

KIC 011754553

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})
011754553-01	OBS	0775.02	7.877415	136.989209	1290.2	2.980	41.5	44.6	0.61	4126	3.25	22.20
011754553-02	OBS	0775.01	16.384851	139.959522	1043.1	3.183	28.1	30.0	0.61	4126	2.17	8.36
011754553-03	OBS	0775.03	36.445326	151.601449	1016.5	4.088	19.8	21.2	0.61	4126	2.19	2.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011754553-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011754553-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011754553-03	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.

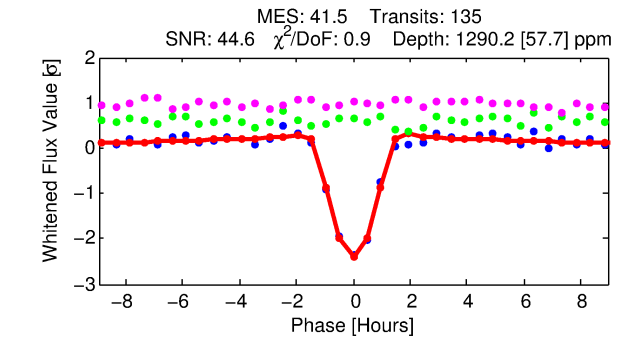
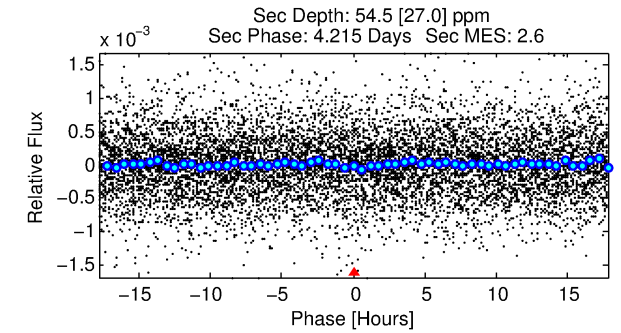
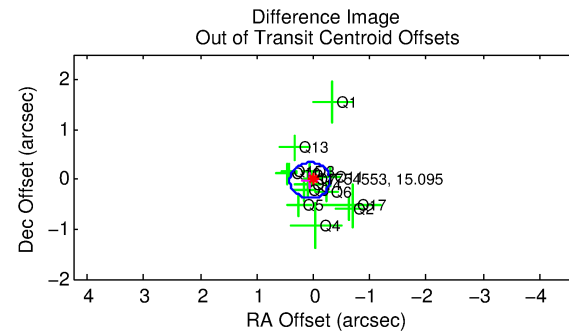
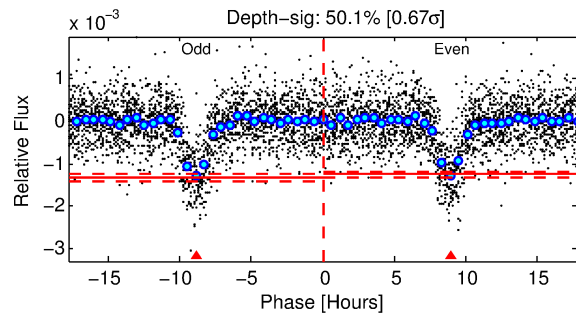
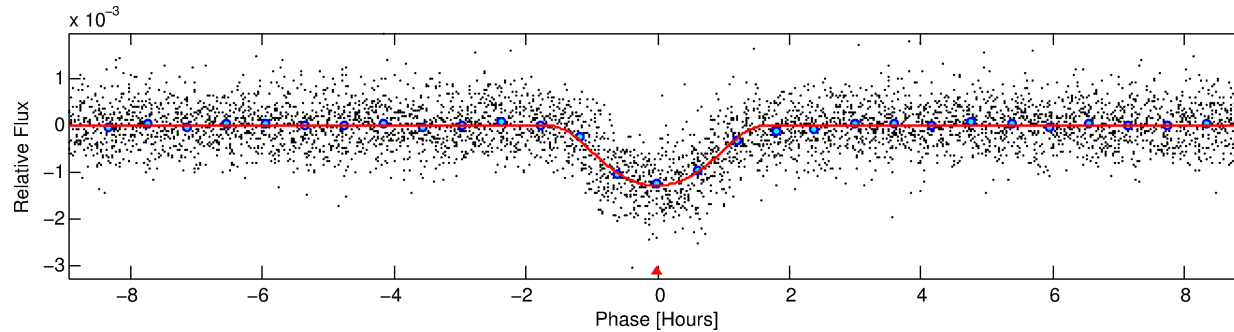
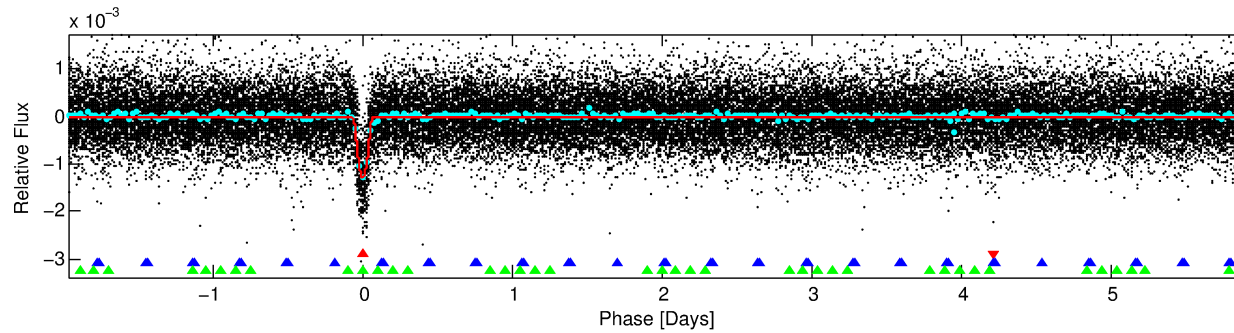
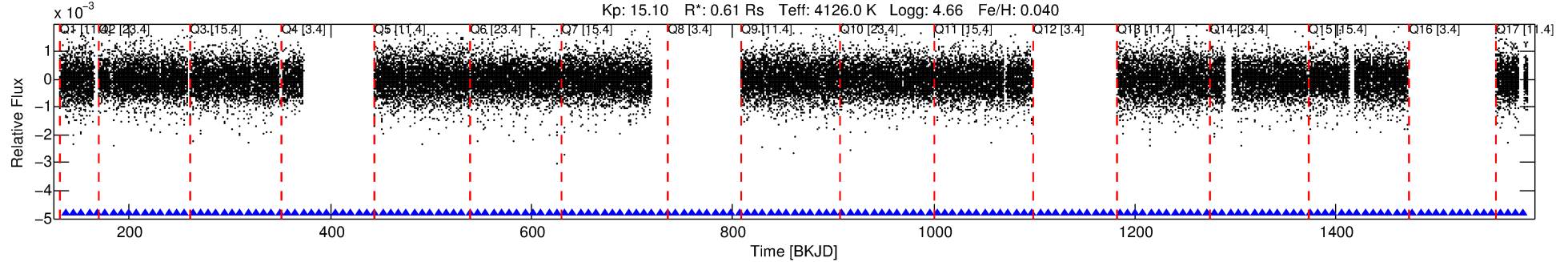
Ephemeris Match Information For 011754553-01

No Significant Match Found

DV One-Page Summary

KIC: 11754553 Candidate: 1 of 3 Period: 7.877 d
KOI: K00775.02 Name: Kepler-52b Corr: 0.869

Kp: 15.10 R*: 0.61 Rs Teff: 4126.0 K Logg: 4.66 Fe/H: 0.040



DV Fit Results:

Period = 7.87742 [0.00001] d
Epoch = 136.9892 [0.0014] BKJD
Rp/R* = 0.0484 [0.0094]
a/R* = 8.22 [0.81]
b = 0.97 [0.02]
Seff = 22.20 [2.04]
Teq = 554 [13] K
Rp = 3.25 [0.65] Re
a = 0.0665 [0.0024] AU
Ag = 12.56 [7.92] [1.46σ]
Teffp = 1611 [255] K [4.14σ]

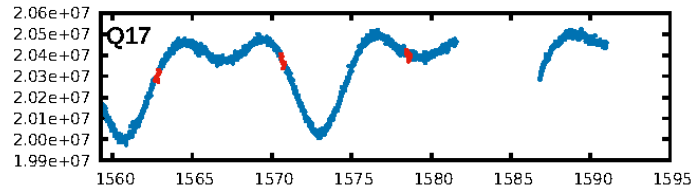
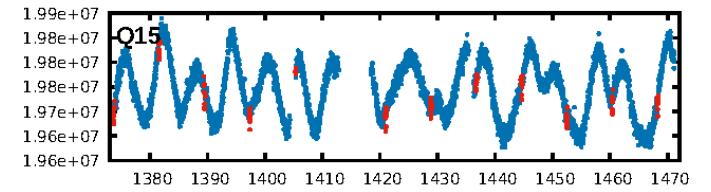
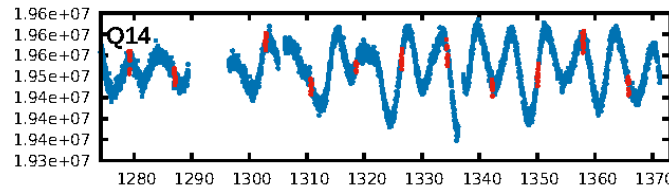
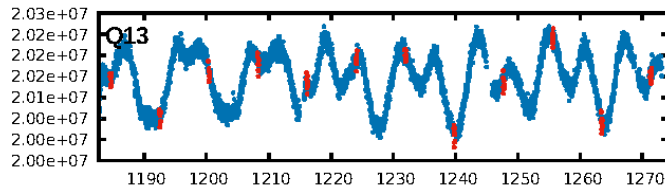
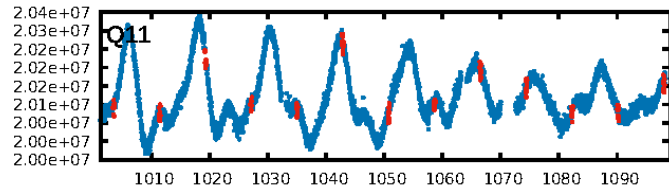
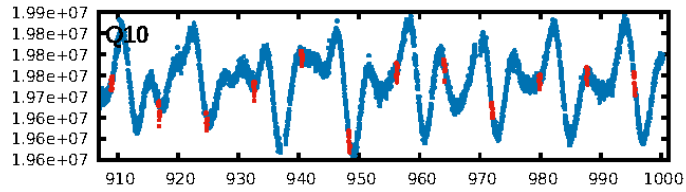
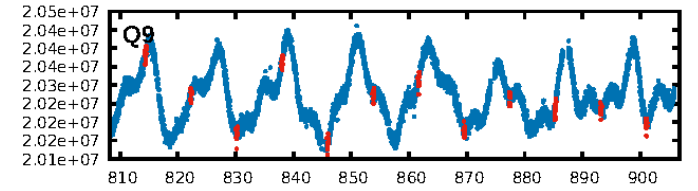
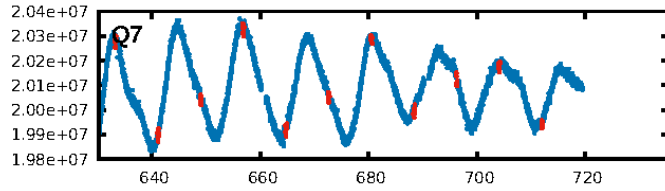
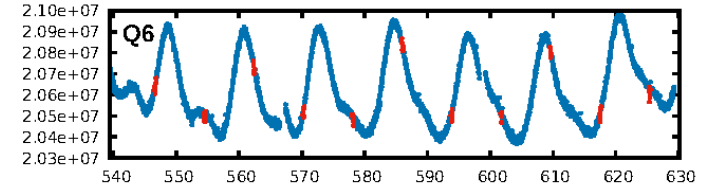
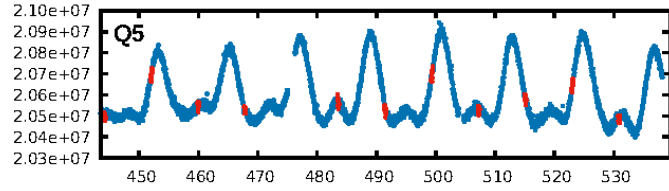
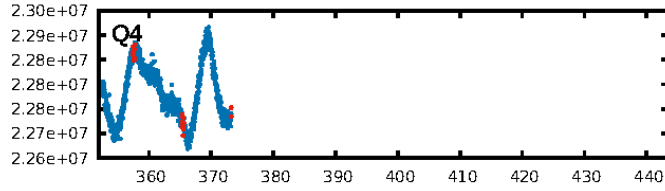
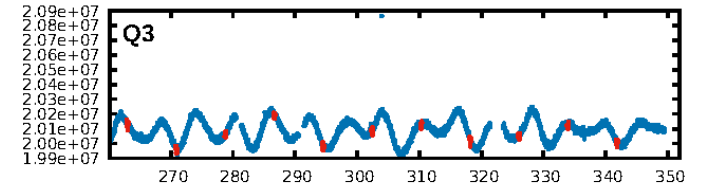
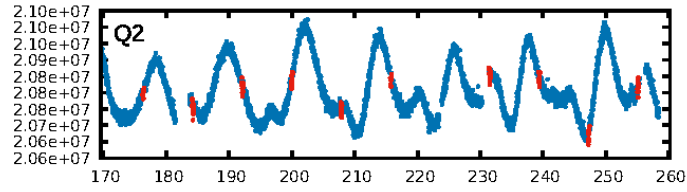
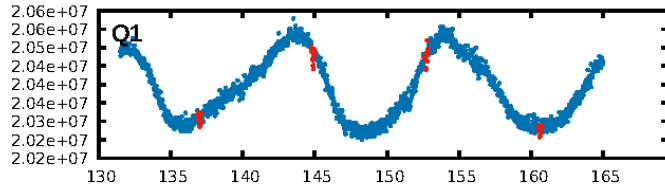
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [46.83σ]
ModelChiSquare2-sig: 97.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [126/126]
GhostDiagnostic-chr: 2.408
Centroid-sig: 58.8%
Centroid-so: 0.436 arcsec [1.62σ]
OotOffset-rm: 0.069 arcsec [0.58σ]
KicOffset-rm: 0.163 arcsec [0.96σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

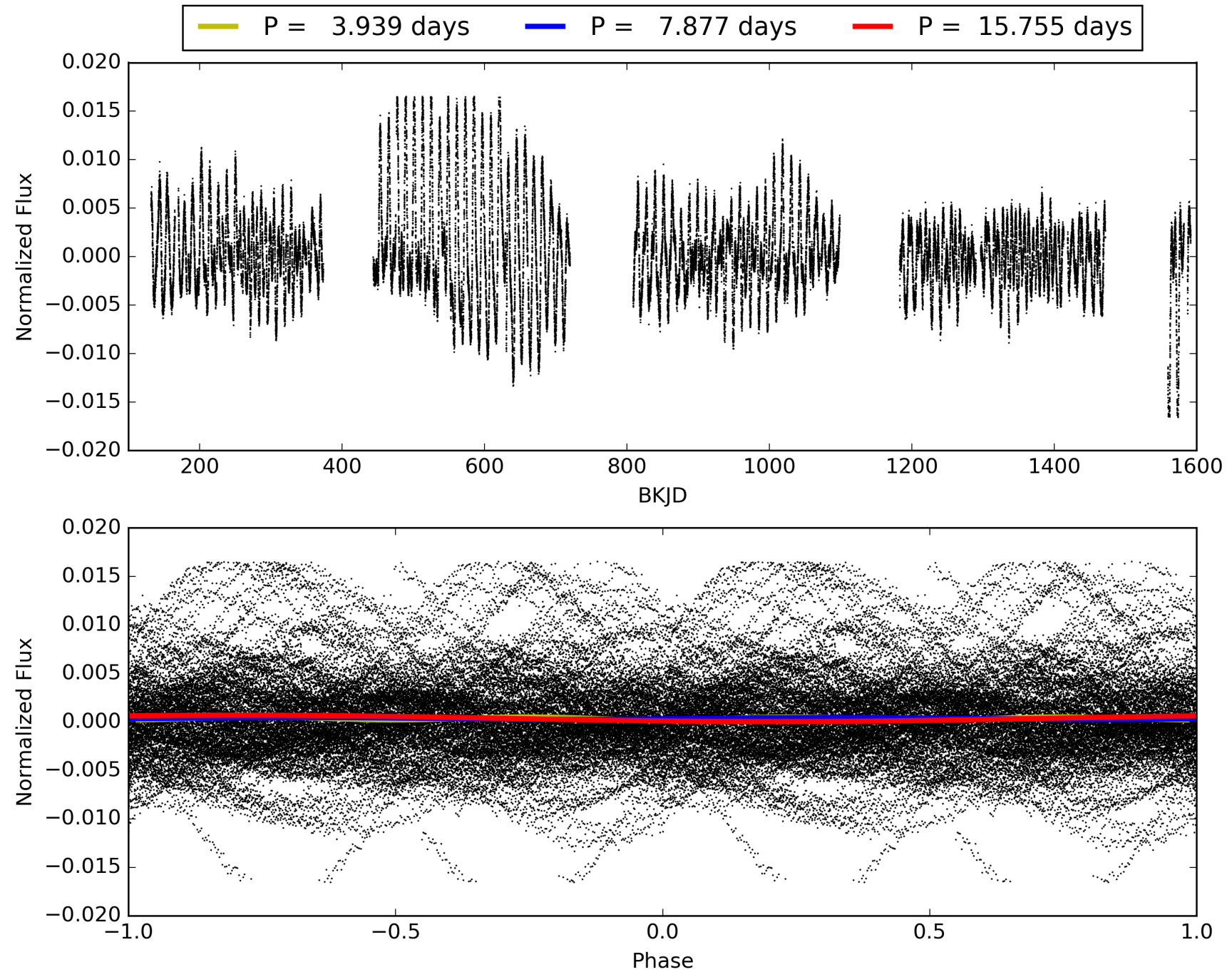
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 011754553-01, PDC Light Curves

