

KIC 011044394

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})
011044394-01	OBS	No	3.749183	135.096776	27.6	17.597	9.4	7.9	2.15	7029	2.13	3364.96
011044394-02	OBS	No	139.112631	157.641456	562.6	27.742	27.9	18.5	2.15	7029	9.67	27.19
011044394-03	OBS	No	3.749372	132.536464	15.6	9.751	10.6	5.8	2.15	7029	0.96	3364.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044394-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
011044394-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011044394-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

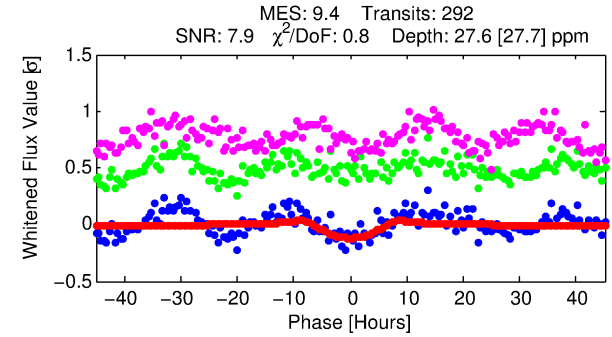
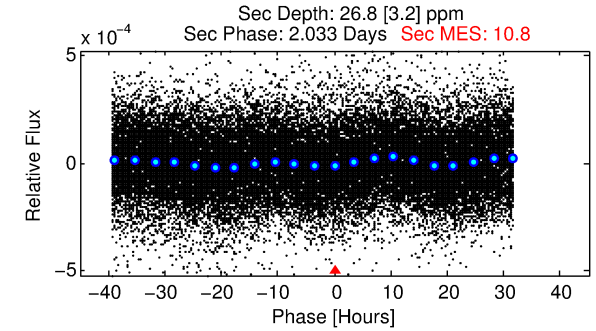
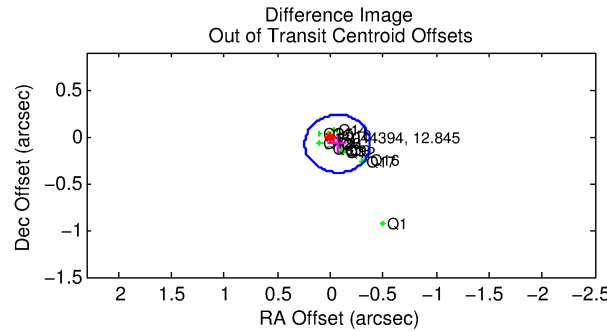
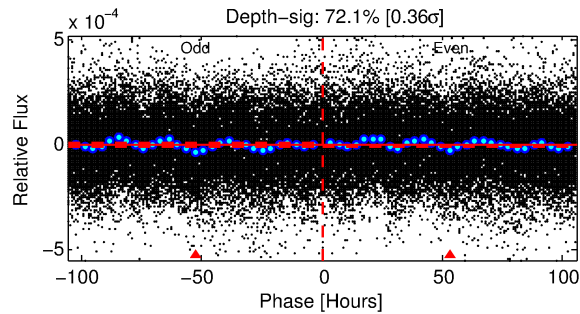
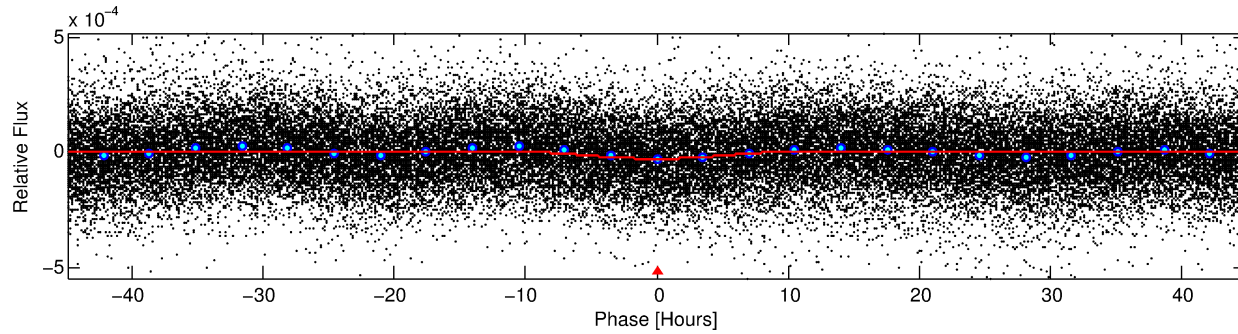
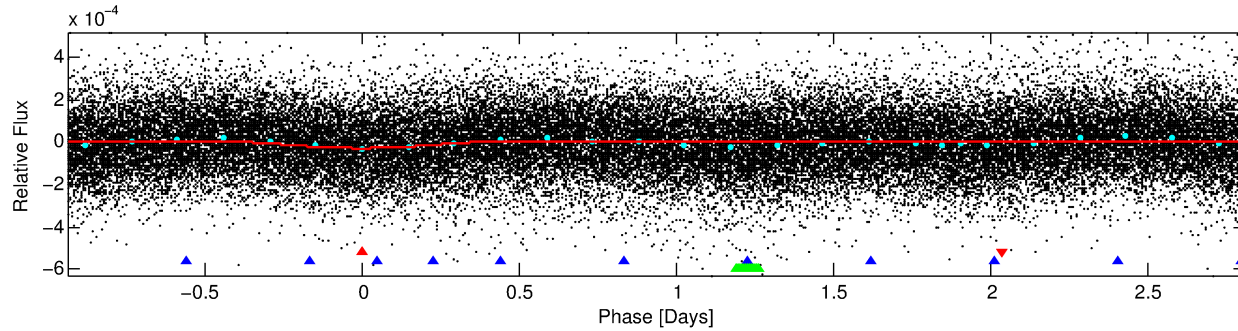
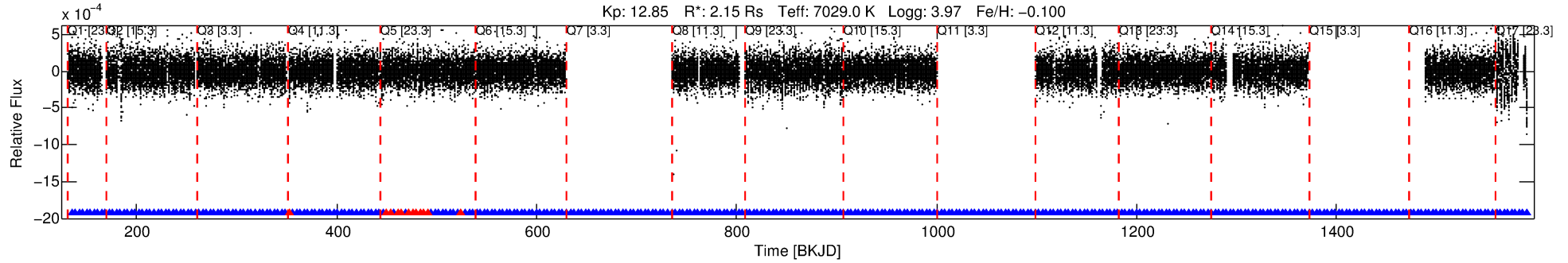
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044394-01

No Significant Match Found

DV One-Page Summary

KIC: 11044394 Candidate: 1 of 3 Period: 3.749 d



DV Fit Results:

Period = 3.74918 [0.00019] d
Epoch = 135.0968 [0.0394] BKJD
Rp/R* = 0.0091 [0.0154]
a/R* = 1.03 [0.01]
b = 1.00 [0.03]
Seff = 3364.96 [1302.17]
Teq = 1942 [188] K
Rp = 2.13 [3.67] Re
a = 0.0548 [0.0130] AU
Ag = 9.76 [33.39] [0.26 σ]
Teffp = 5307 [4518] K [0.74 σ]

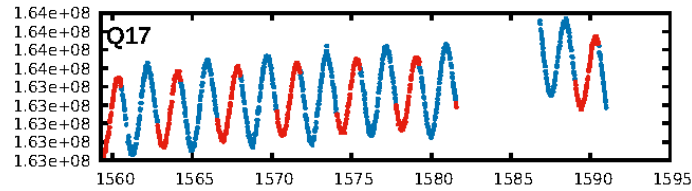
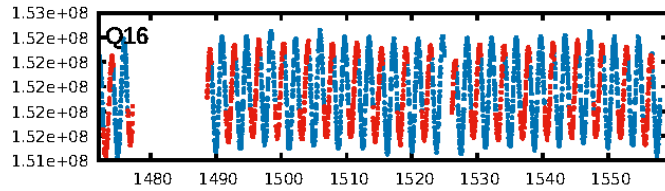
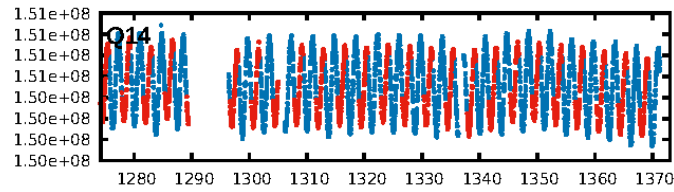
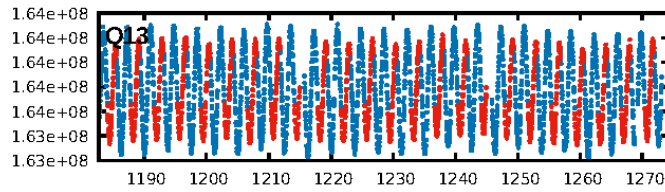
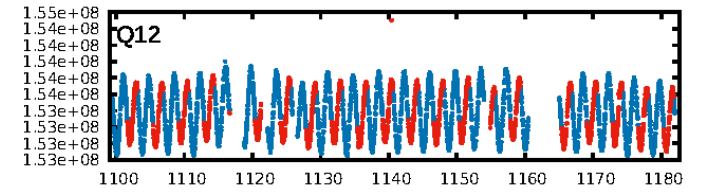
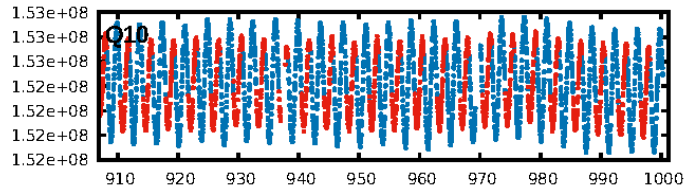
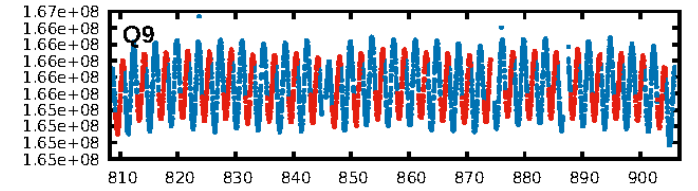
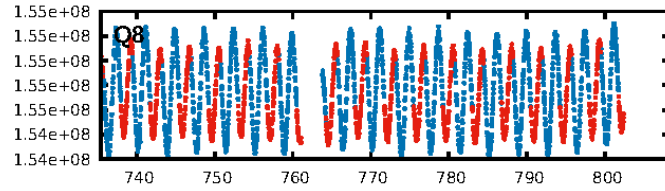
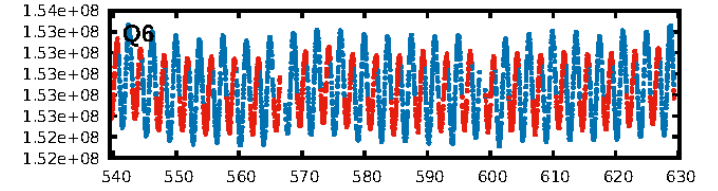
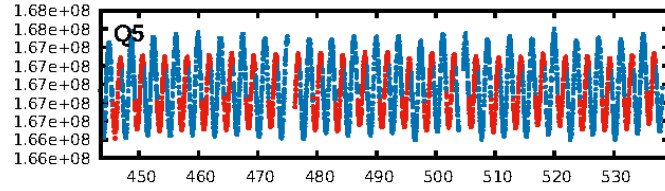
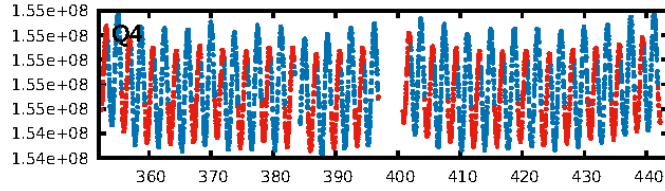
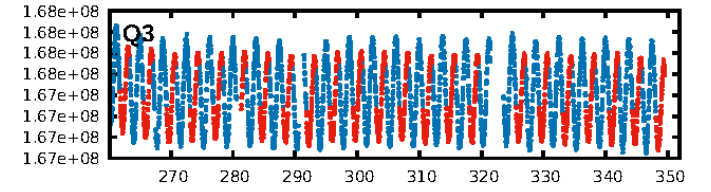
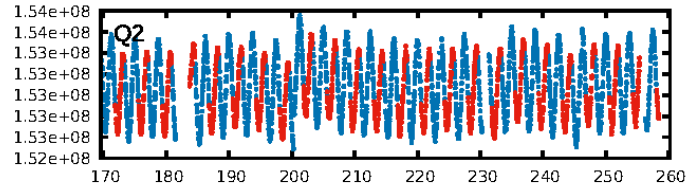
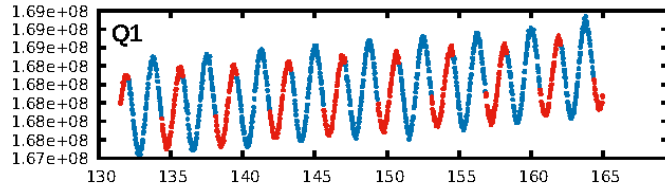
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.33e-14
RollingBand-fgt: 0.96 [263/275]
GhostDiagnostic-chr: 0.909
Centroid-sig: 0.0%
Centroid-so: 3.200 arcsec [2.75 σ]
OotOffset-rm: 0.103 arcsec [1.00 σ]
KicOffset-rm: 0.140 arcsec [1.45 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

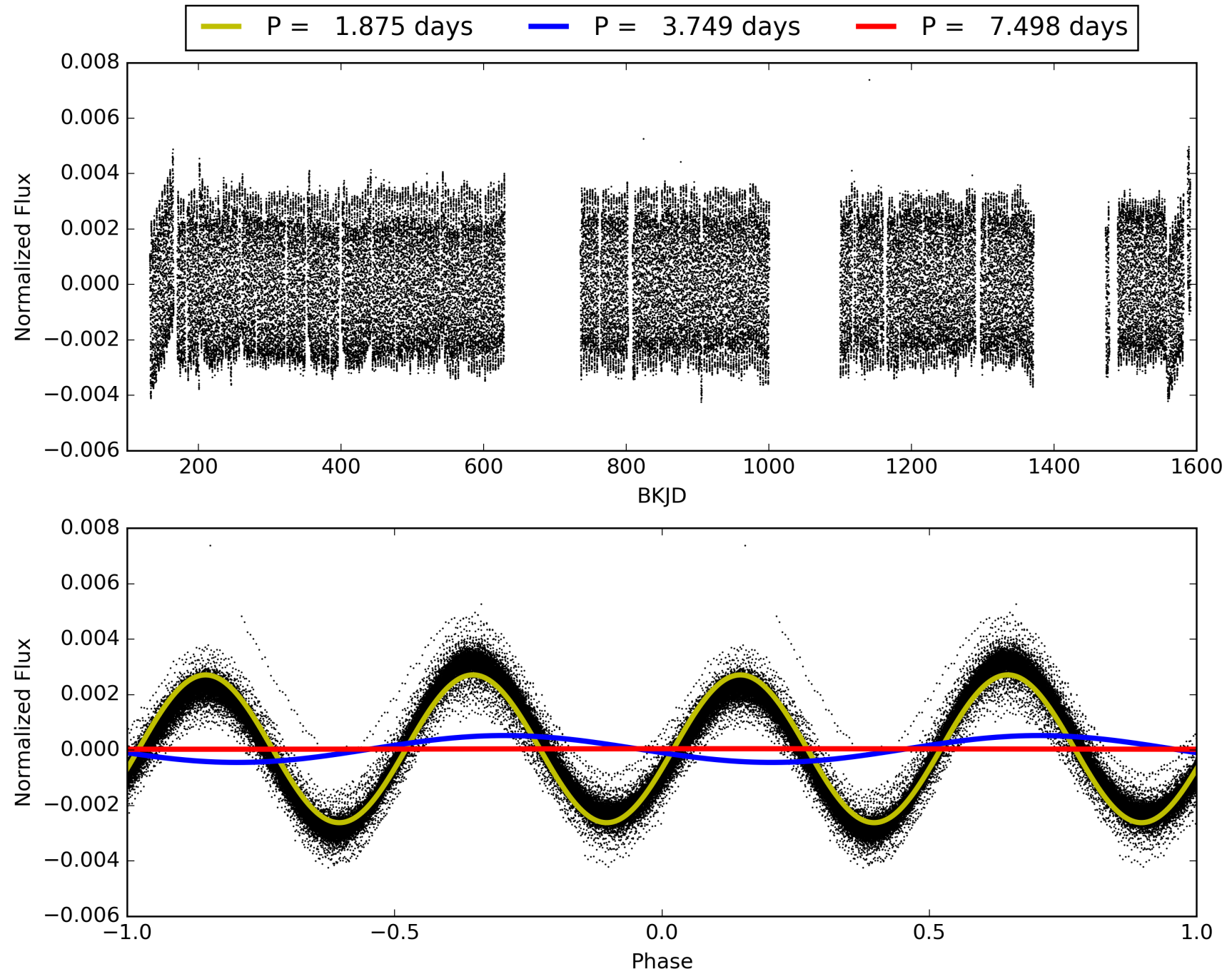
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:55:03 Z

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

TCE 011044394-01, PDC Light Curves

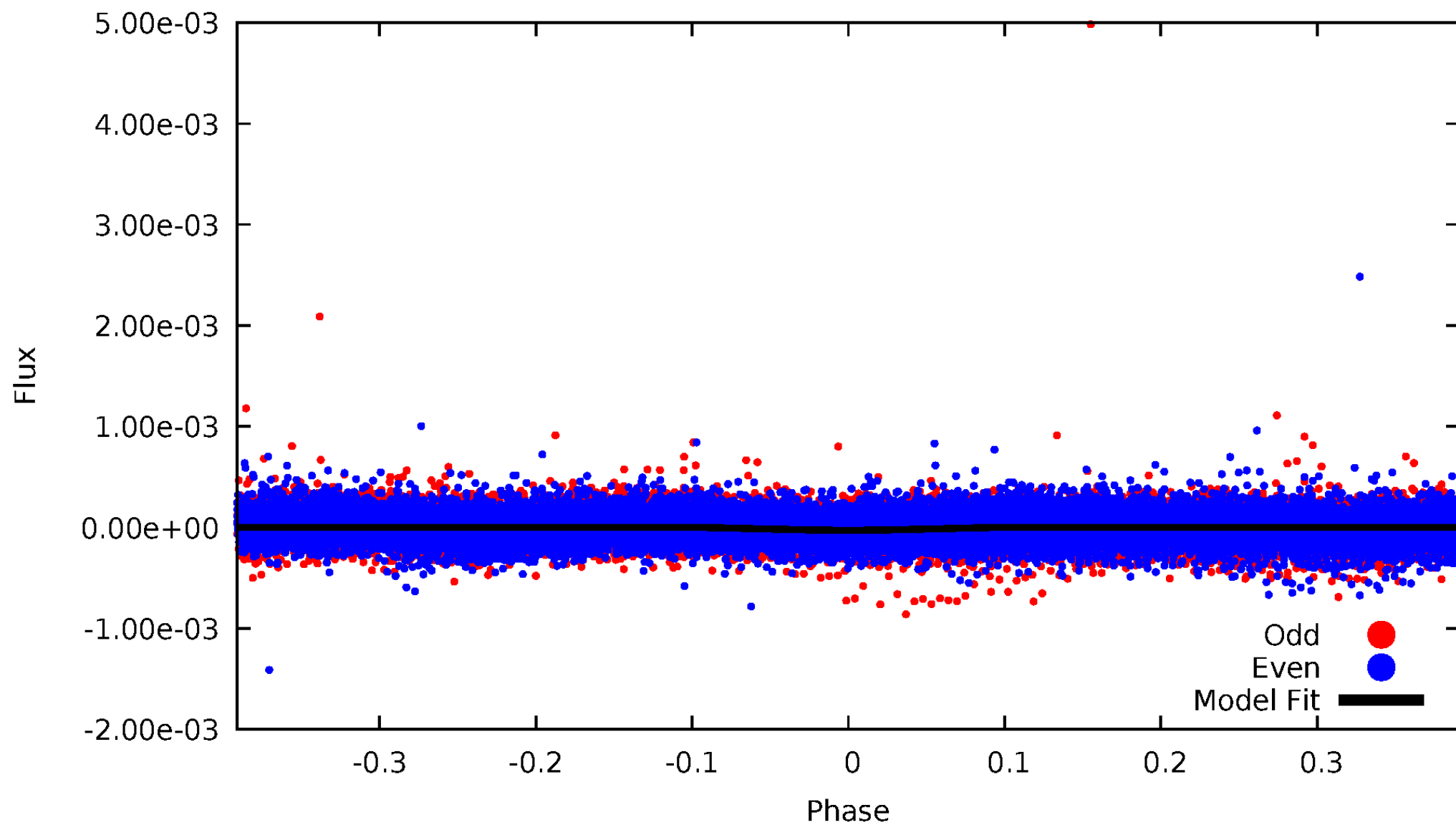


TCE 011044394-01



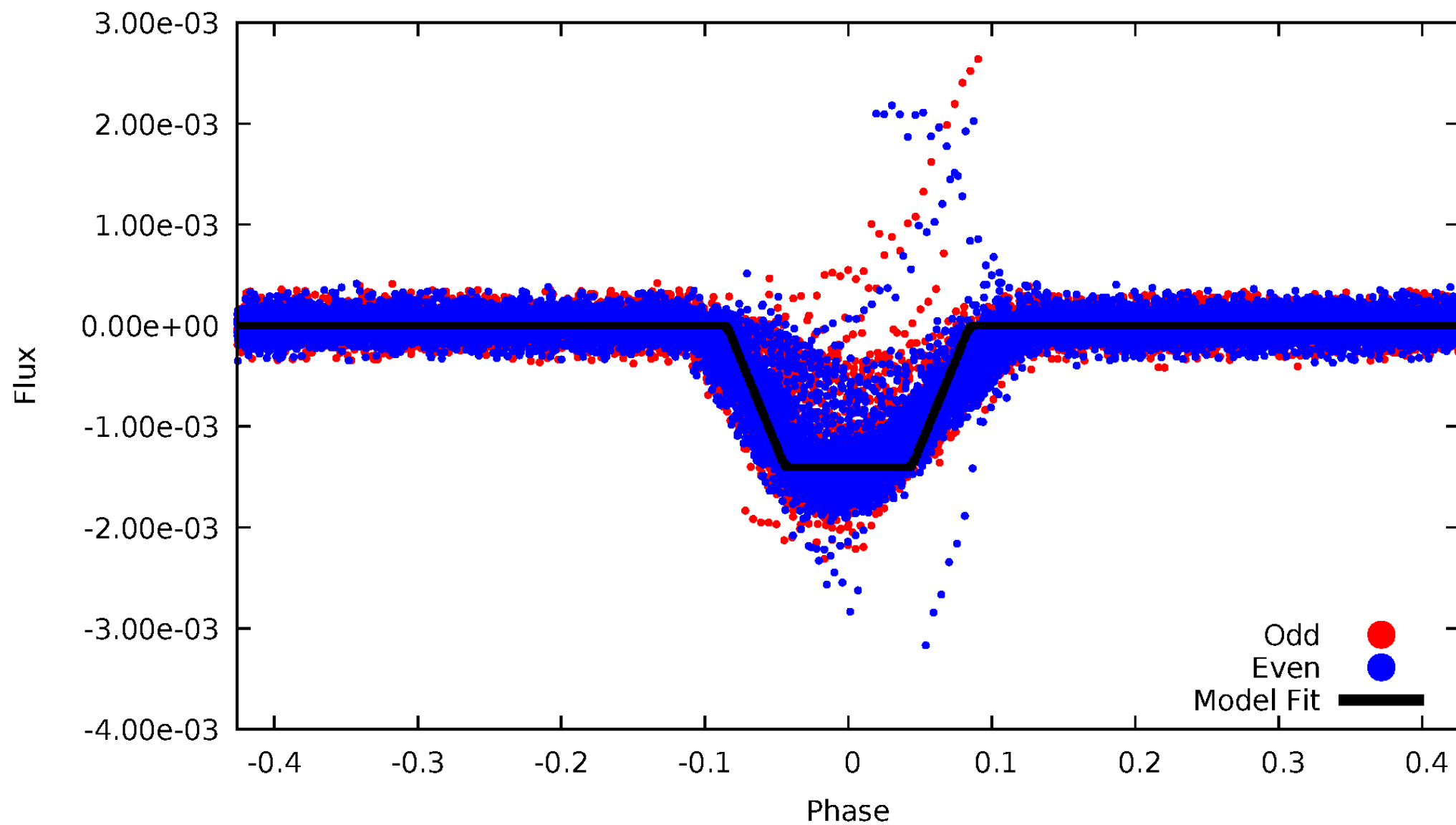
DV Odd/Even

TCE 011044394-01

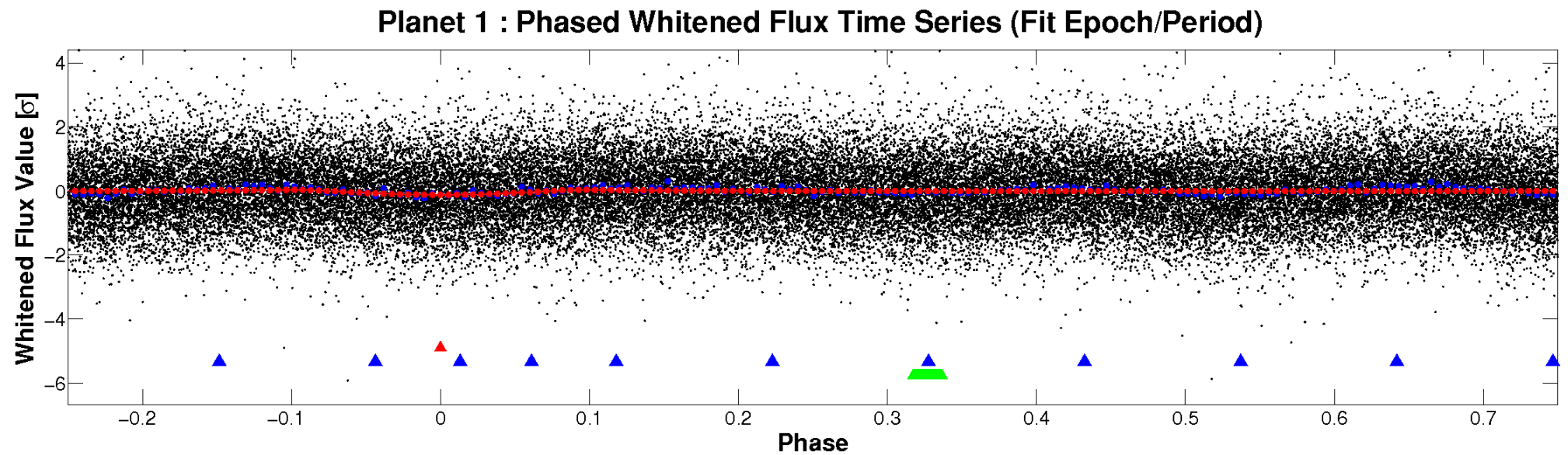
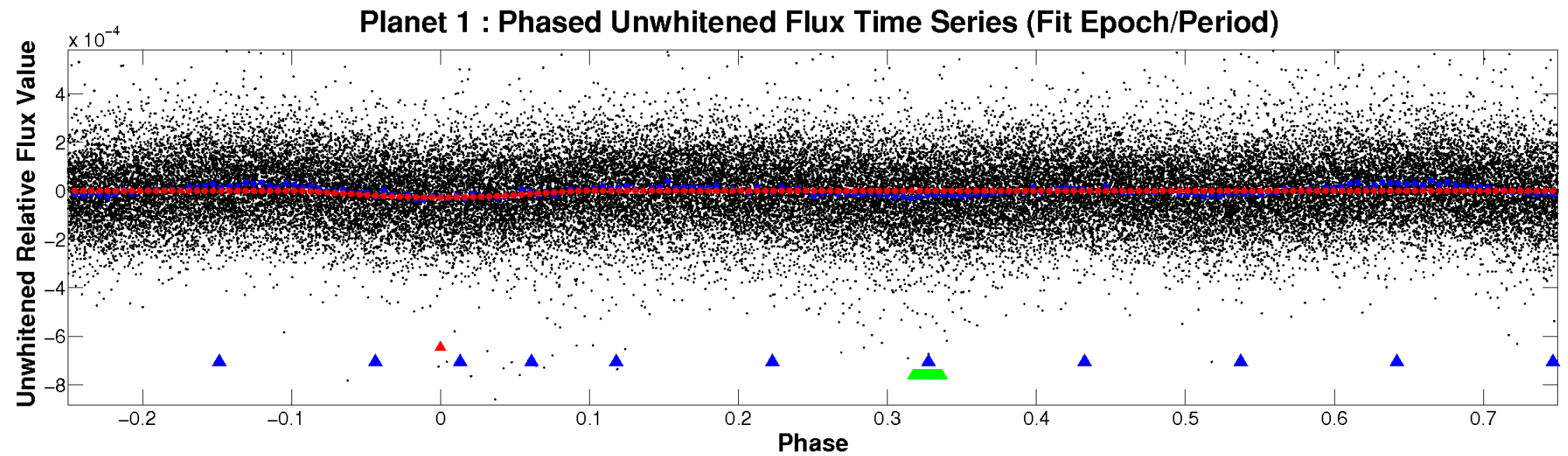


