

KIC 007116236

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})
007116236-01	OBS	6828.01	0.566750	131.868484	30.6	4.313	11.1	5.9	0.83	5707	0.46	3999.67
007116236-02	OBS	No	3.081284	132.609562	385.4	1.607	11.7	11.0	0.83	5707	1.63	418.38
007116236-03	OBS	No	12.460797	141.411539	1072.0	0.533	20.0	15.0	0.83	5707	3.67	64.94
007116236-04	OBS	No	1.875345	131.630708	708.0	1.065	17.0	23.6	0.83	5707	2.39	811.16
007116236-05	OBS	No	5.018200	132.119748	972.7	1.521	15.7	23.4	0.83	5707	2.80	218.35
007116236-06	OBS	No	1.187759	131.965534	301.4	1.085	16.6	11.6	0.83	5707	1.55	1491.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007116236-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH
007116236-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

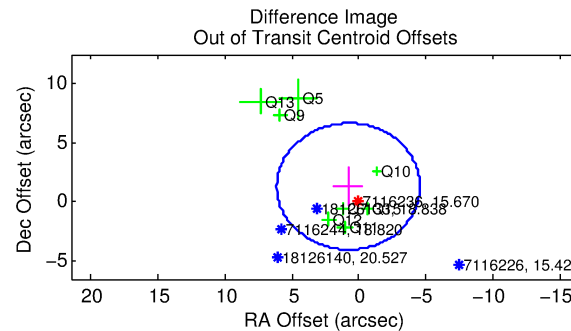
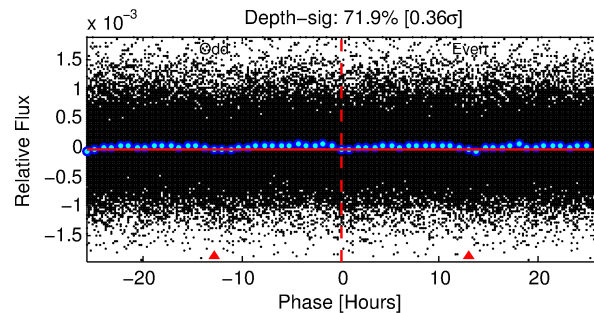
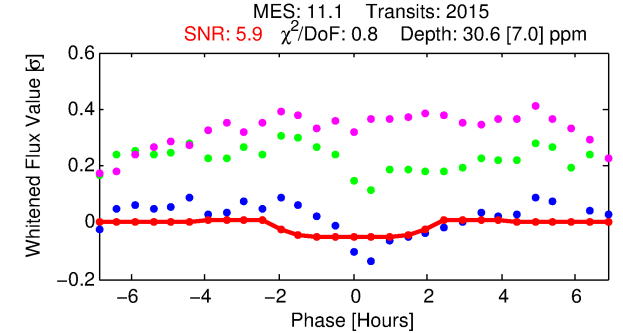
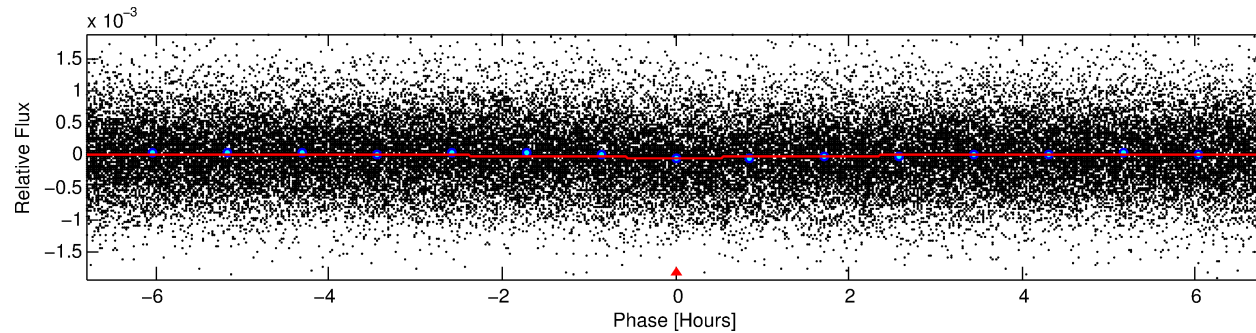
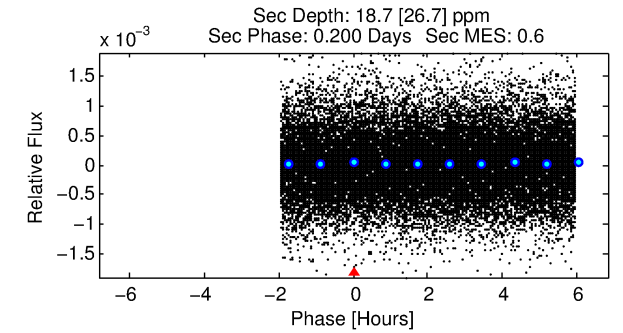
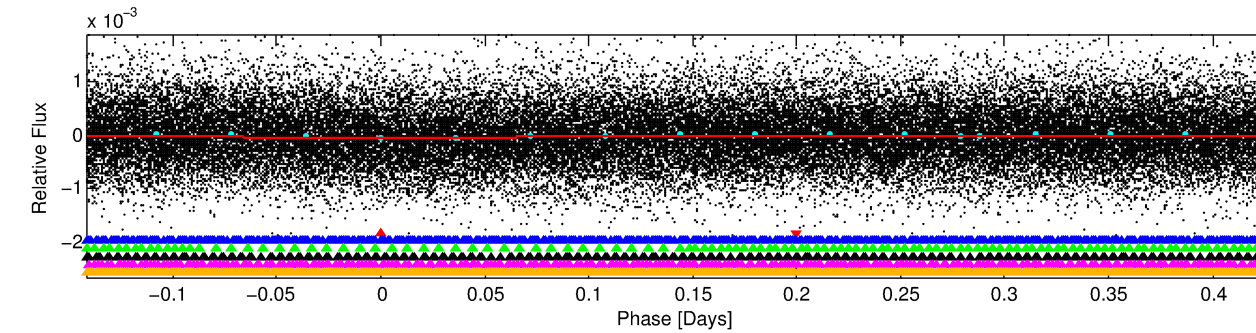
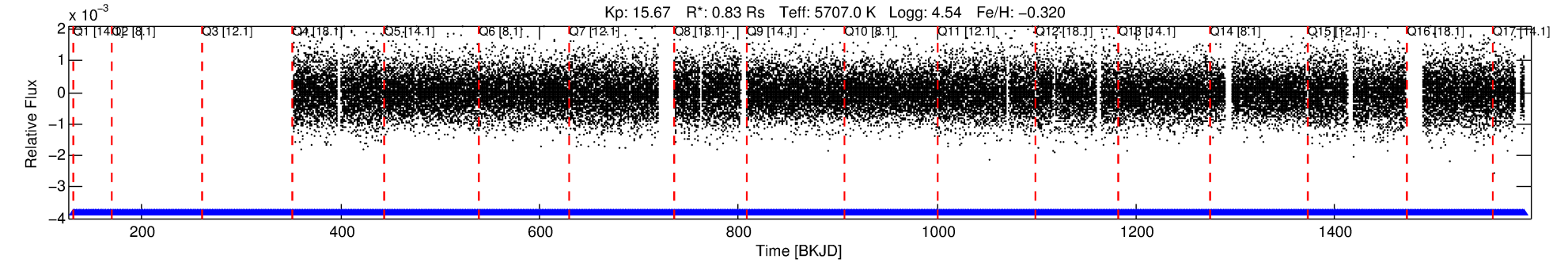
Ephemeris Match Information For 007116236-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (μ)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007116236-01	7116236	RR-Lyr-pri	7198959	1:1	615.6	108	-112	7.86	15.67	20106.00	Direct-PRF	0	0.44	21.61

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: 7116236 Candidate: 1 of 6 Period: 0.567 d
KOI: K06828.01 Corr: 0.763



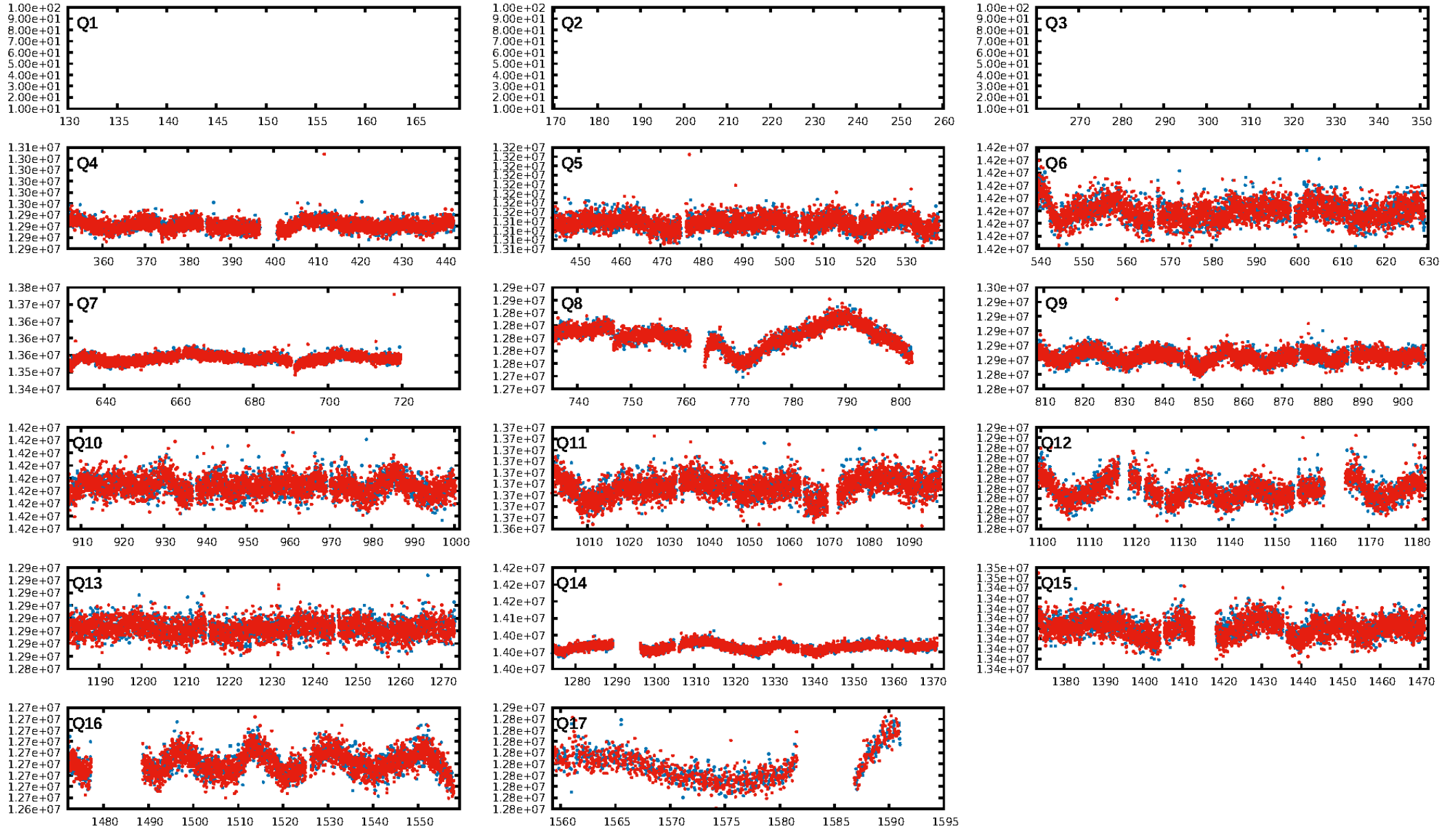
DV Fit Results:

Period = 0.56675 [0.00002] d
Epoch = 131.8685 [0.0078] BKJD
Rp/R* = 0.0051 [0.0100]
a/R* = 1.17 [2.71]
b = 0.42 [17.68]
Seff = 3999.67 [1351.80]
Teq = 2028 [171] K
Rp = 0.46 [0.91] Re
a = 0.0128 [0.0028] AU
Ag = 7.79 [32.48] [0.21σ]
Teffp = 5237 [5450] K [0.59σ]

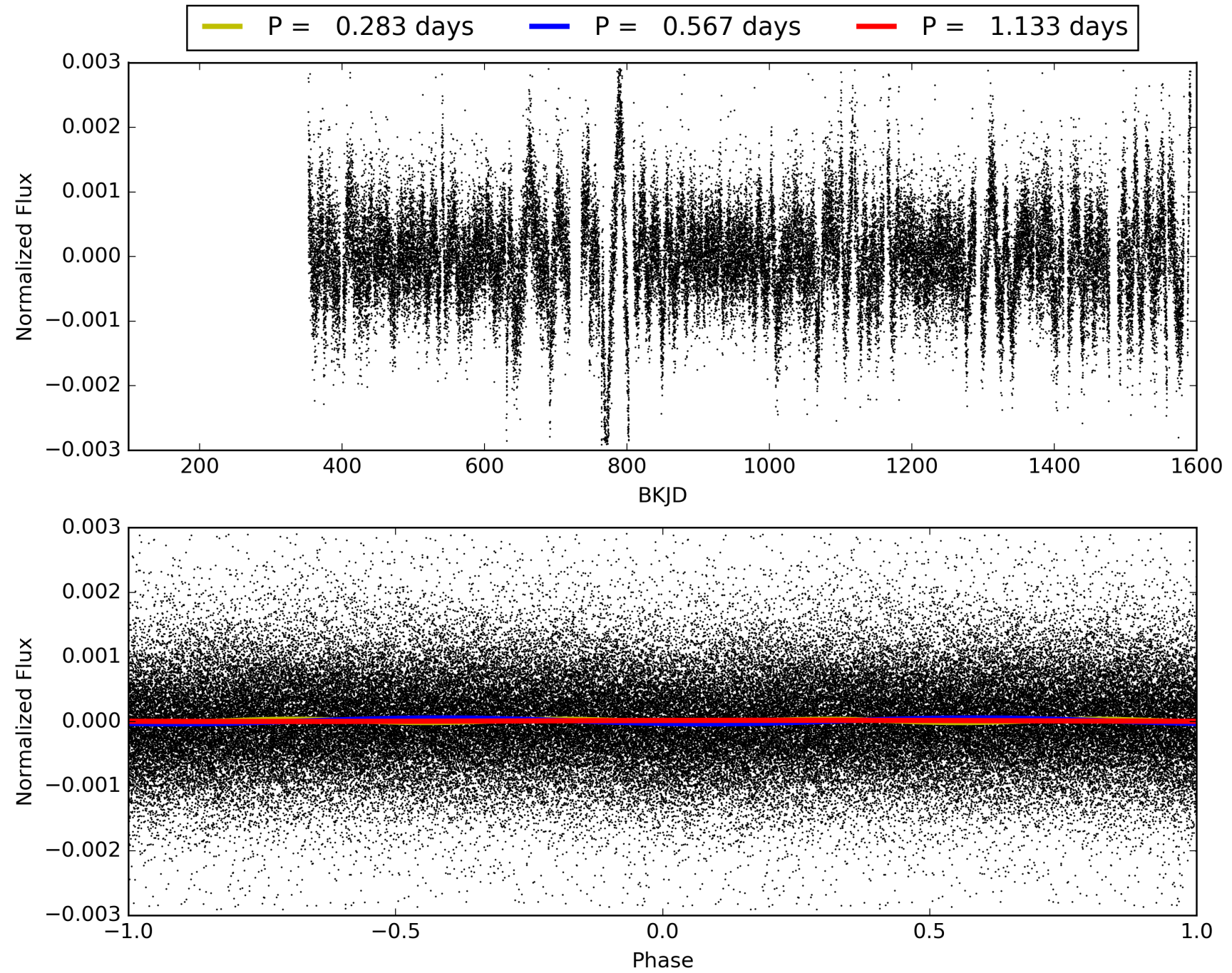
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.35σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1968/1968]
GhostDiagnostic-chr: 0.1814
Centroid-sig: 0.0%
Centroid-so: 5.305 arcsec [3.38σ]
OotOffset-rm: 1.541 arcsec [0.87σ]
KicOffset-rm: 0.967 arcsec [1.91σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 007116236-01, PDC Light Curves

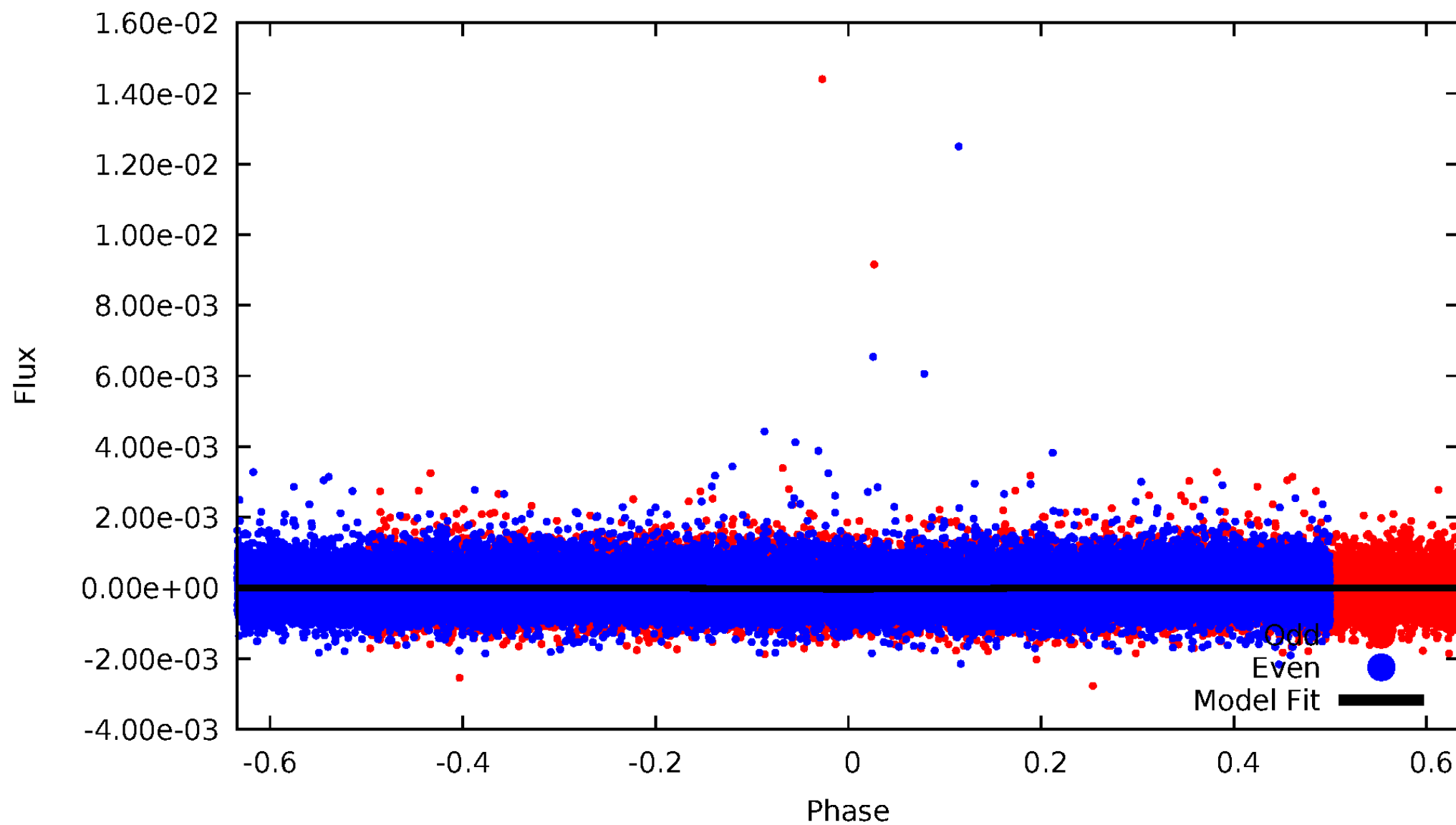


TCE 007116236-01



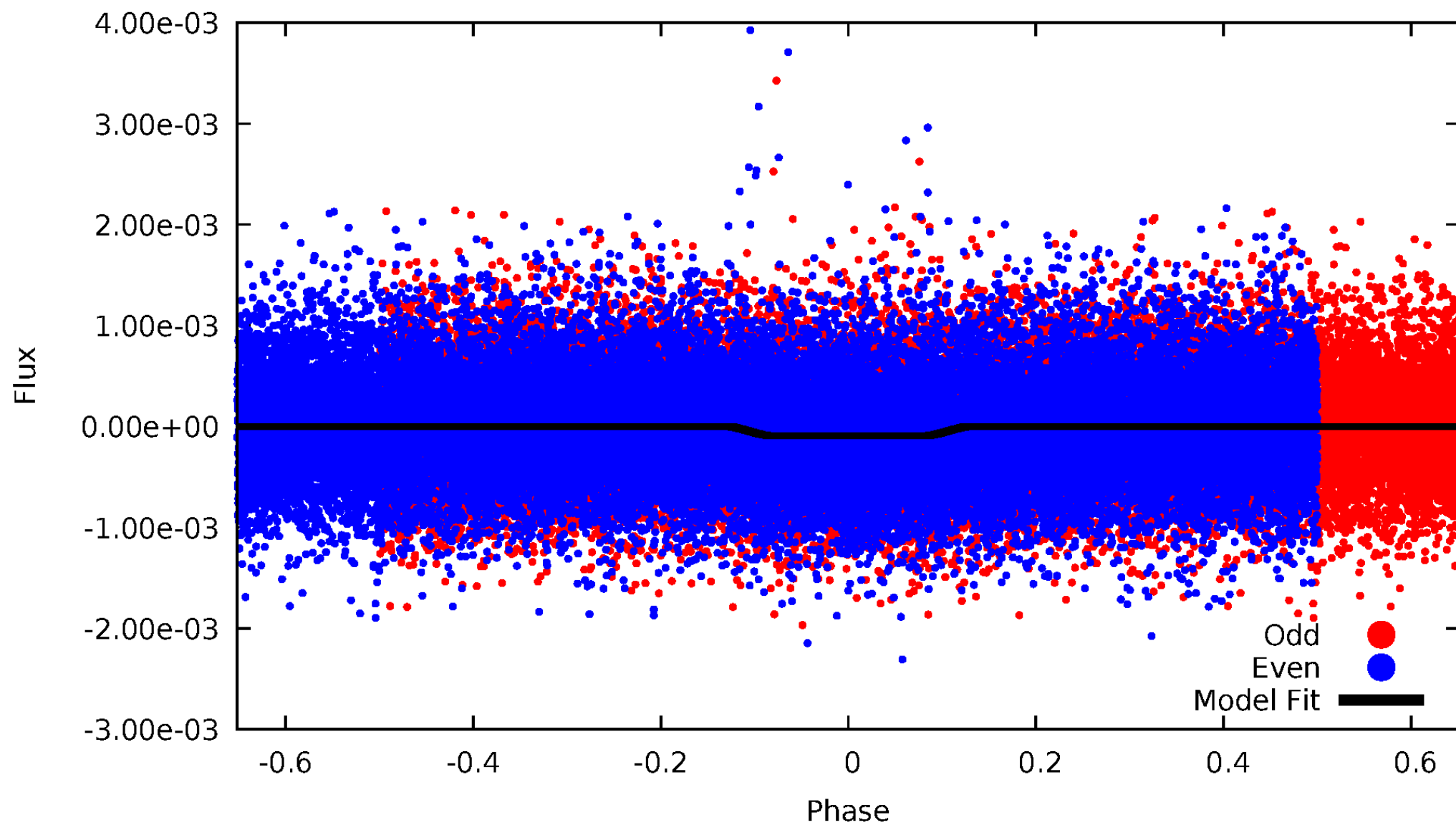
DV Odd/Even

TCE 007116236-01



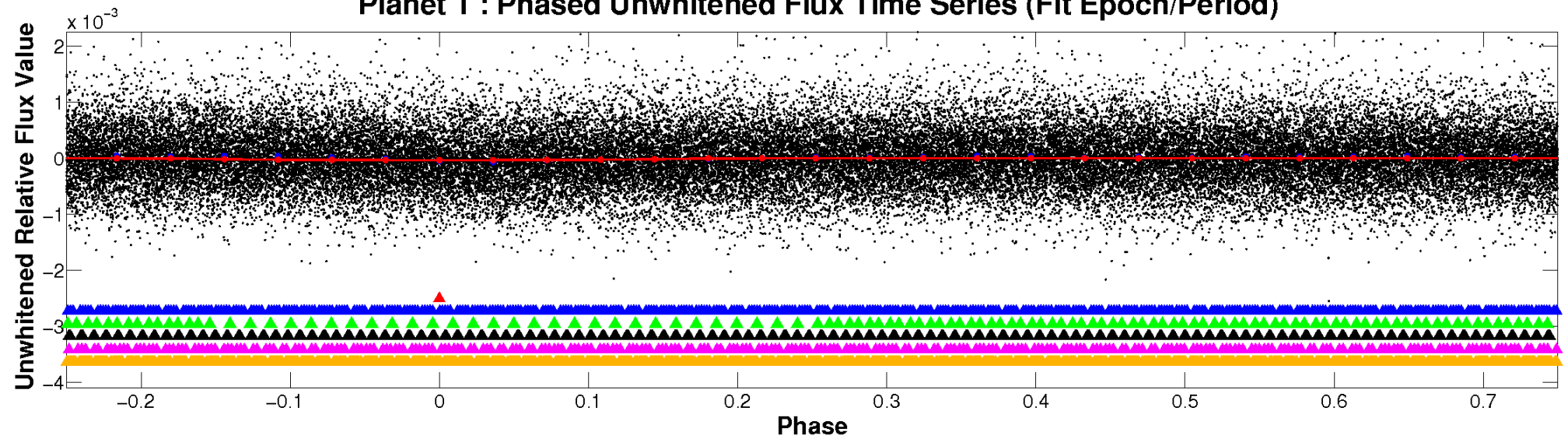
ALT Odd/Even

TCE 007116236-01

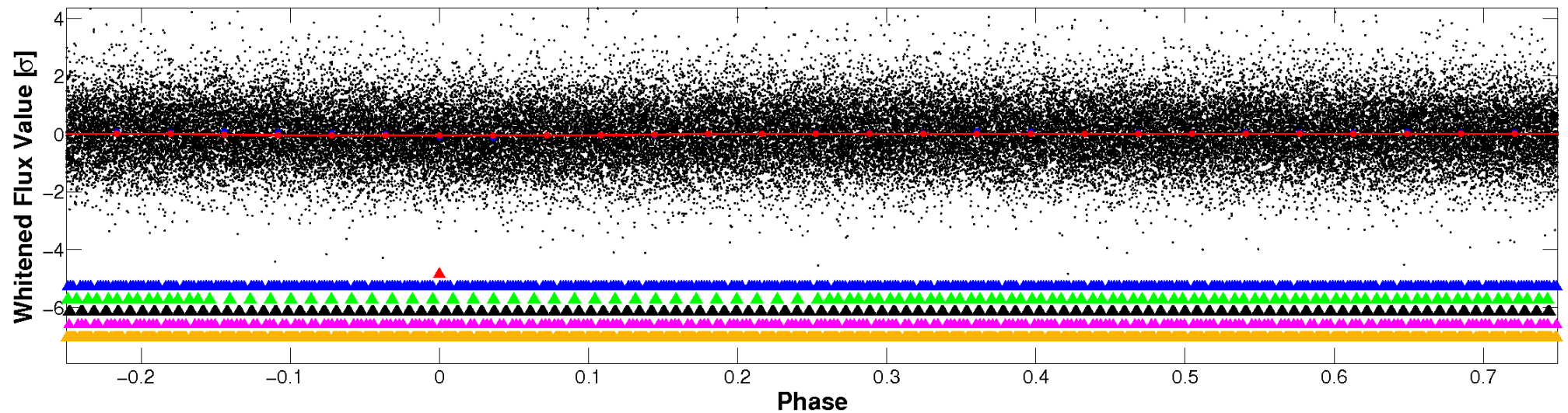


Non-Whitened Vs. Whitened Light Curve

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

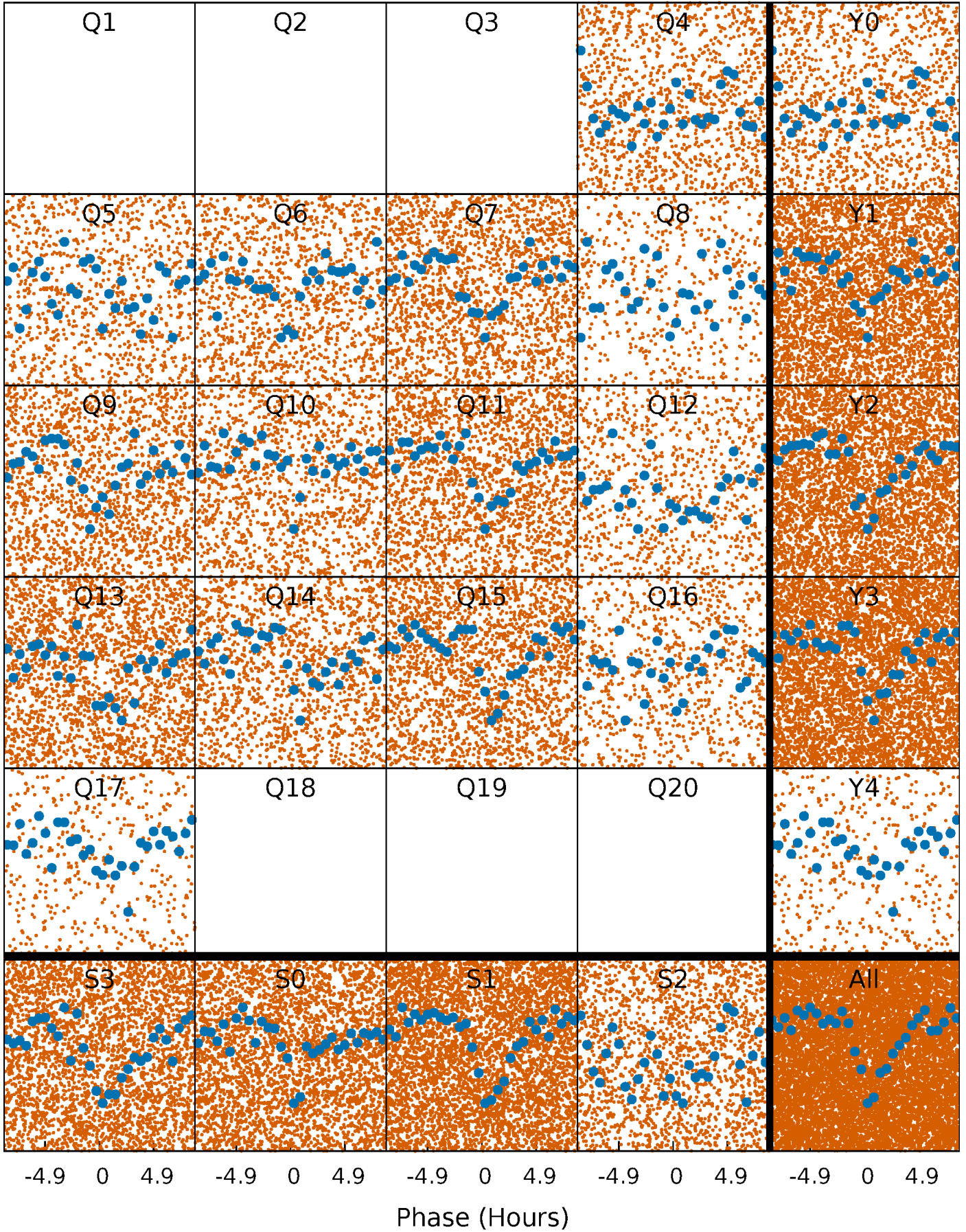


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



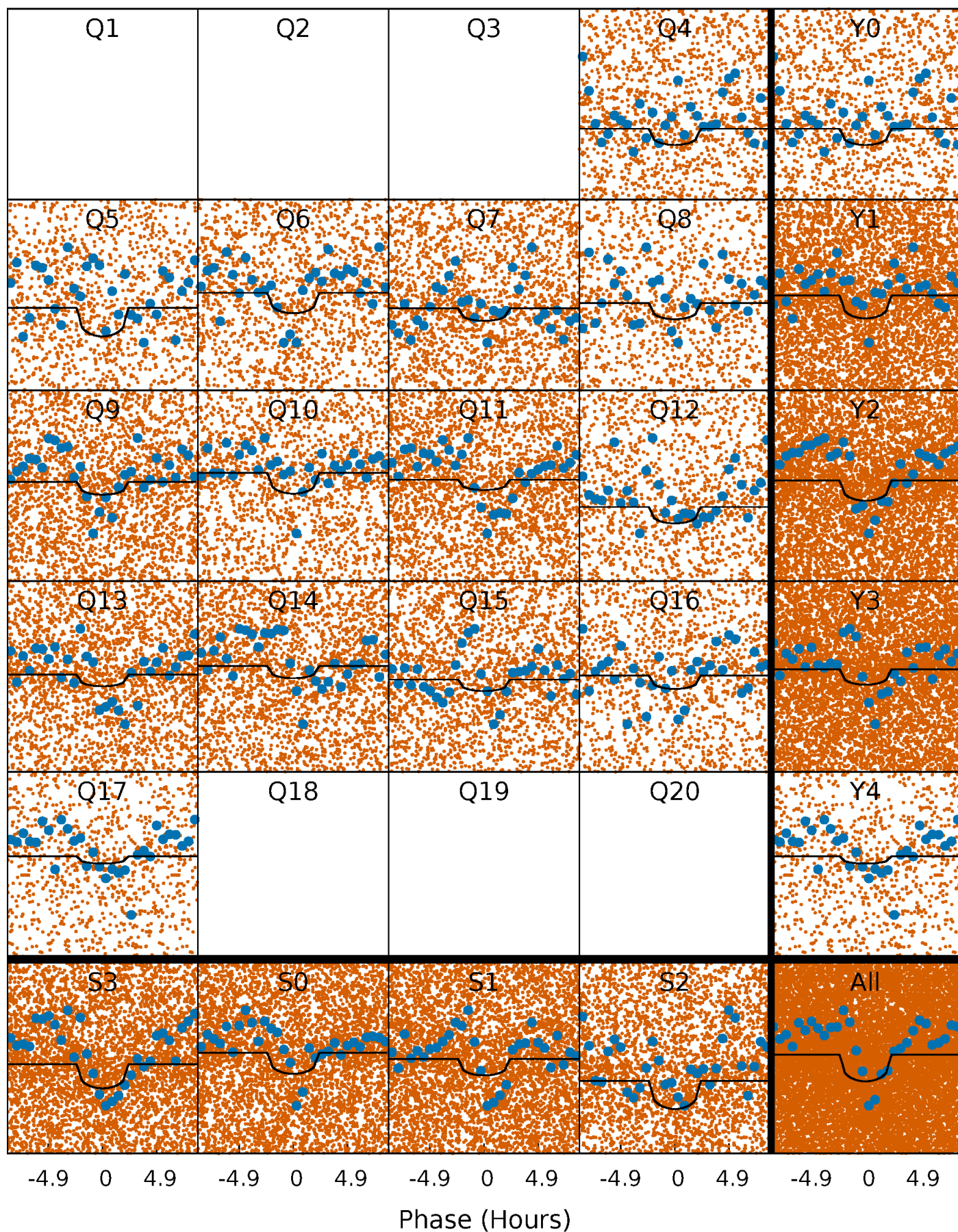
PDC Quarter-Phased Transit Curves

TCE 007116236-01 P= 0.566750 Days $T_0=131.868484$ (BKJD)



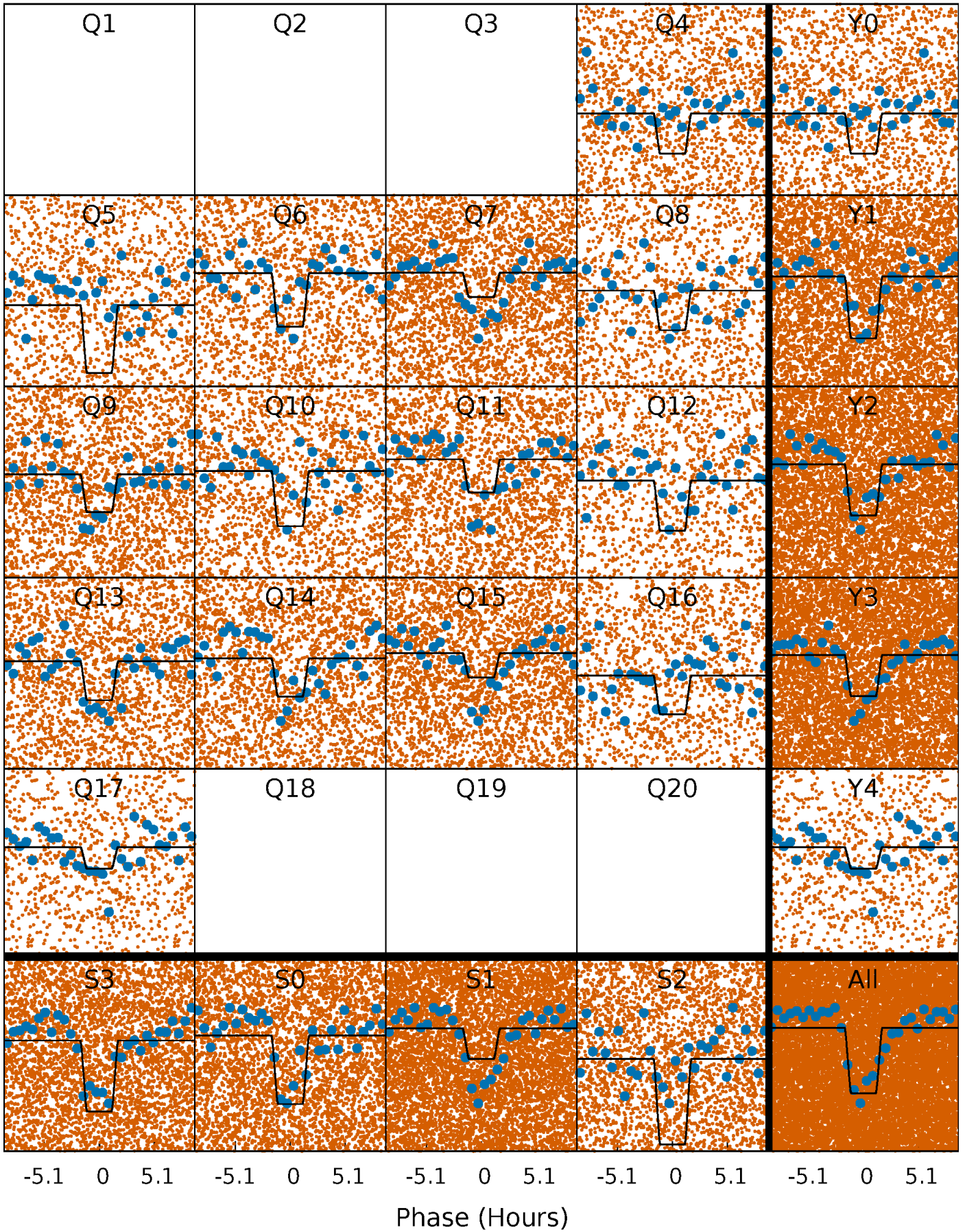
DV Quarter-Phased Transit Curves

TCE 007116236-01 P= 0.566750 Days $T_0=131.868484$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

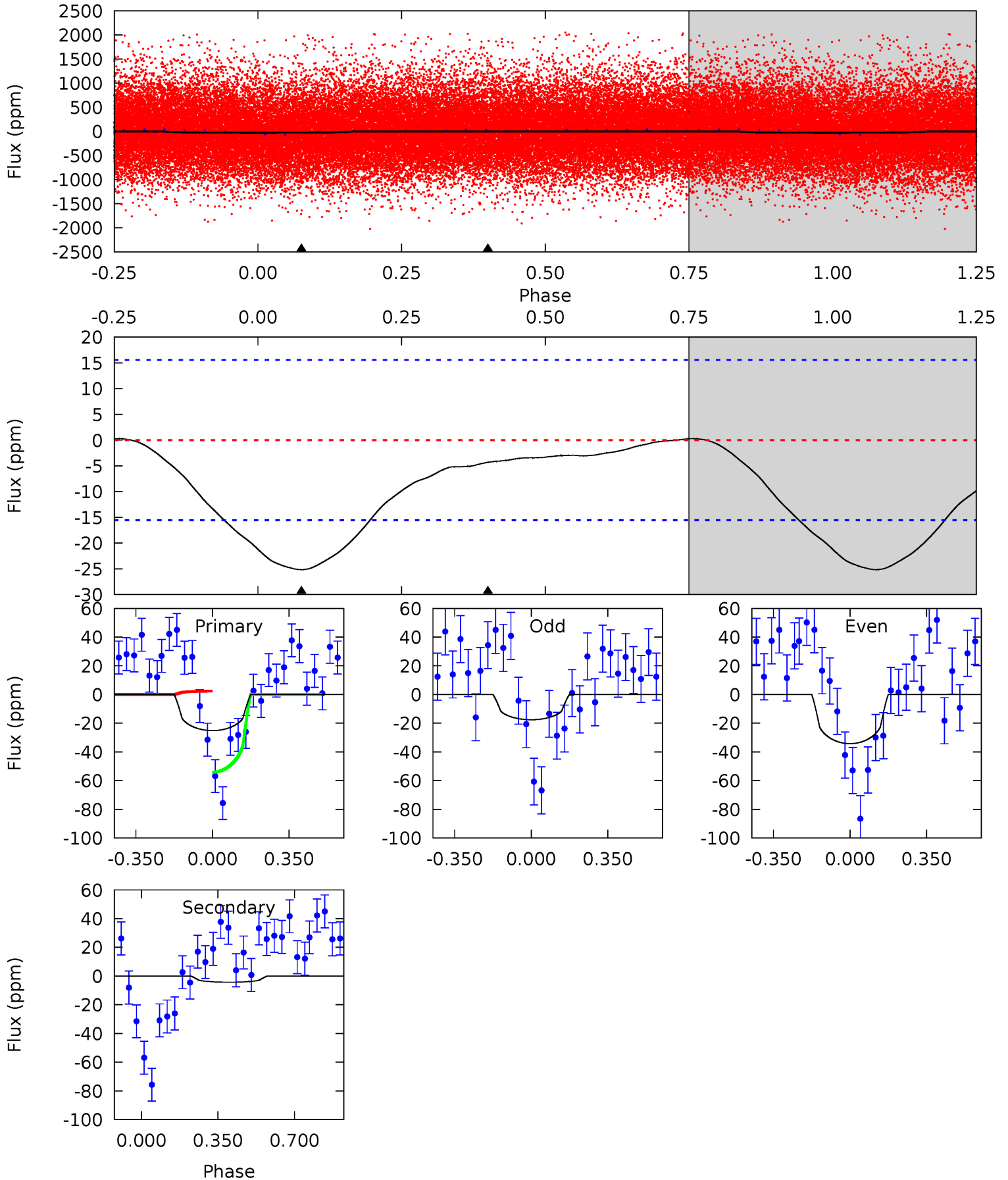
TCE 007116236-01 P= 0.566795 Days $T_0=131.829316$ (BKJD)



DV Model-Shift Uniqueness Test

007116236-01, P = 0.566750 Days, E = 131.868484 Days

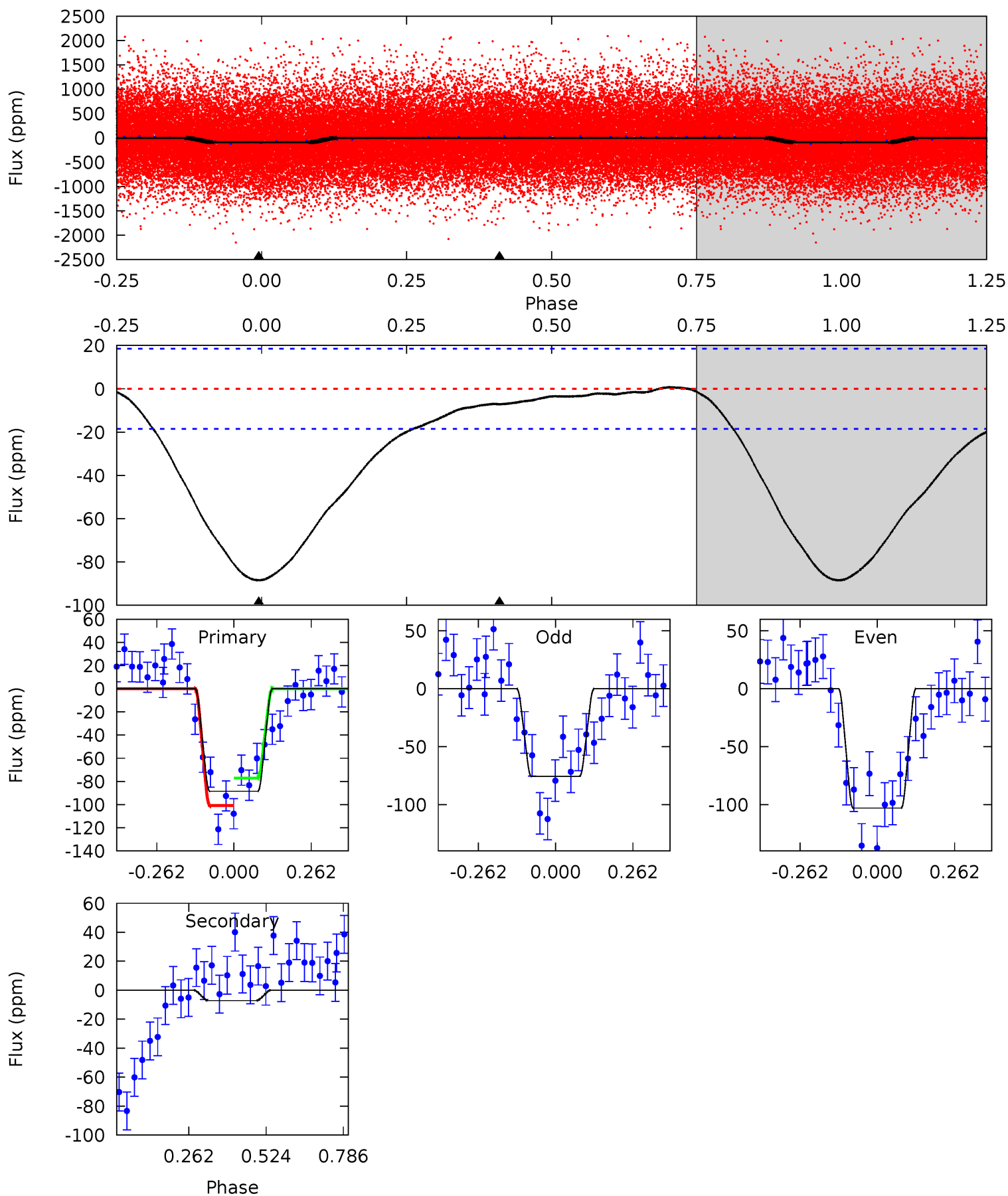
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.94	1.19	0	0	4.29	0.94	0.06	6.94	6.94	1.19	1.19	2.27	0.61	0.01	7.06



Alt Model-Shift Uniqueness Test

007116236-01, P = 0.566795 Days, E = 131.829316 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.8	1.68	0	0	4.36	1.12	0.19	20.8	20.8	1.68	1.68	3.21	0.91	0.01	2.76



Stellar Parameters For KIC 007116236

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-01 / KOI 6828.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 4	$0.90^{+0.74}_{-0.62}$	2883^{+179}_{-144}	2472^{+2088}_{-5466}	$0.364^{+3.797}_{-0.322}$
Alt.	-7 ± 4	$1.07^{+0.89}_{-0.67}$	2874^{+167}_{-127}	2762^{+1656}_{-5633}	$0.460^{+2.771}_{-0.358}$

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

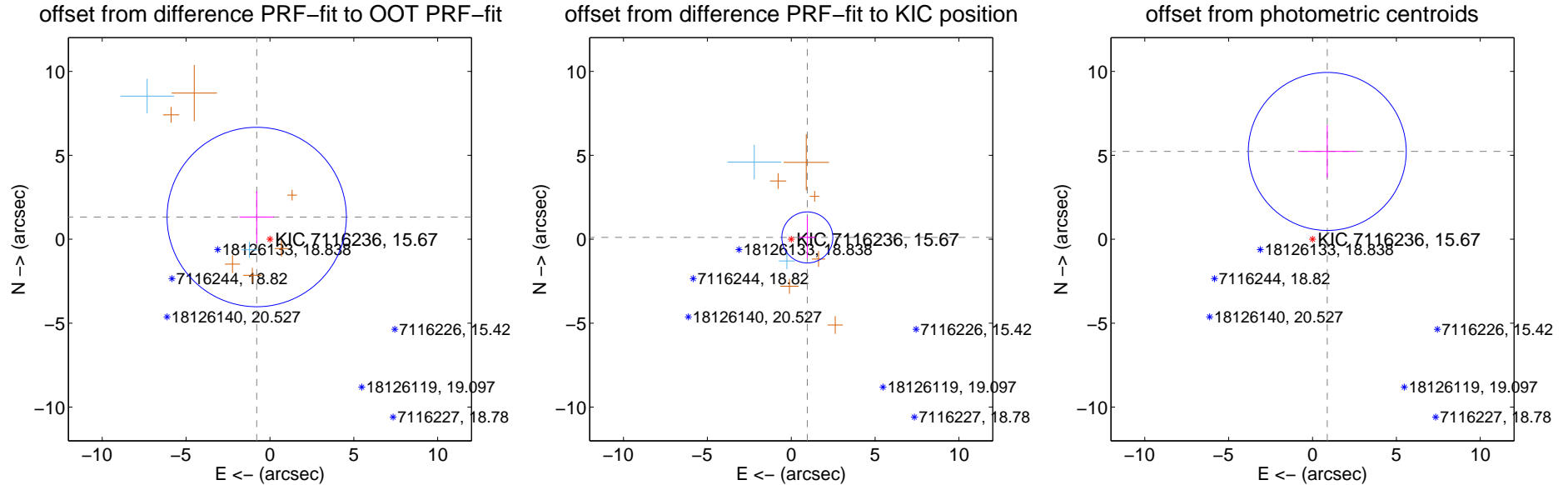
DV Centroid Data

Supplemental centroid analysis for 007116236-01. Kepler magnitude: 15.67. Transit SNR 5.92

There are 2 quarters with good PRF difference image offsets

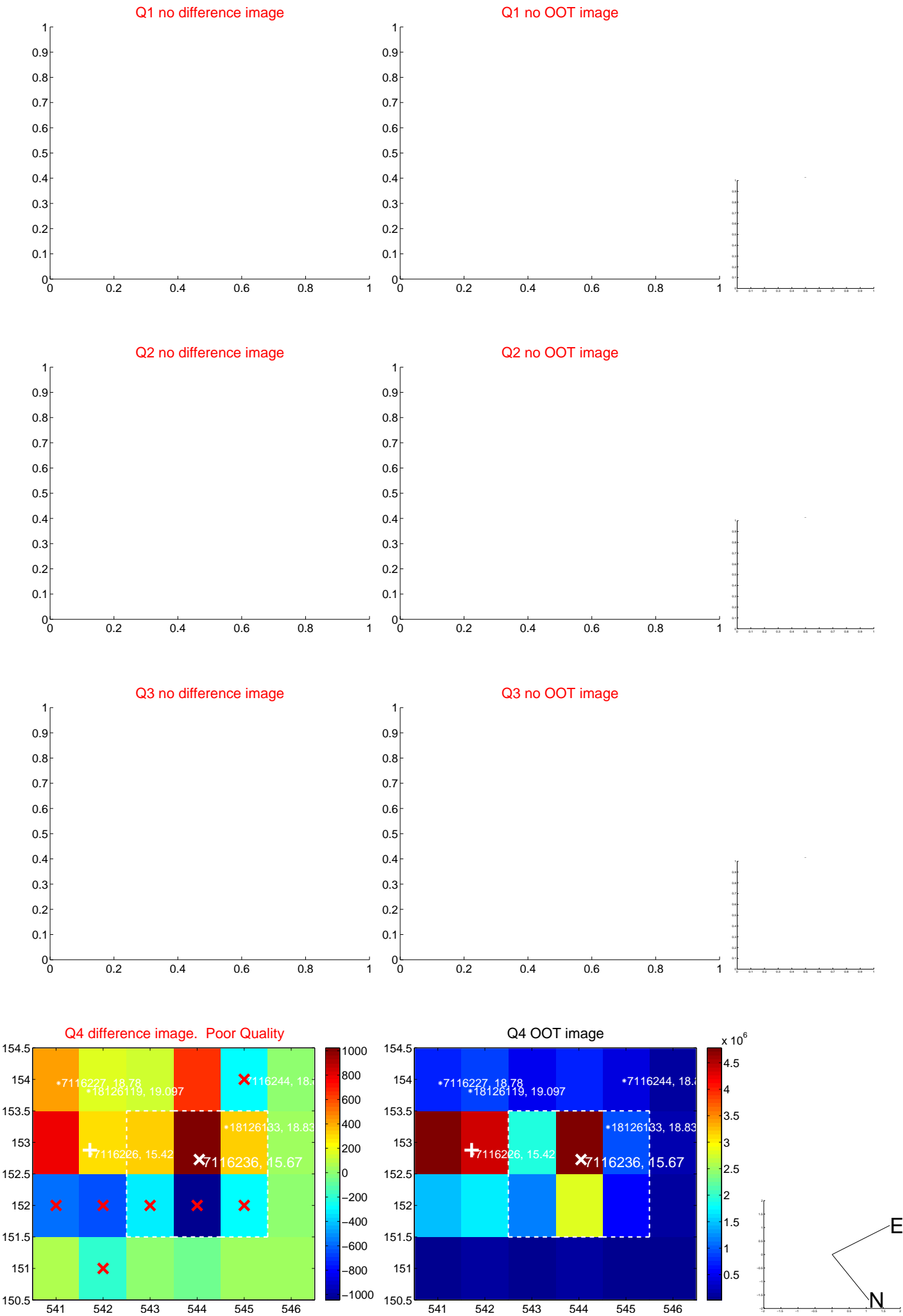
The direct PRF centroid is offset from the target star catalog position by about 1.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.541 ± 1.781	0.87	0.789 ± 1.029	1.324 ± 1.558
PRF-fit source offset from KIC position	0.967 ± 0.507	1.91	-0.960 ± 0.490	0.109 ± 1.247
photometric centroid source offset	5.31 ± 1.57	3.38	-0.88 ± 1.74	5.23 ± 1.56

