

KIC 007747425

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})
007747425-01	OBS	1952.01	8.010388	135.317195	293.9	4.567	29.2	31.9	1.11	5616	2.27	184.59
007747425-02	OBS	1952.02	27.666819	143.857482	333.8	6.259	20.4	21.5	1.11	5616	2.21	35.36
007747425-03	OBS	1952.04	42.473086	146.282817	308.8	7.297	16.7	18.0	1.11	5616	2.21	19.96
007747425-04	OBS	1952.03	5.195619	132.720377	124.4	3.736	14.6	15.6	1.11	5616	1.42	328.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007747425-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-02	OBS	PC	0.97	0	0	0	0	NO_COMMENT
007747425-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-04	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

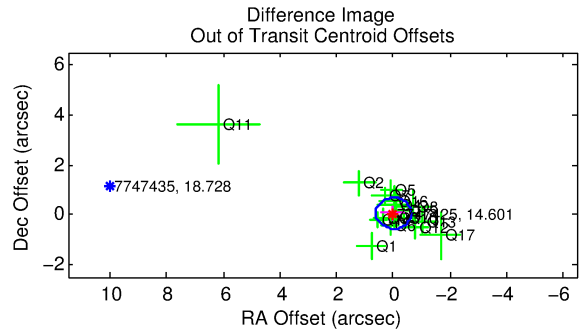
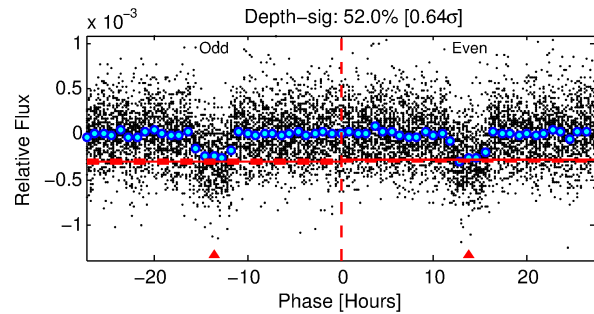
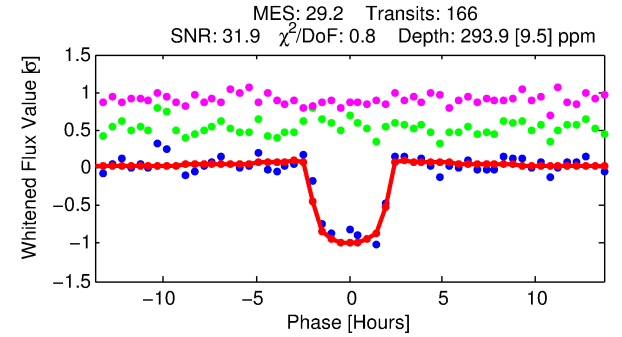
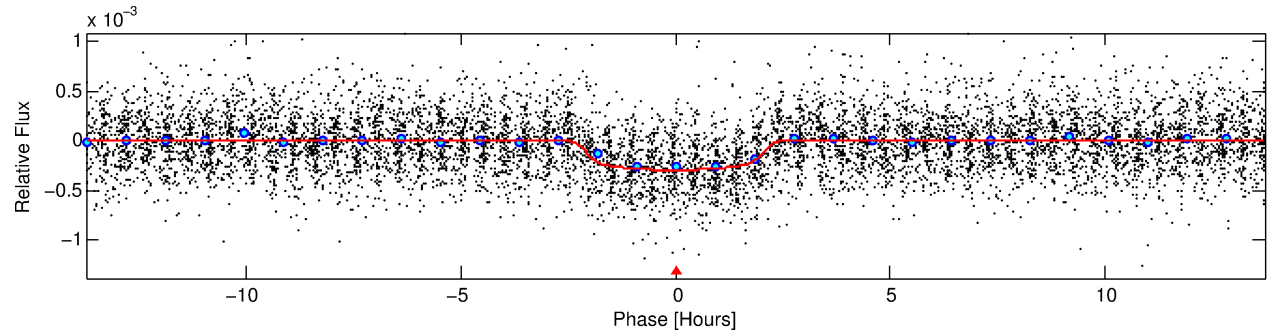
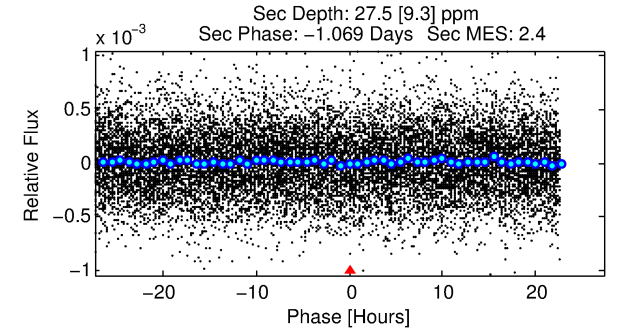
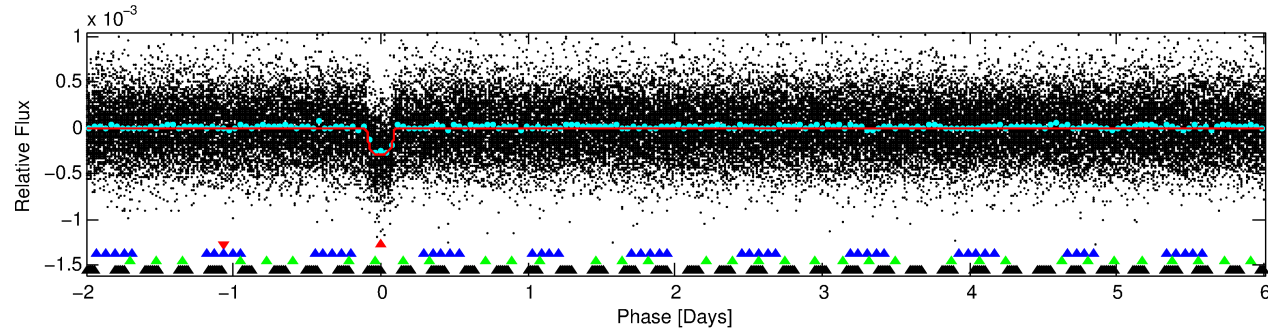
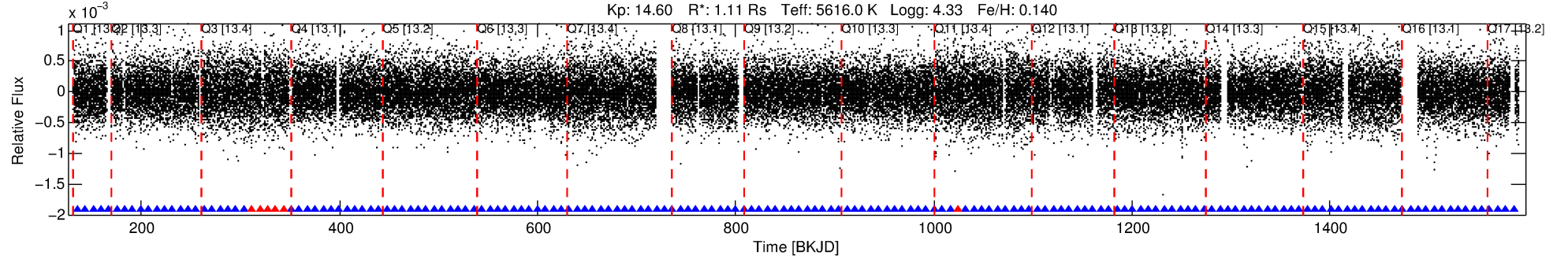
Ephemeris Match Information For 007747425-01

No Significant Match Found

DV One-Page Summary

KIC: 7747425 Candidate: 1 of 4 Period: 8.010 d
KOI: K01952.01 Name: Kepler-341c Corr: 0.966

Kp: 14.60 R*: 1.11 Rs Teff: 5616.0 K Logg: 4.33 Fe/H: 0.140



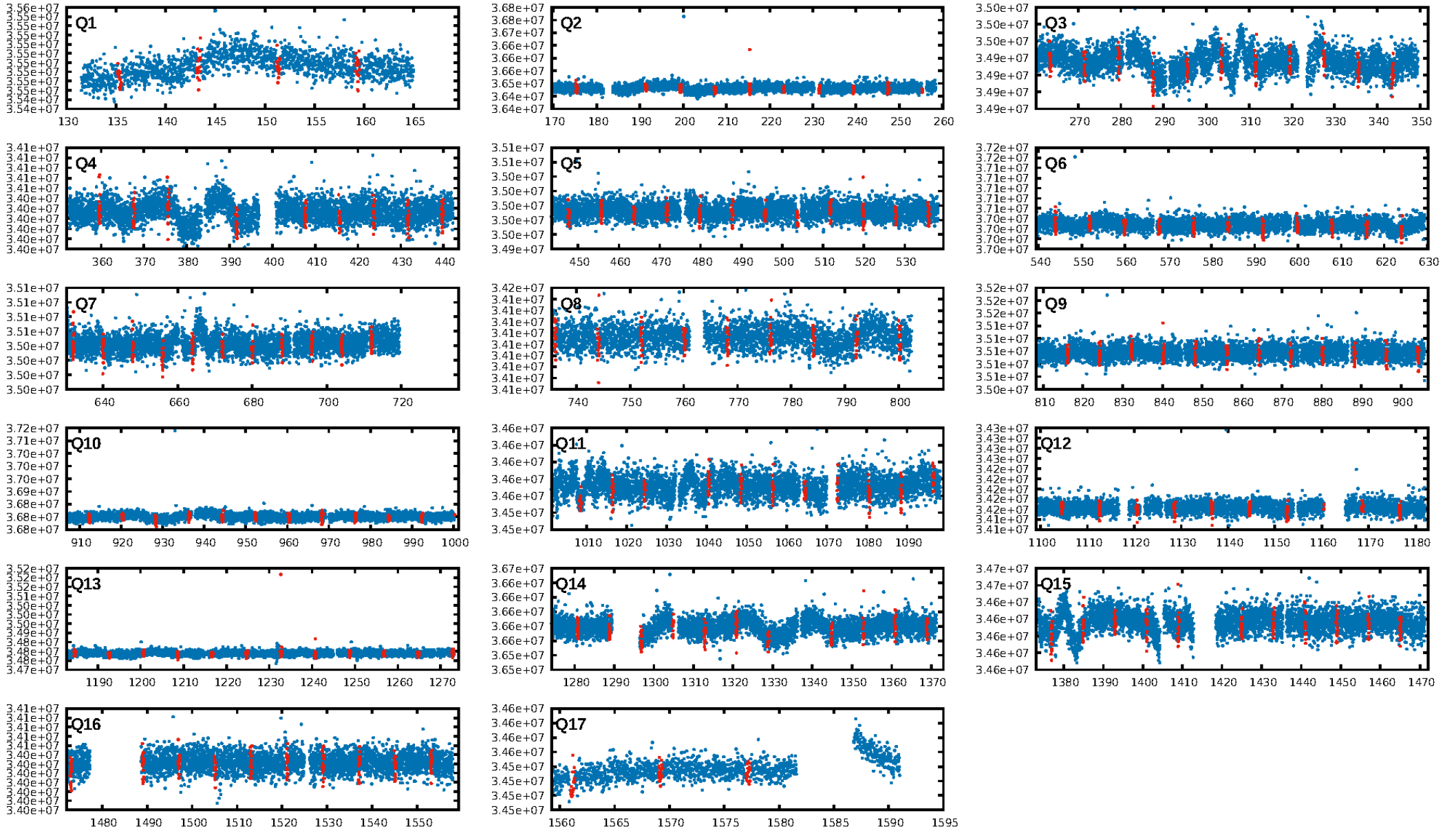
DV Fit Results:

Period = 8.01039 [0.00003] d
Epoch = 135.3172 [0.0028] BKJD
Rp/R* = 0.0187 [0.0021]
a/R* = 6.61 [3.27]
b = 0.89 [0.12]
Seff = 184.59 [42.58]
Teq = 940 [54] K
Rp = 2.27 [0.41] Re
a = 0.0772 [0.0108] AU
Ag = 17.59 [8.18] [2.03σ]
Teffp = 2976 [306] K [6.56σ]

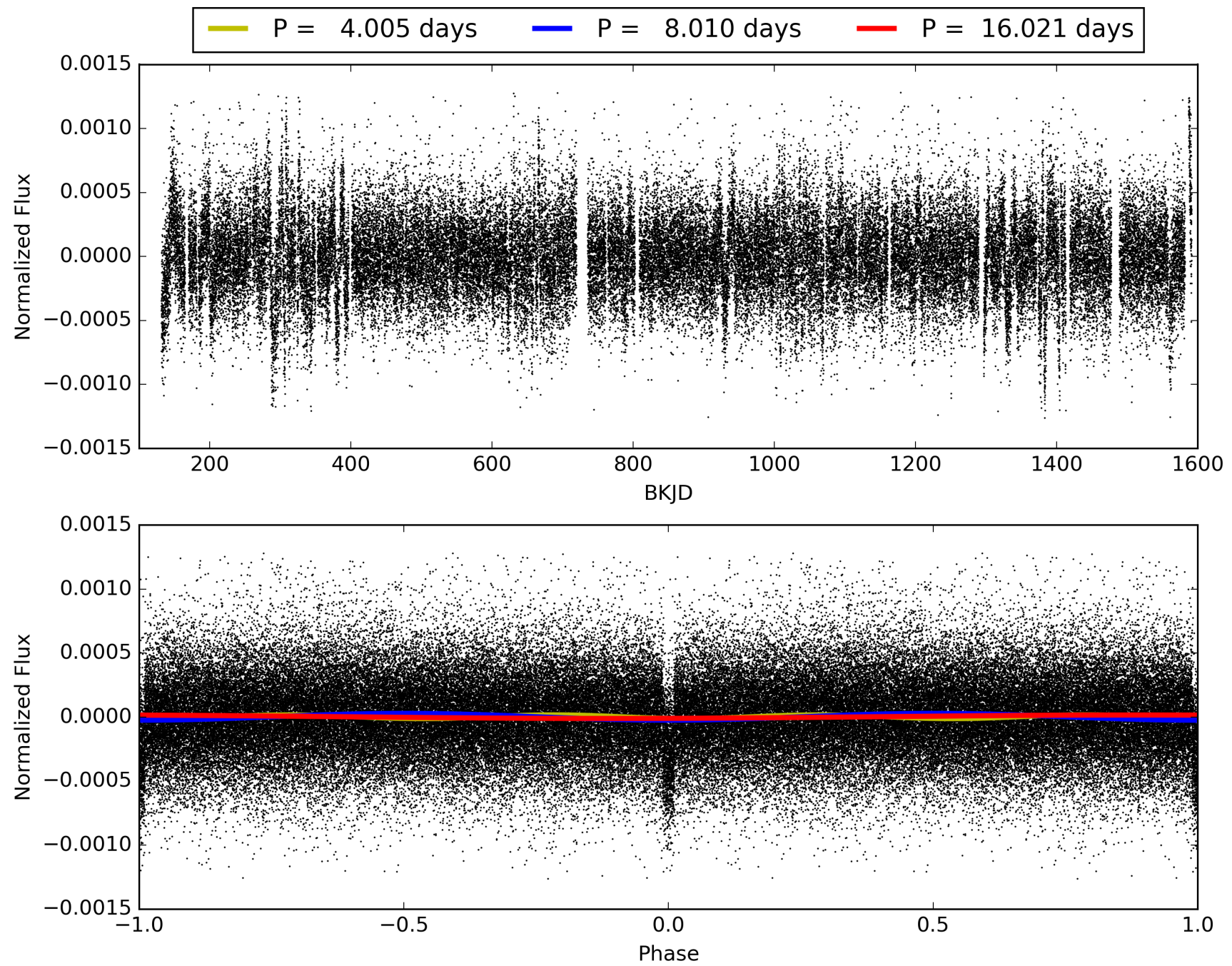
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.45σ]
LongPeriod-sig: 100.0% [60.89σ]
ModelChiSquare2-sig: 95.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.85e-183
RollingBand-fgt: 0.96 [153/159]
GhostDiagnostic-chr: 3.015
Centroid-sig: 1.0%
Centroid-so: 0.928 arcsec [1.97σ]
OotOffset-rm: 0.053 arcsec [0.26σ]
KicOffset-rm: 0.017 arcsec [0.04σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007747425-01, PDC Light Curves

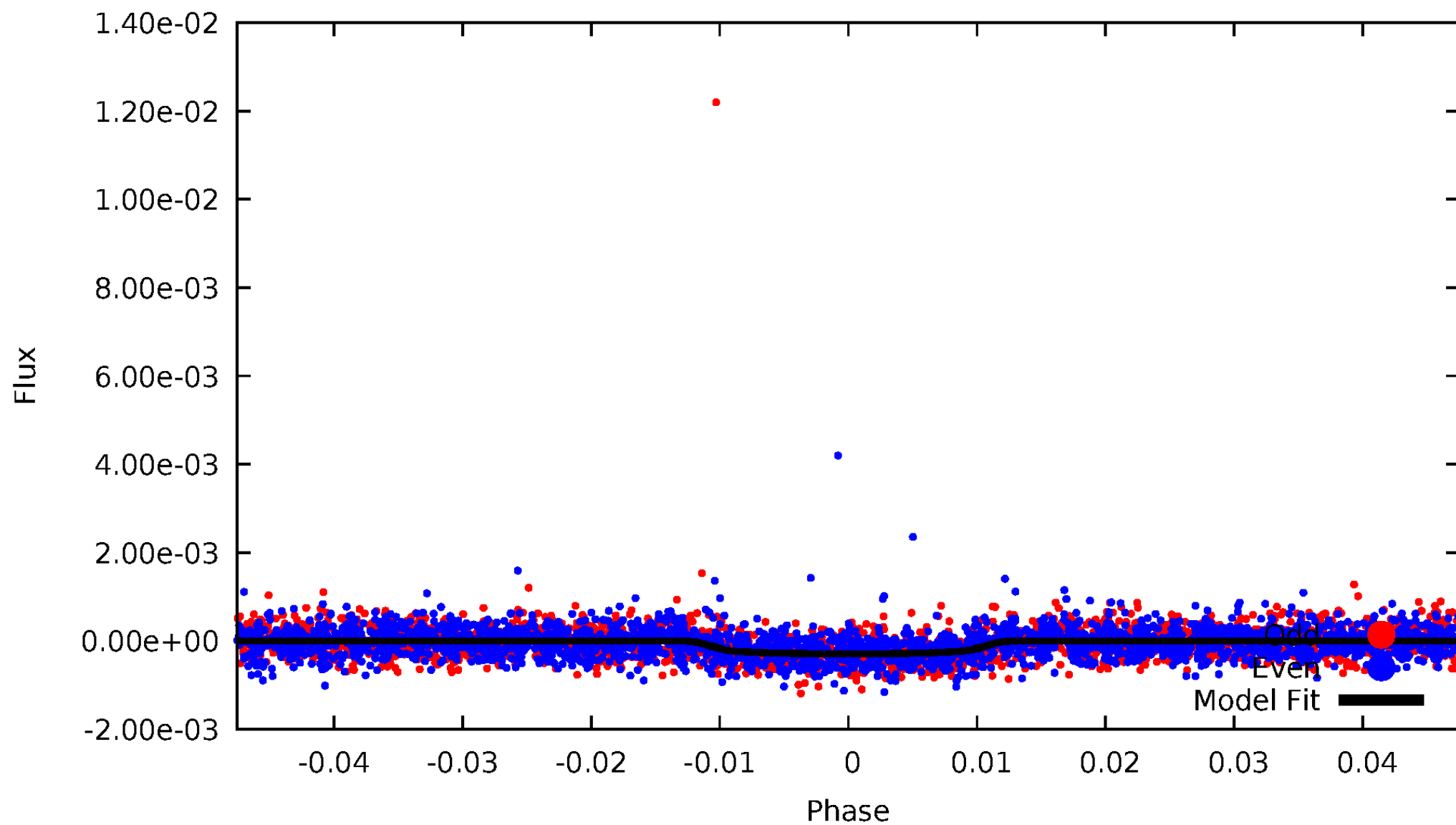


TCE 007747425-01



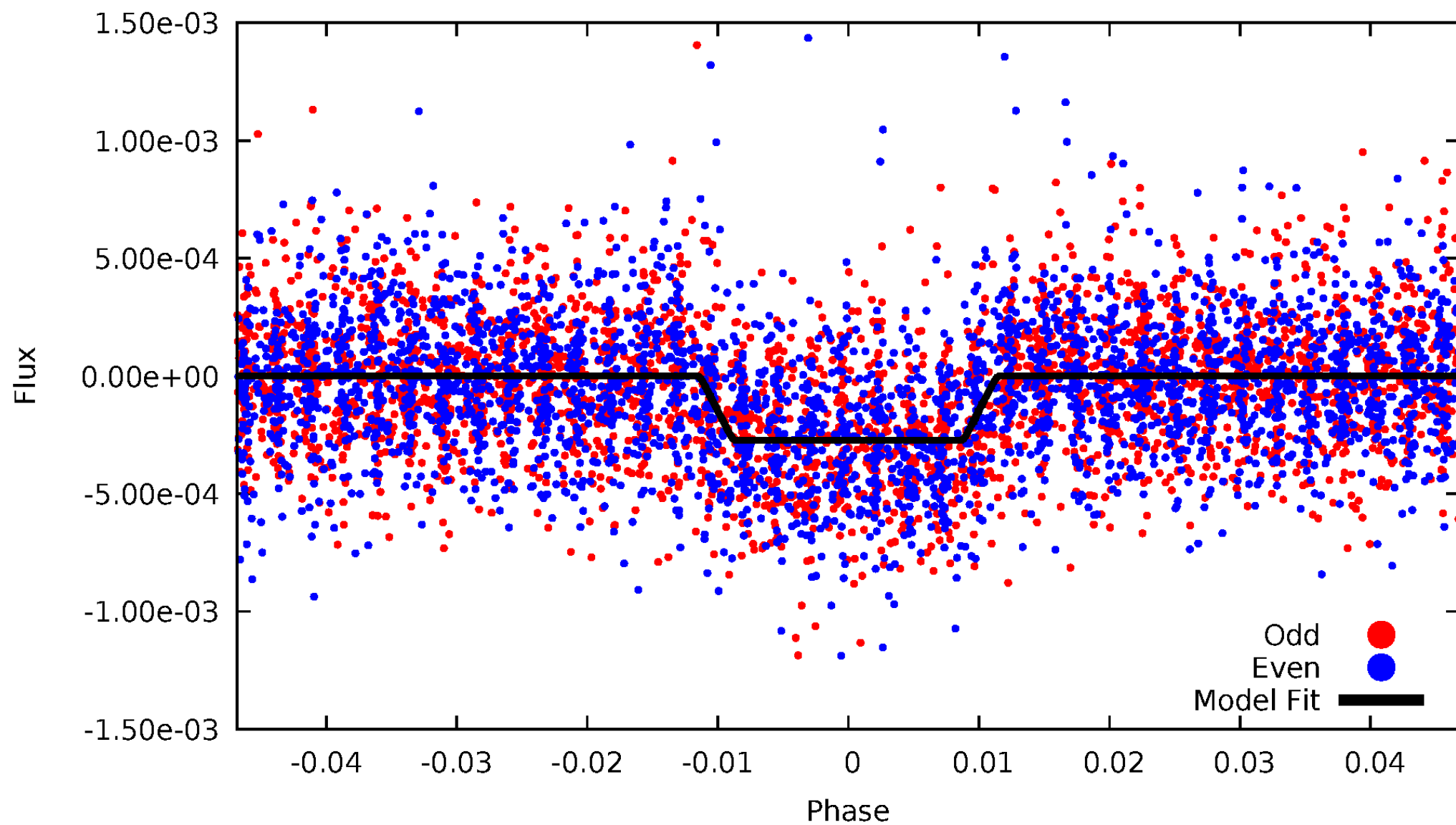
DV Odd/Even

TCE 007747425-01



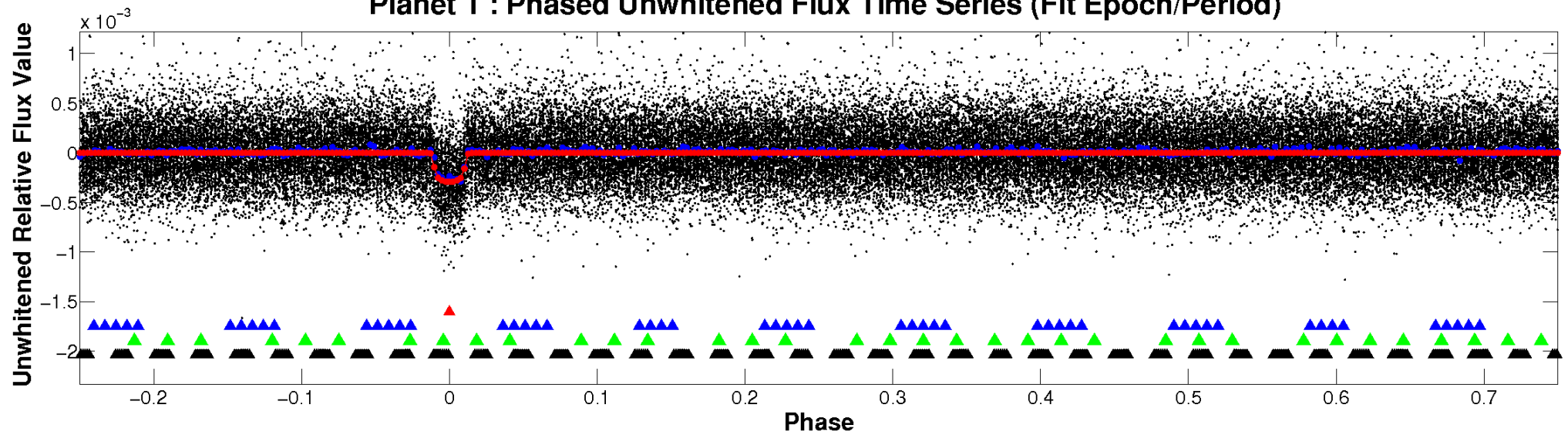
ALT Odd/Even

TCE 007747425-01

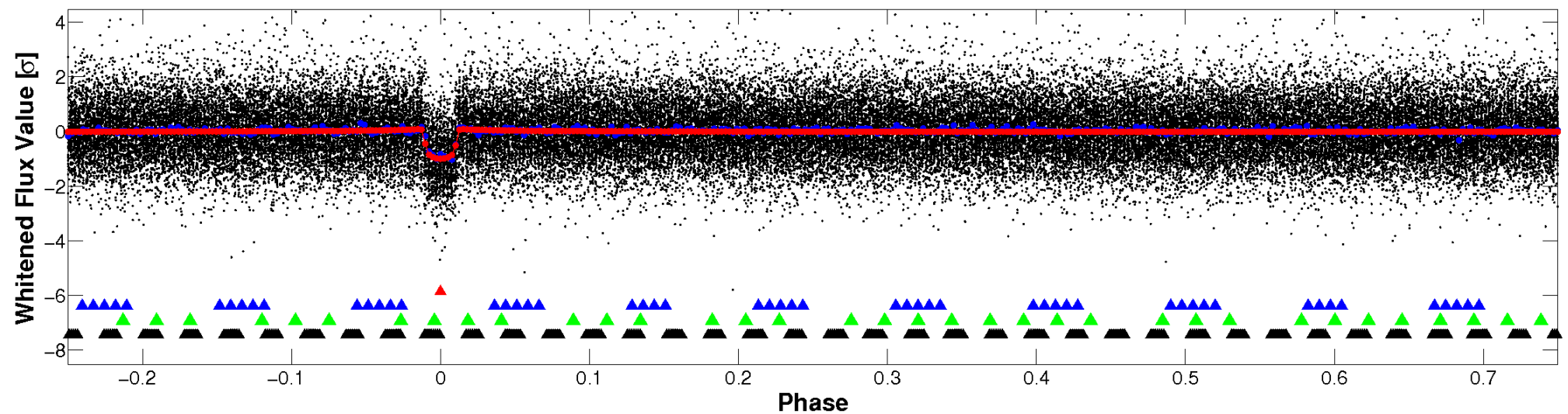


Non-Whitened Vs. Whitened Light Curve

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

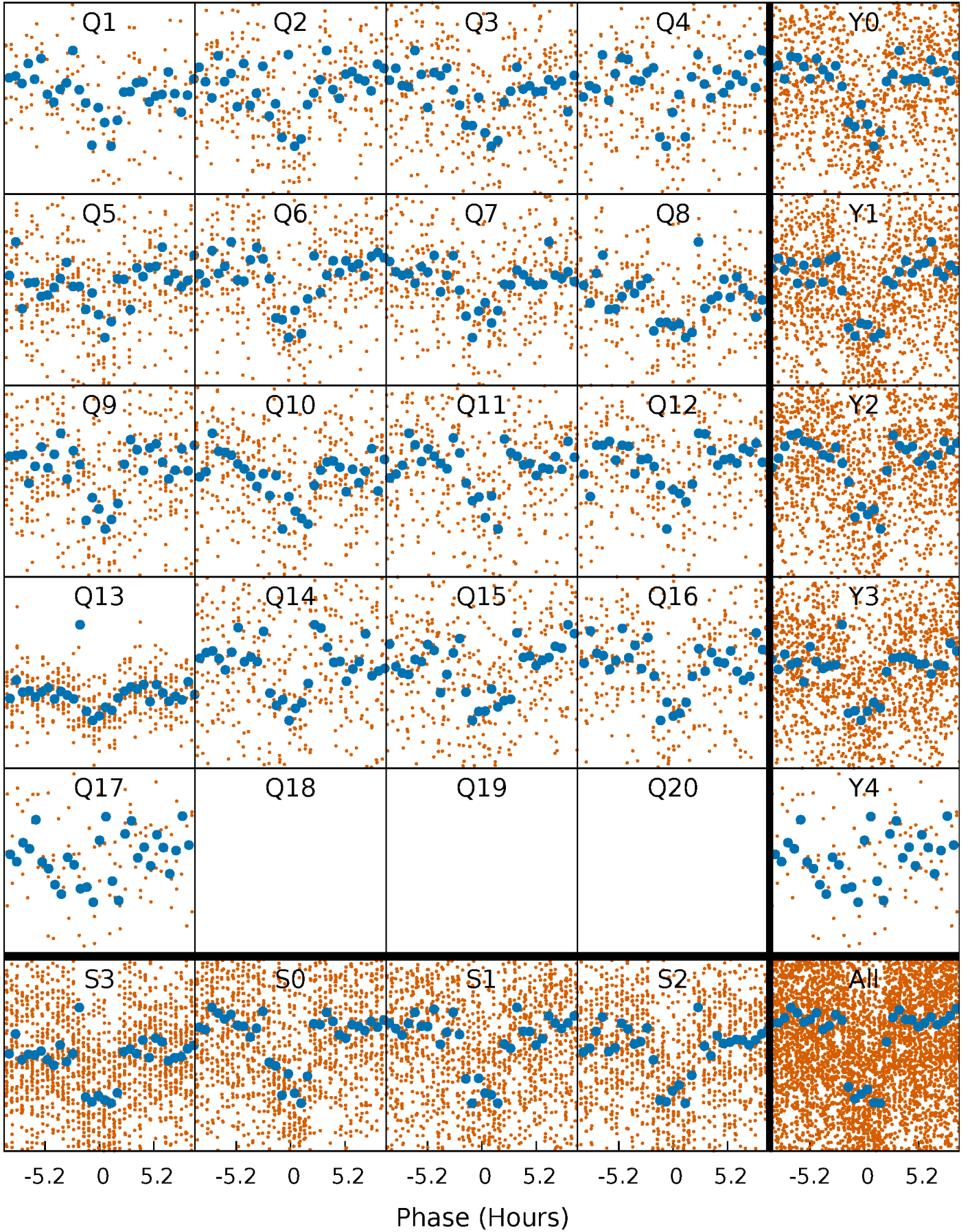


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



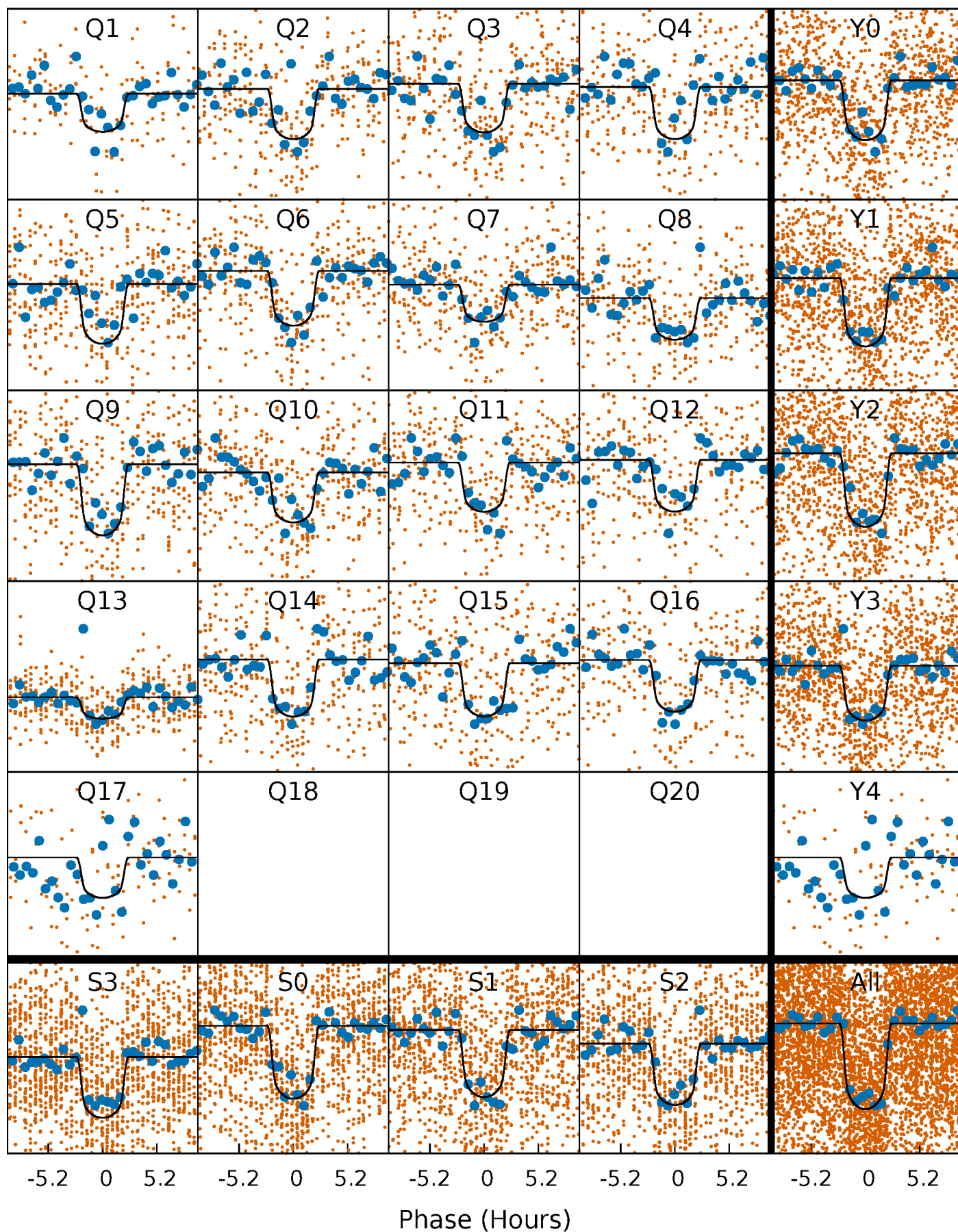
PDC Quarter-Phased Transit Curves

TCE 007747425-01 P= 8.010388 Days $T_0=135.317195$ (BKJD)



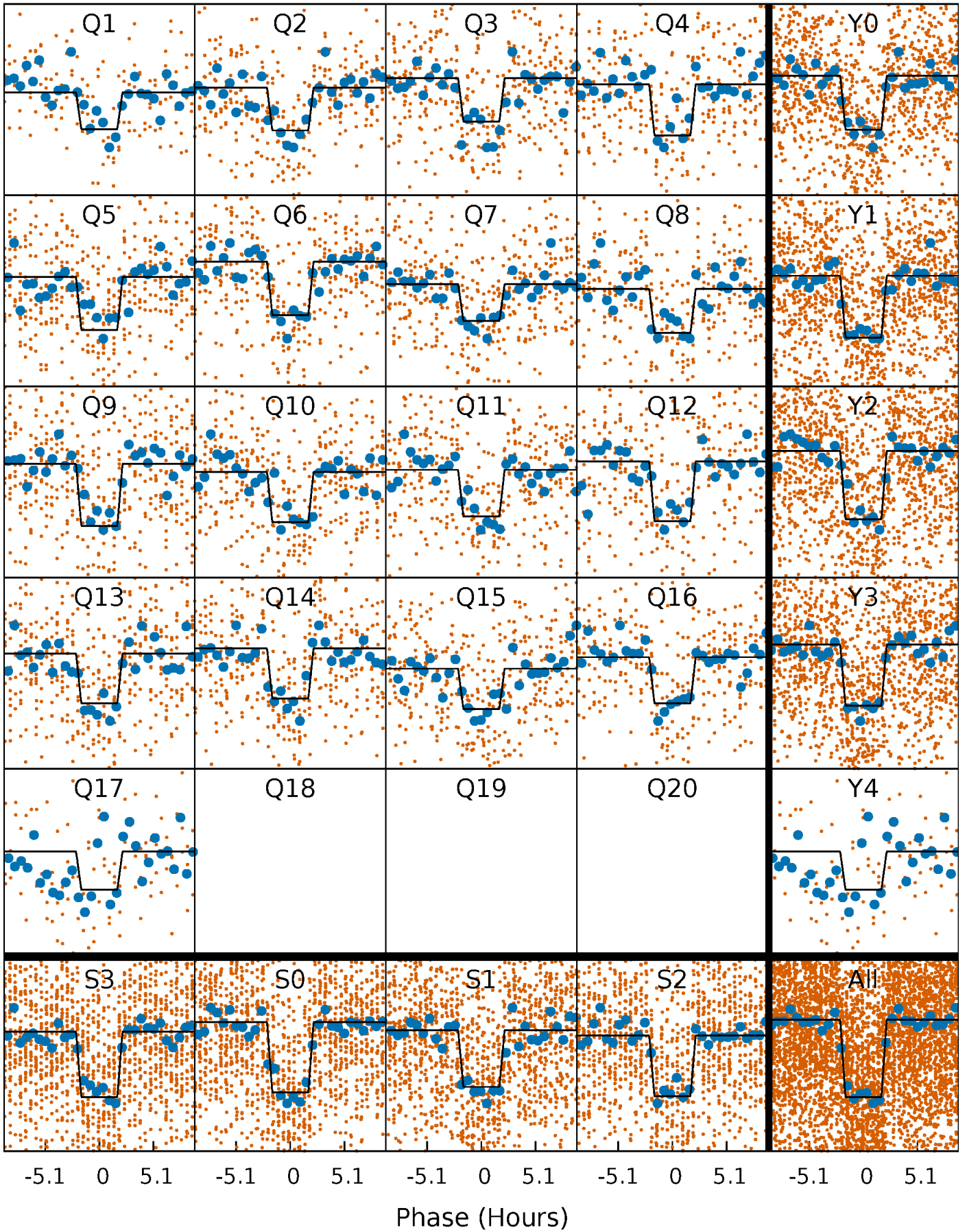
DV Quarter-Phased Transit Curves

TCE 007747425-01 P= 8.010388 Days $T_0=135.317195$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

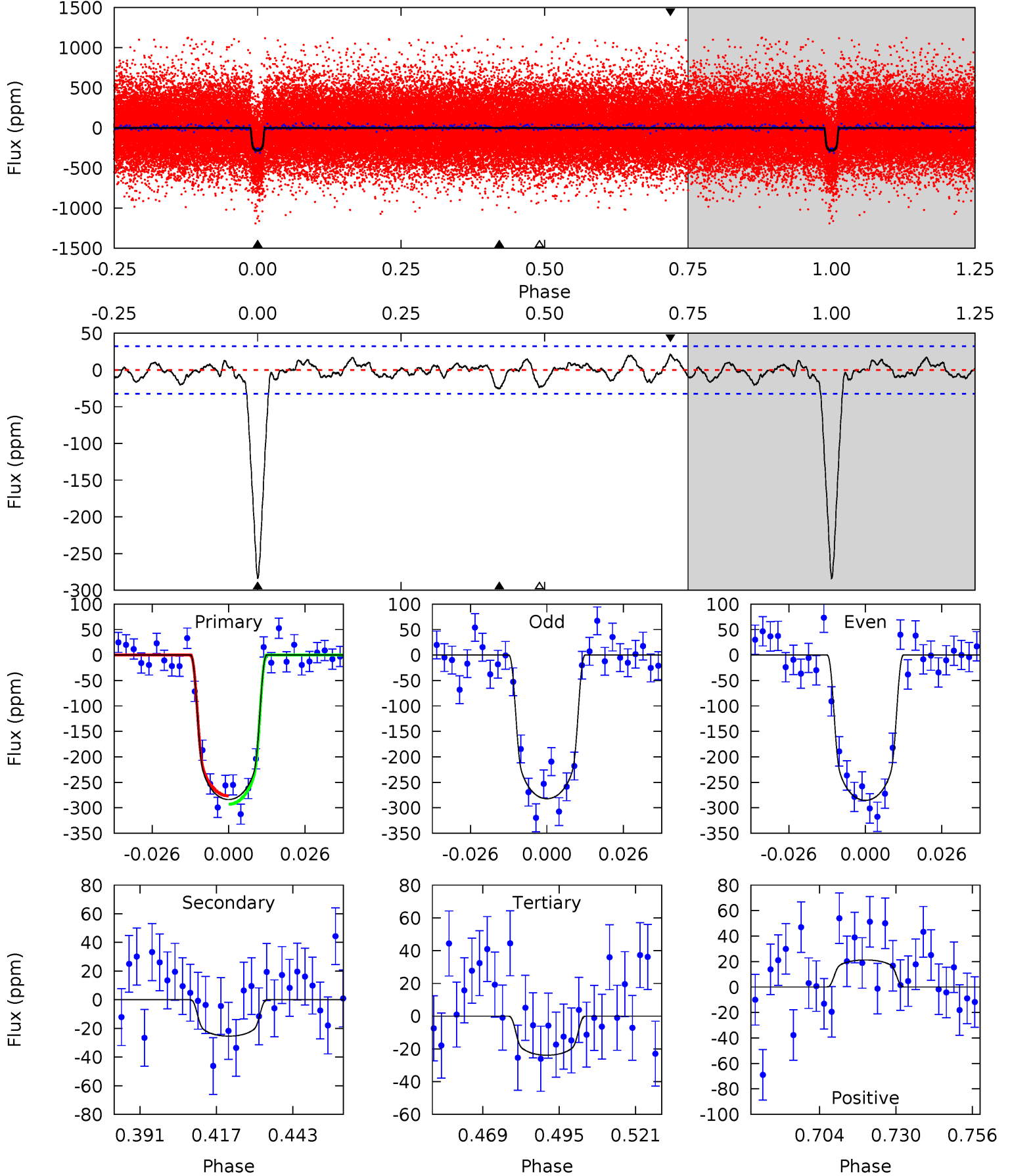
TCE 007747425-01 P= 8.010394 Days $T_0=135.318050$ (BKJD)



