

KIC 007040629

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})
007040629-01	OBS	0671.01	4.228646	132.684186	149.0	3.837	34.3	36.8	1.50	5966	2.37	857.49
007040629-02	OBS	0671.02	7.466650	132.772417	118.1	3.869	20.4	22.1	1.50	5966	1.88	401.79
007040629-03	OBS	0671.03	16.259572	144.527378	128.6	3.861	14.4	15.9	1.50	5966	2.00	142.35
007040629-04	OBS	0671.04	11.131759	134.426471	95.9	4.157	13.0	14.7	1.50	5966	1.74	235.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040629-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007040629-04	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.

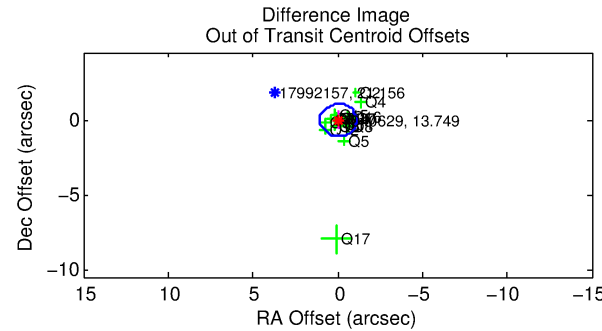
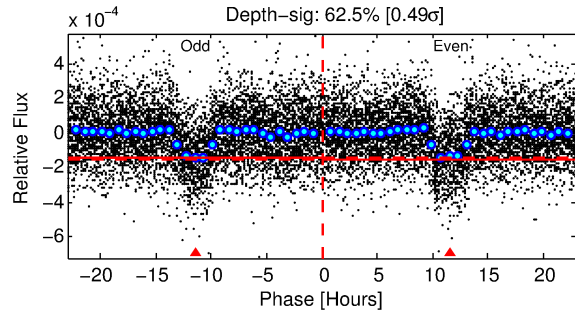
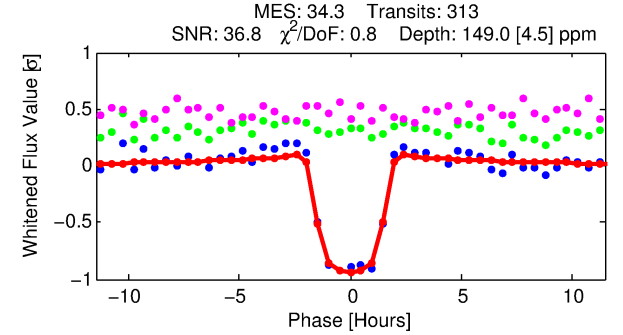
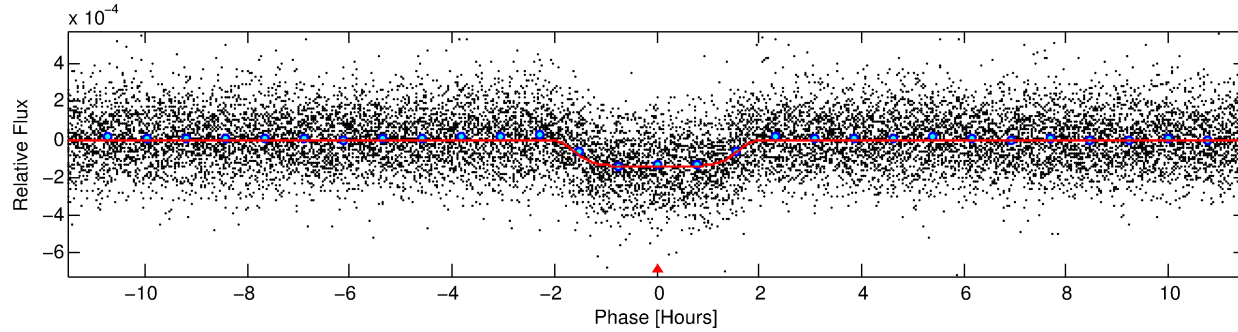
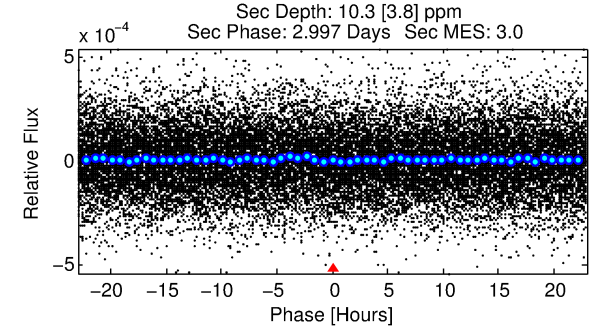
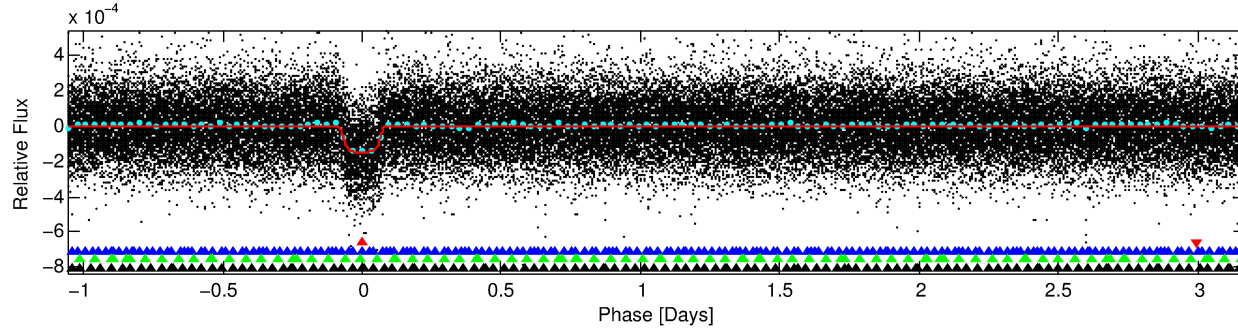
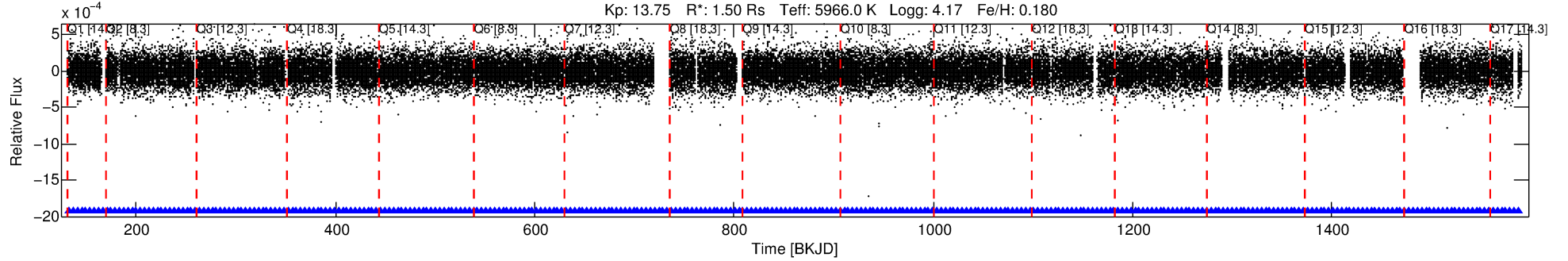
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040629-01

No Significant Match Found

DV One-Page Summary

KIC: 7040629 Candidate: 1 of 4 Period: 4.229 d
KOI: K00671.01 Name: Kepler-208b Corr: 0.931



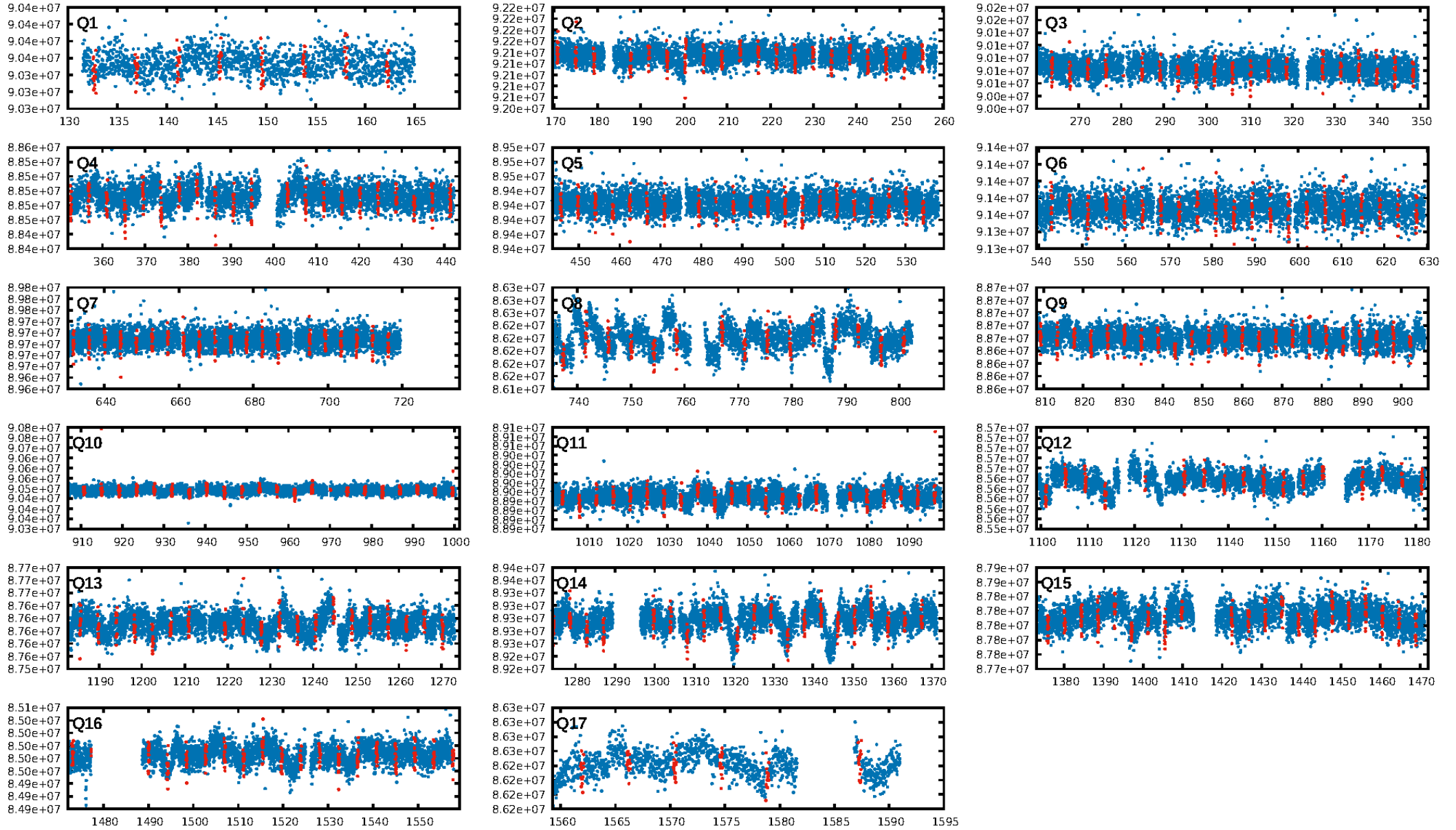
DV Fit Results:

Period = 4.22865 [0.00001] d
Epoch = 132.6842 [0.0017] BKJD
Rp/R* = 0.0145 [0.0005]
a/R* = 2.88 [0.41]
b = 0.96 [0.01]
Seff = 857.49 [255.22]
Teq = 1380 [103] K
Rp = 2.37 [0.51] Re
a = 0.0545 [0.0103] AU
Ag = 3.00 [1.43] [1.40σ]
Teffp = 2809 [273] K [4.90σ]

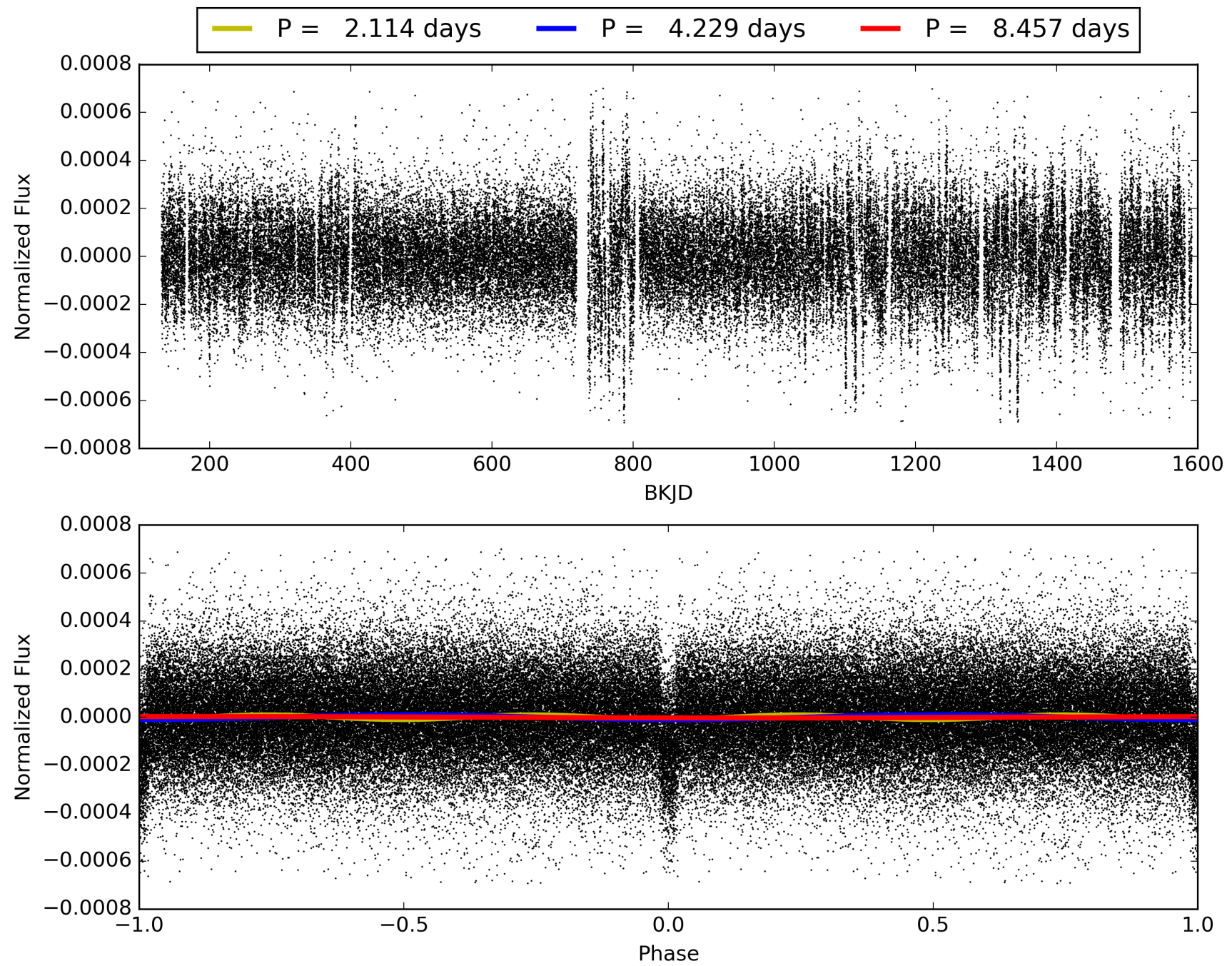
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [14.26σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.14e-246
RollingBand-fgt: 1.00 [299/299]
GhostDiagnostic-chr: 5.533
Centroid-sig: 12.7%
Centroid-so: 0.333 arcsec [1.11σ]
OotOffset-rm: 0.056 arcsec [0.15σ]
KicOffset-rm: 0.135 arcsec [0.31σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.94 [15/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007040629-01, PDC Light Curves

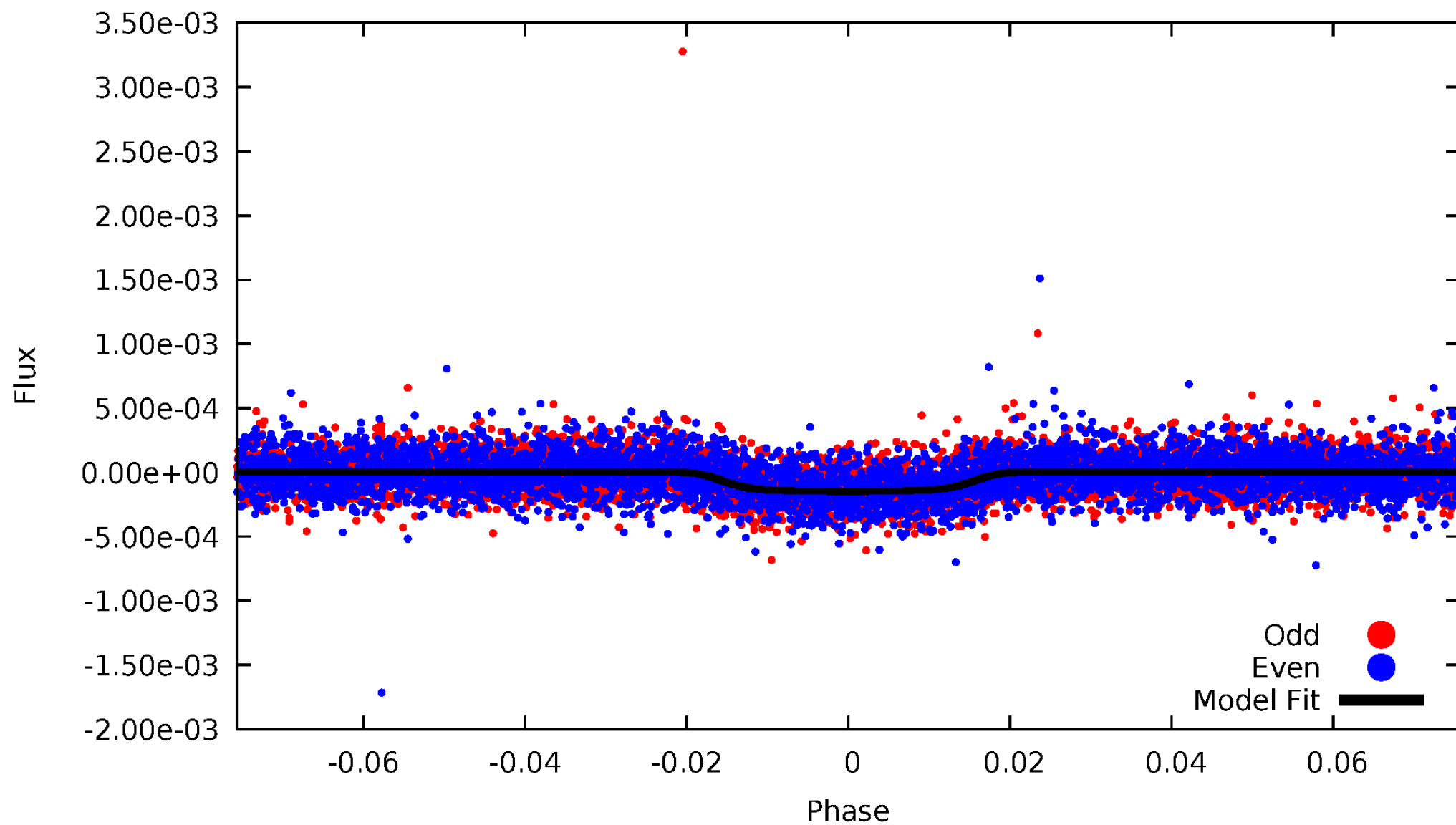


TCE 007040629-01



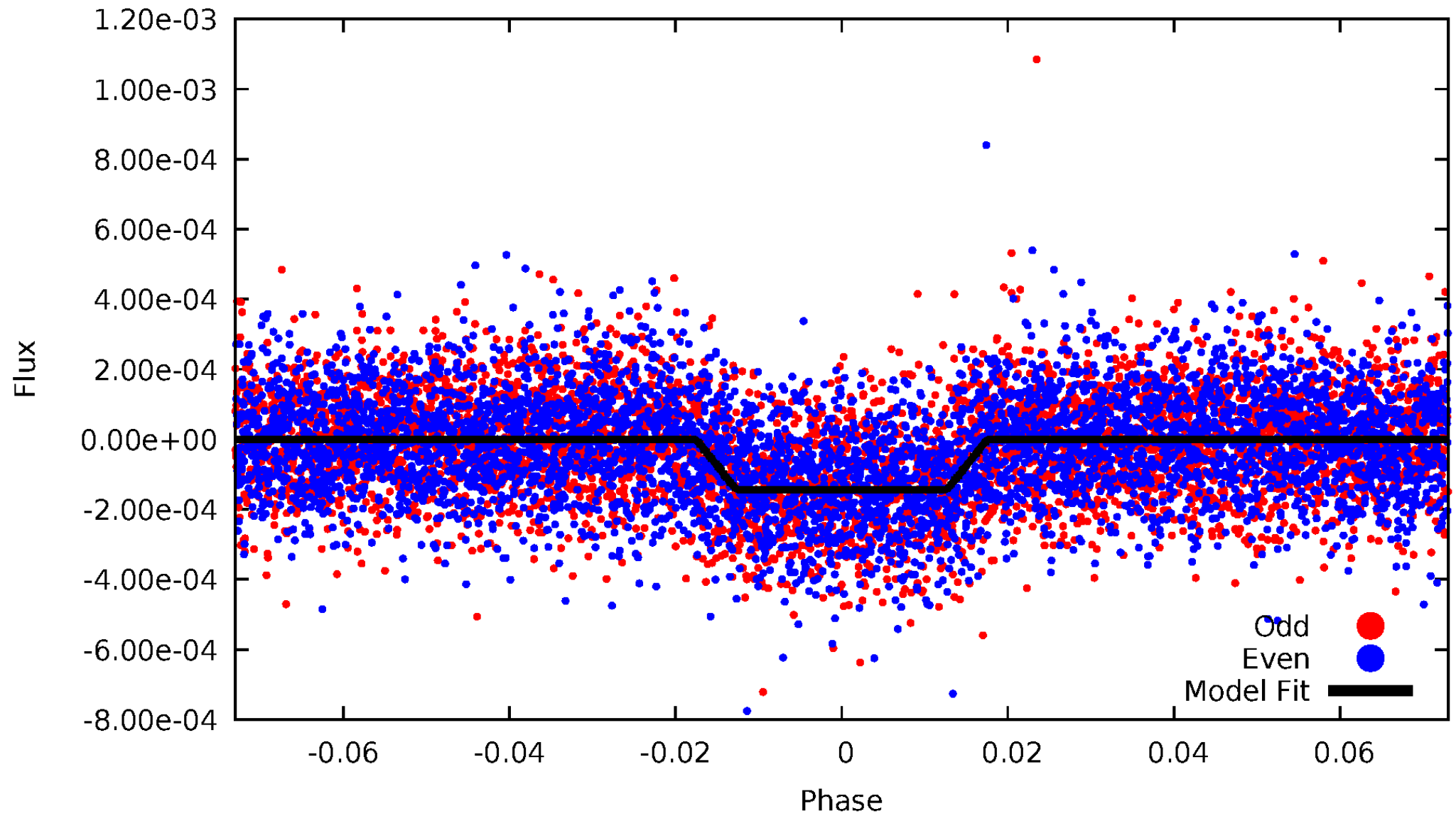
DV Odd/Even

TCE 007040629-01



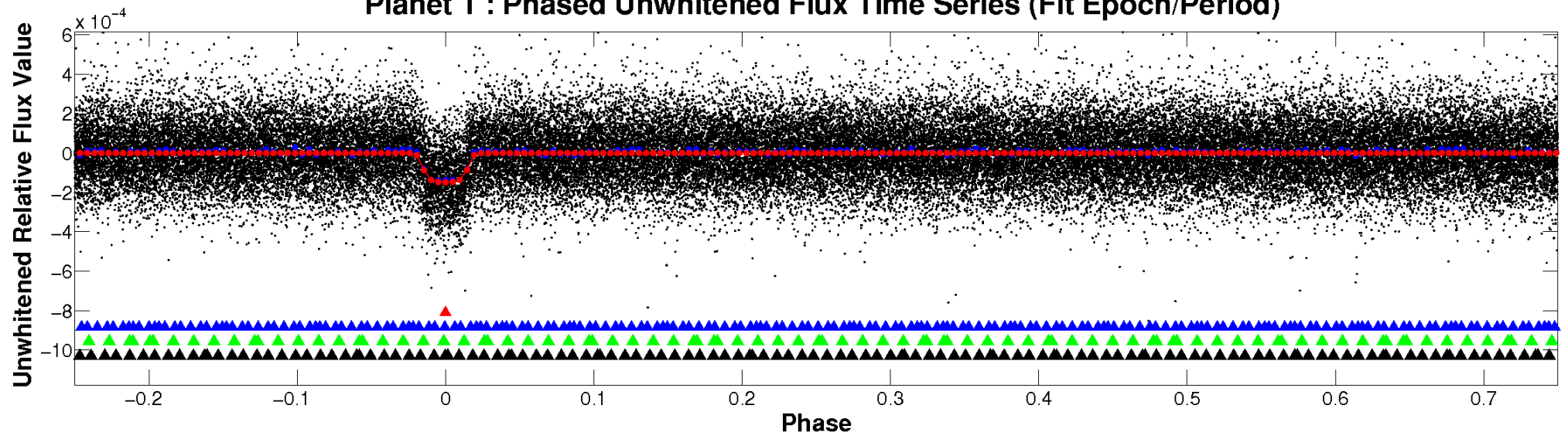
ALT Odd/Even

TCE 007040629-01

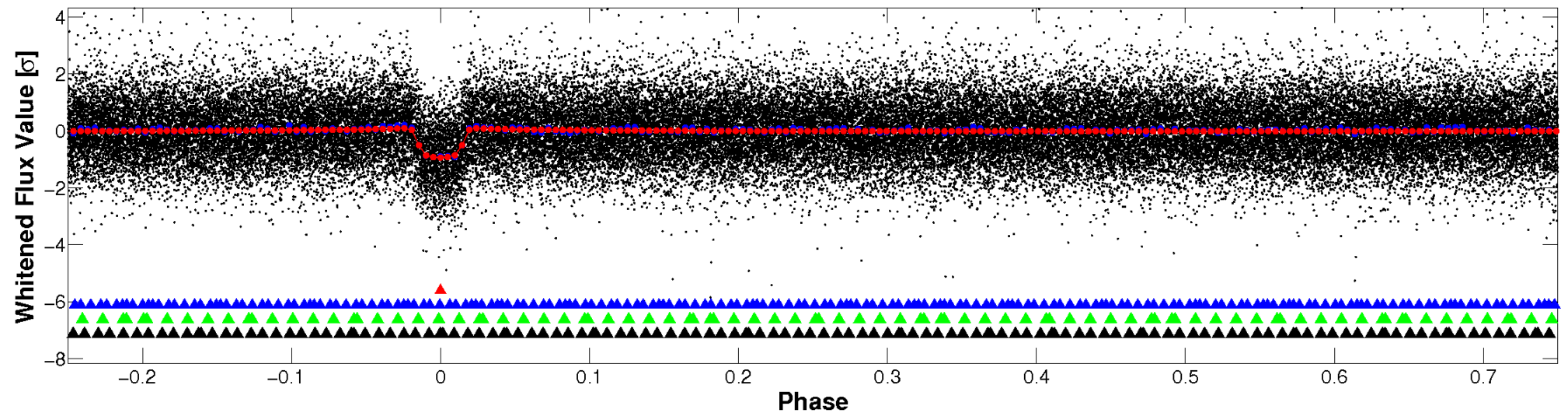


Non-Whitened Vs. Whitened Light Curve

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

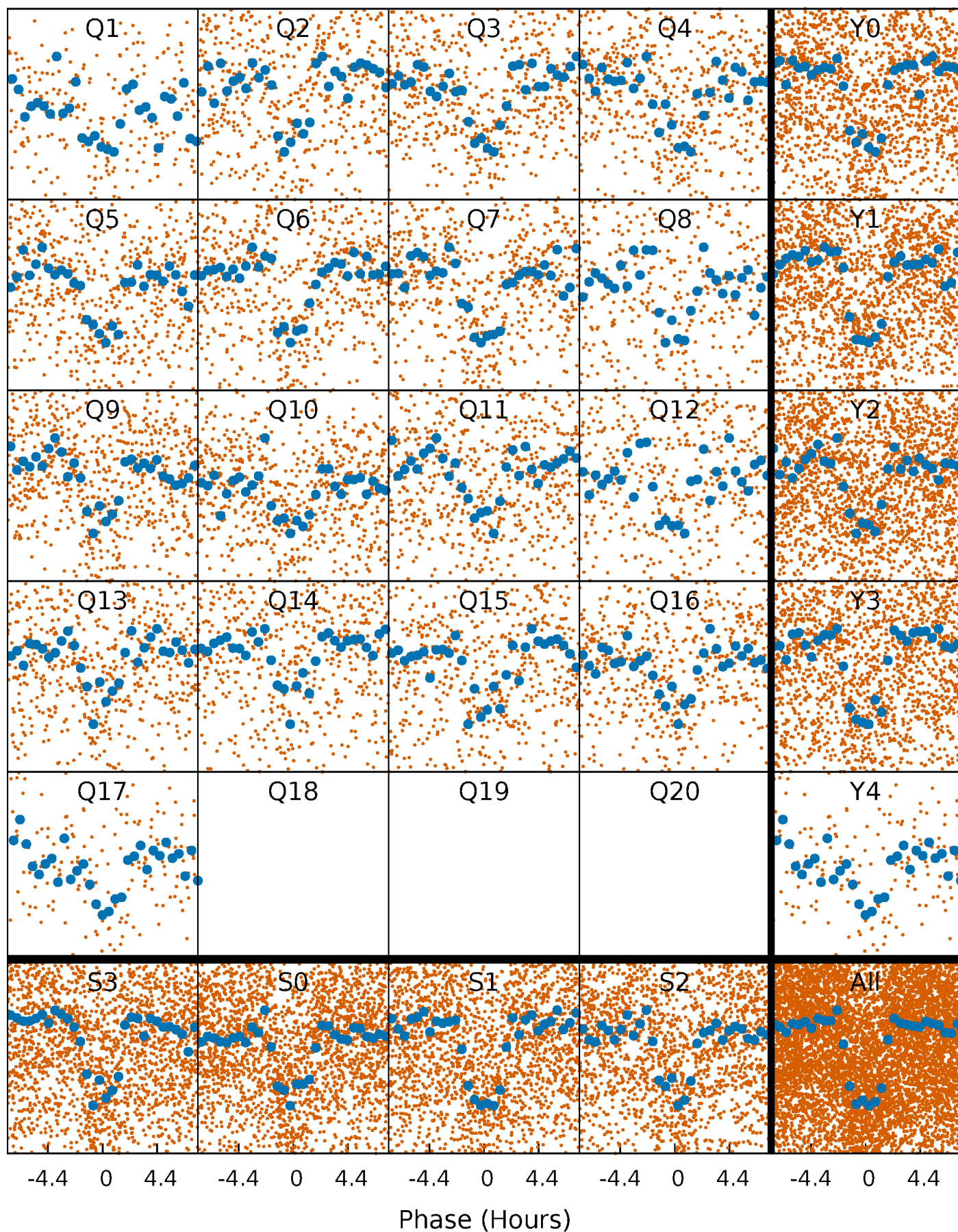


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



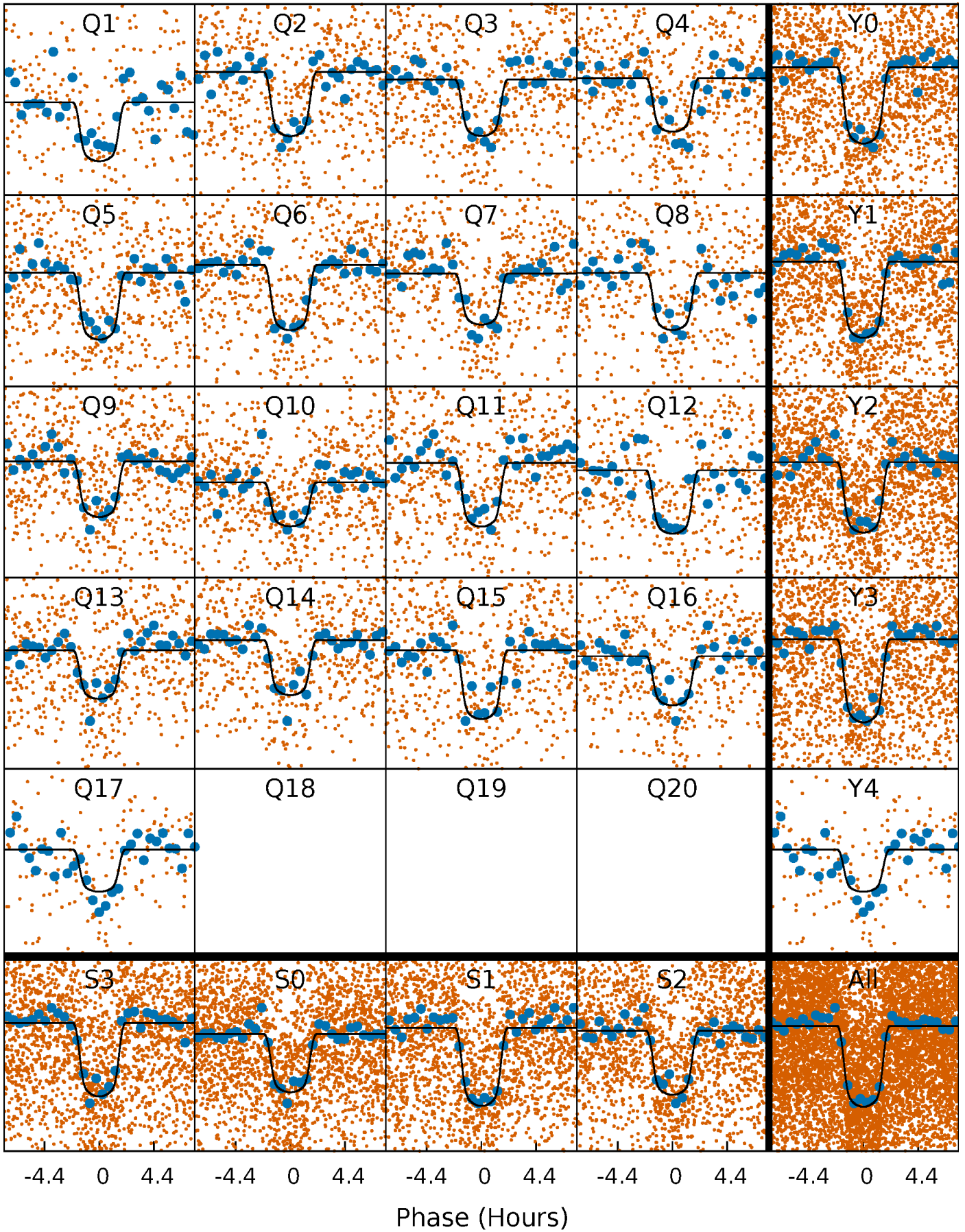
PDC Quarter-Phased Transit Curves

TCE 007040629-01 P= 4.228646 Days $T_0=132.684186$ (BKJD)



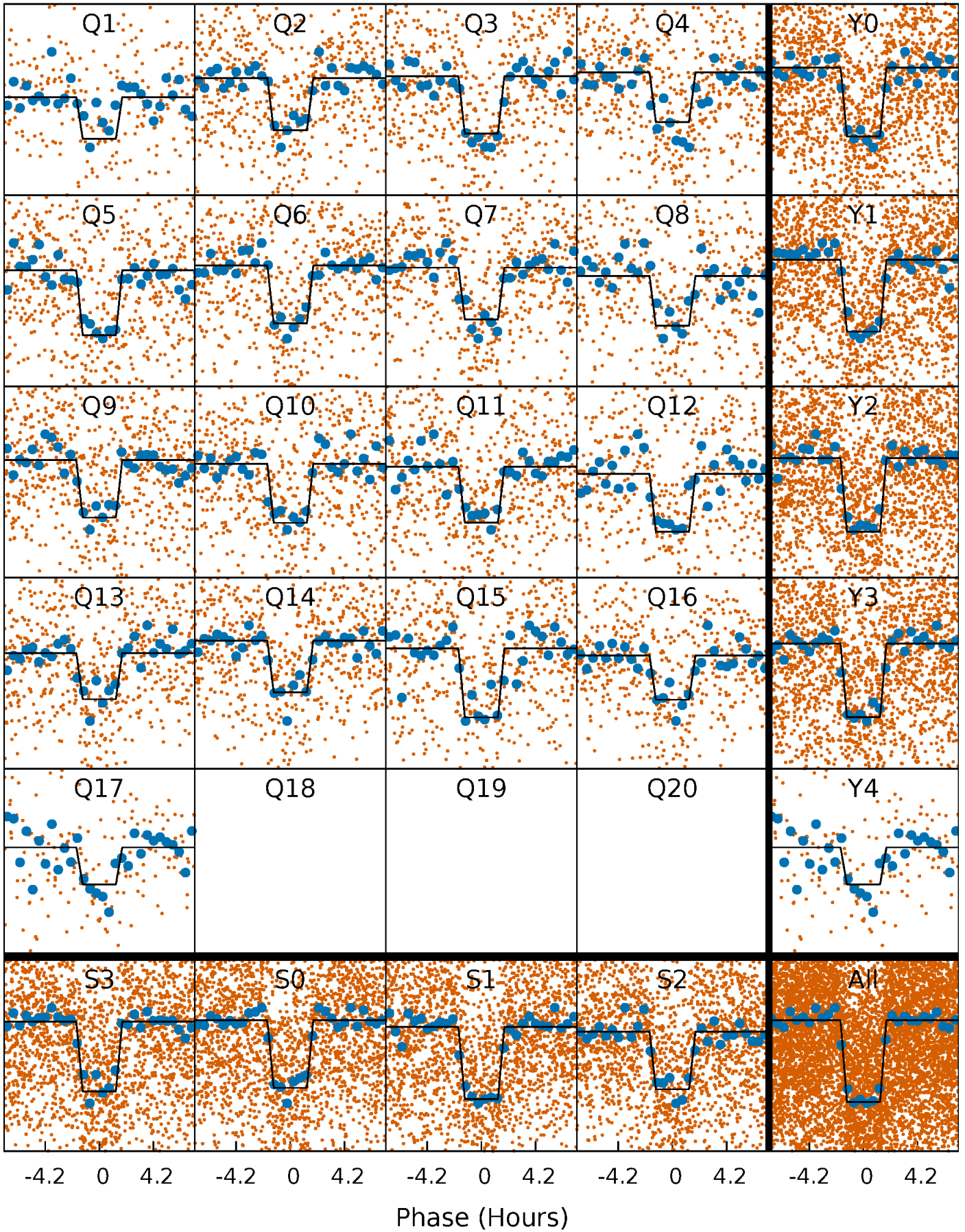
DV Quarter-Phased Transit Curves

TCE 007040629-01 P= 4.228646 Days $T_0=132.684186$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