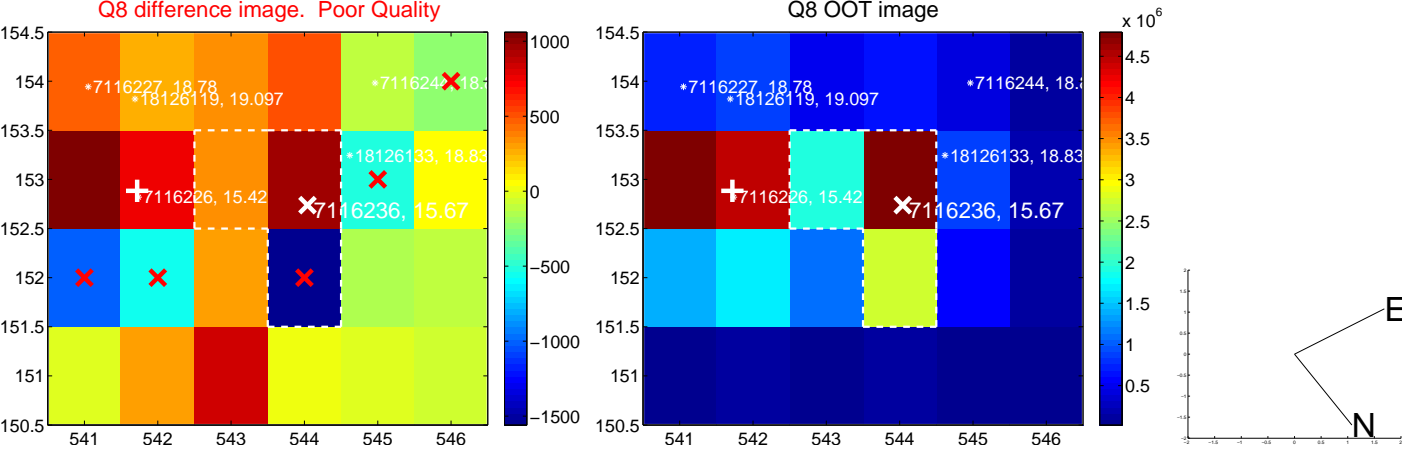
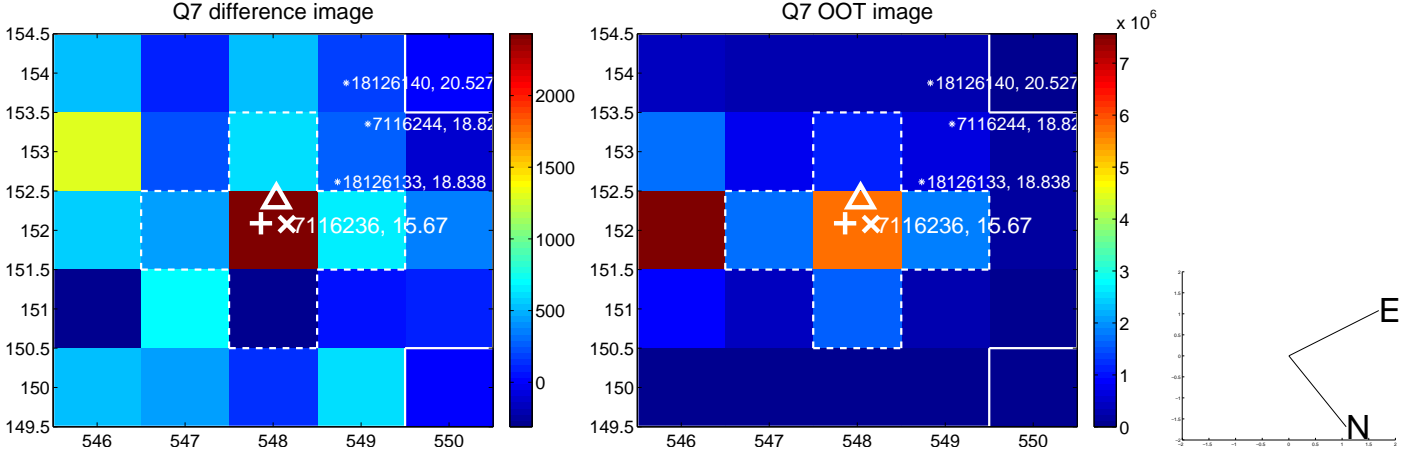
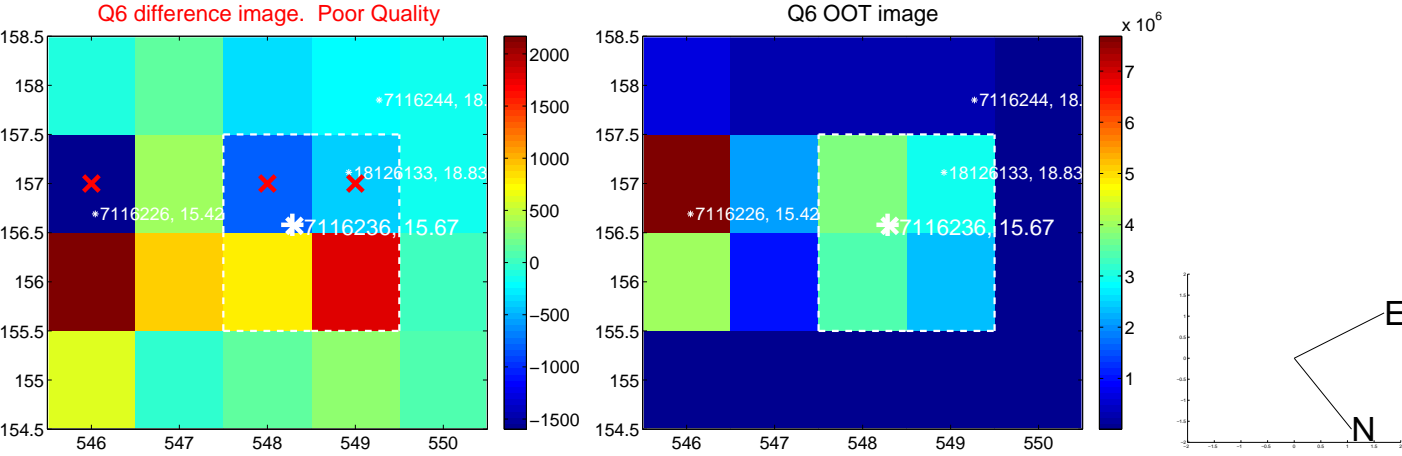
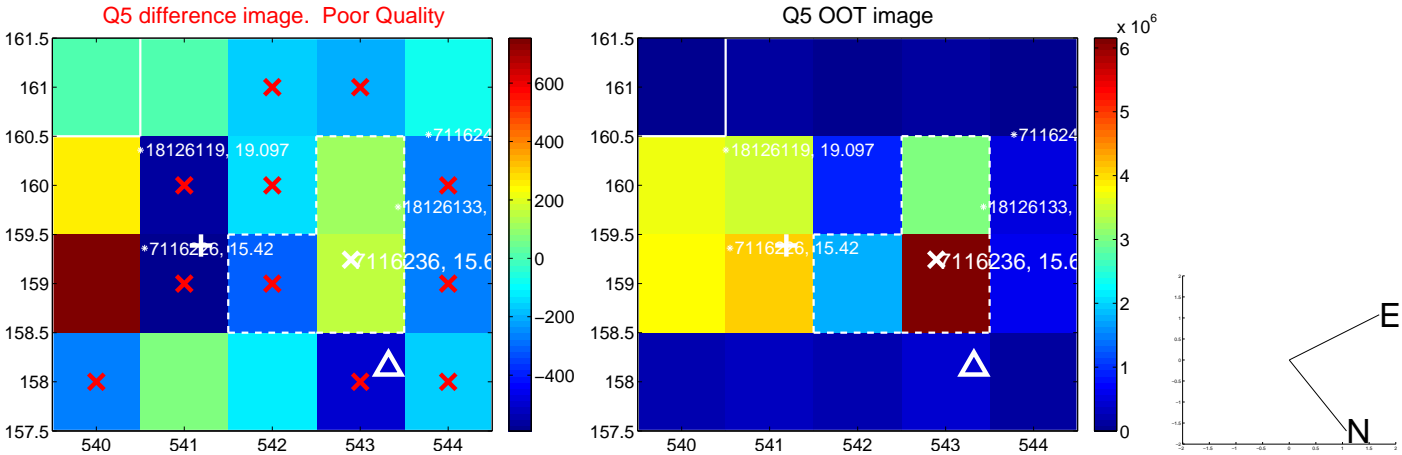


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

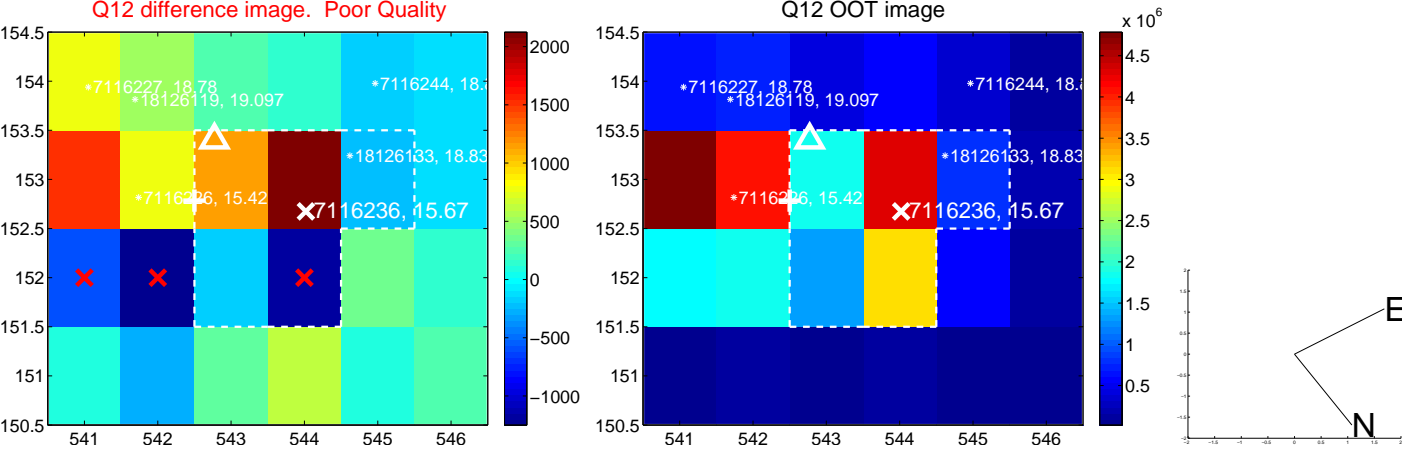
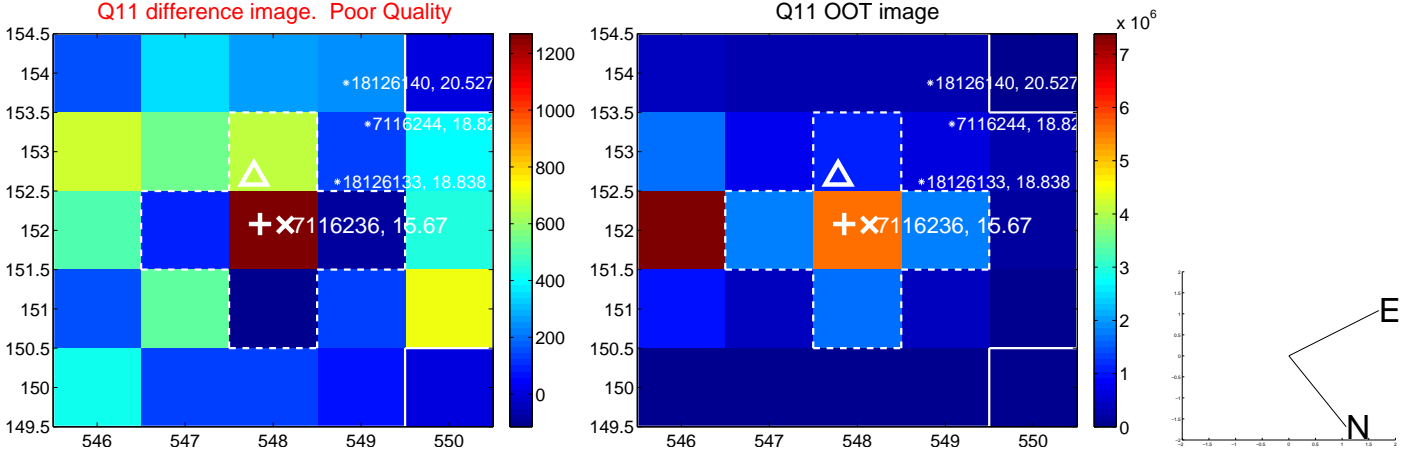
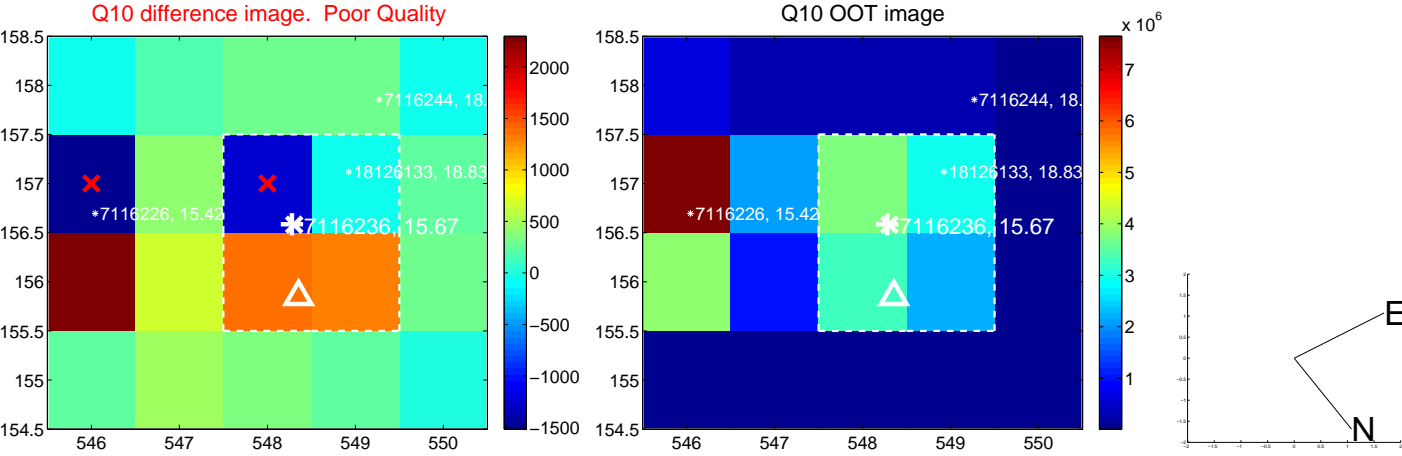
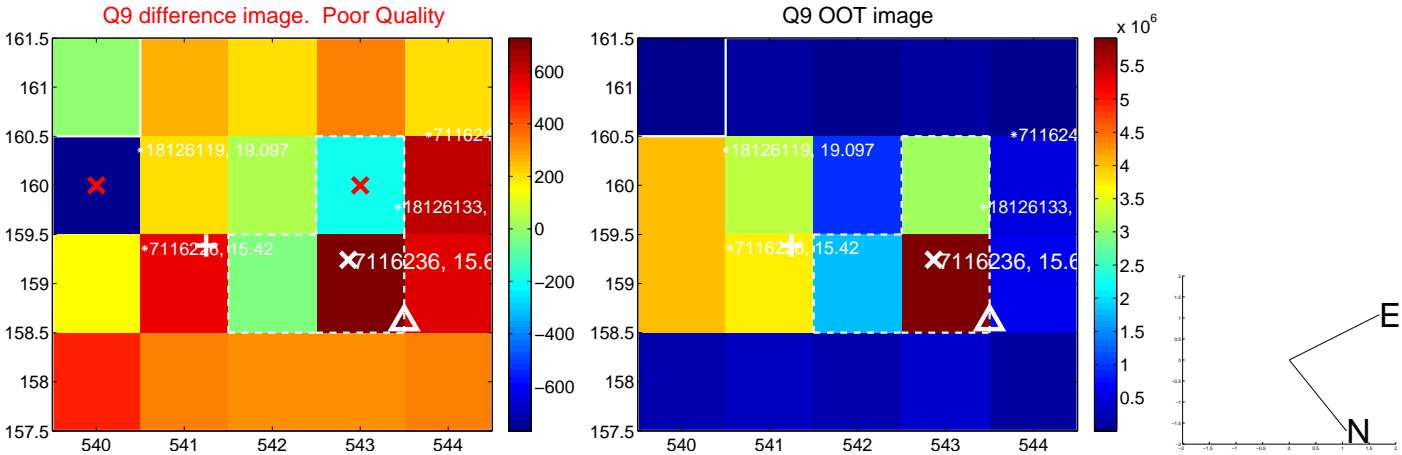
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



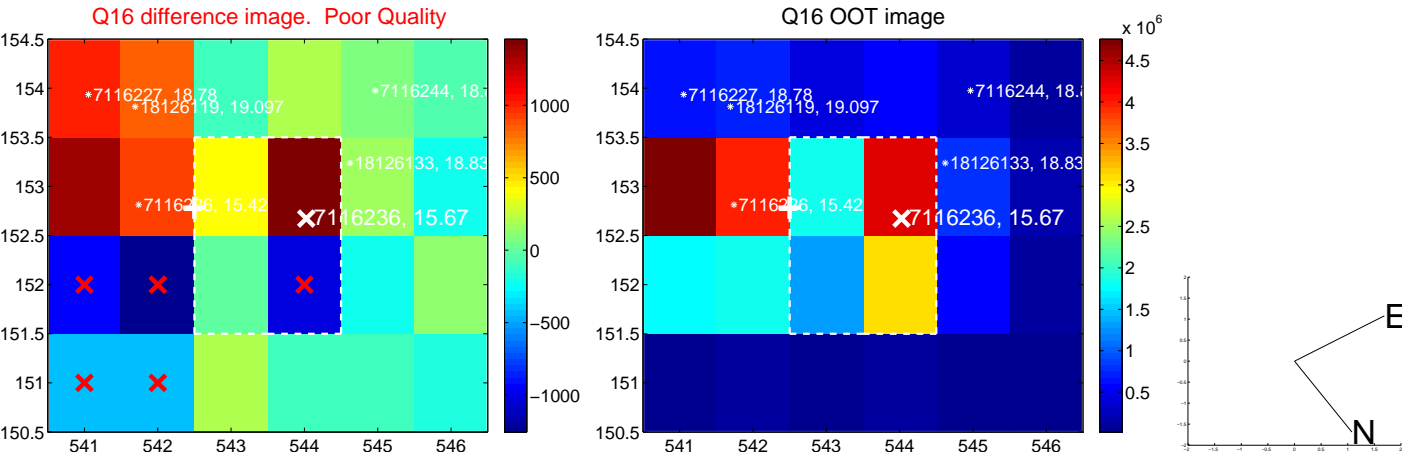
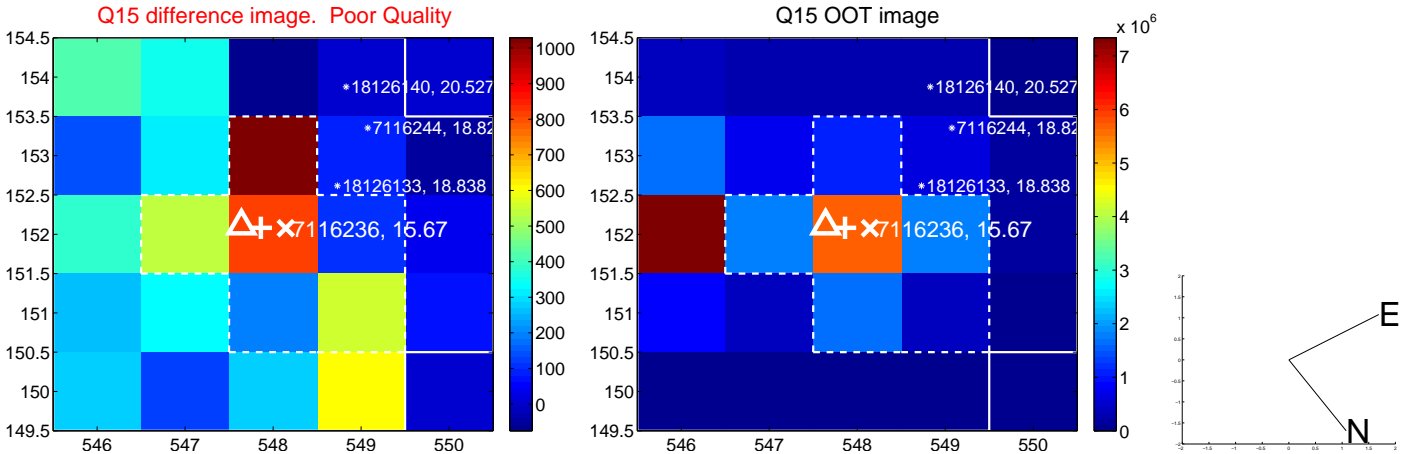
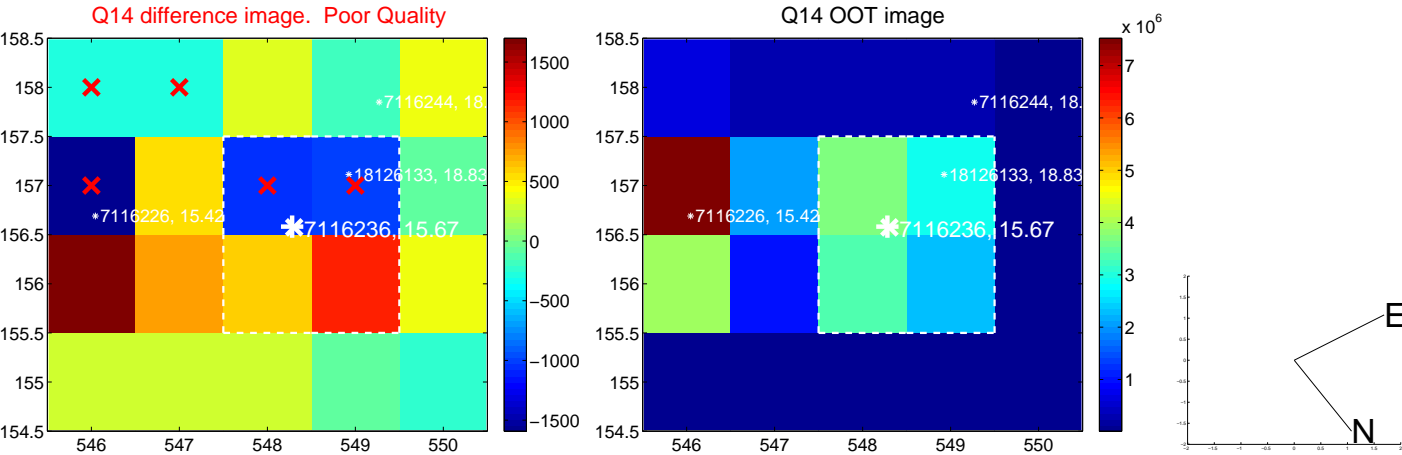
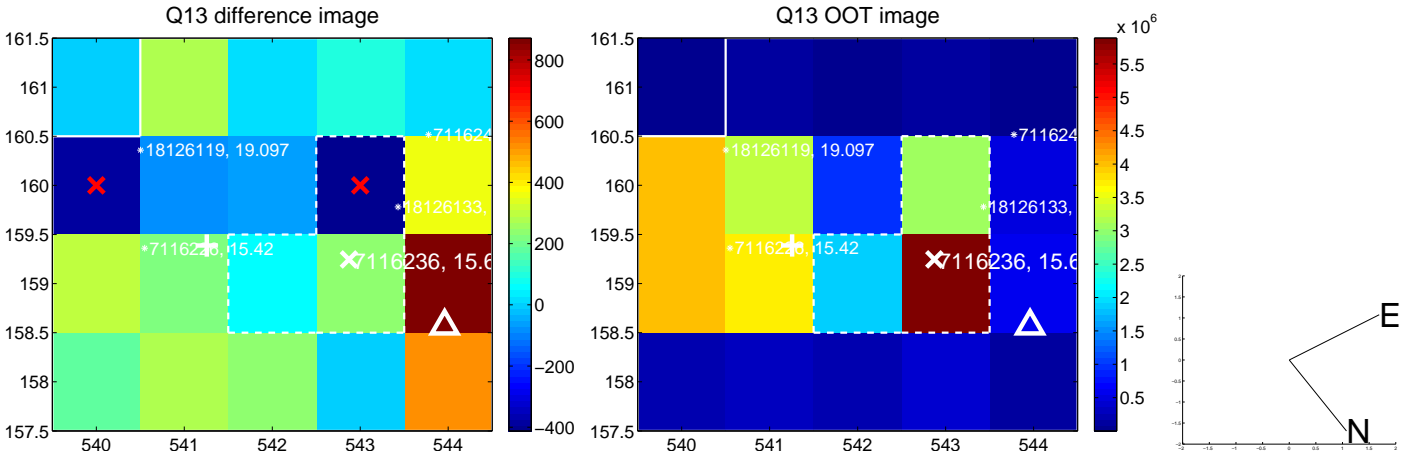
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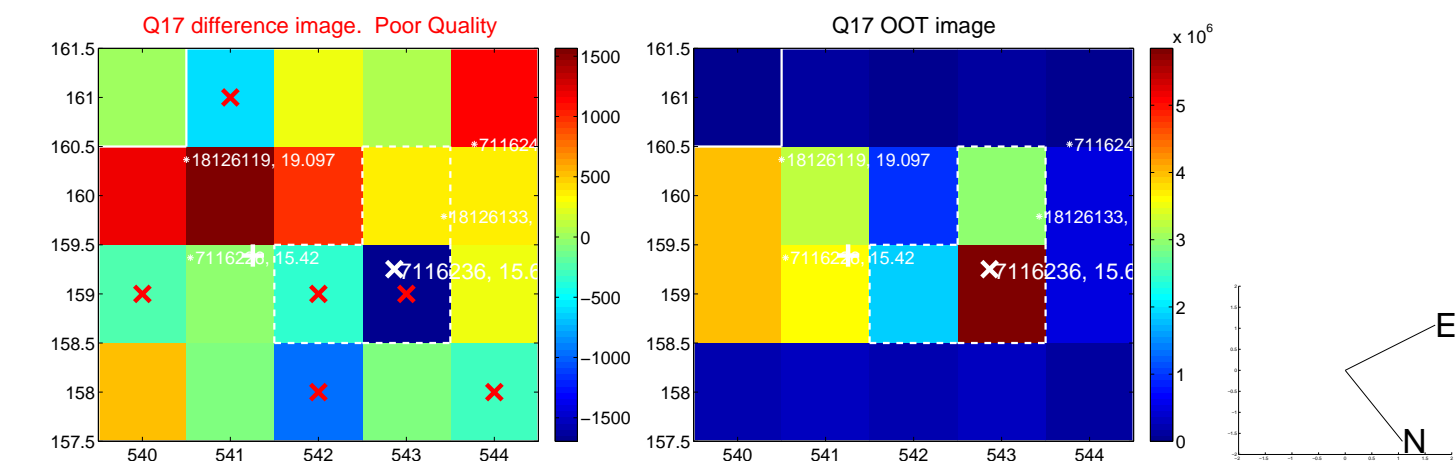
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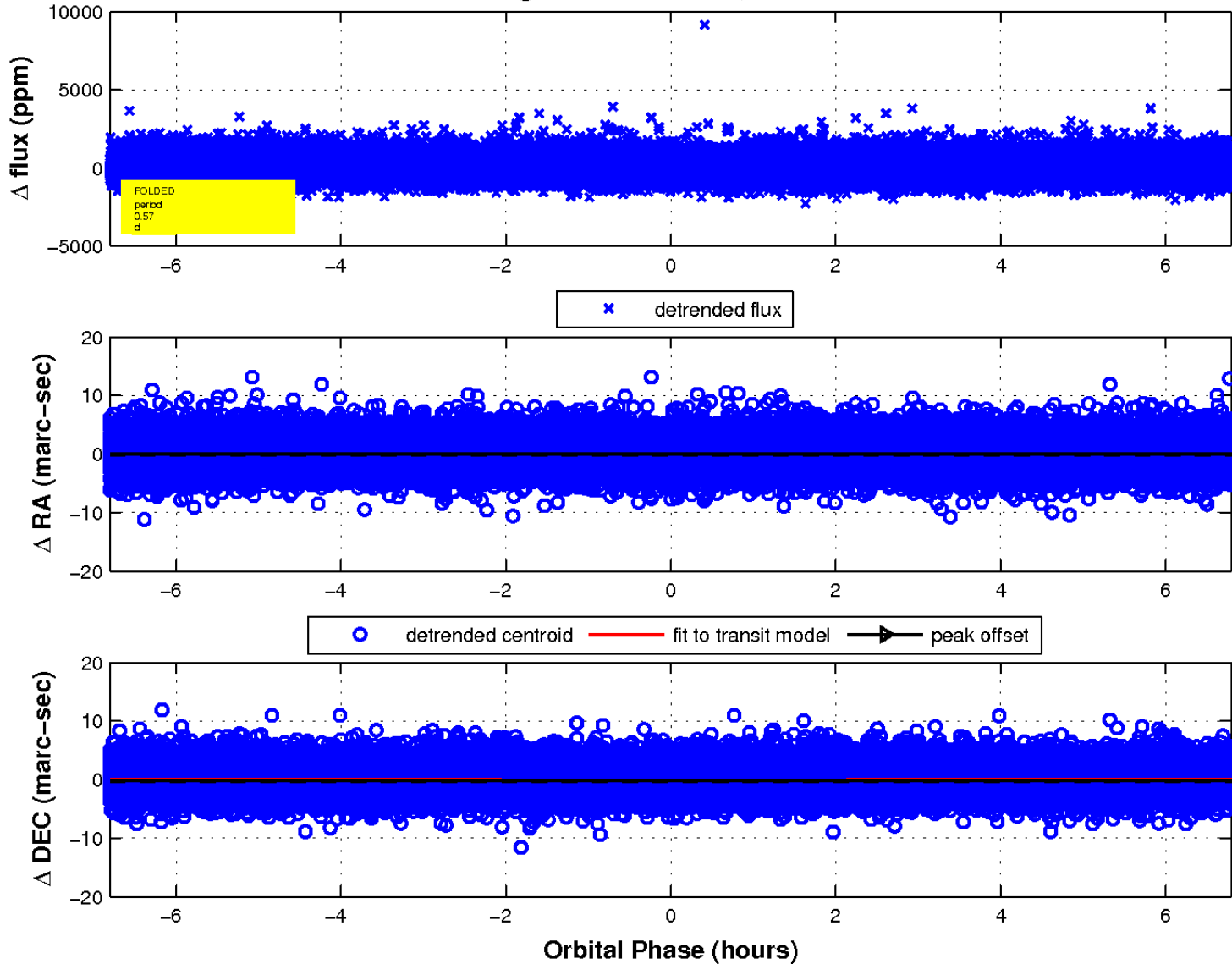
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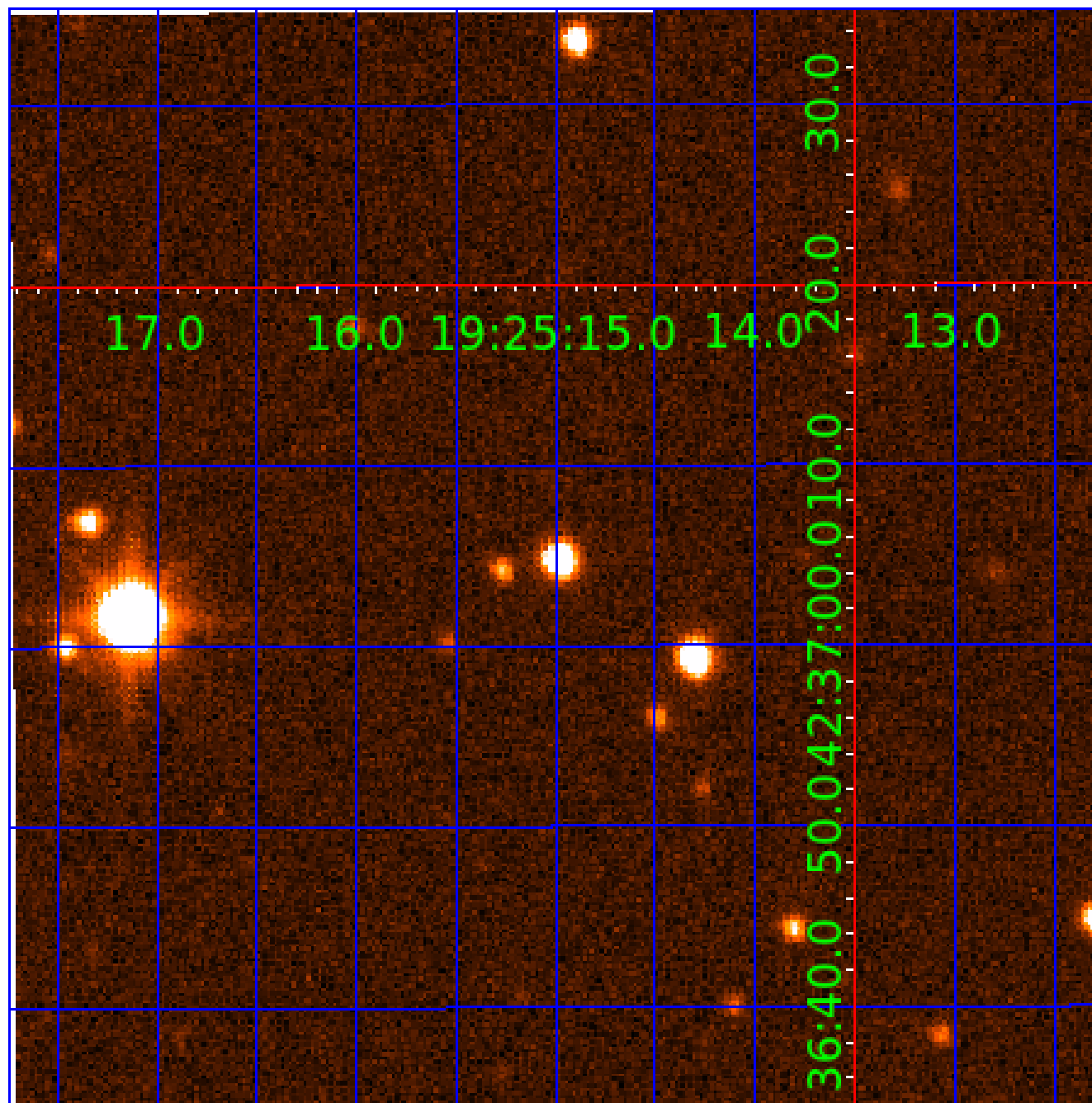


fluxWeightedCentroids, Planet 1 of 6



UKIRT Image

Declination



KIC 007116236

Q1-17 DR25 TCE Parameters

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007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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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.

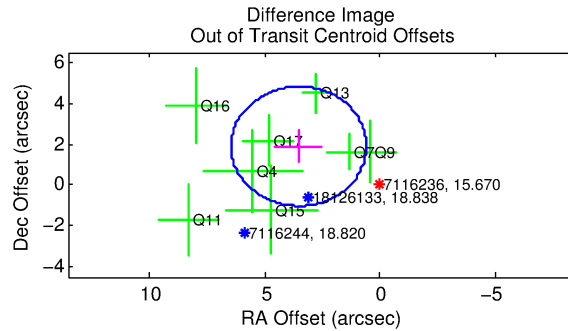
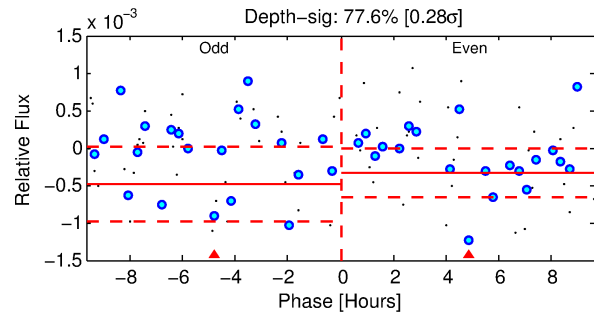
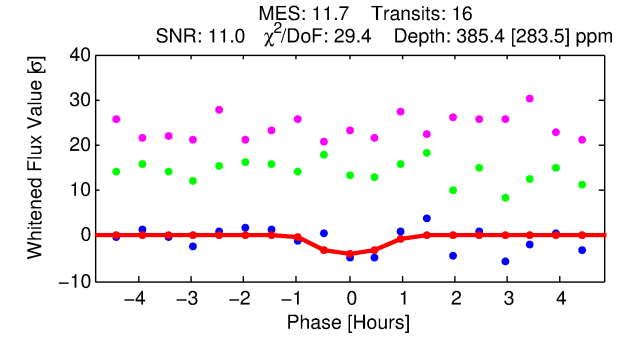
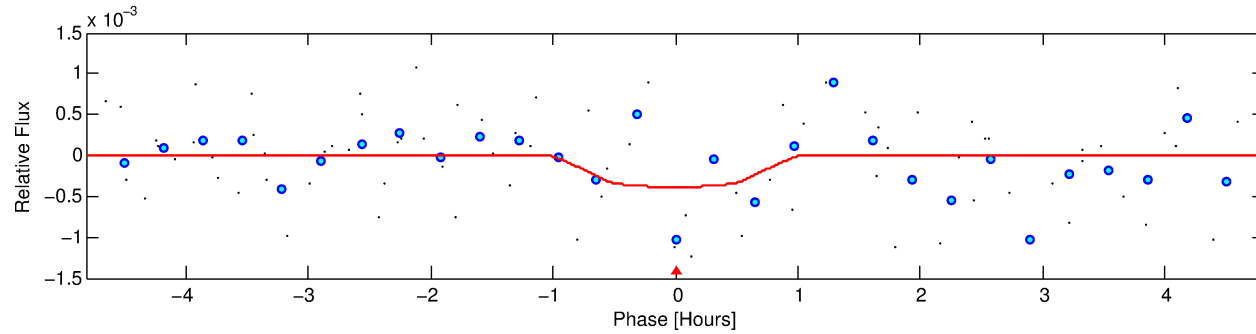
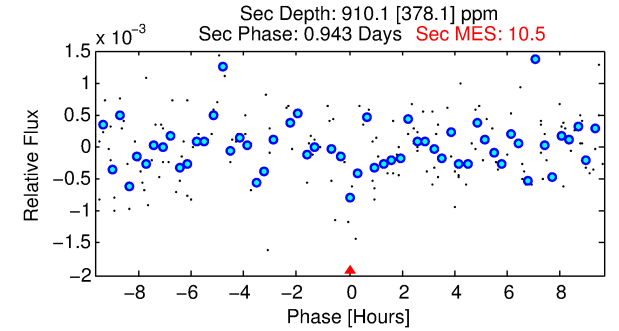
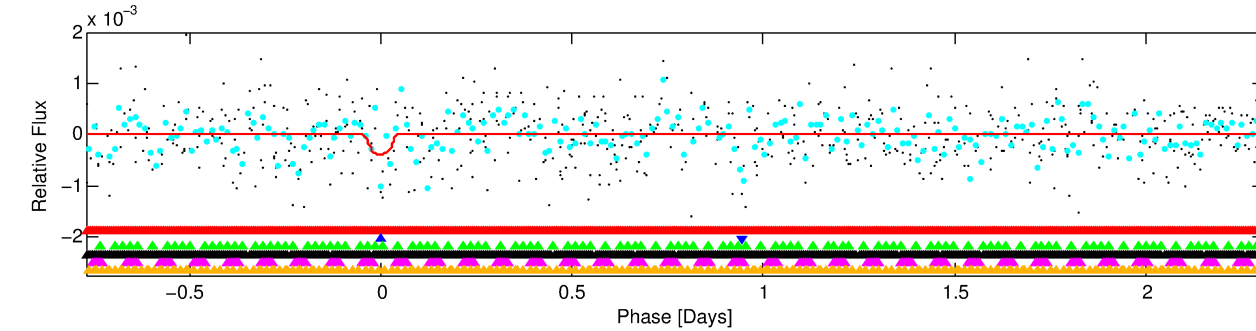
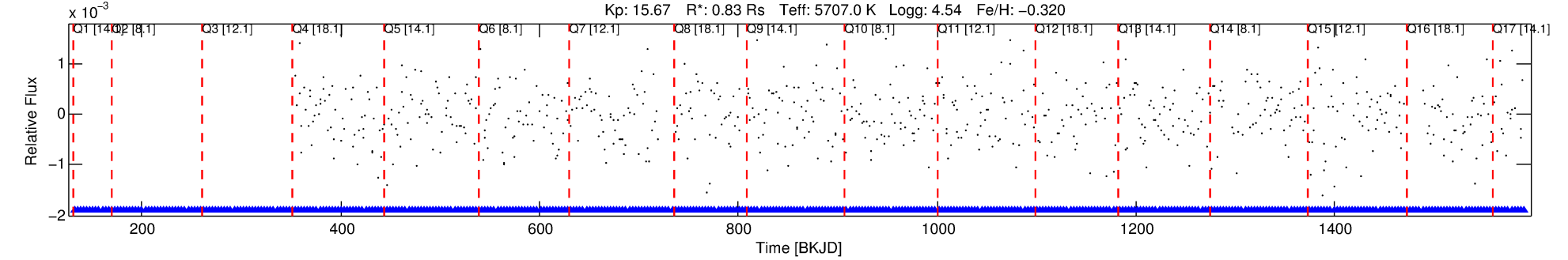
Ephemeris Match Information For 007116236-02

No Significant Match Found

DV One-Page Summary

KIC: 7116236 Candidate: 2 of 6 Period: 3.081 d
KOI: K06828 Corr: No Ephemeris Match

Kp: 15.67 R*: 0.83 Rs Teff: 5707.0 K Logg: 4.54 Fe/H: -0.320



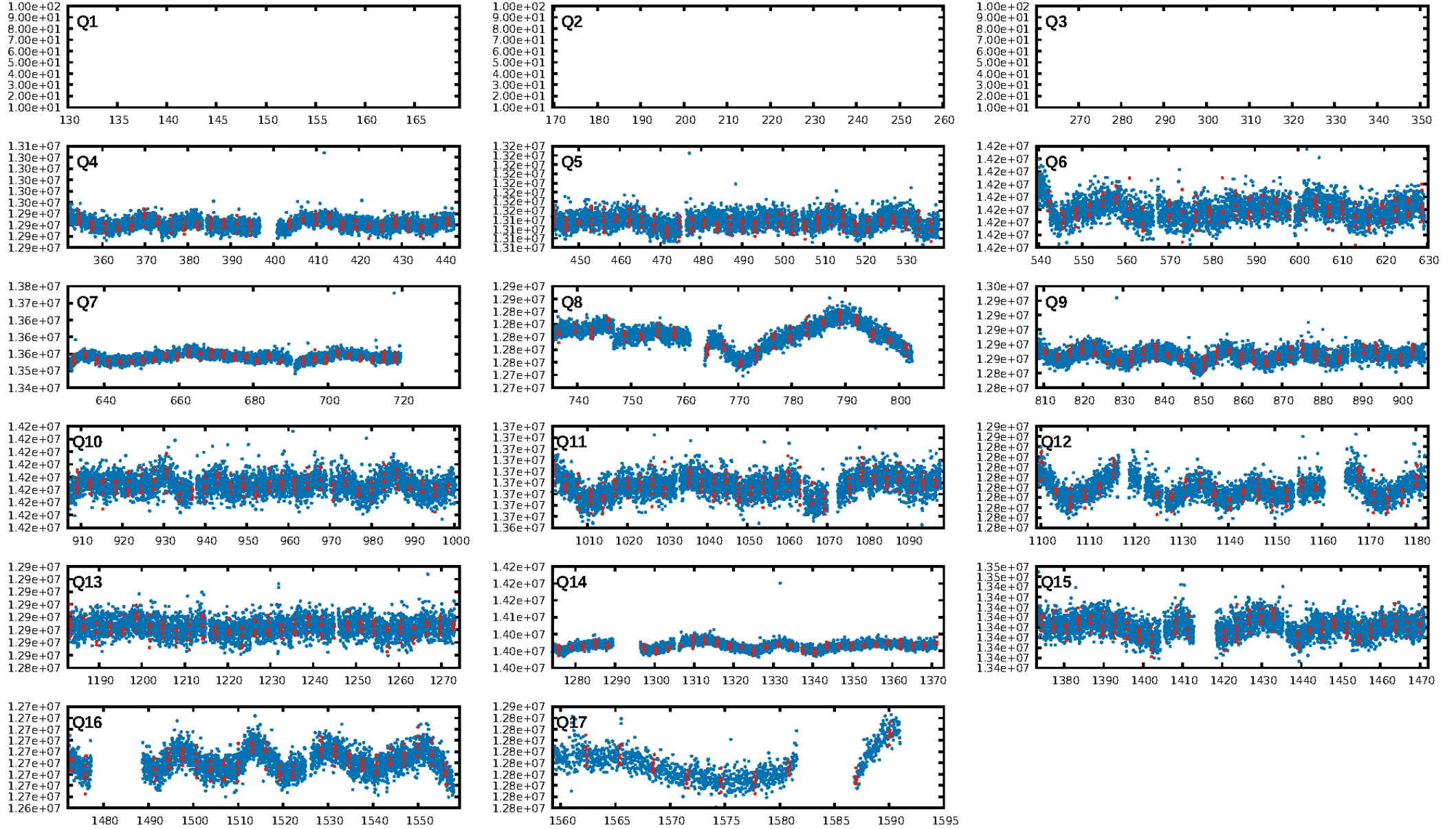
DV Fit Results:

Period = 3.08128 [0.00009] d
Epoch = 132.6096 [0.0178] BKJD
Rp/R* = 0.0181 [0.0774]
a/R* = 14.27 [277.83]
b = 0.30 [59.46]
Seff = 418.38 [141.40]
Teq = 1153 [97] K
Rp = 1.63 [7.01] Re
a = 0.0395 [0.0087] AU
Ag = 292.03 [2505.01] [0.12σ]
Teffp = 7371 [15798] K [0.39σ]

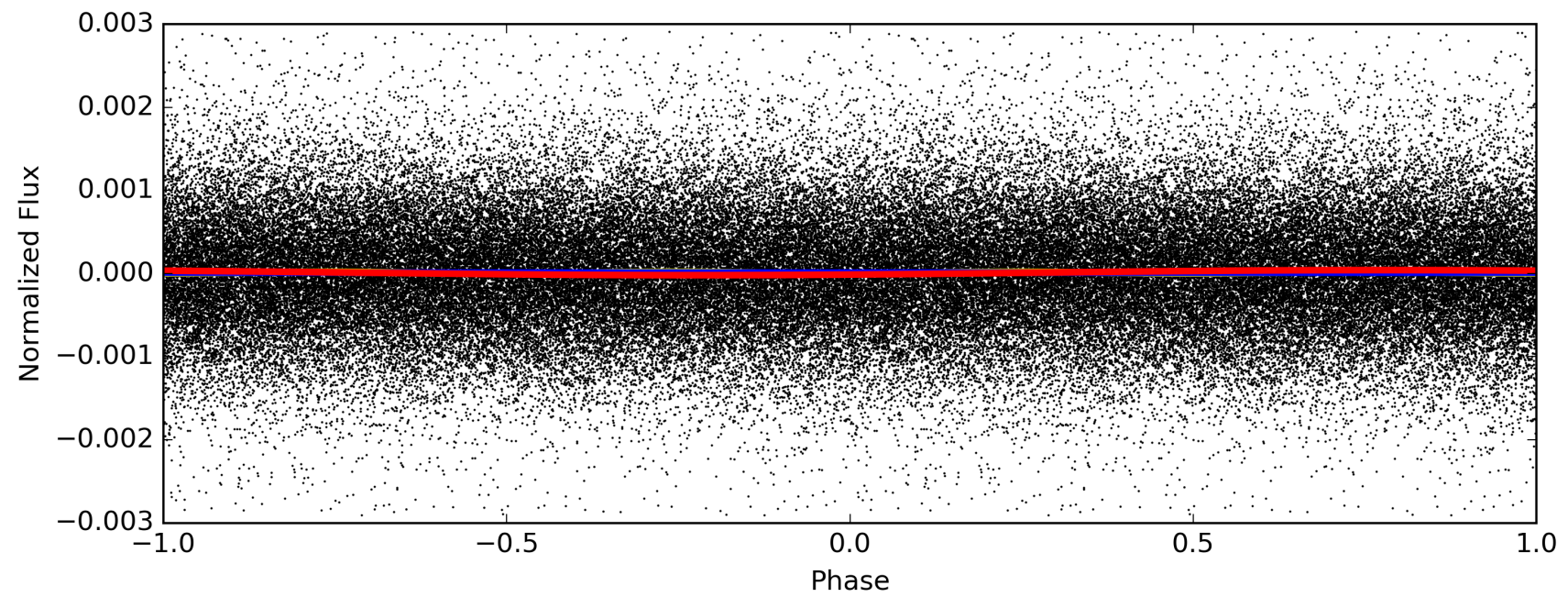
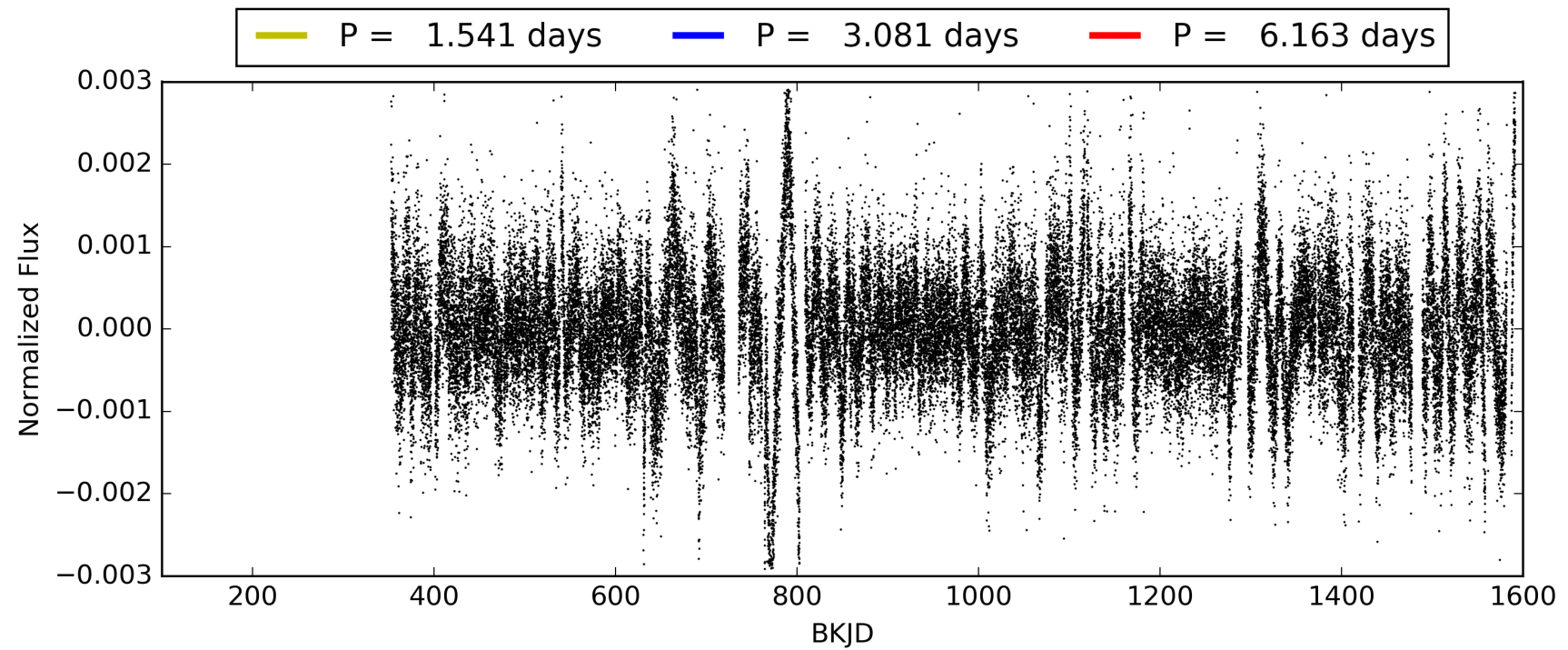
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.02σ]
LongPeriod-sig: 100.0% [21.01σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 2.385
Centroid-sig: 0.0%
Centroid-so: 1.216 arcsec [2.49σ]
OotOffset-rm: 4.008 arcsec [4.11σ]
OotOffset-st: 0/3/2/3 [8]
KicOffset-rm: 0.820 arcsec [0.79σ]
KicOffset-st: 0/3/2/3 [8]
DiffImageQuality-fgm: 0.00 [0/8]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 007116236-02, PDC Light Curves

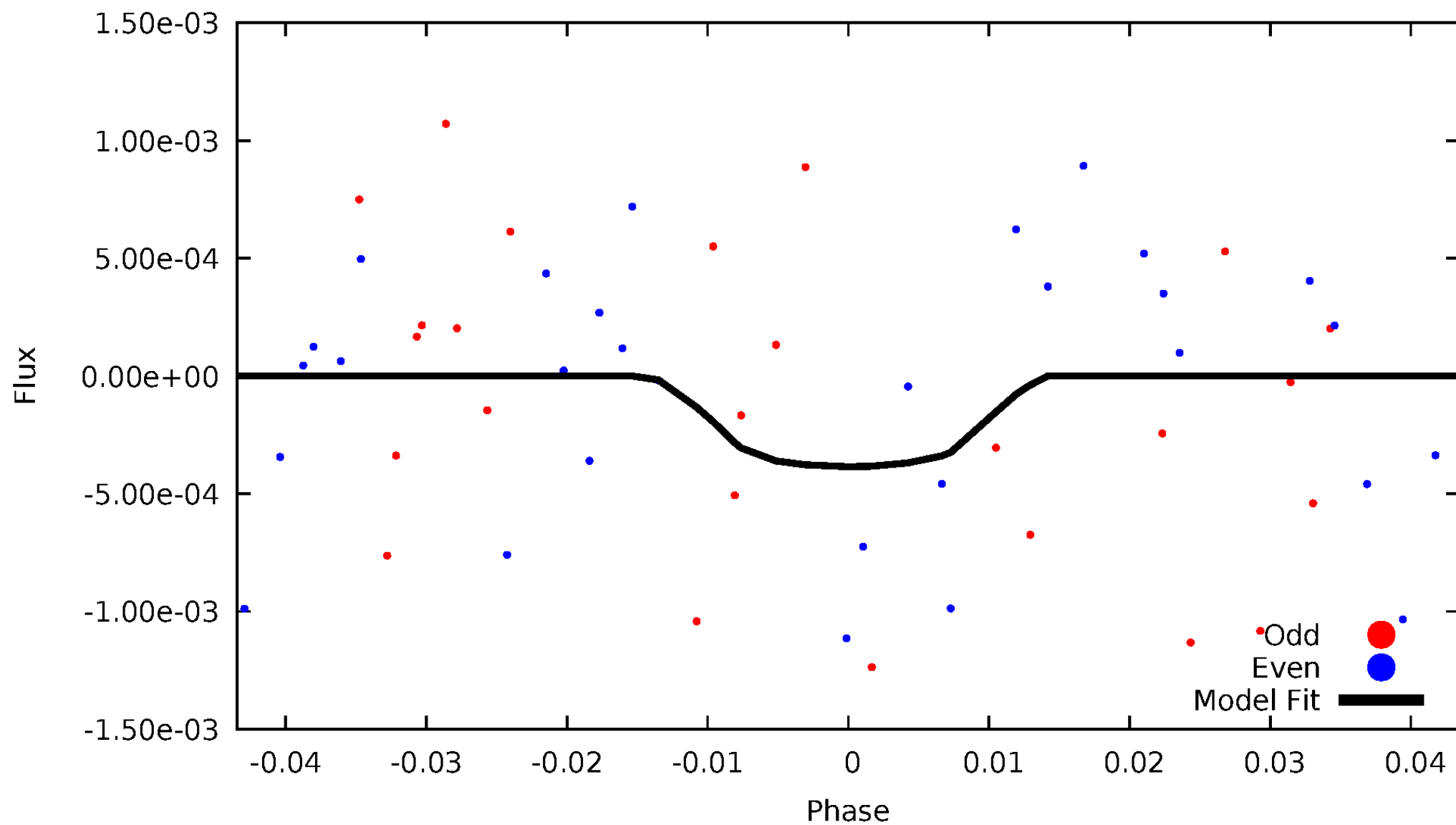


TCE 007116236-02



DV Odd/Even

TCE 007116236-02

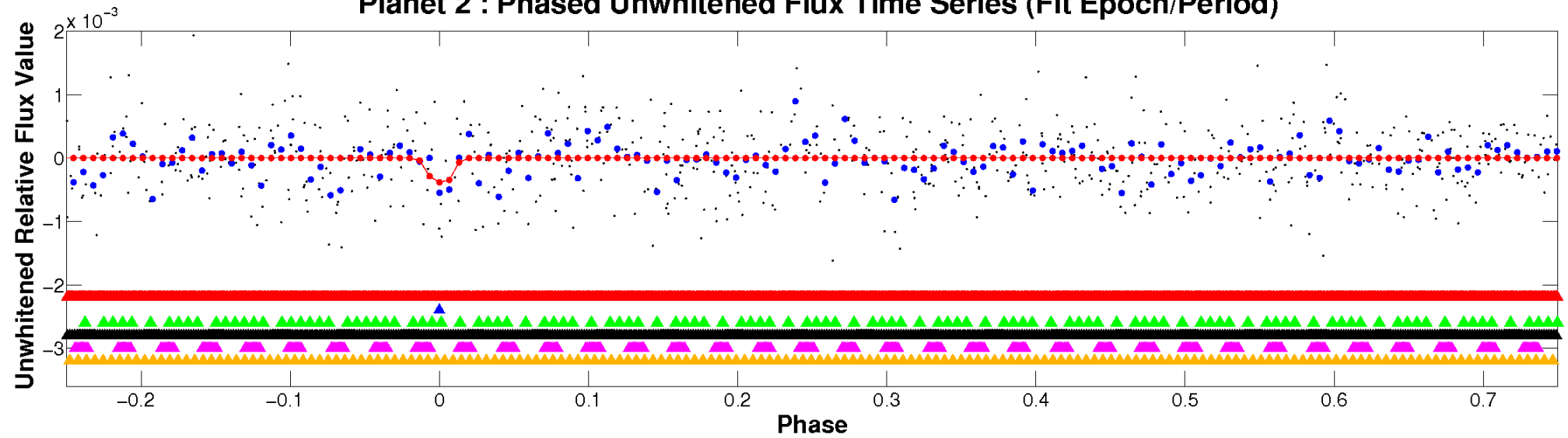


ALT Odd/Even

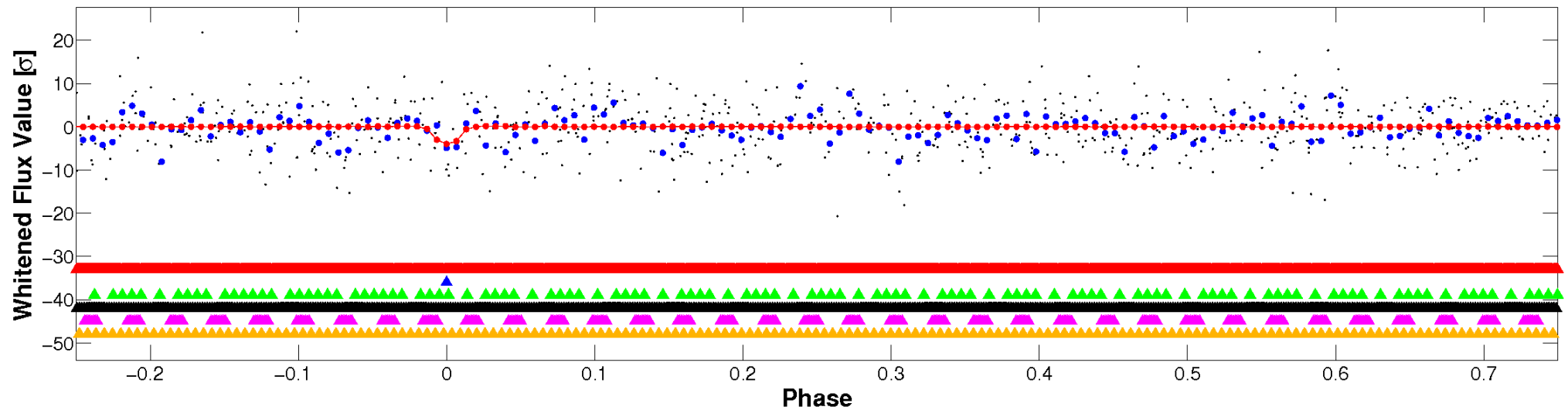
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