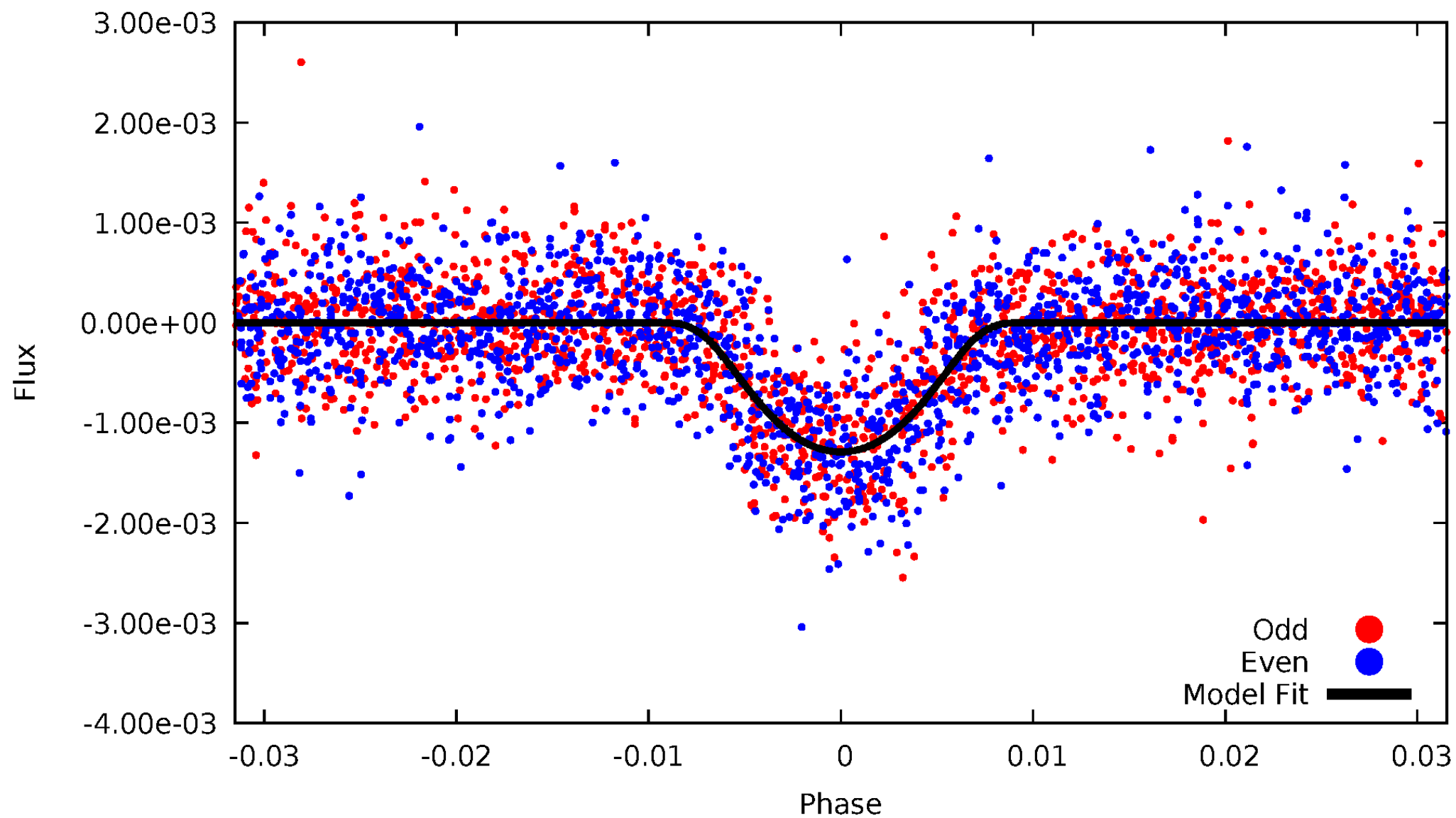


TCE 011754553-01



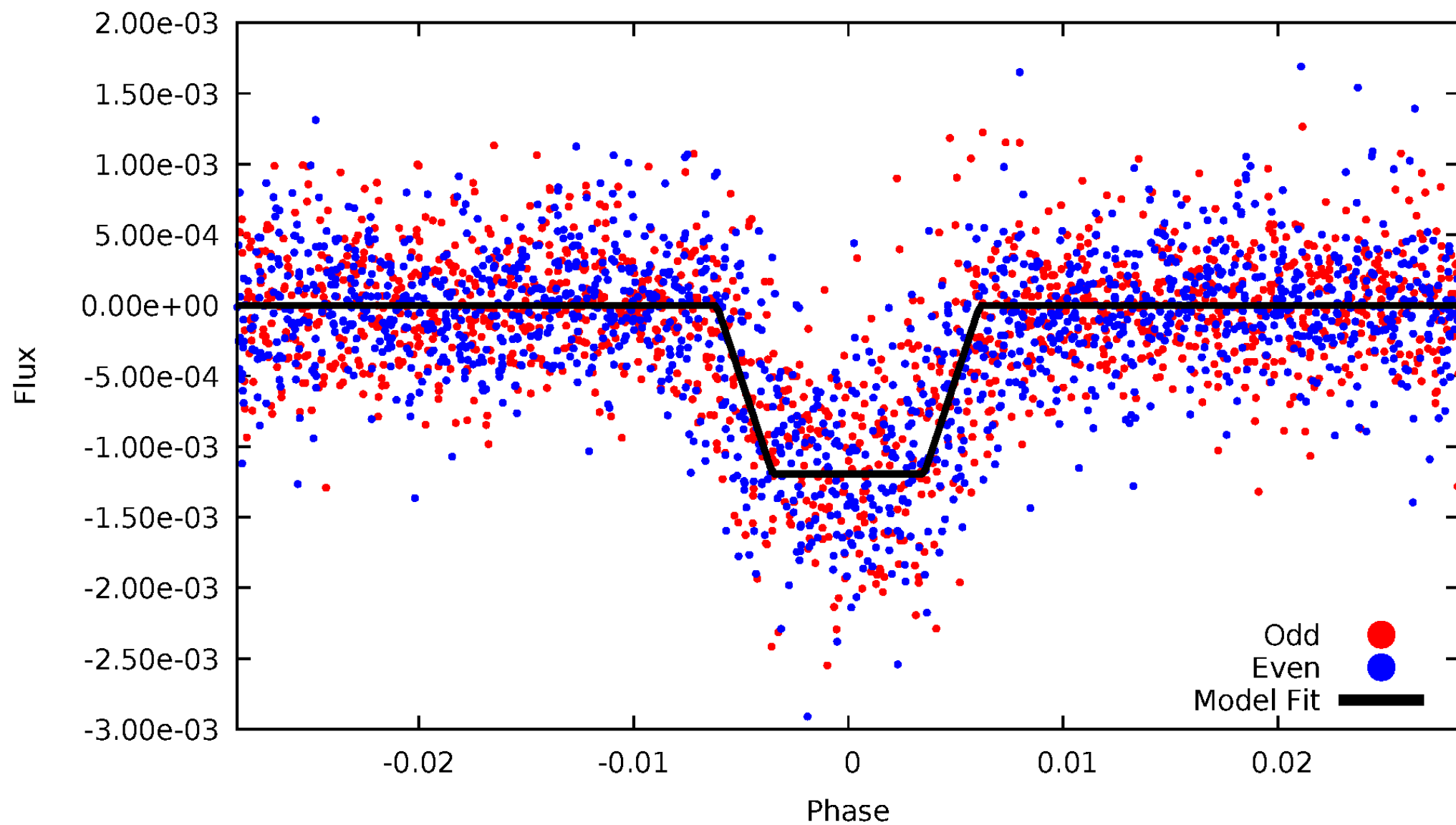
DV Odd/Even

TCE 011754553-01



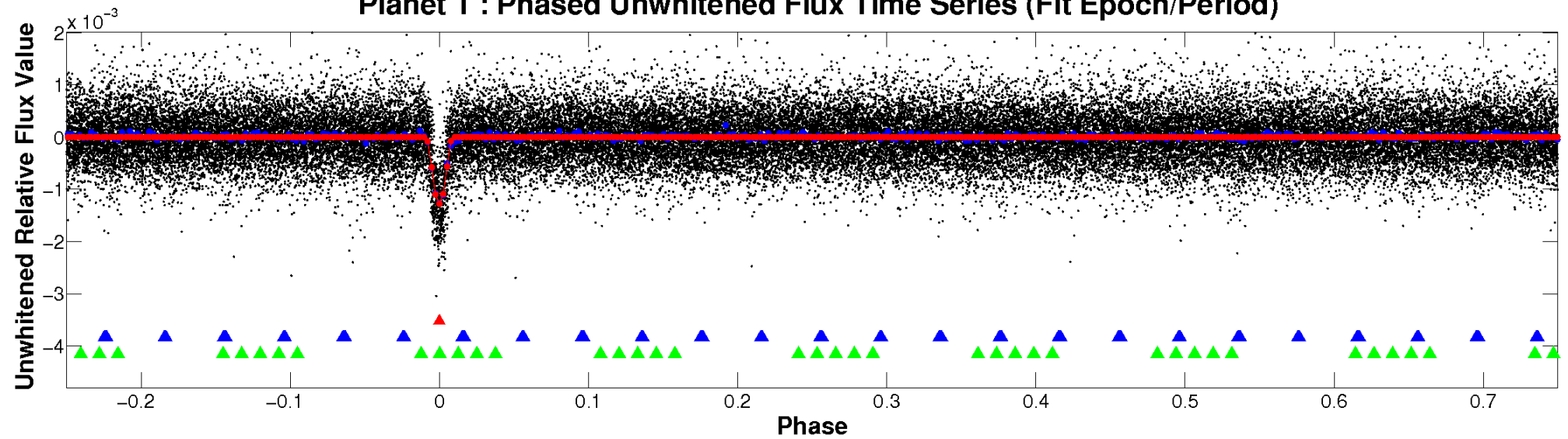
ALT Odd/Even

TCE 011754553-01

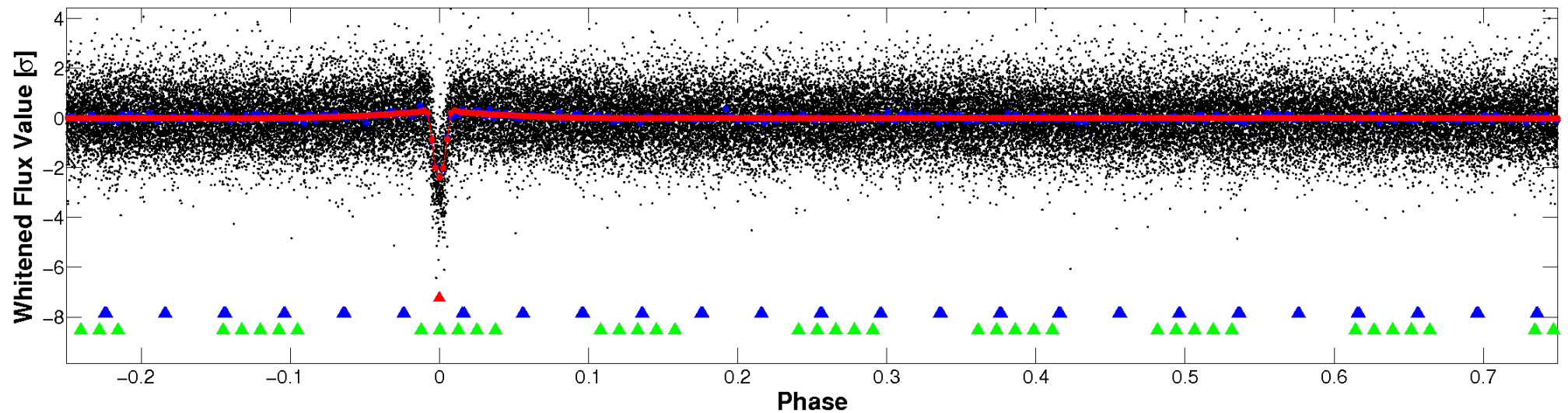


Non-Whitened Vs. Whitened Light Curve

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

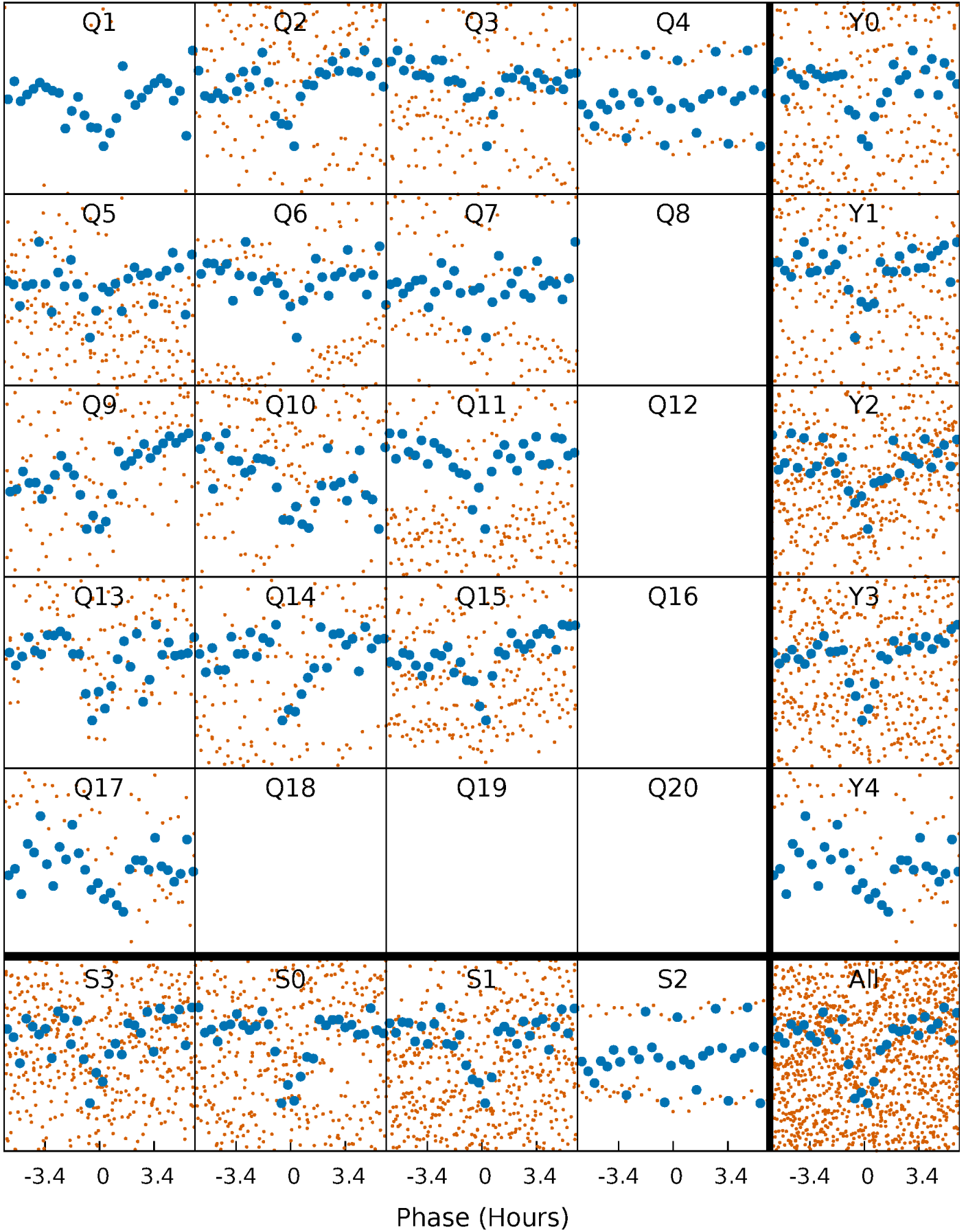


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



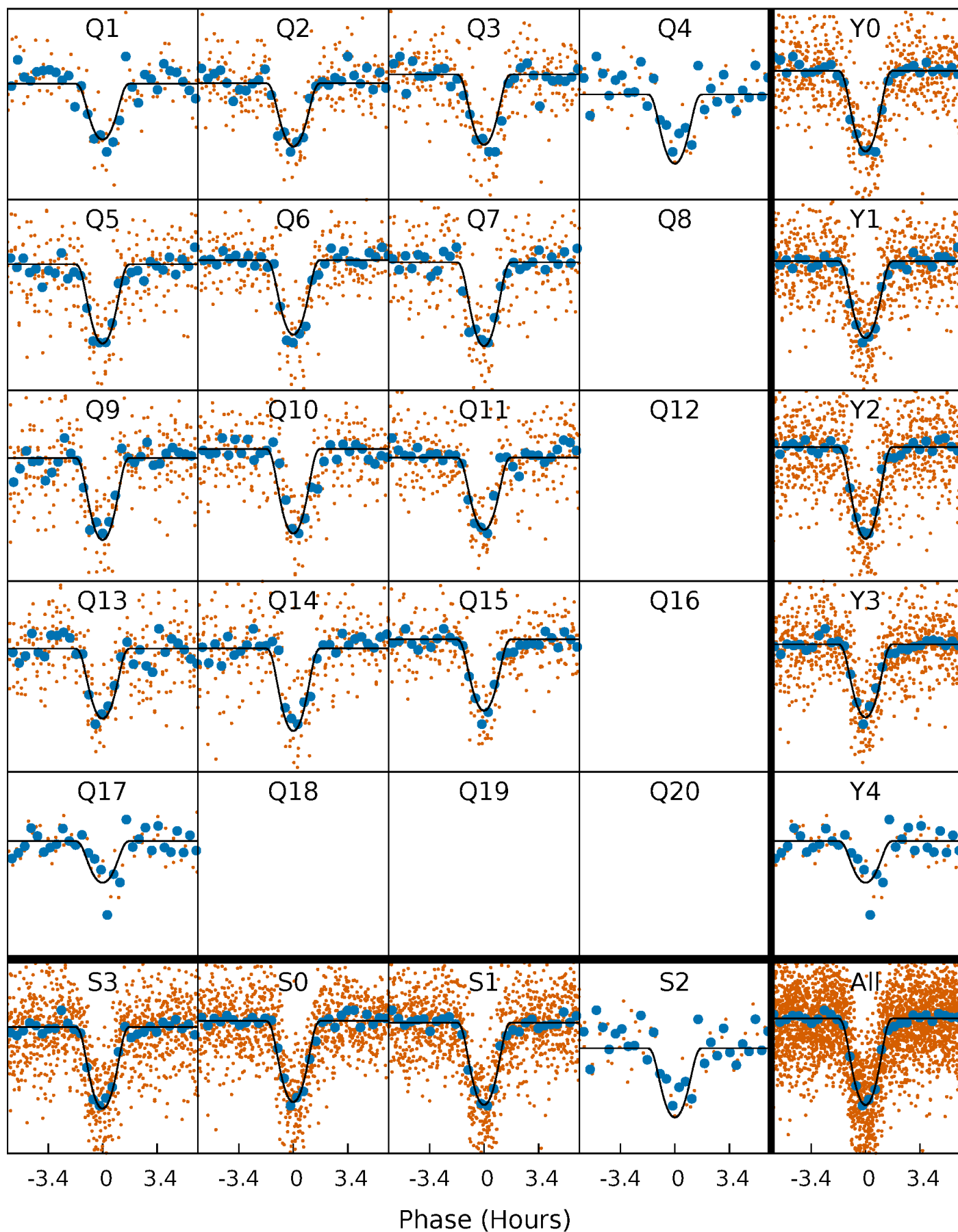
PDC Quarter-Phased Transit Curves

TCE 011754553-01 P= 7.877415 Days $T_0=136.989209$ (BKJD)



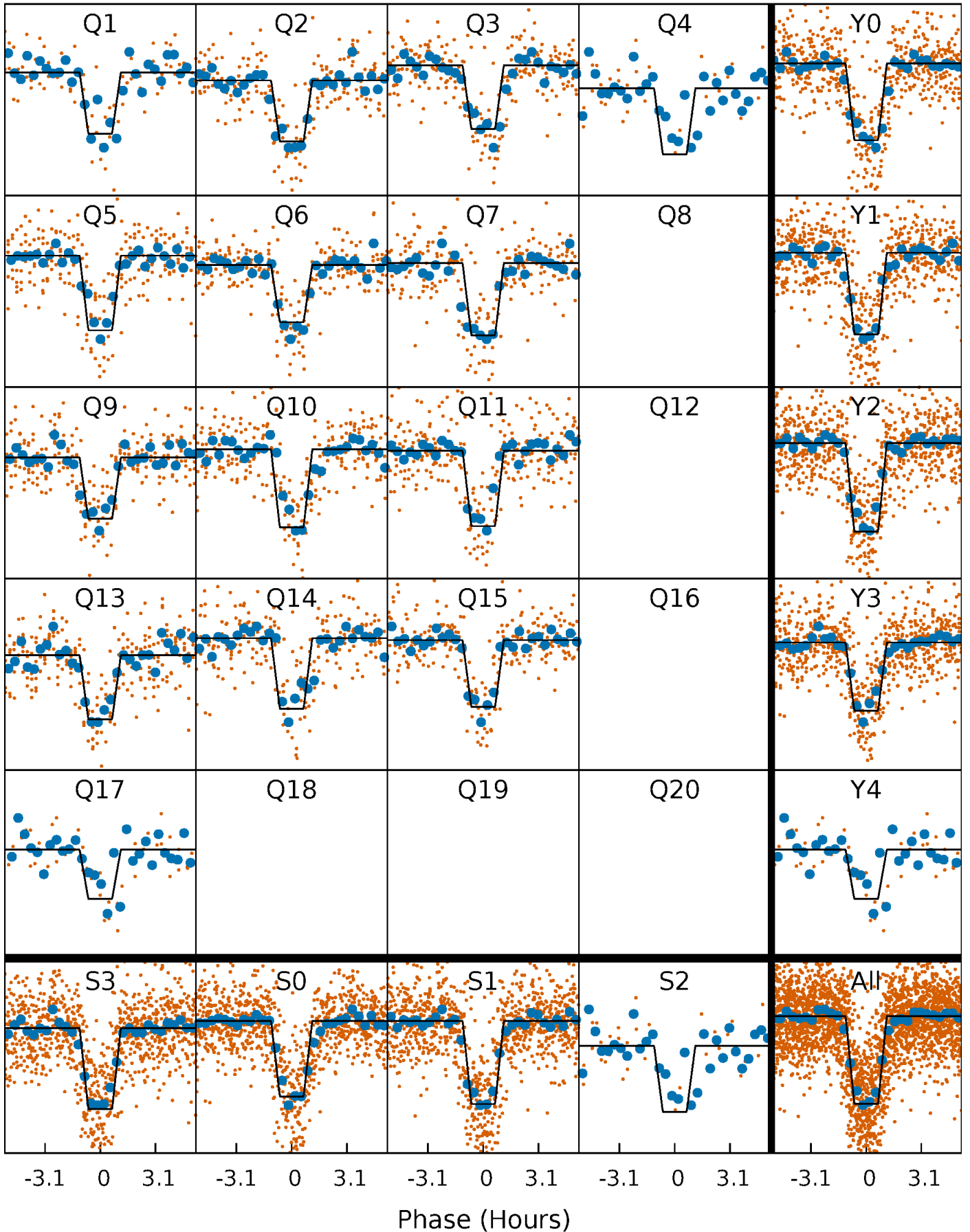
DV Quarter-Phased Transit Curves

TCE 011754553-01 P= 7.877415 Days $T_0=136.989209$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

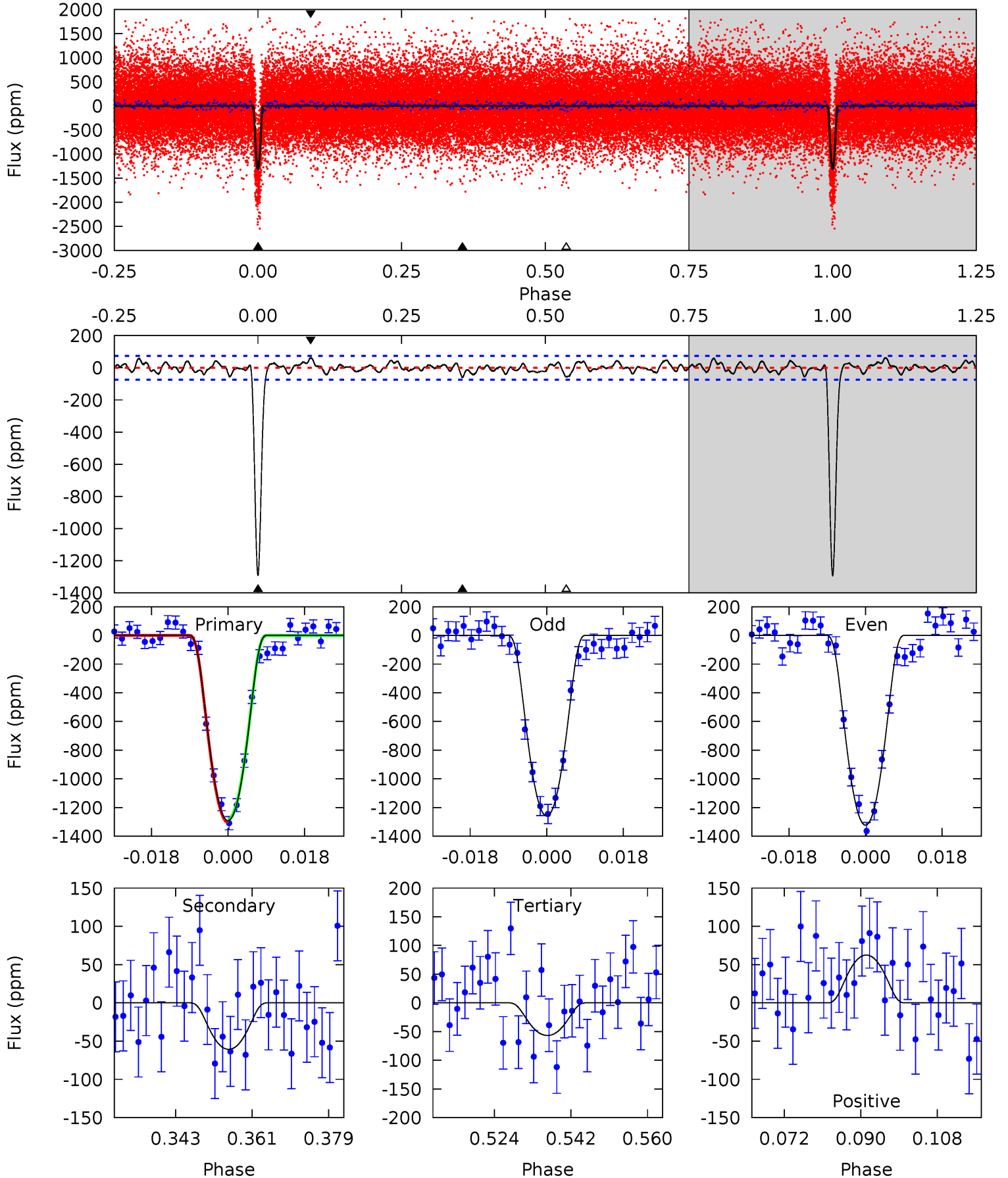
TCE 011754553-01 P= 7.877433 Days $T_0=136.986958$ (BKJD)



DV Model-Shift Uniqueness Test

011754553-01, P = 7.877415 Days, E = 129.111794 Days

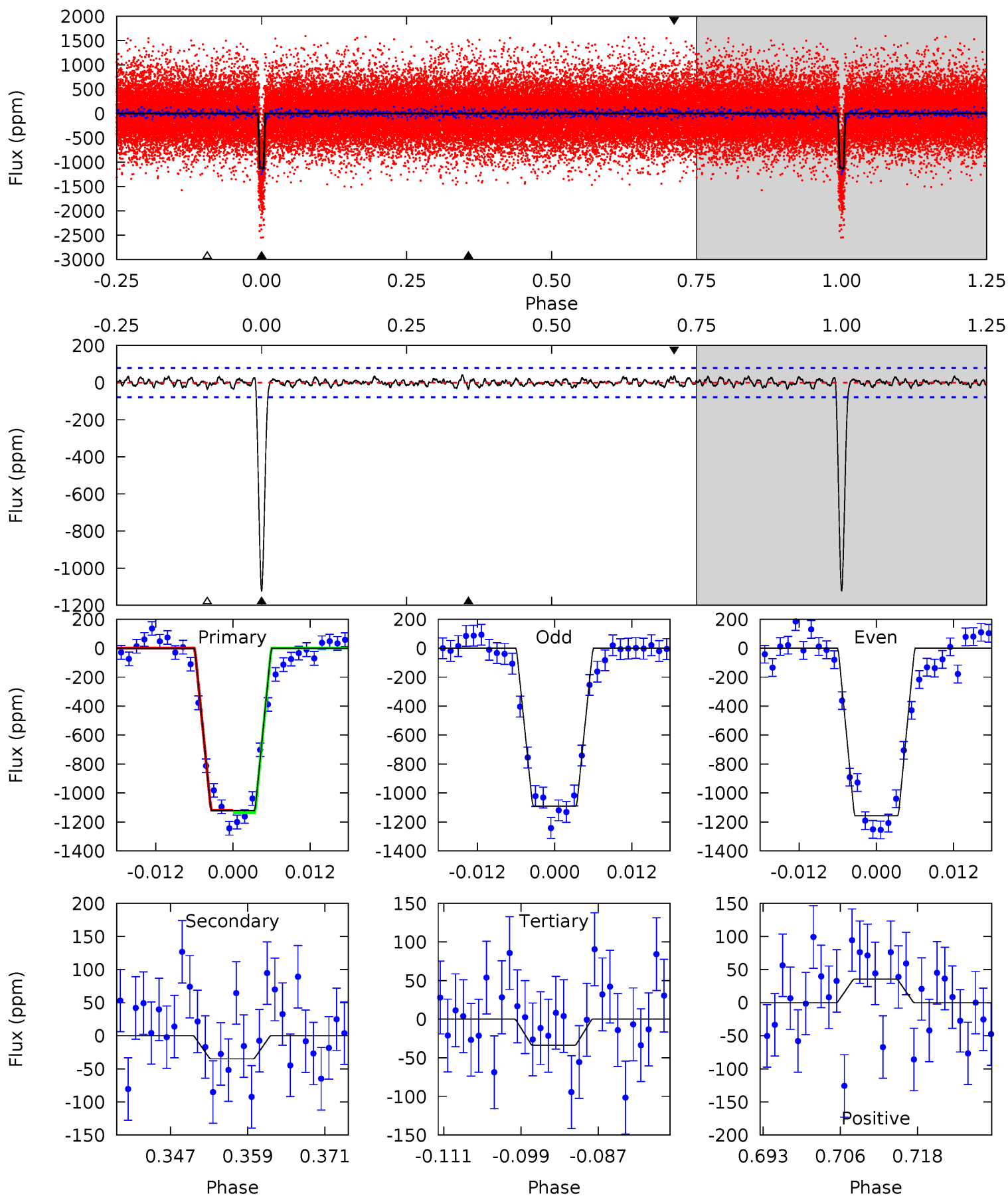
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
85.7	4.03	3.77	4.15	4.91	2.36	1.46	81.9	81.6	0.26	-0.12	2.12	1.01	0.05	0.64



Alt Model-Shift Uniqueness Test

011754553-01, P = 7.877433 Days, E = 129.109525 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.4	2.23	2.14	2.25	4.99	2.50	0.83	69.2	69.1	0.08	-0.02	2.12	1.01	0.04	0.59



Stellar Parameters For KIC 011754553

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4126^{+82}_{-82}	$4.661^{+0.022}_{-0.022}$	$0.040^{+0.150}_{-0.150}$	$0.615^{+0.027}_{-0.029}$	$0.633^{+0.029}_{-0.035}$	$3.829^{+0.371}_{-0.338}$
	+2%/-2%	+0%/-0%	+375%/-375%	+4%/-5%	+5%/-6%	+10%/-9%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 011754553-01 / KOI 0775.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 15	$3.29^{+0.58}_{-0.64}$	773^{+16}_{-17}	2408^{+157}_{-130}	13^{+9}_{-5}
Alt.	-35 ± 16	$2.39^{+0.55}_{-0.65}$	774^{+15}_{-18}	2426^{+241}_{-187}	14^{+16}_{-7}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

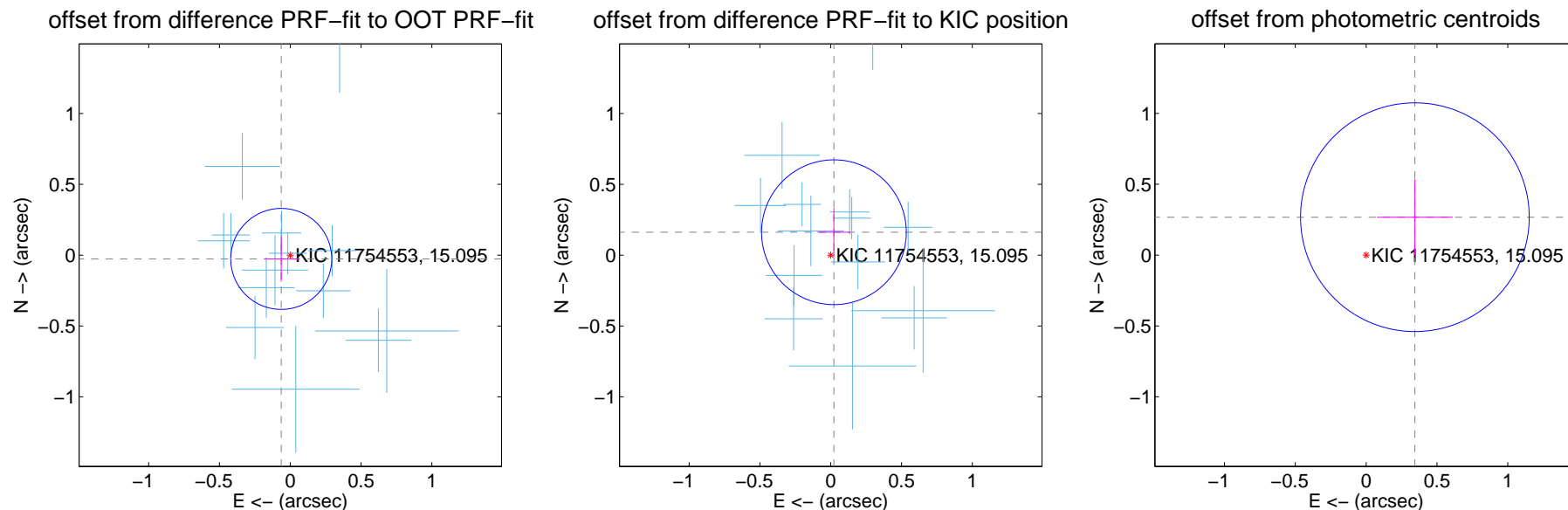
DV Centroid Data

Supplemental centroid analysis for 011754553-01. Kepler magnitude: 15.10. Transit SNR 44.56

There are 14 quarters with good PRF difference image offsets

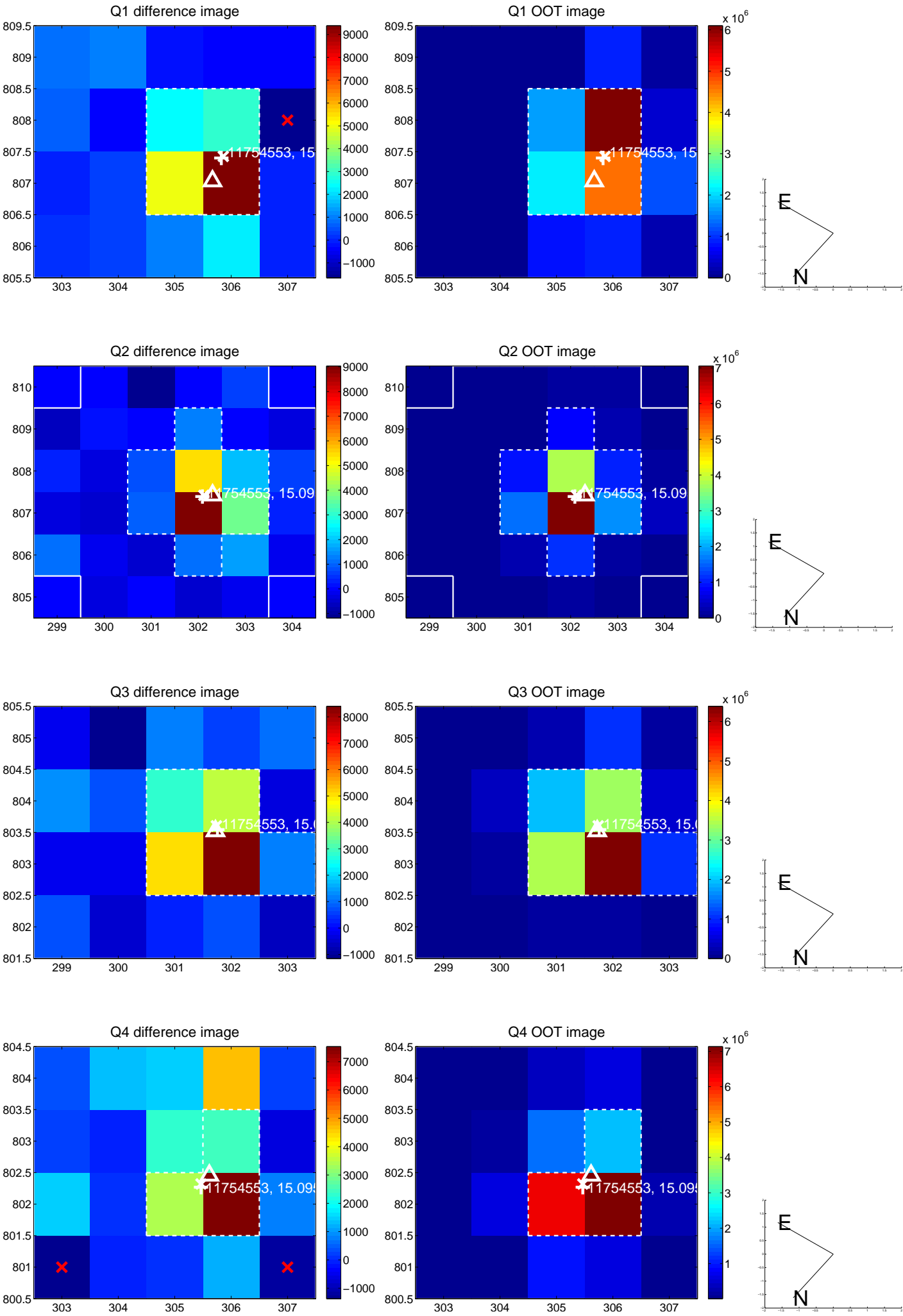
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.119	0.58	0.064 ± 0.121	-0.027 ± 0.160
PRF-fit source offset from KIC position	0.163 ± 0.170	0.96	-0.023 ± 0.116	0.162 ± 0.173
photometric centroid source offset	0.44 ± 0.27	1.62	-0.34 ± 0.27	0.27 ± 0.27

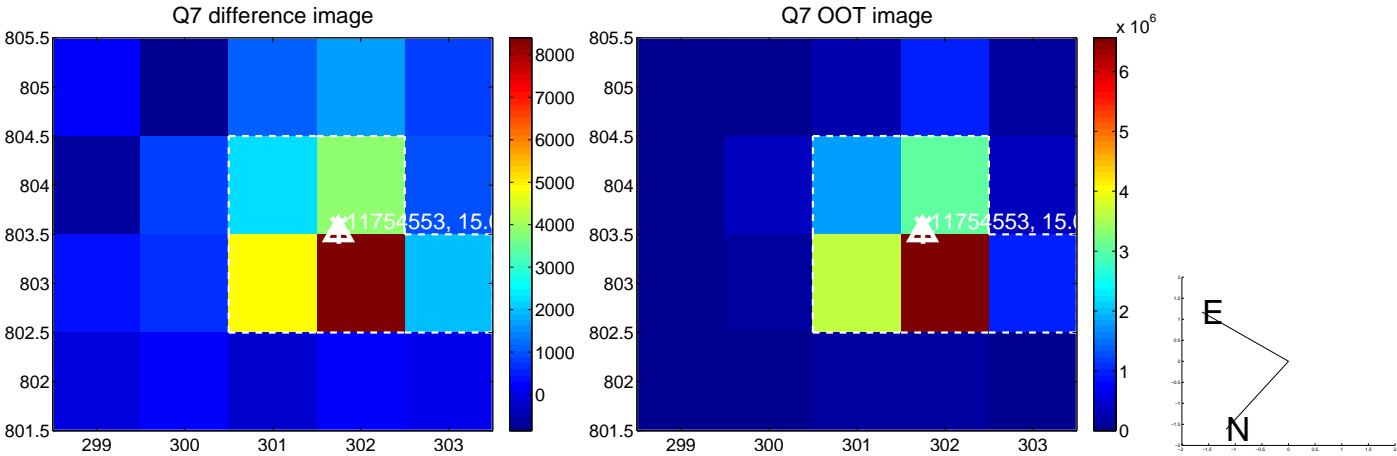
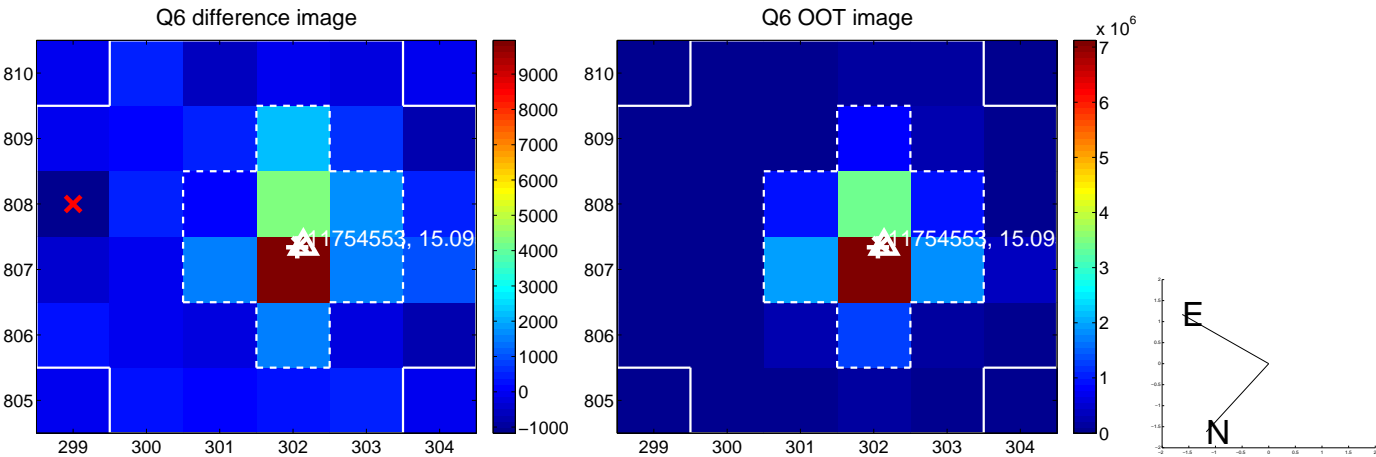
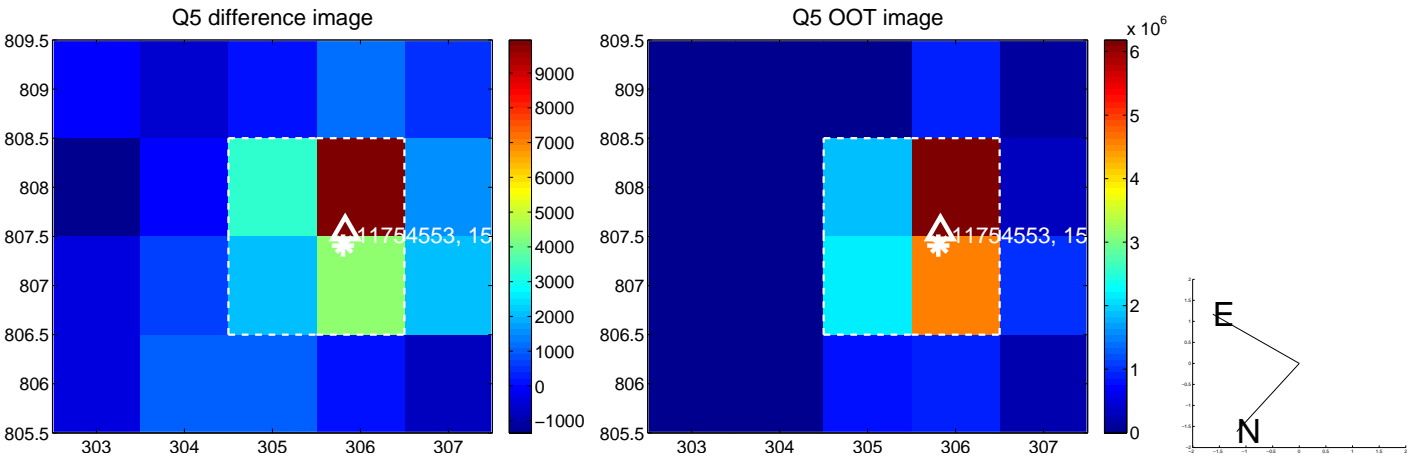


