

KIC 005896585

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})
005896585-01	OBS	No	0.708815	132.137099	42.6	4.430	9.7	10.8	0.67	4514	0.54	916.65
005896585-03	OBS	No	155.261669	150.192489	874.8	6.672	12.6	8.0	0.67	4514	2.67	0.69
005896585-05	OBS	No	134.956803	171.147409	1141.2	7.469	9.2	9.3	0.67	4514	2.38	0.84
005896585-06	OBS	No	73.302070	175.285983	533.0	4.448	8.5	5.8	0.67	4514	1.62	1.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005896585-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
005896585-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

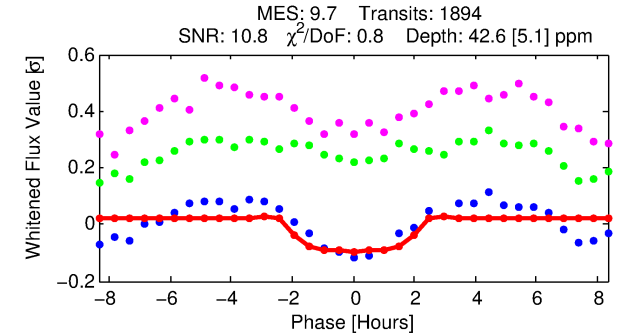
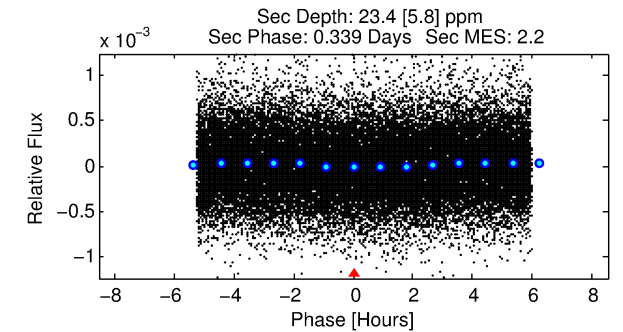
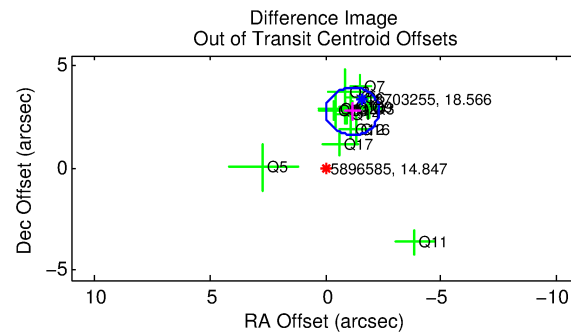
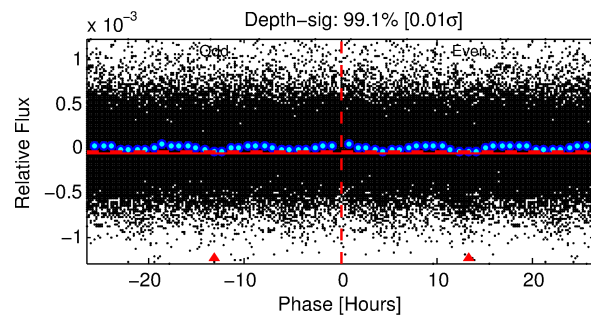
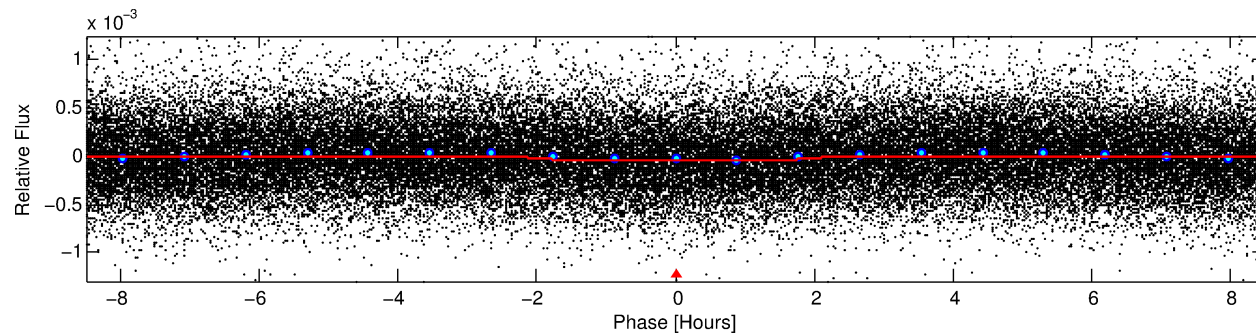
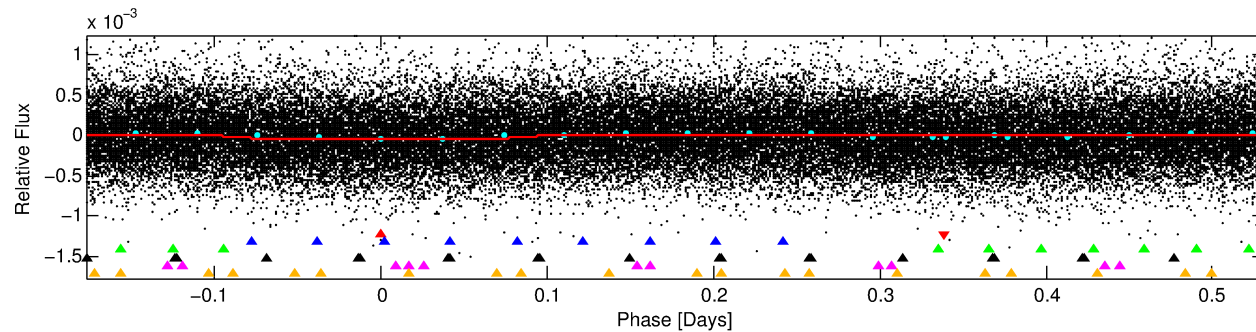
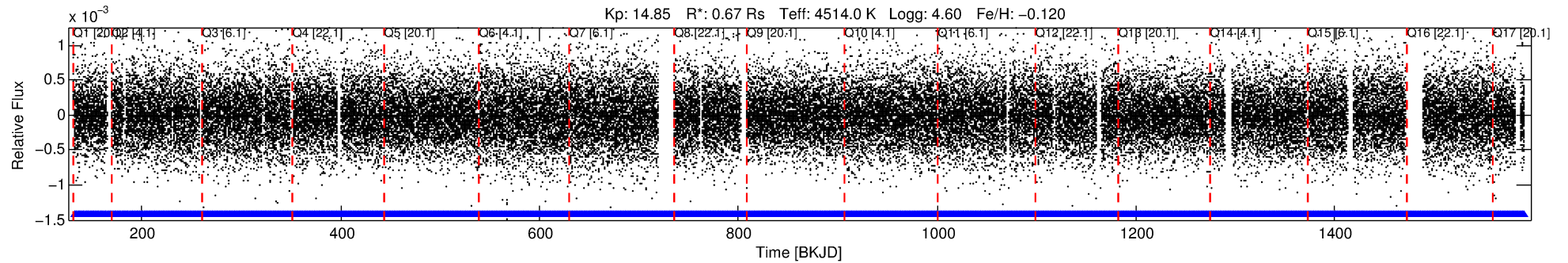
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005896585-01

No Significant Match Found

DV One-Page Summary

KIC: 5896585 Candidate: 1 of 6 Period: 0.709 d



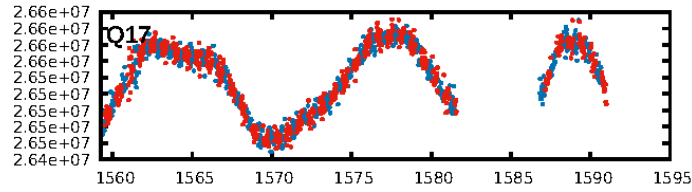
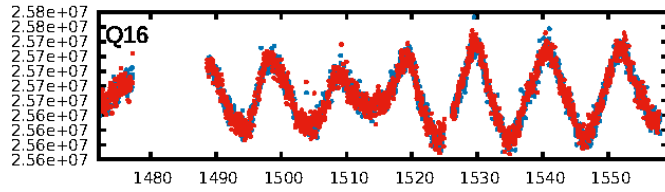
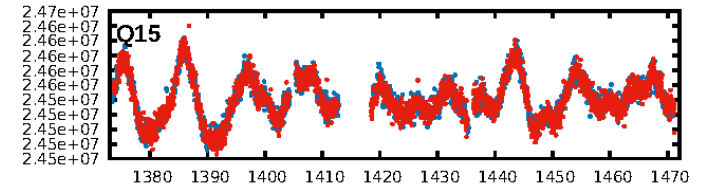
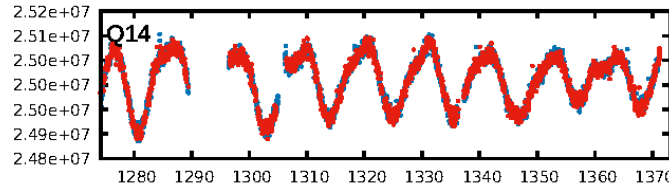
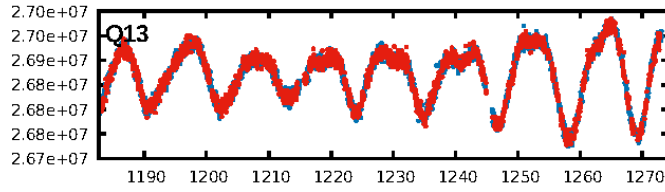
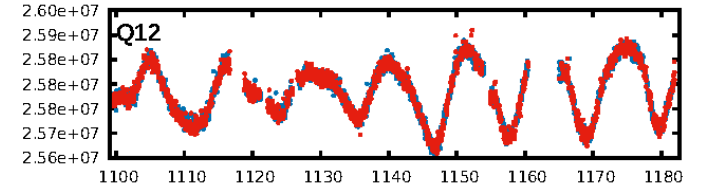
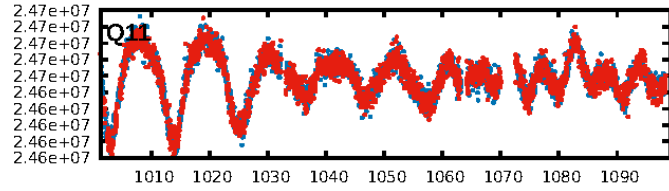
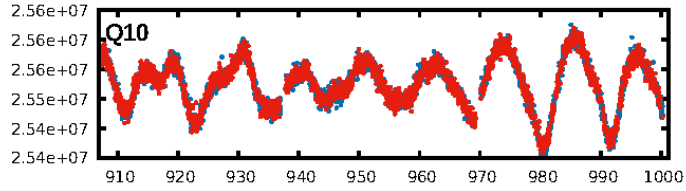
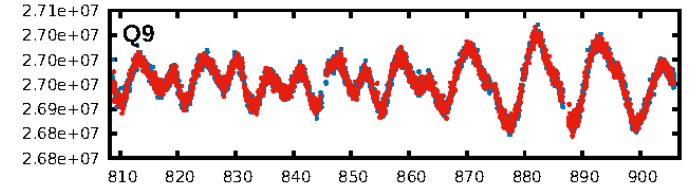
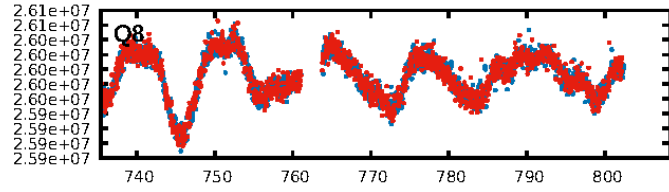
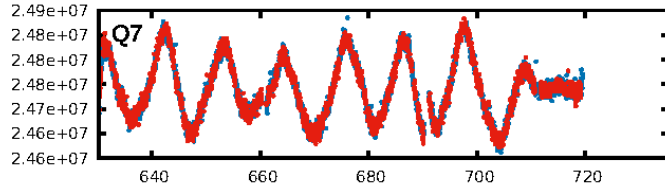
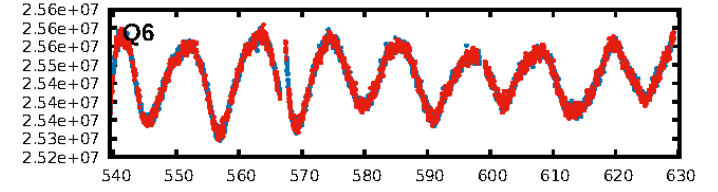
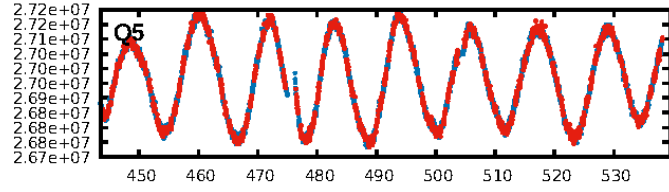
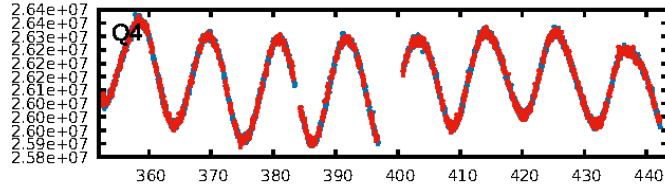
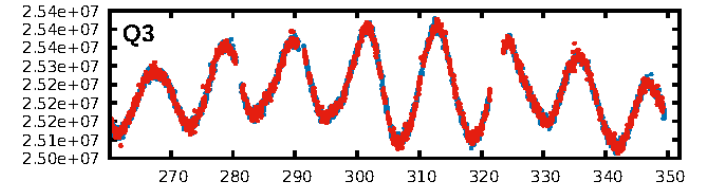
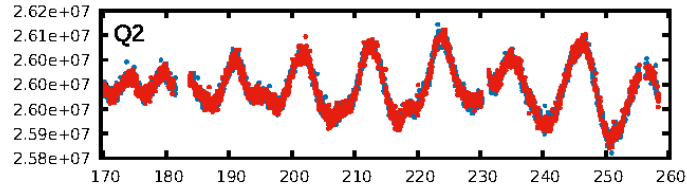
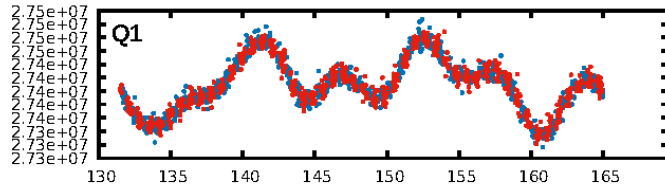
DV Fit Results:

Period = 0.70882 [0.00001] d
Epoch = 132.1371 [0.0039] BKJD
Rp/R* = 0.0074 [0.0036]
a/R* = 1.09 [0.33]
b = 0.90 [0.40]
Seff = 916.65 [142.72]
Teff = 1403 [55] K
Rp = 0.54 [0.27] Re
a = 0.0136 [0.0010] AU
Ag = 8.02 [8.17] [0.86 σ]
Teffp = 3650 [931] K [2.41 σ]

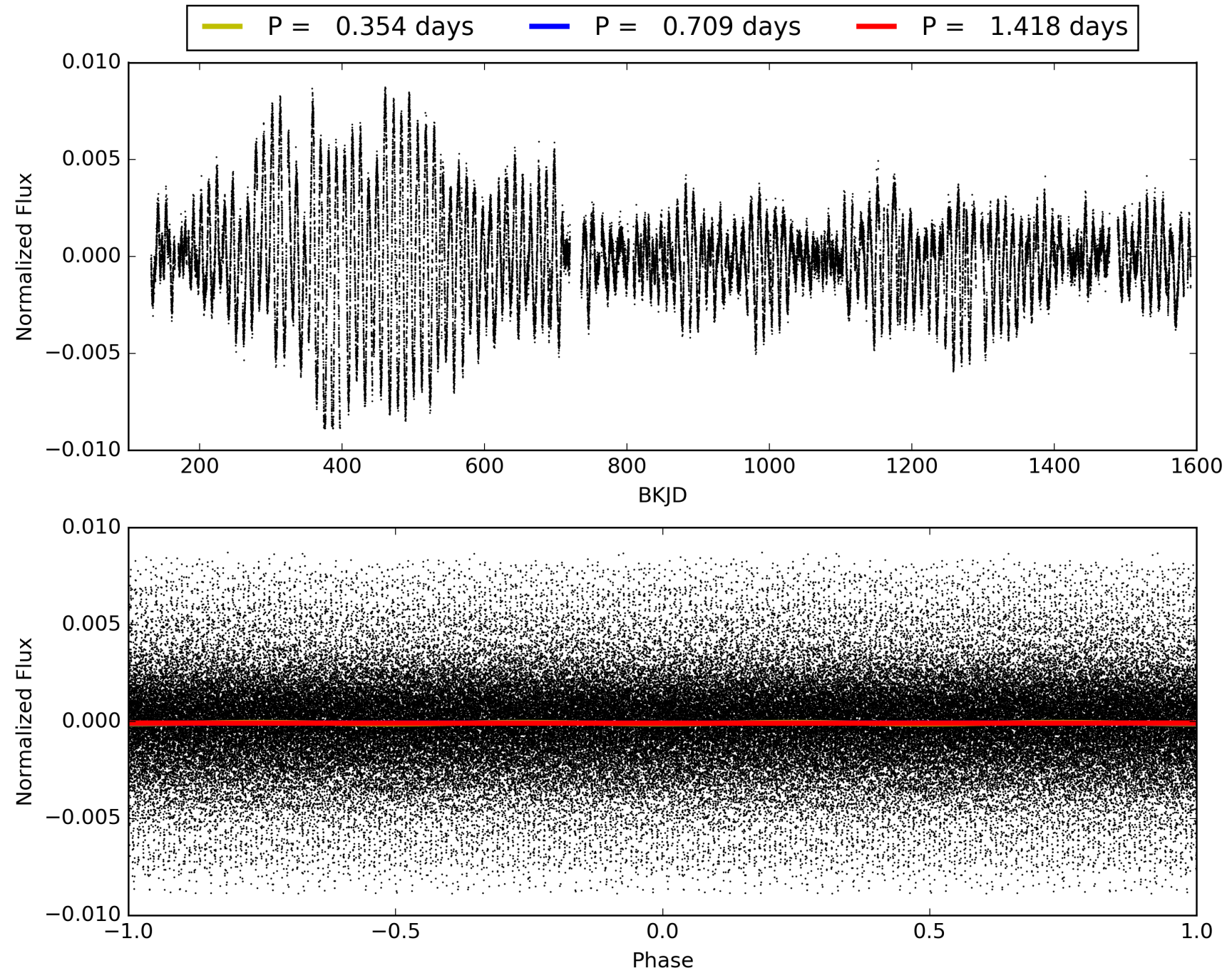
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [163.90 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.32e-17
RollingBand-fgt: 1.00 [1808/1808]
GhostDiagnostic-chr: 1.216
Centroid-sig: 0.4%
Centroid-so: 2.130 arcsec [2.06 σ]
OotOffset-rm: 3.000 arcsec [7.76 σ]
KicOffset-rm: 2.952 arcsec [6.73 σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005896585-01, PDC Light Curves

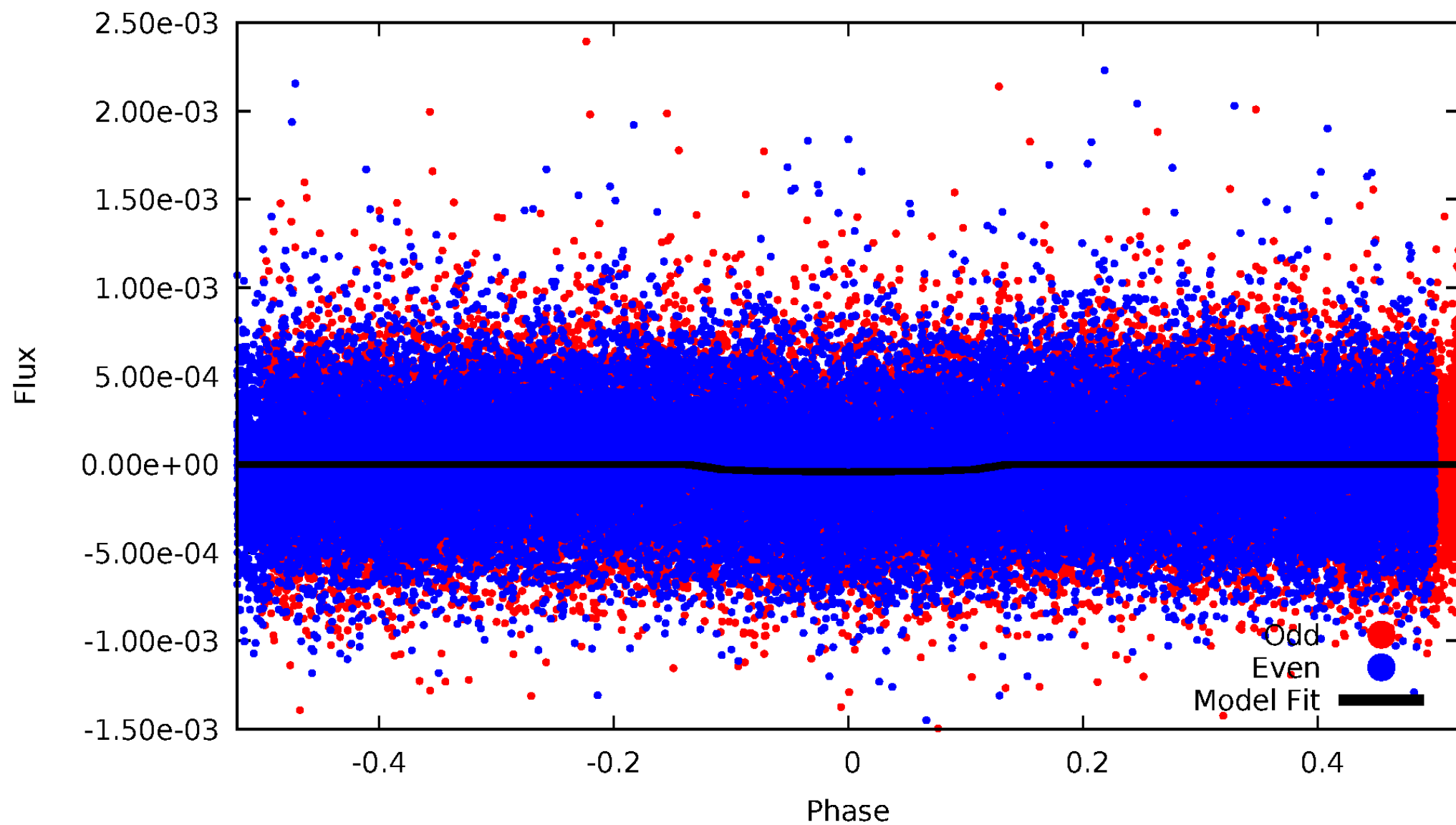


TCE 005896585-01



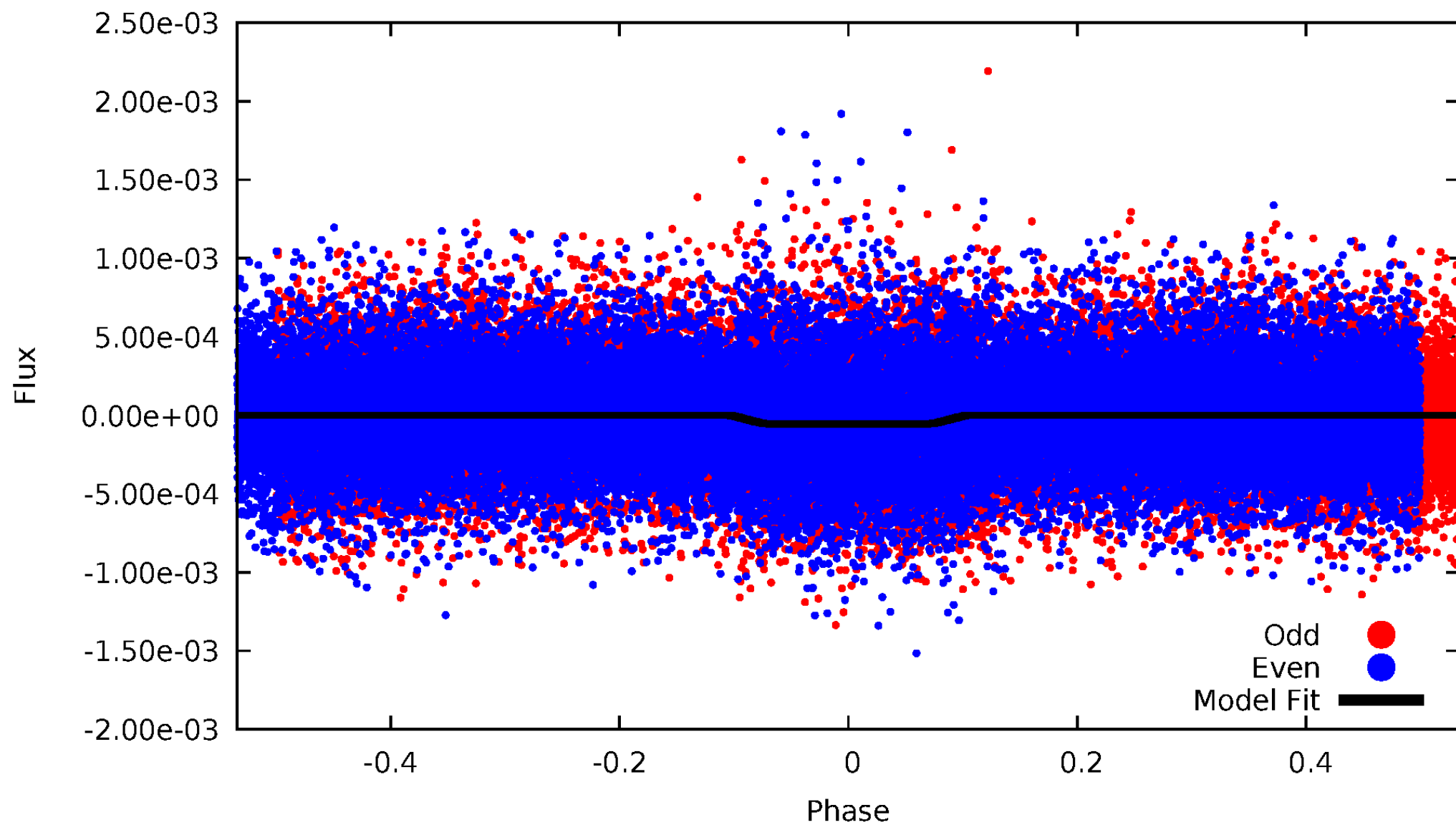
DV Odd/Even

TCE 005896585-01

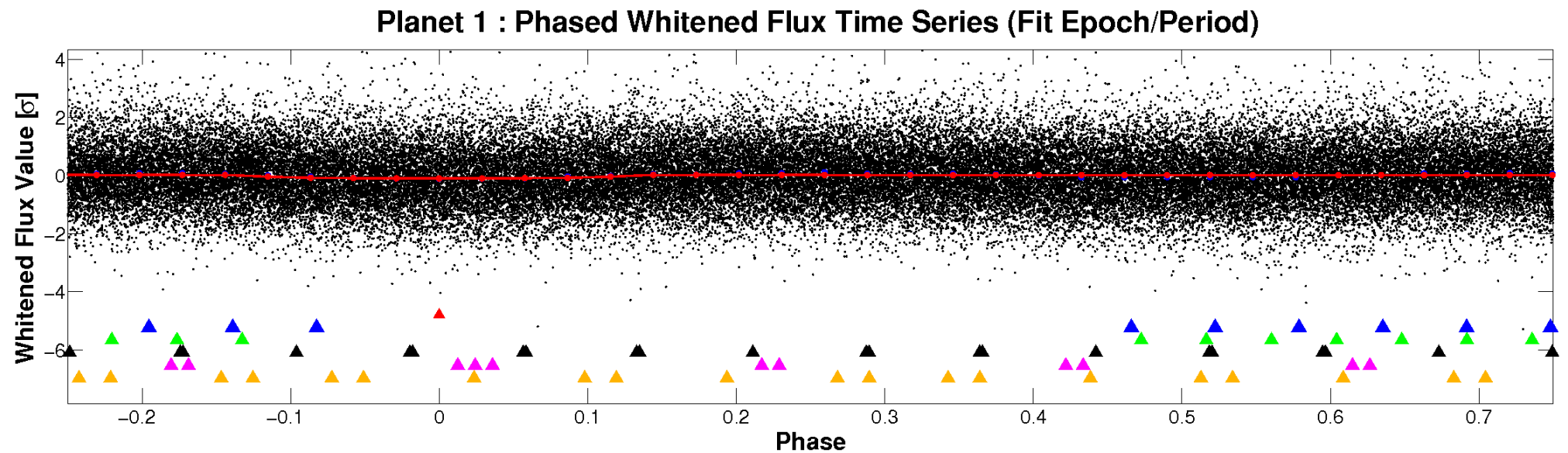
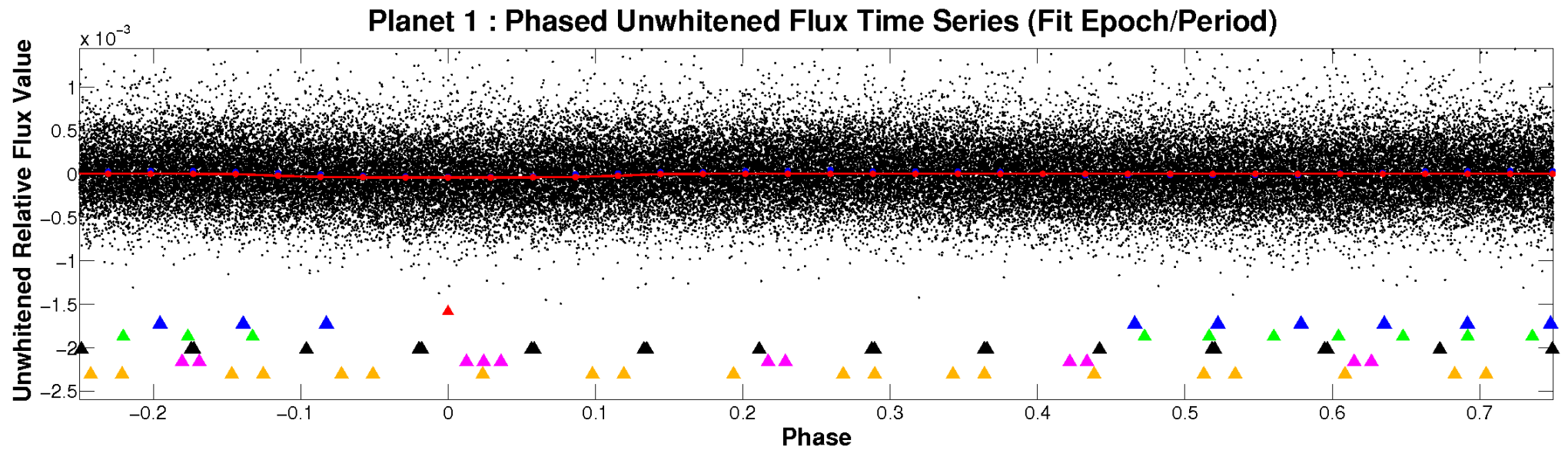


ALT Odd/Even

TCE 005896585-01

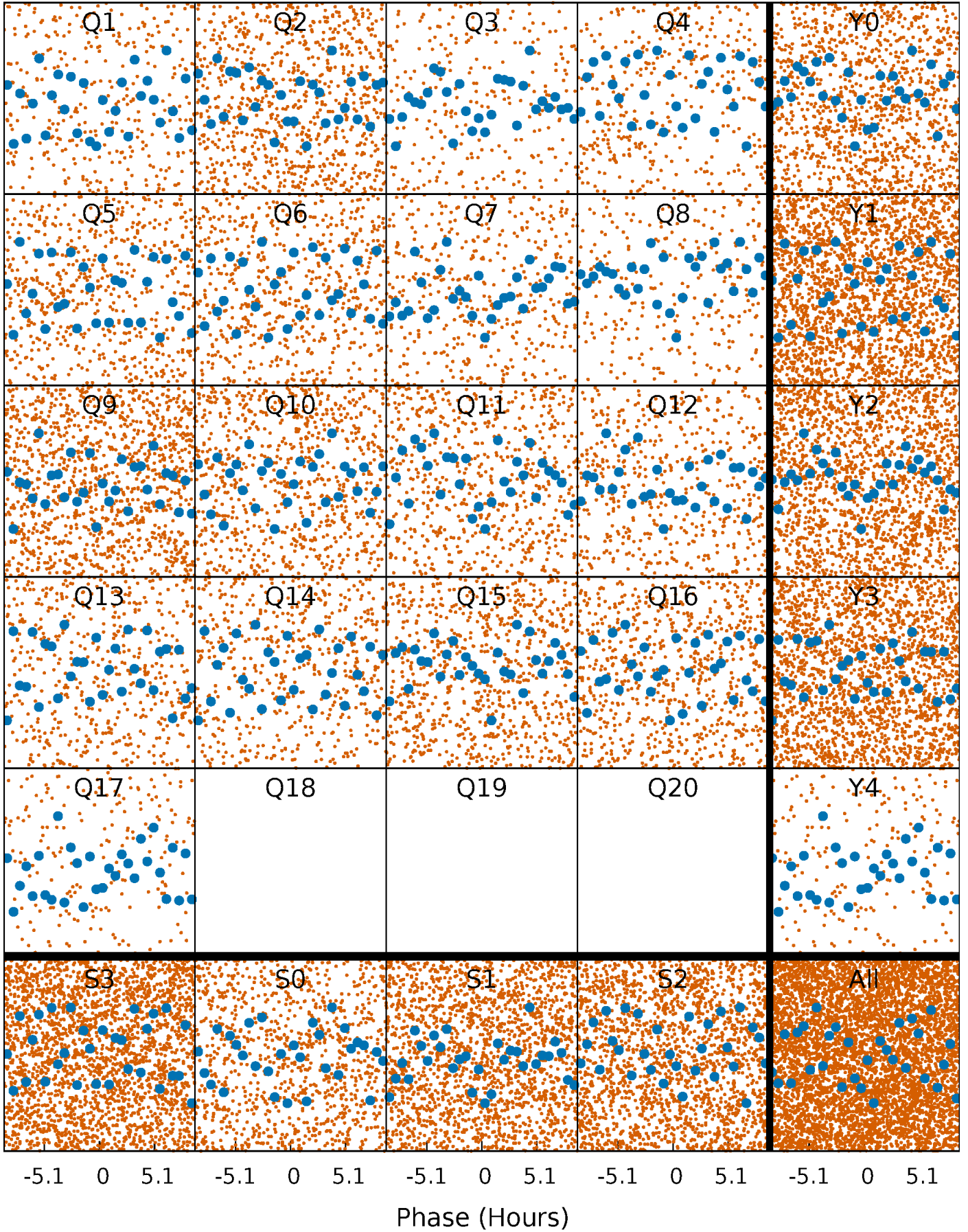


Non-Whitened Vs. Whitened Light Curve



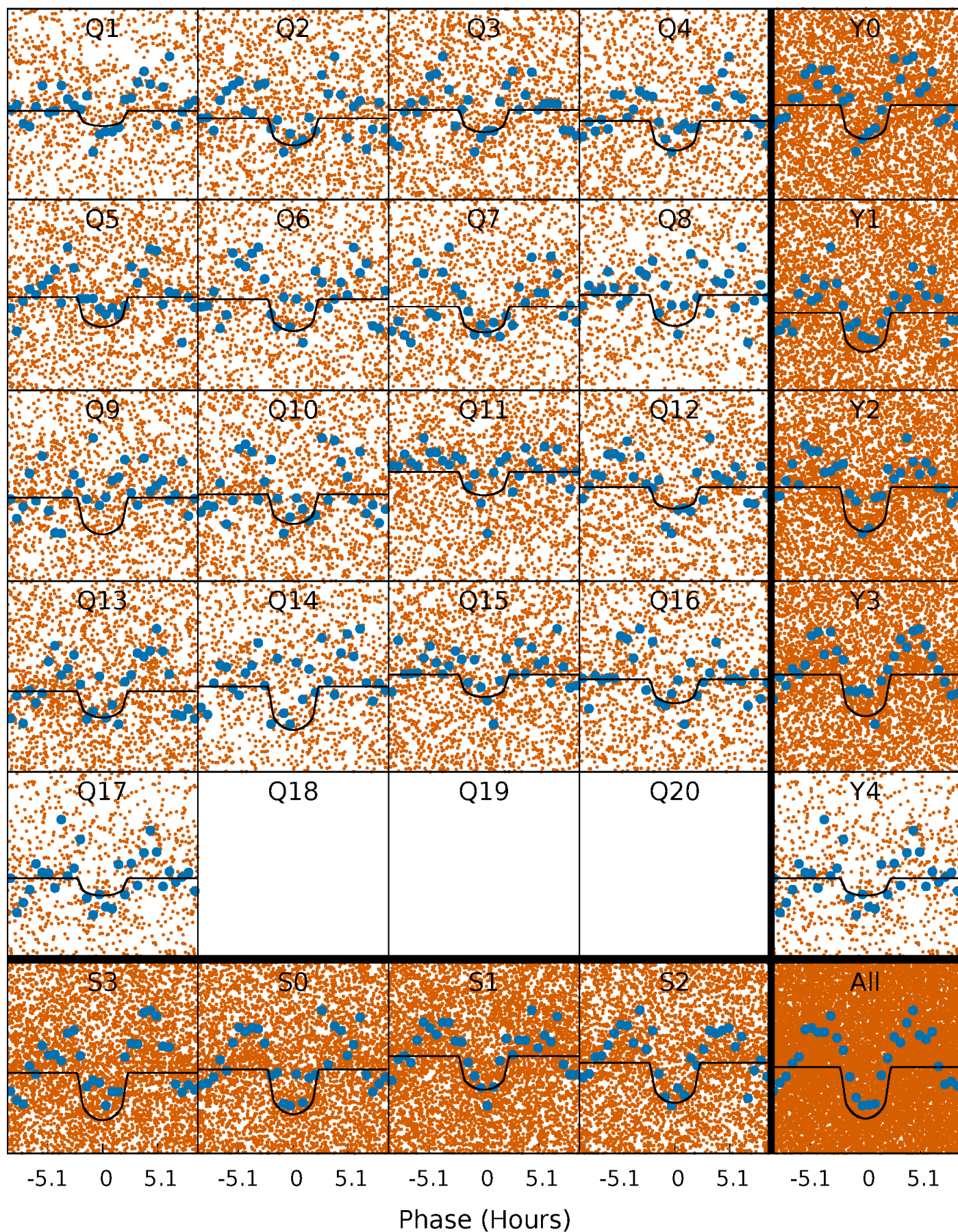
PDC Quarter-Phased Transit Curves

TCE 005896585-01 P= 0.708815 Days $T_0=132.137099$ (BKJD)



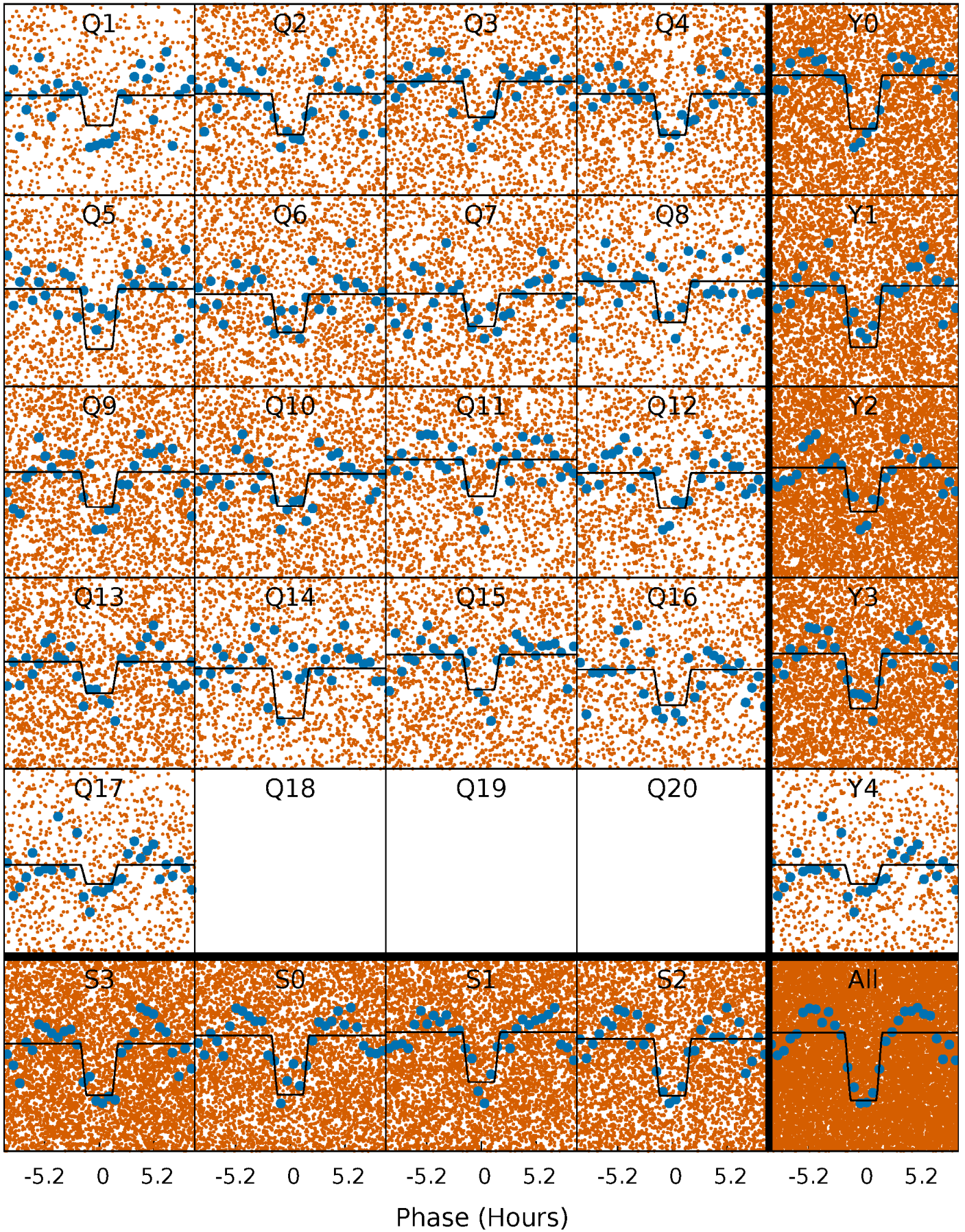
DV Quarter-Phased Transit Curves

TCE 005896585-01 P= 0.708815 Days $T_0=132.137099$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

