

KIC 007007169

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})
007007169-01	OBS	No	6.582909	132.257023	38.4	18.637	8.6	7.9	2.35	6684	1.65	1658.86
007007169-02	OBS	No	6.584210	135.822475	133.0	15.000	8.9	-1.0	2.35	6684	2.74	1658.42
007007169-03	OBS	No	198.749838	301.520538	169.1	43.237	10.5	5.9	2.35	6684	3.21	17.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007007169-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007007169-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007007169-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

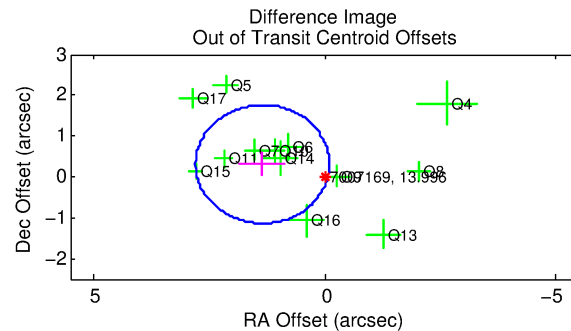
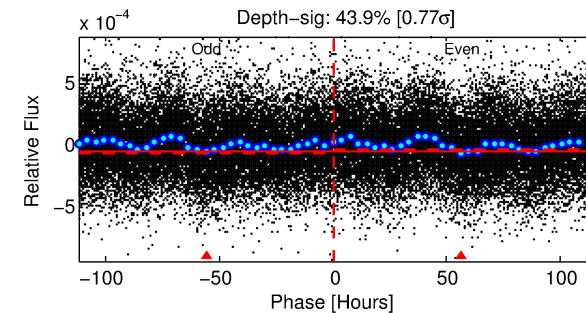
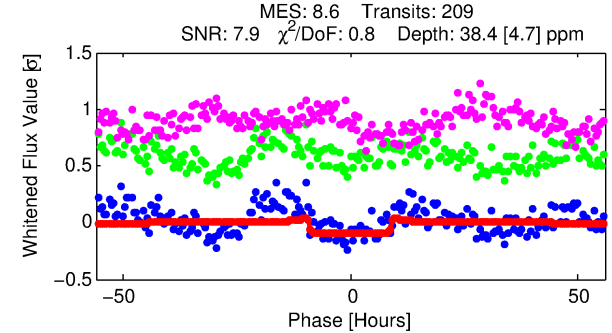
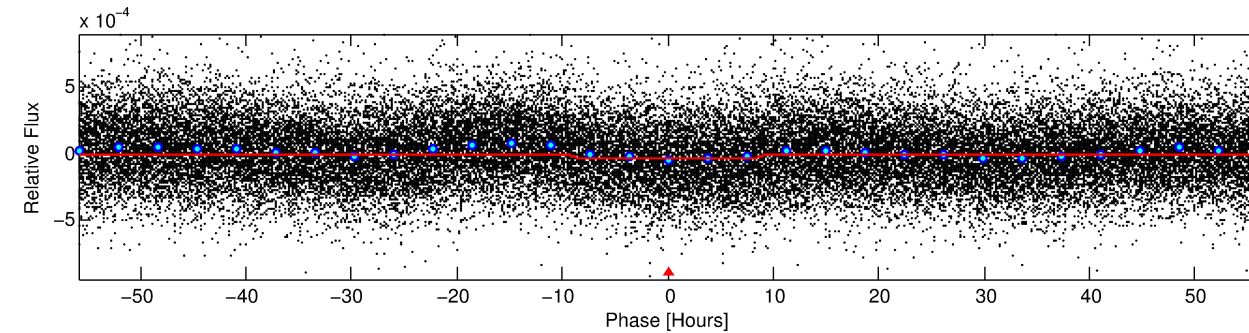
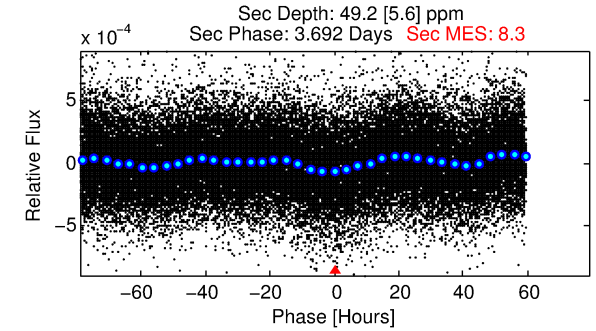
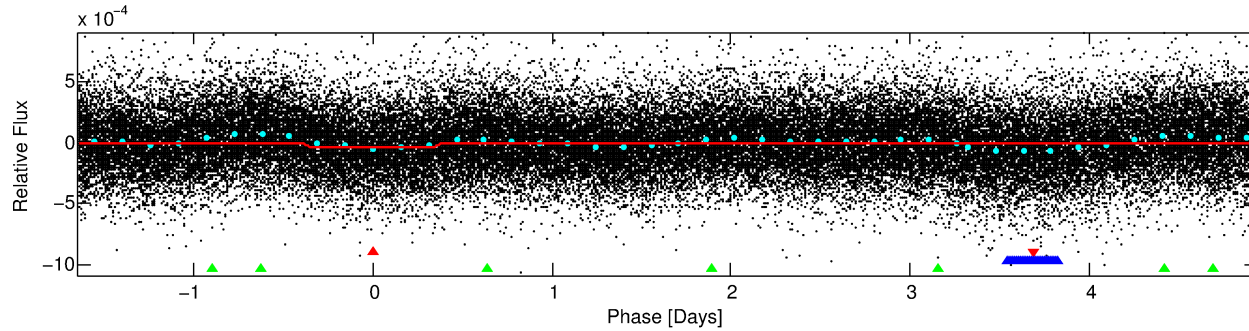
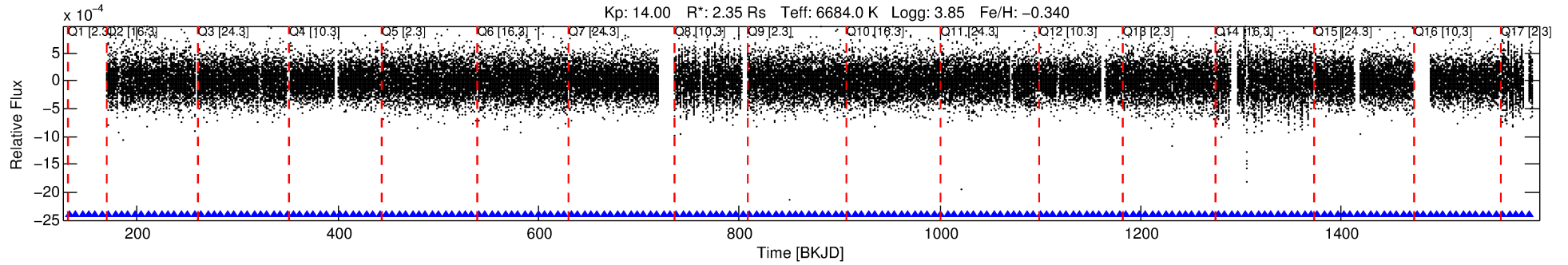
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007007169-01

No Significant Match Found

DV One-Page Summary

KIC: 7007169 Candidate: 1 of 3 Period: 6.583 d



DV Fit Results:

Period = 6.58291 [0.00016] d
Epoch = 132.2570 [0.0178] BKJD
Rp/R* = 0.0064 [0.0011]
a/R* = 1.72 [1.11]
b = 0.85 [0.32]
Seff = 1658.86 [1249.91]
Teq = 1627 [307] K
Rp = 1.64 [0.80] Re
a = 0.0773 [0.0350] AU
Ag = 59.83 [49.57] [1.19σ]
Teffp = 6998 [698] K [7.05σ]

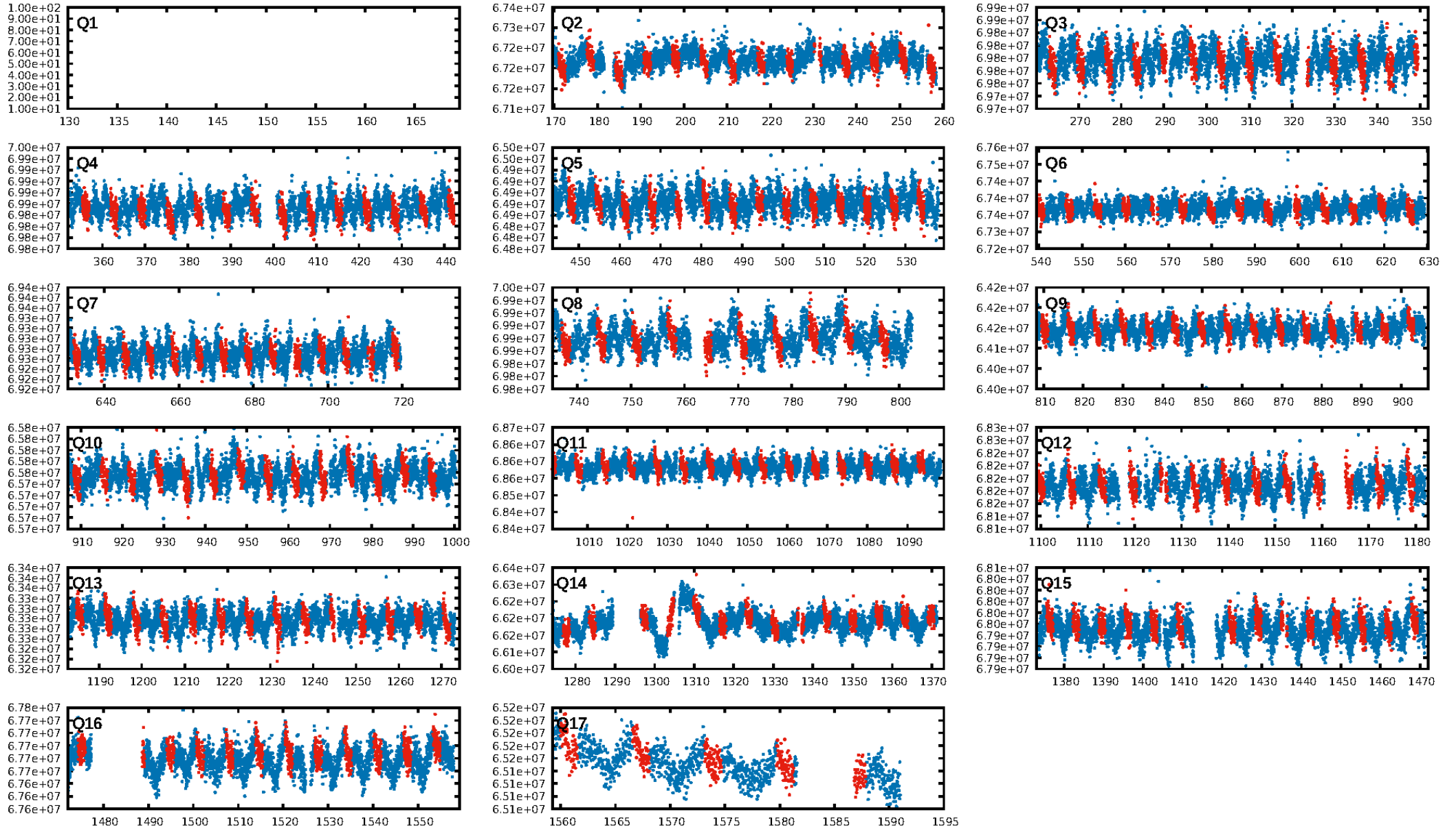
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.81e-14
RollingBand-fgt: 1.00 [204/204]
GhostDiagnostic-chr: 3.603
Centroid-sig: 72.2%
Centroid-so: 1.793 arcsec [1.51σ]
OotOffset-rm: 1.381 arcsec [2.86σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-rm: 1.063 arcsec [2.33σ]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [16/16]

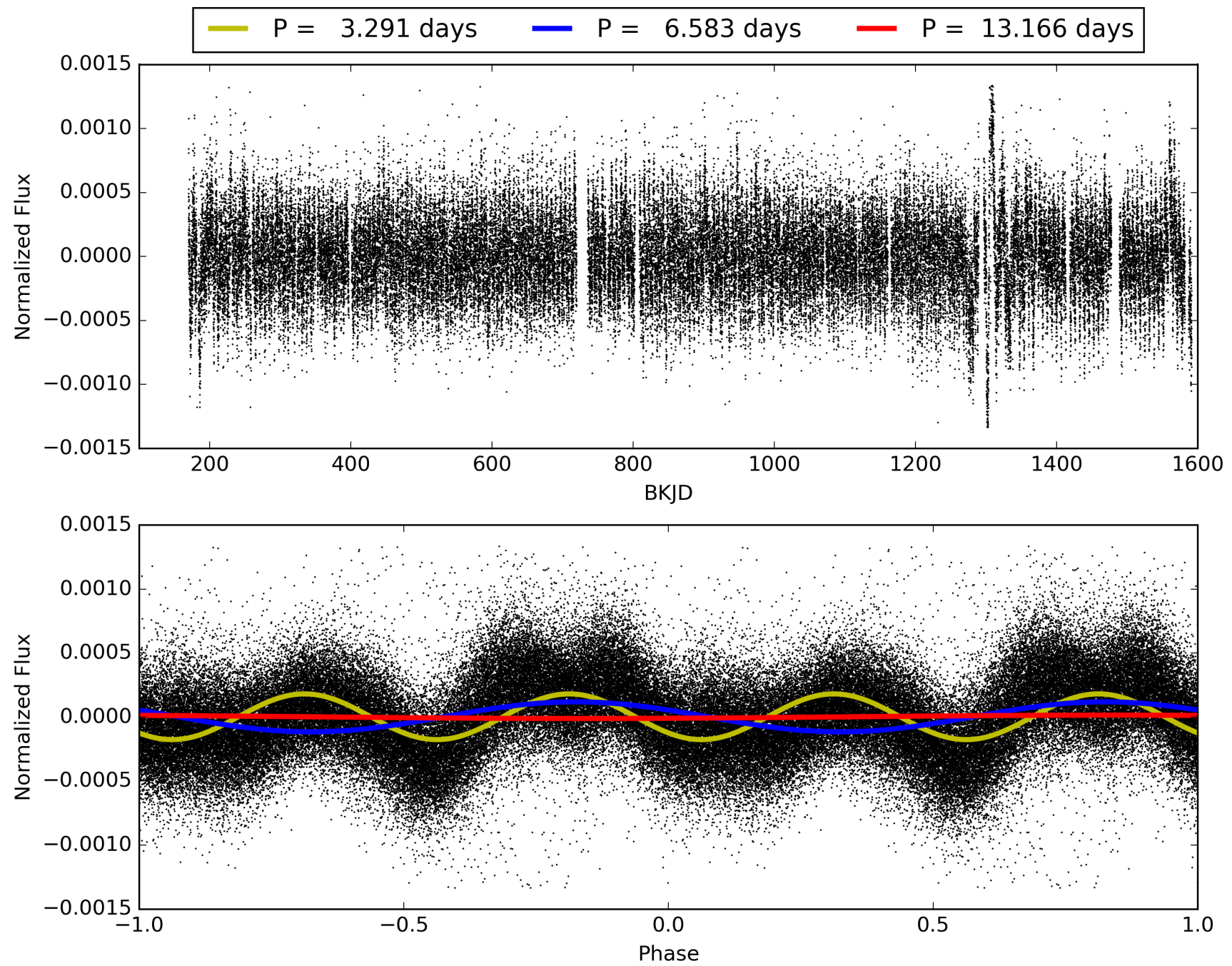
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:09:01 Z