ALT Odd/Even

TCE 011044394-01

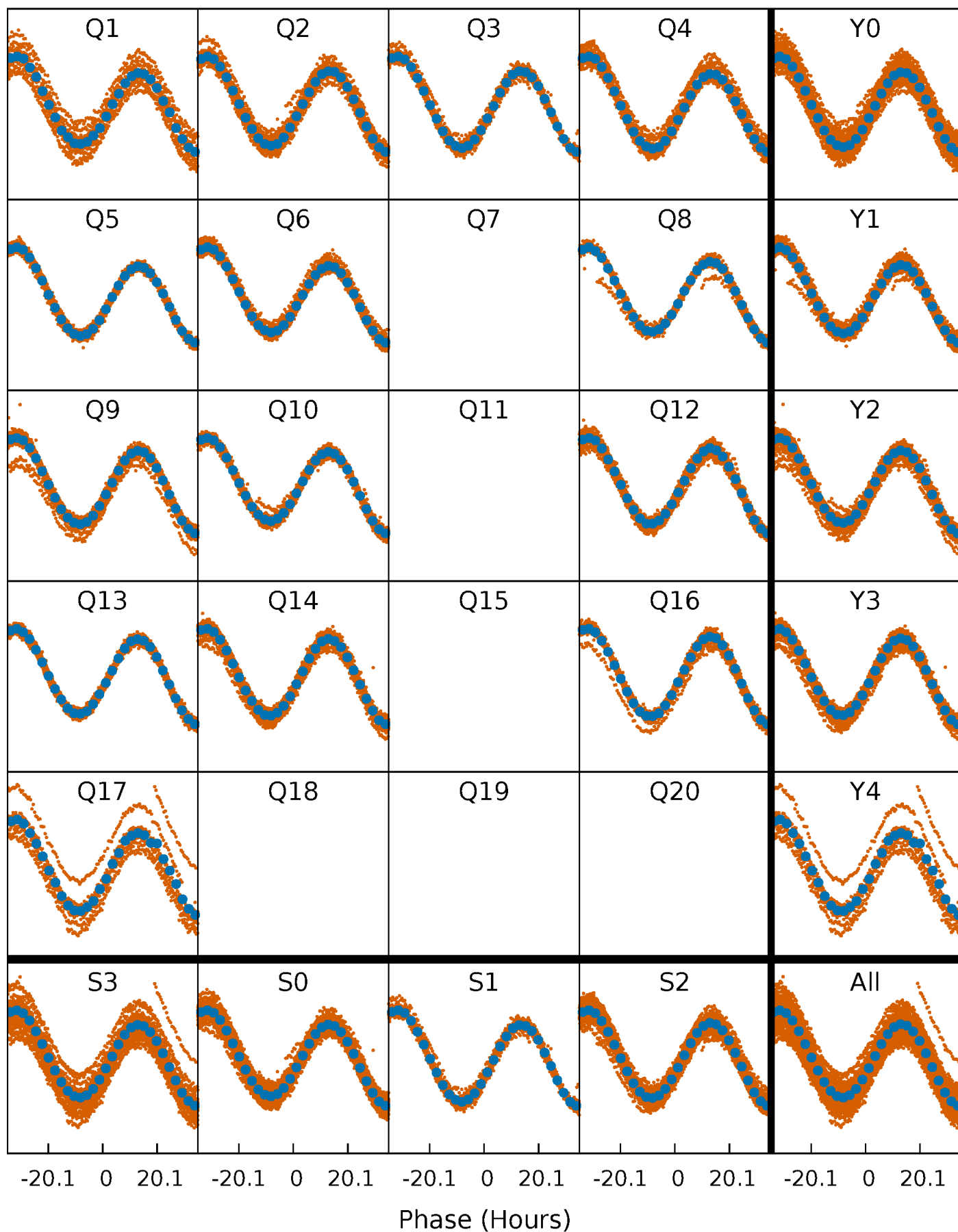


Non-Whitened Vs. Whitened Light Curve



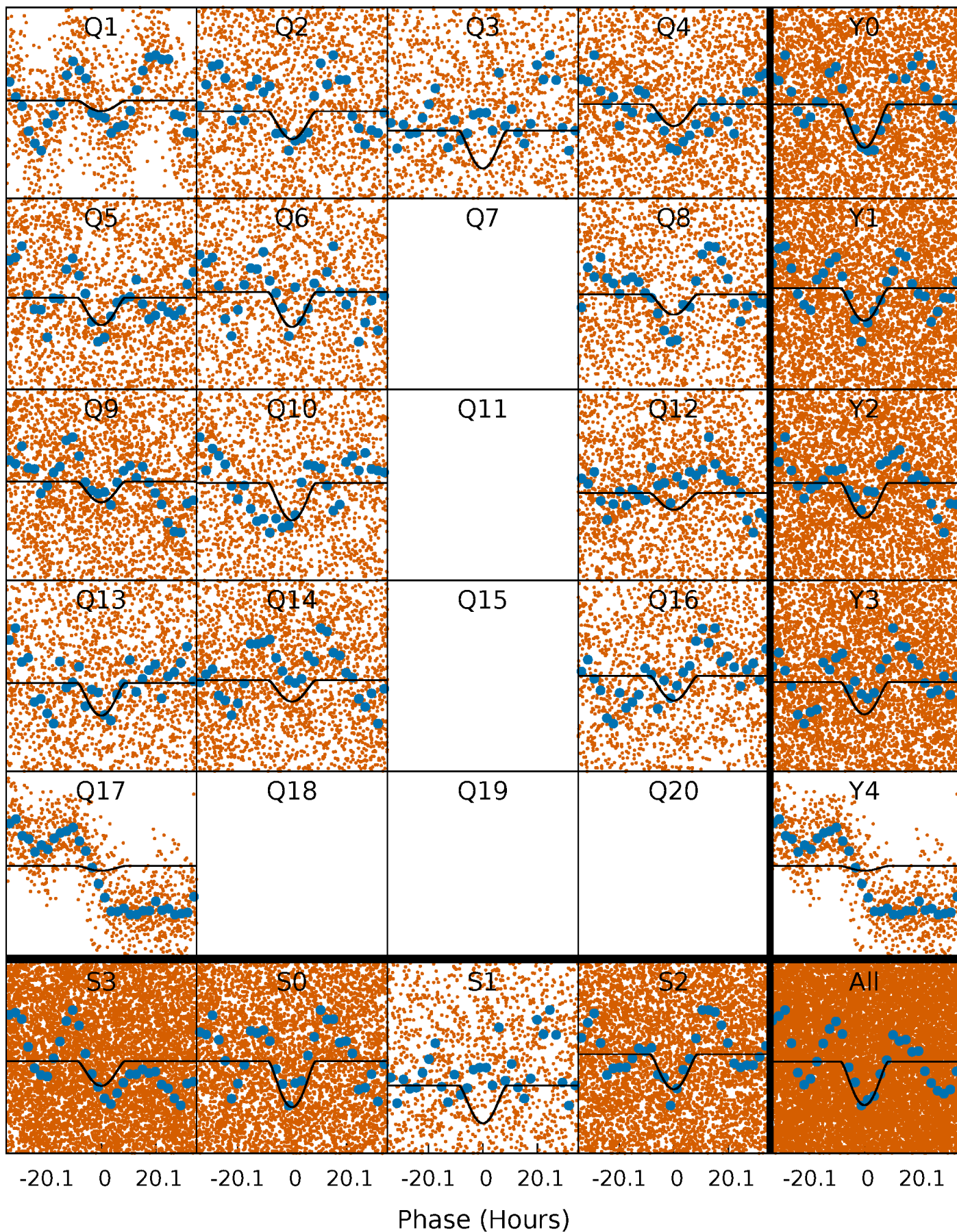
PDC Quarter-Phased Transit Curves

TCE 011044394-01 P= 3.749183 Days $T_0=135.096776$ (BKJD)



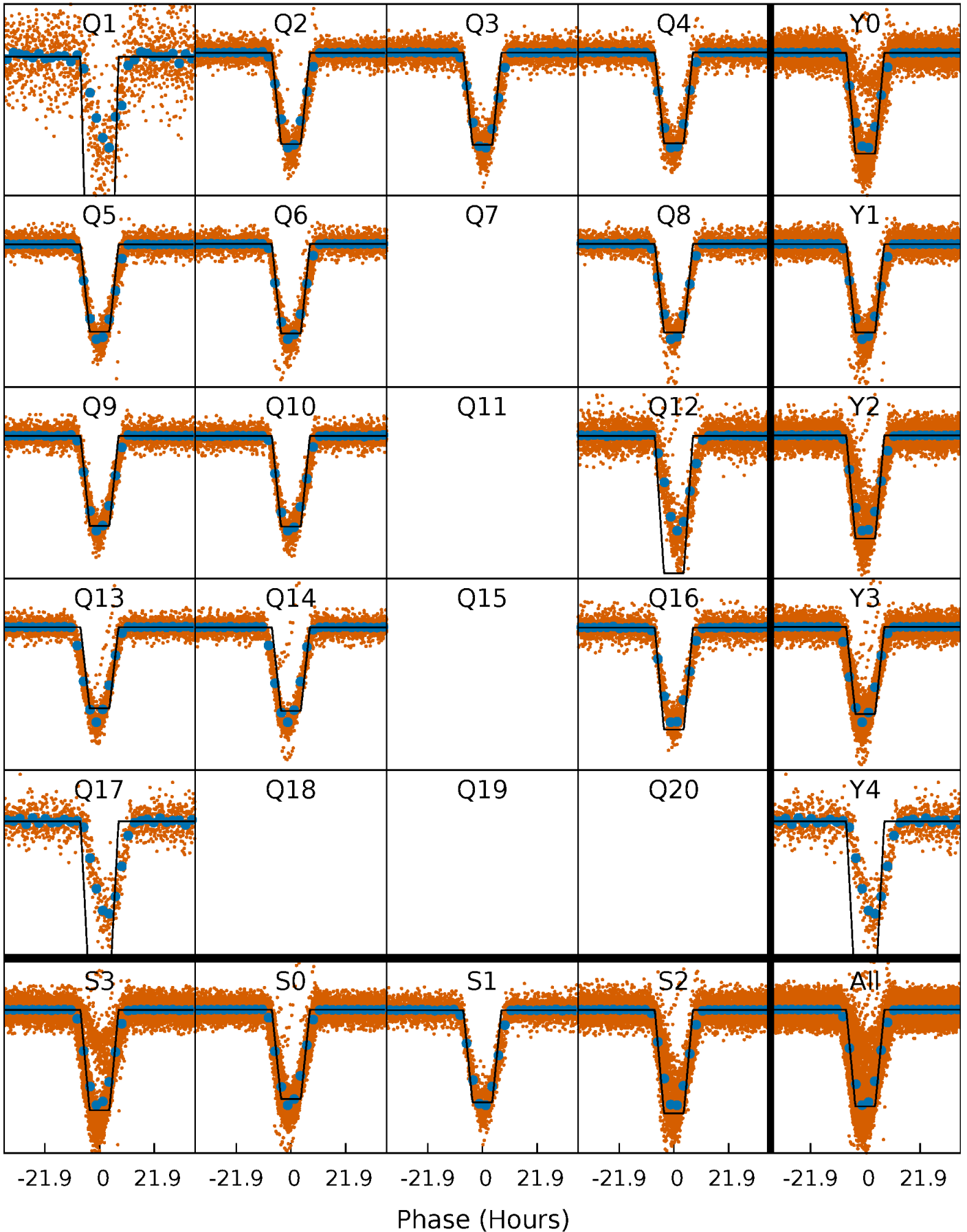
DV Quarter-Phased Transit Curves

TCE 011044394-01 P= 3.749183 Days $T_0=135.096776$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

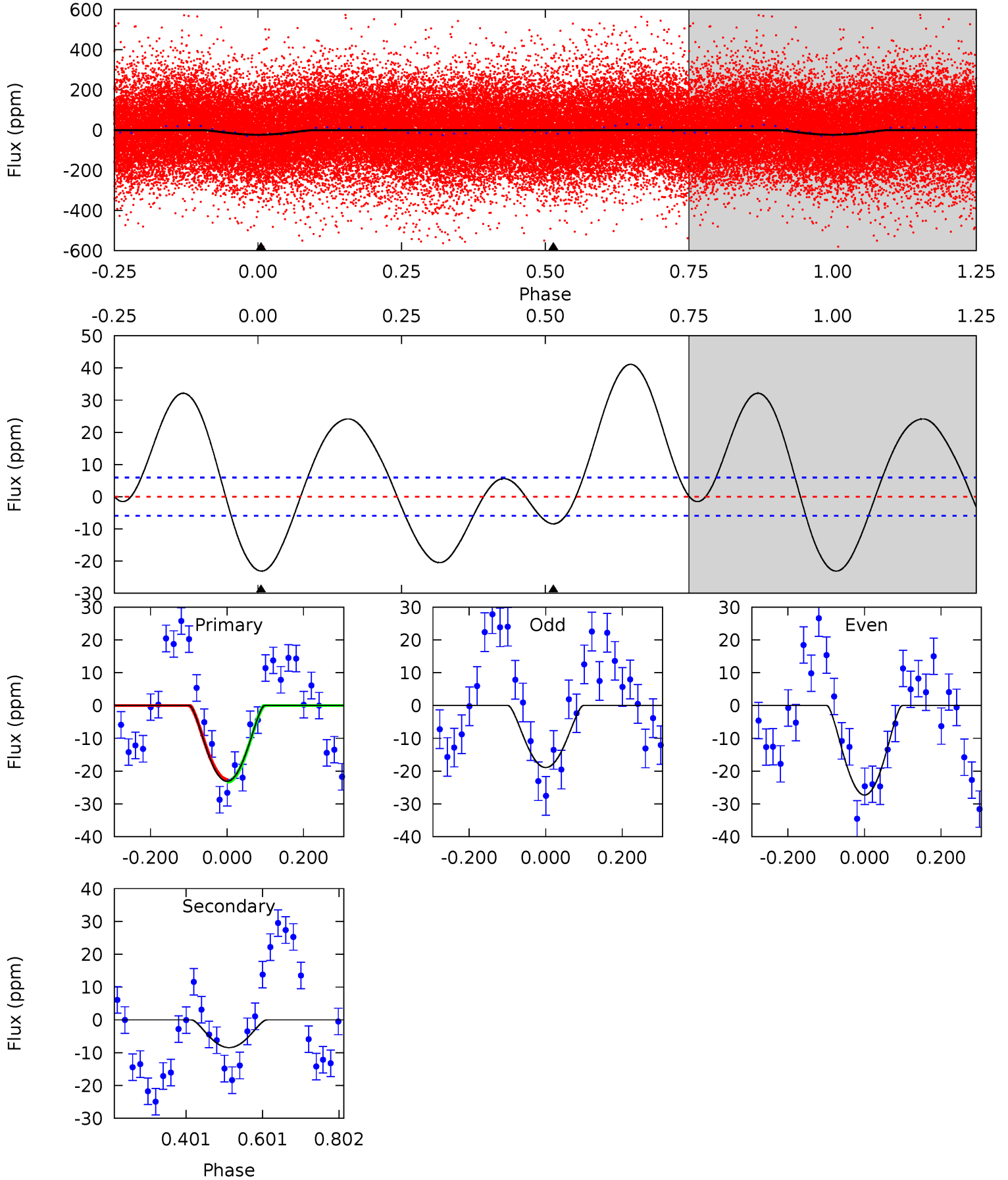
TCE 011044394-01 P= 3.749188 Days $T_0=134.908694$ (BKJD)



DV Model-Shift Uniqueness Test

011044394-01, P = 3.749183 Days, E = 131.347593 Days

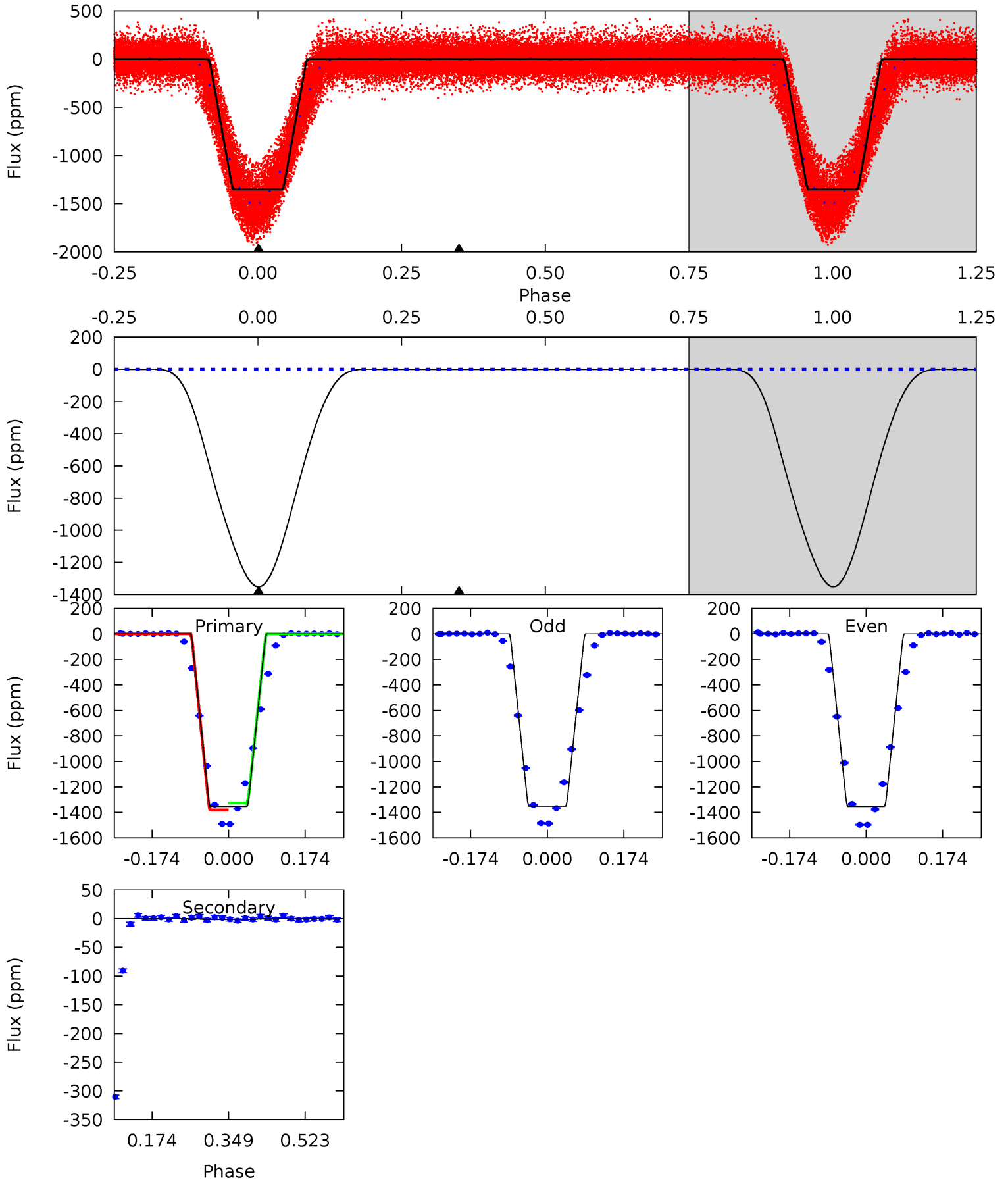
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	6.29	0	0	4.42	1.28	7.38	17.2	17.2	6.29	6.29	3.13	0.72	0.64	0.32



Alt Model-Shift Uniqueness Test

011044394-01, P = 3.749188 Days, E = 131.159506 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1272	1.74	0	0	4.45	1.36	0.90	1272	1272	1.74	1.74	0.27	0.96	0.00	25.3



Stellar Parameters For KIC 011044394

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7029^{+197}_{-246}	$3.967^{+0.204}_{-0.136}$	$-0.100^{+0.250}_{-0.300}$	$2.151^{+0.473}_{-0.578}$	$1.564^{+0.195}_{-0.260}$	$0.221^{+0.283}_{-0.088}$
	+3%/-3%	+5%/-3%	+250%/-300%	+22%/-27%	+12%/-17%	+128%/-40%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044394-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 1	$3.22^{+3.31}_{-2.06}$	2696^{+188}_{-189}	3451^{+1822}_{-1248}	$1.309^{+9.053}_{-0.980}$
Alt.	-2 ± 1	$8.54^{+3.75}_{-3.60}$	2687^{+188}_{-192}	-2812^{+238}_{-138}	$0.040^{+0.101}_{-0.026}$

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

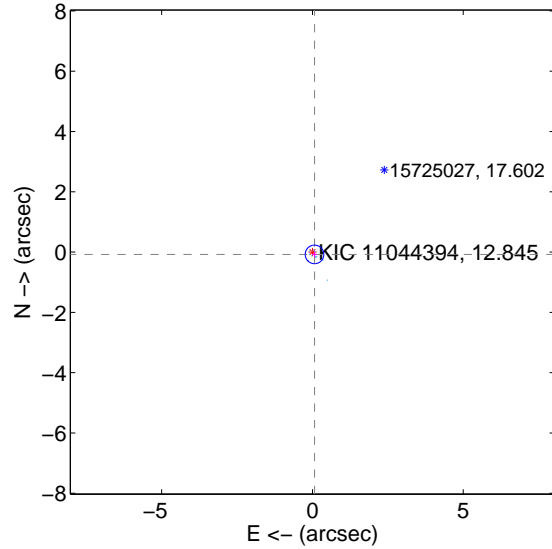
Supplemental centroid analysis for 011044394-01. Kepler magnitude: 12.85. Transit SNR 7.91

There are 14 quarters with good PRF difference image offsets

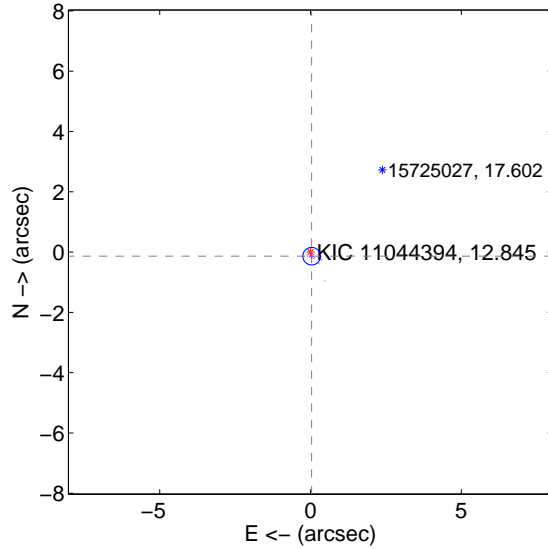
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.103 ± 0.103	1.00	-0.069 ± 0.081	-0.076 ± 0.095
PRF-fit source offset from KIC position	0.140 ± 0.097	1.45	-0.037 ± 0.080	-0.136 ± 0.092
photometric centroid source offset	3.20 ± 1.16	2.75	-1.57 ± 1.19	-2.79 ± 1.15

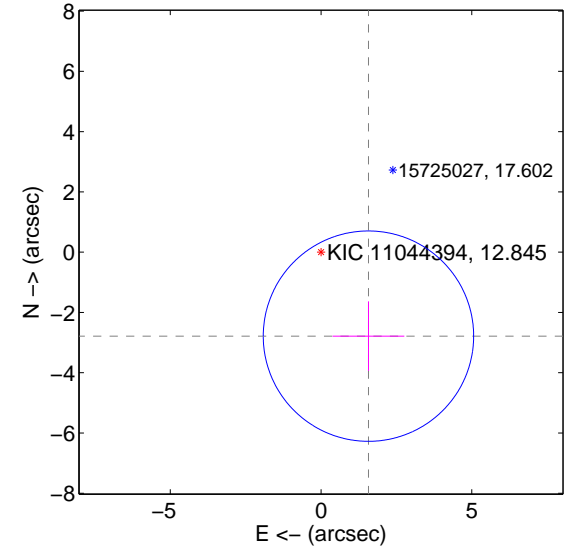
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

