

KIC 007115597

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})
007115597-01	OBS	6824.01	0.566803	131.825096	111.2	3.771	13.4	13.3	0.97	5836	1.01	5151.81
007115597-02	OBS	No	33.201862	147.855359	1426.4	3.513	9.3	4.2	0.97	5836	3.82	22.65
007115597-03	OBS	No	92.200579	170.643831	3939.1	2.091	9.4	6.3	0.97	5836	6.84	5.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115597-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH
007115597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES
007115597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

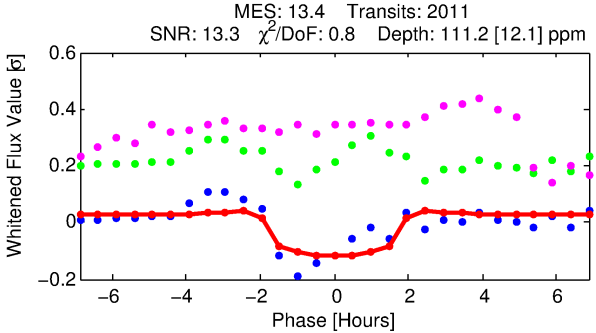
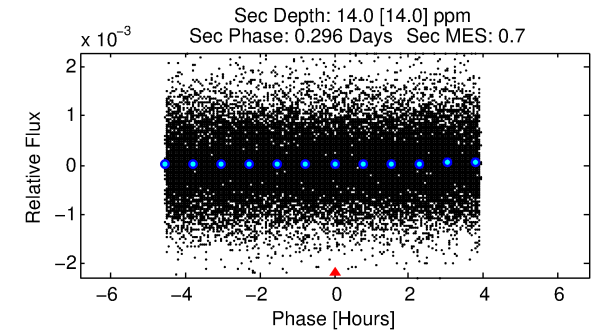
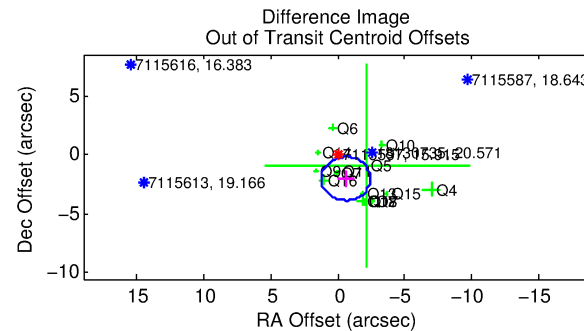
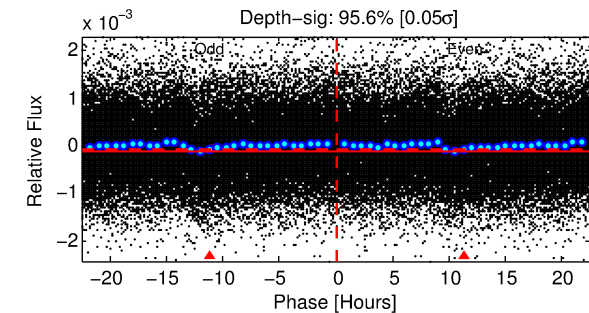
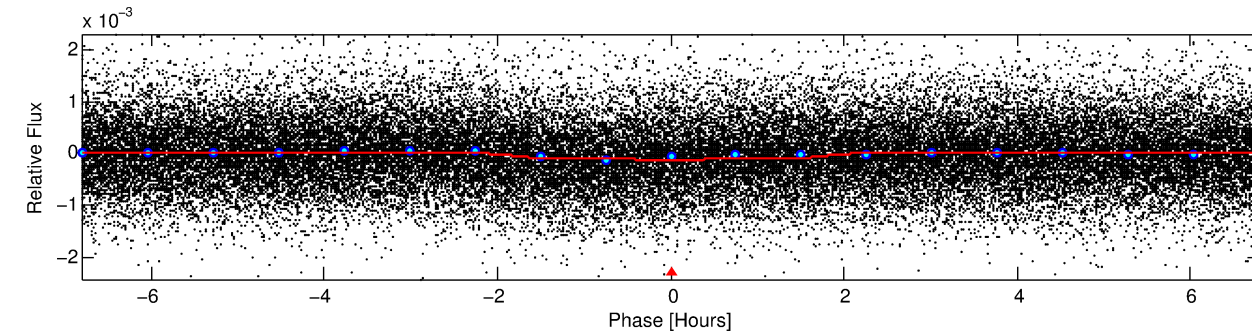
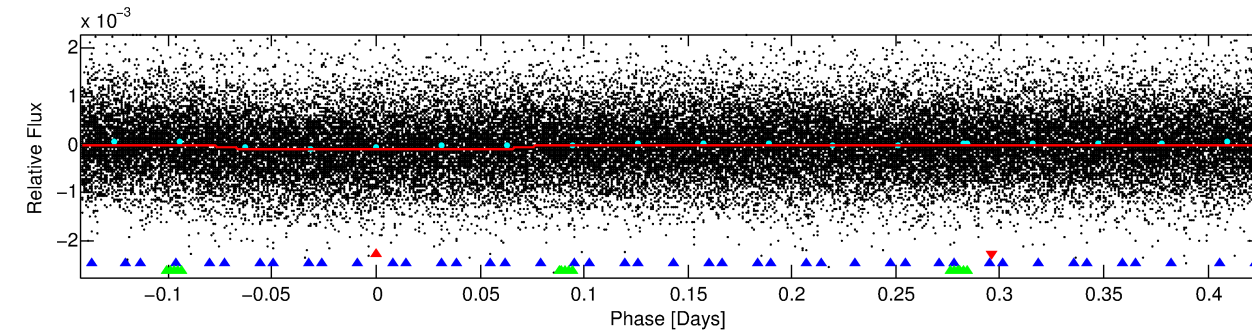
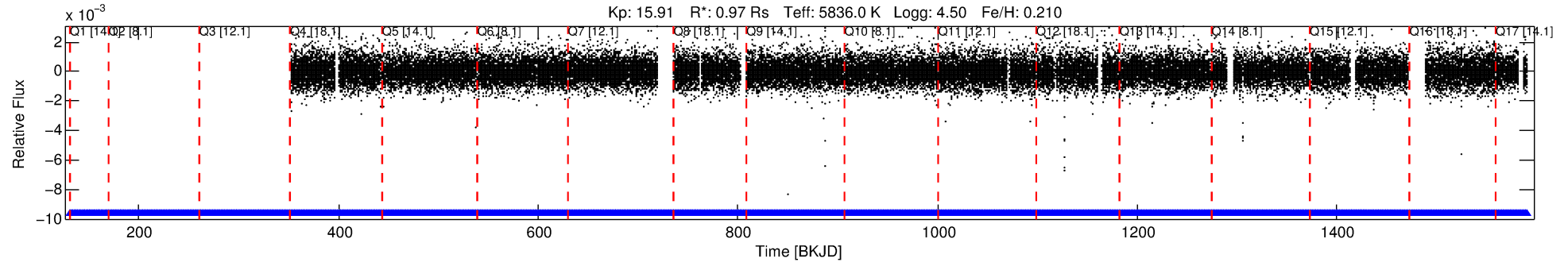
Ephemeris Match Information For 007115597-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007115597-01	7115597	RR-Lyr-pri	7198959	1:1	854.0	12	-215	7.86	15.91	5615.30	Direct-PRF	0	4.93	25.19

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7115597 Candidate: 1 of 3 Period: 0.567 d
KOI: K06824.01 Corr: 0.863



DV Fit Results:

Period = 0.56680 [0.00001] d
Epoch = 131.8251 [0.0026] BKJD
Rp/R* = 0.0096 [0.0096]
a/R* = 1.31 [2.36]
b = 0.17 [25.03]
Seff = 5151.81 [1987.42]
Teq = 2160 [208] K
Rp = 1.01 [1.05] Re
a = 0.0138 [0.0033] AU
Ag = 1.42 [3.22] [0.13 σ]
Teffp = 3649 [2041] K [0.73 σ]

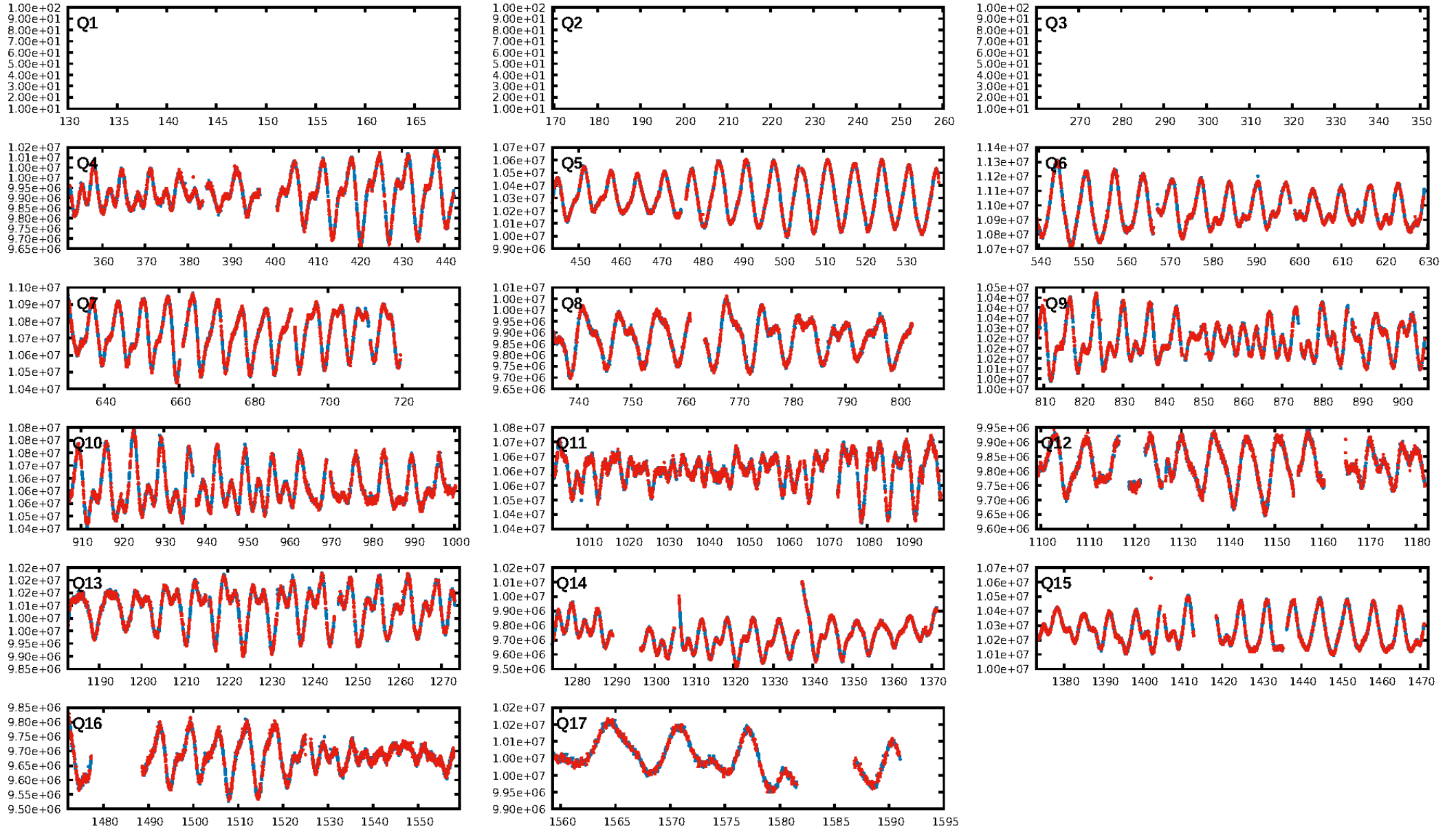
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [151.97 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.12e-32
RollingBand-fgt: 1.00 [1964/1964]
GhostDiagnostic-chr: 0.2993
Centroid-sig: 0.0%
Centroid-so: 2.006 arcsec [3.09 σ]
OotOffset-rm: 2.109 arcsec [3.45 σ]
KicOffset-rm: 2.264 arcsec [3.72 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

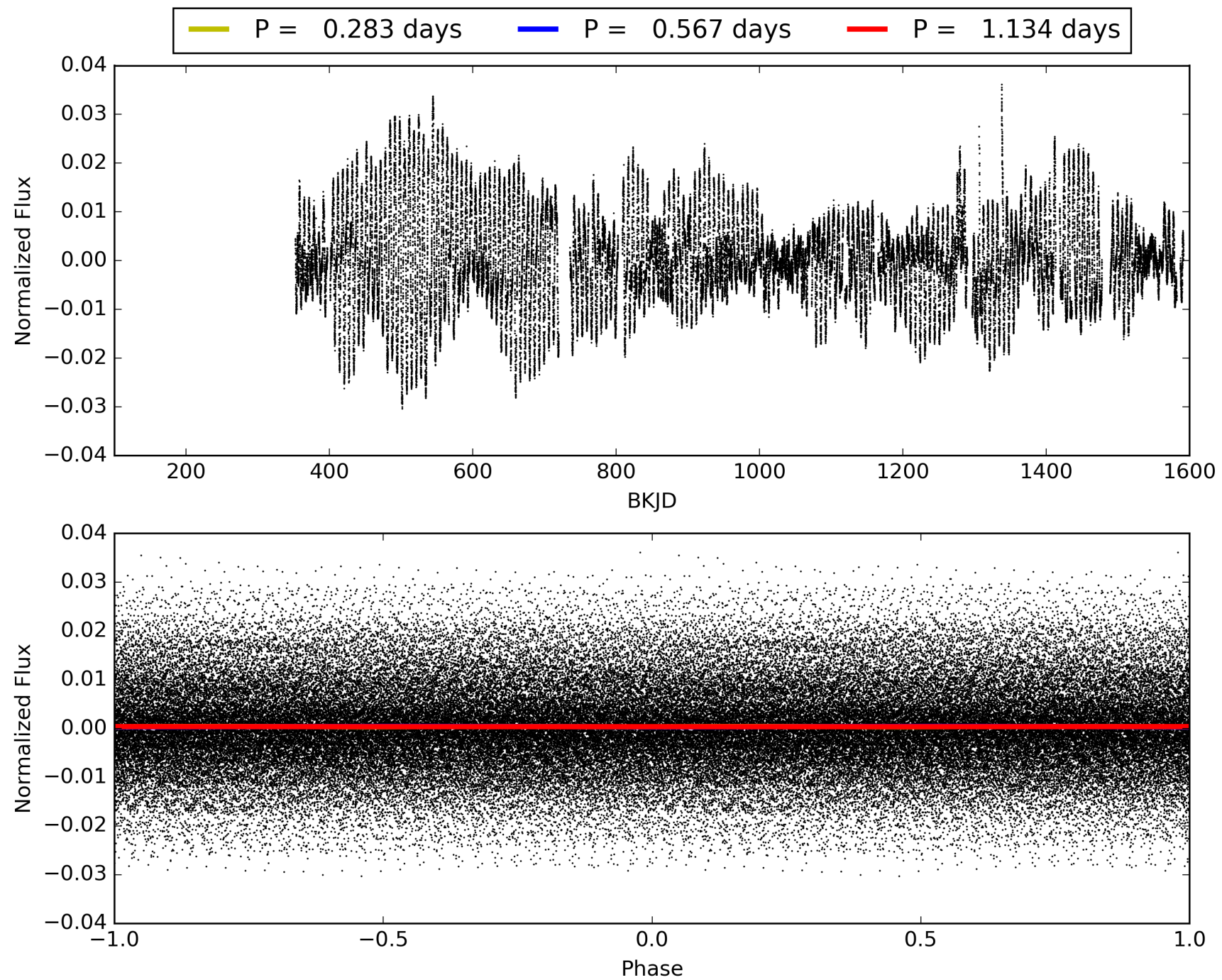
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:07:23 Z

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

TCE 007115597-01, PDC Light Curves

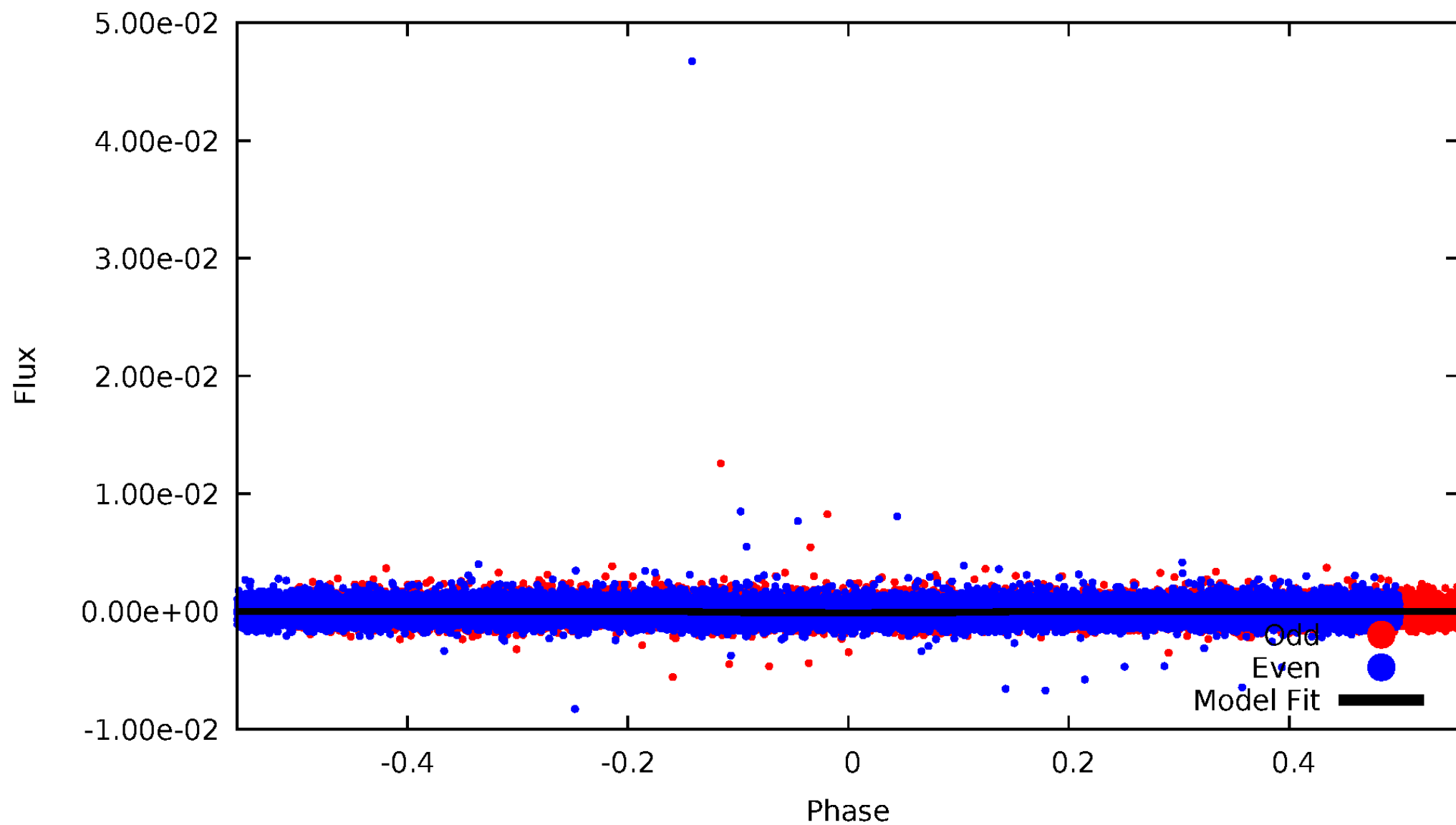


TCE 007115597-01



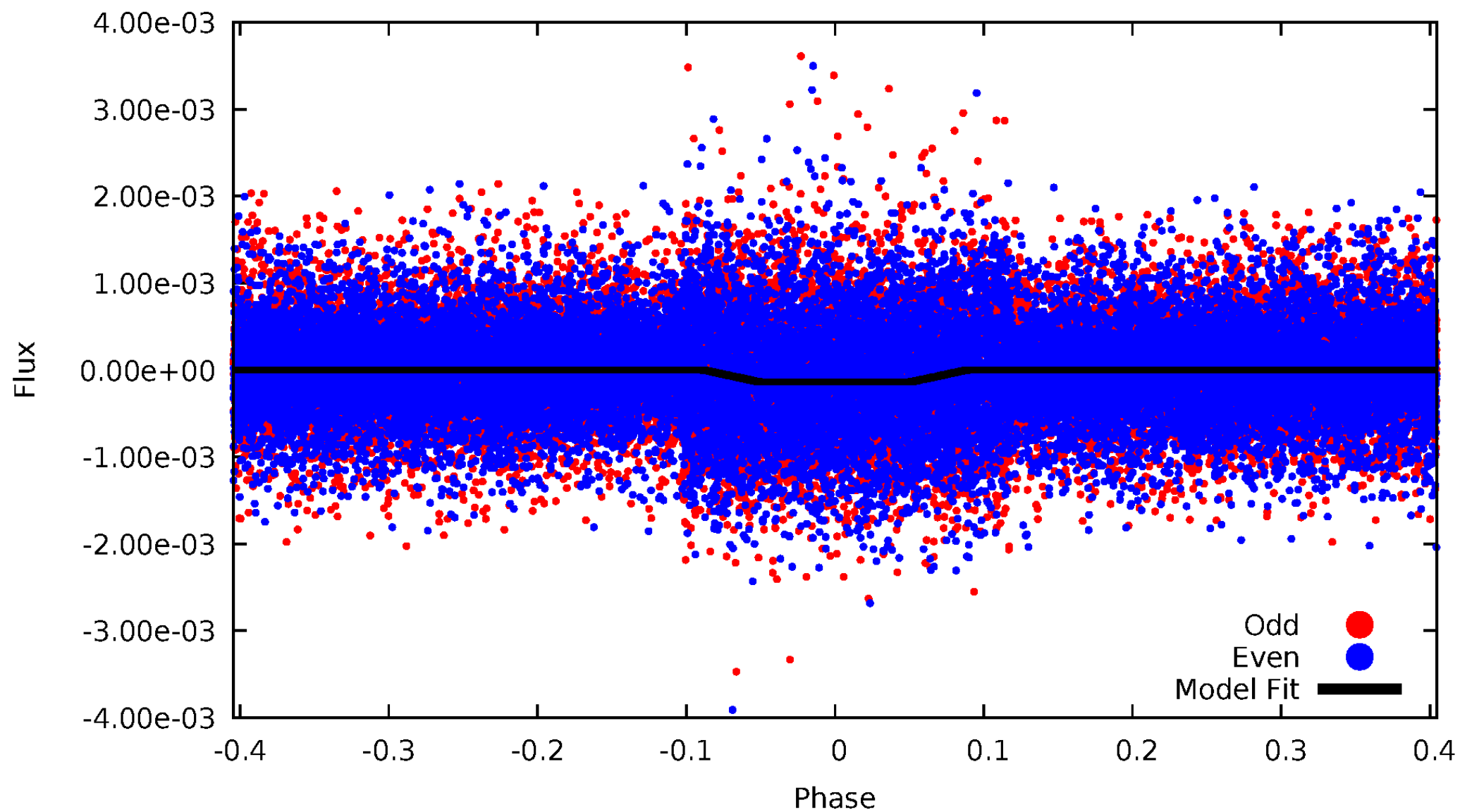
DV Odd/Even

TCE 007115597-01

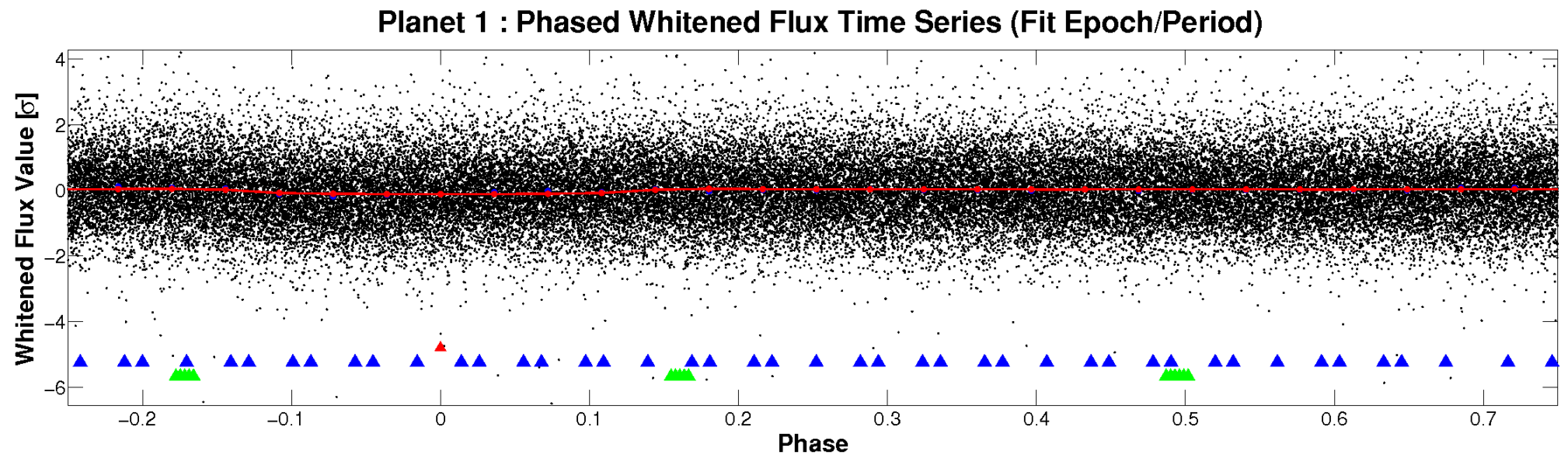
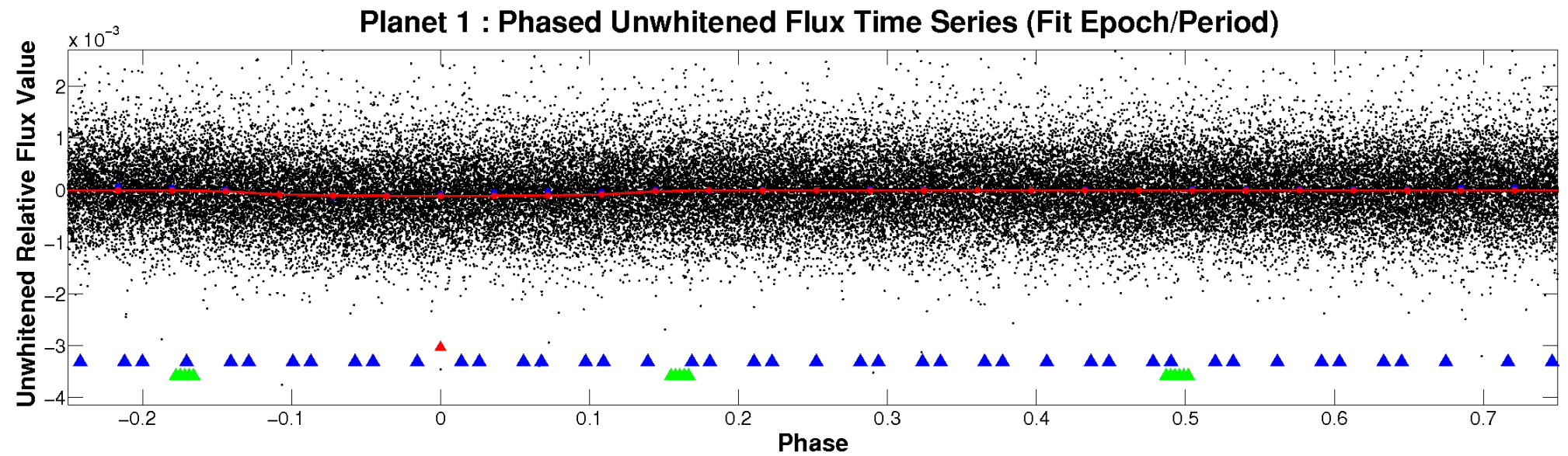


ALT Odd/Even

TCE 007115597-01

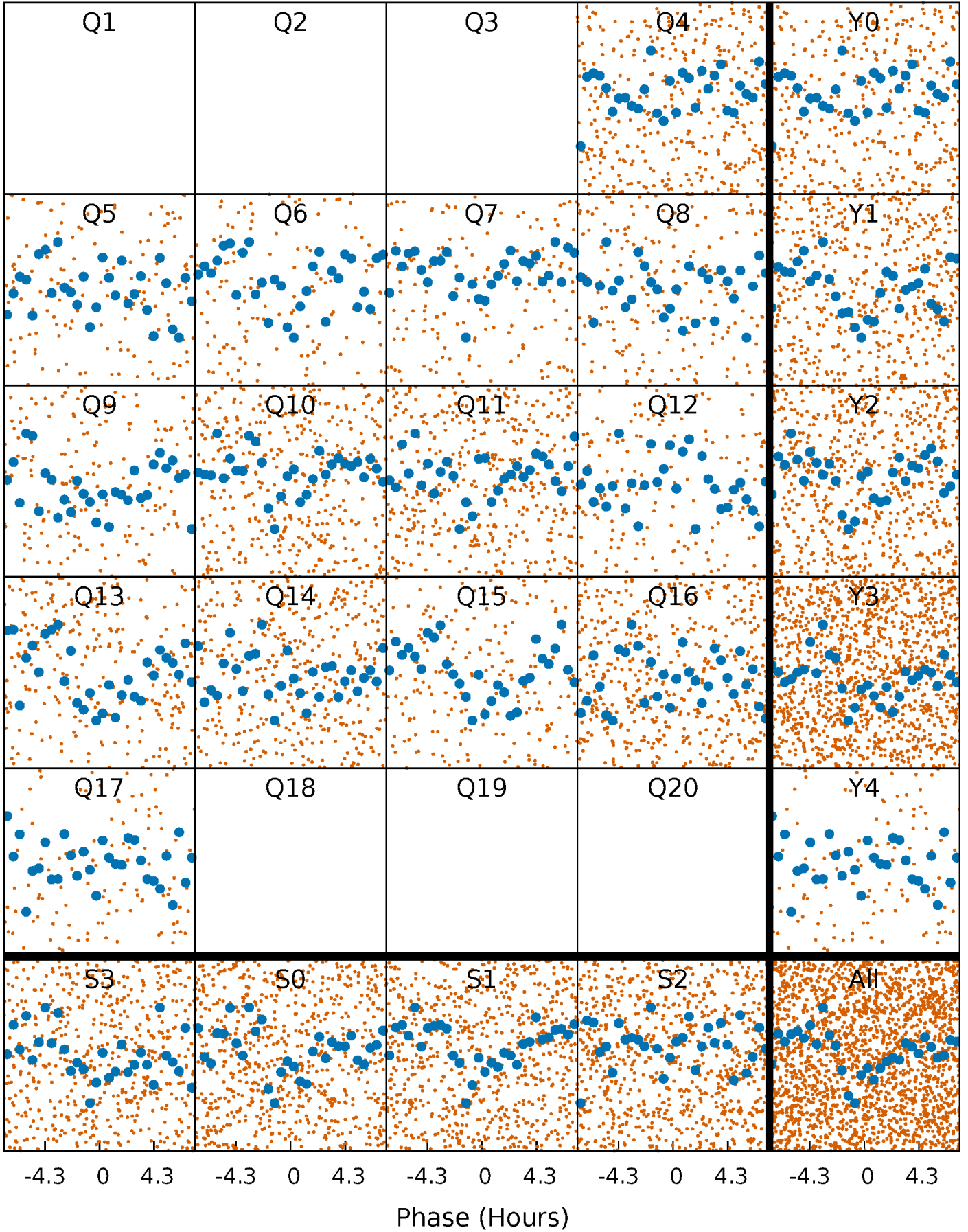


Non-Whitened Vs. Whitened Light Curve



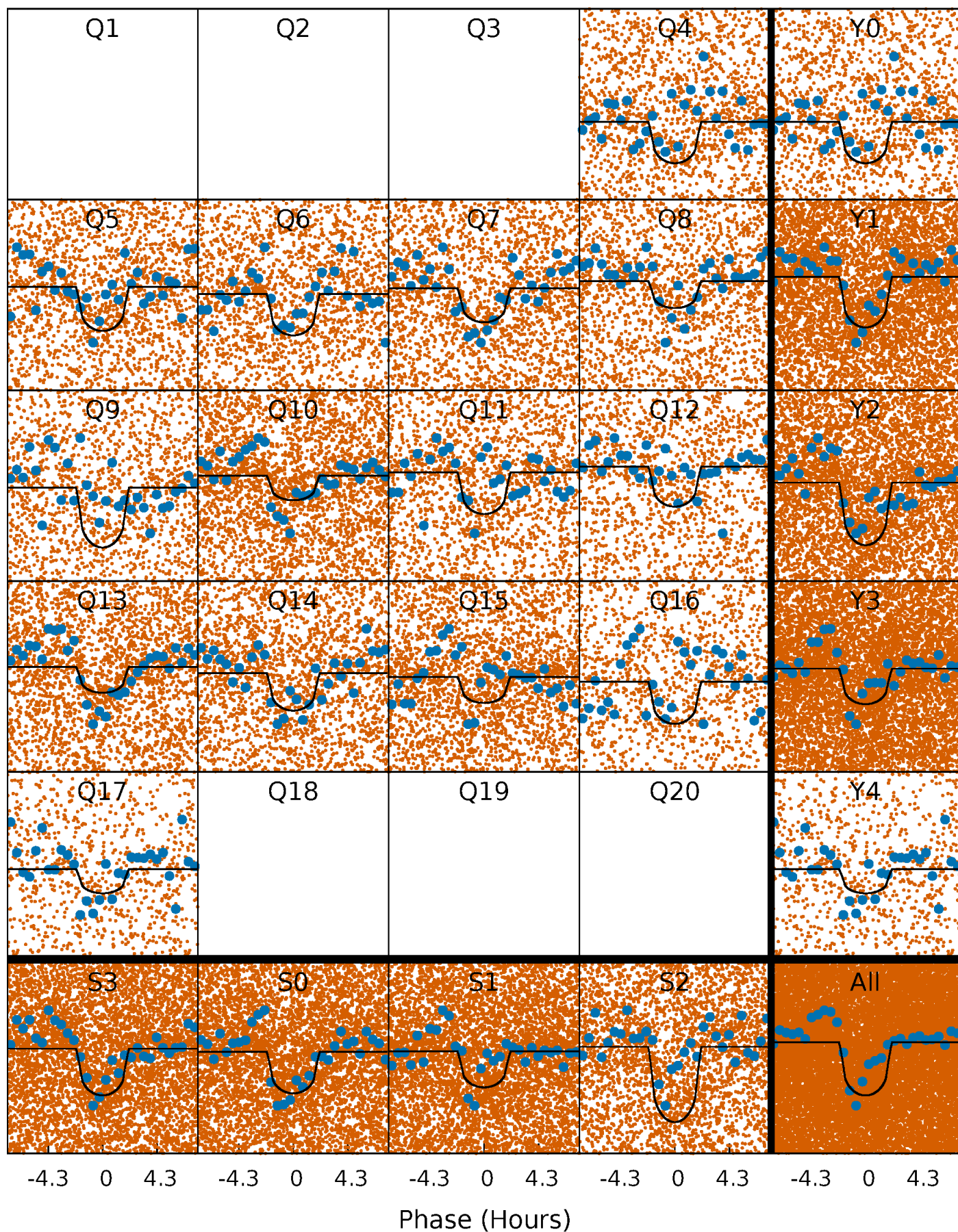
PDC Quarter-Phased Transit Curves

TCE 007115597-01 P= 0.566803 Days $T_0=131.825096$ (BKJD)