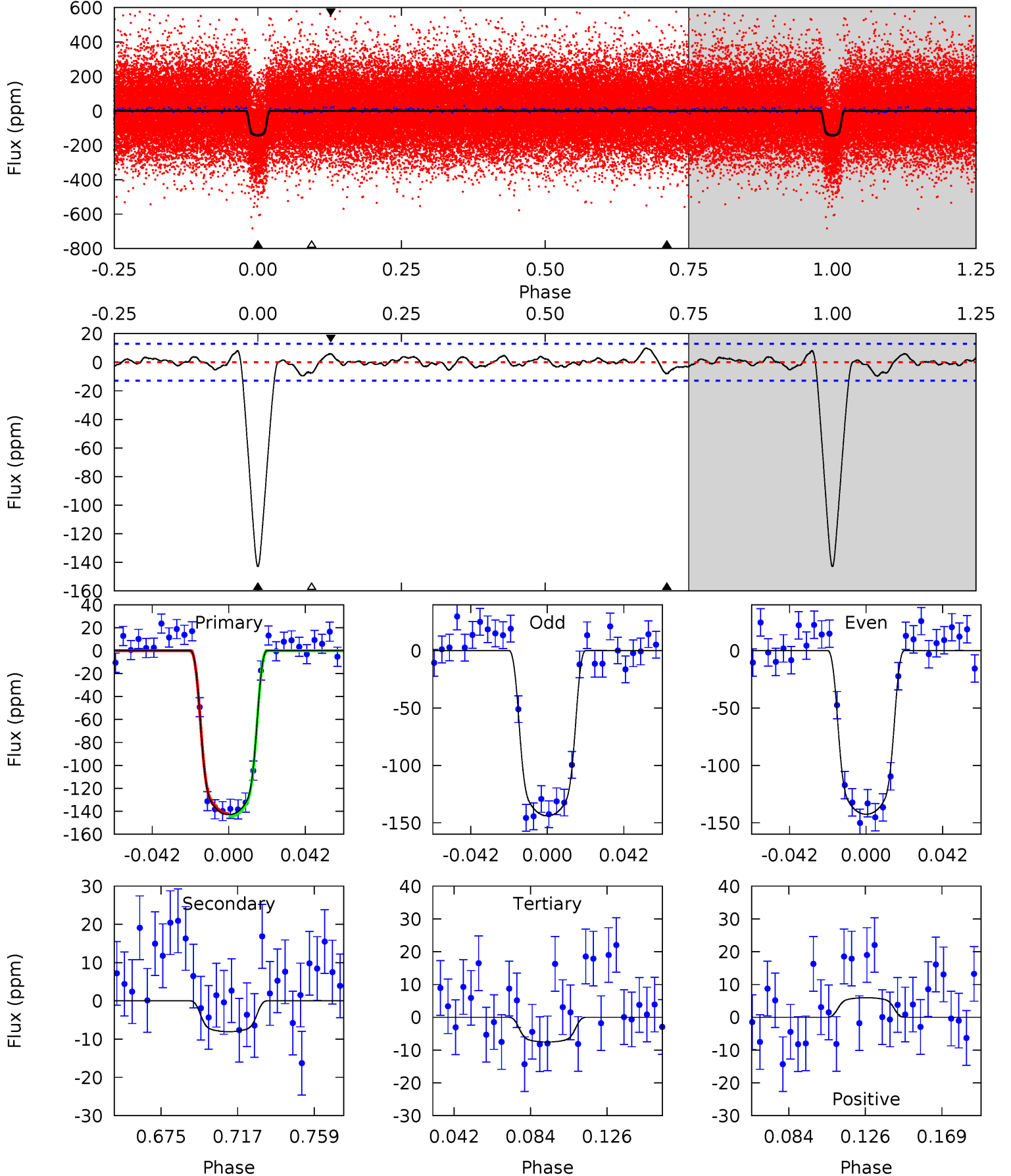
TCE 007040629-01 P= 4.228648 Days $T_0=132.683700$ (BKJD)



DV Model-Shift Uniqueness Test

007040629-01, P = 4.228646 Days, E = 128.455540 Days

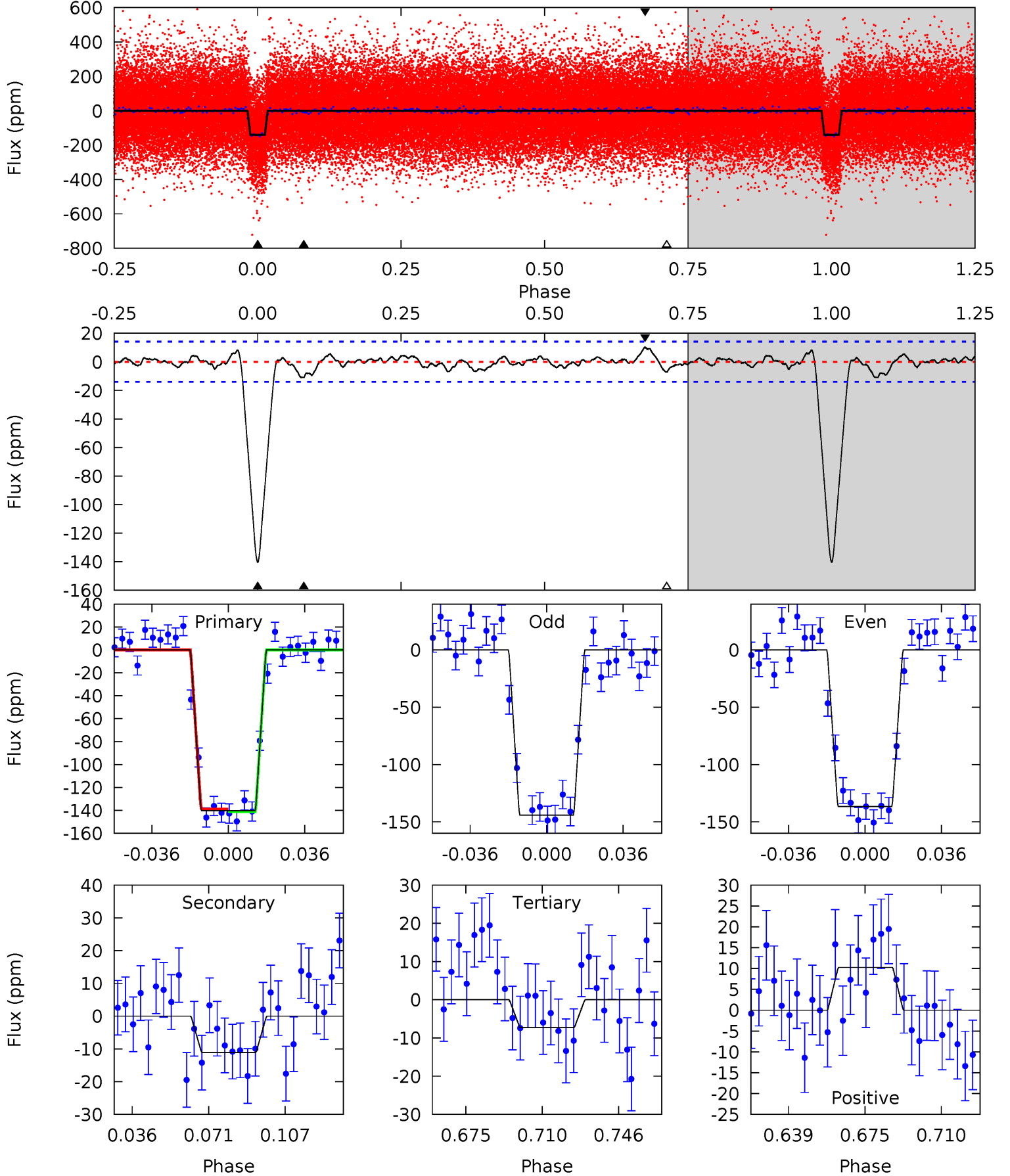
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.6	2.96	2.78	2.19	4.74	2.03	1.00	49.8	50.4	0.18	0.77	0.25	1.00	0.06	0.43



Alt Model-Shift Uniqueness Test

007040629-01, P = 4.228648 Days, E = 128.455052 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.4	3.74	2.45	3.47	4.78	2.10	1.01	45.0	44.0	1.29	0.27	1.25	1.03	0.07	0.41



Stellar Parameters For KIC 007040629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5966^{+107}_{-119}	$4.169^{+0.162}_{-0.108}$	$0.180^{+0.150}_{-0.150}$	$1.499^{+0.262}_{-0.321}$	$1.213^{+0.098}_{-0.135}$	$0.507^{+0.421}_{-0.168}$
	+2%/-2%	+4%/-3%	+83%/-83%	+17%/-21%	+8%/-11%	+83%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 007040629-01 / KOI 0671.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 3	$2.35^{+0.28}_{-0.27}$	1924^{+97}_{-107}	3161^{+163}_{-222}	$2.396^{+1.051}_{-0.895}$
Alt.	-11 ± 3	$1.96^{+0.22}_{-0.24}$	1923^{+95}_{-112}	3550^{+163}_{-202}	$4.686^{+1.966}_{-1.519}$

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

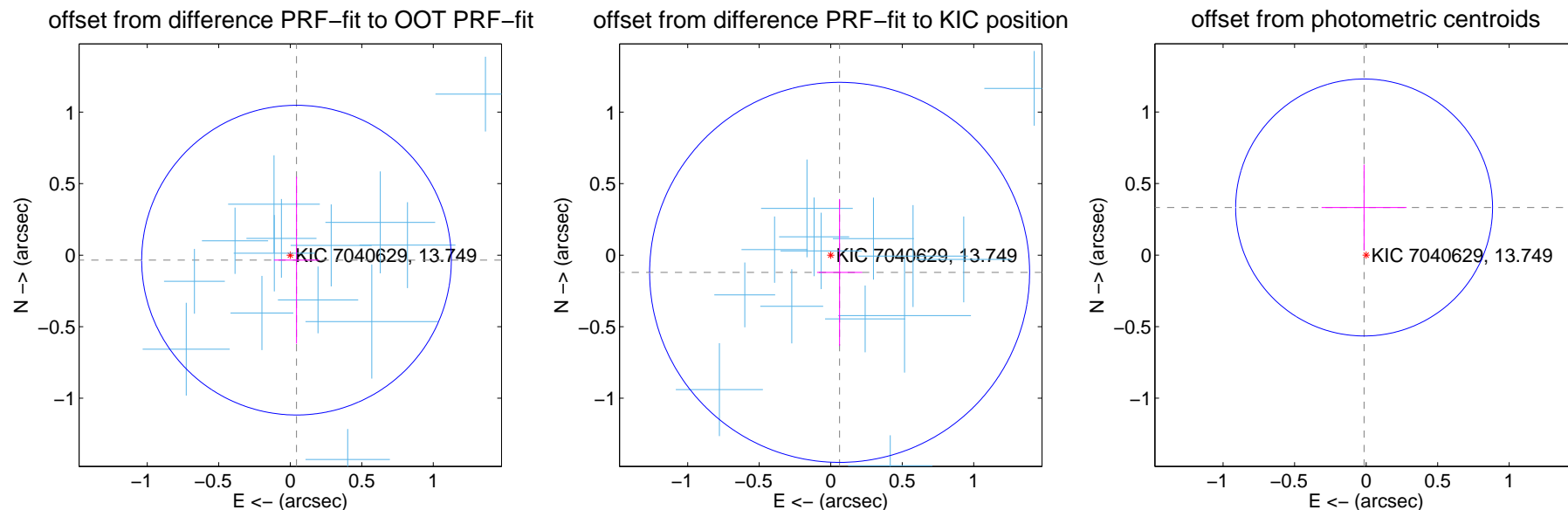
DV Centroid Data

Supplemental centroid analysis for 007040629-01. Kepler magnitude: 13.75. Transit SNR 36.79

There are 15 quarters with good PRF difference image offsets

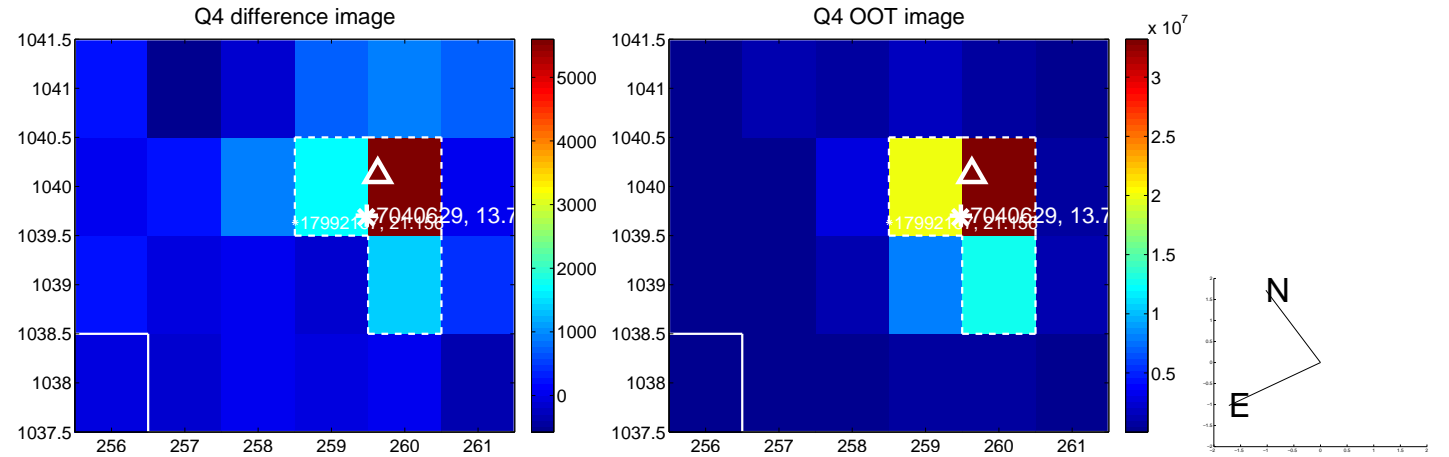
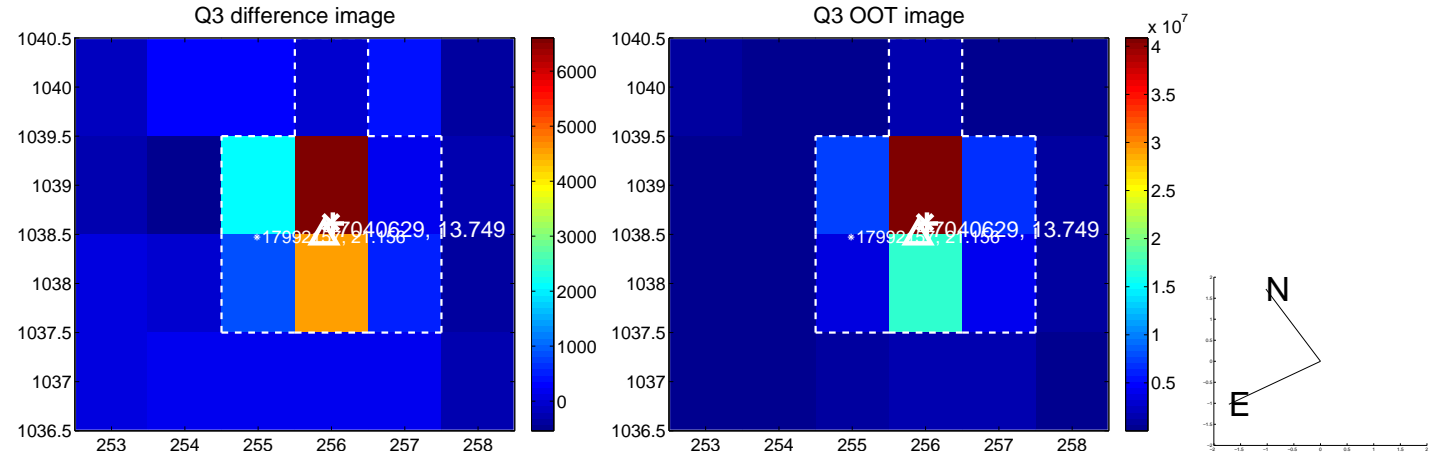
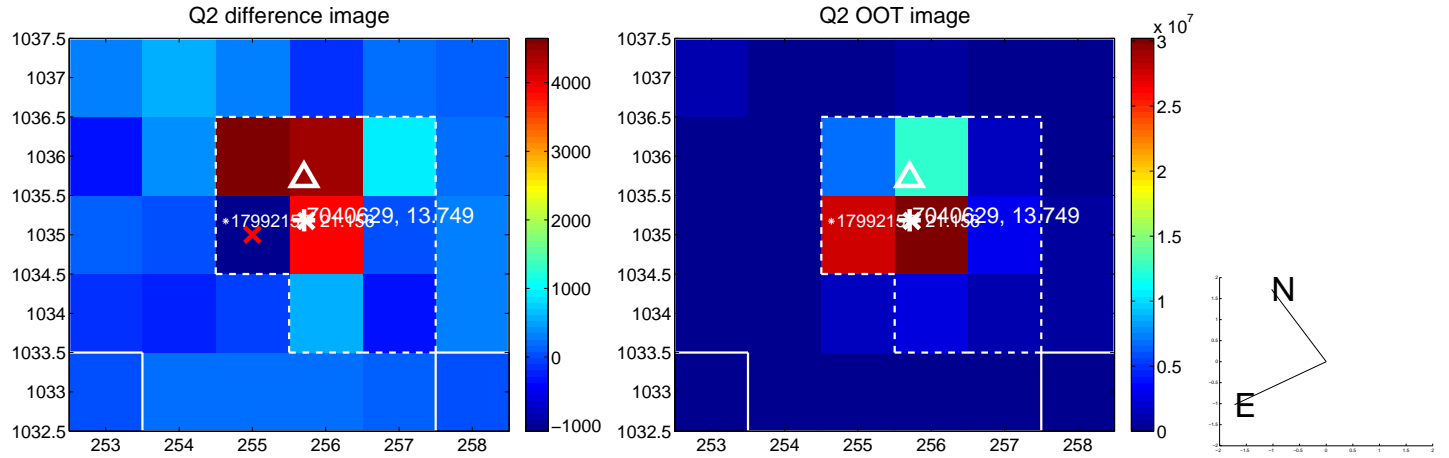
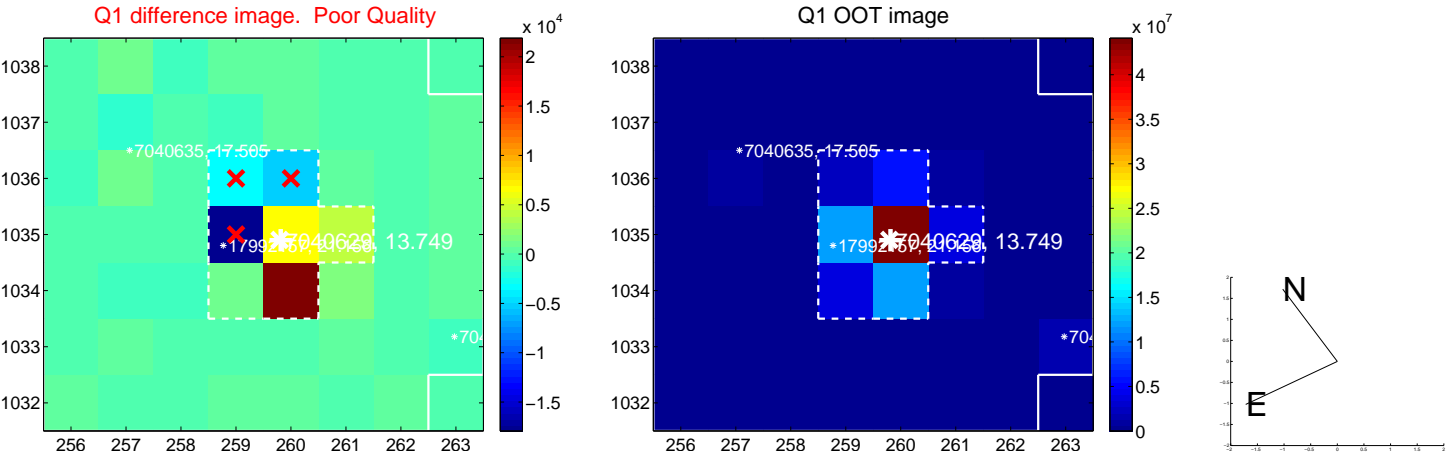
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.361	0.15	-0.044 ± 0.158	-0.035 ± 0.584
PRF-fit source offset from KIC position	0.135 ± 0.443	0.31	-0.062 ± 0.158	-0.120 ± 0.513
photometric centroid source offset	0.33 ± 0.30	1.11	0.01 ± 0.30	0.33 ± 0.30

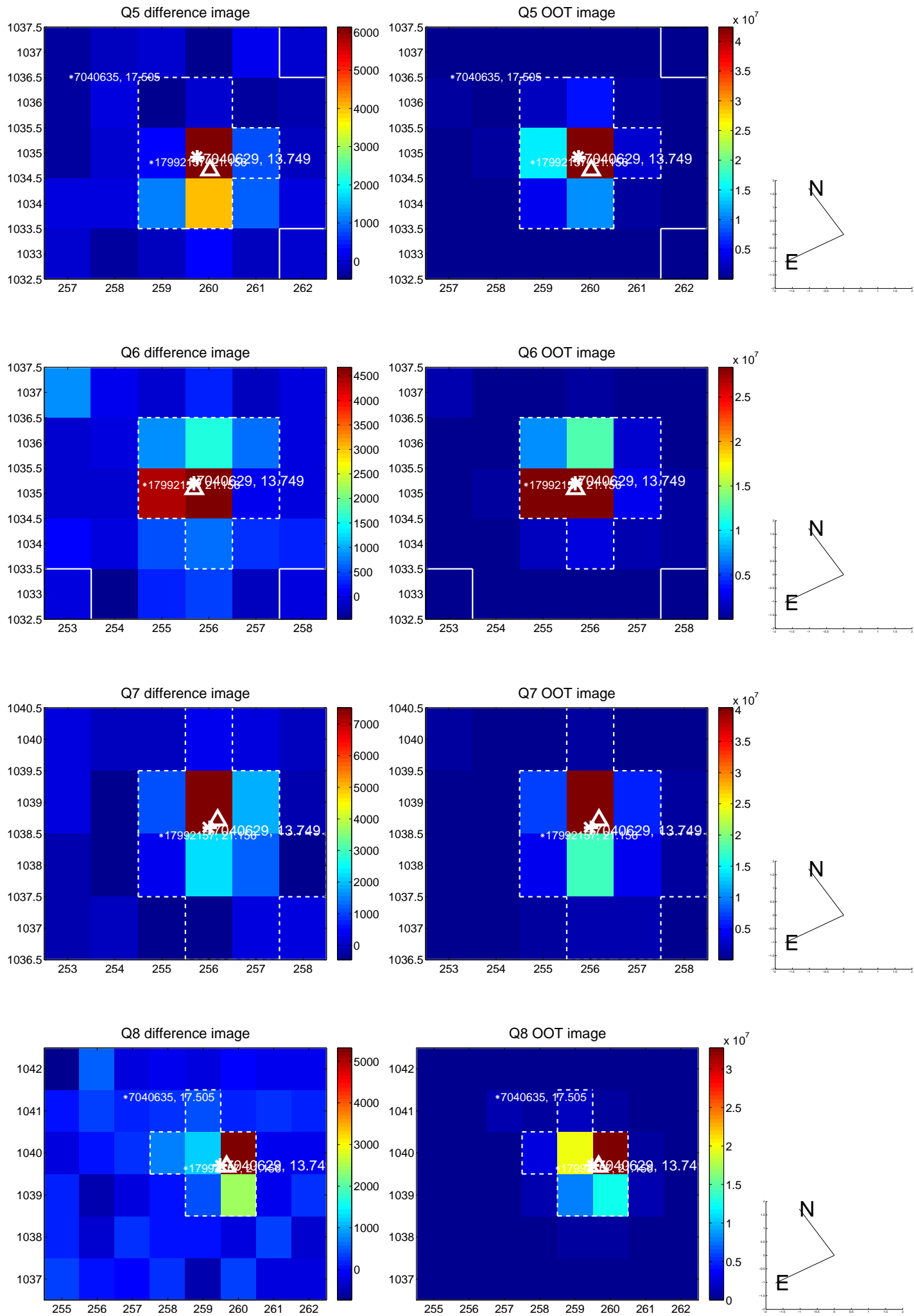


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

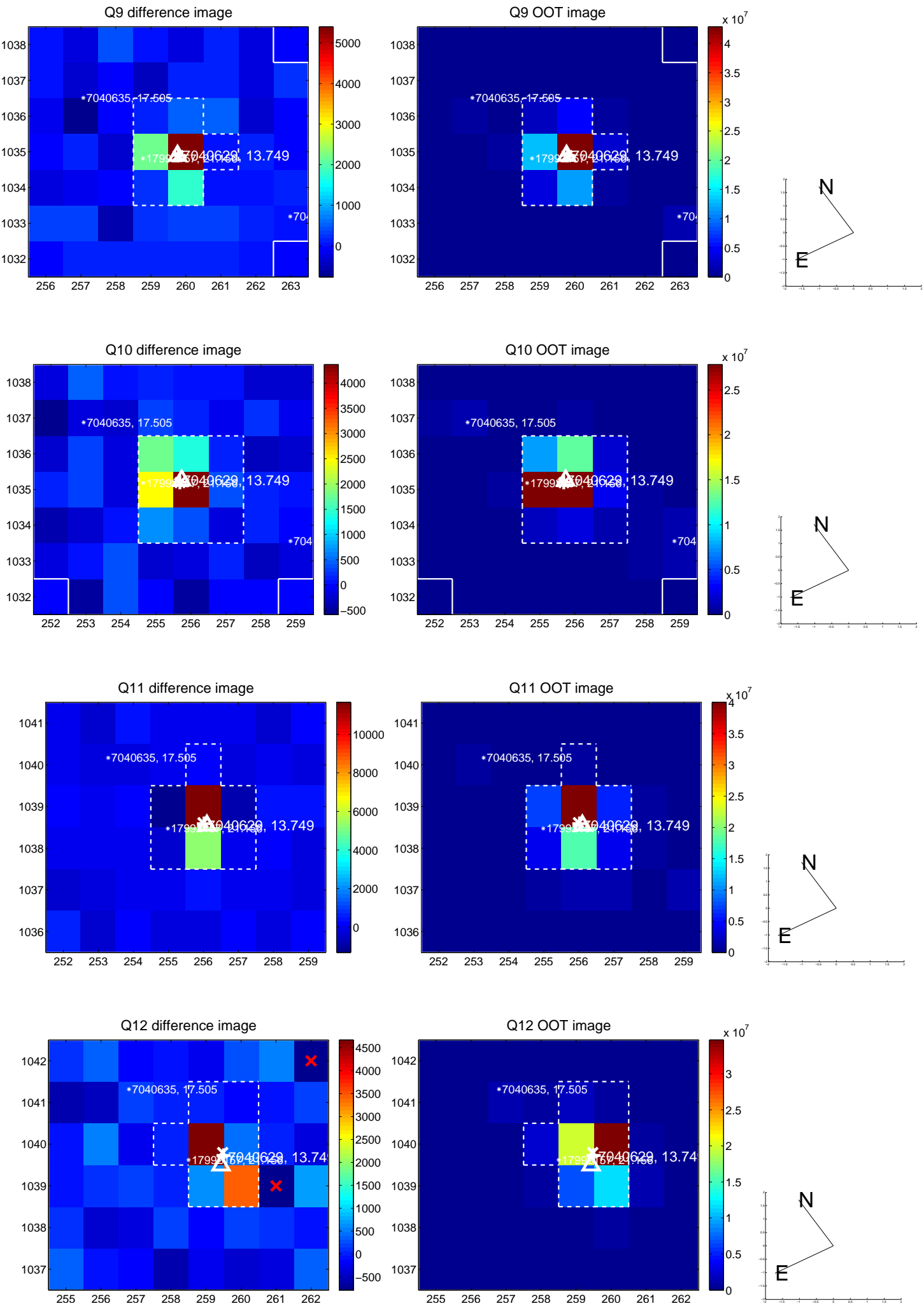
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

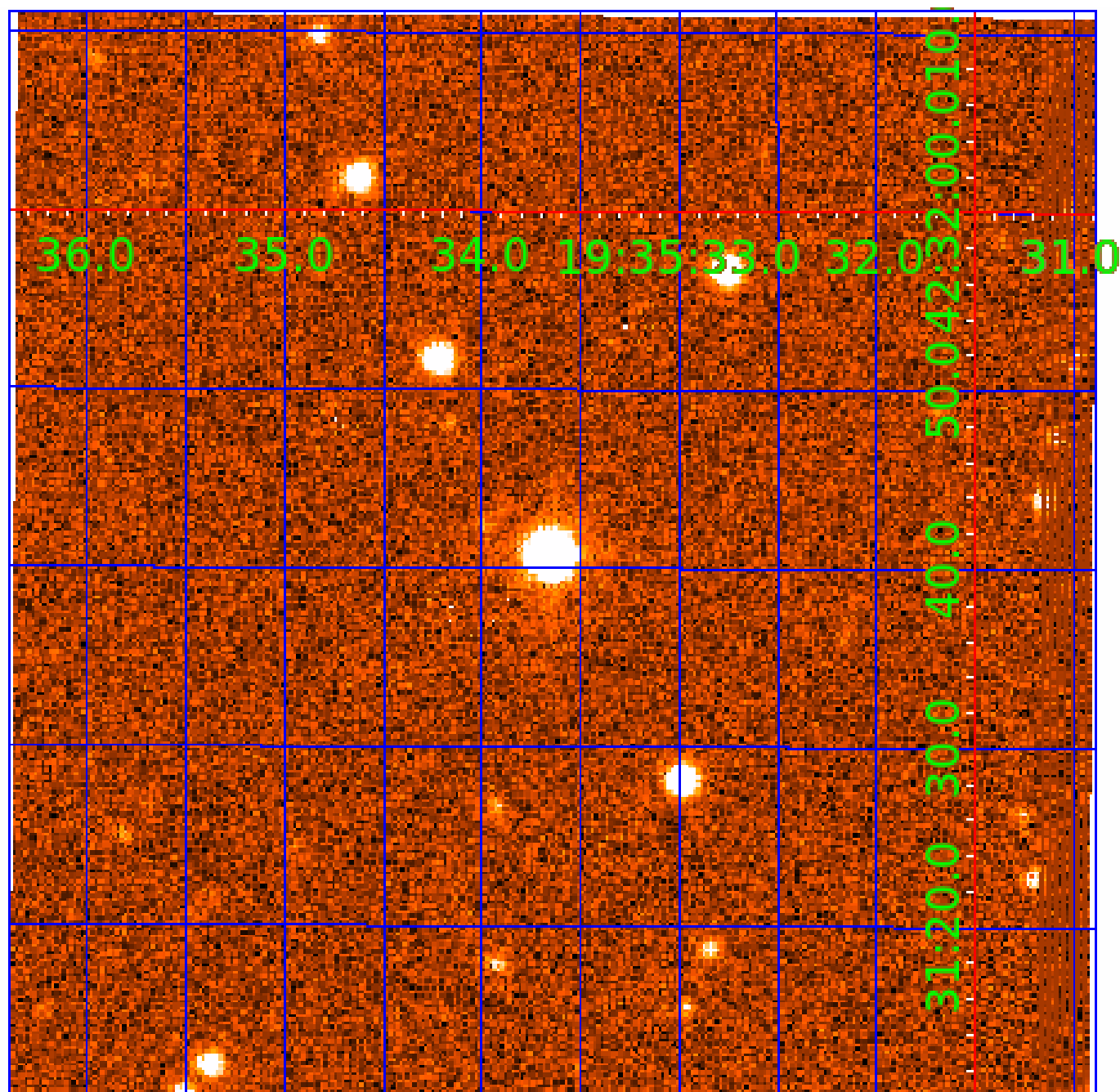


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007040629

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})
007040629-01	OBS	0671.01	4.228646	132.684186	149.0	3.837	34.3	36.8	1.50	5966	2.37	857.49
007040629-02	OBS	0671.02	7.466650	132.772417	118.1	3.869	20.4	22.1	1.50	5966	1.88	401.79
007040629-03	OBS	0671.03	16.259572	144.527378	128.6	3.861	14.4	15.9	1.50	5966	2.00	142.35
007040629-04	OBS	0671.04	11.131759	134.426471	95.9	4.157	13.0	14.7	1.50	5966	1.74	235.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040629-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007040629-04	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.