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

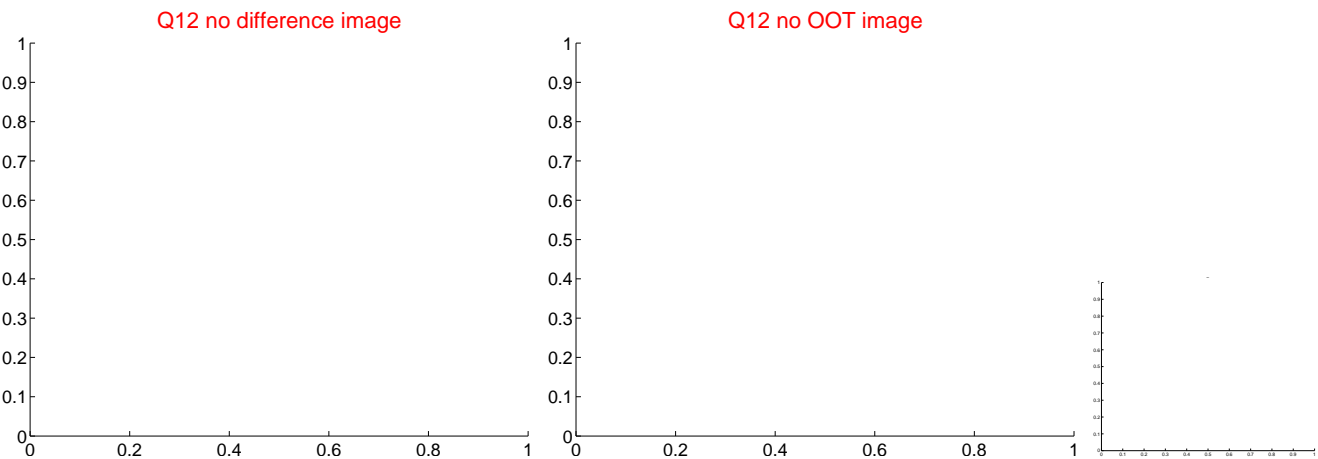
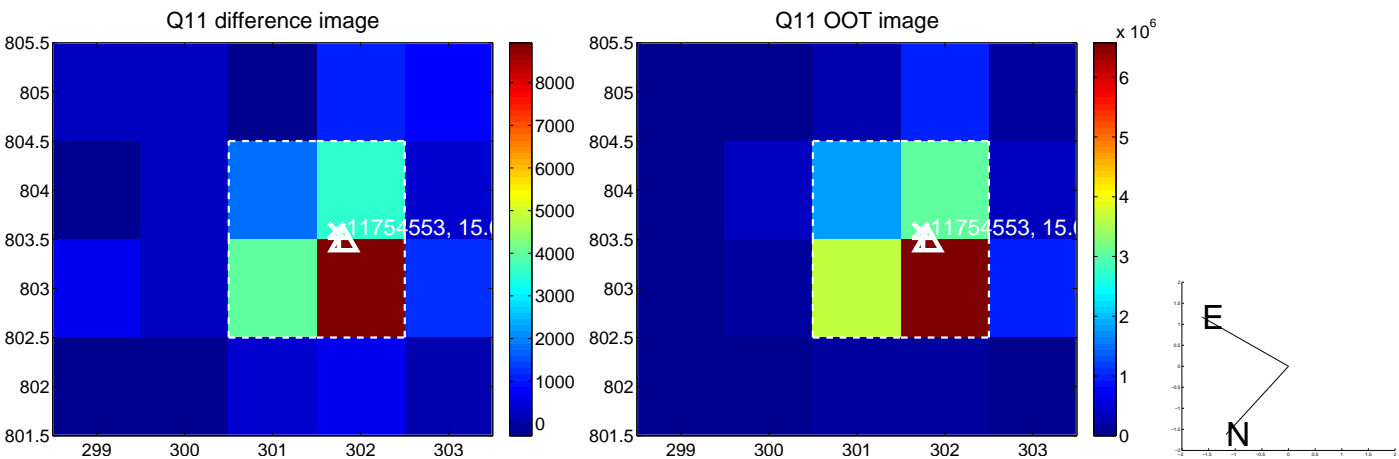
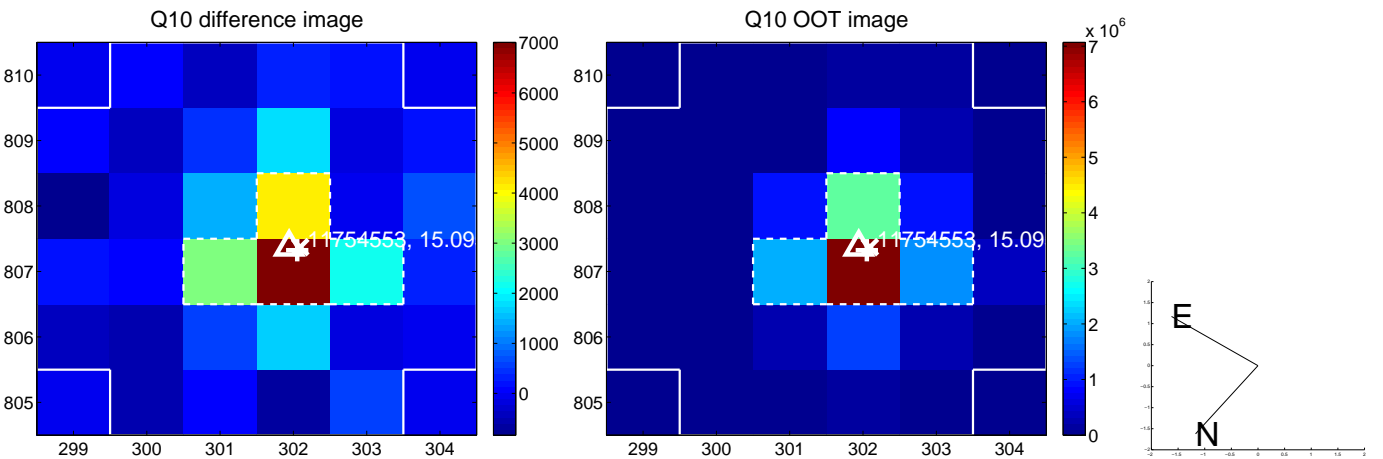
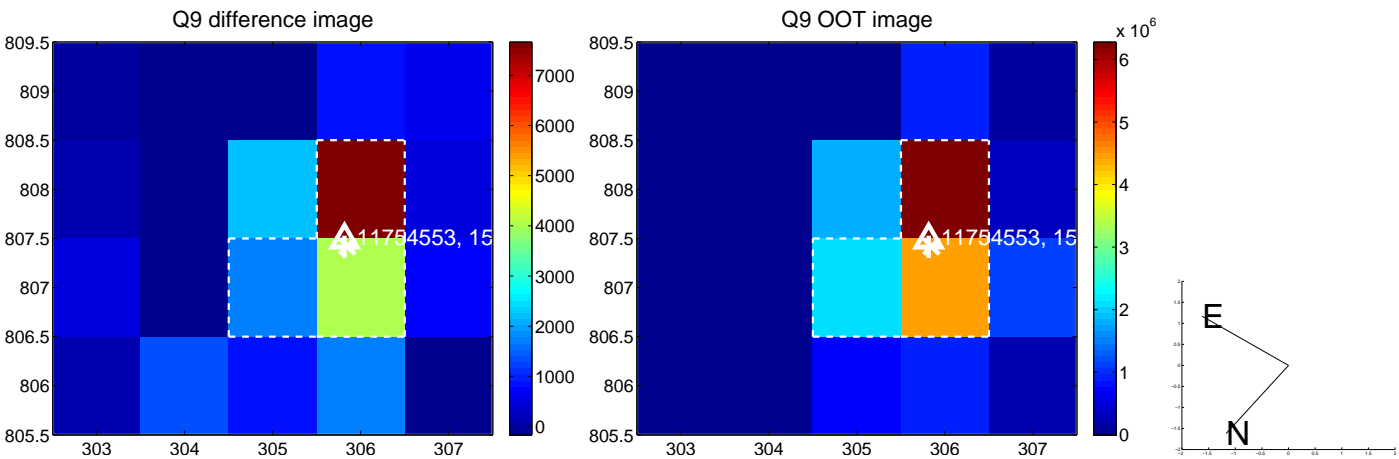
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



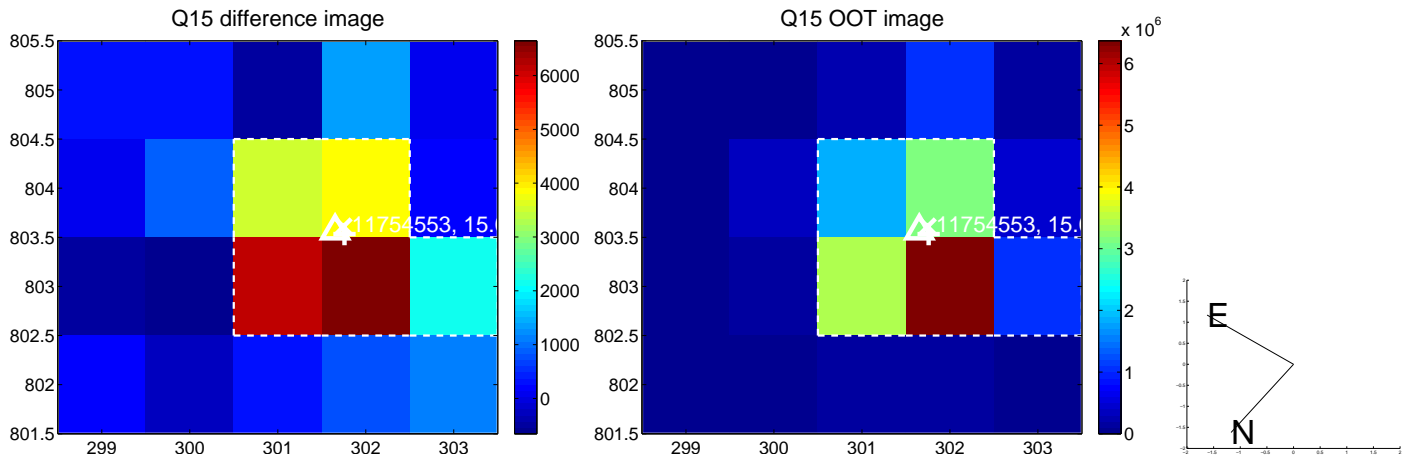
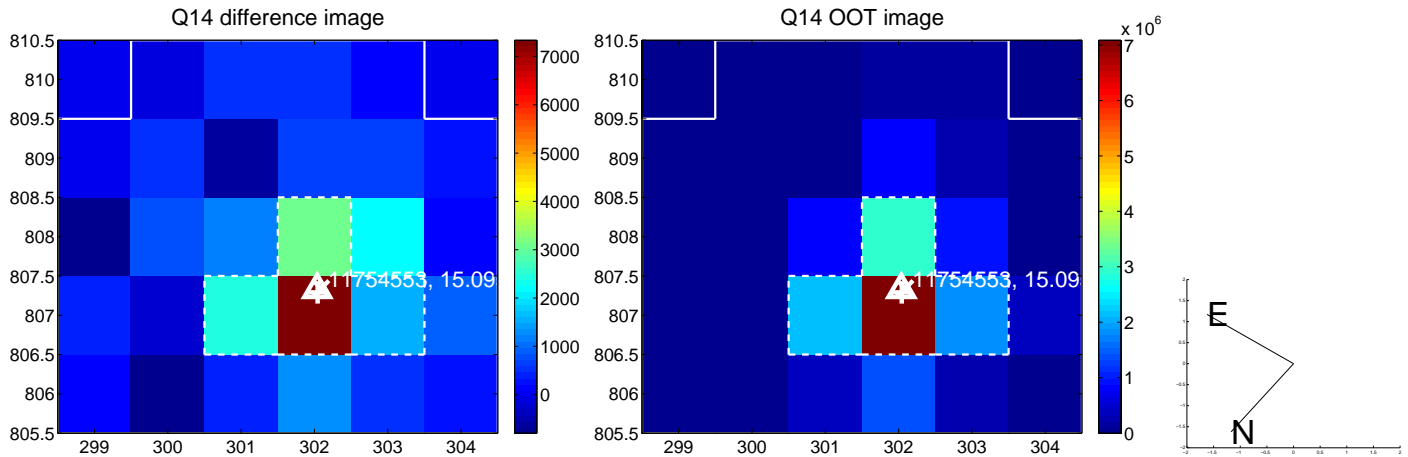
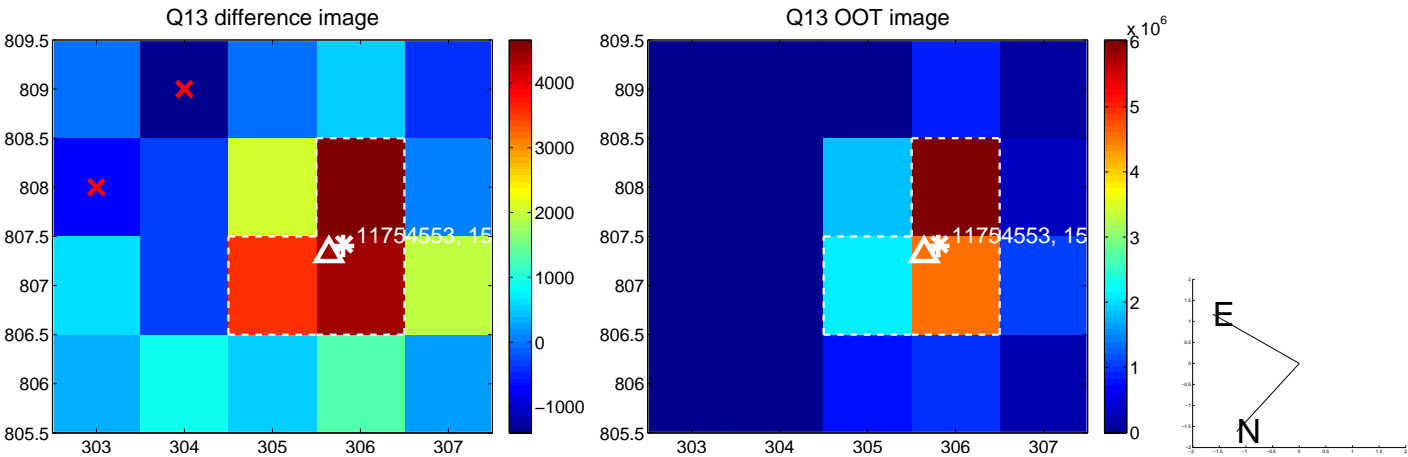
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



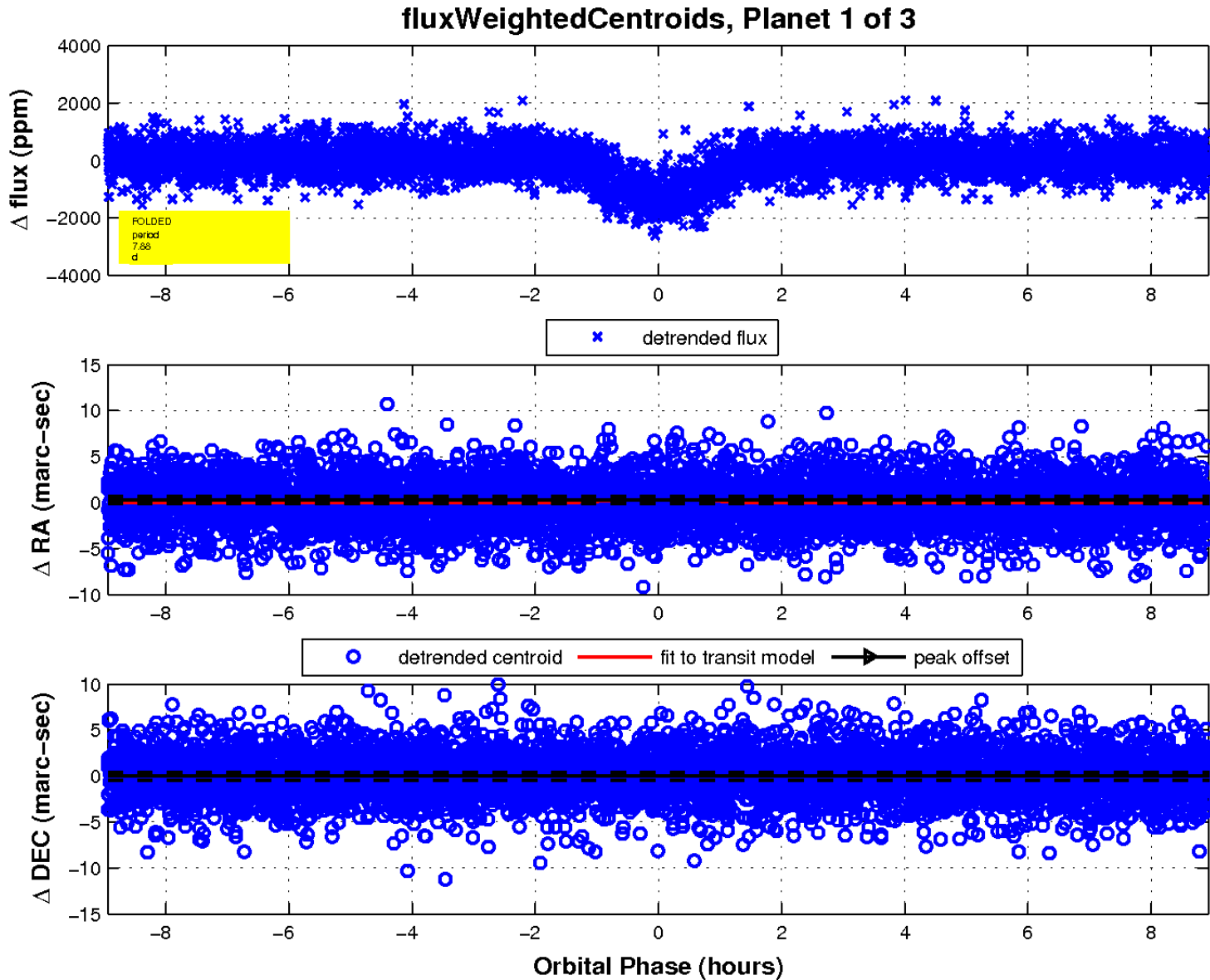
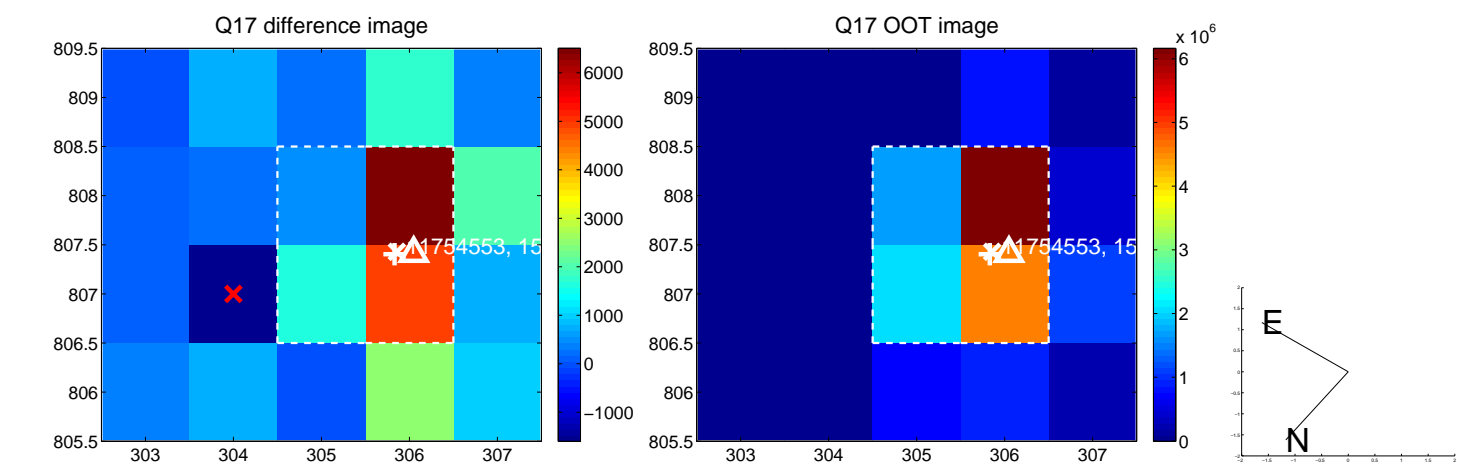
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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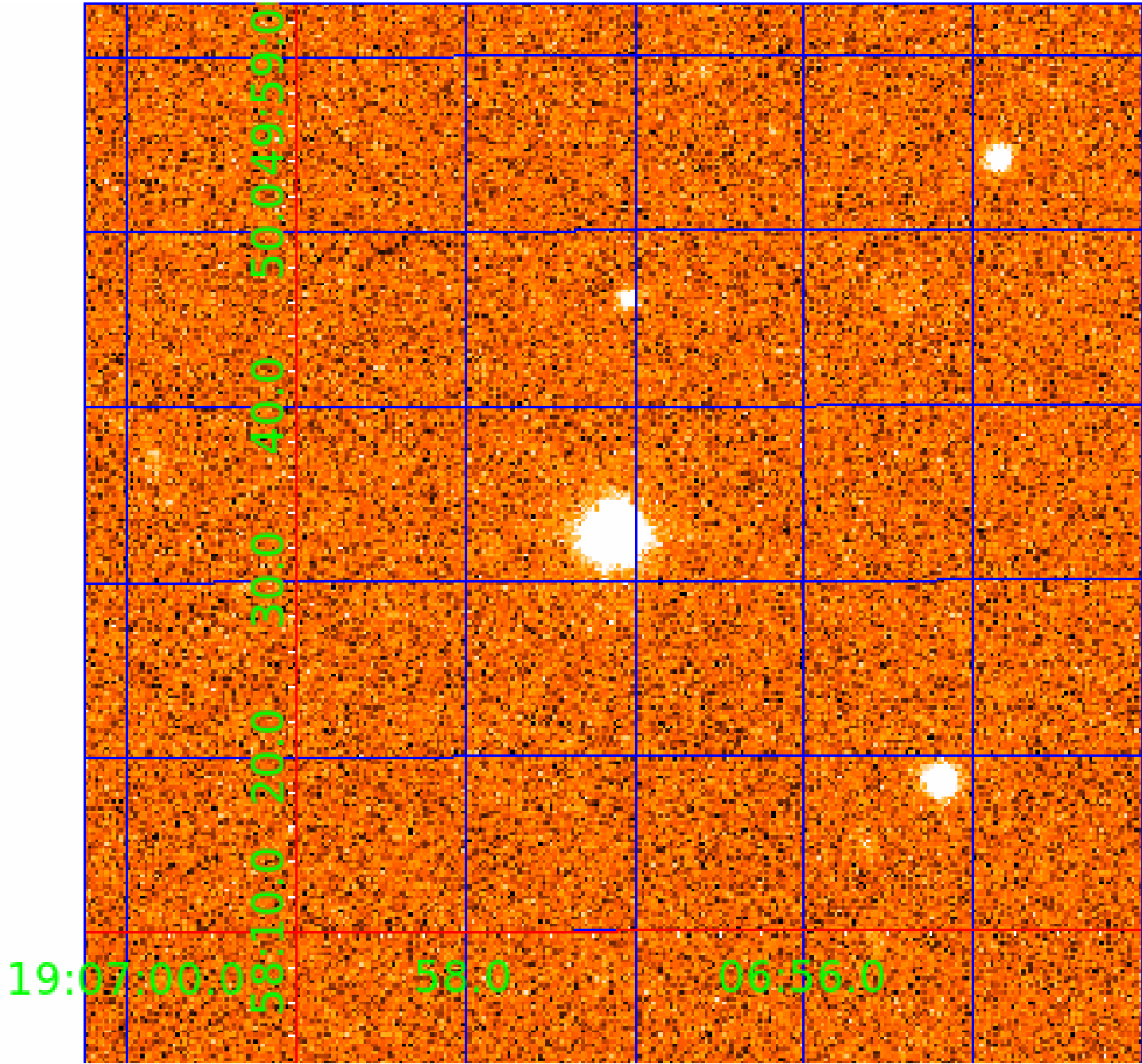


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011754553

Q1-17 DR25 TCE Parameters

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011754553-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011754553-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

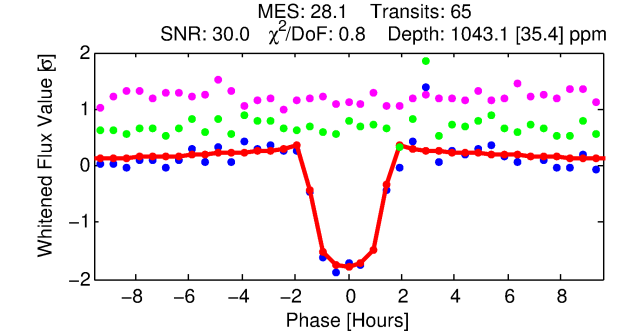
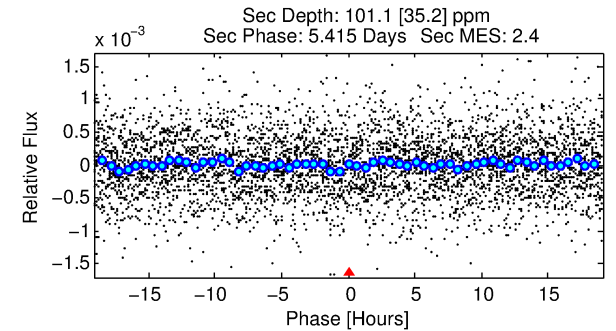
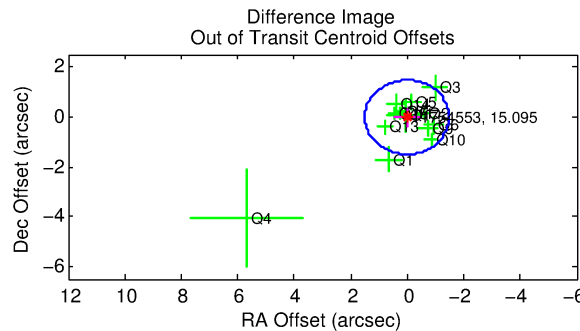
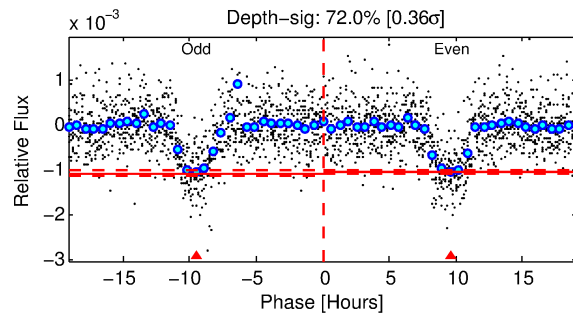
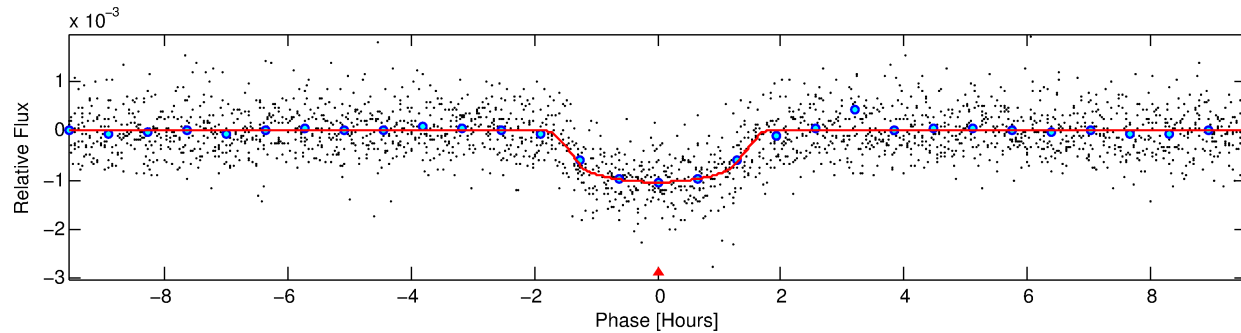
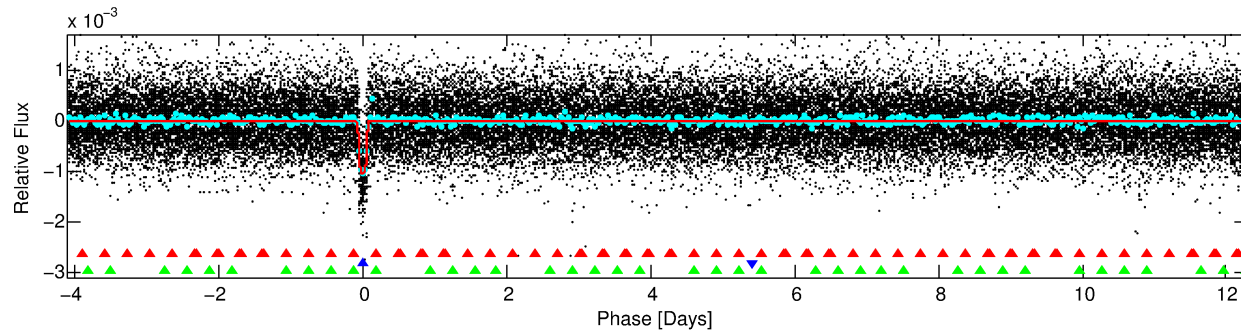
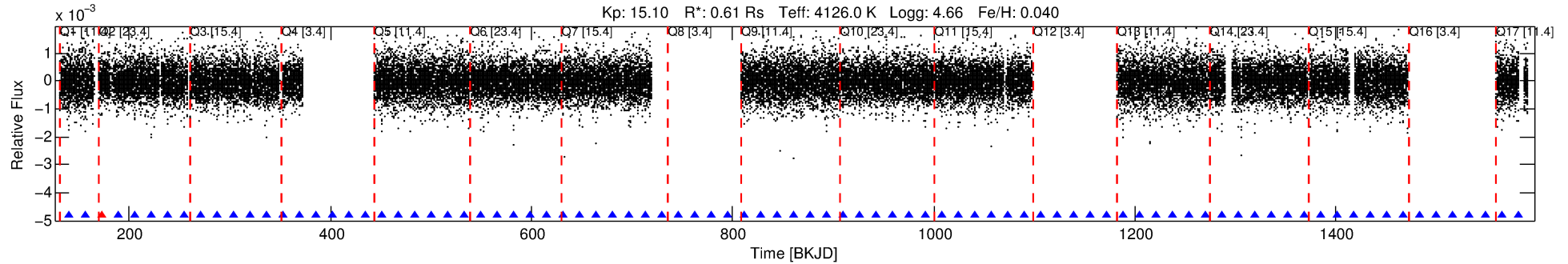
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011754553-02

No Significant Match Found

DV One-Page Summary

KIC: 11754553 Candidate: 2 of 3 Period: 16.385 d
KOI: K00775.01 Name: Kepler-52c Corr: 0.966



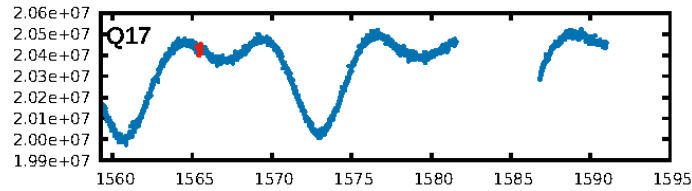
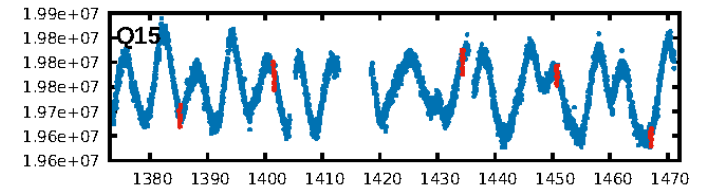
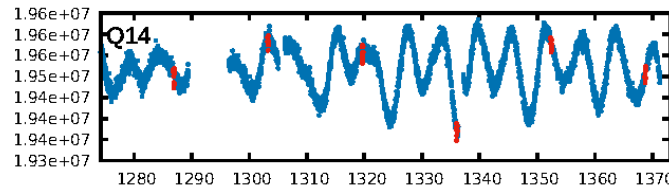
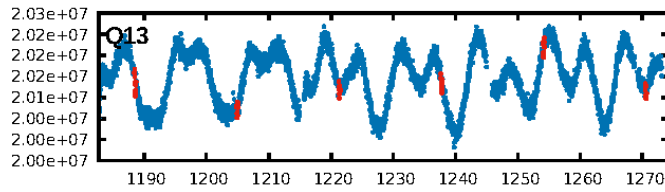
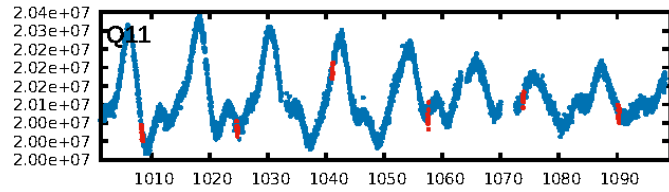
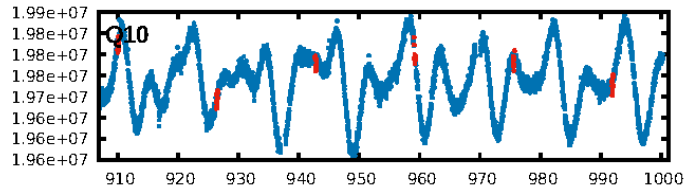
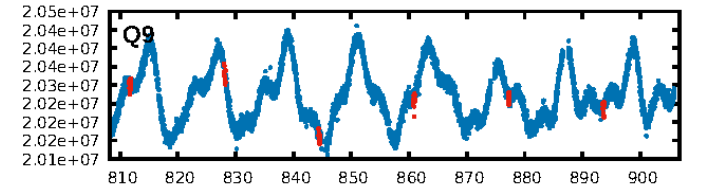
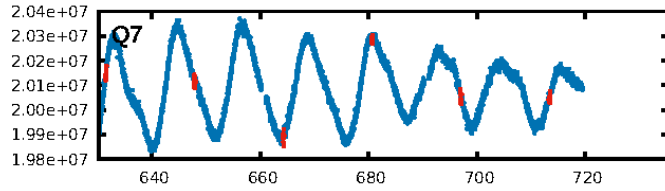
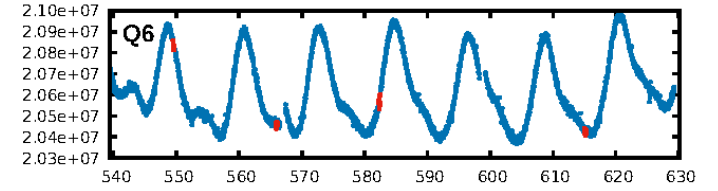
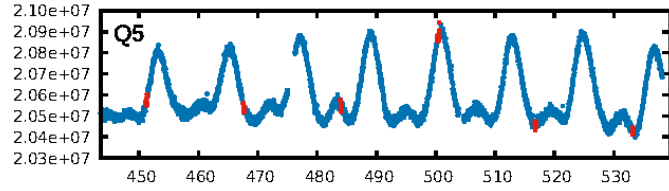
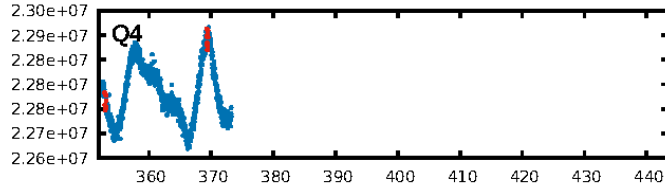
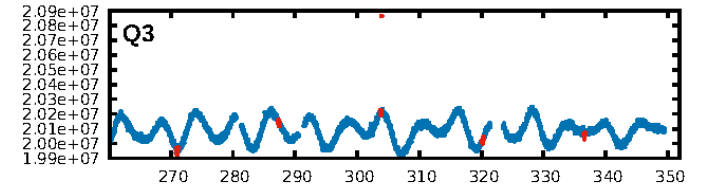
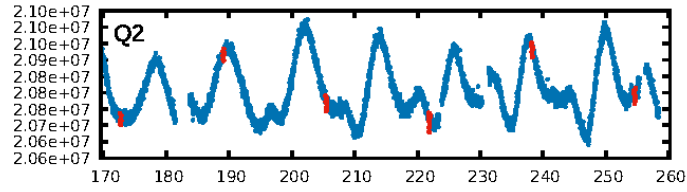
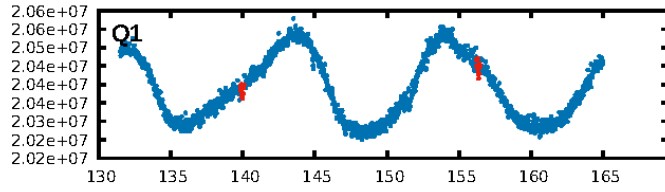
DV Fit Results:

Period = 16.38485 [0.00005] d
Epoch = 139.9595 [0.0021] BKJD
Rp/R* = 0.0323 [0.0097]
a/R* = 28.04 [29.17]
b = 0.75 [0.63]
Seff = 8.36 [0.77]
Teq = 434 [10] K
Rp = 2.17 [0.66] Re
a = 0.1084 [0.0039] AU
Ag = 139.29 [97.12] [1.42 σ]
Teffp = 2303 [403] K [4.64 σ]

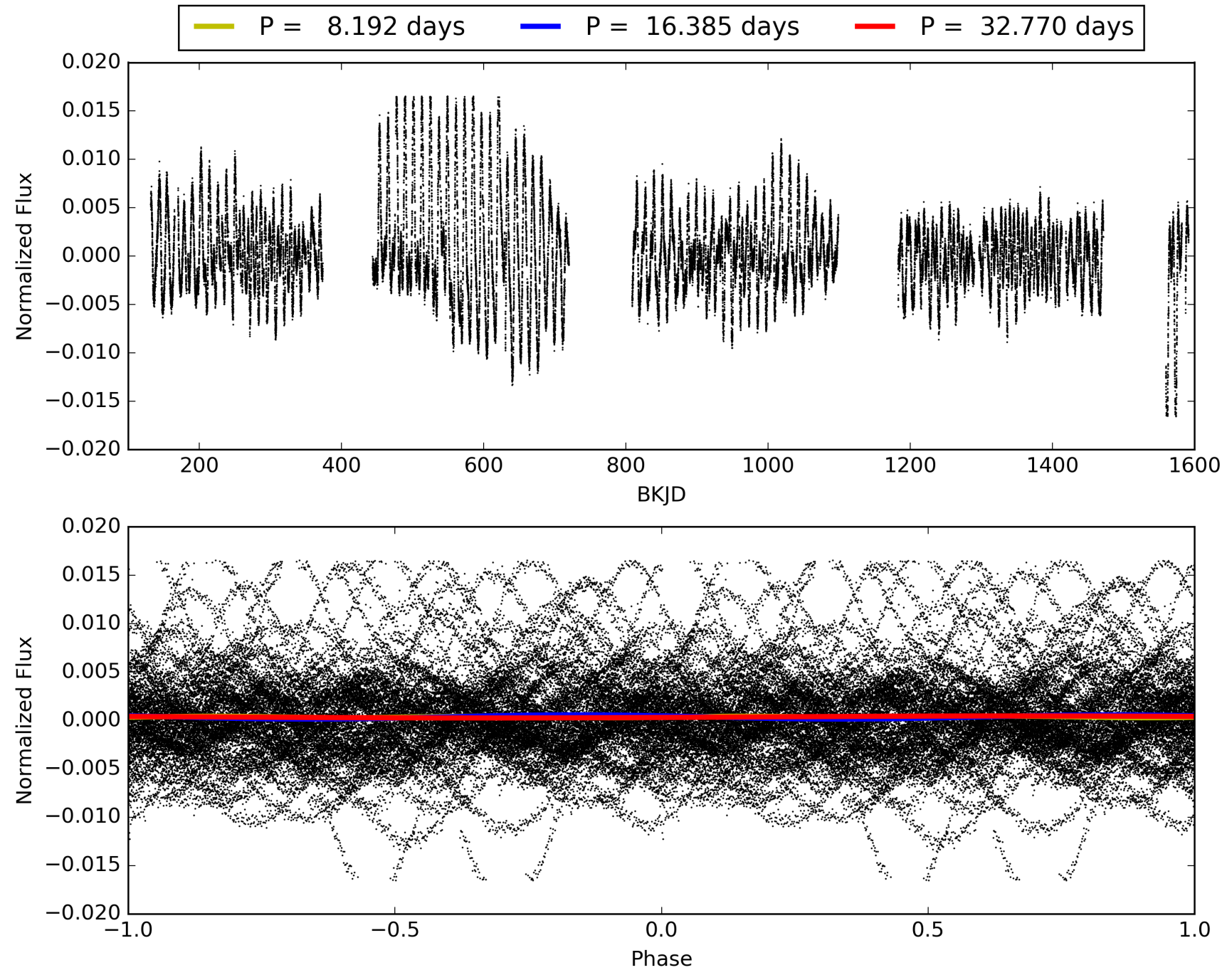
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.83 σ]
LongPeriod-sig: 100.0% [92.93 σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.14e-167
RollingBand-fgt: 0.98 [59/60]
GhostDiagnostic-chr: 2.963
Centroid-sig: 20.4%
Centroid-so: 0.732 arcsec [1.99 σ]
OotOffset-rm: 0.028 arcsec [0.06 σ]
KicOffset-rm: 0.167 arcsec [0.39 σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 011754553-02, PDC Light Curves

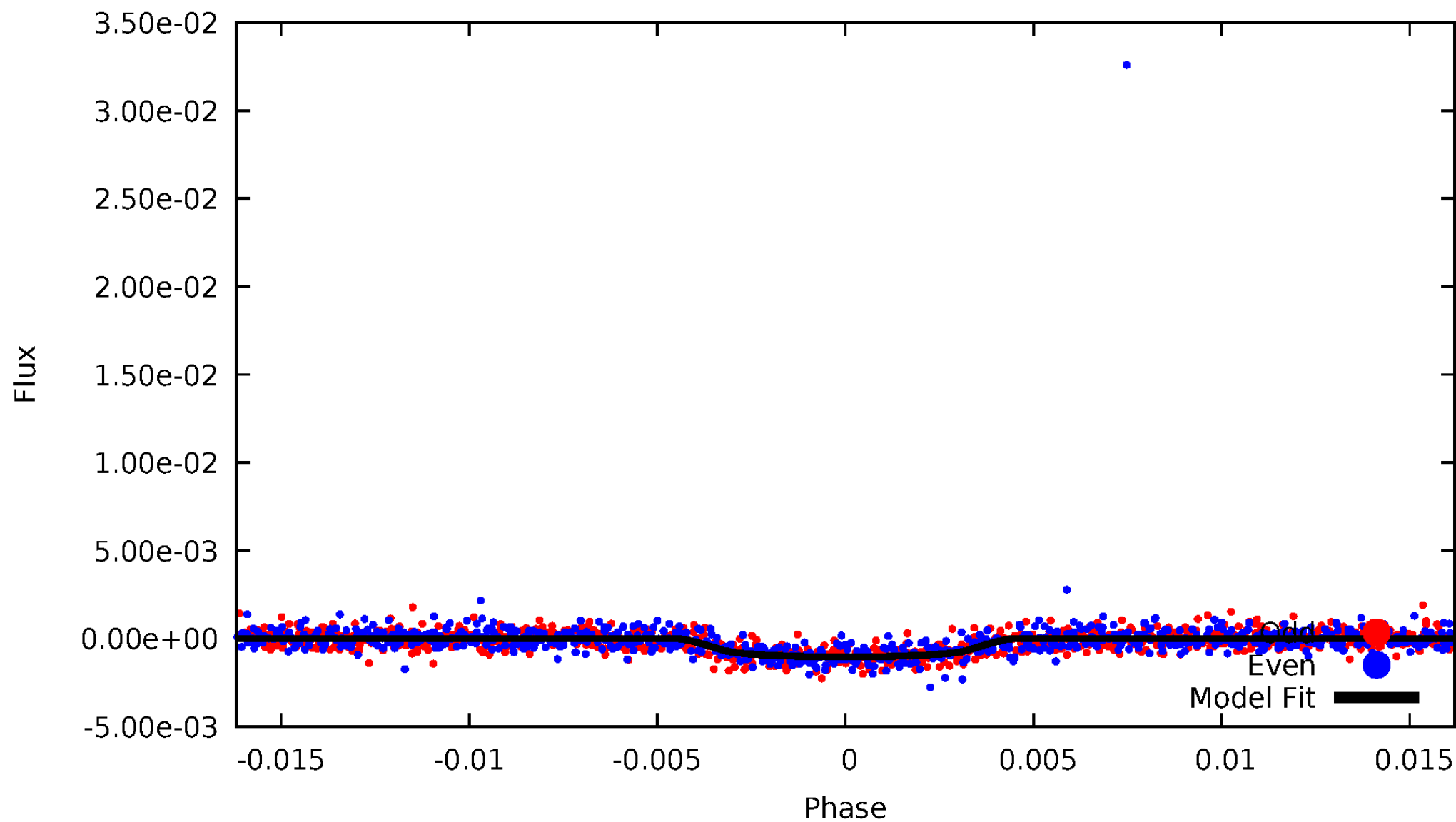


TCE 011754553-02



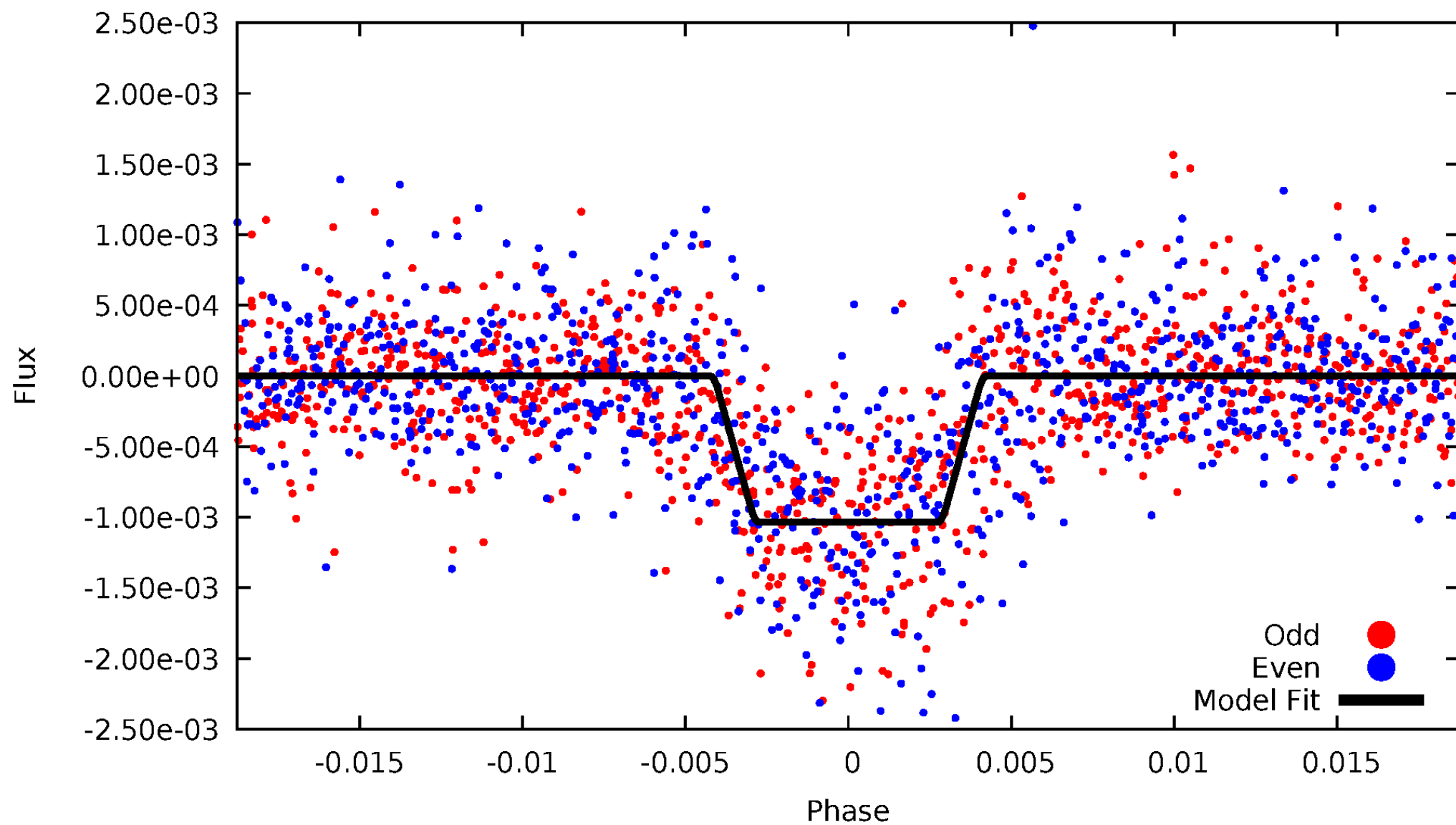
DV Odd/Even

TCE 011754553-02



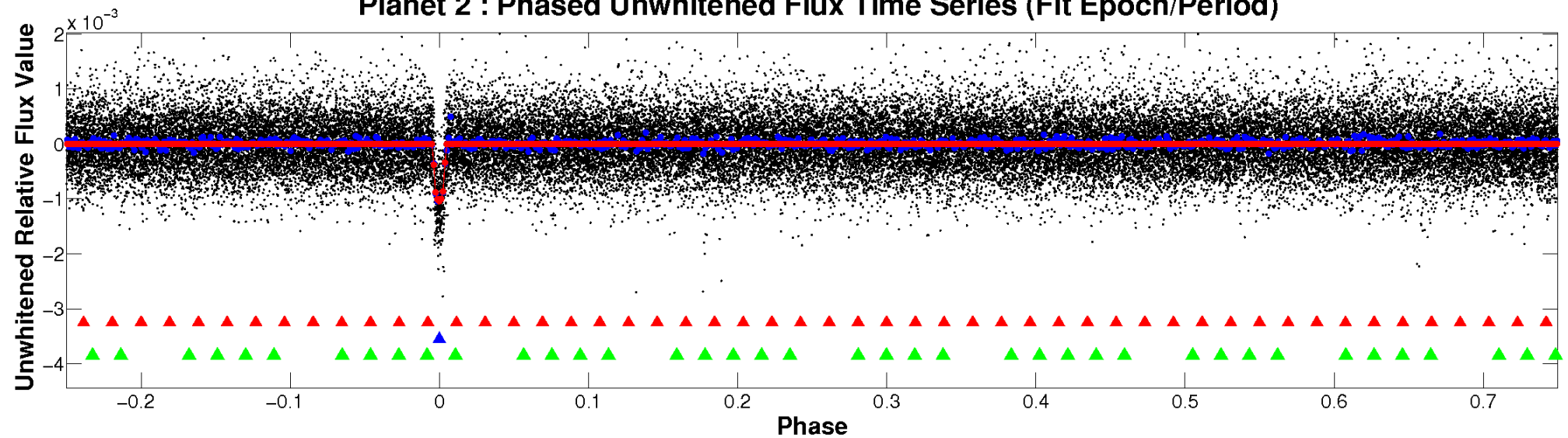
ALT Odd/Even

TCE 011754553-02

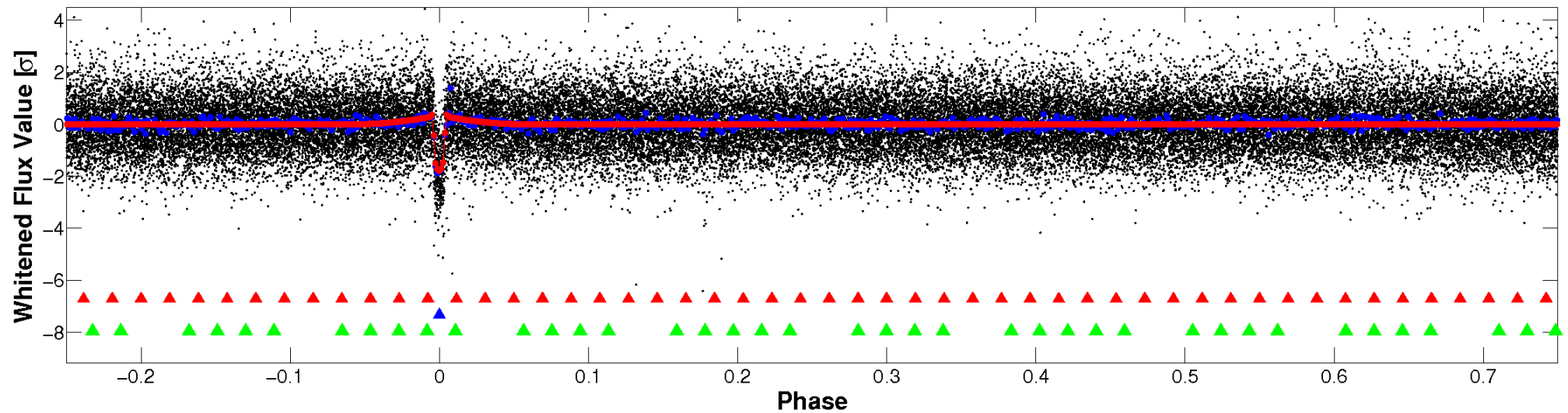


Non-Whitened Vs. Whitened Light Curve

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

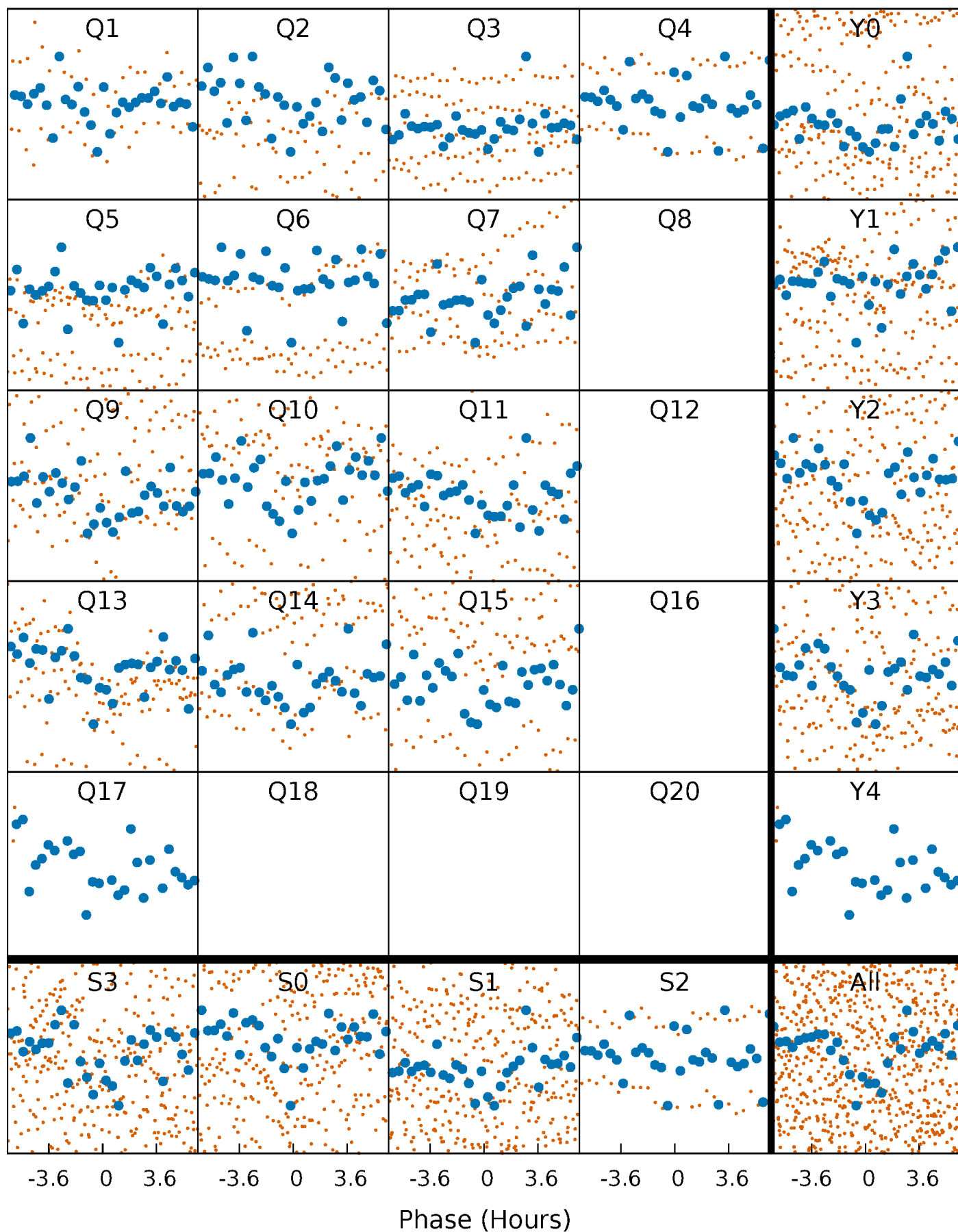


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



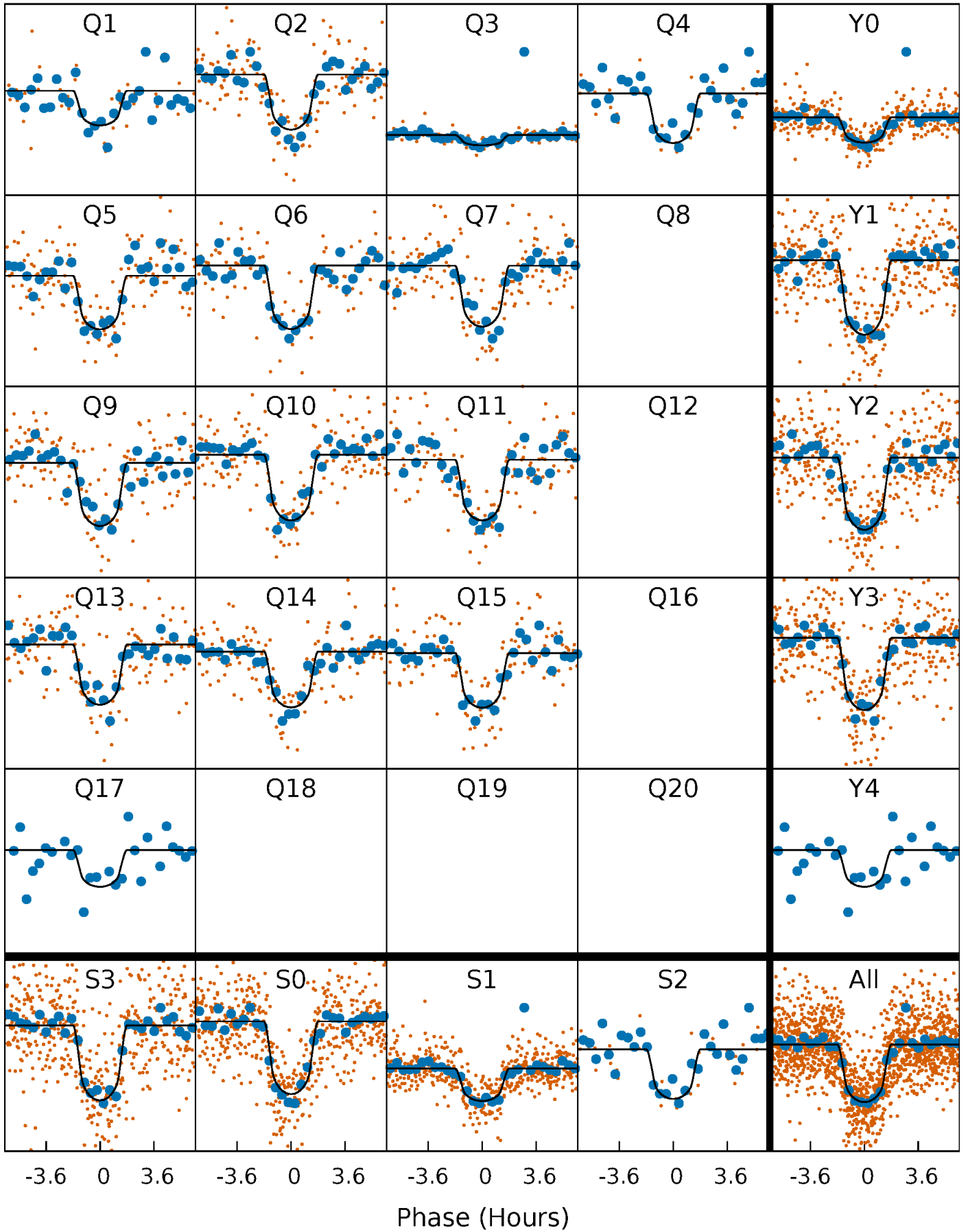
PDC Quarter-Phased Transit Curves

TCE 011754553-02 P= 16.384851 Days $T_0=139.959522$ (BKJD)



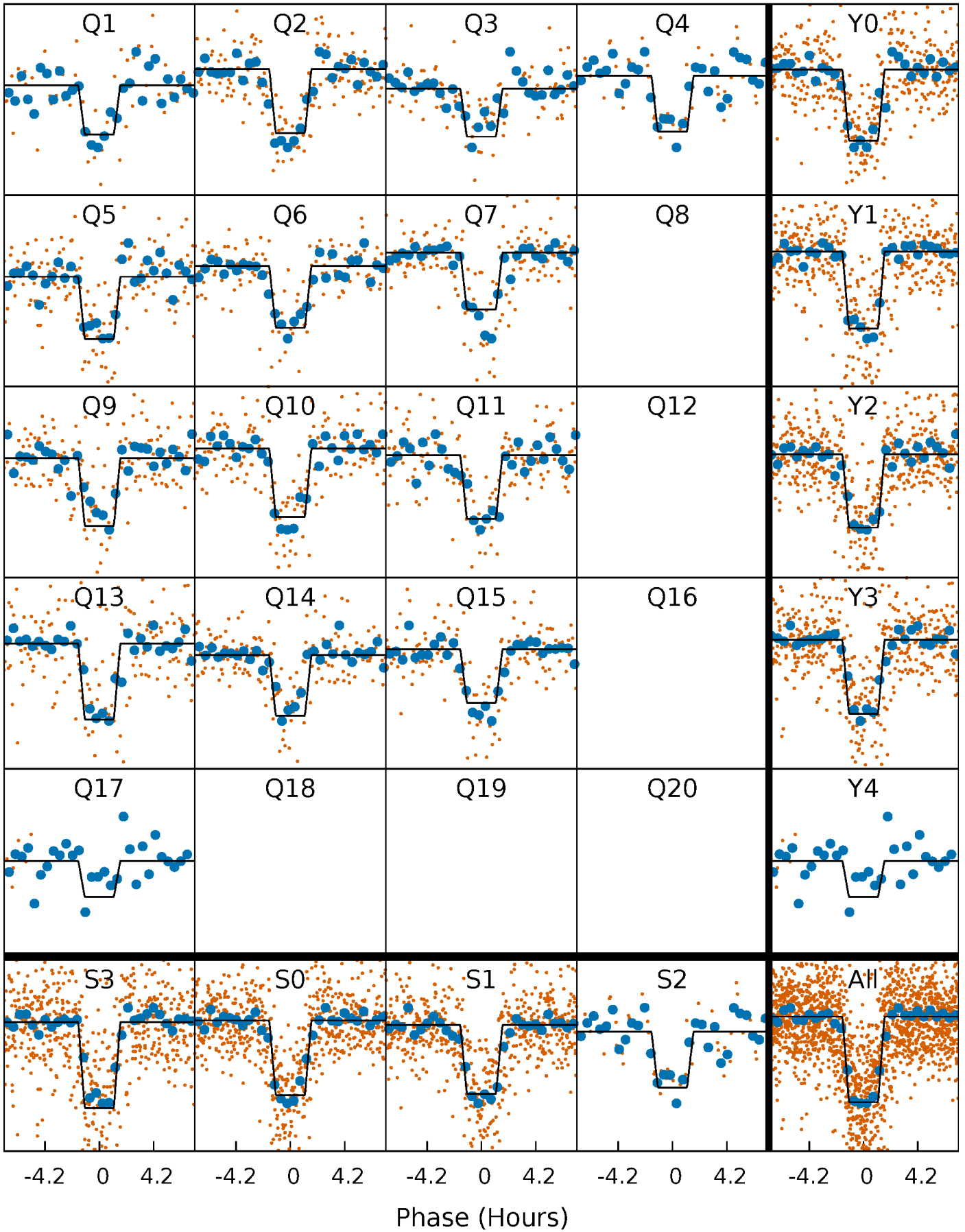
DV Quarter-Phased Transit Curves

TCE 011754553-02 P= 16.384851 Days $T_0=139.959522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