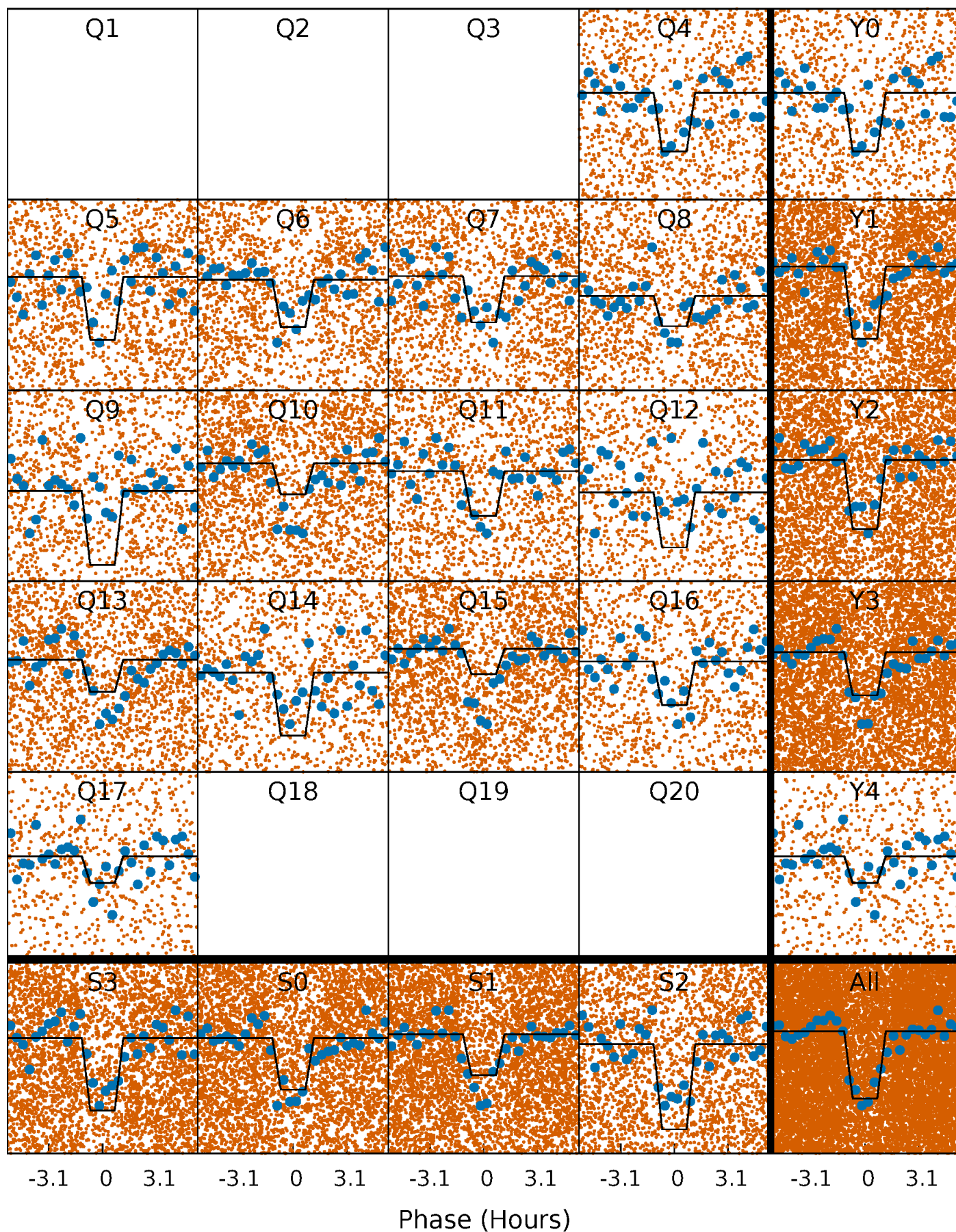
DV Quarter-Phased Transit Curves

TCE 007115597-01 P= 0.566803 Days $T_0=131.825096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

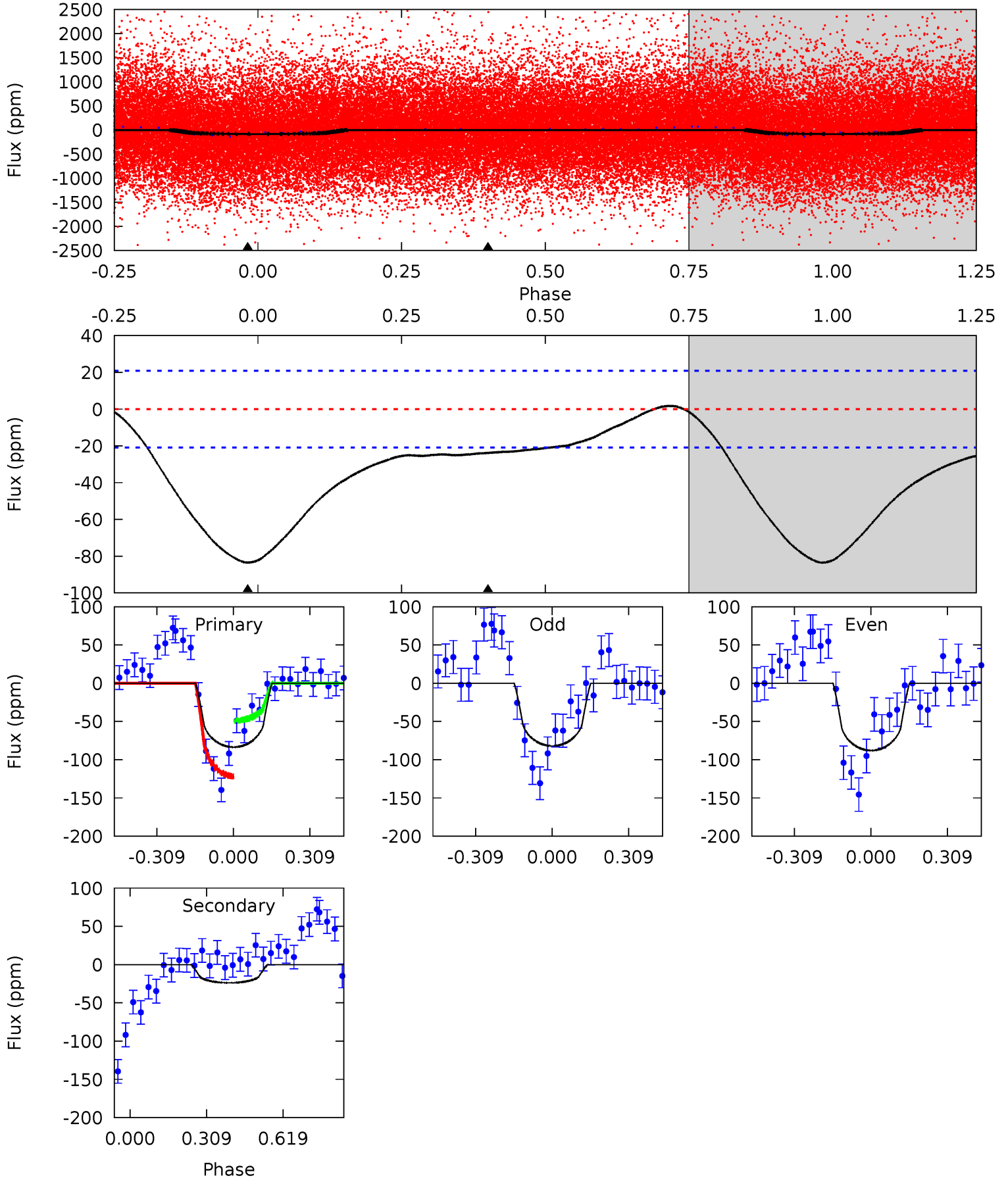
TCE 007115597-01 P= 0.566788 Days $T_0=131.814696$ (BKJD)



DV Model-Shift Uniqueness Test

007115597-01, P = 0.566803 Days, E = 131.825096 Days

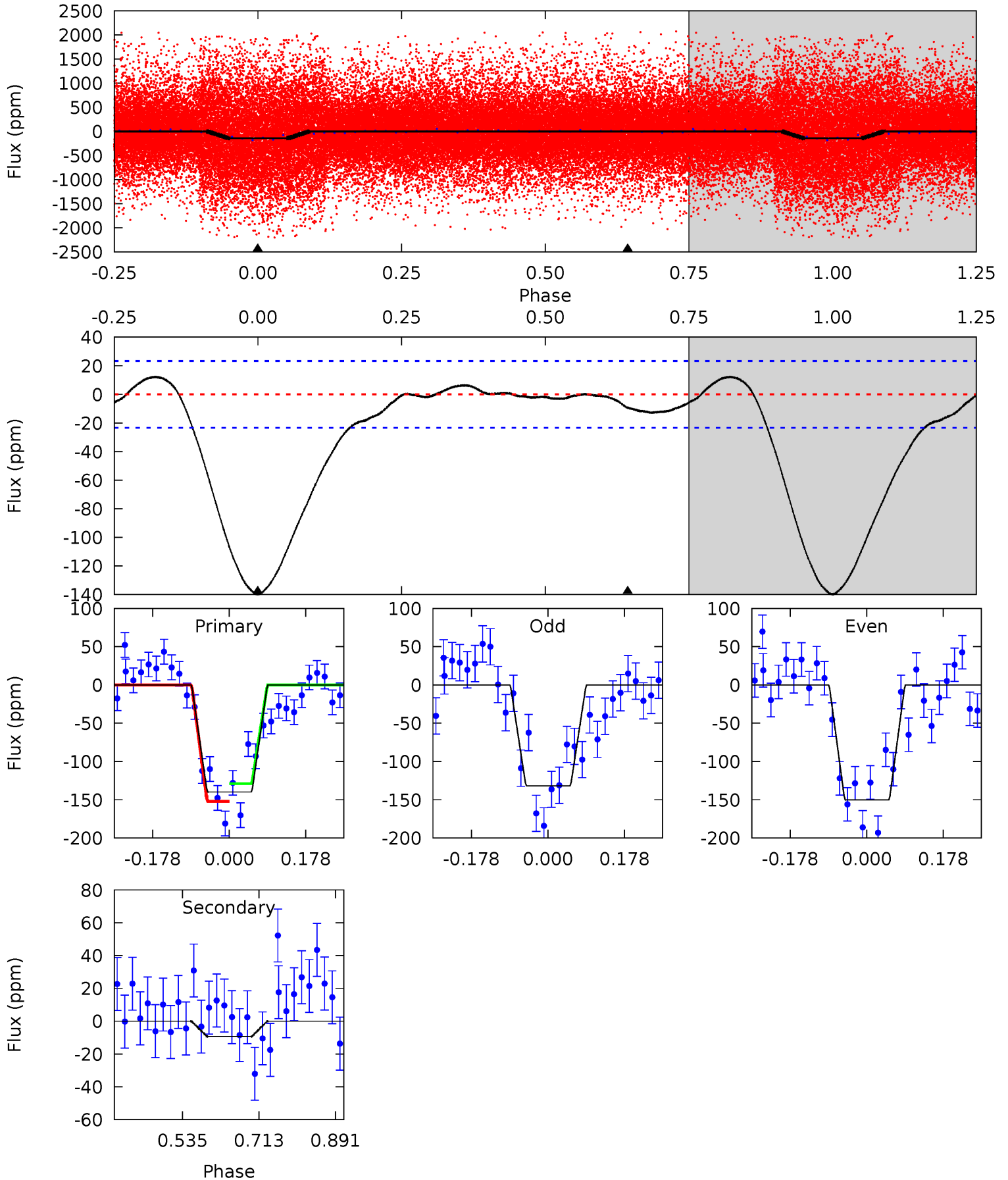
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	4.94	0	0	4.32	1.02	0.56	17.3	17.3	4.94	4.94	0.63	0.88	0.02	7.68



Alt Model-Shift Uniqueness Test

007115597-01, P = 0.566788 Days, E = 131.814696 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	1.79	0	0	4.44	1.35	1.26	26.6	26.6	1.79	1.79	1.75	1.05	0.08	2.22



Stellar Parameters For KIC 007115597

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5836^{+182}_{-203}	$4.500^{+0.037}_{-0.200}$	$0.210^{+0.200}_{-0.300}$	$0.970^{+0.273}_{-0.091}$	$1.087^{+0.112}_{-0.150}$	$1.676^{+0.330}_{-0.860}$
	+3%/-3%	+1%/-4%	+95%/-143%	+28%/-9%	+10%/-14%	+20%/-51%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007115597-01 / KOI 6824.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 5	$1.24^{+1.04}_{-0.75}$	3107^{+204}_{-164}	3948^{+2014}_{-1053}	$1.502^{+7.969}_{-1.029}$
Alt.	-9 ± 5	$1.45^{+0.99}_{-0.87}$	3099^{+203}_{-151}	2773^{+1653}_{-5756}	$0.432^{+2.039}_{-0.329}$

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

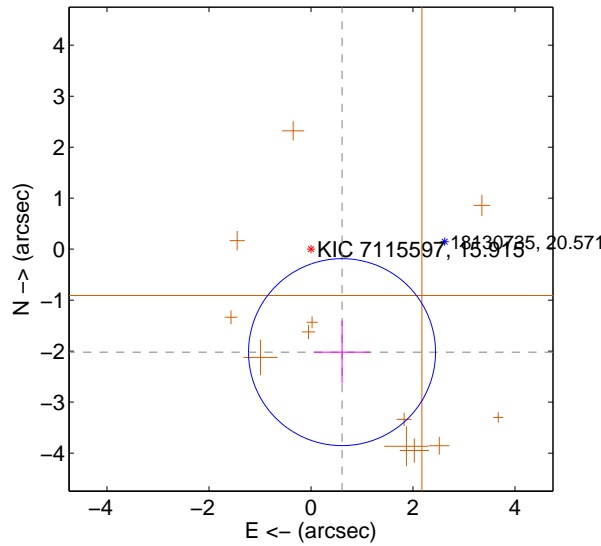
Supplemental centroid analysis for 007115597-01. Kepler magnitude: 15.91. Transit SNR 13.29

There are 0 quarters with good PRF difference image offsets

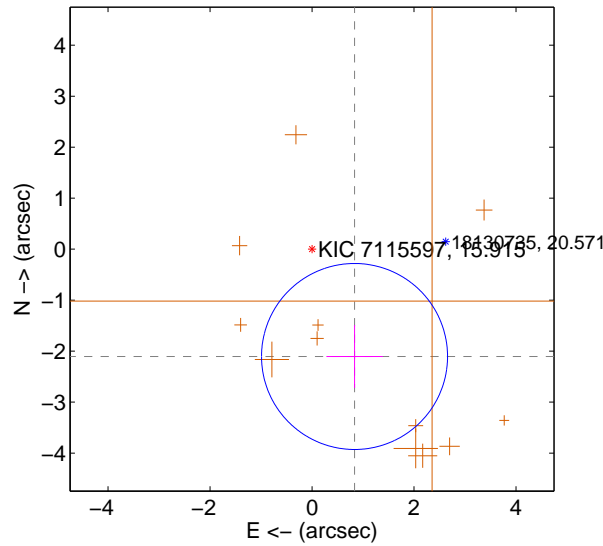
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.109 ± 0.611	3.45	-0.609 ± 0.553	-2.020 ± 0.616
PRF-fit source offset from KIC position	2.264 ± 0.608	3.72	-0.834 ± 0.553	-2.105 ± 0.616
photometric centroid source offset	2.01 ± 0.65	3.09	0.00 ± 0.72	-2.01 ± 0.65

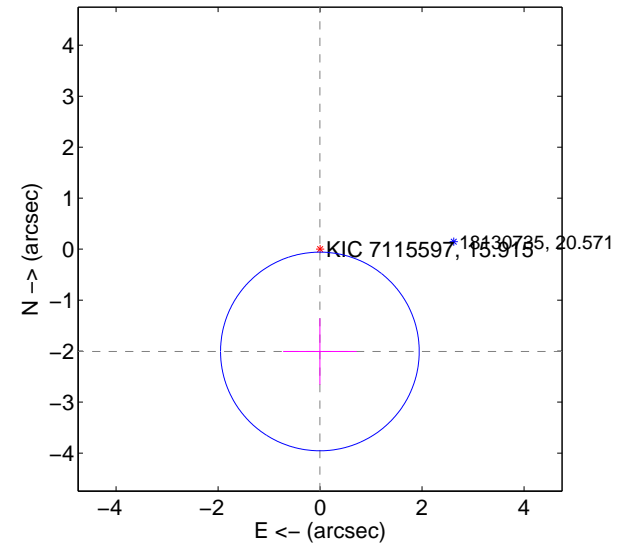
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

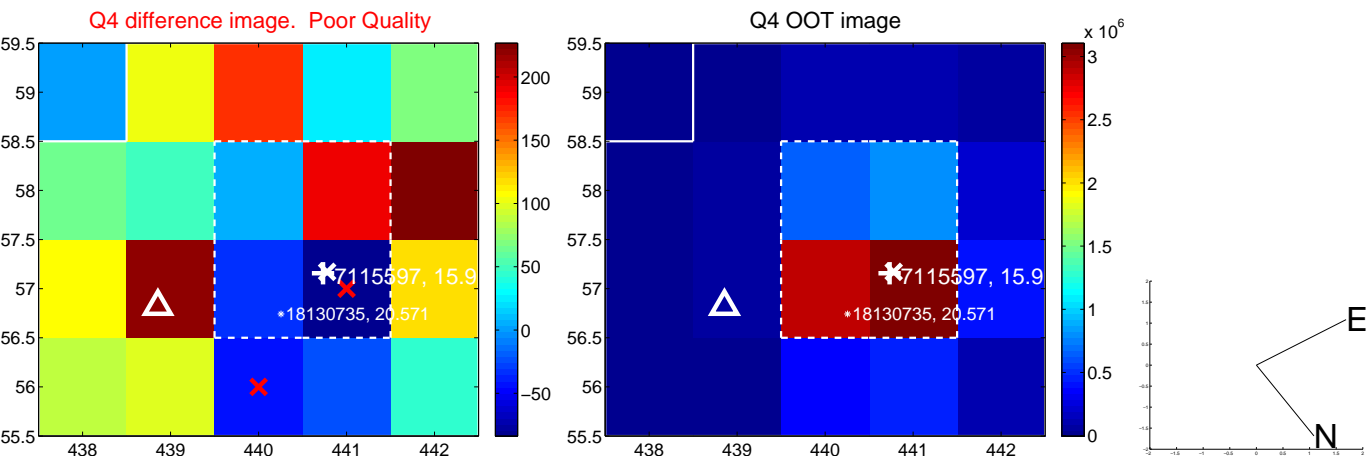
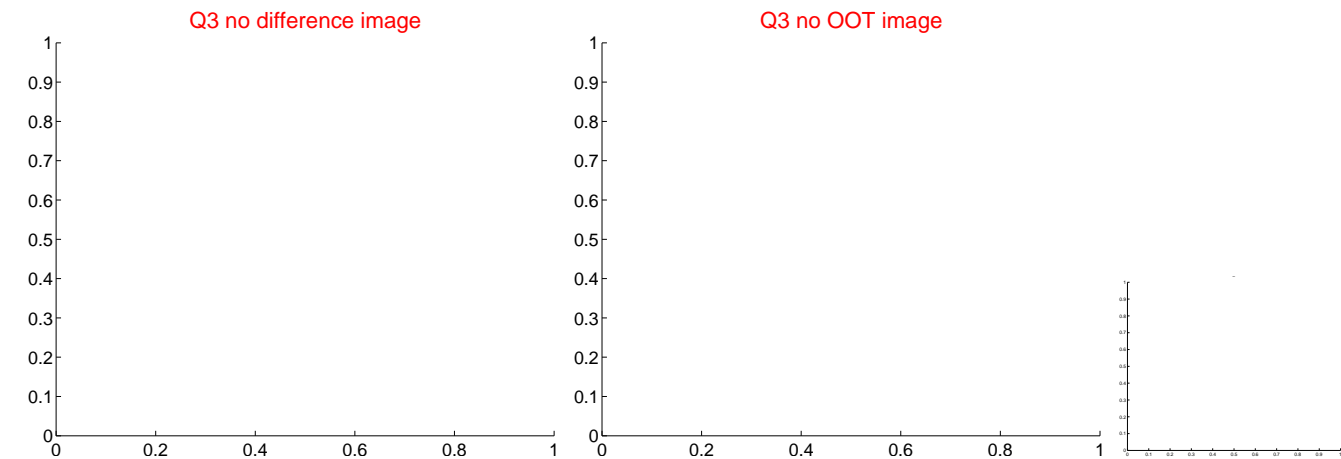
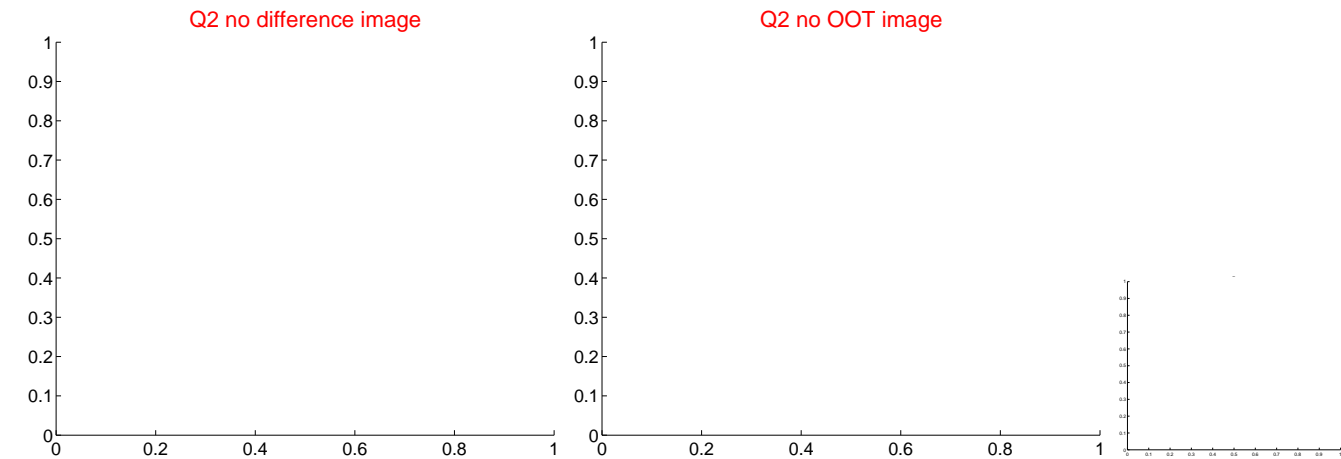


offset from photometric centroids

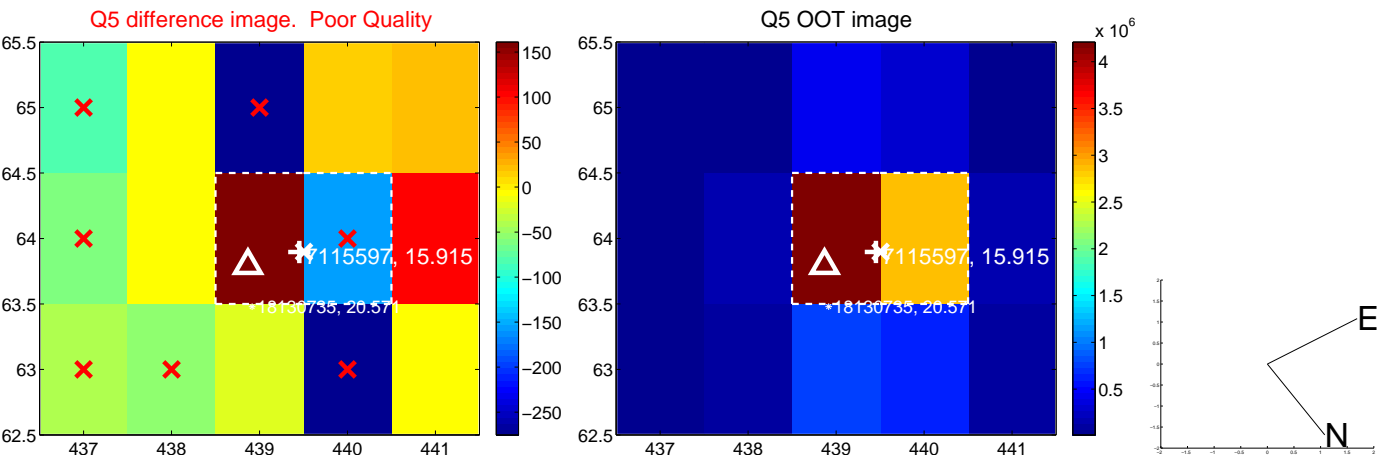


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

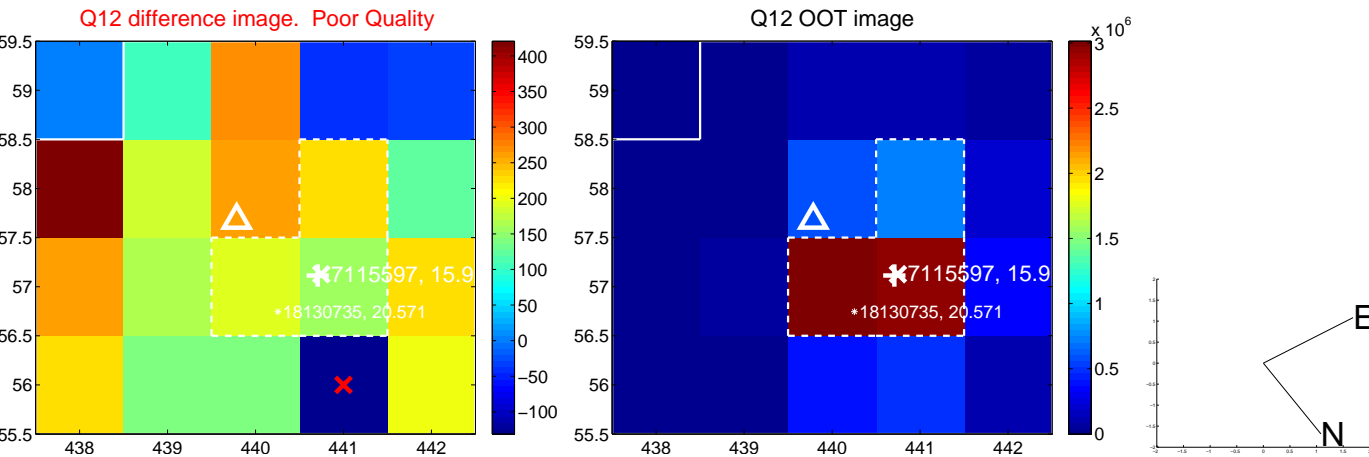
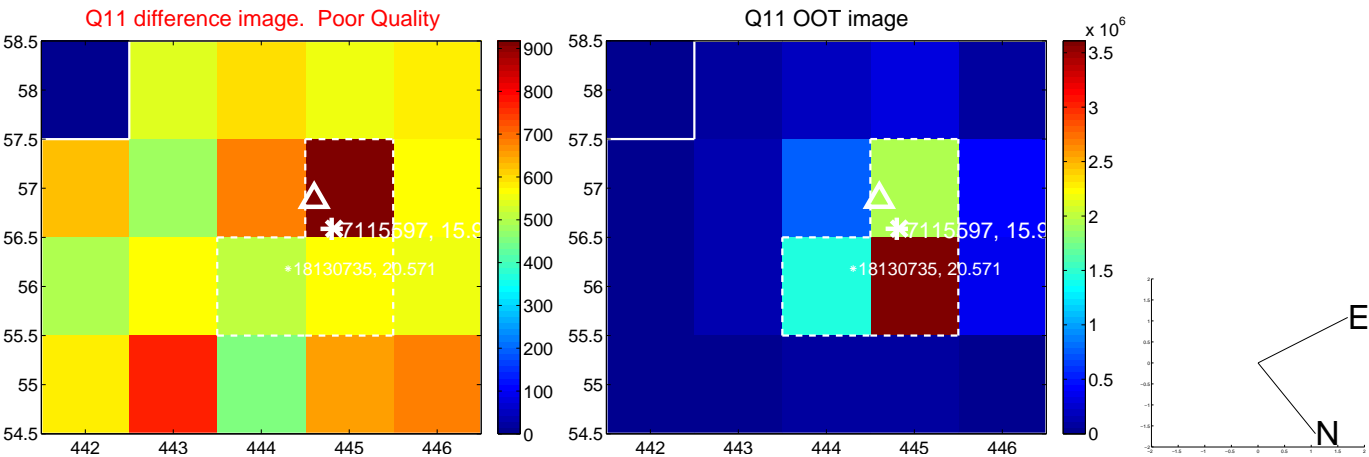
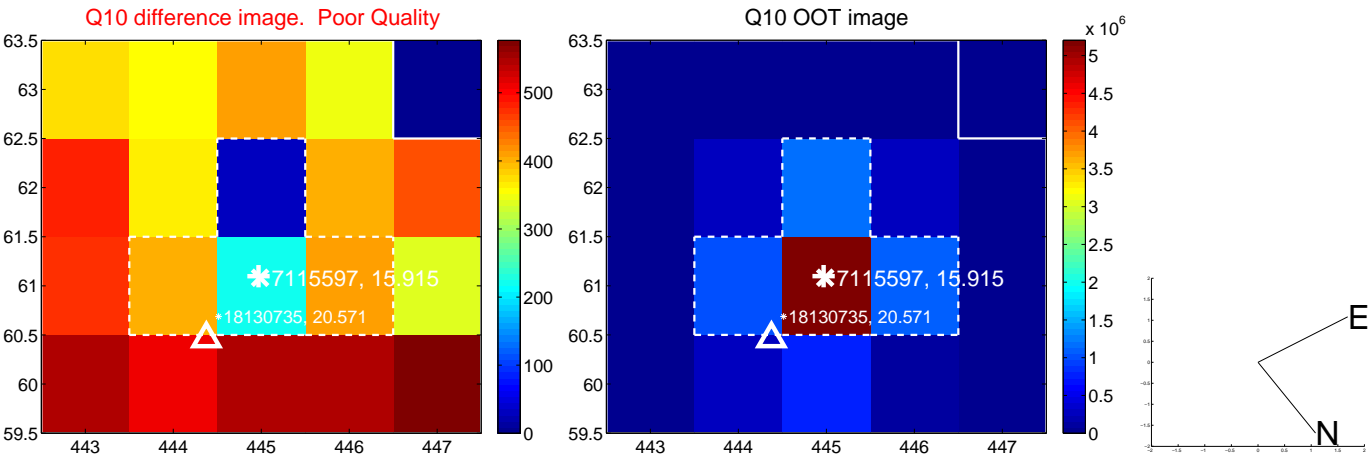
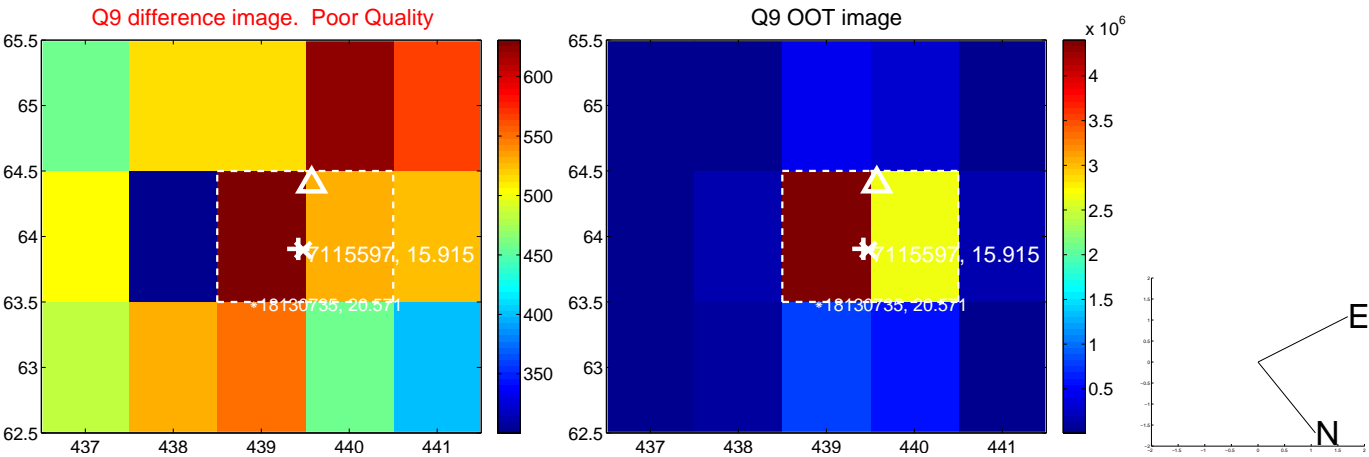
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