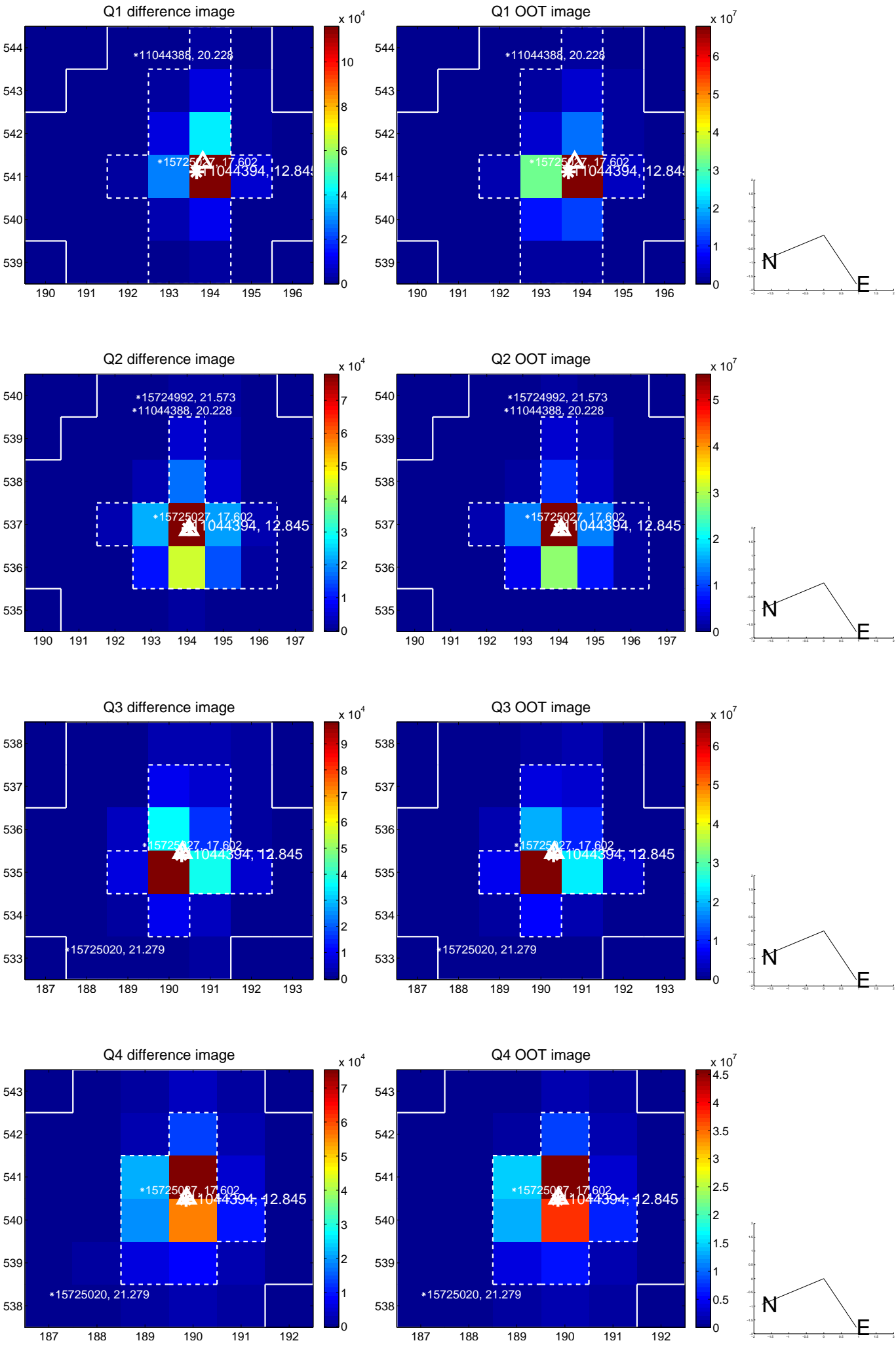


offset from photometric centroids

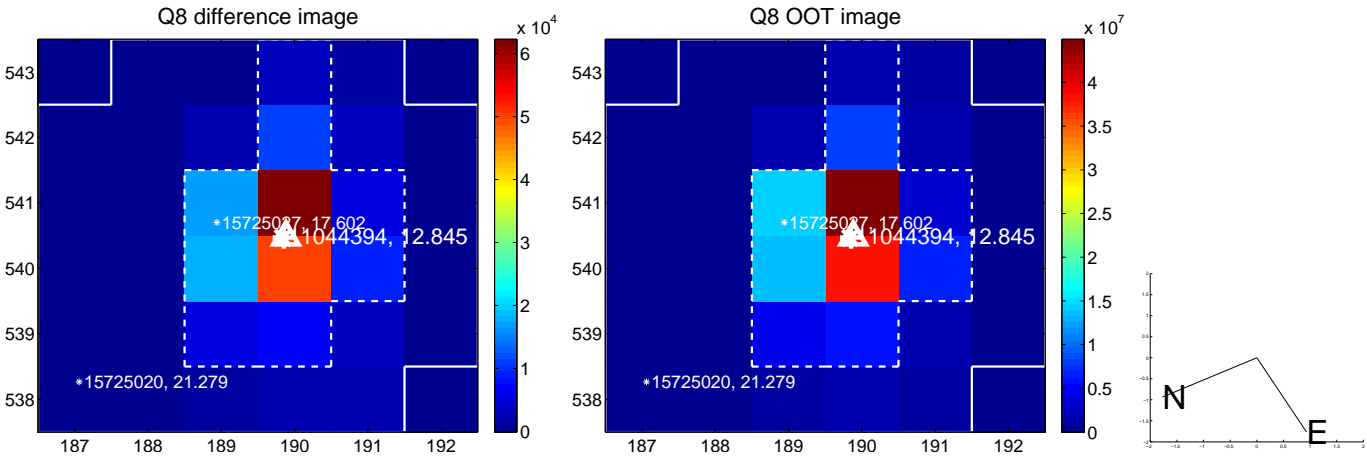
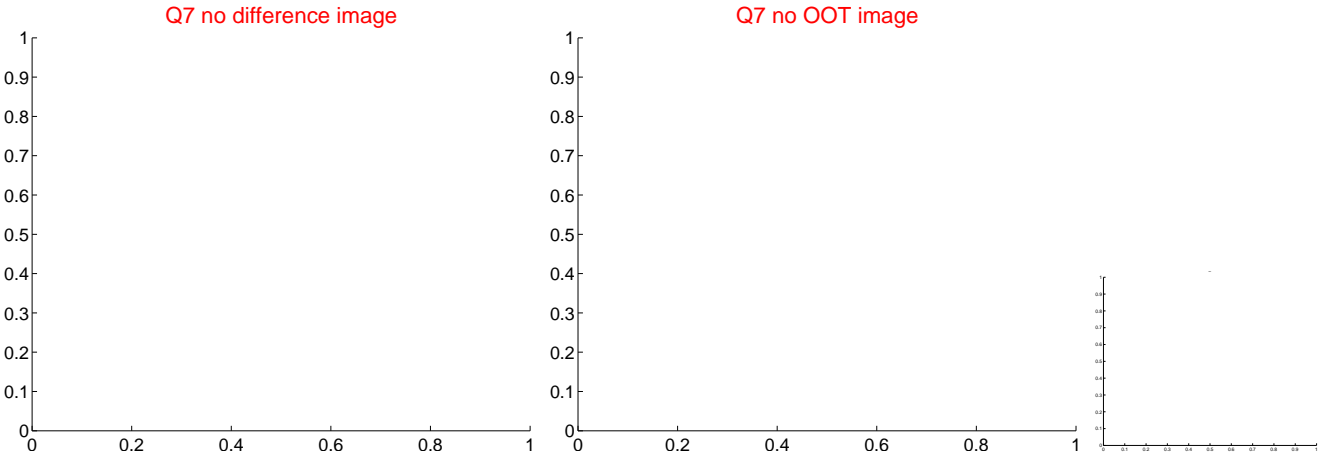
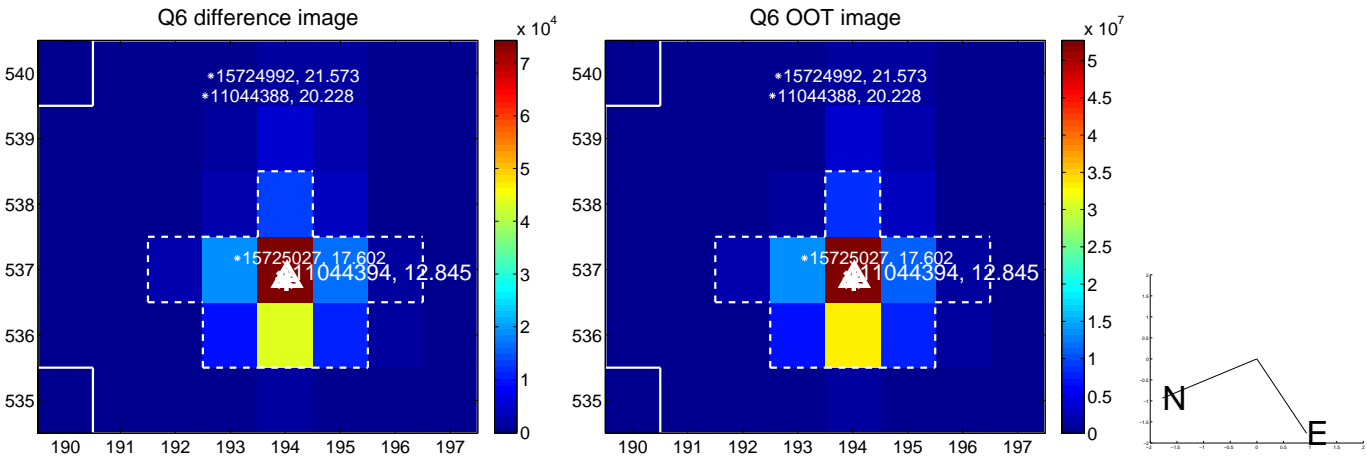
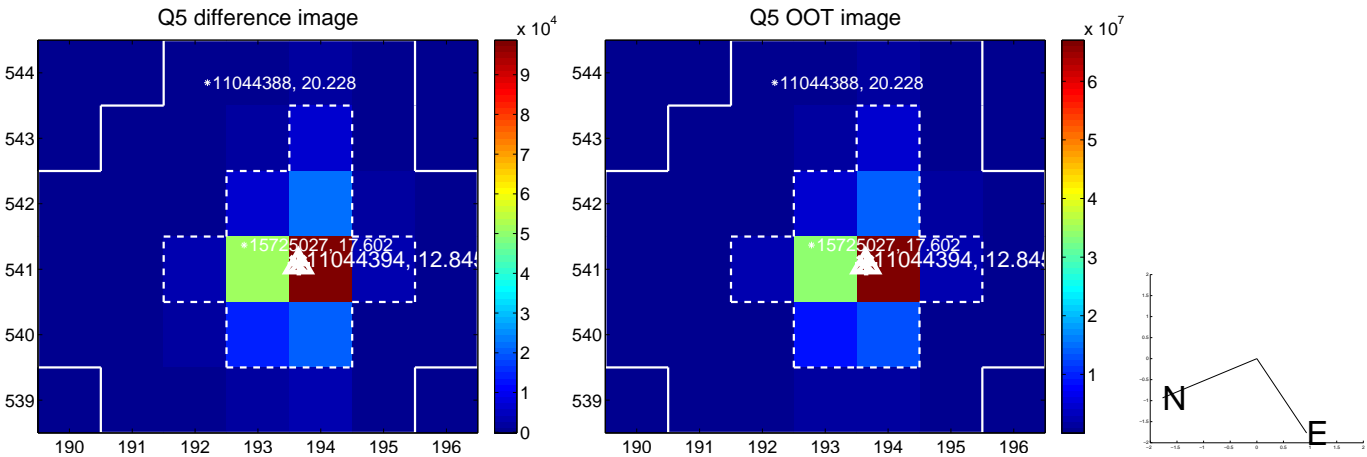


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

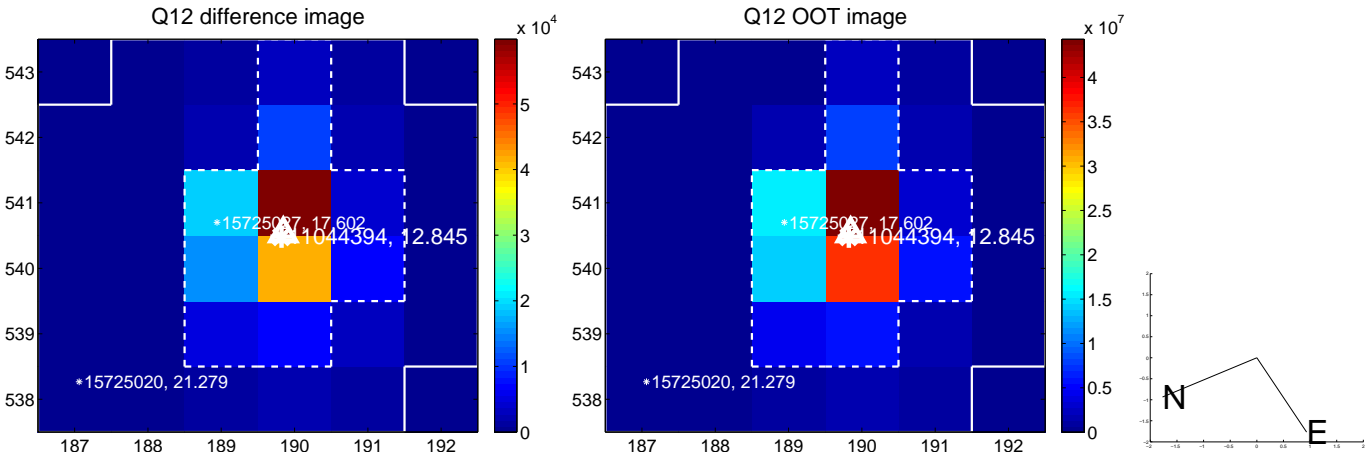
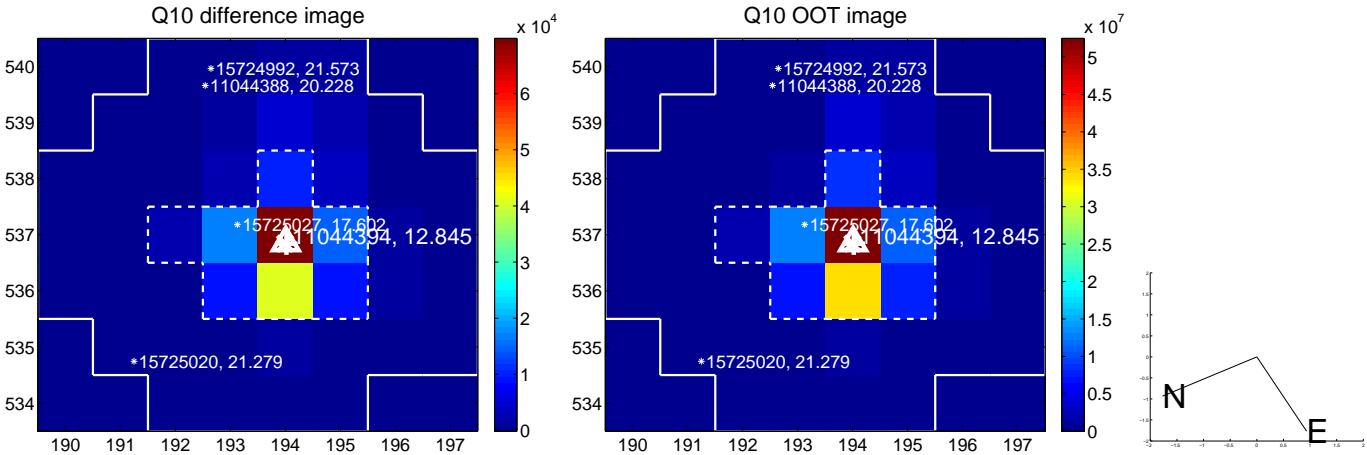
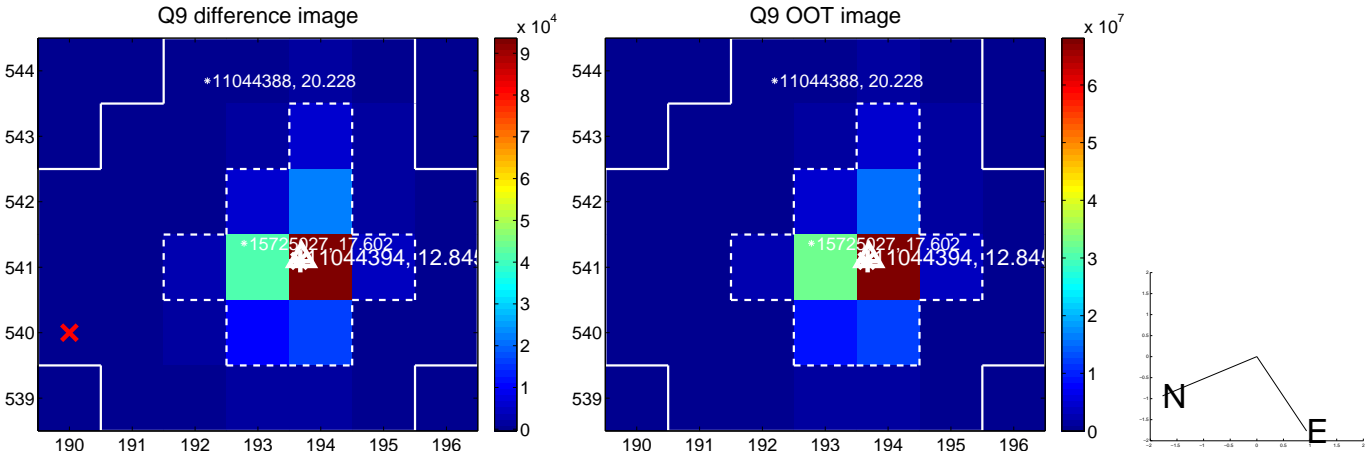
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



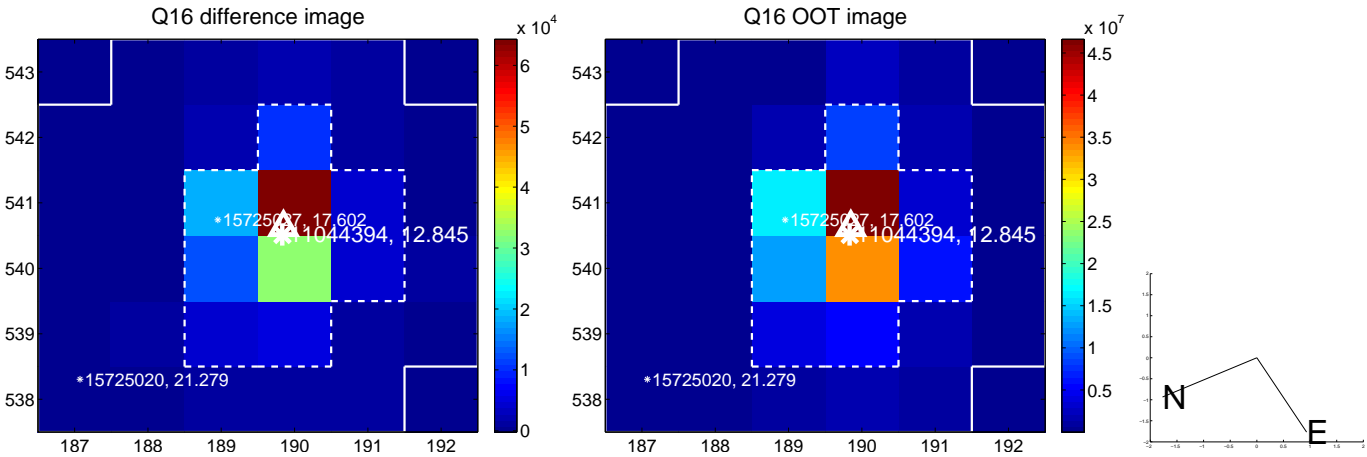
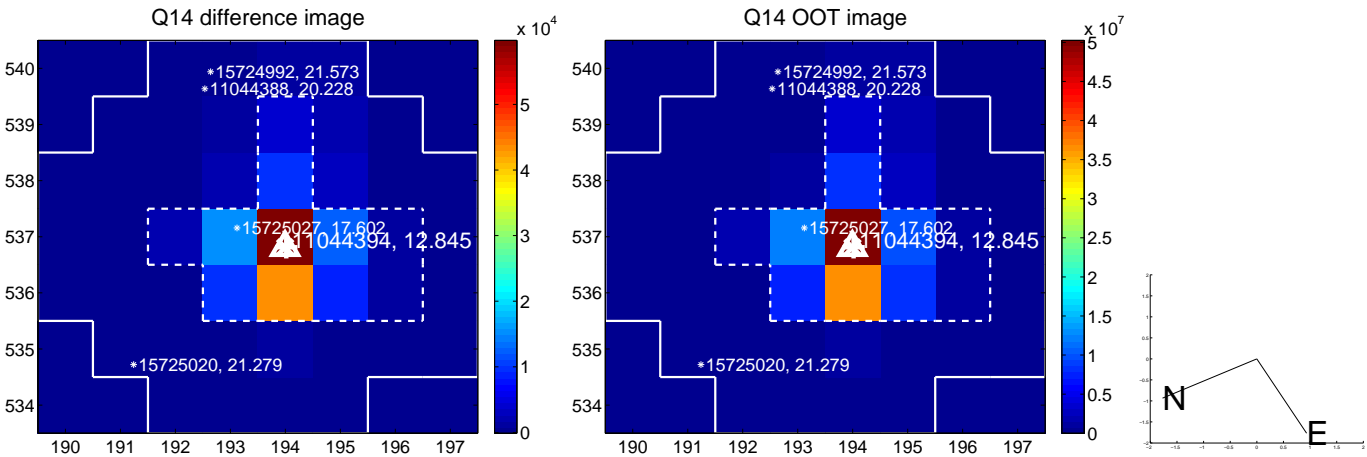
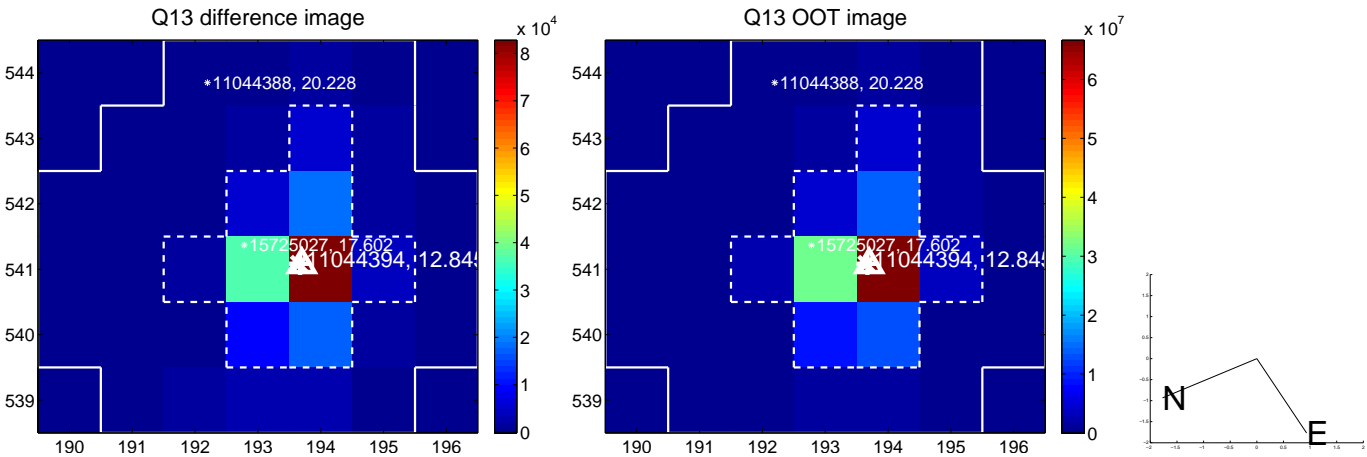
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



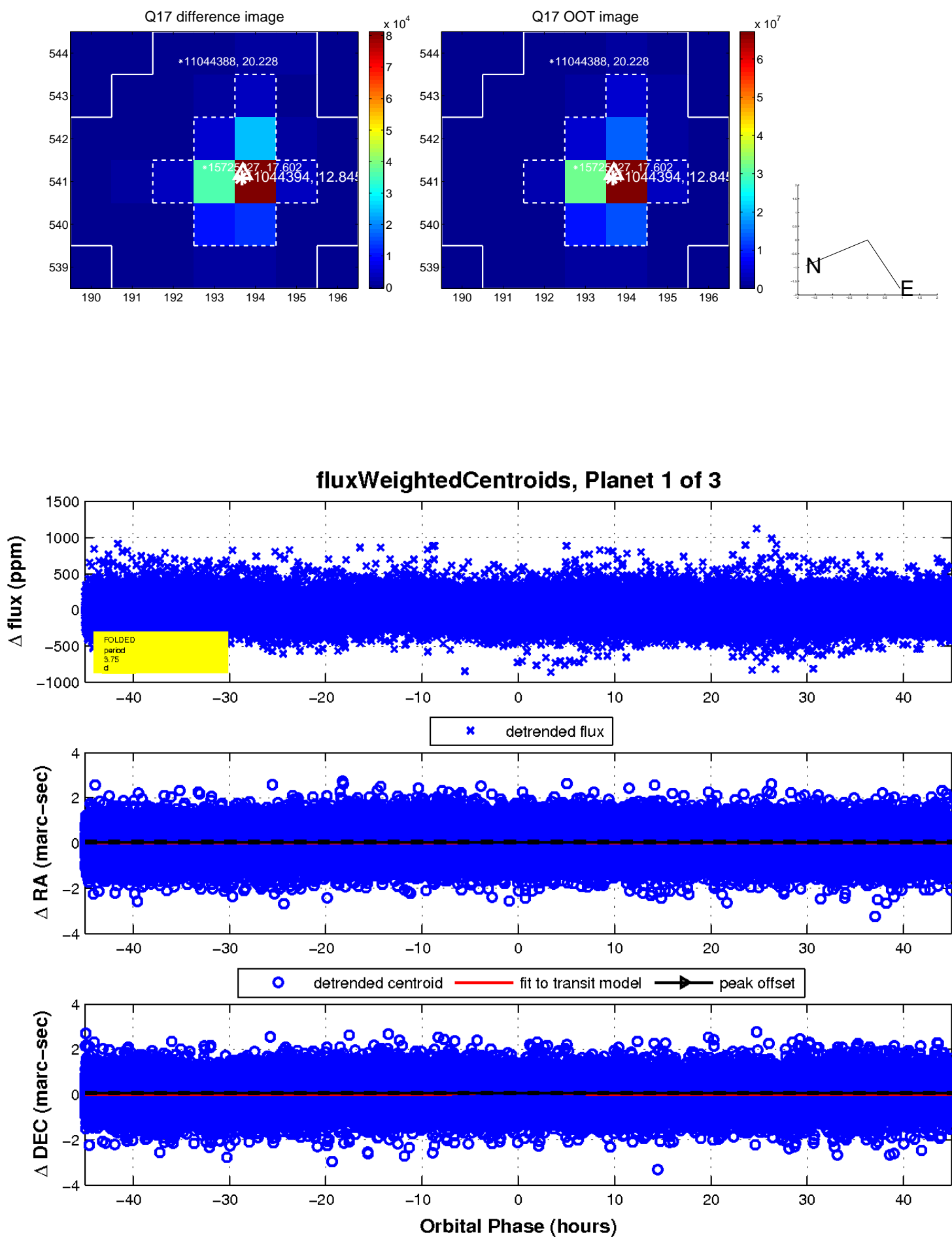
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

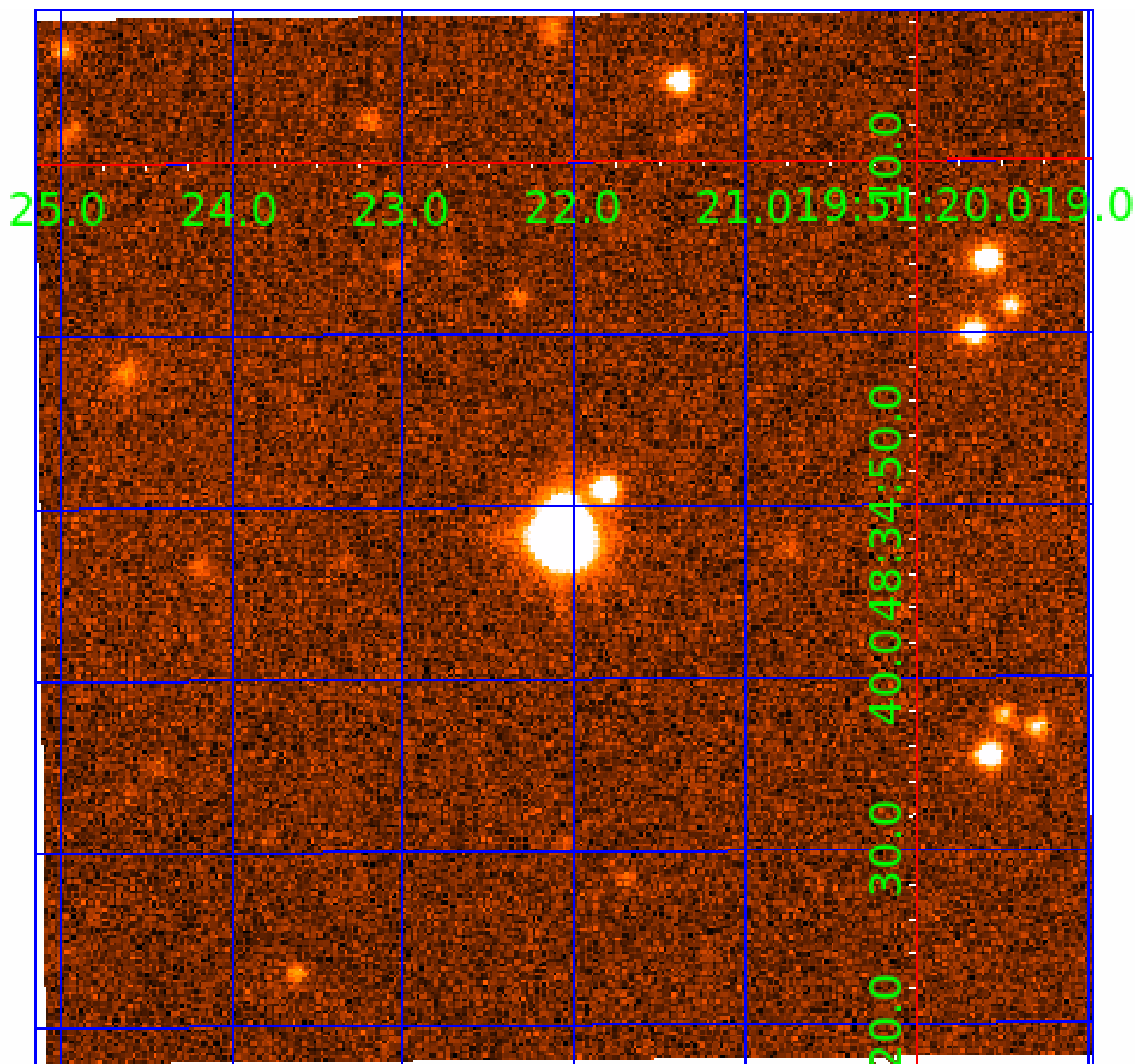


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011044394

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044394-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
011044394-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011044394-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

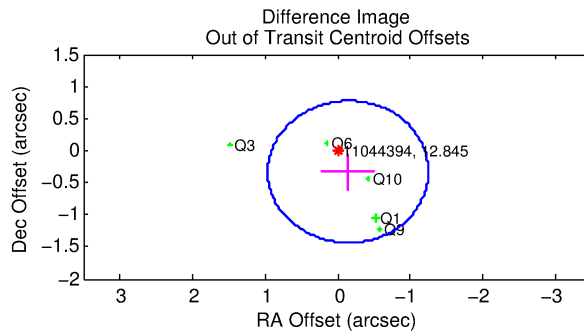
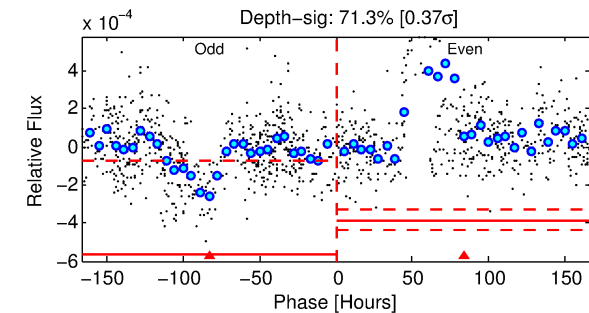
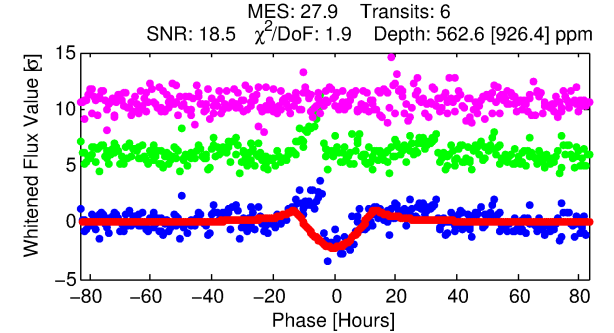
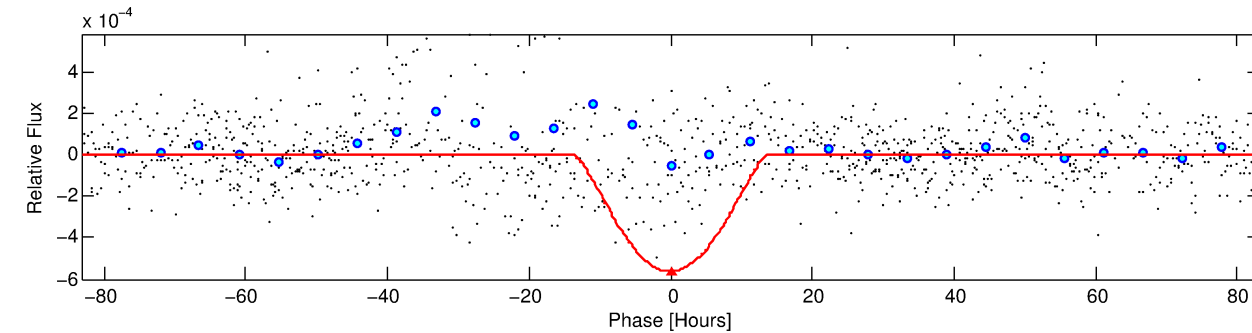
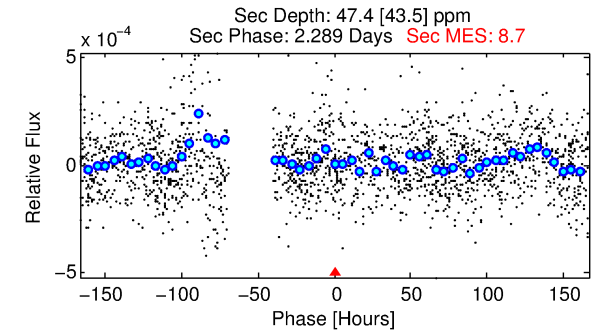
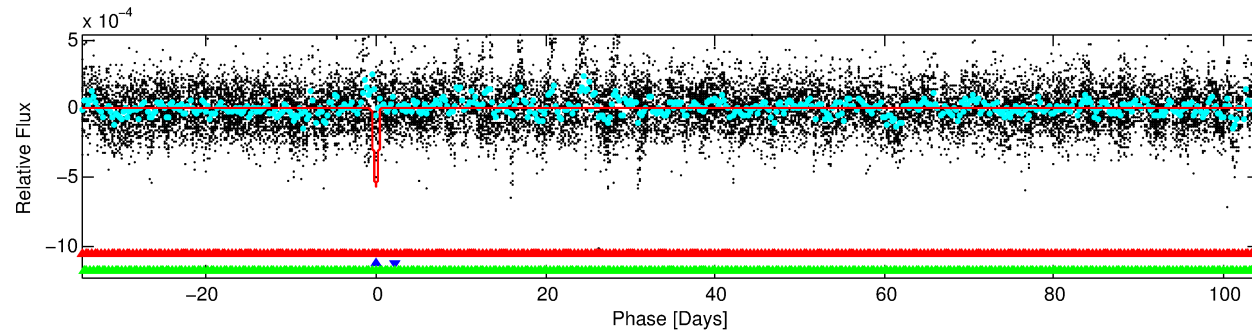
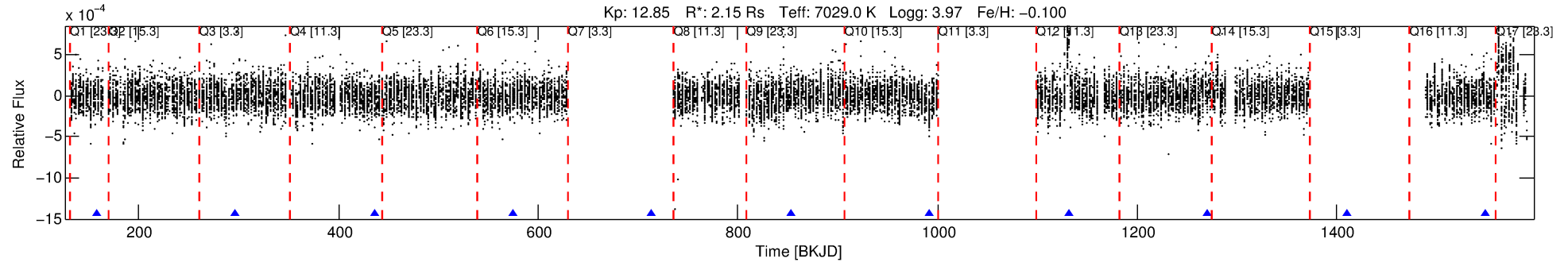
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044394-02