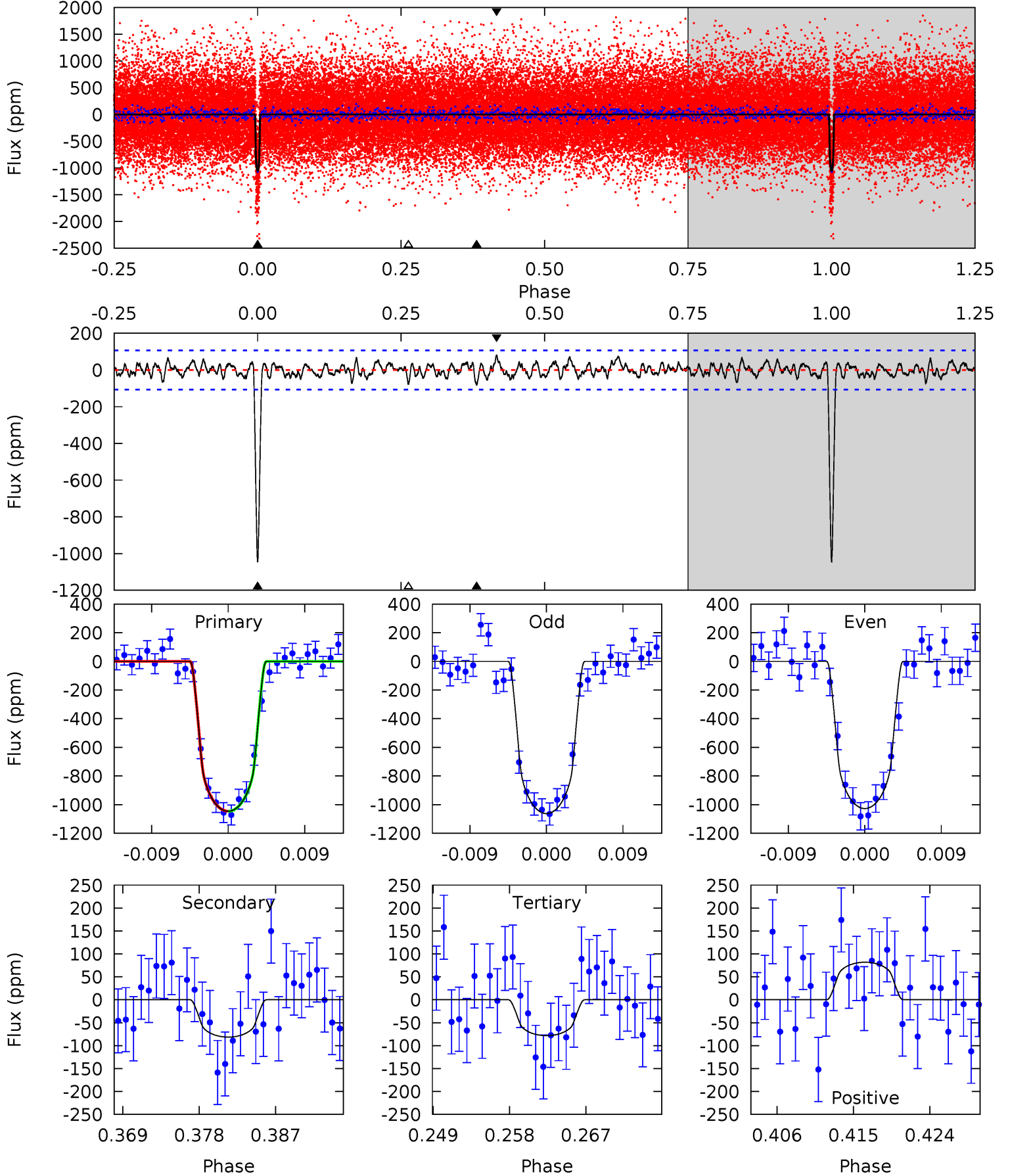
TCE 011754553-02 P= 16.384665 Days $T_0=139.967074$ (BKJD)



DV Model-Shift Uniqueness Test

011754553-02, P = 16.384851 Days, E = 123.574671 Days

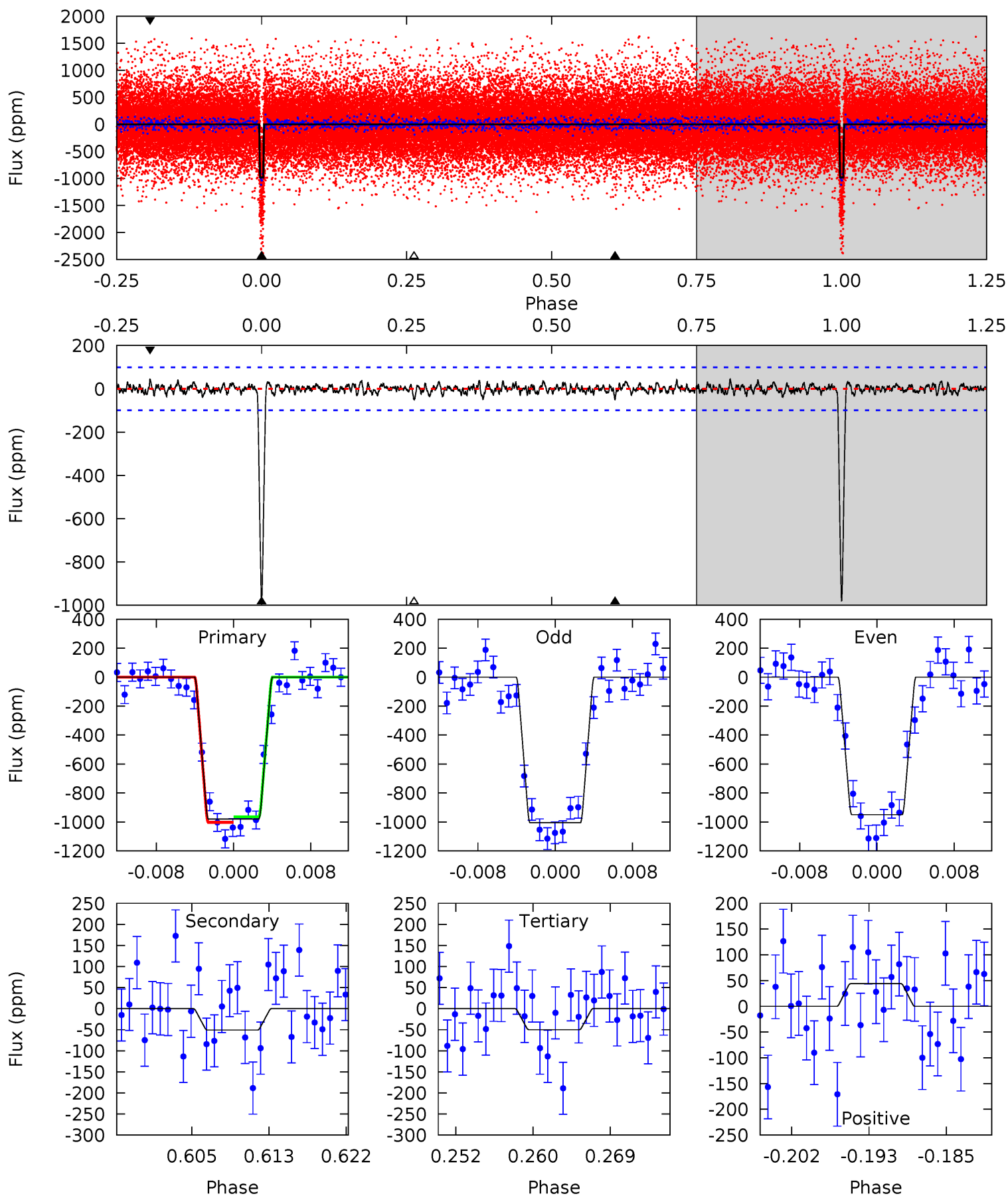
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.3	3.84	3.69	3.86	5.04	2.60	1.27	45.6	45.5	0.15	-0.02	0.83	1.01	0.07	0.02



Alt Model-Shift Uniqueness Test

011754553-02, P = 16.384665 Days, E = 123.582409 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.0	2.59	2.55	2.24	5.06	2.64	0.74	47.4	47.7	0.04	0.35	1.41	1.06	0.04	0.98



Stellar Parameters For KIC 011754553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4126^{+82}_{-82}	$4.661^{+0.022}_{-0.022}$	$0.040^{+0.150}_{-0.150}$	$0.615^{+0.027}_{-0.029}$	$0.633^{+0.029}_{-0.035}$	$3.829^{+0.371}_{-0.338}$
	+2%/-2%	+0%/-0%	+375%/-375%	+4%/-5%	+5%/-6%	+10%/-9%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 011754553-02 / KOI 0775.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-81 ± 21	$2.18^{+0.69}_{-0.66}$	605^{+13}_{-14}	2764^{+313}_{-207}	106^{+125}_{-48}
Alt.	-51 ± 20	$2.16^{+0.68}_{-0.65}$	605^{+13}_{-13}	2608^{+280}_{-225}	68^{+81}_{-35}

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 $A_{obs} \gg 1.0$

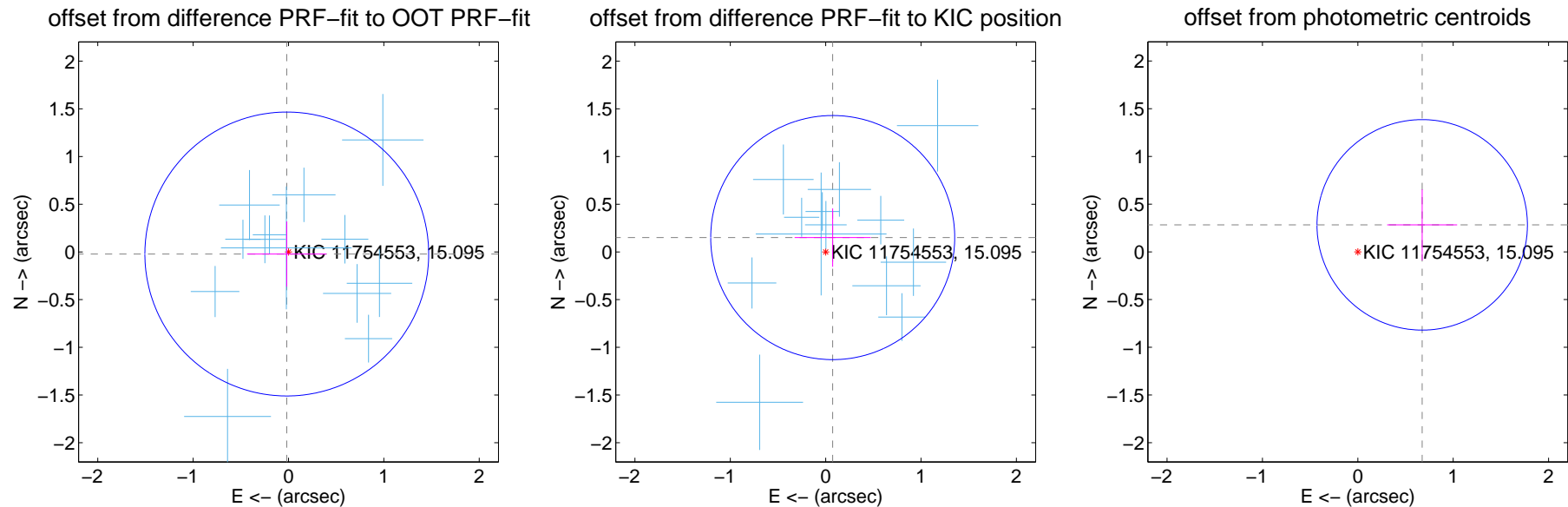
DV Centroid Data

Supplemental centroid analysis for 011754553-02. Kepler magnitude: 15.10. Transit SNR 29.98

There are 13 quarters with good PRF difference image offsets

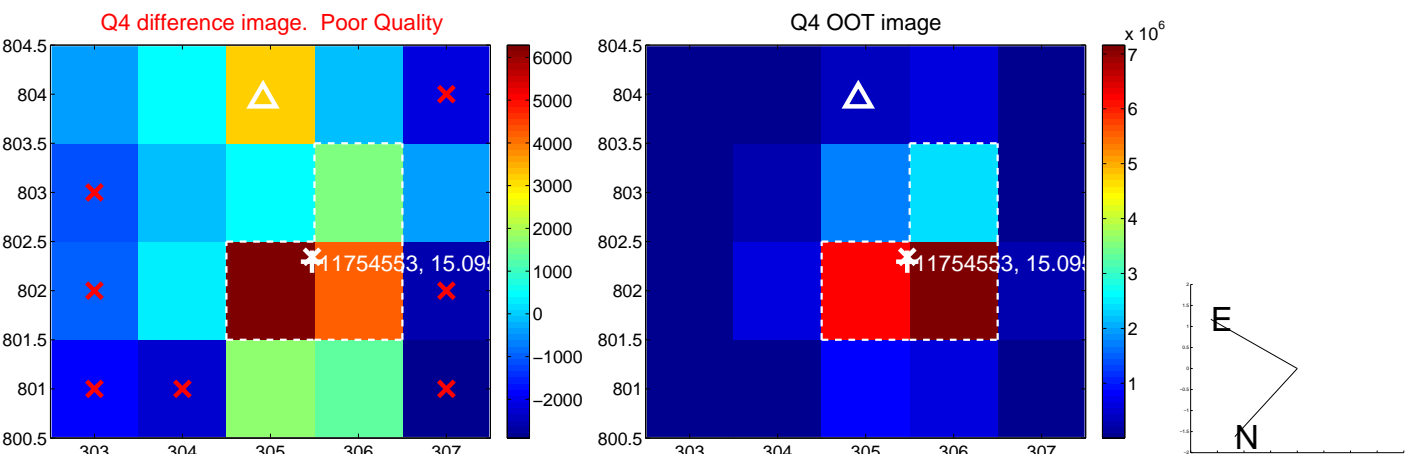
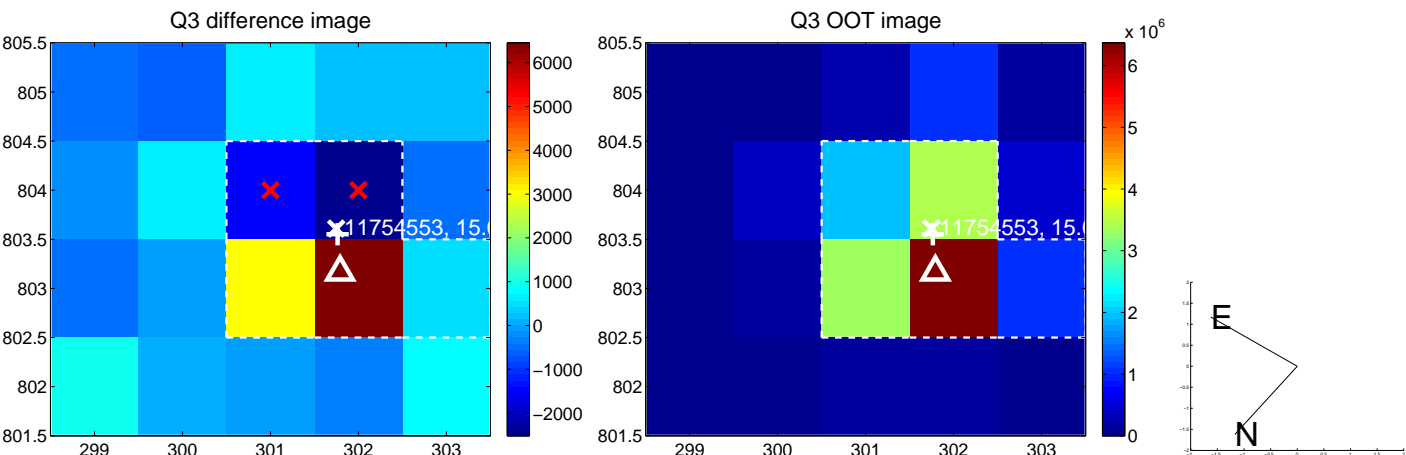
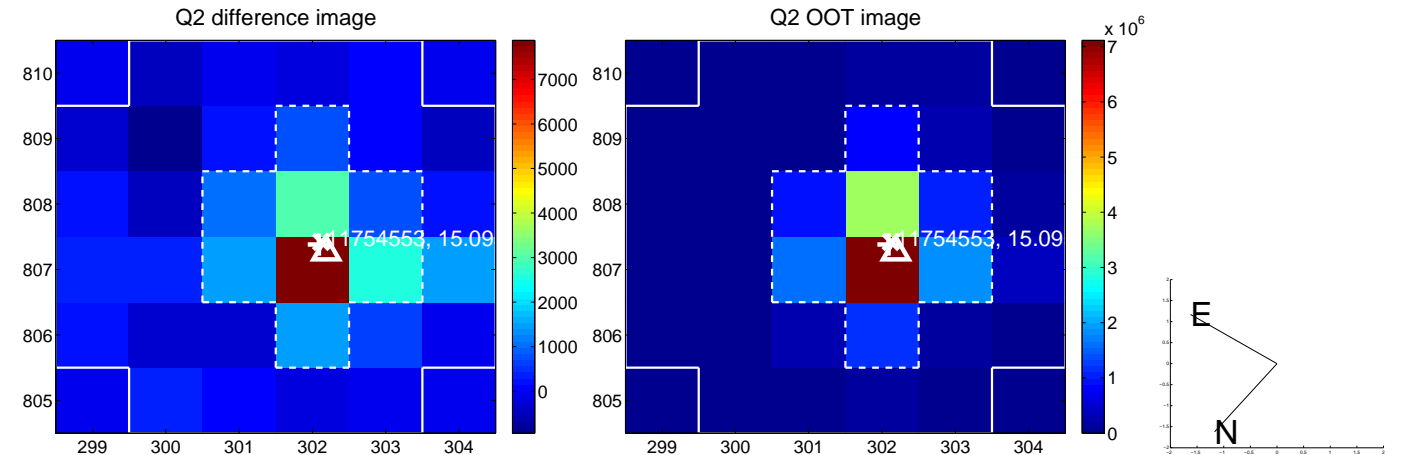
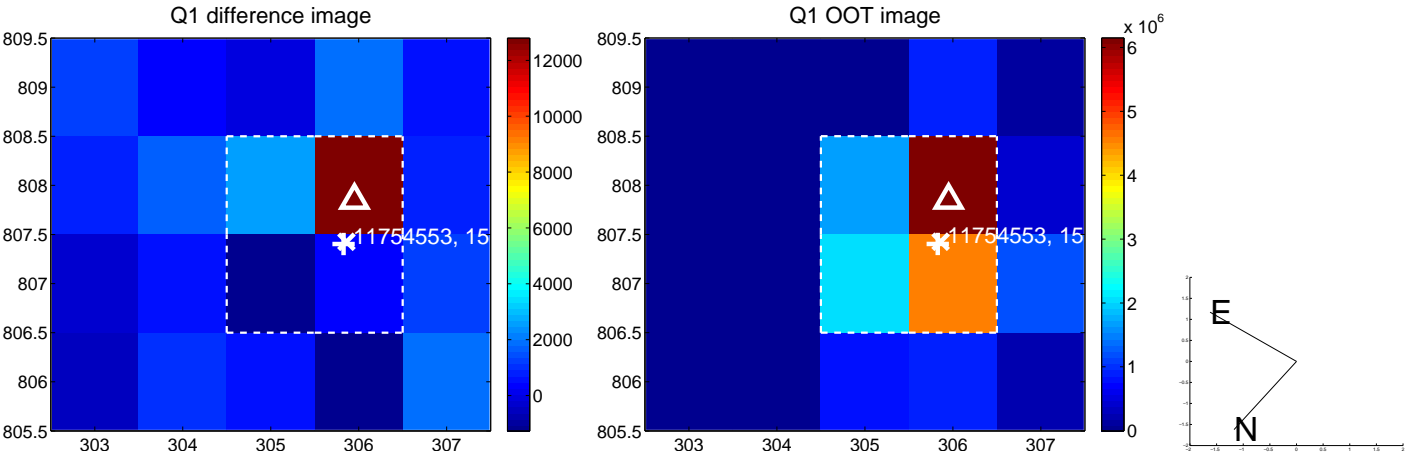
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.496	0.06	0.018 ± 0.416	-0.022 ± 0.342
PRF-fit source offset from KIC position	0.167 ± 0.426	0.39	-0.074 ± 0.399	0.150 ± 0.306
photometric centroid source offset	0.73 ± 0.37	1.99	-0.67 ± 0.37	0.28 ± 0.37

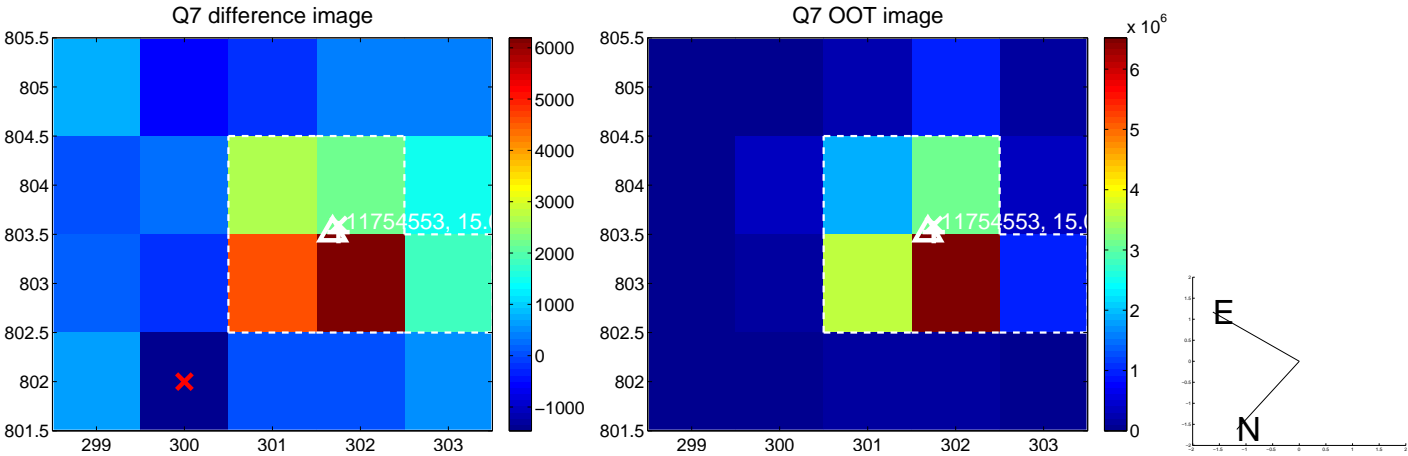
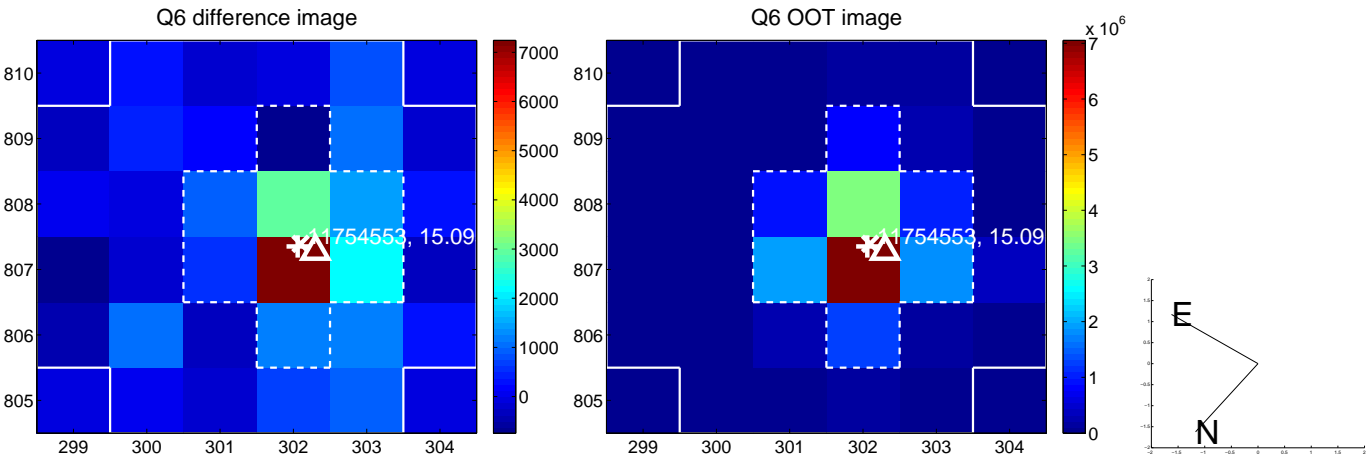
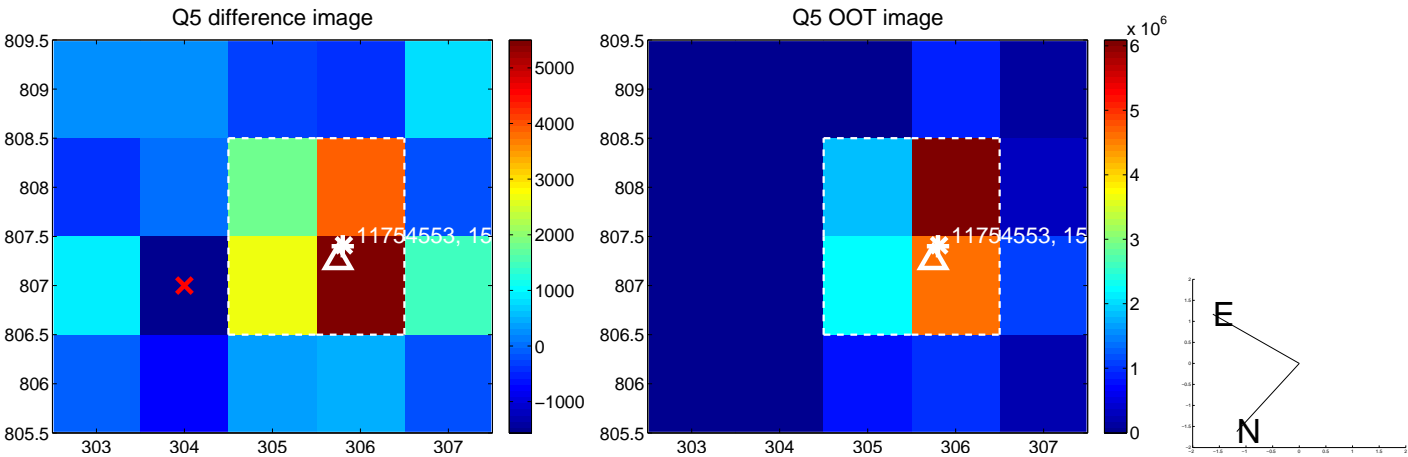


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

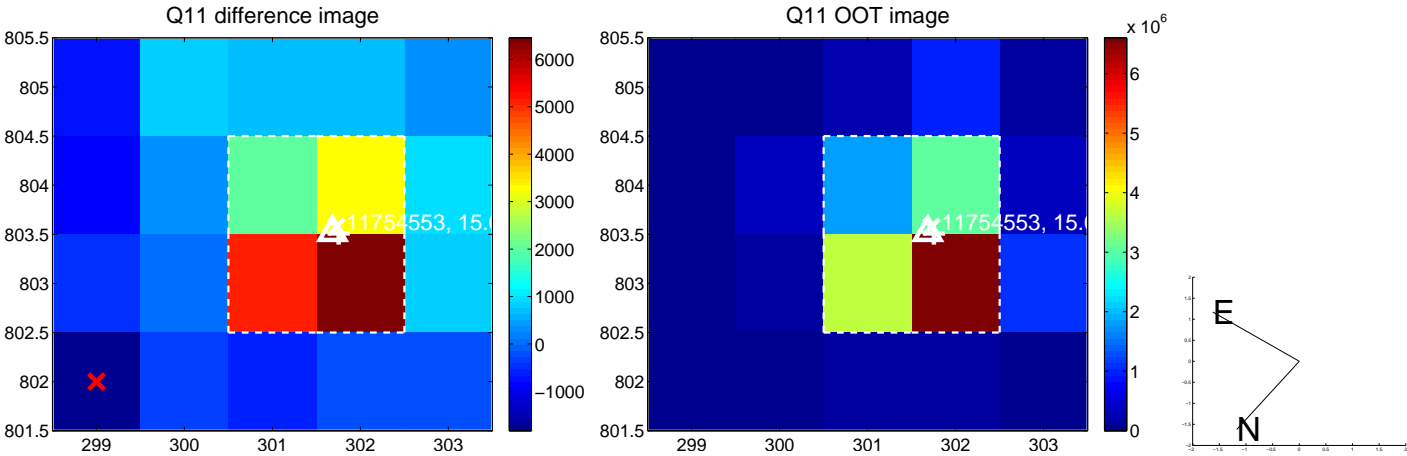
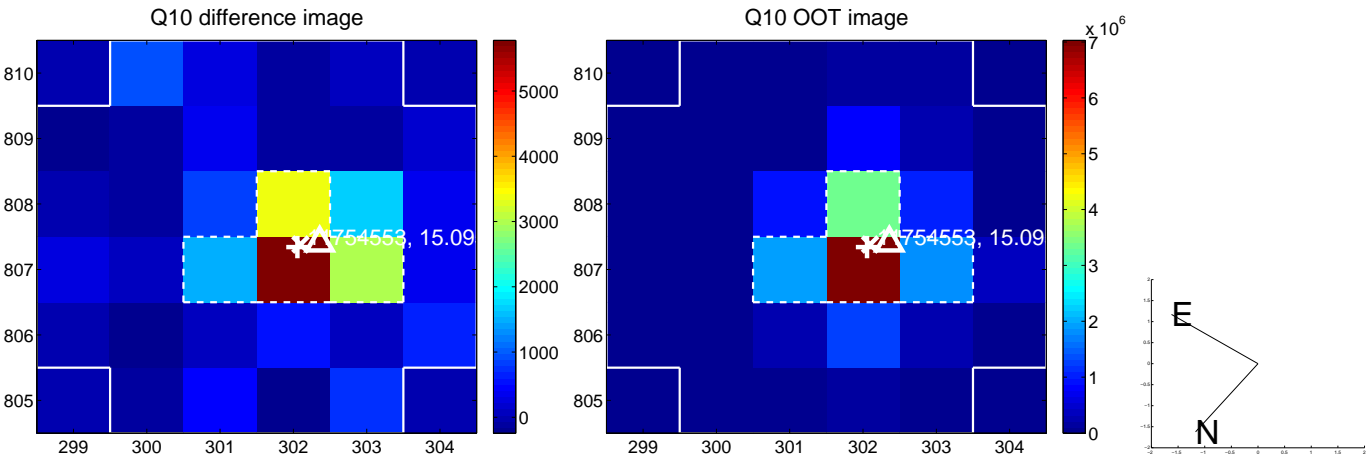
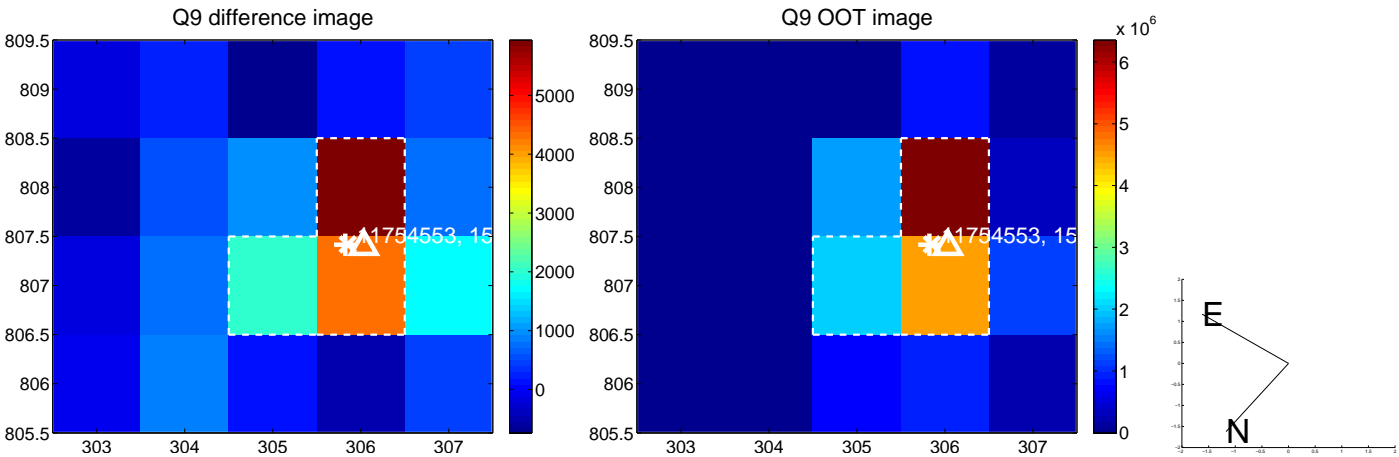
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



