

KIC 006037581

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})
006037581-01	OBS	1916.02	9.599923	136.581280	276.2	4.456	32.3	35.9	1.27	5865	2.38	207.30
006037581-02	OBS	1916.01	20.678775	151.691680	324.9	4.894	26.1	28.7	1.27	5865	2.71	74.52
006037581-03	OBS	1916.03	2.024833	132.352679	67.8	2.728	16.0	17.3	1.27	5865	1.25	1651.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037581-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-03	OBS	PC	0.93	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.

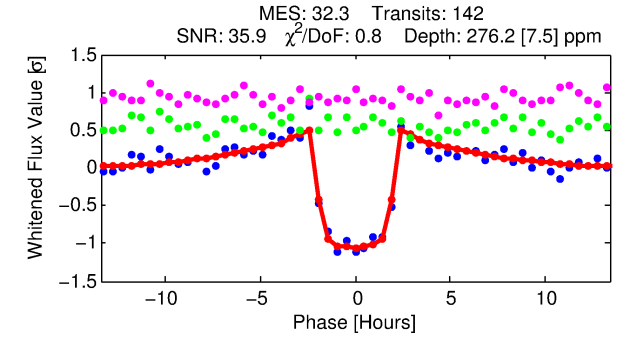
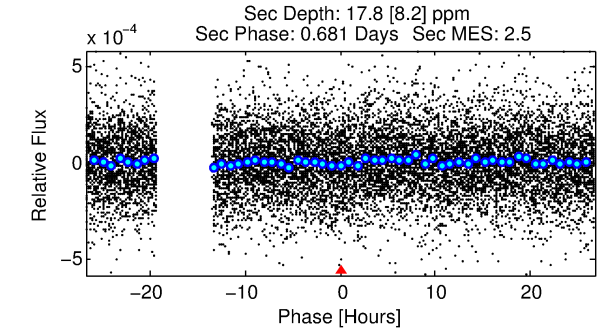
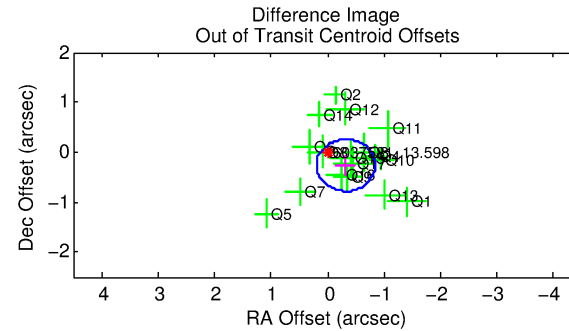
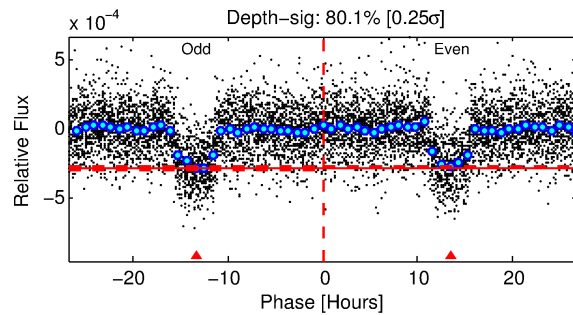
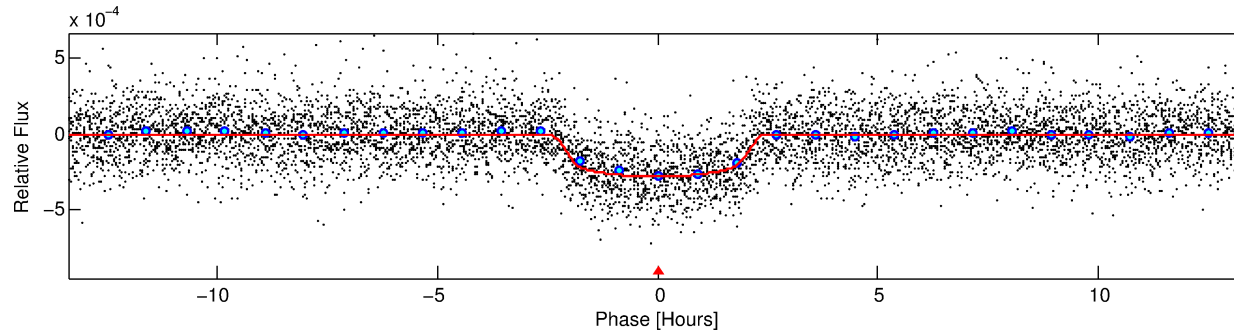
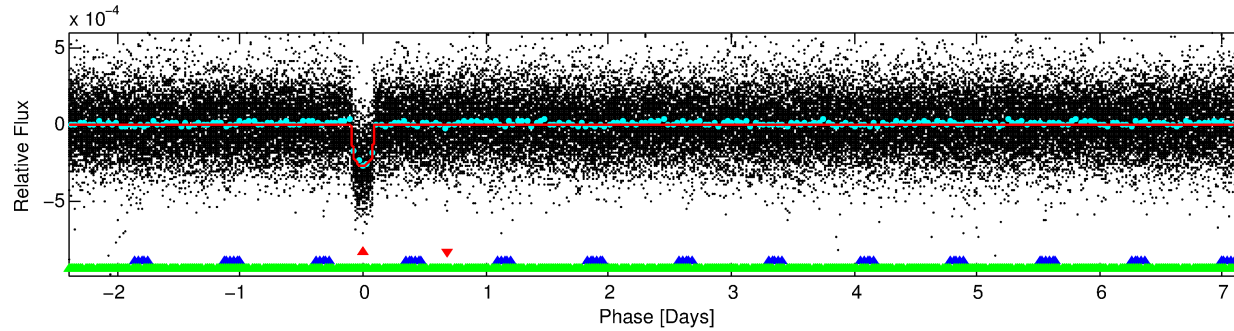
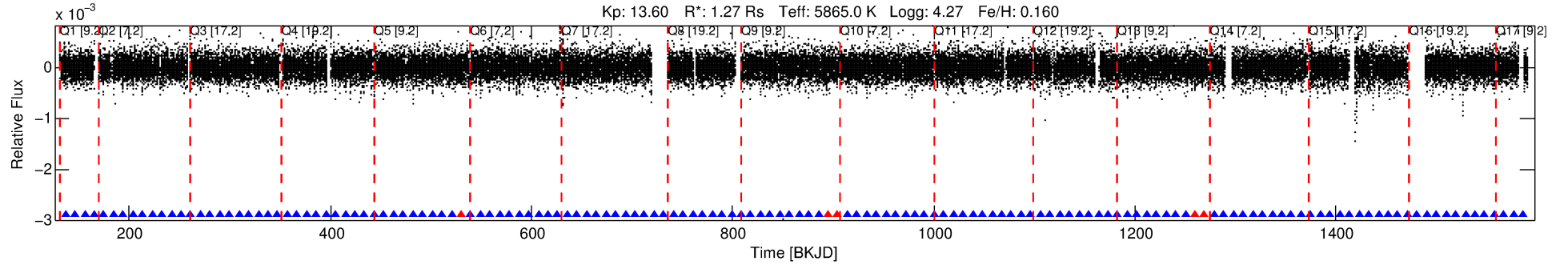
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037581-01

No Significant Match Found

DV One-Page Summary

KIC: 6037581 Candidate: 1 of 3 Period: 9.600 d
KOI: K01916.02 Name: Kepler-336c Corr: 0.977



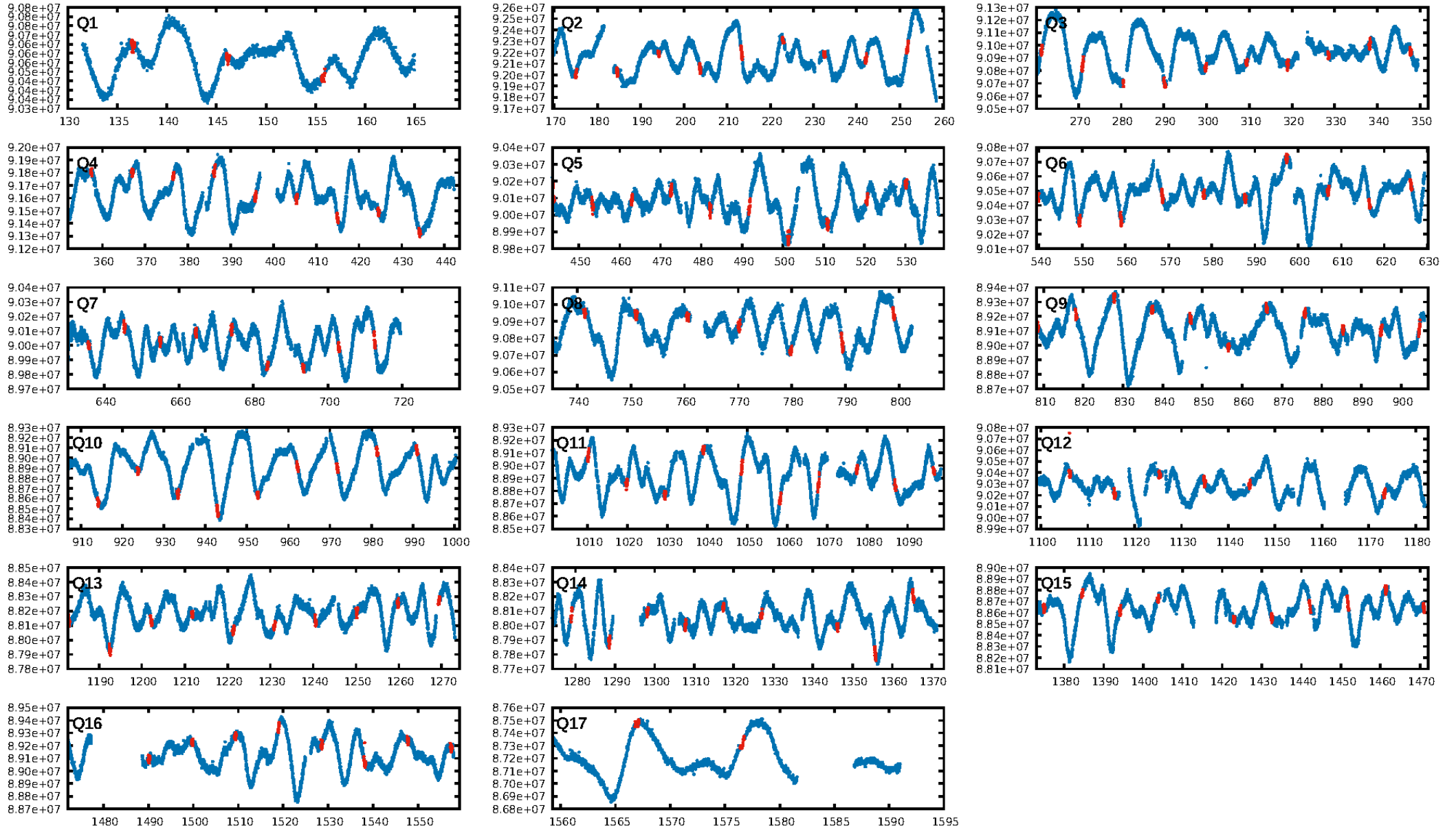
DV Fit Results:

Period = 9.59992 [0.00002] d
Epoch = 136.5813 [0.0017] BKJD
Rp/R* = 0.0171 [0.0023]
a/R* = 9.82 [6.02]
b = 0.83 [0.24]
Seff = 207.30 [52.06]
Teq = 968 [61] K
Rp = 2.38 [0.51] Re
a = 0.0910 [0.0140] AU
Ag = 14.32 [8.41] [1.58 σ]
Teff = 2910 [395] K [4.86 σ]

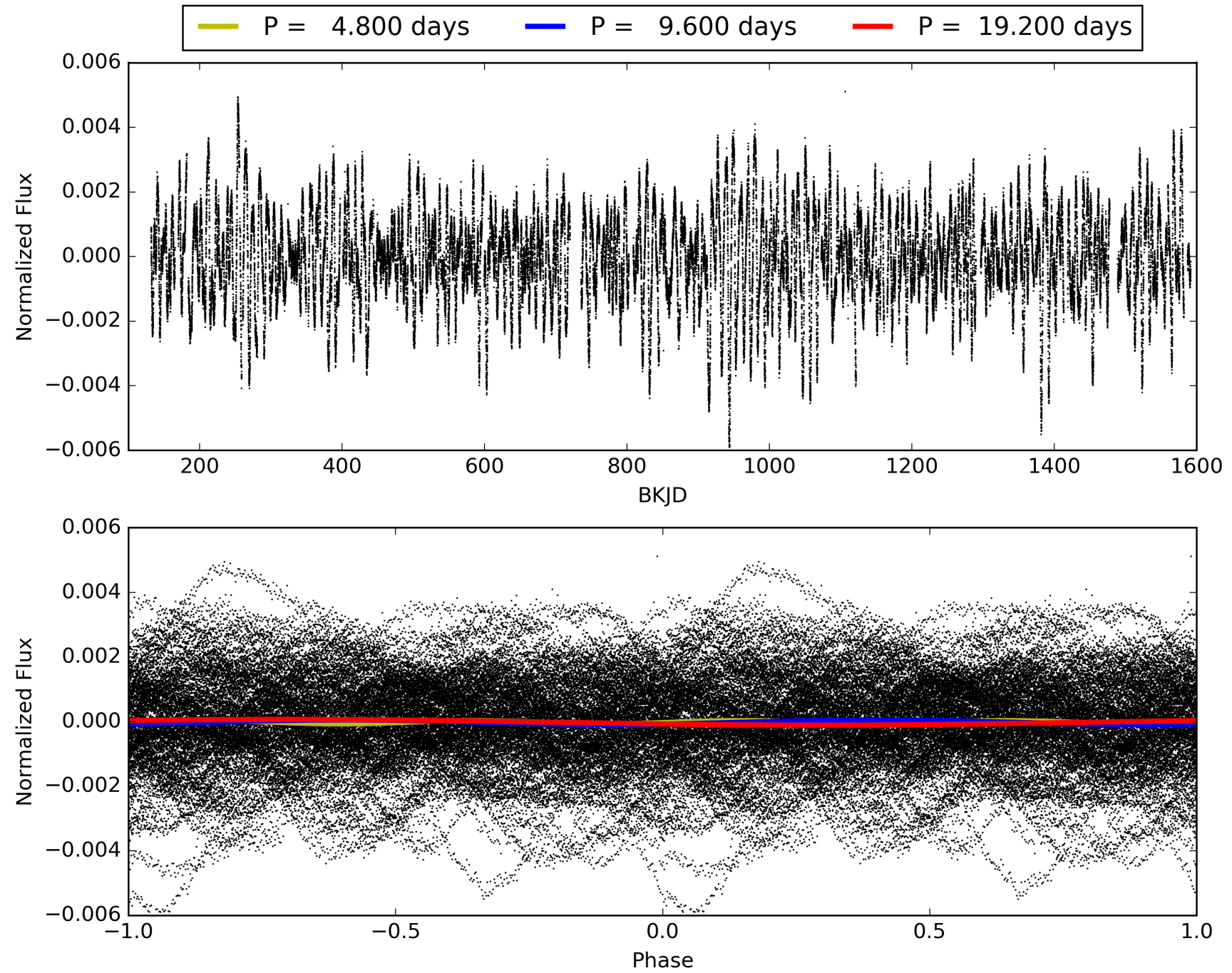
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.79 σ]
LongPeriod-sig: 100.0% [40.17 σ]
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.91e-195
RollingBand-fgt: 0.96 [132/137]
GhostDiagnostic-chr: 4.299
Centroid-sig: N/A
Centroid-so: 0.530 arcsec [2.06 σ]
OotOffset-rm: 0.415 arcsec [2.40 σ]
KicOffset-rm: 0.452 arcsec [2.65 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006037581-01, PDC Light Curves

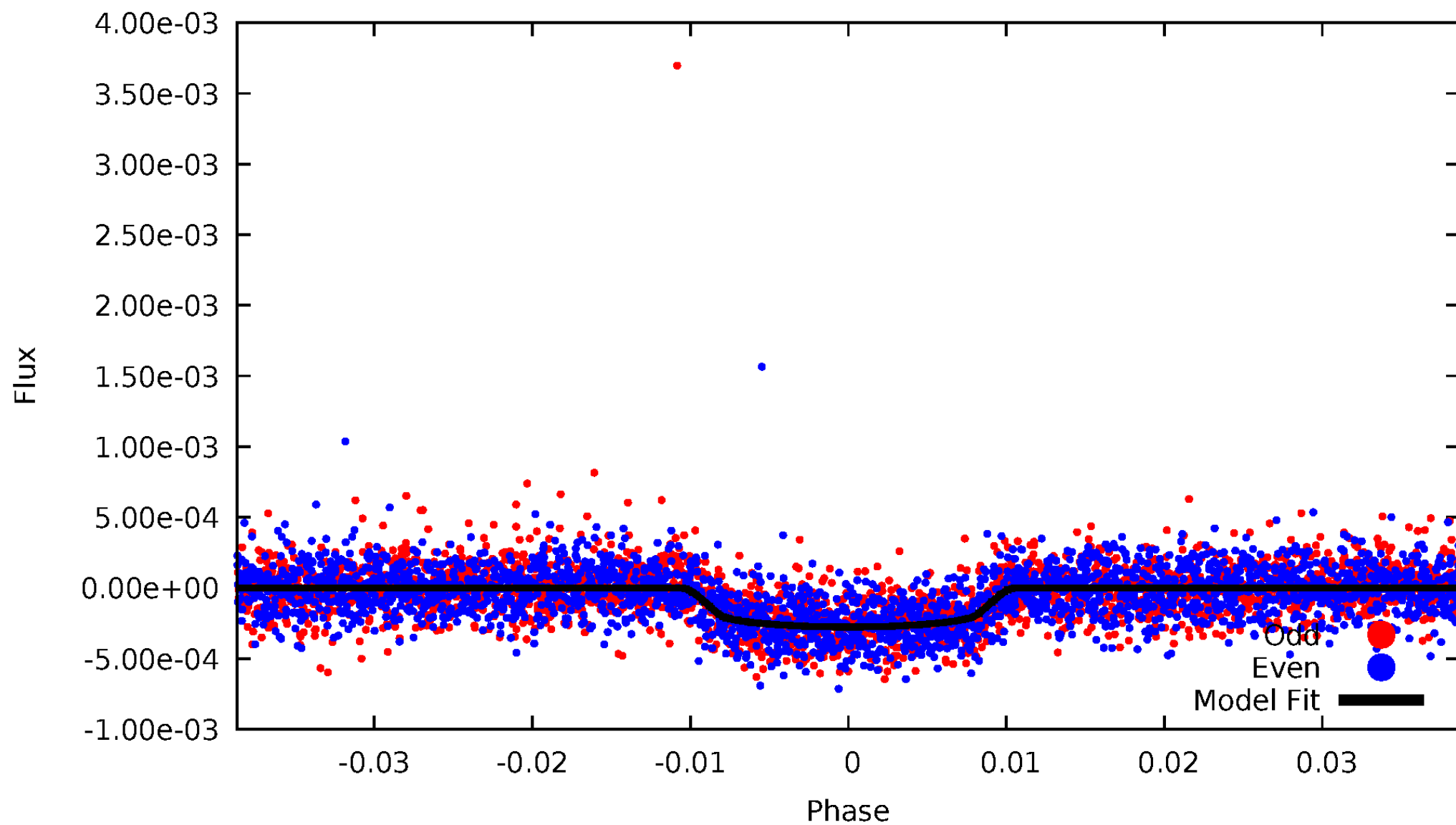


TCE 006037581-01



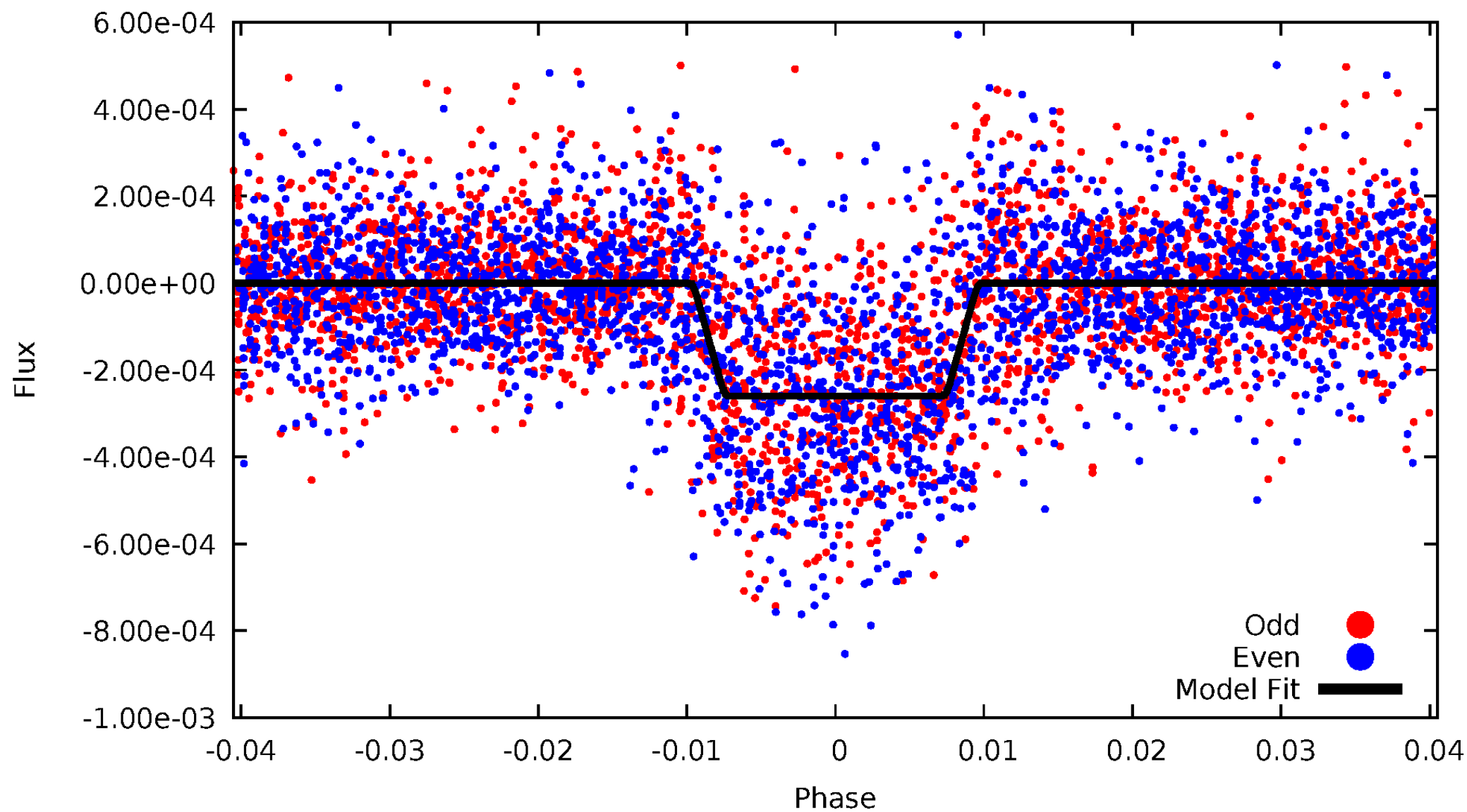
DV Odd/Even

TCE 006037581-01



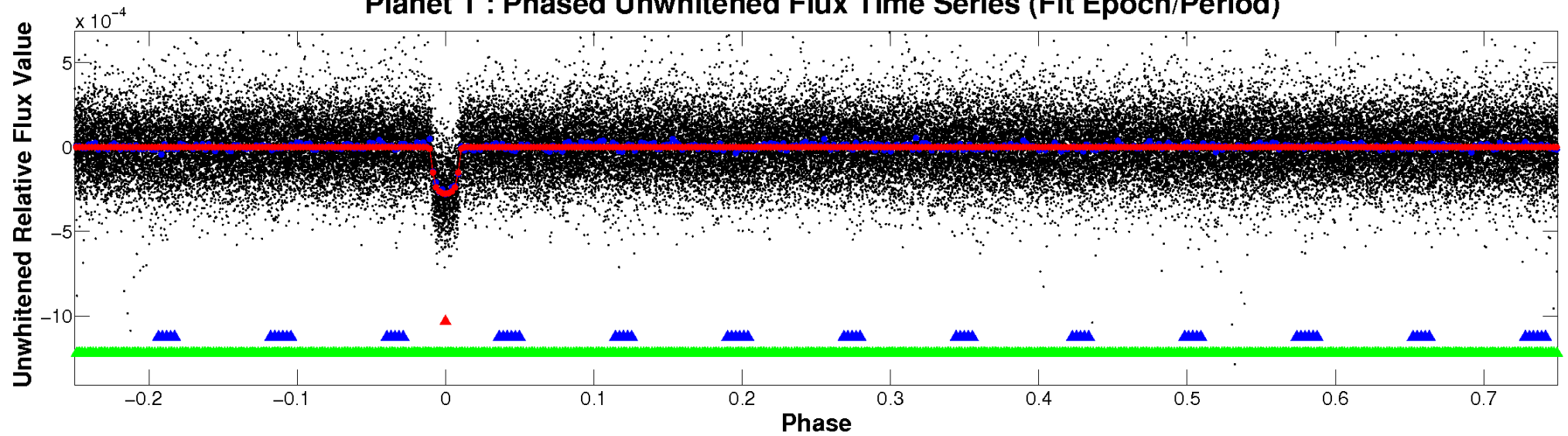
ALT Odd/Even

TCE 006037581-01

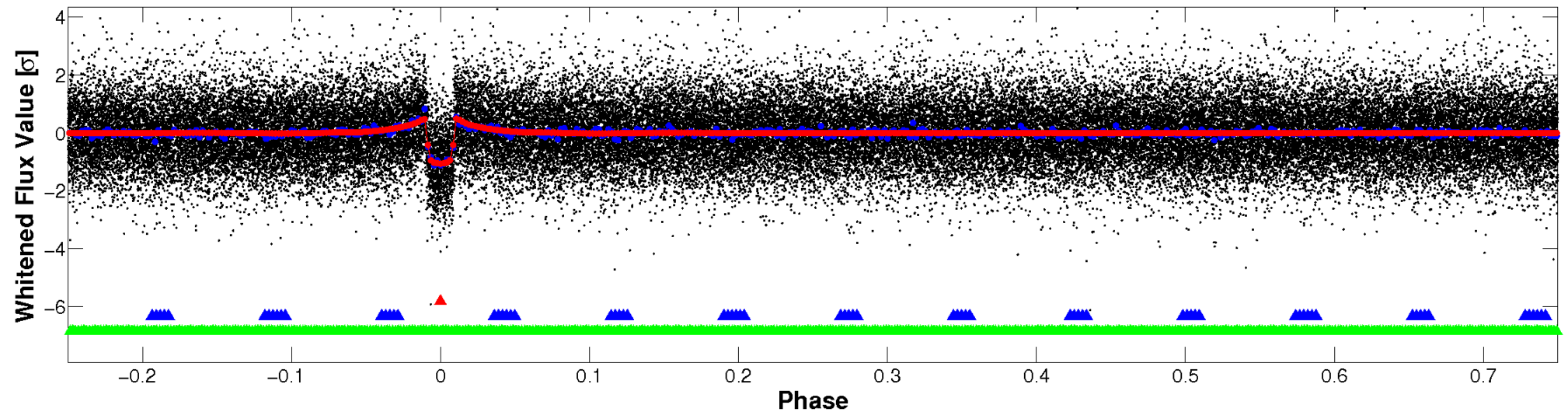


Non-Whitened Vs. Whitened Light Curve

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

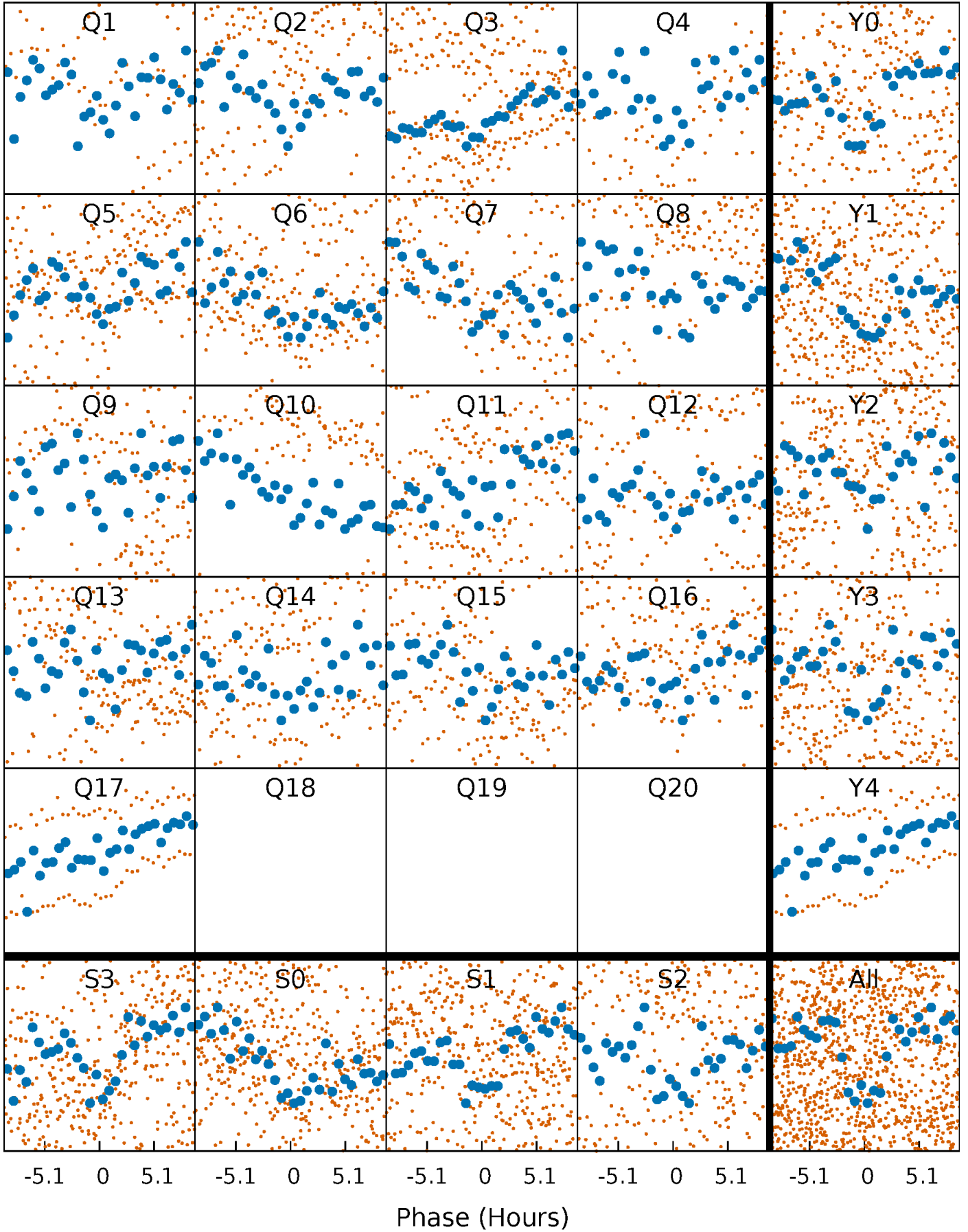


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



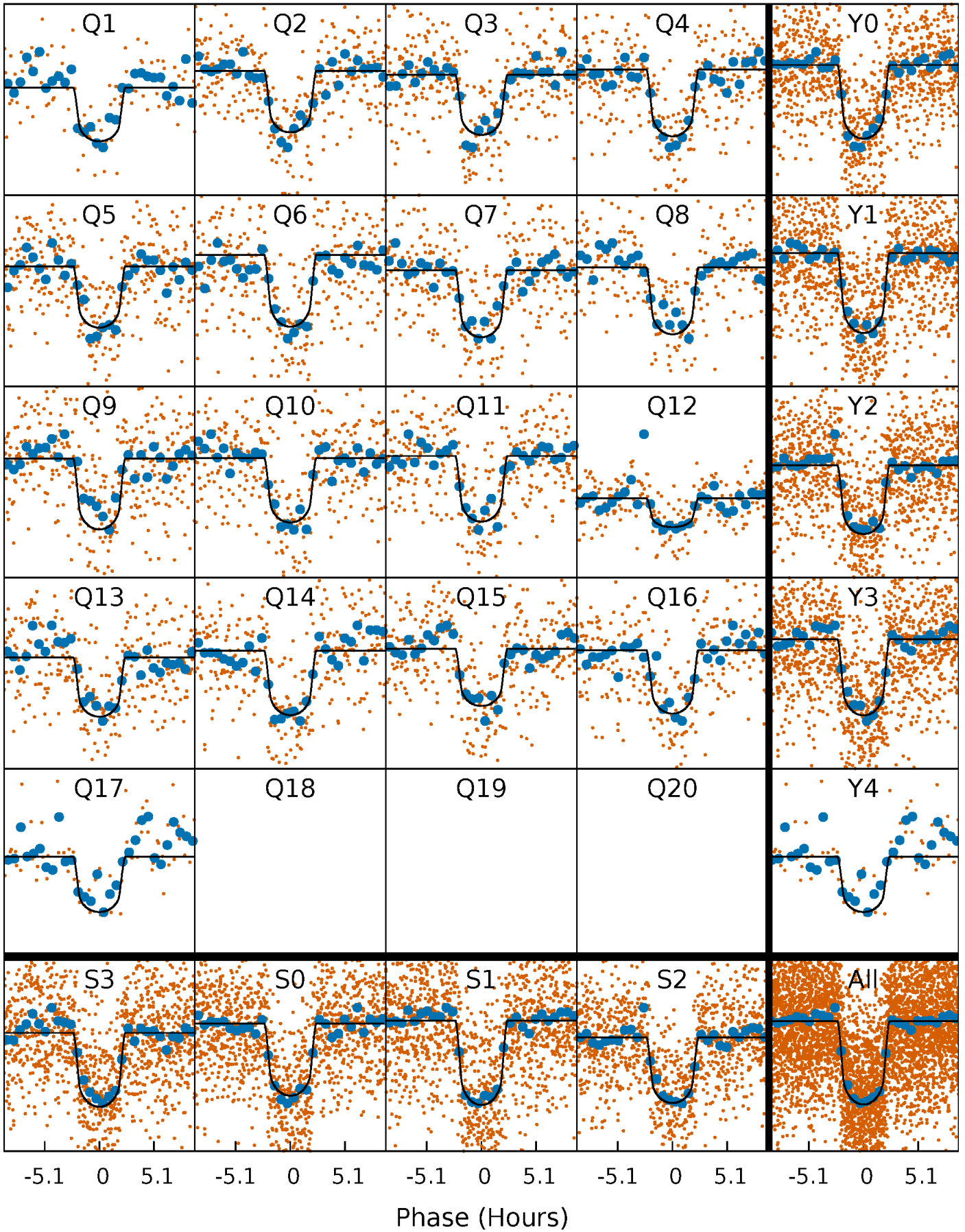
PDC Quarter-Phased Transit Curves

TCE 006037581-01 P= 9.599923 Days $T_0=136.581279$ (BKJD)