DV Model-Shift Uniqueness Test

007747425-01, P = 8.010388 Days, E = 127.306807 Days

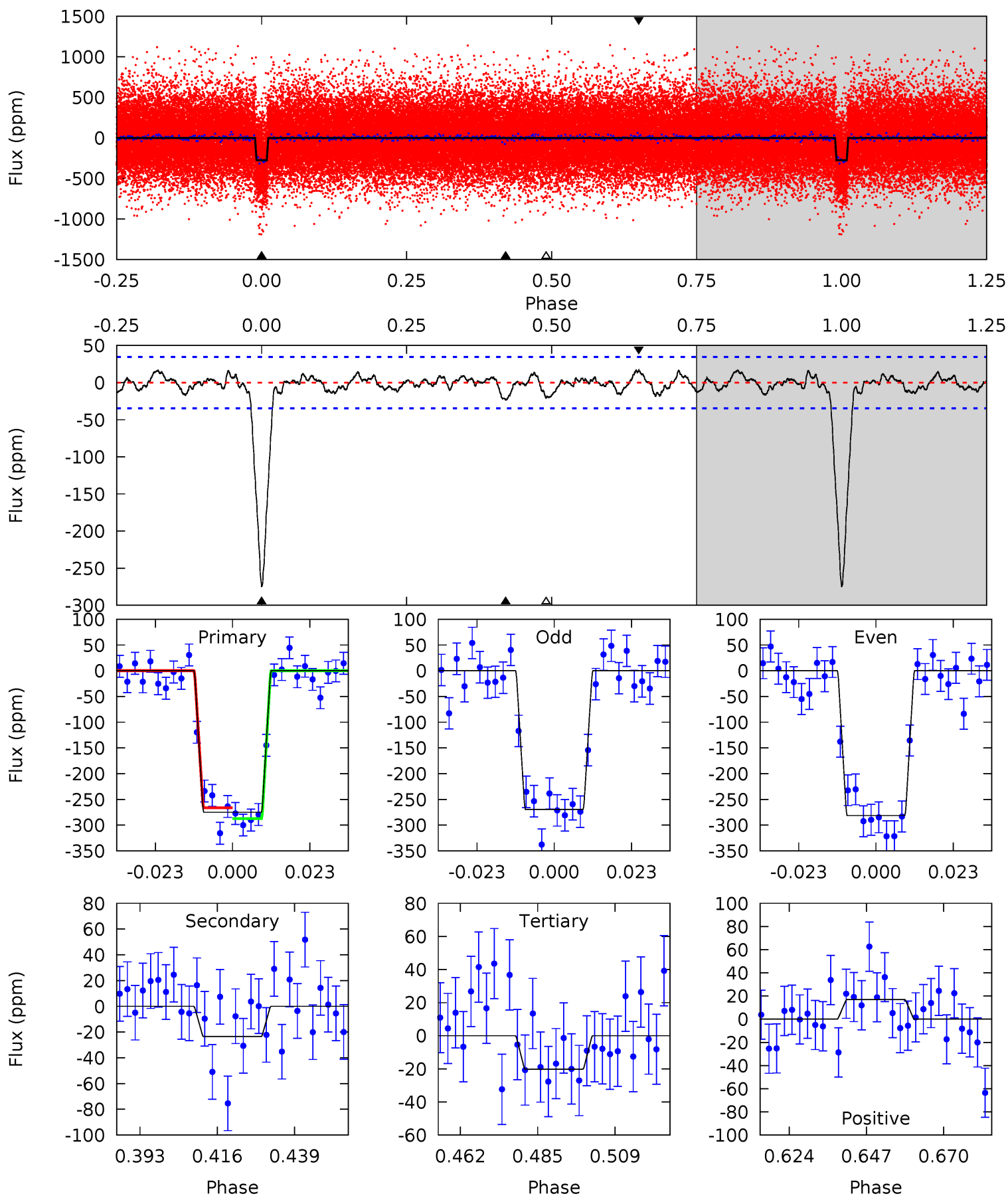
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.4	3.80	3.57	3.18	4.84	2.23	1.25	38.8	39.2	0.23	0.62	0.25	0.97	0.07	1.24



Alt Model-Shift Uniqueness Test

007747425-01, P = 8.010394 Days, E = 127.307656 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.7	3.31	2.85	2.39	4.86	2.27	1.07	35.8	36.3	0.46	0.92	0.85	1.05	0.06	1.47



Stellar Parameters For KIC 007747425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+76}_{-76}	$4.327^{+0.132}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.111^{+0.160}_{-0.160}$	$0.957^{+0.068}_{-0.050}$	$0.982^{+0.559}_{-0.301}$
	+1%/-1%	+3%/-2%	+107%/-107%	+14%/-14%	+7%/-5%	+57%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007747425-01 / KOI 1952.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 7	$2.23^{+0.35}_{-0.28}$	1308^{+58}_{-60}	3417^{+197}_{-178}	17^{+8}_{-6}
Alt.	-24 ± 7	$2.00^{+0.31}_{-0.31}$	1314^{+55}_{-57}	3501^{+249}_{-233}	19^{+11}_{-7}

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 $A_{obs} \gg 1.0$

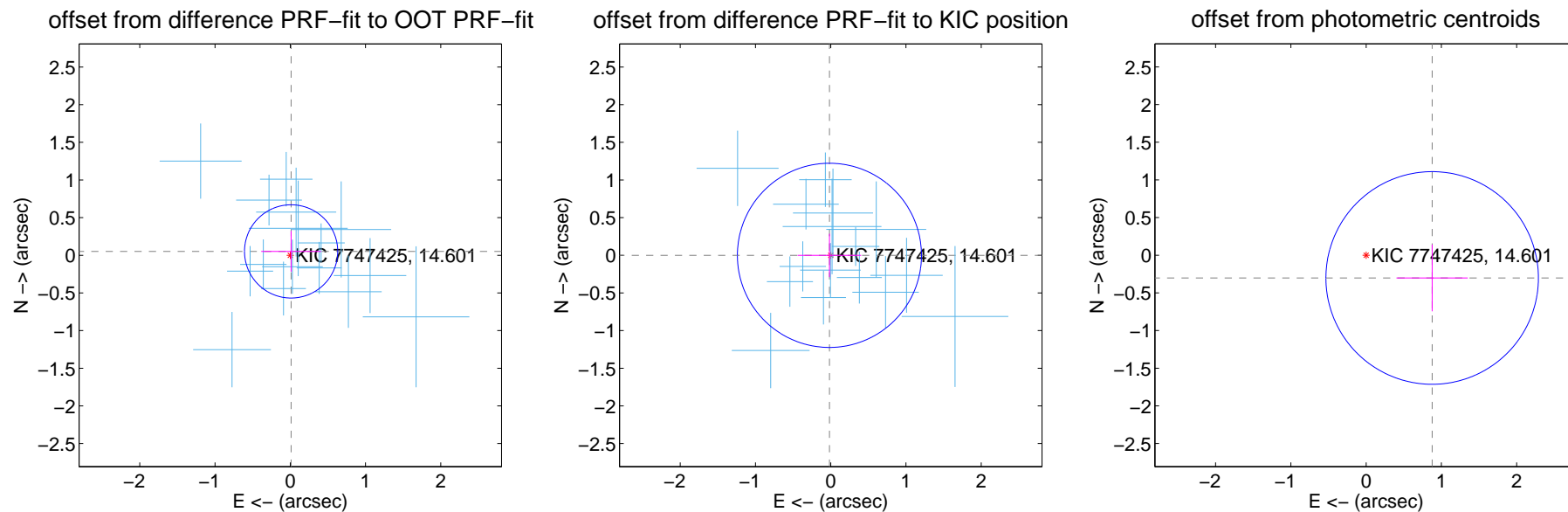
DV Centroid Data

Supplemental centroid analysis for 007747425-01. Kepler magnitude: 14.60. Transit SNR 31.89

There are 16 quarters with good PRF difference image offsets

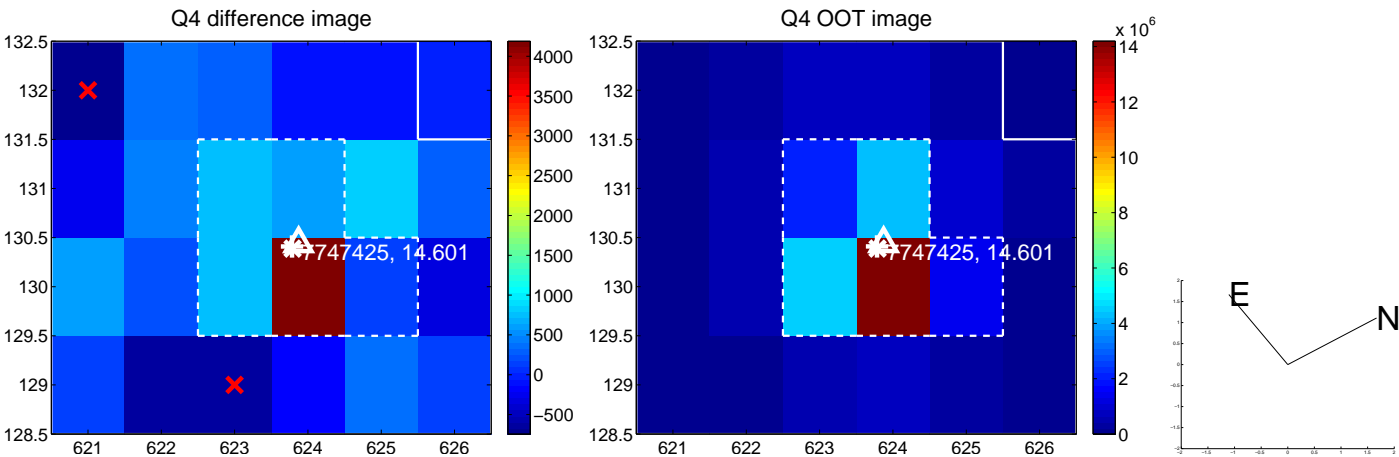
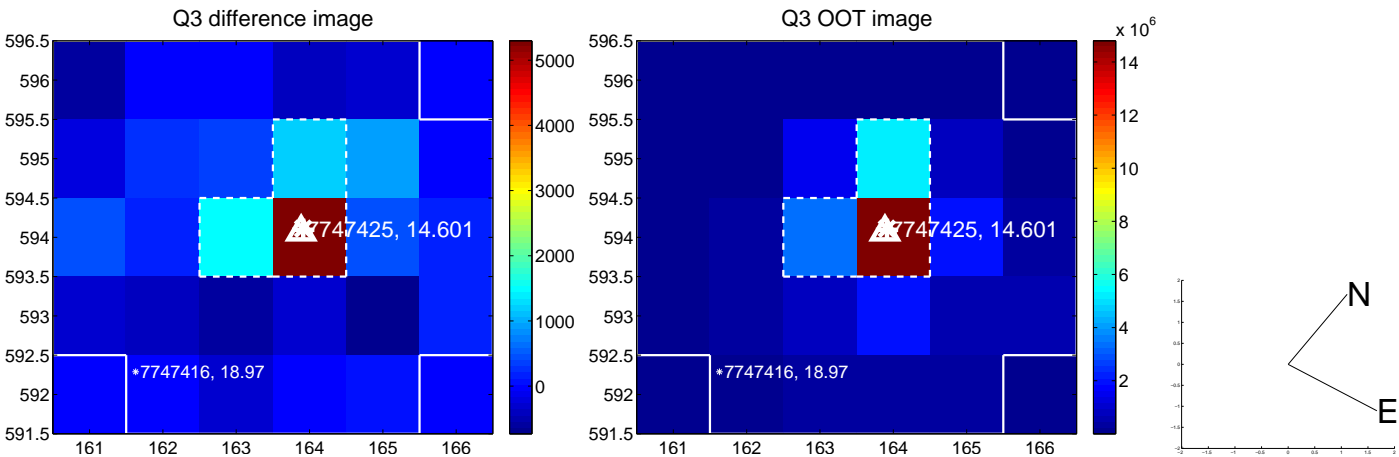
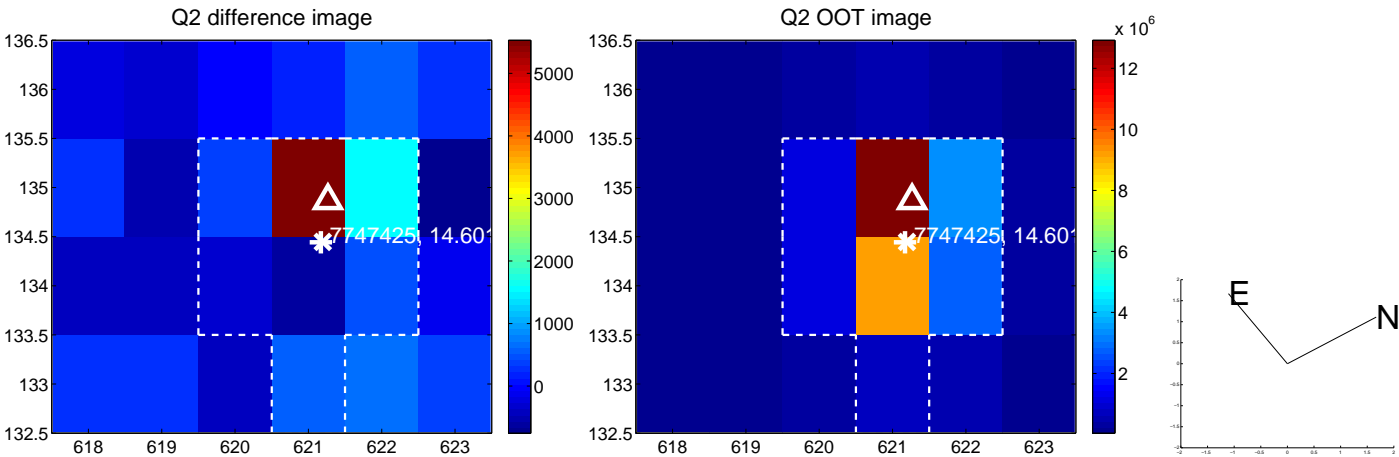
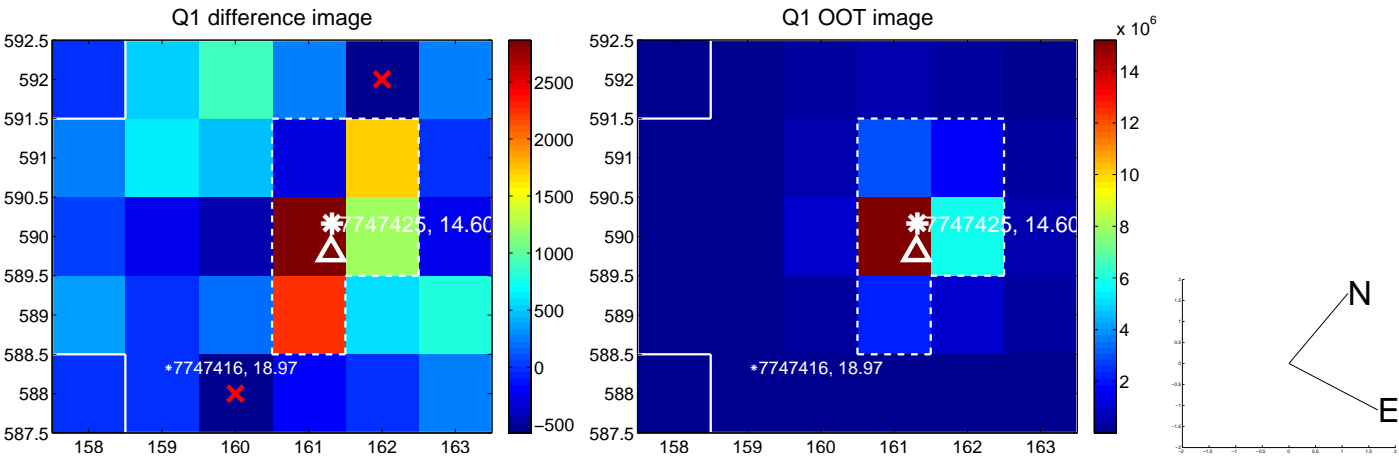
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.053 ± 0.206	0.26	-0.011 ± 0.397	0.051 ± 0.270
PRF-fit source offset from KIC position	0.017 ± 0.408	0.04	0.017 ± 0.422	-0.001 ± 0.288
photometric centroid source offset	0.93 ± 0.47	1.97	-0.88 ± 0.47	-0.30 ± 0.44

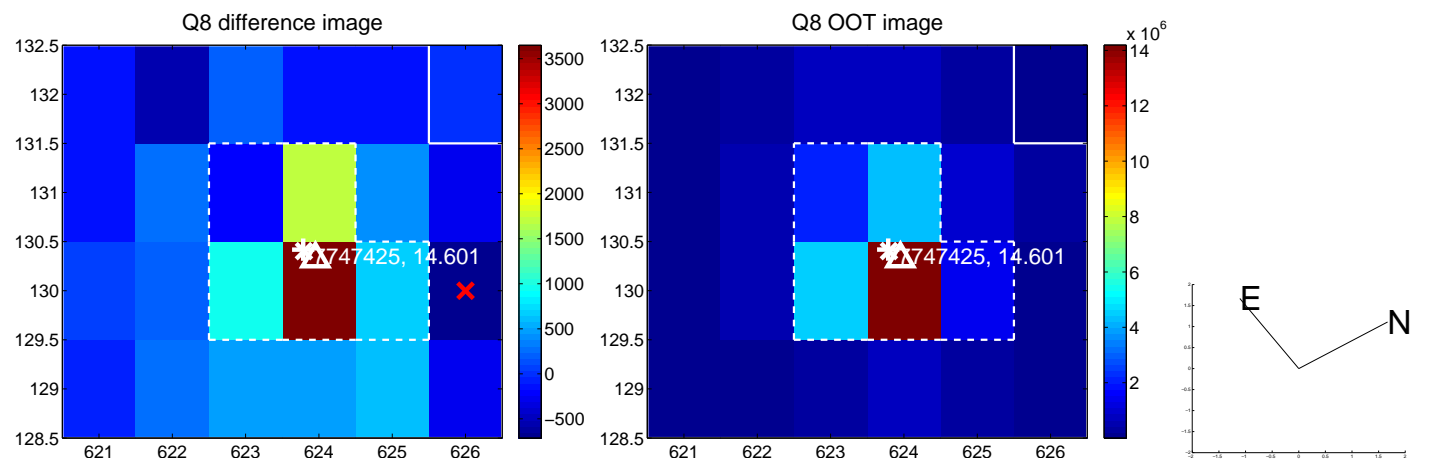
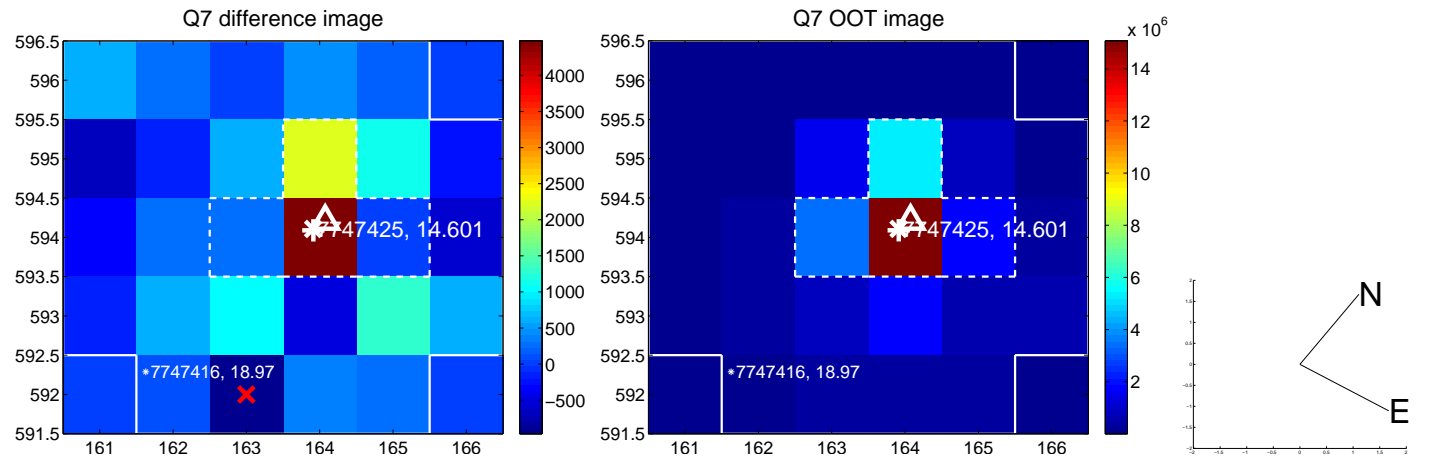
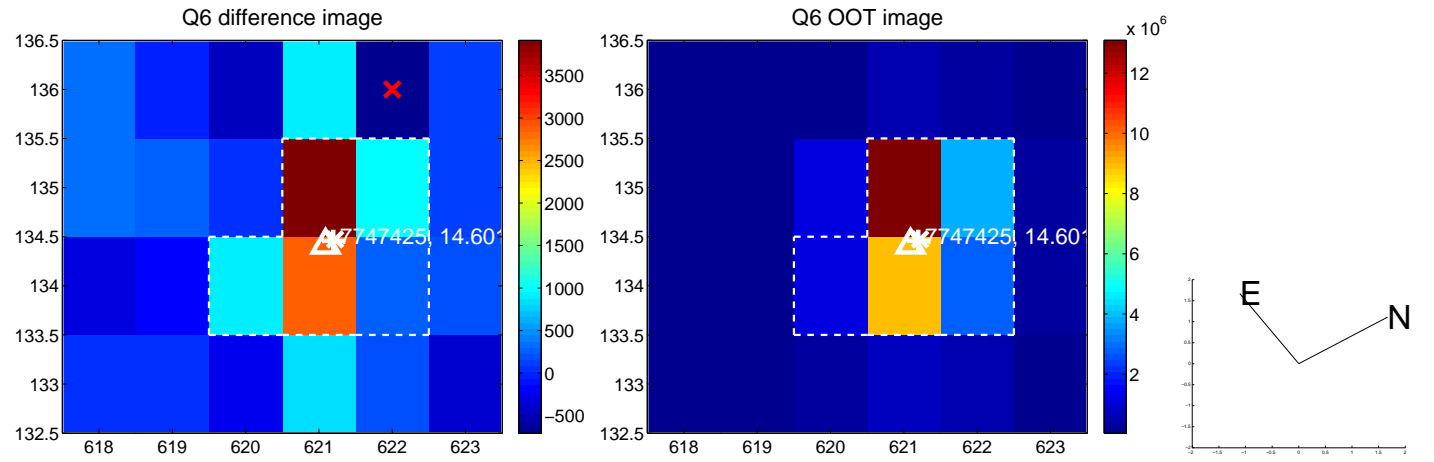
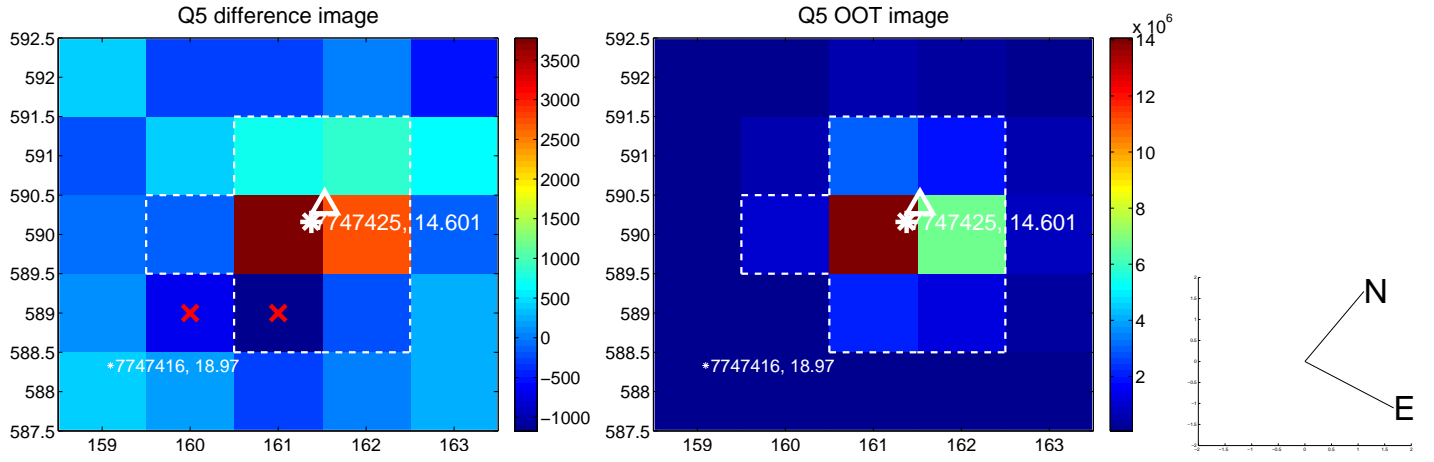


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

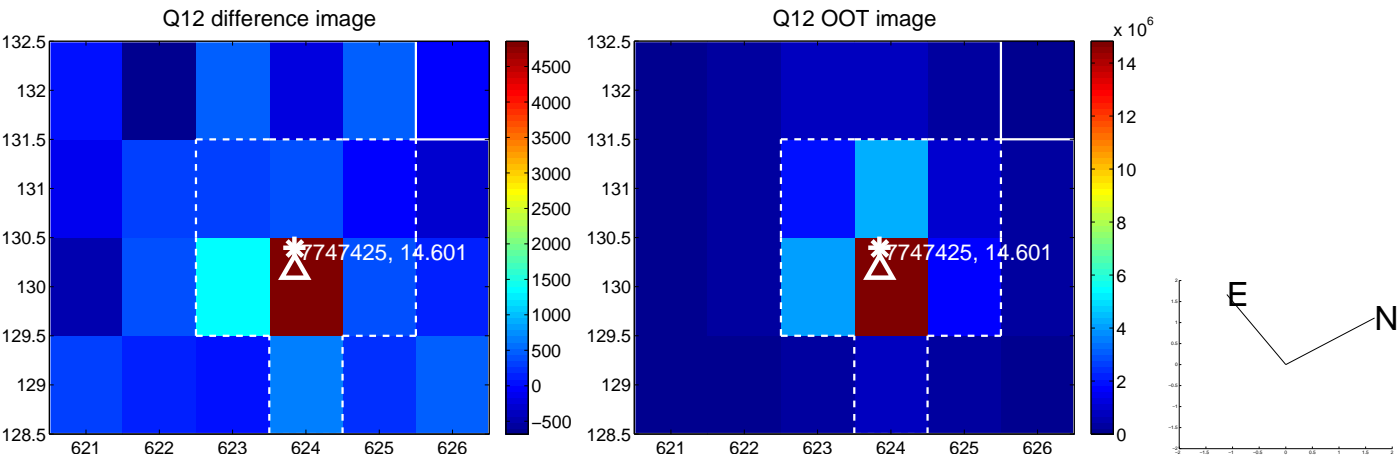
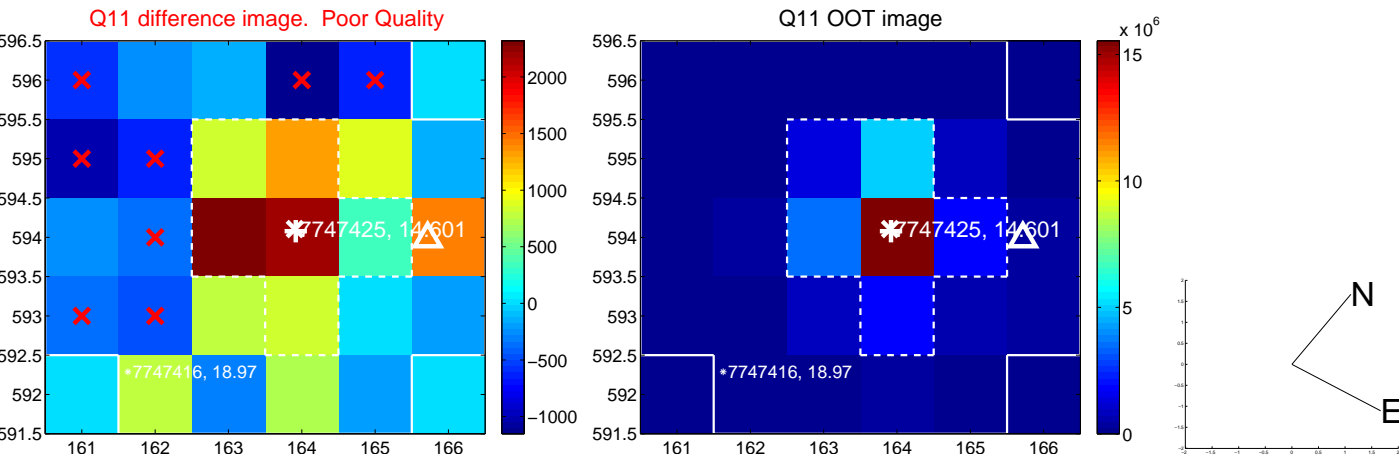
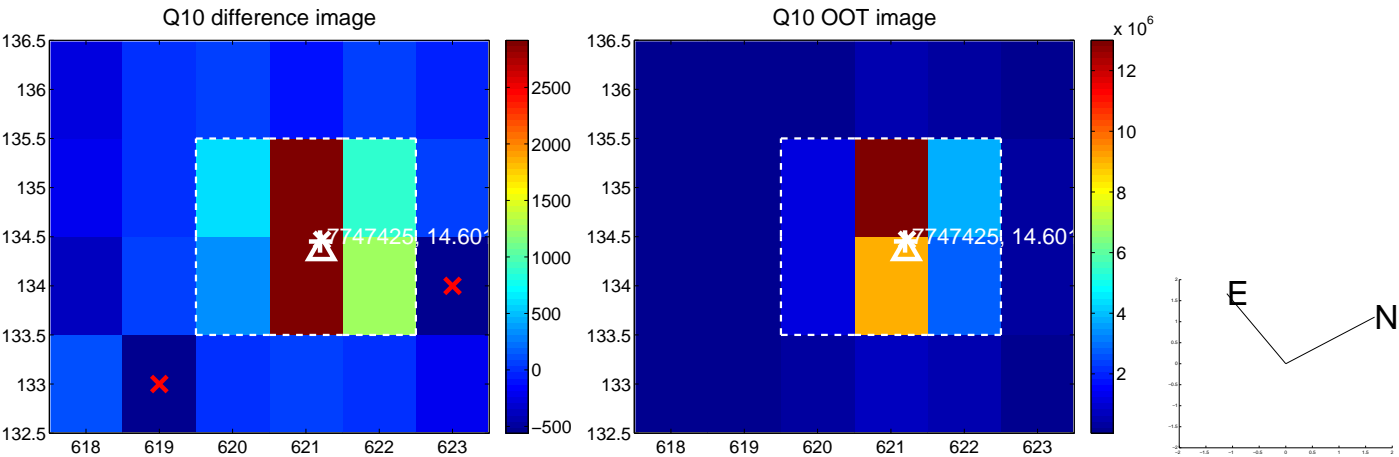
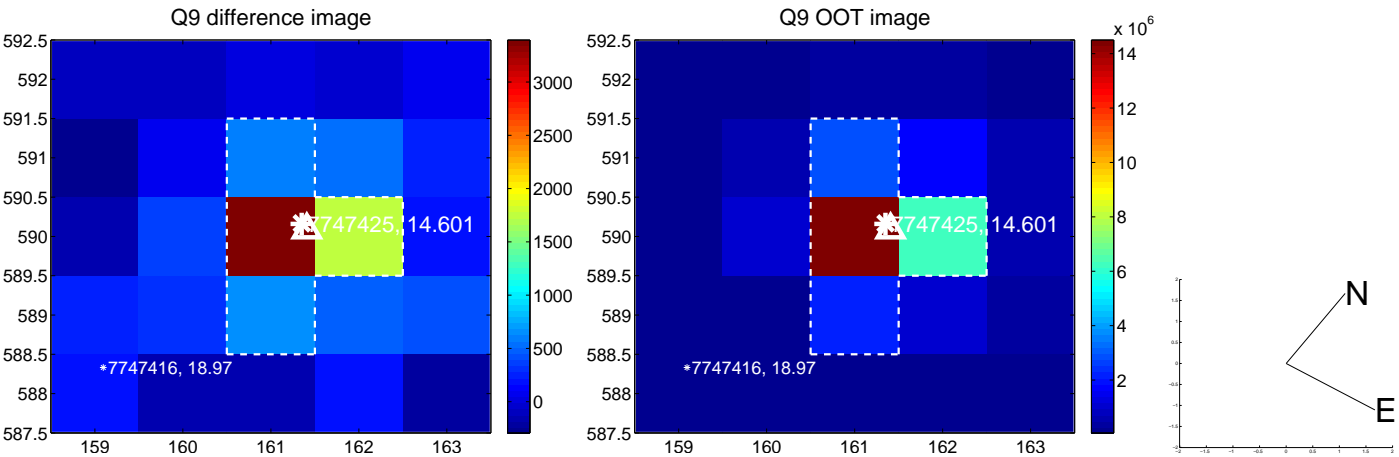
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



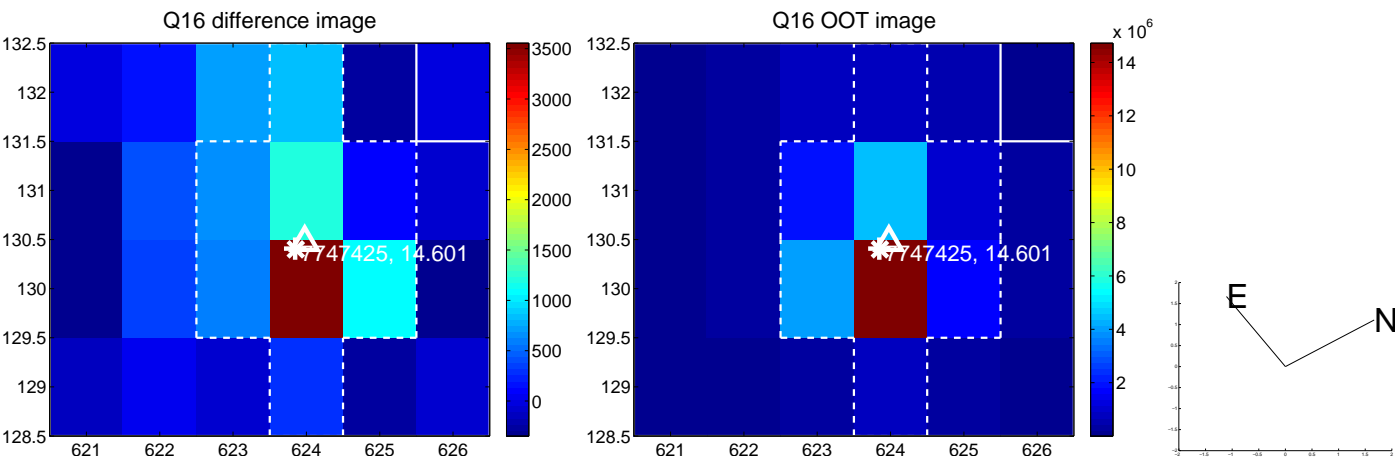
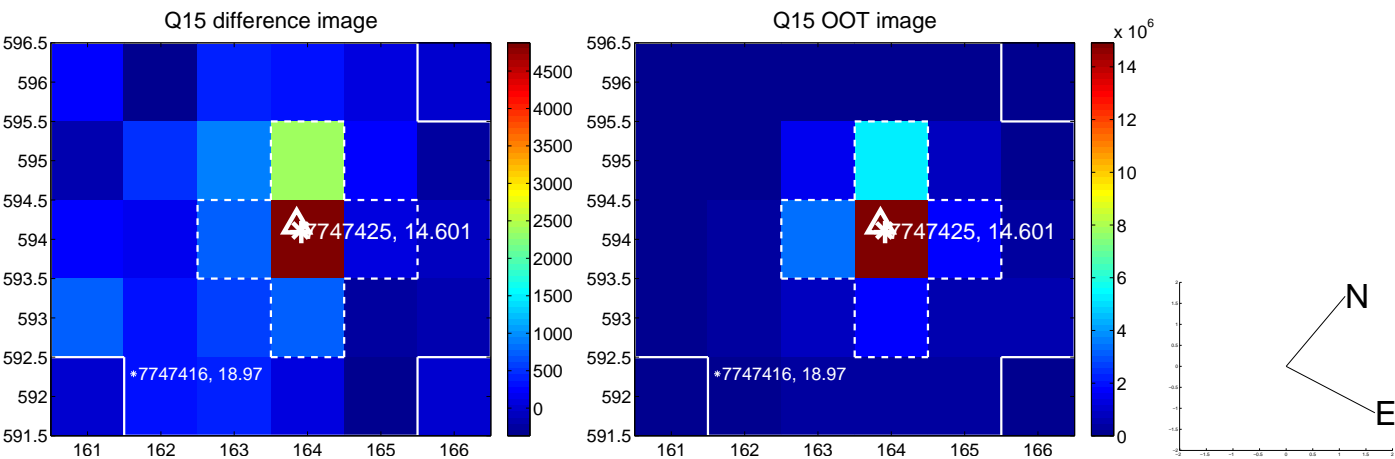
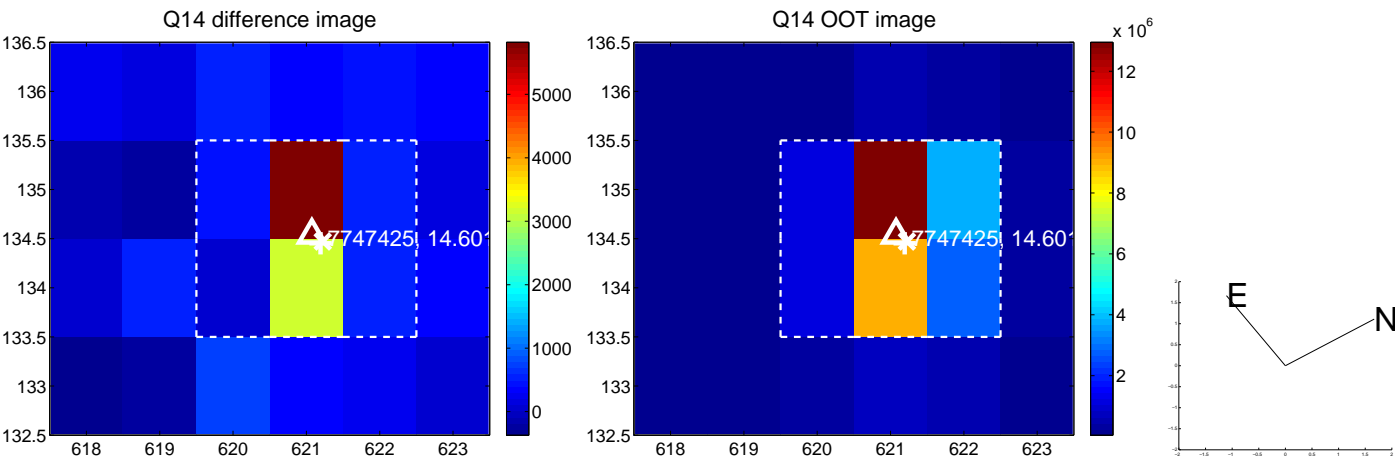
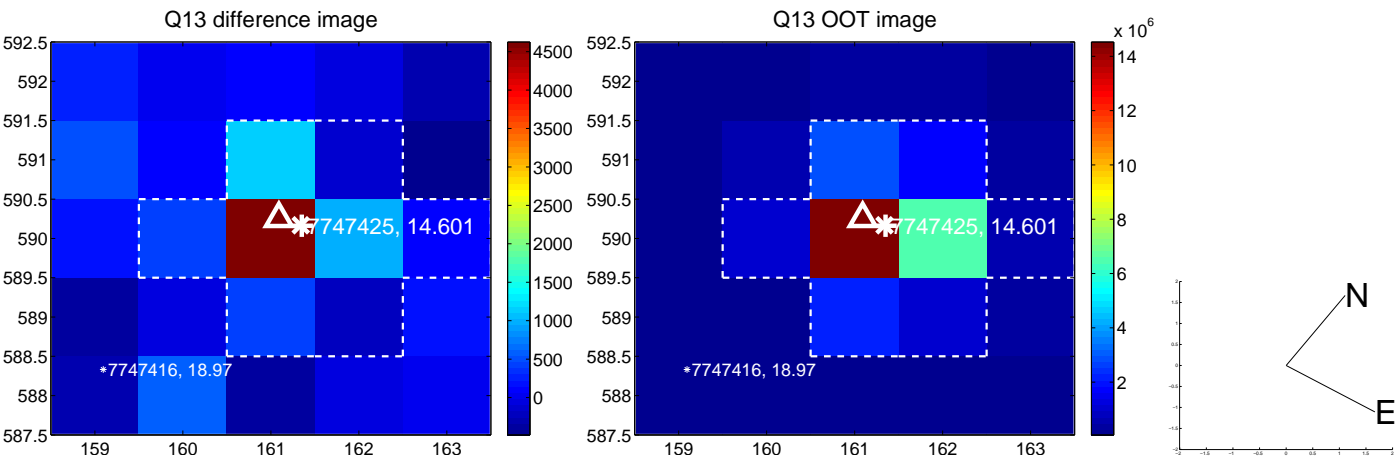
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