No Significant Match Found

DV One-Page Summary

KIC: 11044394 Candidate: 2 of 3 Period: 139.113 d



DV Fit Results:

Period = 139.11263 [0.01632] d
Epoch = 157.6415 [0.0789] BKJD
Rp/R* = 0.0412 [0.0593]
a/R* = 11.15 [4.00]
b = 1.00 [0.13]
Seff = 27.19 [10.52]
Teq = 582 [56] K
Rp = 9.67 [14.16] Re
a = 0.6101 [0.1451] AU
Ag = 103.82 [315.98] [0.33σ]
Teffp = 2874 [2173] K [1.05σ]

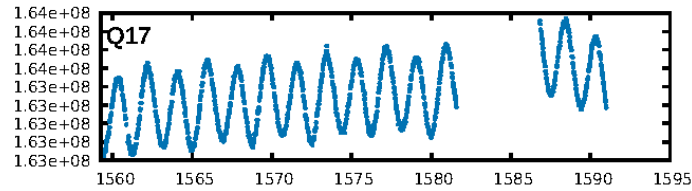
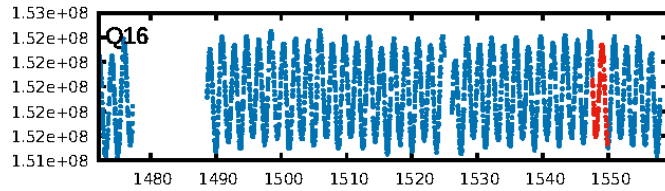
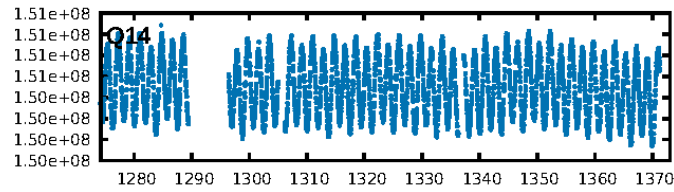
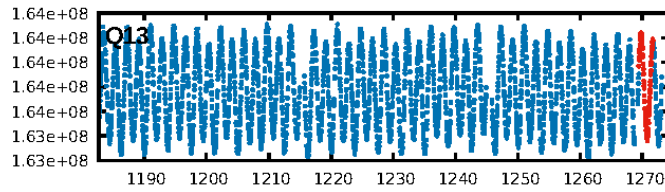
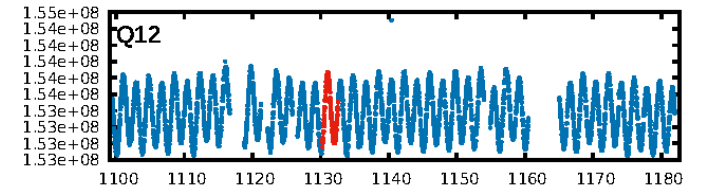
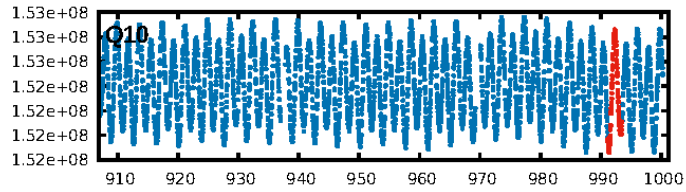
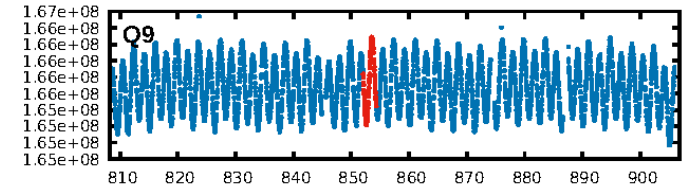
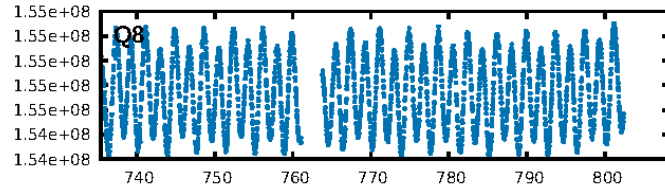
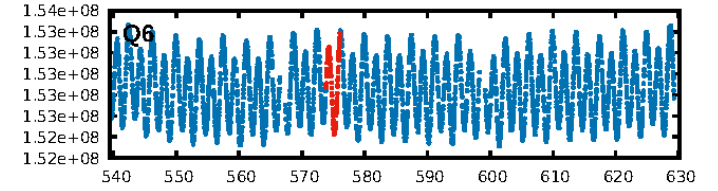
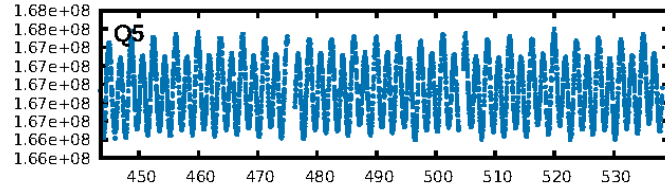
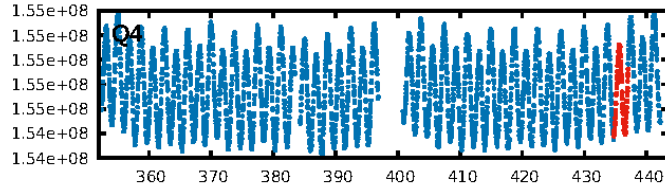
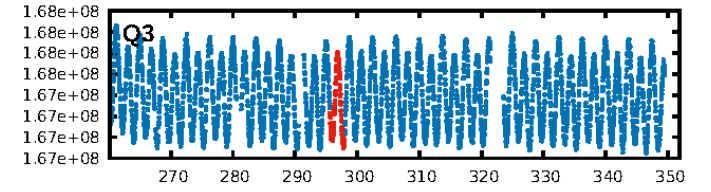
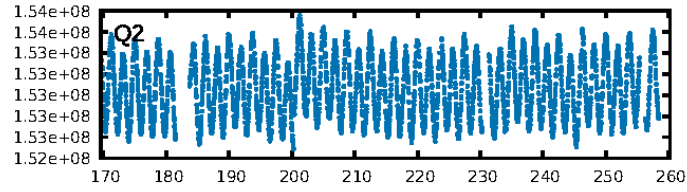
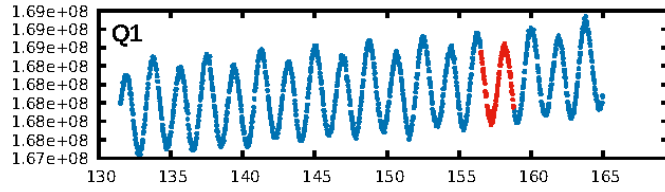
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [110.48σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.86e-69
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 7.554
Centroid-sig: 28.7%
Centroid-so: 0.306 arcsec [1.07σ]
OotOffset-rm: 0.361 arcsec [0.98σ]
OotOffset-st: 2/1/0/2 [5]
KicOffset-rm: 0.413 arcsec [1.55σ]
KicOffset-st: 2/1/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/5]

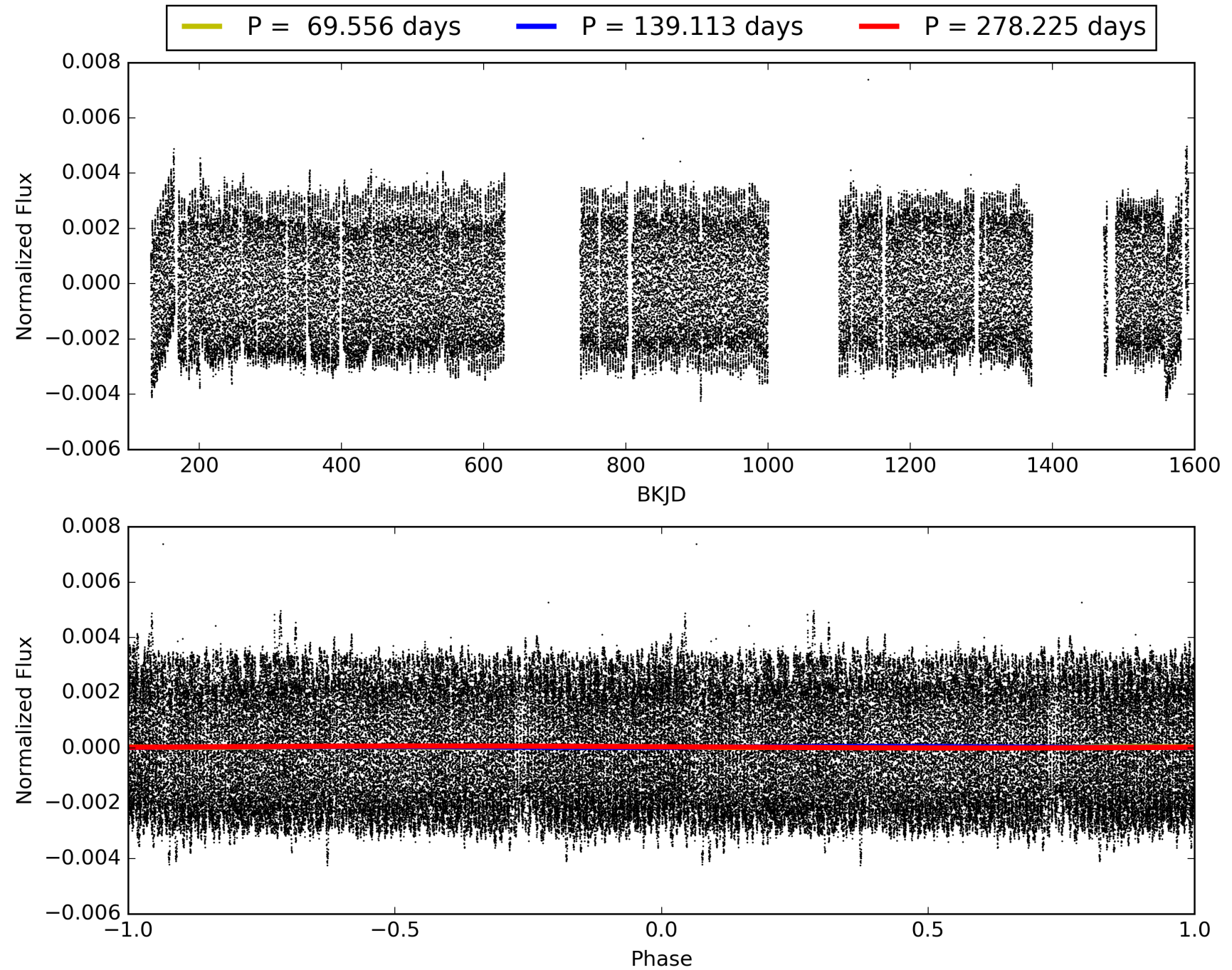
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:55:13 Z

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

TCE 011044394-02, PDC Light Curves

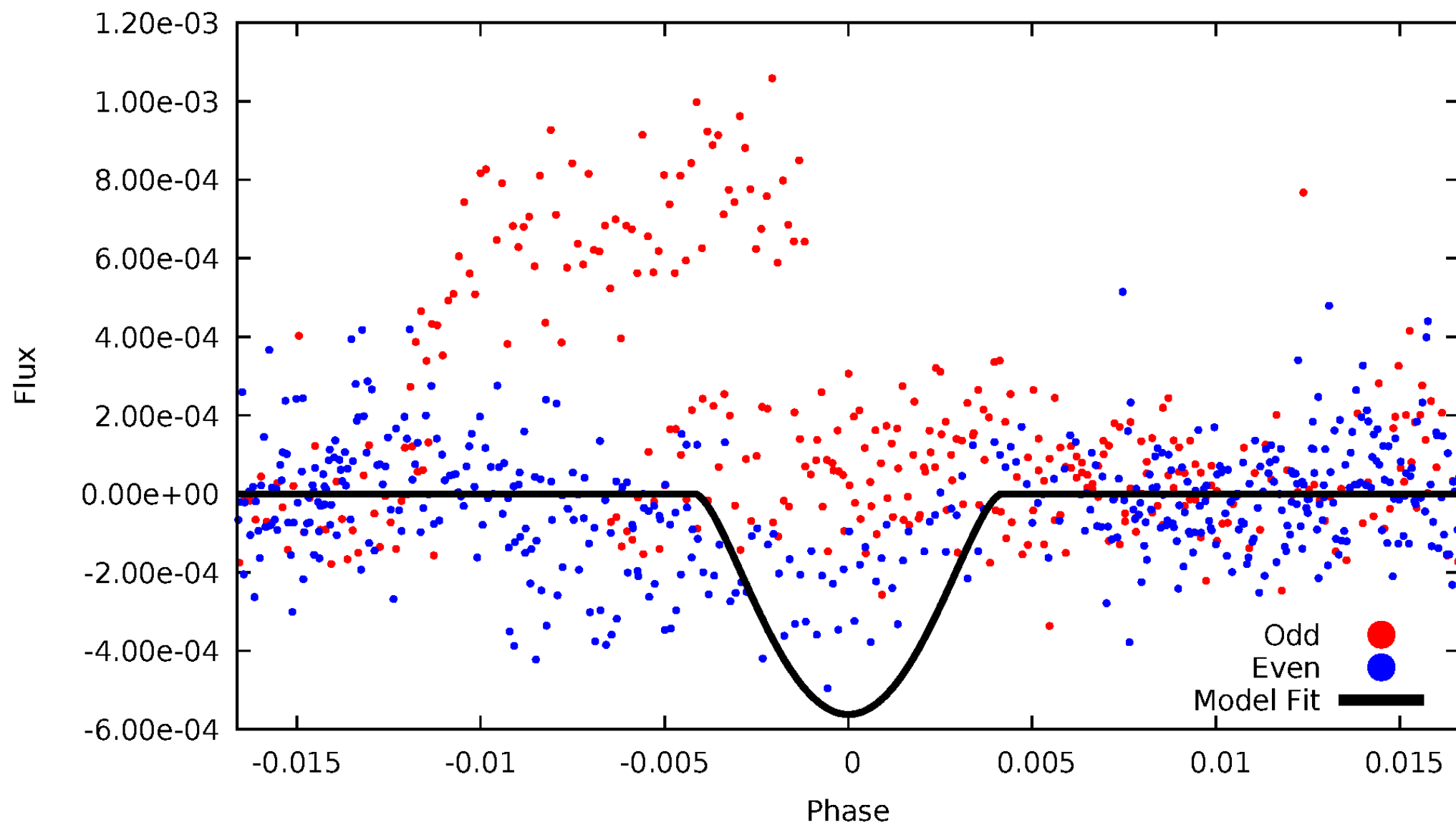


TCE 011044394-02



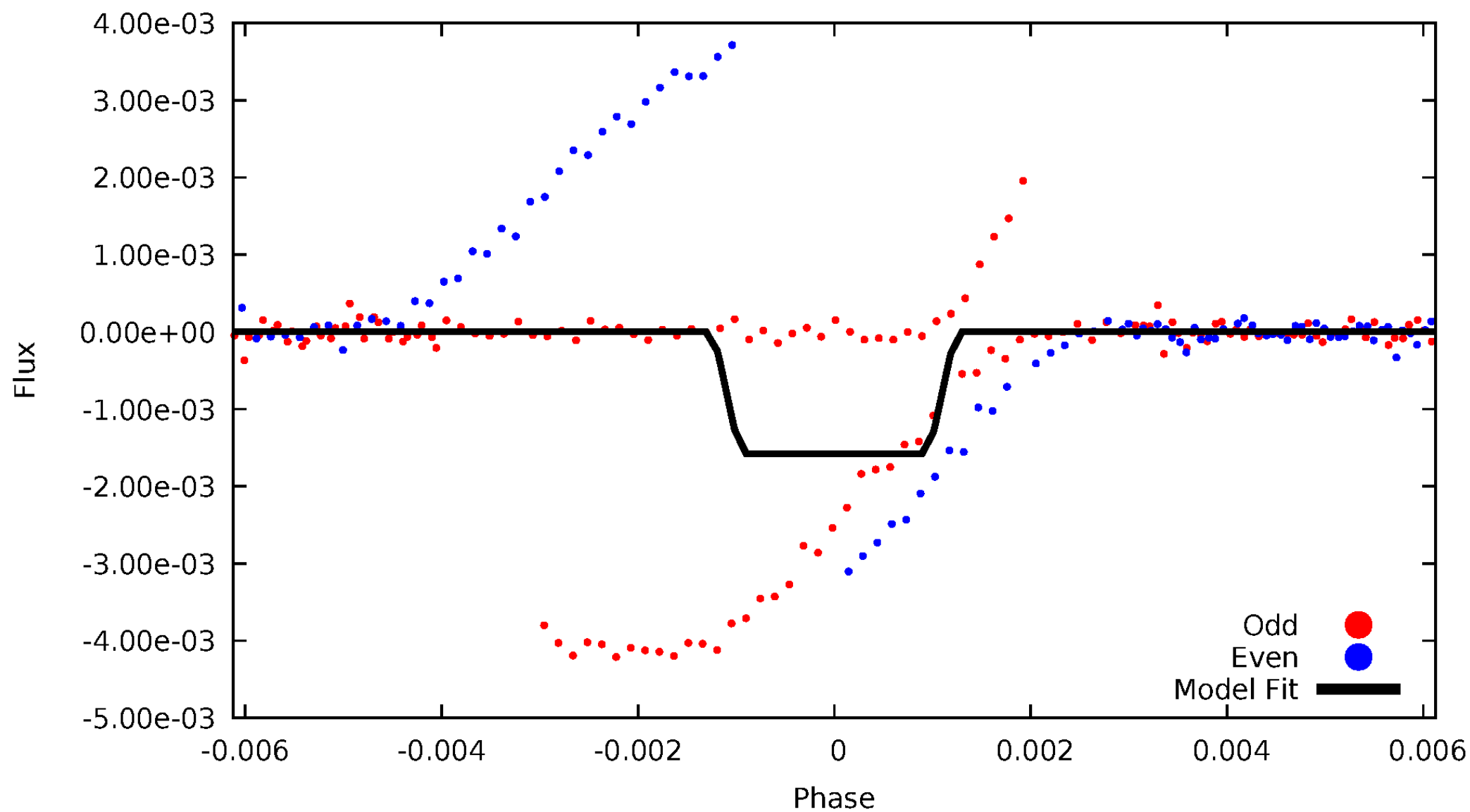
DV Odd/Even

TCE 011044394-02



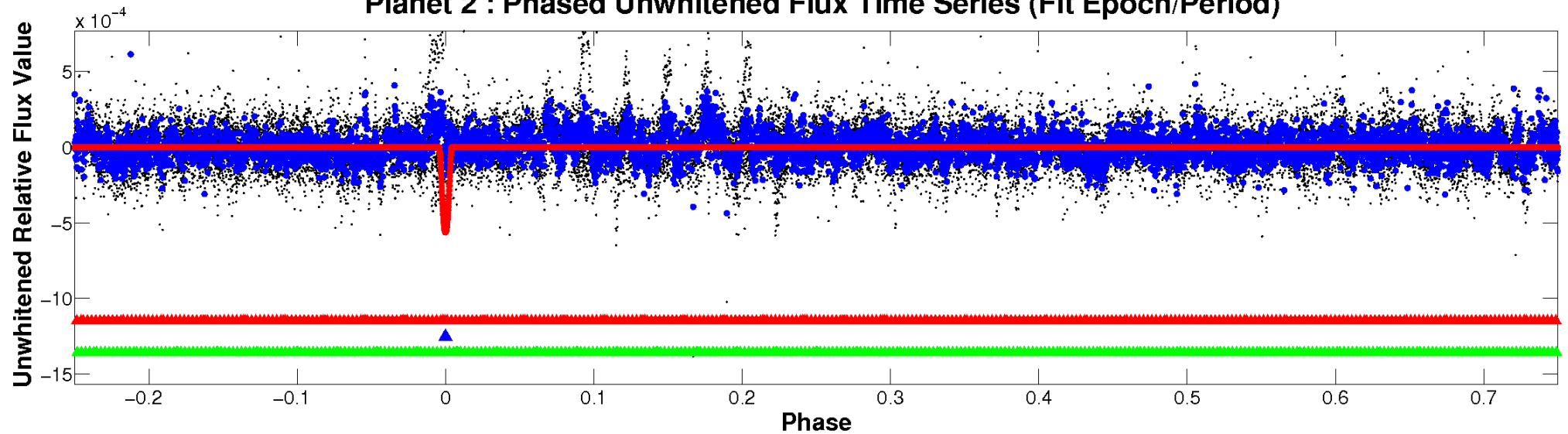
ALT Odd/Even

TCE 011044394-02

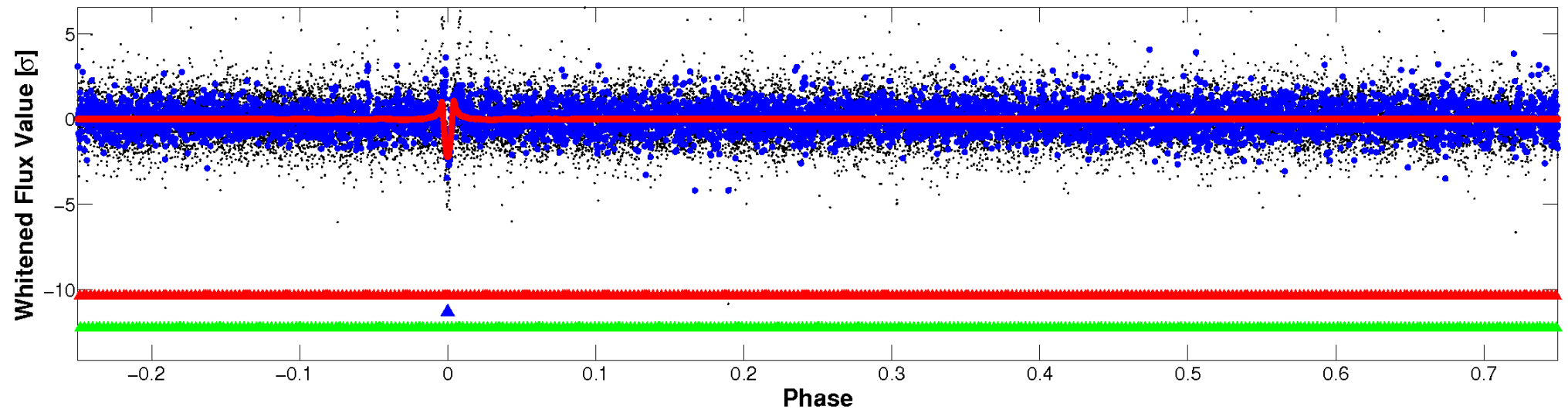


Non-Whitened Vs. Whitened Light Curve

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

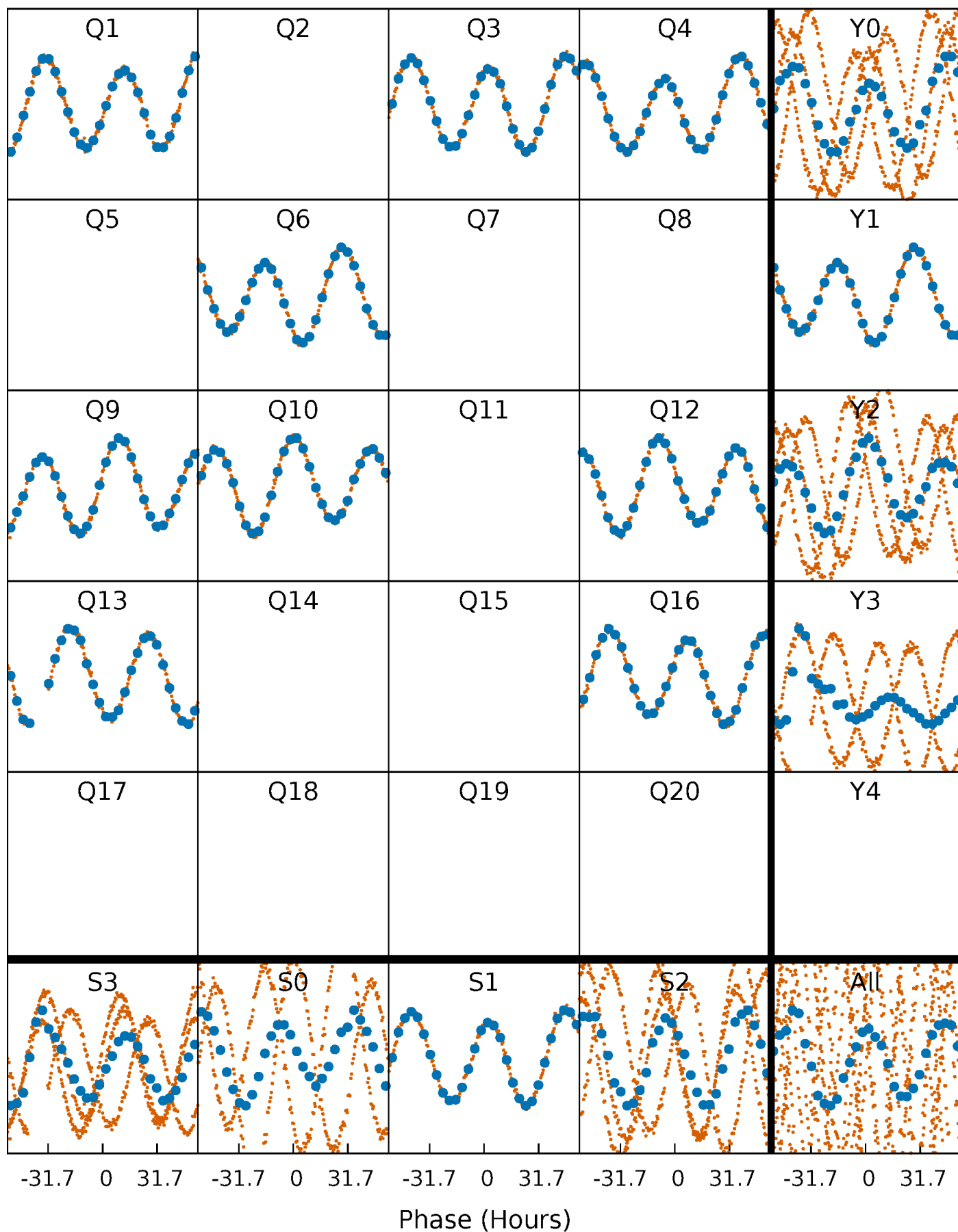


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



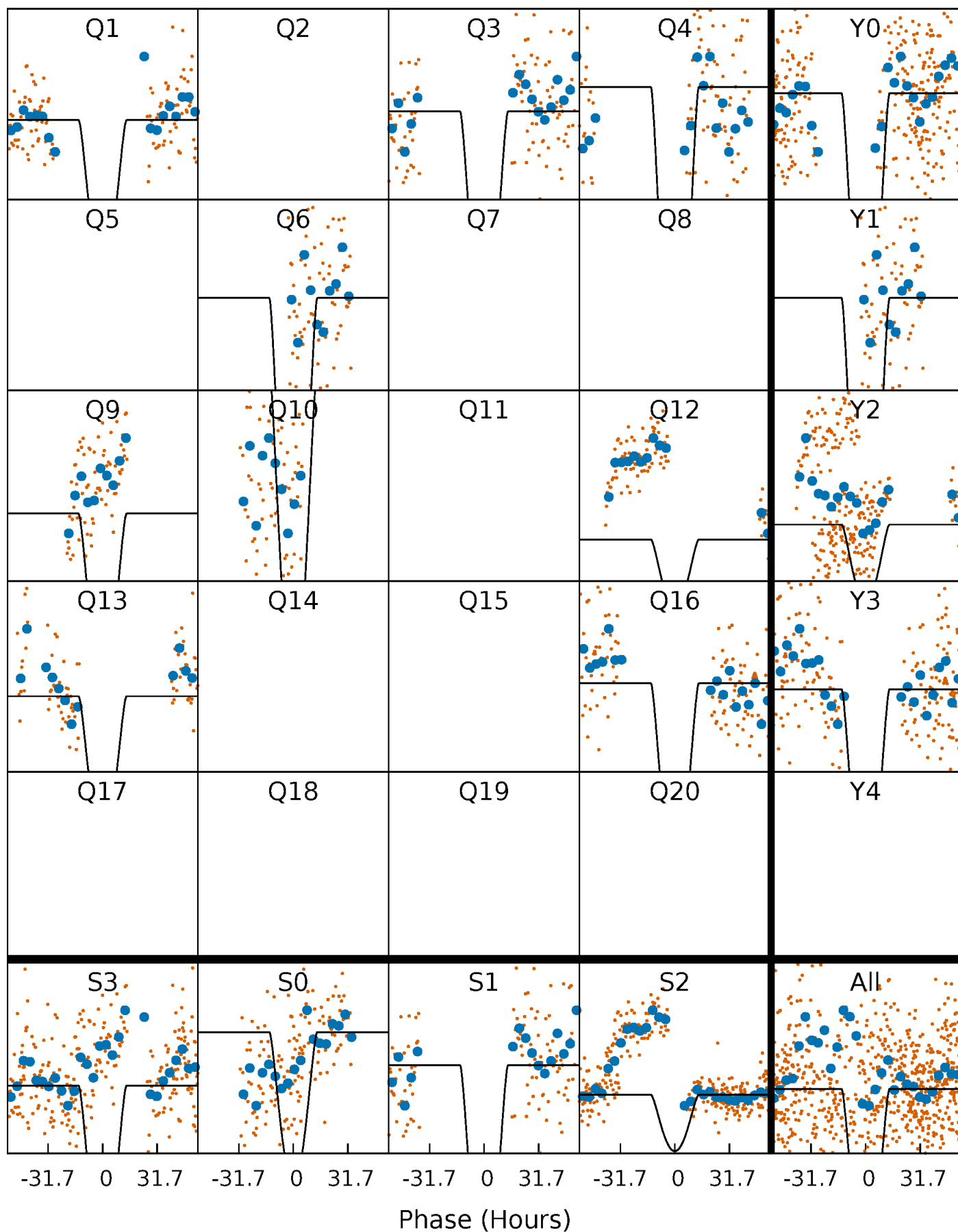
PDC Quarter-Phased Transit Curves

TCE 011044394-02 P=139.112631 Days $T_0=157.641456$ (BKJD)