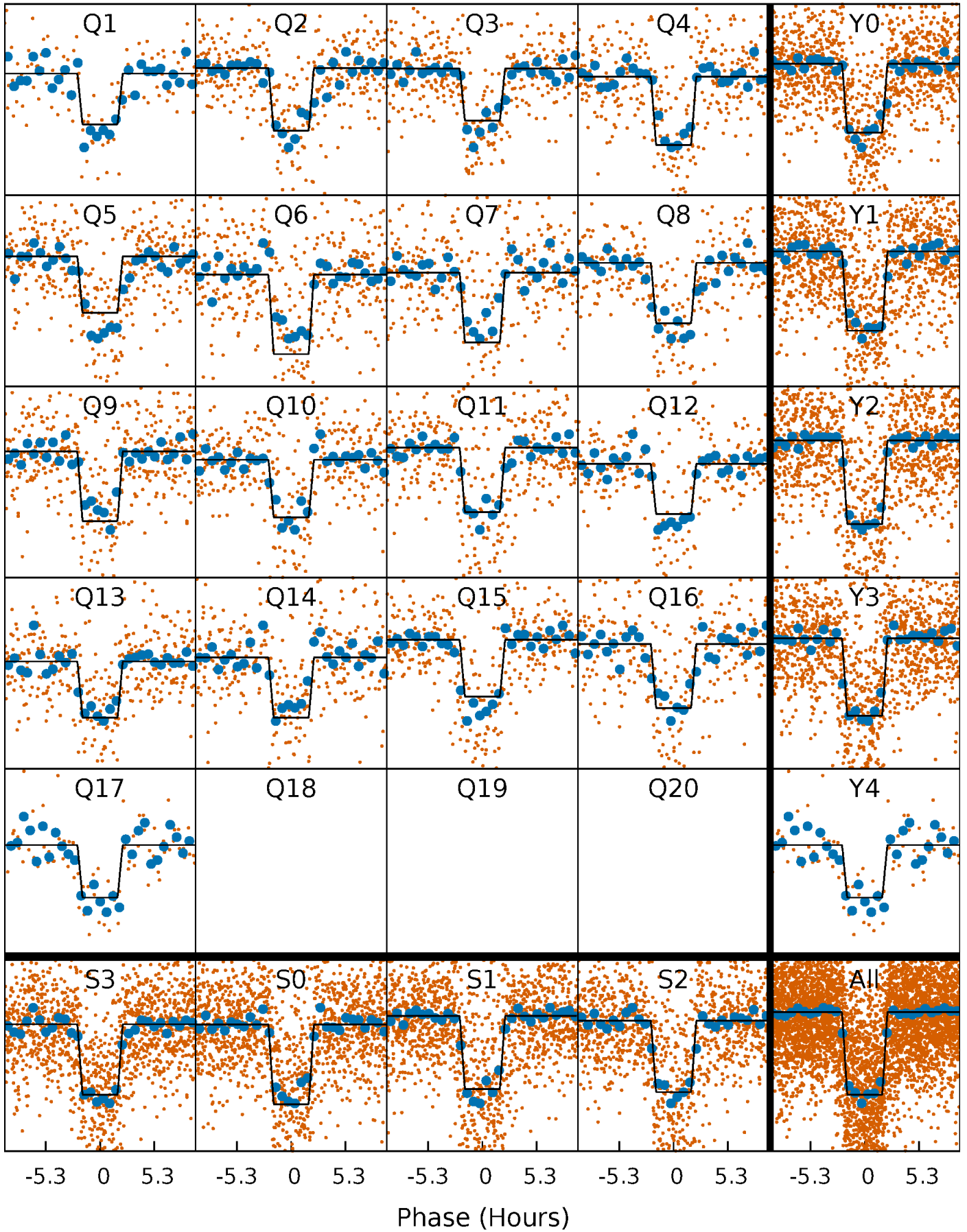
DV Quarter-Phased Transit Curves

TCE 006037581-01 P= 9.599923 Days $T_0=136.581279$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

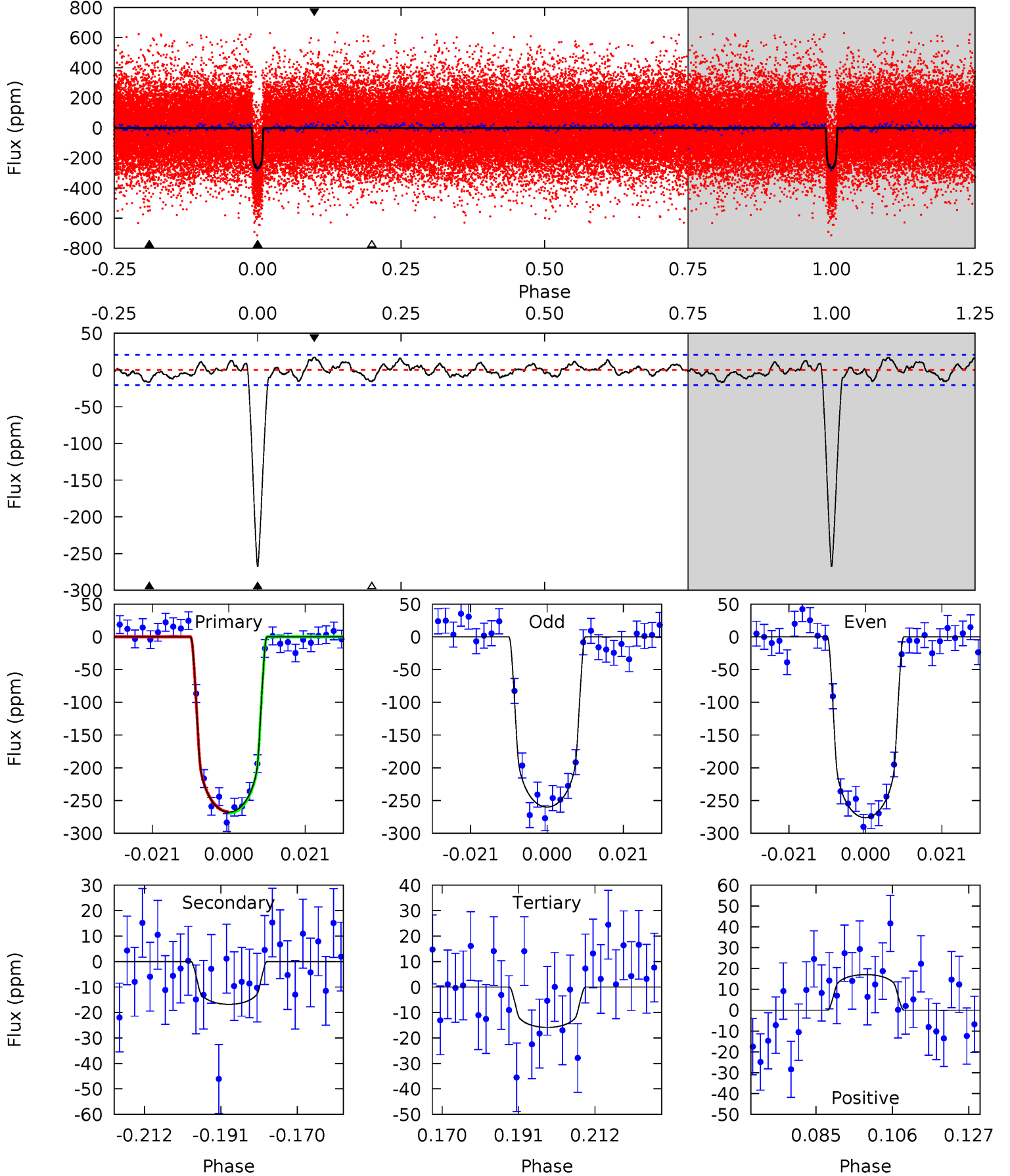
TCE 006037581-01 P= 9.600035 Days $T_0=136.572800$ (BKJD)



DV Model-Shift Uniqueness Test

006037581-01, P = 9.599923 Days, E = 126.981356 Days

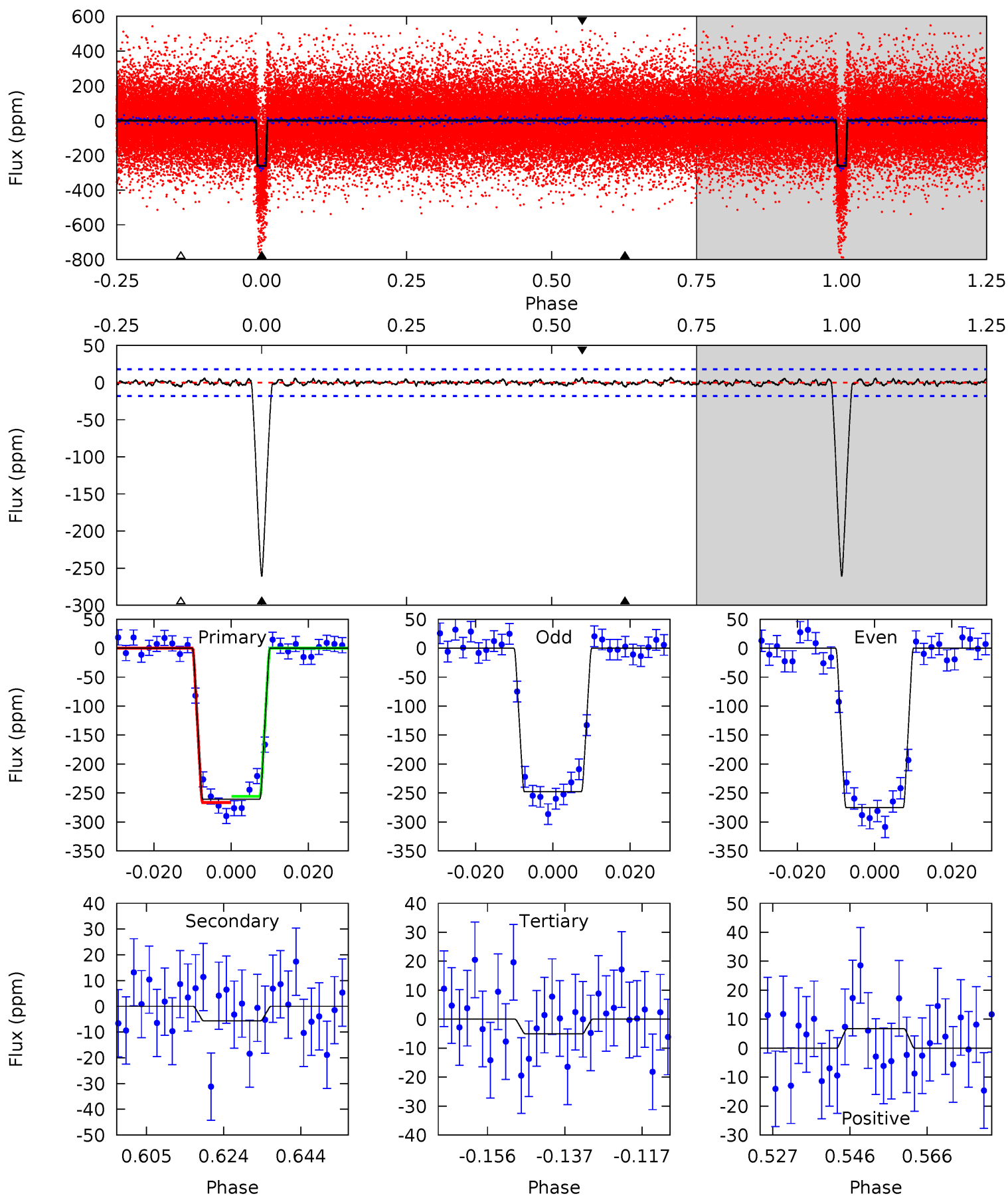
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	3.98	3.76	4.05	4.88	2.30	1.52	59.6	59.4	0.22	-0.07	1.93	1.01	0.06	0.26



Alt Model-Shift Uniqueness Test

006037581-01, P = 9.600035 Days, E = 126.972765 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.1	1.53	1.38	1.83	4.90	2.34	0.57	69.7	69.3	0.15	-0.30	3.79	0.96	0.03	1.44



Stellar Parameters For KIC 006037581

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5865^{+105}_{-117}	$4.266^{+0.137}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$1.272^{+0.213}_{-0.213}$	$1.088^{+0.089}_{-0.089}$	$0.745^{+0.469}_{-0.244}$
	+2%/-2%	+3%/-3%	+94%/-94%	+17%/-17%	+8%/-8%	+63%/-33%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006037581-01 / KOI 1916.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 4	$2.37^{+0.43}_{-0.41}$	1349^{+63}_{-67}	3374^{+217}_{-210}	14^{+7}_{-5}
Alt.	-6 ± 4	$2.21^{+0.41}_{-0.36}$	1352^{+68}_{-67}	2919^{+287}_{-377}	$5.141^{+4.906}_{-3.219}$

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

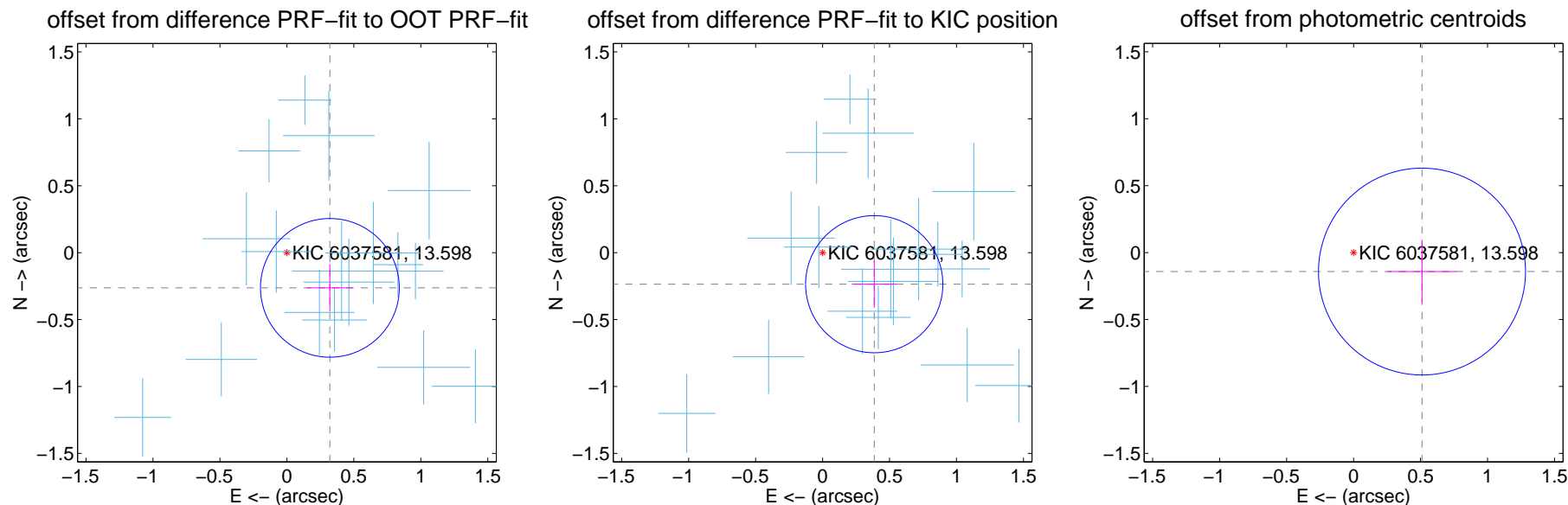
DV Centroid Data

Supplemental centroid analysis for 006037581-01. Kepler magnitude: 13.60. Transit SNR 35.86

There are 17 quarters with good PRF difference image offsets

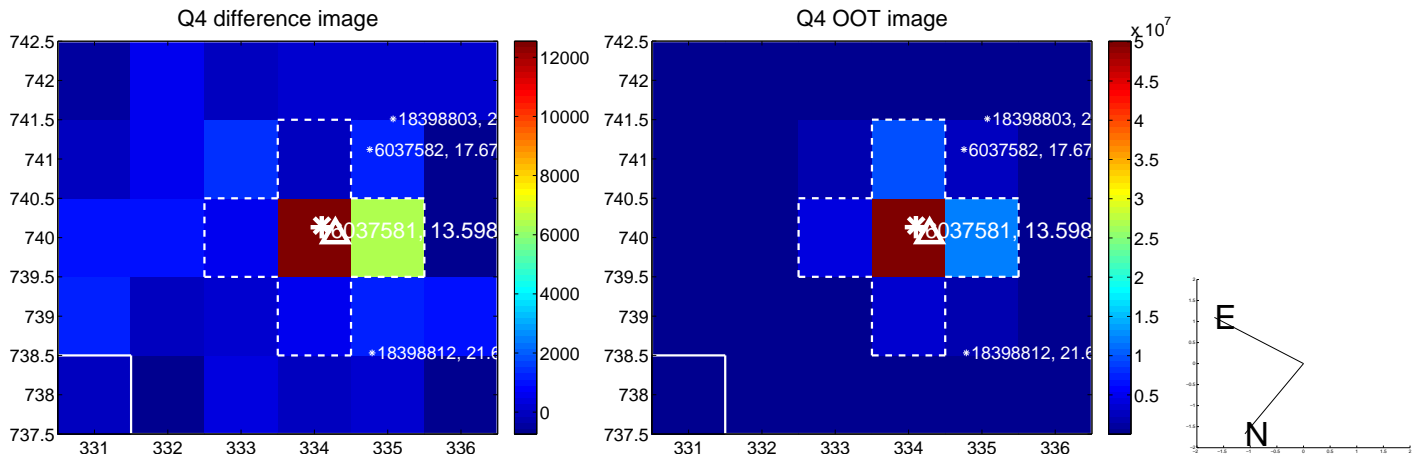
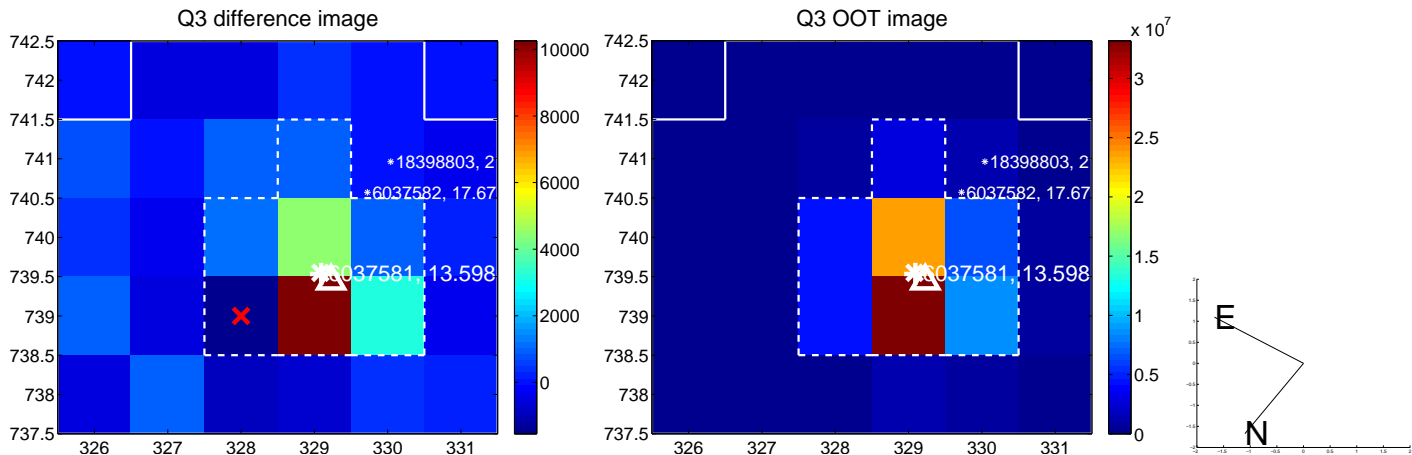
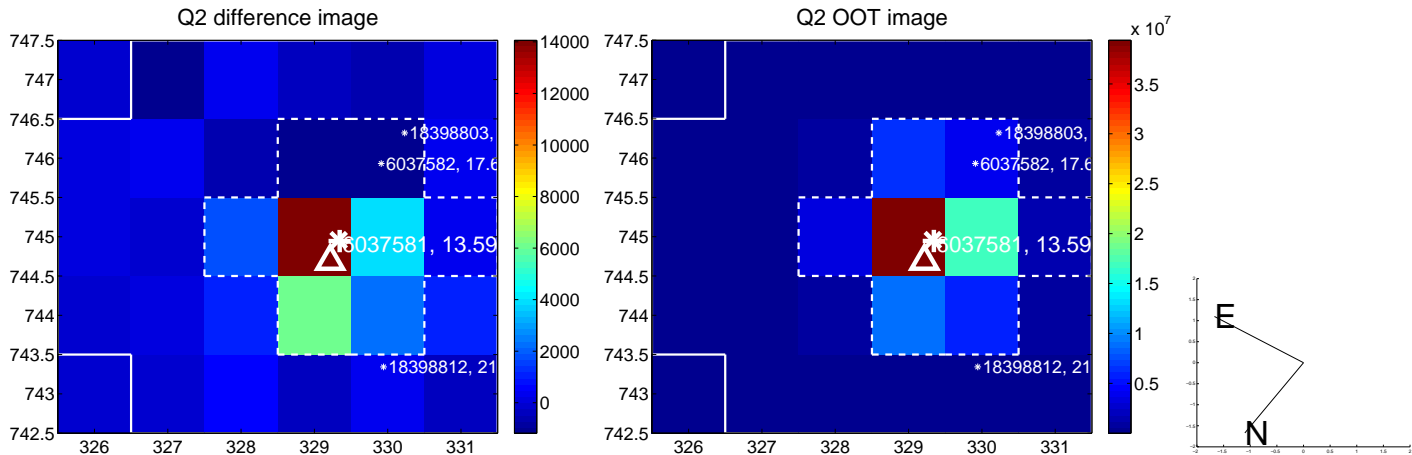
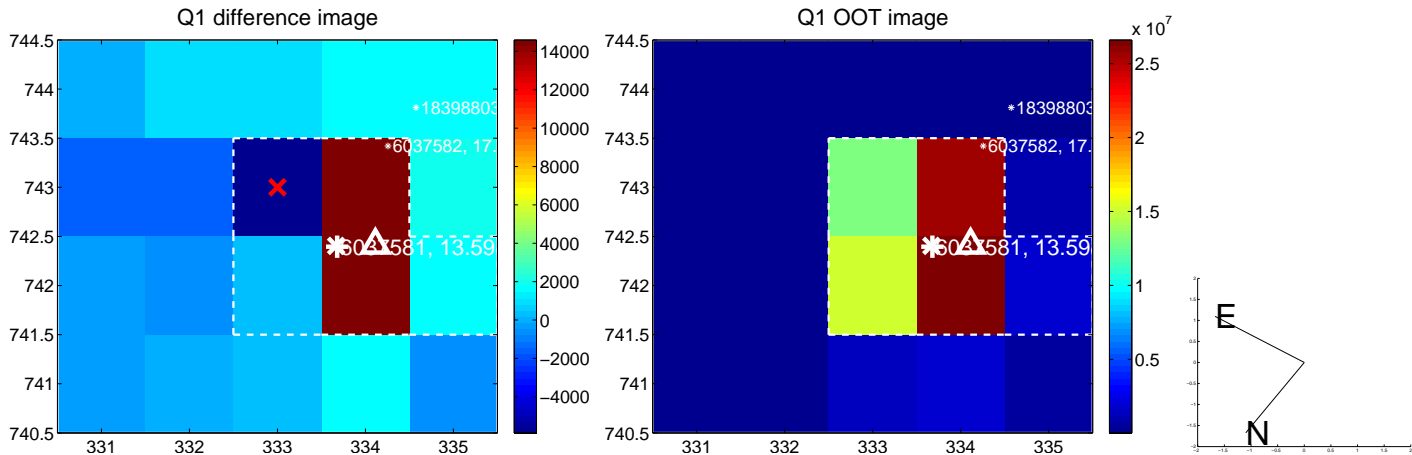
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.415 ± 0.173	2.40	-0.321 ± 0.170	-0.263 ± 0.176
PRF-fit source offset from KIC position	0.452 ± 0.171	2.65	-0.386 ± 0.169	-0.236 ± 0.176
photometric centroid source offset	0.53 ± 0.26	2.06	-0.51 ± 0.26	-0.14 ± 0.24

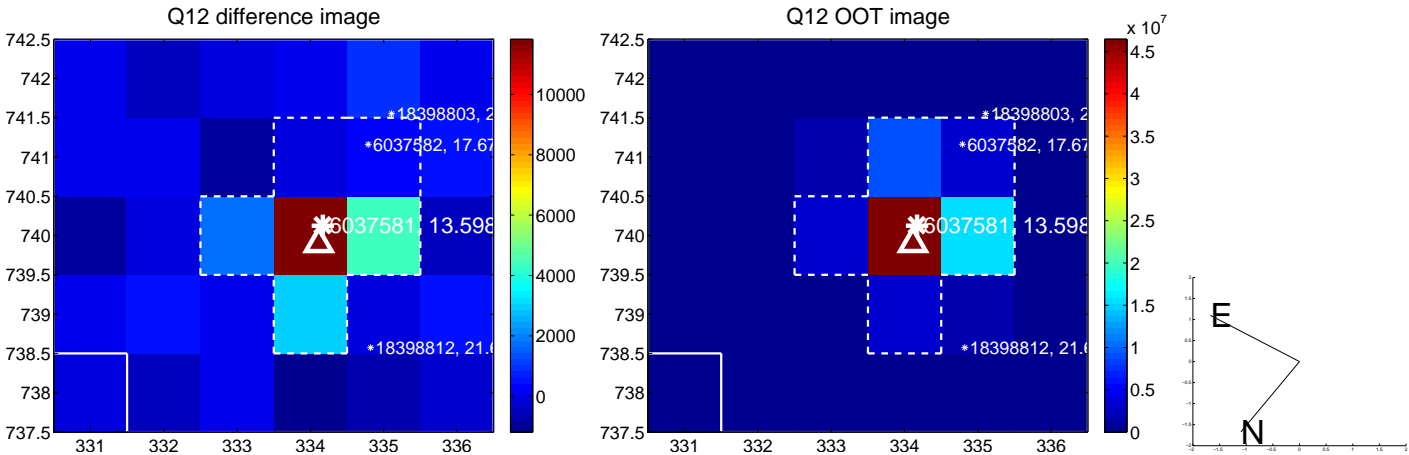
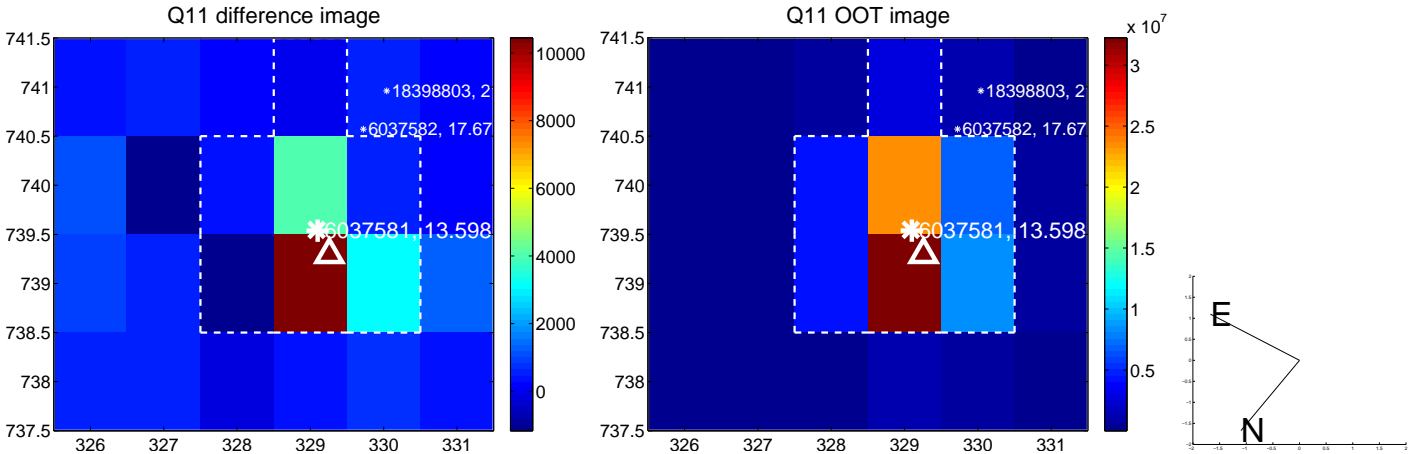
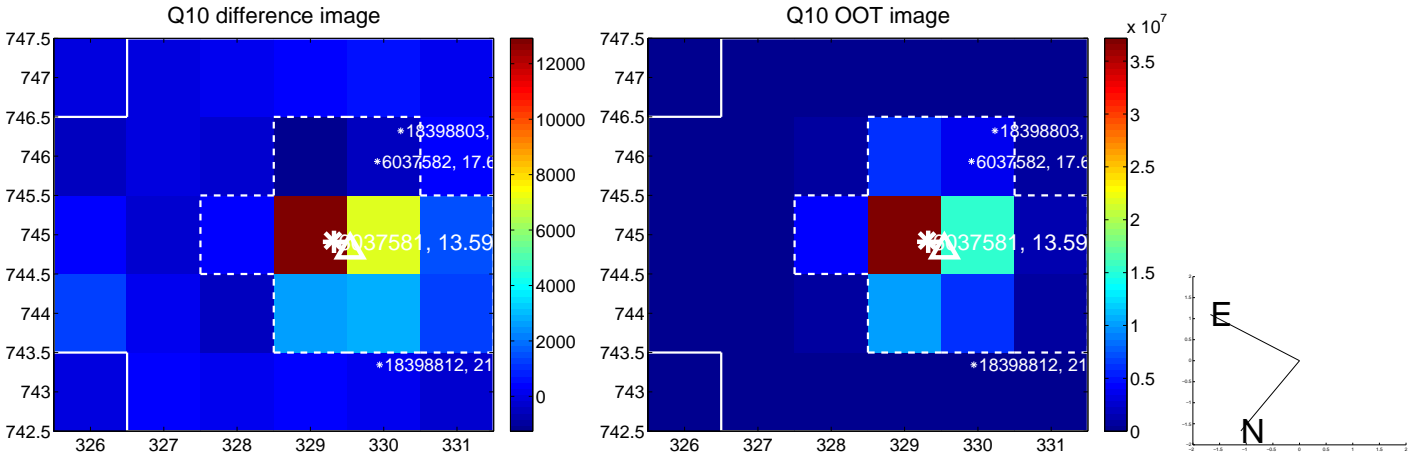
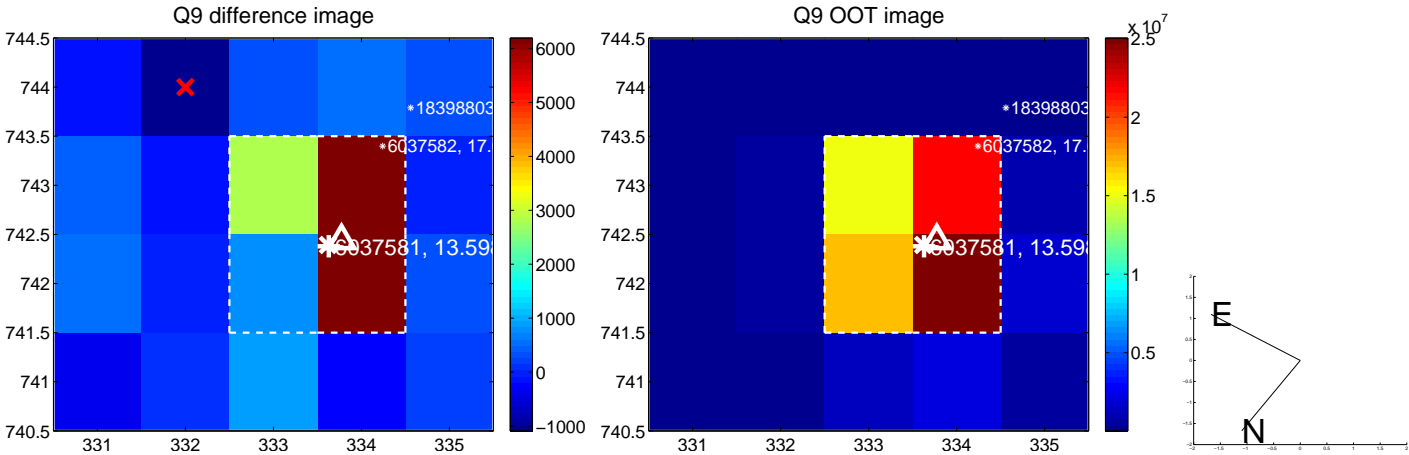