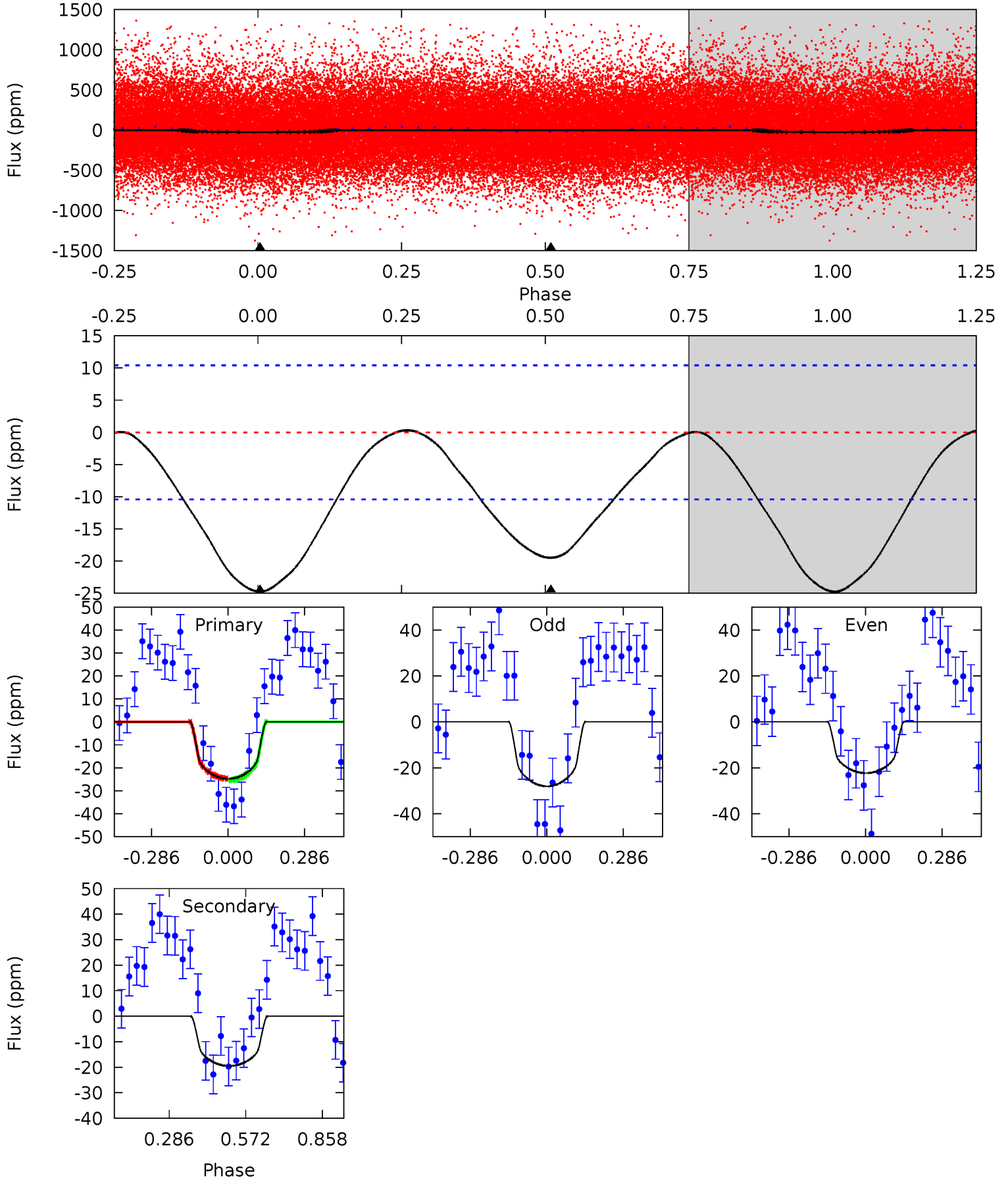
TCE 005896585-01 P= 0.708818 Days $T_0=132.136748$ (BKJD)



DV Model-Shift Uniqueness Test

005896585-01, P = 0.708815 Days, E = 131.428284 Days

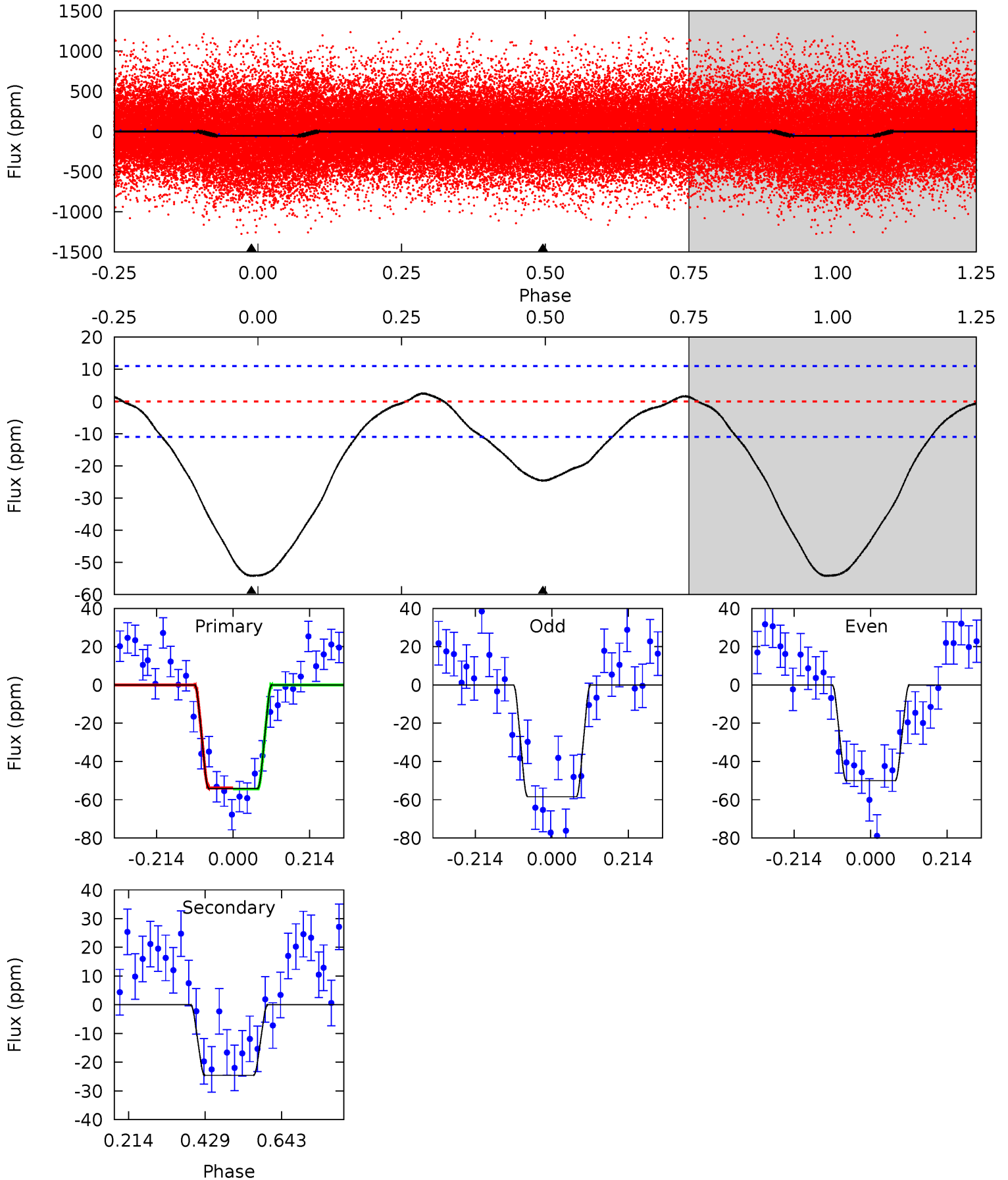
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	8.12	0	0	4.34	1.07	0.10	10.3	10.3	8.12	8.12	1.19	0.88	0.01	0.14



Alt Model-Shift Uniqueness Test

005896585-01, P = 0.708818 Days, E = 131.427930 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	9.83	0	0	4.40	1.24	0.70	21.7	21.7	9.83	9.83	1.67	0.98	0.04	0.10



Stellar Parameters For KIC 005896585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4514^{+134}_{-134}	$4.603^{+0.053}_{-0.021}$	$-0.120^{+0.300}_{-0.300}$	$0.674^{+0.044}_{-0.060}$	$0.663^{+0.067}_{-0.054}$	$3.052^{+0.707}_{-0.302}$
	+3%/-3%	+1%/-0%	+250%/-250%	+7%/-9%	+10%/-8%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005896585-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 2	$0.56^{+0.26}_{-0.26}$	1941^{+68}_{-67}	3656^{+934}_{-460}	$6.383^{+14.763}_{-3.420}$
Alt.	-25 ± 3	$0.53^{+0.28}_{-0.24}$	1949^{+63}_{-69}	3899^{+1049}_{-544}	$8.974^{+21.367}_{-5.099}$

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

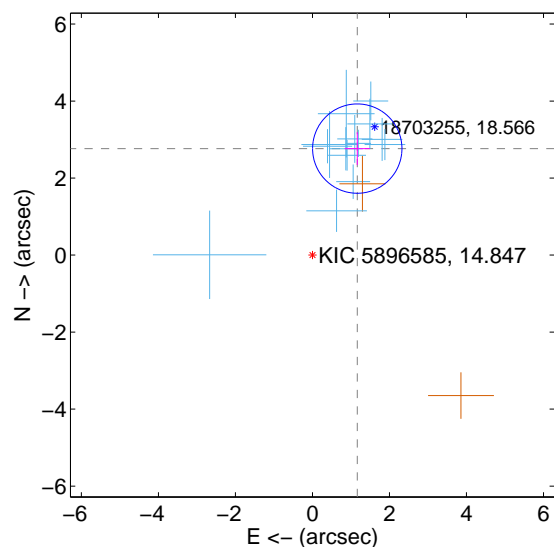
Supplemental centroid analysis for 005896585-01. Kepler magnitude: 14.85. Transit SNR 10.84

There are 14 quarters with good PRF difference image offsets

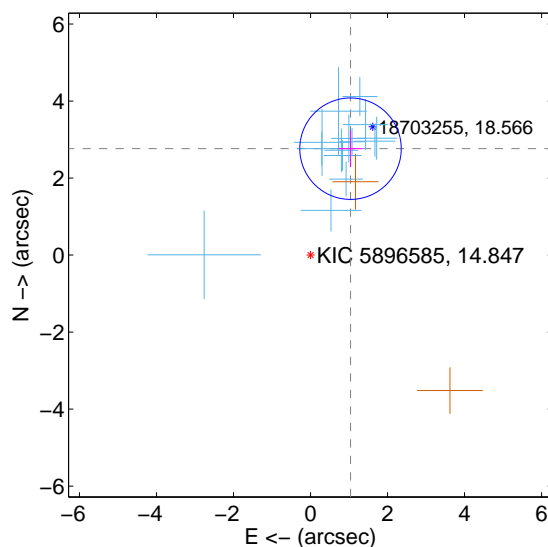
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.000 ± 0.387	7.76	-1.164 ± 0.327	2.765 ± 0.427
PRF-fit source offset from KIC position	2.952 ± 0.439	6.73	-1.039 ± 0.318	2.763 ± 0.472
photometric centroid source offset	2.13 ± 1.04	2.06	1.10 ± 1.10	1.82 ± 1.01

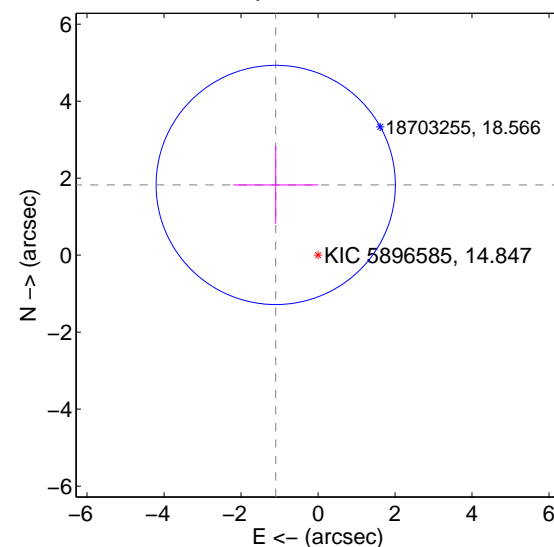
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

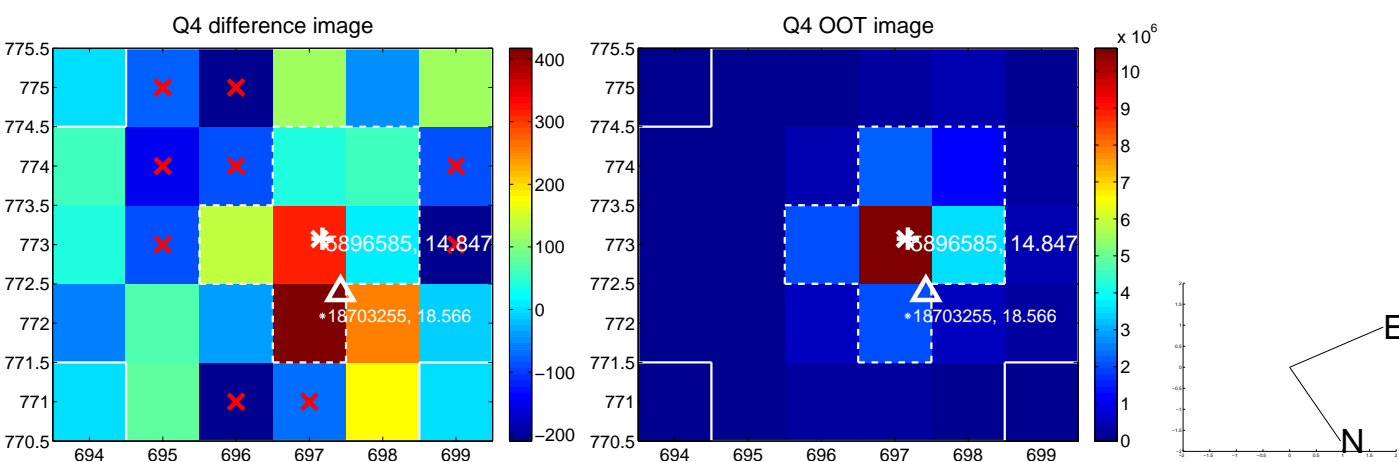
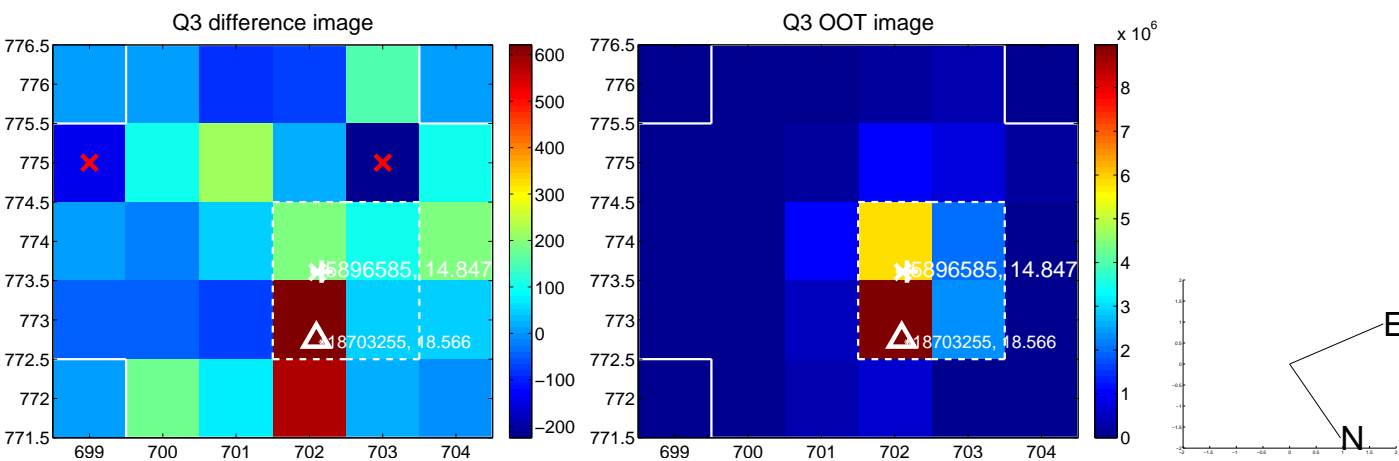
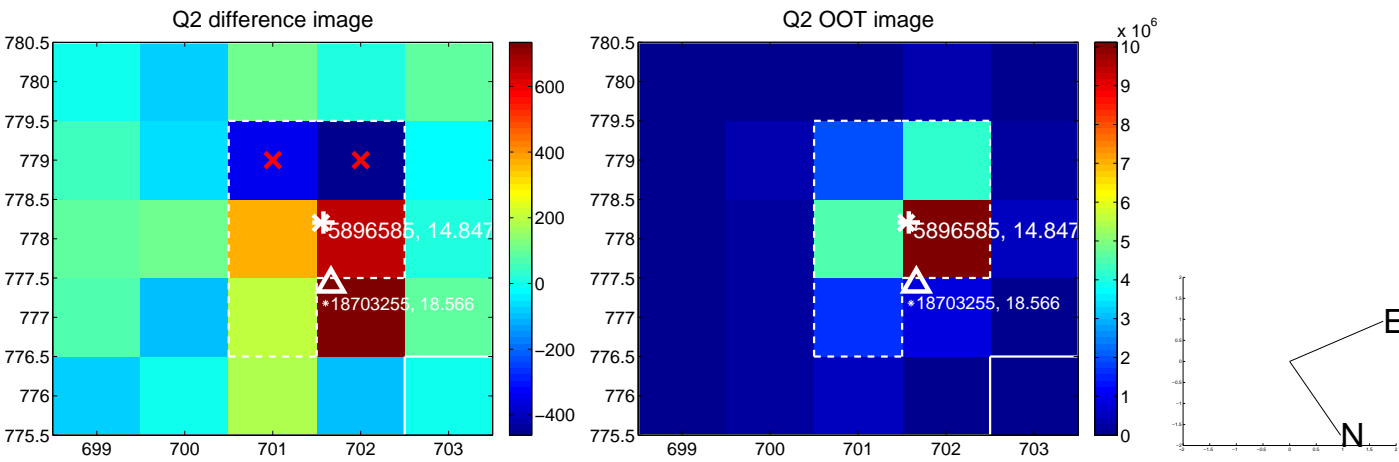
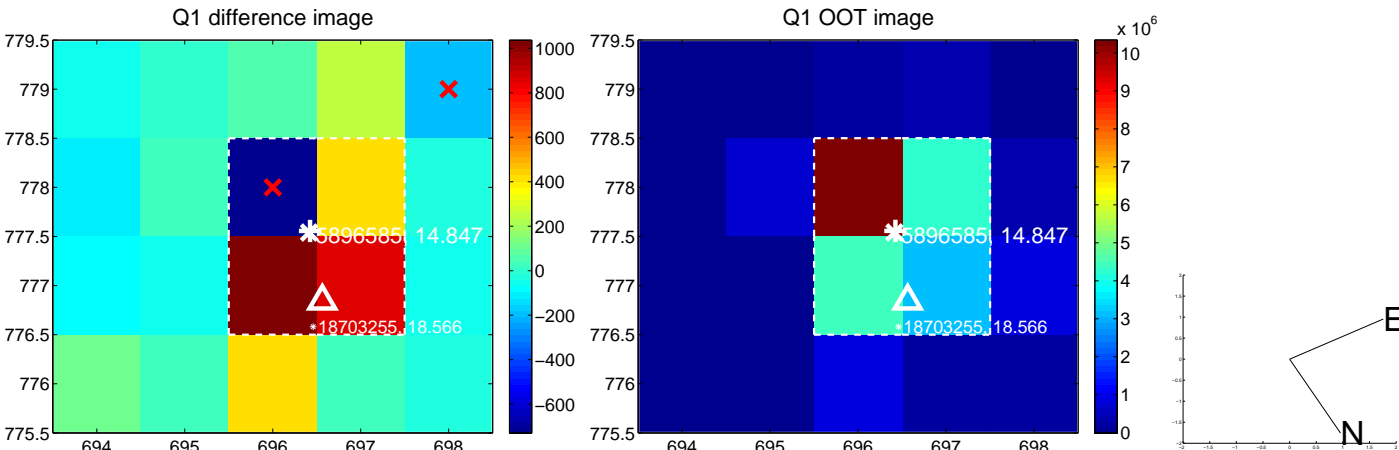


offset from photometric centroids

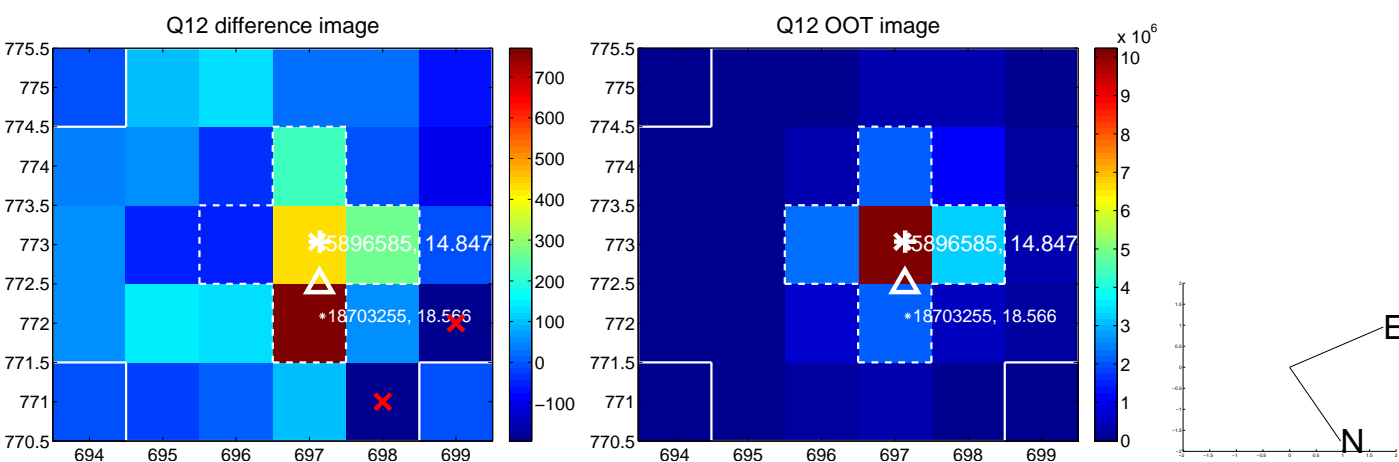
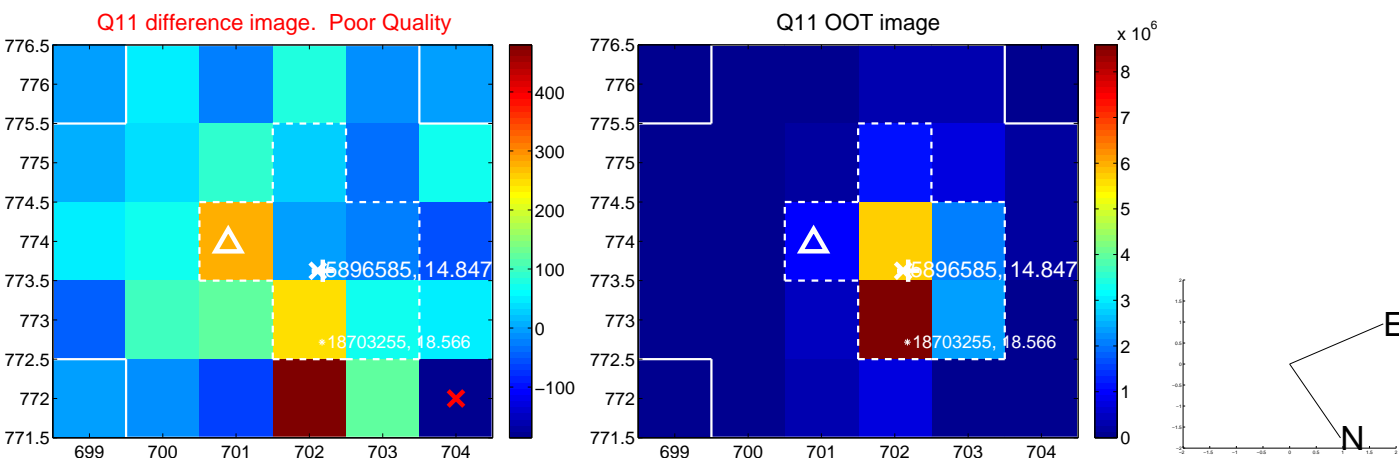
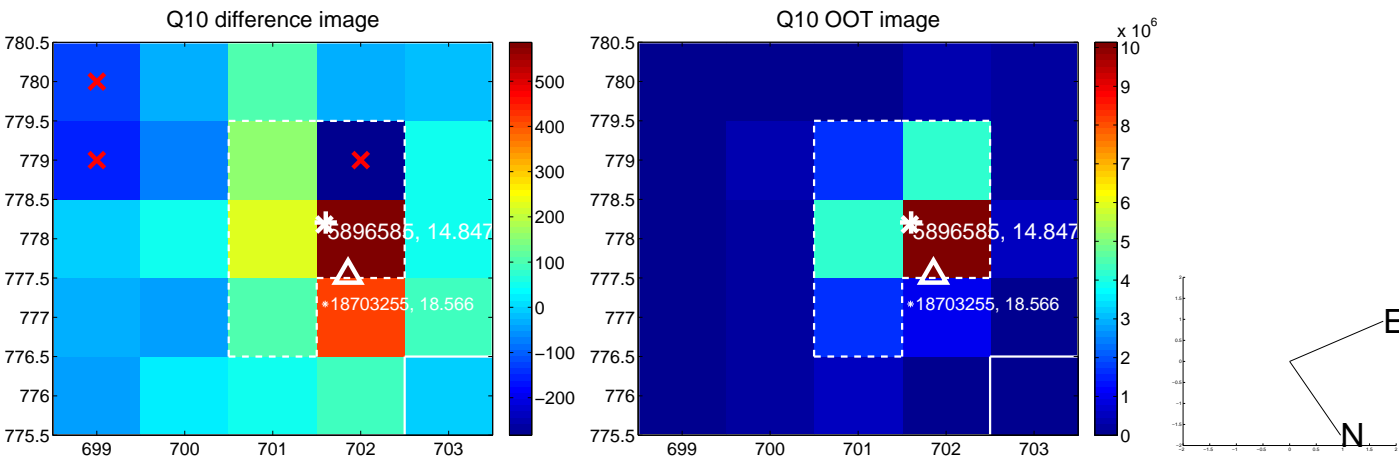
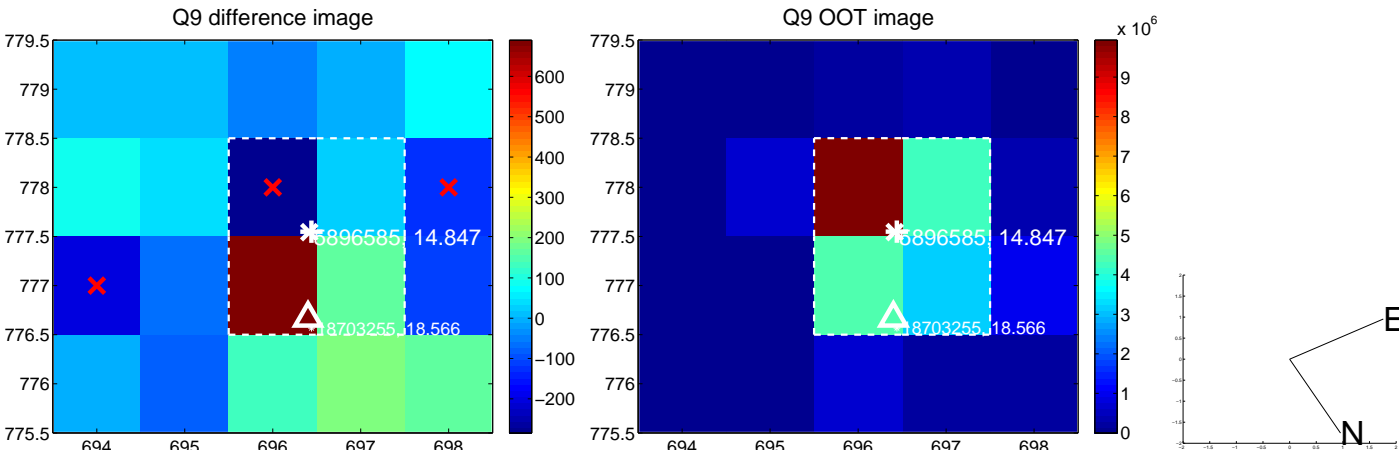


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

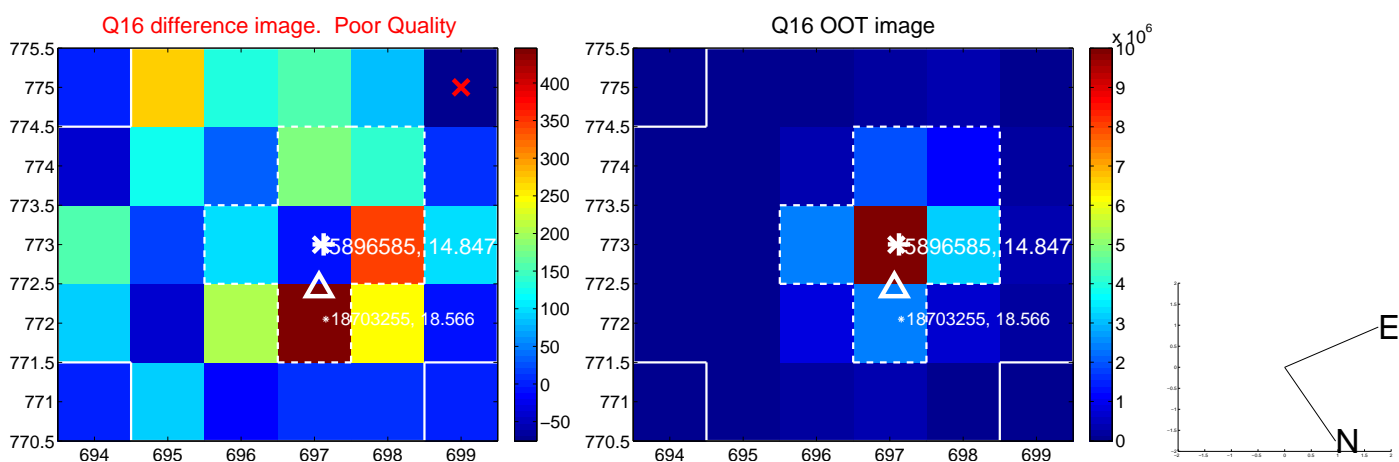
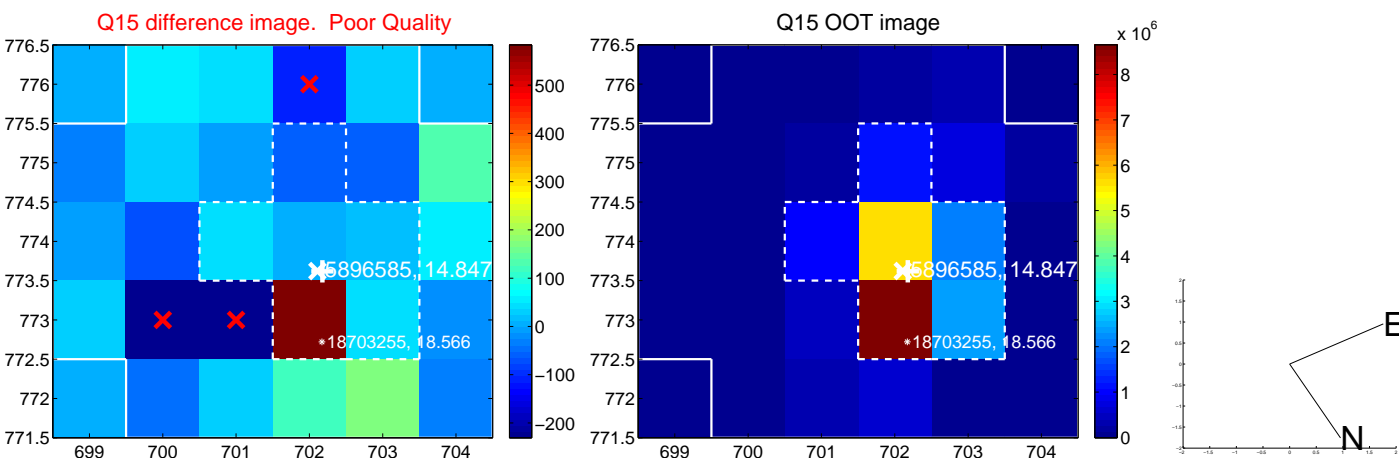
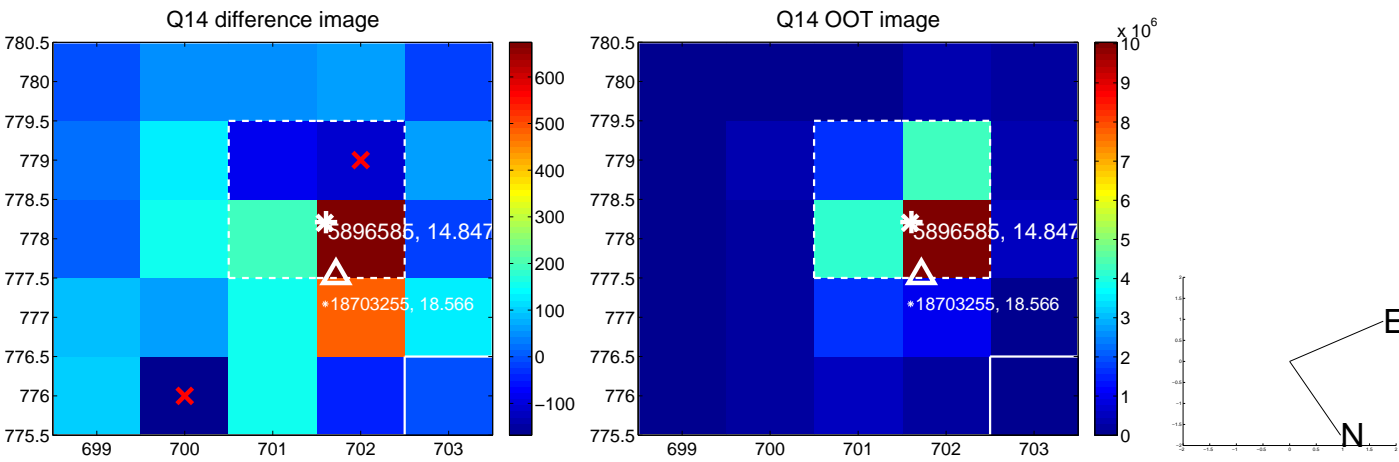
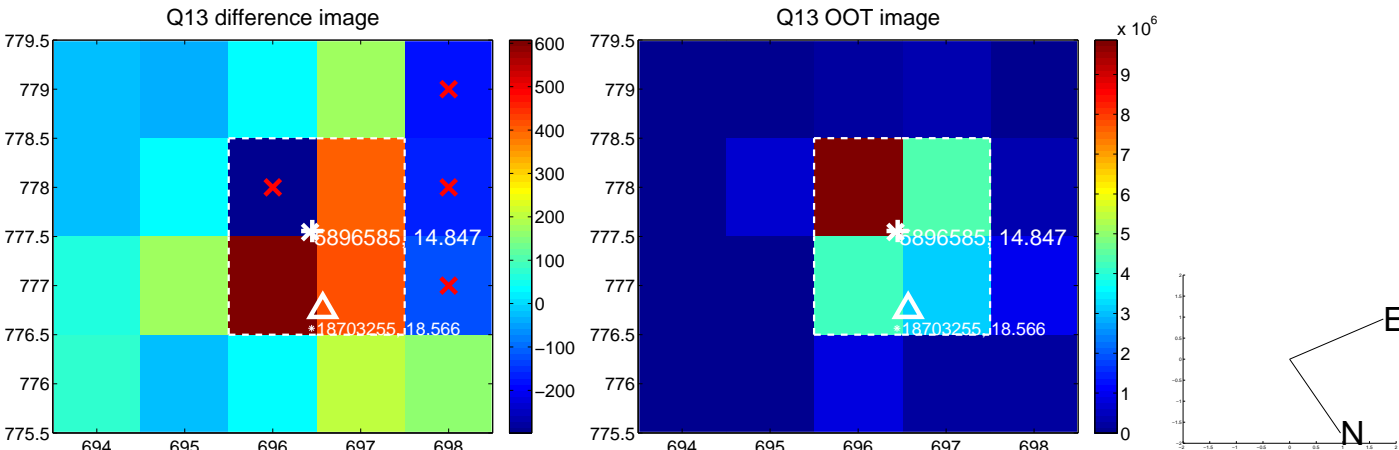
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



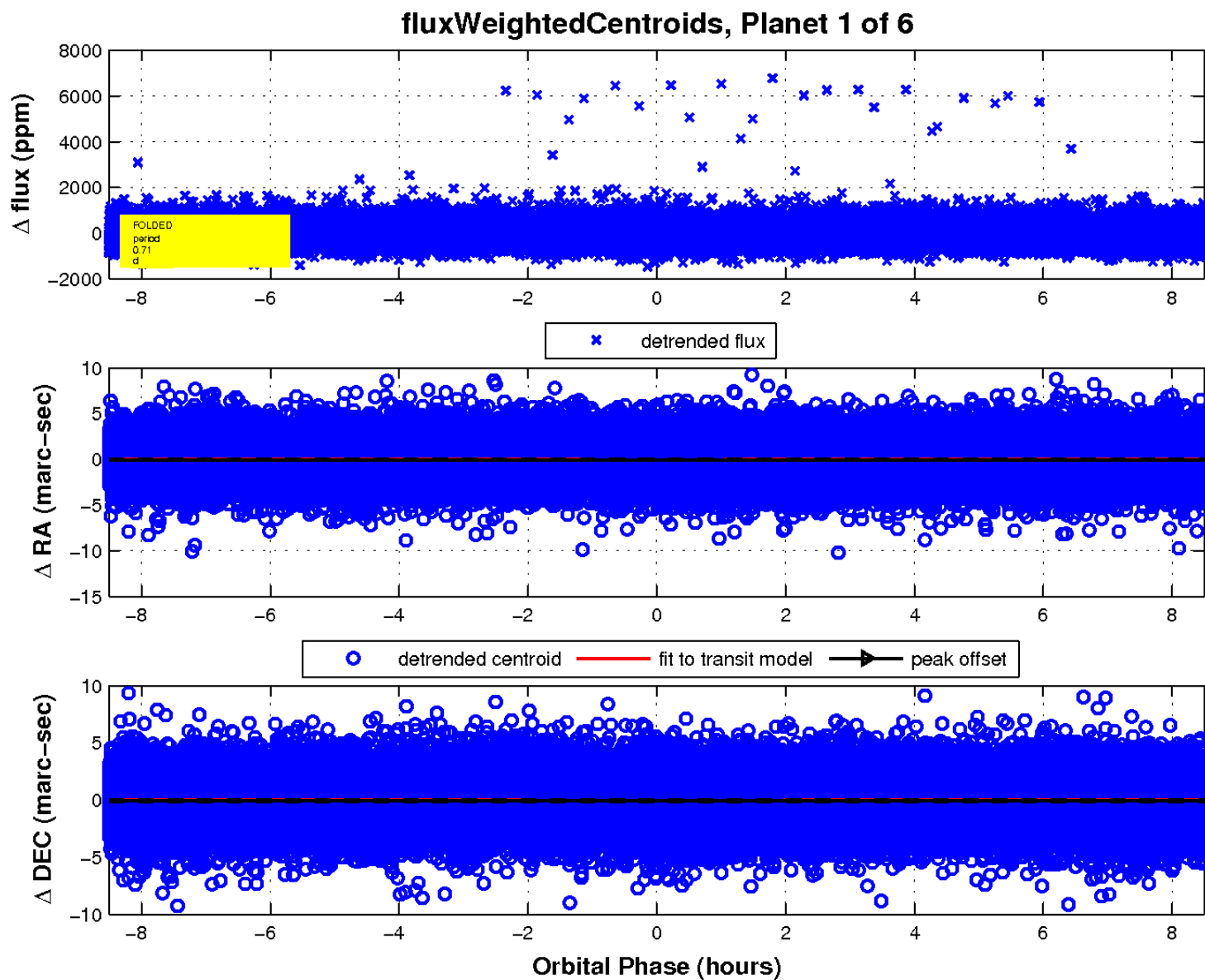
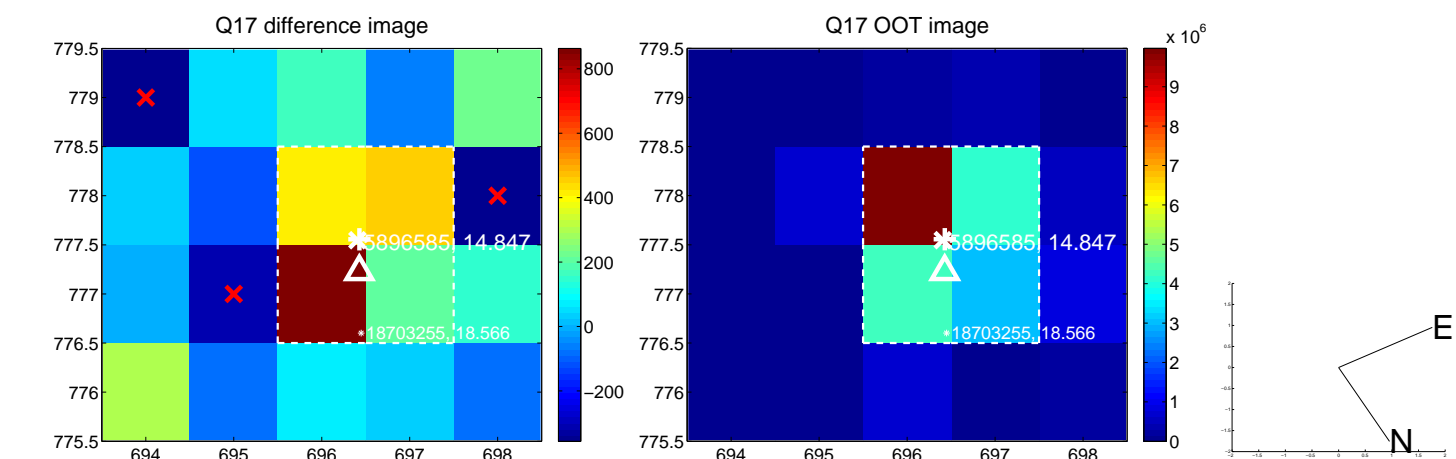
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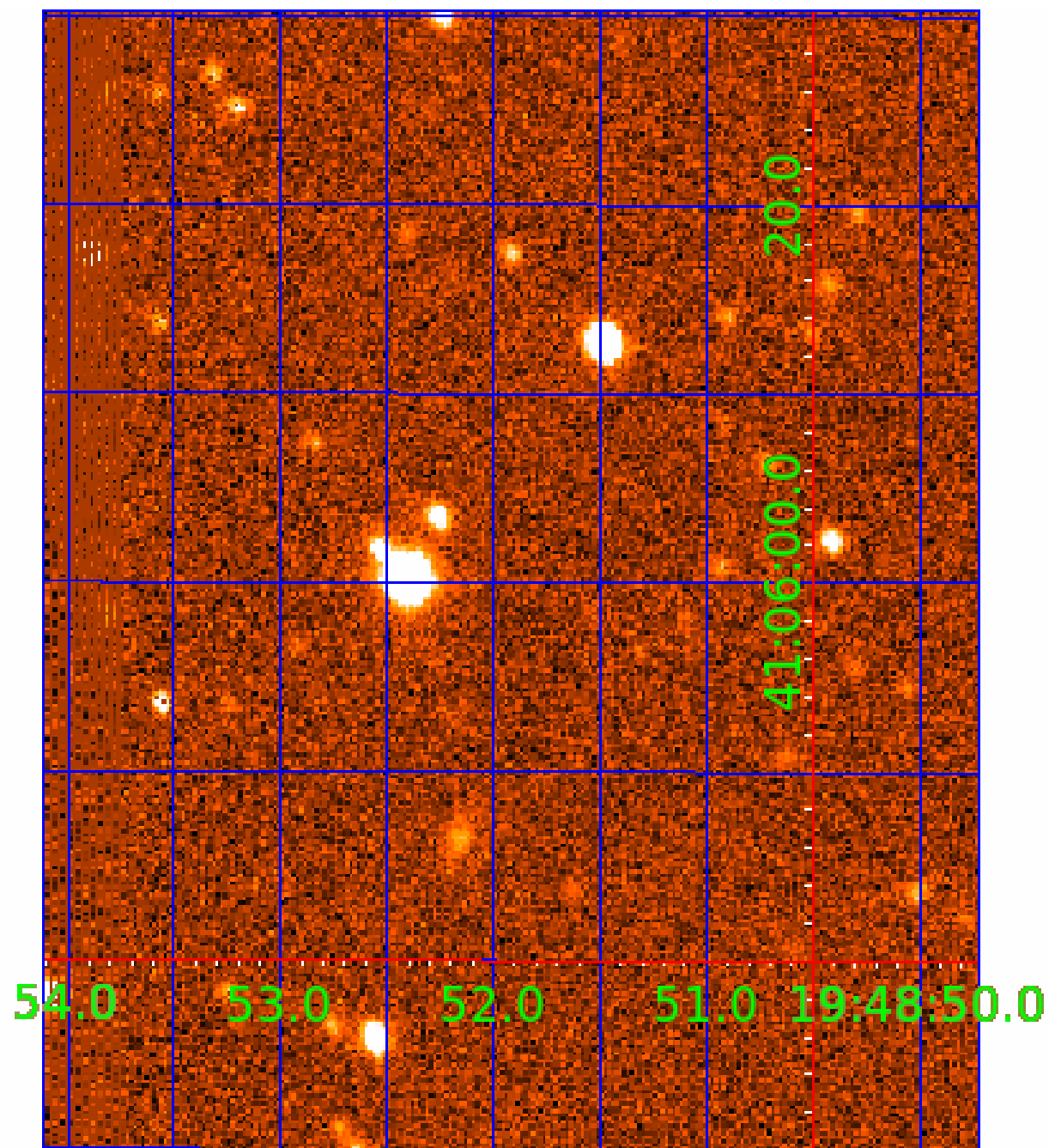


