

KIC 011152649

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})
011152649-01	OBS	No	1.253797	132.777276	300.0	6.732	10.4	11.0	2.05	7440	6.40	15207.30
011152649-02	OBS	No	84.424211	144.194661	1861.0	4.170	7.6	7.8	2.05	7440	10.59	55.51
011152649-03	OBS	No	35.210383	151.685900	1511.8	2.100	7.7	6.5	2.05	7440	9.02	178.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011152649-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS
011152649-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
011152649-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS

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

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

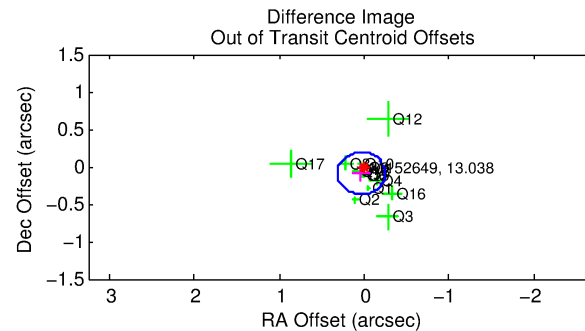
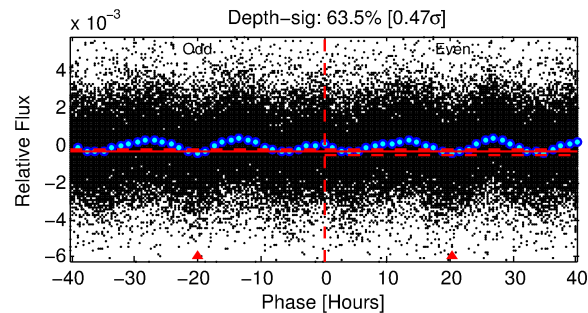
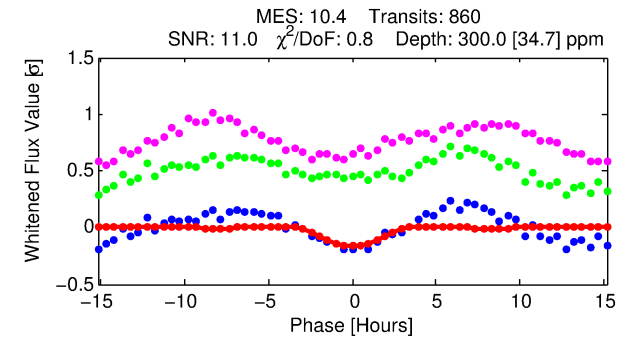
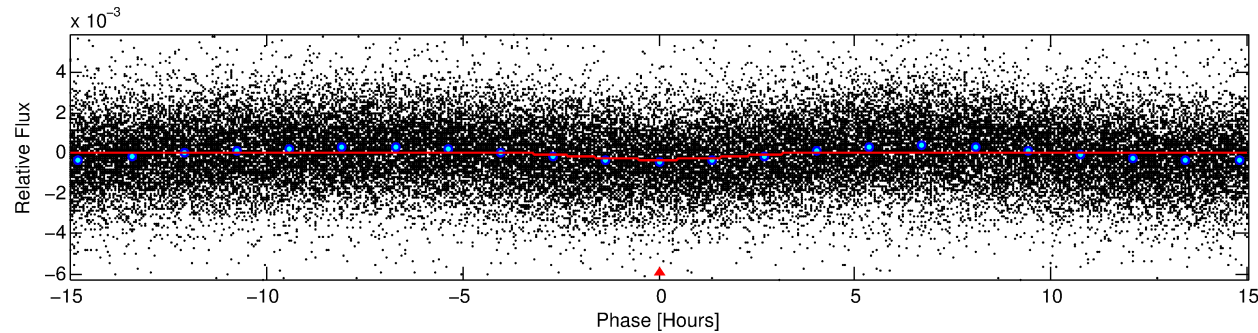
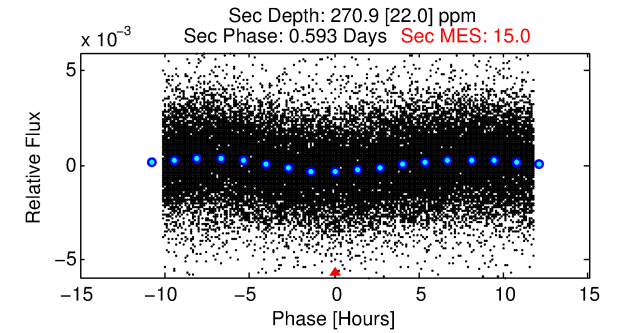
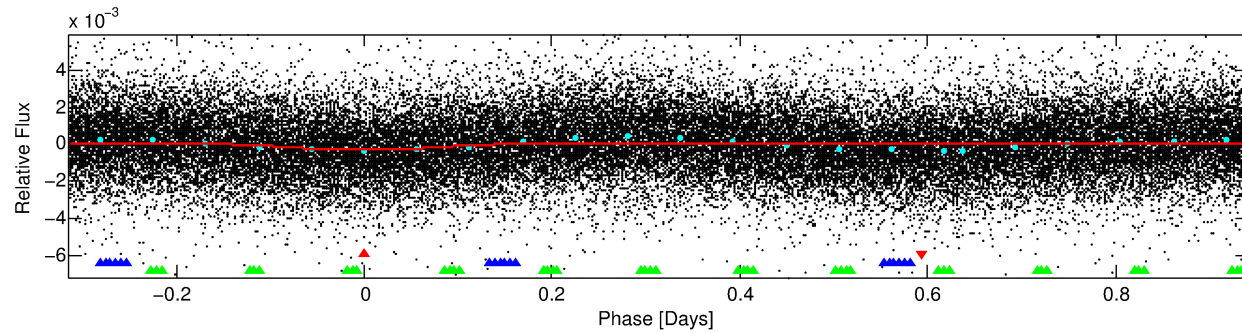
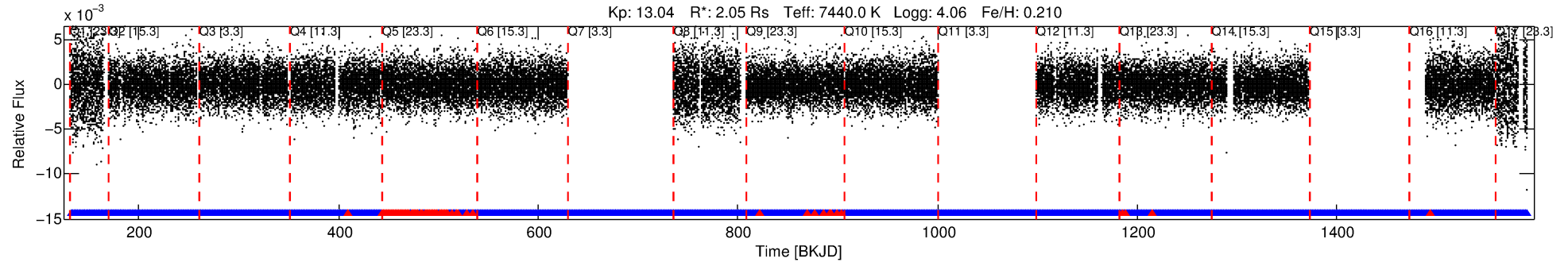
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011152649-01

No Significant Match Found

DV One-Page Summary

KIC: 11152649 Candidate: 1 of 3 Period: 1.254 d



DV Fit Results:

Period = 1.25380 [0.00002] d
Epoch = 132.7773 [0.0103] BKJD
Rp/R* = 0.0286 [0.0607]
a/R* = 1.07 [0.02]
b = 1.00 [0.10]
Seff = 15207.30 [5509.14]
Teq = 2832 [256] K
Rp = 6.40 [13.69] Re
a = 0.0275 [0.0060] AU
Ag = 2.76 [11.73] [0.15σ]
Teffp = 5641 [5991] K [0.47σ]

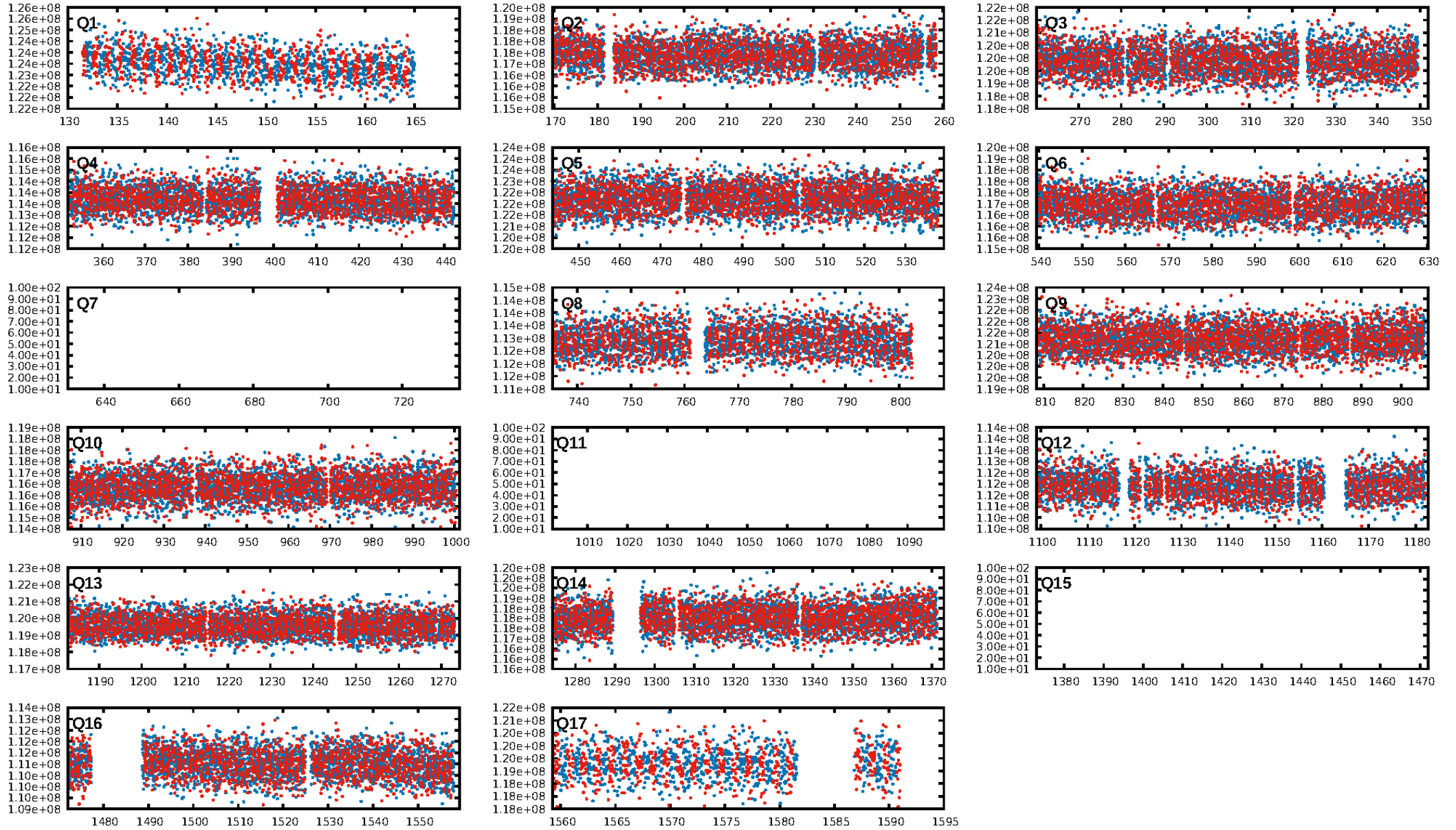
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [115.56σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.66e-16
RollingBand-fgt: 0.92 [745/811]
GhostDiagnostic-chr: 0.9958
Centroid-sig: 0.3%
Centroid-so: 0.958 arcsec [6.74σ]
OotOffset-rm: 0.095 arcsec [1.01σ]
KicOffset-rm: 0.943 arcsec [9.64σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [14/14]