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

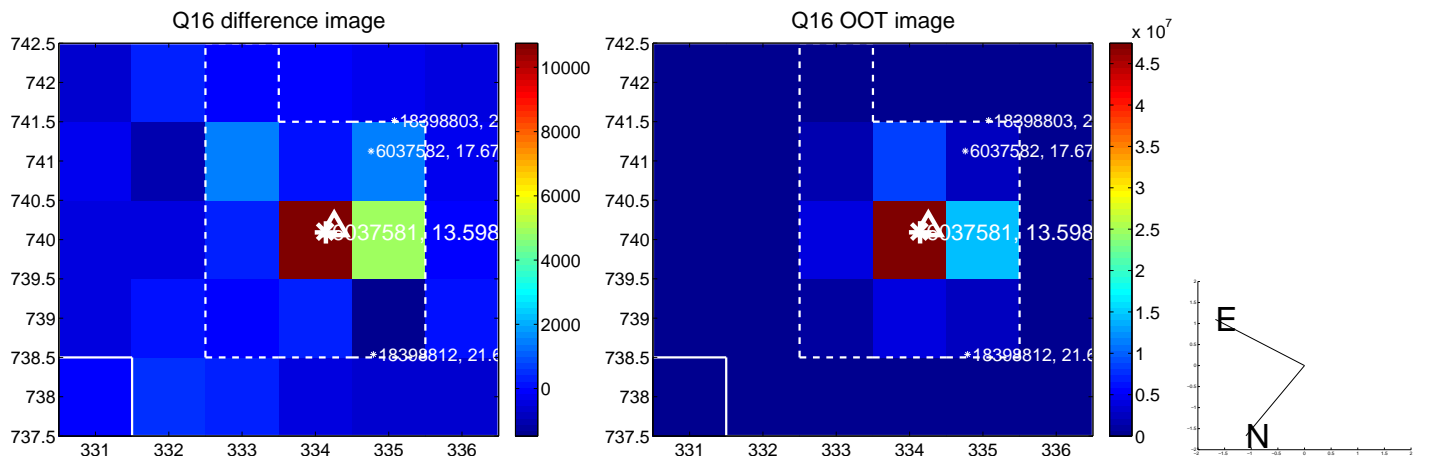
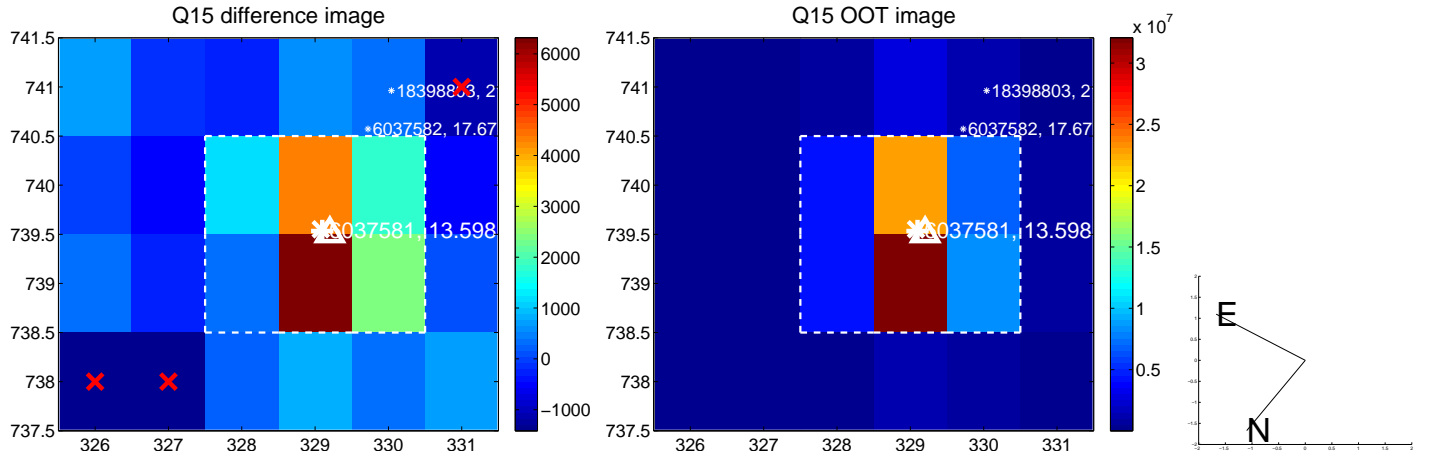
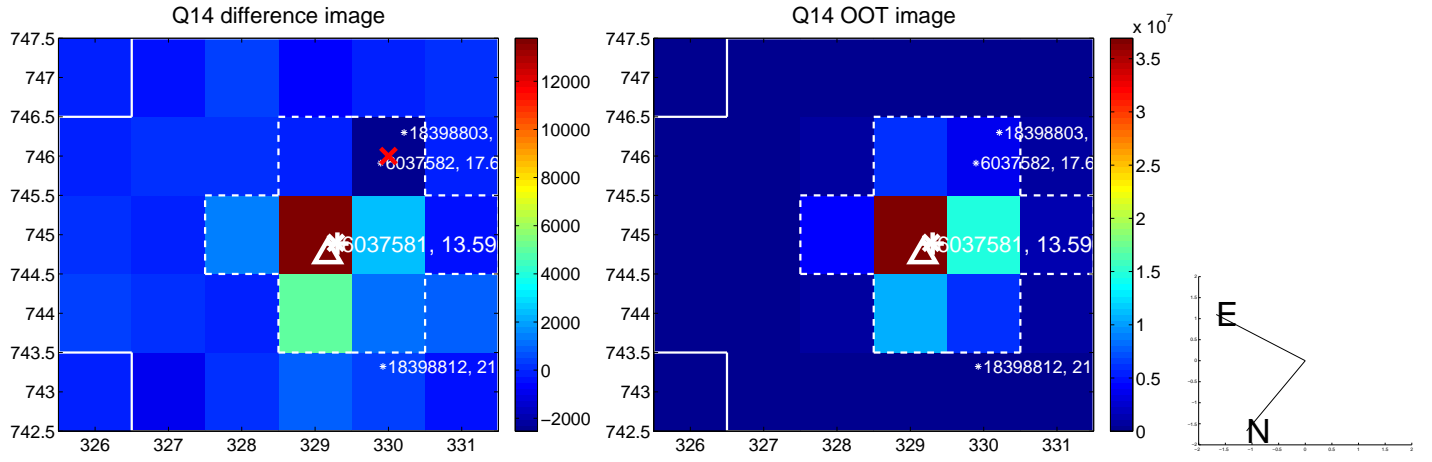
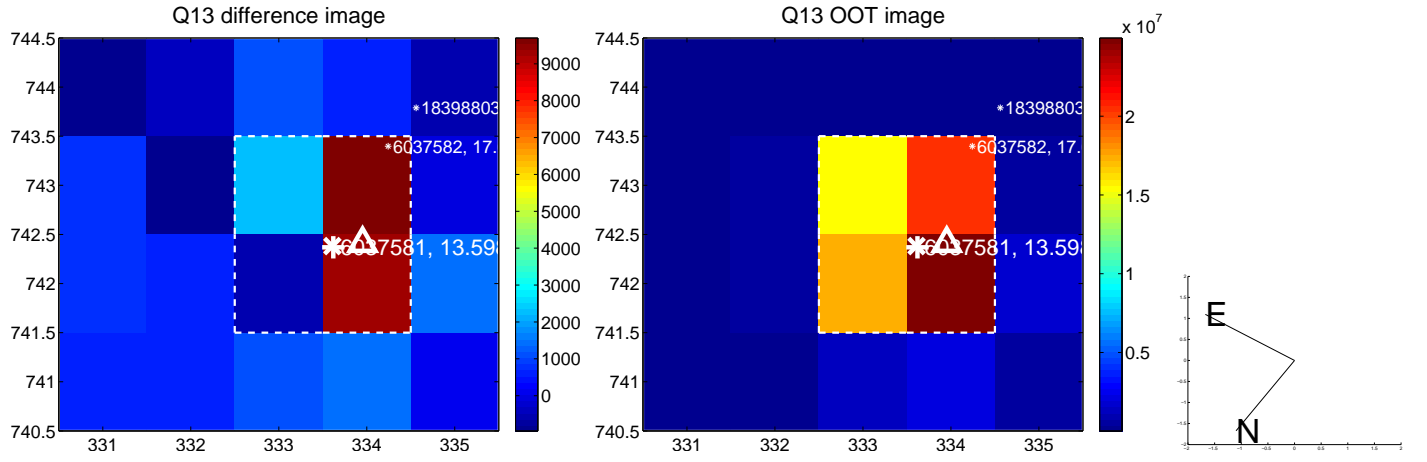
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



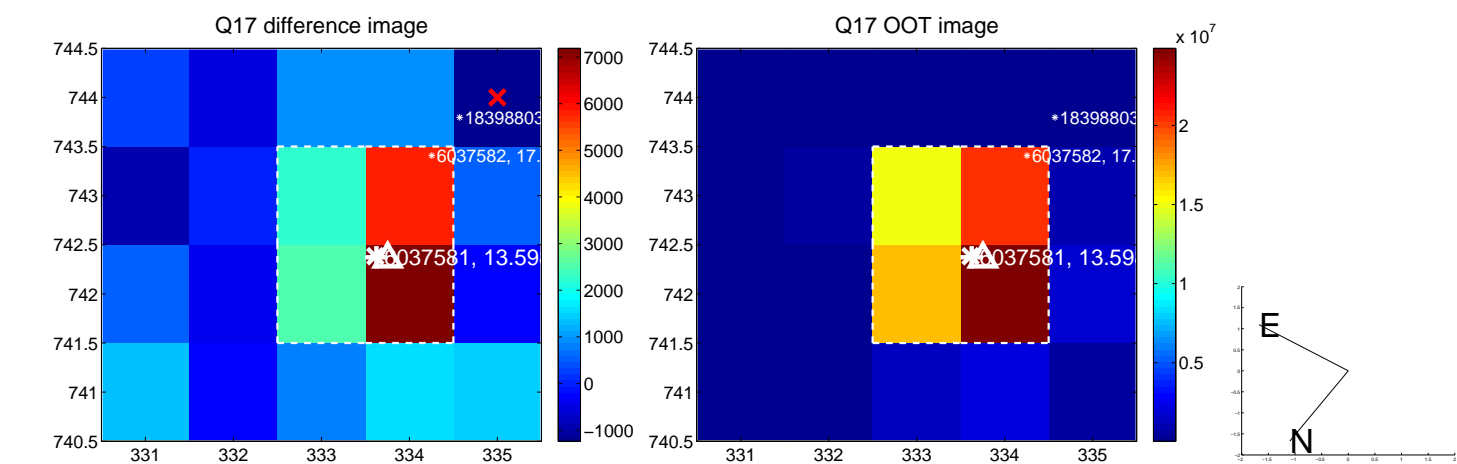
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



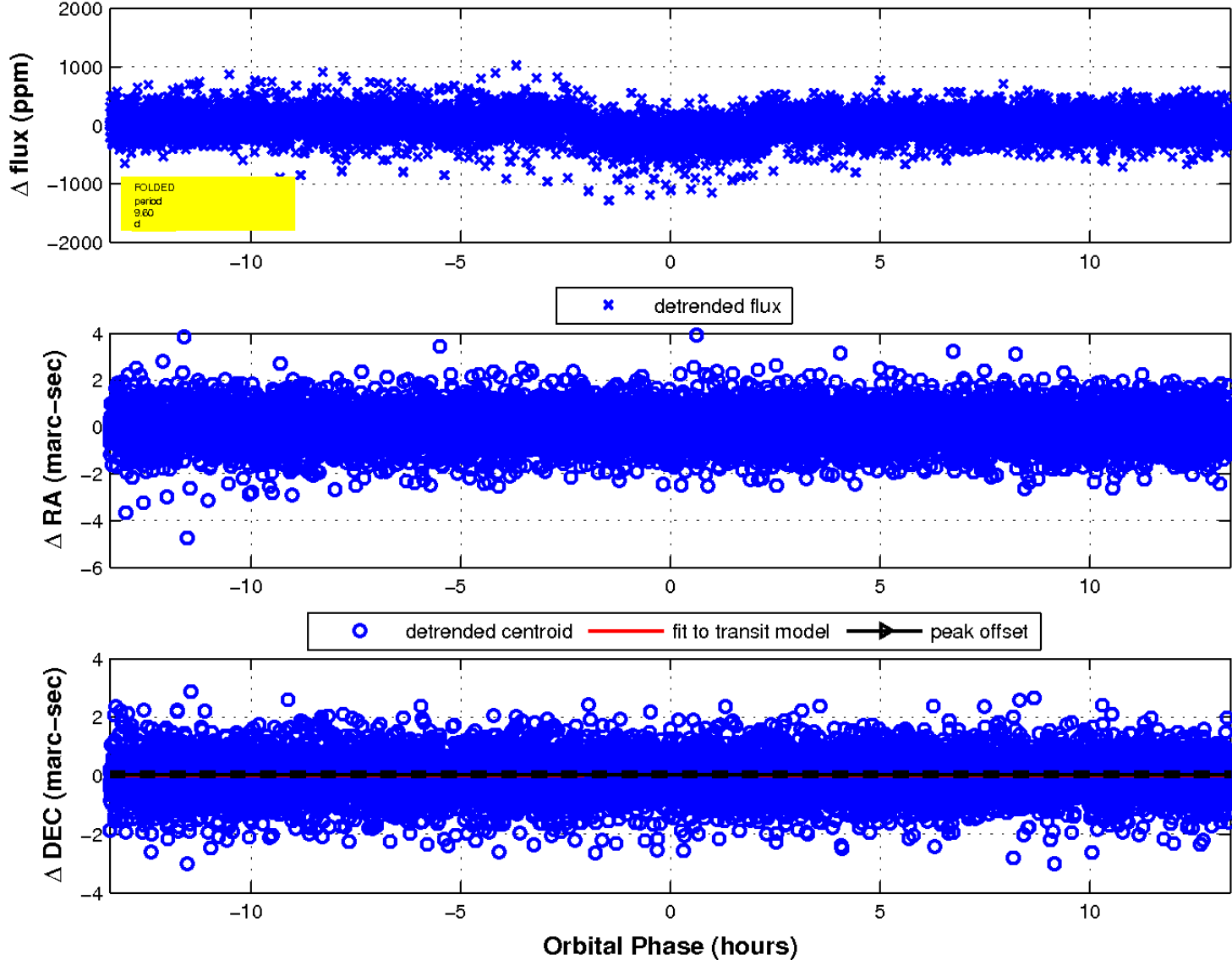
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

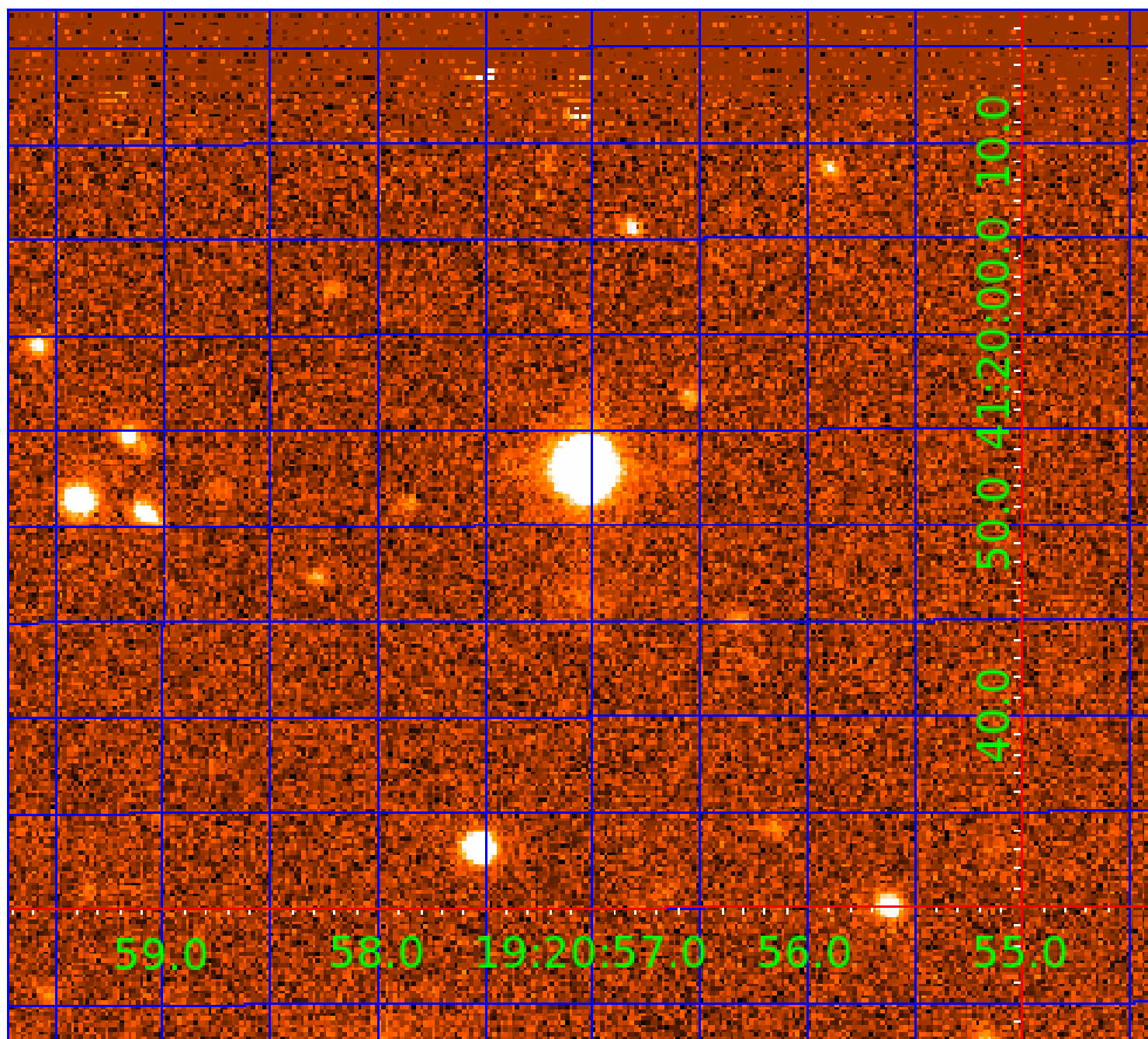


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 006037581

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})
006037581-01	OBS	1916.02	9.599923	136.581280	276.2	4.456	32.3	35.9	1.27	5865	2.38	207.30
006037581-02	OBS	1916.01	20.678775	151.691680	324.9	4.894	26.1	28.7	1.27	5865	2.71	74.52
006037581-03	OBS	1916.03	2.024833	132.352679	67.8	2.728	16.0	17.3	1.27	5865	1.25	1651.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037581-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-03	OBS	PC	0.93	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.

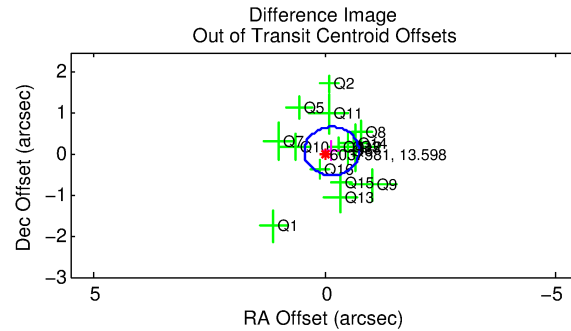
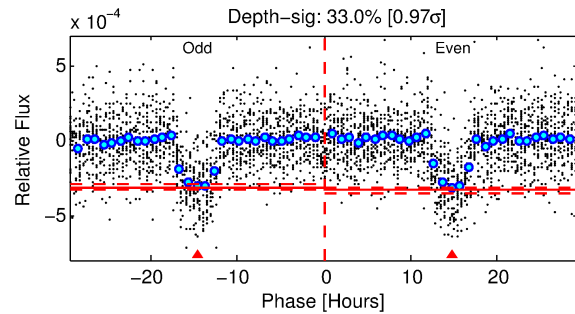
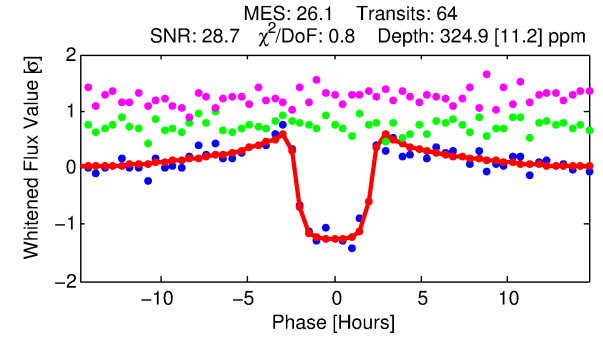
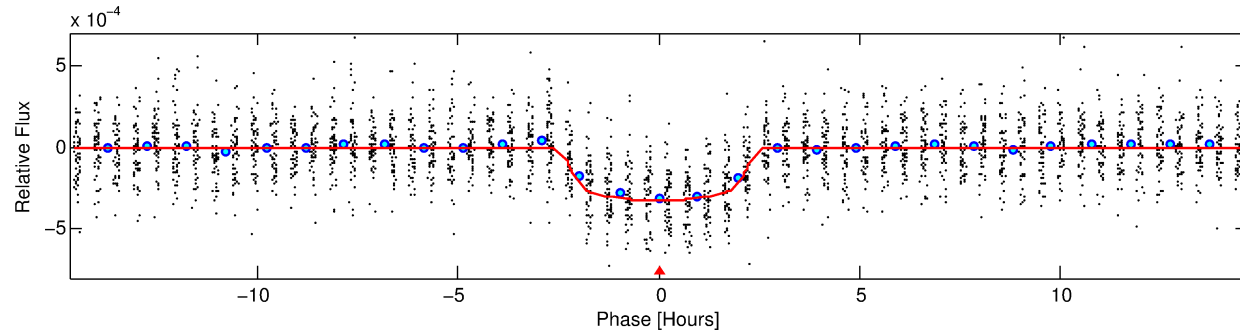
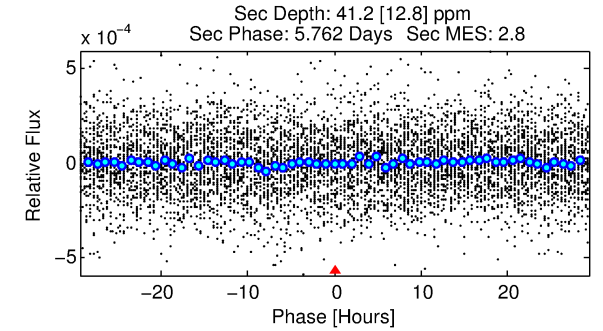
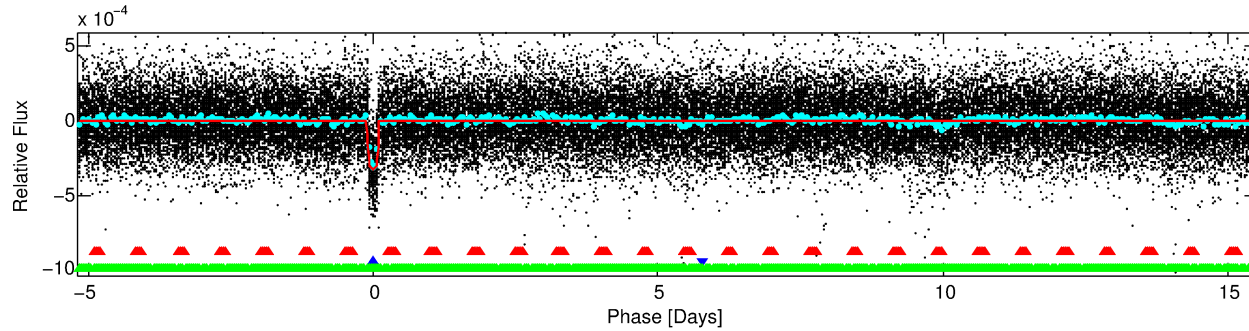
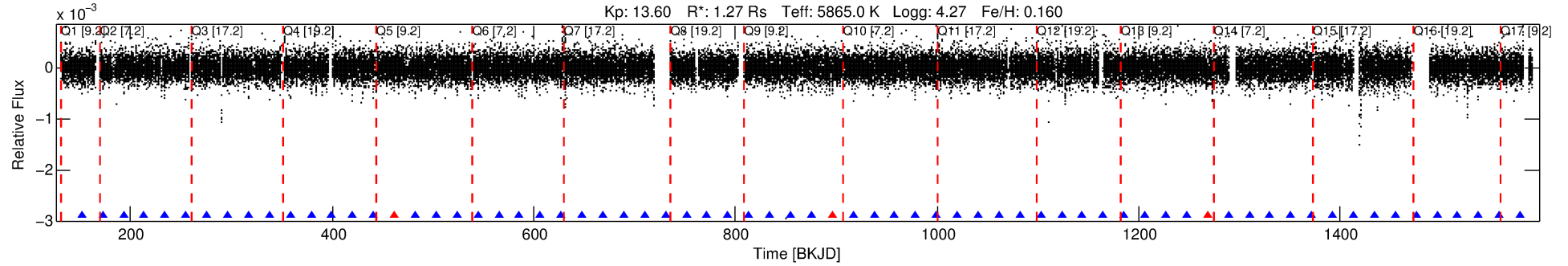
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037581-02

No Significant Match Found

DV One-Page Summary

KIC: 6037581 Candidate: 2 of 3 Period: 20.679 d
KOI: K01916.01 Name: Kepler-336d Corr: 0.967



DV Fit Results:

Period = 20.67877 [0.00006] d
Epoch = 151.6917 [0.0024] BKJD
Rp/R* = 0.0195 [0.0044]
a/R* = 15.88 [16.94]
b = 0.89 [0.25]
Seff = 74.52 [18.71]
Teq = 749 [47] K
Rp = 2.71 [0.76] Re
a = 0.1517 [0.0233] AU
Ag = 71.10 [42.26] [1.66σ]
Teffp = 3364 [463] K [5.62σ]

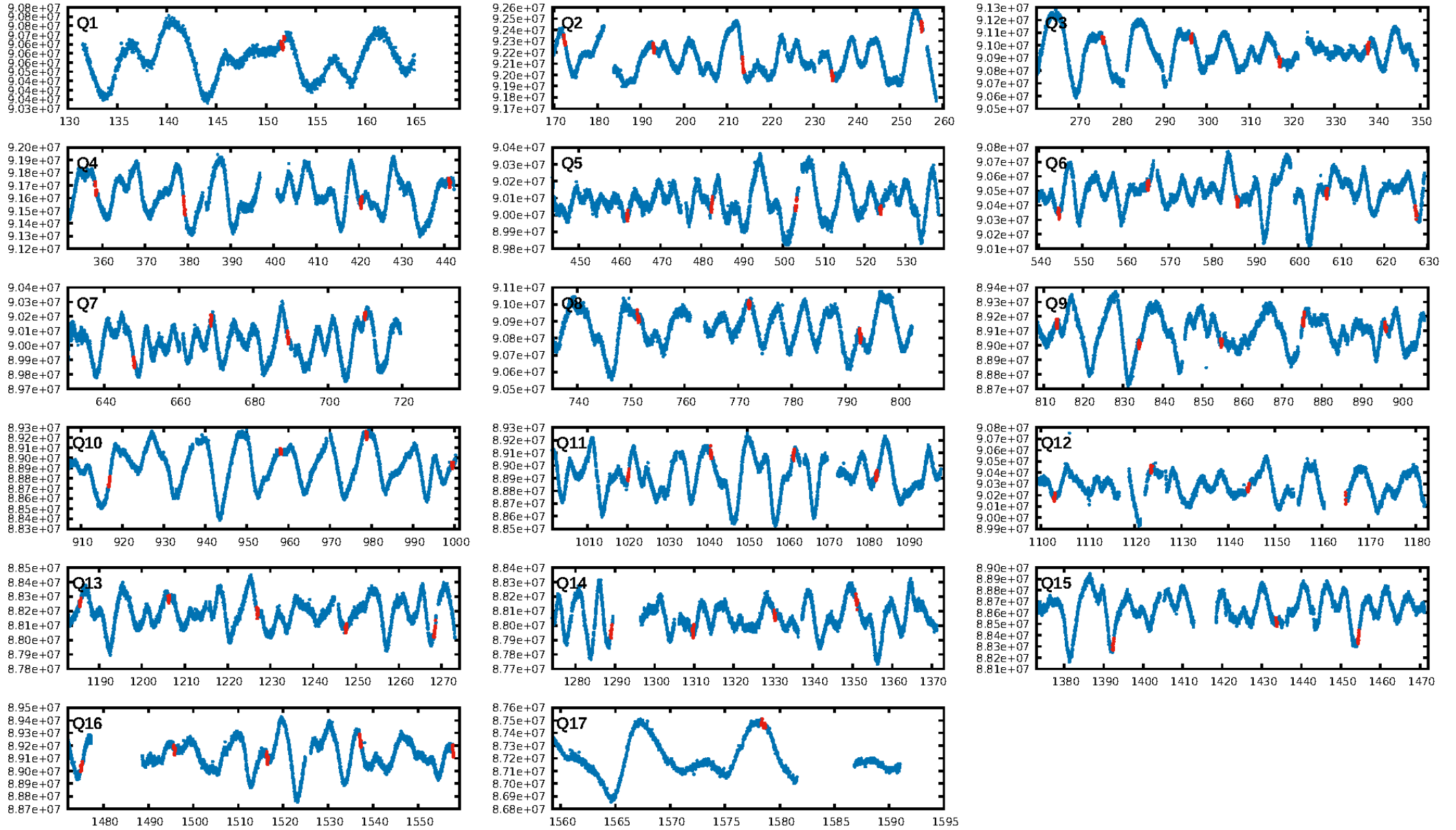
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [40.17σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.04e-119
RollingBand-fgt: 0.95 [59/62]
GhostDiagnostic-chr: 2.173
Centroid-sig: N/A
Centroid-so: 0.132 arcsec [0.41σ]
OotOffset-rm: 0.168 arcsec [0.85σ]
KicOffset-rm: 0.234 arcsec [1.33σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 0.82 [14/17]

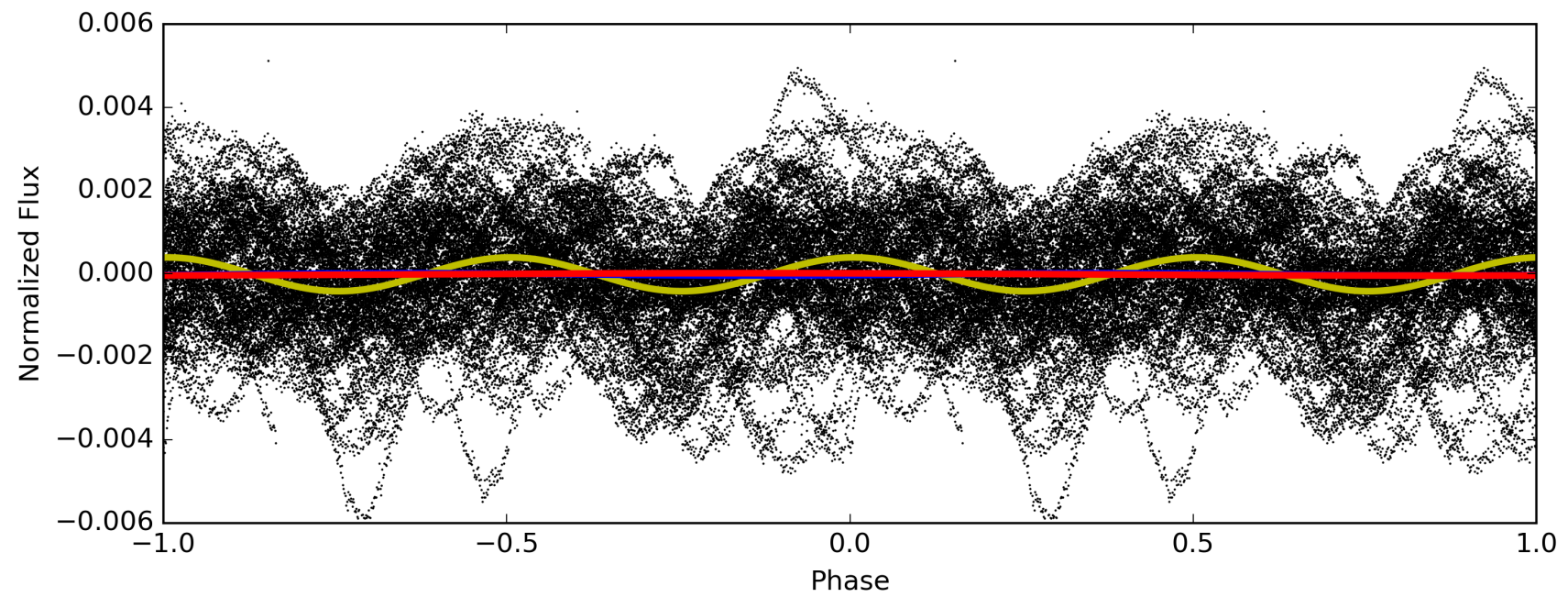
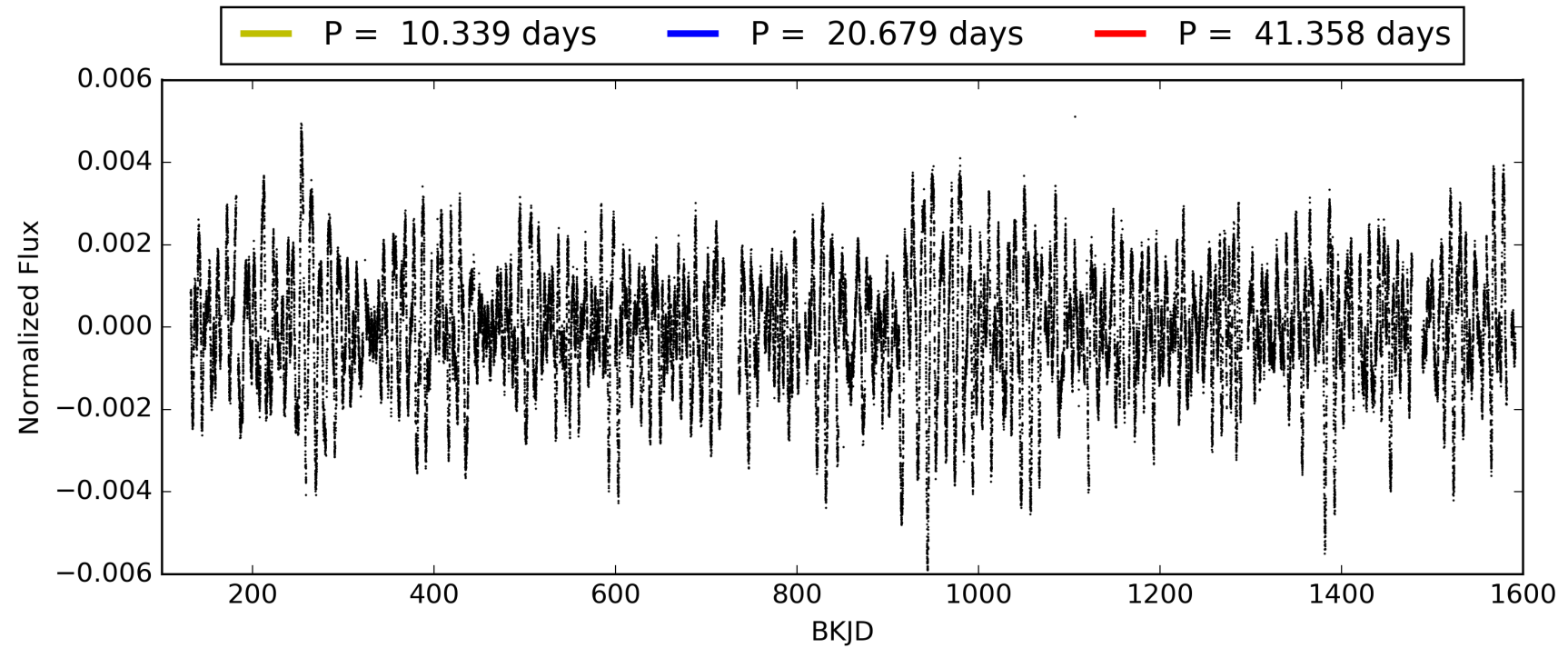
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:10:29 Z