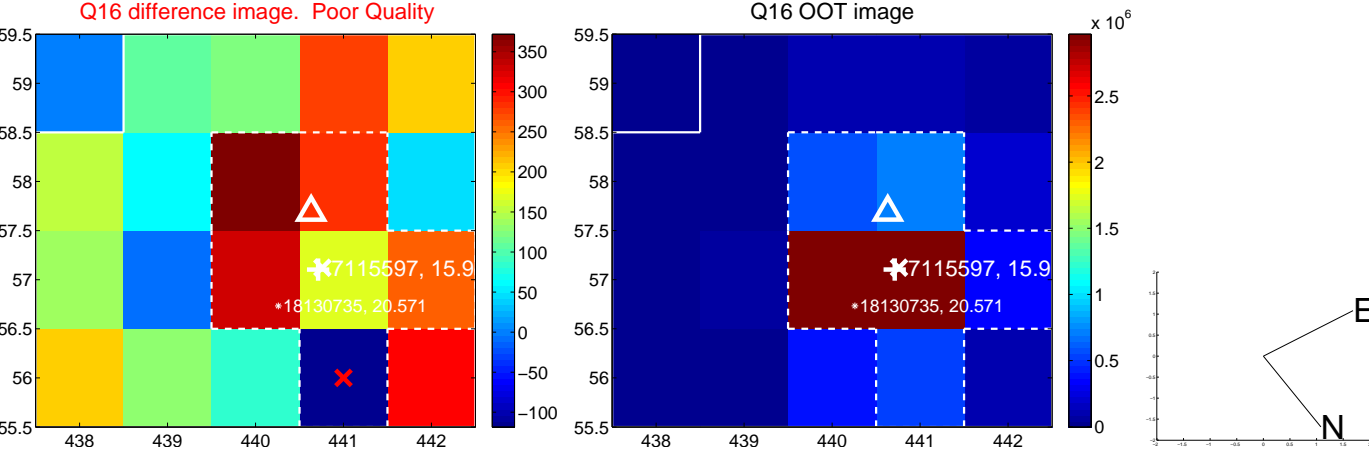
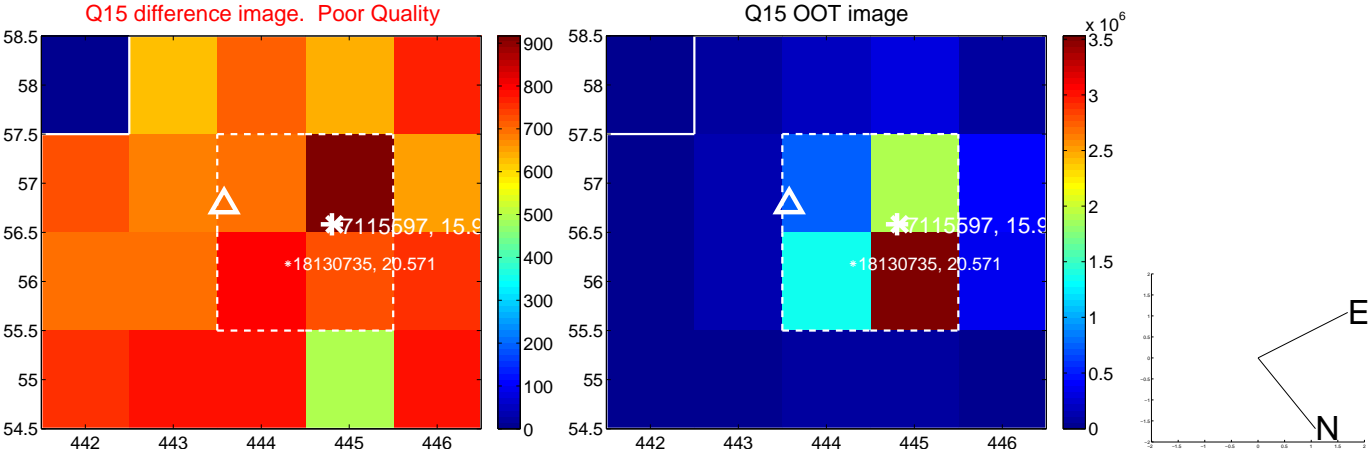
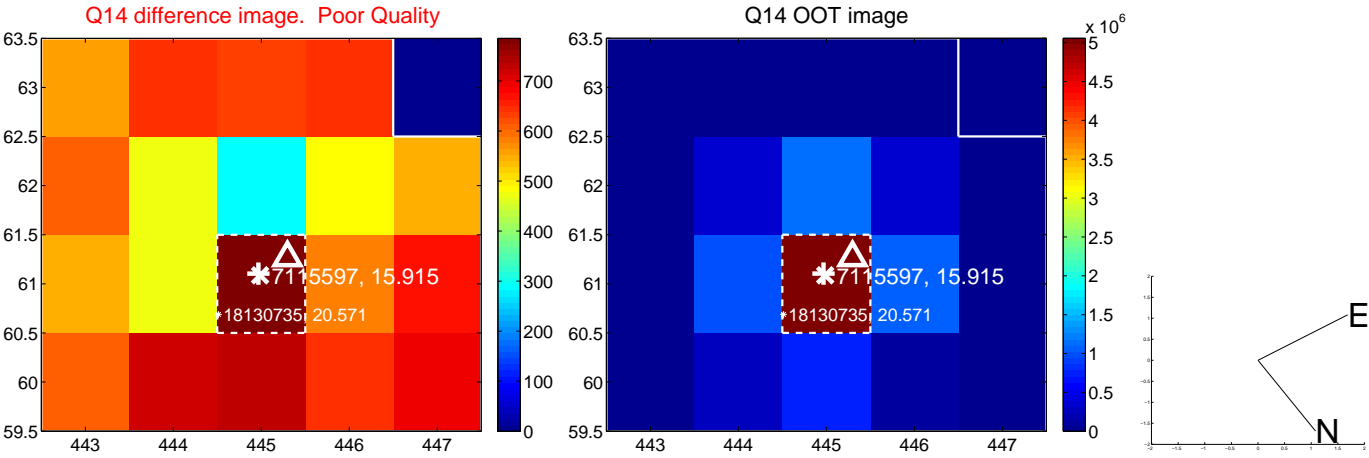
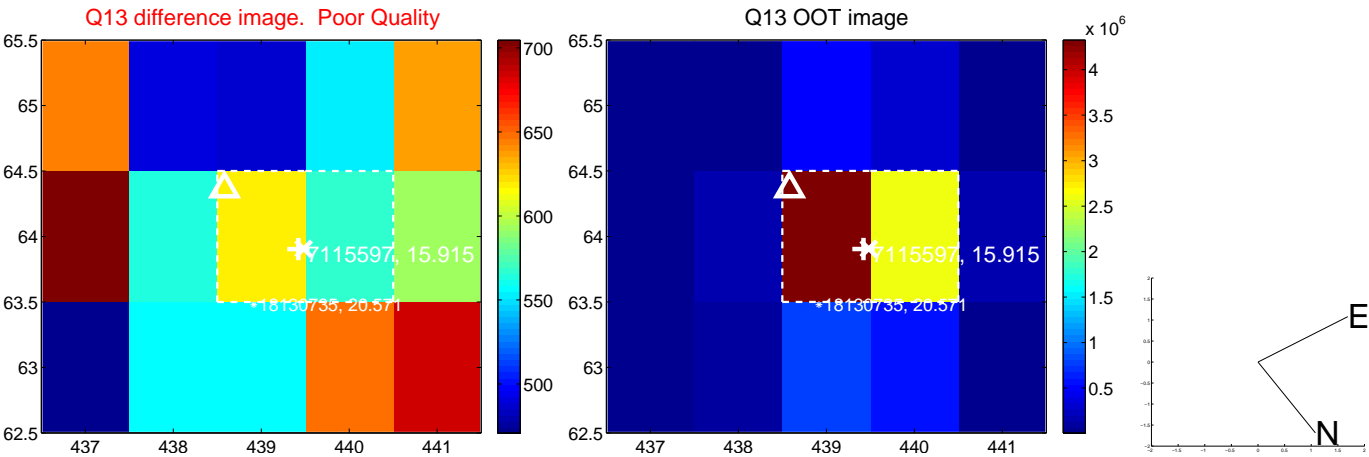
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



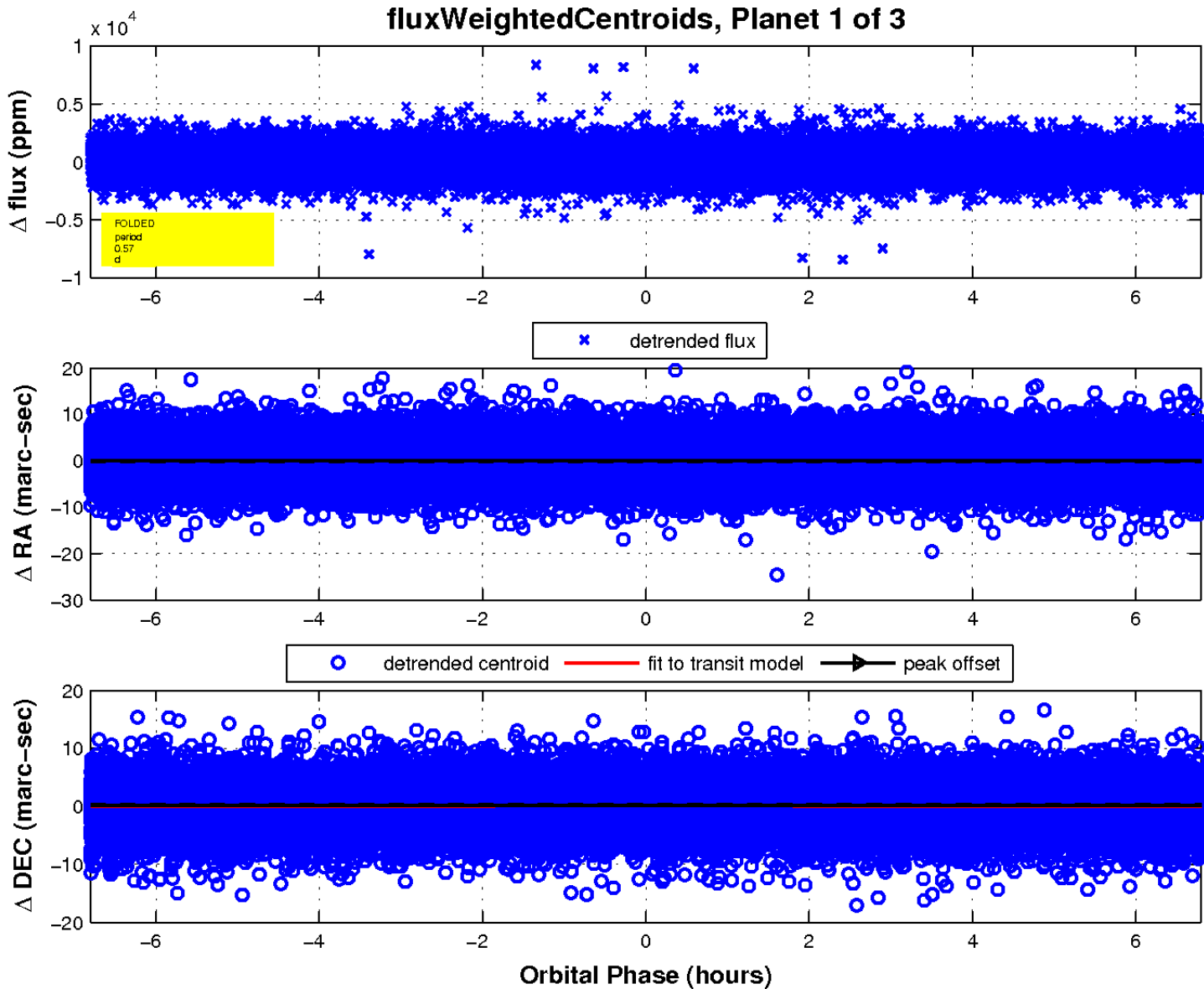
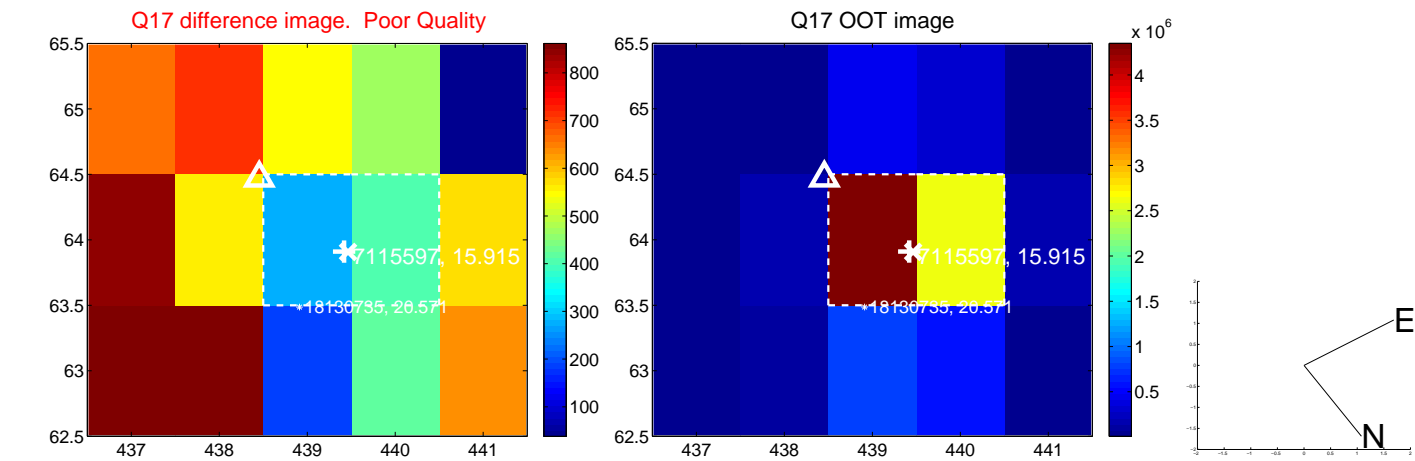
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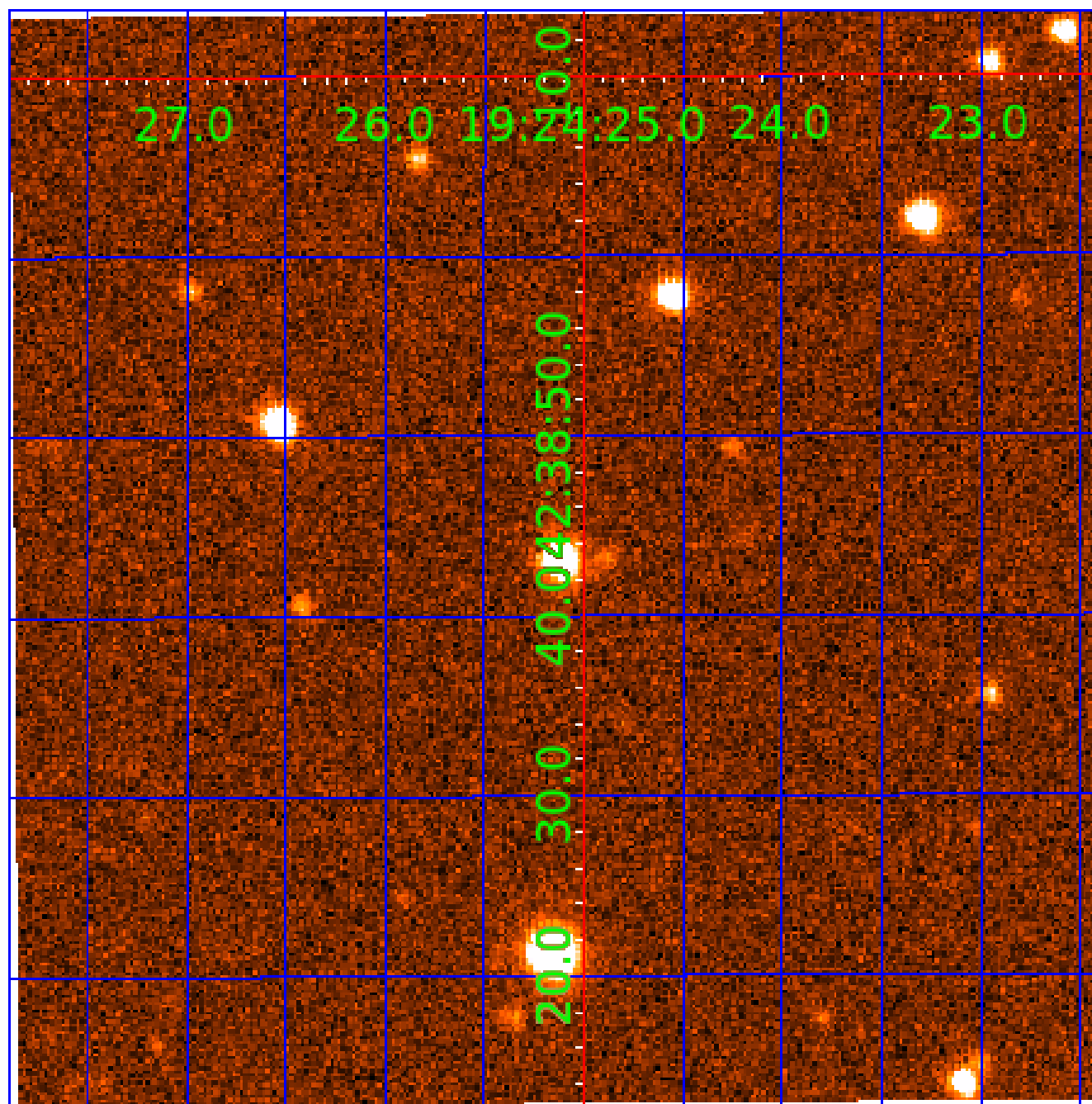


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007115597

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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007115597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES
007115597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

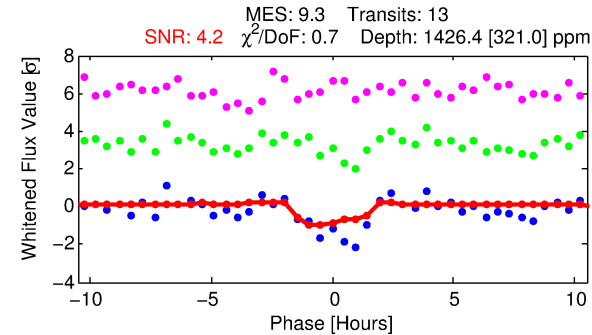
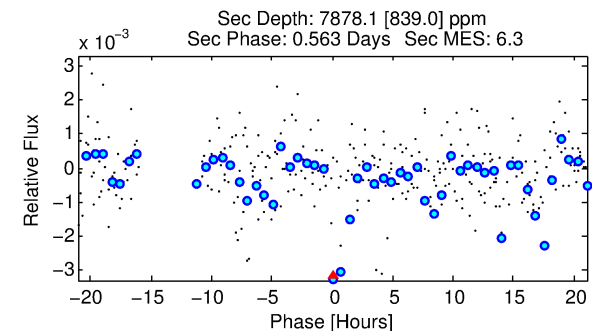
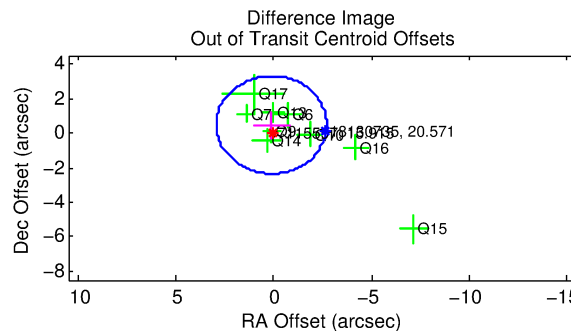
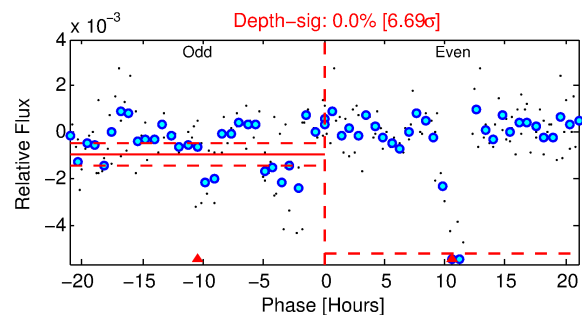
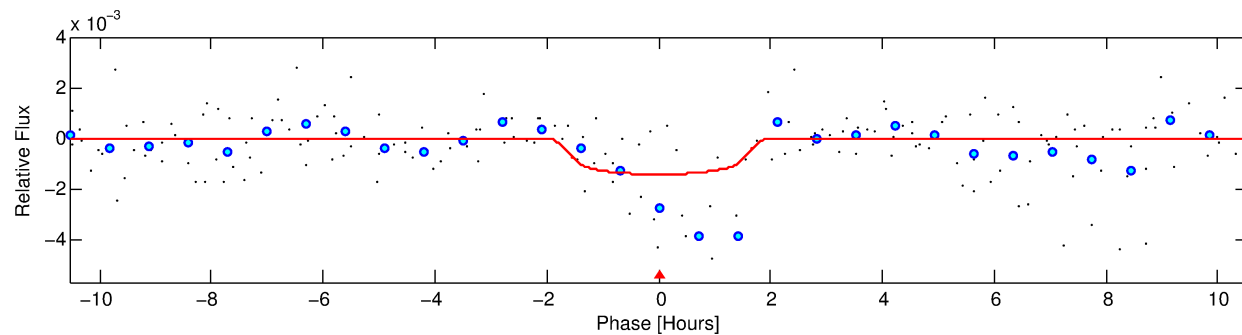
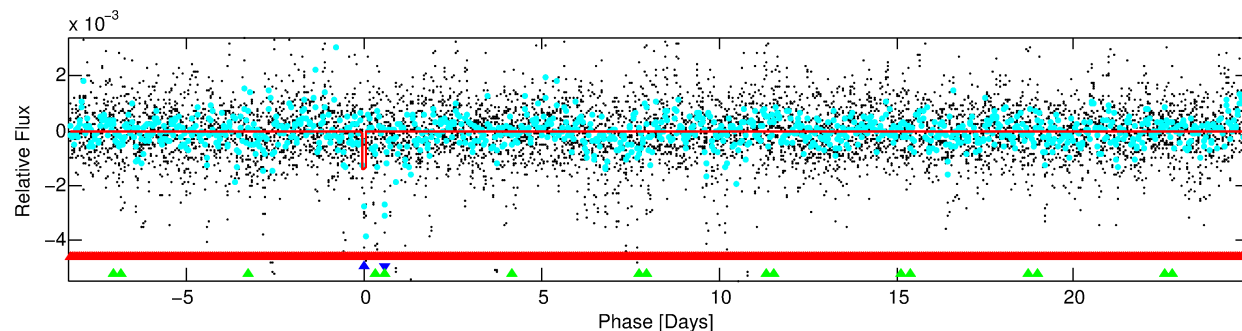
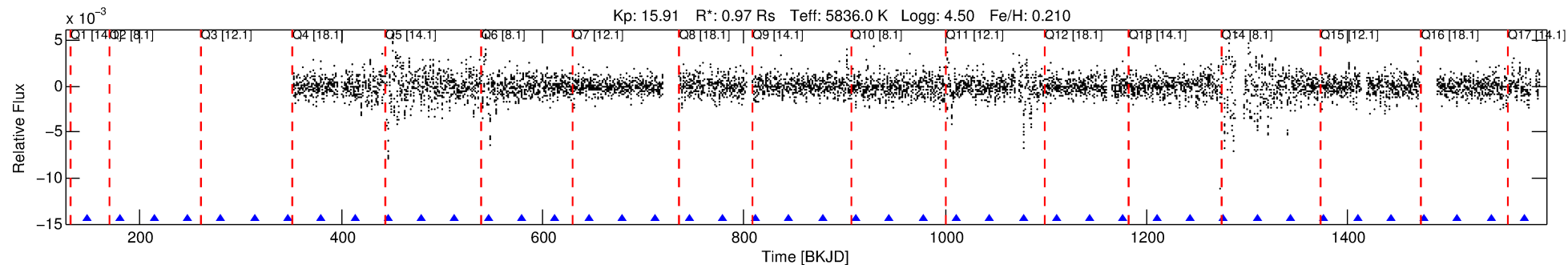
Ephemeris Match Information For 007115597-02

No Significant Match Found

DV One-Page Summary

KIC: 7115597 Candidate: 2 of 3 Period: 33.202 d
KOI: K06824 Corr: No Ephemeris Match

Kp: 15.91 R*: 0.97 Rs Teff: 5836.0 K Logg: 4.50 Fe/H: 0.210



DV Fit Results:

Period = 33.20186 [0.00084] d
Epoch = 147.8554 [0.0195] BKJD
Rp/R* = 0.0361 [0.0692]
a/R* = 60.32 [491.75]
b = 0.61 [8.39]
Seff = 22.65 [8.74]
Teq = 556 [54] K
Rp = 3.82 [7.40] Re
a = 0.2078 [0.0504] AU
Ag = 12804.53 [49266.37] [0.26σ]
Teffp = 9149 [8767] K [0.98σ]

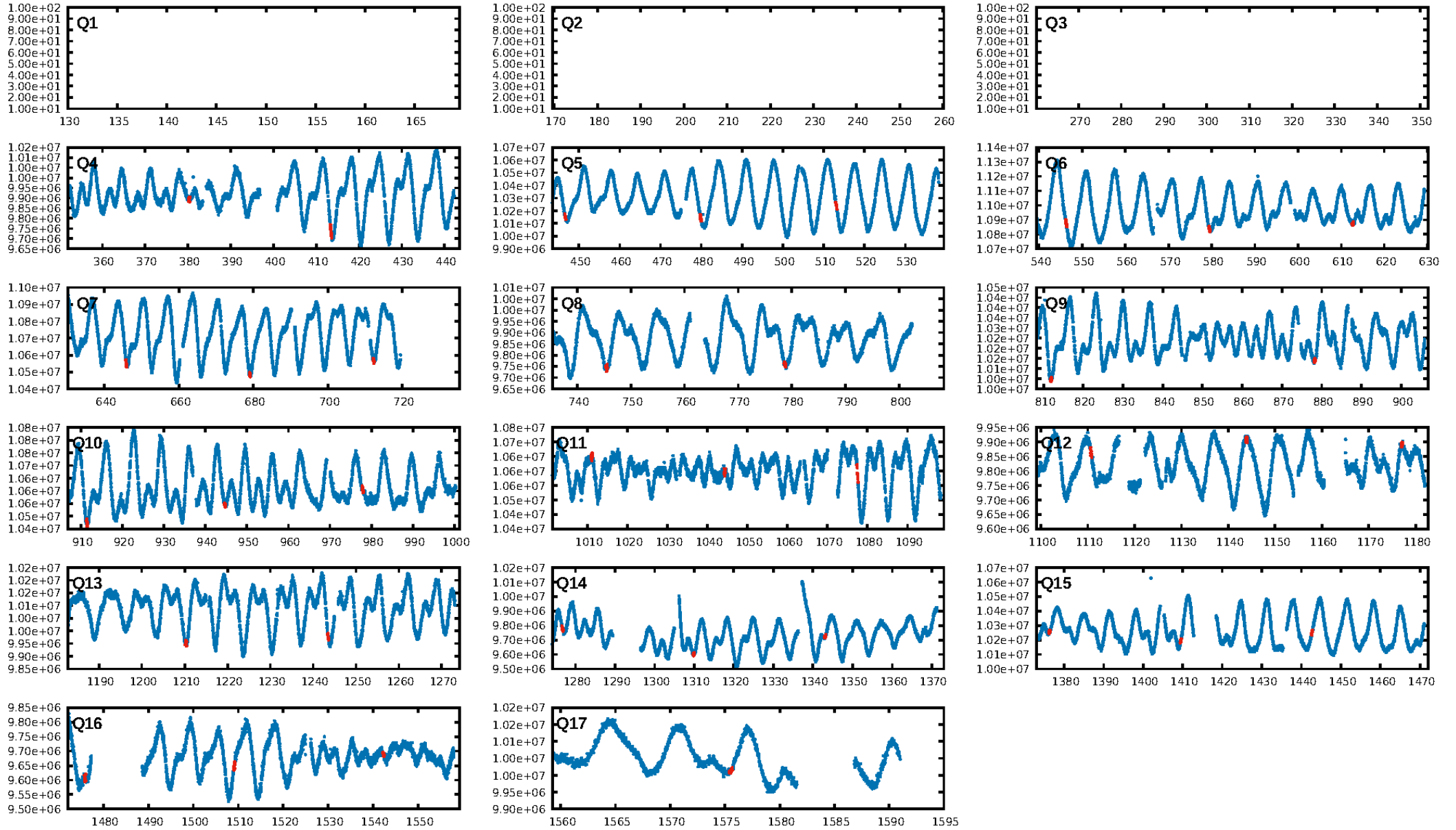
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [151.97σ]
LongPeriod-sig: 100.0% [346.33σ]
ModelChiSquare2-sig: 5.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.66e-16
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 1.203
Centroid-sig: 3.5%
Centroid-so: 0.638 arcsec [1.37σ]
OotOffset-rm: 0.488 arcsec [0.52σ]
KicOffset-rm: 0.397 arcsec [0.64σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-st: 3/2/1/3 [9]
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DiffImageOverlap-fno: 0.00 [0/14]

