

KIC 005733972

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})
005733972-01	OBS	No	0.982313	131.857030	42.8	2.819	9.1	8.8	1.20	6131	0.92	5003.02
005733972-02	OBS	No	558.449195	392.903905	532.3	3.500	8.0	-1.0	1.20	6131	2.77	1.06
005733972-03	OBS	No	461.187720	586.423189	783.9	3.482	7.7	6.3	1.20	6131	3.87	1.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005733972-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST
005733972-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
005733972-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

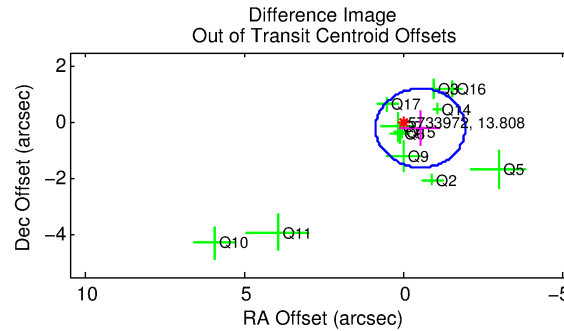
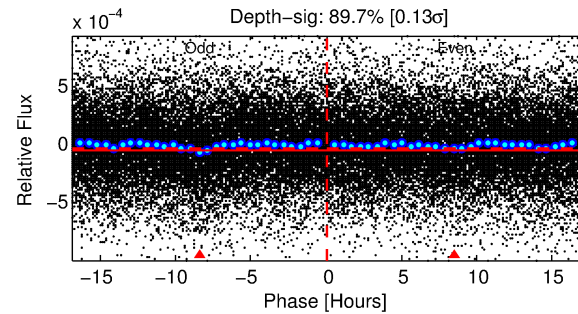
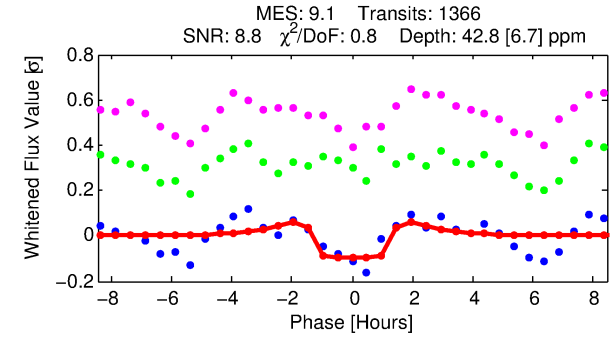
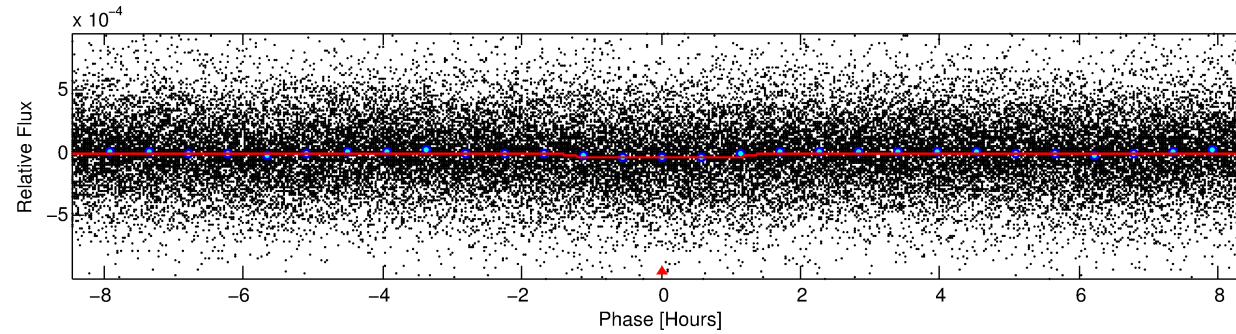
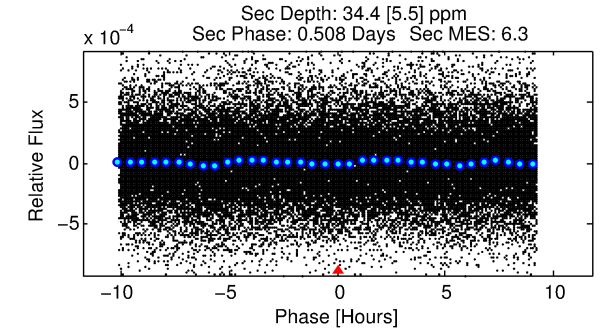
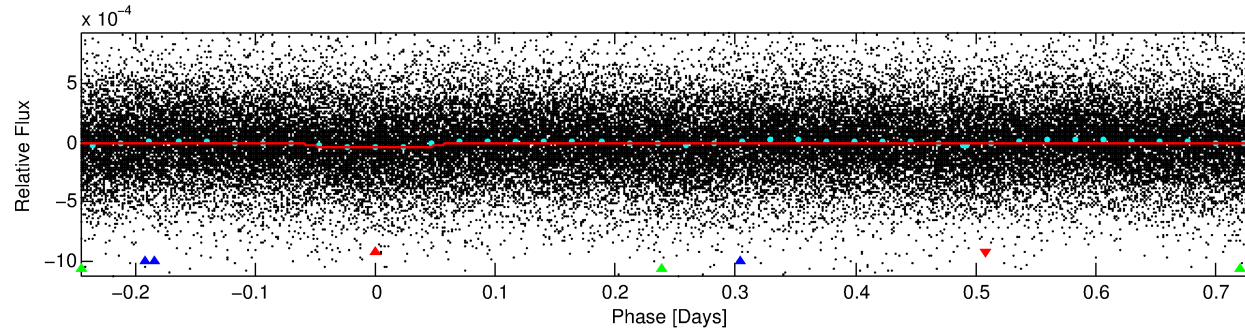
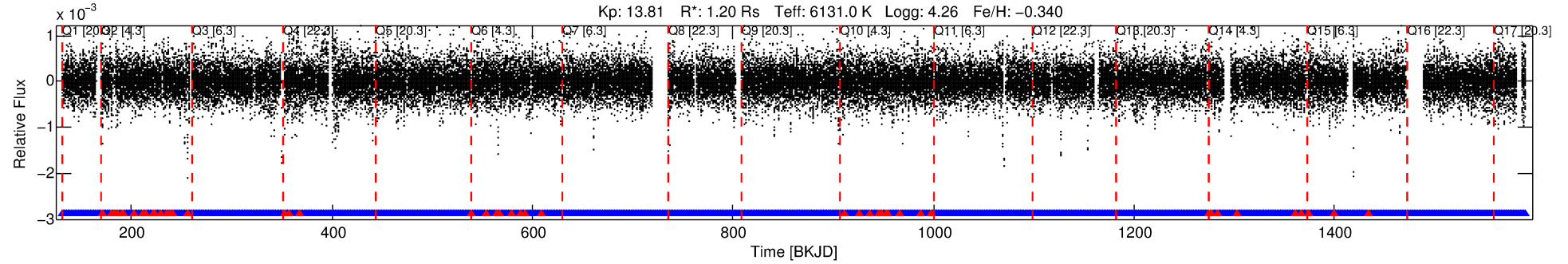
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005733972-01

No Significant Match Found

DV One-Page Summary

KIC: 5733972 Candidate: 1 of 3 Period: 0.982 d



DV Fit Results:

Period = 0.98231 [0.00001] d
Epoch = 131.8570 [0.0025] BKJD
Rp/R* = 0.0070 [0.0029]
a/R* = 1.52 [1.91]
b = 0.90 [0.47]
Seff = 5003.02 [1858.55]
Teq = 2145 [199] K
Rp = 0.92 [0.46] Re
a = 0.0191 [0.0046] AU
Ag = 8.10 [7.37] [0.96σ]
Teffp = 5594 [1189] K [2.86σ]

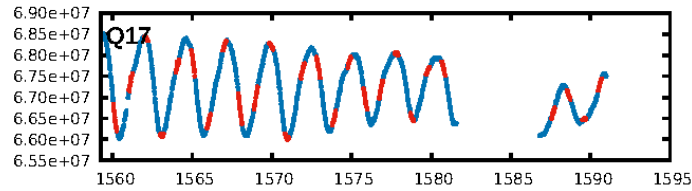
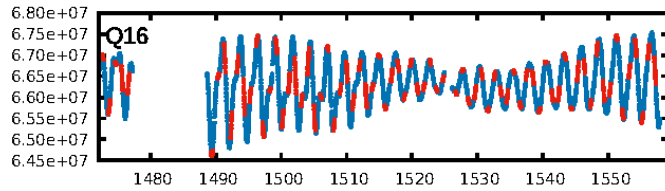
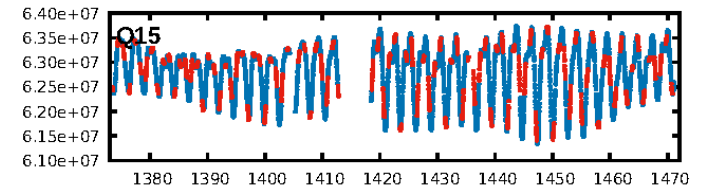
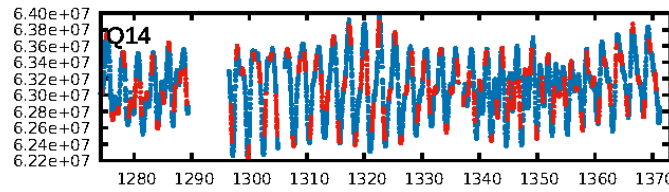
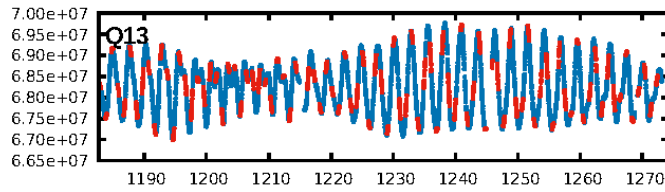
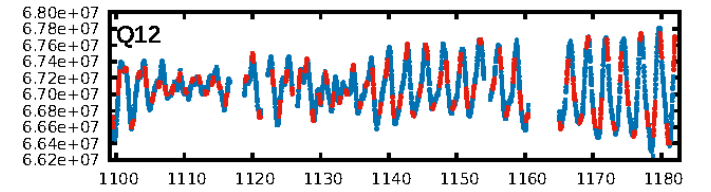
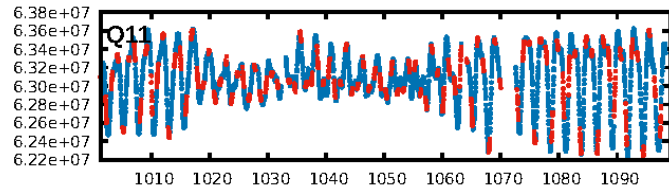
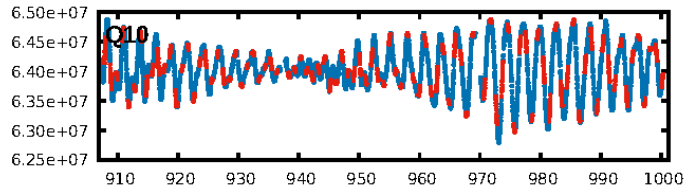
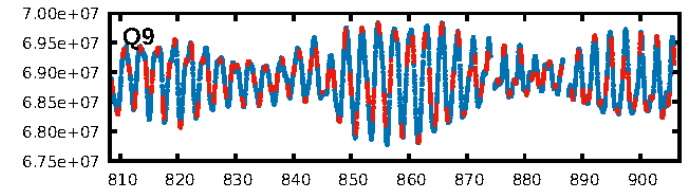
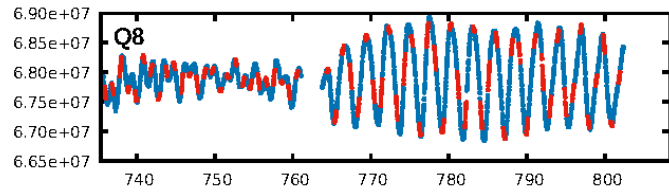
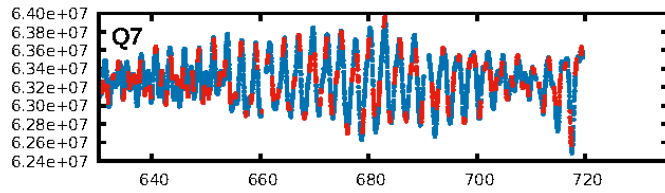
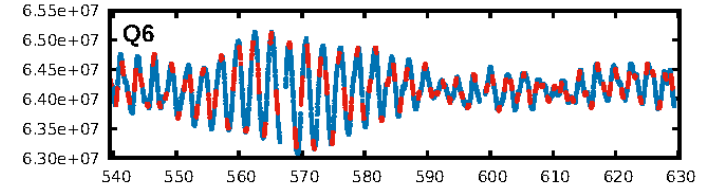
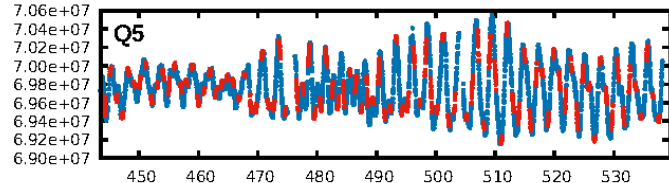
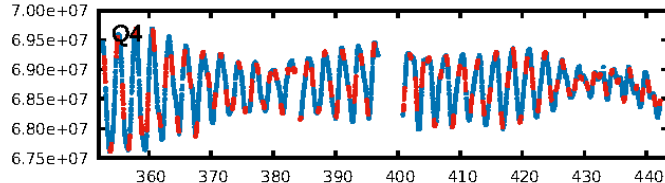
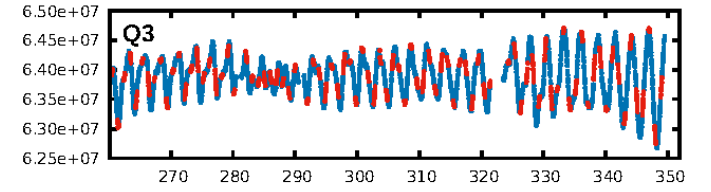
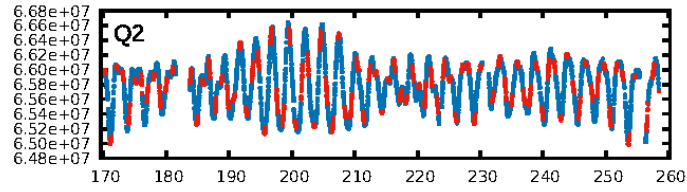
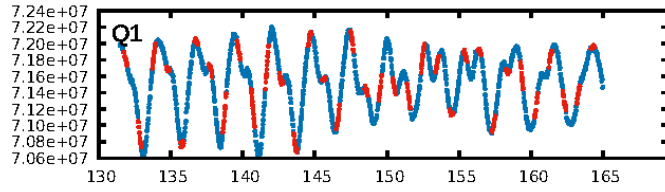
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [2465.03σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.91e-18
RollingBand-fgt: 0.96 [1258/1306]
GhostDiagnostic-chr: -0.05175
Centroid-sig: 68.5%
Centroid-so: 0.365 arcsec [0.40σ]
OotOffset-rm: 0.558 arcsec [1.19σ]
OotOffset-st: 4/4/1/3 [12]
KicOffset-rm: 0.610 arcsec [0.99σ]
KicOffset-st: 4/4/1/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

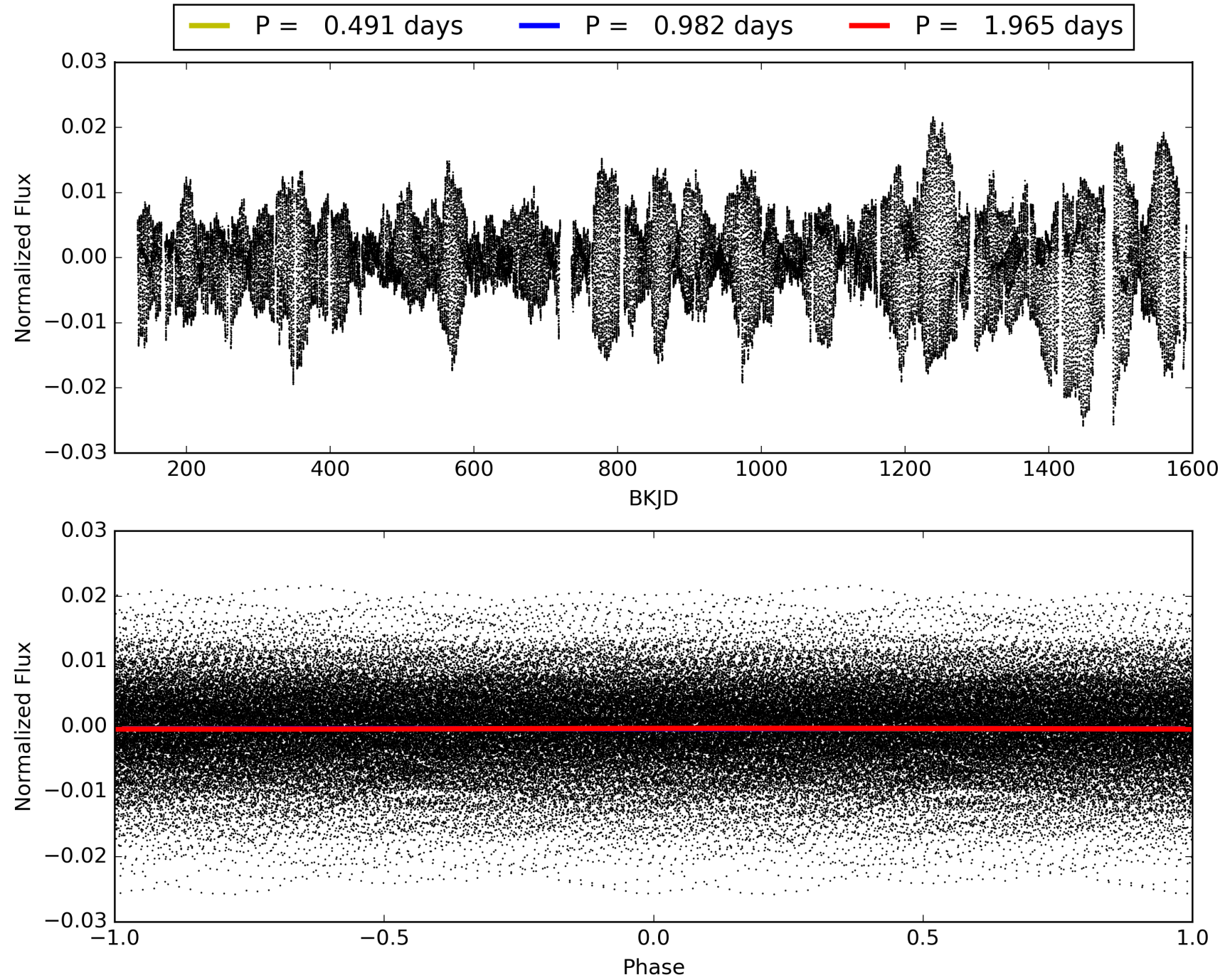
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005733972-01, PDC Light Curves

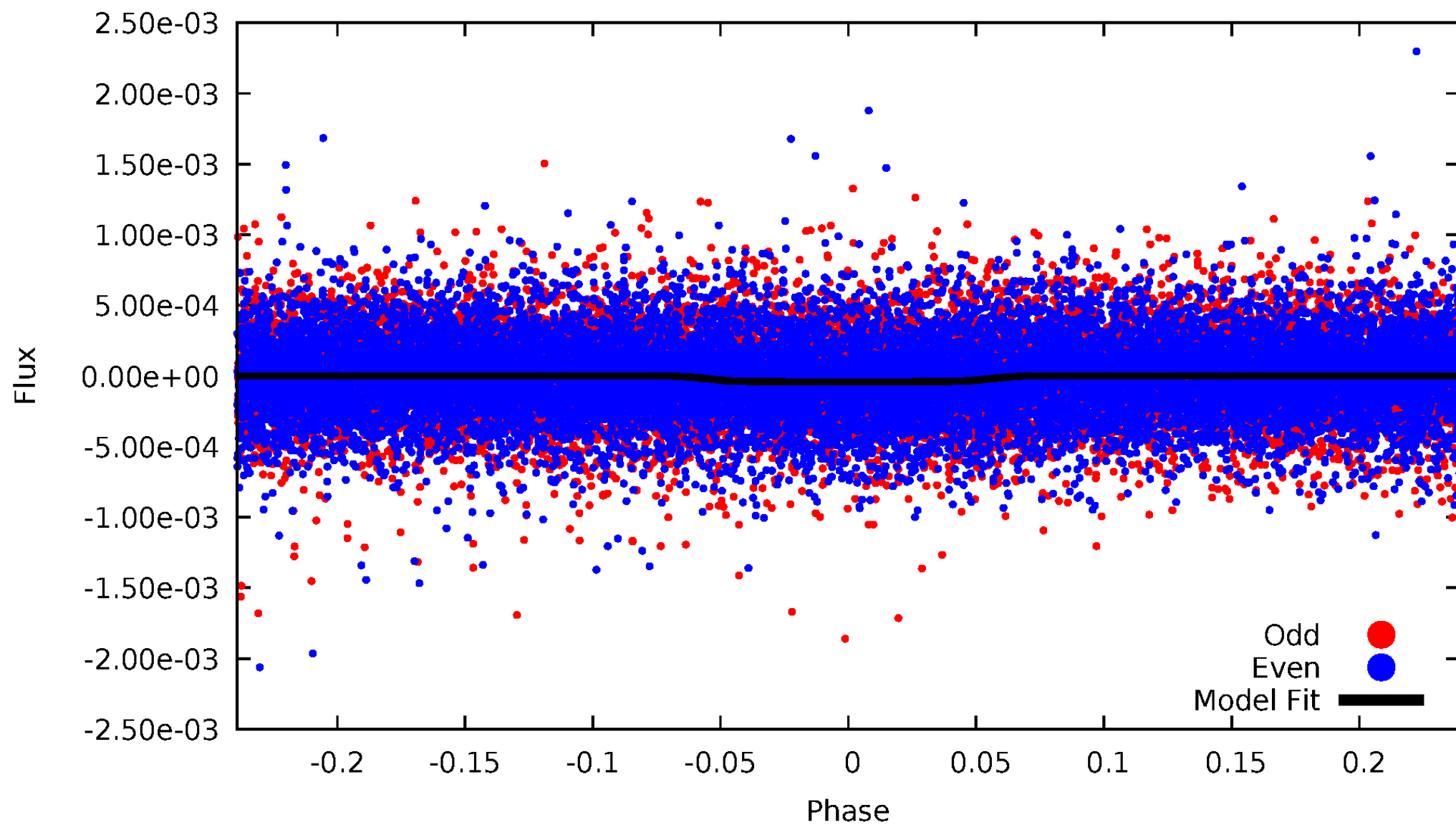


TCE 005733972-01



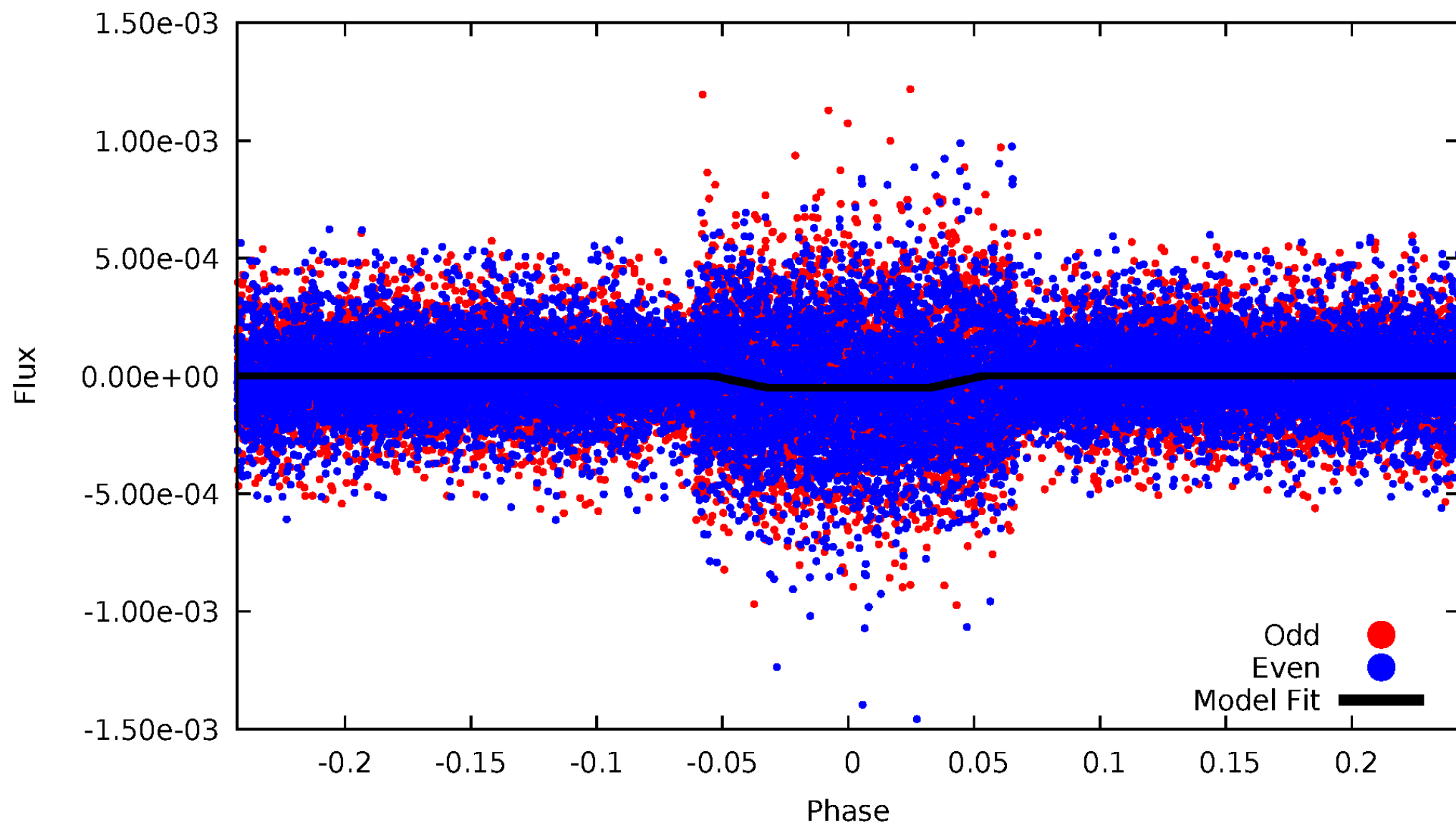
DV Odd/Even

TCE 005733972-01

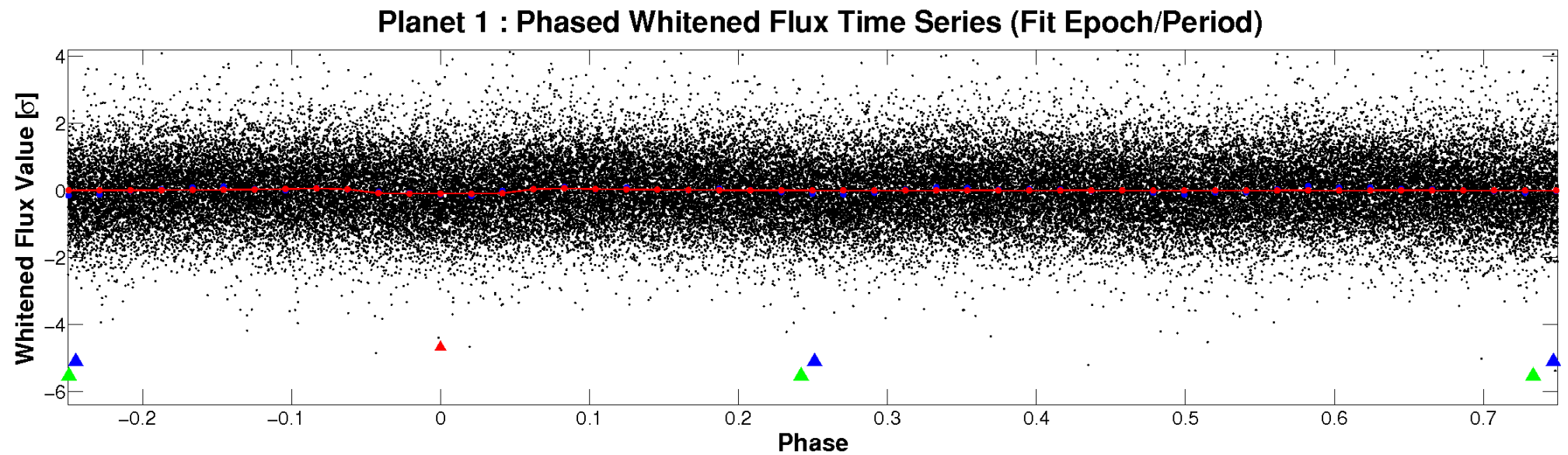
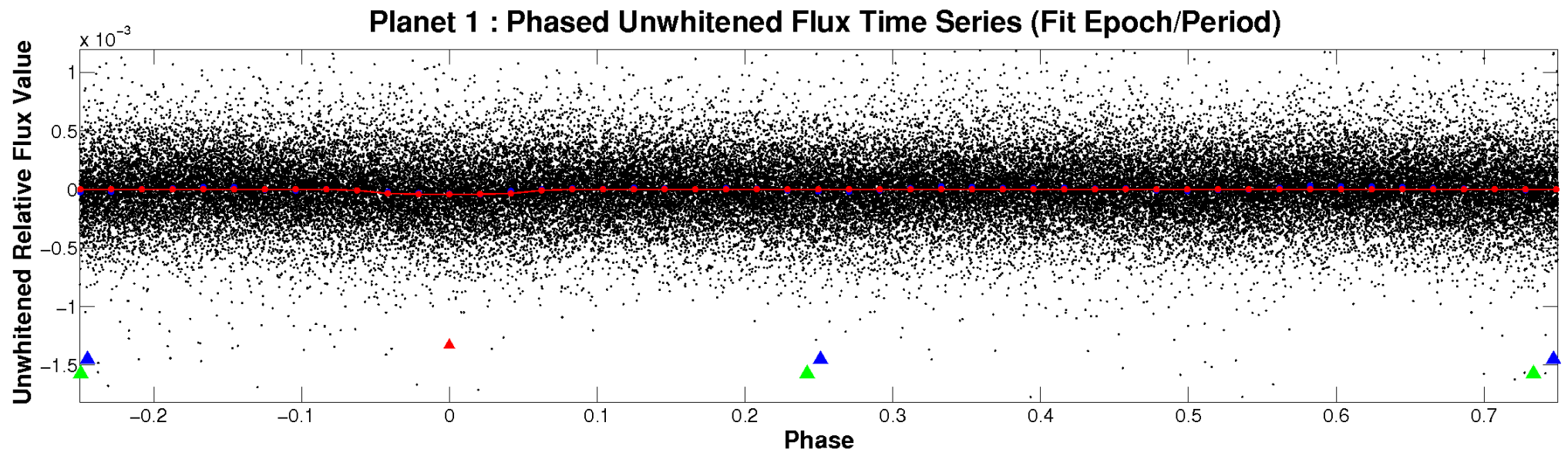