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

TCE 006037581-02, PDC Light Curves

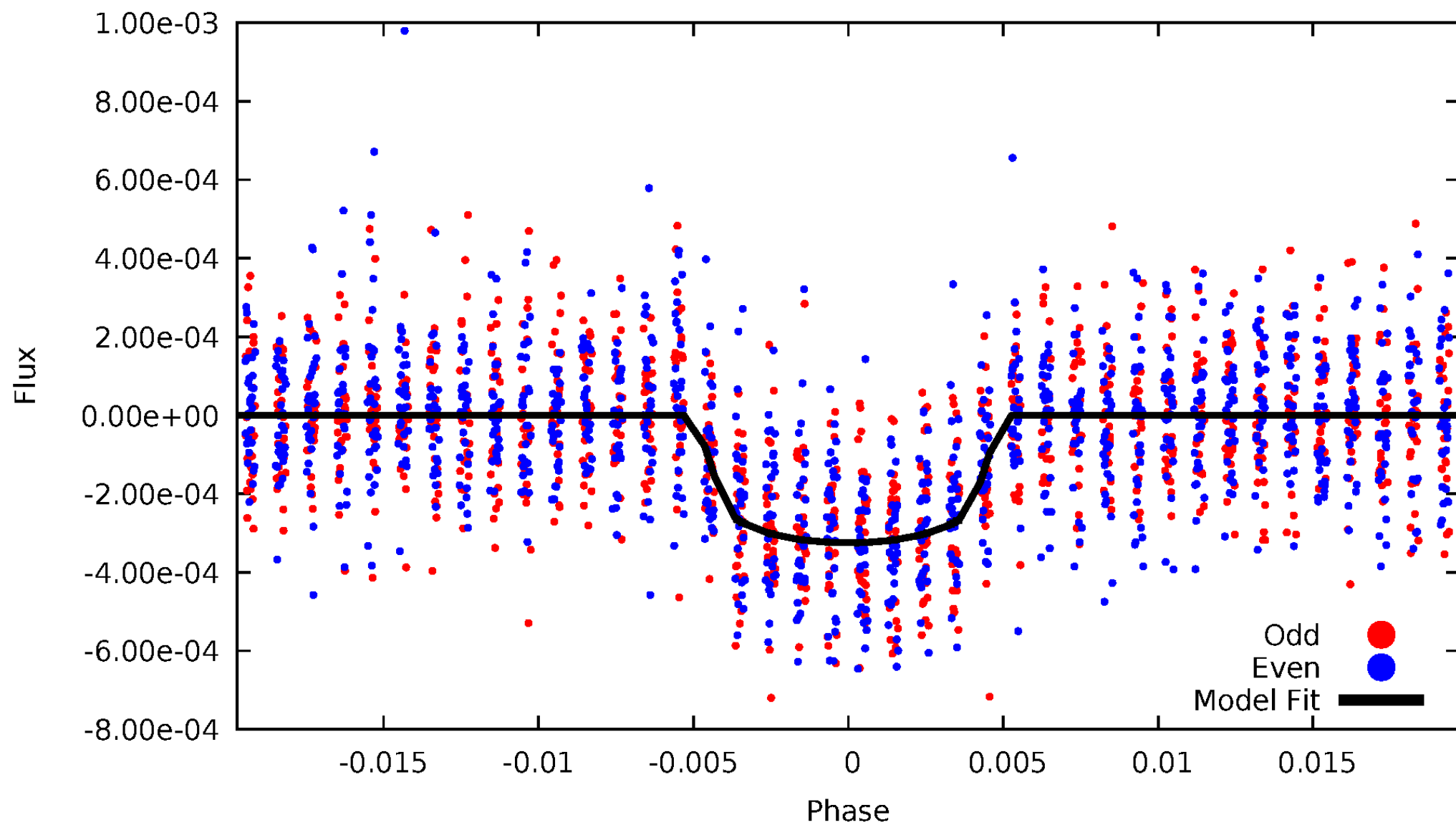


TCE 006037581-02



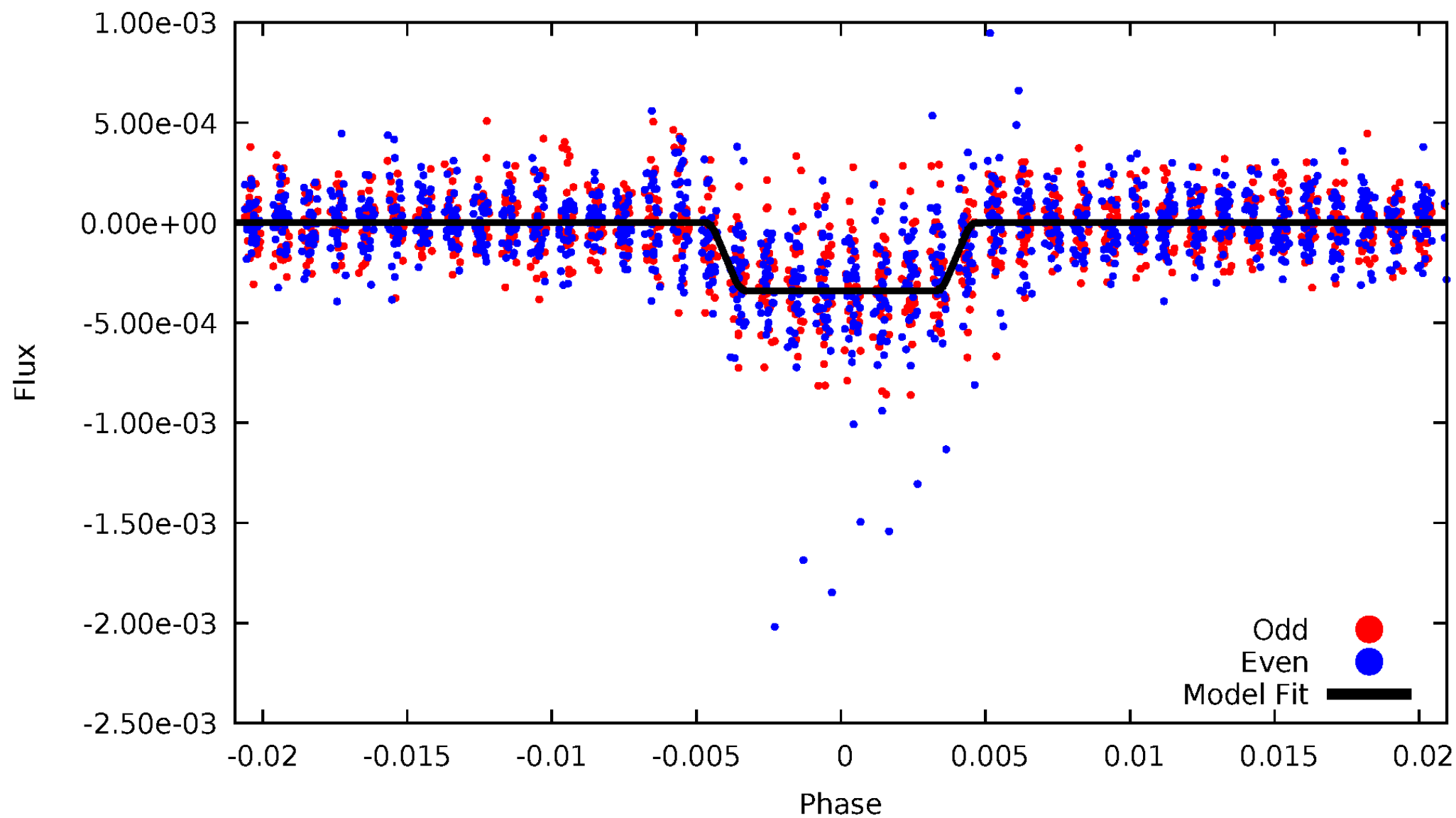
DV Odd/Even

TCE 006037581-02



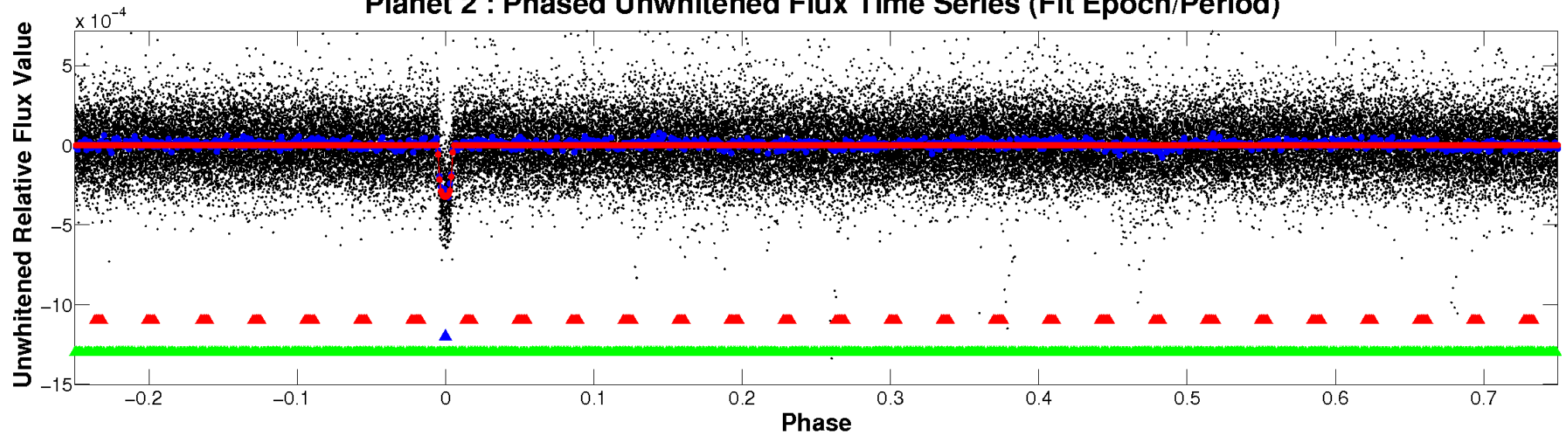
ALT Odd/Even

TCE 006037581-02

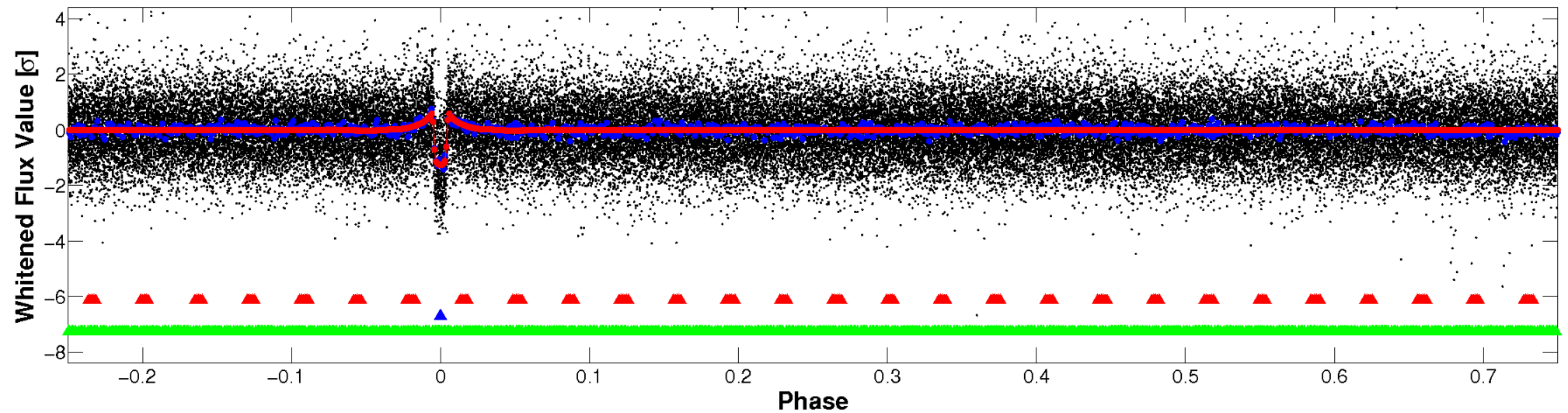


Non-Whitened Vs. Whitened Light Curve

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

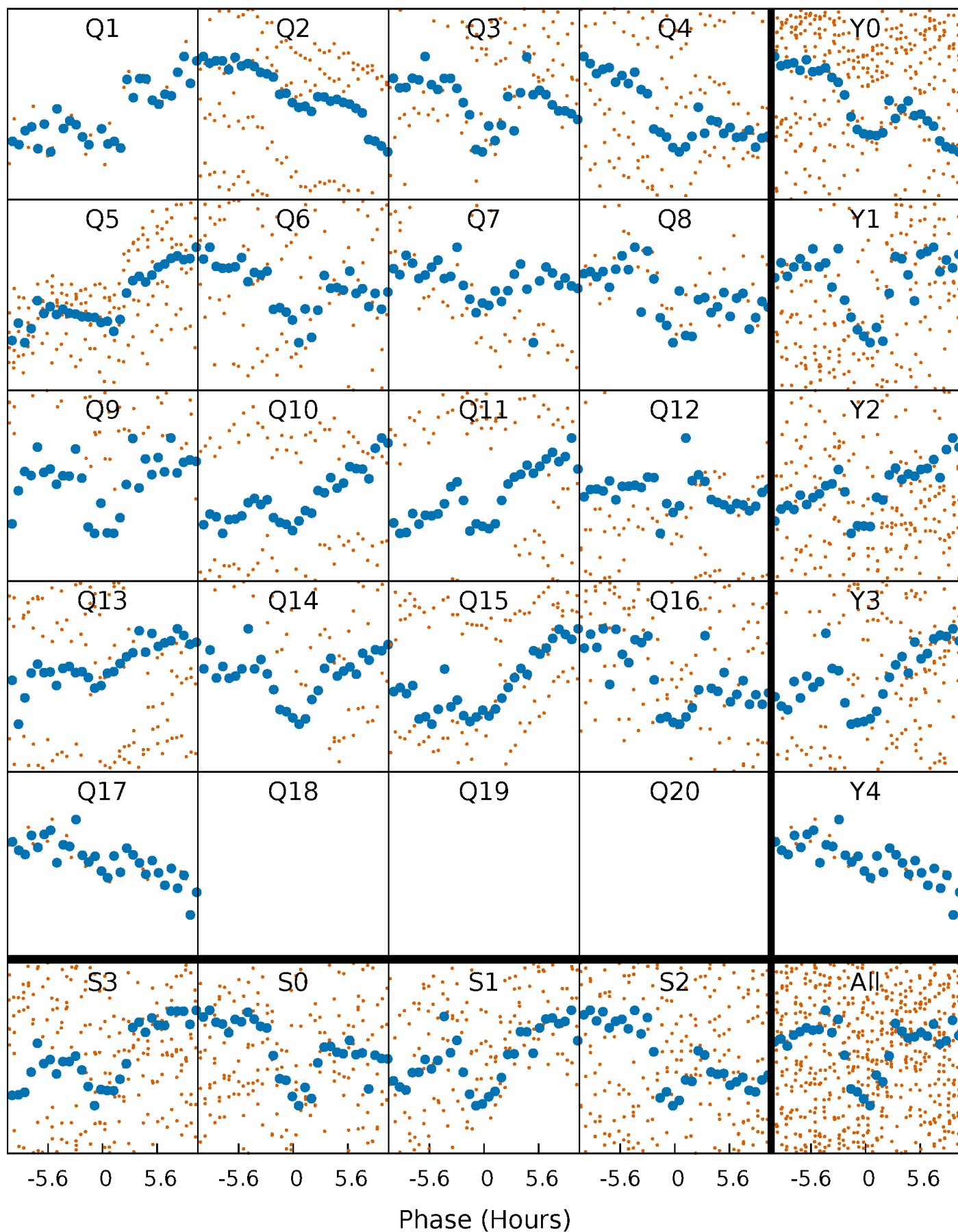


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



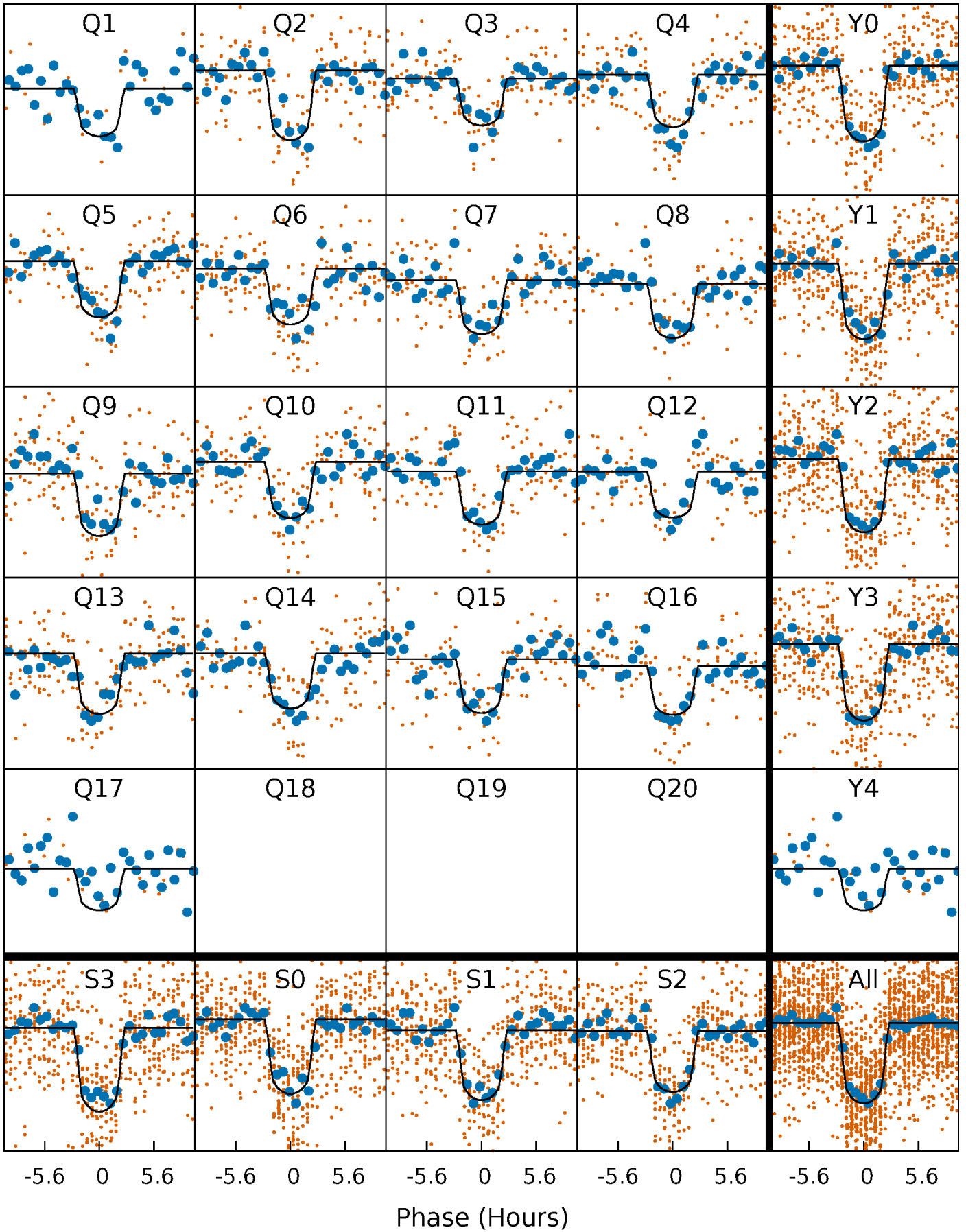
PDC Quarter-Phased Transit Curves

TCE 006037581-02 P= 20.678775 Days $T_0=151.691680$ (BKJD)



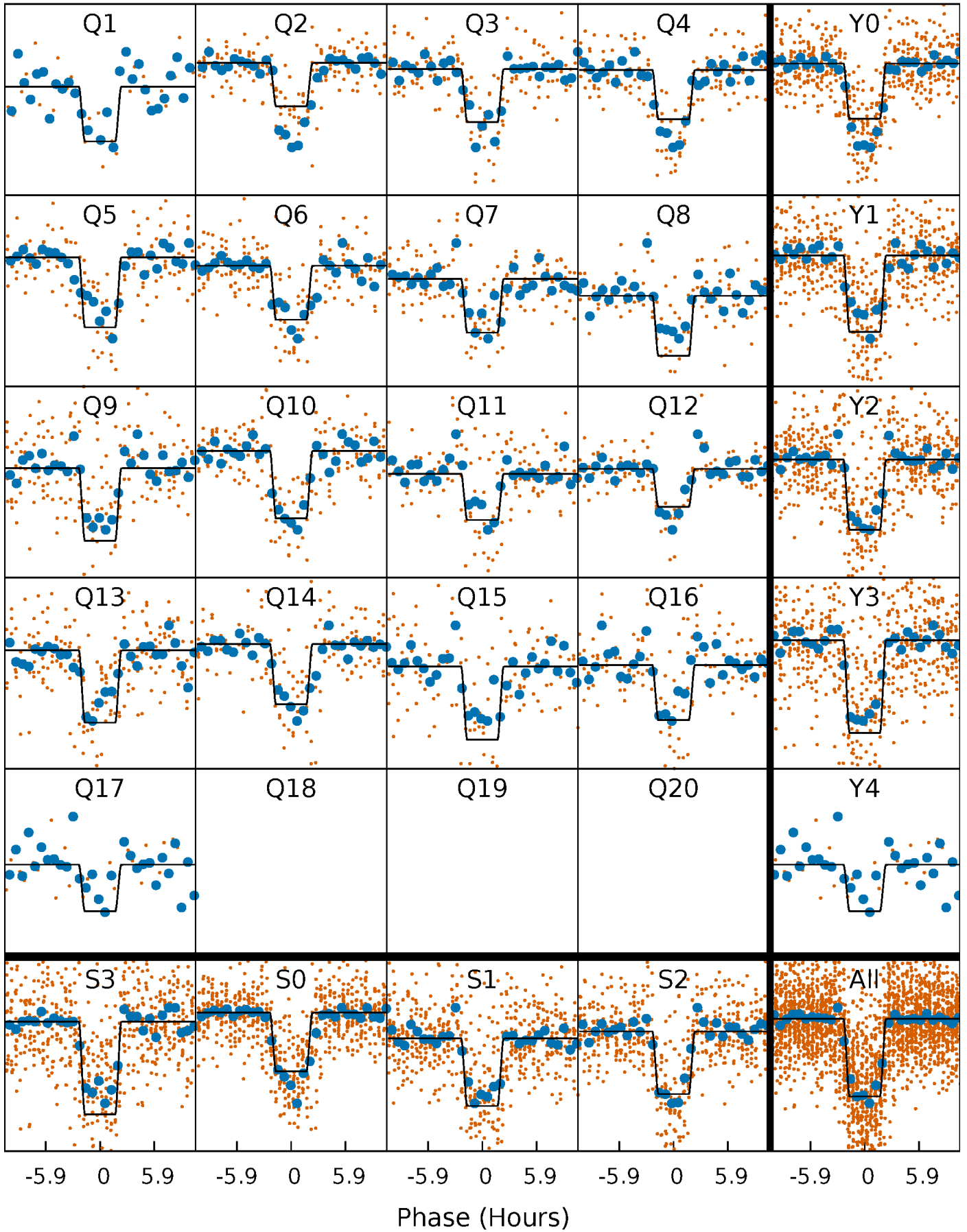
DV Quarter-Phased Transit Curves

TCE 006037581-02 P= 20.678775 Days $T_0=151.691680$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

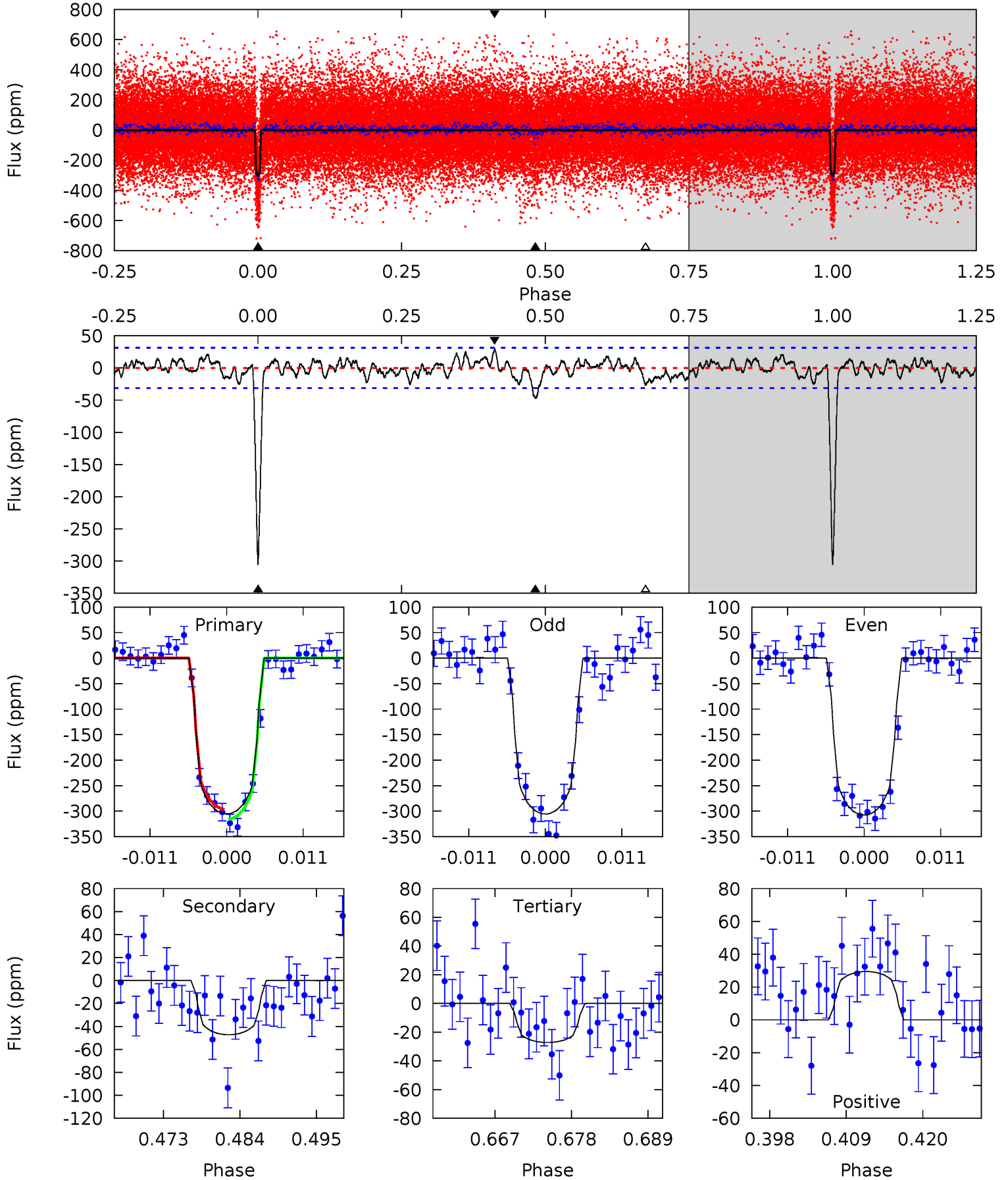
TCE 006037581-02 P= 20.678894 Days $T_0=151.688651$ (BKJD)



DV Model-Shift Uniqueness Test

006037581-02, $P = 20.678775$ Days, $E = 131.012905$ Days

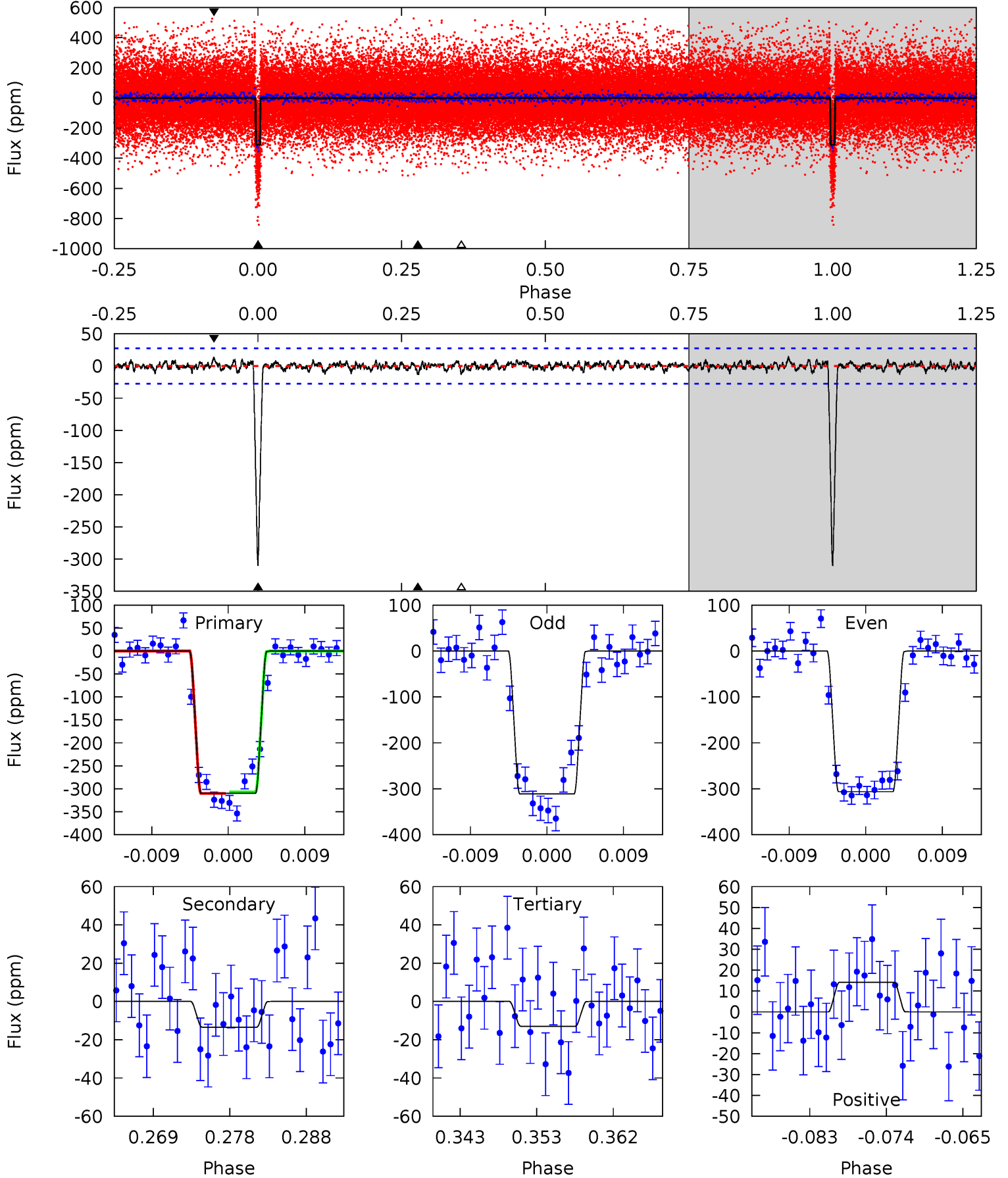
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.8	7.55	4.34	4.71	5.01	2.55	1.62	44.4	44.1	3.21	2.84	0.17	0.96	0.09	1.56



Alt Model-Shift Uniqueness Test

006037581-02, $P = 20.678894$ Days, $E = 131.009757$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.9	2.47	2.38	2.62	5.04	2.60	0.73	54.5	54.3	0.09	-0.14	0.43	1.00	0.04	0



Stellar Parameters For KIC 006037581

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5865^{+105}_{-117}	$4.266^{+0.137}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$1.272^{+0.213}_{-0.213}$	$1.088^{+0.089}_{-0.089}$	$0.745^{+0.469}_{-0.244}$
	+2%/-2%	+3%/-3%	+94%/-94%	+17%/-17%	+8%/-8%	+63%/-33%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006037581-02 / KOI 1916.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-47 ± 6	$2.70^{+0.68}_{-0.67}$	1045^{+50}_{-49}	3839^{+408}_{-258}	81^{+69}_{-29}
Alt.	-13 ± 5	$2.53^{+0.69}_{-0.64}$	1046^{+48}_{-53}	3199^{+337}_{-307}	25^{+26}_{-13}