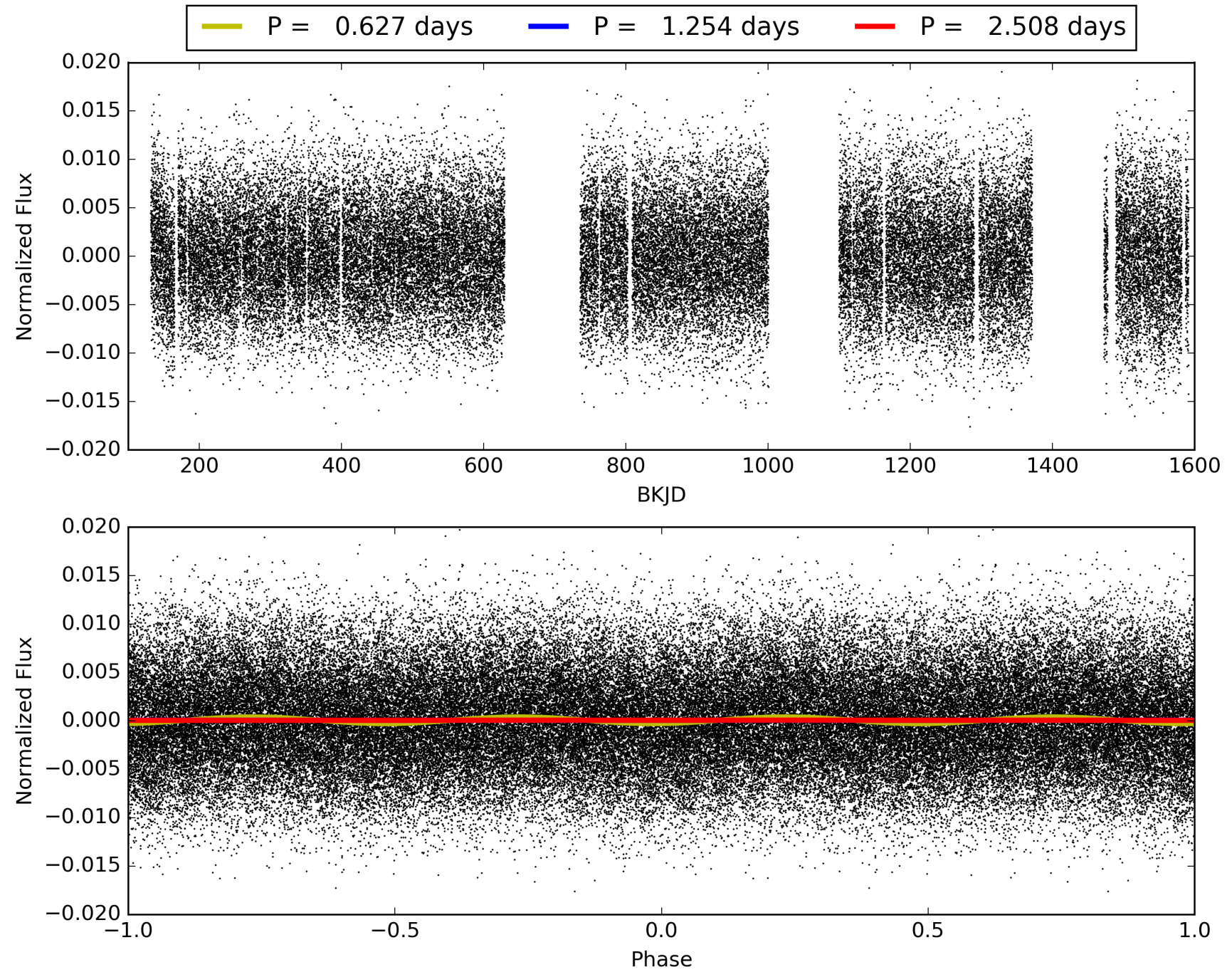
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:58:18 Z