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UKIRT Image

Declination



KIC 005896585

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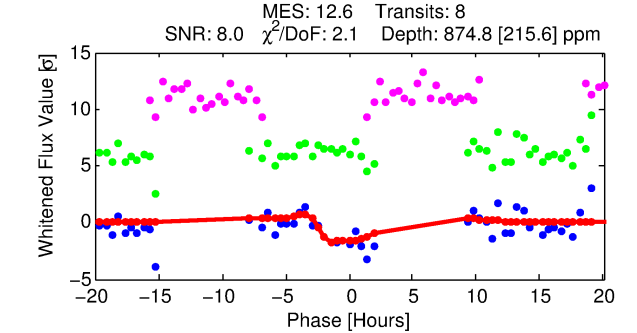
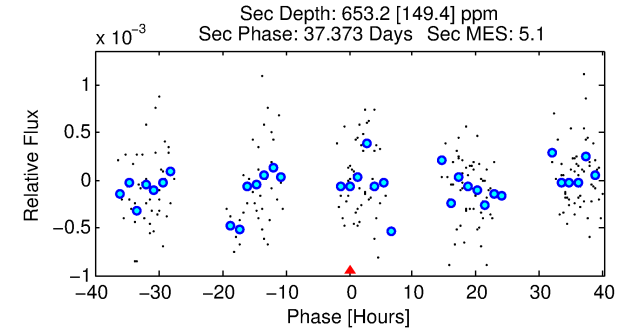
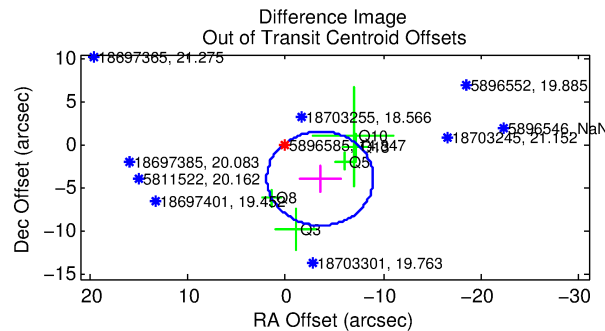
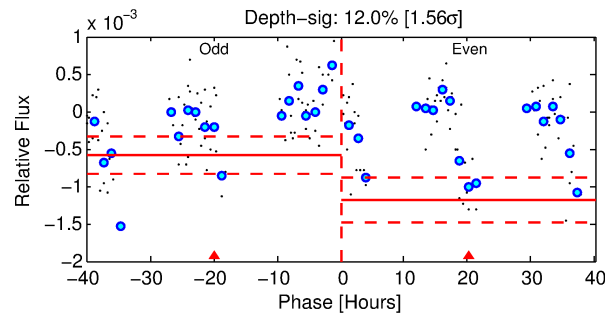
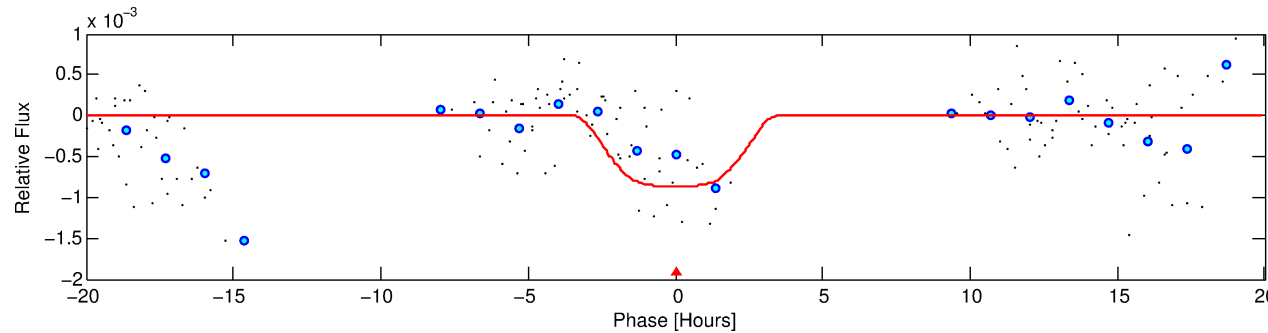
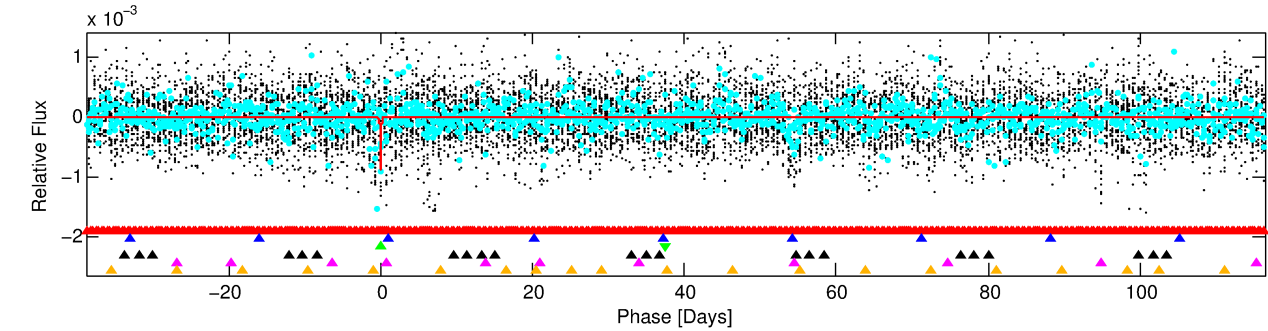
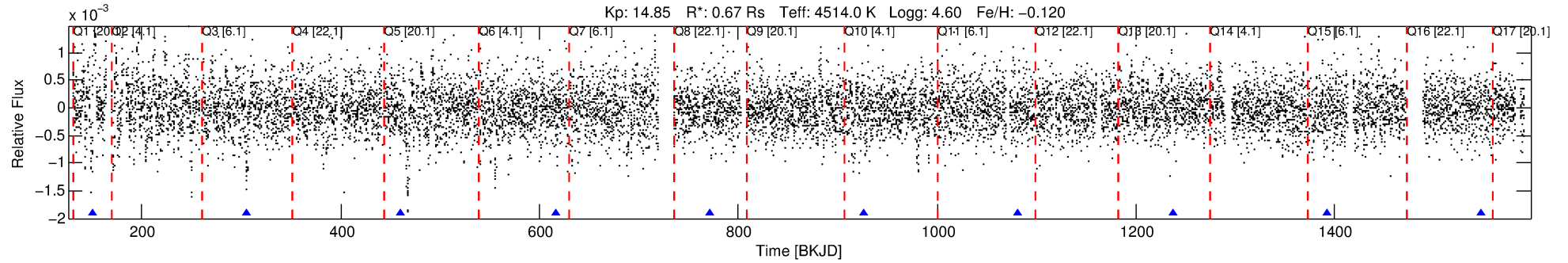
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005896585-03

No Significant Match Found

DV One-Page Summary

KIC: 5896585 Candidate: 3 of 6 Period: 155.262 d



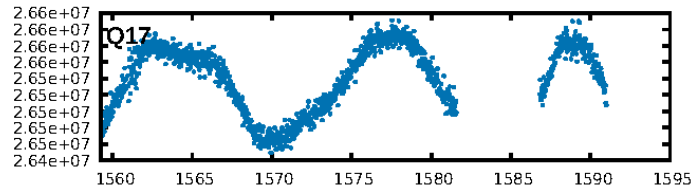
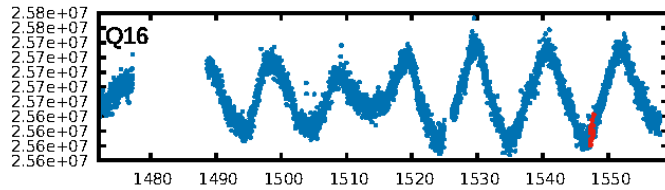
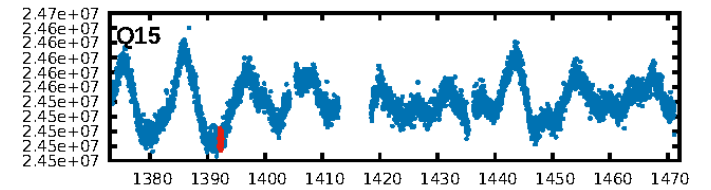
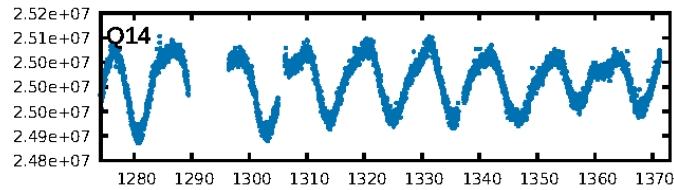
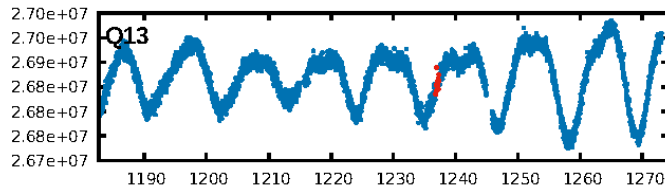
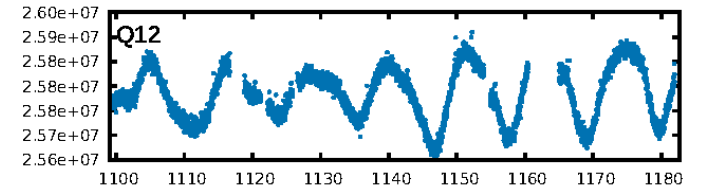
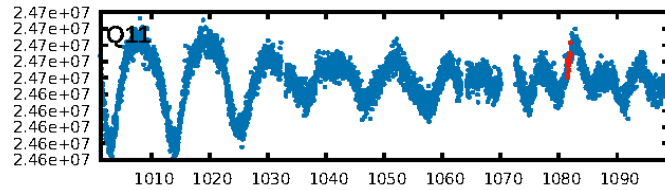
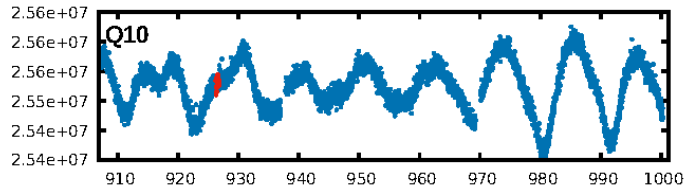
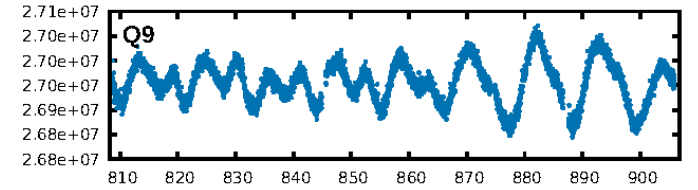
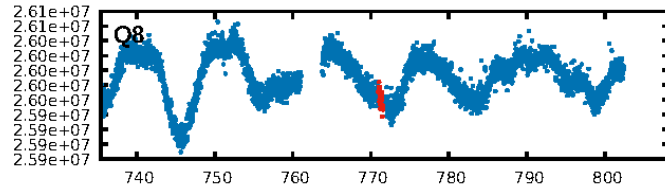
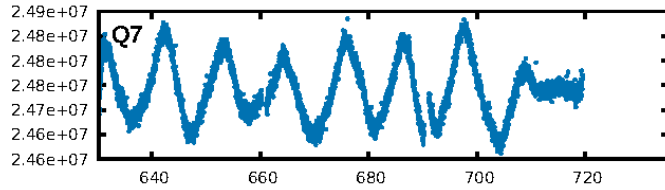
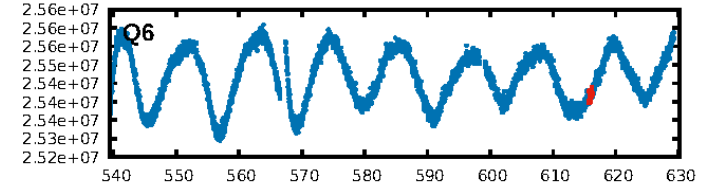
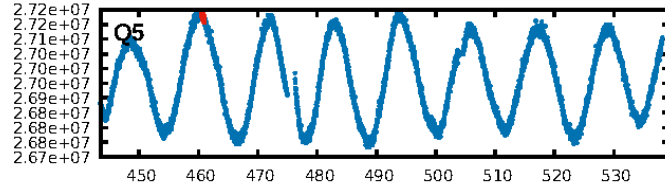
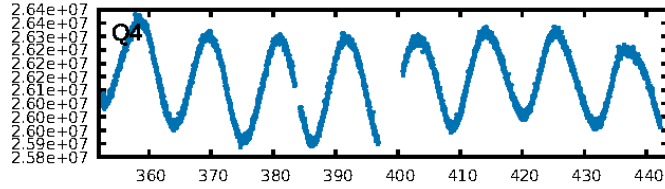
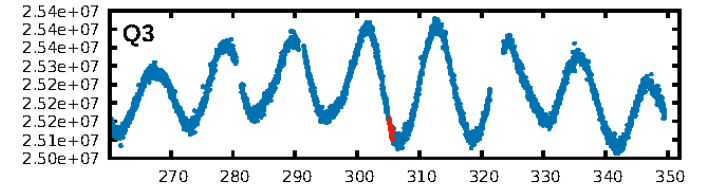
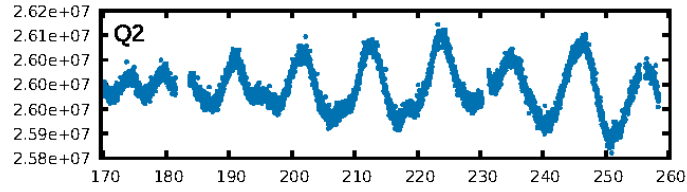
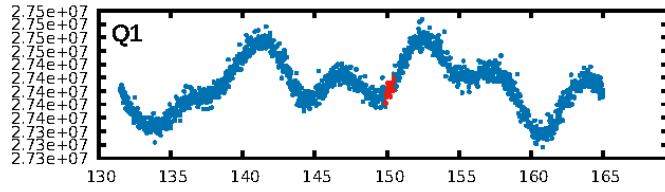
DV Fit Results:

Period = 155.26167 [0.00877] d
Epoch = 150.1925 [0.0344] BKJD
Rp/R* = 0.0363 [0.0063]
a/R* = 74.25 [34.26]
b = 0.95 [0.04]
Seff = 0.69 [0.11]
Teq = 233 [9] K
Rp = 2.67 [0.52] Re
a = 0.4934 [0.0355] AU
Ag = 12282.56 [5232.47] [2.35 σ]
Teffp = 3788 [408] K [8.72 σ]

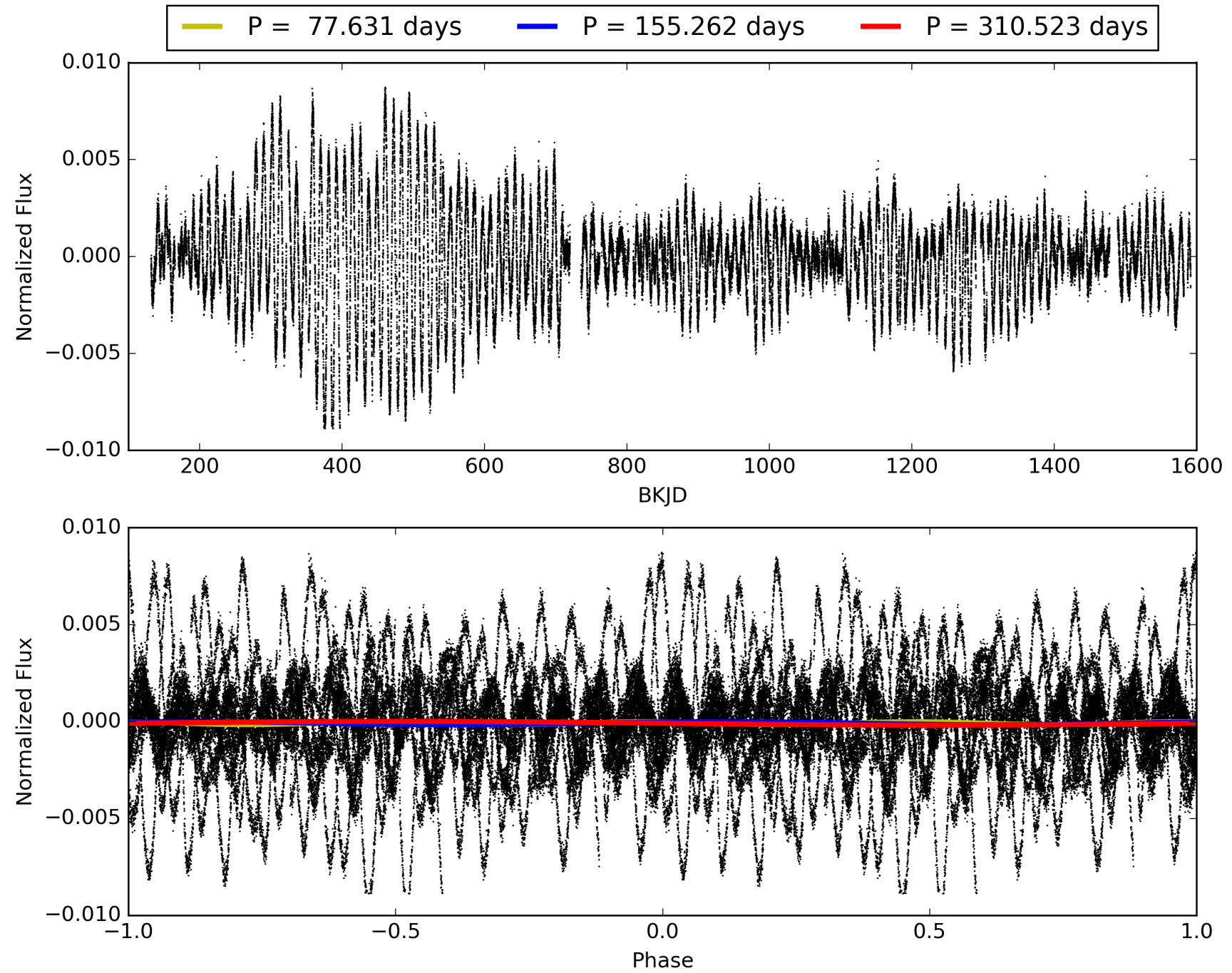
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [48.66 σ]
LongPeriod-sig: 100.0% [40.69 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.84e-18
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 2.046
Centroid-sig: 2.1%
Centroid-so: 0.976 arcsec [1.54 σ]
OotOffset-rm: 5.245 arcsec [2.89 σ]
KicOffset-rm: 5.149 arcsec [2.84 σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.00 [0/10]

TCE 005896585-03, PDC Light Curves

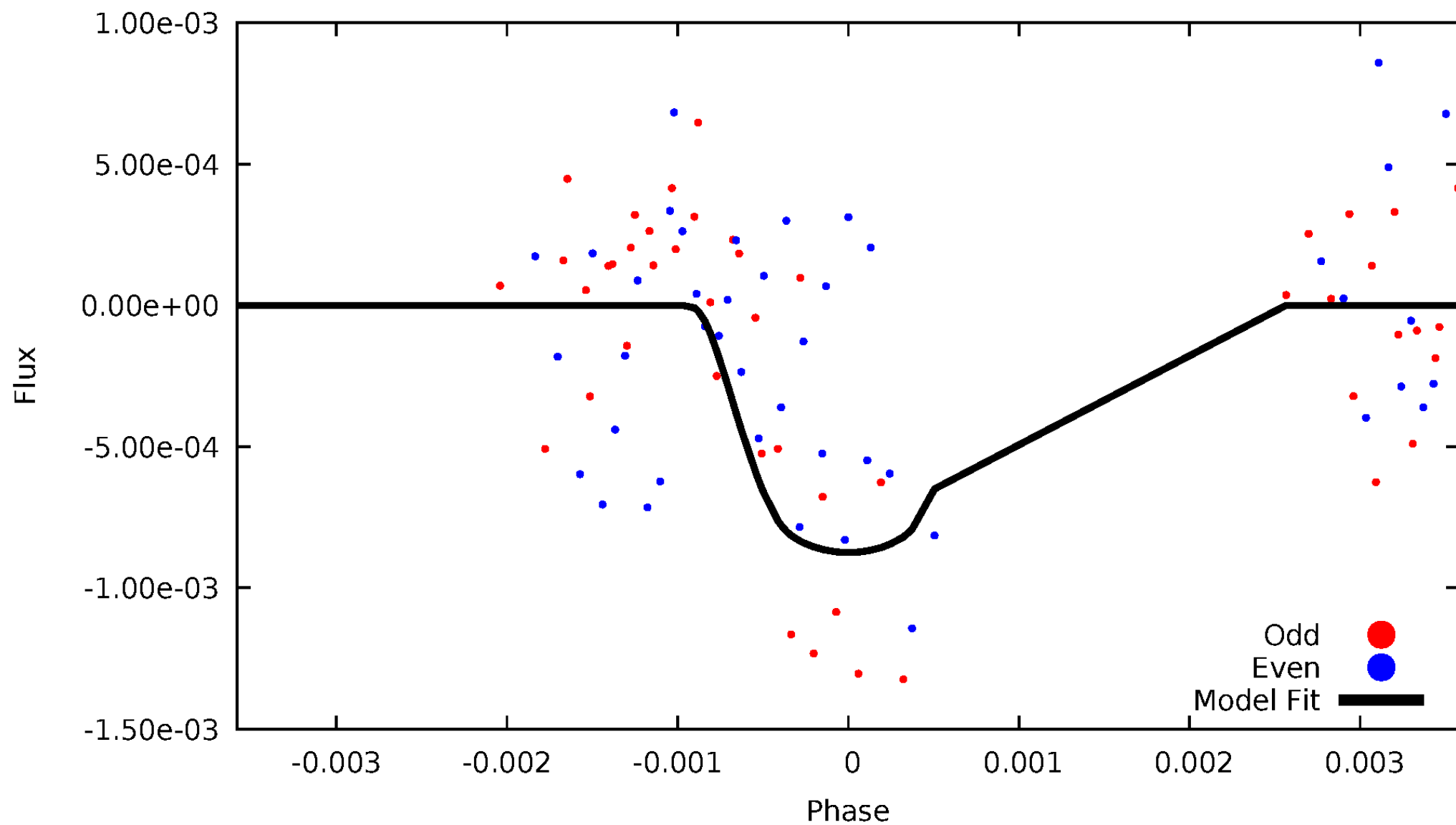


TCE 005896585-03



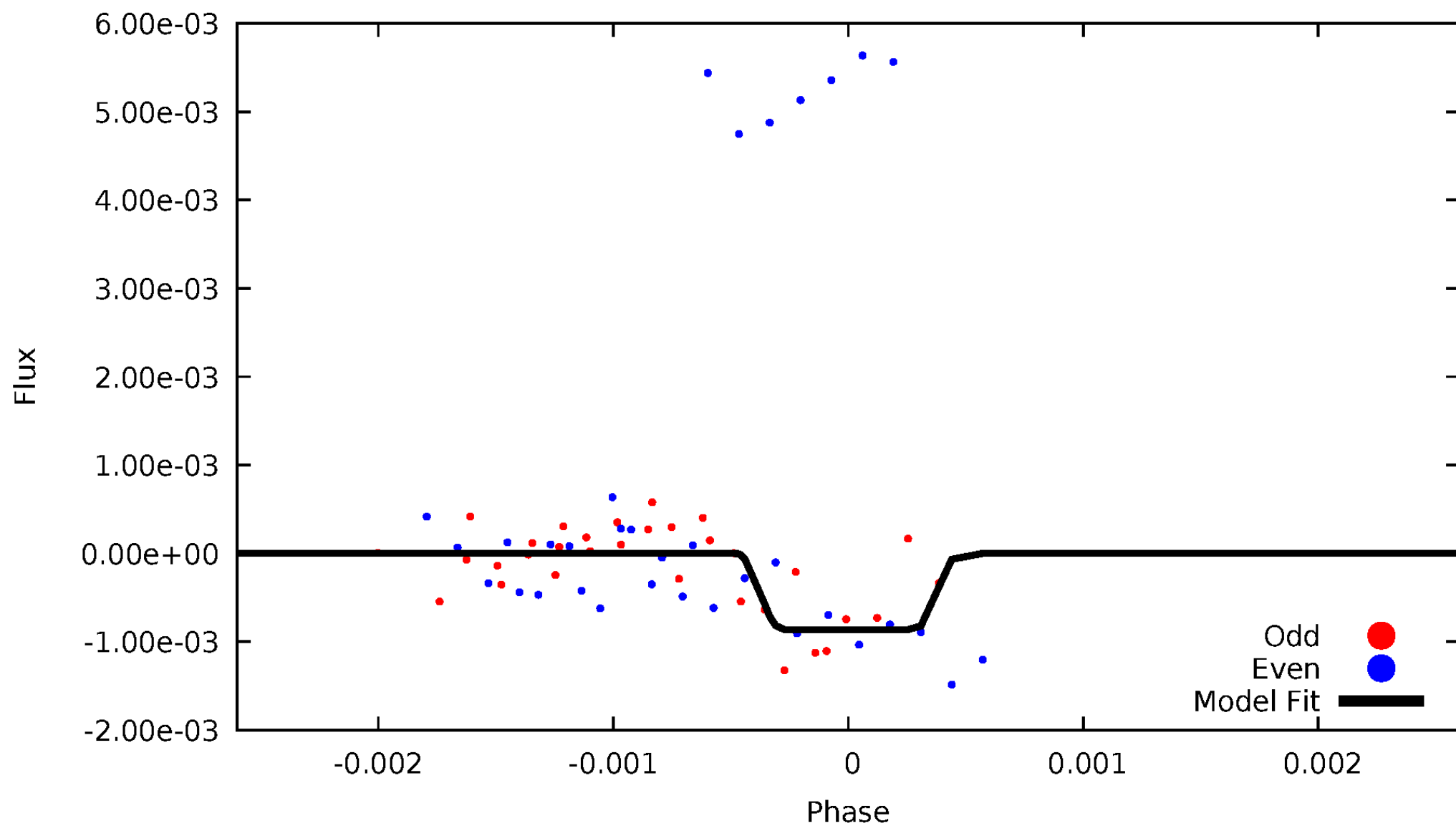
DV Odd/Even

TCE 005896585-03



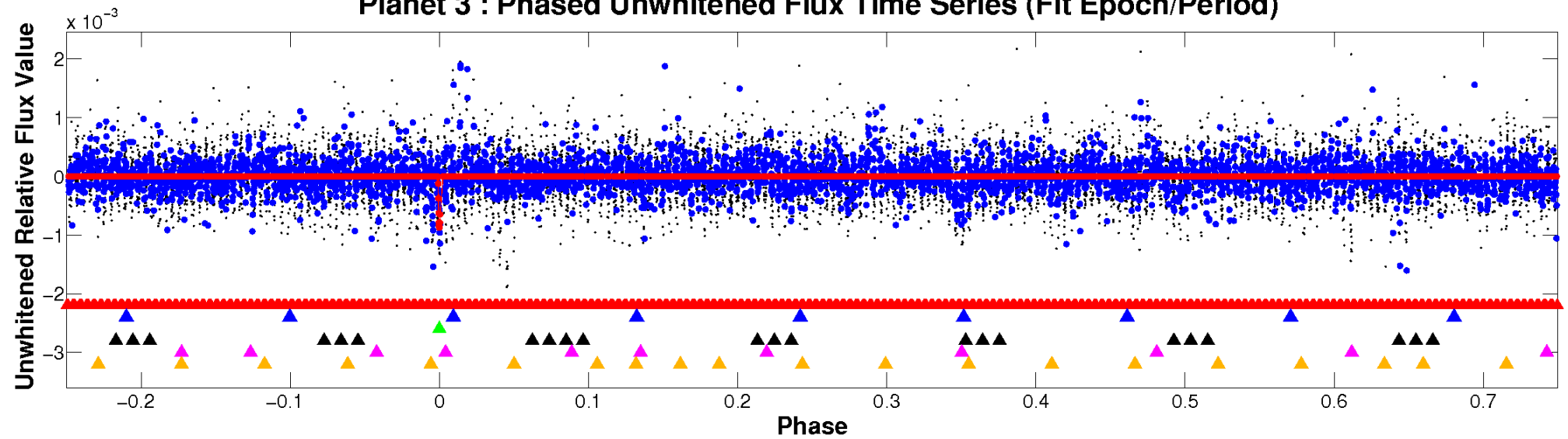
ALT Odd/Even

TCE 005896585-03

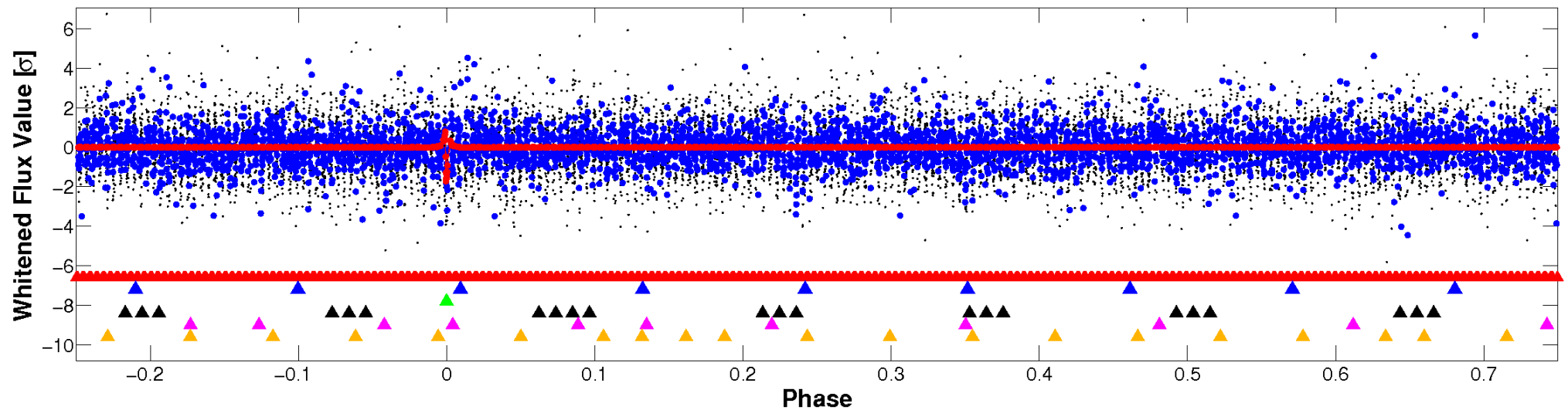


Non-Whitened Vs. Whitened Light Curve

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

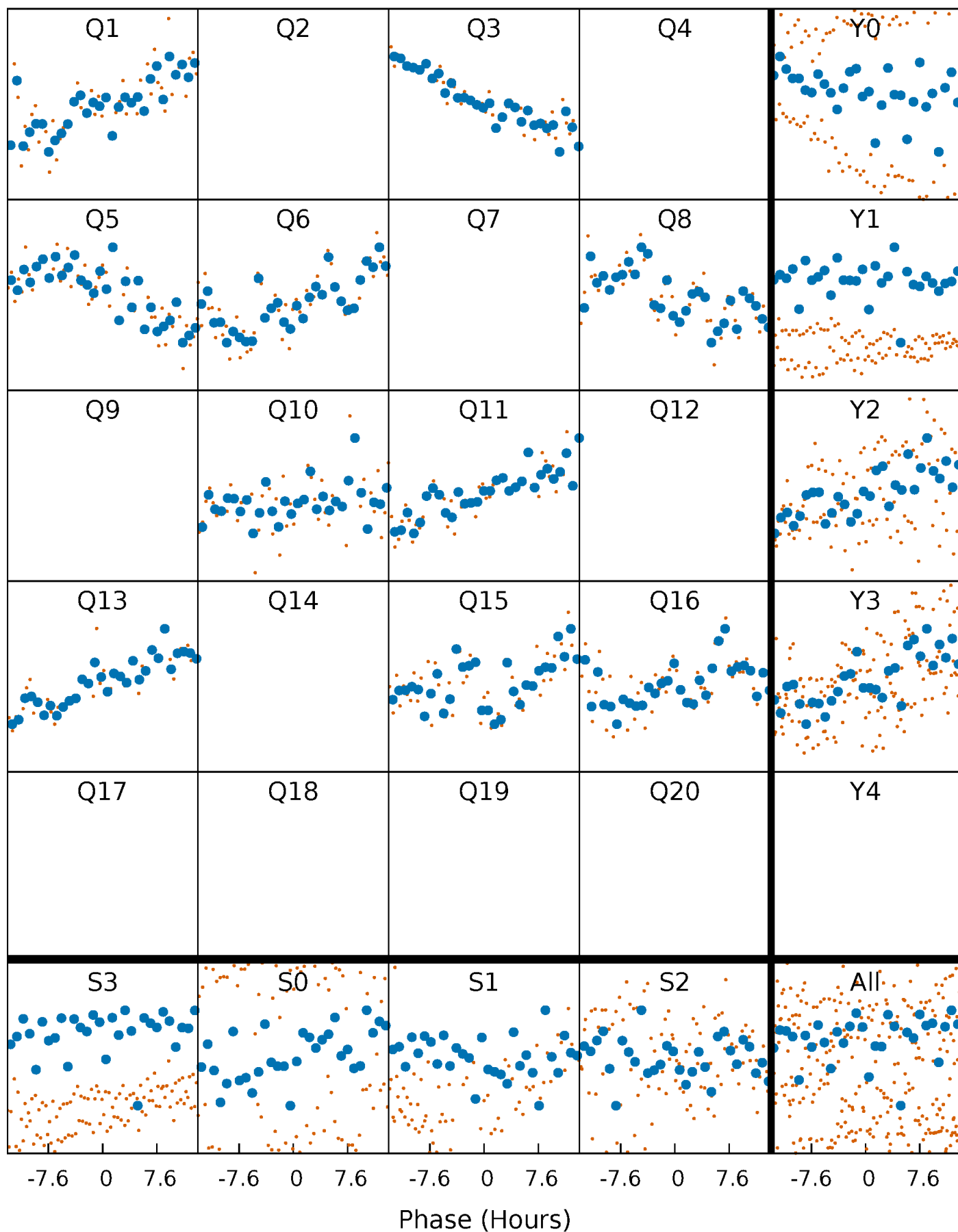


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



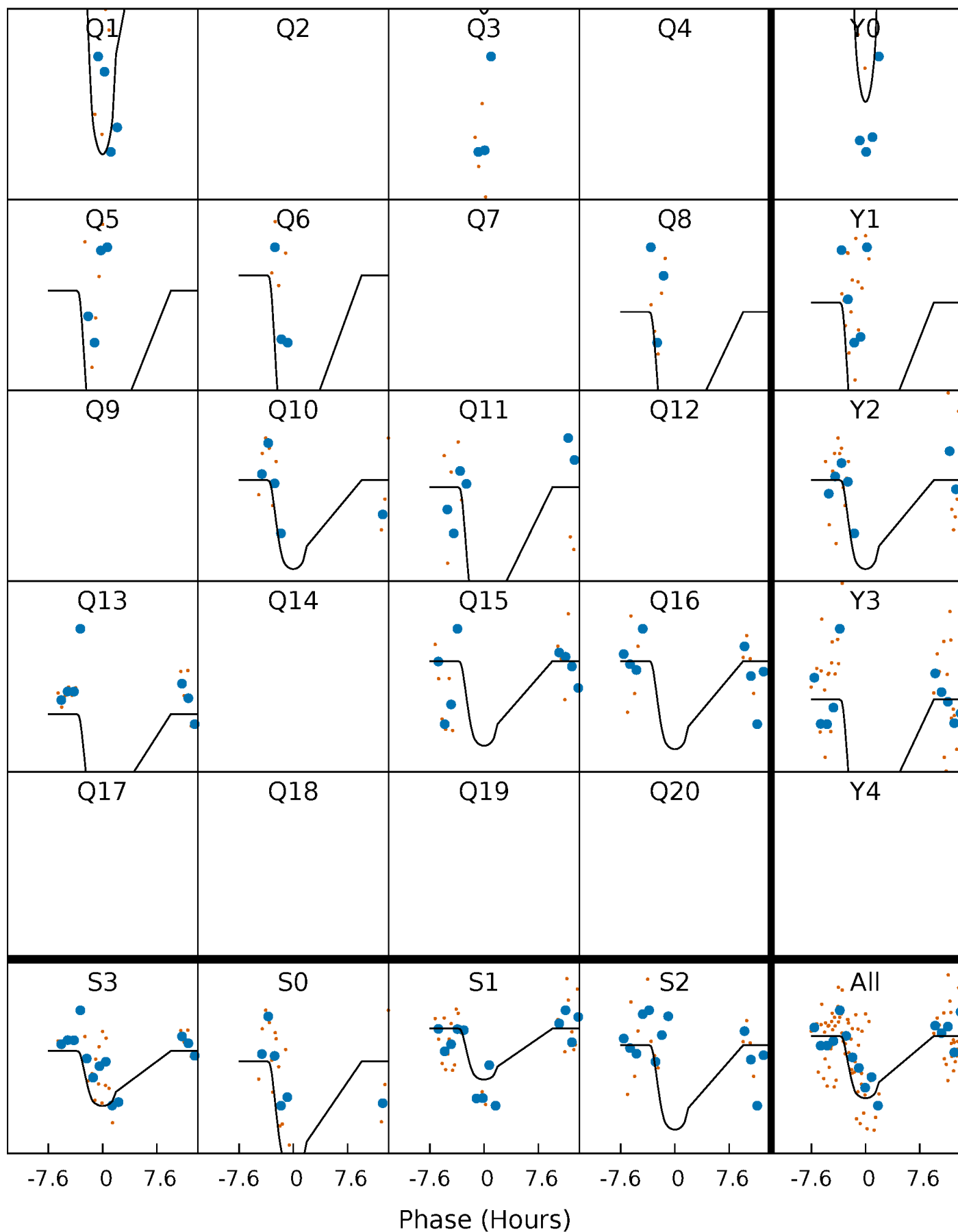
PDC Quarter-Phased Transit Curves

TCE 005896585-03 P=155.261669 Days $T_0=150.192489$ (BKJD)



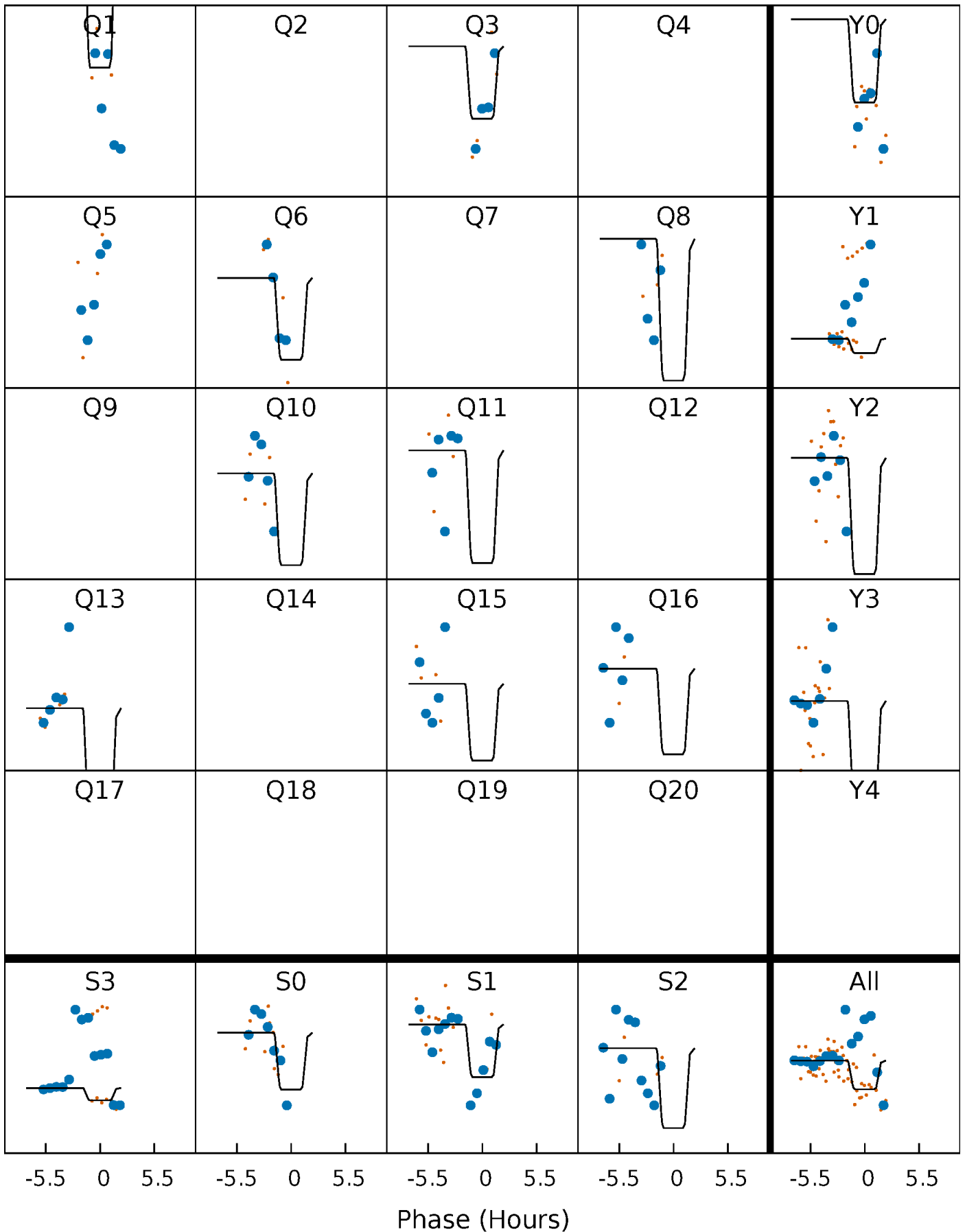
DV Quarter-Phased Transit Curves

TCE 005896585-03 P=155.261669 Days $T_0=150.192489$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