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 $A_{obs} \gg 1.0$

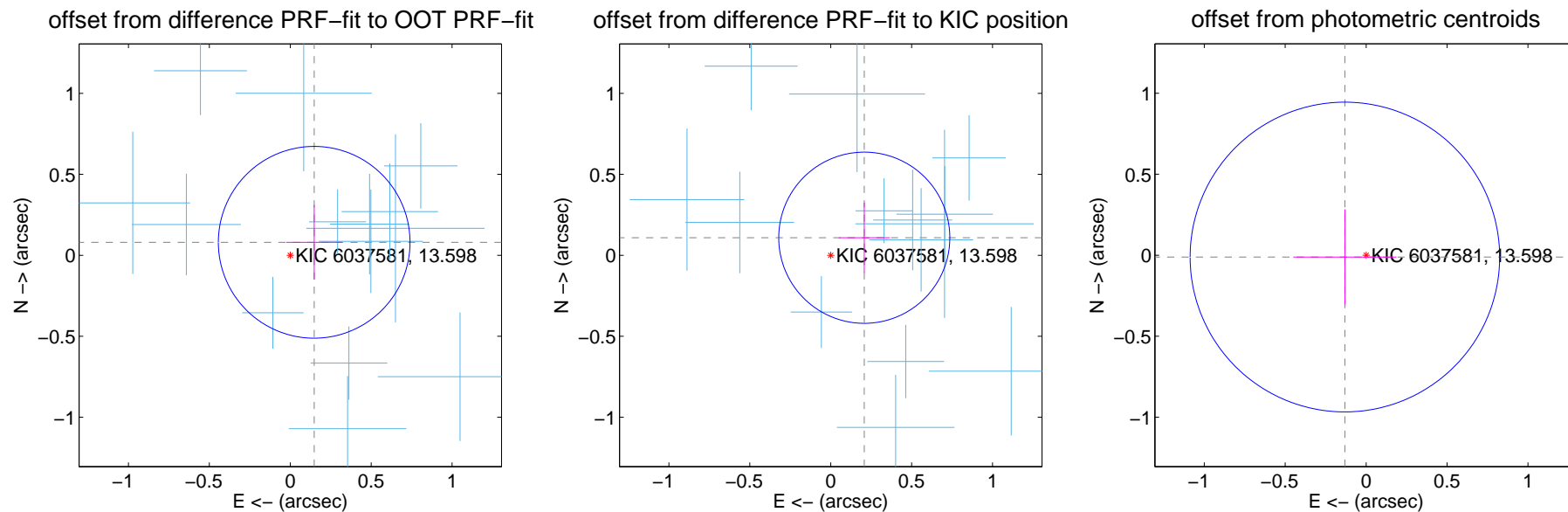
DV Centroid Data

Supplemental centroid analysis for 006037581-02. Kepler magnitude: 13.60. Transit SNR 28.67

There are 16 quarters with good PRF difference image offsets

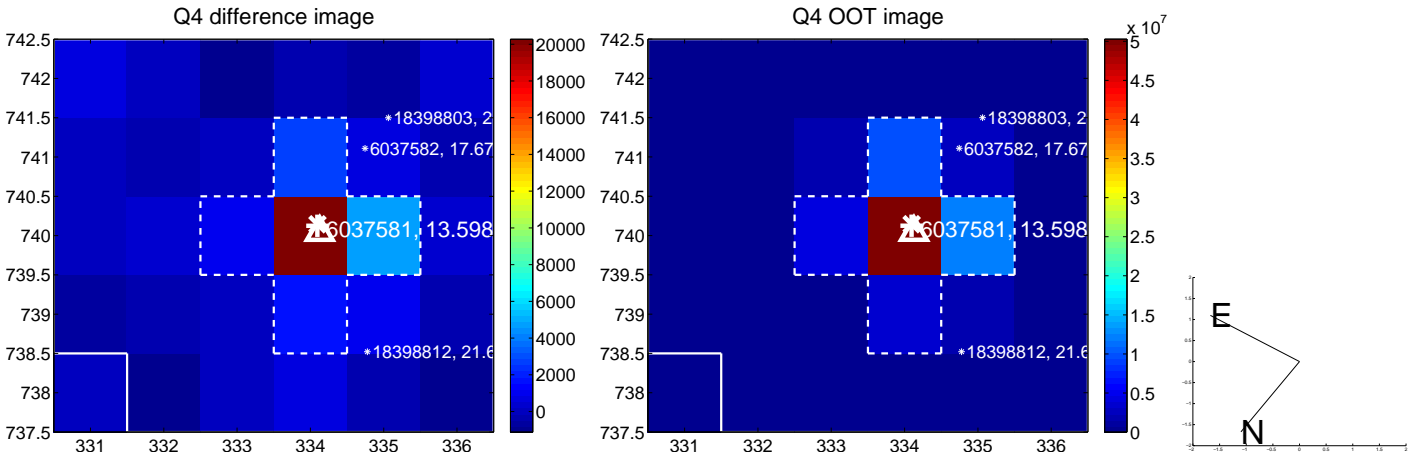
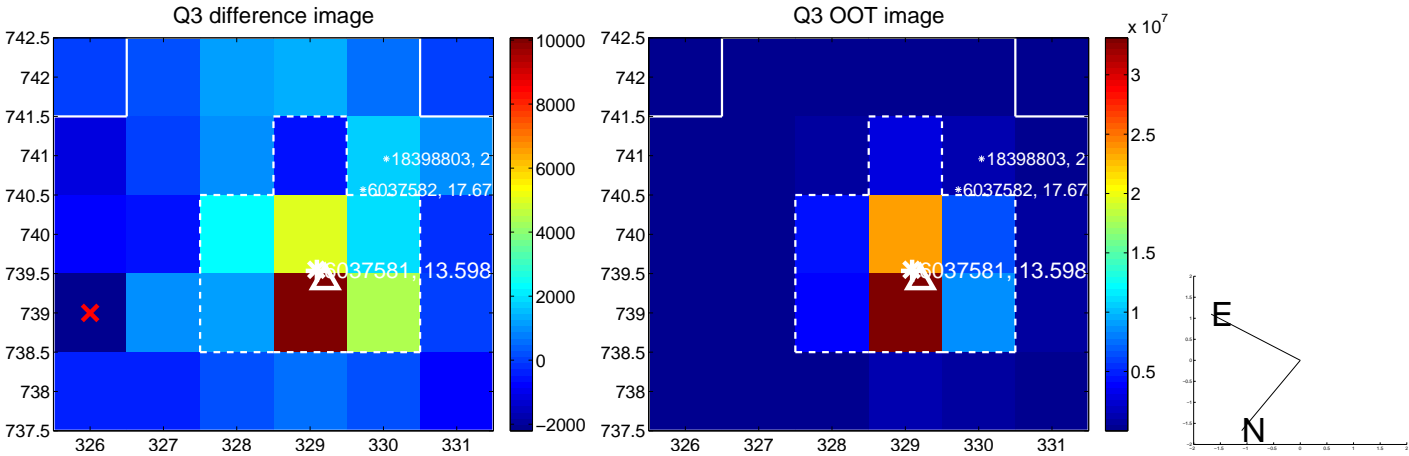
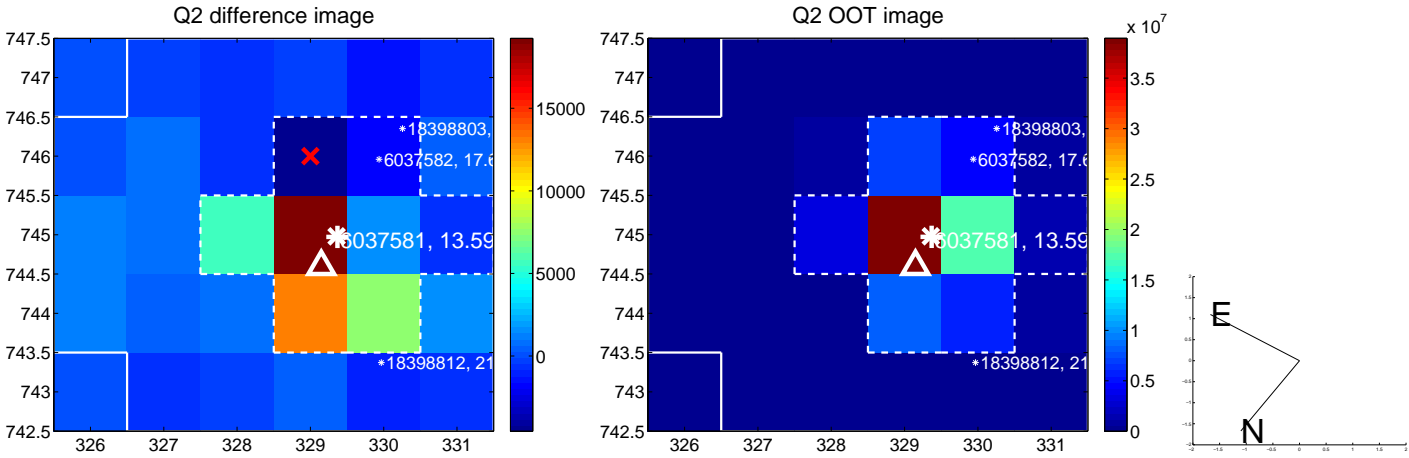
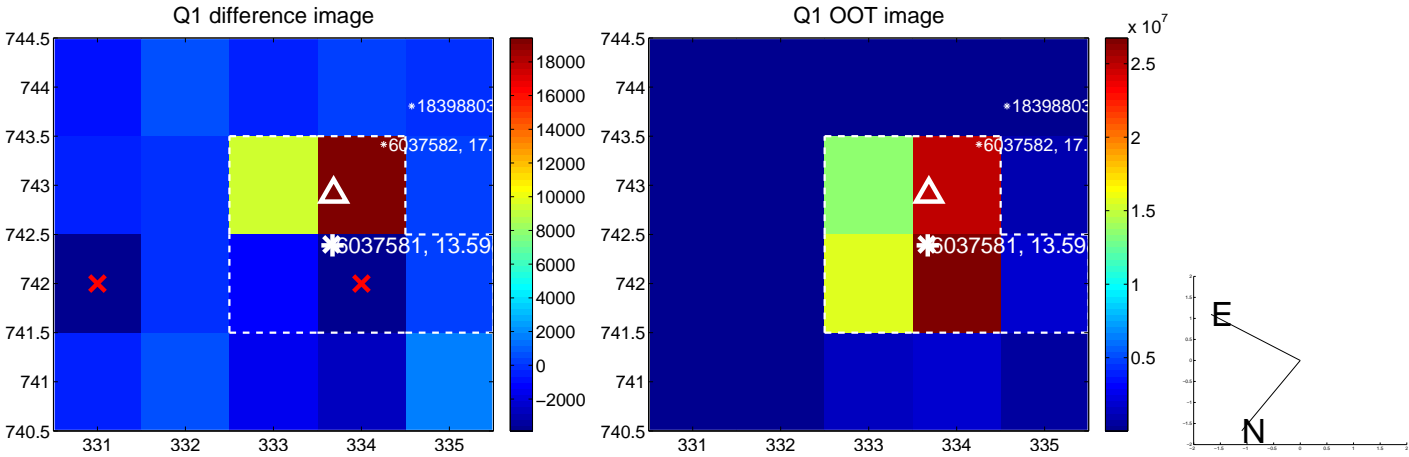
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.168 ± 0.197	0.85	-0.148 ± 0.172	0.080 ± 0.230
PRF-fit source offset from KIC position	0.234 ± 0.176	1.33	-0.207 ± 0.157	0.108 ± 0.217
photometric centroid source offset	0.13 ± 0.32	0.41	0.13 ± 0.32	-0.01 ± 0.29

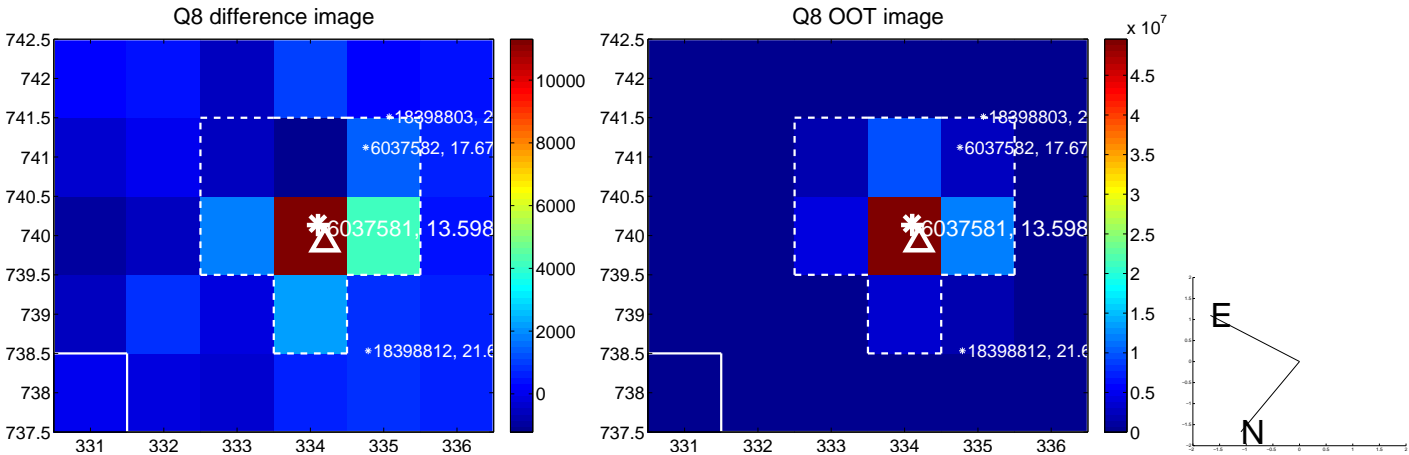
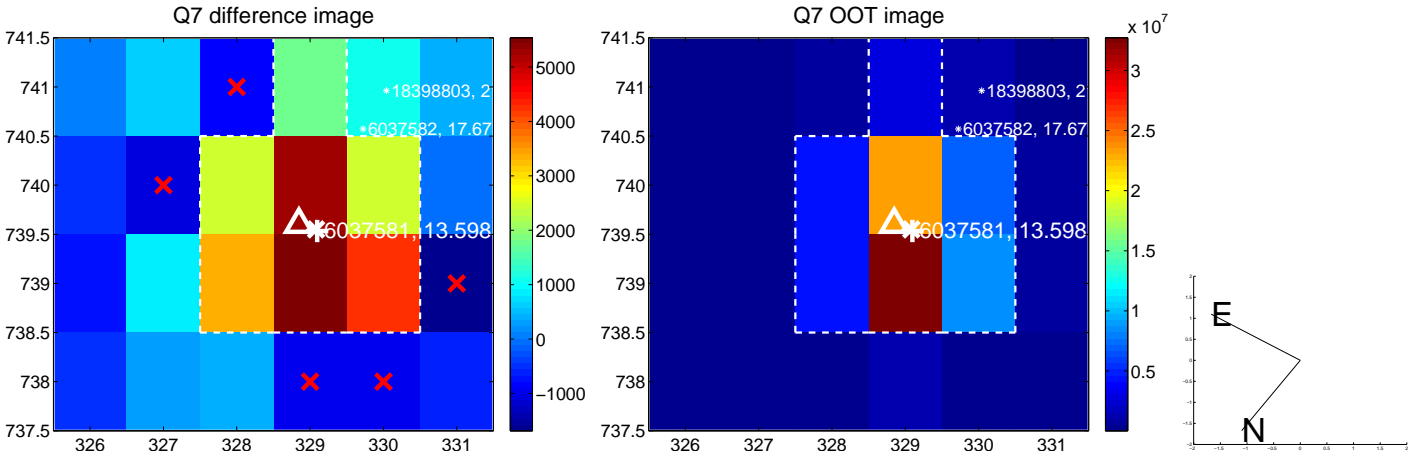
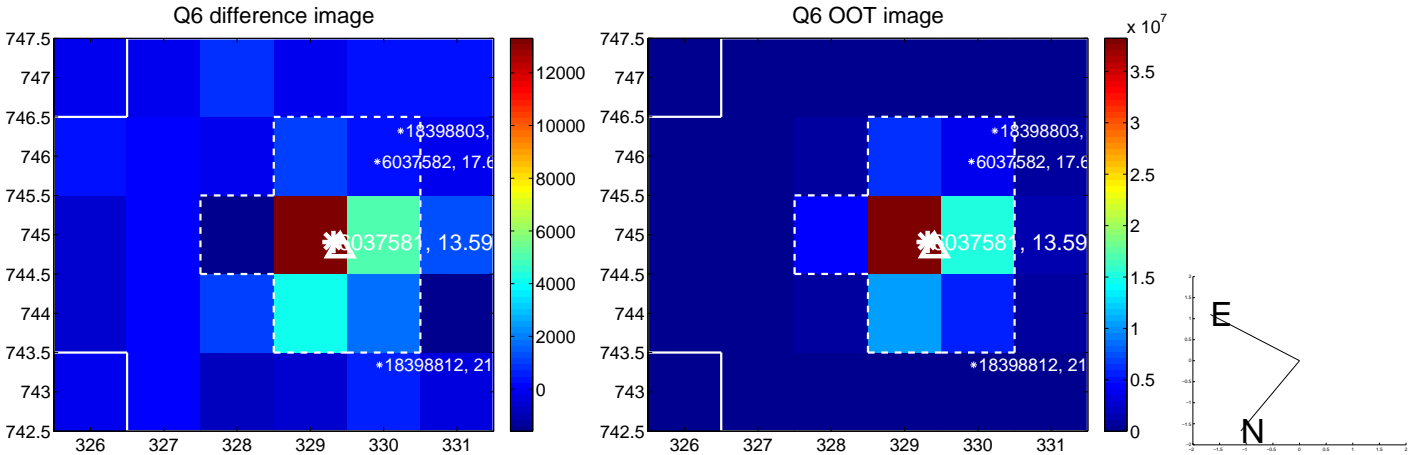
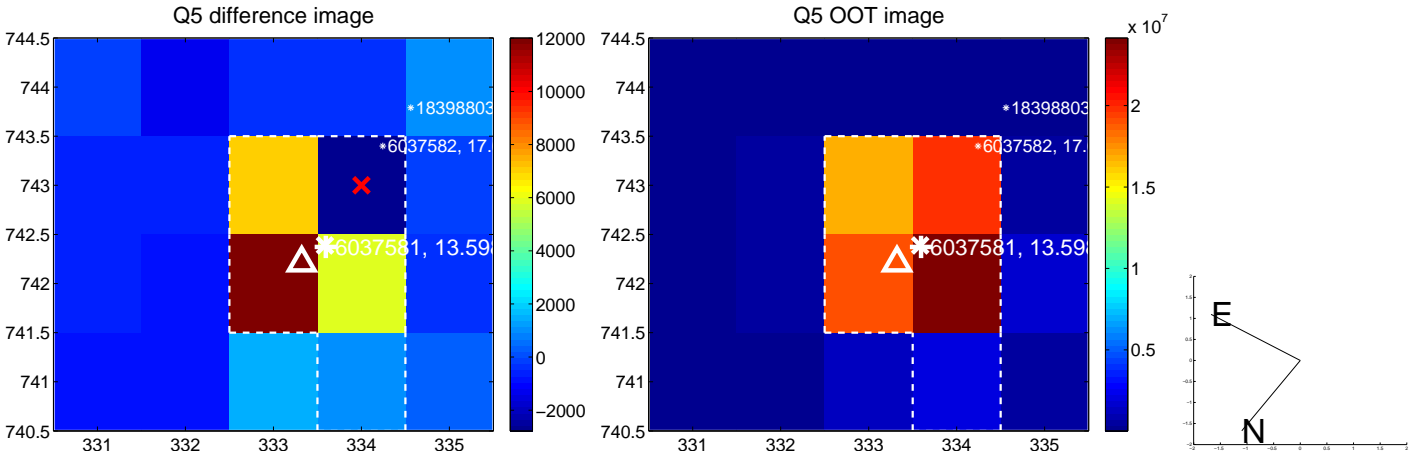


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

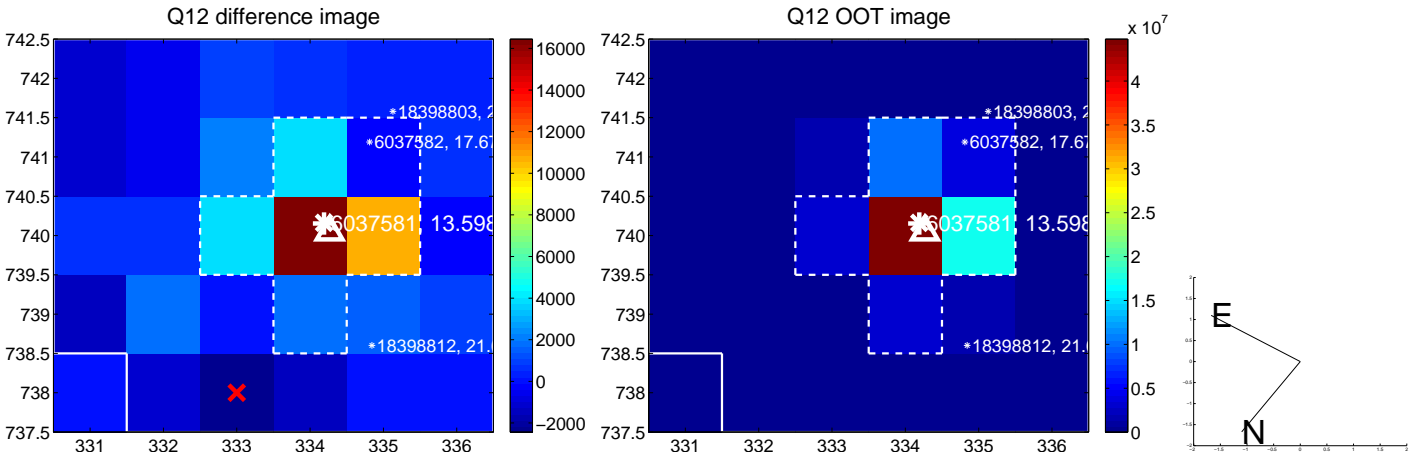
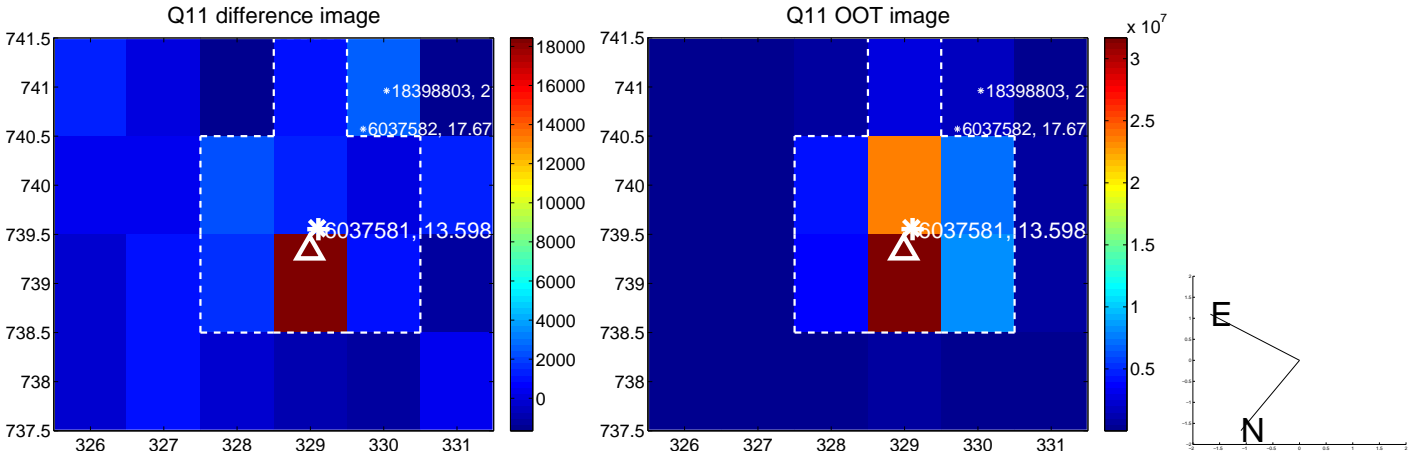
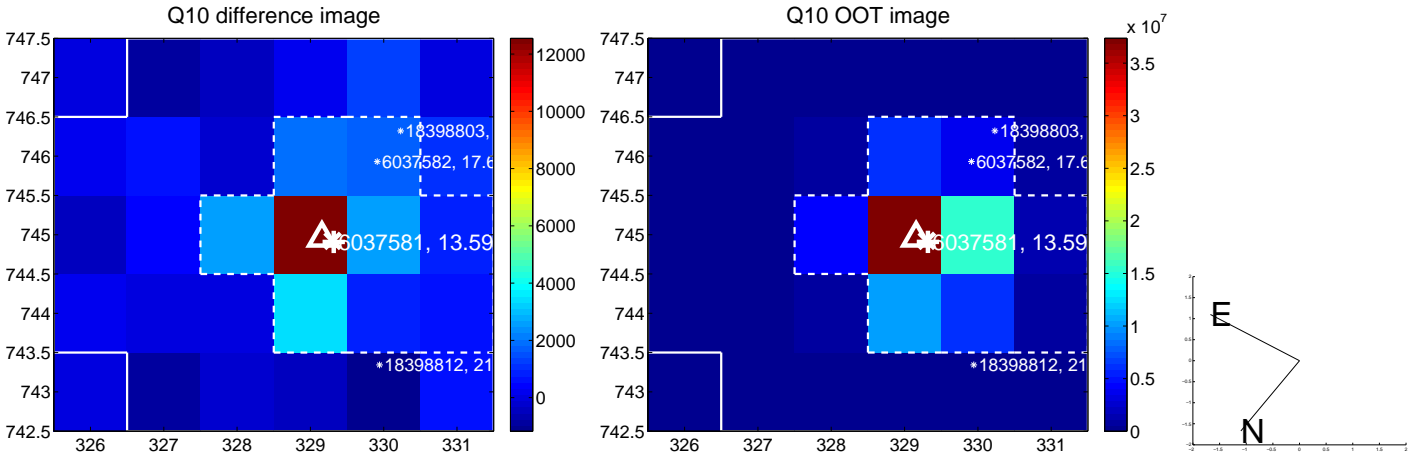
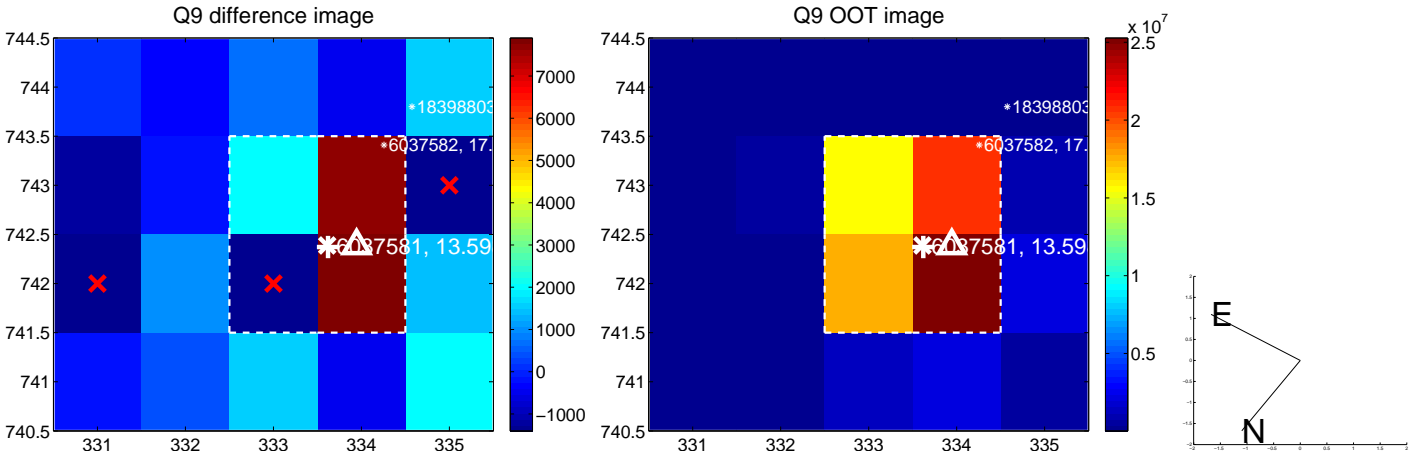
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



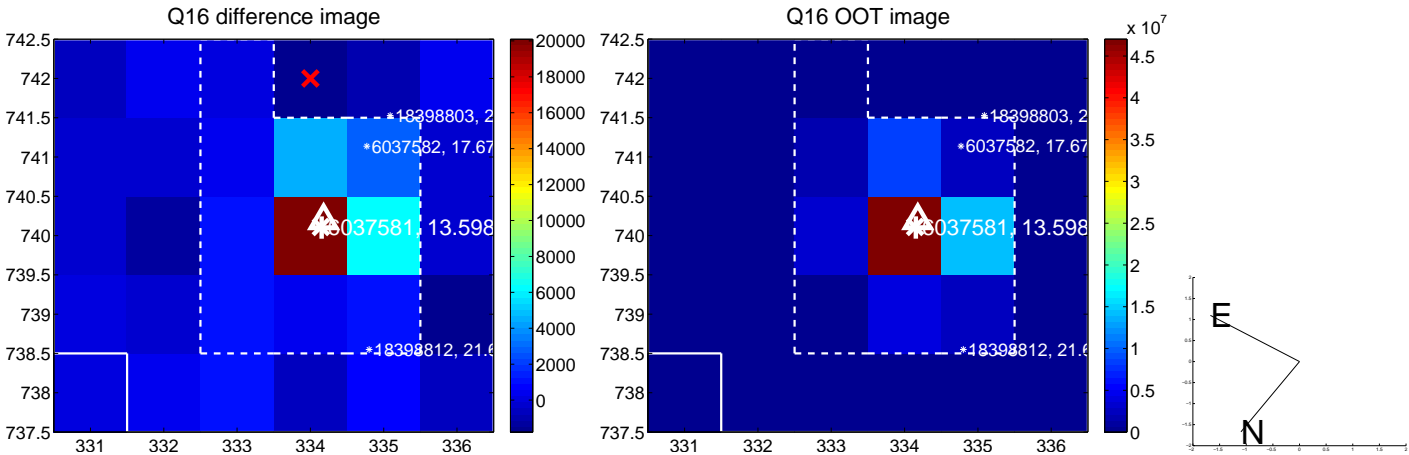
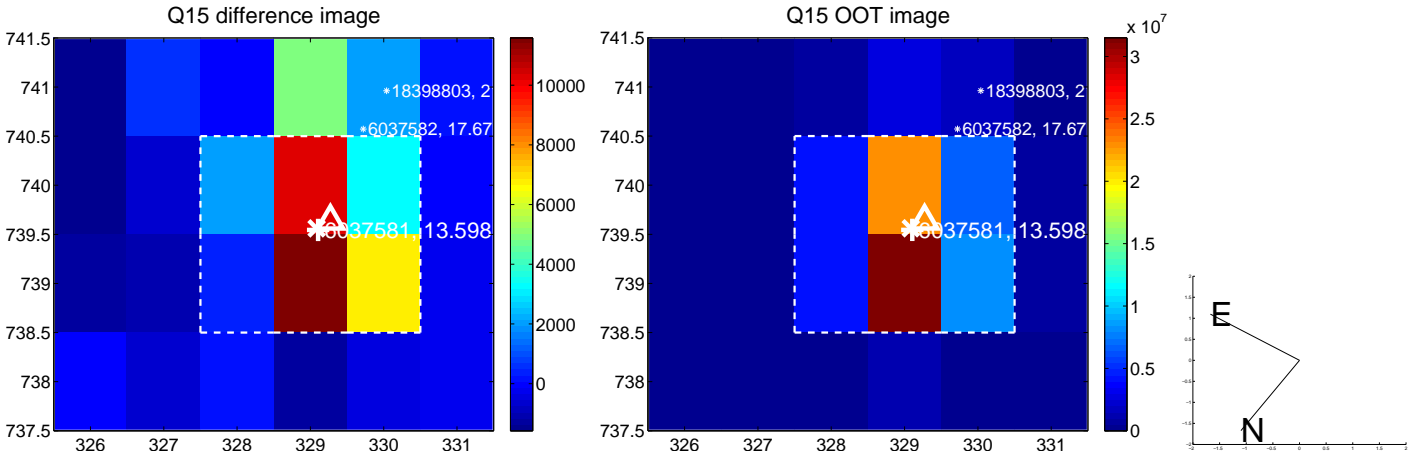
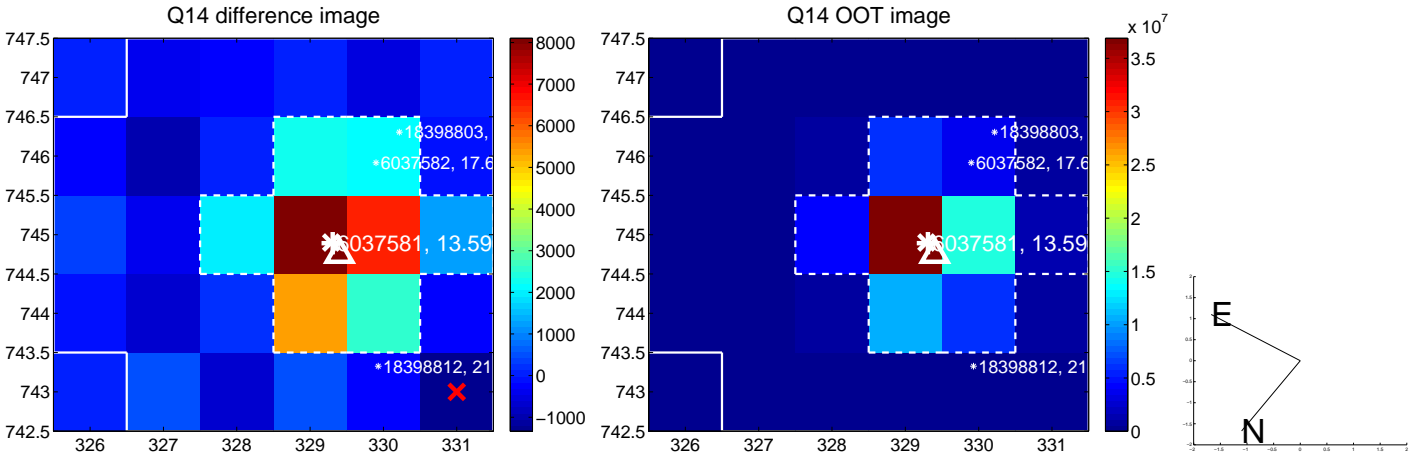
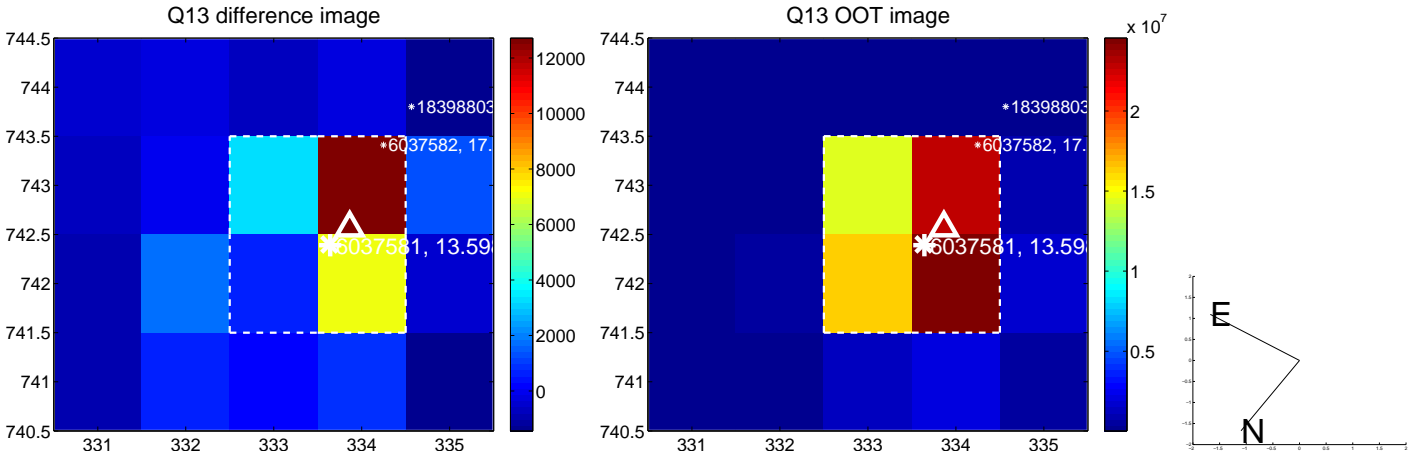
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



