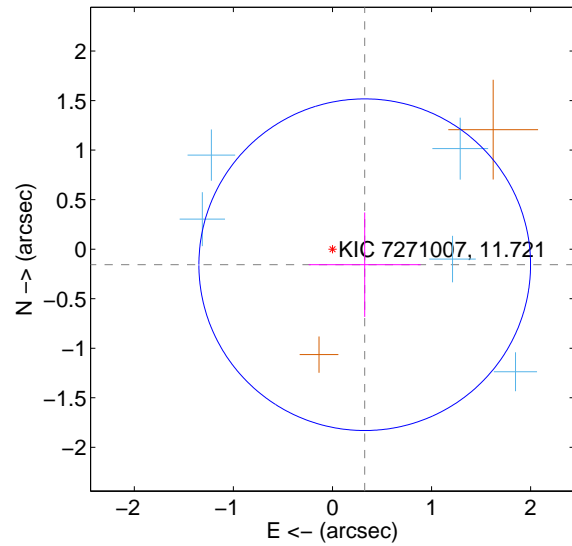
Supplemental centroid analysis for 007271007-05. **Kepler magnitude: 11.72**. Transit SNR 7.28

There are 5 quarters with good PRF difference image offsets

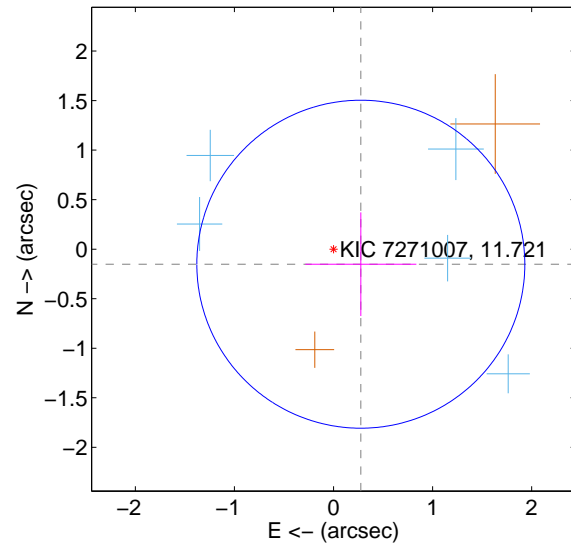
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.361 ± 0.558	0.65	-0.326 ± 0.565	-0.157 ± 0.527
PRF-fit source offset from KIC position	0.315 ± 0.552	0.57	-0.276 ± 0.560	-0.152 ± 0.523
photometric centroid source offset	0.11 ± 0.55	0.20	0.10 ± 0.55	-0.04 ± 0.56

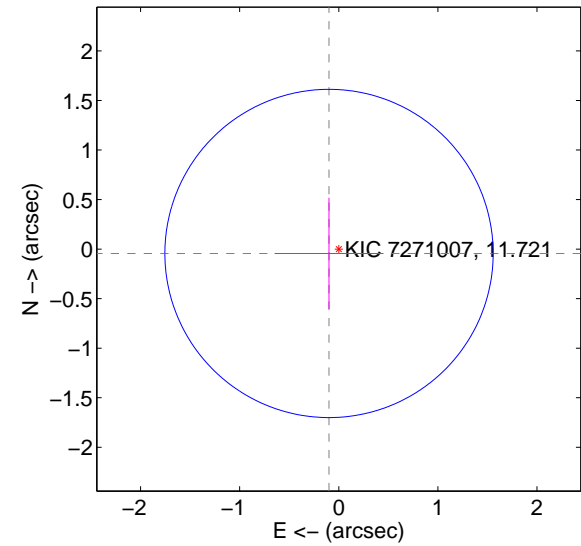
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



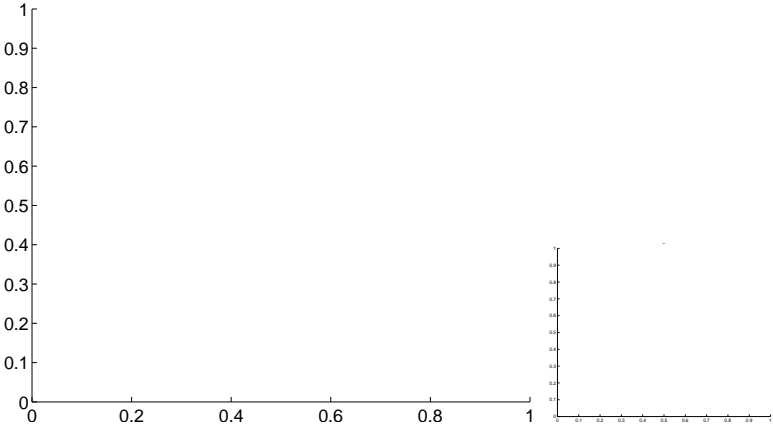
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

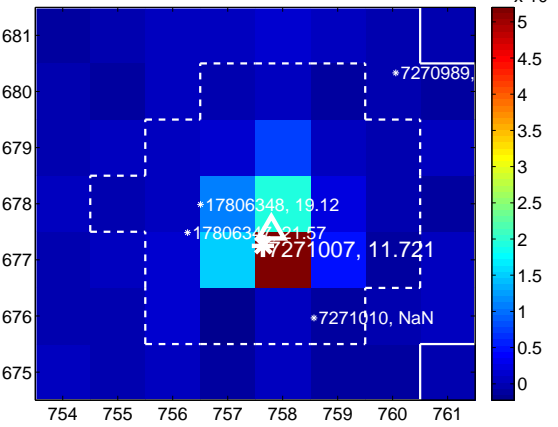
Q1 no difference image



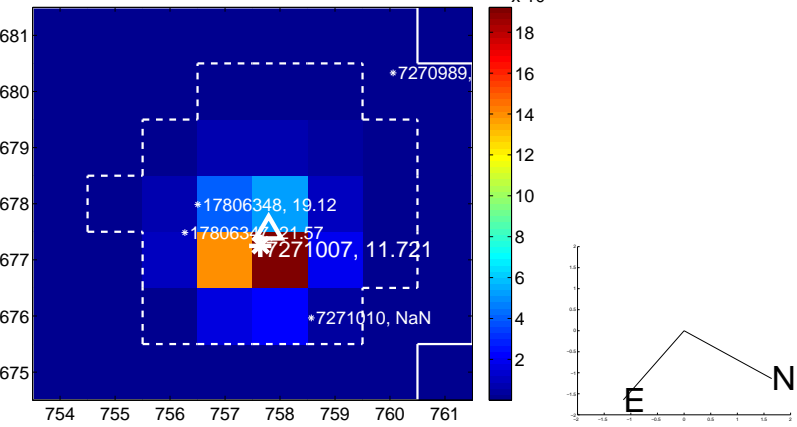
Q1 no OOT image



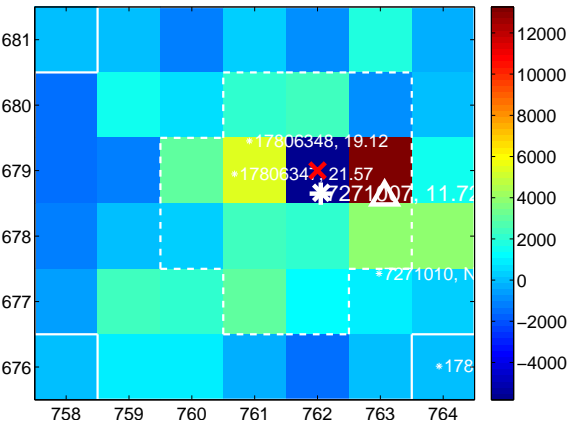
Q2 difference image



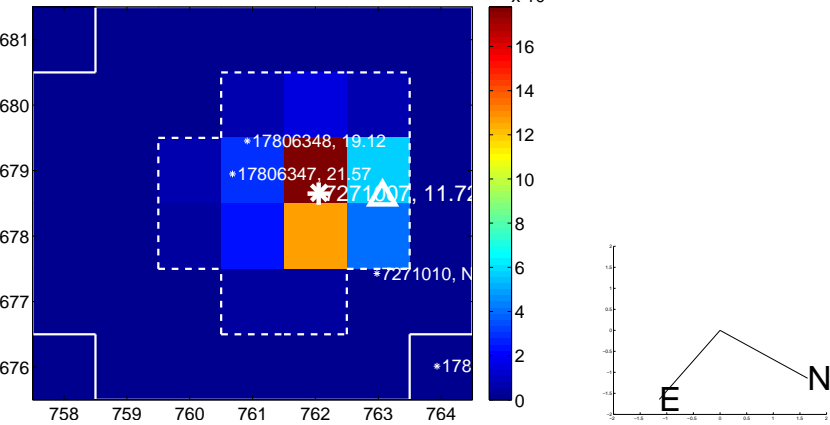
Q2 OOT image



Q3 difference image. Poor Quality



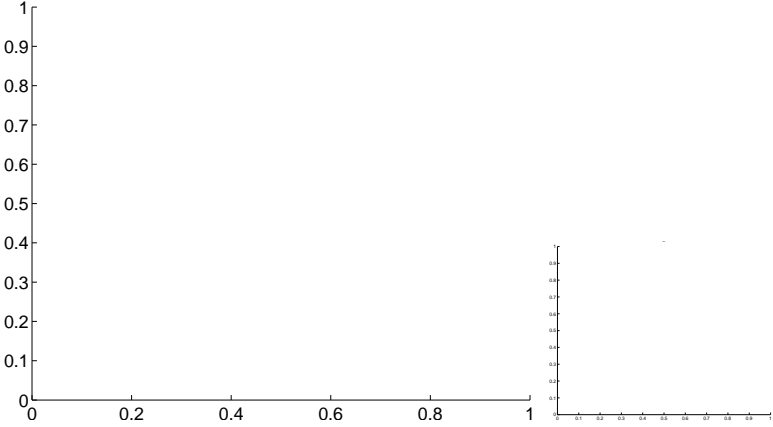
Q3 OOT image



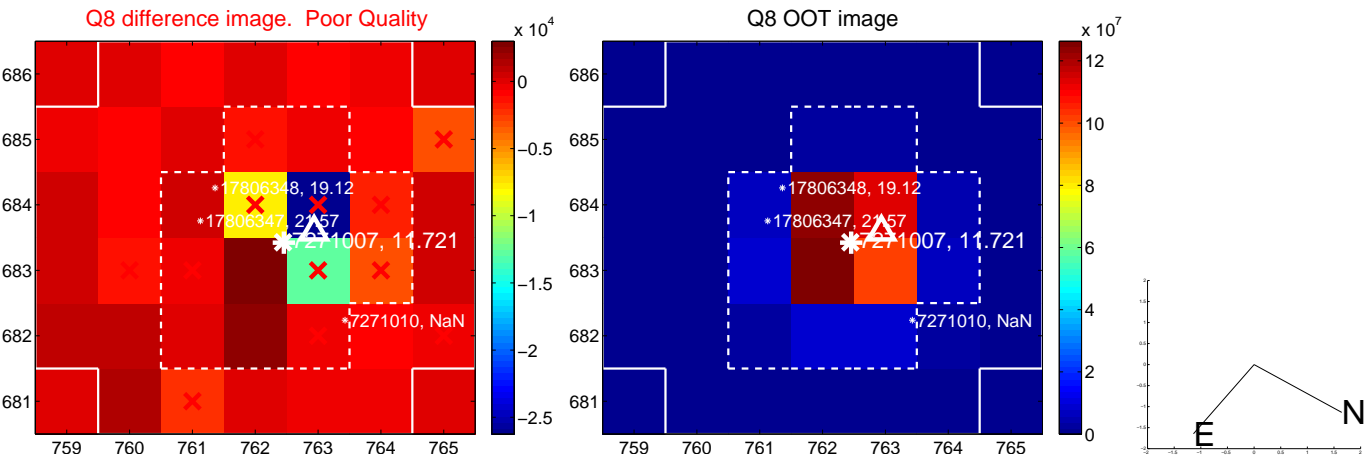
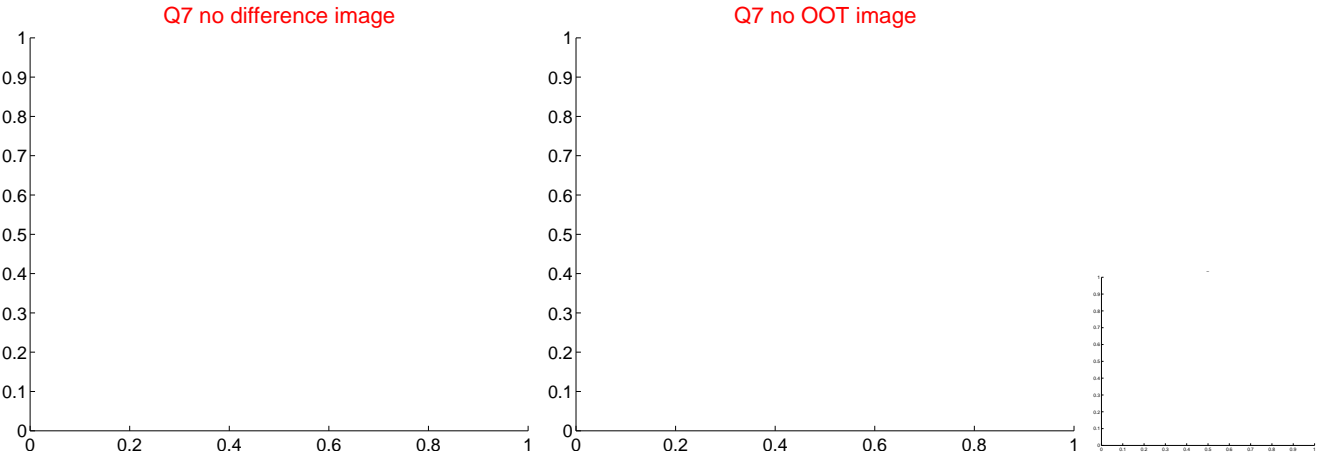
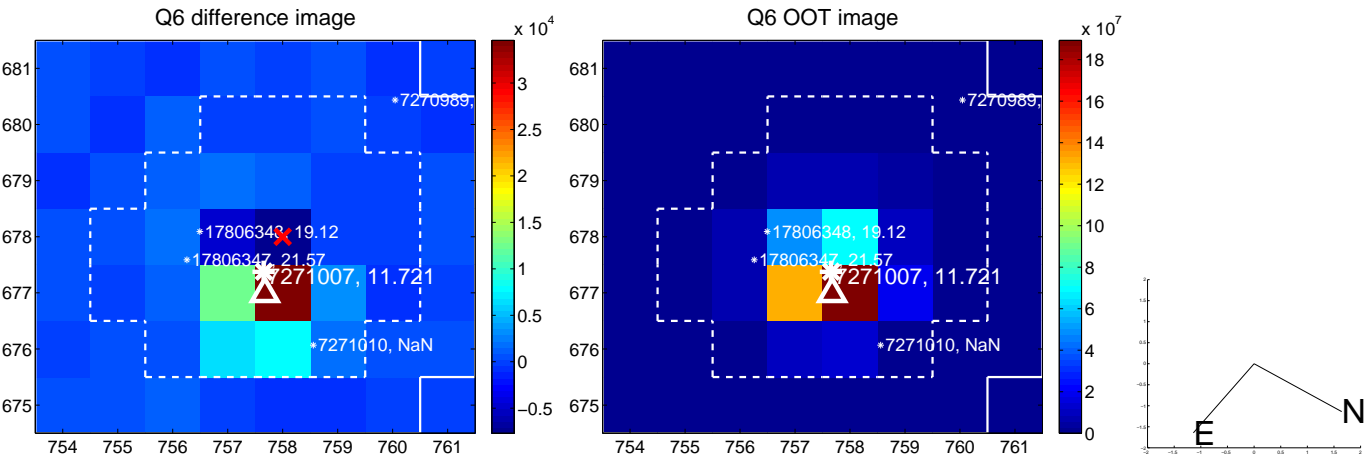
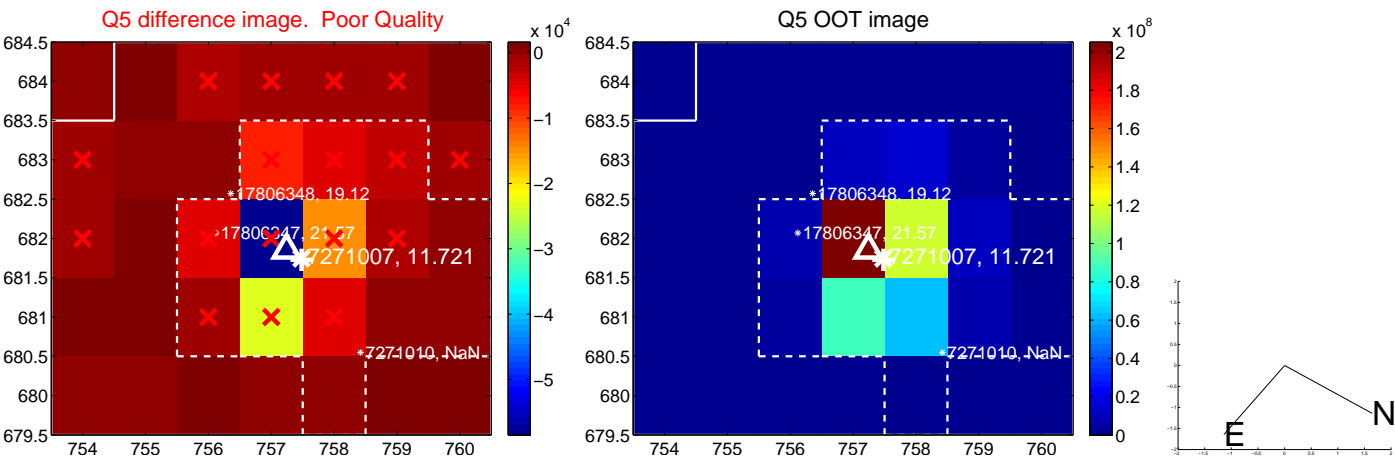
Q4 no difference image