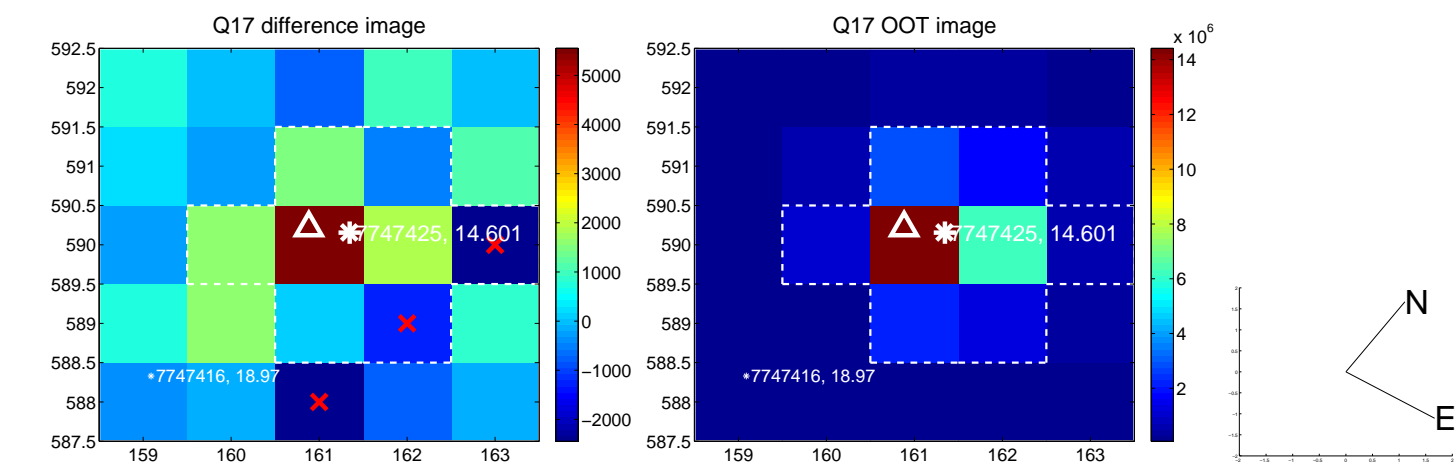
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



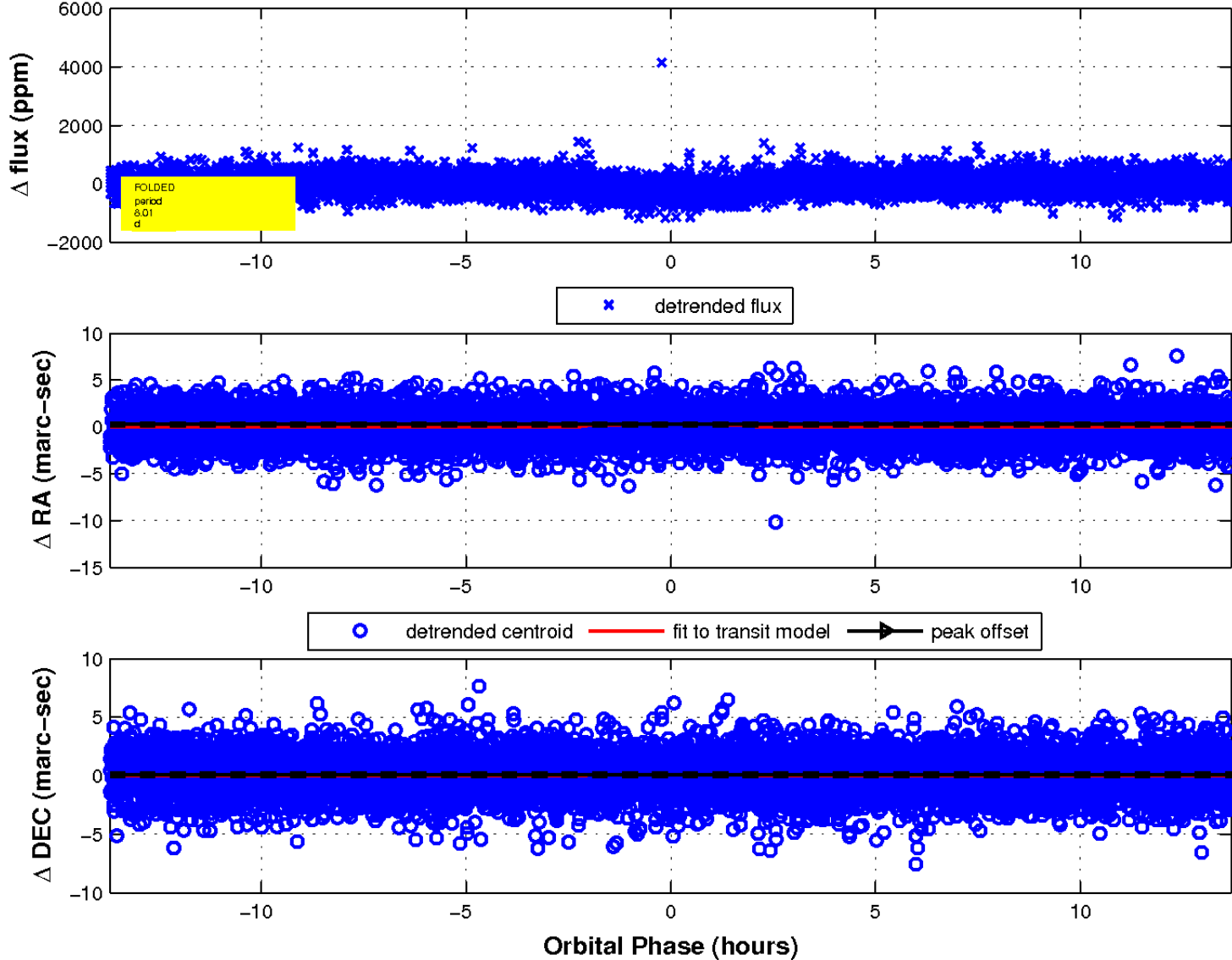
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

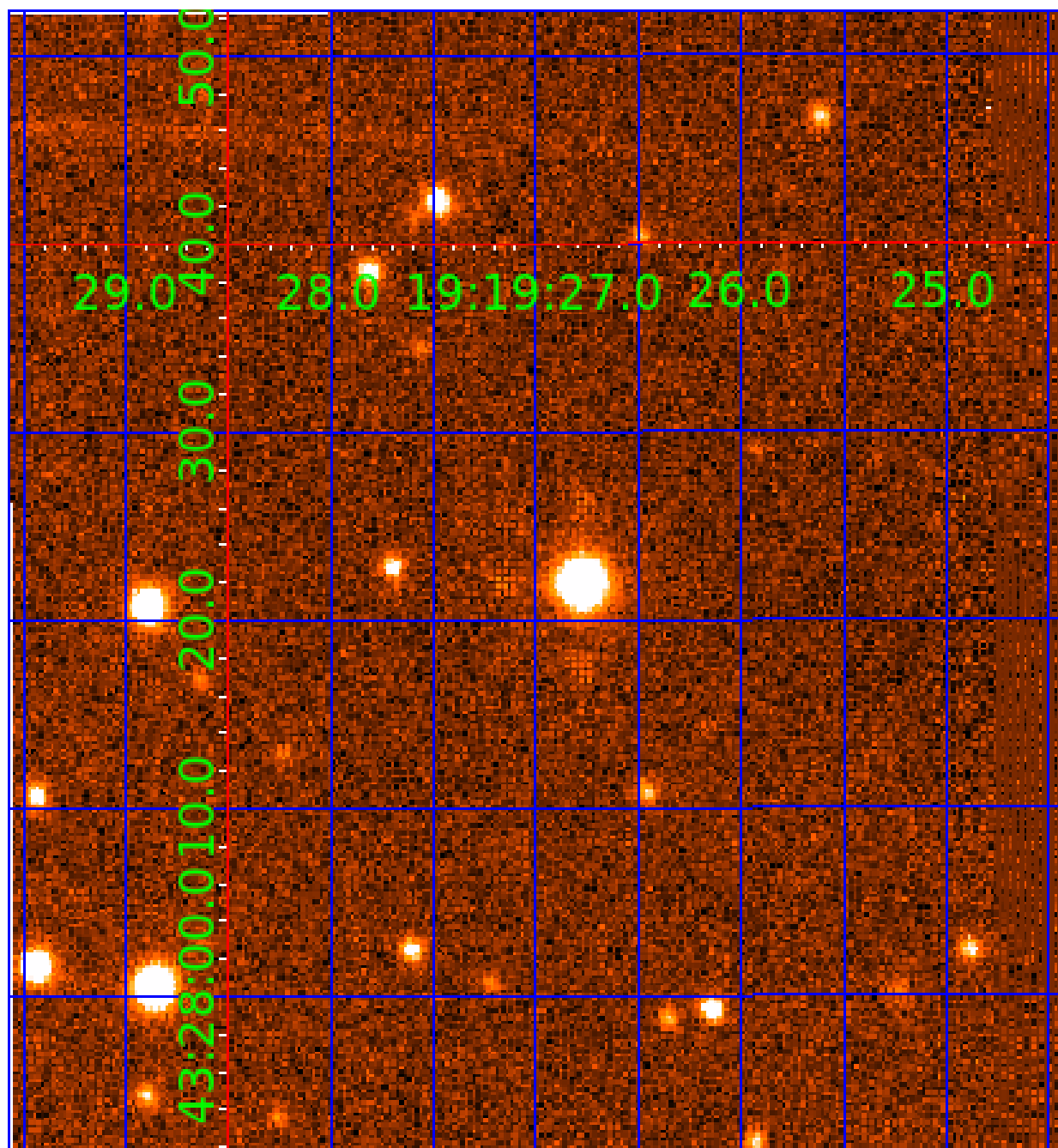


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 007747425

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})
007747425-01	OBS	1952.01	8.010388	135.317195	293.9	4.567	29.2	31.9	1.11	5616	2.27	184.59
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007747425-03	OBS	1952.04	42.473086	146.282817	308.8	7.297	16.7	18.0	1.11	5616	2.21	19.96
007747425-04	OBS	1952.03	5.195619	132.720377	124.4	3.736	14.6	15.6	1.11	5616	1.42	328.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007747425-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-02	OBS	PC	0.97	0	0	0	0	NO_COMMENT
007747425-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-04	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

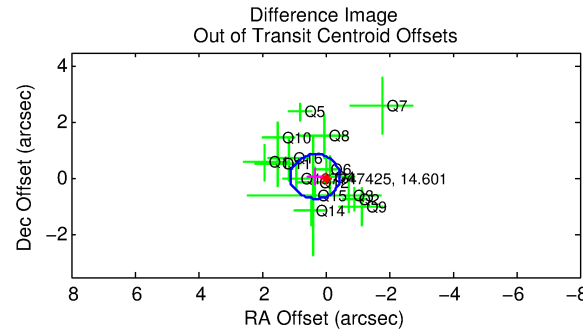
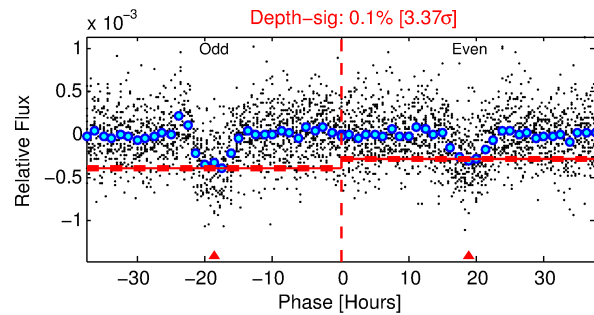
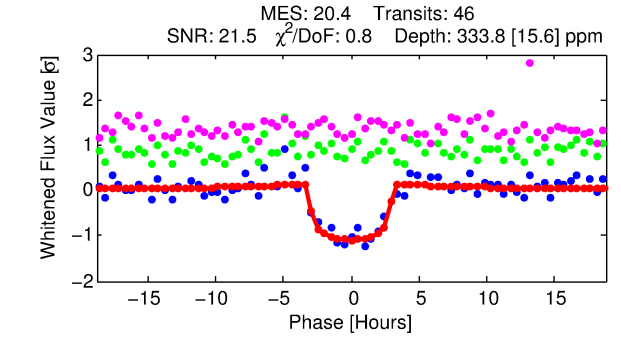
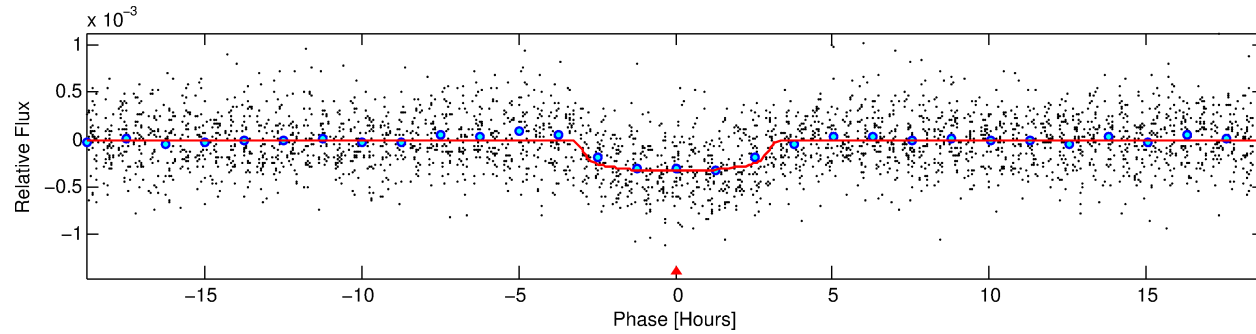
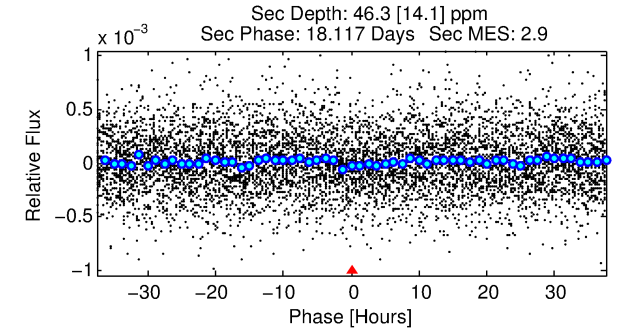
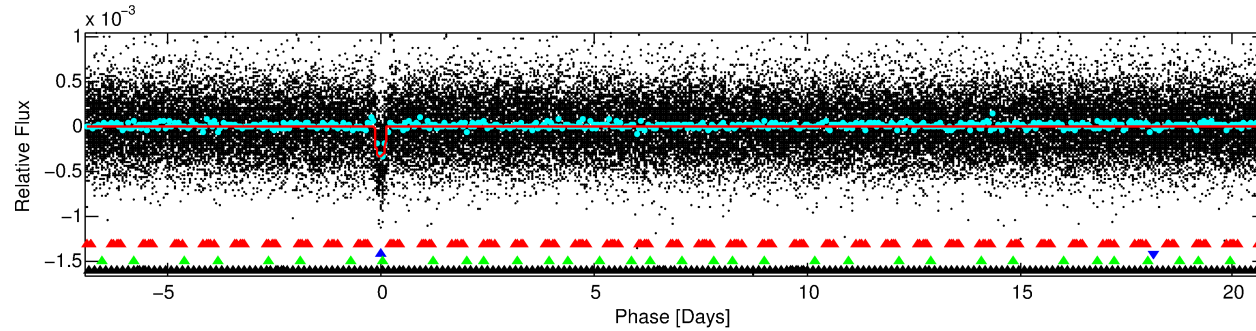
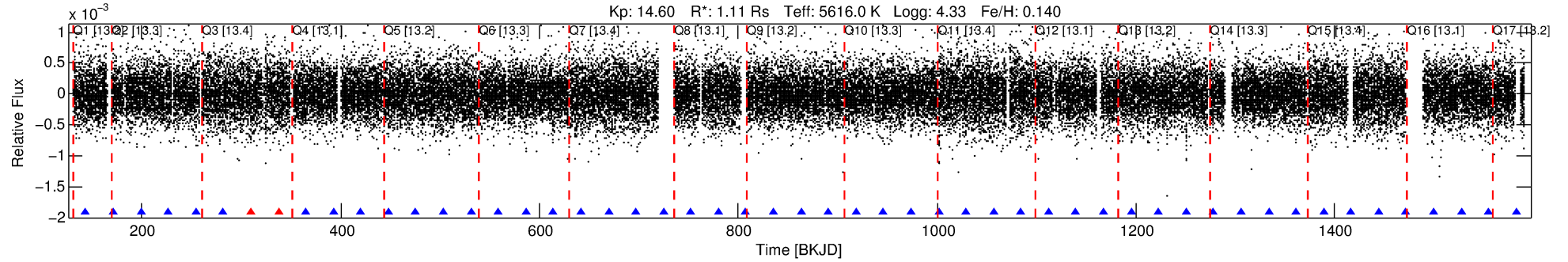
Ephemeris Match Information For 007747425-02

No Significant Match Found

DV One-Page Summary

KIC: 7747425 Candidate: 2 of 4 Period: 27.667 d
KOI: K01952.02 Name: Kepler-341d Corr: 0.988

Kp: 14.60 R*: 1.11 Rs Teff: 5616.0 K Logg: 4.33 Fe/H: 0.140



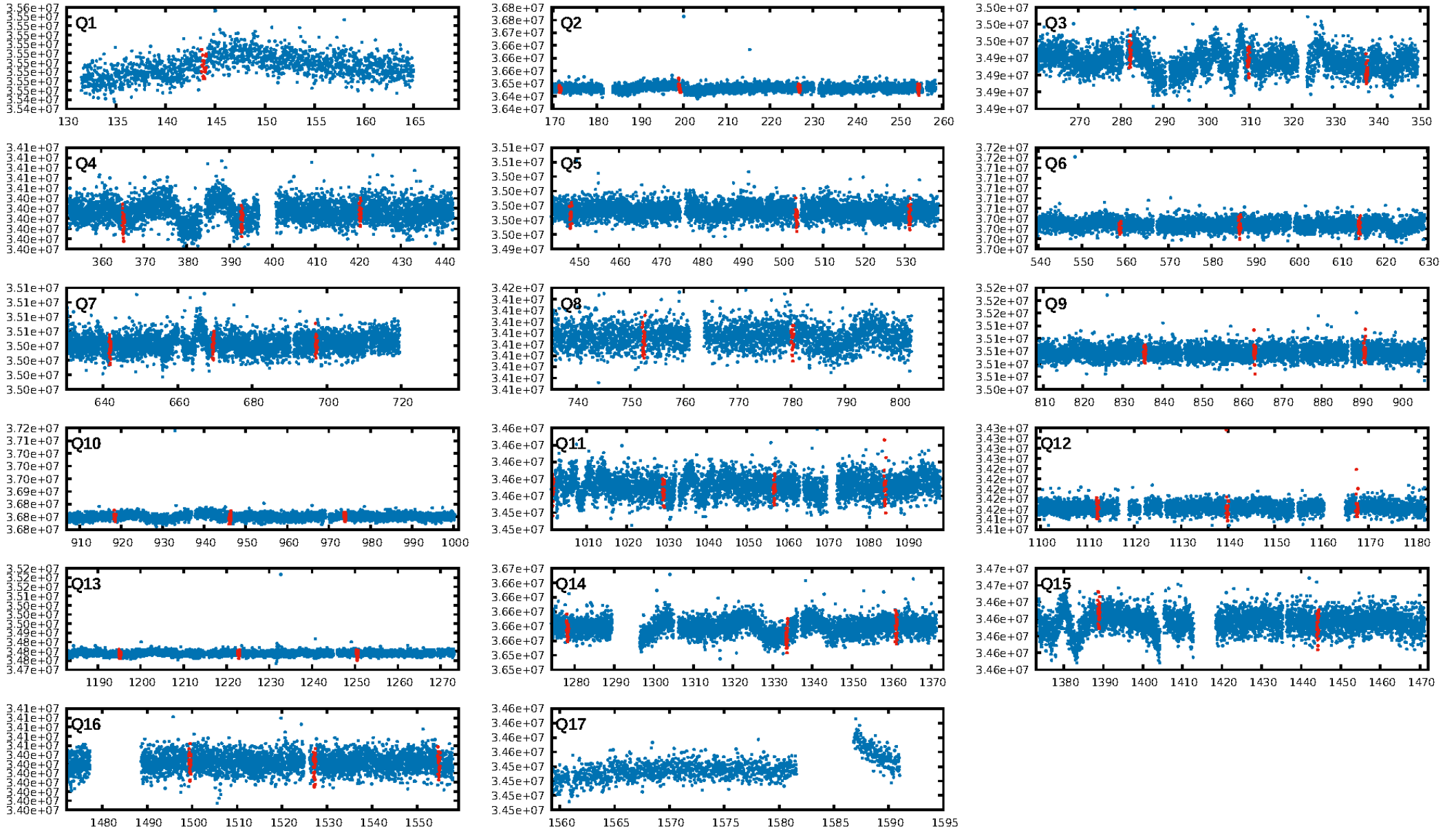
DV Fit Results:

Period = 27.66682 [0.00019] d
Epoch = 143.8575 [0.0051] BKJD
Rp/R* = 0.0182 [0.0071]
a/R* = 23.05 [37.70]
b = 0.76 [0.94]
Seff = 35.36 [8.16]
Teq = 622 [36] K
Rp = 2.21 [0.92] Re
a = 0.1764 [0.0246] AU
Ag = 162.19 [140.69] [1.15σ]
Teff = 3431 [720] K [3.90σ]

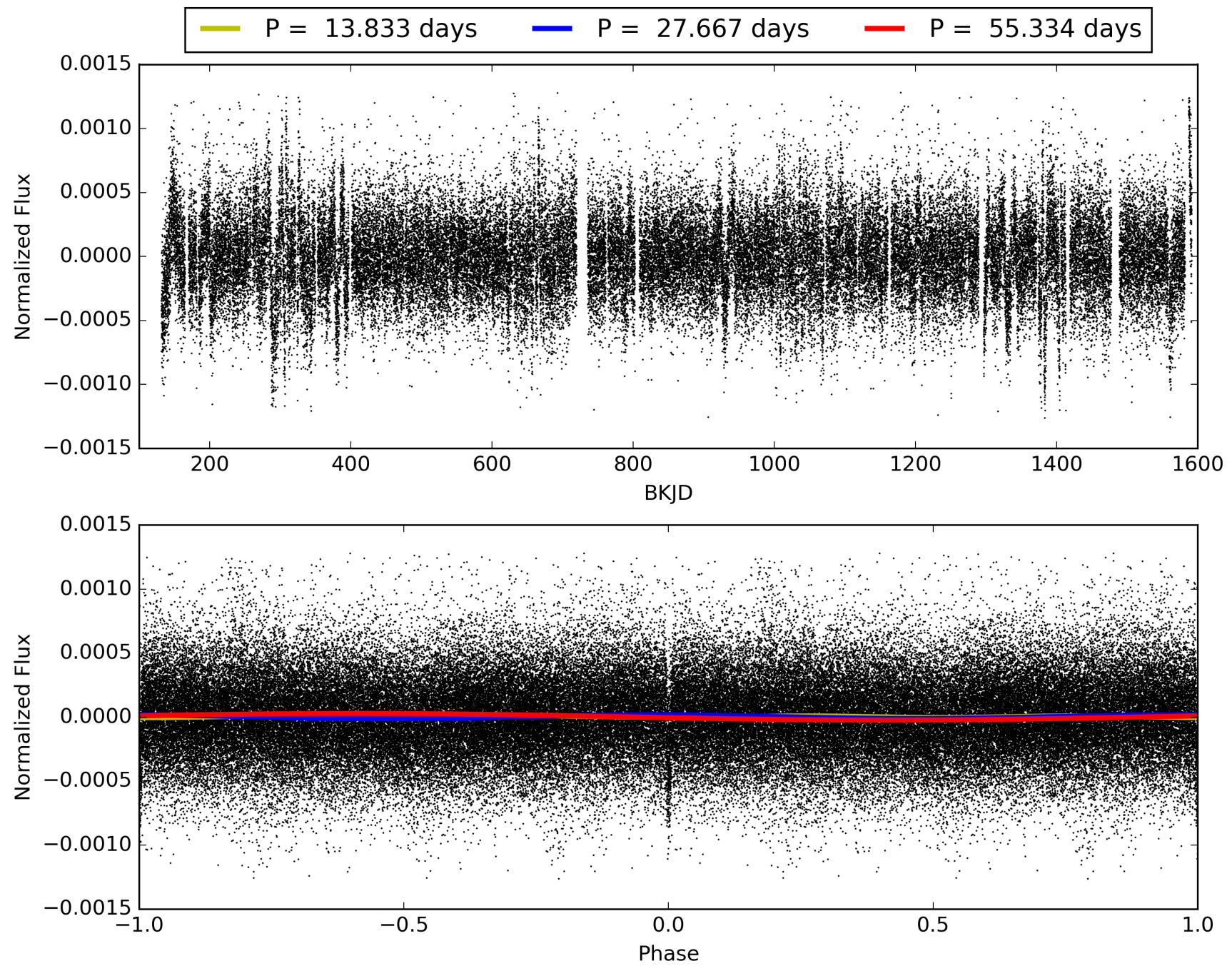
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [60.89σ]
LongPeriod-sig: 100.0% [36.96σ]
ModelChiSquare2-sig: 51.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.98e-88
RollingBand-fgt: 0.96 [43/45]
GhostDiagnostic-chr: 7.082
Centroid-sig: 2.5%
Centroid-so: 0.878 arcsec [1.39σ]
OotOffset-rm: 0.331 arcsec [1.26σ]
KicOffset-rm: 0.357 arcsec [1.34σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.81 [13/16]
DiffImageOverlap-fno: 0.94 [15/16]

TCE 007747425-02, PDC Light Curves

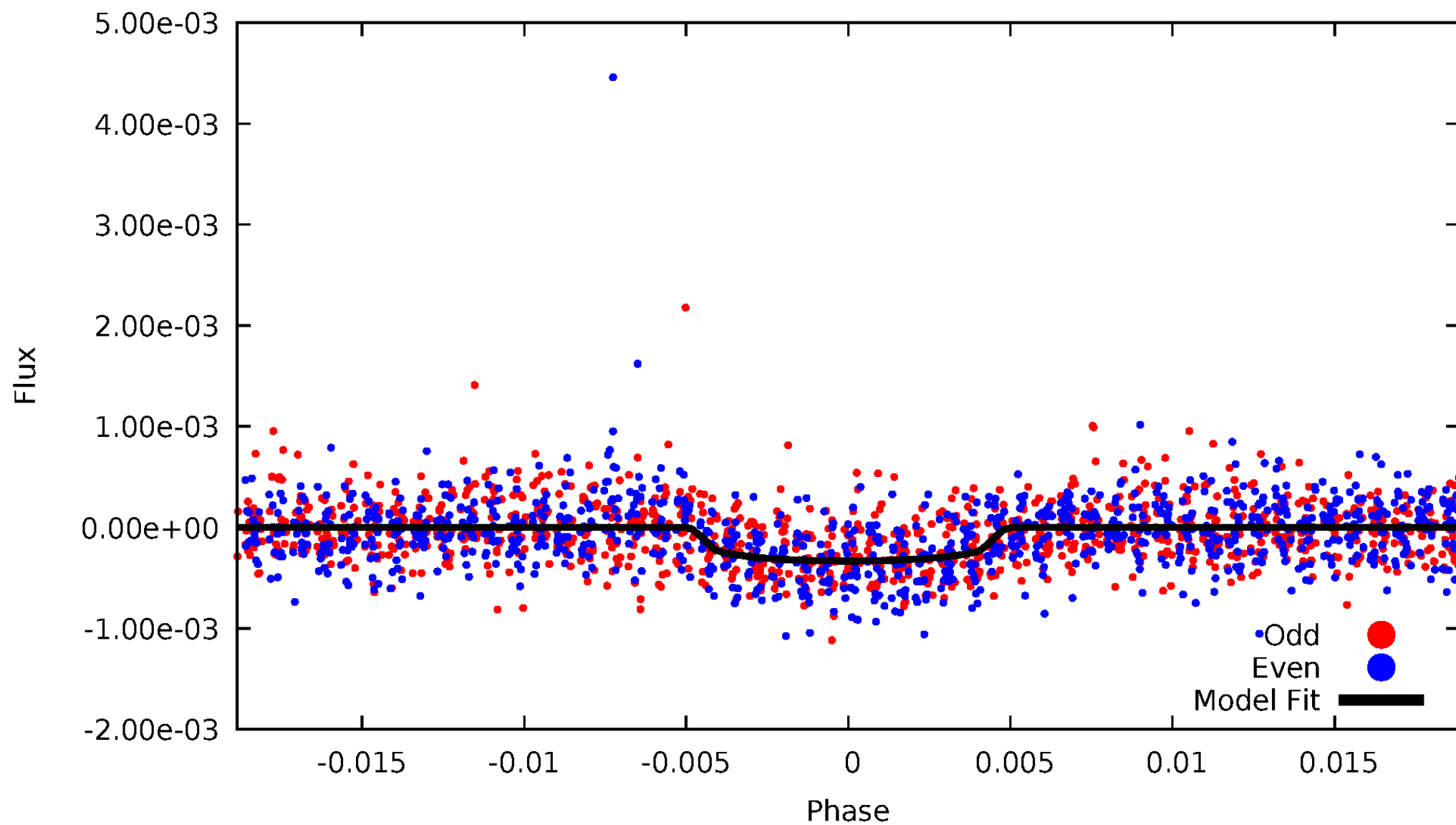


TCE 007747425-02



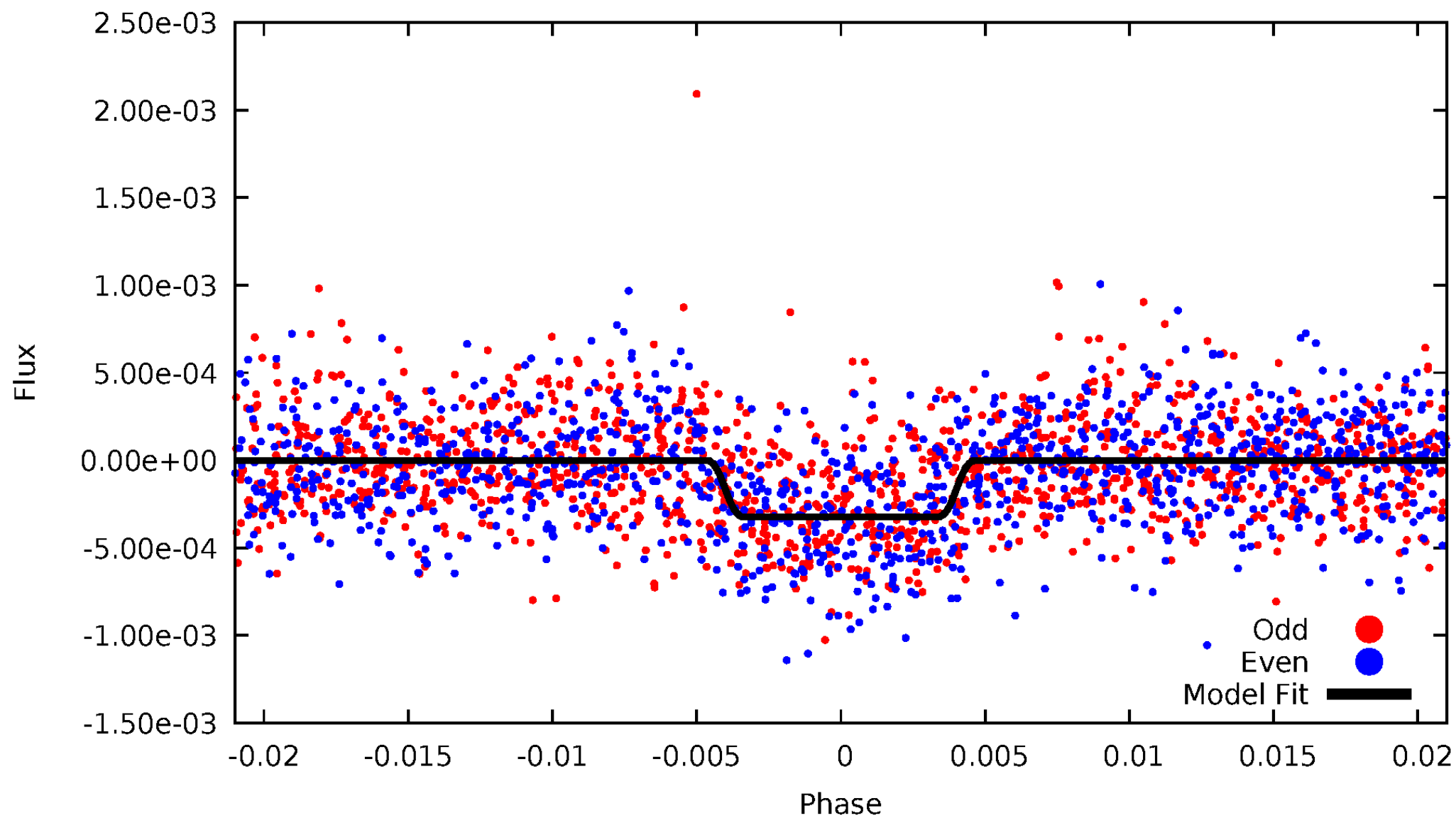
DV Odd/Even

TCE 007747425-02



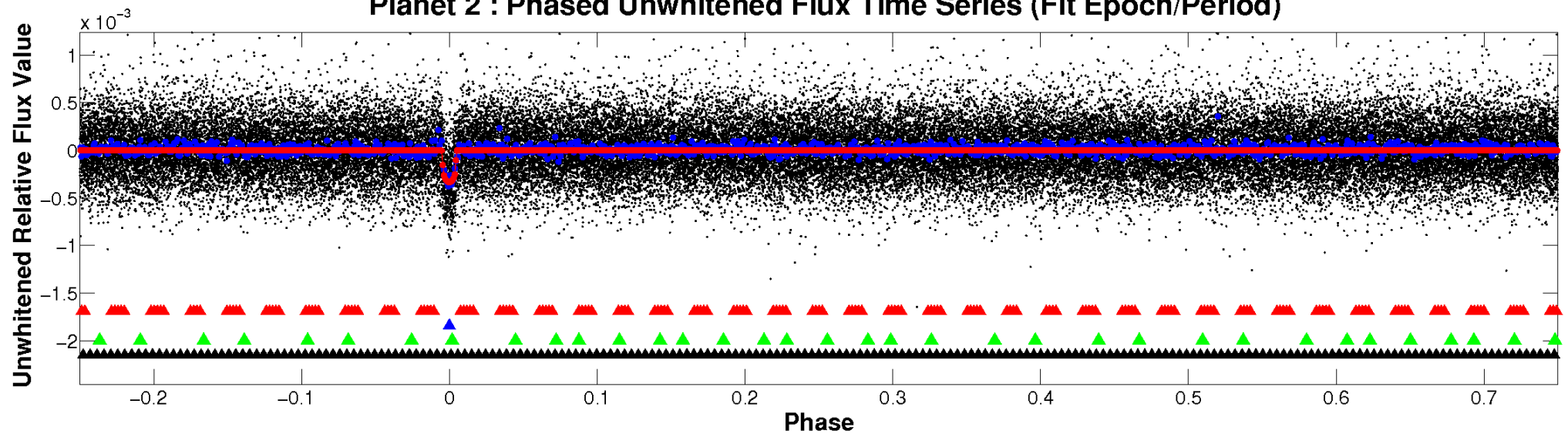
ALT Odd/Even

TCE 007747425-02

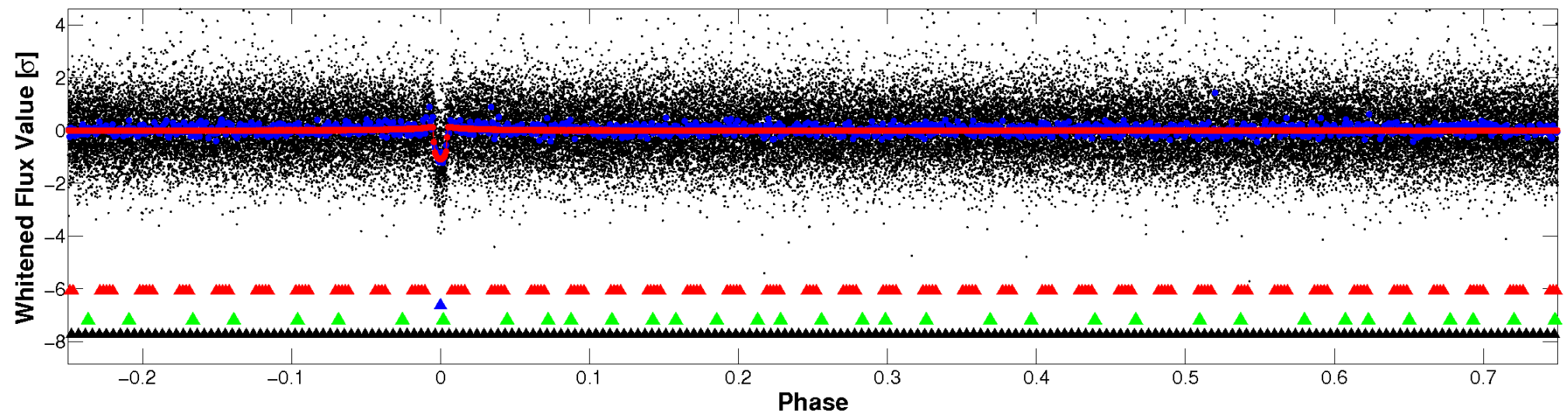


Non-Whitened Vs. Whitened Light Curve

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

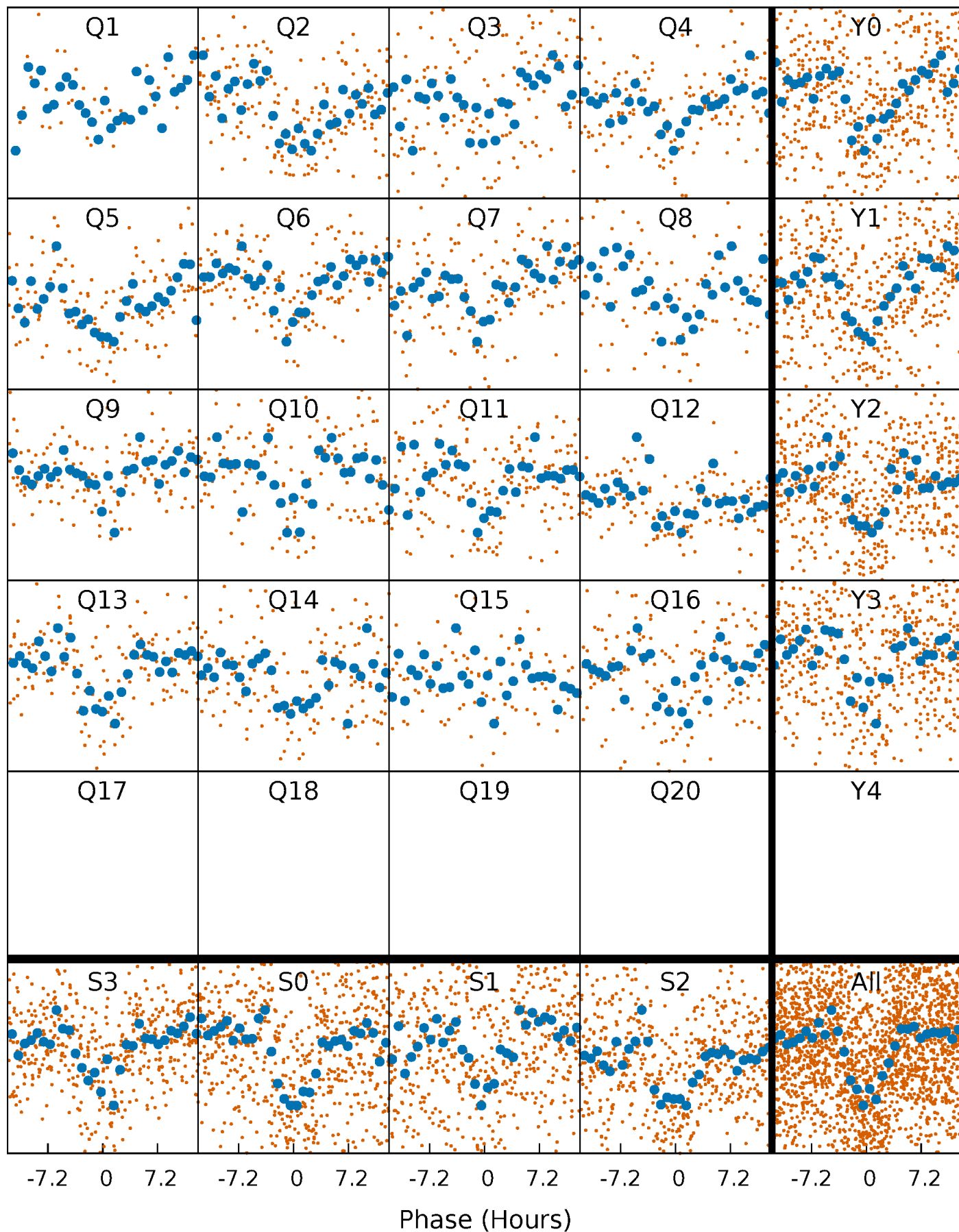


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



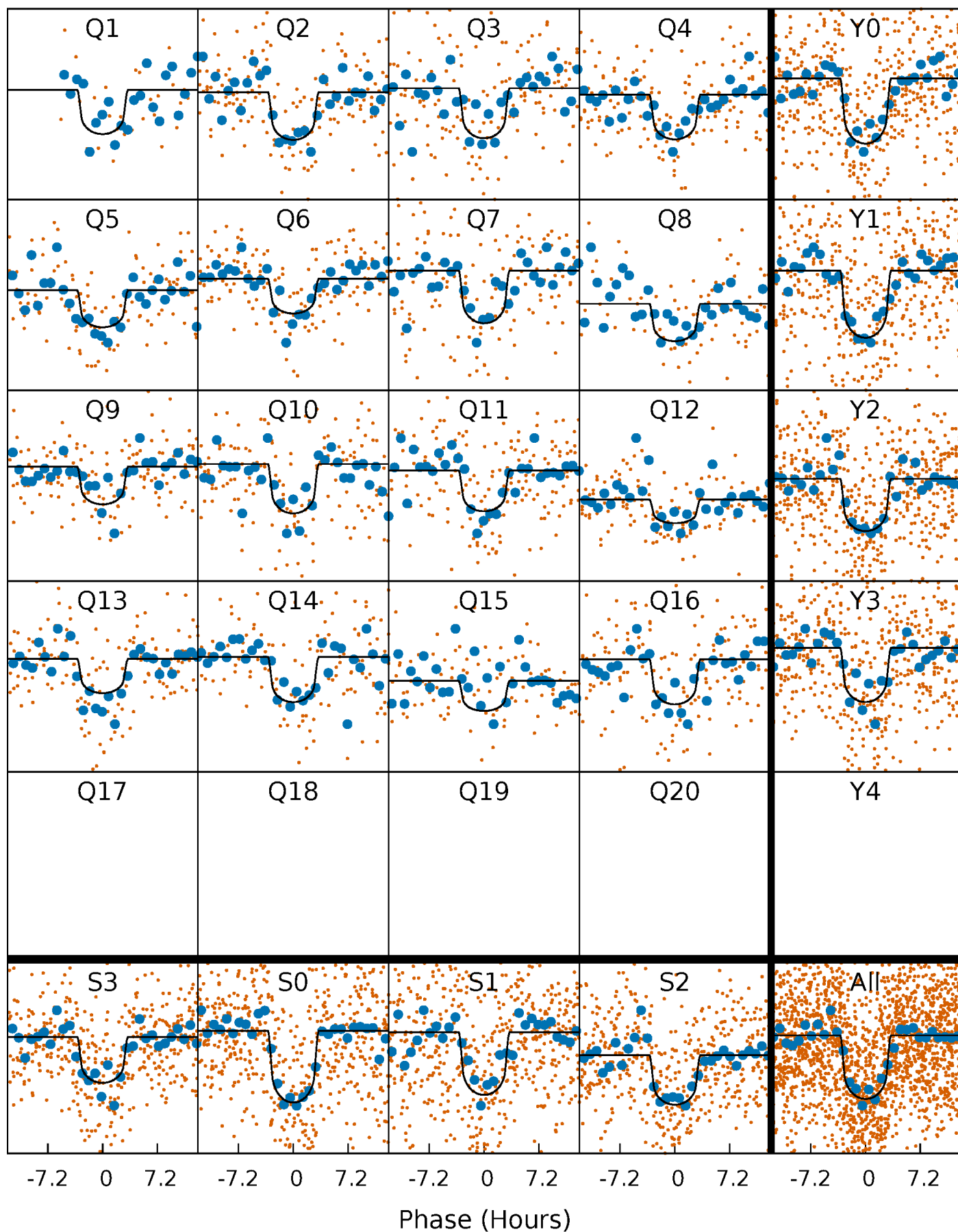
PDC Quarter-Phased Transit Curves

TCE 007747425-02 P= 27.666819 Days $T_0=143.857482$ (BKJD)