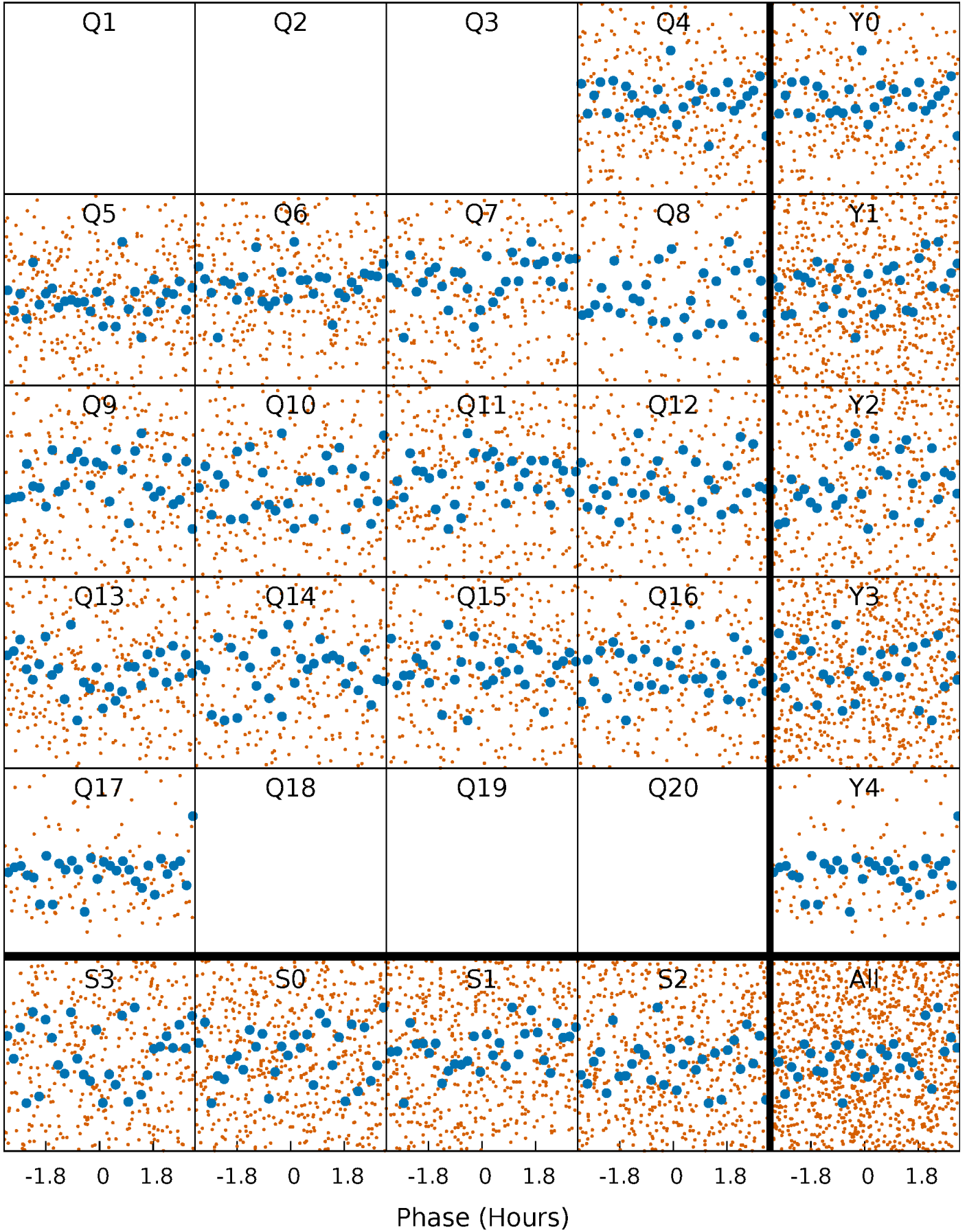


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



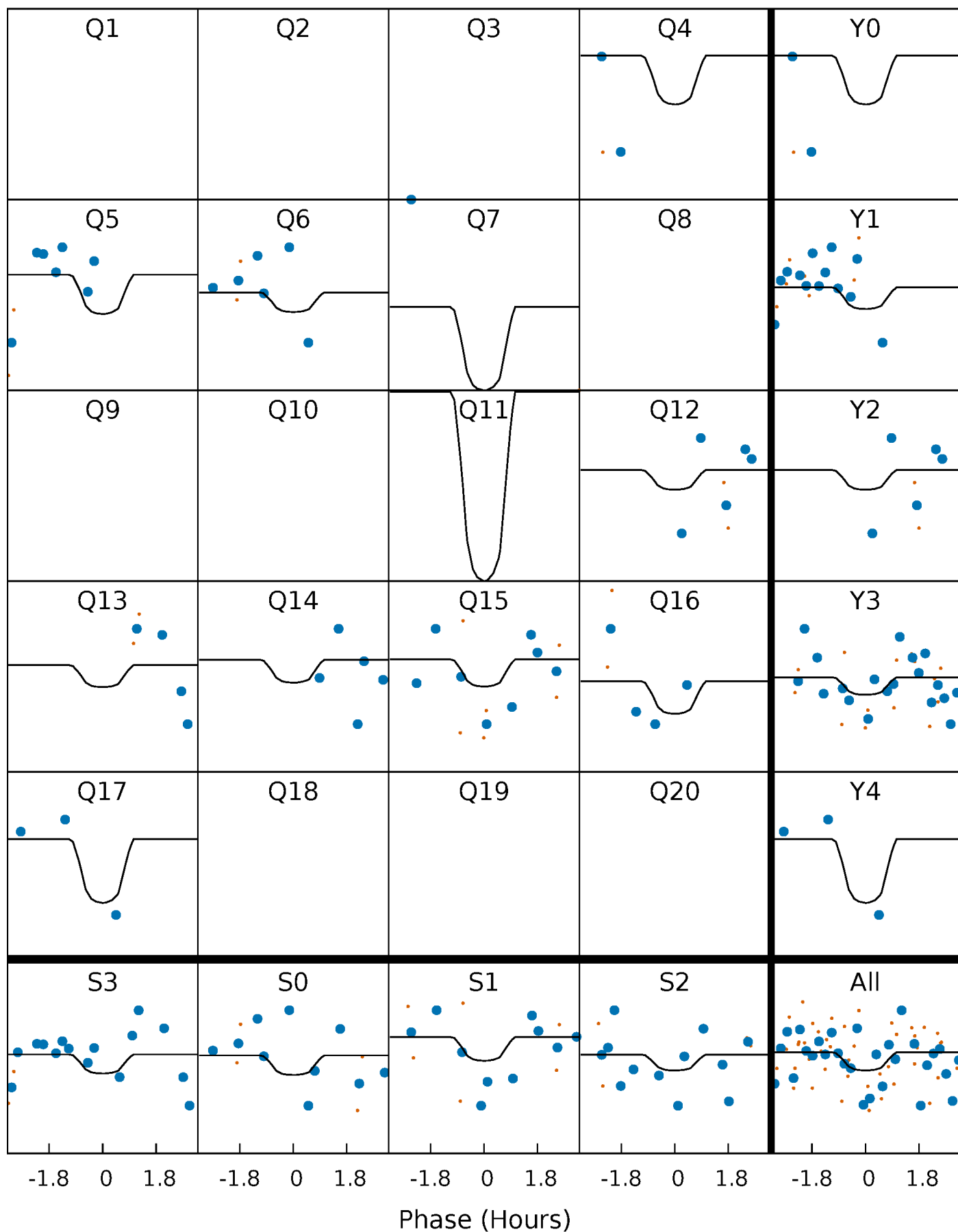
PDC Quarter-Phased Transit Curves

TCE 007116236-02 P= 3.081284 Days $T_0=132.609562$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007116236-02 P= 3.081284 Days $T_0=132.609562$ (BKJD)

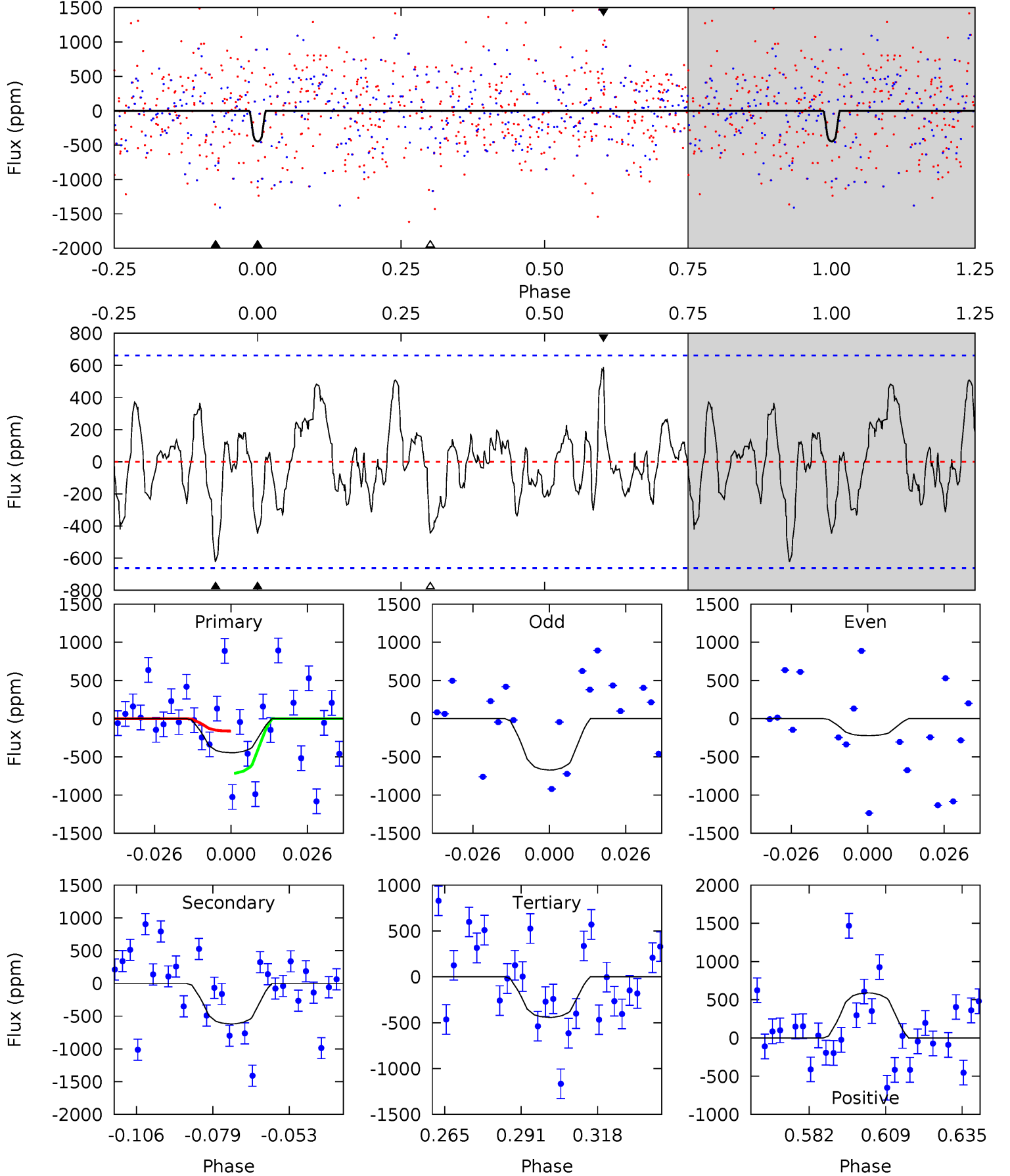


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007116236-02, P = 3.081284 Days, E = 132.609562 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.26	4.53	3.24	4.31	4.84	2.22	1.40	0.03	-1.05	1.29	0.22	1.63	0	0.49	2.04



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007116236

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-620 ± 137	$5.32^{+5.61}_{-3.71}$	1639^{+101}_{-77}	4034^{+2888}_{-894}	18^{+182}_{-14}
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 $A_{\text{obs}} \gg 1.0$

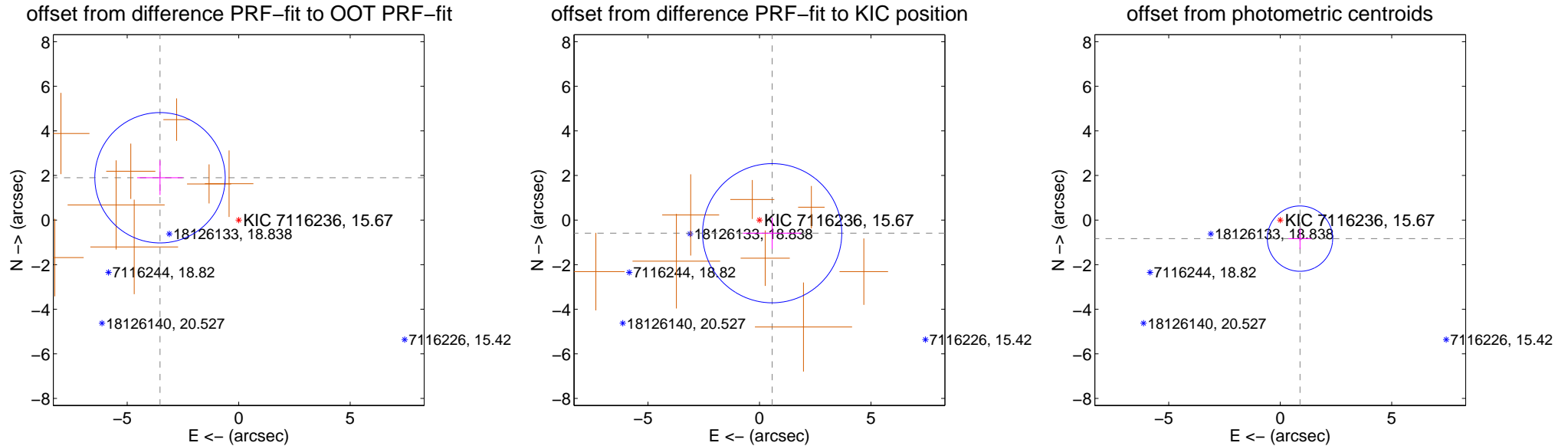
DV Centroid Data

Supplemental centroid analysis for 007116236-02. Kepler magnitude: 15.67. Transit SNR 11.01

There are 0 quarters with good PRF difference image offsets

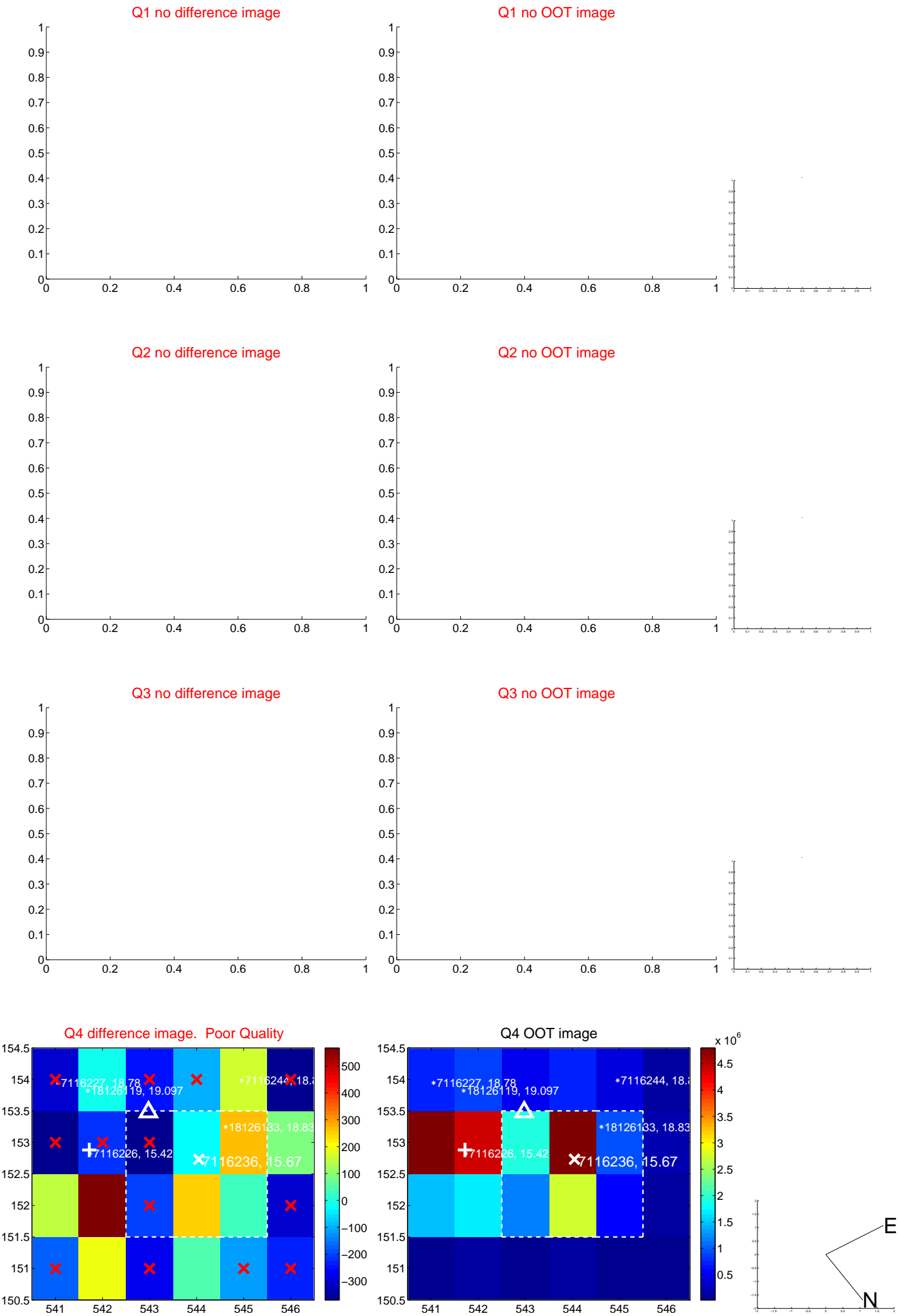
The OOT PRF centroid is offset from the target star catalog position by about 6.42 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.008 ± 0.975	4.11	3.529 ± 1.026	1.898 ± 0.773
PRF-fit source offset from KIC position	0.820 ± 1.041	0.79	-0.570 ± 1.309	-0.590 ± 0.704
photometric centroid source offset	1.22 ± 0.49	2.49	-0.89 ± 0.51	-0.83 ± 0.46

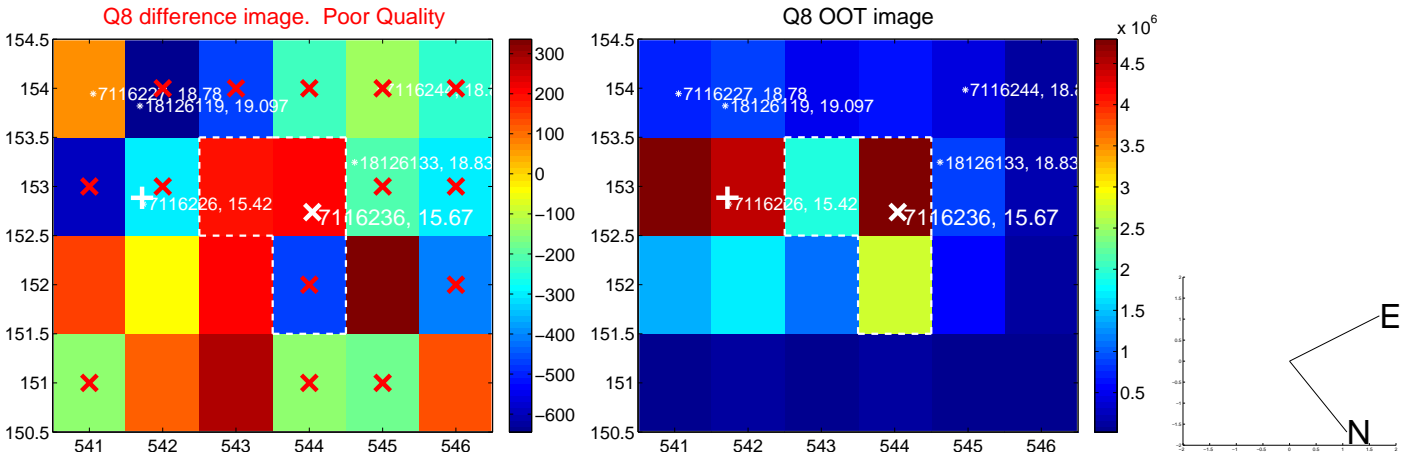
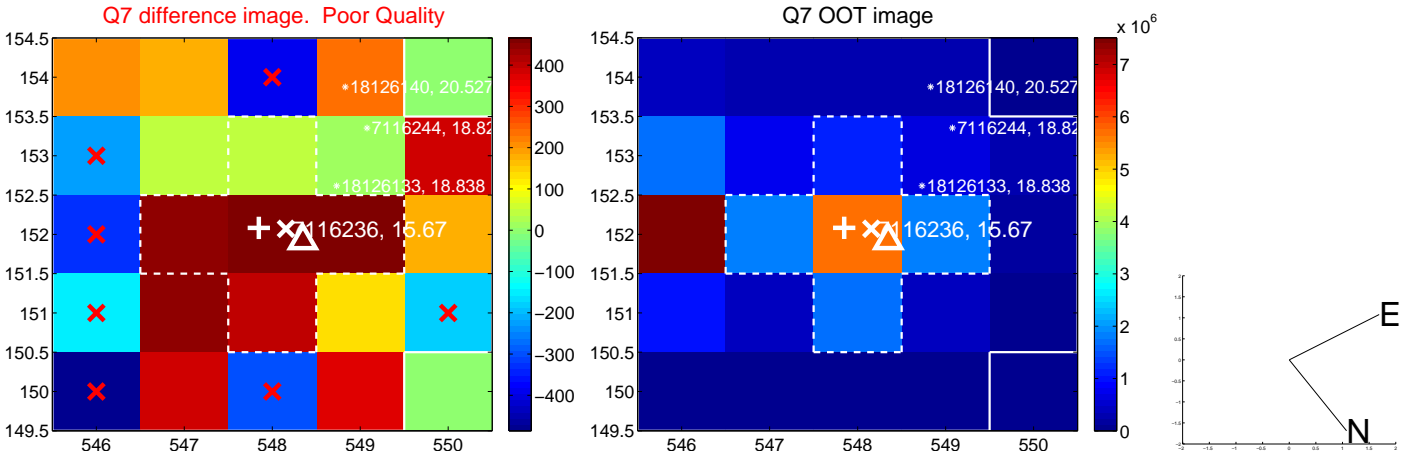
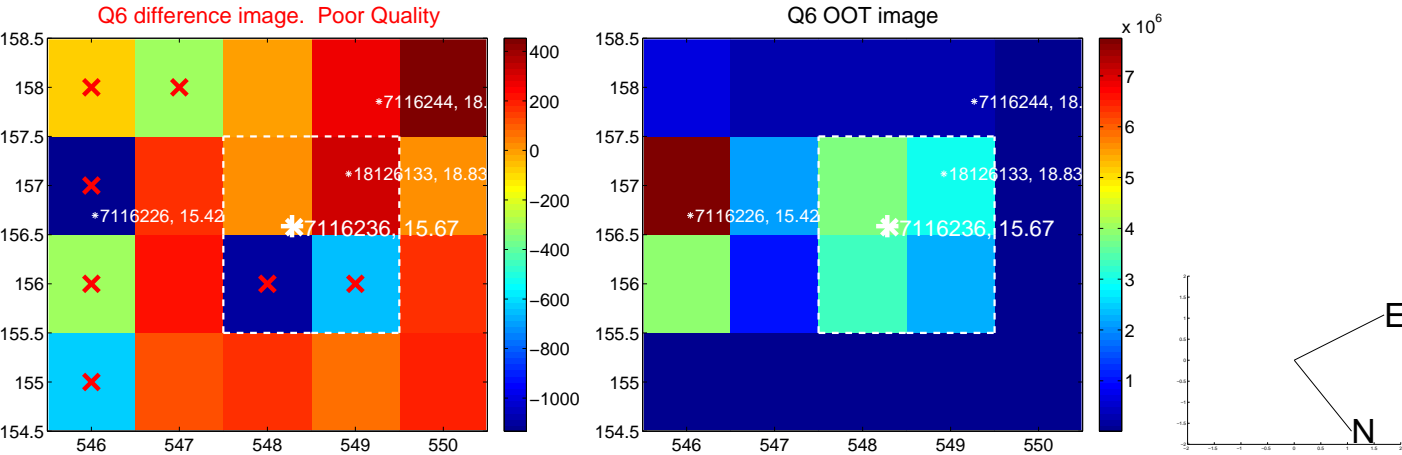
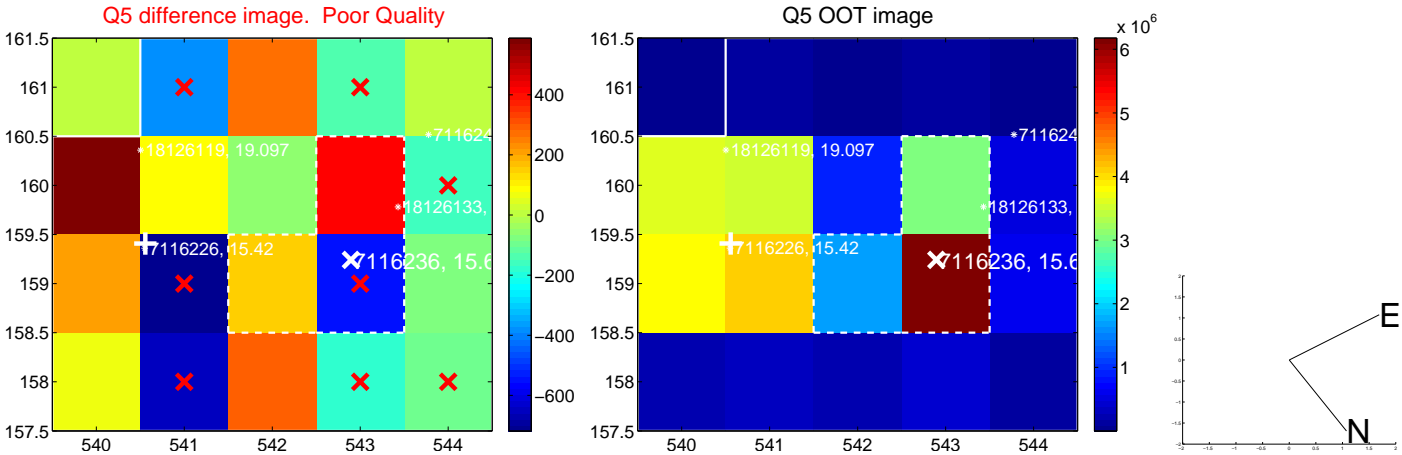


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

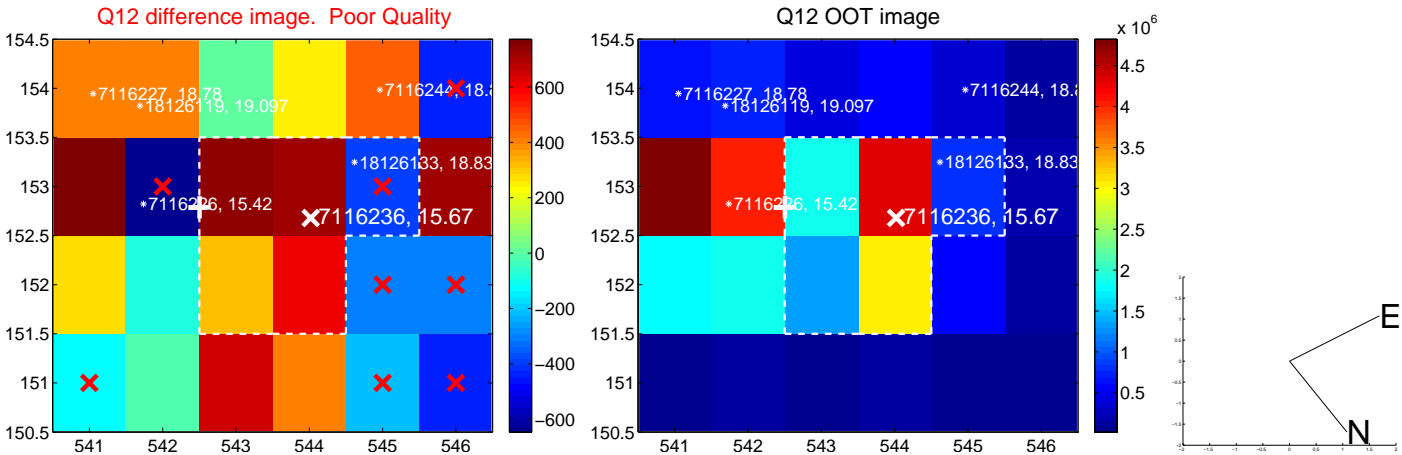
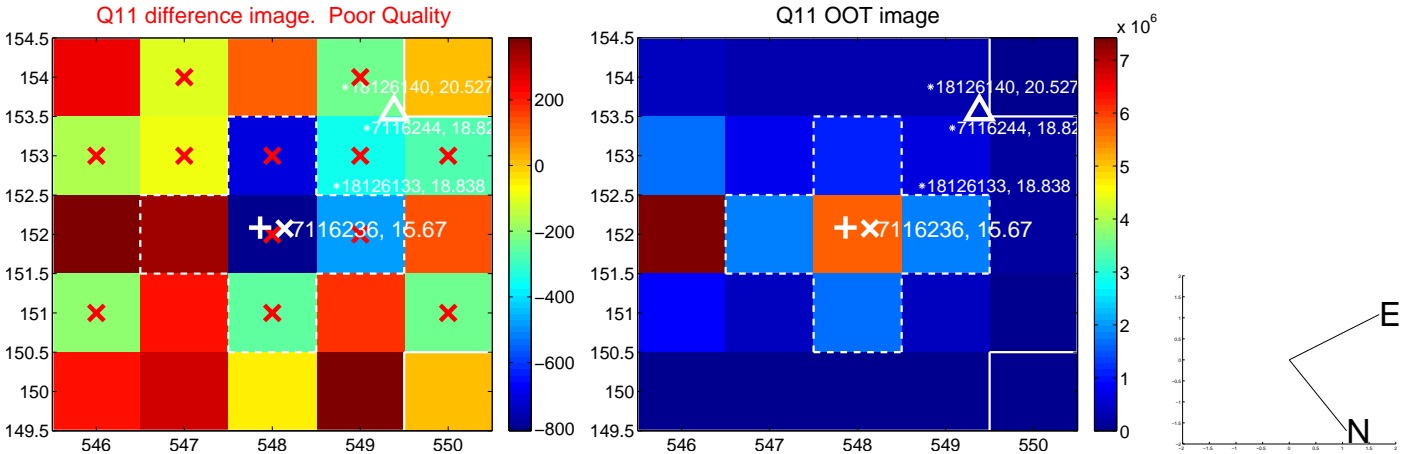
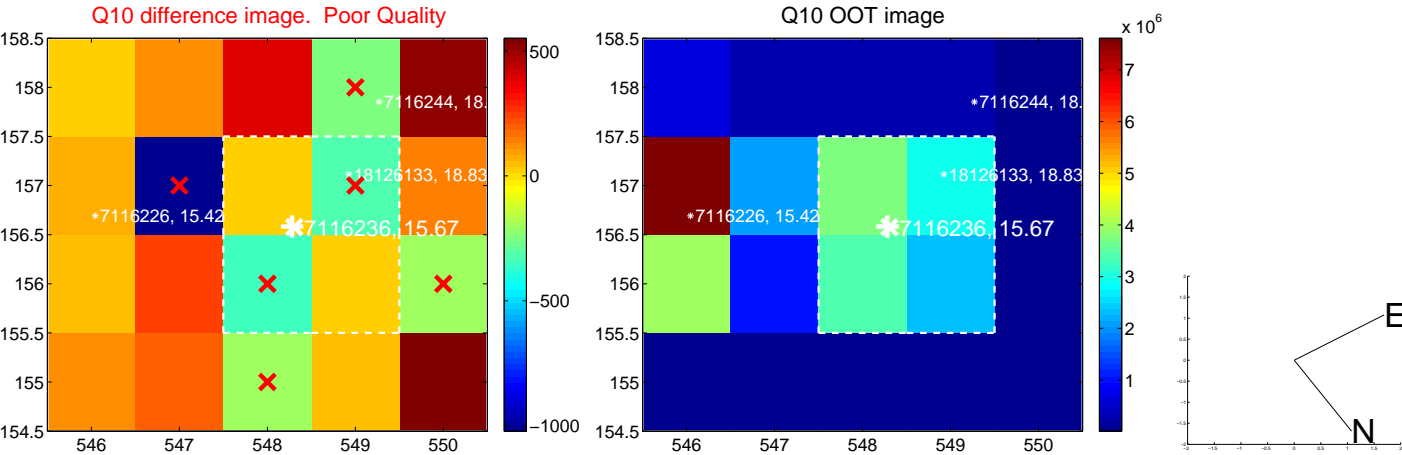
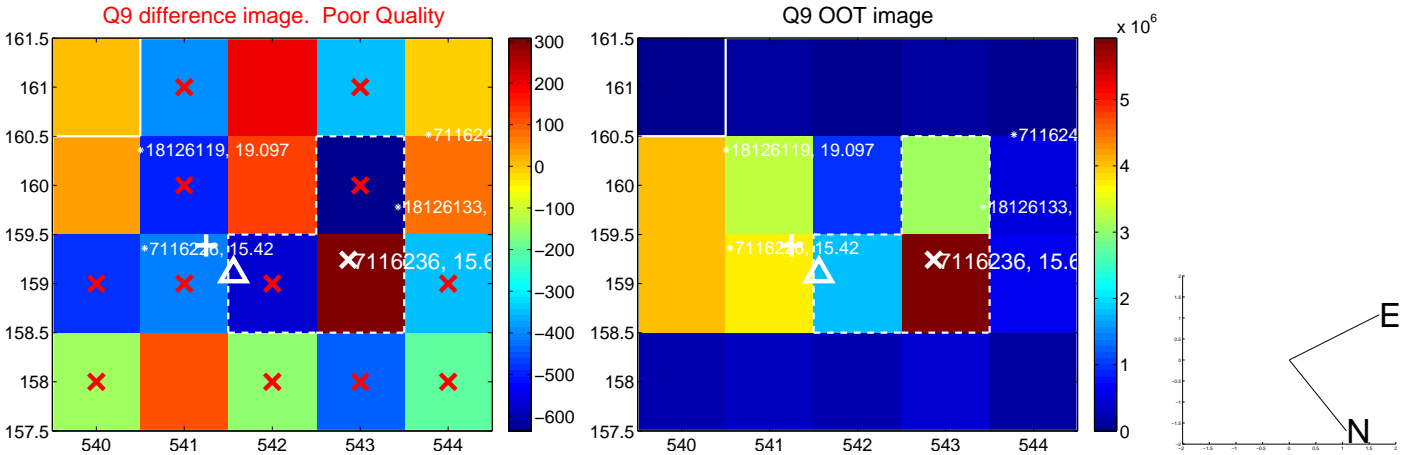
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



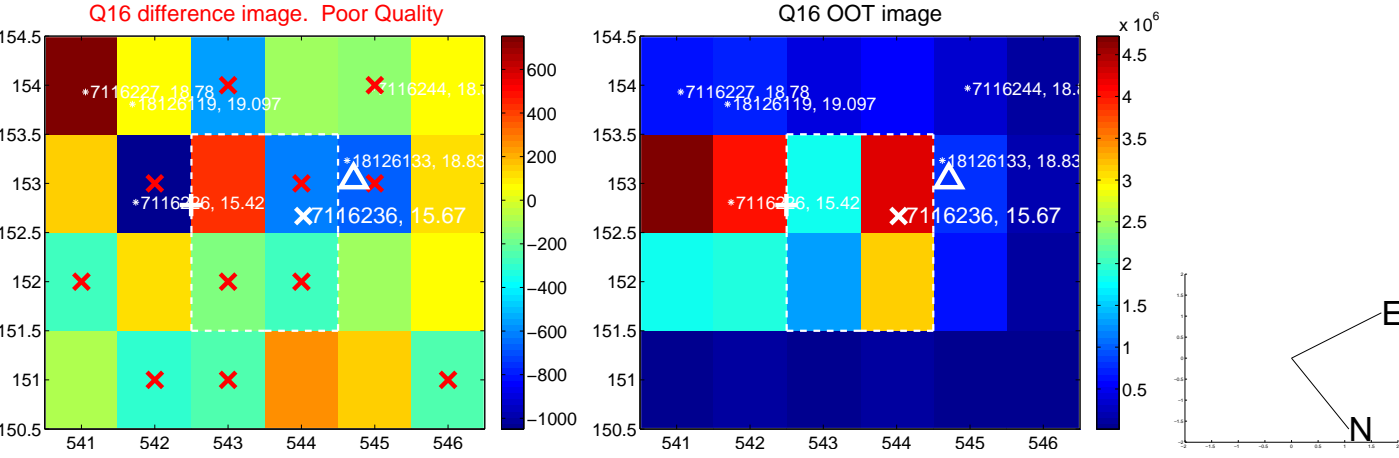
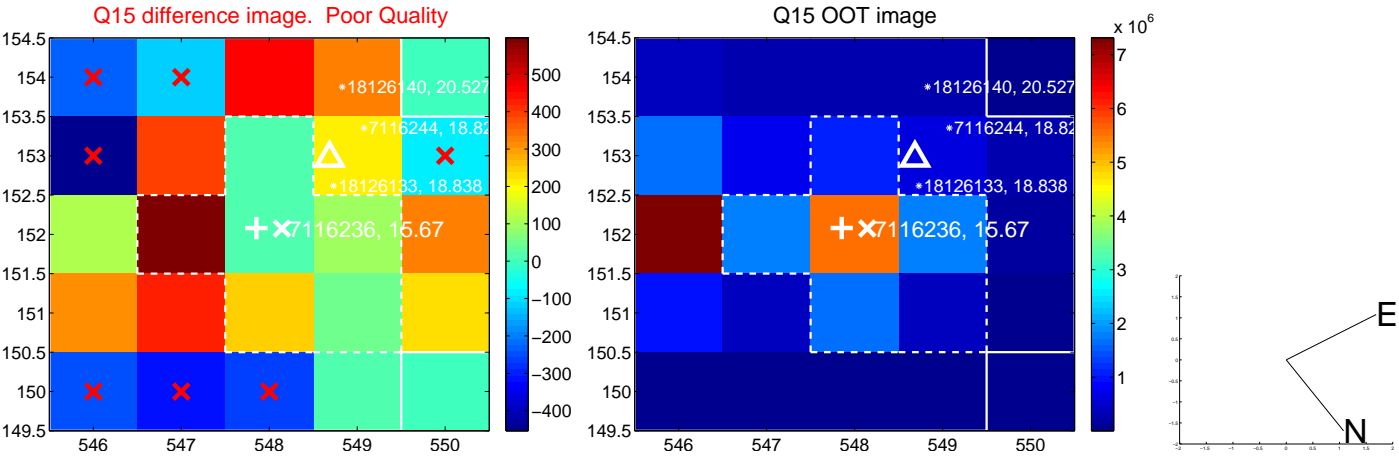
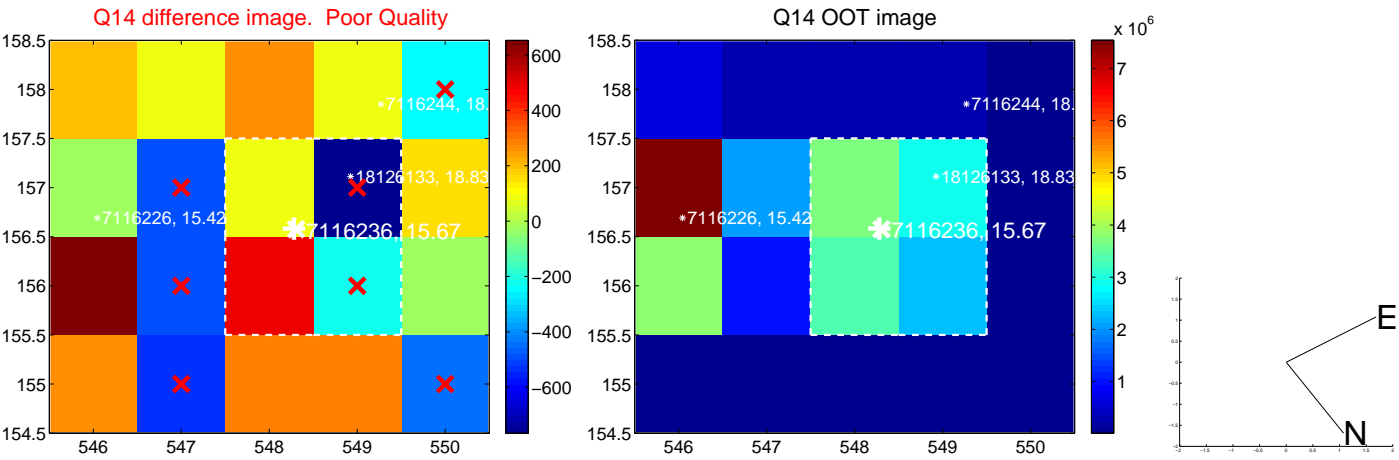
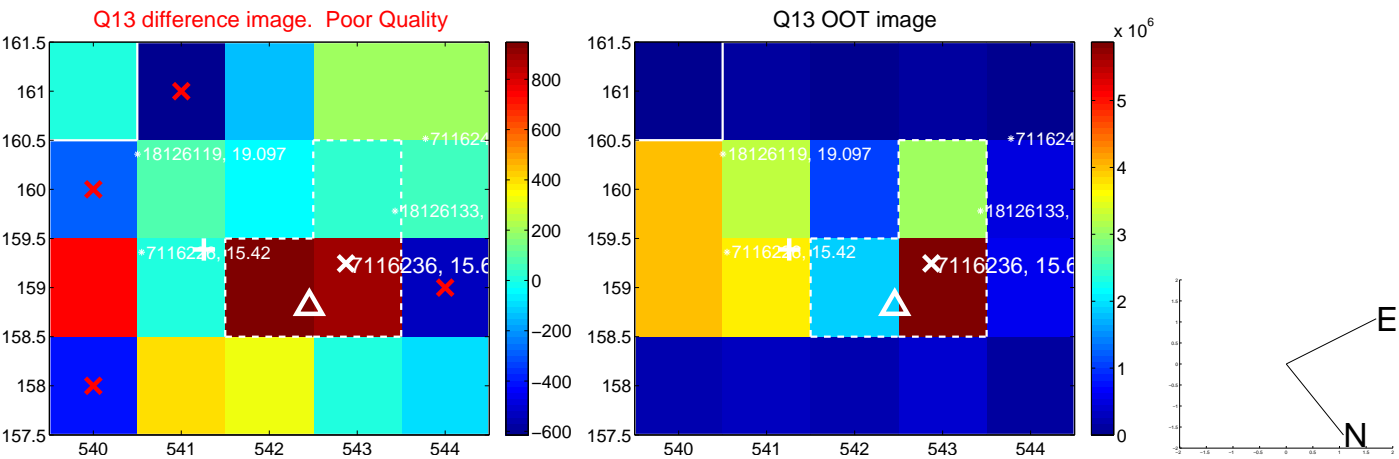
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



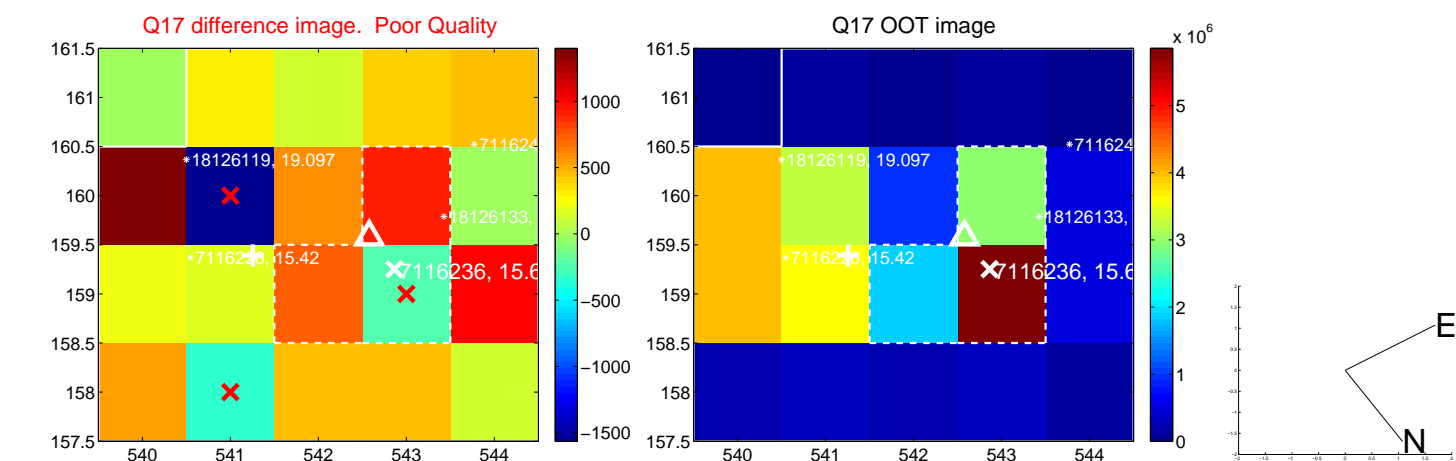
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



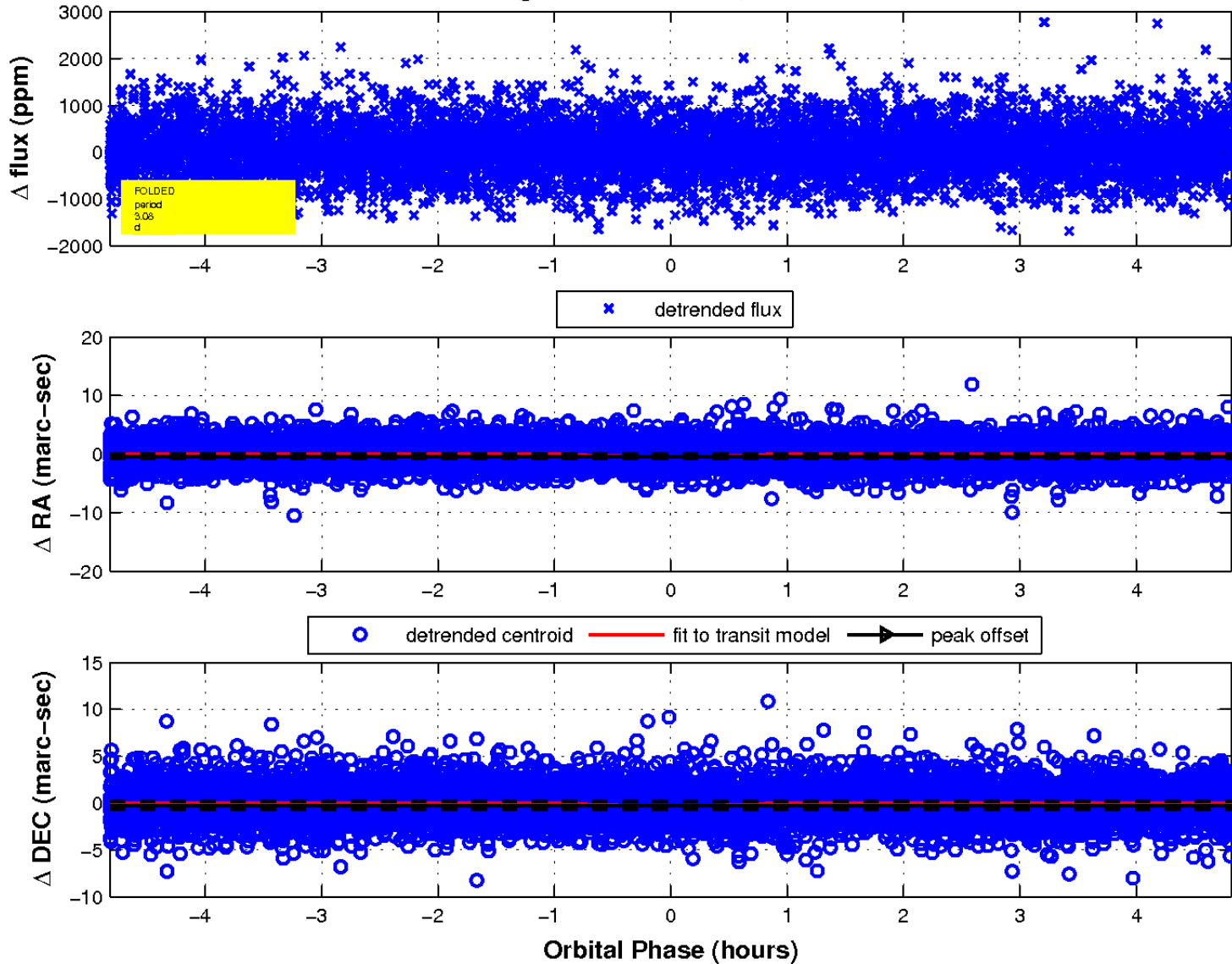
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

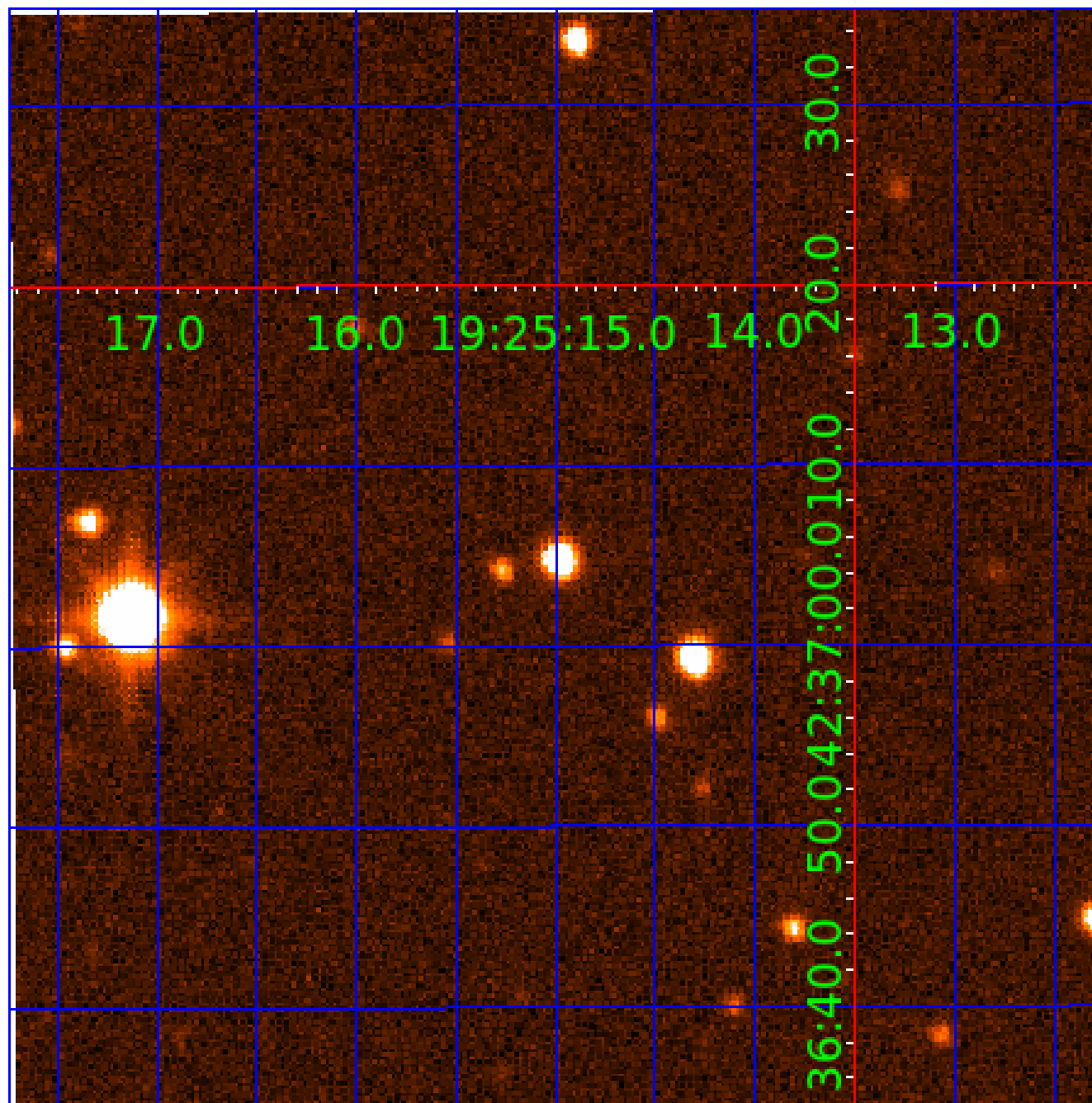


fluxWeightedCentroids, Planet 2 of 6



UKIRT Image

Declination



KIC 007116236

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})
007116236-01	OBS	6828.01	0.566750	131.868484	30.6	4.313	11.1	5.9	0.83	5707	0.46	3999.67
007116236-02	OBS	No	3.081284	132.609562	385.4	1.607	11.7	11.0	0.83	5707	1.63	418.38
007116236-03	OBS	No	12.460797	141.411539	1072.0	0.533	20.0	15.0	0.83	5707	3.67	64.94
007116236-04	OBS	No	1.875345	131.630708	708.0	1.065	17.0	23.6	0.83	5707	2.39	811.16
007116236-05	OBS	No	5.018200	132.119748	972.7	1.521	15.7	23.4	0.83	5707	2.80	218.35
007116236-06	OBS	No	1.187759	131.965534	301.4	1.085	16.6	11.6	0.83	5707	1.55	1491.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007116236-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH
007116236-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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 007116236-03

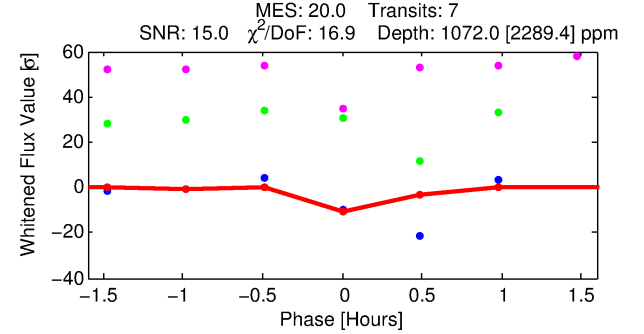
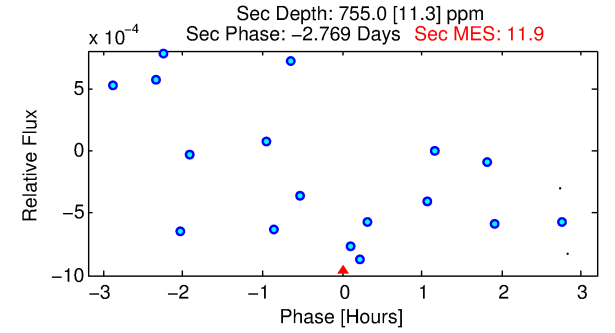
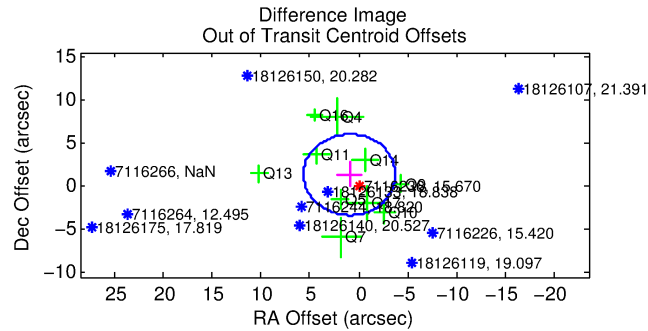
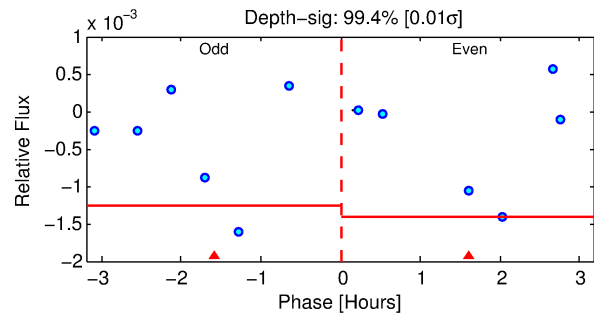
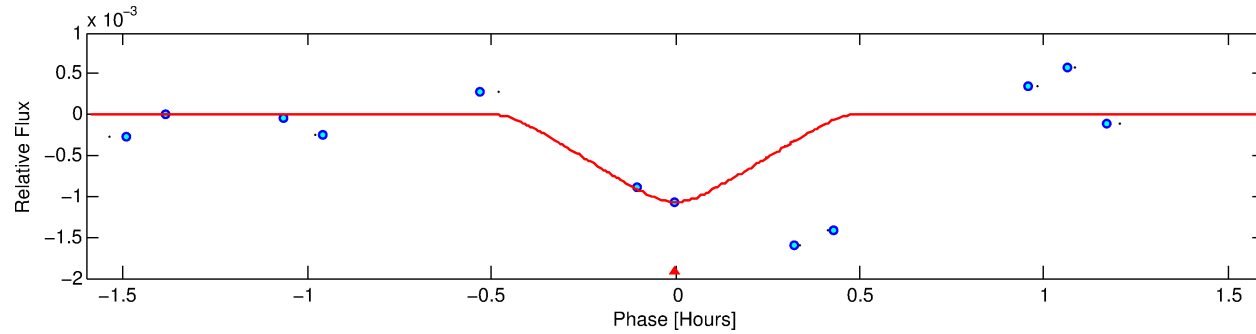
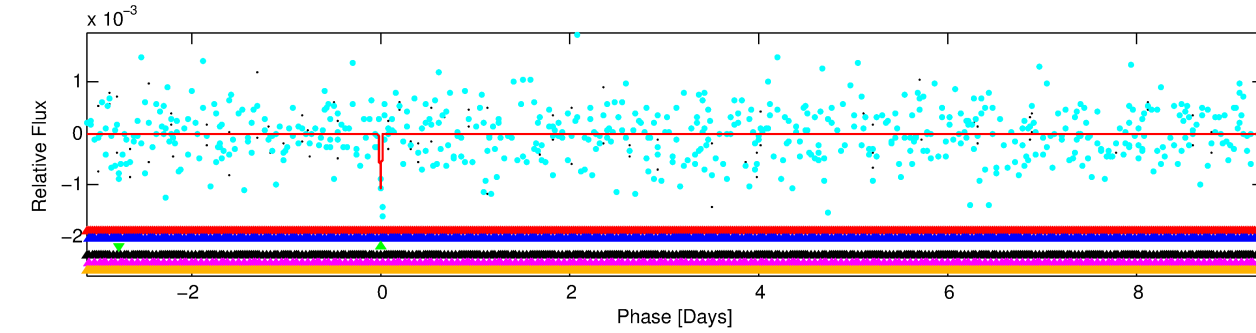
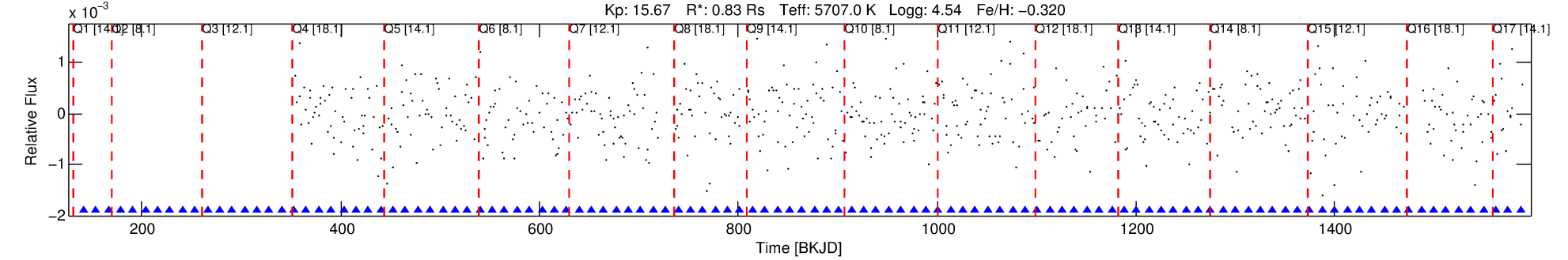
No Significant Match Found