Q4 no OOT image



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



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

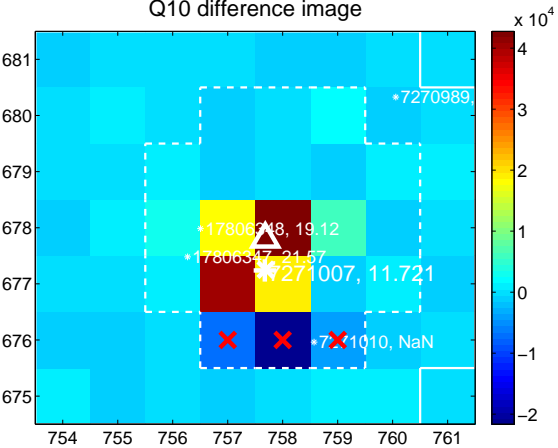
Q9 no difference image



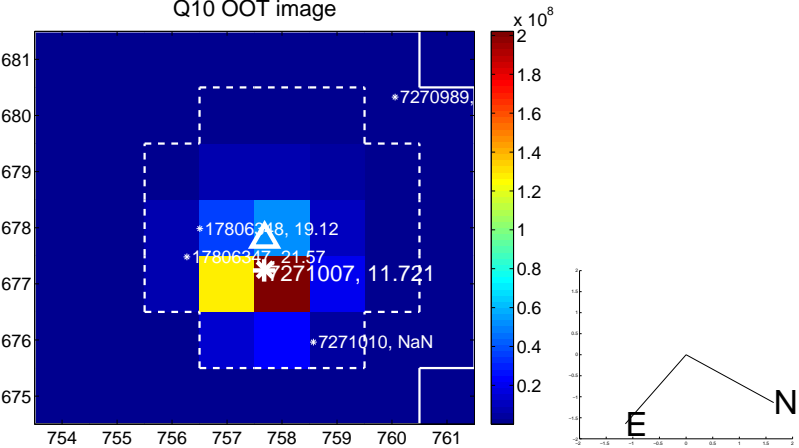
Q9 no OOT image



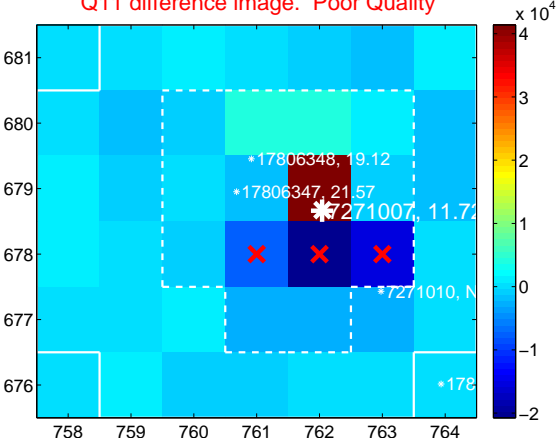
Q10 difference image



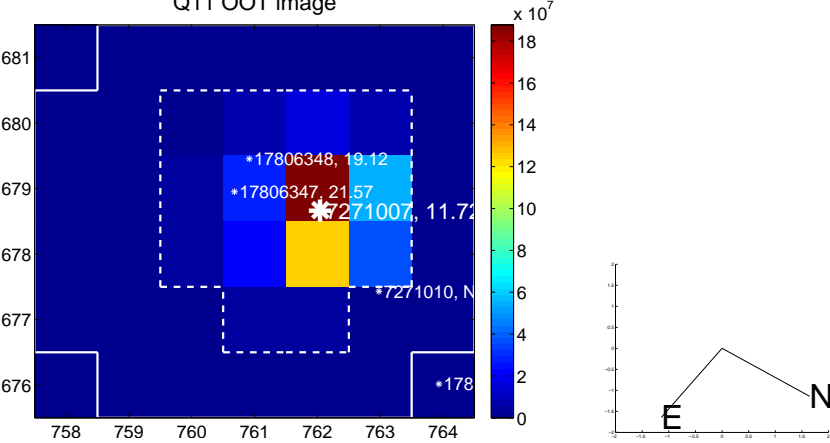
Q10 OOT image



Q11 difference image. Poor Quality



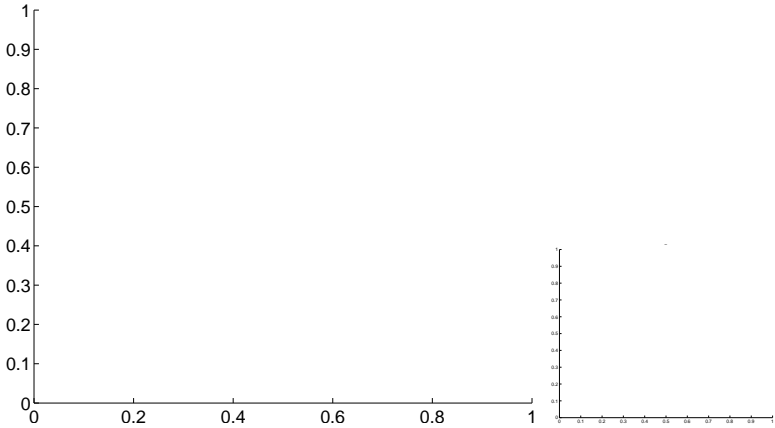
Q11 OOT image



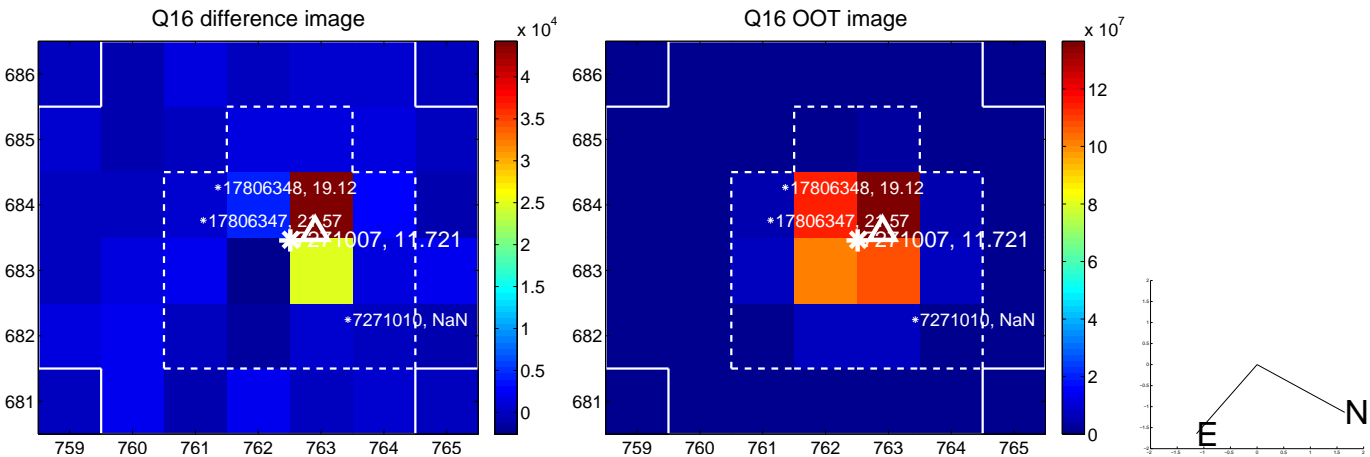
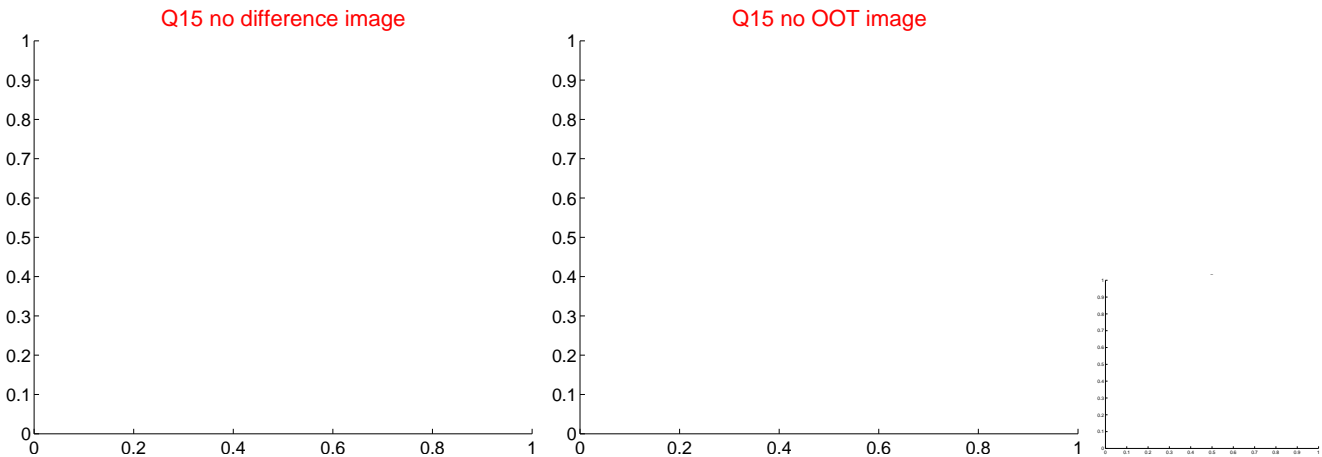
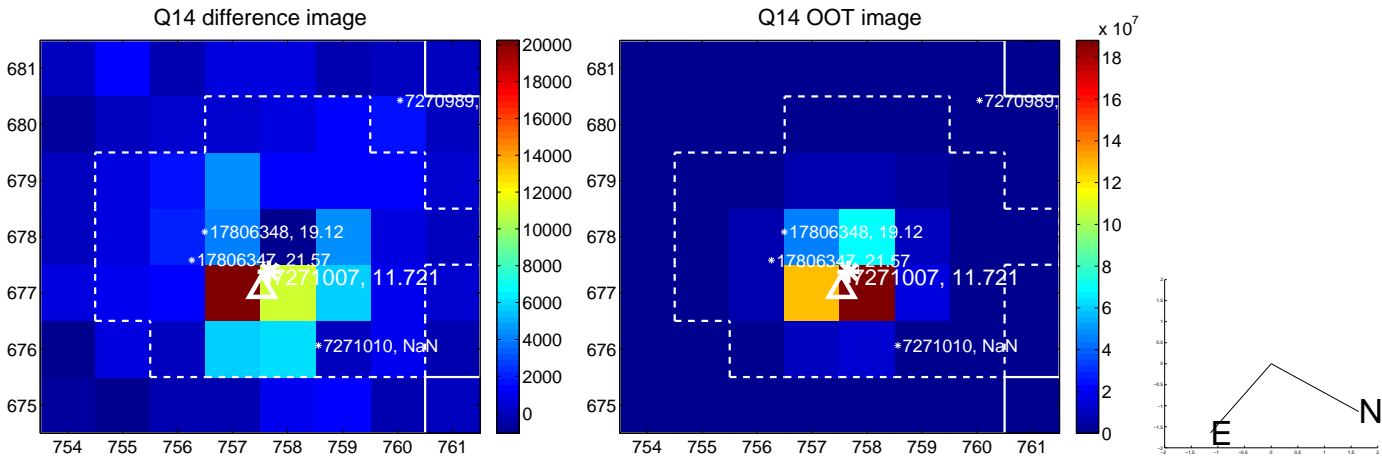
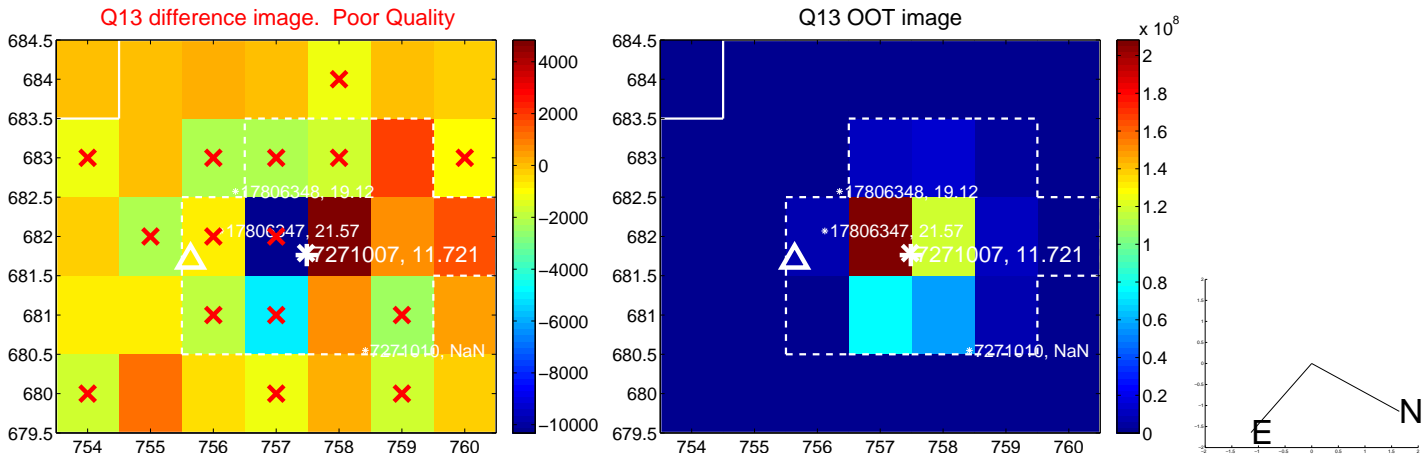
Q12 no difference image



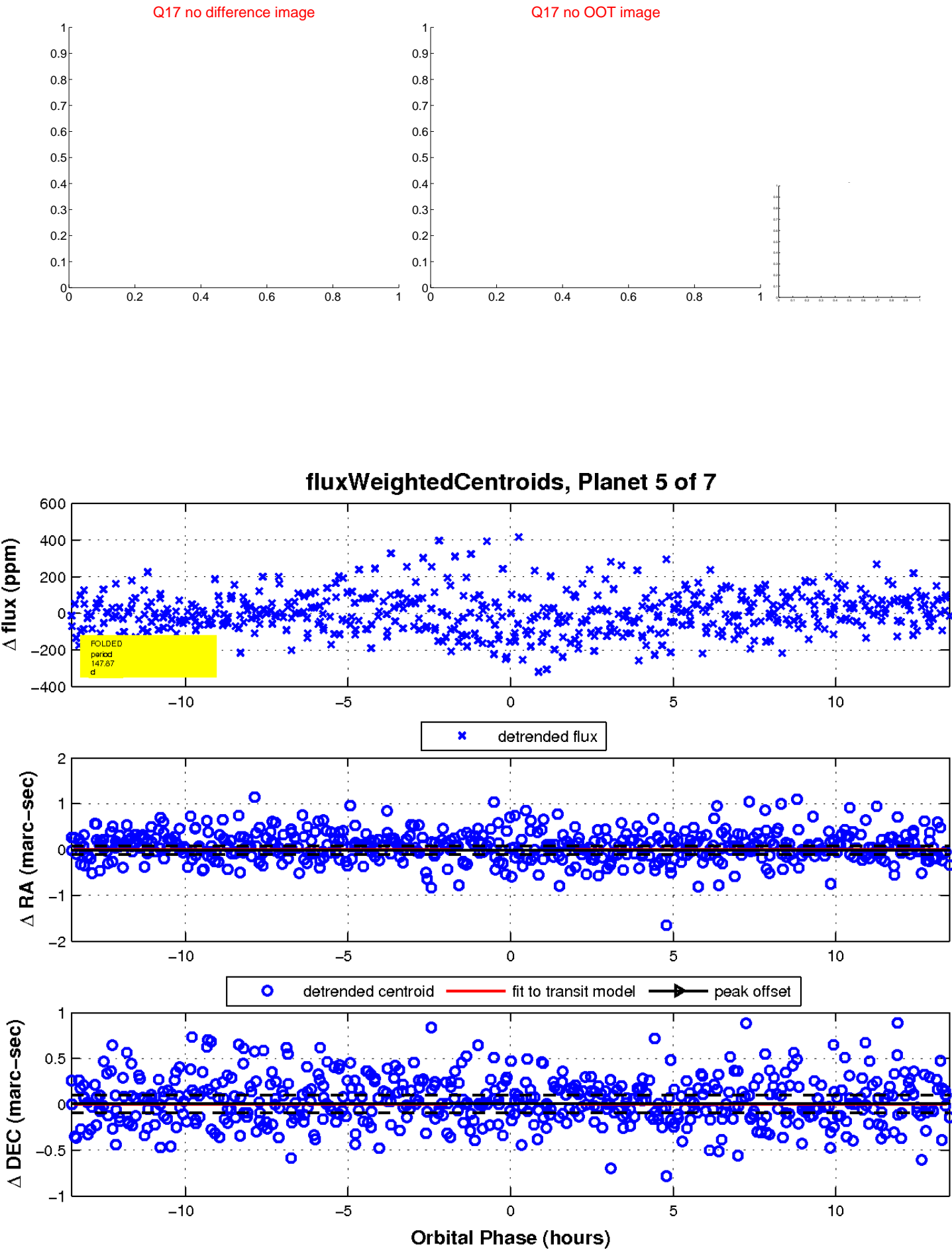
Q12 no OOT image



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

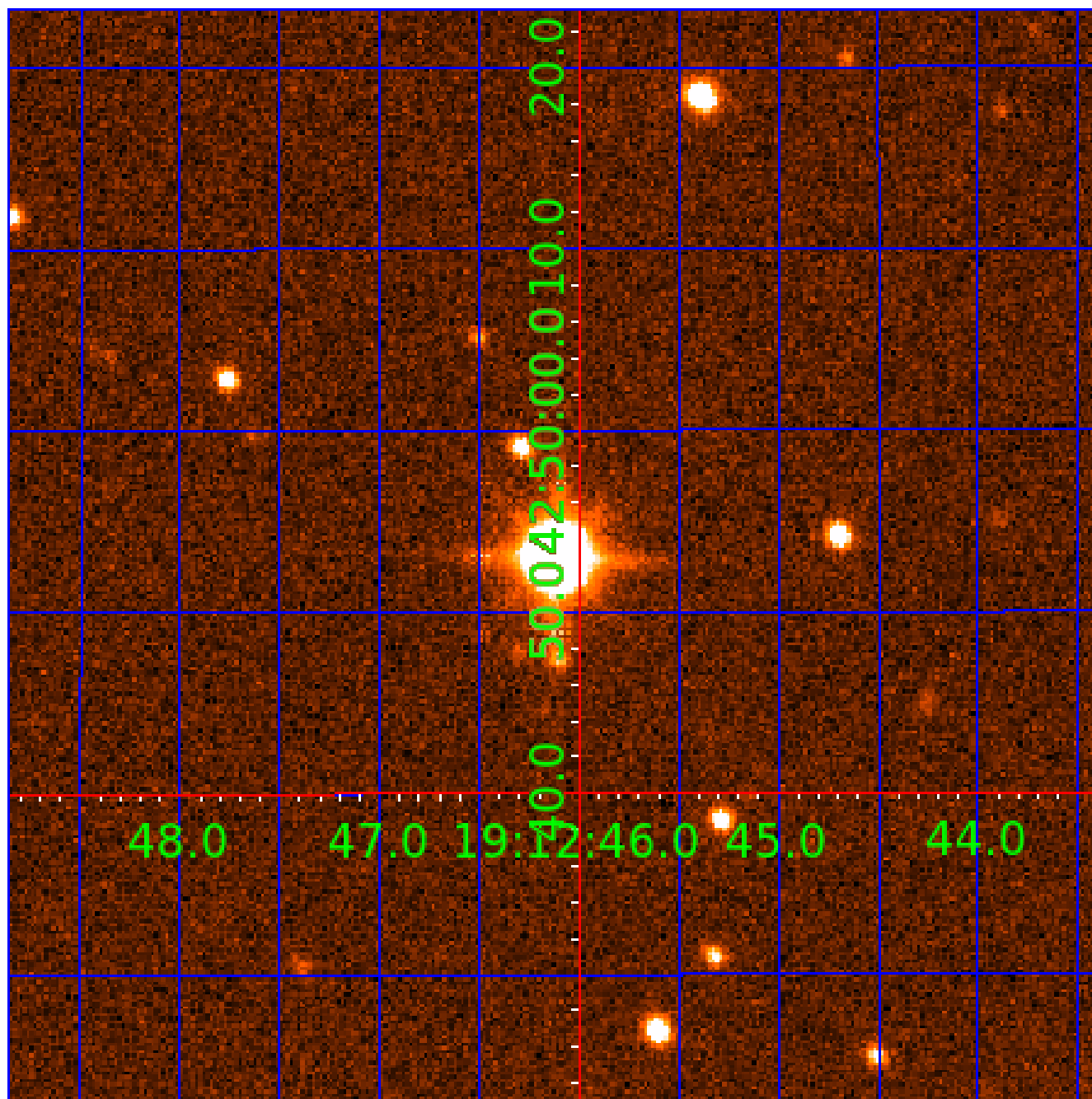


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

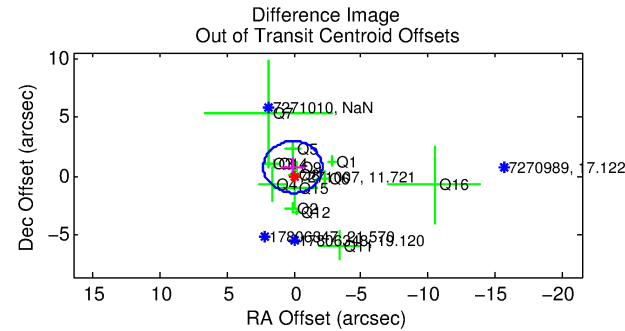
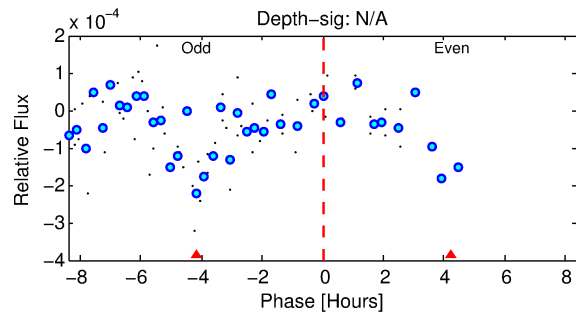
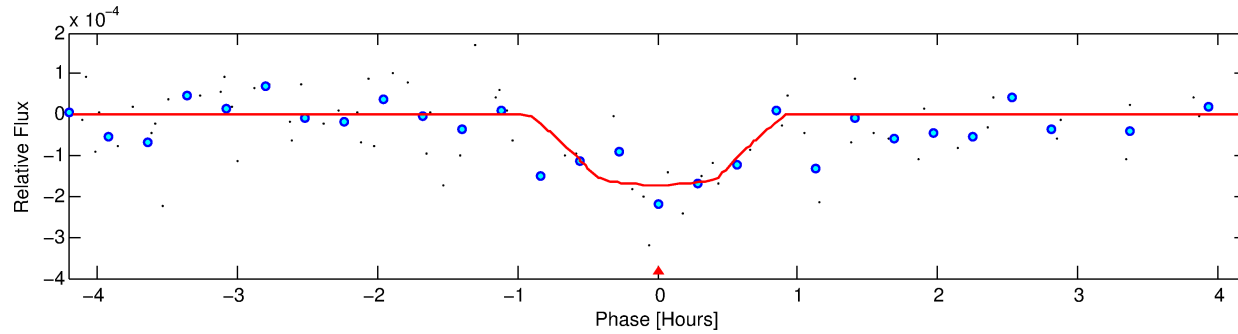
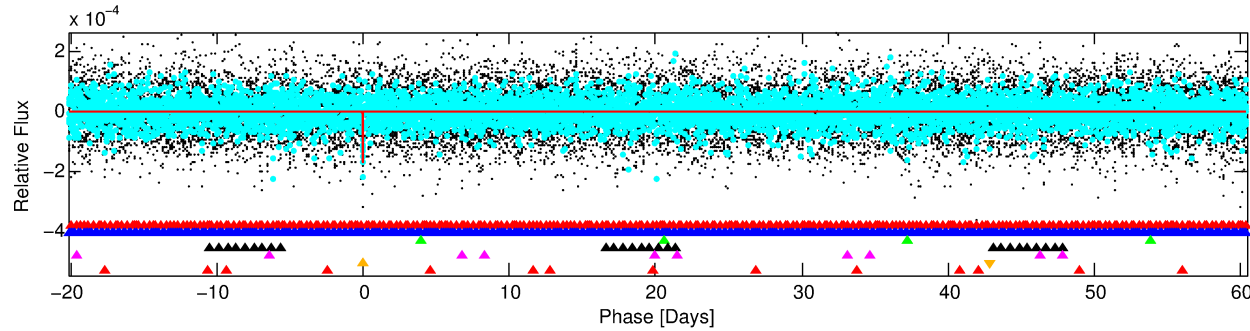
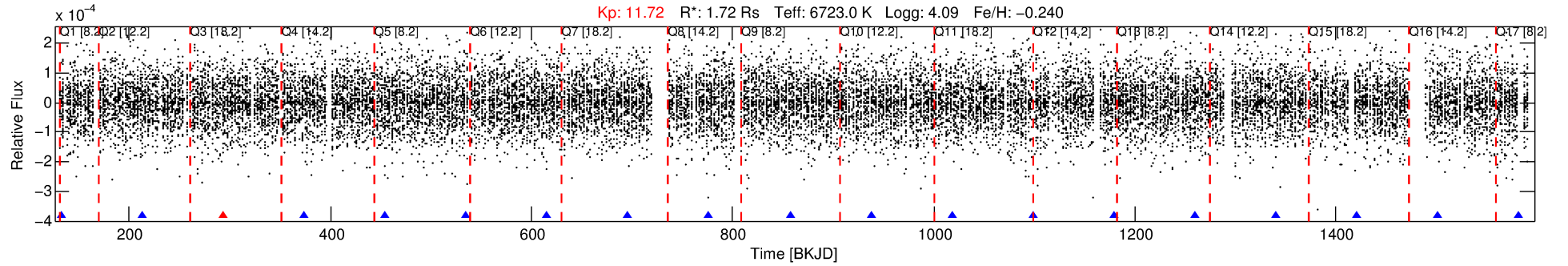
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-06

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 6 of 7 Period: 80.516 d



DV Fit Results:

Period = 80.51561 [0.00082] d
Epoch = 132.4552 [0.0050] BKJD
Rp/R* = 0.0131 [0.0086]
a/R* = 299.30 [1138.18]
b = 0.75 [2.25]
Seff = 33.69 [15.54]
Teq = 614 [71] K
Rp = 2.45 [1.80] Re
a = 0.4007 [0.1146] AU
Ag = 1395.28 [1981.00] [0.70 σ]
Teffp = 5805 [1974] K [2.63 σ]

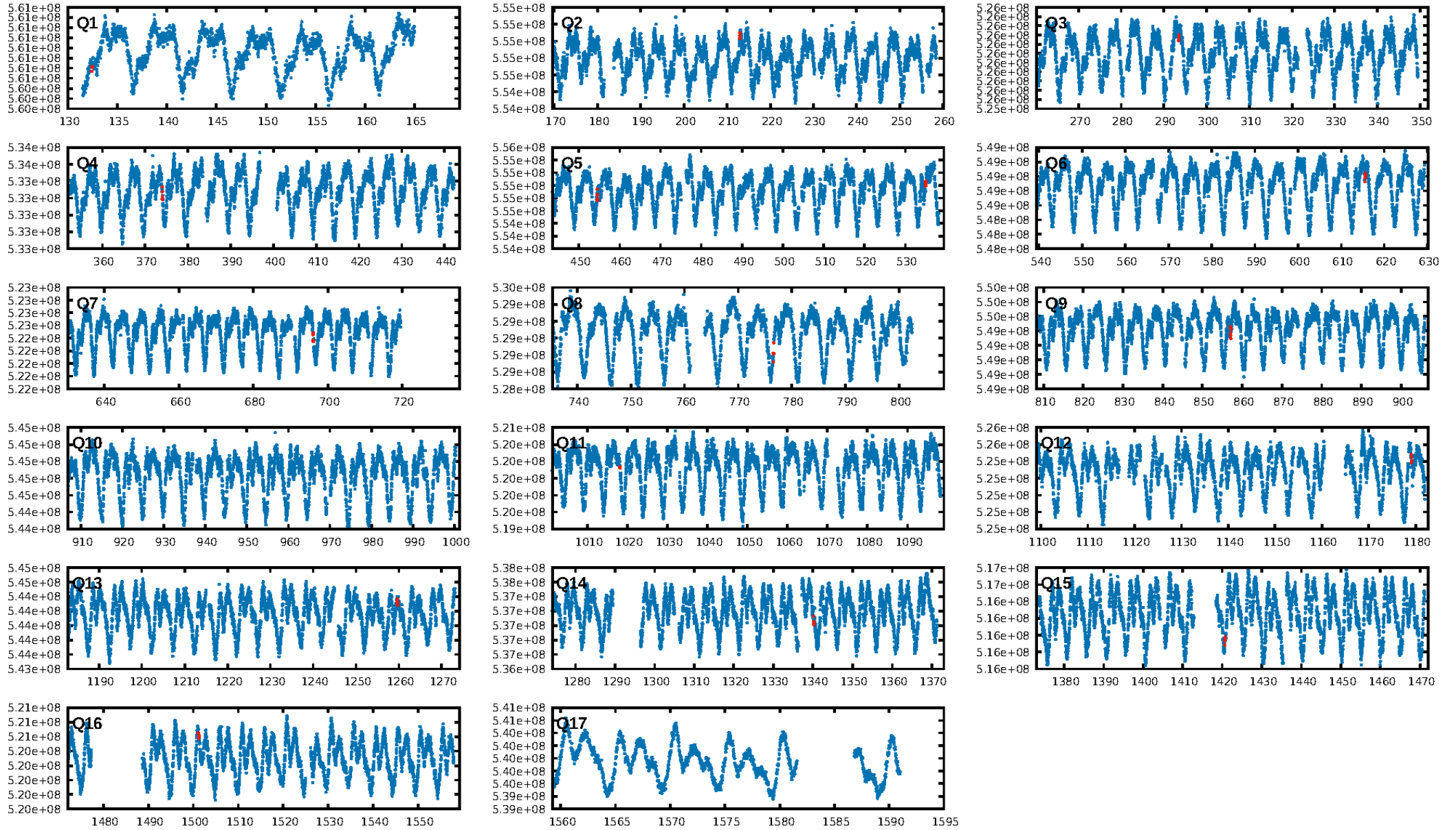
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [125.28 σ]
LongPeriod-sig: 100.0% [148.51 σ]
ModelChiSquare2-sig: 86.1%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: -5.321
Centroid-sig: 14.9%
Centroid-so: 0.827 arcsec [1.23 σ]
OotOffset-rm: 0.801 arcsec [1.10 σ]
KicOffset-rm: 0.843 arcsec [1.15 σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 0.53 [8/15]