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

TCE 011152649-01, PDC Light Curves

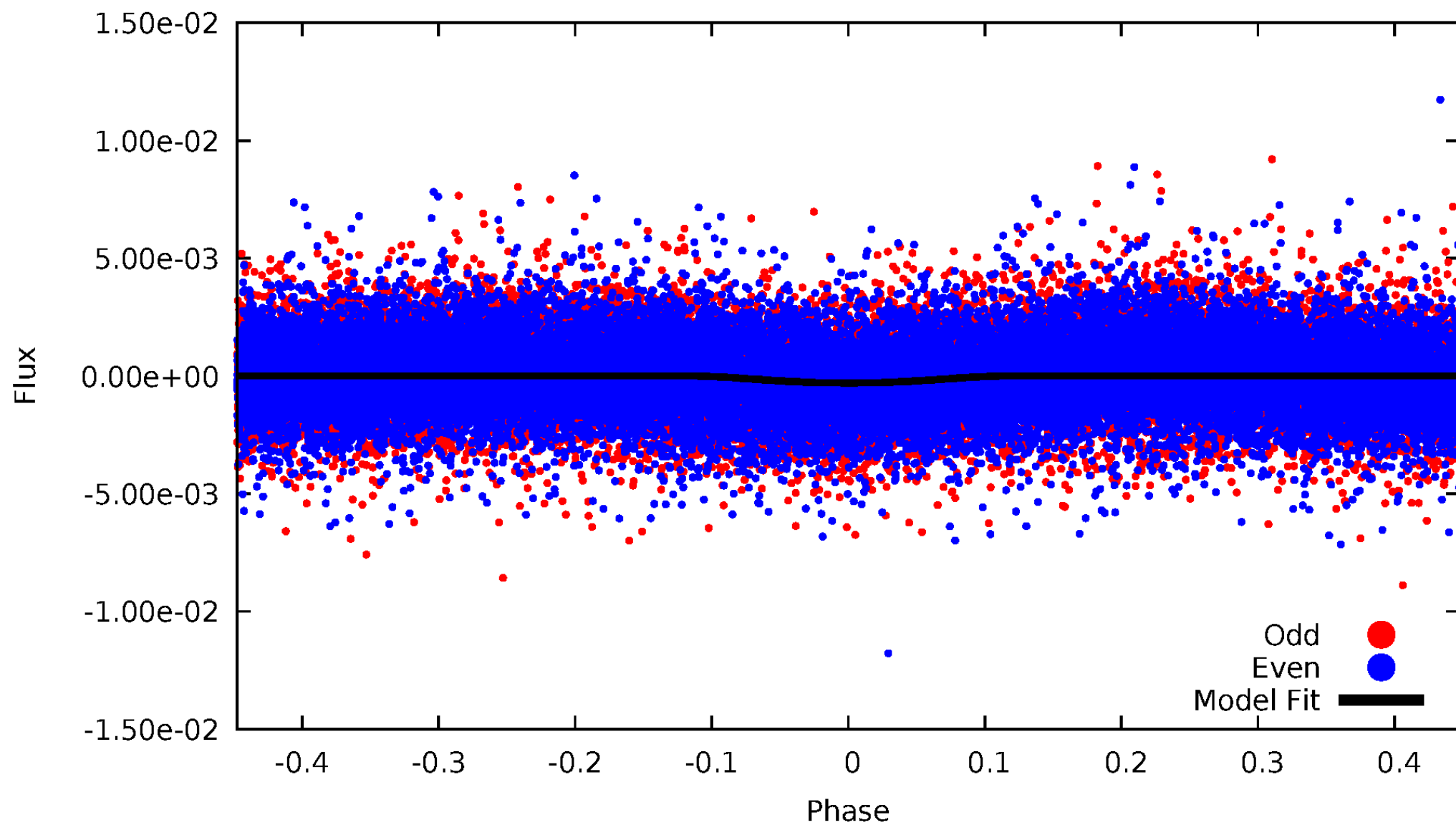


TCE 011152649-01



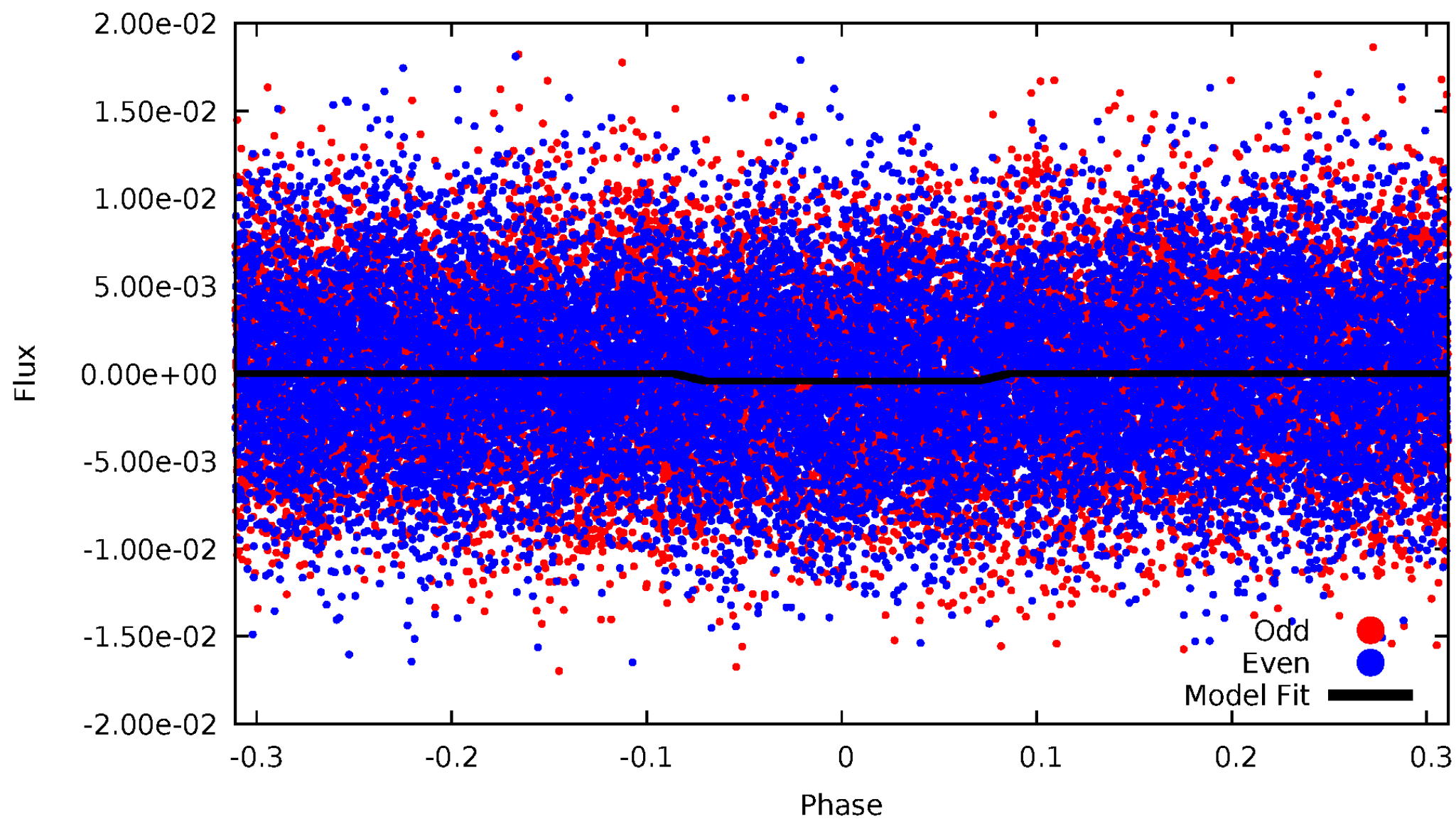
DV Odd/Even

TCE 011152649-01



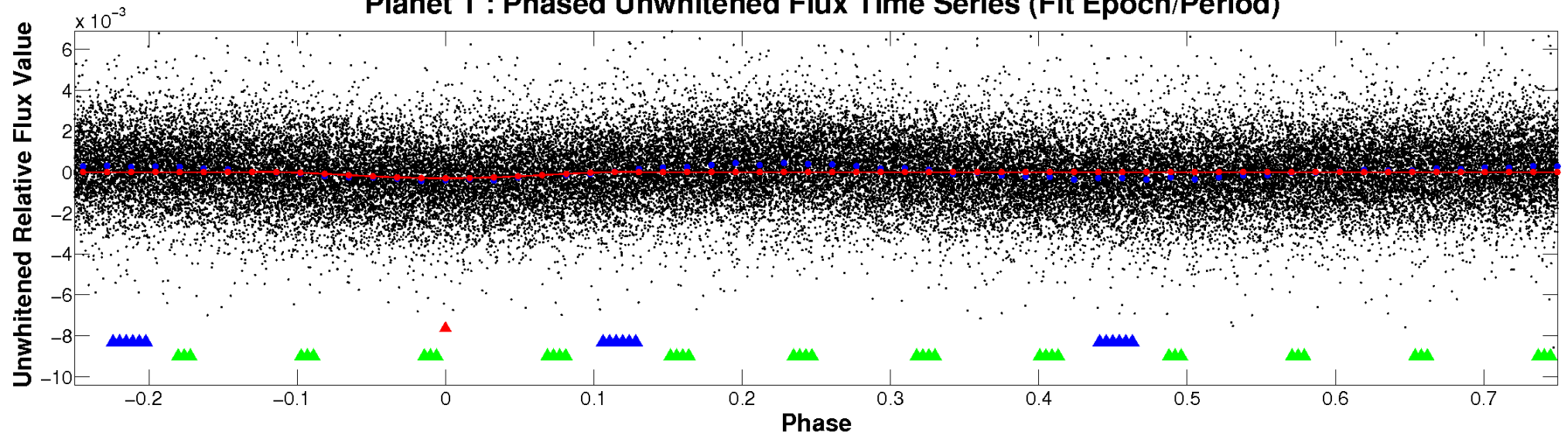
ALT Odd/Even

TCE 011152649-01

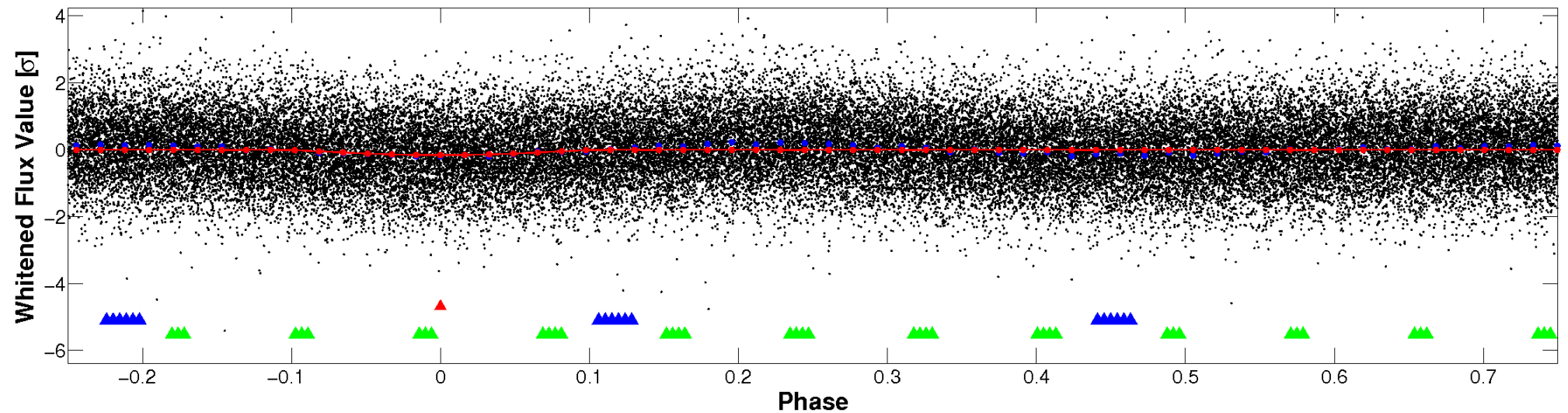


Non-Whitened Vs. Whitened Light Curve

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