ALT Odd/Even

TCE 005733972-01

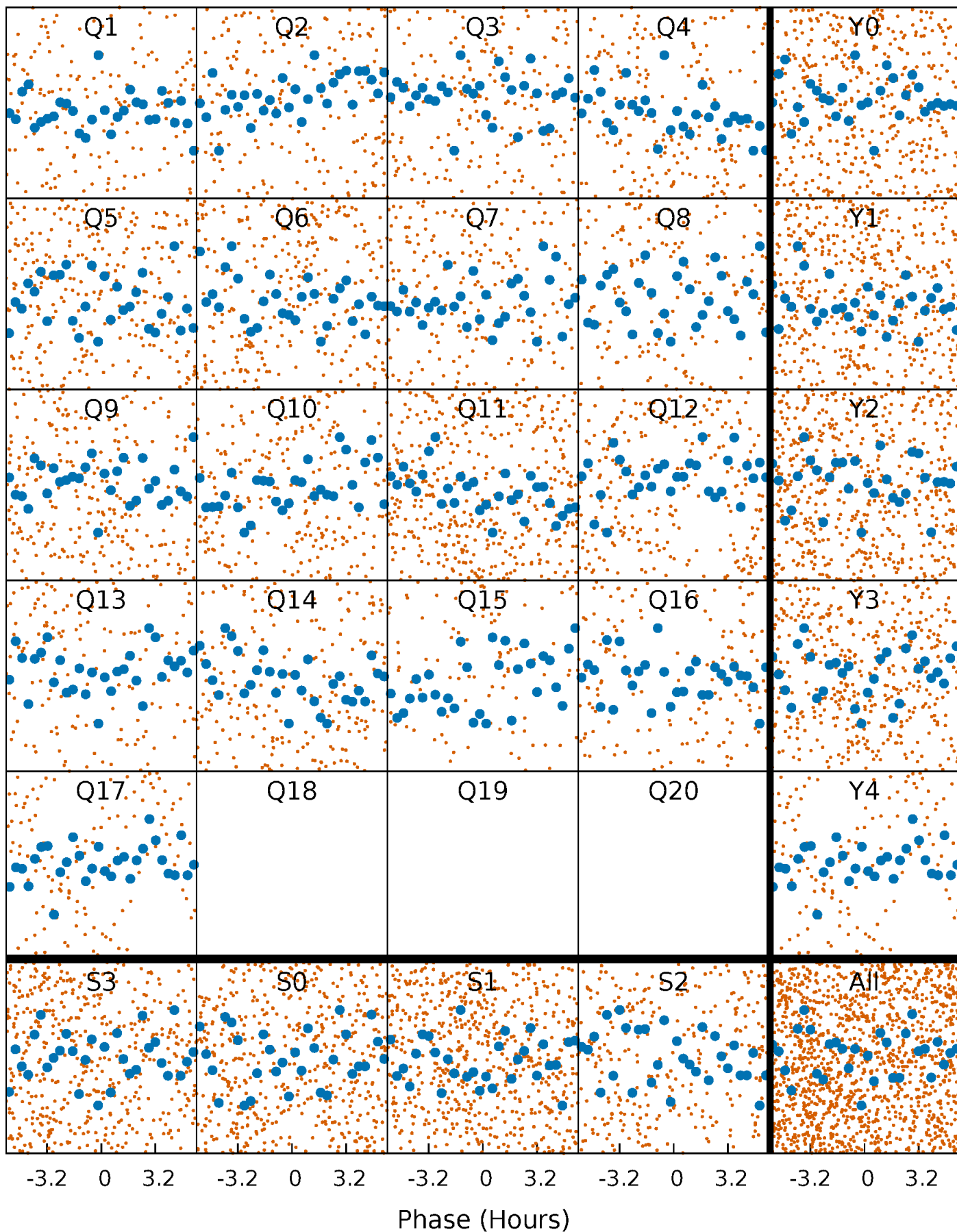


Non-Whitened Vs. Whitened Light Curve



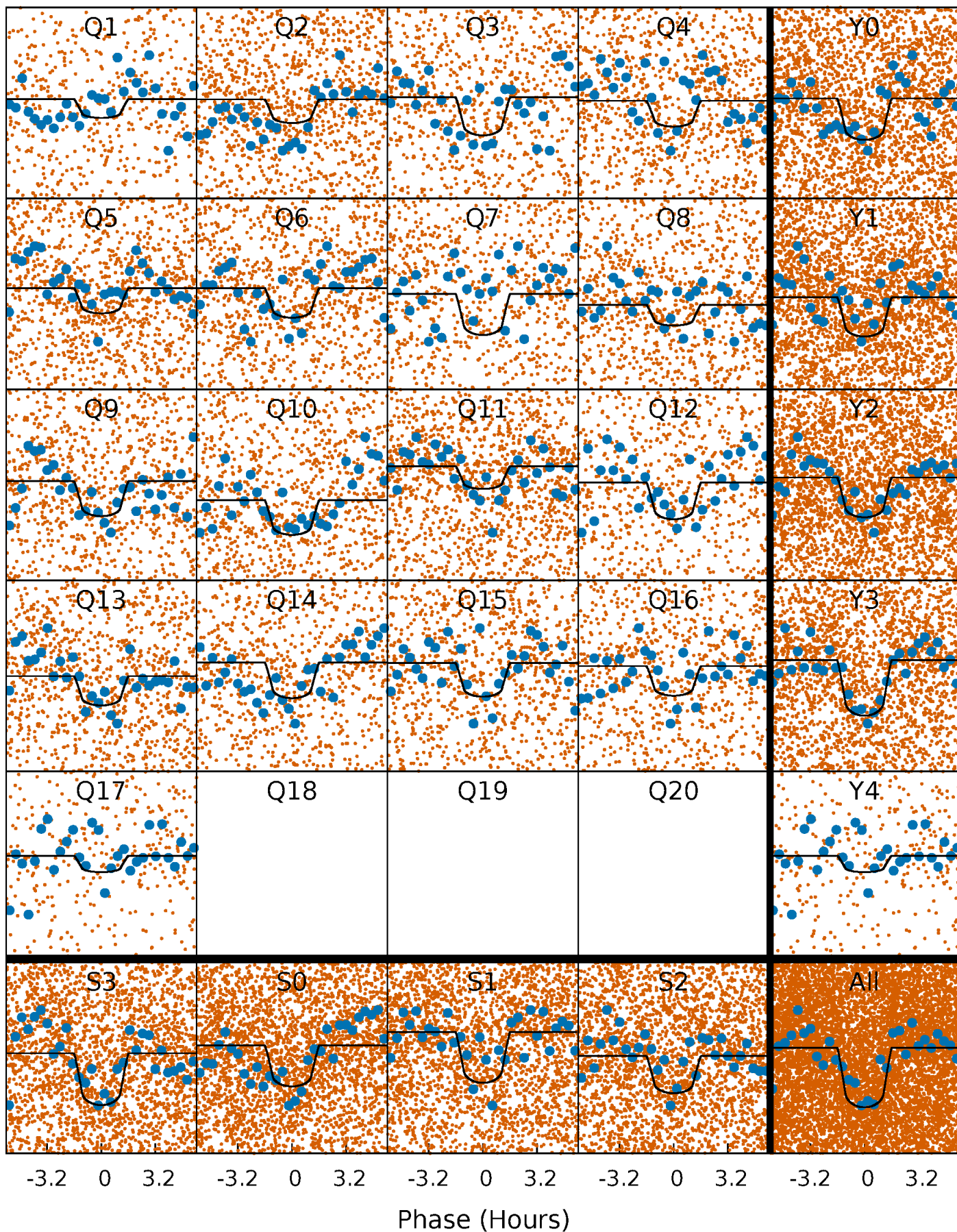
PDC Quarter-Phased Transit Curves

TCE 005733972-01 P= 0.982313 Days $T_0=131.857030$ (BKJD)



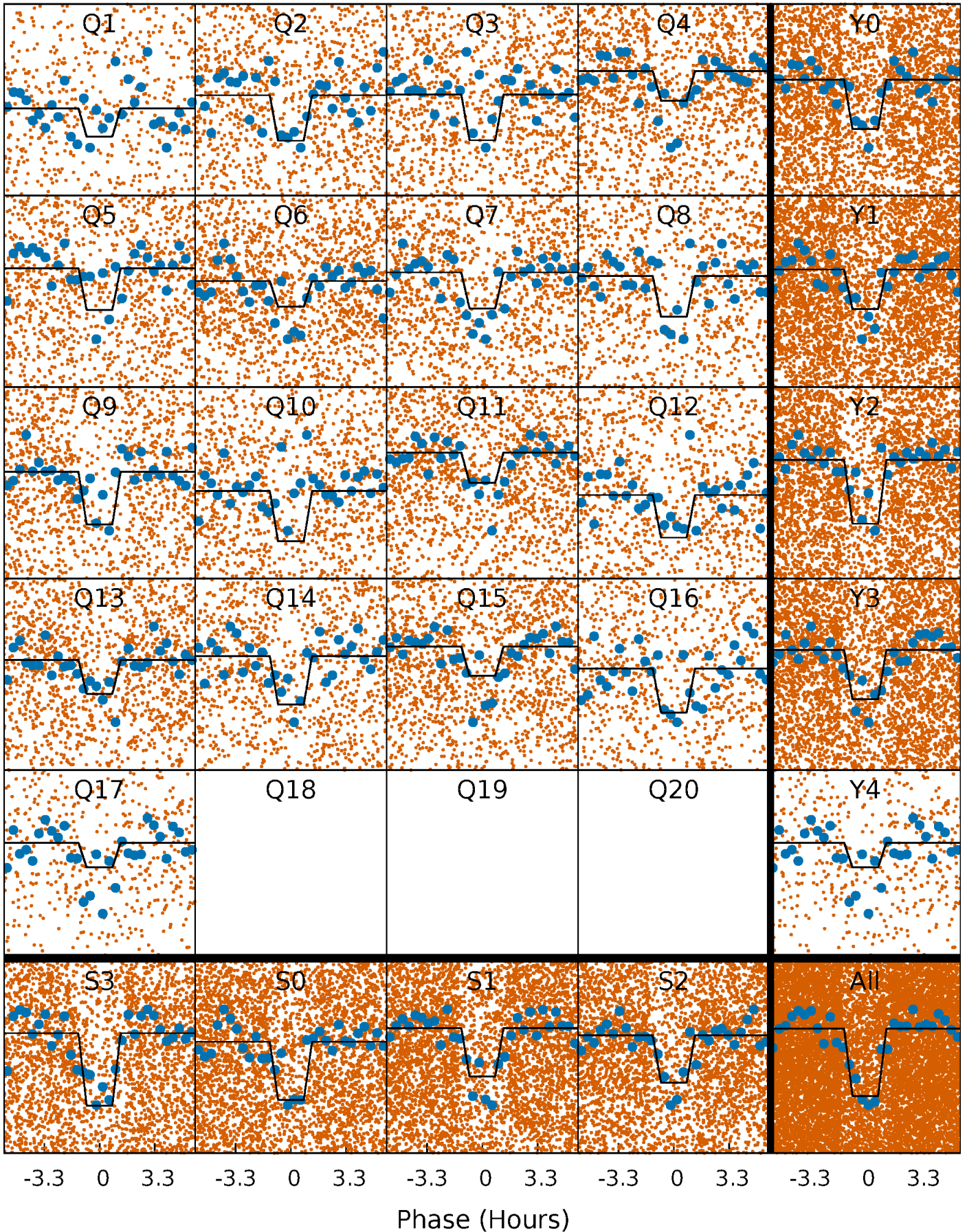
DV Quarter-Phased Transit Curves

TCE 005733972-01 P= 0.982313 Days $T_0=131.857030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

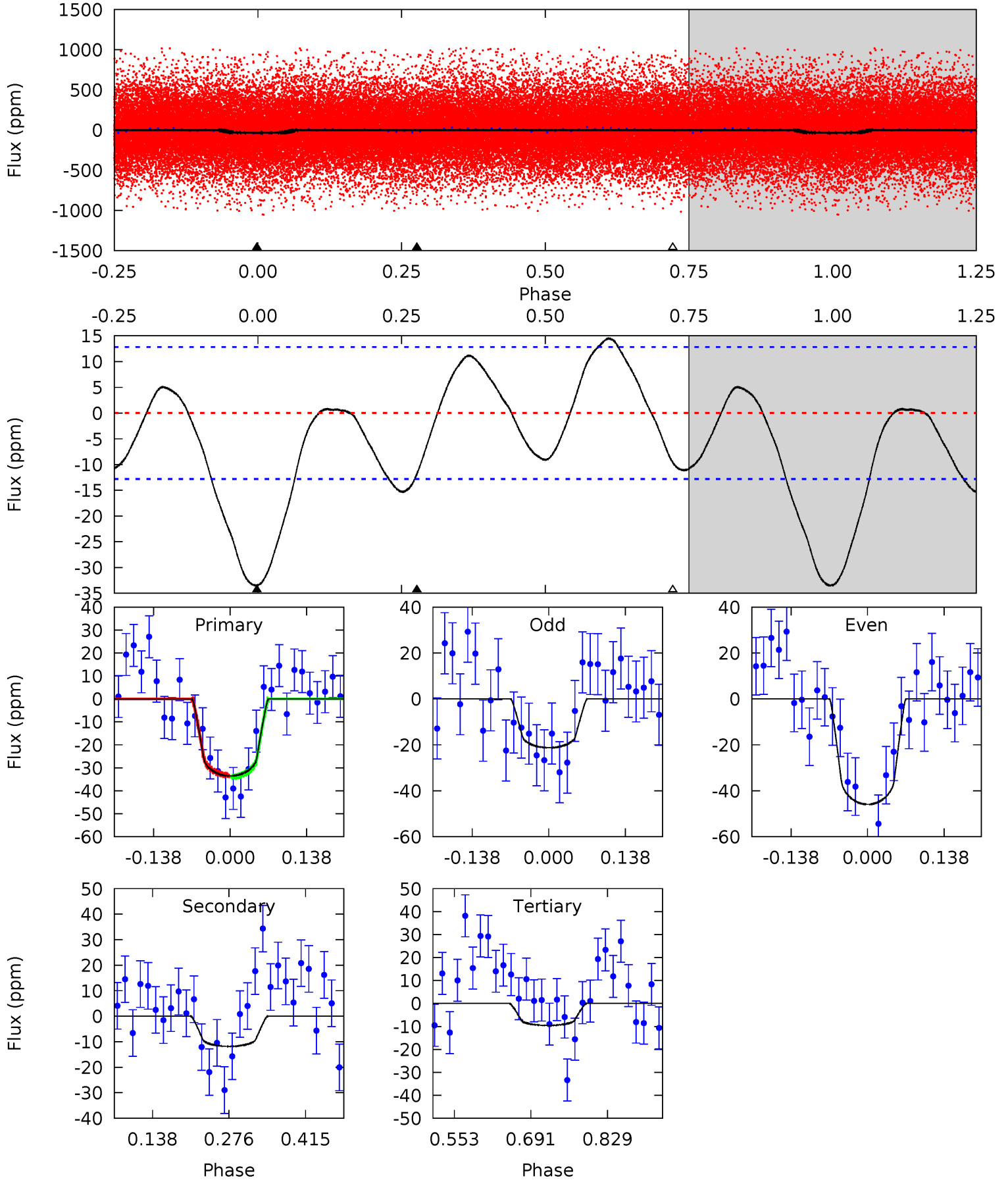
TCE 005733972-01 P= 0.982315 Days $T_0=131.856793$ (BKJD)



DV Model-Shift Uniqueness Test

005733972-01, P = 0.982313 Days, E = 130.874717 Days

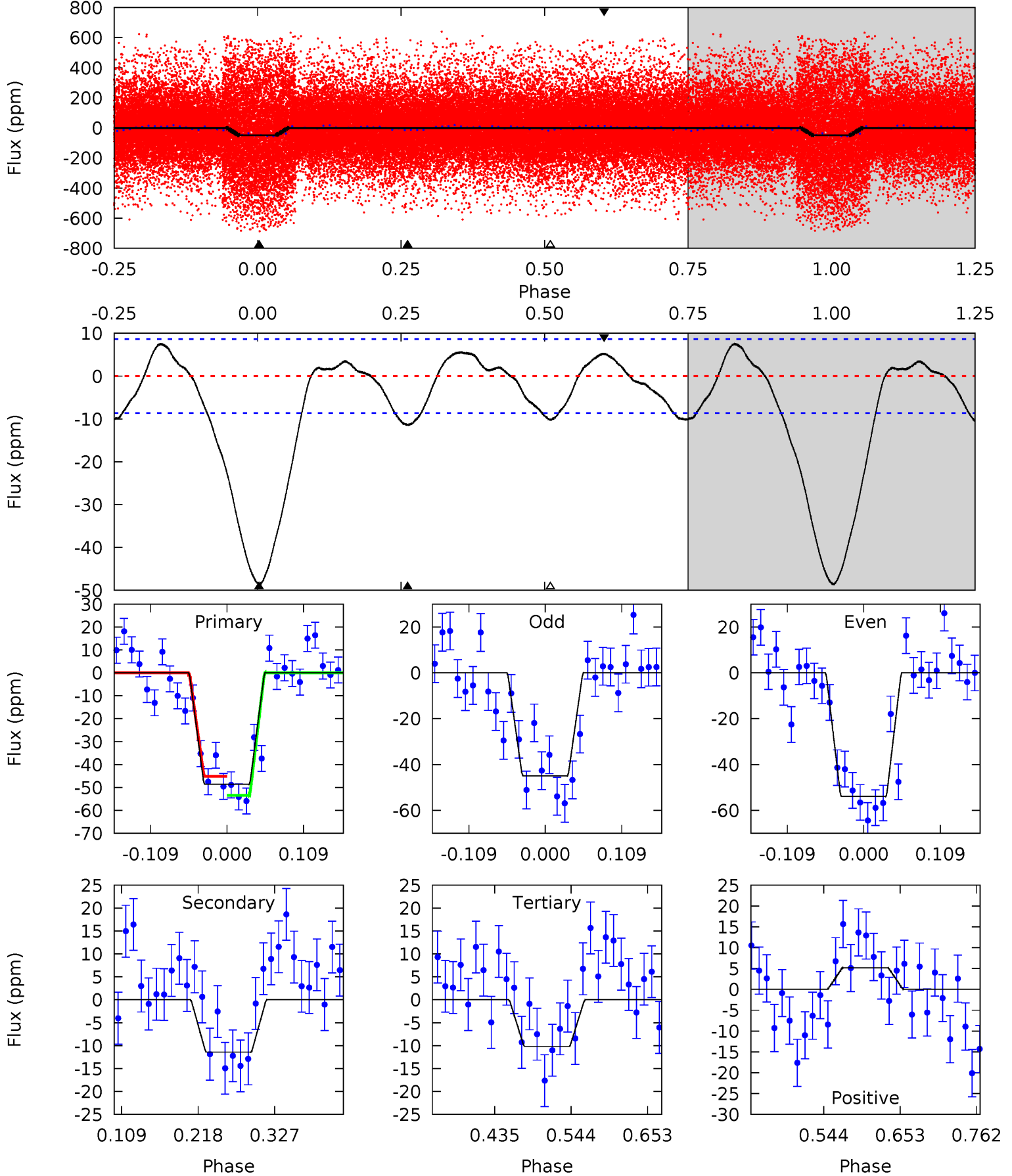
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	4.15	3.36	0	4.50	1.48	2.68	8.39	11.7	0.79	4.15	4.32	0.80	0.30	0.12



Alt Model-Shift Uniqueness Test

005733972-01, P = 0.982315 Days, E = 130.874478 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.6	6.01	5.37	2.73	4.55	1.60	2.65	20.2	22.9	0.64	3.27	2.35	0.92	0.13	2.21



Stellar Parameters For KIC 005733972

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6131^{+183}_{-201}	$4.262^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.199^{+0.340}_{-0.247}$	$0.960^{+0.151}_{-0.110}$	$0.784^{+0.871}_{-0.382}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-21%	+16%/-11%	+111%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005733972-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 3	$0.91^{+0.43}_{-0.38}$	2993^{+223}_{-203}	4382^{+1171}_{-664}	$2.783^{+5.738}_{-1.531}$
Alt.	-11 ± 2	$0.95^{+0.43}_{-0.40}$	2994^{+233}_{-219}	4295^{+1155}_{-624}	$2.557^{+5.163}_{-1.379}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

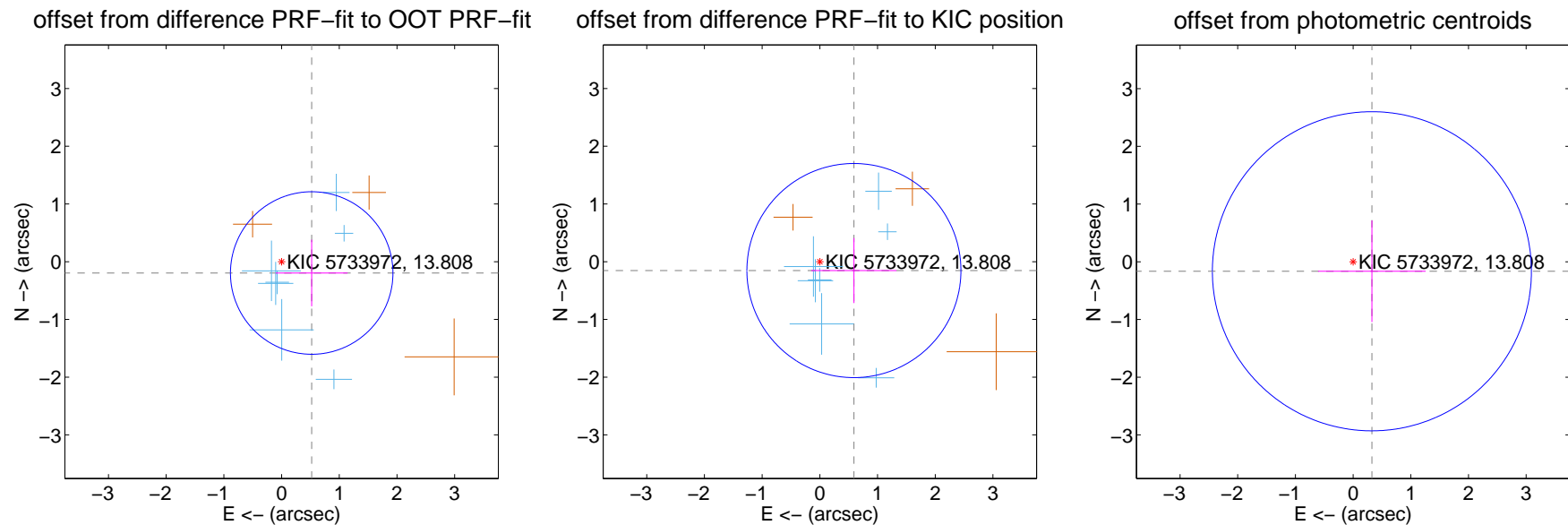
DV Centroid Data

Supplemental centroid analysis for 005733972-01. Kepler magnitude: 13.81. Transit SNR 8.82

There are 7 quarters with good PRF difference image offsets

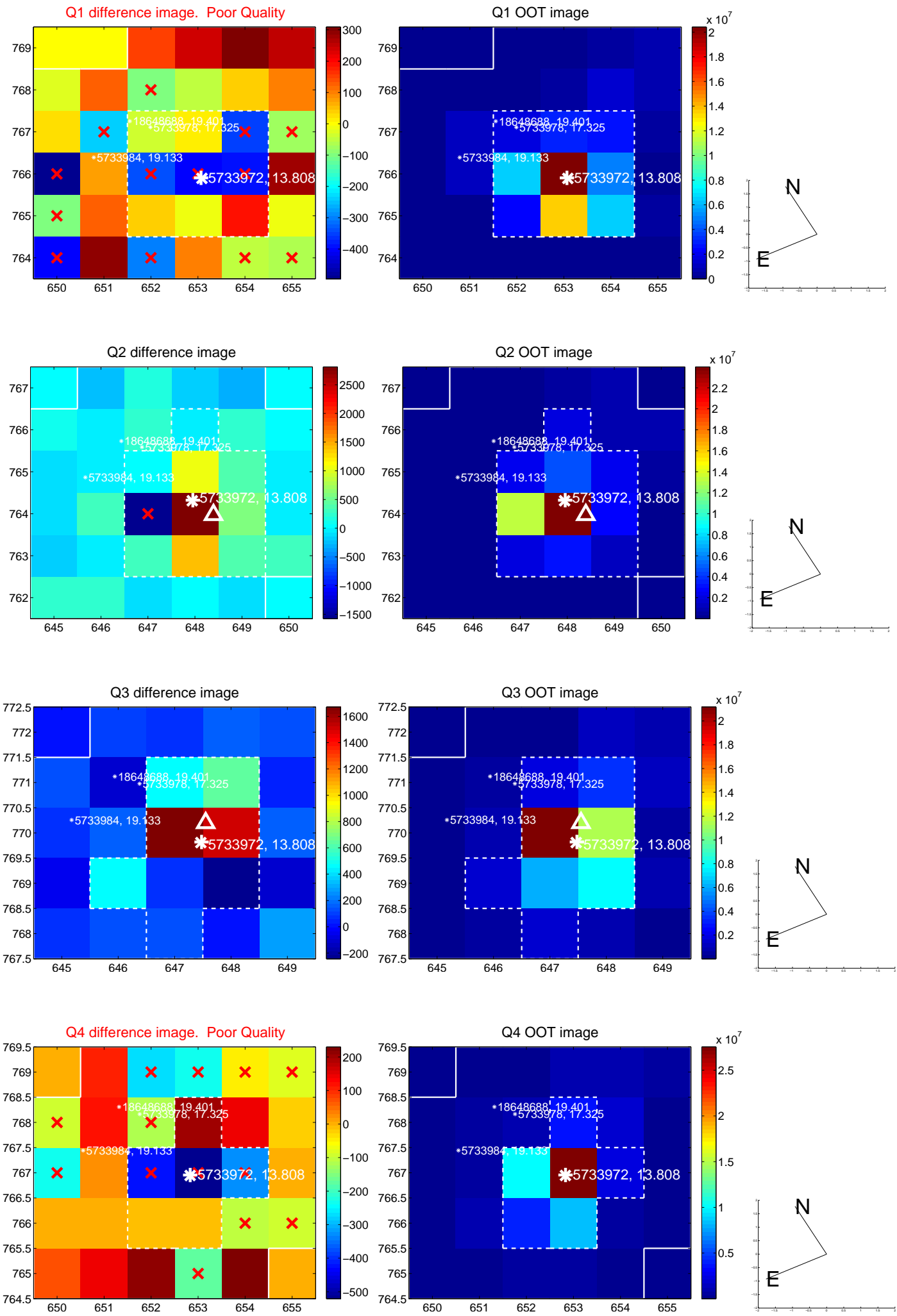
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.558 ± 0.469	1.19	-0.522 ± 0.622	-0.196 ± 0.577
PRF-fit source offset from KIC position	0.610 ± 0.618	0.99	-0.590 ± 0.738	-0.153 ± 0.564
photometric centroid source offset	0.36 ± 0.92	0.40	-0.33 ± 0.93	-0.16 ± 0.88