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

TCE 007007169-01, PDC Light Curves

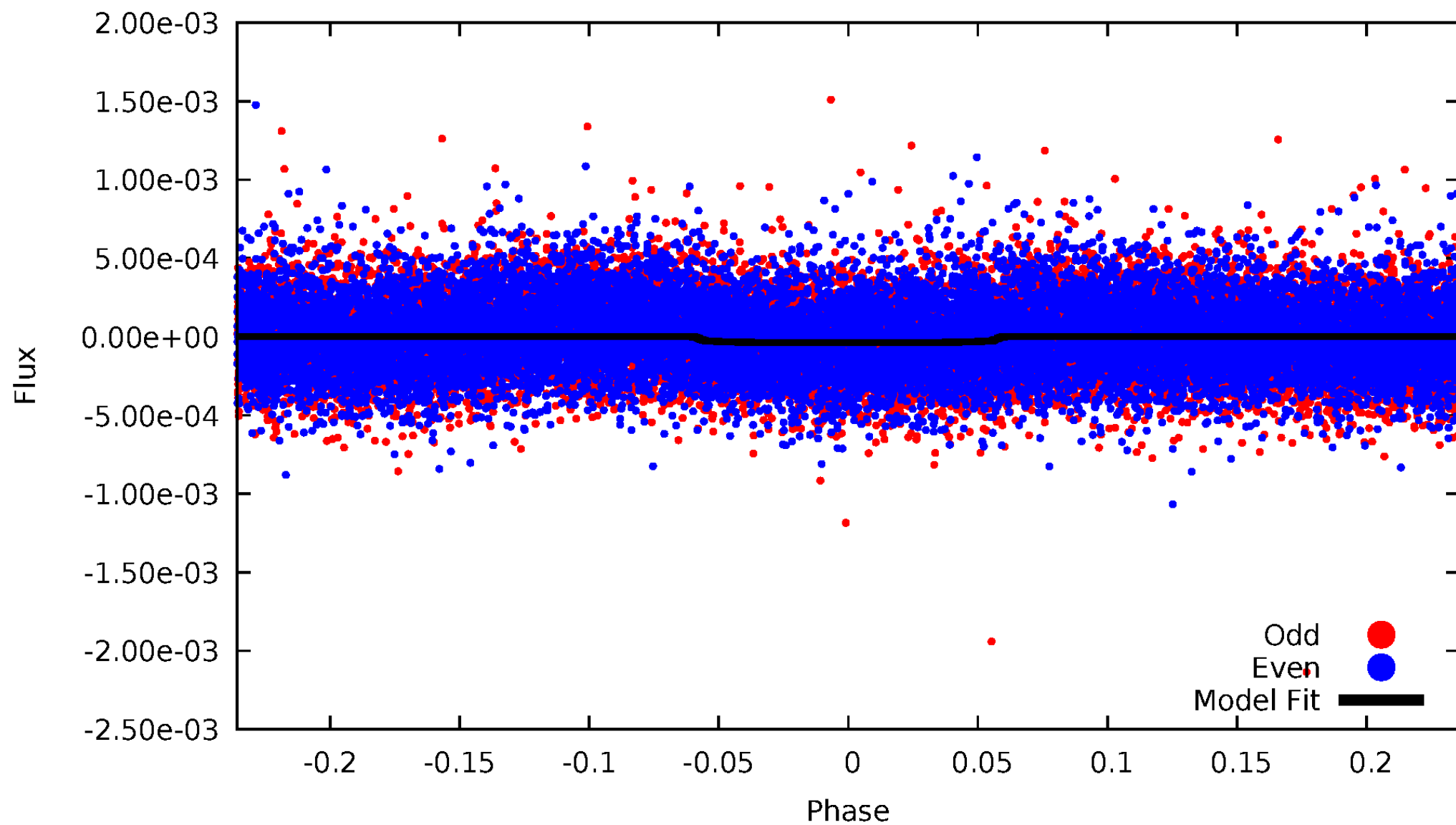


TCE 007007169-01



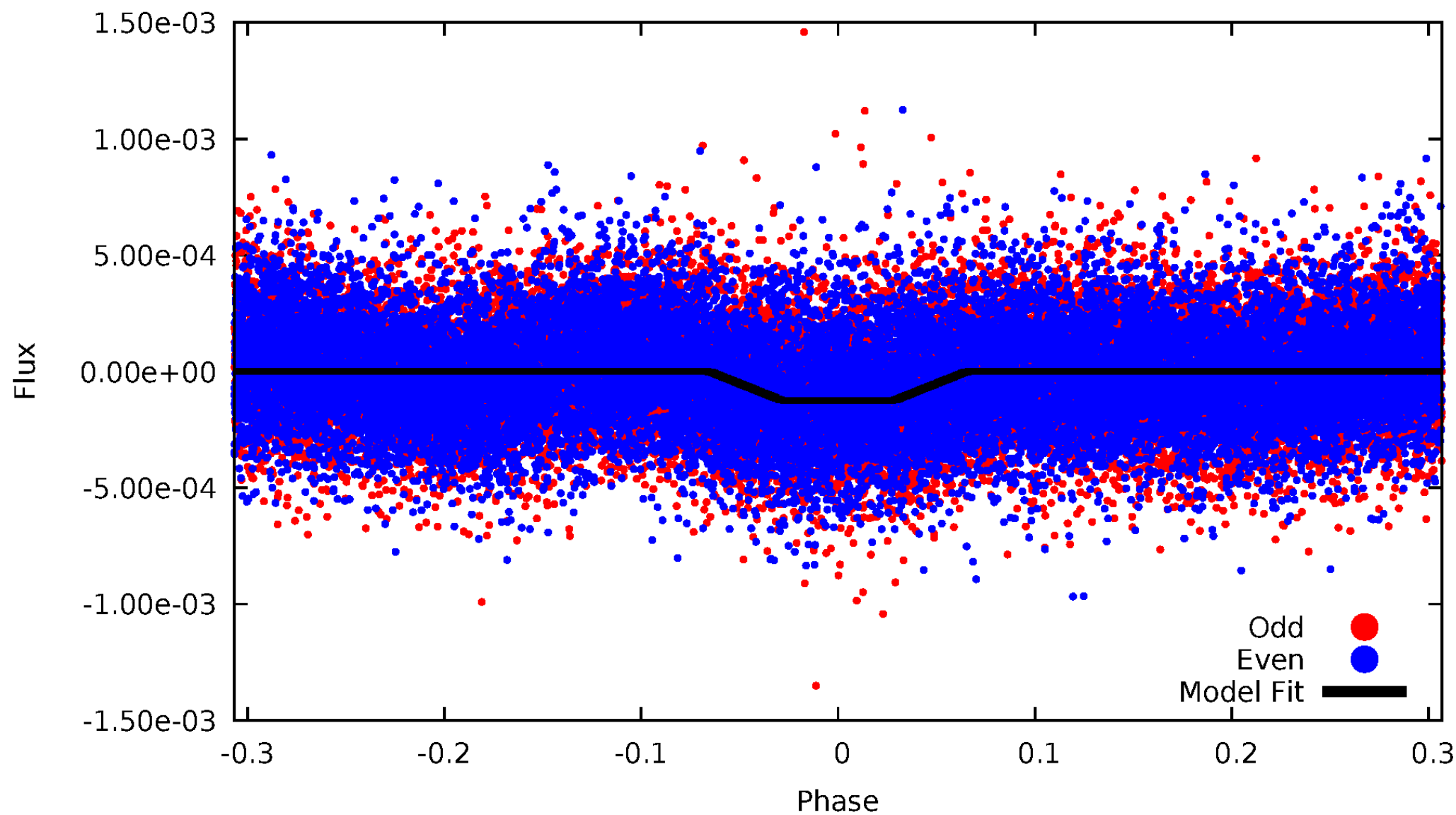
DV Odd/Even

TCE 007007169-01



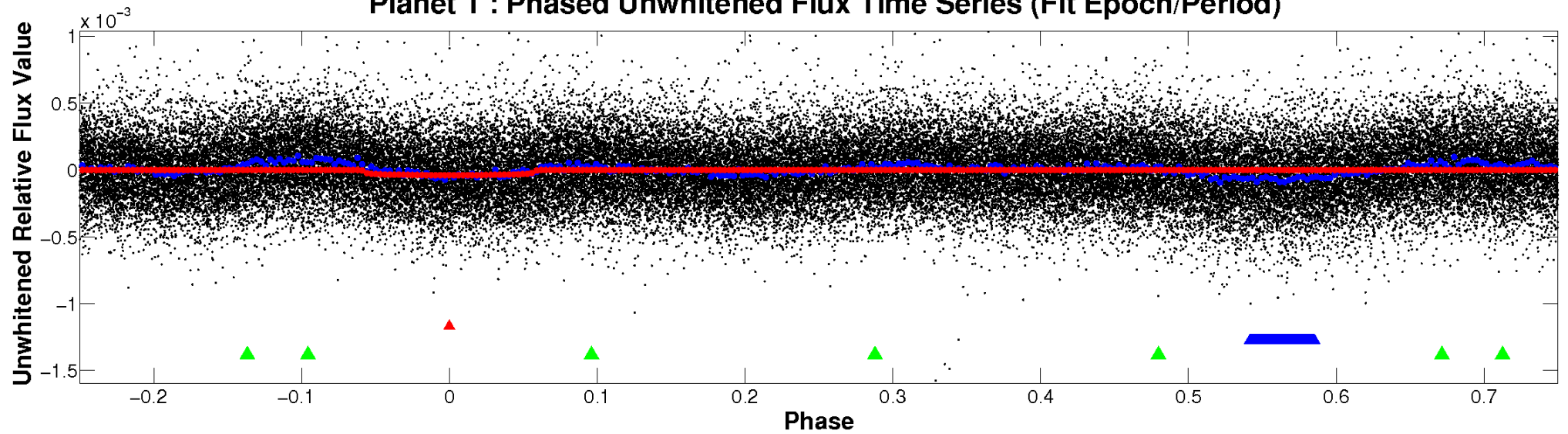
ALT Odd/Even

TCE 007007169-01

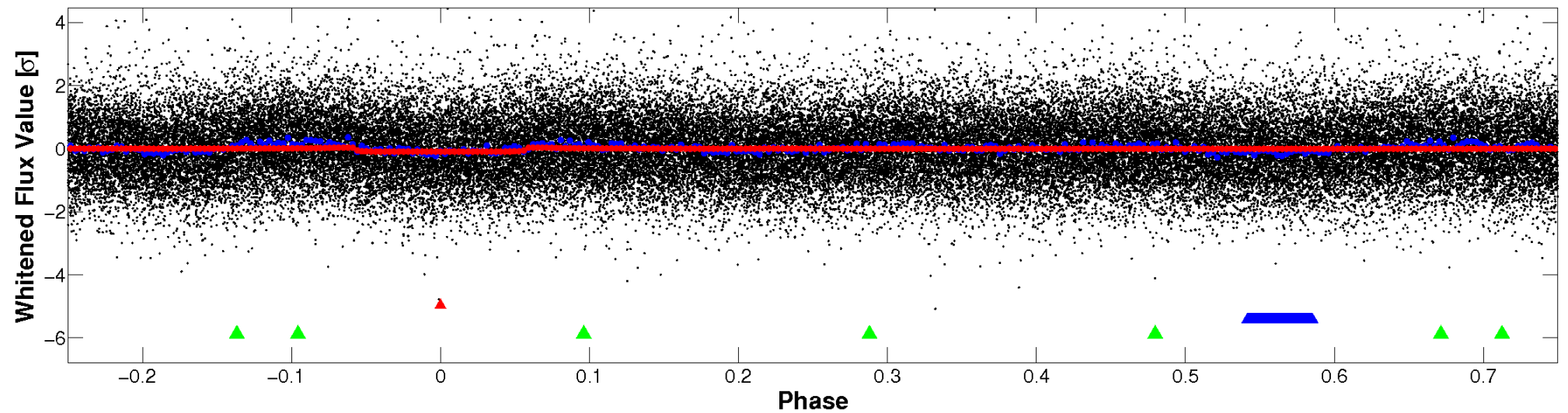


Non-Whitened Vs. Whitened Light Curve

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

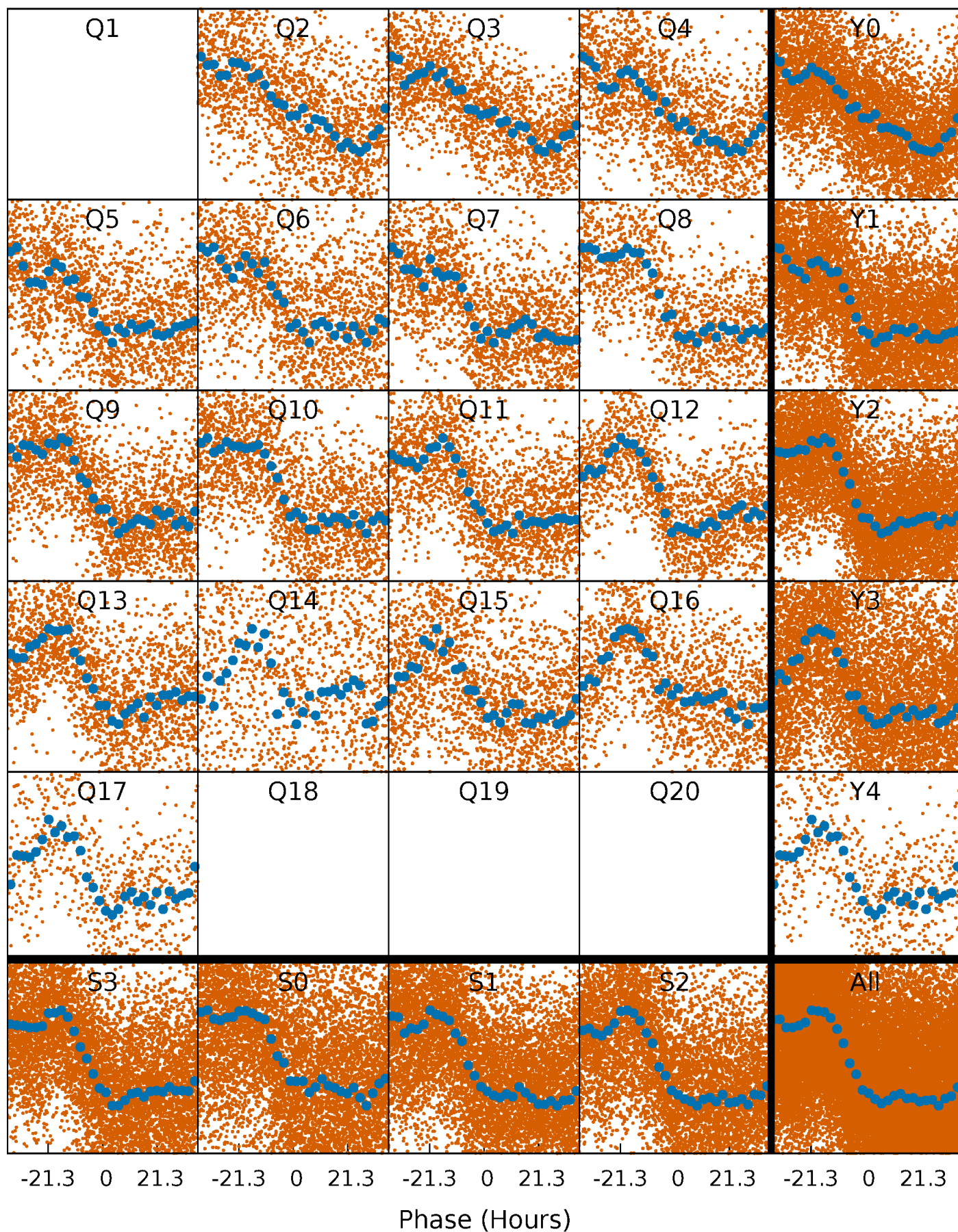


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



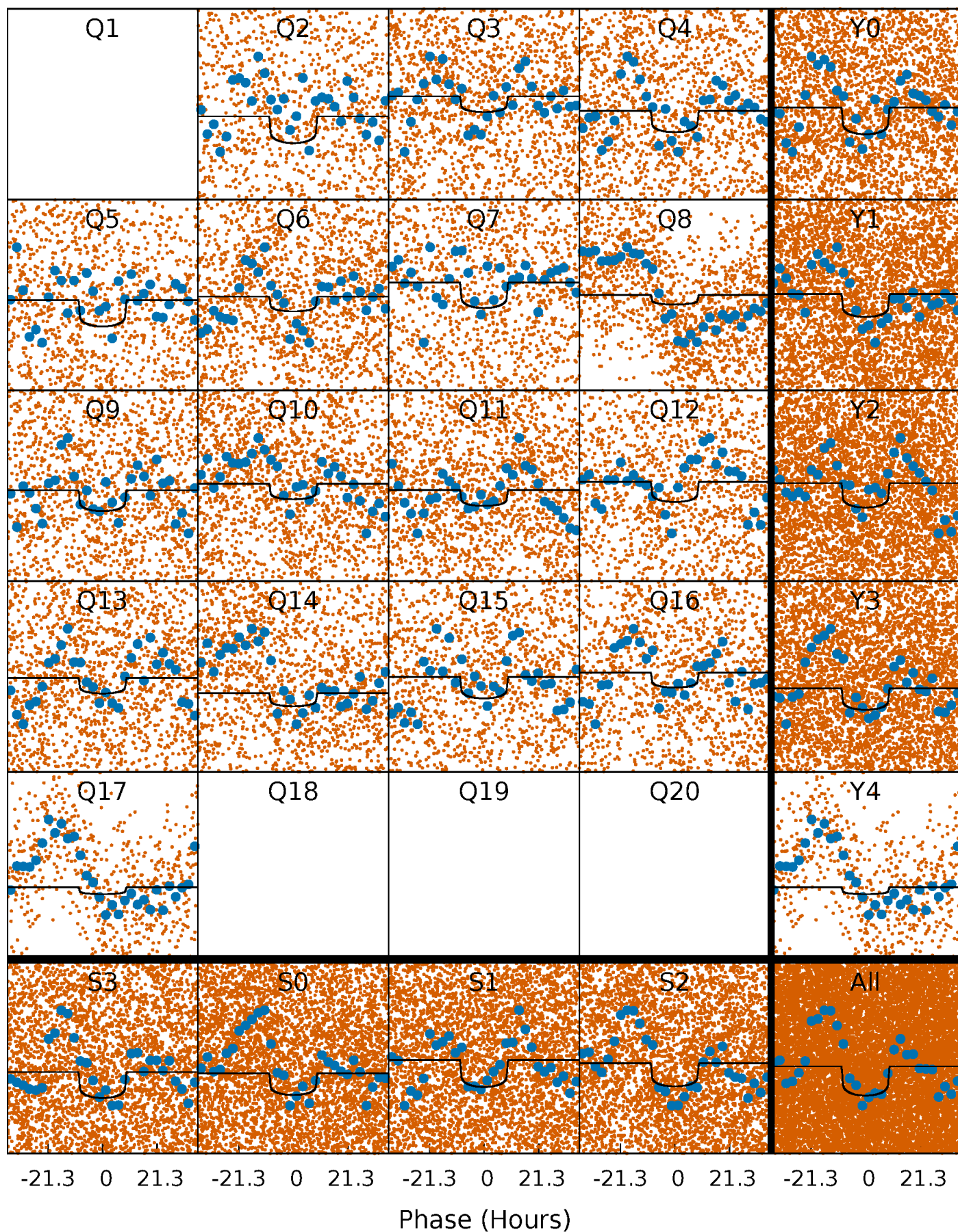
PDC Quarter-Phased Transit Curves

TCE 007007169-01 P= 6.582909 Days $T_0=132.257023$ (BKJD)



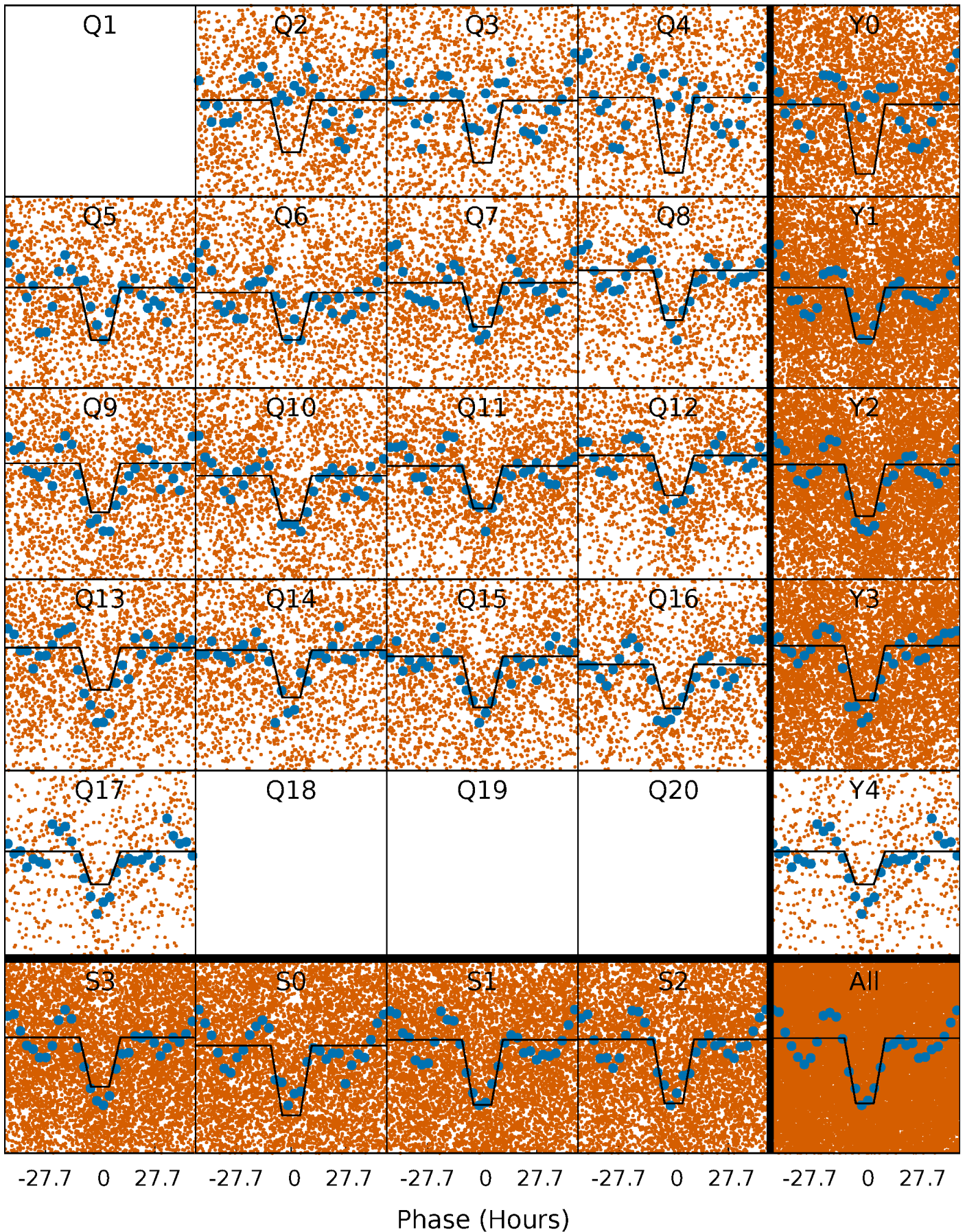
DV Quarter-Phased Transit Curves

TCE 007007169-01 P= 6.582909 Days $T_0=132.257023$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

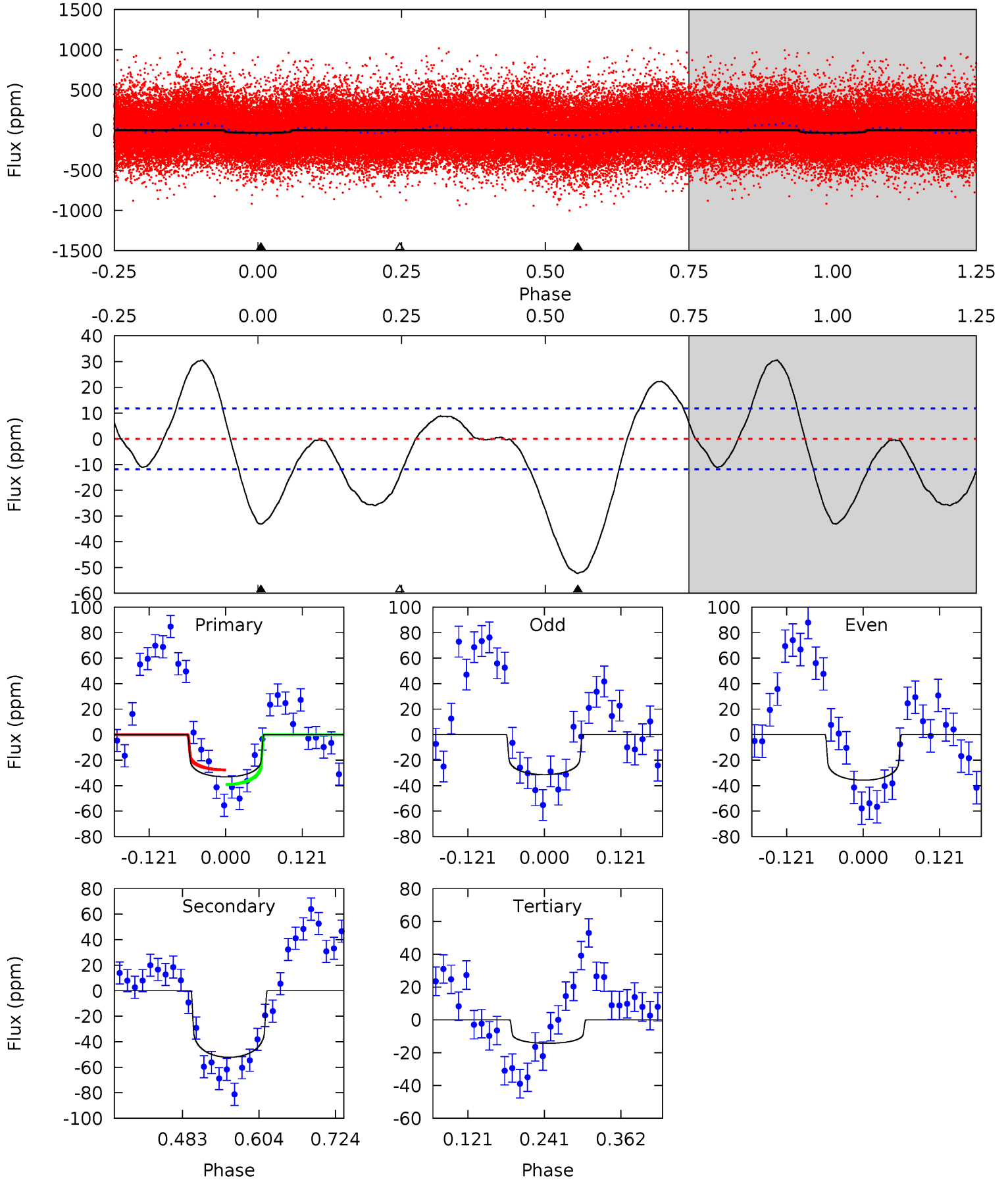
TCE 007007169-01 P= 6.583084 Days $T_0=132.294984$ (BKJD)



DV Model-Shift Uniqueness Test

007007169-01, P = 6.582909 Days, E = 132.257023 Days

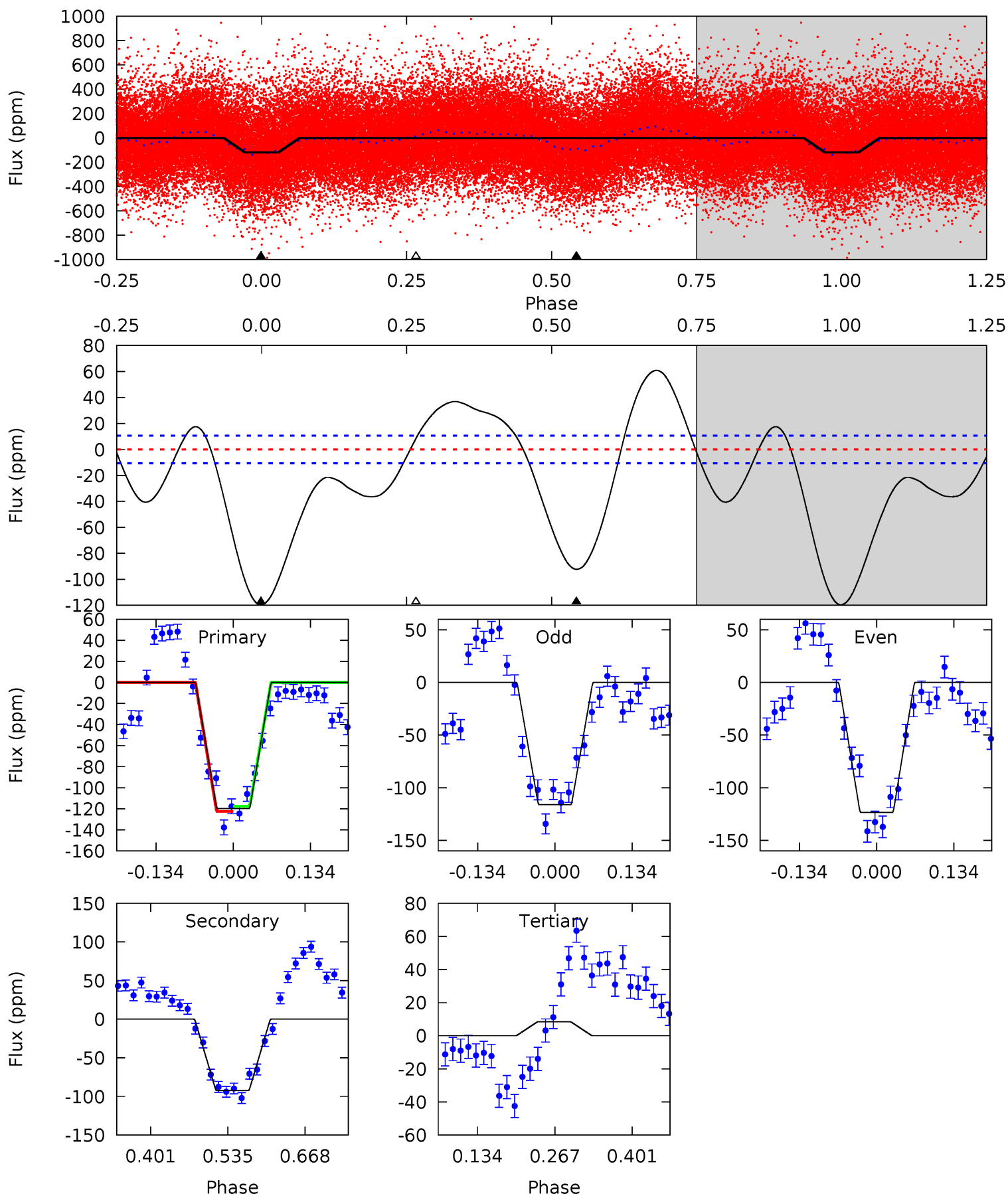
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	20.0	5.47	0	4.53	1.55	5.27	7.22	12.7	14.5	20.0	0.85	1.05	0.37	2.20



Alt Model-Shift Uniqueness Test

007007169-01, P = 6.583084 Days, E = 132.294984 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.6	39.1	-3.57	0	4.50	1.50	13.2	54.2	50.6	42.6	39.1	1.57	1.00	0.34	1.01



Stellar Parameters For KIC 007007169

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6684^{+189}_{-237}	$3.847^{+0.440}_{-0.110}$	$-0.340^{+0.300}_{-0.300}$	$2.355^{+0.493}_{-1.068}$	$1.422^{+0.190}_{-0.353}$	$0.153^{+0.635}_{-0.050}$
	+3%/-4%	+11%/-3%	+88%/-88%	+21%/-45%	+13%/-25%	+414%/-33%
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 007007169-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52 ± 3	$1.50^{+0.42}_{-0.42}$	2210^{+164}_{-282}	7114^{+894}_{-649}	75^{+64}_{-29}
Alt.	-92 ± 2	$2.67^{+0.56}_{-0.67}$	2207^{+168}_{-269}	6154^{+398}_{-314}	42^{+31}_{-12}

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

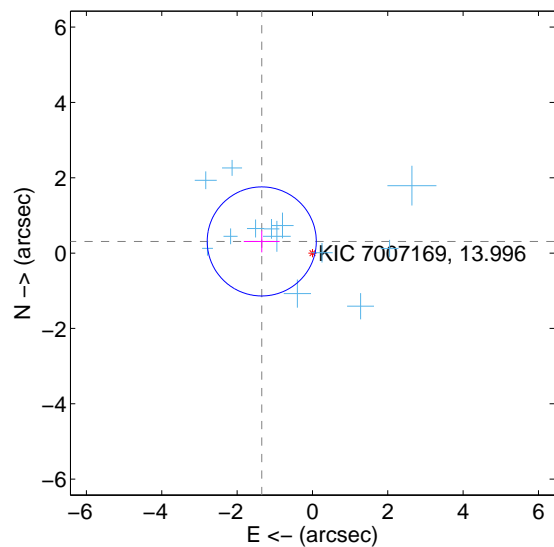
Supplemental centroid analysis for 007007169-01. Kepler magnitude: 14.00. Transit SNR 7.94

There are 13 quarters with good PRF difference image offsets

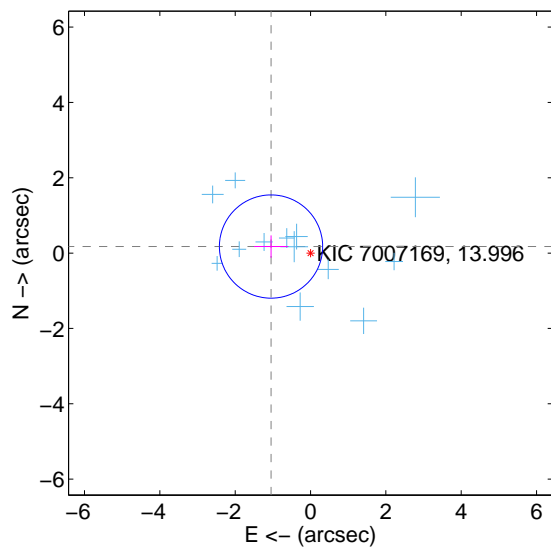
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.381 ± 0.483	2.86	1.346 ± 0.476	0.310 ± 0.289
PRF-fit source offset from KIC position	1.063 ± 0.457	2.33	1.048 ± 0.449	0.174 ± 0.296
photometric centroid source offset	1.79 ± 1.19	1.51	-1.55 ± 1.16	-0.91 ± 1.26

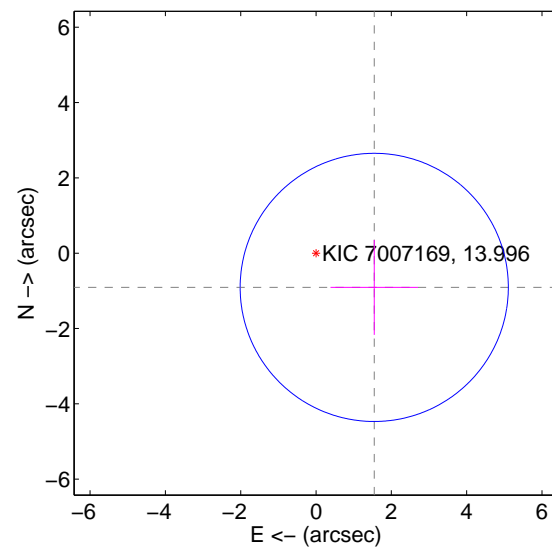
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