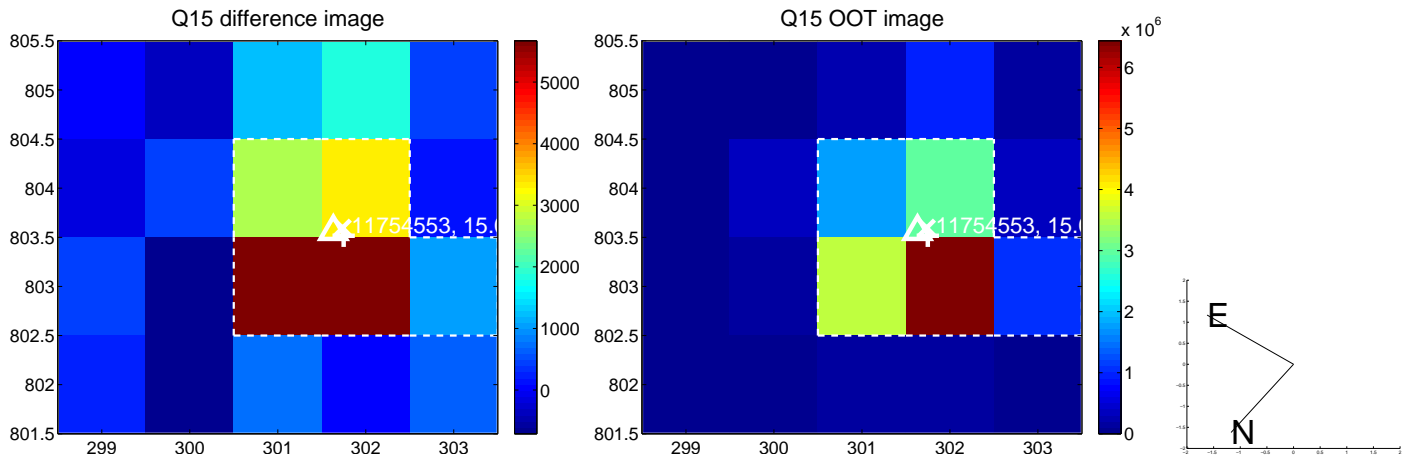
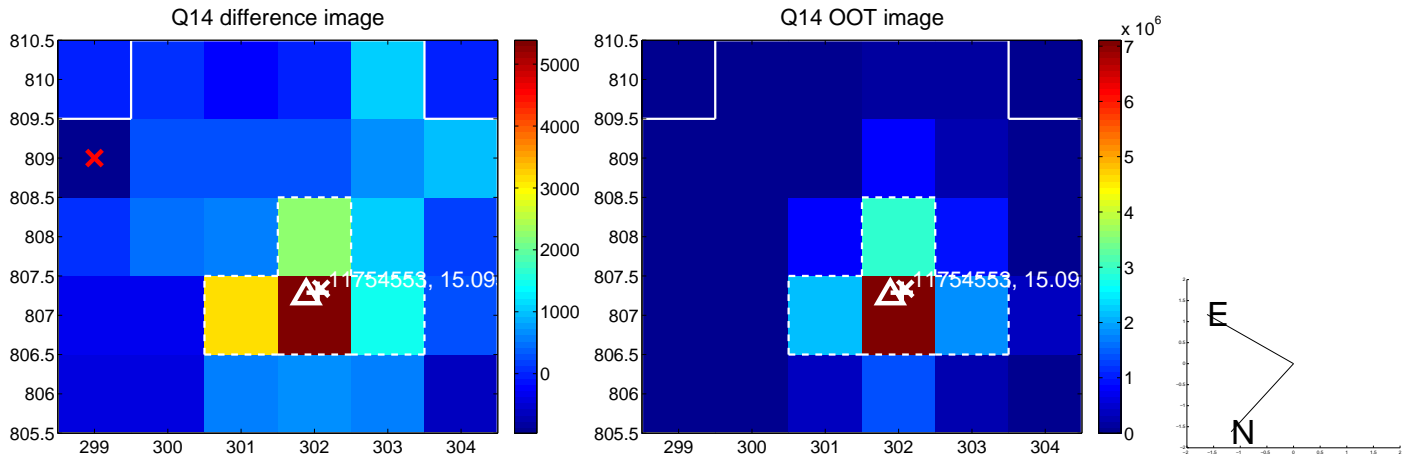
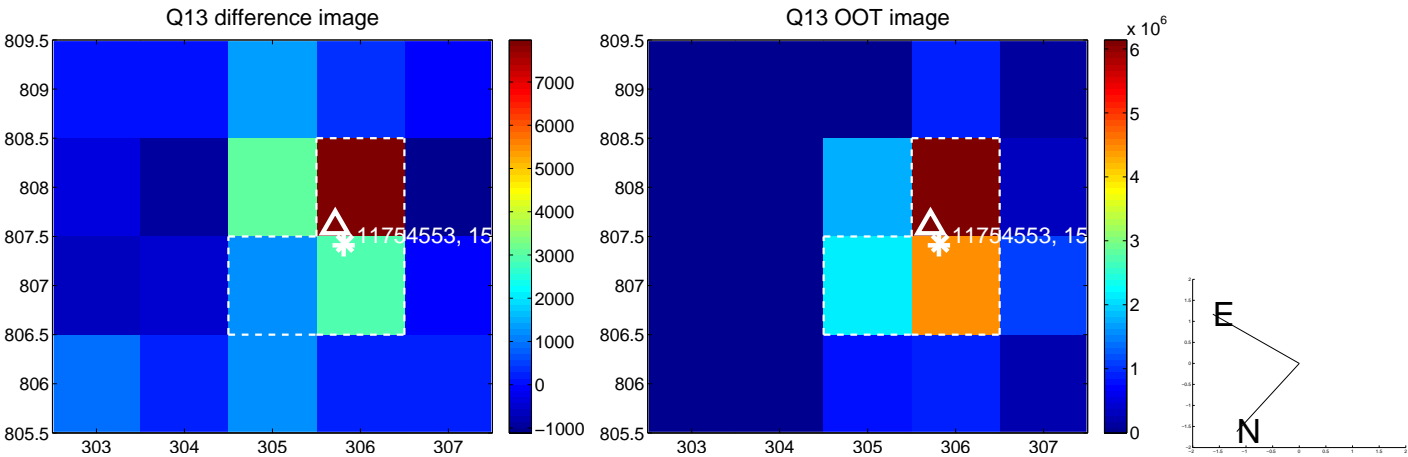
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



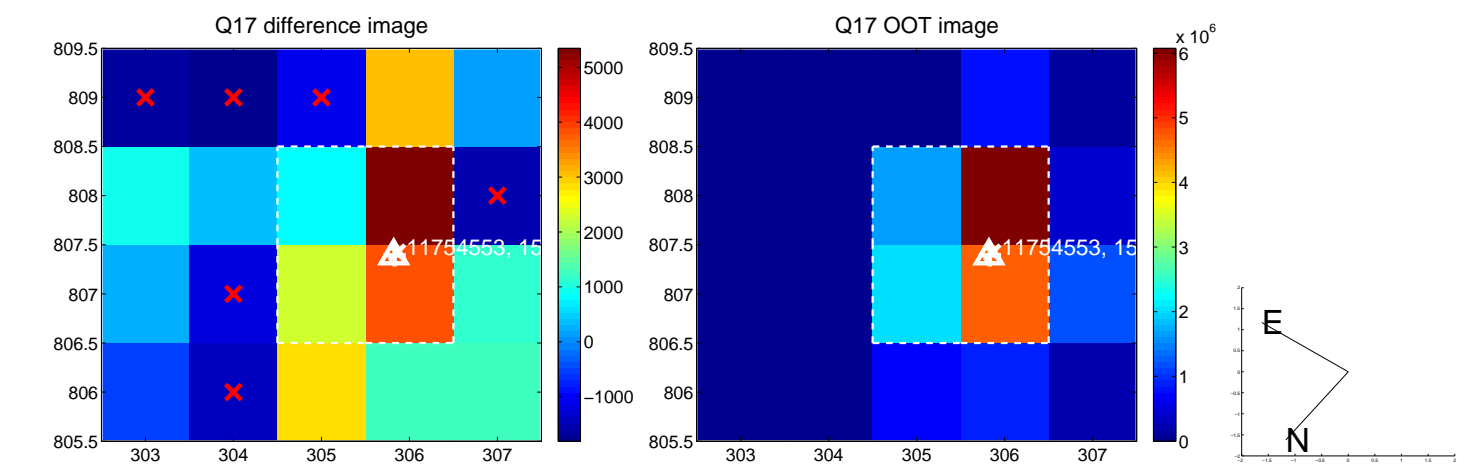
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



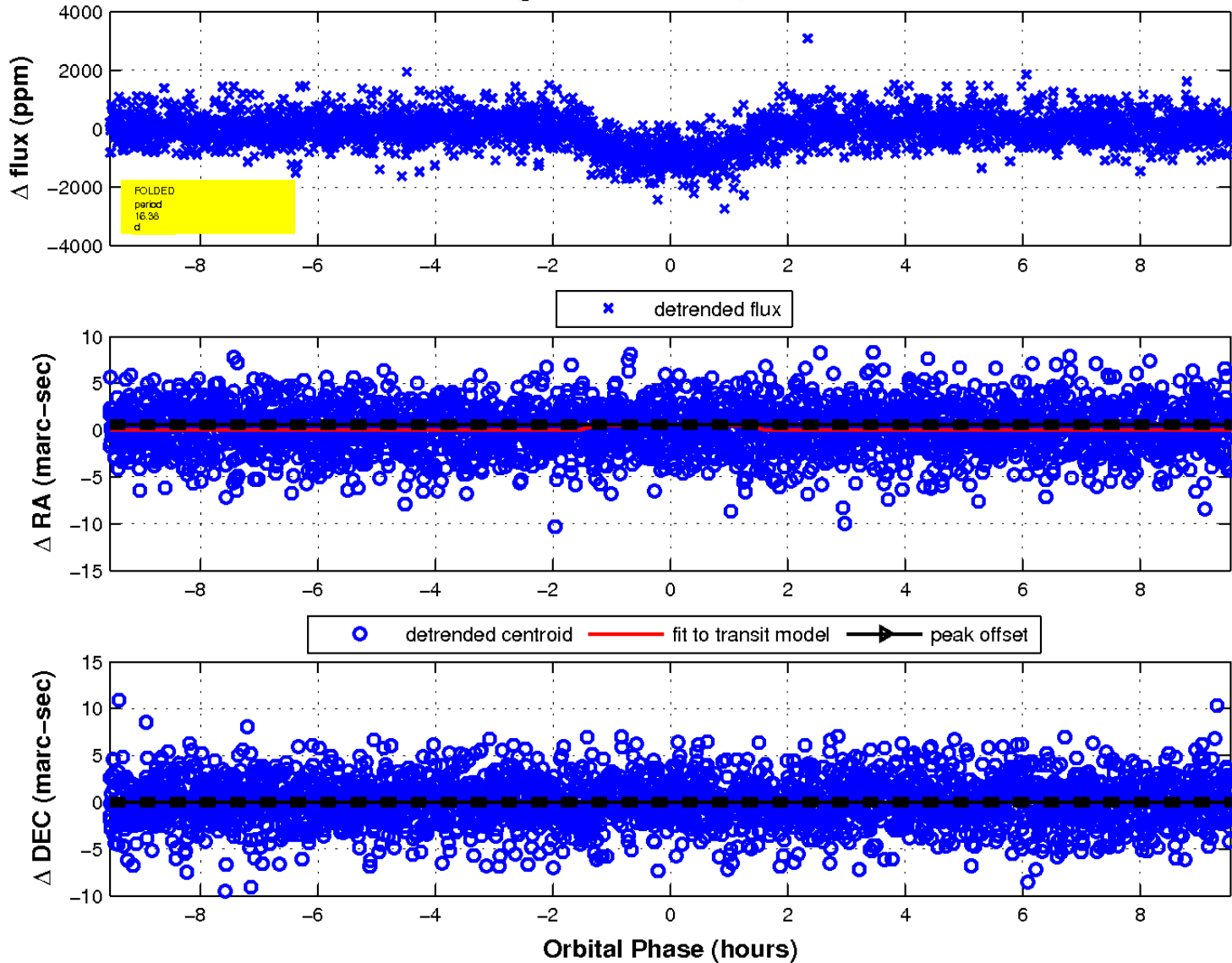
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

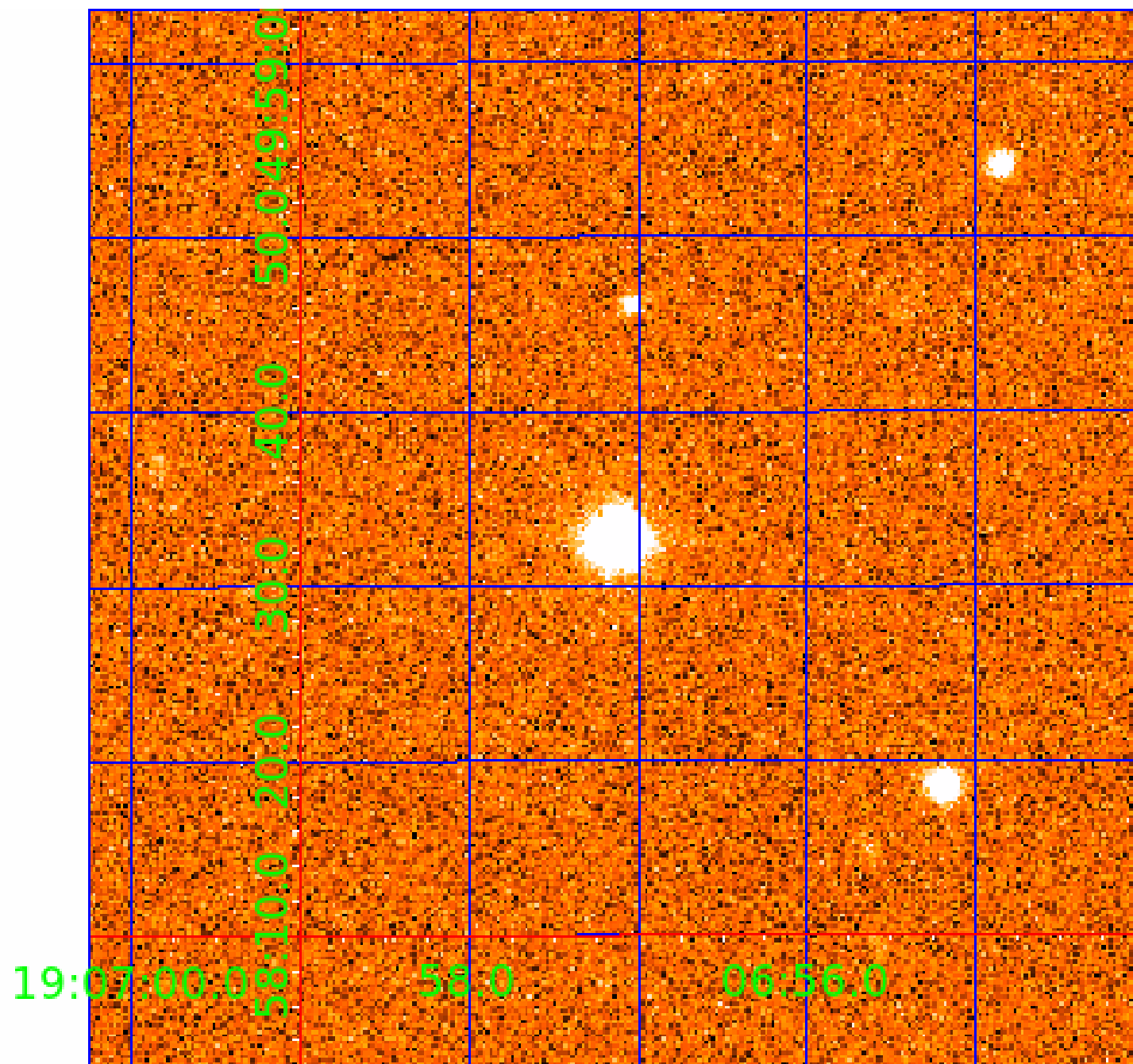


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011754553

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})
011754553-01	OBS	0775.02	7.877415	136.989209	1290.2	2.980	41.5	44.6	0.61	4126	3.25	22.20
011754553-02	OBS	0775.01	16.384851	139.959522	1043.1	3.183	28.1	30.0	0.61	4126	2.17	8.36
011754553-03	OBS	0775.03	36.445326	151.601449	1016.5	4.088	19.8	21.2	0.61	4126	2.19	2.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011754553-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011754553-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011754553-03	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.

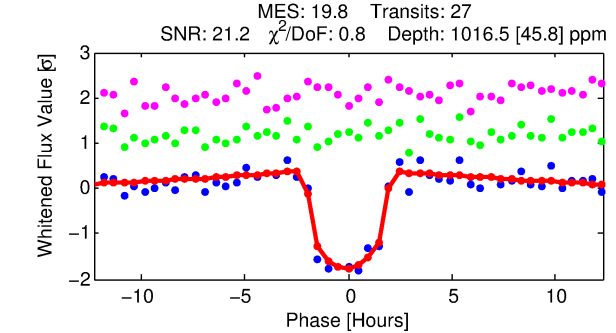
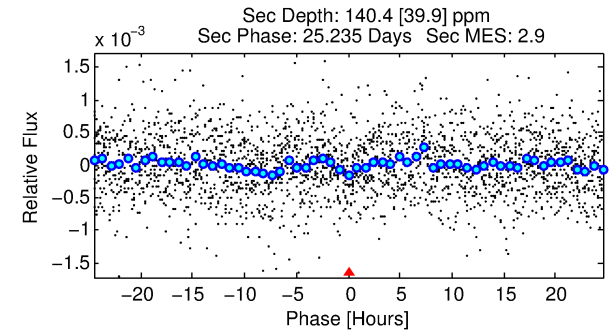
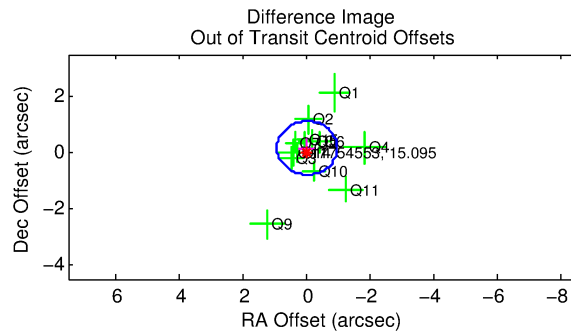
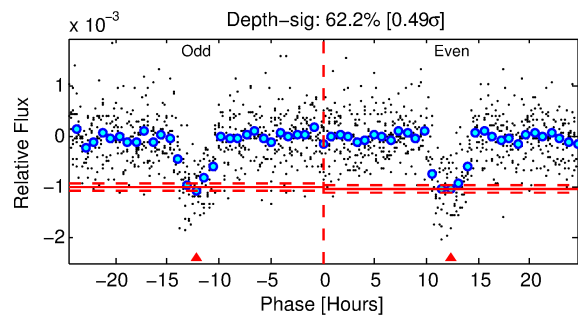
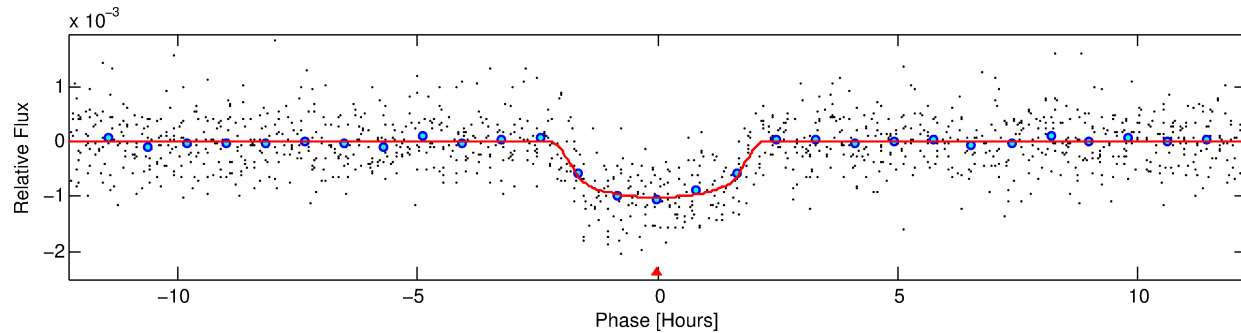
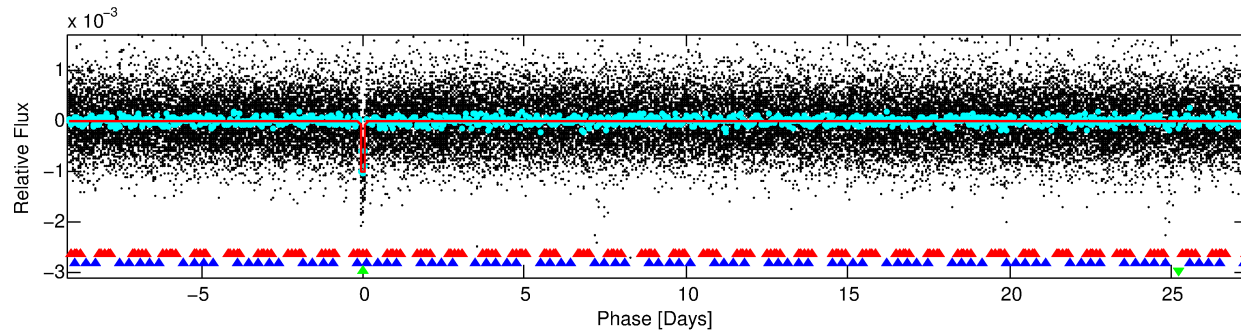
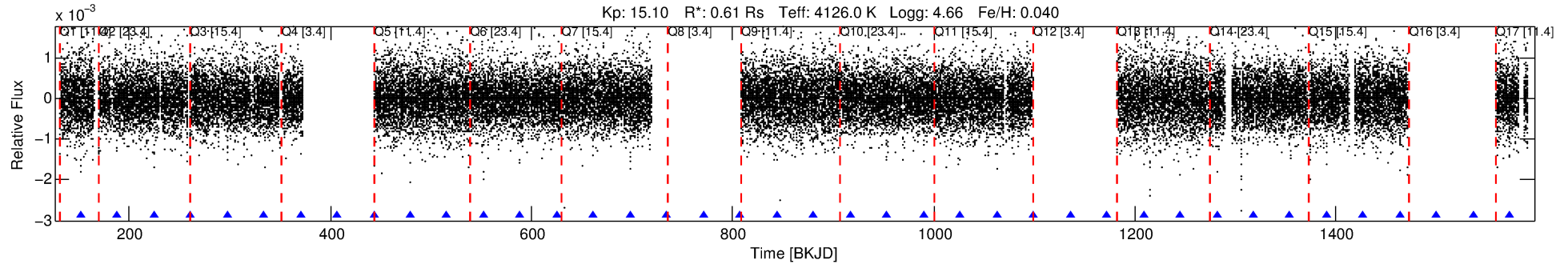
Ephemeris Match Information For 011754553-03

No Significant Match Found

DV One-Page Summary

KIC: 11754553 Candidate: 3 of 3 Period: 36.445 d
KOI: K00775.03 Name: Kepler-52d Corr: 0.985

Kp: 15.10 R*: 0.61 Rs Teff: 4126.0 K Logg: 4.66 Fe/H: 0.040



DV Fit Results:

Period = 36.4453 [0.00015] d
Epoch = 151.6014 [0.0035] BKJD
Rp/R* = 0.0327 [0.0078]
a/R* = 44.92 [37.83]
b = 0.79 [0.40]
Seff = 2.88 [0.26]
Teq = 332 [8] K
Rp = 2.19 [0.54] Re
a = 0.1847 [0.0066] AU
Ag = 547.89 [306.38] [1.79σ]
Teffp = 2485 [350] K [6.15σ]

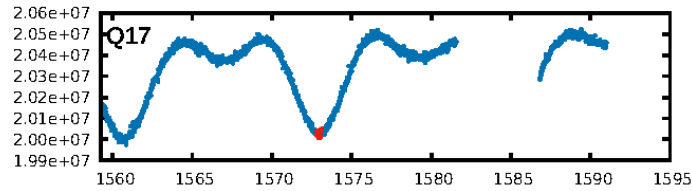
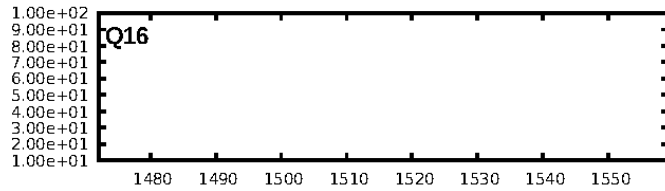
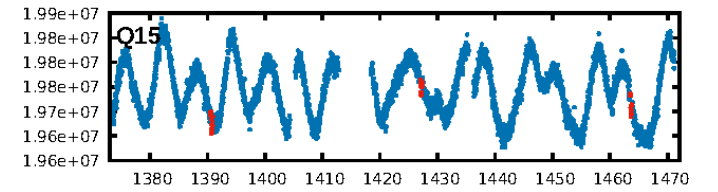
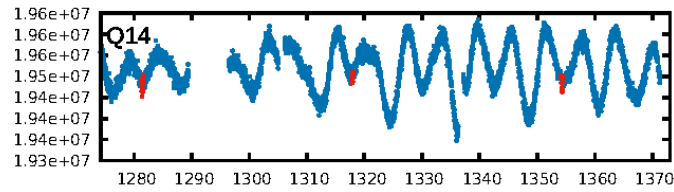
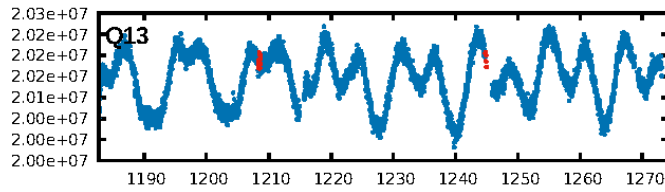
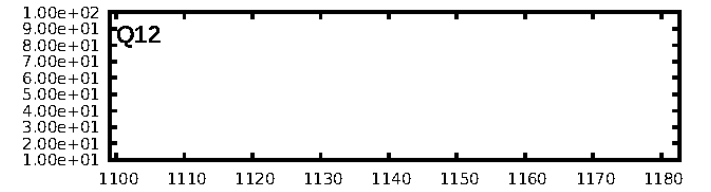
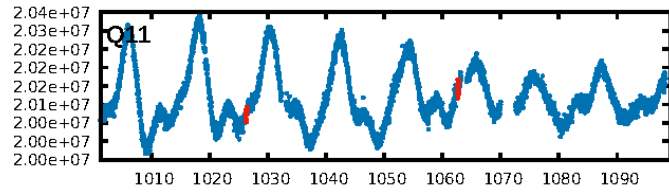
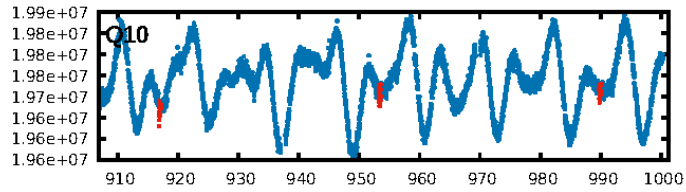
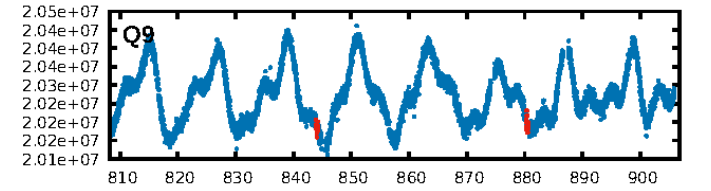
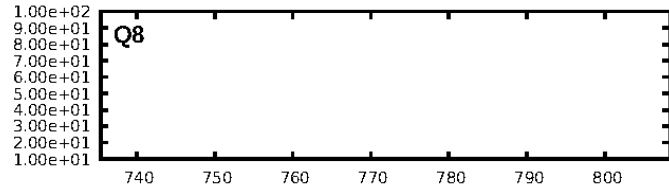
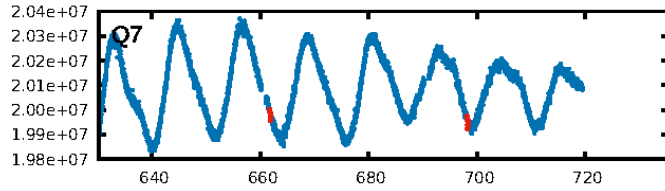
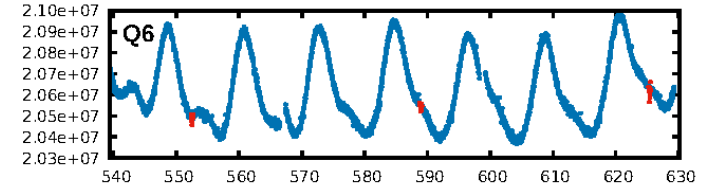
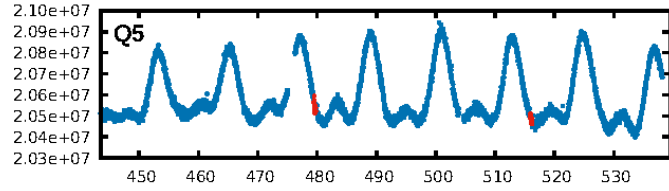
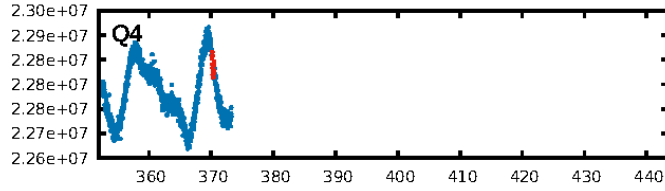
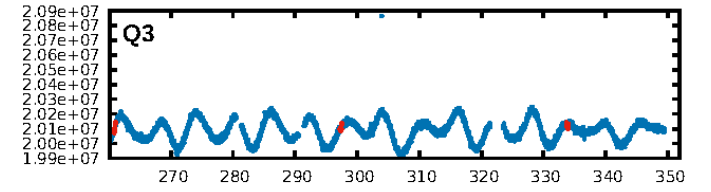
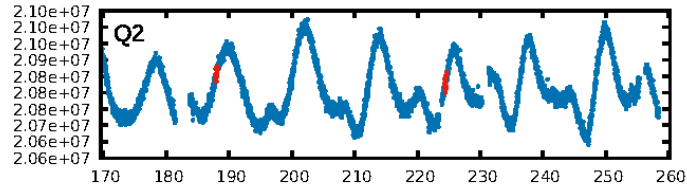
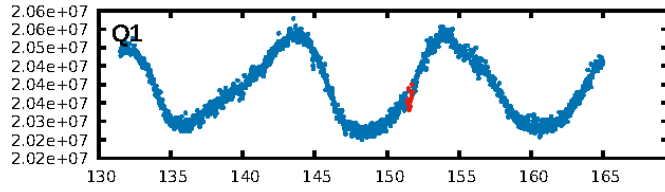
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.93σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.14e-82
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: 1.288
Centroid-sig: 1.0%
Centroid-so: 0.578 arcsec [1.13σ]
OotOffset-rm: 0.166 arcsec [0.52σ]
KicOffset-rm: 0.364 arcsec [1.10σ]
OotOffset-st: 4/4/1/4 [13]
KicOffset-st: 4/4/1/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.93 [13/14]

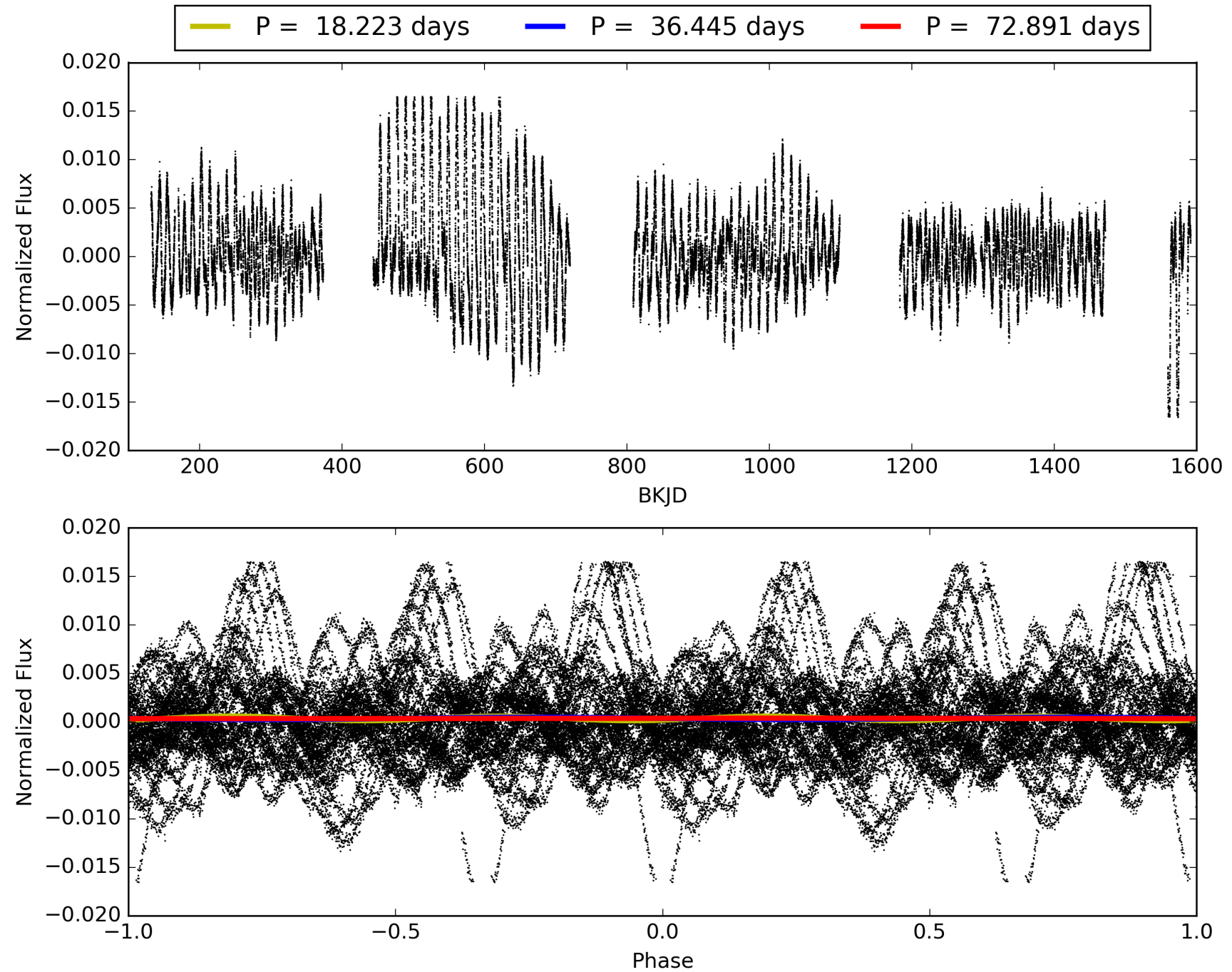
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 09:12:29 Z