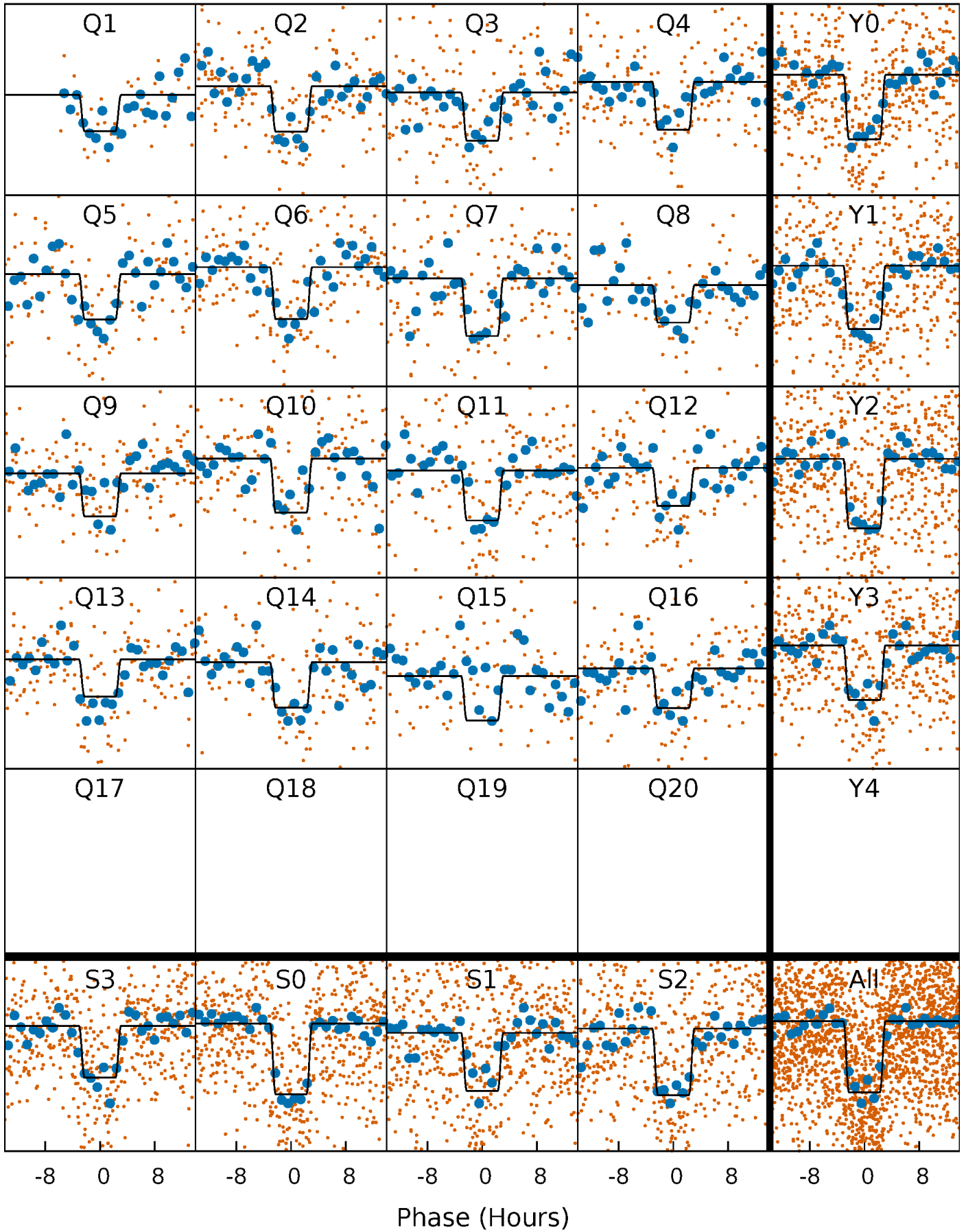
DV Quarter-Phased Transit Curves

TCE 007747425-02 P= 27.666819 Days $T_0=143.857482$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

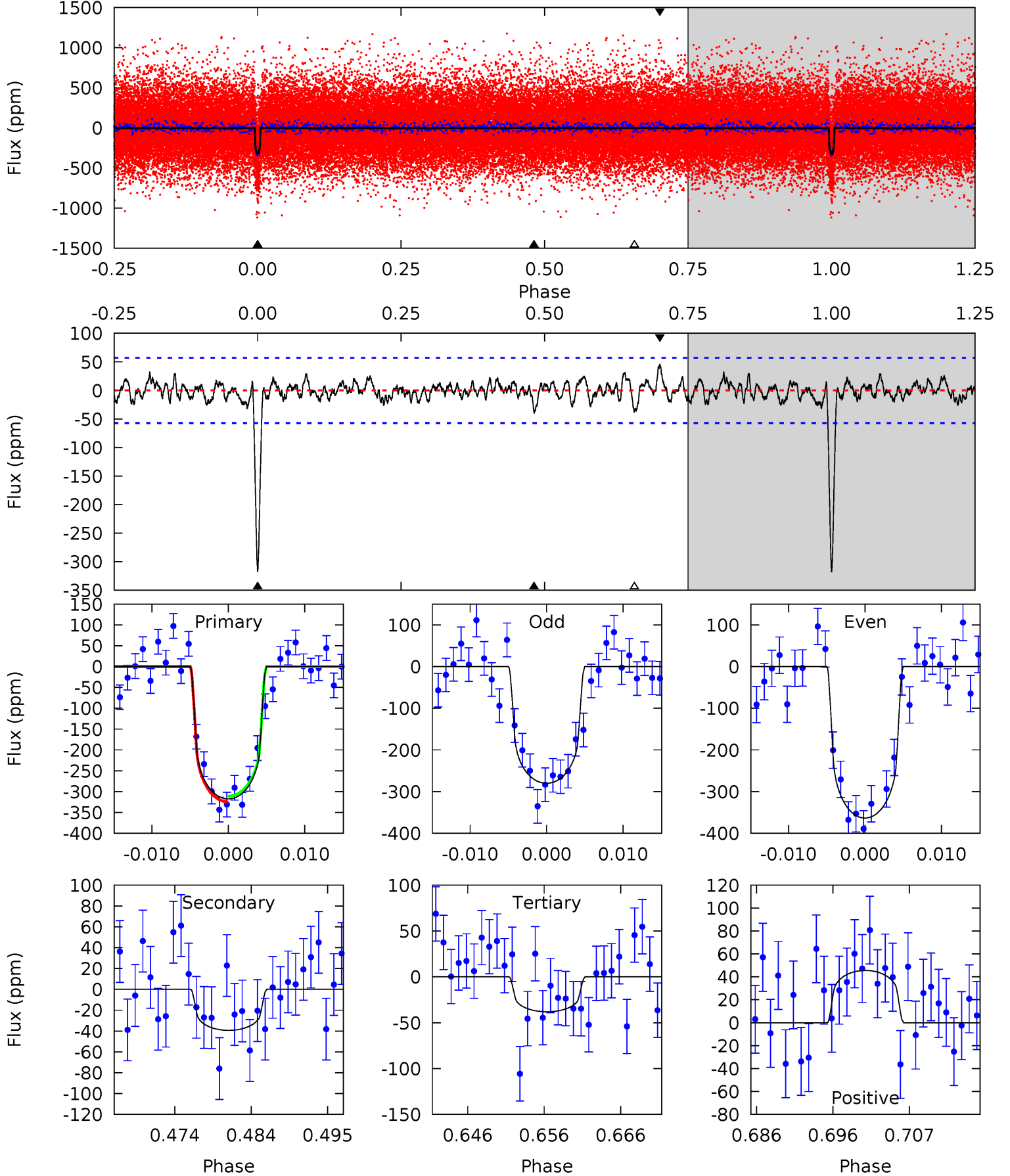
TCE 007747425-02 P= 27.666524 Days $T_0=143.867890$ (BKJD)



DV Model-Shift Uniqueness Test

007747425-02, P = 27.666819 Days, E = 116.190663 Days

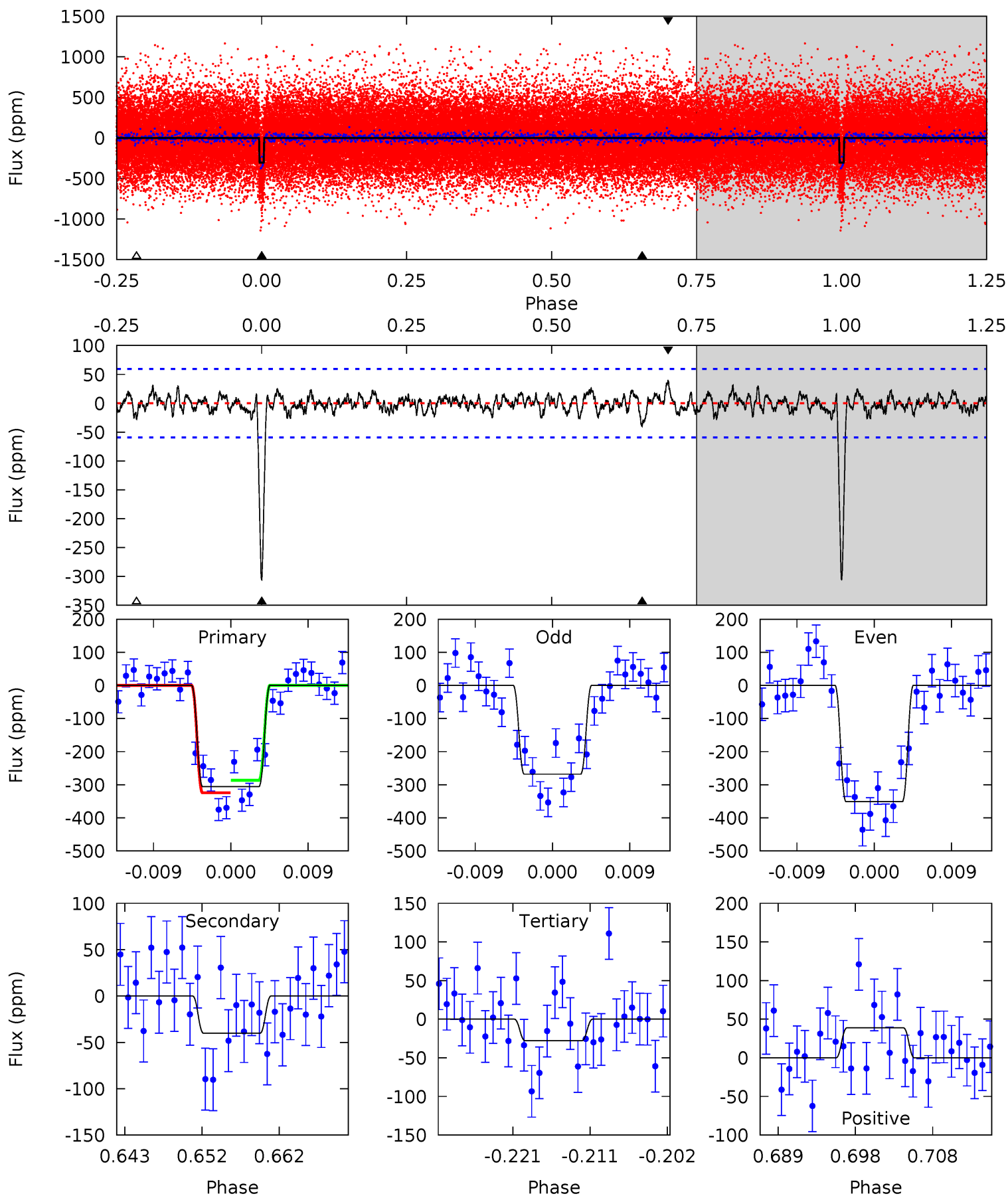
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.9	3.46	3.35	4.01	5.02	2.57	1.10	24.6	23.9	0.11	-0.55	3.66	1.01	0.13	0.59



Alt Model-Shift Uniqueness Test

007747425-02, P = 27.666524 Days, E = 116.201366 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	3.40	2.37	3.29	5.04	2.60	0.94	23.5	22.6	1.04	0.12	3.50	0.99	0.11	1.62



Stellar Parameters For KIC 007747425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+76}_{-76}	$4.327^{+0.132}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.111^{+0.160}_{-0.160}$	$0.957^{+0.068}_{-0.050}$	$0.982^{+0.559}_{-0.301}$
	+1%/-1%	+3%/-2%	+107%/-107%	+14%/-14%	+7%/-5%	+57%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007747425-02 / KOI 1952.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39 ± 11	$2.24^{+0.94}_{-0.91}$	870^{+36}_{-40}	3653^{+727}_{-382}	127^{+257}_{-64}
Alt.	-40 ± 12	$2.22^{+0.90}_{-0.97}$	869^{+37}_{-38}	3720^{+802}_{-448}	141^{+322}_{-77}

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

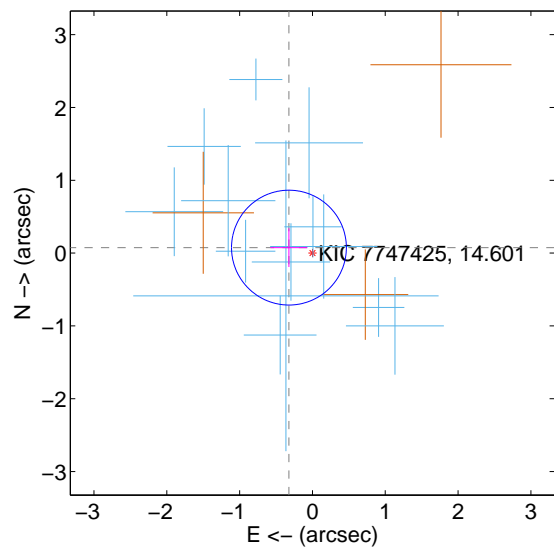
Supplemental centroid analysis for 007747425-02. Kepler magnitude: 14.60. Transit SNR 21.52

There are 13 quarters with good PRF difference image offsets

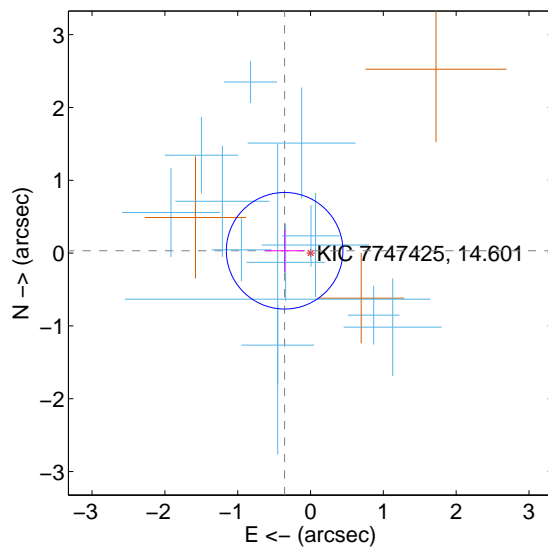
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.331 ± 0.263	1.26	0.323 ± 0.253	0.075 ± 0.266
PRF-fit source offset from KIC position	0.357 ± 0.267	1.34	0.356 ± 0.265	0.032 ± 0.291
photometric centroid source offset	0.88 ± 0.63	1.39	-0.38 ± 0.67	0.79 ± 0.62

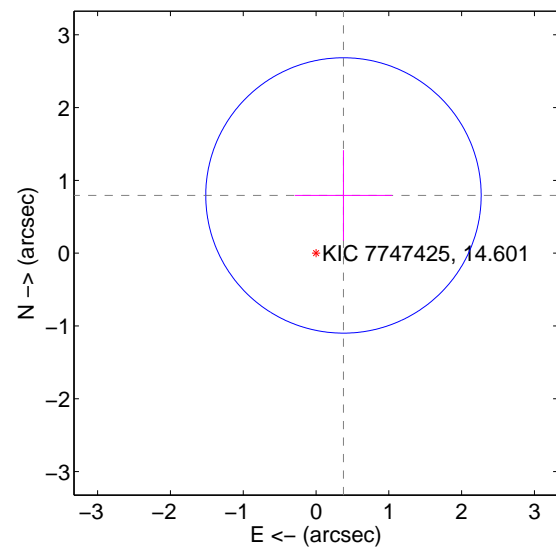
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

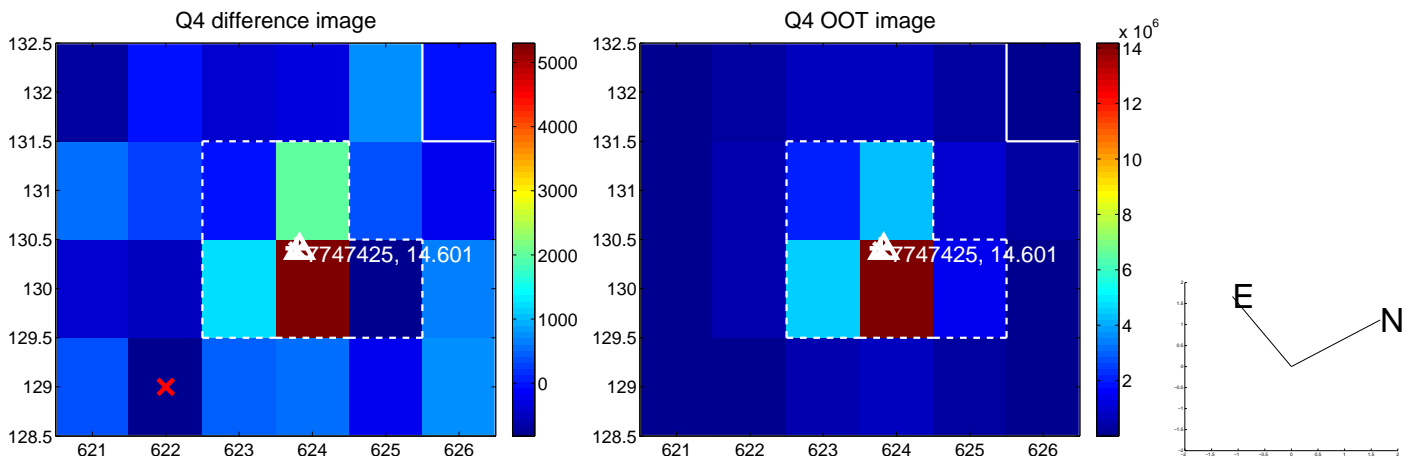
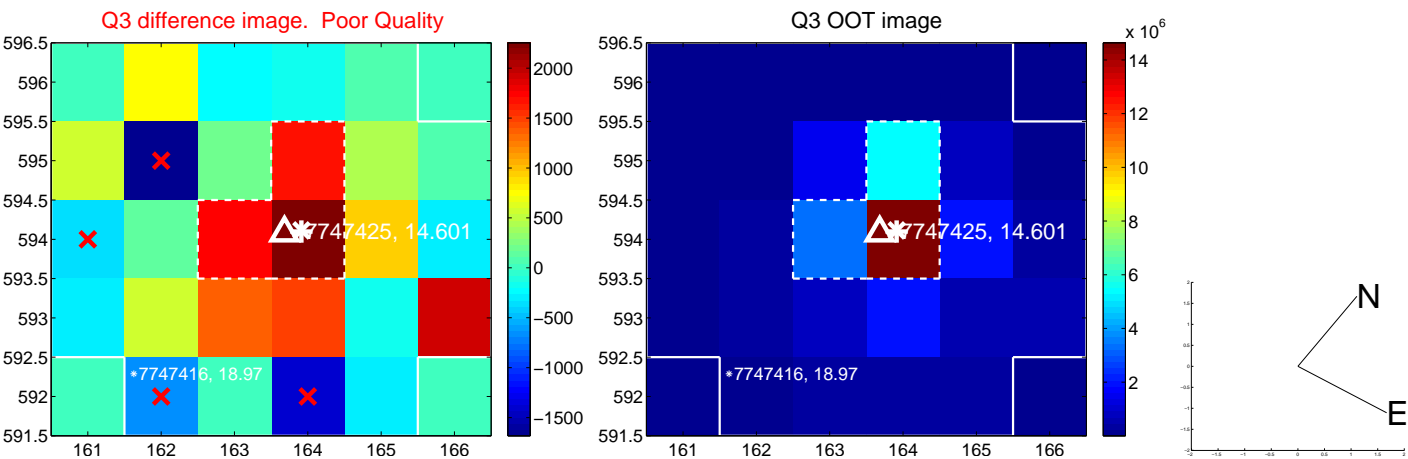
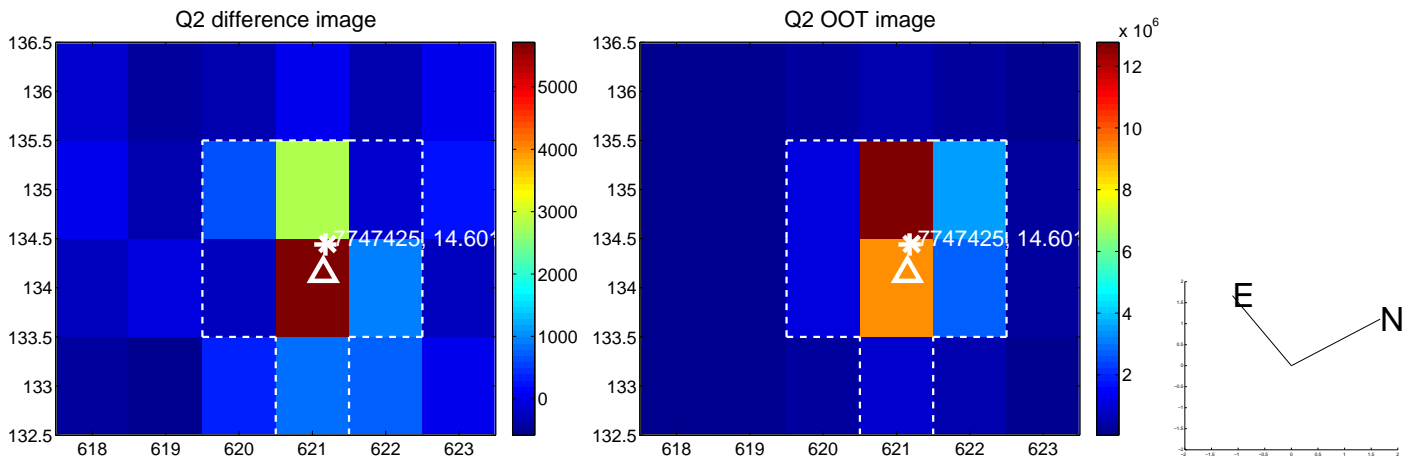
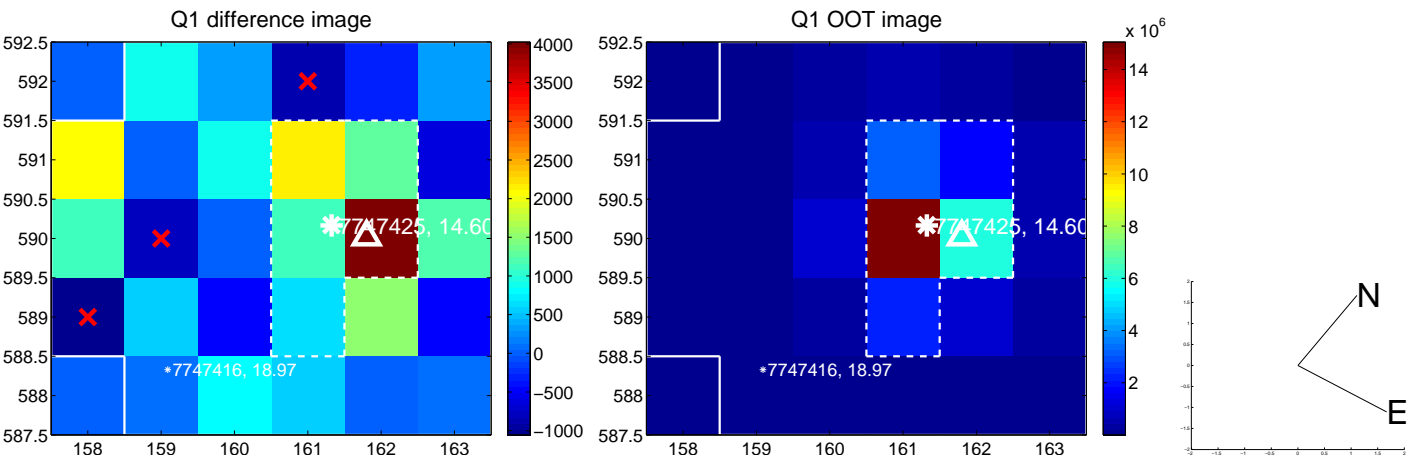


offset from photometric centroids

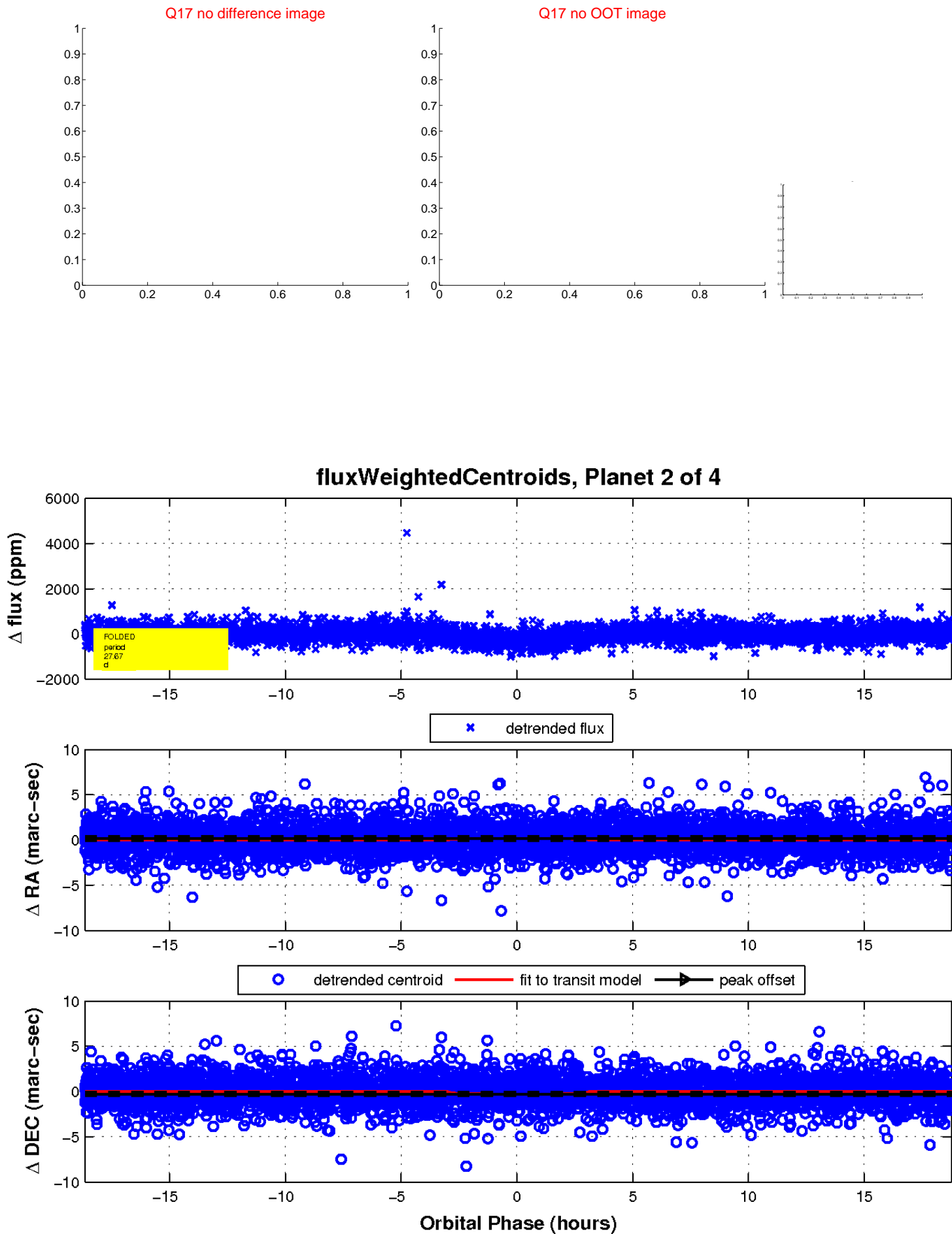


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

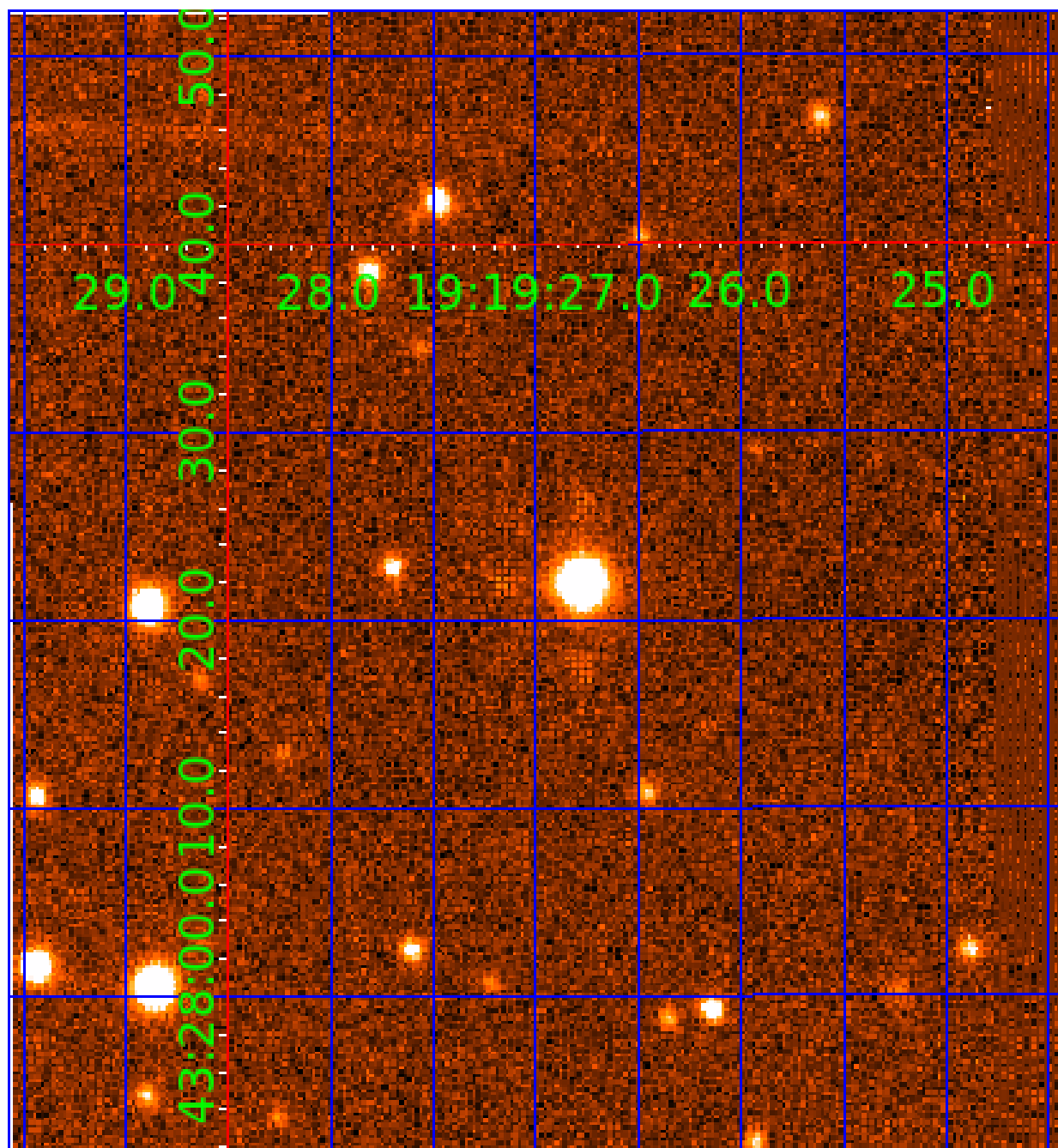


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007747425

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})
007747425-01	OBS	1952.01	8.010388	135.317195	293.9	4.567	29.2	31.9	1.11	5616	2.27	184.59
007747425-02	OBS	1952.02	27.666819	143.857482	333.8	6.259	20.4	21.5	1.11	5616	2.21	35.36
007747425-03	OBS	1952.04	42.473086	146.282817	308.8	7.297	16.7	18.0	1.11	5616	2.21	19.96
007747425-04	OBS	1952.03	5.195619	132.720377	124.4	3.736	14.6	15.6	1.11	5616	1.42	328.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007747425-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-02	OBS	PC	0.97	0	0	0	0	NO_COMMENT
007747425-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-04	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

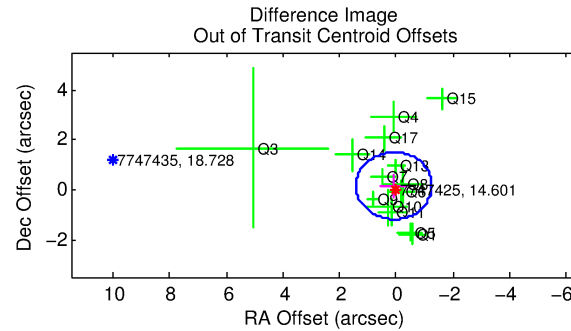
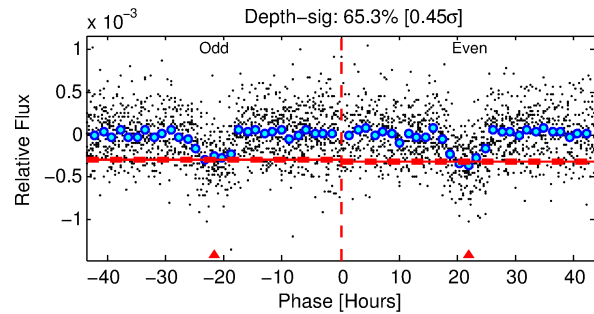
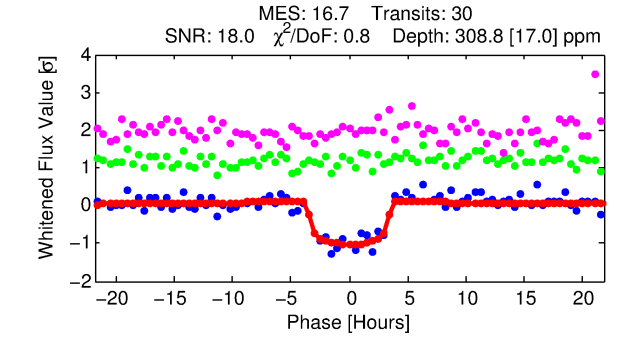
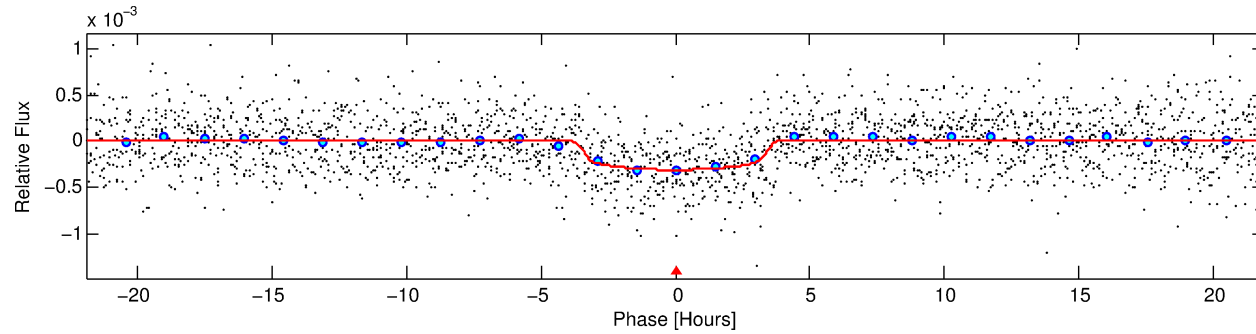
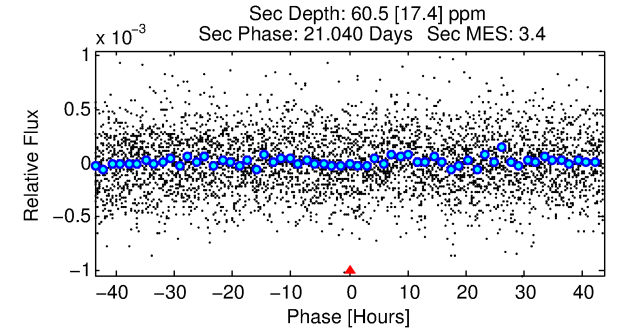
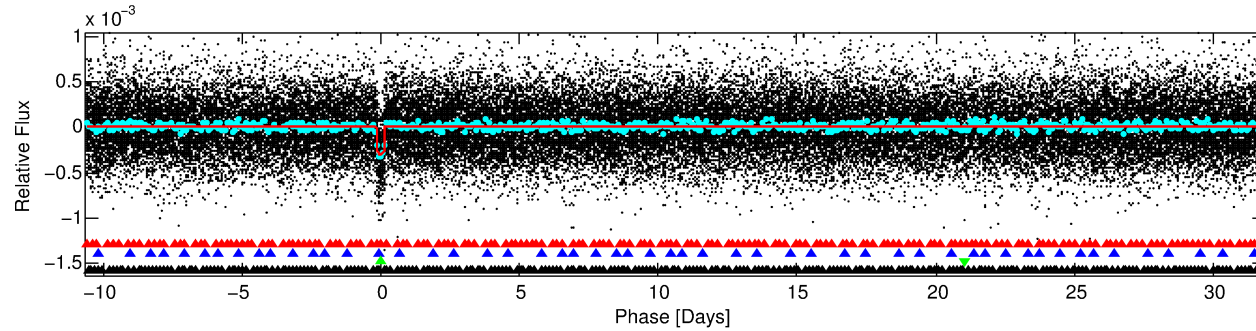
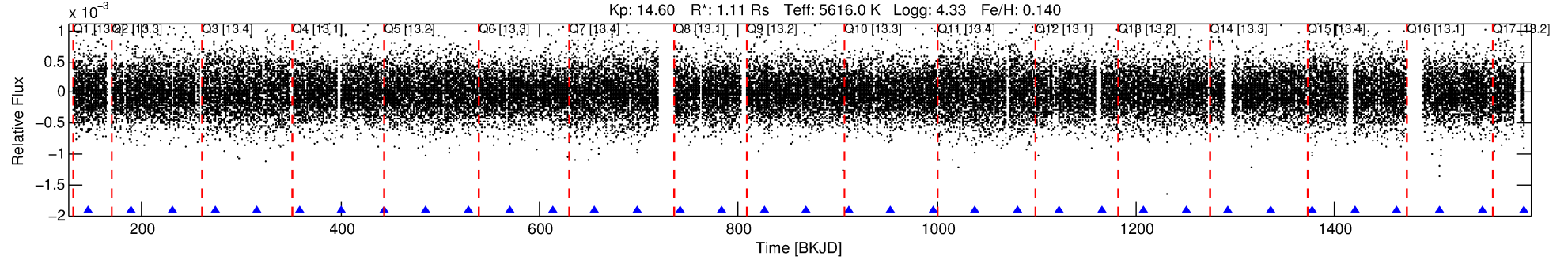
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007747425-03