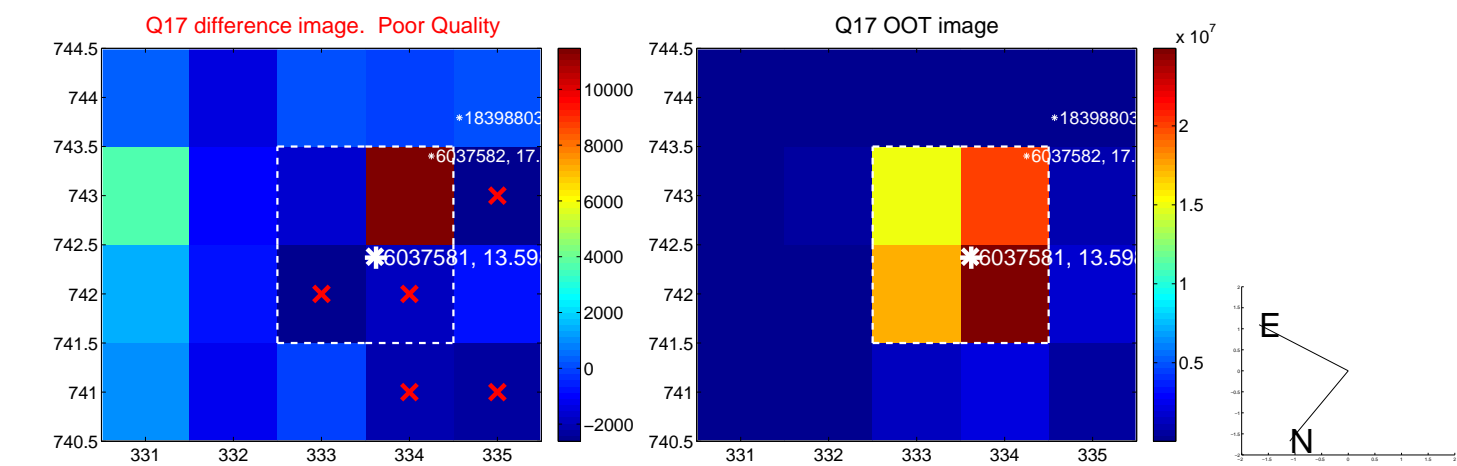
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



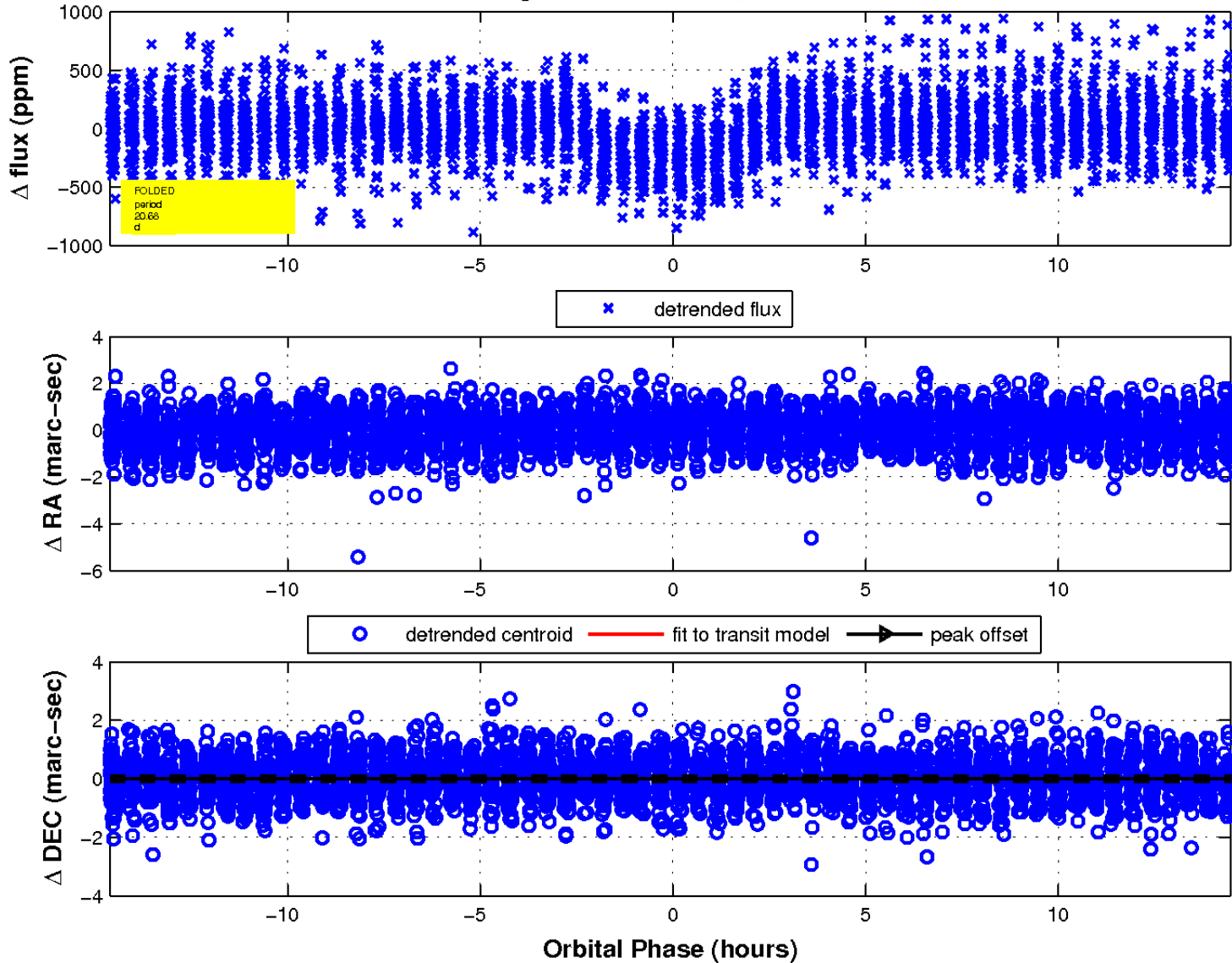
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

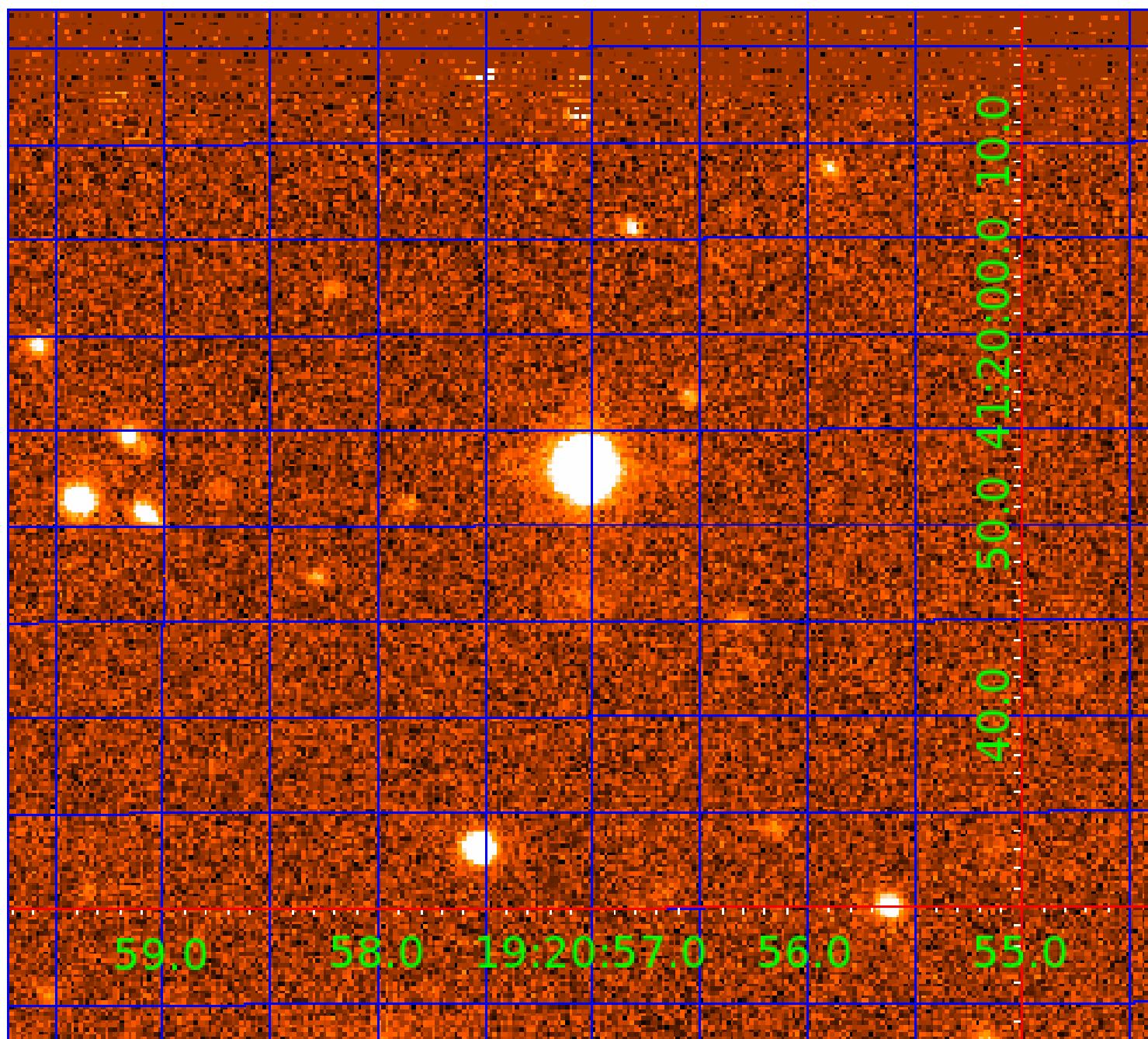


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 006037581

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})
006037581-01	OBS	1916.02	9.599923	136.581280	276.2	4.456	32.3	35.9	1.27	5865	2.38	207.30
006037581-02	OBS	1916.01	20.678775	151.691680	324.9	4.894	26.1	28.7	1.27	5865	2.71	74.52
006037581-03	OBS	1916.03	2.024833	132.352679	67.8	2.728	16.0	17.3	1.27	5865	1.25	1651.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006037581-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
006037581-03	OBS	PC	0.93	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.

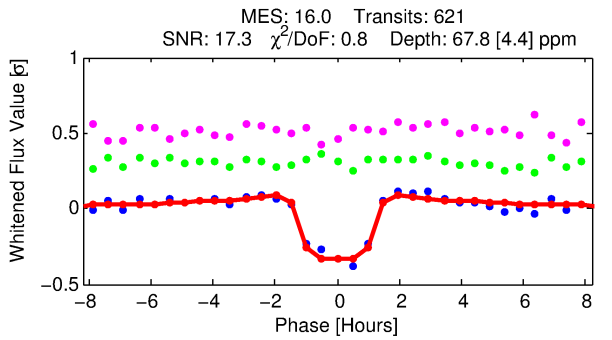
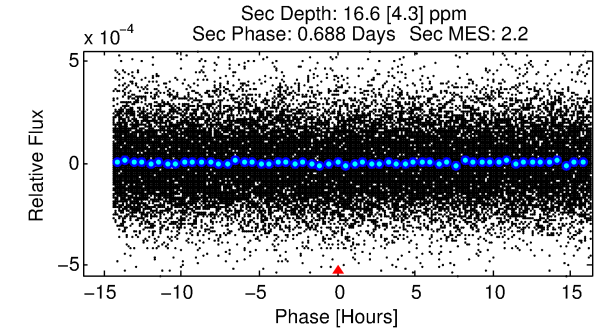
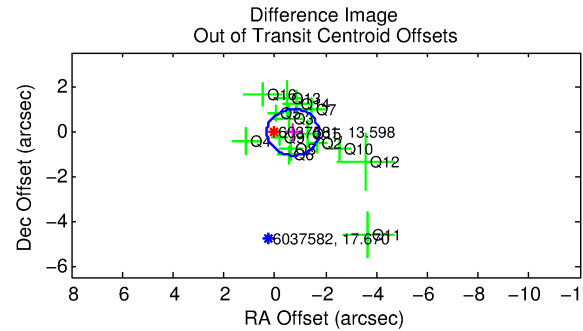
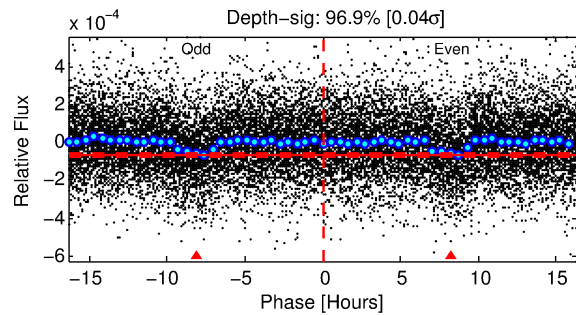
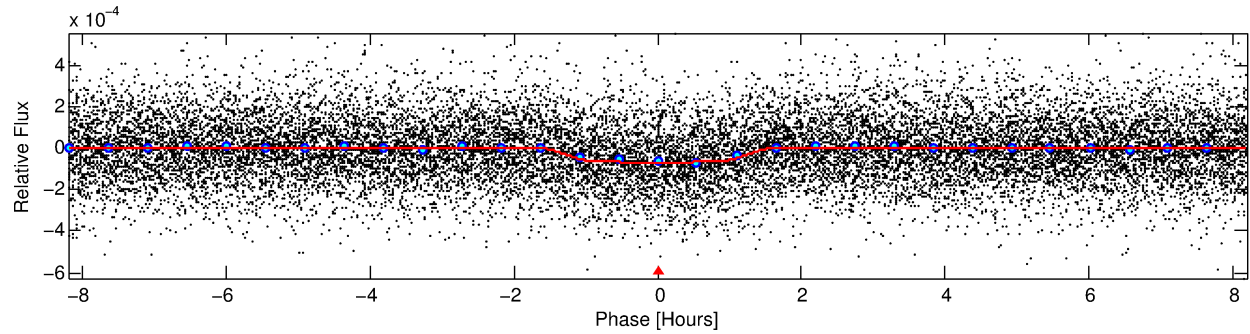
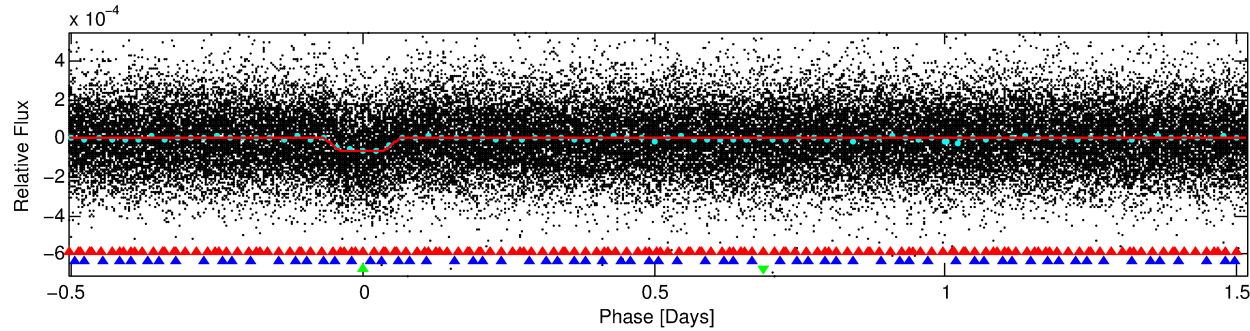
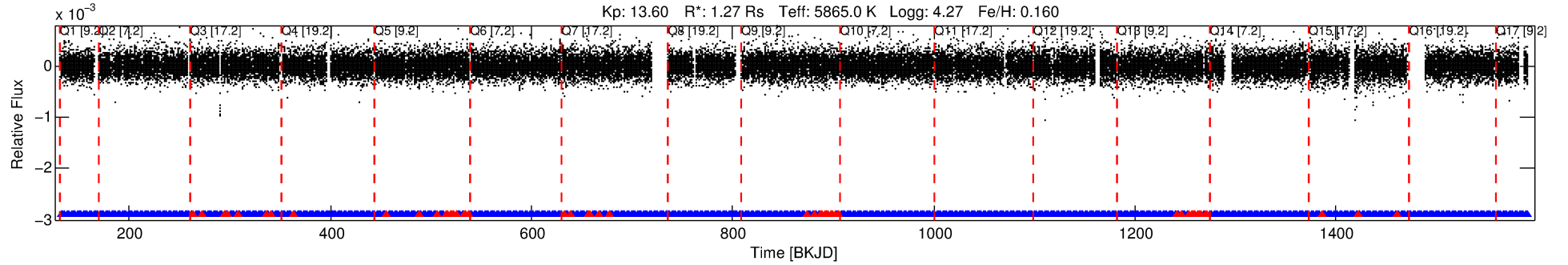
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006037581-03

No Significant Match Found

DV One-Page Summary

KIC: 6037581 Candidate: 3 of 3 Period: 2.025 d
KOI: K01916.03 Name: Kepler-336b Corr: 0.979



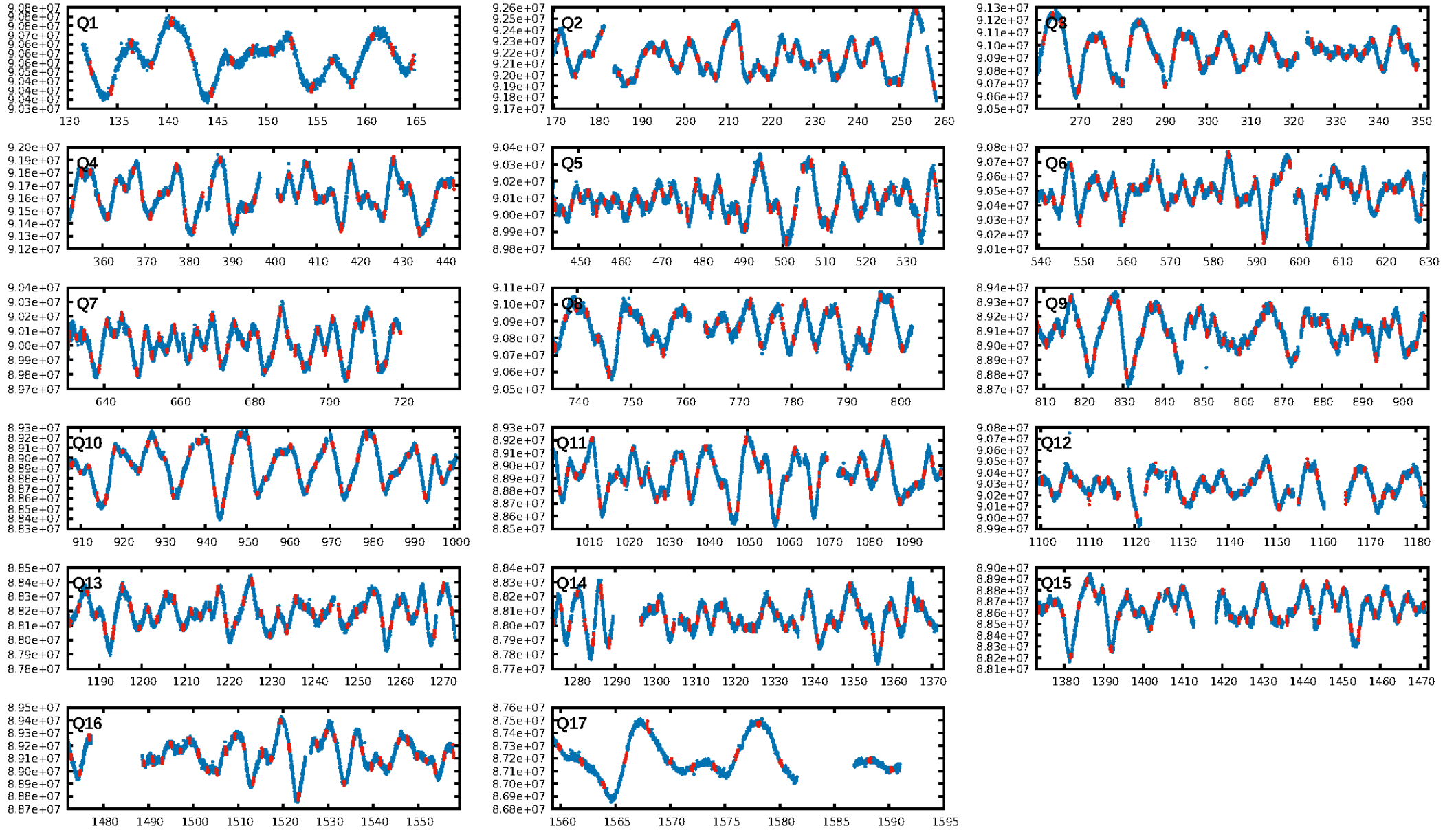
DV Fit Results:

Period = 2.02483 [0.00001] d
Epoch = 132.3527 [0.0018] BKJD
Rp/R* = 0.0090 [0.0028]
a/R* = 2.75 [3.62]
b = 0.90 [0.33]
Seff = 1651.10 [414.61]
Teq = 1625 [102] K
Rp = 1.25 [0.44] Re
a = 0.0322 [0.0049] AU
Ag = 6.13 [4.42] [1.16 σ]
Teffp = 3955 [677] K [3.40 σ]

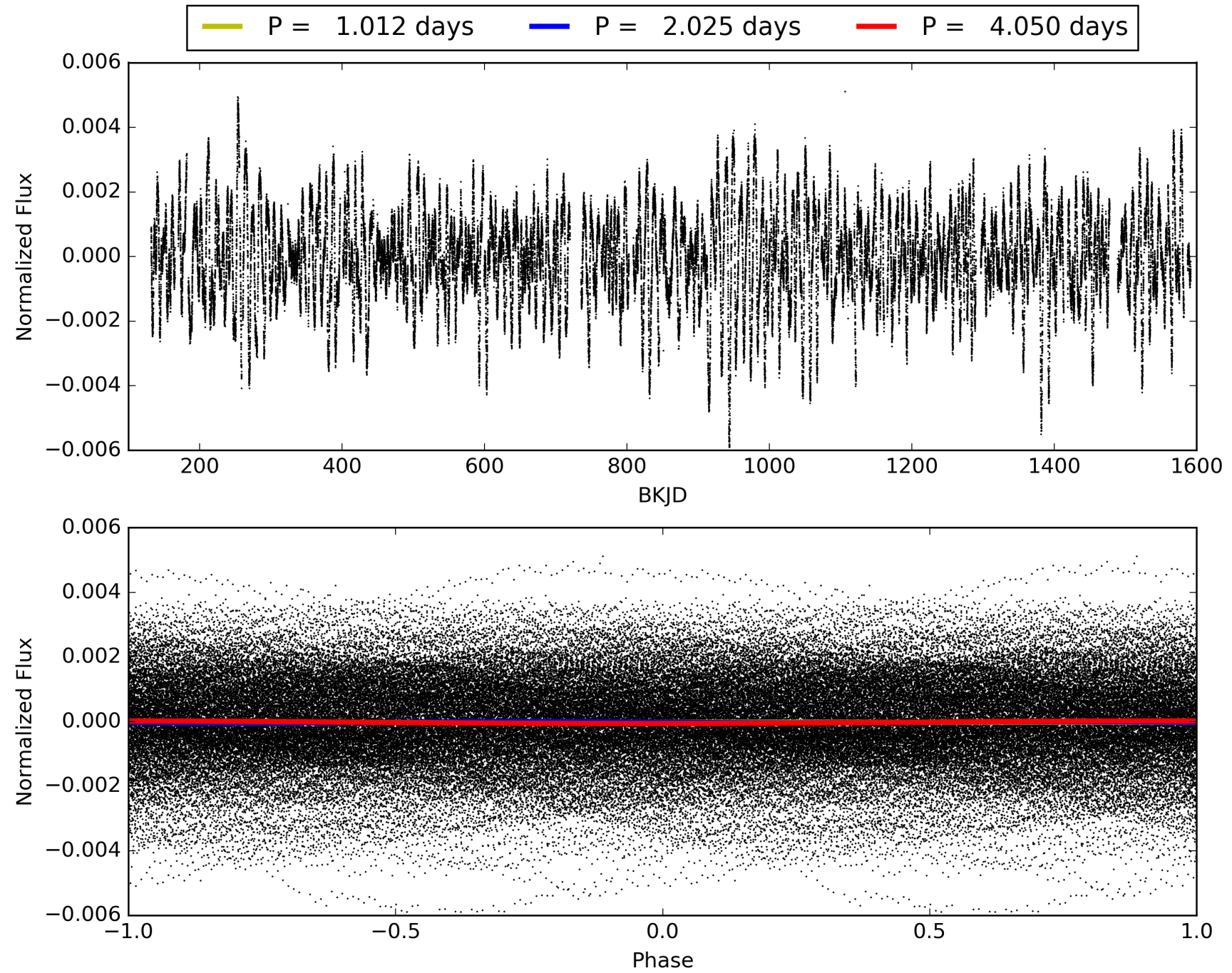
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [34.79 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.10e-52
RollingBand-fgt: 0.91 [541/592]
GhostDiagnostic-chr: 2.229
Centroid-sig: N/A
Centroid-so: 1.466 arcsec [2.73 σ]
OotOffset-rm: 0.725 arcsec [2.12 σ]
KicOffset-rm: 0.791 arcsec [2.36 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 006037581-03, PDC Light Curves