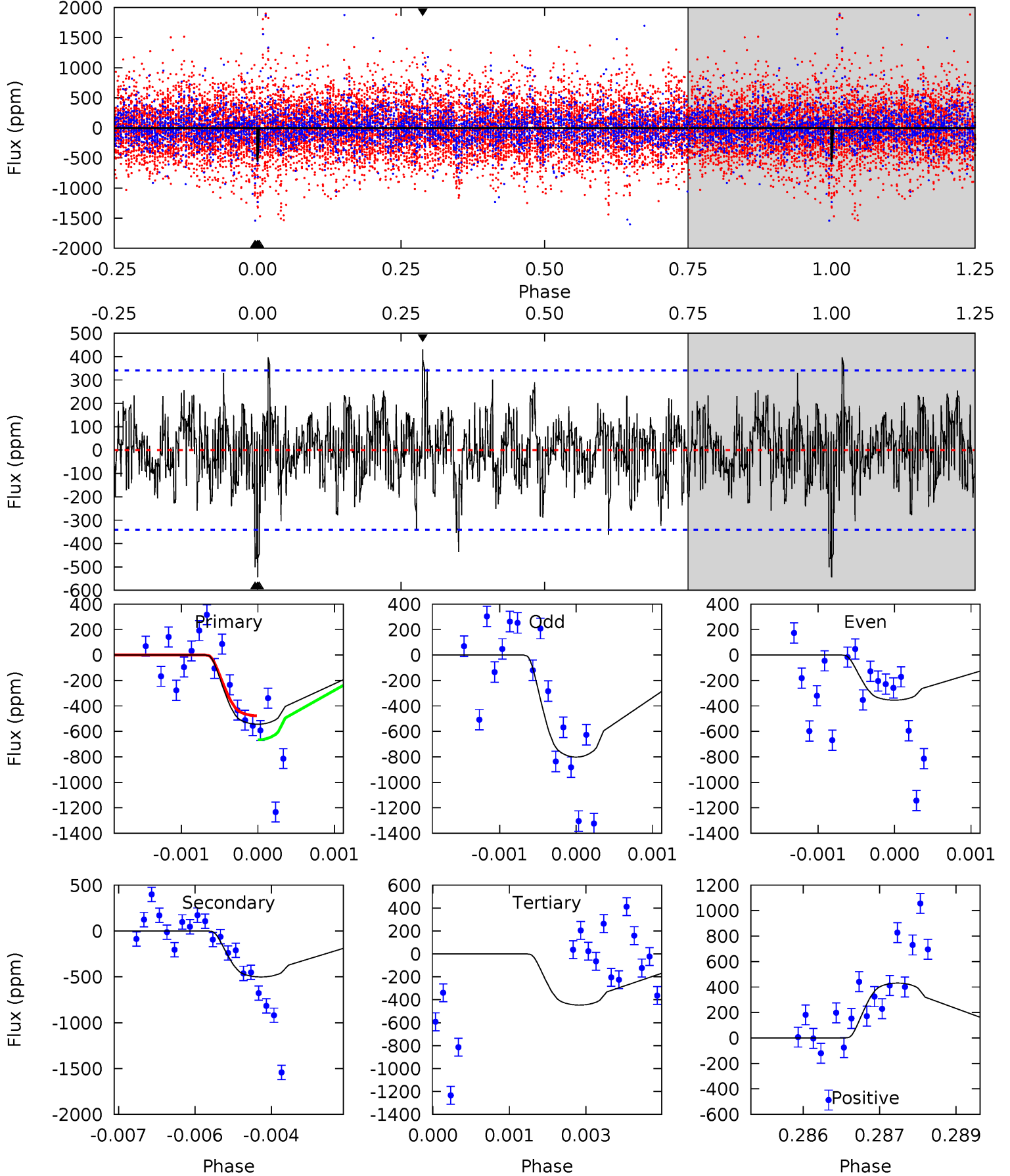
TCE 005896585-03 P=155.262154 Days $T_0=150.182213$ (BKJD)



DV Model-Shift Uniqueness Test

005896585-03, P = 155.261669 Days, E = 150.192489 Days

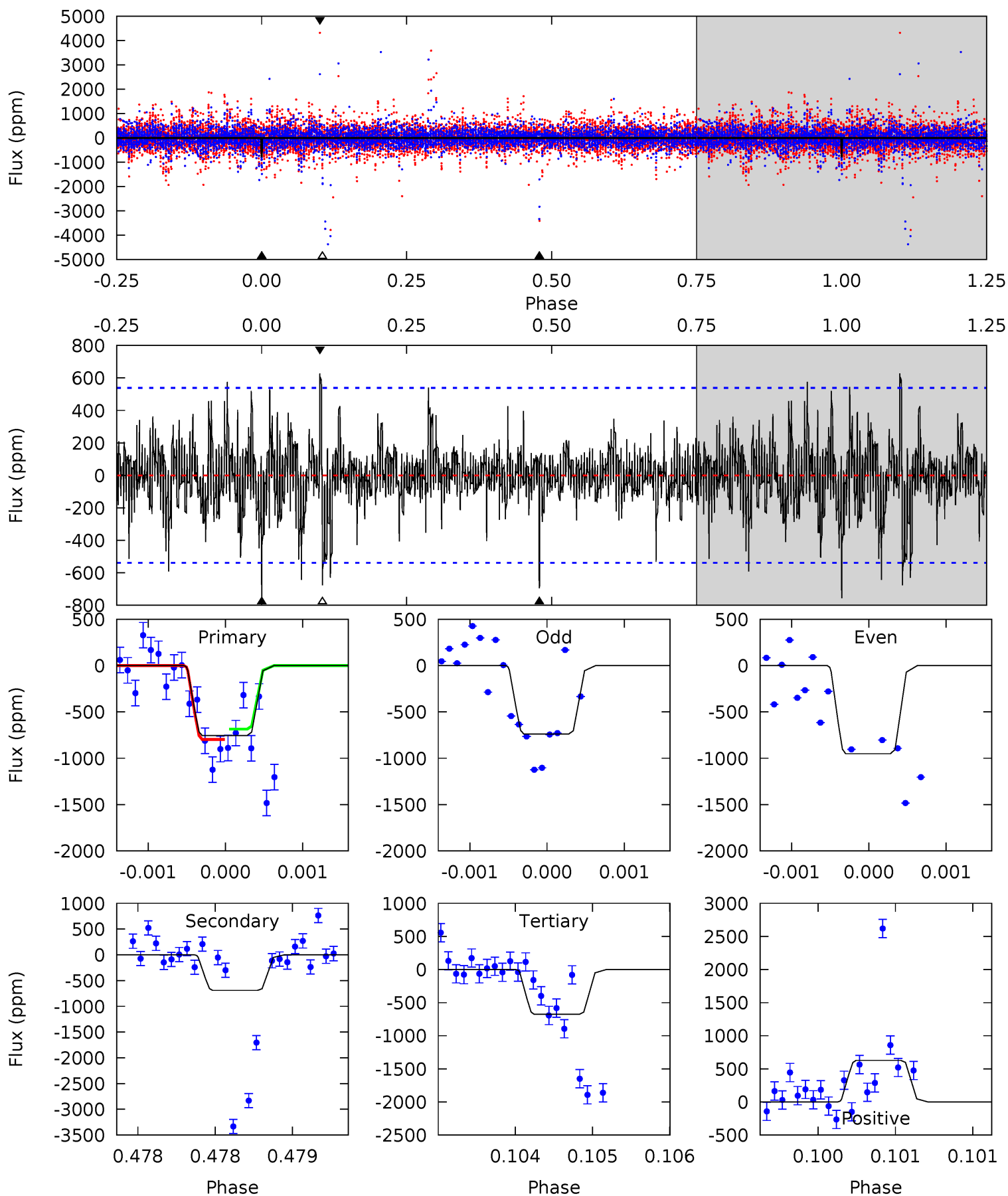
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.60	7.93	7.06	6.82	5.39	3.19	1.67	1.54	1.78	0.87	1.11	3.55	1.24	0.44	1.24



Alt Model-Shift Uniqueness Test

005896585-03, P = 155.262154 Days, E = 150.182213 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	7.02	6.87	6.37	5.47	3.32	1.36	0.80	1.30	0.15	0.65	0.58	-0.85	0.45	0.54



Stellar Parameters For KIC 005896585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4514^{+134}_{-134}	$4.603^{+0.053}_{-0.021}$	$-0.120^{+0.300}_{-0.300}$	$0.674^{+0.044}_{-0.060}$	$0.663^{+0.067}_{-0.054}$	$3.052^{+0.707}_{-0.302}$
	+3%/-3%	+1%/-0%	+250%/-250%	+7%/-9%	+10%/-8%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005896585-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-501 ± 63	$2.70^{+0.44}_{-0.50}$	324^{+11}_{-12}	3777^{+286}_{-255}	9304^{+4729}_{-2732}
Alt.	-691 ± 98	$2.15^{+0.46}_{-0.43}$	322^{+12}_{-11}	4284^{+456}_{-309}	20163^{+12101}_{-6935}

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 $A_{obs} \gg 1.0$

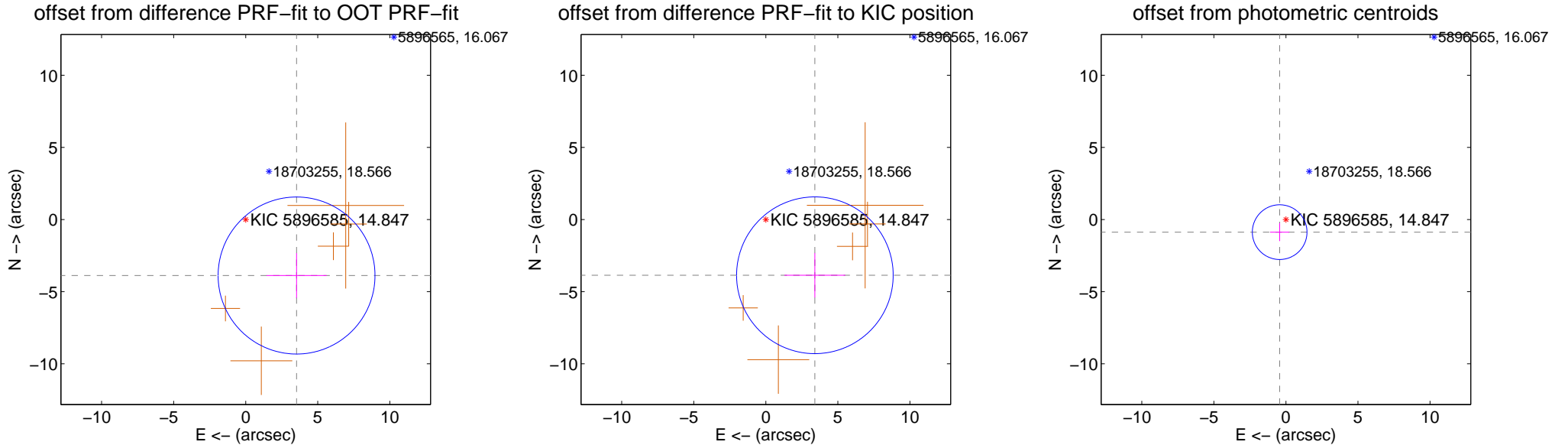
DV Centroid Data

Supplemental centroid analysis for 005896585-03. Kepler magnitude: 14.85. Transit SNR 8.04

There are 0 quarters with good PRF difference image offsets

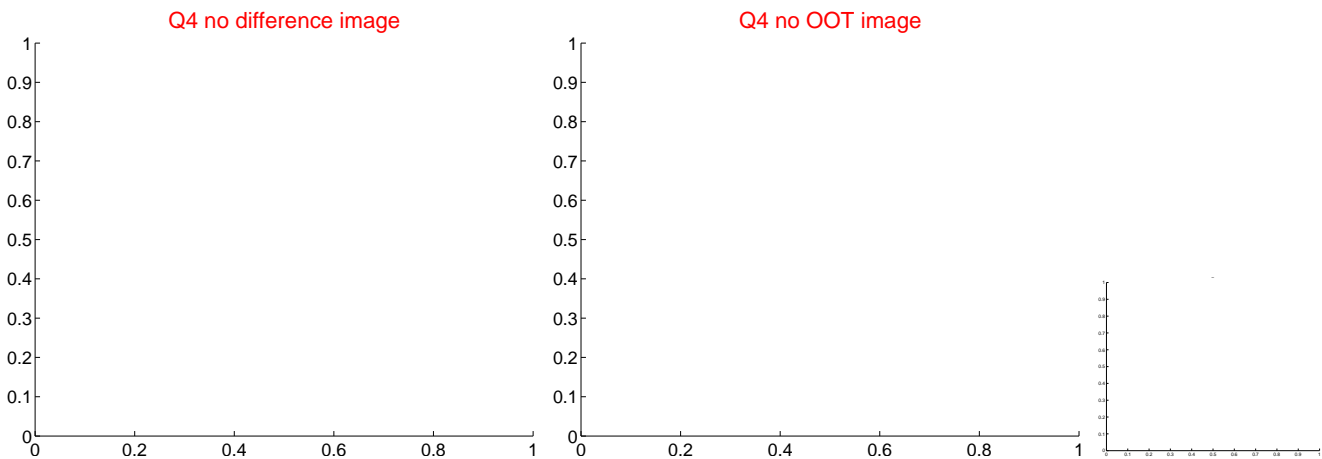
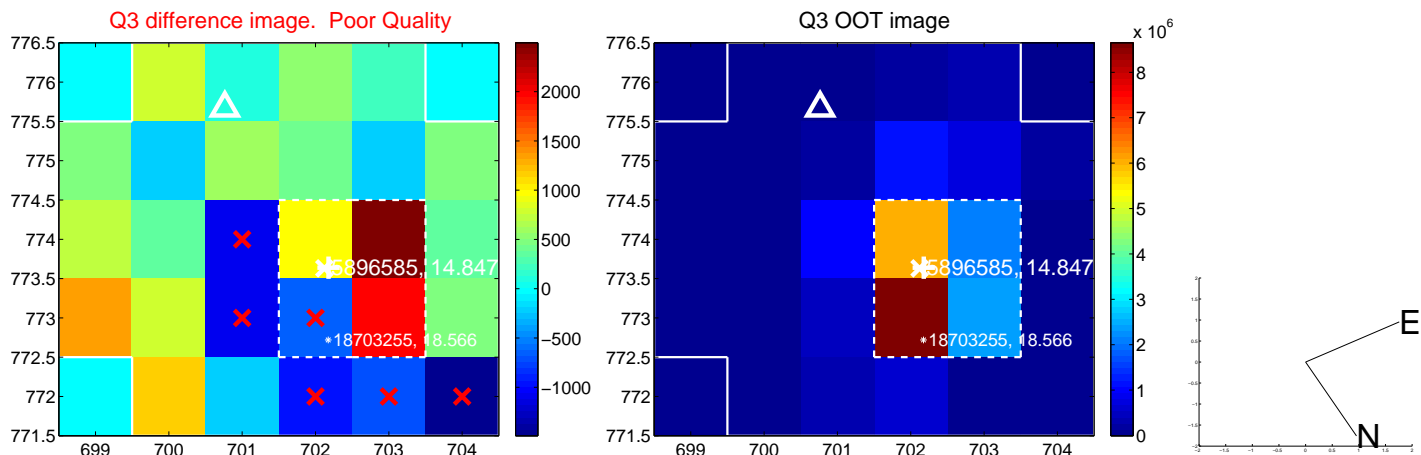
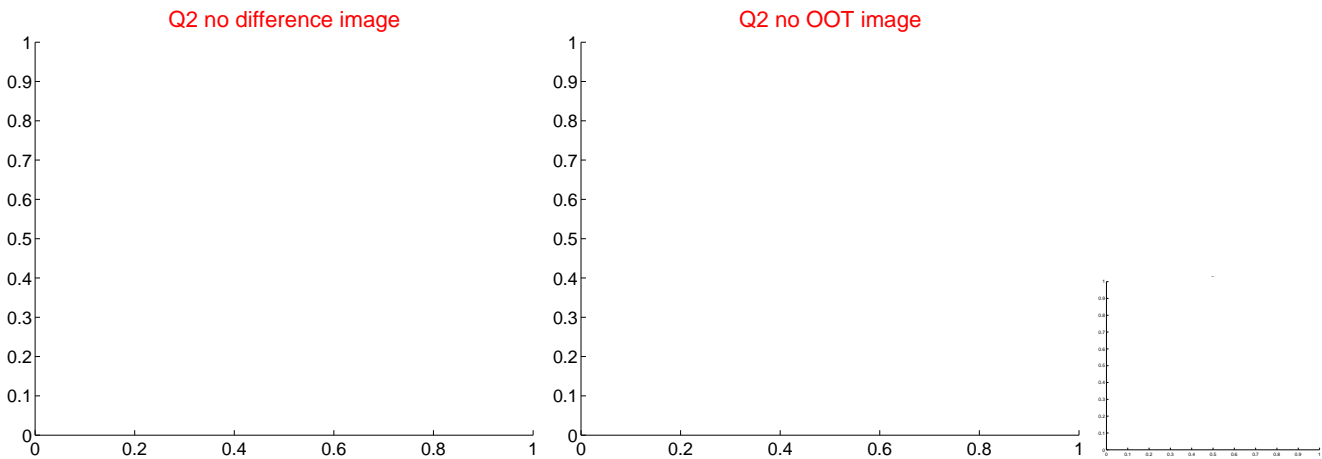
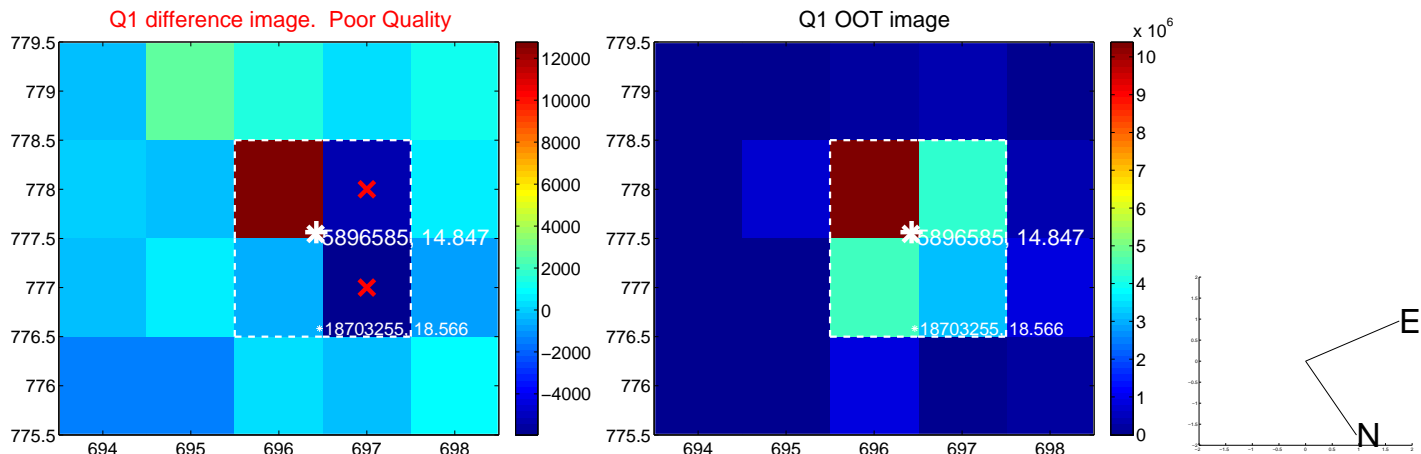
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.245 ± 1.814	2.89	-3.528 ± 2.085	-3.881 ± 1.554
PRF-fit source offset from KIC position	5.149 ± 1.811	2.84	-3.405 ± 2.108	-3.863 ± 1.541
photometric centroid source offset	0.98 ± 0.63	1.54	0.43 ± 0.67	-0.87 ± 0.62

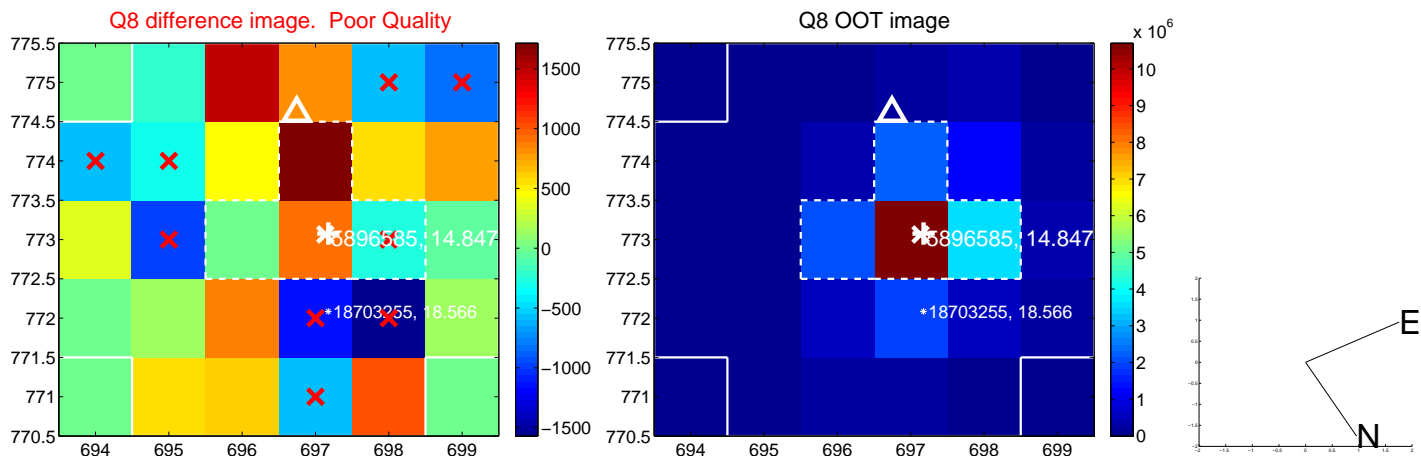
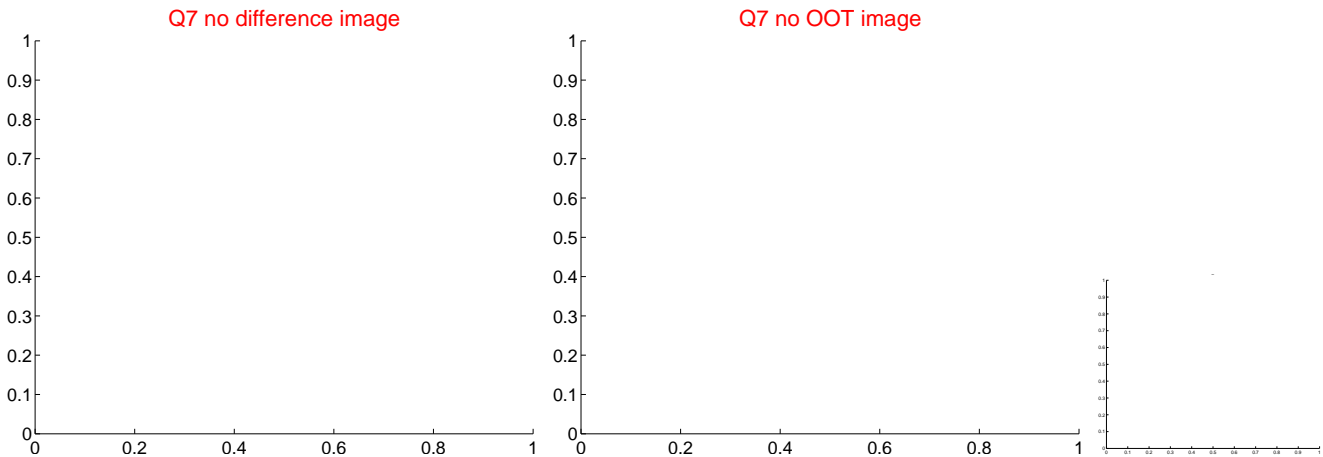
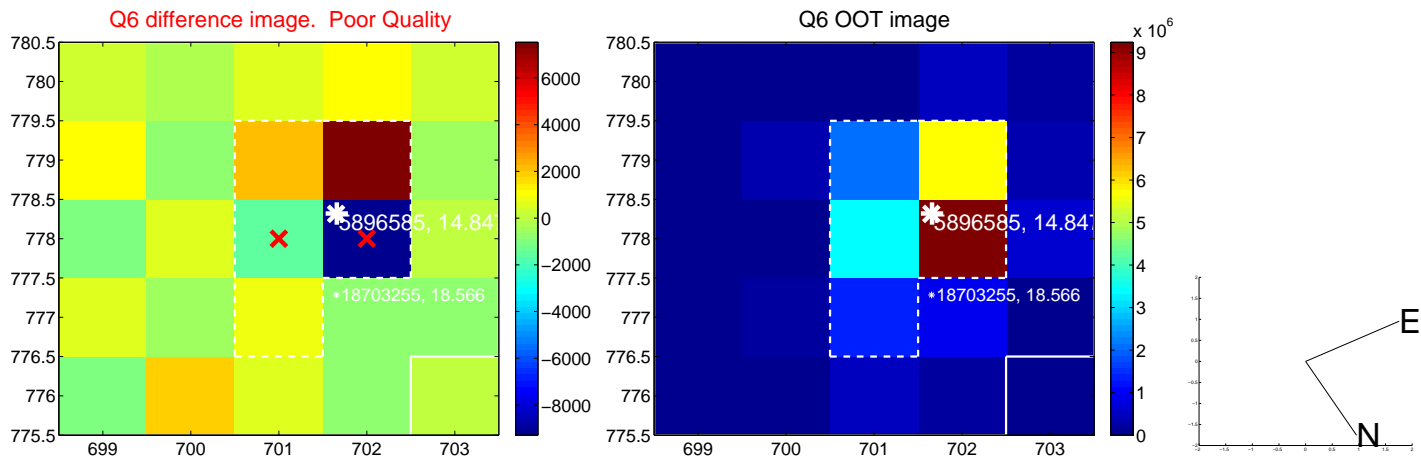
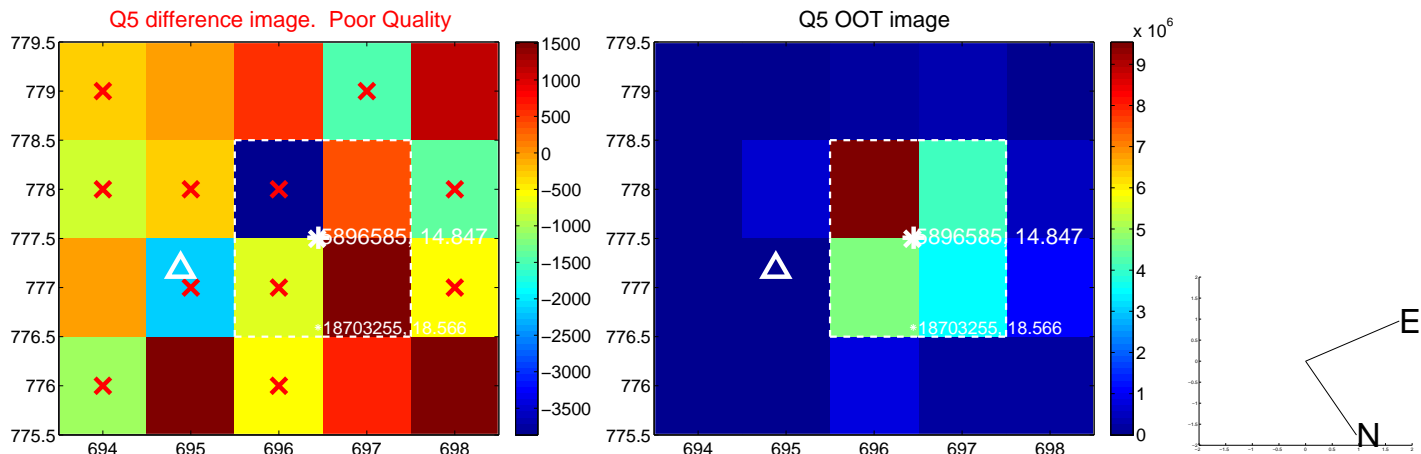


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

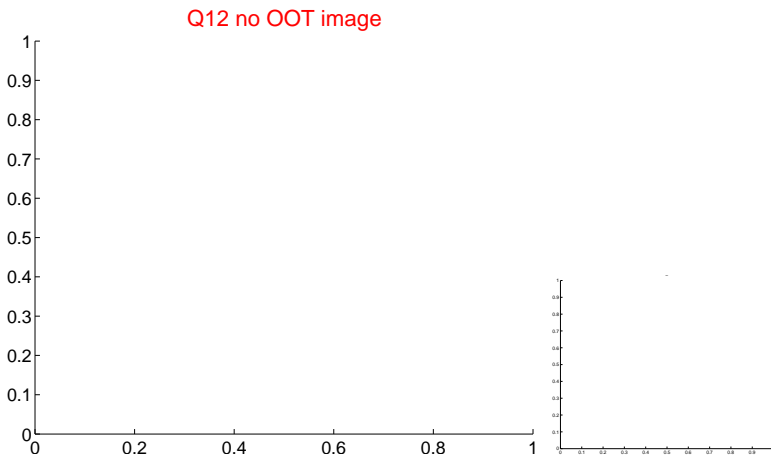
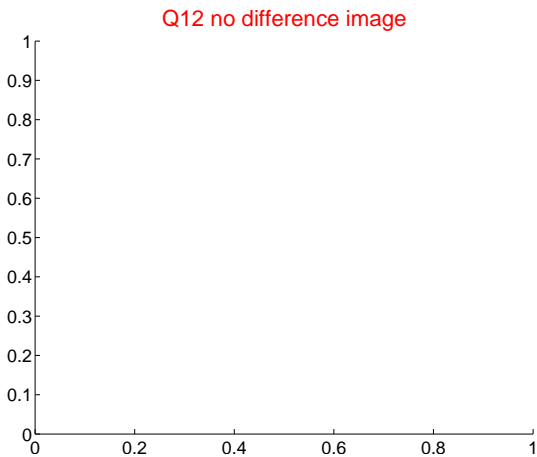
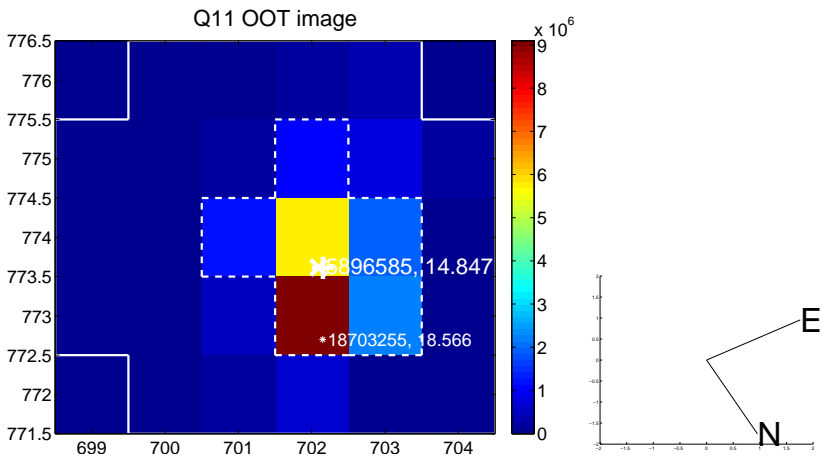
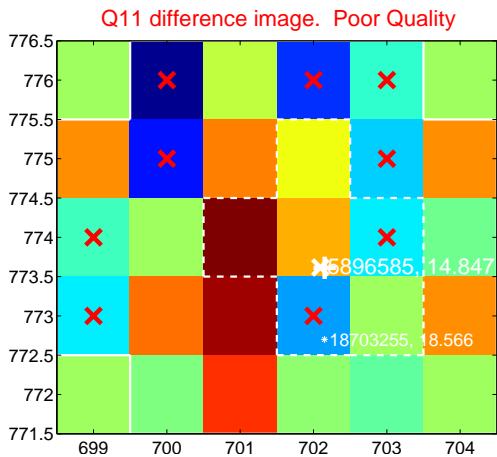
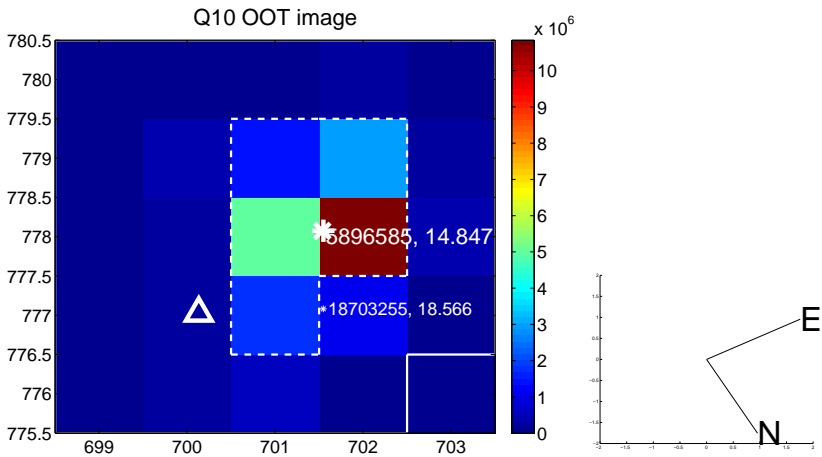
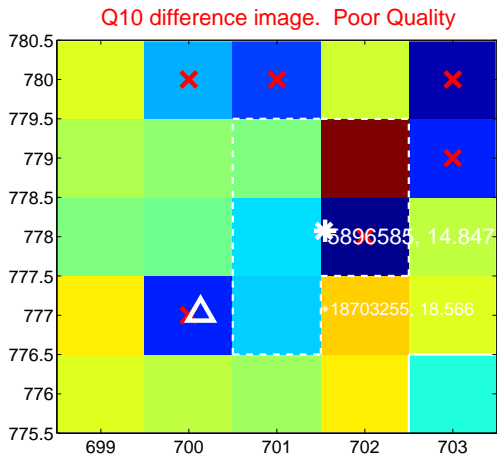
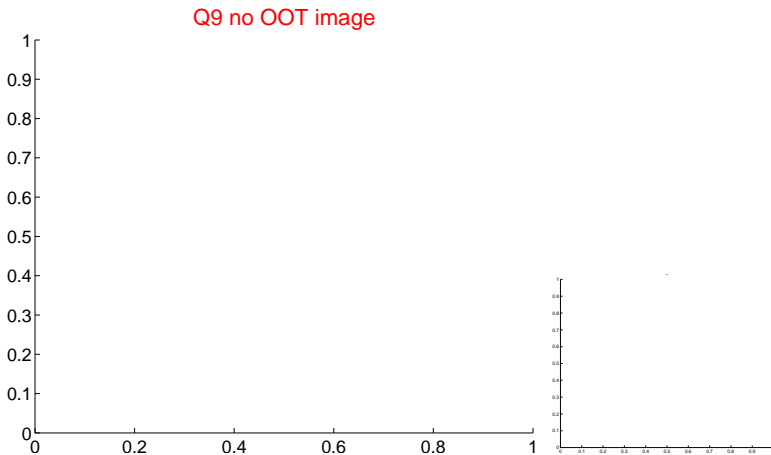
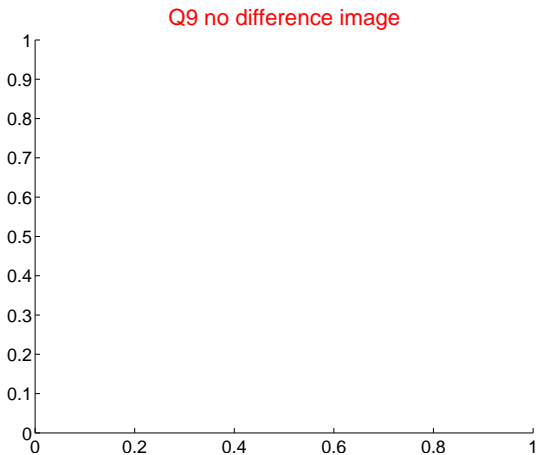
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



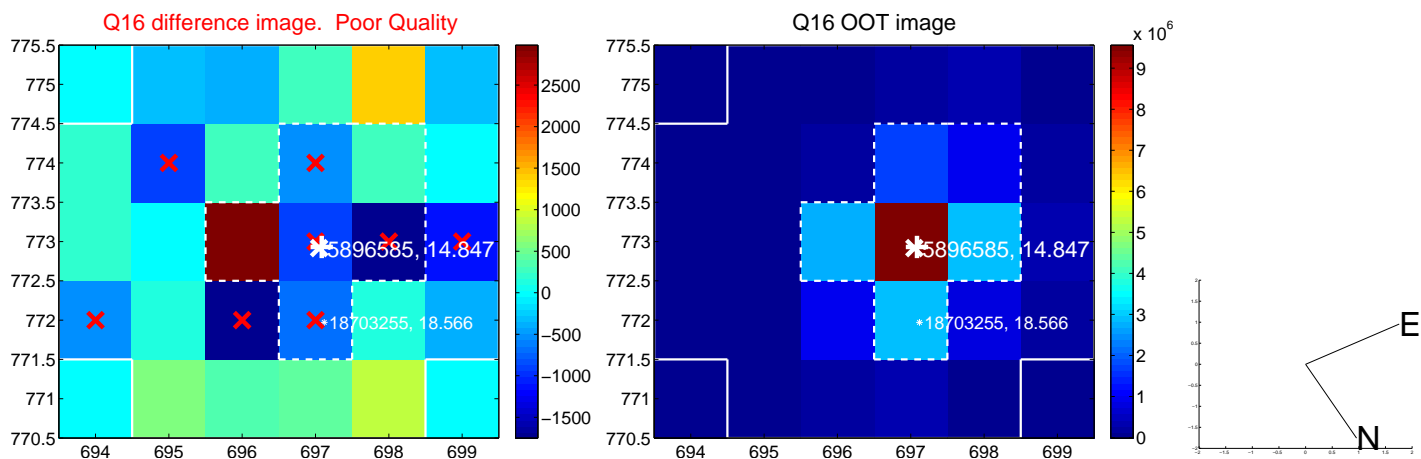
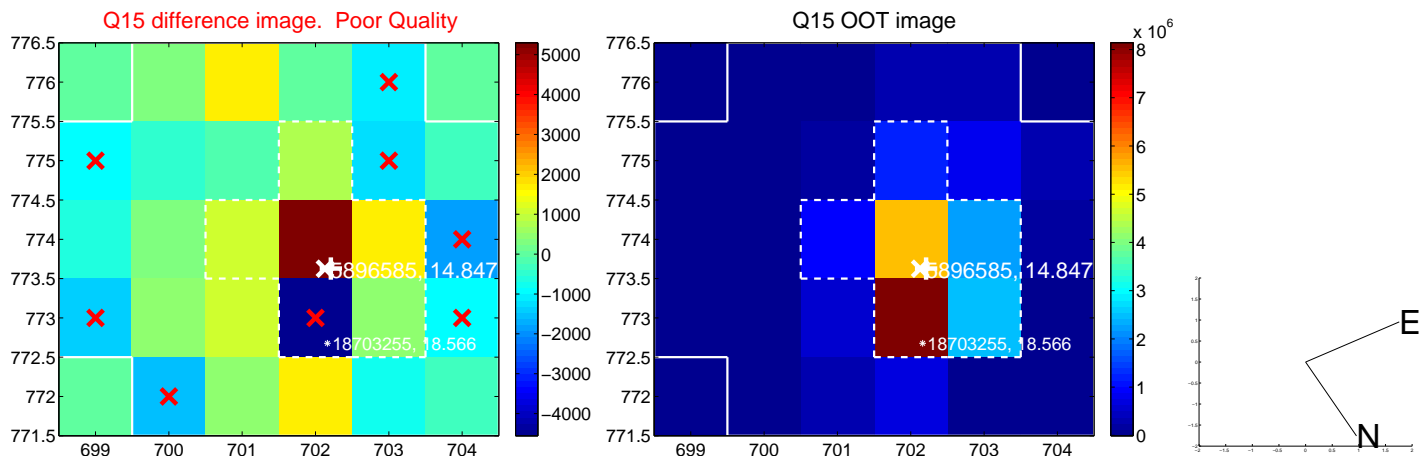
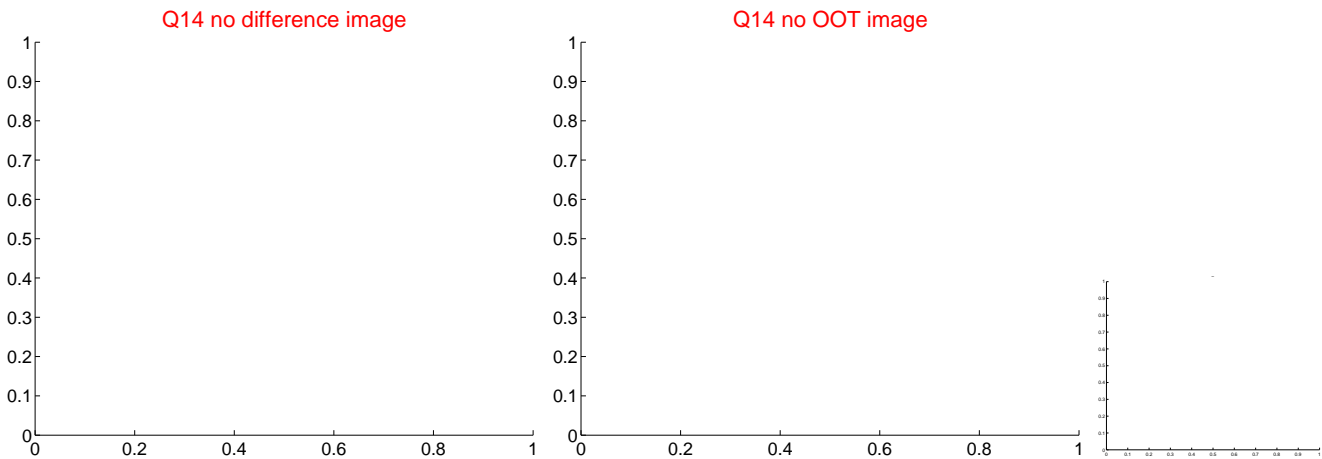
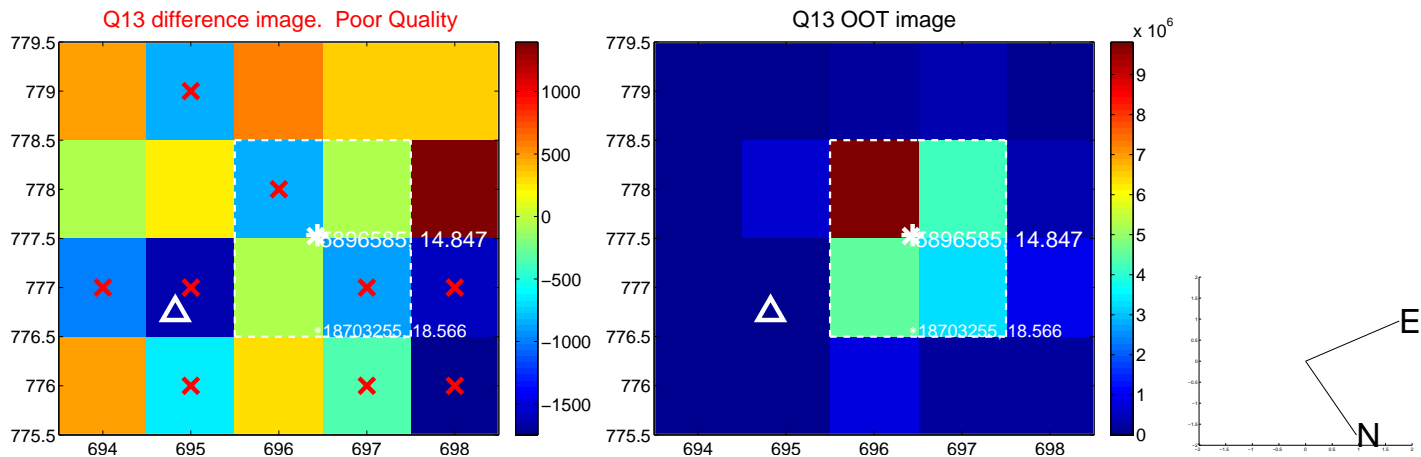
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