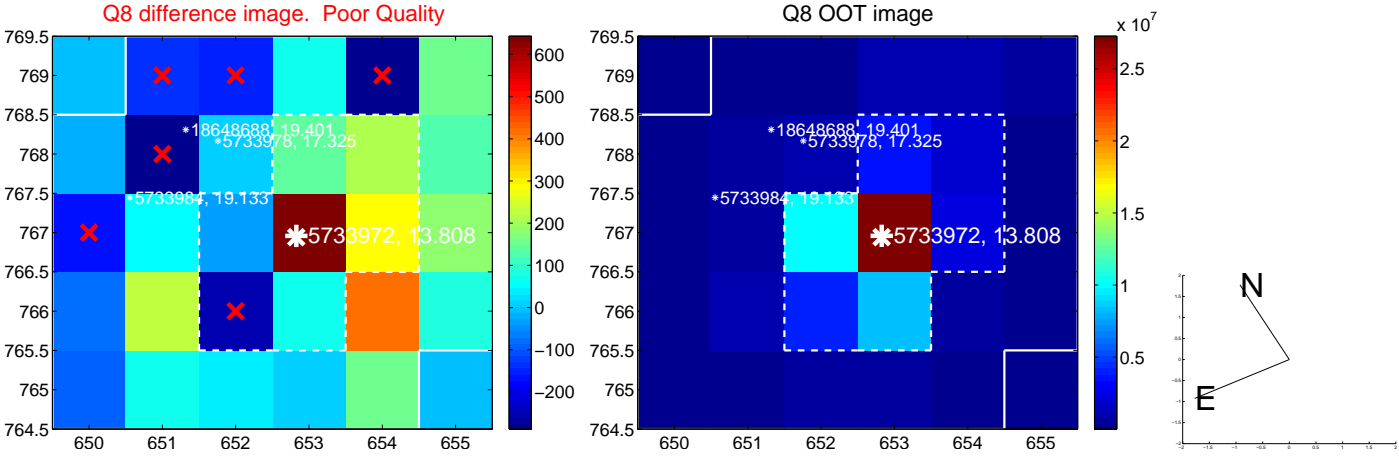
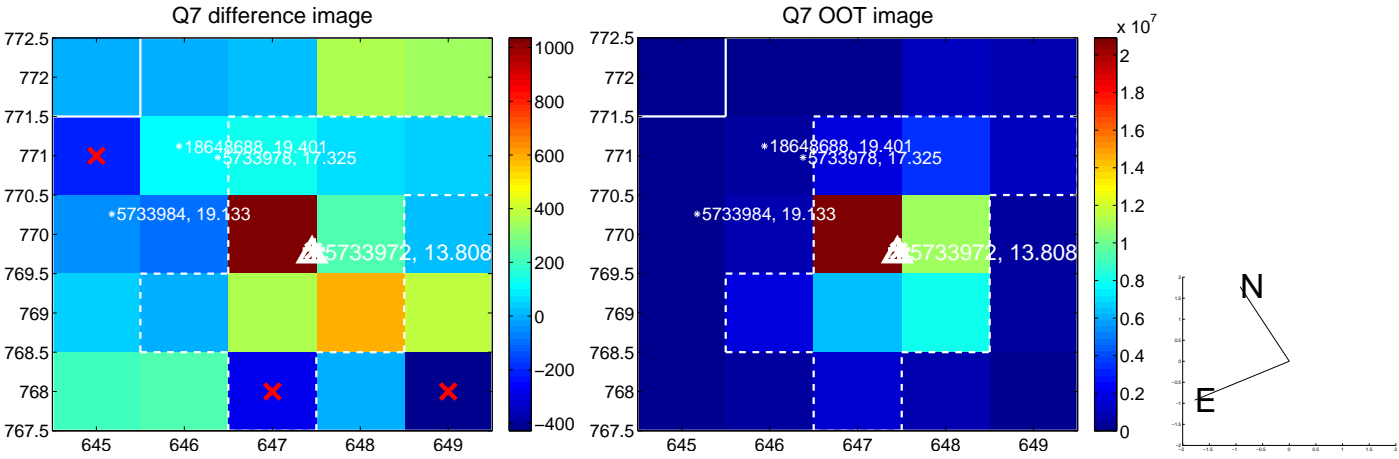
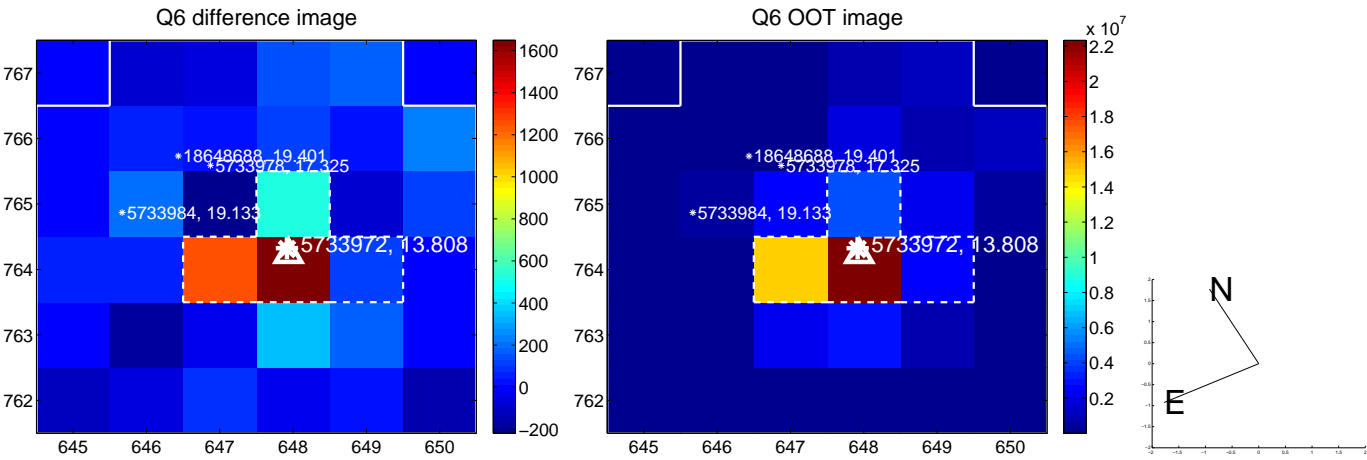
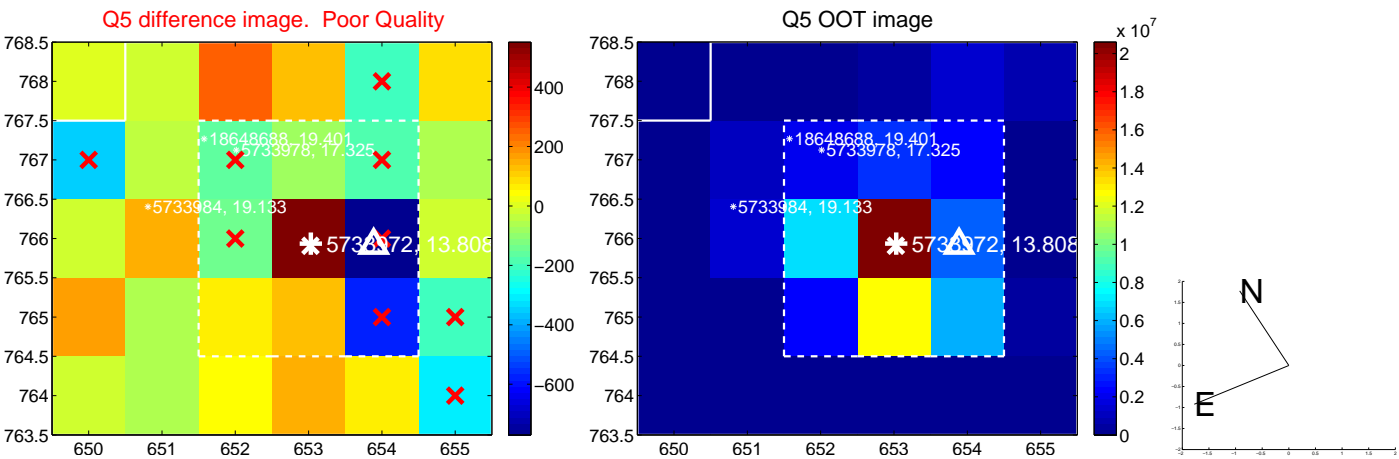


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

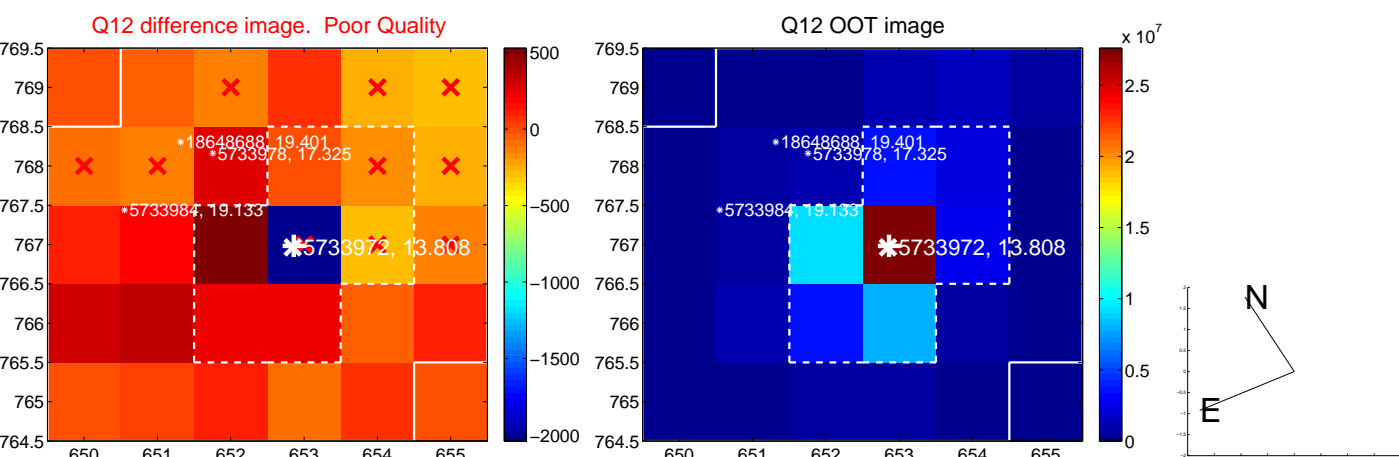
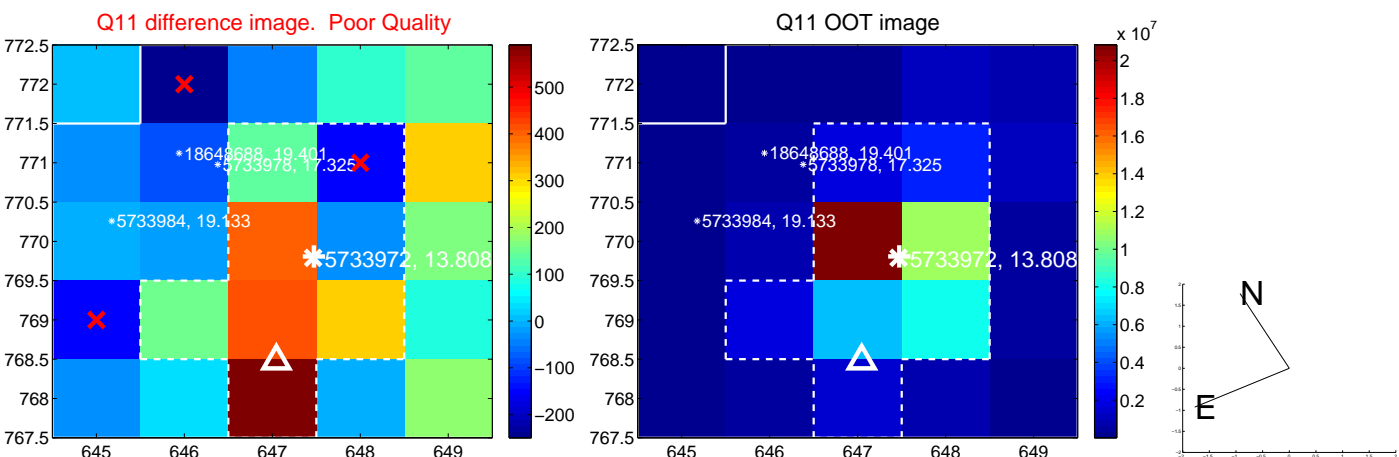
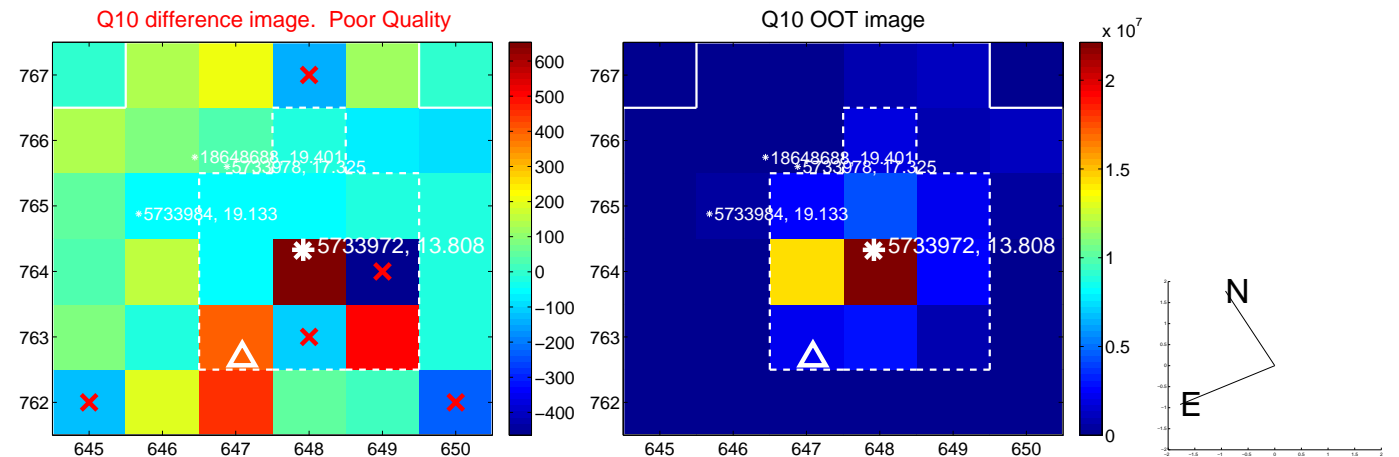
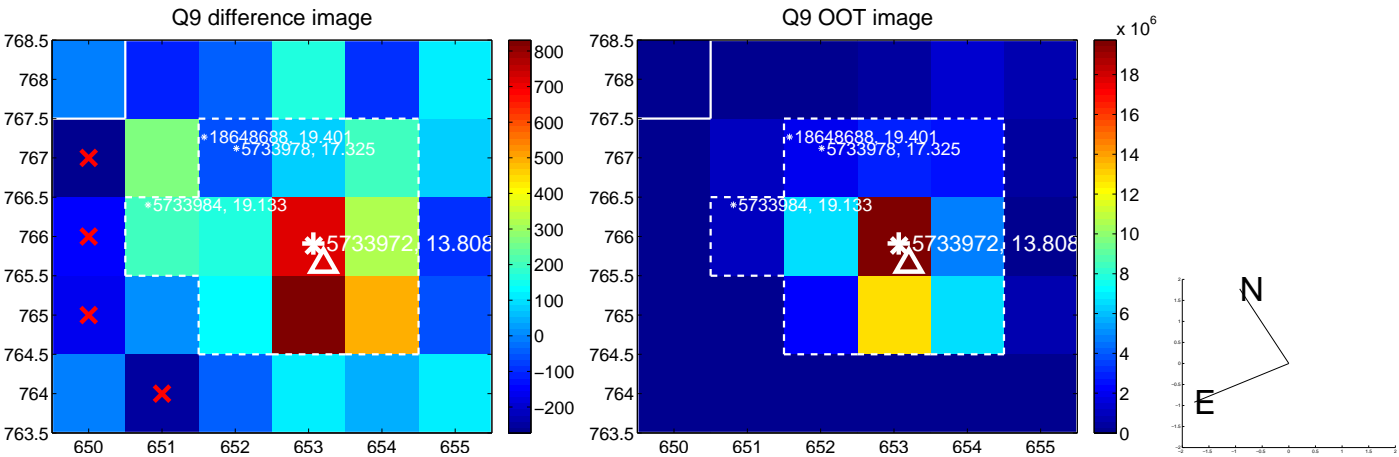
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



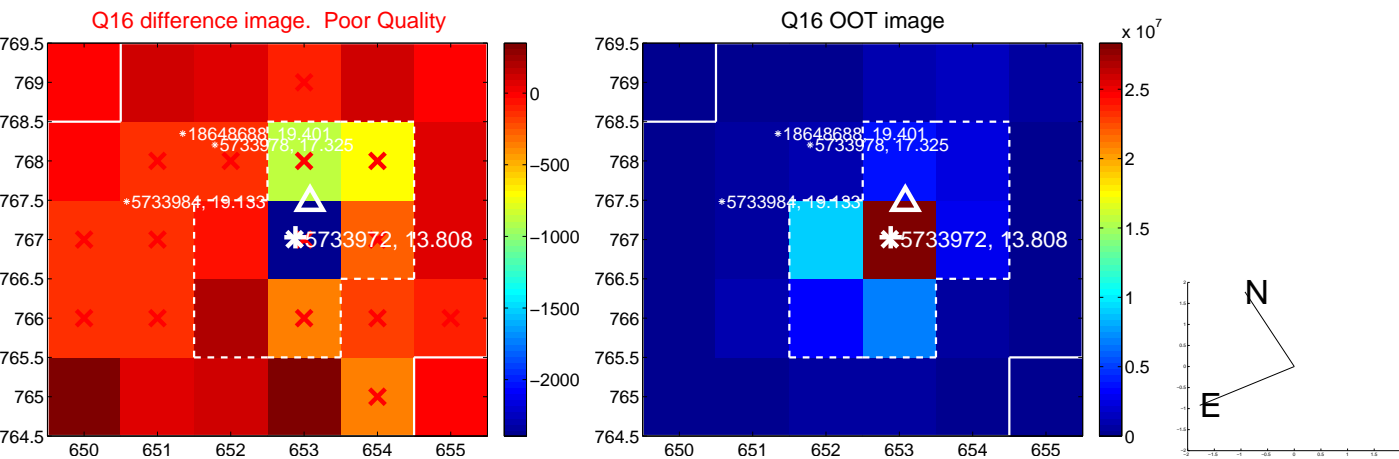
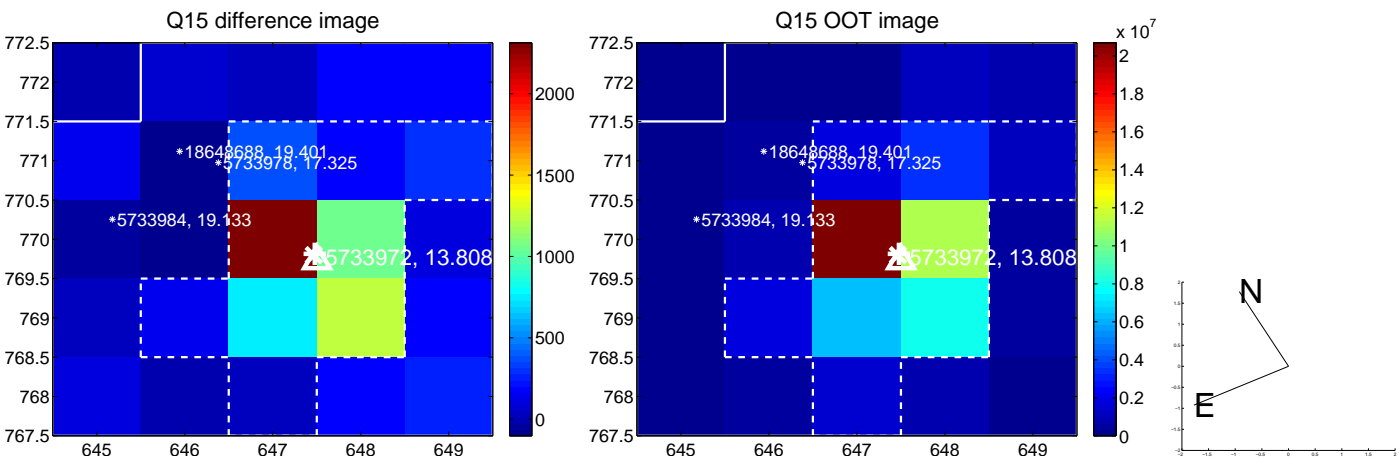
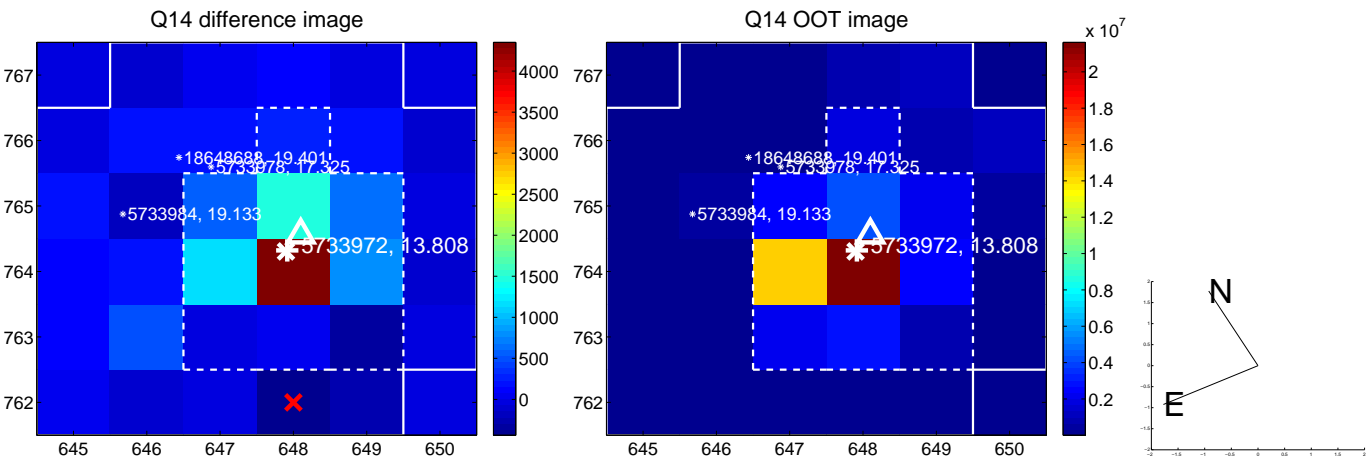
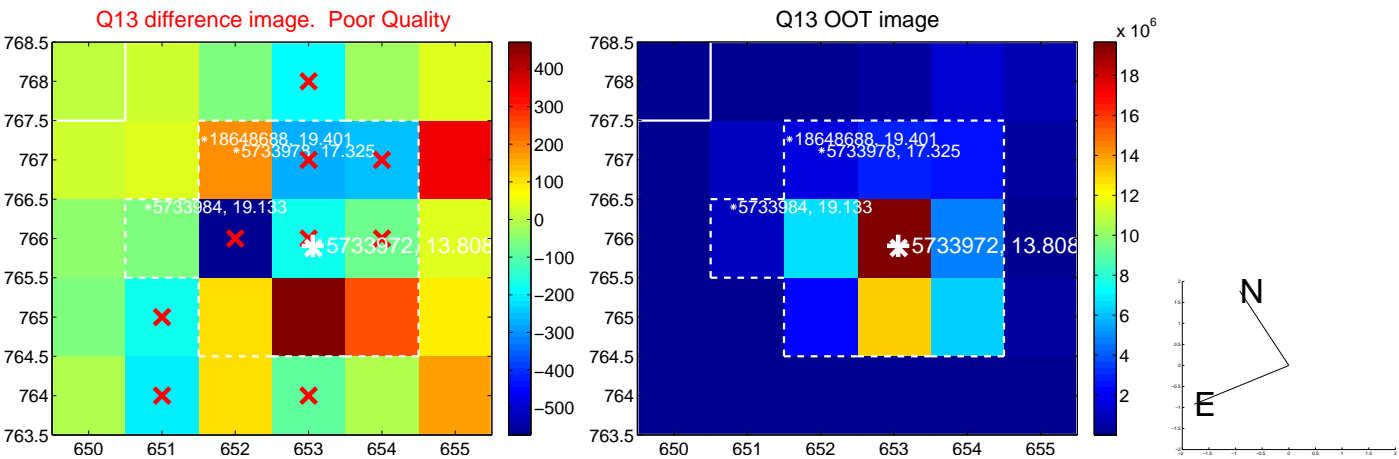
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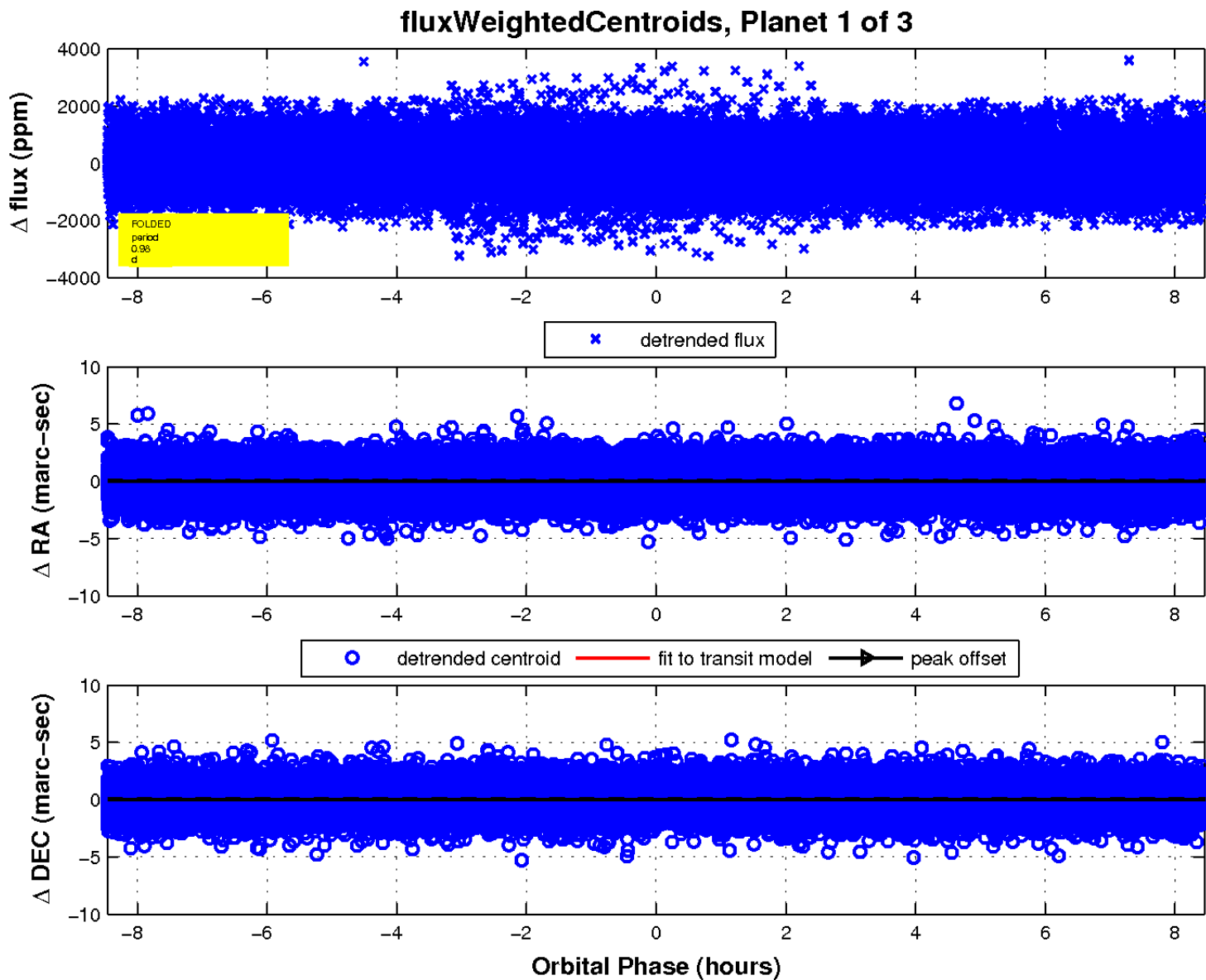
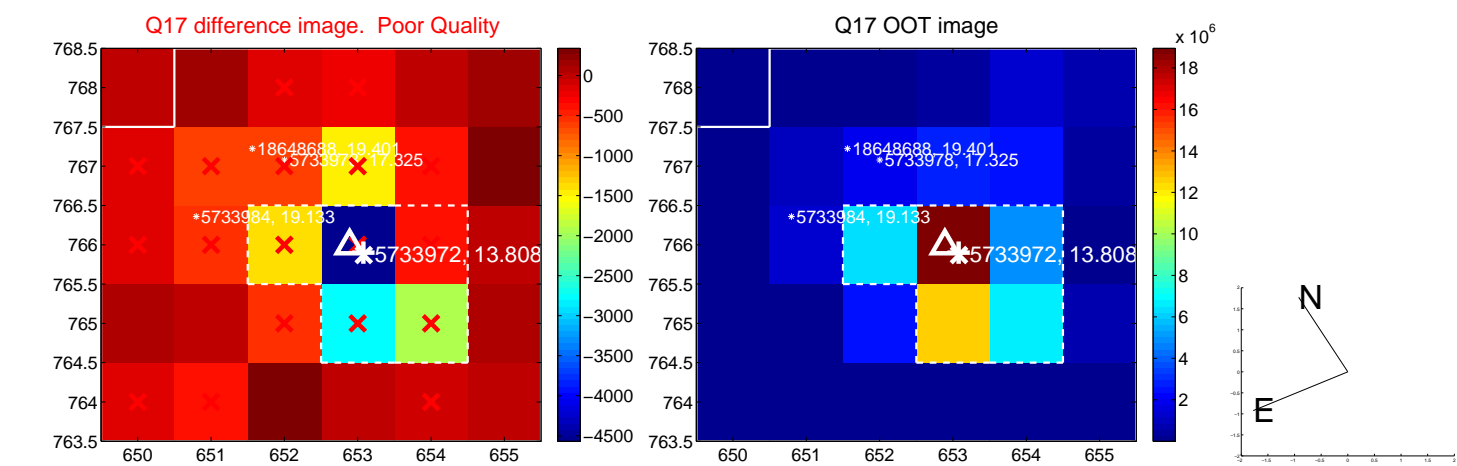
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

