

KIC 007115785

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})
007115785-01	OBS	0672.02	41.749450	153.845051	1032.9	5.860	67.5	66.9	0.91	5506	3.25	13.24
007115785-02	OBS	0672.01	16.087845	140.638478	590.4	3.269	47.7	50.3	0.91	5506	2.68	47.23
007115785-03	OBS	0672.03	0.566786	131.831046	27.0	3.681	12.8	12.7	0.91	5506	0.47	4089.26
007115785-04	OBS	No	34.948375	136.272091	404.6	1.608	8.0	6.8	0.91	5506	1.98	16.79
007115785-05	OBS	No	15.458865	132.590079	217.3	2.399	8.7	8.3	0.91	5506	1.54	49.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115785-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-03	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007115785-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
007115785-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

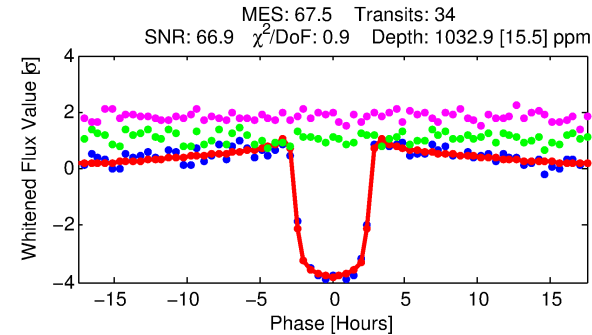
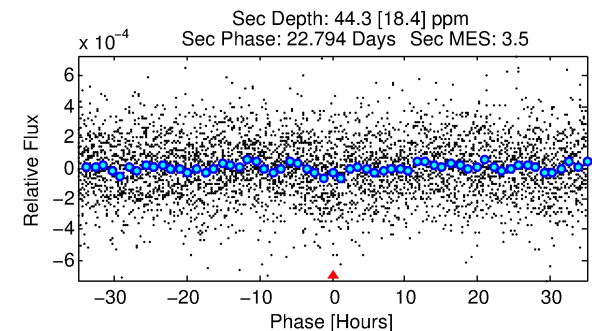
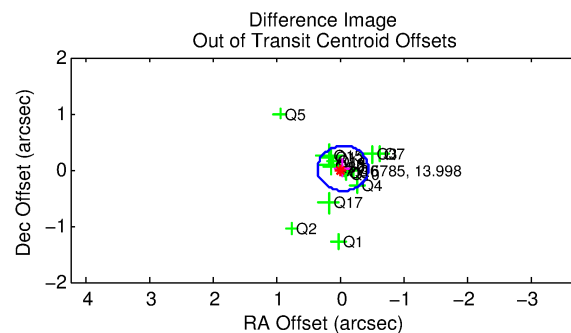
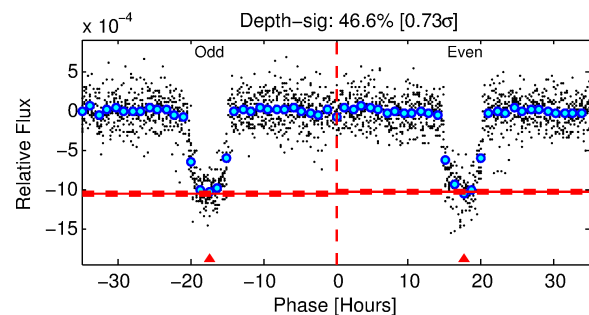
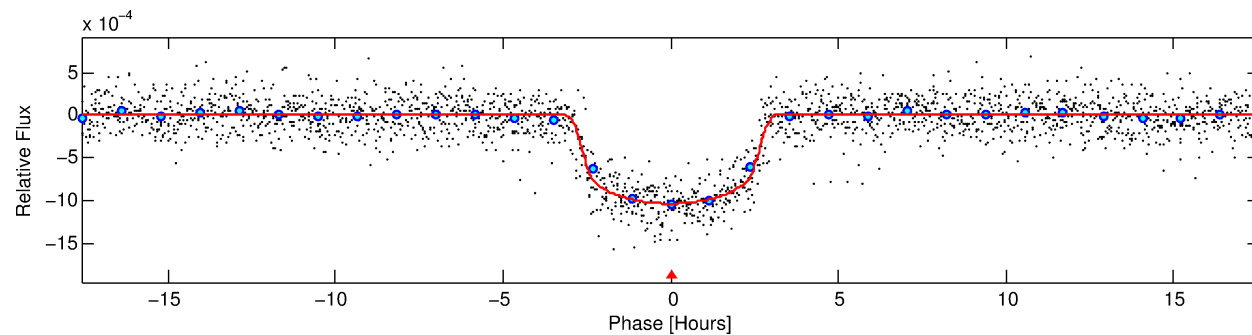
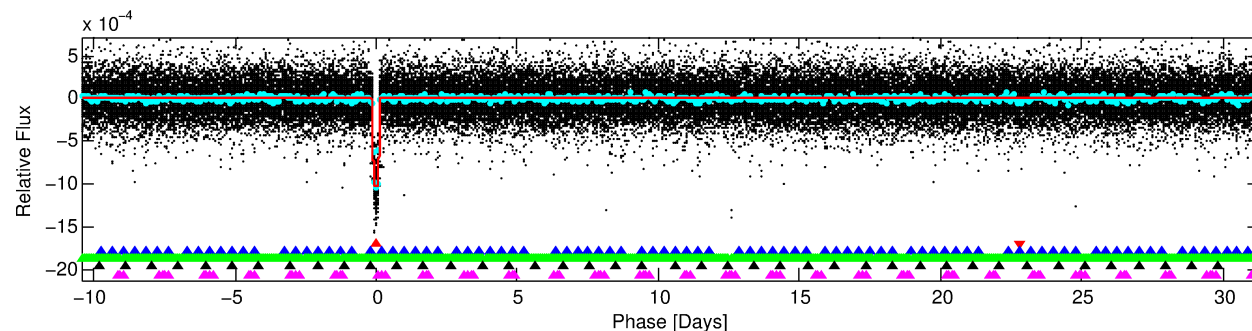
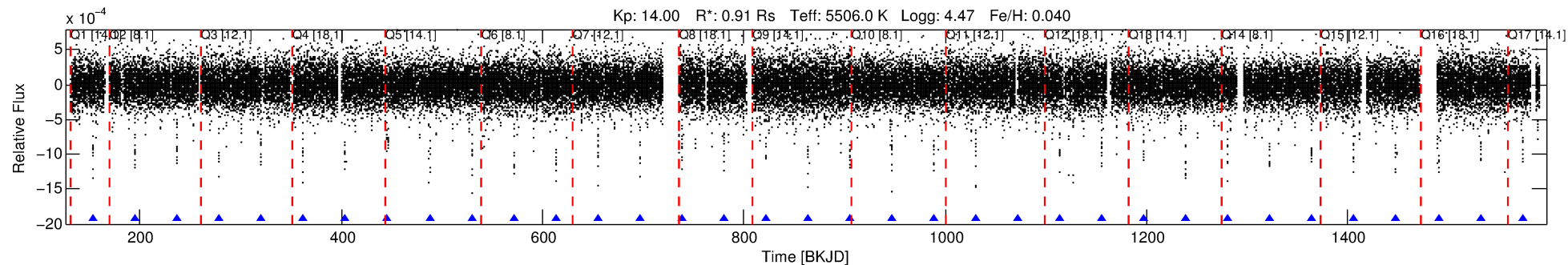
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007115785-01

No Significant Match Found

DV One-Page Summary

KIC: 7115785 Candidate: 1 of 5 Period: 41.749 d
KOI: K00672.02 Name: Kepler-209c Corr: 0.982



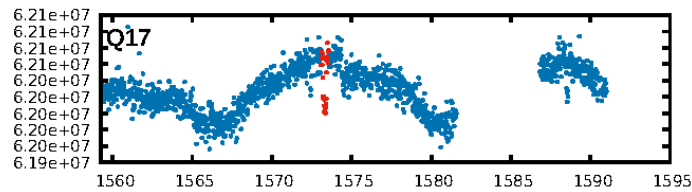
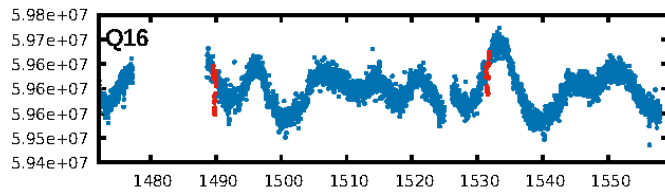
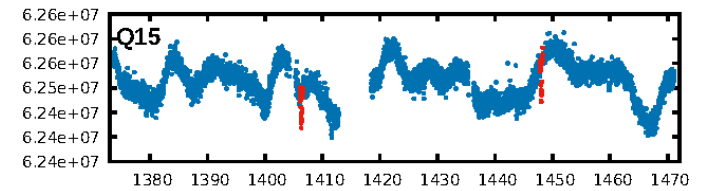
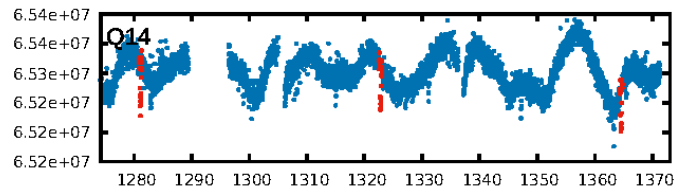
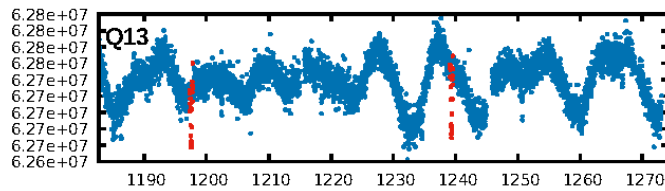
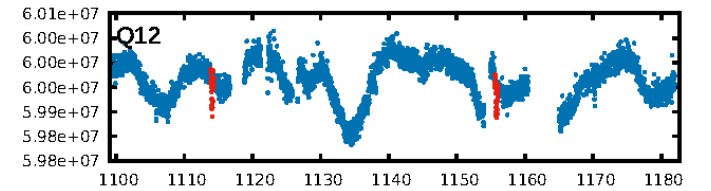
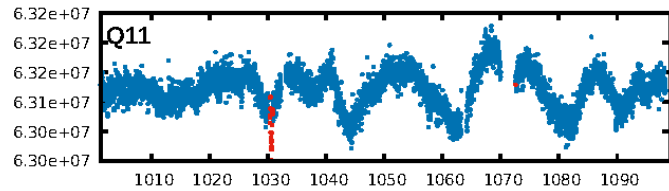
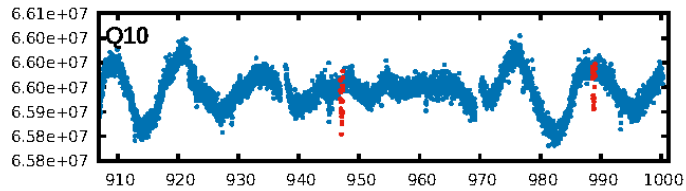
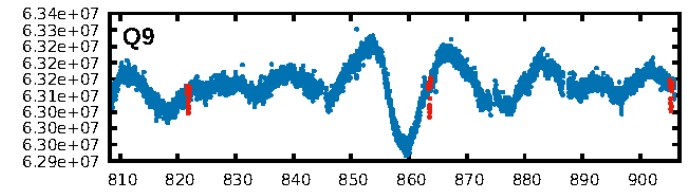
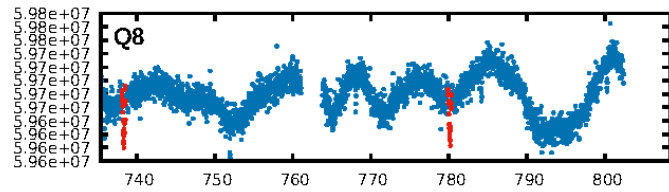
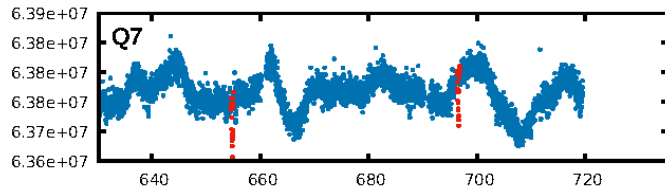
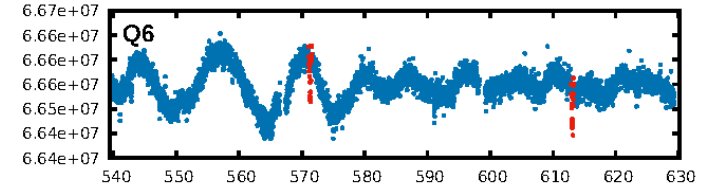
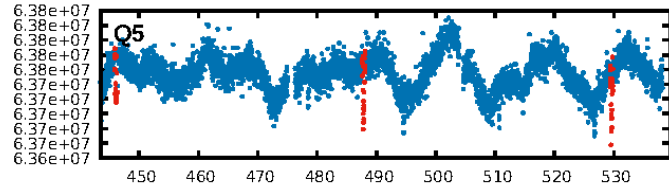
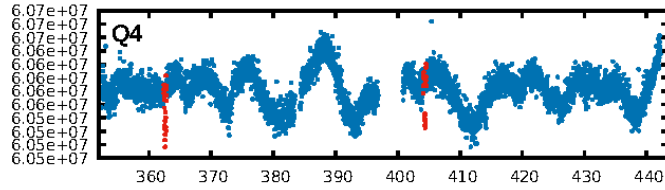
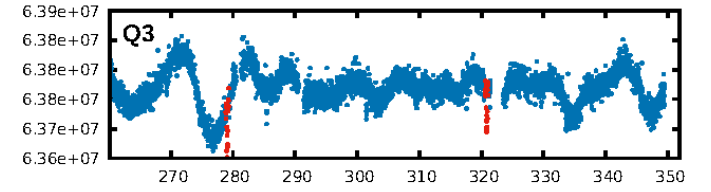
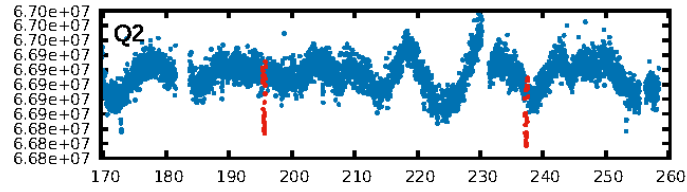
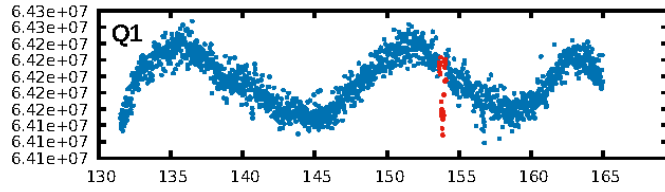
DV Fit Results:

Period = 41.74945 [0.00007] d
Epoch = 153.8451 [0.0014] BKJD
Rp/R* = 0.0325 [0.0014]
a/R* = 36.54 [6.14]
b = 0.78 [0.08]
Seff = 13.24 [2.47]
Teq = 486 [23] K
Rp = 3.24 [0.42] Re
a = 0.2279 [0.0249] AU
Ag = 120.21 [54.91] [2.17σ]
Teffp = 2490 [269] K [7.42σ]

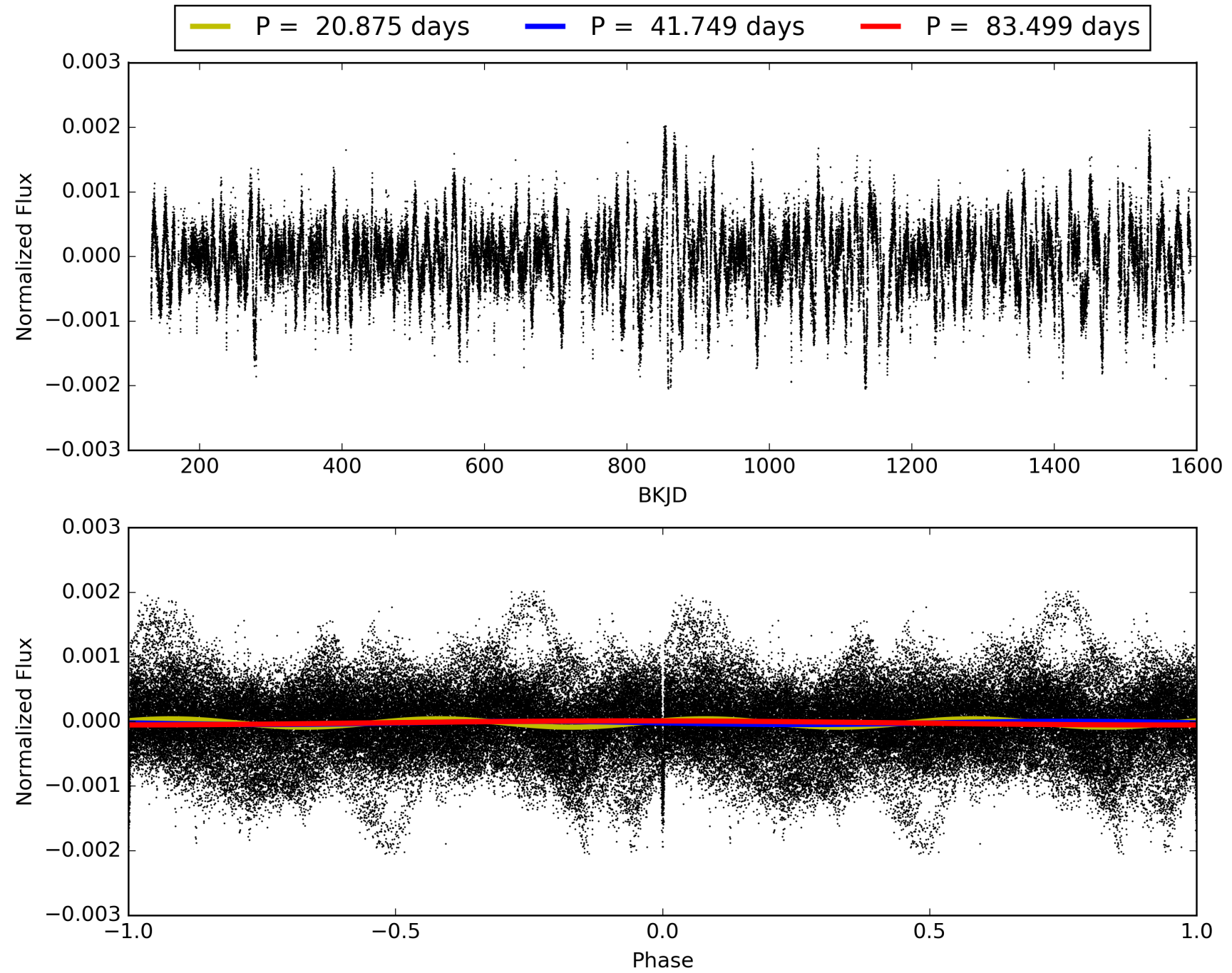
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.86σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 6.728
Centroid-sig: 2.4%
Centroid-so: 0.380 arcsec [2.03σ]
OotOffset-rm: 0.042 arcsec [0.32σ]
KicOffset-rm: 0.227 arcsec [1.84σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.00 [0/16]

TCE 007115785-01, PDC Light Curves

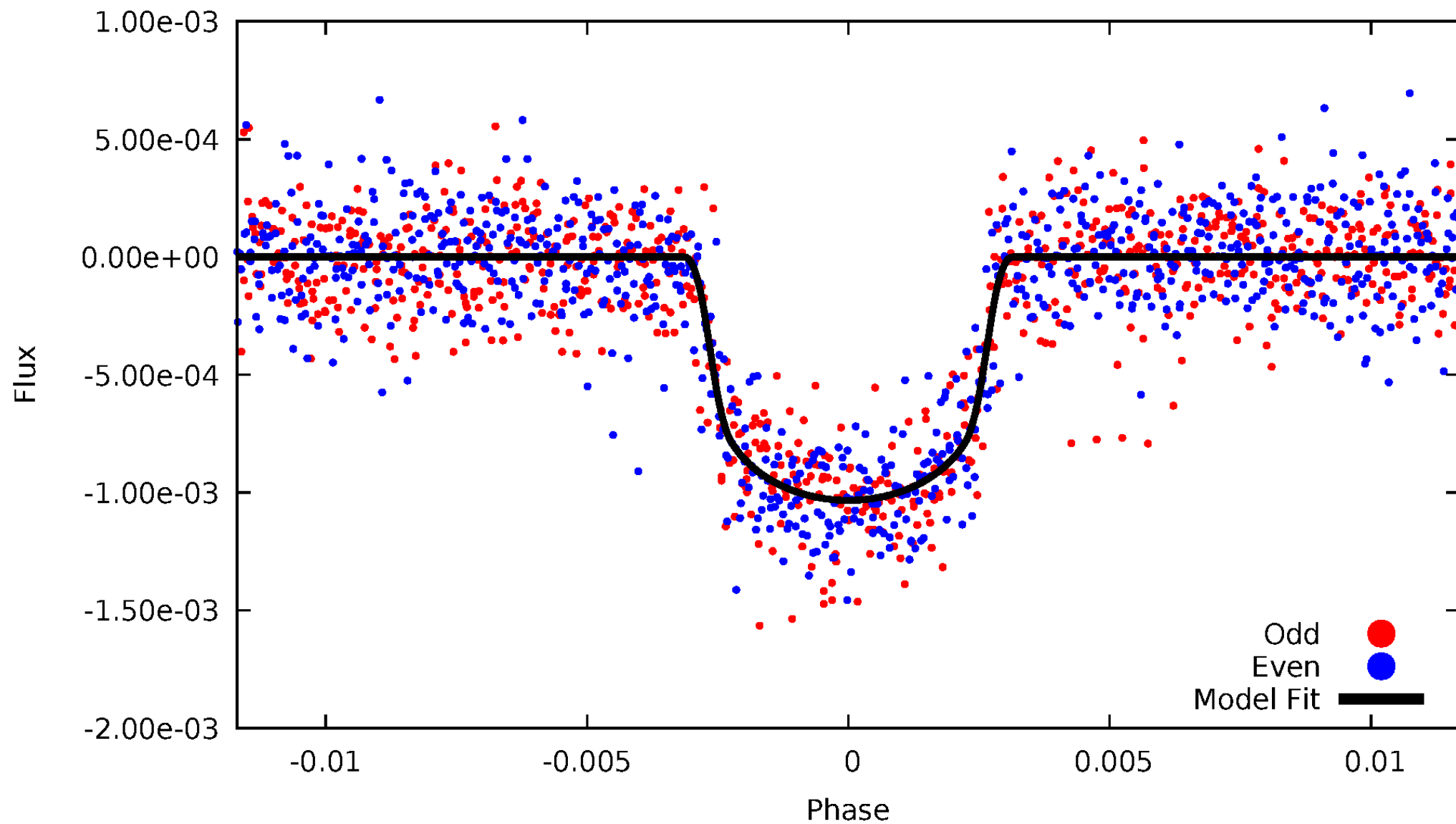


TCE 007115785-01



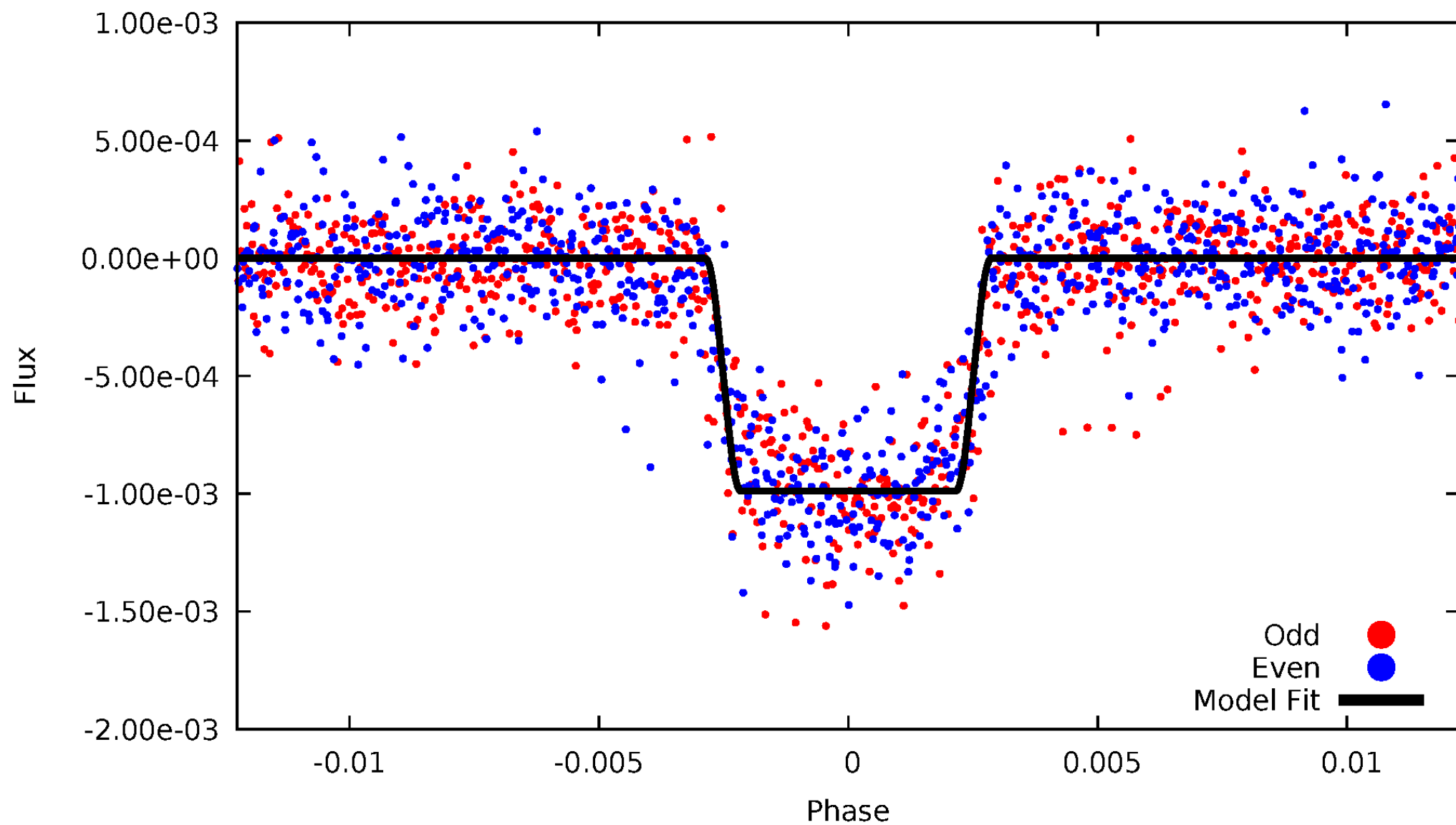
DV Odd/Even

TCE 007115785-01



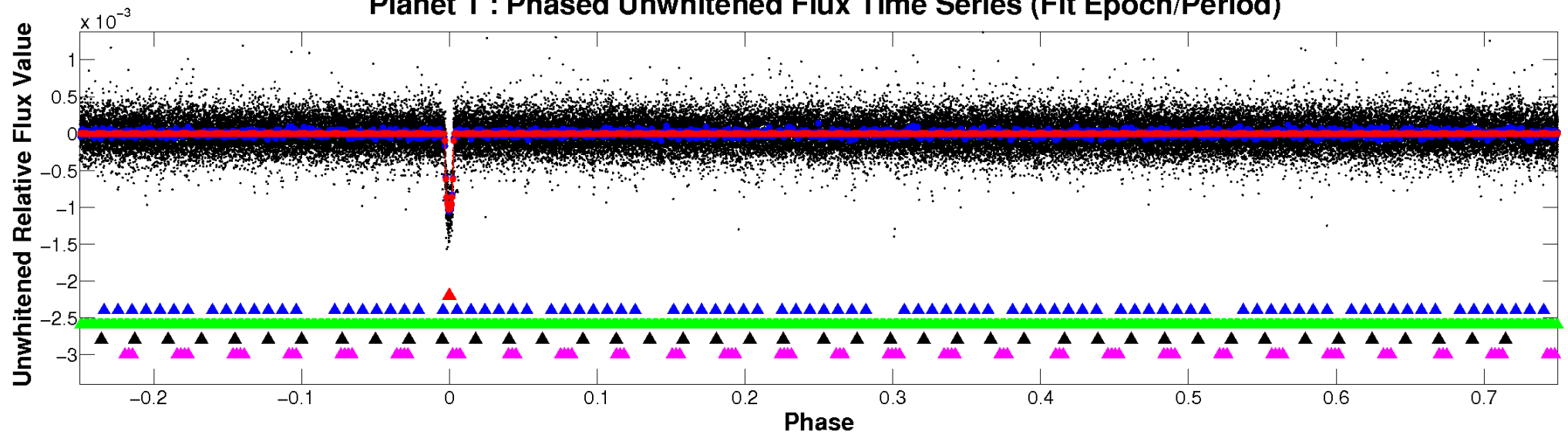
ALT Odd/Even

TCE 007115785-01

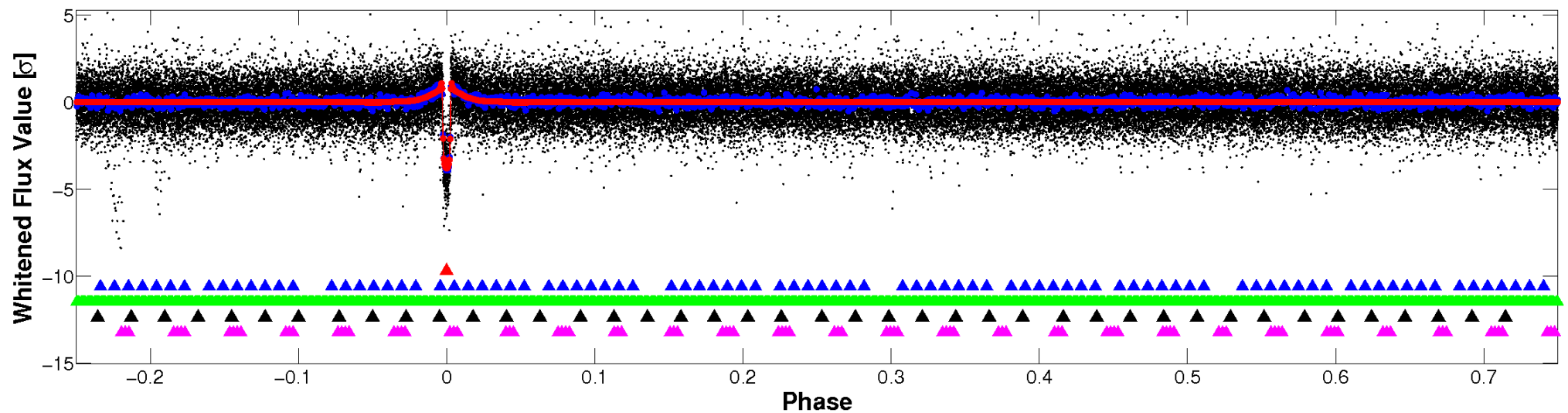


Non-Whitened Vs. Whitened Light Curve

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

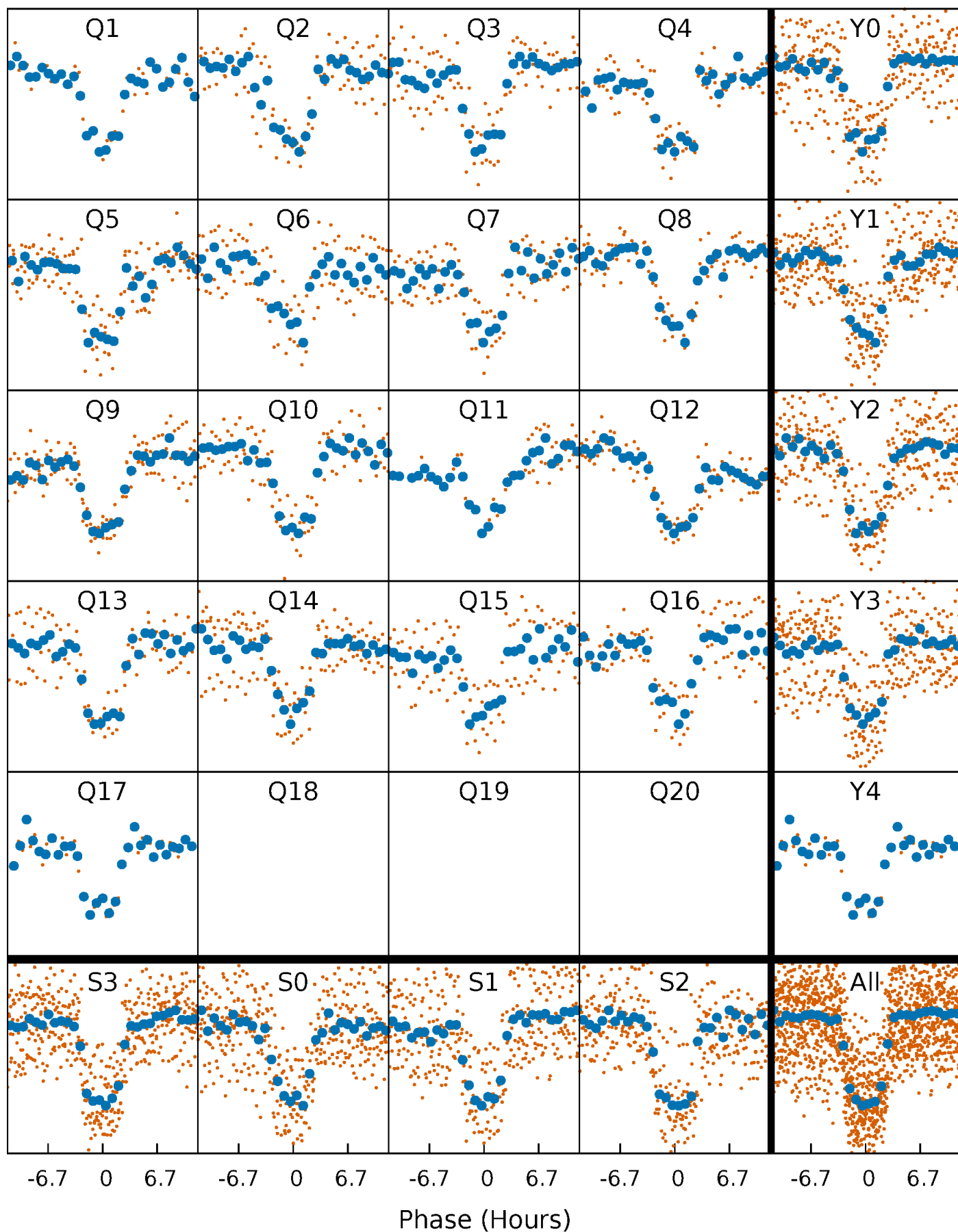


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



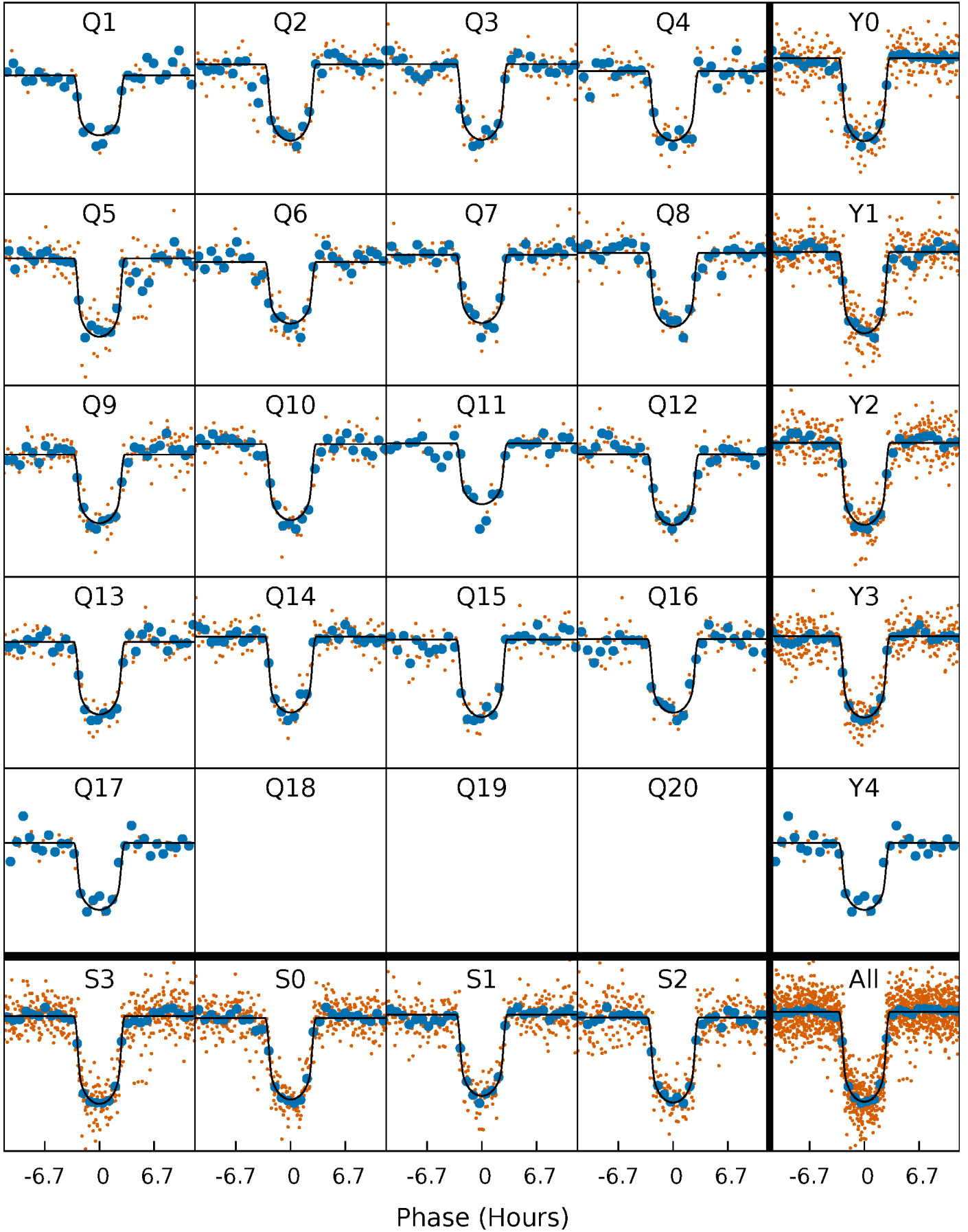
PDC Quarter-Phased Transit Curves

TCE 007115785-01 P= 41.749450 Days $T_0=153.845051$ (BKJD)



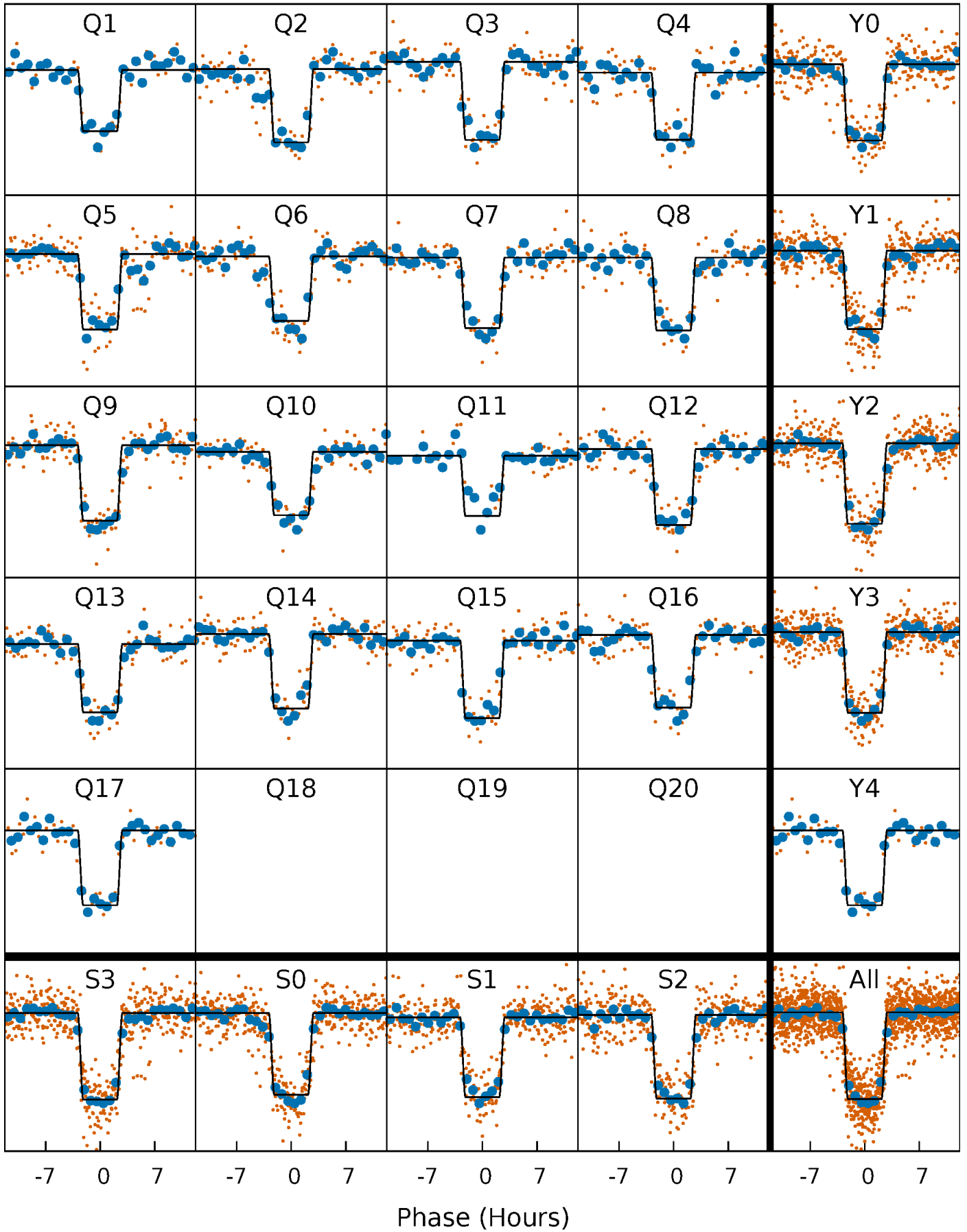
DV Quarter-Phased Transit Curves

TCE 007115785-01 P= 41.749450 Days $T_0=153.845051$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

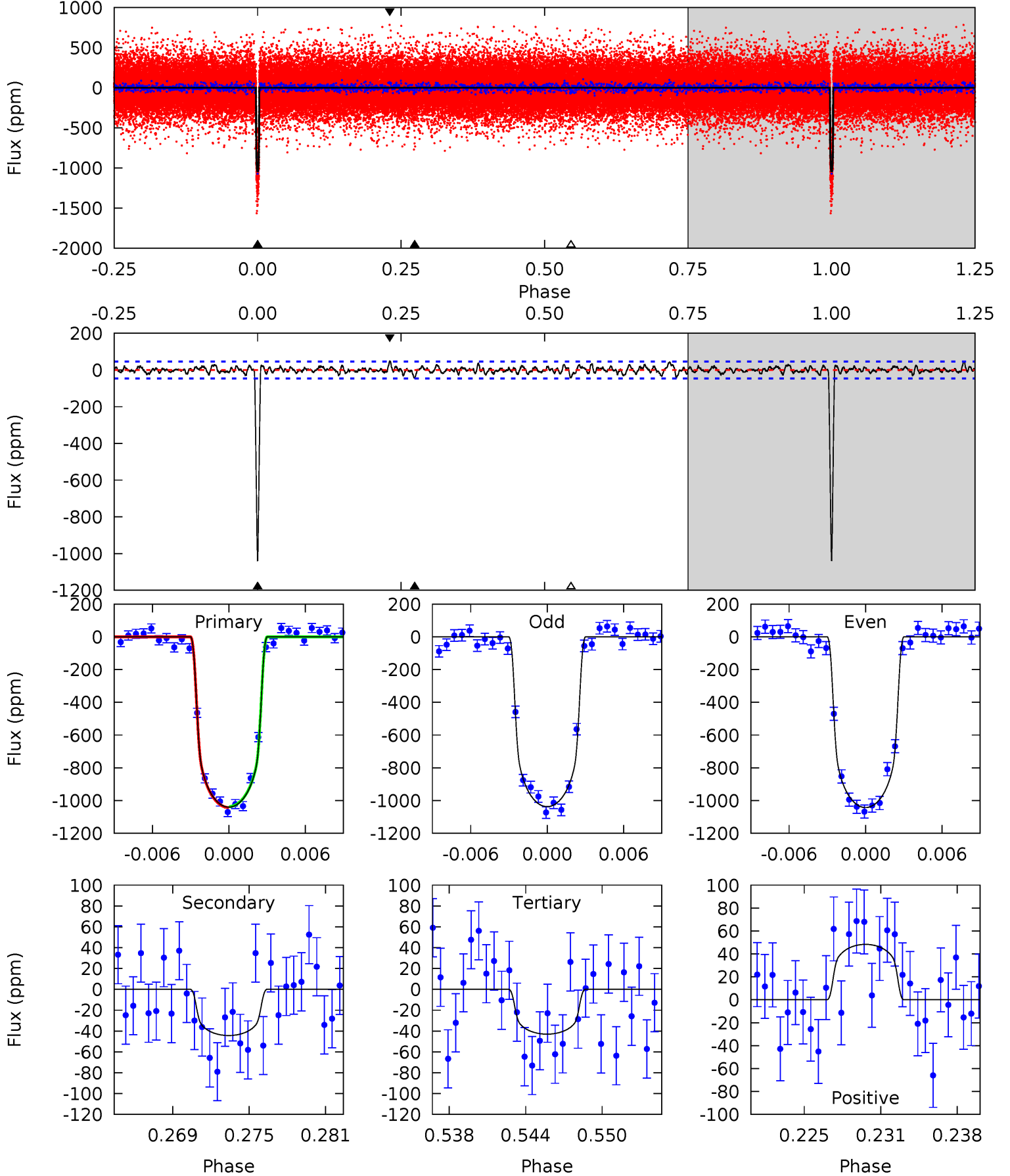
TCE 007115785-01 P= 41.749529 Days $T_0=153.842964$ (BKJD)



DV Model-Shift Uniqueness Test

007115785-01, $P = 41.749450$ Days, $E = 112.095601$ Days

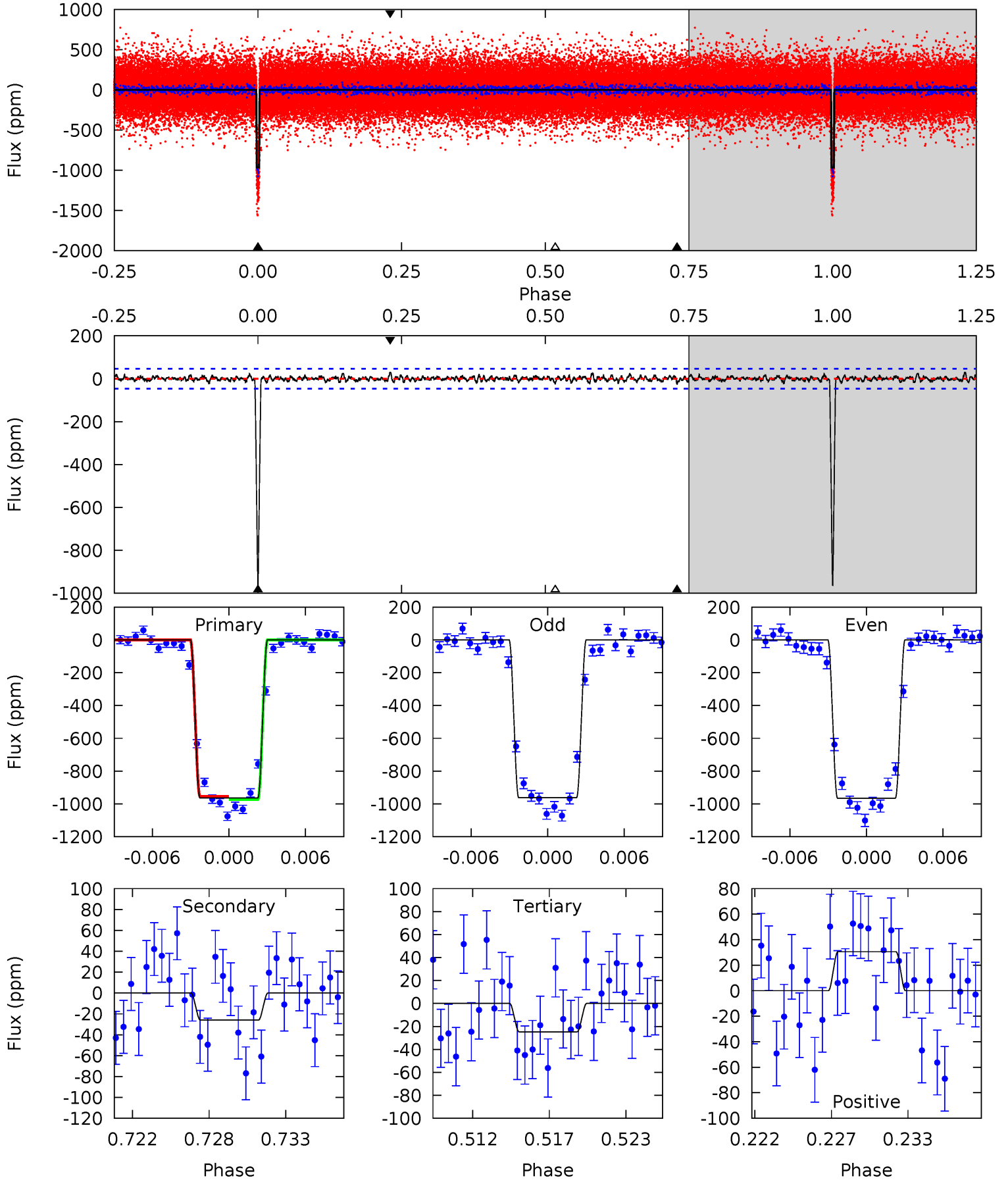
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
114.5	4.88	4.73	5.32	5.12	2.73	1.45	109.8	109.2	0.15	-0.44	0.30	0.99	0.04	0.31



Alt Model-Shift Uniqueness Test

007115785-01, $P = 41.749529$ Days, $E = 112.093435$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
106.3	2.86	2.72	3.37	5.13	2.77	0.87	103.6	103.0	0.14	-0.51	0.13	0.98	0.03	1.04



Stellar Parameters For KIC 007115785

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5506^{+110}_{-1}	$4.473^{+0.064}_{-0.096}$	$0.040^{+0.150}_{-0.150}$	$0.914^{+0.111}_{-0.074}$	$0.904^{+0.056}_{-0.050}$	$1.667^{+0.416}_{-0.474}$
	+2%/-0%	+1%/-2%	+375%/-375%	+12%/-8%	+6%/-6%	+25%/-28%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 007115785-01 / KOI 0672.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-44 ± 9	$3.28^{+0.25}_{-0.23}$	682^{+27}_{-31}	3093^{+108}_{-129}	117^{+30}_{-29}
Alt.	-26 ± 9	$3.16^{+0.23}_{-0.21}$	678^{+29}_{-27}	2887^{+141}_{-170}	74^{+28}_{-26}

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 $A_{obs} \gg 1.0$

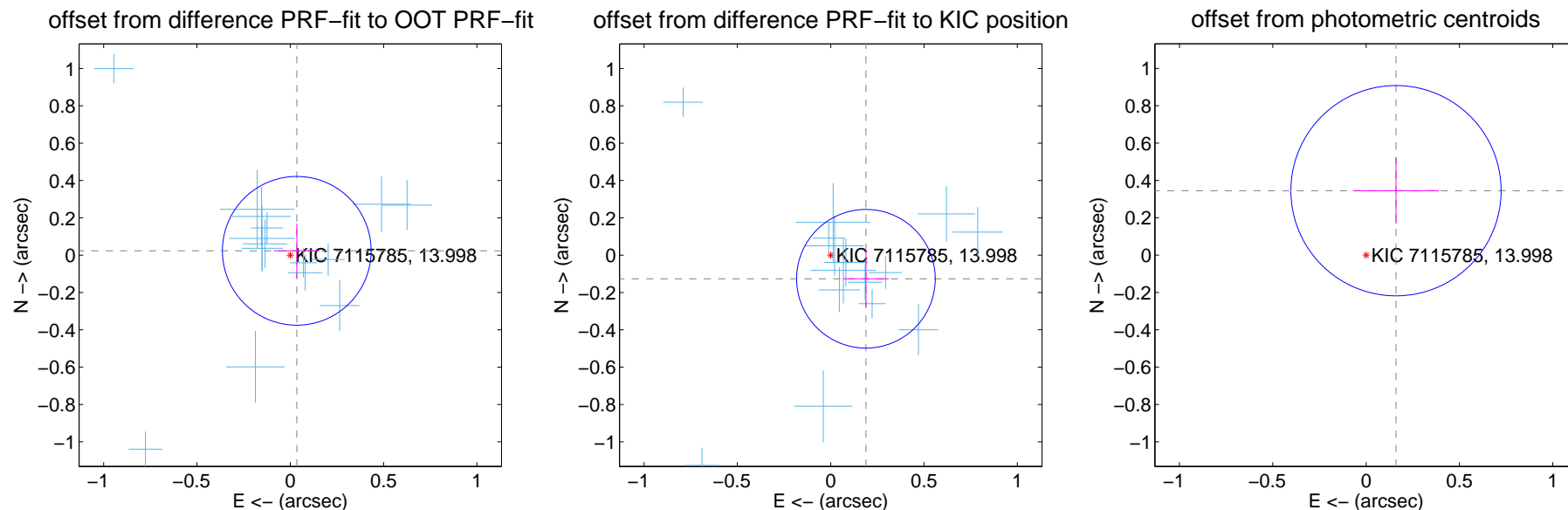
DV Centroid Data

Supplemental centroid analysis for 007115785-01. Kepler magnitude: 14.00. Transit SNR 66.88