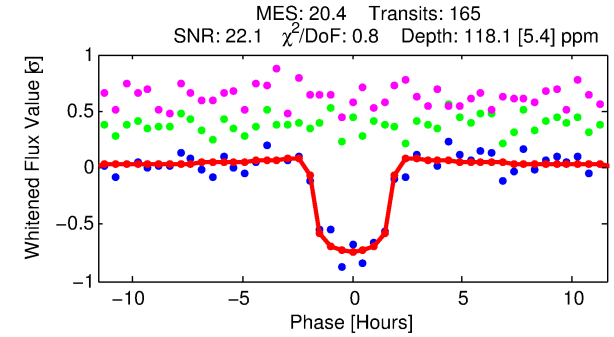
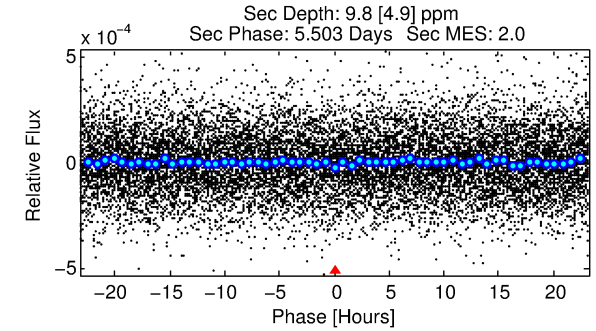
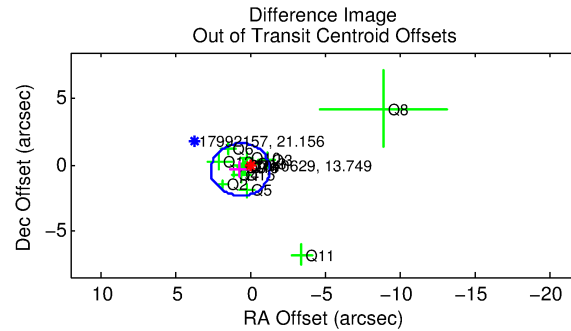
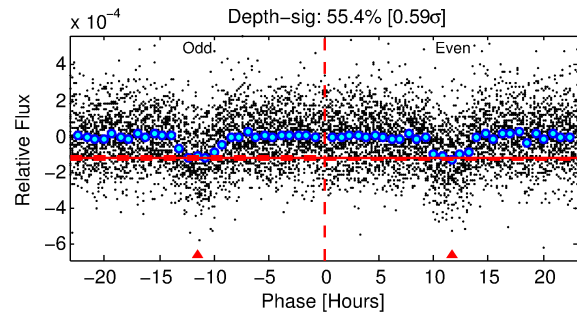
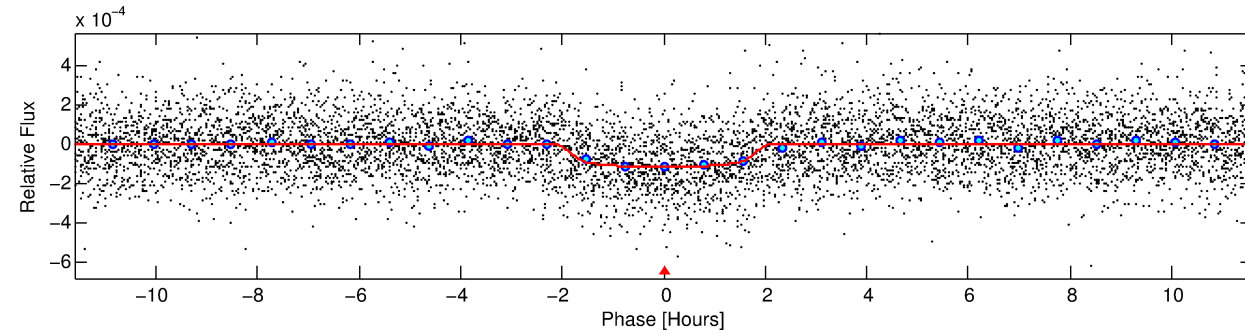
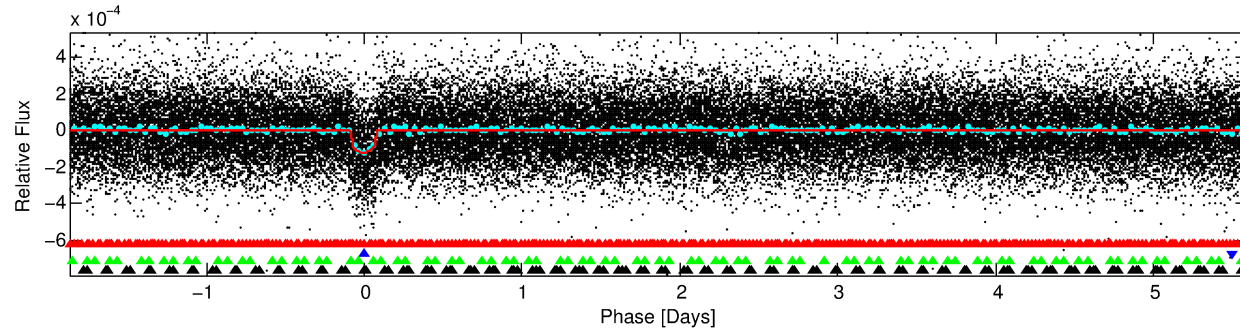
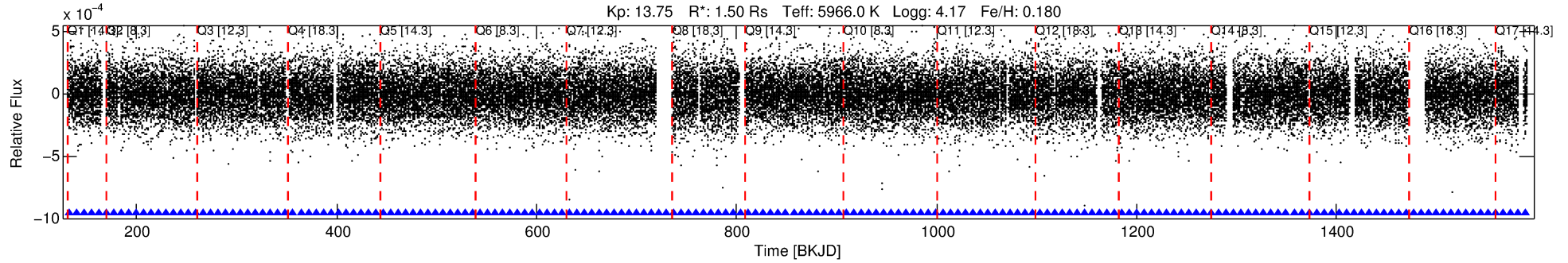
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040629-02

No Significant Match Found

DV One-Page Summary

KIC: 7040629 Candidate: 2 of 4 Period: 7.467 d
KOI: K00671.02 Name: Kepler-208c Corr: 0.992



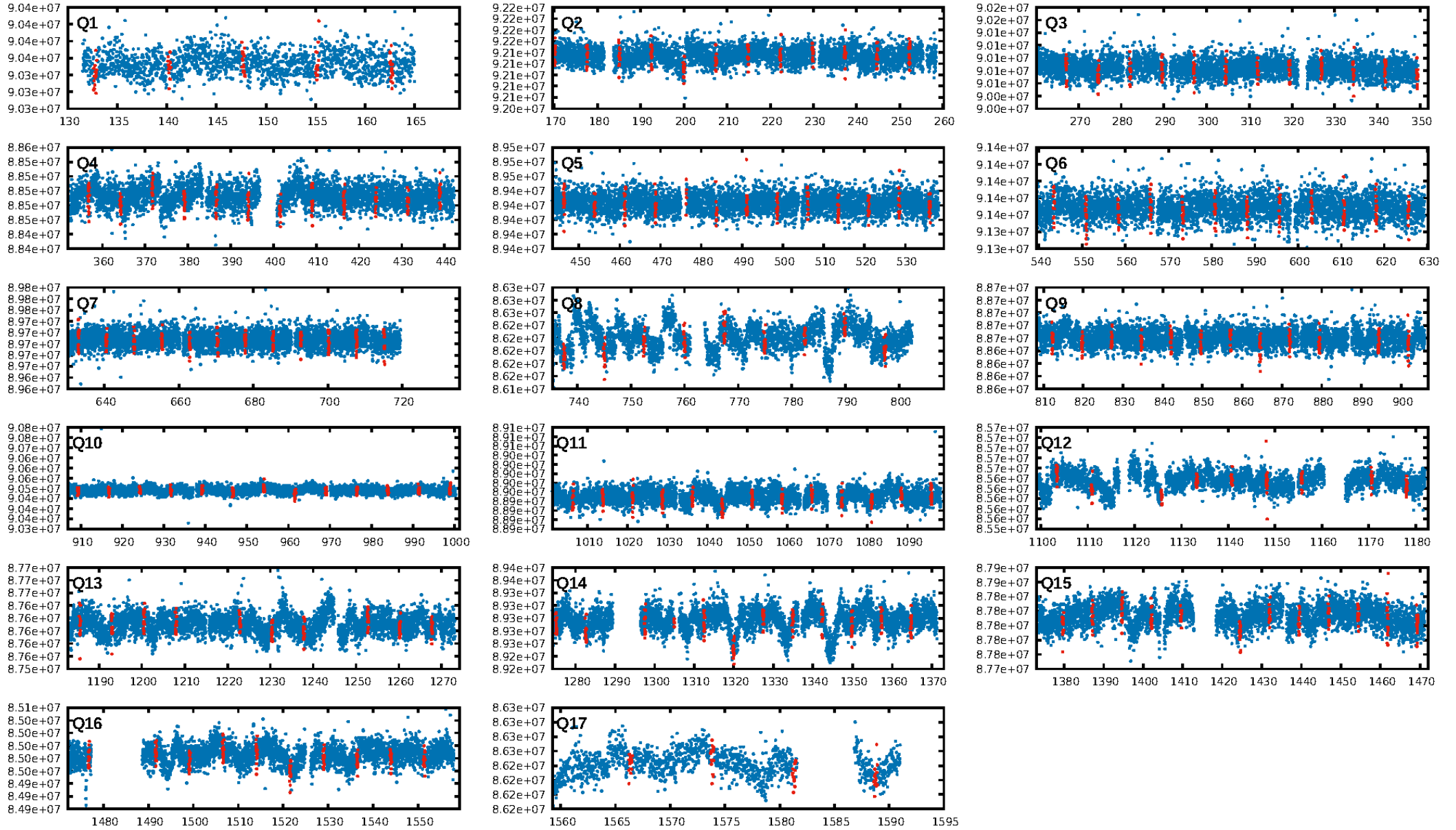
DV Fit Results:

Period = 7.46665 [0.00003] d
Epoch = 132.7724 [0.0030] BKJD
Rp/R* = 0.0115 [0.0031]
a/R* = 7.72 [9.98]
b = 0.87 [0.38]
Seff = 401.79 [119.59]
Teff = 1142 [85] K
Rp = 1.88 [0.65] Re
a = 0.0797 [0.0151] AU
Ag = 9.72 [7.70] [1.13 σ]
Teffp = 3116 [579] K [3.37 σ]

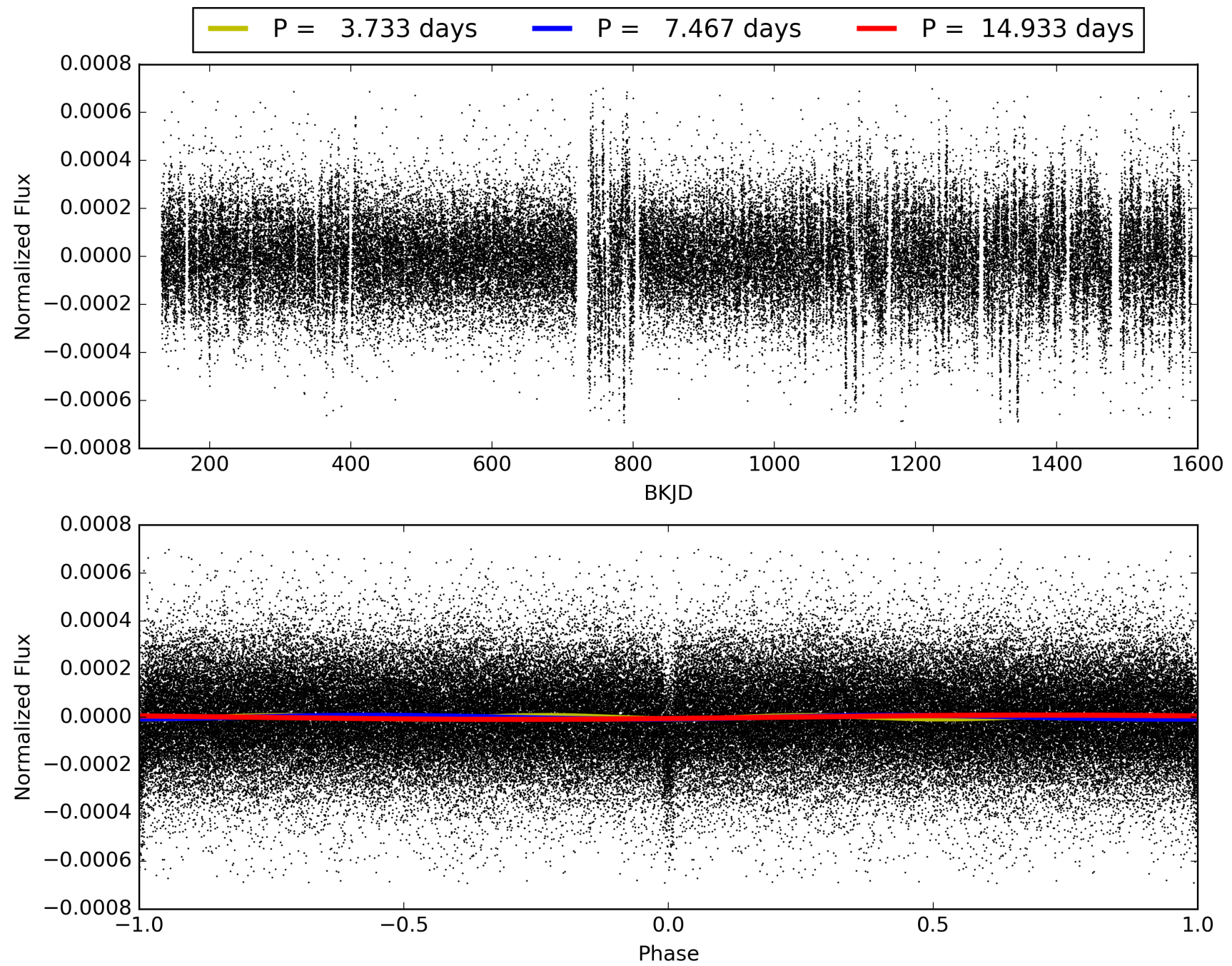
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.26 σ]
LongPeriod-sig: 100.0% [15.49 σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.65e-86
RollingBand-fgt: 1.00 [157/157]
GhostDiagnostic-chr: 134.7
Centroid-sig: 29.2%
Centroid-so: 0.413 arcsec [0.88 σ]
OotOffset-rm: 0.733 arcsec [1.11 σ]
KicOffset-rm: 0.724 arcsec [1.02 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007040629-02, PDC Light Curves

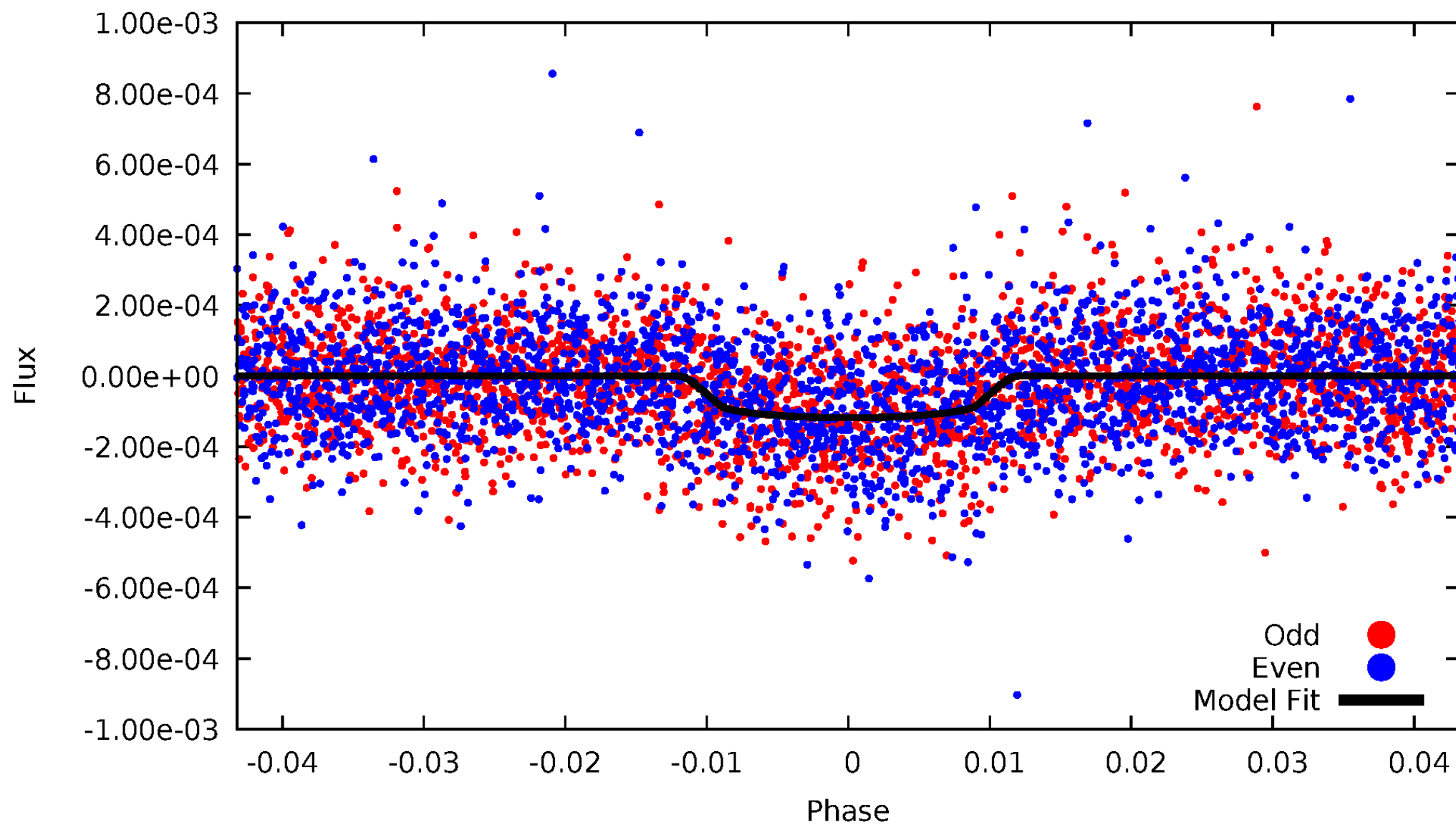


TCE 007040629-02



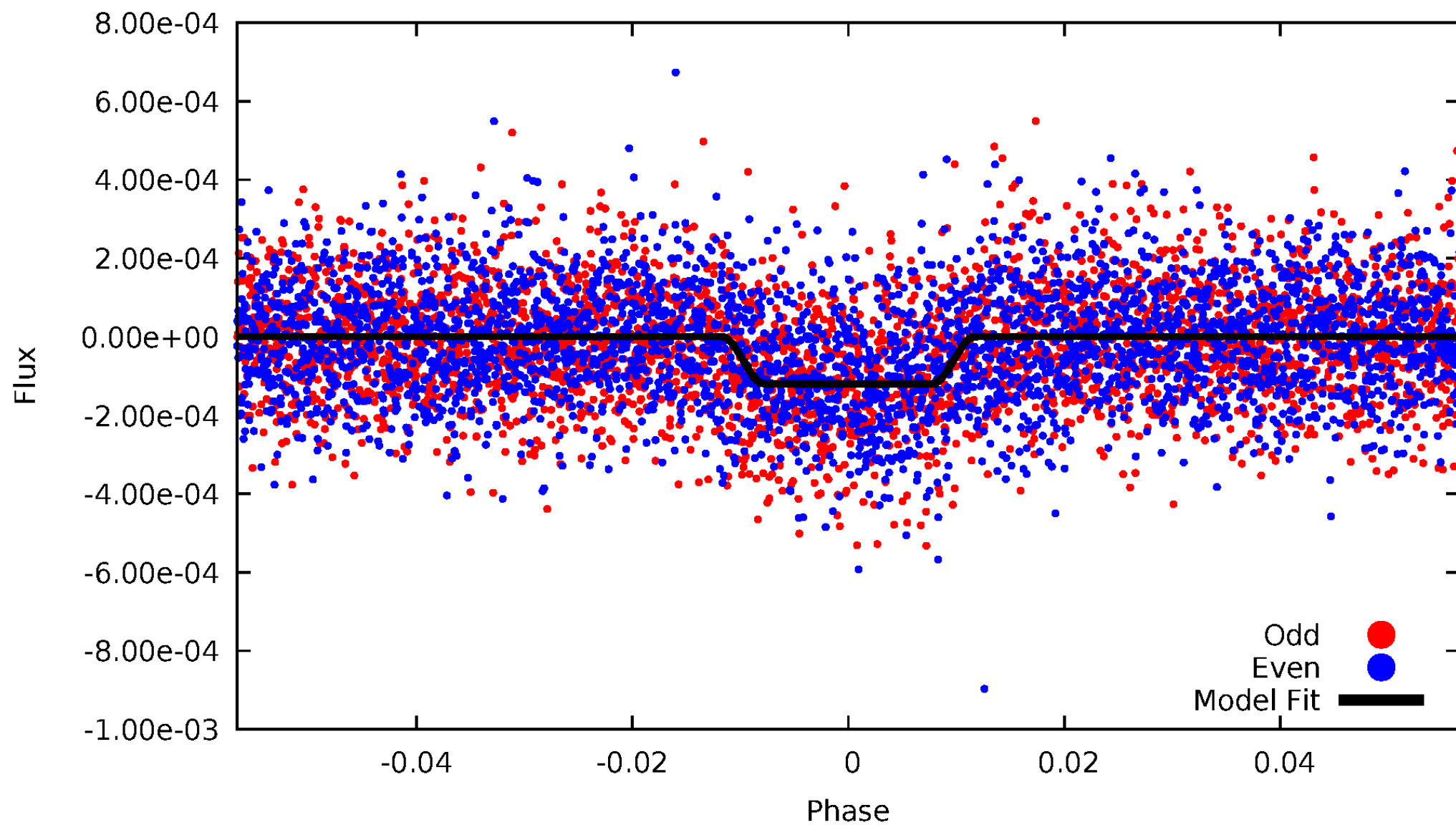
DV Odd/Even

TCE 007040629-02



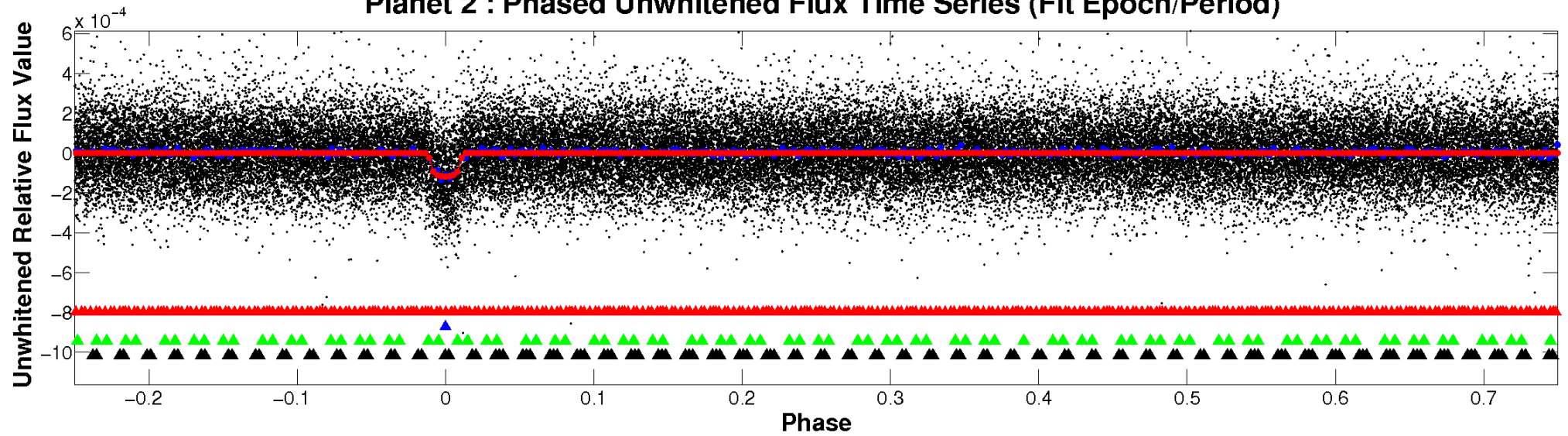
ALT Odd/Even

TCE 007040629-02

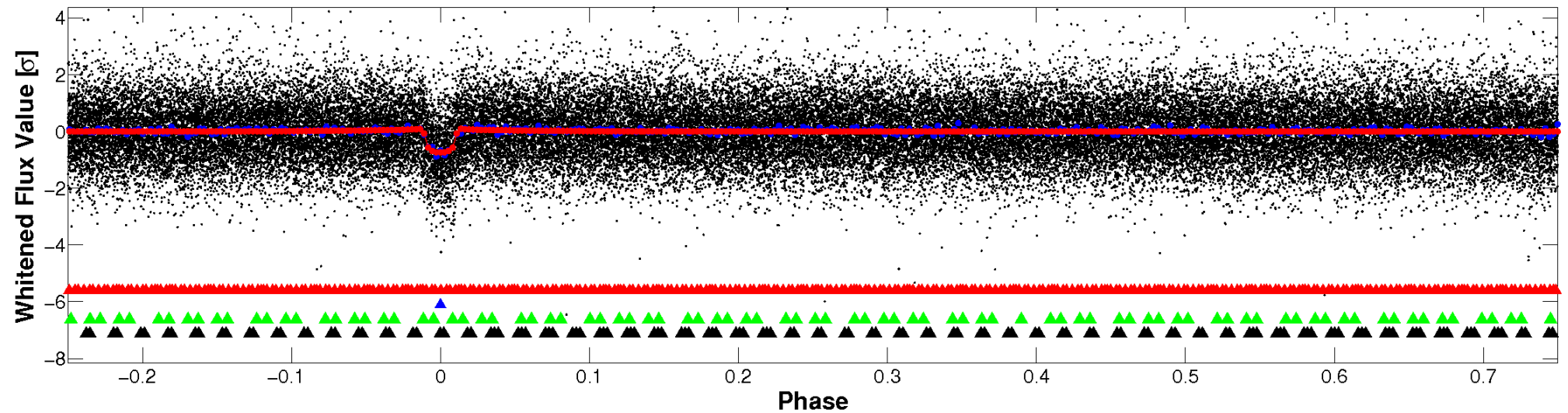


Non-Whitened Vs. Whitened Light Curve

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

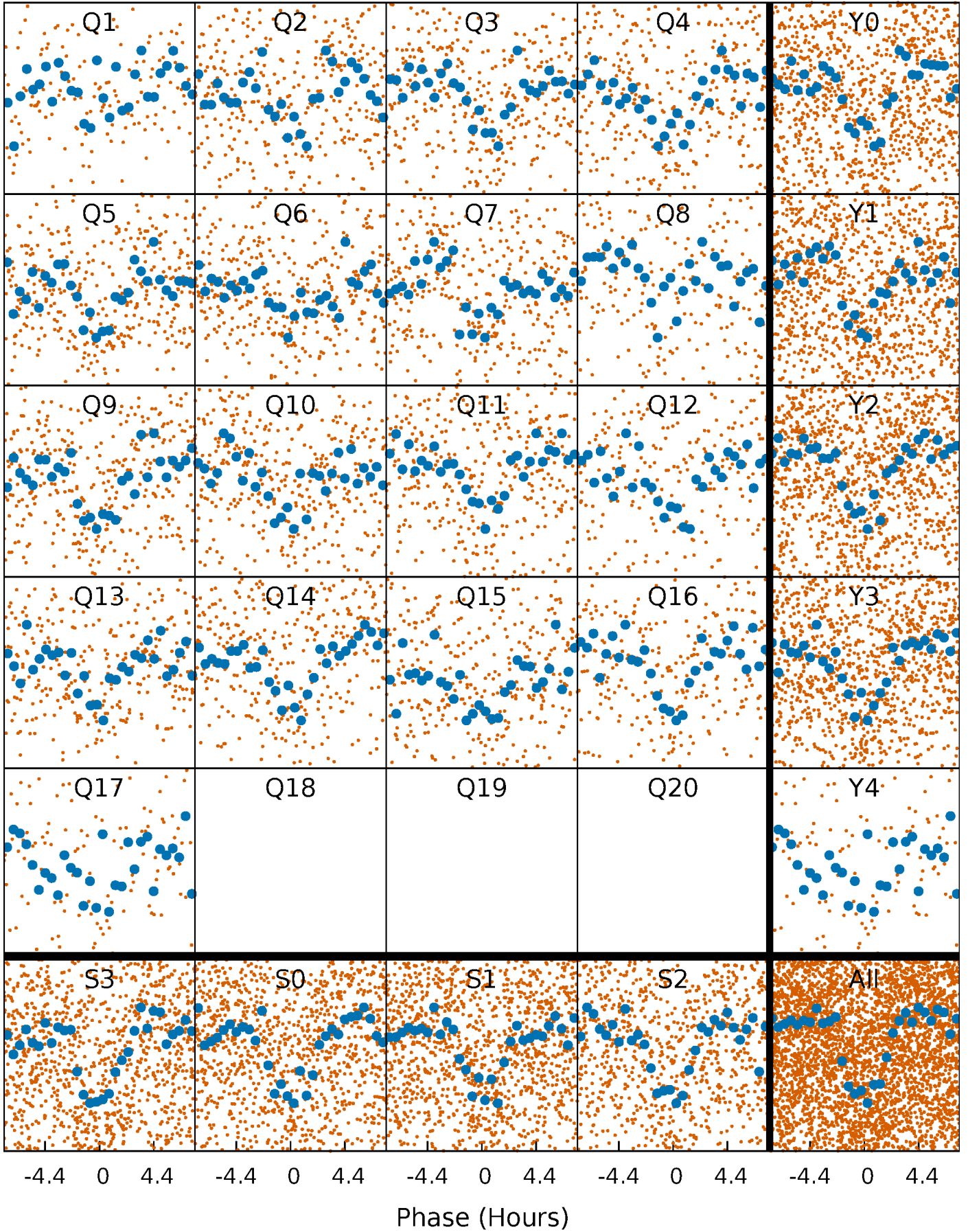


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



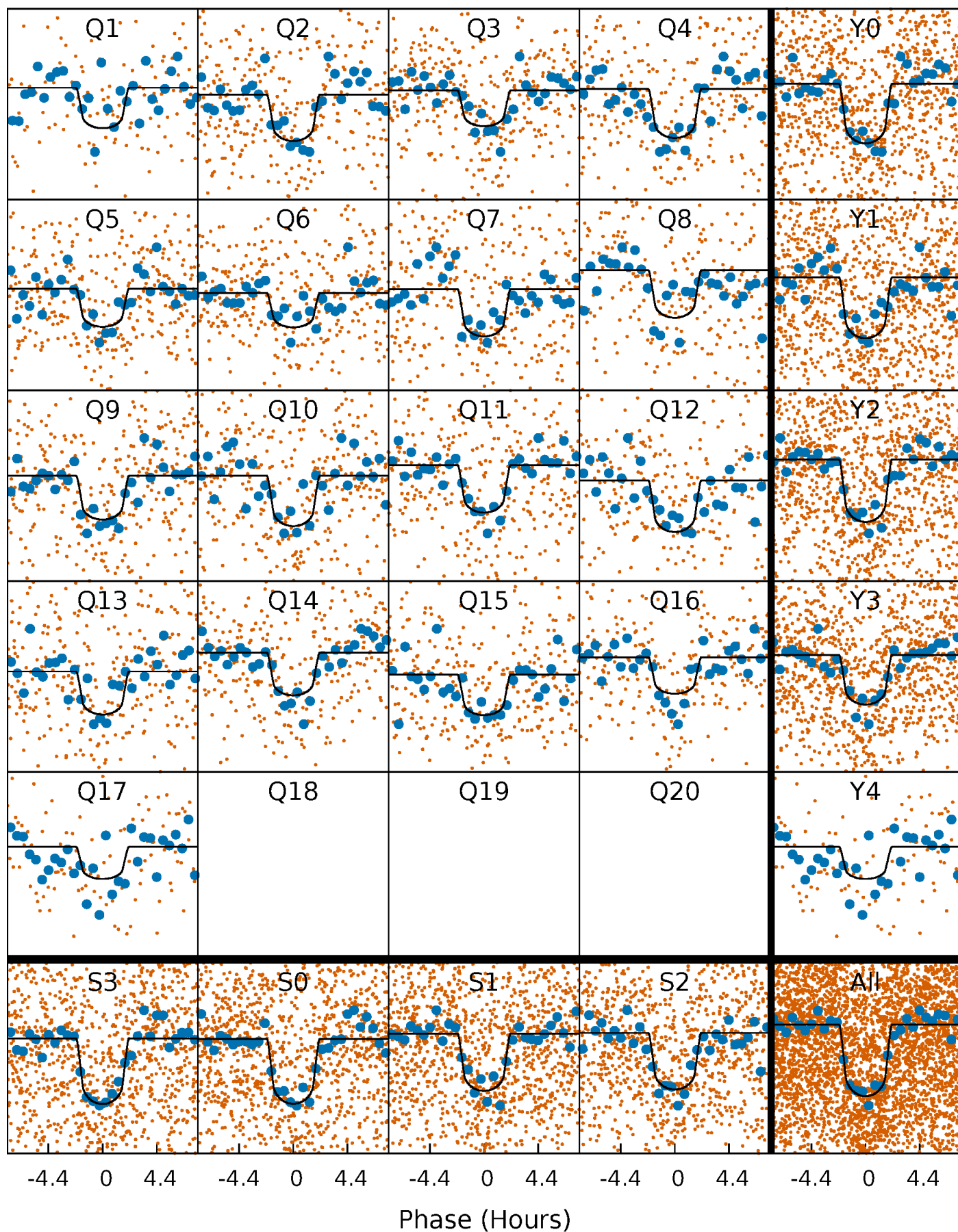
PDC Quarter-Phased Transit Curves

TCE 007040629-02 P= 7.466650 Days $T_0=132.772417$ (BKJD)



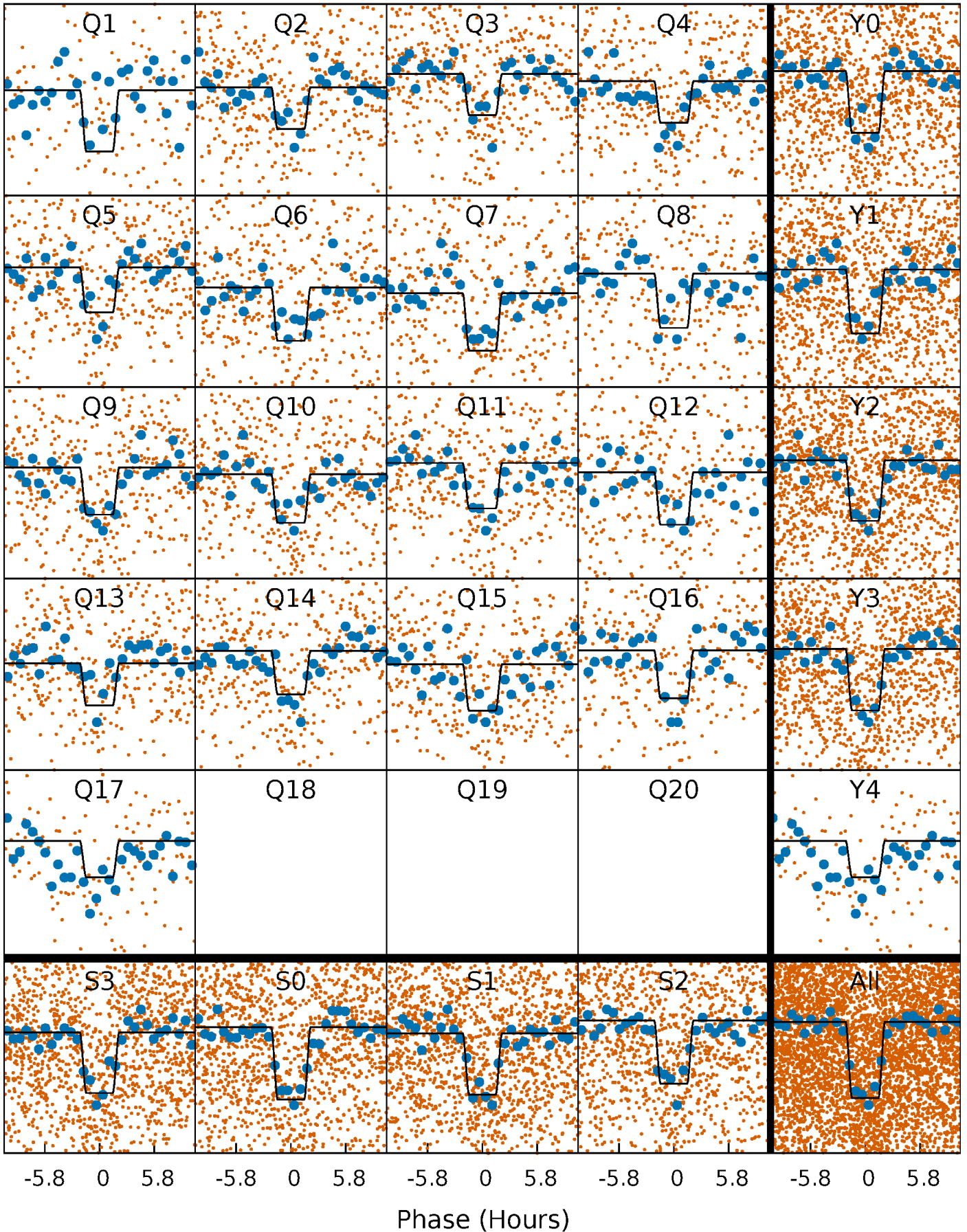
DV Quarter-Phased Transit Curves

TCE 007040629-02 P= 7.466650 Days $T_0=132.772417$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

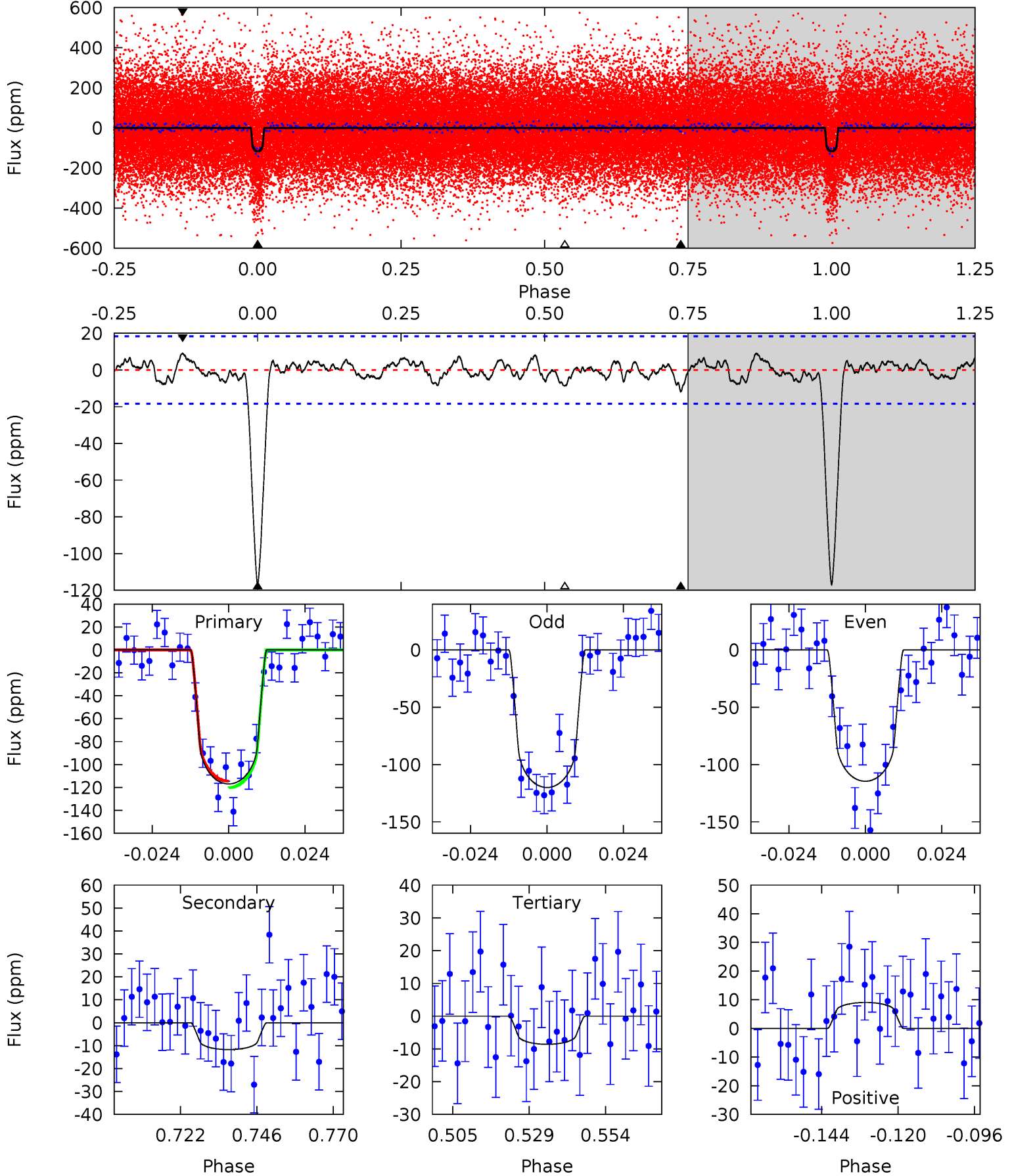
TCE 007040629-02 P= 7.466489 Days $T_0=132.789323$ (BKJD)