No Significant Match Found

DV One-Page Summary

KIC: 7747425 Candidate: 3 of 4 Period: 42.473 d
KOI: K01952.04 Name: Kepler-341e Corr: 0.954



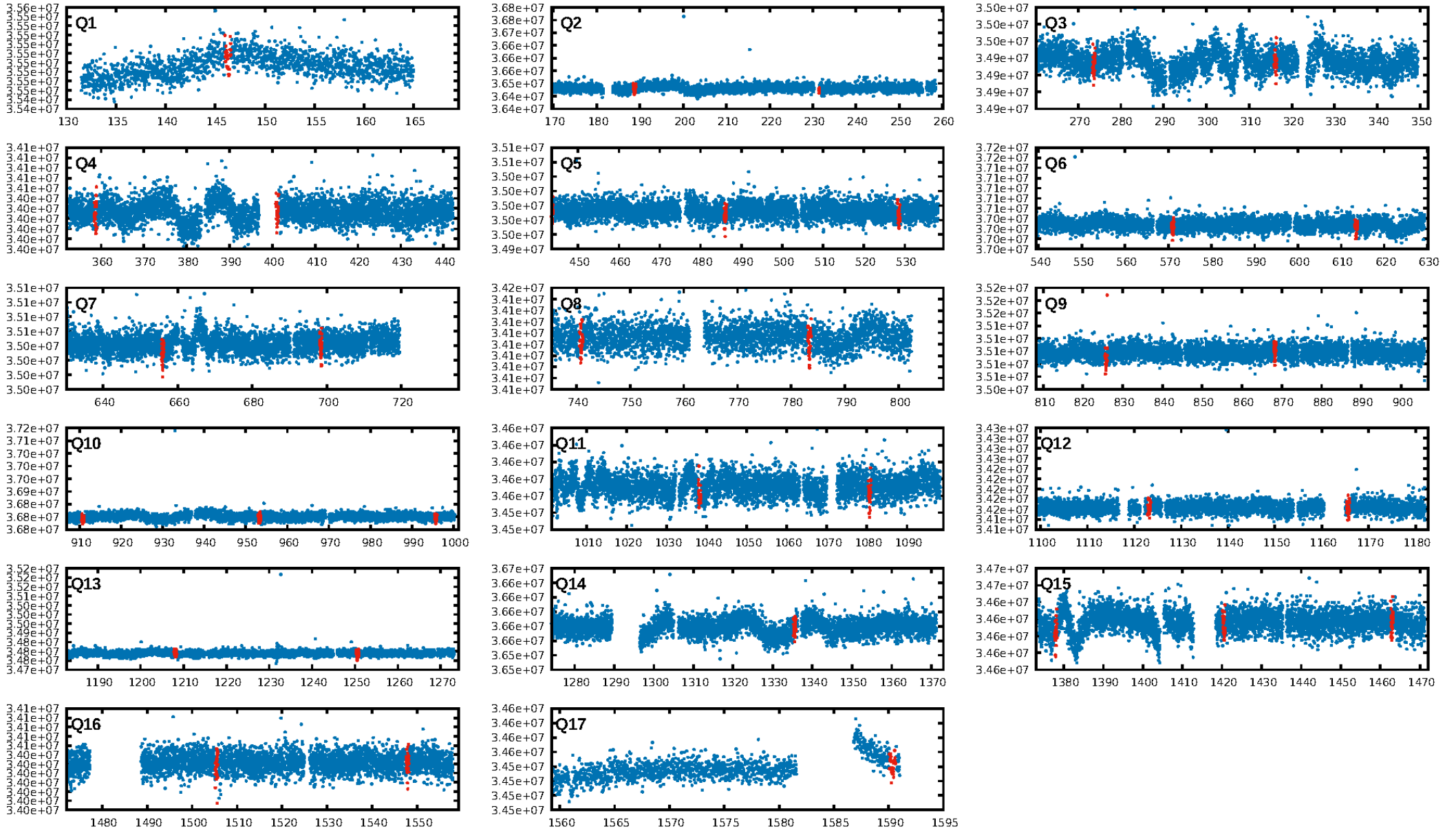
DV Fit Results:

Period = 42.47309 [0.00039] d
Epoch = 146.2828 [0.0075] BKJD
Rp/R* = 0.0182 [0.0042]
a/R* = 26.17 [25.60]
b = 0.83 [0.37]
Seff = 19.96 [4.61]
Teq = 539 [31] K
Rp = 2.21 [0.60] Re
a = 0.2347 [0.0328] AU
Ag = 375.35 [219.96] [1.70σ]
Teffp = 3668 [499] K [6.26σ]

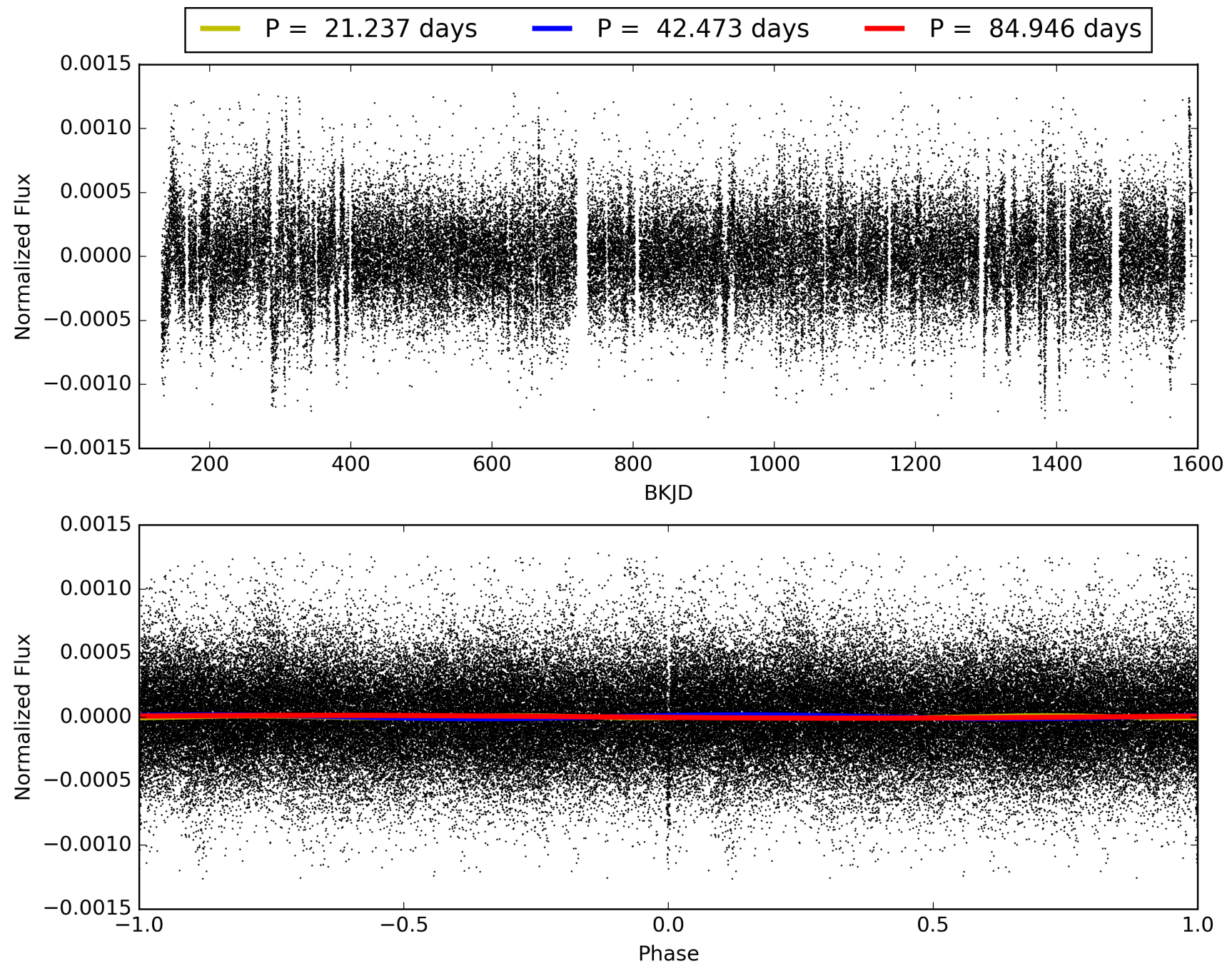
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [36.96σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 74.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.94e-57
RollingBand-fgt: 1.00 [28/28]
GhostDiagnostic-chr: -12.08
Centroid-sig: 0.9%
Centroid-so: 1.314 arcsec [1.75σ]
OotOffset-rm: 0.173 arcsec [0.39σ]
KicOffset-rm: 0.196 arcsec [0.45σ]
OotOffset-st: 3/4/2/5 [14]
KicOffset-st: 3/4/2/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 0.81 [13/16]

TCE 007747425-03, PDC Light Curves

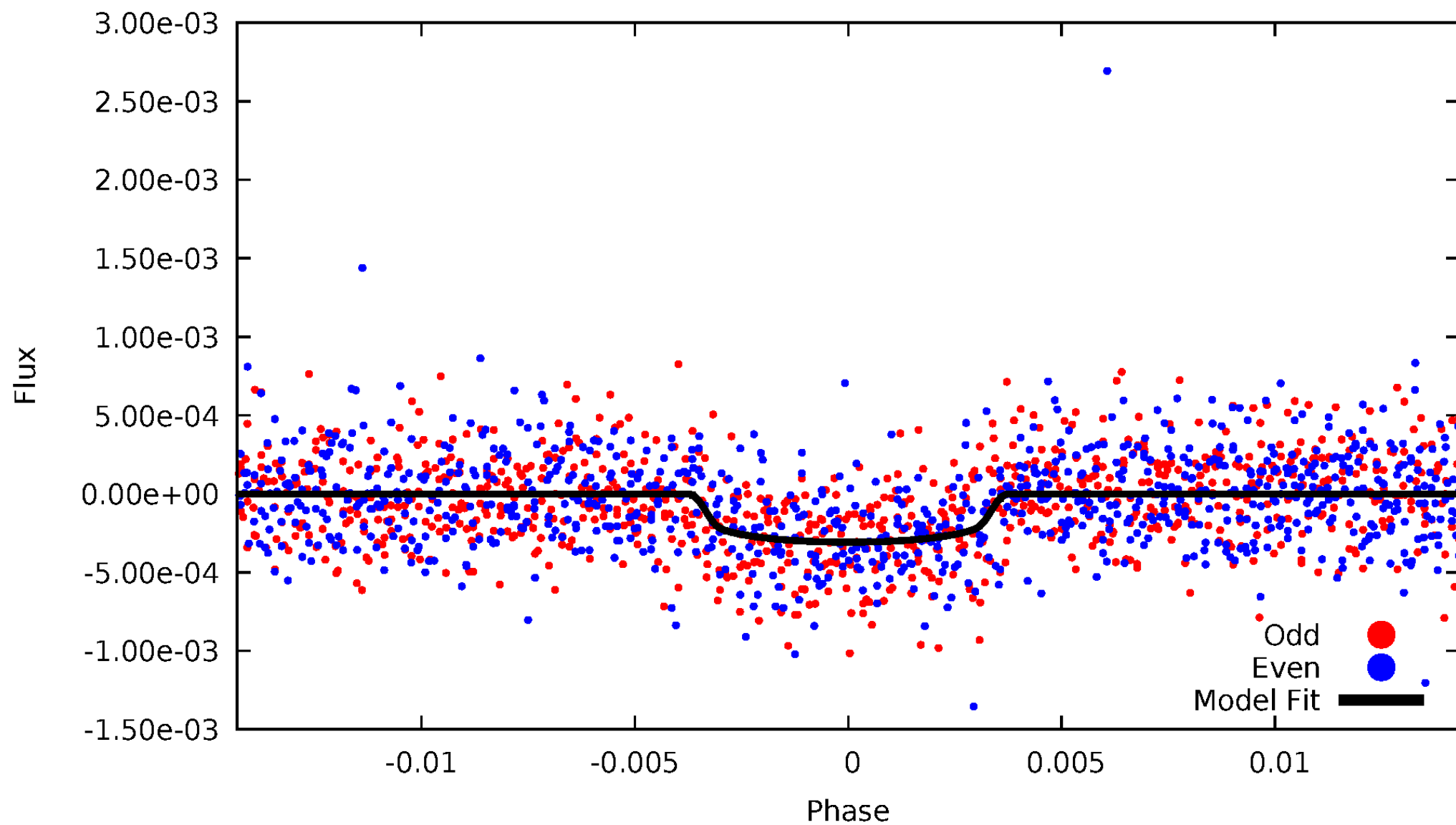


TCE 007747425-03



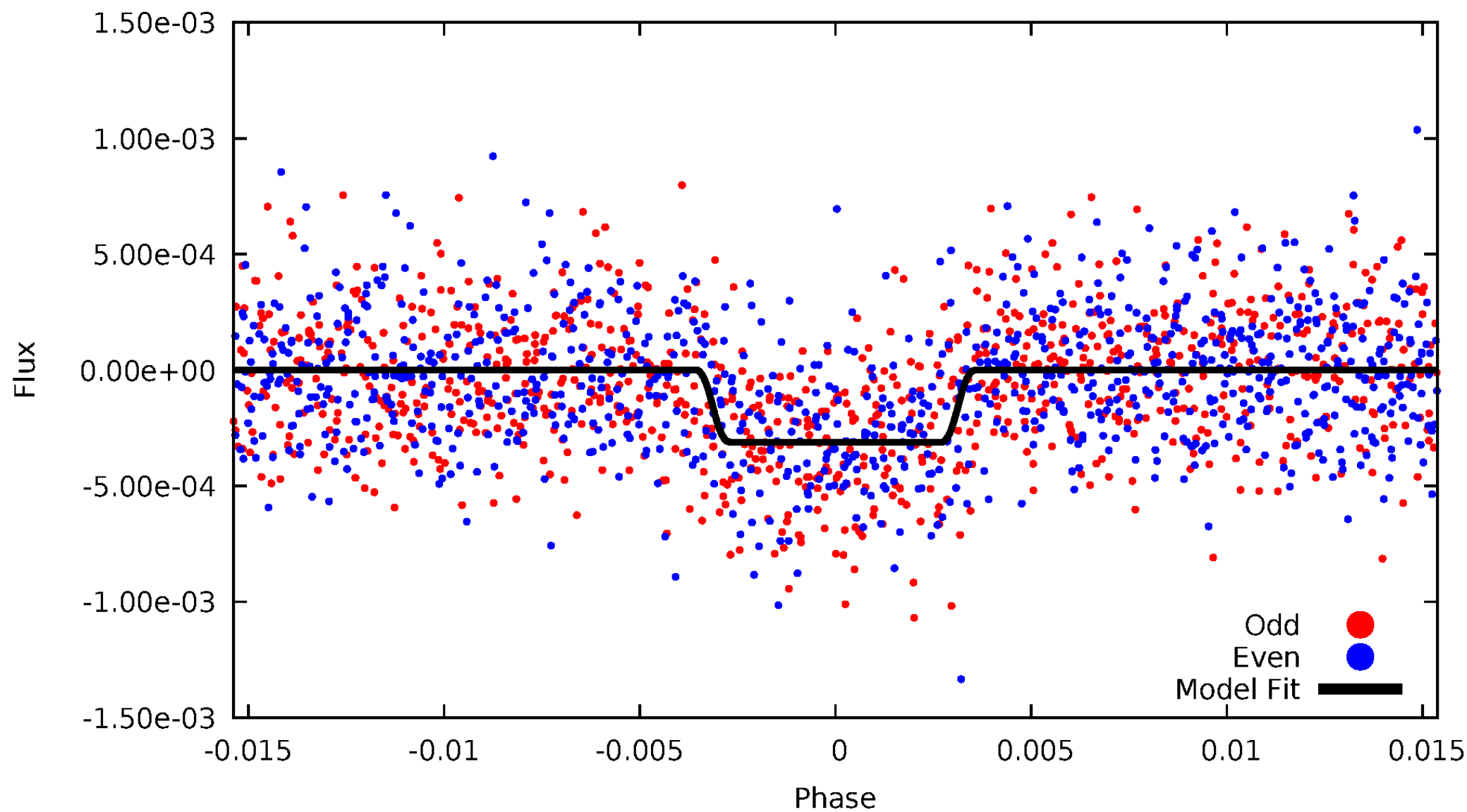
DV Odd/Even

TCE 007747425-03



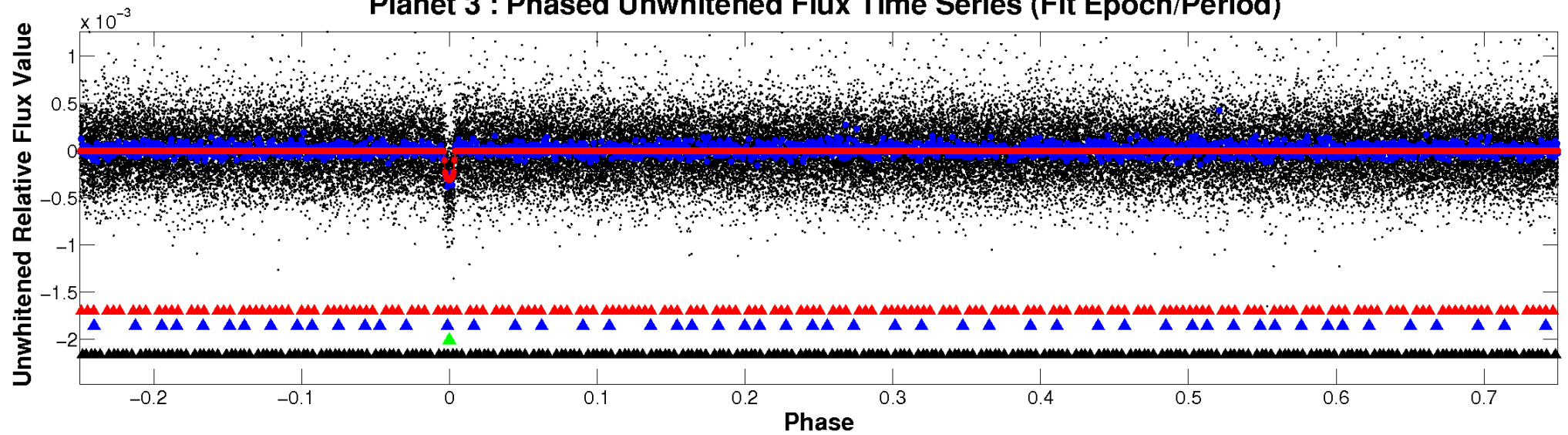
ALT Odd/Even

TCE 007747425-03

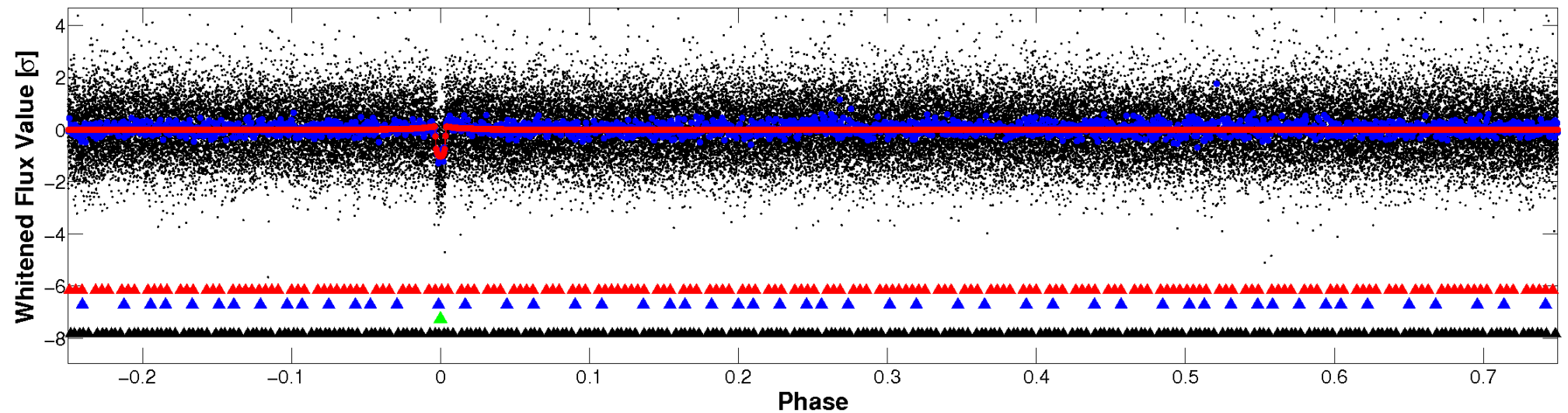


Non-Whitened Vs. Whitened Light Curve

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

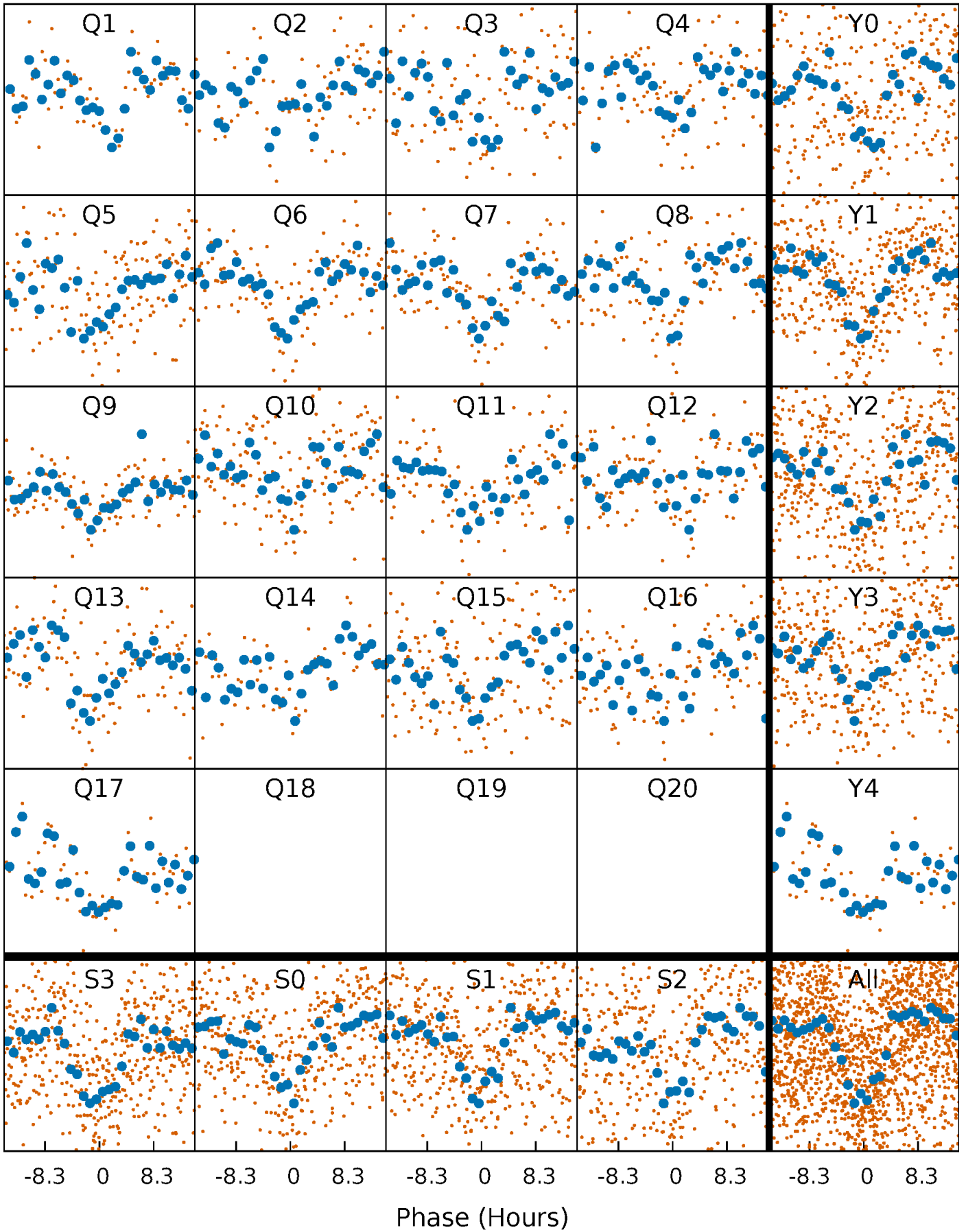


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



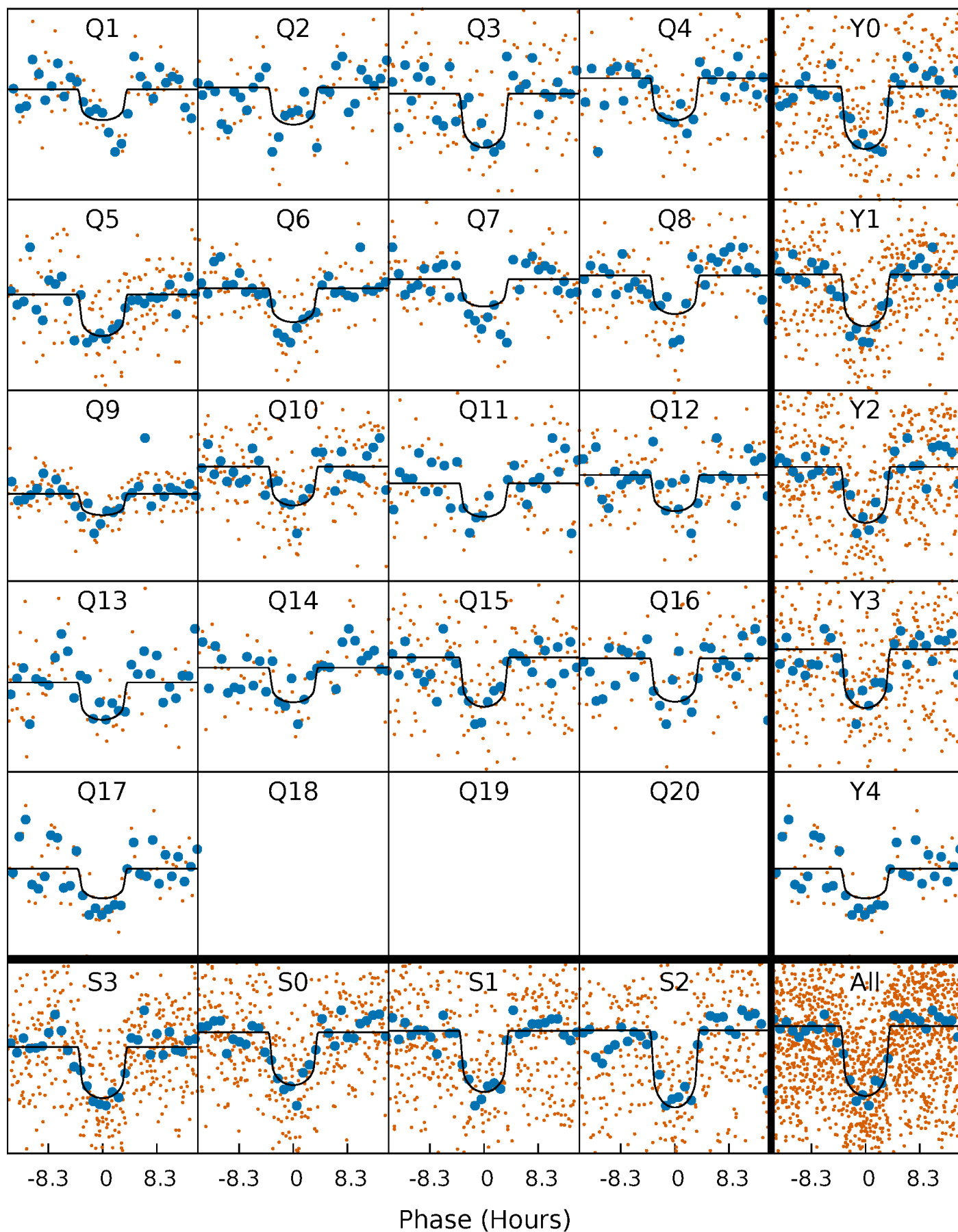
PDC Quarter-Phased Transit Curves

TCE 007747425-03 $P = 42.473086$ Days $T_0 = 146.282817$ (BKJD)



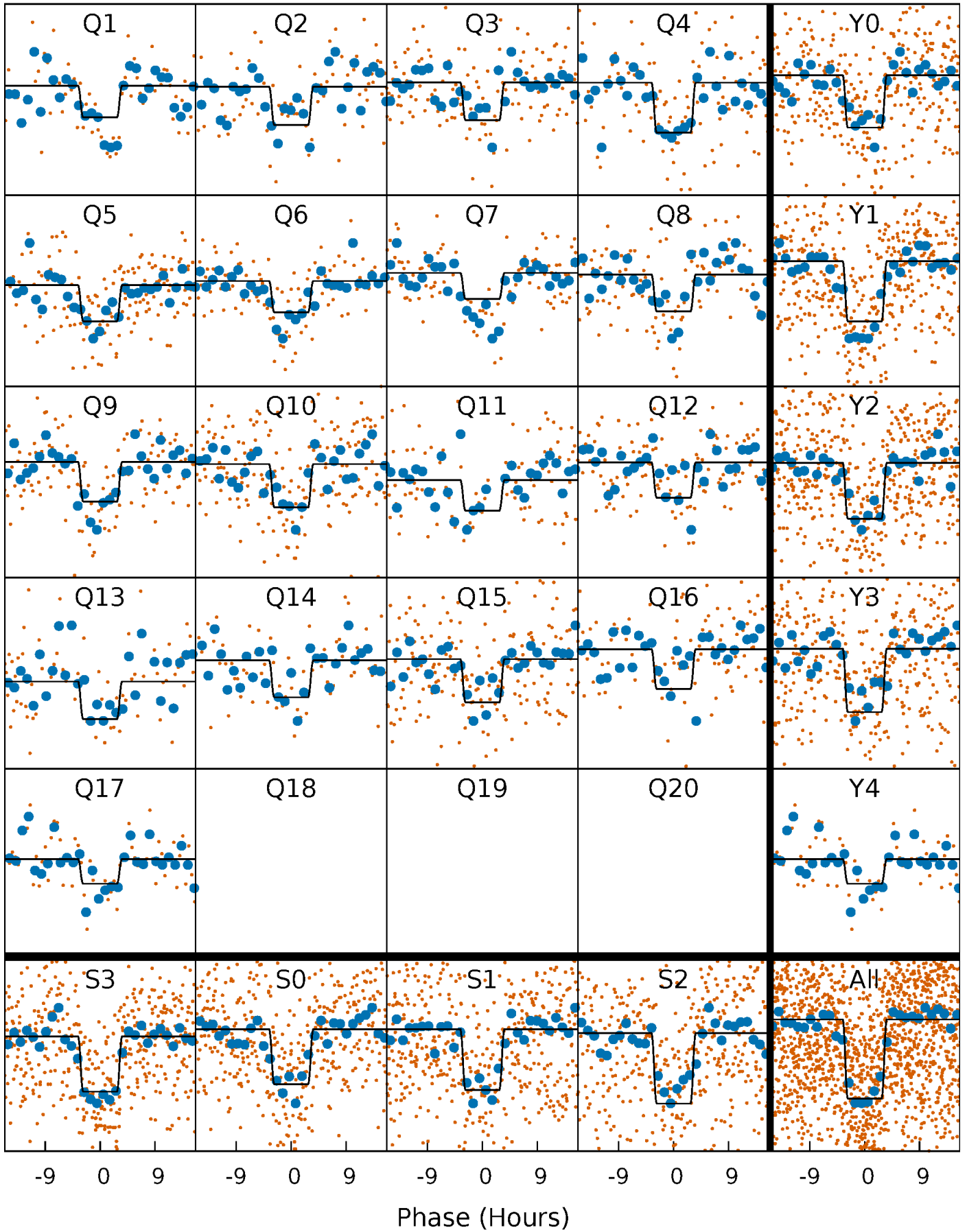
DV Quarter-Phased Transit Curves

TCE 007747425-03 P= 42.473086 Days $T_0=146.282817$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

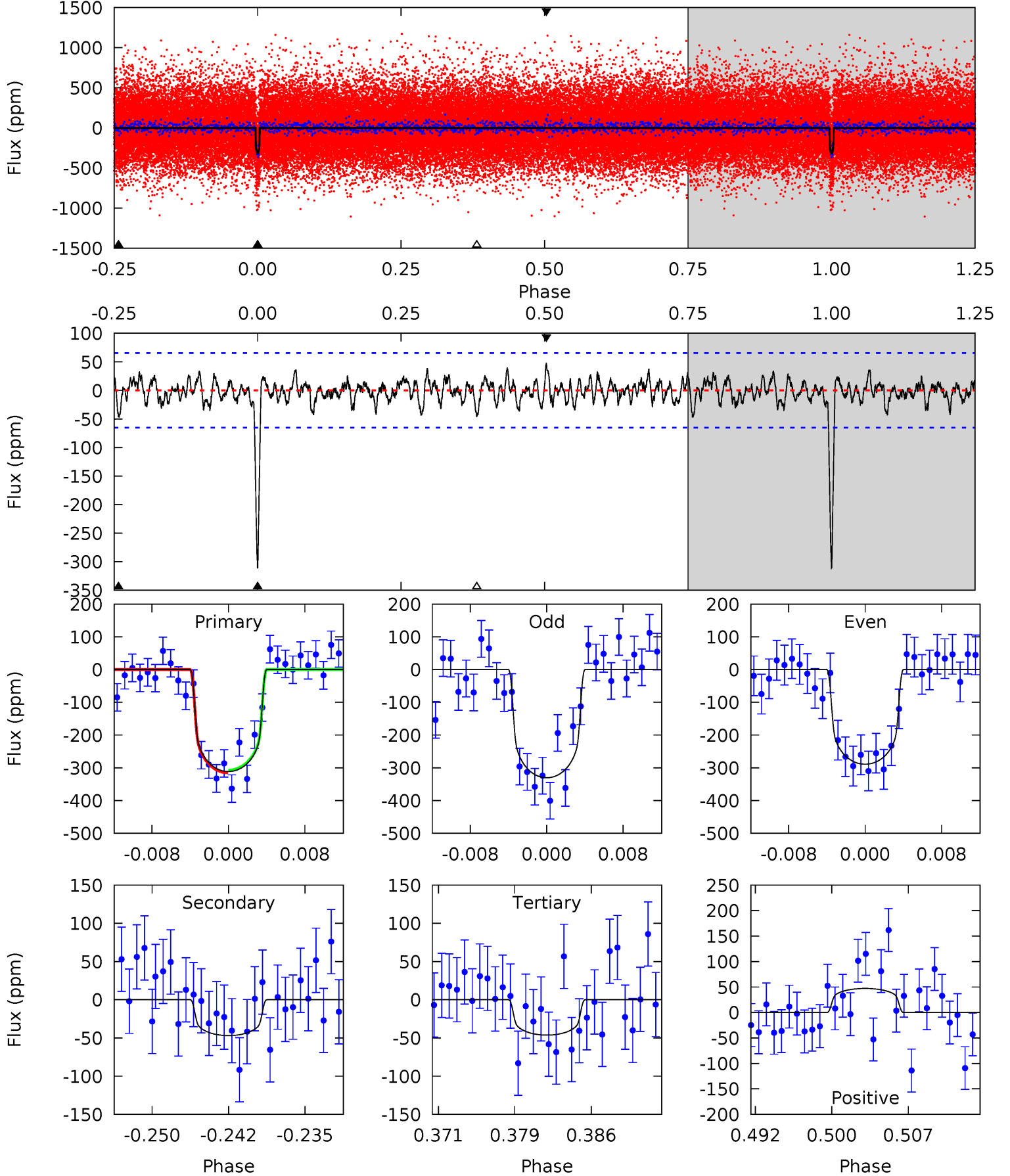
TCE 007747425-03 P= 42.472230 Days $T_0=146.298458$ (BKJD)



DV Model-Shift Uniqueness Test

007747425-03, $P = 42.473086$ Days, $E = 103.809731$ Days

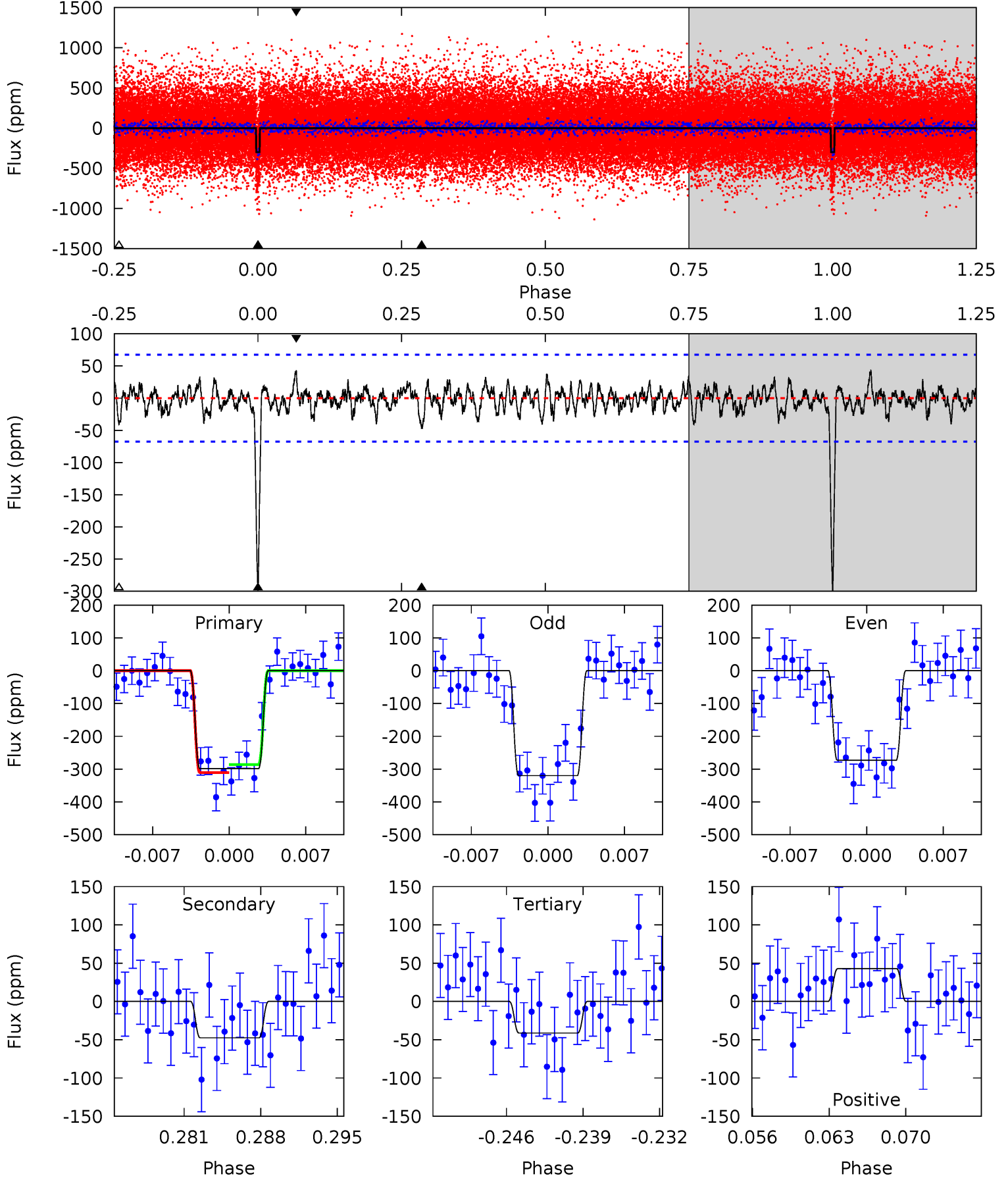
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	3.65	3.60	3.67	5.08	2.67	1.20	20.6	20.6	0.05	-0.03	1.60	1.03	0.13	0.33