There are 16 quarters with good PRF difference image offsets

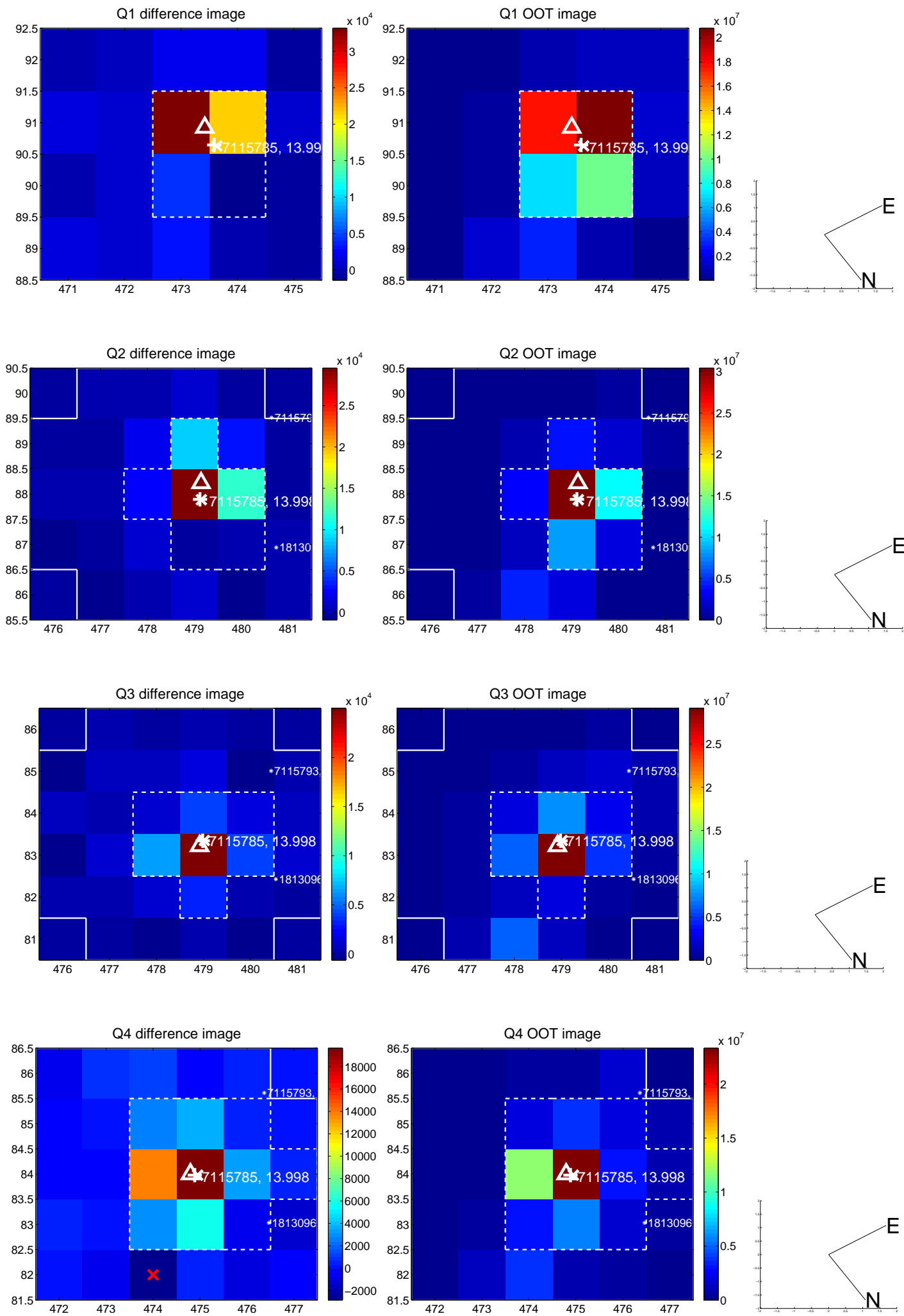
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.042 ± 0.133	0.32	-0.035 ± 0.123	0.023 ± 0.147
PRF-fit source offset from KIC position	0.227 ± 0.124	1.84	-0.189 ± 0.122	-0.127 ± 0.152
photometric centroid source offset	0.38 ± 0.19	2.03	-0.16 ± 0.23	0.34 ± 0.18

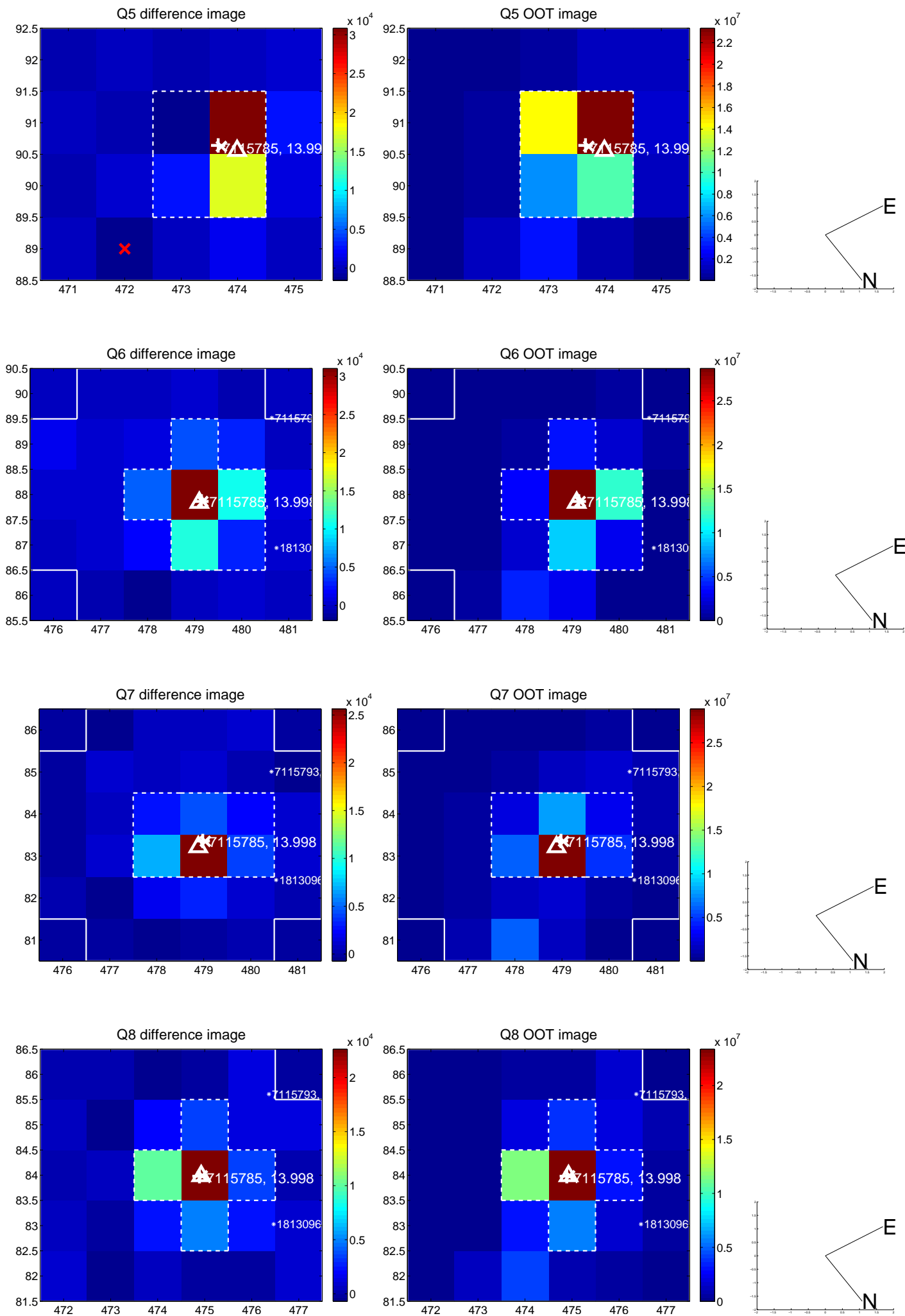


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

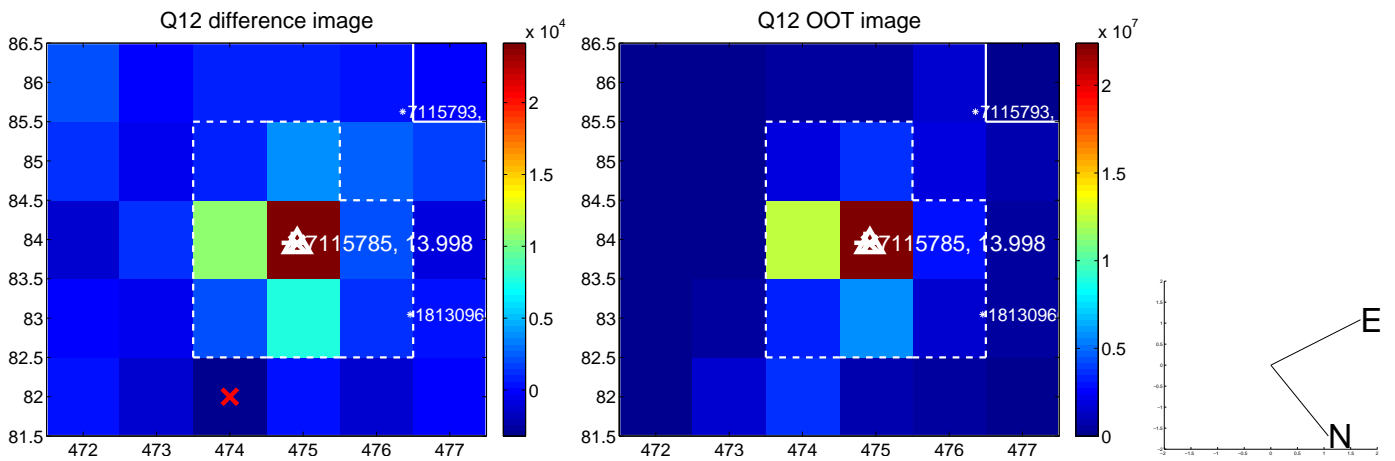
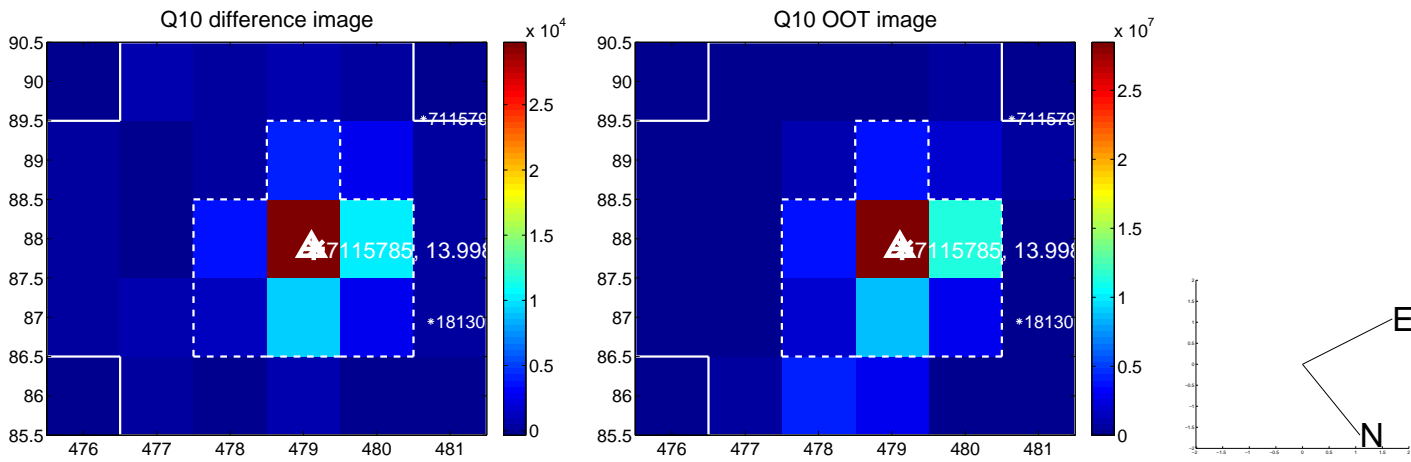
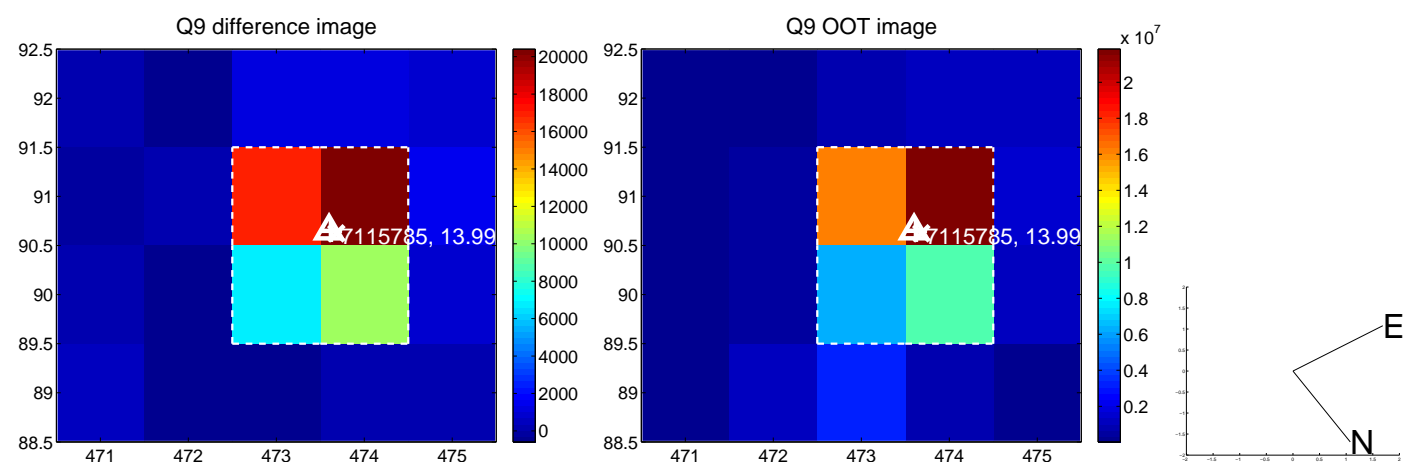
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



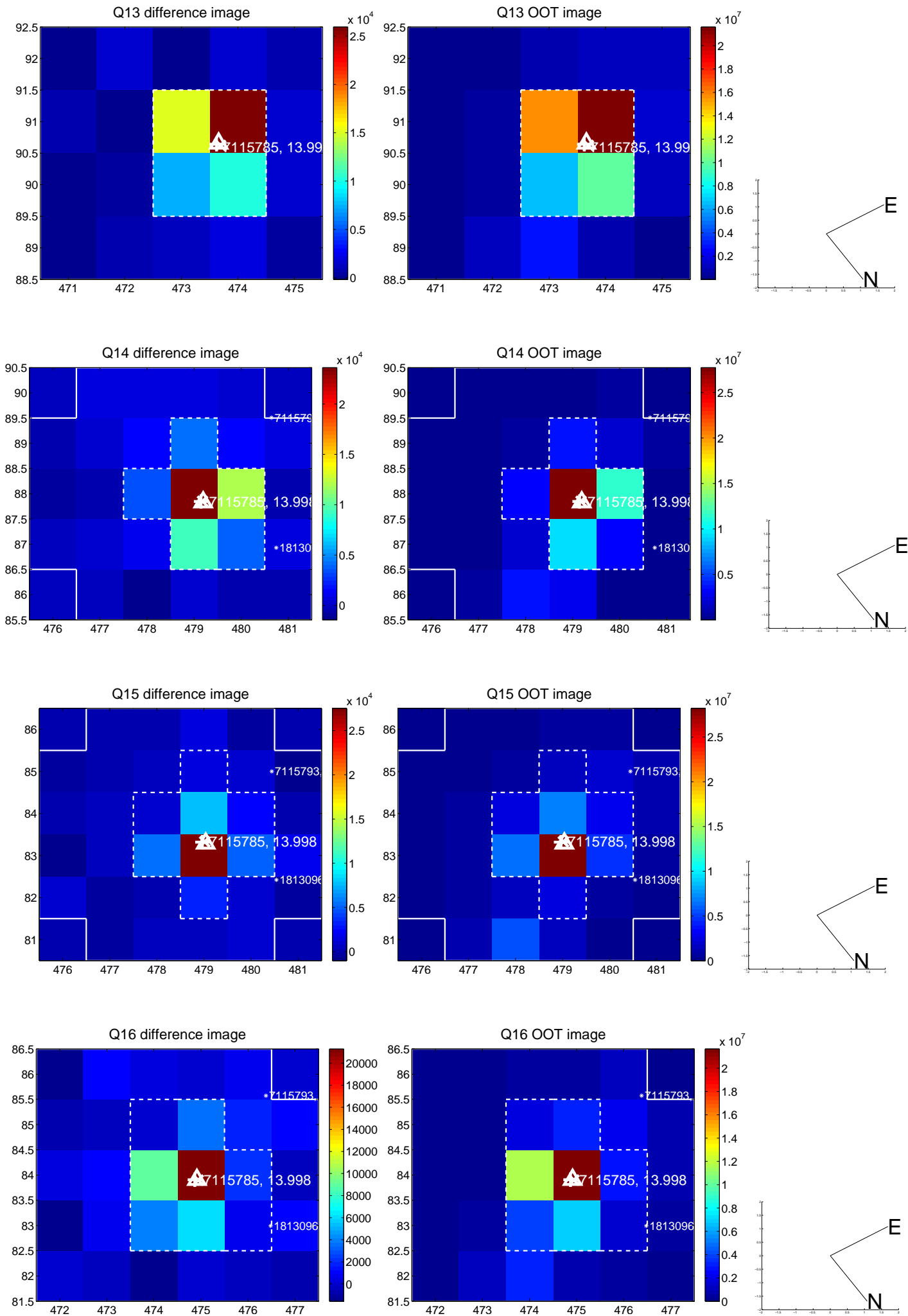
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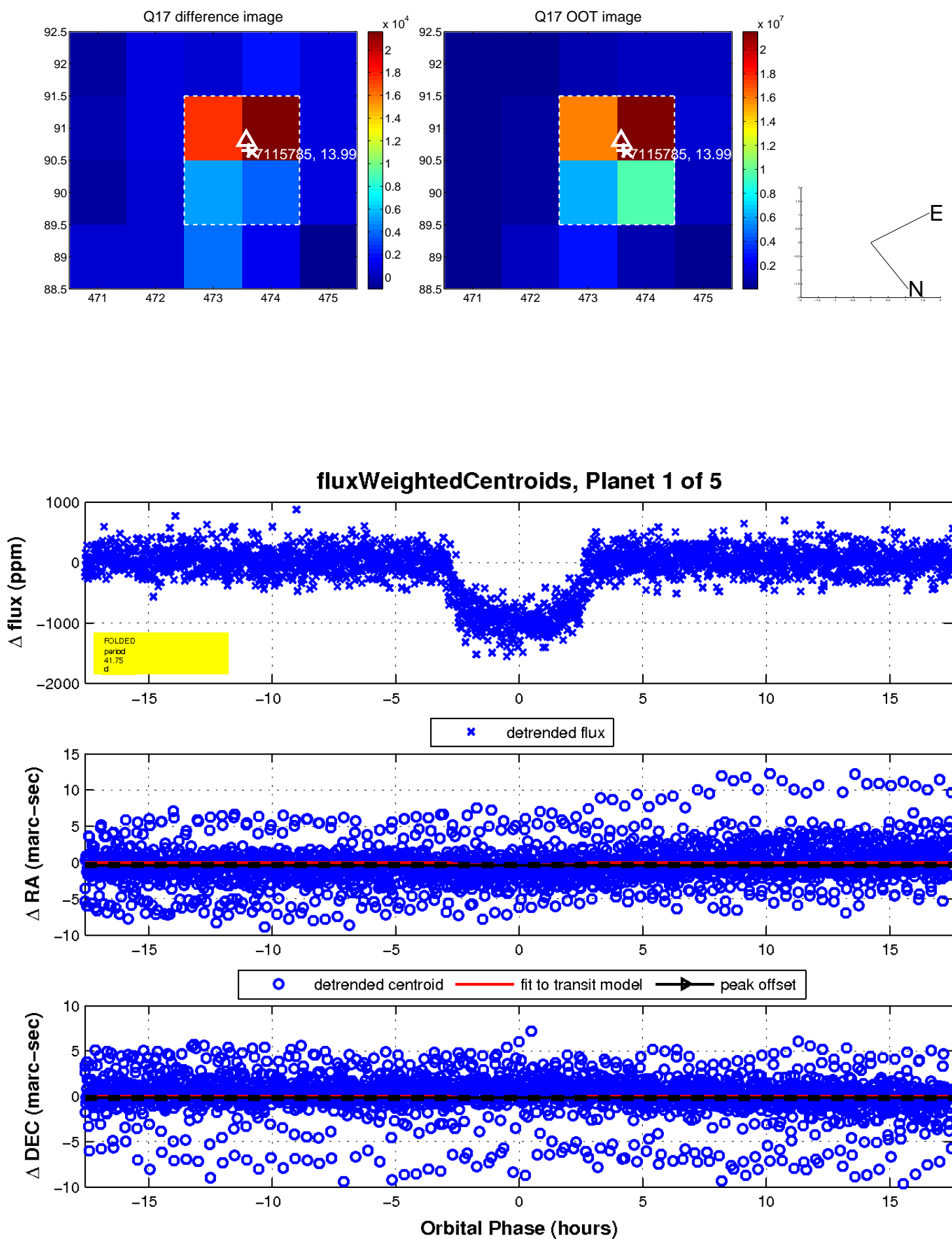
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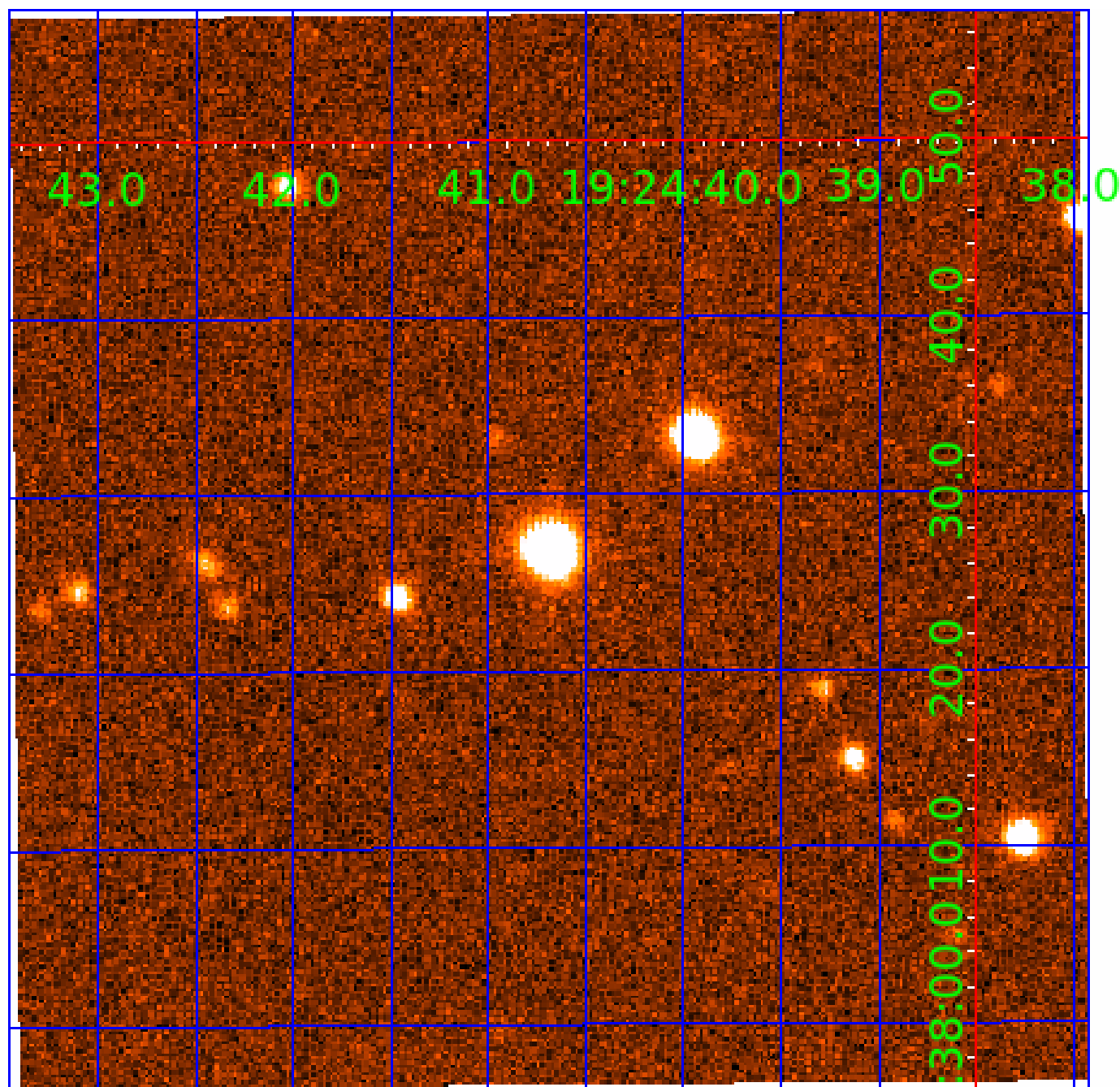


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007115785

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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007115785-04	OBS	No	34.948375	136.272091	404.6	1.608	8.0	6.8	0.91	5506	1.98	16.79
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007115785-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-03	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007115785-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
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Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

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

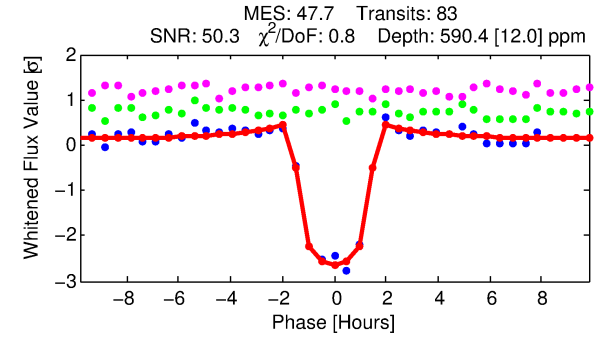
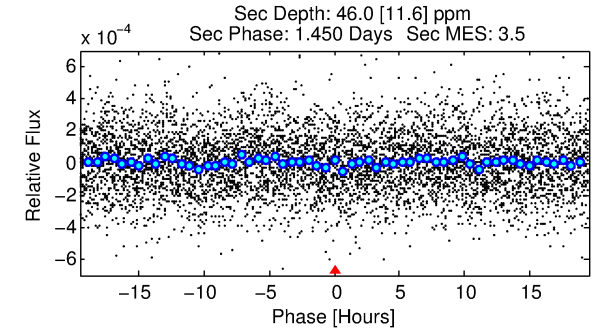
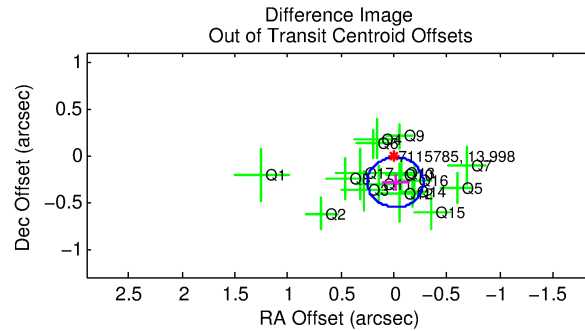
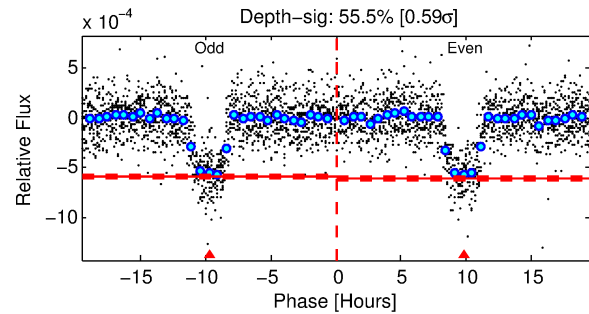
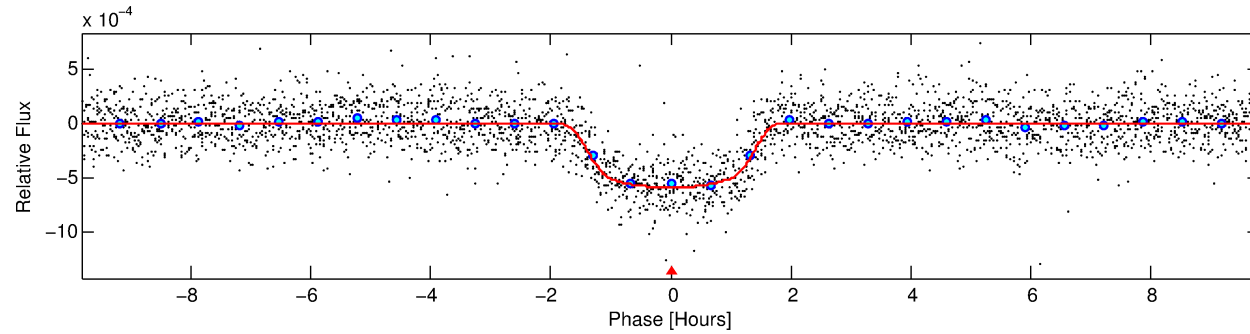
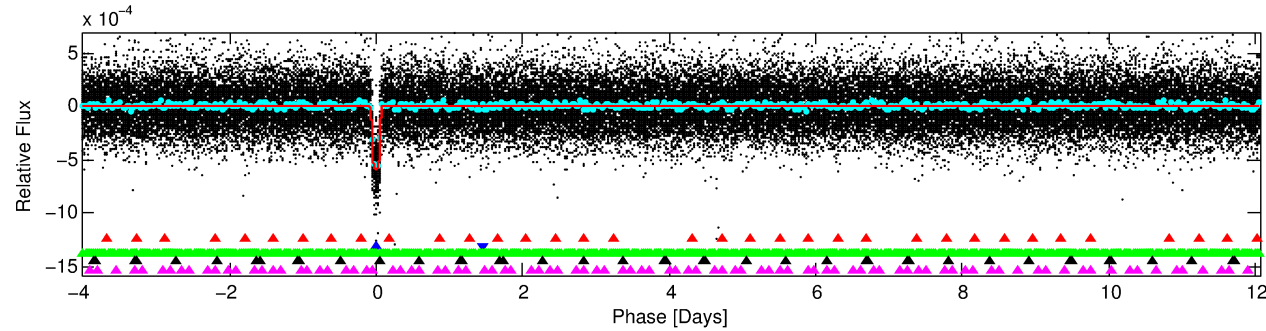
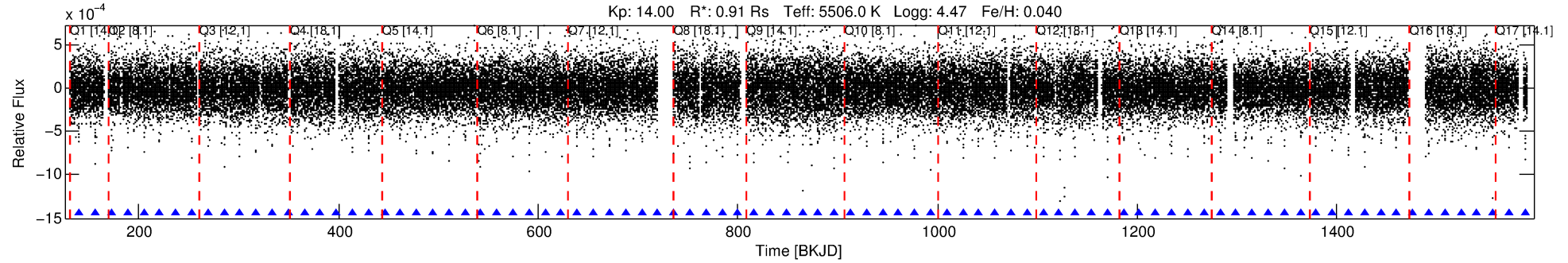
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007115785-02

No Significant Match Found

DV One-Page Summary

KIC: 7115785 Candidate: 2 of 5 Period: 16.088 d
KOI: K00672.01 Name: Kepler-209b Corr: 0.954



DV Fit Results:

Period = 16.08785 [0.00003] d
Epoch = 140.6385 [0.0013] BKJD
Rp/R* = 0.0269 [0.0012]
a/R* = 18.23 [3.47]
b = 0.91 [0.04]
Seff = 47.23 [8.79]
Teff = 668 [31] K
Rp = 2.68 [0.35] Re
a = 0.1207 [0.0132] AU
Ag = 51.23 [16.26] [3.09σ]
Teffp = 2765 [194] K [10.67σ]

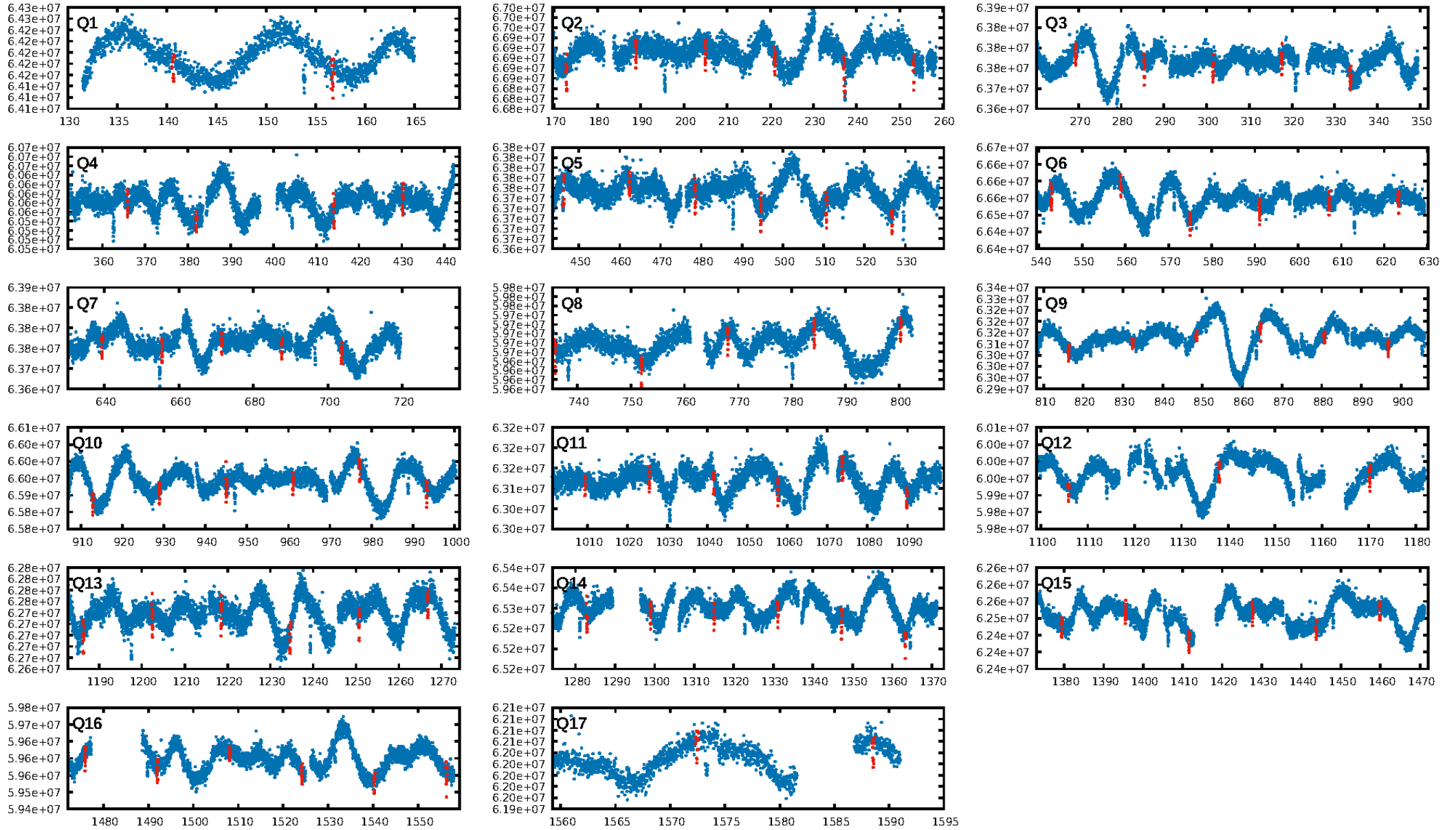
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.72σ]
LongPeriod-sig: 100.0% [124.26σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.65e-280
RollingBand-fgt: 1.00 [79/79]
GhostDiagnostic-chr: 3.14
Centroid-sig: 0.0%
Centroid-so: 0.371 arcsec [1.57σ]
OotOffset-rm: 0.290 arcsec [3.27σ]
KicOffset-rm: 0.462 arcsec [4.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

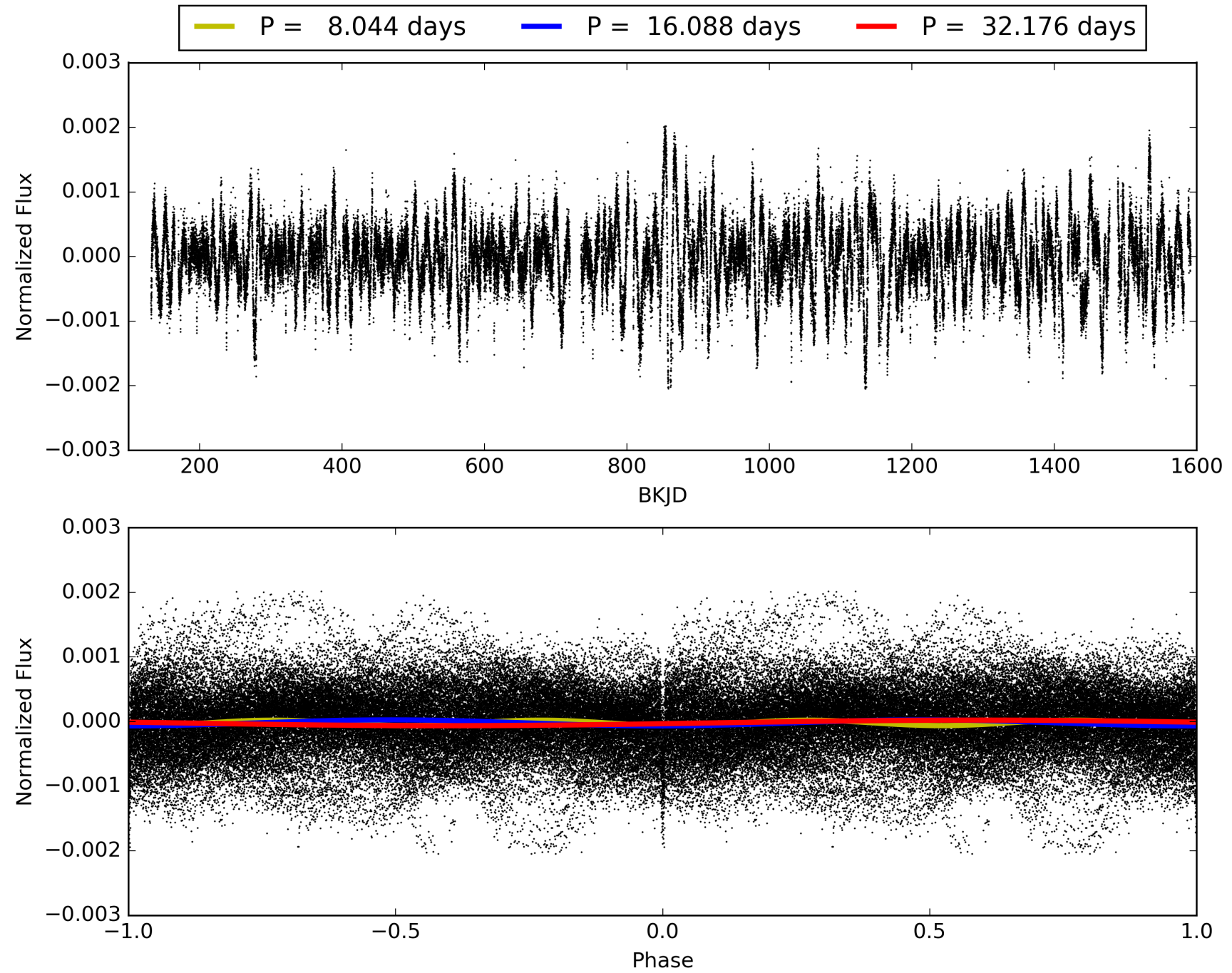
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:19 Z