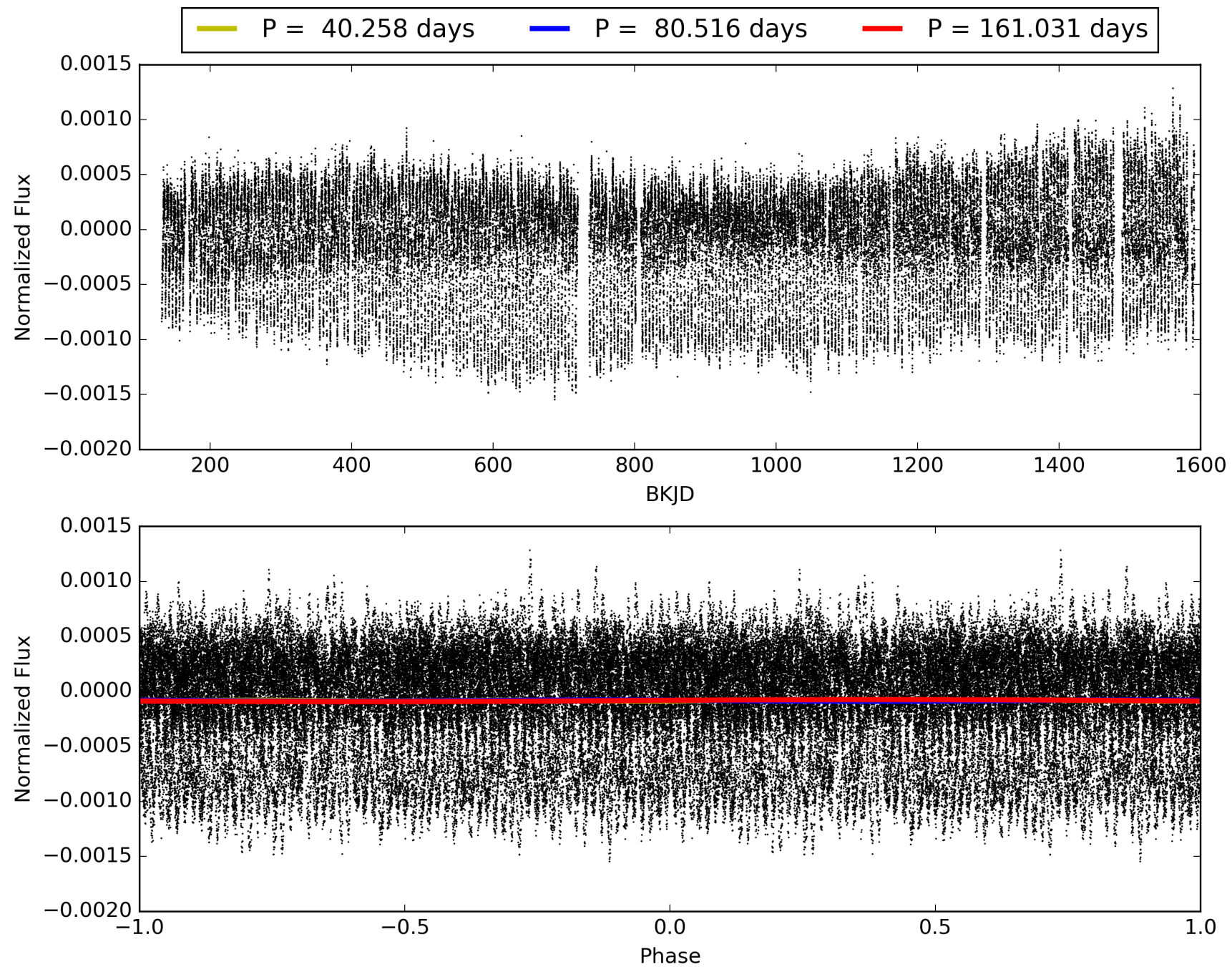
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:42:19 Z

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

TCE 007271007-06, PDC Light Curves

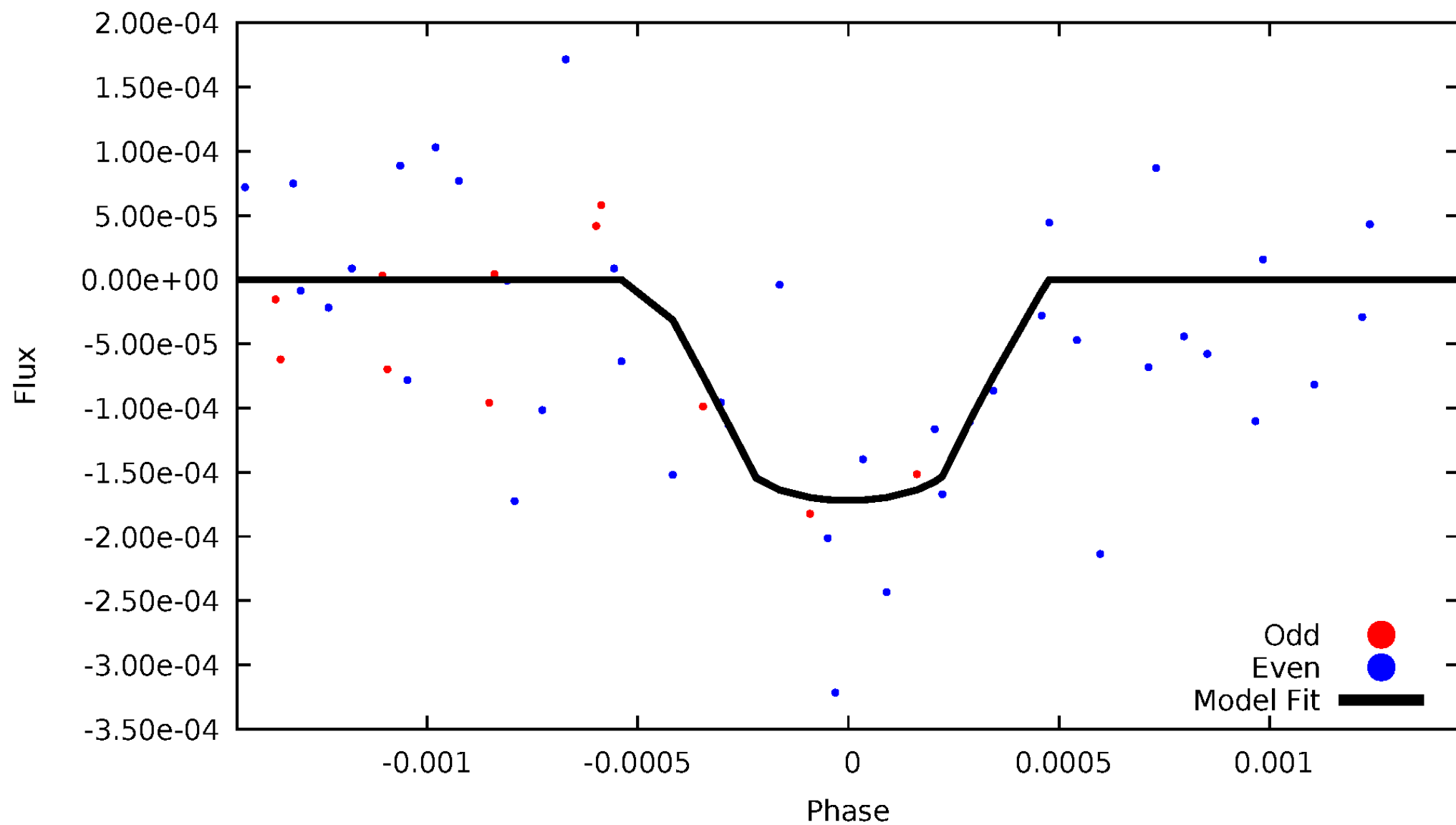


TCE 007271007-06



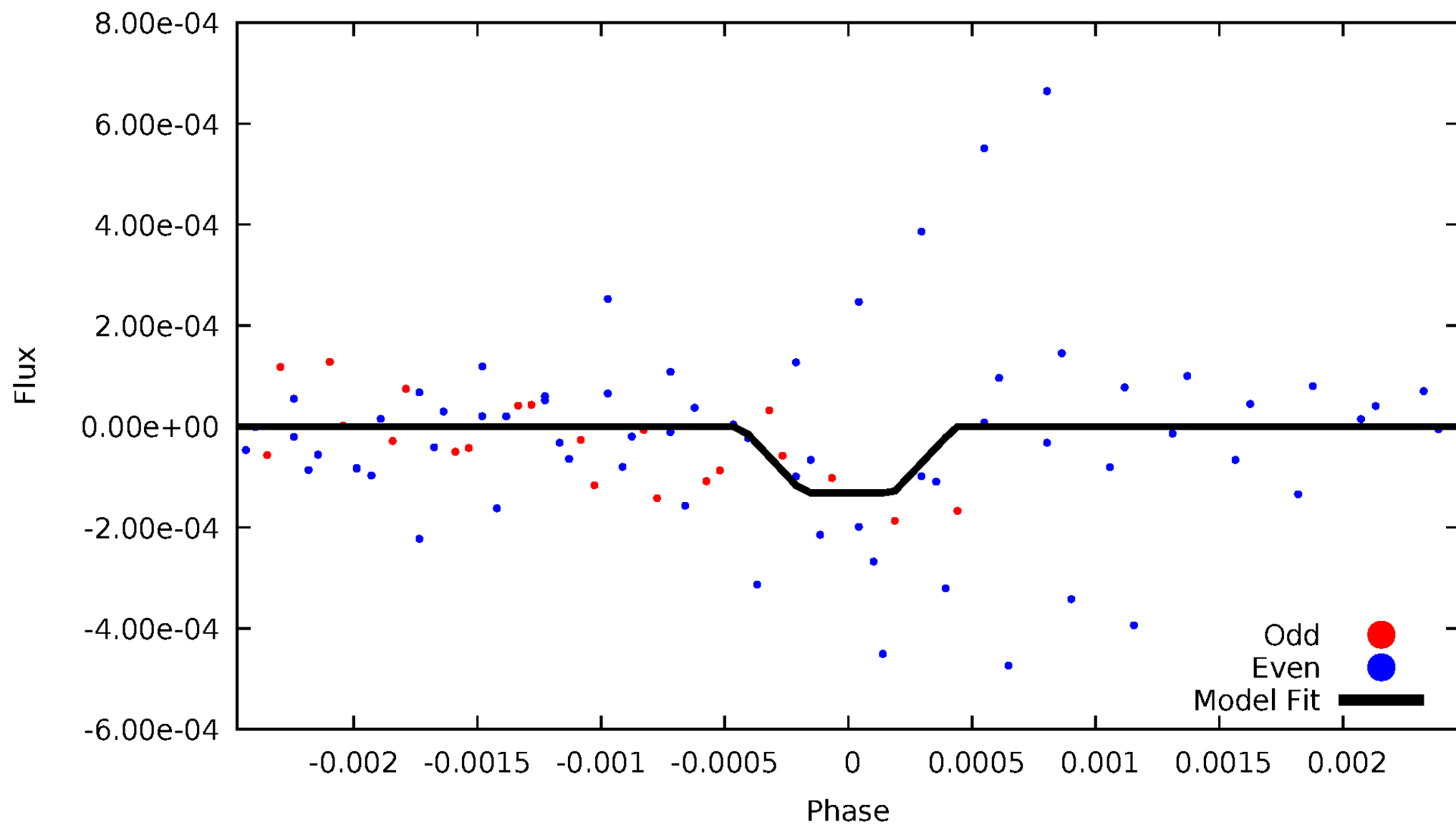
DV Odd/Even

TCE 007271007-06



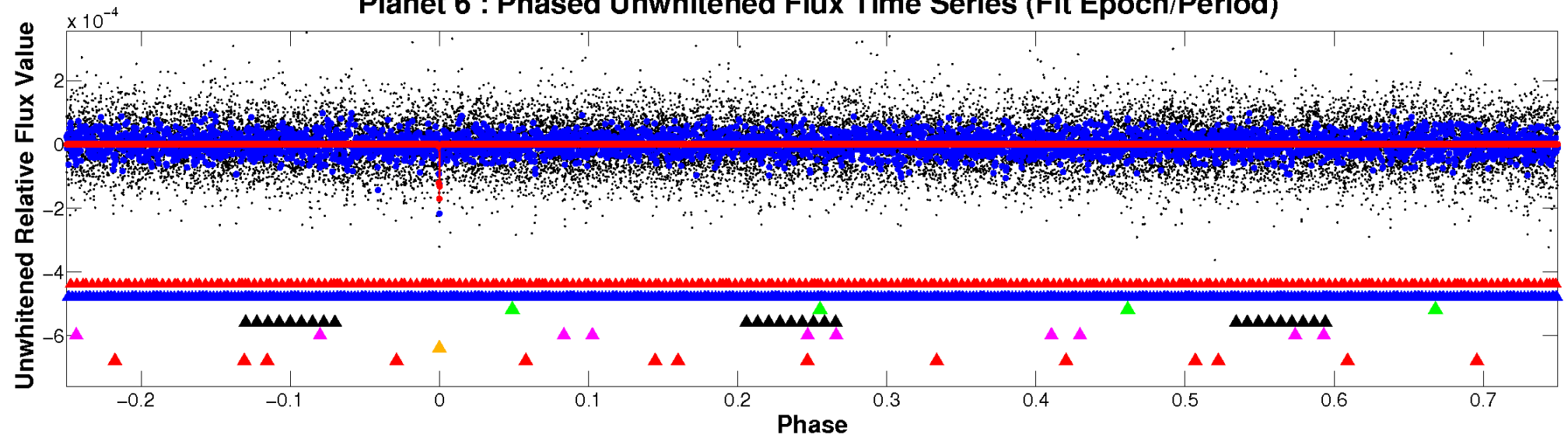
ALT Odd/Even

TCE 007271007-06

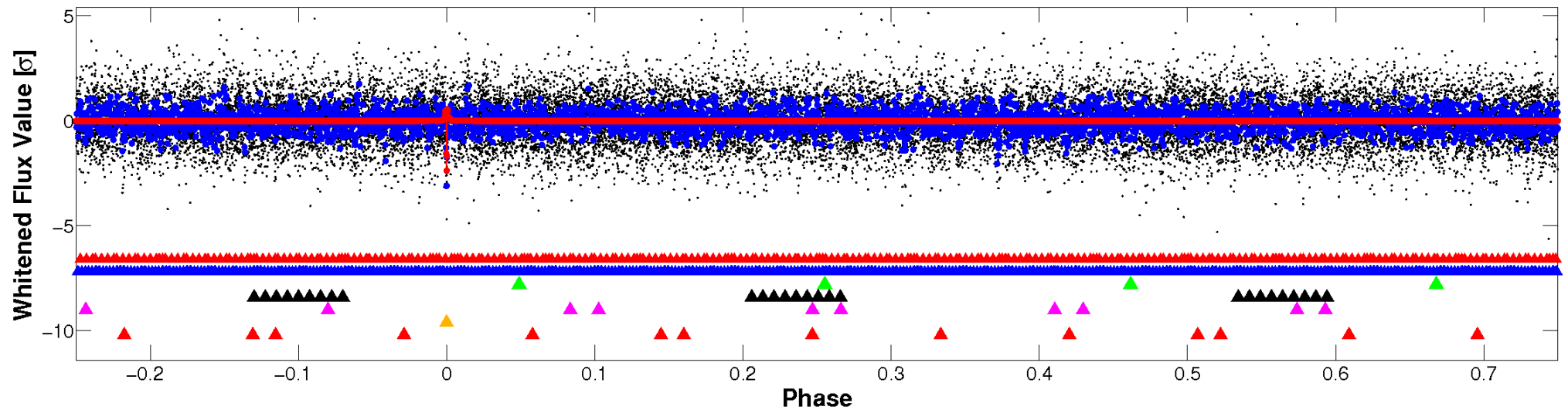


Non-Whitened Vs. Whitened Light Curve

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

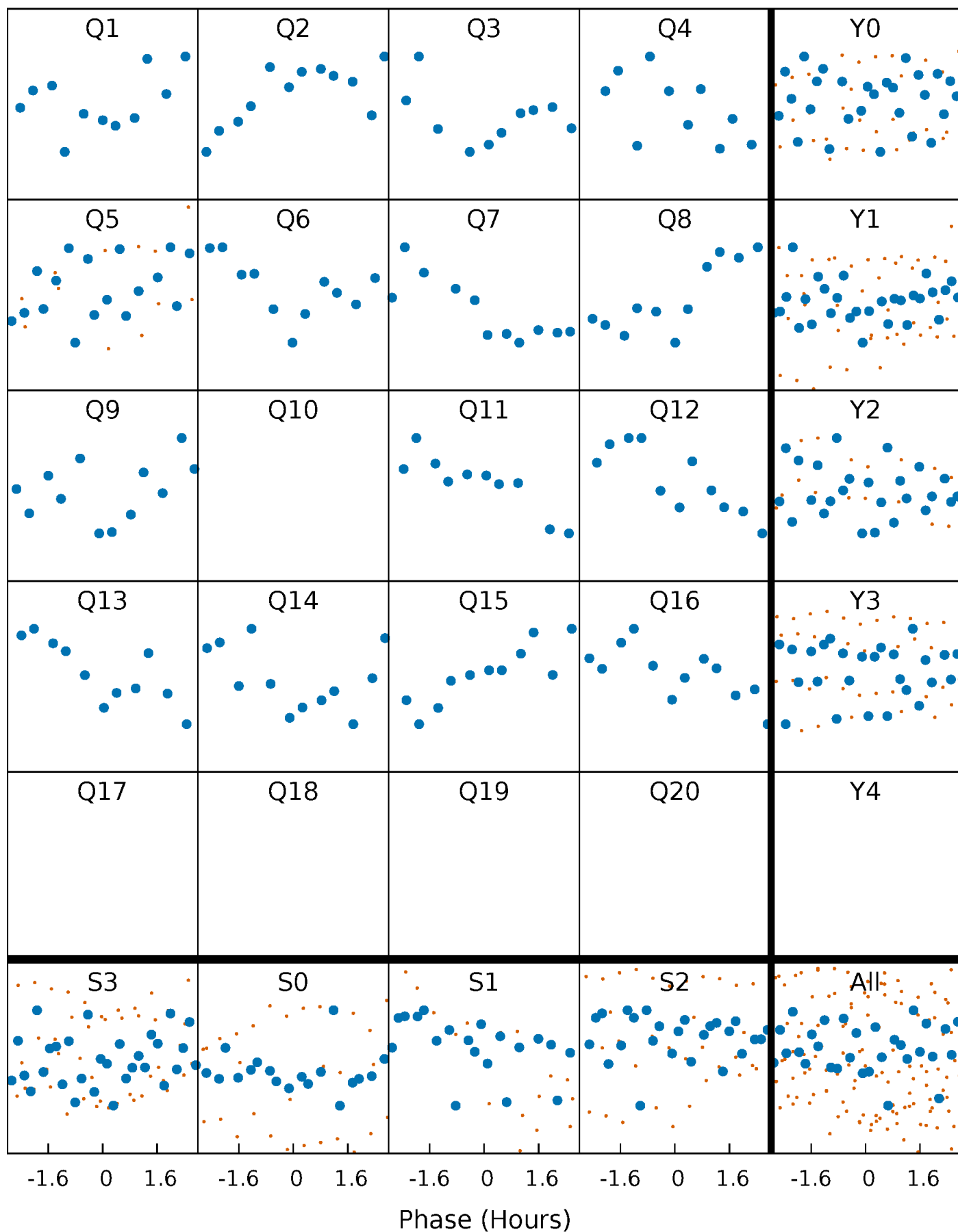


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



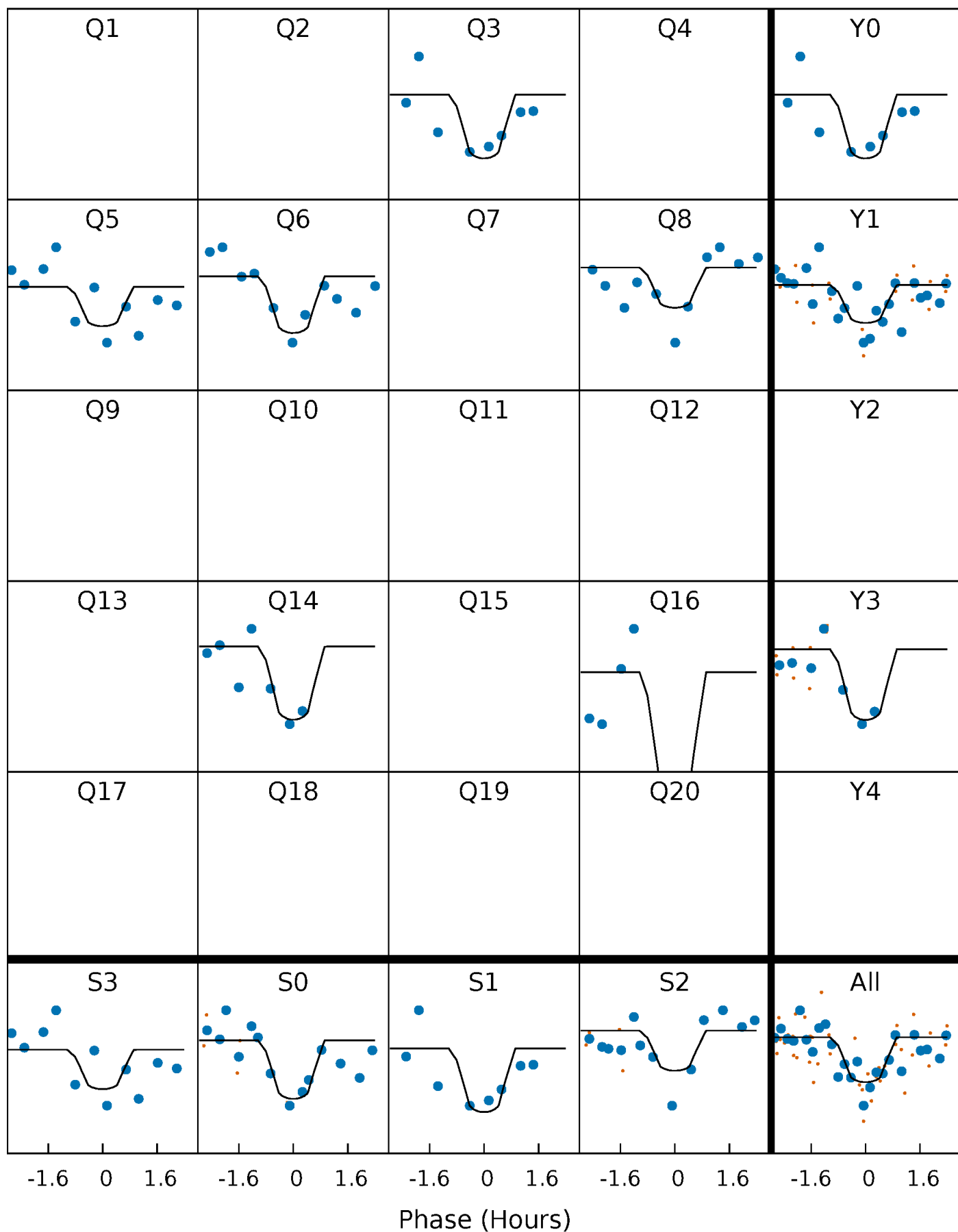
PDC Quarter-Phased Transit Curves

TCE 007271007-06 P= 80.515611 Days $T_0=132.455203$ (BKJD)