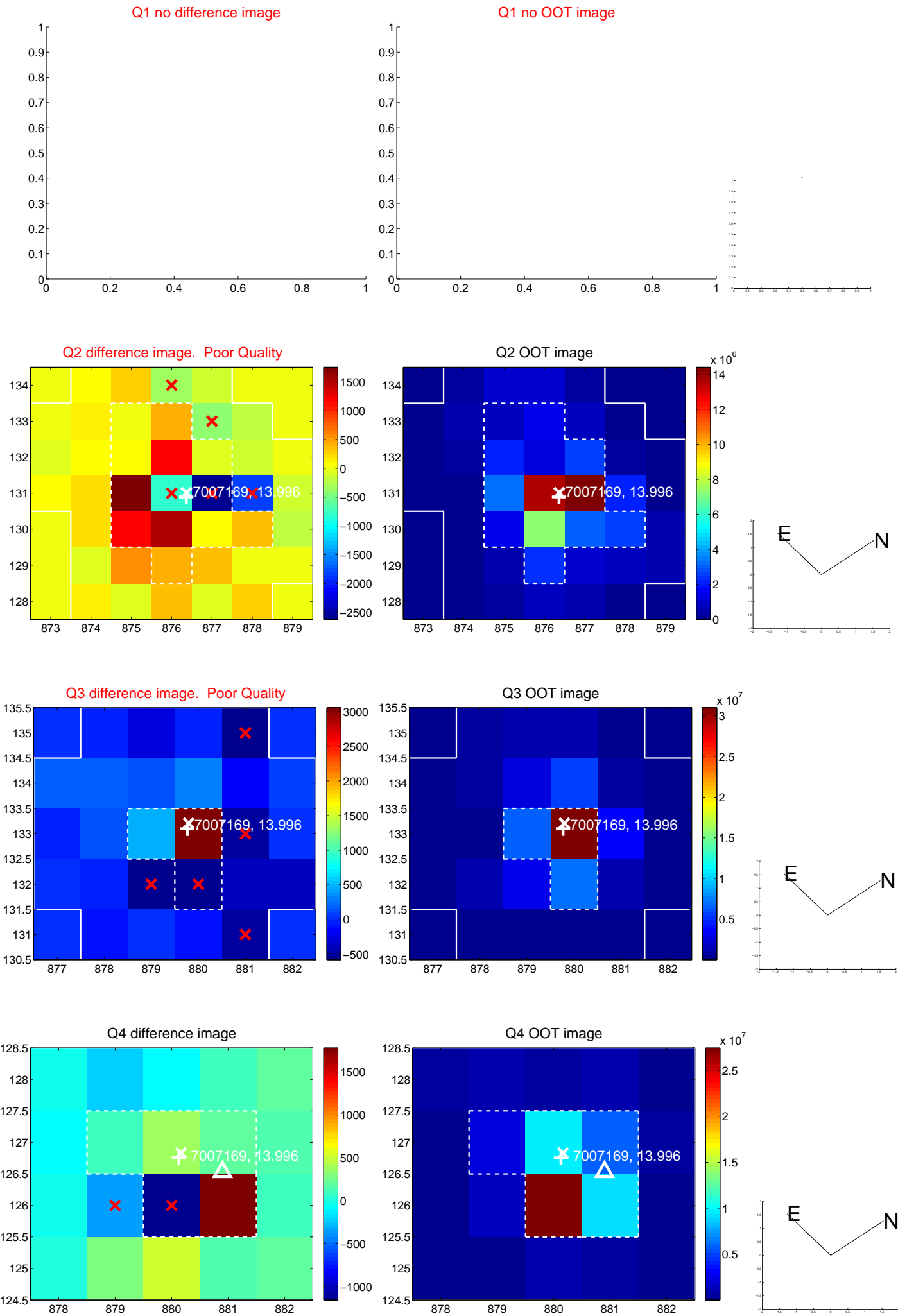


offset from photometric centroids

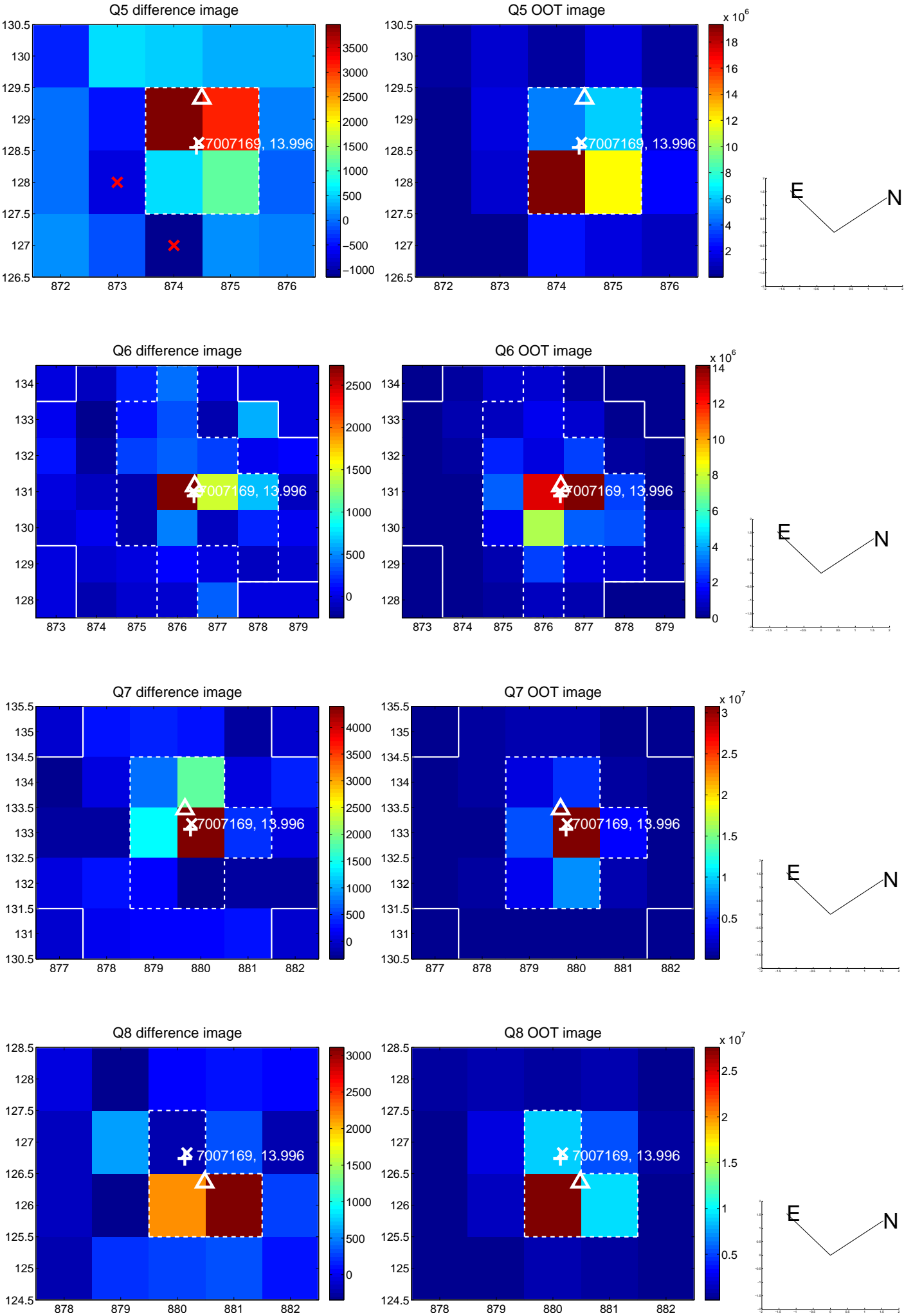


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

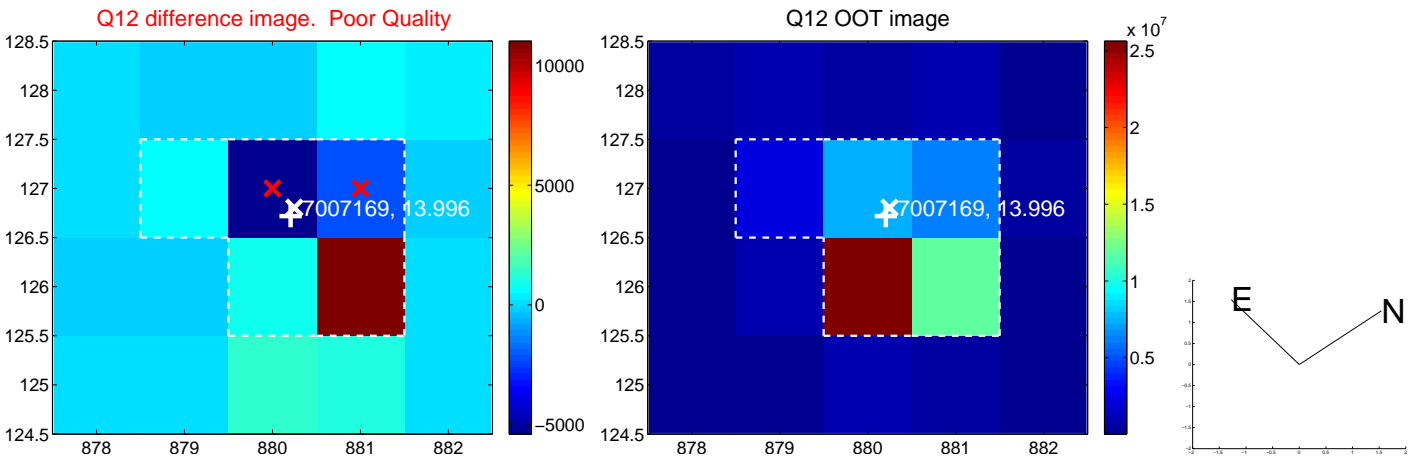
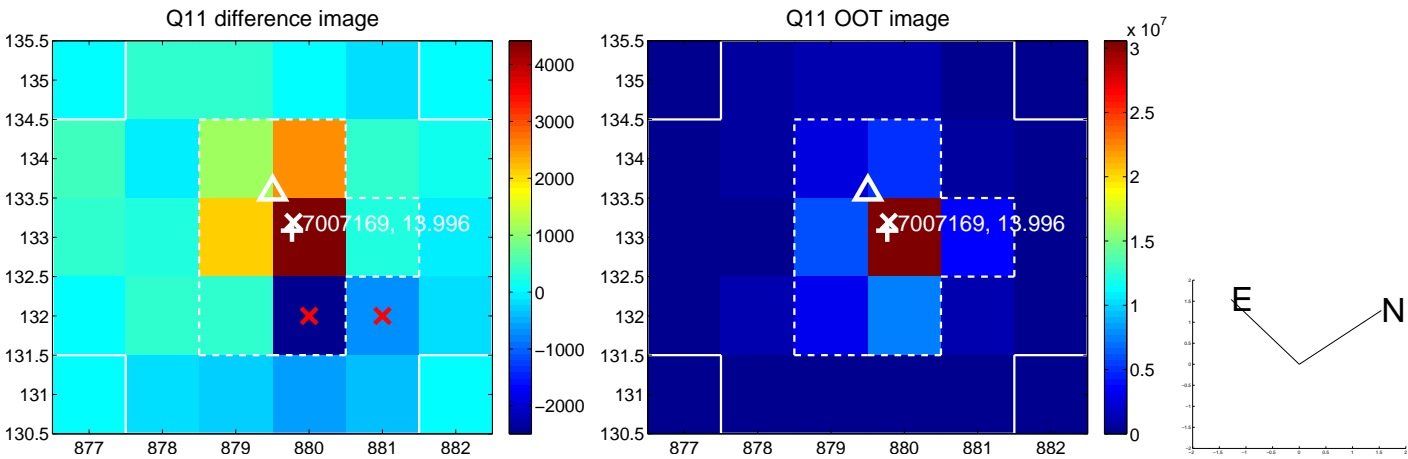
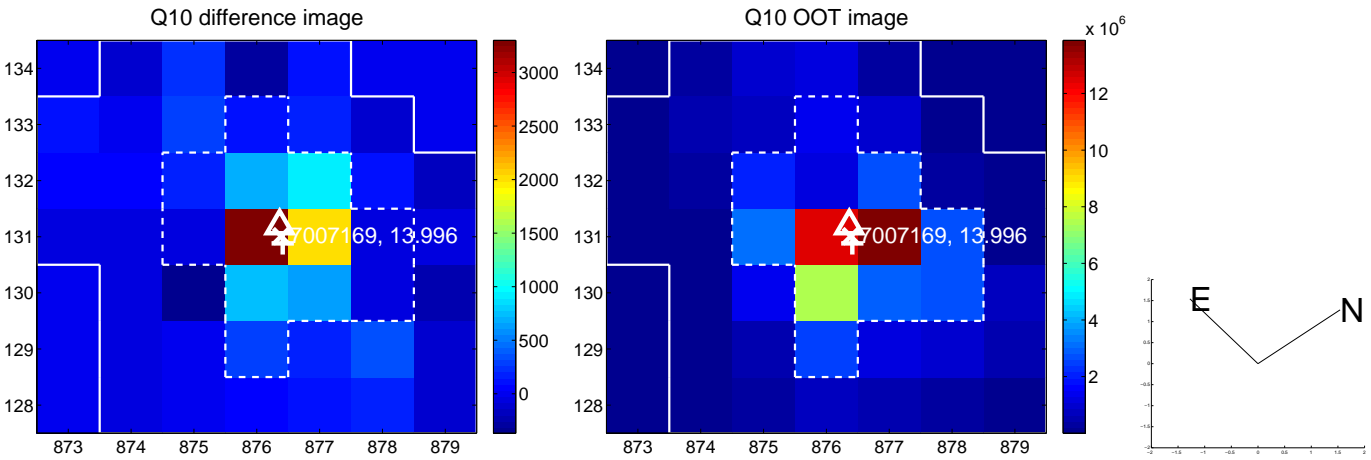
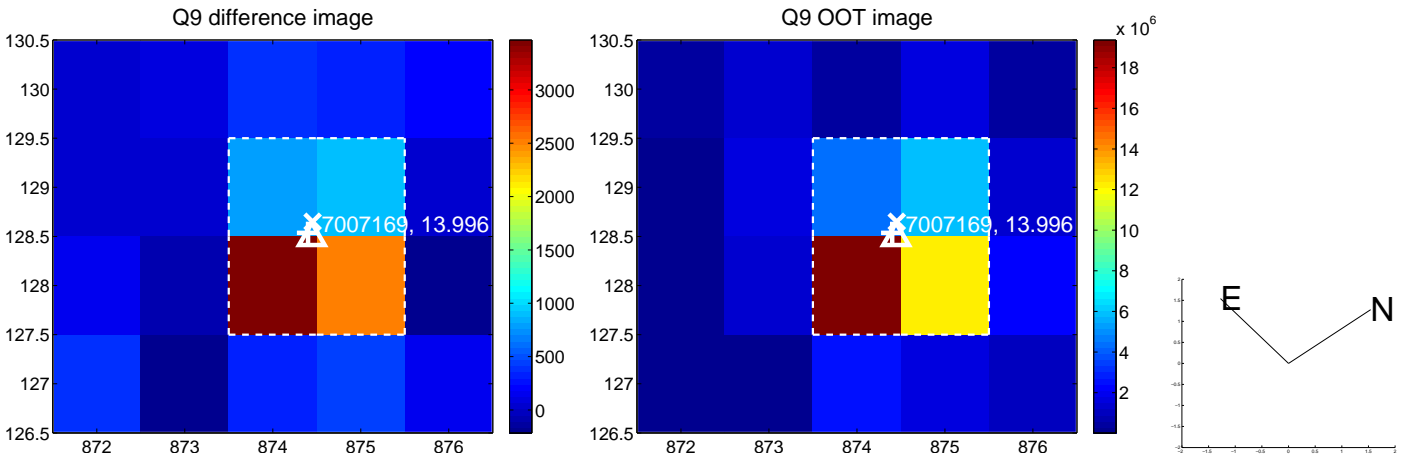
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



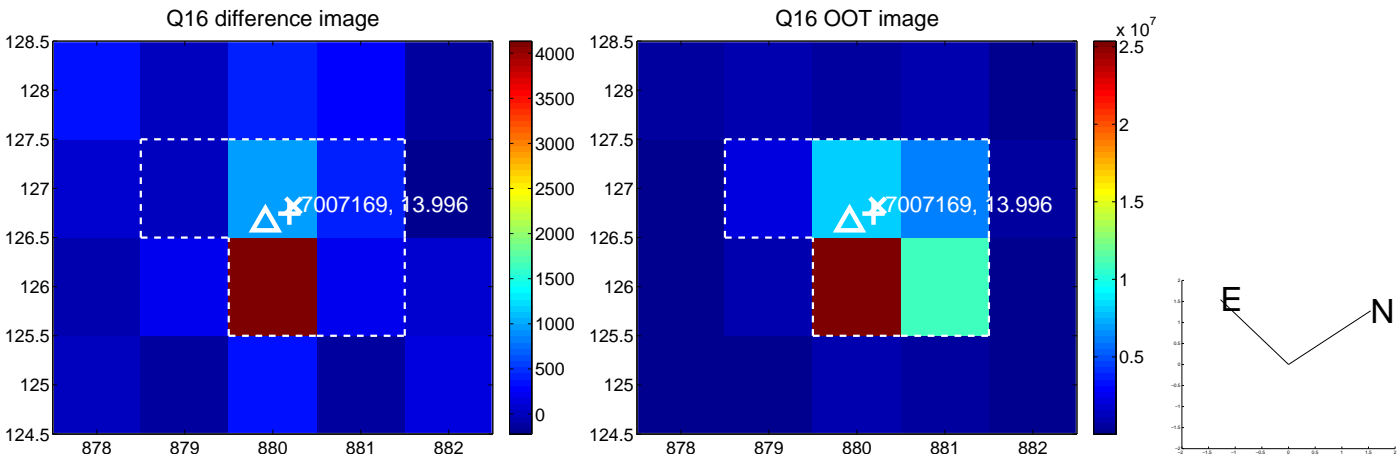
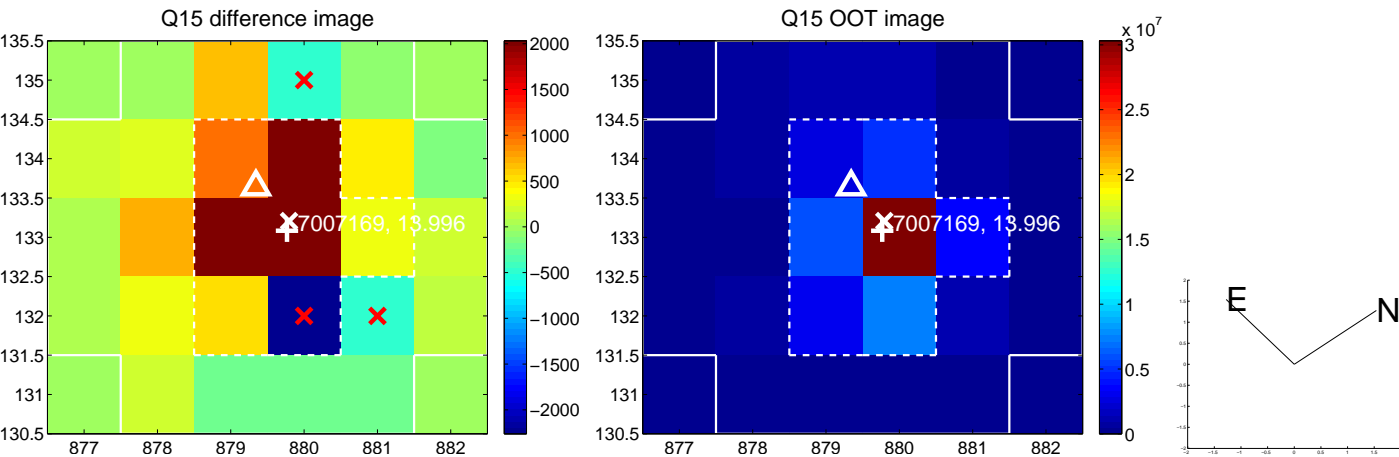
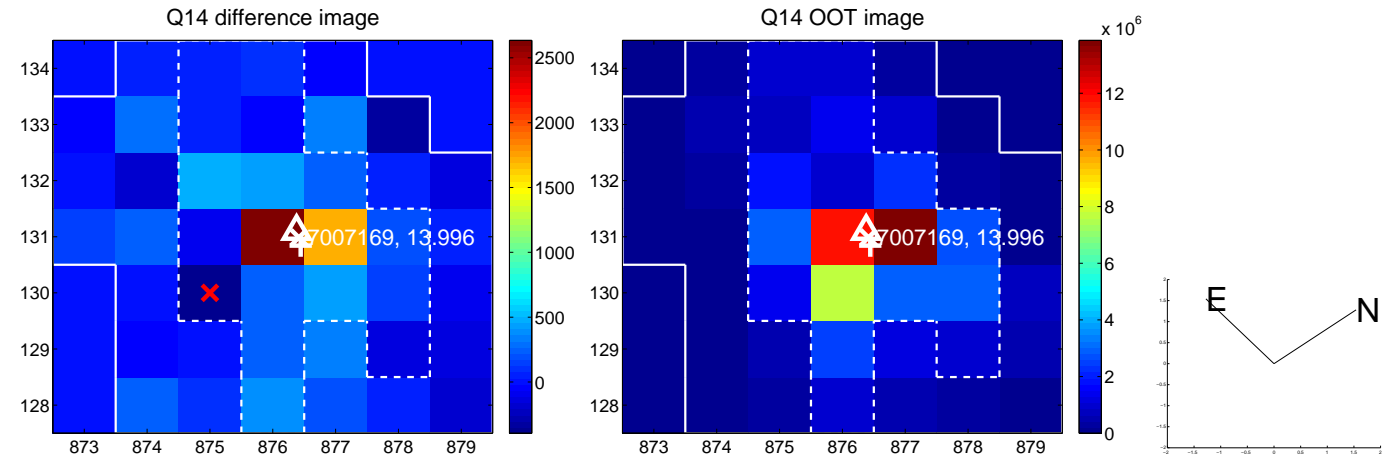
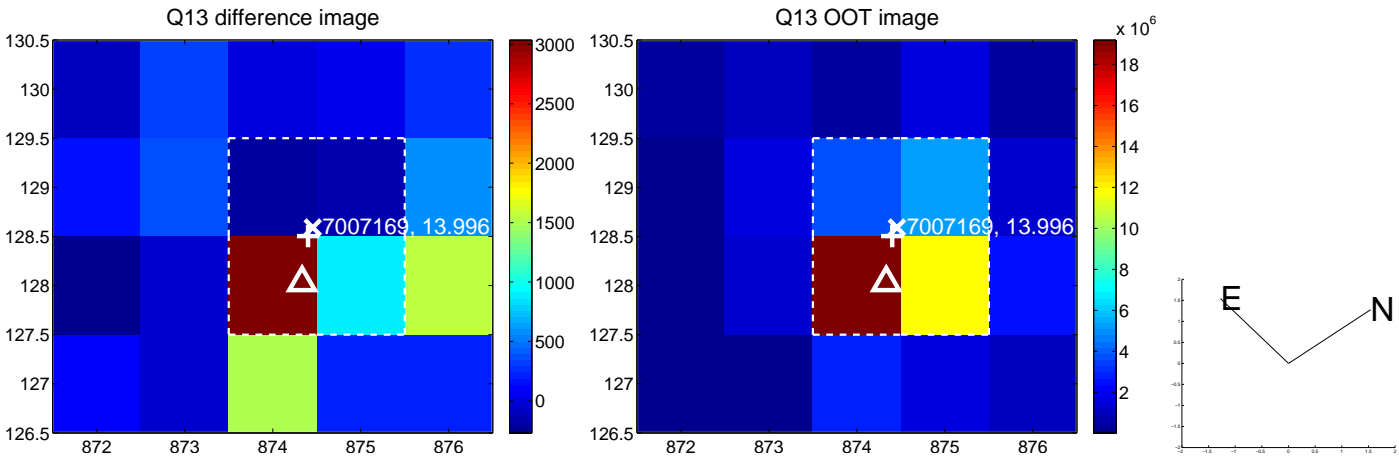
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



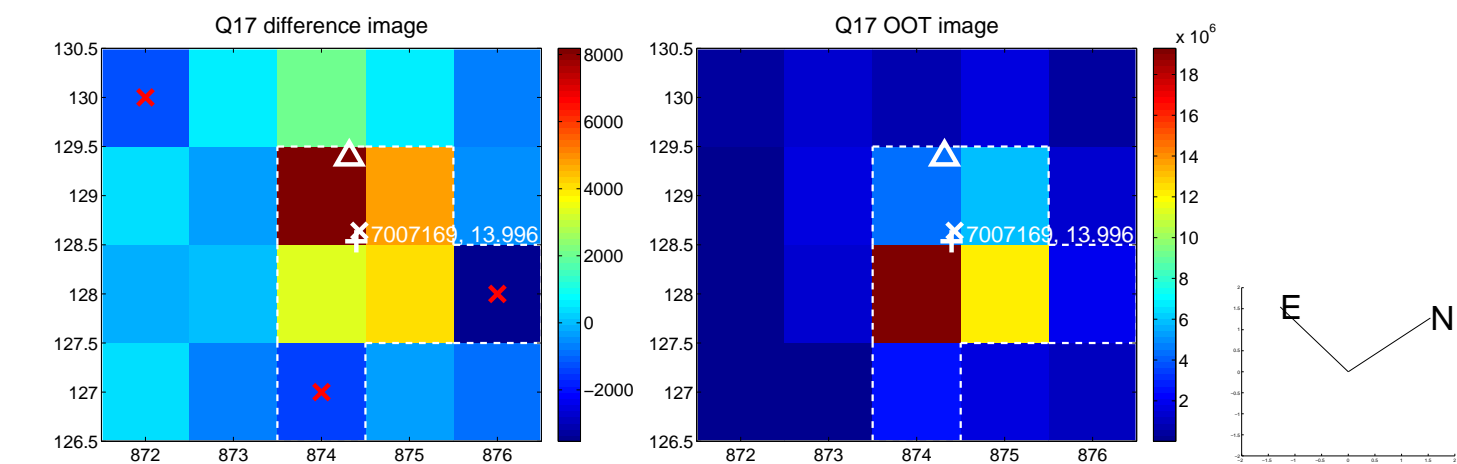
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



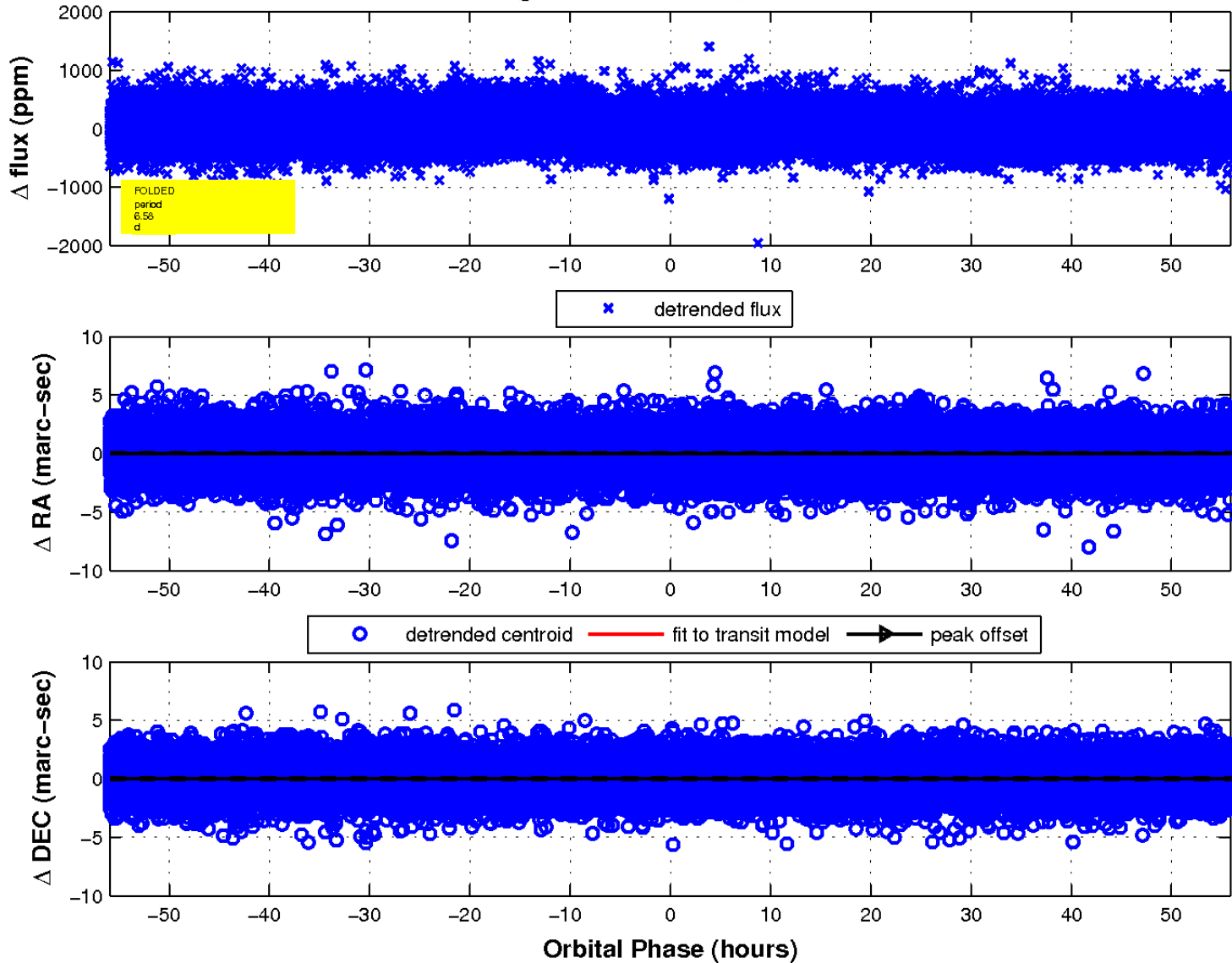
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

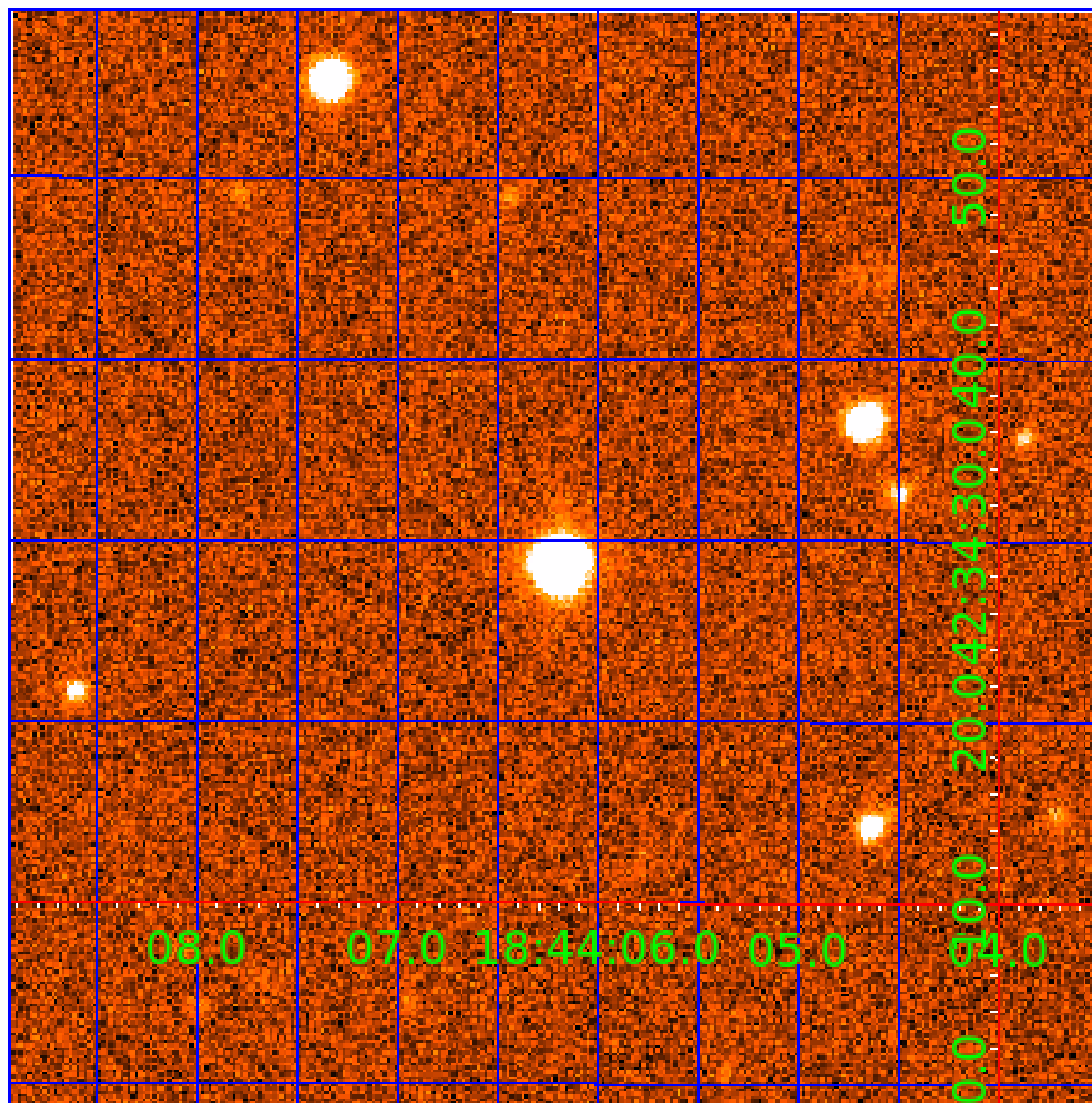


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 007007169

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})
007007169-01	OBS	No	6.582909	132.257023	38.4	18.637	8.6	7.9	2.35	6684	1.65	1658.86
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Robovetter Results

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007007169-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007007169-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