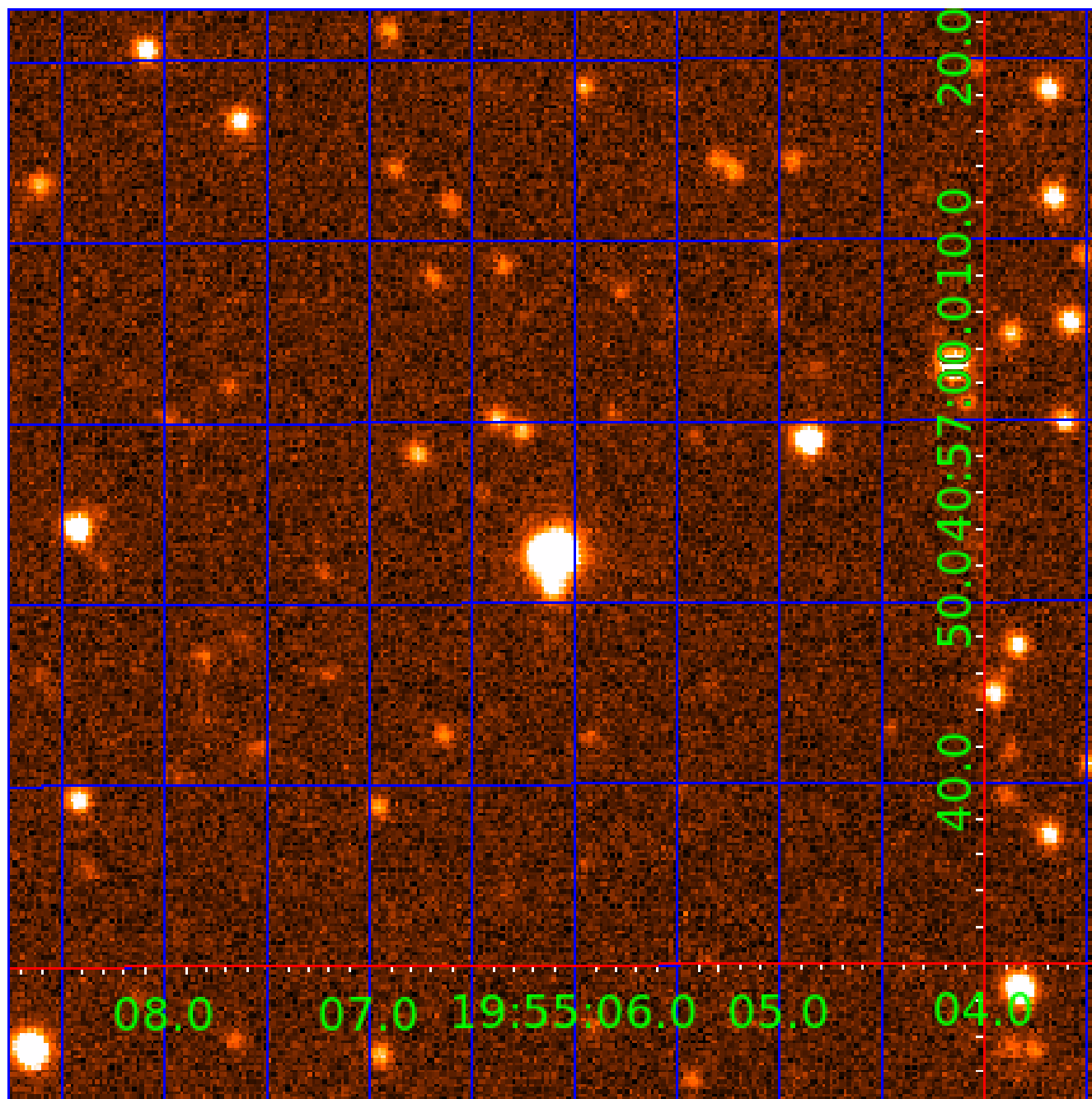


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005733972

Q1-17 DR25 TCE Parameters

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005733972-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST
005733972-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
005733972-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

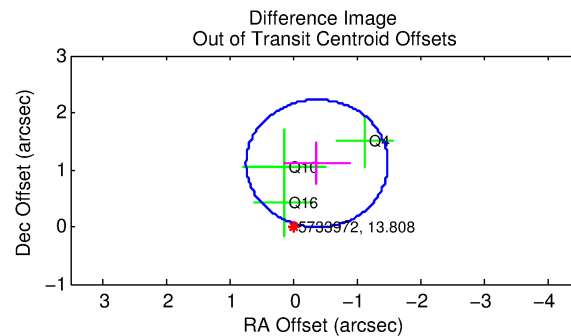
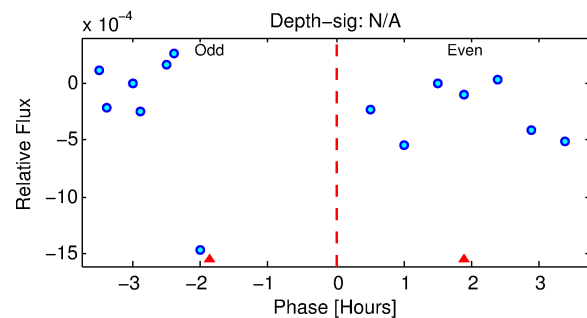
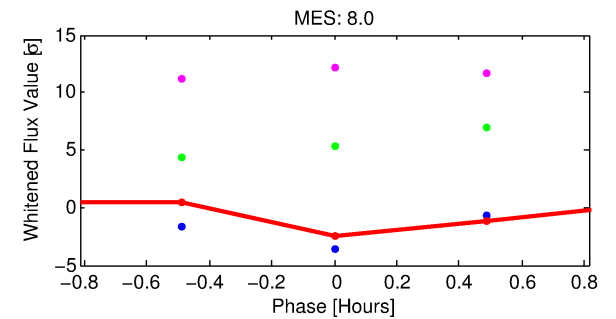
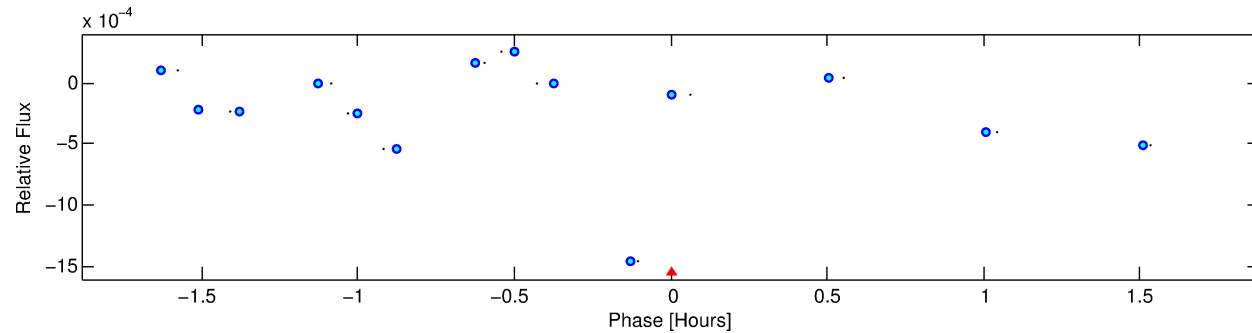
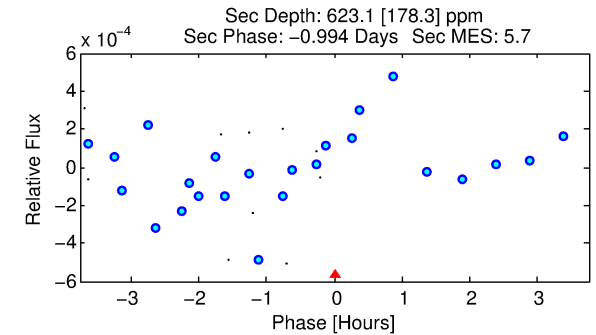
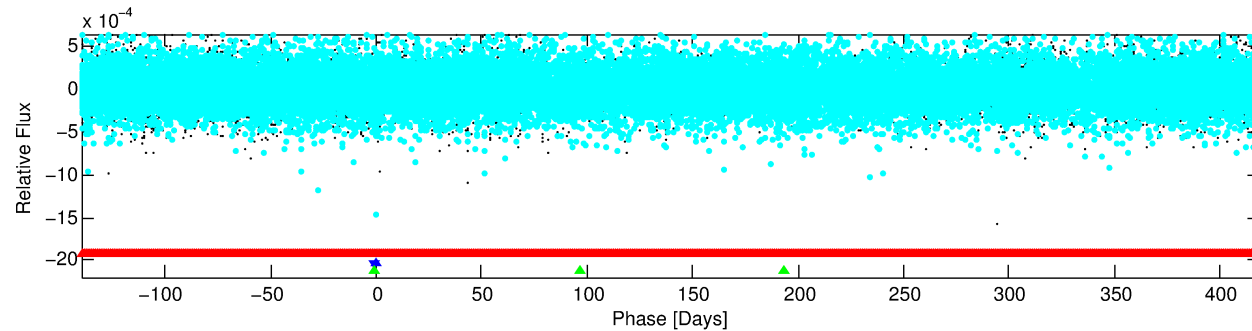
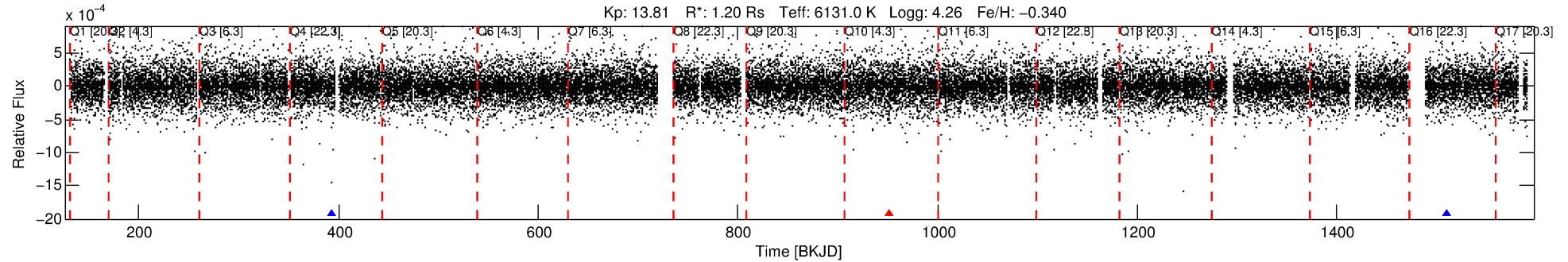
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005733972-02

No Significant Match Found

DV One-Page Summary

KIC: 5733972 Candidate: 2 of 3 Period: 558.449 d



TPS TCE Results:

Period = 558.44919 d
Epoch = 392.9039 BKJD

DV fit results are unavailable

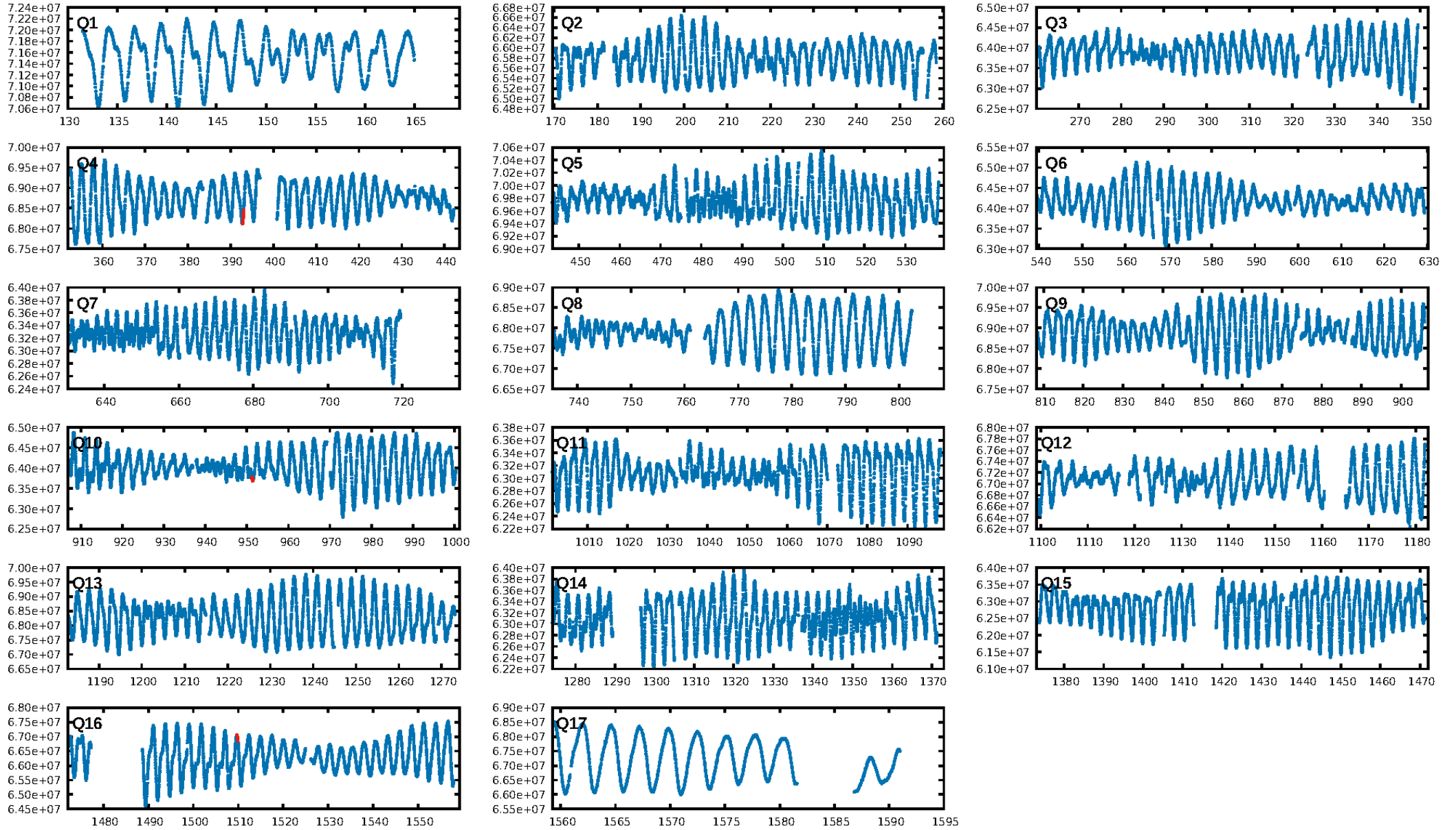
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [472.78 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.38e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: -4.19
Centroid-sig: 68.4%
Centroid-so: 0.303 arcsec [0.71 σ]
OotOffset-rm: 1.174 arcsec [3.15 σ]
KicOffset-rm: 1.262 arcsec [3.29 σ]
OotOffset-st: 1/0/2/0 [3]
KicOffset-st: 1/0/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.33 [1/3]

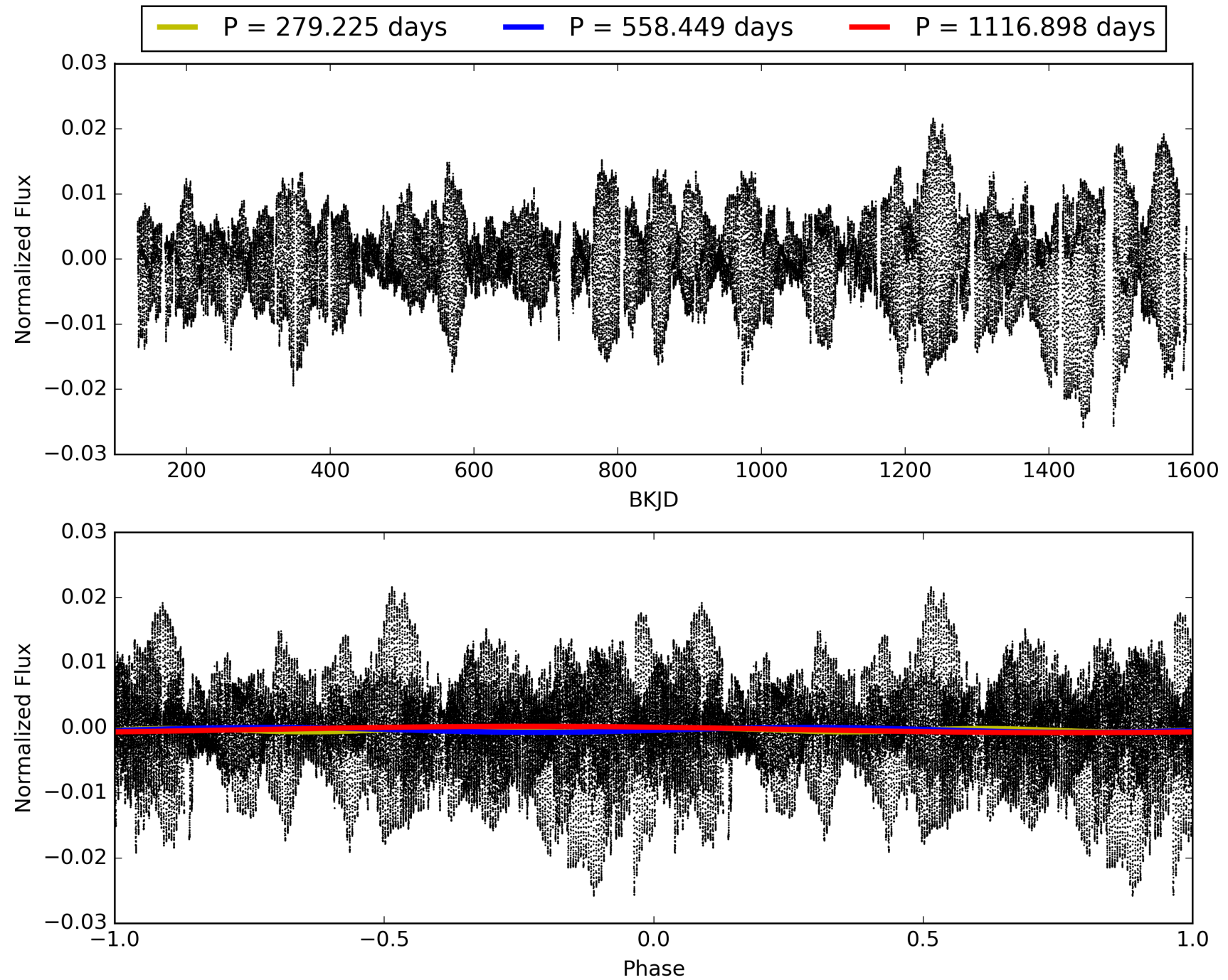
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:22:40 Z