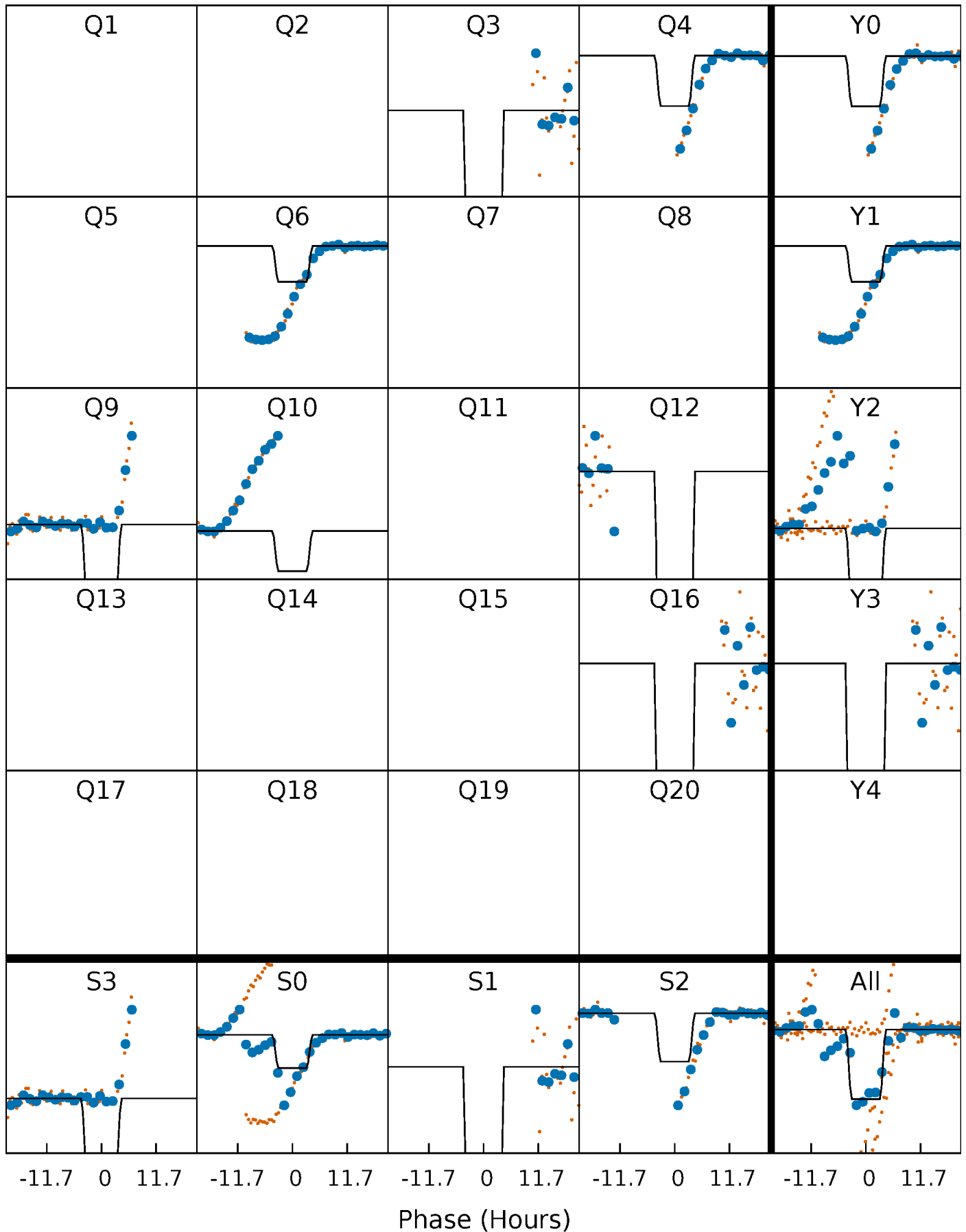
DV Quarter-Phased Transit Curves

TCE 011044394-02 P=139.112631 Days $T_0=157.641456$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

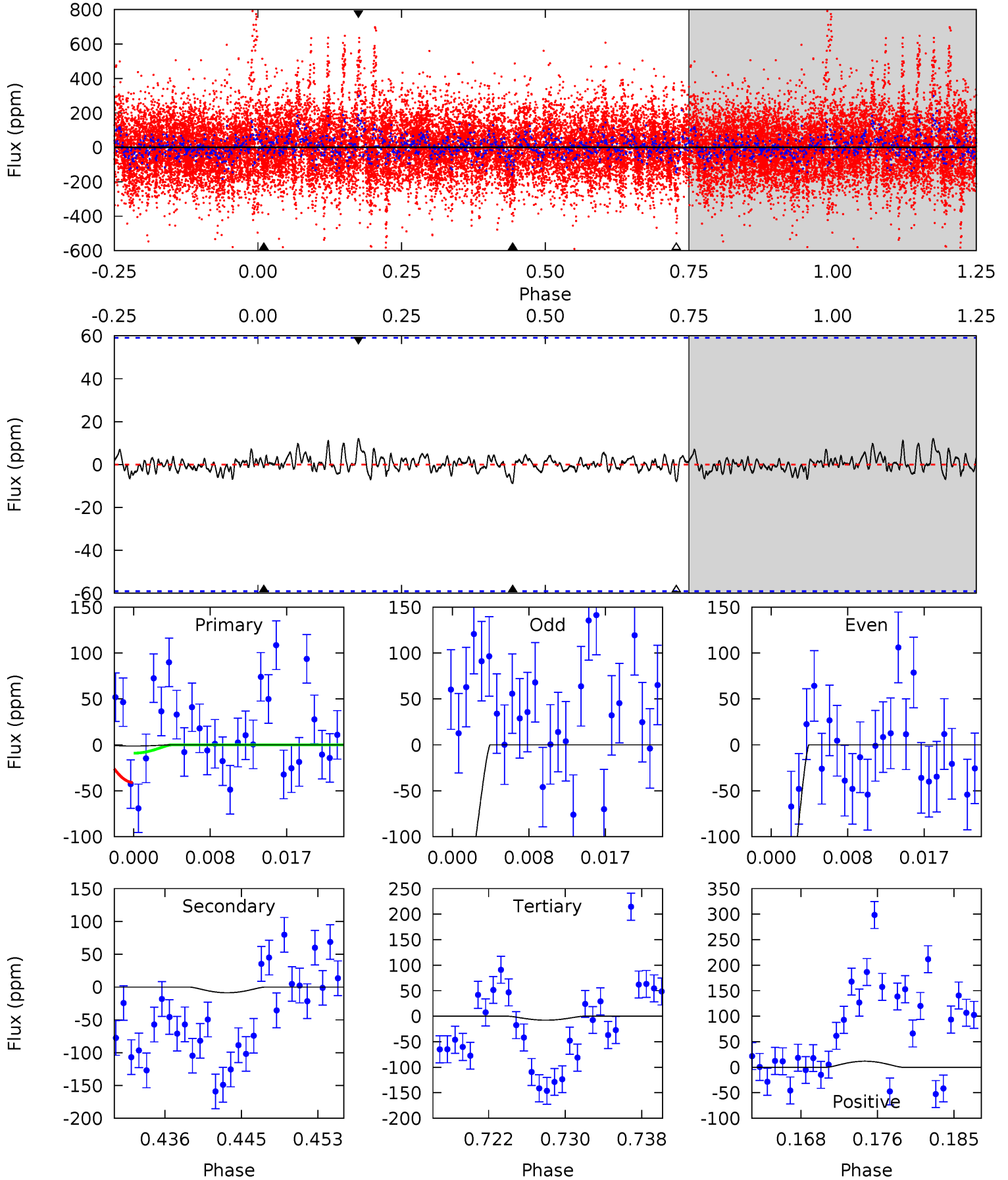
TCE 011044394-02 P=139.138921 Days $T_0=157.856236$ (BKJD)



DV Model-Shift Uniqueness Test

011044394-02, P = 139.112631 Days, E = 18.528825 Days

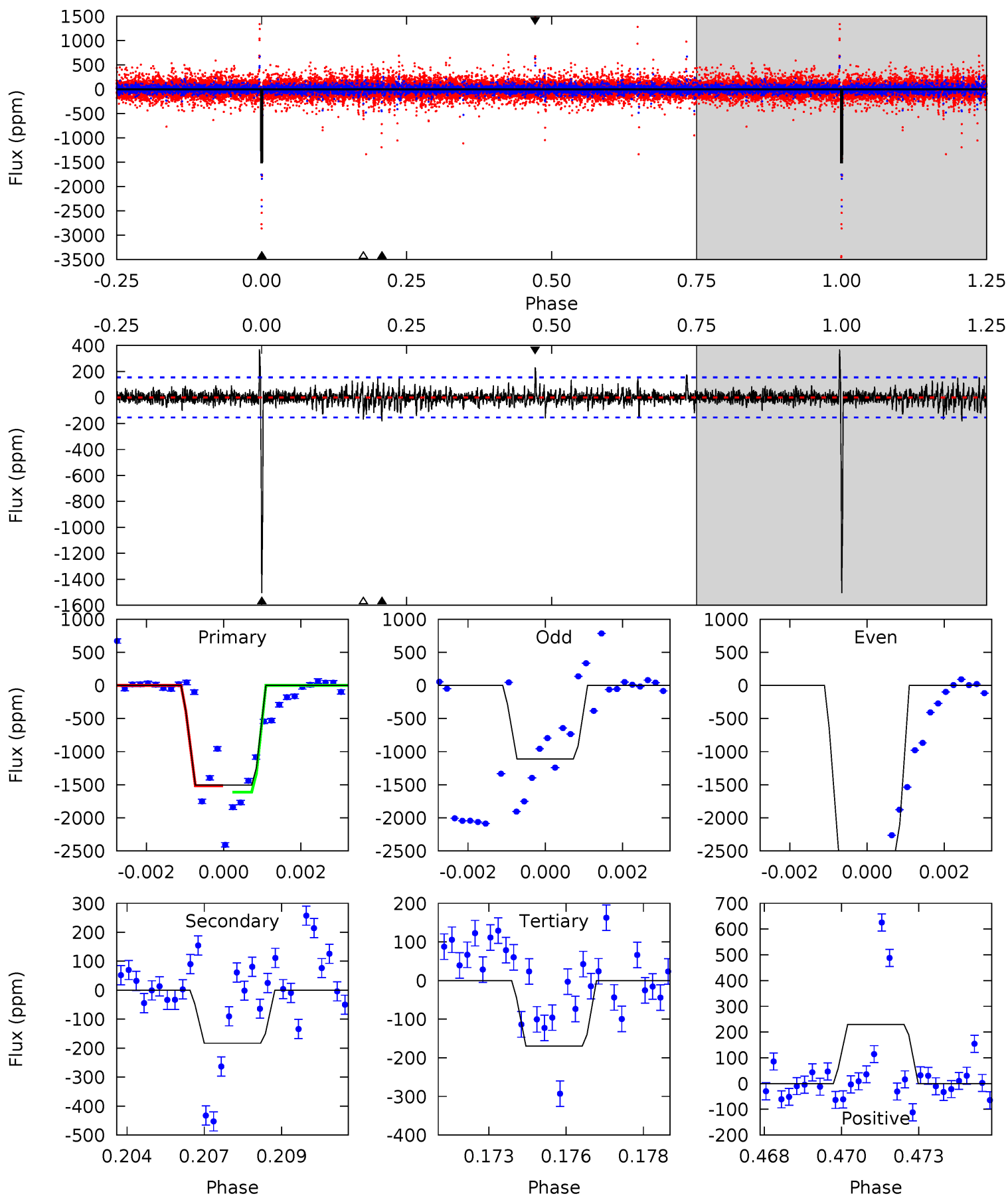
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.11	0.75	0.66	1.01	5.06	2.64	0.25	-0.56	-0.90	0.09	-0.26	2.41	-12.0	0.57	1.37



Alt Model-Shift Uniqueness Test

011044394-02, P = 139.138921 Days, E = 18.717315 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.8	6.28	5.83	7.90	5.30	3.04	1.19	45.9	43.9	0.45	-1.61	20.3	-0.16	0.20	1.49



Stellar Parameters For KIC 011044394

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7029^{+197}_{-246}	$3.967^{+0.204}_{-0.136}$	$-0.100^{+0.250}_{-0.300}$	$2.151^{+0.473}_{-0.578}$	$1.564^{+0.195}_{-0.260}$	$0.221^{+0.283}_{-0.088}$
	+3%/-3%	+5%/-3%	+250%/-300%	+22%/-27%	+12%/-17%	+128%/-40%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044394-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 12	$13.51^{+12.41}_{-8.78}$	808^{+53}_{-56}	2341^{+847}_{-4441}	$7.055^{+67.075}_{-9.542}$
Alt.	-183 ± 29	$13.32^{+10.98}_{-9.00}$	809^{+54}_{-57}	3762^{+2189}_{-643}	211^{+1713}_{-149}

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

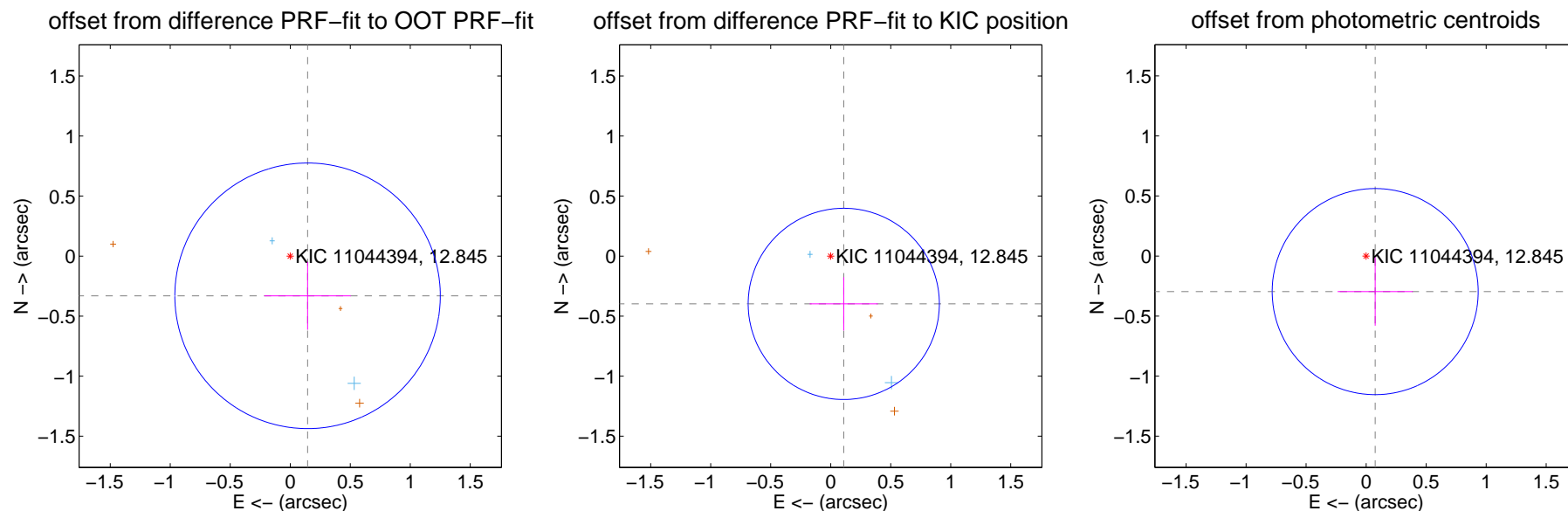
DV Centroid Data

Supplemental centroid analysis for 011044394-02. Kepler magnitude: 12.85. Transit SNR 18.53

There are 2 quarters with good PRF difference image offsets

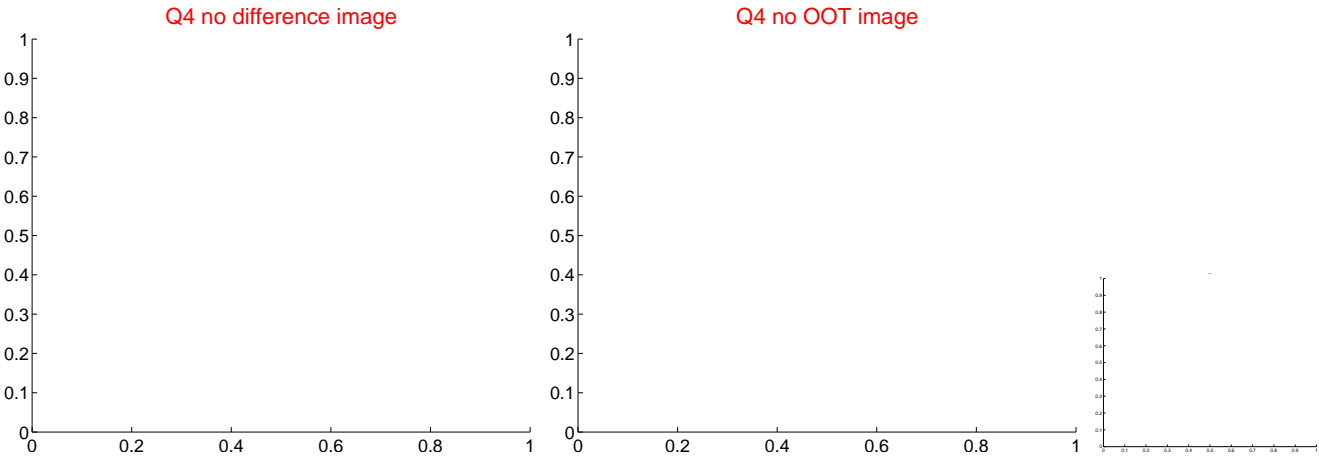
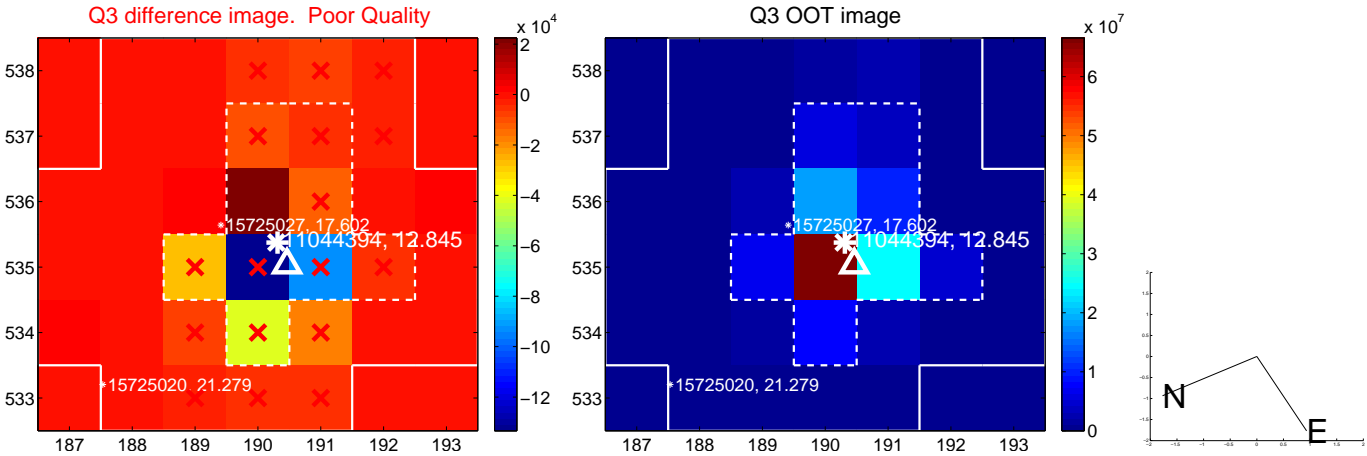
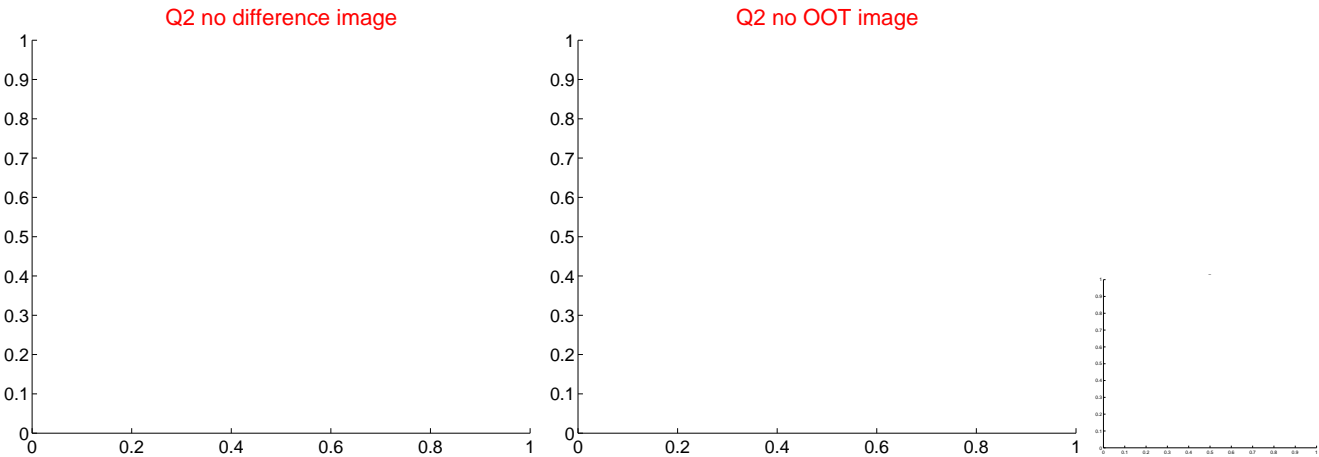
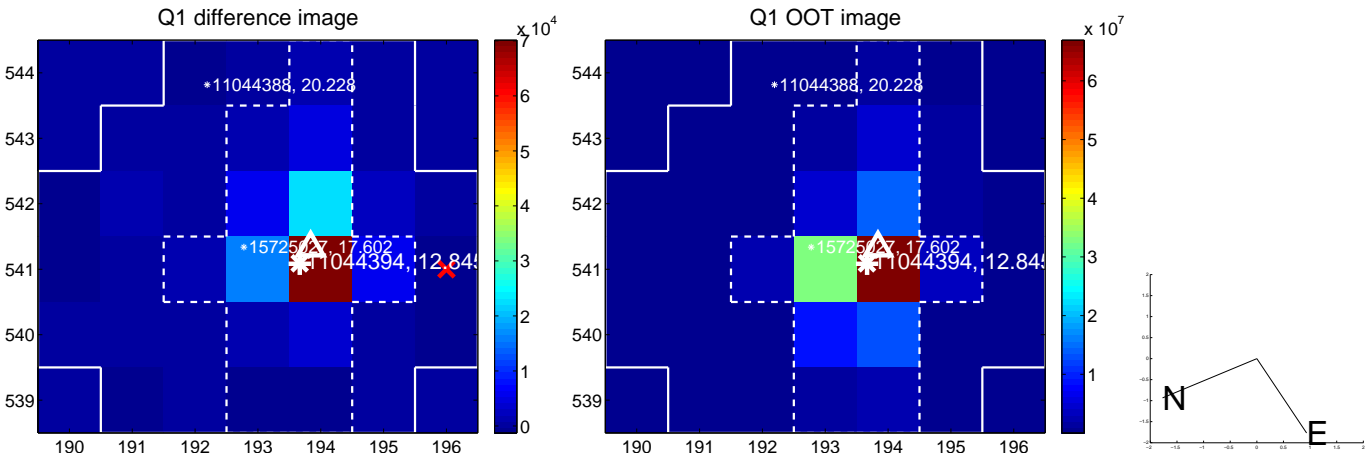
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.361 ± 0.369	0.98	-0.144 ± 0.360	-0.331 ± 0.282
PRF-fit source offset from KIC position	0.413 ± 0.265	1.55	-0.109 ± 0.284	-0.398 ± 0.222
photometric centroid source offset	0.31 ± 0.29	1.07	-0.08 ± 0.31	-0.30 ± 0.28



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

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



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

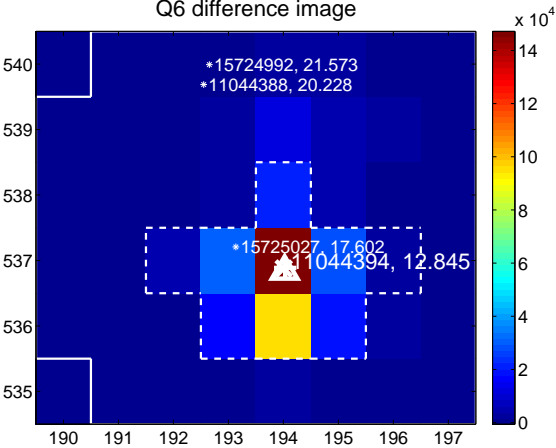
Q5 no difference image



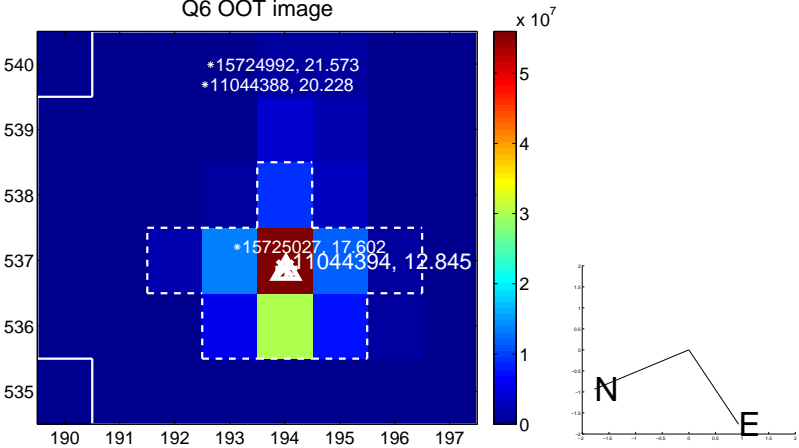
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