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

TCE 011754553-03, PDC Light Curves

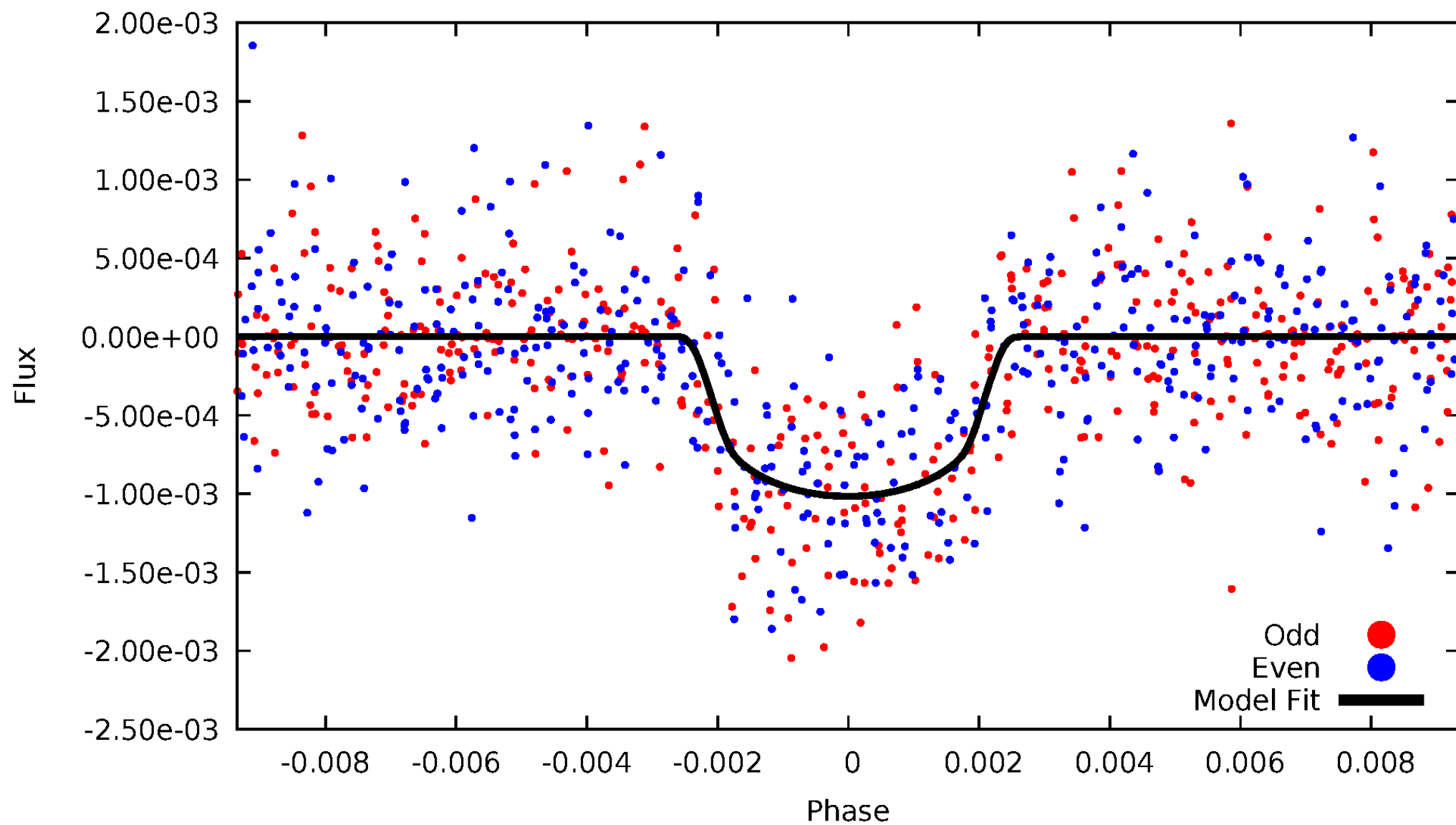


TCE 011754553-03



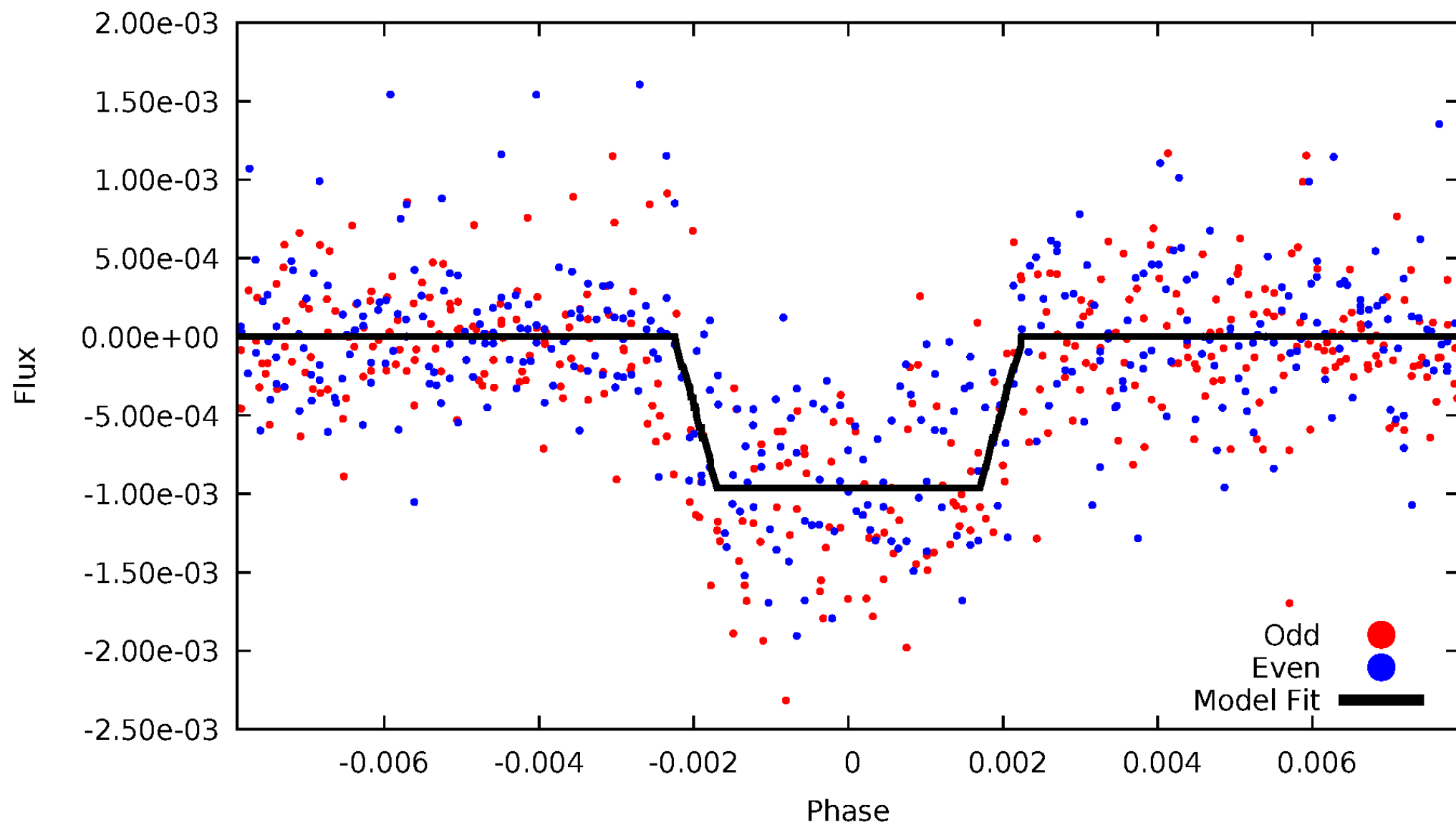
DV Odd/Even

TCE 011754553-03



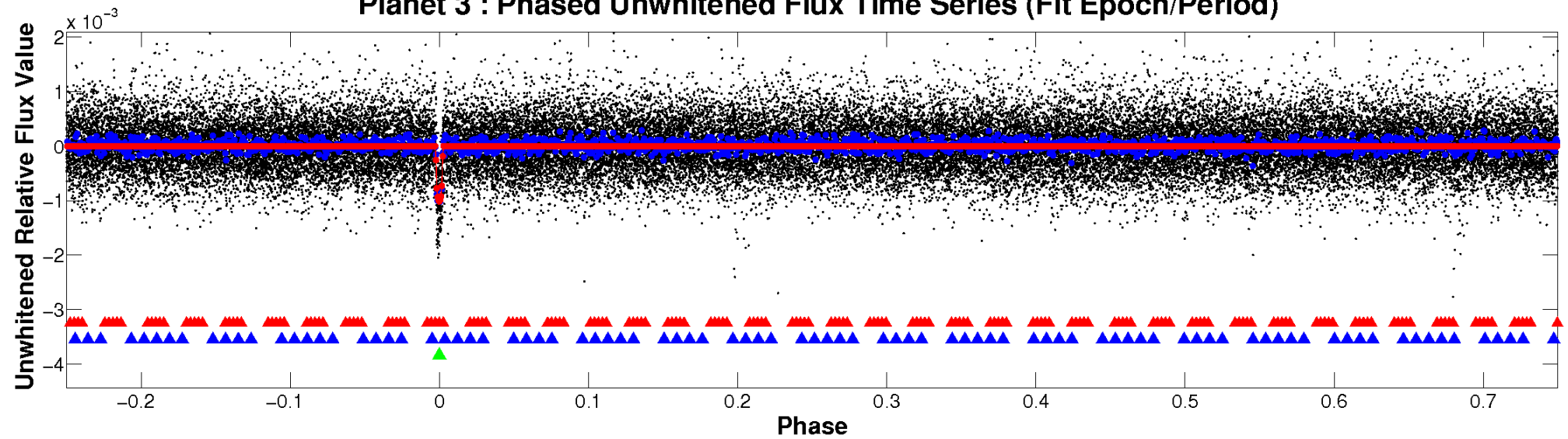
ALT Odd/Even

TCE 011754553-03

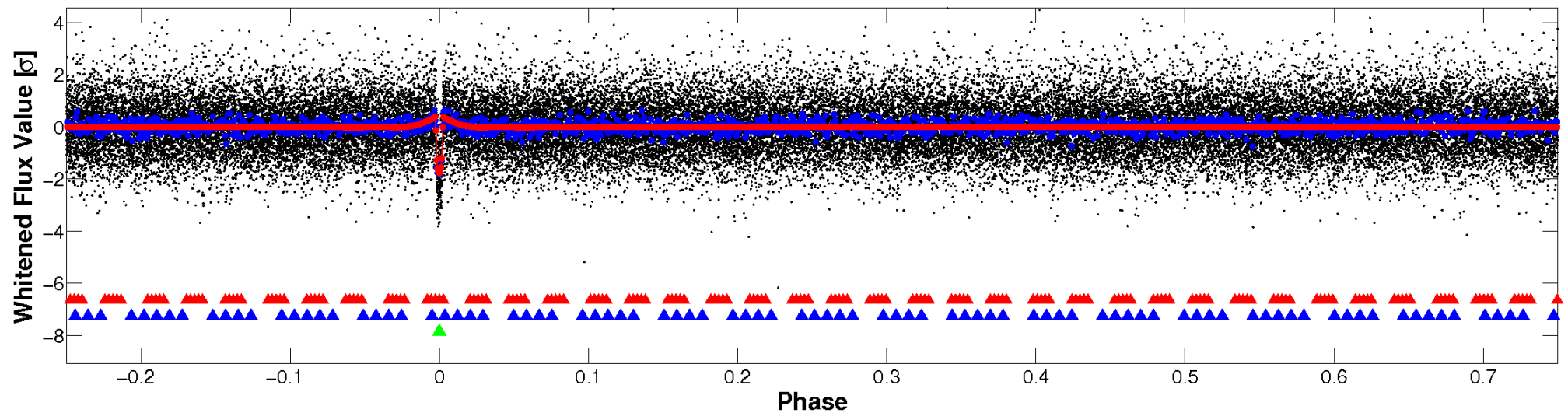


Non-Whitened Vs. Whitened Light Curve

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

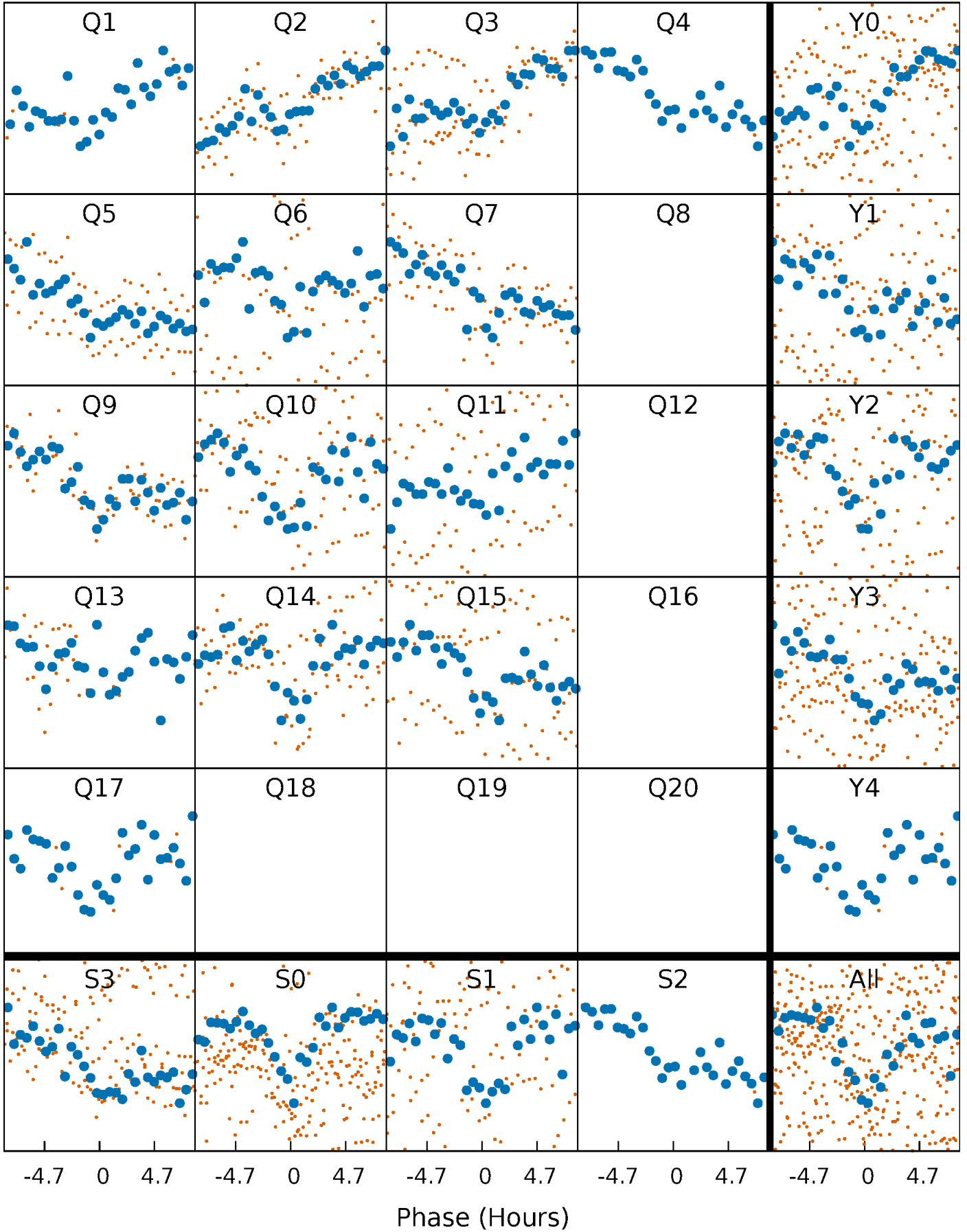


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



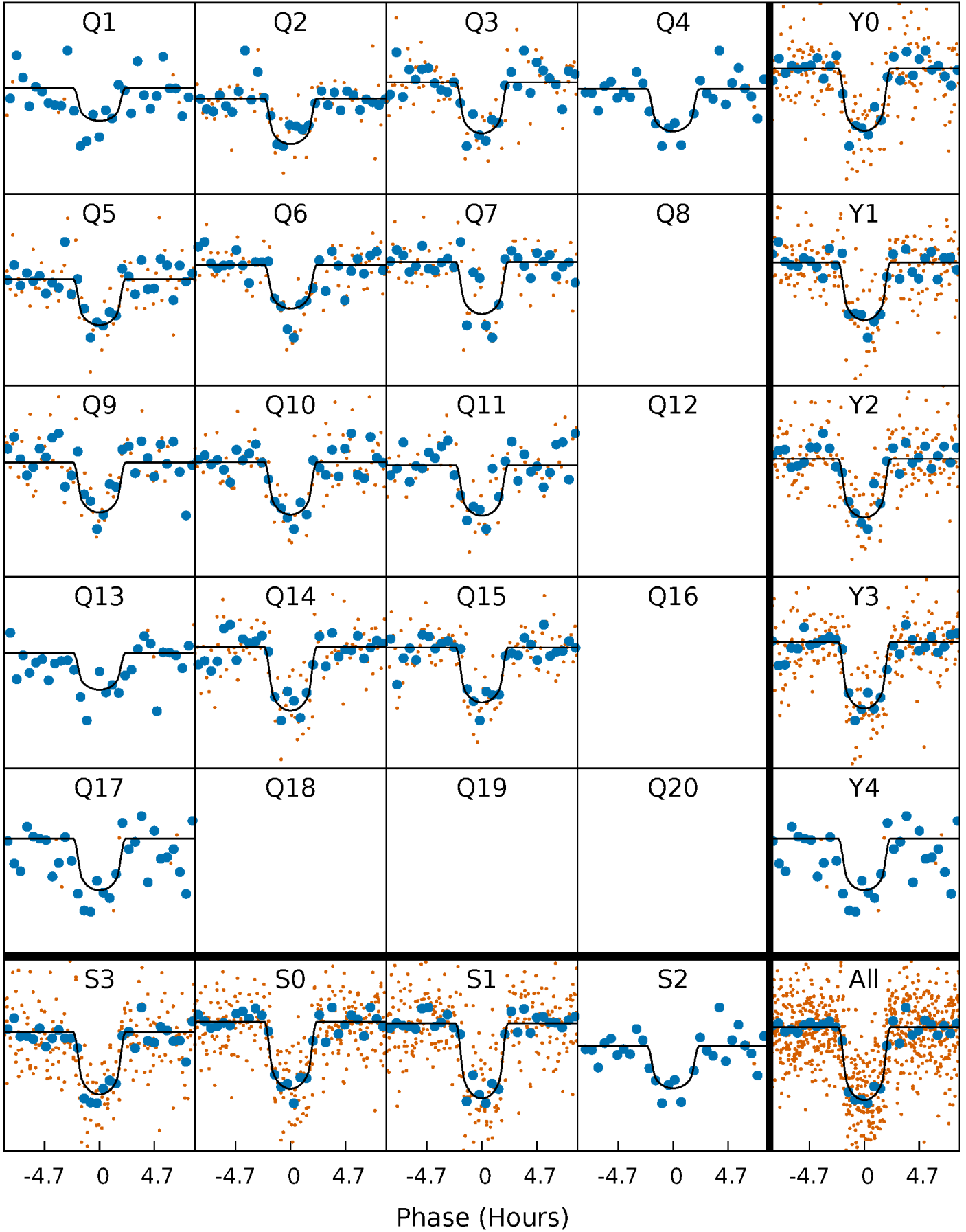
PDC Quarter-Phased Transit Curves

TCE 011754553-03 P= 36.445326 Days $T_0=151.601449$ (BKJD)



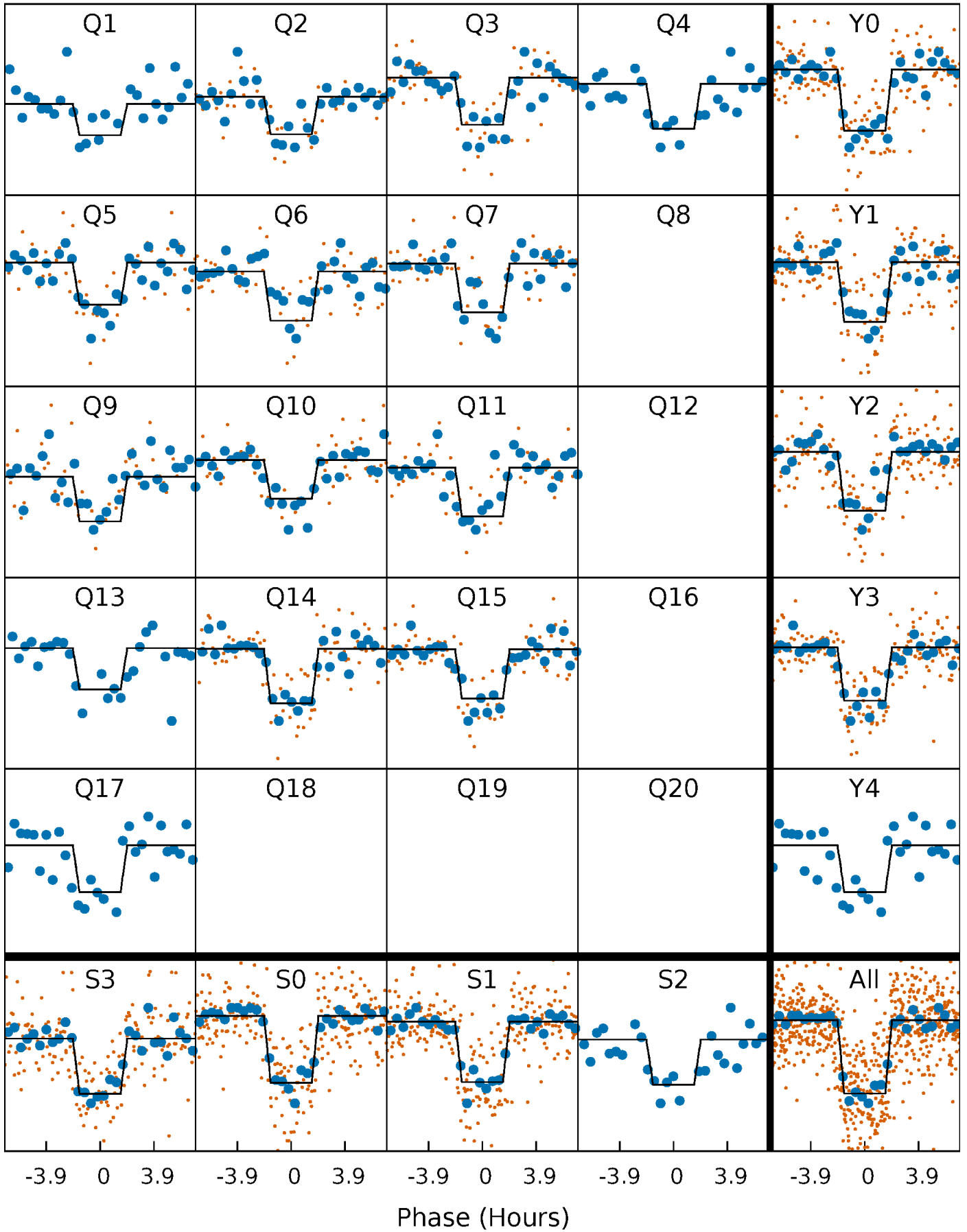
DV Quarter-Phased Transit Curves

TCE 011754553-03 P= 36.445326 Days $T_0=151.601449$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

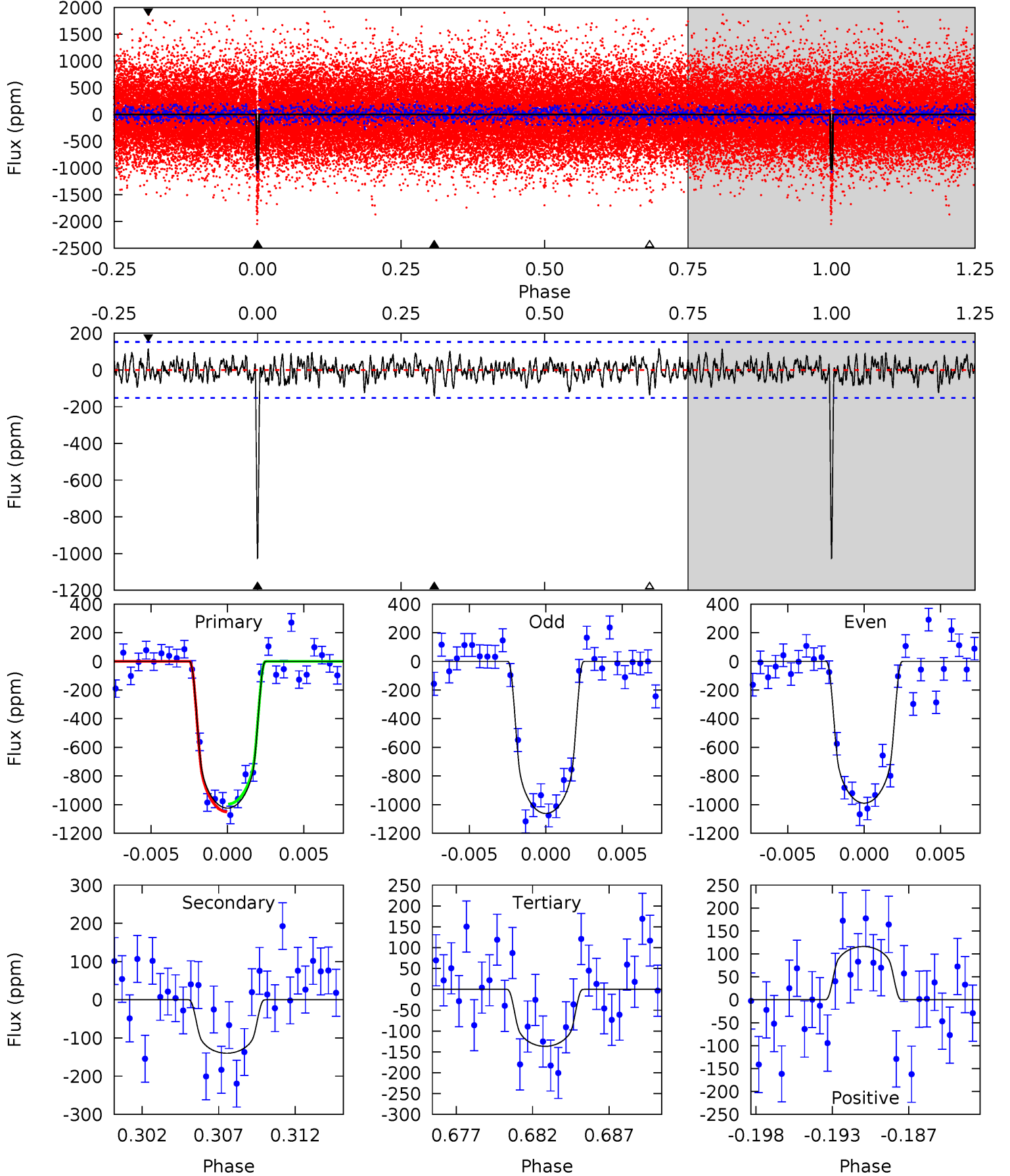
TCE 011754553-03 P= 36.445744 Days $T_0=151.595152$ (BKJD)



DV Model-Shift Uniqueness Test

011754553-03, P = 36.445326 Days, E = 115.156123 Days

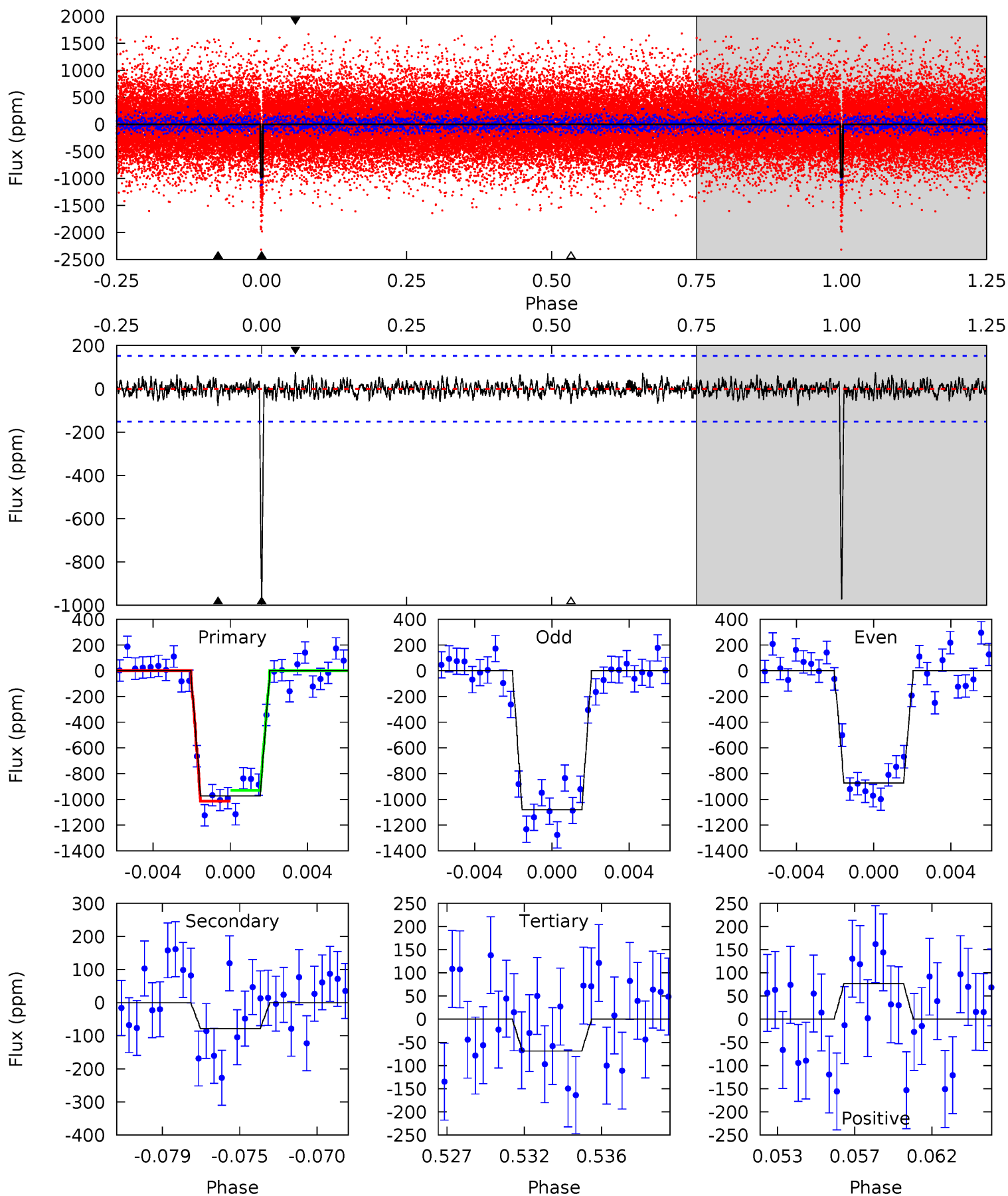
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.6	4.72	4.61	3.91	5.15	2.79	1.34	29.9	30.6	0.11	0.81	1.22	1.01	0.10	0.90



Alt Model-Shift Uniqueness Test

011754553-03, P = 36.445744 Days, E = 115.149408 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	2.70	2.35	2.61	5.18	2.85	0.77	30.9	30.6	0.35	0.08	3.57	1.03	0.07	1.44