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

TCE 005733972-02, PDC Light Curves

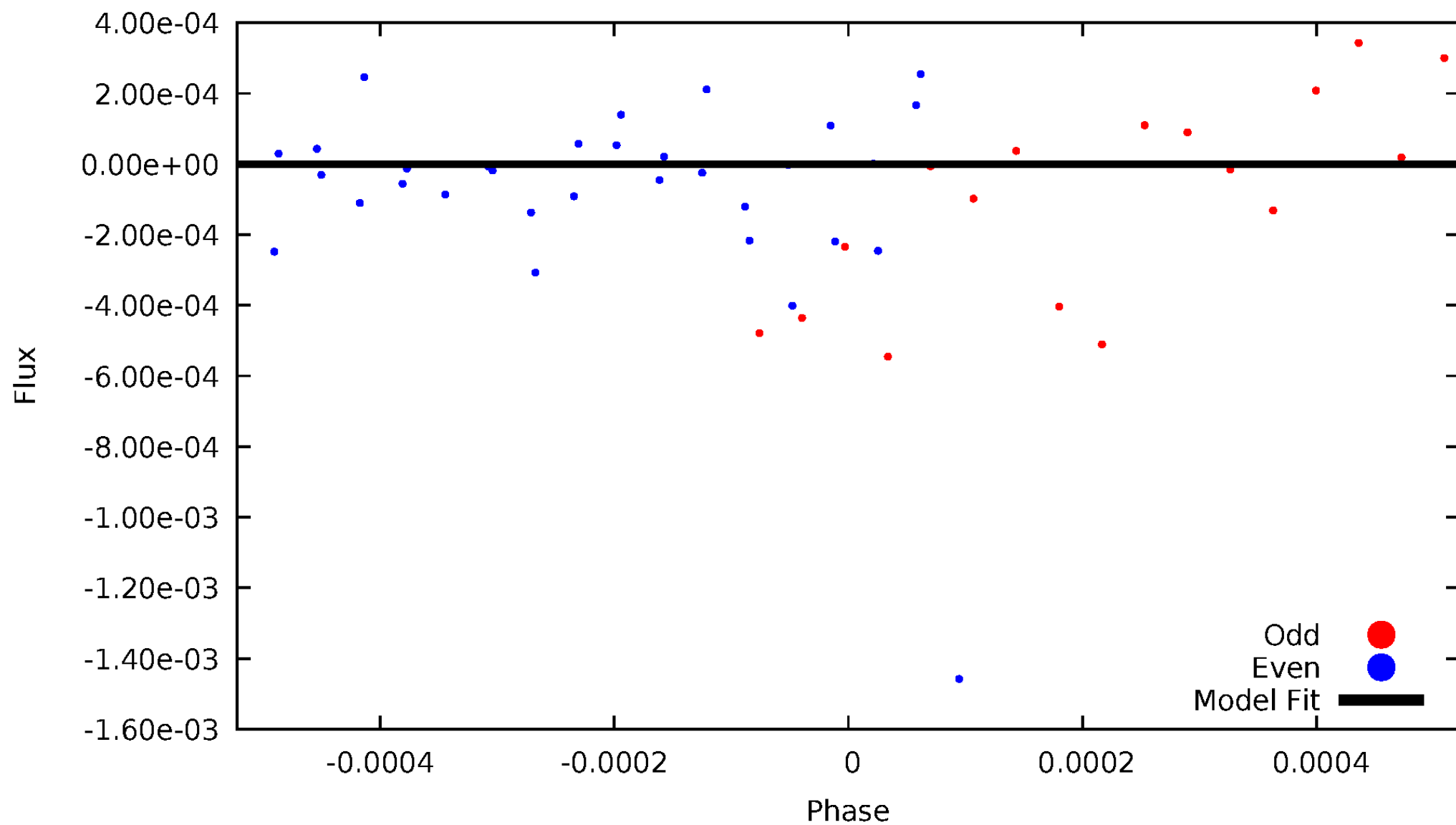


TCE 005733972-02



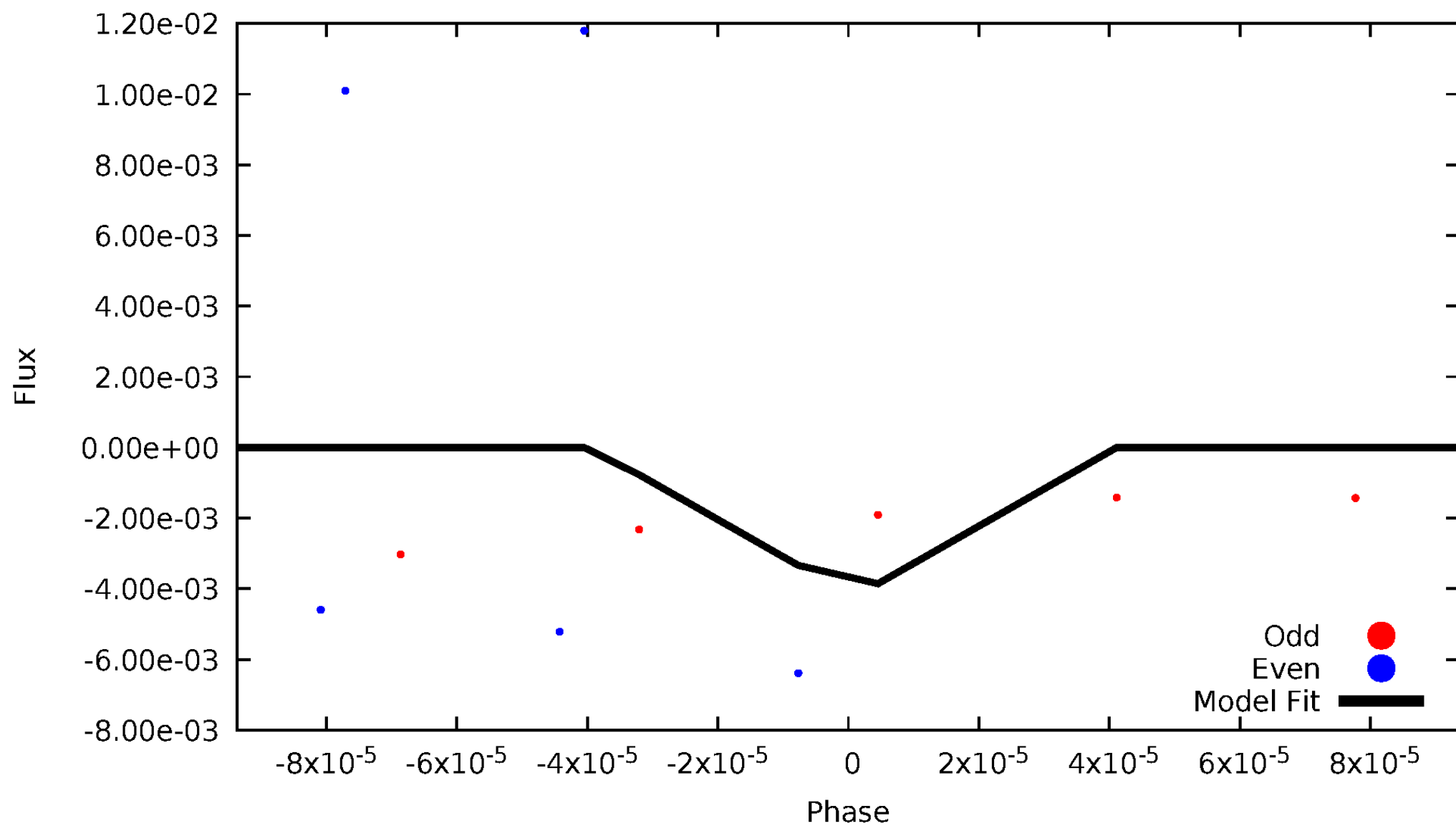
DV Odd/Even

TCE 005733972-02



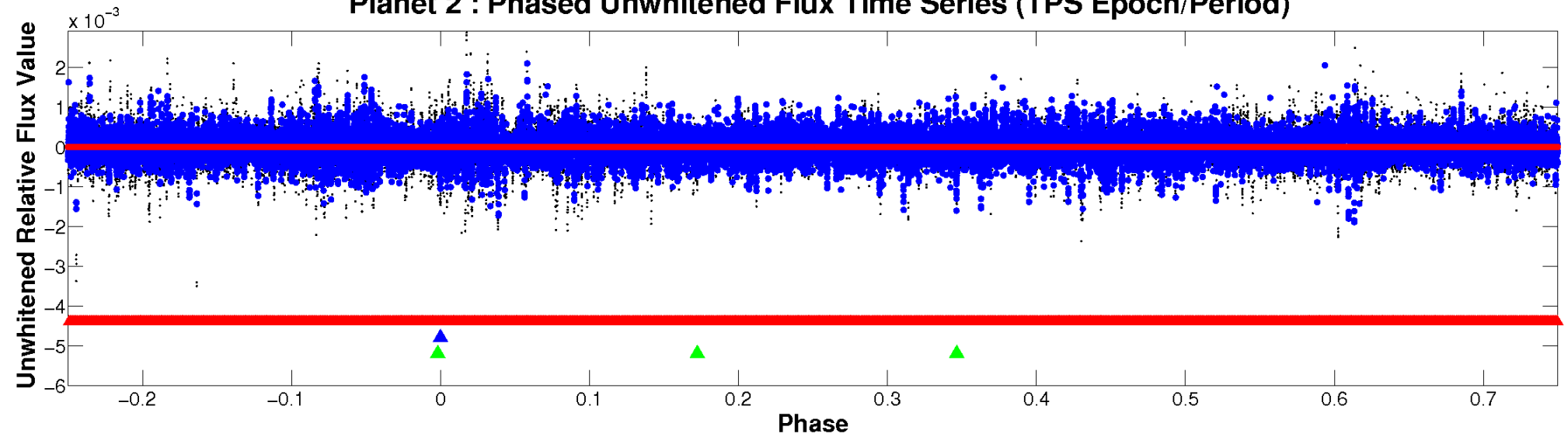
ALT Odd/Even

TCE 005733972-02

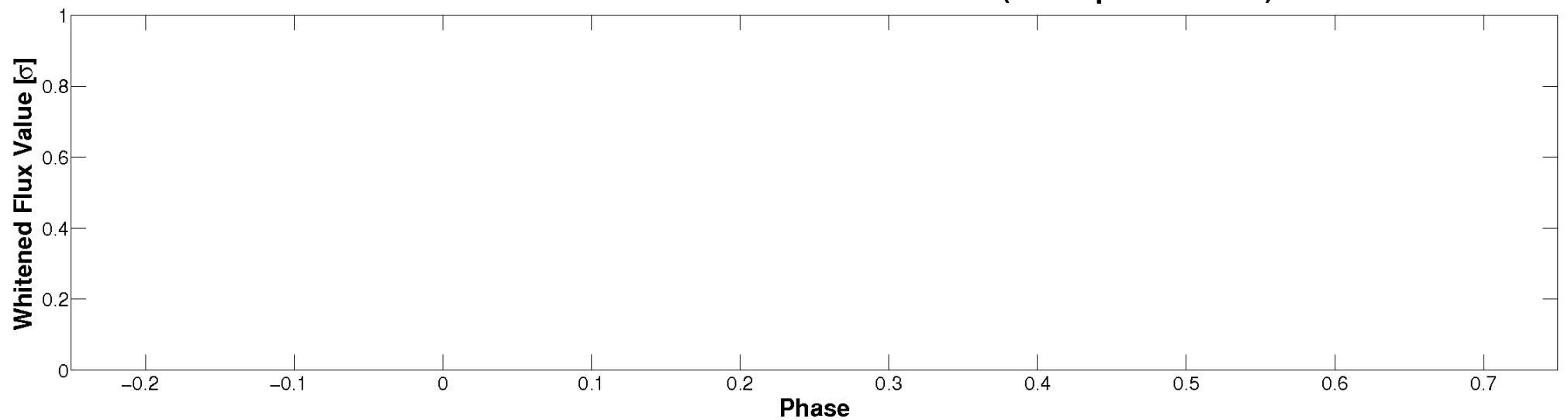


Non-Whitened Vs. Whitened Light Curve

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

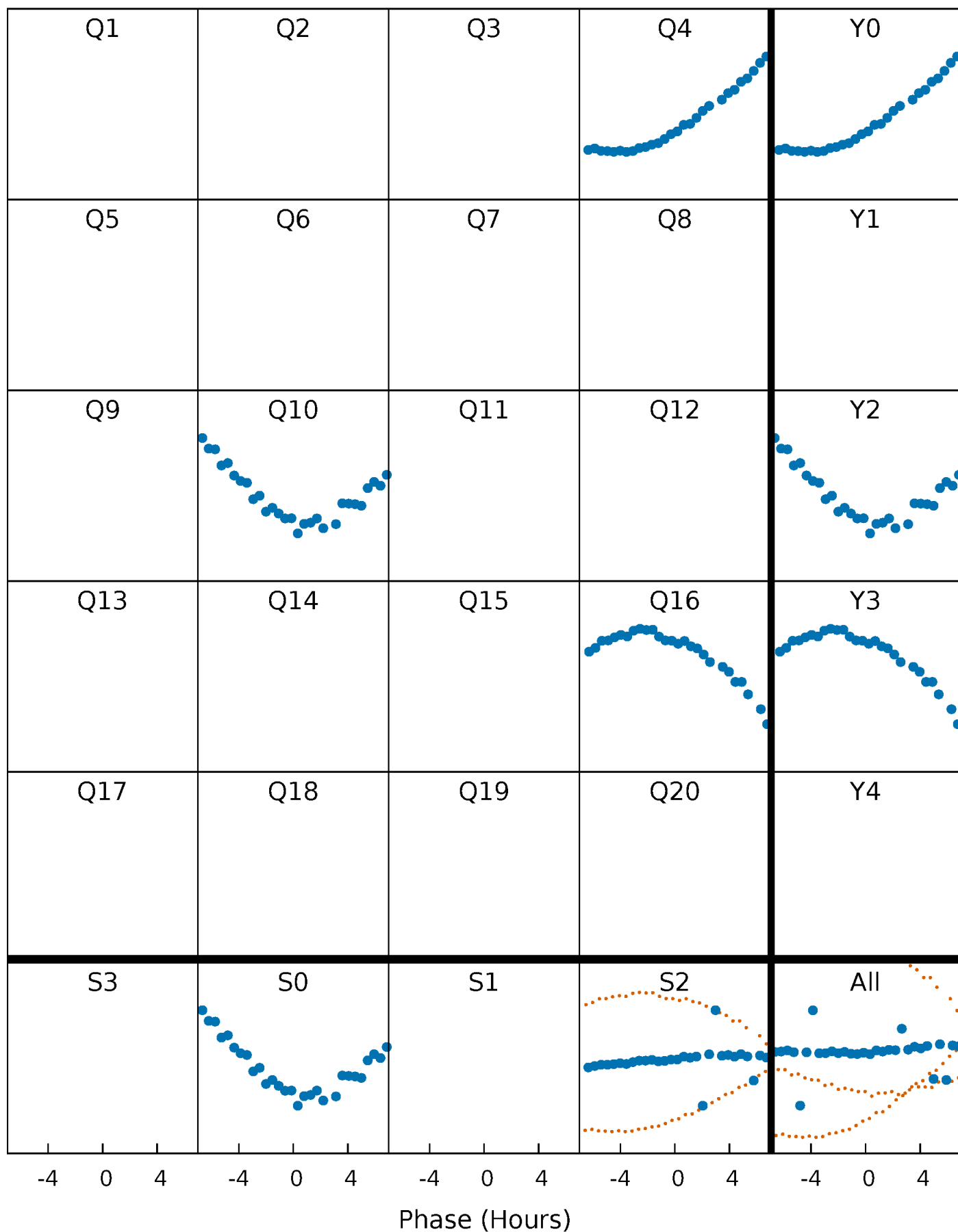


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



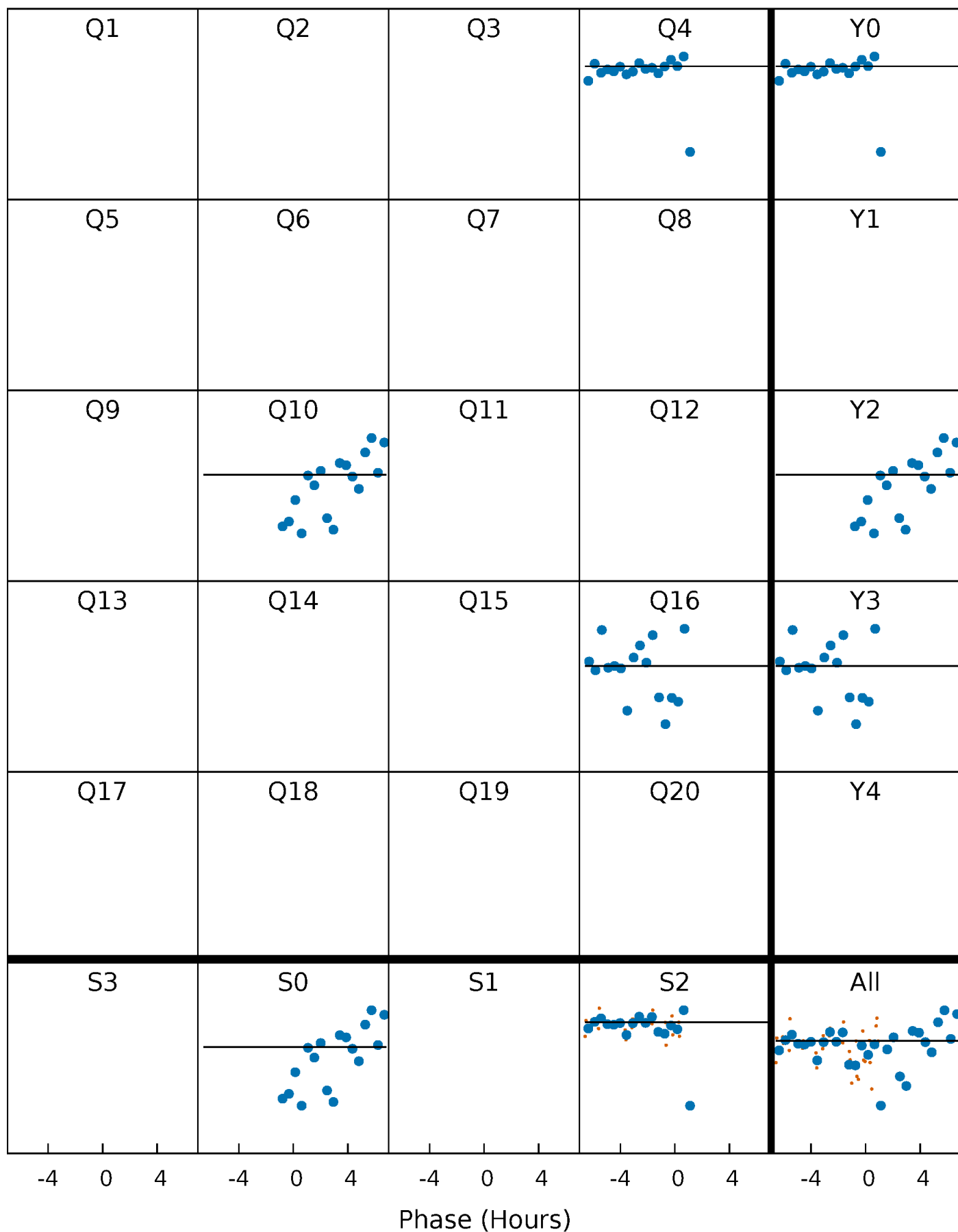
PDC Quarter-Phased Transit Curves

TCE 005733972-02 P=558.449195 Days $T_0=392.903905$ (BKJD)



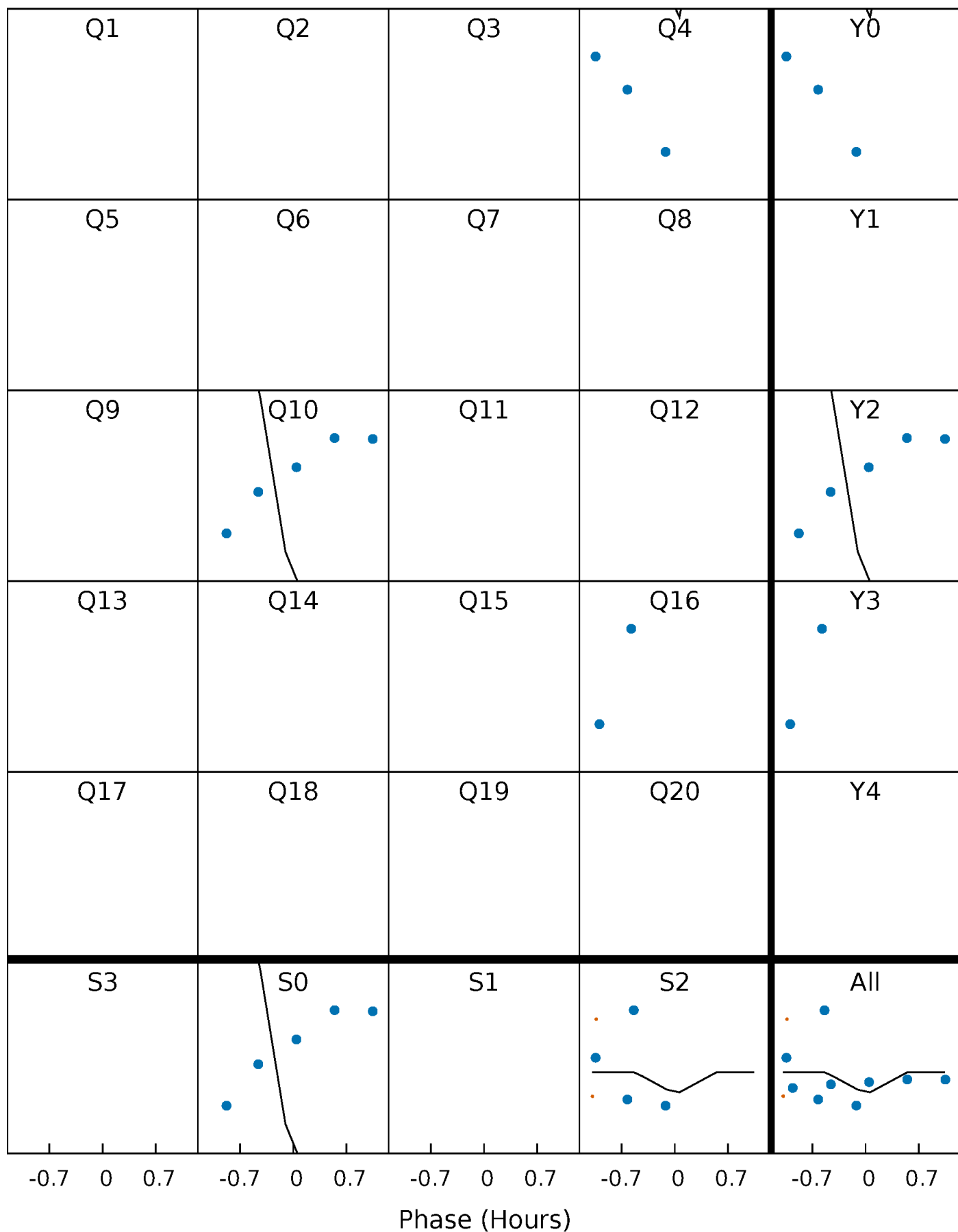
DV Quarter-Phased Transit Curves

TCE 005733972-02 P=558.449195 Days $T_0=392.903905$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

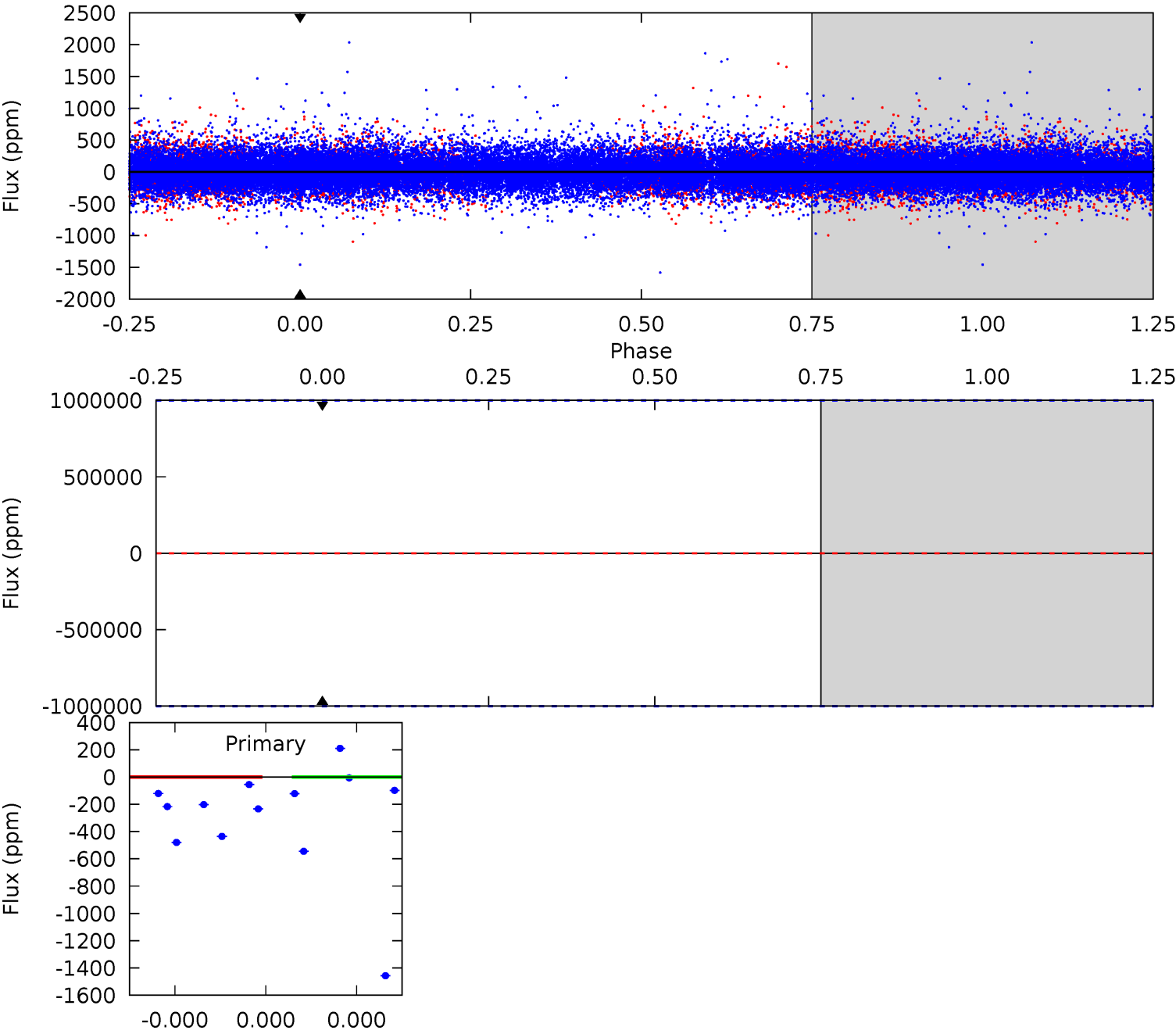
TCE 005733972-02 P=558.449195 Days $T_0=392.961071$ (BKJD)



DV Model-Shift Uniqueness Test

005733972-02, P = 558.449195 Days, E = 392.903905 Days

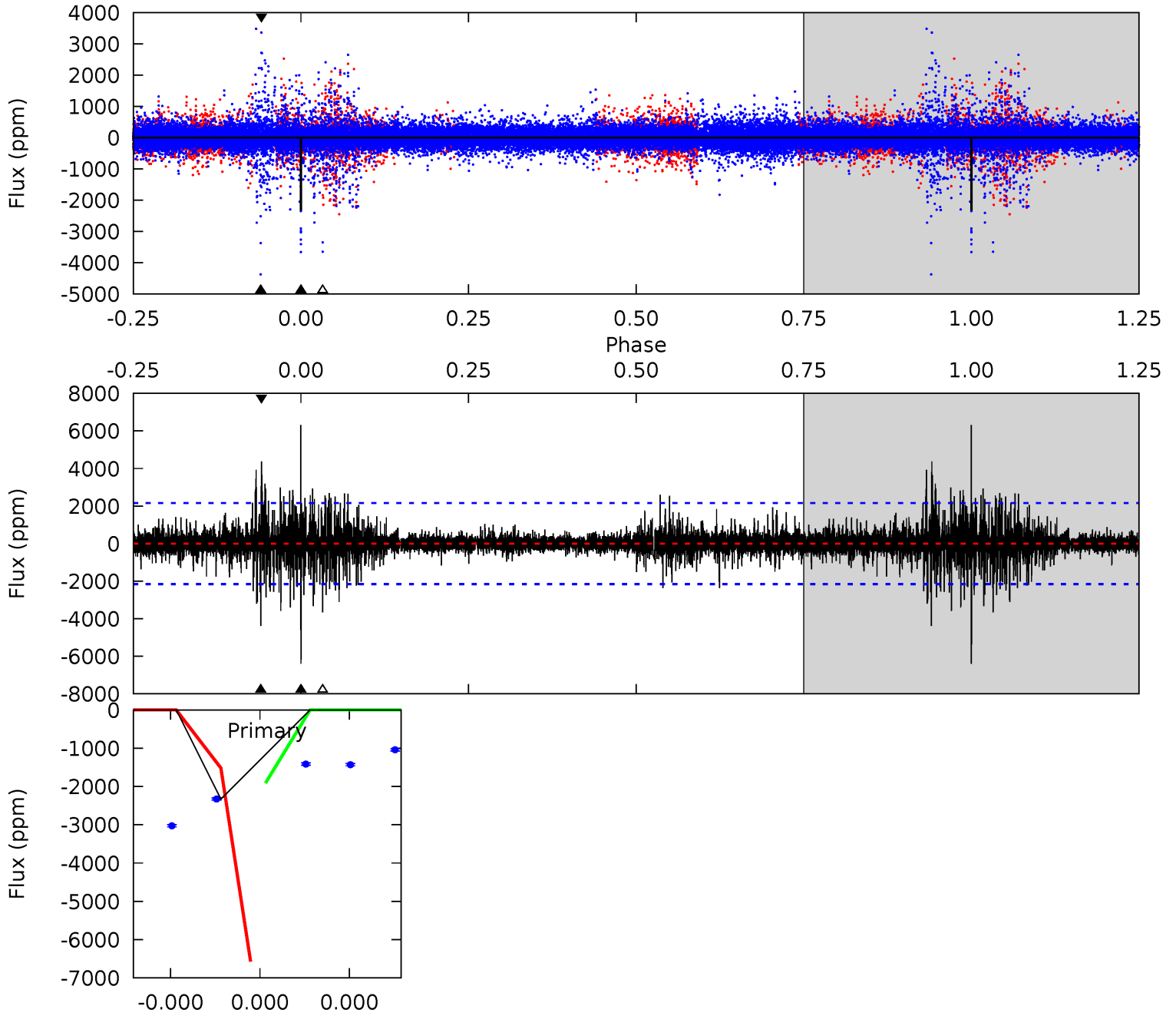
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005733972-02, P = 558.449195 Days, E = 392.961071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	12.0	9.97	12.0	5.90	3.97	1.00	7.49	5.50	1.98	-0.01	0	1.00	0.50	11.6



Stellar Parameters For KIC 005733972

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6131^{+183}_{-201}	$4.262^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.199^{+0.340}_{-0.247}$	$0.960^{+0.151}_{-0.110}$	$0.784^{+0.871}_{-0.382}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-21%	+16%/-11%	+111%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005733972-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$10.29^{+9.82}_{-7.16}$	362^{+29}_{-25}	3292^{+23001}_{-25082}	$1093^{+1840156}_{-1440090}$
Alt.	-0 ± 366	$12.41^{+11.86}_{-8.38}$	361^{+31}_{-25}	2181^{+1556}_{-5645}	89^{+4273}_{-3114}

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 $A_{obs} \gg 1.0$

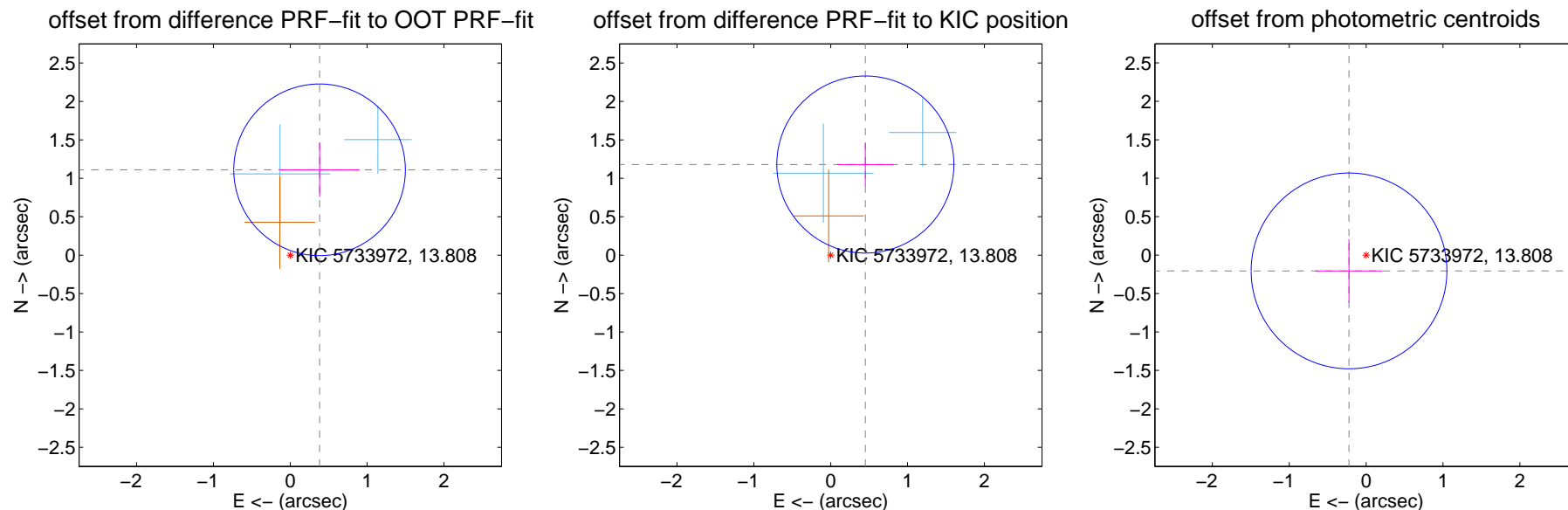
DV Centroid Data

Supplemental centroid analysis for 005733972-02. Kepler magnitude: 13.81. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

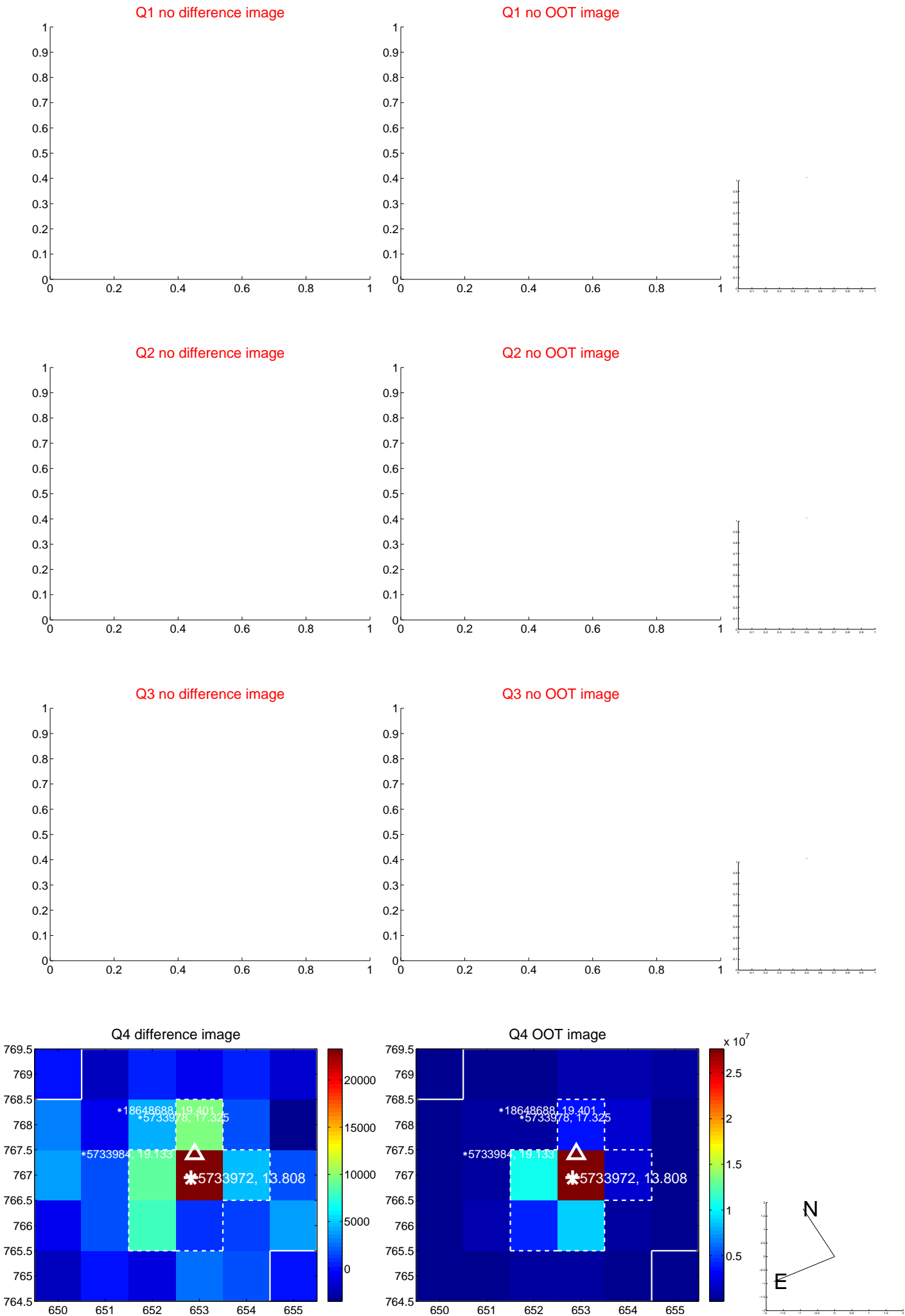
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.174 ± 0.372	3.15	-0.381 ± 0.523	1.111 ± 0.350
PRF-fit source offset from KIC position	1.262 ± 0.384	3.29	-0.450 ± 0.366	1.179 ± 0.281
photometric centroid source offset	0.30 ± 0.42	0.71	0.22 ± 0.44	-0.21 ± 0.41

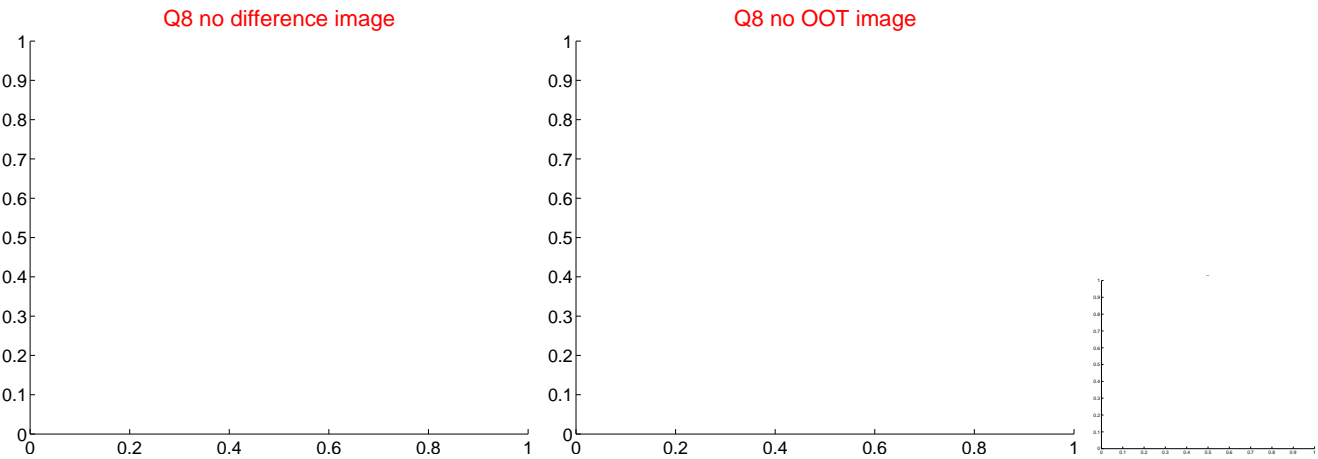
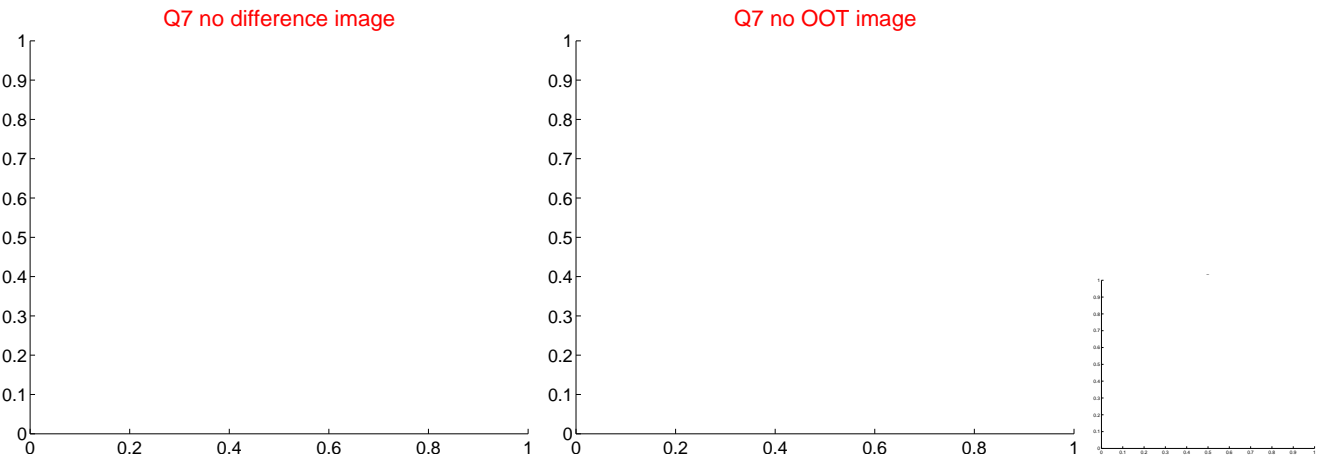
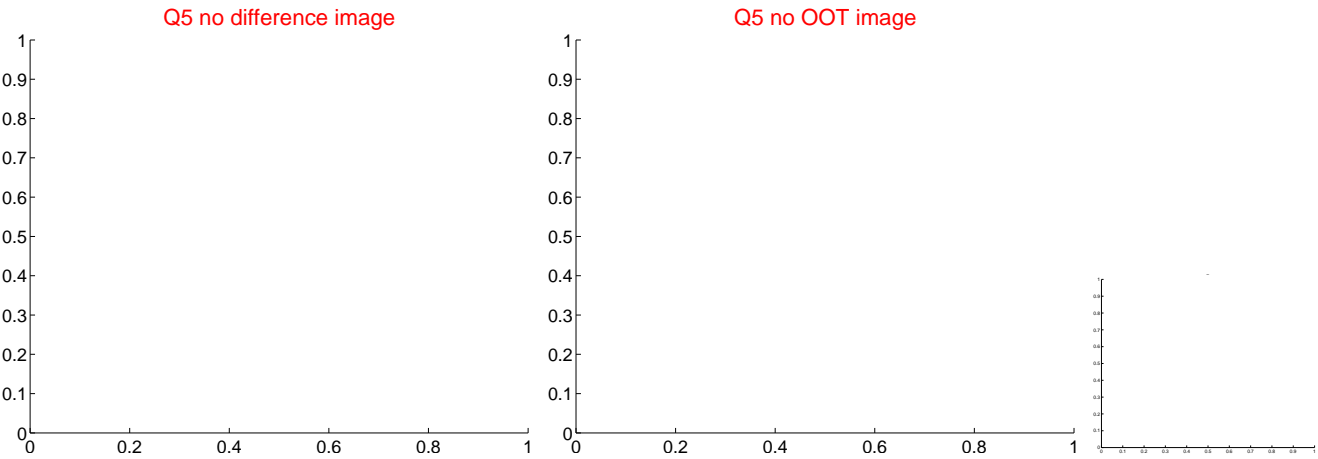