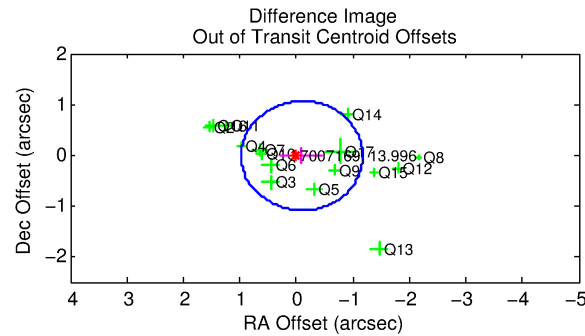
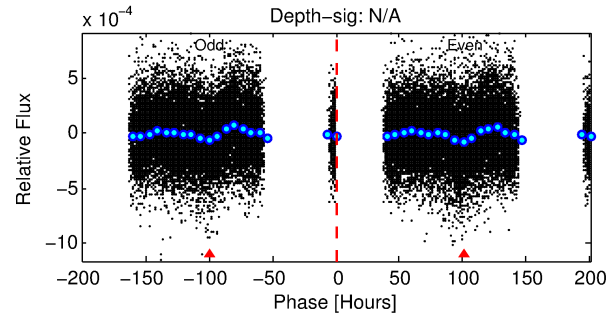
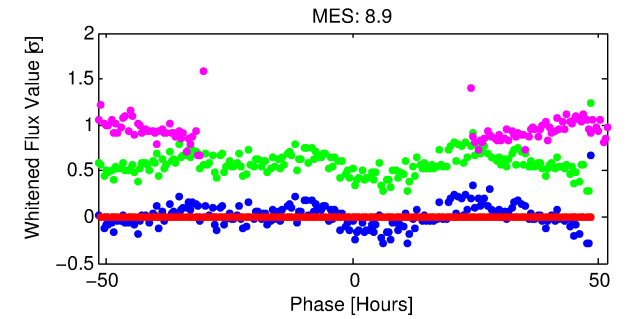
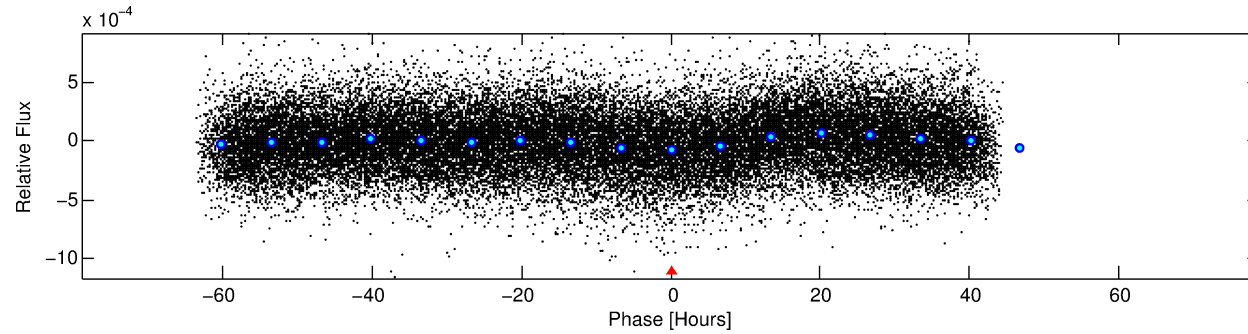
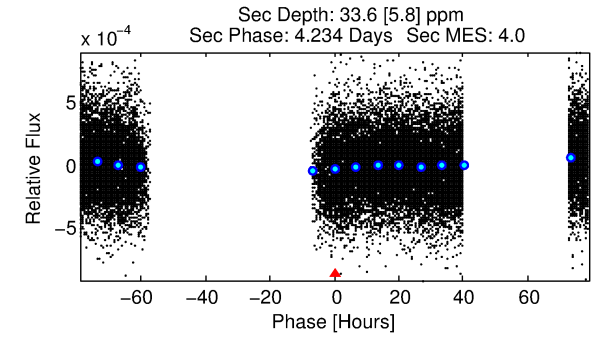
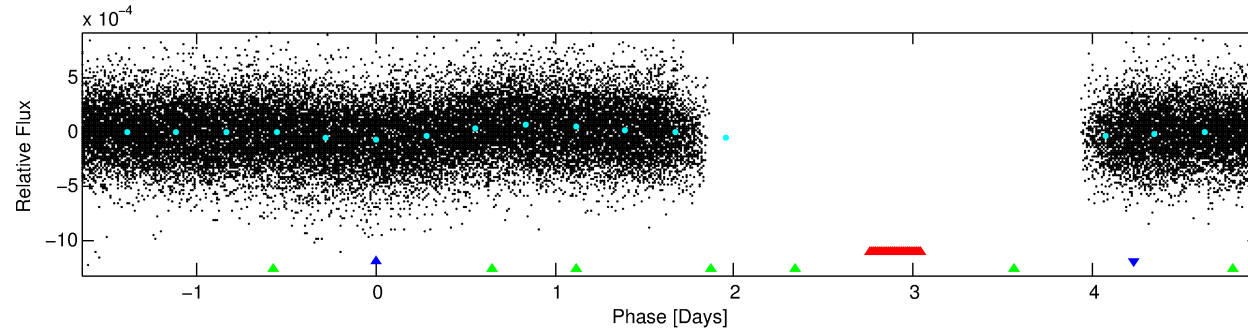
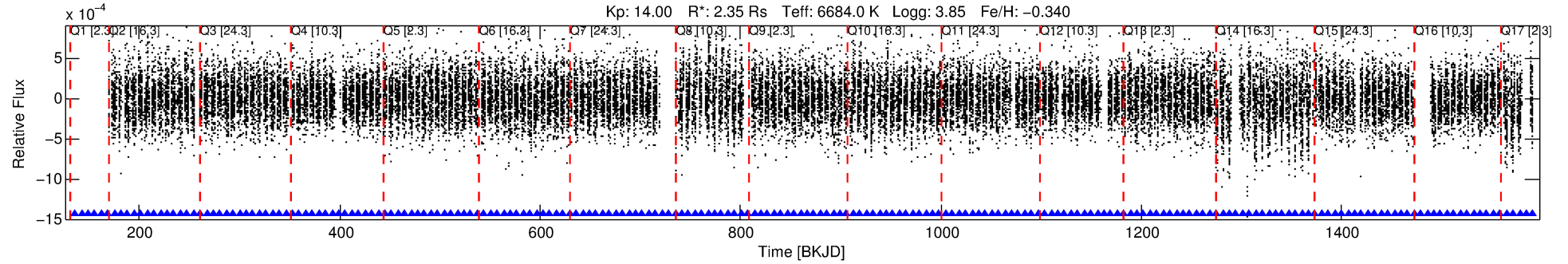
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007007169-02

No Significant Match Found

DV One-Page Summary

KIC: 7007169 Candidate: 2 of 3 Period: 6.584 d



TPS TCE Results:

Period = 6.58421 d
Epoch = 135.8225 BKJD

DV fit results are unavailable

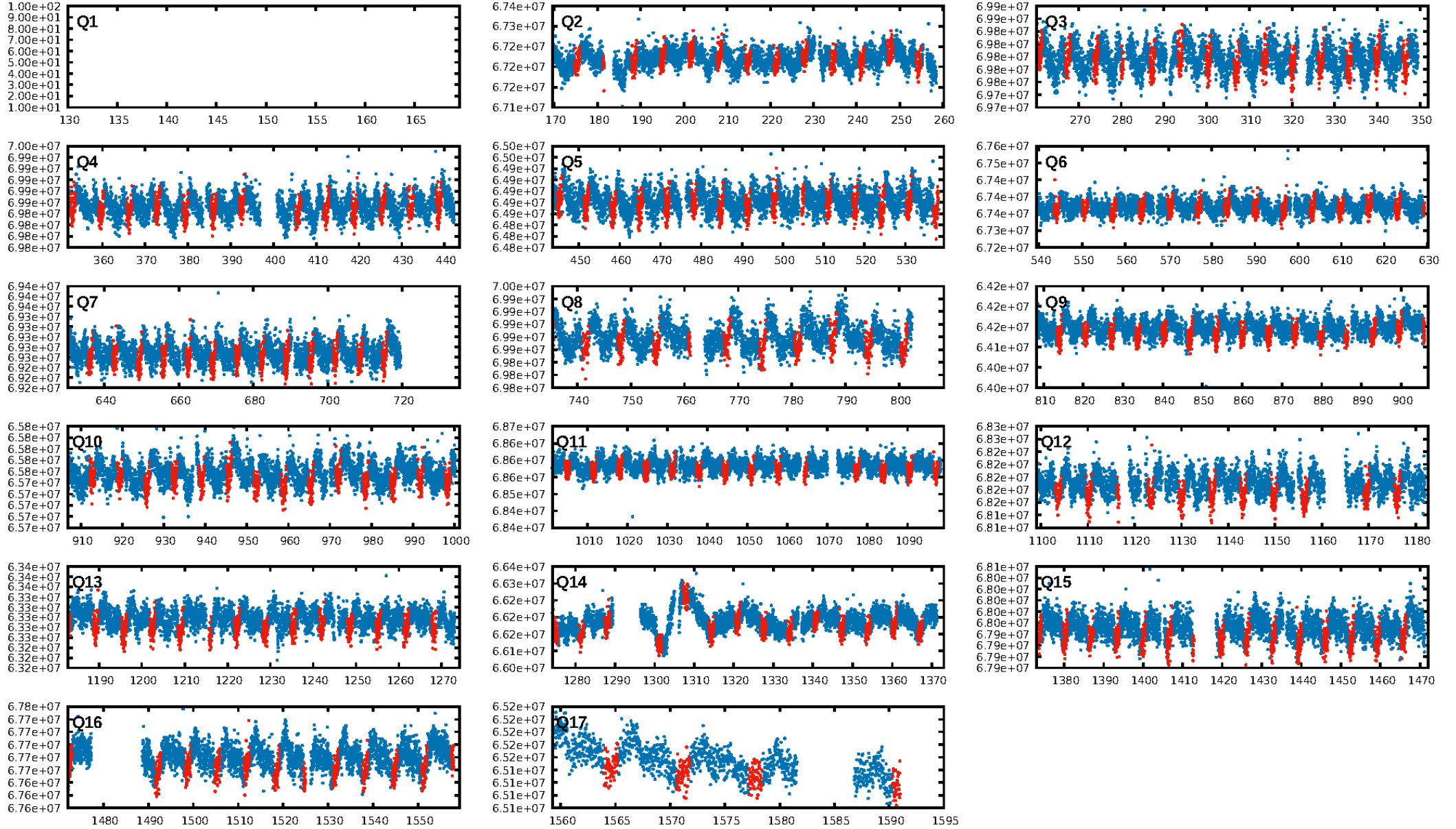
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [100.78σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.80e-15
RollingBand-fgt: 1.00 [201/201]
GhostDiagnostic-chr: 1.241
Centroid-sig: 25.5%
Centroid-so: 1.200 arcsec [6.08σ]
OotOffset-rm: 0.099 arcsec [0.28σ]
KicOffset-rm: 0.563 arcsec [1.81σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
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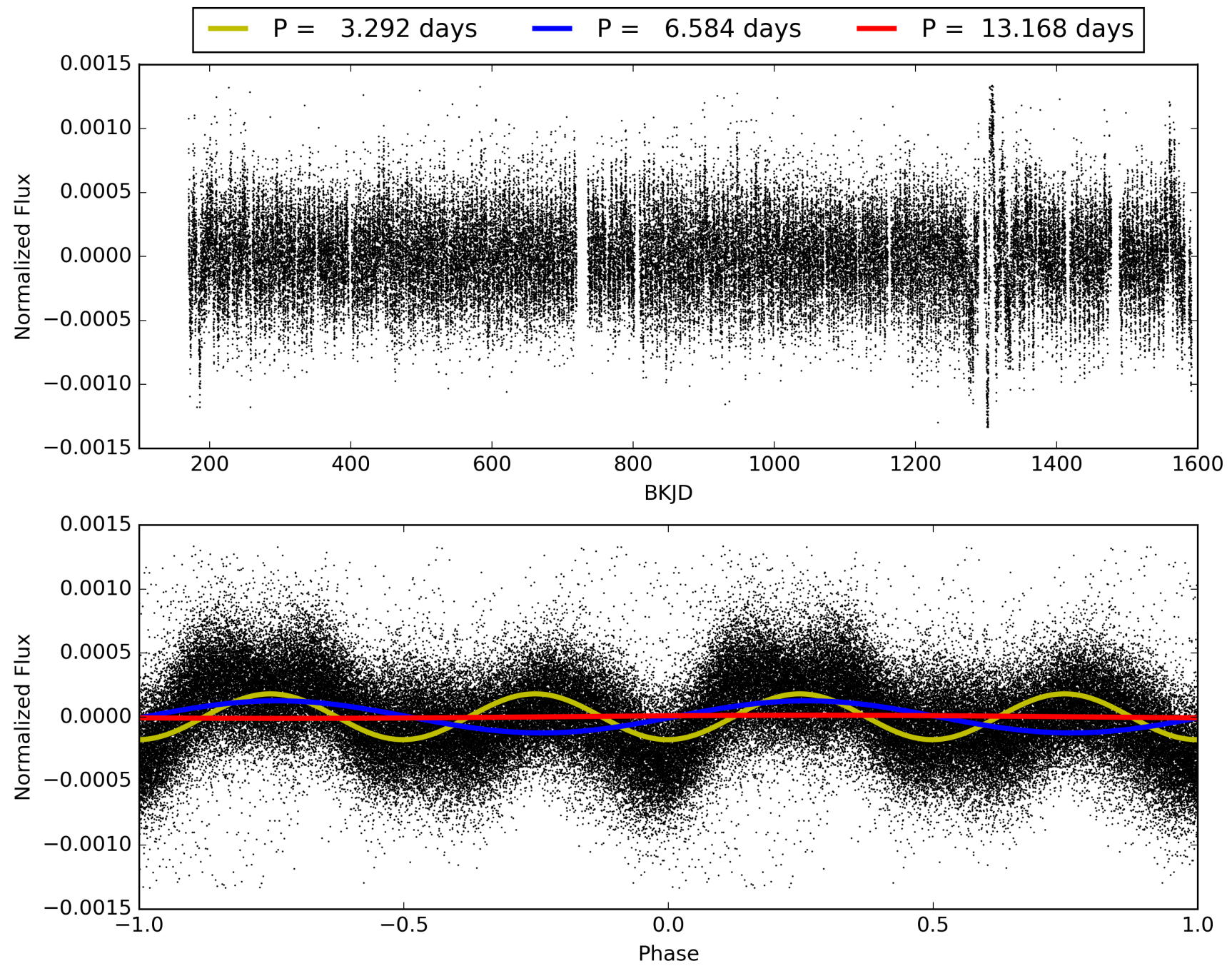
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:09:14 Z

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

TCE 007007169-02, PDC Light Curves

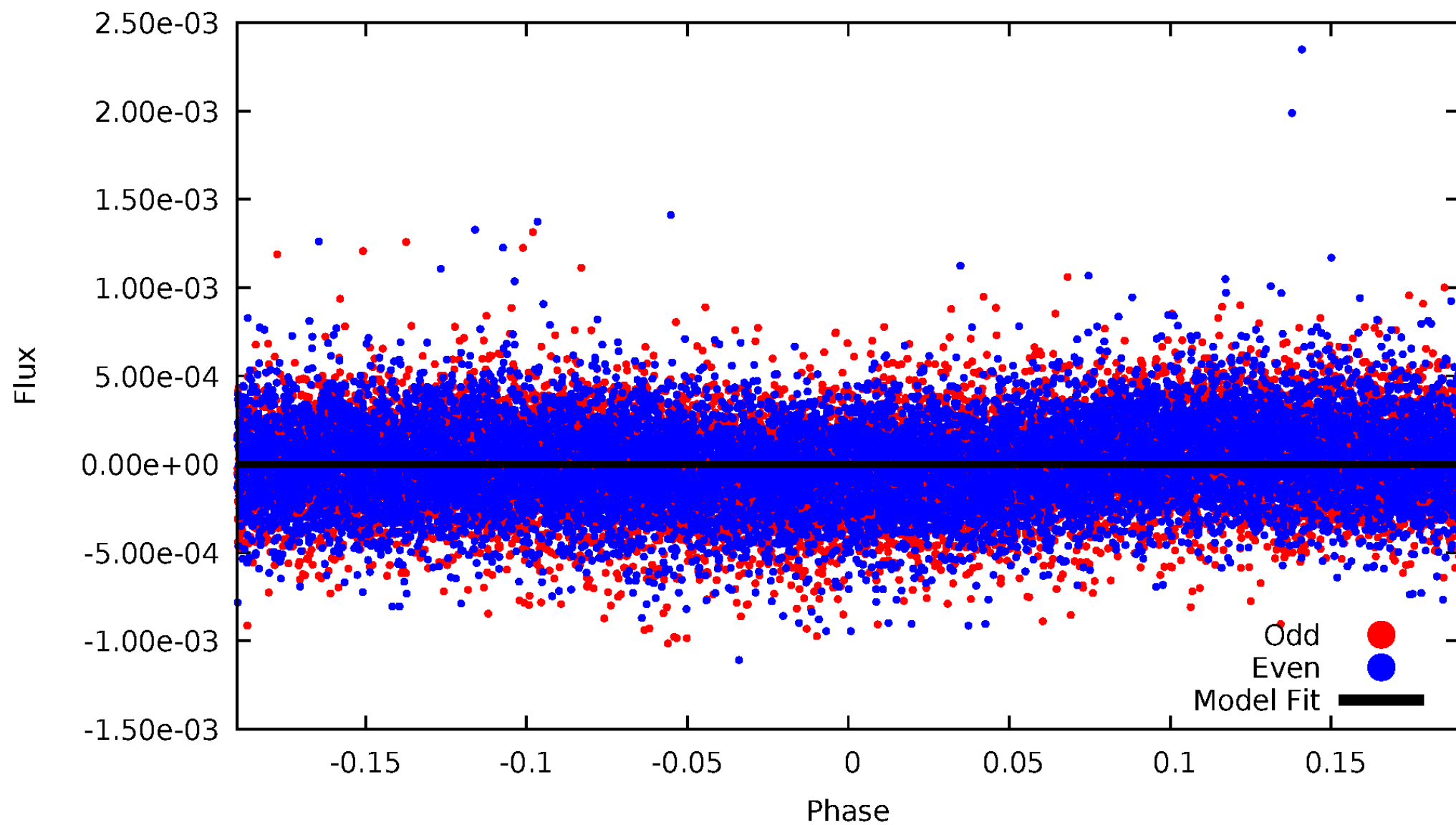


TCE 007007169-02



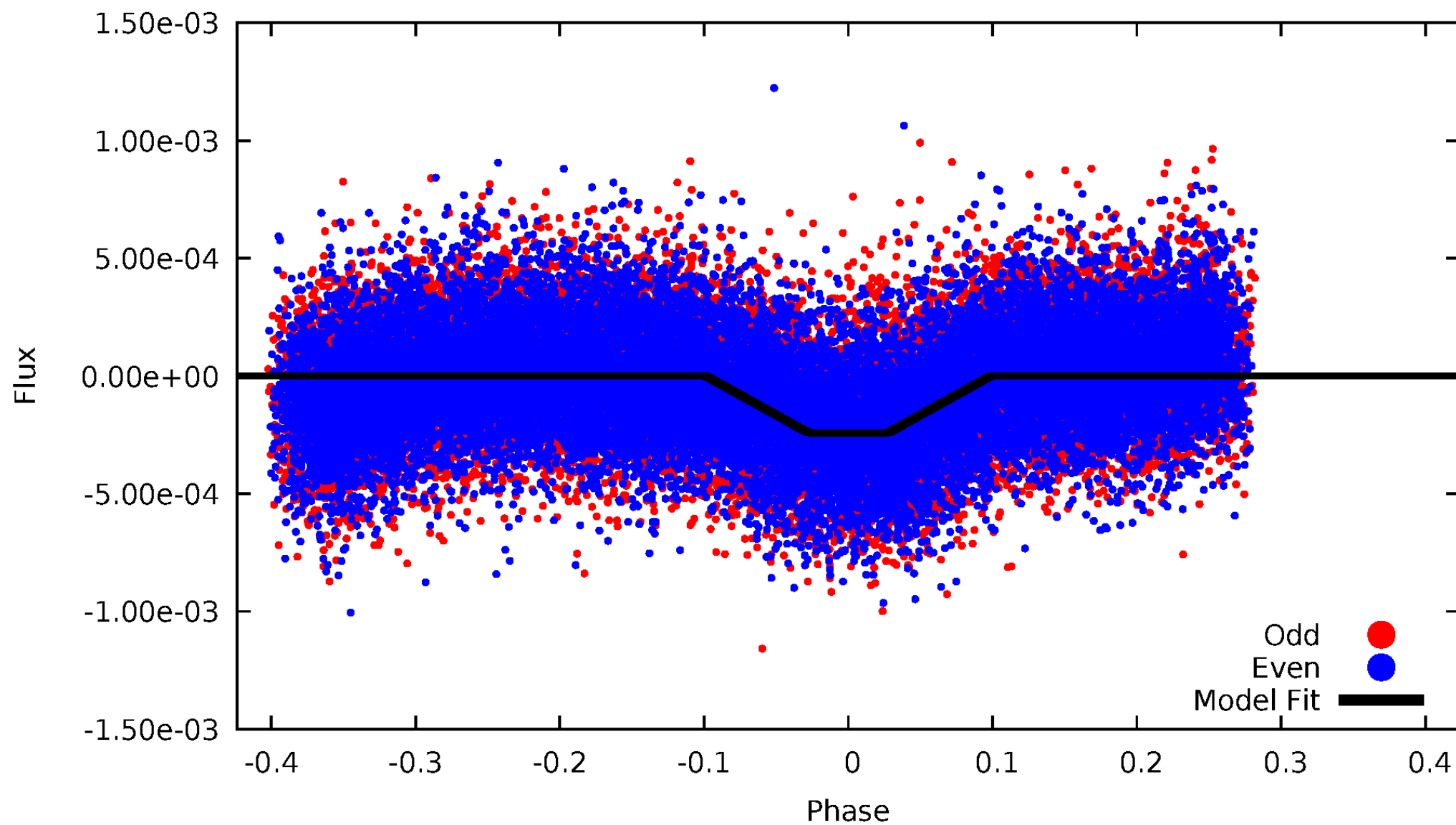
DV Odd/Even

TCE 007007169-02



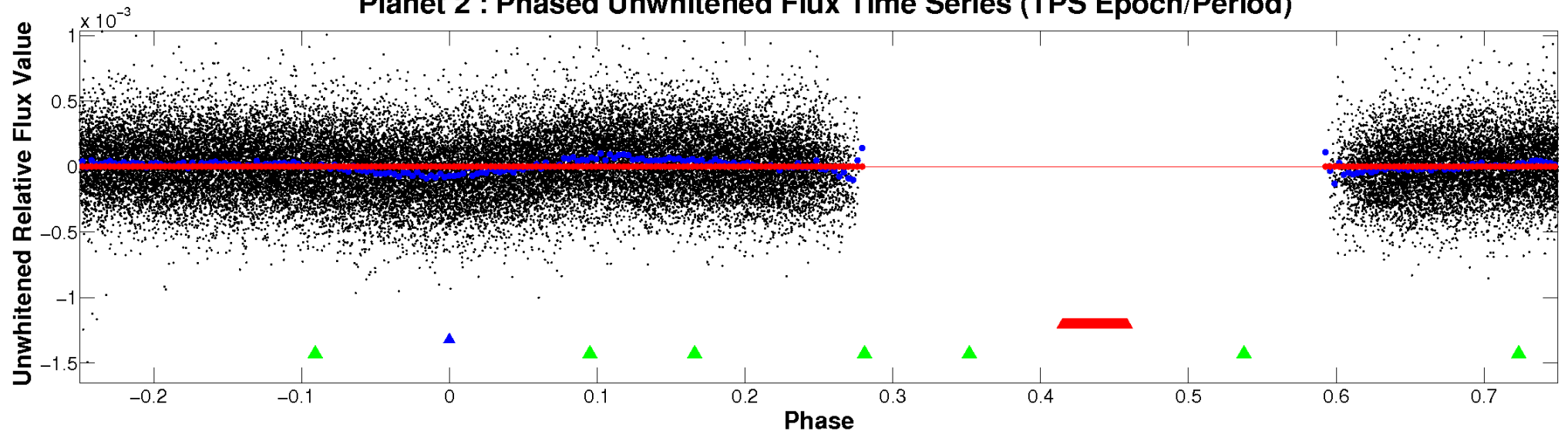
ALT Odd/Even

TCE 007007169-02



Non-Whitened Vs. Whitened Light Curve

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

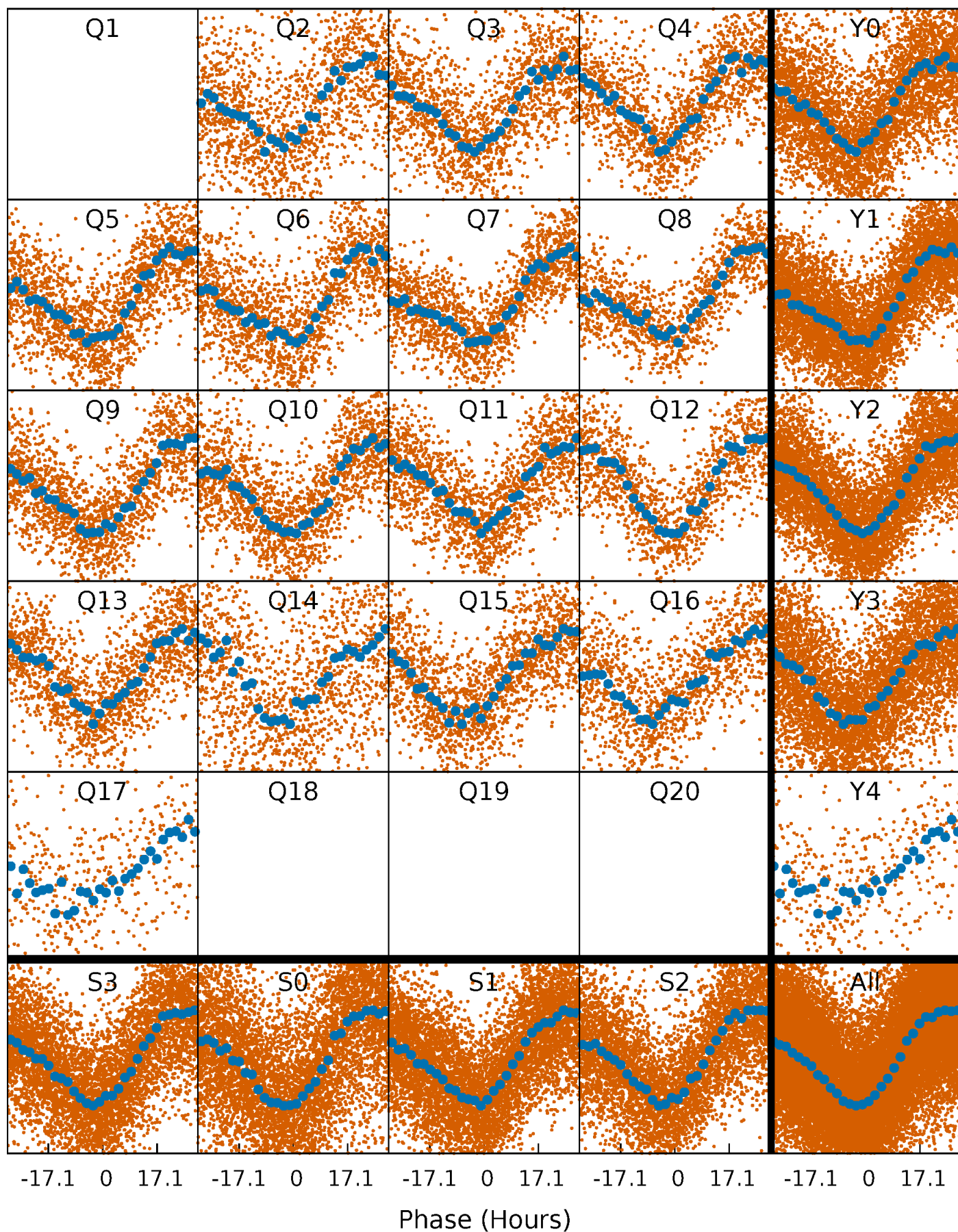


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



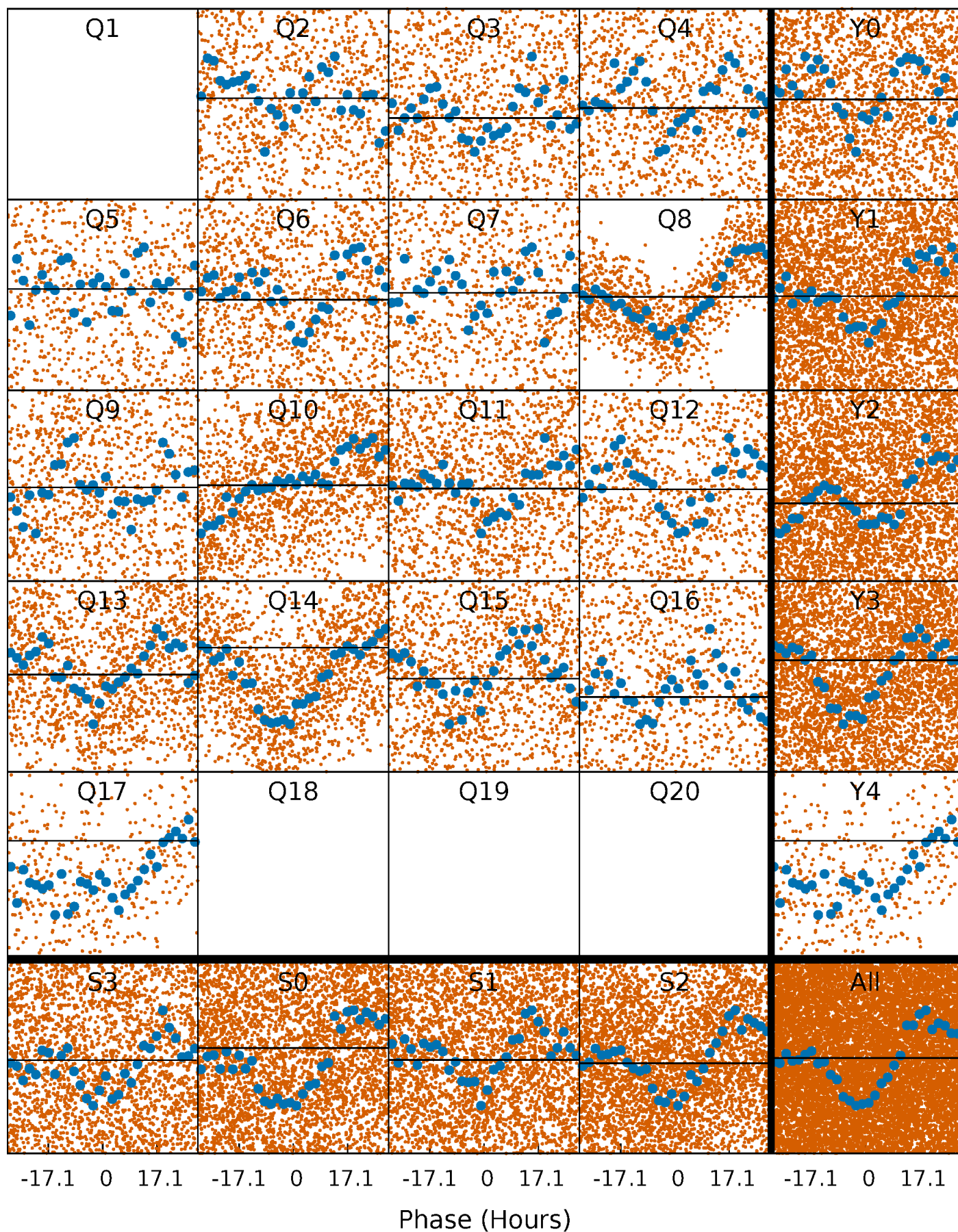
PDC Quarter-Phased Transit Curves

TCE 007007169-02 P= 6.584210 Days $T_0=135.822475$ (BKJD)