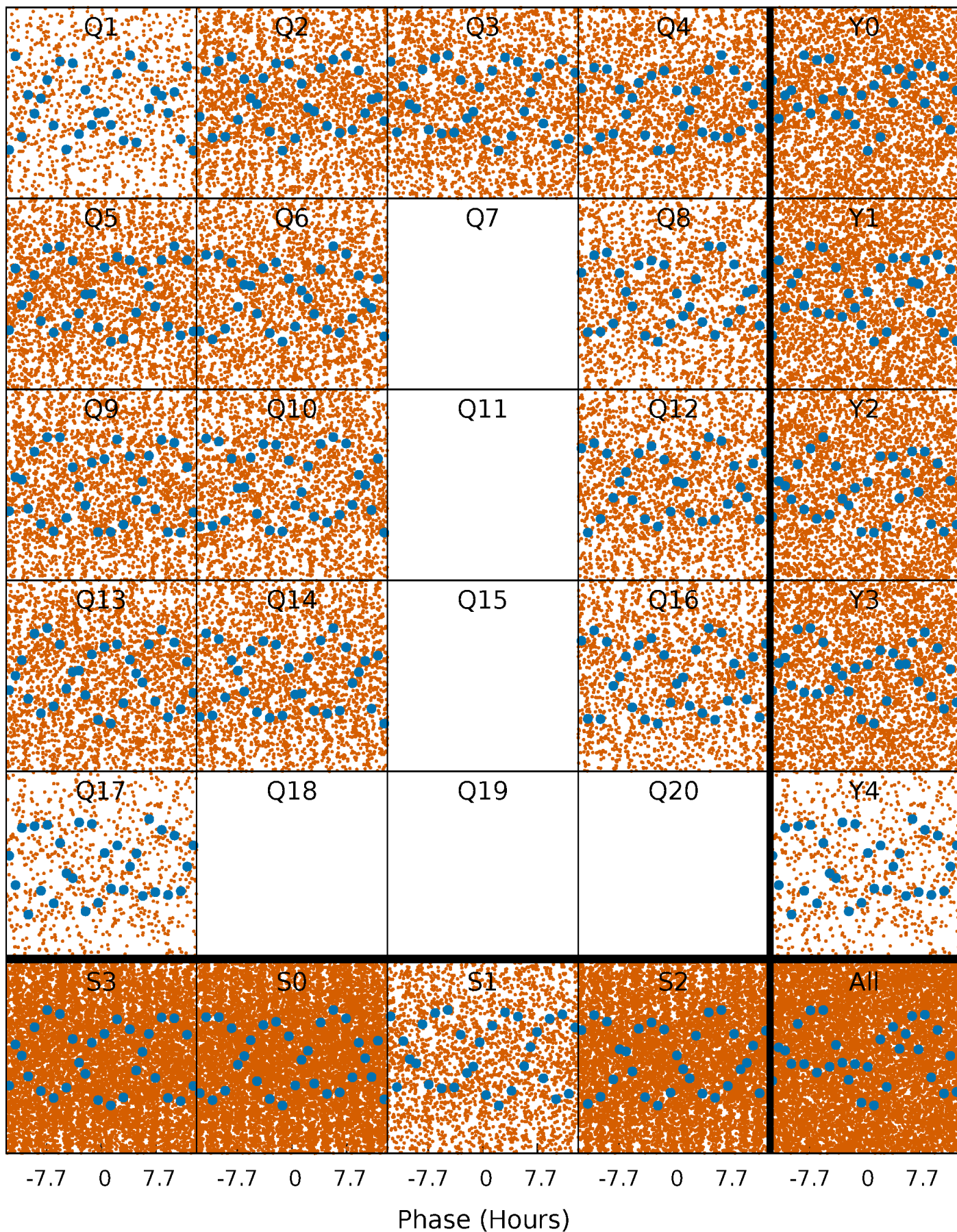


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



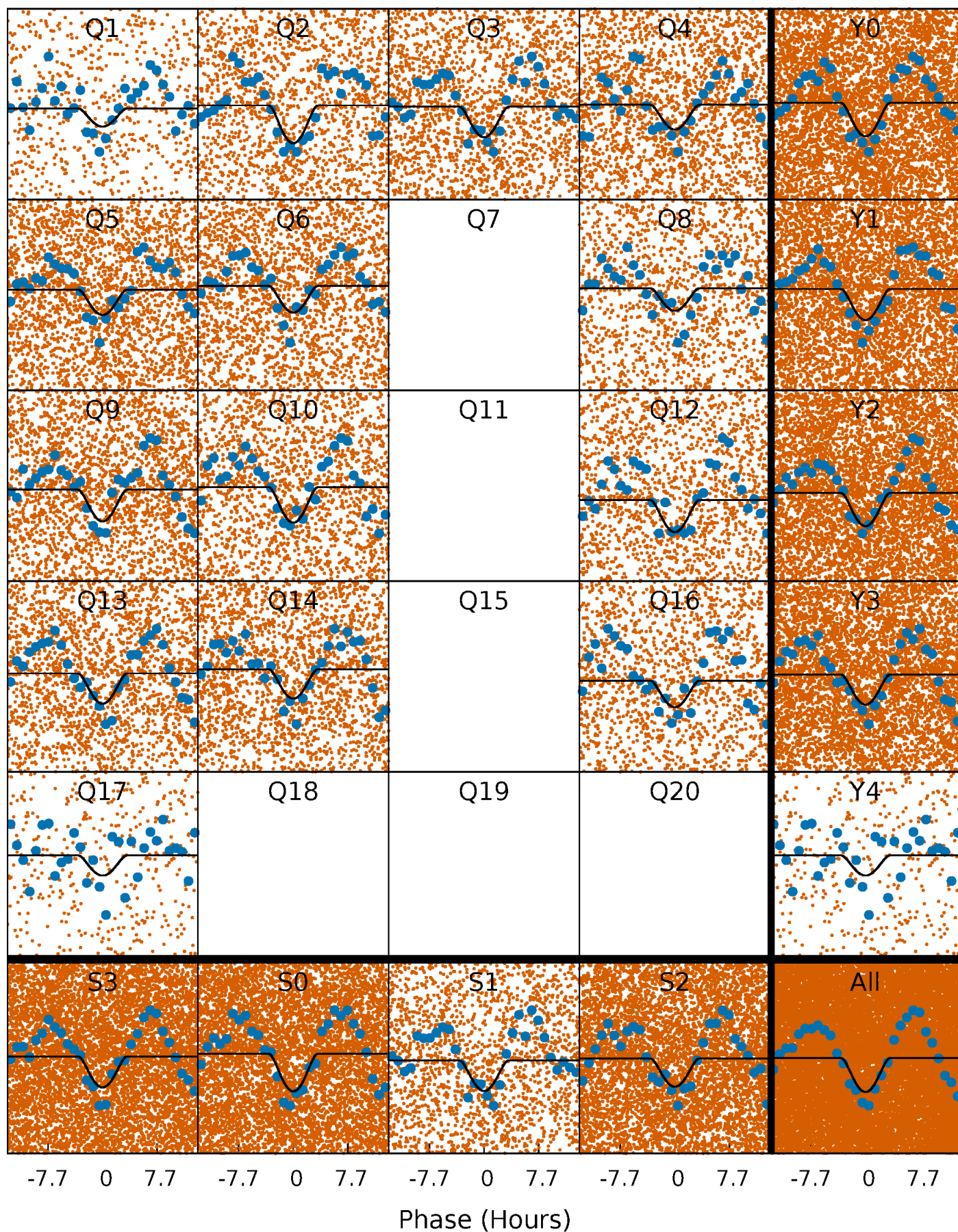
PDC Quarter-Phased Transit Curves

TCE 011152649-01 P= 1.253797 Days $T_0=132.777276$ (BKJD)



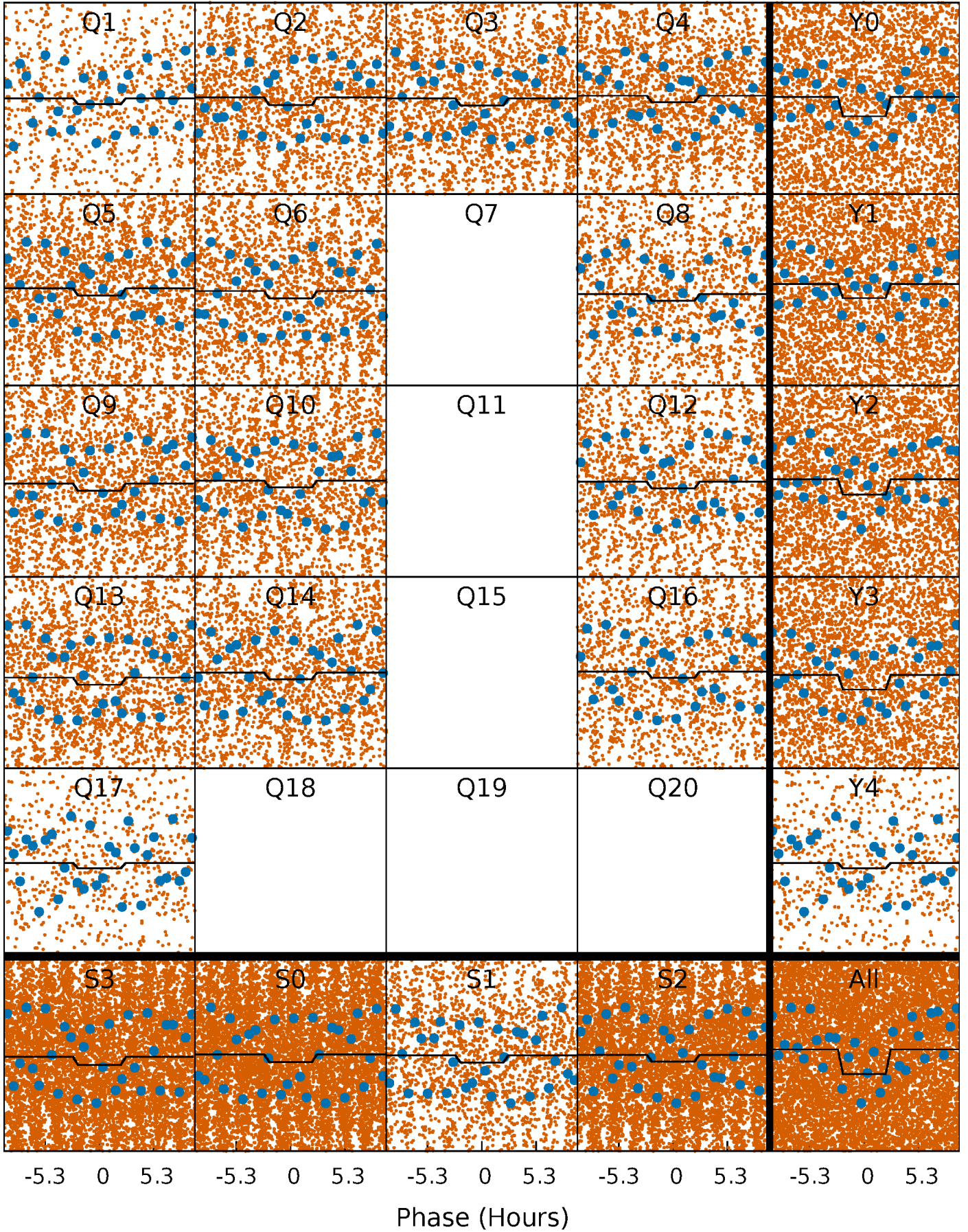
DV Quarter-Phased Transit Curves

TCE 011152649-01 P= 1.253797 Days $T_0=132.777276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