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

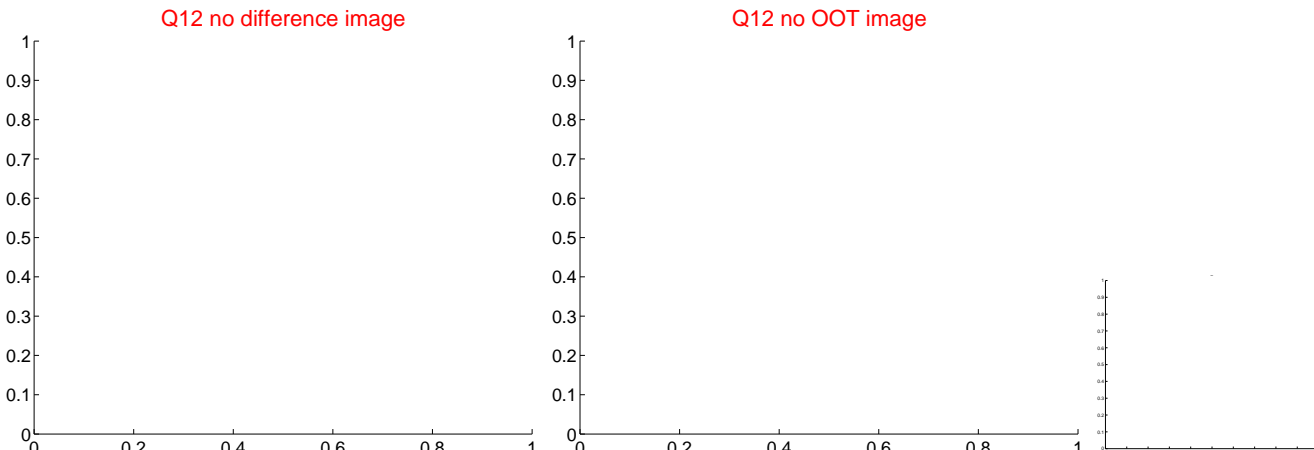
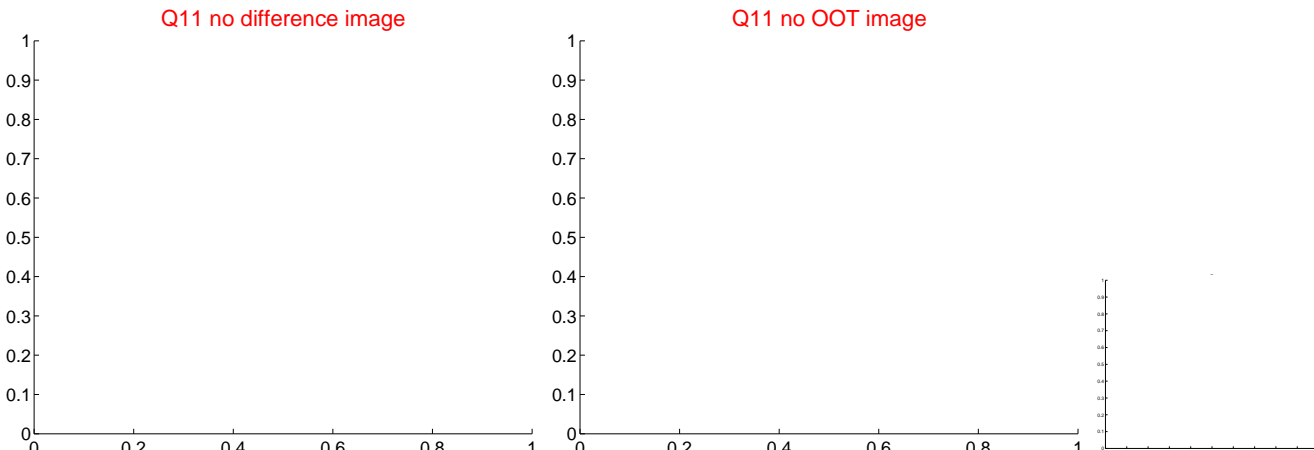
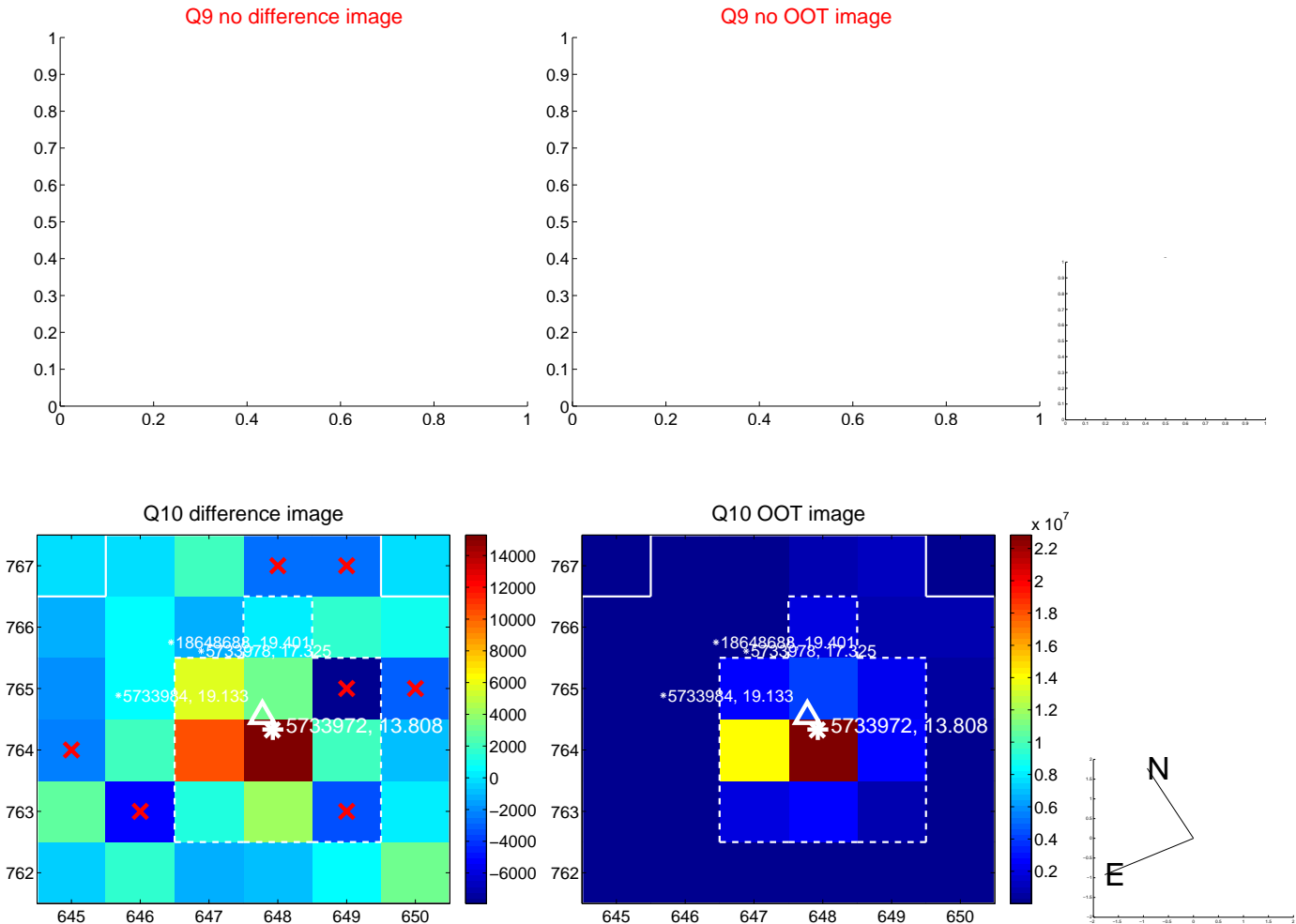
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



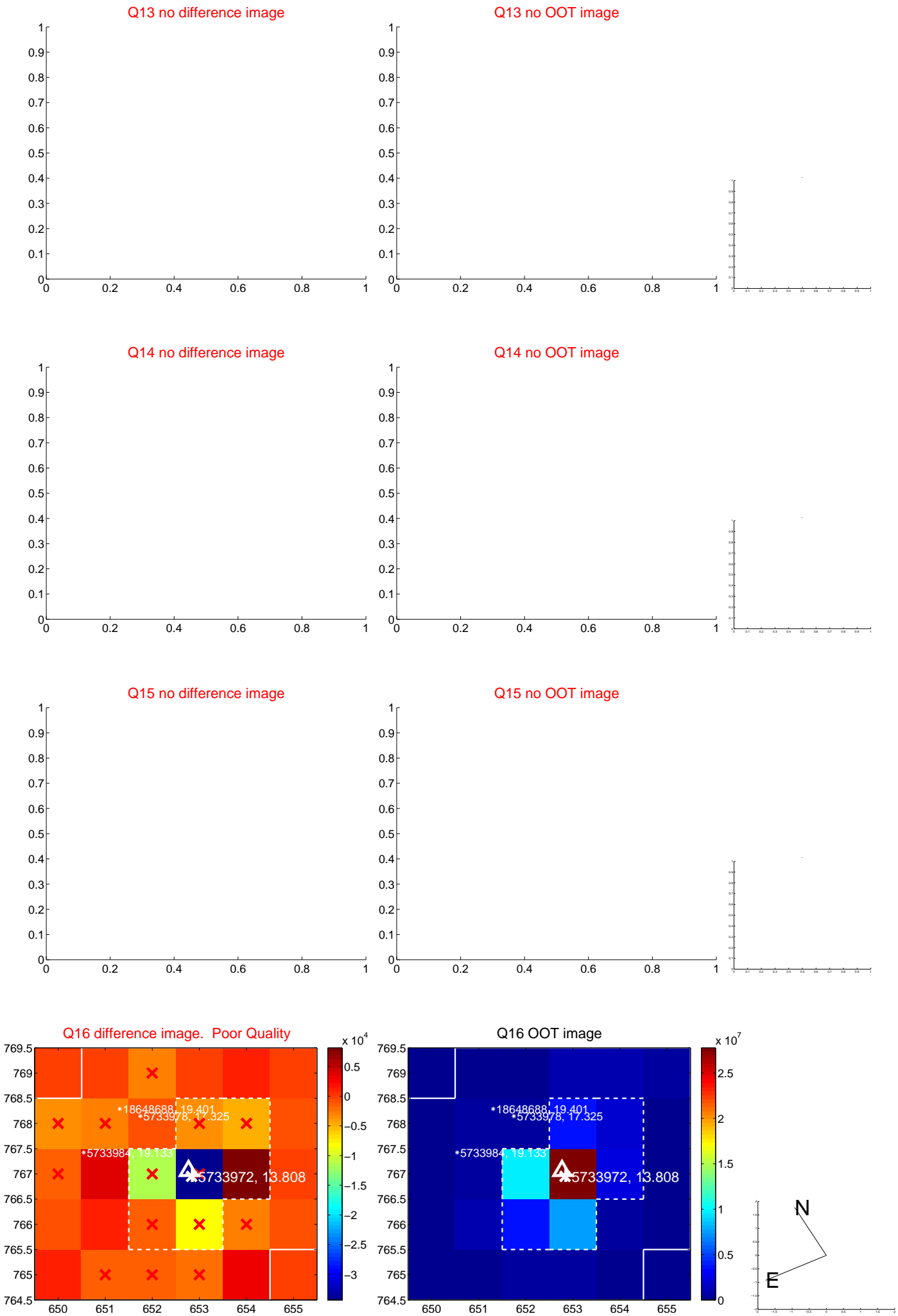
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



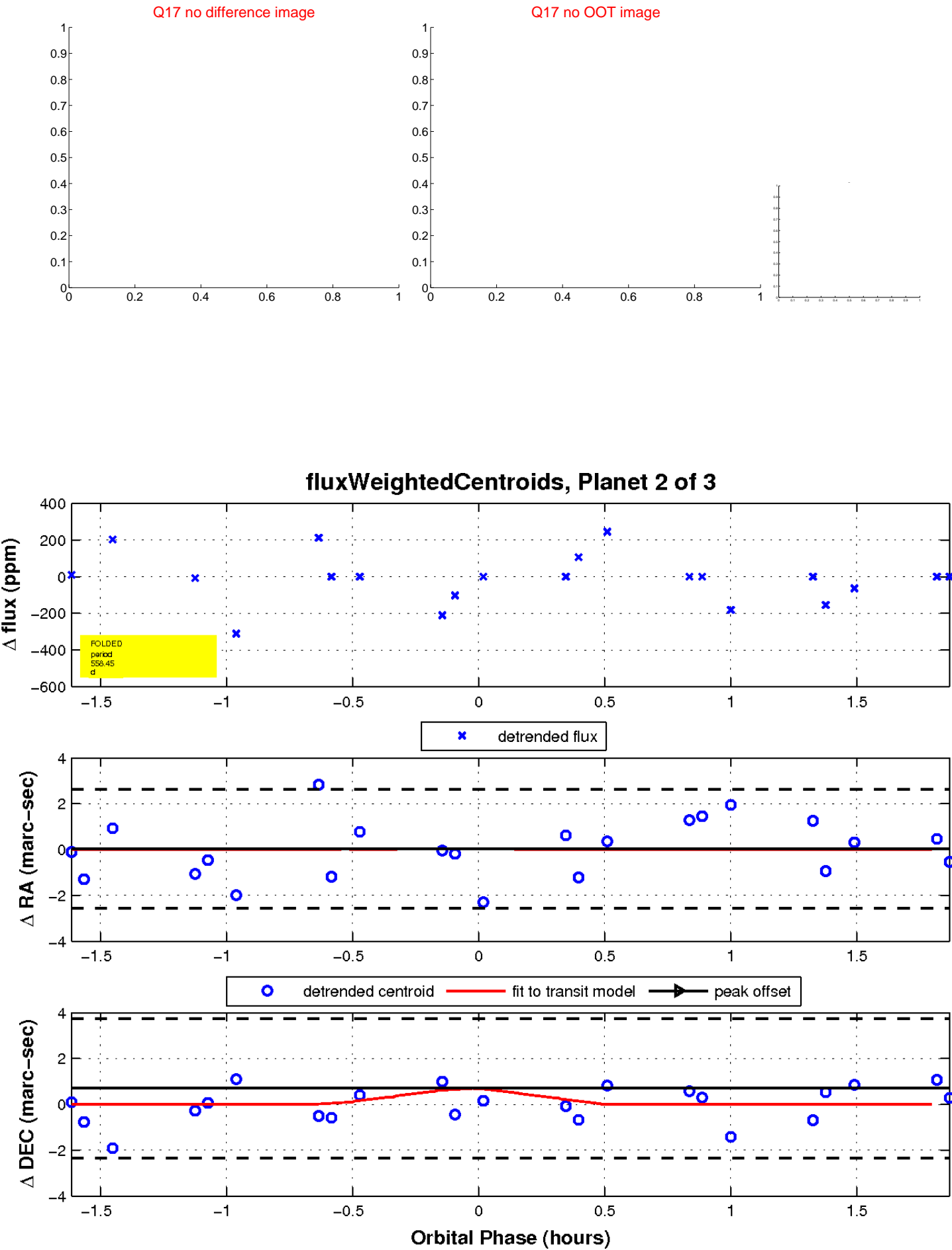
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

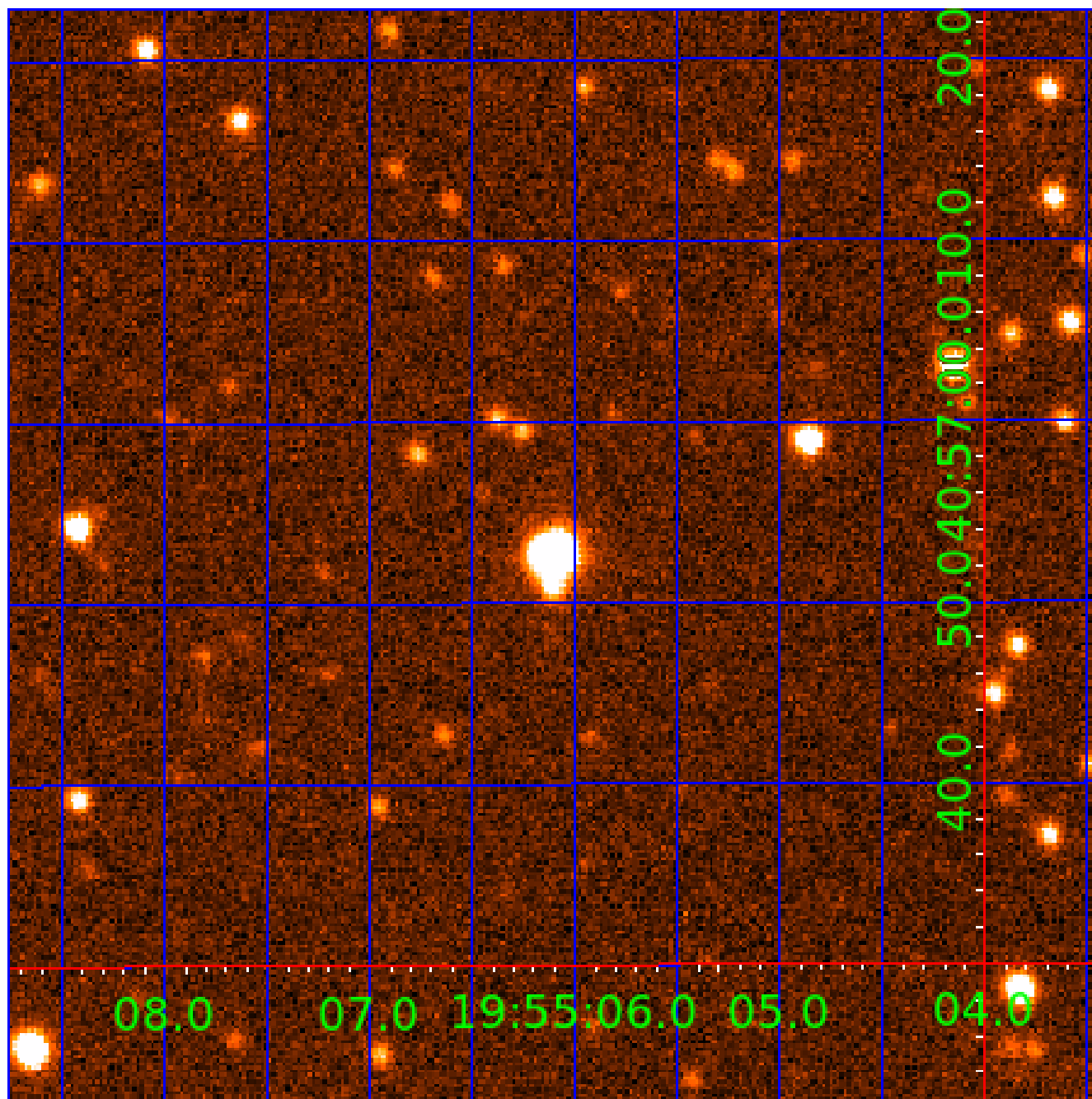


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005733972

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})
005733972-01	OBS	No	0.982313	131.857030	42.8	2.819	9.1	8.8	1.20	6131	0.92	5003.02
005733972-02	OBS	No	558.449195	392.903905	532.3	3.500	8.0	-1.0	1.20	6131	2.77	1.06
005733972-03	OBS	No	461.187720	586.423189	783.9	3.482	7.7	6.3	1.20	6131	3.87	1.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005733972-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST
005733972-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
005733972-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

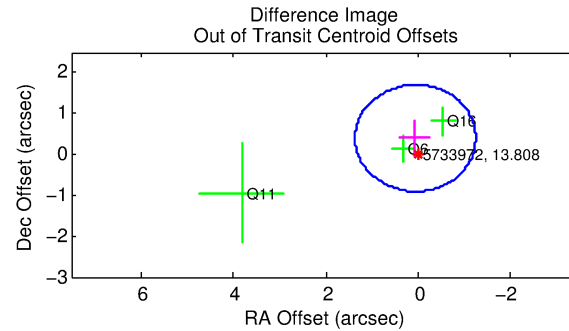
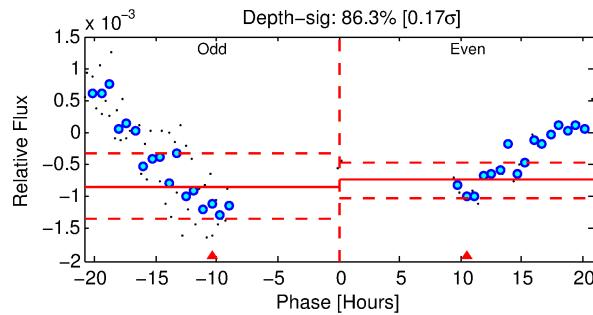
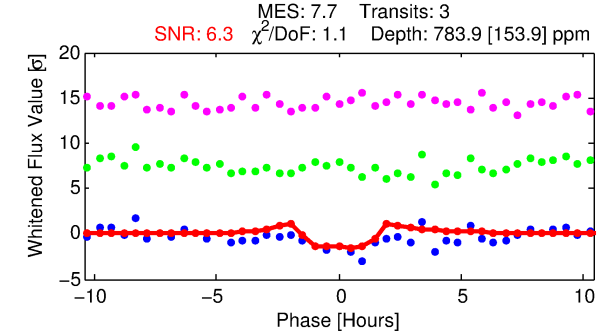
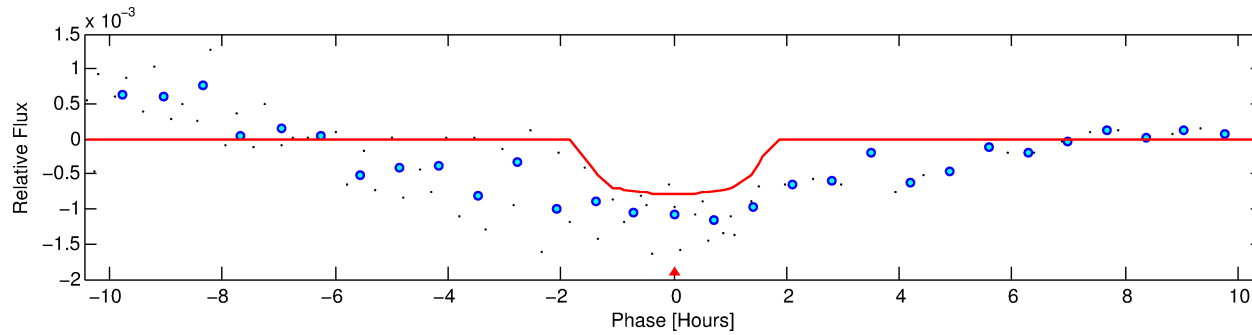
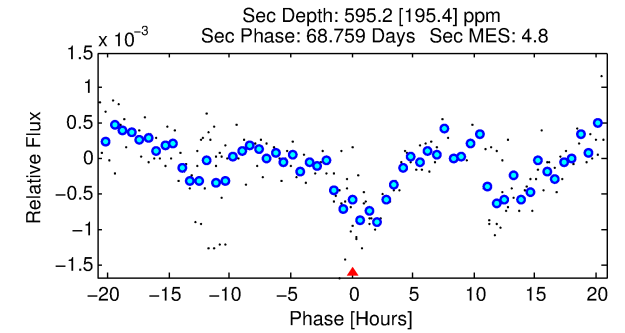
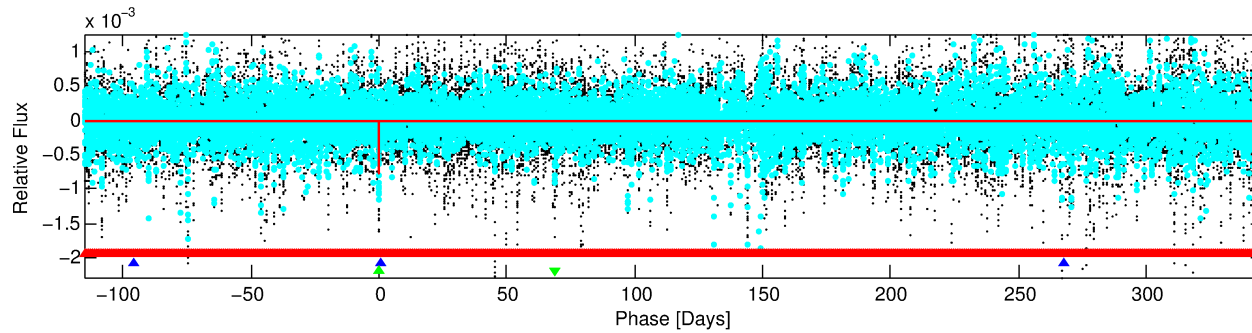
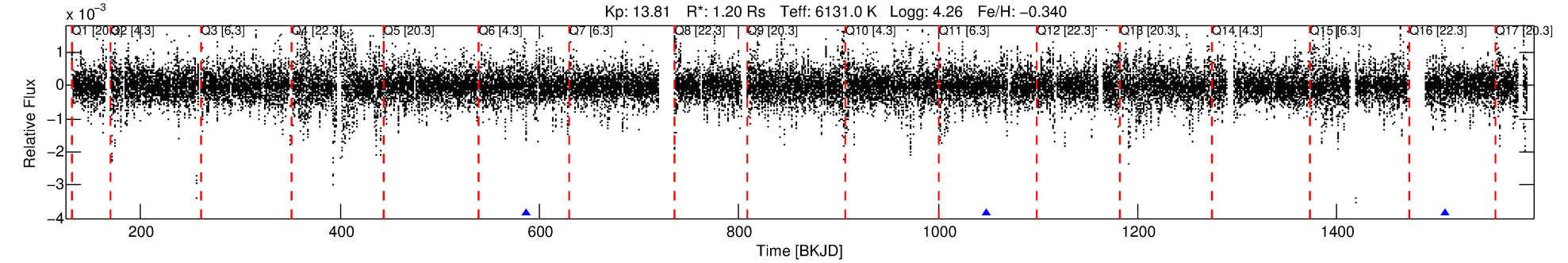
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005733972-03

No Significant Match Found

DV One-Page Summary

KIC: 5733972 Candidate: 3 of 3 Period: 461.188 d



DV Fit Results:

Period = 461.18772 [0.00867] d
Epoch = 586.4232 [0.0134] BKJD
Rp/R* = 0.0296 [0.0189]
a/R* = 548.97 [1818.14]
b = 0.87 [0.89]
Seff = 1.37 [0.51]
Teff = 276 [26] K
Rp = 3.87 [2.70] Re
a = 1.1521 [0.2751] AU
Ag = 29060.03 [39619.54] [0.73σ]
Teffp = 5570 [1845] K [2.87σ]

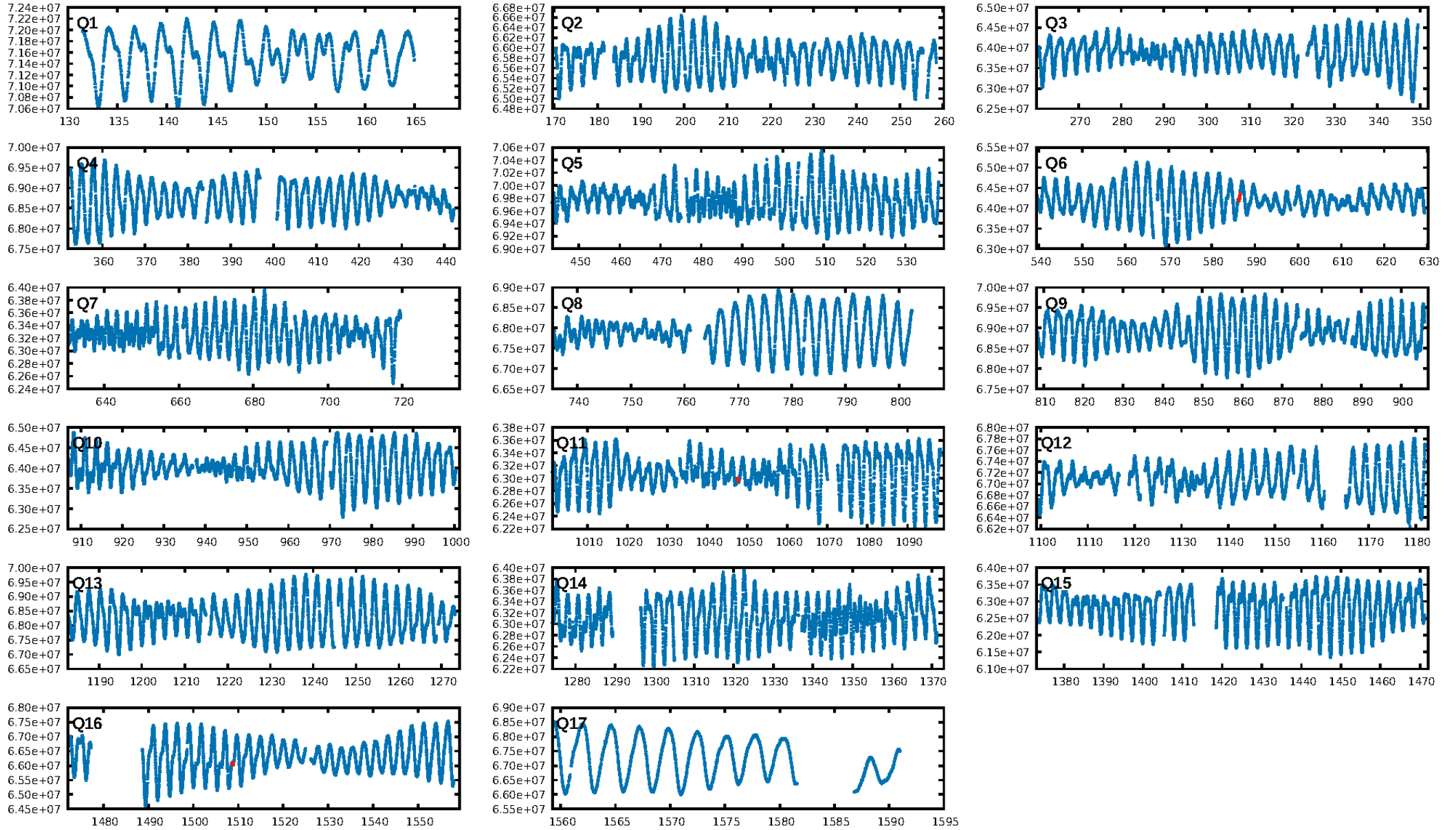
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2465.03σ]
LongPeriod-sig: 100.0% [472.78σ]
ModelChiSquare2-sig: 64.3%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 1.90e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.491
Centroid-sig: 71.9%
Centroid-so: 0.283 arcsec [0.30σ]
OotOffset-rm: 0.404 arcsec [0.93σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.460 arcsec [1.05σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