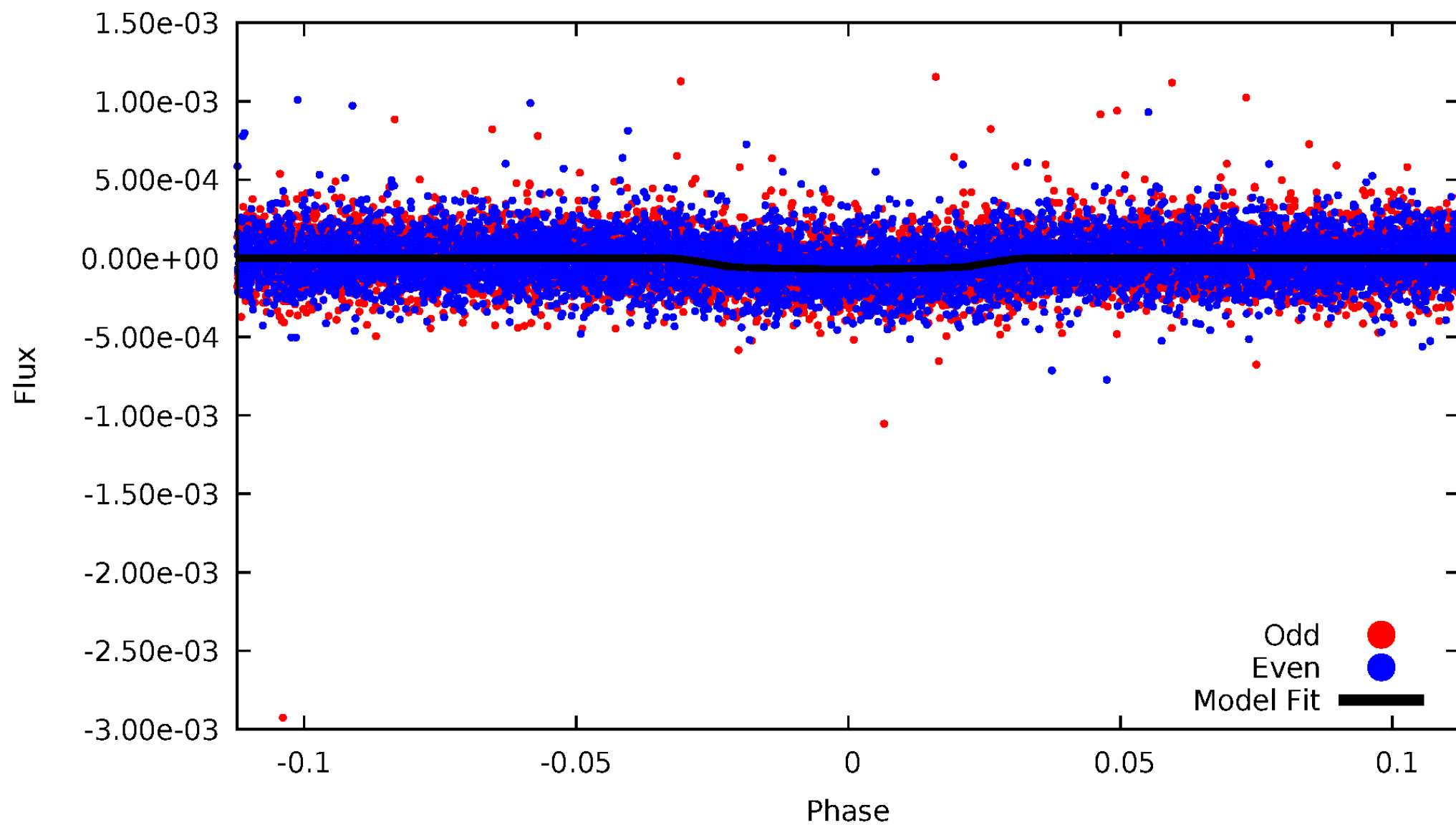


TCE 006037581-03



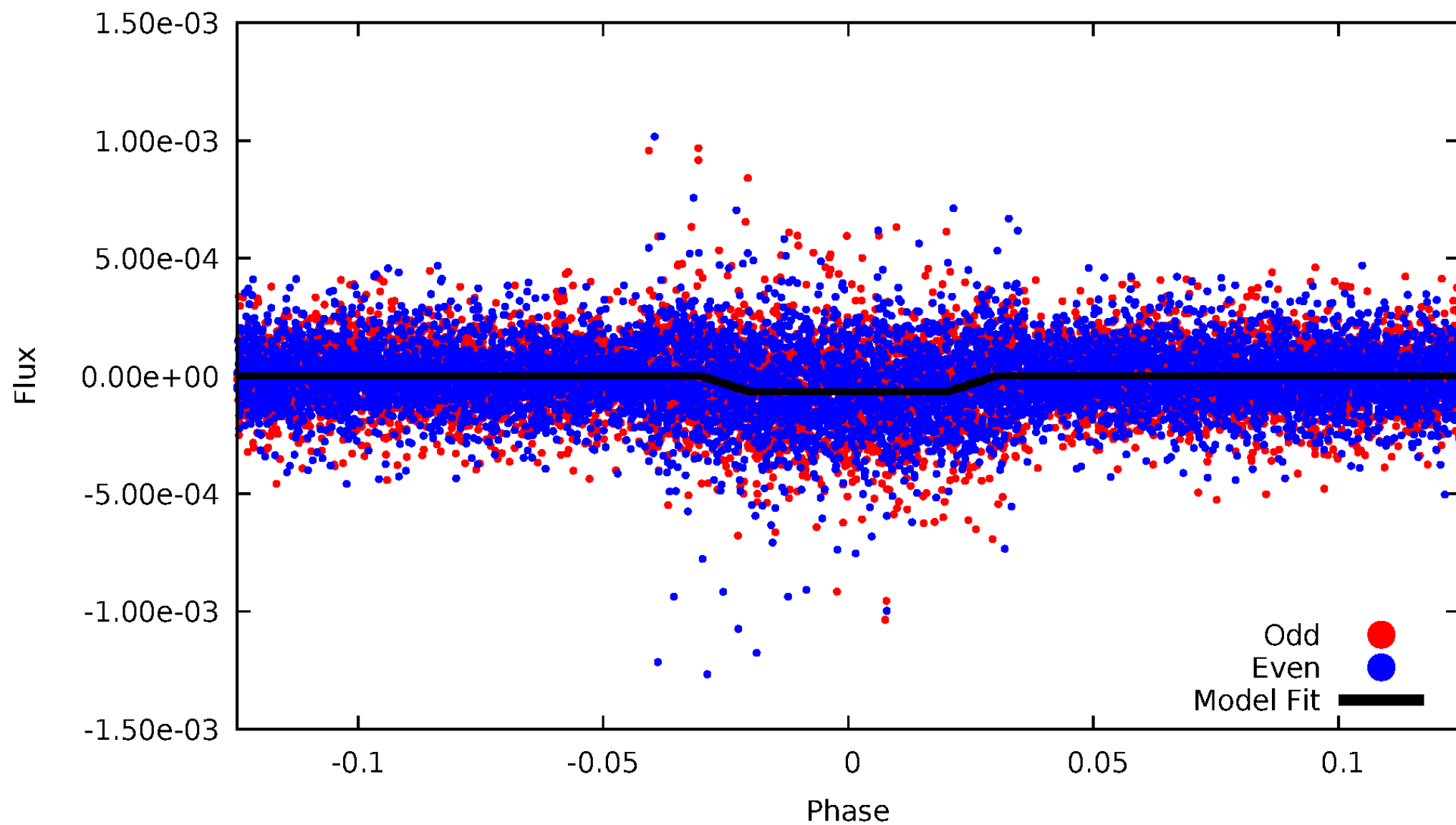
DV Odd/Even

TCE 006037581-03



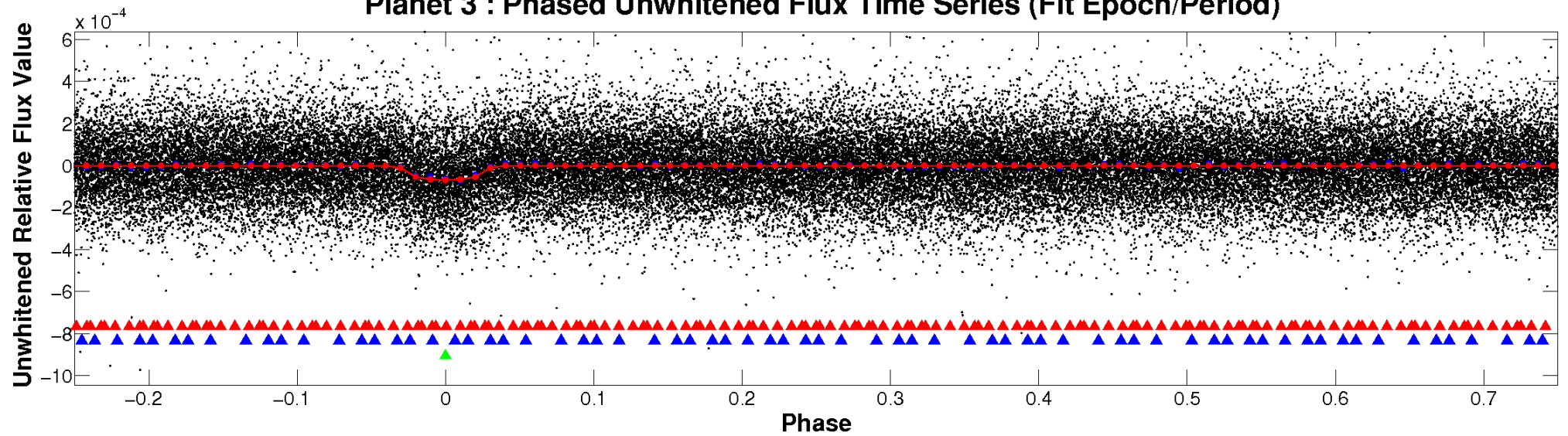
ALT Odd/Even

TCE 006037581-03

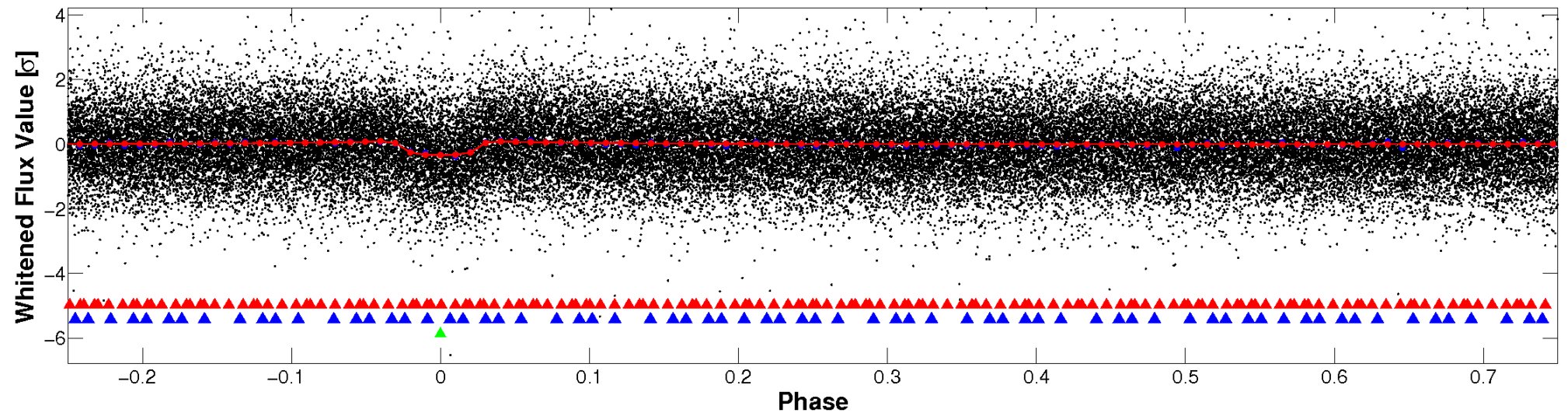


Non-Whitened Vs. Whitened Light Curve

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

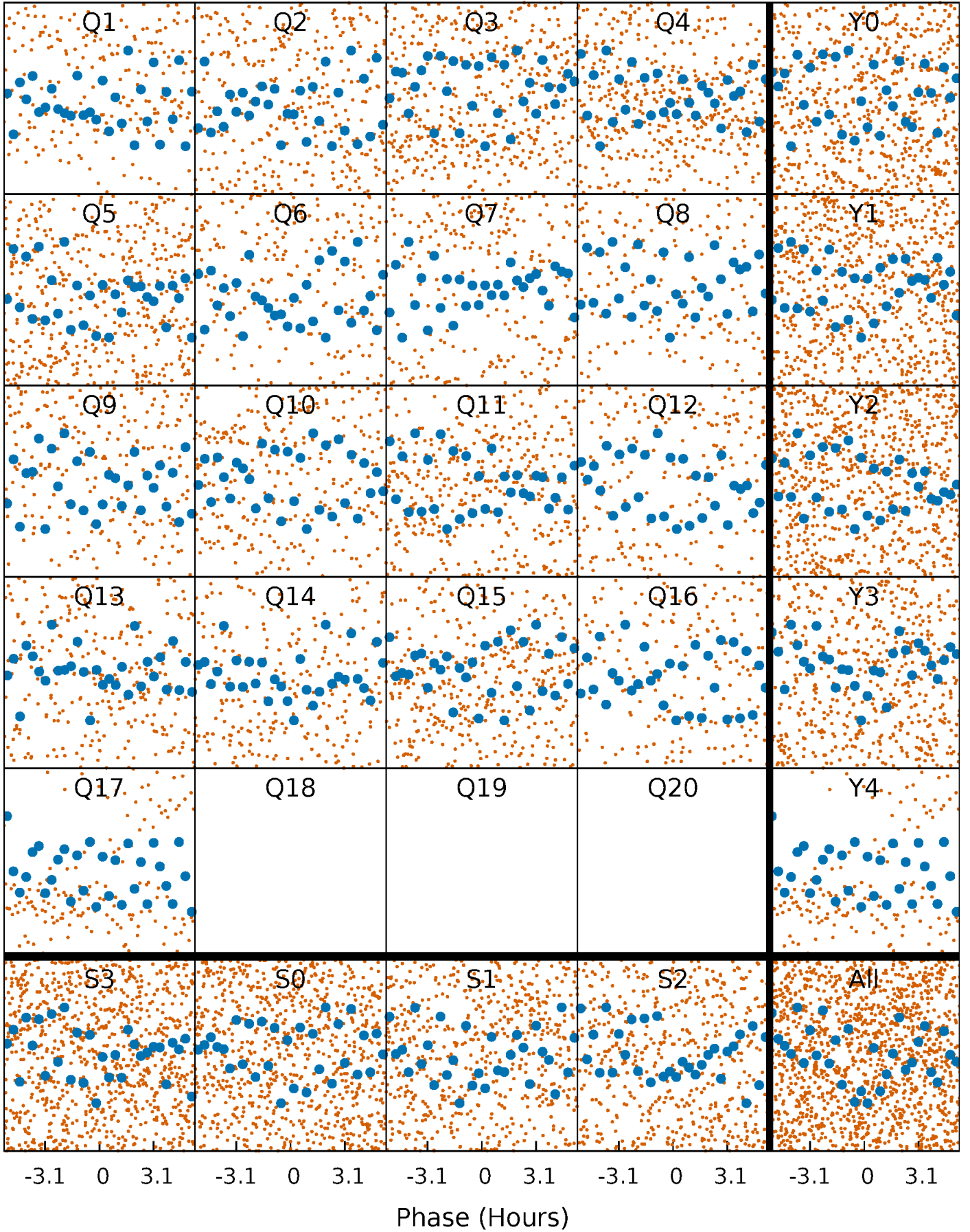


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



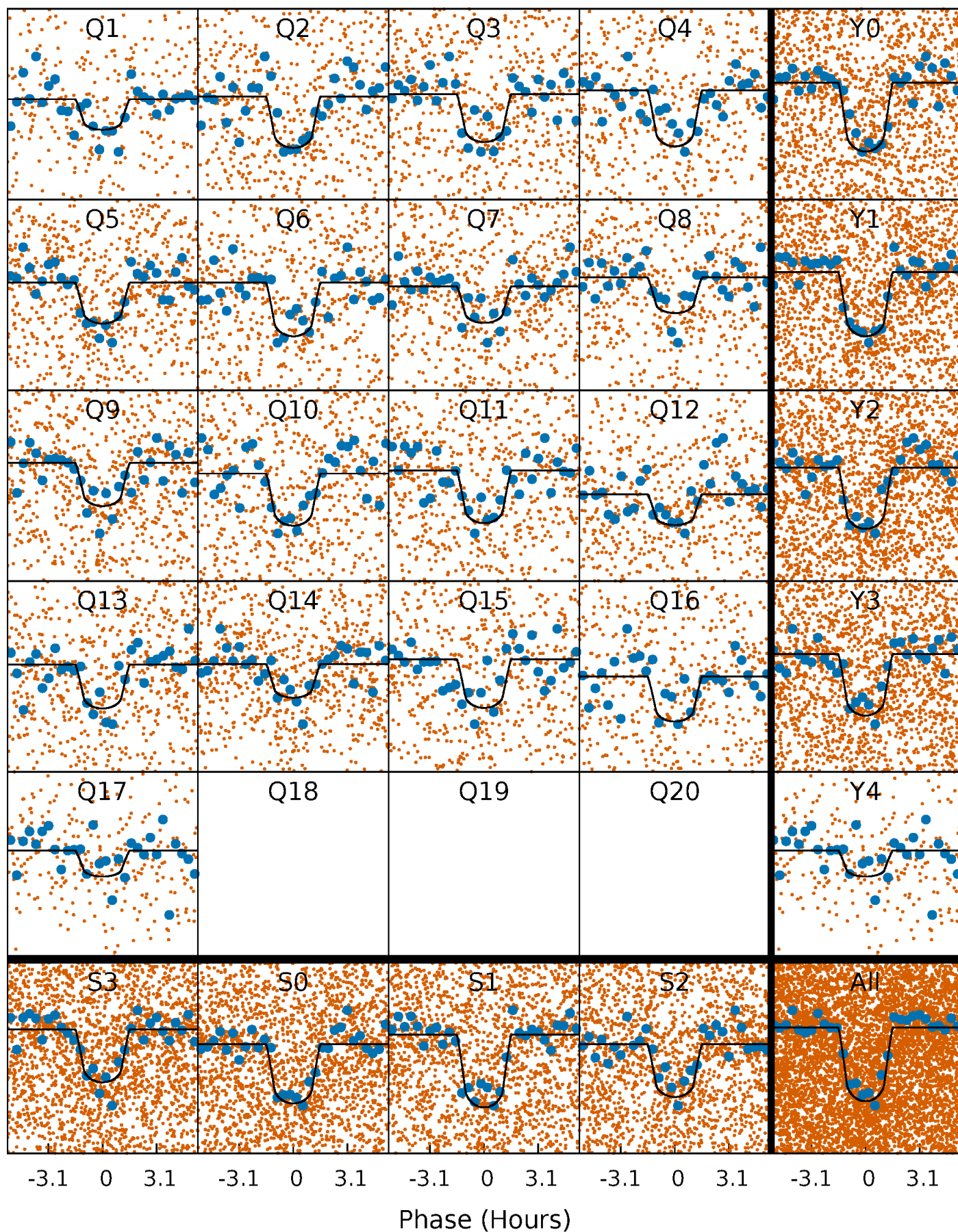
PDC Quarter-Phased Transit Curves

TCE 006037581-03 P= 2.024833 Days $T_0=132.352679$ (BKJD)



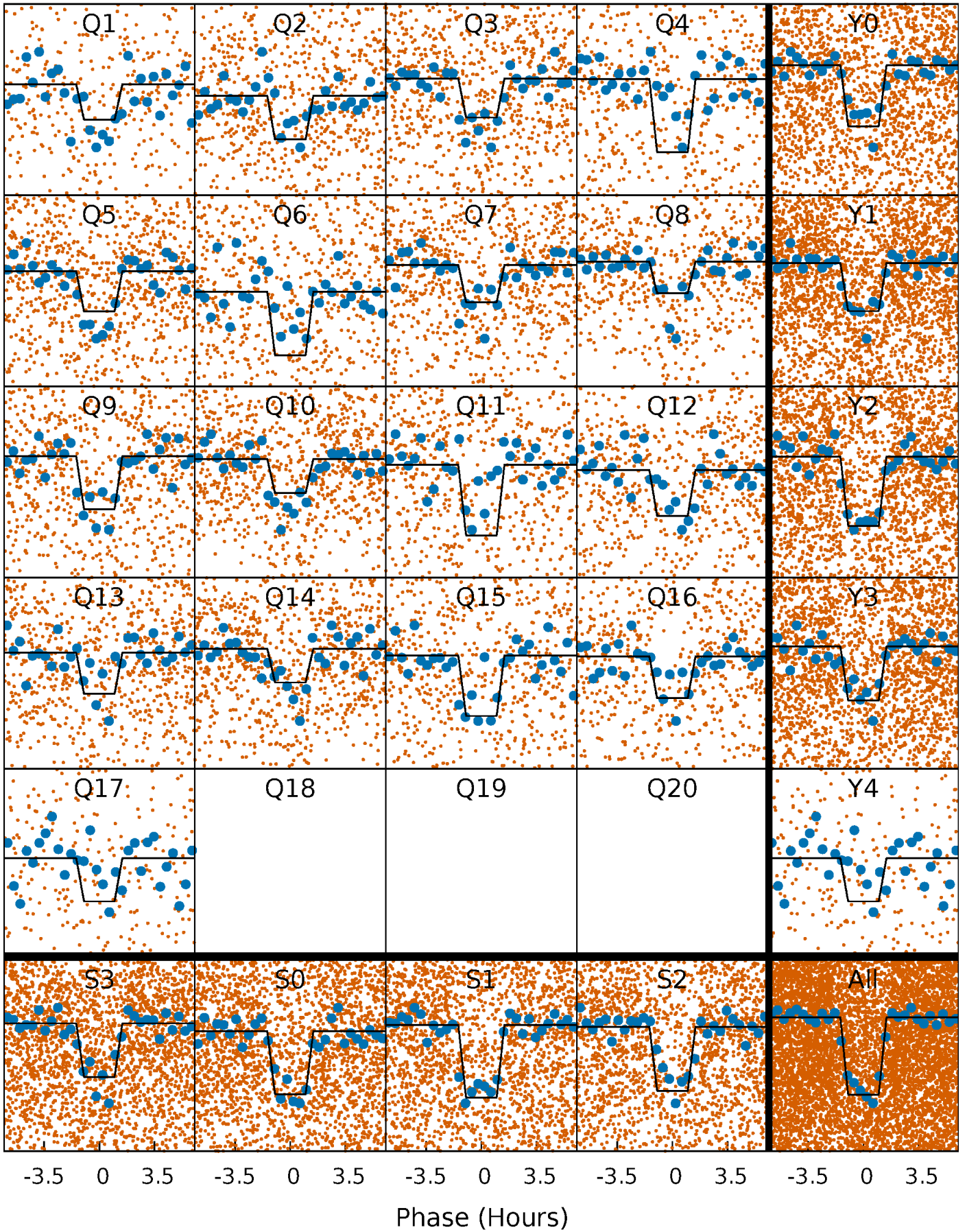
DV Quarter-Phased Transit Curves

TCE 006037581-03 P= 2.024833 Days $T_0=132.352679$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

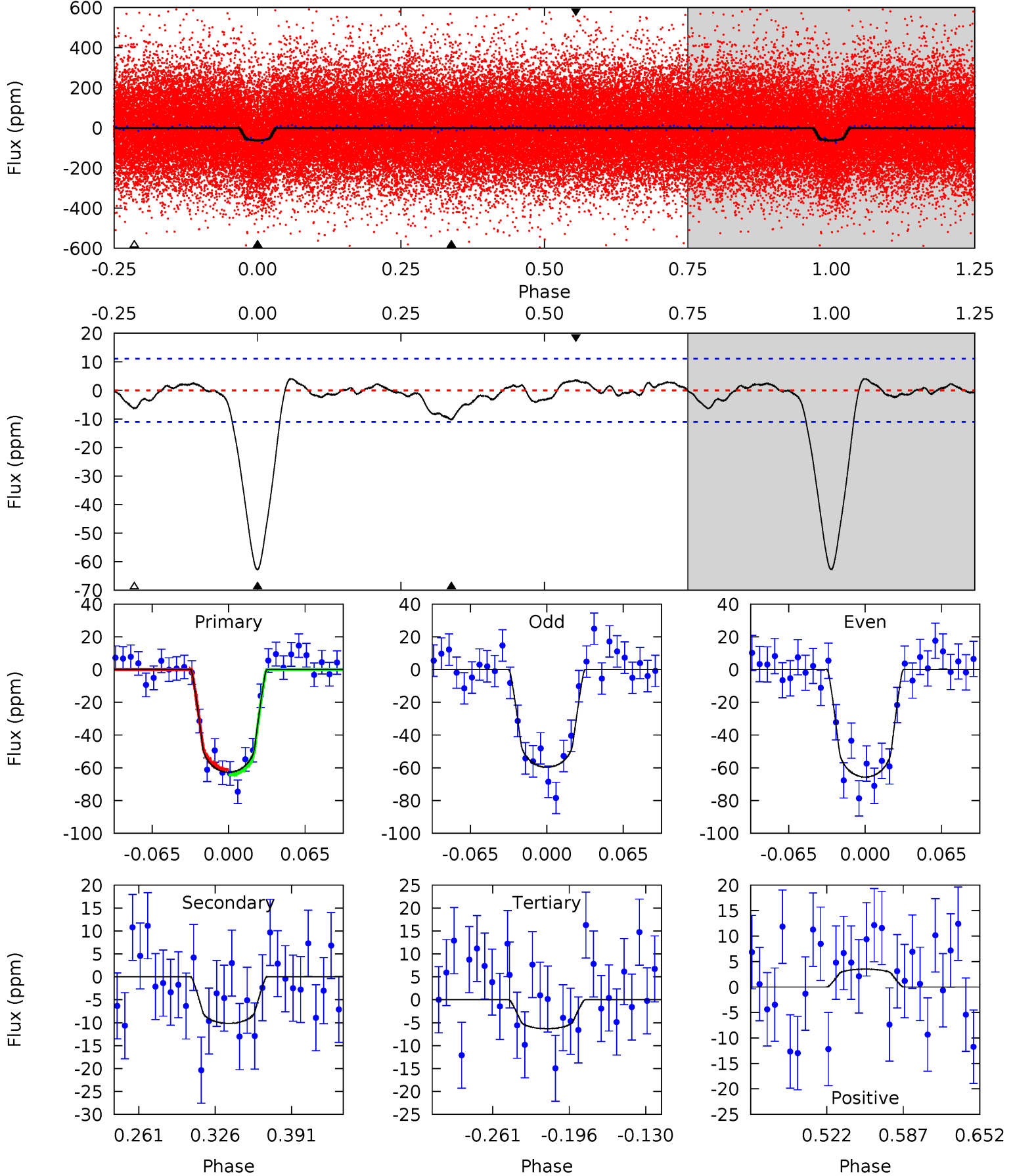
TCE 006037581-03 P= 2.024824 Days $T_0=132.355122$ (BKJD)



DV Model-Shift Uniqueness Test

006037581-03, P = 2.024833 Days, E = 130.327846 Days

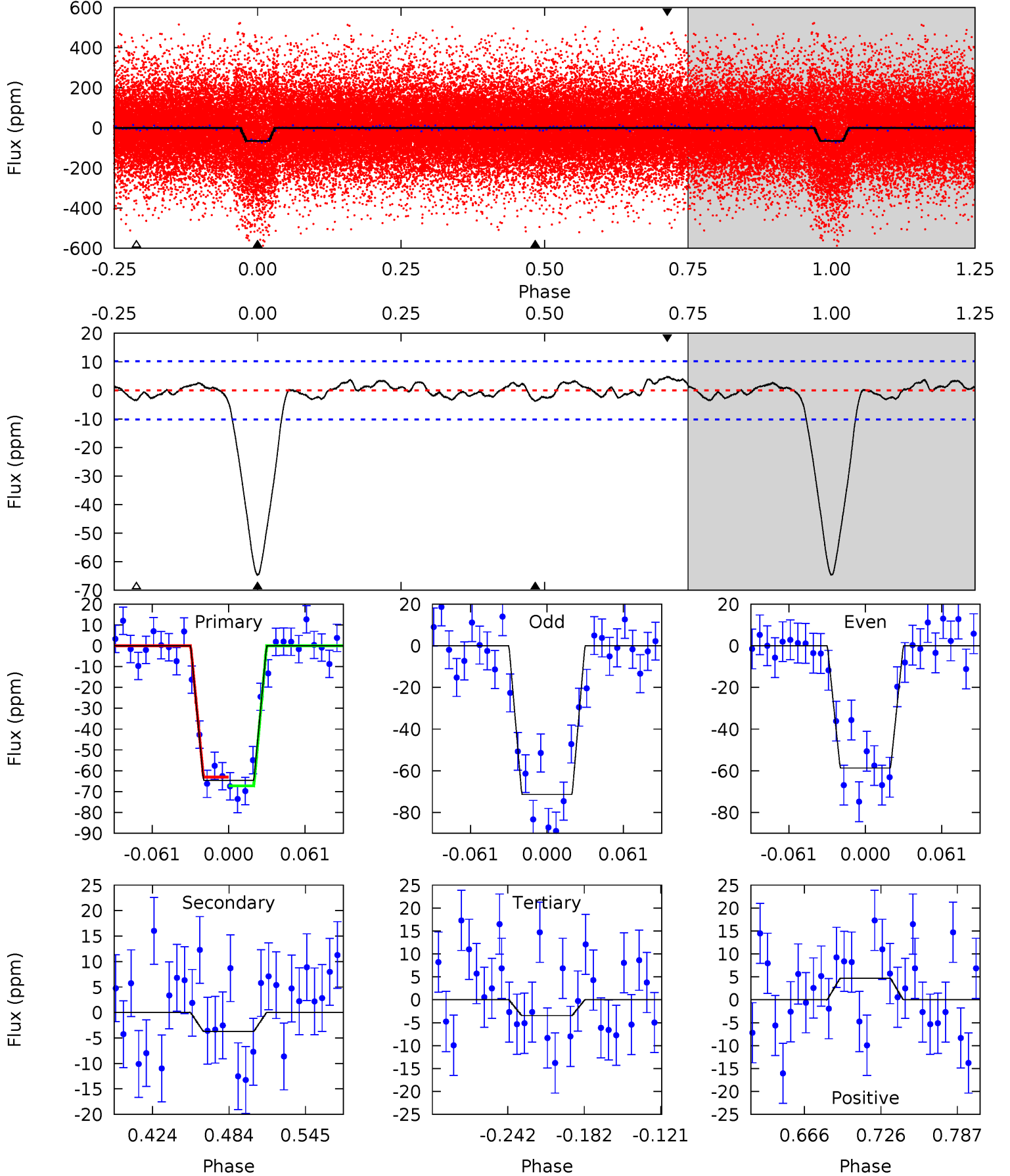
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	4.27	2.65	1.48	4.65	1.84	0.88	23.7	24.9	1.62	2.79	1.26	0.89	0.06	0.68



Alt Model-Shift Uniqueness Test

006037581-03, P = 2.024824 Days, E = 130.330298 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	1.71	1.58	2.16	4.67	1.88	0.92	28.0	27.5	0.13	-0.44	2.93	1.01	0.07	0.97



Stellar Parameters For KIC 006037581

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5865^{+105}_{-117}	$4.266^{+0.137}_{-0.112}$	$0.160^{+0.150}_{-0.150}$	$1.272^{+0.213}_{-0.213}$	$1.088^{+0.089}_{-0.089}$	$0.745^{+0.469}_{-0.244}$
	+2%/-2%	+3%/-3%	+94%/-94%	+17%/-17%	+8%/-8%	+63%/-33%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 006037581-03 / KOI 1916.03

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 2	$1.25^{+0.40}_{-0.43}$	2268^{+108}_{-114}	3780^{+647}_{-404}	$3.604^{+5.005}_{-1.618}$
Alt.	-4 ± 2	$1.14^{+0.40}_{-0.40}$	2266^{+116}_{-111}	3234^{+594}_{-608}	$1.552^{+2.467}_{-0.966}$

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

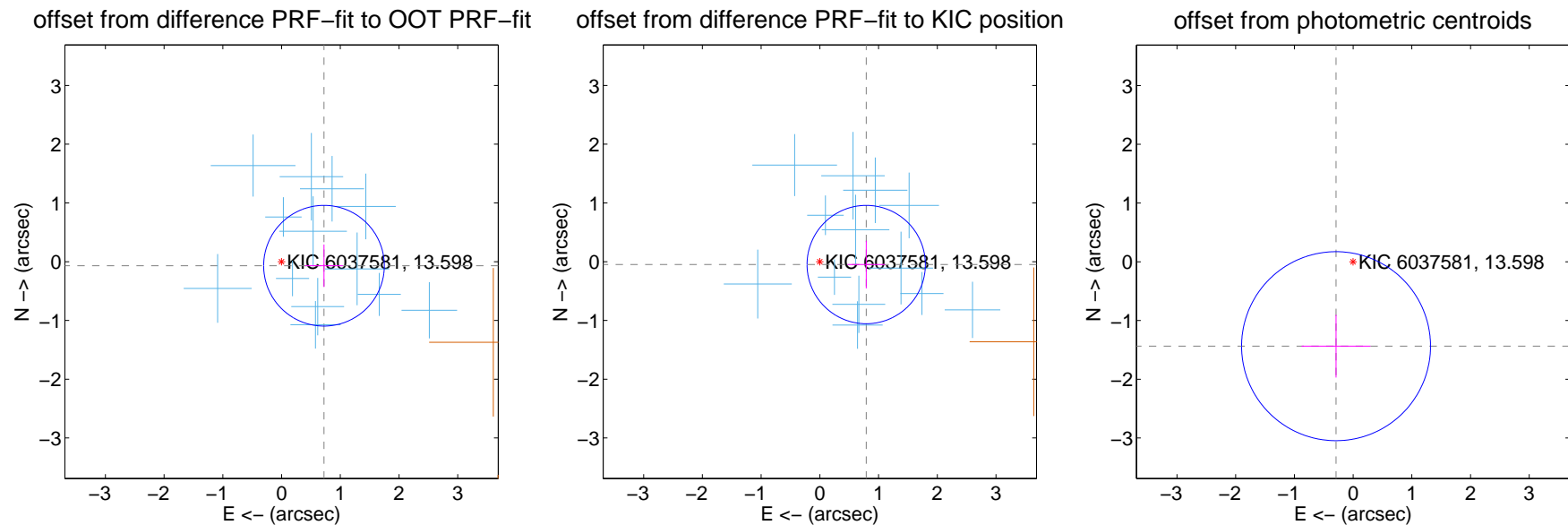
DV Centroid Data

Supplemental centroid analysis for 006037581-03. Kepler magnitude: 13.60. Transit SNR 17.28

There are 13 quarters with good PRF difference image offsets

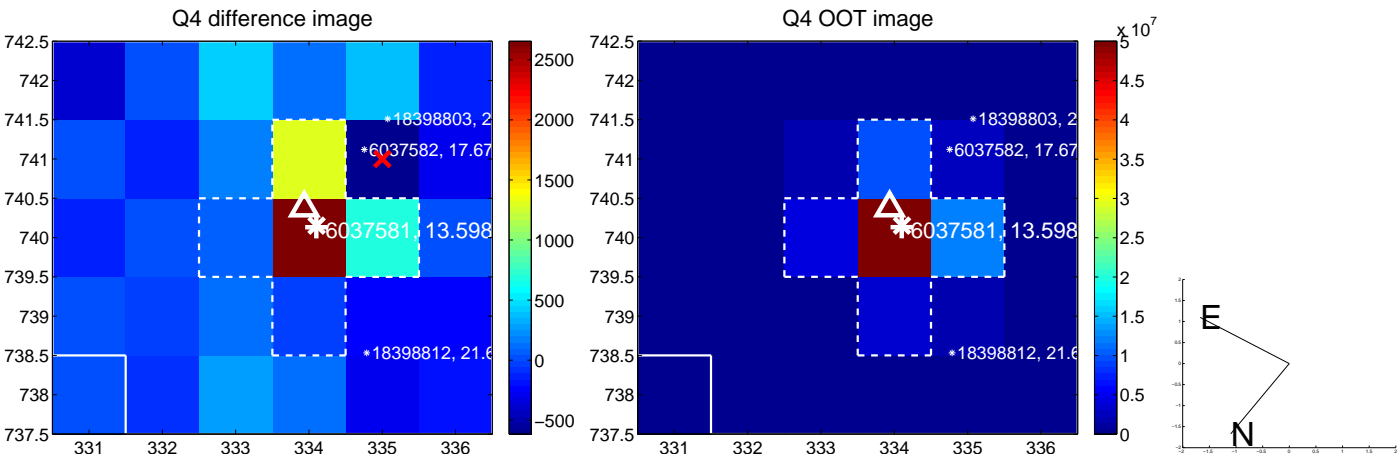
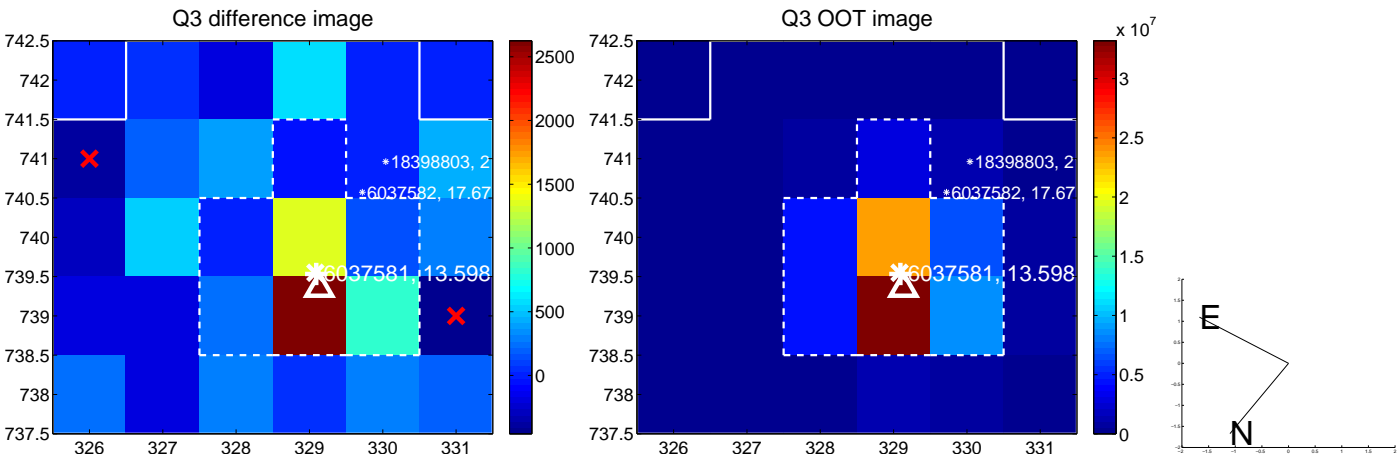
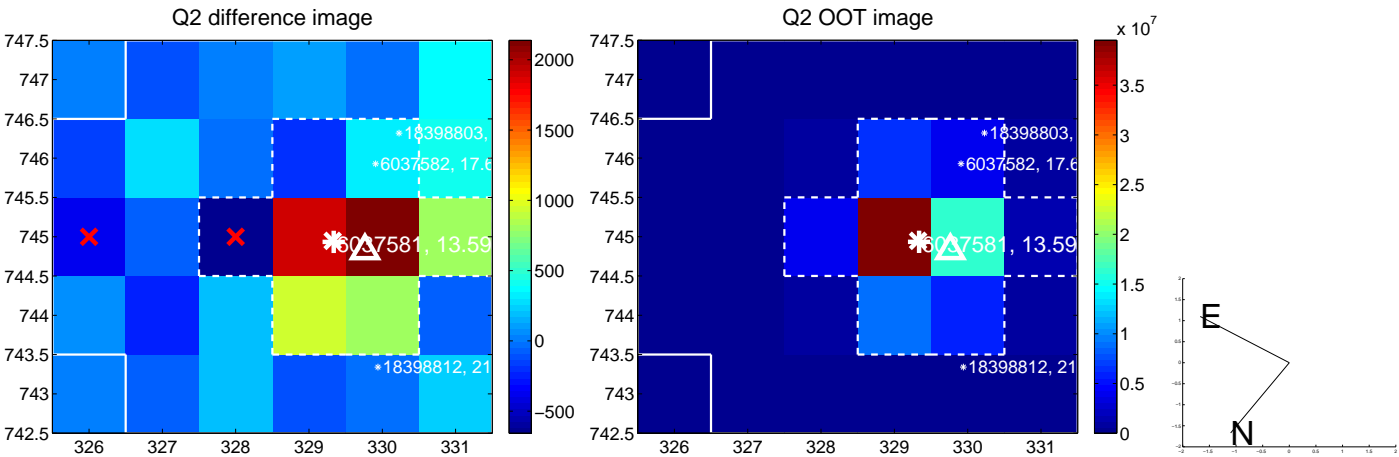
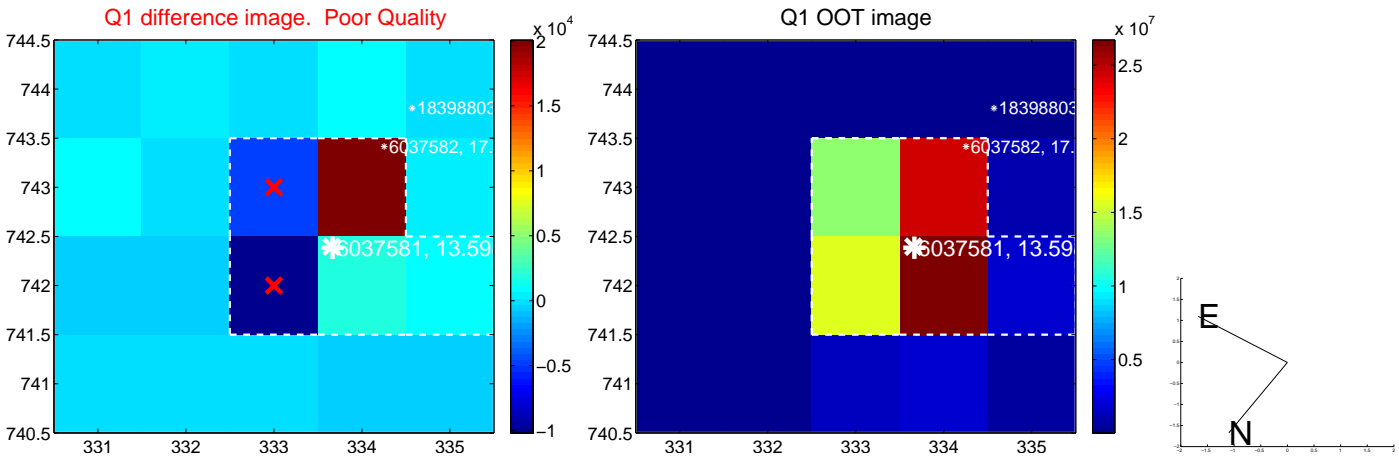
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.725 ± 0.342	2.12	-0.722 ± 0.323	-0.068 ± 0.361
PRF-fit source offset from KIC position	0.791 ± 0.336	2.36	-0.790 ± 0.320	-0.049 ± 0.405
photometric centroid source offset	1.47 ± 0.54	2.73	0.29 ± 0.59	-1.44 ± 0.53