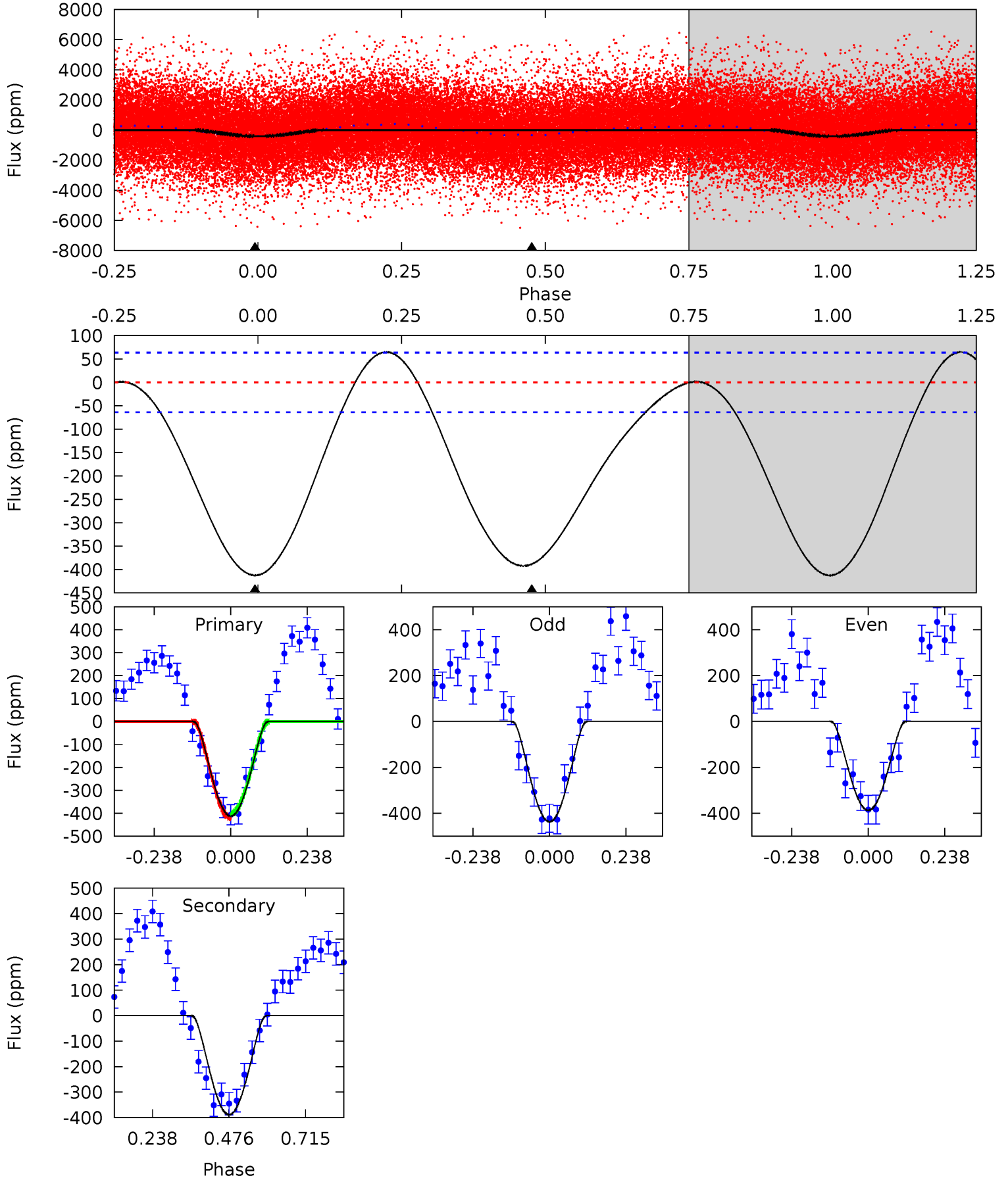
TCE 011152649-01 P= 1.253796 Days $T_0=132.756027$ (BKJD)



DV Model-Shift Uniqueness Test

011152649-01, P = 1.253797 Days, E = 130.269682 Days

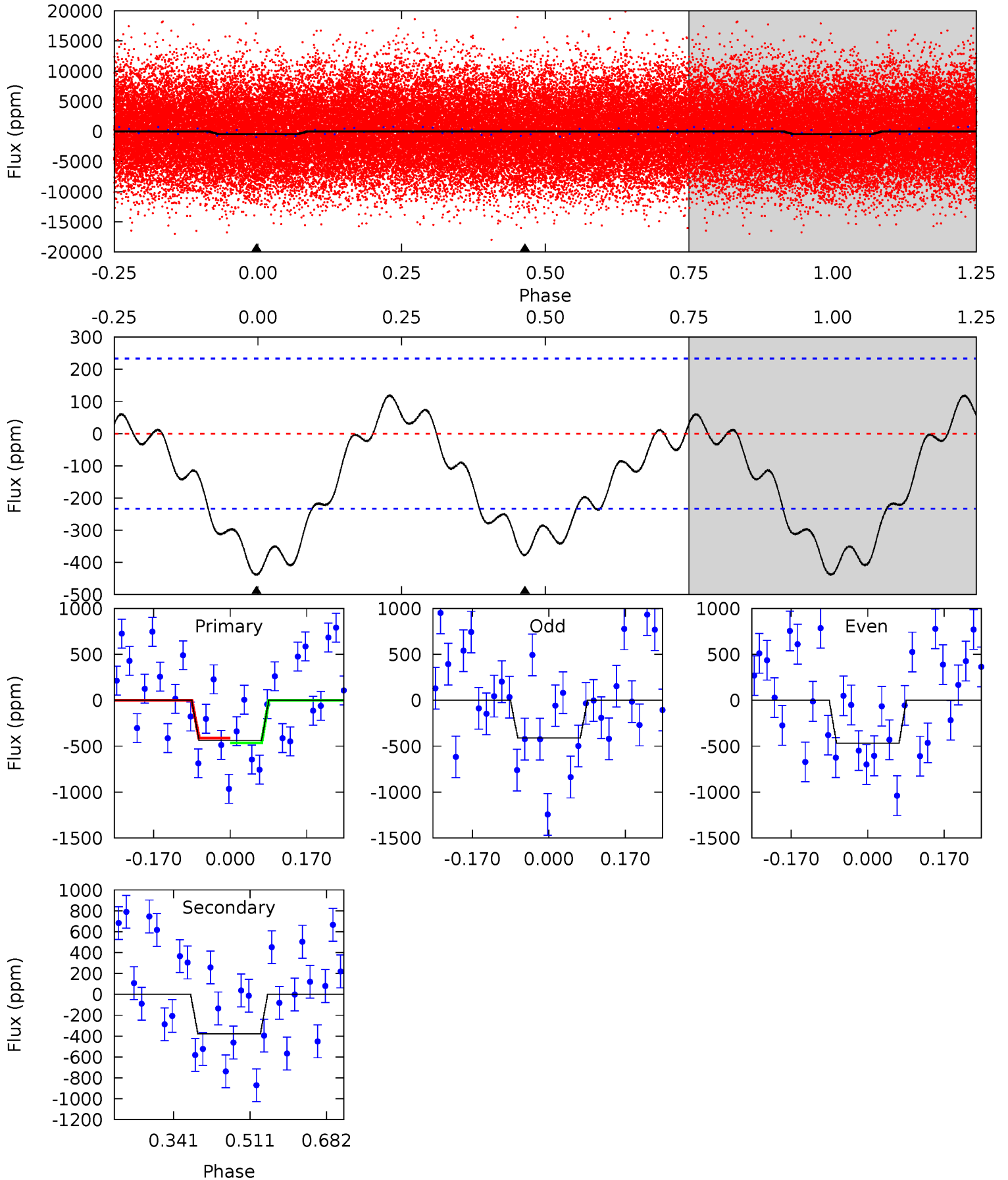
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	26.7	0	0	4.38	1.18	2.30	28.4	28.4	26.7	26.7	1.71	1.19	0.14	0.70



Alt Model-Shift Uniqueness Test

011152649-01, P = 1.253796 Days, E = 131.502231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.36	7.21	0	0	4.45	1.37	1.11	8.36	8.36	7.21	7.21	0.55	1.01	0.21	0.48



Stellar Parameters For KIC 011152649

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7440^{+206}_{-353}	$4.063^{+0.135}_{-0.165}$	$0.210^{+0.150}_{-0.350}$	$2.050^{+0.542}_{-0.443}$	$1.770^{+0.184}_{-0.299}$	$0.289^{+0.206}_{-0.141}$
	+3%/-5%	+3%/-4%	+71%/-167%	+26%/-22%	+10%/-17%	+71%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011152649-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-388 ± 15	$12.80^{+11.81}_{-8.80}$	3968^{+276}_{-281}	4161^{+3458}_{-6783}	$0.966^{+8.979}_{-0.698}$
Alt.	-378 ± 52	$11.17^{+10.71}_{-7.63}$	3944^{+287}_{-248}	4433^{+3764}_{-2134}	$1.189^{+11.249}_{-0.880}$

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

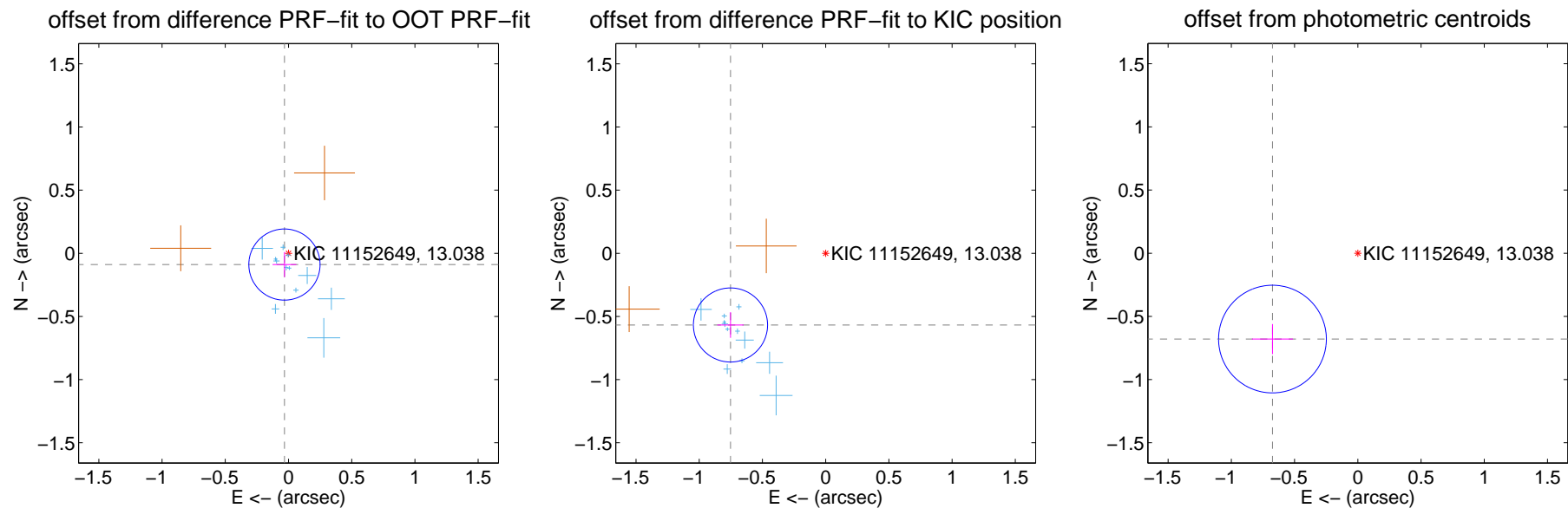
DV Centroid Data

Supplemental centroid analysis for 011152649-01. Kepler magnitude: 13.04. Transit SNR 11.05