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

TCE 007115785-02, PDC Light Curves

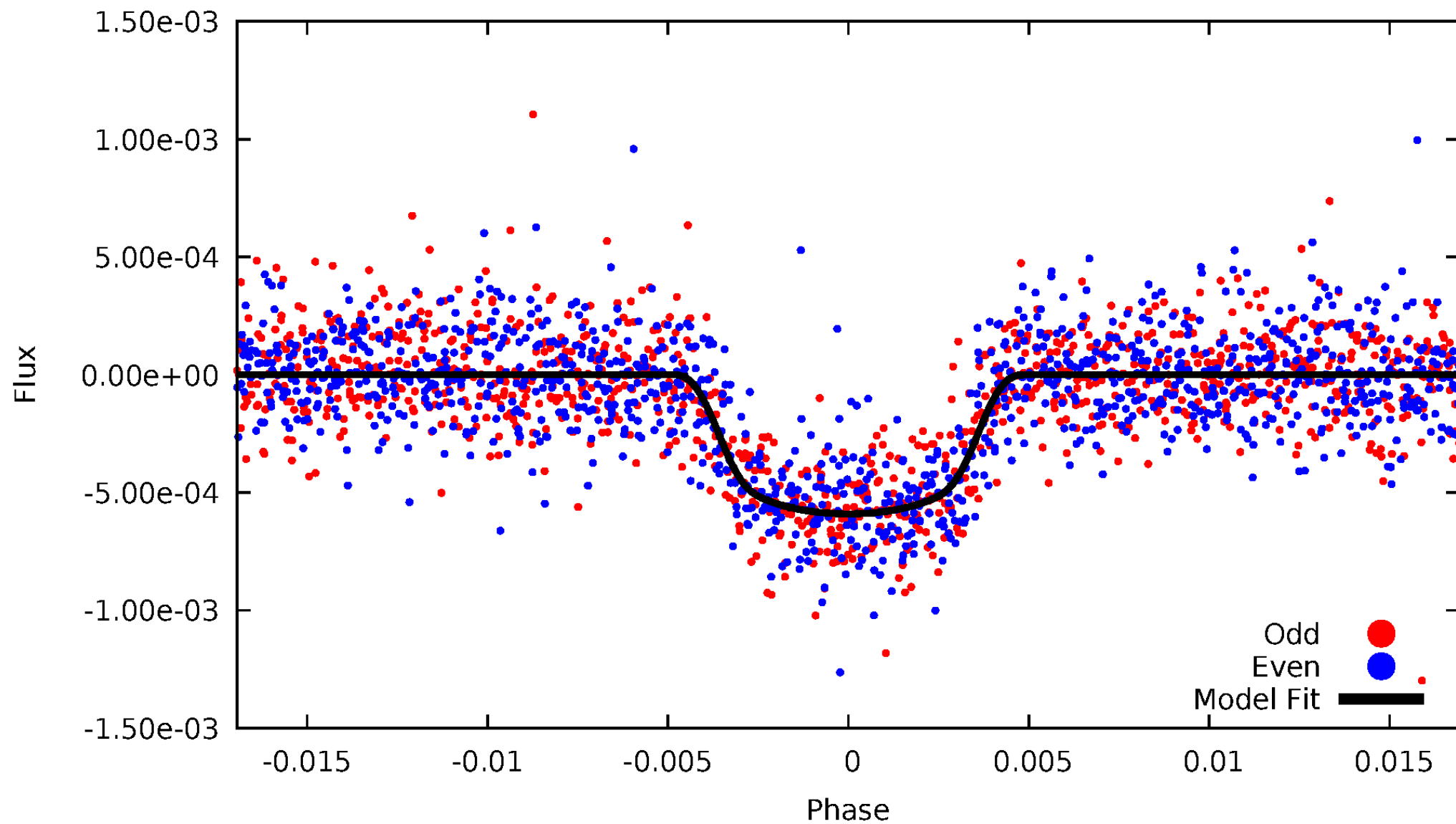


TCE 007115785-02



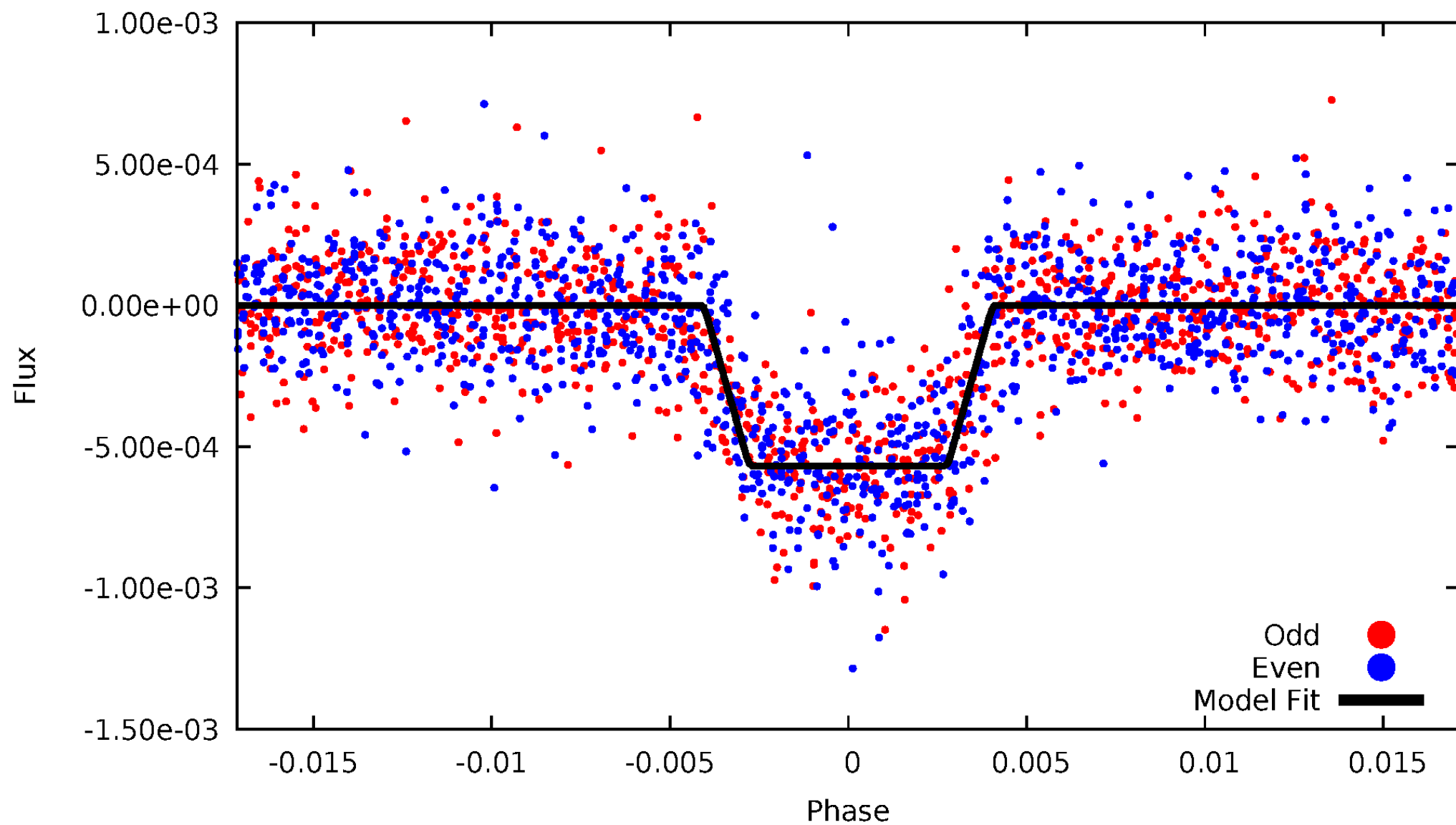
DV Odd/Even

TCE 007115785-02



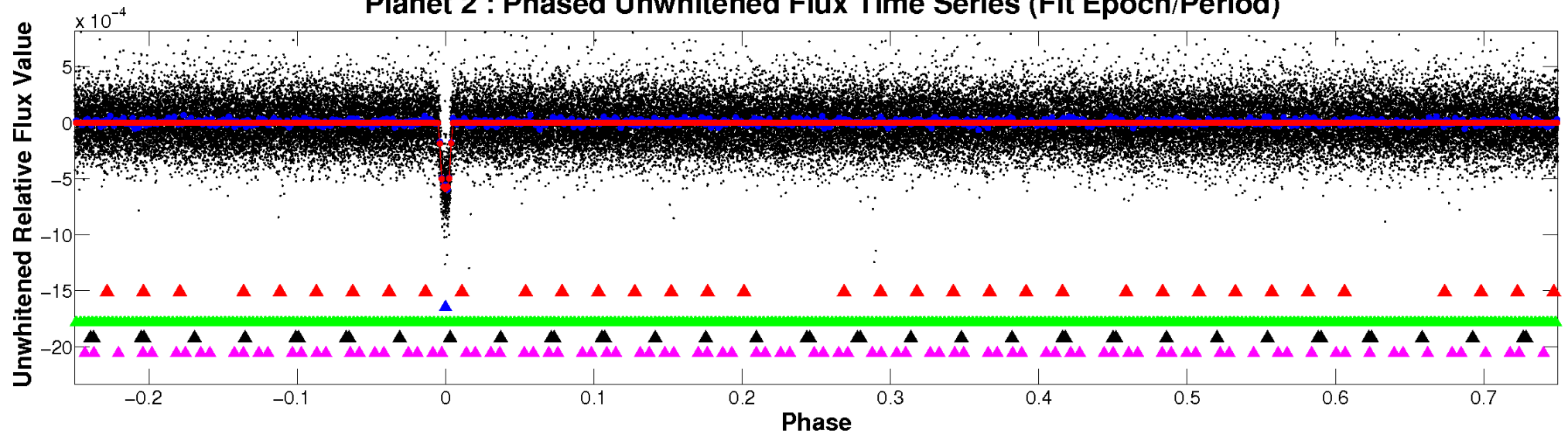
ALT Odd/Even

TCE 007115785-02

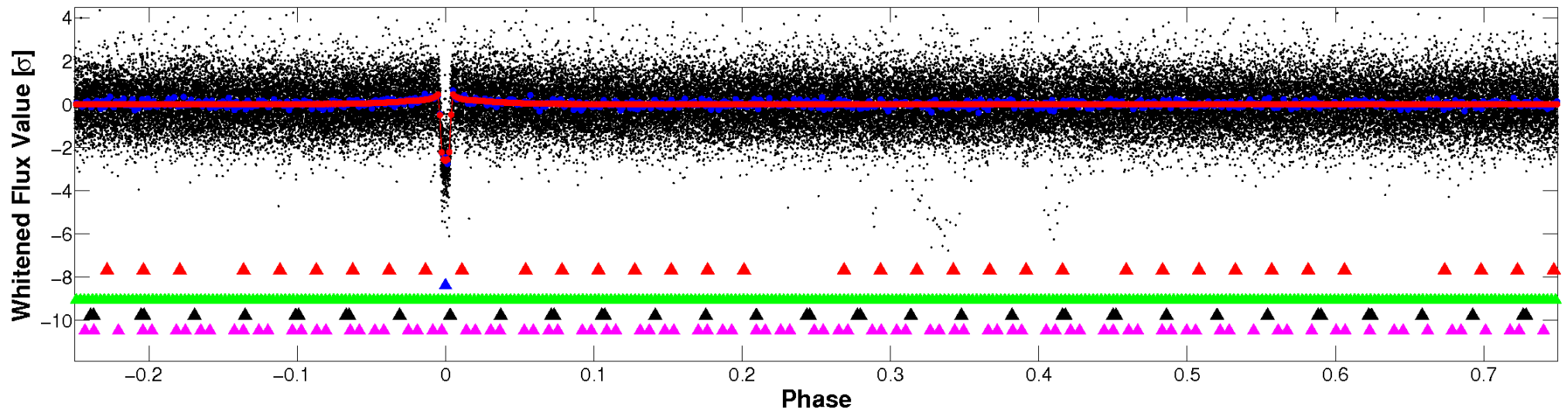


Non-Whitened Vs. Whitened Light Curve

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

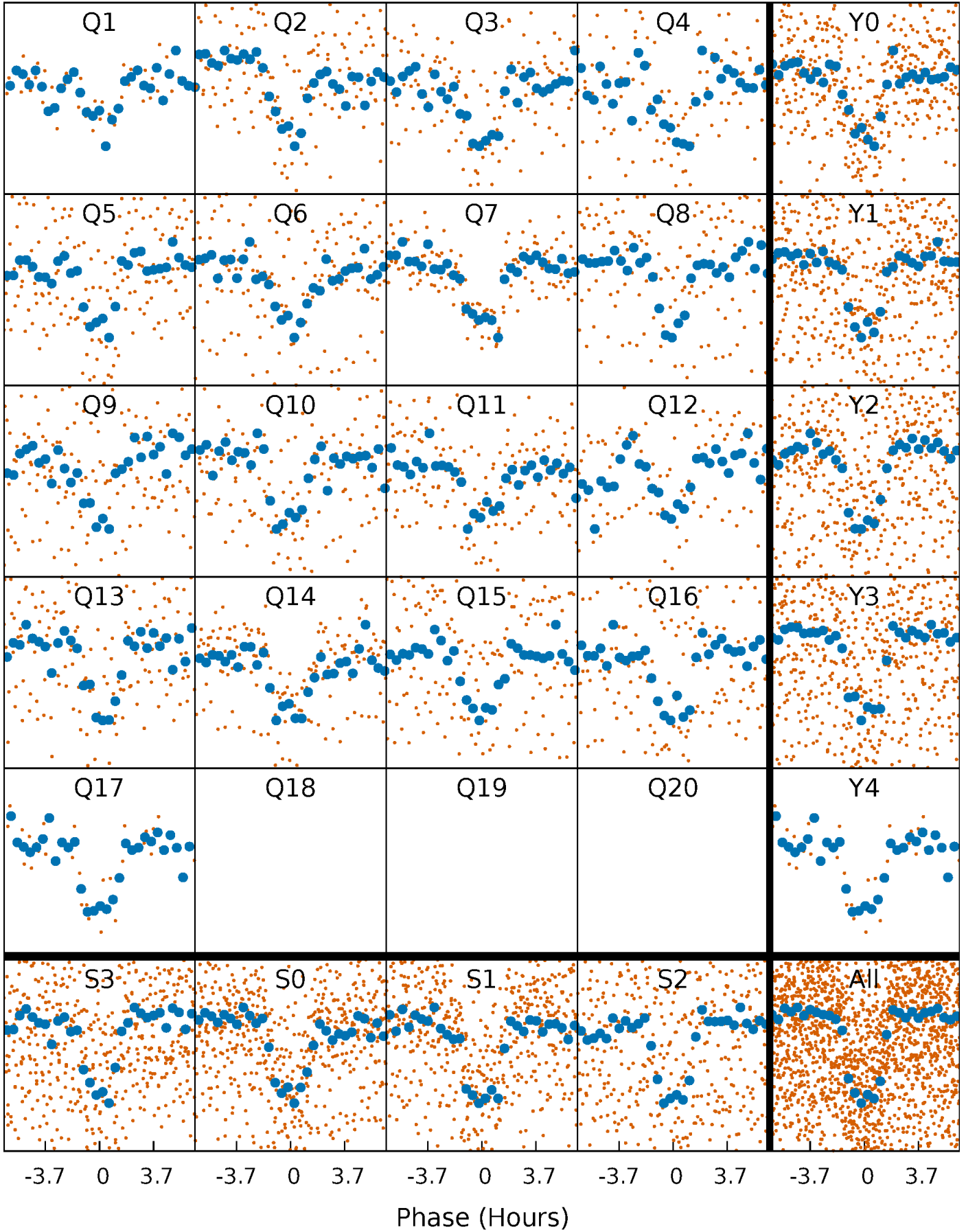


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



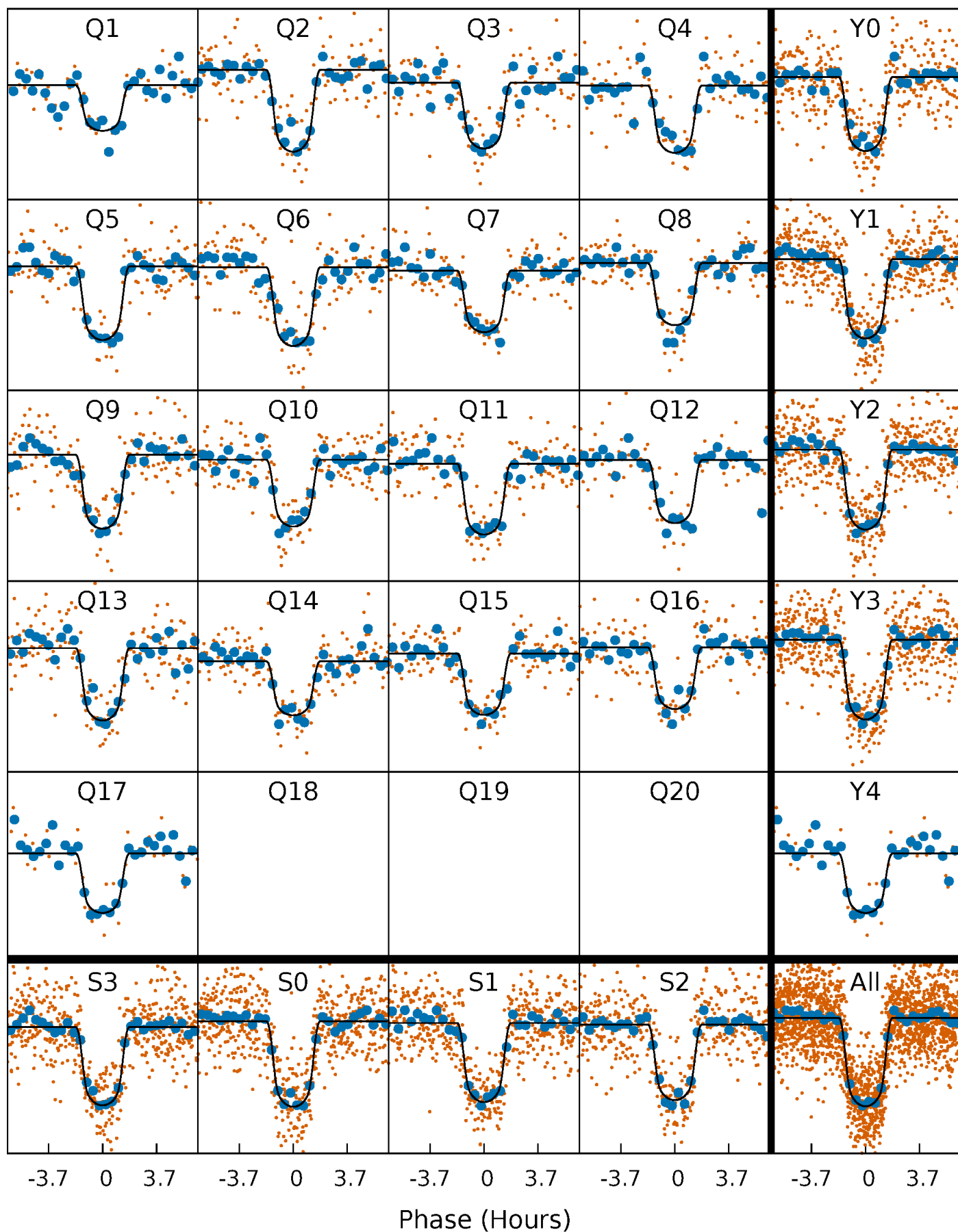
PDC Quarter-Phased Transit Curves

TCE 007115785-02 P= 16.087845 Days $T_0=140.638478$ (BKJD)



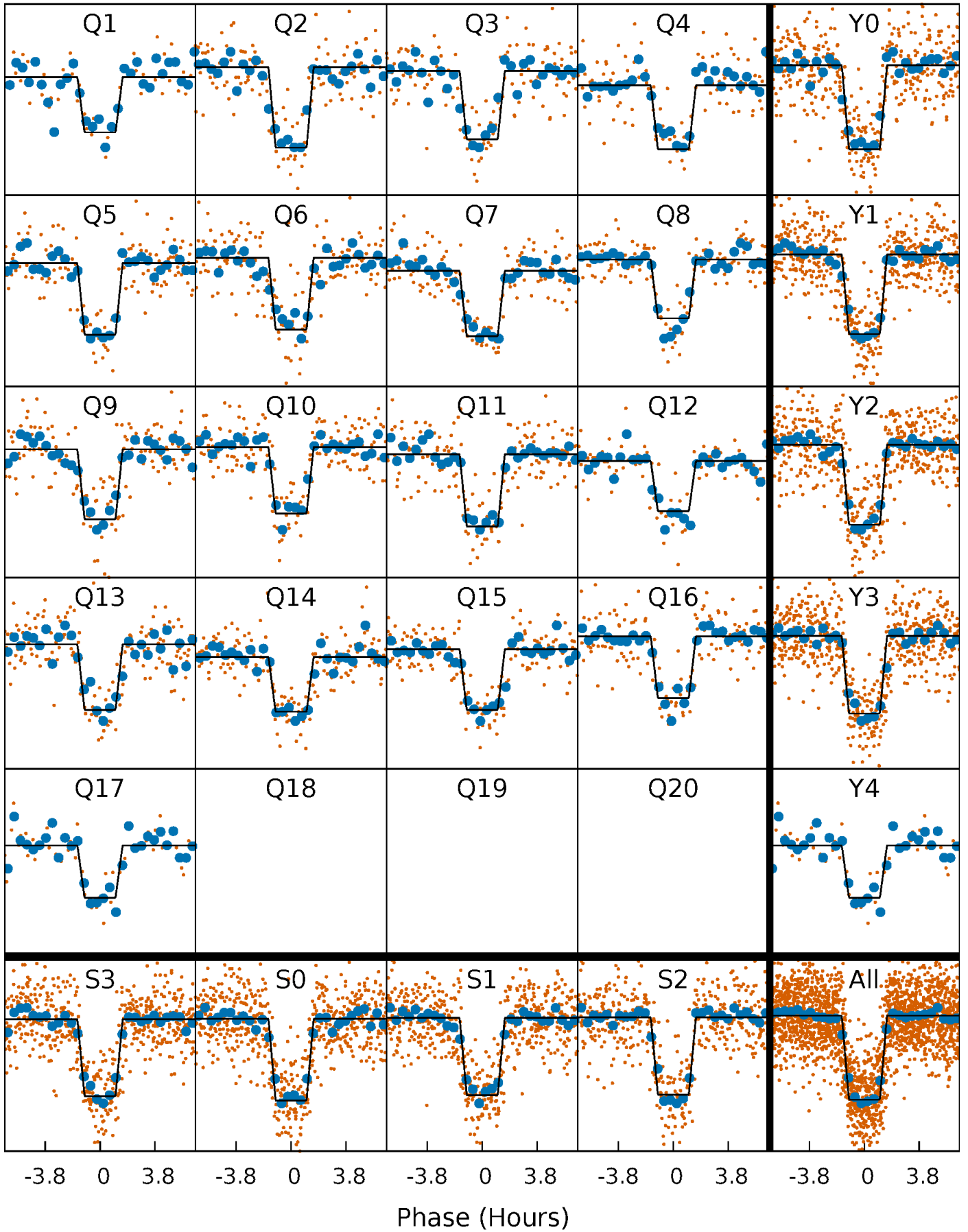
DV Quarter-Phased Transit Curves

TCE 007115785-02 P= 16.087845 Days $T_0=140.638478$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

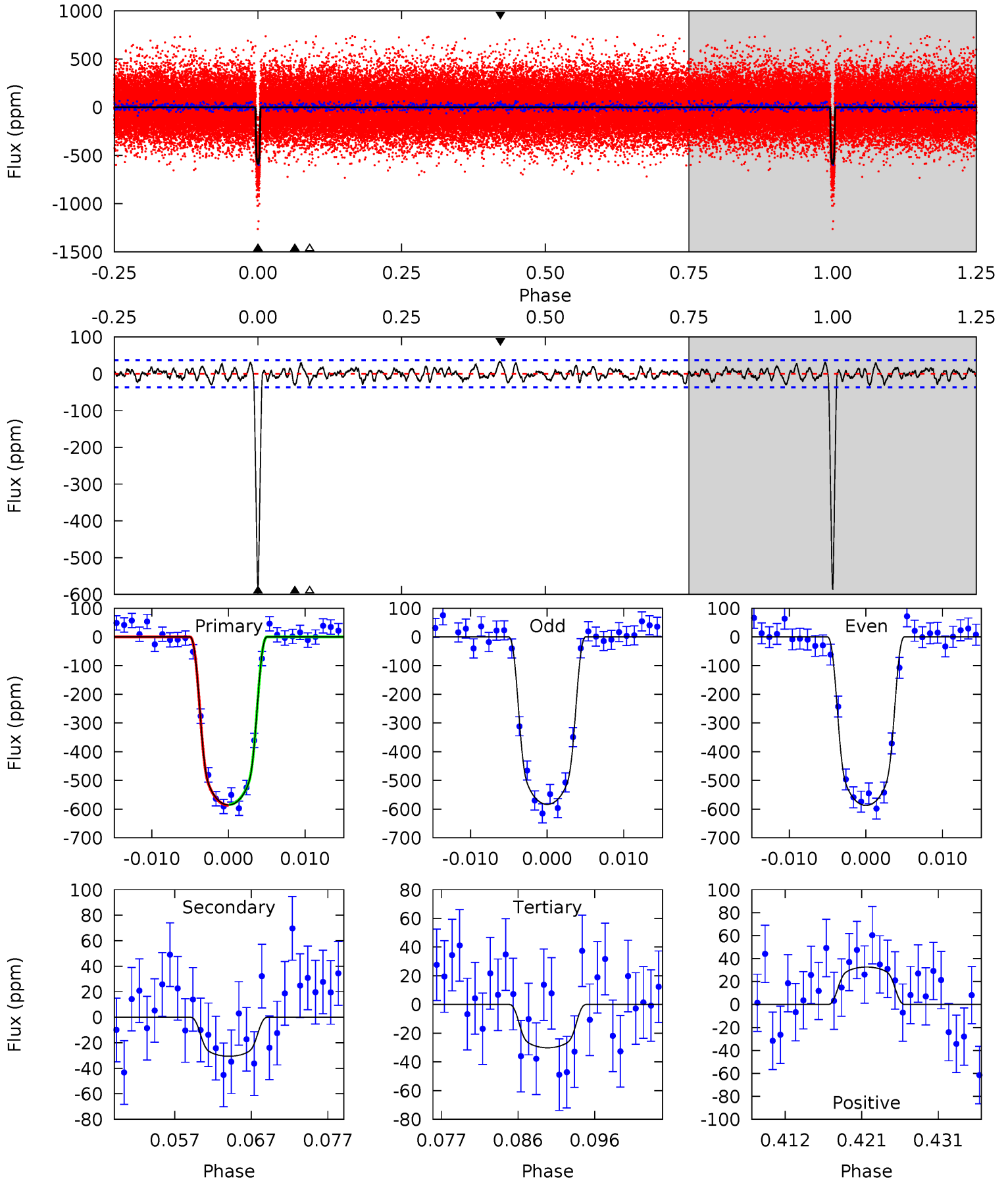
TCE 007115785-02 P= 16.087710 Days $T_0=140.644682$ (BKJD)



DV Model-Shift Uniqueness Test

007115785-02, P = 16.087845 Days, E = 124.550633 Days

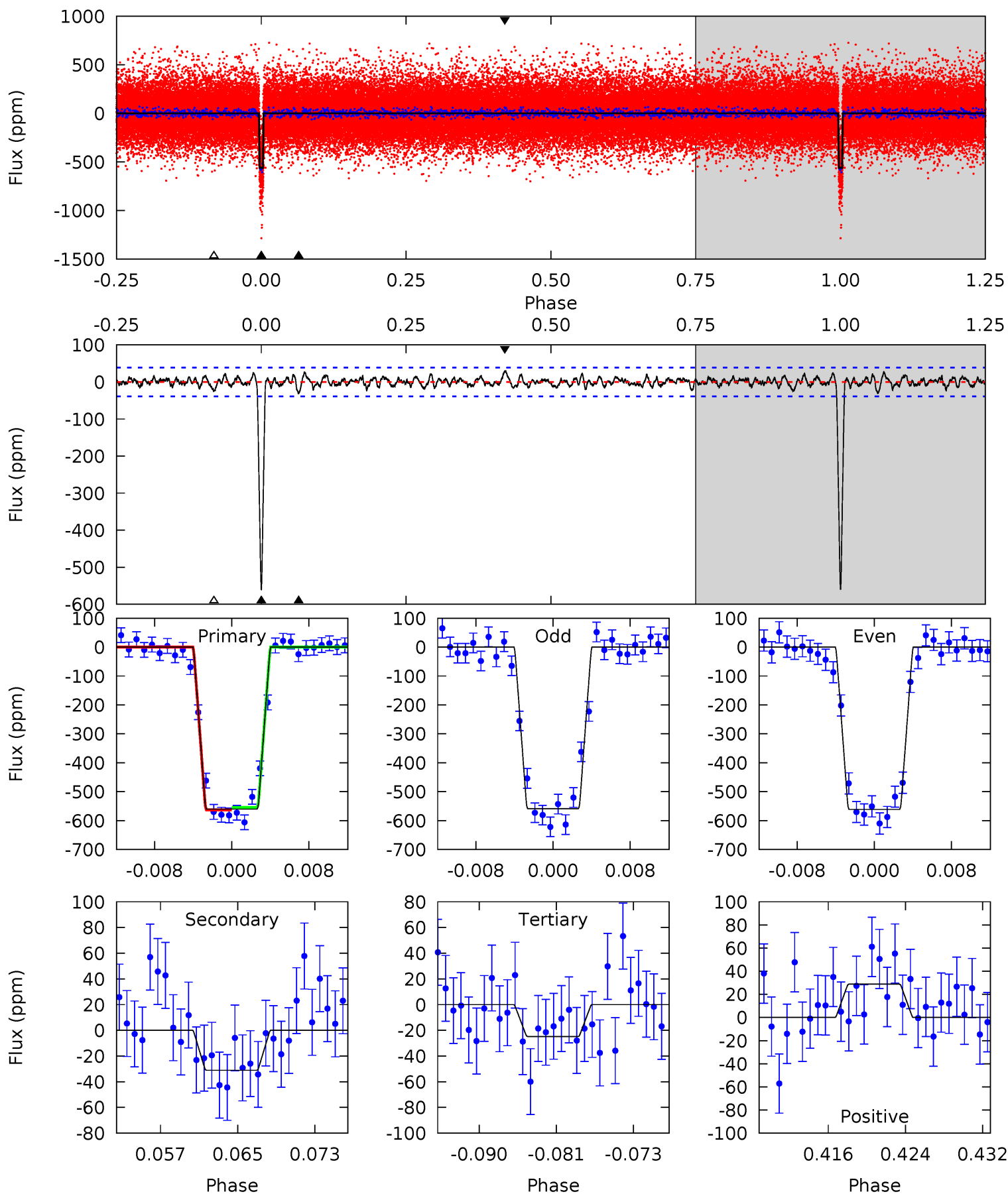
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
80.3	4.19	4.13	4.47	5.03	2.59	1.54	76.1	75.8	0.06	-0.28	0.26	1.00	0.05	0.18



Alt Model-Shift Uniqueness Test

007115785-02, P = 16.087710 Days, E = 124.556972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
73.0	4.05	3.23	3.75	5.07	2.65	1.16	69.8	69.3	0.82	0.30	0.15	1.01	0.05	0.58



Stellar Parameters For KIC 007115785

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5506^{+110}_{-1}	$4.473^{+0.064}_{-0.096}$	$0.040^{+0.150}_{-0.150}$	$0.914^{+0.111}_{-0.074}$	$0.904^{+0.056}_{-0.050}$	$1.667^{+0.416}_{-0.474}$
	+2%/-0%	+1%/-2%	+375%/-375%	+12%/-8%	+6%/-6%	+25%/-28%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 007115785-02 / KOI 0672.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 7	$2.72^{+0.22}_{-0.20}$	935^{+39}_{-35}	3091^{+125}_{-126}	33^{+10}_{-9}
Alt.	-31 ± 8	$2.39^{+0.21}_{-0.18}$	935^{+36}_{-38}	3216^{+125}_{-160}	42^{+14}_{-11}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

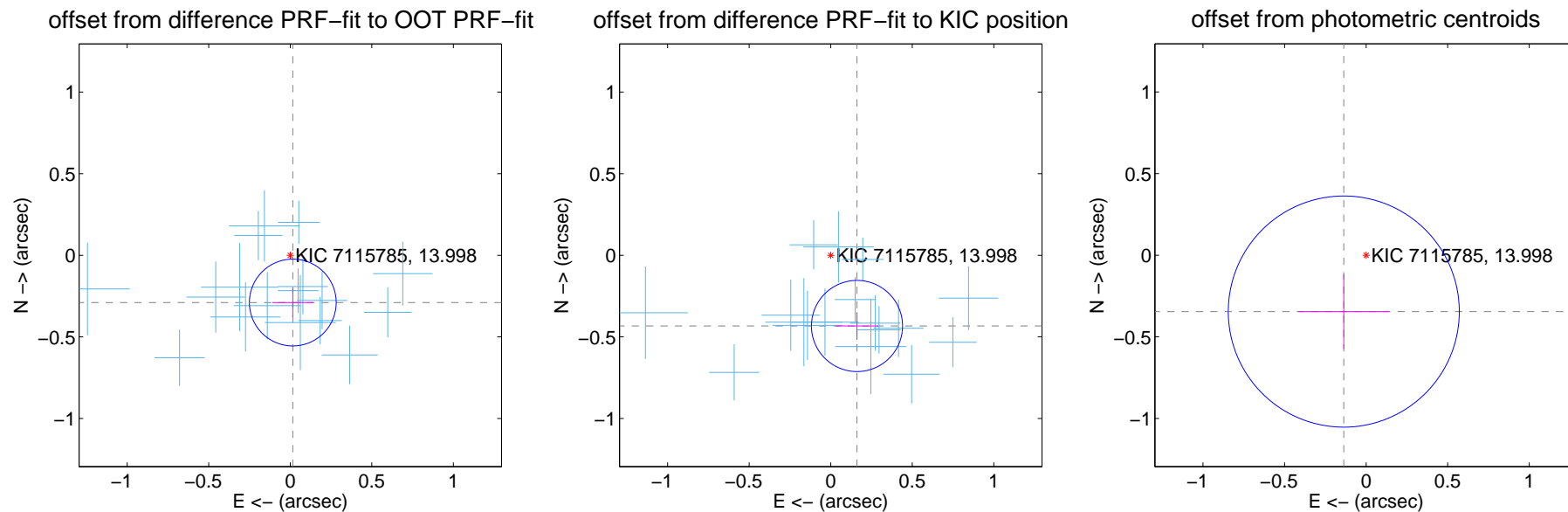
DV Centroid Data

Supplemental centroid analysis for 007115785-02. Kepler magnitude: 14.00. Transit SNR 50.31

There are 17 quarters with good PRF difference image offsets

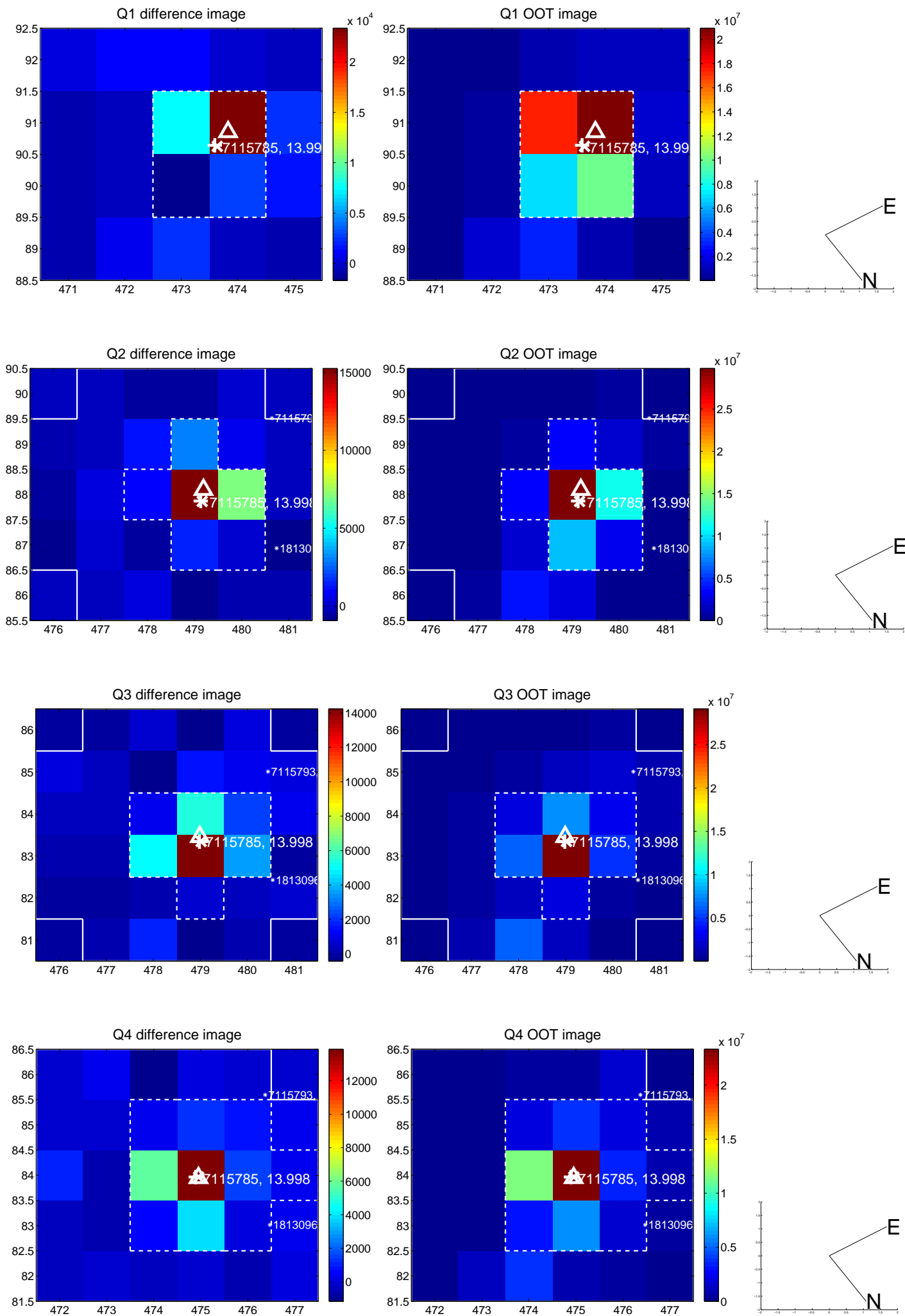
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.290 ± 0.089	3.27	-0.015 ± 0.126	-0.290 ± 0.089
PRF-fit source offset from KIC position	0.462 ± 0.093	4.97	-0.161 ± 0.131	-0.433 ± 0.085
photometric centroid source offset	0.37 ± 0.24	1.57	0.14 ± 0.28	-0.35 ± 0.23

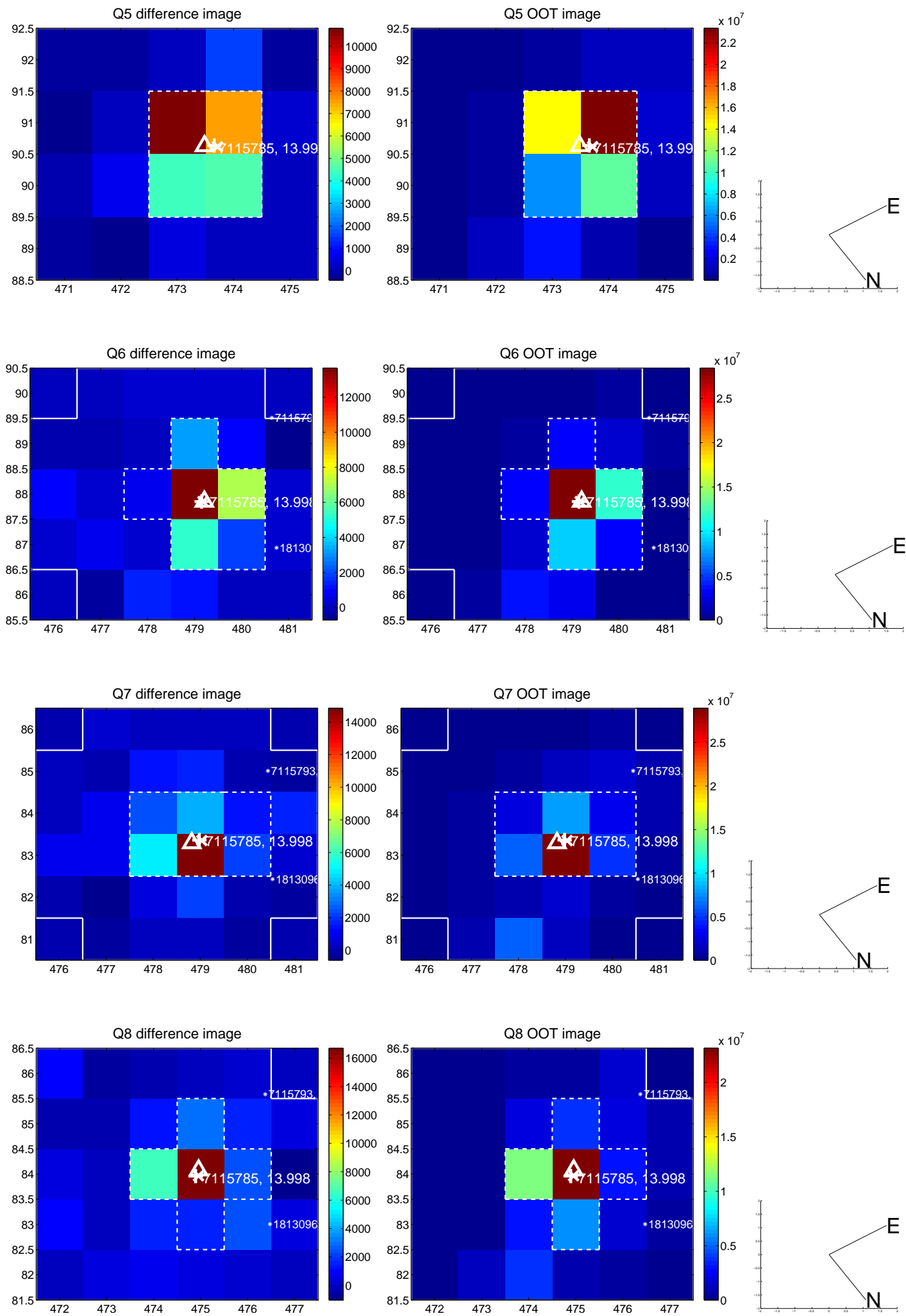


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

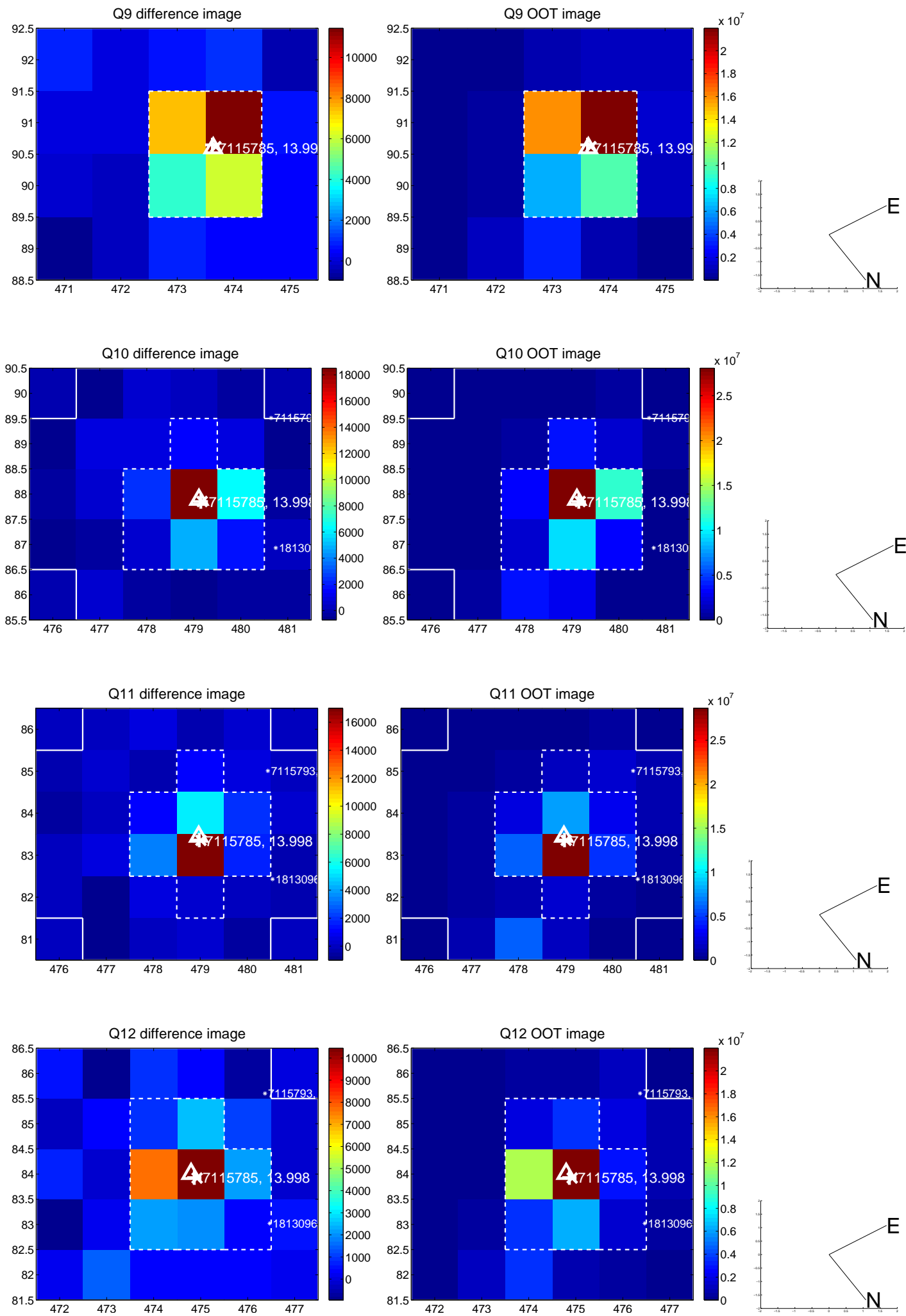
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



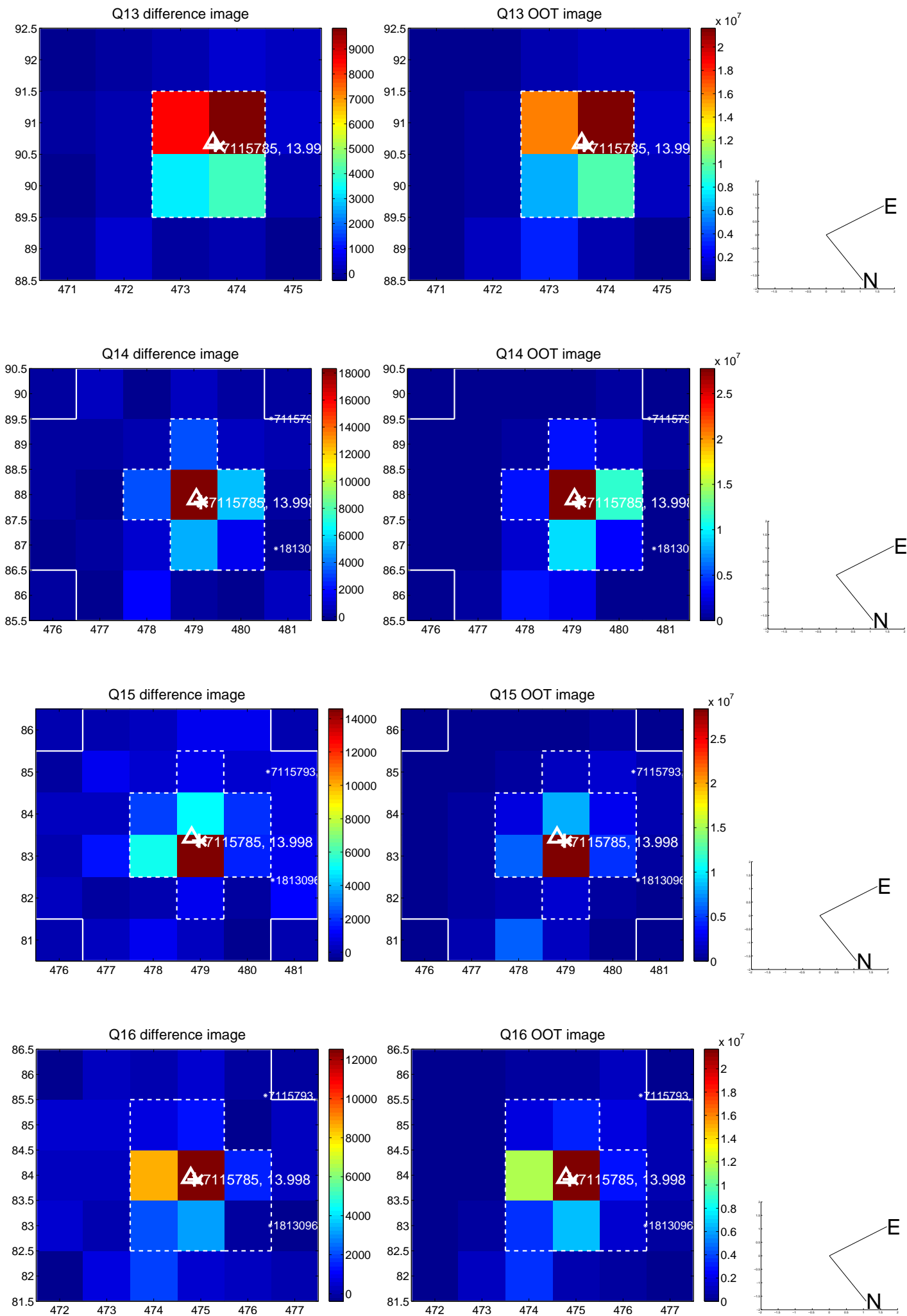
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



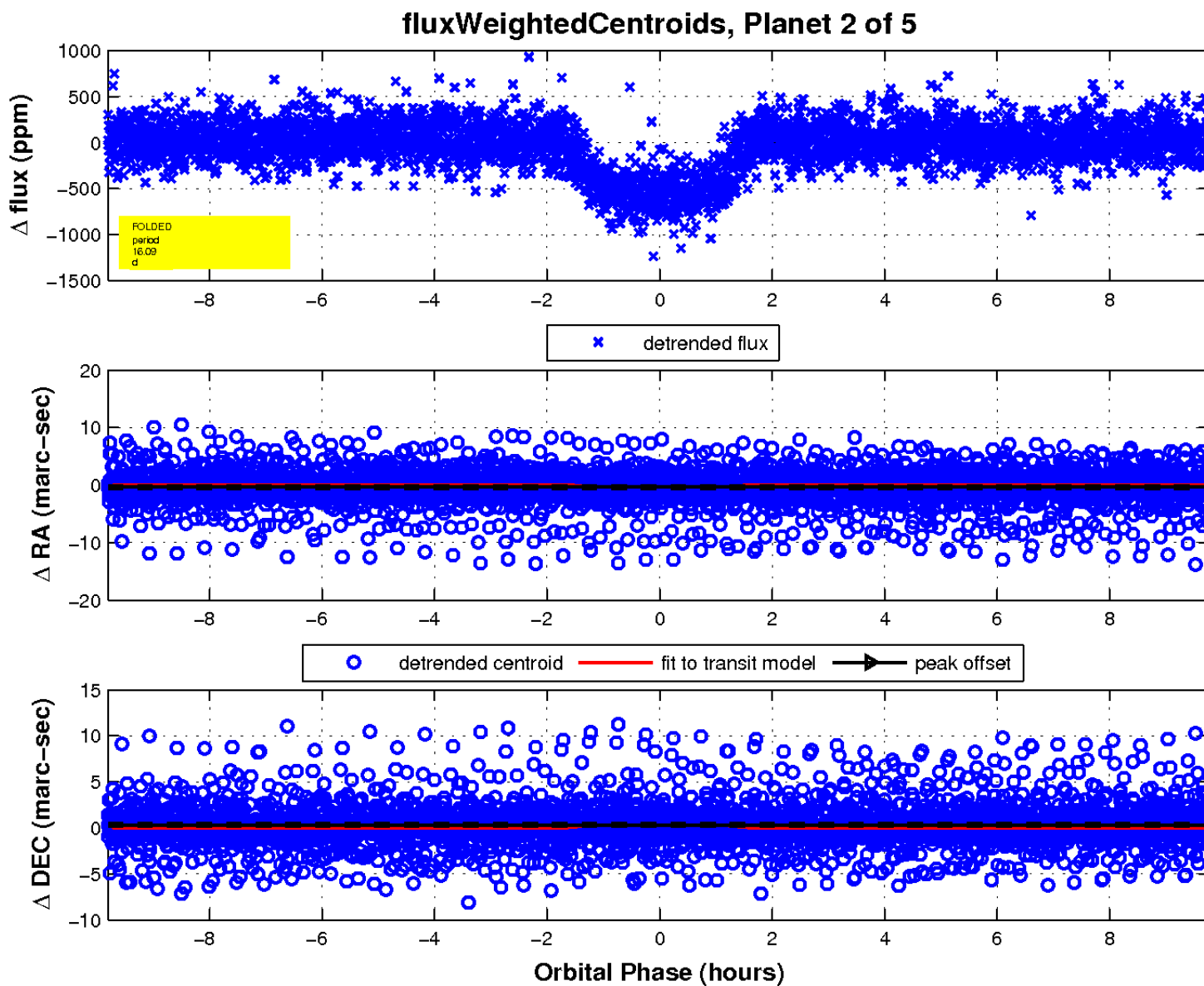
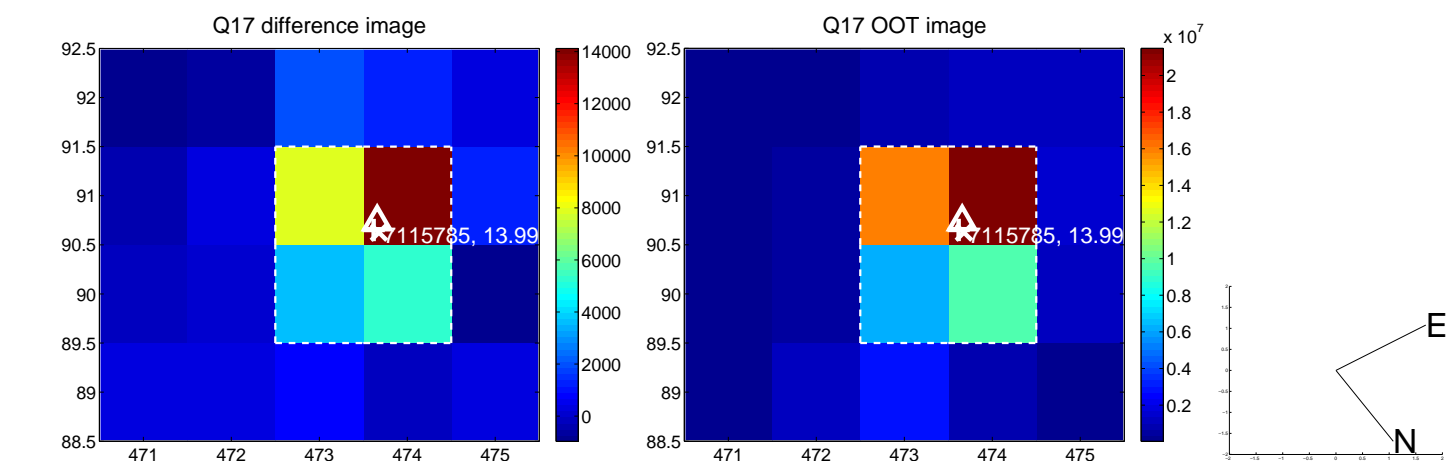
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

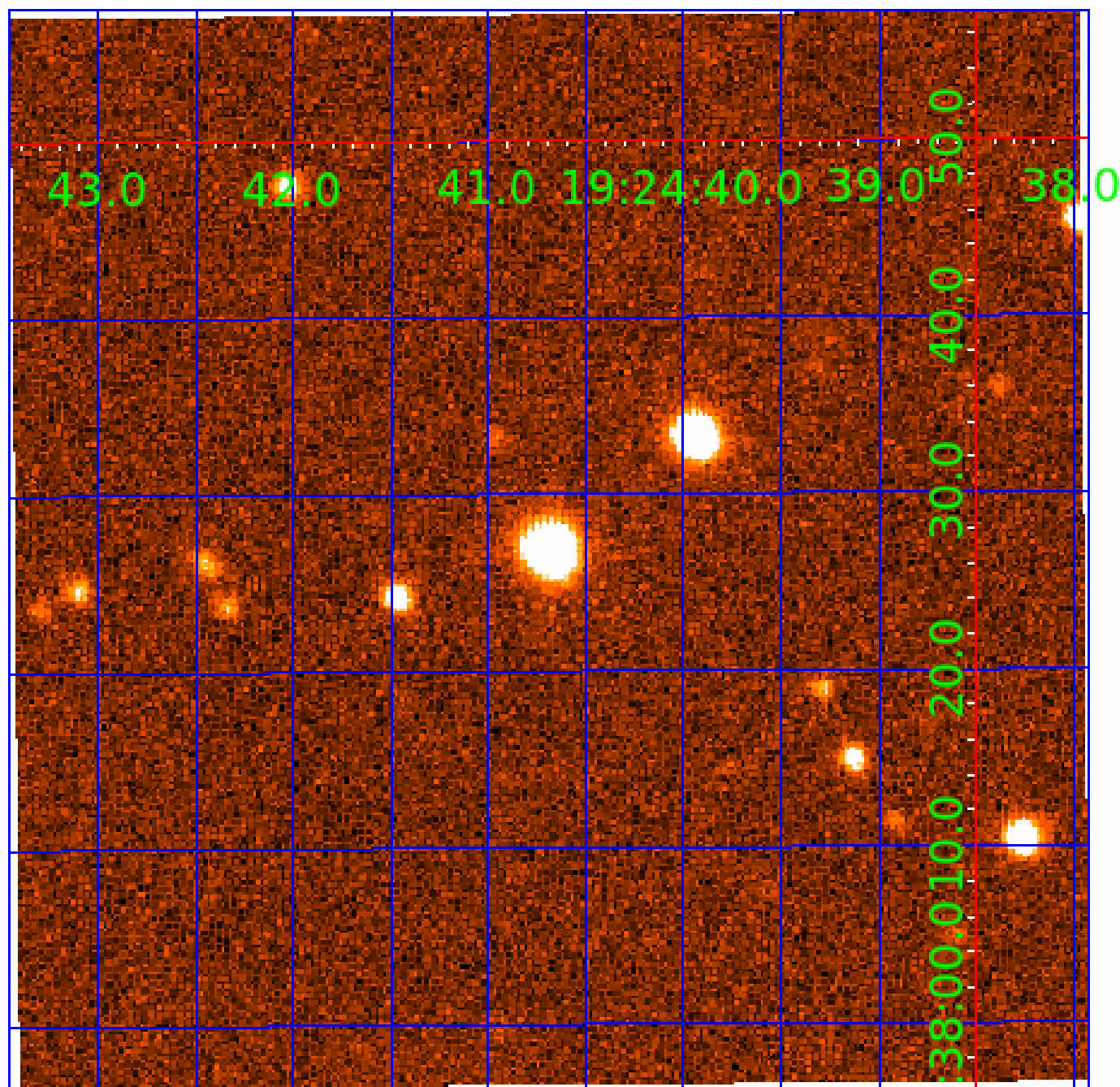


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007115785

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})
007115785-01	OBS	0672.02	41.749450	153.845051	1032.9	5.860	67.5	66.9	0.91	5506	3.25	13.24
007115785-02	OBS	0672.01	16.087845	140.638478	590.4	3.269	47.7	50.3	0.91	5506	2.68	47.23
007115785-03	OBS	0672.03	0.566786	131.831046	27.0	3.681	12.8	12.7	0.91	5506	0.47	4089.26
007115785-04	OBS	No	34.948375	136.272091	404.6	1.608	8.0	6.8	0.91	5506	1.98	16.79
007115785-05	OBS	No	15.458865	132.590079	217.3	2.399	8.7	8.3	0.91	5506	1.54	49.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115785-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-03	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007115785-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
007115785-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS—HALO_GHOST

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.