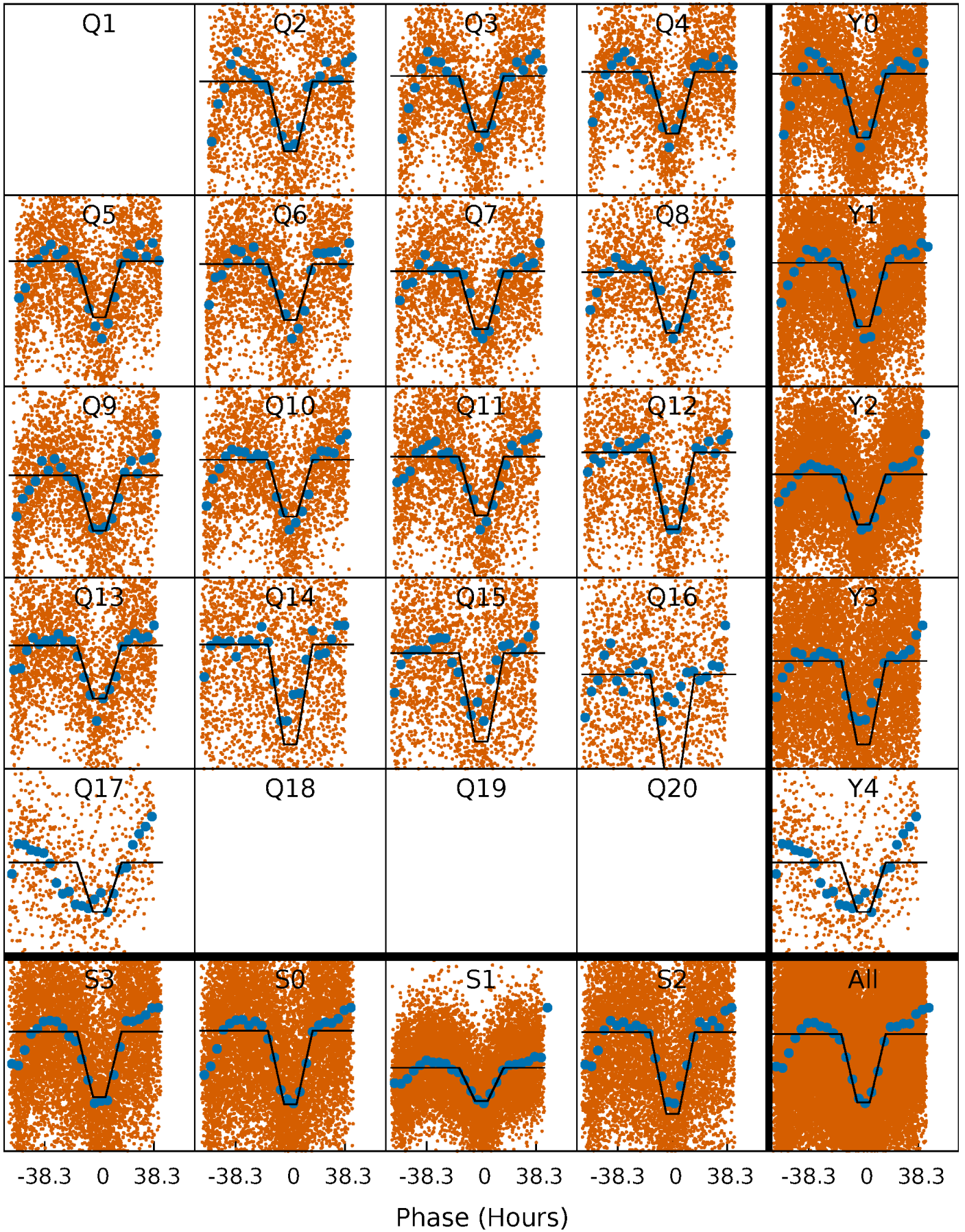
DV Quarter-Phased Transit Curves

TCE 007007169-02 P= 6.584210 Days $T_0=135.822475$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

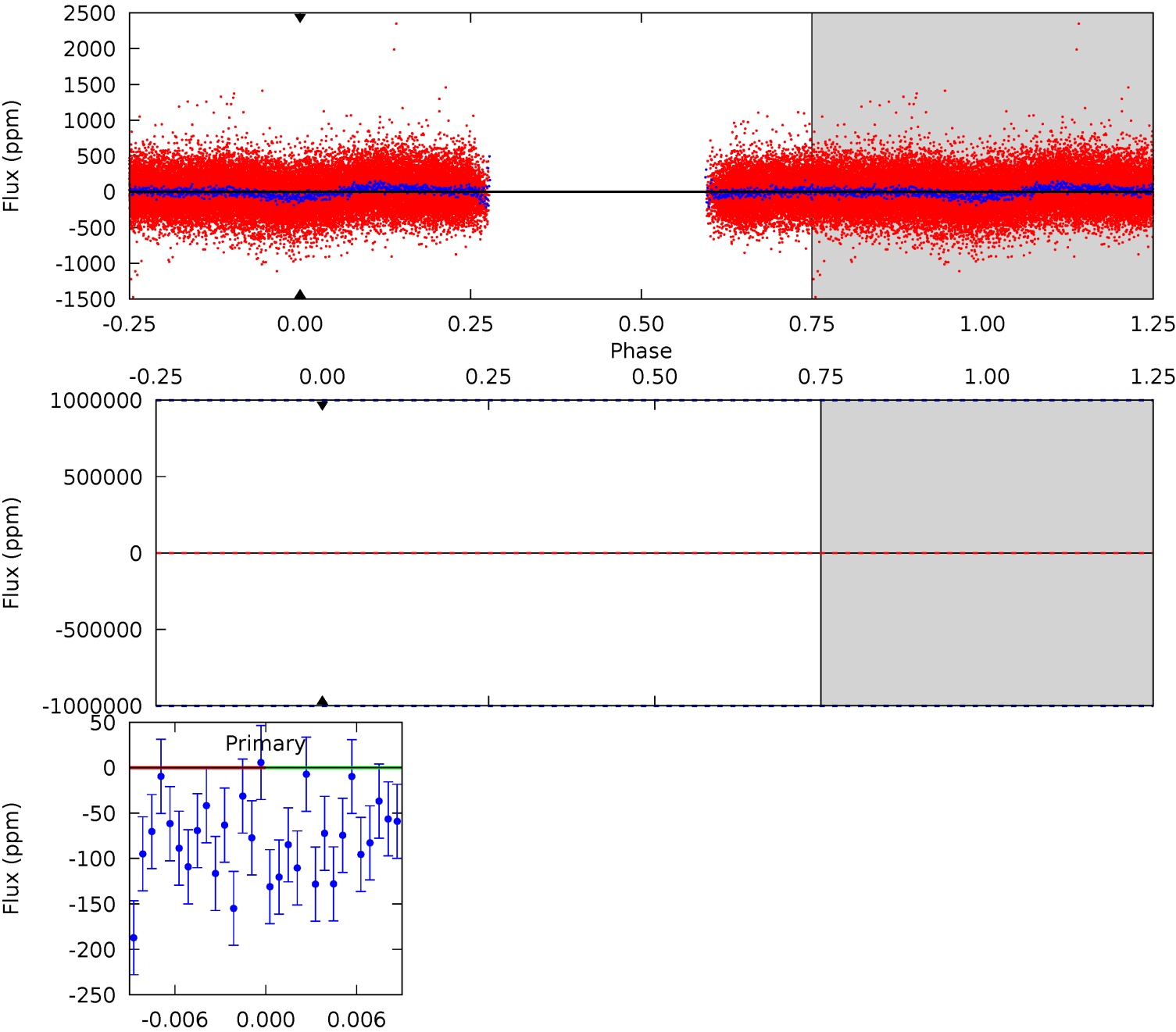
TCE 007007169-02 P= 6.584210 Days $T_0=135.797817$ (BKJD)



DV Model-Shift Uniqueness Test

007007169-02, P = 6.584210 Days, E = 135.822475 Days

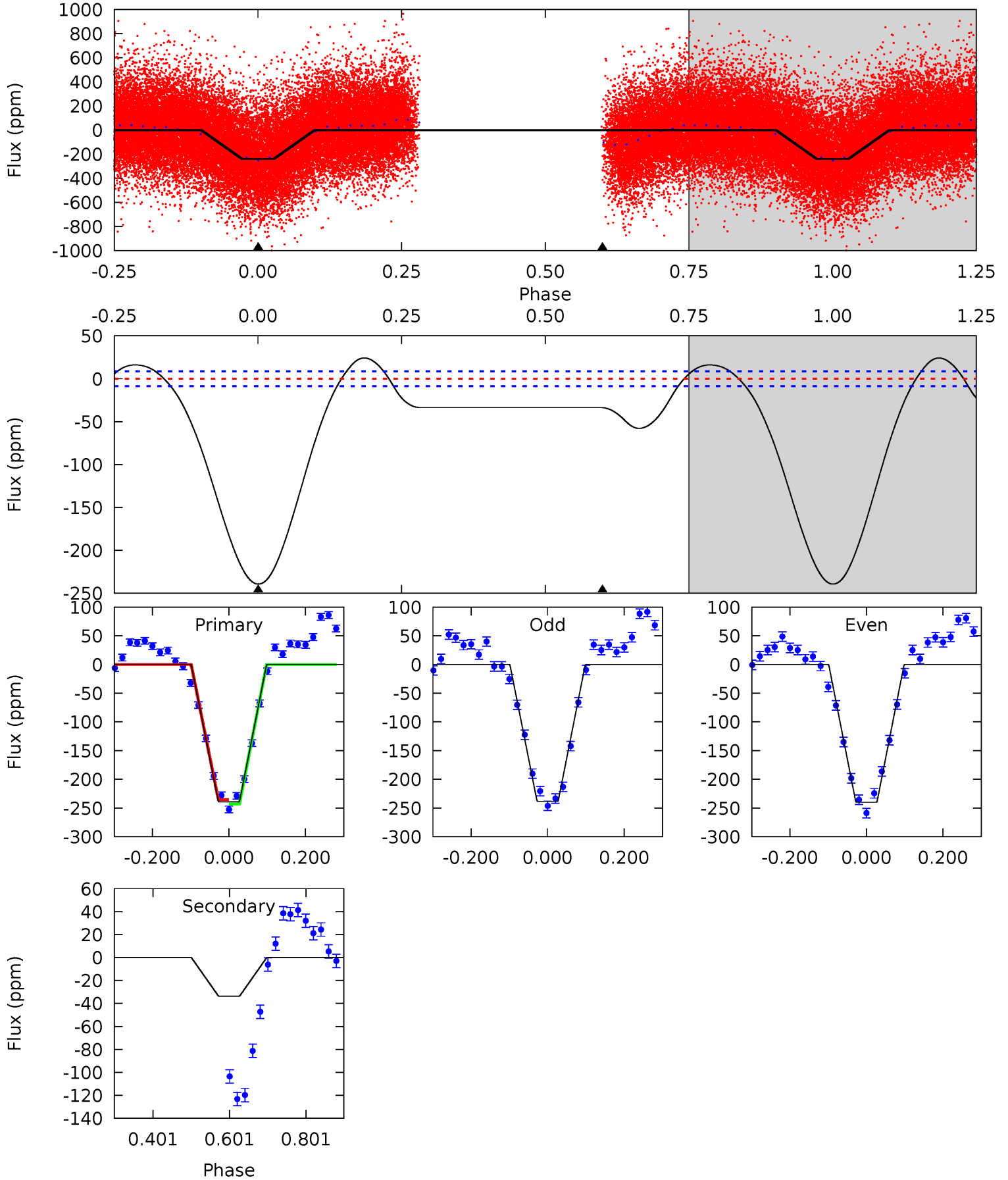
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007007169-02, P = 6.584210 Days, E = 135.797817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
120.7	17.0	0	0	4.42	1.28	8.67	120.7	120.7	17.0	17.0	0.41	0.97	0.09	1.96



Stellar Parameters For KIC 007007169

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6684^{+189}_{-237}	$3.847^{+0.440}_{-0.110}$	$-0.340^{+0.300}_{-0.300}$	$2.355^{+0.493}_{-1.068}$	$1.422^{+0.190}_{-0.353}$	$0.153^{+0.635}_{-0.050}$
	+3%/-4%	+11%/-3%	+88%/-88%	+21%/-45%	+13%/-25%	+414%/-33%
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 007007169-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$16.06^{+18.17}_{-11.37}$	2210^{+165}_{-271}	6132^{+35938}_{-31959}	42^{+3532}_{-1693}
Alt.	-34 ± 2	$16.80^{+20.58}_{-11.82}$	2196^{+175}_{-251}	2178^{+1599}_{-4702}	$0.393^{+3.885}_{-0.315}$

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 $A_{obs} \gg 1.0$

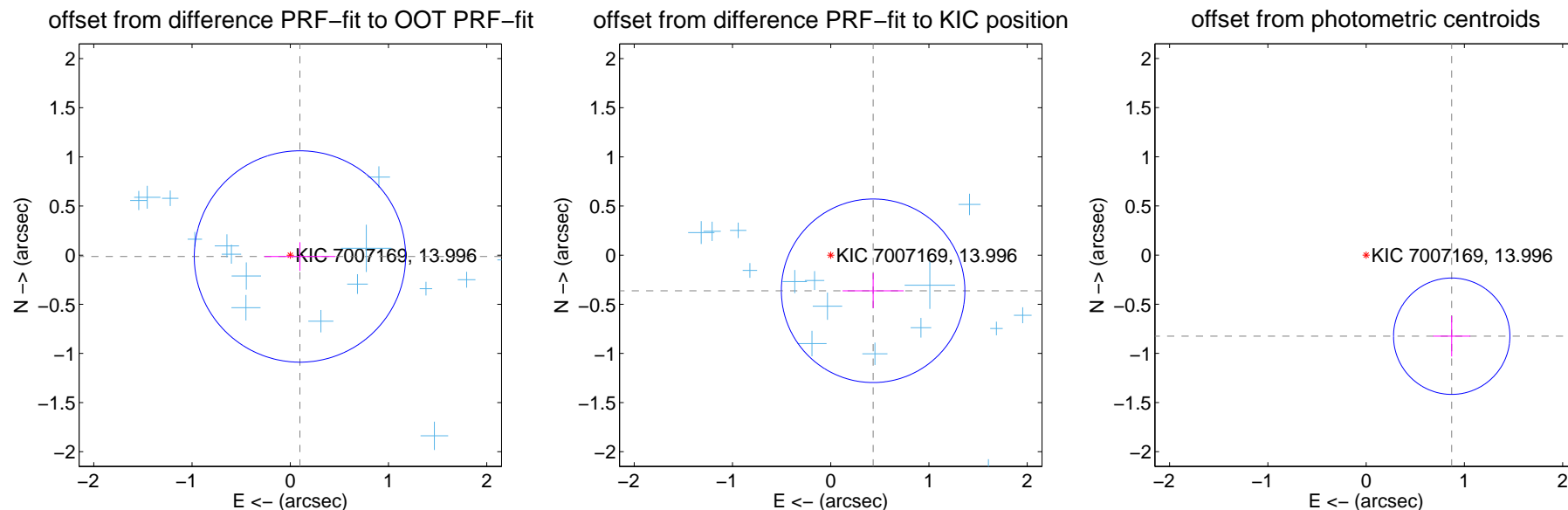
DV Centroid Data

Supplemental centroid analysis for 007007169-02. Kepler magnitude: 14.00. Transit SNR -1.00

There are 16 quarters with good PRF difference image offsets

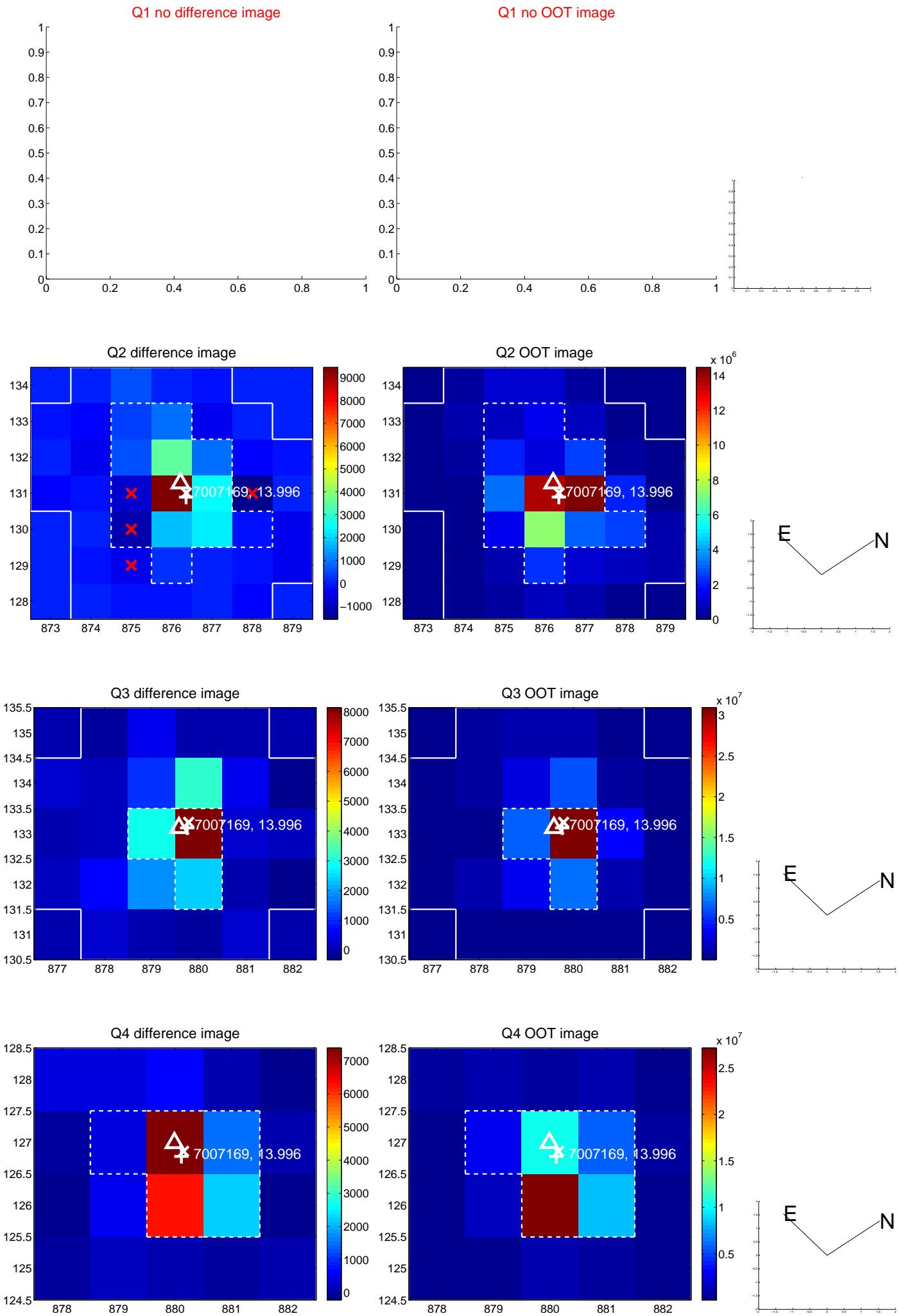
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.358	0.28	-0.098 ± 0.361	-0.014 ± 0.145
PRF-fit source offset from KIC position	0.563 ± 0.311	1.81	-0.431 ± 0.311	-0.362 ± 0.178
photometric centroid source offset	1.20 ± 0.20	6.08	-0.87 ± 0.19	-0.83 ± 0.21

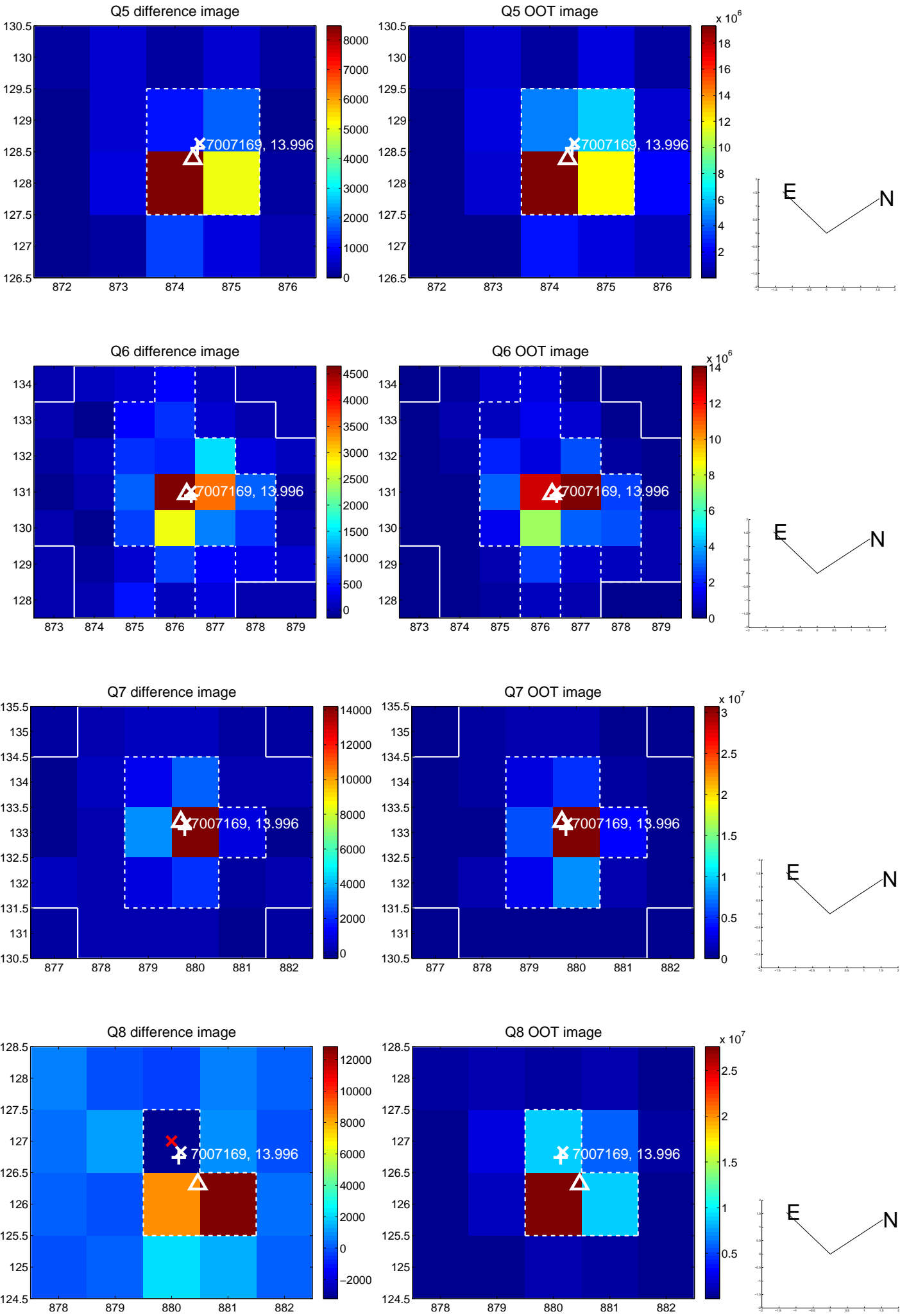


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

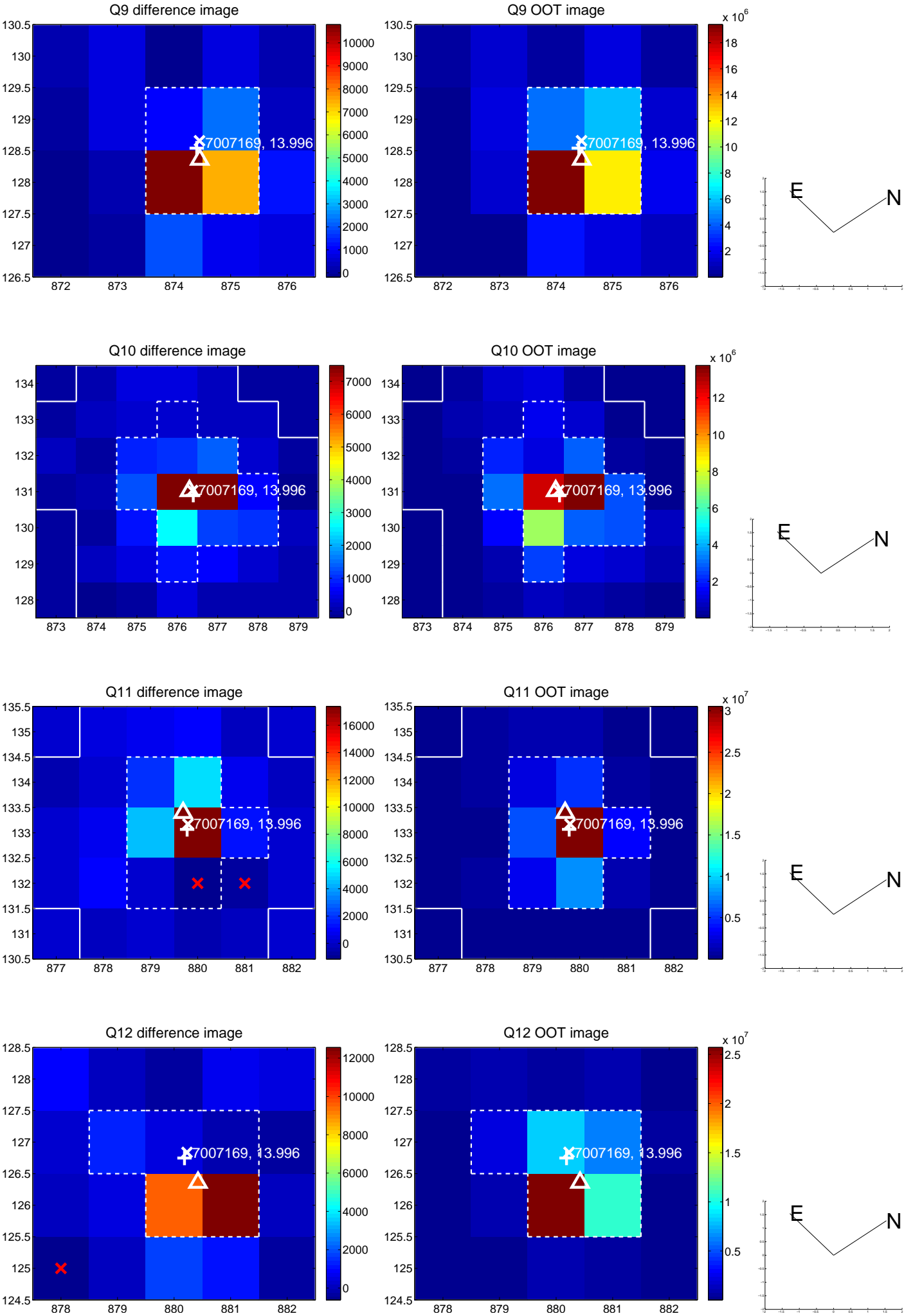
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