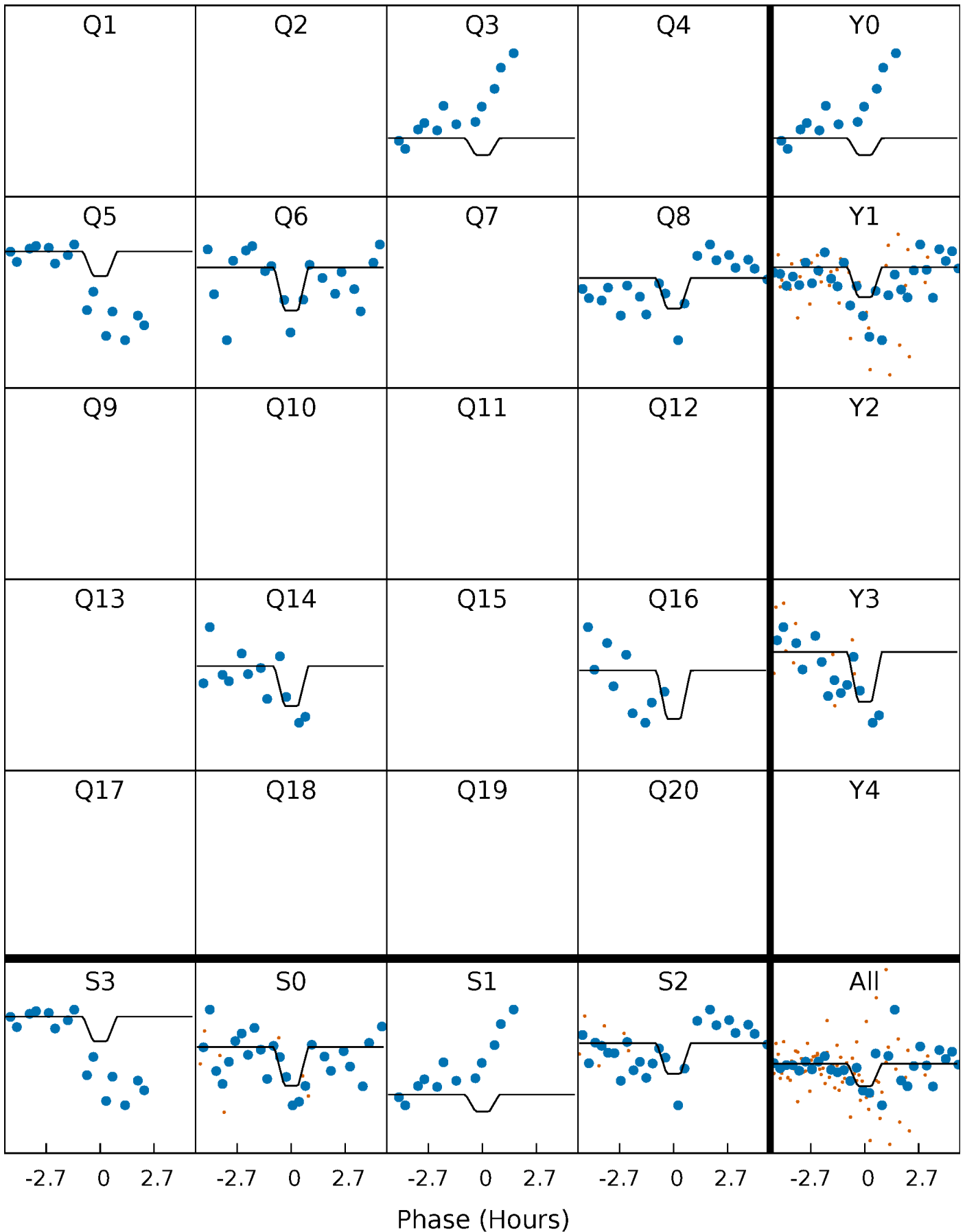
DV Quarter-Phased Transit Curves

TCE 007271007-06 P= 80.515611 Days $T_0=132.455203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

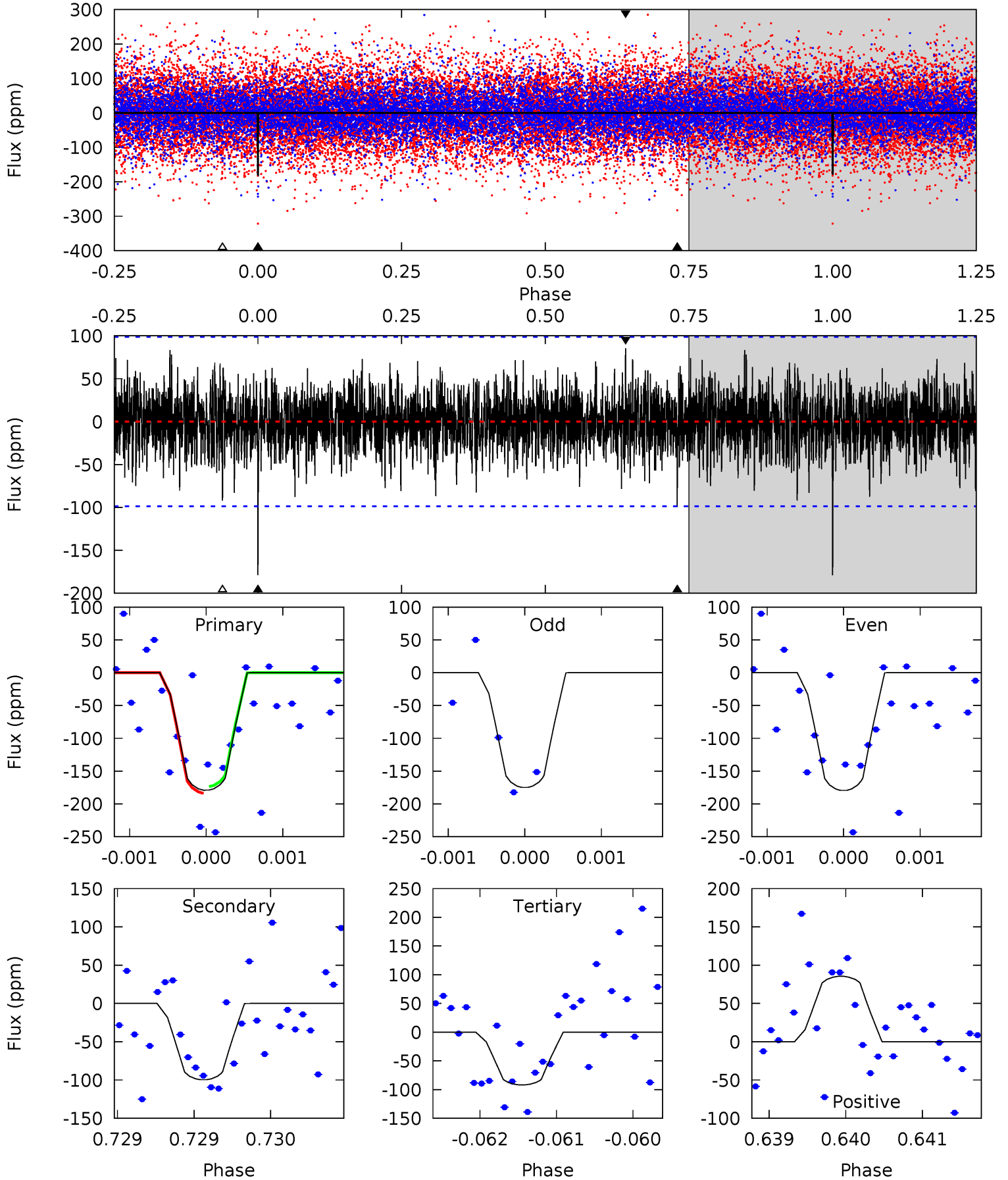
TCE 007271007-06 P= 80.513929 Days $T_0=132.457976$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-06, P = 80.515611 Days, E = 51.939592 Days

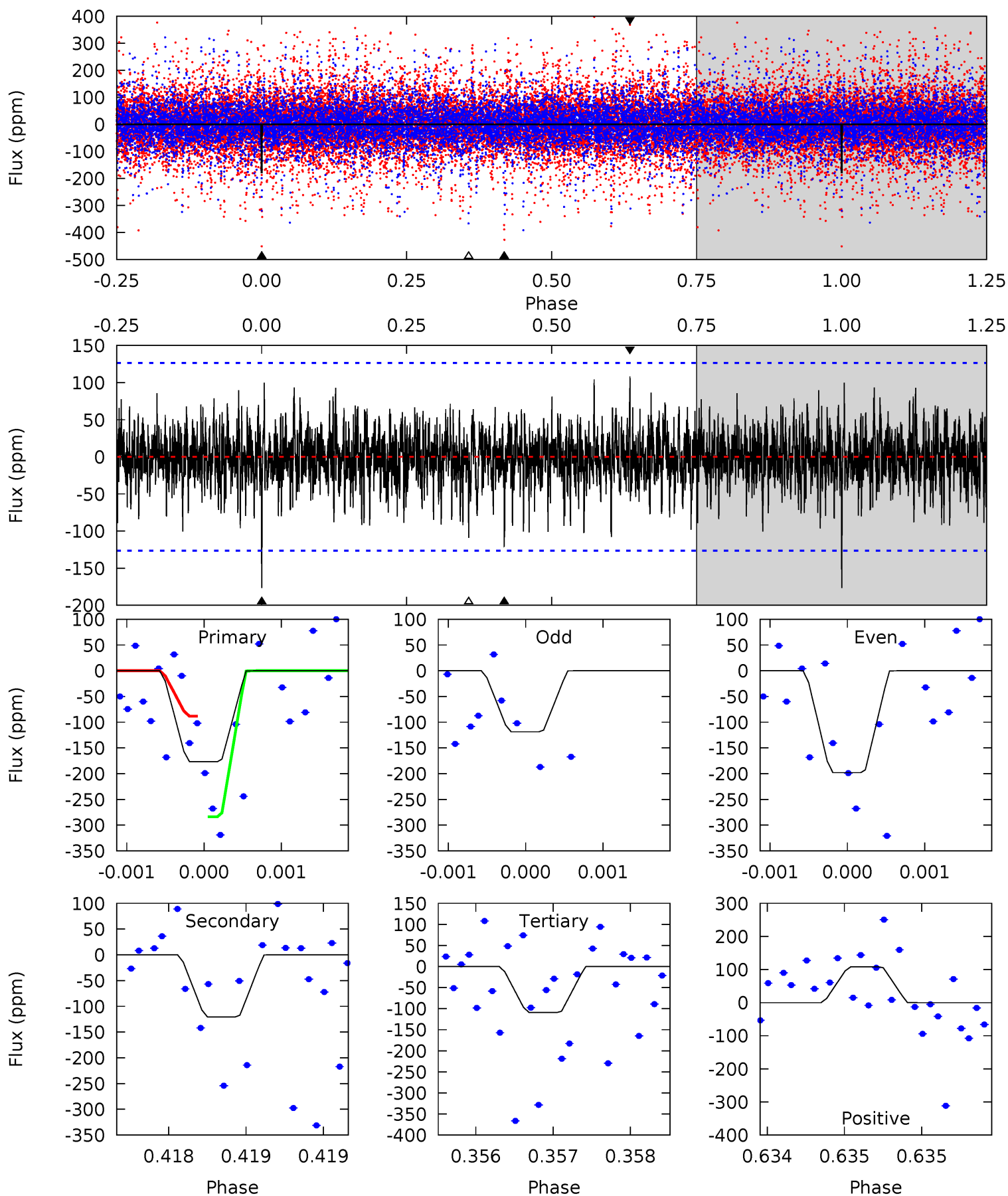
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.93	5.53	5.09	4.74	5.47	3.32	1.36	4.84	5.19	0.44	0.79	0.08	1.07	0.32	0.28



Alt Model-Shift Uniqueness Test

007271007-06, P = 80.513929 Days, E = 51.944047 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	5.23	4.74	4.69	5.49	3.35	1.25	2.93	2.97	0.50	0.54	1.55	0.70	0.38	4.28



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-100 ± 18	$2.49^{+1.70}_{-1.41}$	849^{+67}_{-69}	5666^{+3392}_{-1055}	1365^{+6133}_{-874}
Alt.	-121 ± 23	$2.37^{+1.55}_{-1.45}$	848^{+67}_{-72}	6101^{+4758}_{-1201}	1835^{+10214}_{-1187}

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 $A_{obs} \gg 1.0$

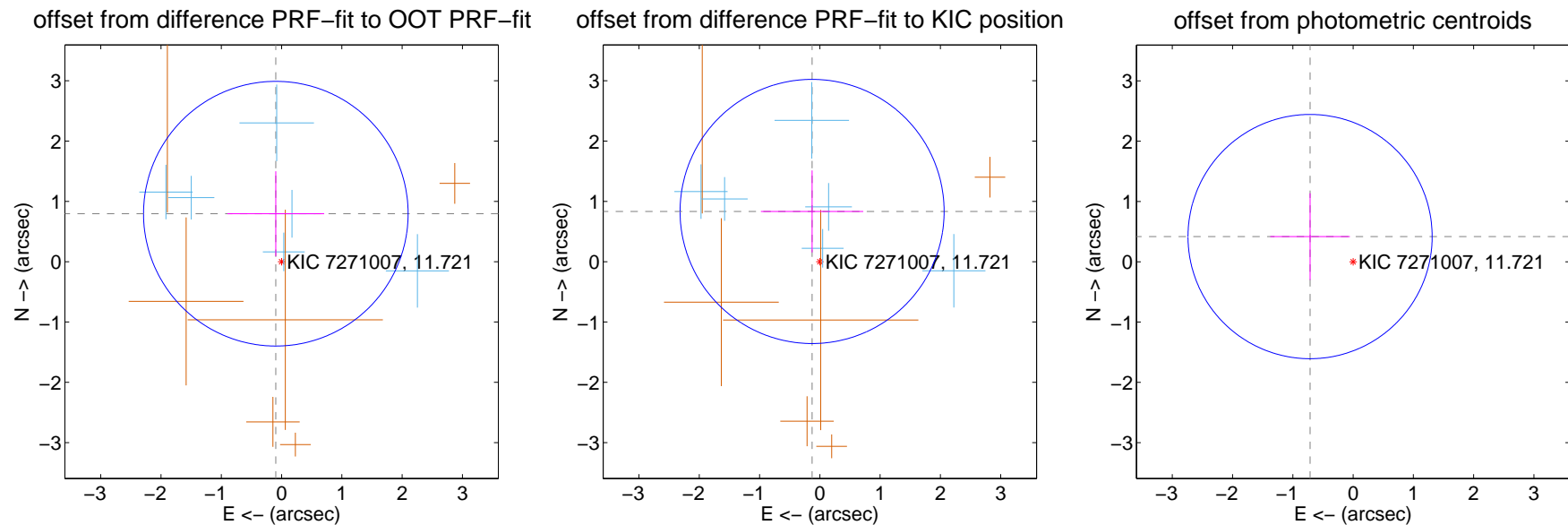
DV Centroid Data

Supplemental centroid analysis for 007271007-06. **Kepler magnitude: 11.72.** Transit SNR 7.66

There are 6 quarters with good PRF difference image offsets

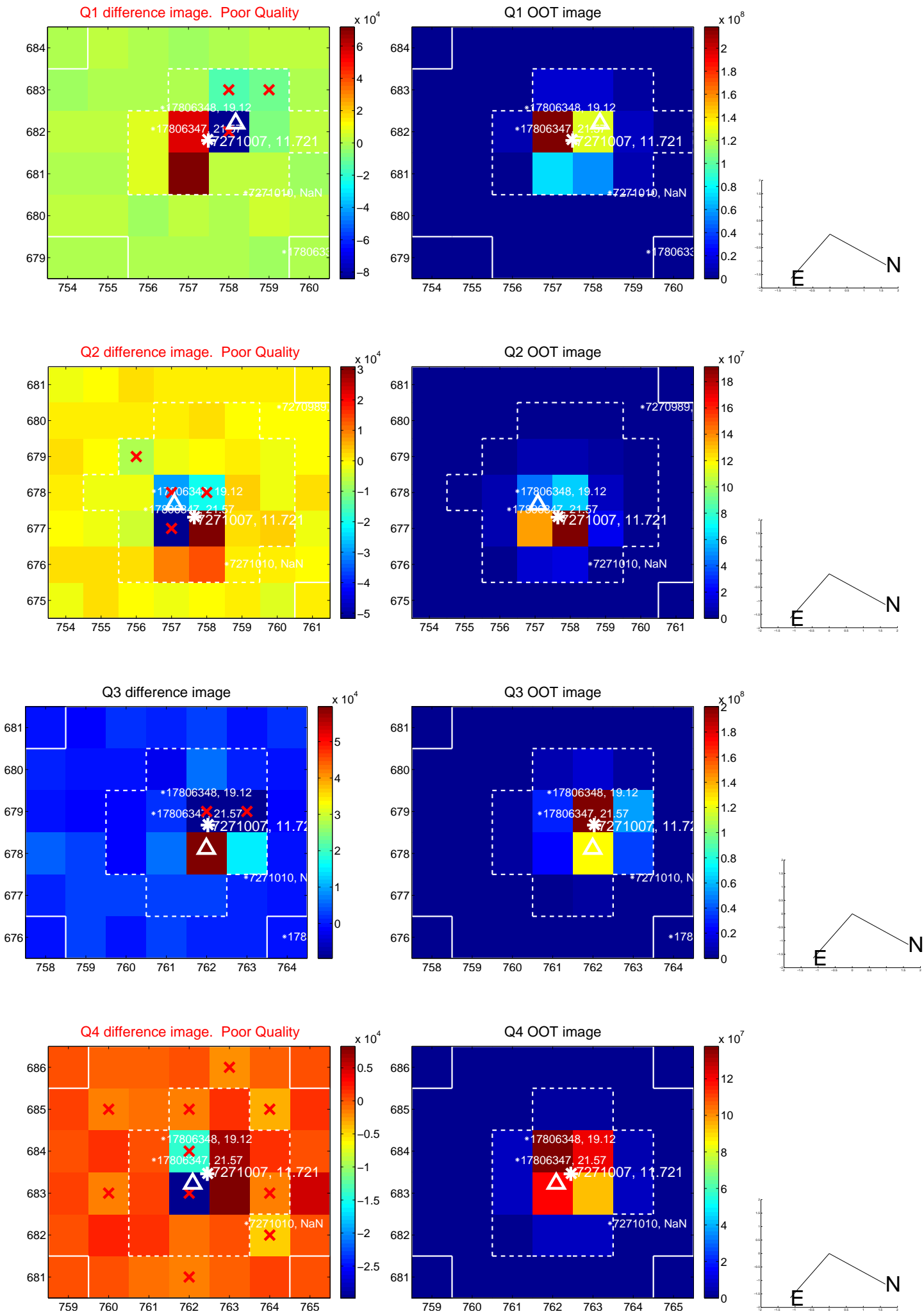
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.801 ± 0.731	1.10	0.095 ± 0.802	0.796 ± 0.704
PRF-fit source offset from KIC position	0.843 ± 0.730	1.15	0.128 ± 0.849	0.833 ± 0.680
photometric centroid source offset	0.83 ± 0.68	1.23	0.71 ± 0.66	0.42 ± 0.72