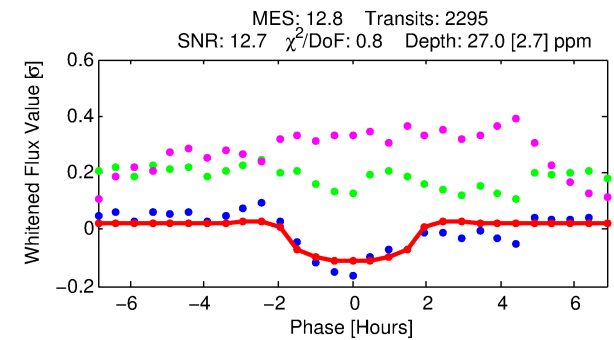
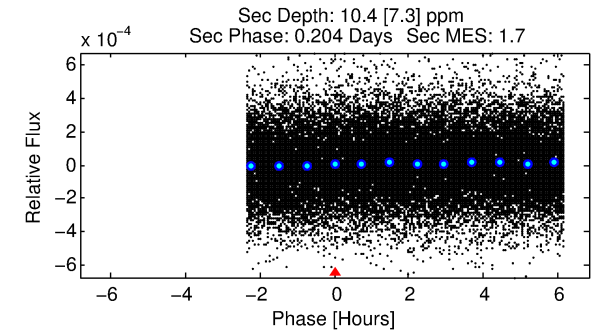
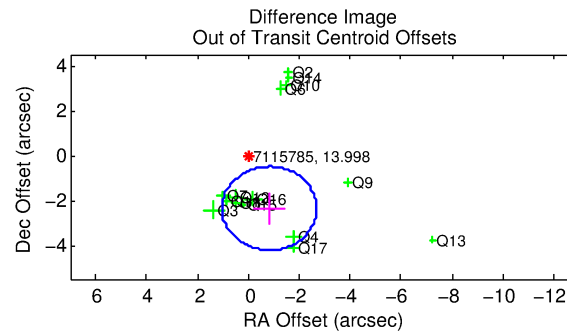
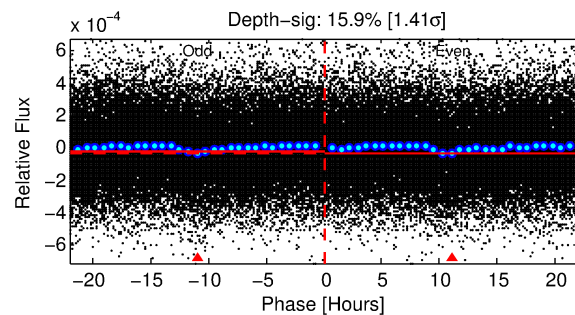
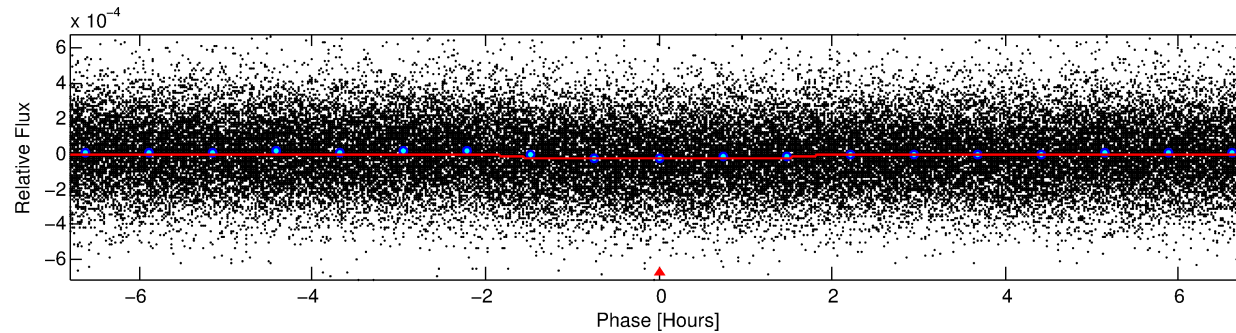
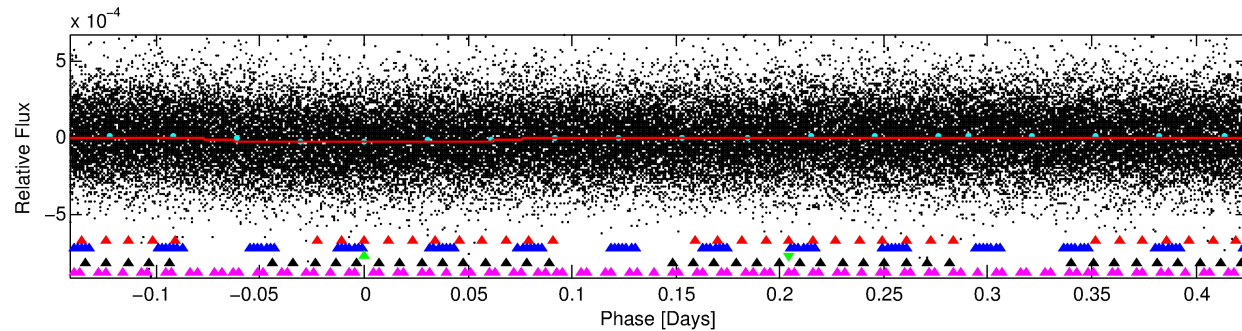
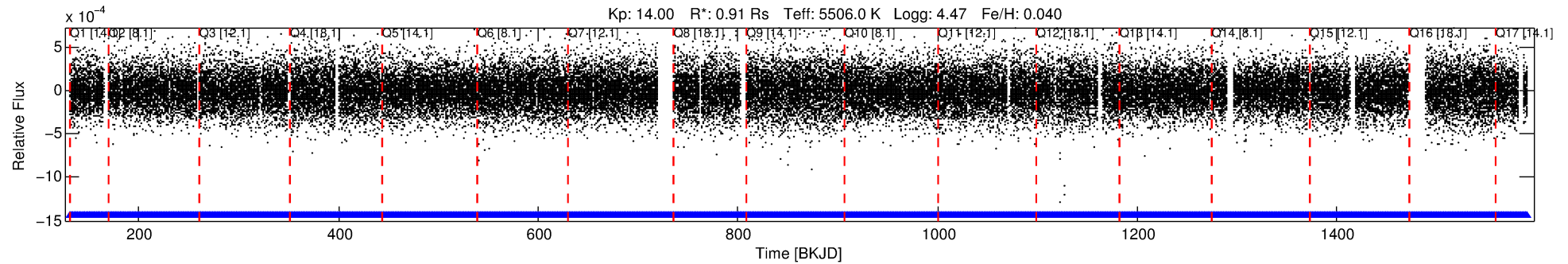
Ephemeris Match Information For 007115785-03

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
007115785-03	7115785	RR-Lyr-pri	7198959	1:1	733.4	39	-181	7.86	14.00	23085.00	Direct-PRF	0	2.44	18.46

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 7115785 Candidate: 3 of 5 Period: 0.567 d
KOI: K00672.03 Corr: 0.934



DV Fit Results:

Period = 0.56679 [0.00001] d
Epoch = 131.8310 [0.0029] BKJD
Rp/R* = 0.0047 [0.0048]
a/R* = 1.34 [2.44]
b = 0.01 [702.23]
Seff = 4089.26 [761.28]
Teq = 2039 [95] K
Rp = 0.47 [0.49] Re
a = 0.0130 [0.0014] AU
Ag = 4.41 [9.68] [0.35 σ]
Teffp = 4569 [2500] K [1.01 σ]

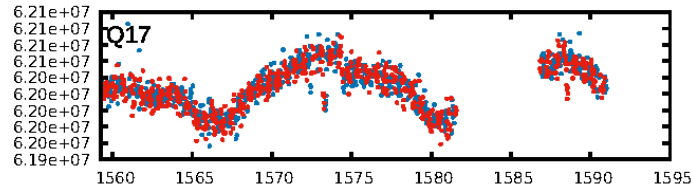
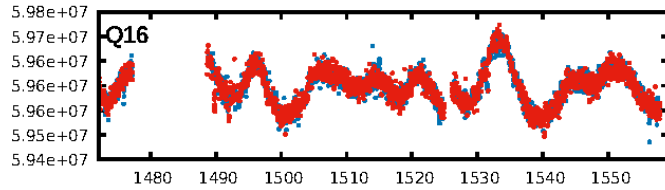
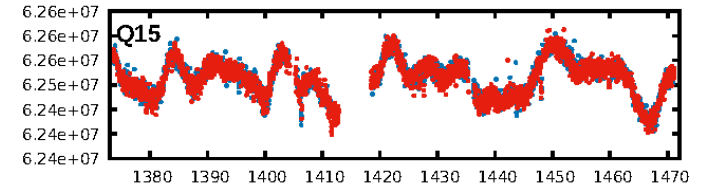
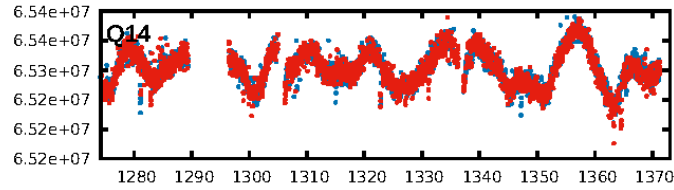
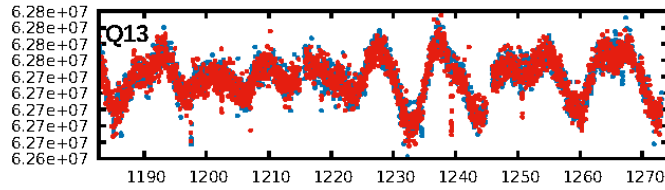
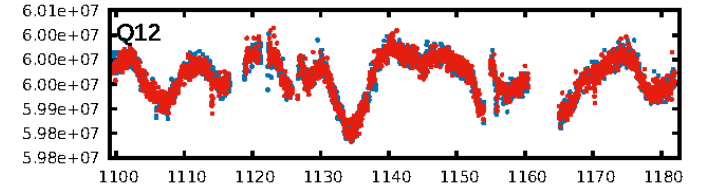
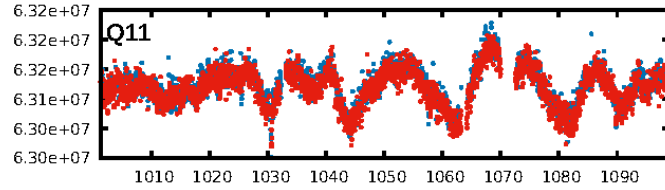
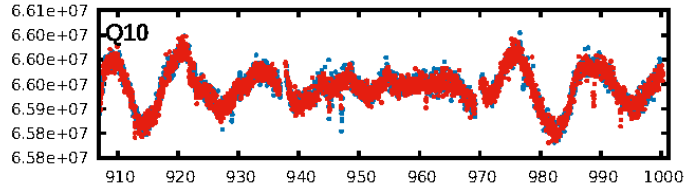
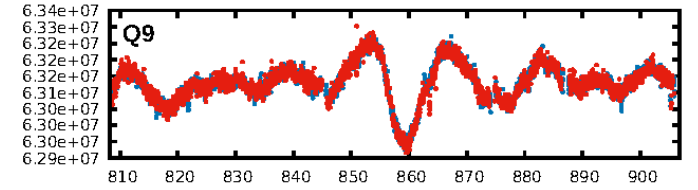
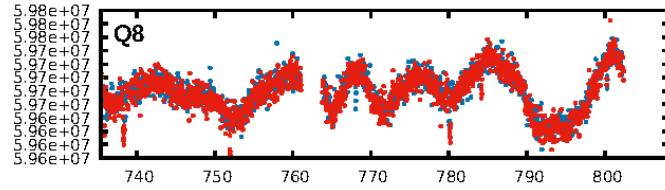
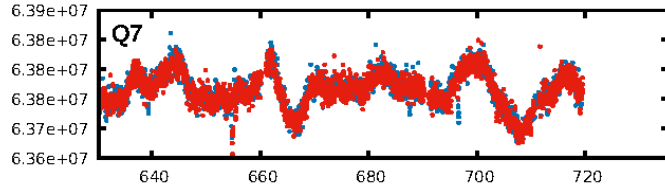
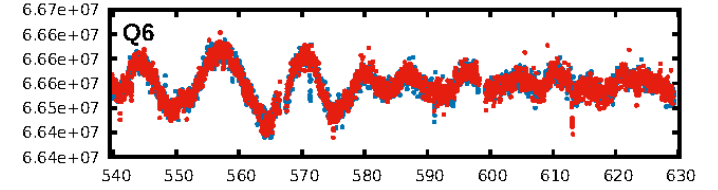
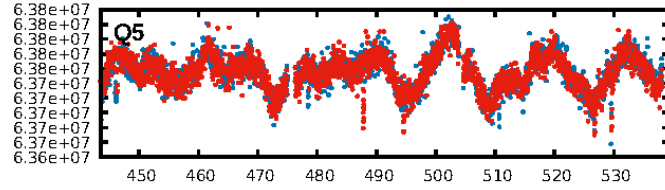
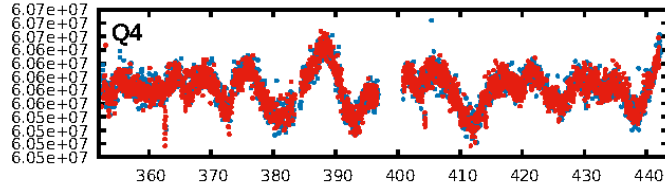
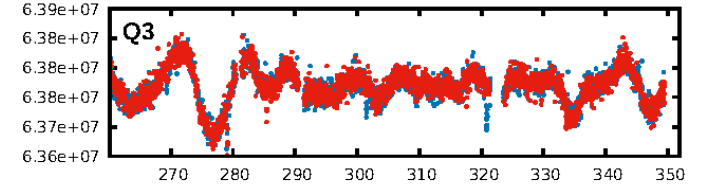
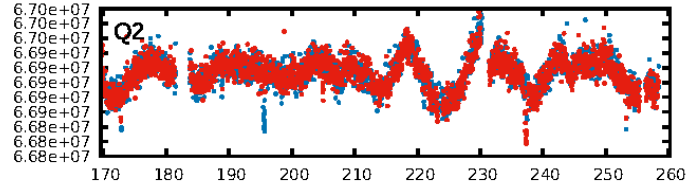
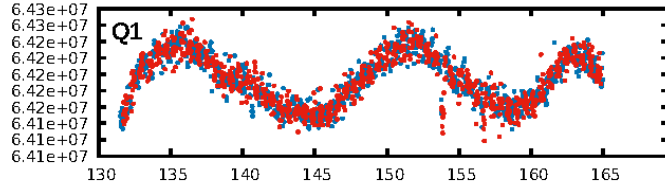
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [81.34 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.35e-25
RollingBand-fgt: 1.00 [2193/2193]
GhostDiagnostic-chr: 0.4449
Centroid-sig: 0.4%
Centroid-so: 1.383 arcsec [1.58 σ]
OotOffset-rm: 2.501 arcsec [4.03 σ]
KicOffset-rm: 2.696 arcsec [3.93 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 1.00 [17/17]

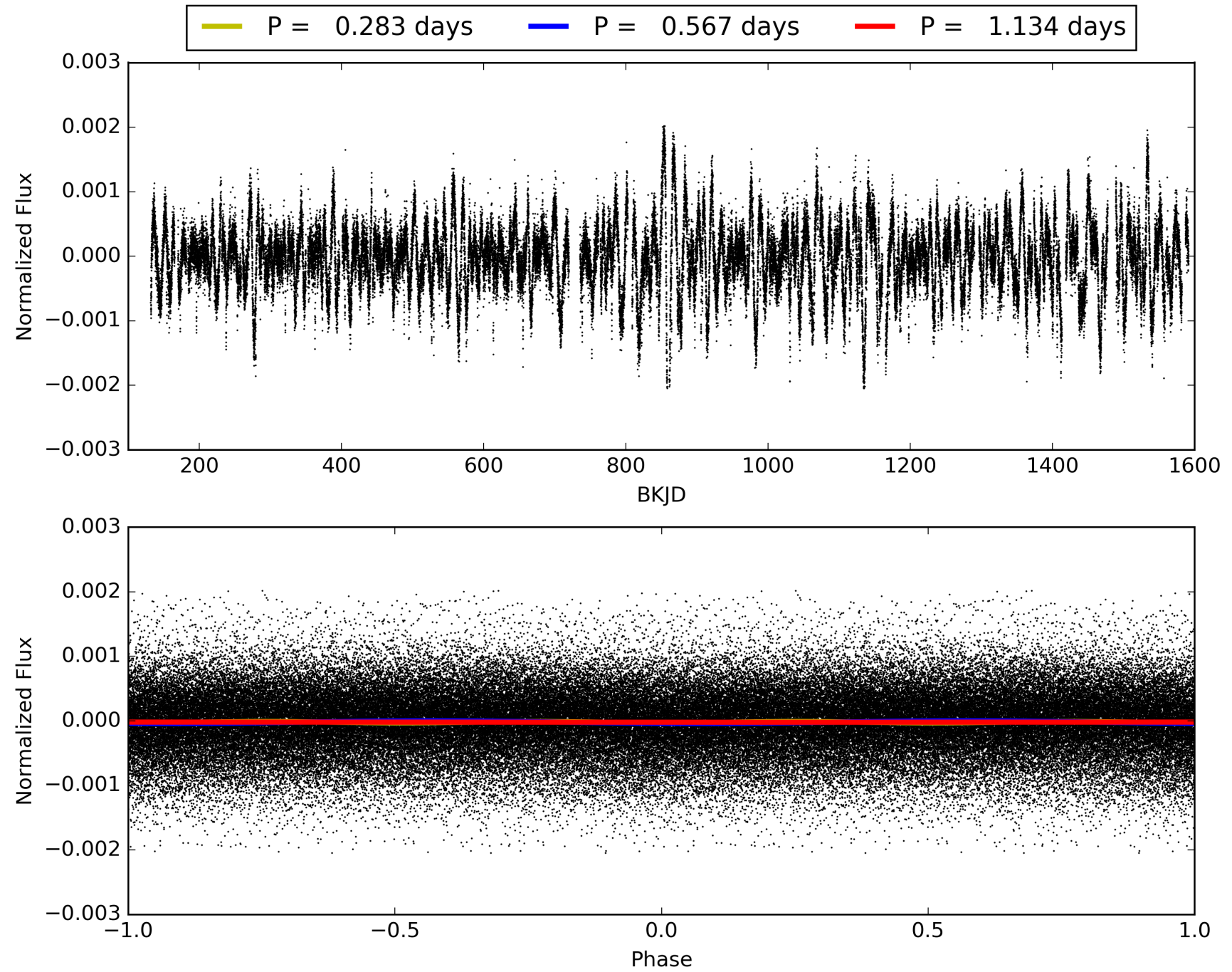
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:29 Z

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

TCE 007115785-03, PDC Light Curves

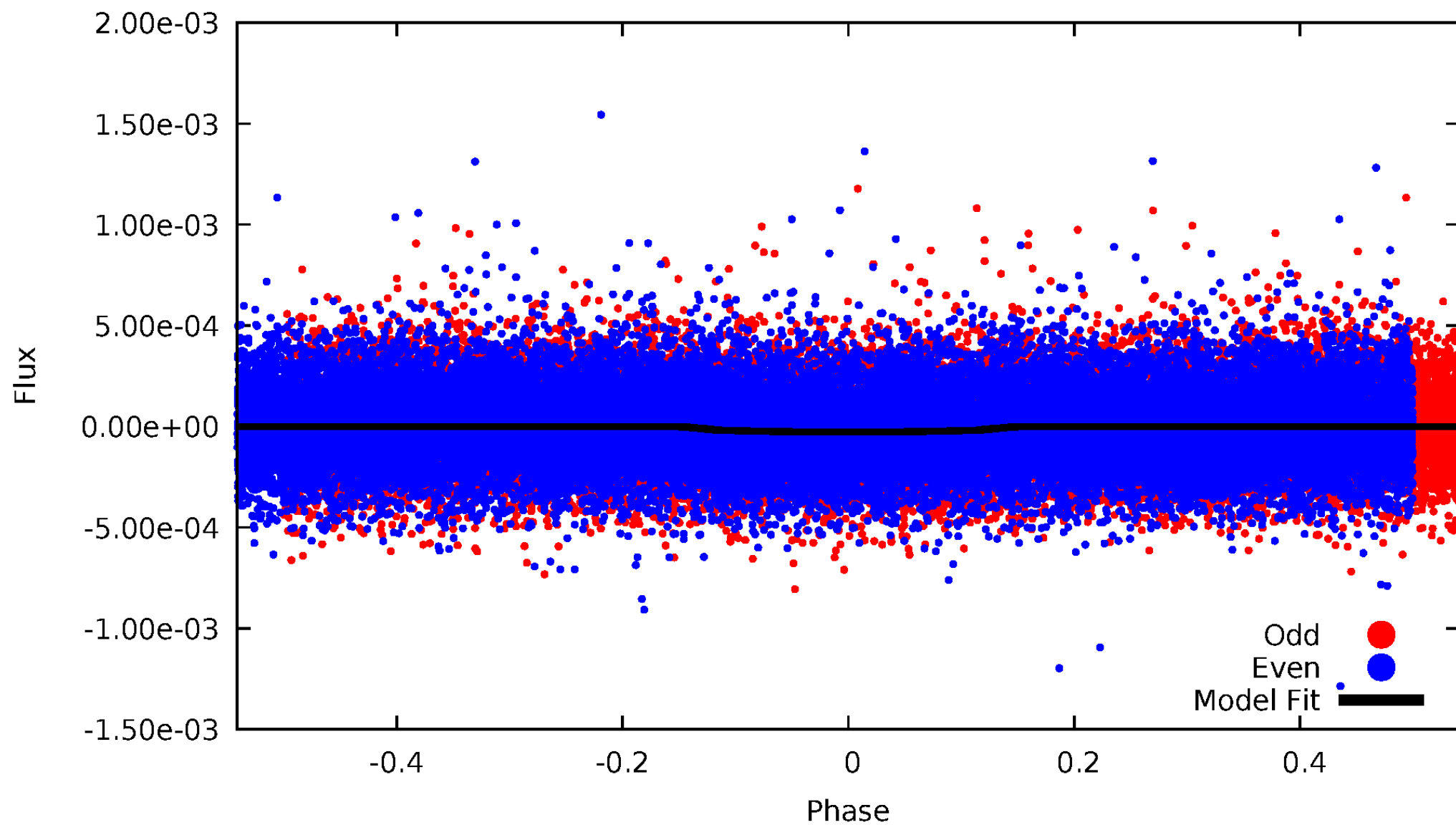


TCE 007115785-03



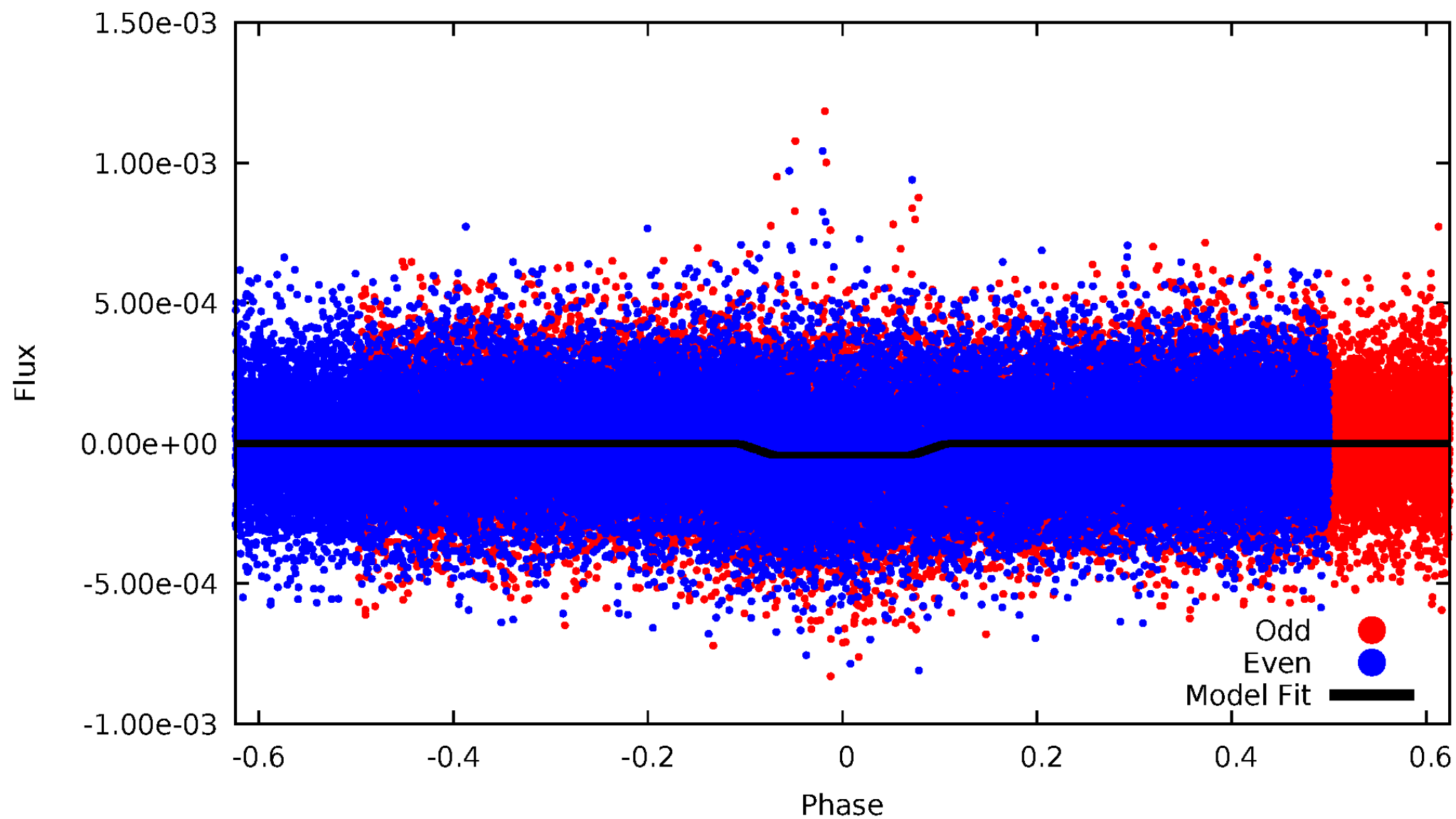
DV Odd/Even

TCE 007115785-03



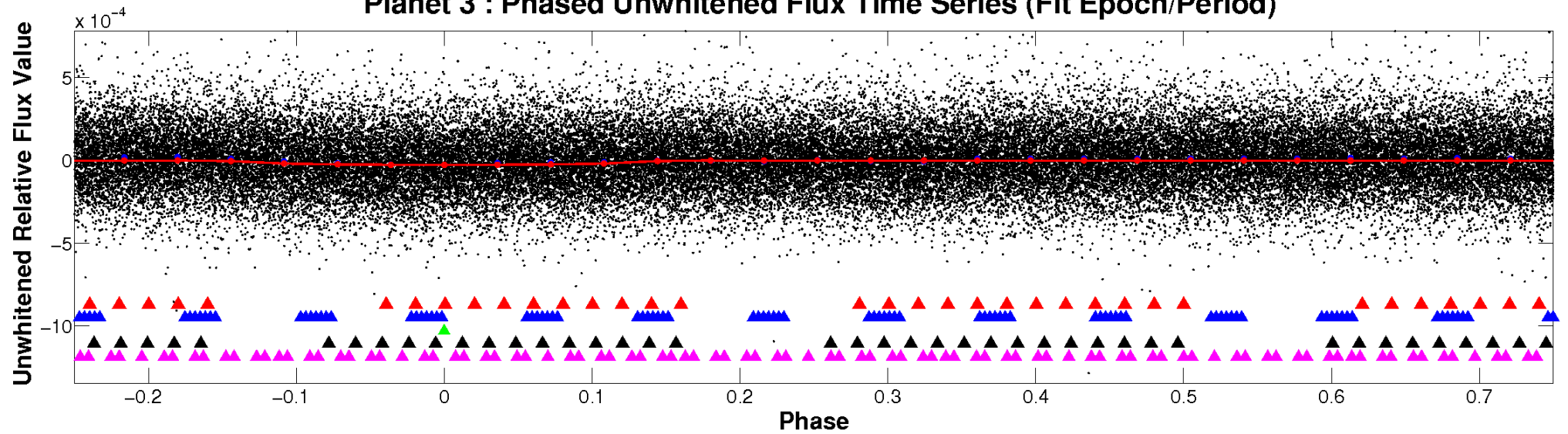
ALT Odd/Even

TCE 007115785-03

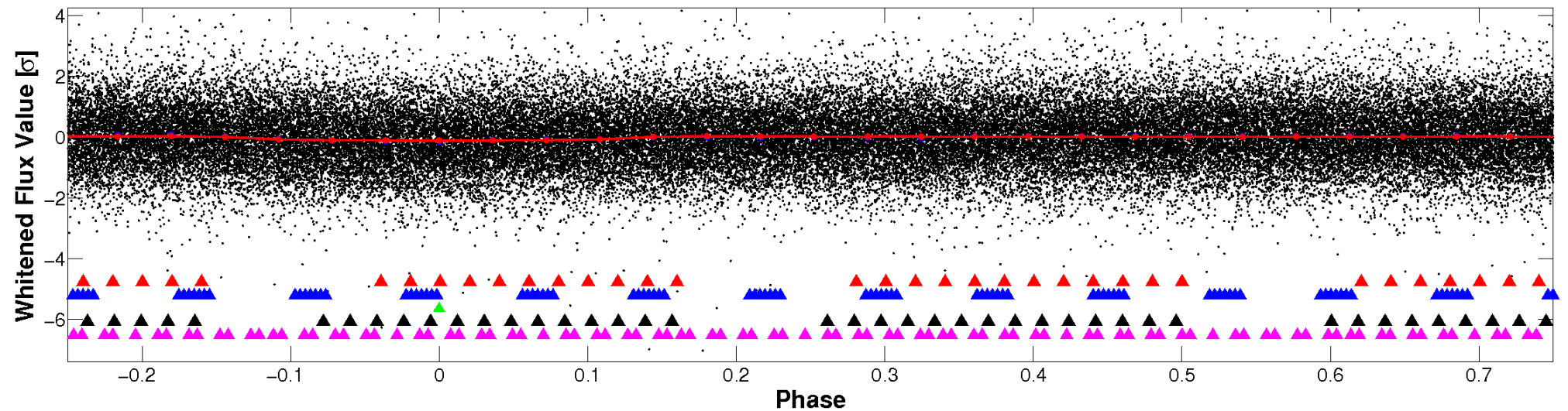


Non-Whitened Vs. Whitened Light Curve

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

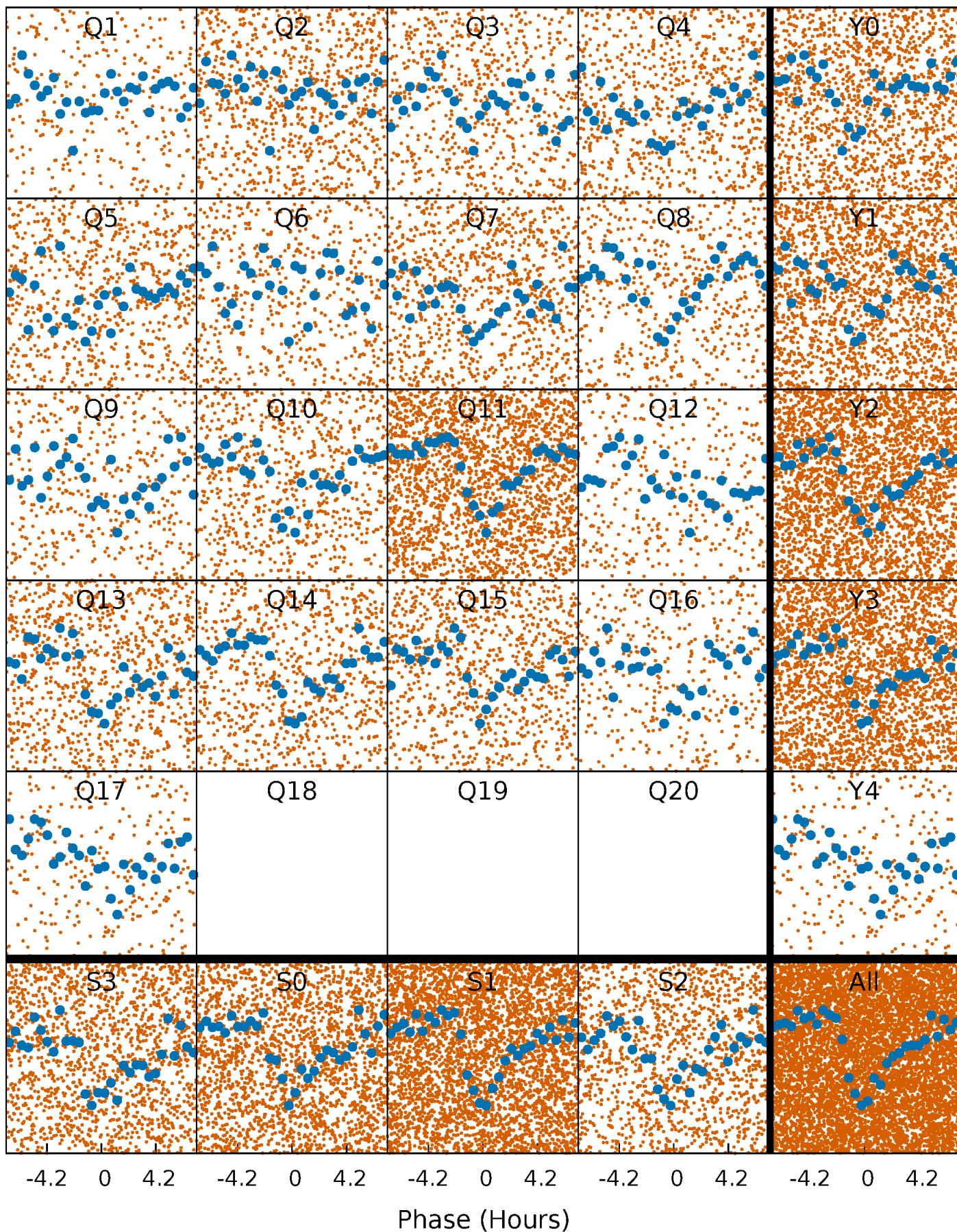


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



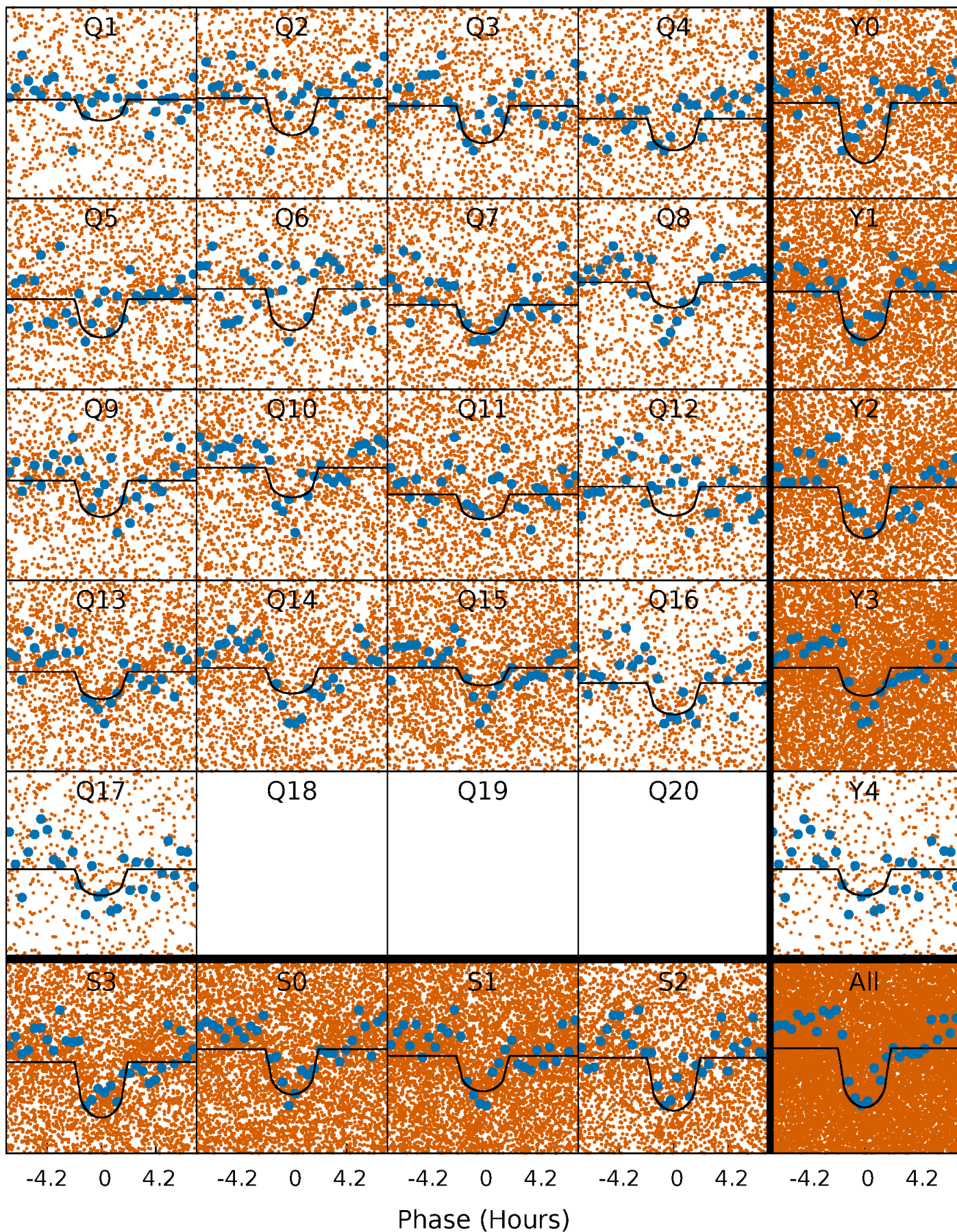
PDC Quarter-Phased Transit Curves

TCE 007115785-03 P= 0.566786 Days $T_0=131.831047$ (BKJD)



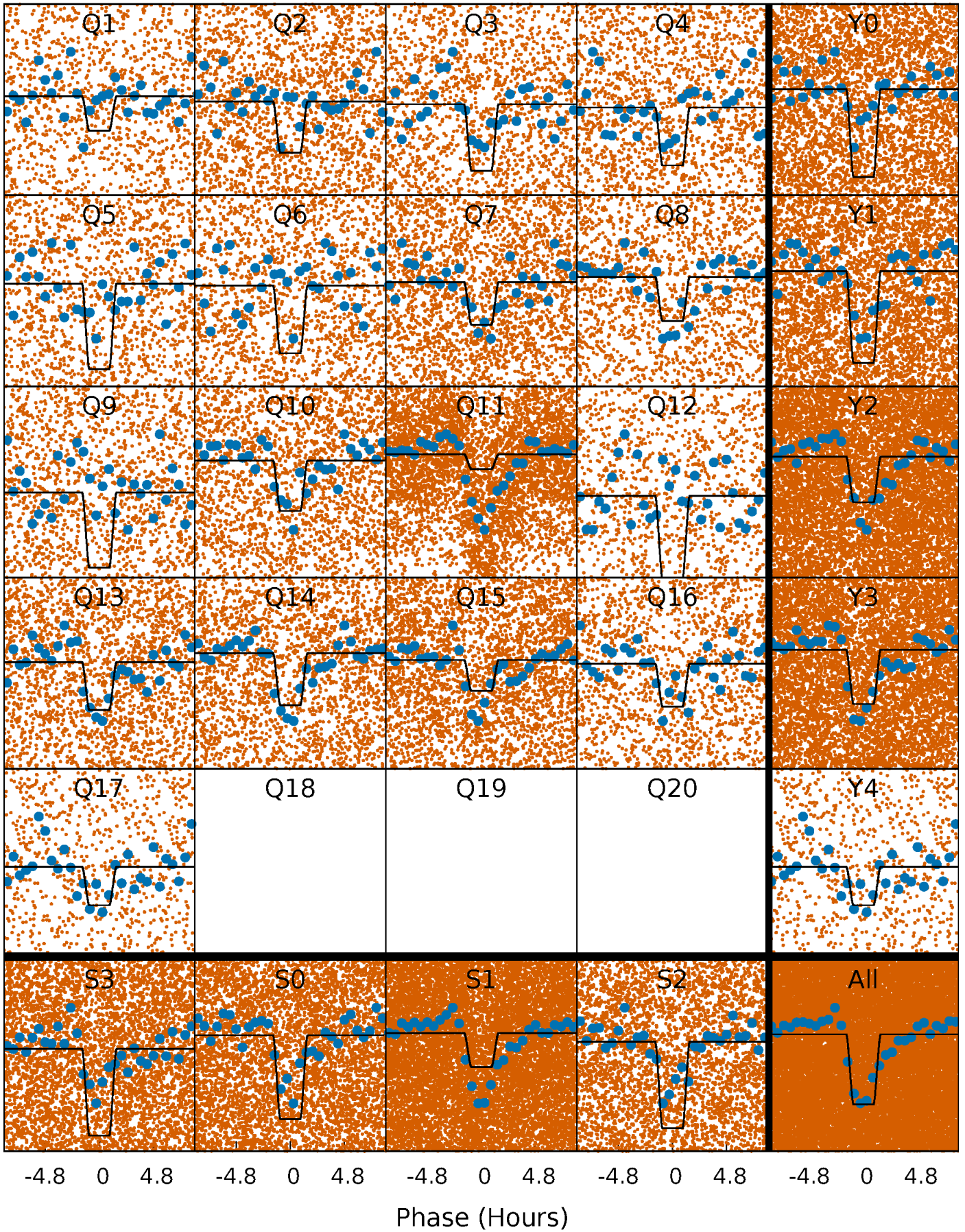
DV Quarter-Phased Transit Curves

TCE 007115785-03 P= 0.566786 Days $T_0=131.831047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

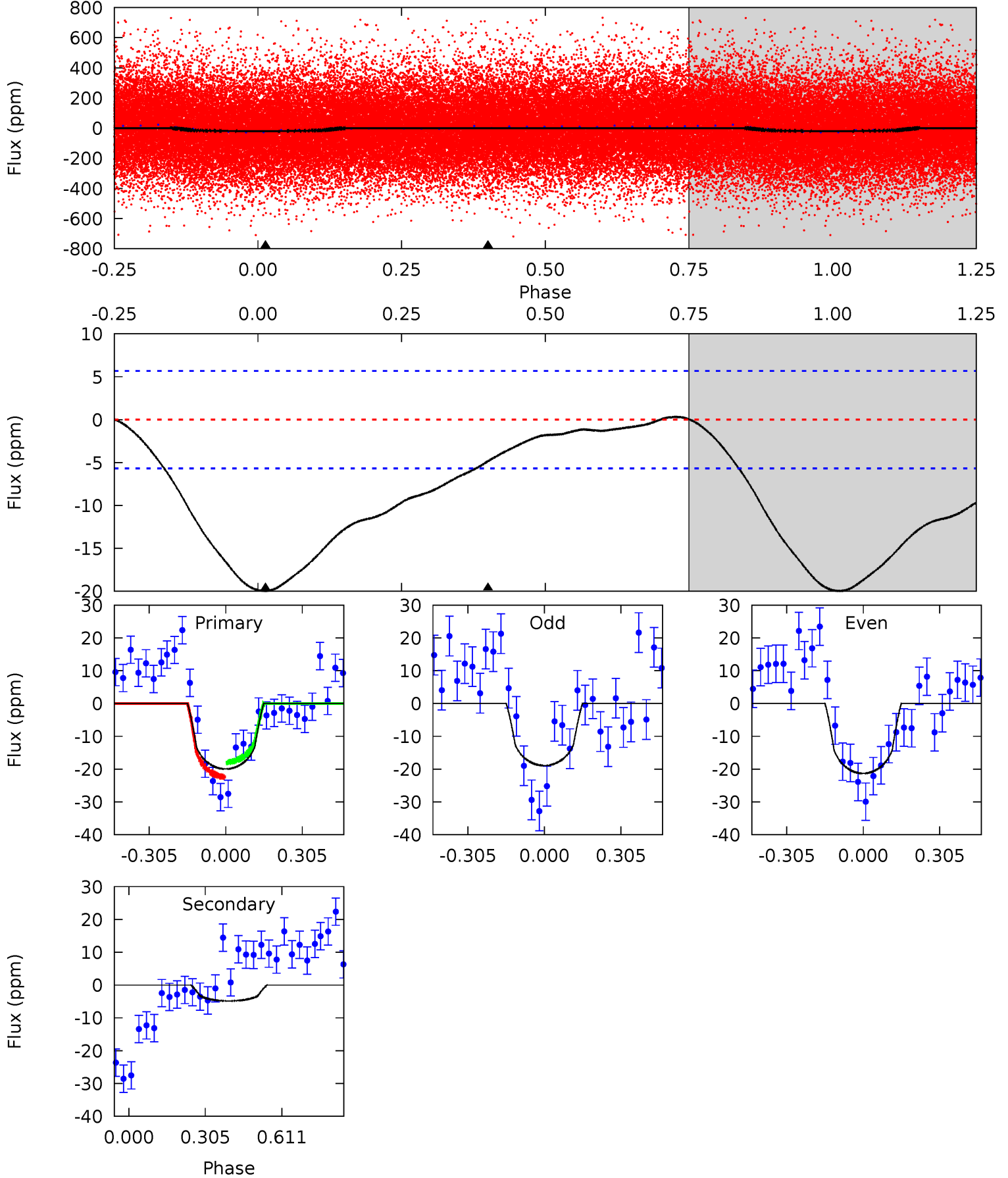
TCE 007115785-03 P= 0.566808 Days $T_0=131.795388$ (BKJD)



DV Model-Shift Uniqueness Test

007115785-03, P = 0.566786 Days, E = 131.264261 Days

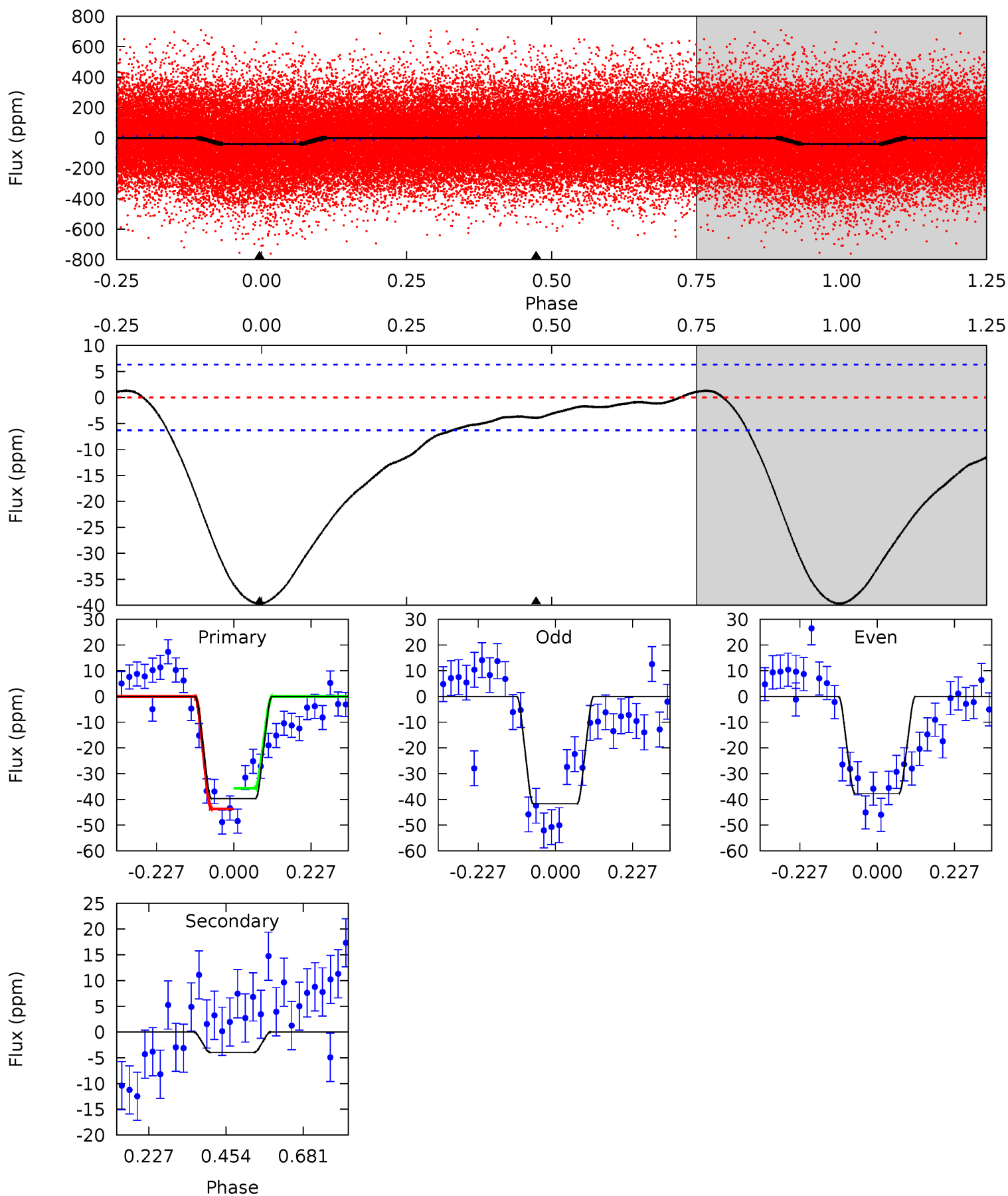
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	3.70	0	0	4.32	1.02	0.28	15.2	15.2	3.70	3.70	0.91	1.02	0.02	1.69



Alt Model-Shift Uniqueness Test

007115785-03, P = 0.566808 Days, E = 131.228580 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	2.74	0	0	4.39	1.21	3.94	27.6	27.6	2.74	2.74	1.36	1.01	0.03	2.82



Stellar Parameters For KIC 007115785

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5506^{+110}_{-1}	$4.473^{+0.064}_{-0.096}$	$0.040^{+0.150}_{-0.150}$	$0.914^{+0.111}_{-0.074}$	$0.904^{+0.056}_{-0.050}$	$1.667^{+0.416}_{-0.474}$
	+2%/-0%	+1%/-2%	+375%/-375%	+12%/-8%	+6%/-6%	+25%/-28%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 007115785-03 / KOI 0672.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$0.56^{+0.41}_{-0.35}$	2852^{+99}_{-111}	3646^{+1865}_{-1002}	$1.417^{+8.665}_{-0.997}$
Alt.	-4 ± 1	$0.74^{+0.47}_{-0.45}$	2852^{+116}_{-116}	3027^{+1449}_{-5574}	$0.637^{+3.214}_{-0.434}$

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

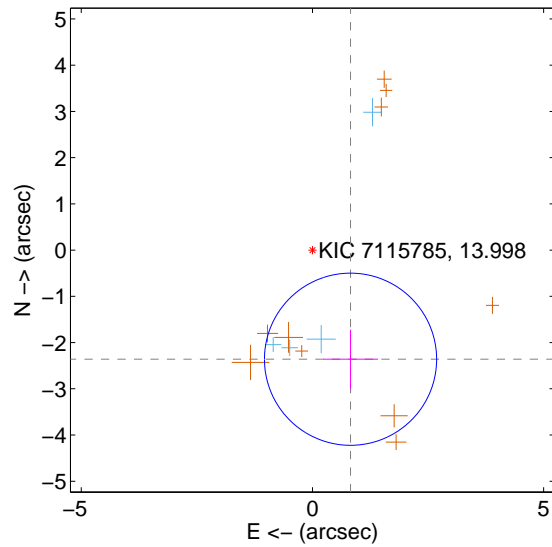
Supplemental centroid analysis for 007115785-03. Kepler magnitude: 14.00. Transit SNR 12.73

There are 4 quarters with good PRF difference image offsets

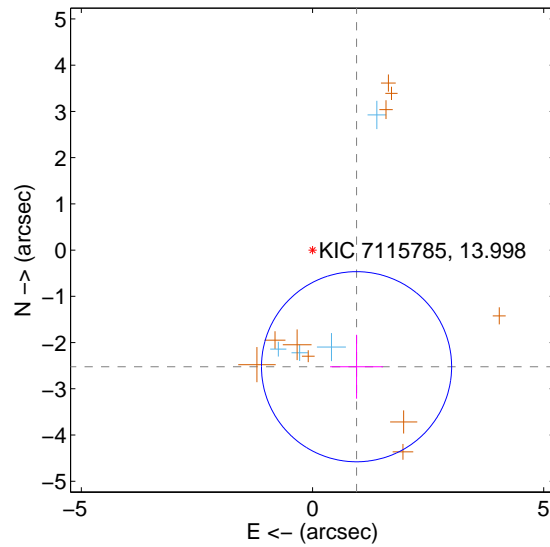
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.501 ± 0.621	4.03	-0.824 ± 0.594	-2.361 ± 0.640
PRF-fit source offset from KIC position	2.696 ± 0.685	3.93	-0.952 ± 0.573	-2.523 ± 0.691
photometric centroid source offset	1.38 ± 0.87	1.58	0.35 ± 1.05	-1.34 ± 0.86

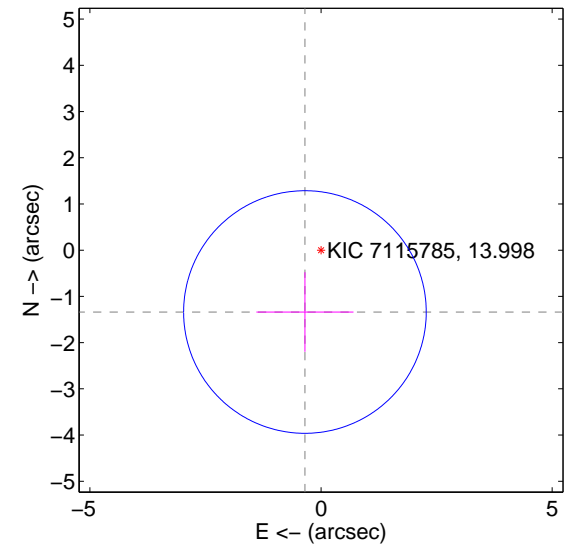
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