DV Model-Shift Uniqueness Test

007040629-02, P = 7.466650 Days, E = 125.305767 Days

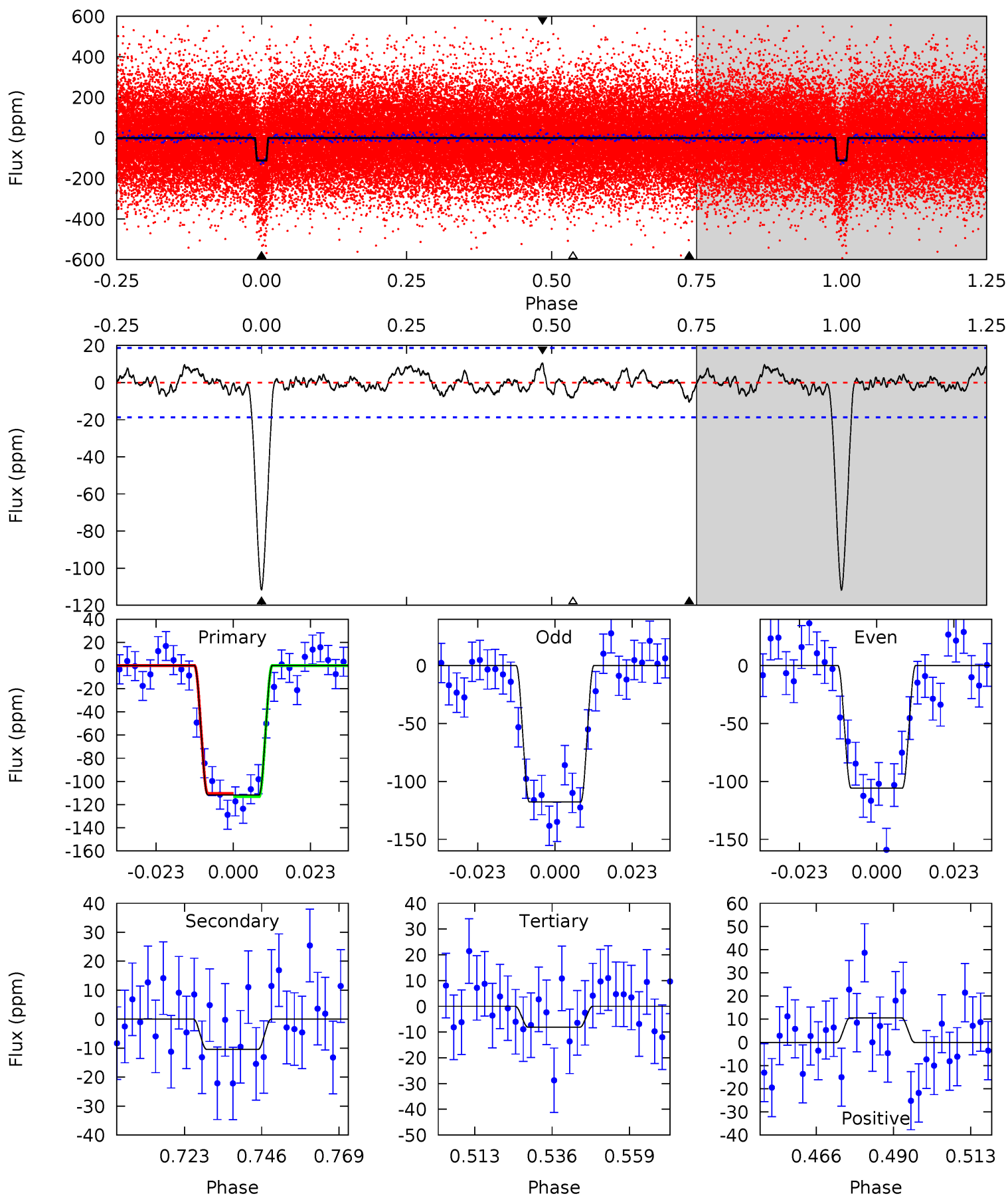
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	3.10	2.27	2.39	4.86	2.26	0.99	28.6	28.5	0.83	0.71	0.72	0.98	0.07	0.76



Alt Model-Shift Uniqueness Test

007040629-02, P = 7.466489 Days, E = 125.322834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.1	2.71	2.12	2.75	4.86	2.27	0.98	26.9	26.3	0.59	-0.05	1.56	1.05	0.09	0.37



Stellar Parameters For KIC 007040629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5966^{+107}_{-119}	$4.169^{+0.162}_{-0.108}$	$0.180^{+0.150}_{-0.150}$	$1.499^{+0.262}_{-0.321}$	$1.213^{+0.098}_{-0.135}$	$0.507^{+0.421}_{-0.168}$
	+2%/-2%	+4%/-3%	+83%/-83%	+17%/-21%	+8%/-11%	+83%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 007040629-02 / KOI 0671.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 4	$1.87^{+0.56}_{-0.54}$	1592^{+80}_{-85}	3650^{+473}_{-363}	12^{+12}_{-6}
Alt.	-10 ± 4	$1.80^{+0.55}_{-0.52}$	1589^{+84}_{-83}	3596^{+542}_{-355}	11^{+13}_{-5}

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

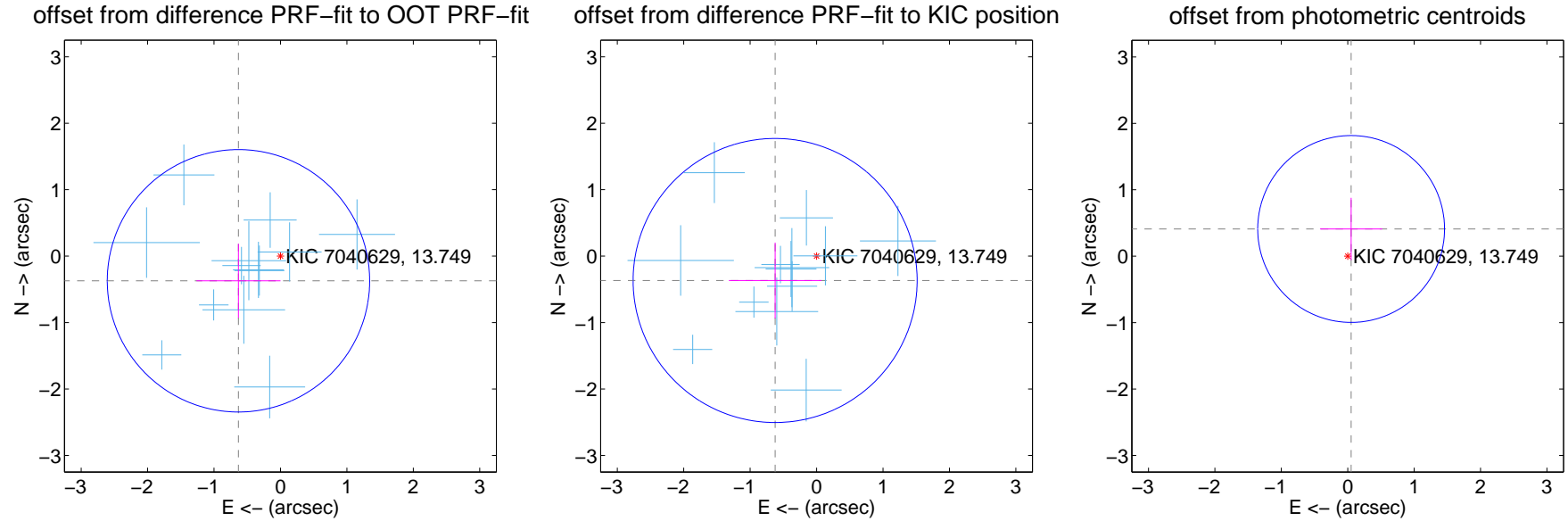
DV Centroid Data

Supplemental centroid analysis for 007040629-02. Kepler magnitude: 13.75. Transit SNR 22.08

There are 13 quarters with good PRF difference image offsets

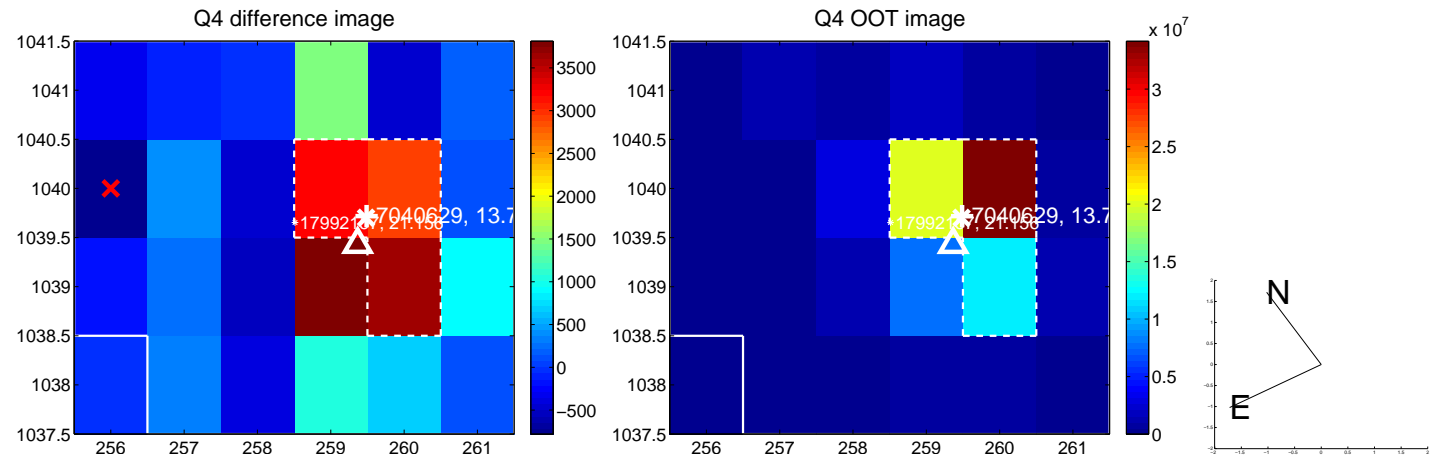
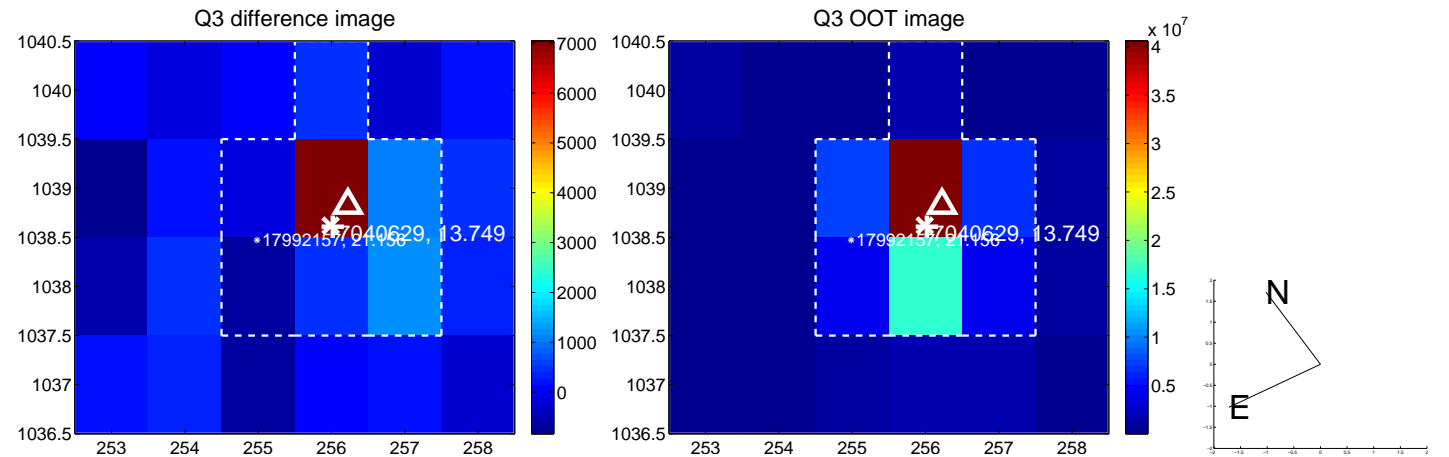
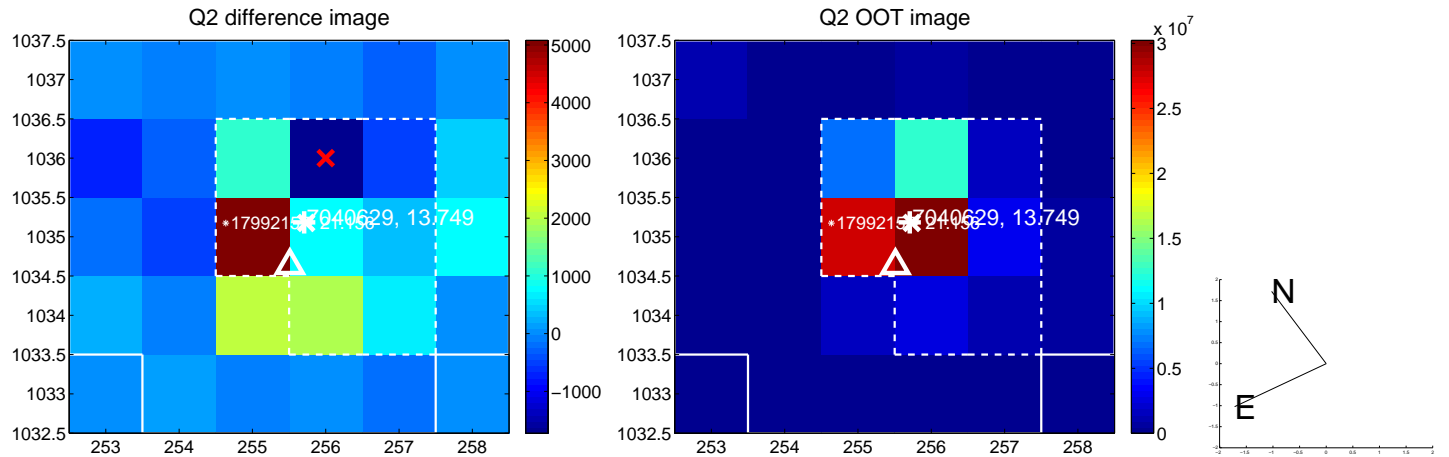
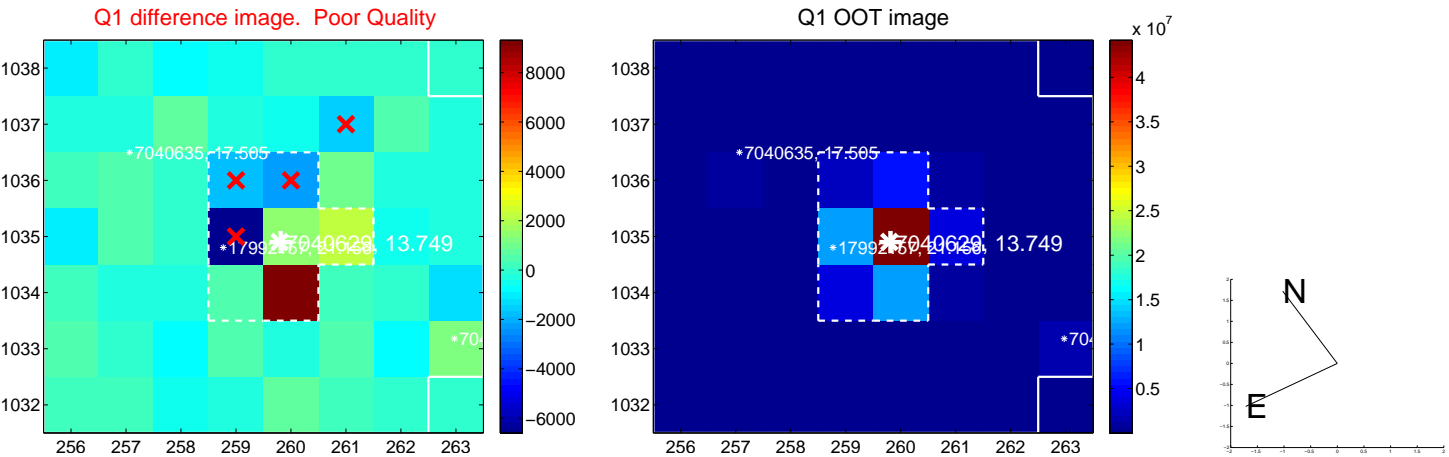
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.733 ± 0.658	1.11	0.632 ± 0.633	-0.371 ± 0.558
PRF-fit source offset from KIC position	0.724 ± 0.713	1.02	0.624 ± 0.697	-0.367 ± 0.570
photometric centroid source offset	0.41 ± 0.47	0.88	-0.05 ± 0.47	0.41 ± 0.47

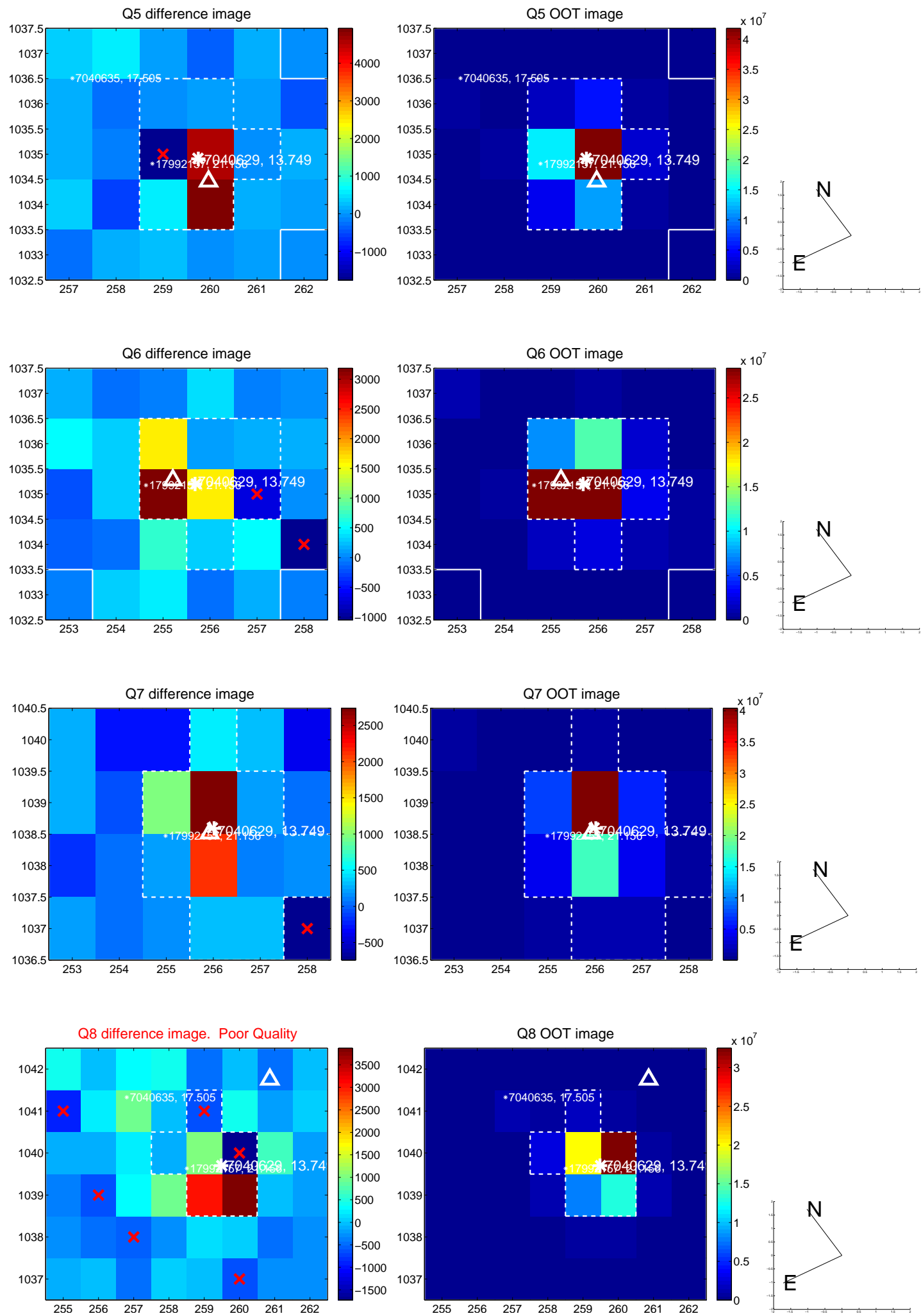


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

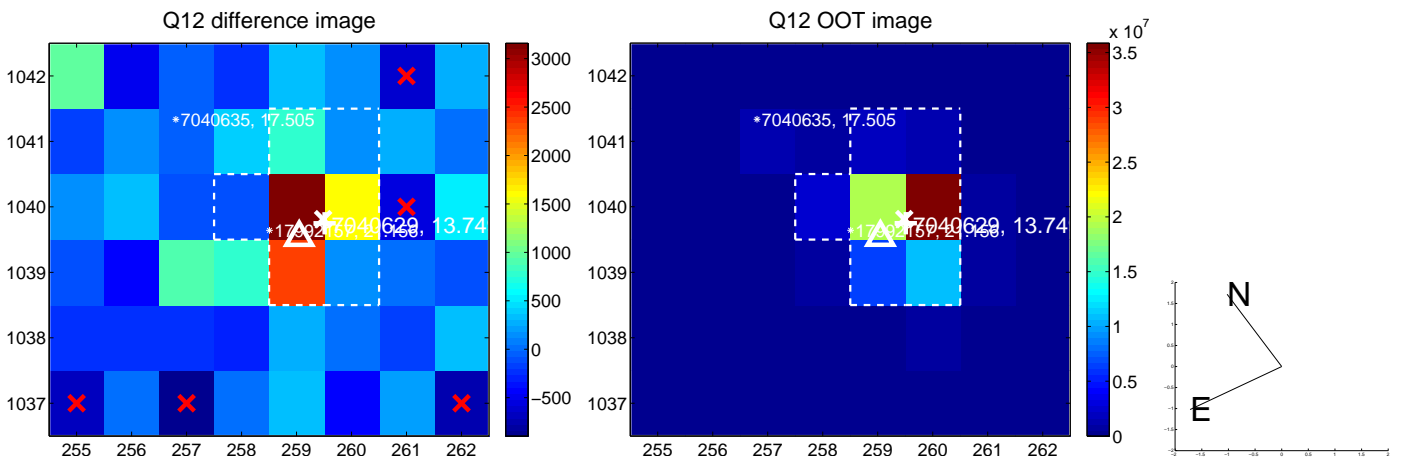
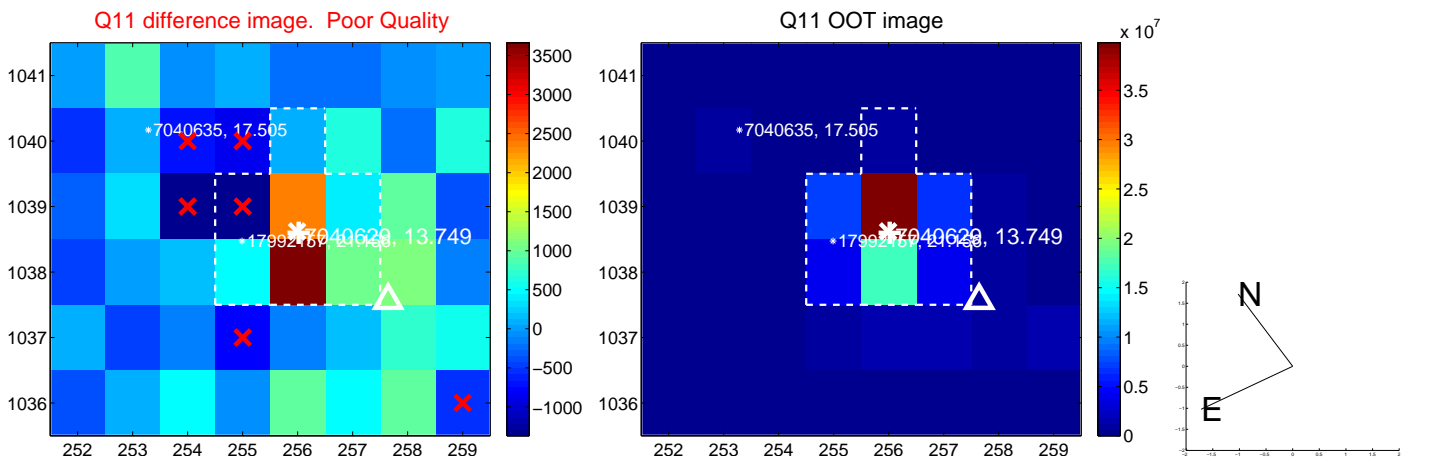
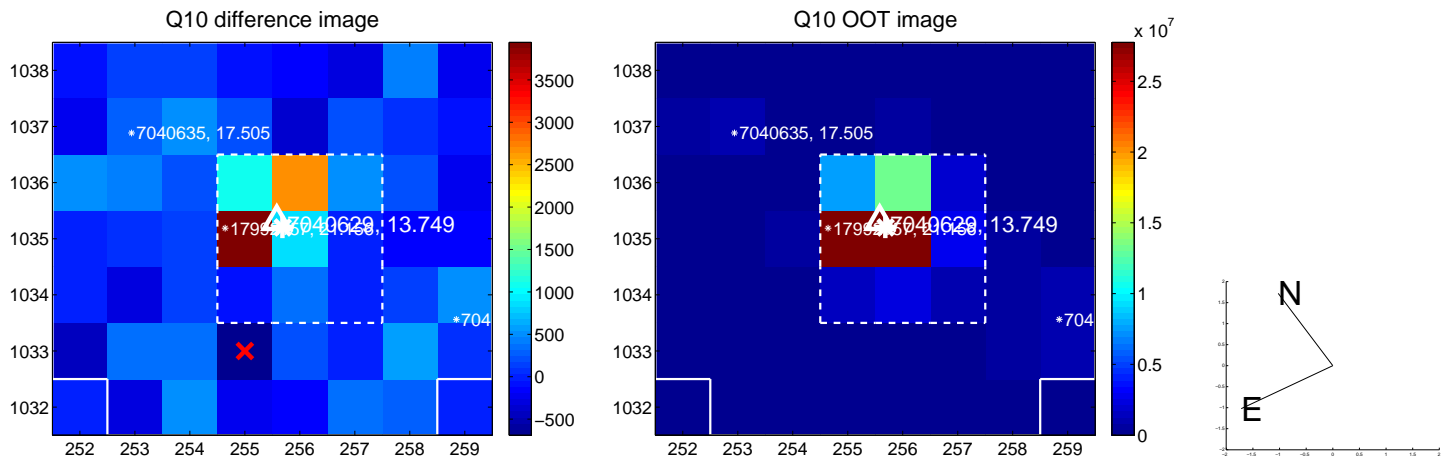
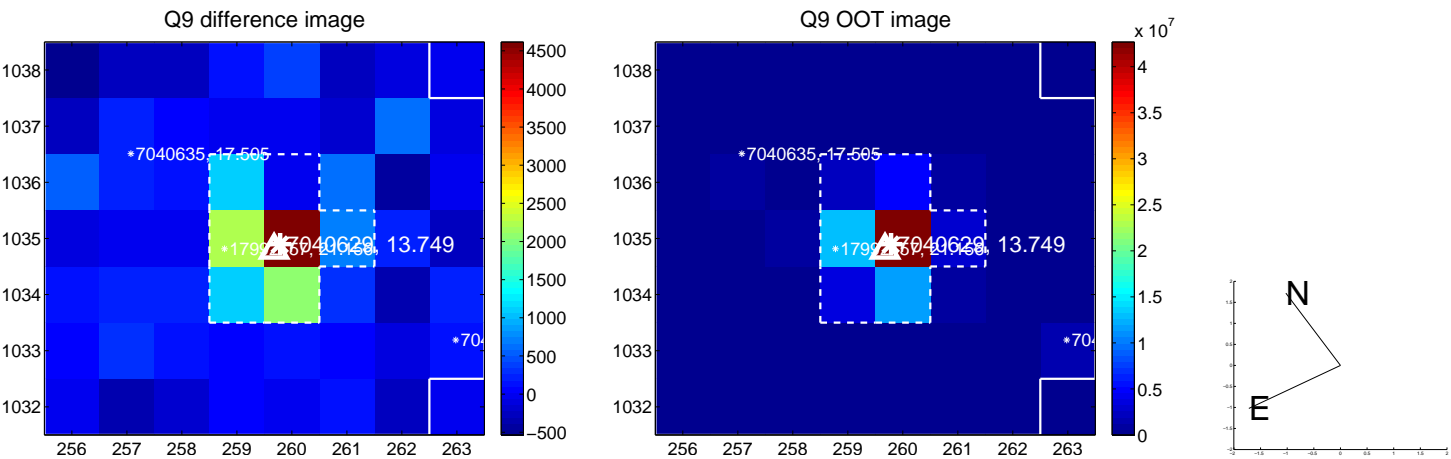
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

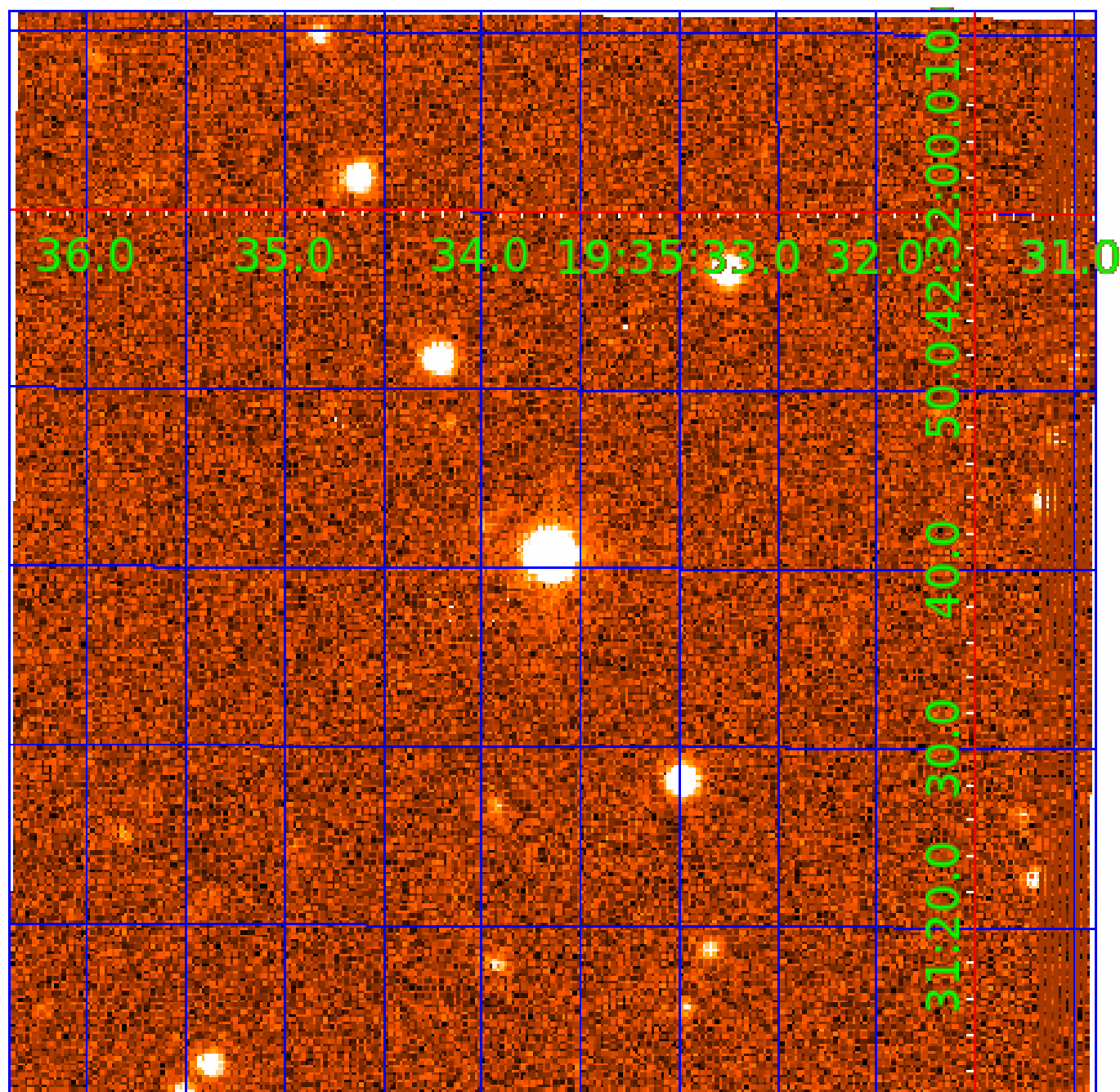


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007040629

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})
007040629-01	OBS	0671.01	4.228646	132.684186	149.0	3.837	34.3	36.8	1.50	5966	2.37	857.49
007040629-02	OBS	0671.02	7.466650	132.772417	118.1	3.869	20.4	22.1	1.50	5966	1.88	401.79
007040629-03	OBS	0671.03	16.259572	144.527378	128.6	3.861	14.4	15.9	1.50	5966	2.00	142.35
007040629-04	OBS	0671.04	11.131759	134.426471	95.9	4.157	13.0	14.7	1.50	5966	1.74	235.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040629-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007040629-04	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.

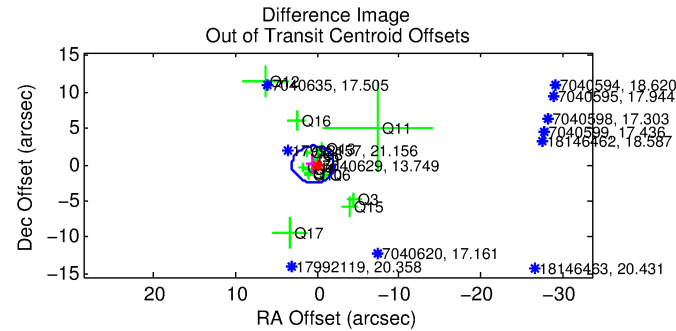
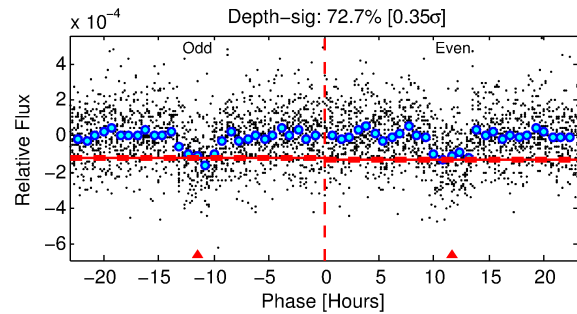
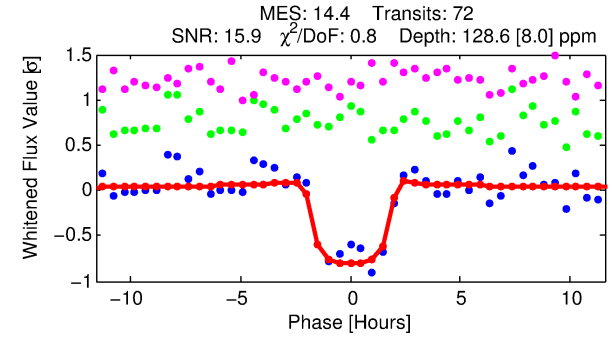
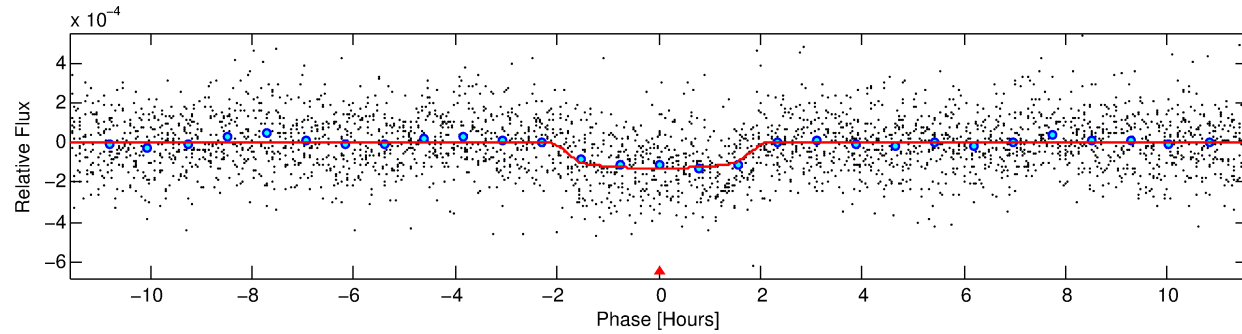
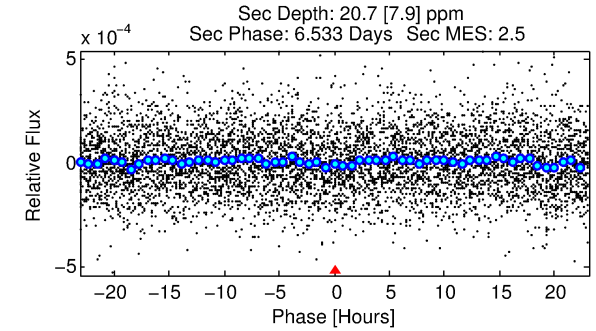
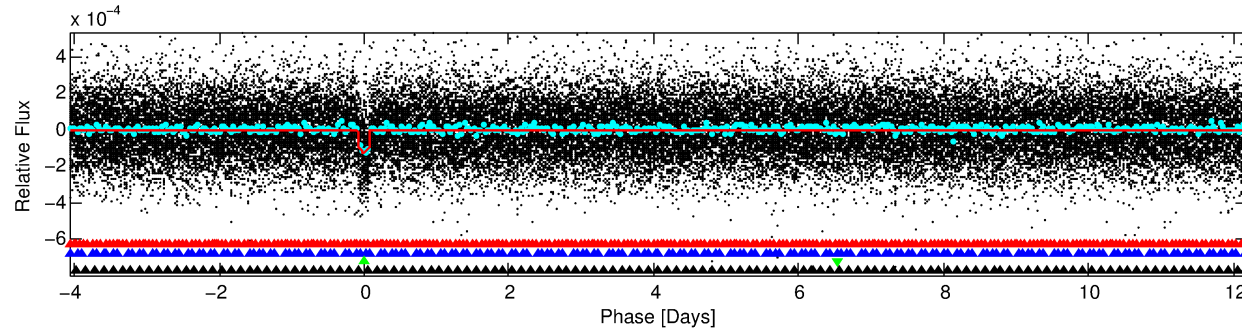
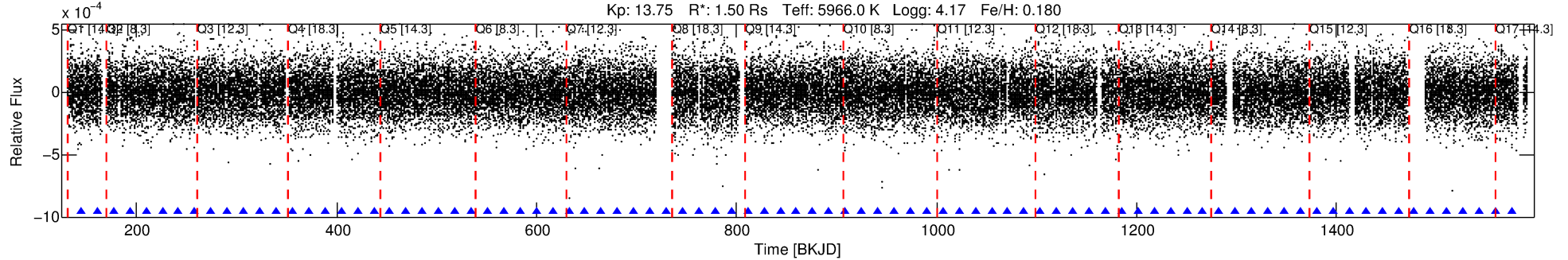
Ephemeris Match Information For 007040629-03