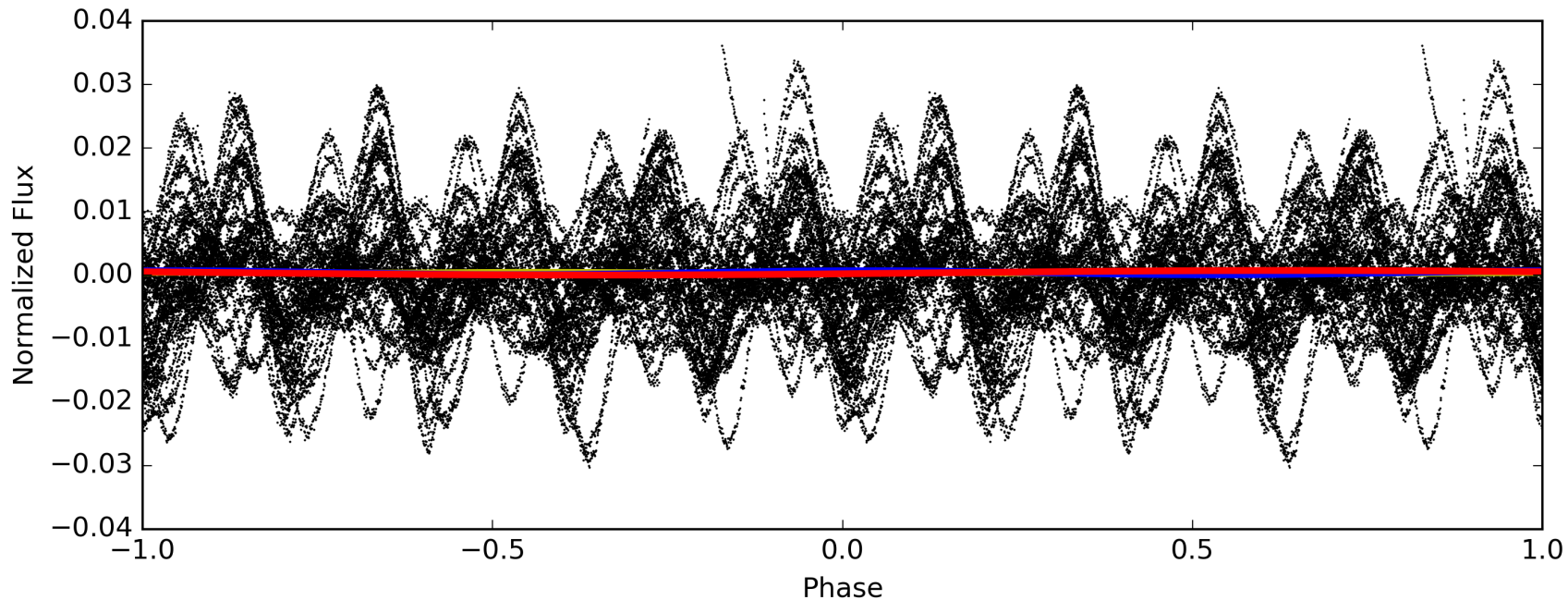
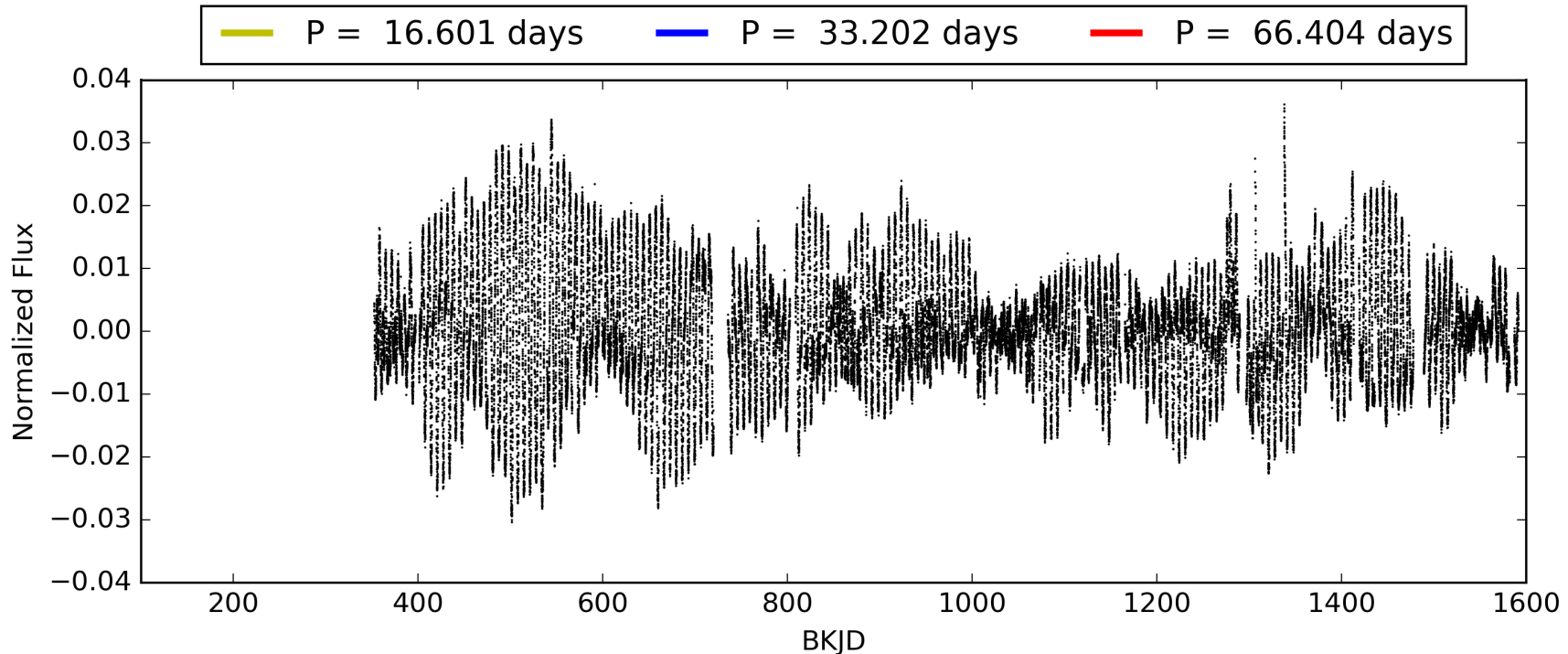
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:07:33 Z

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

TCE 007115597-02, PDC Light Curves

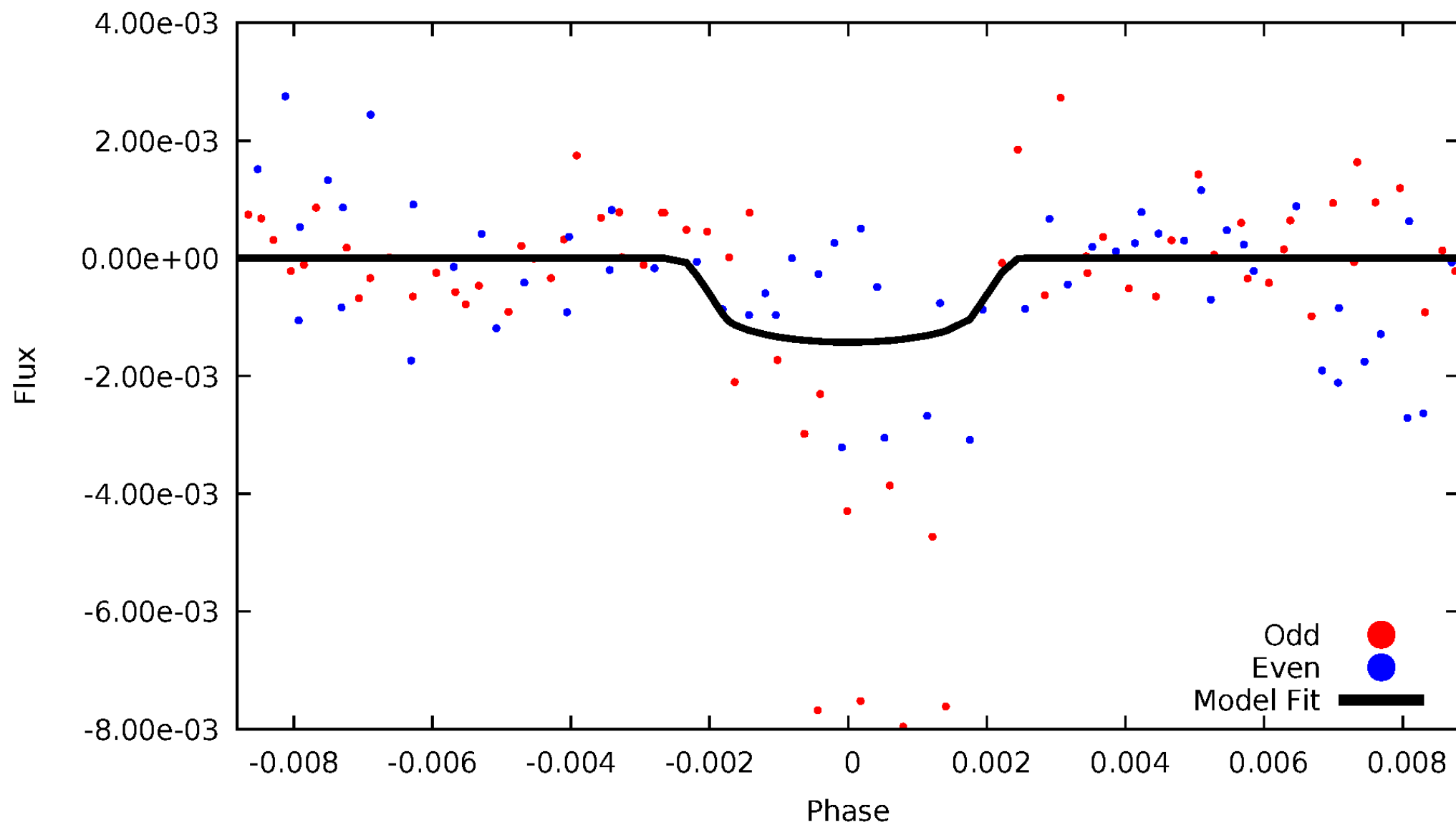


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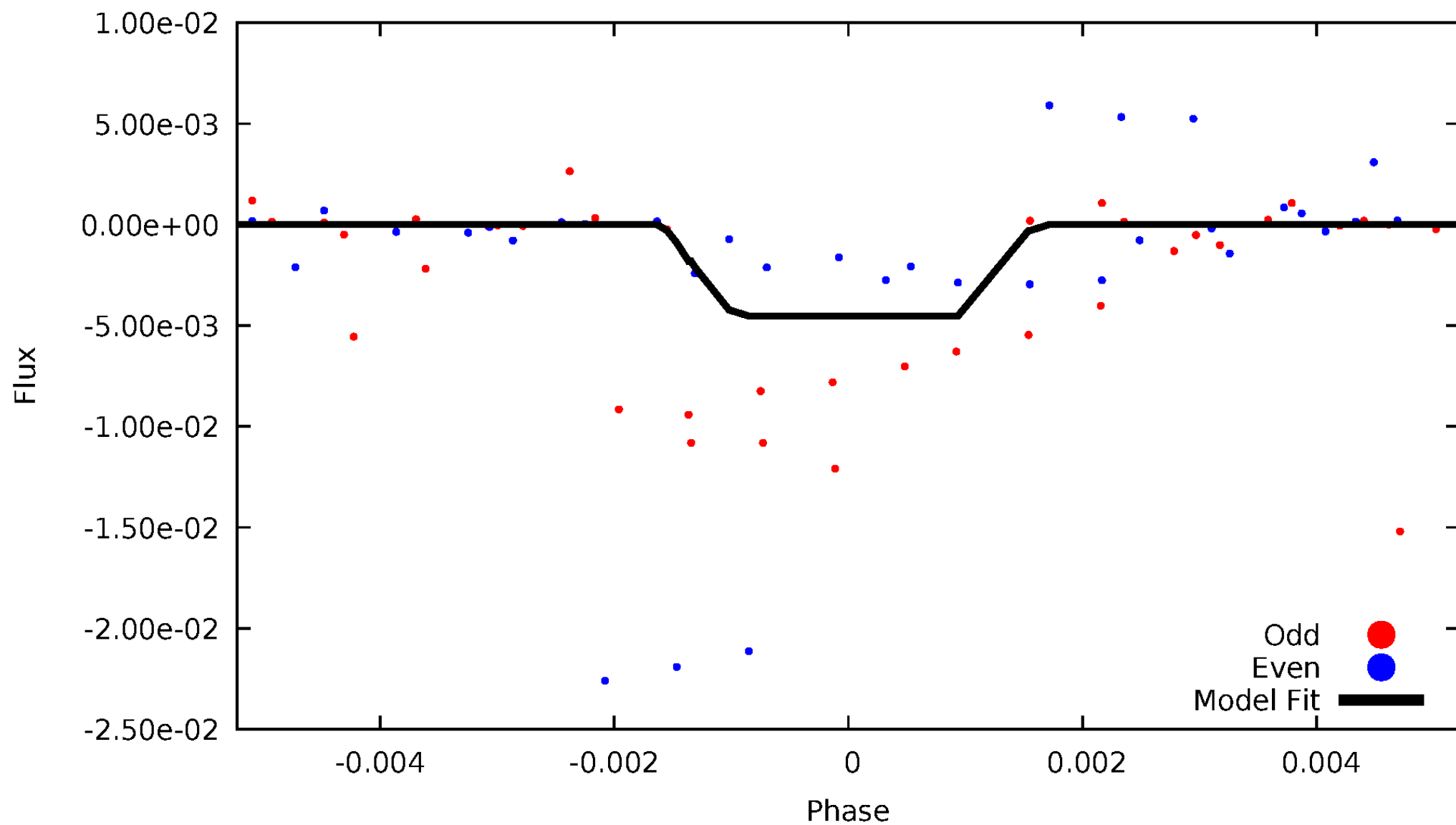
DV Odd/Even

TCE 007115597-02



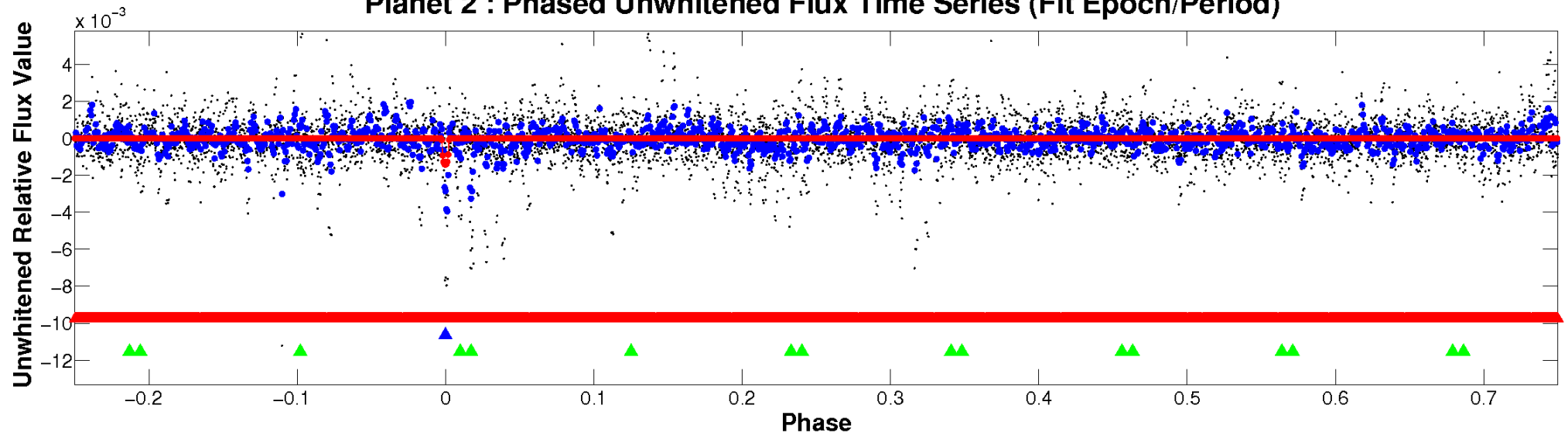
ALT Odd/Even

TCE 007115597-02

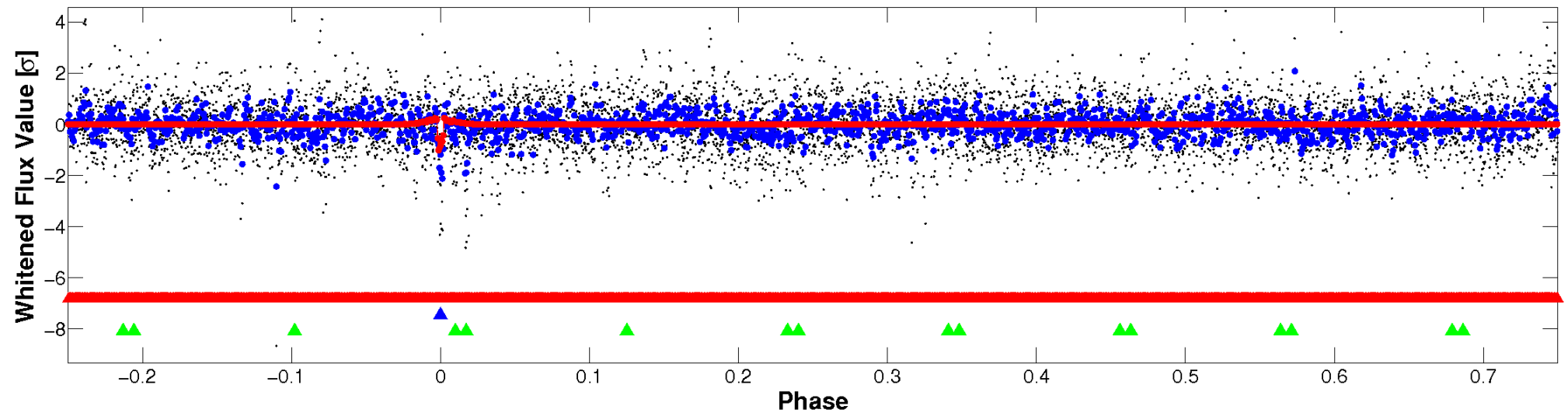


Non-Whitened Vs. Whitened Light Curve

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

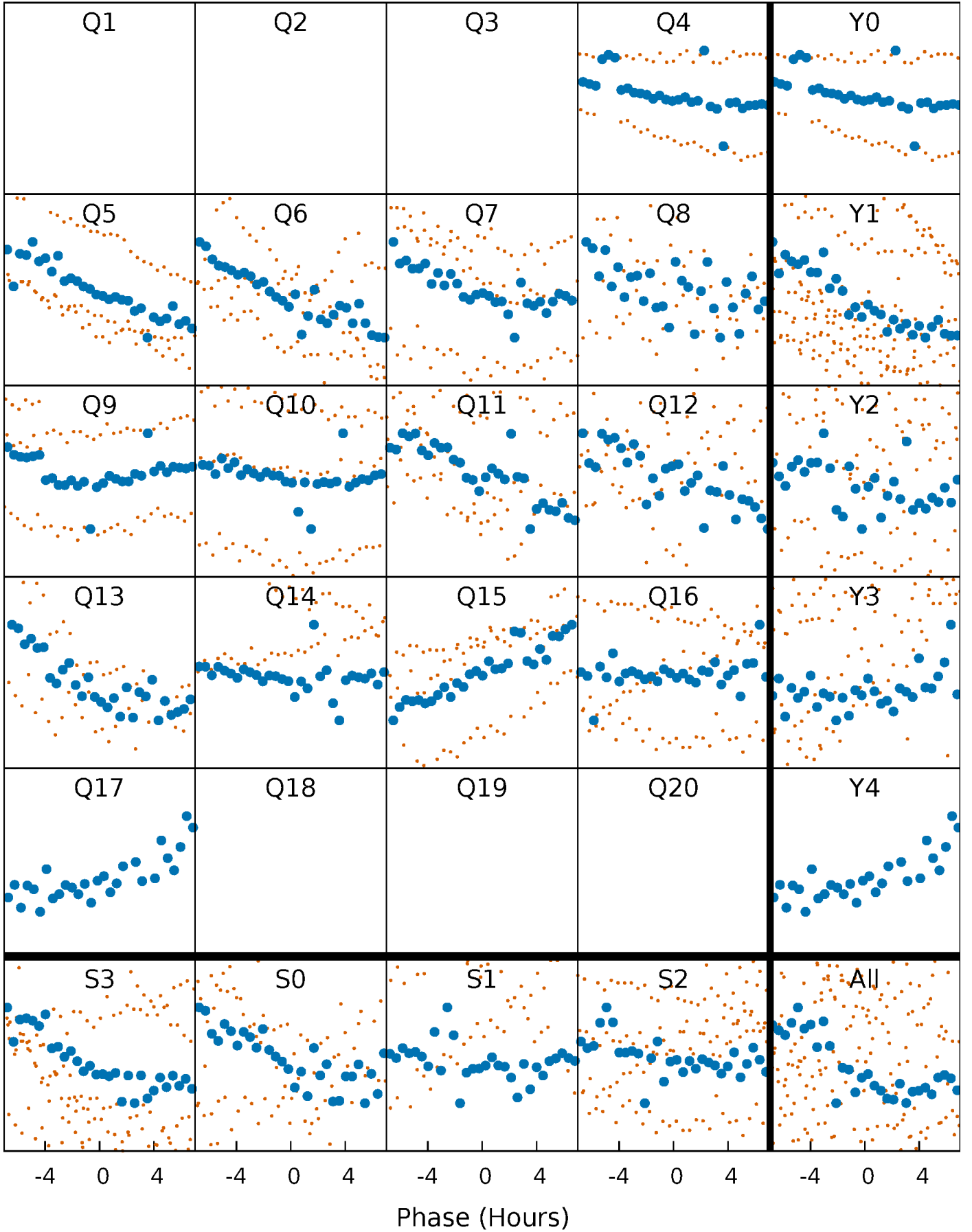


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



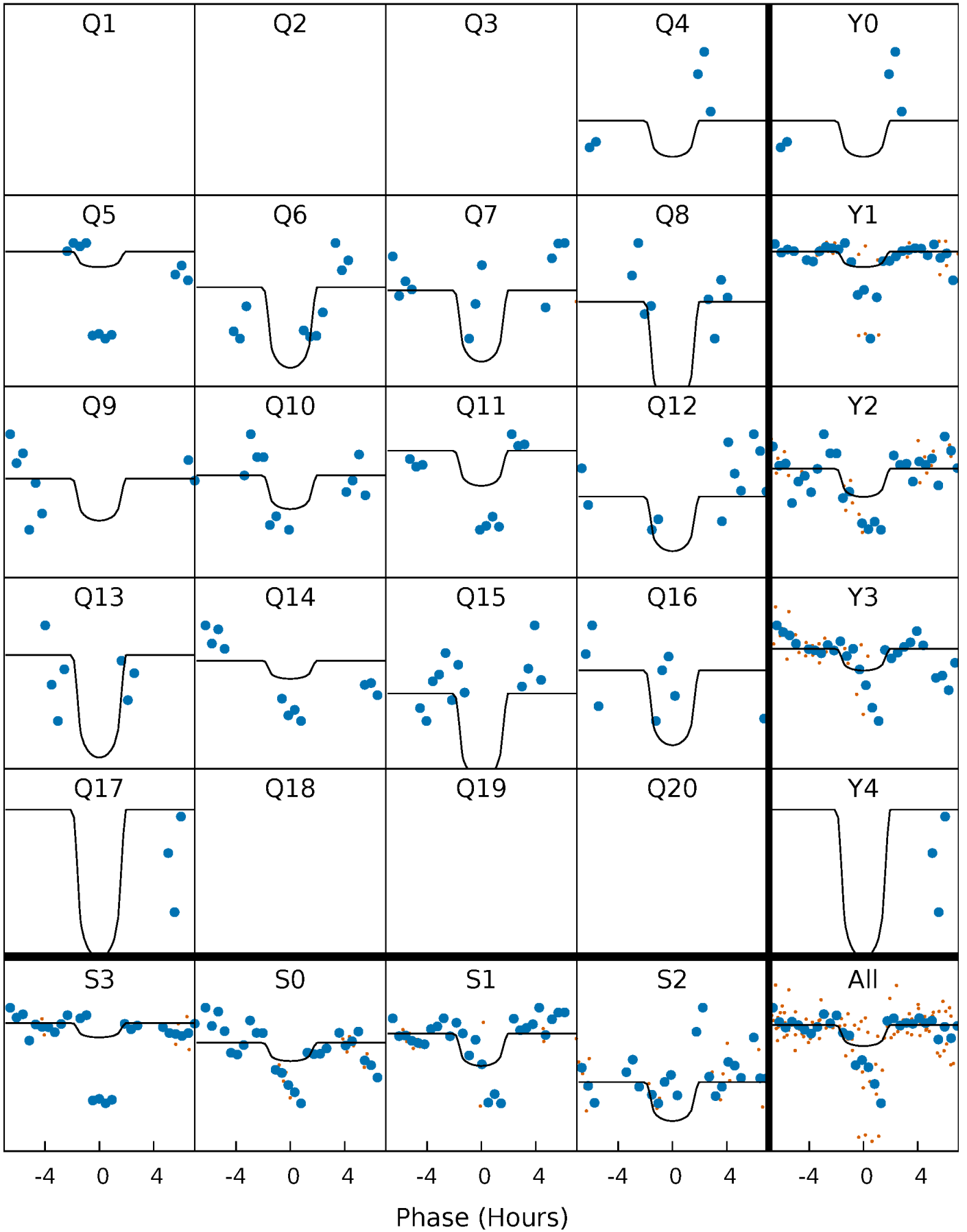
PDC Quarter-Phased Transit Curves

TCE 007115597-02 P= 33.201862 Days $T_0=147.855359$ (BKJD)



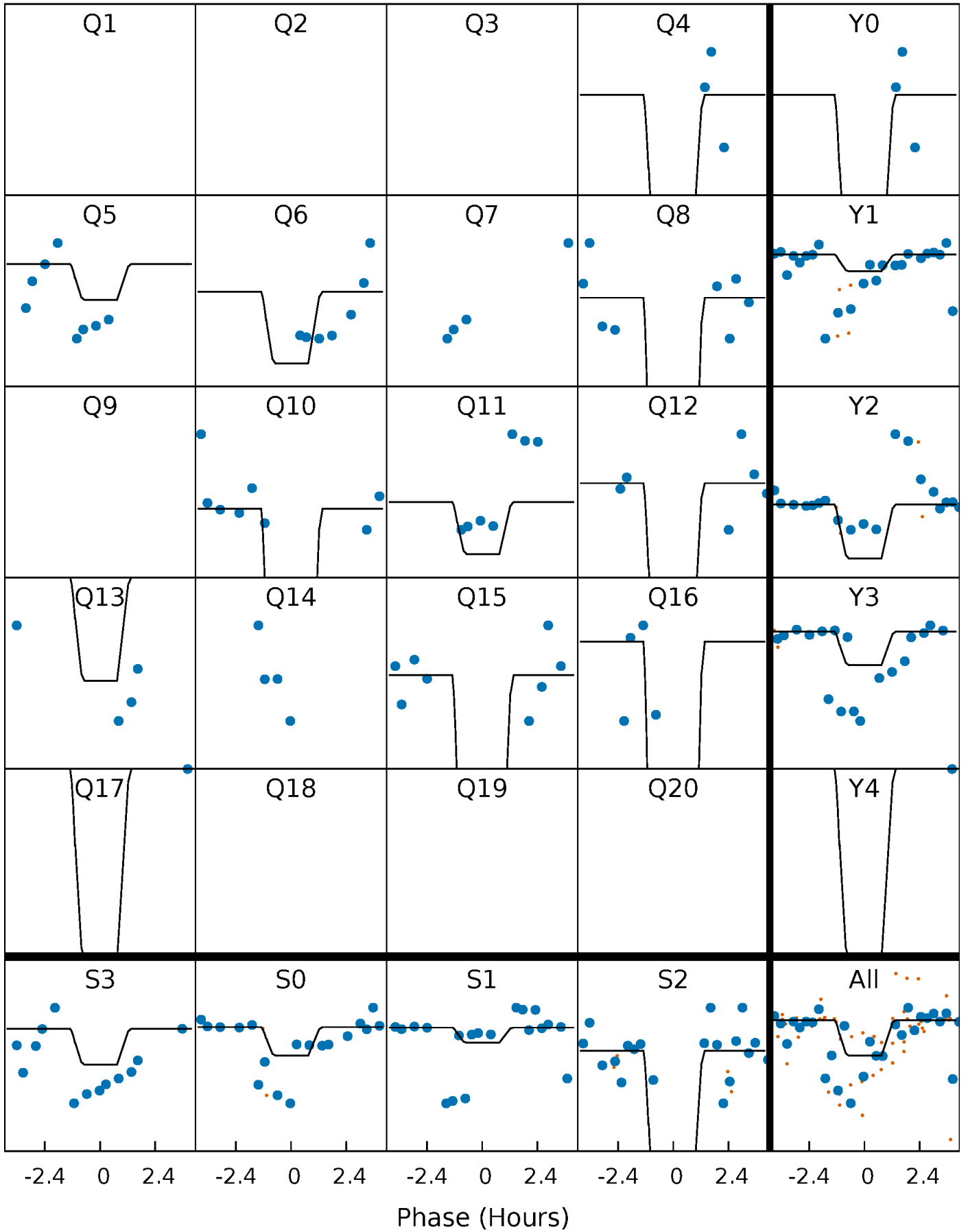
DV Quarter-Phased Transit Curves

TCE 007115597-02 P= 33.201862 Days $T_0=147.855359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

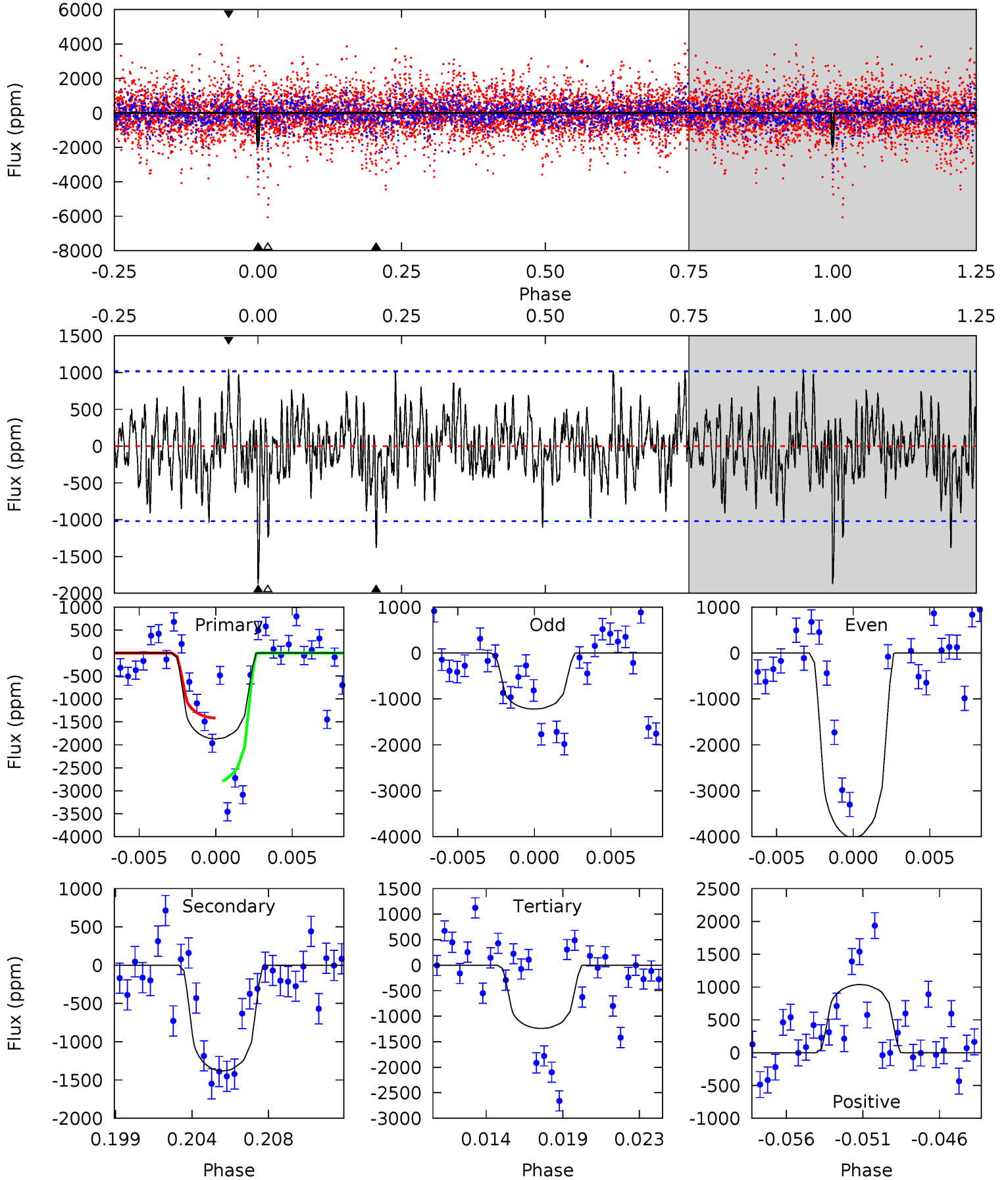
TCE 007115597-02 P= 33.202374 Days $T_0=147.881489$ (BKJD)