Alt Model-Shift Uniqueness Test

007747425-03, P = 42.472230 Days, E = 103.826228 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	3.59	3.12	3.24	5.09	2.70	1.06	19.4	19.3	0.47	0.35	1.74	0.97	0.13	0.92



Stellar Parameters For KIC 007747425

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+76}_{-76}	$4.327^{+0.132}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.111^{+0.160}_{-0.160}$	$0.957^{+0.068}_{-0.050}$	$0.982^{+0.559}_{-0.301}$
	+1%/-1%	+3%/-2%	+107%/-107%	+14%/-14%	+7%/-5%	+57%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007747425-03 / KOI 1952.04

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 13	$2.18^{+0.52}_{-0.53}$	750^{+32}_{-35}	3809^{+394}_{-303}	298^{+224}_{-121}
Alt.	-48 ± 13	$2.13^{+0.56}_{-0.50}$	751^{+32}_{-33}	3842^{+416}_{-319}	311^{+251}_{-130}

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

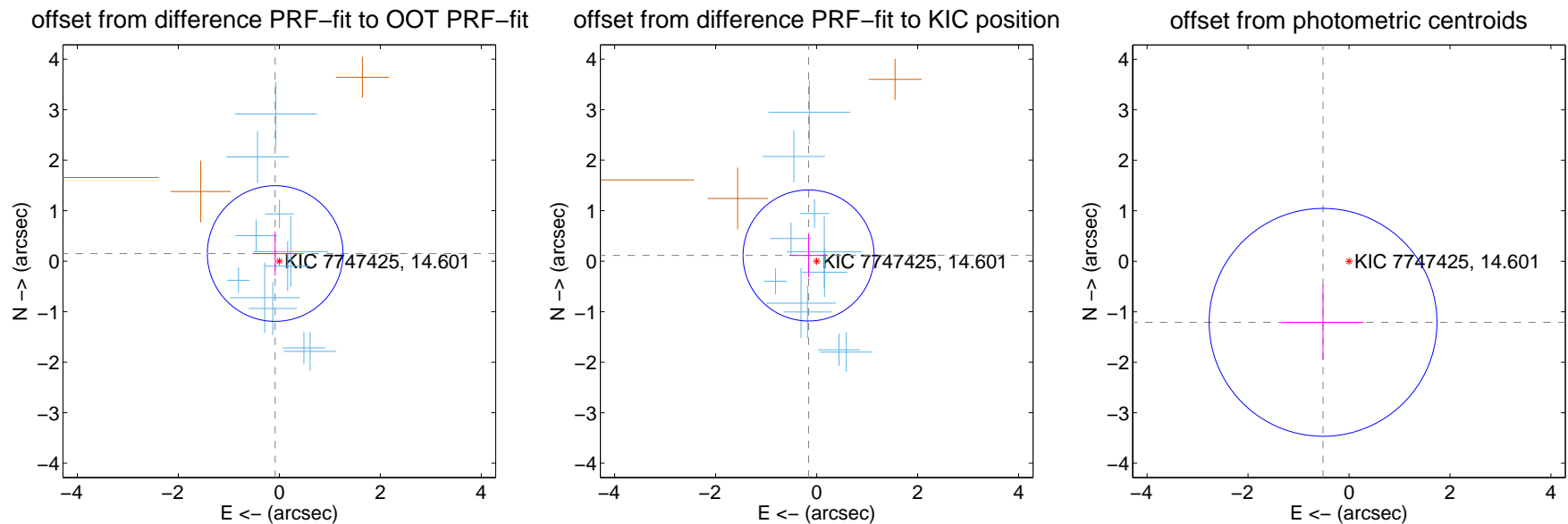
DV Centroid Data

Supplemental centroid analysis for 007747425-03. Kepler magnitude: 14.60. Transit SNR 18.02

There are 11 quarters with good PRF difference image offsets

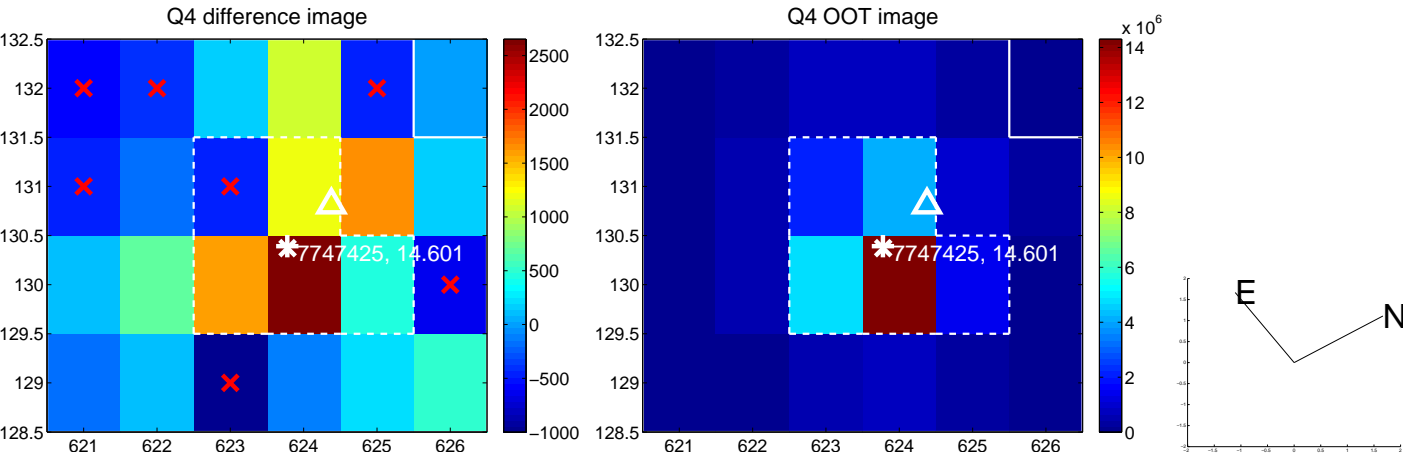
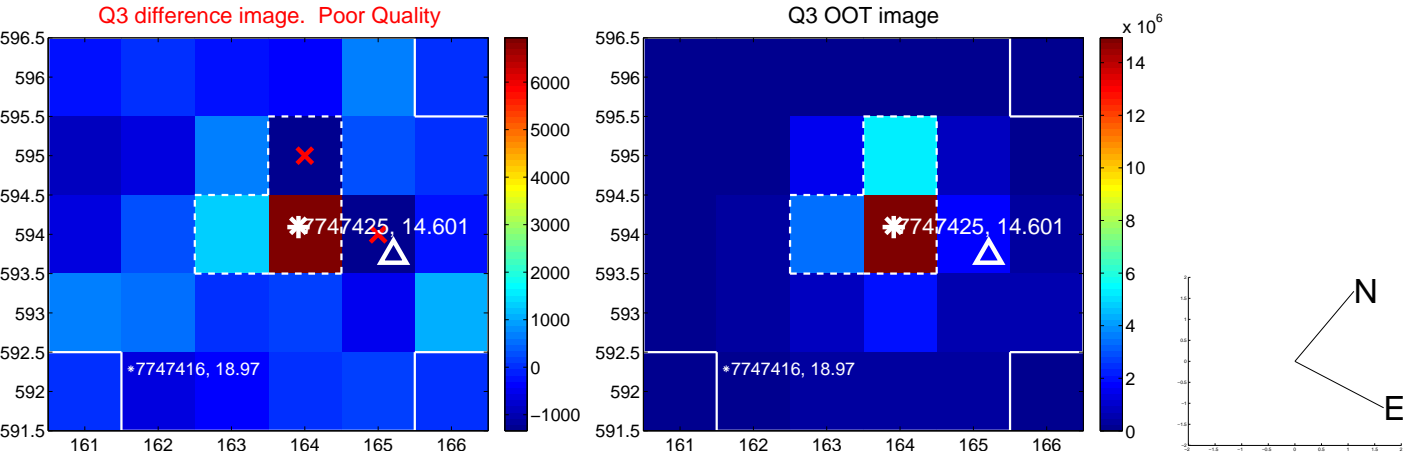
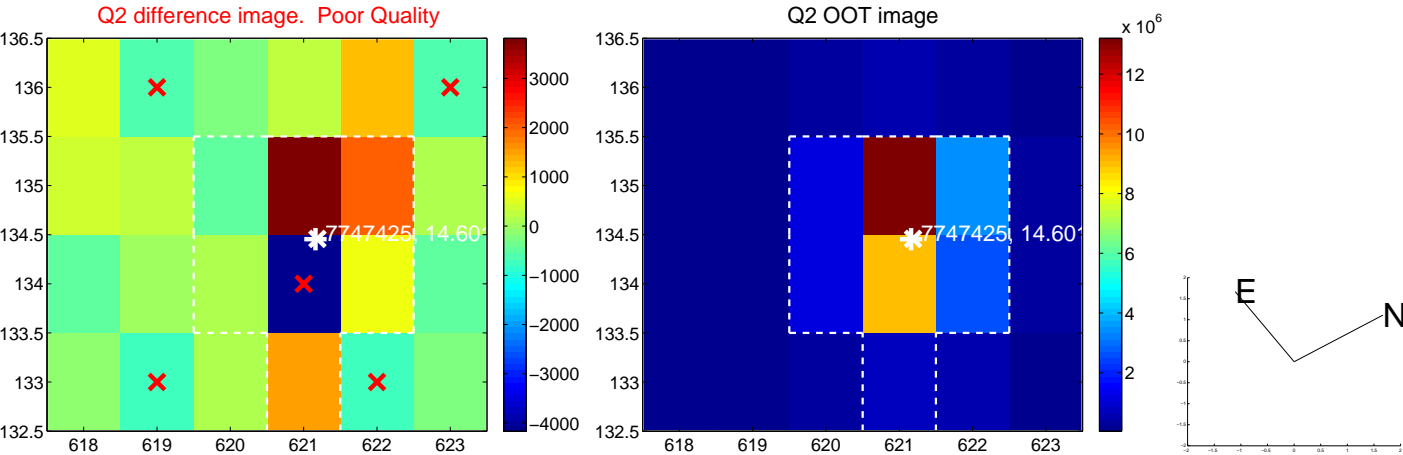
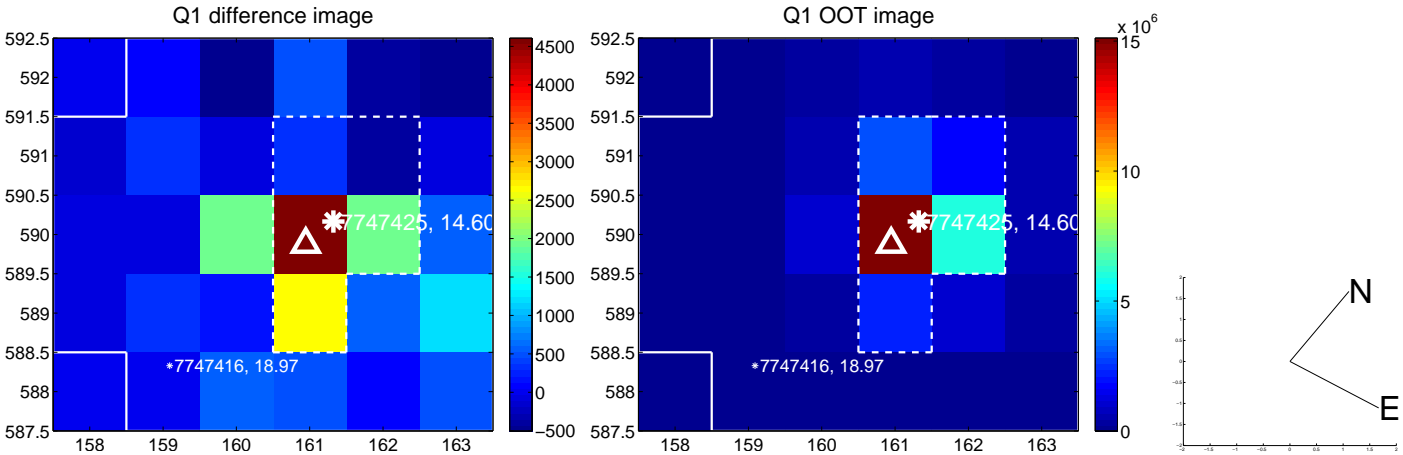
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.173 ± 0.448	0.39	0.082 ± 0.433	0.152 ± 0.438
PRF-fit source offset from KIC position	0.196 ± 0.432	0.45	0.160 ± 0.382	0.114 ± 0.435
photometric centroid source offset	1.31 ± 0.75	1.75	0.51 ± 0.80	-1.21 ± 0.74

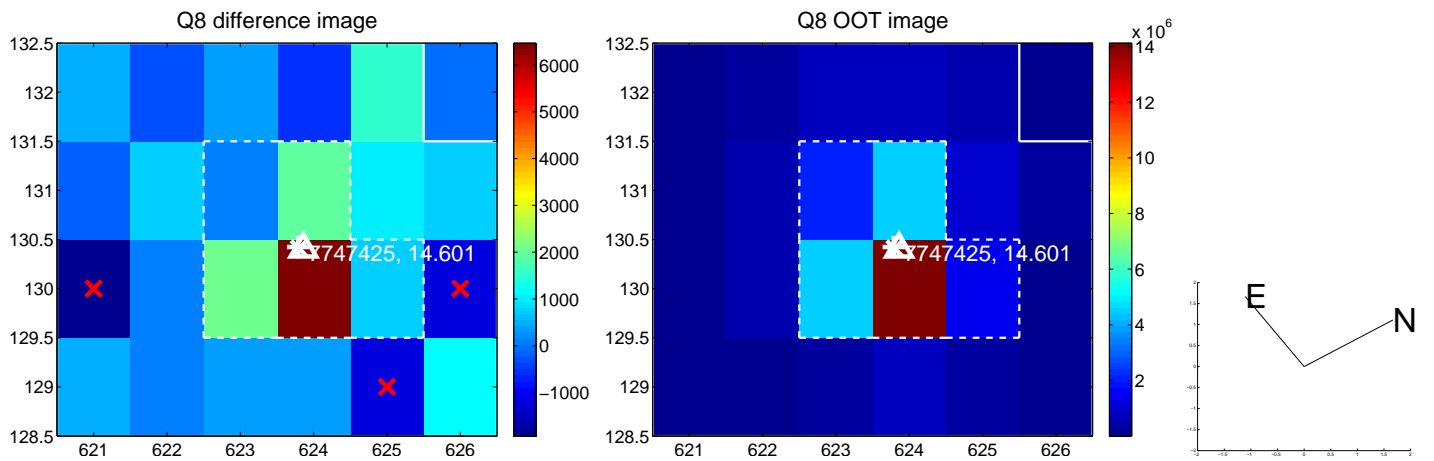
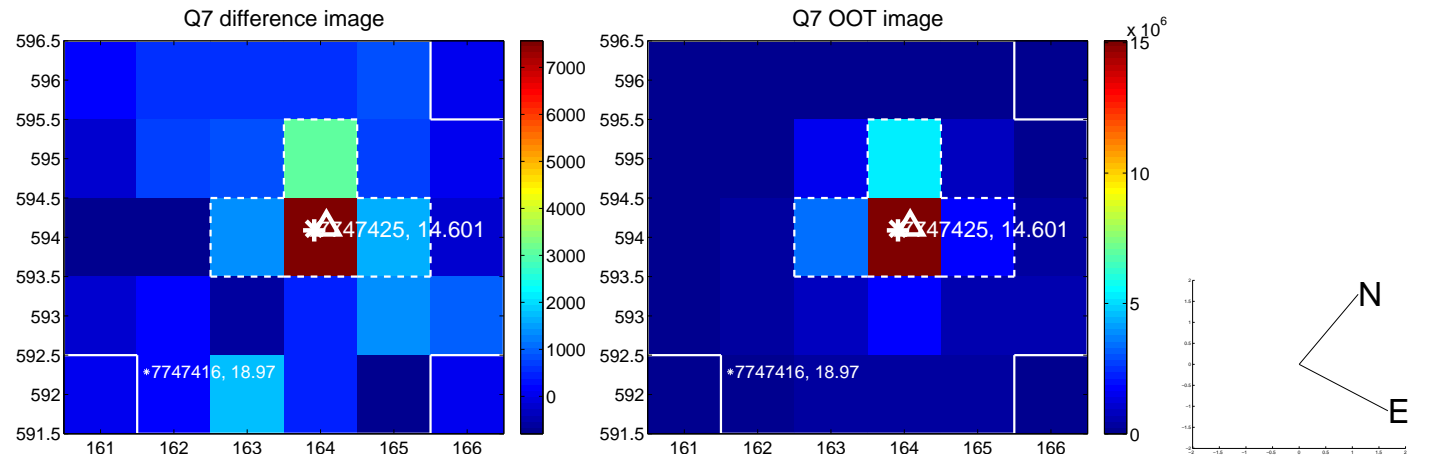
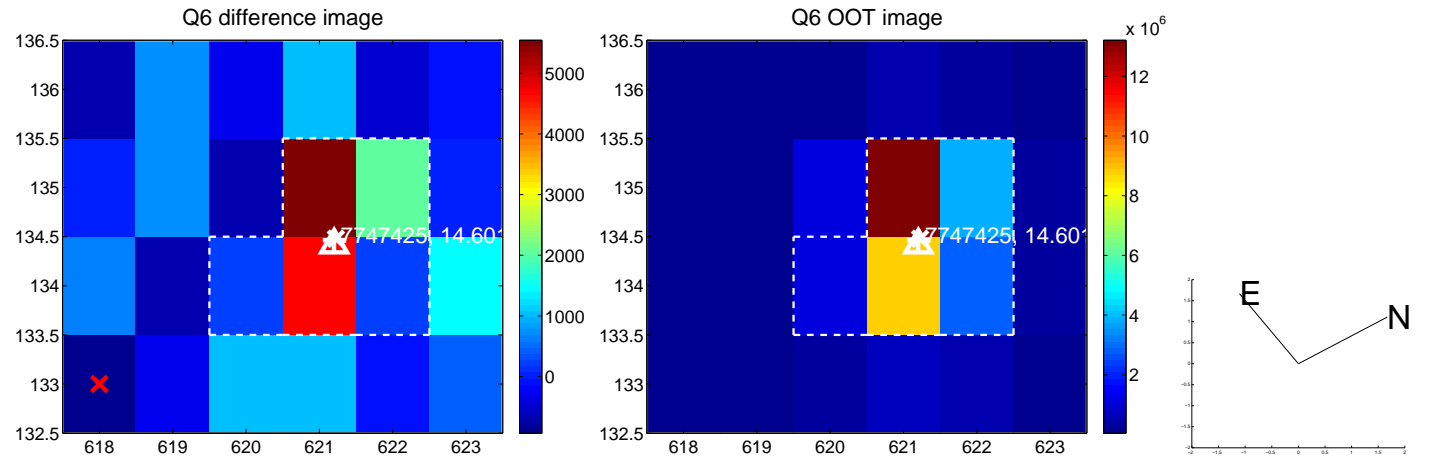
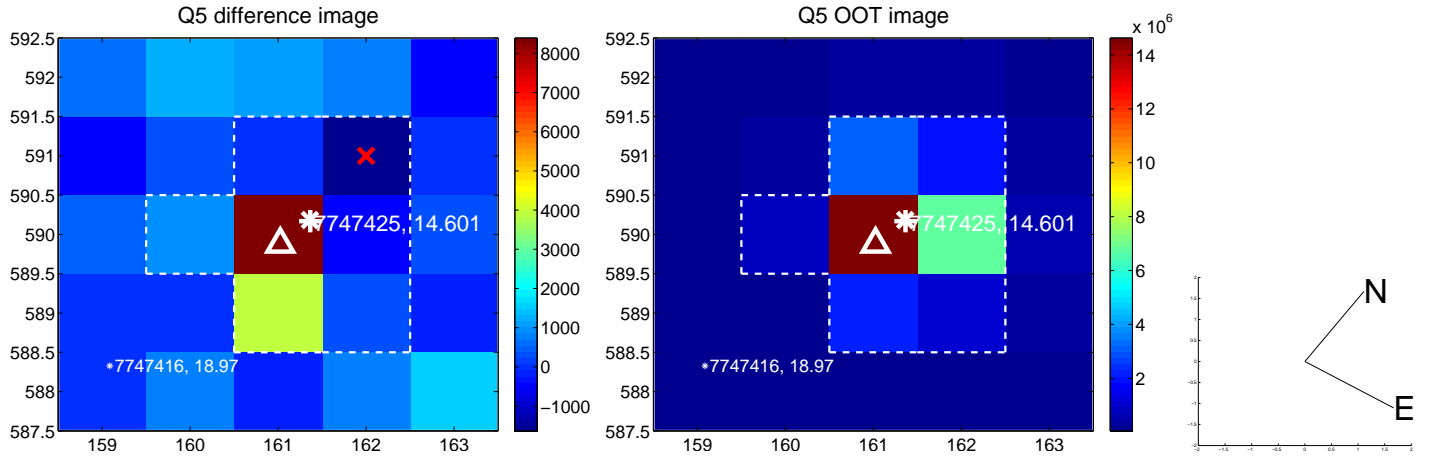


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

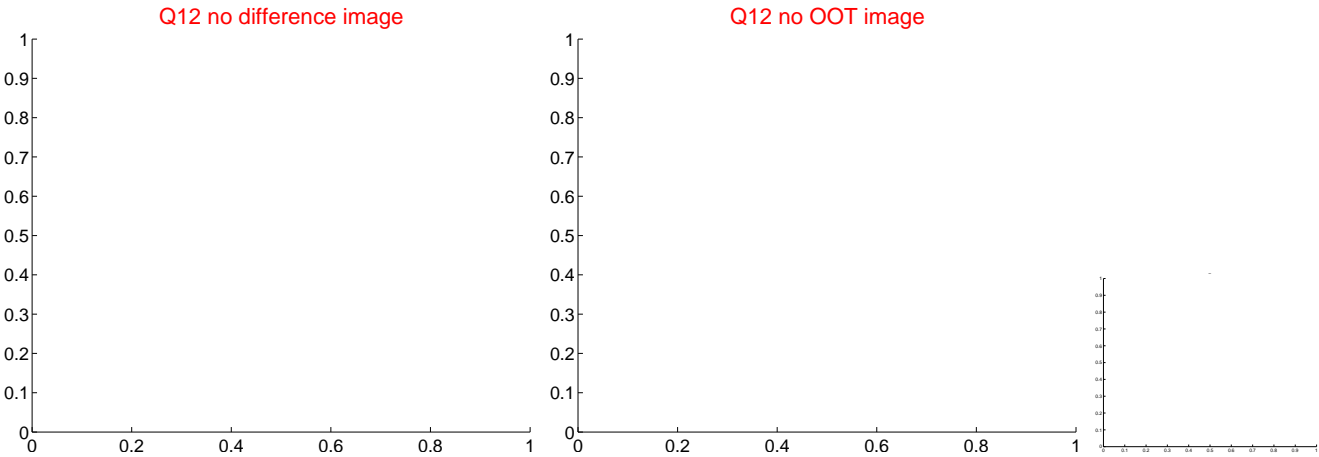
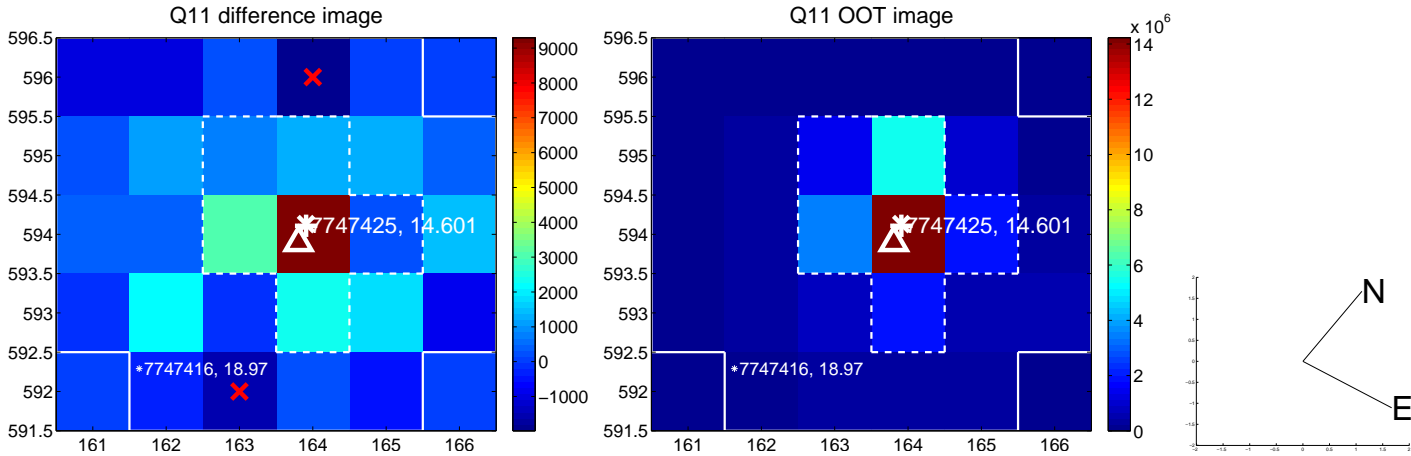
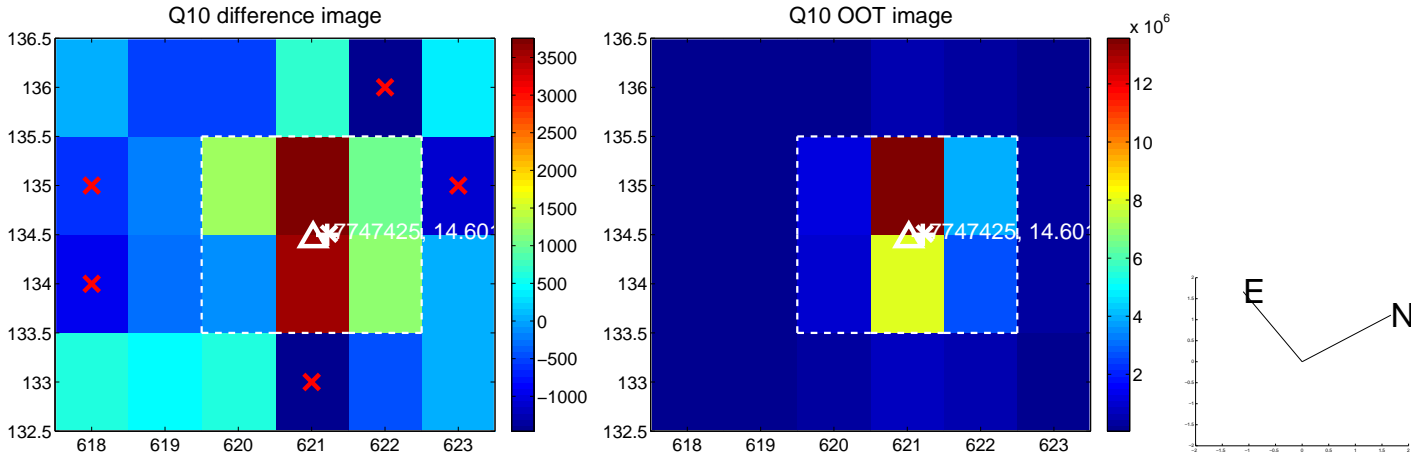
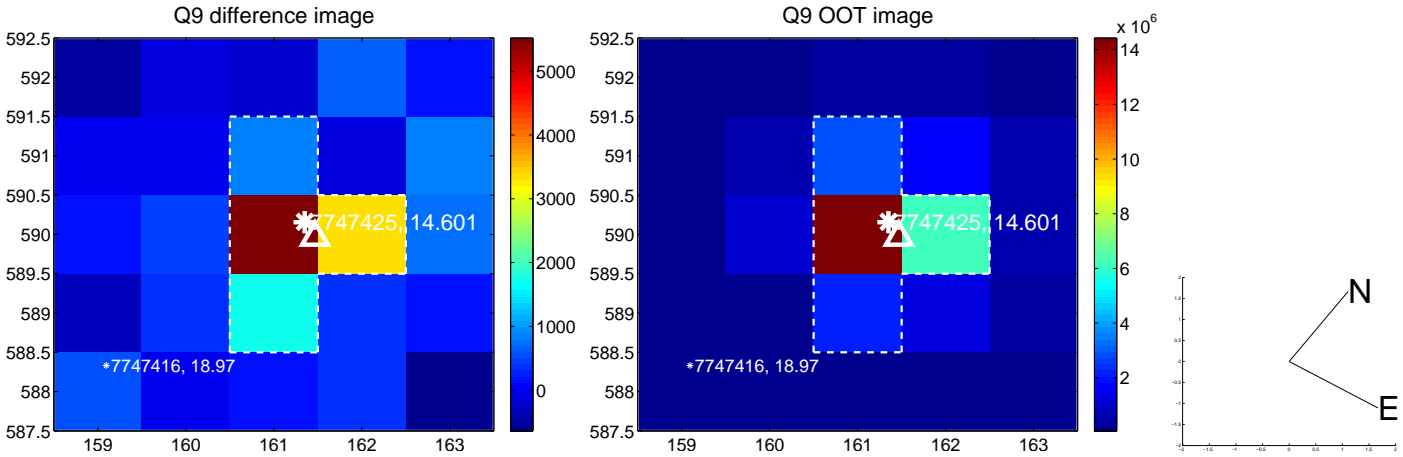
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



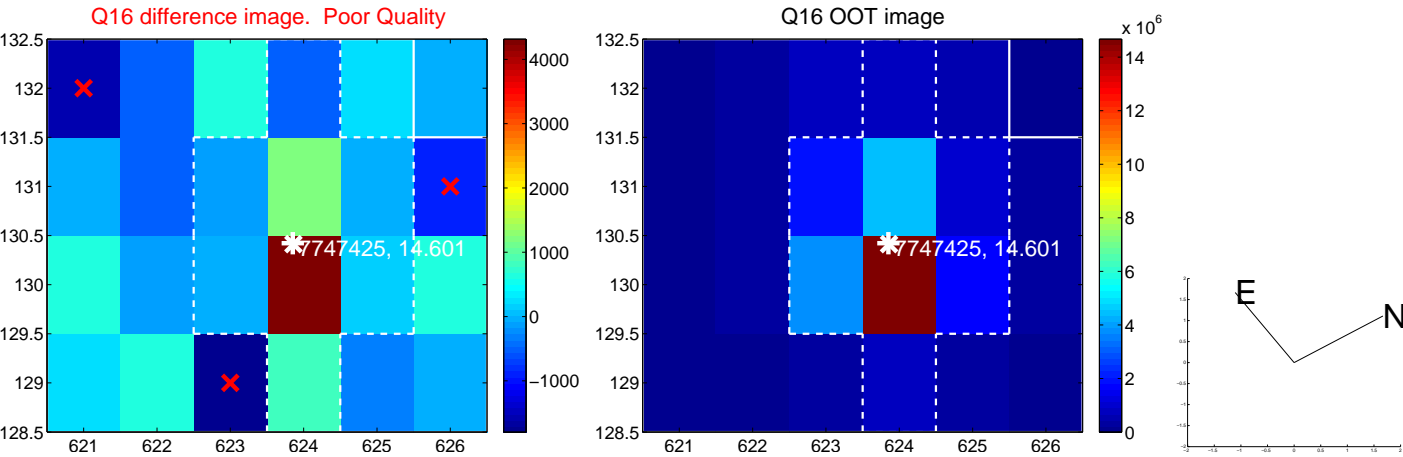
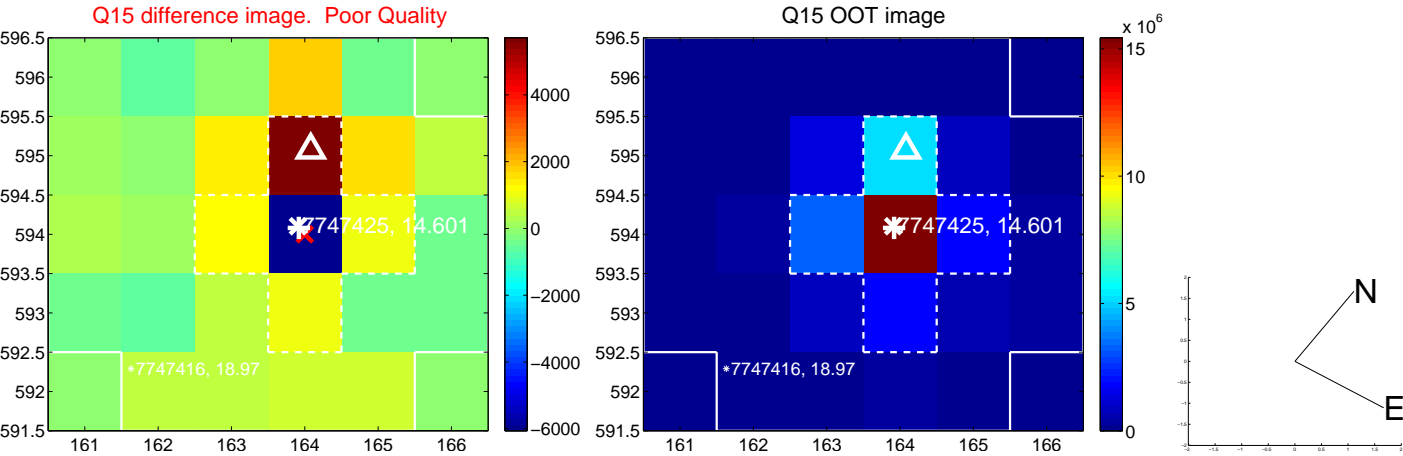
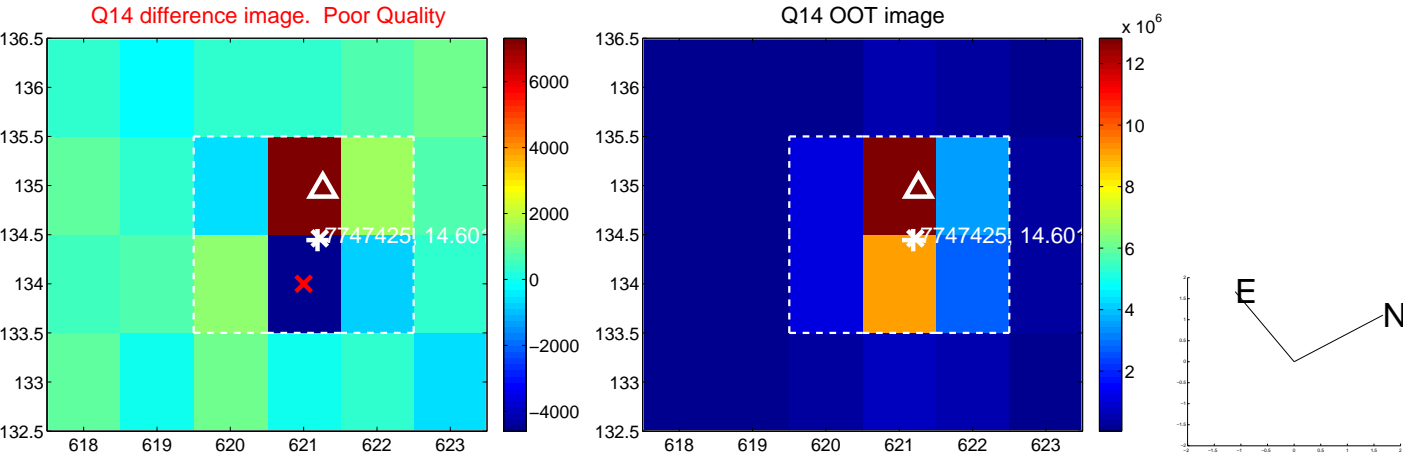
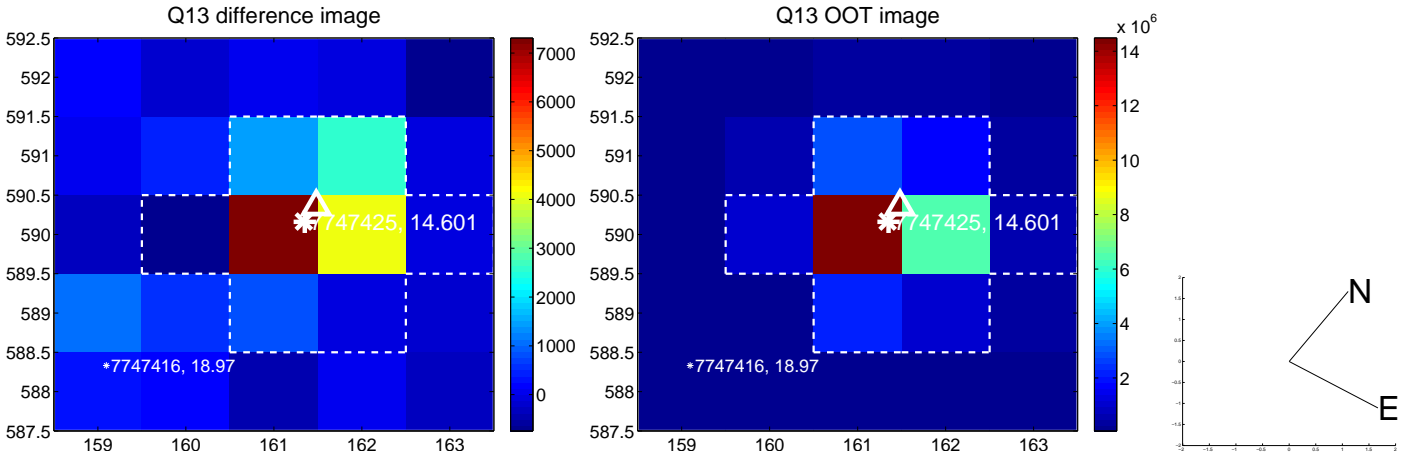
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

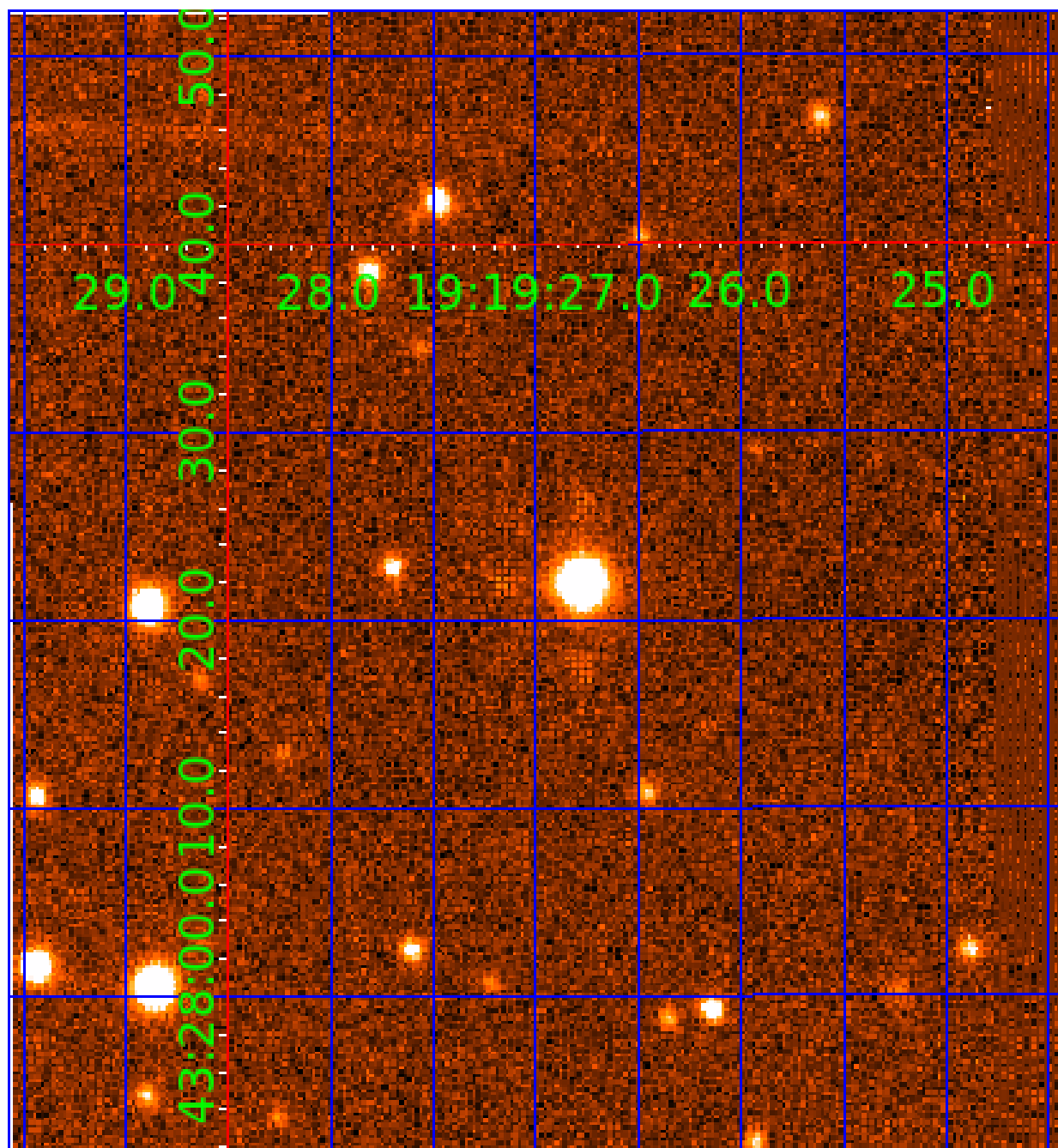


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007747425

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})
007747425-01	OBS	1952.01	8.010388	135.317195	293.9	4.567	29.2	31.9	1.11	5616	2.27	184.59
007747425-02	OBS	1952.02	27.666819	143.857482	333.8	6.259	20.4	21.5	1.11	5616	2.21	35.36
007747425-03	OBS	1952.04	42.473086	146.282817	308.8	7.297	16.7	18.0	1.11	5616	2.21	19.96
007747425-04	OBS	1952.03	5.195619	132.720377	124.4	3.736	14.6	15.6	1.11	5616	1.42	328.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007747425-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-02	OBS	PC	0.97	0	0	0	0	NO_COMMENT
007747425-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007747425-04	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