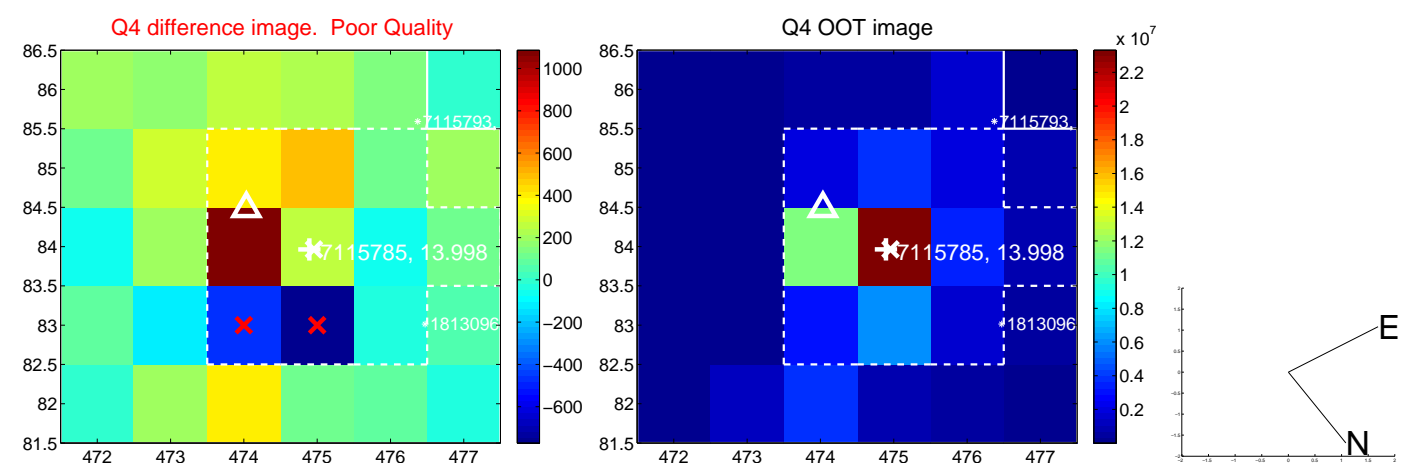
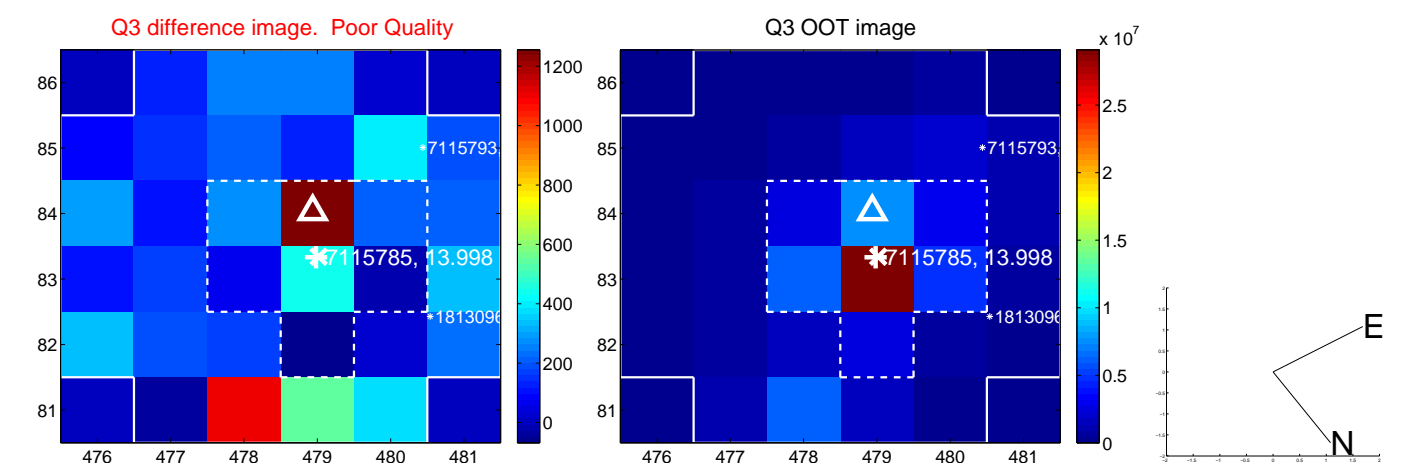
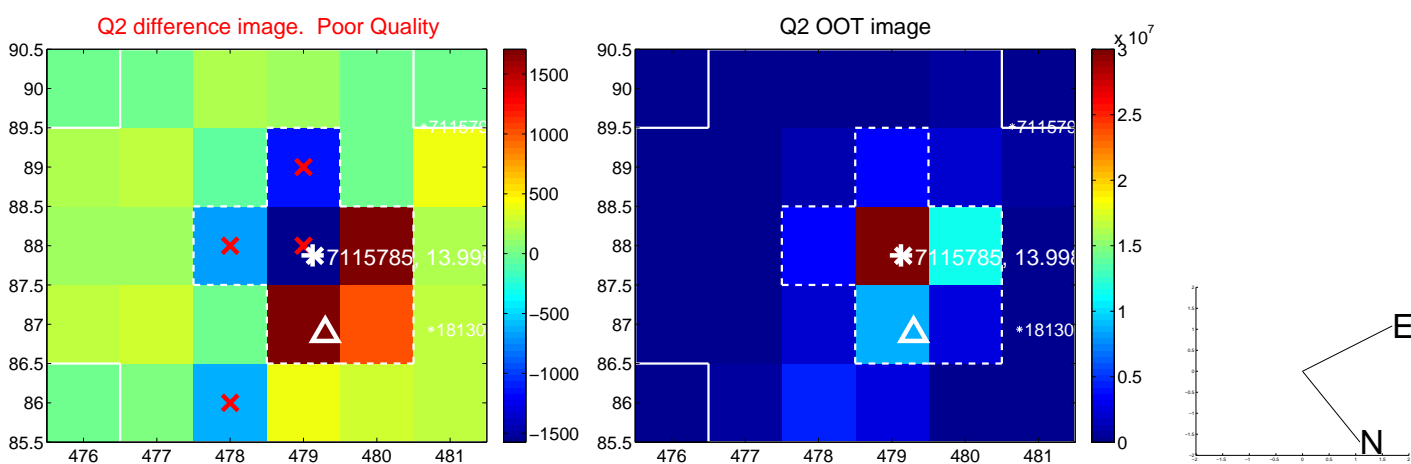
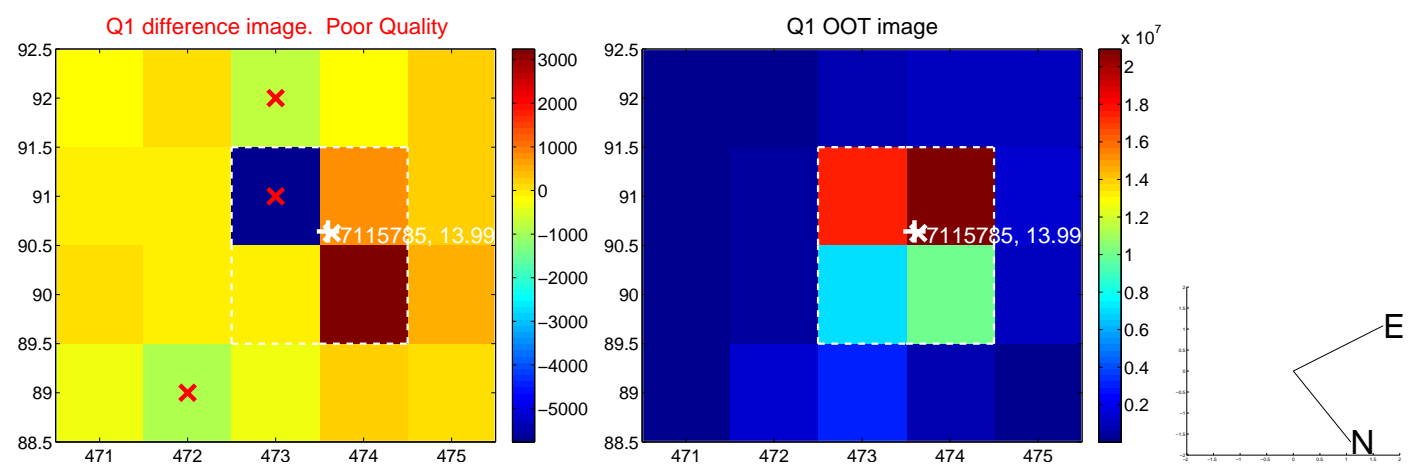


offset from photometric centroids

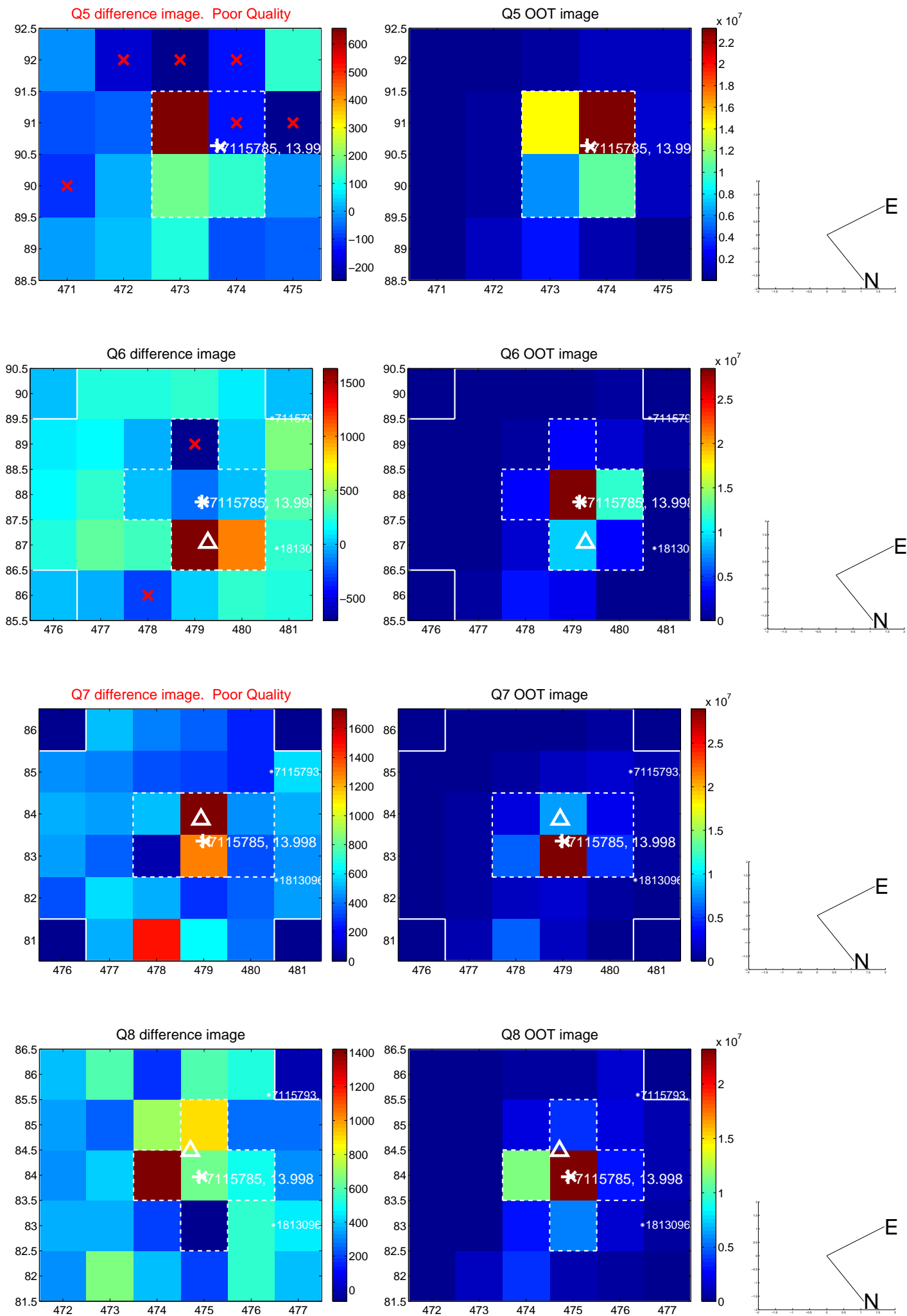


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

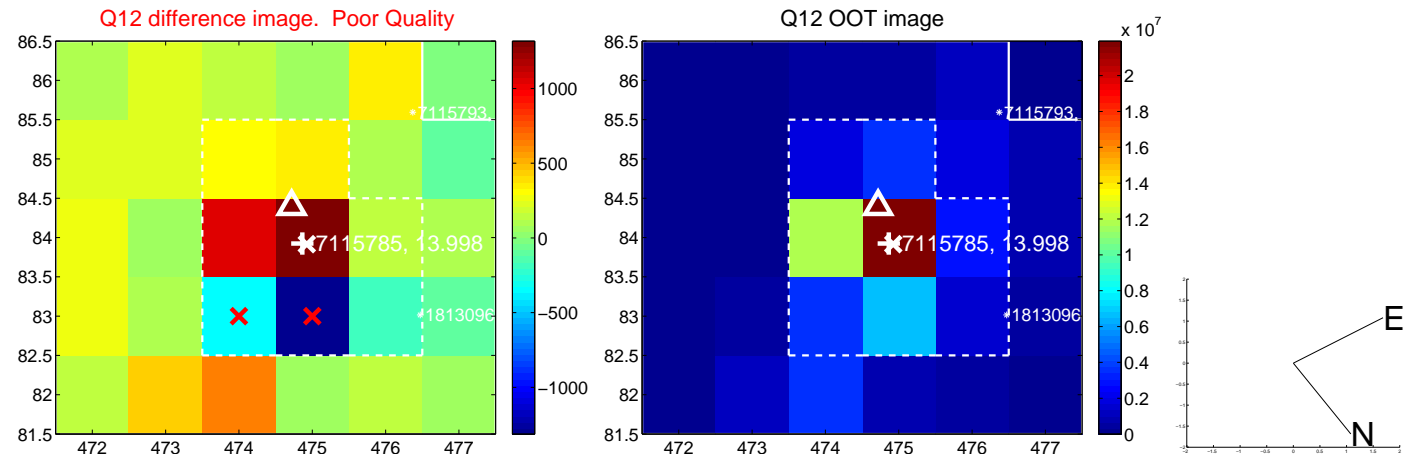
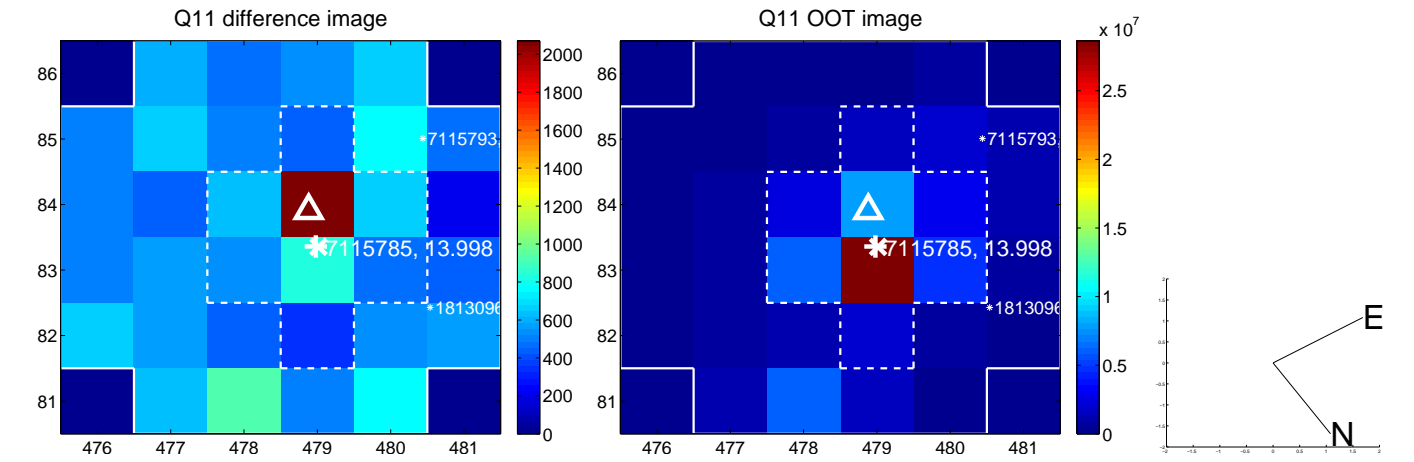
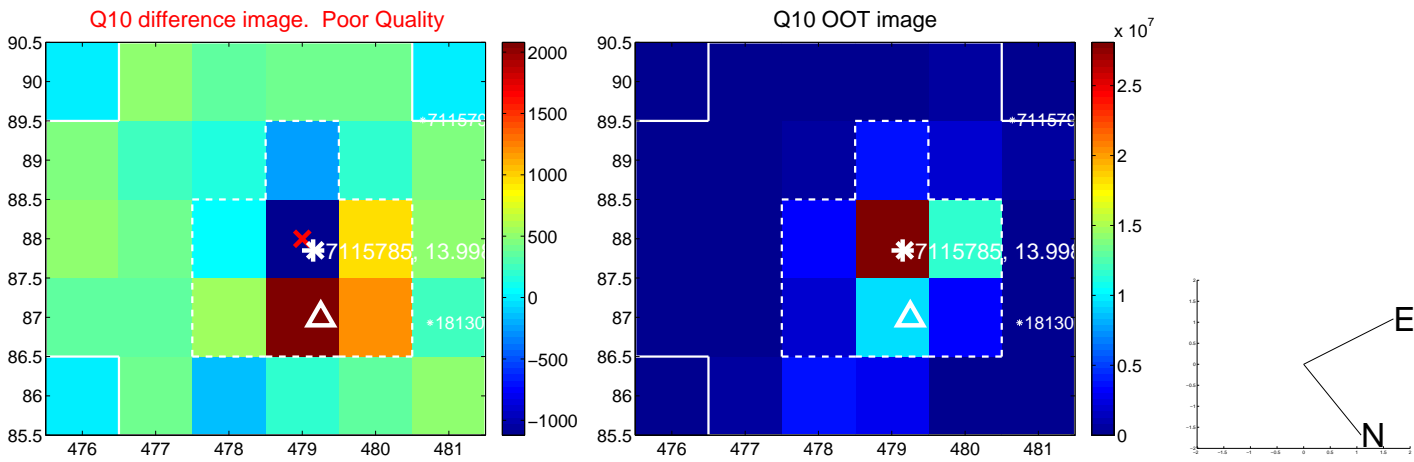
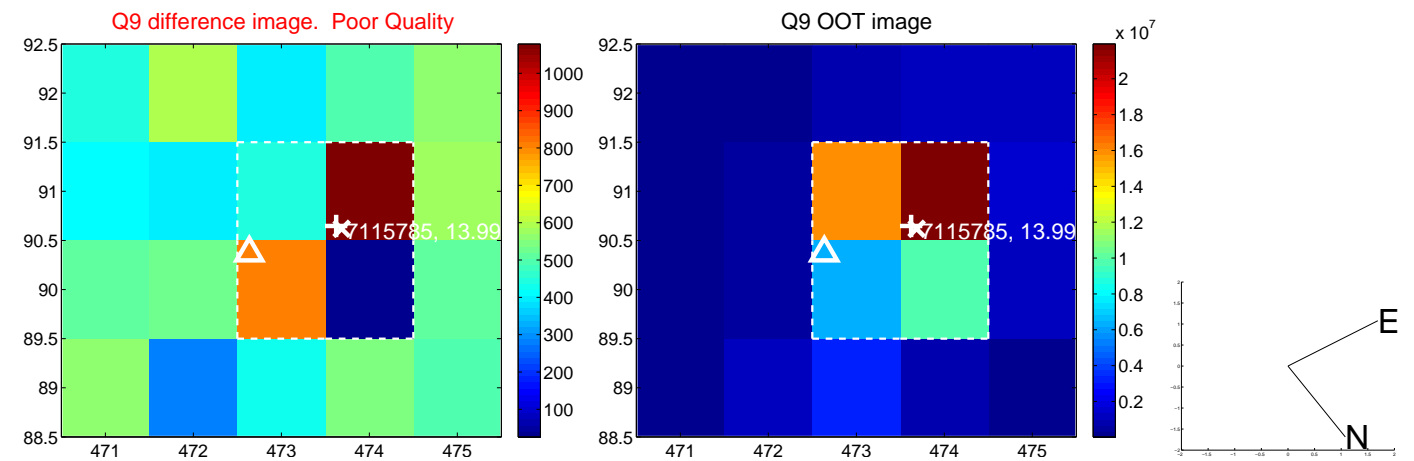
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



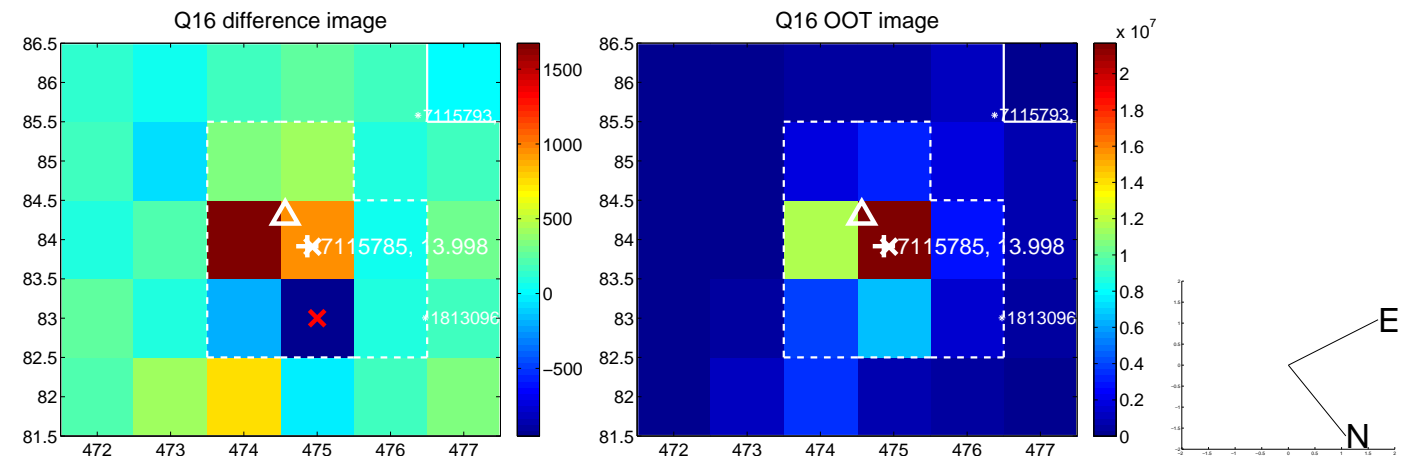
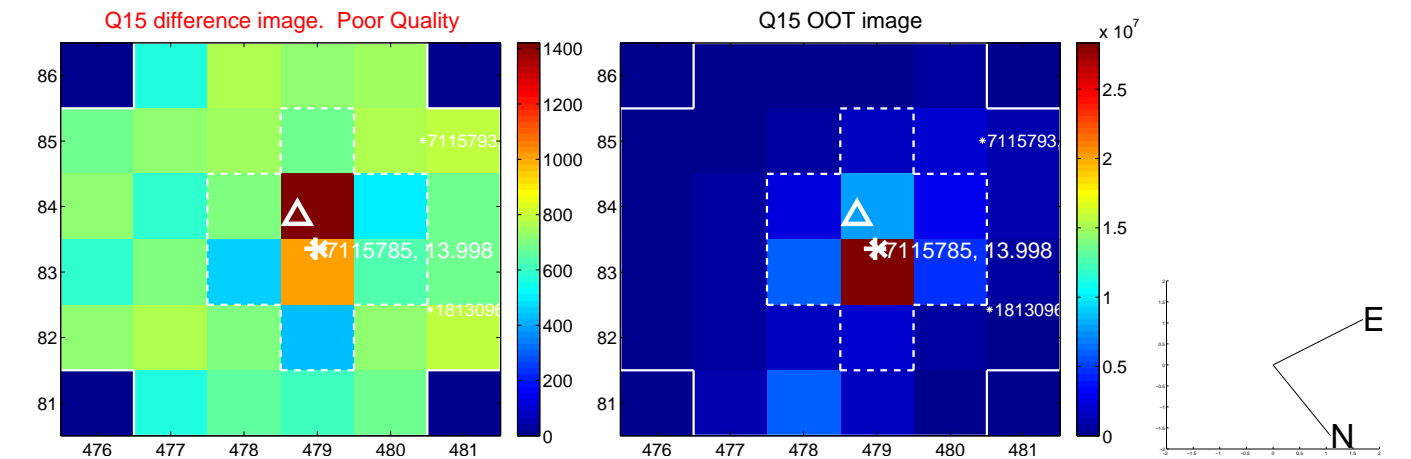
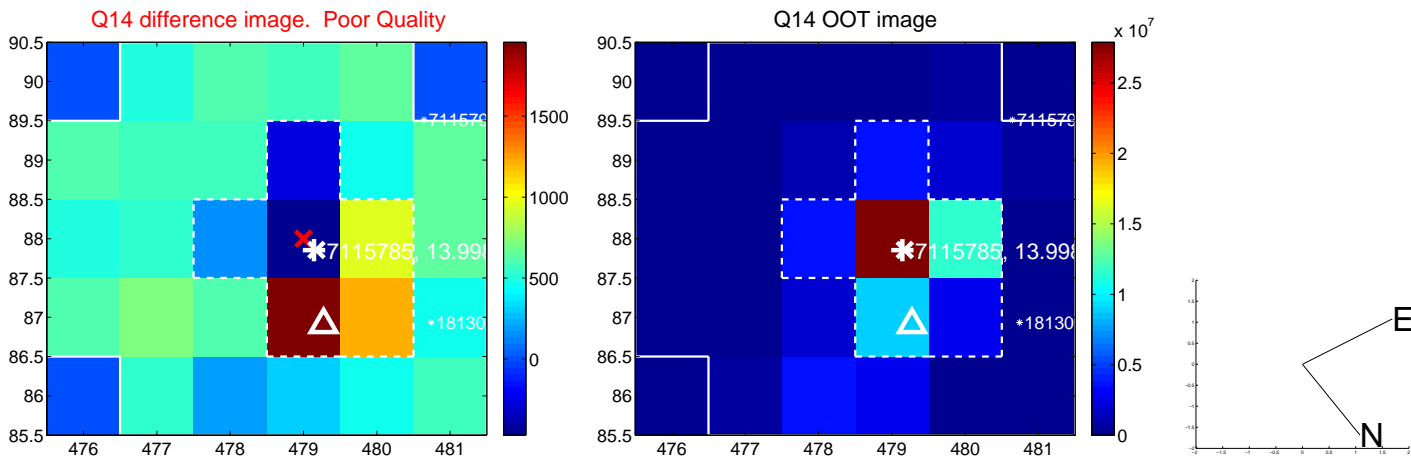
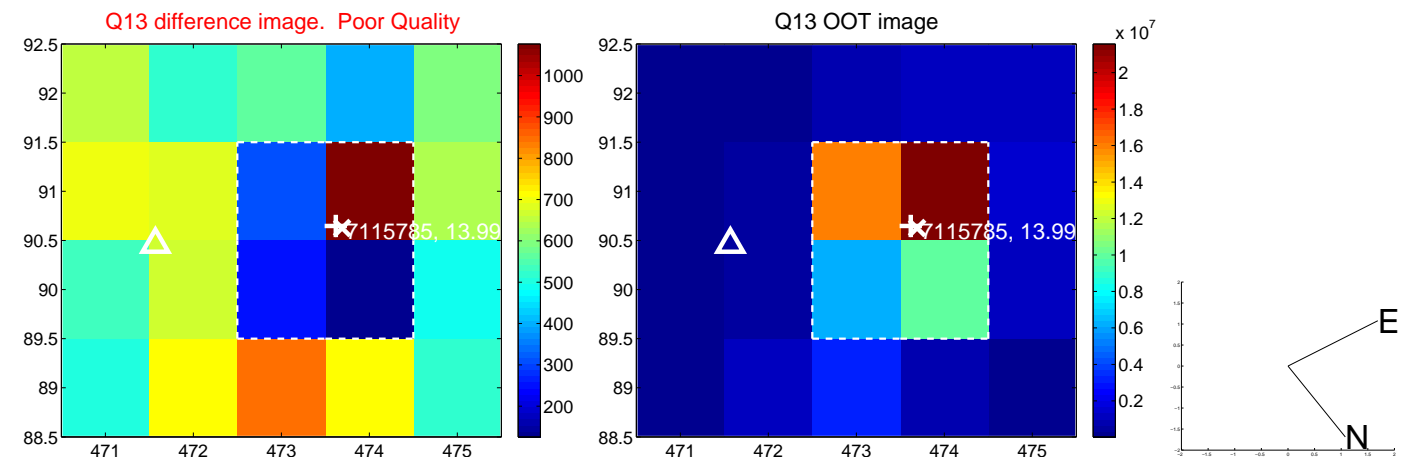
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



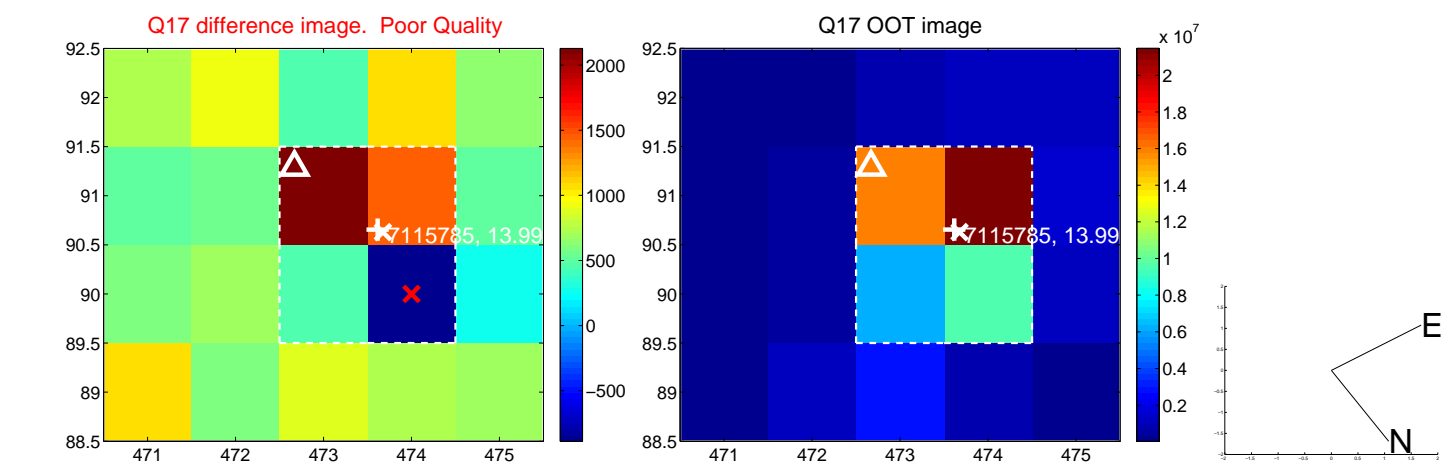
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



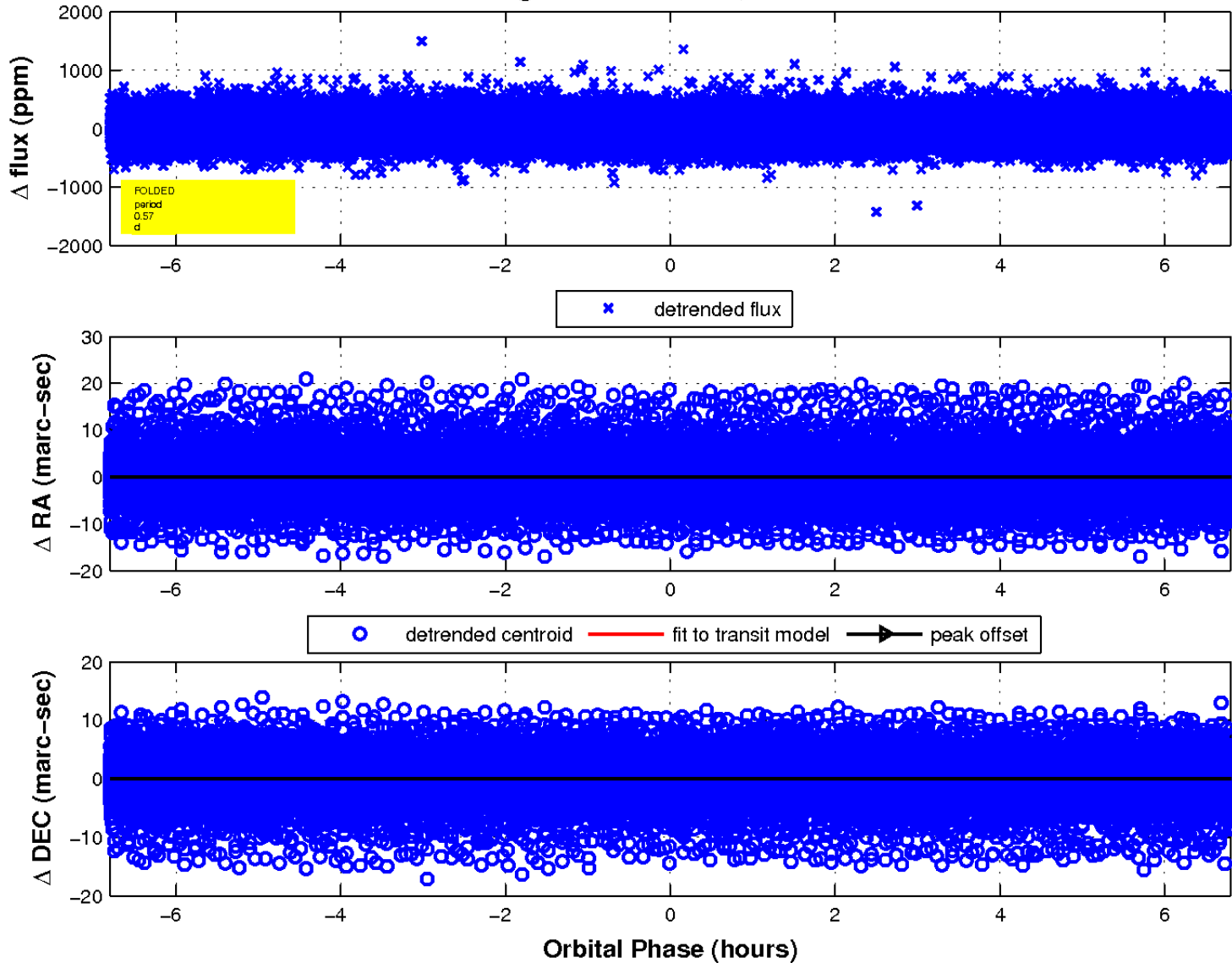
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

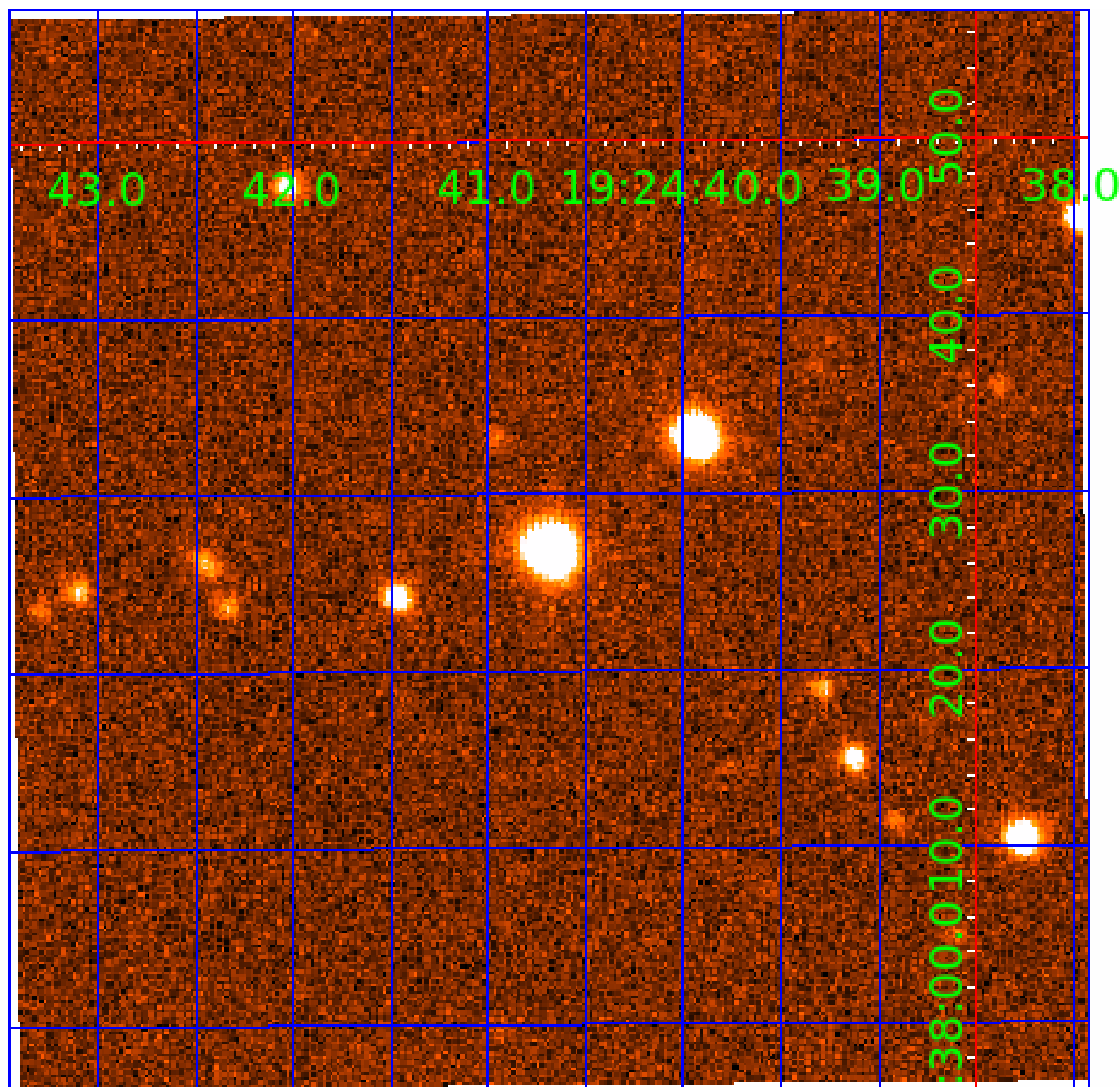


fluxWeightedCentroids, Planet 3 of 5



UKIRT Image

Declination



KIC 007115785

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})
007115785-01	OBS	0672.02	41.749450	153.845051	1032.9	5.860	67.5	66.9	0.91	5506	3.25	13.24
007115785-02	OBS	0672.01	16.087845	140.638478	590.4	3.269	47.7	50.3	0.91	5506	2.68	47.23
007115785-03	OBS	0672.03	0.566786	131.831046	27.0	3.681	12.8	12.7	0.91	5506	0.47	4089.26
007115785-04	OBS	No	34.948375	136.272091	404.6	1.608	8.0	6.8	0.91	5506	1.98	16.79
007115785-05	OBS	No	15.458865	132.590079	217.3	2.399	8.7	8.3	0.91	5506	1.54	49.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115785-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-03	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007115785-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
007115785-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

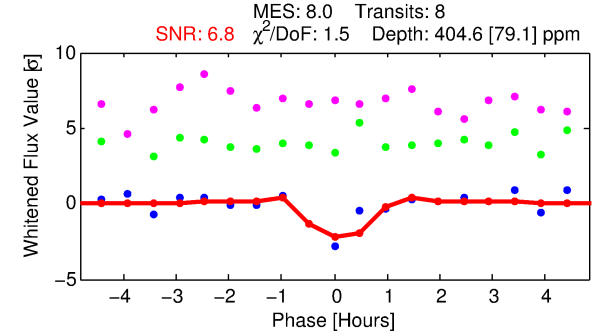
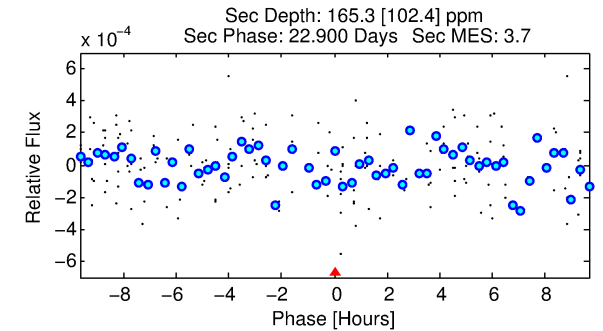
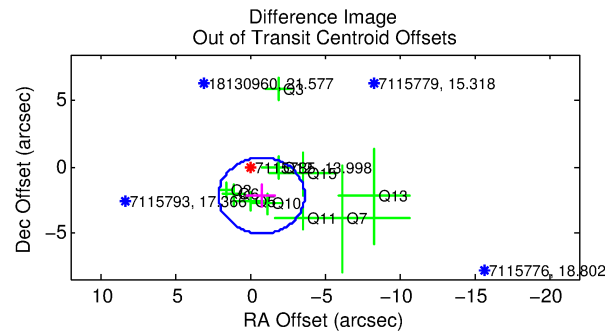
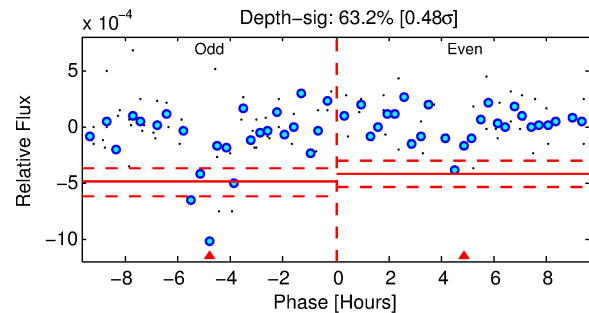
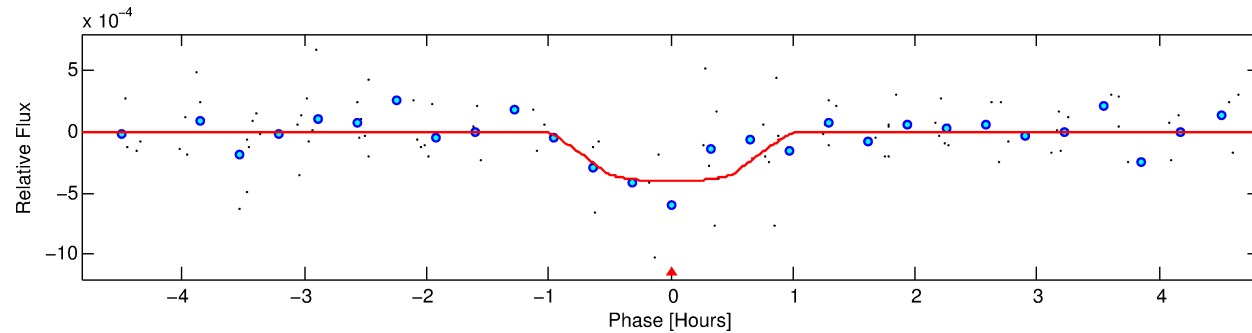
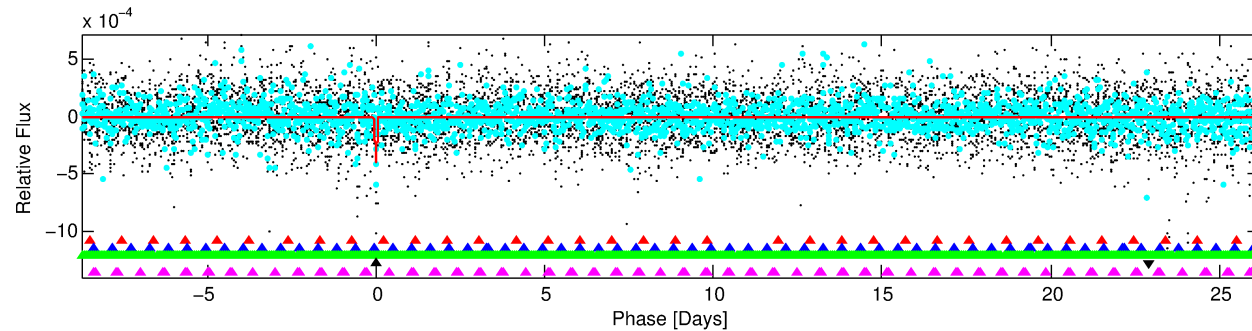
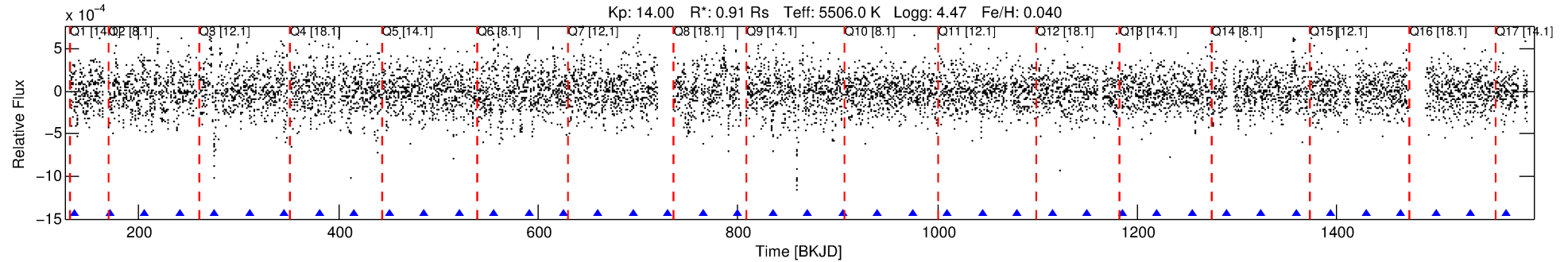
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007115785-04

No Significant Match Found

DV One-Page Summary

KIC: 7115785 Candidate: 4 of 5 Period: 34.948 d
KOI: K00672 Name: Kepler-209 Corr: No Ephemeris Match



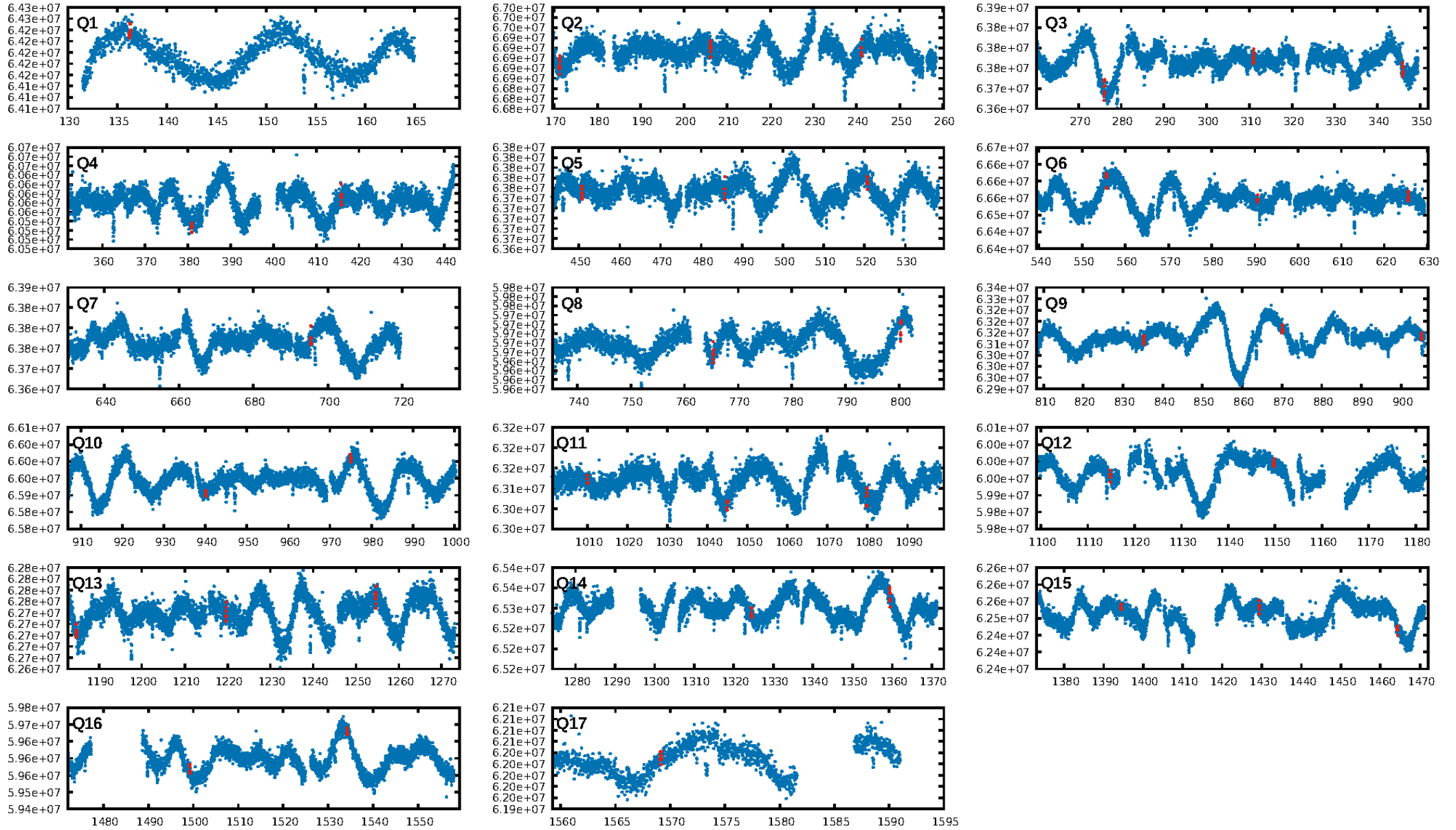
DV Fit Results:

Period = 34.94838 [0.00029] d
Epoch = 136.2721 [0.0059] BKJD
Rp/R* = 0.0199 [0.0995]
a/R* = 120.55 [2427.36]
b = 0.72 [13.97]
Seff = 16.79 [3.13]
Teq = 516 [24] K
Rp = 1.98 [9.92] Re
a = 0.2024 [0.0222] AU
Ag = 950.16 [9538.53] [0.10 σ]
Teffp = 4431 [11118] K [0.35 σ]

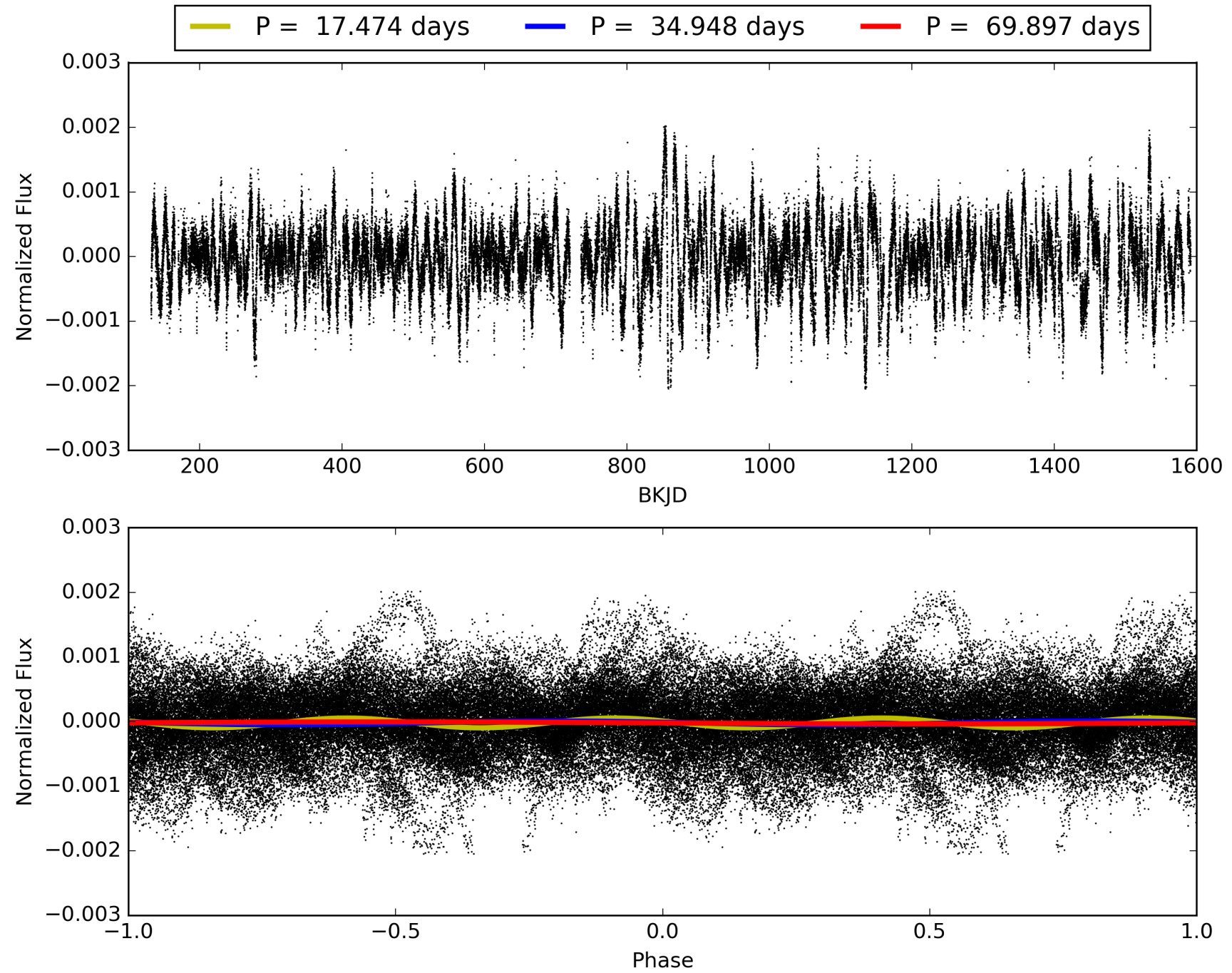
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [124.26 σ]
LongPeriod-sig: 100.0% [26.86 σ]
ModelChiSquare2-sig: 13.5%
ModelChiSquareGof-sig: 85.9%
Bootstrap-pfa: 8.64e-10
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.1023
Centroid-sig: 57.0%
Centroid-so: 0.681 arcsec [0.93 σ]
OotOffset-rm: 2.327 arcsec [2.43 σ]
OotOffset-st: 3/4/1/2 [10]
KicOffset-rm: 2.525 arcsec [2.85 σ]
KicOffset-st: 3/4/1/2 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 007115785-04, PDC Light Curves