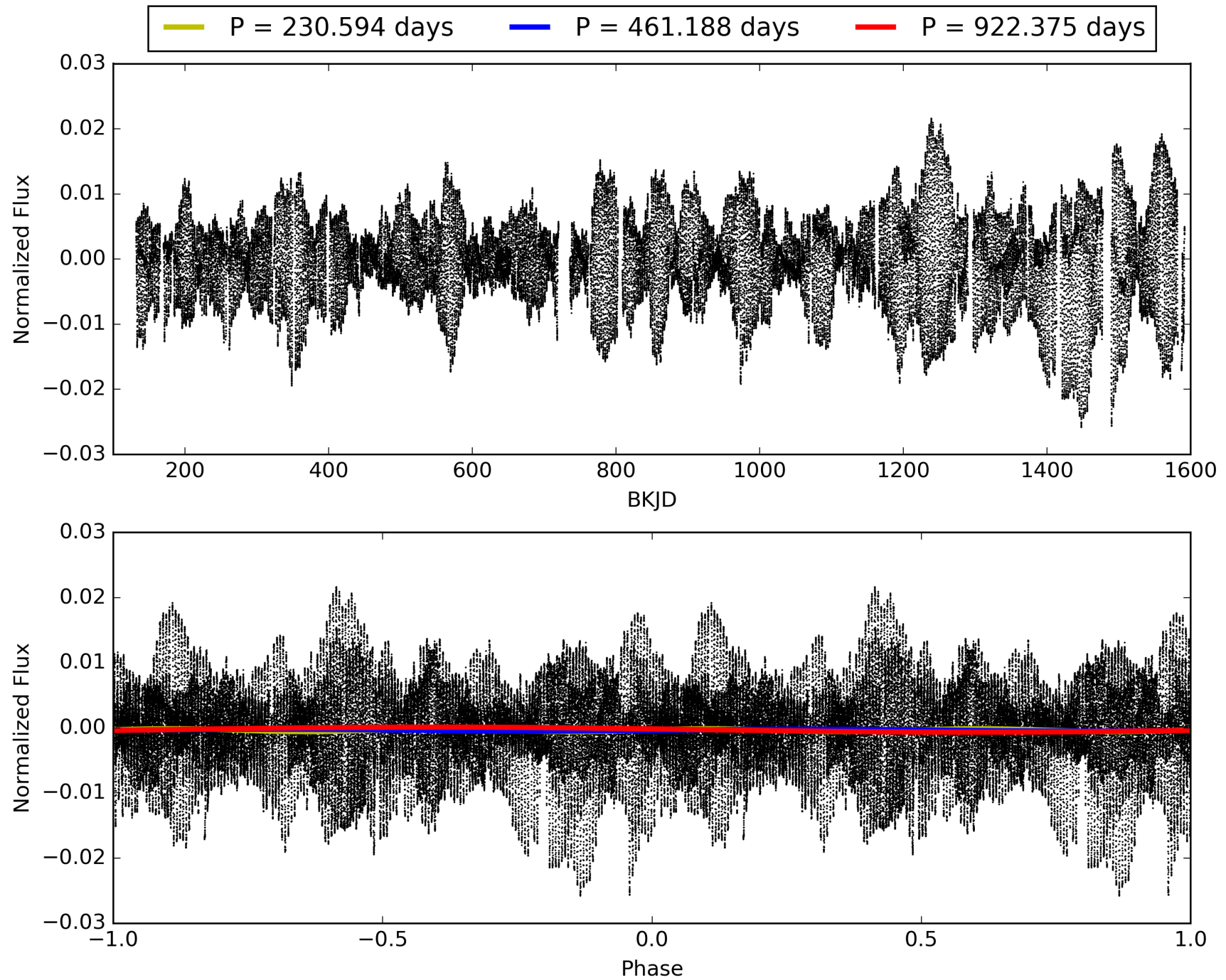
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:22:54 Z

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

TCE 005733972-03, PDC Light Curves

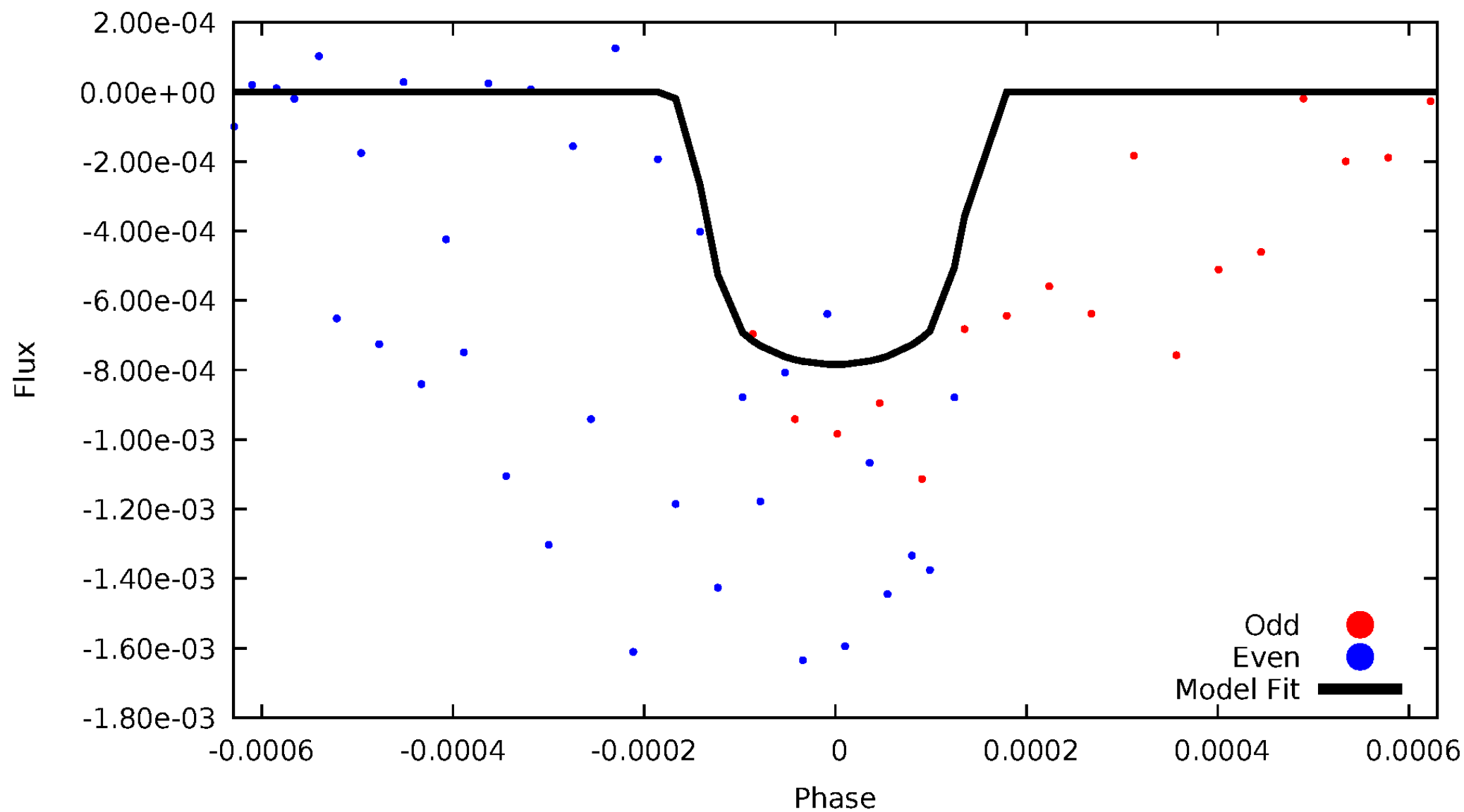


TCE 005733972-03



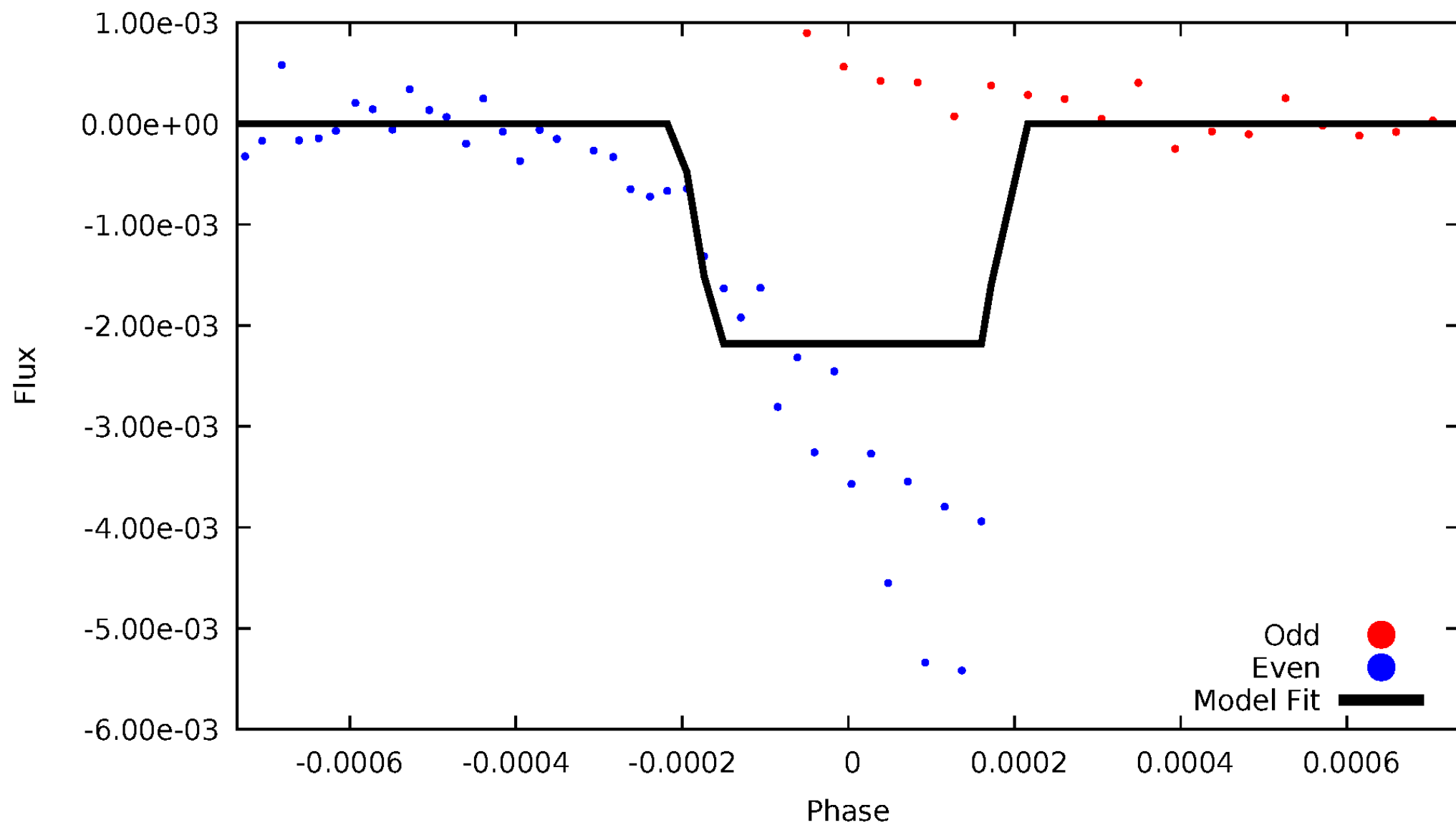
DV Odd/Even

TCE 005733972-03



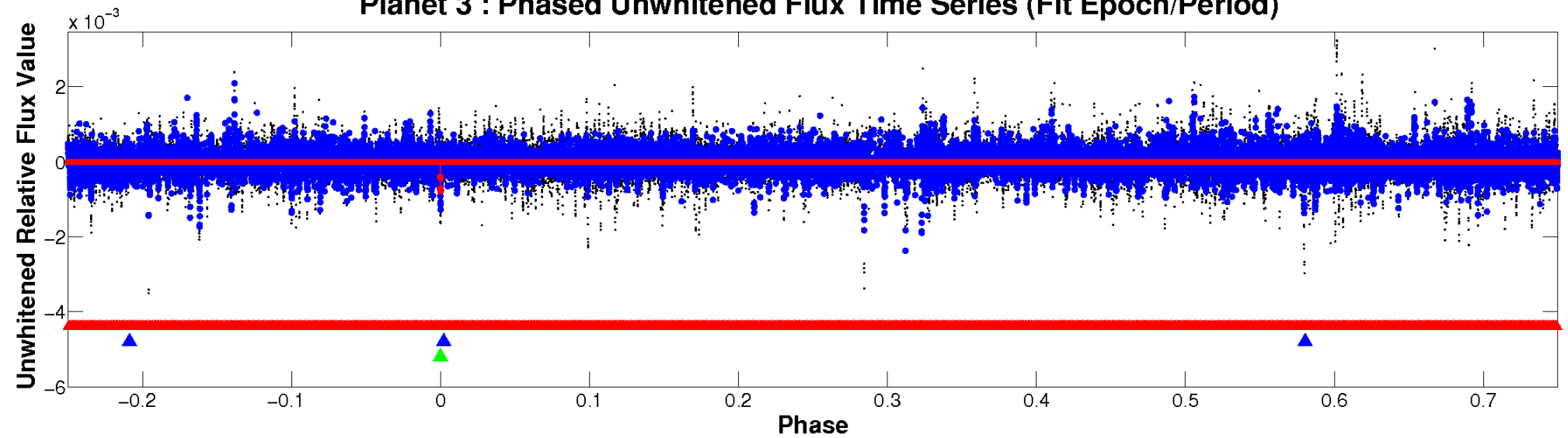
ALT Odd/Even

TCE 005733972-03

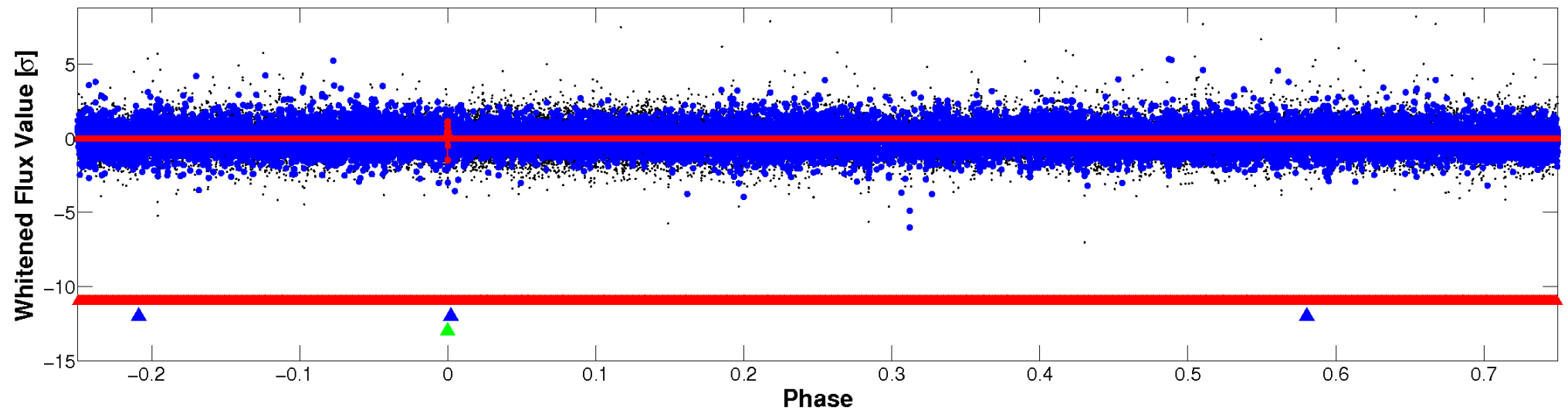


Non-Whitened Vs. Whitened Light Curve

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

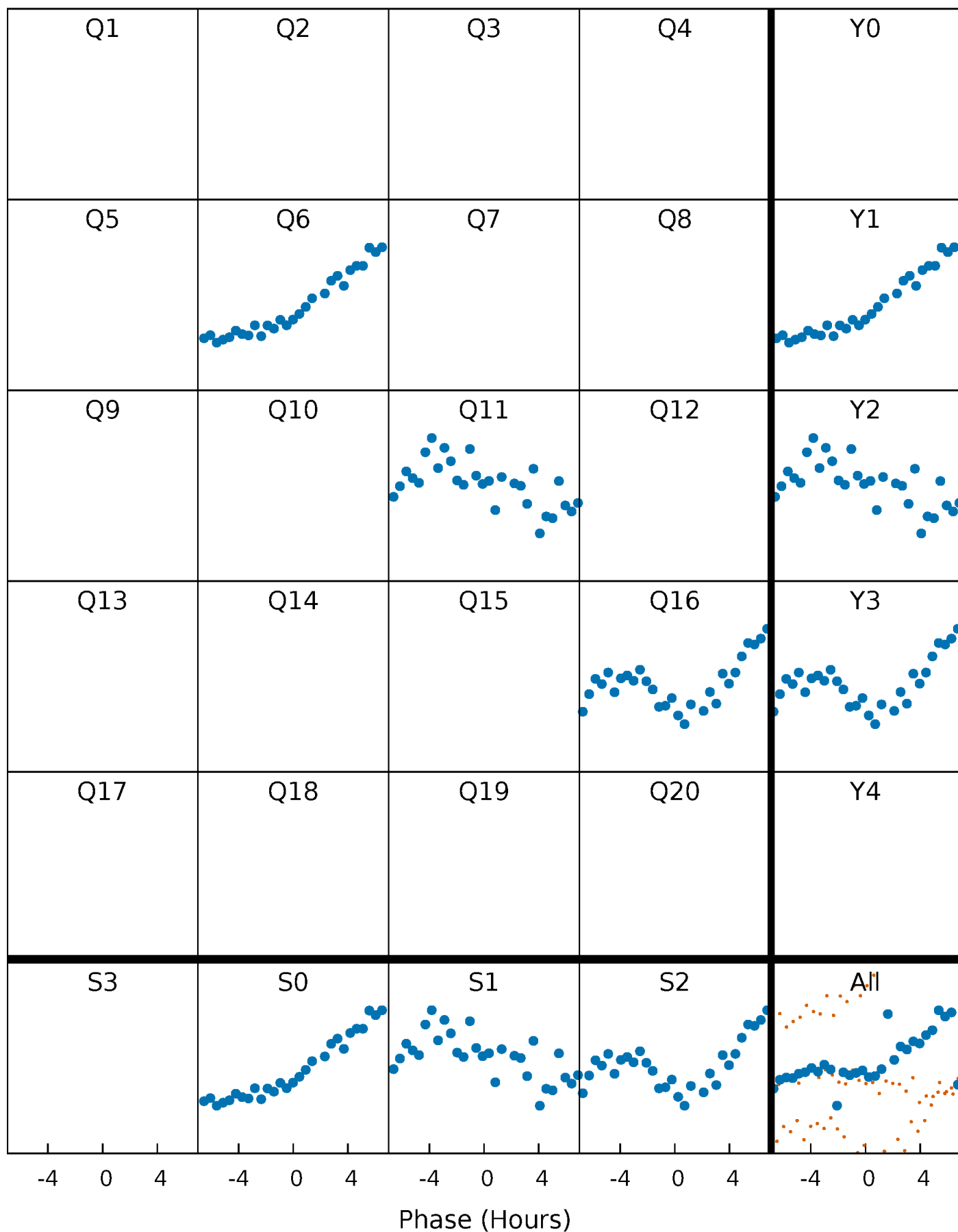


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



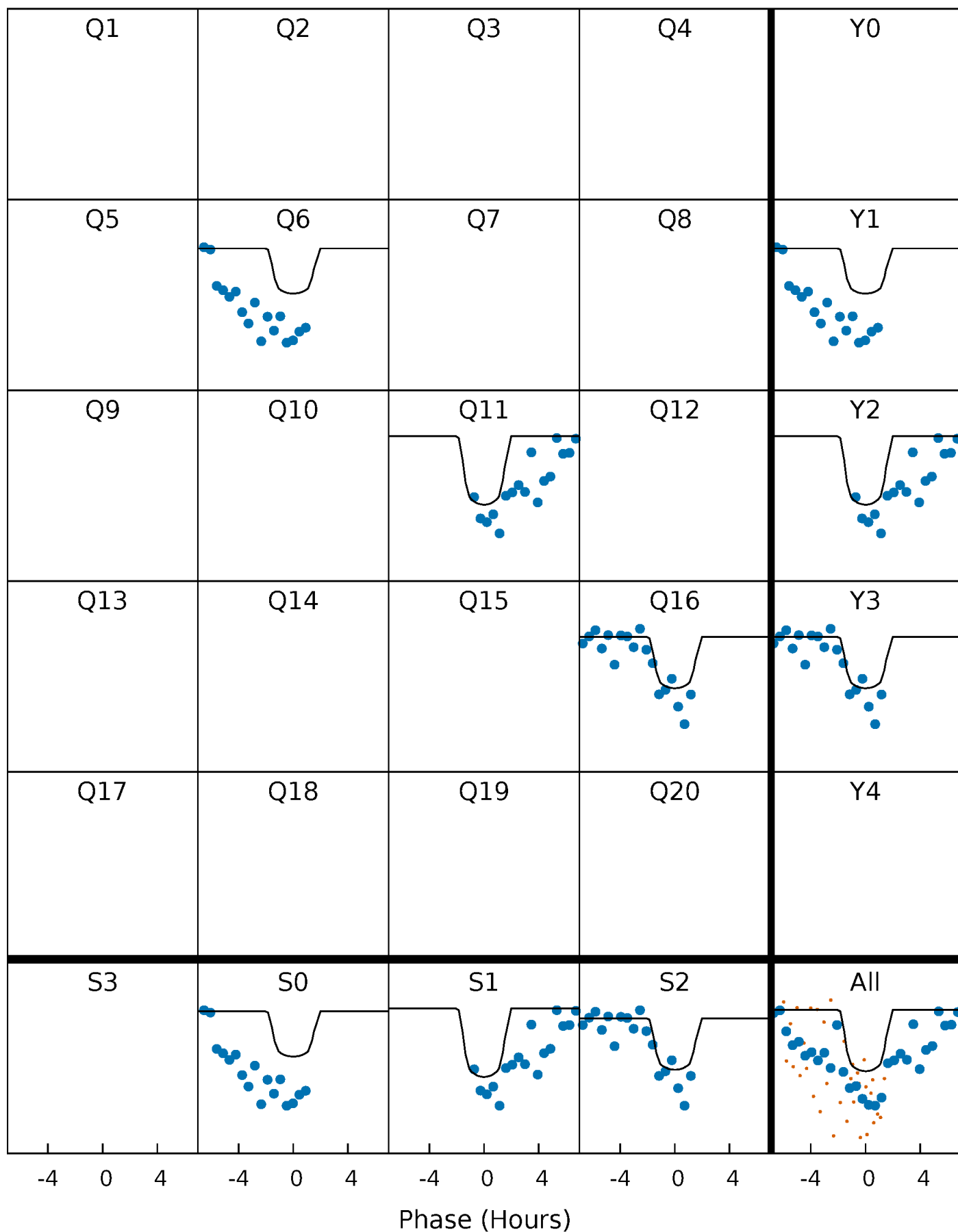
PDC Quarter-Phased Transit Curves

TCE 005733972-03 P=461.187720 Days $T_0=586.423189$ (BKJD)



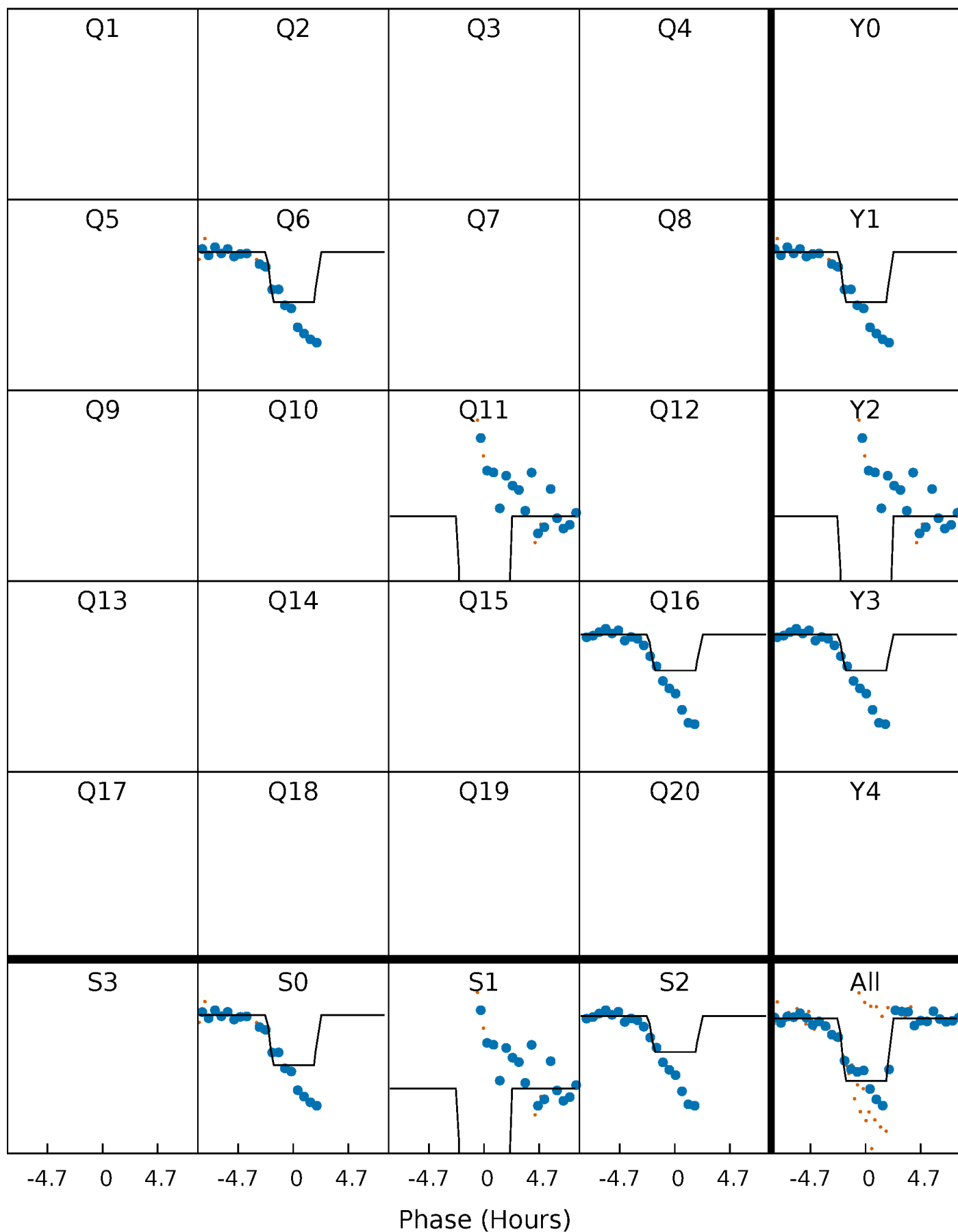
DV Quarter-Phased Transit Curves

TCE 005733972-03 P=461.187720 Days $T_0=586.423189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

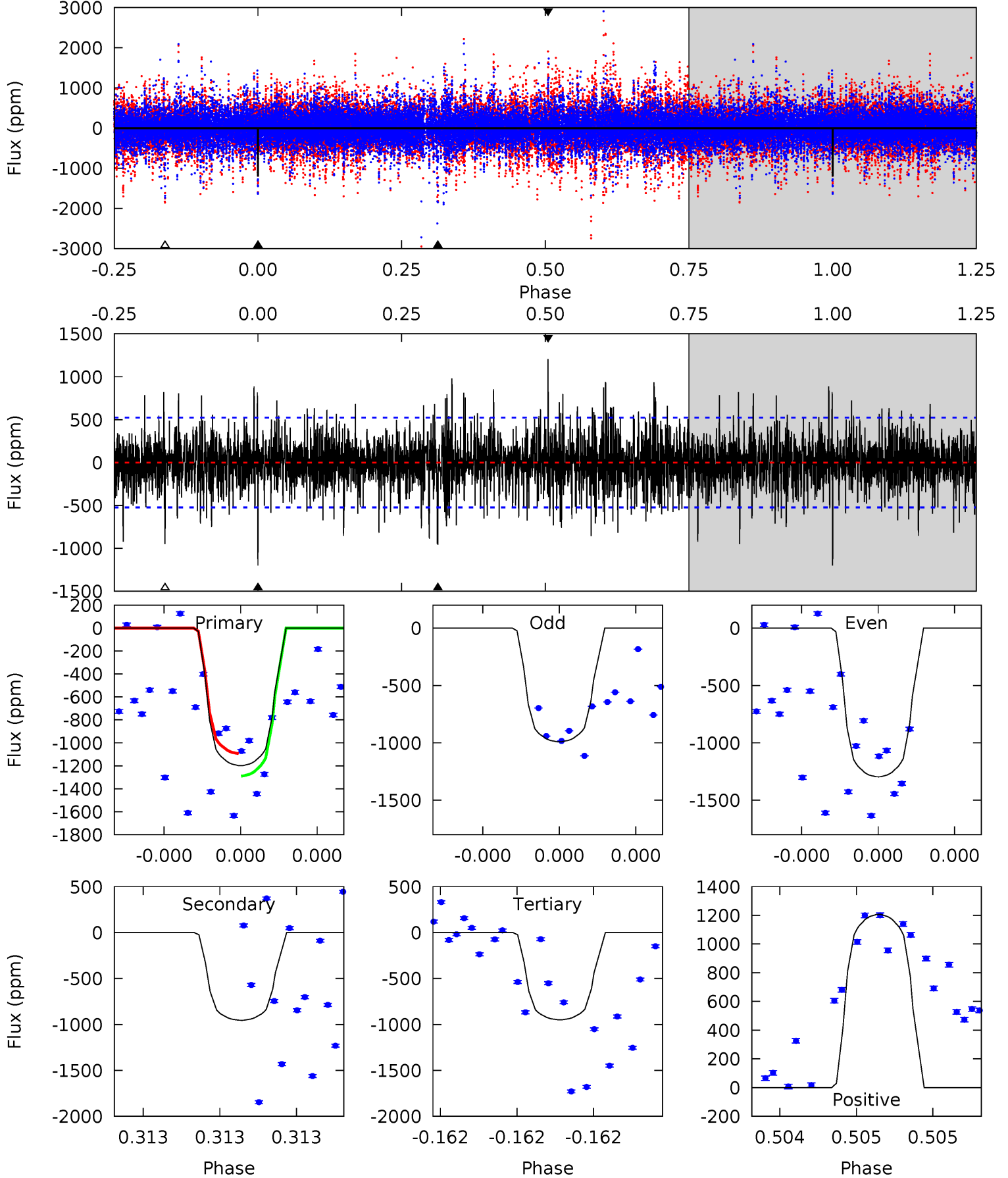
TCE 005733972-03 P=461.199072 Days $T_0=586.394906$ (BKJD)