No Significant Match Found

DV One-Page Summary

KIC: 7040629 Candidate: 3 of 4 Period: 16.260 d
KOI: K00671.03 Name: Kepler-208e Corr: 0.983

Kp: 13.75 R*: 1.50 Rs Teff: 5966.0 K Logg: 4.17 Fe/H: 0.180



DV Fit Results:

Period = 16.25957 [0.00010] d
Epoch = 144.5274 [0.0049] BKJD
Rp/R* = 0.0122 [0.0040]
a/R* = 15.56 [25.17]
b = 0.89 [0.39]
Seff = 142.35 [42.37]
Teq = 881 [66] K
Rp = 2.00 [0.79] Re
a = 0.1339 [0.0253] AU
Ag = 51.12 [41.67] [1.20σ]
Teffp = 3641 [698] K [3.94σ]

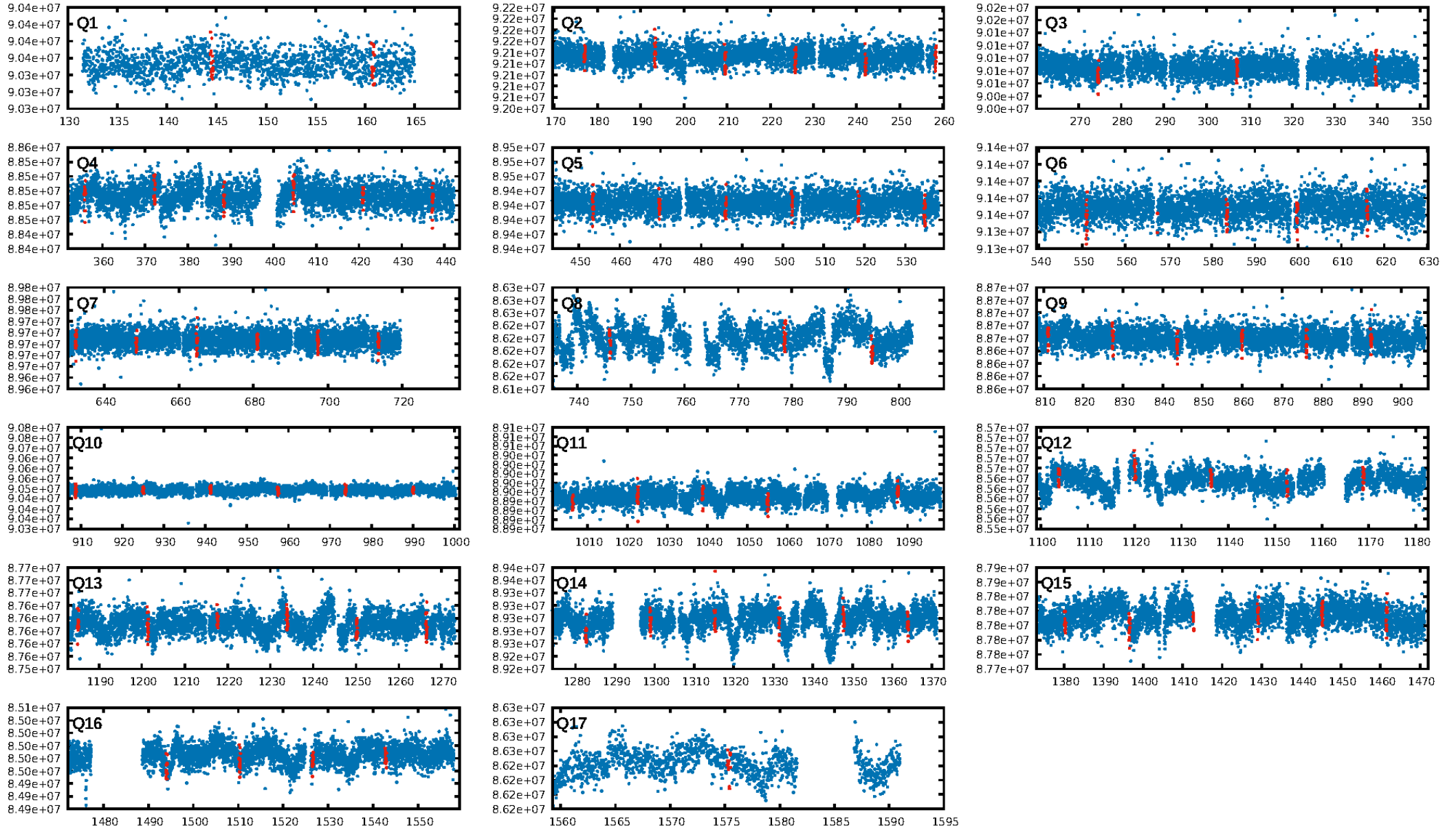
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.69σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-45
RollingBand-fgt: 1.00 [69/69]
GhostDiagnostic-chr: -20.81
Centroid-sig: 37.2%
Centroid-so: 0.523 arcsec [0.81σ]
OotOffset-rm: 0.484 arcsec [0.57σ]
KicOffset-rm: 0.479 arcsec [0.52σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

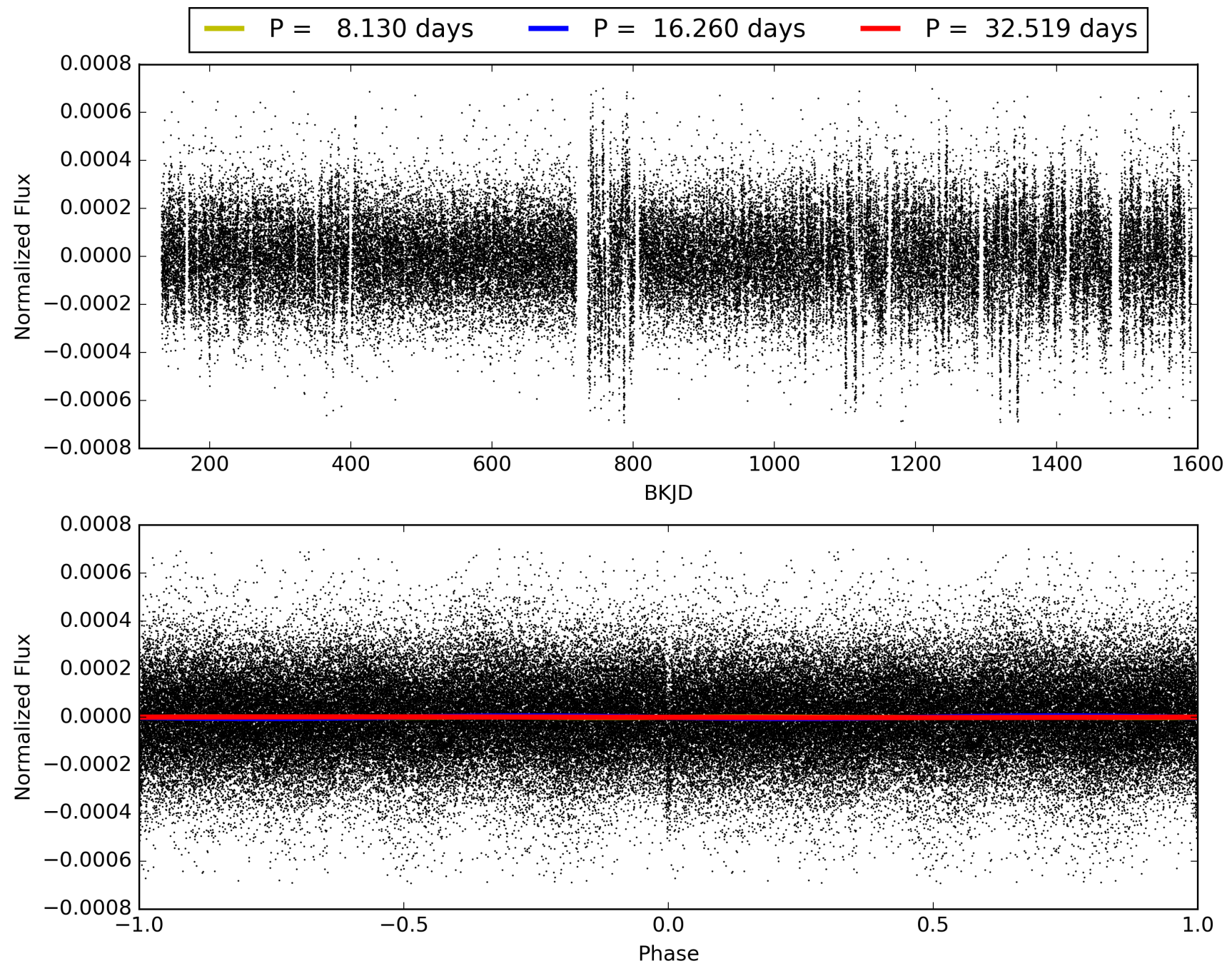
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:49:10 Z

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

TCE 007040629-03, PDC Light Curves

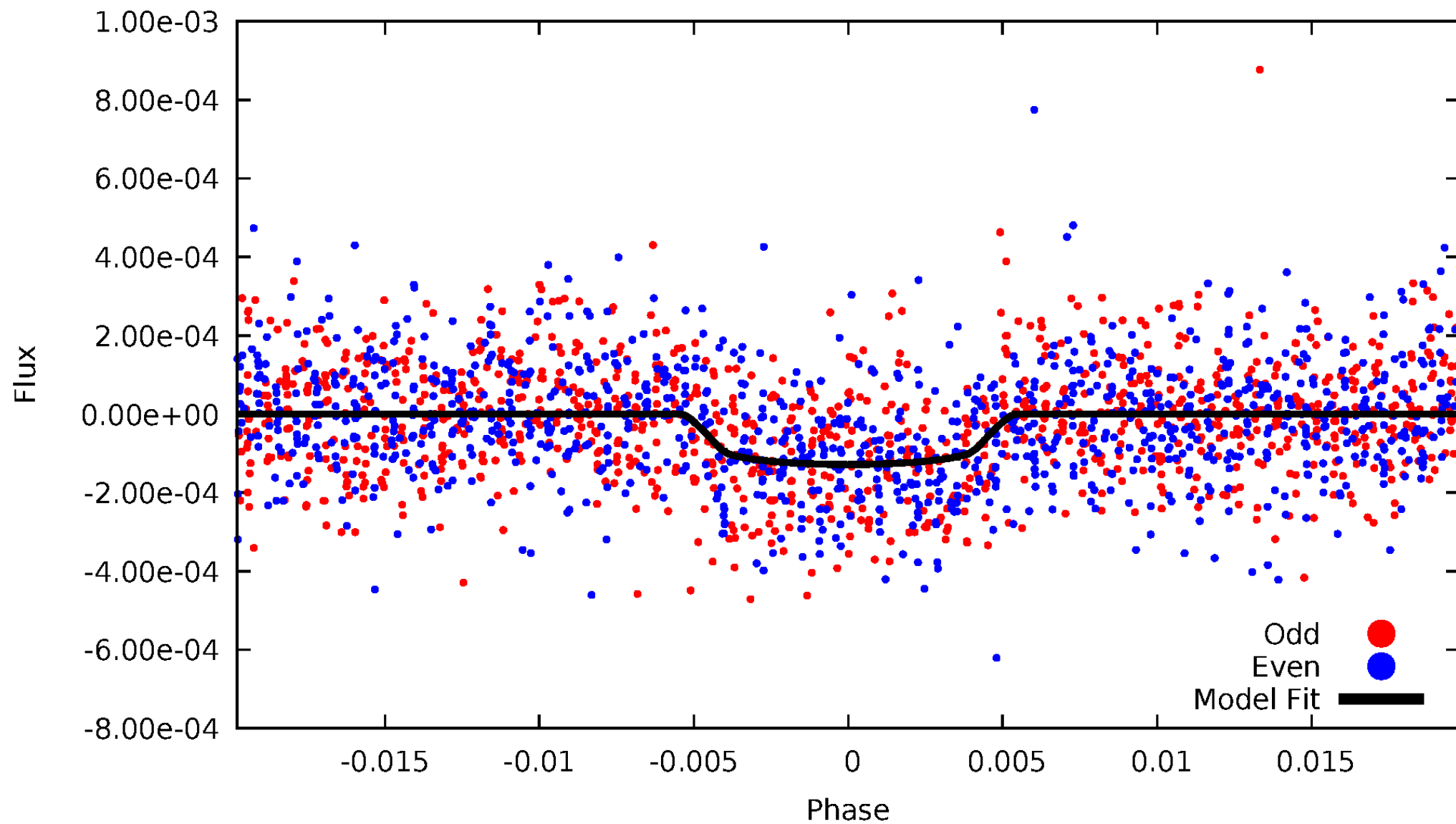


TCE 007040629-03



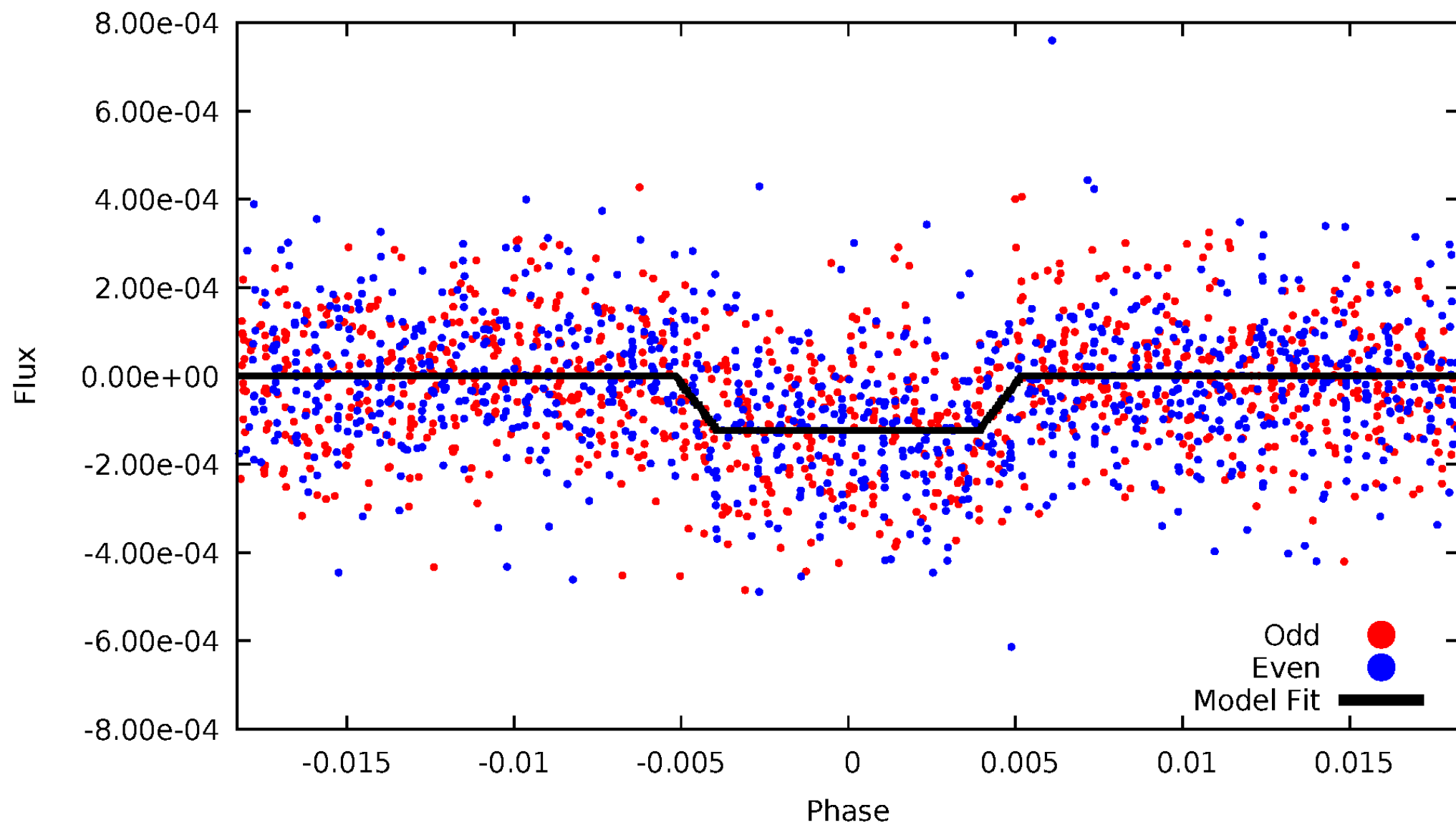
DV Odd/Even

TCE 007040629-03



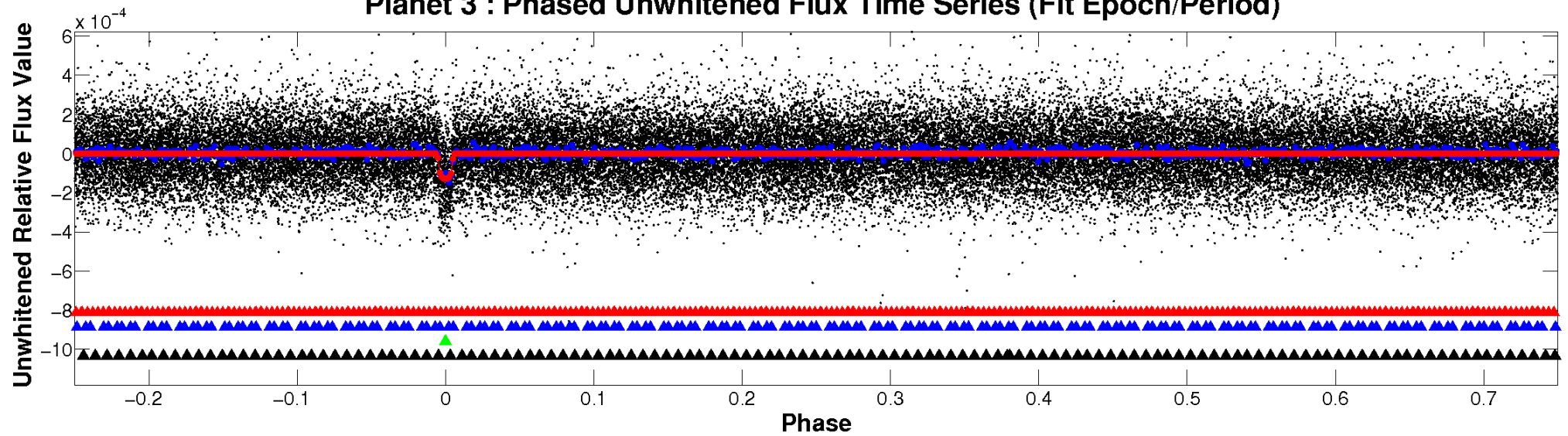
ALT Odd/Even

TCE 007040629-03

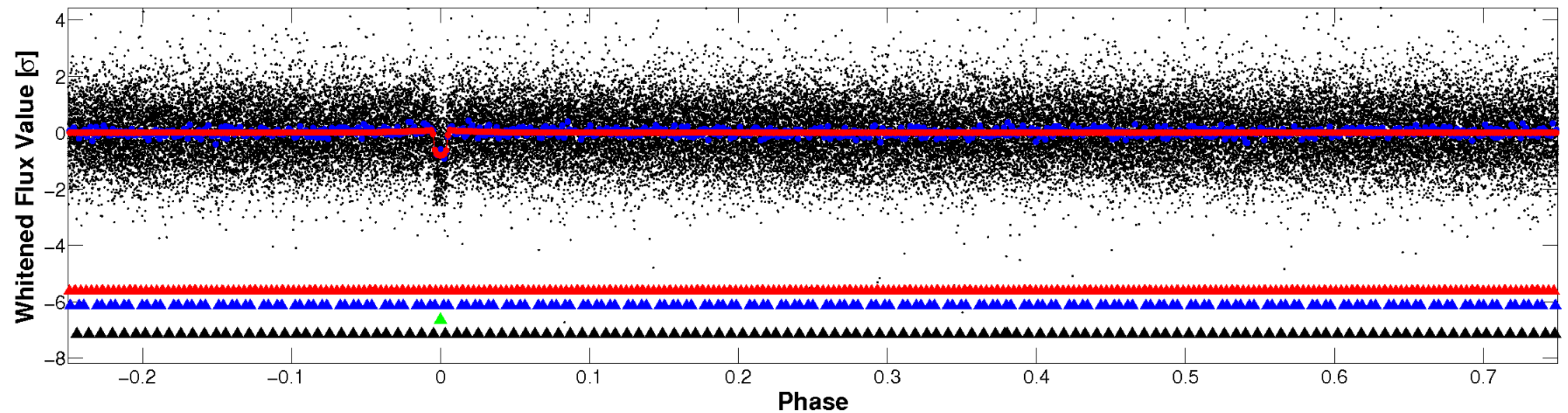


Non-Whitened Vs. Whitened Light Curve

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

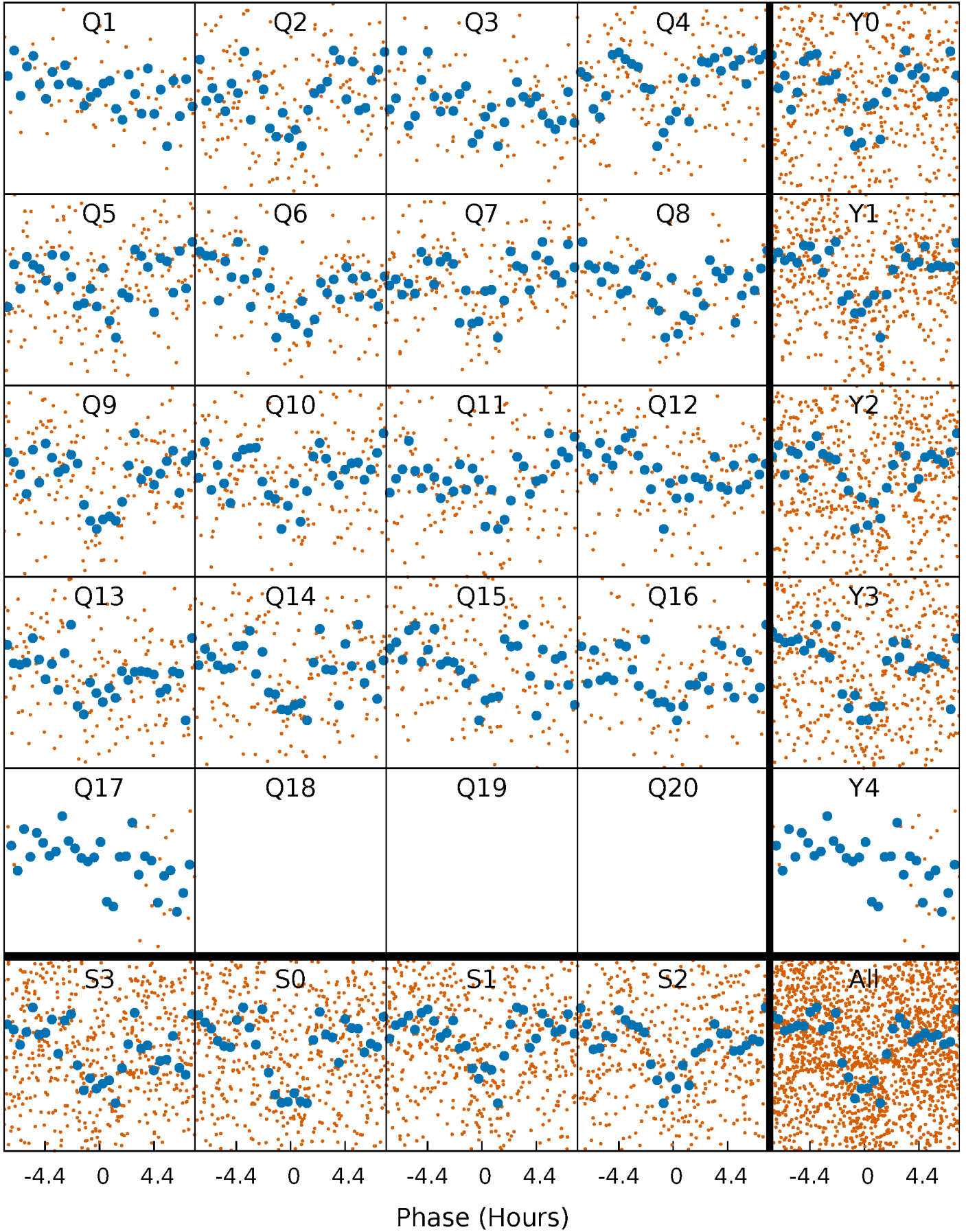


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



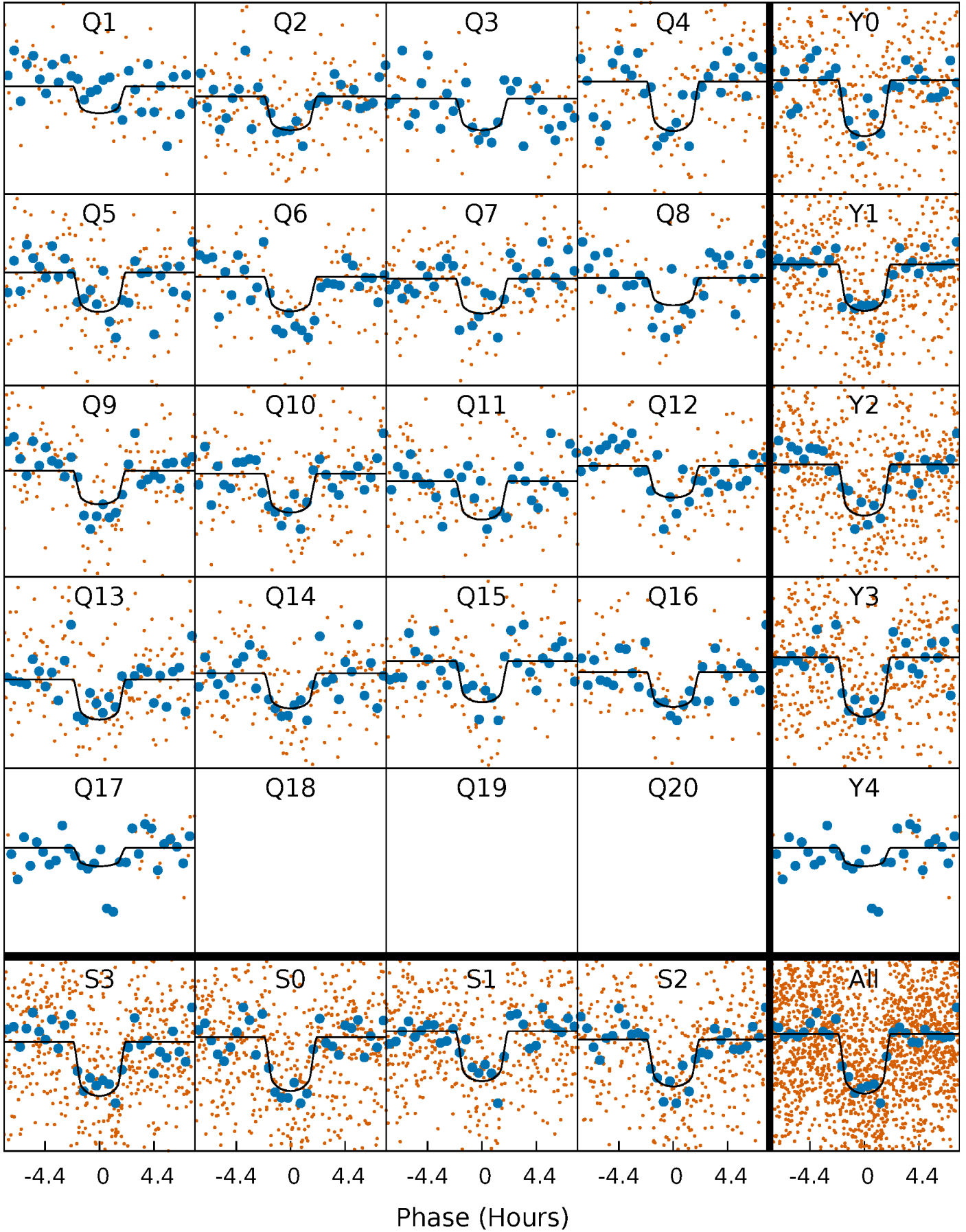
PDC Quarter-Phased Transit Curves

TCE 007040629-03 P= 16.259572 Days $T_0=144.527378$ (BKJD)



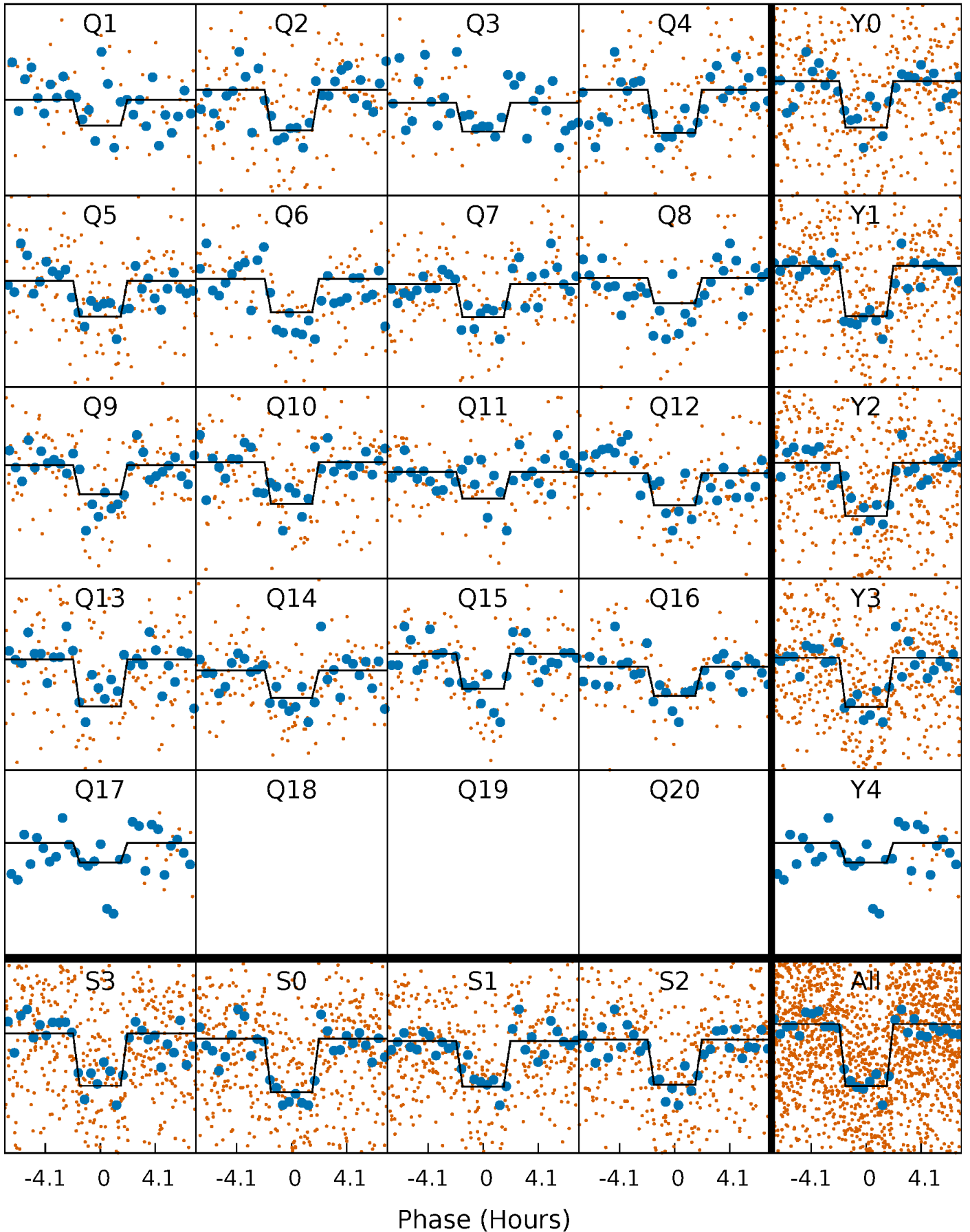
DV Quarter-Phased Transit Curves

TCE 007040629-03 P= 16.259572 Days $T_0=144.527378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

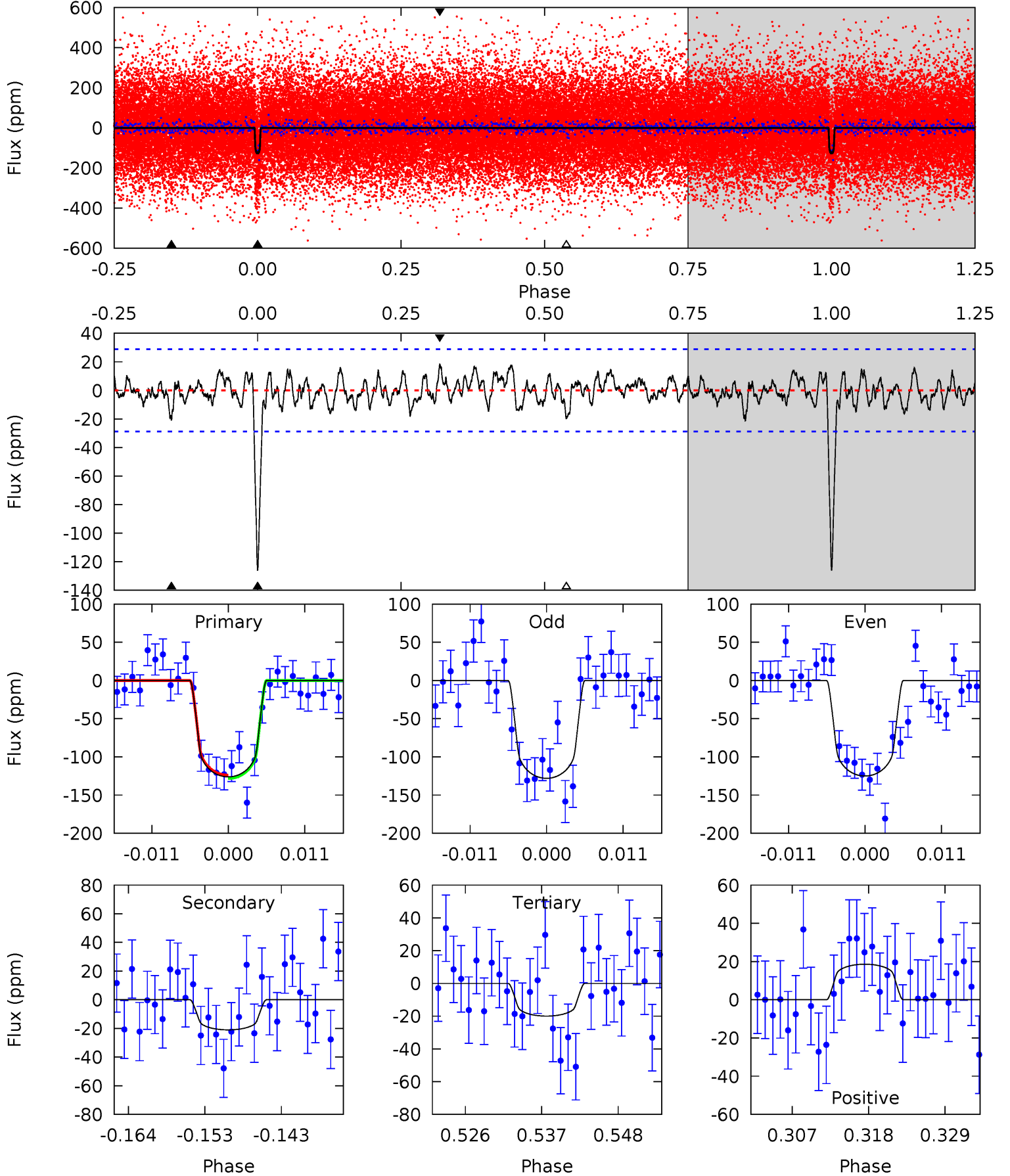
TCE 007040629-03 P= 16.259573 Days $T_0=144.526127$ (BKJD)



DV Model-Shift Uniqueness Test

007040629-03, P = 16.259572 Days, E = 128.267806 Days

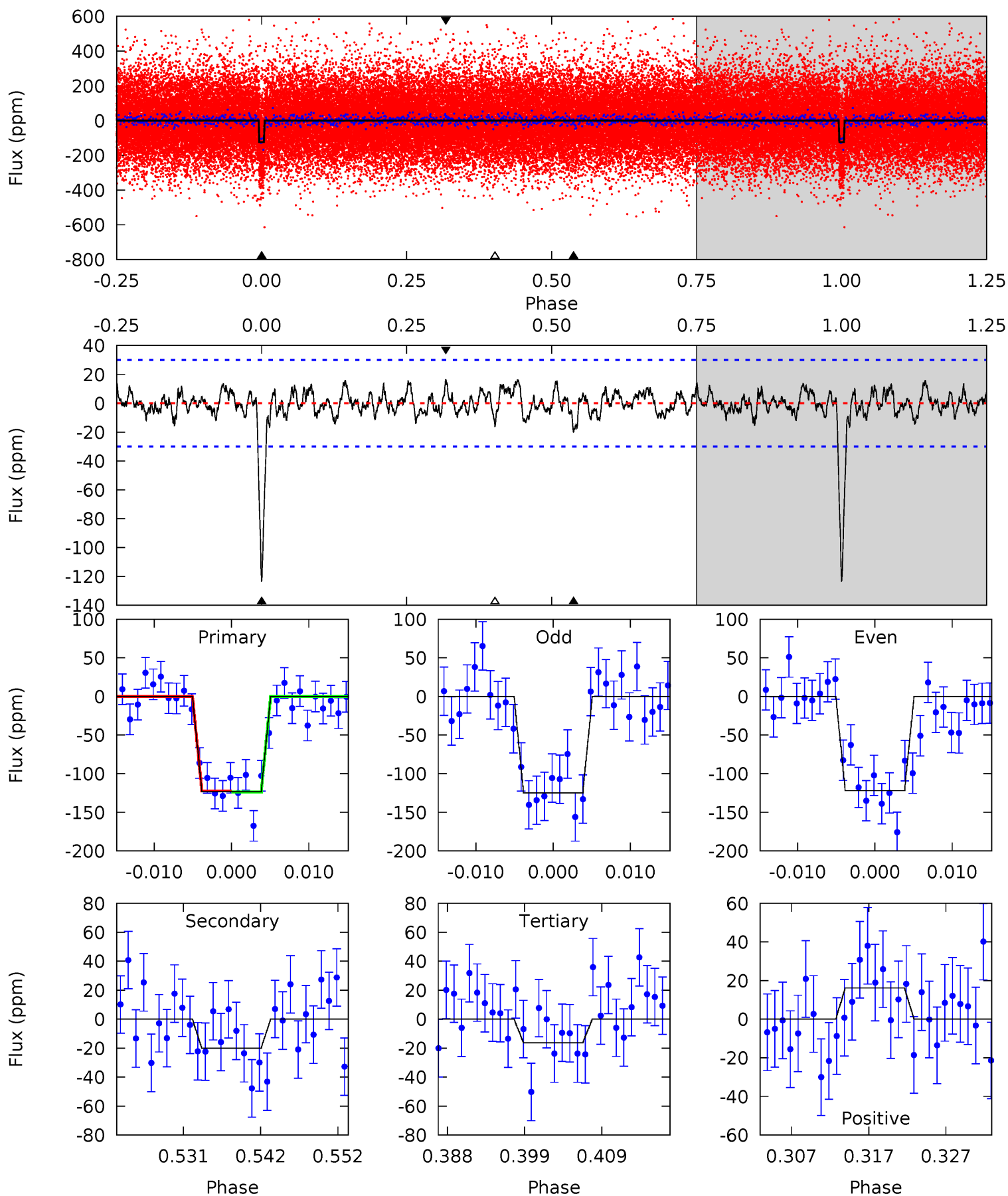
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.9	3.65	3.47	3.23	5.01	2.54	1.24	18.4	18.7	0.18	0.42	0.26	0.97	0.13	0.36