There are 12 quarters with good PRF difference image offsets

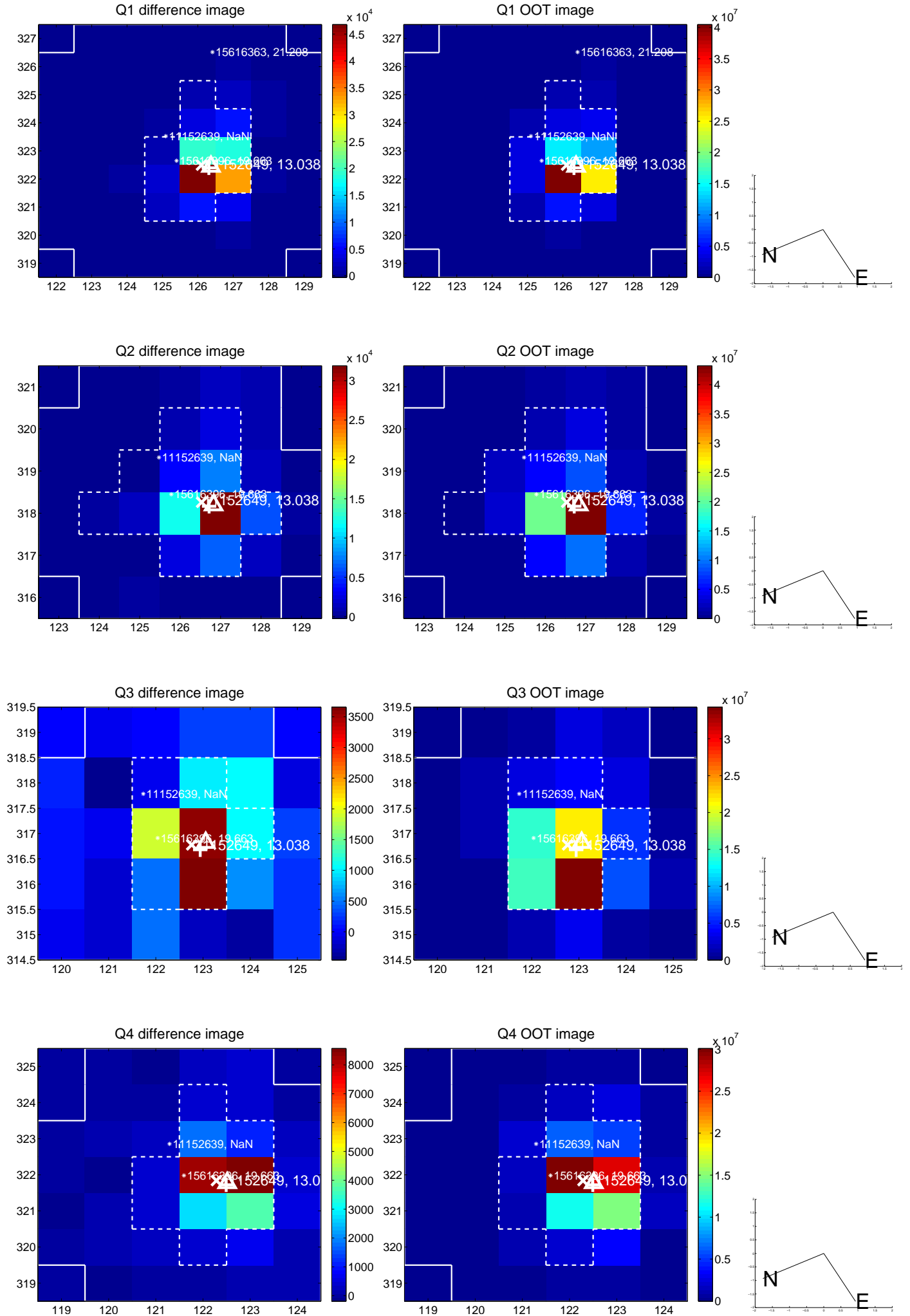
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.095 ± 0.094	1.01	0.032 ± 0.094	-0.089 ± 0.099
PRF-fit source offset from KIC position	0.943 ± 0.098	9.64	0.753 ± 0.105	-0.568 ± 0.102
photometric centroid source offset	0.96 ± 0.14	6.74	0.67 ± 0.16	-0.68 ± 0.12

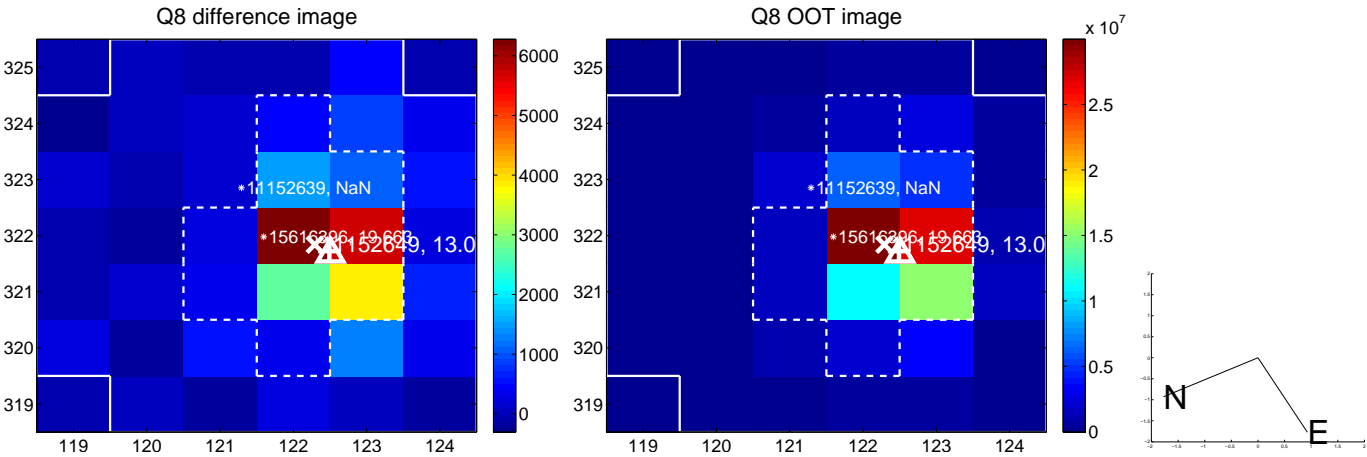
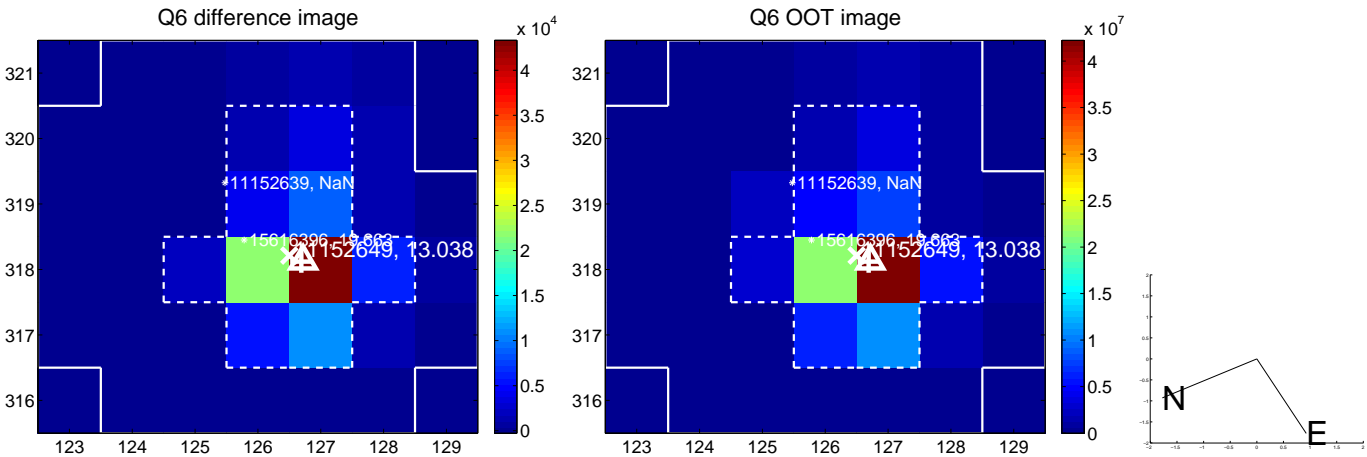
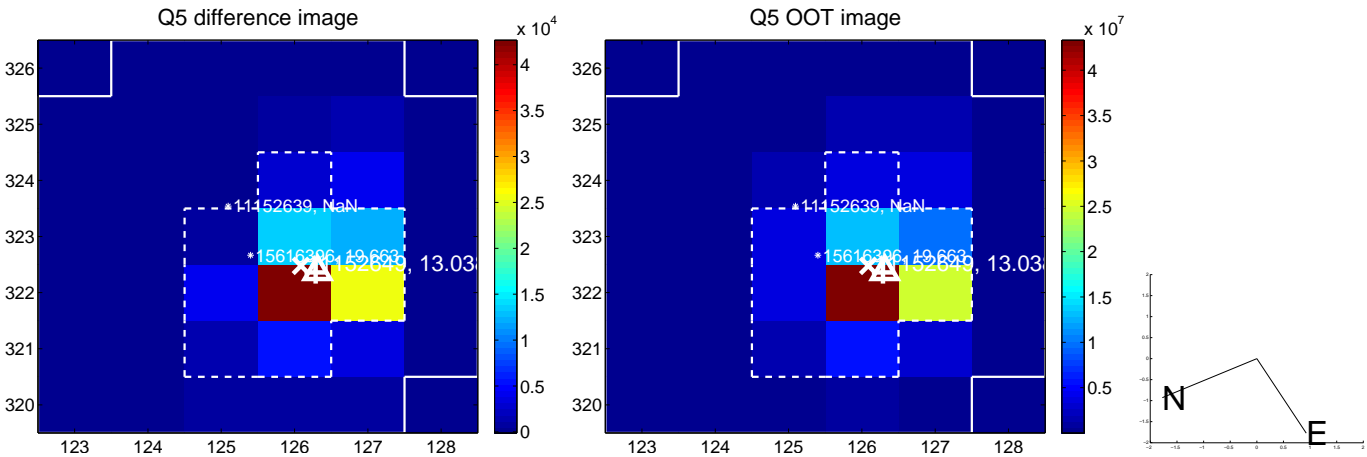