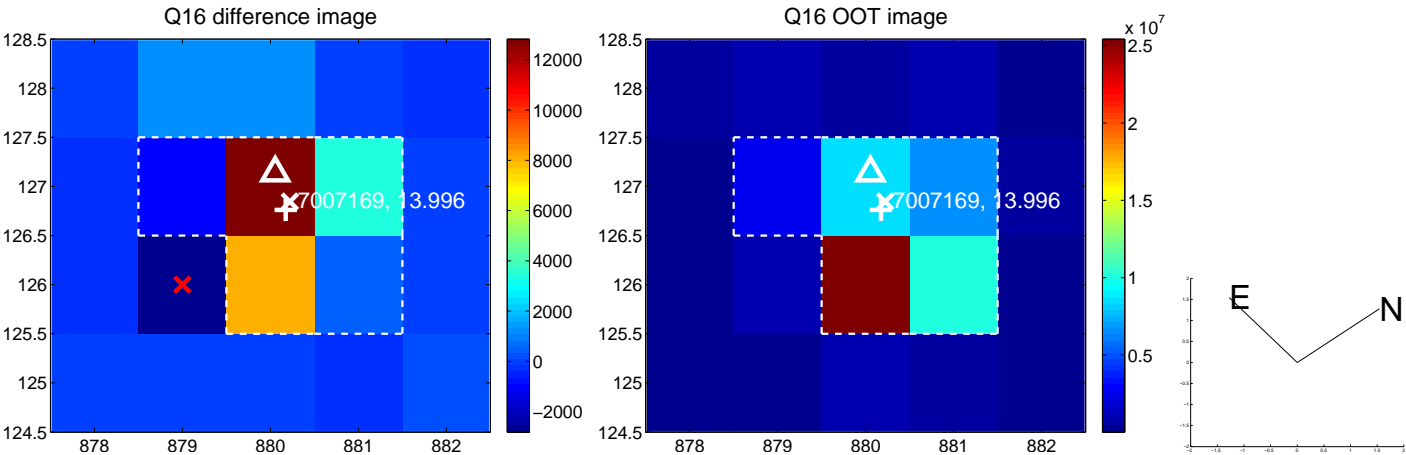
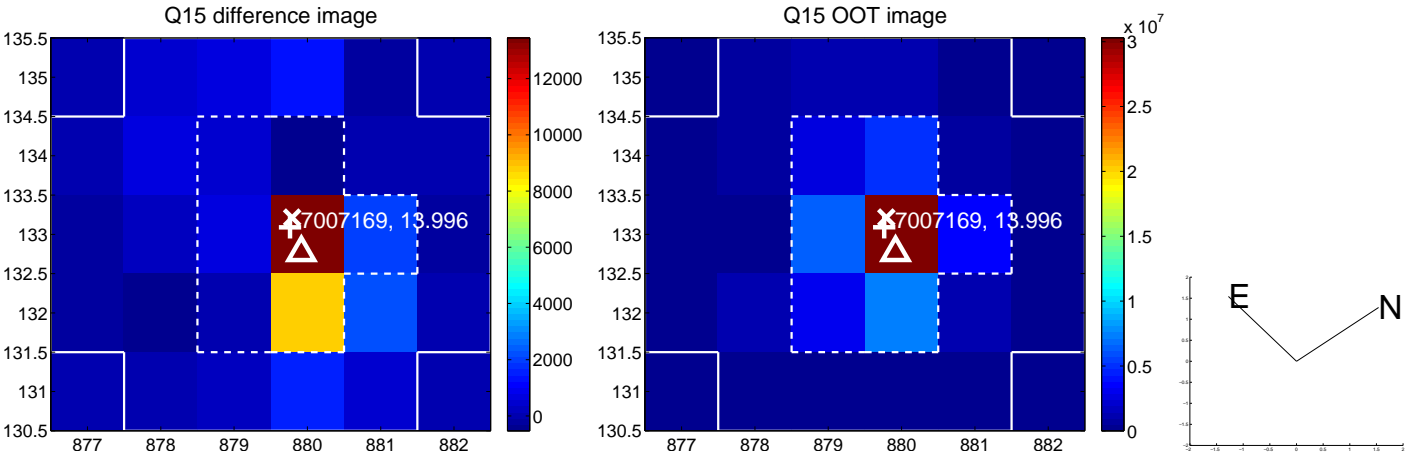
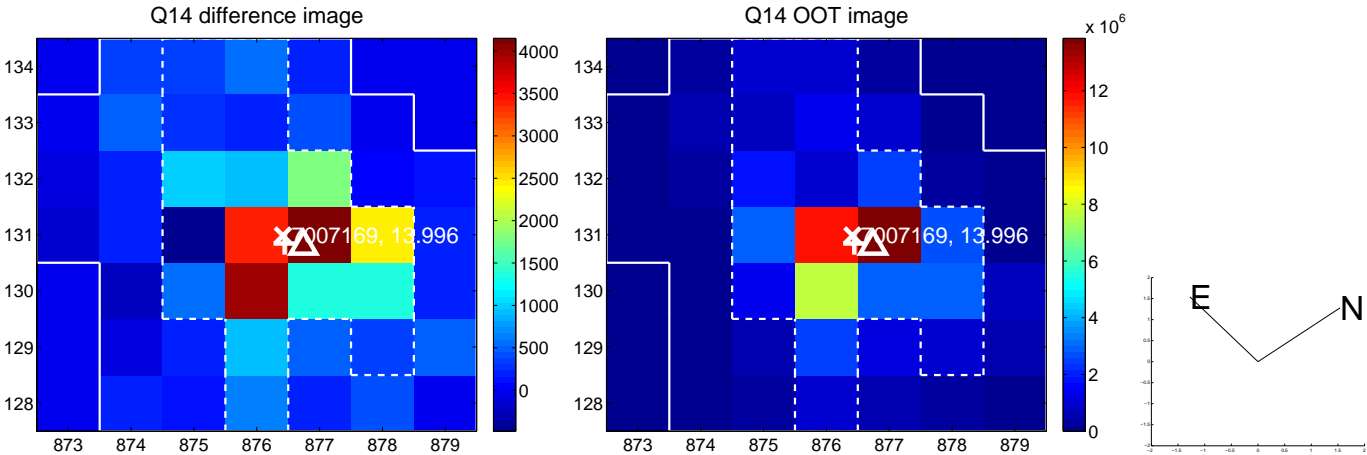
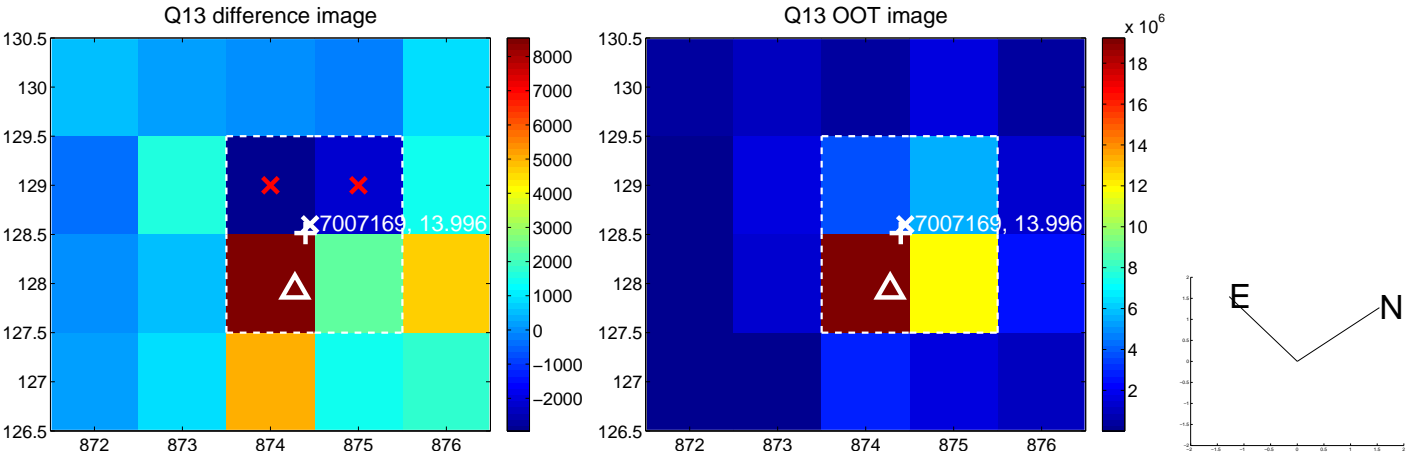
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



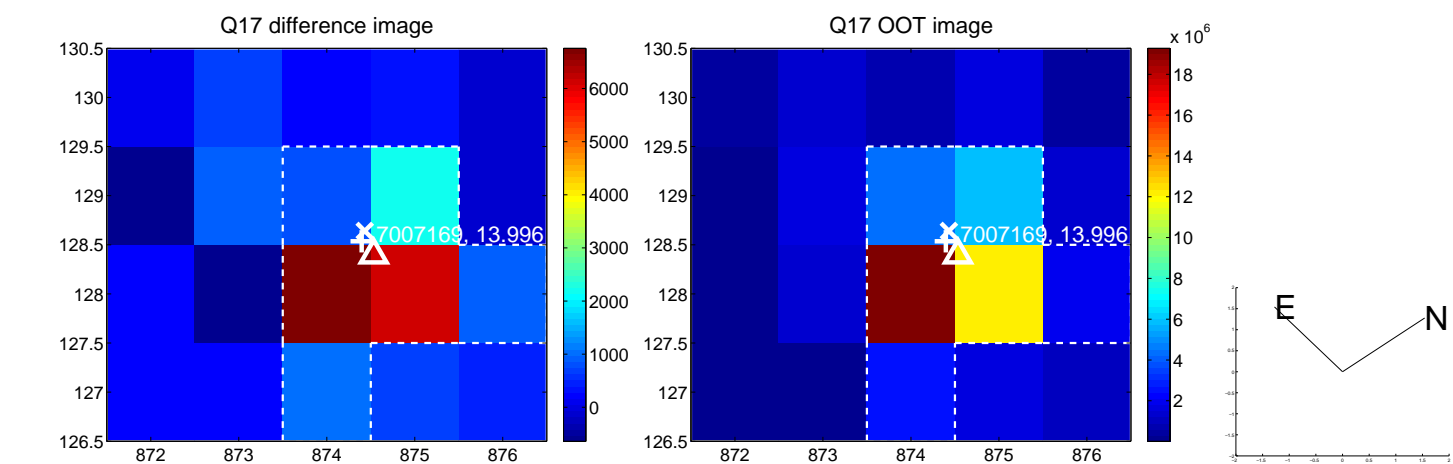
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



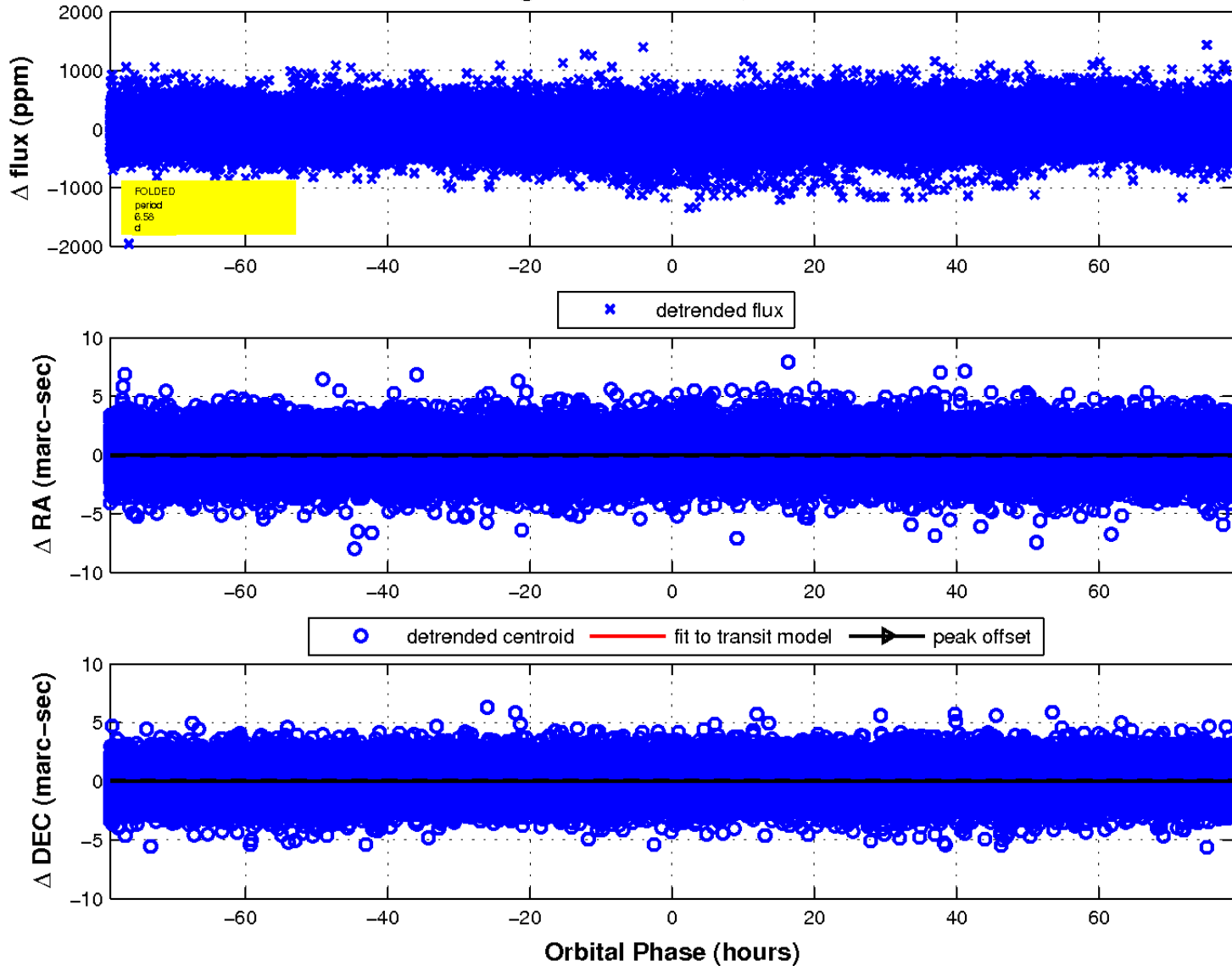
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

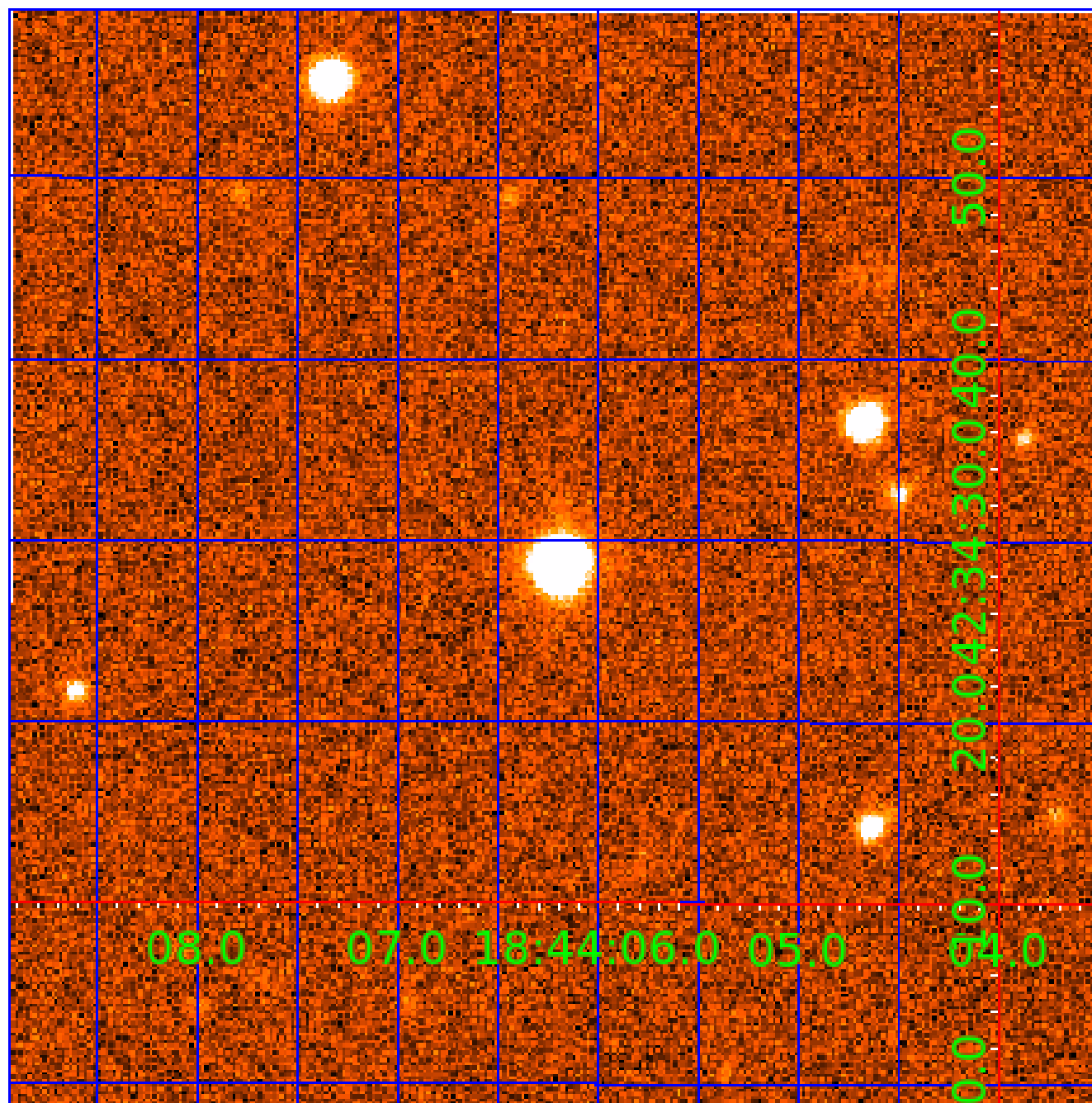


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 007007169

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})
007007169-01	OBS	No	6.582909	132.257023	38.4	18.637	8.6	7.9	2.35	6684	1.65	1658.86
007007169-02	OBS	No	6.584210	135.822475	133.0	15.000	8.9	-1.0	2.35	6684	2.74	1658.42
007007169-03	OBS	No	198.749838	301.520538	169.1	43.237	10.5	5.9	2.35	6684	3.21	17.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007007169-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007007169-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007007169-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

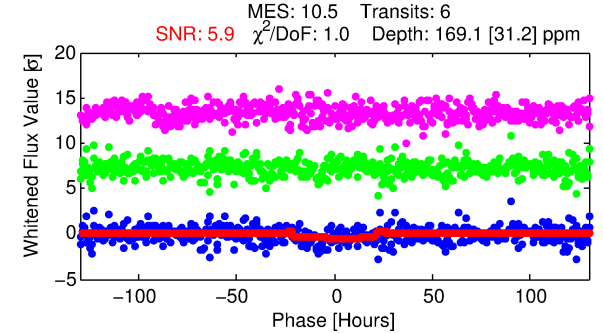
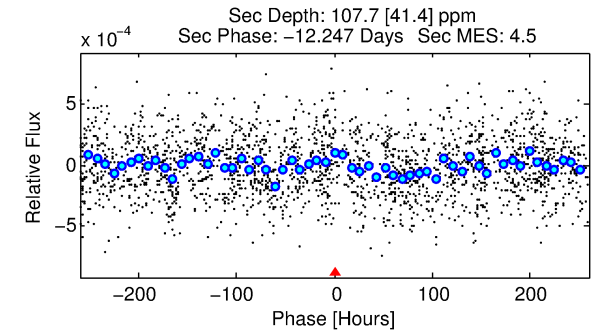
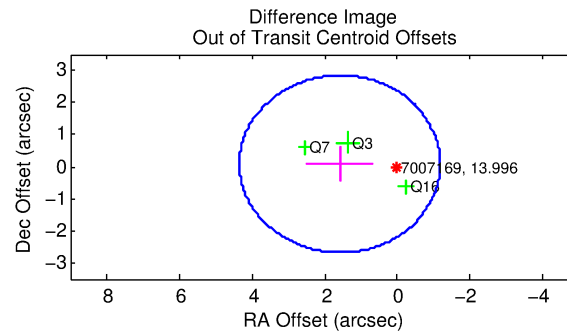
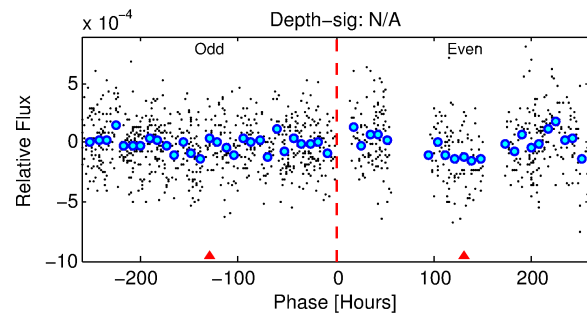
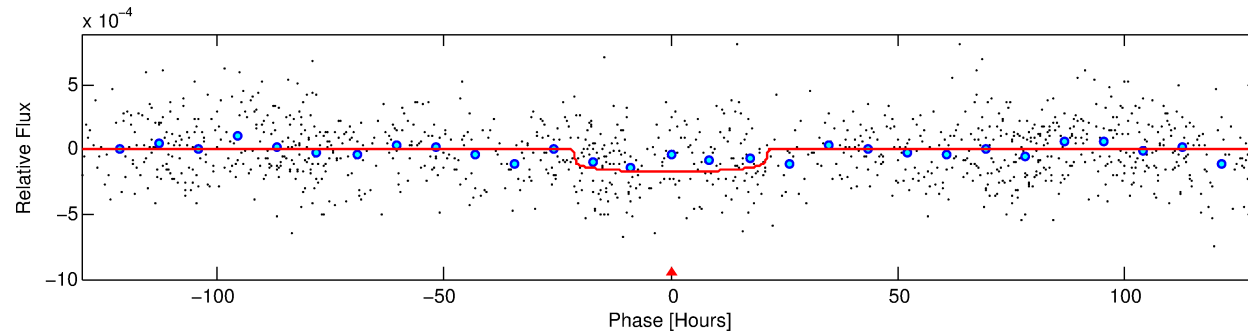
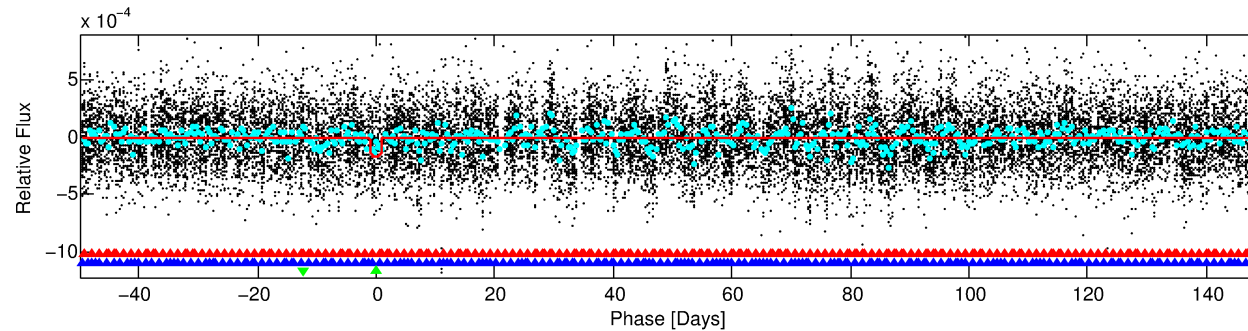
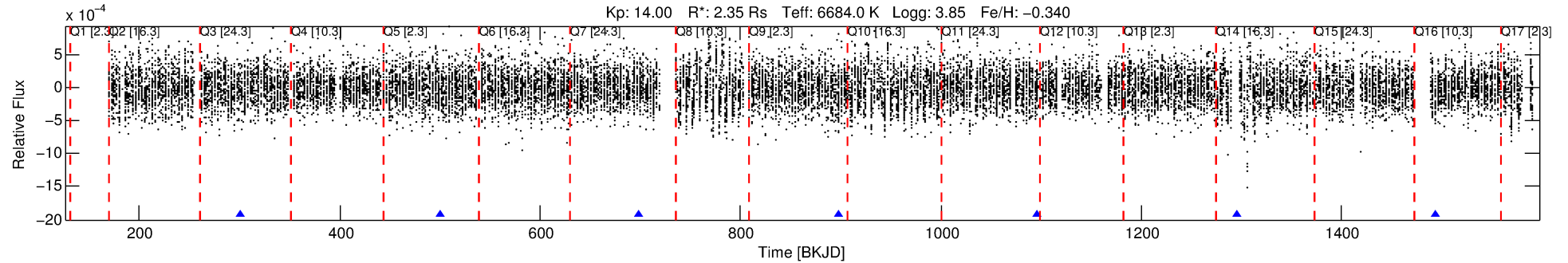
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007007169-03

No Significant Match Found

DV One-Page Summary

KIC: 7007169 Candidate: 3 of 3 Period: 198.750 d



DV Fit Results:

Period = 198.74984 [0.01743] d
Epoch = 301.5205 [0.0648] BKJD
Rp/R* = 0.0125 [0.0031]
a/R* = 28.90 [37.43]
b = 0.59 [1.44]
Seff = 17.65 [13.30]
Teq = 523 [98] K
Rp = 3.21 [1.66] Re
a = 0.7497 [0.3398] AU
Ag = 3235.62 [3145.90] [1.03σ]
Teffp = 6094 [985] K [5.63σ]

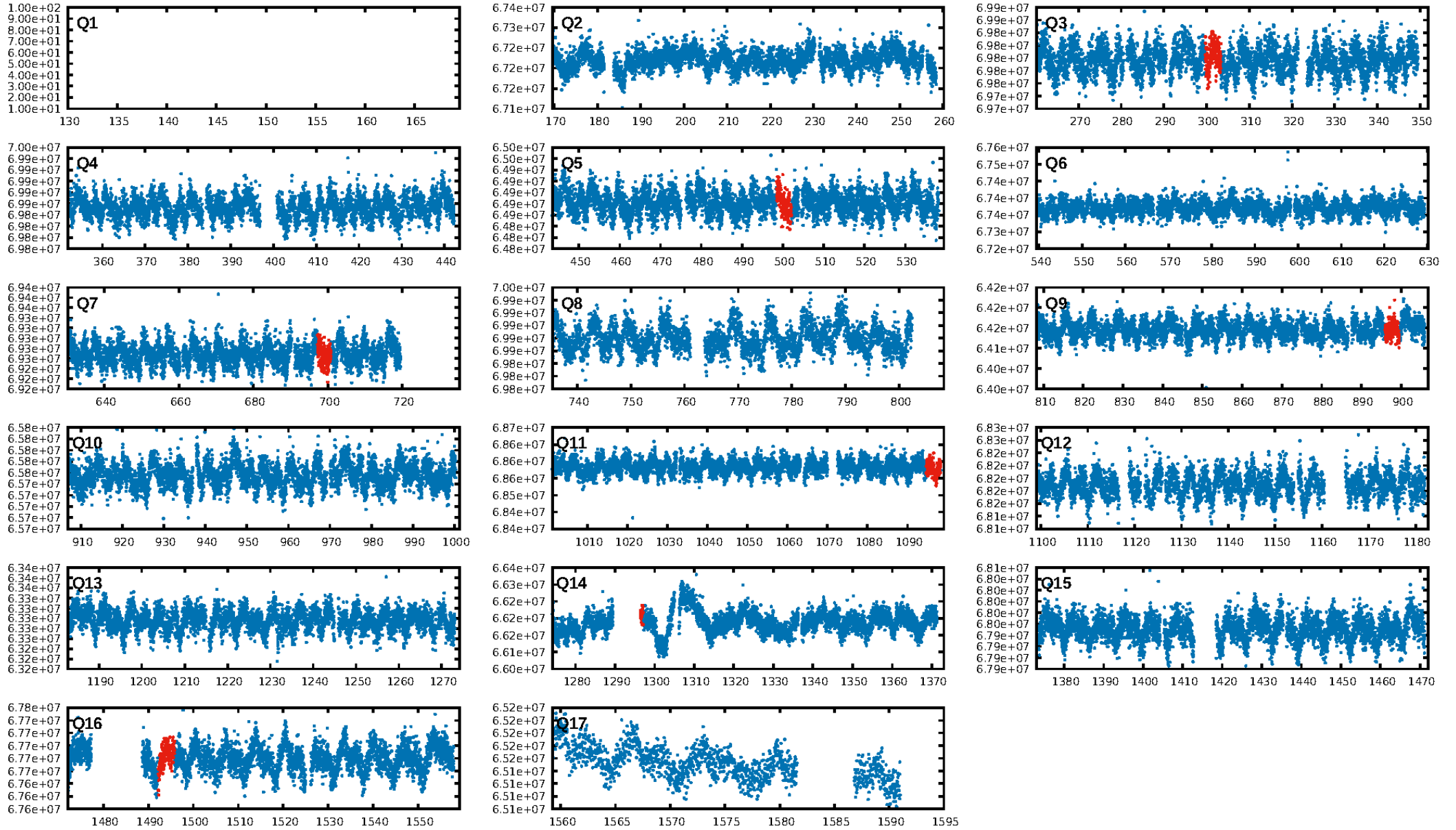
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [100.78σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.61e-14
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.5939
Centroid-sig: 9.1%
Centroid-so: 2.319 arcsec [2.27σ]
OotOffset-rm: 1.586 arcsec [1.72σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-rm: 1.373 arcsec [1.57σ]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/5]