Alt Model-Shift Uniqueness Test

007040629-03, P = 16.259573 Days, E = 128.266554 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	3.37	2.74	2.70	5.02	2.57	1.07	17.9	17.9	0.63	0.66	0.23	1.01	0.12	0.12



Stellar Parameters For KIC 007040629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5966^{+107}_{-119}	$4.169^{+0.162}_{-0.108}$	$0.180^{+0.150}_{-0.150}$	$1.499^{+0.262}_{-0.321}$	$1.213^{+0.098}_{-0.135}$	$0.507^{+0.421}_{-0.168}$
	+2%/-2%	+4%/-3%	+83%/-83%	+17%/-21%	+8%/-11%	+83%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 007040629-03 / KOI 0671.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 6	$1.98^{+0.71}_{-0.71}$	1226^{+64}_{-63}	3954^{+714}_{-404}	51^{+76}_{-25}
Alt.	-20 ± 6	$1.78^{+0.74}_{-0.62}$	1225^{+62}_{-68}	4053^{+802}_{-501}	60^{+90}_{-33}

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 $A_{obs} \gg 1.0$

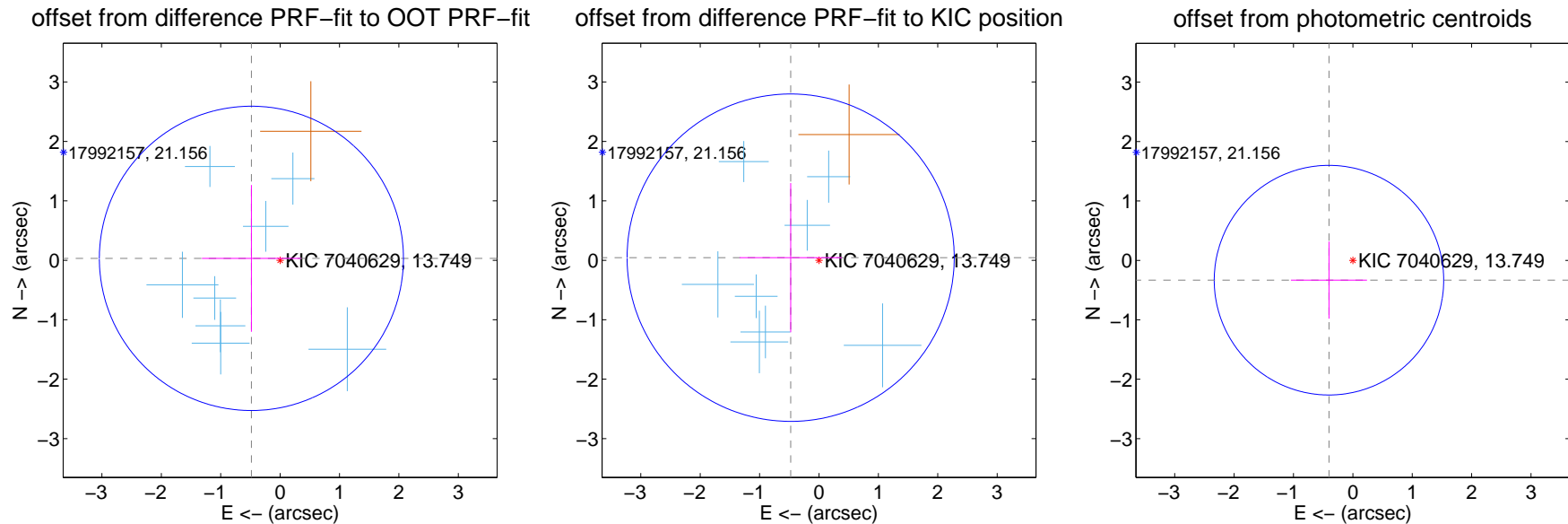
DV Centroid Data

Supplemental centroid analysis for 007040629-03. Kepler magnitude: 13.75. Transit SNR 15.87

There are 8 quarters with good PRF difference image offsets

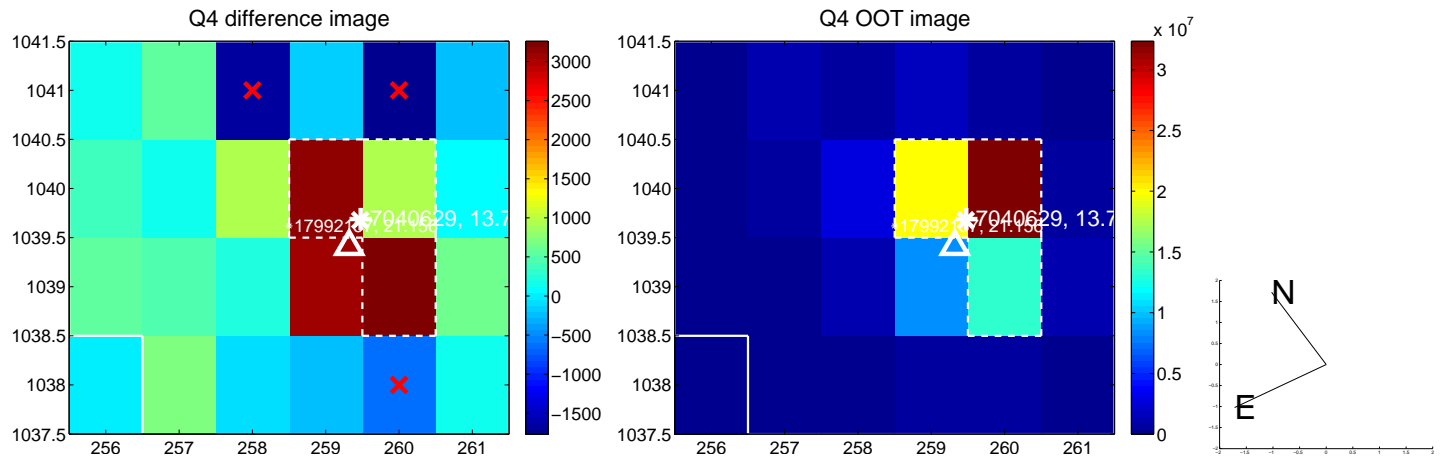
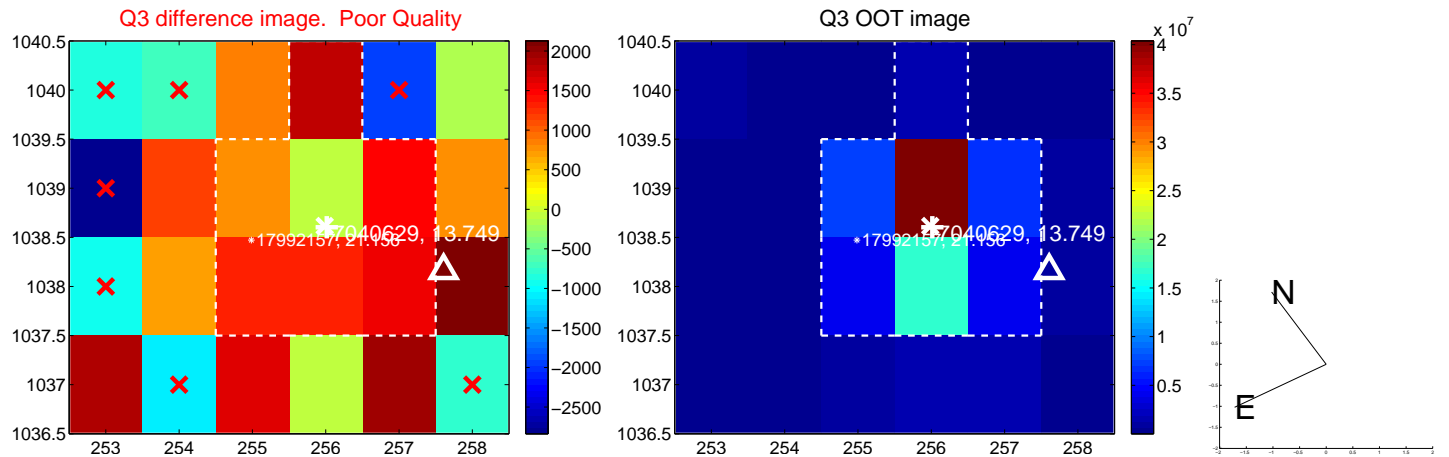
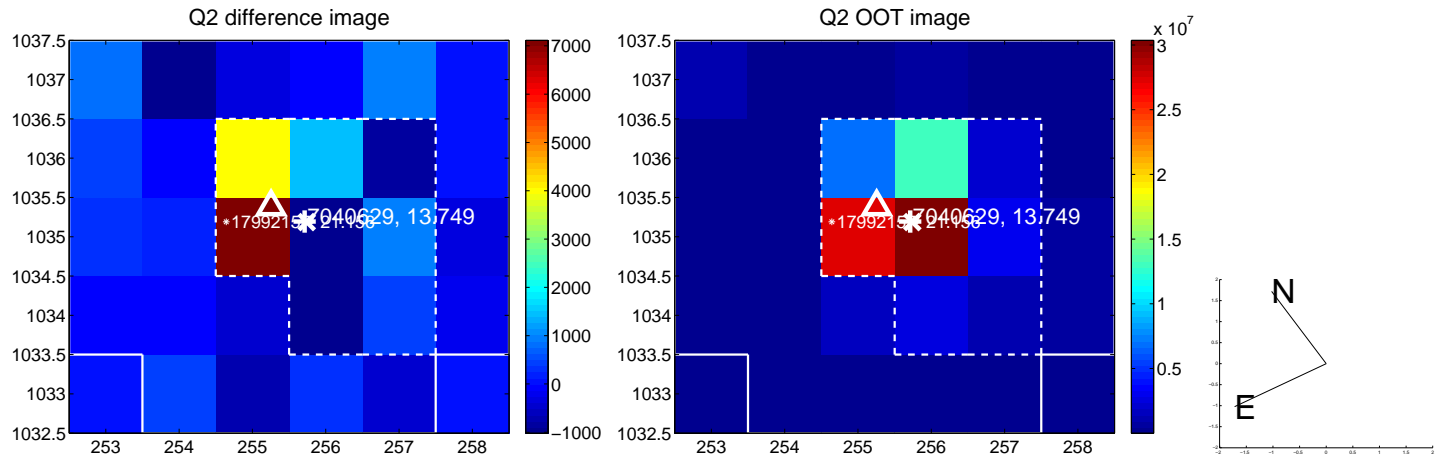
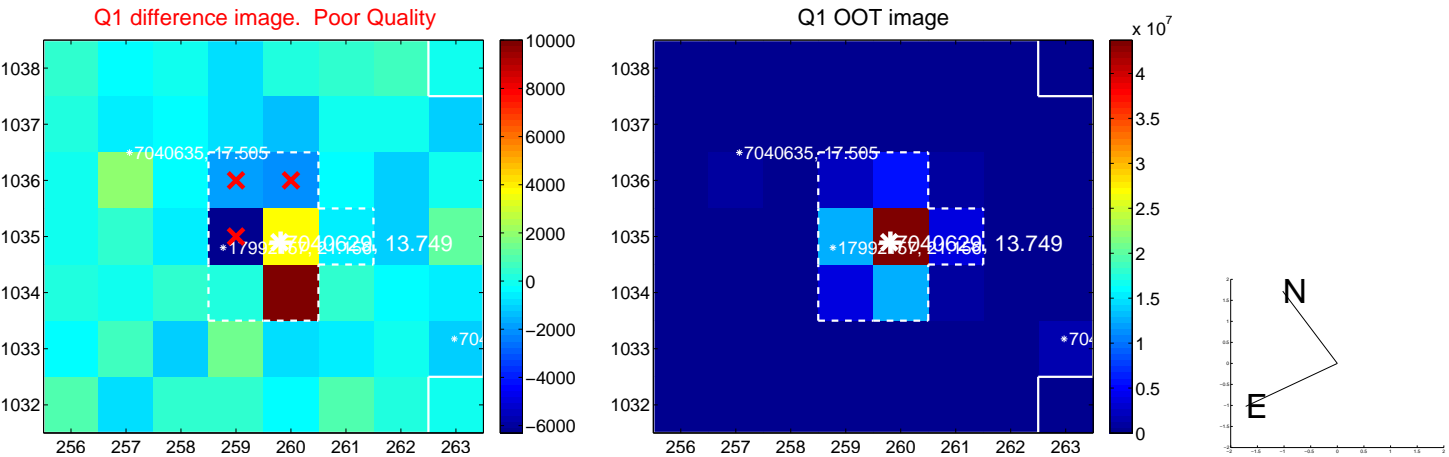
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.484 ± 0.853	0.57	0.483 ± 0.833	0.033 ± 1.234
PRF-fit source offset from KIC position	0.479 ± 0.918	0.52	0.477 ± 0.860	0.044 ± 1.255
photometric centroid source offset	0.52 ± 0.64	0.81	0.40 ± 0.64	-0.33 ± 0.65

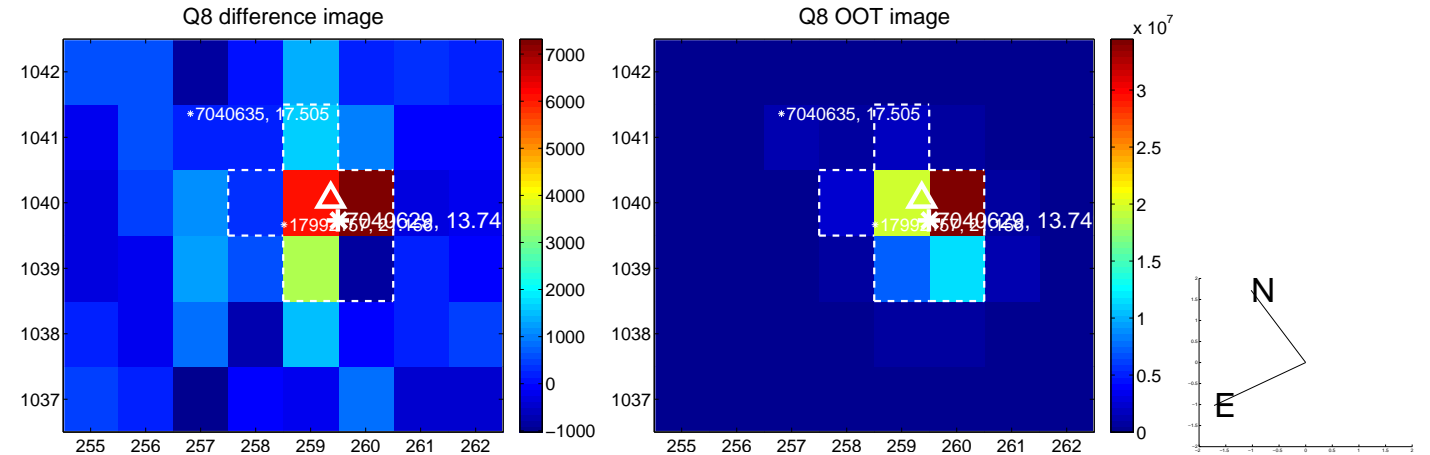
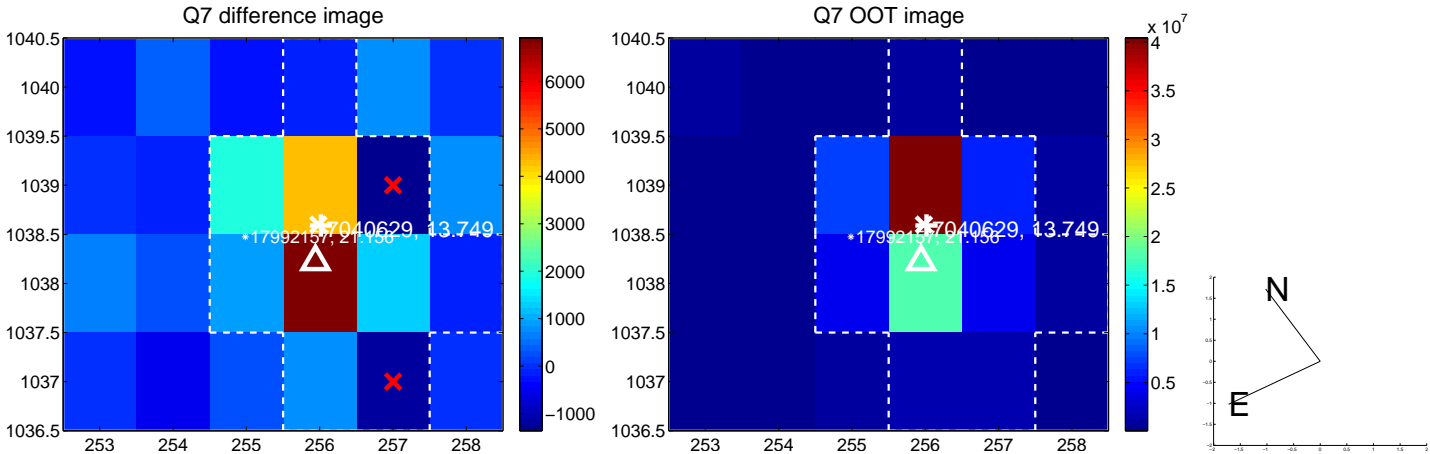
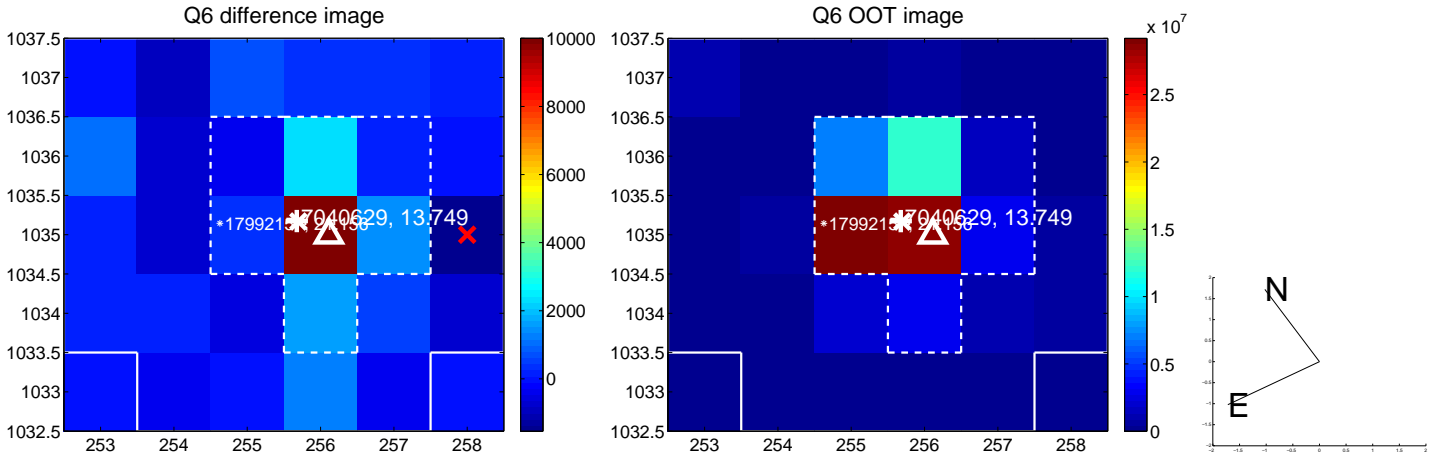
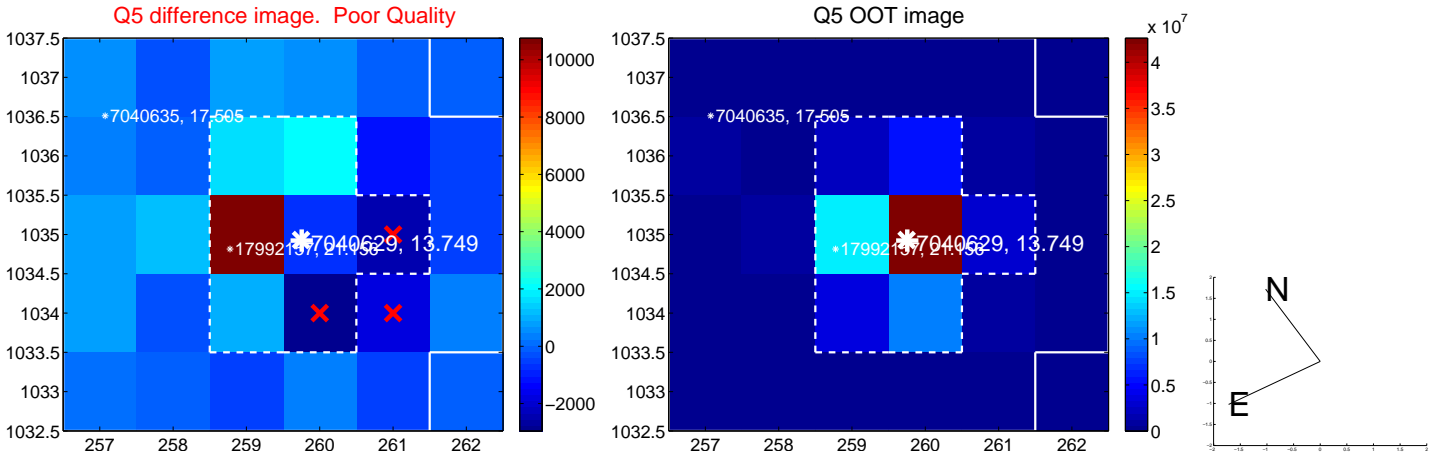


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

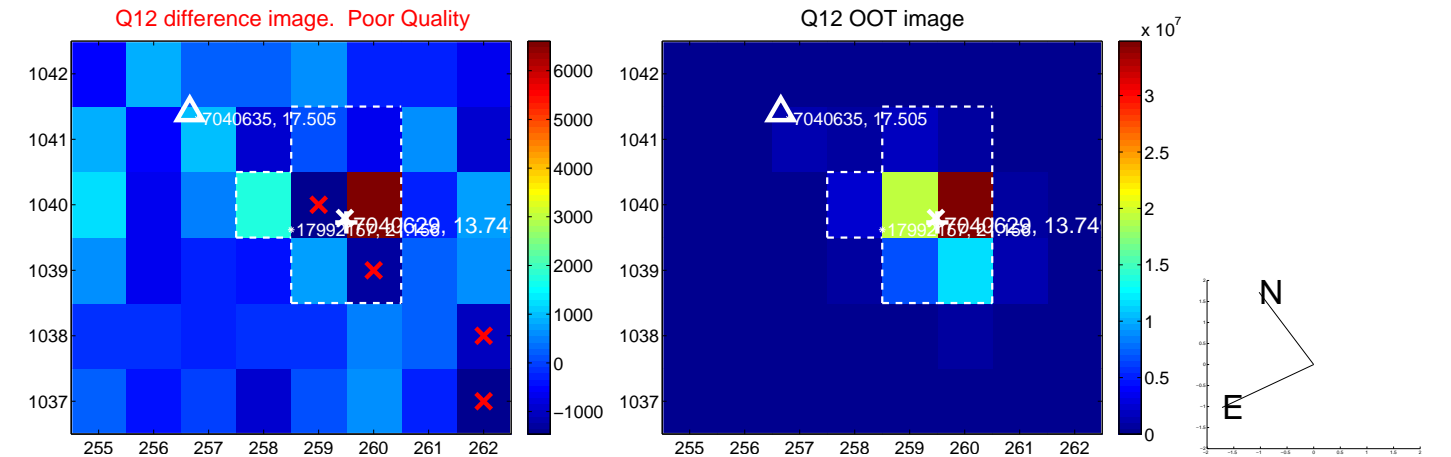
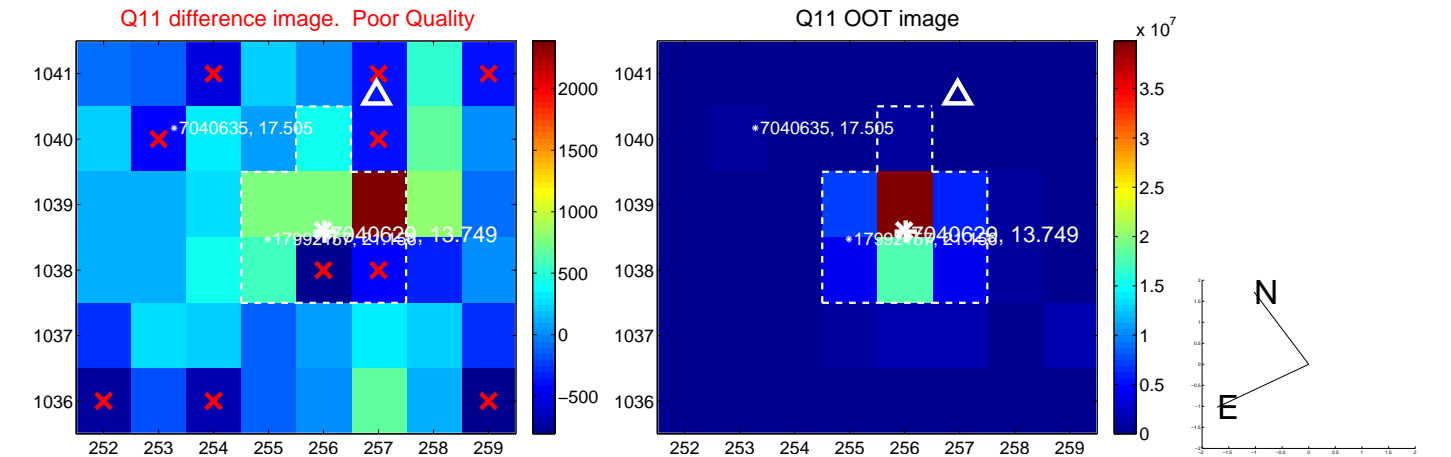
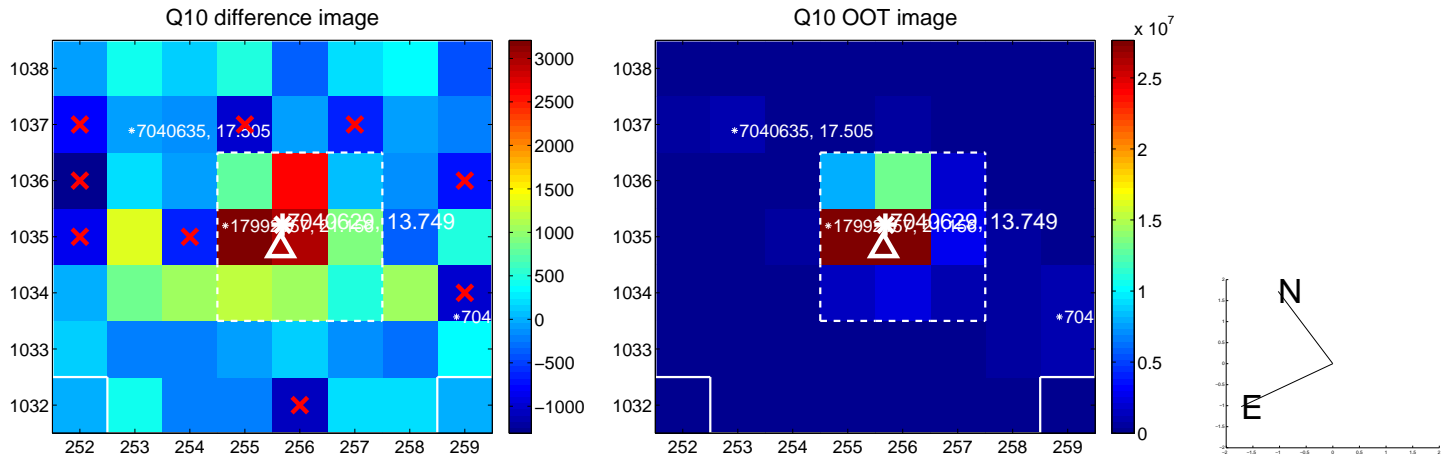
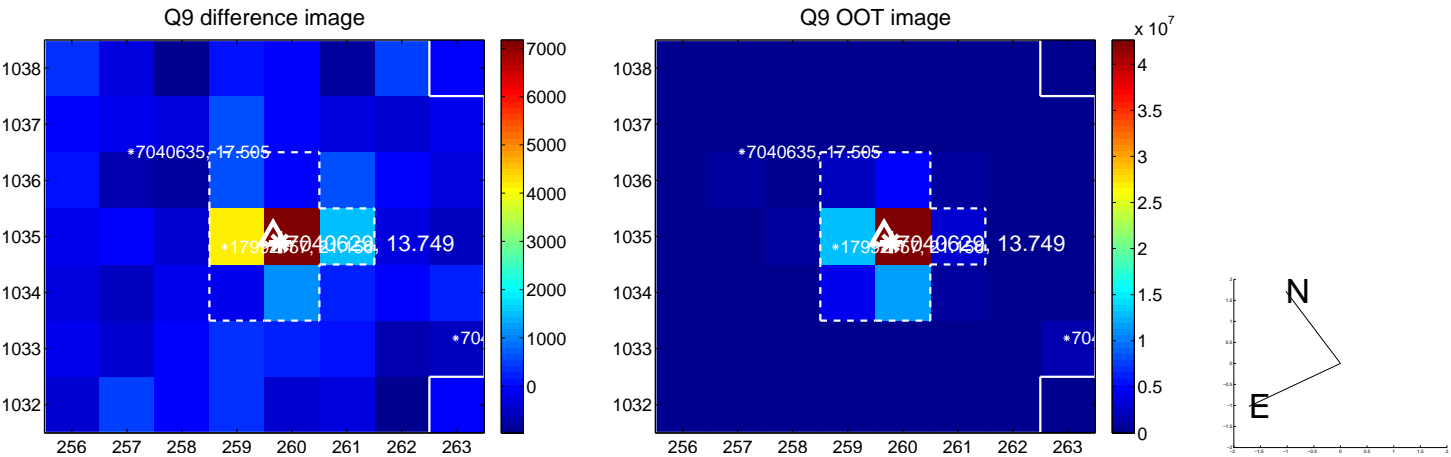
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



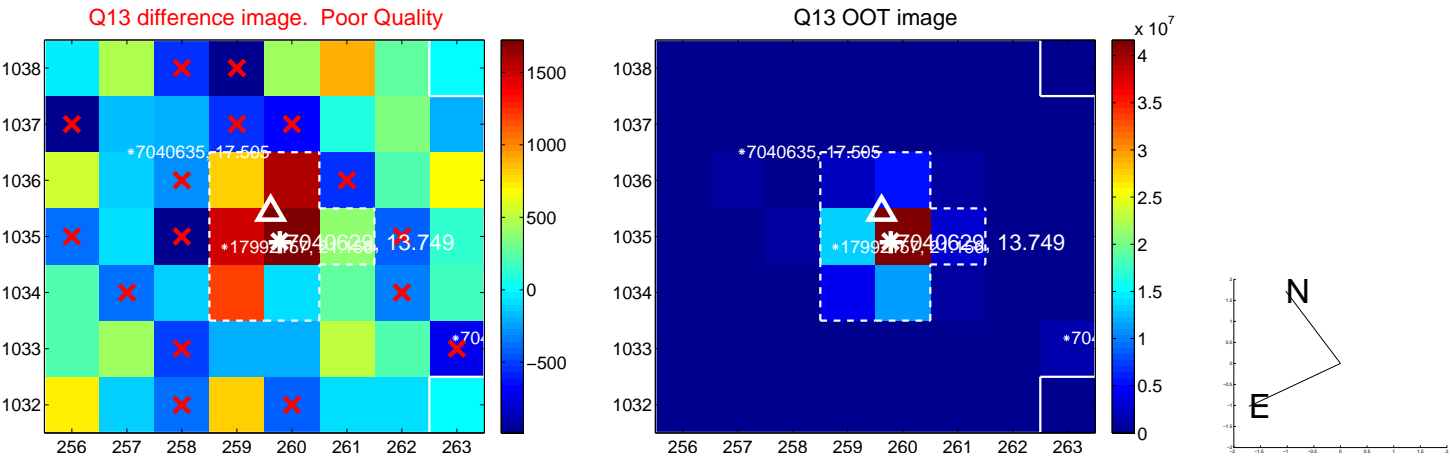
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



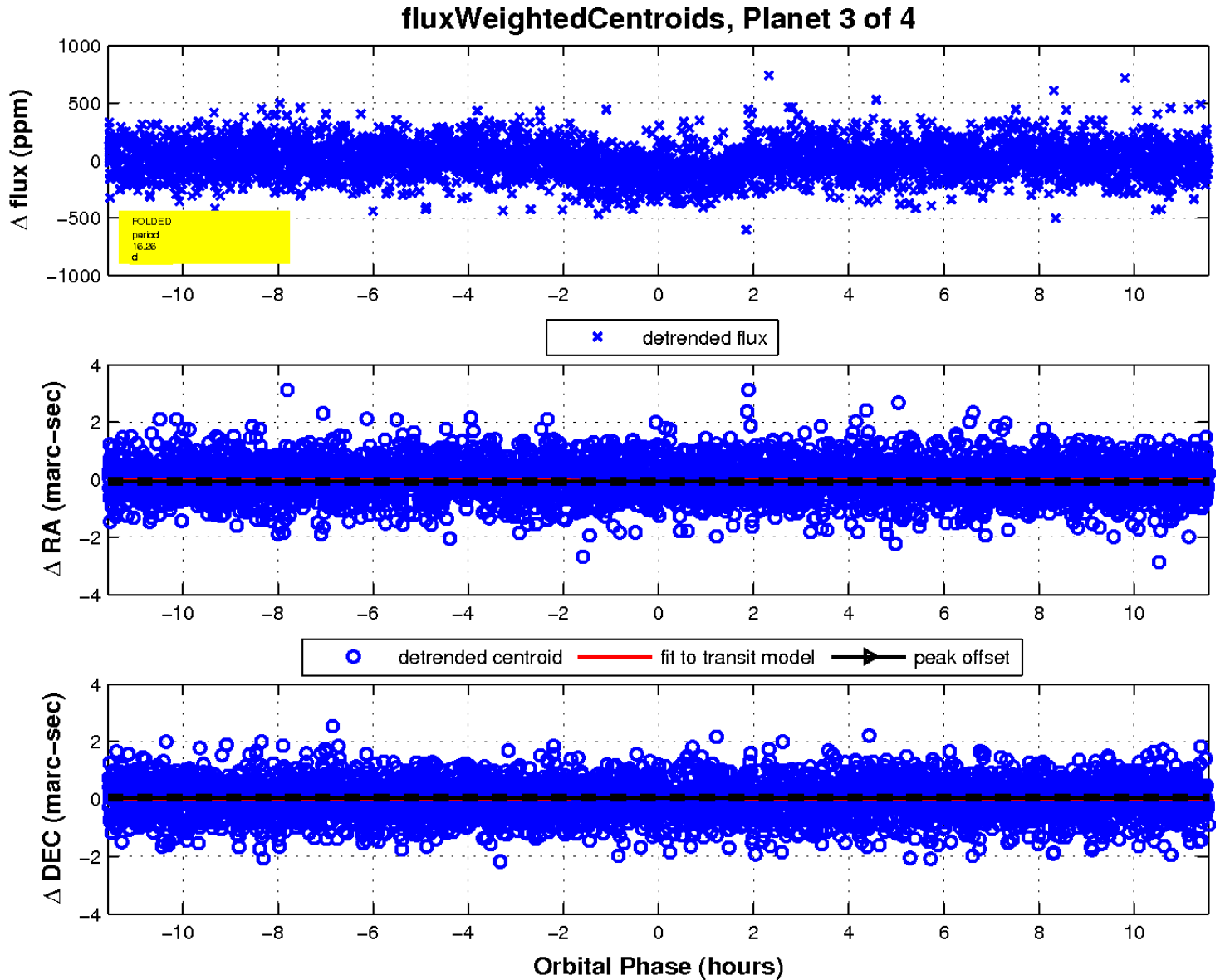
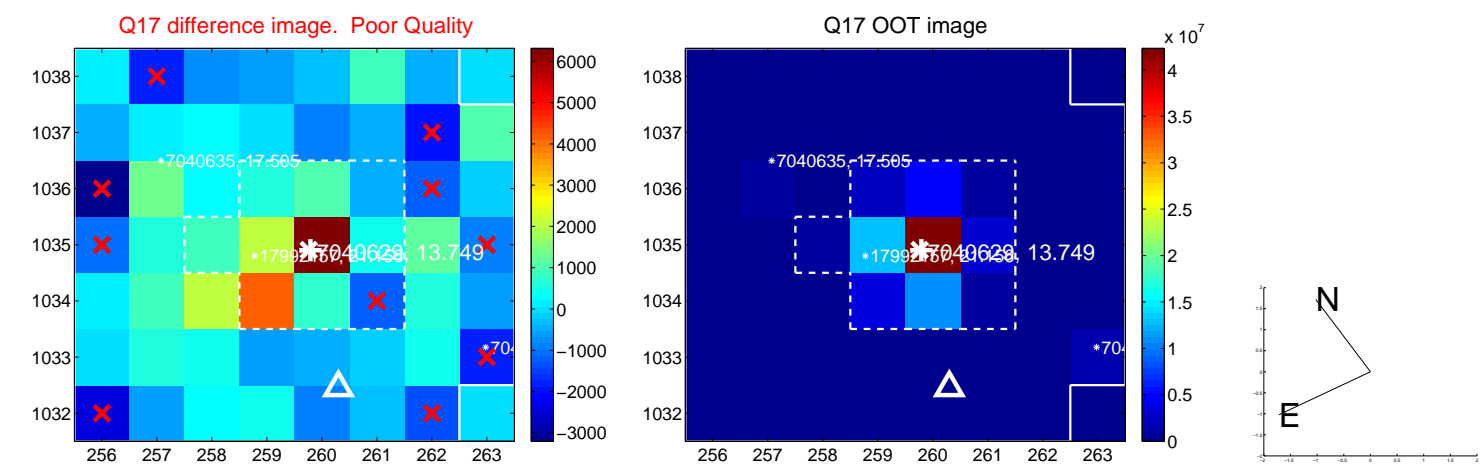
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

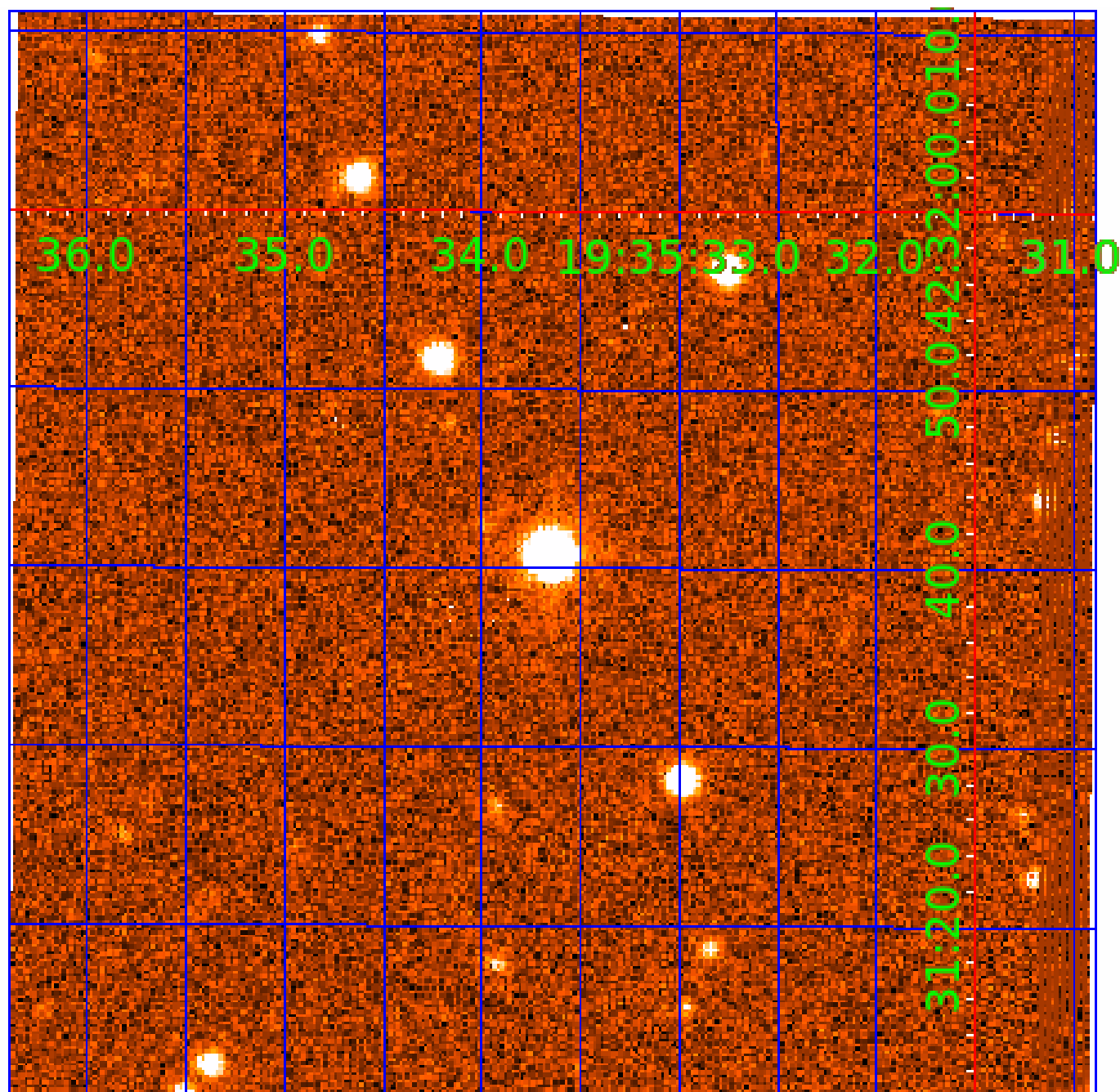


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007040629

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})
007040629-01	OBS	0671.01	4.228646	132.684186	149.0	3.837	34.3	36.8	1.50	5966	2.37	857.49
007040629-02	OBS	0671.02	7.466650	132.772417	118.1	3.869	20.4	22.1	1.50	5966	1.88	401.79
007040629-03	OBS	0671.03	16.259572	144.527378	128.6	3.861	14.4	15.9	1.50	5966	2.00	142.35
007040629-04	OBS	0671.04	11.131759	134.426471	95.9	4.157	13.0	14.7	1.50	5966	1.74	235.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007040629-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
007040629-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT
007040629-04	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.