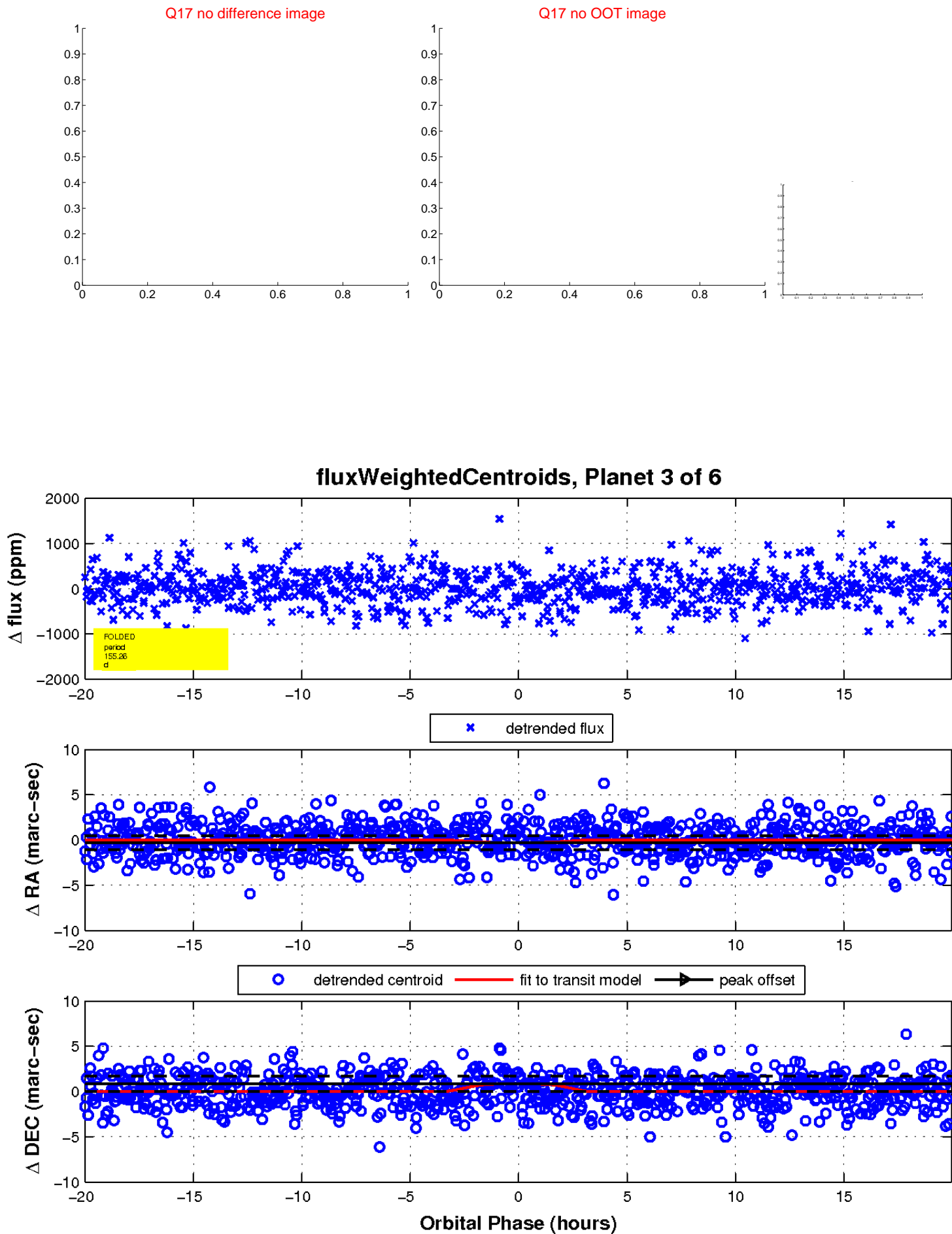
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

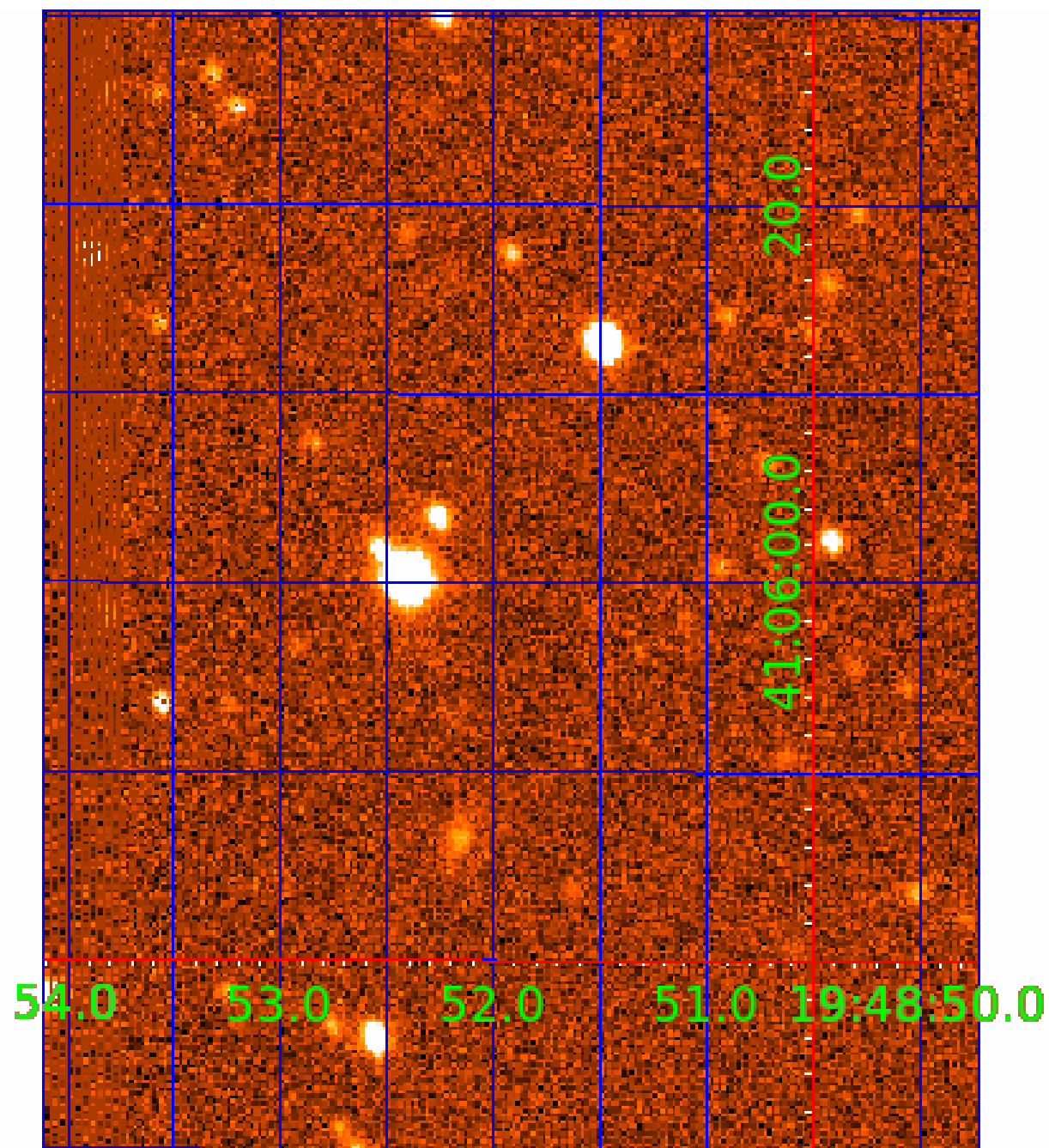


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005896585

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})
005896585-01	OBS	No	0.708815	132.137099	42.6	4.430	9.7	10.8	0.67	4514	0.54	916.65
005896585-03	OBS	No	155.261669	150.192489	874.8	6.672	12.6	8.0	0.67	4514	2.67	0.69
005896585-05	OBS	No	134.956803	171.147409	1141.2	7.469	9.2	9.3	0.67	4514	2.38	0.84
005896585-06	OBS	No	73.302070	175.285983	533.0	4.448	8.5	5.8	0.67	4514	1.62	1.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005896585-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
005896585-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

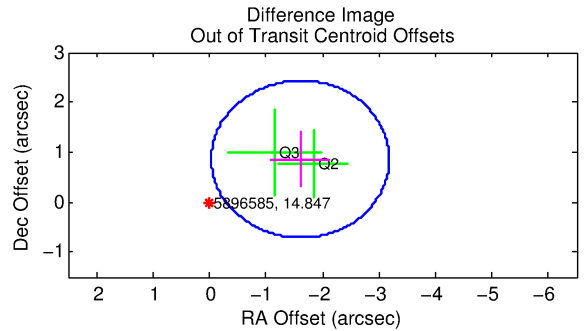
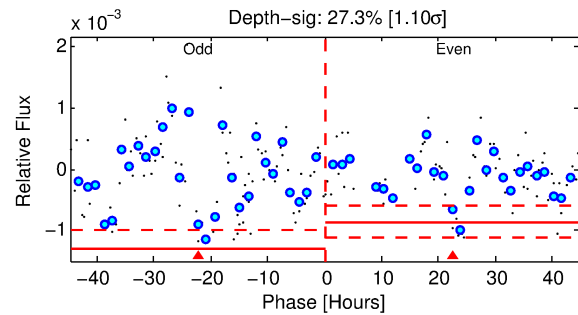
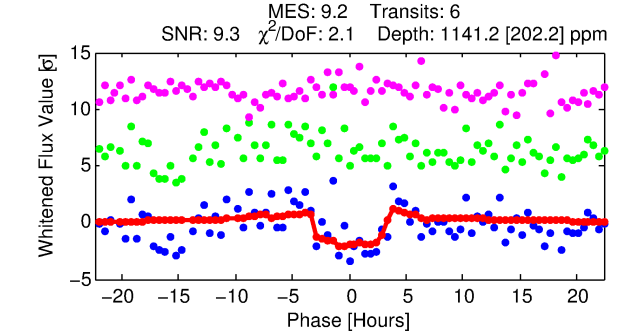
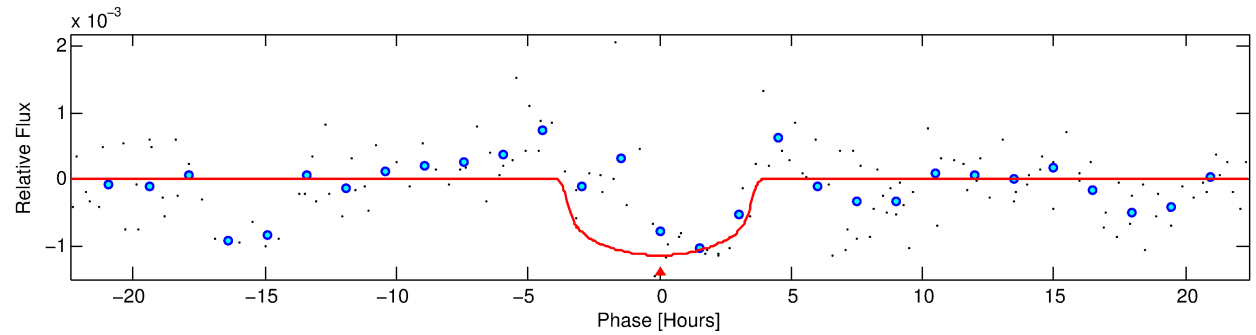
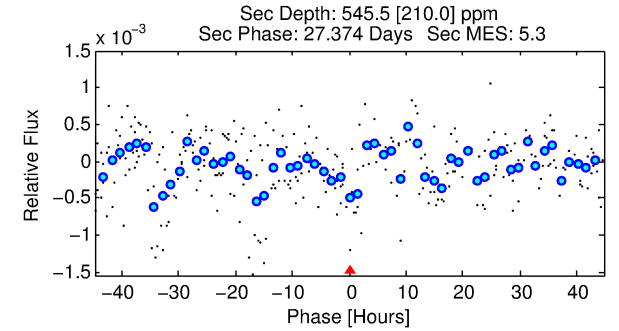
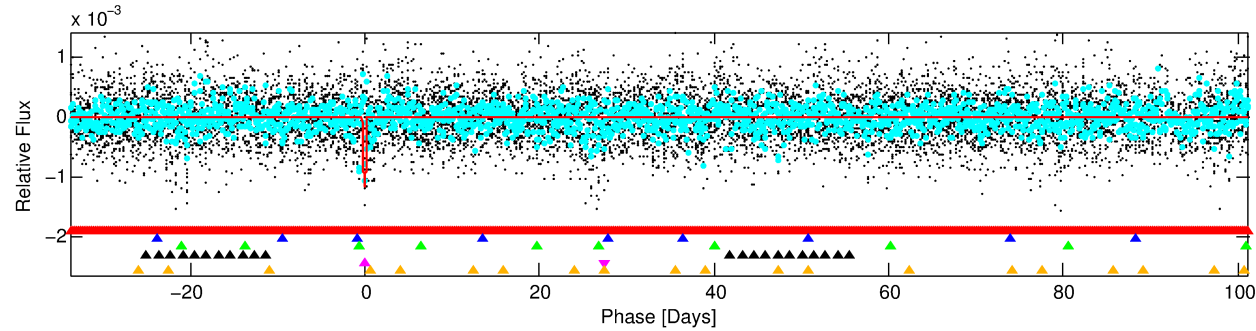
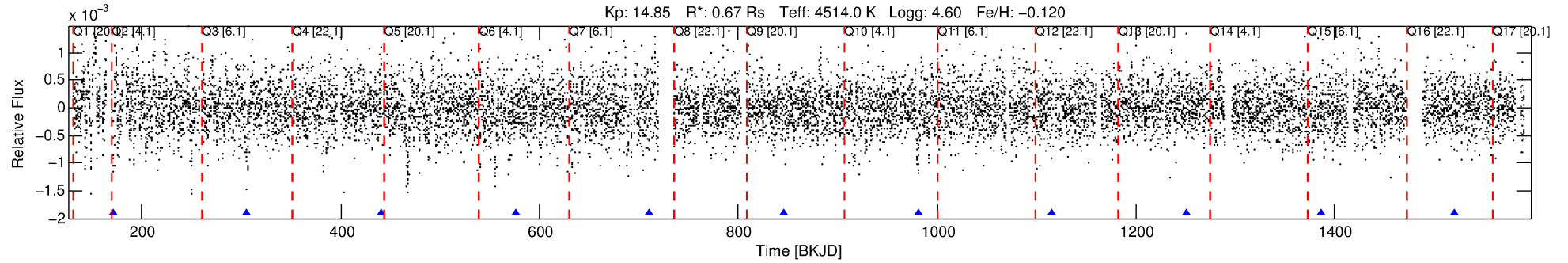
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005896585-05

No Significant Match Found

DV One-Page Summary

KIC: 5896585 Candidate: 5 of 6 Period: 134.957 d



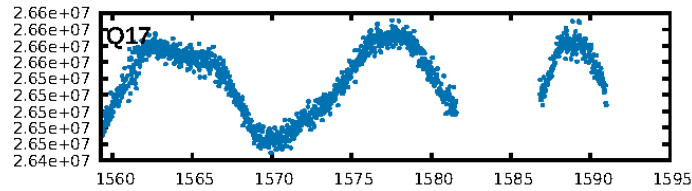
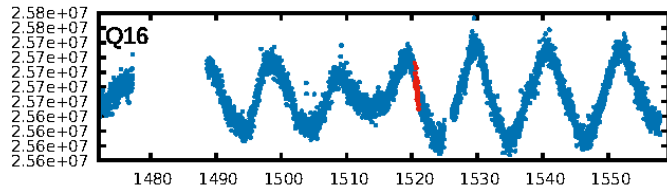
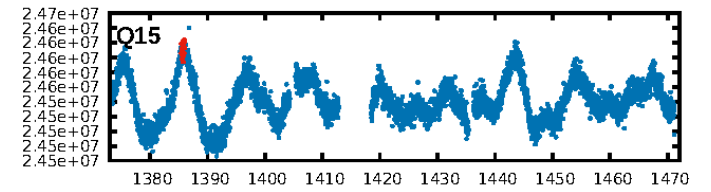
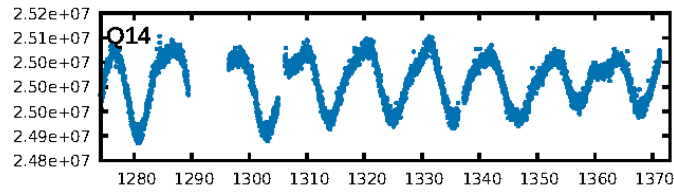
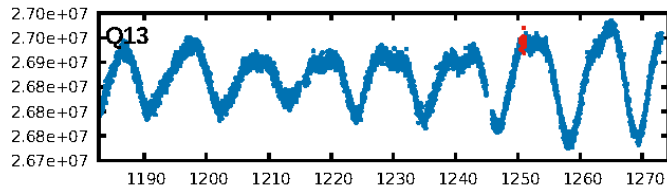
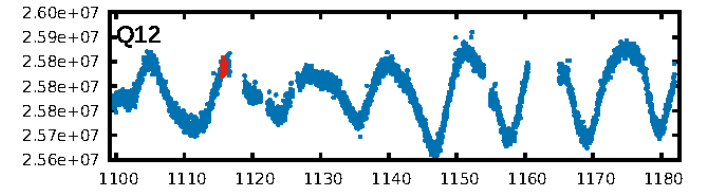
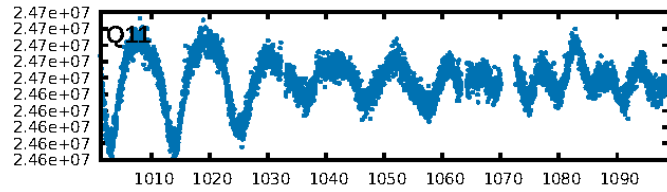
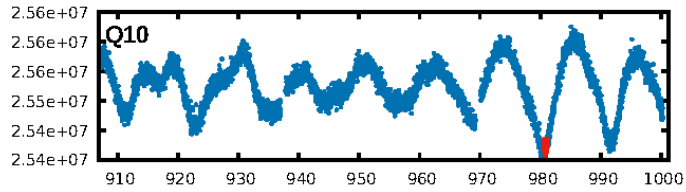
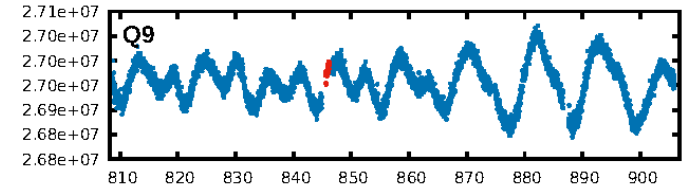
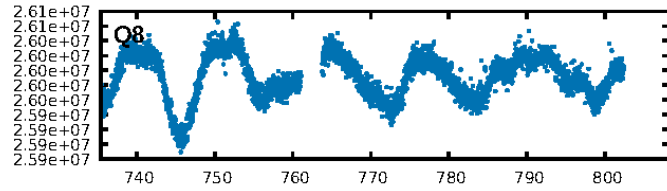
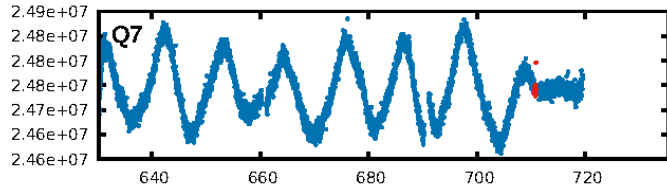
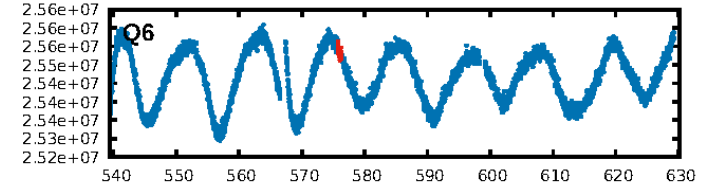
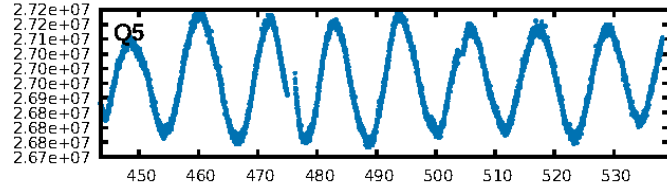
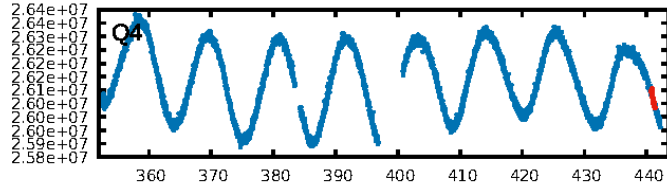
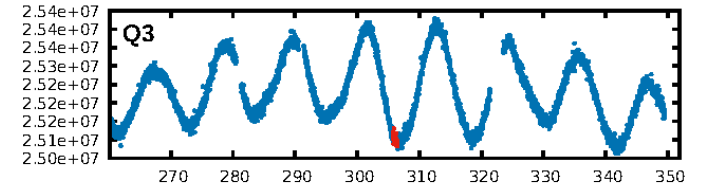
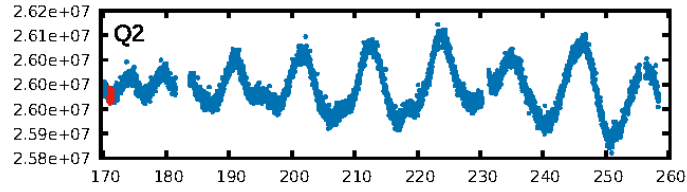
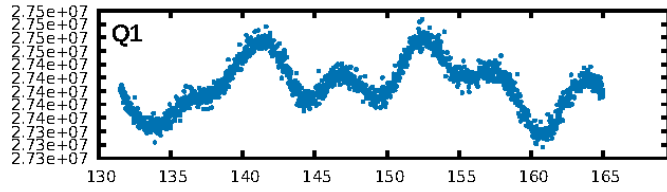
DV Fit Results:

Period = 134.95680 [0.00344] d
Epoch = 171.1474 [0.0219] BKJD
Rp/R* = 0.0324 [0.0412]
a/R* = 110.90 [435.79]
b = 0.65 [3.60]
Seff = 0.84 [0.13]
Teq = 244 [9] K
Rp = 2.38 [3.04] Re
a = 0.4494 [0.0323] AU
Ag = 10701.64 [27605.35] [0.39 σ]
Teffp = 3835 [2474] K [1.45 σ]

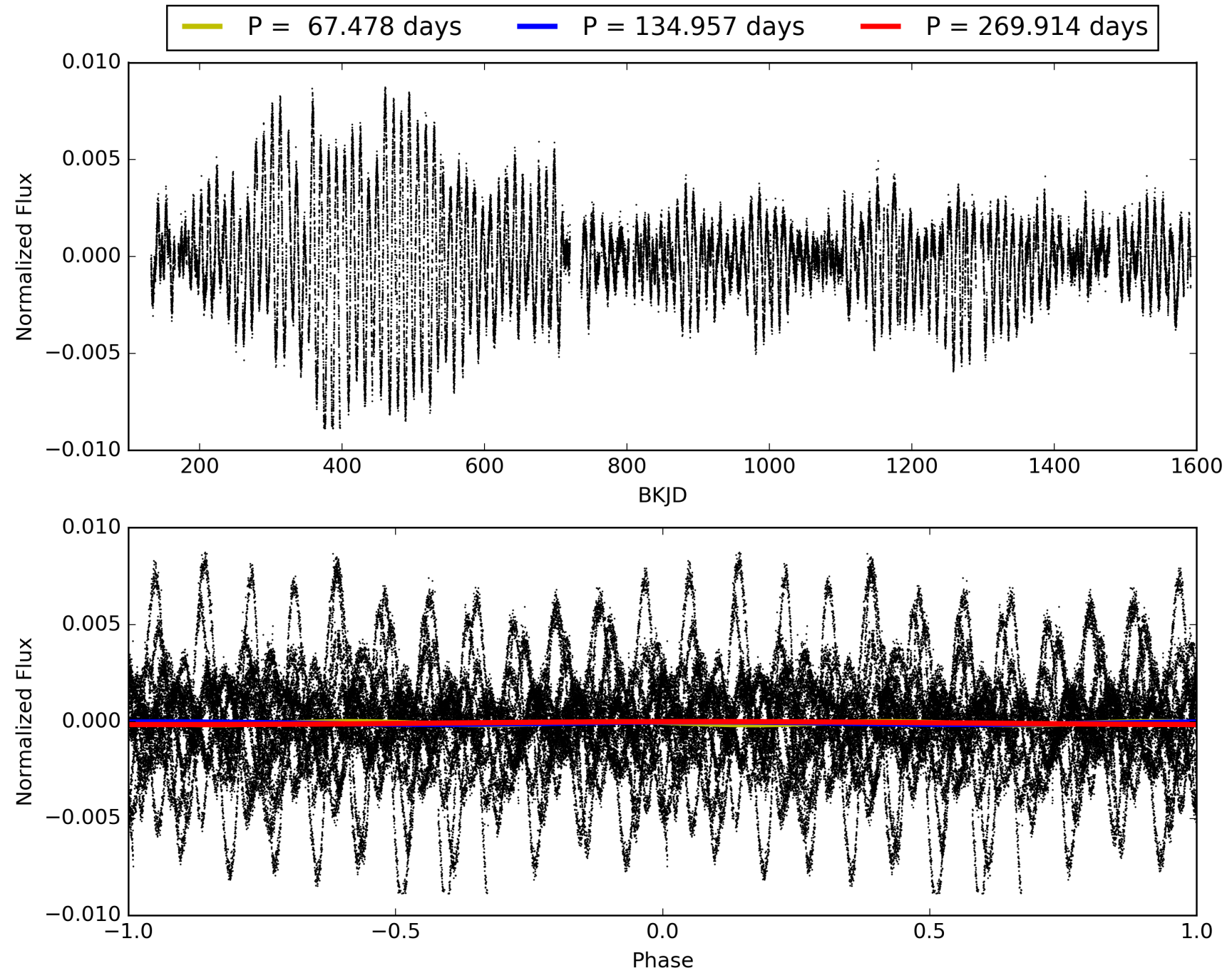
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [170.22 σ]
LongPeriod-sig: 100.0% [48.66 σ]
ModelChiSquare2-sig: 5.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.42e-11
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.6578
Centroid-sig: 41.4%
Centroid-so: 0.455 arcsec [1.07 σ]
OotOffset-rm: 1.824 arcsec [3.48 σ]
KicOffset-rm: 1.757 arcsec [3.34 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/9]

TCE 005896585-05, PDC Light Curves

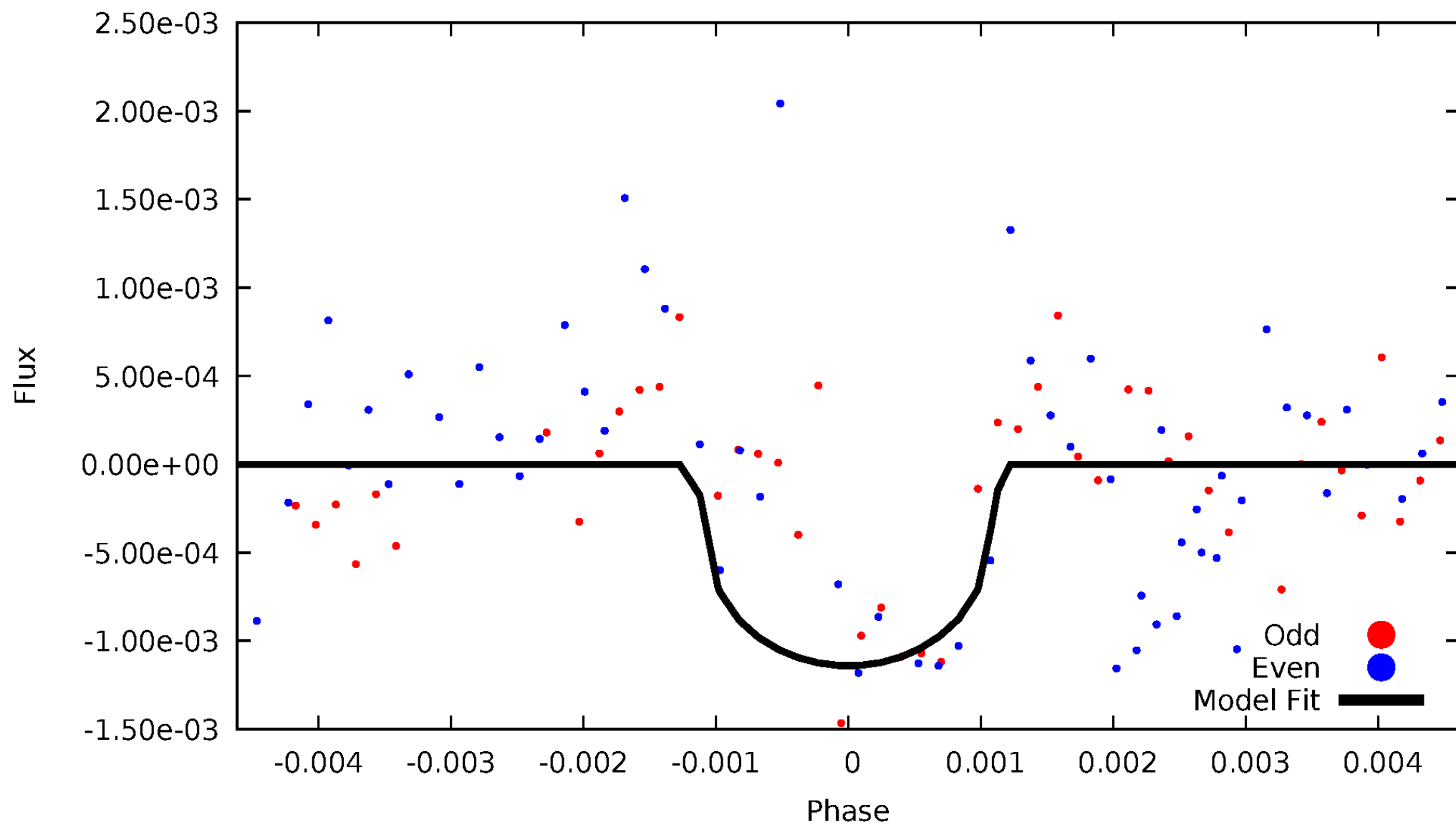


TCE 005896585-05



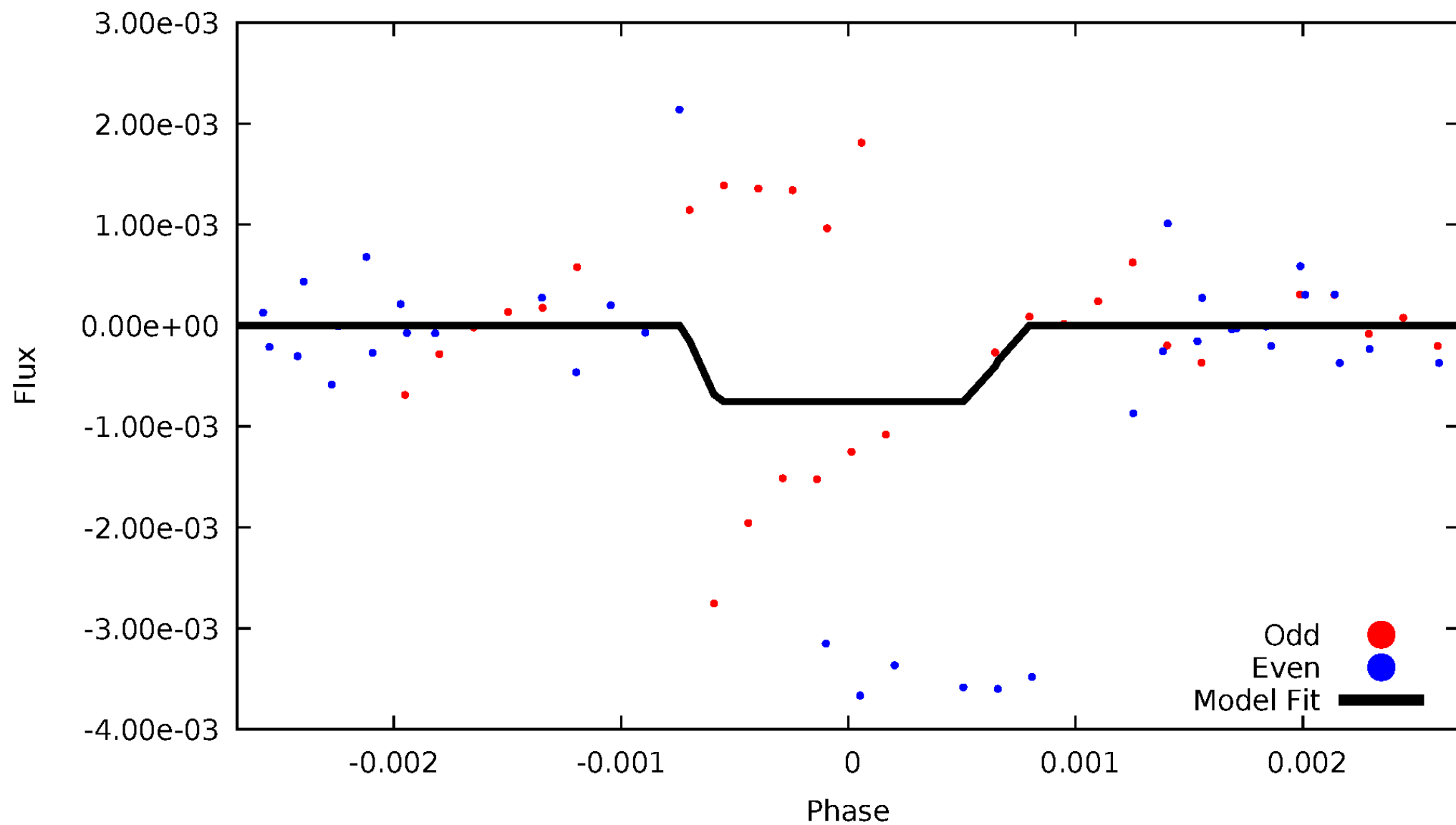
DV Odd/Even

TCE 005896585-05



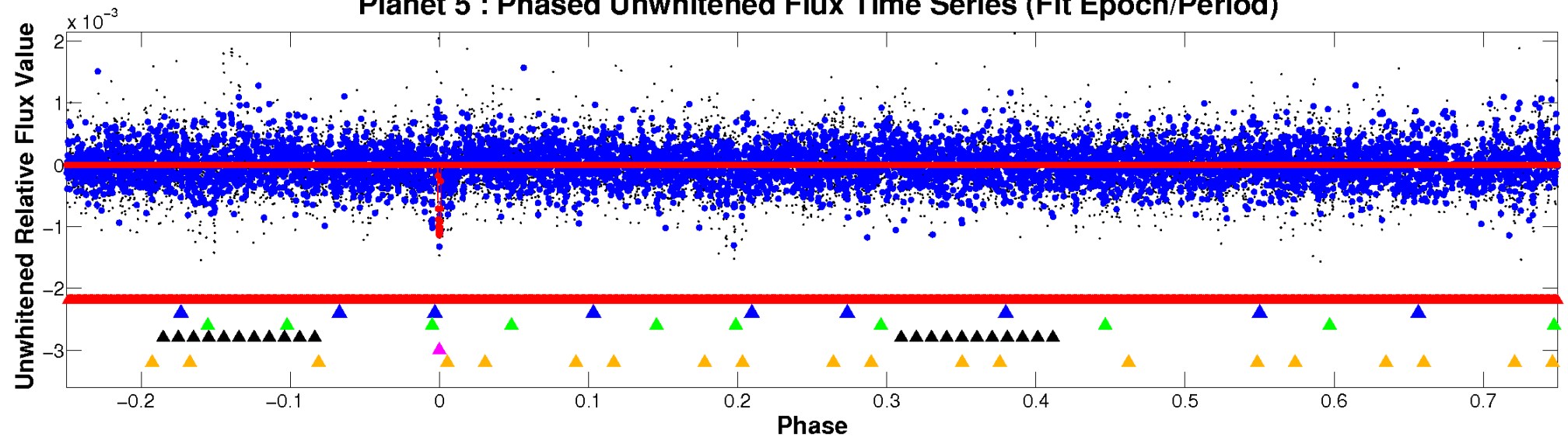
ALT Odd/Even

TCE 005896585-05

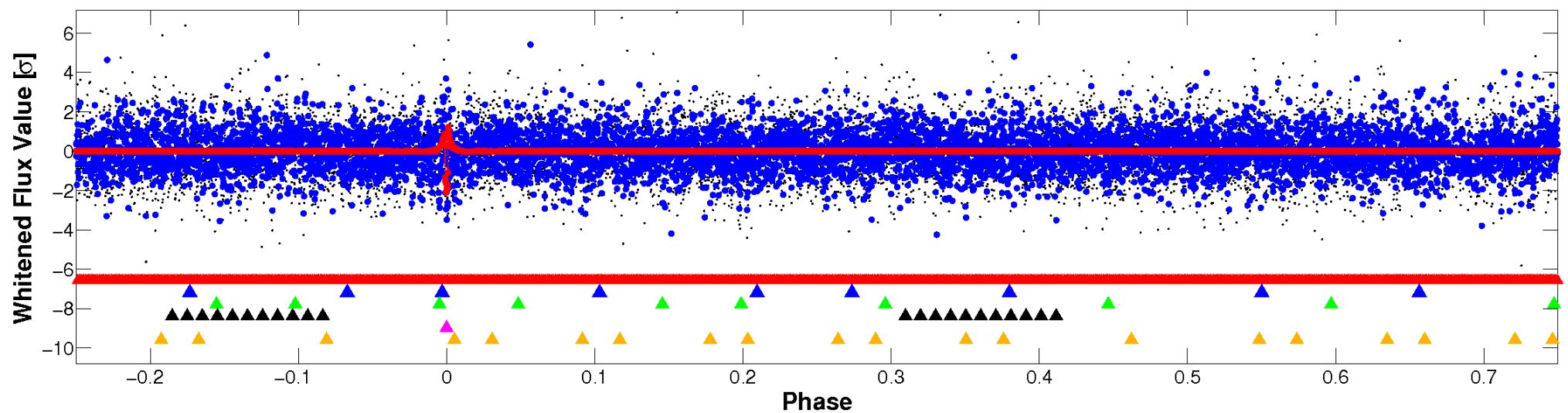


Non-Whitened Vs. Whitened Light Curve

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

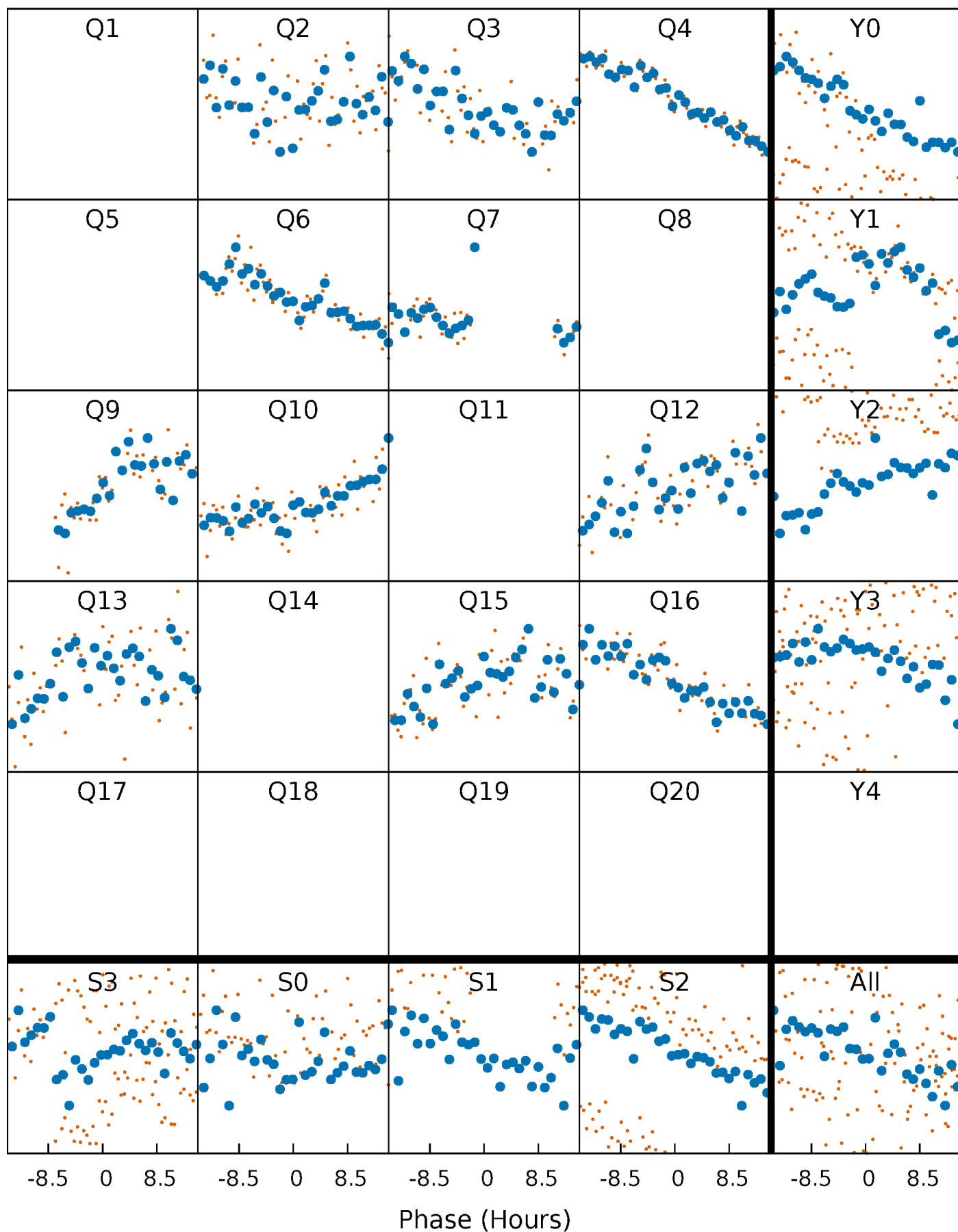


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



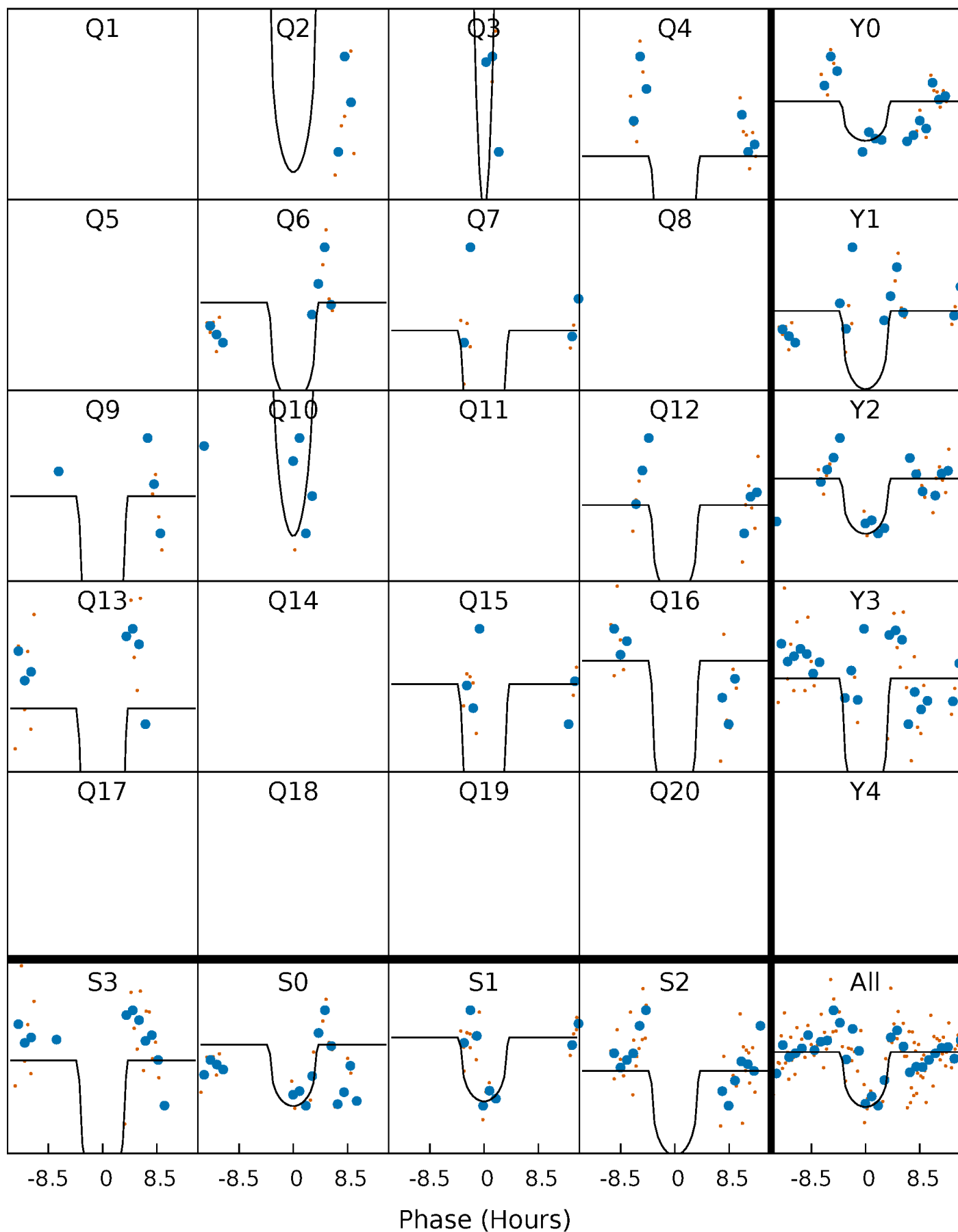
PDC Quarter-Phased Transit Curves

TCE 005896585-05 $P=134.956803$ Days $T_0=171.147409$ (BKJD)