Stellar Parameters For KIC 011754553

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4126^{+82}_{-82}	$4.661^{+0.022}_{-0.022}$	$0.040^{+0.150}_{-0.150}$	$0.615^{+0.027}_{-0.029}$	$0.633^{+0.029}_{-0.035}$	$3.829^{+0.371}_{-0.338}$
	+2%/-2%	+0%/-0%	+375%/-375%	+4%/-5%	+5%/-6%	+10%/-9%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 011754553-03 / KOI 0775.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-140 ± 30	$2.19^{+0.54}_{-0.57}$	464^{+10}_{-10}	2979^{+286}_{-202}	534^{+471}_{-209}
Alt.	-79 ± 29	$2.05^{+0.54}_{-0.54}$	464^{+10}_{-10}	2796^{+283}_{-212}	340^{+325}_{-157}

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 $A_{obs} \gg 1.0$

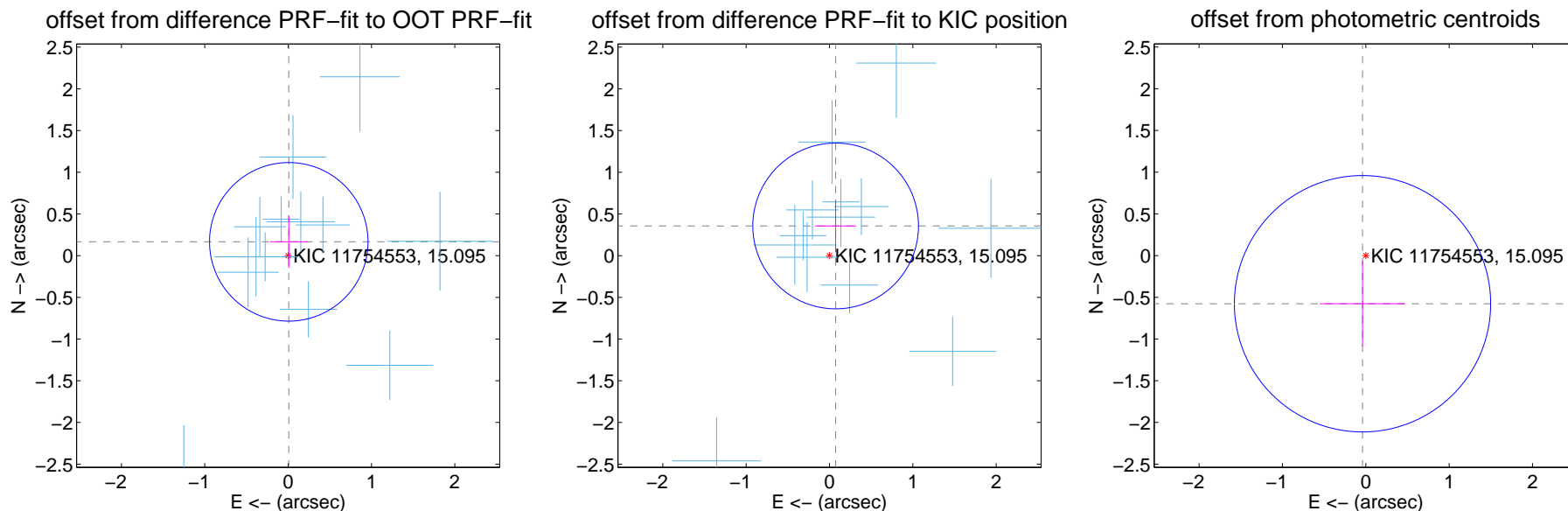
DV Centroid Data

Supplemental centroid analysis for 011754553-03. Kepler magnitude: 15.10. Transit SNR 21.19

There are 13 quarters with good PRF difference image offsets

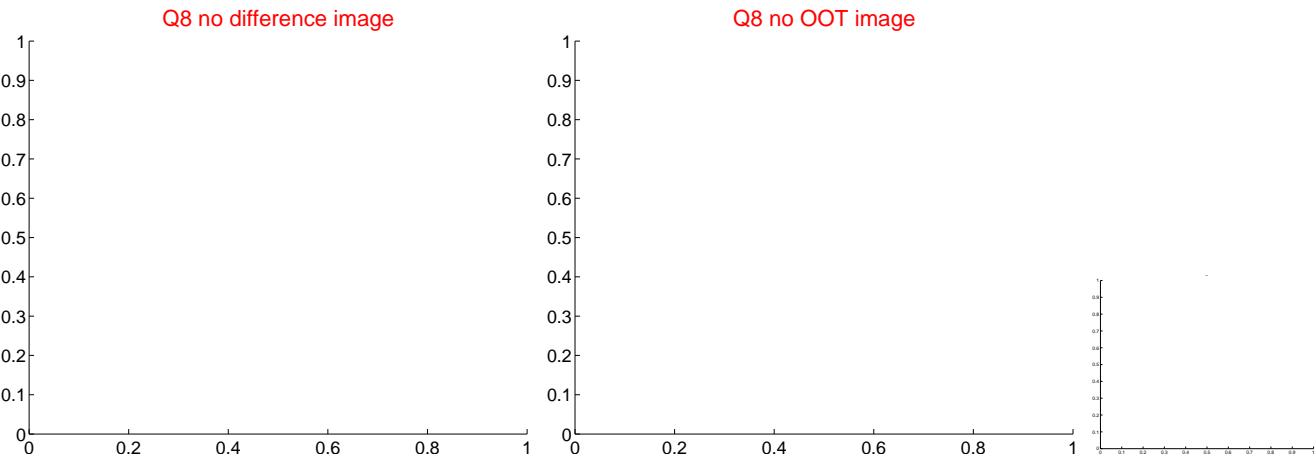
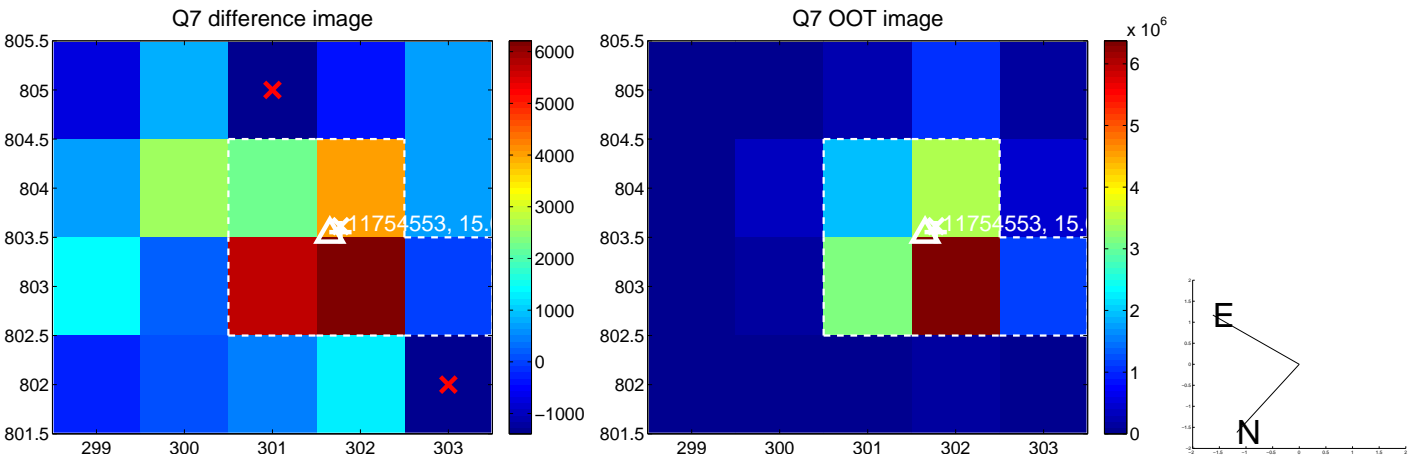
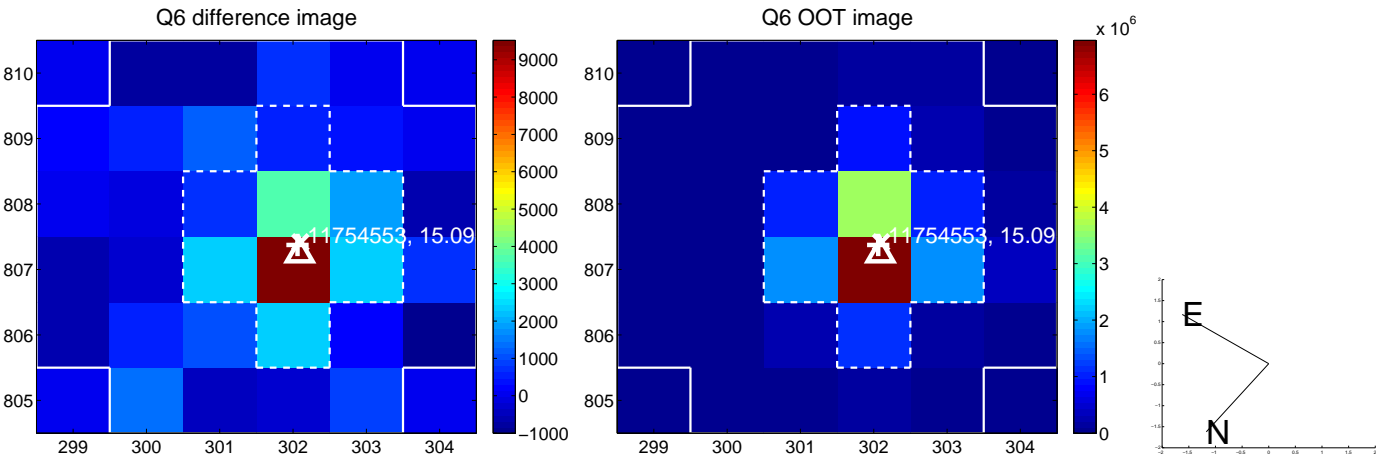
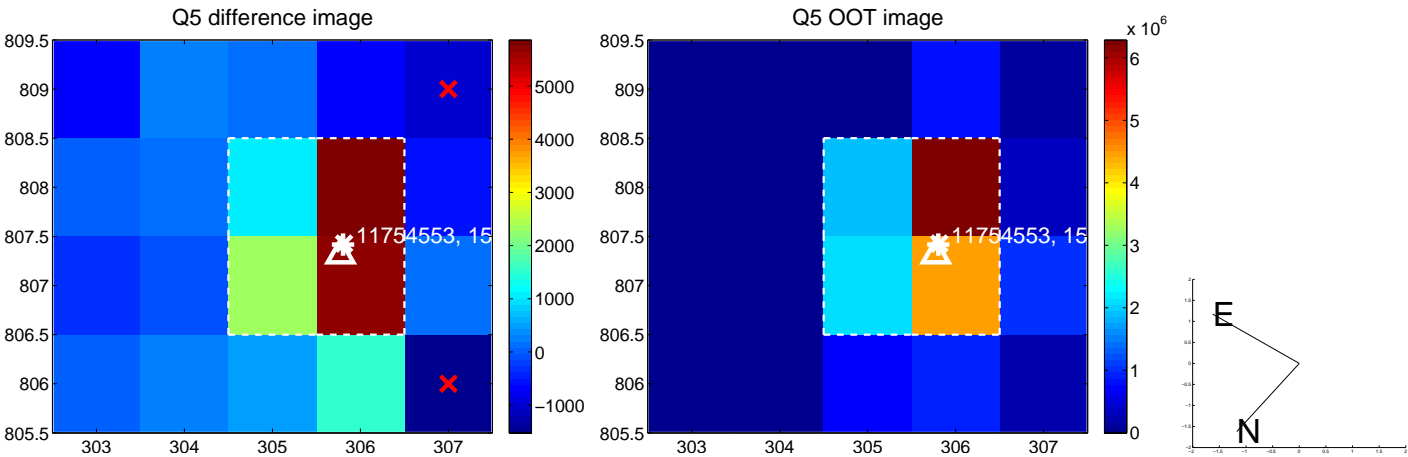
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.166 ± 0.317	0.52	-0.008 ± 0.224	0.166 ± 0.314
PRF-fit source offset from KIC position	0.364 ± 0.331	1.10	-0.074 ± 0.247	0.356 ± 0.315
photometric centroid source offset	0.58 ± 0.51	1.13	0.04 ± 0.51	-0.58 ± 0.51

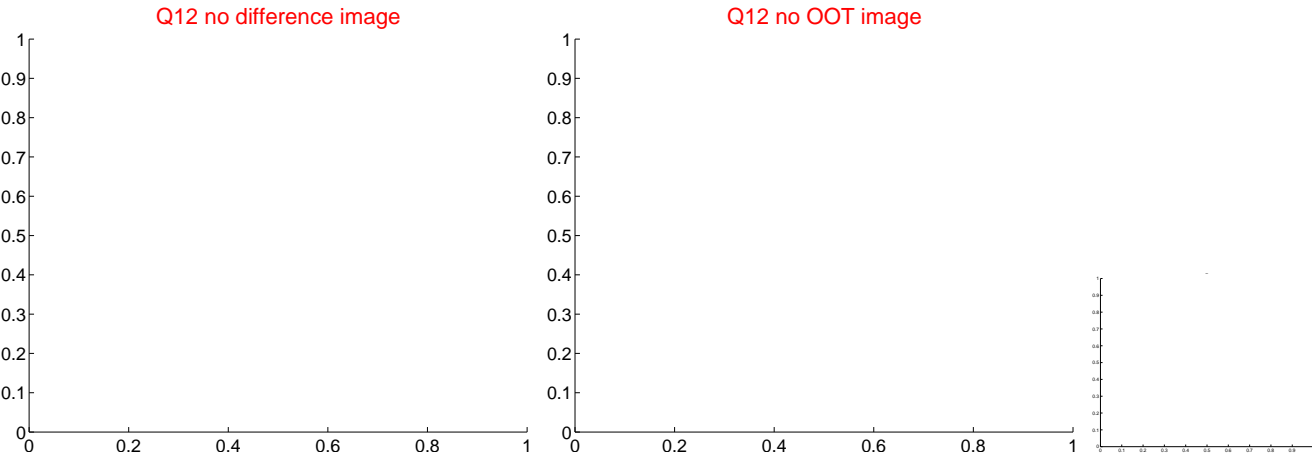
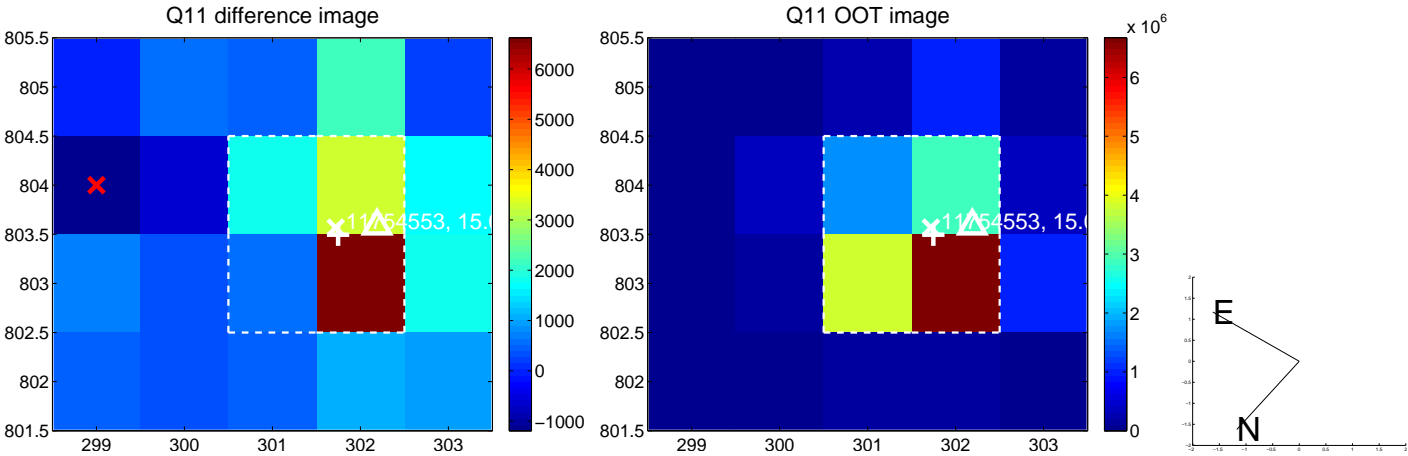
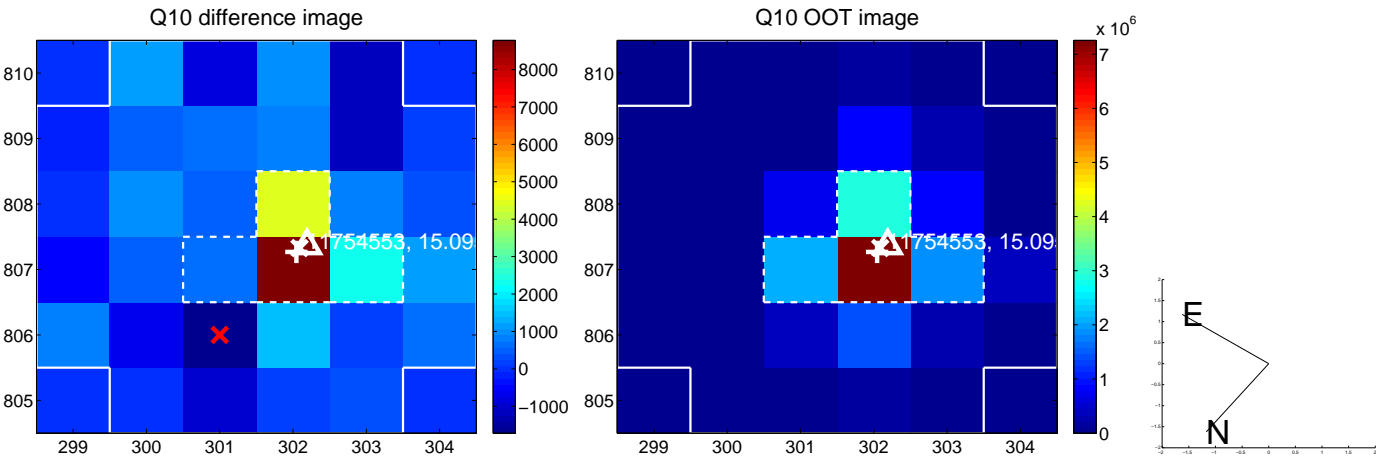
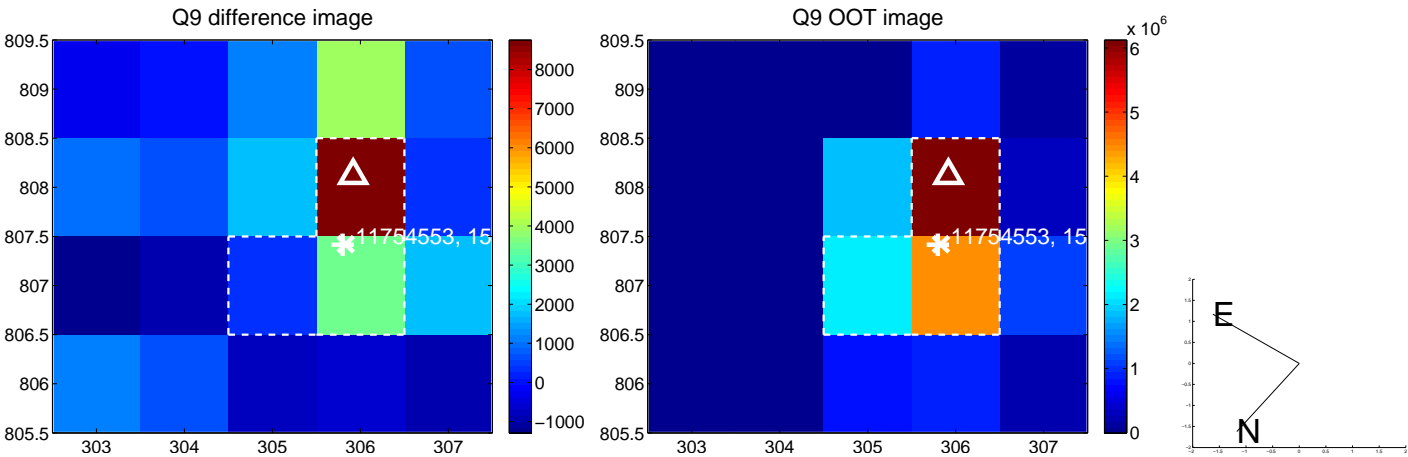


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

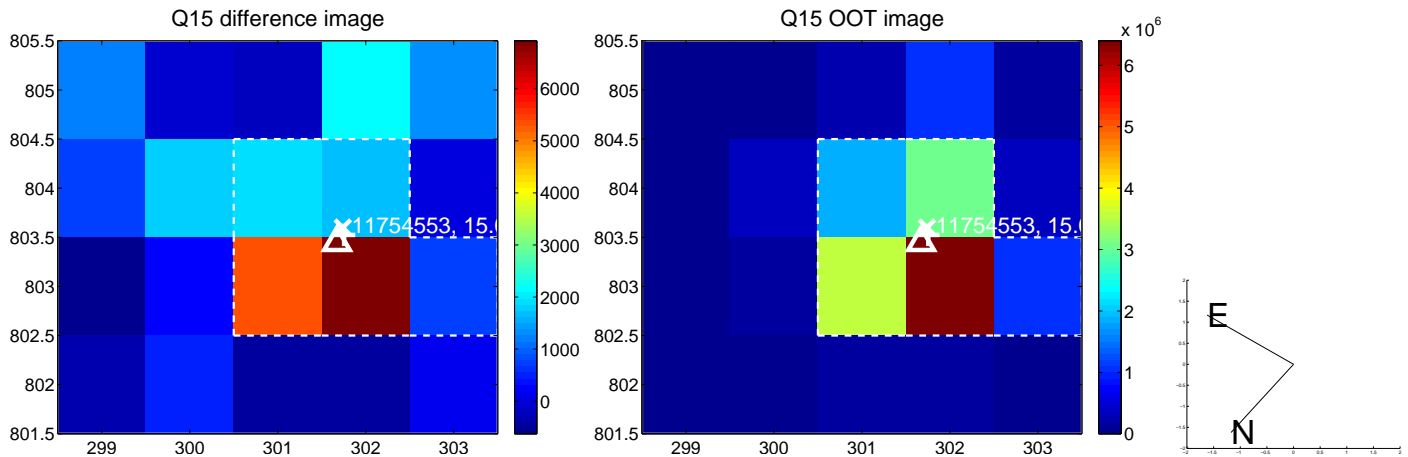
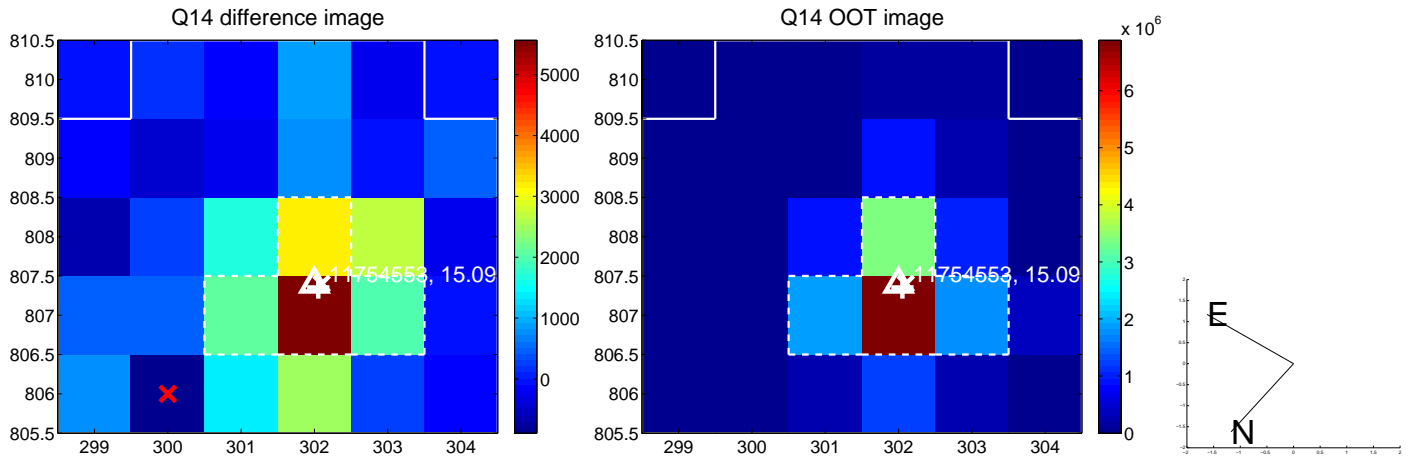
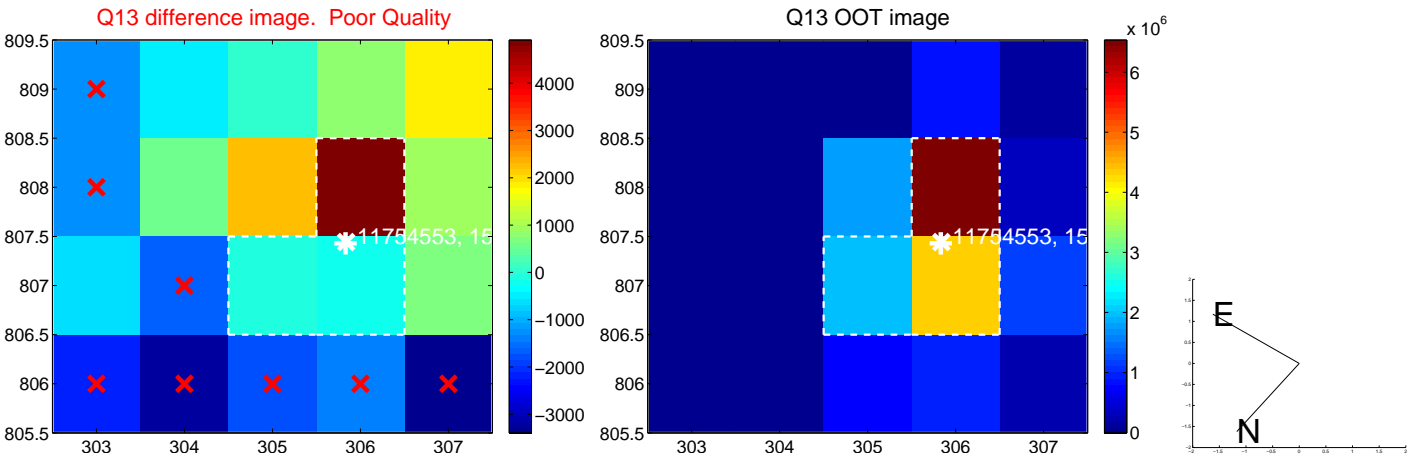
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



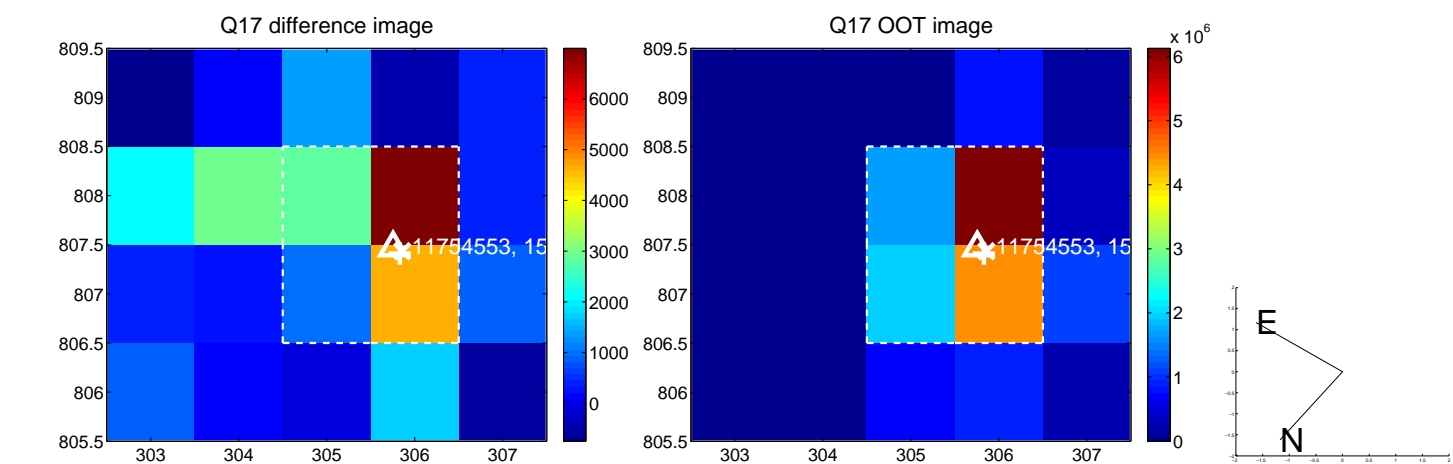
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



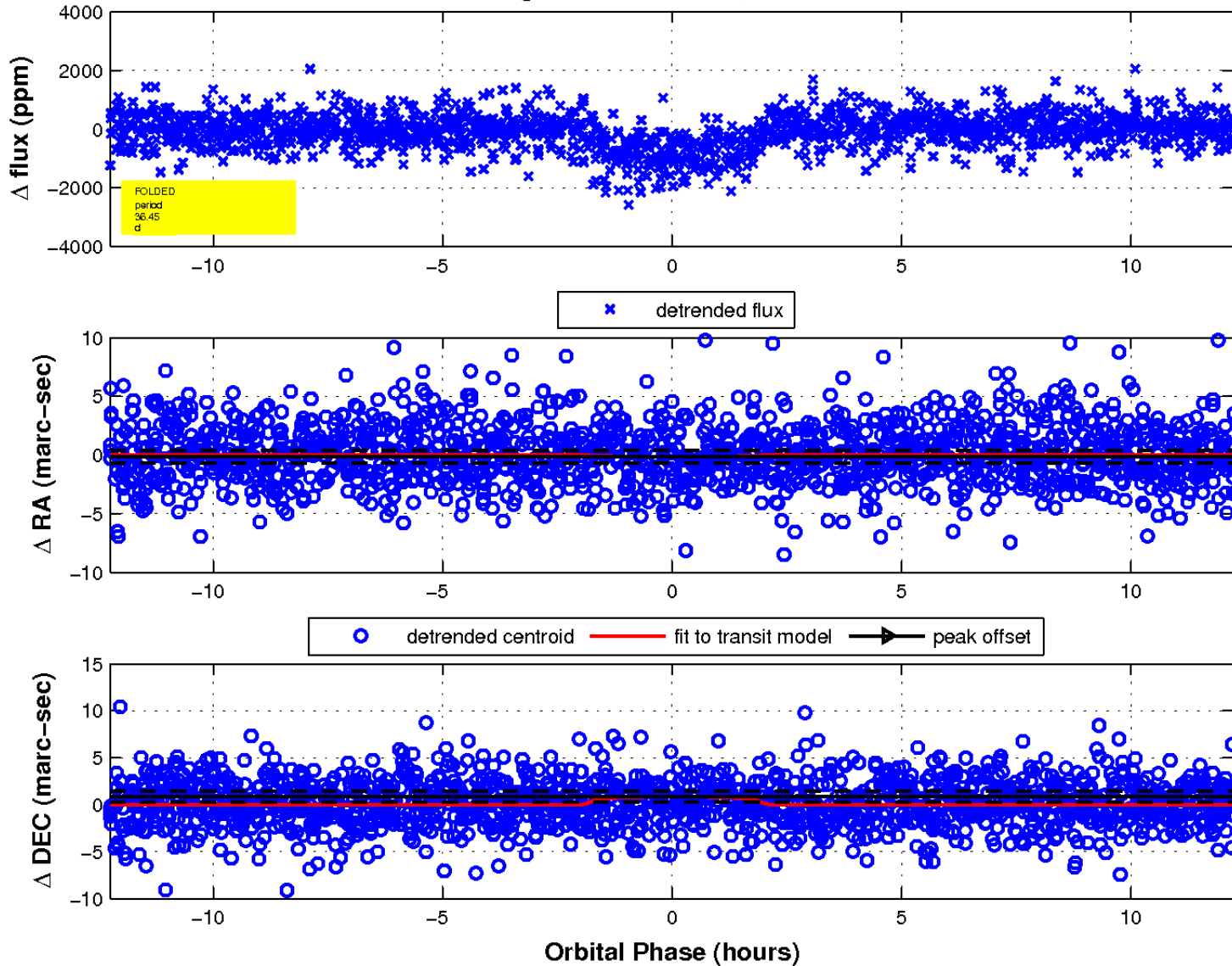
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