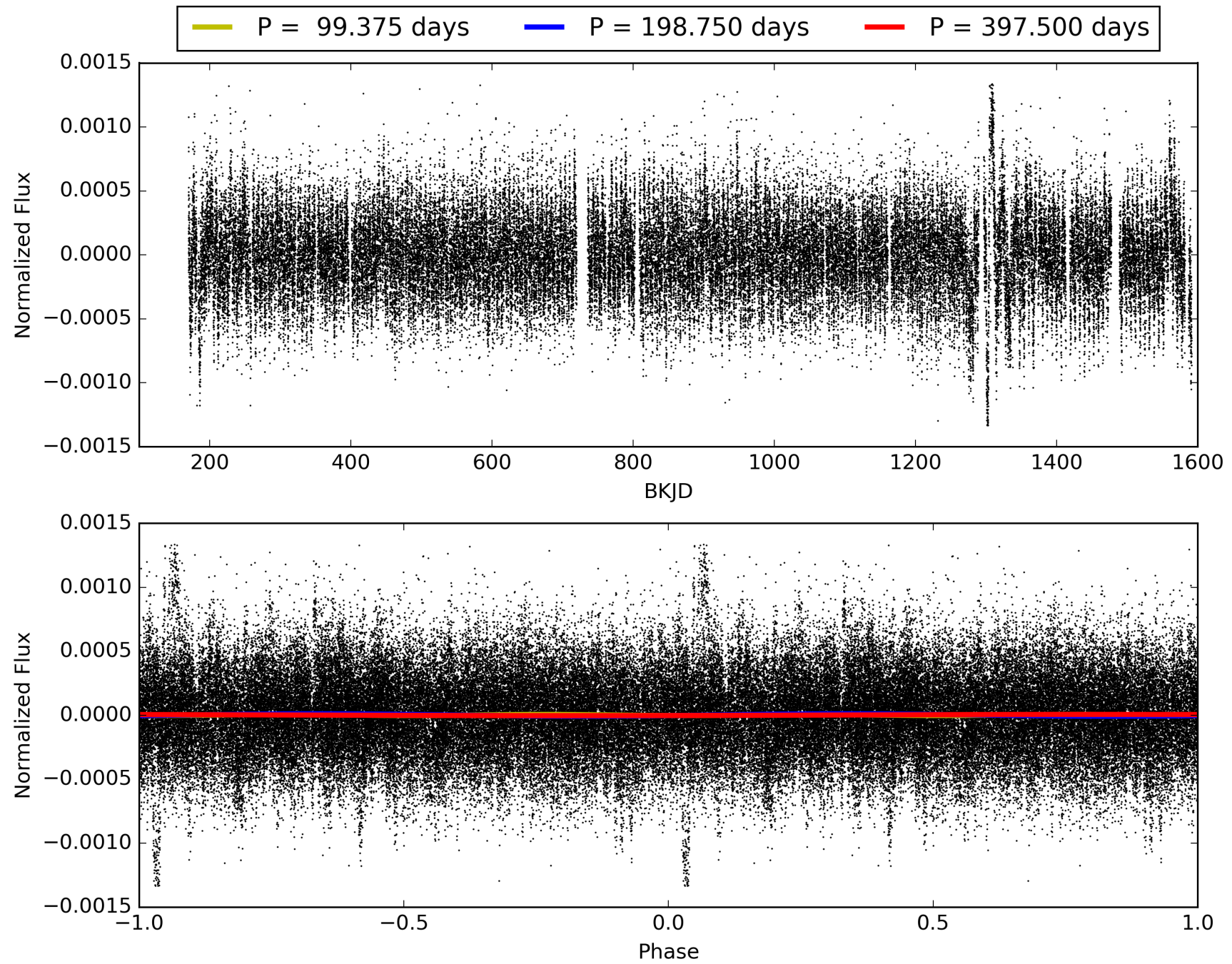
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:09:23 Z

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

TCE 007007169-03, PDC Light Curves

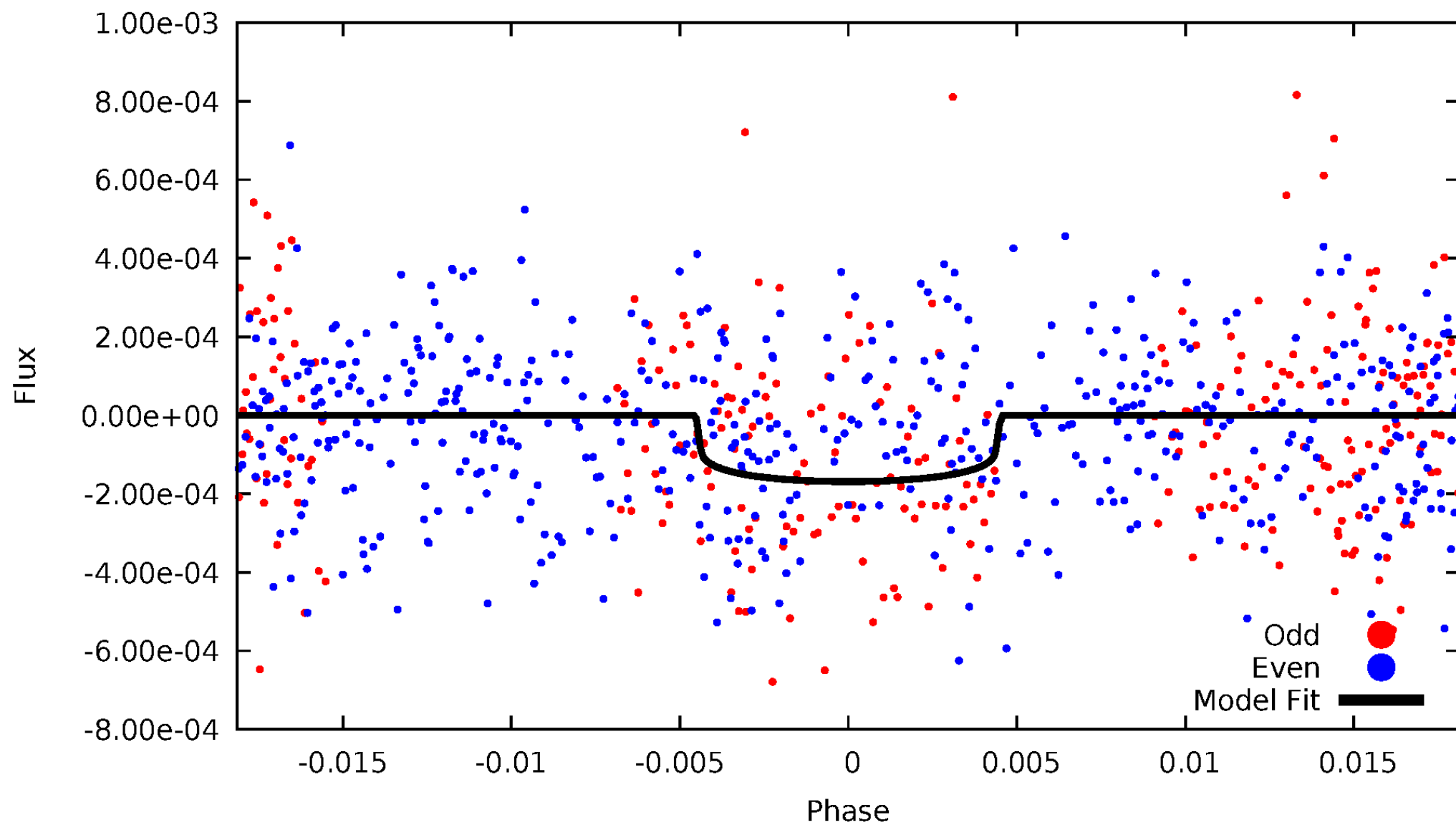


TCE 007007169-03



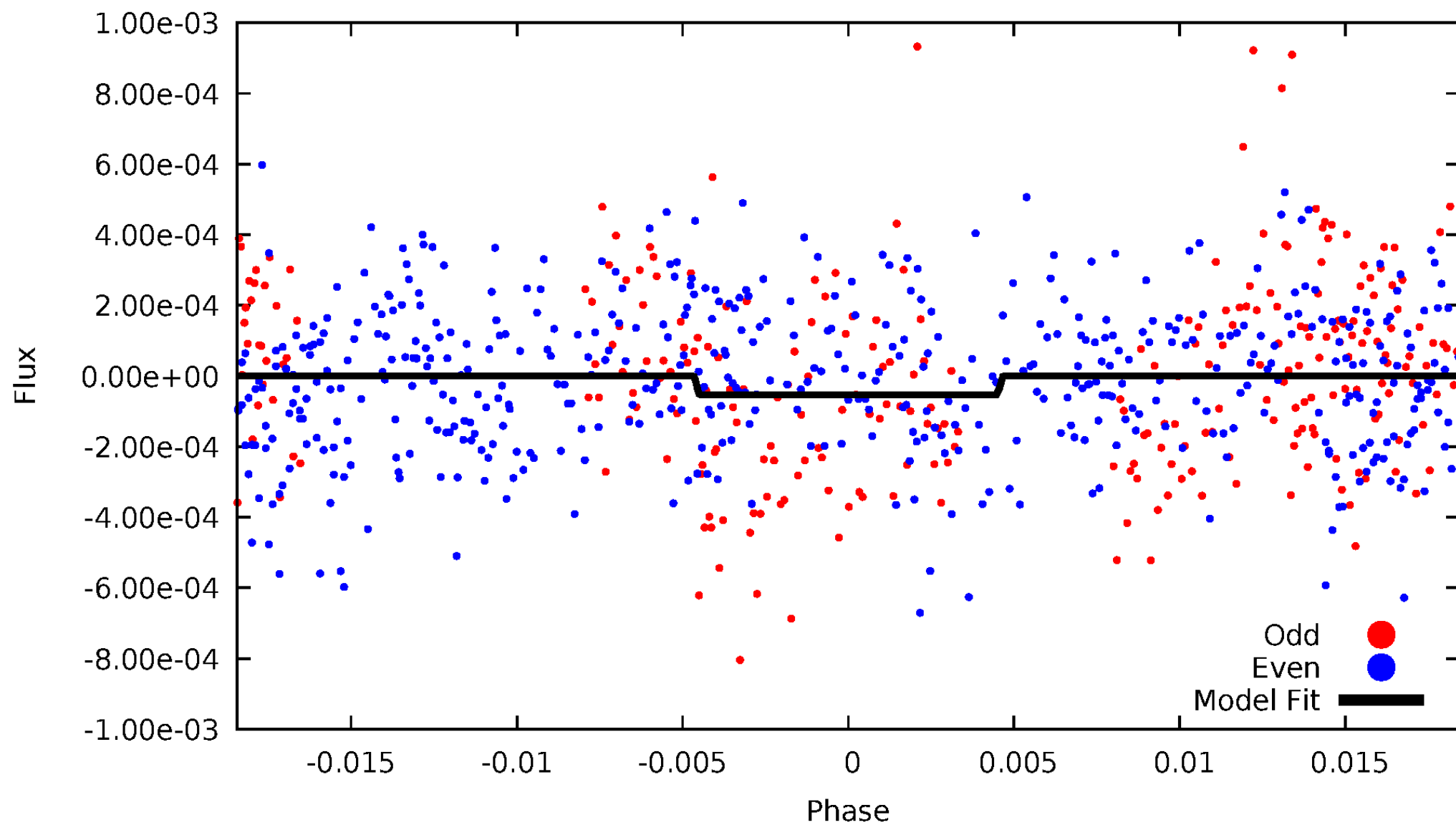
DV Odd/Even

TCE 007007169-03



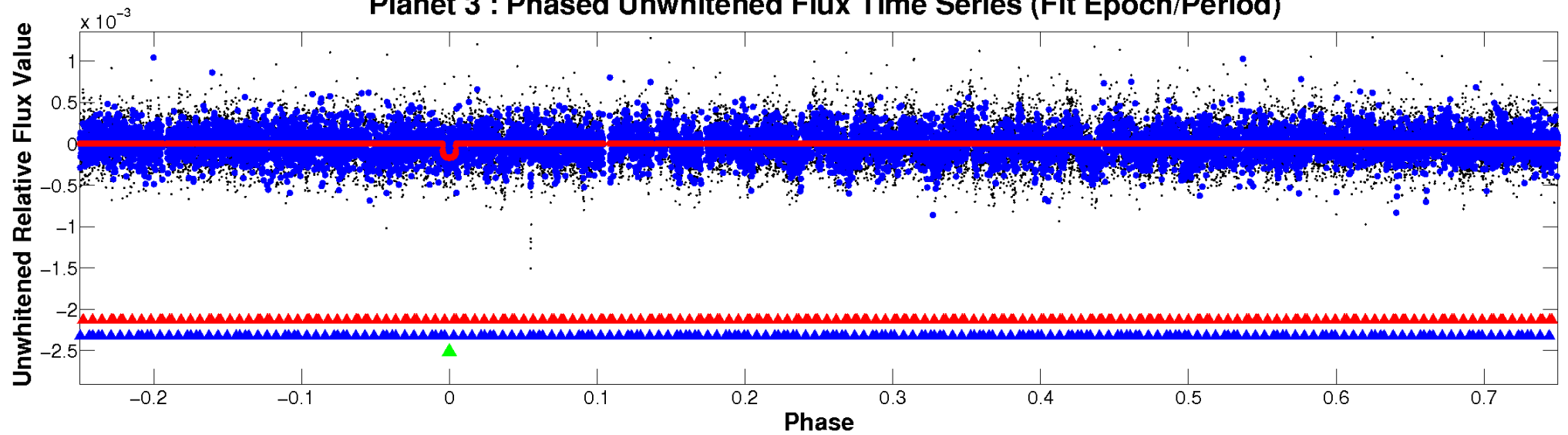
ALT Odd/Even

TCE 007007169-03

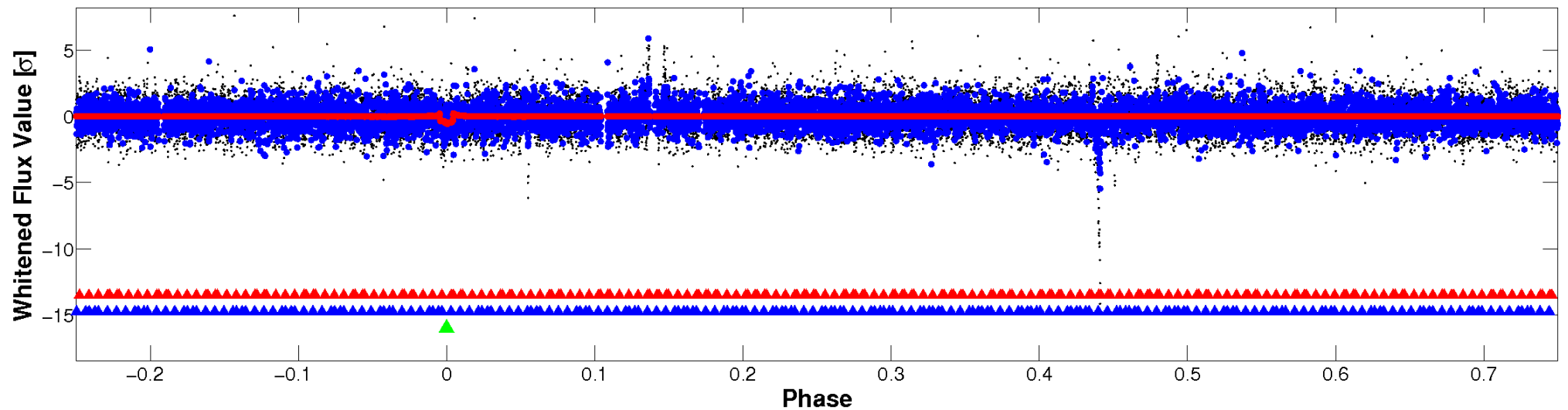


Non-Whitened Vs. Whitened Light Curve

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

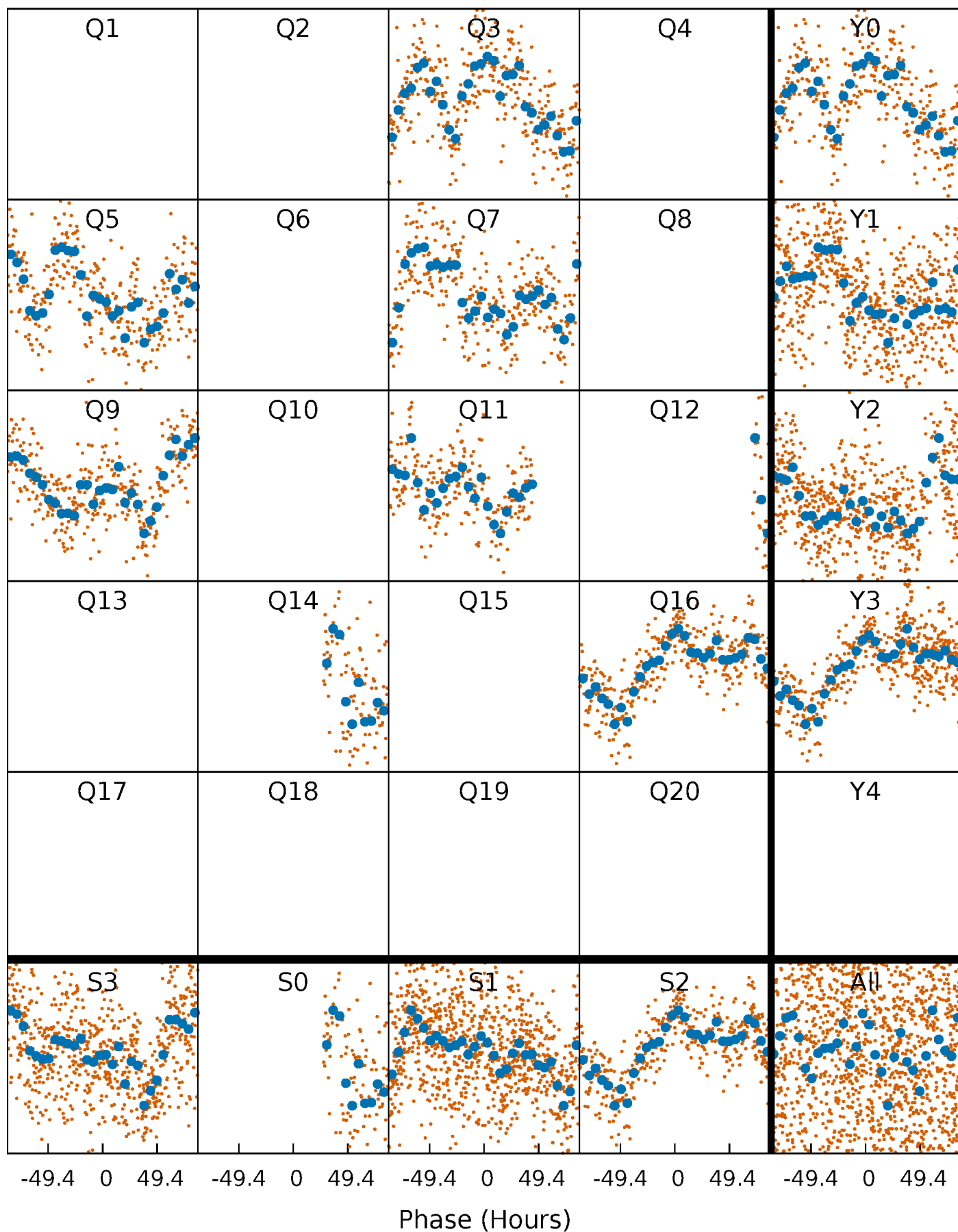


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



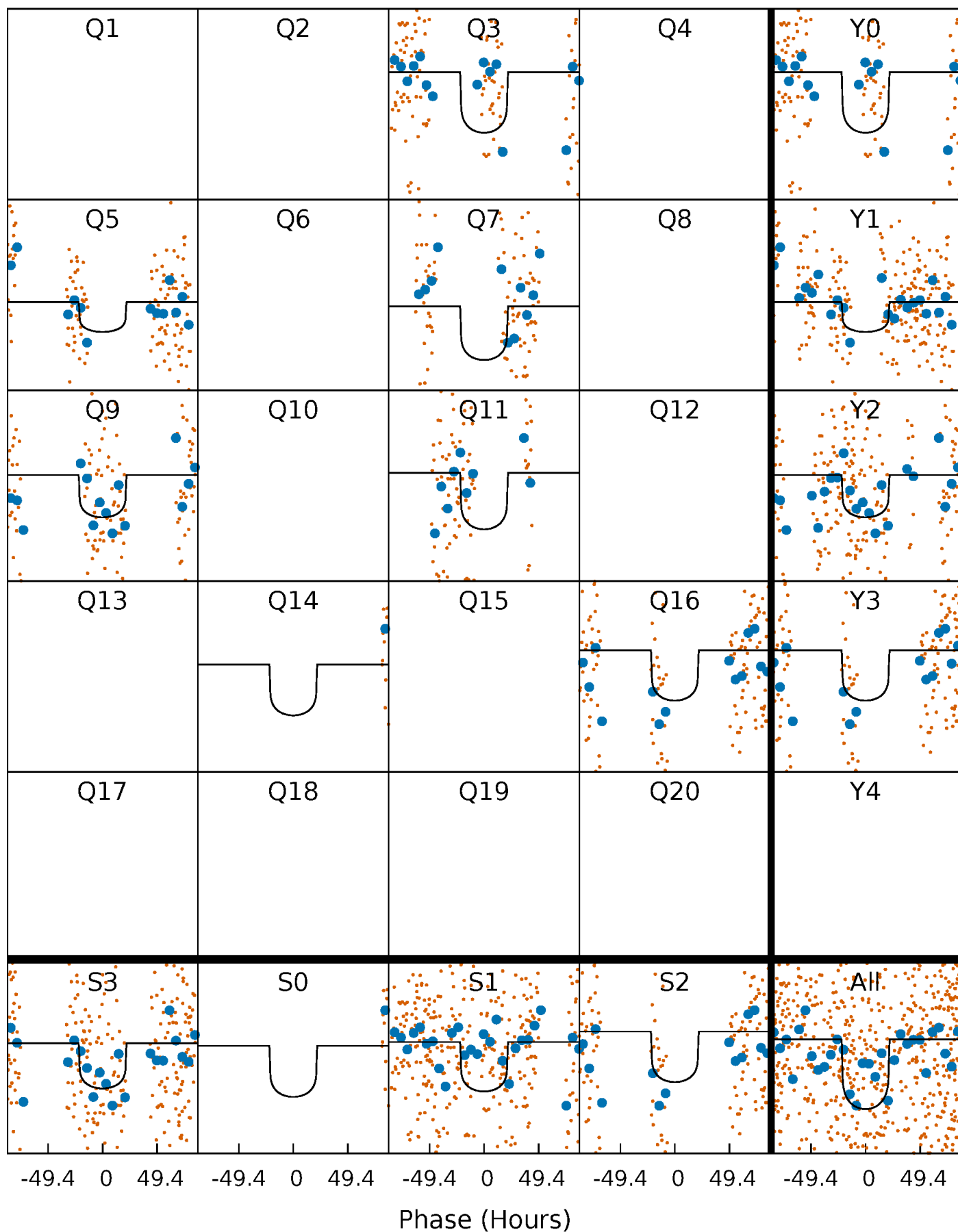
PDC Quarter-Phased Transit Curves

TCE 007007169-03 P=198.749838 Days $T_0=301.520538$ (BKJD)



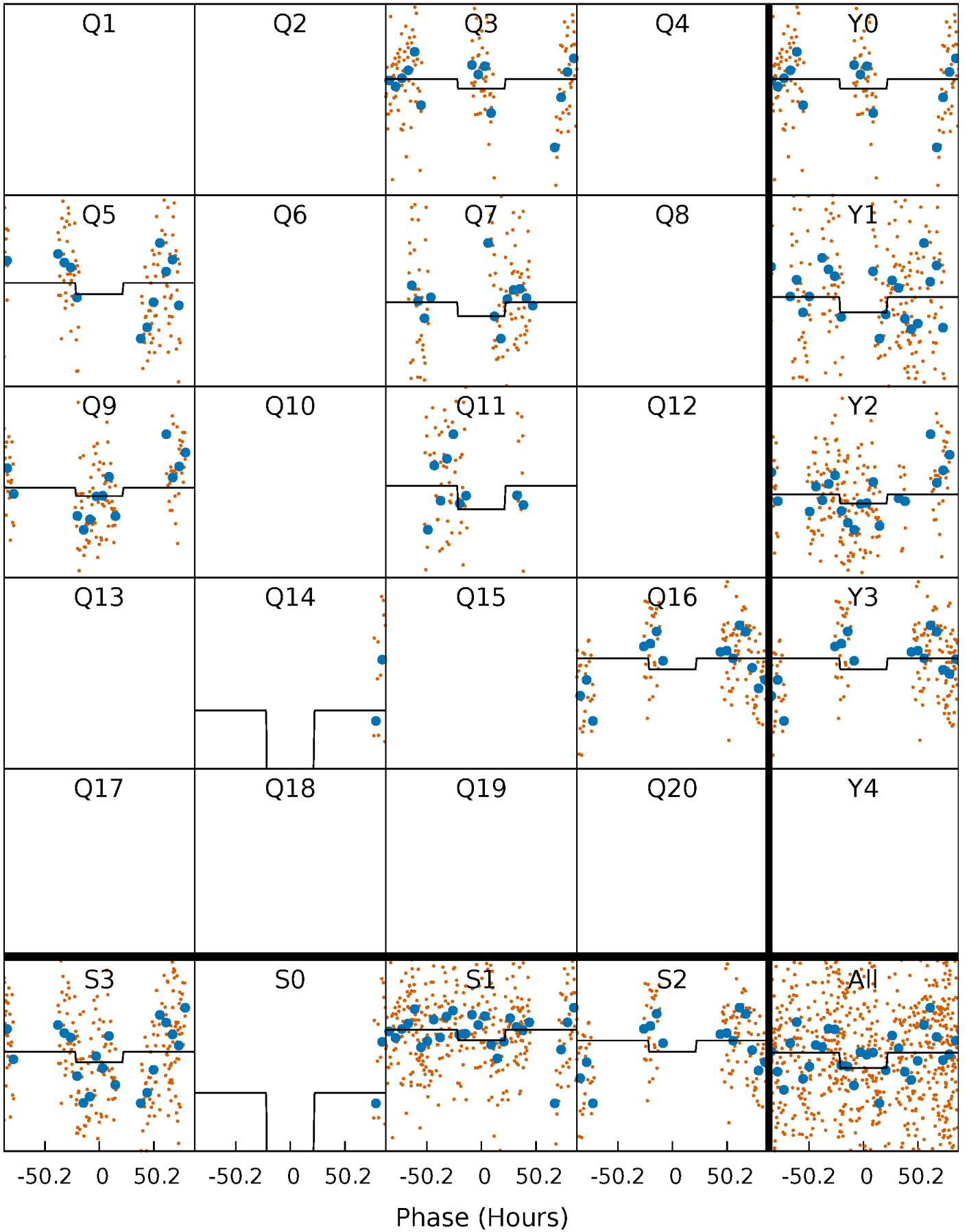
DV Quarter-Phased Transit Curves

TCE 007007169-03 P=198.749838 Days $T_0=301.520538$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