DV Model-Shift Uniqueness Test

007115597-02, $P = 33.201862$ Days, $E = 147.855359$ Days

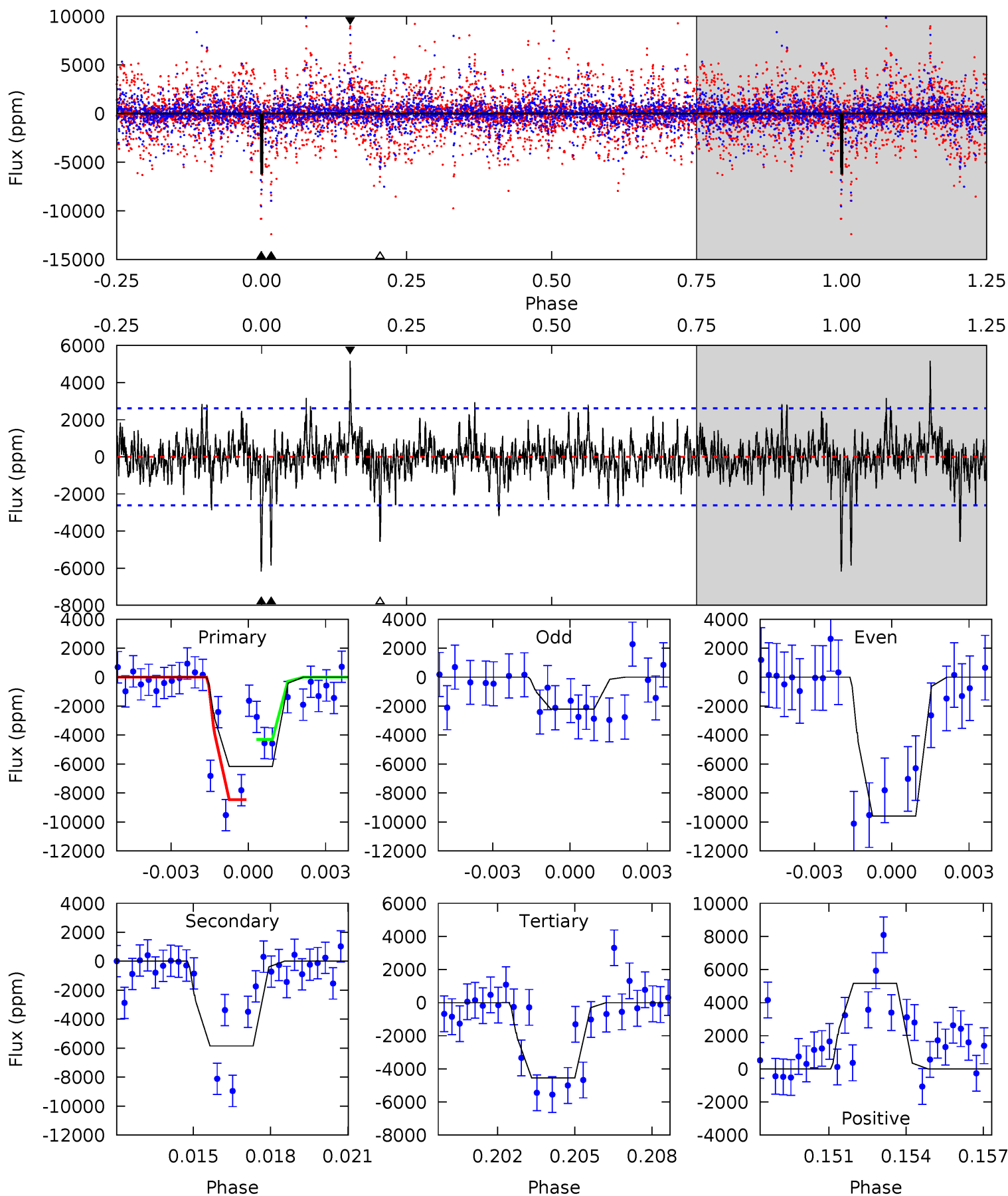
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	7.01	6.29	5.27	5.17	2.83	1.78	3.20	4.23	0.72	1.74	7.66	1.95	0.36	3.39



Alt Model-Shift Uniqueness Test

007115597-02, $P = 33.202374$ Days, $E = 147.881489$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	11.8	9.15	10.4	5.25	2.97	1.68	3.26	2.03	2.62	1.38	5.71	1.26	0.46	4.45



Stellar Parameters For KIC 007115597

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot cm^{-3})$
	5836^{+182}_{-203}	$4.500^{+0.037}_{-0.200}$	$0.210^{+0.200}_{-0.300}$	$0.970^{+0.273}_{-0.091}$	$1.087^{+0.112}_{-0.150}$	$1.676^{+0.330}_{-0.860}$
	+3%/-3%	+1%/-4%	+95%/-143%	+28%/-9%	+10%/-14%	+20%/-51%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007115597-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1382 ± 197	$7.19^{+6.76}_{-5.18}$	798^{+51}_{-41}	4591^{+4170}_{-977}	624^{+7062}_{-453}
Alt.	-5849 ± 497	$9.35^{+7.51}_{-6.02}$	796^{+54}_{-38}	5578^{+4779}_{-1215}	1548^{+9882}_{-1077}

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

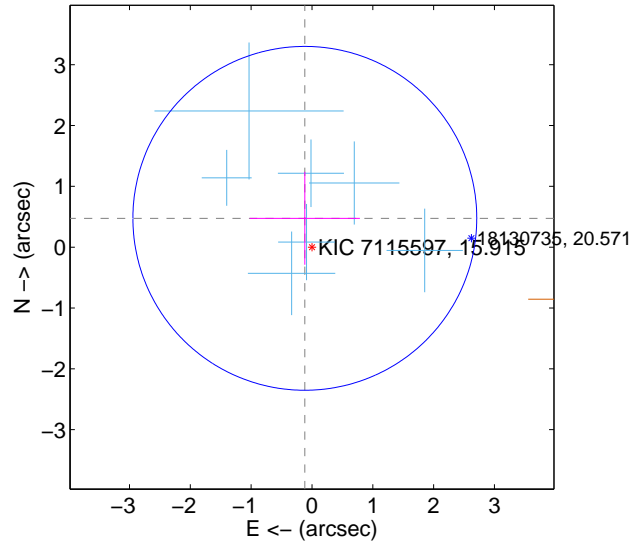
Supplemental centroid analysis for 007115597-02. Kepler magnitude: 15.91. Transit SNR 4.18

There are 7 quarters with good PRF difference image offsets

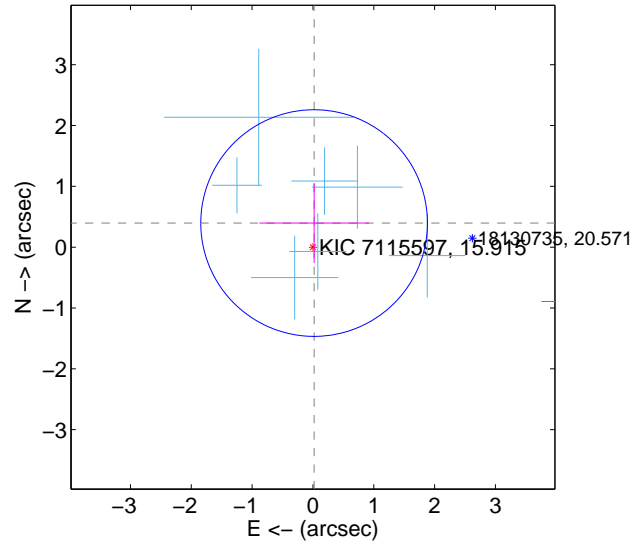
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.488 ± 0.942	0.52	0.117 ± 0.905	0.474 ± 0.764
PRF-fit source offset from KIC position	0.397 ± 0.621	0.64	-0.019 ± 0.900	0.396 ± 0.658
photometric centroid source offset	0.64 ± 0.46	1.37	0.63 ± 0.47	-0.09 ± 0.39

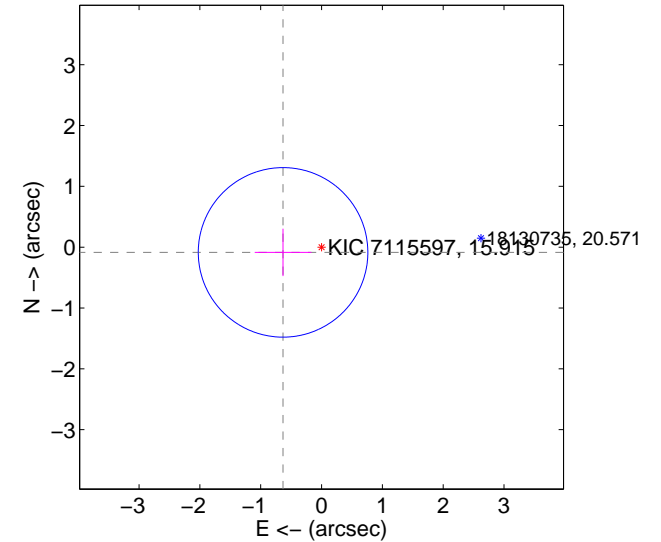
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

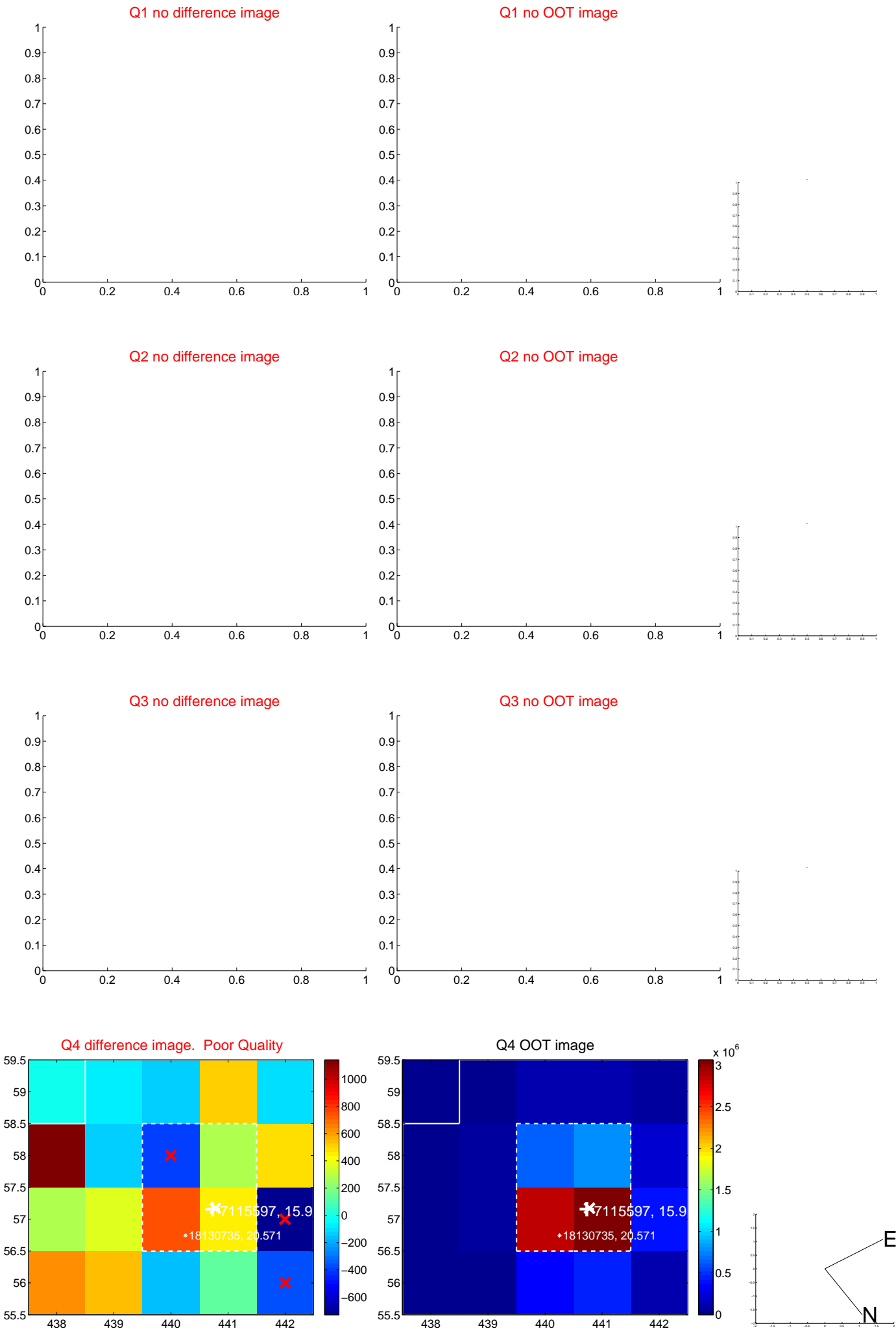


offset from photometric centroids

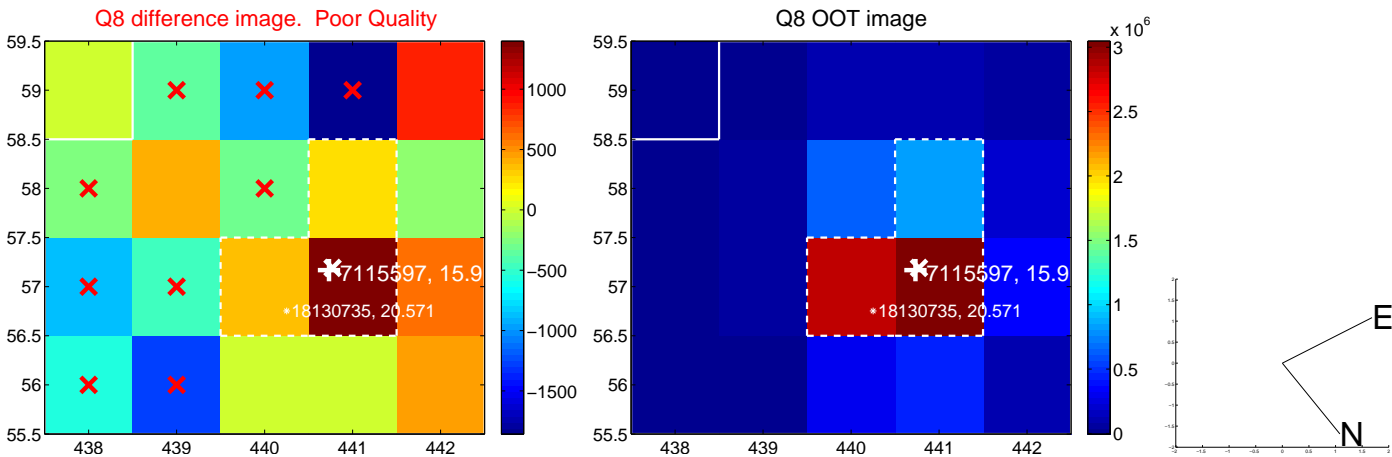
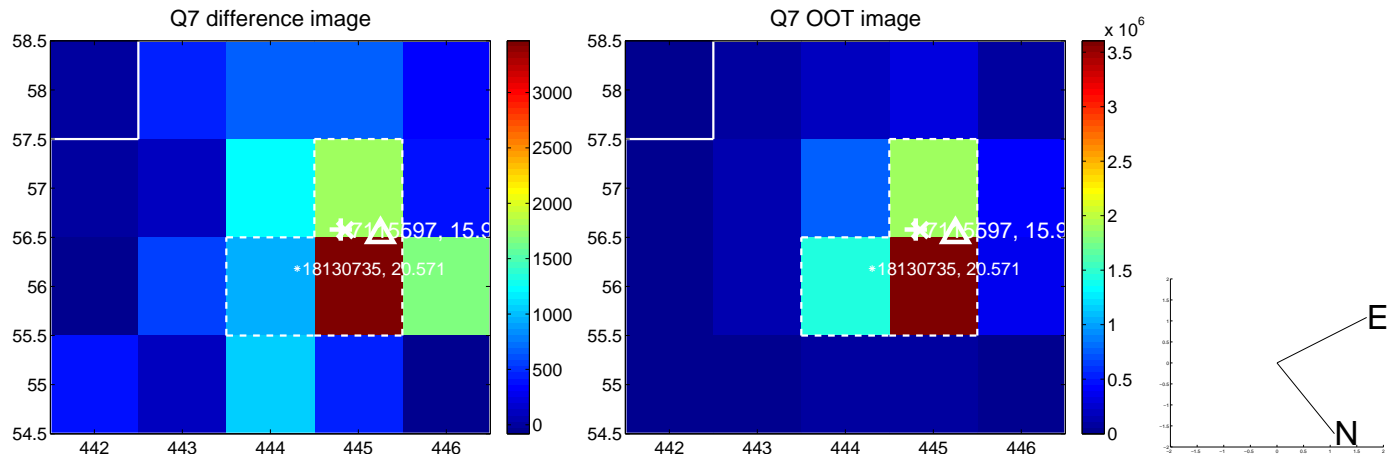
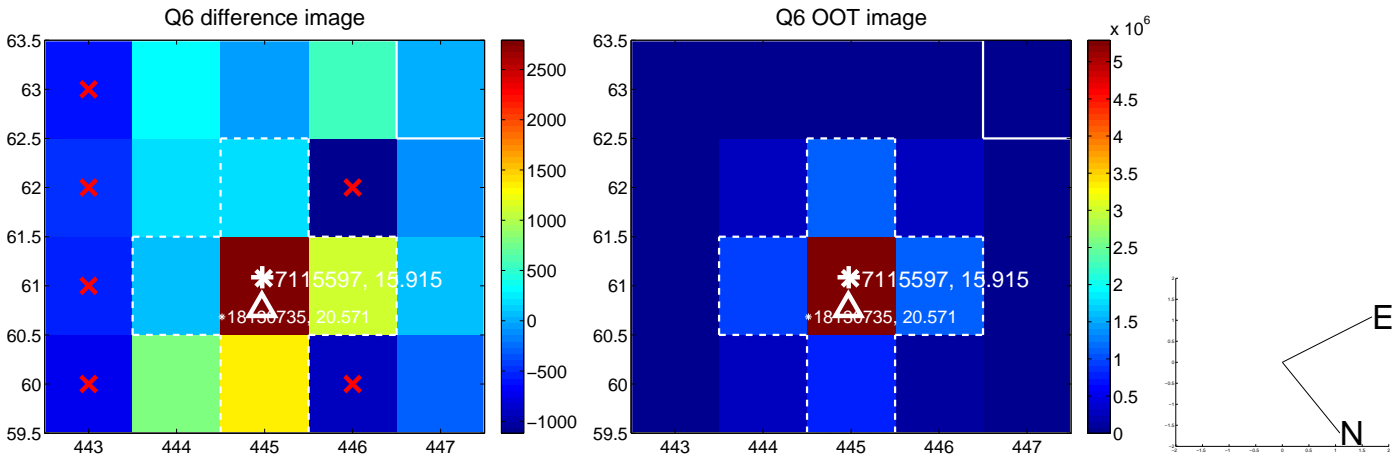
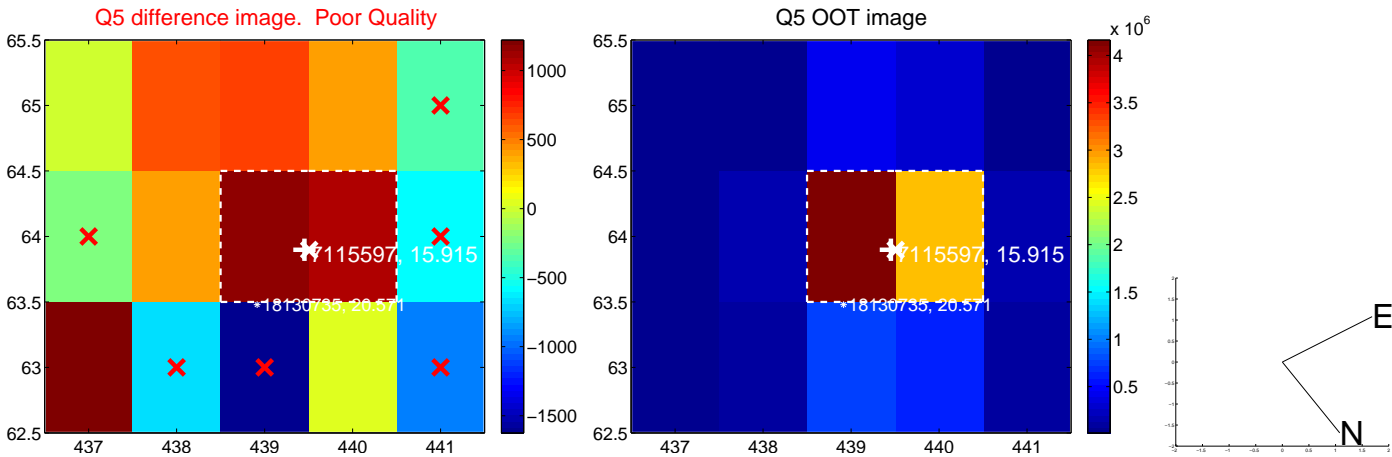


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

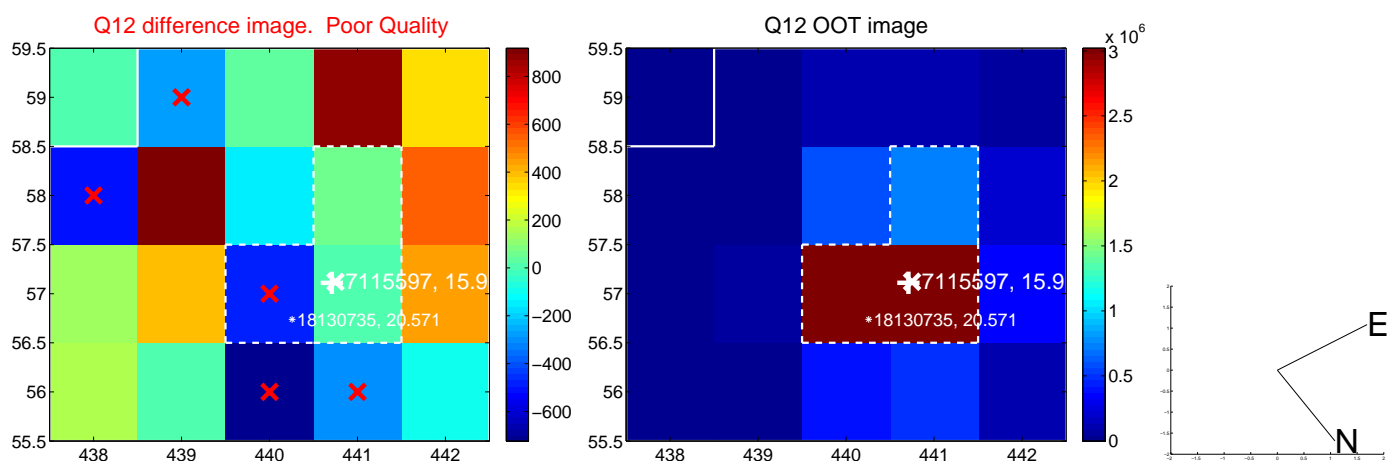
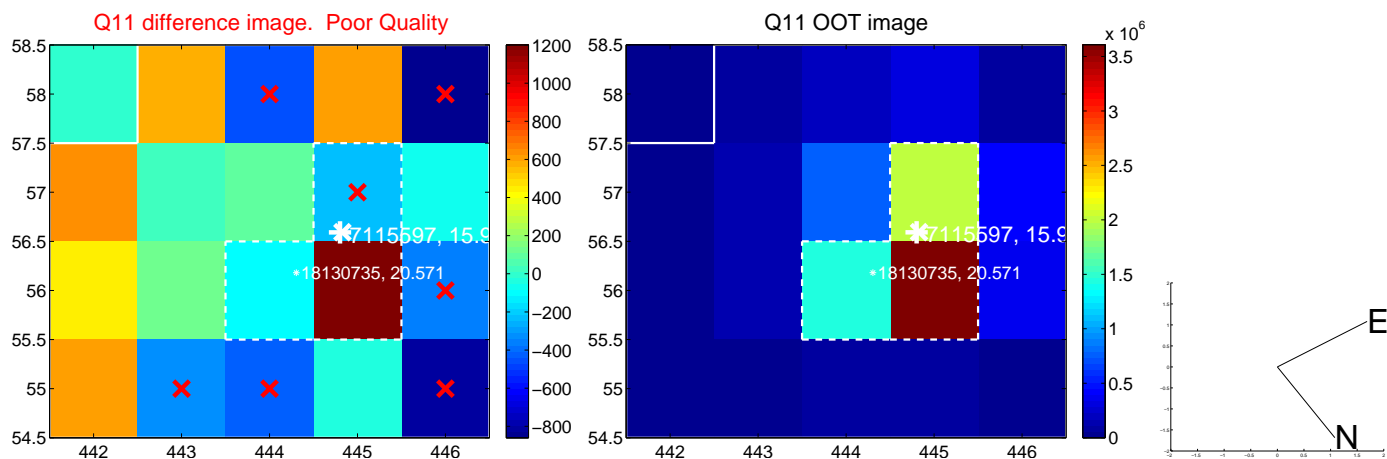
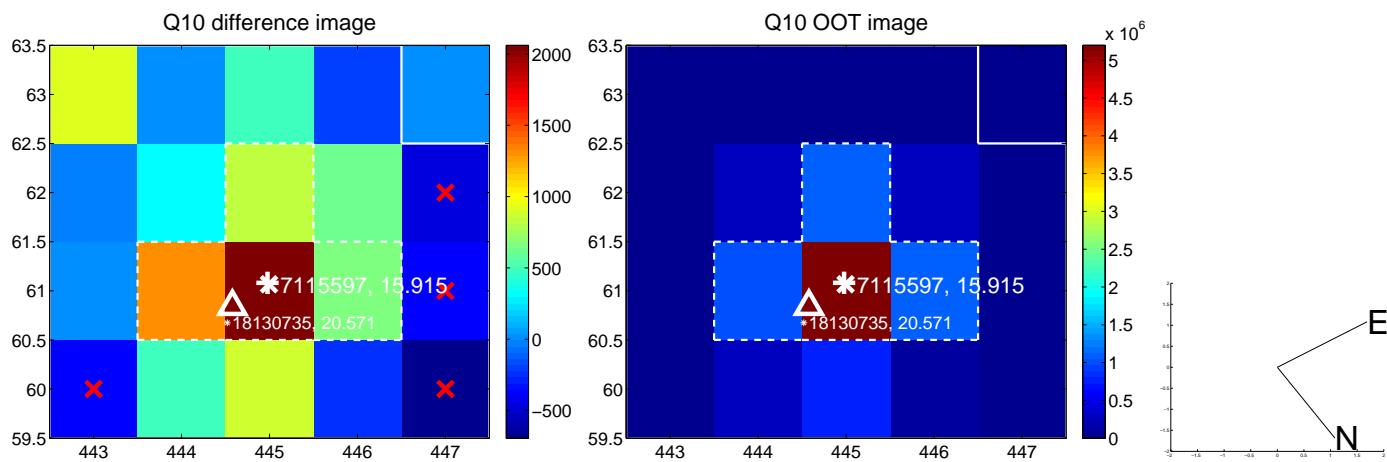
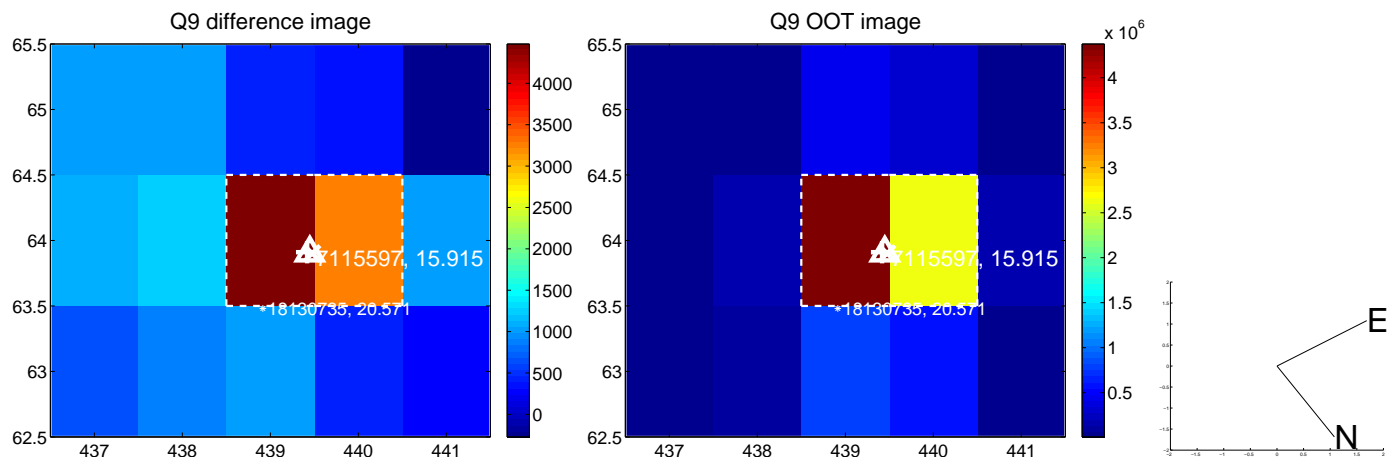
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