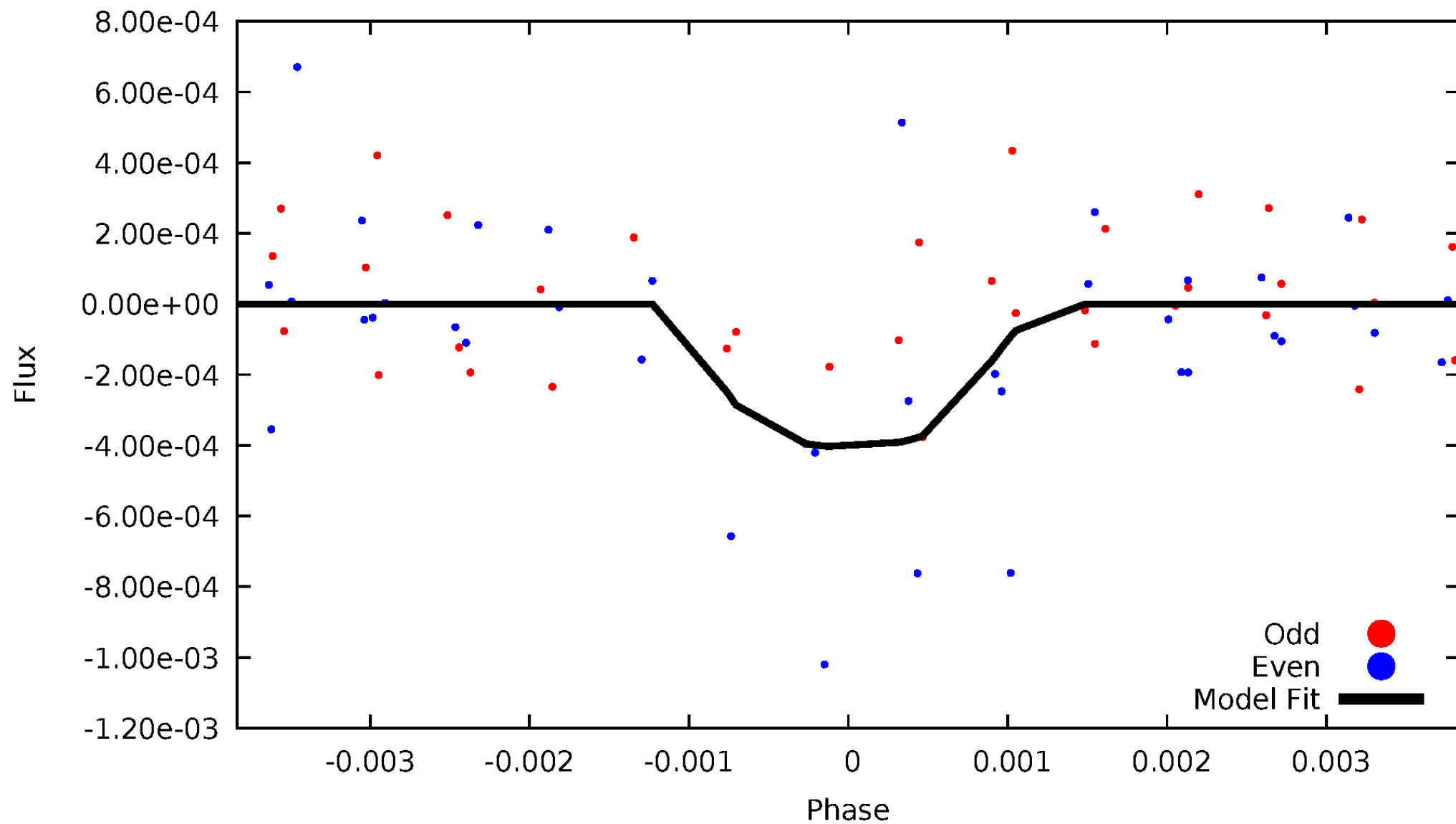


TCE 007115785-04



DV Odd/Even

TCE 007115785-04

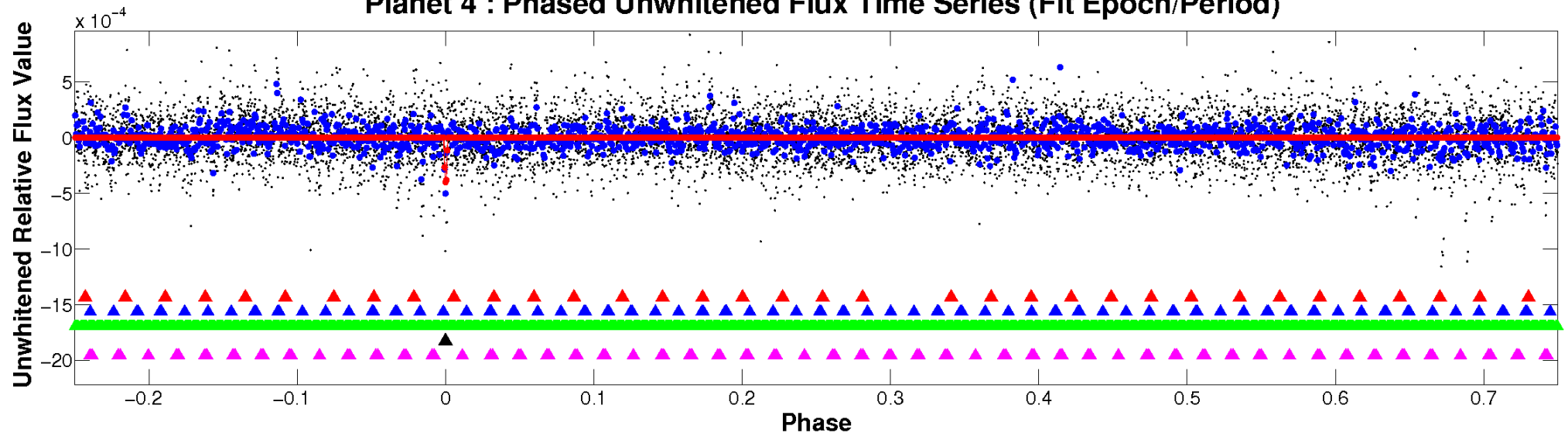


ALT Odd/Even

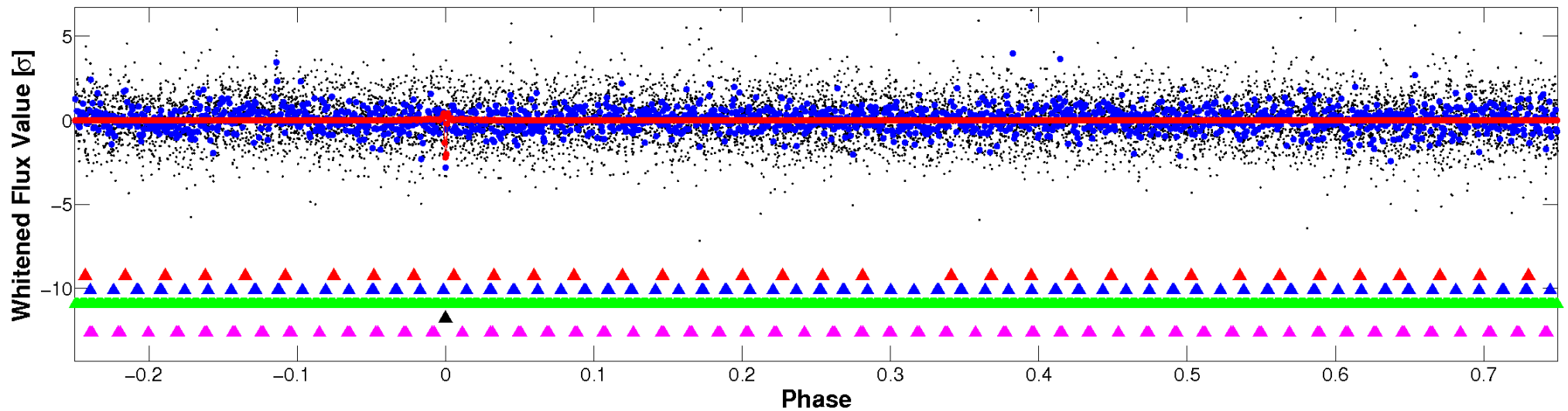
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

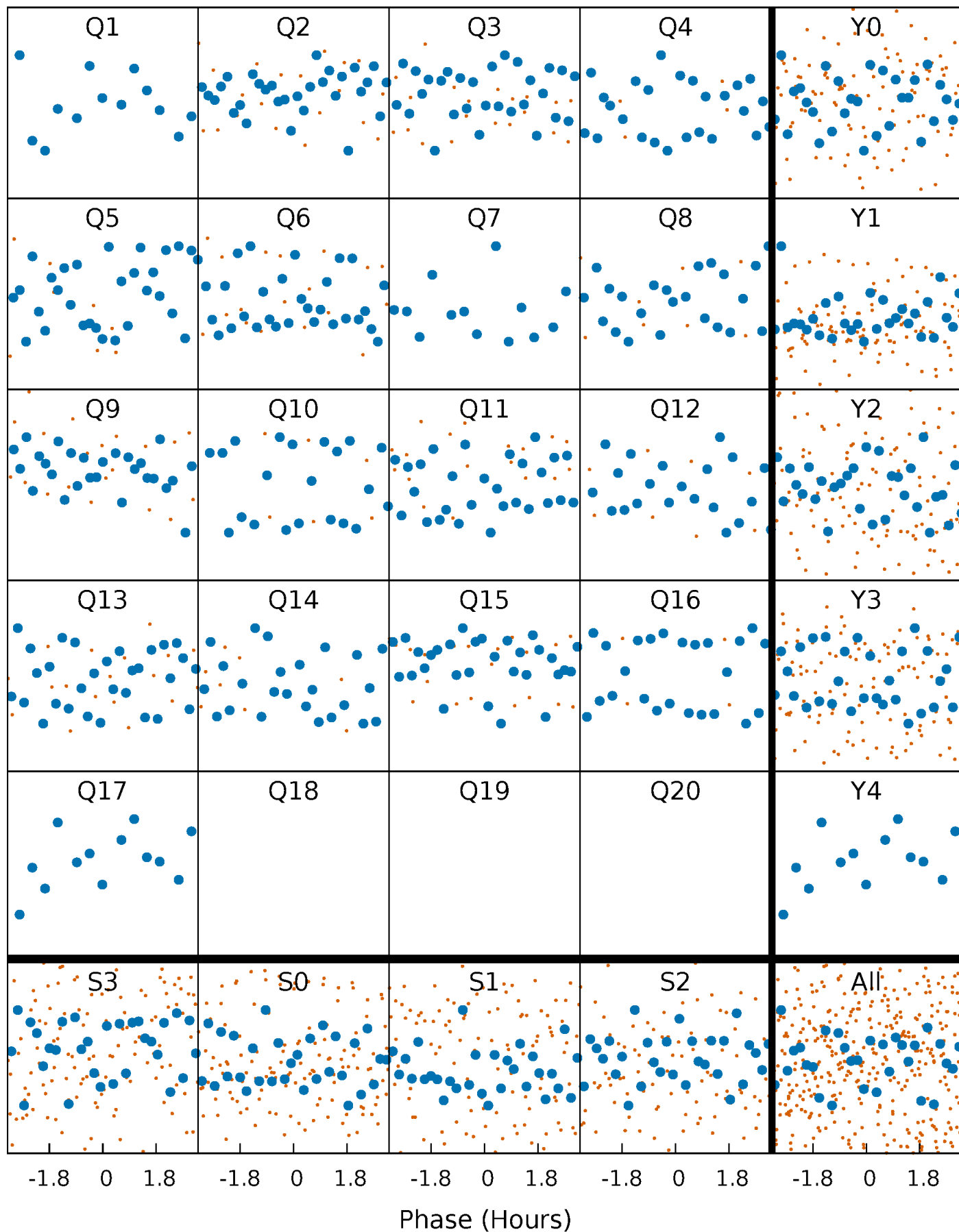


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



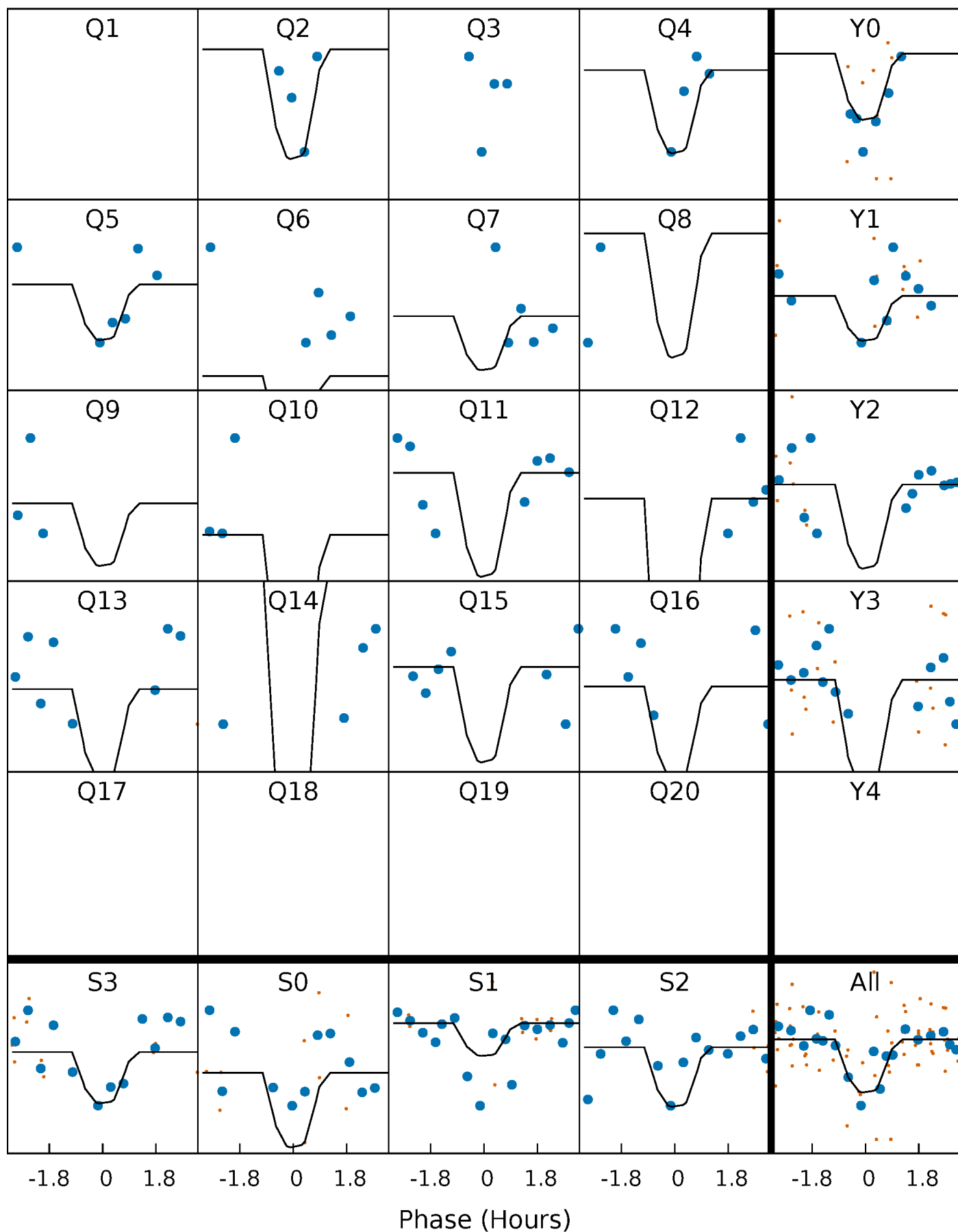
PDC Quarter-Phased Transit Curves

TCE 007115785-04 P= 34.948375 Days $T_0=136.272091$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007115785-04 P= 34.948375 Days $T_0=136.272091$ (BKJD)

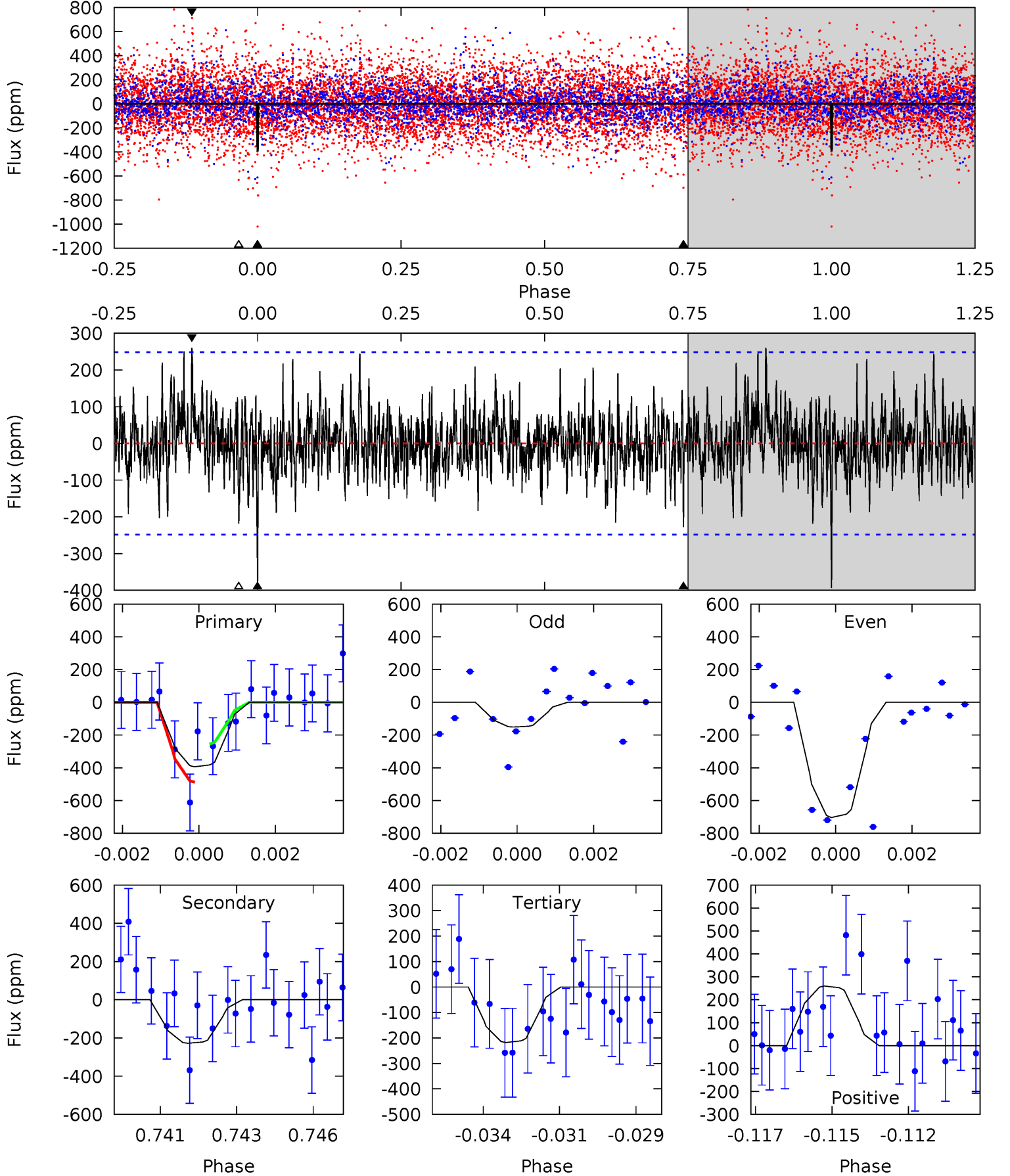


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007115785-04, P = 34.948375 Days, E = 101.323716 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.41	4.86	4.65	5.55	5.31	3.06	1.40	3.76	2.86	0.21	-0.69	5.89	0.83	0.40	2.32



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007115785

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5506^{+110}_{-1}	$4.473^{+0.064}_{-0.096}$	$0.040^{+0.150}_{-0.150}$	$0.914^{+0.111}_{-0.074}$	$0.904^{+0.056}_{-0.050}$	$1.667^{+0.416}_{-0.474}$
	+2%/-0%	+1%/-2%	+375%/-375%	+12%/-8%	+6%/-6%	+25%/-28%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 007115785-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-228 ± 47	$7.37^{+8.12}_{-4.93}$	720^{+27}_{-28}	3081^{+1331}_{-540}	94^{+710}_{-73}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

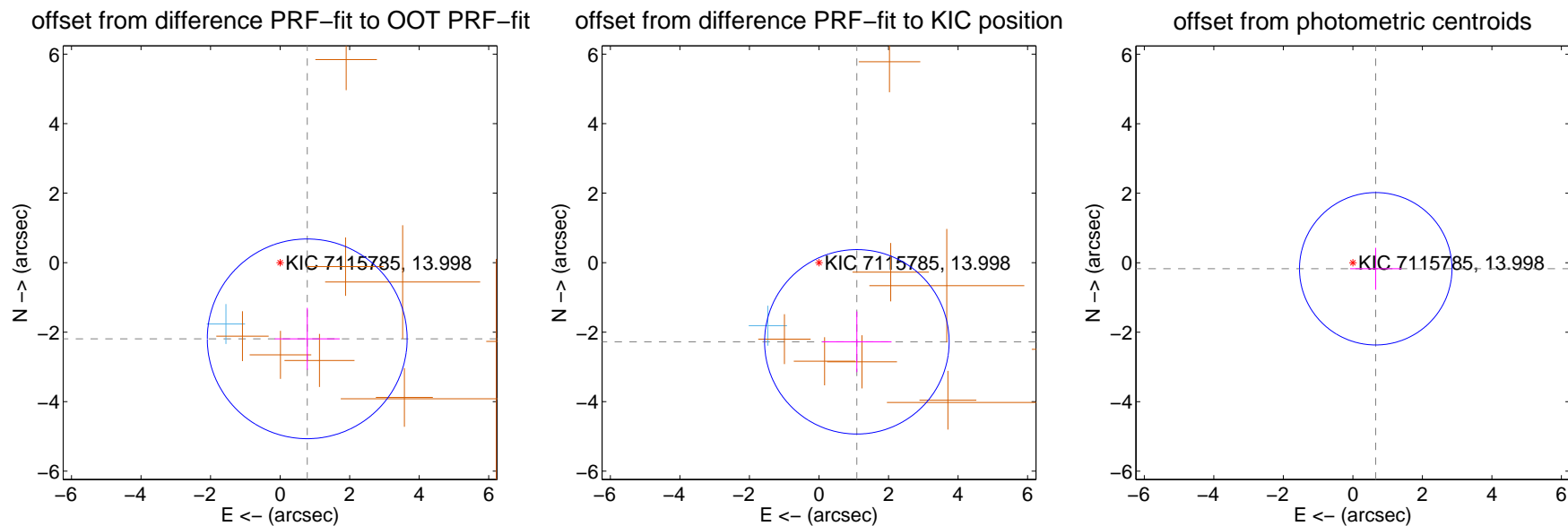
DV Centroid Data

Supplemental centroid analysis for 007115785-04. Kepler magnitude: 14.00. Transit SNR 6.78

There are 1 quarters with good PRF difference image offsets

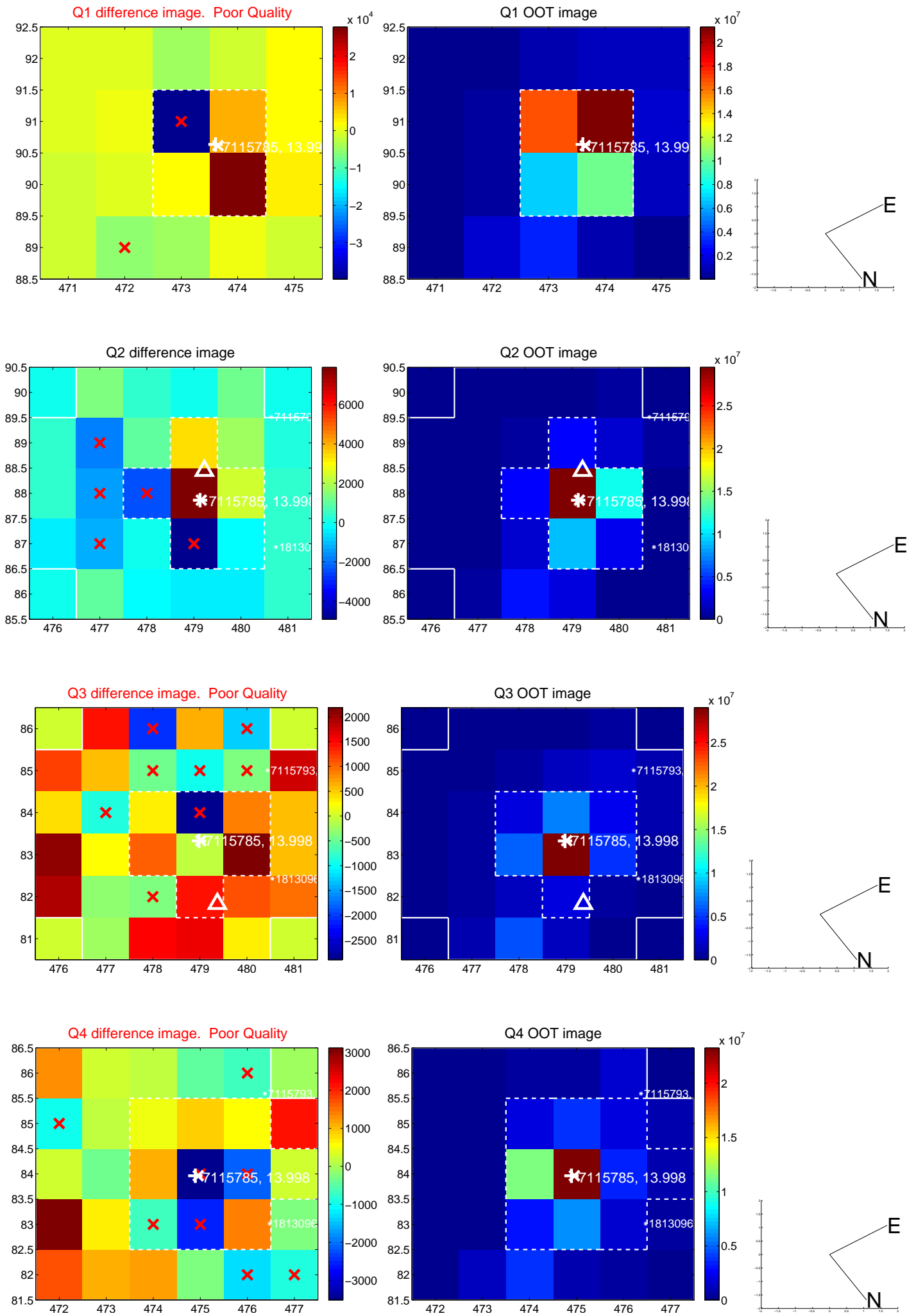
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.327 ± 0.958	2.43	-0.780 ± 0.935	-2.192 ± 0.891
PRF-fit source offset from KIC position	2.525 ± 0.885	2.85	-1.089 ± 0.996	-2.278 ± 0.872
photometric centroid source offset	0.68 ± 0.73	0.93	-0.66 ± 0.74	-0.17 ± 0.60

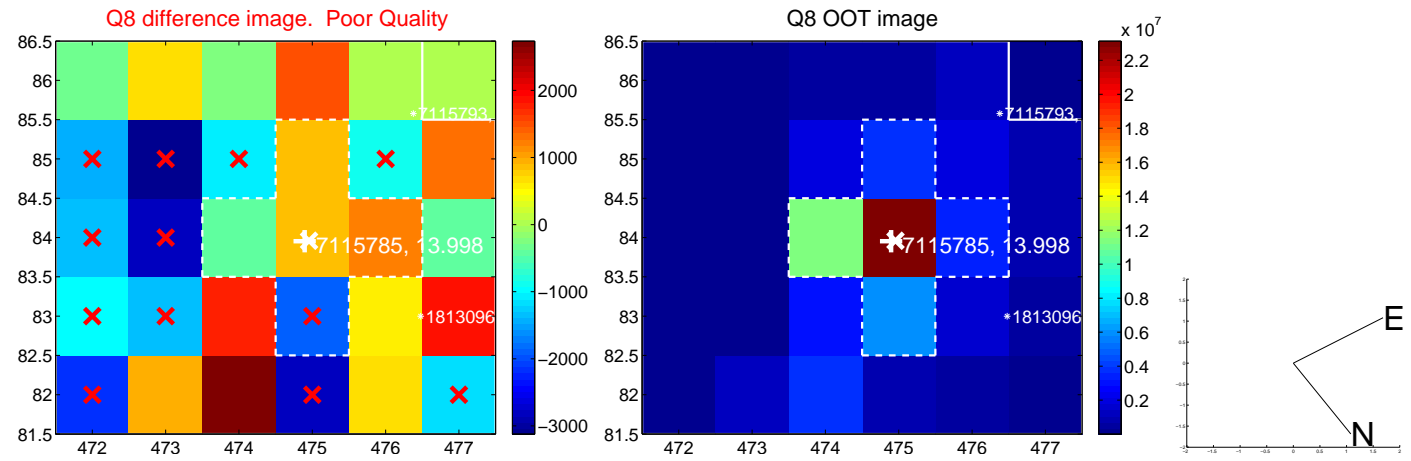
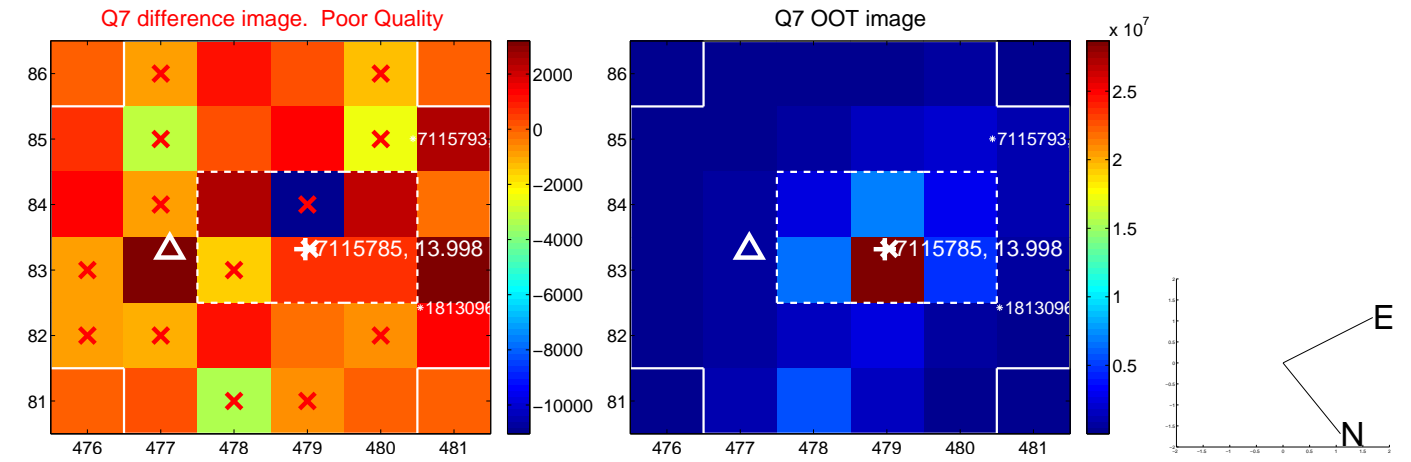
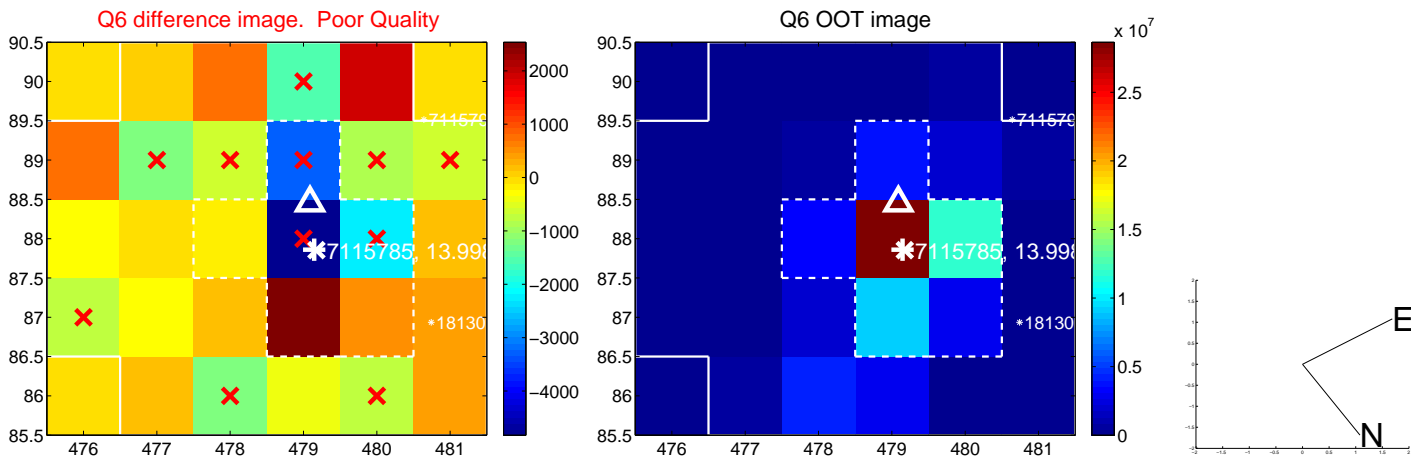
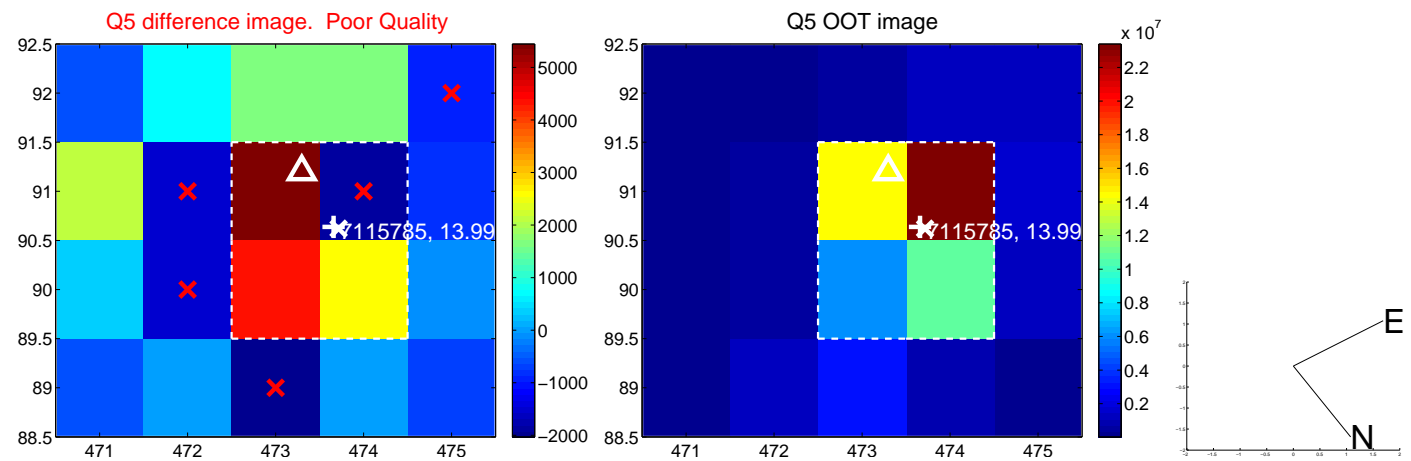


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

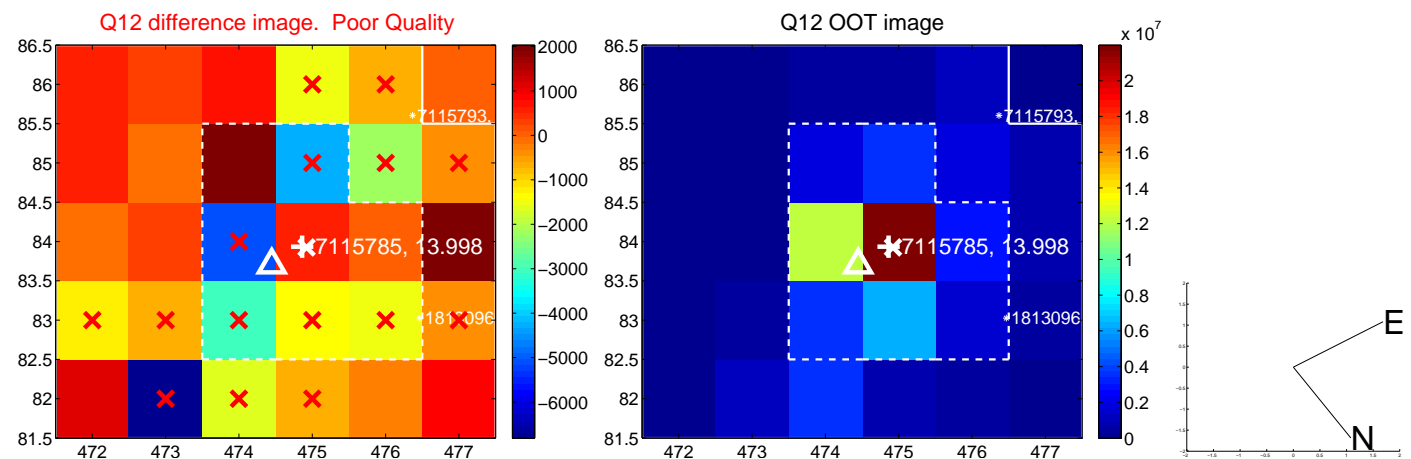
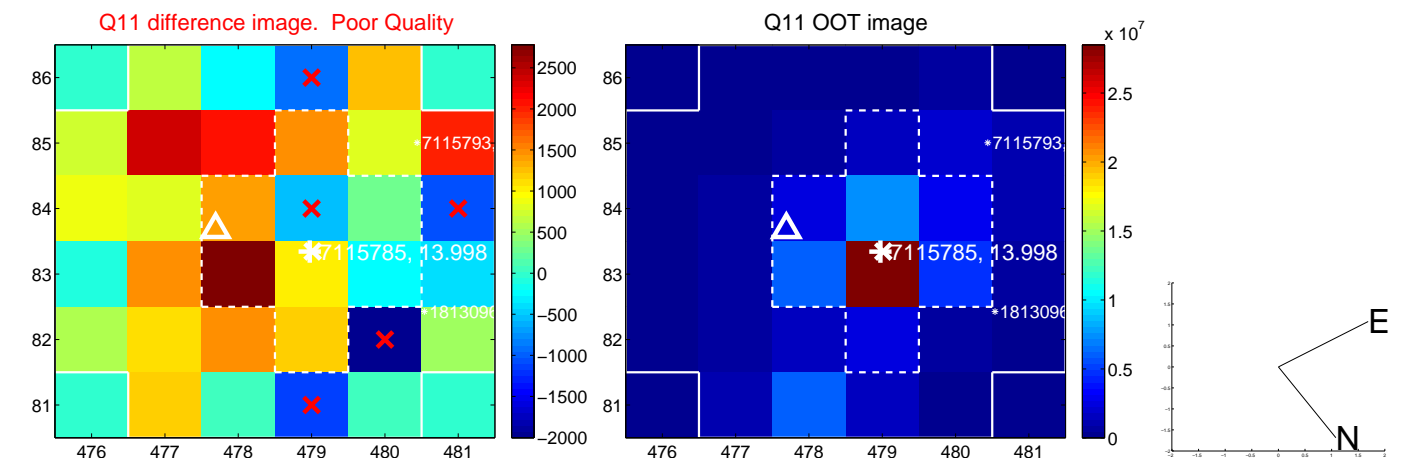
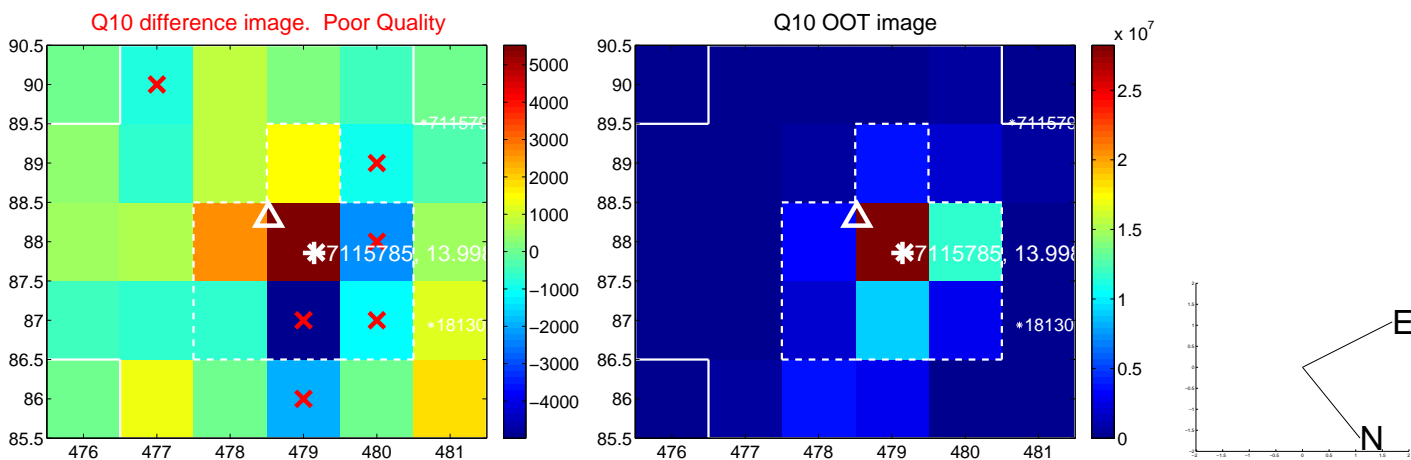
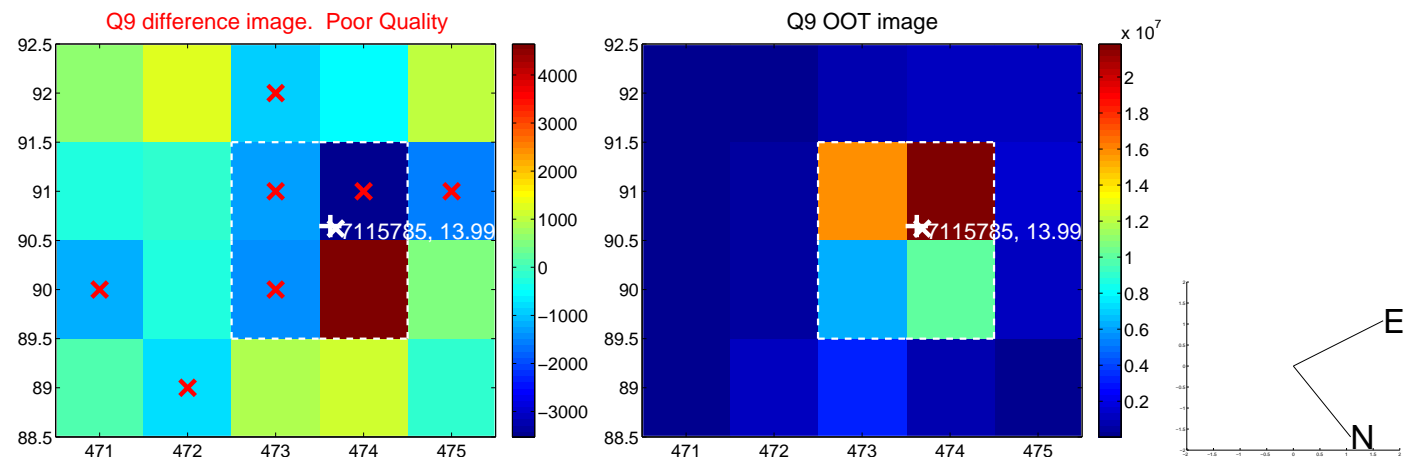
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



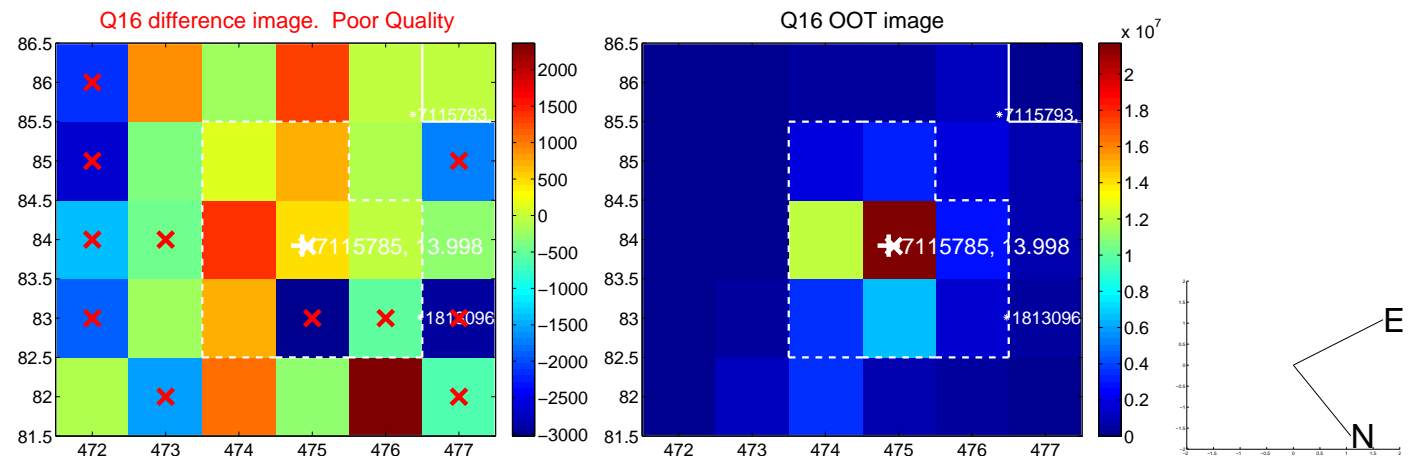
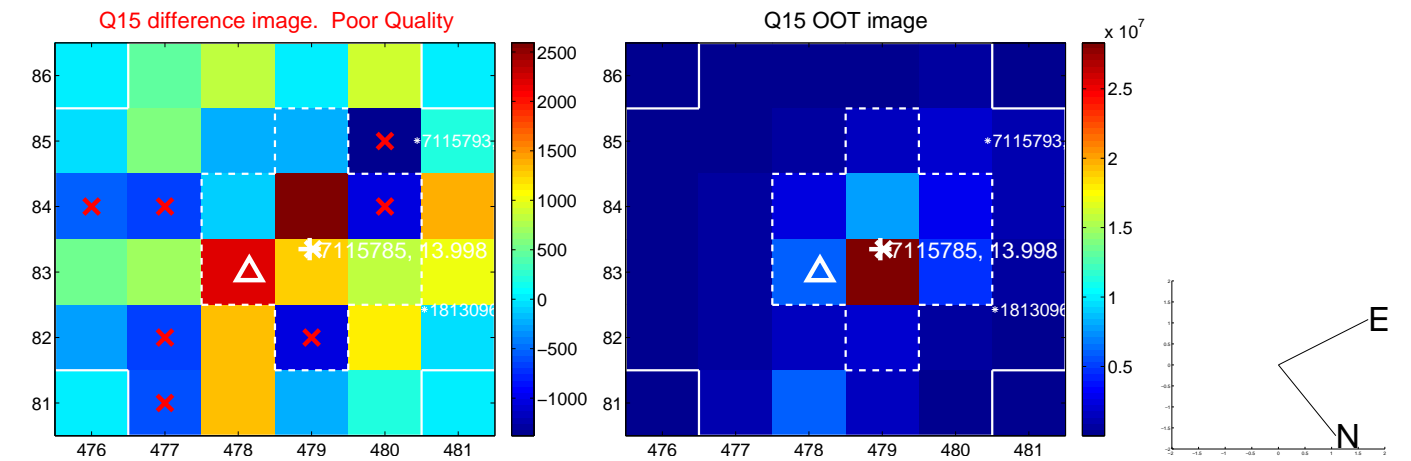
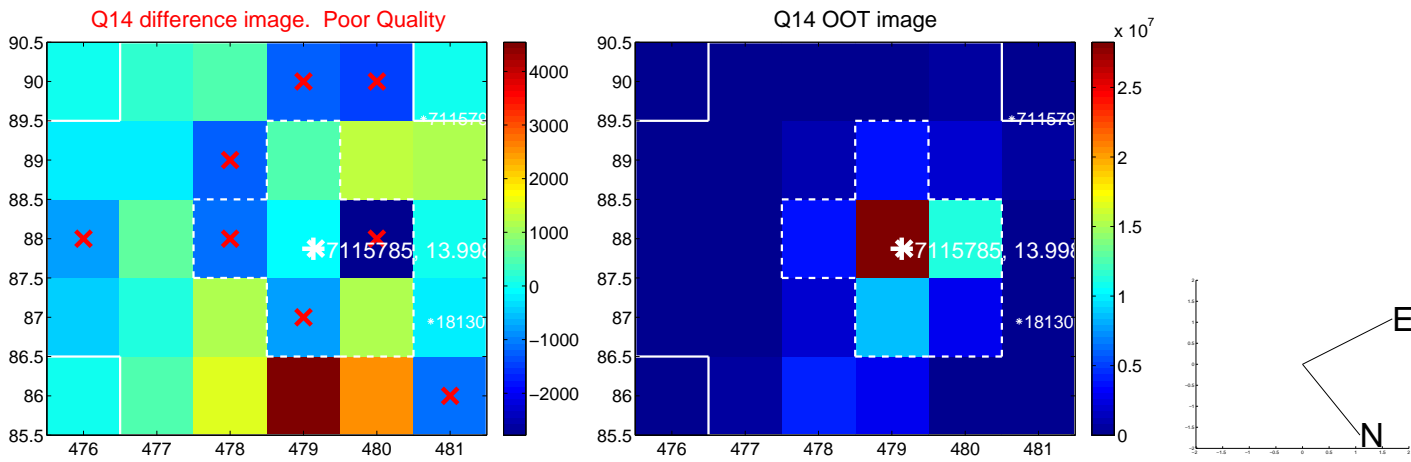
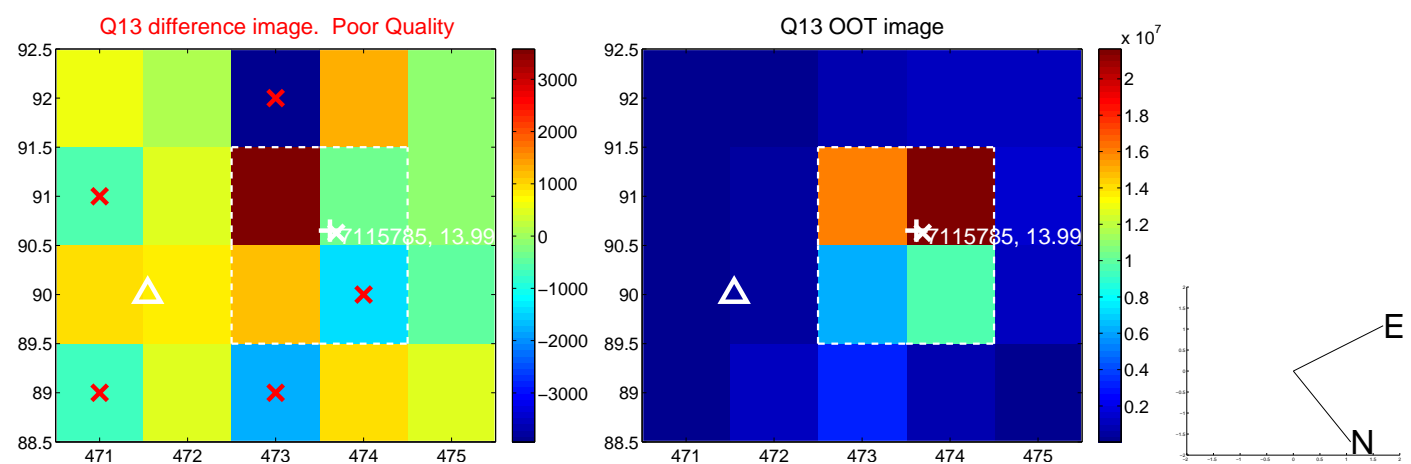
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