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

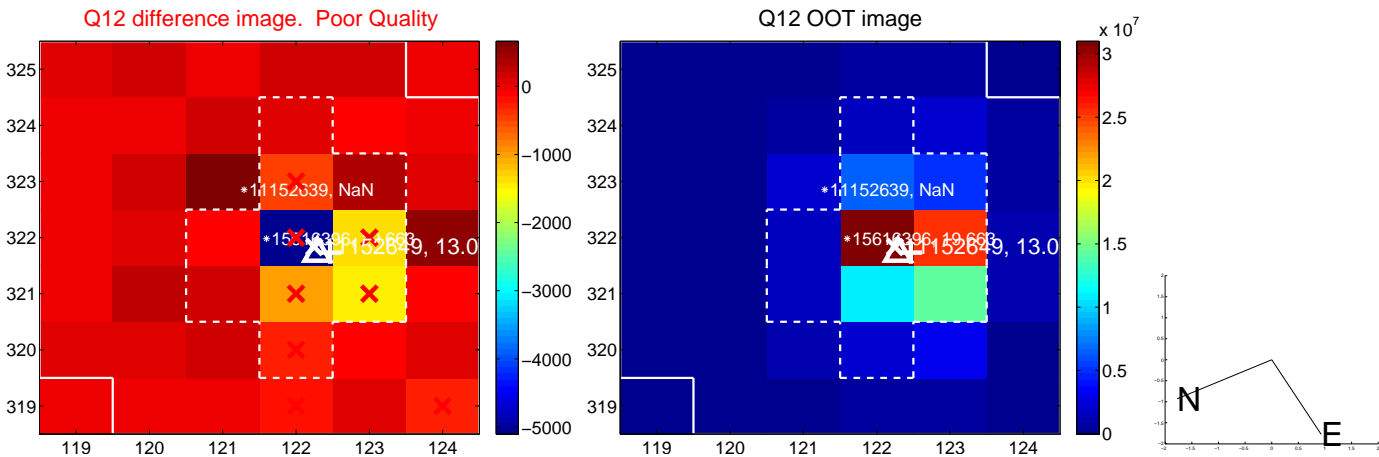
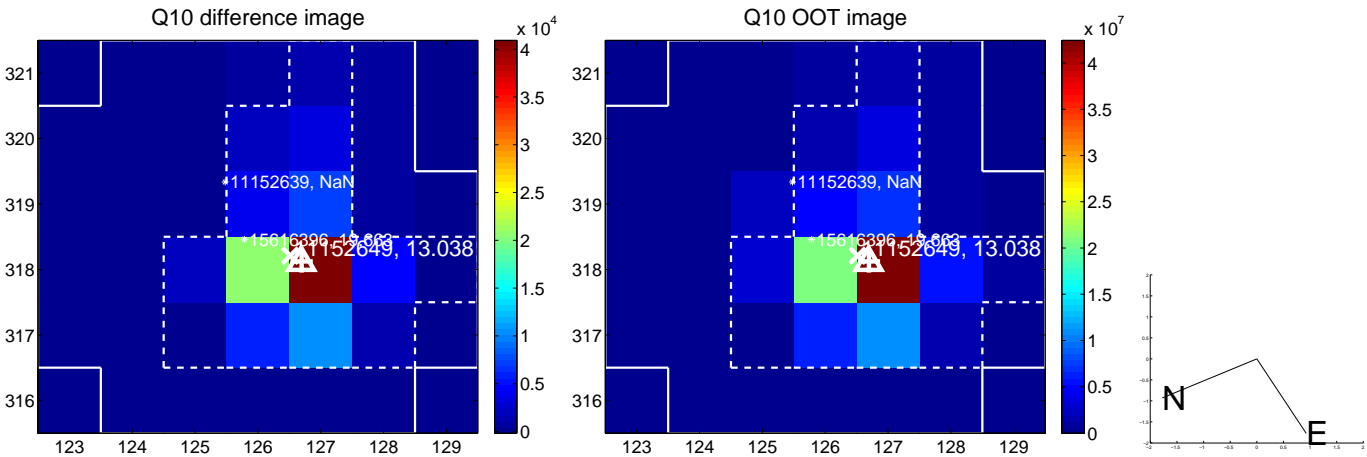
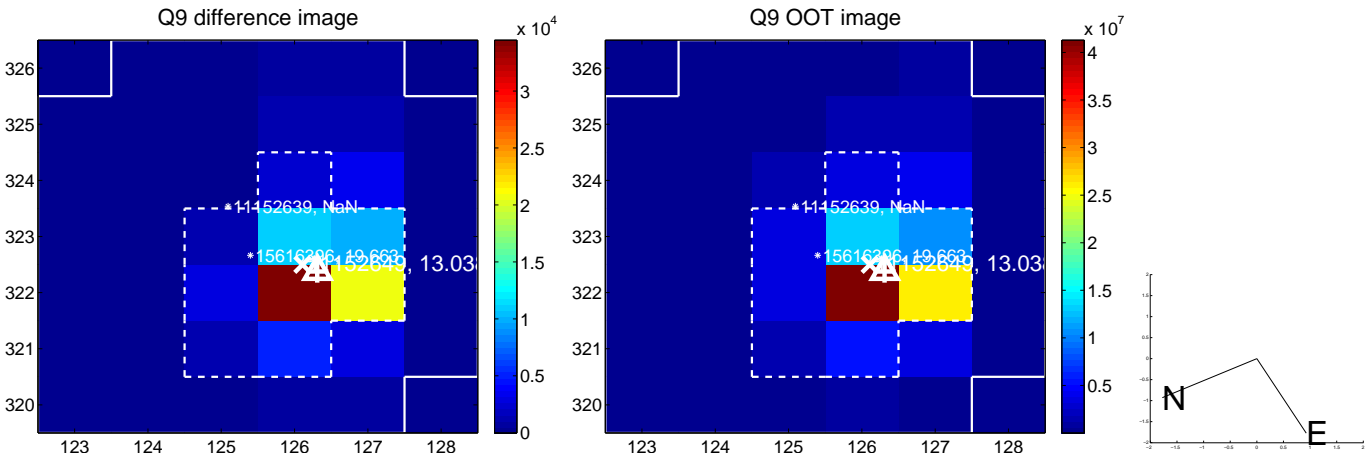
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