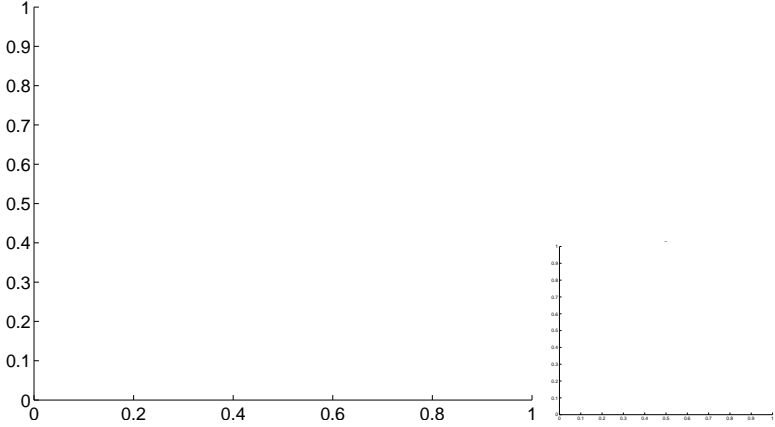
Q7 no OOT image



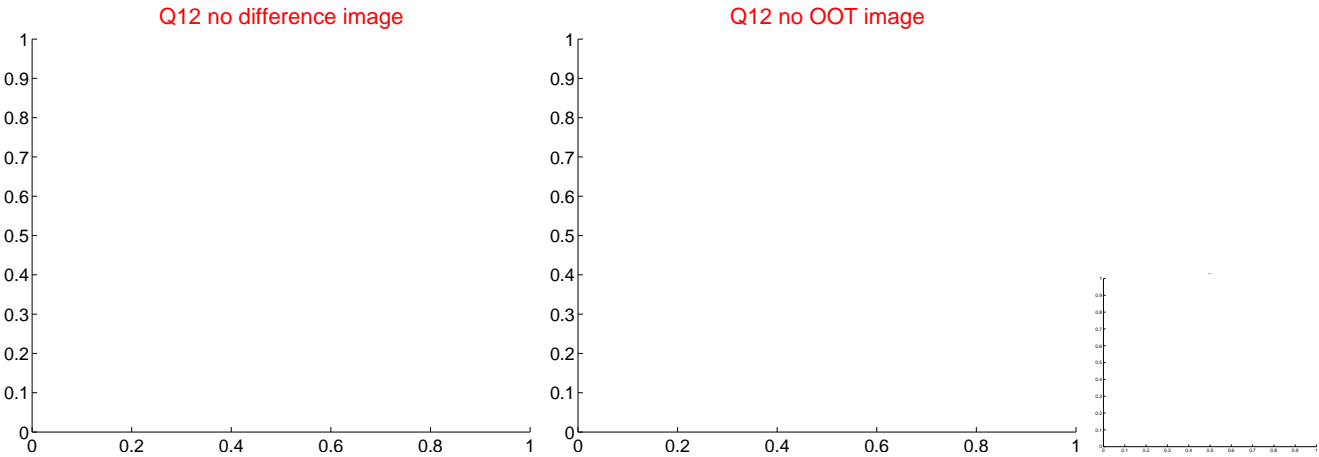
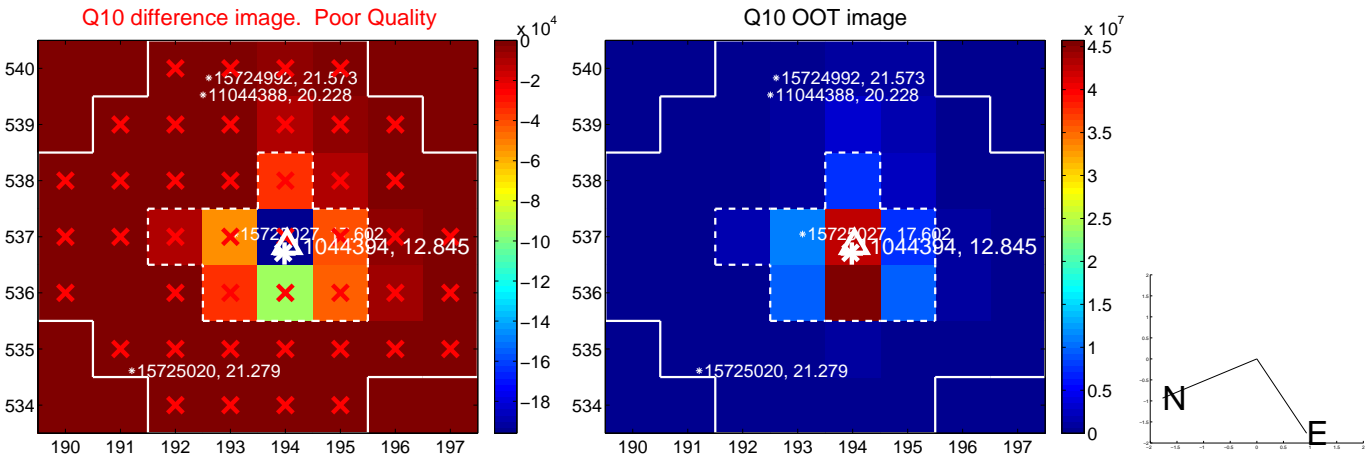
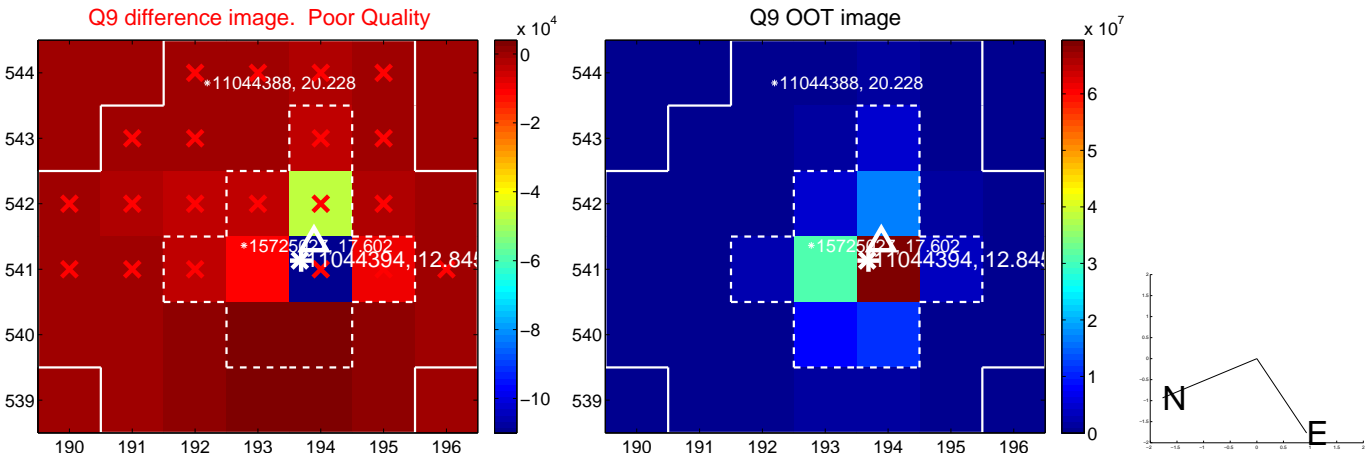
Q8 no difference image



Q8 no OOT image



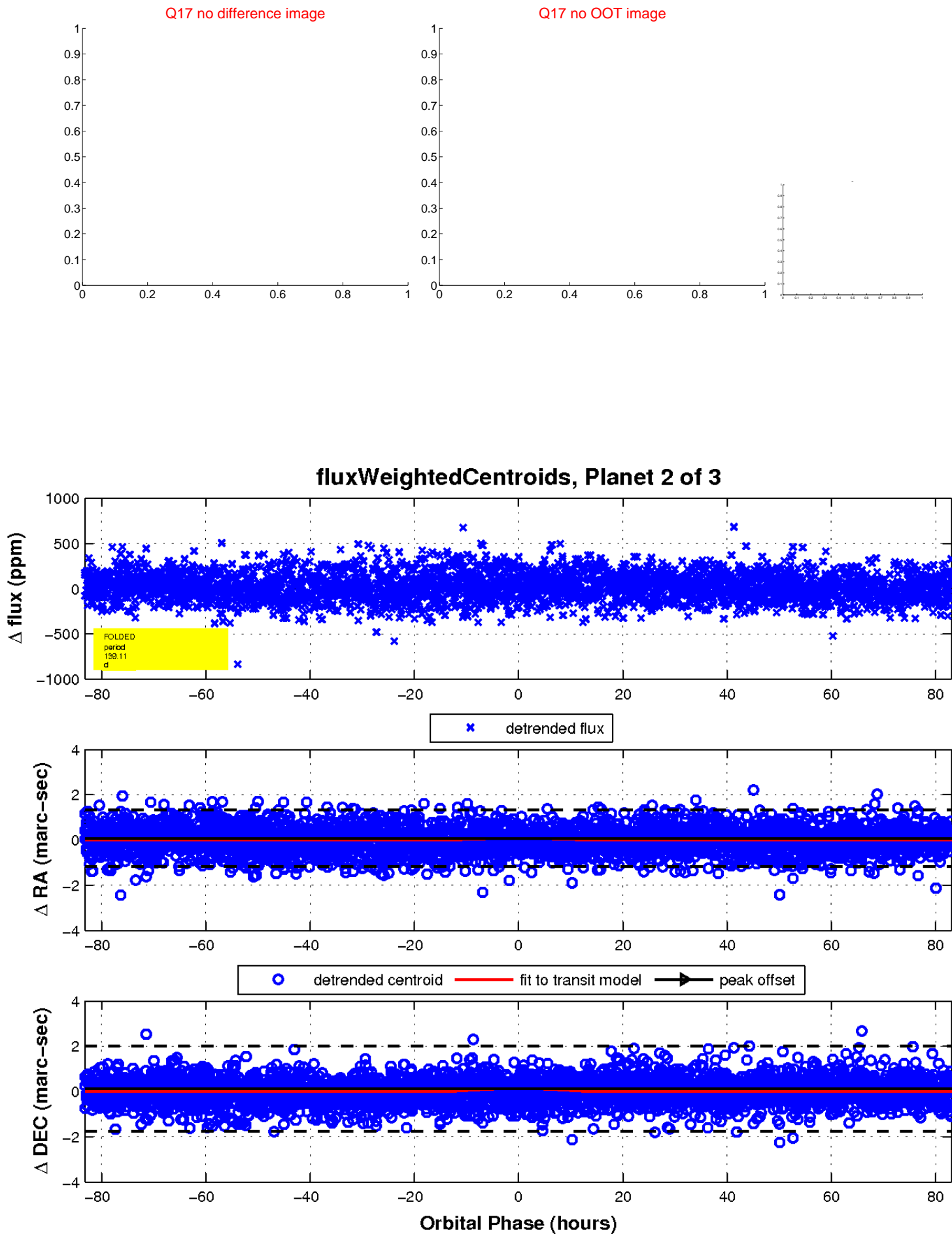
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

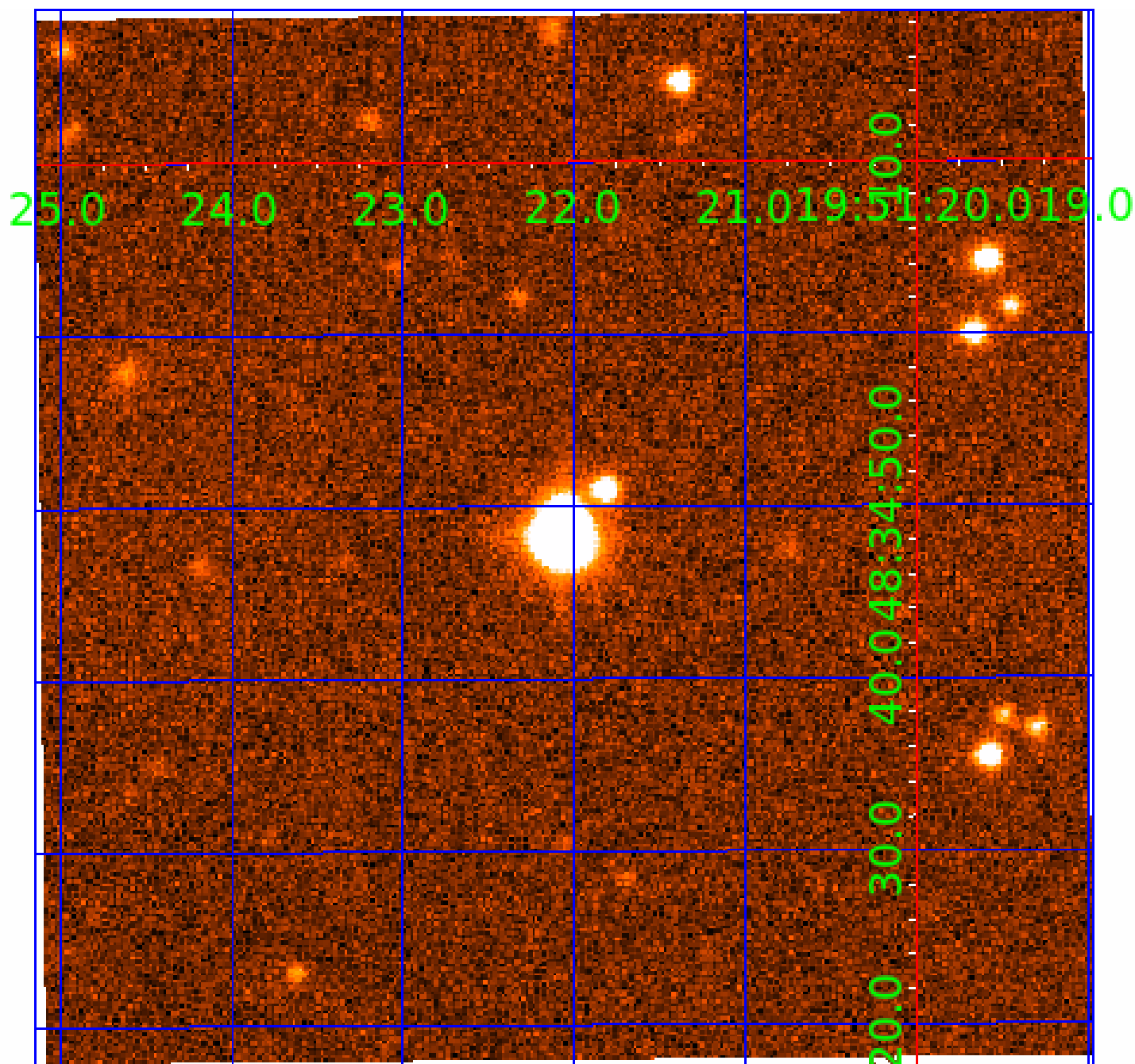


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011044394

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})
011044394-01	OBS	No	3.749183	135.096776	27.6	17.597	9.4	7.9	2.15	7029	2.13	3364.96
011044394-02	OBS	No	139.112631	157.641456	562.6	27.742	27.9	18.5	2.15	7029	9.67	27.19
011044394-03	OBS	No	3.749372	132.536464	15.6	9.751	10.6	5.8	2.15	7029	0.96	3364.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011044394-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
011044394-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011044394-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

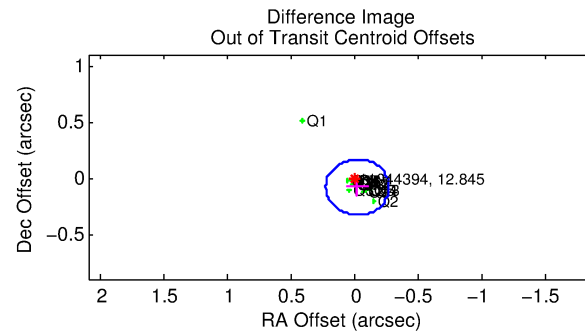
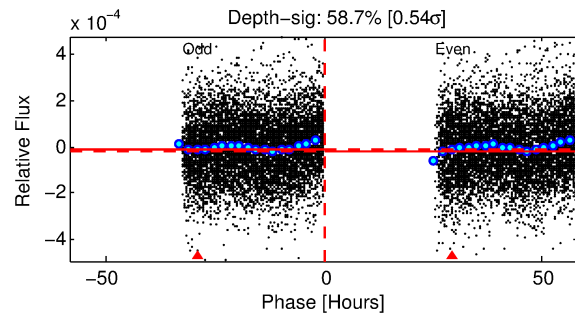
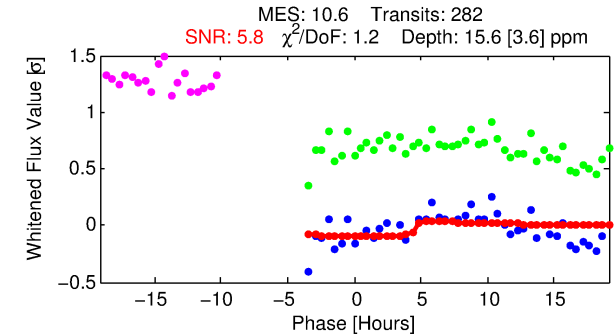
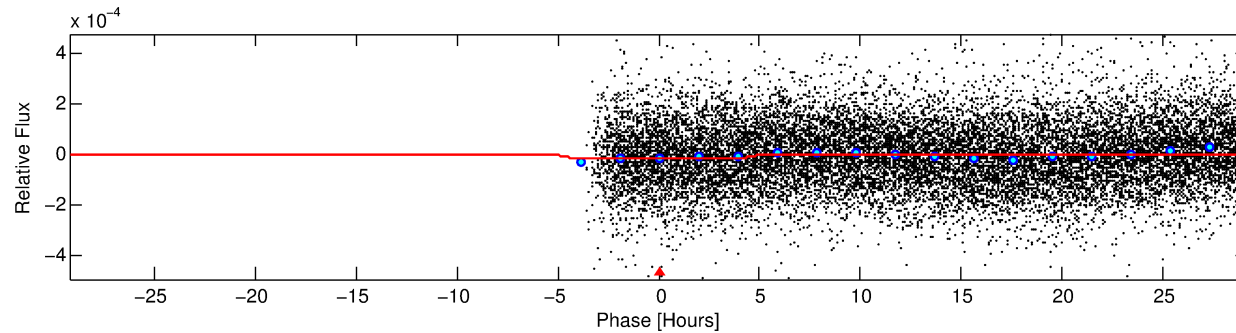
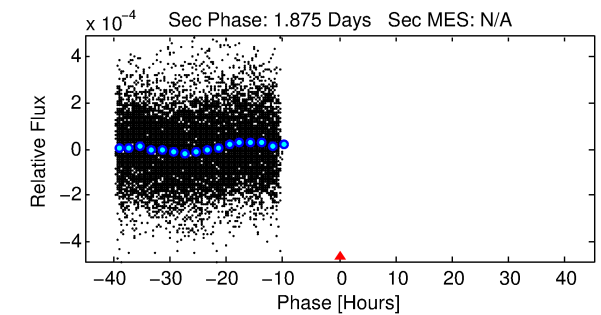
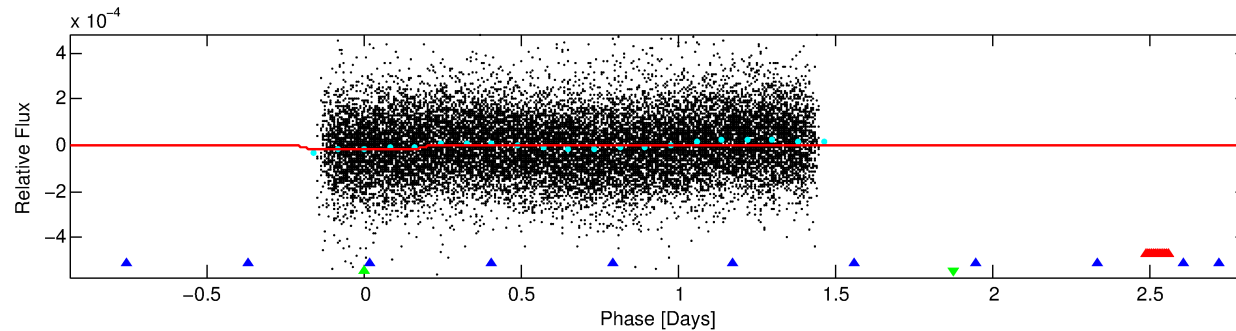
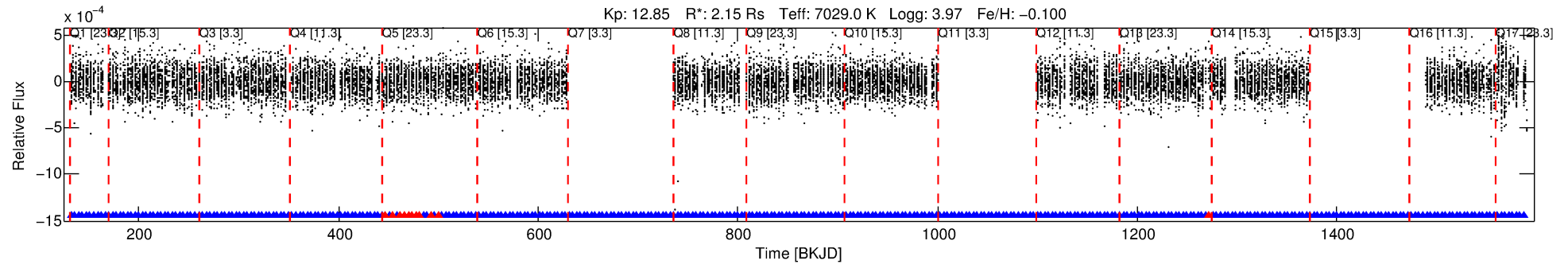
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011044394-03

No Significant Match Found

DV One-Page Summary

KIC: 11044394 Candidate: 3 of 3 Period: 3.749 d



DV Fit Results:

Period = 3.74937 [0.00011] d
Epoch = 132.5365 [0.0693] BKJD
Rp/R* = 0.0041 [0.0022]
a/R* = 1.78 [4.05]
b = 0.86 [0.97]
Seff = 3364.73 [1302.08]
Teq = 1942 [188] K
Rp = 0.96 [0.58] Re
a = 0.0548 [0.0130] AU

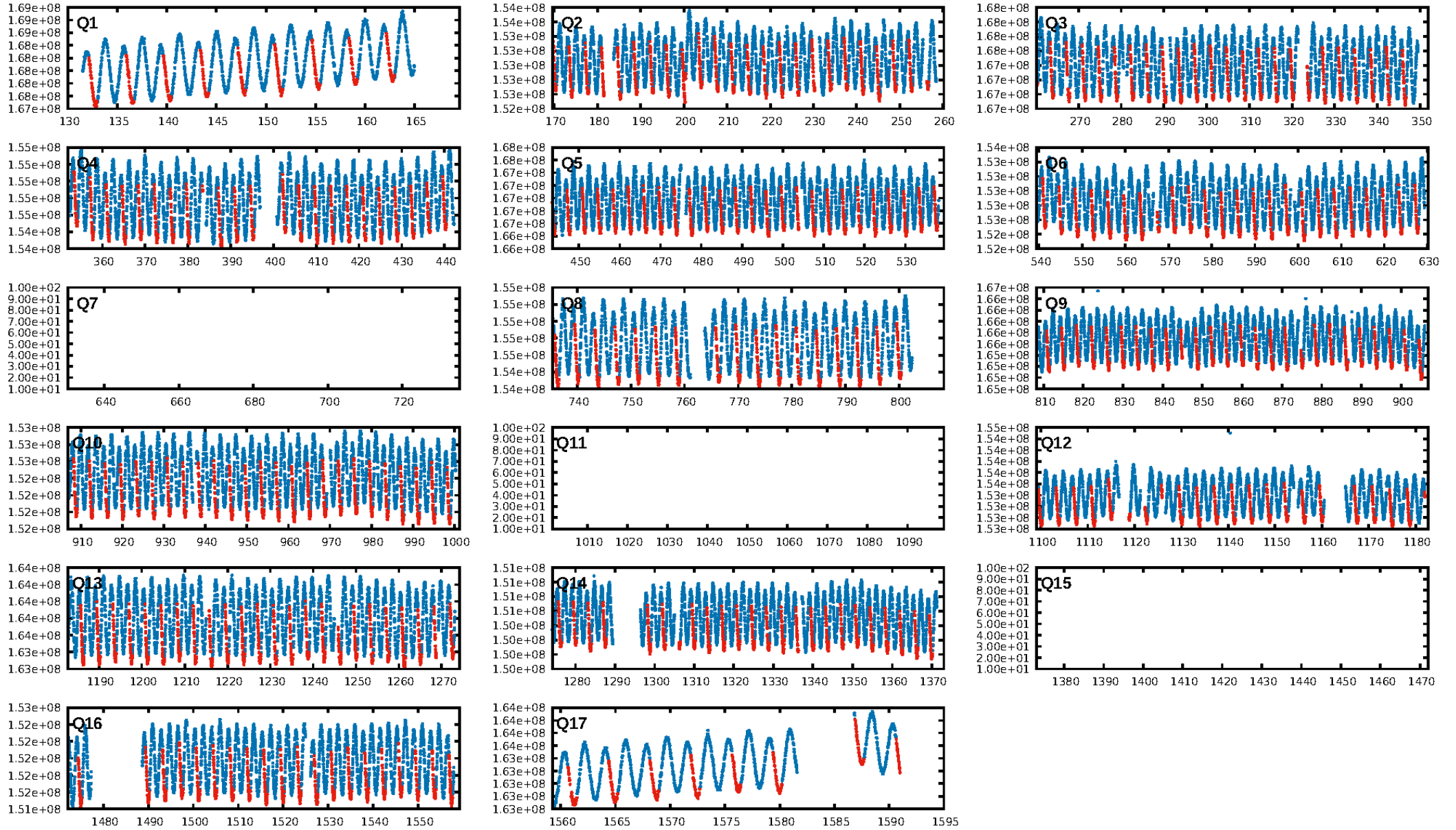
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [110.48σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.82e-16
RollingBand-fgt: 0.96 [255/266]
GhostDiagnostic-chr: 1.105
Centroid-sig: 0.0%
Centroid-so: 5.108 arcsec [2.70σ]
OotOffset-rm: 0.084 arcsec [1.02σ]
KicOffset-rm: 0.141 arcsec [1.76σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

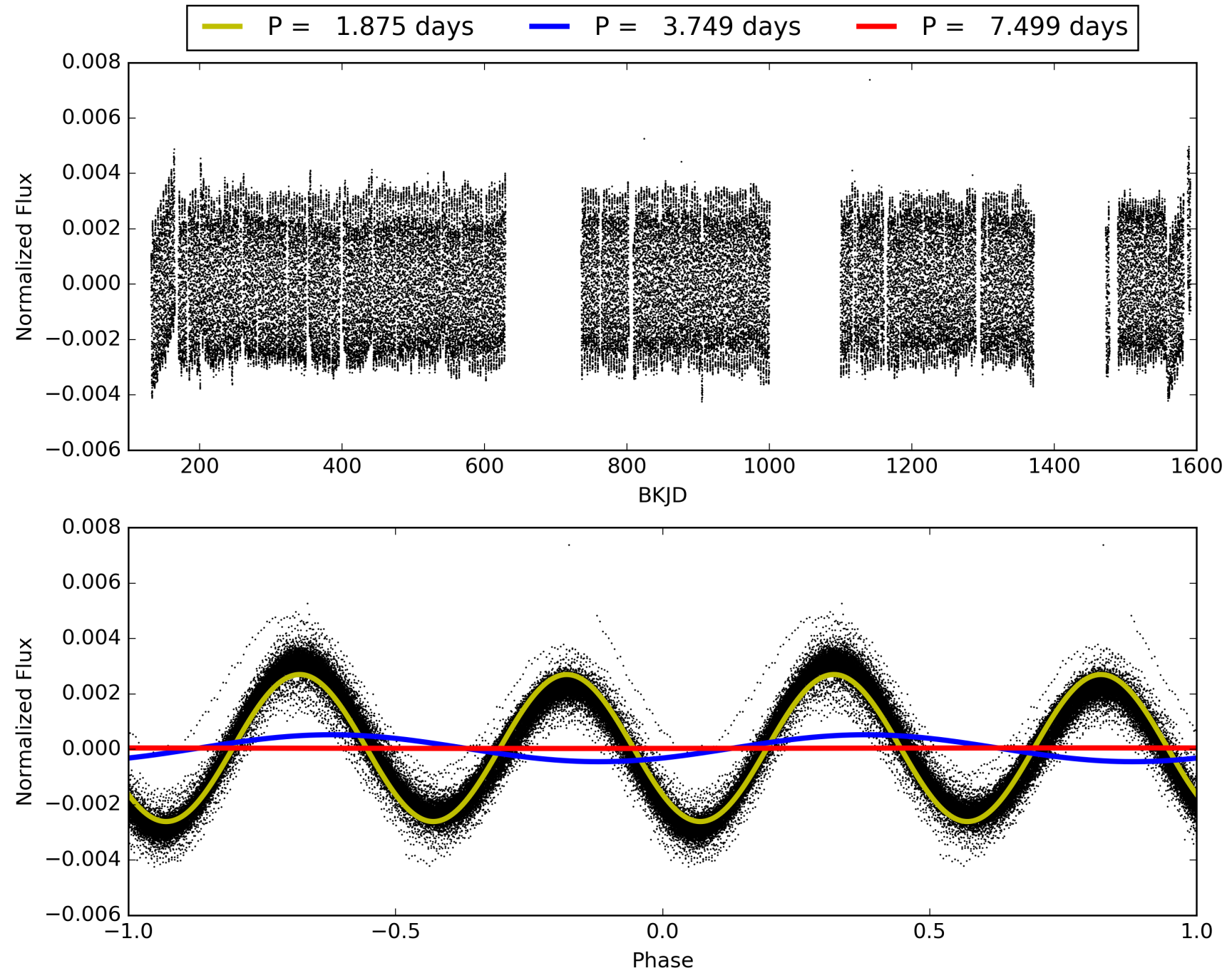
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:55:19 Z