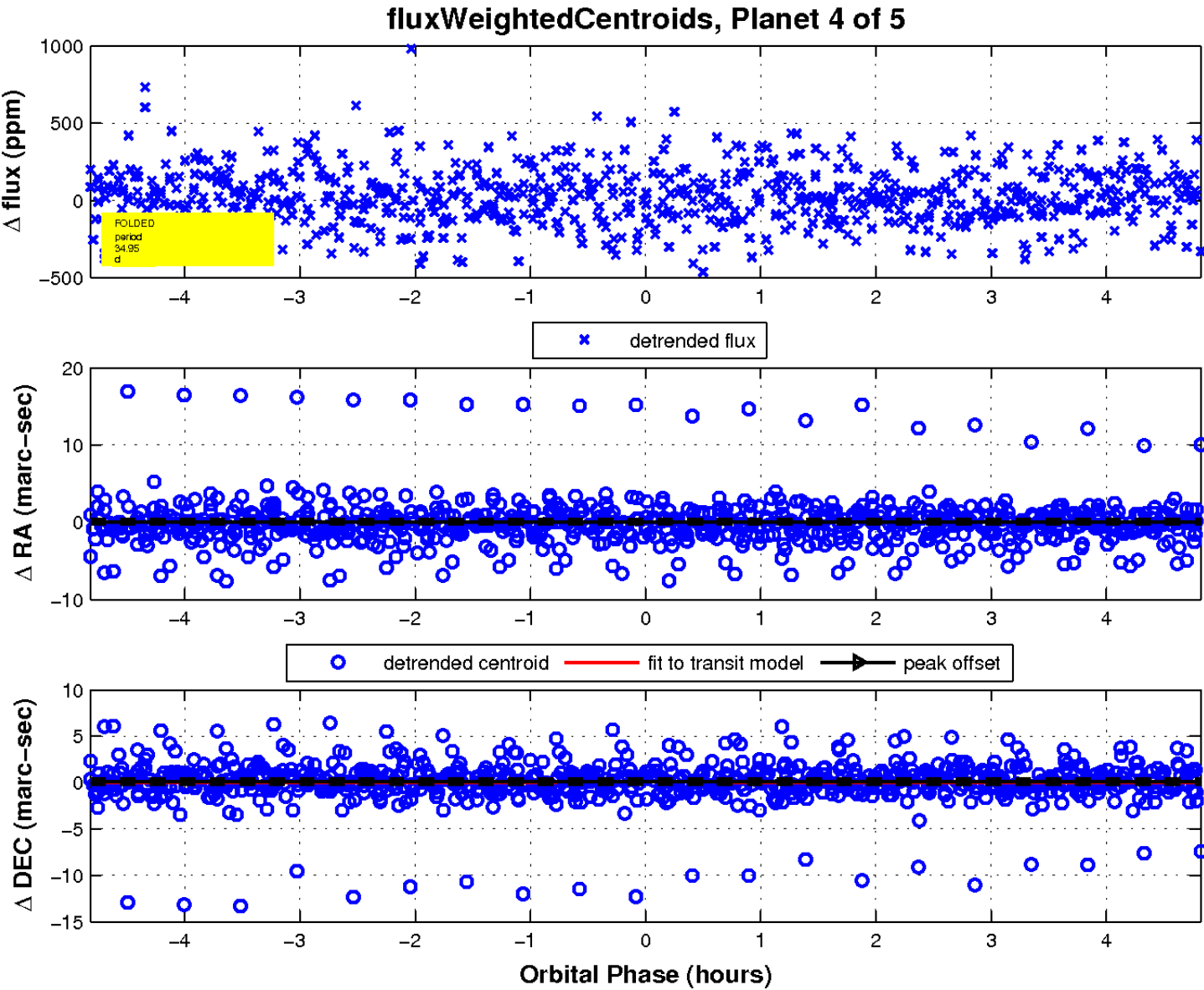
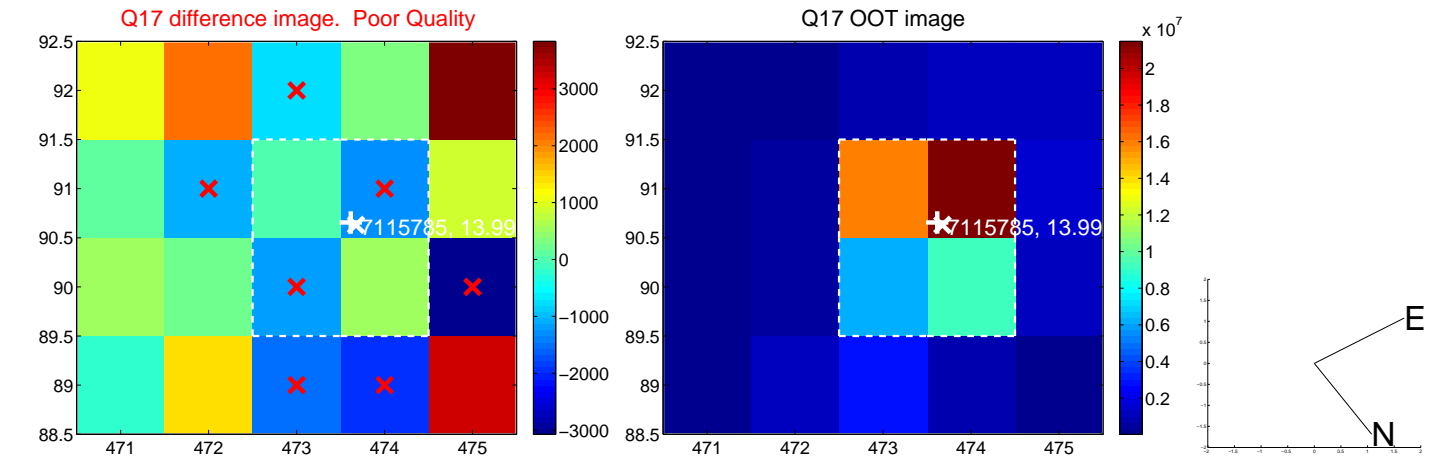
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

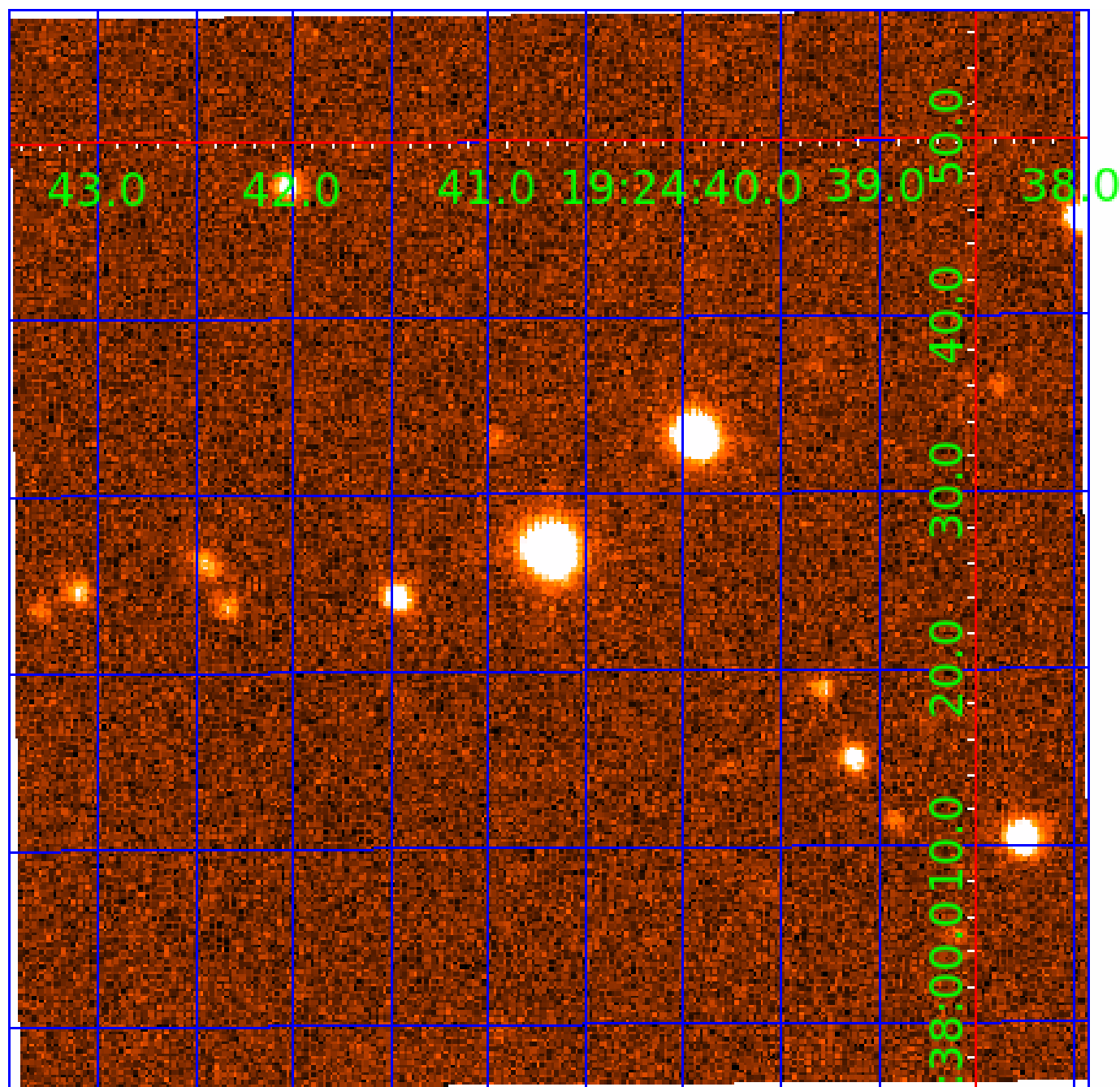


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007115785

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})
007115785-01	OBS	0672.02	41.749450	153.845051	1032.9	5.860	67.5	66.9	0.91	5506	3.25	13.24
007115785-02	OBS	0672.01	16.087845	140.638478	590.4	3.269	47.7	50.3	0.91	5506	2.68	47.23
007115785-03	OBS	0672.03	0.566786	131.831046	27.0	3.681	12.8	12.7	0.91	5506	0.47	4089.26
007115785-04	OBS	No	34.948375	136.272091	404.6	1.608	8.0	6.8	0.91	5506	1.98	16.79
007115785-05	OBS	No	15.458865	132.590079	217.3	2.399	8.7	8.3	0.91	5506	1.54	49.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115785-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007115785-03	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—EPHEM_MATCH
007115785-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
007115785-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

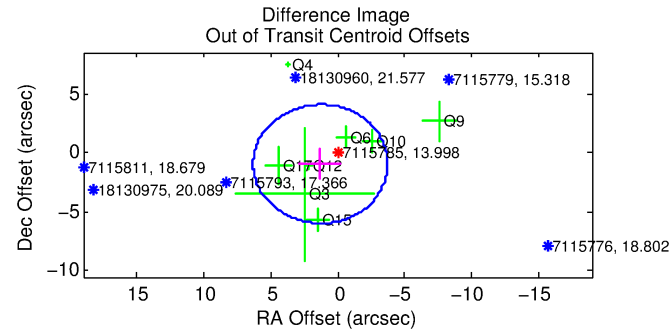
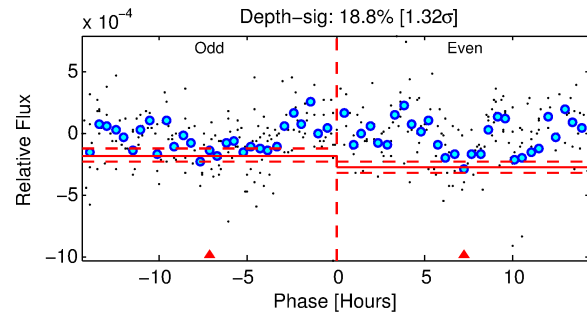
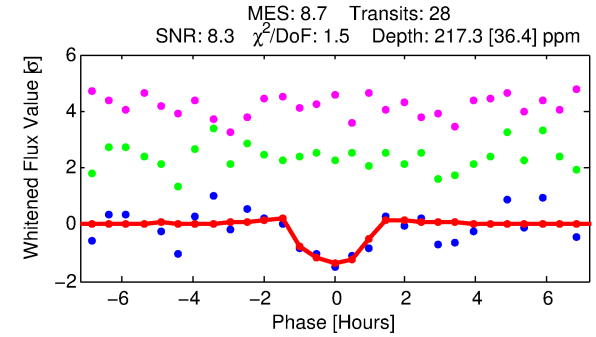
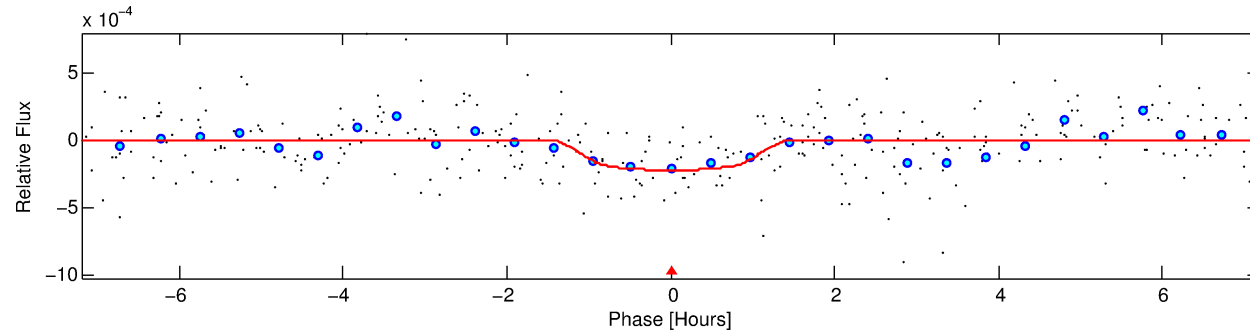
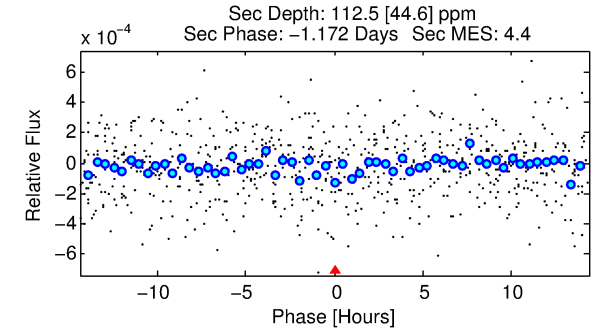
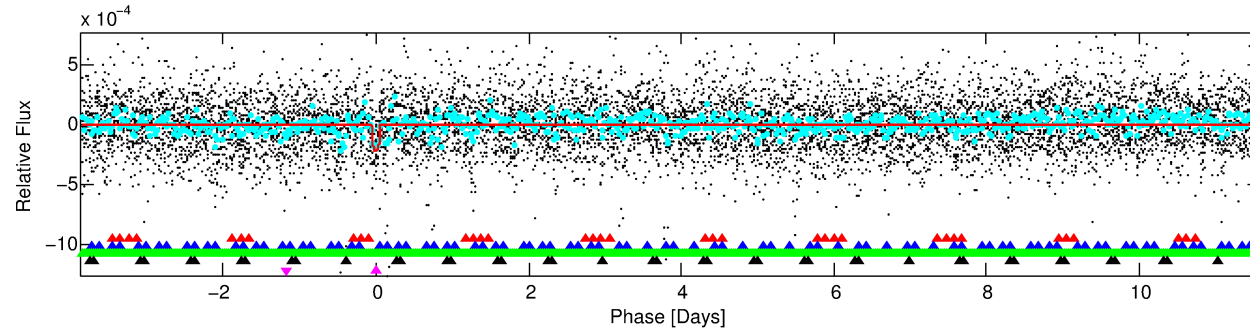
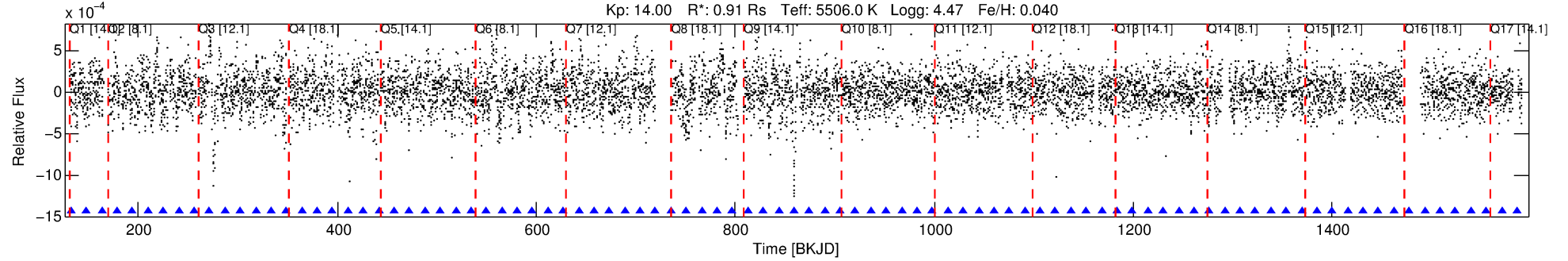
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007115785-05

No Significant Match Found

DV One-Page Summary

KIC: 7115785 Candidate: 5 of 5 Period: 15.459 d
KOI: K00672 Name: Kepler-209 Corr: No Ephemeris Match



DV Fit Results:

Period = 15.45887 [0.00017] d
Epoch = 132.5901 [0.0081] BKJD
Rp/R* = 0.0154 [0.0187]
a/R* = 28.04 [143.17]
b = 0.84 [1.82]
Seff = 49.81 [9.27]
Teq = 677 [32] K
Rp = 1.54 [1.87] Re
a = 0.1175 [0.0129] AU
Ag = 360.87 [887.46] [0.41σ]
Teffp = 4565 [2801] K [1.39σ]

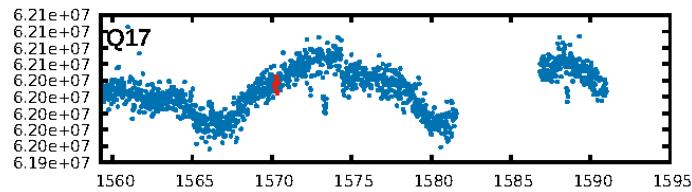
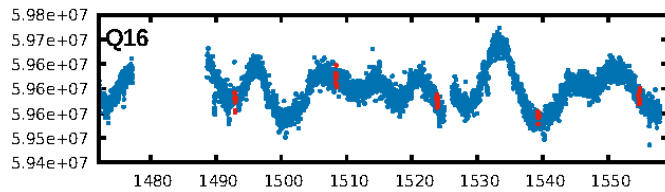
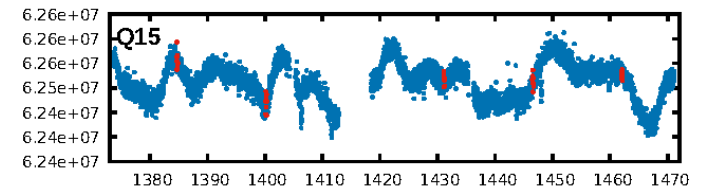
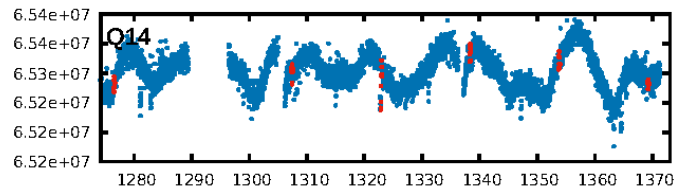
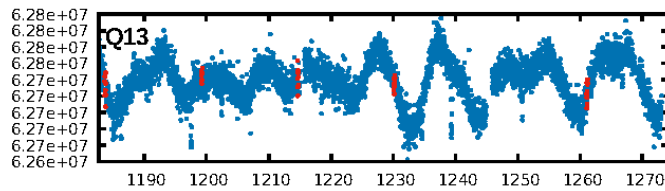
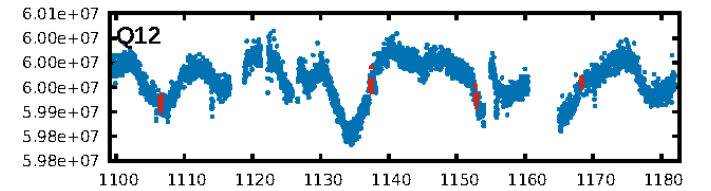
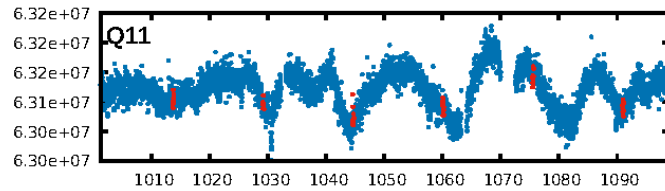
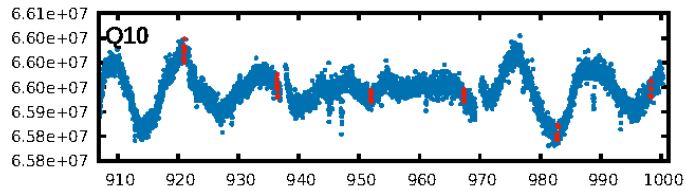
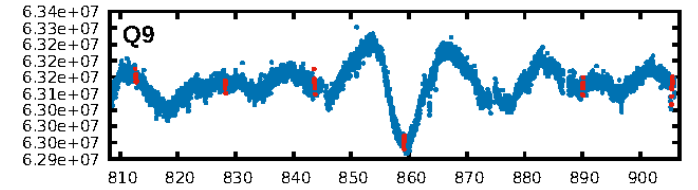
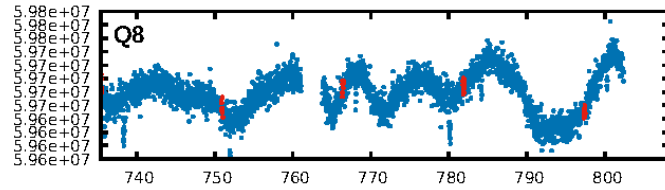
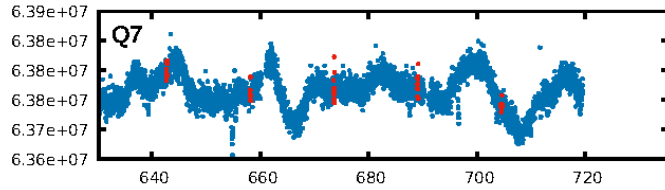
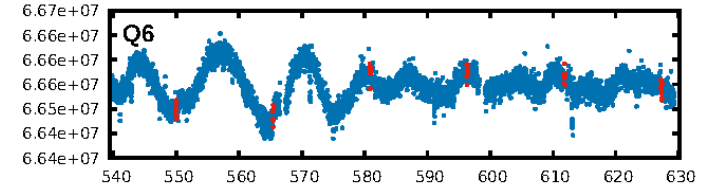
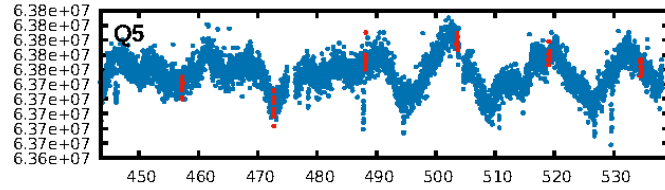
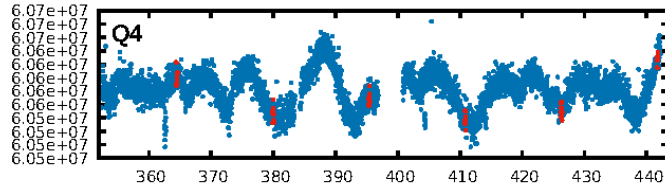
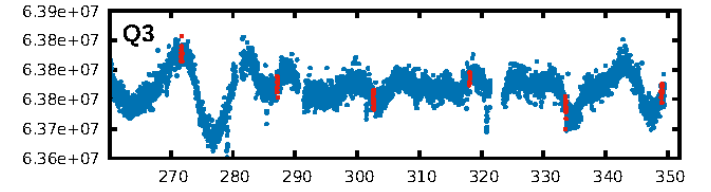
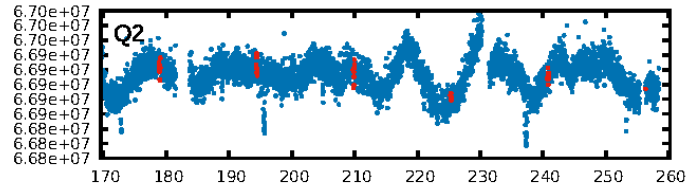
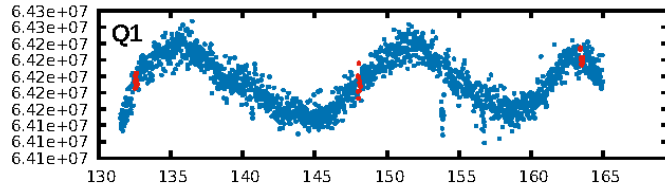
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [81.34σ]
LongPeriod-sig: 100.0% [3.72σ]
ModelChiSquare2-sig: 32.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.13e-11
RollingBand-fgt: 1.00 [27/27]
GhostDiagnostic-chr: 0.1706
Centroid-sig: 70.9%
Centroid-so: 0.975 arcsec [1.24σ]
OotOffset-rm: 1.593 arcsec [0.95σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-rm: 1.578 arcsec [0.99σ]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/17]

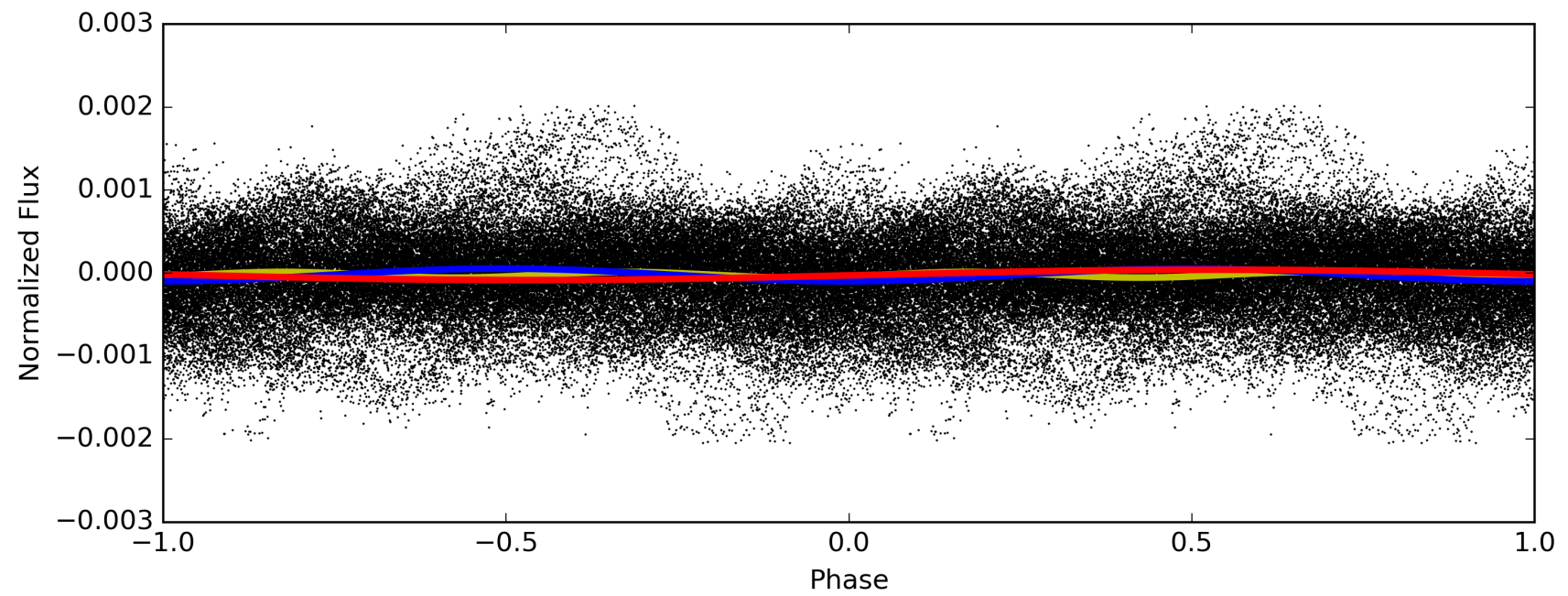
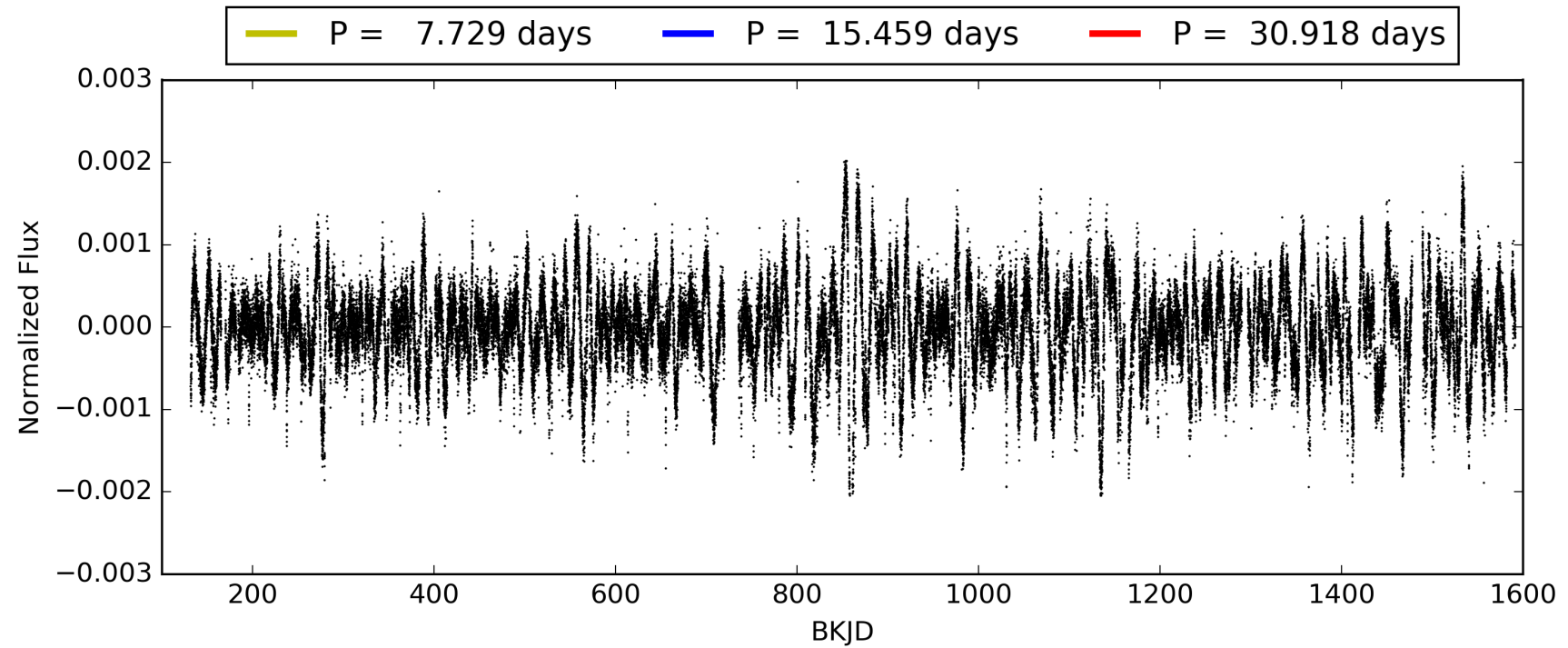
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:48:43 Z

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

TCE 007115785-05, PDC Light Curves

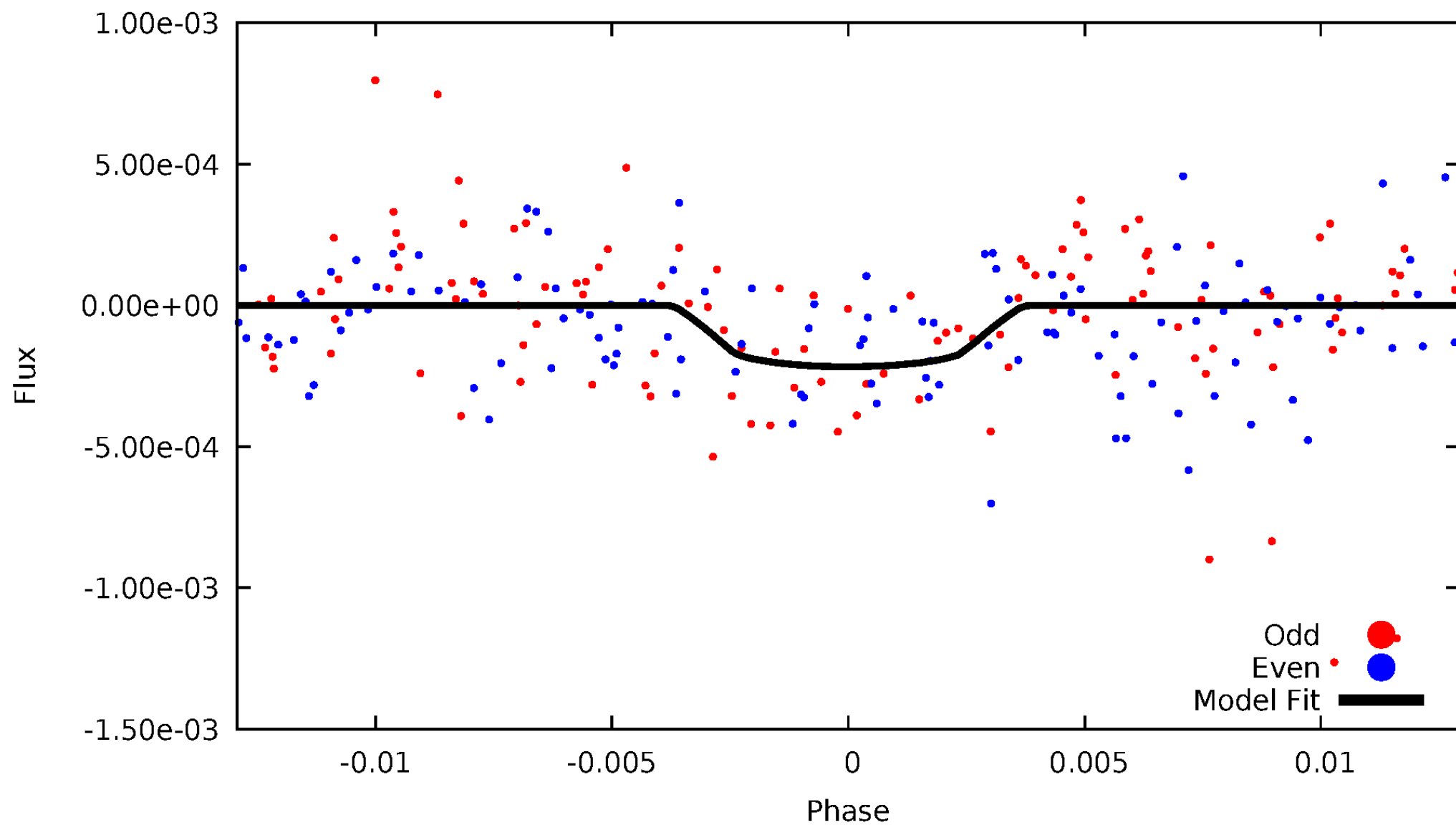


TCE 007115785-05



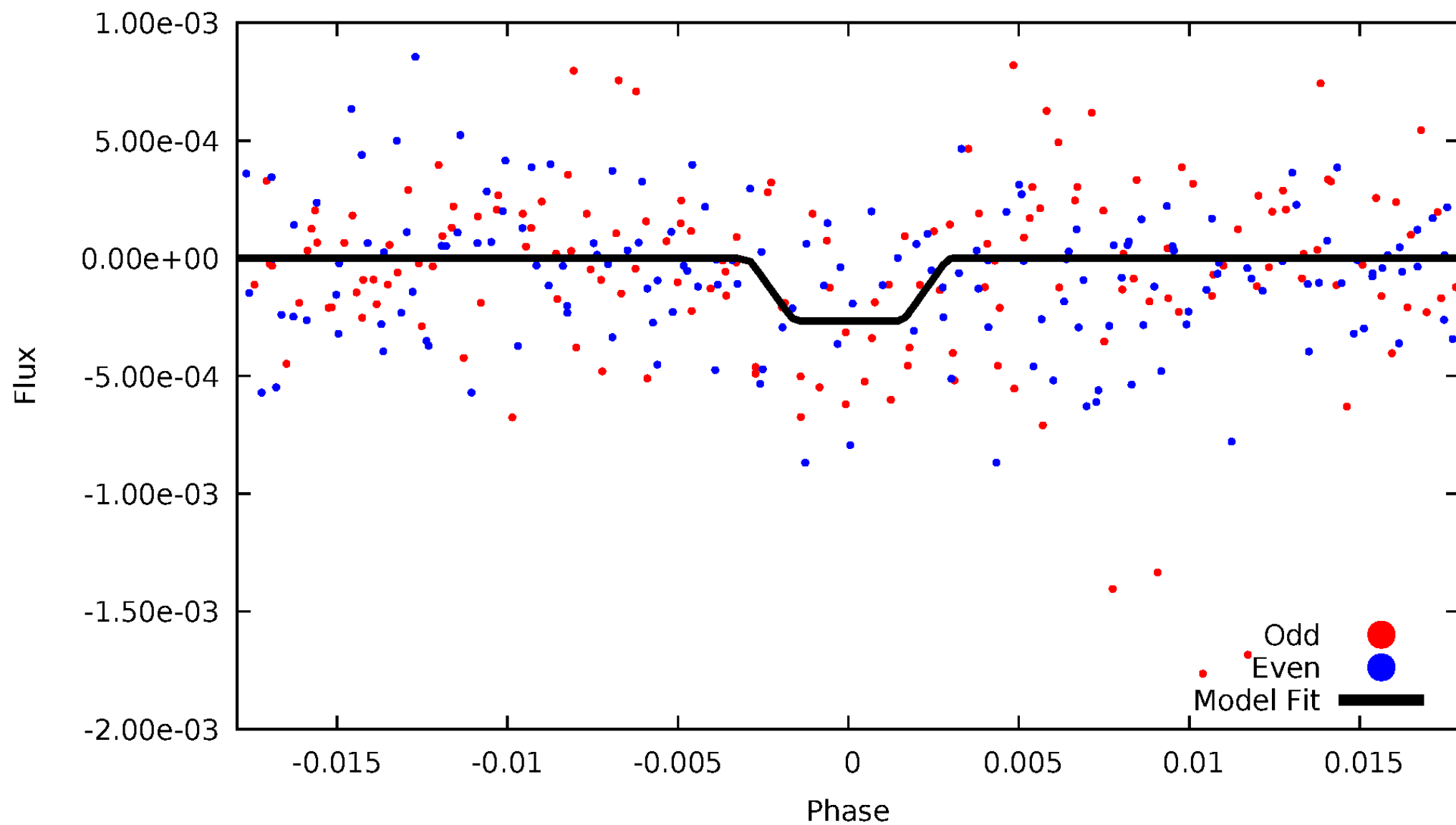
DV Odd/Even

TCE 007115785-05



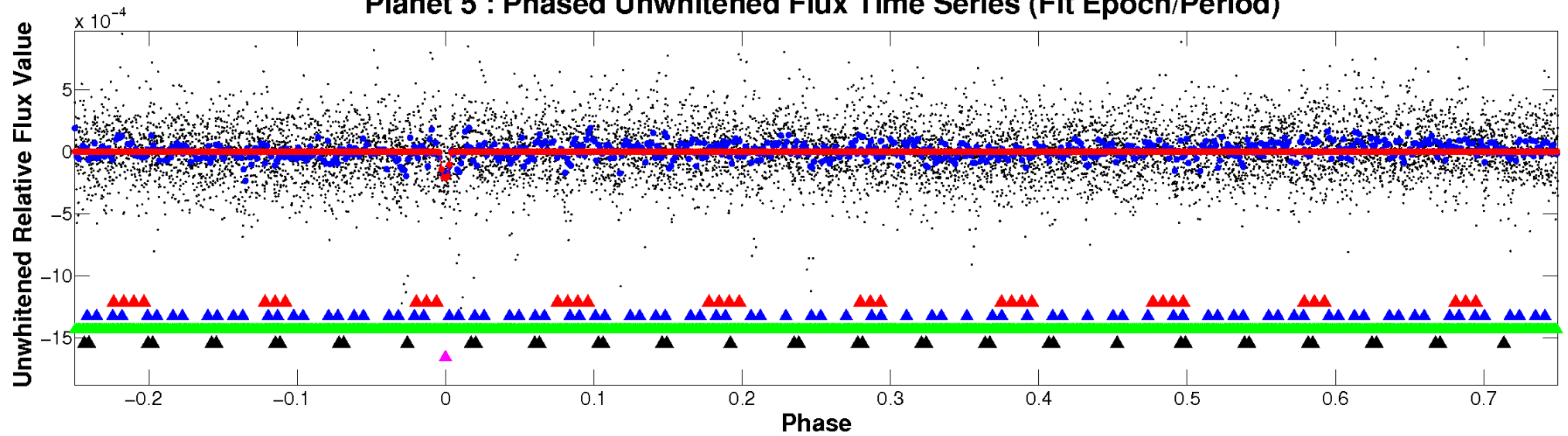
ALT Odd/Even

TCE 007115785-05

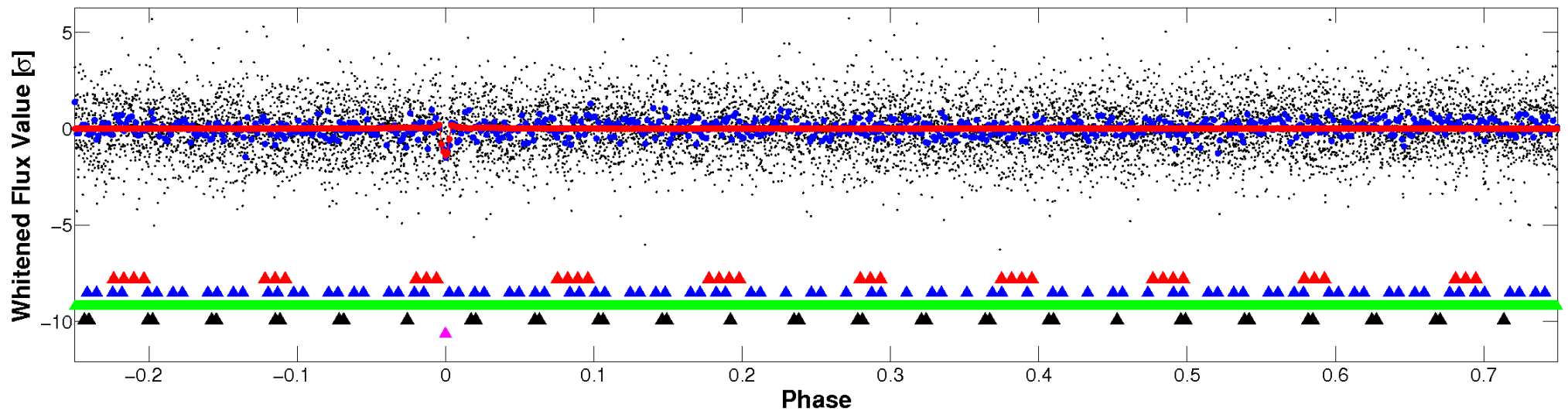


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

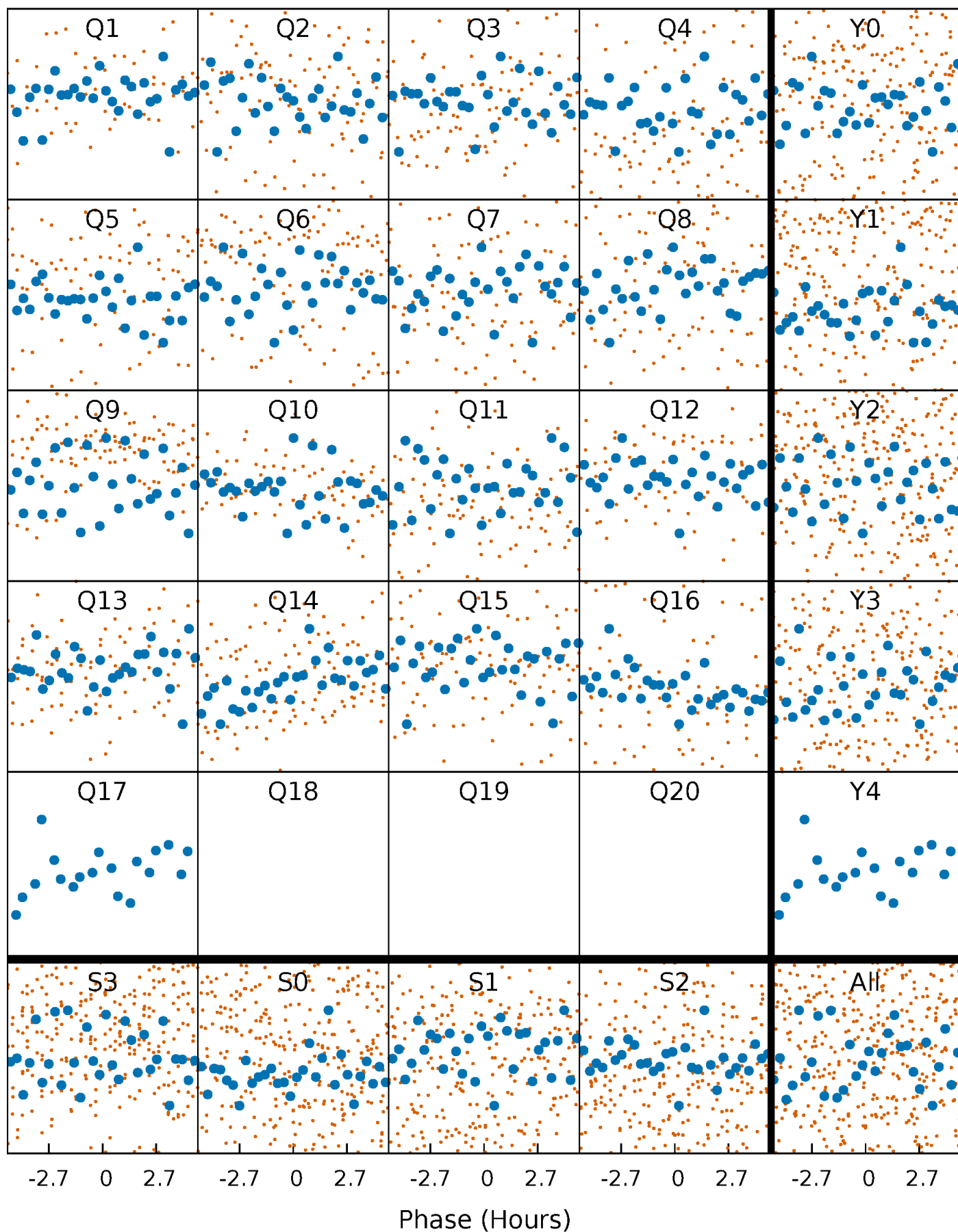


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



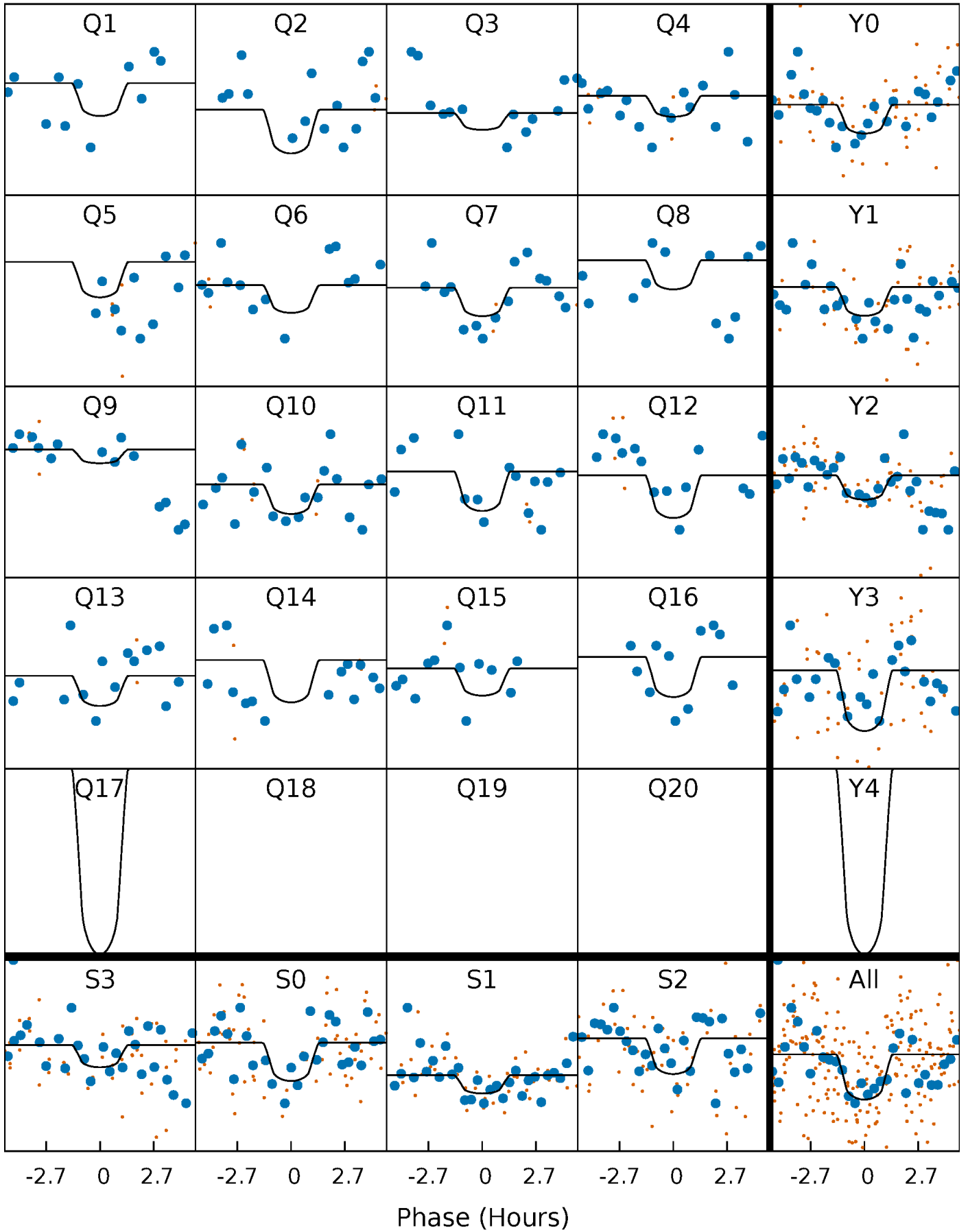
PDC Quarter-Phased Transit Curves

TCE 007115785-05 $P = 15.458865$ Days $T_0 = 132.590079$ (BKJD)



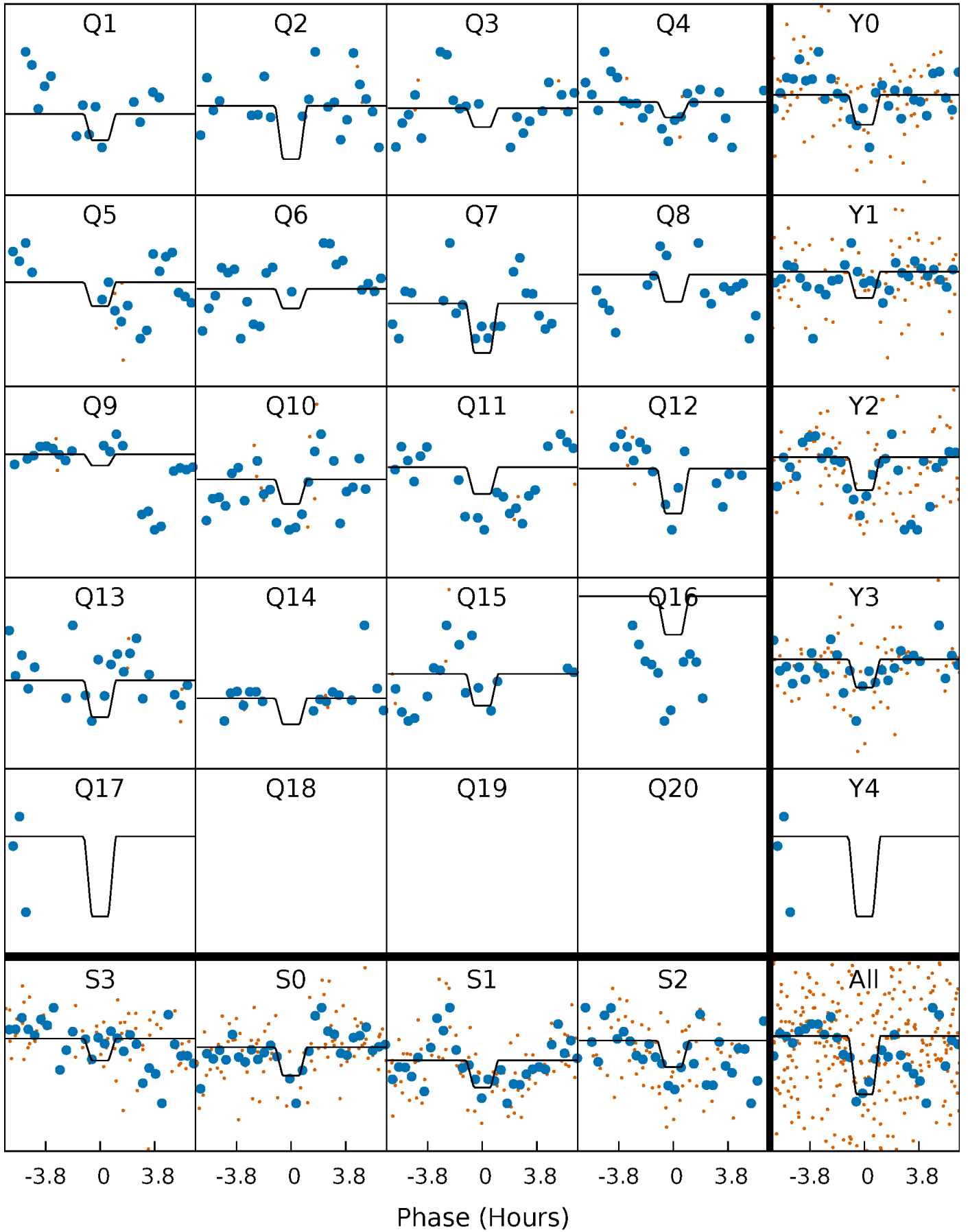
DV Quarter-Phased Transit Curves

TCE 007115785-05 P= 15.458865 Days $T_0=132.590079$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