DV One-Page Summary

KIC: 7116236 Candidate: 3 of 6 Period: 12.461 d

KOI: K06828 Corr: No Ephemeris Match

Kp: 15.67 R*: 0.83 Rs Teff: 5707.0 K Logg: 4.54 Fe/H: -0.320



DV Fit Results:

Period = 12.46080 [0.00041] d
Epoch = 141.4115 [0.0489] BKJD
Rp/R* = 0.0406 [0.2446]
a/R* = 88.07 [1093.59]
b = 0.92 [2.81]
Seff = 64.94 [21.95]
Teq = 724 [61] K
Rp = 3.67 [22.12] Re
a = 0.1002 [0.0221] AU
Ag = 310.02 [3737.82] [0.08σ]
Teffp = 4696 [14151] K [0.28σ]

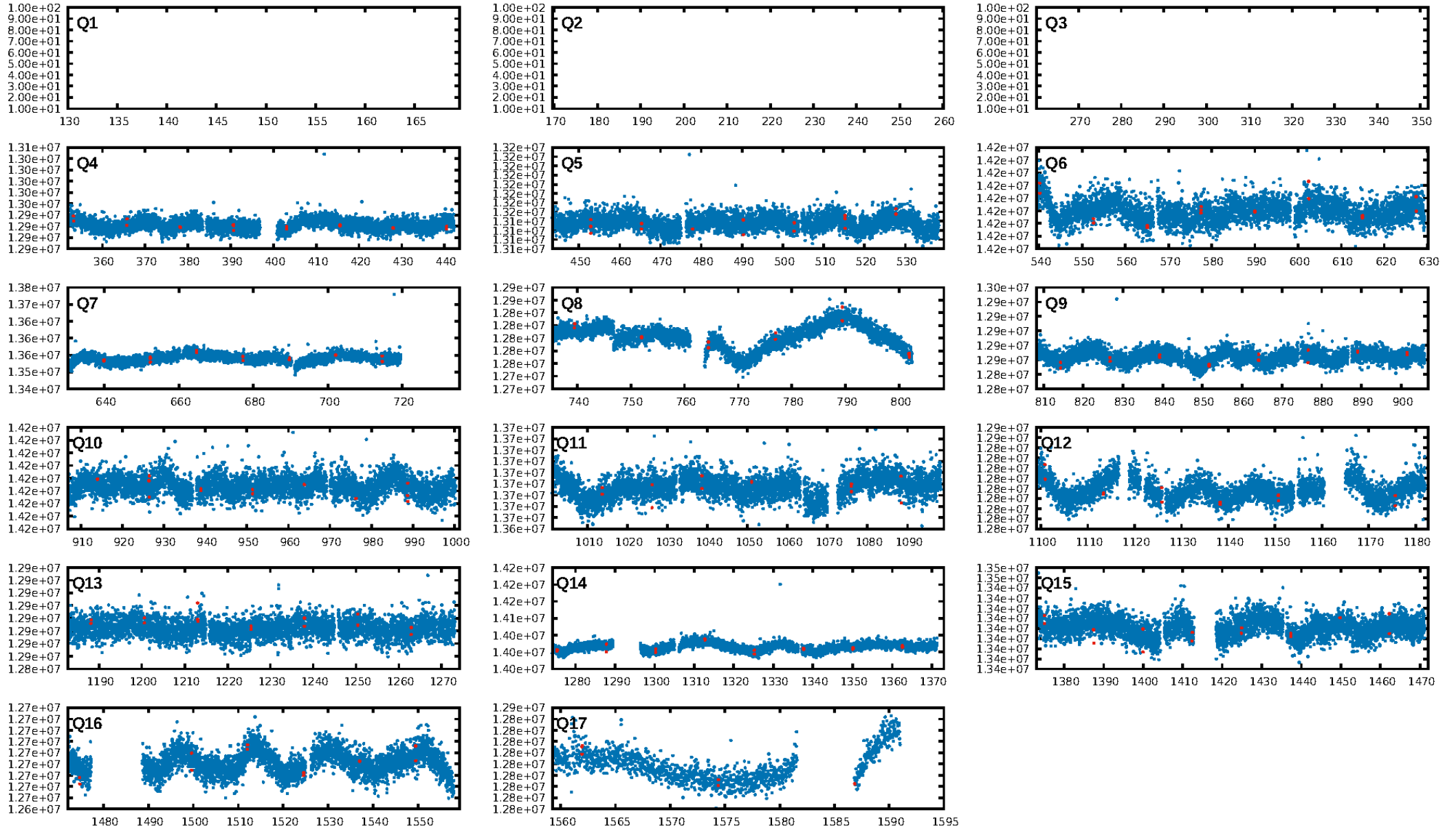
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [110.82σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 3.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.1548
Centroid-sig: 5.9%
Centroid-so: 2.981 arcsec [4.53σ]
OotOffset-rm: 1.647 arcsec [1.05σ]
KicOffset-rm: 1.241 arcsec [0.90σ]
OotOffset-st: 2/2/2/4 [10]
KicOffset-st: 2/2/2/4 [10]
DiffImageQuality-fgm: 0.00 [0/10]
DiffImageOverlap-fno: 0.00 [0/14]

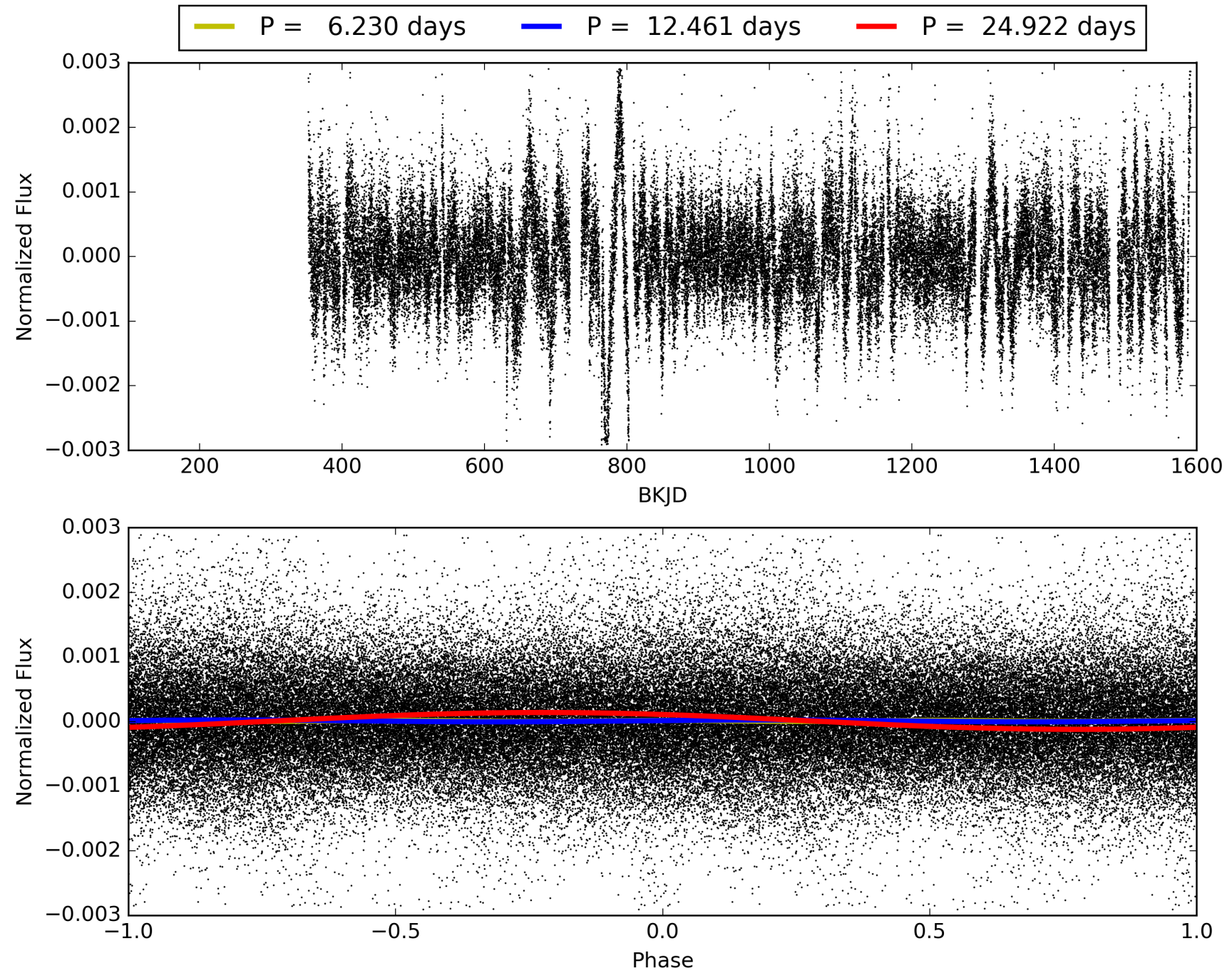
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:20:42 Z

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

TCE 007116236-03, PDC Light Curves

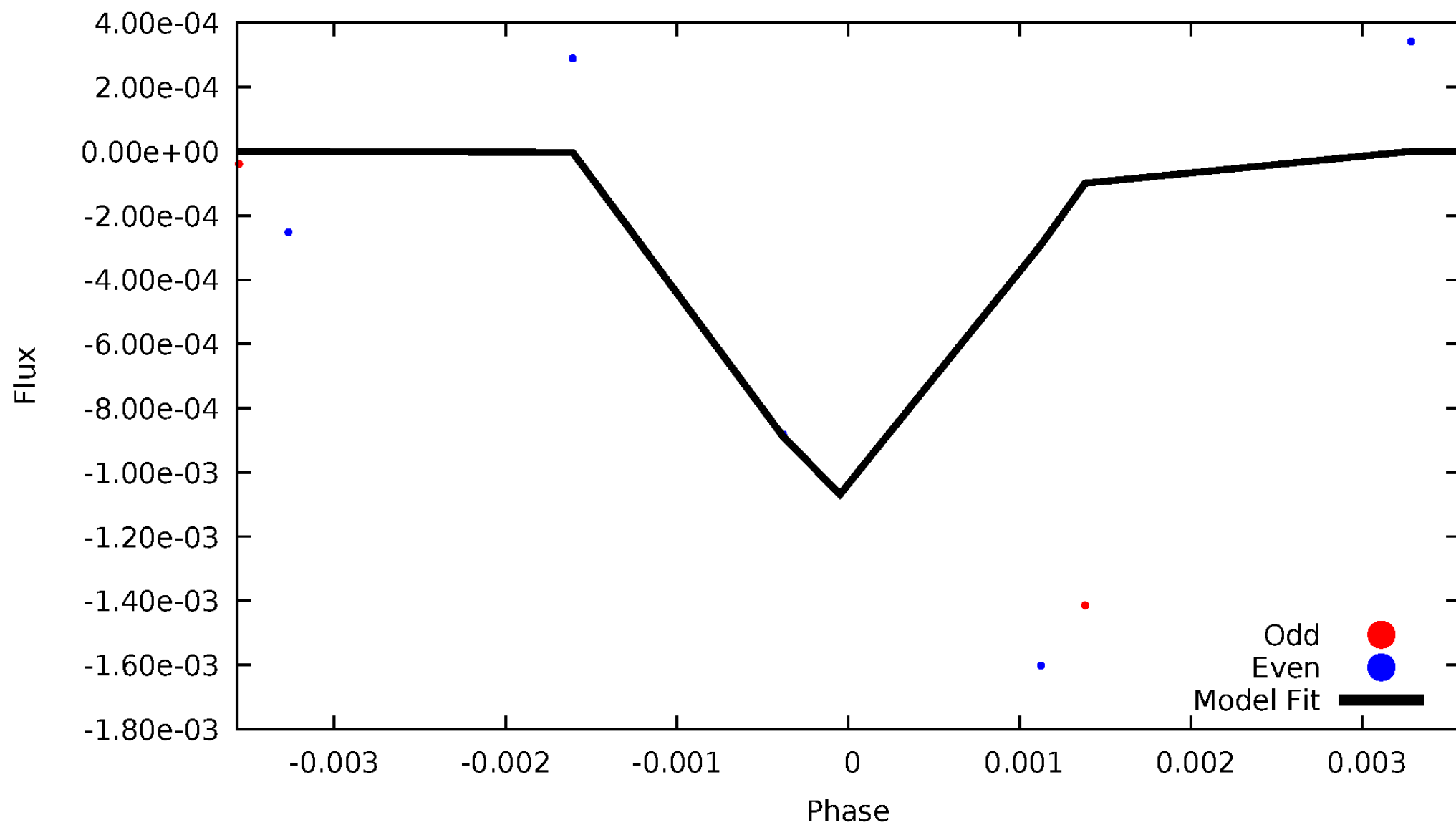


TCE 007116236-03



DV Odd/Even

TCE 007116236-03

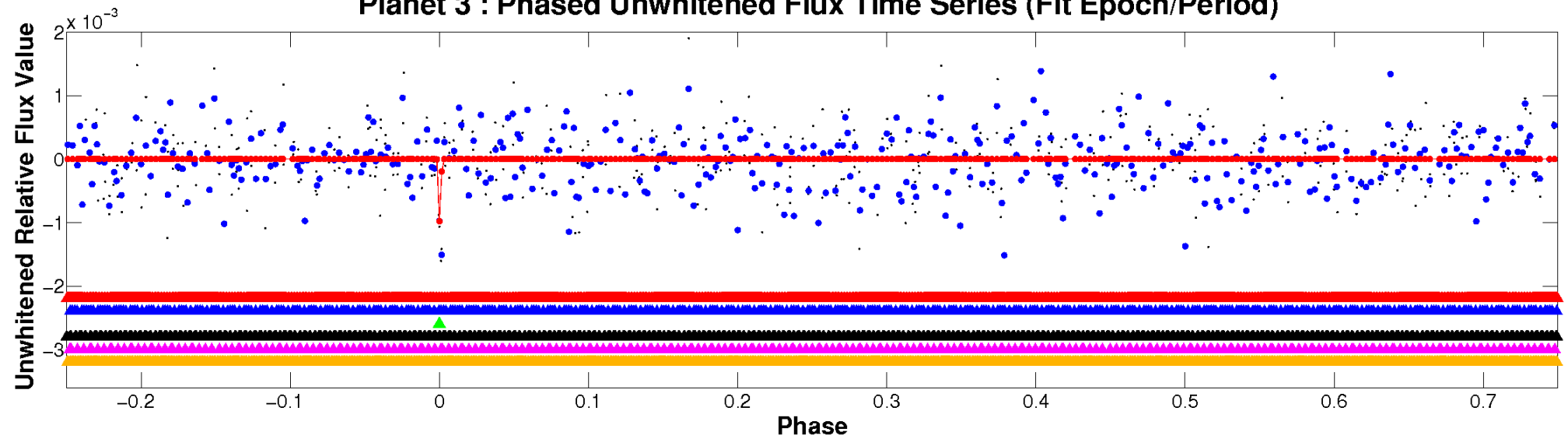


ALT Odd/Even

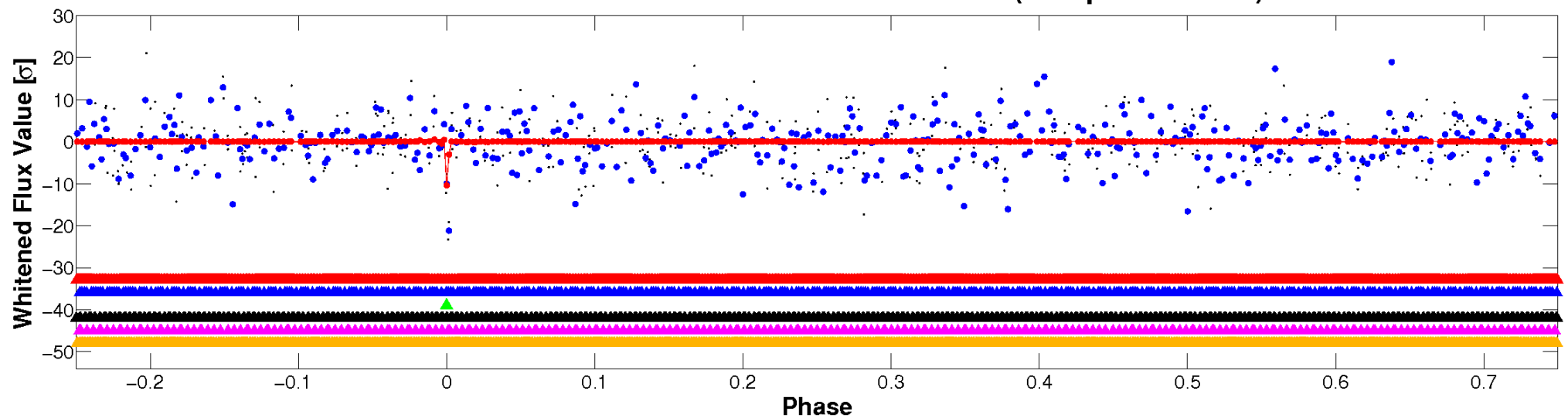
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

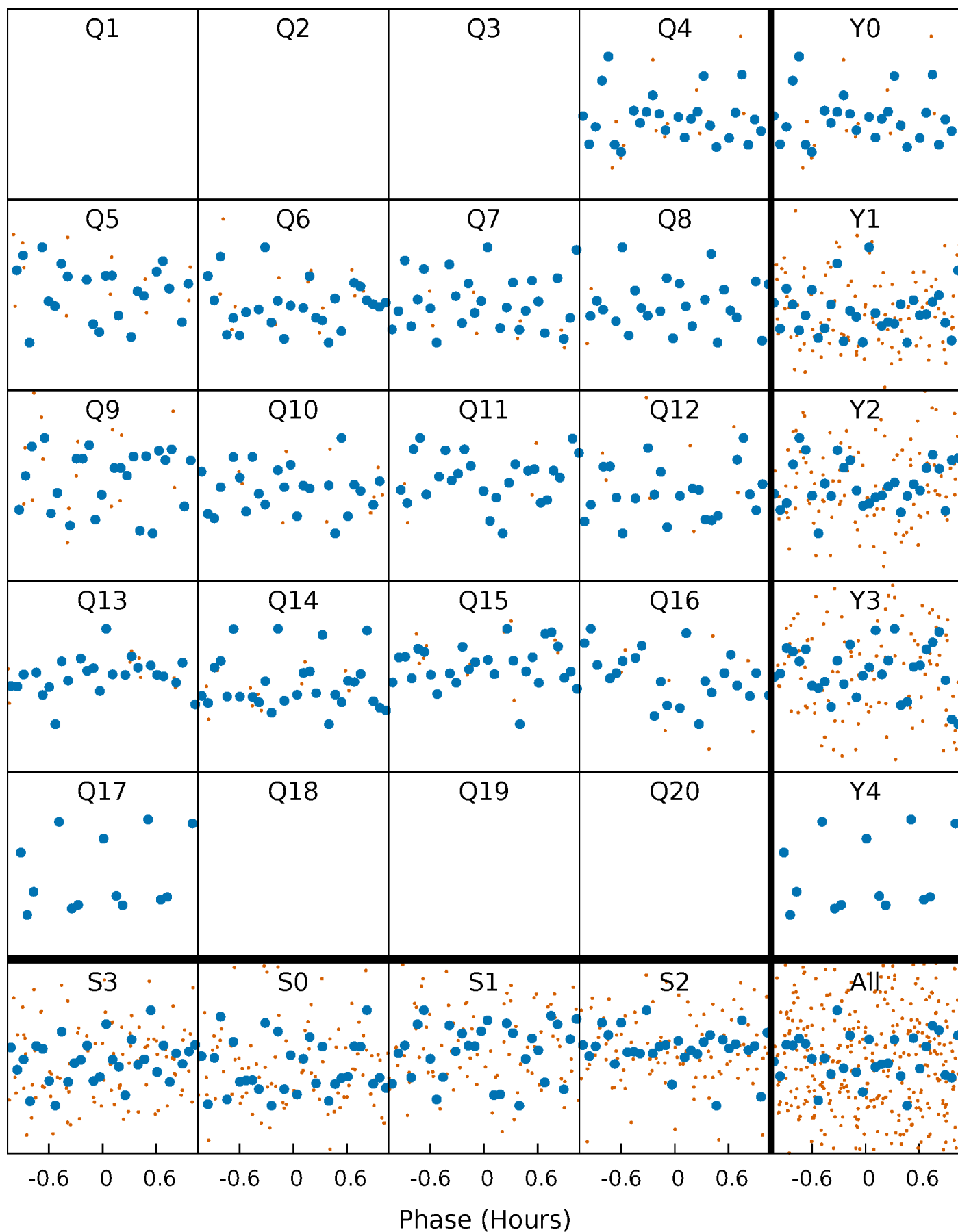


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



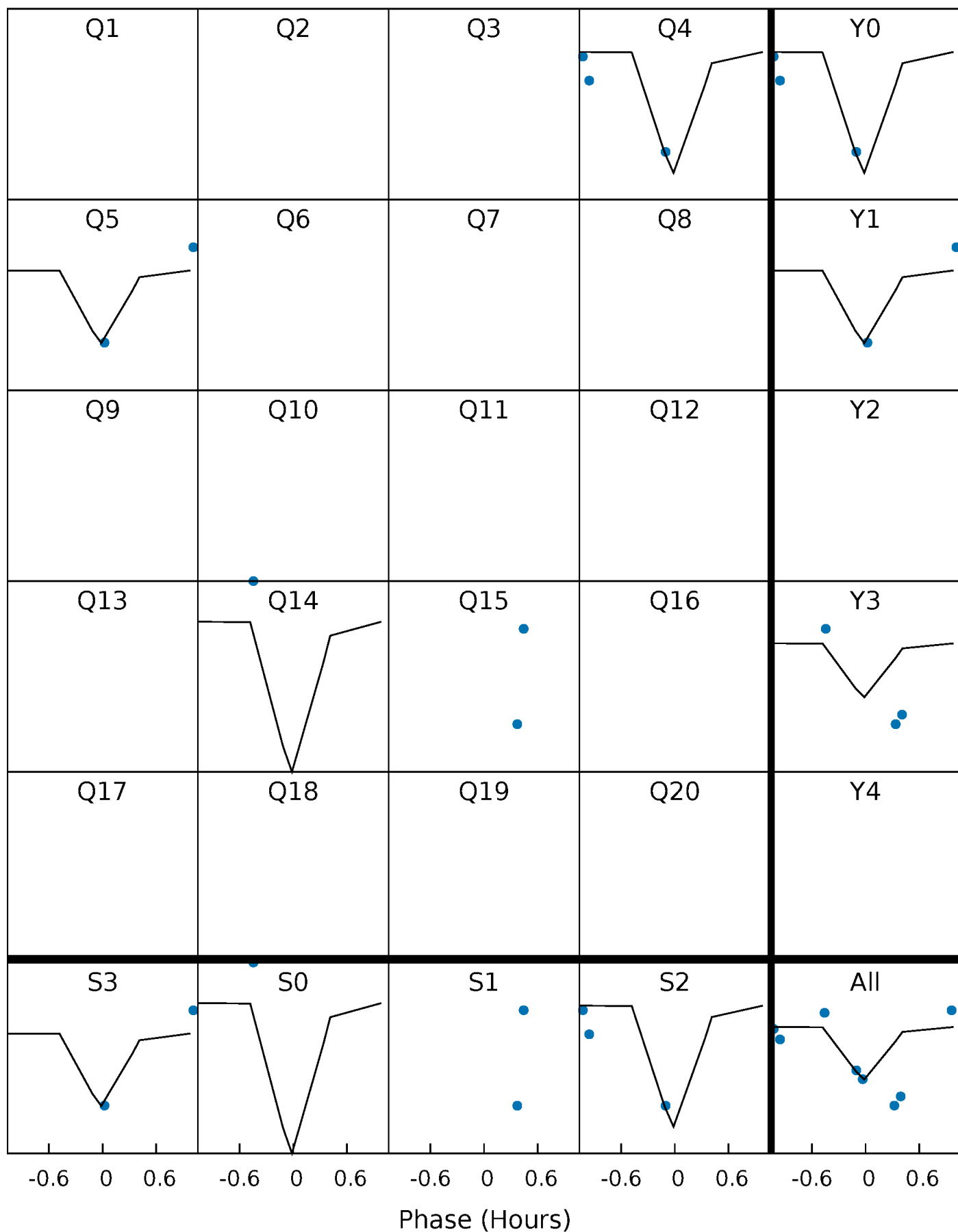
PDC Quarter-Phased Transit Curves

TCE 007116236-03 P= 12.460797 Days $T_0=141.411539$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007116236-03 P= 12.460797 Days $T_0=141.411539$ (BKJD)

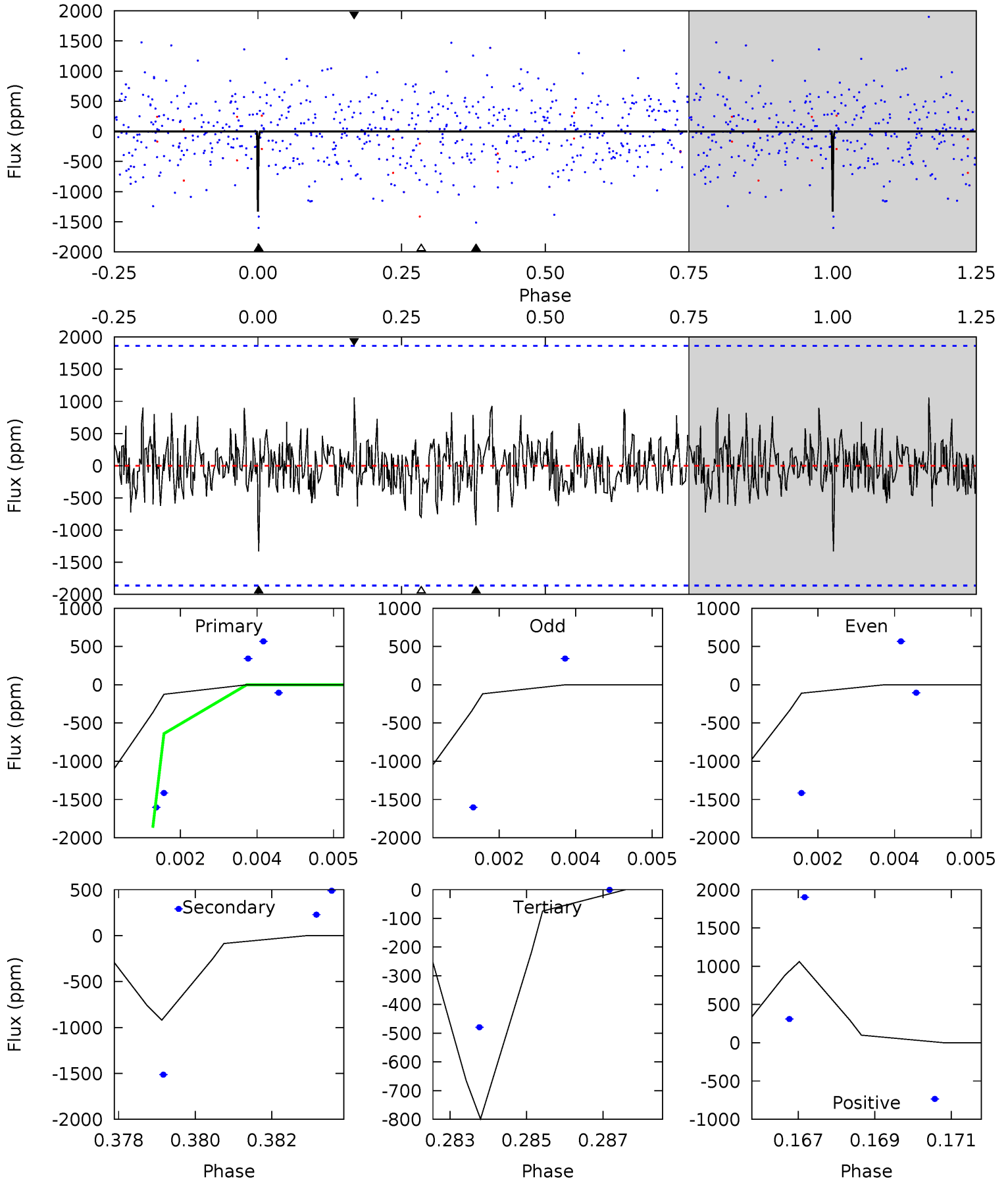


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007116236-03, P = 12.460797 Days, E = 141.411539 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.83	2.64	2.29	3.04	5.35	3.13	0.89	1.53	0.78	0.35	-0.40	0.14	0	0.44	1.15



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007116236

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-920 ± 348	$17.29^{+18.19}_{-12.06}$	1029^{+63}_{-48}	2955^{+1500}_{-548}	16^{+169}_{-13}
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 $A_{\text{obs}} \gg 1.0$

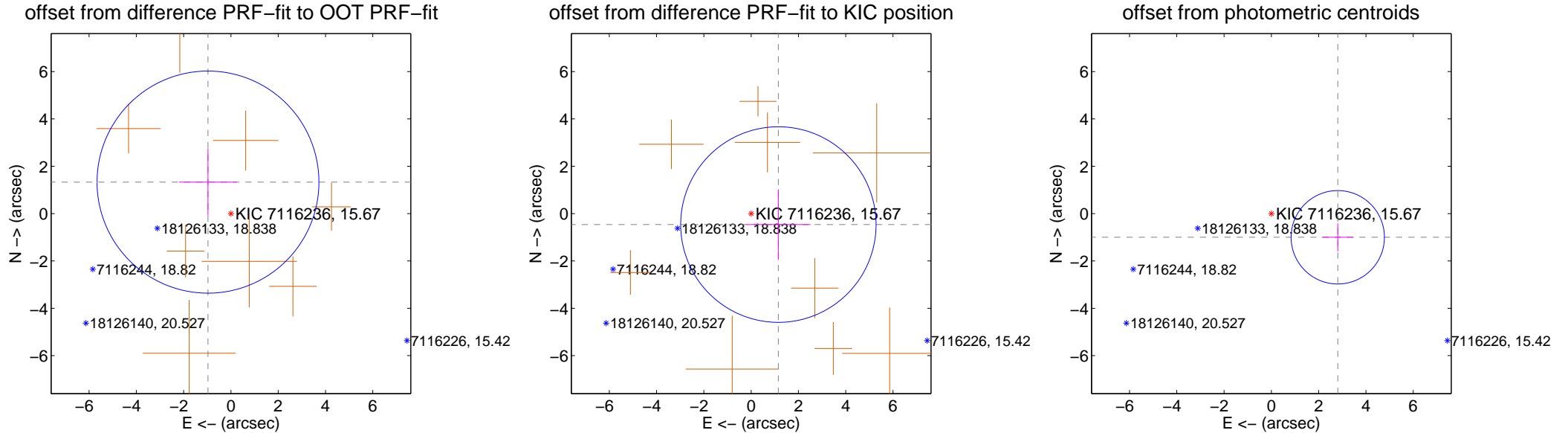
DV Centroid Data

Supplemental centroid analysis for 007116236-03. Kepler magnitude: 15.67. Transit SNR 14.98

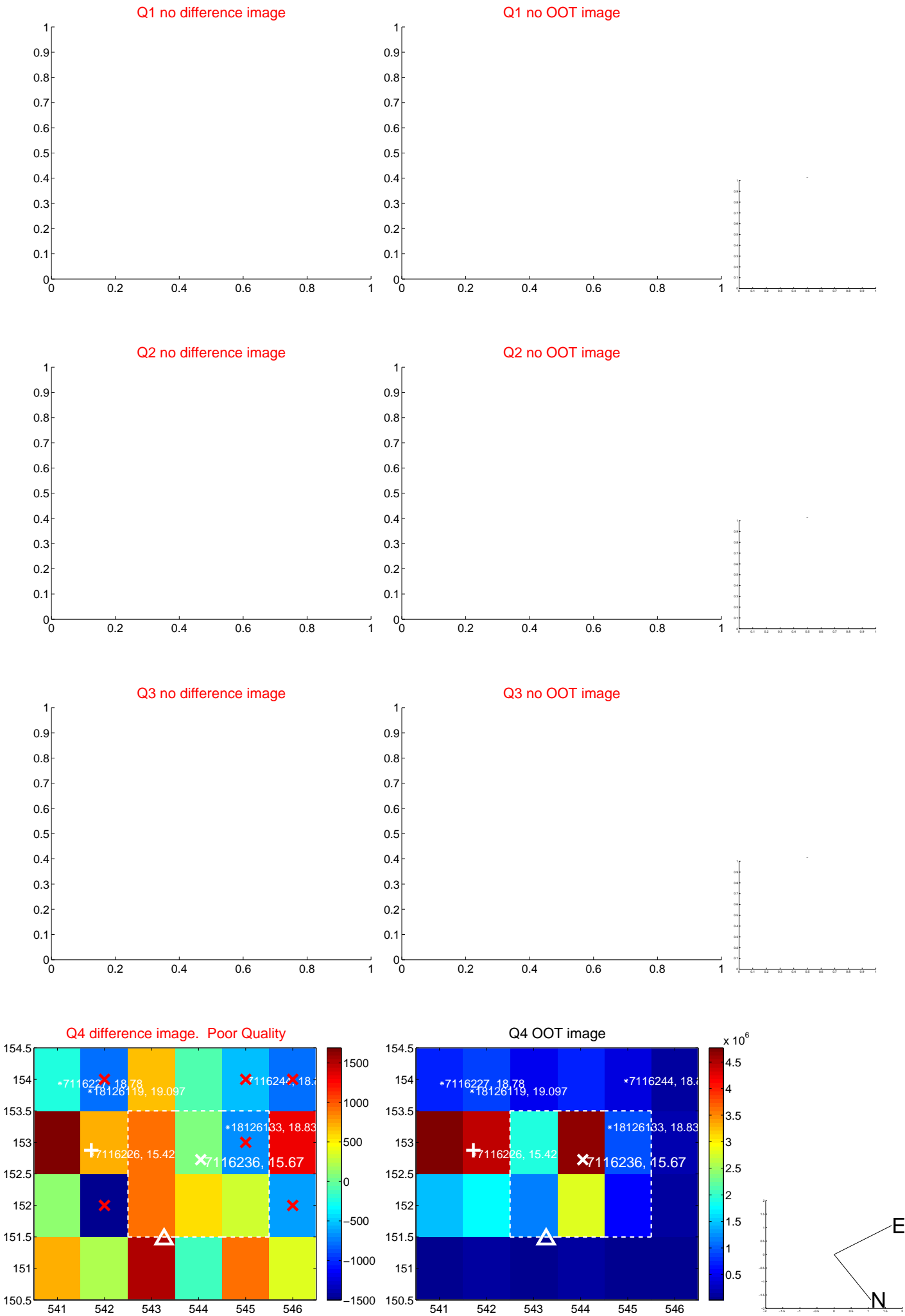
There are 0 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.40 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

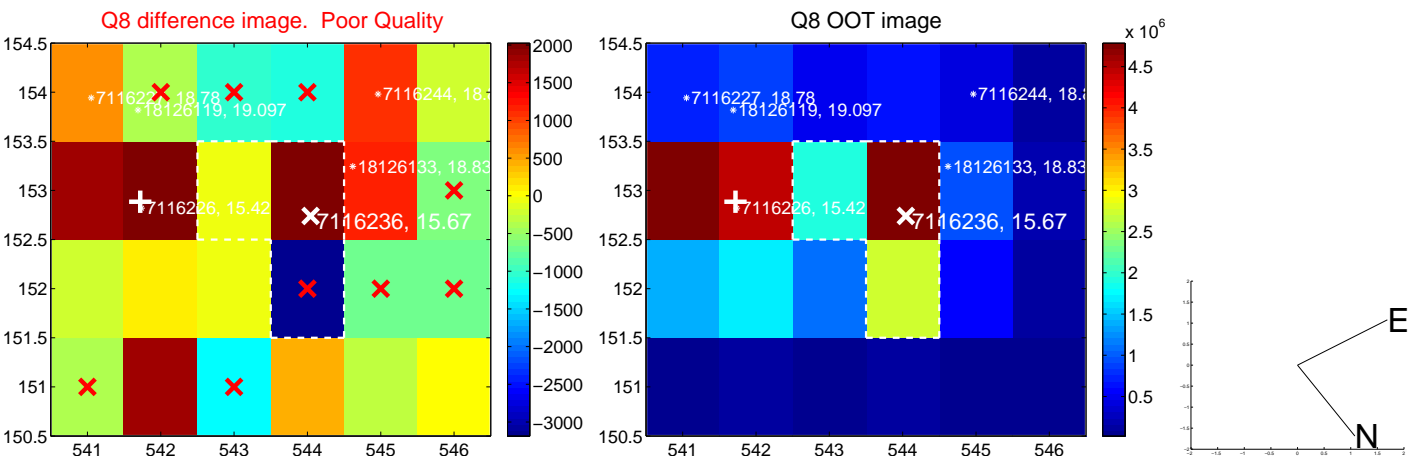
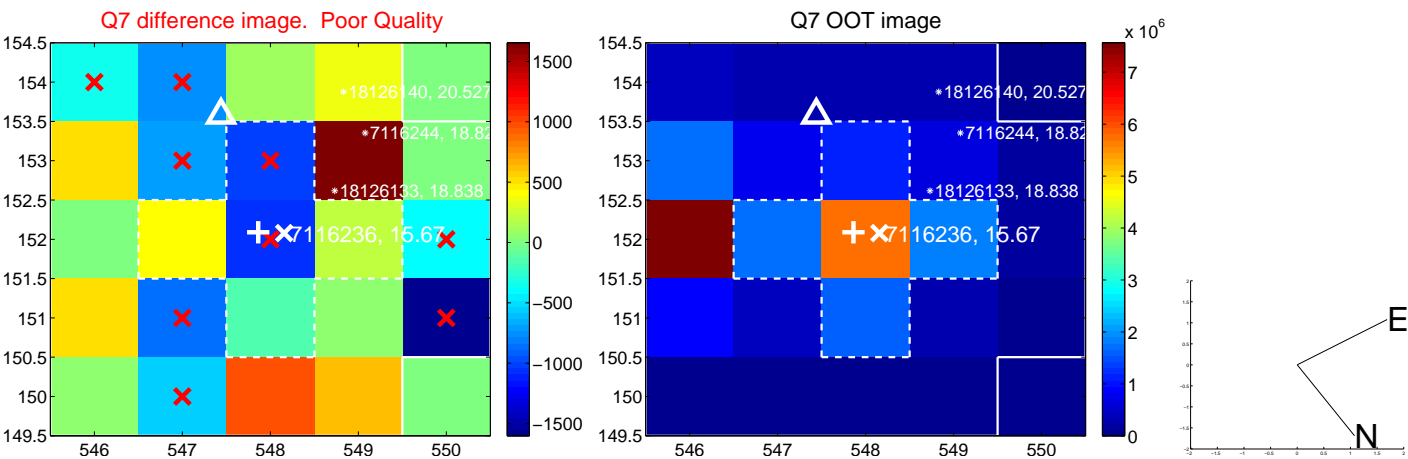
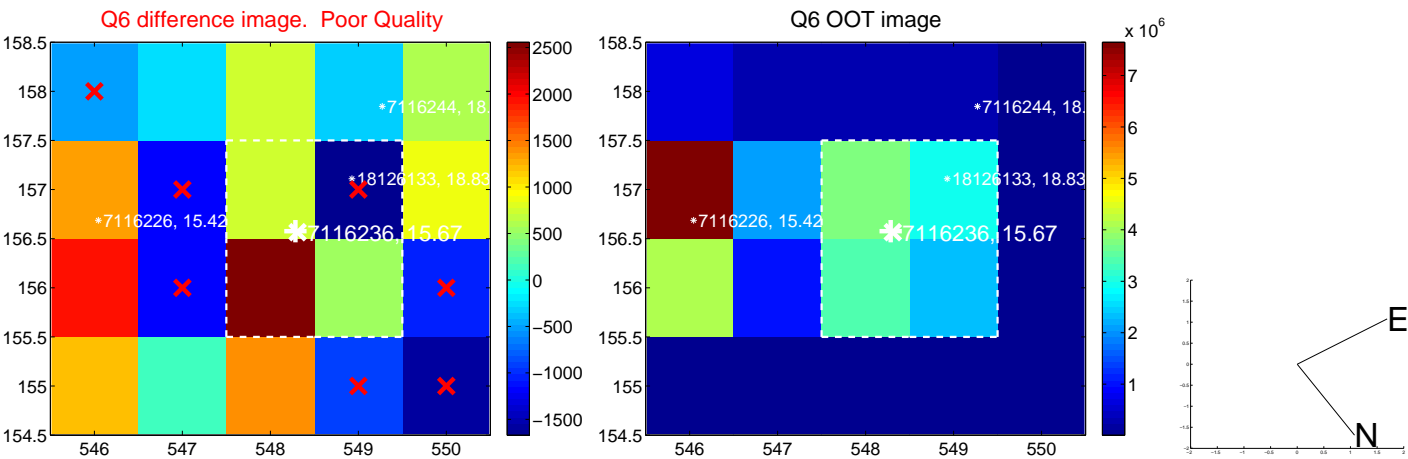
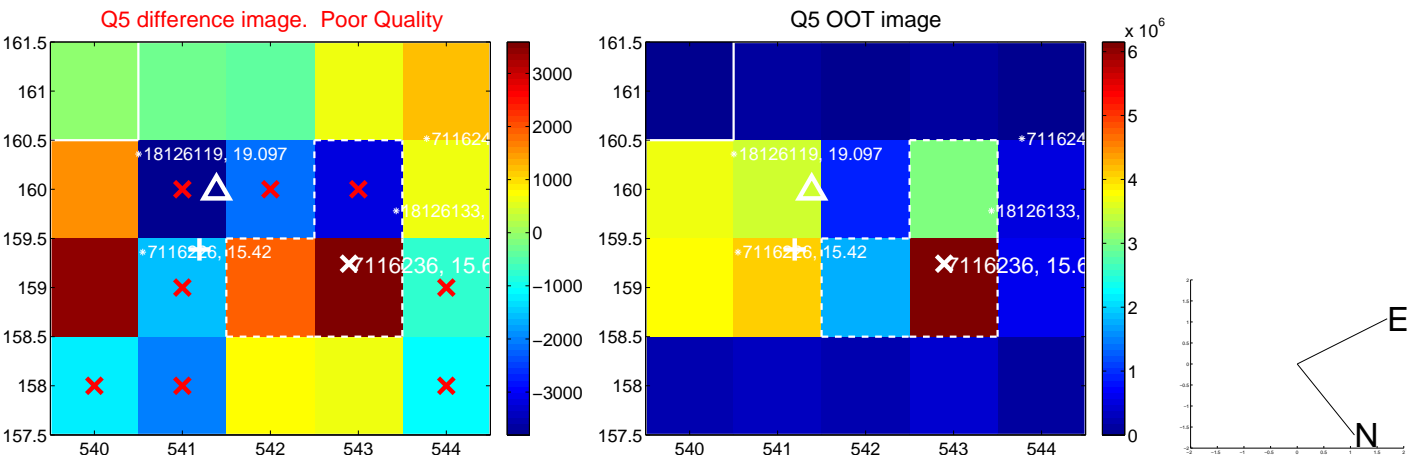
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.647 ± 1.564	1.05	0.970 ± 1.222	1.330 ± 1.413
PRF-fit source offset from KIC position	1.241 ± 1.377	0.90	-1.152 ± 1.358	-0.463 ± 1.490
photometric centroid source offset	2.98 ± 0.66	4.53	-2.81 ± 0.67	-1.00 ± 0.59



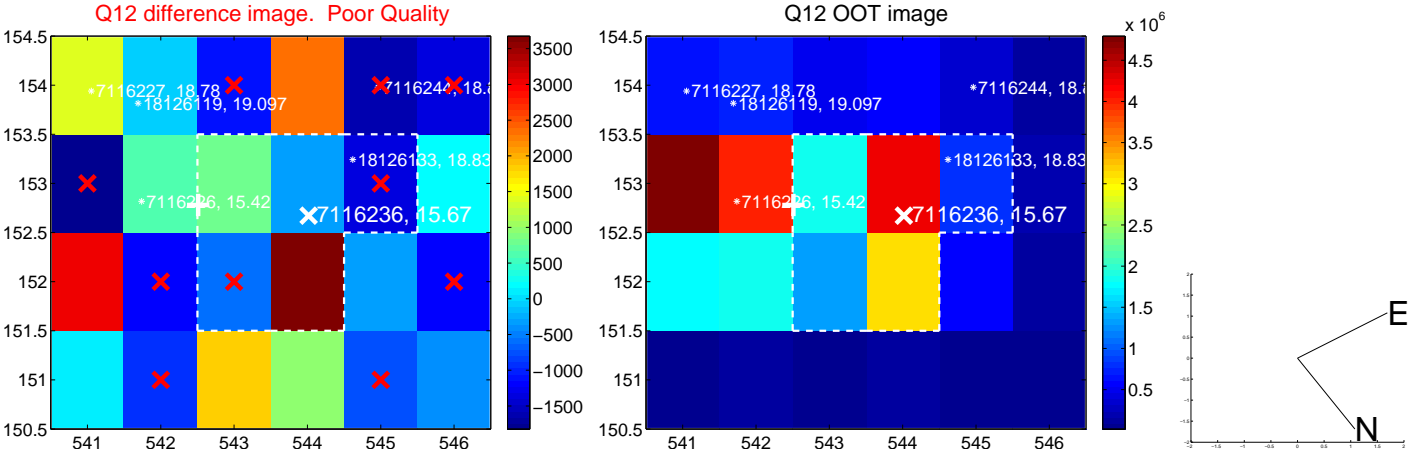
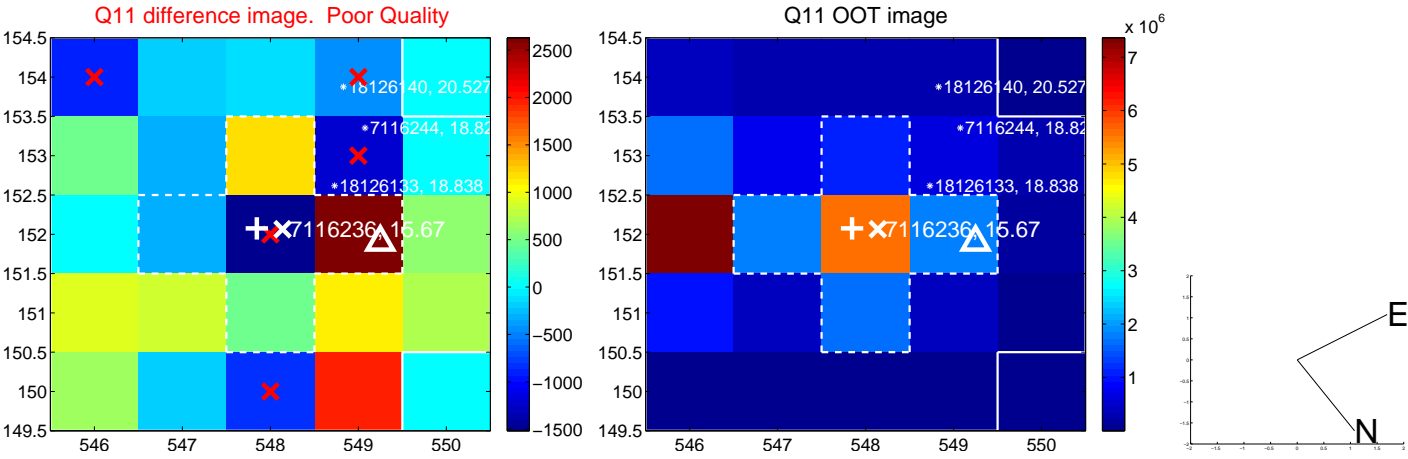
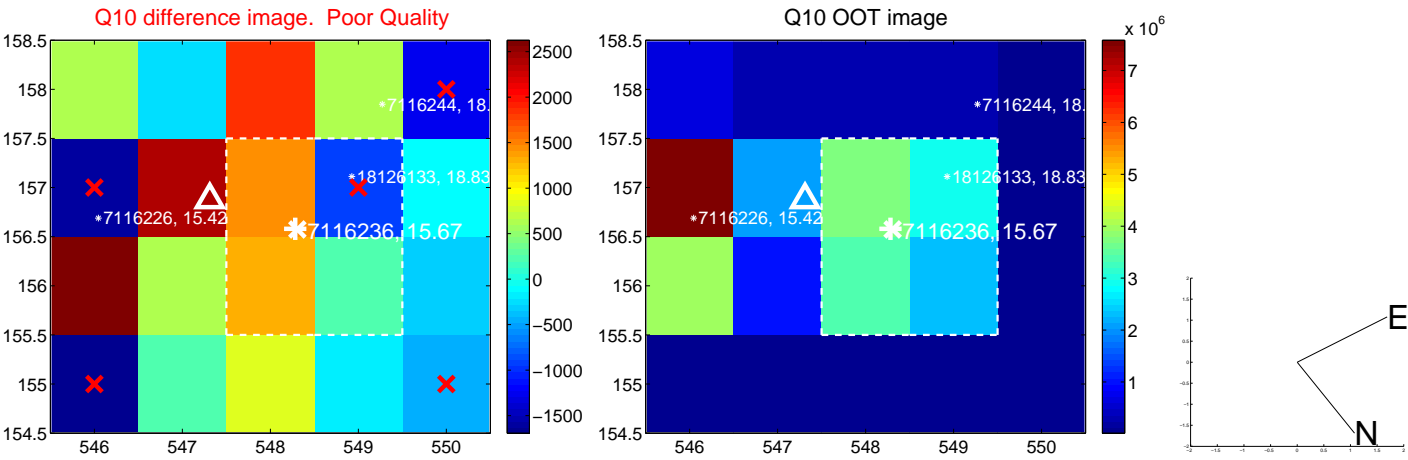
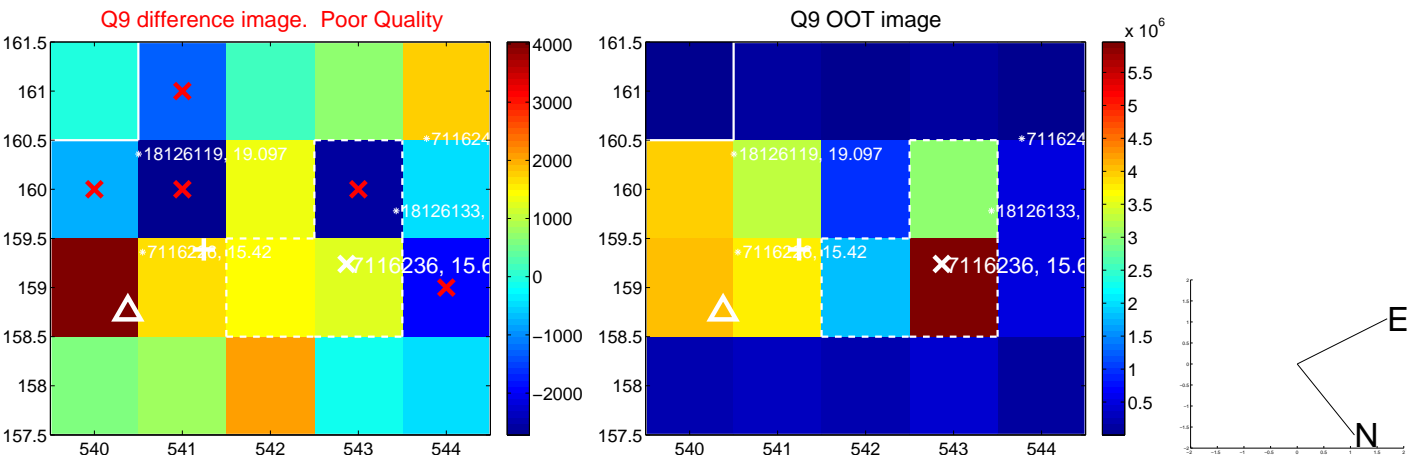
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



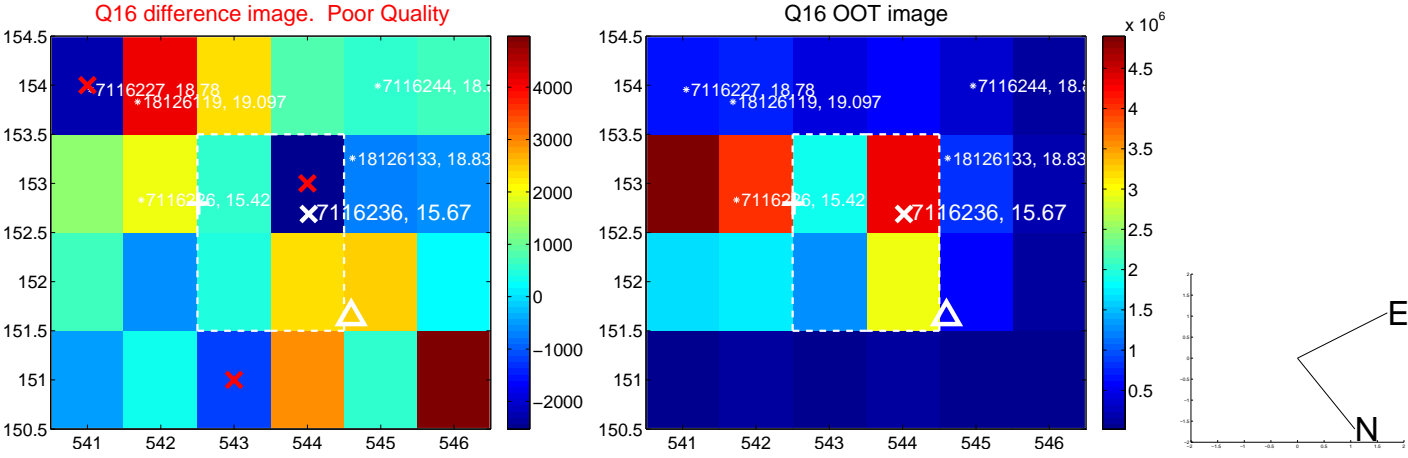
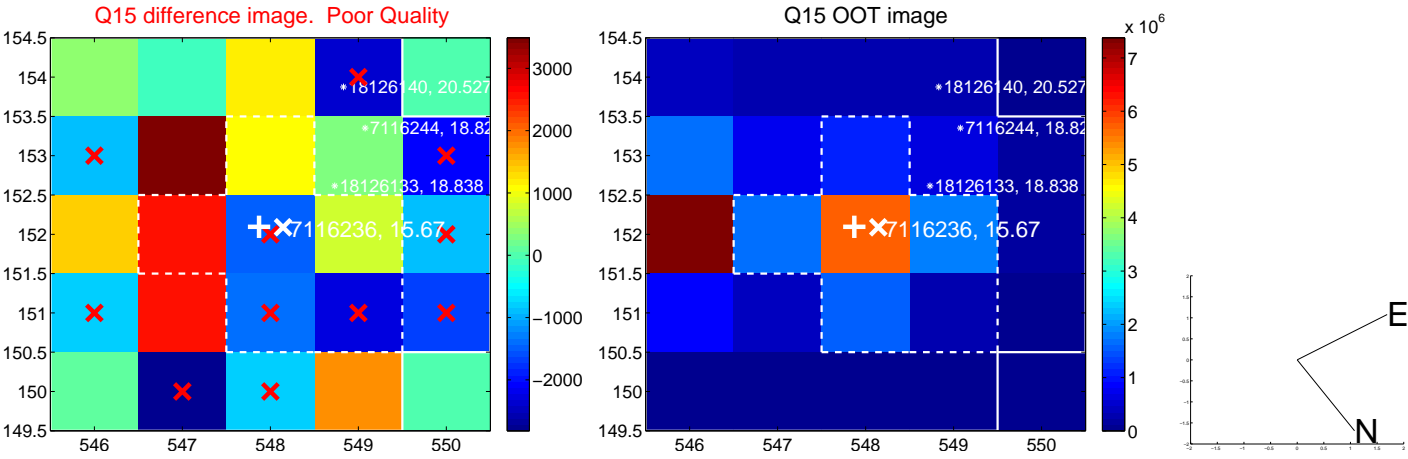
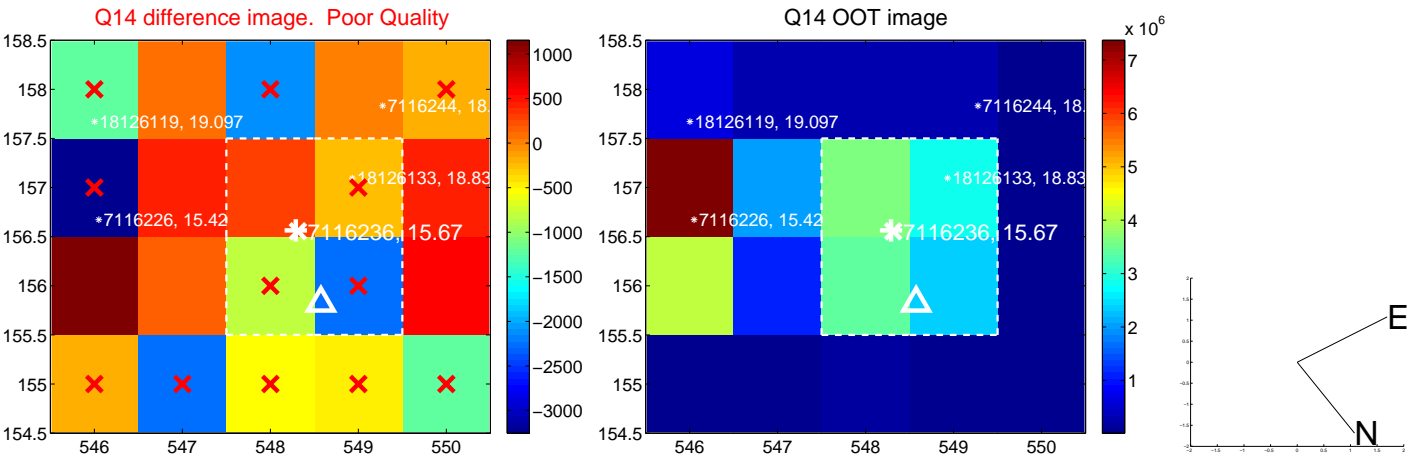
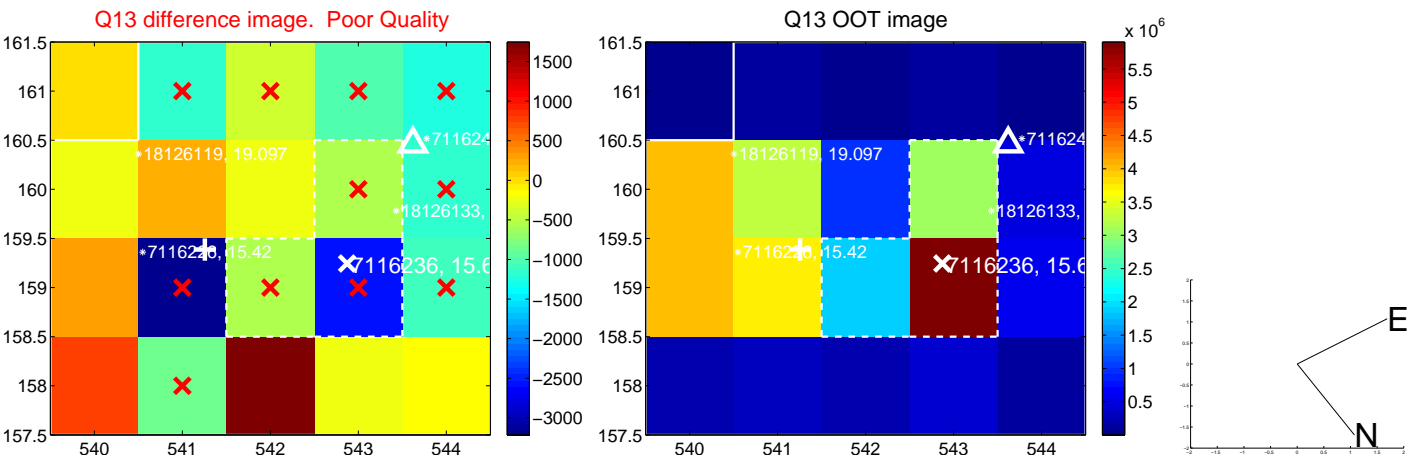
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