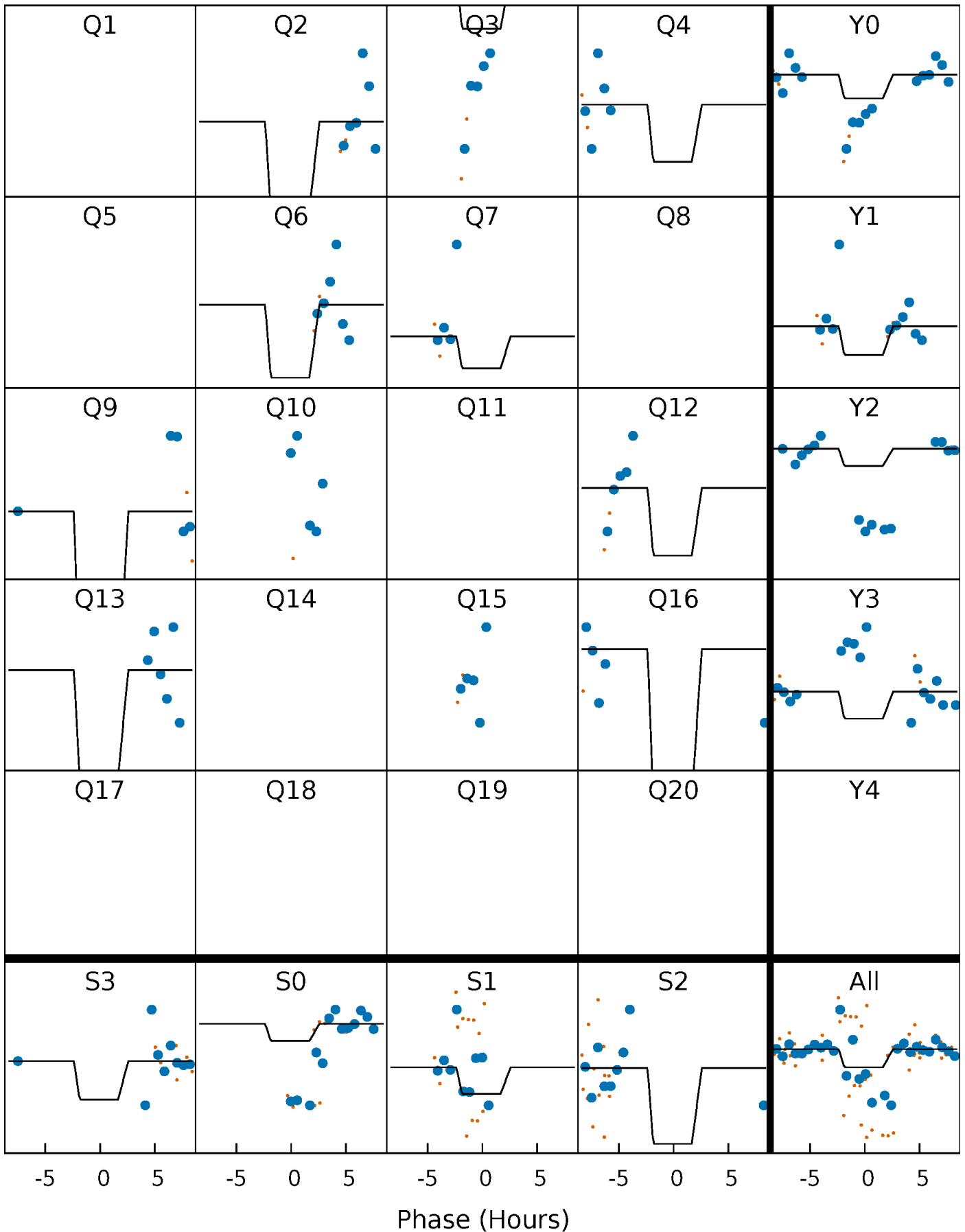
DV Quarter-Phased Transit Curves

TCE 005896585-05 P=134.956803 Days $T_0=171.147409$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

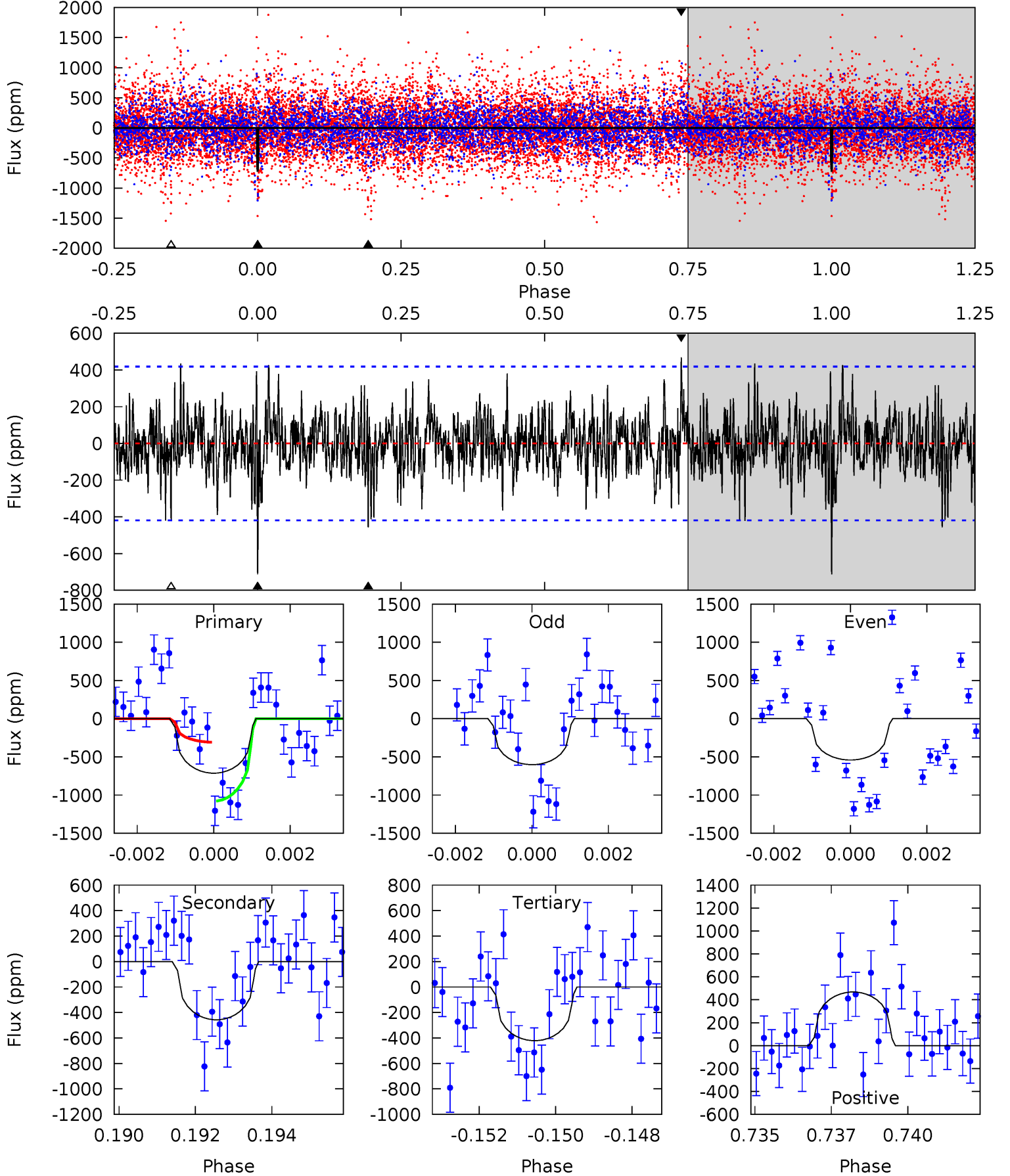
TCE 005896585-05 $P=134.942944$ Days $T_0=171.233720$ (BKJD)



DV Model-Shift Uniqueness Test

005896585-05, $P = 134.956803$ Days, $E = 36.190606$ Days

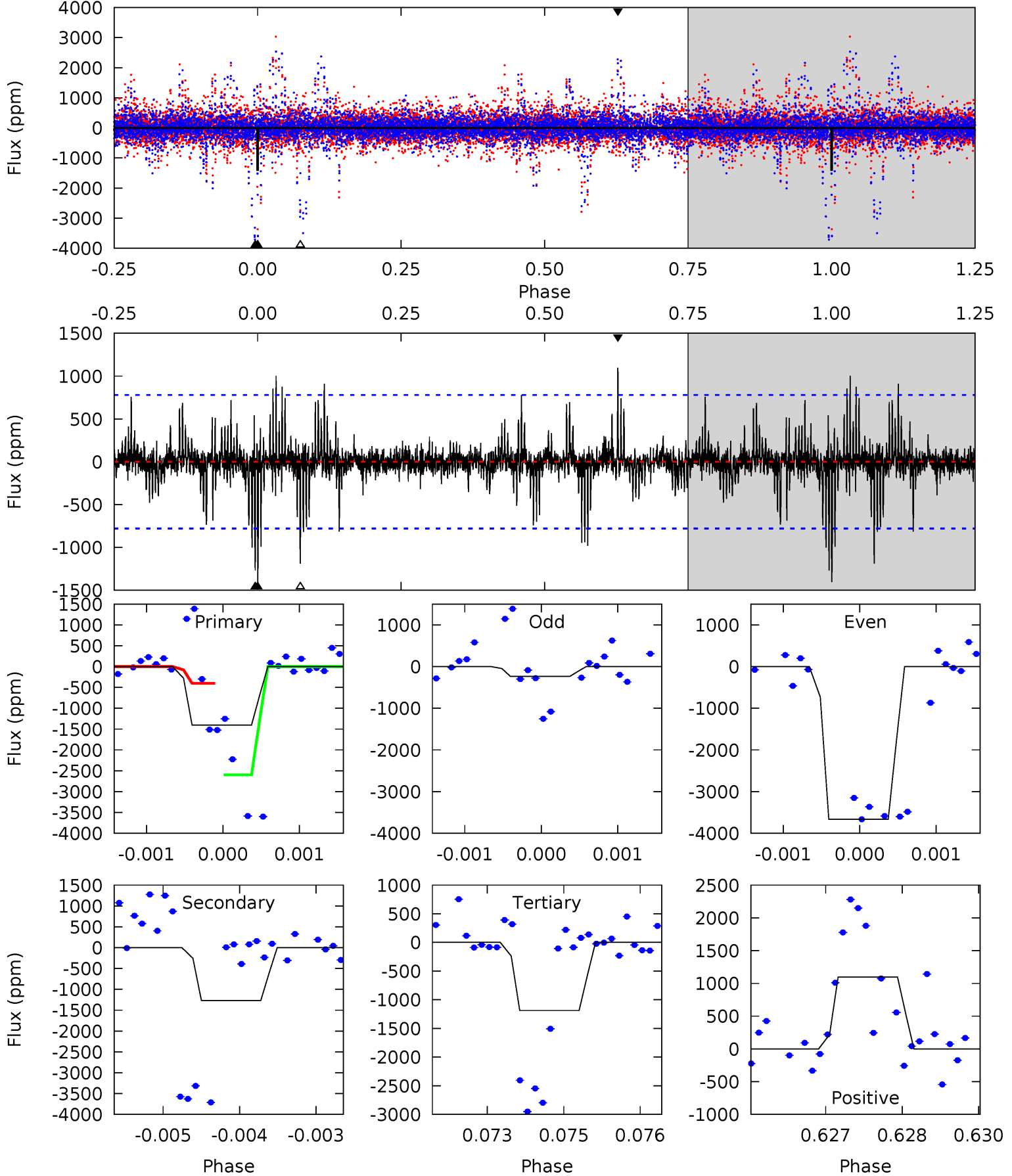
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.04	5.80	5.34	5.93	5.31	3.06	1.58	3.71	3.11	0.46	-0.13	0.39	2.59	0.40	4.86



Alt Model-Shift Uniqueness Test

005896585-05, P = 134.942944 Days, E = 36.290776 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	8.78	8.23	7.60	5.40	3.20	1.11	1.49	2.12	0.55	1.18	13.1	0.78	0.44	0



Stellar Parameters For KIC 005896585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4514^{+134}_{-134}	$4.603^{+0.053}_{-0.021}$	$-0.120^{+0.300}_{-0.300}$	$0.674^{+0.044}_{-0.060}$	$0.663^{+0.067}_{-0.054}$	$3.052^{+0.707}_{-0.302}$
	+3%/-3%	+1%/-0%	+250%/-250%	+7%/-9%	+10%/-8%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005896585-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-457 ± 79	$3.41^{+2.55}_{-2.22}$	339^{+11}_{-11}	3446^{+1519}_{-540}	4495^{+30063}_{-3089}
Alt.	-1267 ± 144	$3.03^{+2.45}_{-1.99}$	338^{+12}_{-11}	4252^{+2595}_{-803}	$15574^{+110881}_{-10984}$

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 $A_{obs} \gg 1.0$

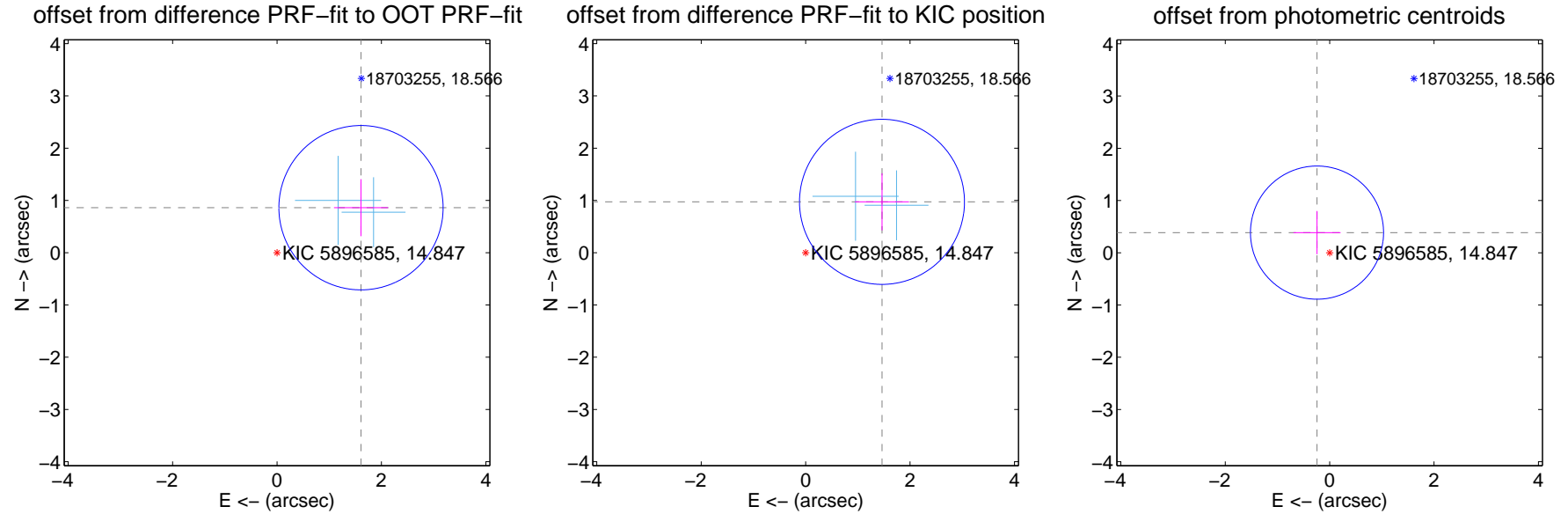
DV Centroid Data

Supplemental centroid analysis for 005896585-05. Kepler magnitude: 14.85. Transit SNR 9.30

There are 2 quarters with good PRF difference image offsets

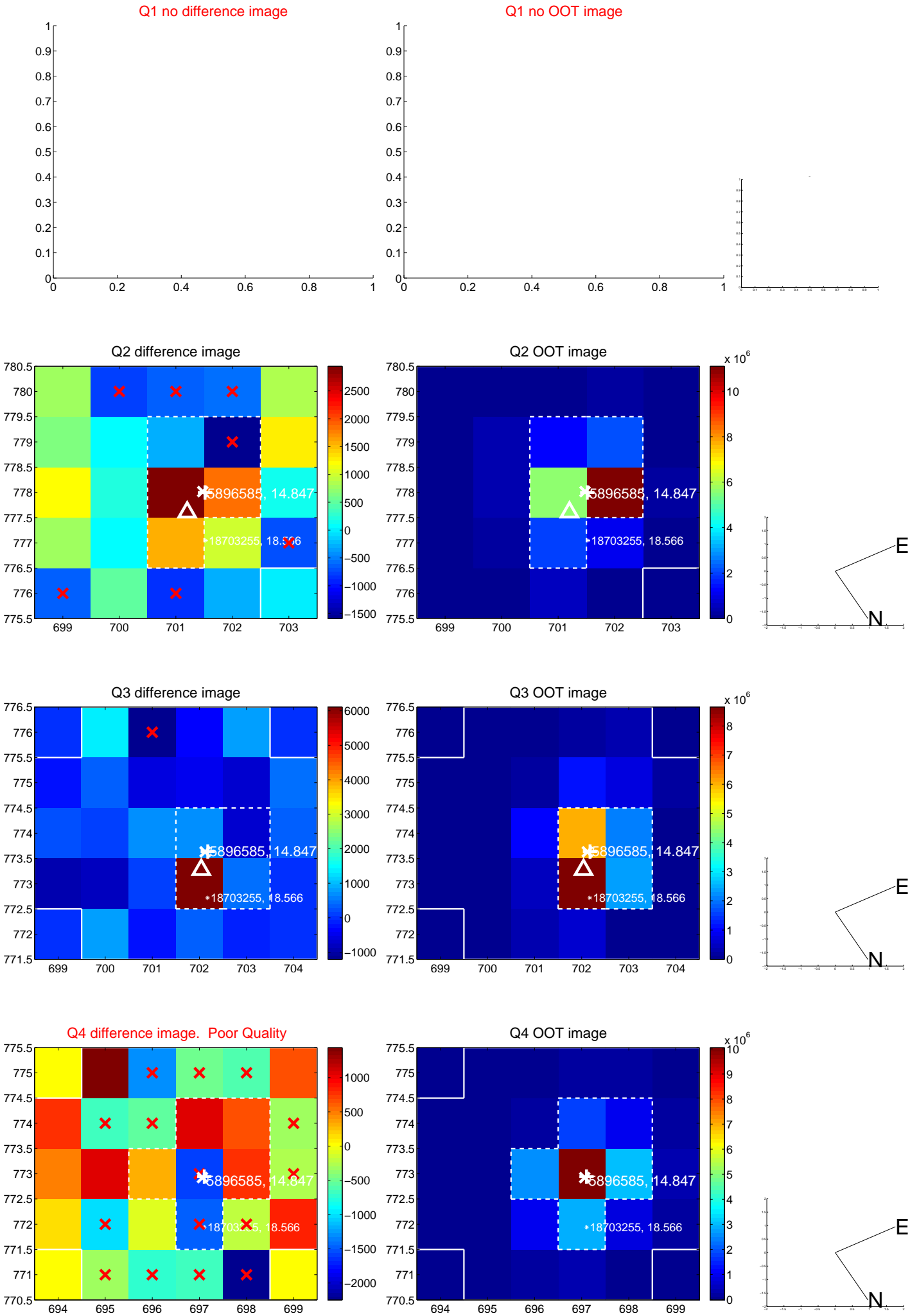
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.824 ± 0.524	3.48	-1.608 ± 0.518	0.861 ± 0.546
PRF-fit source offset from KIC position	1.757 ± 0.527	3.34	-1.462 ± 0.518	0.973 ± 0.546
photometric centroid source offset	0.46 ± 0.42	1.07	0.24 ± 0.45	0.39 ± 0.41



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

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



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

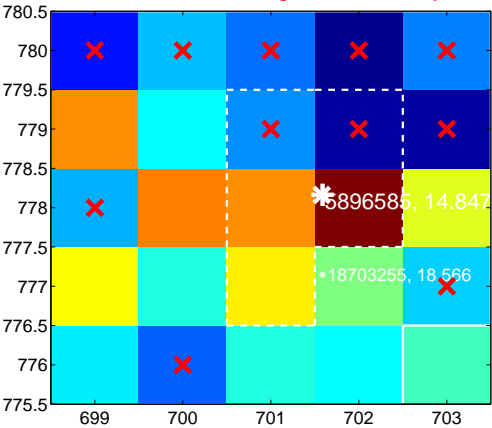
Q5 no difference image



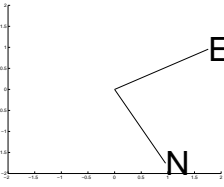
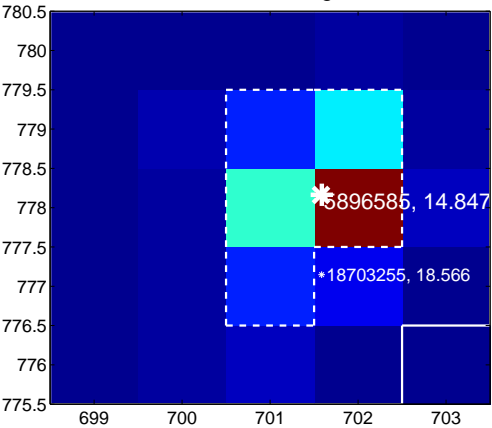
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



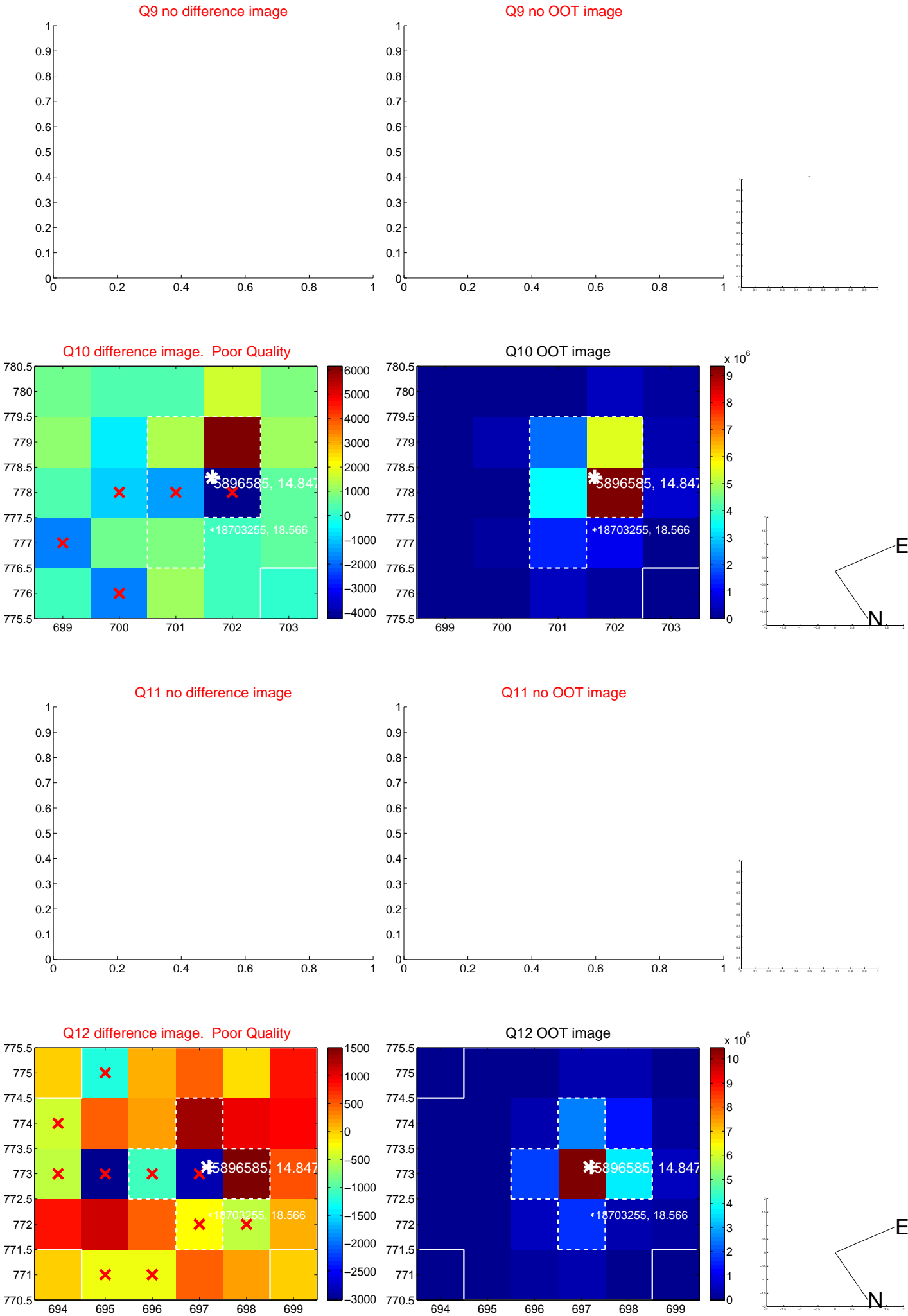
Q8 no difference image



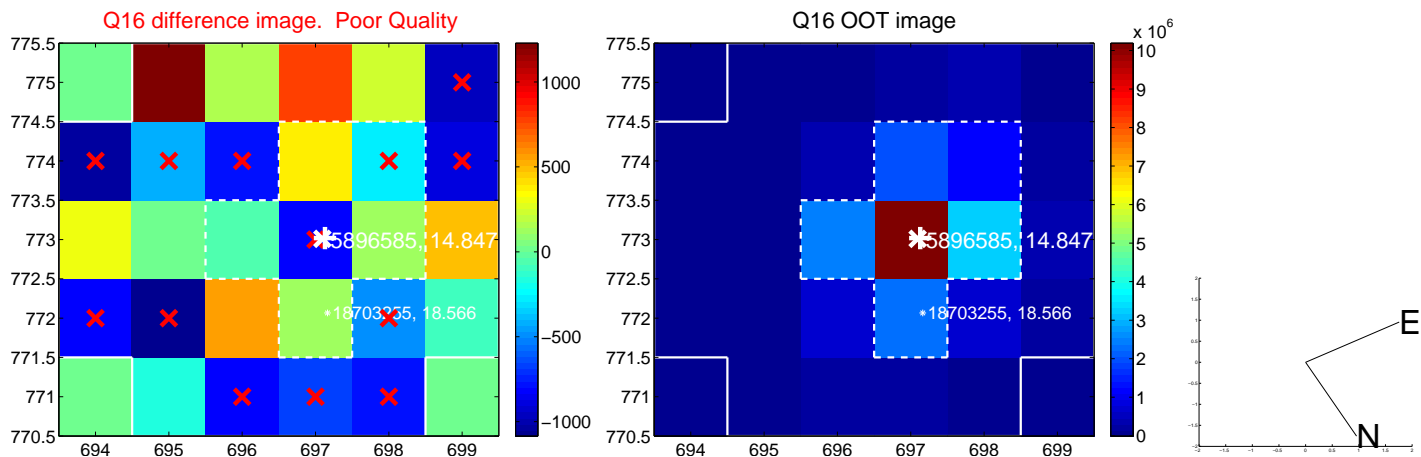
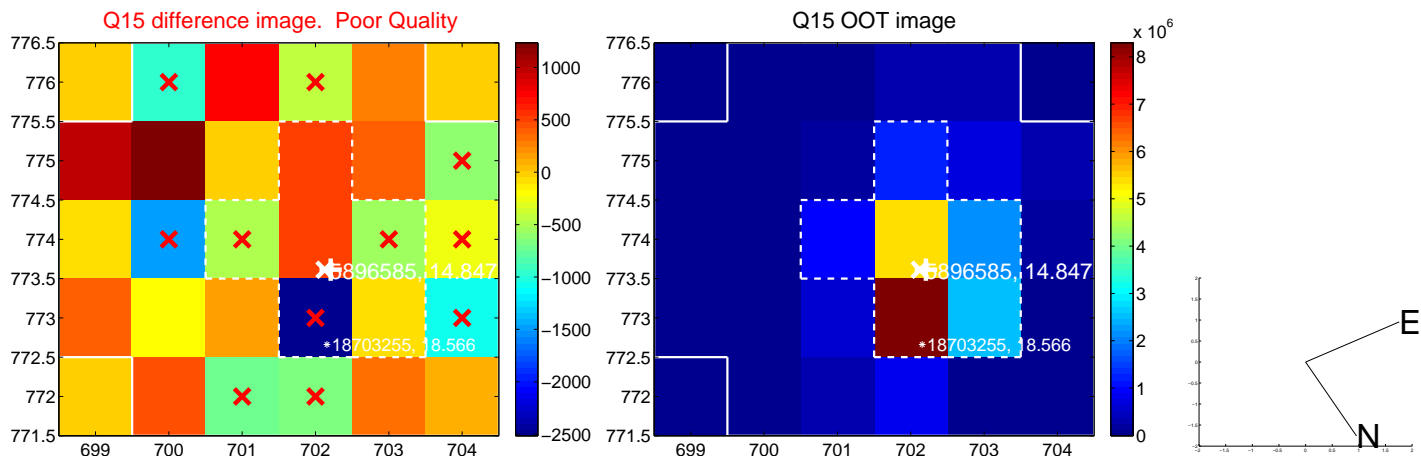
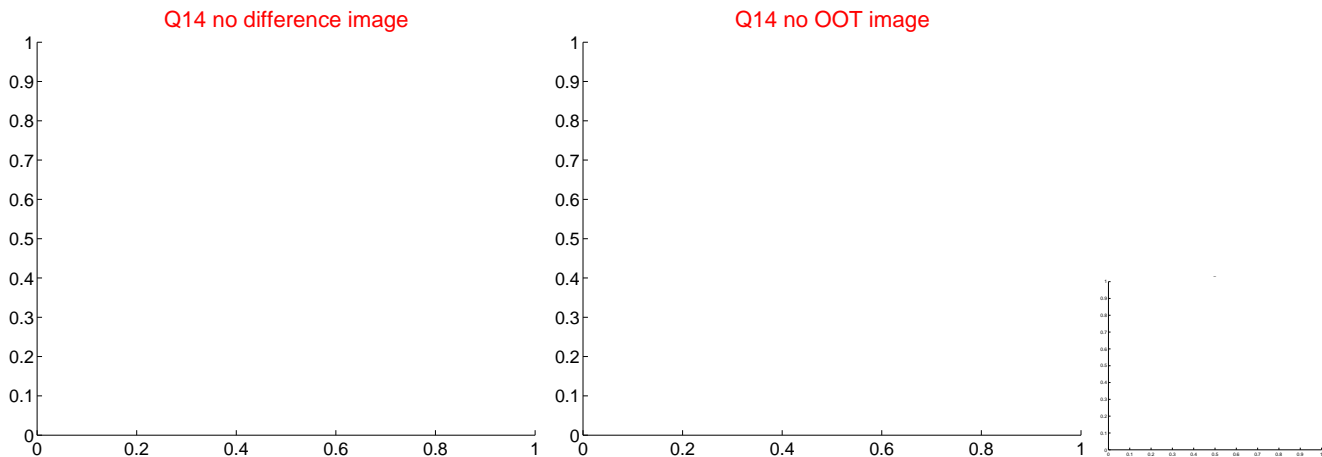
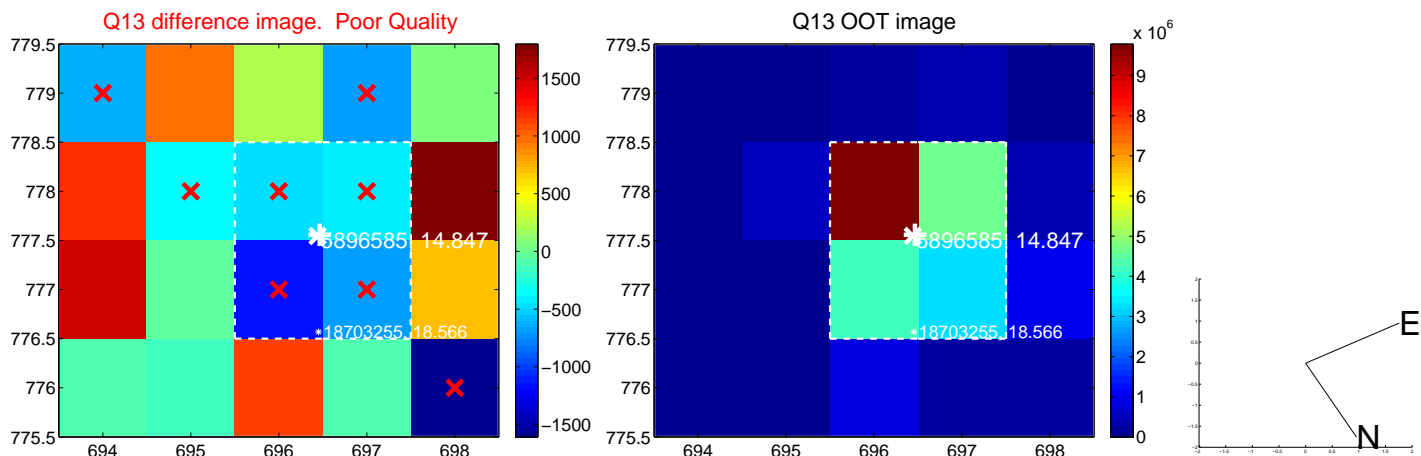
Q8 no OOT image



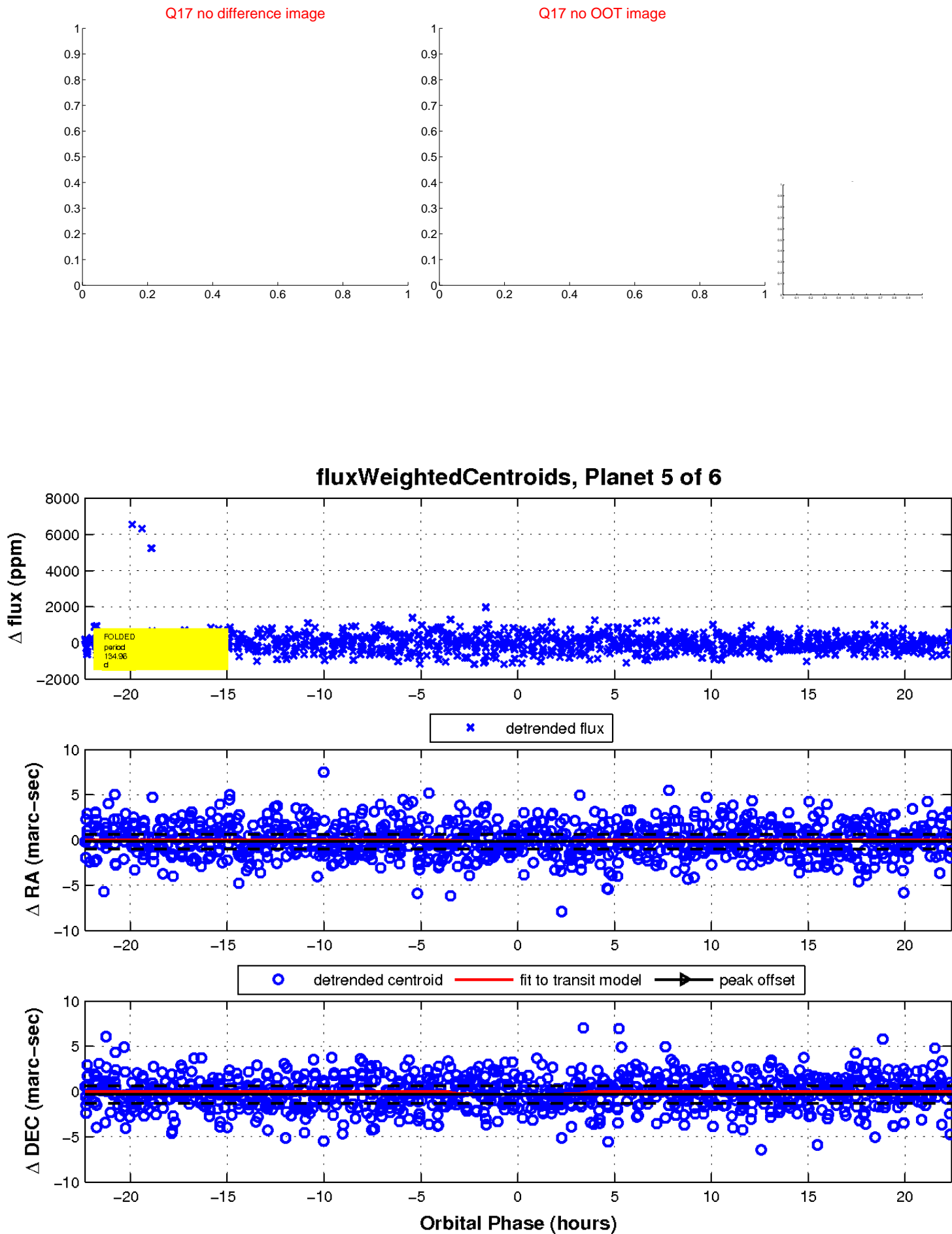
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

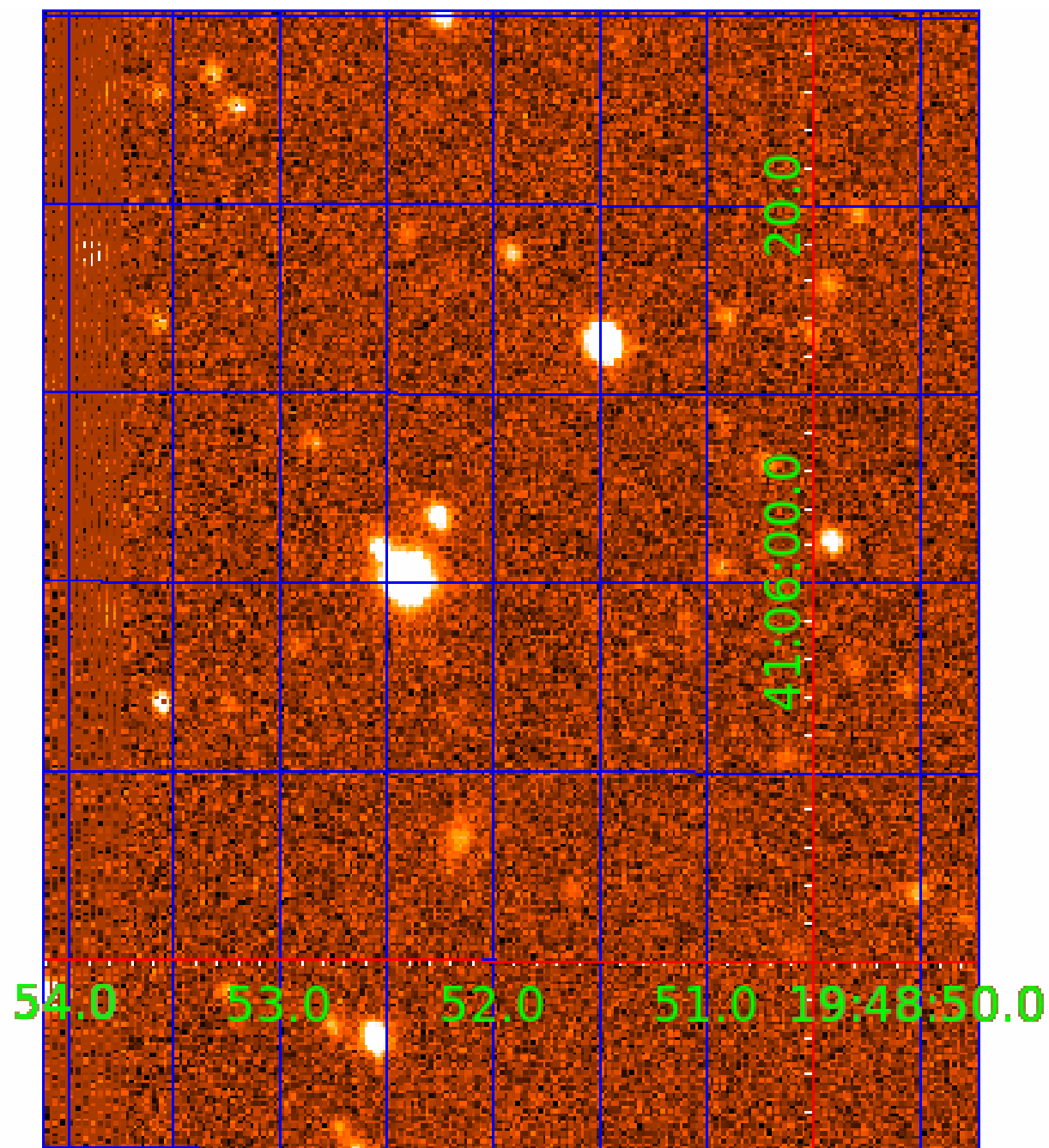


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005896585

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})
005896585-01	OBS	No	0.708815	132.137099	42.6	4.430	9.7	10.8	0.67	4514	0.54	916.65
005896585-03	OBS	No	155.261669	150.192489	874.8	6.672	12.6	8.0	0.67	4514	2.67	0.69
005896585-05	OBS	No	134.956803	171.147409	1141.2	7.469	9.2	9.3	0.67	4514	2.38	0.84
005896585-06	OBS	No	73.302070	175.285983	533.0	4.448	8.5	5.8	0.67	4514	1.62	1.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005896585-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
005896585-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005896585-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