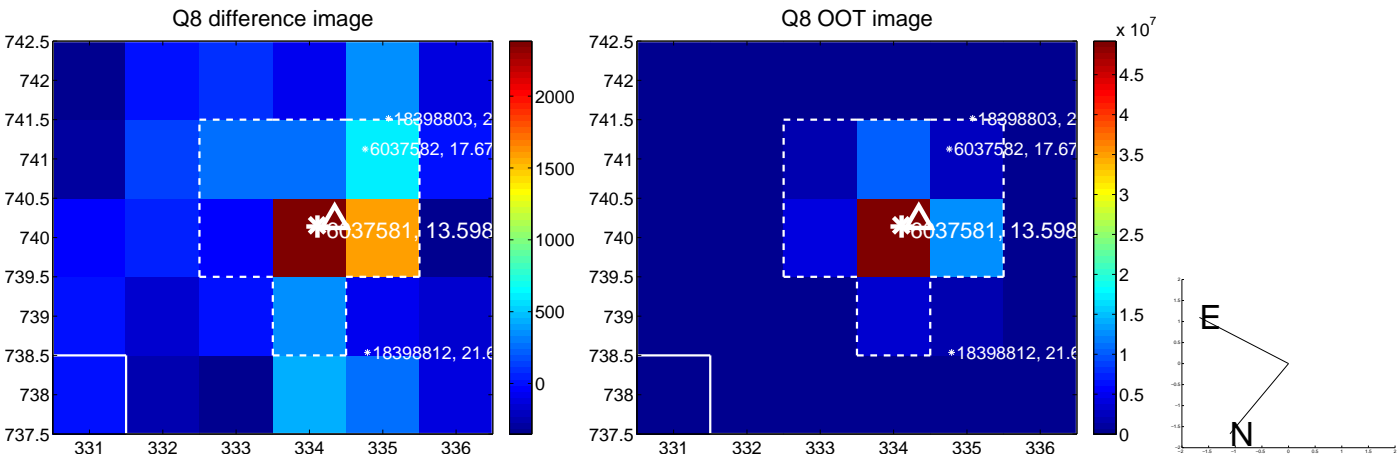
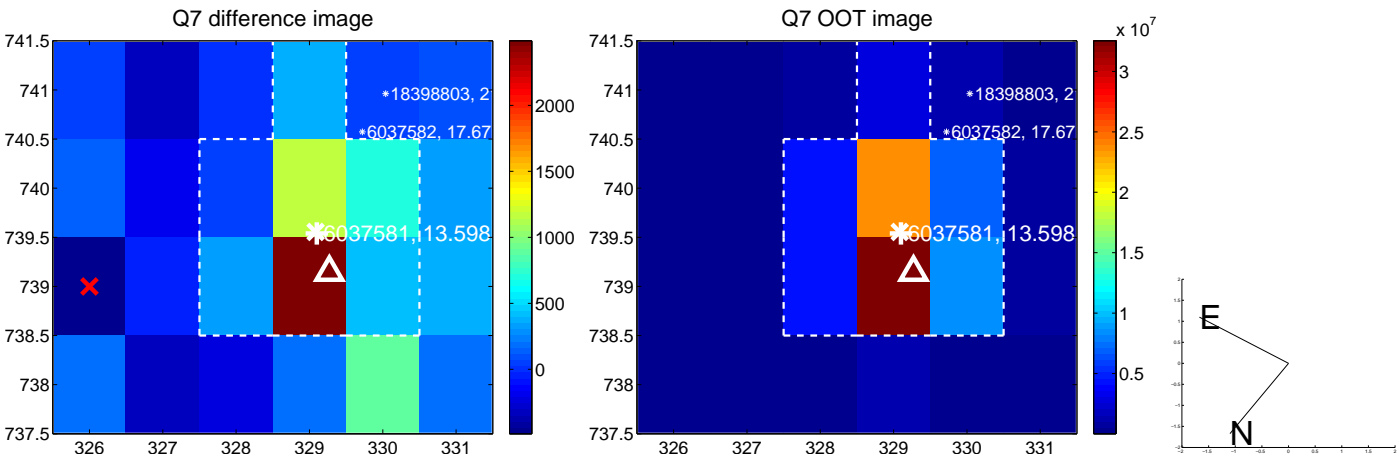
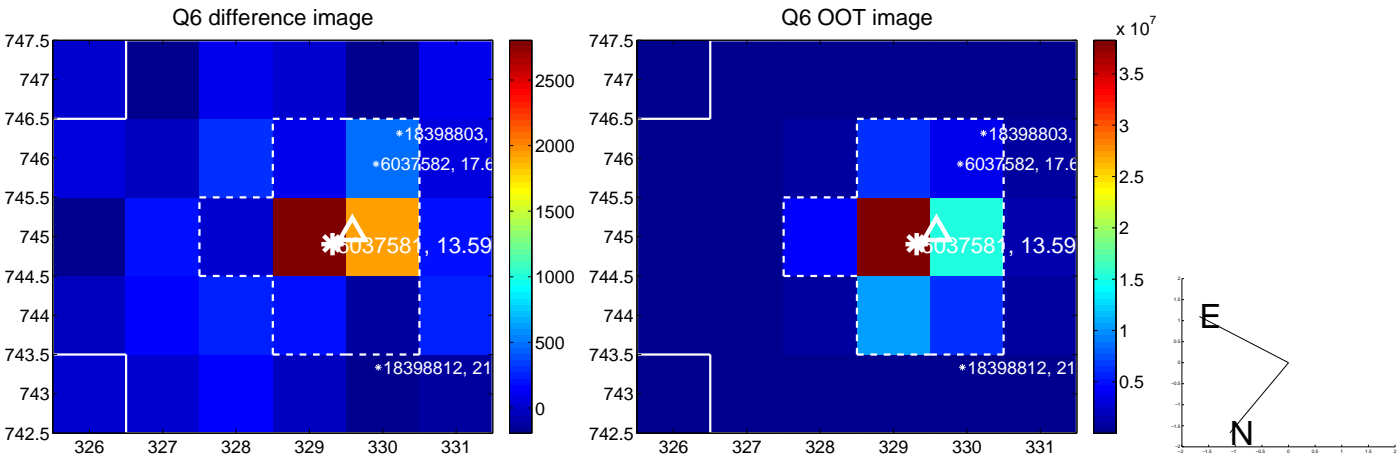
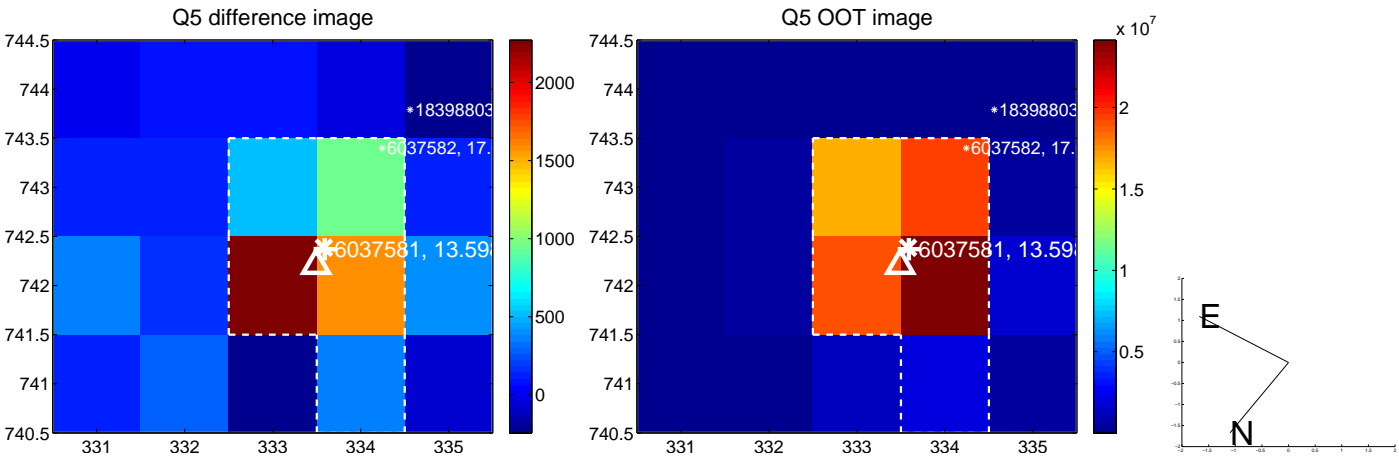


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

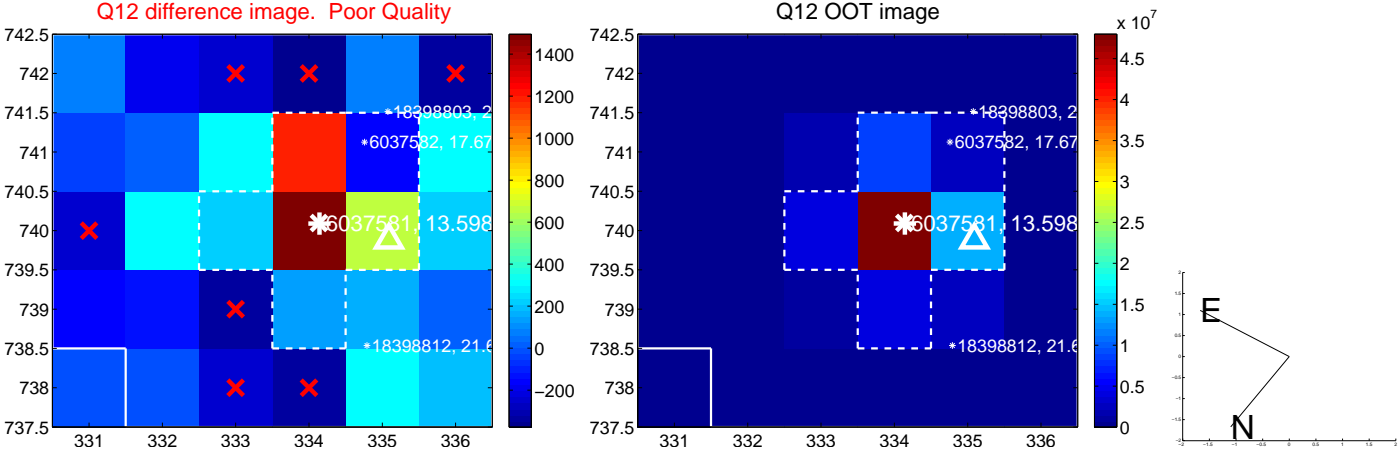
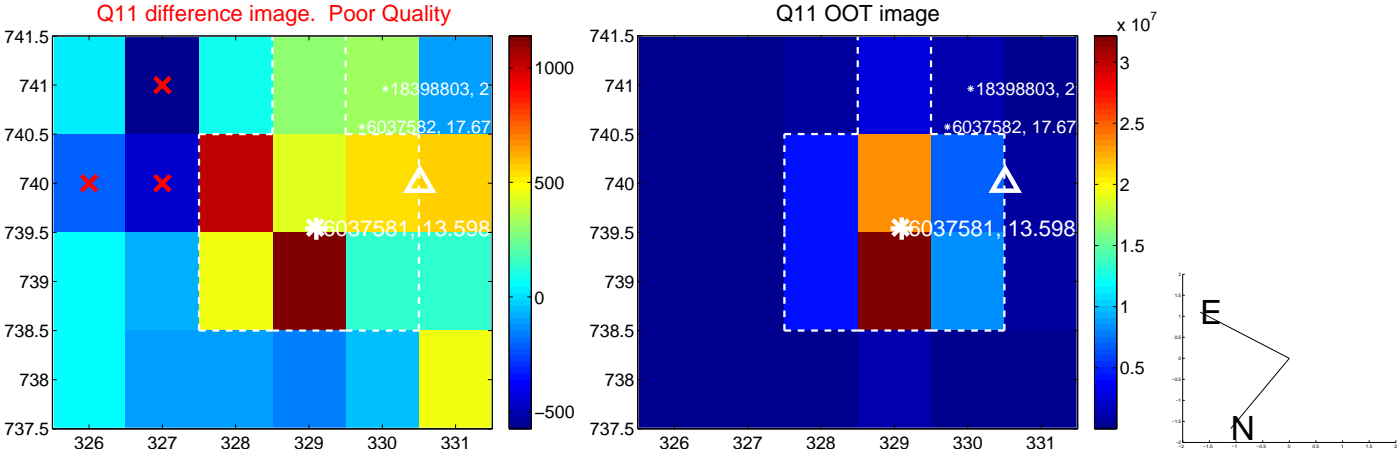
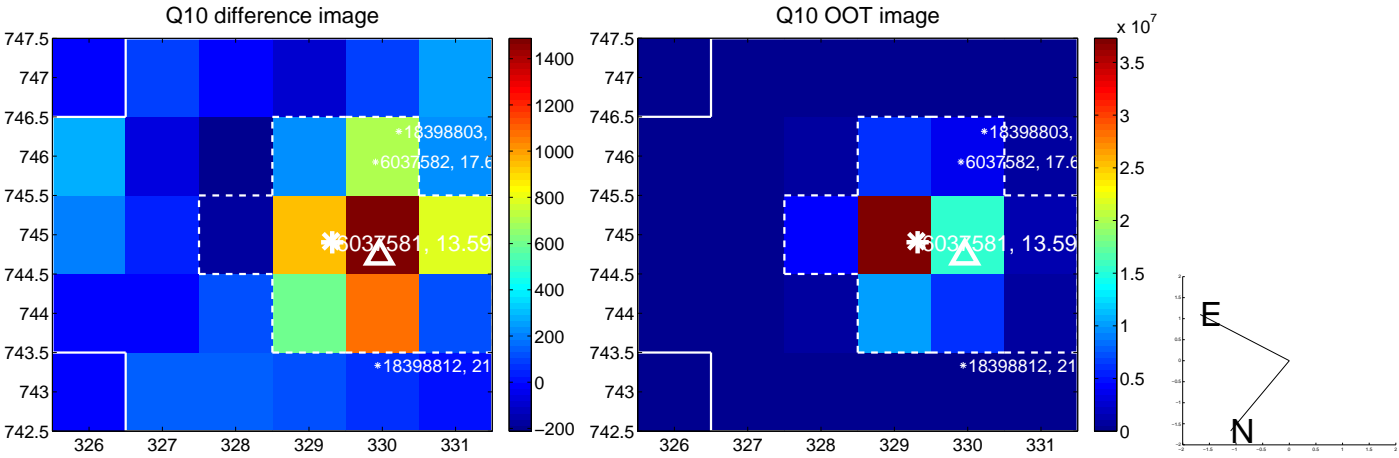
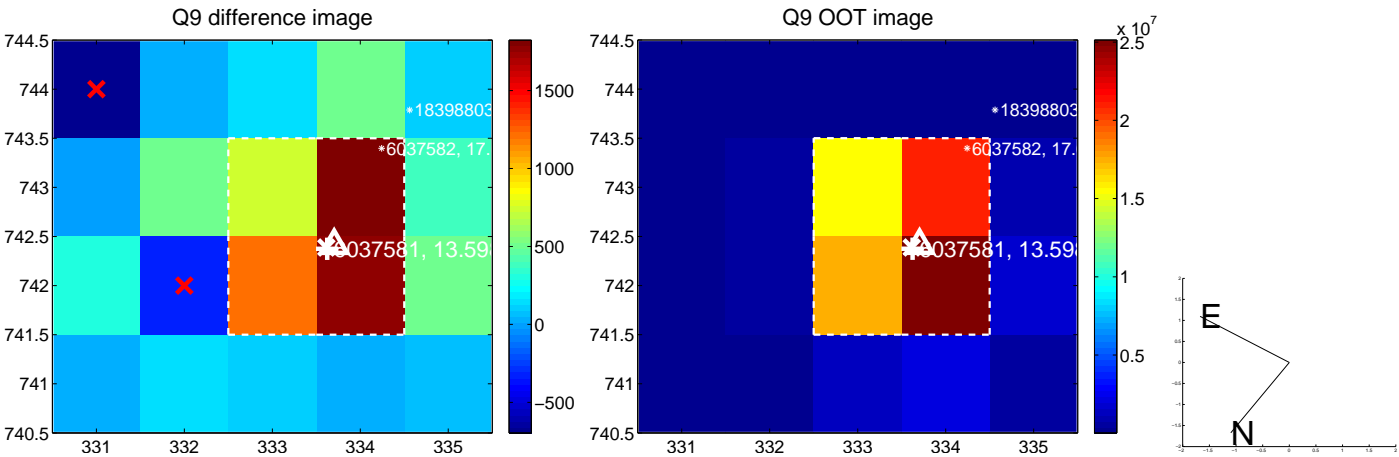
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



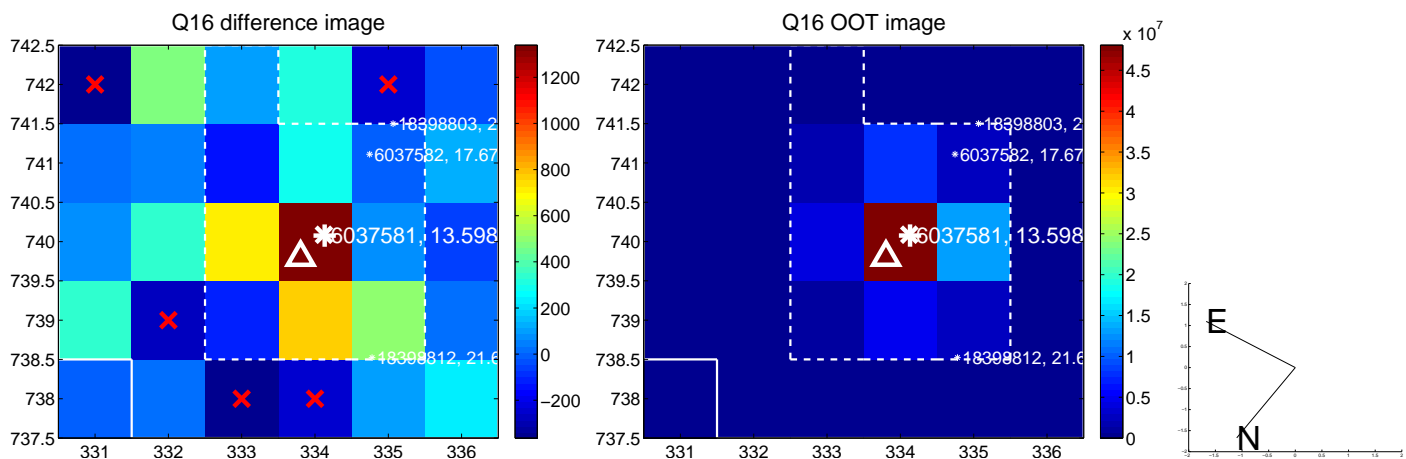
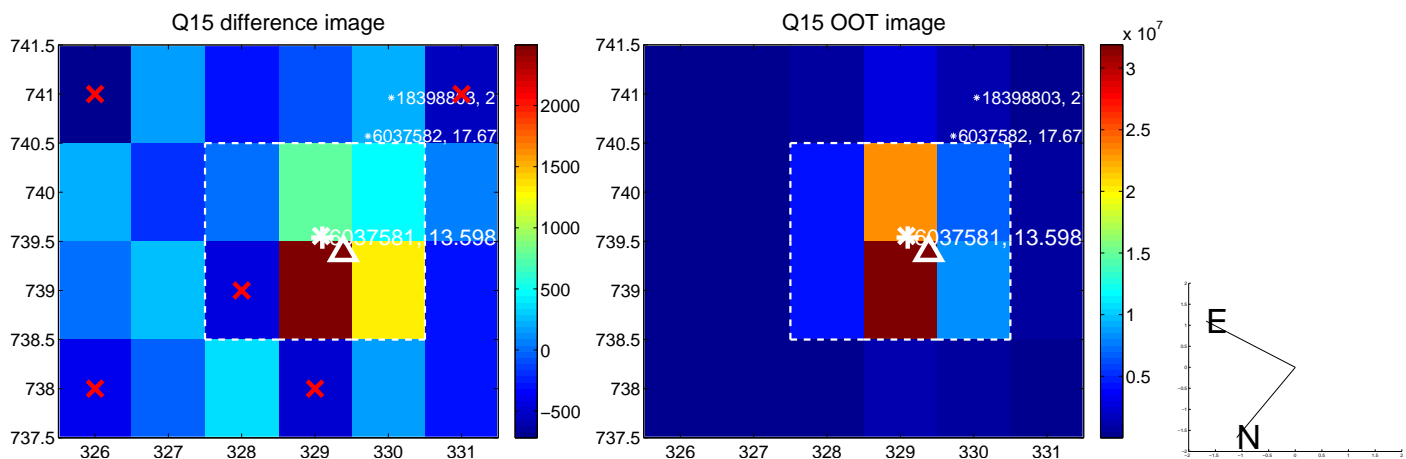
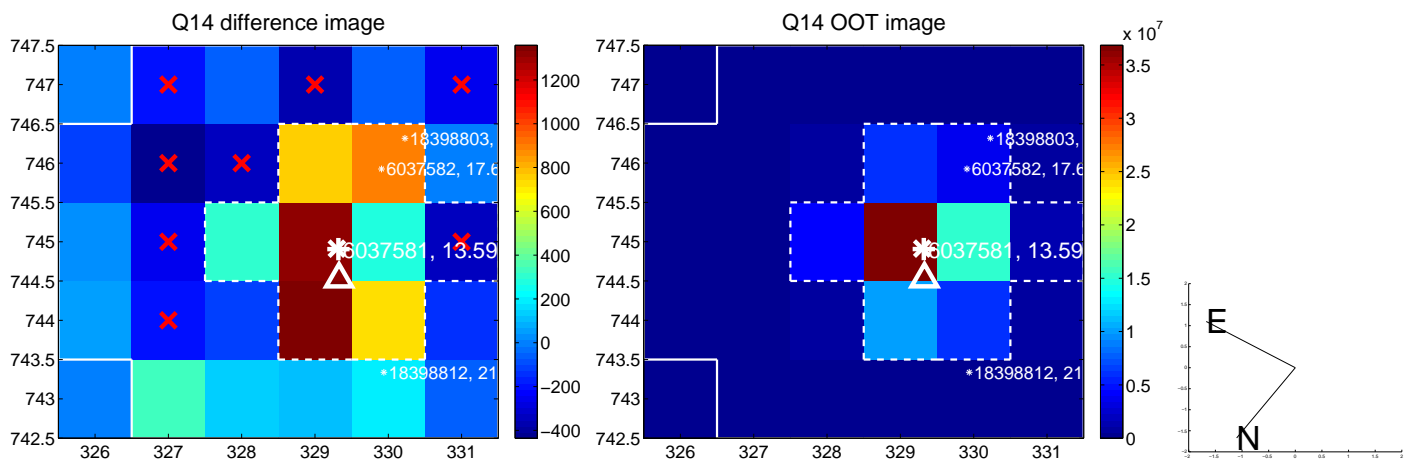
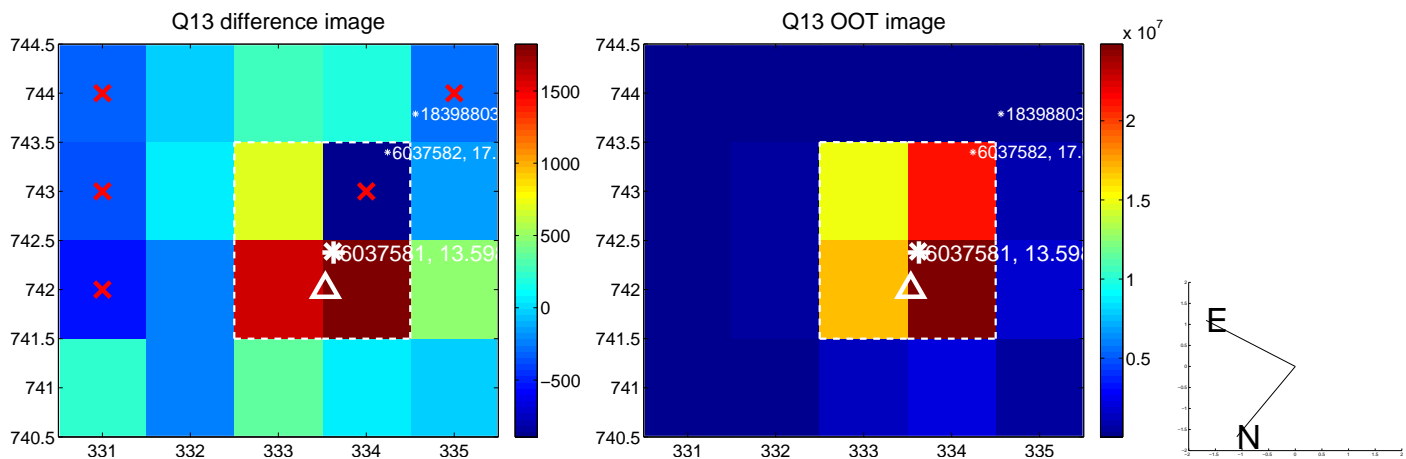
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



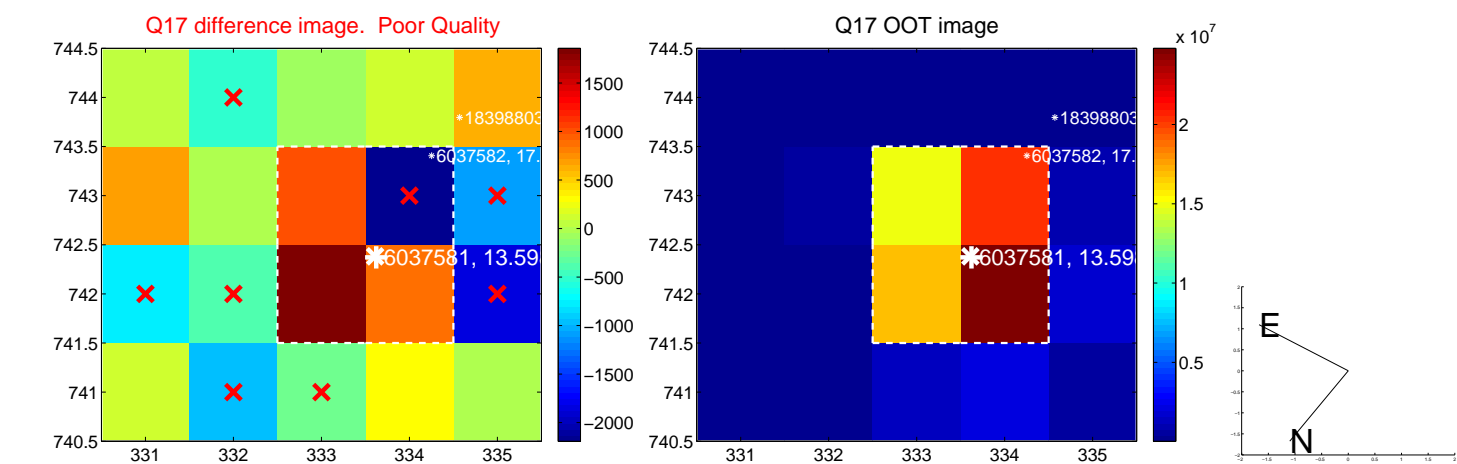
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



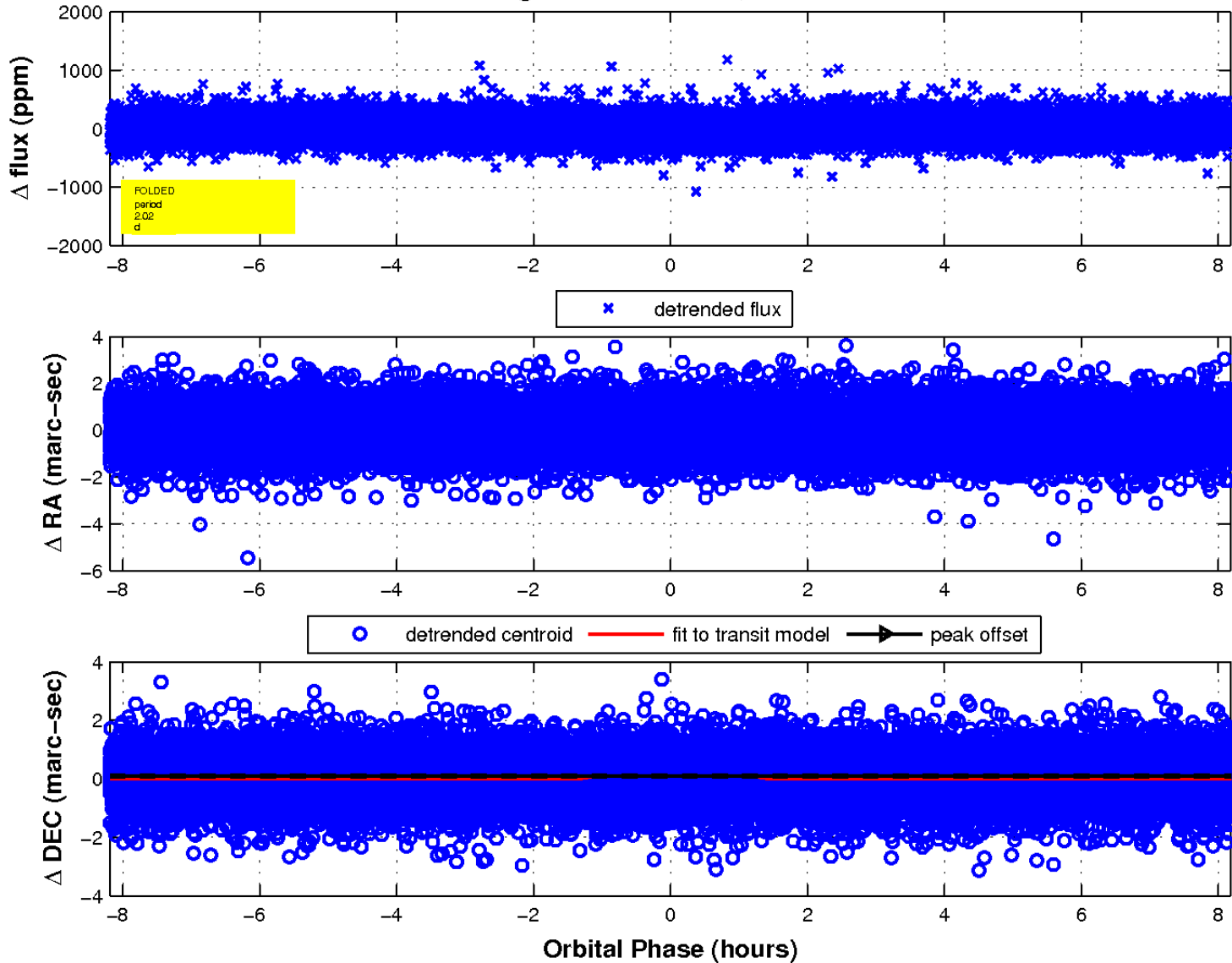
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