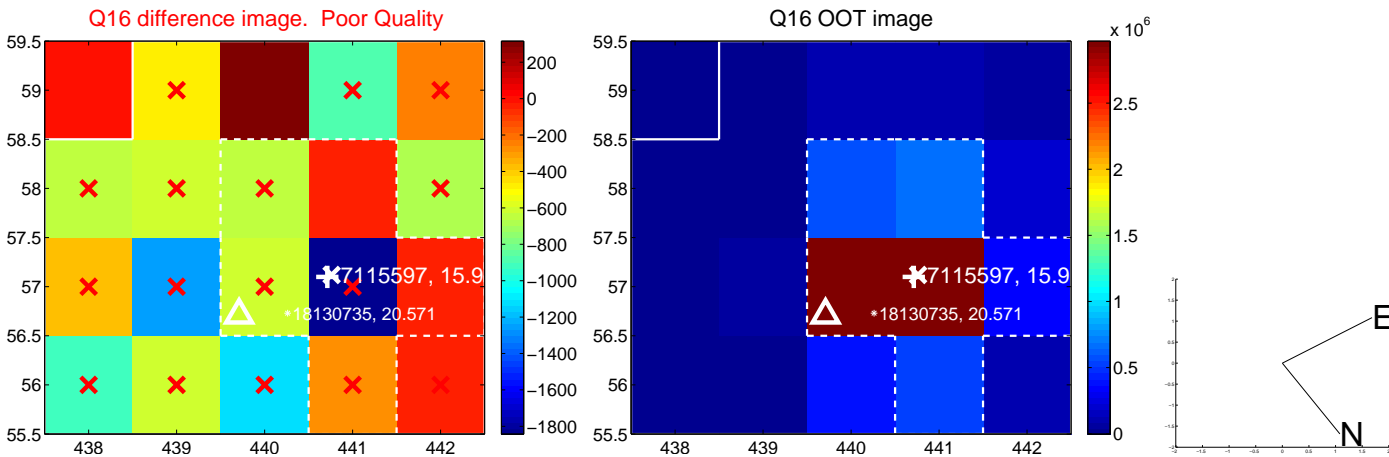
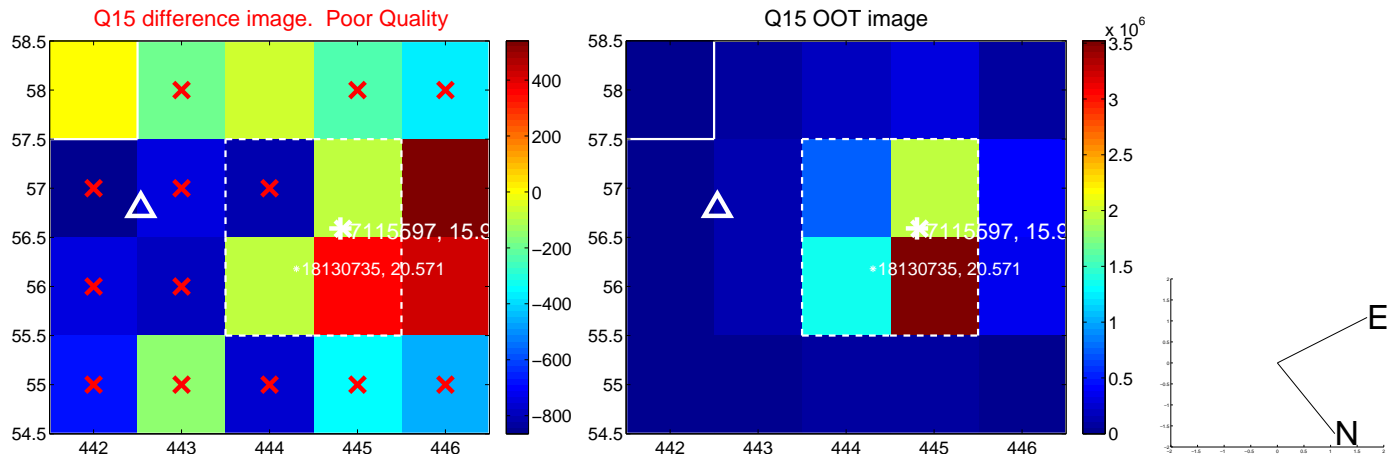
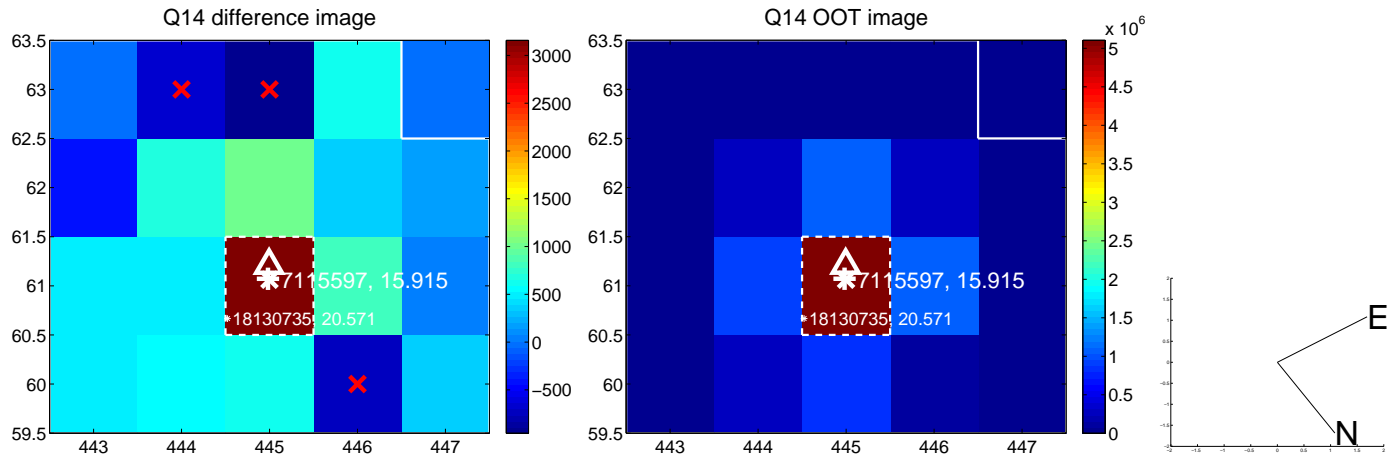
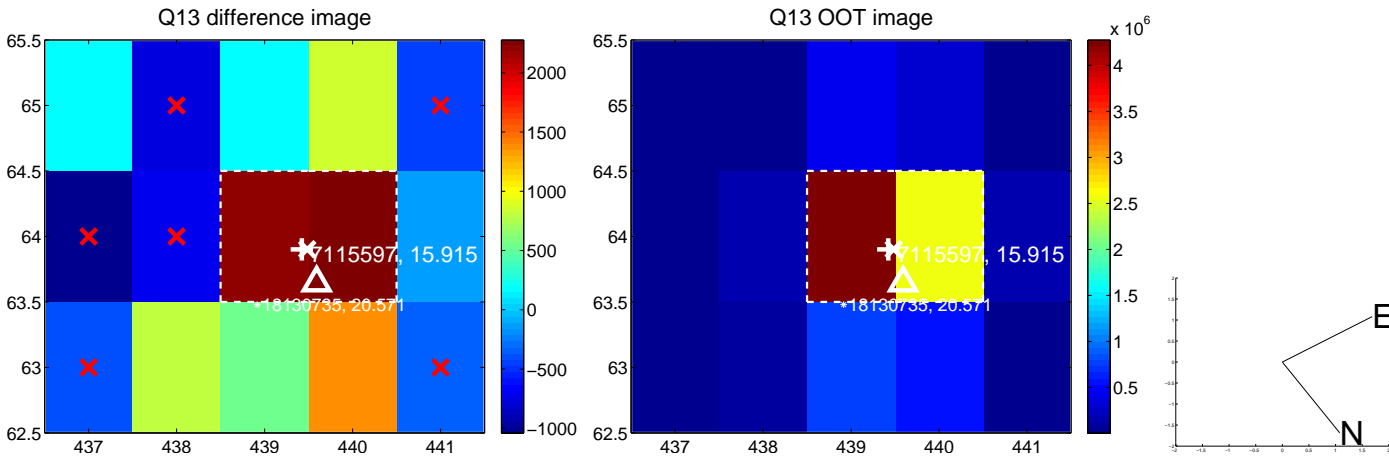
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



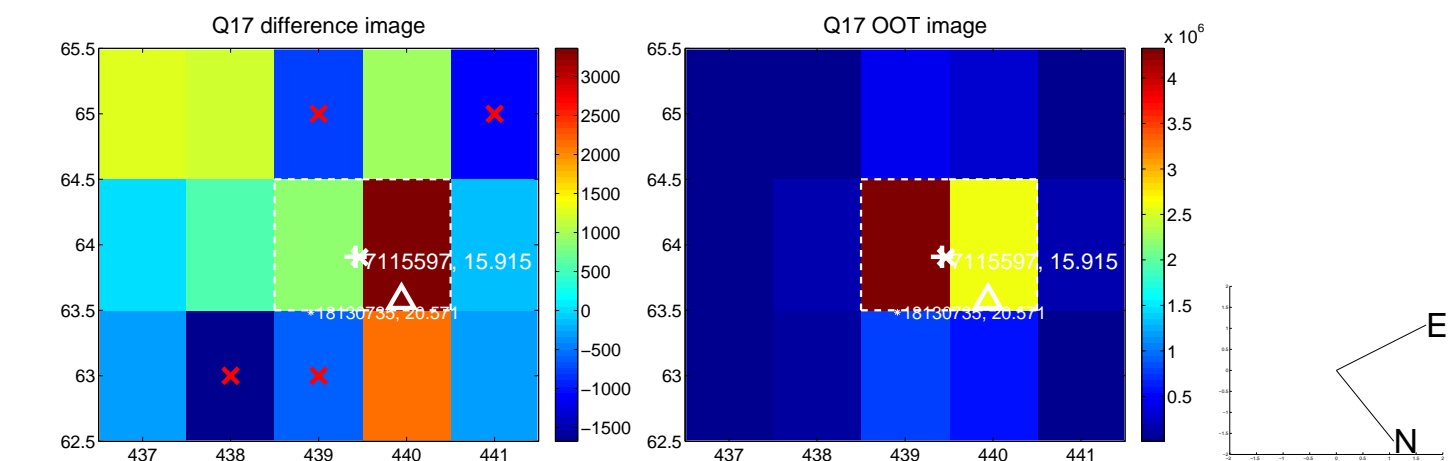
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



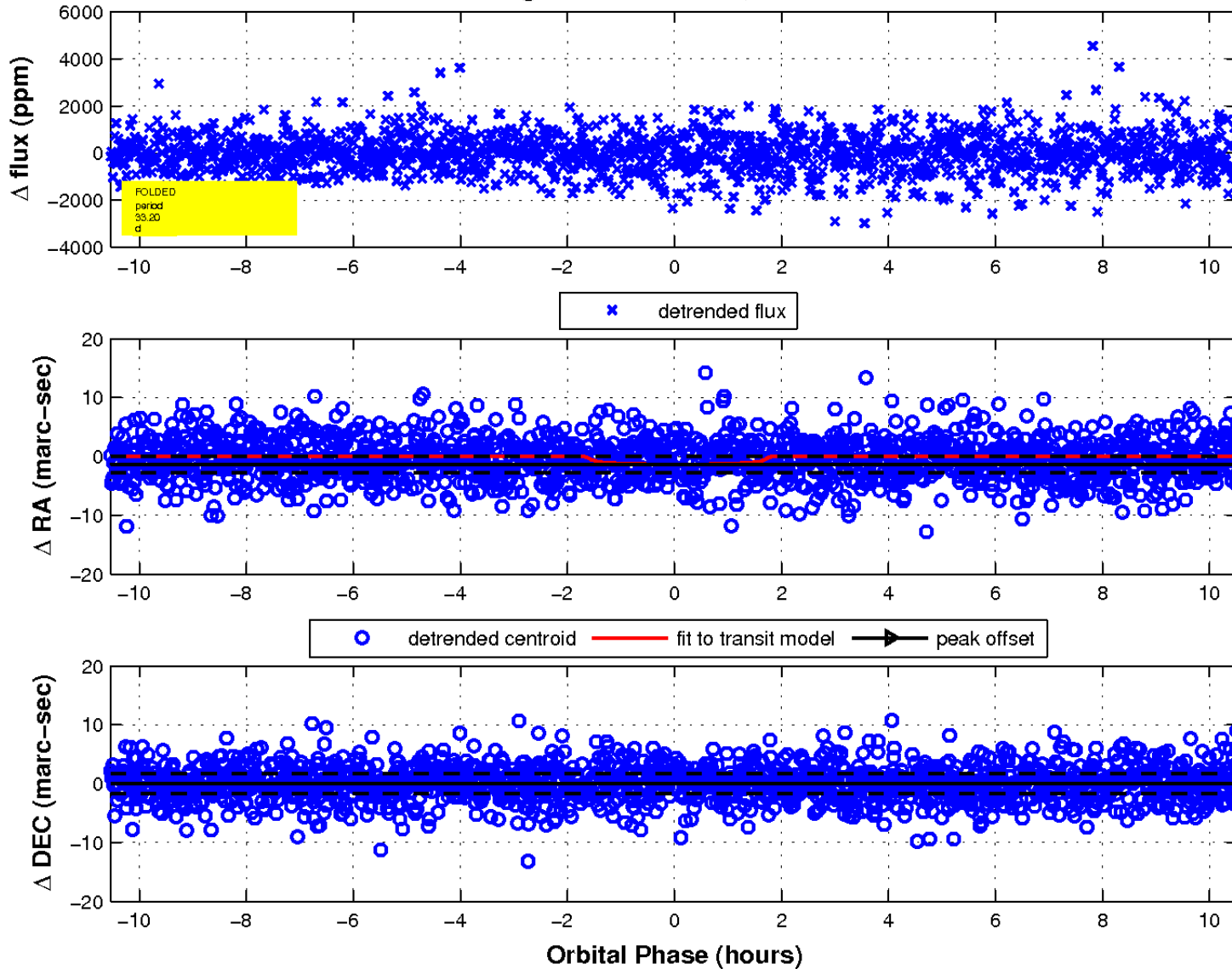
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

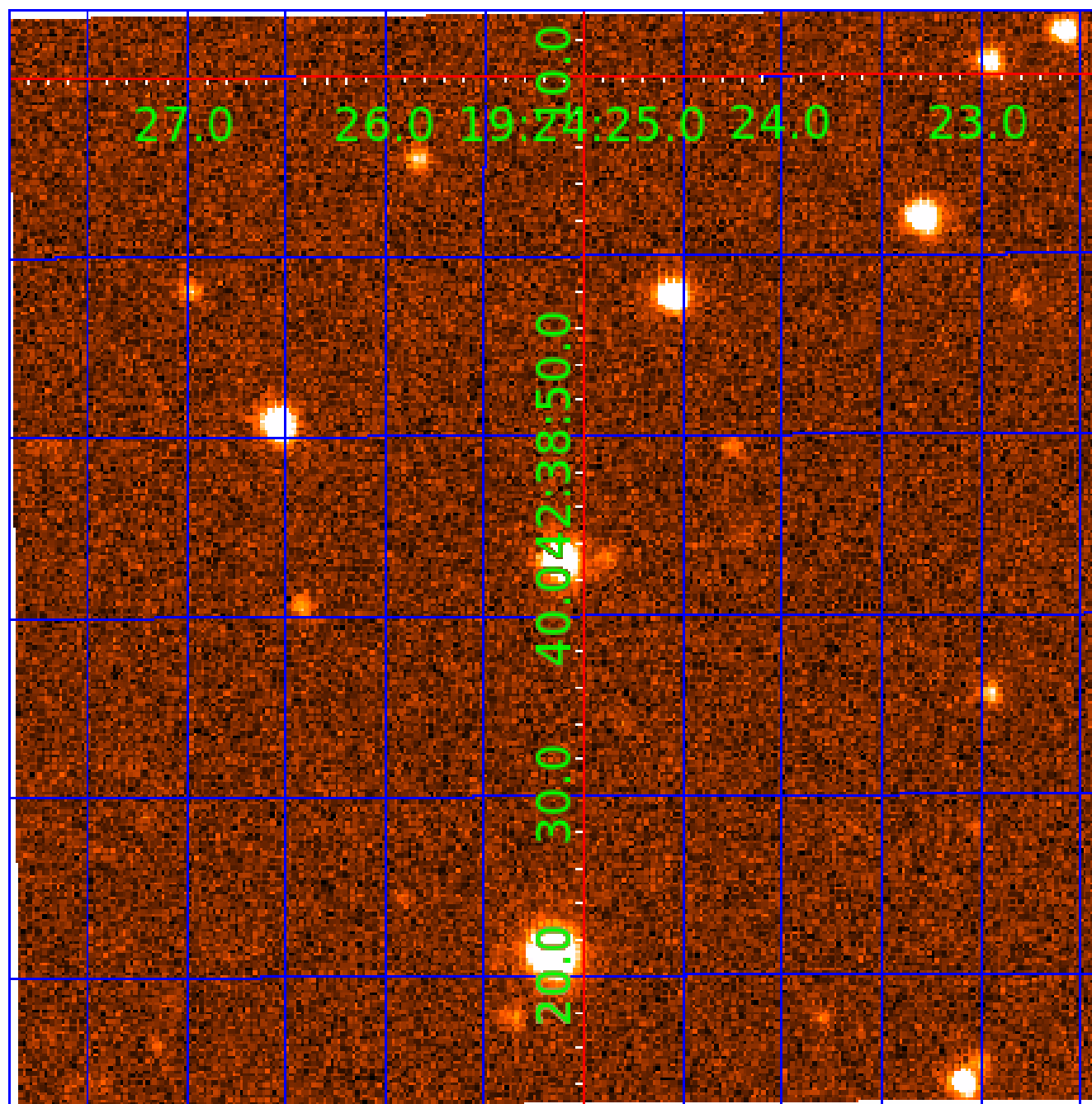


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 007115597

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})
007115597-01	OBS	6824.01	0.566803	131.825096	111.2	3.771	13.4	13.3	0.97	5836	1.01	5151.81
007115597-02	OBS	No	33.201862	147.855359	1426.4	3.513	9.3	4.2	0.97	5836	3.82	22.65
007115597-03	OBS	No	92.200579	170.643831	3939.1	2.091	9.4	6.3	0.97	5836	6.84	5.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115597-01	OBS	FP	0.00	1	0	0	1	LPP_DV—EPHEM_MATCH
007115597-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES
007115597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—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.

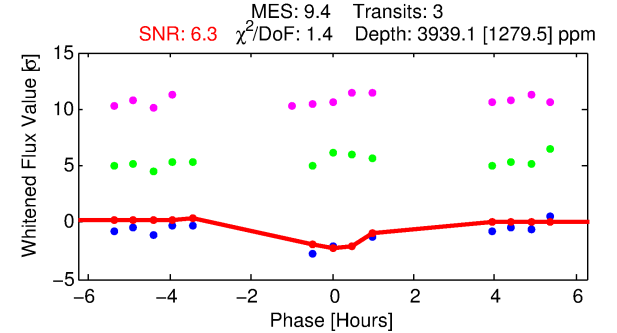
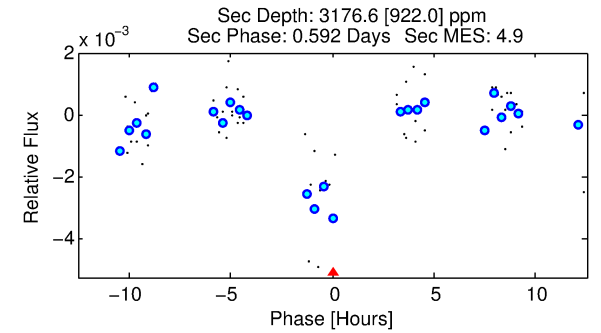
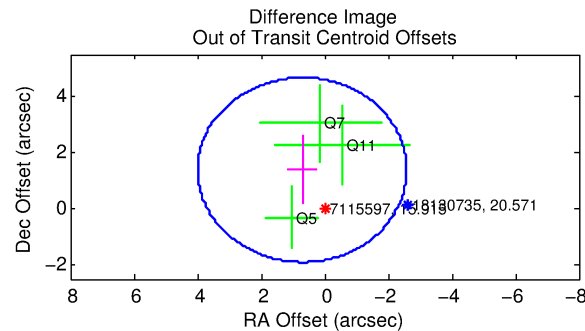
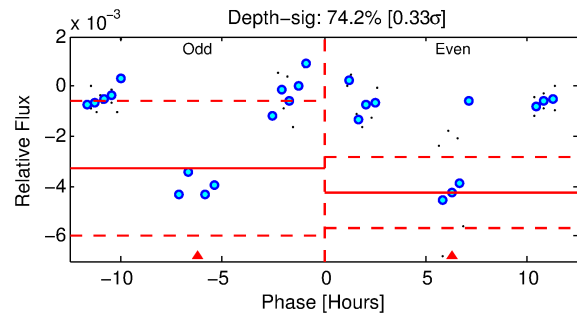
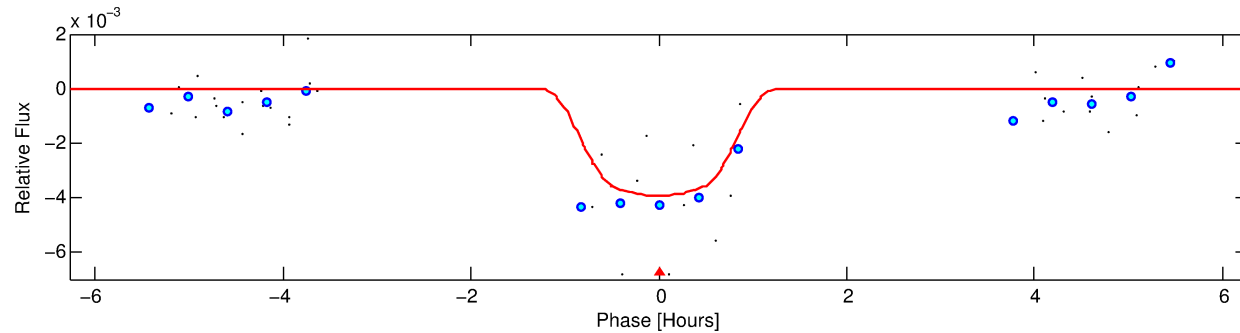
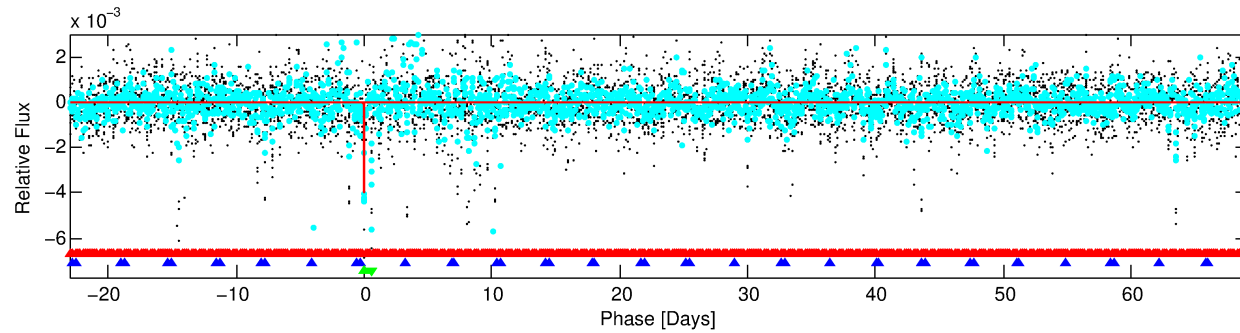
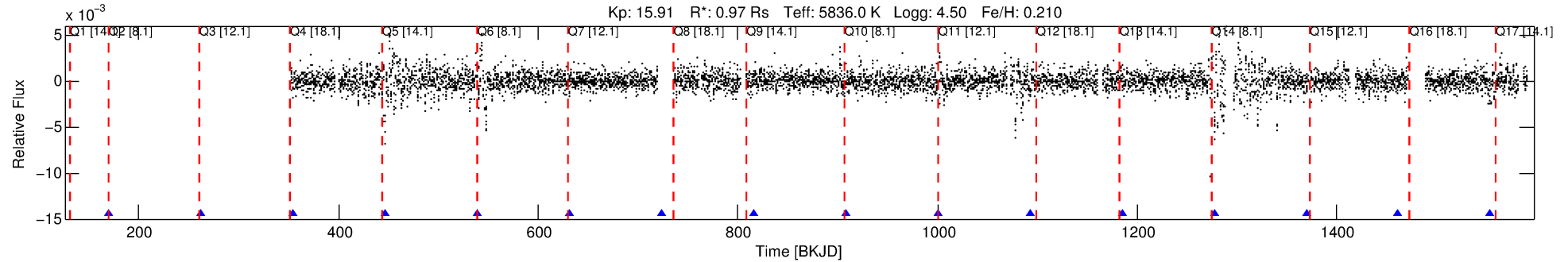
Ephemeris Match Information For 007115597-03

No Significant Match Found

DV One-Page Summary

KIC: 7115597 Candidate: 3 of 3 Period: 92.201 d
KOI: K06824 Corr: No Ephemeris Match

Kp: 15.91 R*: 0.97 Rs Teff: 5836.0 K Logg: 4.50 Fe/H: 0.210



DV Fit Results:

Period = 92.20058 [0.00468] d
Epoch = 170.6438 [0.0517] BKJD
Rp/R* = 0.0646 [0.1196]
a/R* = 231.24 [1825.72]
b = 0.81 [3.17]
Seff = 5.80 [2.24]
Teq = 396 [38] K
Rp = 6.84 [12.80] Re
a = 0.4106 [0.0995] AU
Ag = 6301.68 [23516.93] [0.27σ]
Teffp = 5452 [5066] K [1.00σ]

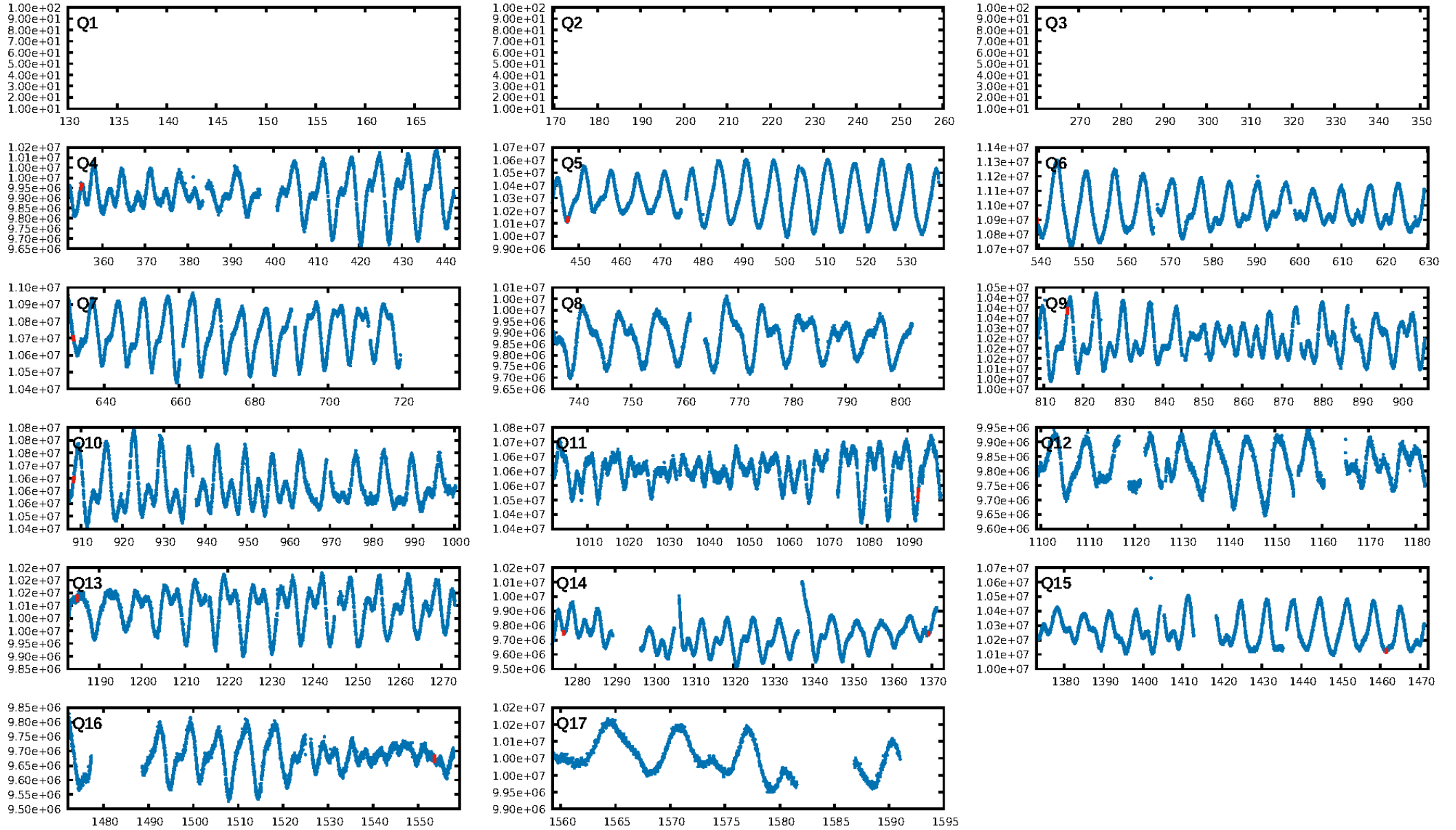
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [346.33σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 70.3%
Bootstrap-pfa: 4.84e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.341
Centroid-sig: 14.6%
Centroid-so: 0.628 arcsec [1.66σ]
OotOffset-rm: 1.552 arcsec [1.42σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-rm: 1.394 arcsec [1.21σ]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/10]

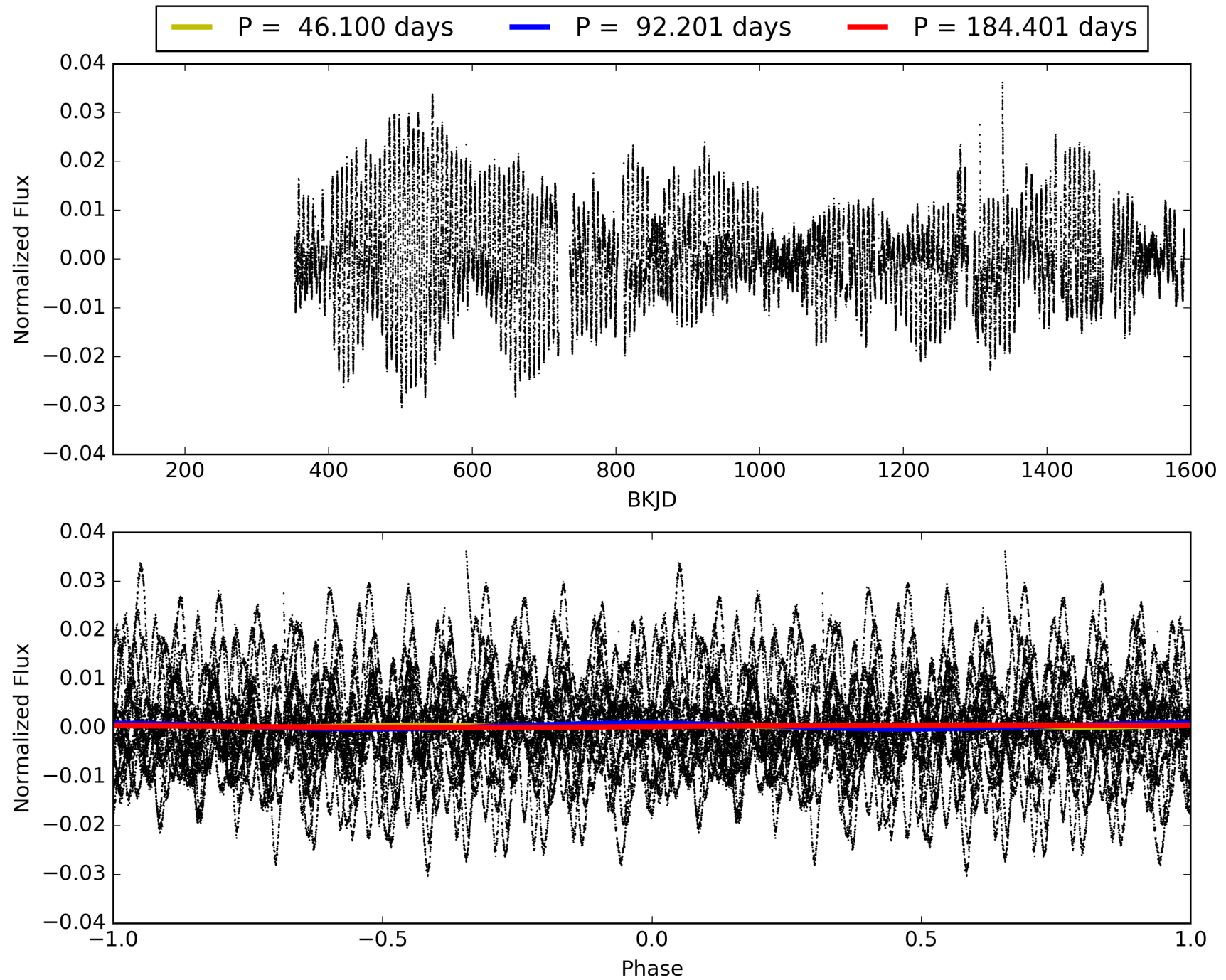
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:07:37 Z