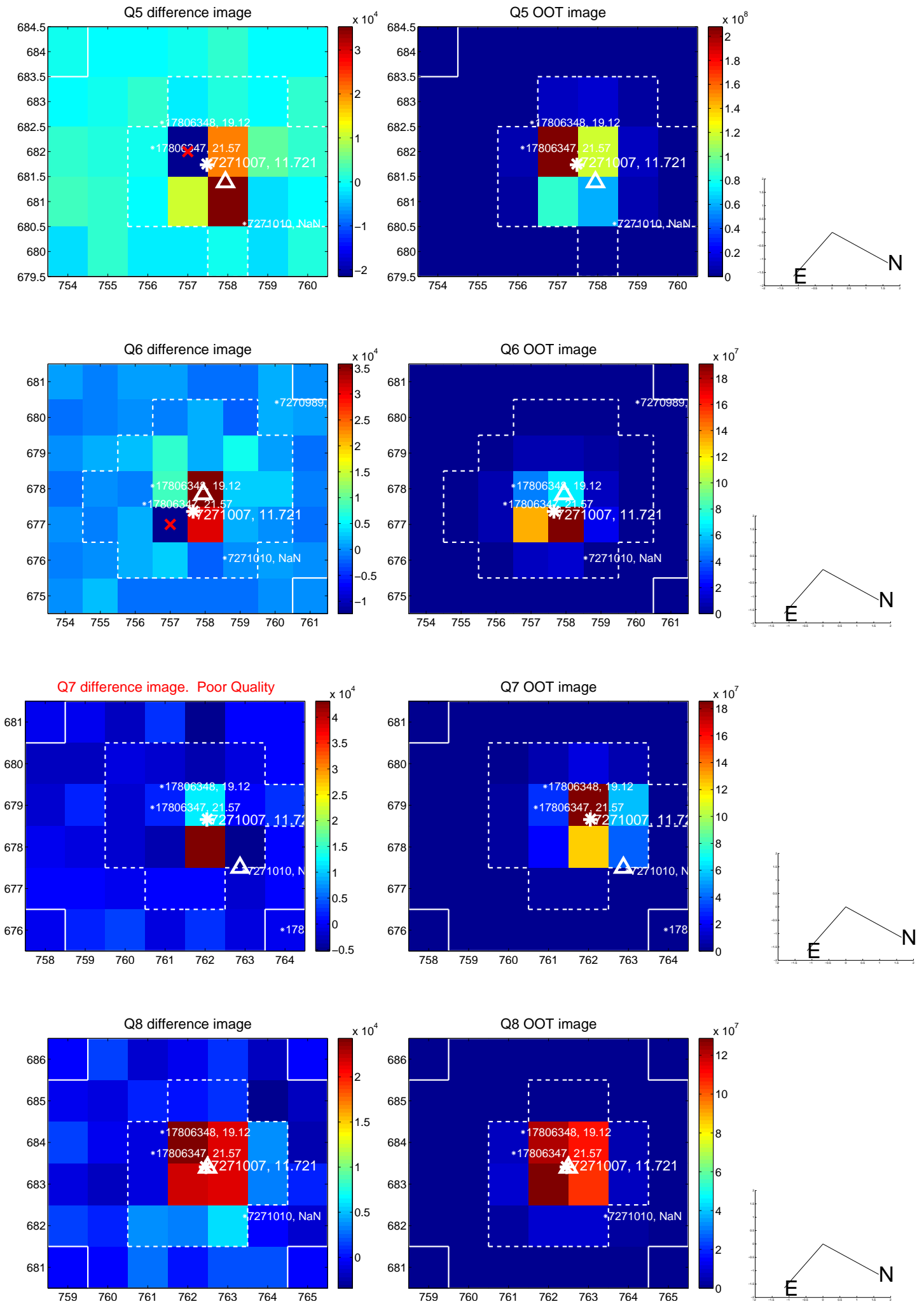


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

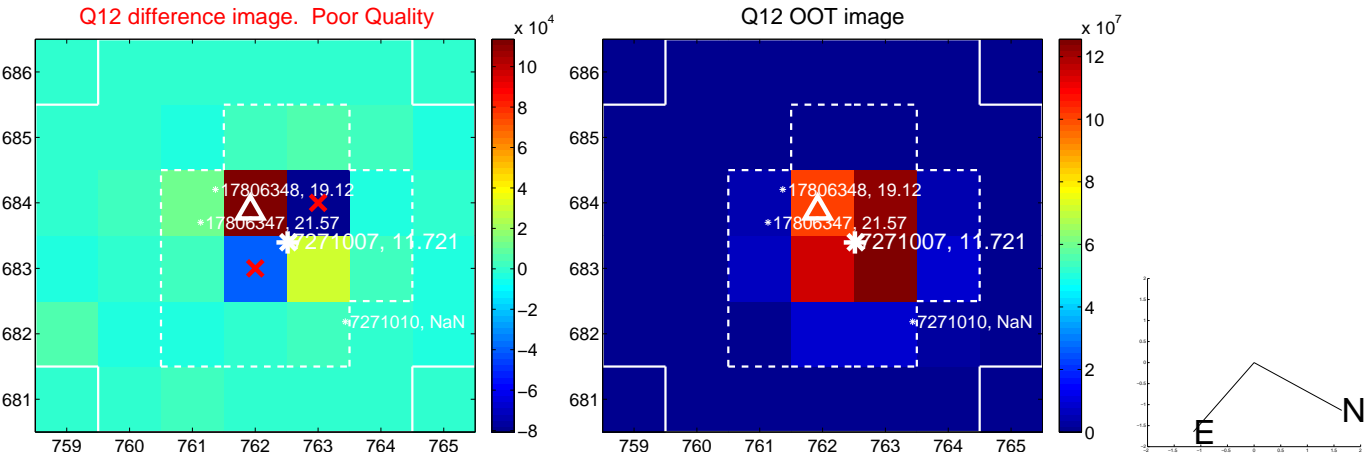
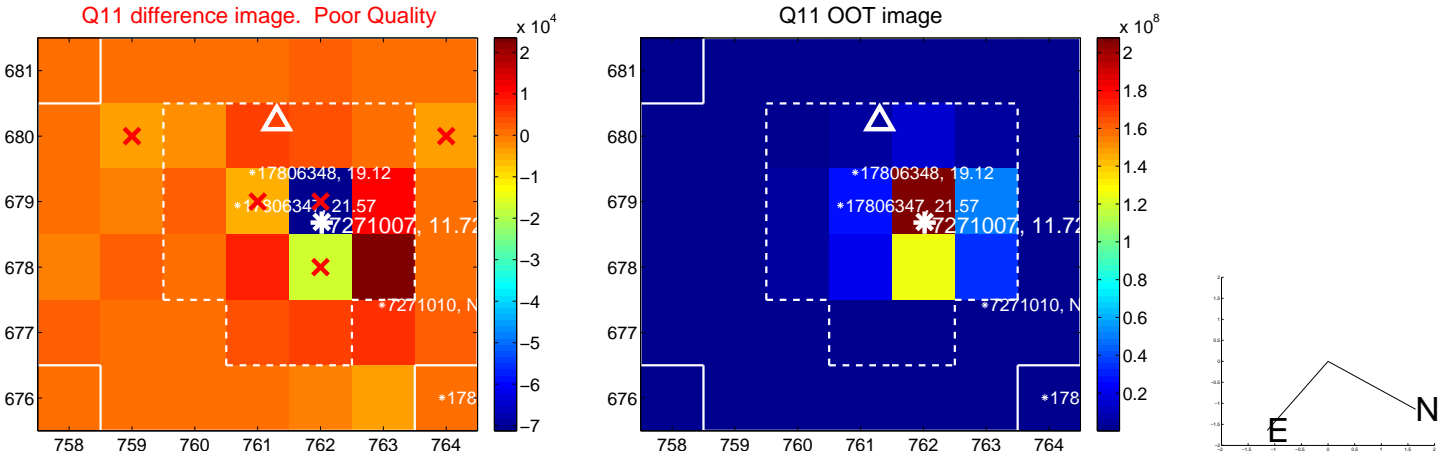
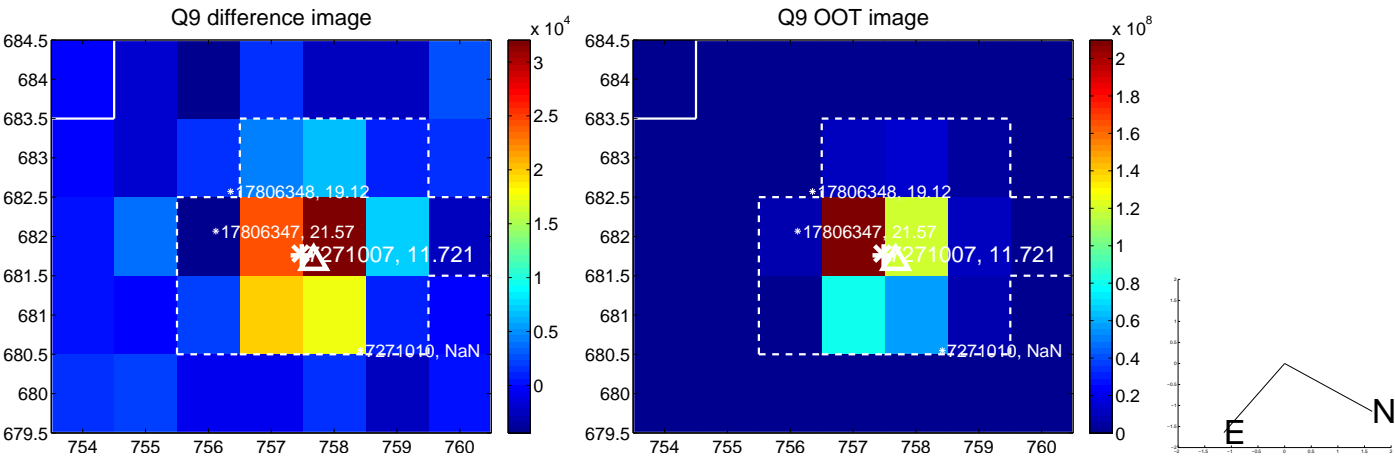
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



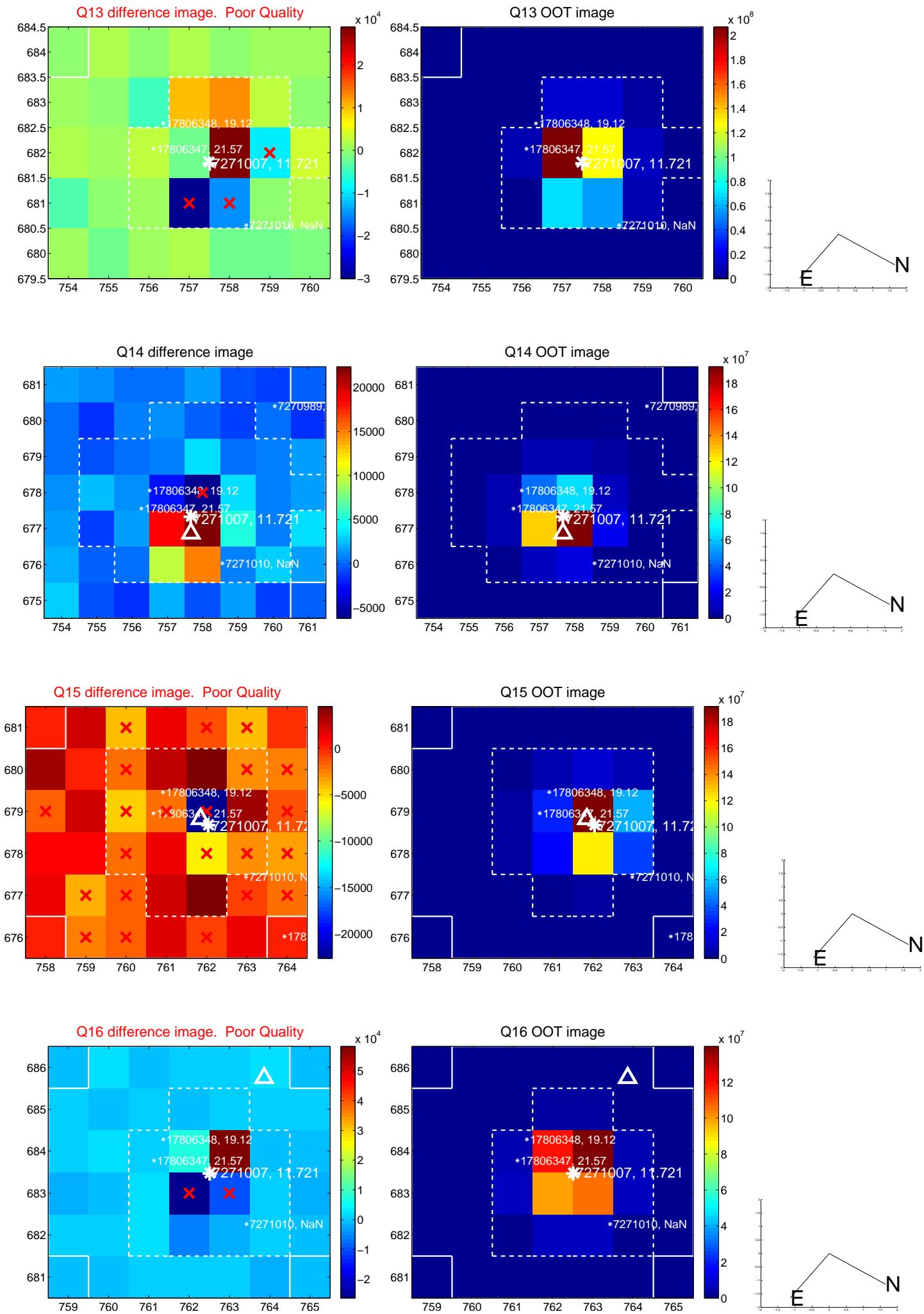
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



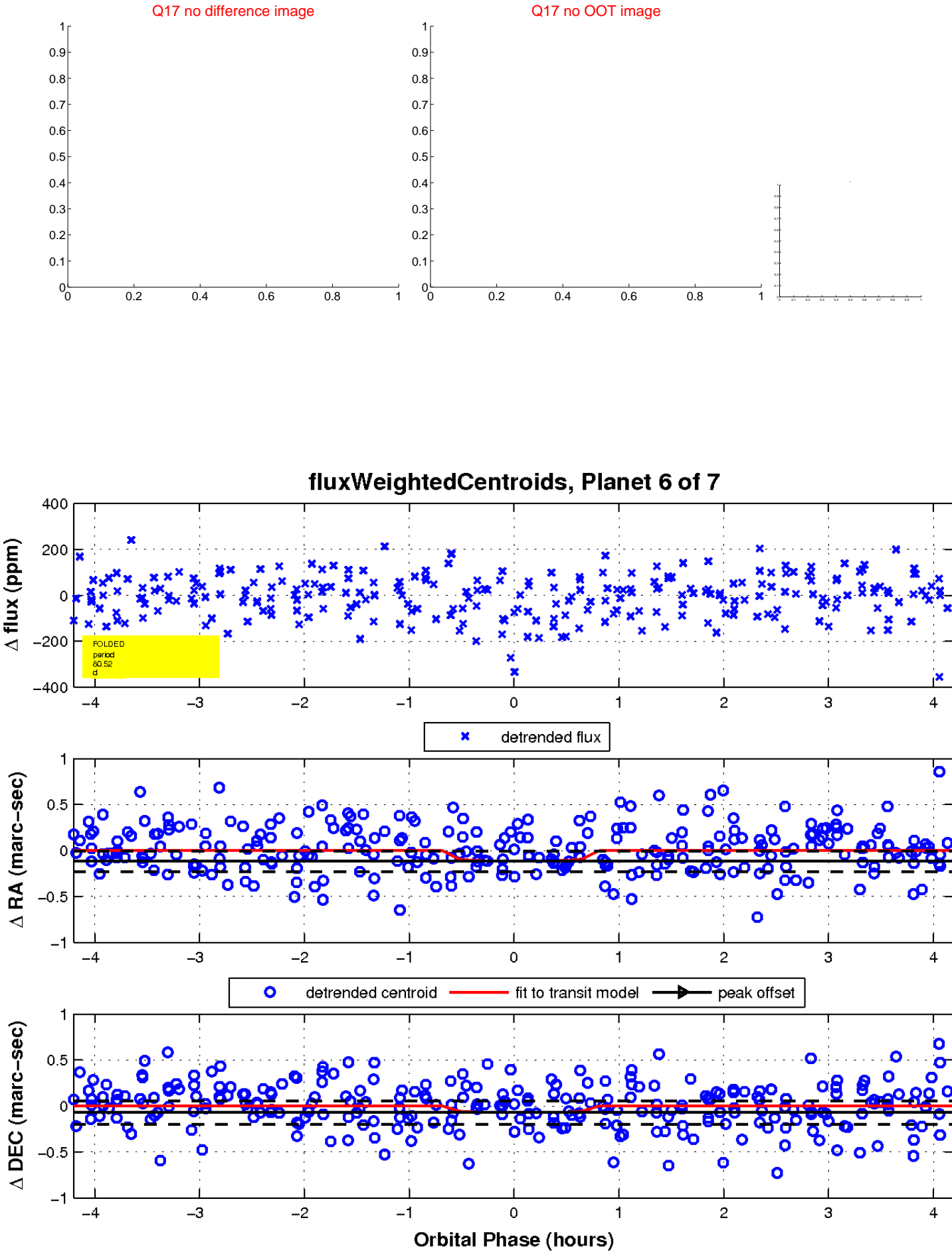
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

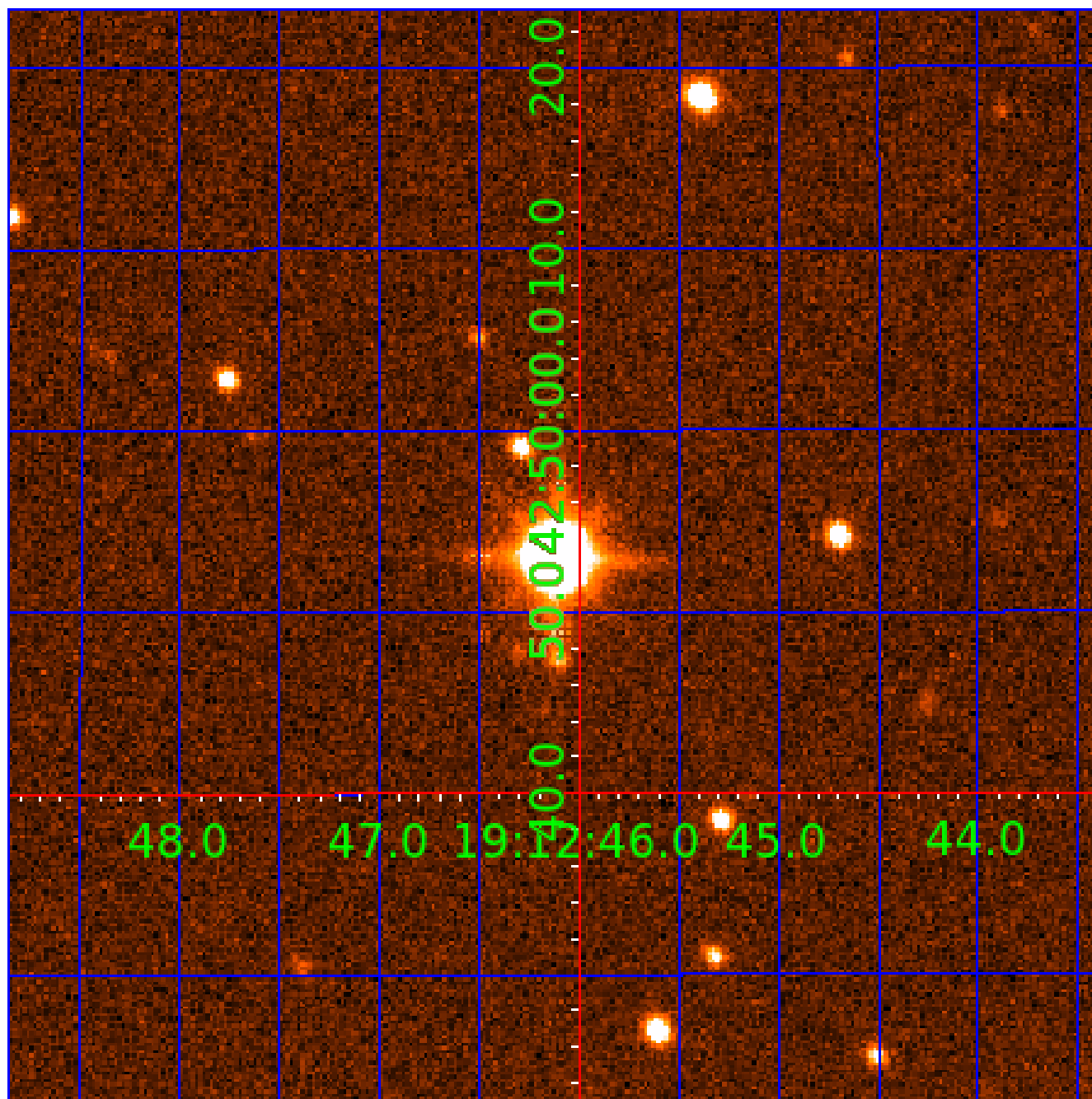


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007271007

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})
007271007-01	OBS	No	4.959954	132.877992	53.1	10.218	10.4	11.9	1.72	6723	2.10	1384.72
007271007-02	OBS	No	2.480220	133.080790	26.8	11.708	10.8	8.8	1.72	6723	1.04	3488.81
007271007-03	OBS	No	419.190865	136.396007	177.2	10.293	10.6	7.9	1.72	6723	2.73	3.73
007271007-04	OBS	No	53.476467	153.854254	109.4	4.987	8.2	9.2	1.72	6723	2.00	58.14
007271007-05	OBS	No	147.868996	178.662354	167.6	4.511	8.6	7.3	1.72	6723	2.59	14.98
007271007-06	OBS	No	80.515611	132.455203	171.9	1.401	7.9	7.7	1.72	6723	2.45	33.69
007271007-07	OBS	No	109.681475	145.344514	91.8	4.500	7.4	-1.0	1.72	6723	1.66	22.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007271007-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV
007271007-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD
007271007-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007271007-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007271007-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007271007-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT
007271007-07	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—CENT_NOFITS

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

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

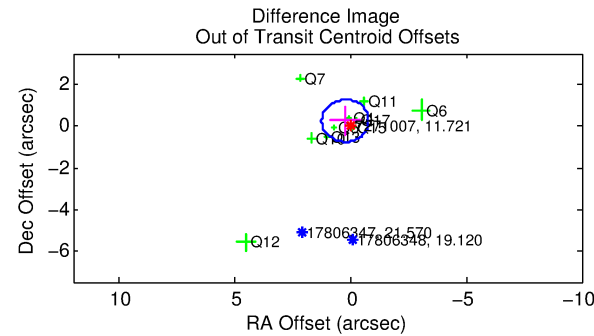
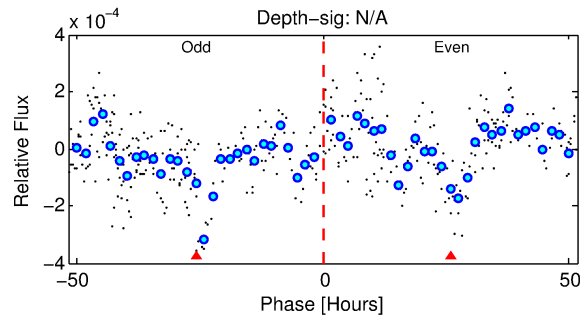
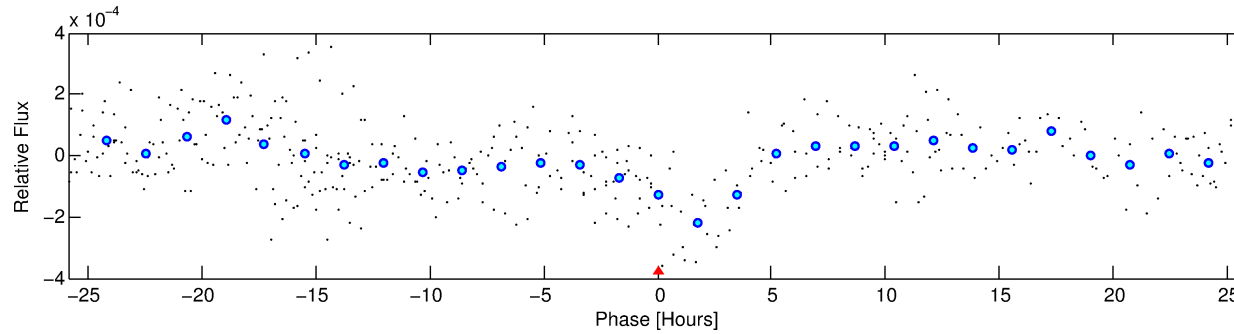
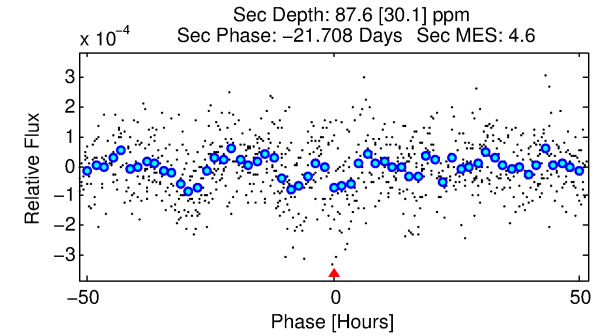
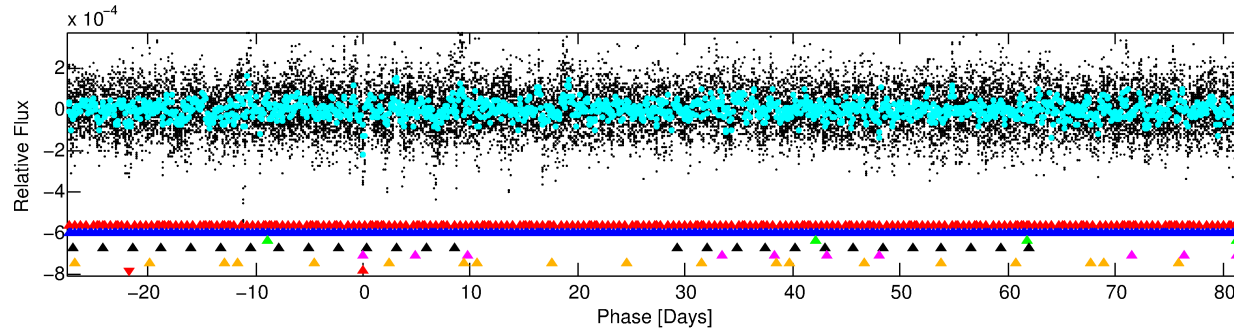
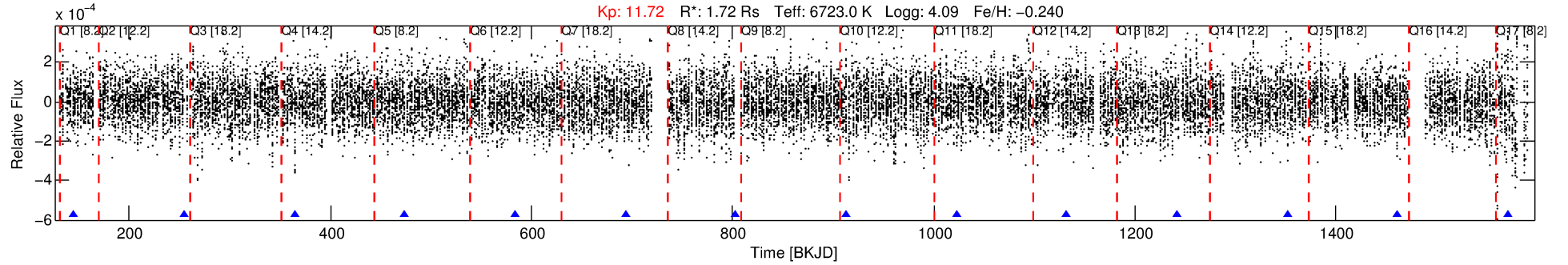
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007271007-07

No Significant Match Found

DV One-Page Summary

KIC: 7271007 Candidate: 7 of 7 Period: 109.681 d



TPS TCE Results:

Period = 109.68147 d
Epoch = 145.3445 BKJD

DV fit results are unavailable

DV Diagnostic Results:

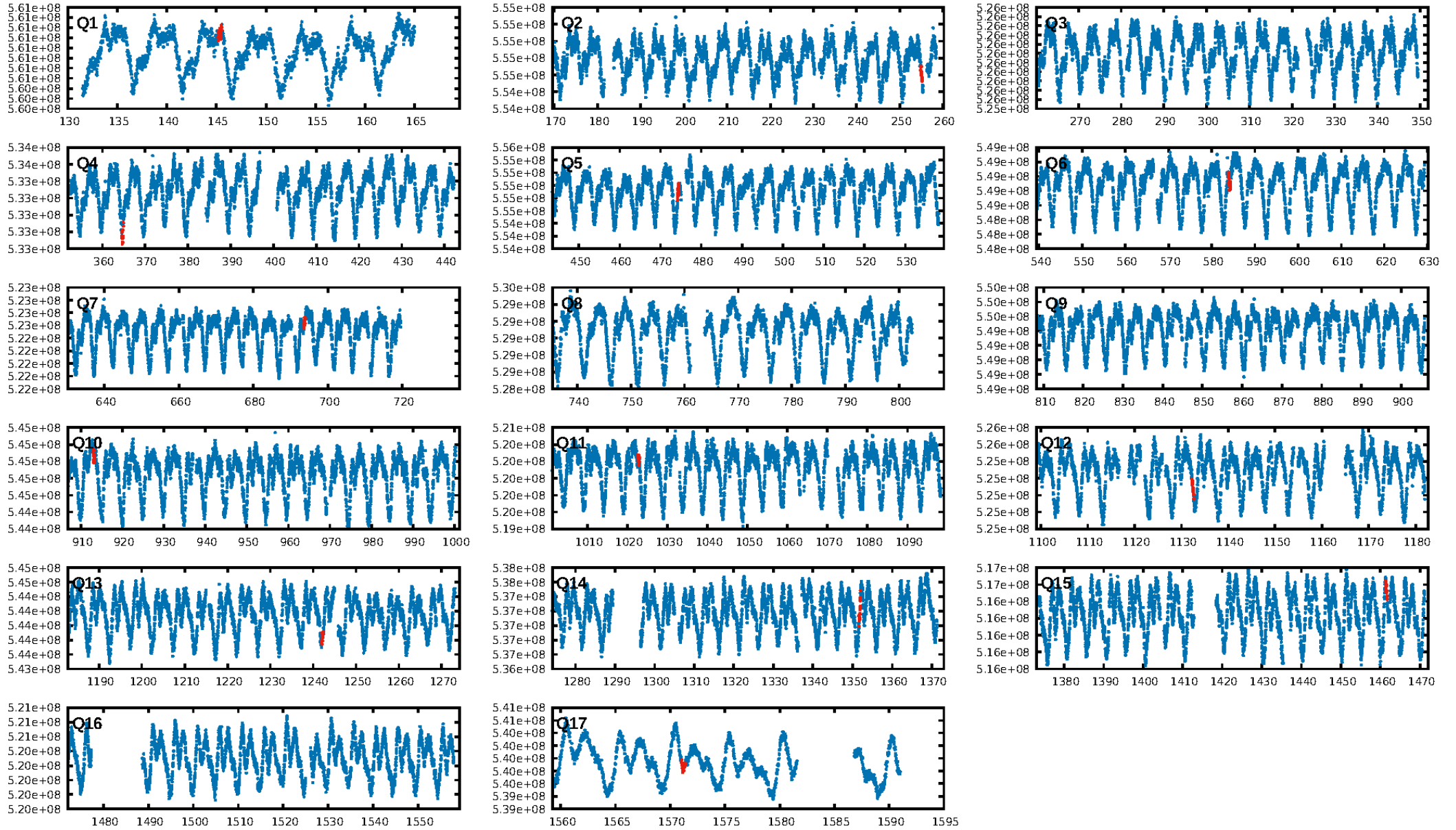
ShortPeriod-sig: 100.0% [148.51 σ]
LongPeriod-sig: 100.0% [143.85 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 7.485

Centroid-sig: 5.1%
Centroid-so: 0.383 arcsec [1.29 σ]
OotOffset-rm: 0.355 arcsec [1.05 σ]
KicOffset-rm: 0.406 arcsec [1.14 σ]
OotOffset-st: 2/3/2/3 [10]
KicOffset-st: 2/3/2/3 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 0.08 [1/12]

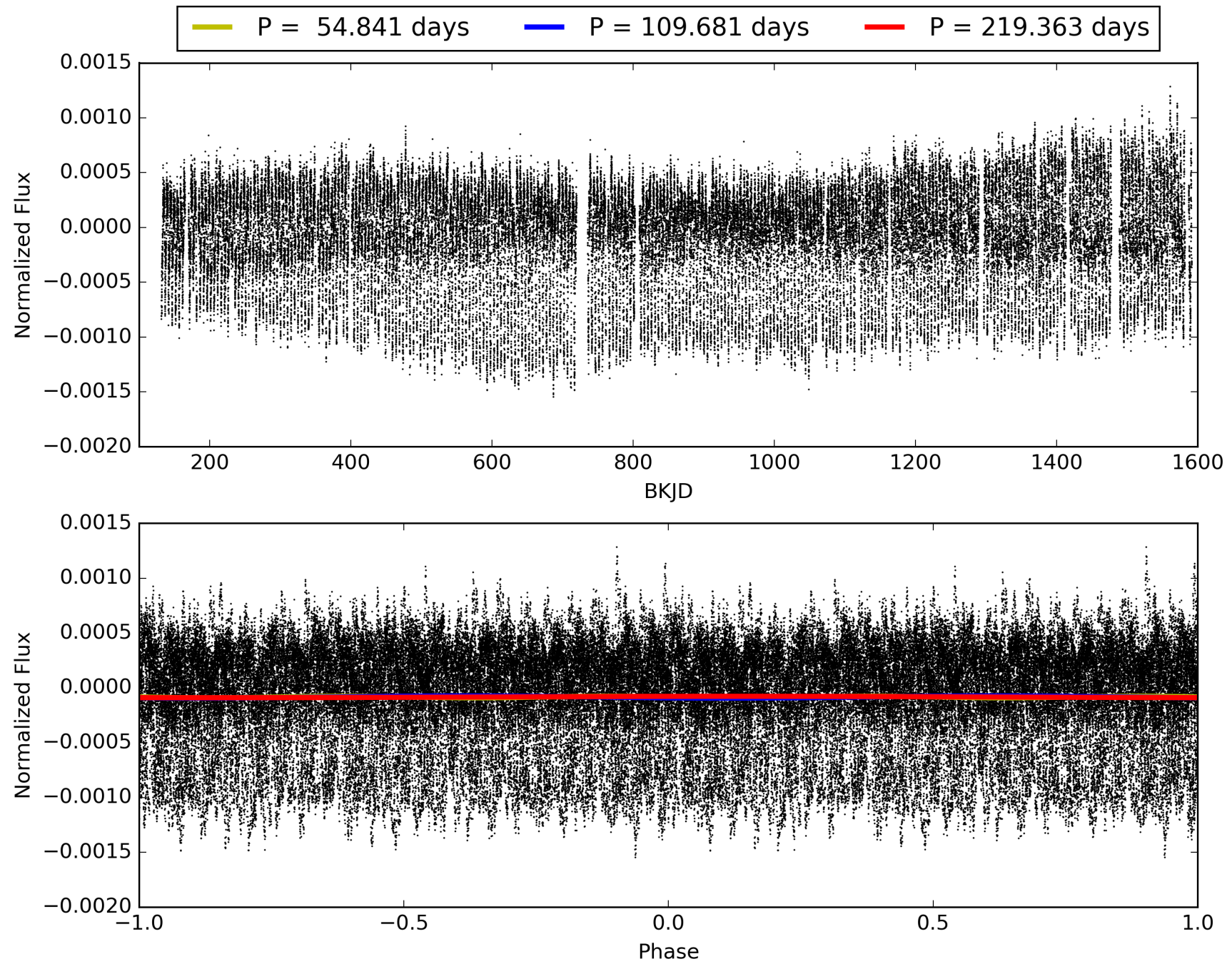
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:42:24 Z

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

TCE 007271007-07, PDC Light Curves

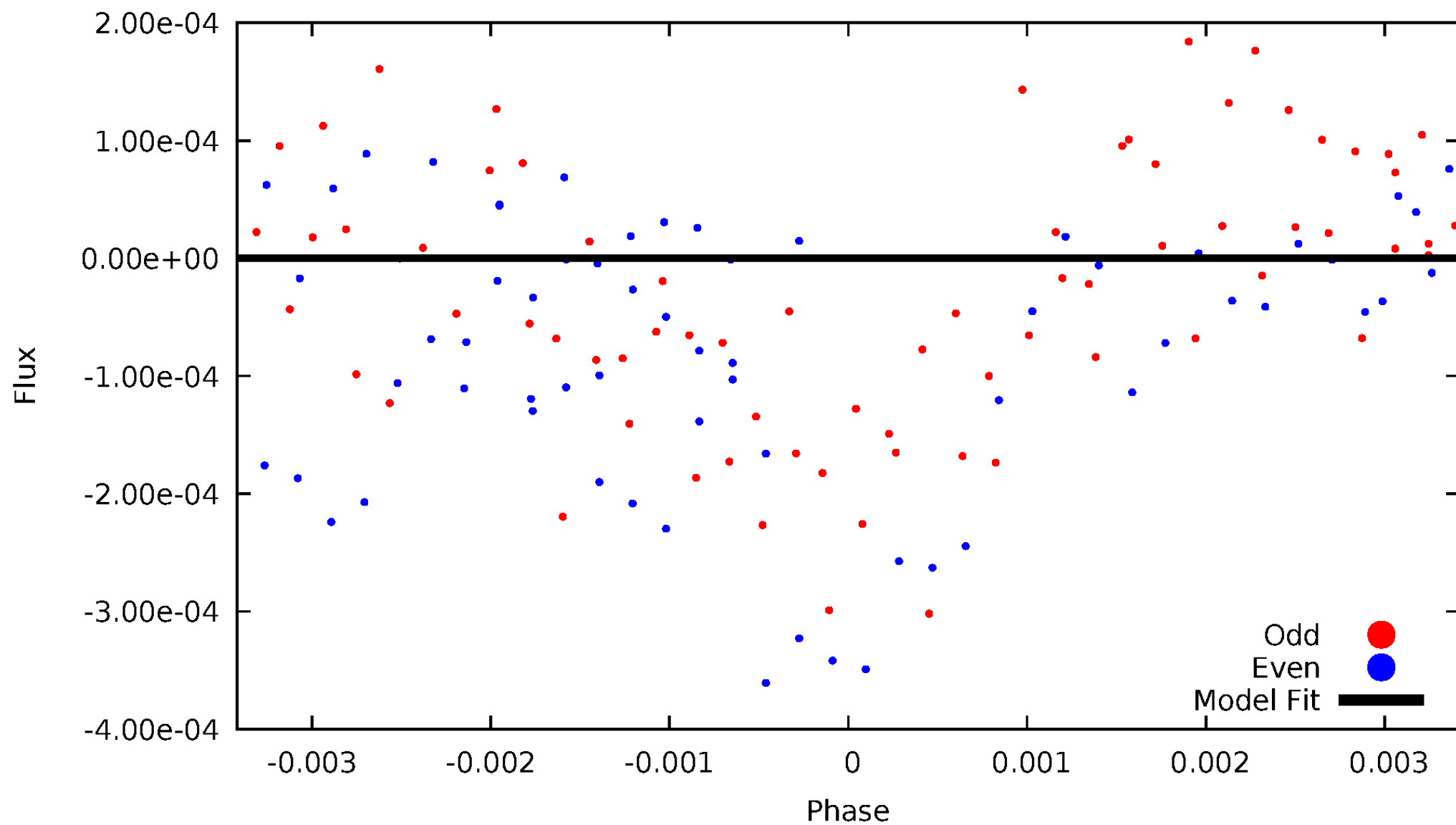


TCE 007271007-07



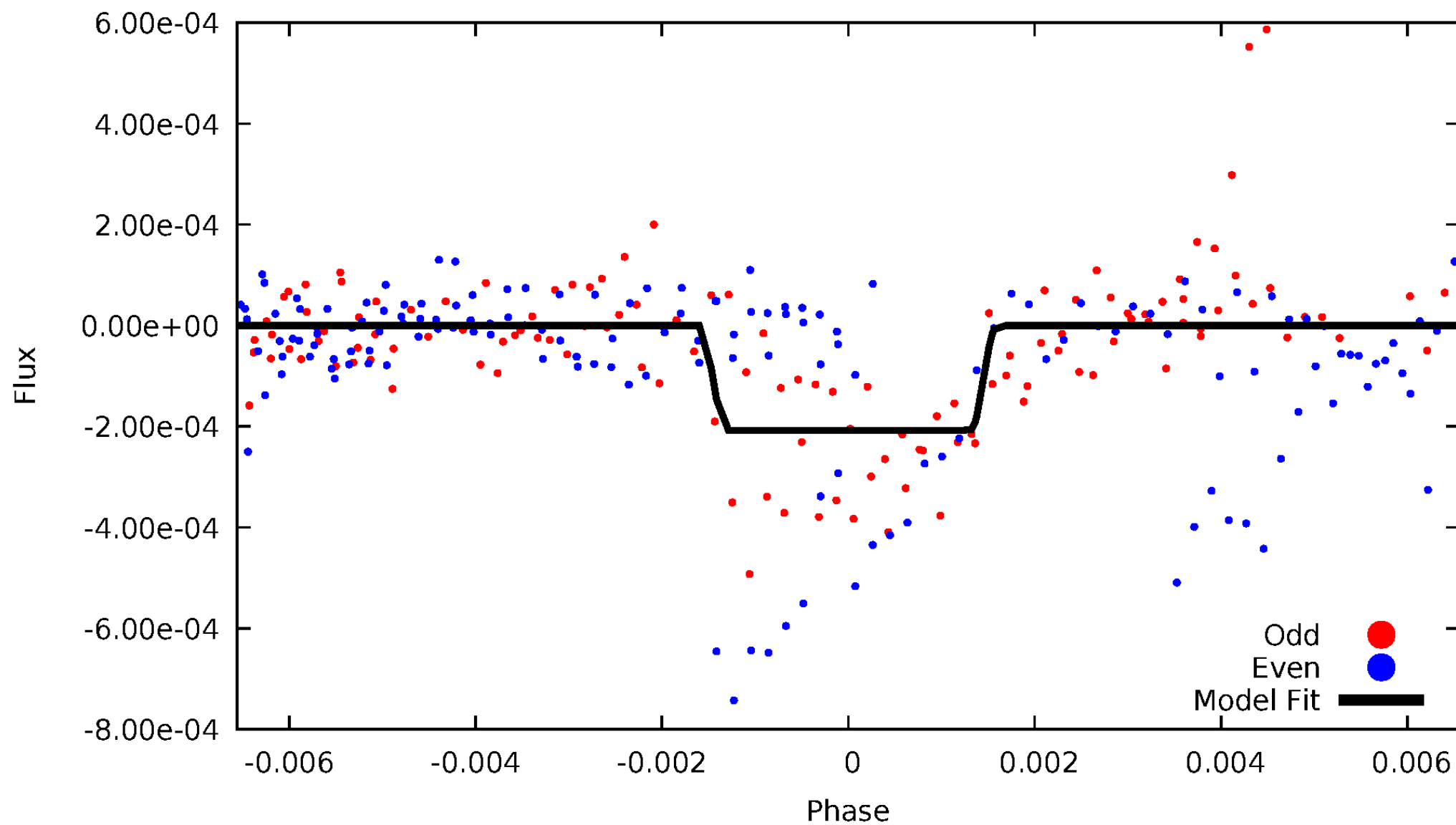
DV Odd/Even

TCE 007271007-07

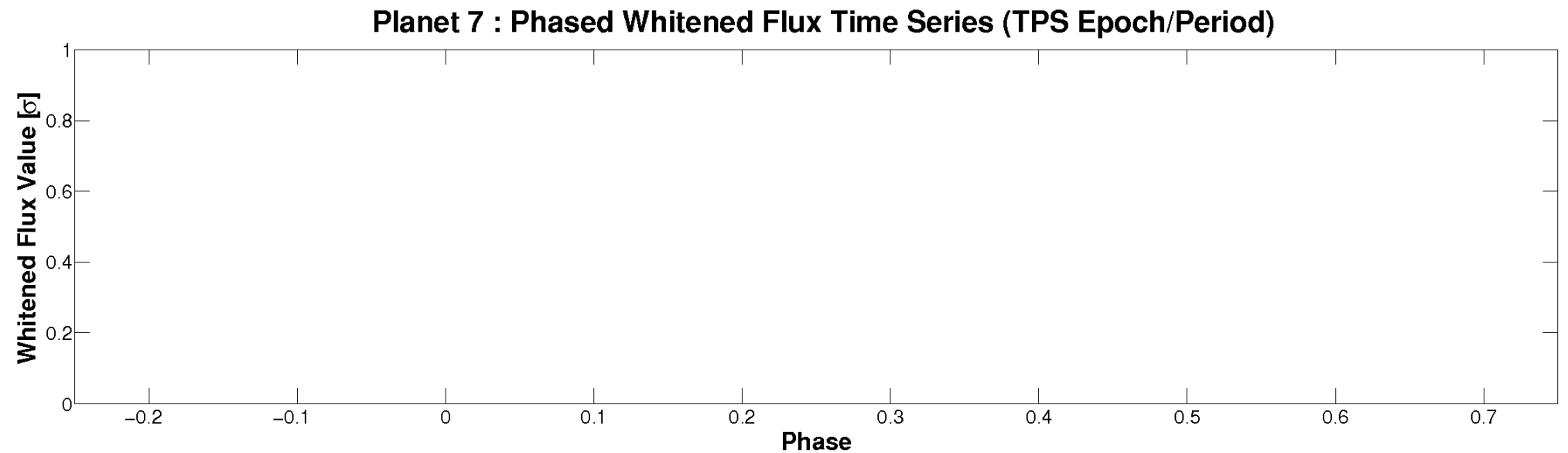
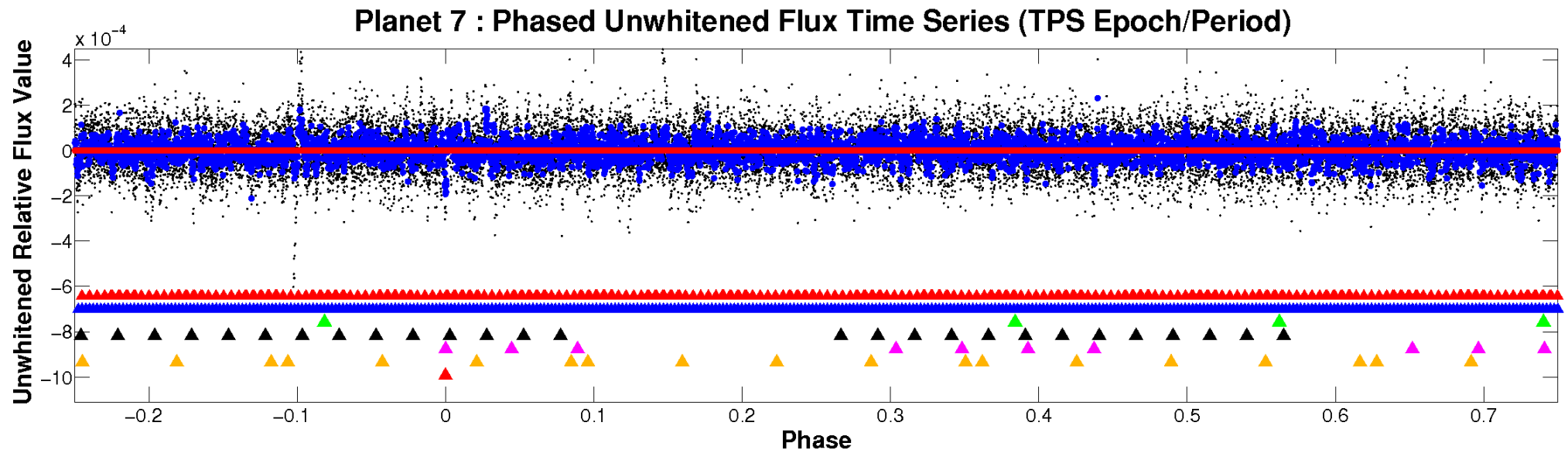


ALT Odd/Even

TCE 007271007-07

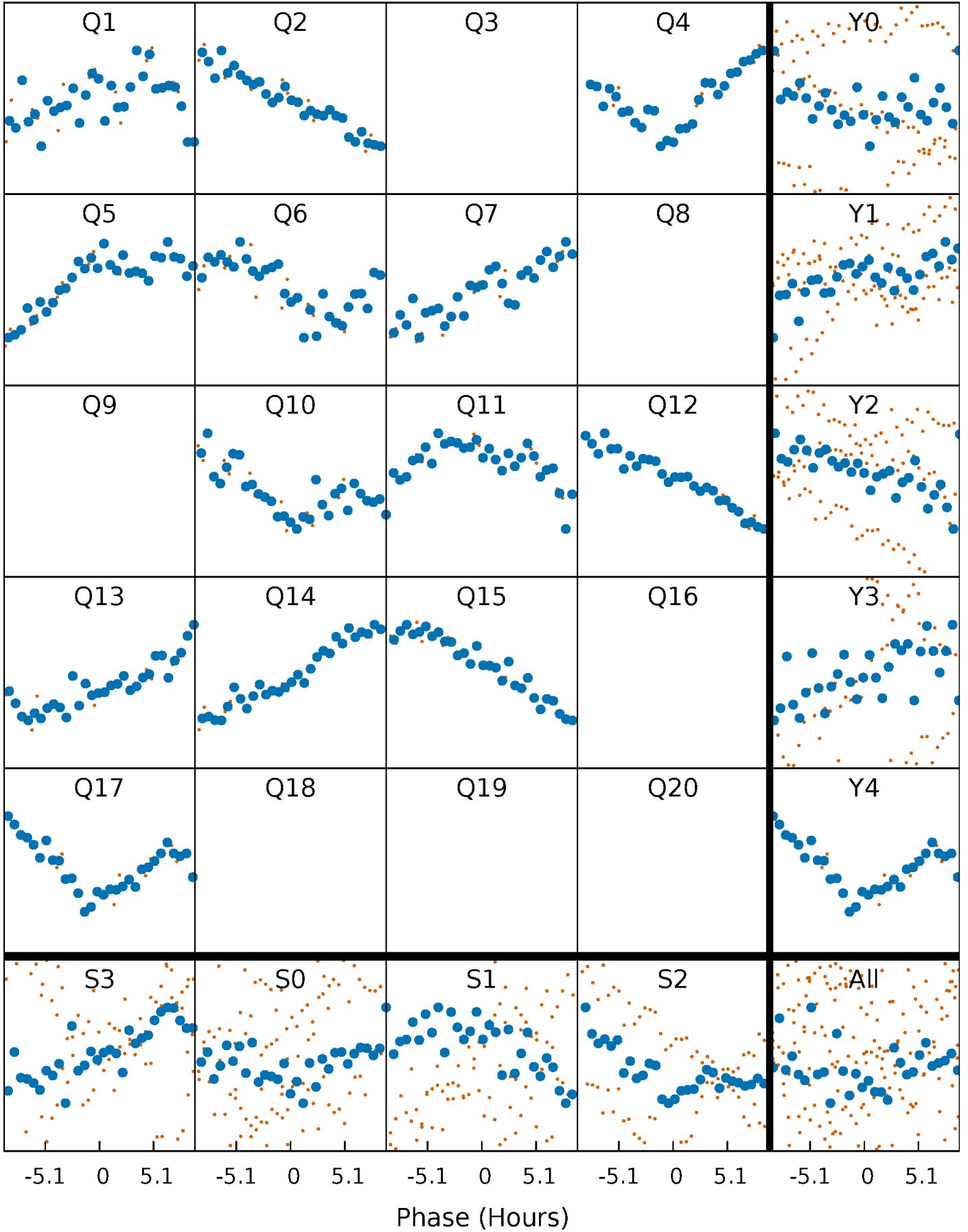


Non-Whitened Vs. Whitened Light Curve



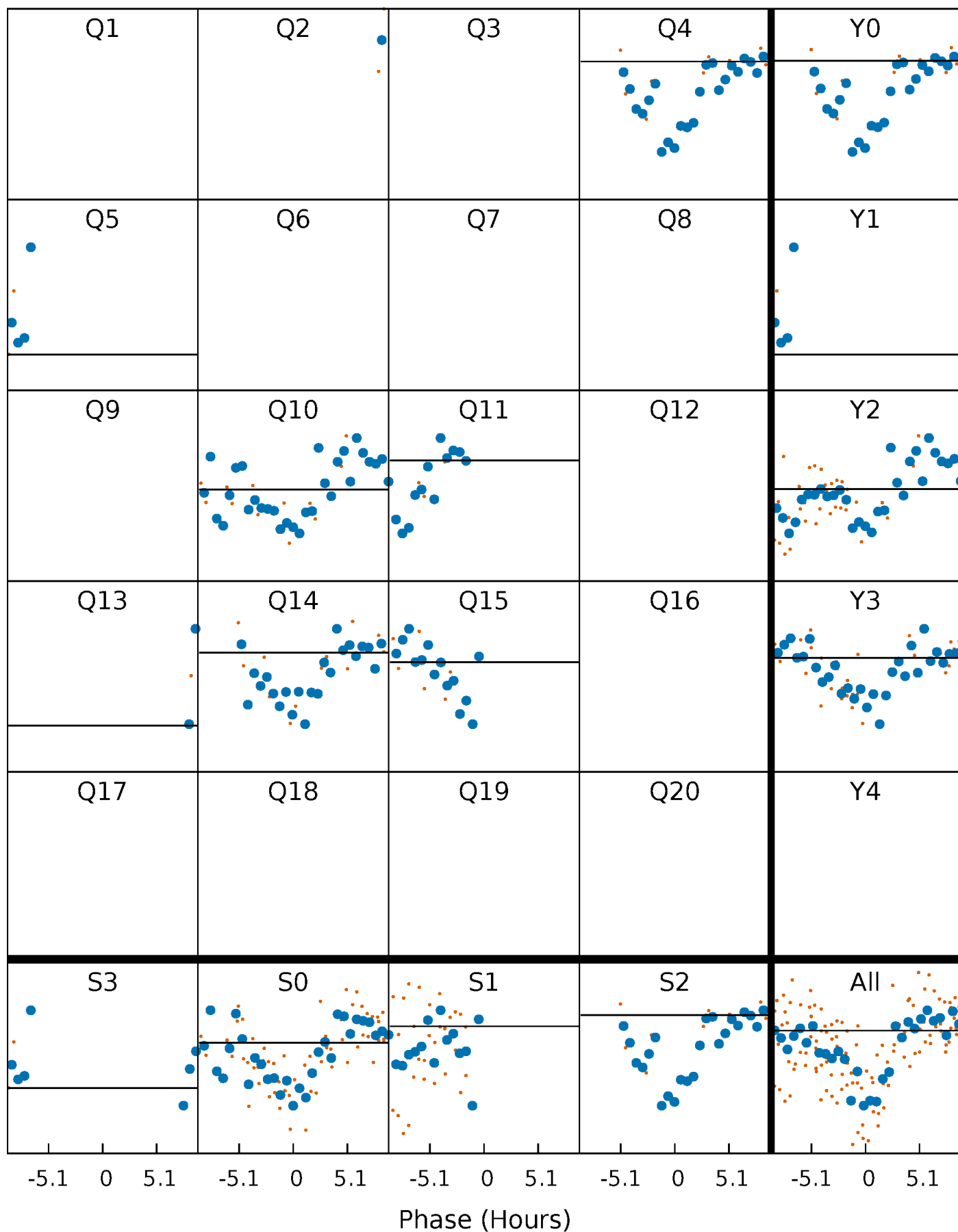
PDC Quarter-Phased Transit Curves

TCE 007271007-07 $P=109.681475$ Days $T_0=145.344514$ (BKJD)