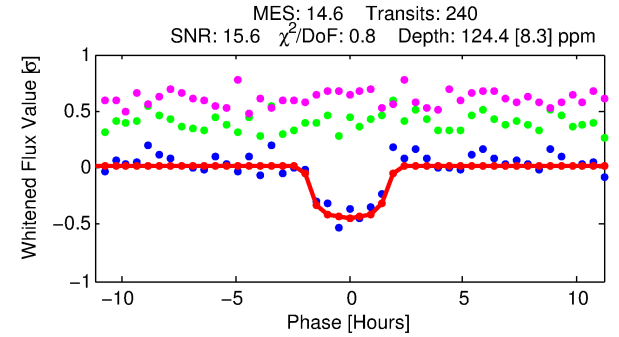
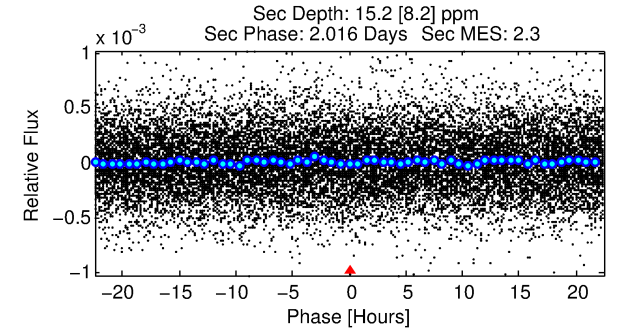
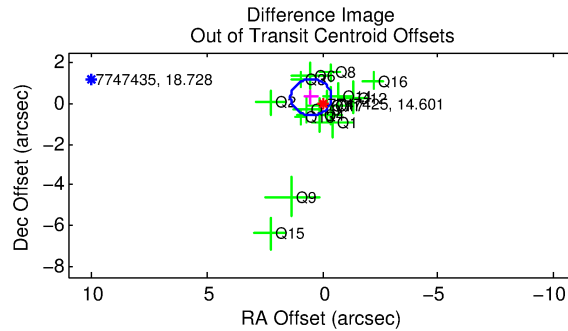
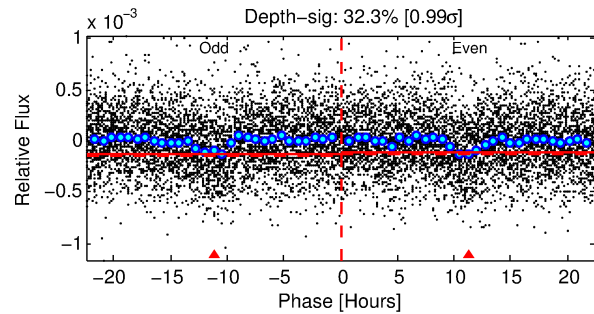
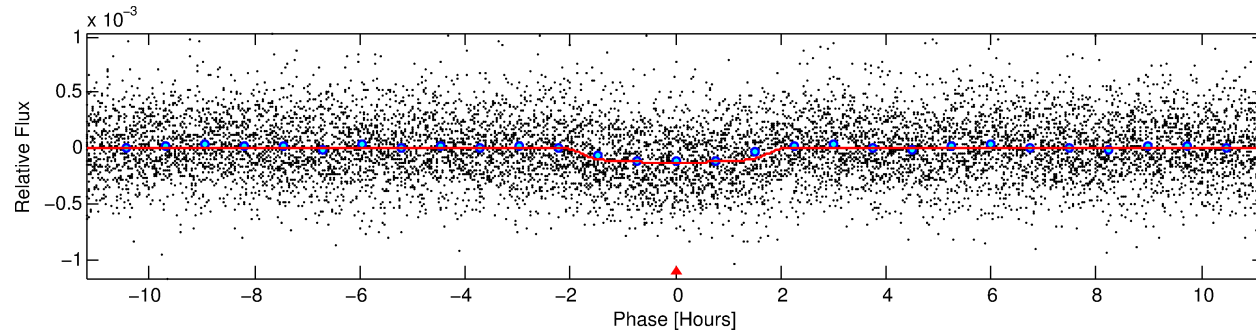
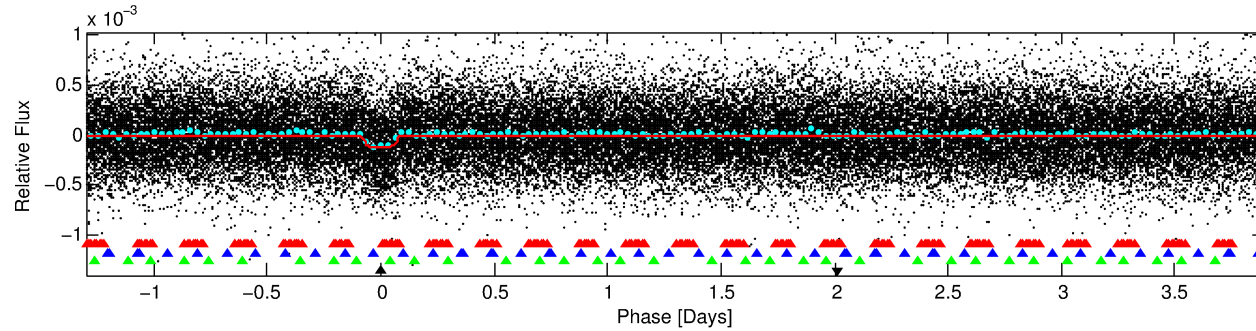
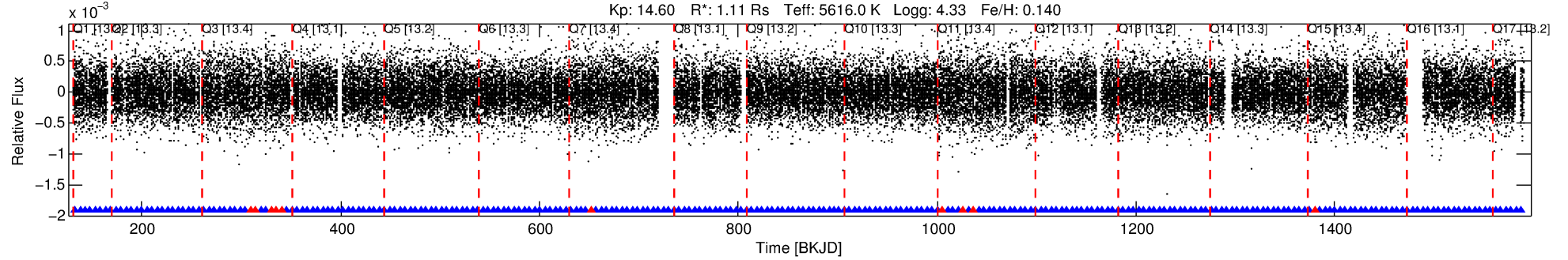
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007747425-04

No Significant Match Found

DV One-Page Summary

KIC: 7747425 Candidate: 4 of 4 Period: 5.196 d
KOI: K01952.03 Name: Kepler-341b Corr: 0.975



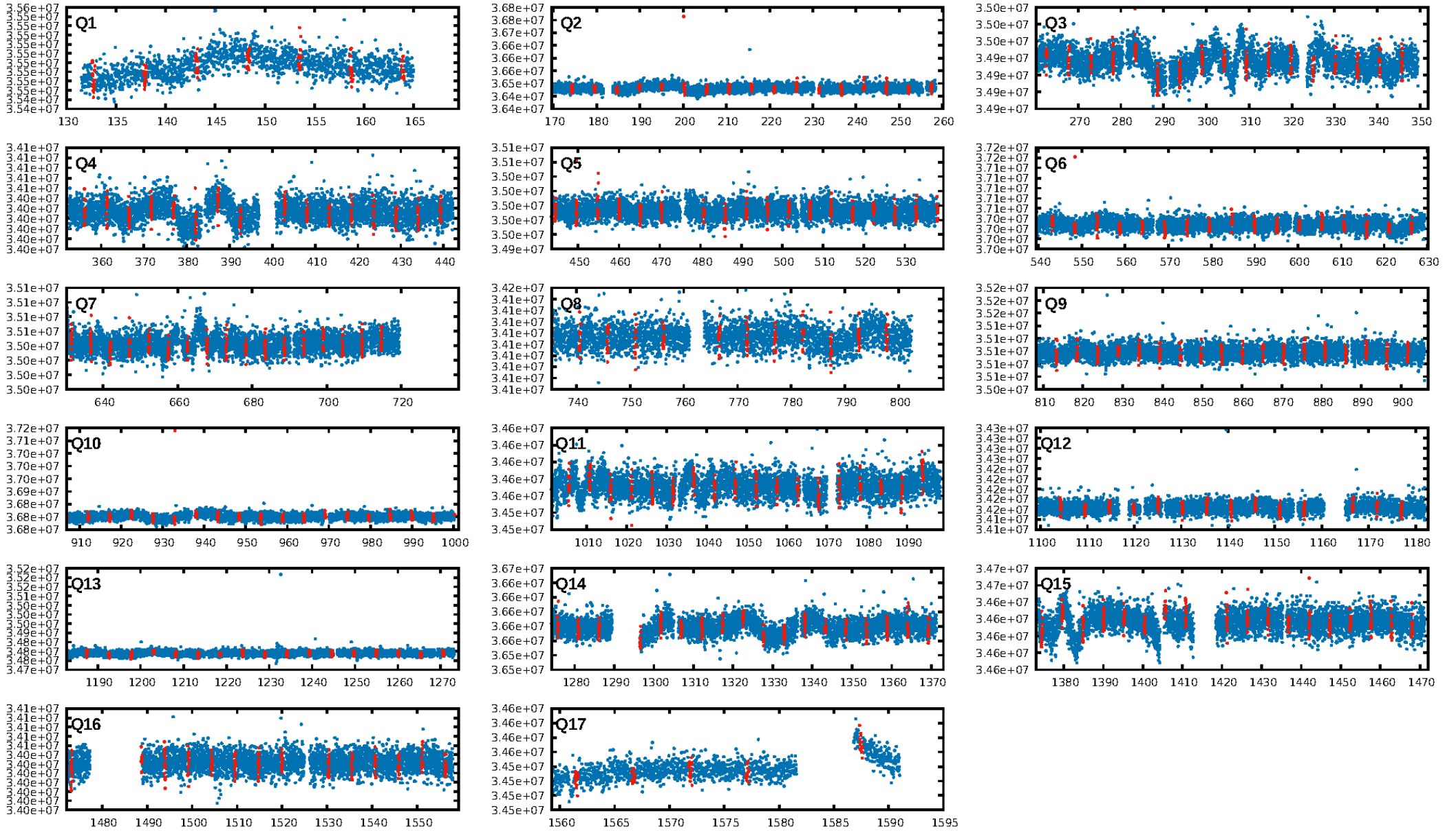
DV Fit Results:

Period = 5.19562 [0.00003] d
Epoch = 132.7204 [0.0042] BKJD
Rp/R* = 0.0117 [0.0066]
a/R* = 5.95 [14.19]
b = 0.85 [0.83]
Seff = 328.77 [75.84]
Teff = 1086 [63] K
Rp = 1.42 [0.82] Re
a = 0.0578 [0.0081] AU
Ag = 13.92 [17.62] [0.73 σ]
Teffp = 3243 [1011] K [2.13 σ]

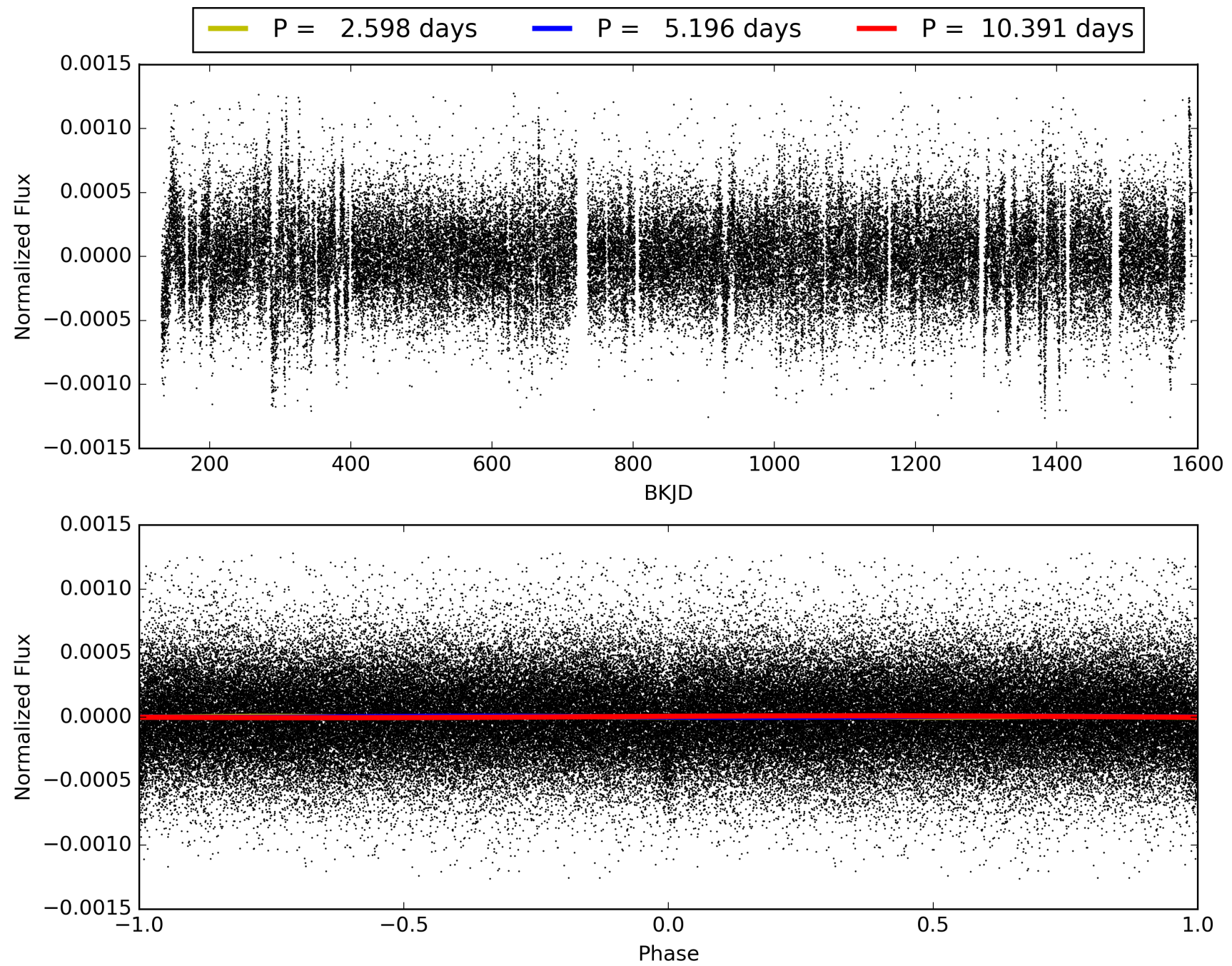
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.45 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.59e-47
RollingBand-fgt: 0.96 [220/230]
GhostDiagnostic-chr: 24.49
Centroid-sig: 5.6%
Centroid-so: 1.093 arcsec [1.20 σ]
OotOffset-rm: 0.585 arcsec [1.99 σ]
KicOffset-rm: 0.596 arcsec [2.05 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007747425-04, PDC Light Curves

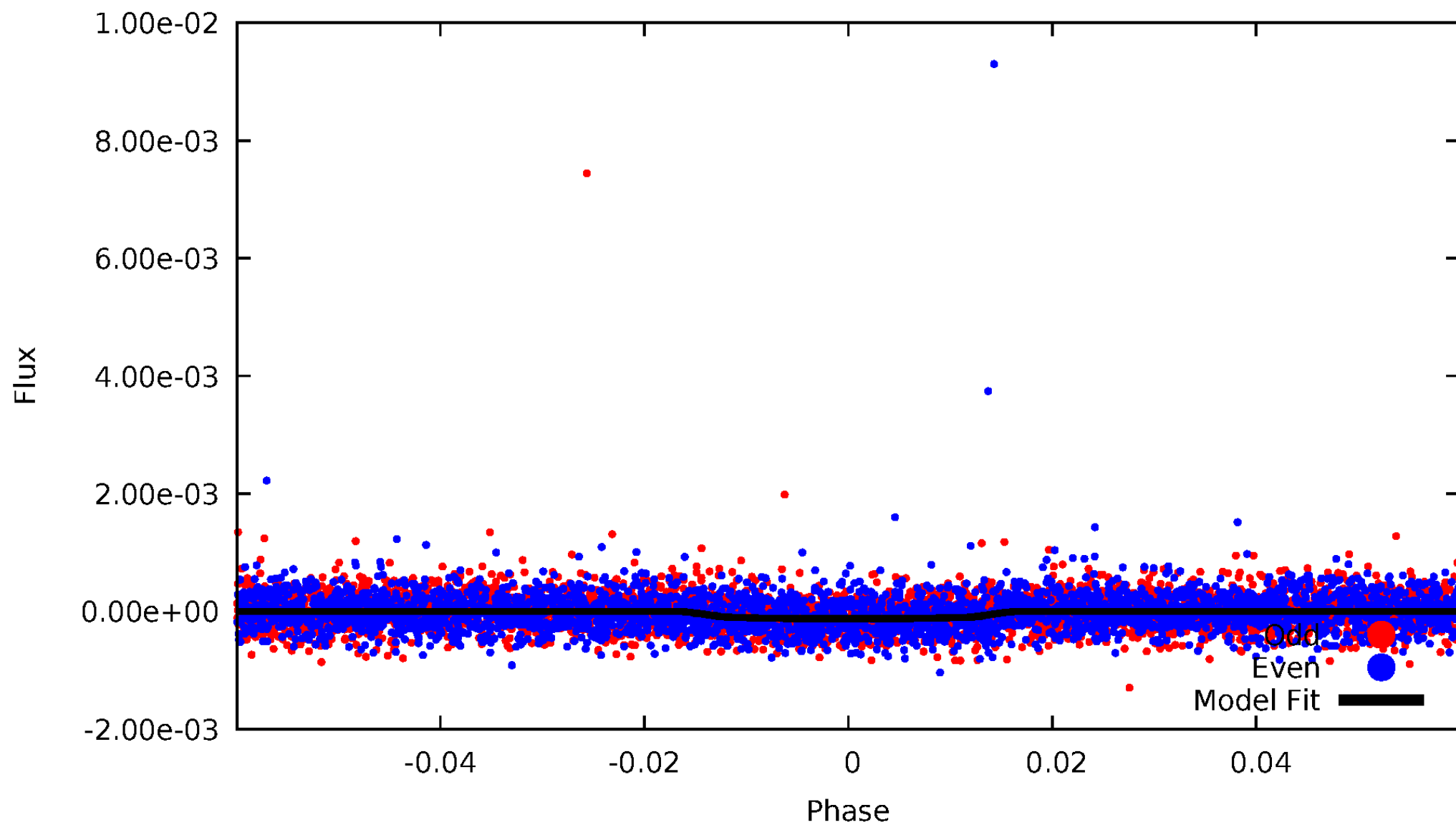


TCE 007747425-04



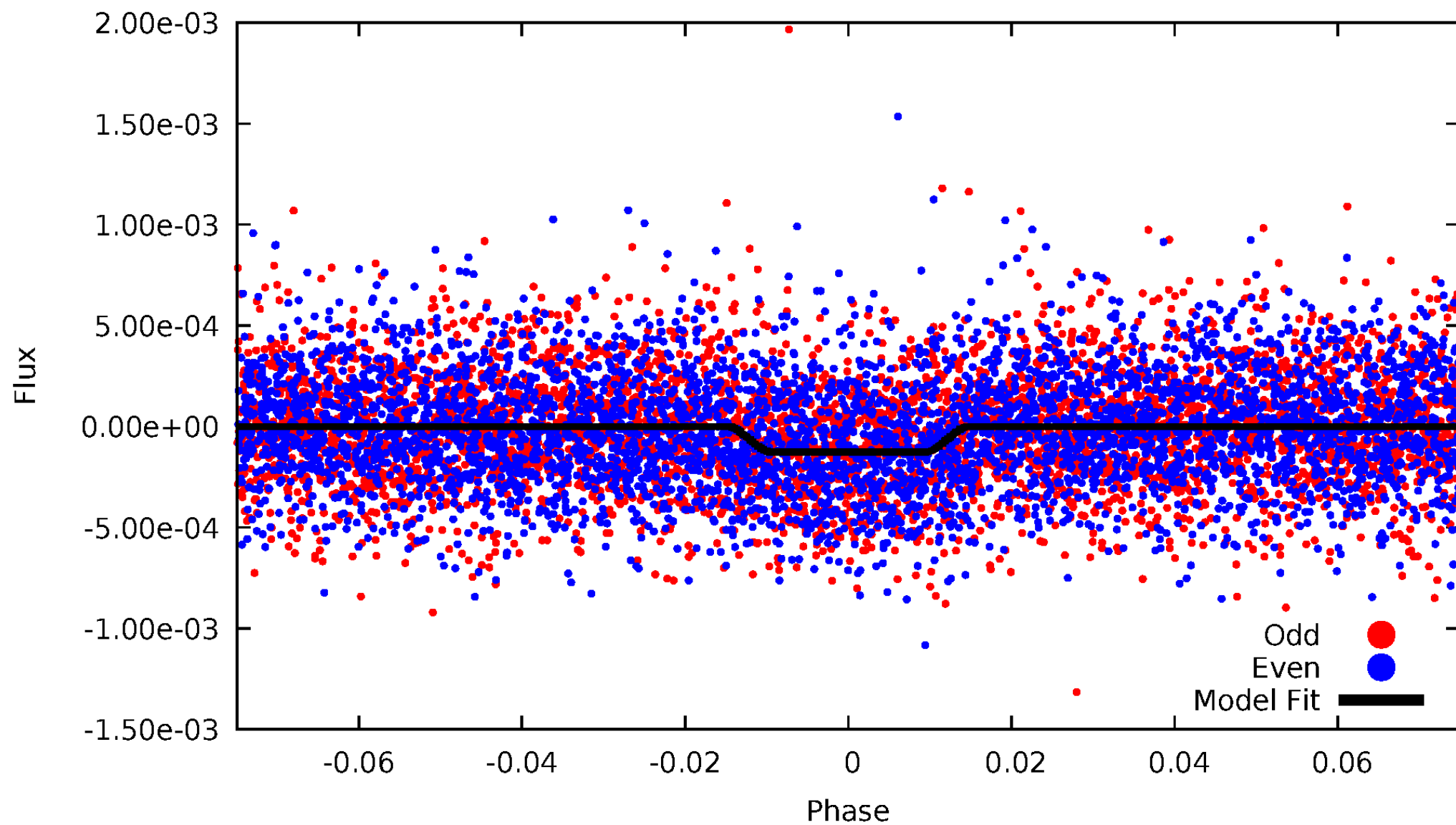
DV Odd/Even

TCE 007747425-04



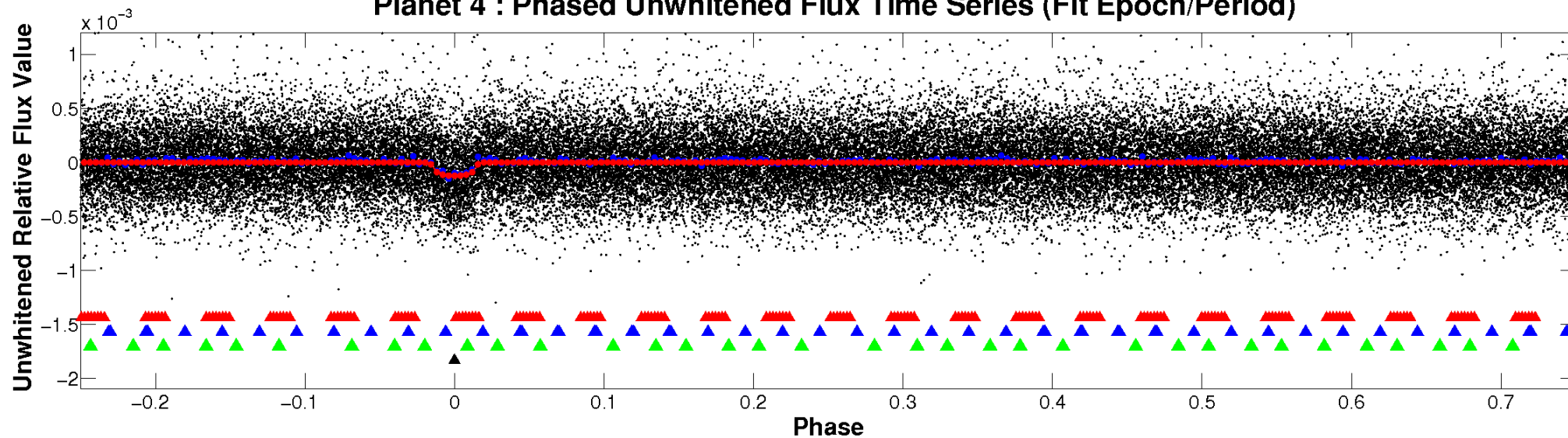
ALT Odd/Even

TCE 007747425-04

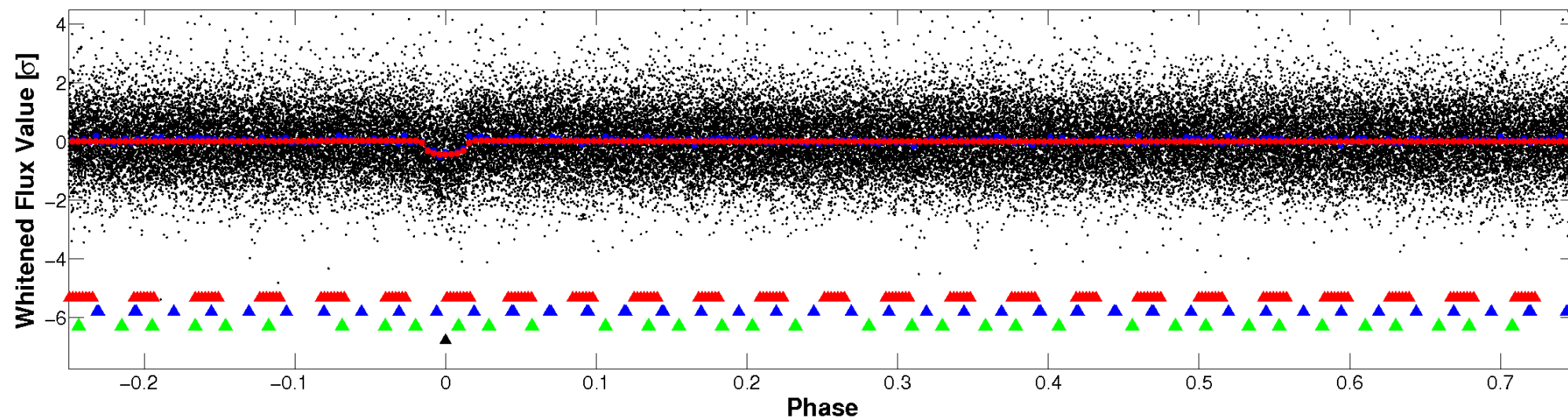


Non-Whitened Vs. Whitened Light Curve

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

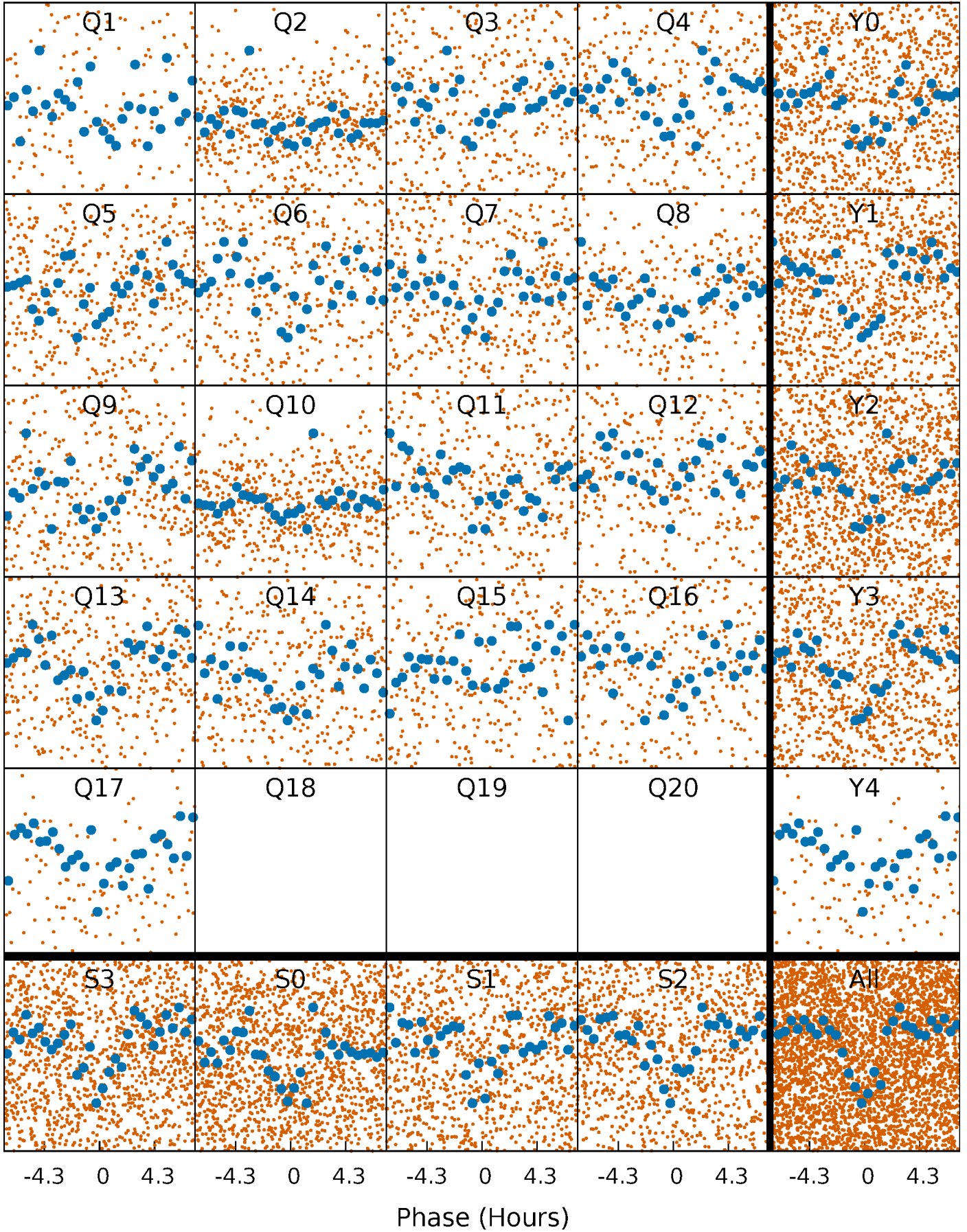


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



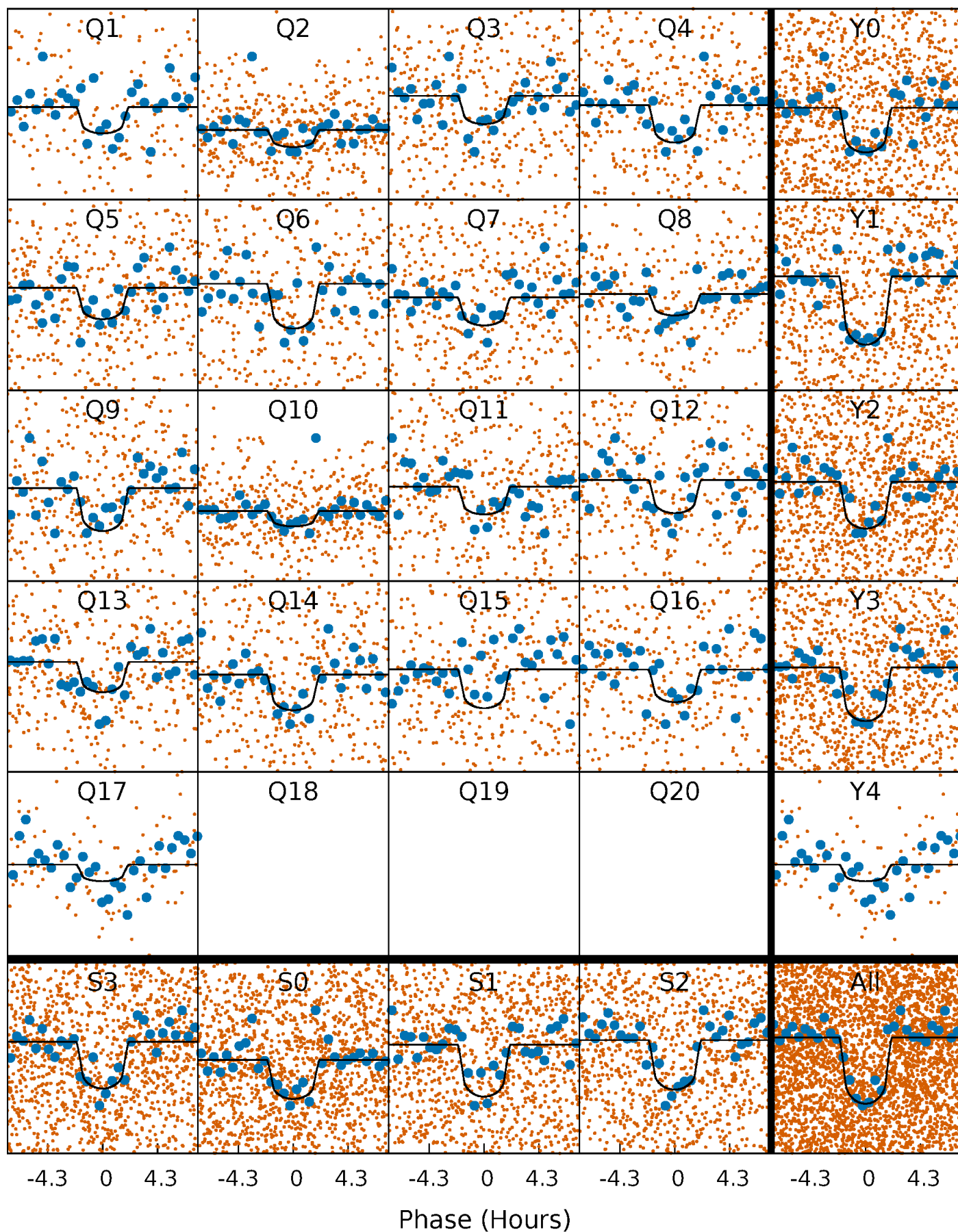
PDC Quarter-Phased Transit Curves

TCE 007747425-04 P= 5.195619 Days $T_0=132.720377$ (BKJD)



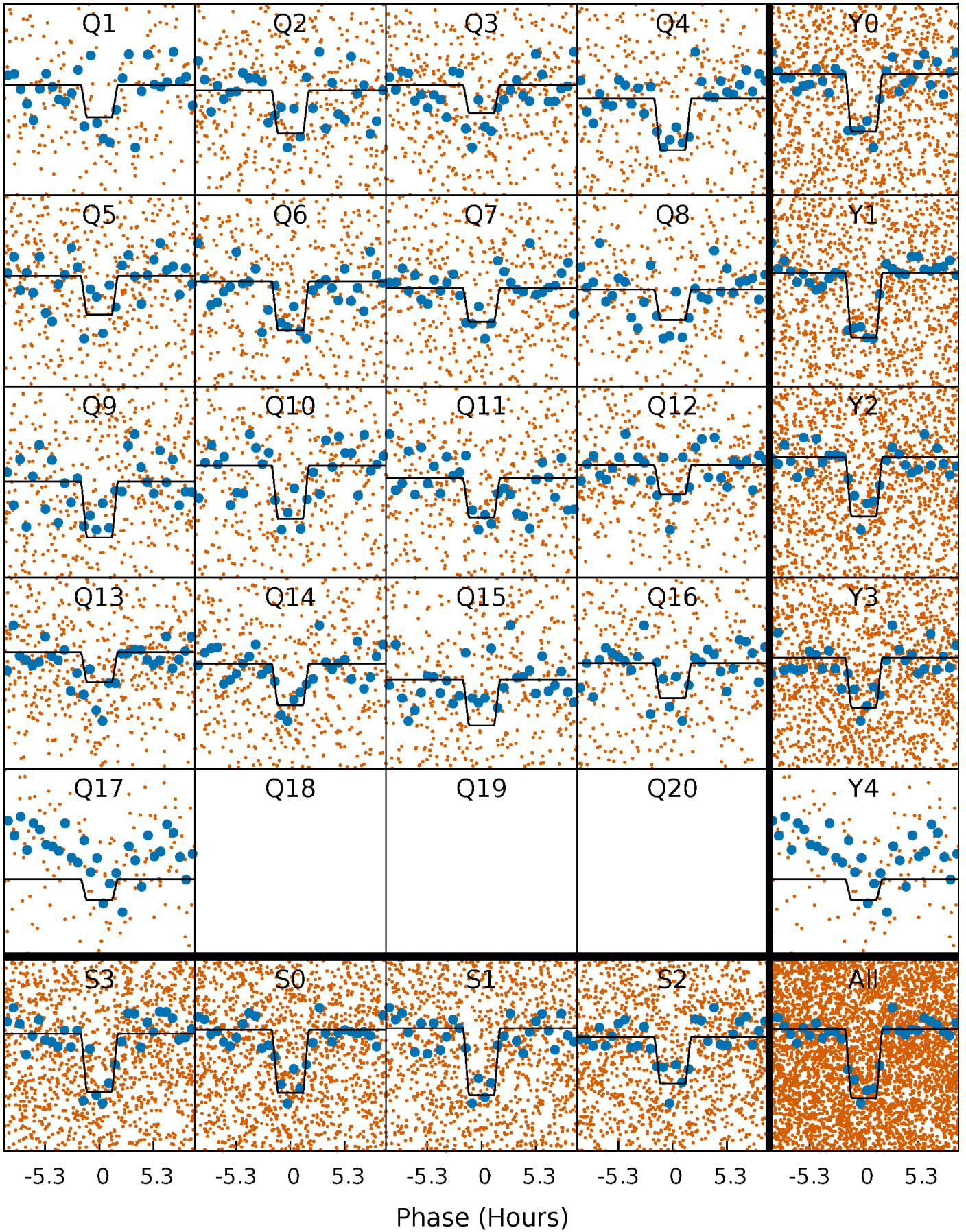
DV Quarter-Phased Transit Curves

TCE 007747425-04 P= 5.195619 Days $T_0=132.720377$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