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

TCE 011044394-03, PDC Light Curves

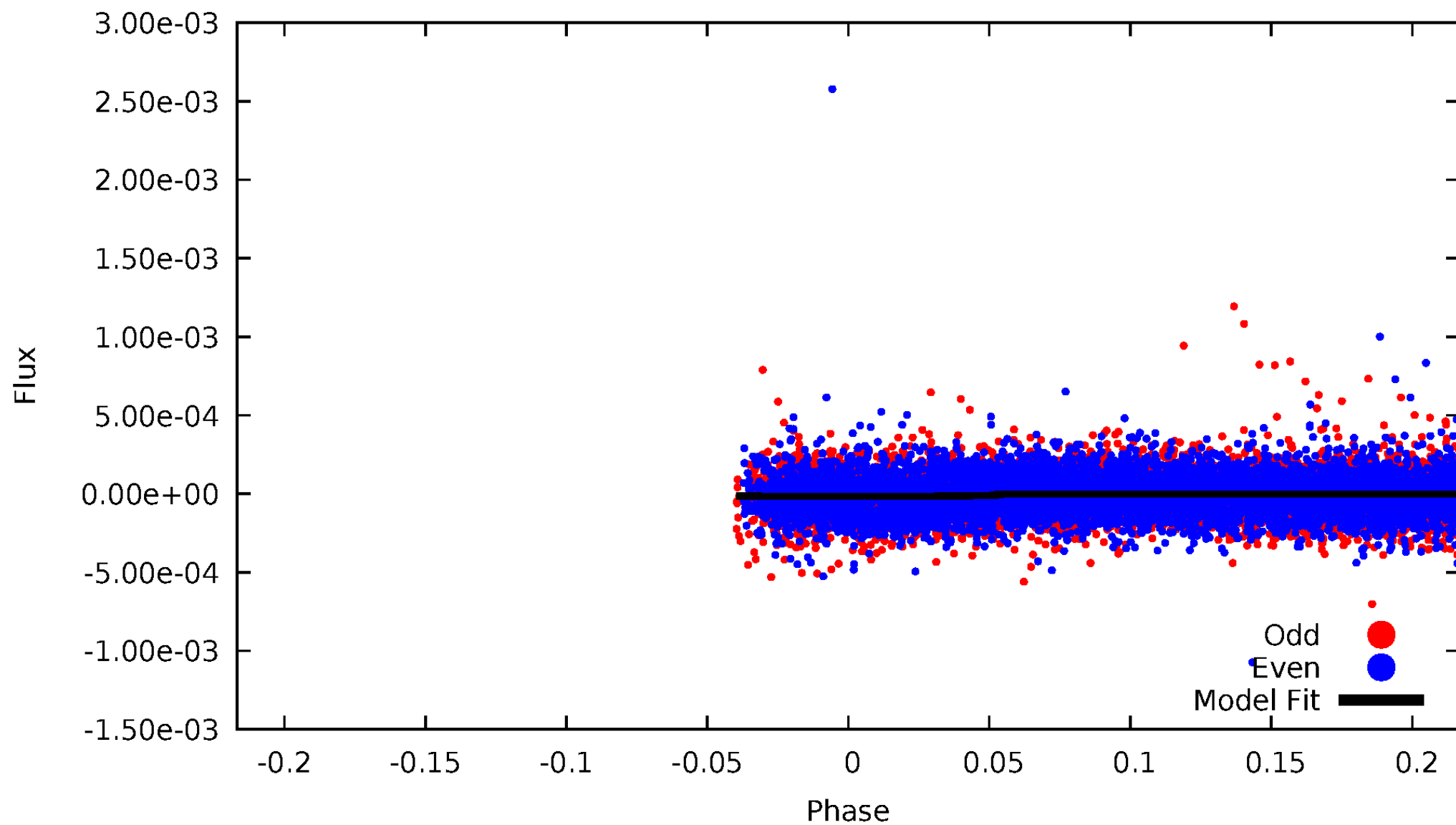


TCE 011044394-03



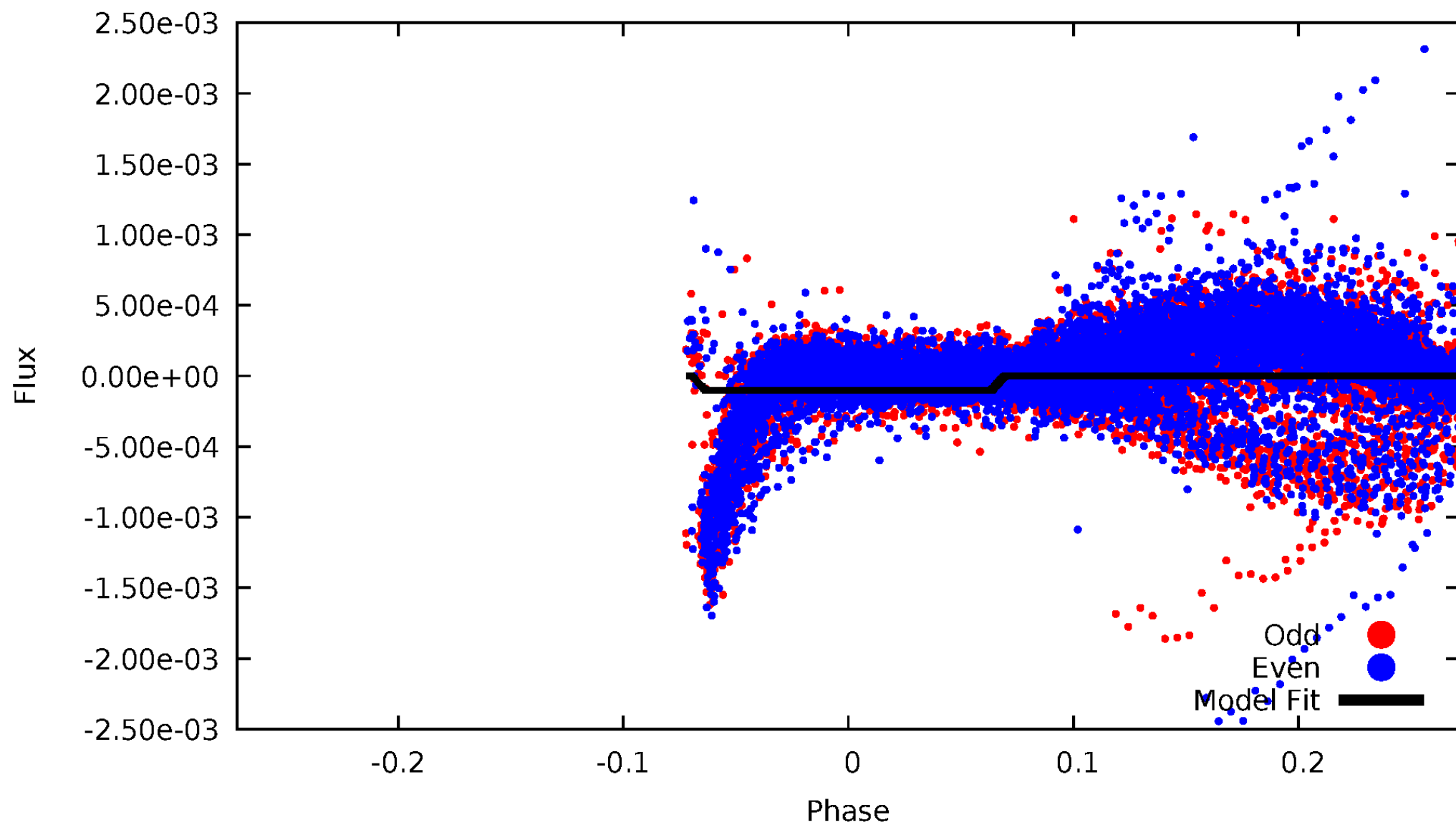
DV Odd/Even

TCE 011044394-03



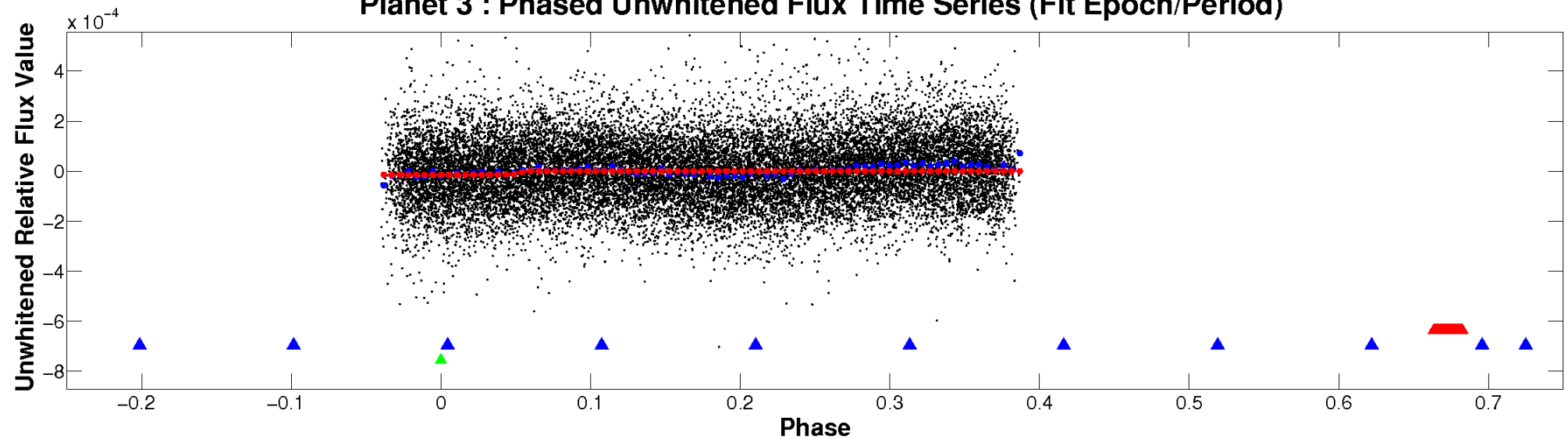
ALT Odd/Even

TCE 011044394-03

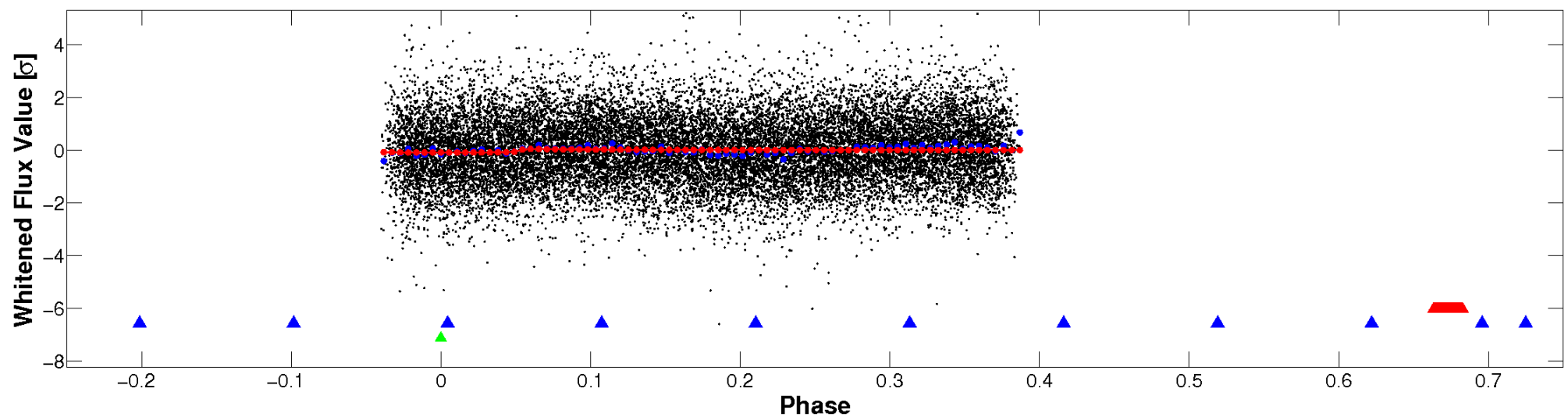


Non-Whitened Vs. Whitened Light Curve

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

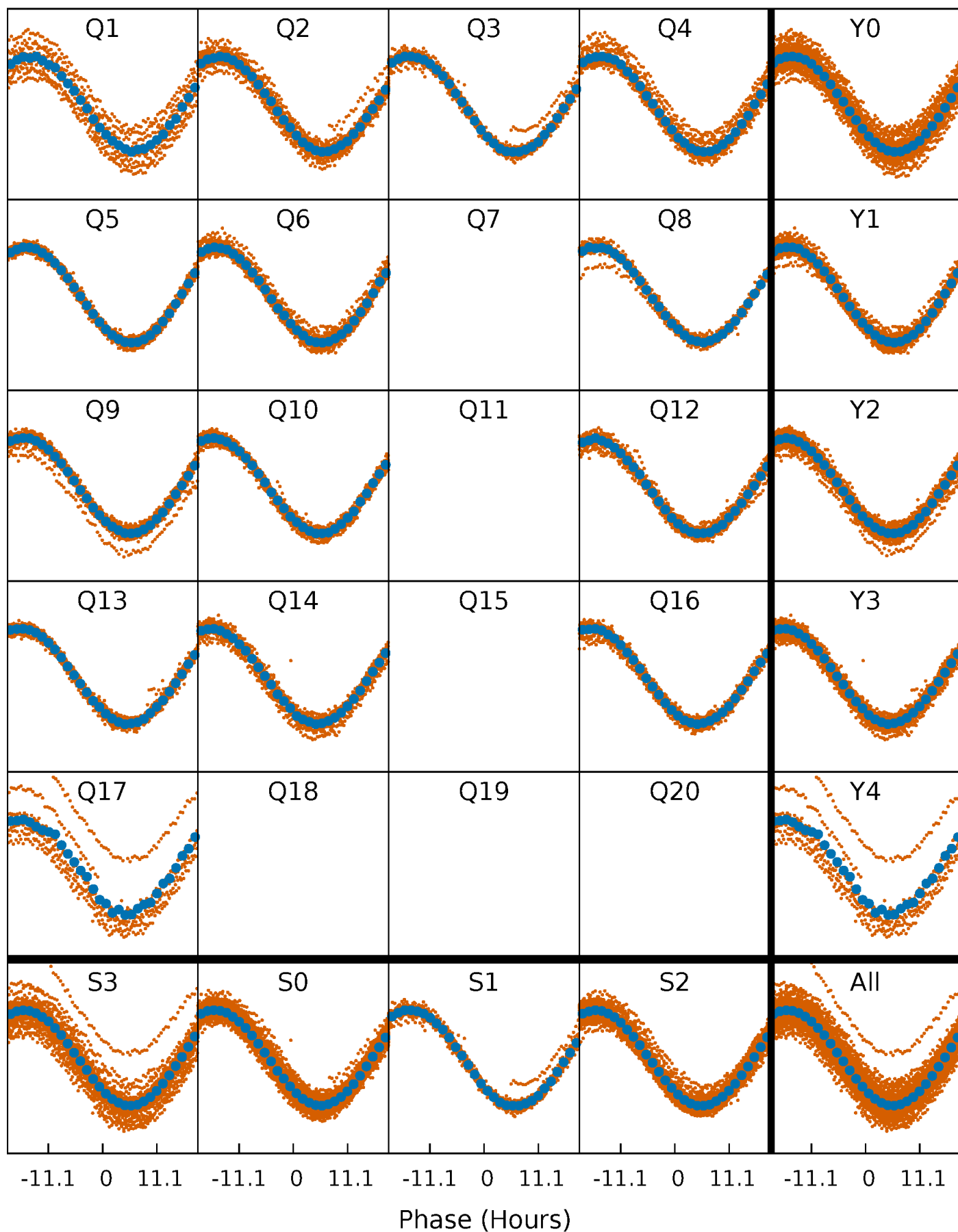


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



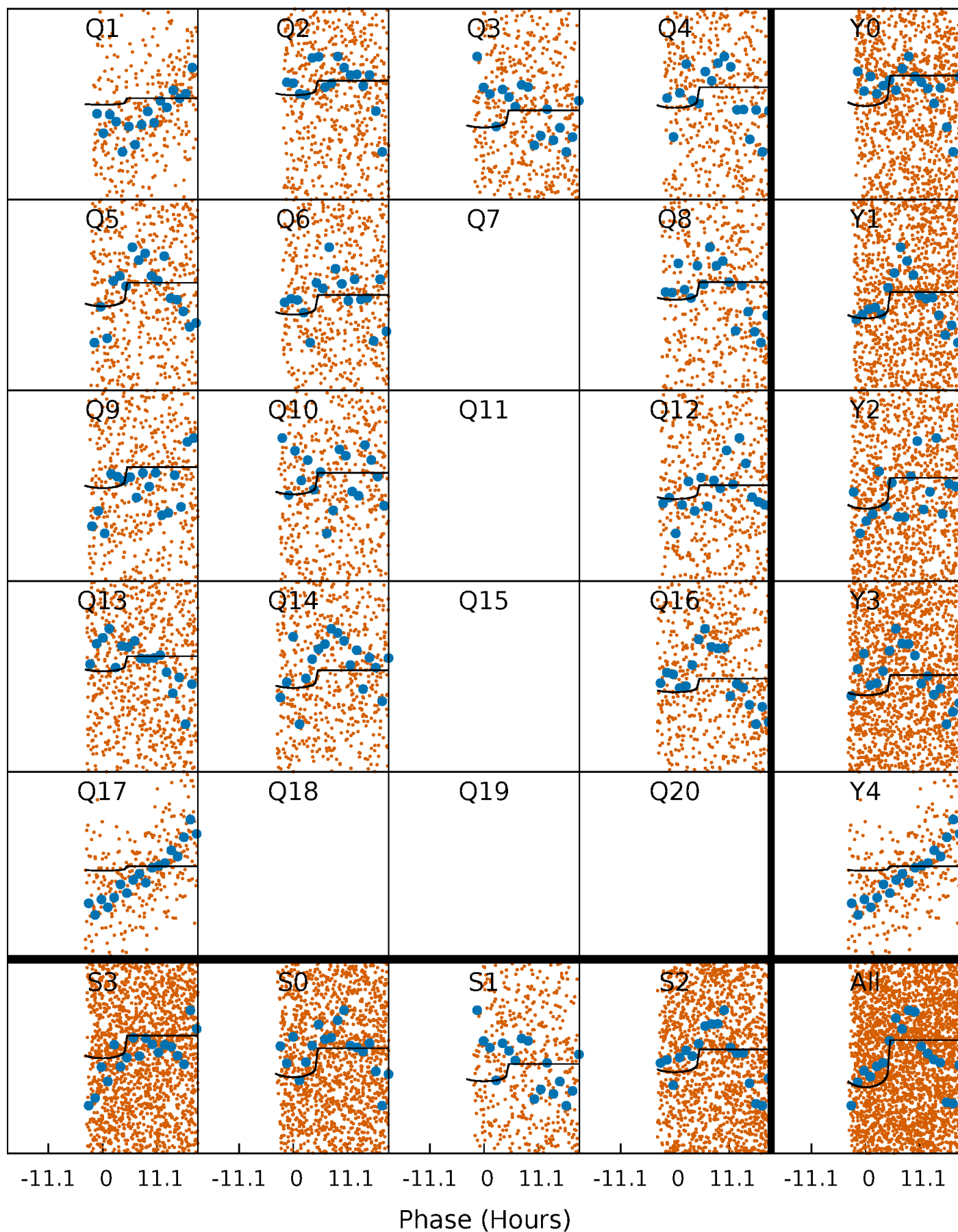
PDC Quarter-Phased Transit Curves

TCE 011044394-03 P= 3.749372 Days $T_0=132.536464$ (BKJD)



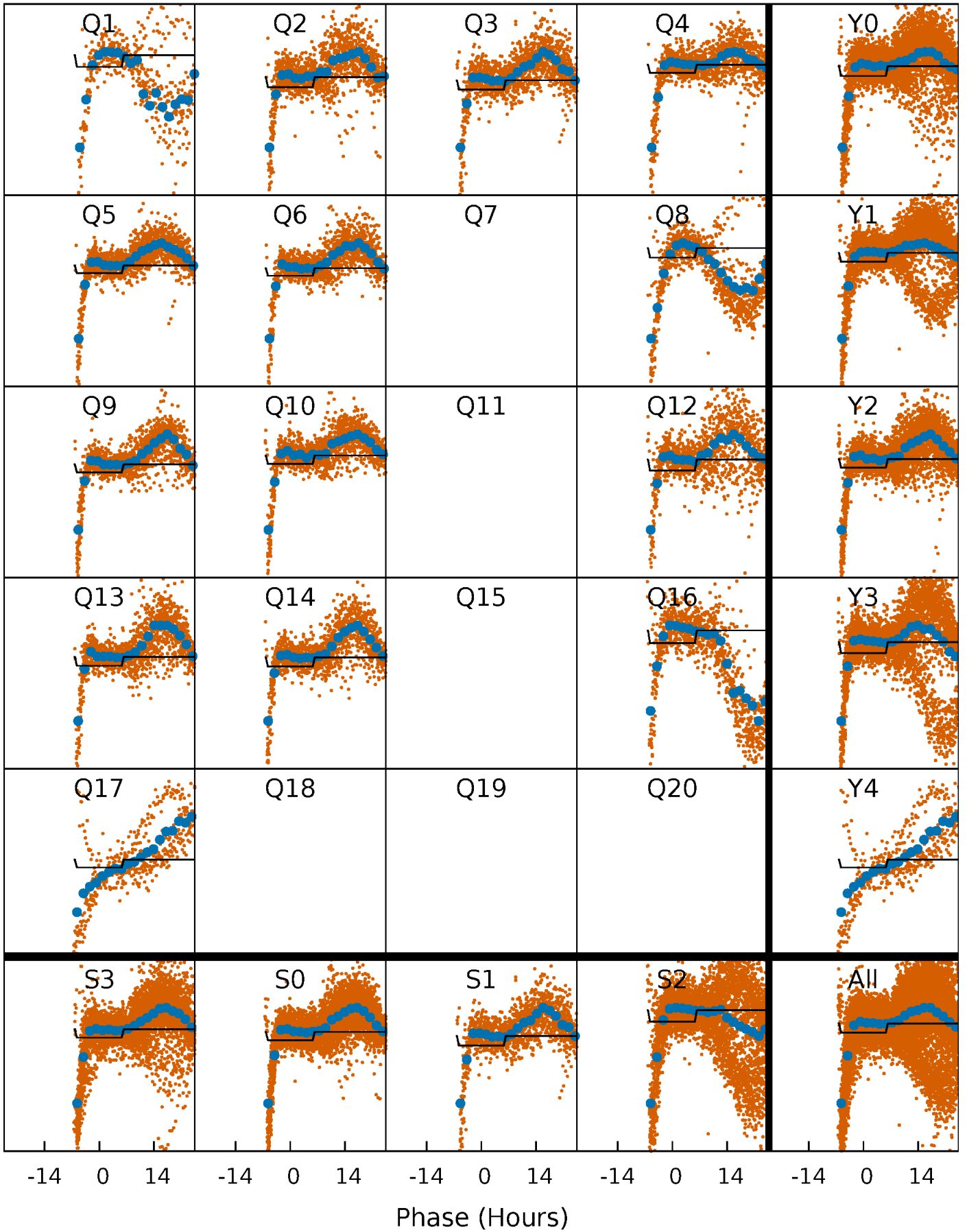
DV Quarter-Phased Transit Curves

TCE 011044394-03 $P = 3.749372$ Days $T_0 = 132.536464$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

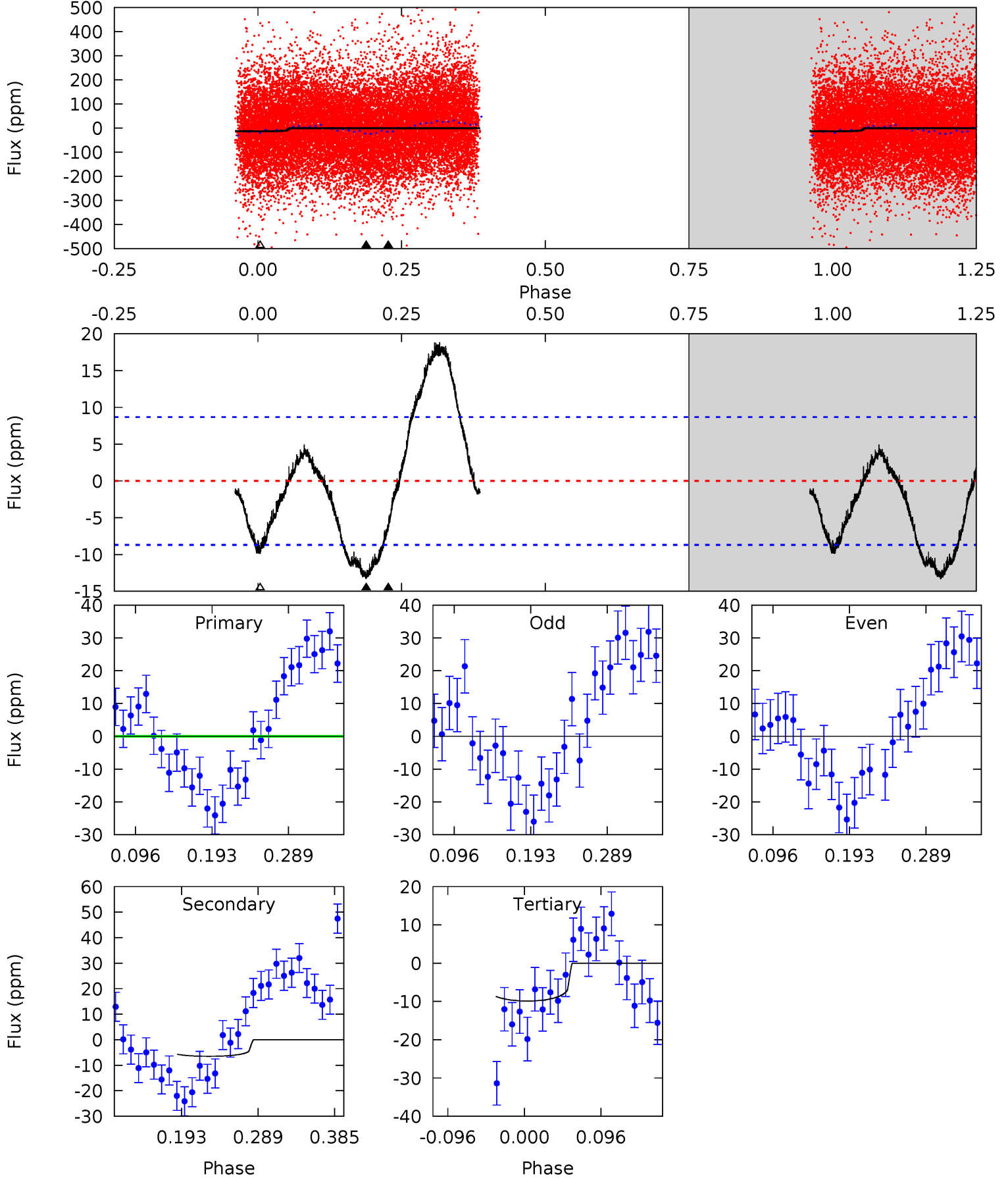
TCE 011044394-03 P= 3.749234 Days $T_0=132.714386$ (BKJD)



DV Model-Shift Uniqueness Test

011044394-03, P = 3.749372 Days, E = 128.787092 Days

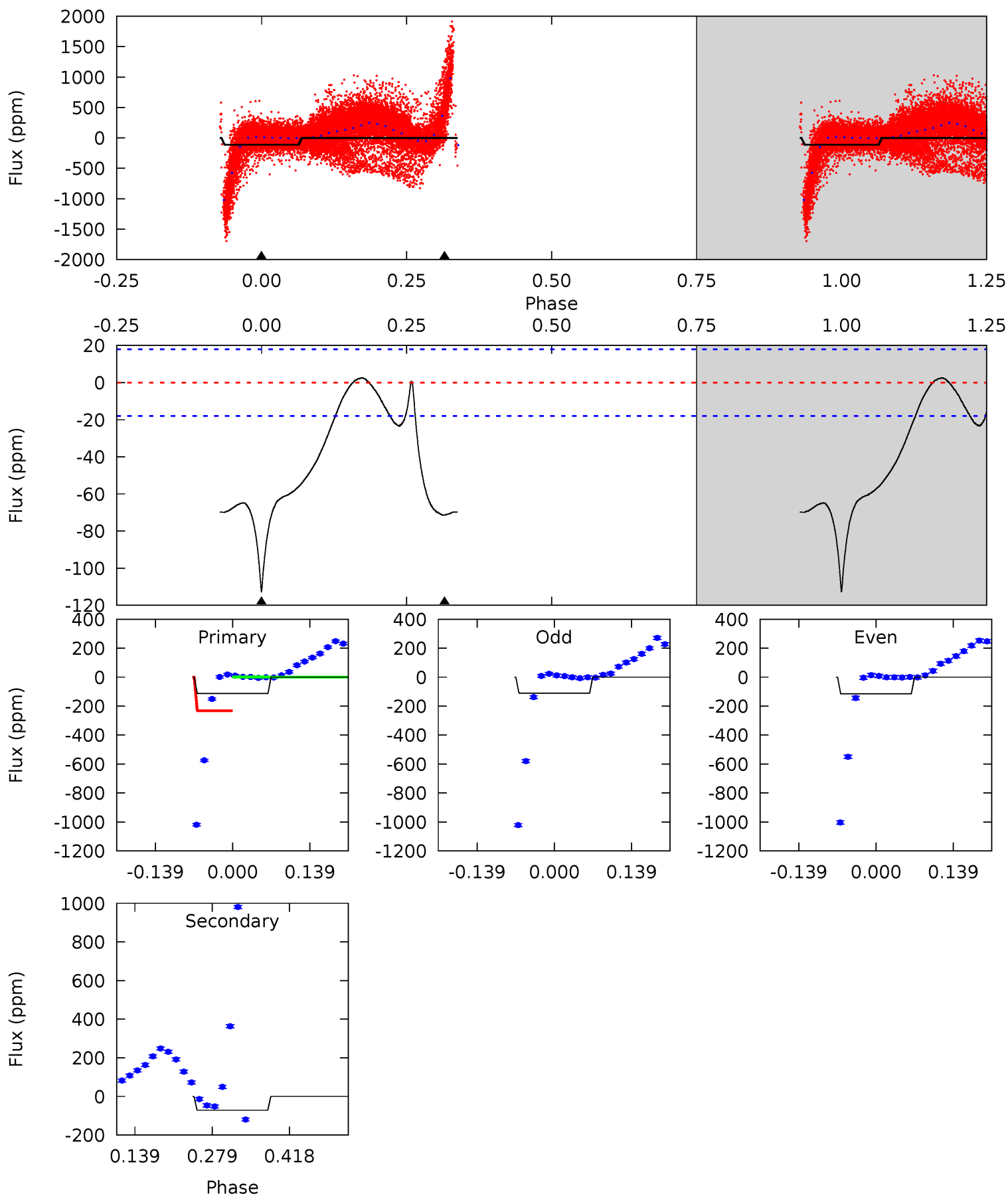
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.01	3.42	5.21	0	4.57	1.66	2.89	1.80	7.01	-1.79	3.42	0.61	0.92	0.59	0.41



Alt Model-Shift Uniqueness Test

011044394-03, P = 3.749234 Days, E = 128.965152 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	17.9	0	0	4.49	1.48	0.93	28.2	28.2	17.9	17.9	0.57	1.06	0.02	15.2



Stellar Parameters For KIC 011044394

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7029^{+197}_{-246}	$3.967^{+0.204}_{-0.136}$	$-0.100^{+0.250}_{-0.300}$	$2.151^{+0.473}_{-0.578}$	$1.564^{+0.195}_{-0.260}$	$0.221^{+0.283}_{-0.088}$
	+3%/-3%	+5%/-3%	+250%/-300%	+22%/-27%	+12%/-17%	+128%/-40%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 011044394-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 2	$0.95^{+0.53}_{-0.45}$	2698^{+170}_{-198}	5447^{+2219}_{-985}	12^{+30}_{-7}
Alt.	-71 ± 4	$2.28^{+0.63}_{-0.60}$	2693^{+197}_{-207}	6403^{+967}_{-643}	23^{+18}_{-9}