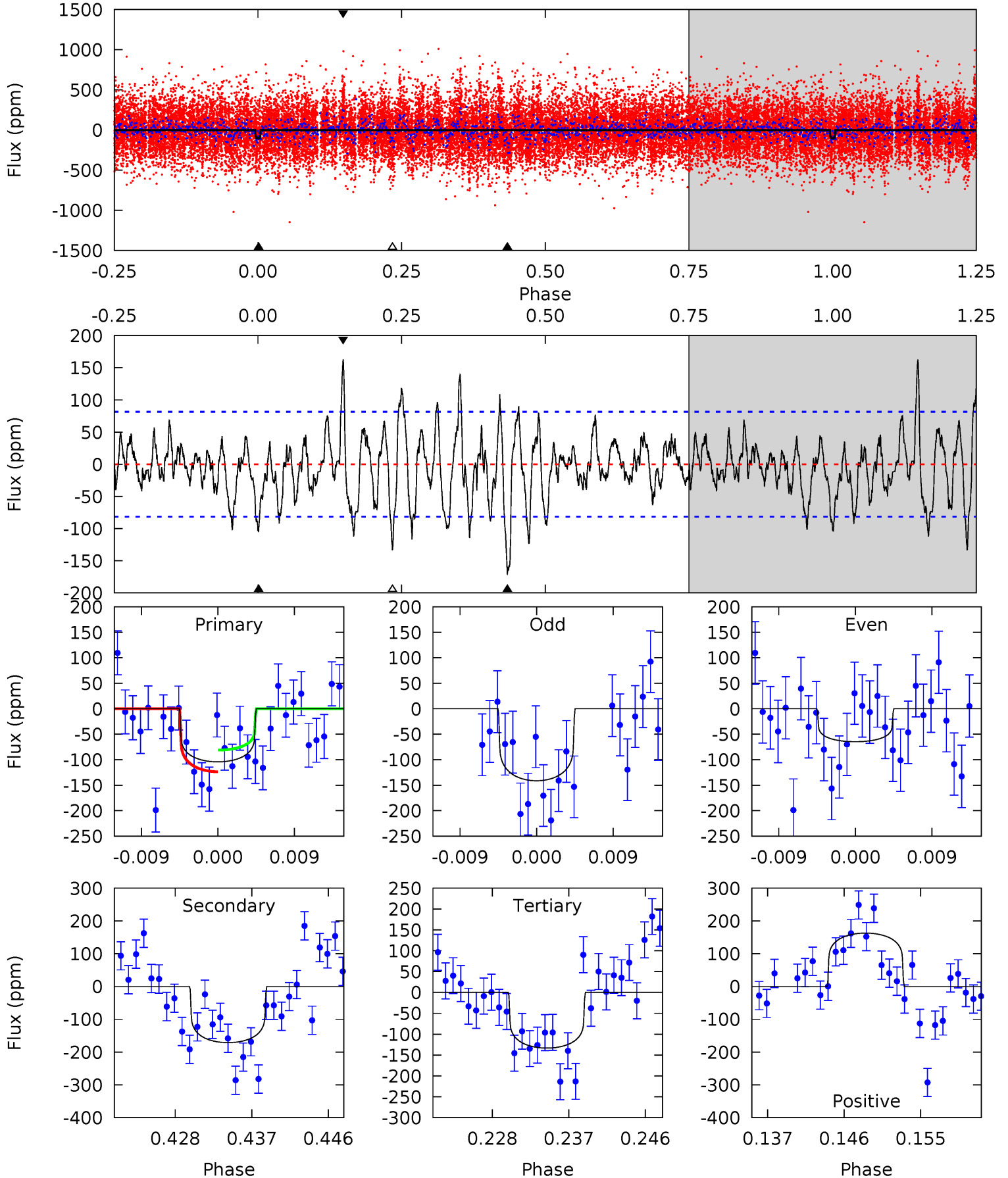
TCE 007007169-03 P=198.743616 Days $T_0=301.742976$ (BKJD)



DV Model-Shift Uniqueness Test

007007169-03, P = 198.749838 Days, E = 102.770700 Days

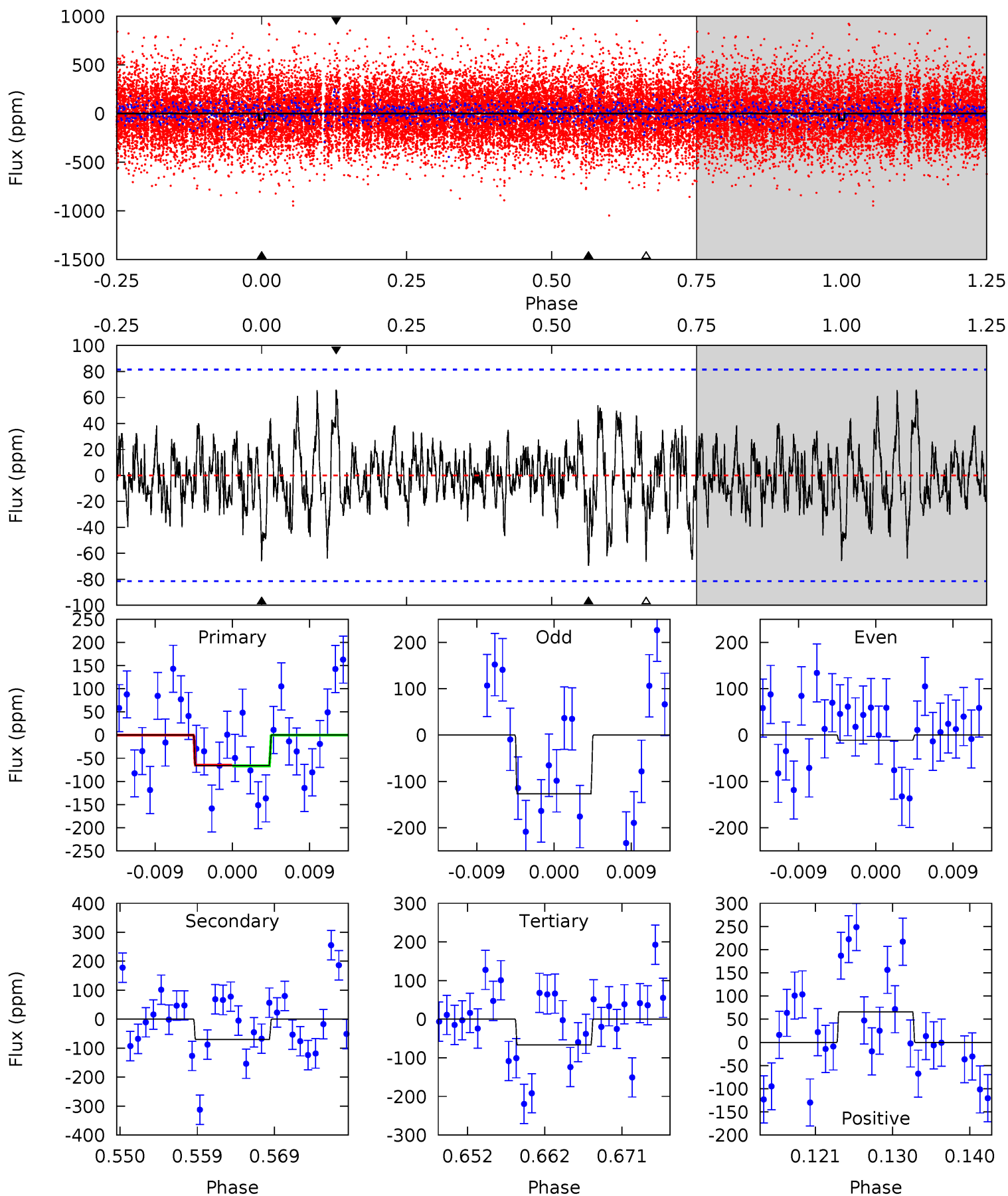
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.45	10.6	8.26	10.1	5.04	2.61	2.77	-1.80	-3.63	2.35	0.53	2.34	1.02	0.49	1.30



Alt Model-Shift Uniqueness Test

007007169-03, P = 198.743616 Days, E = 102.999360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.07	4.30	4.12	4.09	5.04	2.60	1.26	-0.05	-0.02	0.19	0.22	3.54	0.93	0.49	0.05



Stellar Parameters For KIC 007007169

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6684^{+189}_{-237}	$3.847^{+0.440}_{-0.110}$	$-0.340^{+0.300}_{-0.300}$	$2.355^{+0.493}_{-1.068}$	$1.422^{+0.190}_{-0.353}$	$0.153^{+0.635}_{-0.050}$
	+3%/-4%	+11%/-3%	+88%/-88%	+21%/-45%	+13%/-25%	+414%/-33%
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 007007169-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-171 ± 16	$2.86^{+1.08}_{-0.84}$	712^{+52}_{-87}	6891^{+1154}_{-795}	6261^{+6604}_{-2677}
Alt.	-70 ± 16	$1.71^{+0.83}_{-0.79}$	707^{+53}_{-81}	7083^{+3006}_{-1272}	7064^{+16134}_{-3960}

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 $A_{obs} \gg 1.0$

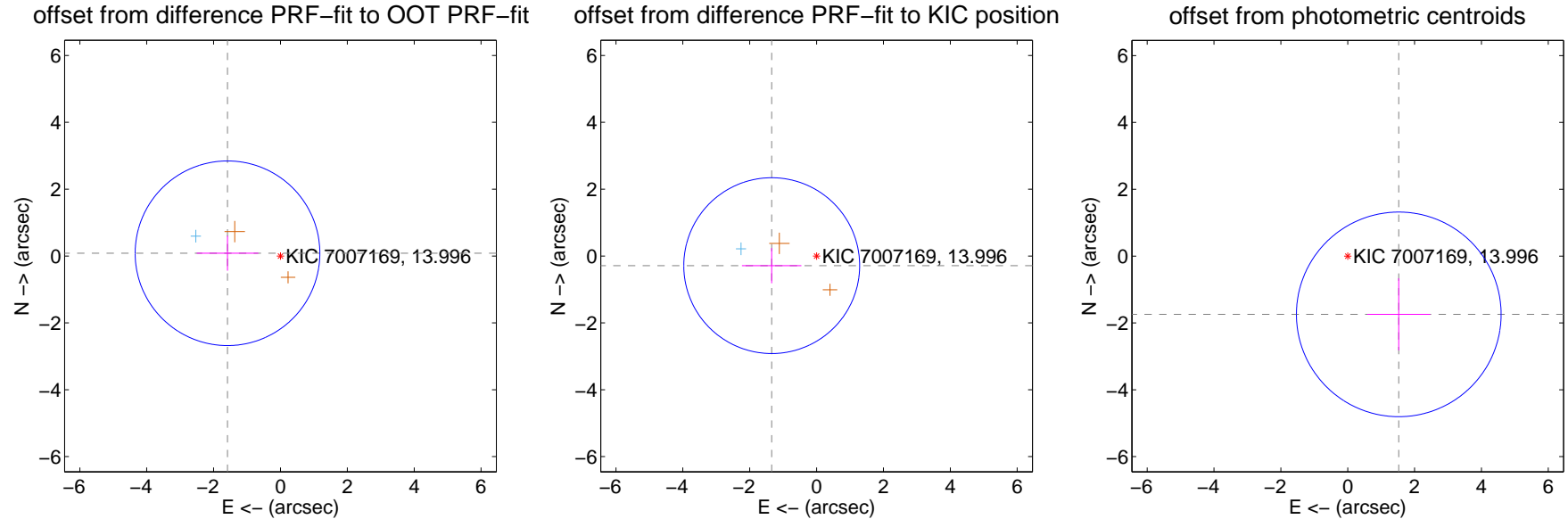
DV Centroid Data

Supplemental centroid analysis for 007007169-03. Kepler magnitude: 14.00. Transit SNR 5.89

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.41 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.586 ± 0.921	1.72	1.584 ± 0.921	0.083 ± 0.523
PRF-fit source offset from KIC position	1.373 ± 0.877	1.57	1.342 ± 0.889	-0.288 ± 0.526
photometric centroid source offset	2.32 ± 1.02	2.27	-1.53 ± 0.94	-1.74 ± 1.08



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



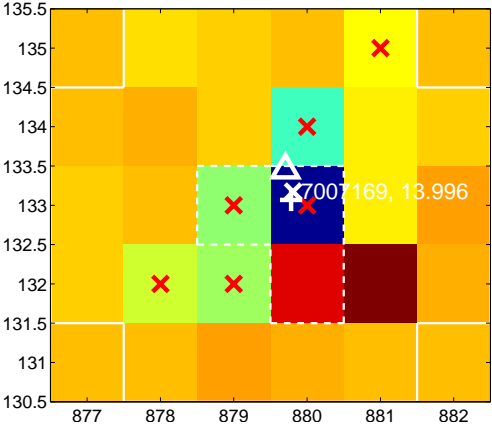
Q2 no difference image



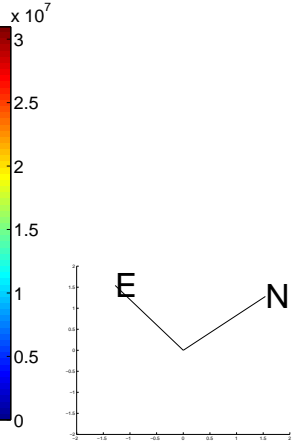
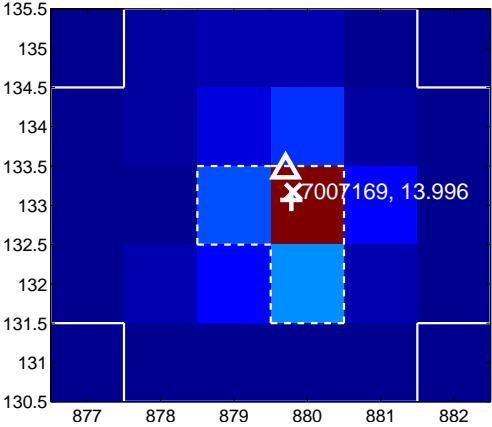
Q2 no OOT image



Q3 difference image. Poor Quality



Q3 OOT image



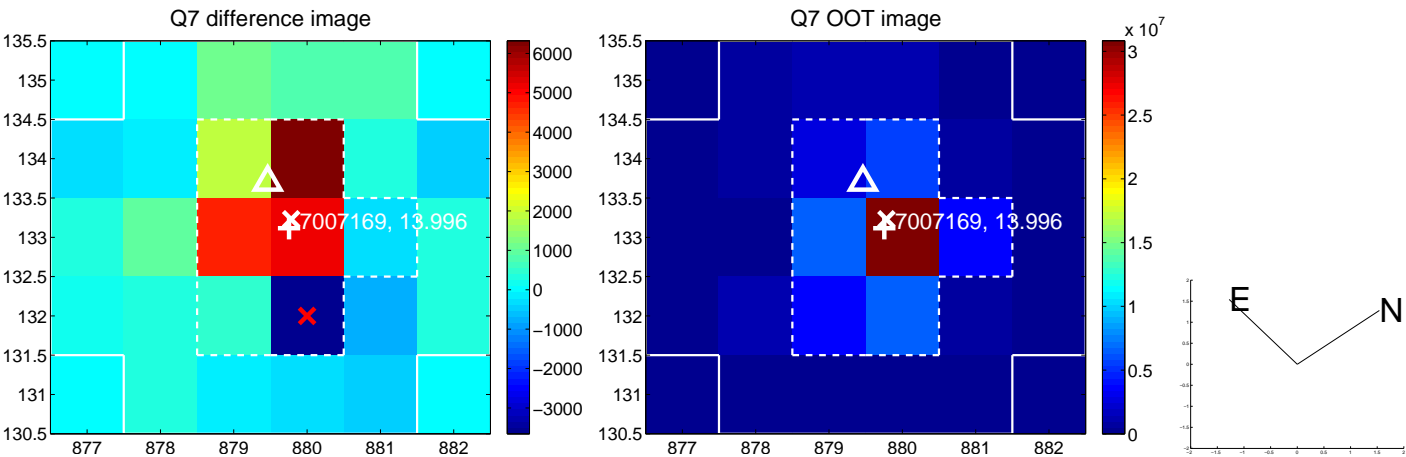
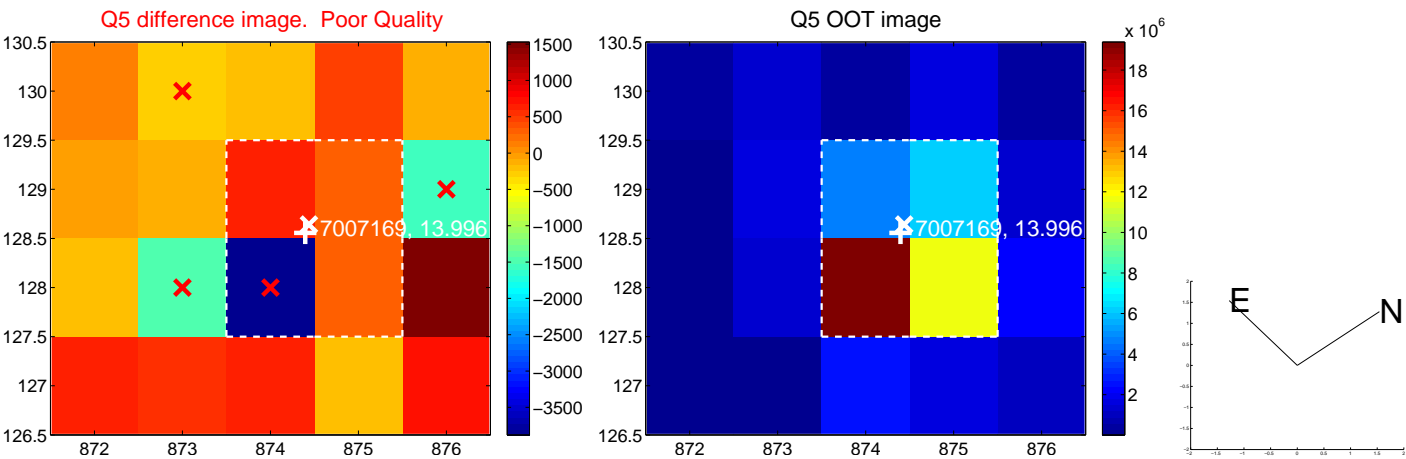
Q4 no difference image



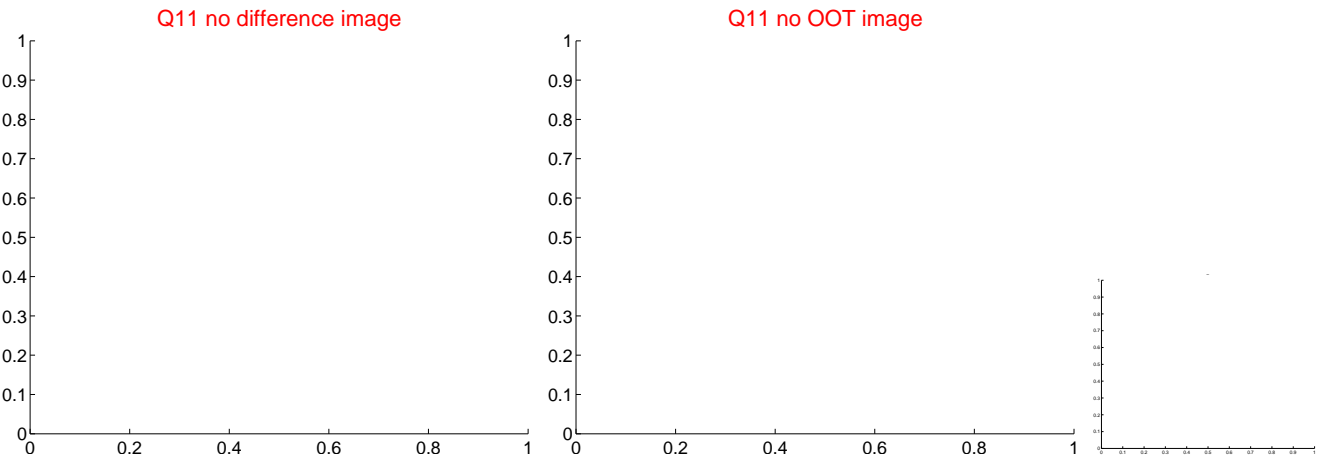
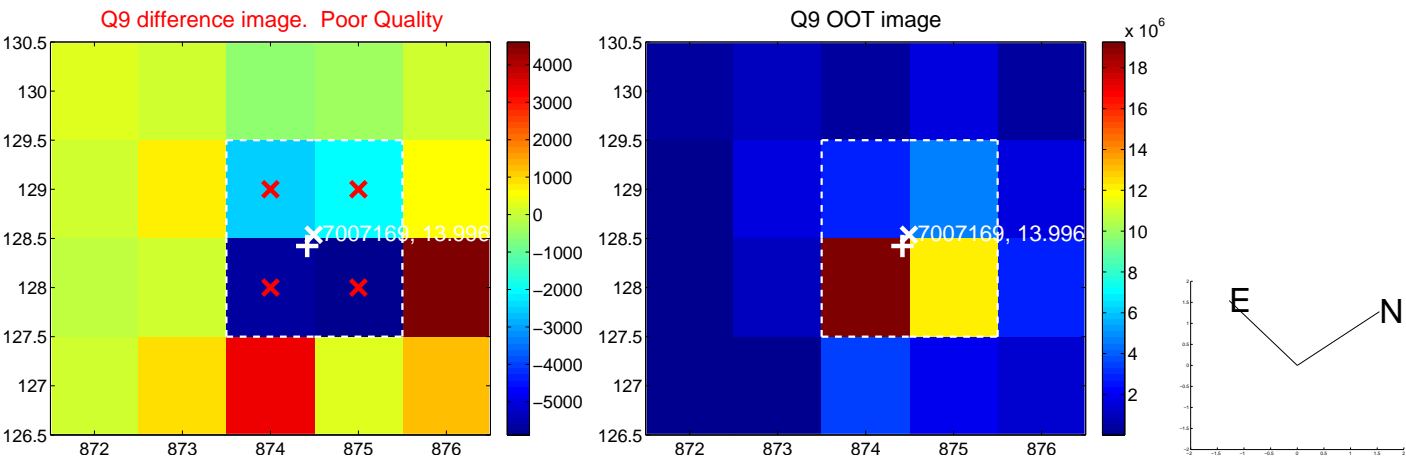
Q4 no OOT image



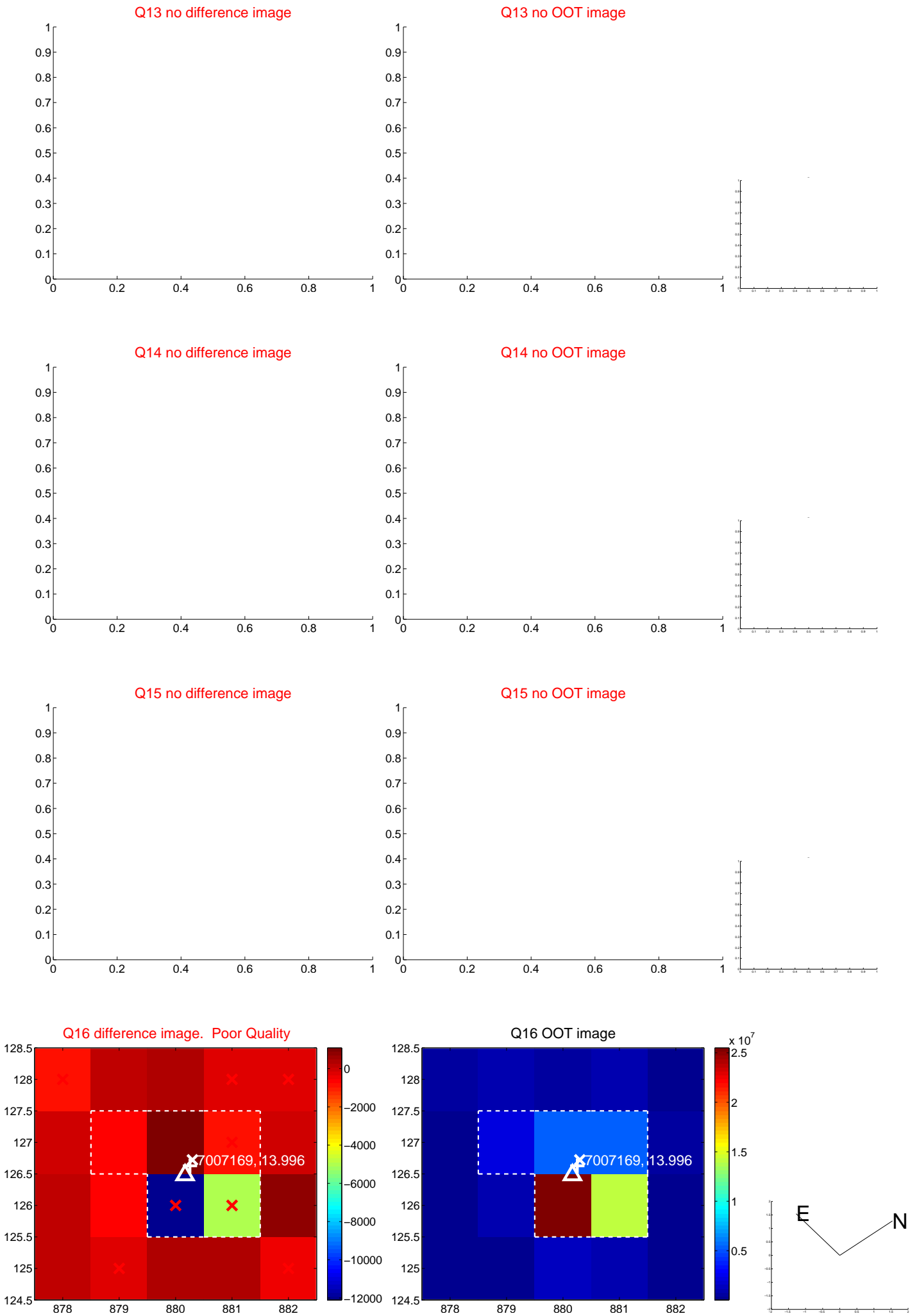
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



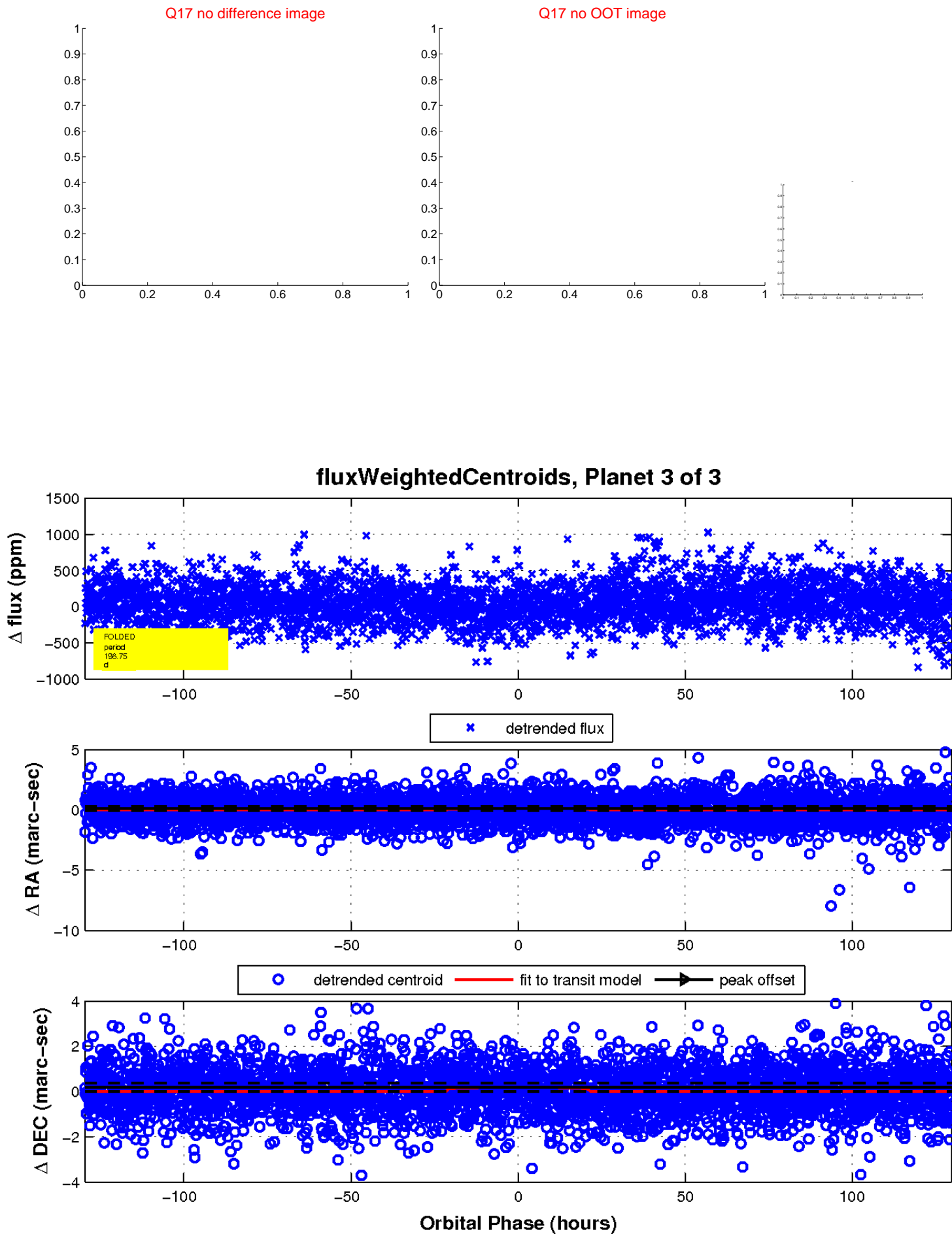
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