DV Model-Shift Uniqueness Test

005733972-03, P = 461.187720 Days, E = 125.235469 Days

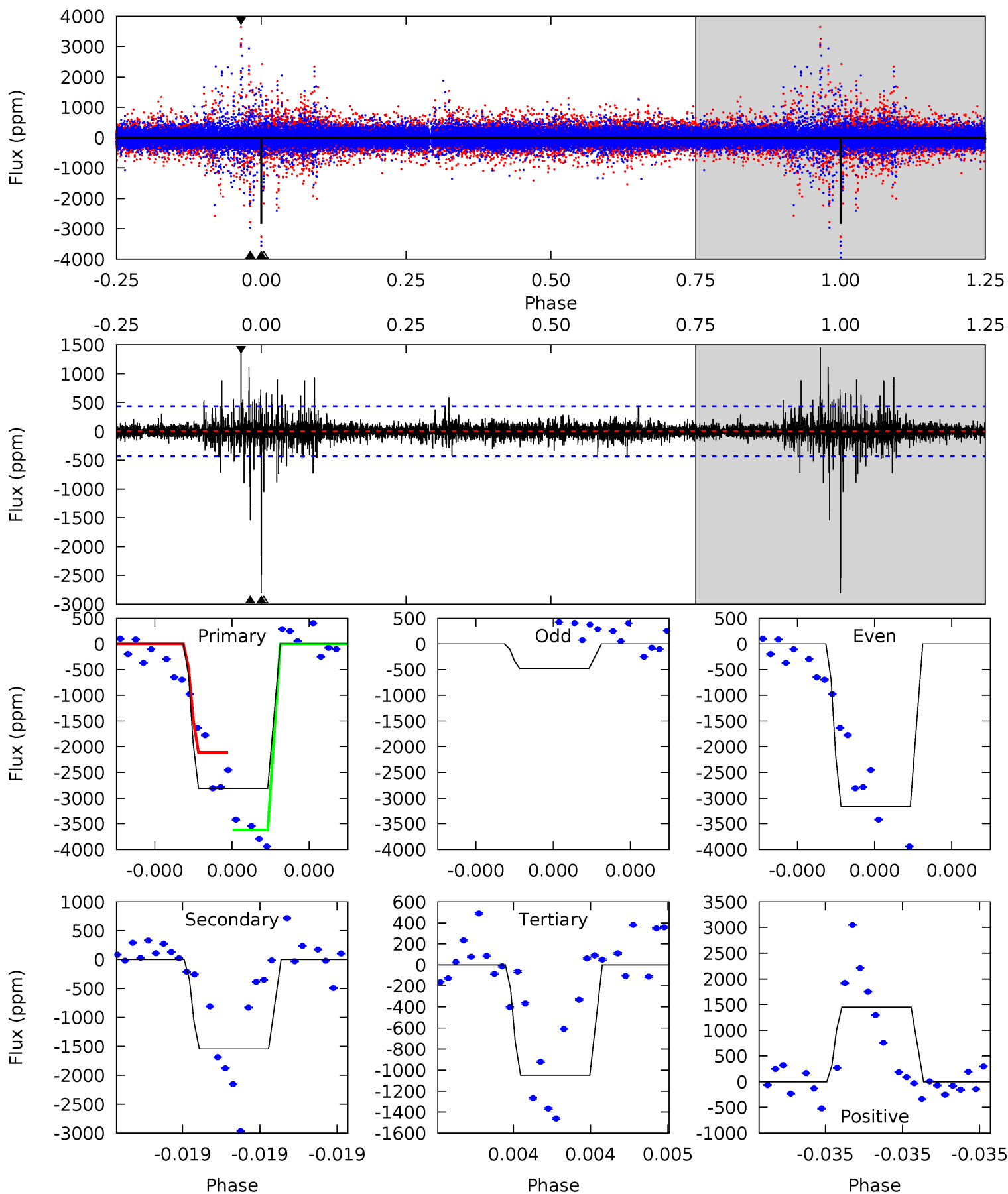
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	10.3	10.3	13.0	5.66	3.61	2.49	2.69	-0.08	0.06	-2.72	1.46	1.17	0.50	1.05



Alt Model-Shift Uniqueness Test

005733972-03, P = 461.199072 Days, E = 125.195834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.3	20.0	13.6	18.7	5.64	3.58	1.37	22.7	17.5	6.39	1.21	16.8	0.72	0.34	0



Stellar Parameters For KIC 005733972

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6131^{+183}_{-201}	$4.262^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.199^{+0.340}_{-0.247}$	$0.960^{+0.151}_{-0.110}$	$0.784^{+0.871}_{-0.382}$
	+3%/-3%	+4%/-4%	+88%/-88%	+28%/-21%	+16%/-11%	+111%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005733972-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-955 ± 92	$4.07^{+2.54}_{-2.19}$	385^{+32}_{-26}	6115^{+3272}_{-1178}	$41089^{+146439}_{-25342}$
Alt.	-1545 ± 77	$6.06^{+2.79}_{-2.50}$	386^{+29}_{-27}	5637^{+1826}_{-770}	31077^{+58741}_{-16234}

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

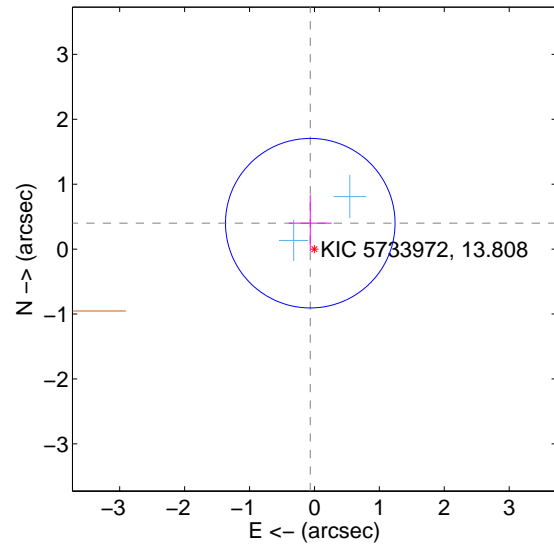
Supplemental centroid analysis for 005733972-03. Kepler magnitude: 13.81. Transit SNR 6.27

There are 2 quarters with good PRF difference image offsets

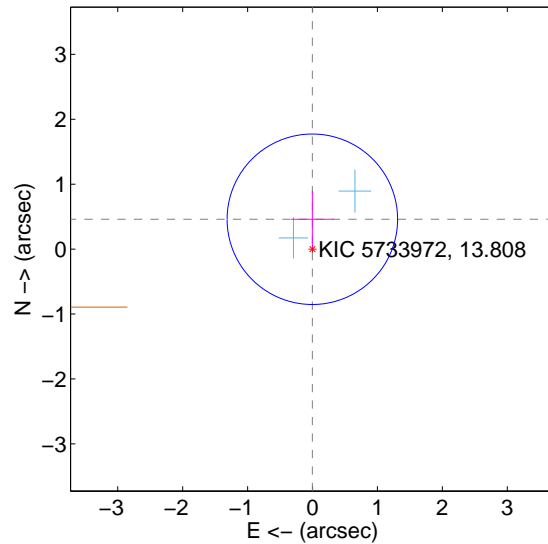
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.404 ± 0.435	0.93	0.064 ± 0.328	0.399 ± 0.438
PRF-fit source offset from KIC position	0.460 ± 0.438	1.05	0.003 ± 0.328	0.460 ± 0.438
photometric centroid source offset	0.28 ± 0.94	0.30	-0.16 ± 0.99	-0.23 ± 0.92

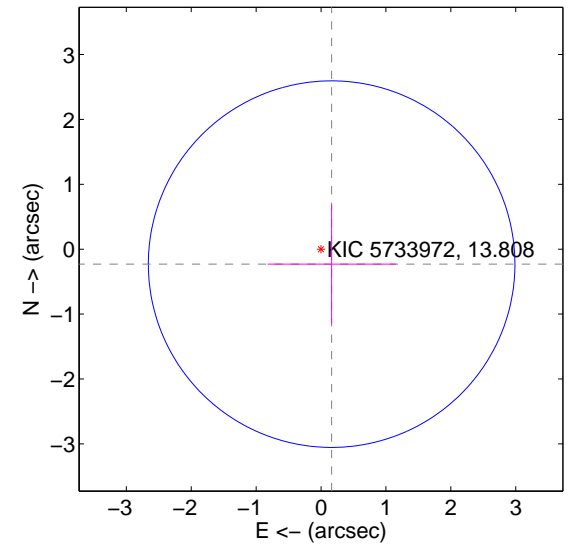
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

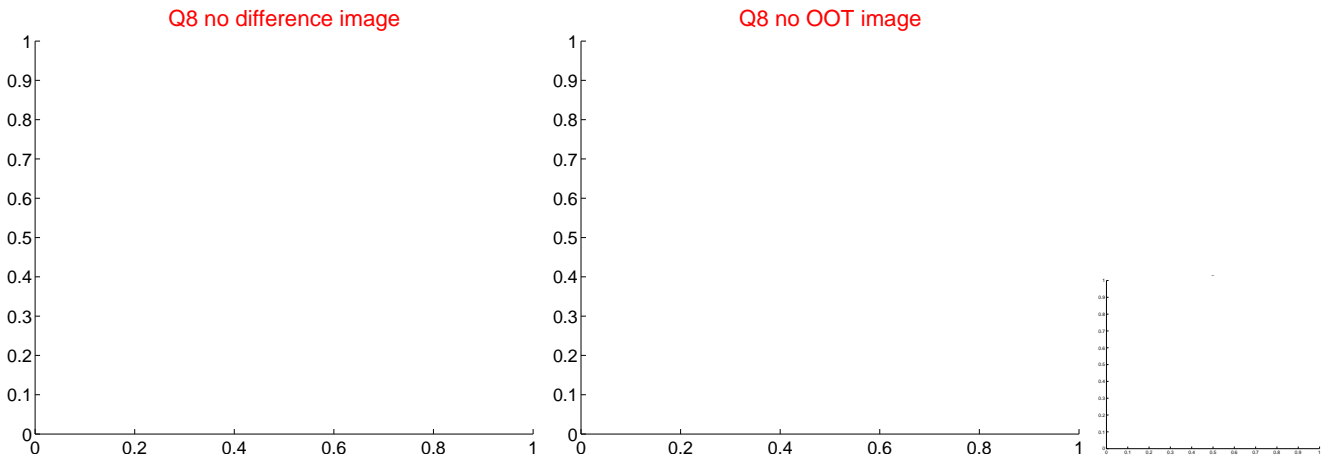
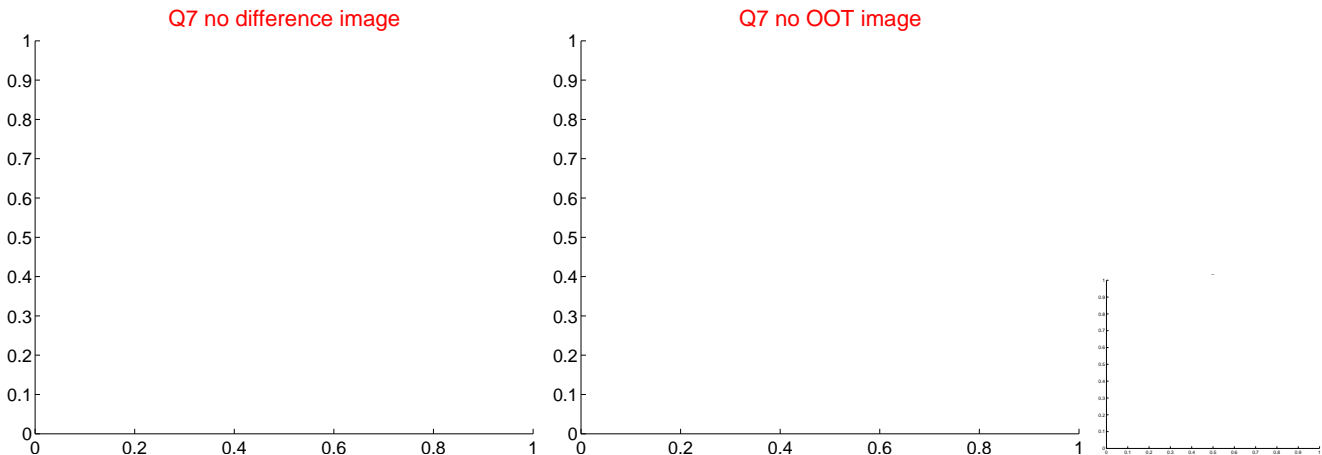
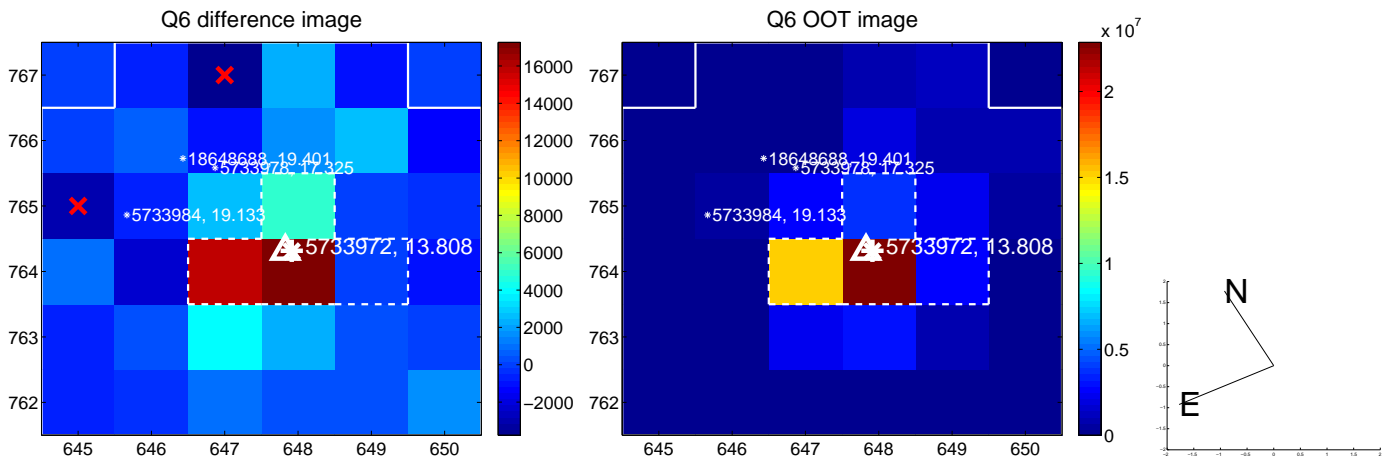
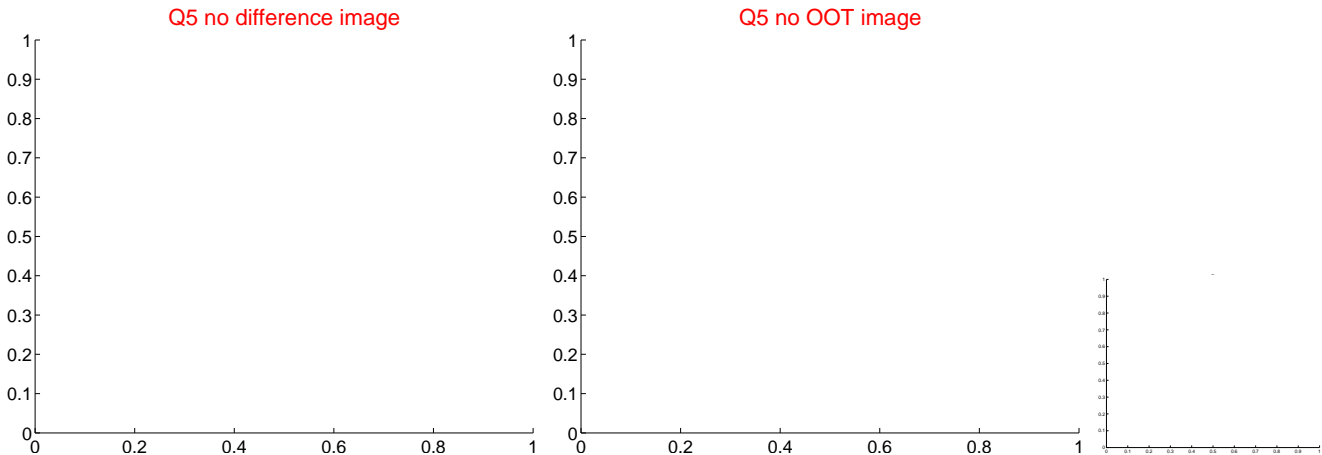


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

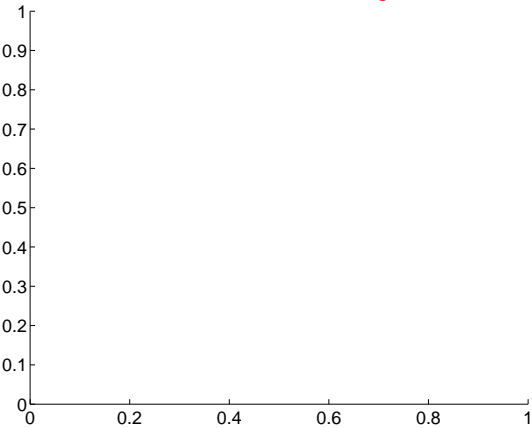
Q9 no difference image



Q9 no OOT image



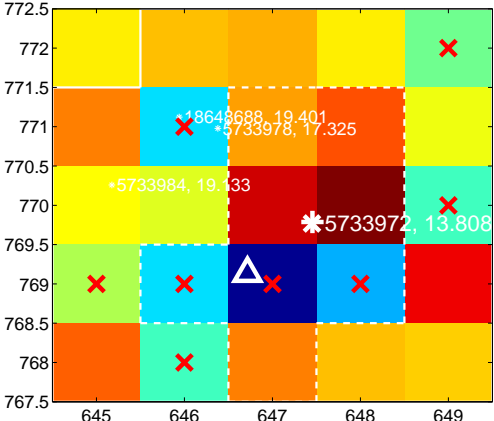
Q10 no difference image



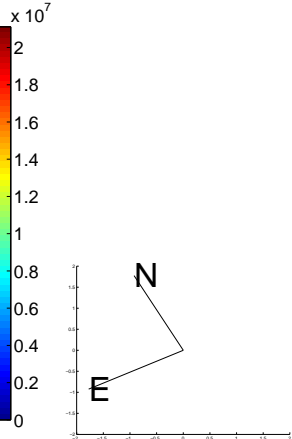
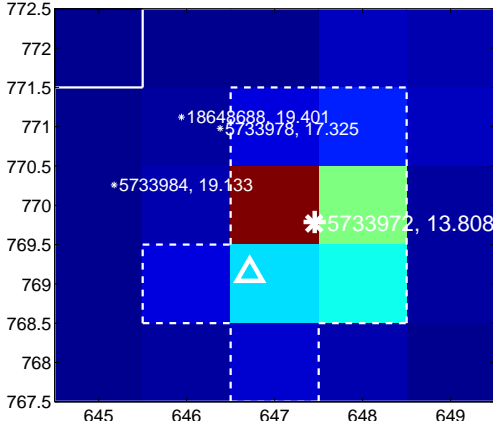
Q10 no OOT image



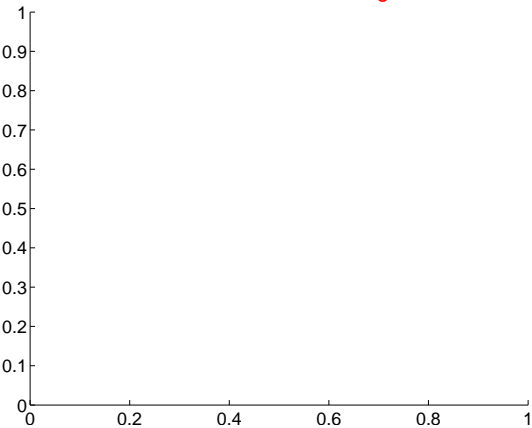
Q11 difference image. Poor Quality



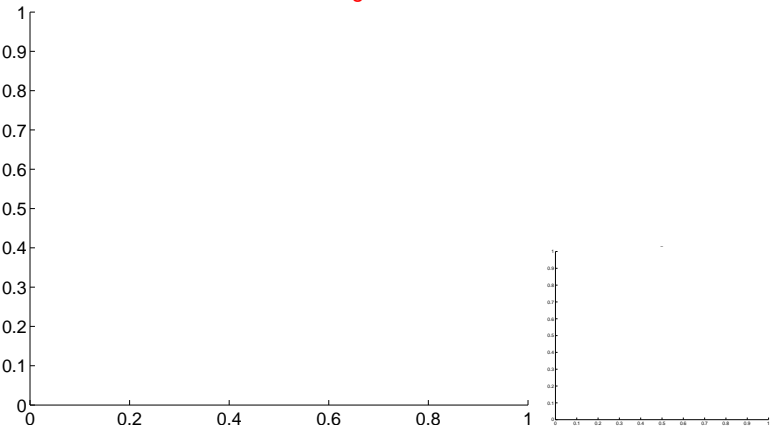
Q11 OOT image



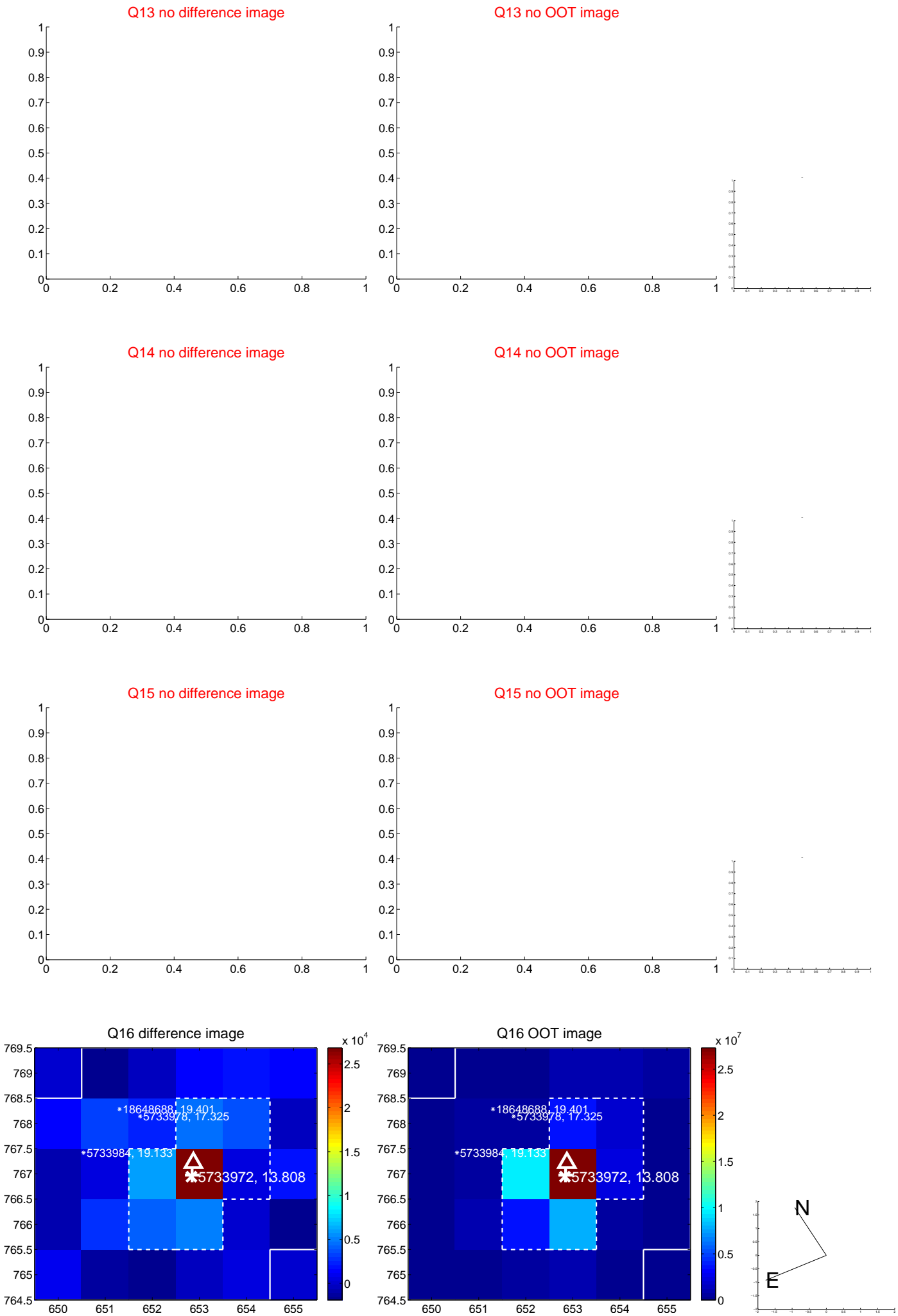
Q12 no difference image



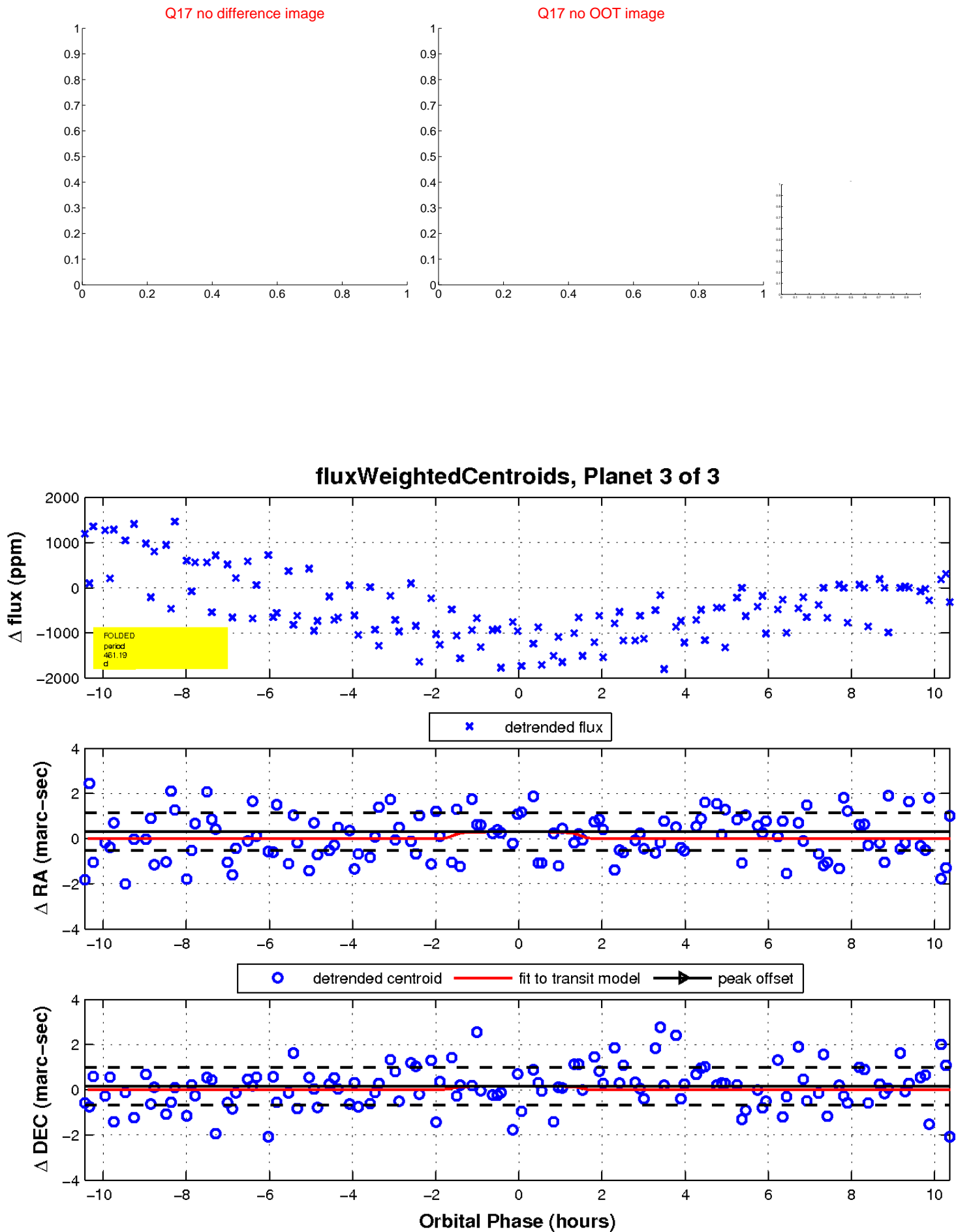
Q12 no OOT image



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