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

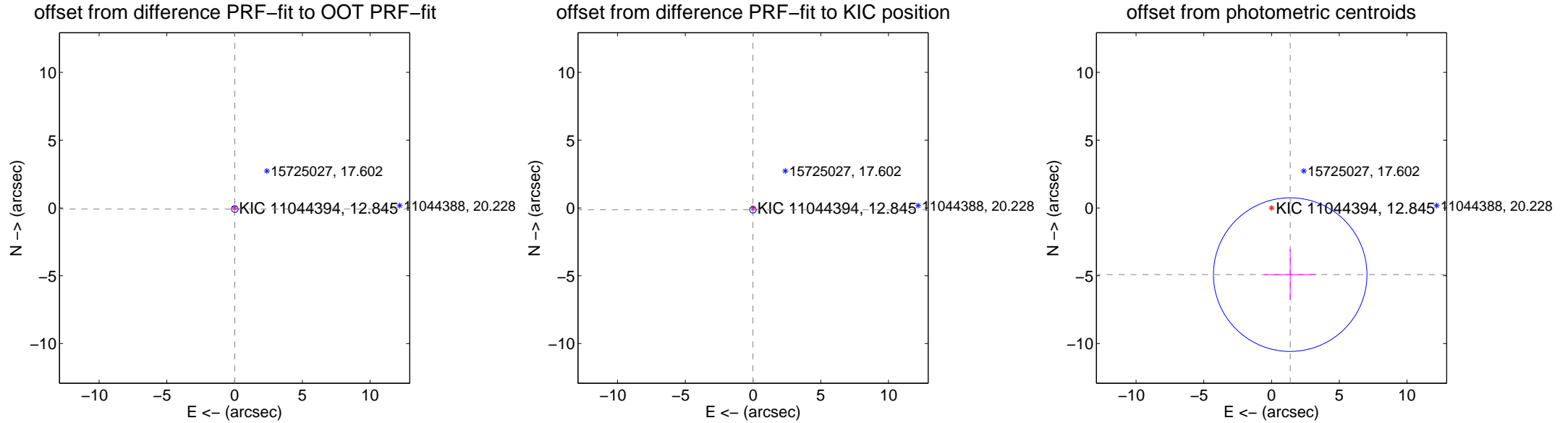
DV Centroid Data

Supplemental centroid analysis for 011044394-03. Kepler magnitude: 12.85. Transit SNR 5.80

There are 14 quarters with good PRF difference image offsets

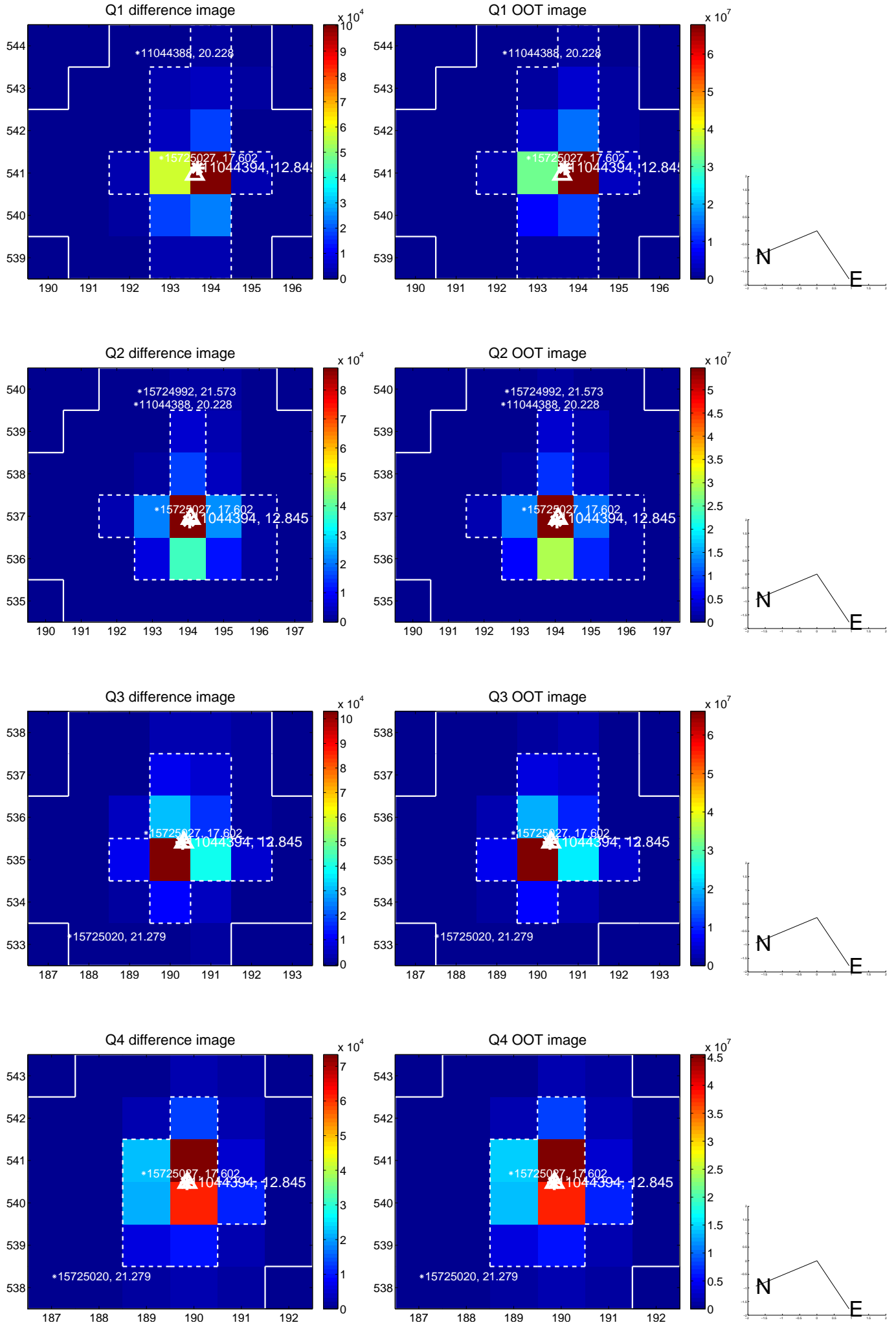
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.084 ± 0.083	1.02	-0.016 ± 0.076	-0.083 ± 0.080
PRF-fit source offset from KIC position	0.141 ± 0.080	1.76	0.007 ± 0.074	-0.140 ± 0.081
photometric centroid source offset	5.11 ± 1.89	2.70	-1.38 ± 1.92	-4.92 ± 1.89

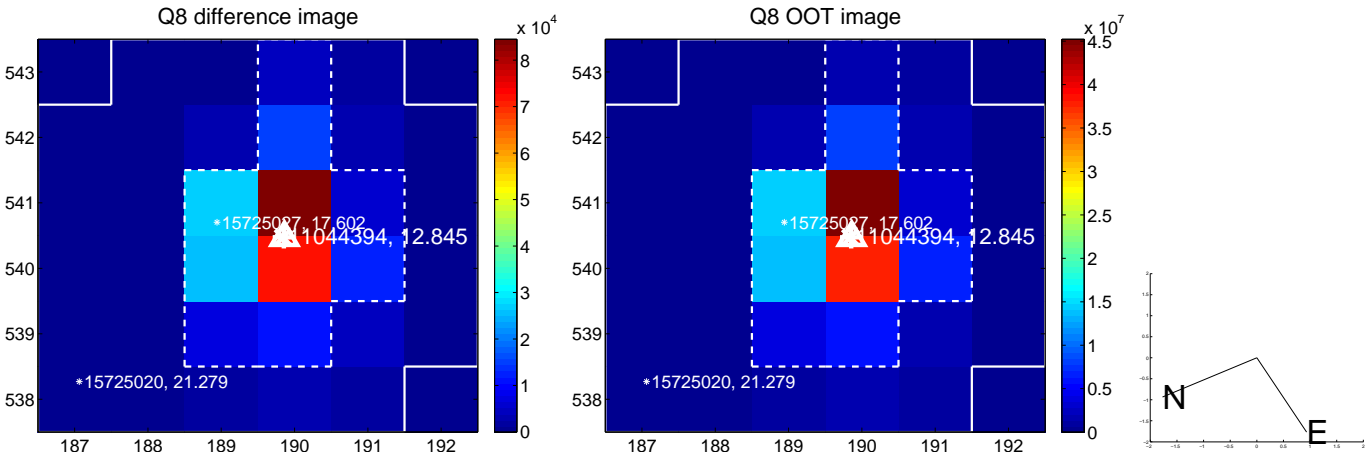
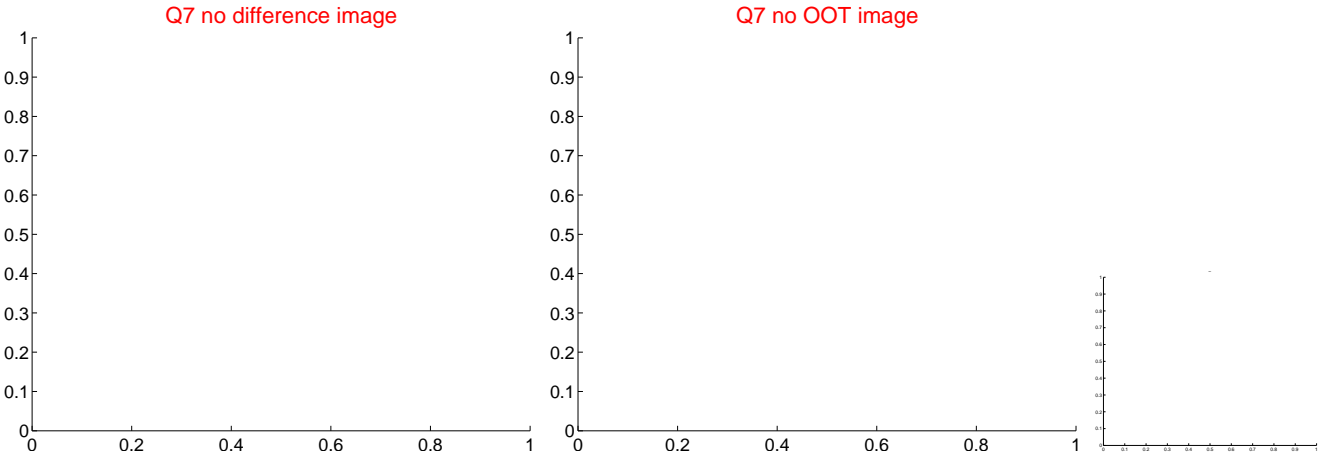
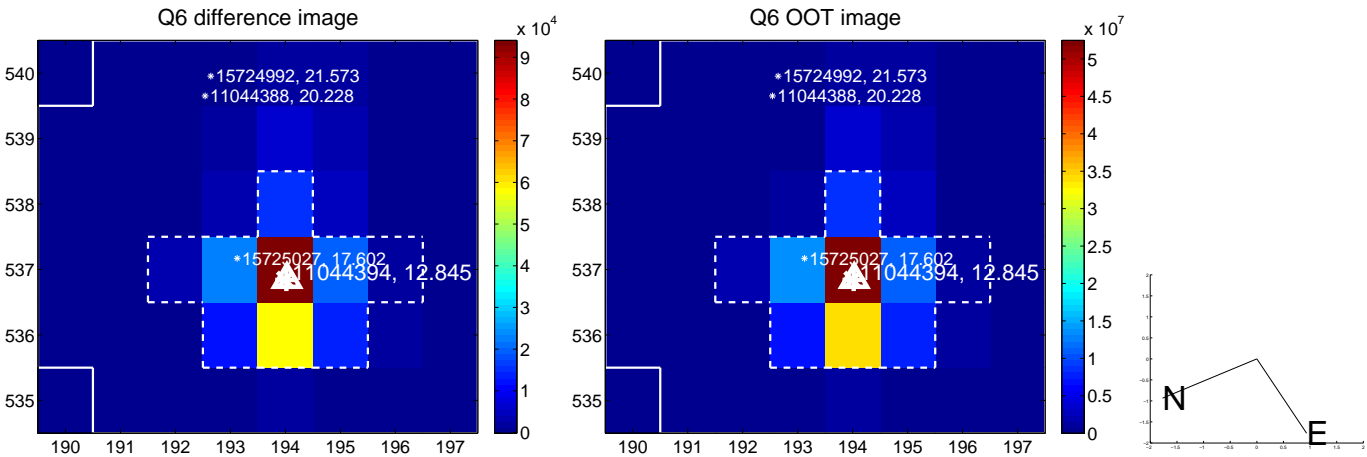
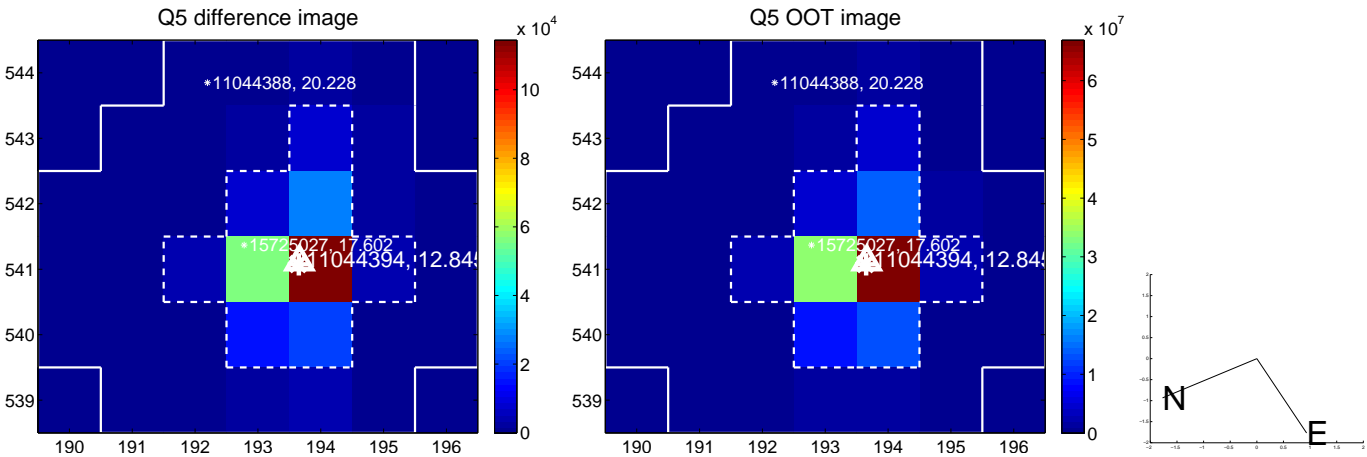


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

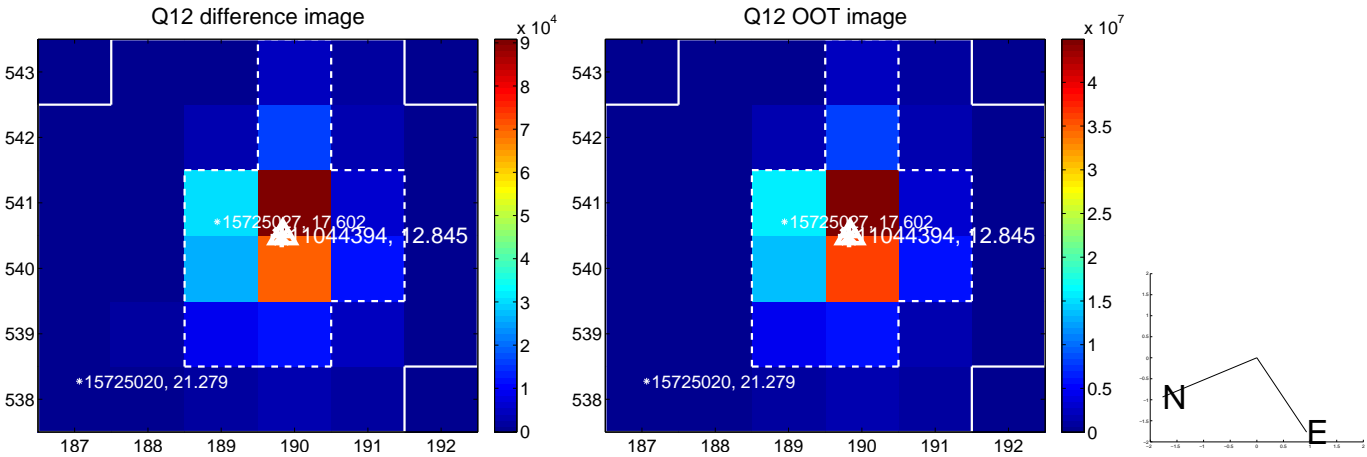
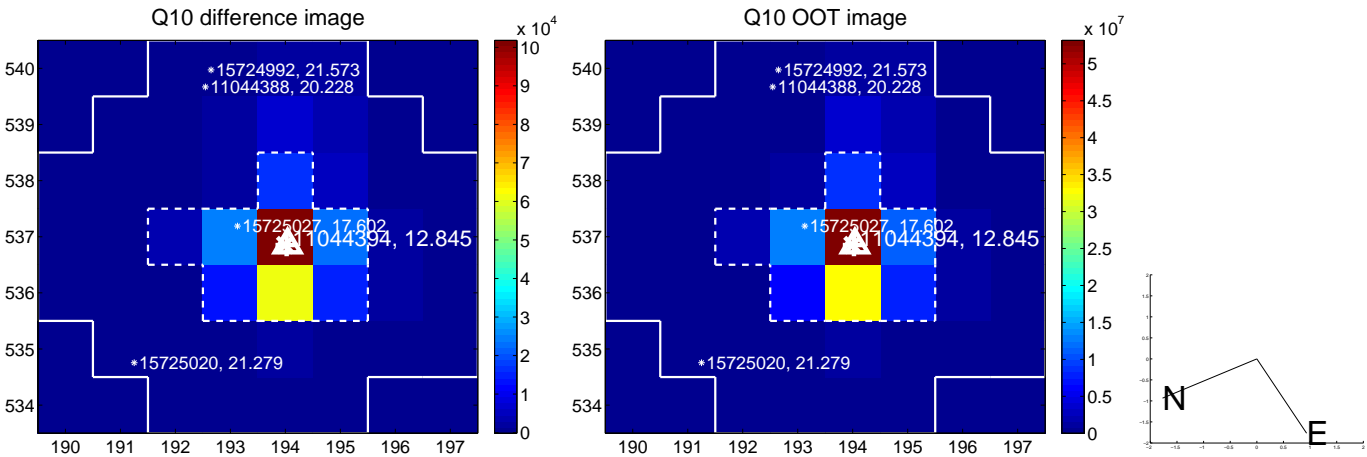
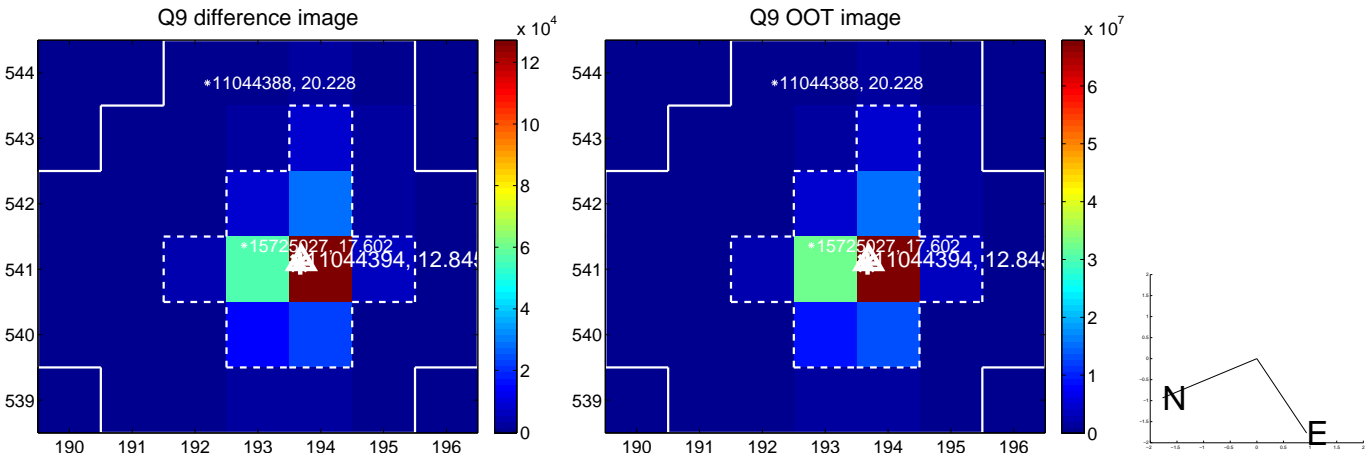
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



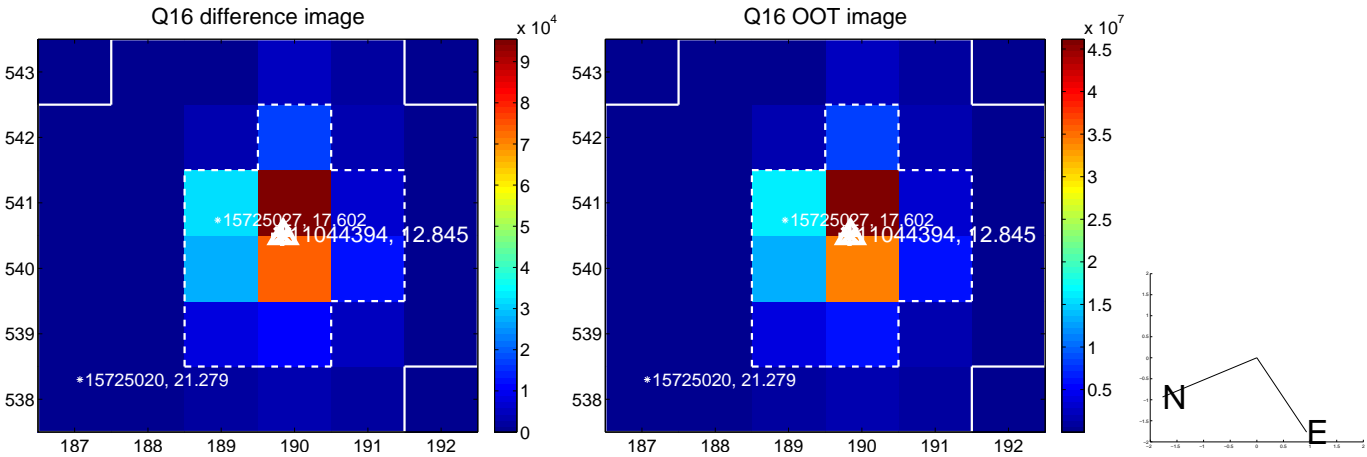
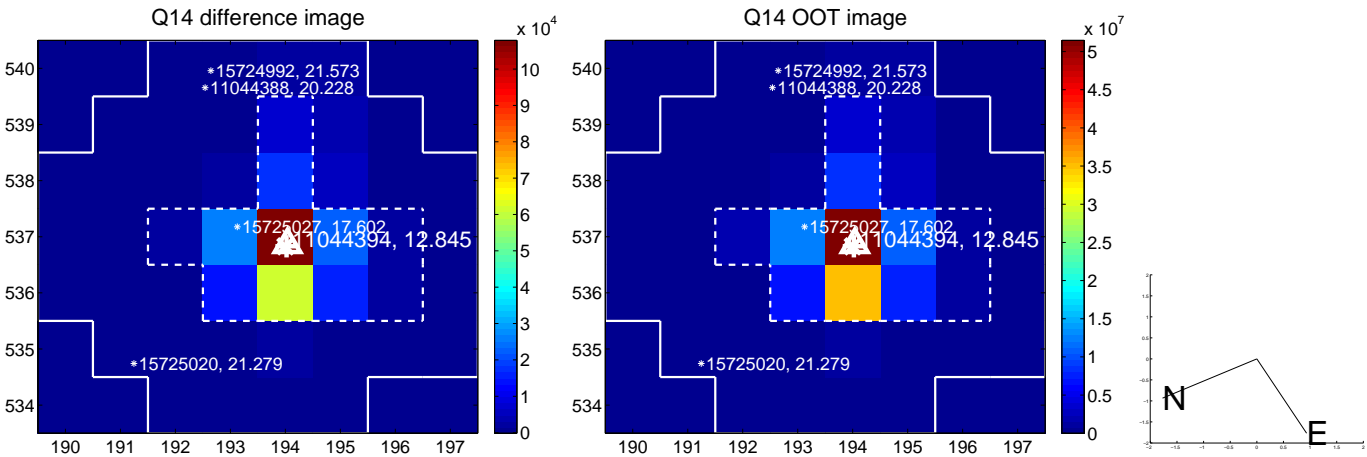
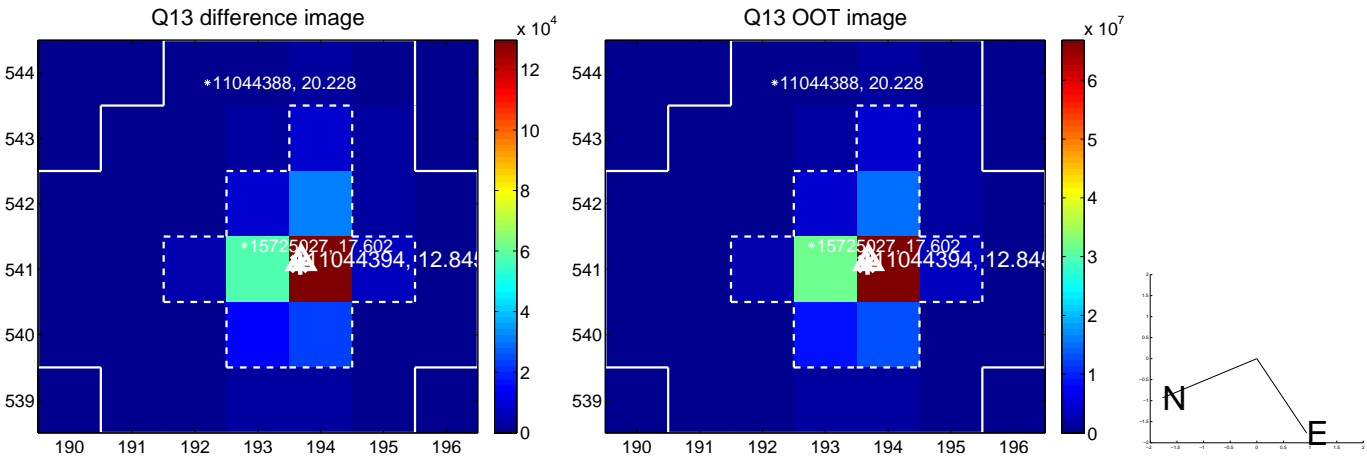
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



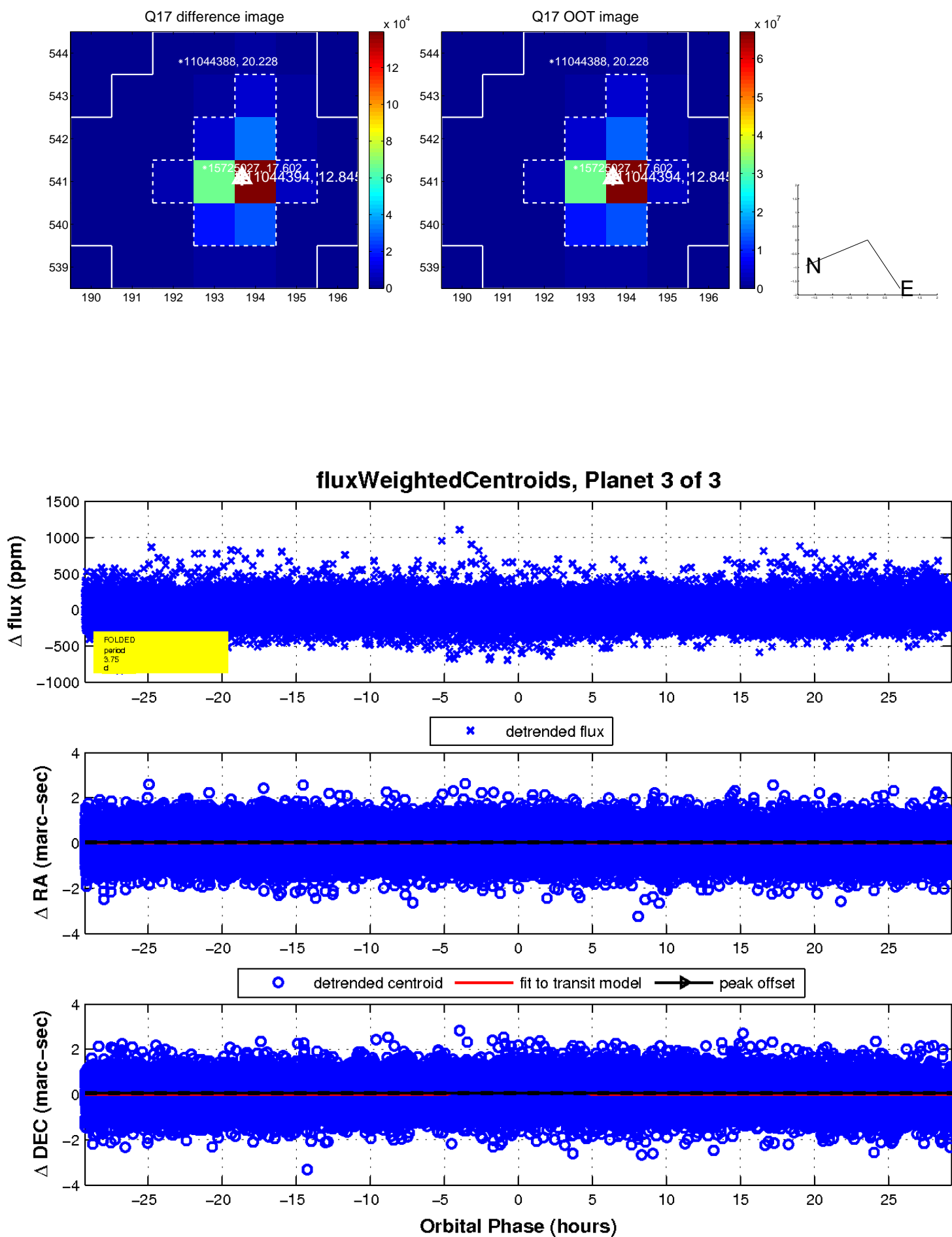
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