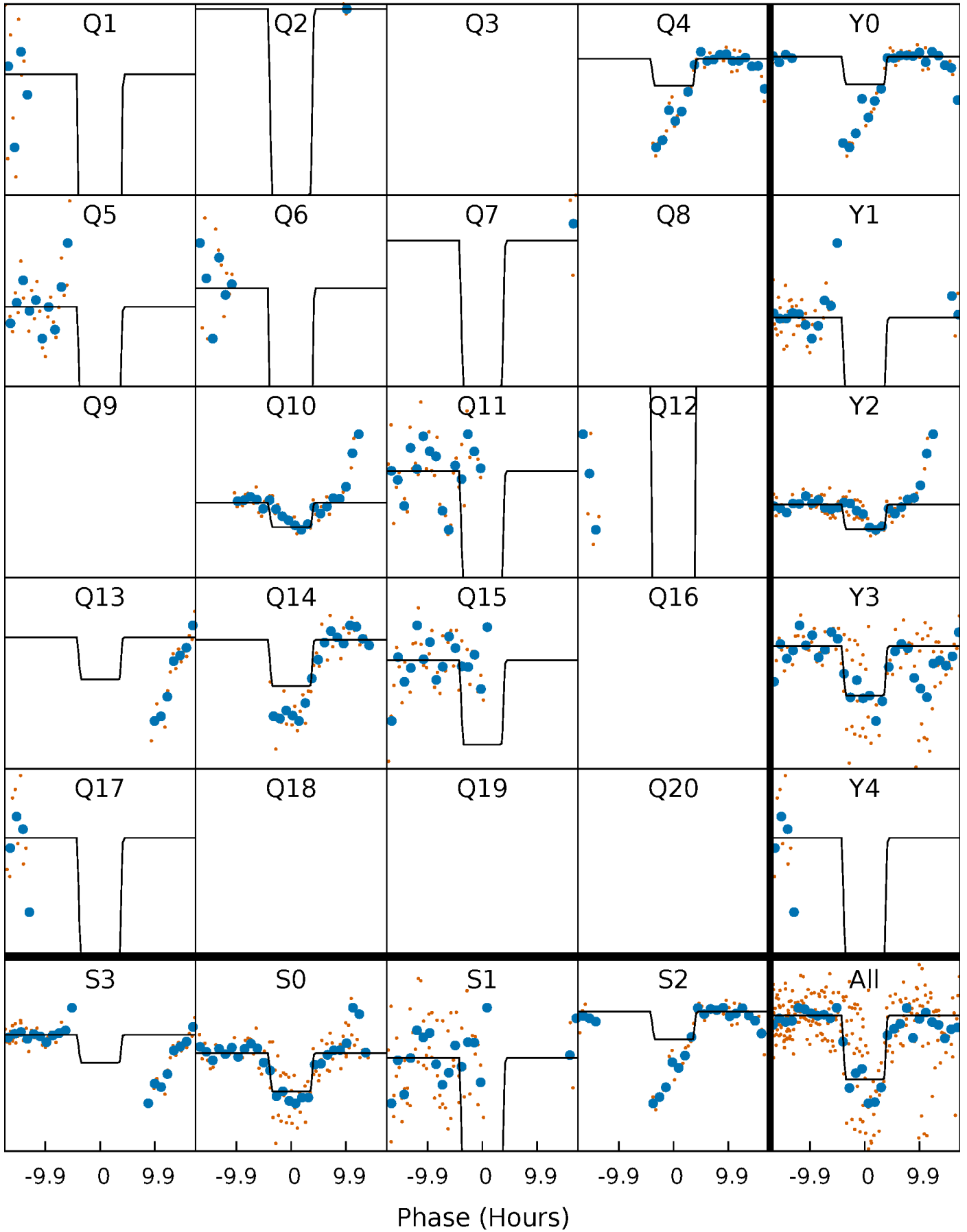
DV Quarter-Phased Transit Curves

TCE 007271007-07 $P=109.681475$ Days $T_0=145.344514$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

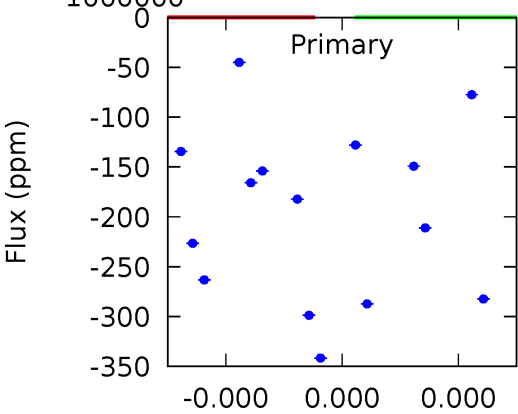
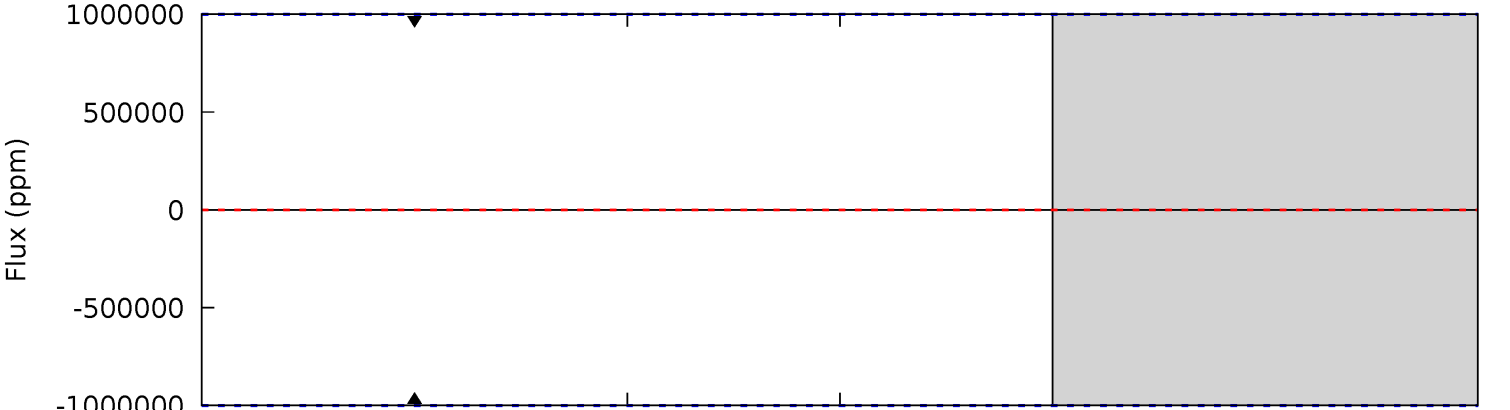
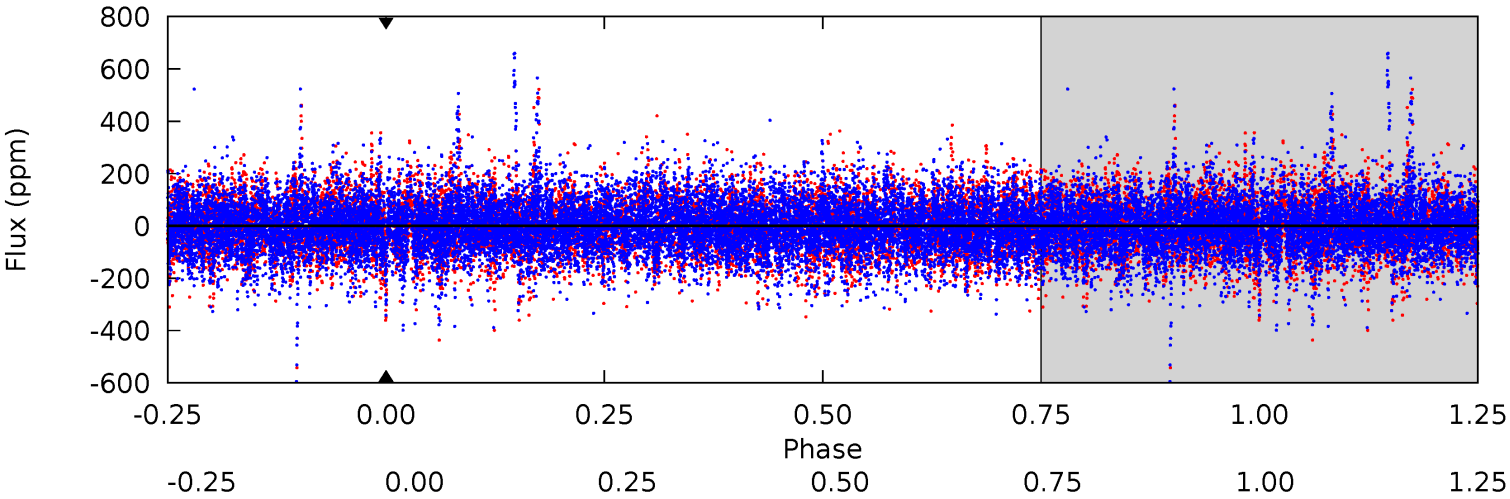
TCE 007271007-07 $P=109.681475$ Days $T_0=145.285675$ (BKJD)



DV Model-Shift Uniqueness Test

007271007-07, P = 109.681475 Days, E = 35.663039 Days

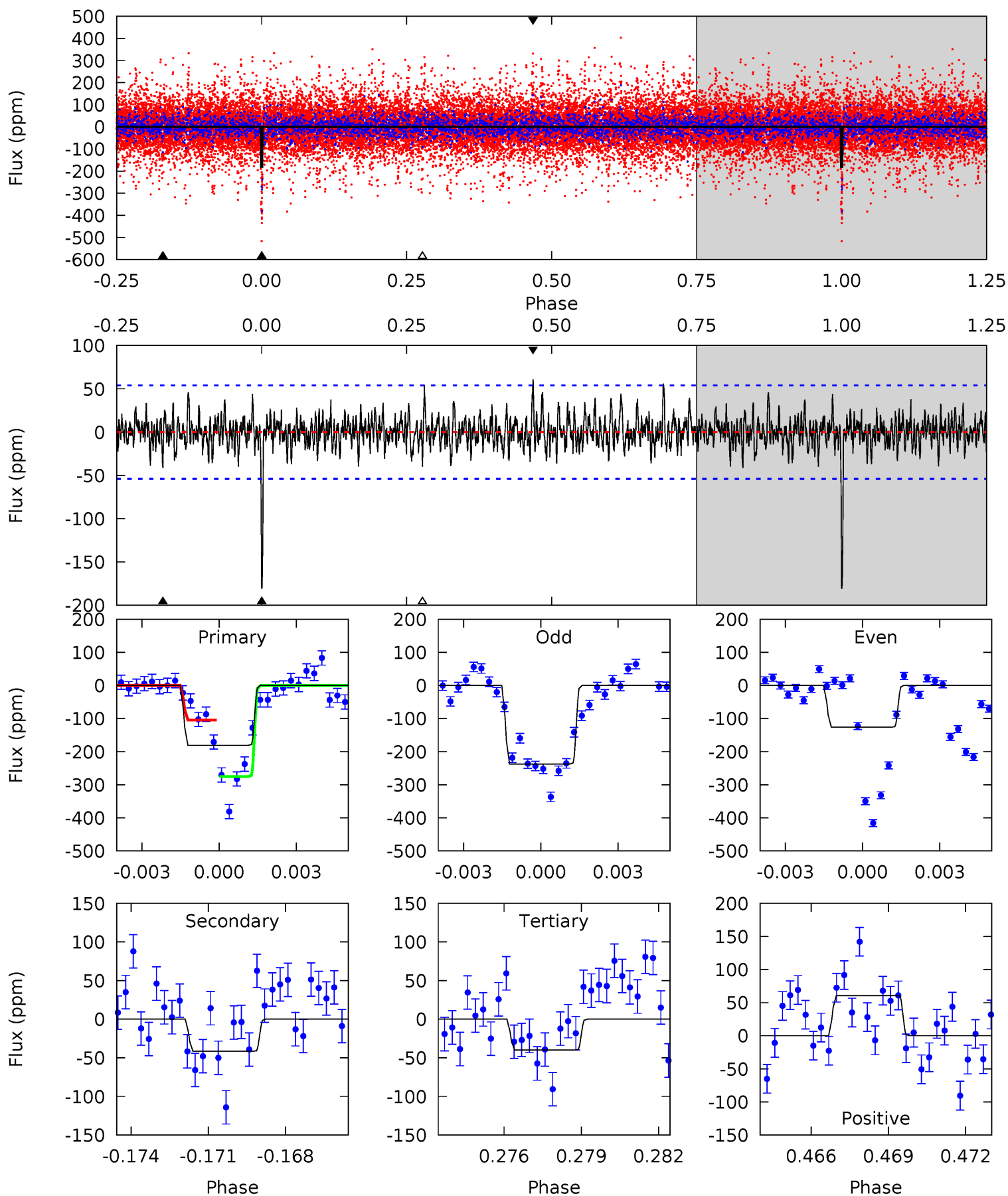
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007271007-07, $P = 109.681475$ Days, $E = 35.604200$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	4.02	3.87	5.89	5.24	2.95	1.38	13.7	11.7	0.15	-1.86	5.11	1.32	0.25	8.34



Stellar Parameters For KIC 007271007

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6723^{+189}_{-260}	$4.089^{+0.246}_{-0.164}$	$-0.240^{+0.250}_{-0.300}$	$1.719^{+0.503}_{-0.554}$	$1.327^{+0.183}_{-0.252}$	$0.368^{+0.532}_{-0.163}$
	+3%/-4%	+6%/-4%	+104%/-125%	+29%/-32%	+14%/-19%	+144%/-44%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007271007-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$12.44^{+14.76}_{-8.66}$	770^{+52}_{-65}	-4514^{+48983}_{-23594}	$-711.162^{+221262.860}_{-124829.039}$
Alt.	-41 ± 10	$13.74^{+15.09}_{-9.77}$	766^{+60}_{-64}	2720^{+1179}_{-449}	29^{+296}_{-22}

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

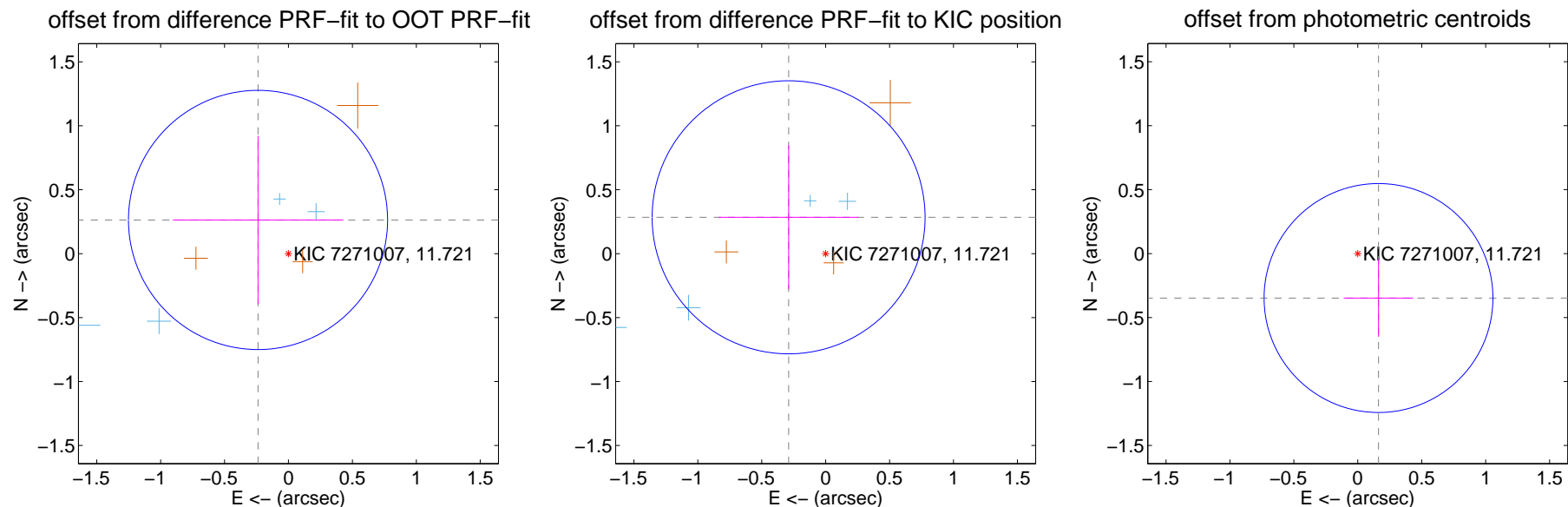
DV Centroid Data

Supplemental centroid analysis for 007271007-07. **Kepler magnitude: 11.72**. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

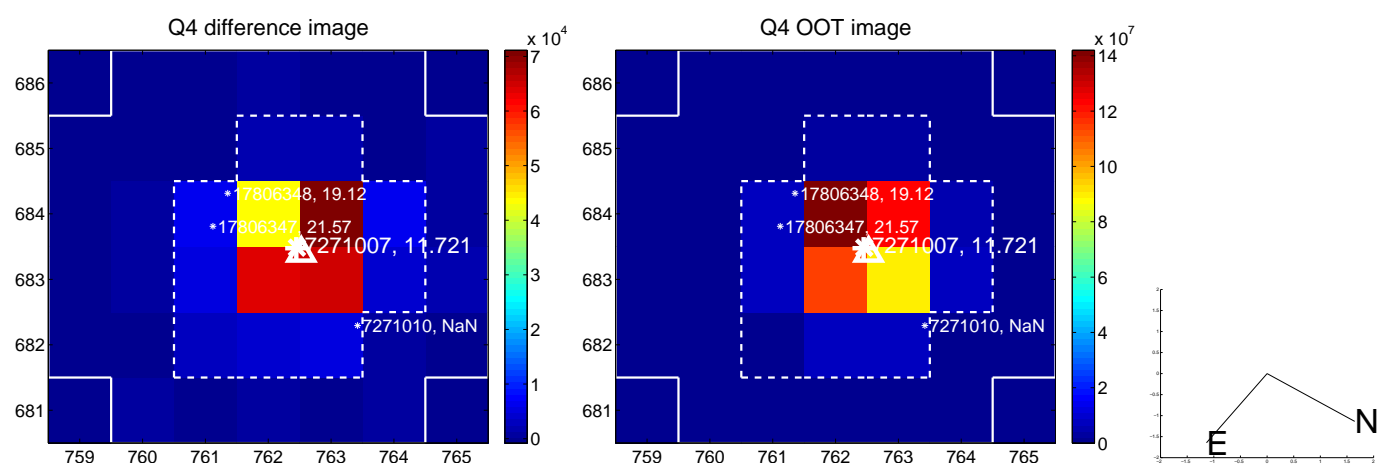
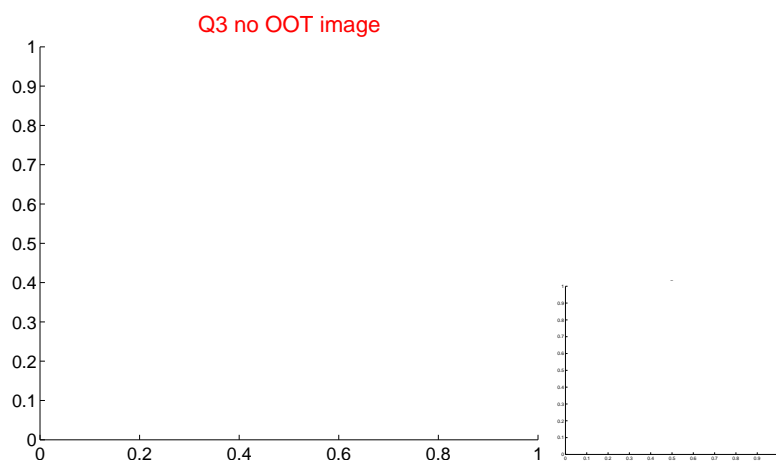
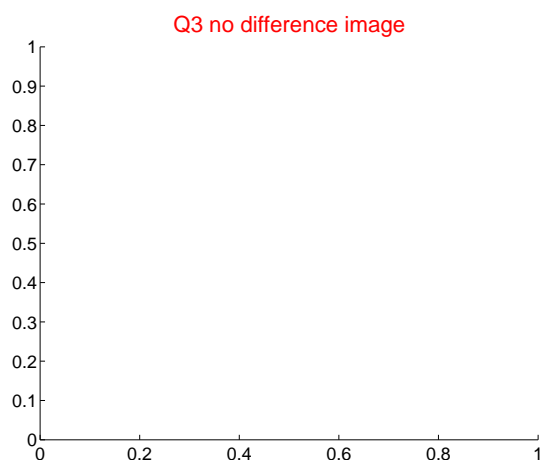
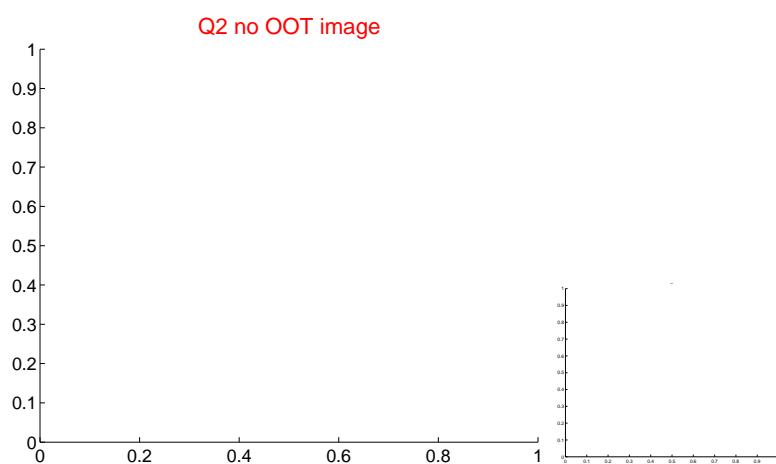
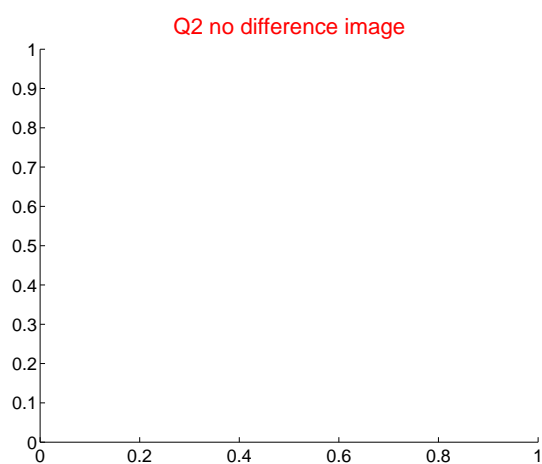
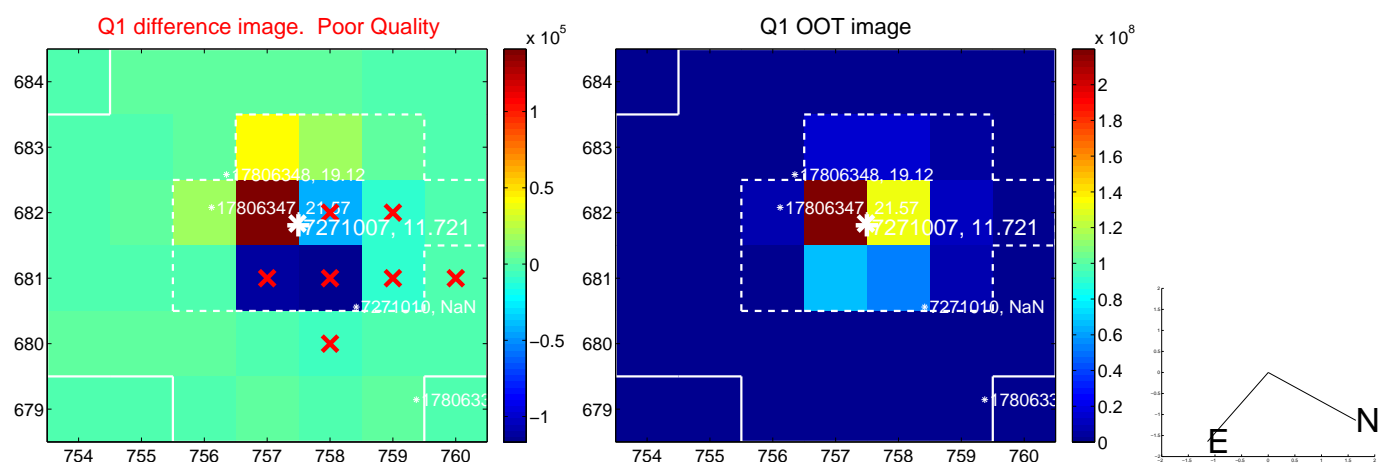
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.355 ± 0.338	1.05	0.238 ± 0.667	0.264 ± 0.658
PRF-fit source offset from KIC position	0.406 ± 0.356	1.14	0.290 ± 0.546	0.284 ± 0.563
photometric centroid source offset	0.38 ± 0.30	1.29	-0.16 ± 0.27	-0.35 ± 0.30