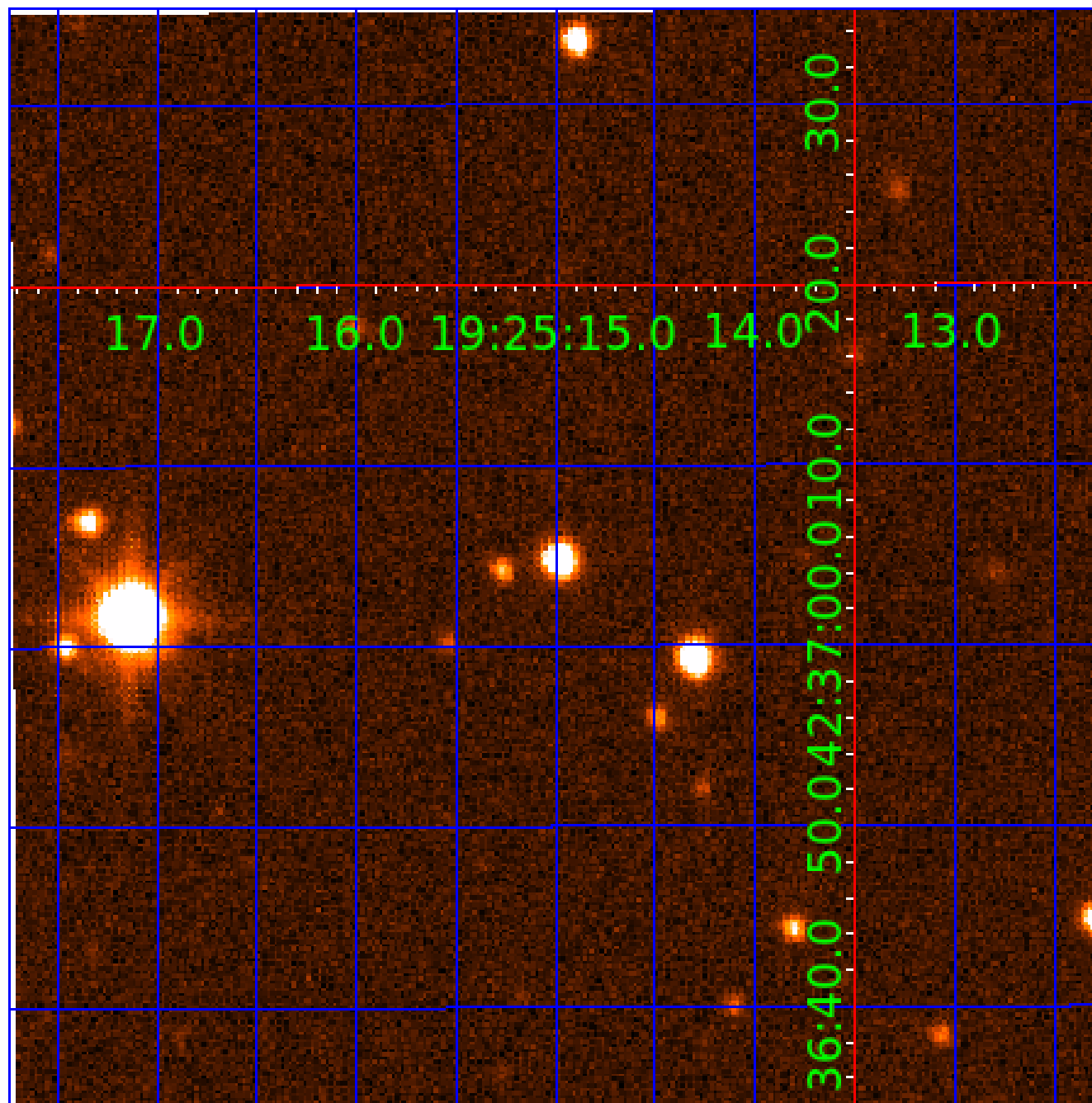


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007116236

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})
007116236-01	OBS	6828.01	0.566750	131.868484	30.6	4.313	11.1	5.9	0.83	5707	0.46	3999.67
007116236-02	OBS	No	3.081284	132.609562	385.4	1.607	11.7	11.0	0.83	5707	1.63	418.38
007116236-03	OBS	No	12.460797	141.411539	1072.0	0.533	20.0	15.0	0.83	5707	3.67	64.94
007116236-04	OBS	No	1.875345	131.630708	708.0	1.065	17.0	23.6	0.83	5707	2.39	811.16
007116236-05	OBS	No	5.018200	132.119748	972.7	1.521	15.7	23.4	0.83	5707	2.80	218.35
007116236-06	OBS	No	1.187759	131.965534	301.4	1.085	16.6	11.6	0.83	5707	1.55	1491.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007116236-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH
007116236-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

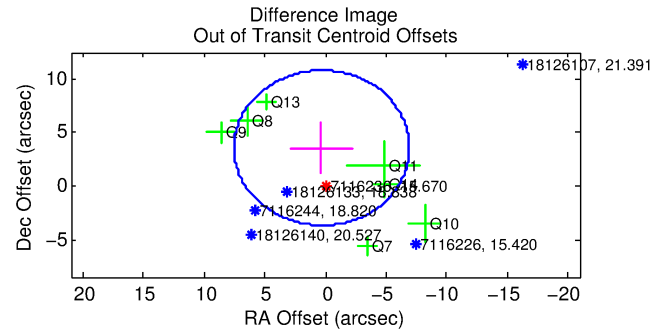
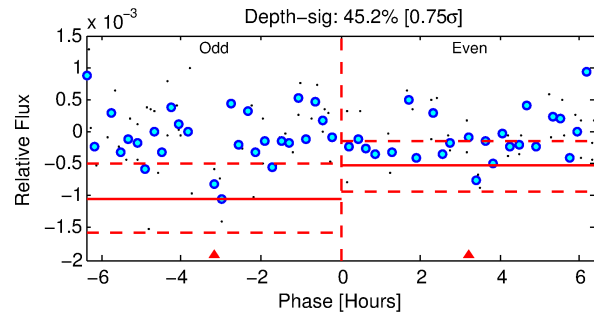
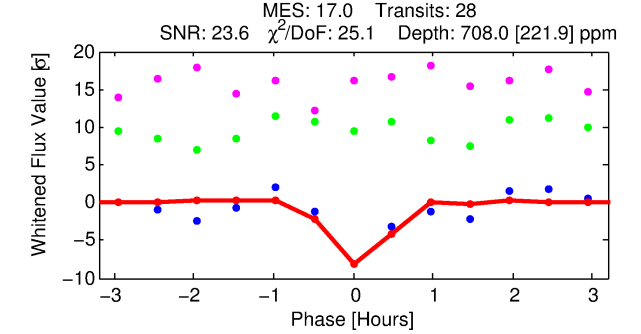
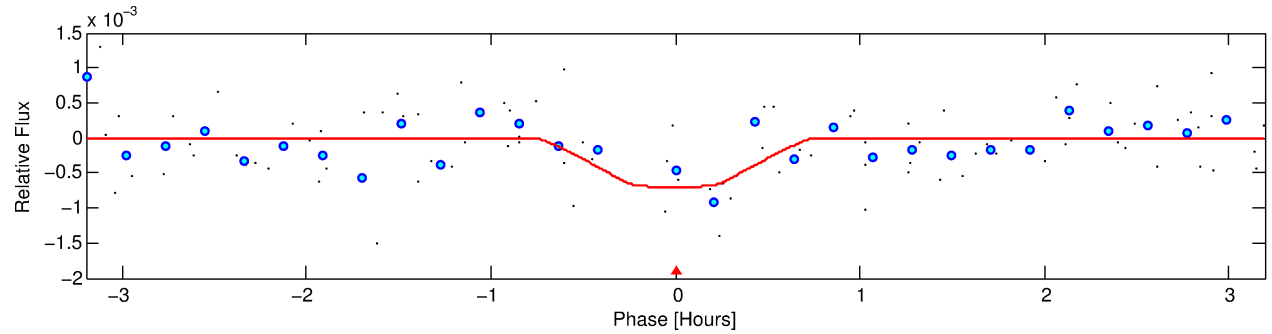
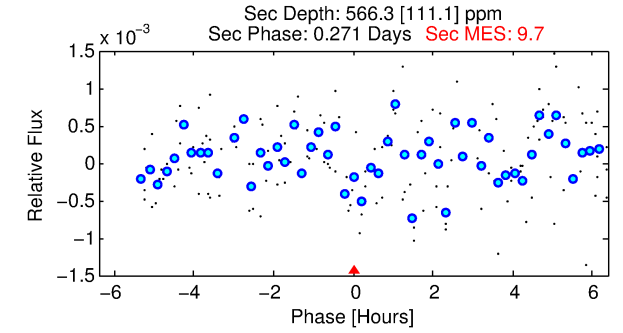
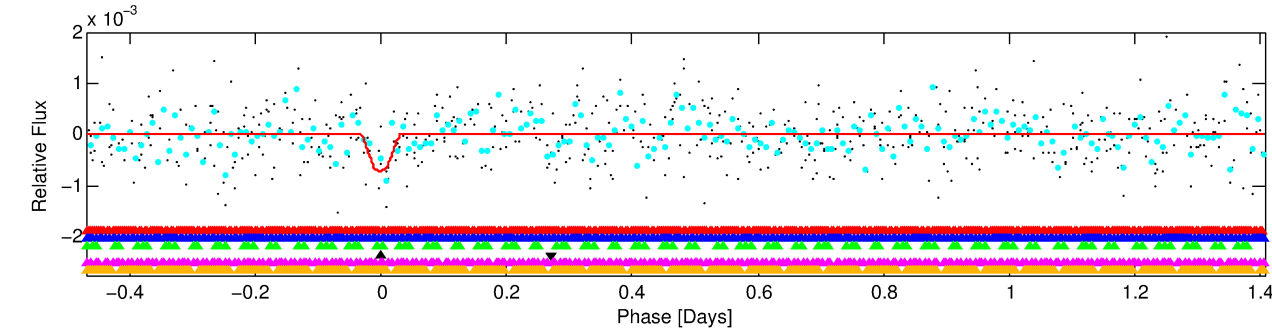
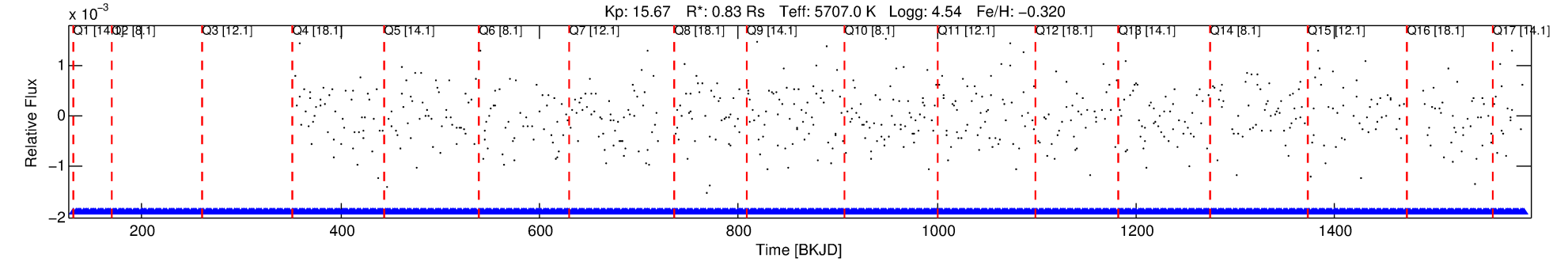
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007116236-04

No Significant Match Found

DV One-Page Summary

KIC: 7116236 Candidate: 4 of 6 Period: 1.875 d
KOI: K06828 Corr: No Ephemeris Match



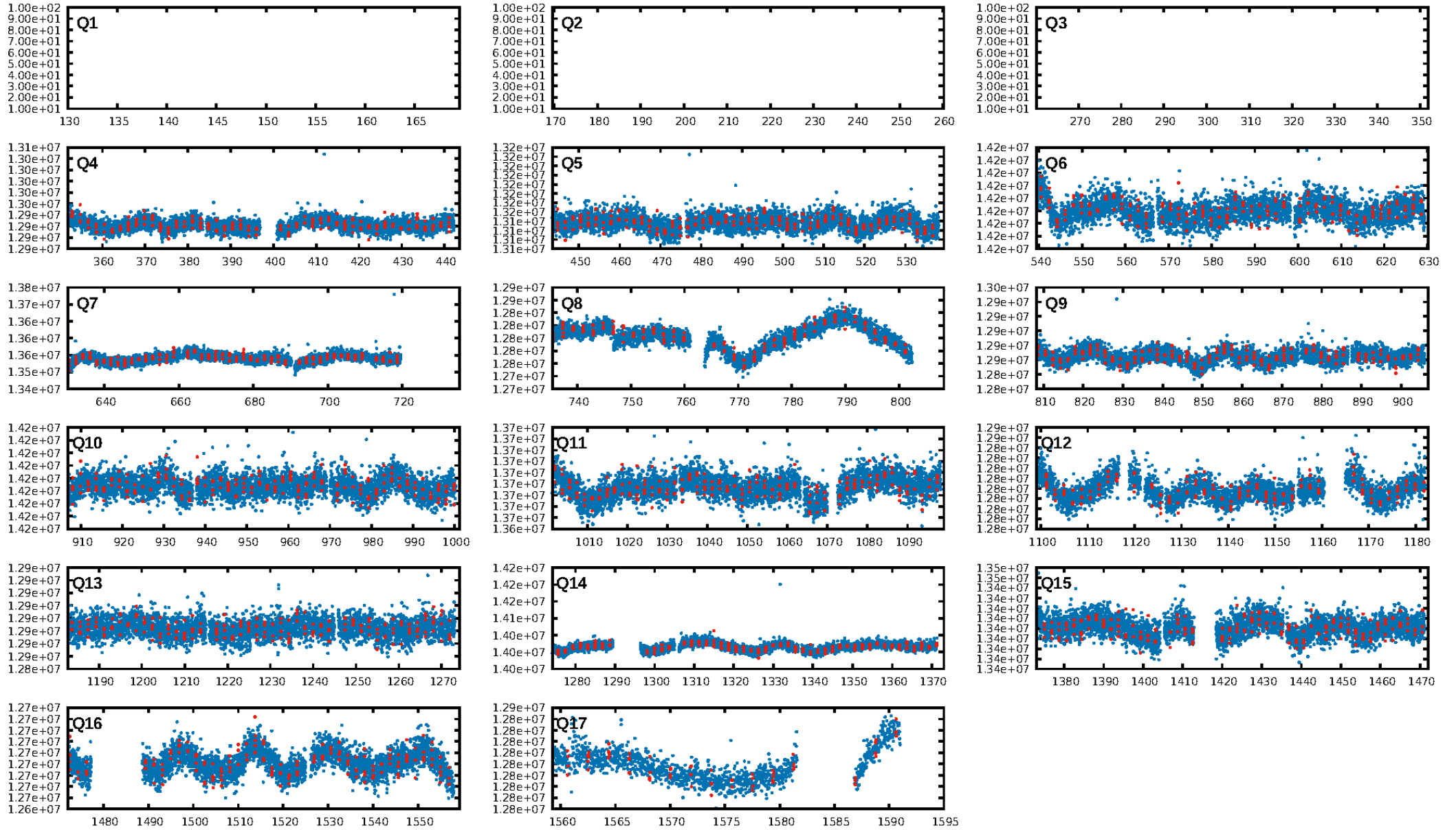
DV Fit Results:

Period = 1.87534 [0.00002] d
Epoch = 131.6307 [0.0047] BKJD
Rp/R* = 0.0264 [0.0419]
a/R* = 9.89 [70.40]
b = 0.72 [4.91]
Seff = 811.16 [274.15]
Teq = 1361 [115] K
Rp = 2.39 [3.84] Re
a = 0.0283 [0.0062] AU
Ag = 43.90 [140.16] [0.31σ]
Teffp = 5416 [4306] K [0.94σ]

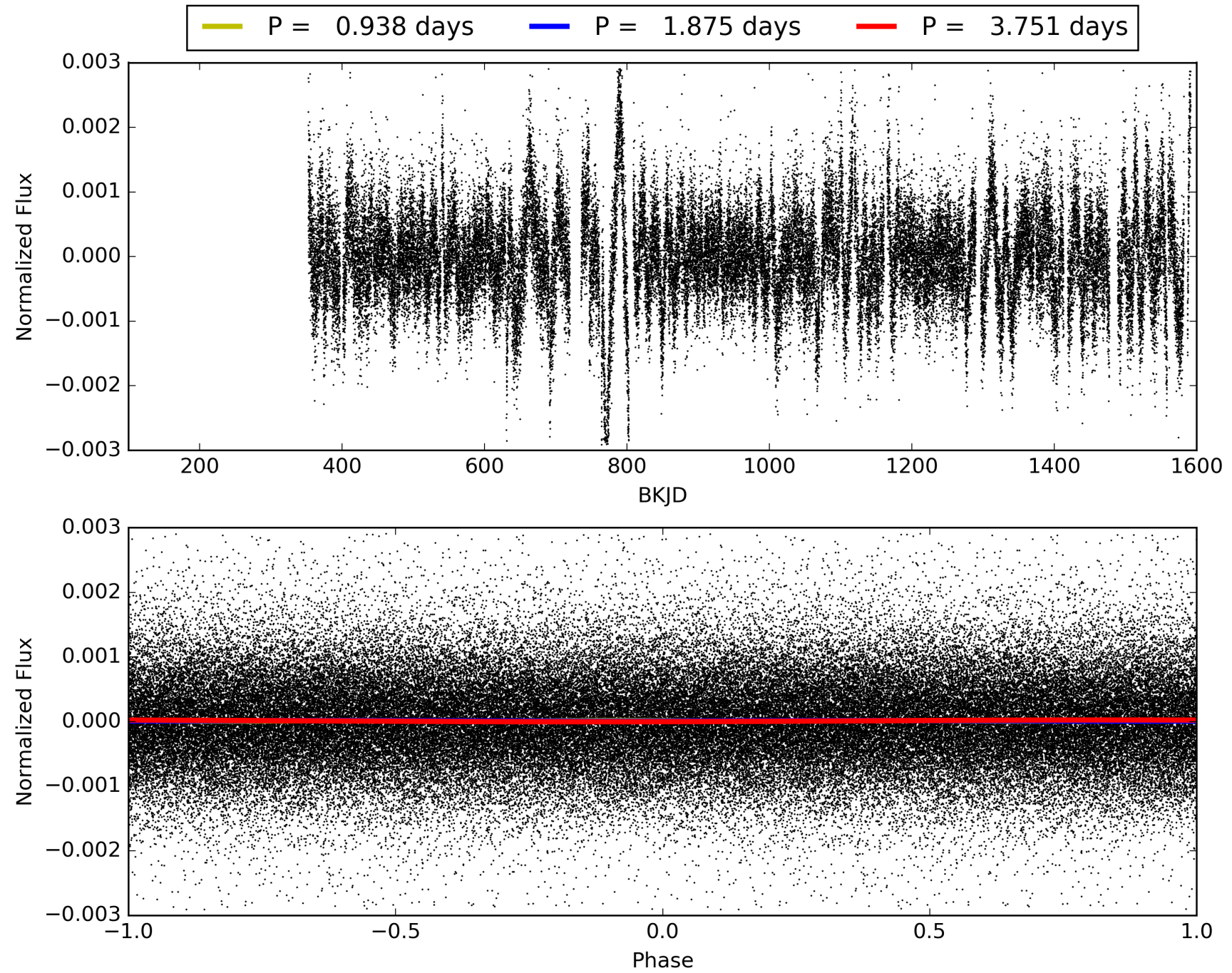
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.85σ]
LongPeriod-sig: 100.0% [15.02σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [27/27]
GhostDiagnostic-chr: -0.09782
Centroid-sig: 42.9%
Centroid-so: 2.642 arcsec [9.95σ]
OotOffset-rm: 3.580 arcsec [1.48σ]
KicOffset-rm: 2.685 arcsec [1.82σ]
OotOffset-st: 2/2/1/2 [7]
KicOffset-st: 2/2/1/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 007116236-04, PDC Light Curves

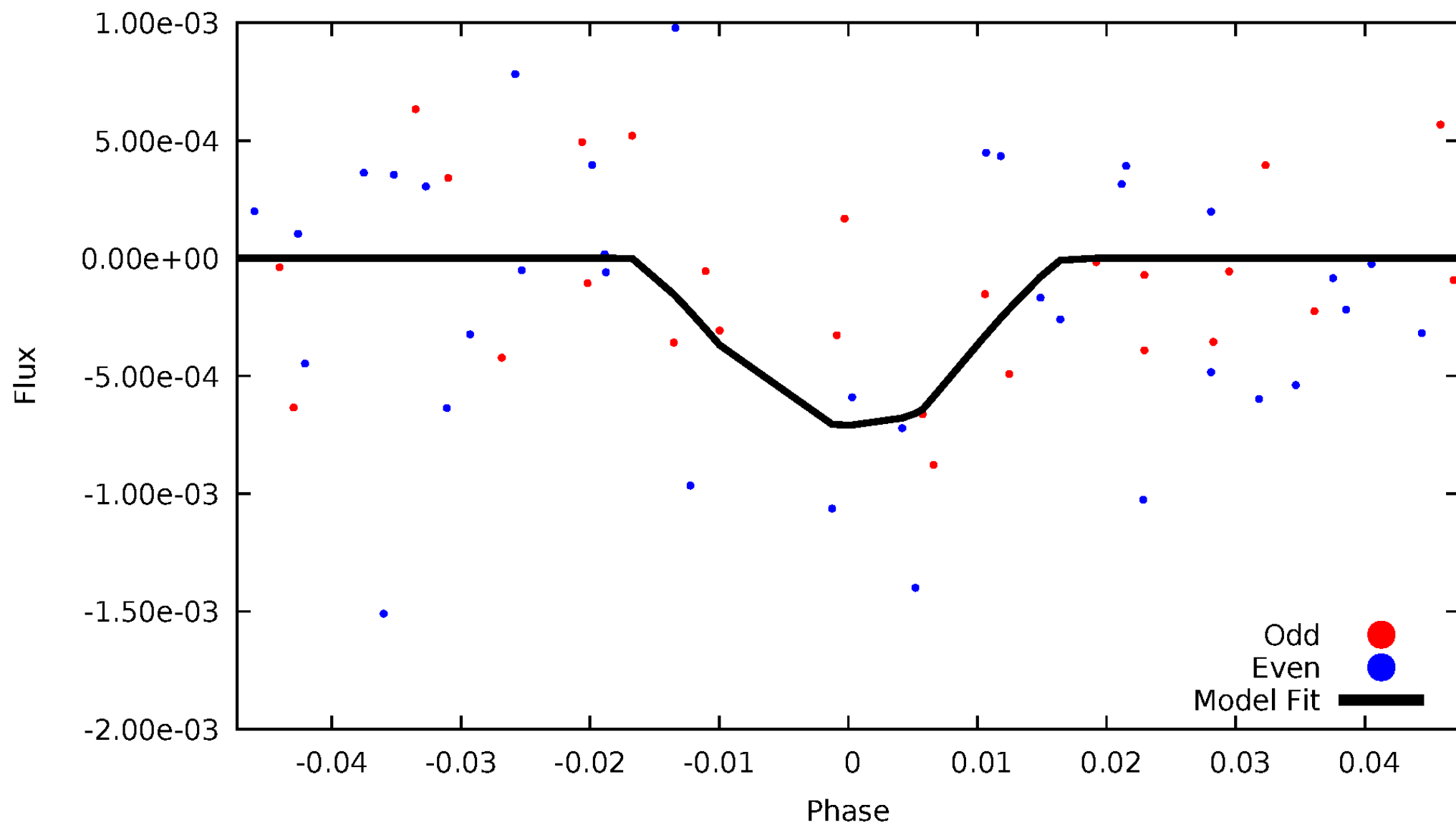


TCE 007116236-04



DV Odd/Even

TCE 007116236-04

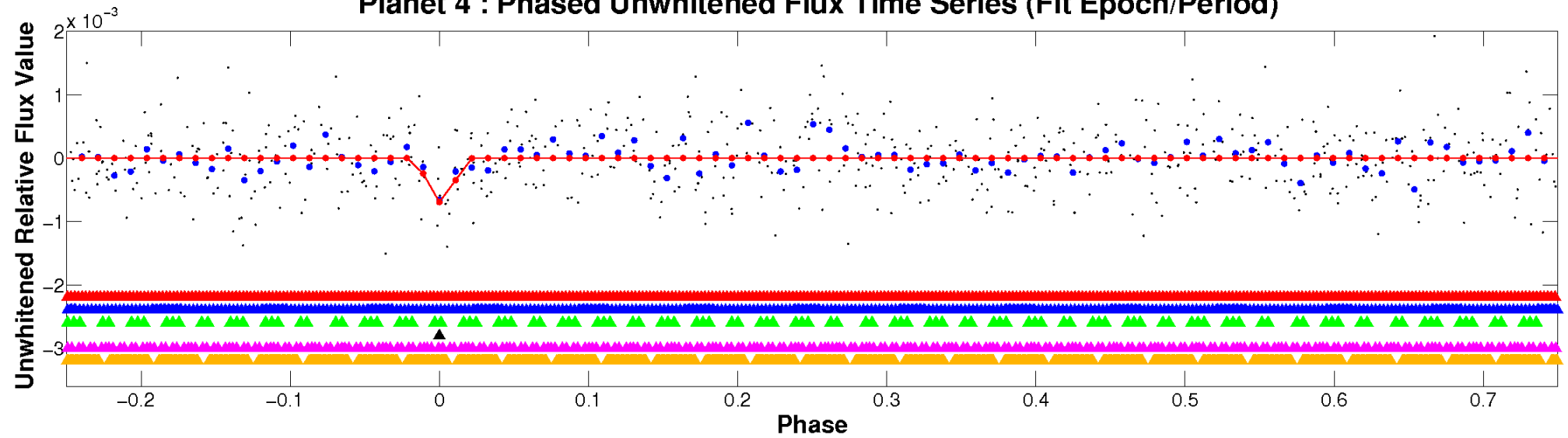


ALT Odd/Even

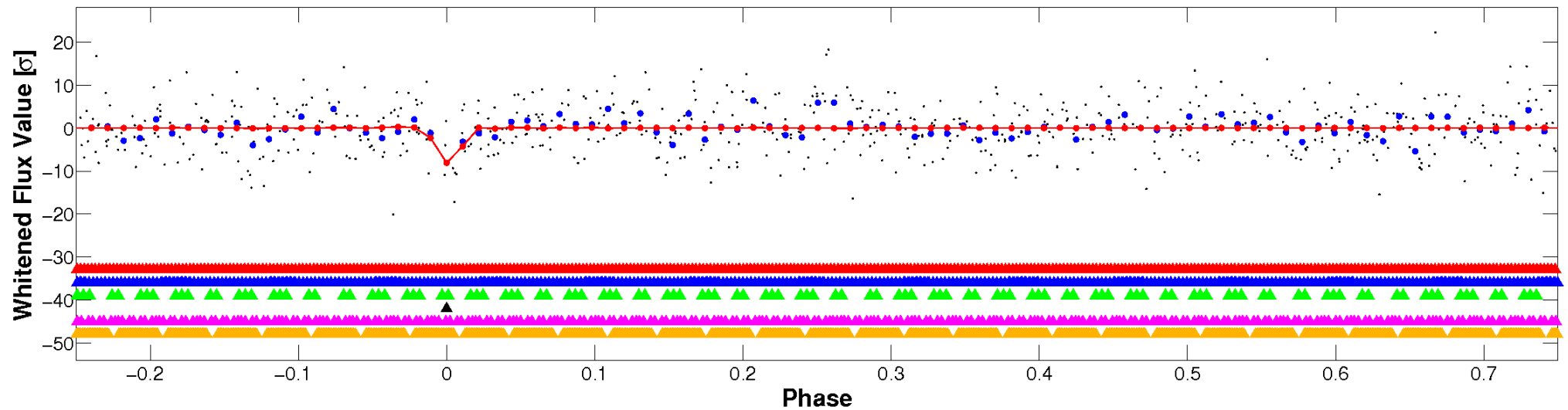
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

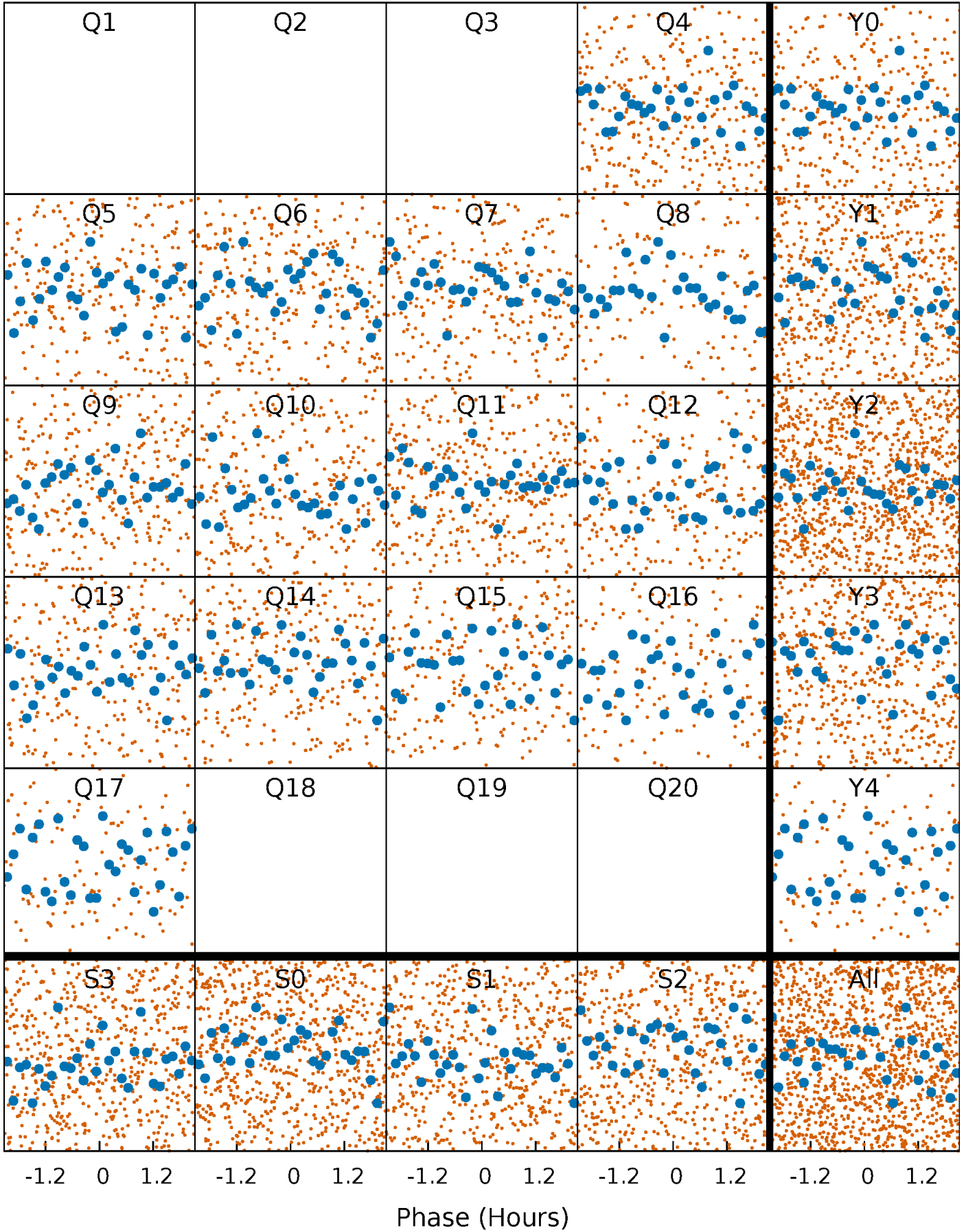


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



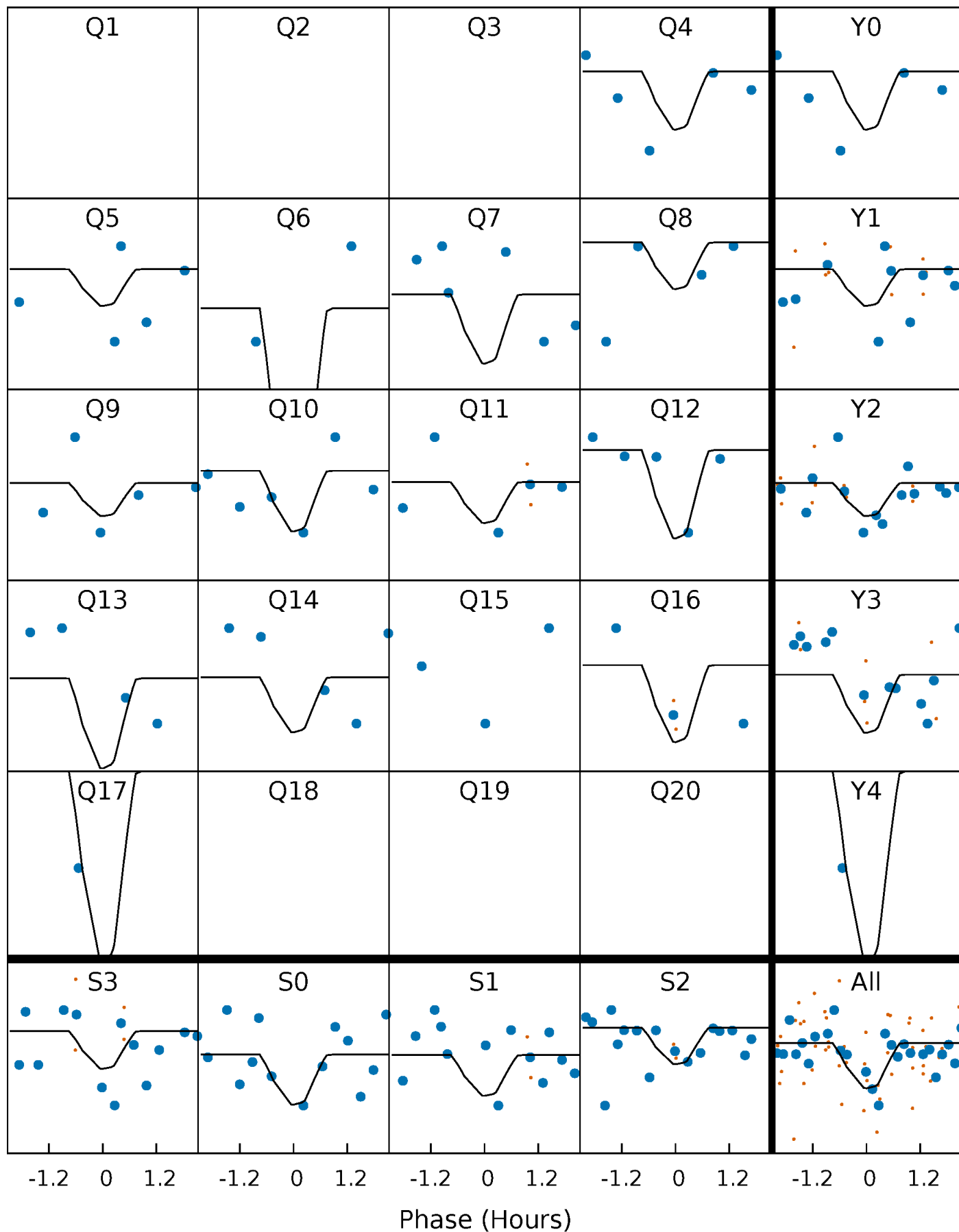
PDC Quarter-Phased Transit Curves

TCE 007116236-04 P= 1.875345 Days $T_0=131.630708$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007116236-04 P= 1.875345 Days $T_0=131.630708$ (BKJD)

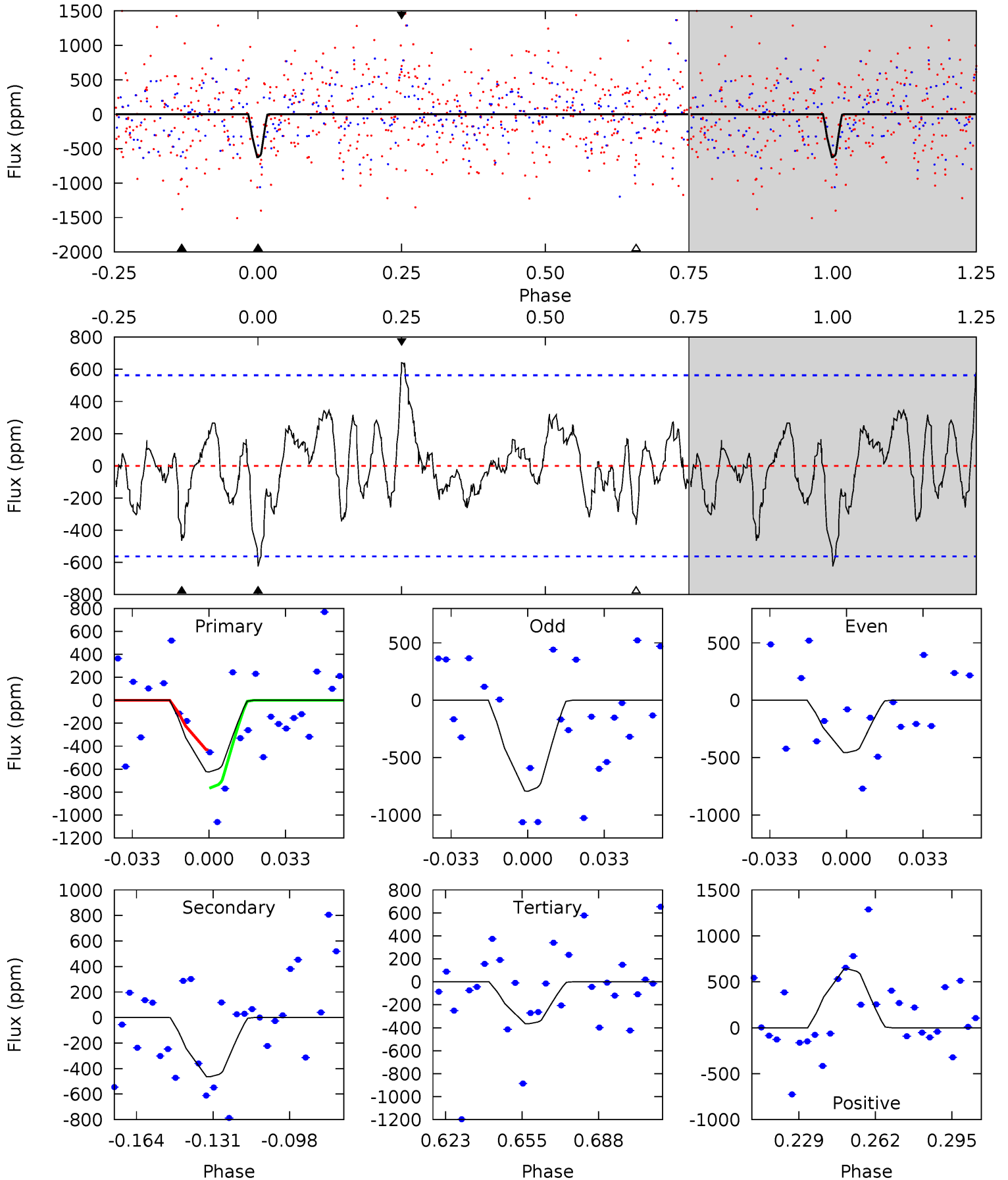


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007116236-04, P = 1.875345 Days, E = 131.630708 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.31	3.96	3.11	5.46	4.79	2.13	1.53	2.20	-0.15	0.85	-1.50	1.44	0	0.51	1.44



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007116236

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-465 ± 117	$3.79^{+3.43}_{-2.62}$	1936^{+117}_{-103}	4349^{+2984}_{-916}	14^{+125}_{-10}
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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

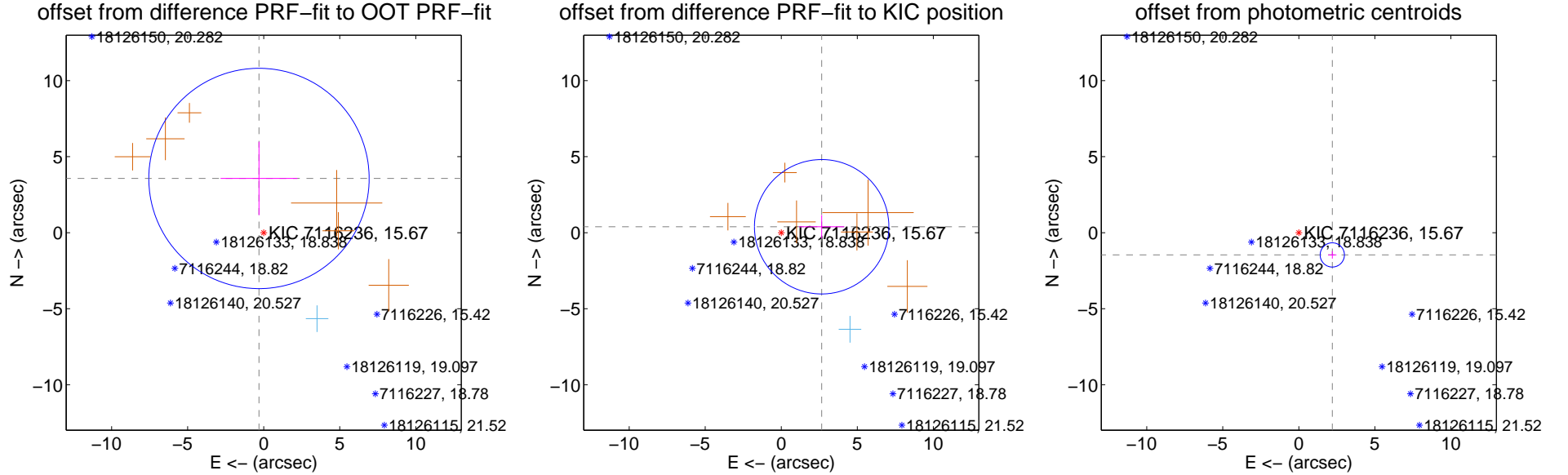
DV Centroid Data

Supplemental centroid analysis for 007116236-04. Kepler magnitude: 15.67. Transit SNR 23.60

There are 1 quarters with good PRF difference image offsets

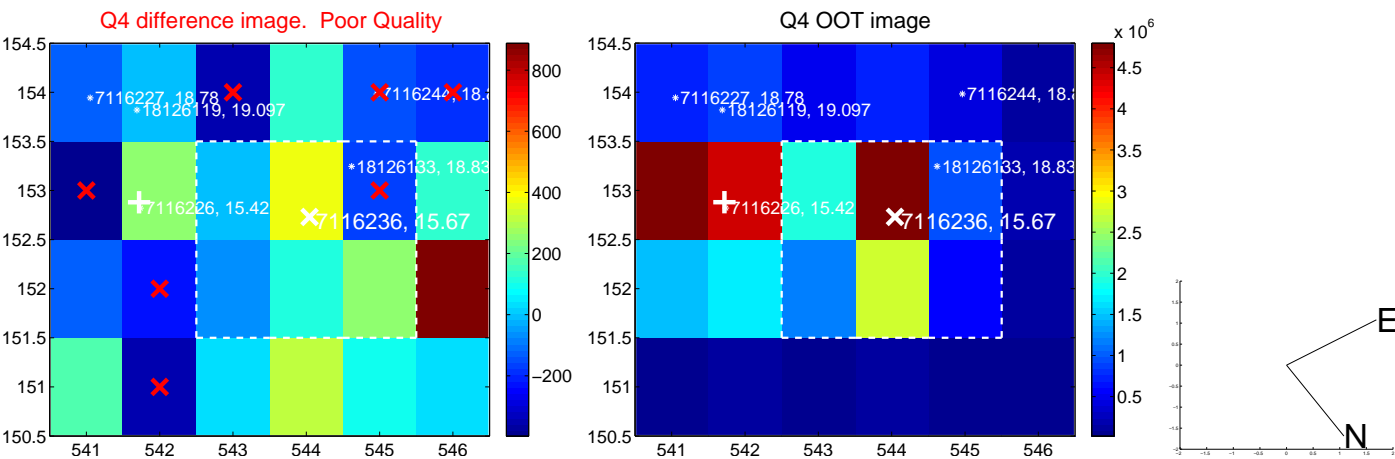
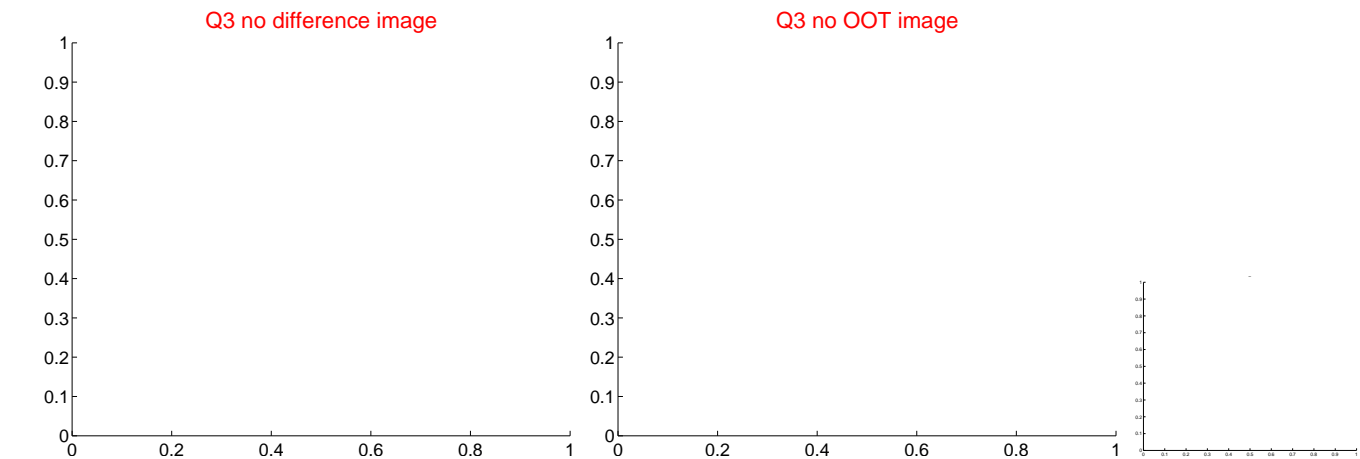
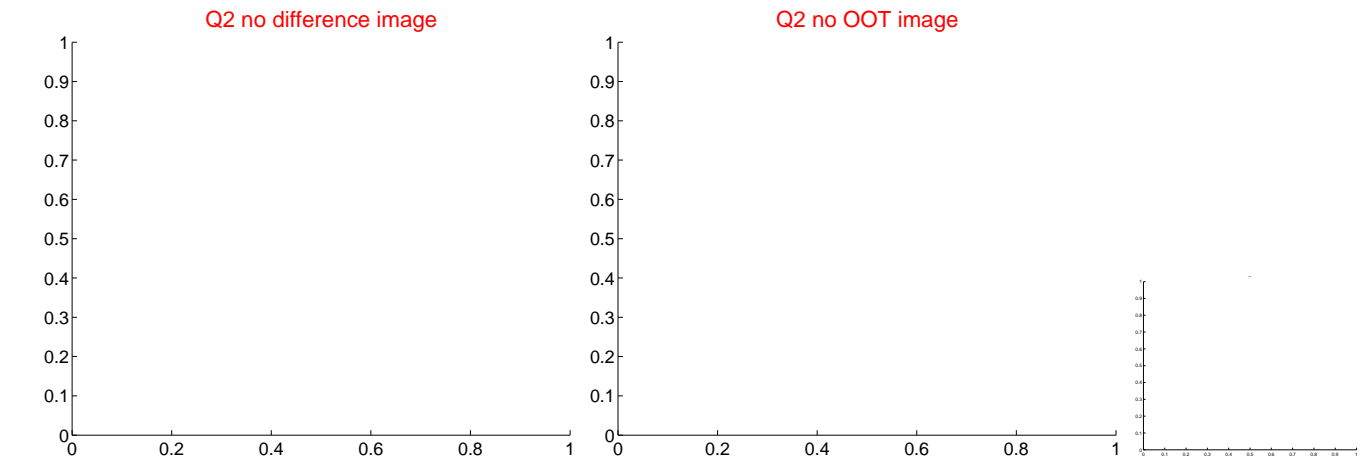
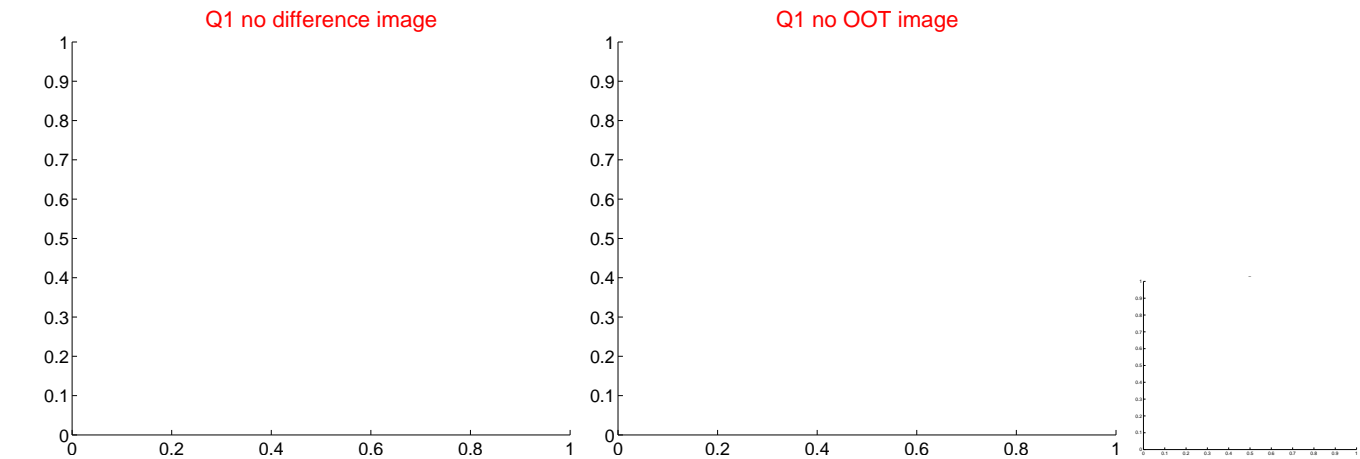
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.580 ± 2.415	1.48	0.311 ± 2.526	3.567 ± 2.414
PRF-fit source offset from KIC position	2.685 ± 1.473	1.82	-2.656 ± 1.485	0.390 ± 0.764
photometric centroid source offset	2.64 ± 0.27	9.95	-2.20 ± 0.27	-1.46 ± 0.25

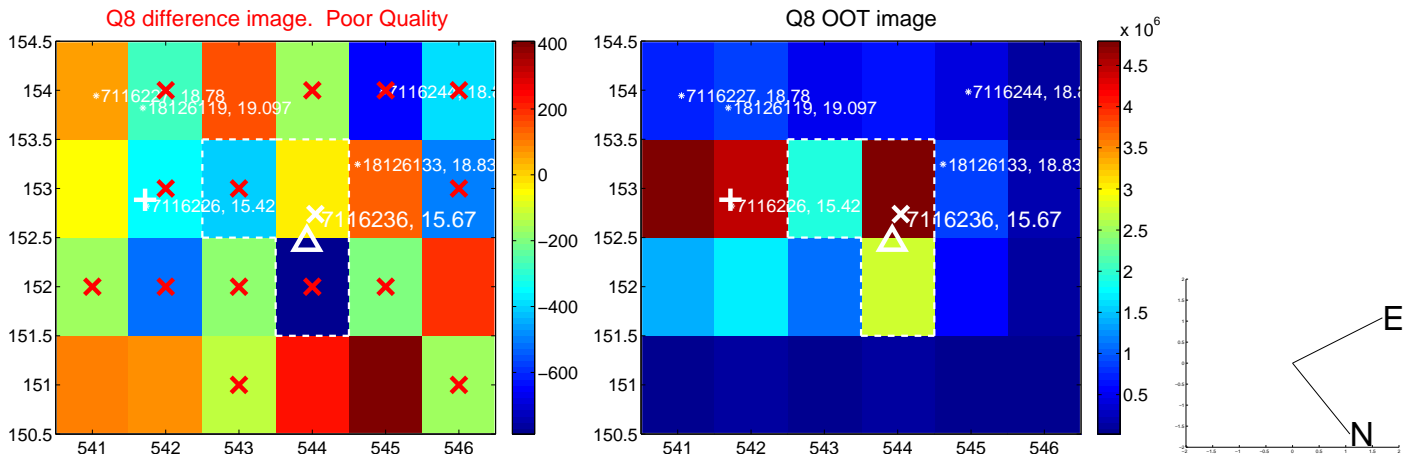
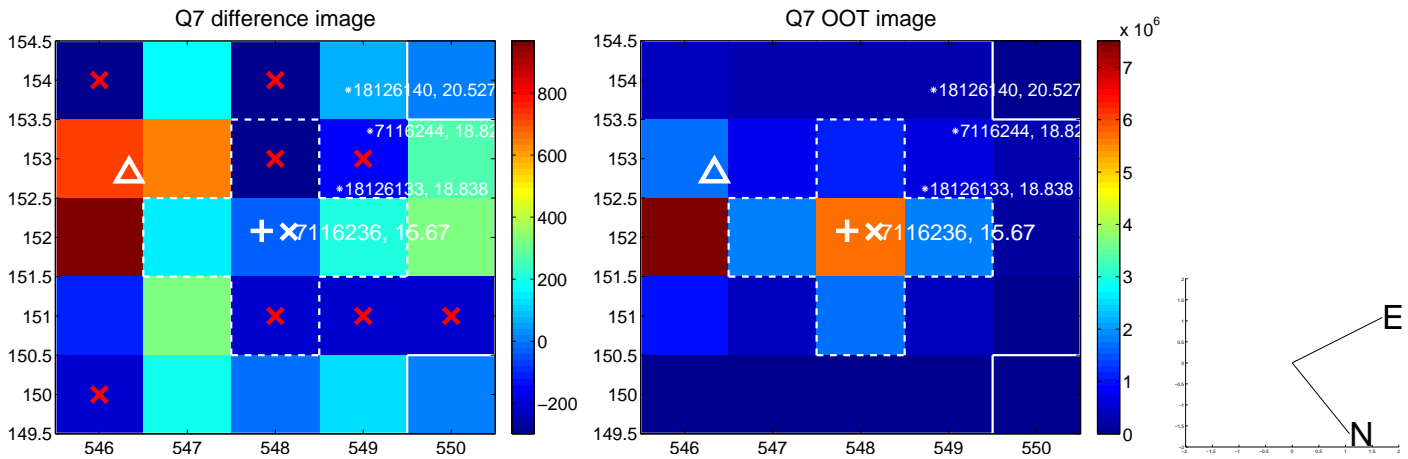
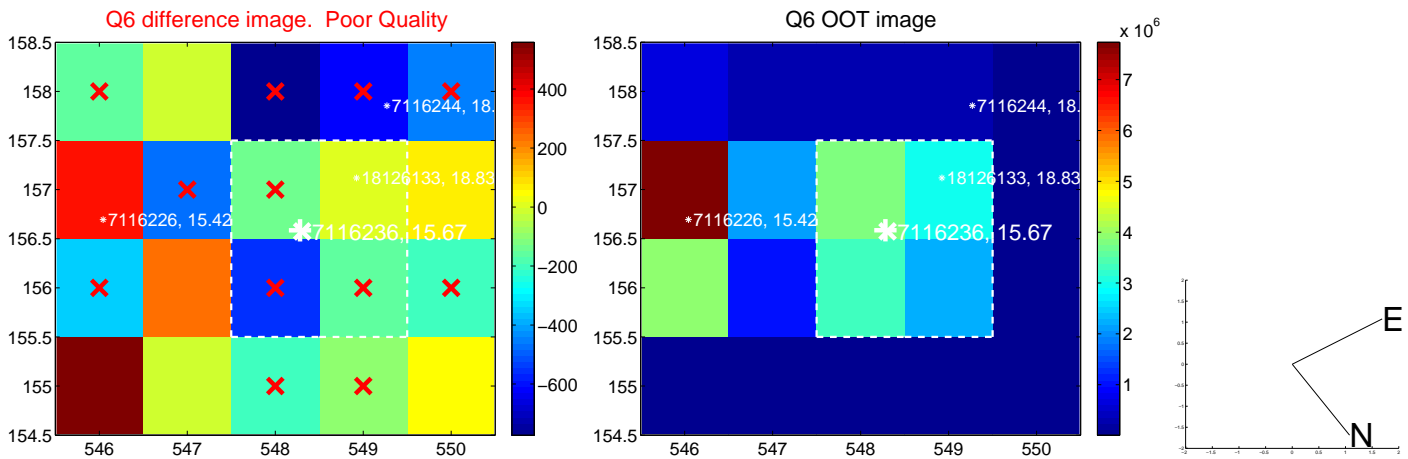
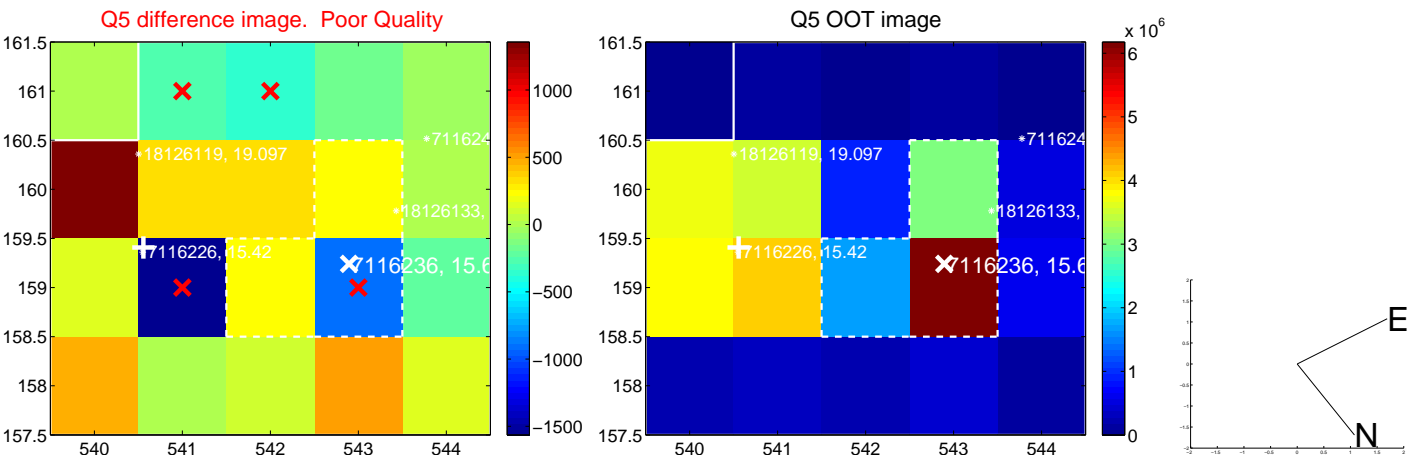