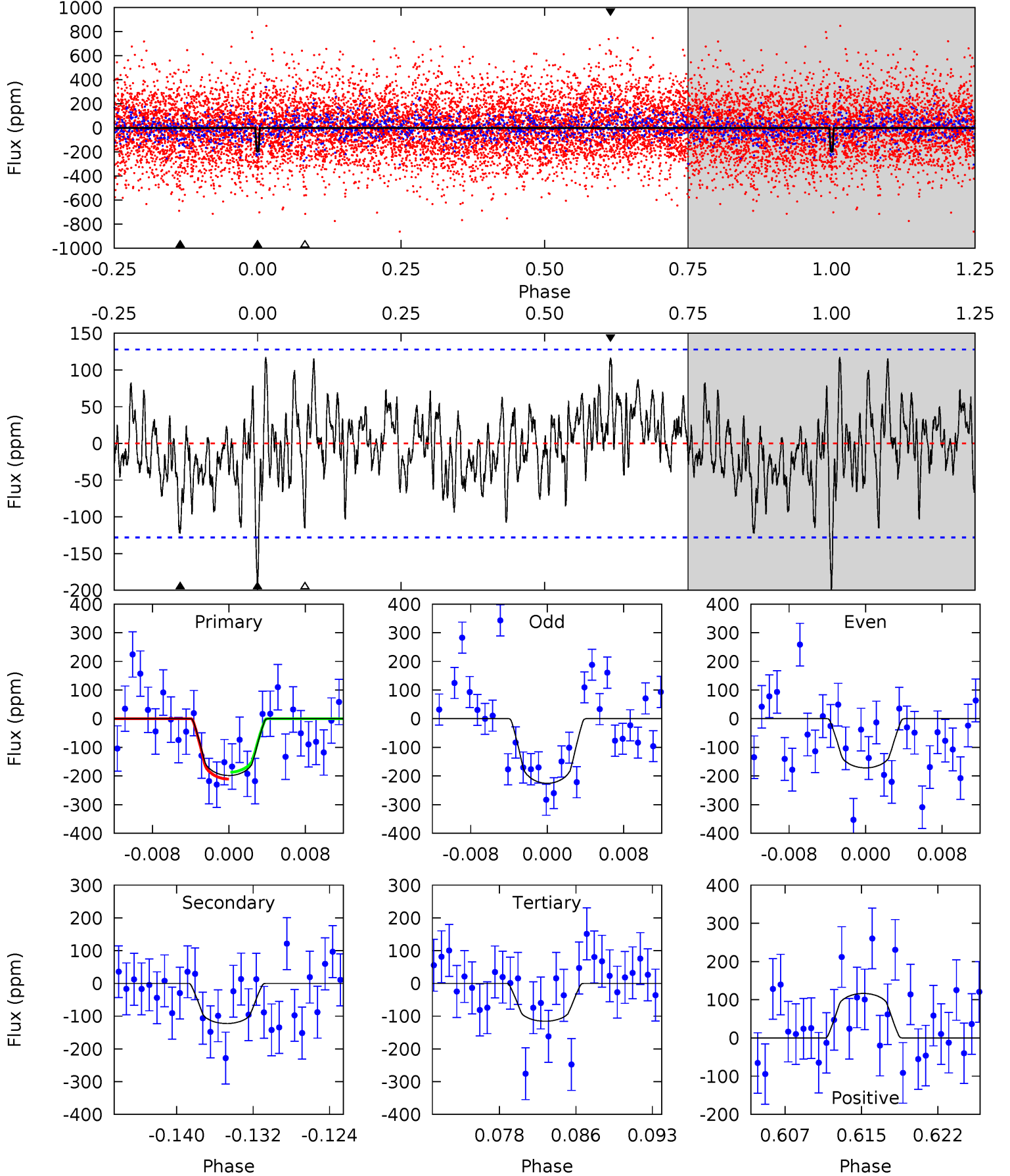
TCE 007115785-05 P= 15.459613 Days $T_0=132.553140$ (BKJD)



DV Model-Shift Uniqueness Test

007115785-05, $P = 15.458865$ Days, $E = 117.131214$ Days

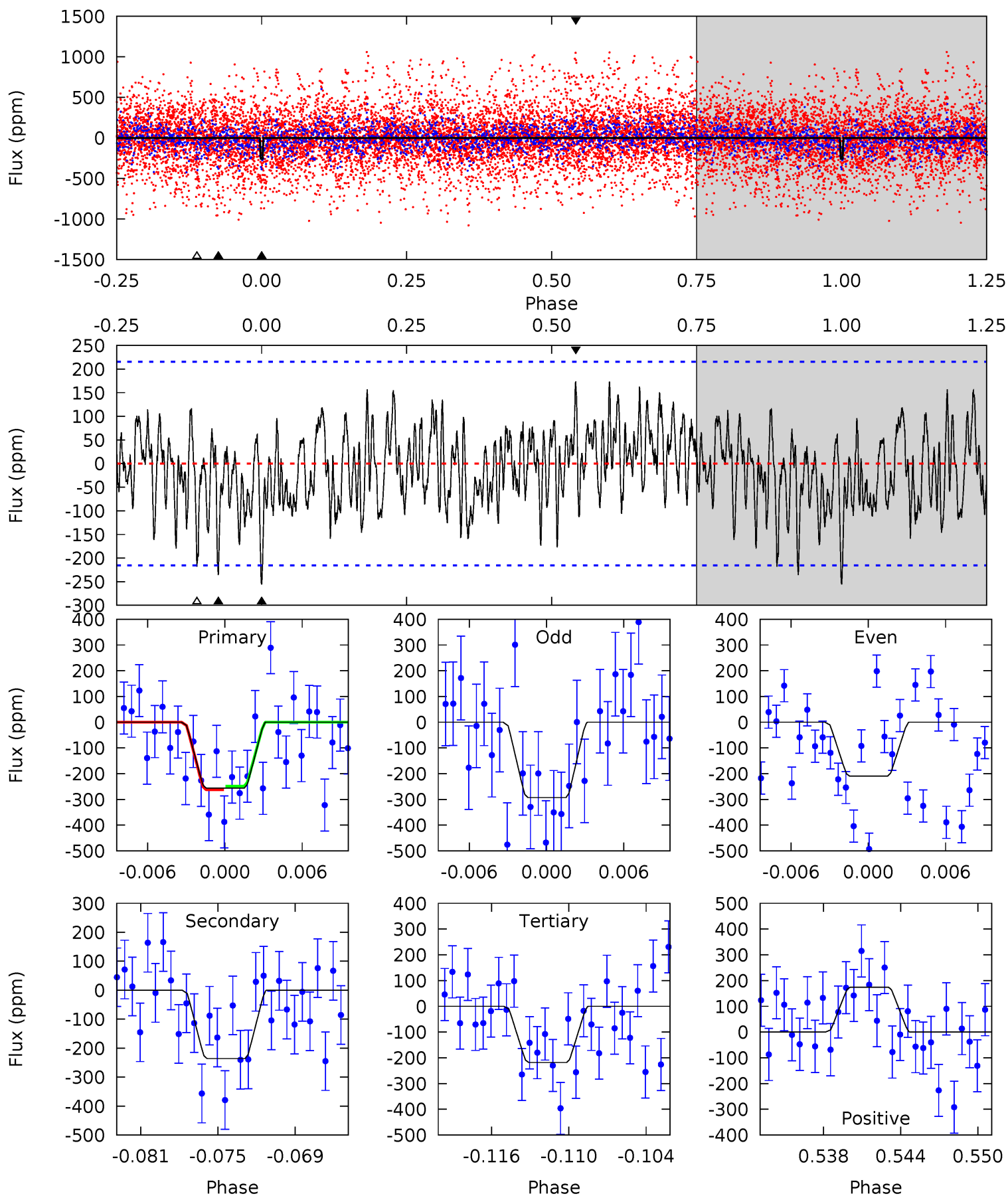
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	4.86	4.58	4.62	5.07	2.66	1.57	3.28	3.25	0.28	0.24	1.07	1.16	0.37	0.47



Alt Model-Shift Uniqueness Test

007115785-05, P = 15.459613 Days, E = 117.093527 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.09	5.61	5.19	4.15	5.13	2.76	1.64	0.90	1.94	0.42	1.46	1.00	1.38	0.41	0.17



Stellar Parameters For KIC 007115785

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5506^{+110}_{-1}	$4.473^{+0.064}_{-0.096}$	$0.040^{+0.150}_{-0.150}$	$0.914^{+0.111}_{-0.074}$	$0.904^{+0.056}_{-0.050}$	$1.667^{+0.416}_{-0.474}$
	+2%/-0%	+1%/-2%	+375%/-375%	+12%/-8%	+6%/-6%	+25%/-28%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 007115785-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-123 ± 25	$2.12^{+1.75}_{-1.35}$	948^{+38}_{-42}	4185^{+2359}_{-766}	201^{+1292}_{-141}
Alt.	-236 ± 42	$2.27^{+1.72}_{-1.42}$	949^{+37}_{-40}	4638^{+2803}_{-878}	341^{+2159}_{-229}

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 $A_{obs} \gg 1.0$

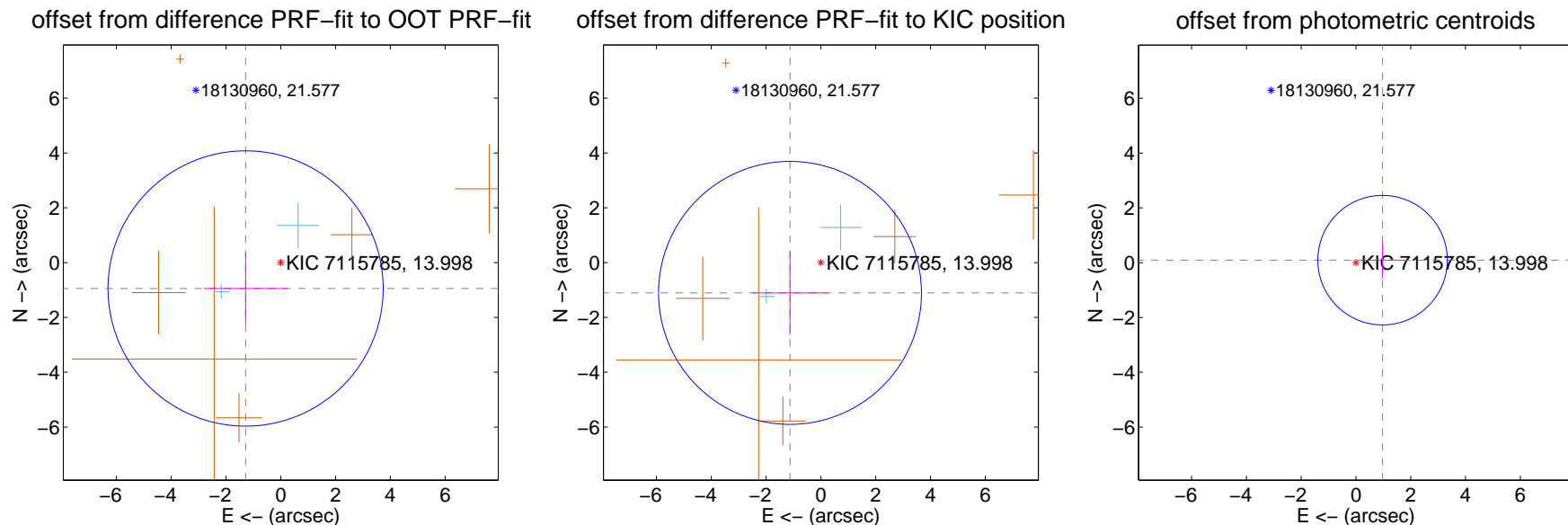
DV Centroid Data

Supplemental centroid analysis for 007115785-05. Kepler magnitude: 14.00. Transit SNR 8.29

There are 2 quarters with good PRF difference image offsets

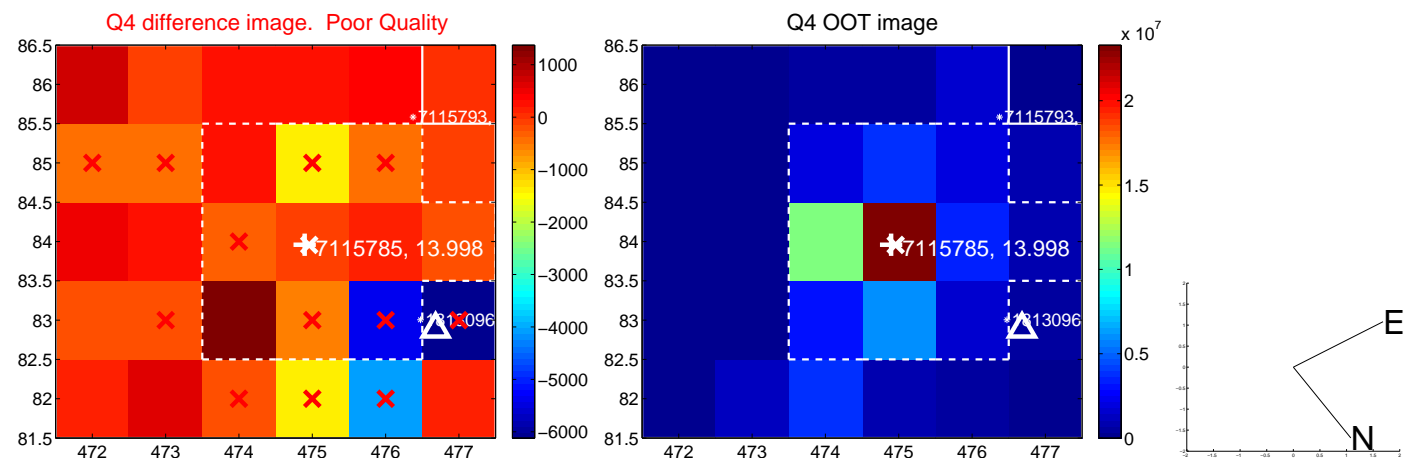
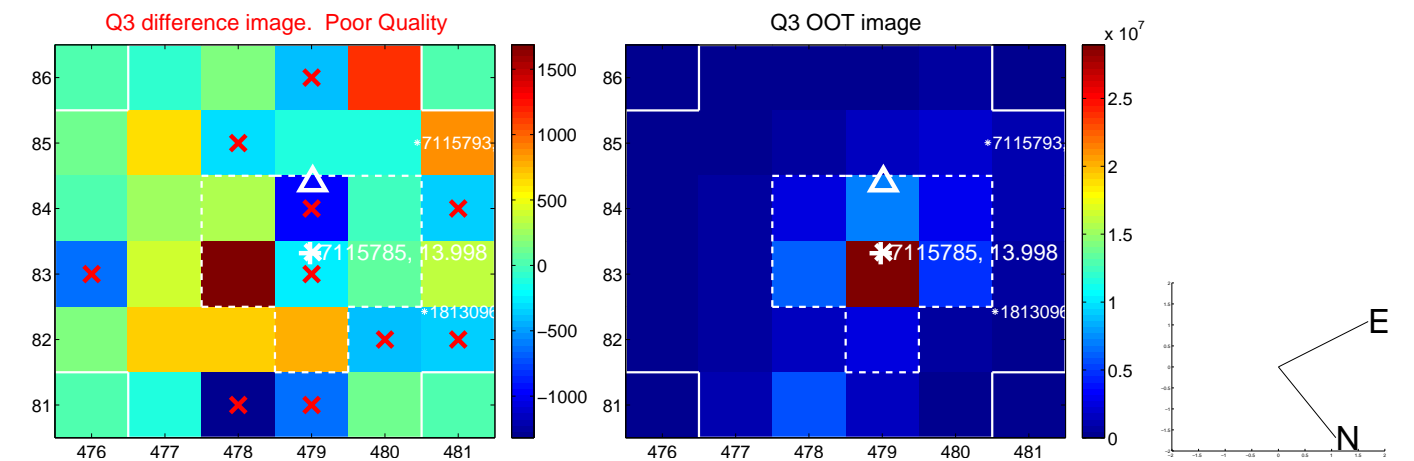
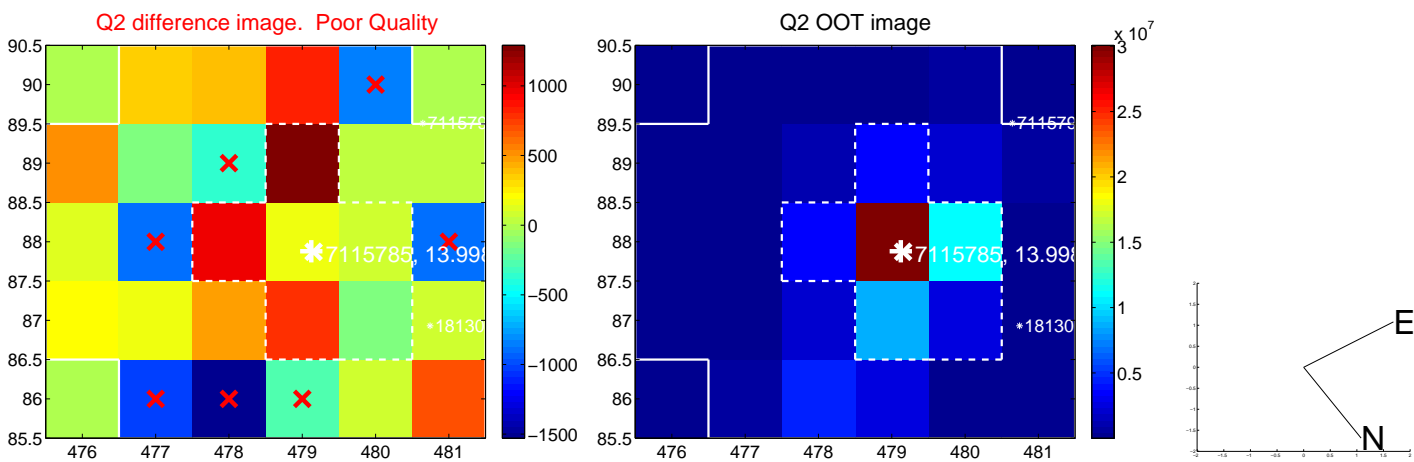
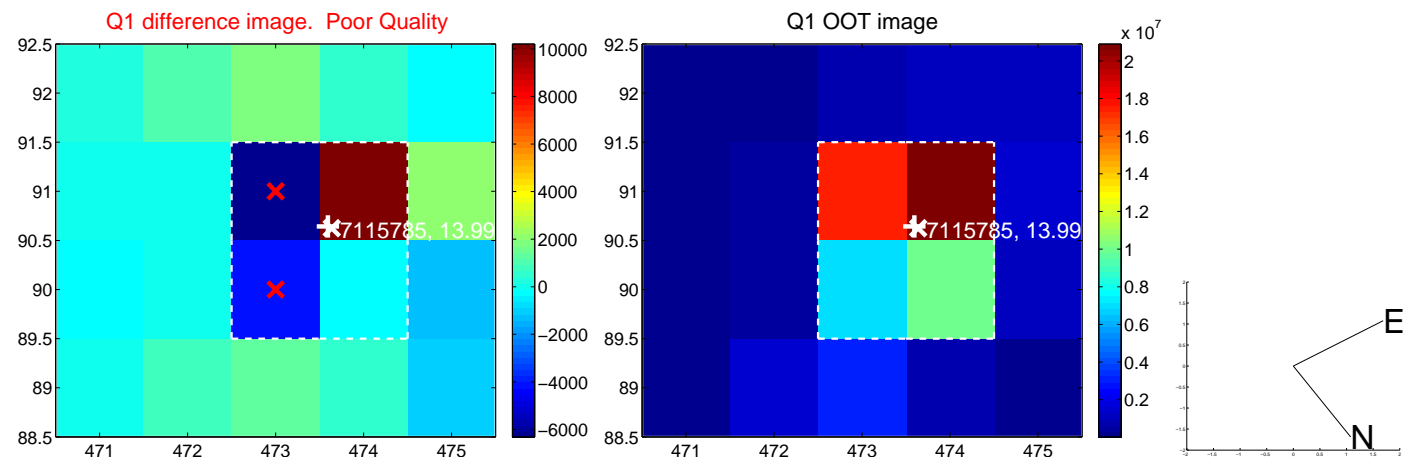
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.593 ± 1.674	0.95	1.283 ± 1.529	-0.944 ± 1.307
PRF-fit source offset from KIC position	1.578 ± 1.599	0.99	1.127 ± 1.381	-1.105 ± 1.526
photometric centroid source offset	0.98 ± 0.79	1.24	-0.97 ± 0.79	0.09 ± 0.67

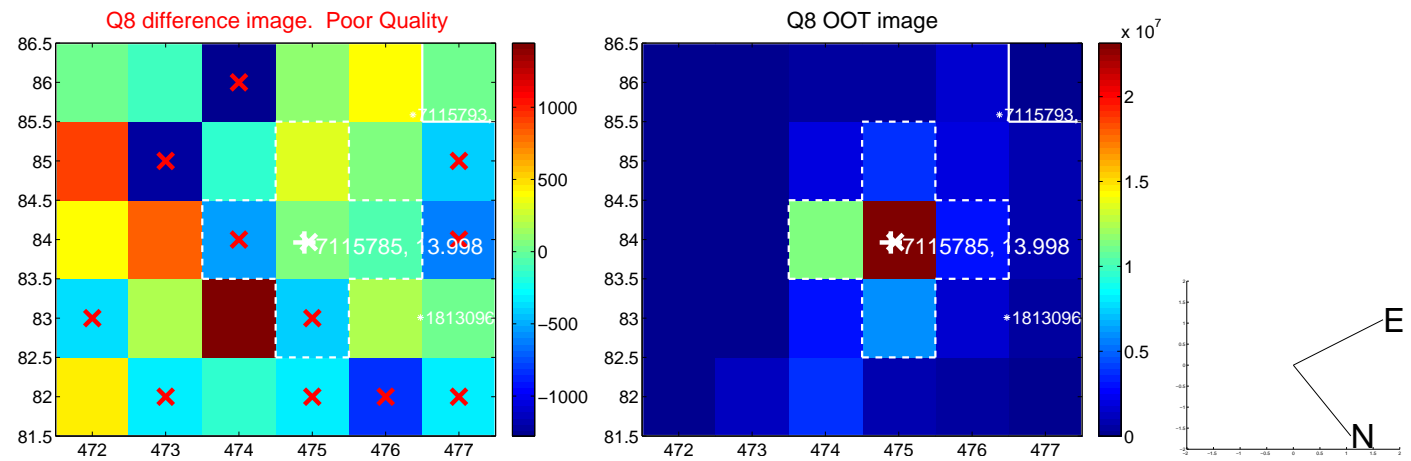
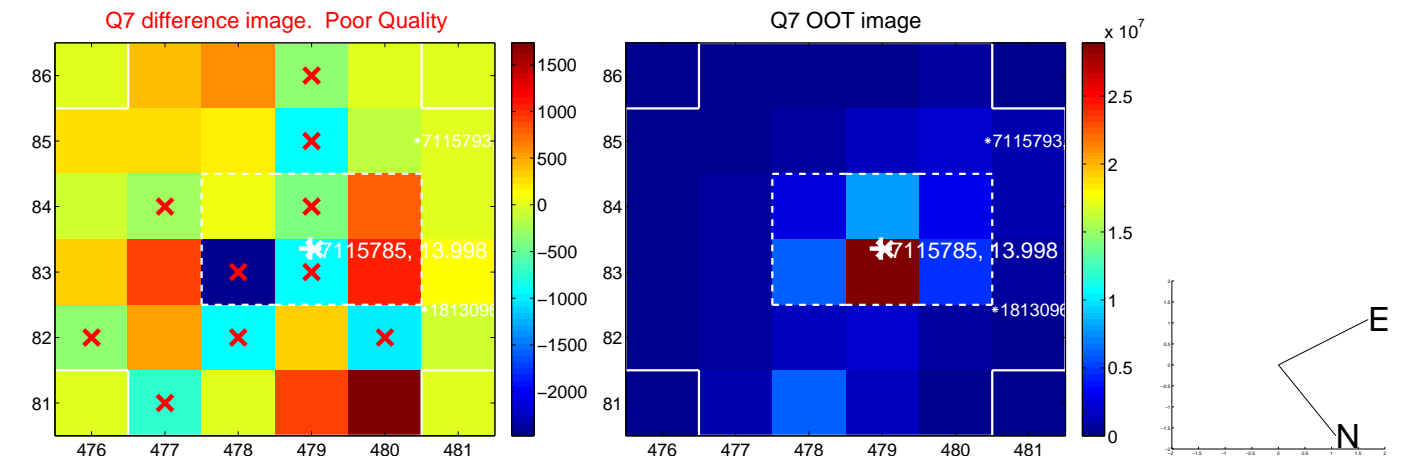
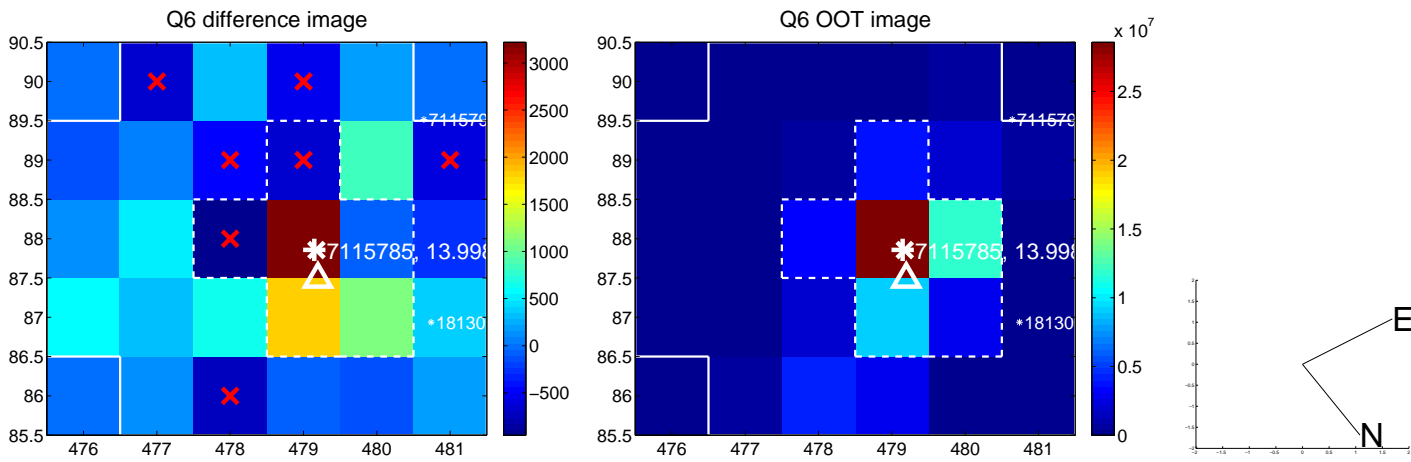
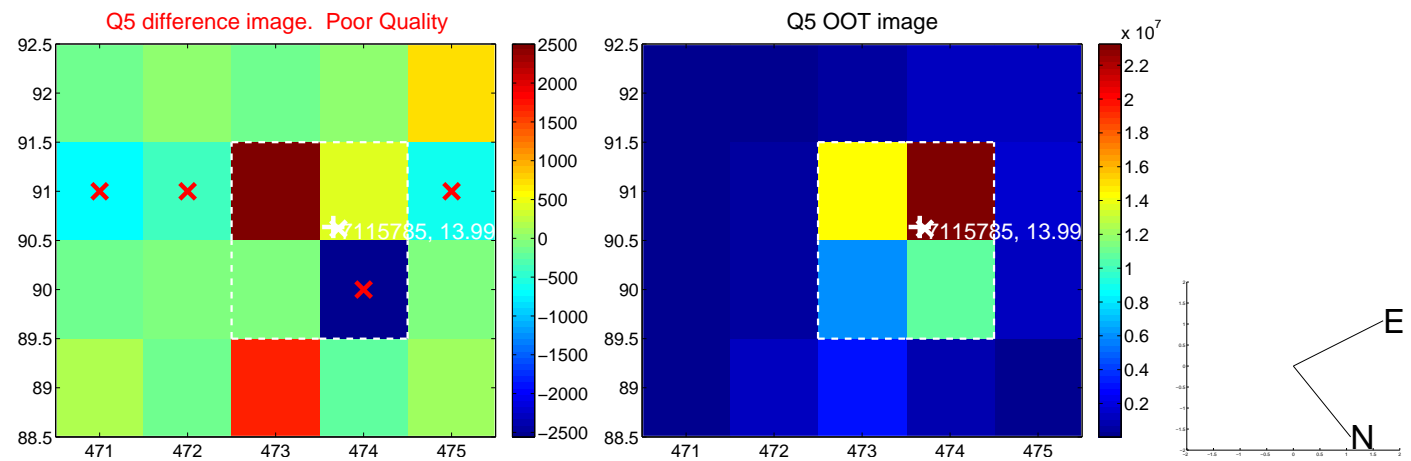


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

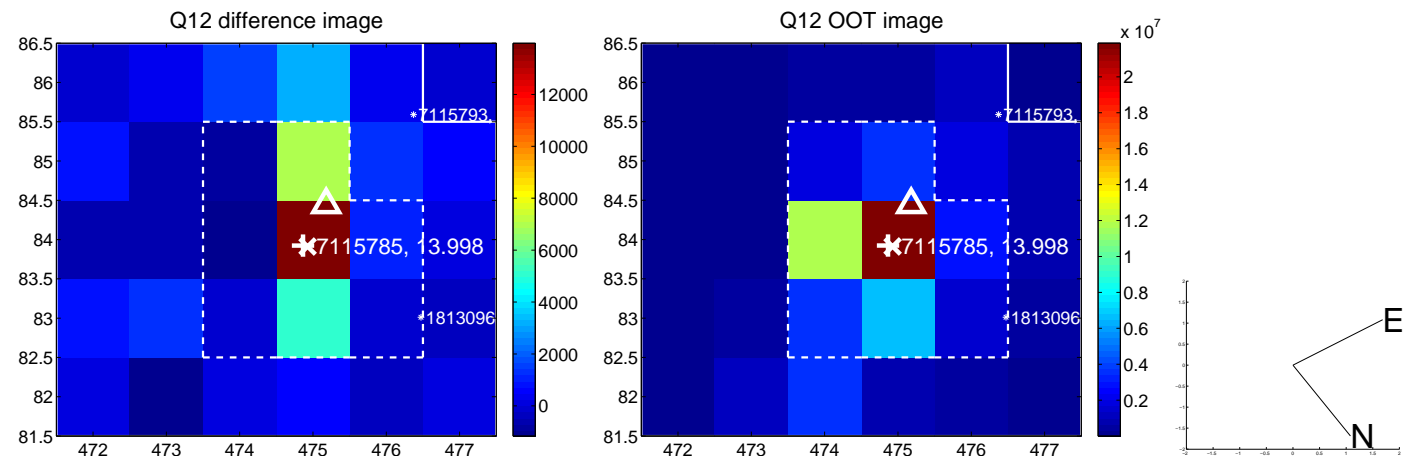
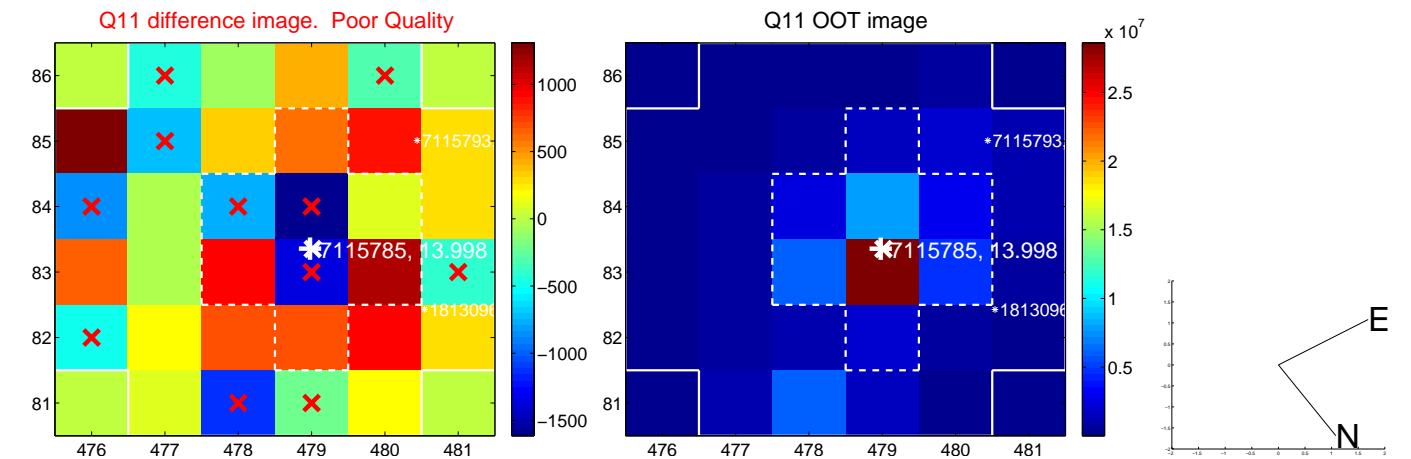
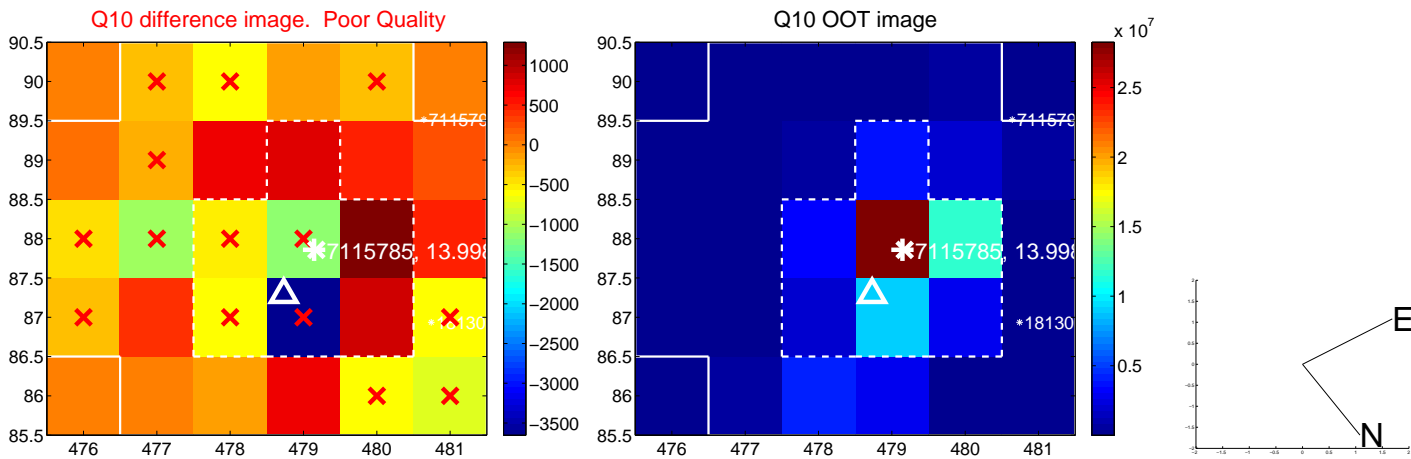
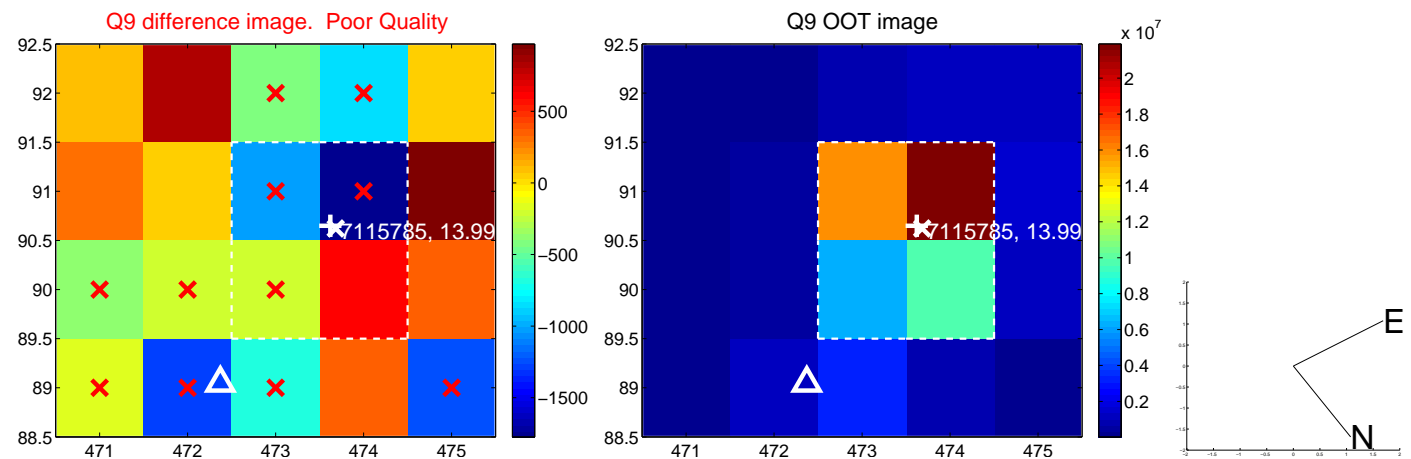
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



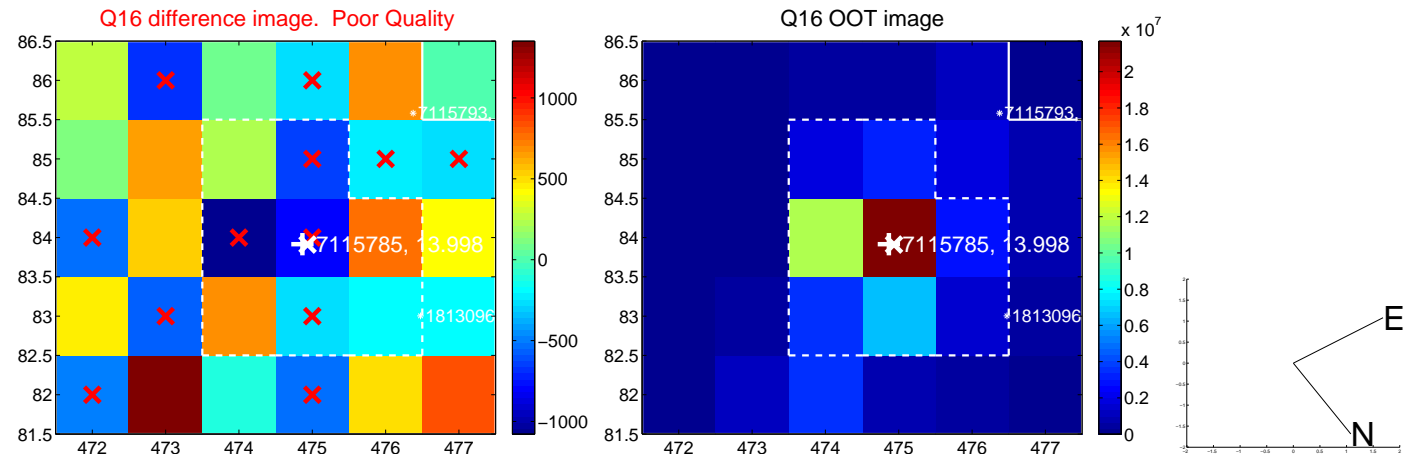
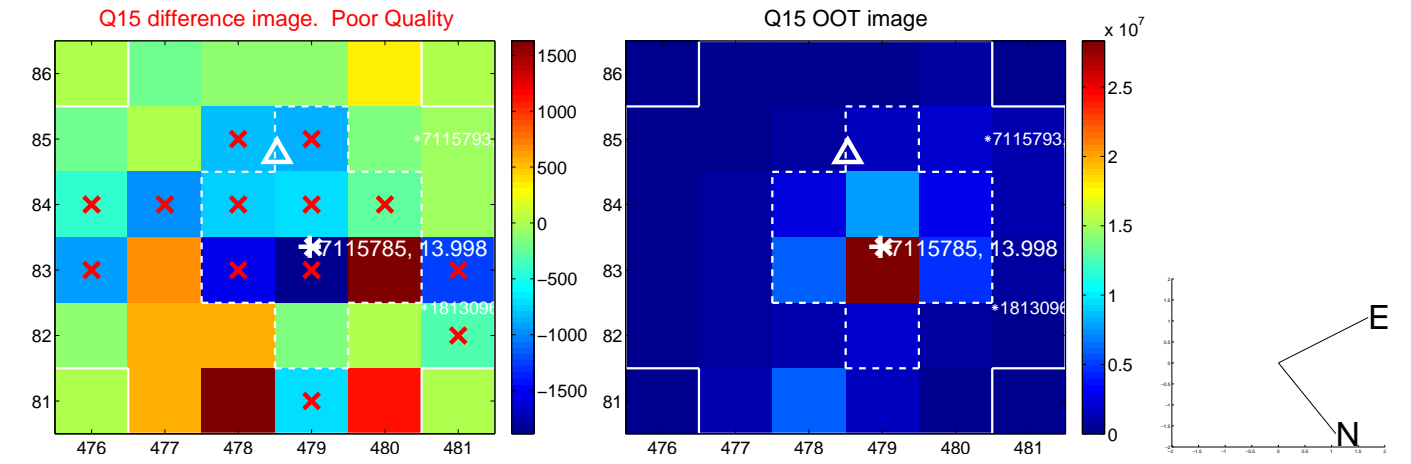
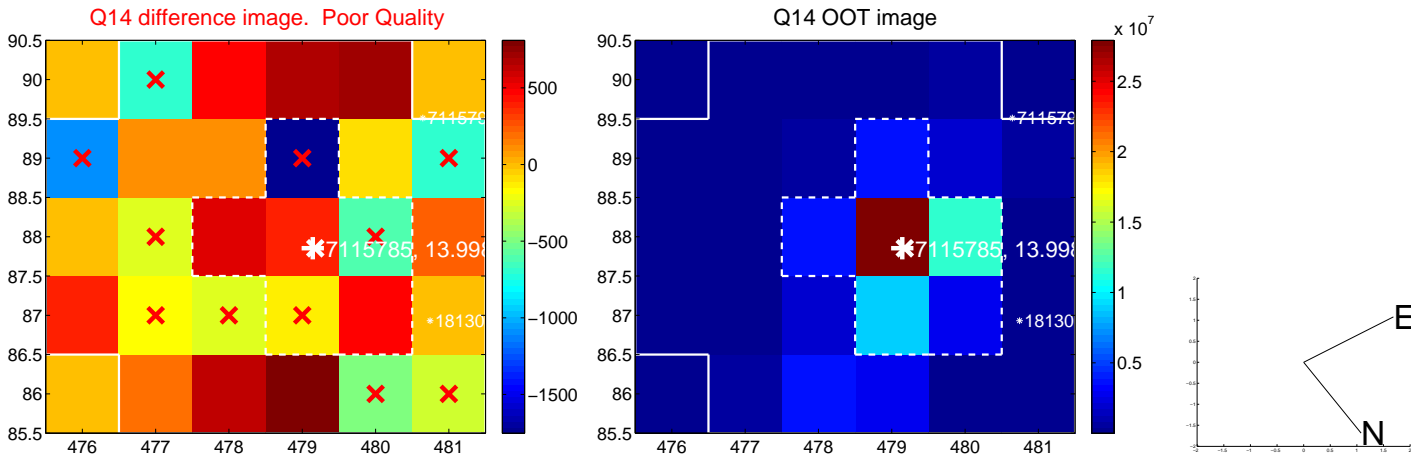
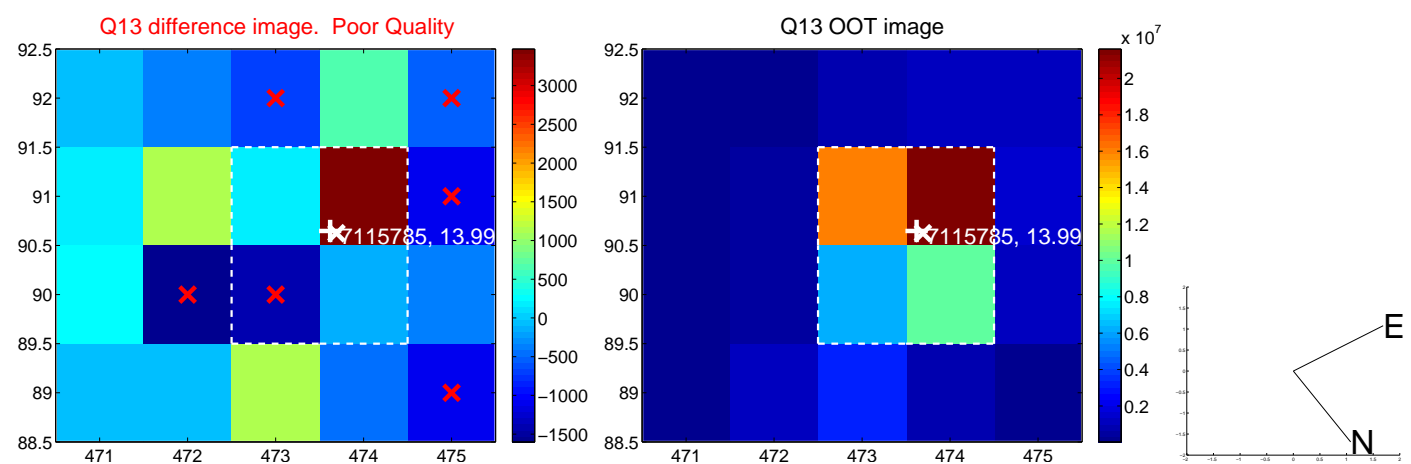
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



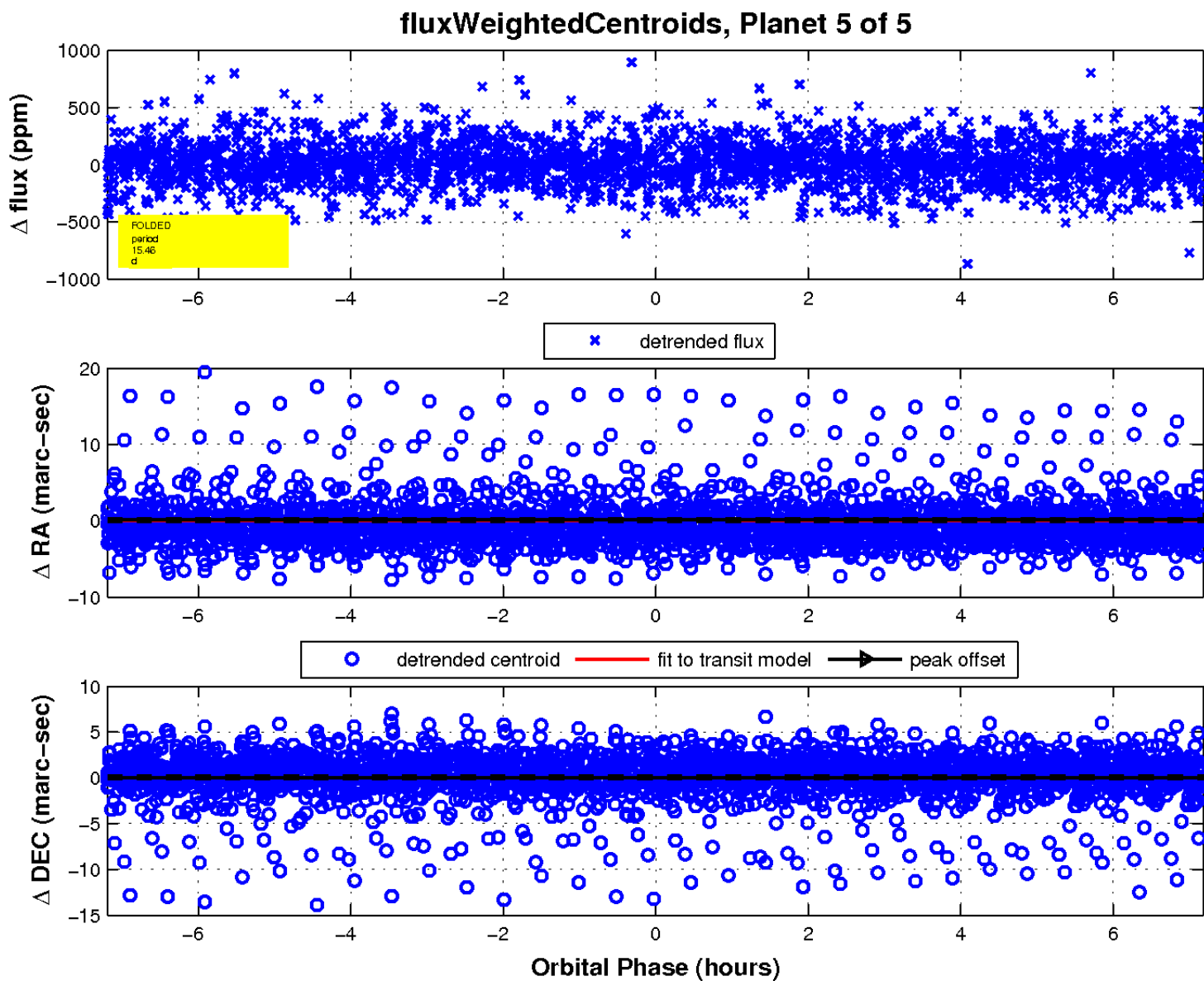
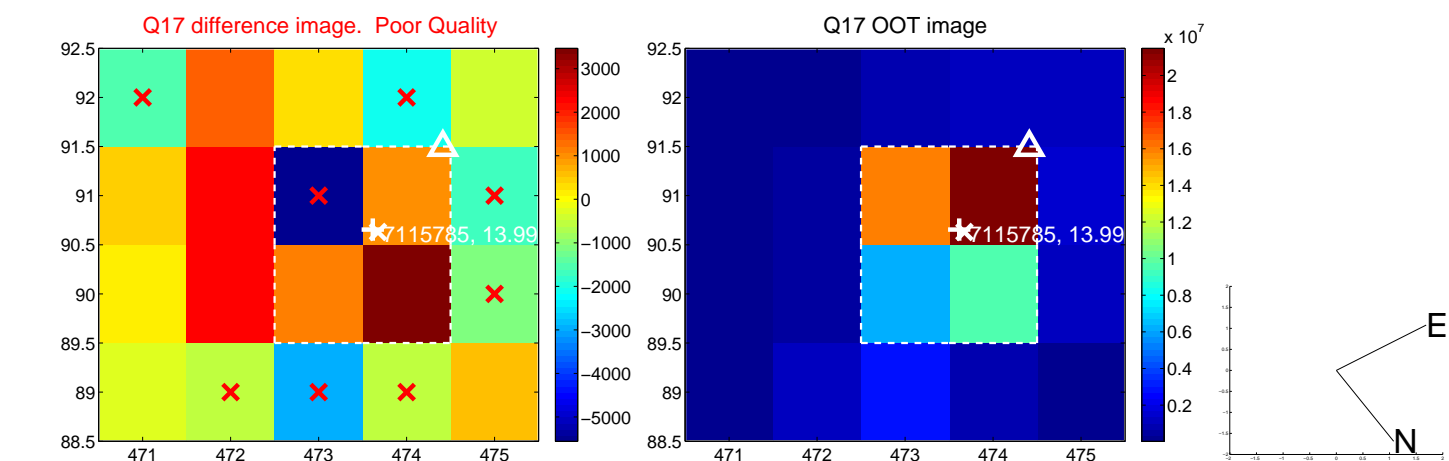
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