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

TCE 007115597-03, PDC Light Curves

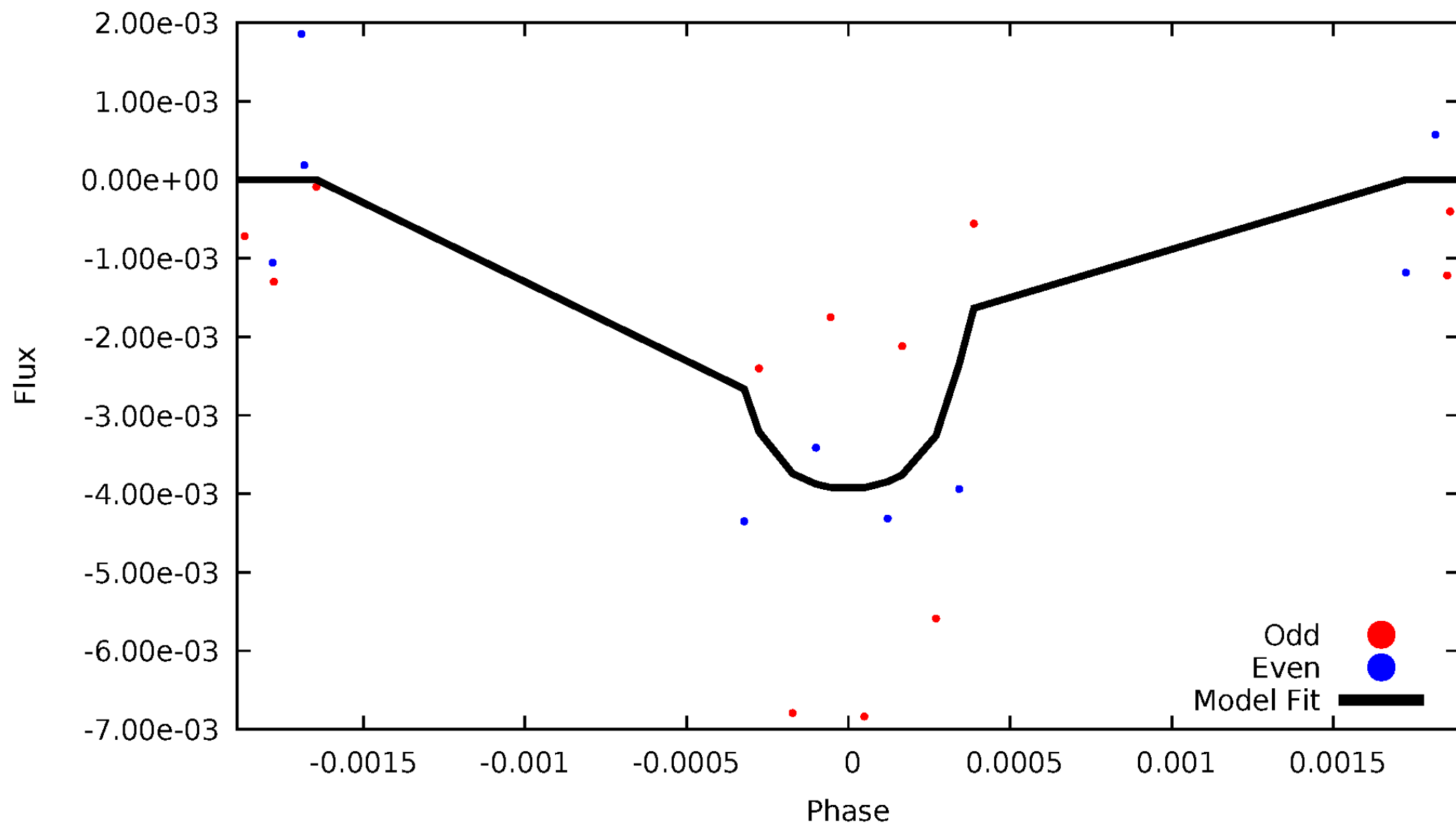


TCE 007115597-03



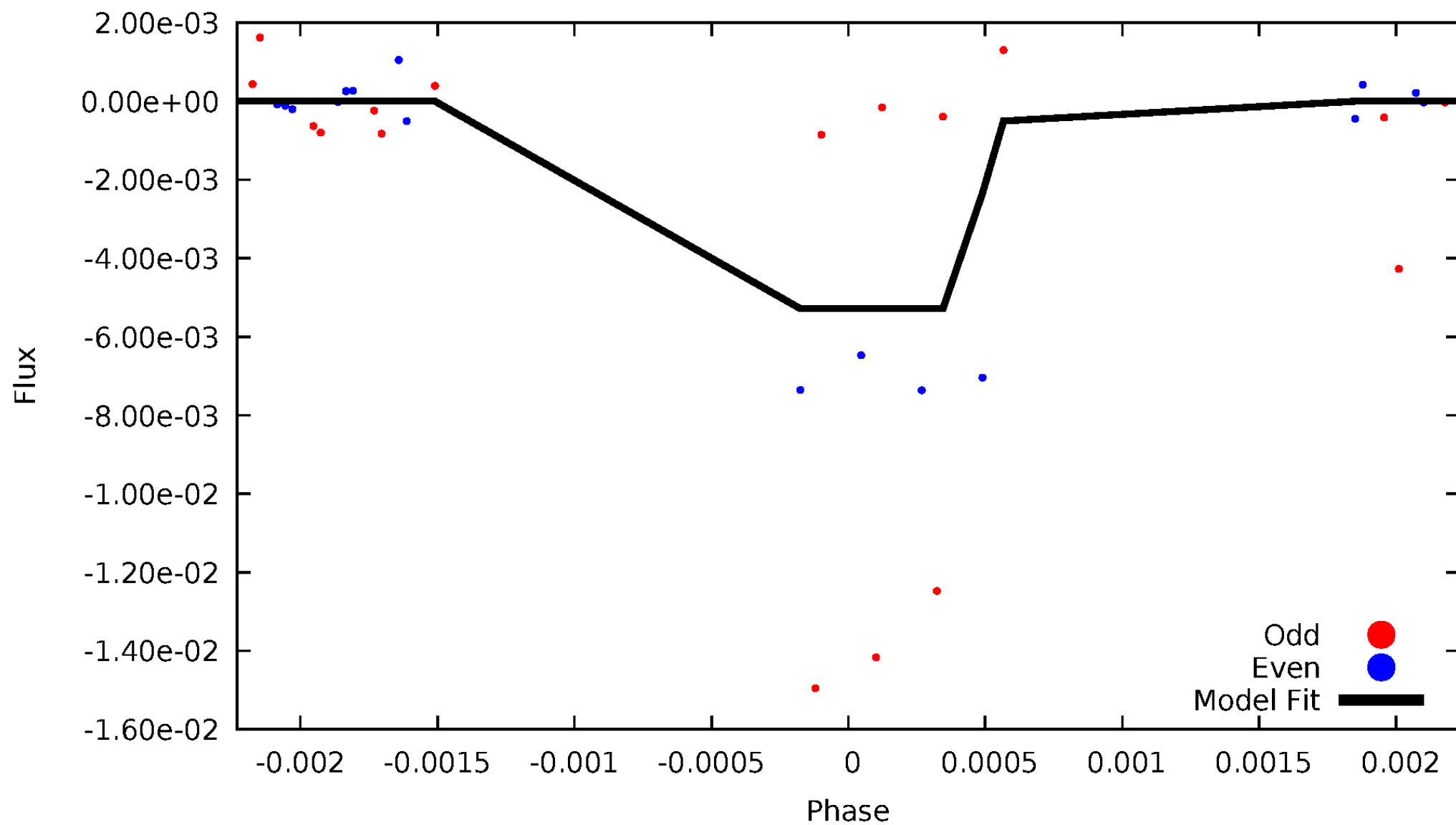
DV Odd/Even

TCE 007115597-03



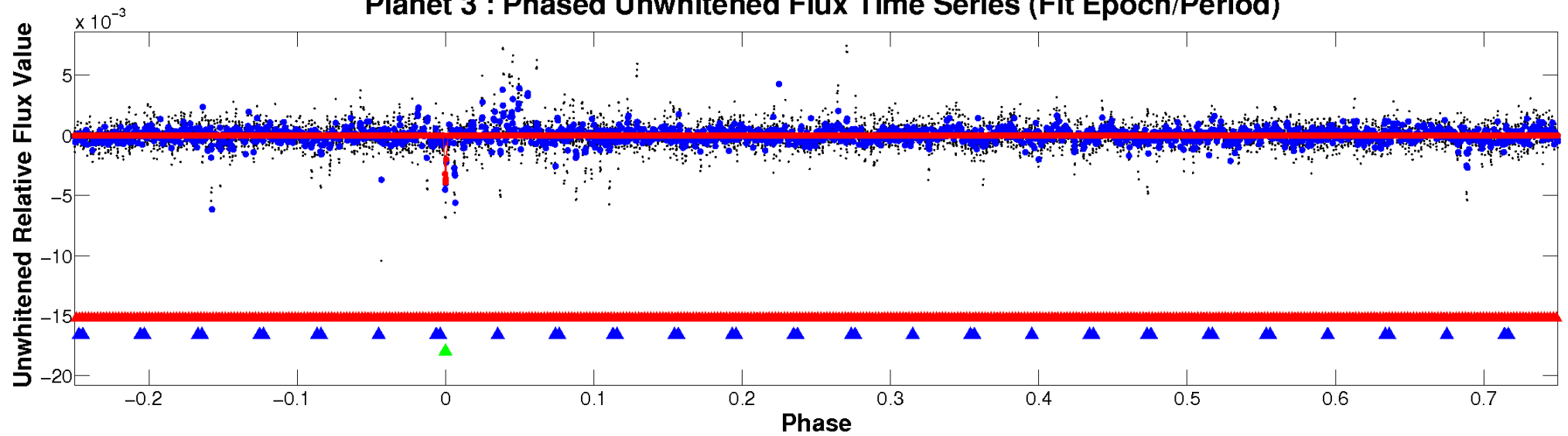
ALT Odd/Even

TCE 007115597-03

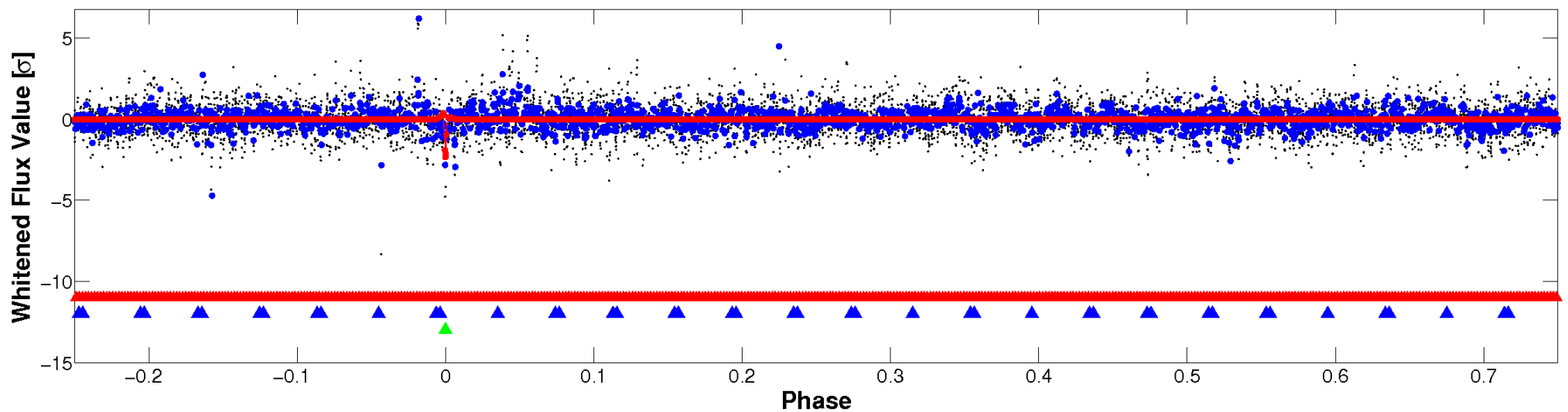


Non-Whitened Vs. Whitened Light Curve

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

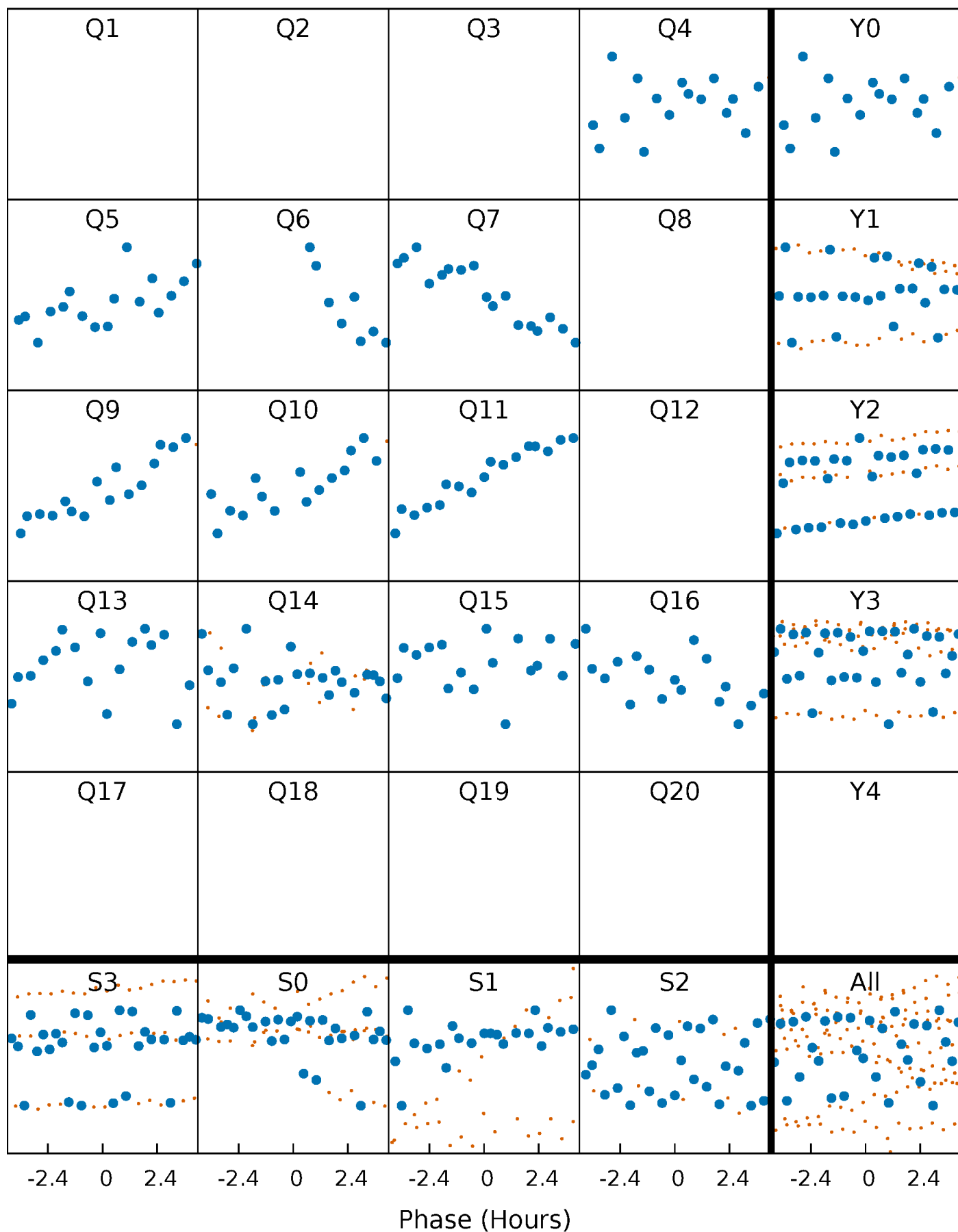


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



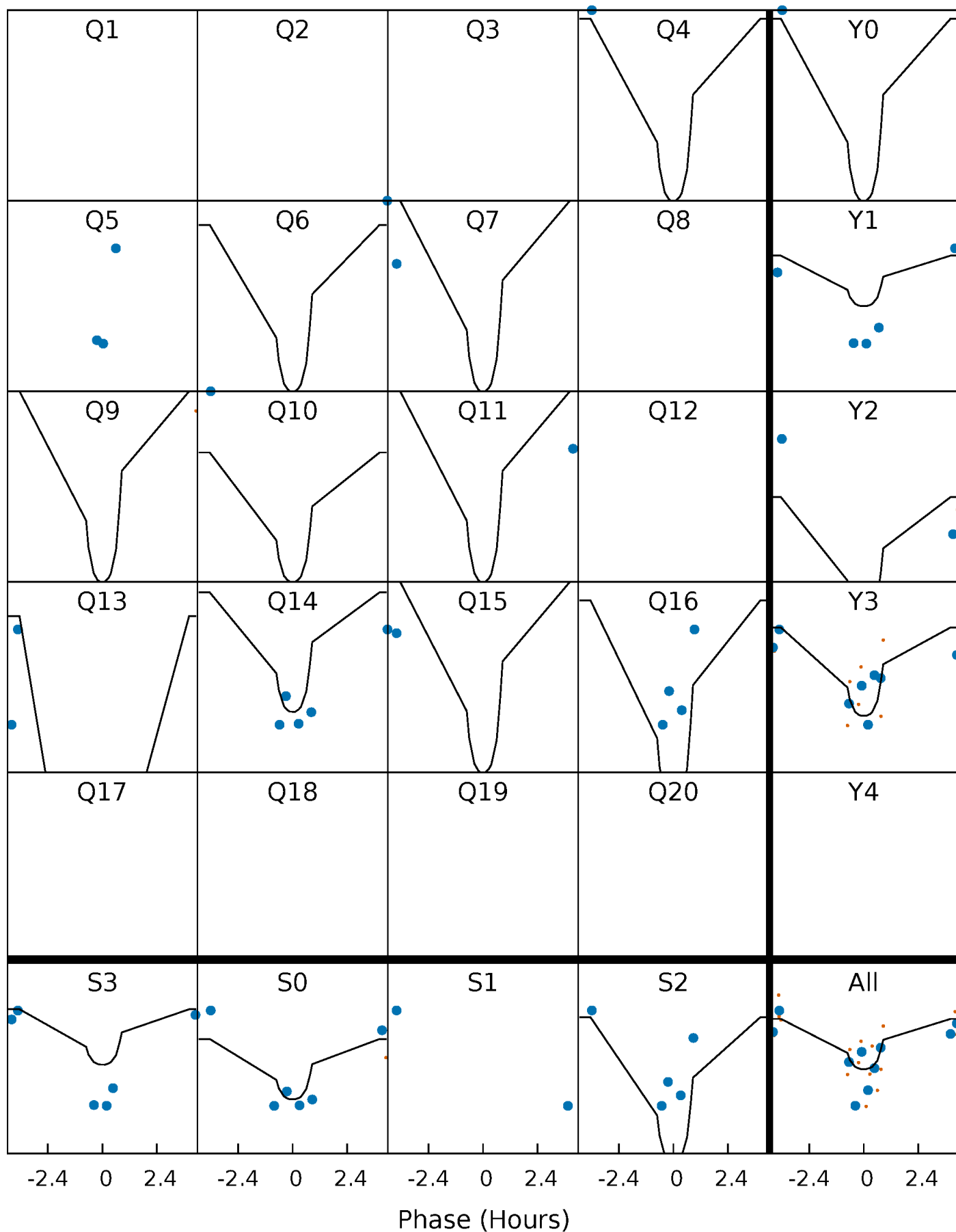
PDC Quarter-Phased Transit Curves

TCE 007115597-03 P= 92.200579 Days $T_0=170.643831$ (BKJD)



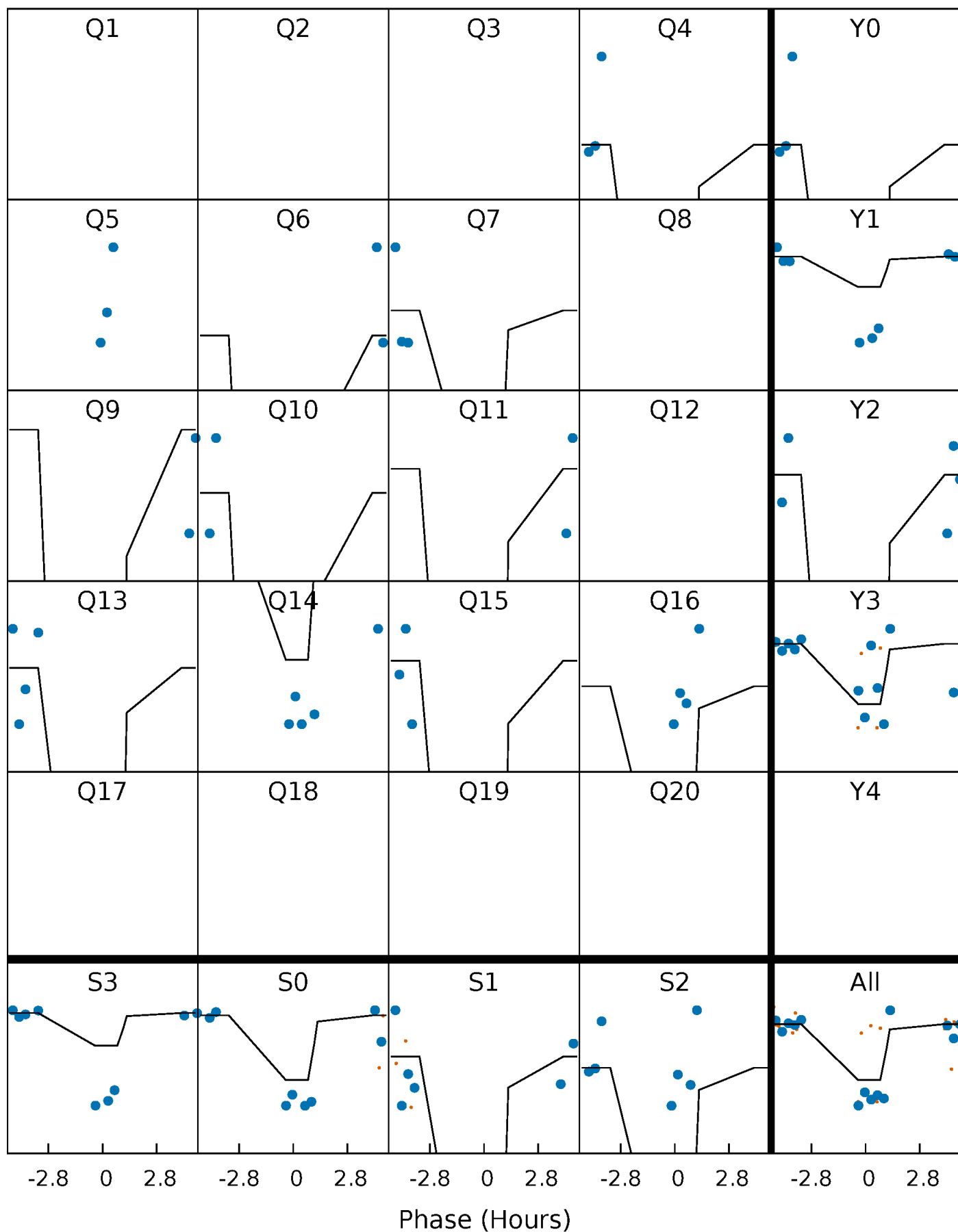
DV Quarter-Phased Transit Curves

TCE 007115597-03 P= 92.200579 Days $T_0=170.643831$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

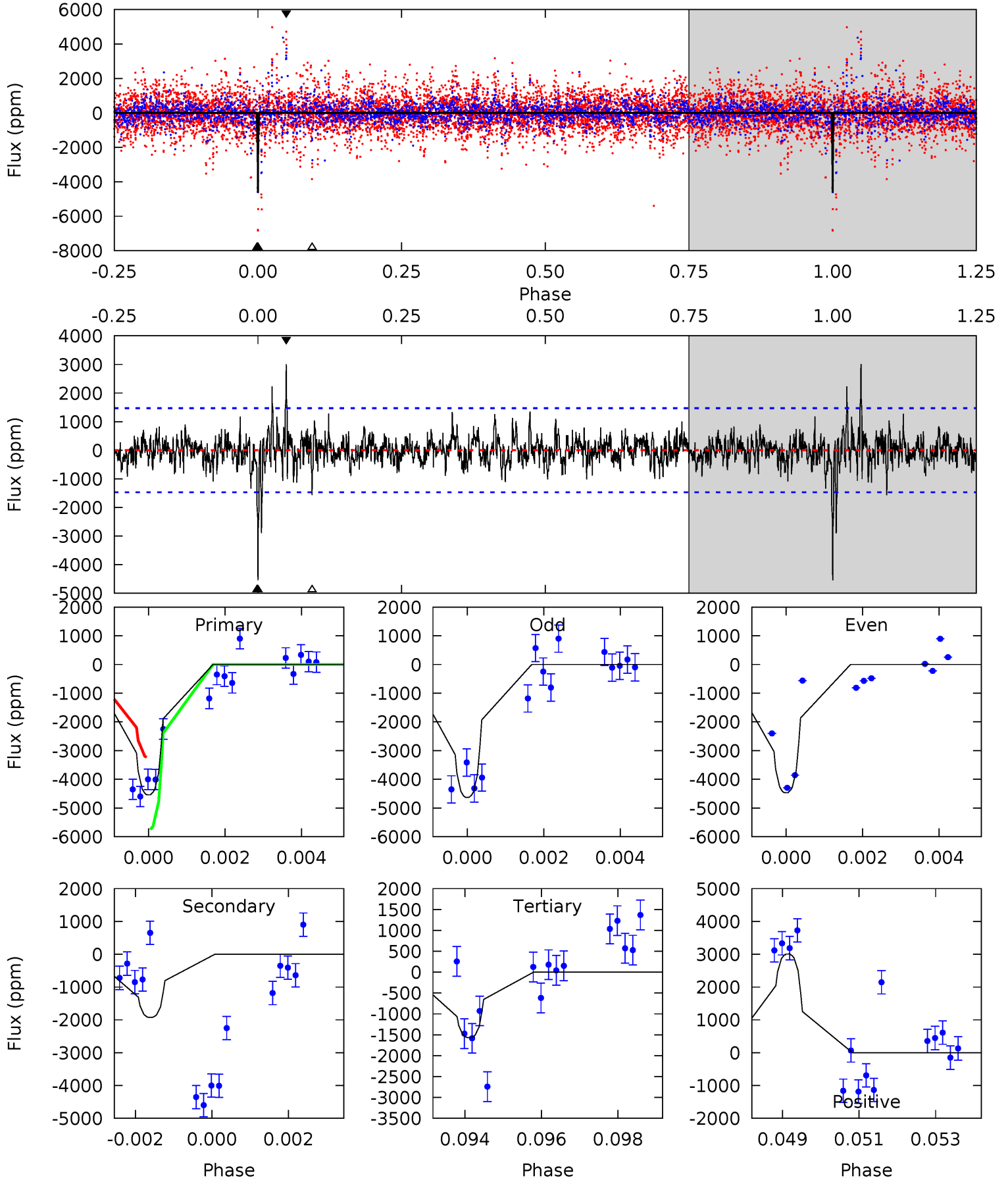
TCE 007115597-03 P= 92.199604 Days $T_0=170.641988$ (BKJD)



DV Model-Shift Uniqueness Test

007115597-03, P = 92.200579 Days, E = 170.643831 Days

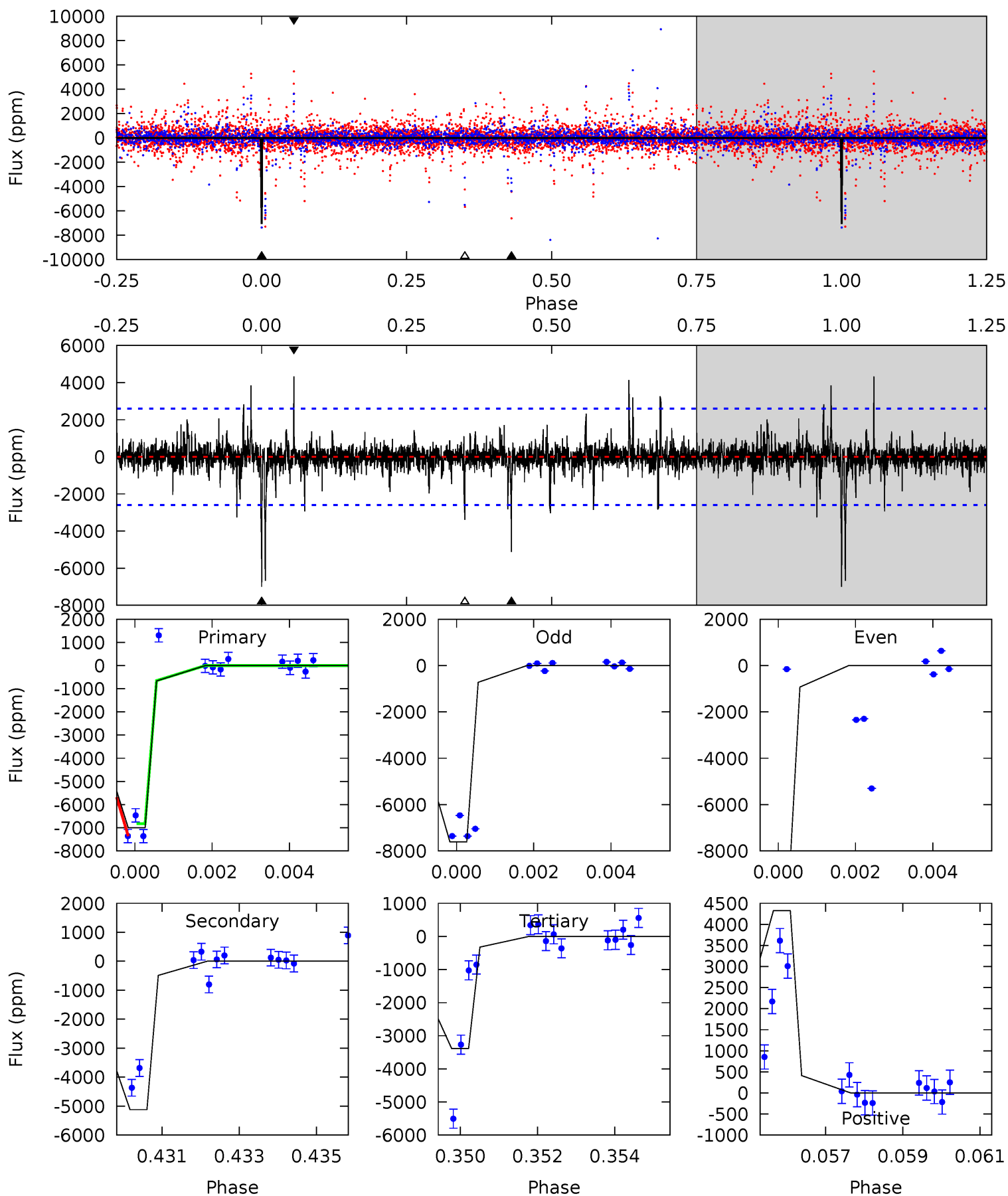
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	6.99	5.68	10.9	5.32	3.08	1.44	10.8	5.57	1.31	-3.92	0.21	0.98	0.40	4.02



Alt Model-Shift Uniqueness Test

007115597-03, P = 92.199604 Days, E = 170.641988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	10.5	6.93	8.85	5.32	3.09	1.12	7.40	5.48	3.55	1.63	1.29	0.96	0.38	0



Stellar Parameters For KIC 007115597

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5836^{+182}_{-203}	$4.500^{+0.037}_{-0.200}$	$0.210^{+0.200}_{-0.300}$	$0.970^{+0.273}_{-0.091}$	$1.087^{+0.112}_{-0.150}$	$1.676^{+0.330}_{-0.860}$
	+3%/-3%	+1%/-4%	+95%/-143%	+28%/-9%	+10%/-14%	+20%/-51%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007115597-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1927 ± 276	$12.69^{+11.63}_{-8.41}$	566^{+37}_{-26}	3941^{+2365}_{-750}	1044^{+9054}_{-753}
Alt.	-5121 ± 489	$12.55^{+12.62}_{-7.91}$	569^{+39}_{-28}	4767^{+3231}_{-1035}	2947^{+18457}_{-2209}

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

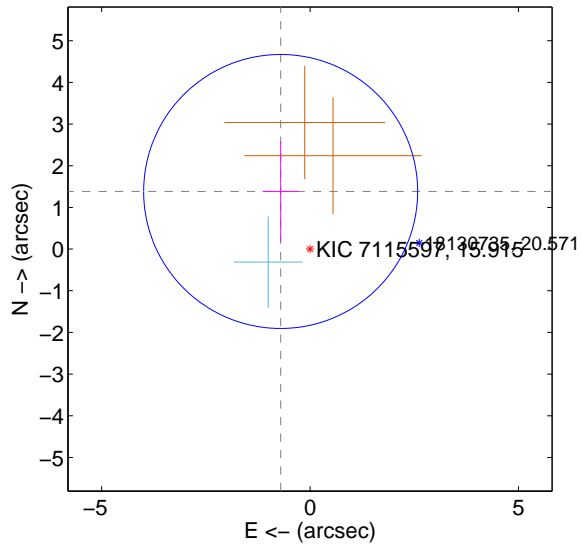
Supplemental centroid analysis for 007115597-03. Kepler magnitude: 15.91. Transit SNR 6.27