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

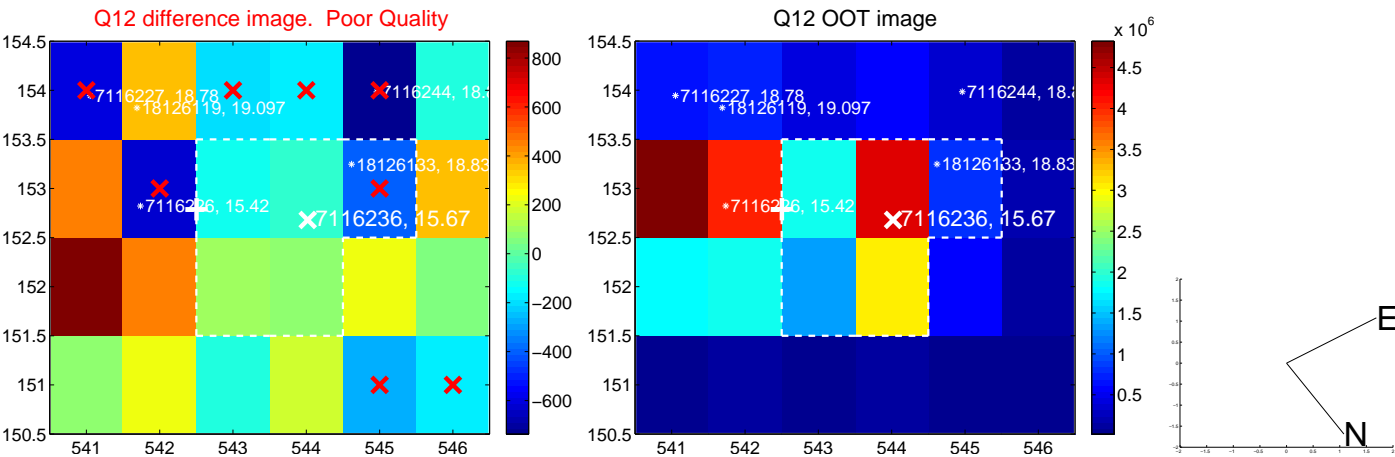
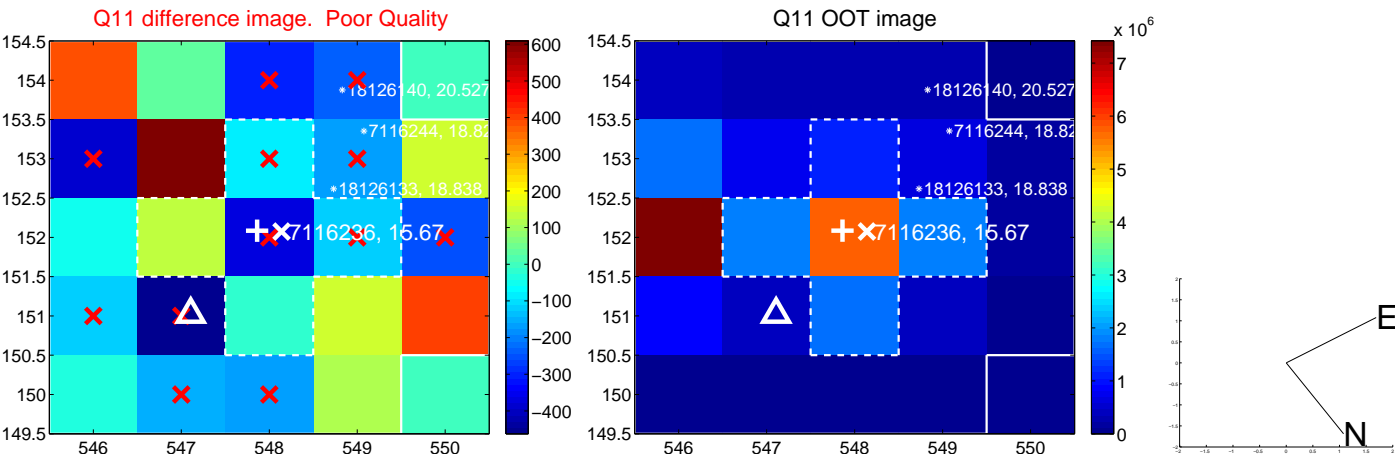
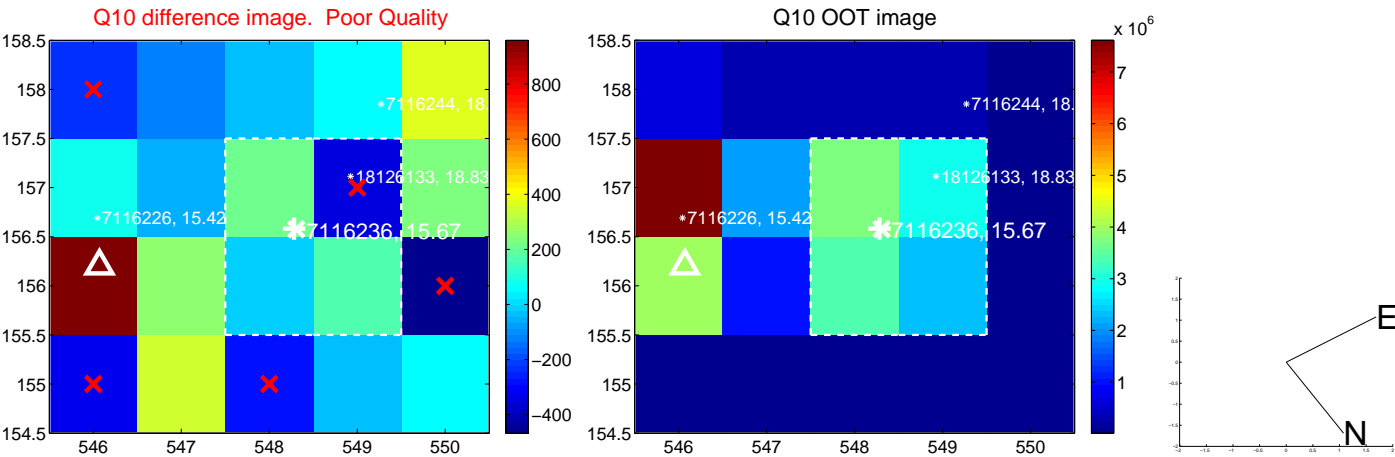
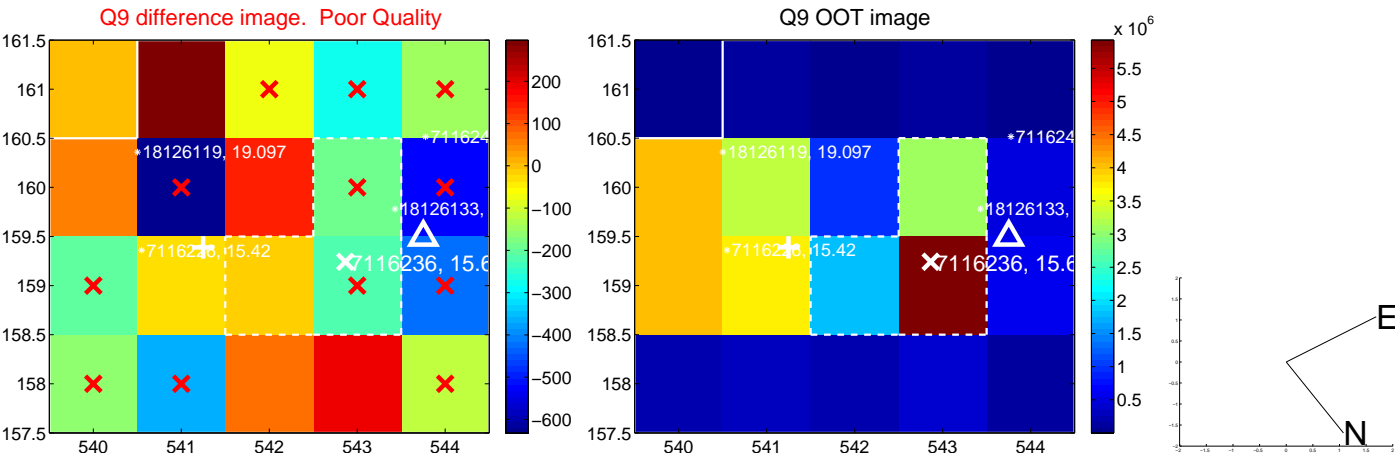
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



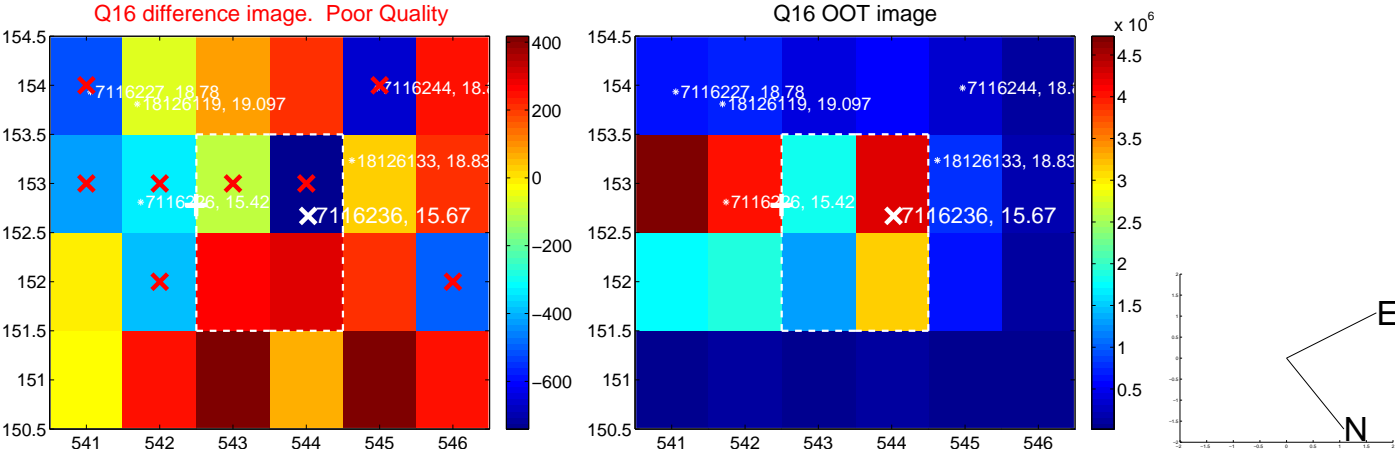
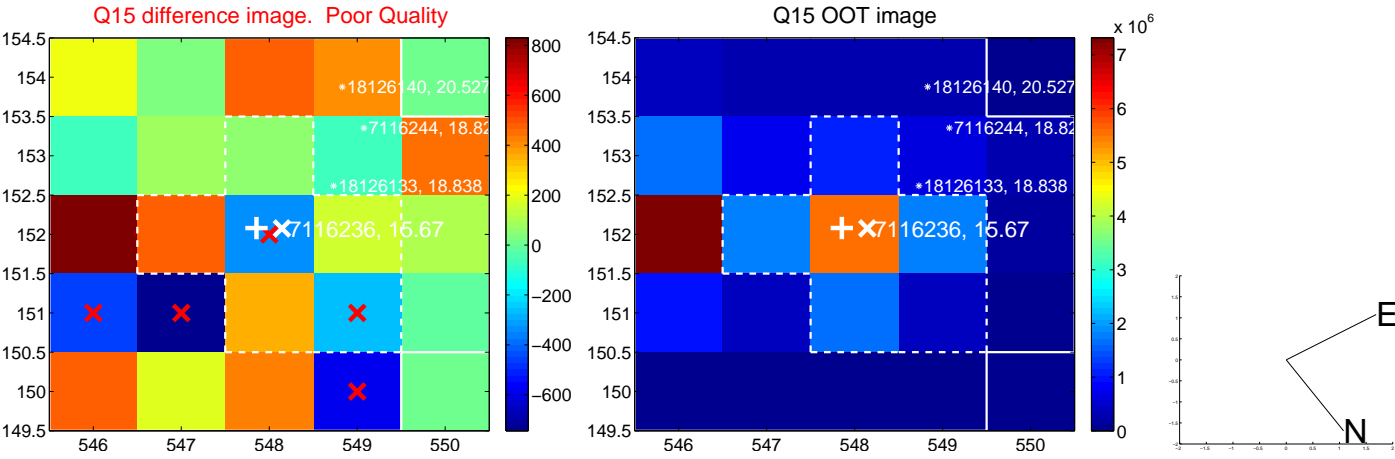
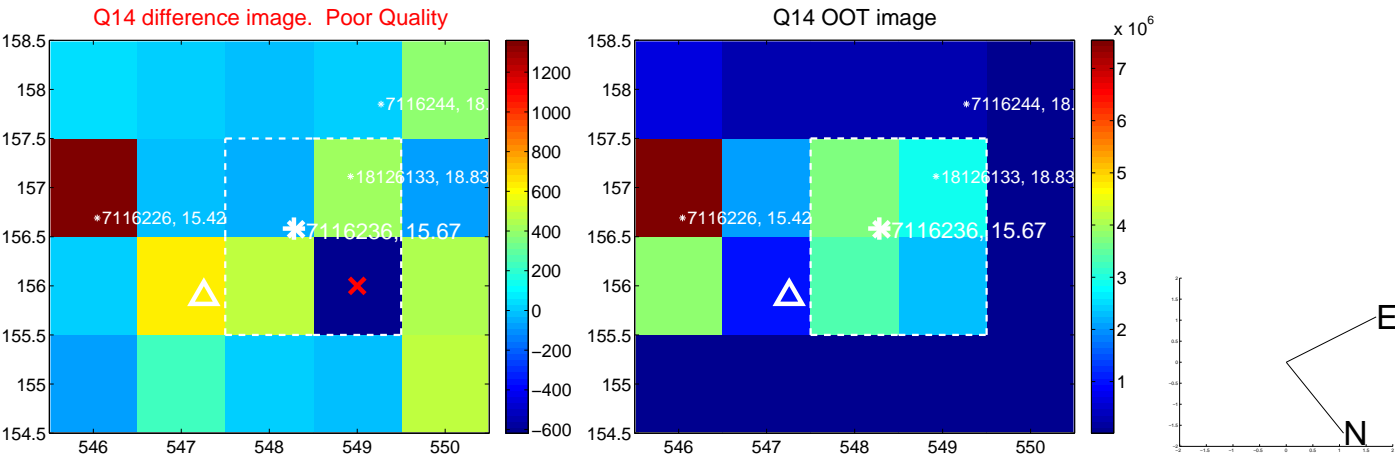
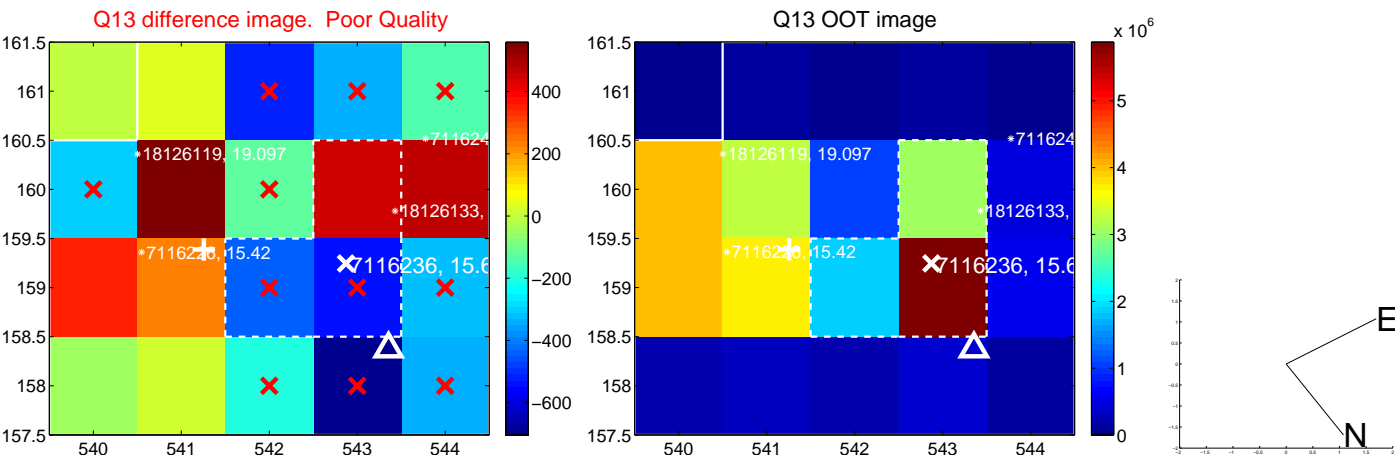
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



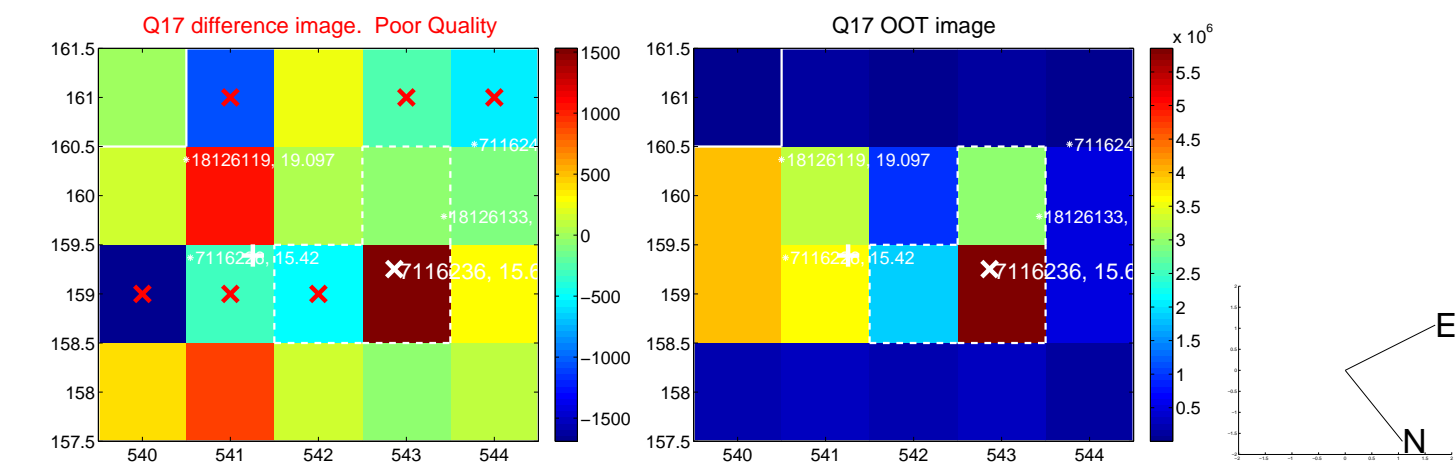
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



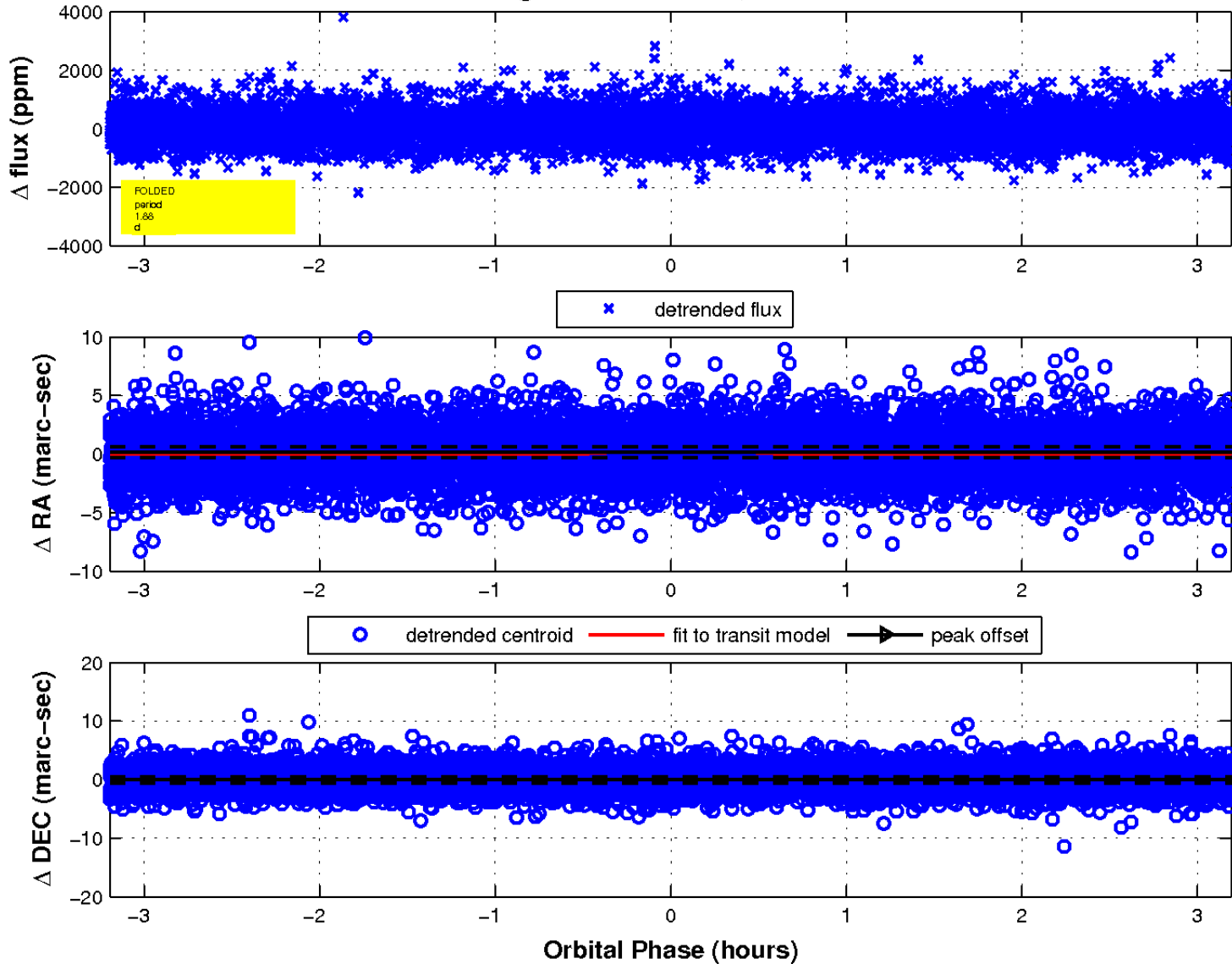
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

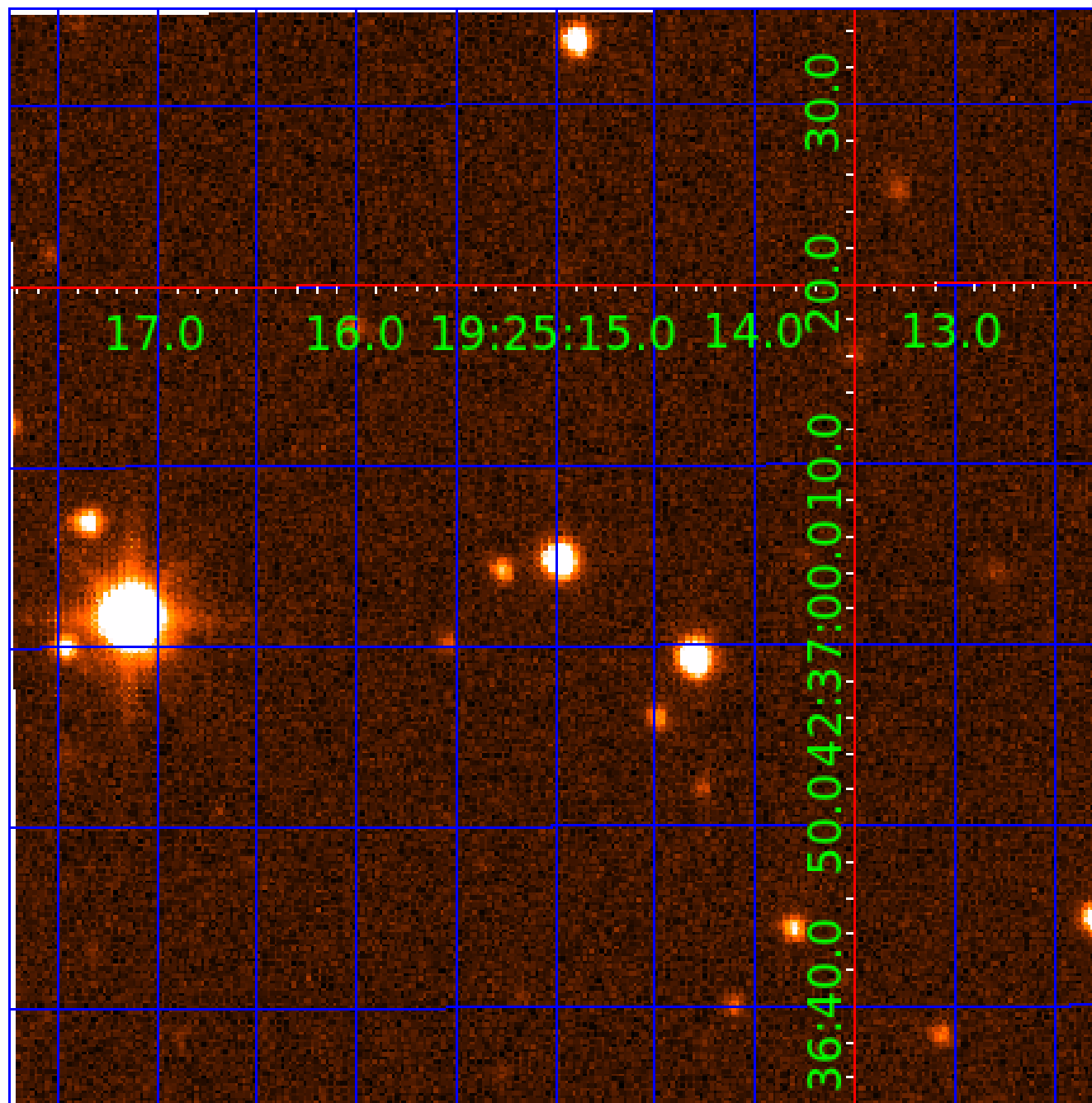


fluxWeightedCentroids, Planet 4 of 6



UKIRT Image

Declination



KIC 007116236

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})
007116236-01	OBS	6828.01	0.566750	131.868484	30.6	4.313	11.1	5.9	0.83	5707	0.46	3999.67
007116236-02	OBS	No	3.081284	132.609562	385.4	1.607	11.7	11.0	0.83	5707	1.63	418.38
007116236-03	OBS	No	12.460797	141.411539	1072.0	0.533	20.0	15.0	0.83	5707	3.67	64.94
007116236-04	OBS	No	1.875345	131.630708	708.0	1.065	17.0	23.6	0.83	5707	2.39	811.16
007116236-05	OBS	No	5.018200	132.119748	972.7	1.521	15.7	23.4	0.83	5707	2.80	218.35
007116236-06	OBS	No	1.187759	131.965534	301.4	1.085	16.6	11.6	0.83	5707	1.55	1491.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007116236-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH
007116236-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

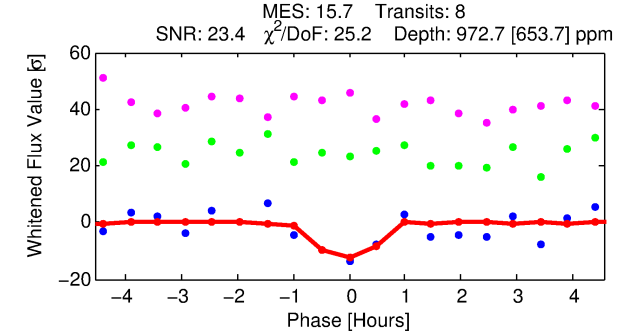
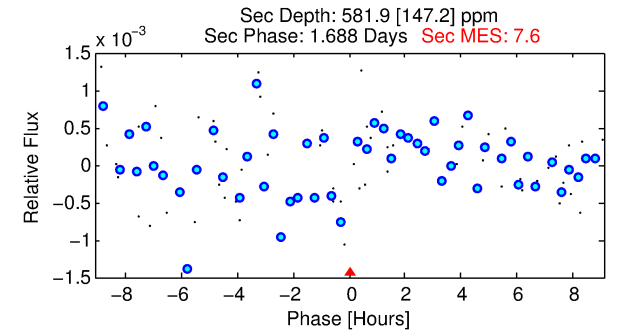
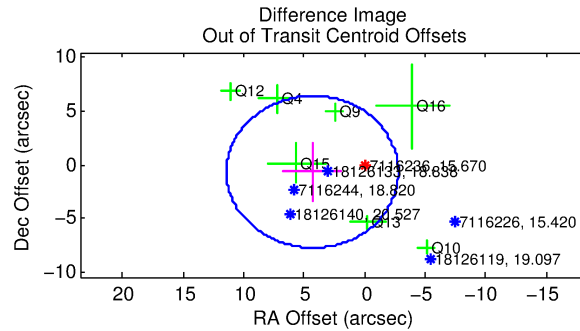
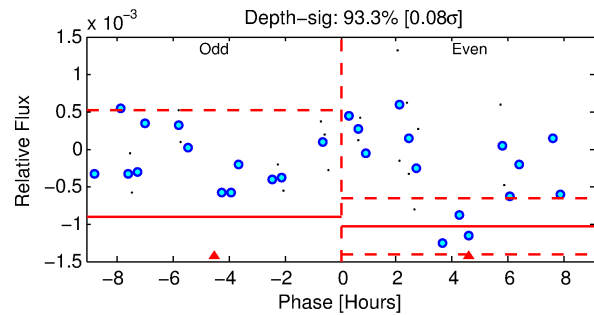
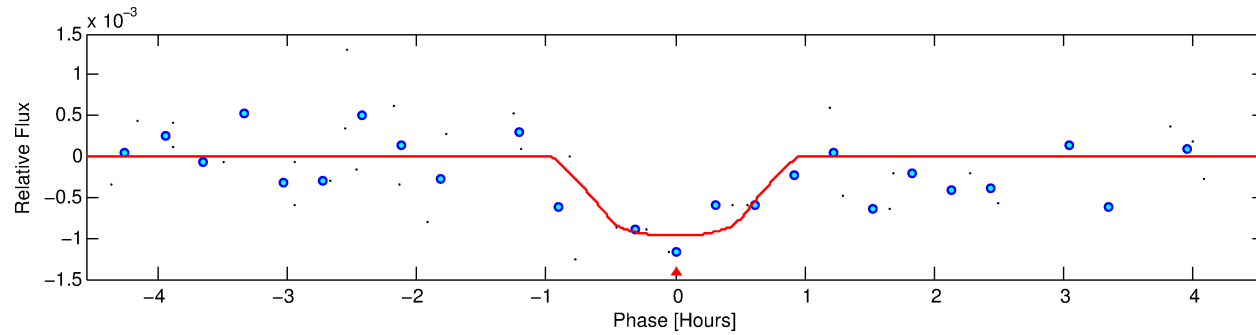
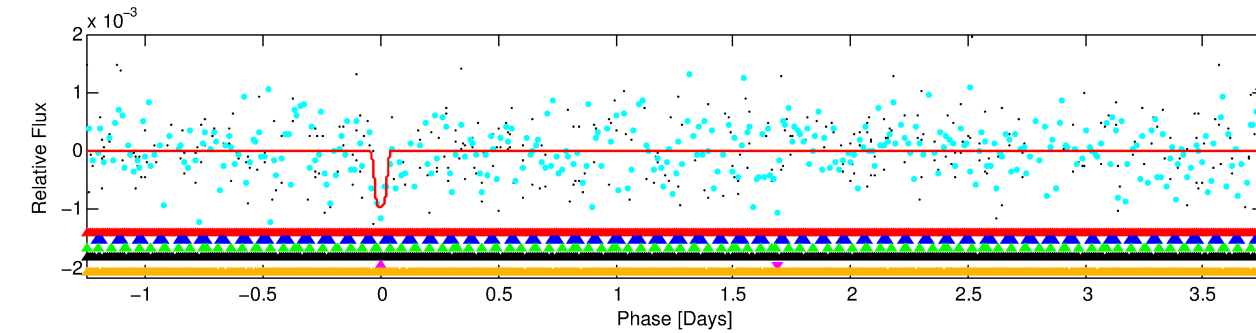
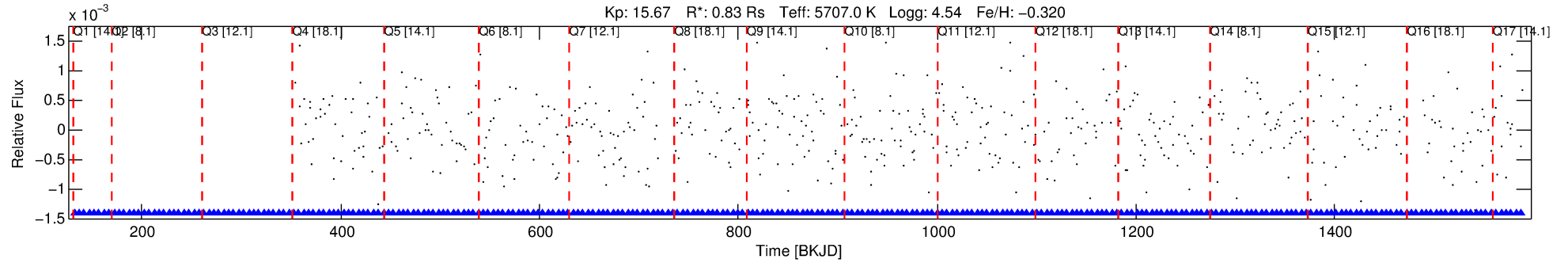
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007116236-05

No Significant Match Found

DV One-Page Summary

KIC: 7116236 Candidate: 5 of 6 Period: 5.018 d
KOI: K06828 Corr: No Ephemeris Match



DV Fit Results:

Period = 5.01820 [0.00008] d
Epoch = 132.1197 [0.0112] BKJD
Rp/R* = 0.0310 [0.1538]
a/R* = 18.19 [386.41]
b = 0.74 [13.47]
Seff = 218.35 [73.80]
Teff = 980 [83] K
Rp = 2.80 [13.91] Re
a = 0.0546 [0.0120] AU
Ag = 121.63 [1206.83] [0.10 σ]
Teffp = 5033 [12479] K [0.32 σ]

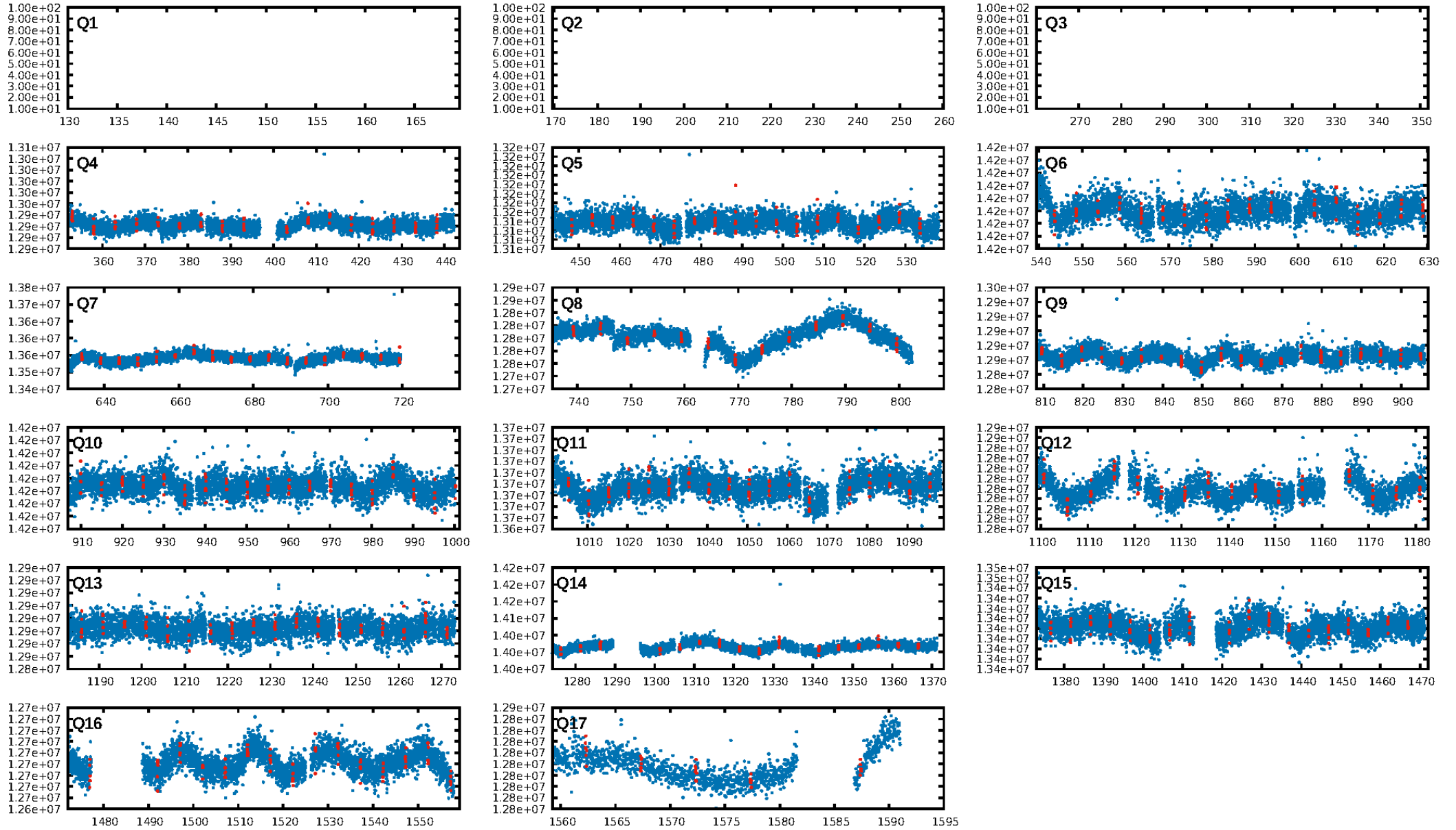
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.01 σ]
LongPeriod-sig: 100.0% [110.82 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.8707
Centroid-sig: 0.6%
Centroid-so: 2.791 arcsec [10.79 σ]
OotOffset-rm: 4.369 arcsec [1.85 σ]
KicOffset-rm: 5.018 arcsec [2.13 σ]
OotOffset-st: 1/1/3/2 [7]
KicOffset-st: 1/1/3/2 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 0.00 [0/14]

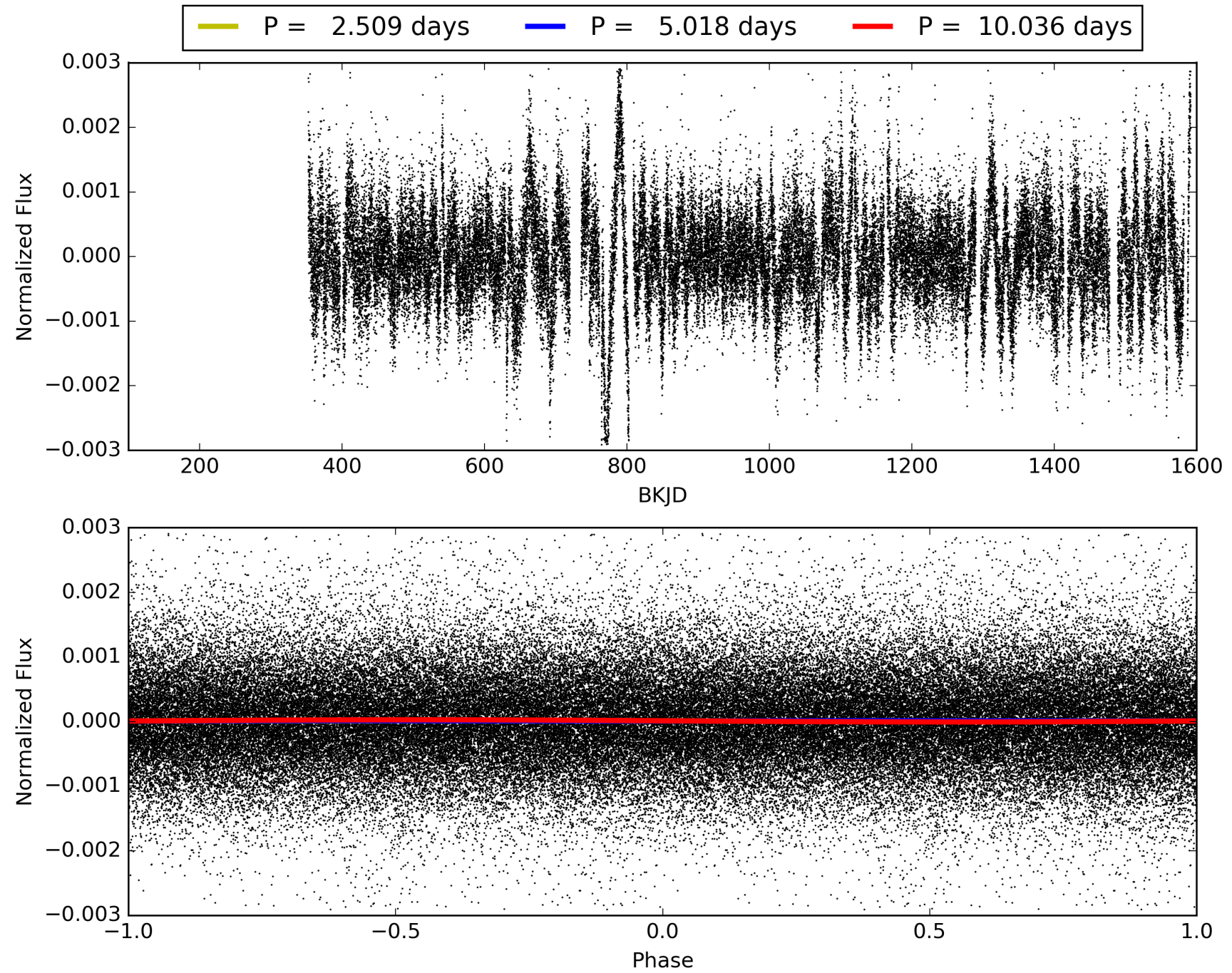
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:20:48 Z

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

TCE 007116236-05, PDC Light Curves

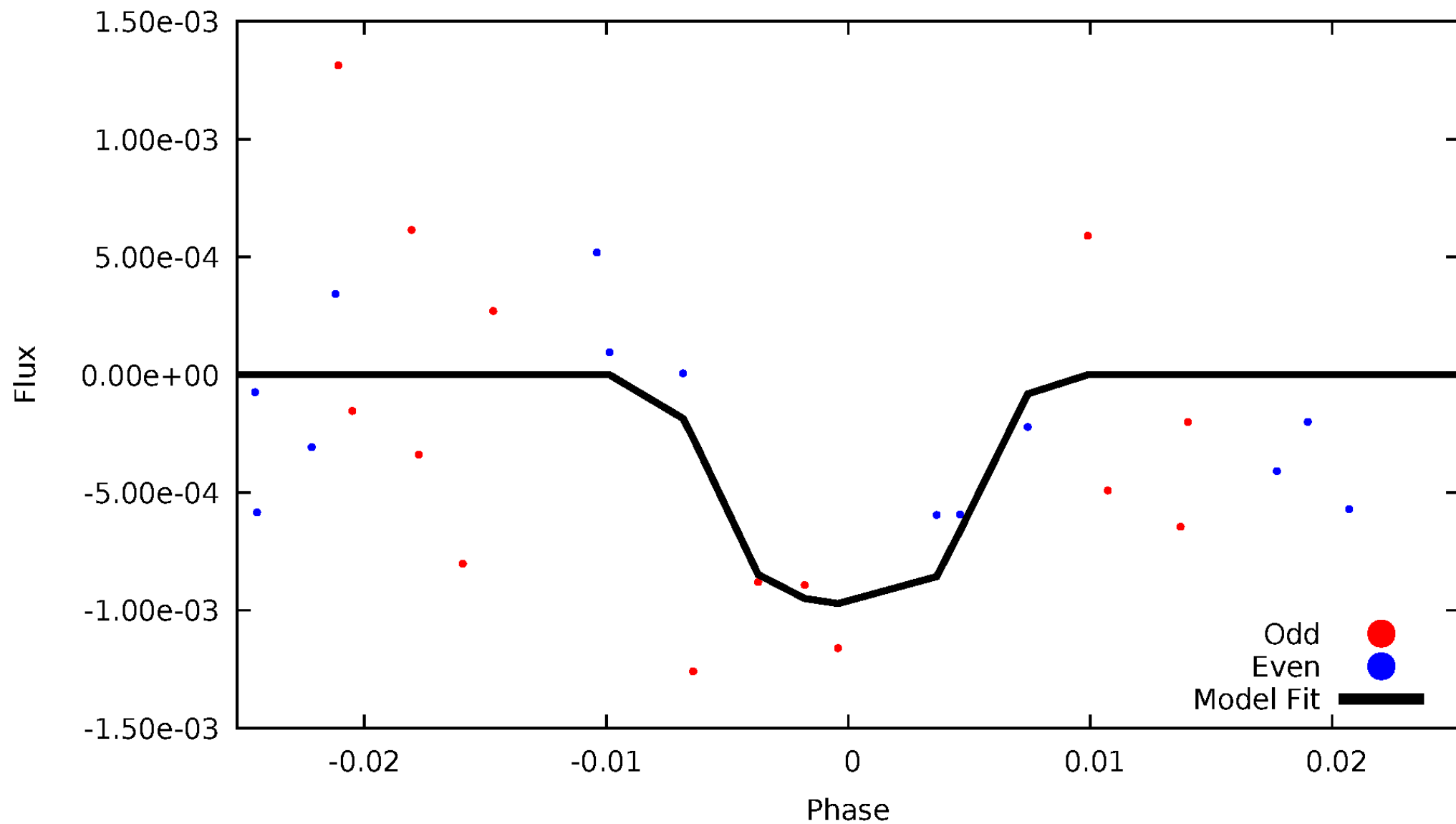


TCE 007116236-05



DV Odd/Even

TCE 007116236-05

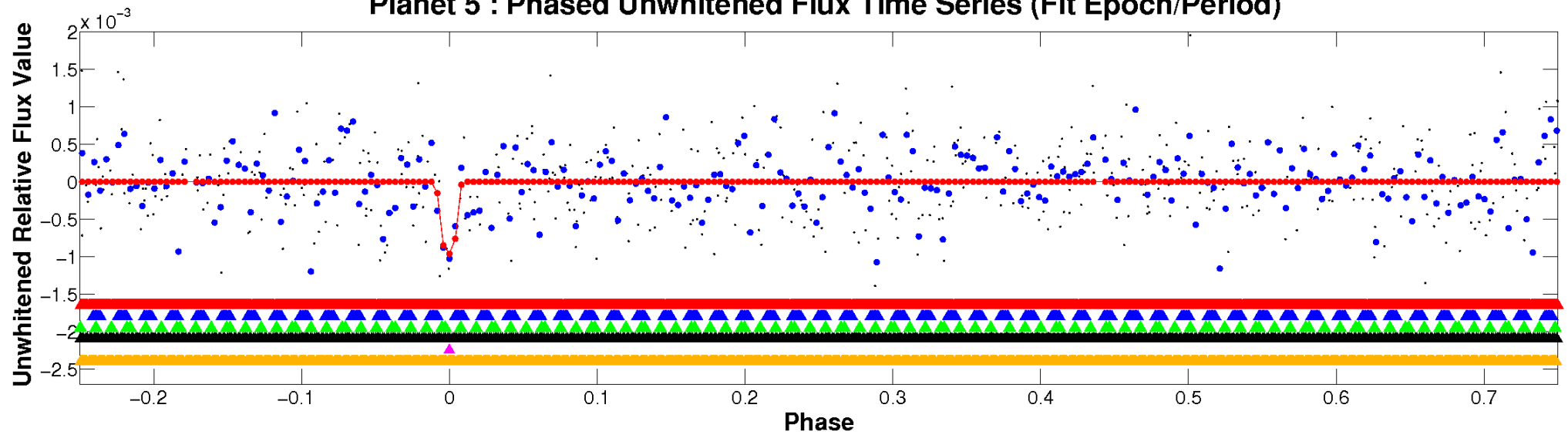


ALT Odd/Even

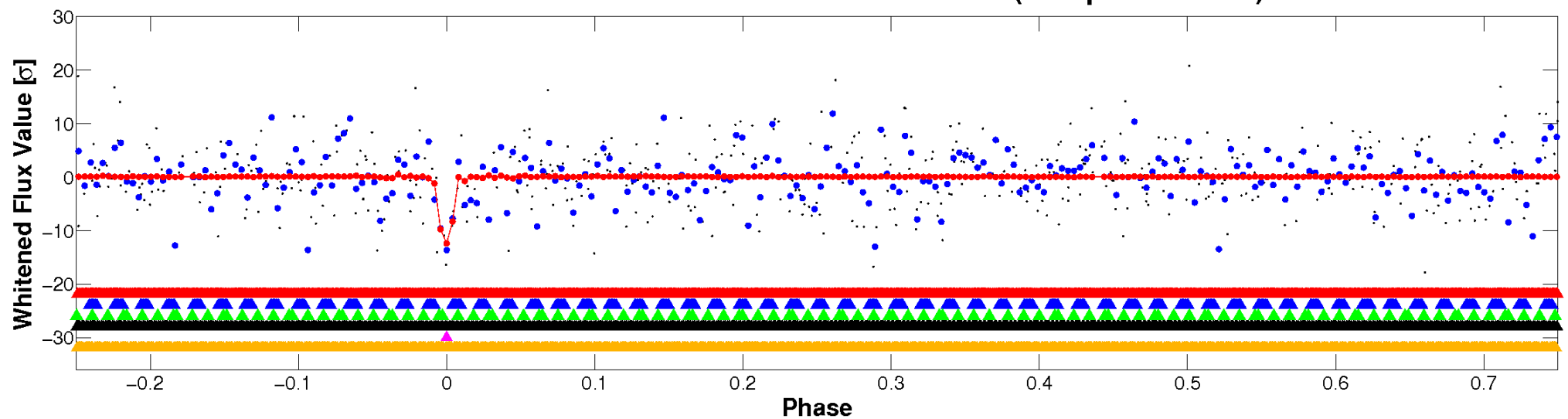
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

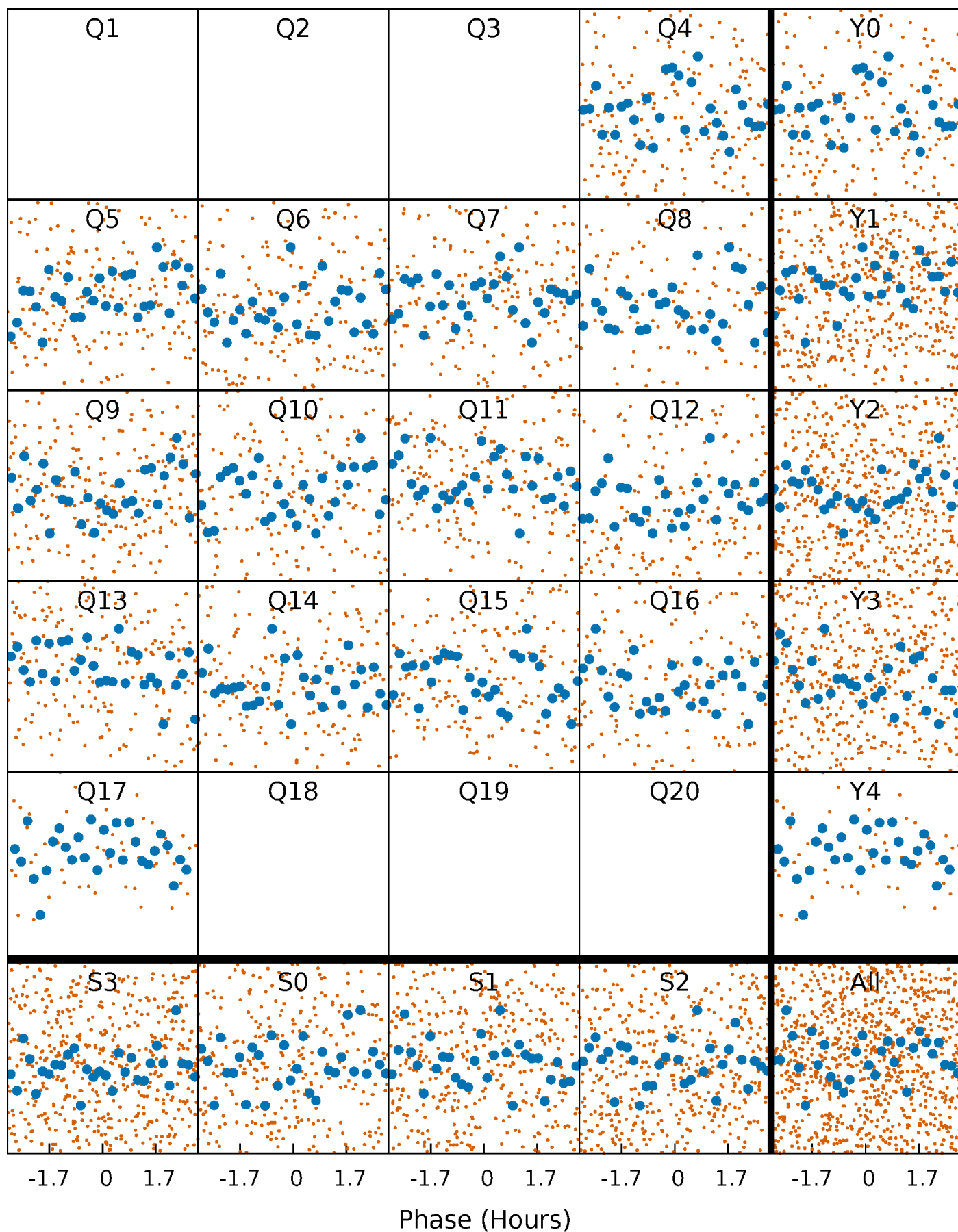


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



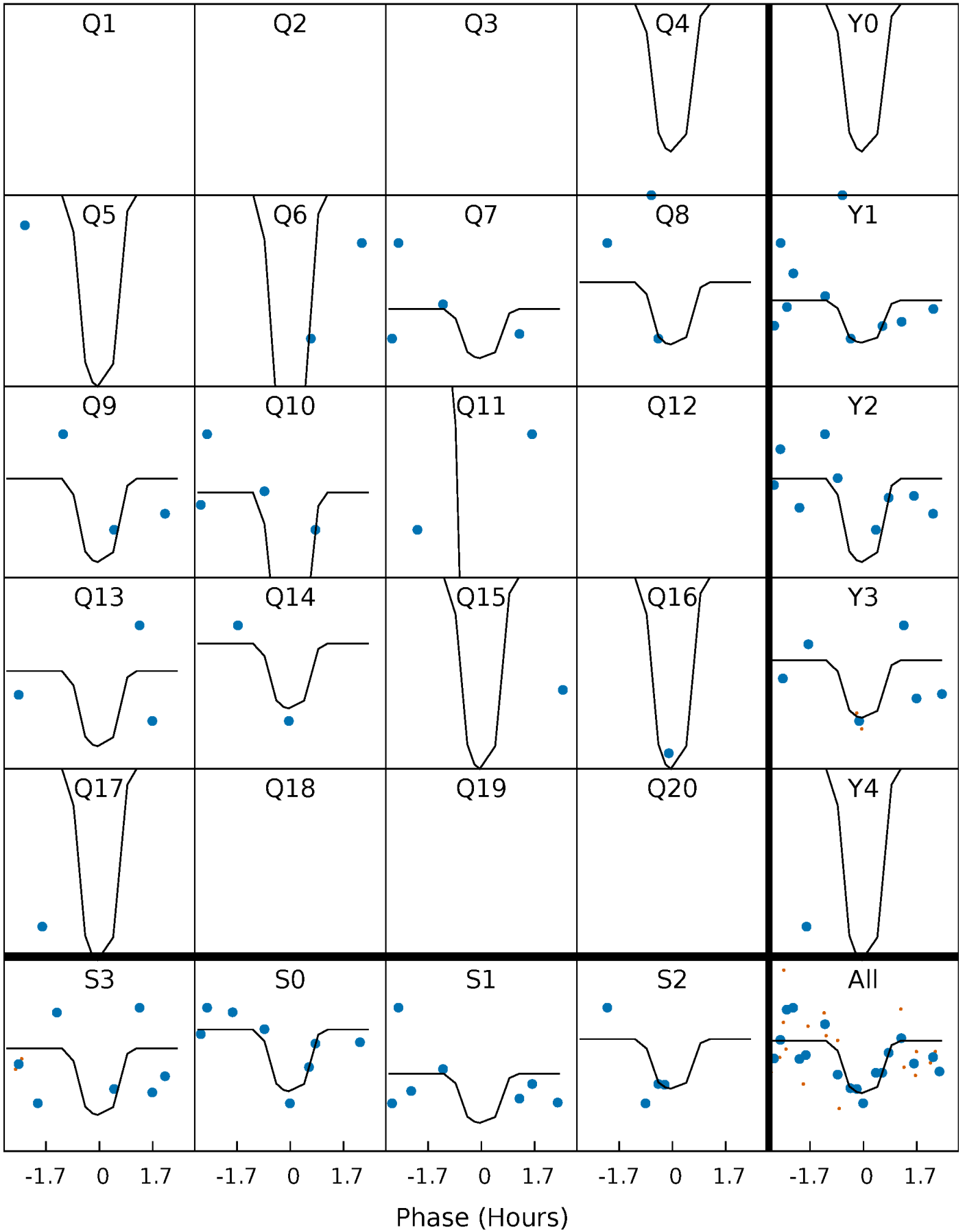
PDC Quarter-Phased Transit Curves

TCE 007116236-05 P= 5.018200 Days $T_0=132.119748$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007116236-05 P= 5.018200 Days $T_0=132.119748$ (BKJD)