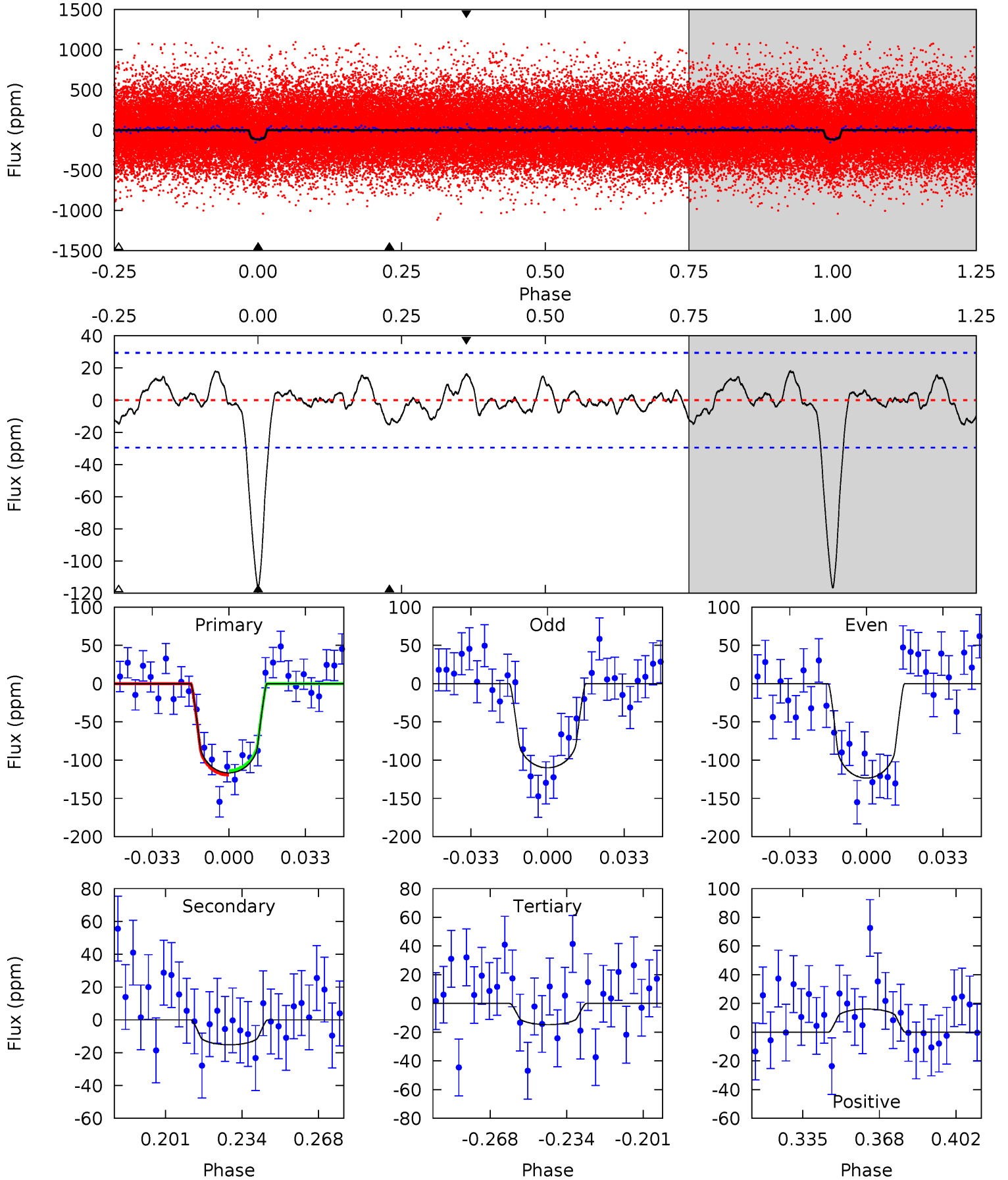
TCE 007747425-04 P= 5.195550 Days $T_0=132.729895$ (BKJD)



DV Model-Shift Uniqueness Test

007747425-04, P = 5.195619 Days, E = 127.524758 Days

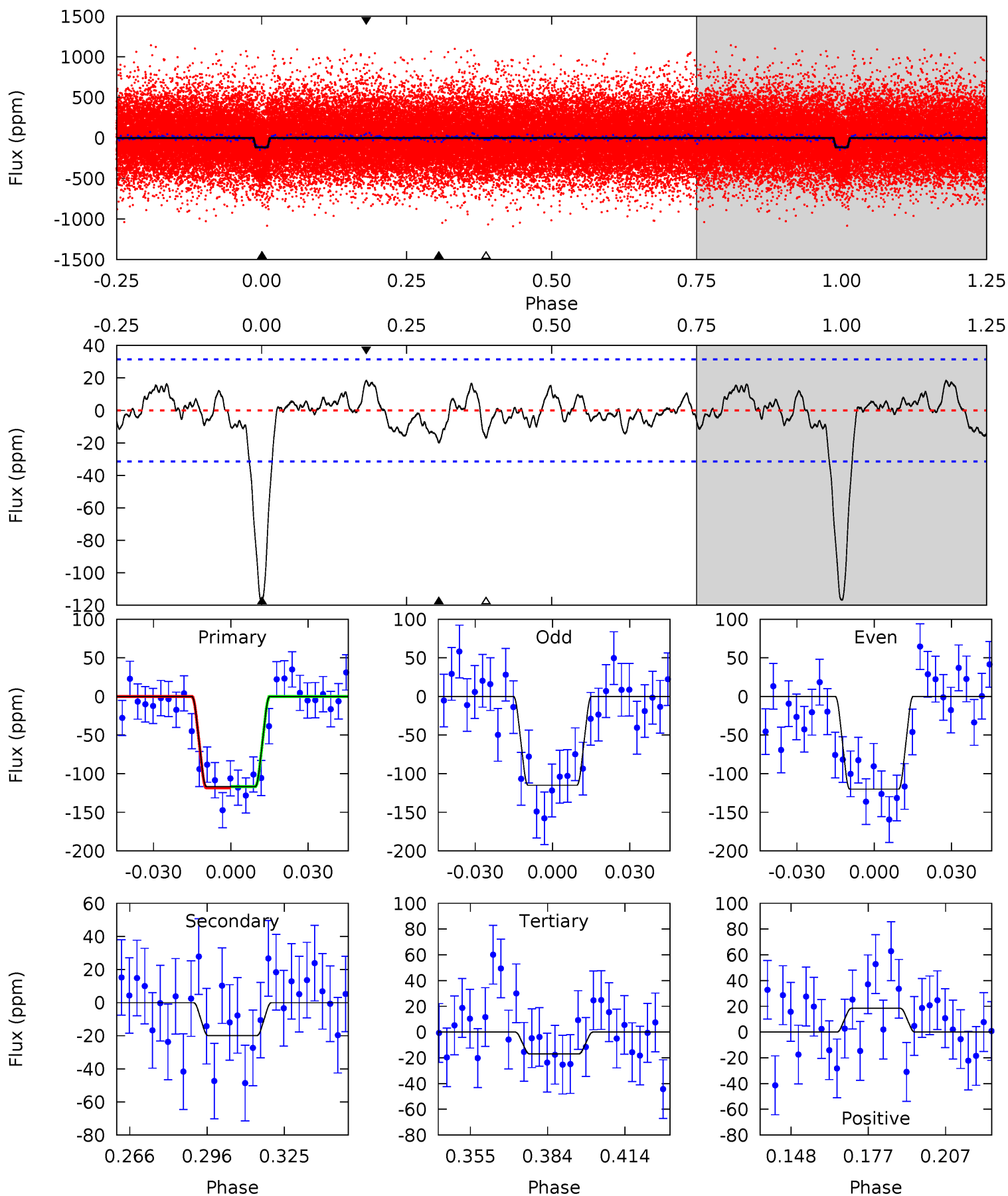
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	2.47	2.40	2.62	4.79	2.13	1.04	16.6	16.3	0.07	-0.15	1.10	0.95	0.13	0.45



Alt Model-Shift Uniqueness Test

007747425-04, P = 5.195550 Days, E = 127.534345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	3.04	2.60	2.82	4.81	2.18	1.12	15.2	15.0	0.44	0.23	0.39	1.01	0.14	0.13



Stellar Parameters For KIC 007747425

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+76}_{-76}	$4.327^{+0.132}_{-0.108}$	$0.140^{+0.150}_{-0.150}$	$1.111^{+0.160}_{-0.160}$	$0.957^{+0.068}_{-0.050}$	$0.982^{+0.559}_{-0.301}$
	+1%/-1%	+3%/-2%	+107%/-107%	+14%/-14%	+7%/-5%	+57%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007747425-04 / KOI 1952.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 6	$1.46^{+0.78}_{-0.79}$	1518^{+66}_{-69}	3598^{+1149}_{-544}	13^{+49}_{-8}
Alt.	-20 ± 7	$1.40^{+0.78}_{-0.67}$	1514^{+61}_{-65}	3791^{+1139}_{-562}	18^{+53}_{-11}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

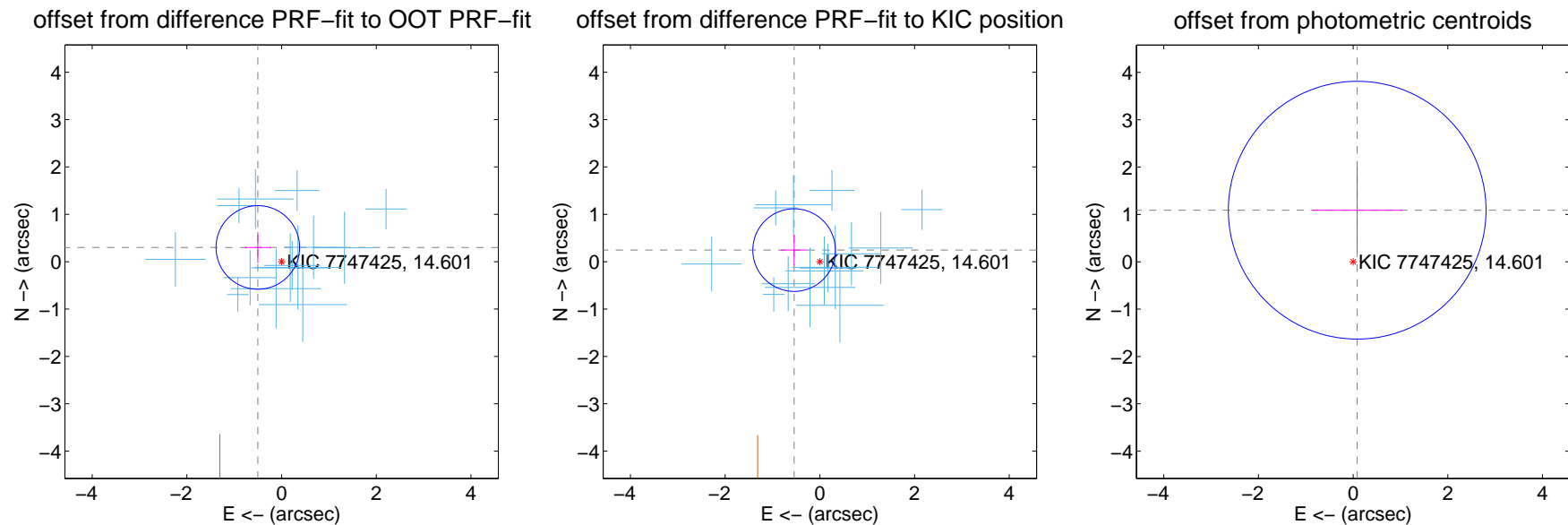
DV Centroid Data

Supplemental centroid analysis for 007747425-04. Kepler magnitude: 14.60. Transit SNR 15.64

There are 14 quarters with good PRF difference image offsets

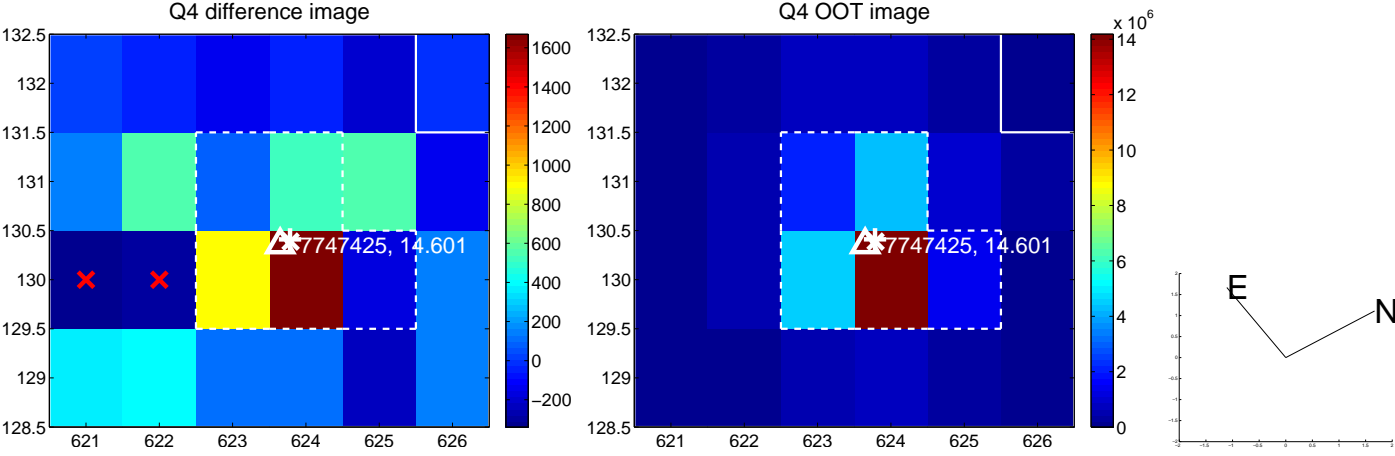
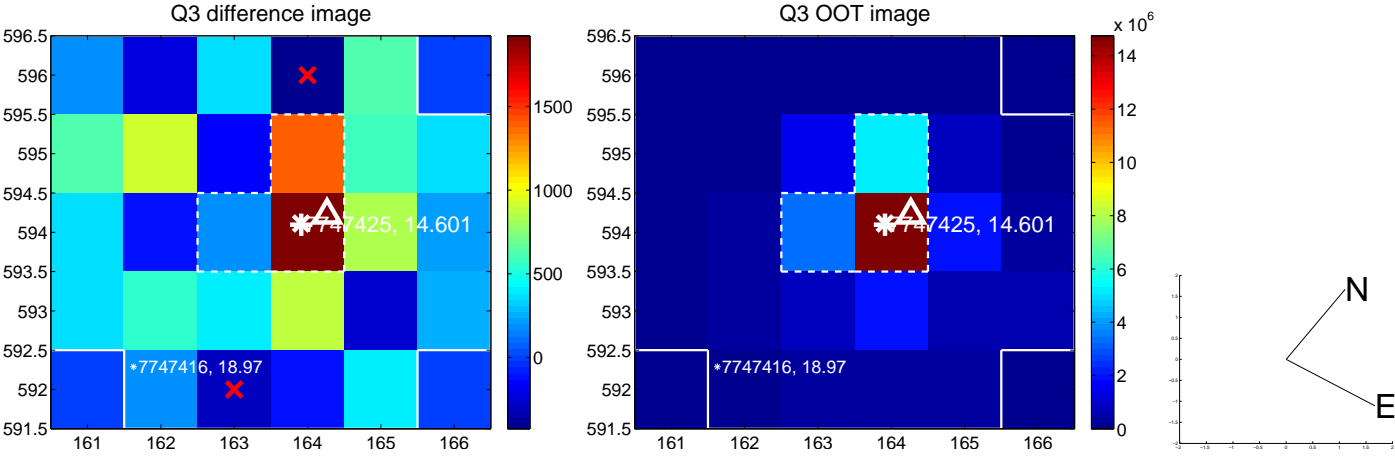
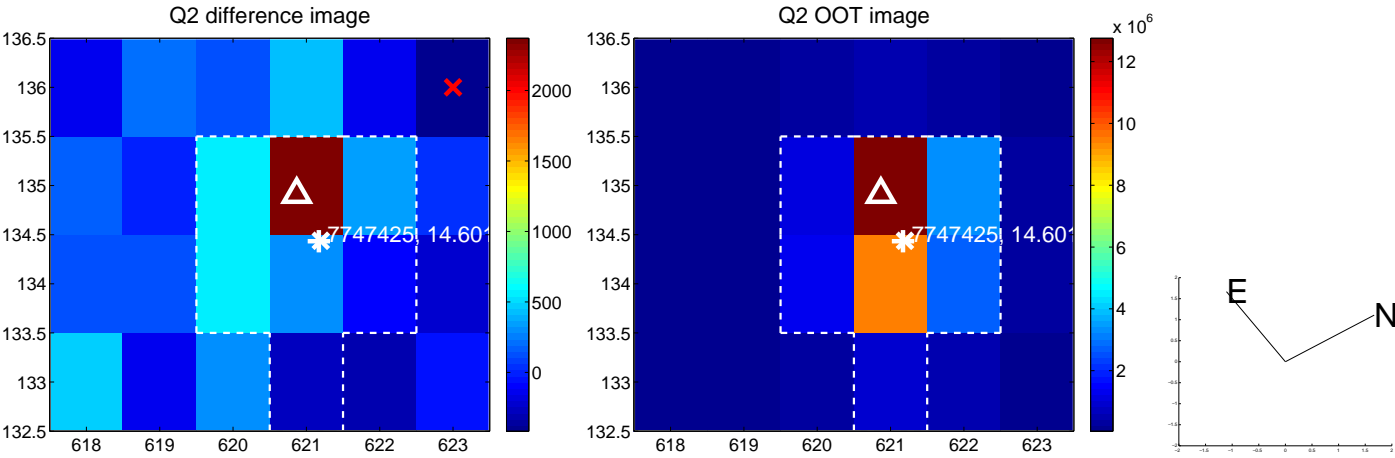
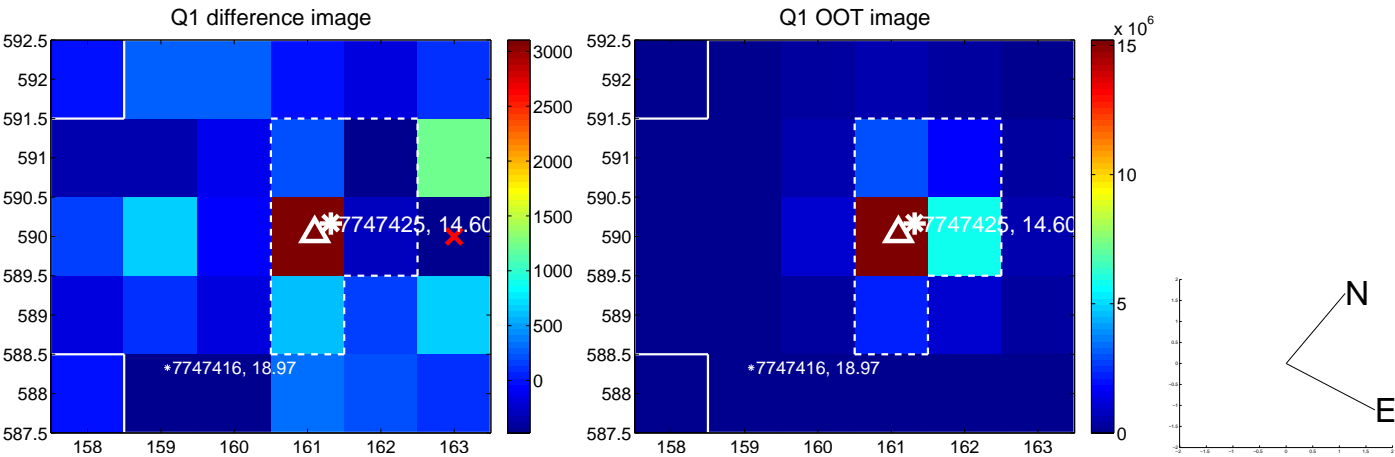
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.585 ± 0.294	1.99	0.502 ± 0.282	0.301 ± 0.325
PRF-fit source offset from KIC position	0.596 ± 0.291	2.05	0.543 ± 0.283	0.245 ± 0.327
photometric centroid source offset	1.09 ± 0.91	1.20	-0.09 ± 0.96	1.09 ± 0.91

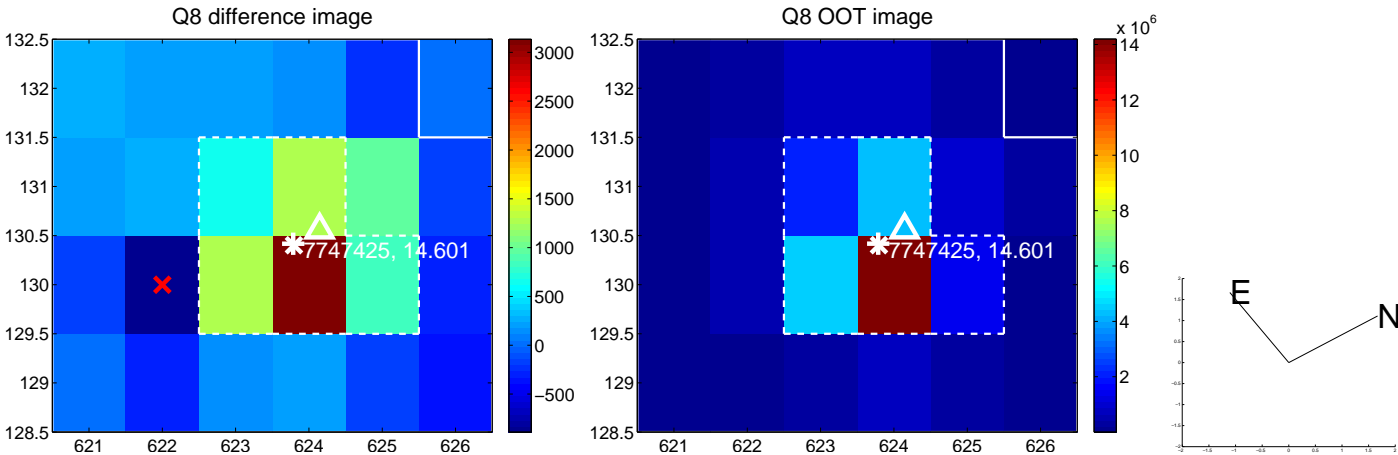
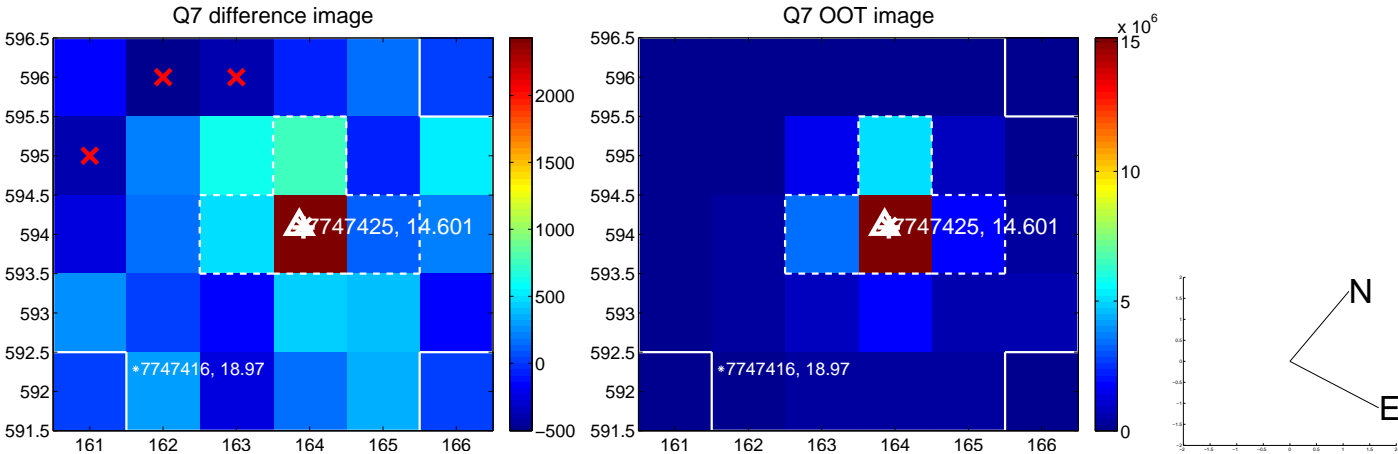
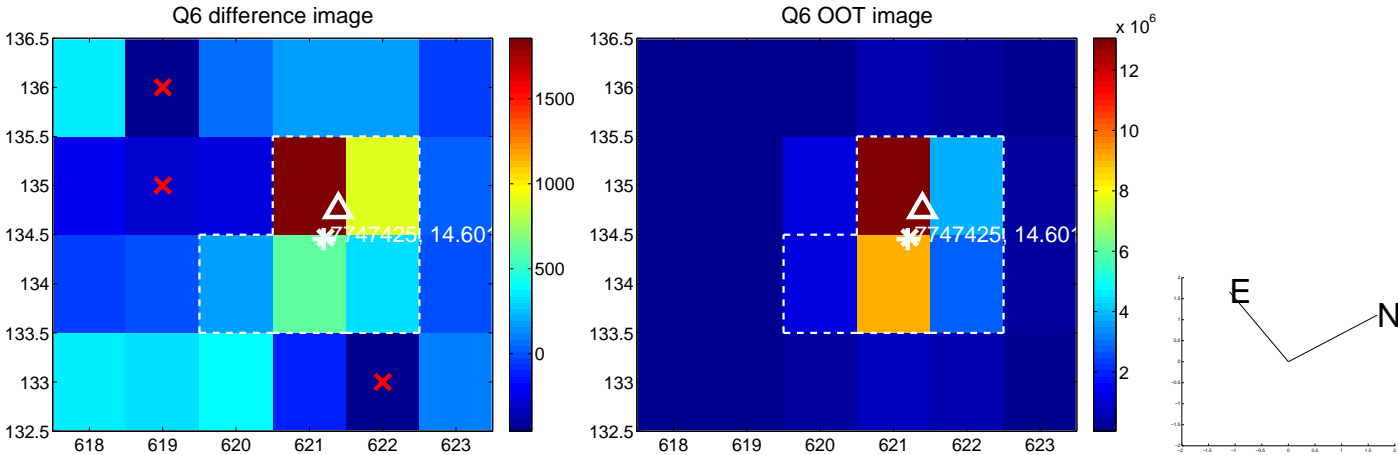
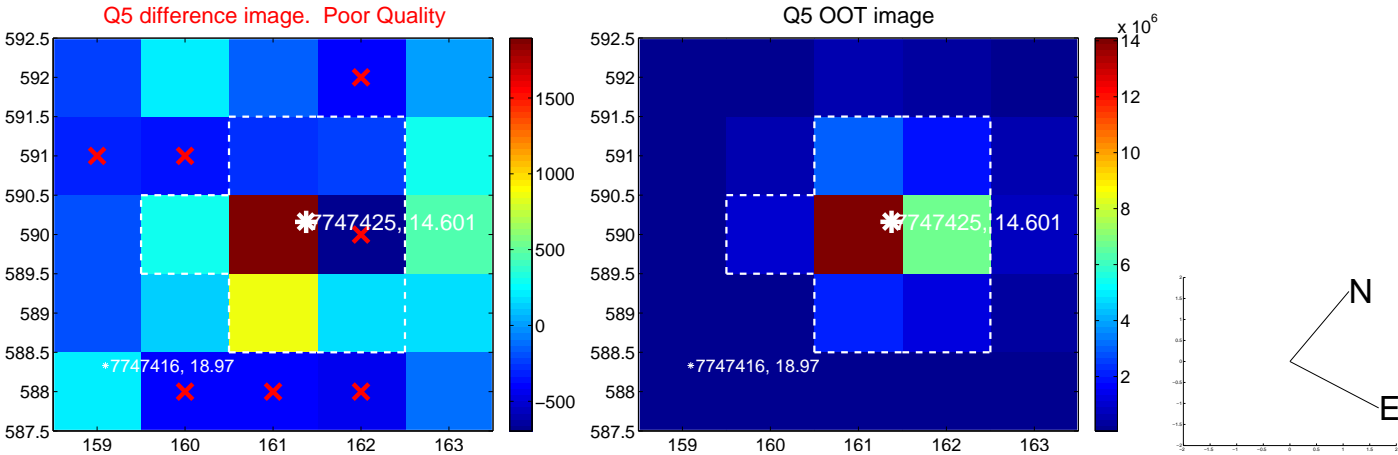


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

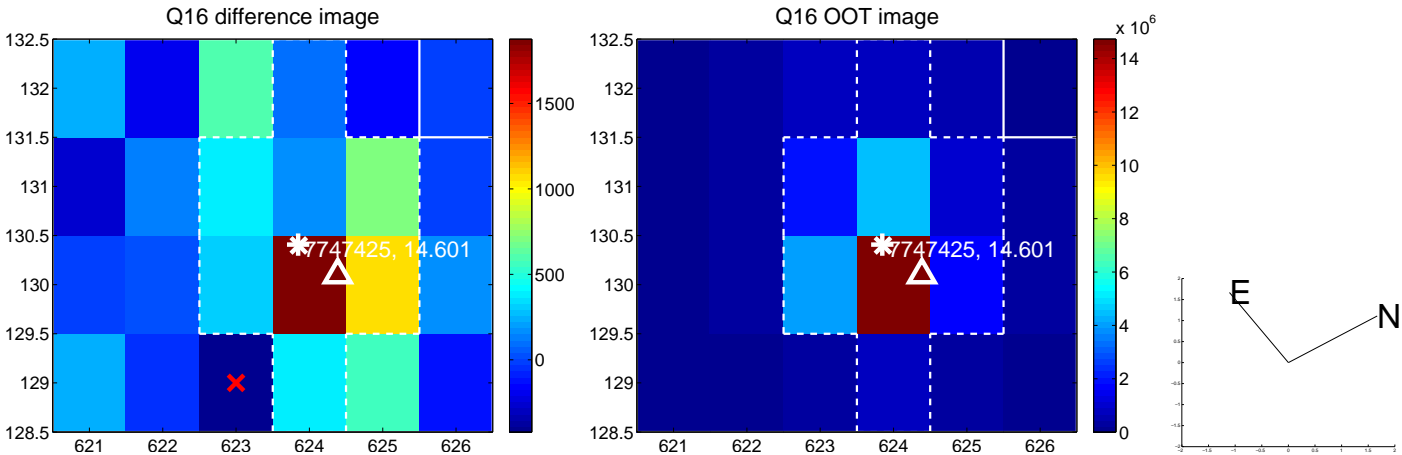
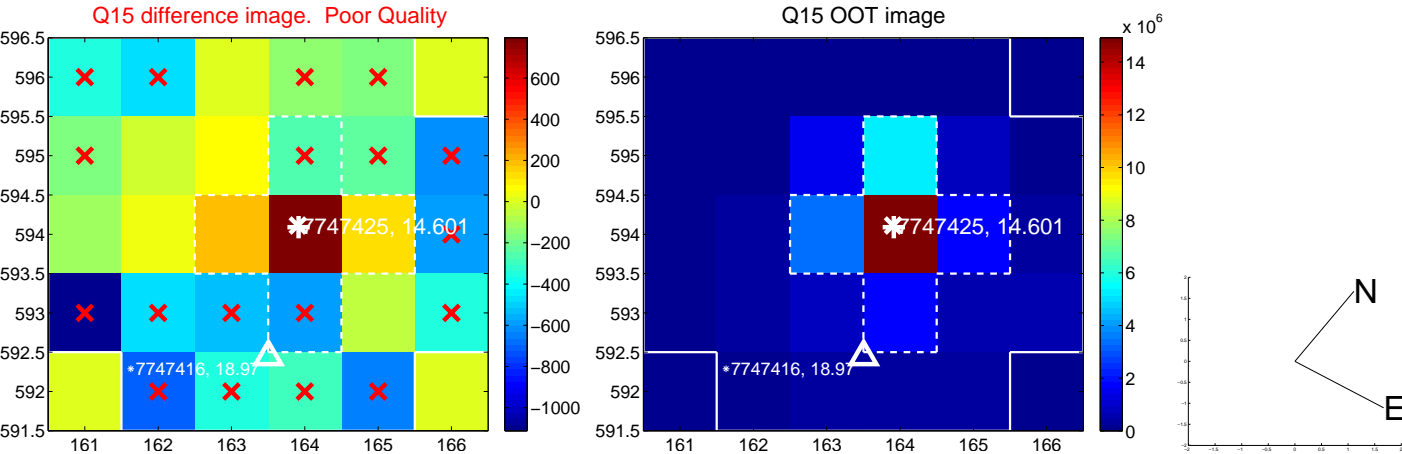
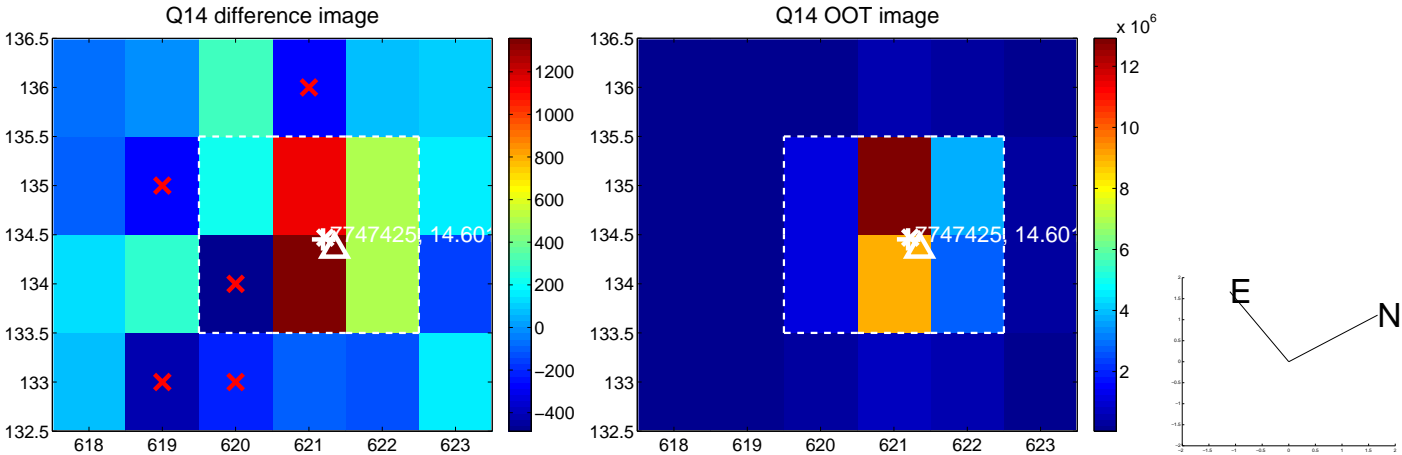
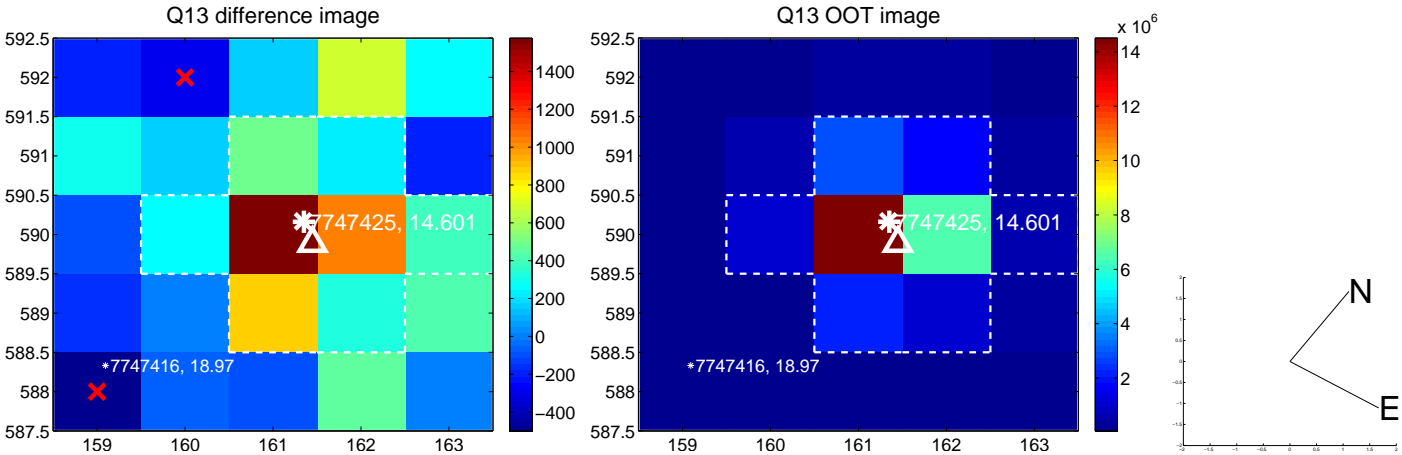
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



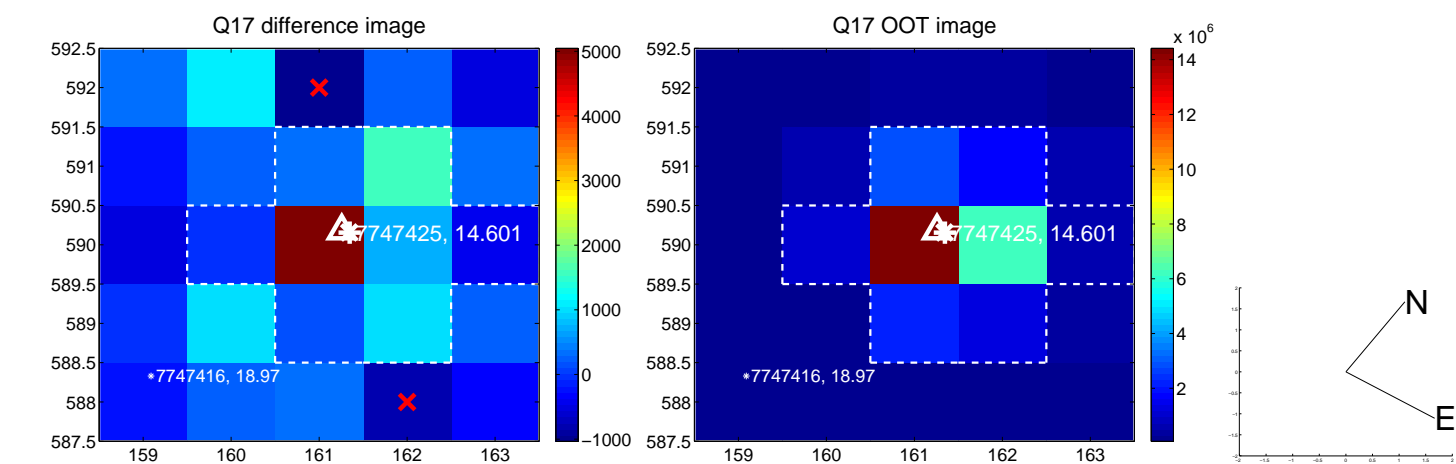
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



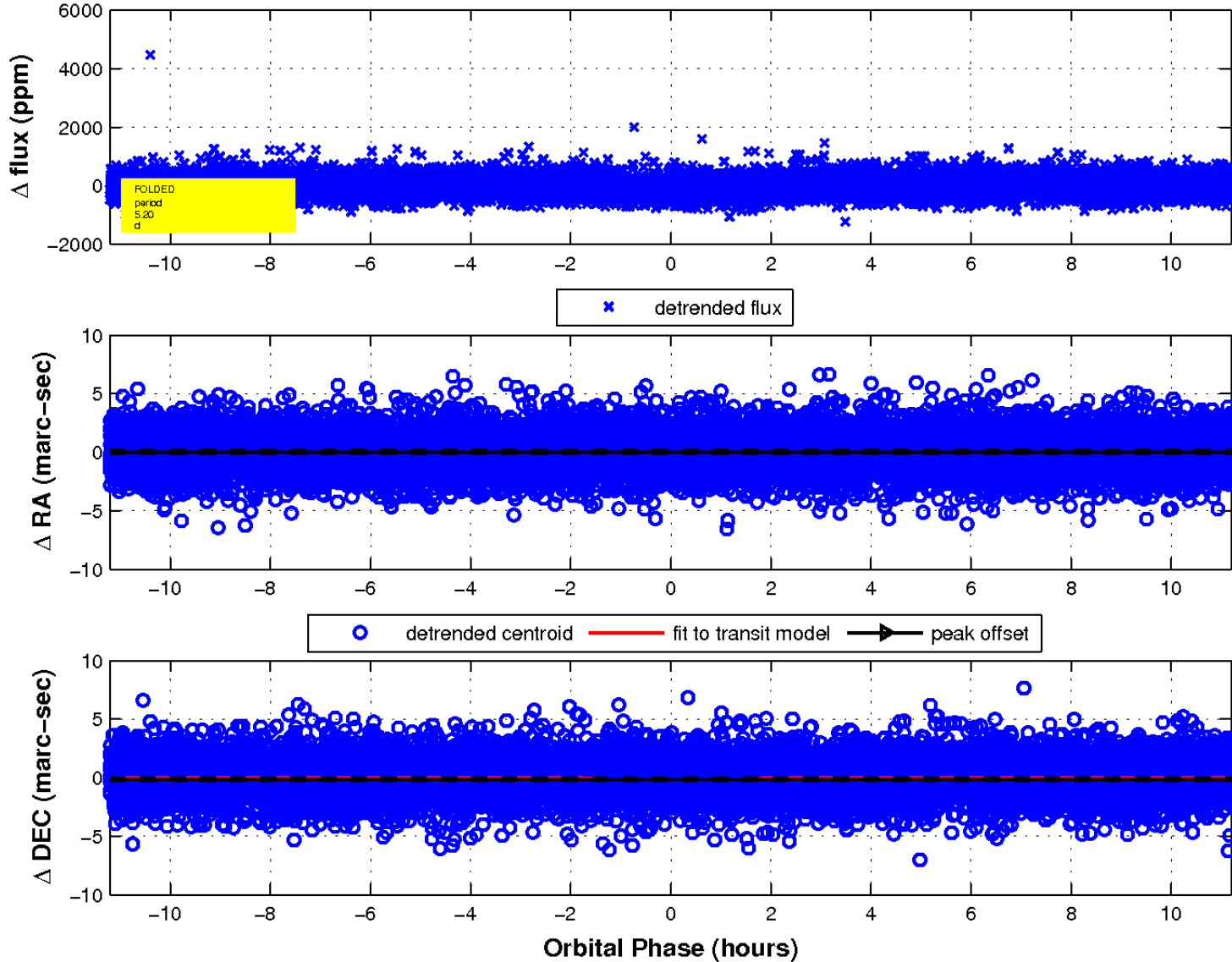
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 4 of 4



UKIRT Image

Declination