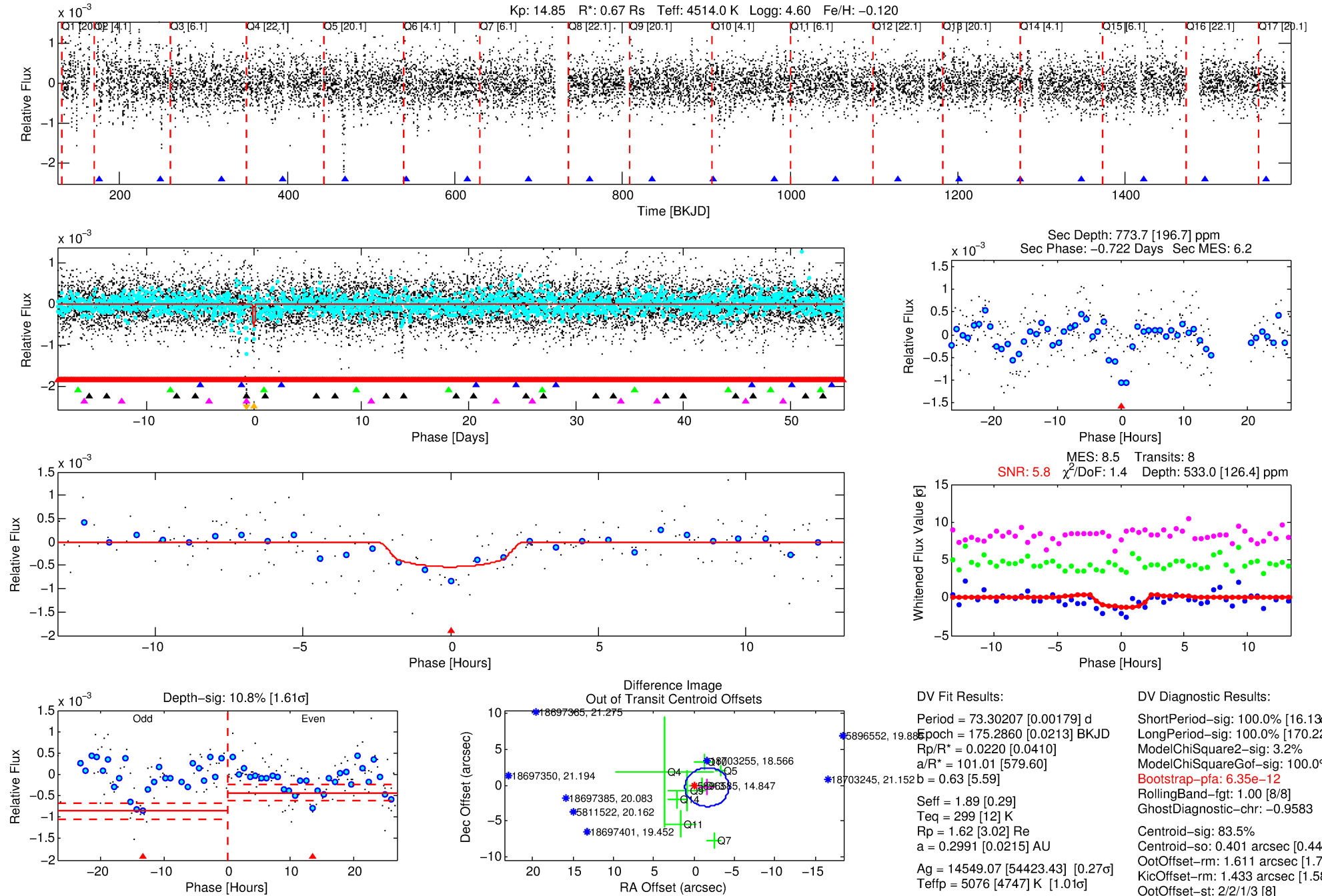
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005896585-06

No Significant Match Found

DV One-Page Summary

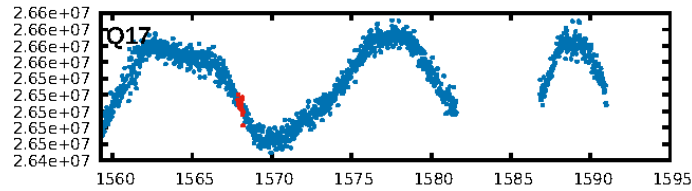
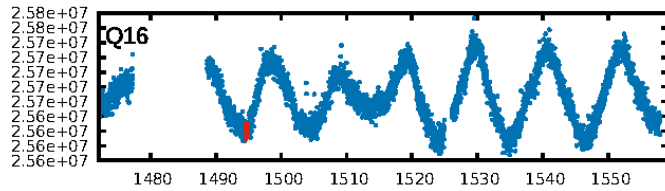
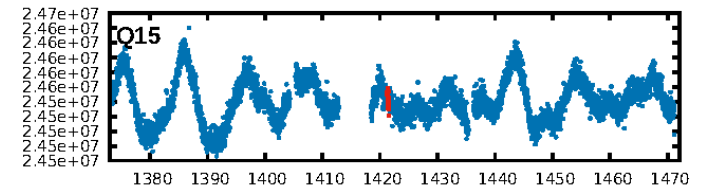
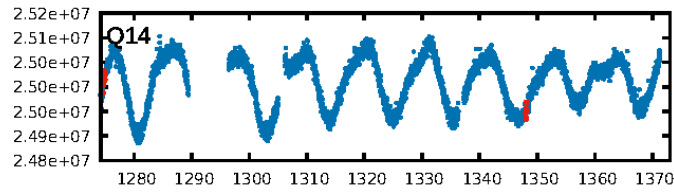
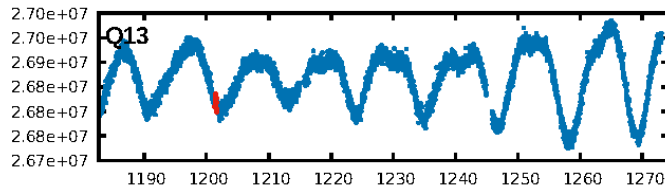
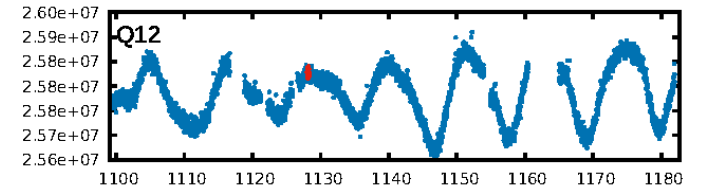
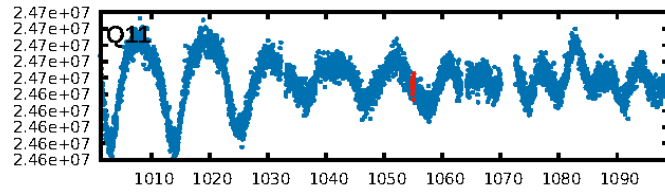
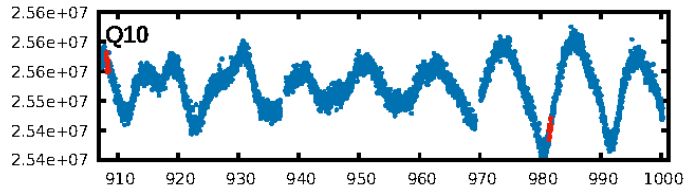
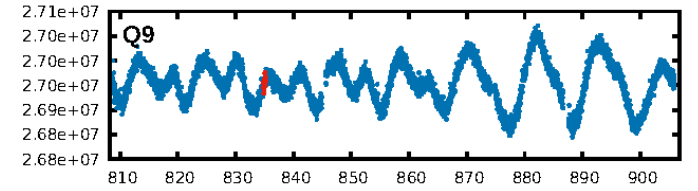
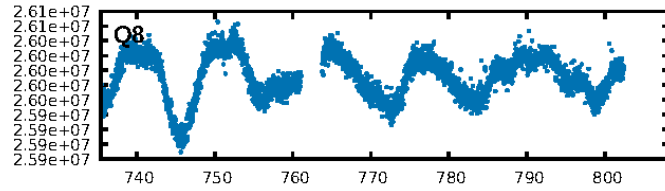
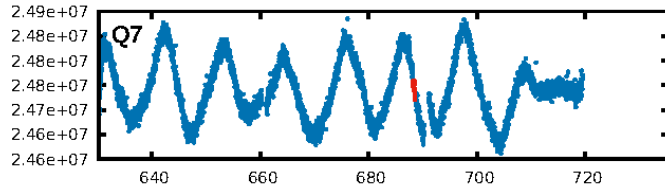
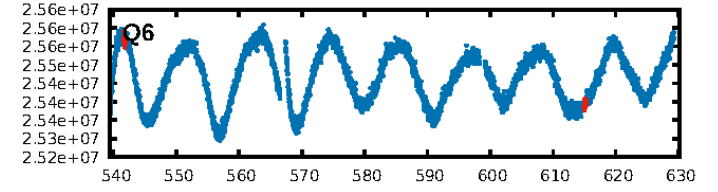
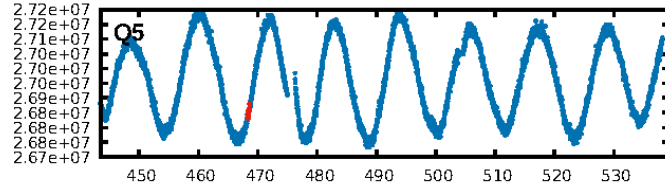
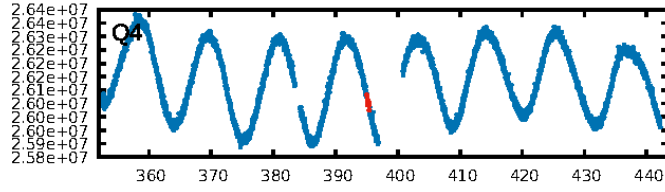
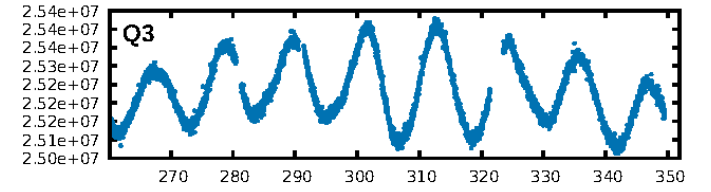
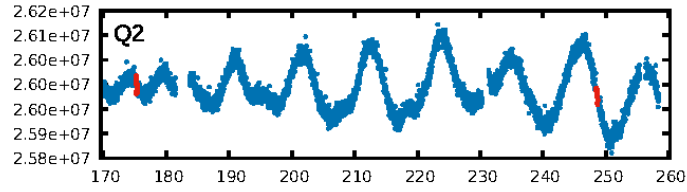
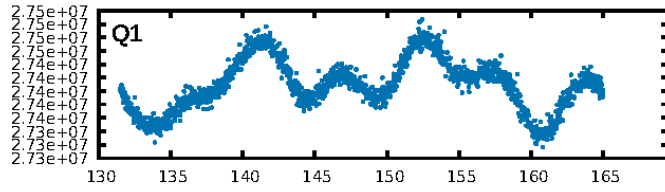
KIC: 5896585 Candidate: 6 of 6 Period: 73.302 d



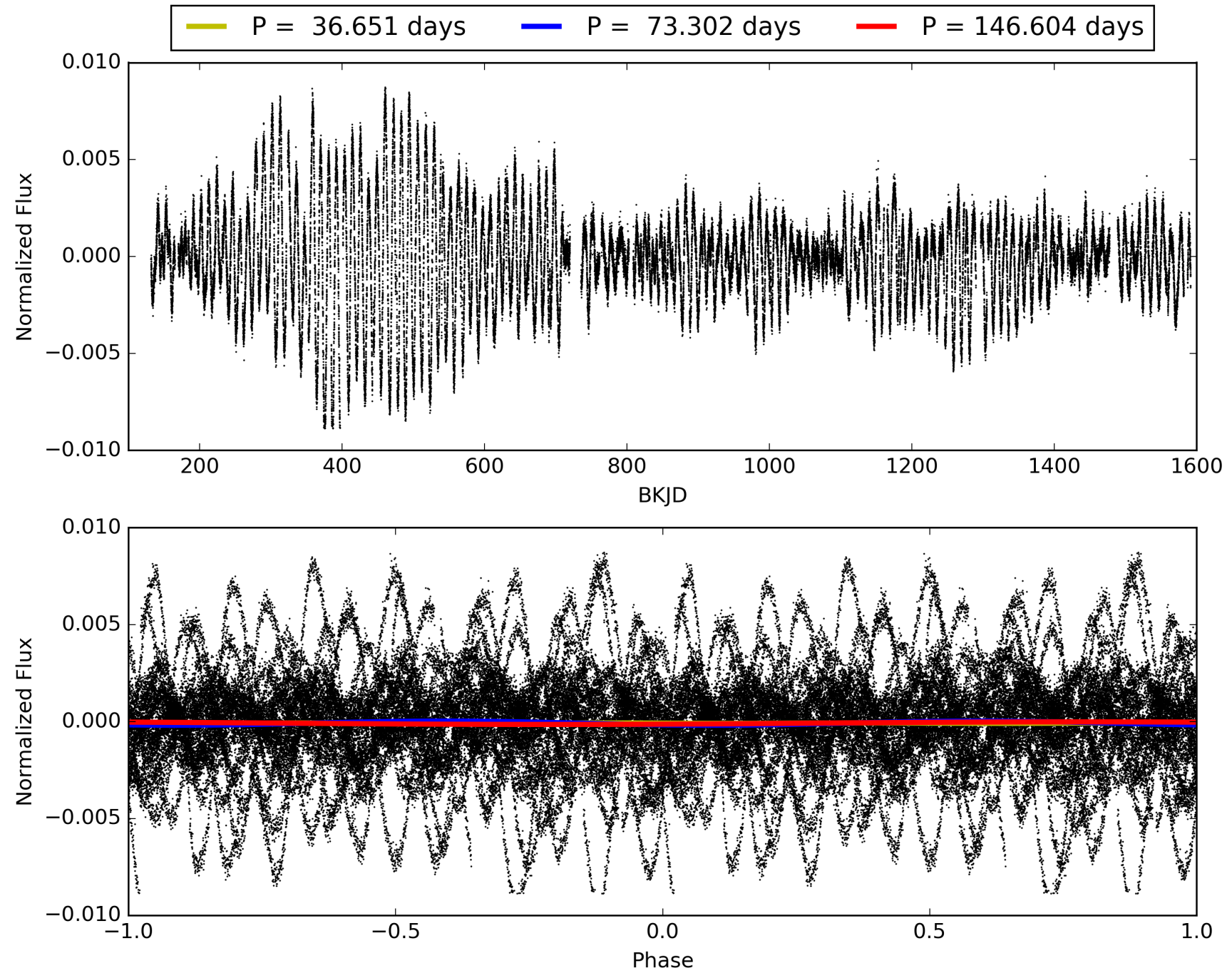
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:23:43 Z

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

TCE 005896585-06, PDC Light Curves

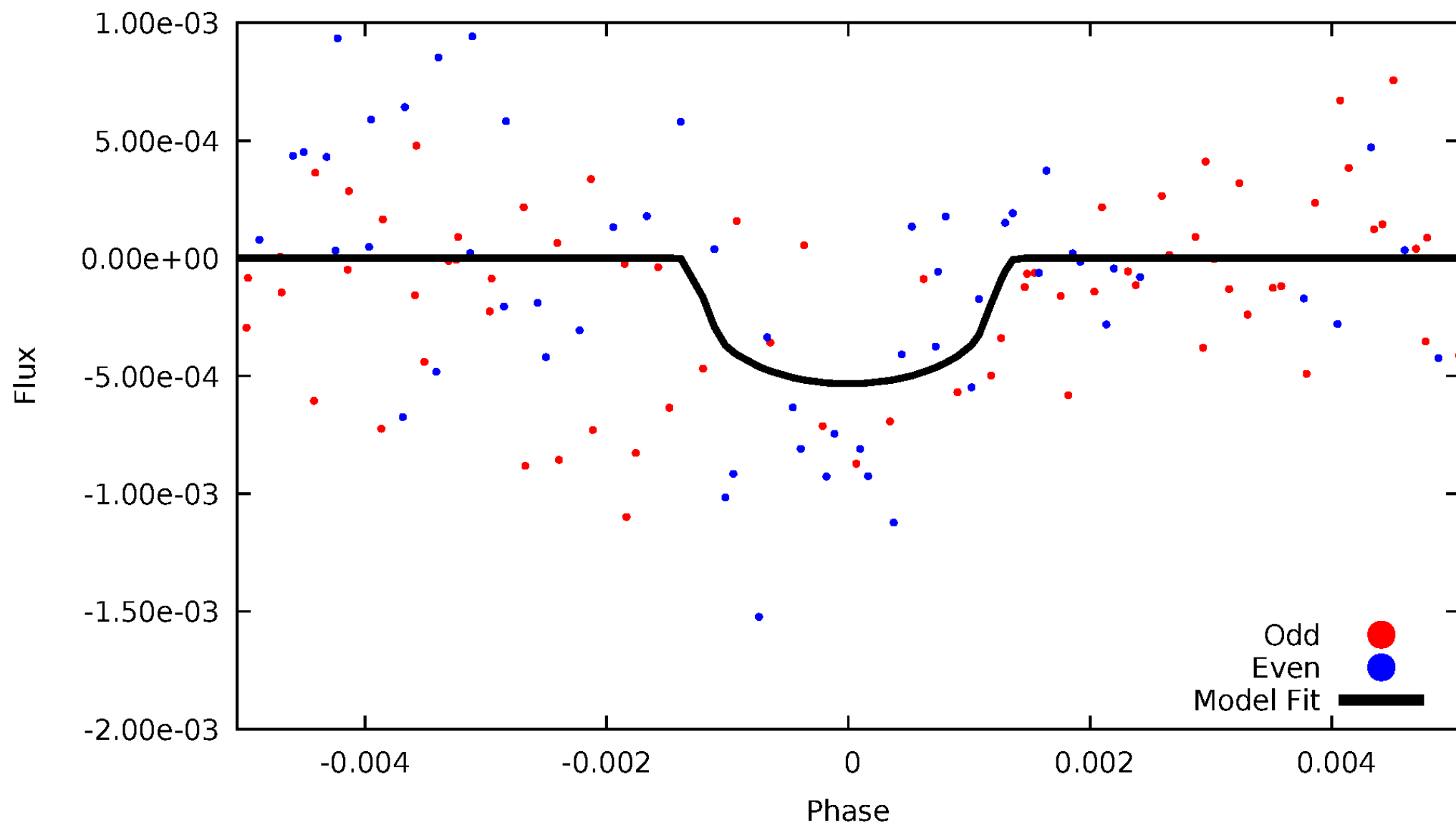


TCE 005896585-06



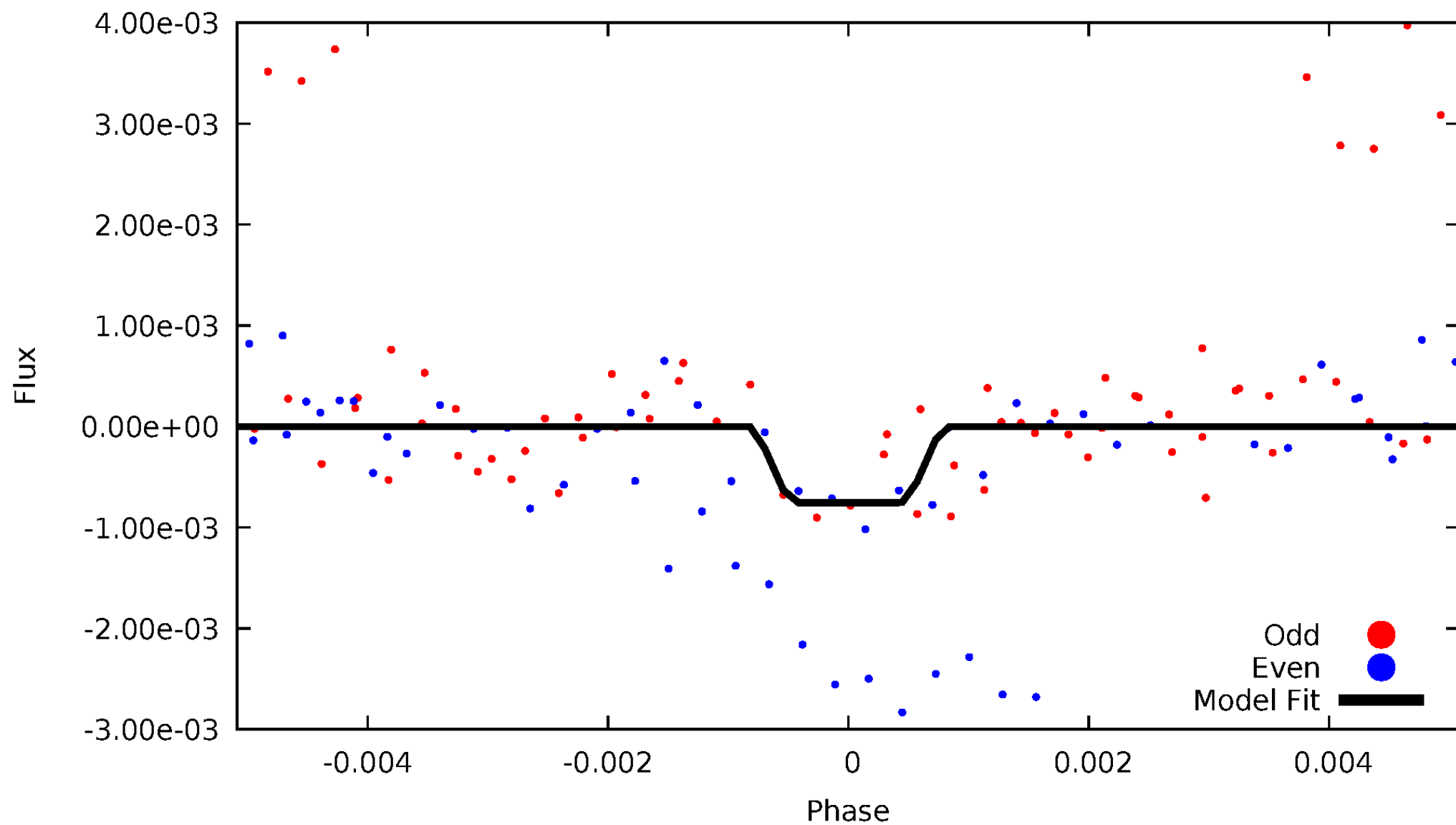
DV Odd/Even

TCE 005896585-06



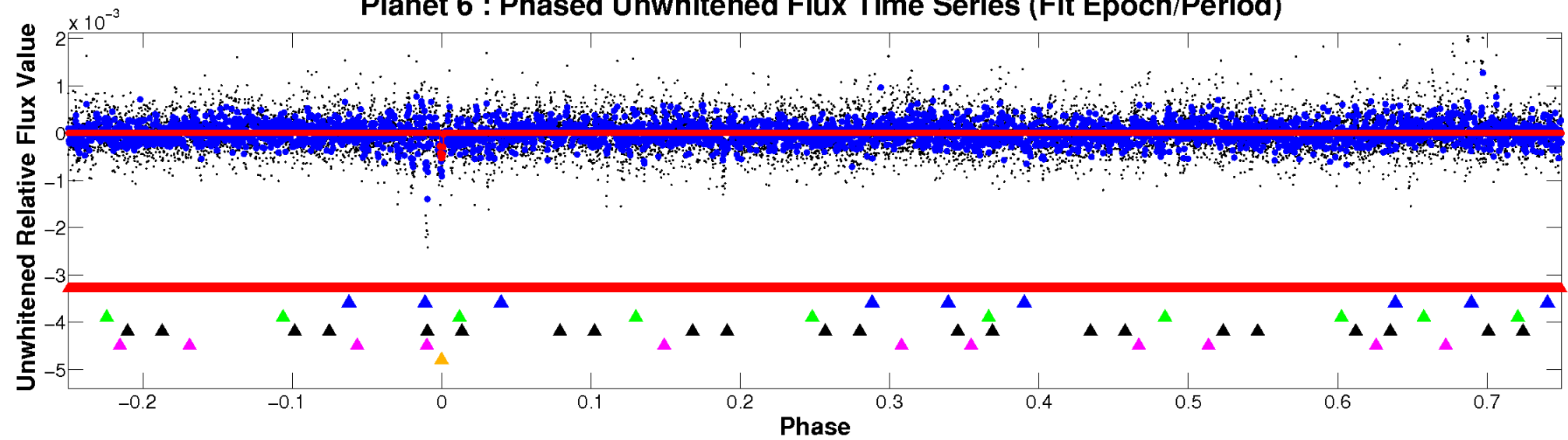
ALT Odd/Even

TCE 005896585-06

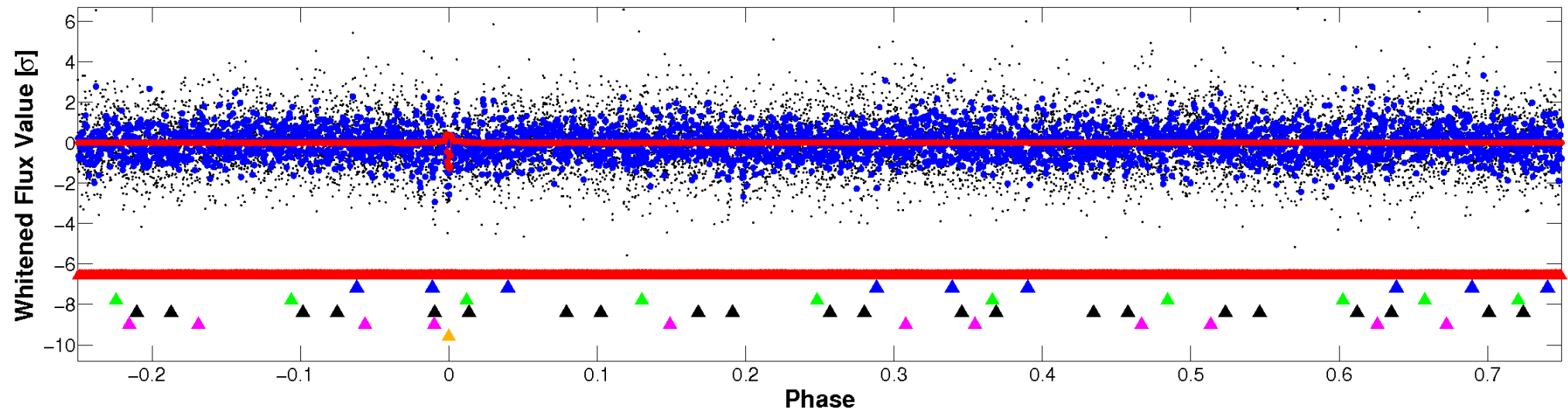


Non-Whitened Vs. Whitened Light Curve

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

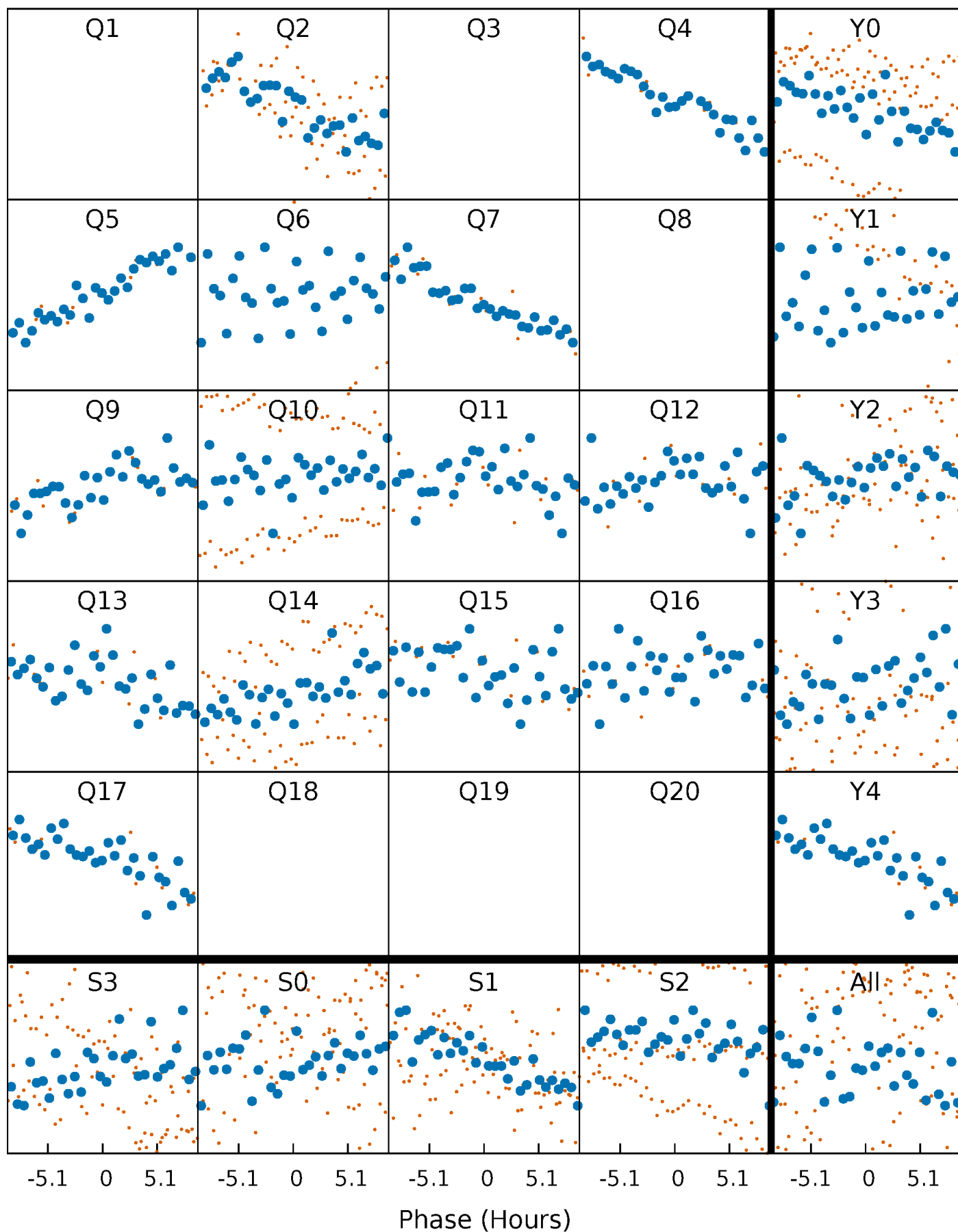


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



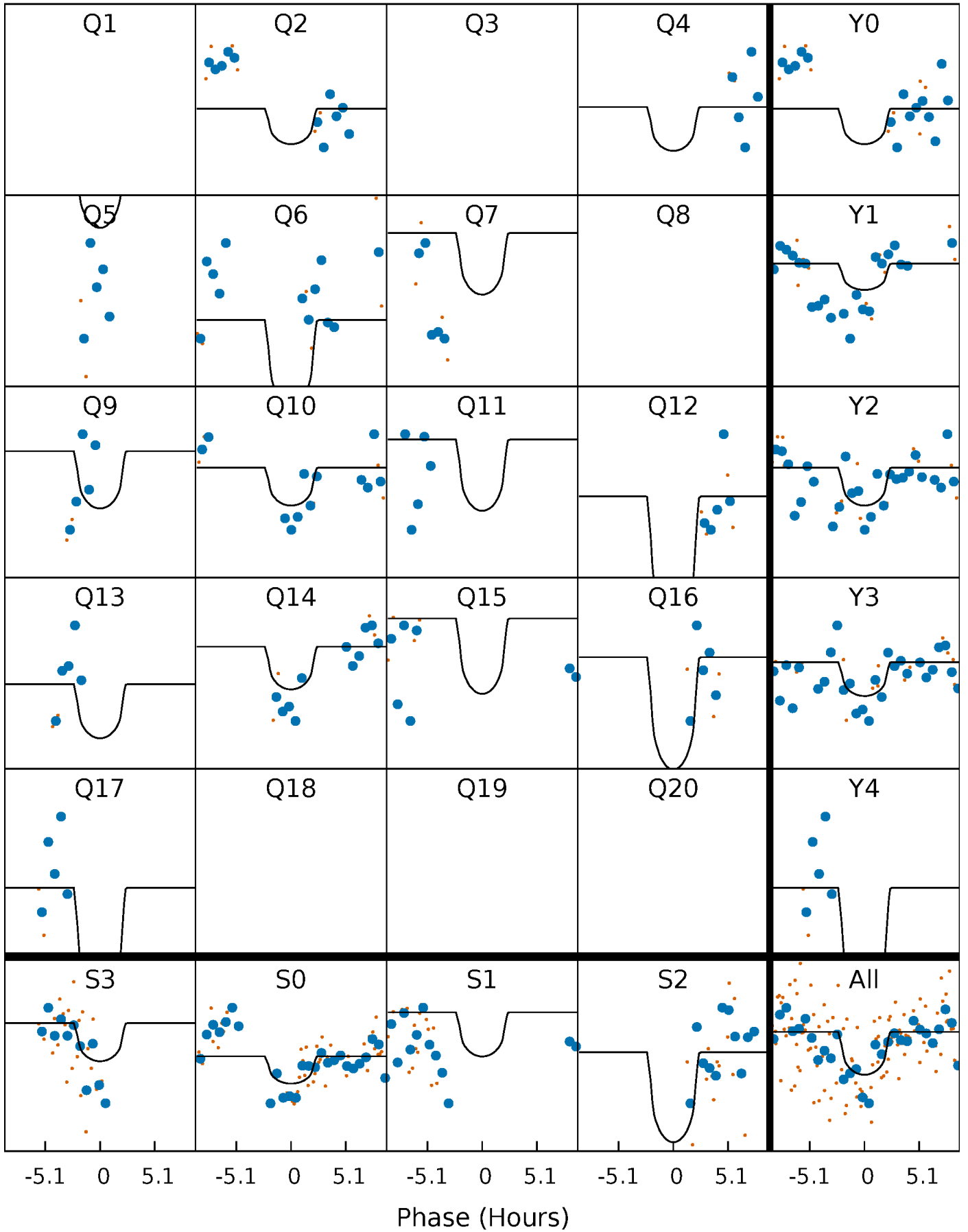
PDC Quarter-Phased Transit Curves

TCE 005896585-06 P= 73.302070 Days $T_0=175.285983$ (BKJD)



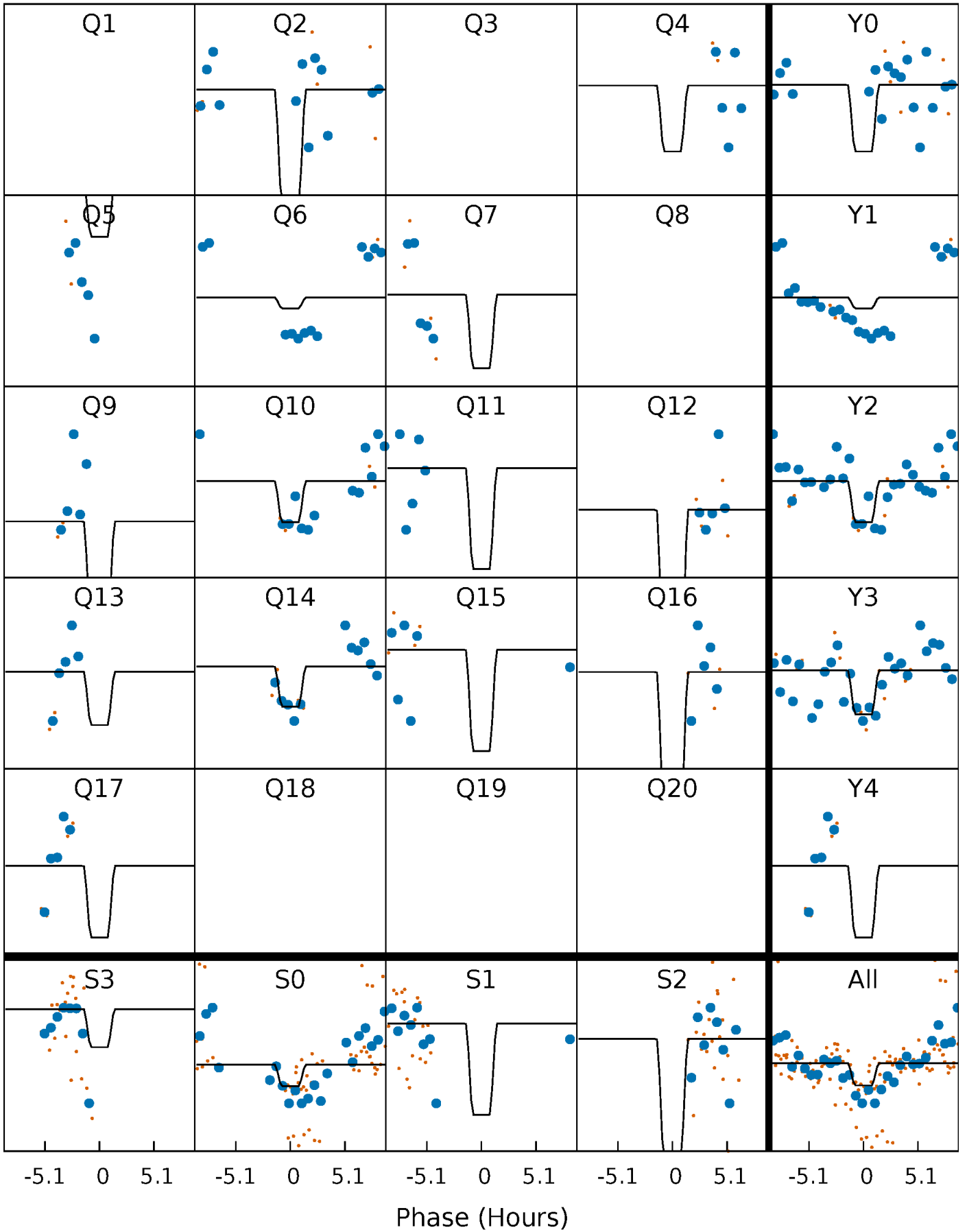
DV Quarter-Phased Transit Curves

TCE 005896585-06 P= 73.302070 Days $T_0=175.285983$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

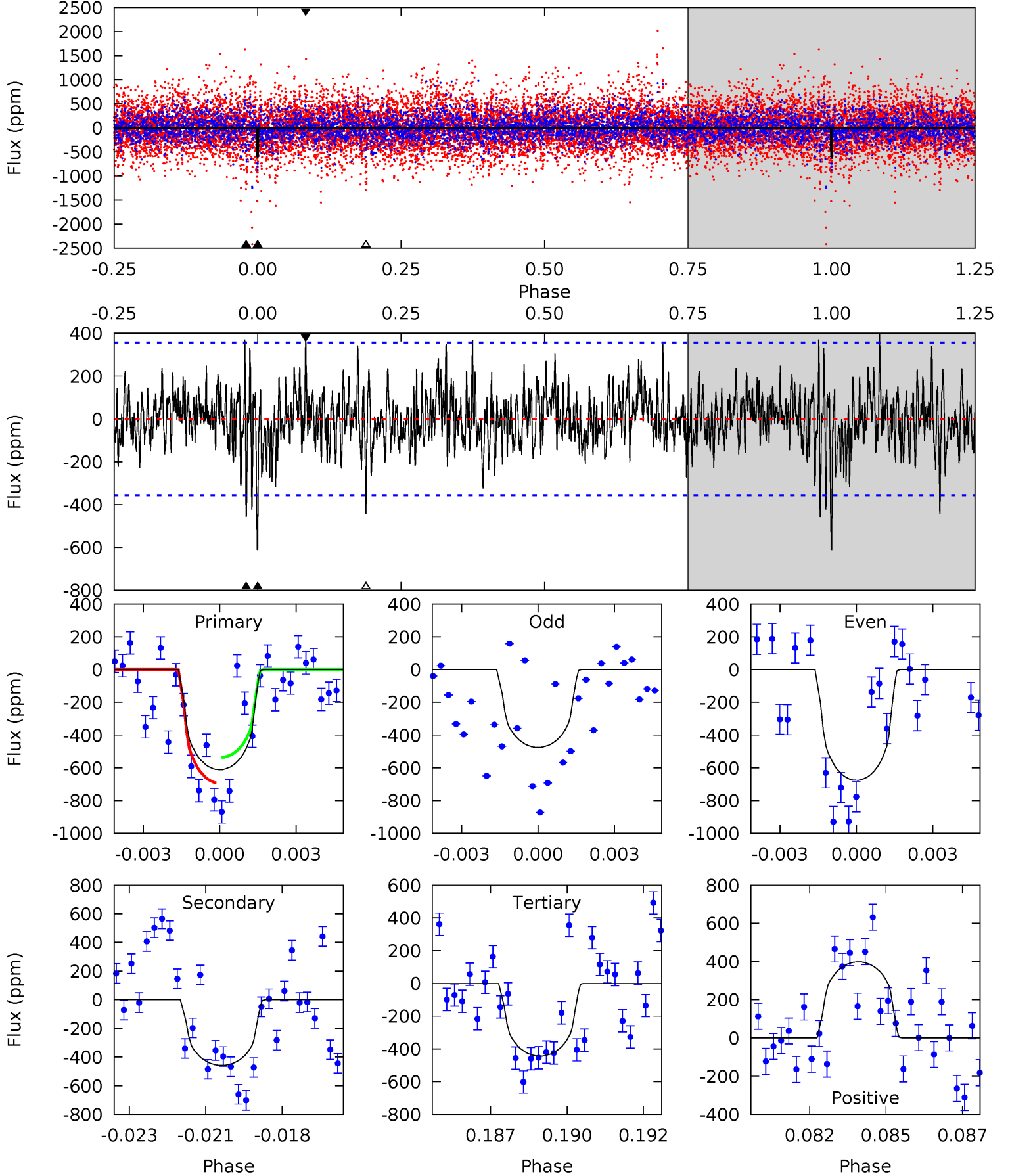
TCE 005896585-06 $P = 73.297575$ Days $T_0 = 175.359459$ (BKJD)



DV Model-Shift Uniqueness Test

005896585-06, $P = 73.302070$ Days, $E = 101.983913$ Days

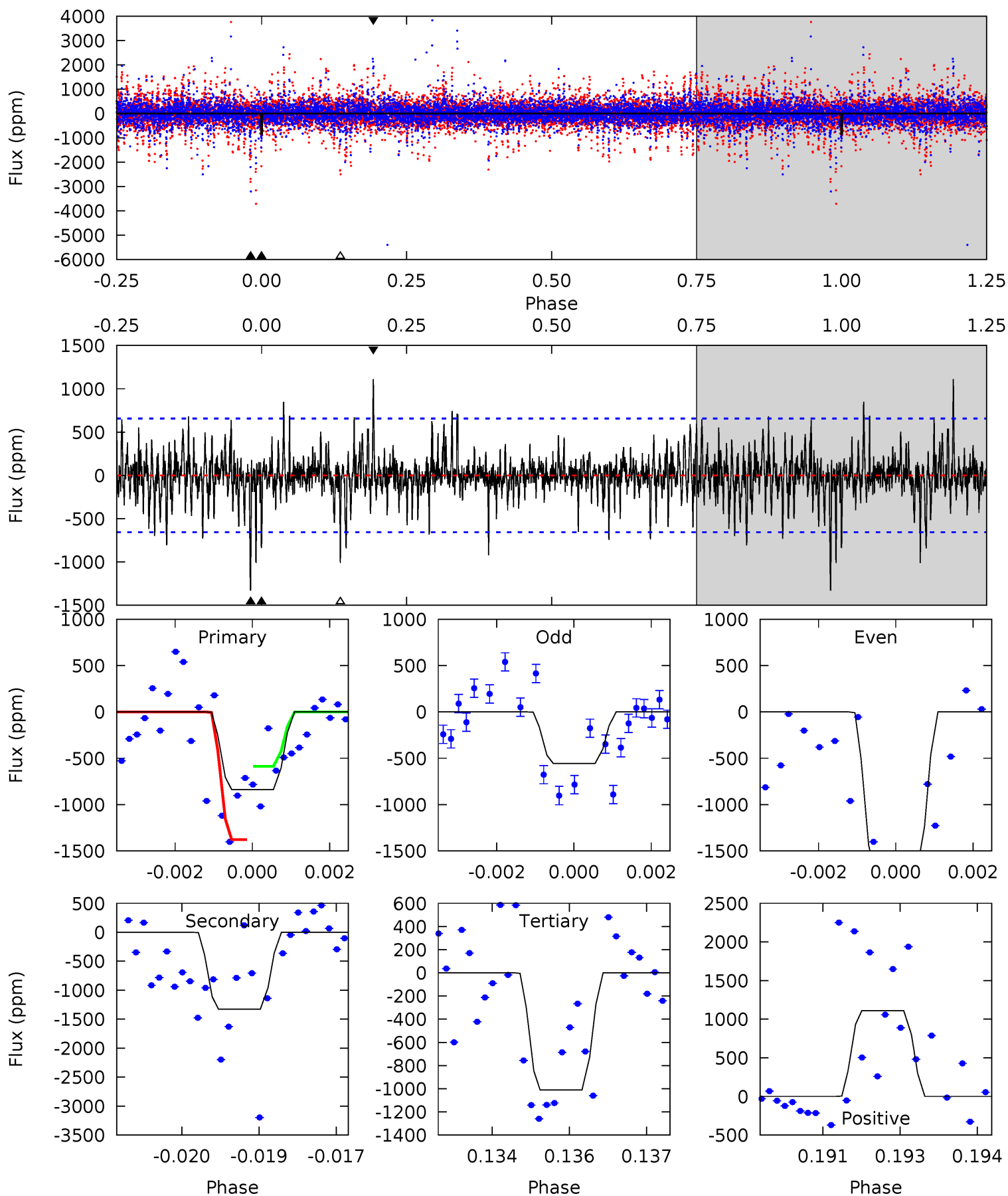
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.07	6.79	6.58	5.91	5.28	3.02	1.63	2.49	3.16	0.21	0.88	1.40	1.17	0.39	1.15