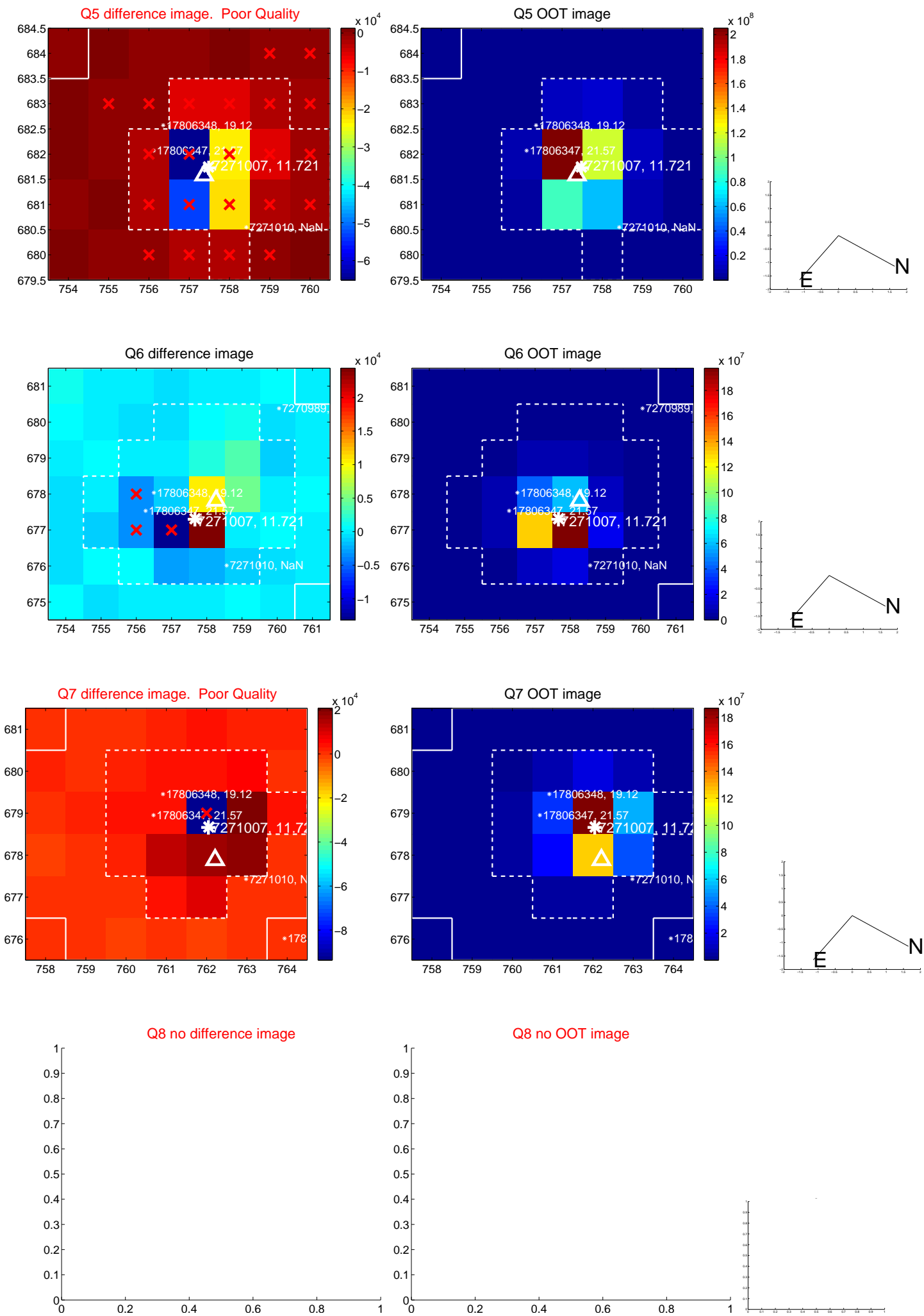


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

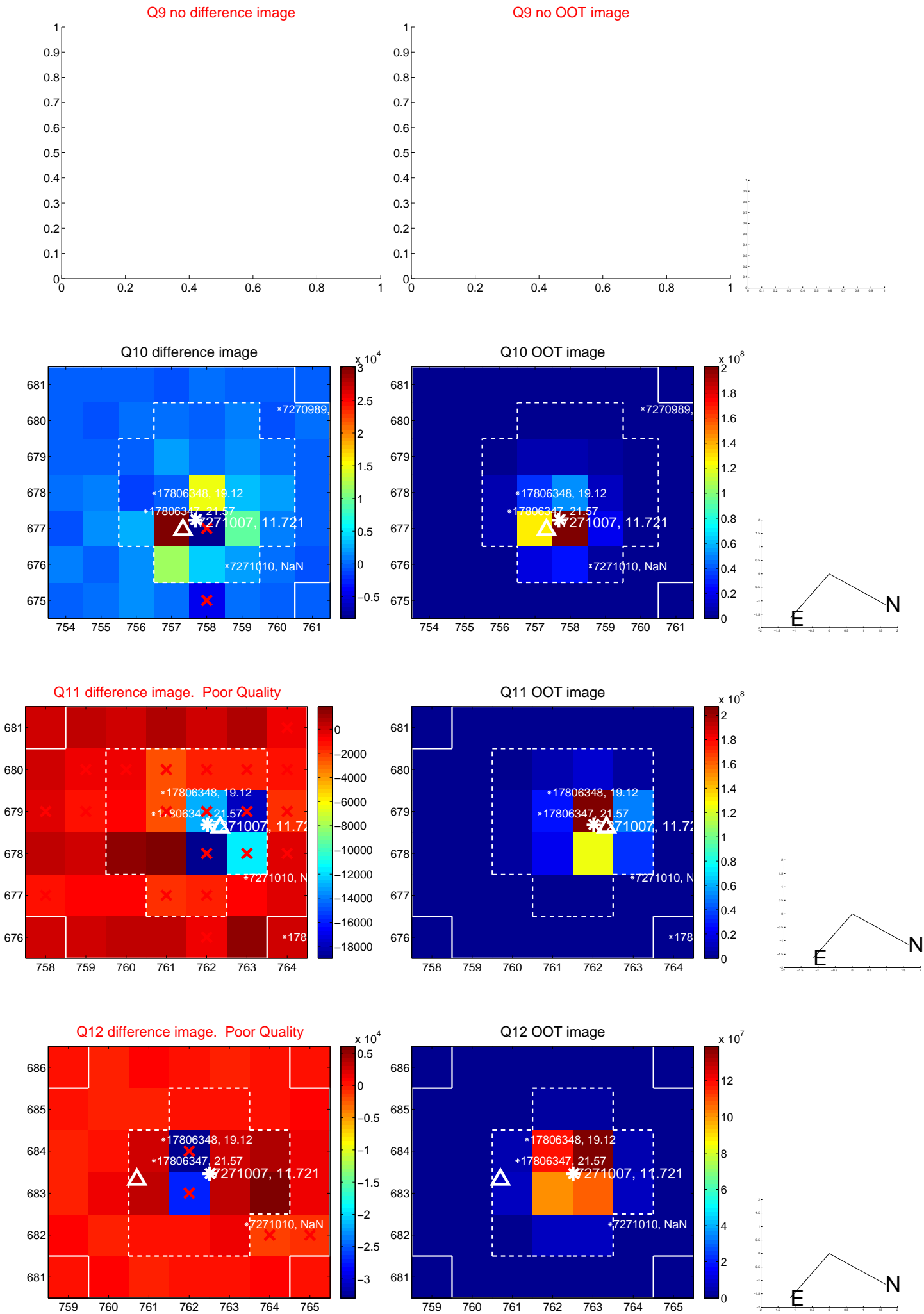
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



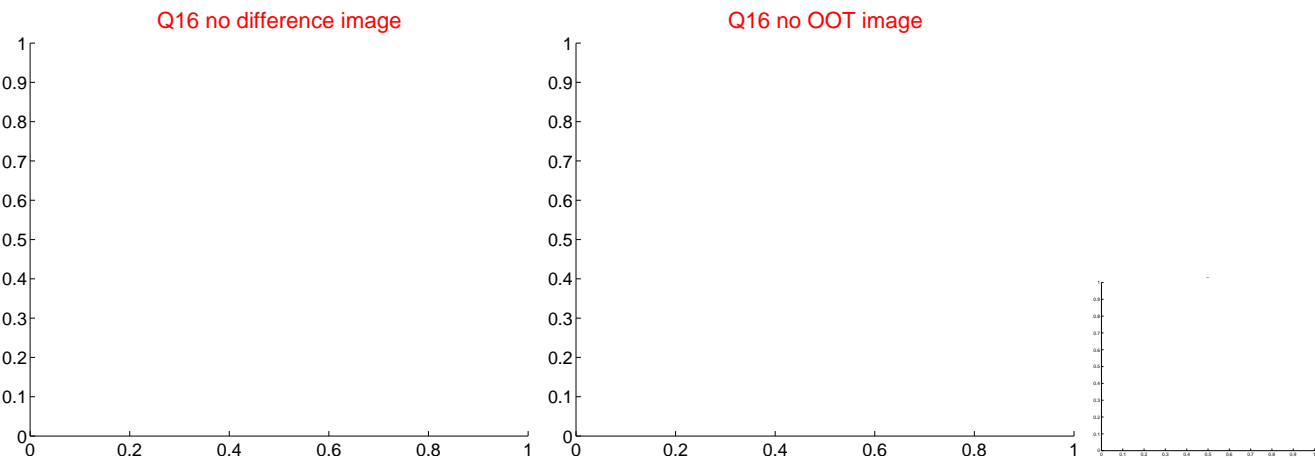
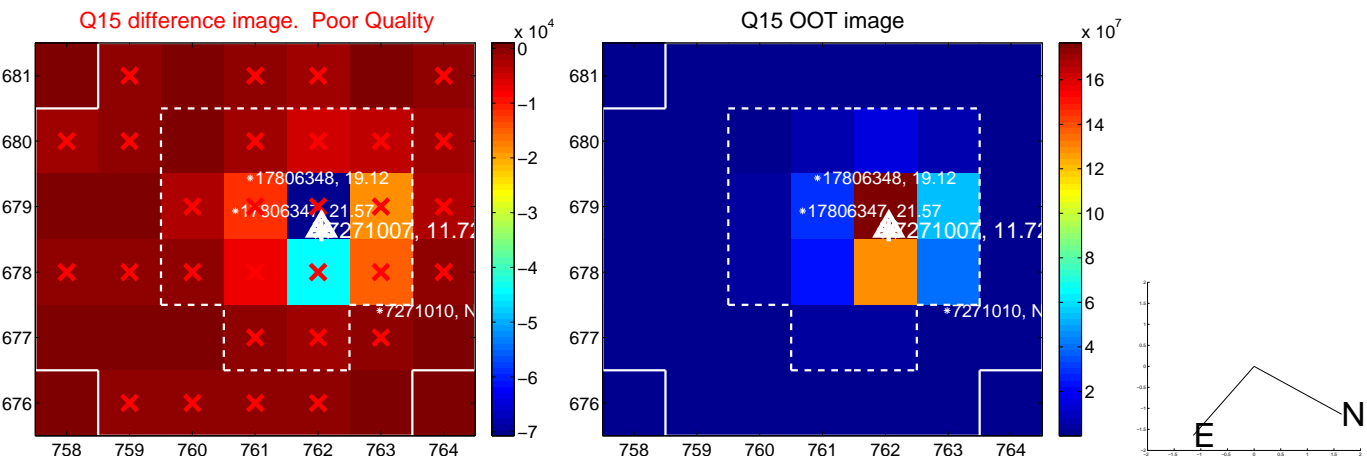
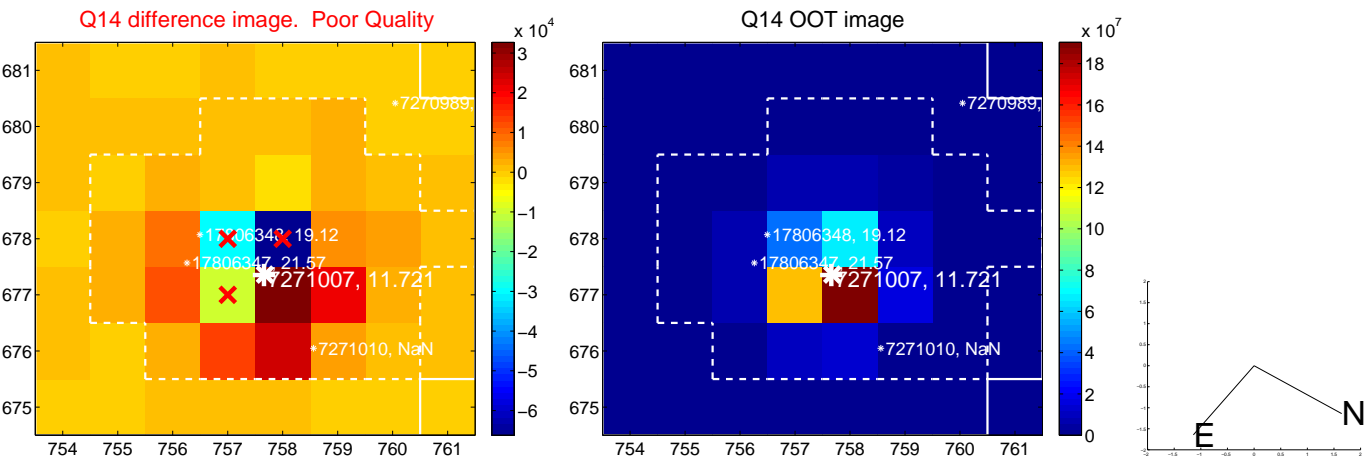
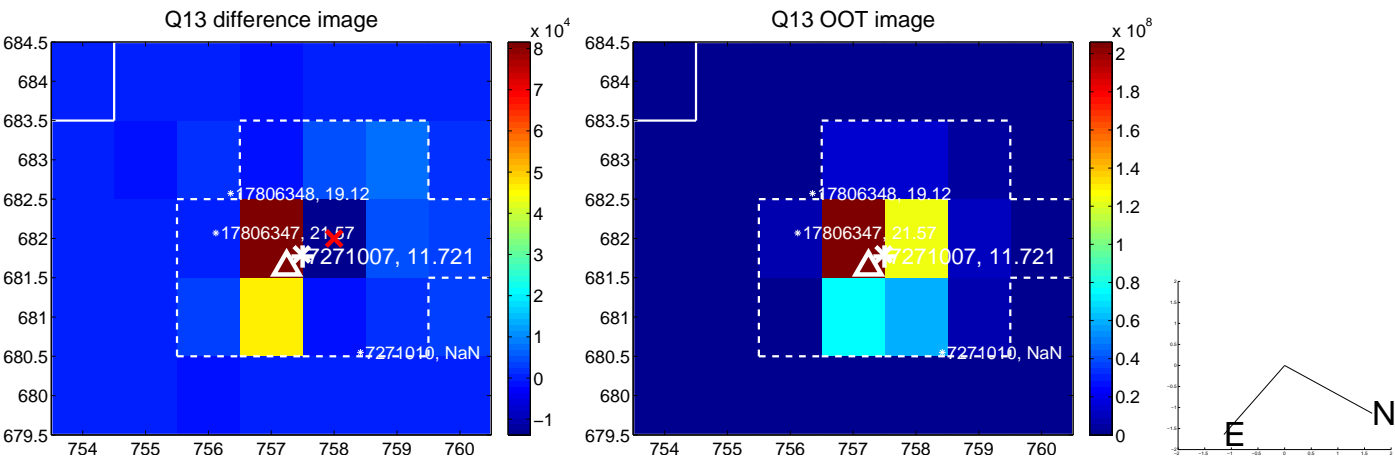
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



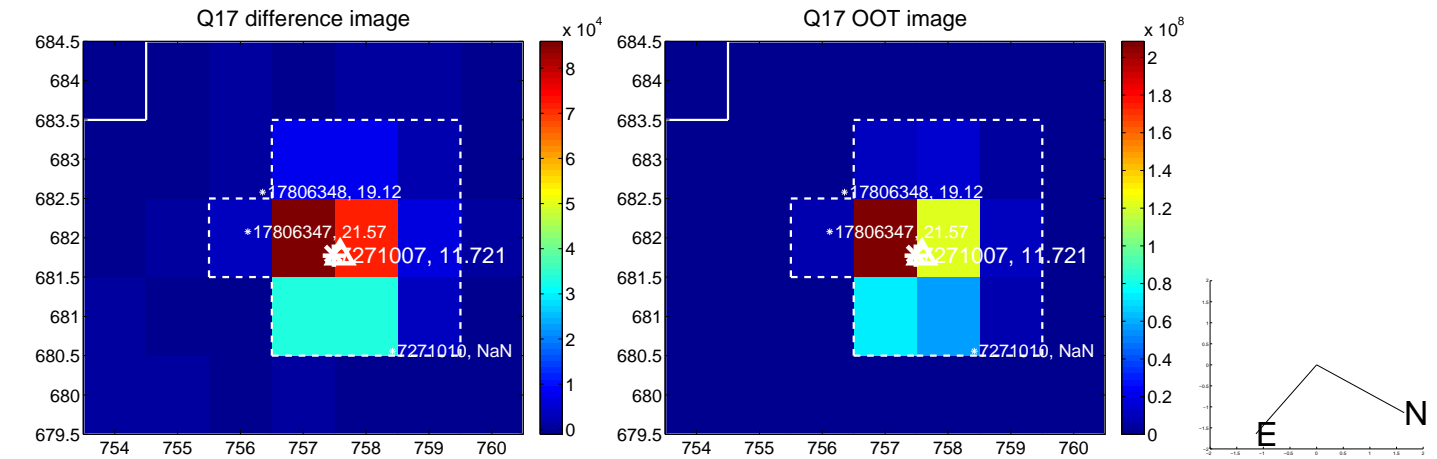
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



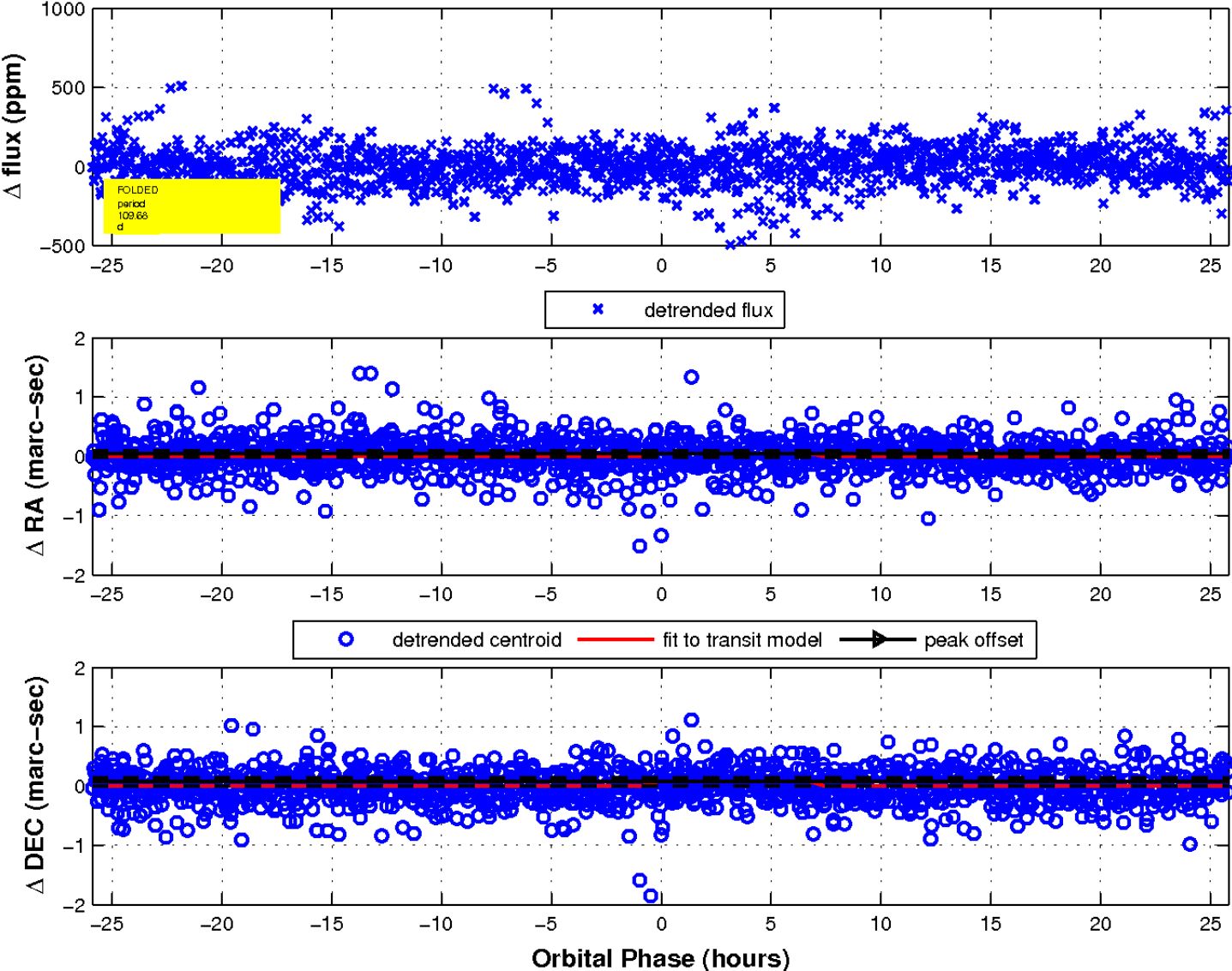
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 7 of 7



UKIRT Image

Declination