There are 1 quarters with good PRF difference image offsets

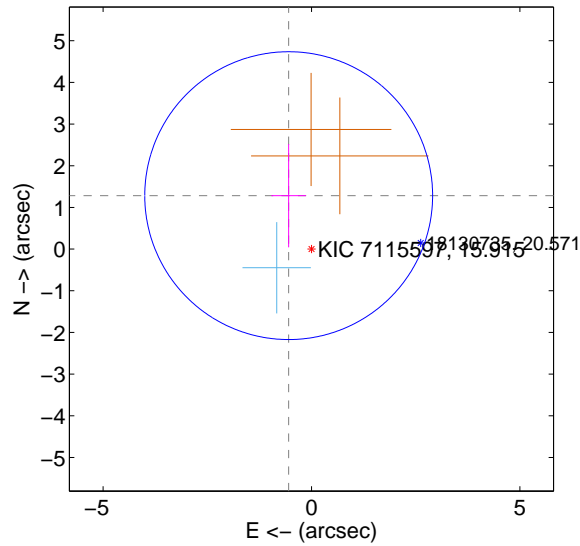
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.552 ± 1.096	1.42	0.706 ± 0.431	1.382 ± 1.210
PRF-fit source offset from KIC position	1.394 ± 1.151	1.21	0.547 ± 0.415	1.282 ± 1.239
photometric centroid source offset	0.63 ± 0.38	1.66	-0.59 ± 0.38	0.22 ± 0.33

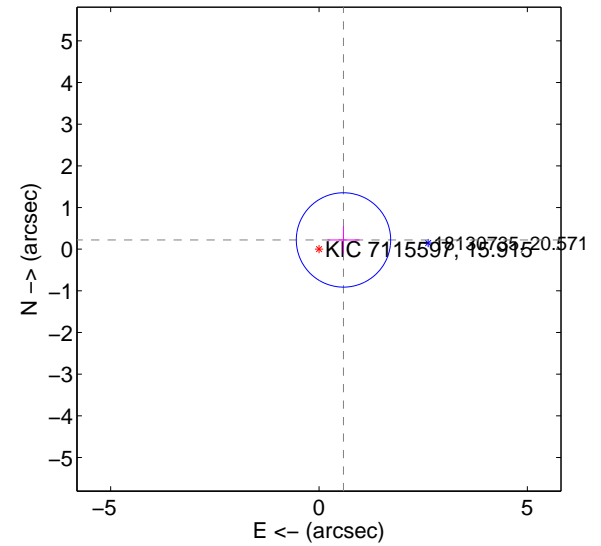
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

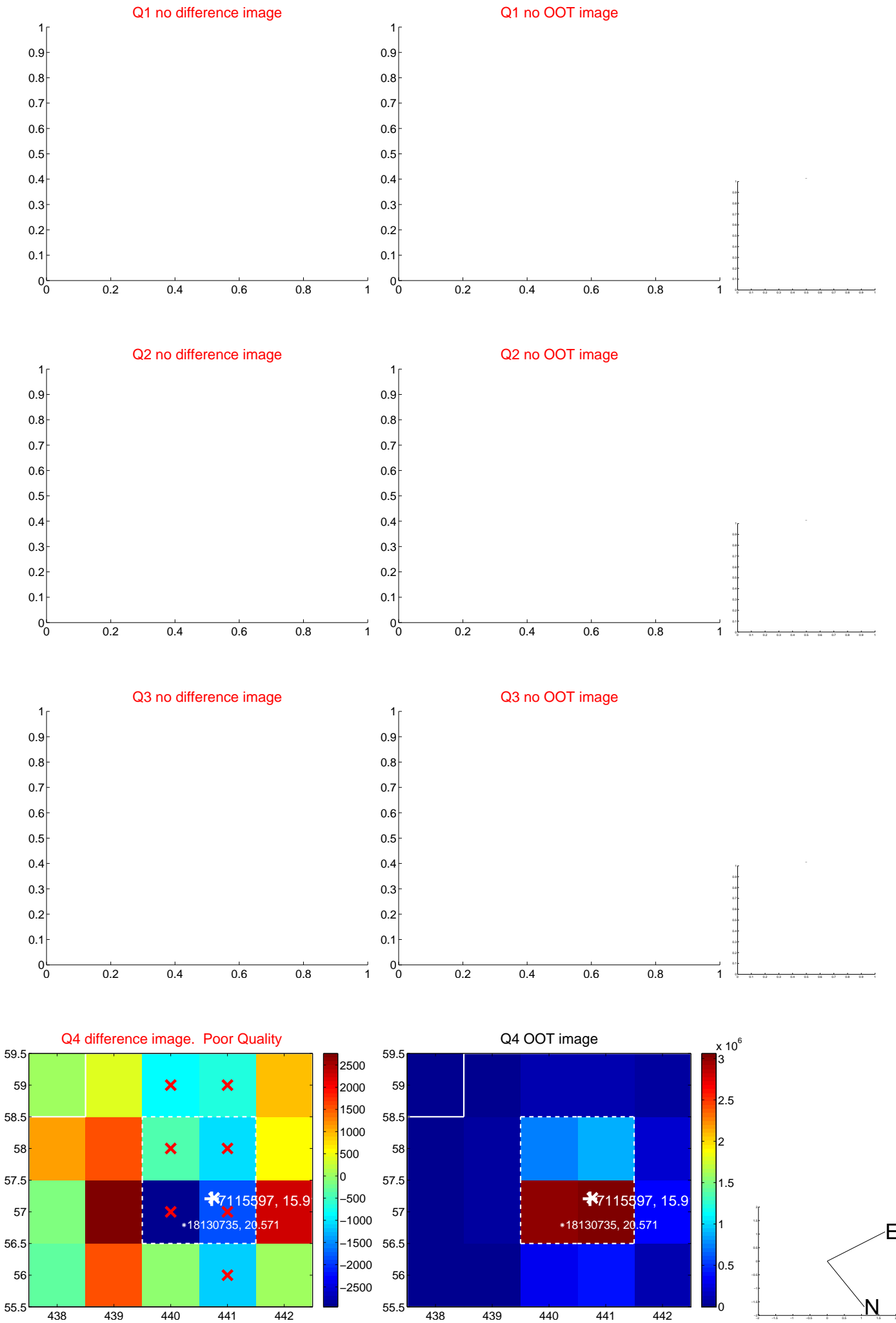


offset from photometric centroids

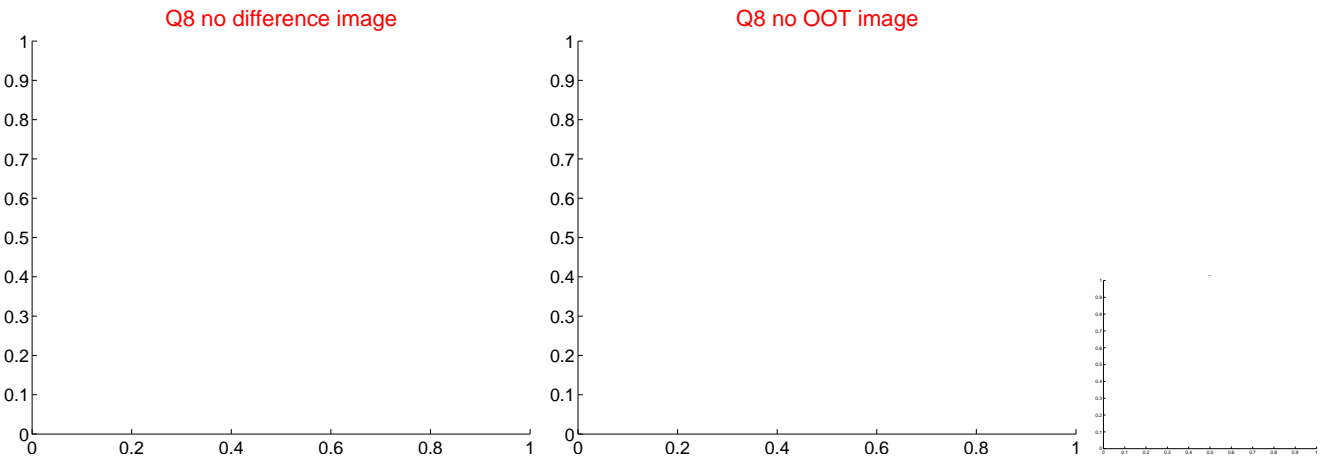
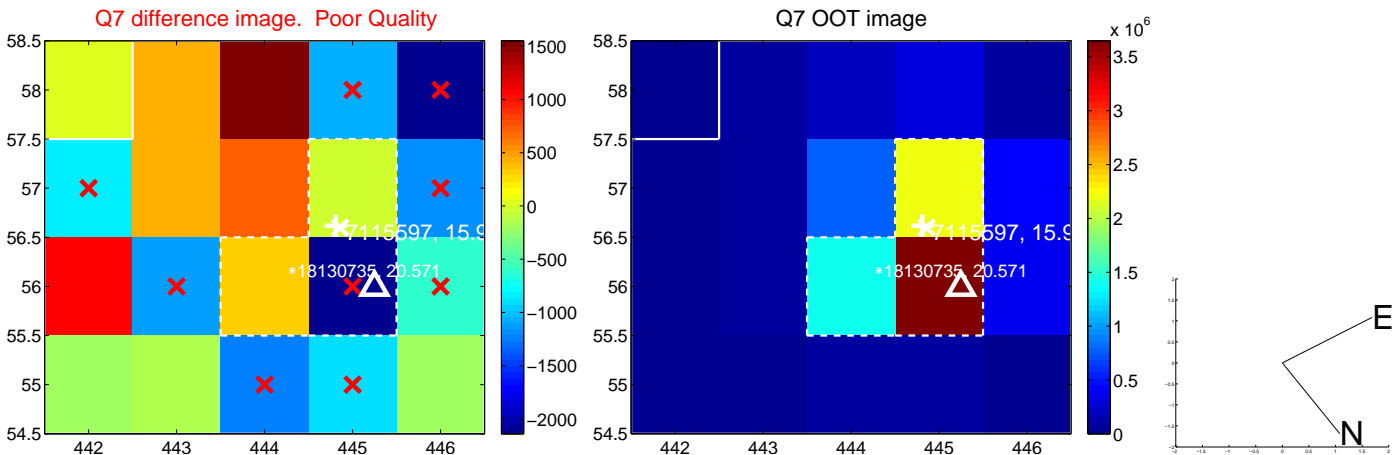
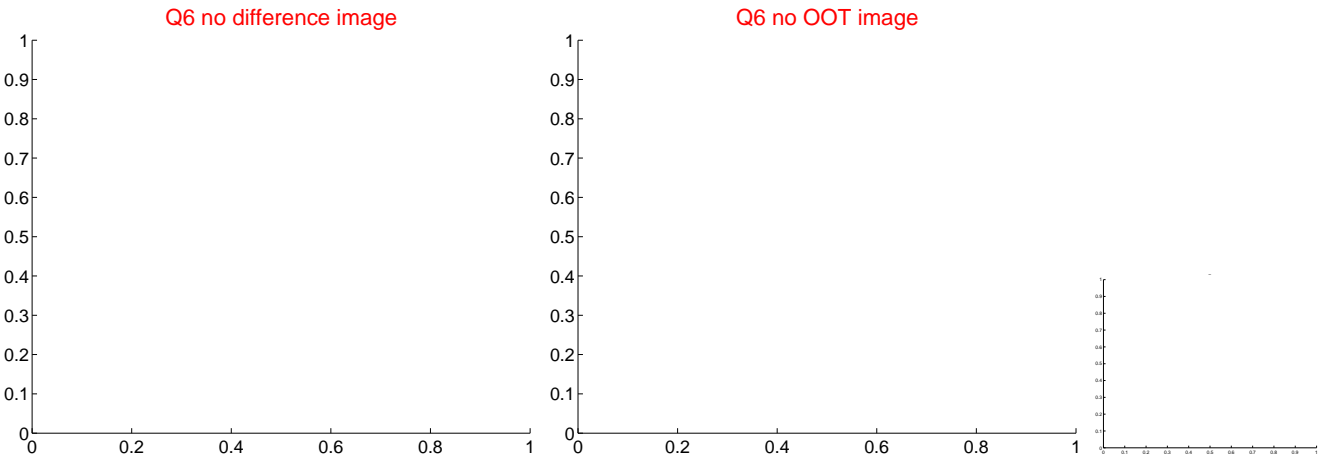
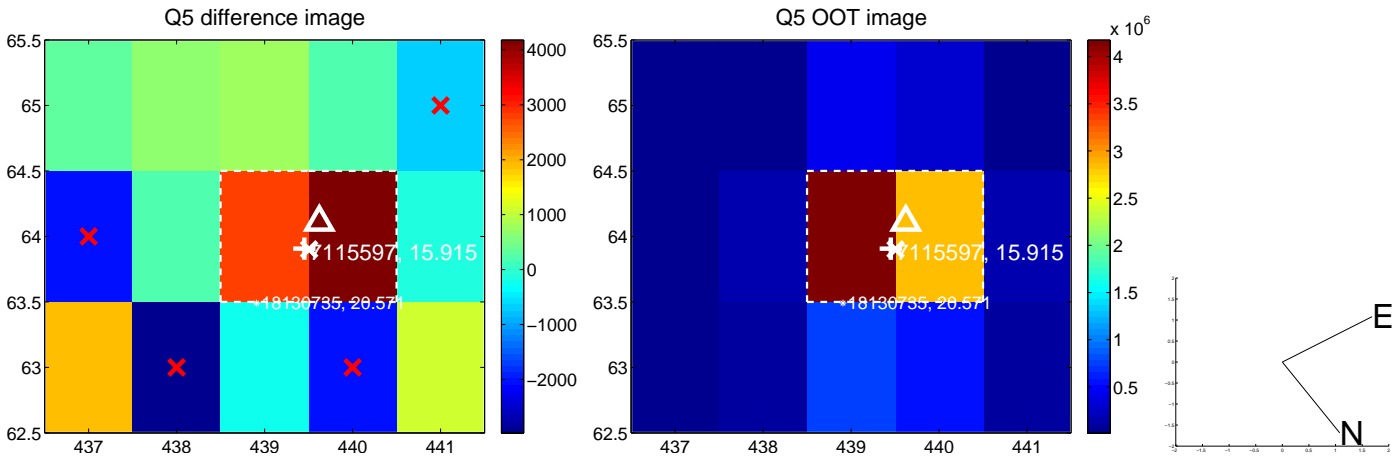


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

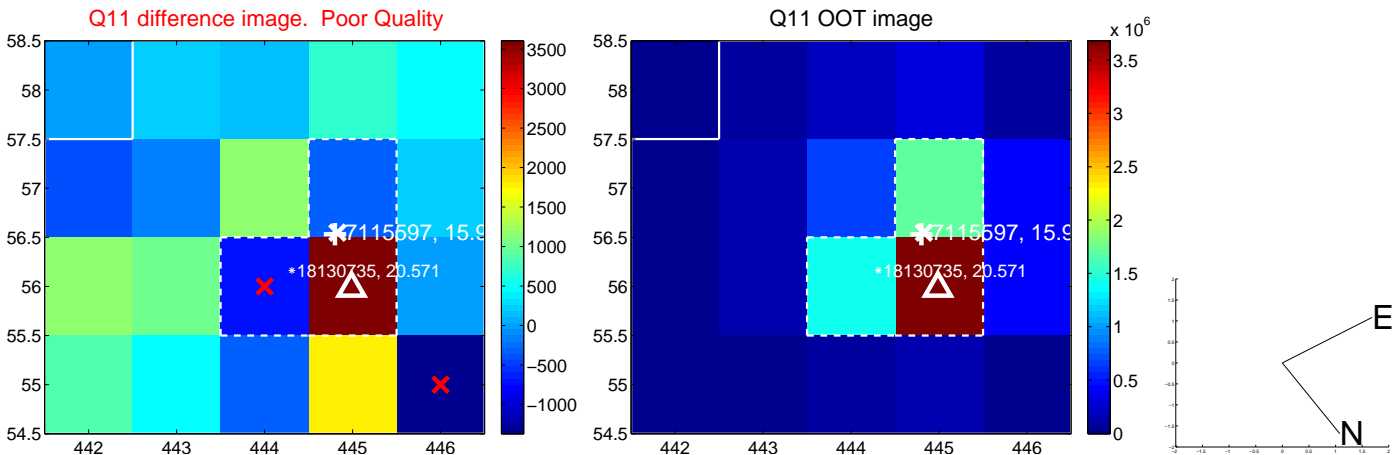
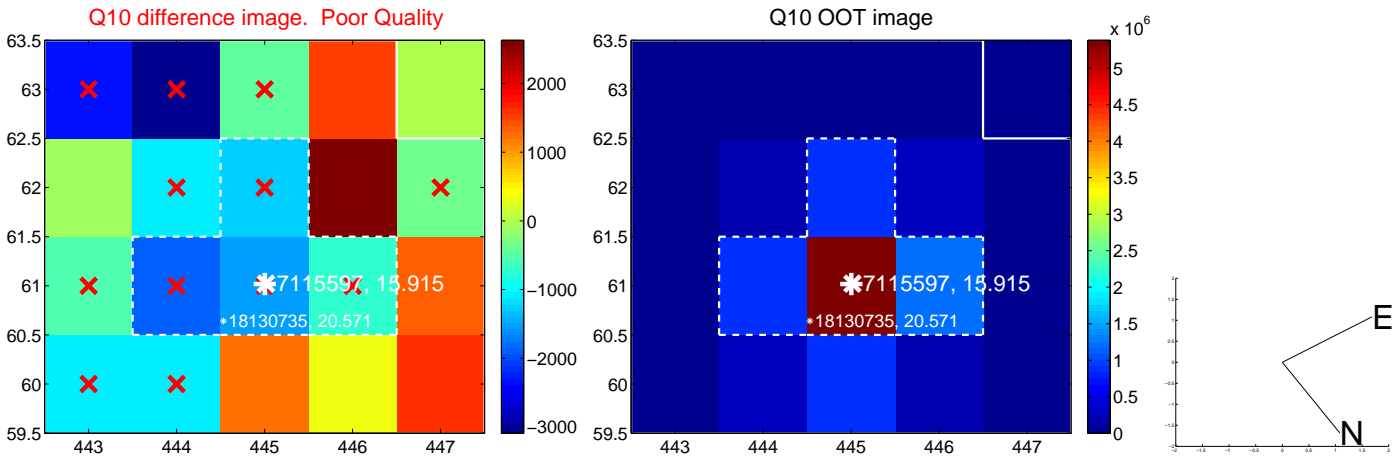
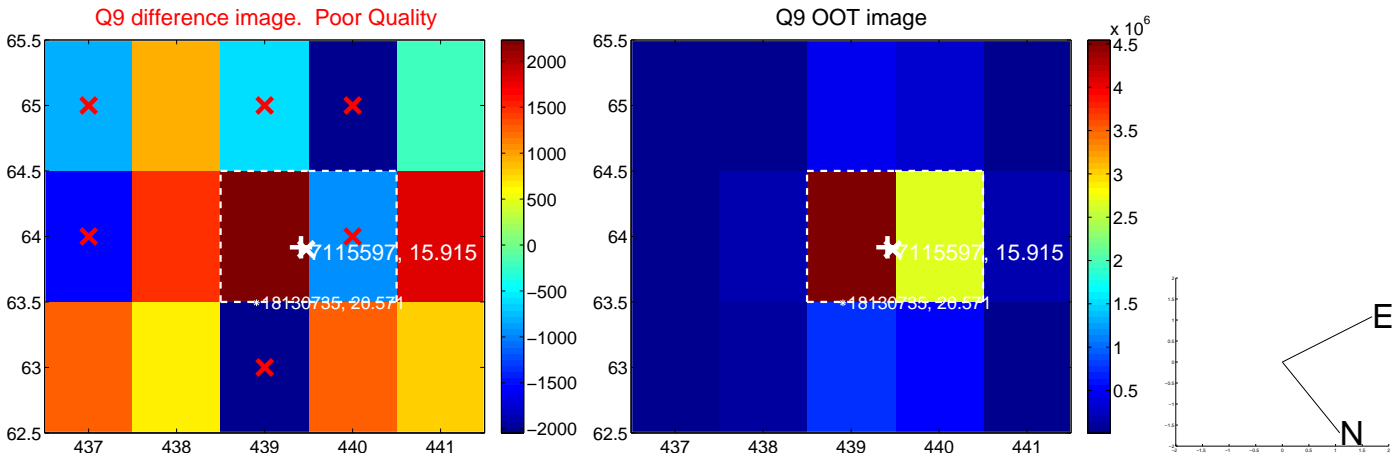
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



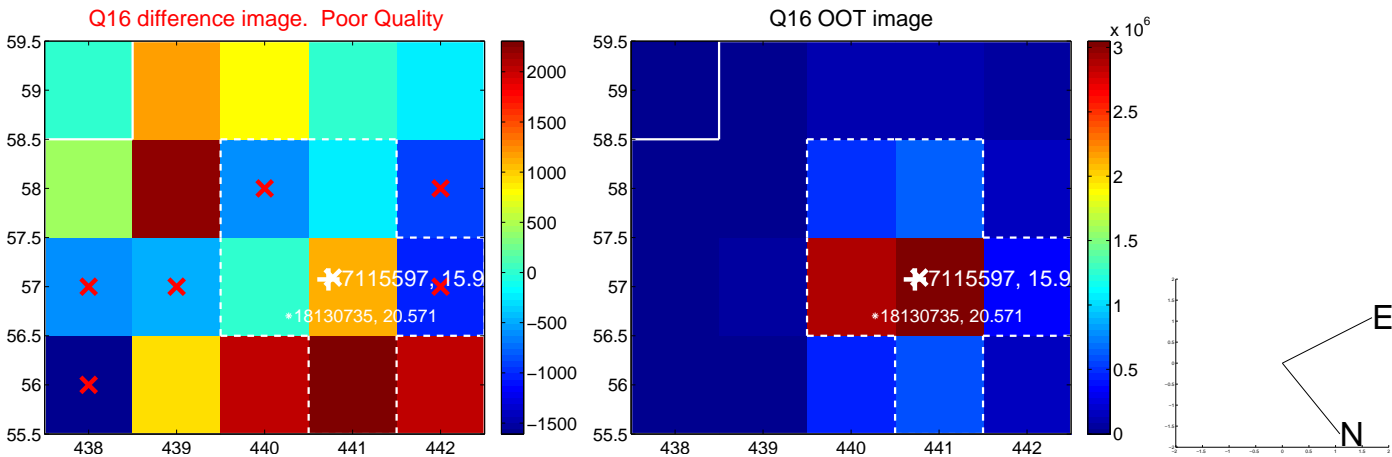
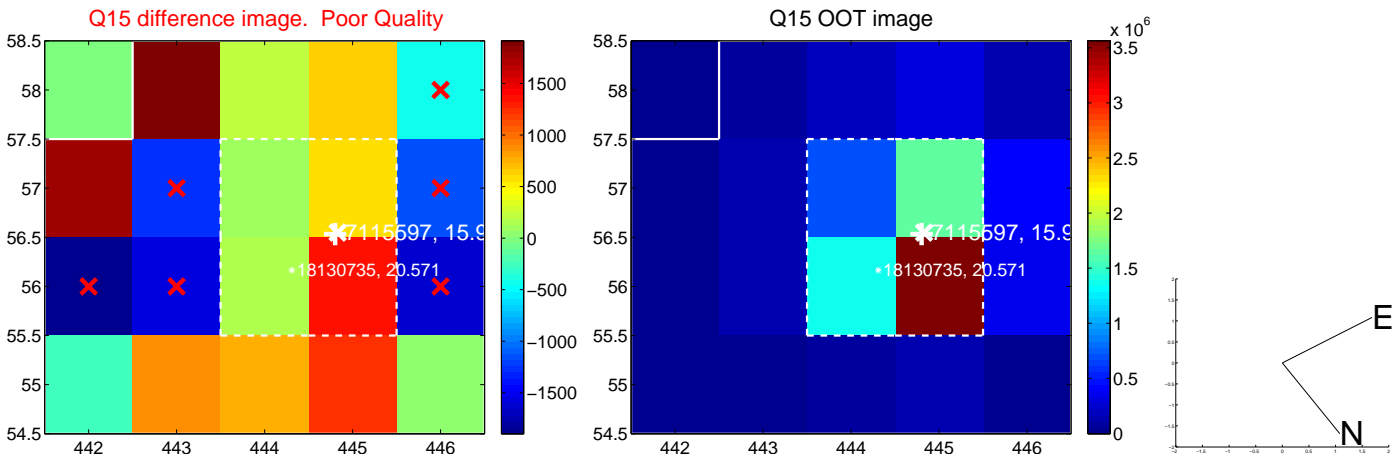
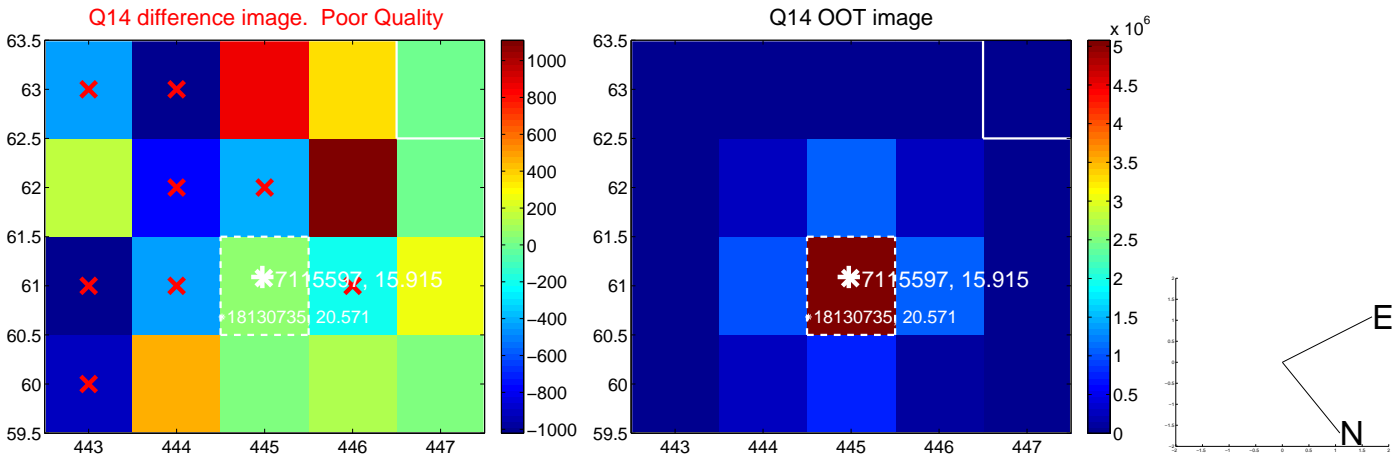
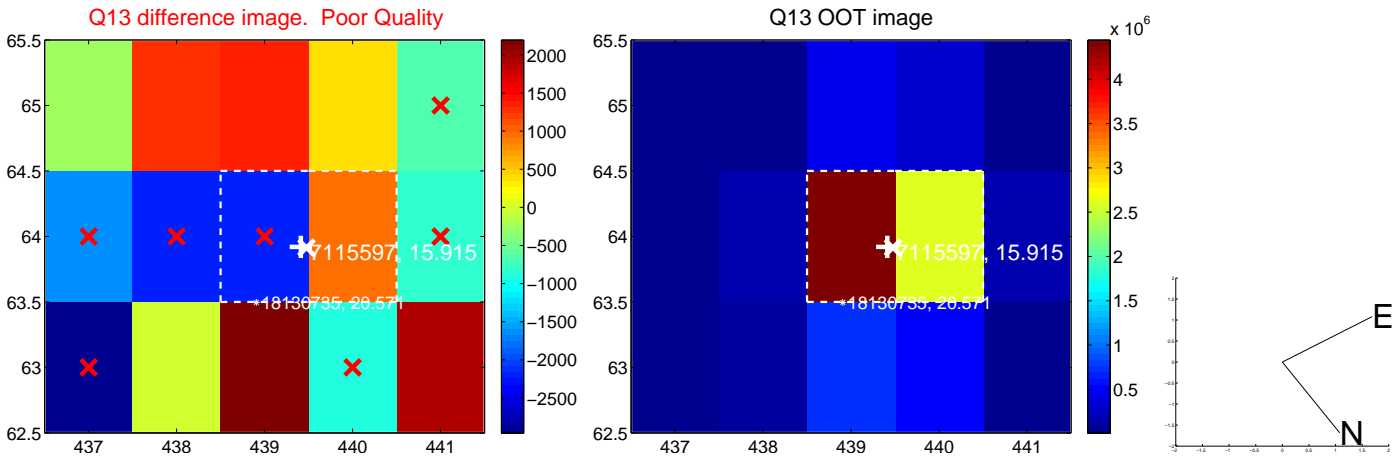
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



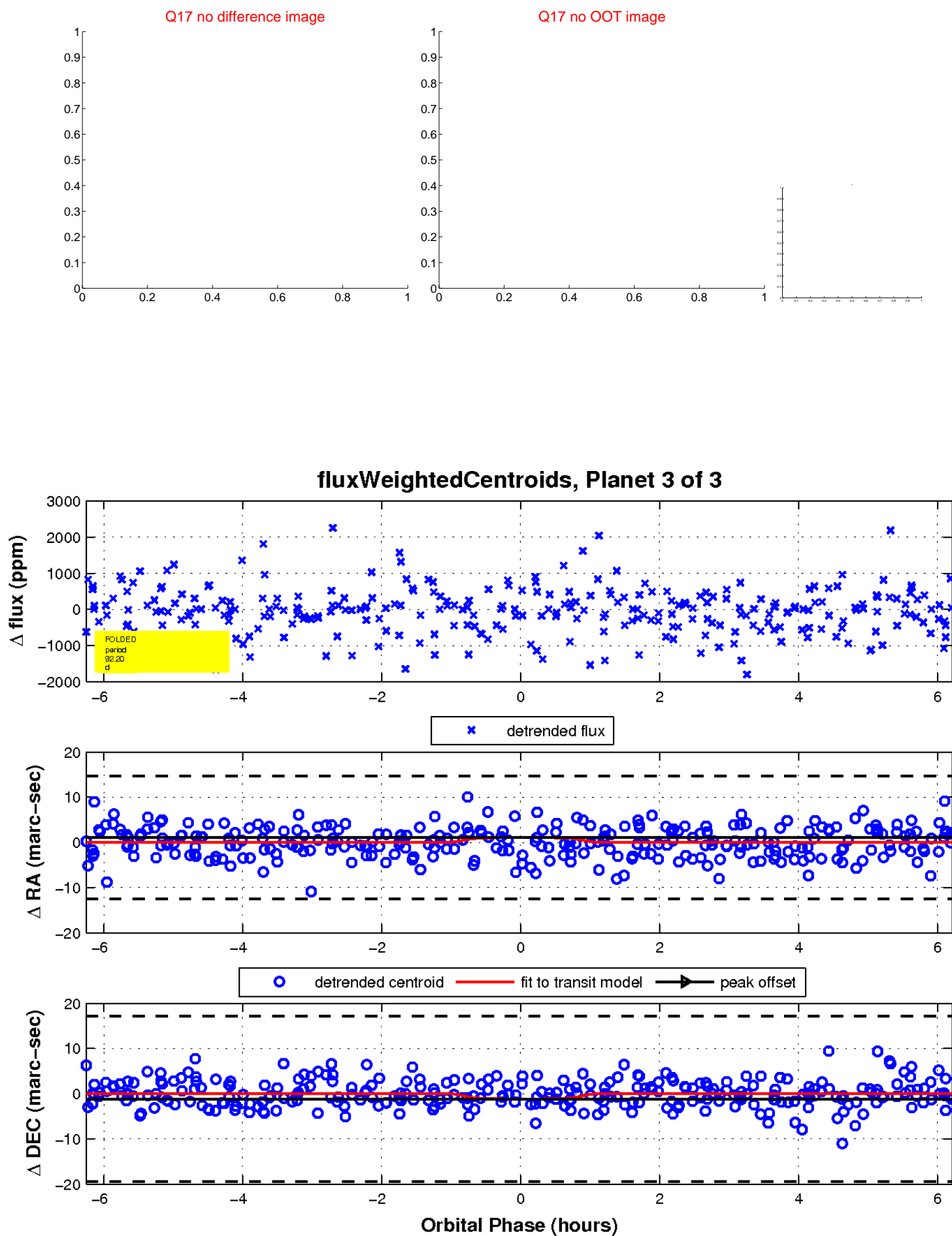
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