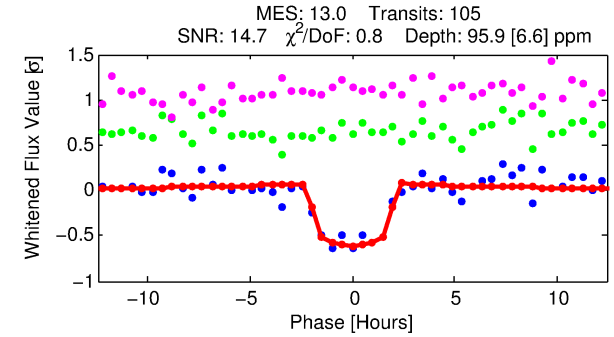
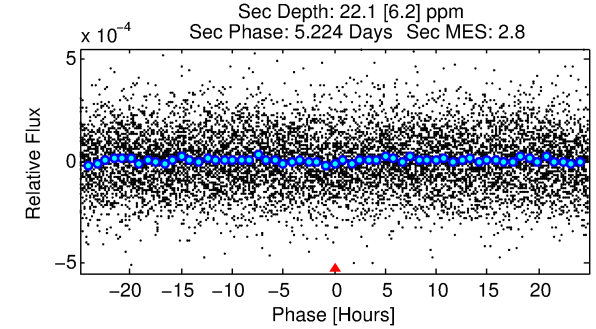
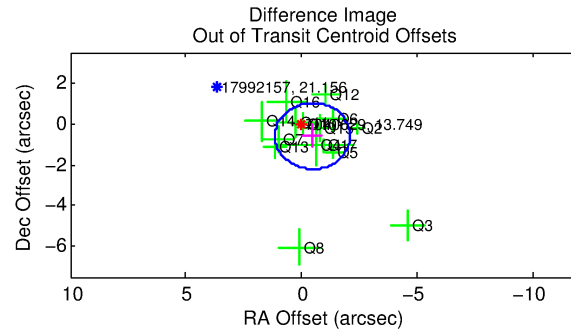
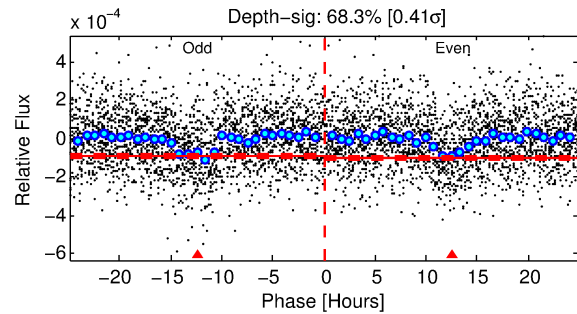
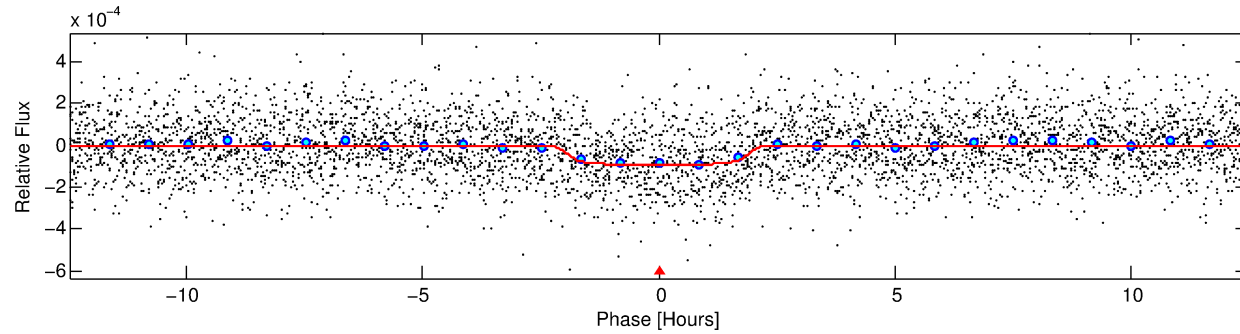
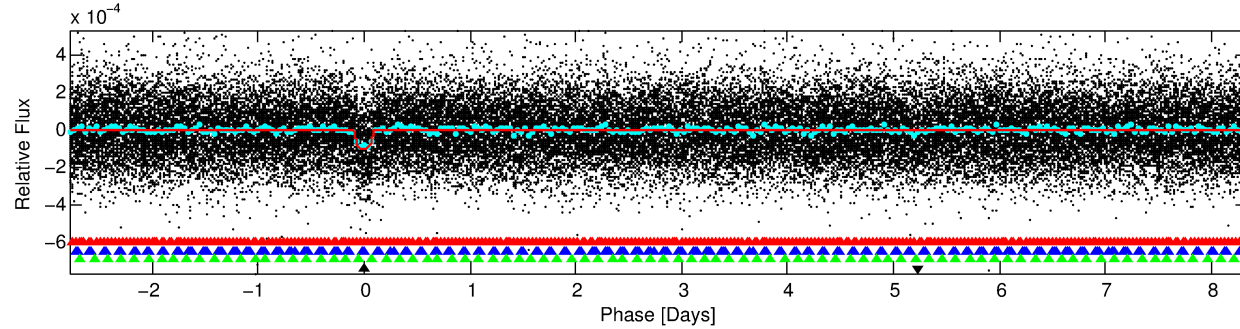
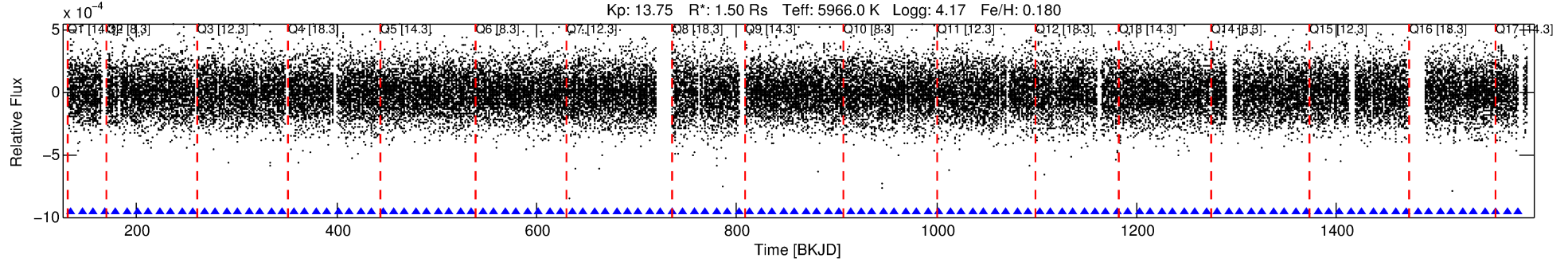
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007040629-04

No Significant Match Found

DV One-Page Summary

KIC: 7040629 Candidate: 4 of 4 Period: 11.132 d
KOI: K00671.04 Name: Kepler-208d Corr: 0.995



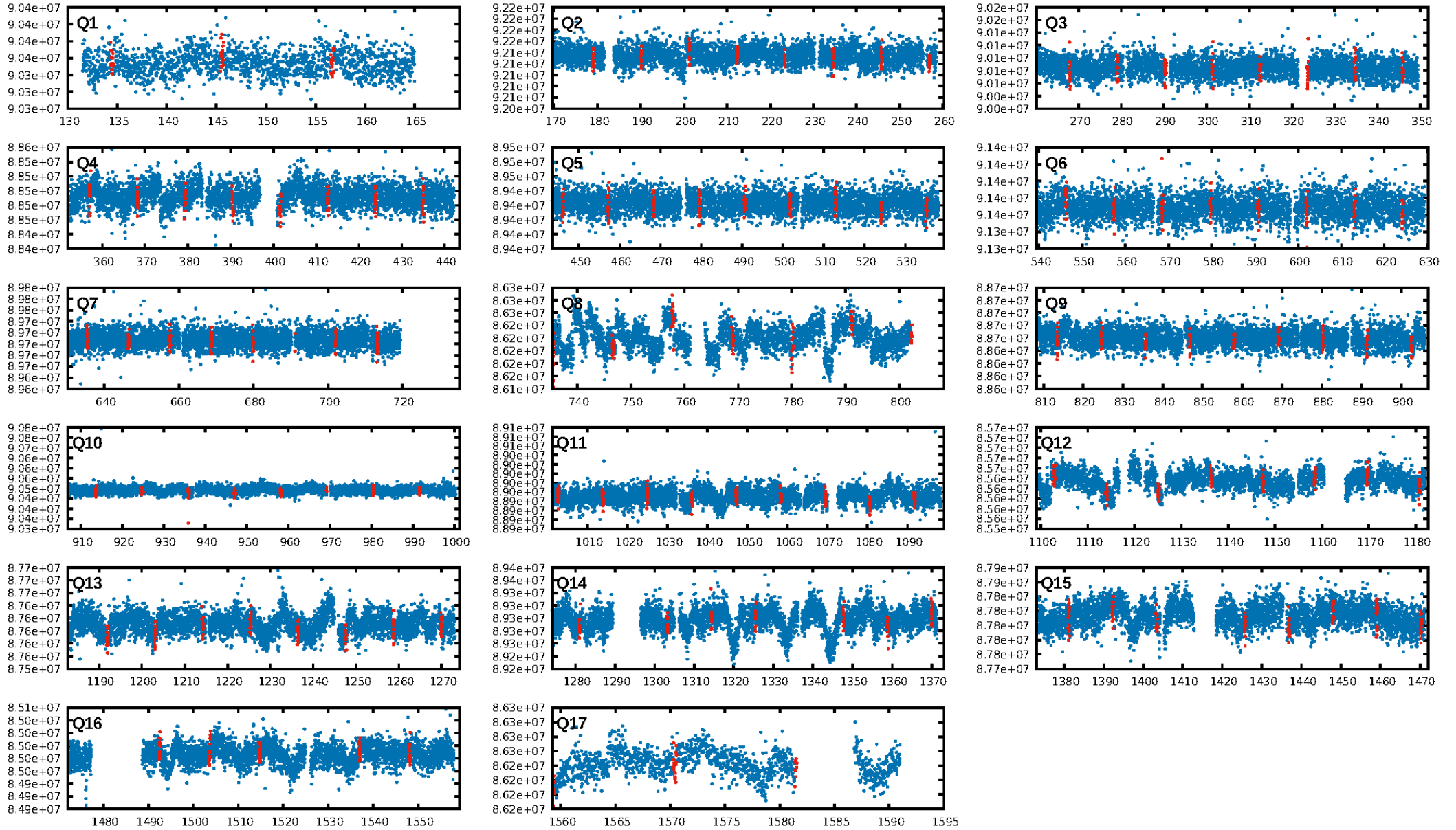
DV Fit Results:

Period = 11.13176 [0.00008] d
Epoch = 134.4265 [0.0053] BKJD
Rp/R* = 0.0106 [0.0035]
a/R* = 9.44 [15.06]
b = 0.90 [0.34]
Seff = 235.91 [70.22]
Teq = 999 [74] K
Rp = 1.74 [0.68] Re
a = 0.1040 [0.0197] AU
Ag = 43.54 [33.21] [1.28 σ]
Teffp = 3969 [706] K [4.18 σ]

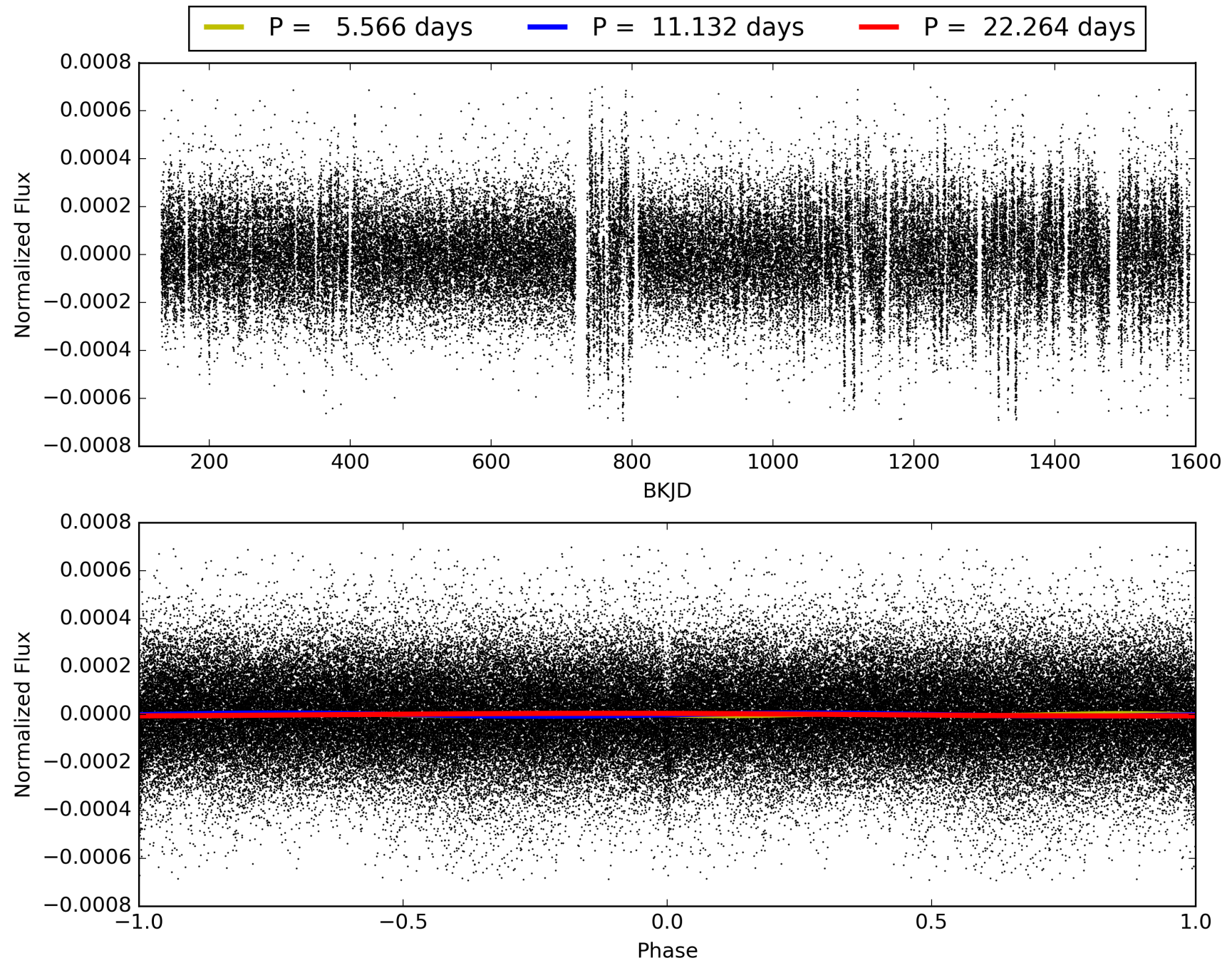
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.49 σ]
LongPeriod-sig: 100.0% [21.69 σ]
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.68e-36
RollingBand-fgt: 1.00 [100/100]
GhostDiagnostic-chr: 3.432
Centroid-sig: 4.9%
Centroid-so: 0.997 arcsec [1.46 σ]
OotOffset-rm: 0.758 arcsec [1.40 σ]
KicOffset-rm: 0.833 arcsec [1.58 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 0.94 [16/17]

TCE 007040629-04, PDC Light Curves

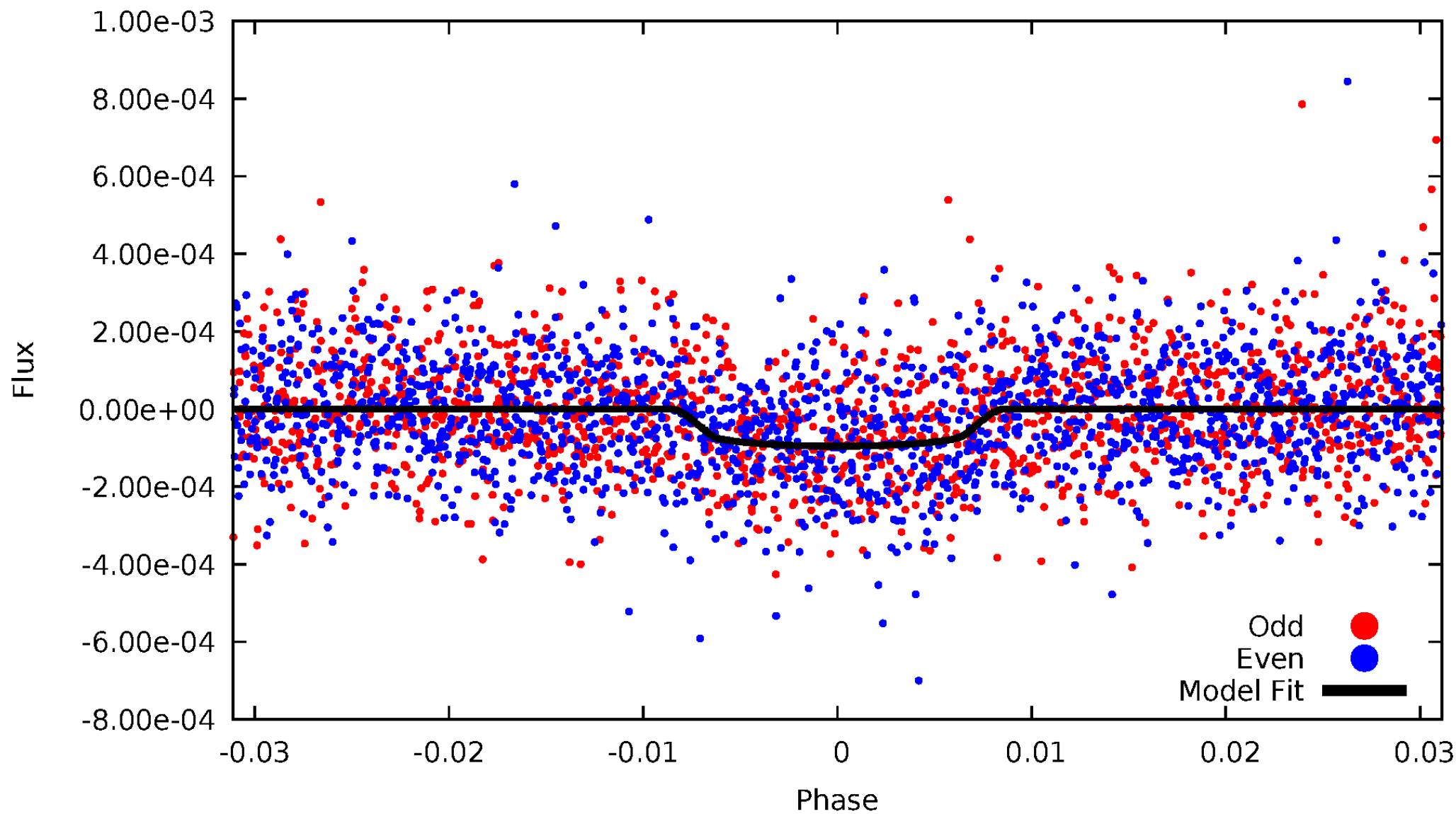


TCE 007040629-04



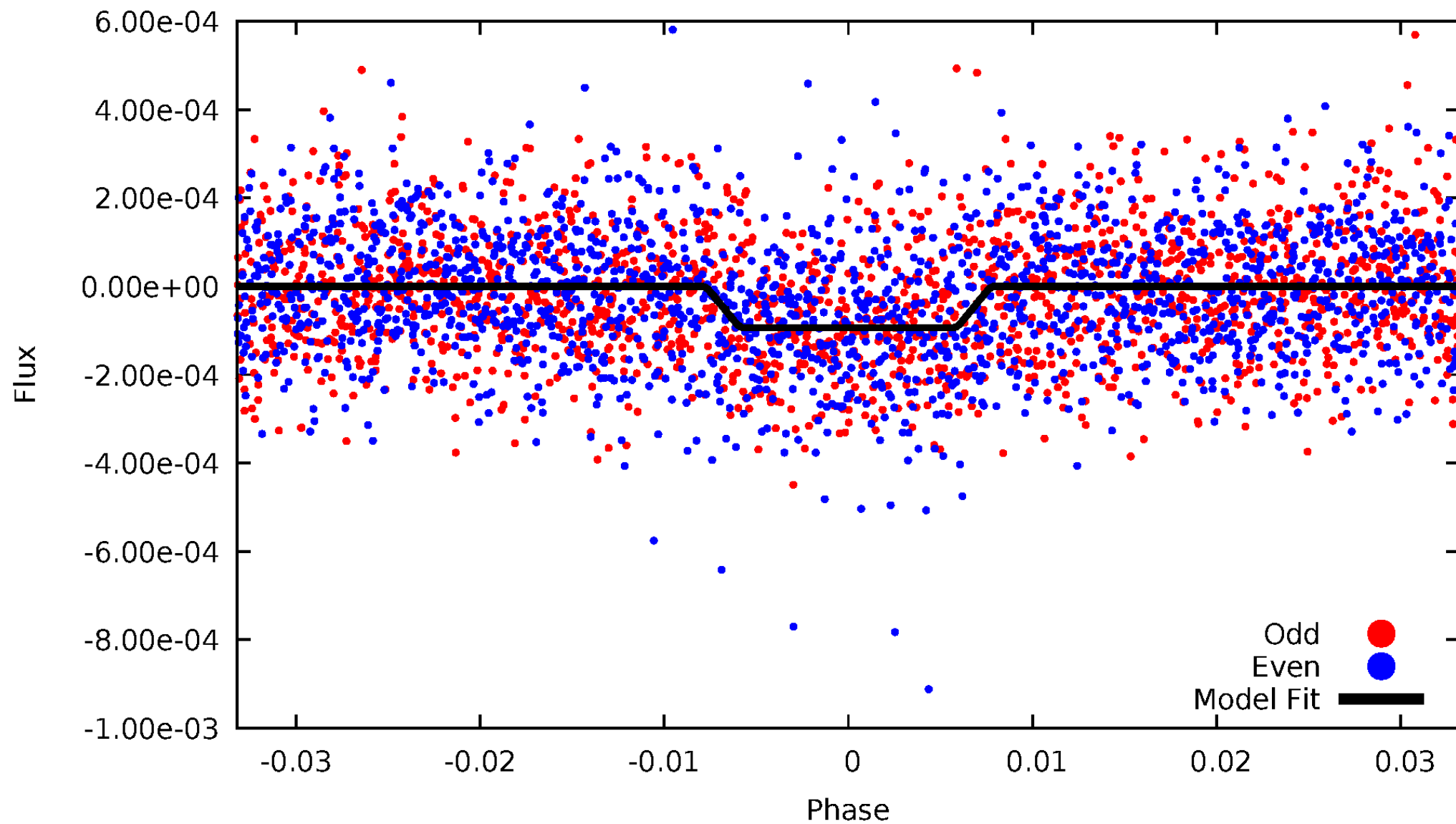
DV Odd/Even

TCE 007040629-04



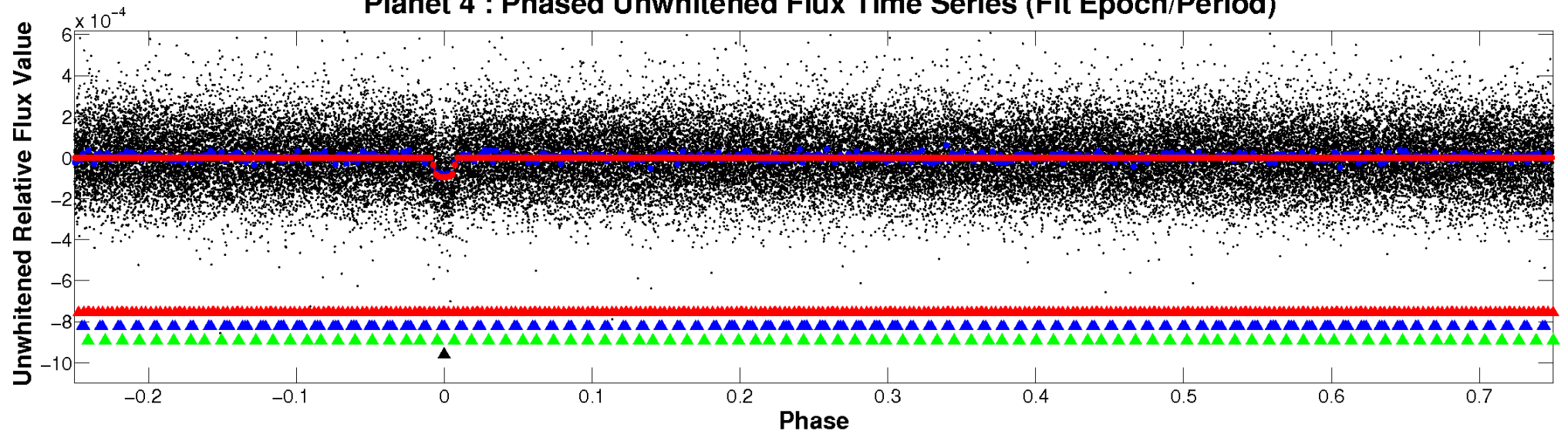
ALT Odd/Even

TCE 007040629-04

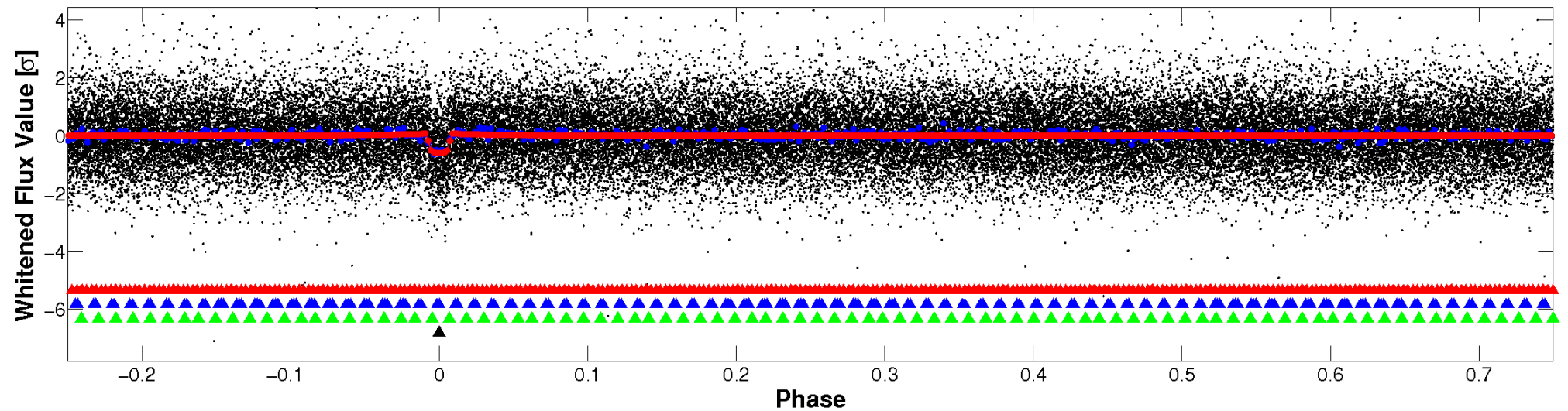


Non-Whitened Vs. Whitened Light Curve

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

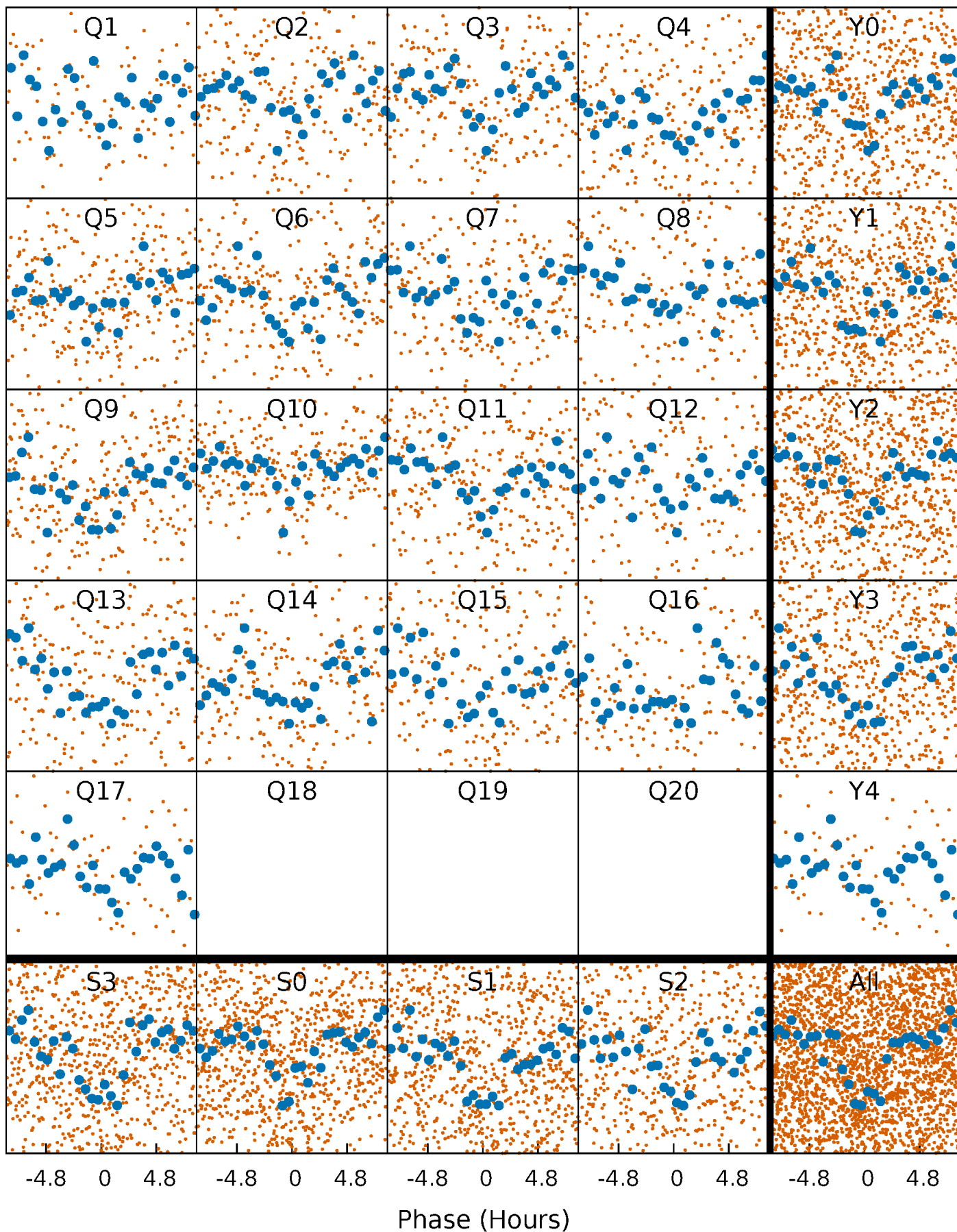


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



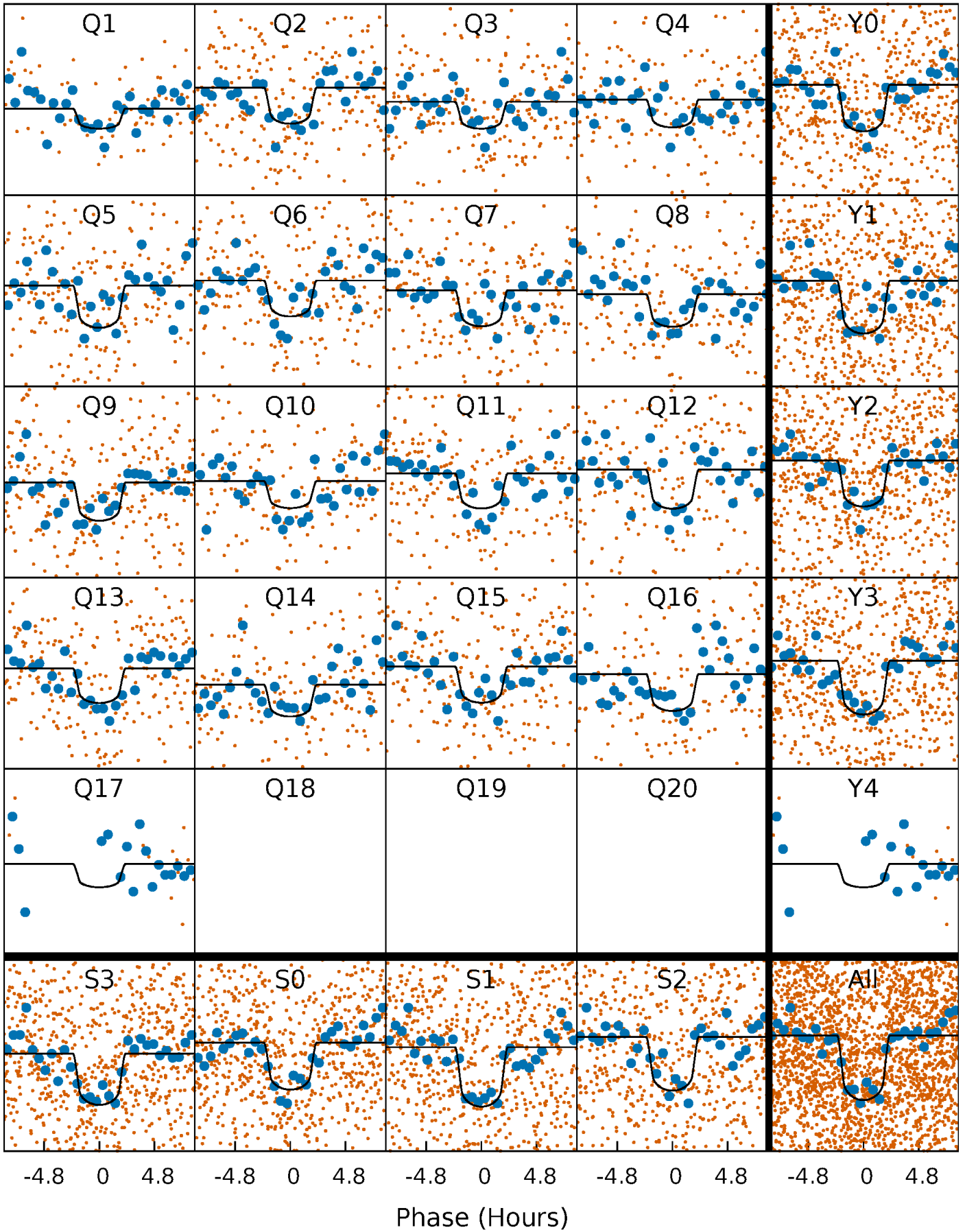
PDC Quarter-Phased Transit Curves

TCE 007040629-04 P= 11.131759 Days $T_0=134.426471$ (BKJD)