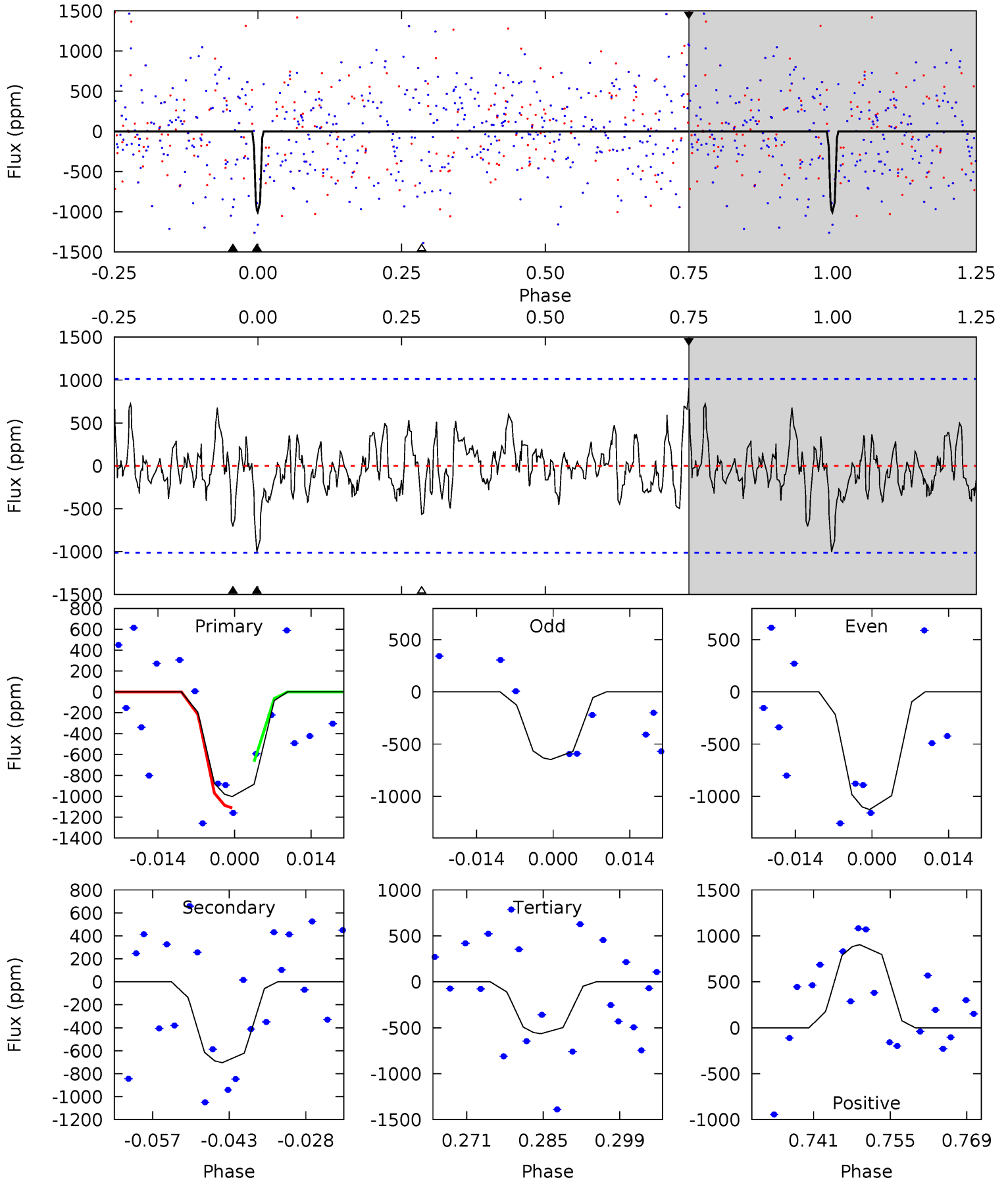


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007116236-05, P = 5.018200 Days, E = 132.119748 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.91	3.45	2.76	4.42	4.96	2.45	1.21	2.14	0.49	0.68	-0.97	1.13	0	0.47	1.05



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007116236

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-704 ± 204	$11.34^{+10.79}_{-7.49}$	1394^{+90}_{-68}	3236^{+1447}_{-597}	$8.617^{+67.436}_{-6.356}$
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 $A_{\text{obs}} \gg 1.0$

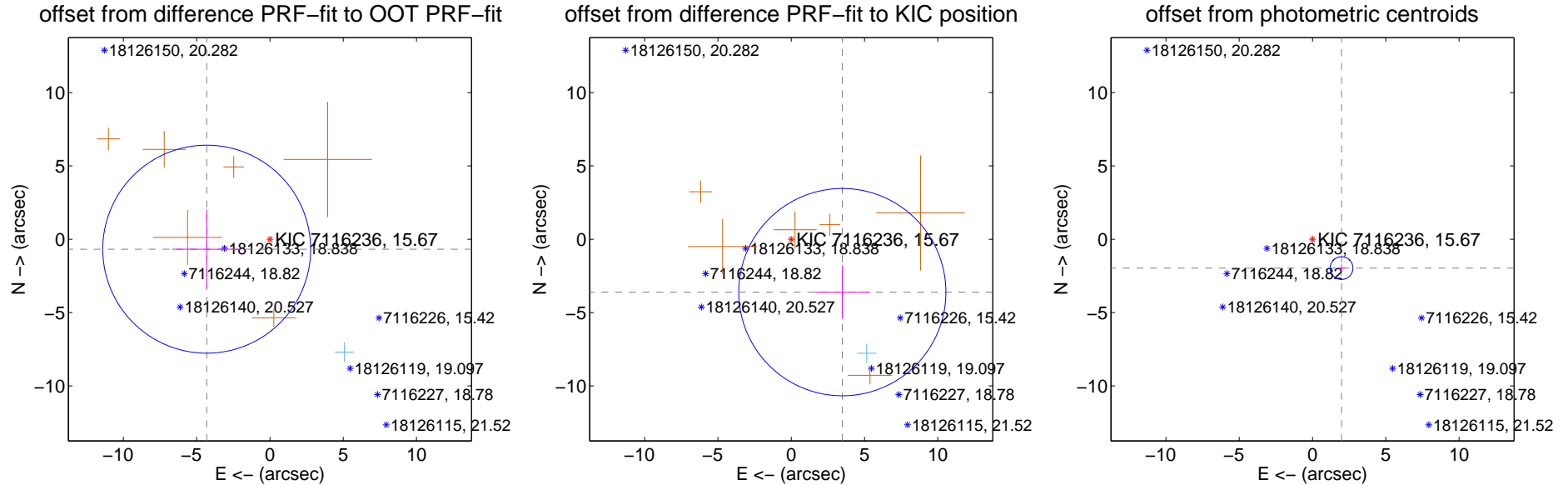
DV Centroid Data

Supplemental centroid analysis for 007116236-05. Kepler magnitude: 15.67. Transit SNR 23.41

There are 1 quarters with good PRF difference image offsets

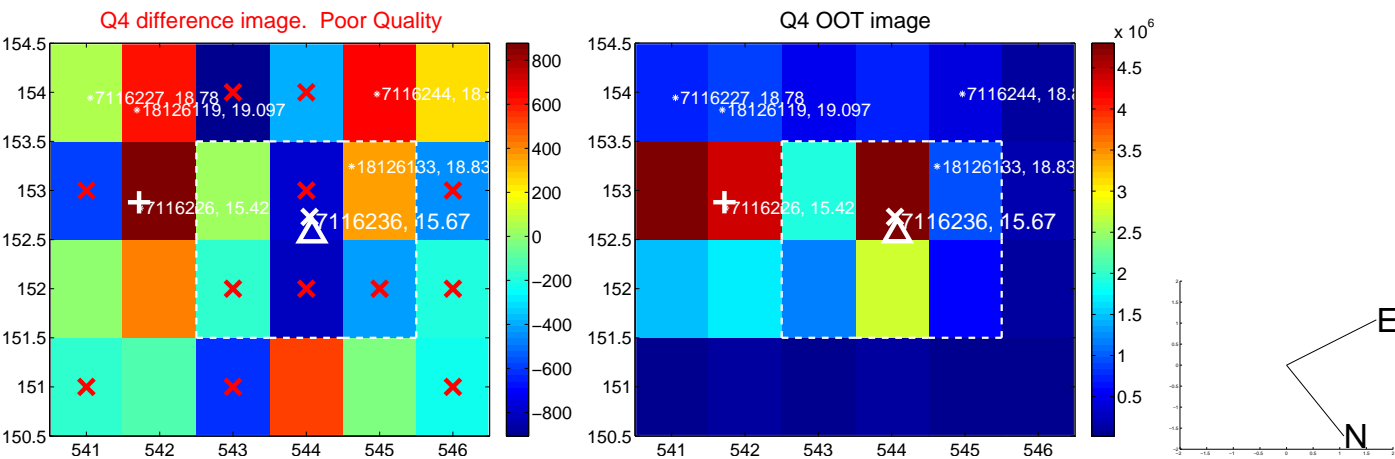
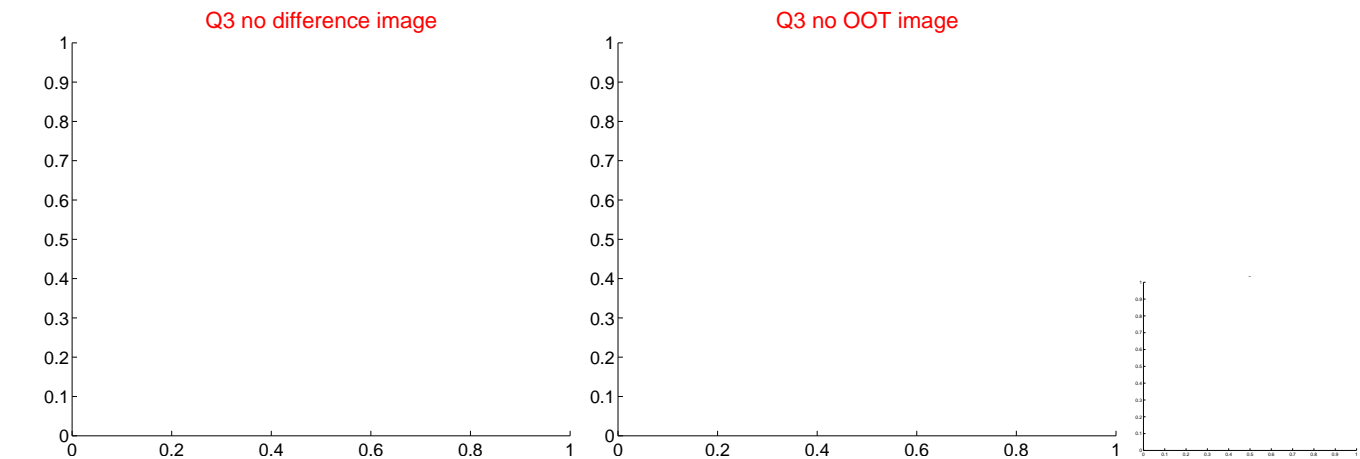
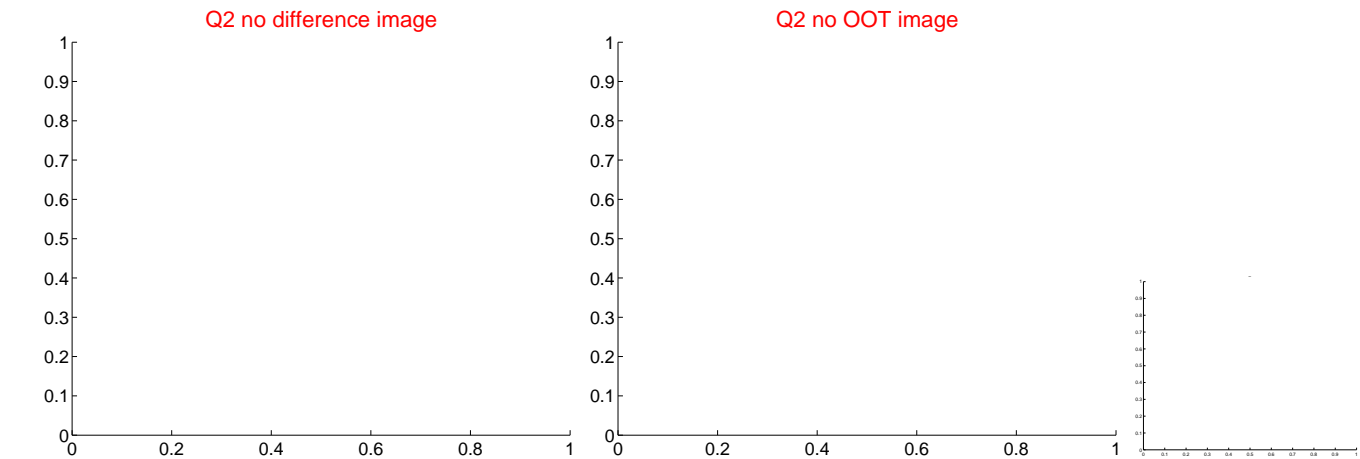
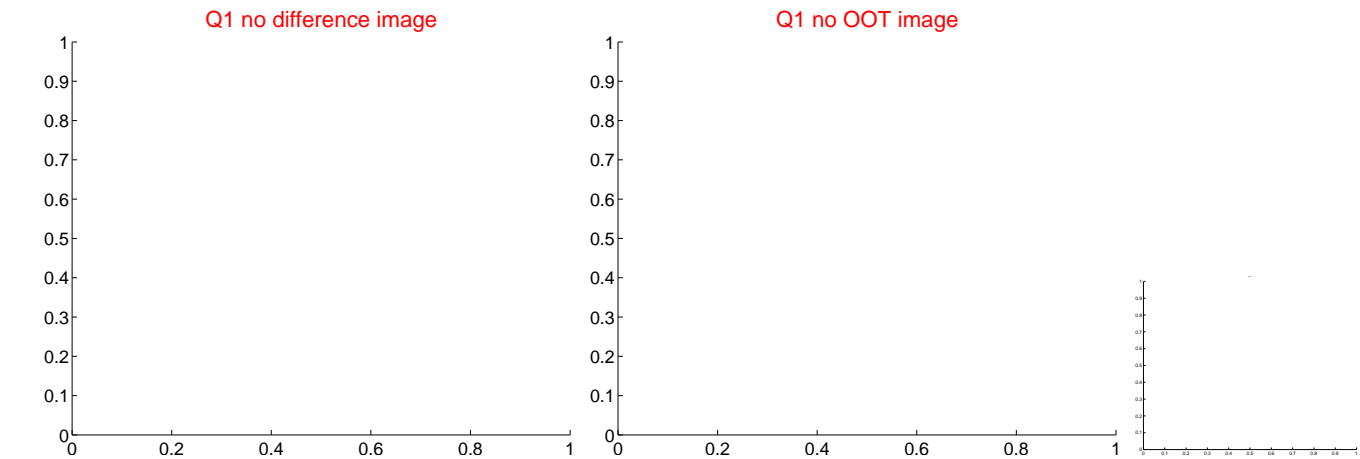
The OOT PRF centroid is offset from the target star catalog position by about 6.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.369 ± 2.365	1.85	4.316 ± 2.356	-0.678 ± 2.705
PRF-fit source offset from KIC position	5.018 ± 2.356	2.13	-3.488 ± 1.893	-3.608 ± 1.814
photometric centroid source offset	2.79 ± 0.26	10.79	-1.98 ± 0.27	-1.97 ± 0.24

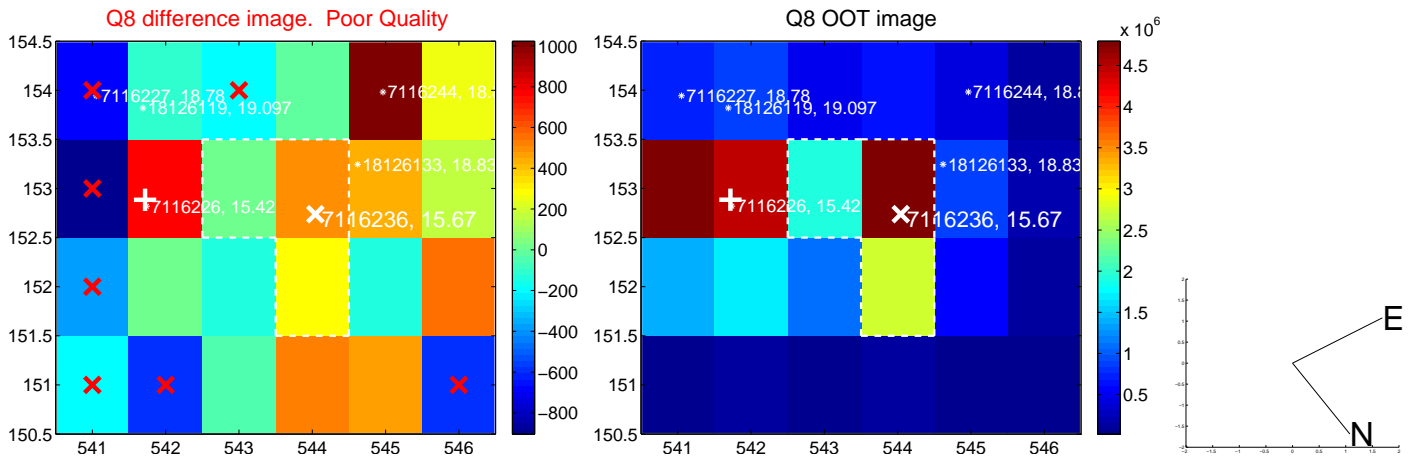
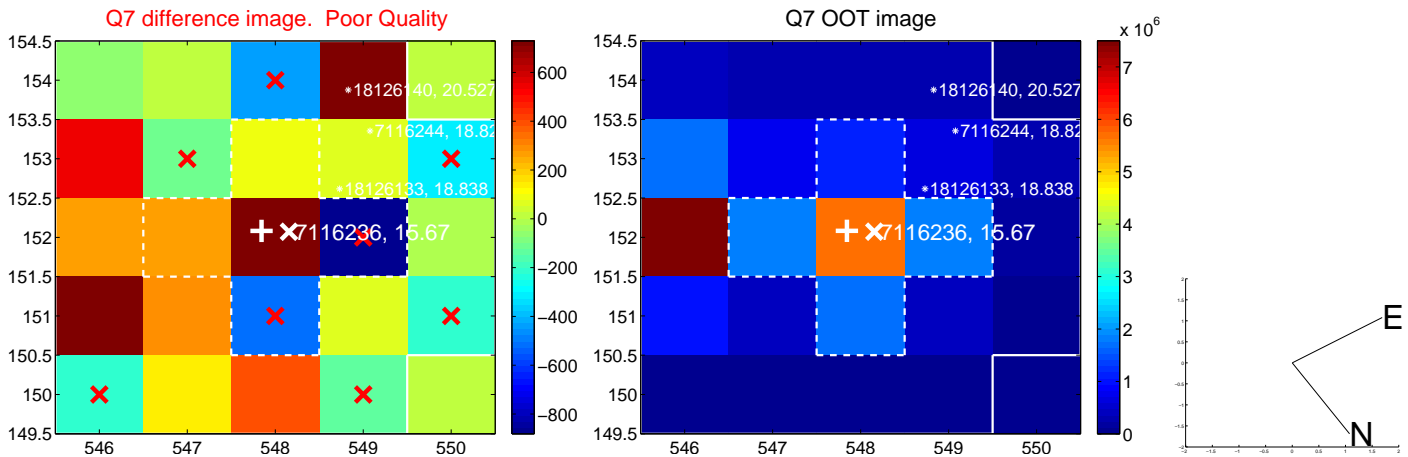
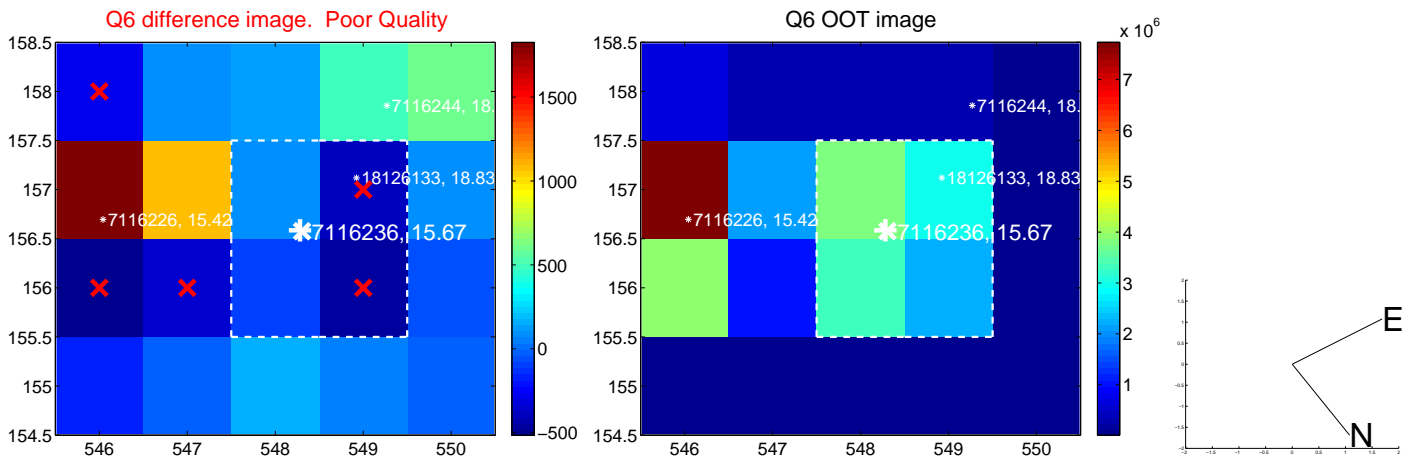
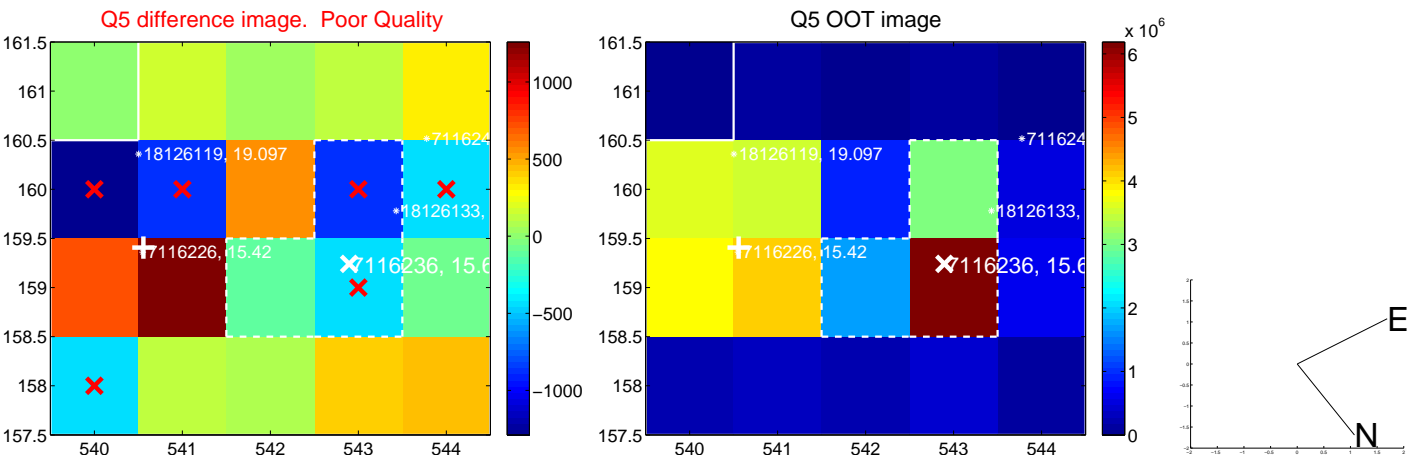


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

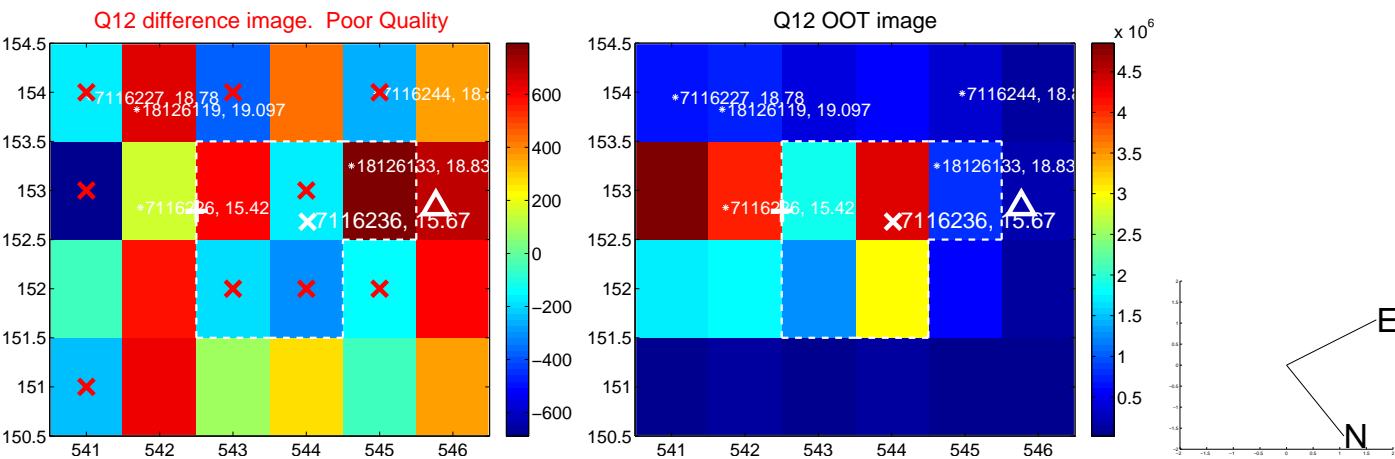
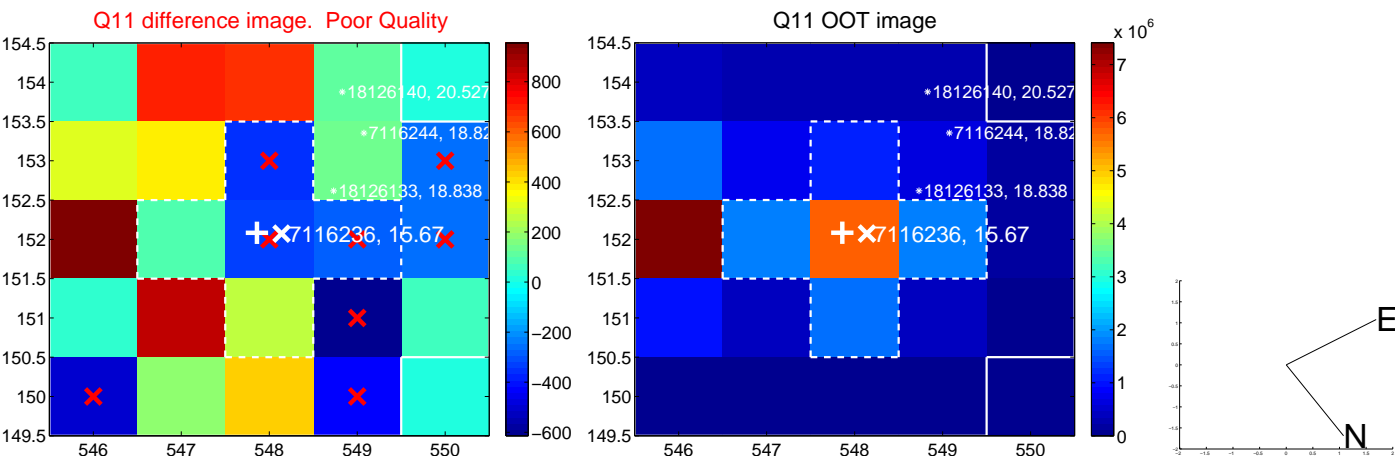
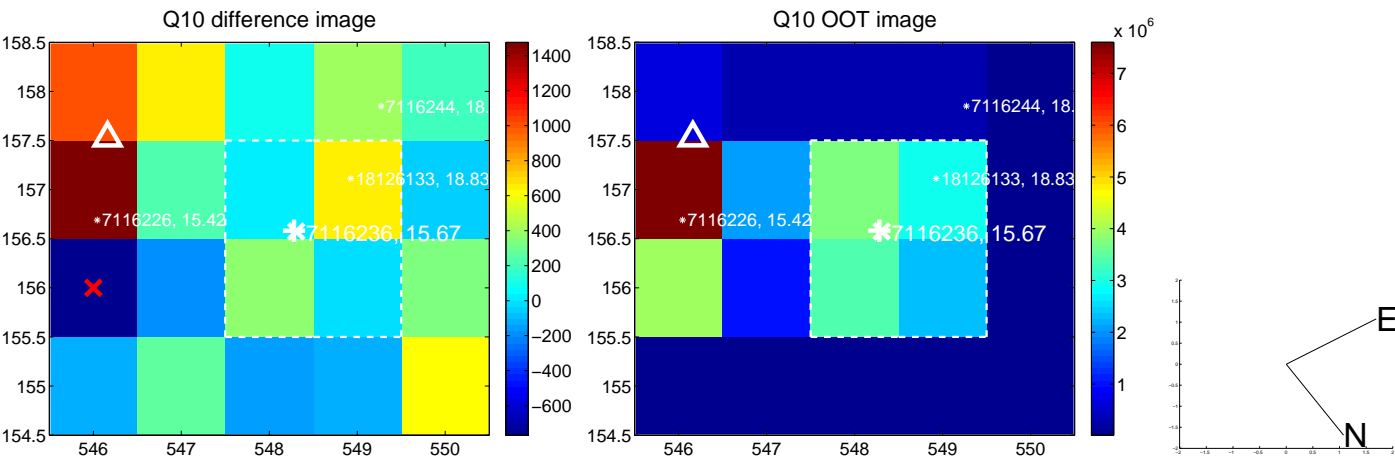
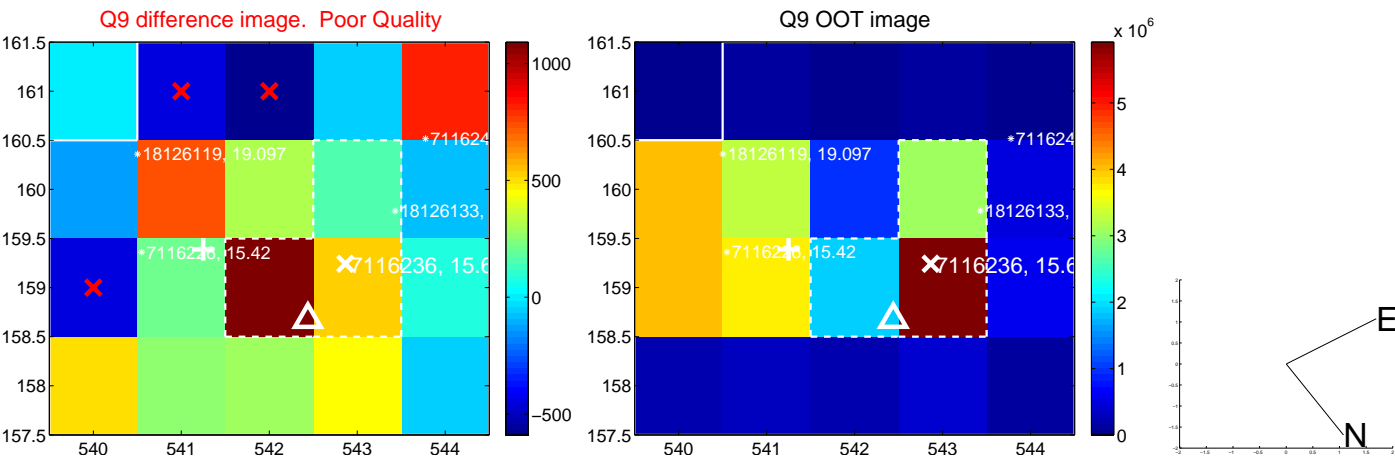
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



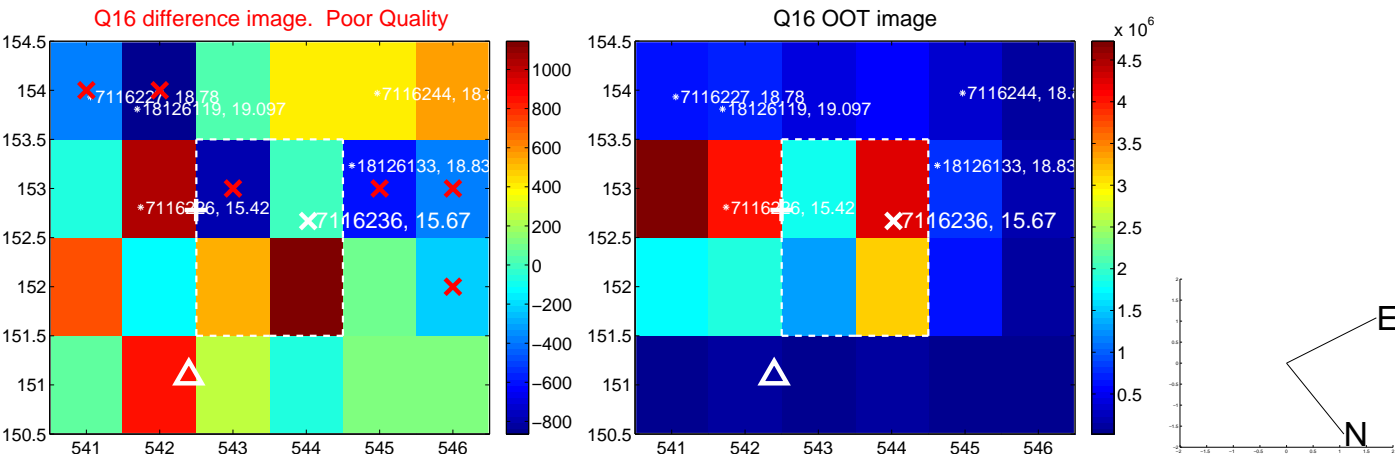
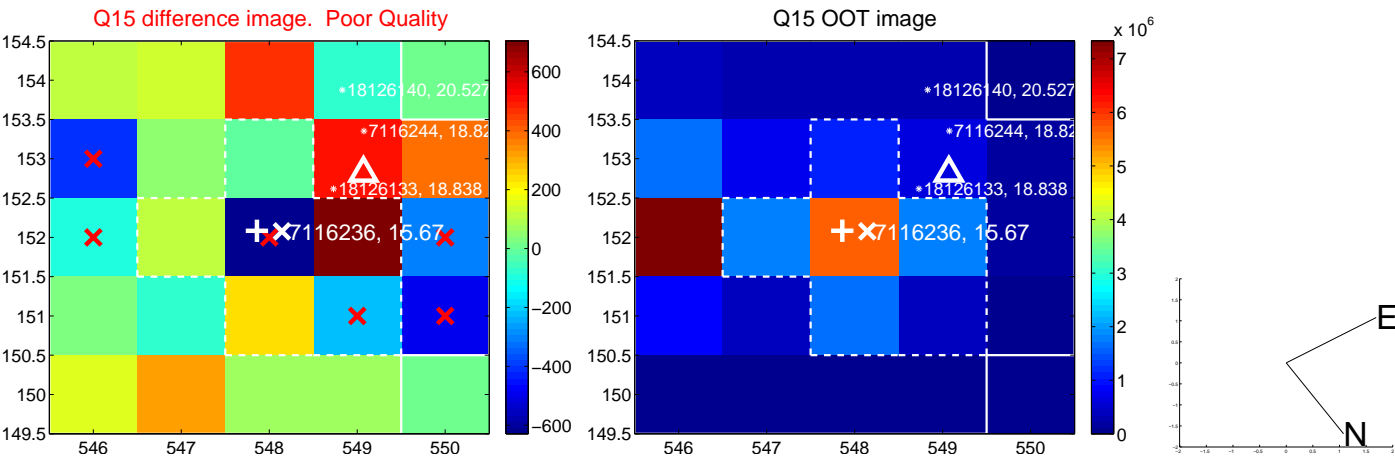
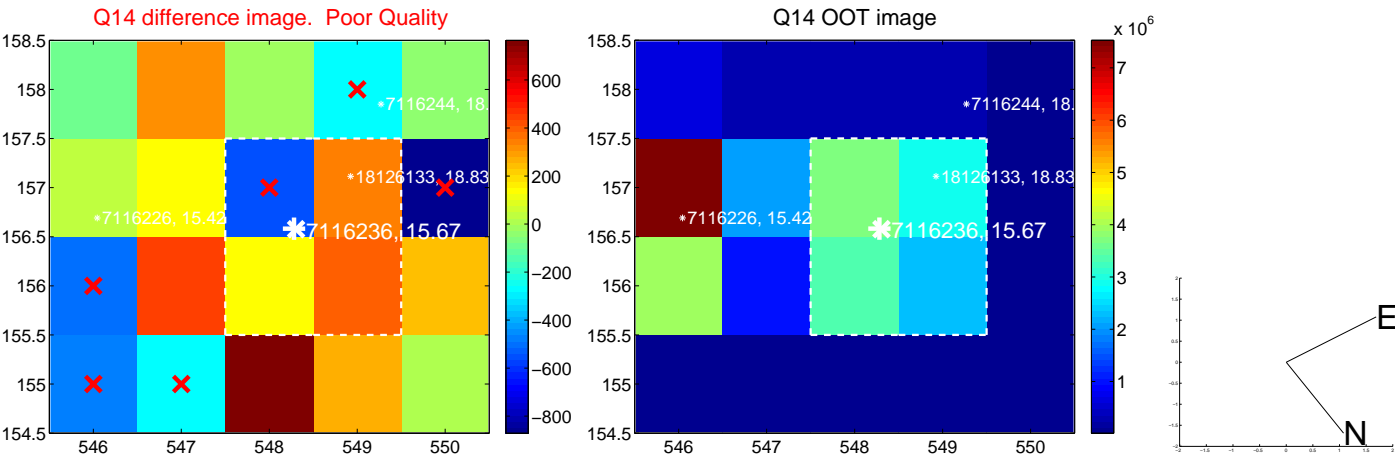
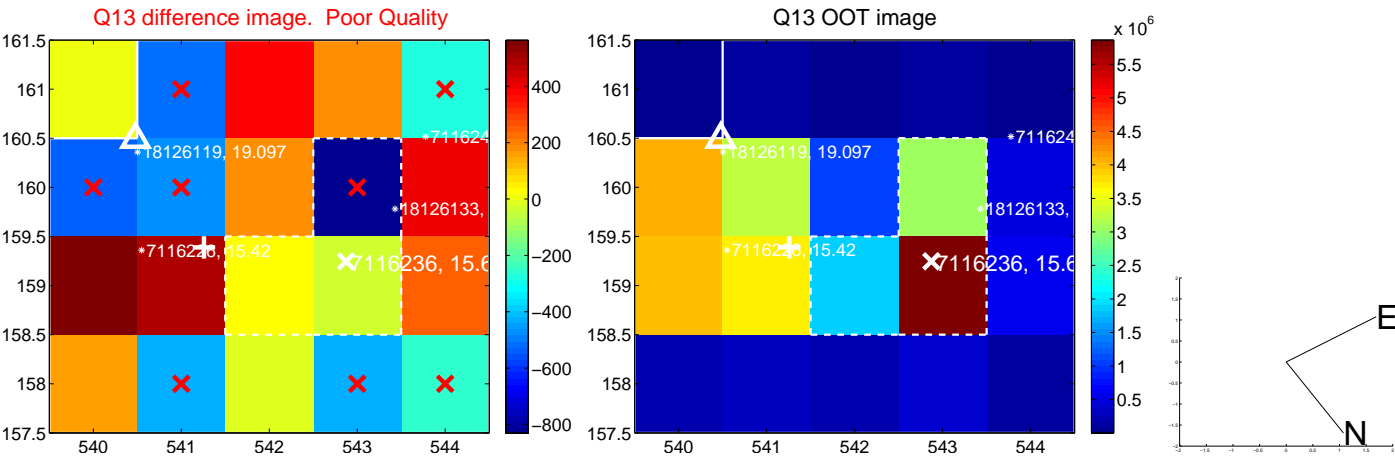
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



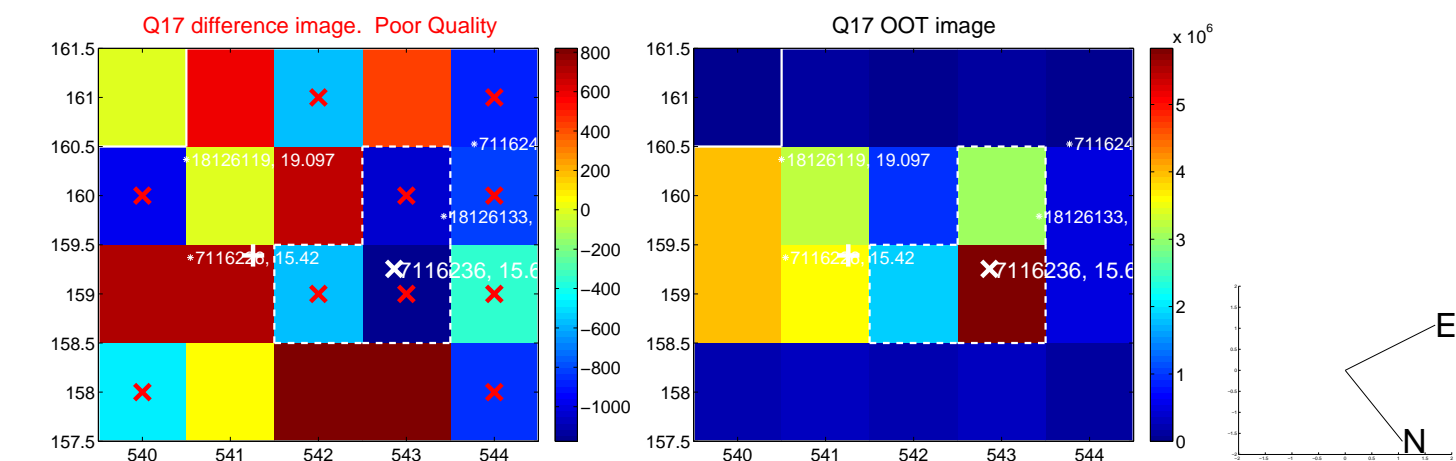
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



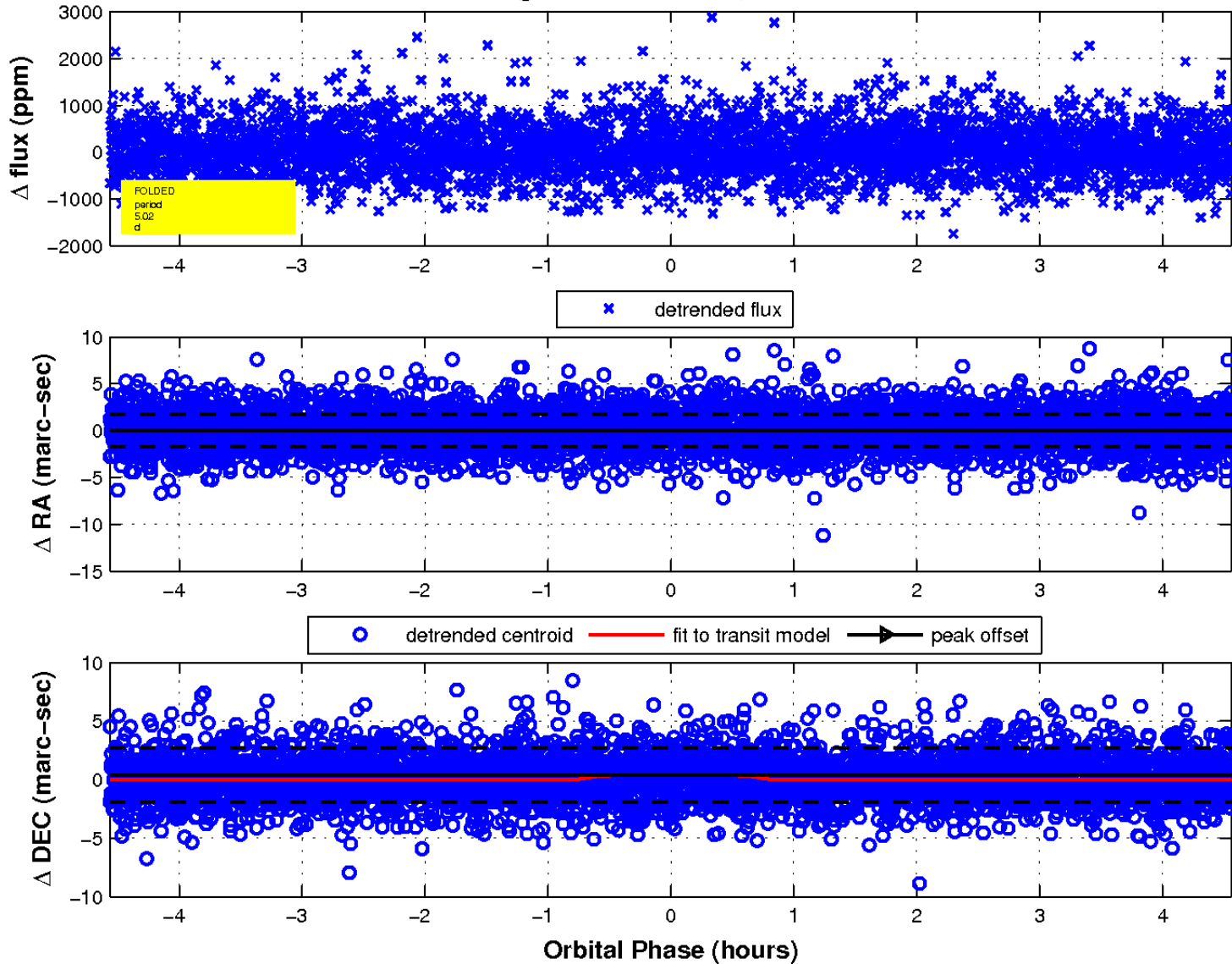
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

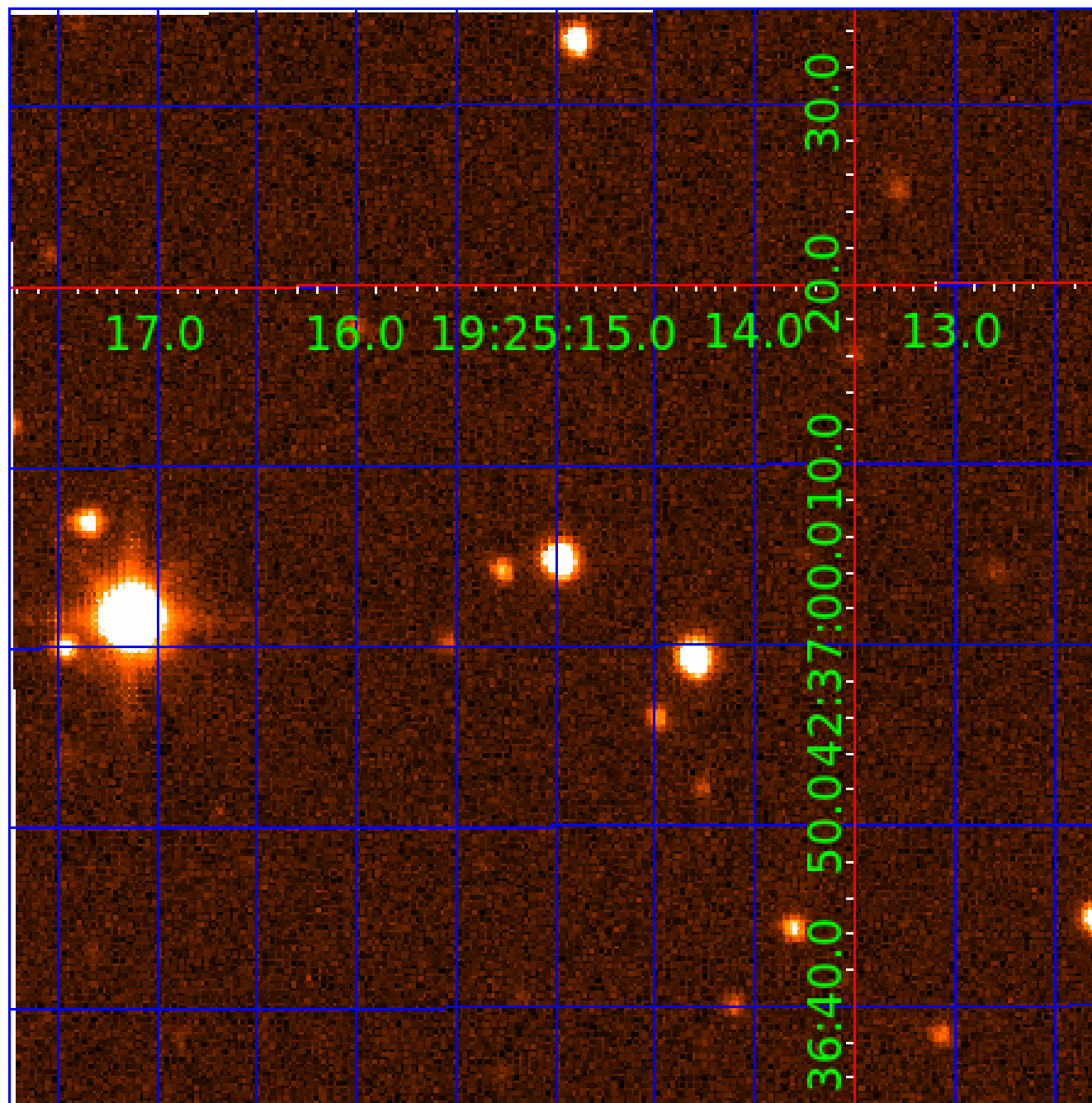


fluxWeightedCentroids, Planet 5 of 6



UKIRT Image

Declination



KIC 007116236

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})
007116236-01	OBS	6828.01	0.566750	131.868484	30.6	4.313	11.1	5.9	0.83	5707	0.46	3999.67
007116236-02	OBS	No	3.081284	132.609562	385.4	1.607	11.7	11.0	0.83	5707	1.63	418.38
007116236-03	OBS	No	12.460797	141.411539	1072.0	0.533	20.0	15.0	0.83	5707	3.67	64.94
007116236-04	OBS	No	1.875345	131.630708	708.0	1.065	17.0	23.6	0.83	5707	2.39	811.16
007116236-05	OBS	No	5.018200	132.119748	972.7	1.521	15.7	23.4	0.83	5707	2.80	218.35
007116236-06	OBS	No	1.187759	131.965534	301.4	1.085	16.6	11.6	0.83	5707	1.55	1491.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007116236-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—PLANET_OCCULT_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH
007116236-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
007116236-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST
007116236-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS
007116236-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—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.