Alt Model-Shift Uniqueness Test

005896585-06, P = 73.297575 Days, E = 102.061884 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.87	10.9	8.28	9.11	5.37	3.17	1.61	-1.42	-2.24	2.59	1.77	3.34	1.71	0.46	3.40



Stellar Parameters For KIC 005896585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4514^{+134}_{-134}	$4.603^{+0.053}_{-0.021}$	$-0.120^{+0.300}_{-0.300}$	$0.674^{+0.044}_{-0.060}$	$0.663^{+0.067}_{-0.054}$	$3.052^{+0.707}_{-0.302}$
	+3%/-3%	+1%/-0%	+250%/-250%	+7%/-9%	+10%/-8%	+23%/-10%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005896585-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-458 ± 67	$2.64^{+2.55}_{-1.85}$	416^{+13}_{-15}	3735^{+2289}_{-698}	3210^{+33123}_{-2367}
Alt.	-1327 ± 122	$2.96^{+2.65}_{-1.90}$	414^{+15}_{-14}	4308^{+2527}_{-836}	7344^{+47776}_{-5197}

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 $A_{obs} \gg 1.0$

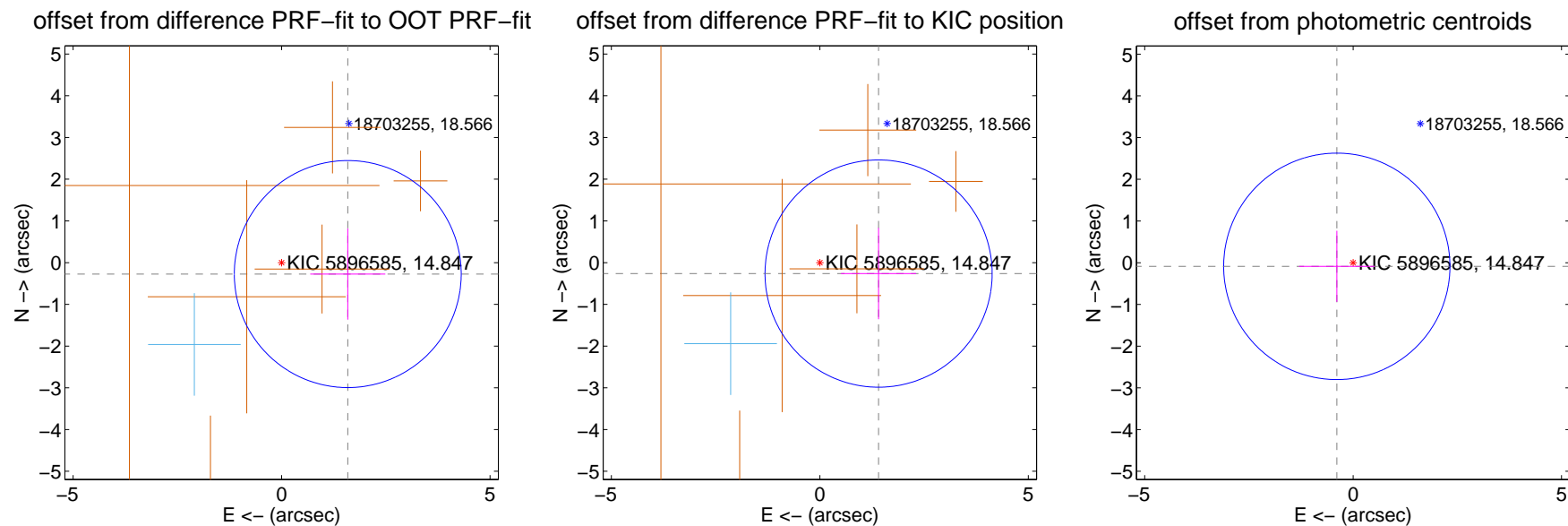
DV Centroid Data

Supplemental centroid analysis for 005896585-06. Kepler magnitude: 14.85. Transit SNR 5.82

There are 1 quarters with good PRF difference image offsets

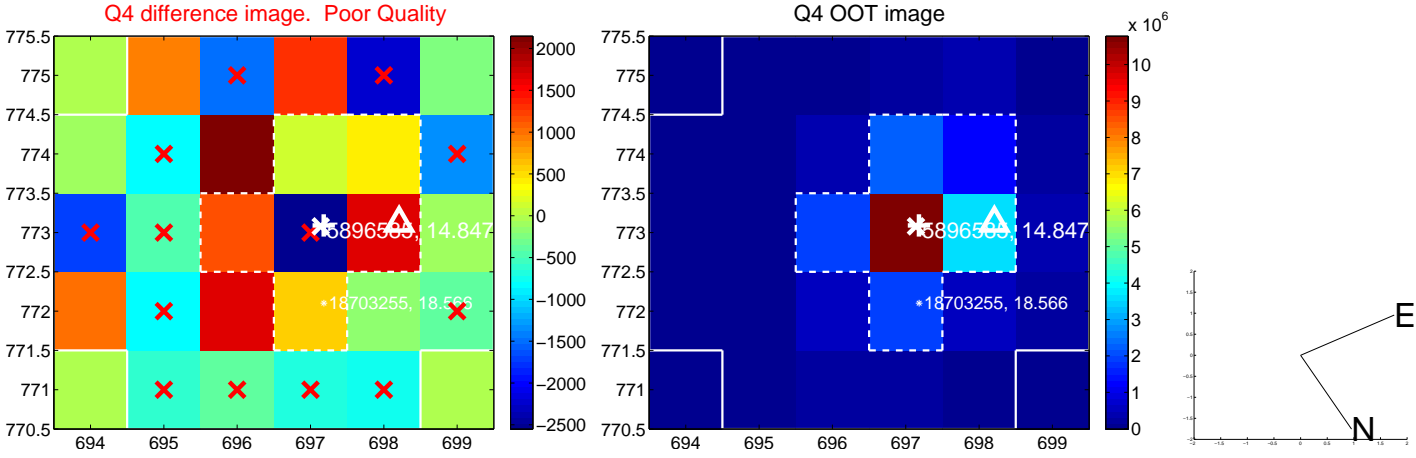
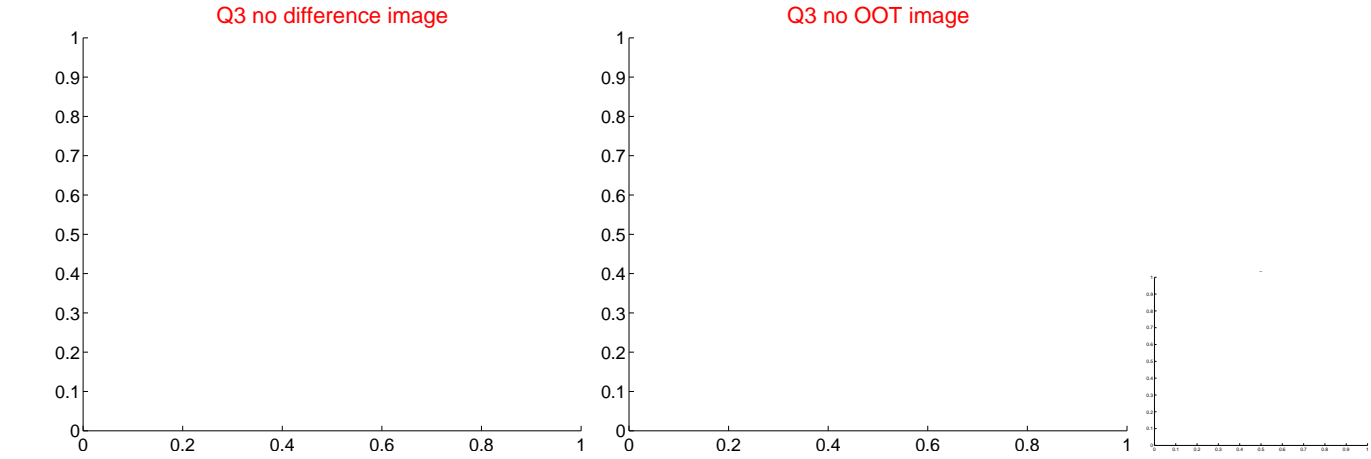
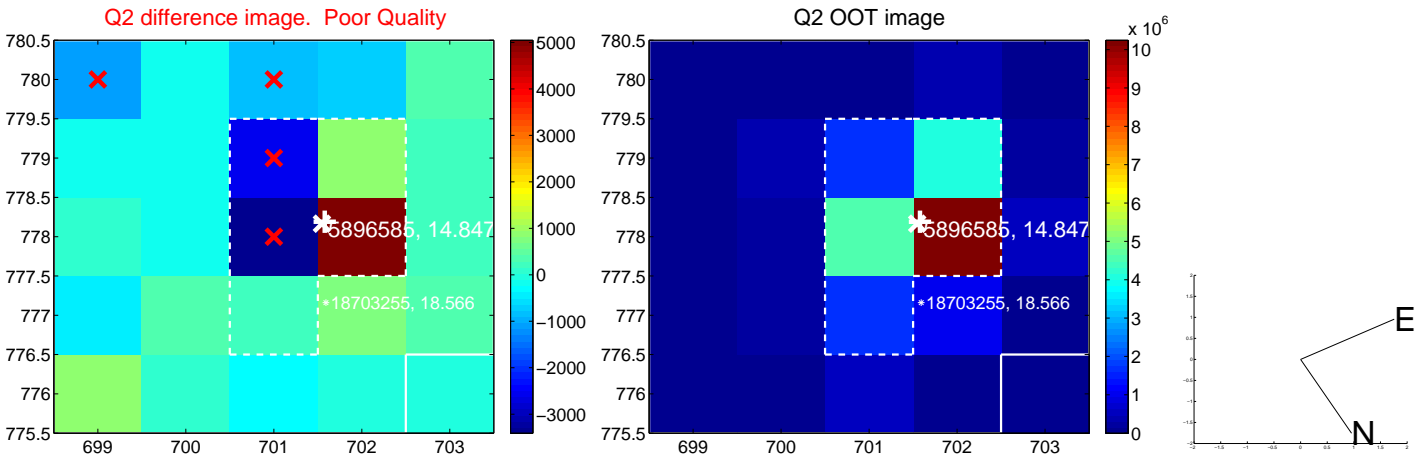
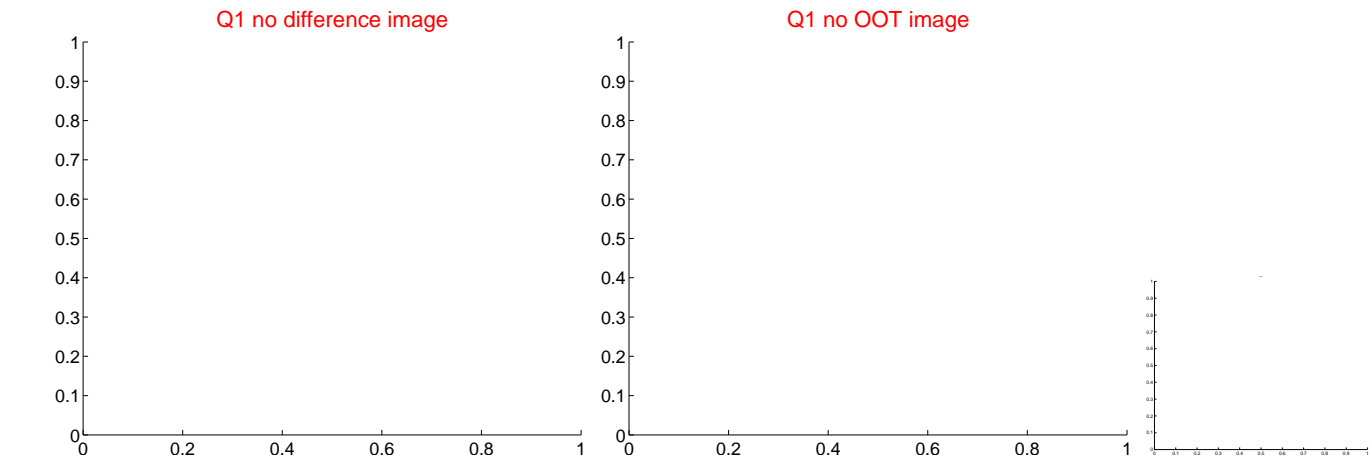
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.611 ± 0.907	1.78	-1.587 ± 0.901	-0.274 ± 1.094
PRF-fit source offset from KIC position	1.433 ± 0.908	1.58	-1.409 ± 0.901	-0.262 ± 1.094
photometric centroid source offset	0.40 ± 0.90	0.44	0.39 ± 0.91	-0.09 ± 0.85

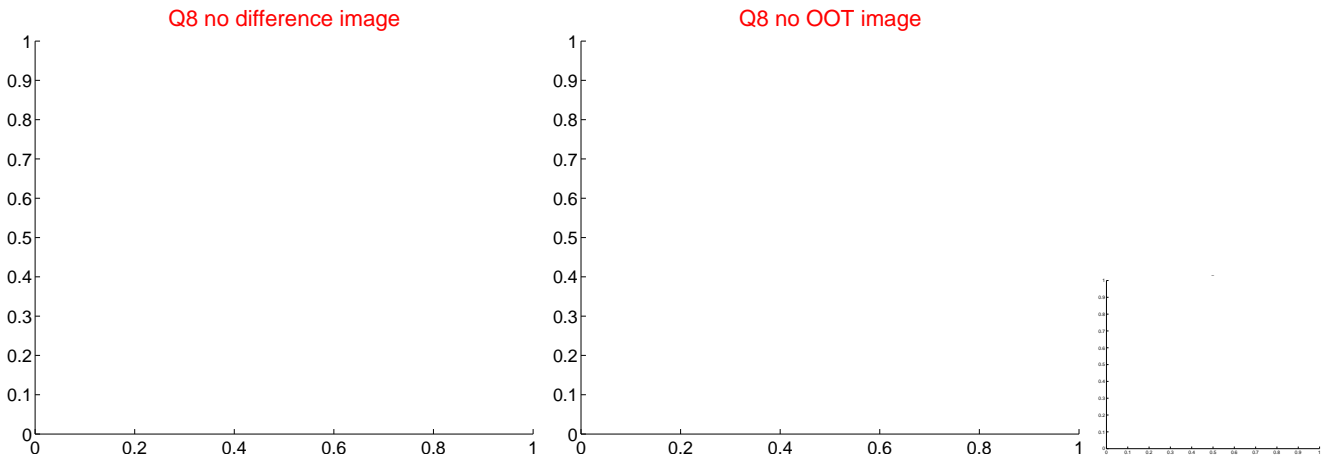
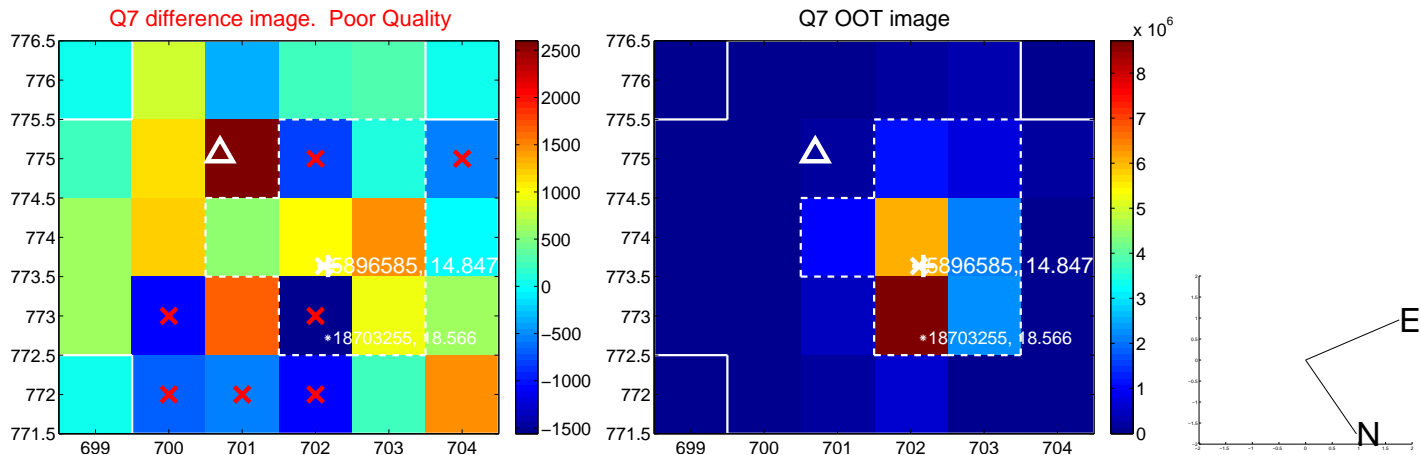
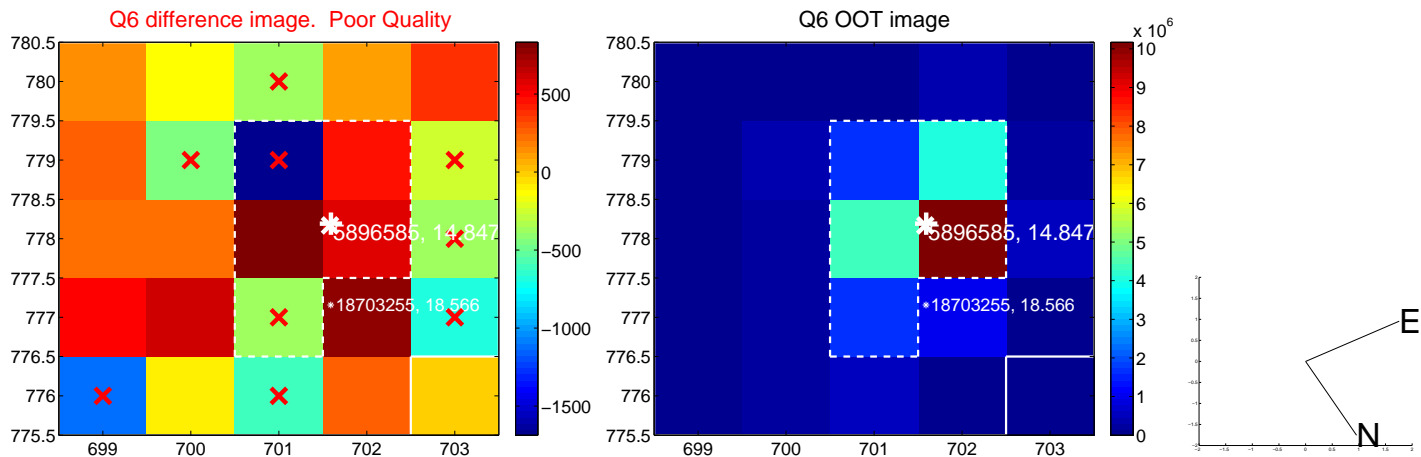
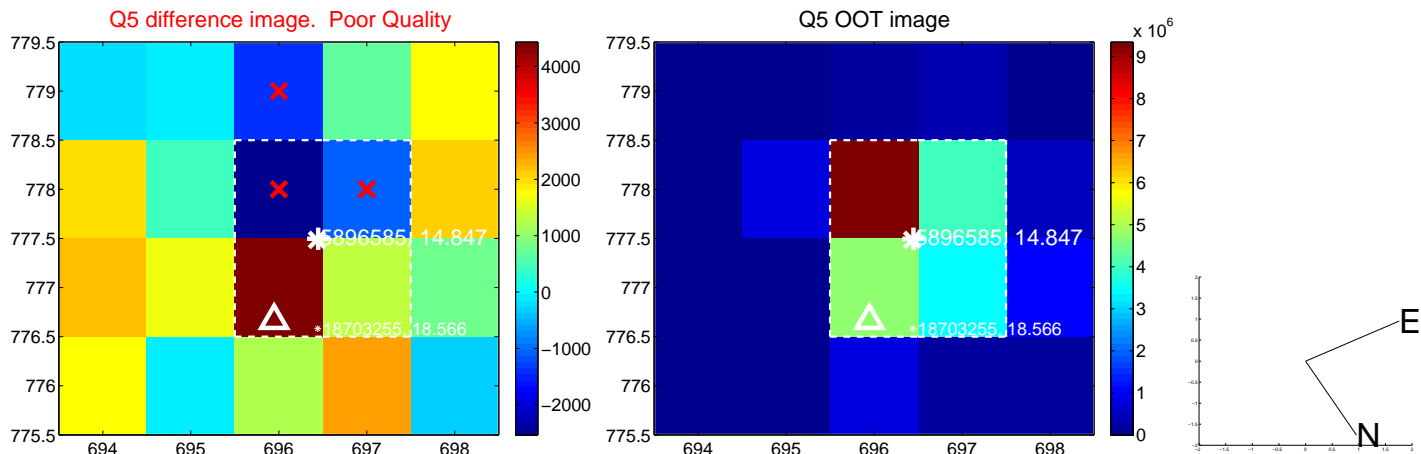


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

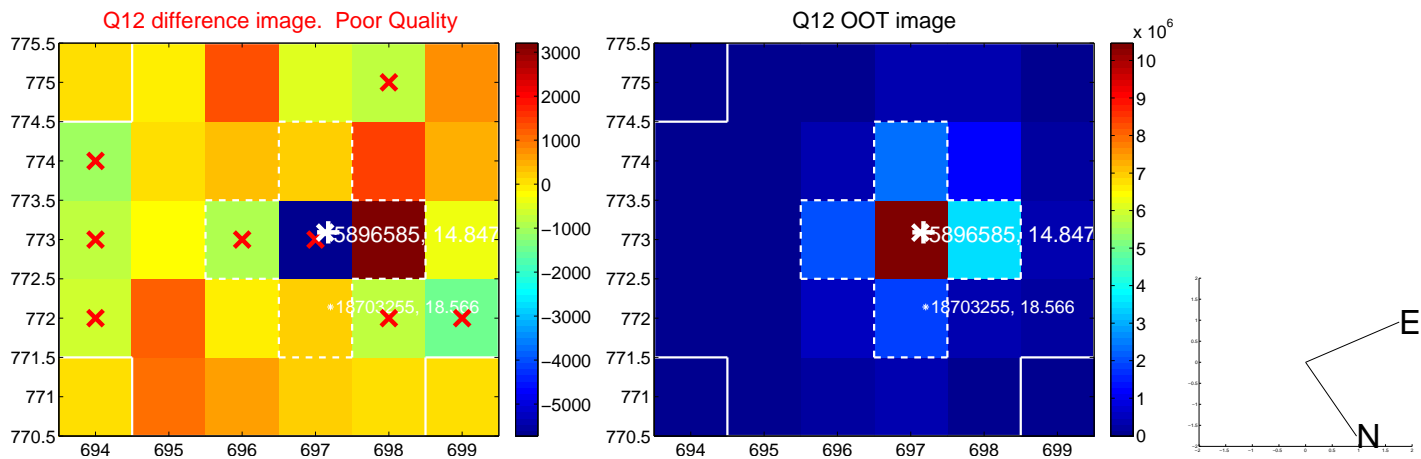
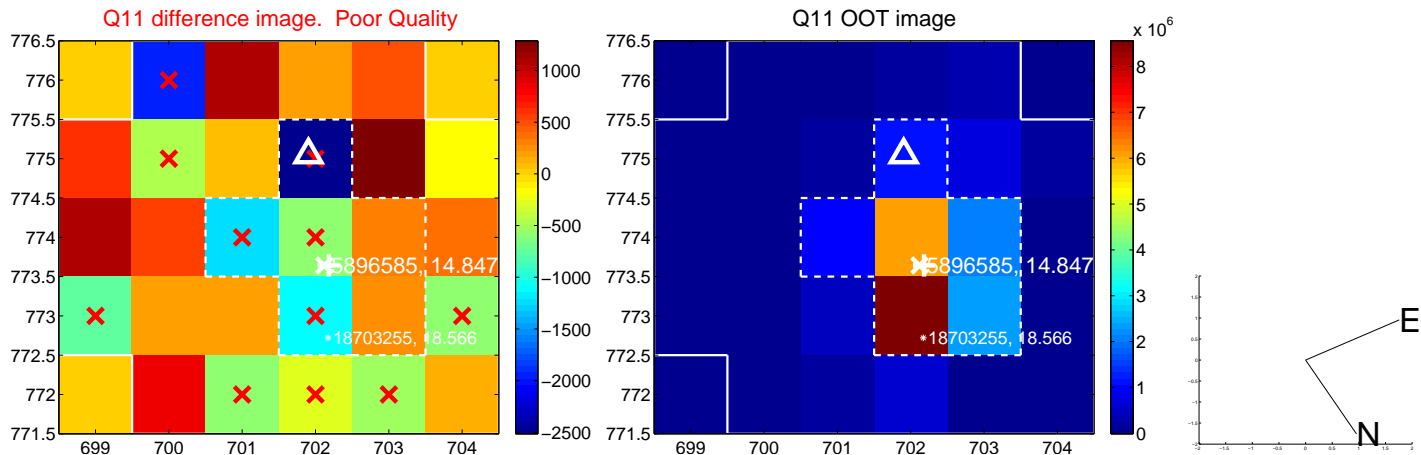
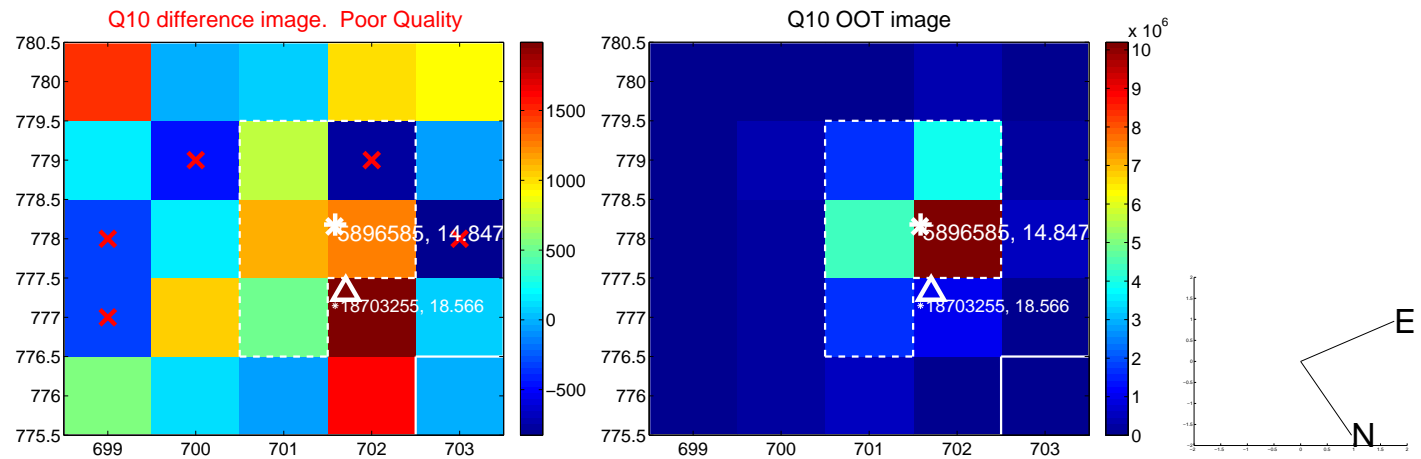
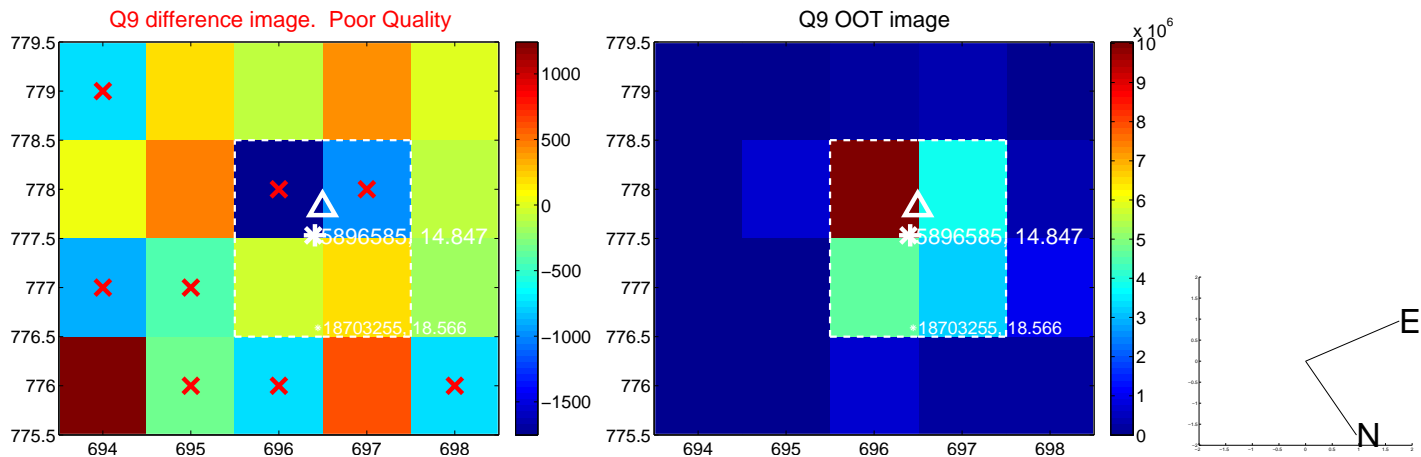
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



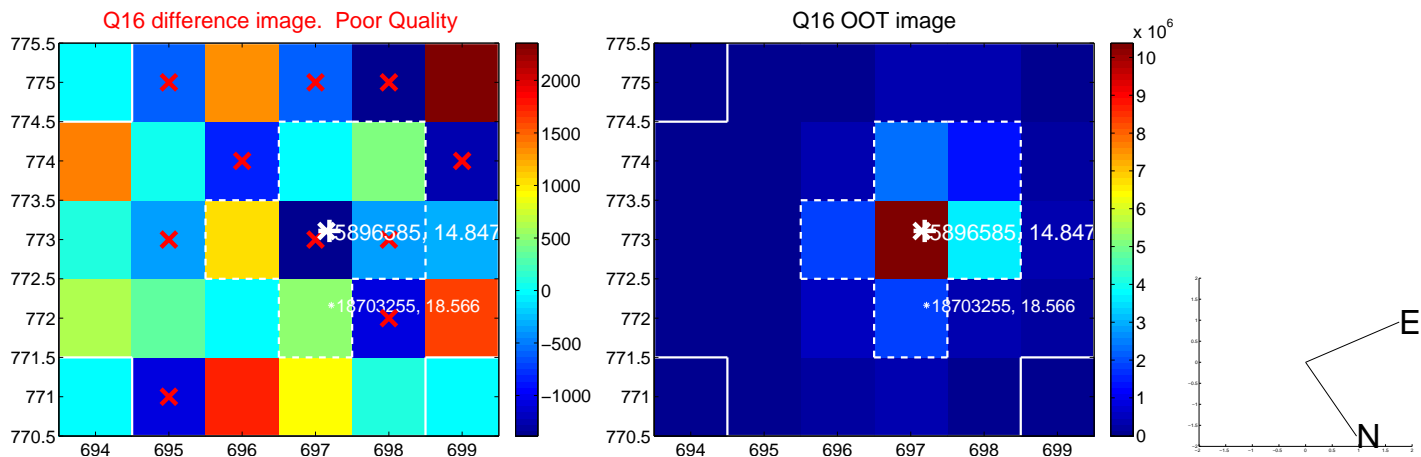
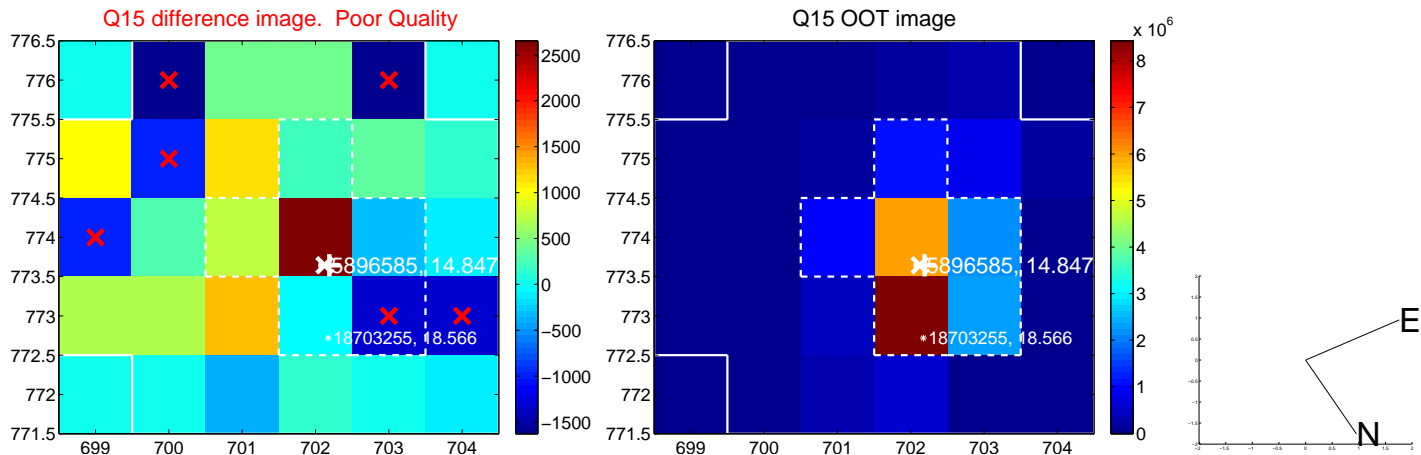
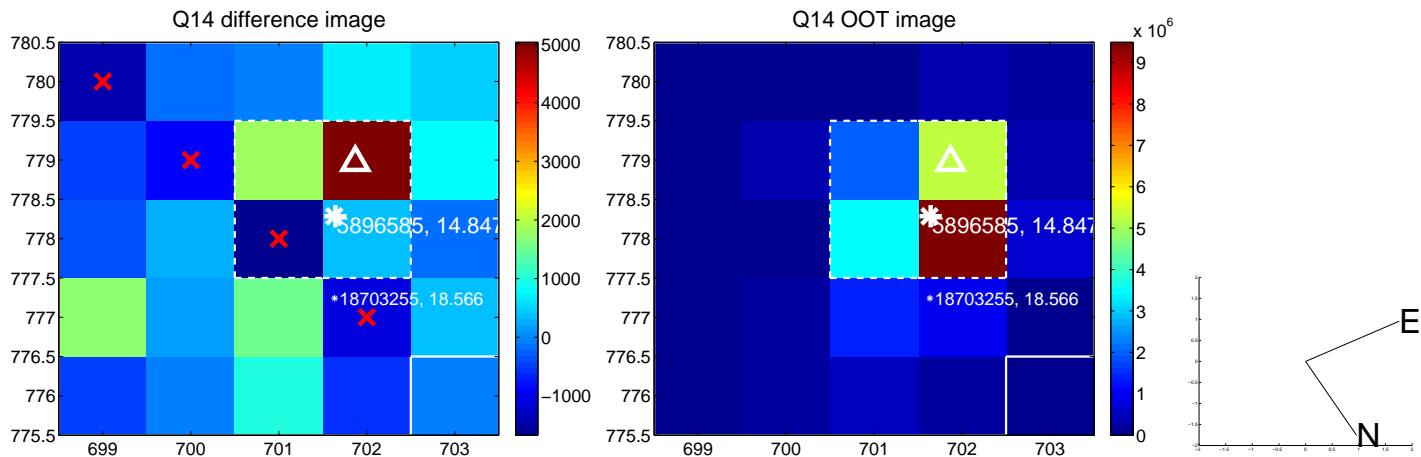
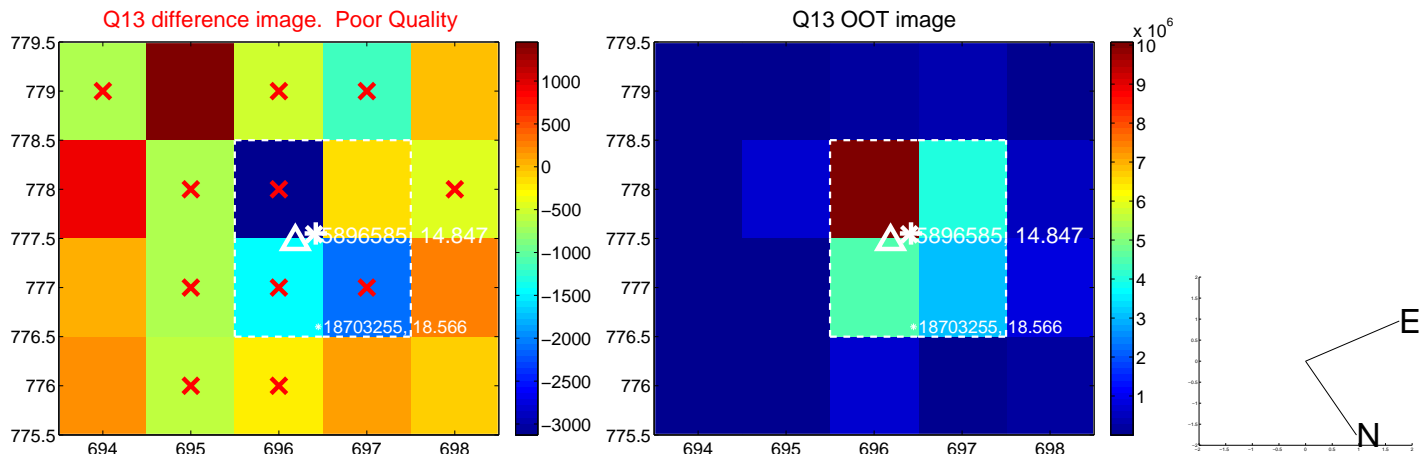
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



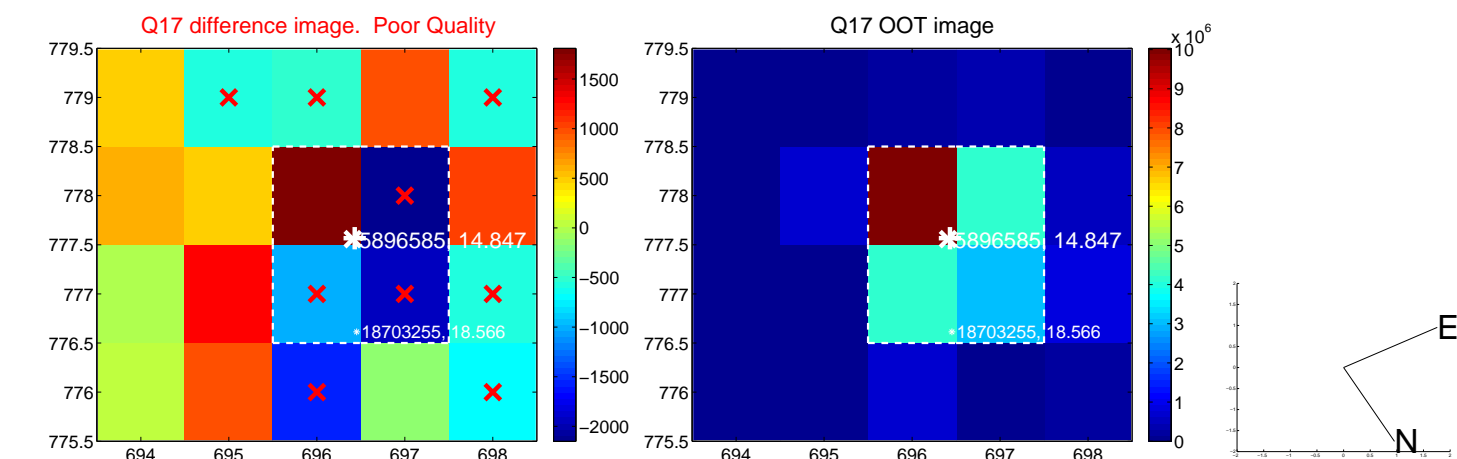
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



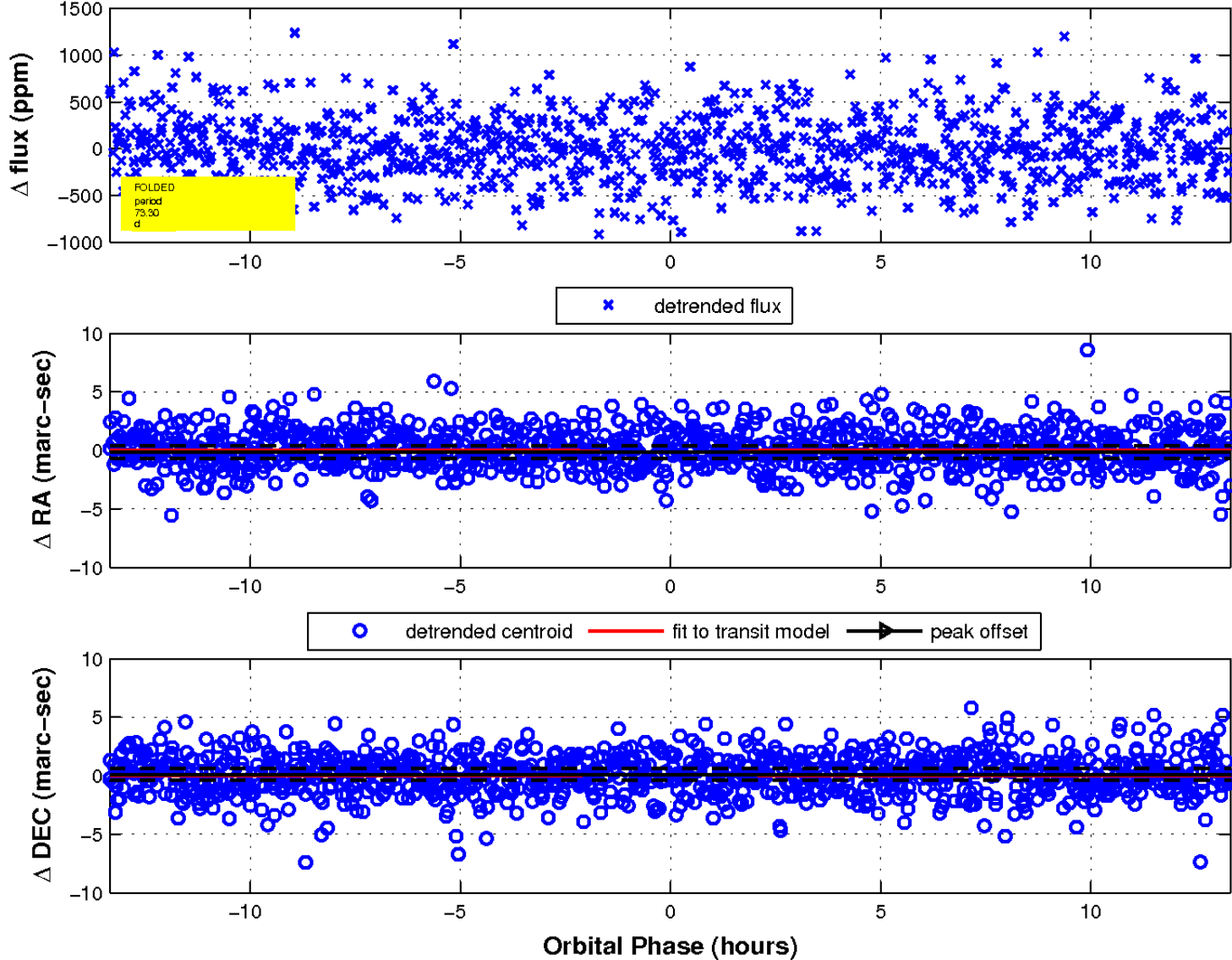
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