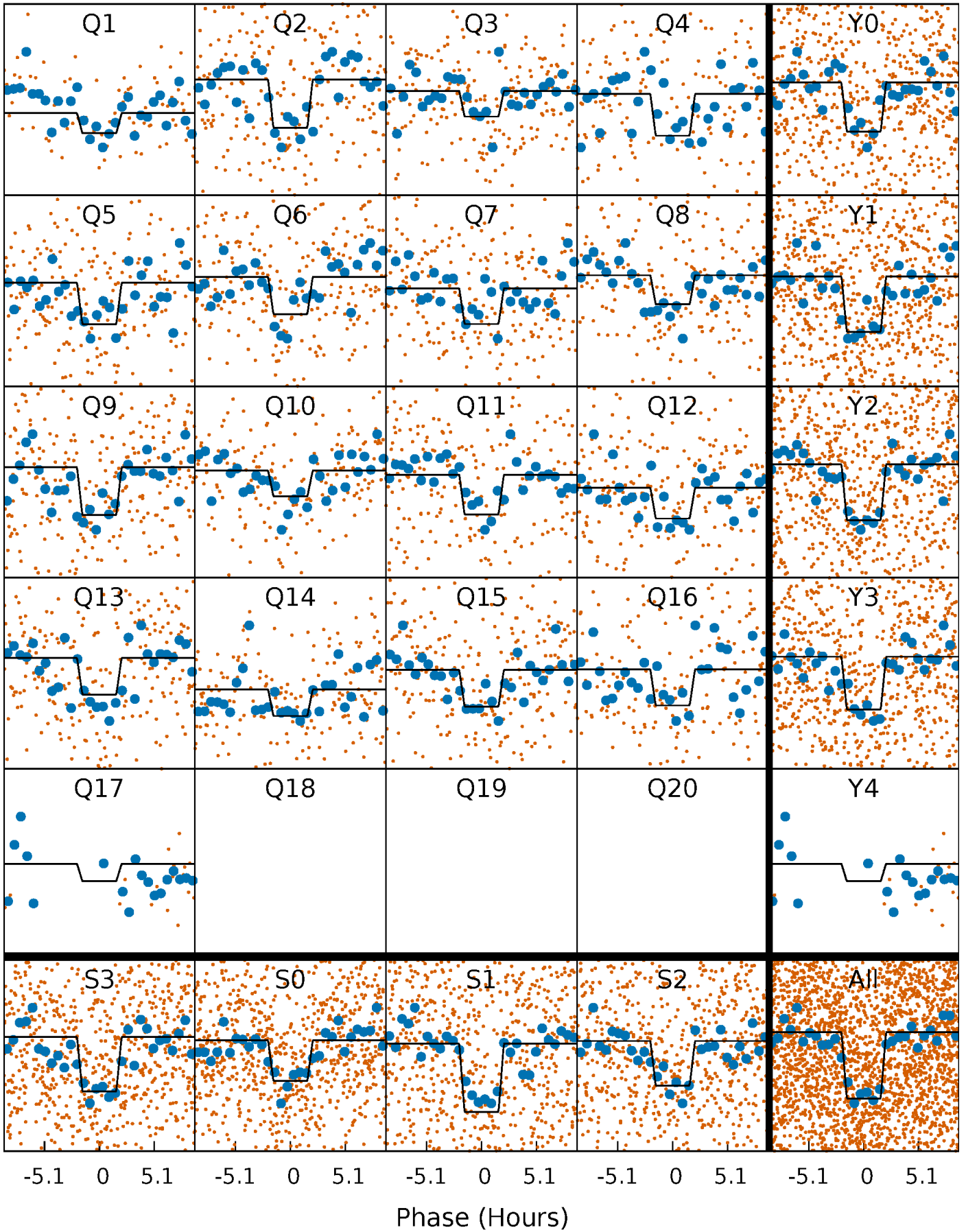
DV Quarter-Phased Transit Curves

TCE 007040629-04 P= 11.131759 Days $T_0=134.426471$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

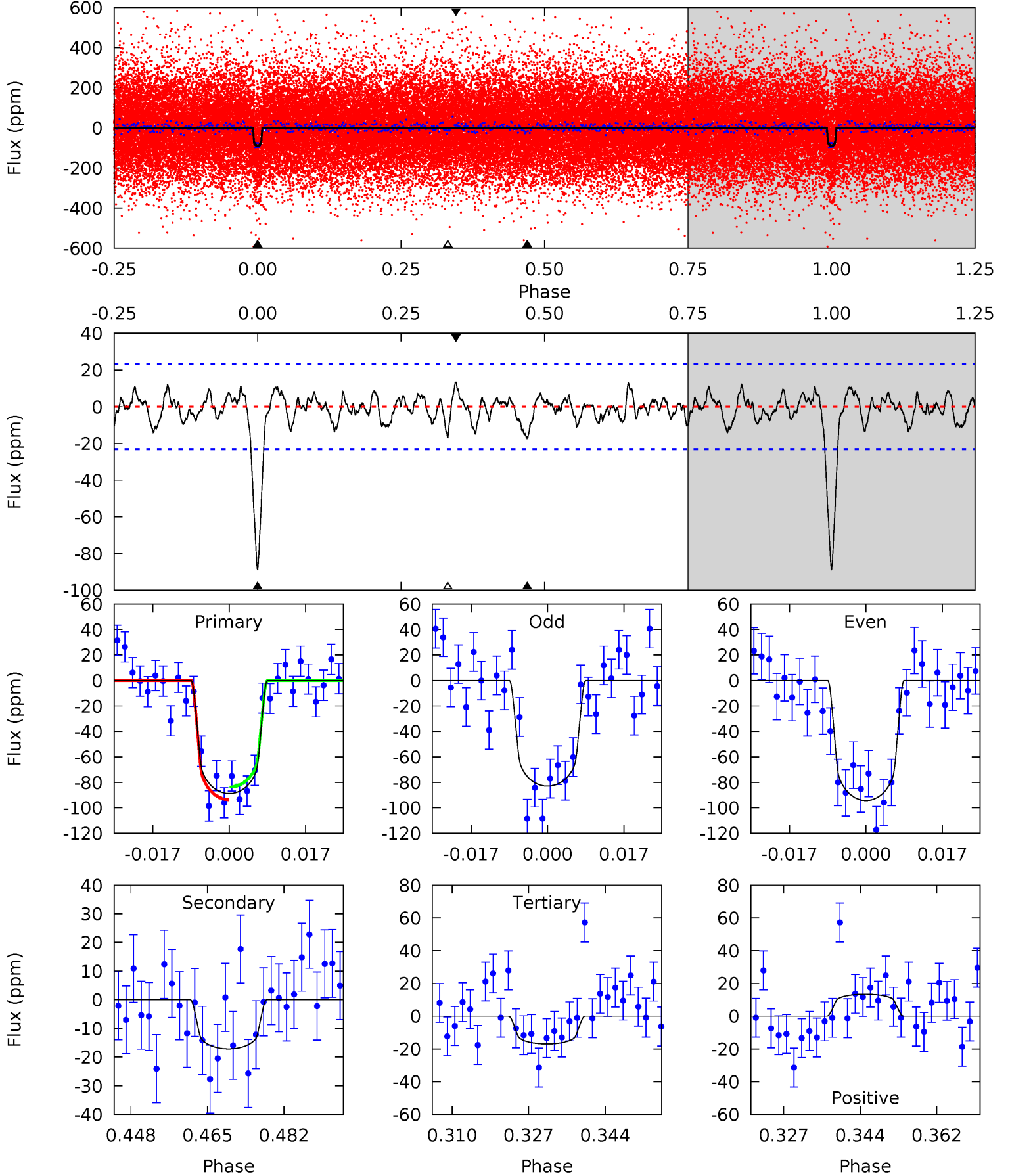
TCE 007040629-04 P= 11.131755 Days $T_0=134.424711$ (BKJD)



DV Model-Shift Uniqueness Test

007040629-04, P = 11.131759 Days, E = 123.294712 Days

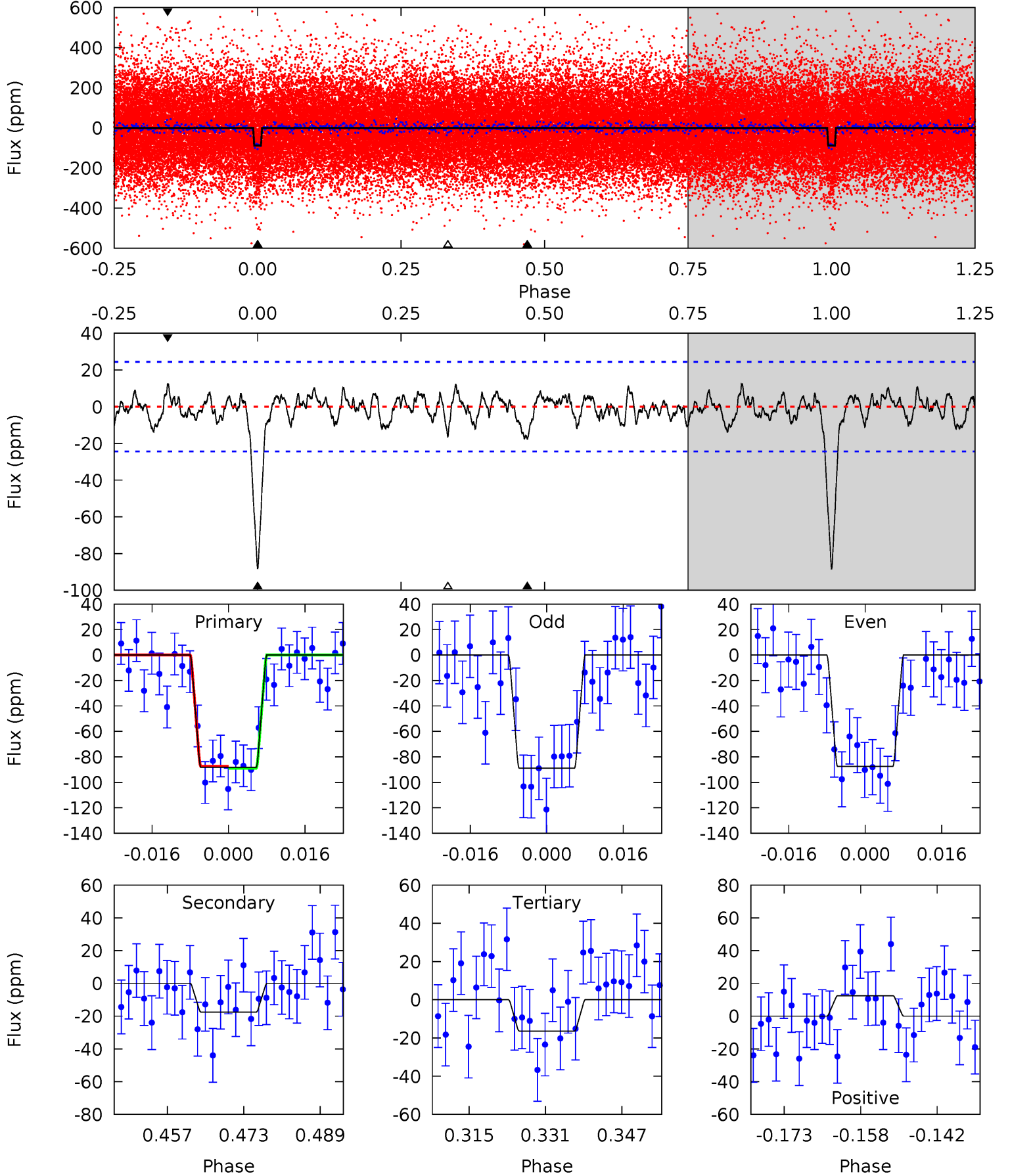
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	3.64	3.61	2.85	4.92	2.38	1.16	15.3	16.0	0.03	0.79	1.21	0.99	0.13	1.05



Alt Model-Shift Uniqueness Test

007040629-04, P = 11.131755 Days, E = 123.292956 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	3.55	3.32	2.52	4.94	2.41	1.05	14.5	15.3	0.23	1.03	0.14	1.05	0.12	0.15



Stellar Parameters For KIC 007040629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5966^{+107}_{-119}	$4.169^{+0.162}_{-0.108}$	$0.180^{+0.150}_{-0.150}$	$1.499^{+0.262}_{-0.321}$	$1.213^{+0.098}_{-0.135}$	$0.507^{+0.421}_{-0.168}$
	+2%/-2%	+4%/-3%	+83%/-83%	+17%/-21%	+8%/-11%	+83%/-33%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 007040629-04 / KOI 0671.04

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 5	$1.70^{+0.62}_{-0.62}$	1388^{+69}_{-87}	4011^{+755}_{-406}	34^{+53}_{-16}
Alt.	-18 ± 5	$1.57^{+0.61}_{-0.60}$	1394^{+77}_{-80}	4169^{+806}_{-501}	41^{+67}_{-22}

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 $A_{obs} \gg 1.0$

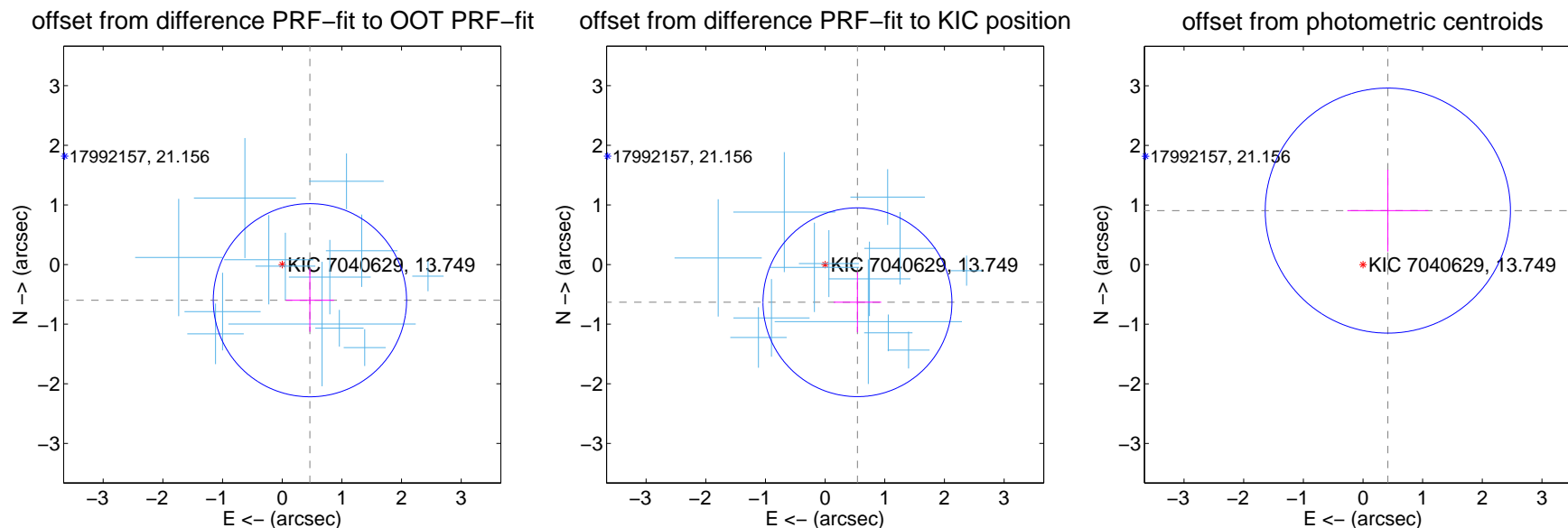
DV Centroid Data

Supplemental centroid analysis for 007040629-04. Kepler magnitude: 13.75. Transit SNR 14.74

There are 13 quarters with good PRF difference image offsets

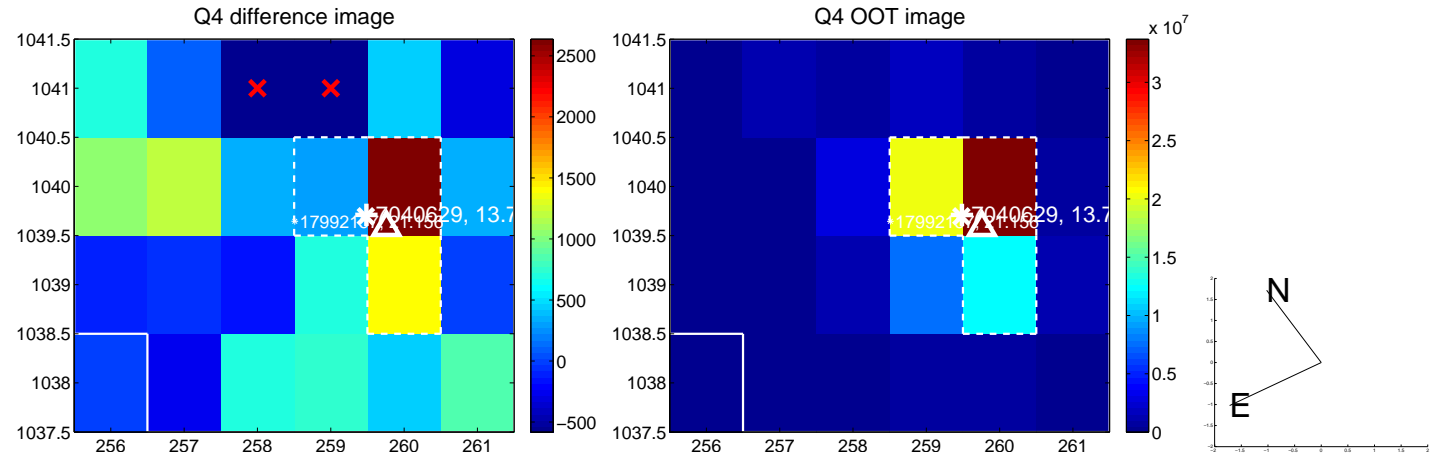
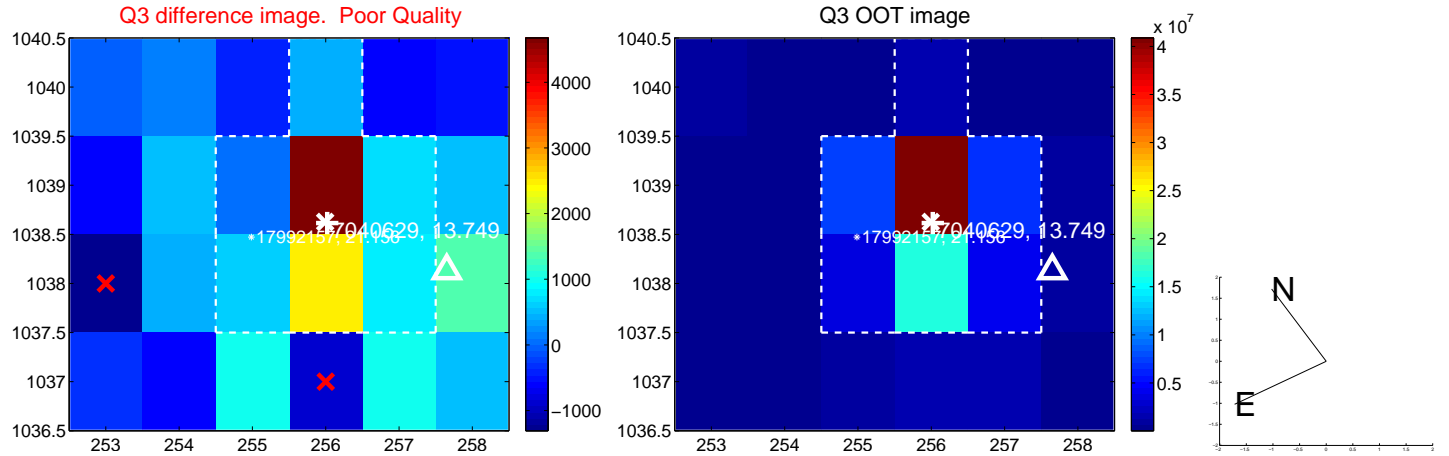
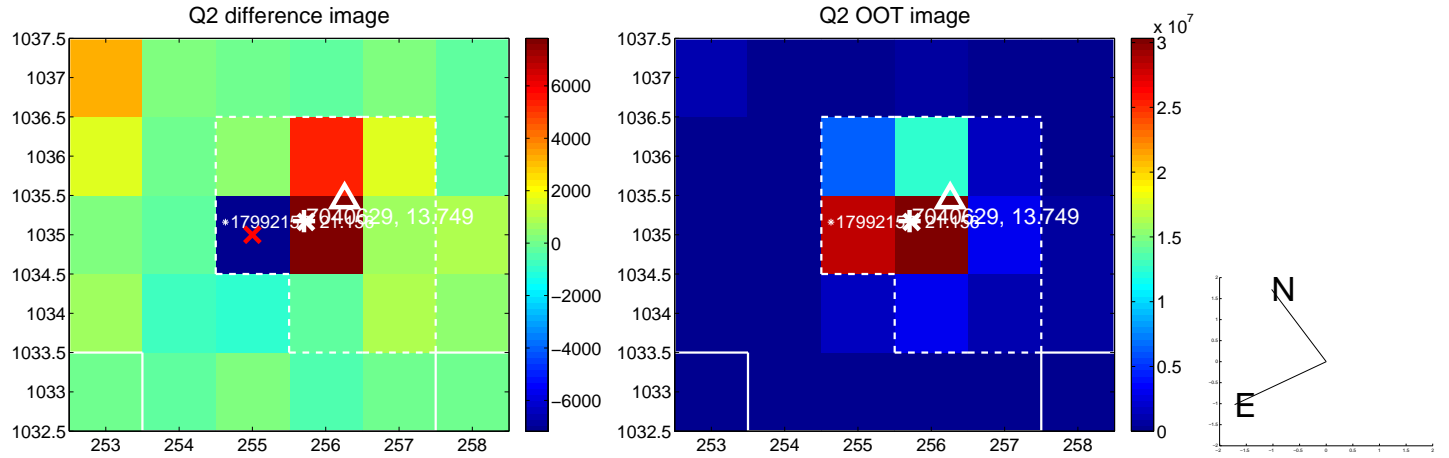
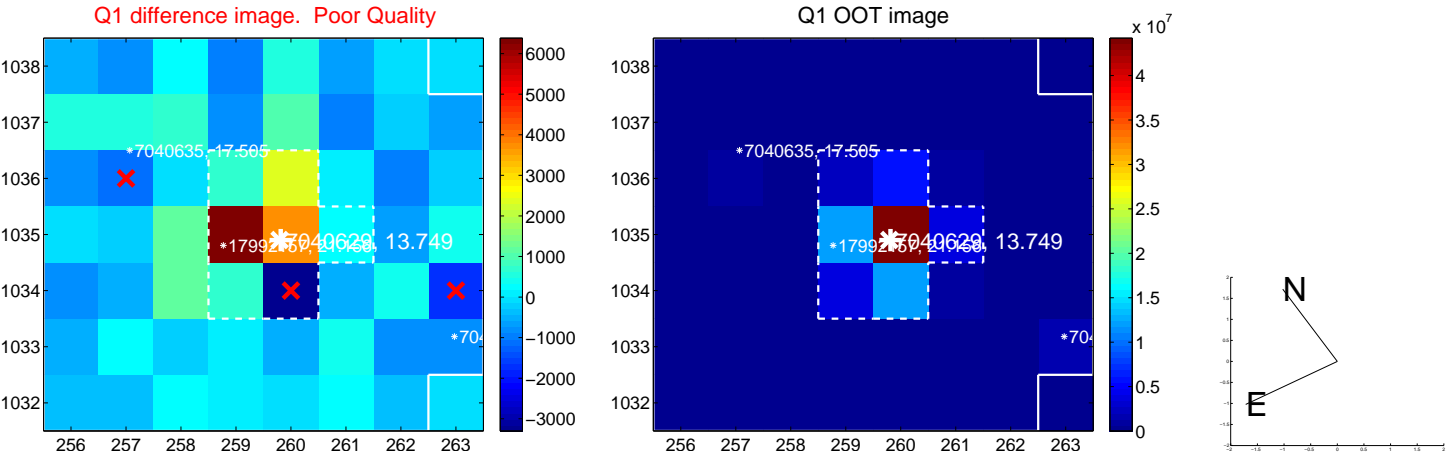
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.758 ± 0.540	1.40	-0.465 ± 0.403	-0.598 ± 0.529
PRF-fit source offset from KIC position	0.833 ± 0.528	1.58	-0.542 ± 0.398	-0.632 ± 0.505
photometric centroid source offset	1.00 ± 0.69	1.46	-0.42 ± 0.68	0.91 ± 0.69

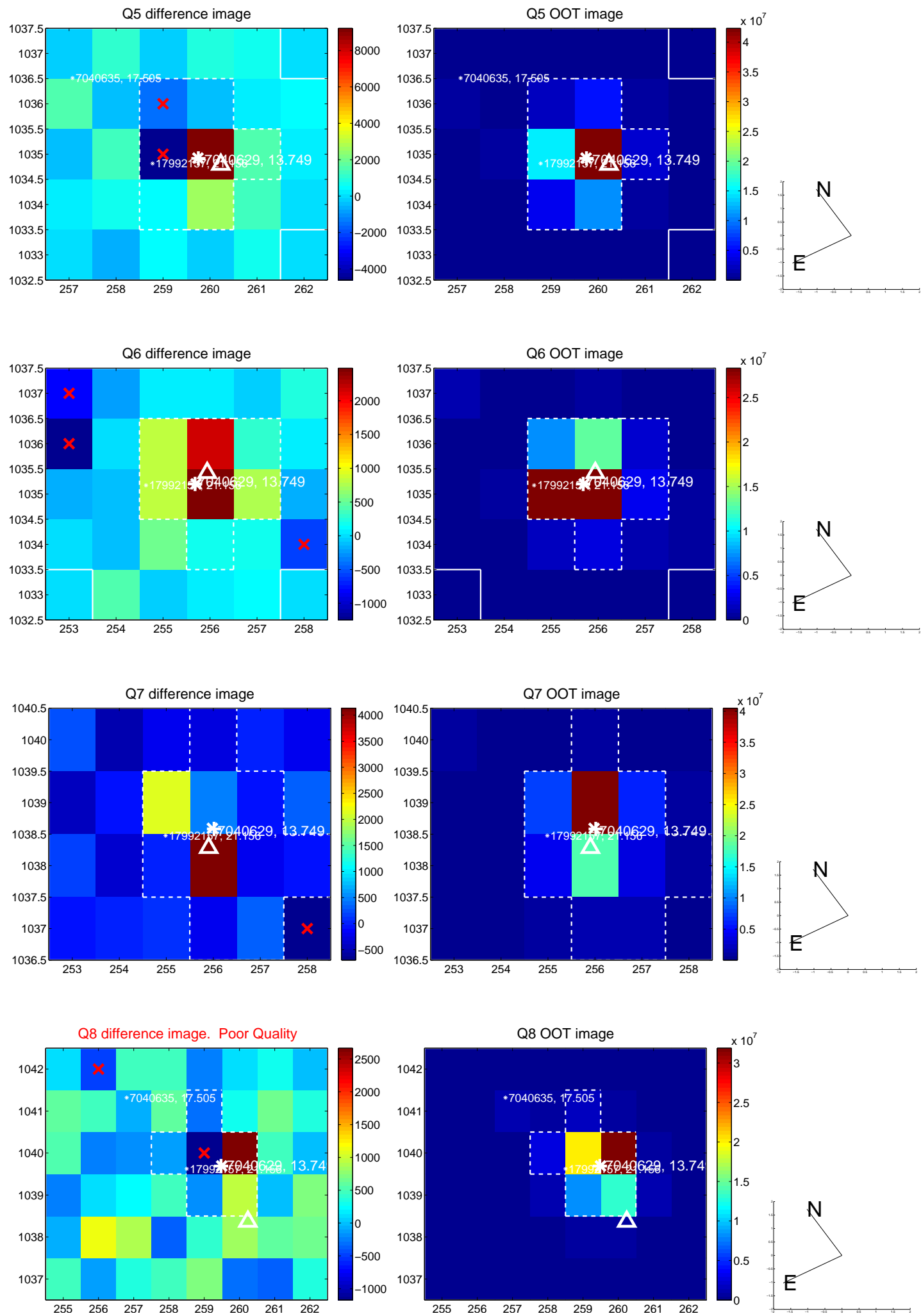


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

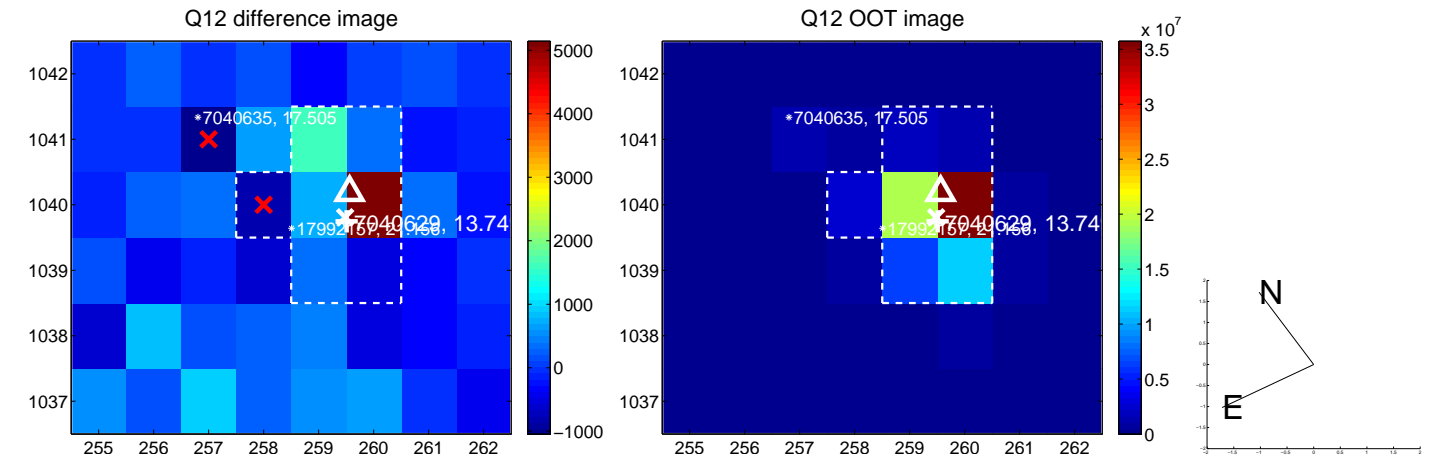
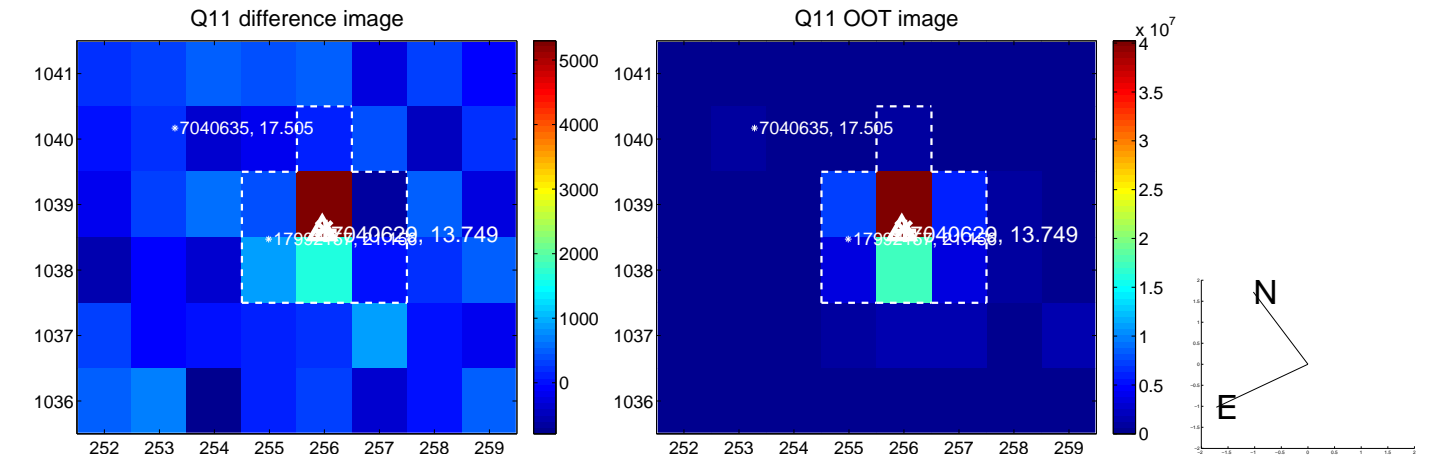
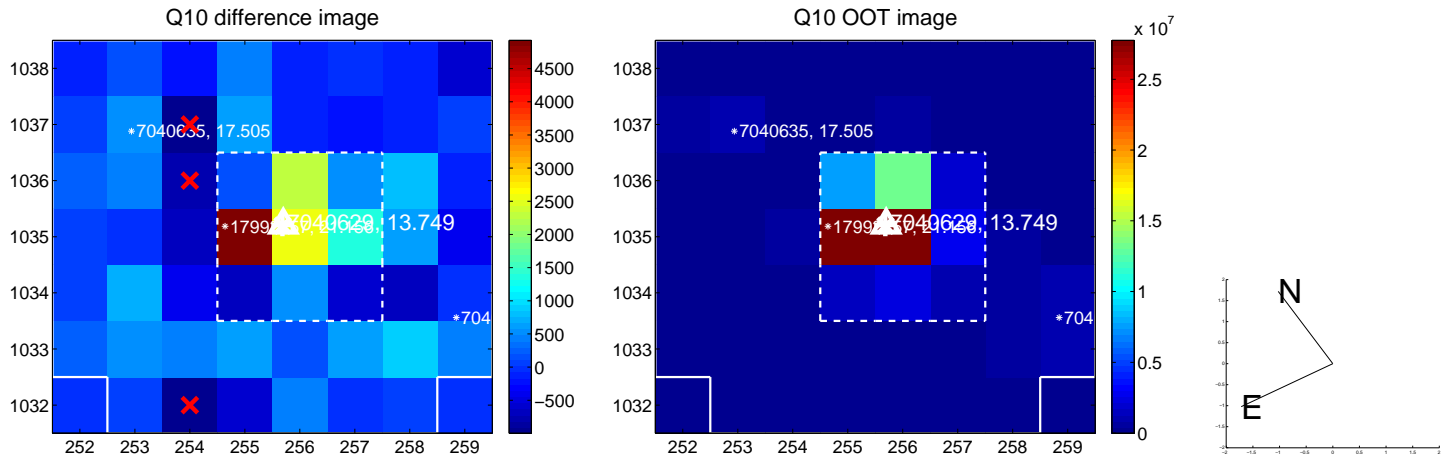
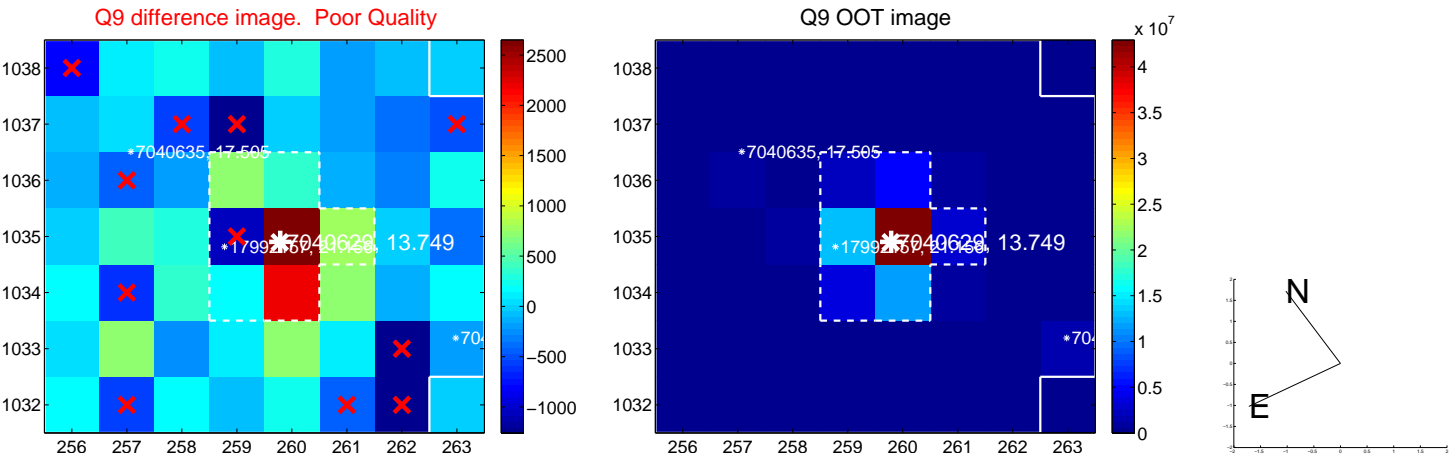
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