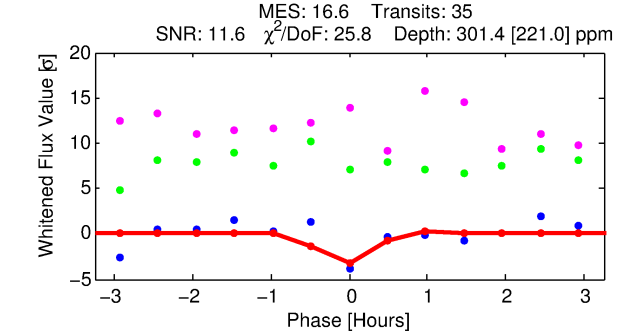
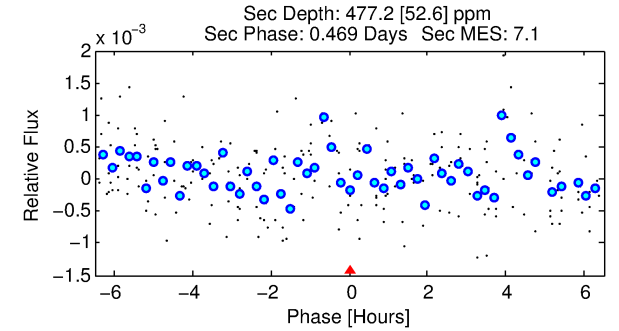
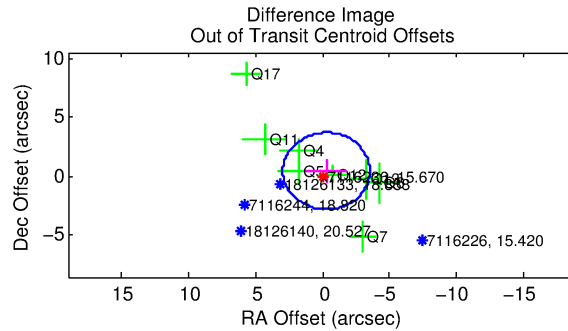
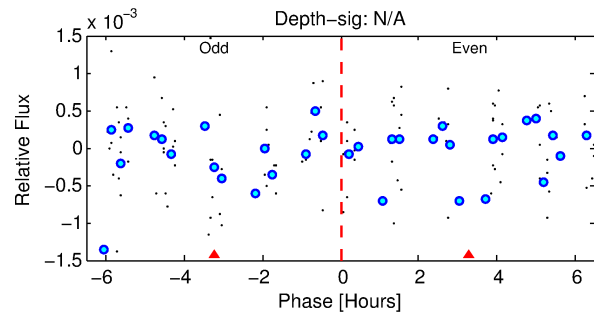
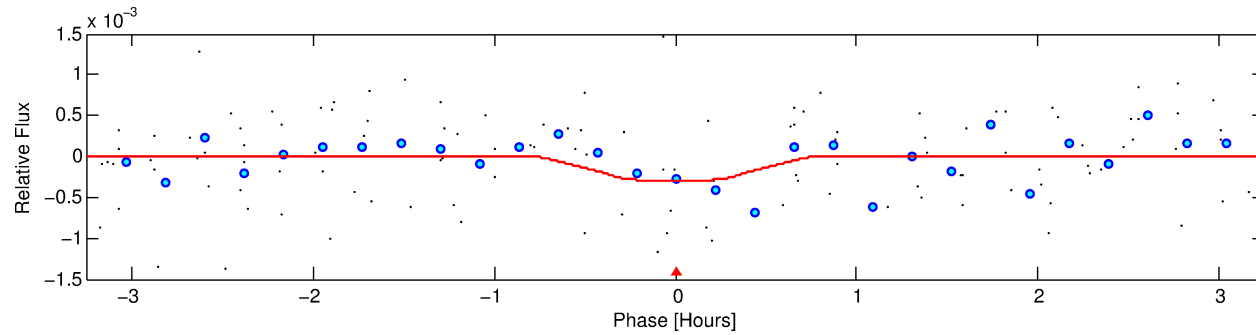
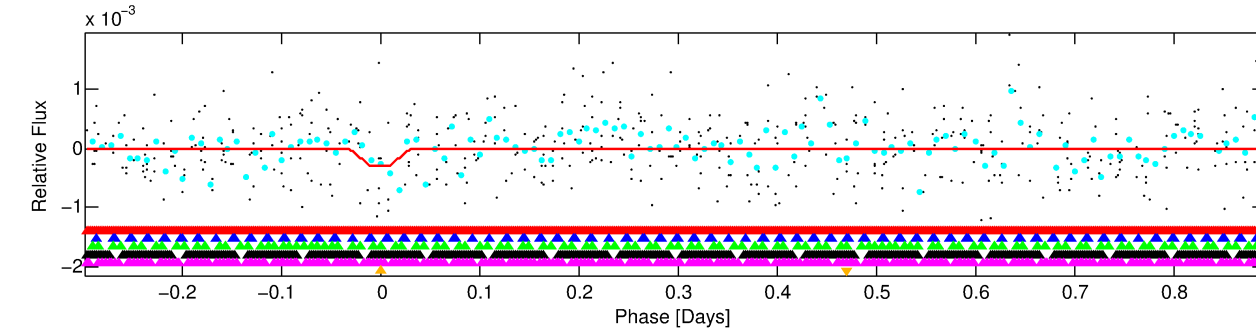
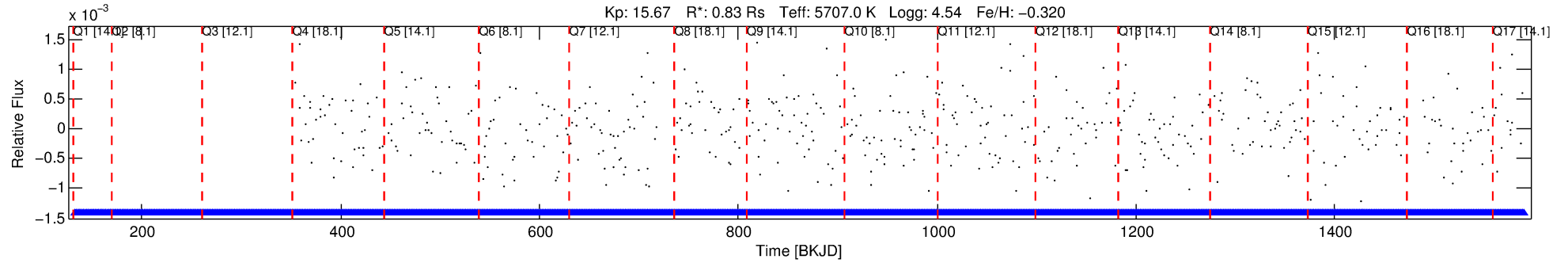
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007116236-06

No Significant Match Found

DV One-Page Summary

KIC: 7116236 Candidate: 6 of 6 Period: 1.188 d
KOI: K06828 Corr: No Ephemeris Match



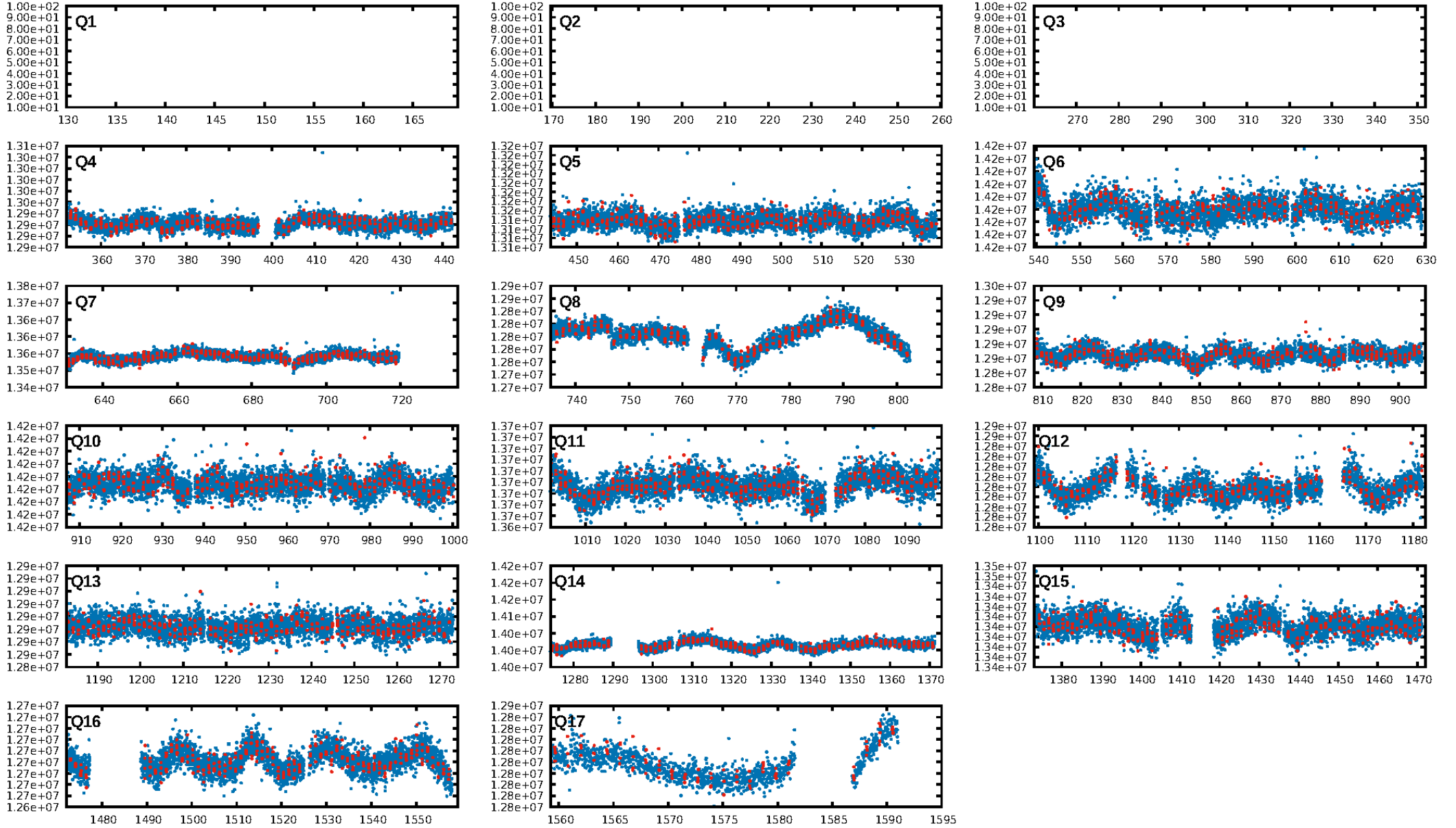
DV Fit Results:

Period = 1.18776 [0.00005] d
Epoch = 131.9655 [0.0095] BKJD
Rp/R* = 0.0171 [0.0697]
a/R* = 6.21 [111.72]
b = 0.70 [13.47]
Seff = 1491.33 [504.04]
Teff = 1585 [134] K
Rp = 1.55 [6.32] Re
a = 0.0209 [0.0046] AU
Ag = 47.84 [389.65] [0.12 σ]
Teffp = 6443 [13112] K [0.37 σ]

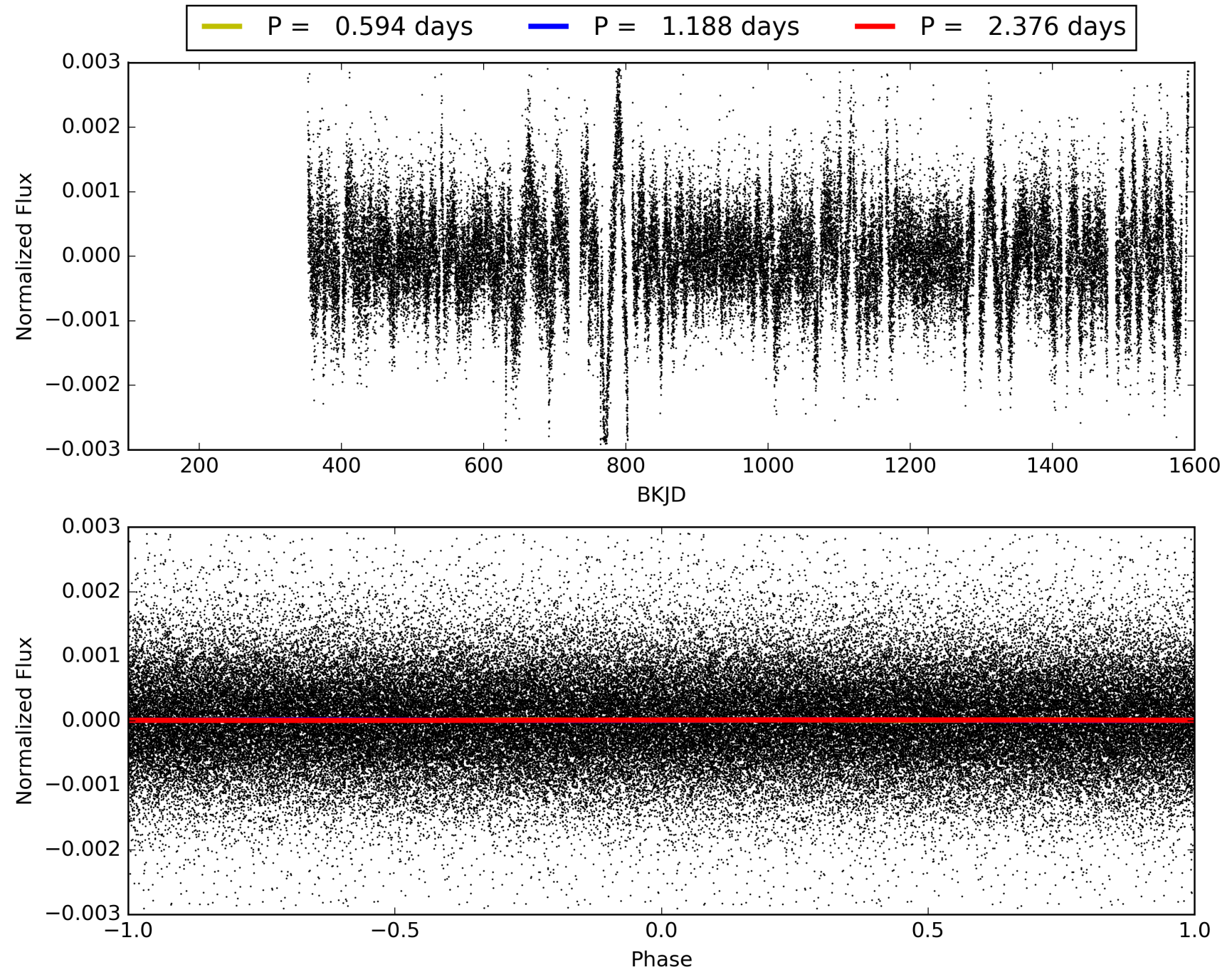
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.35 σ]
LongPeriod-sig: 100.0% [10.85 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: -0.1403
Centroid-sig: 15.7%
Centroid-so: 1.941 arcsec [4.03 σ]
OotOffset-rm: 0.536 arcsec [0.50 σ]
KicOffset-rm: 5.906 arcsec [3.88 σ]
OotOffset-st: 1/2/2/3 [8]
KicOffset-st: 1/2/2/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 007116236-06, PDC Light Curves

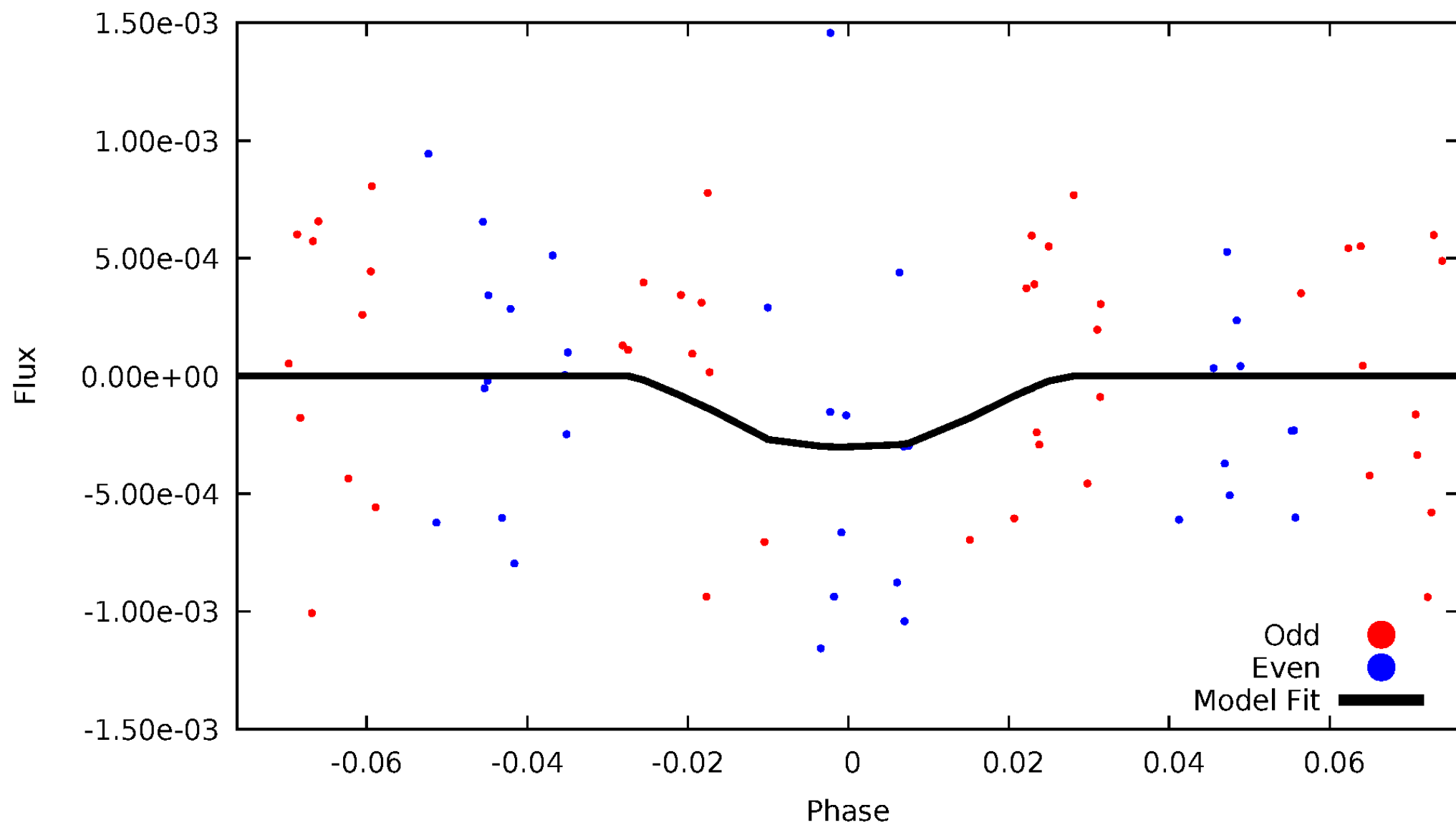


TCE 007116236-06



DV Odd/Even

TCE 007116236-06

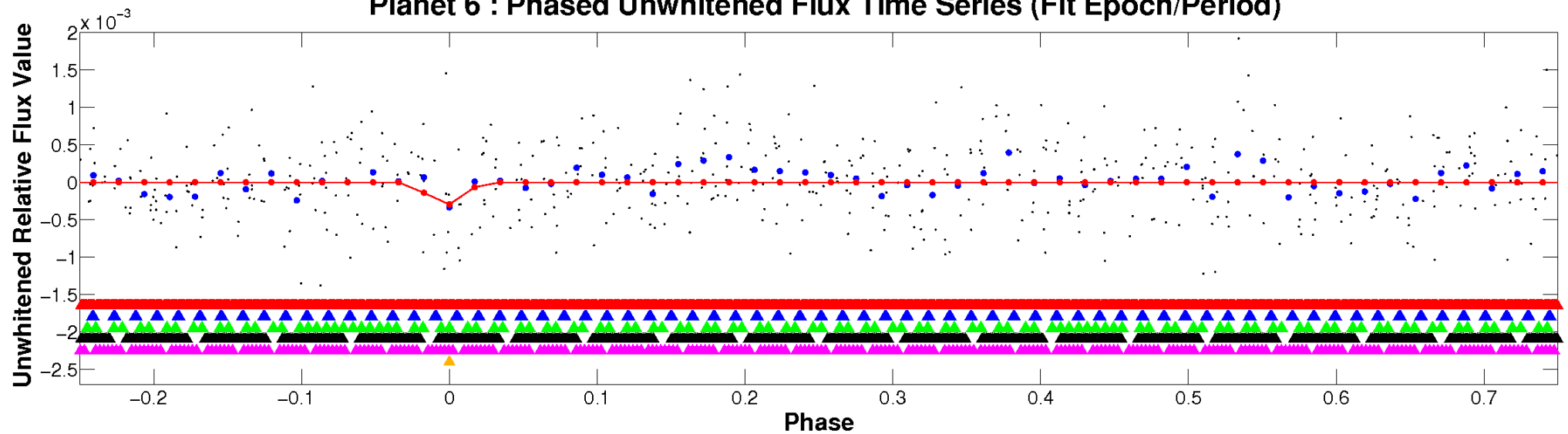


ALT Odd/Even

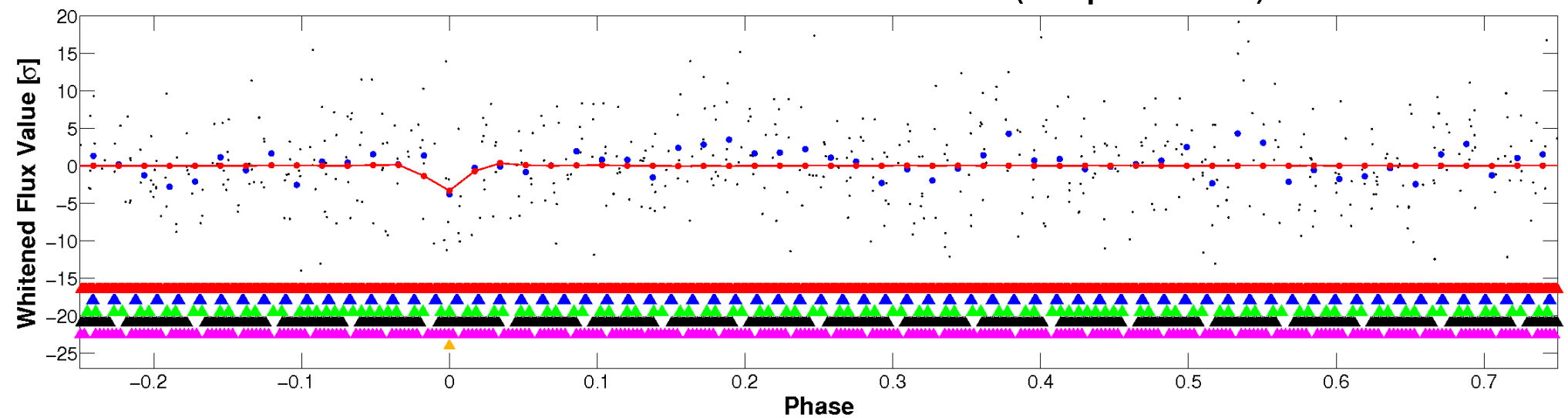
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

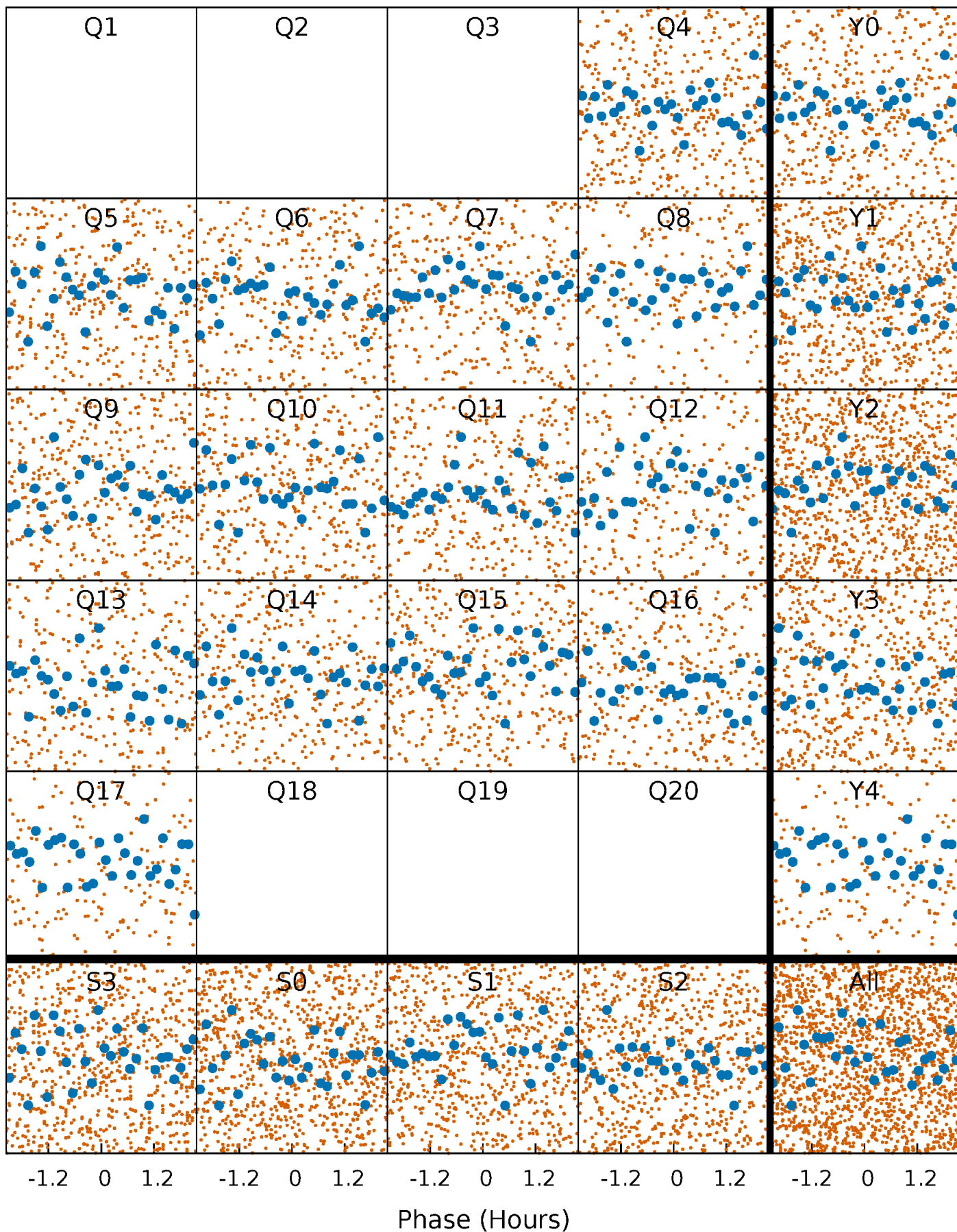


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



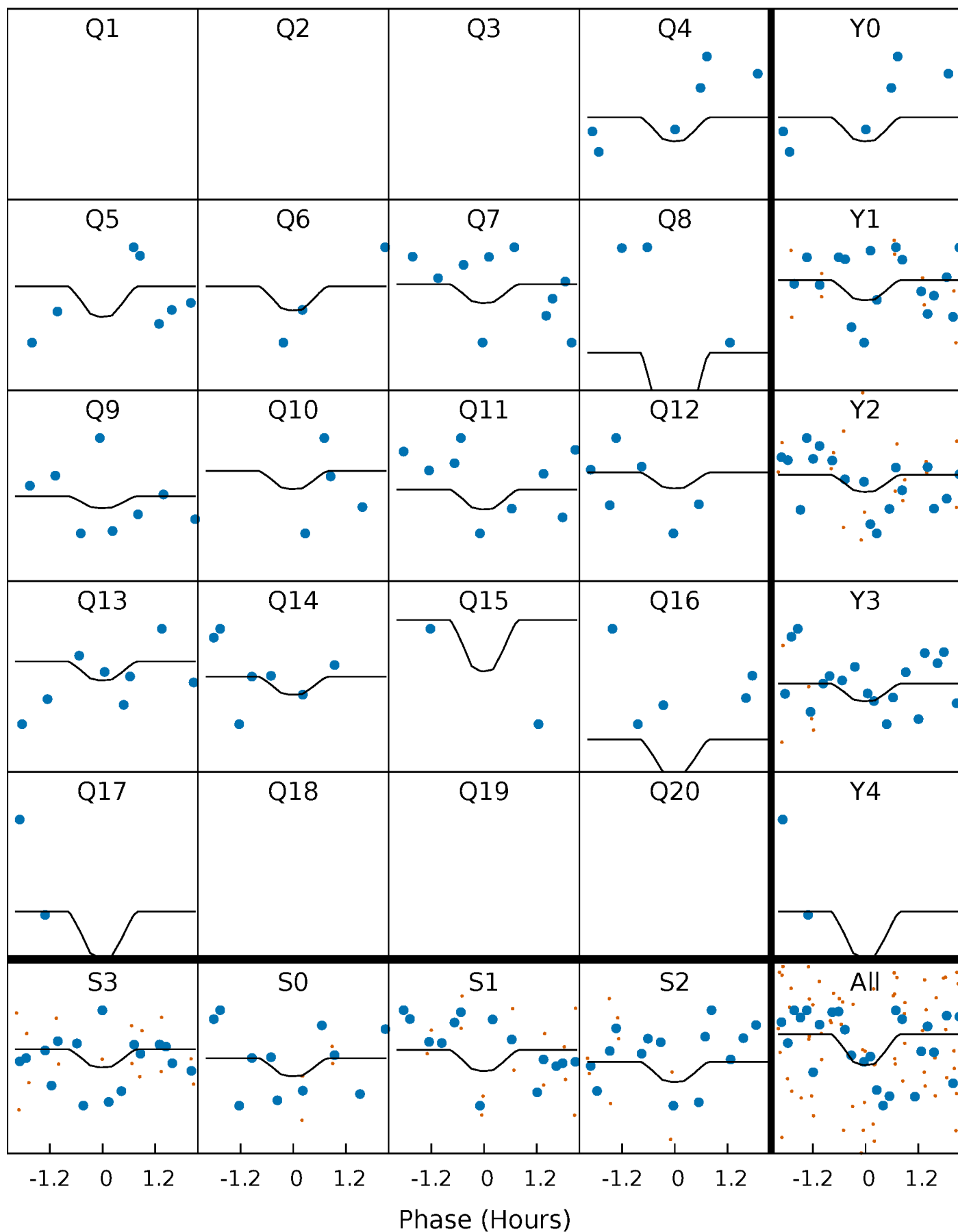
PDC Quarter-Phased Transit Curves

TCE 007116236-06 P= 1.187759 Days $T_0=131.965534$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007116236-06 P= 1.187759 Days $T_0=131.965534$ (BKJD)

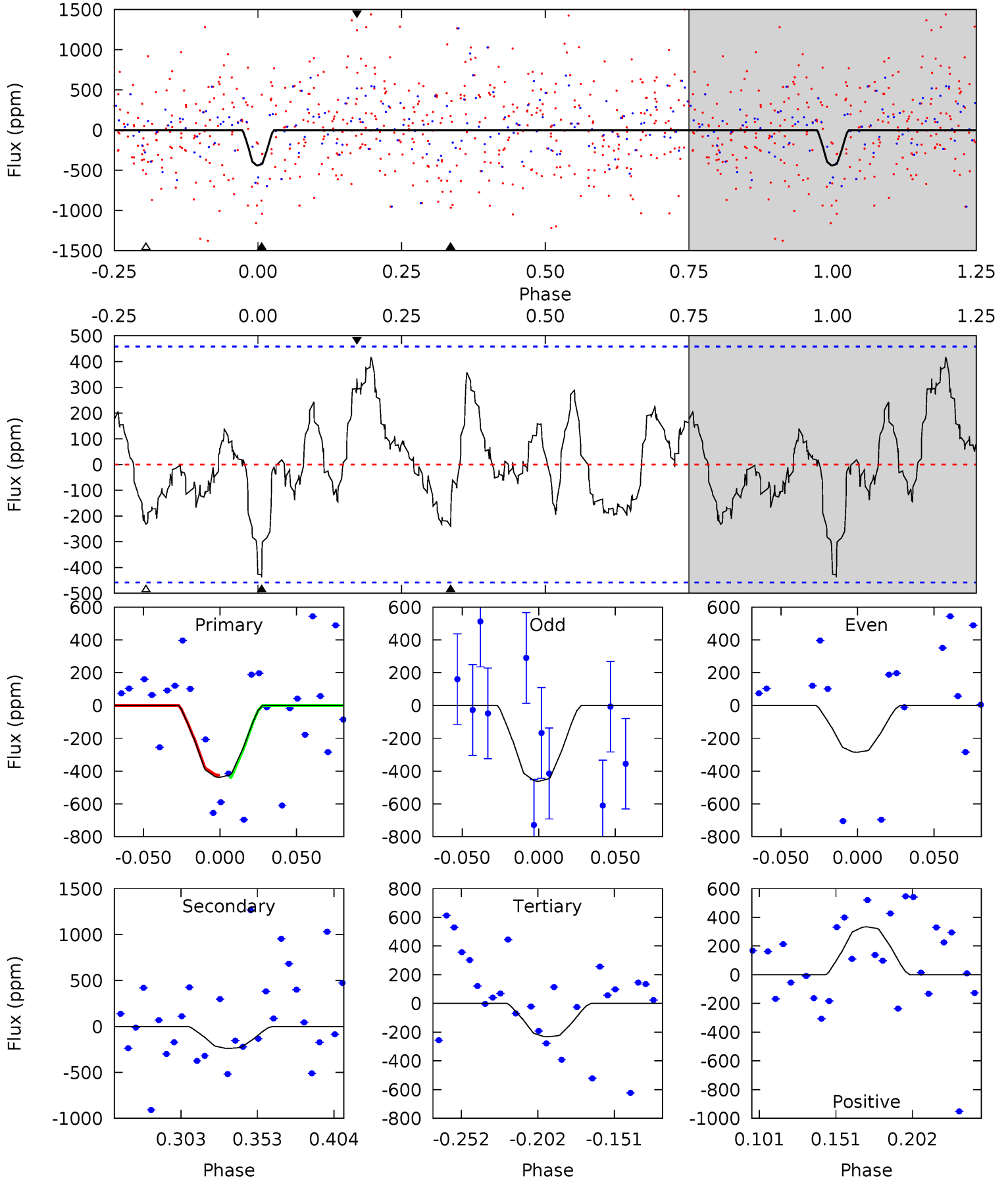


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

007116236-06, P = 1.187759 Days, E = 131.965534 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	2.46	2.38	3.43	4.71	1.96	1.47	2.12	1.08	0.07	-0.97	0.88	0	0.49	0.09



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 007116236

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5707^{+189}_{-189}	$4.538^{+0.055}_{-0.165}$	$-0.320^{+0.300}_{-0.300}$	$0.828^{+0.224}_{-0.090}$	$0.864^{+0.100}_{-0.090}$	$2.145^{+0.506}_{-0.957}$
	+3%/-3%	+1%/-4%	+94%/-94%	+27%/-11%	+12%/-10%	+24%/-45%
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 007116236-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-239 ± 97	$5.33^{+5.09}_{-3.61}$	2250^{+145}_{-107}	3354^{+1850}_{-914}	$1.947^{+18.709}_{-1.496}$
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 $A_{\text{obs}} \gg 1.0$

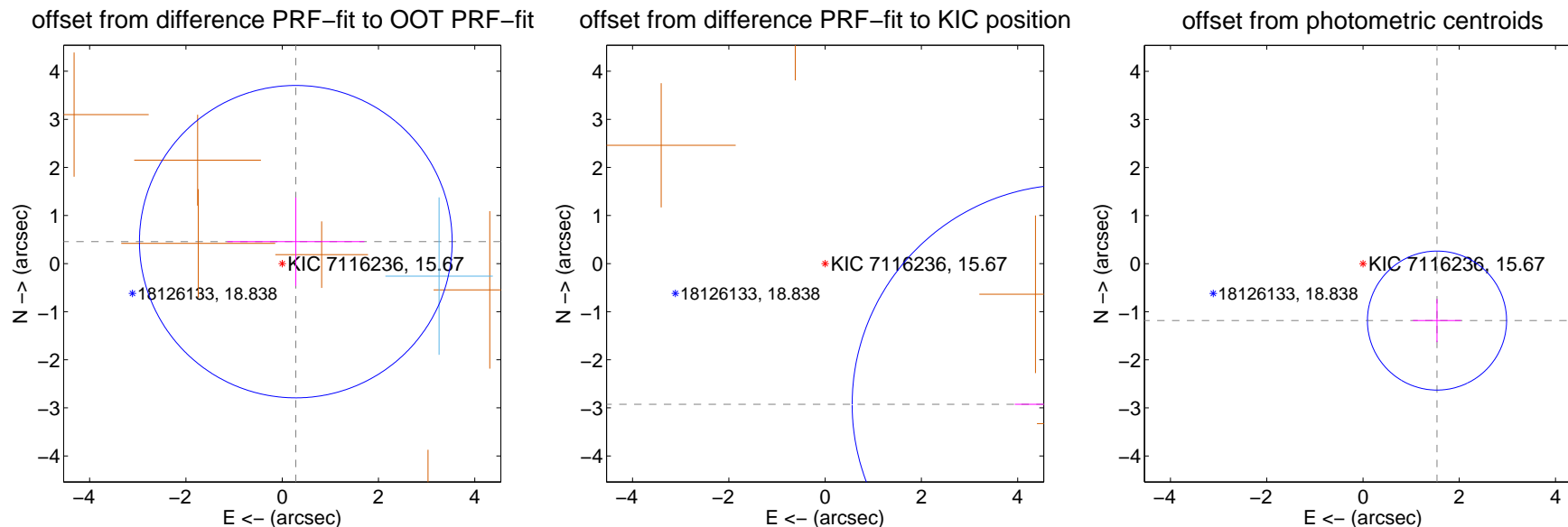
DV Centroid Data

Supplemental centroid analysis for 007116236-06. Kepler magnitude: 15.67. Transit SNR 11.64

There are 1 quarters with good PRF difference image offsets

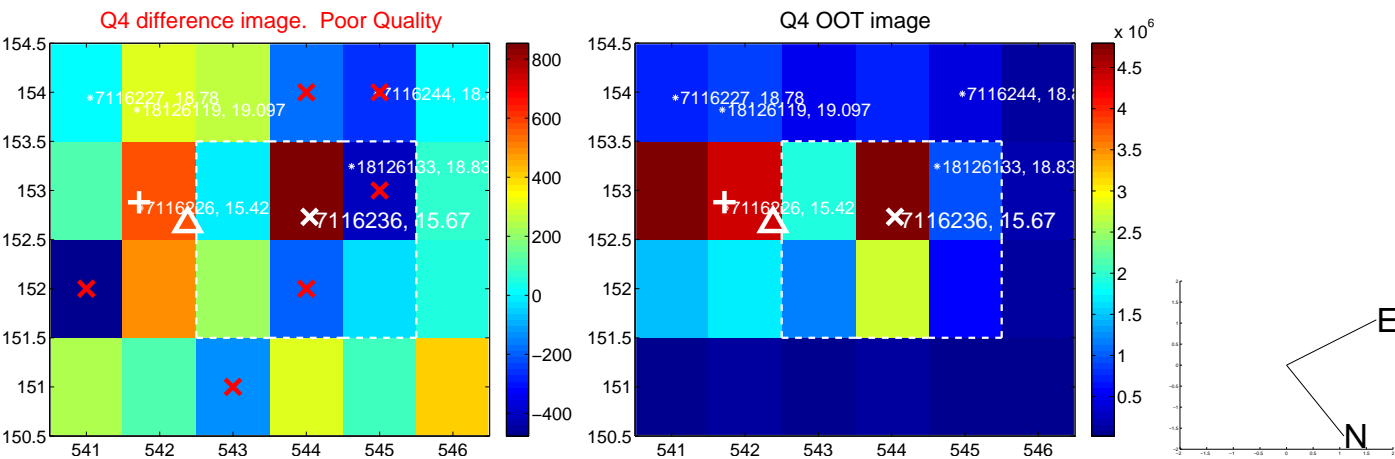
The OOT PRF centroid is offset from the target star catalog position by about 6.42 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.536 ± 1.083	0.50	-0.282 ± 1.425	0.456 ± 0.918
PRF-fit source offset from KIC position	5.906 ± 1.523	3.88	-5.131 ± 1.191	-2.925 ± 1.157
photometric centroid source offset	1.94 ± 0.48	4.03	-1.54 ± 0.50	-1.18 ± 0.45

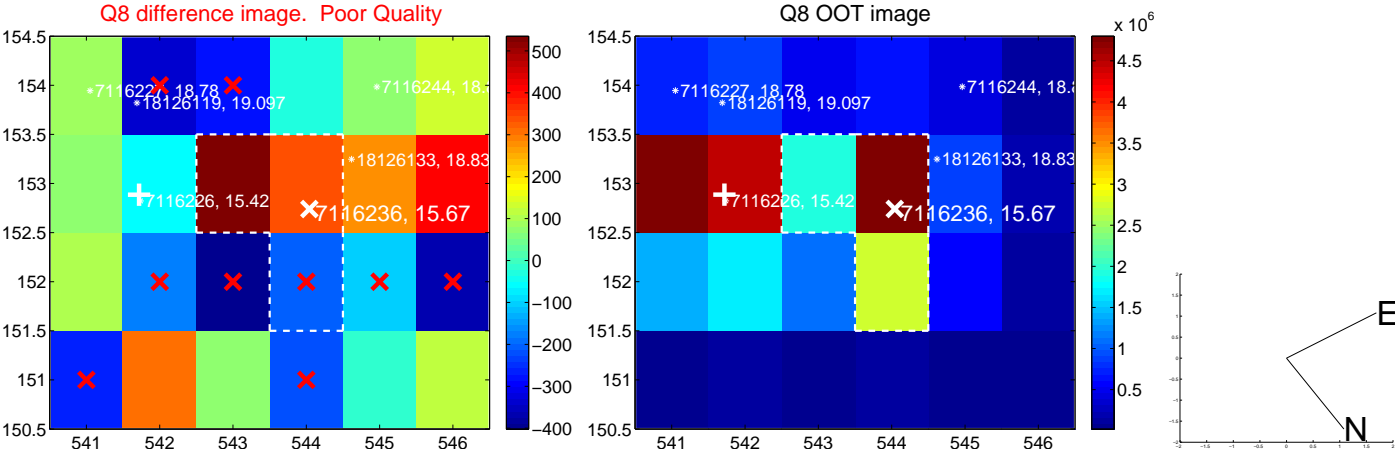
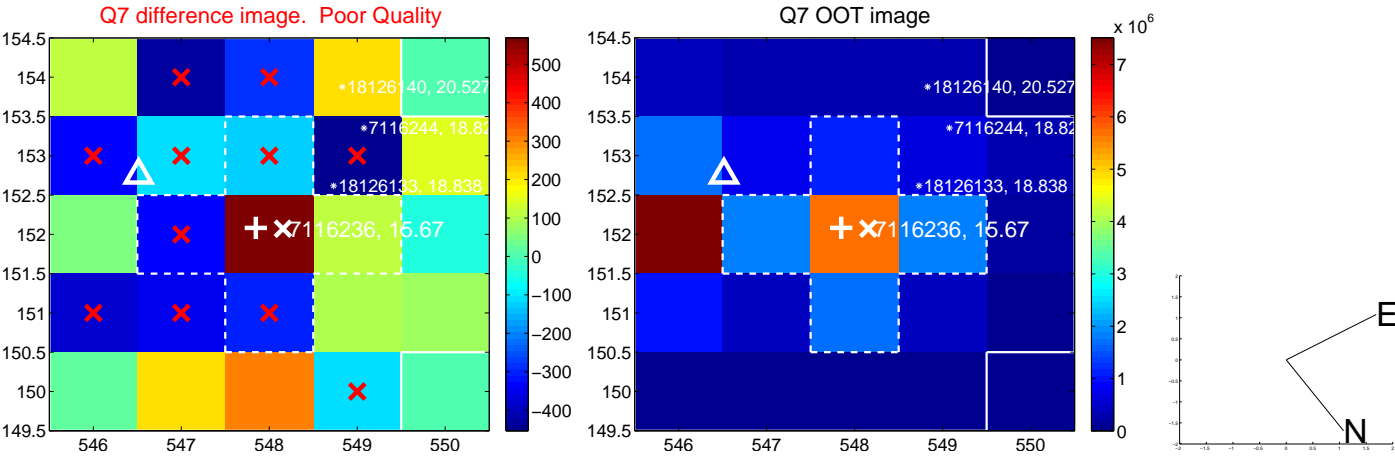
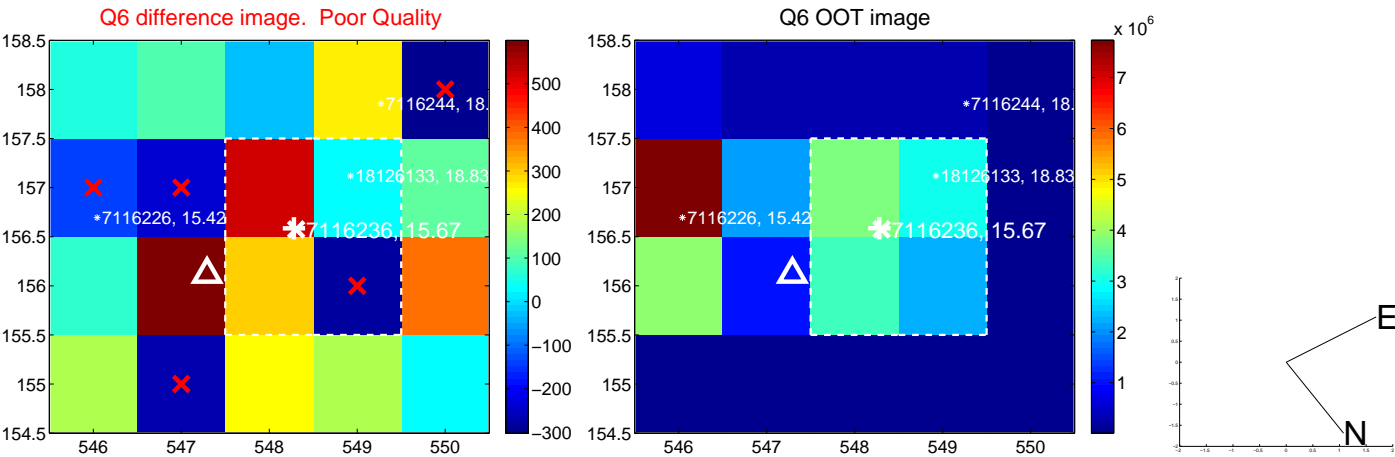
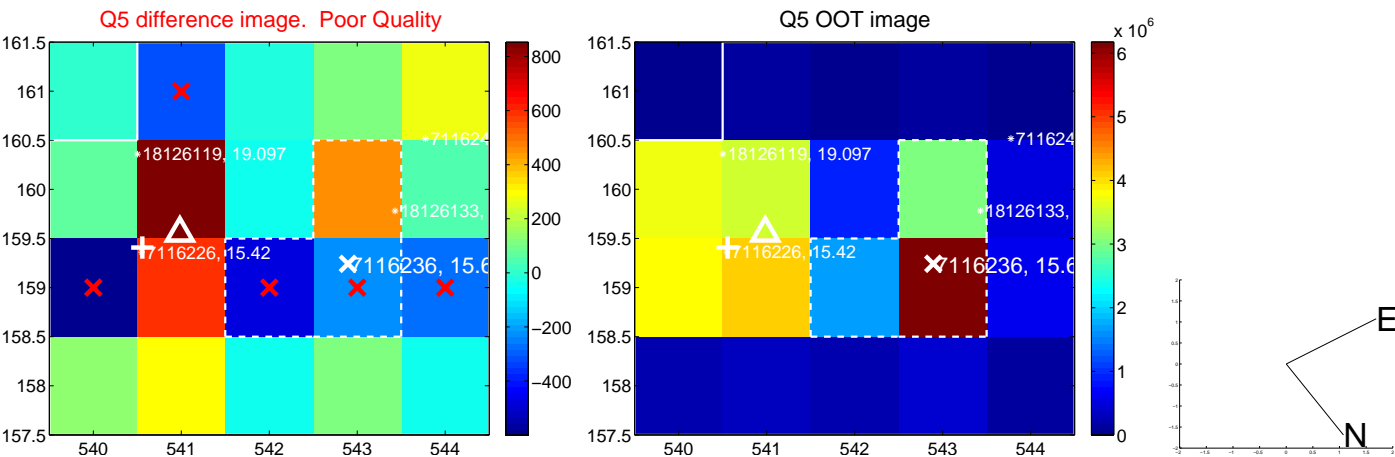


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

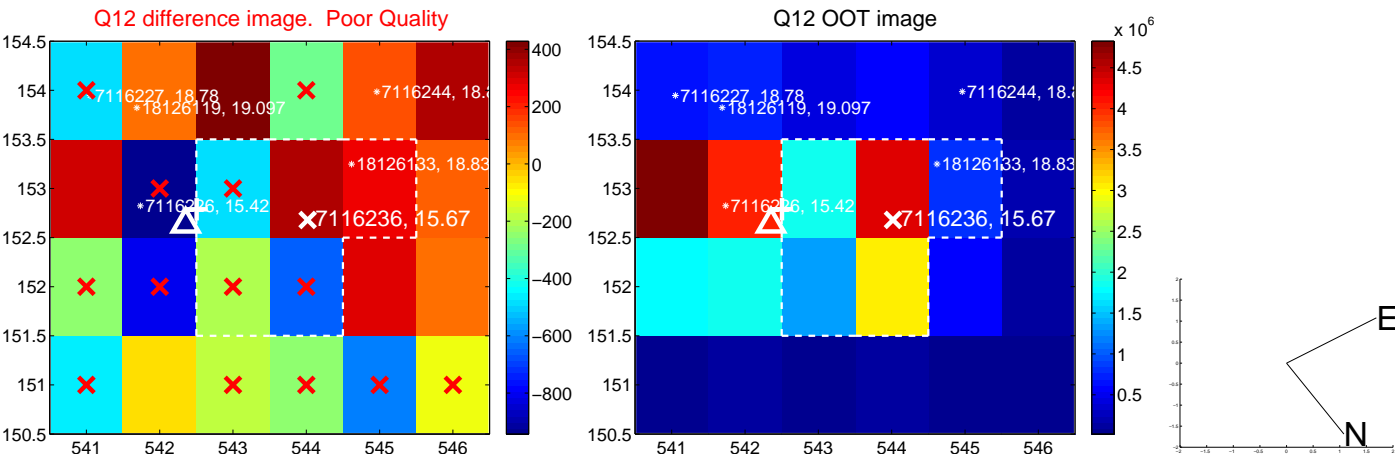
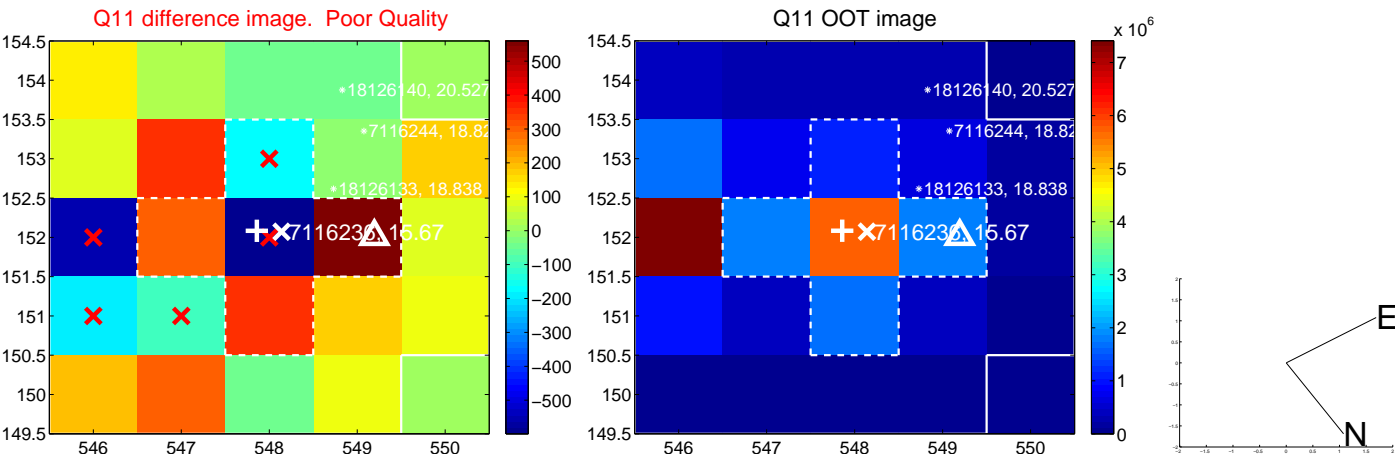
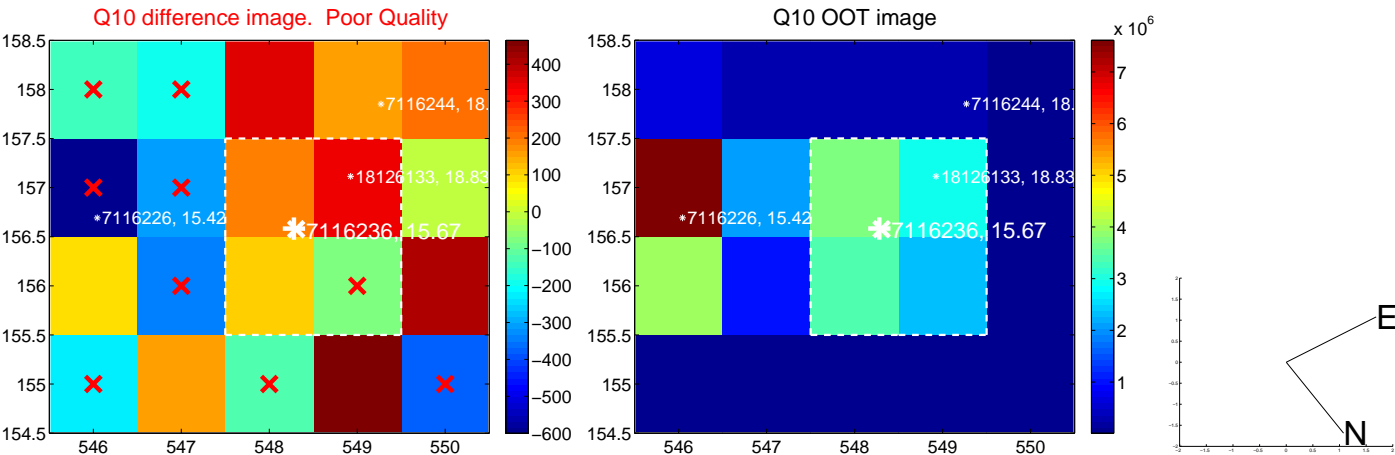
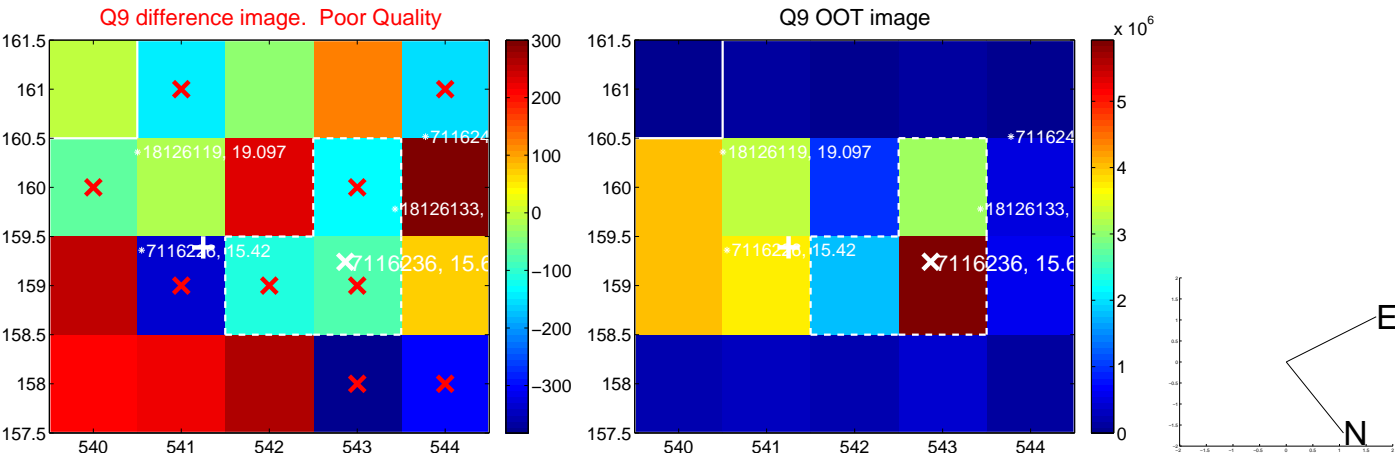
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



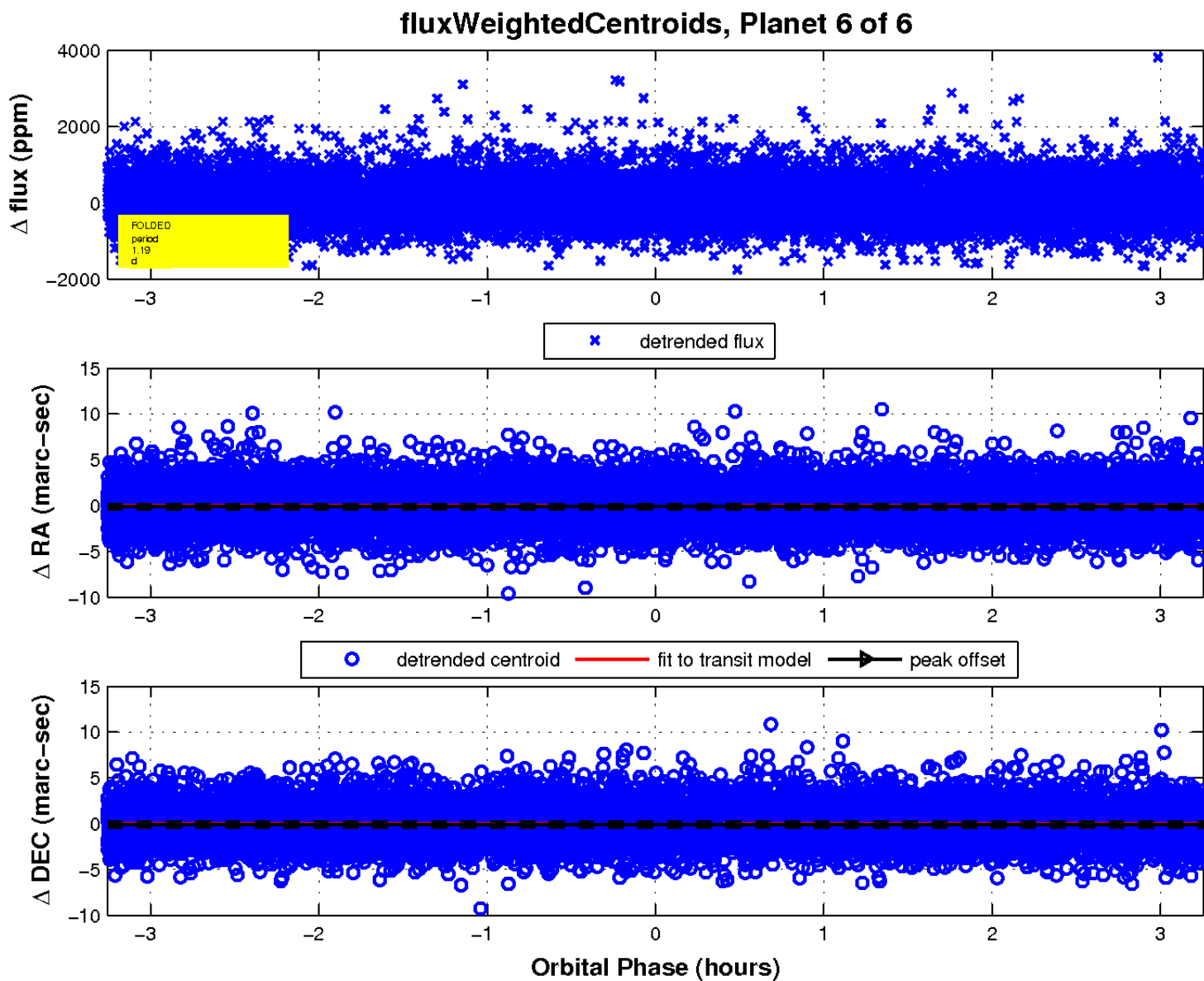
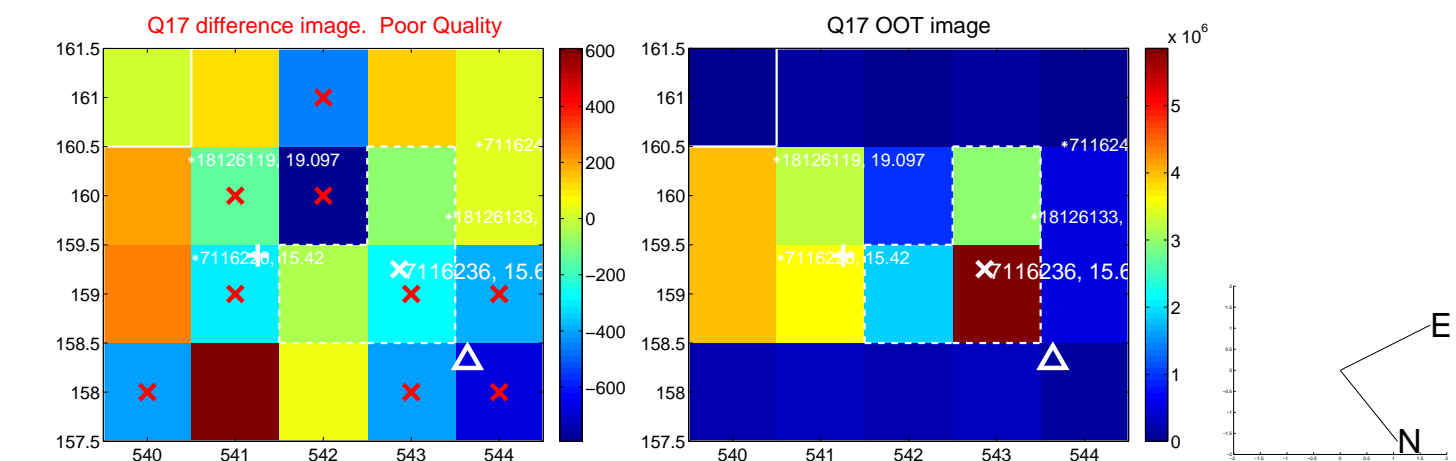
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