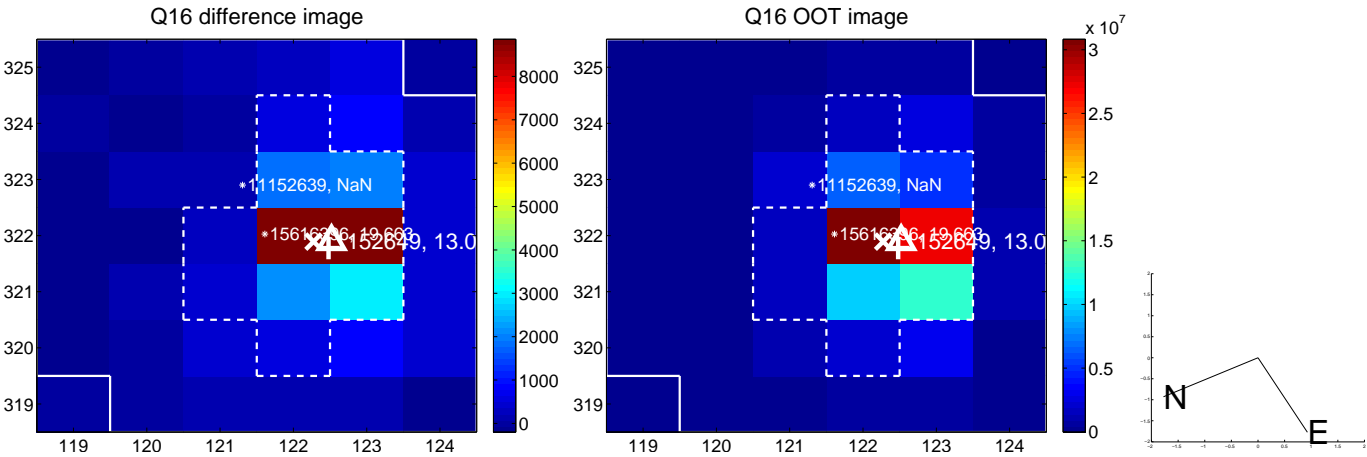
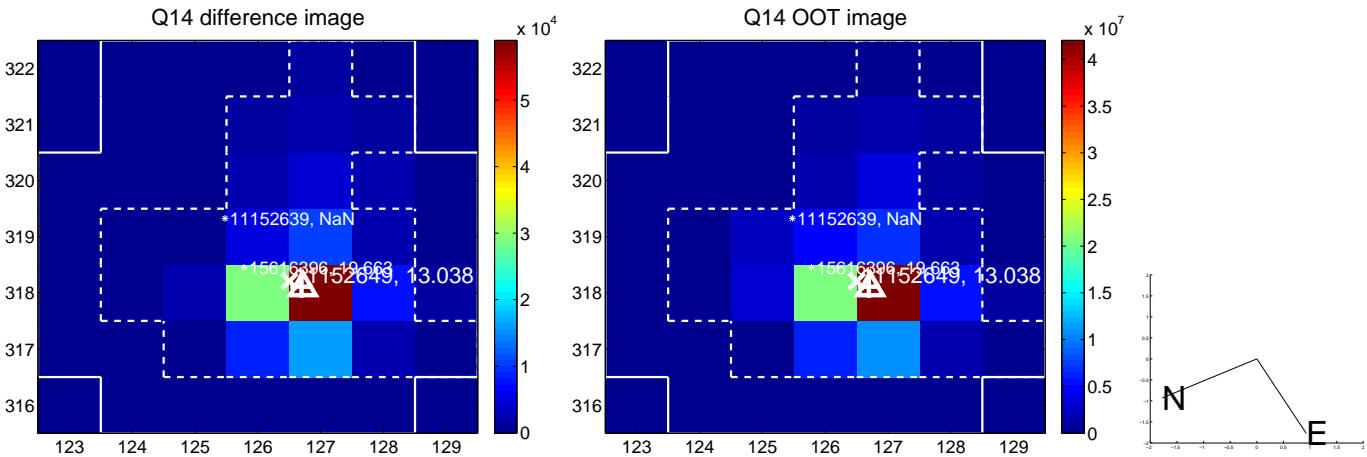
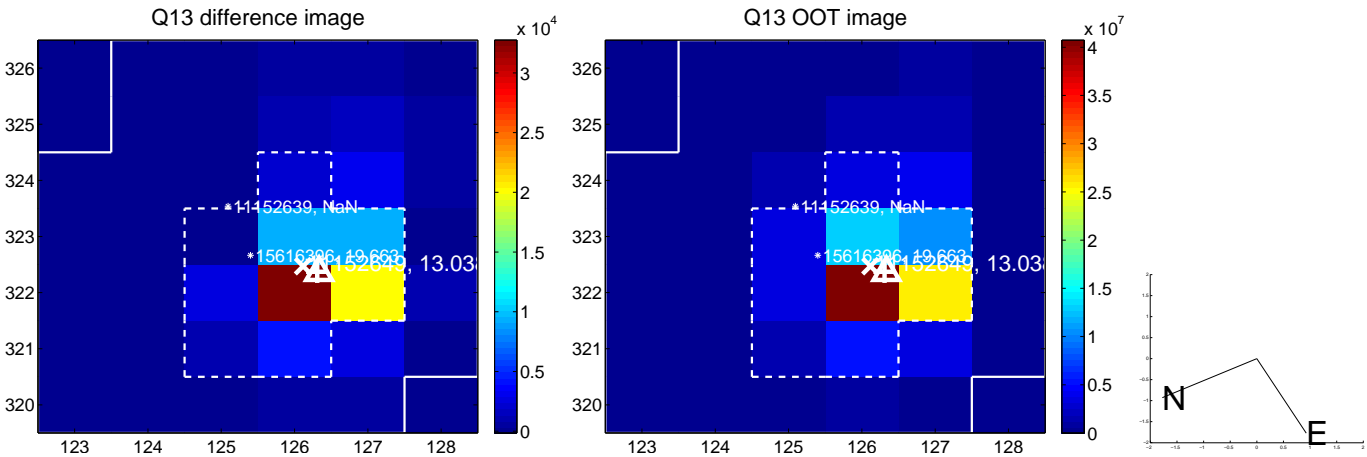
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



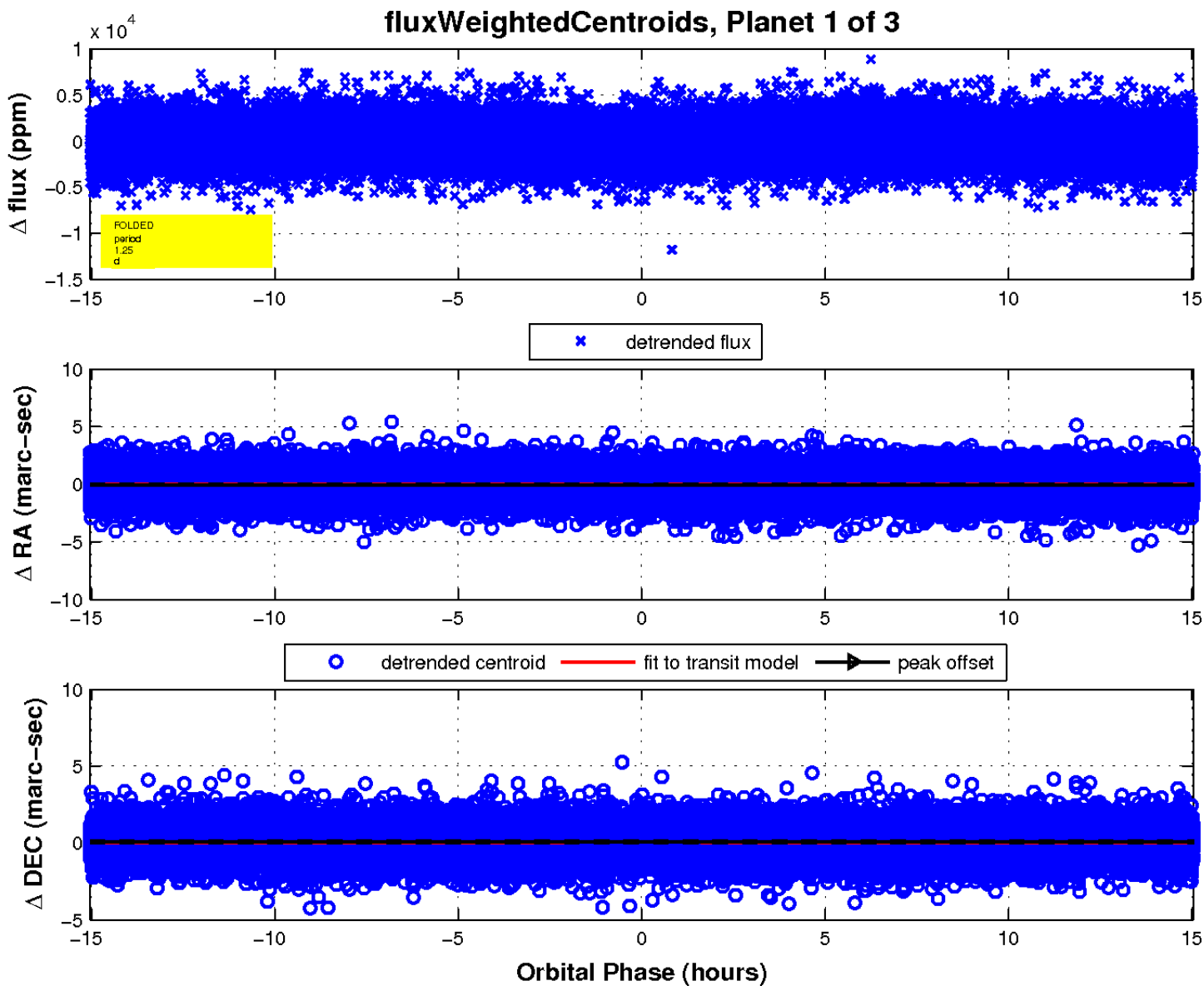
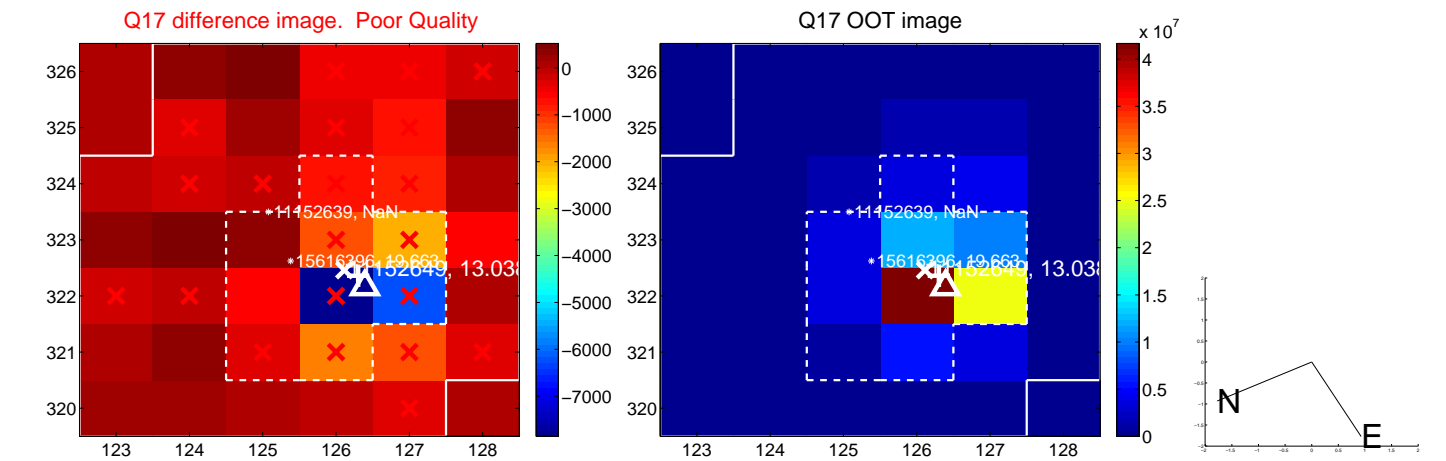
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

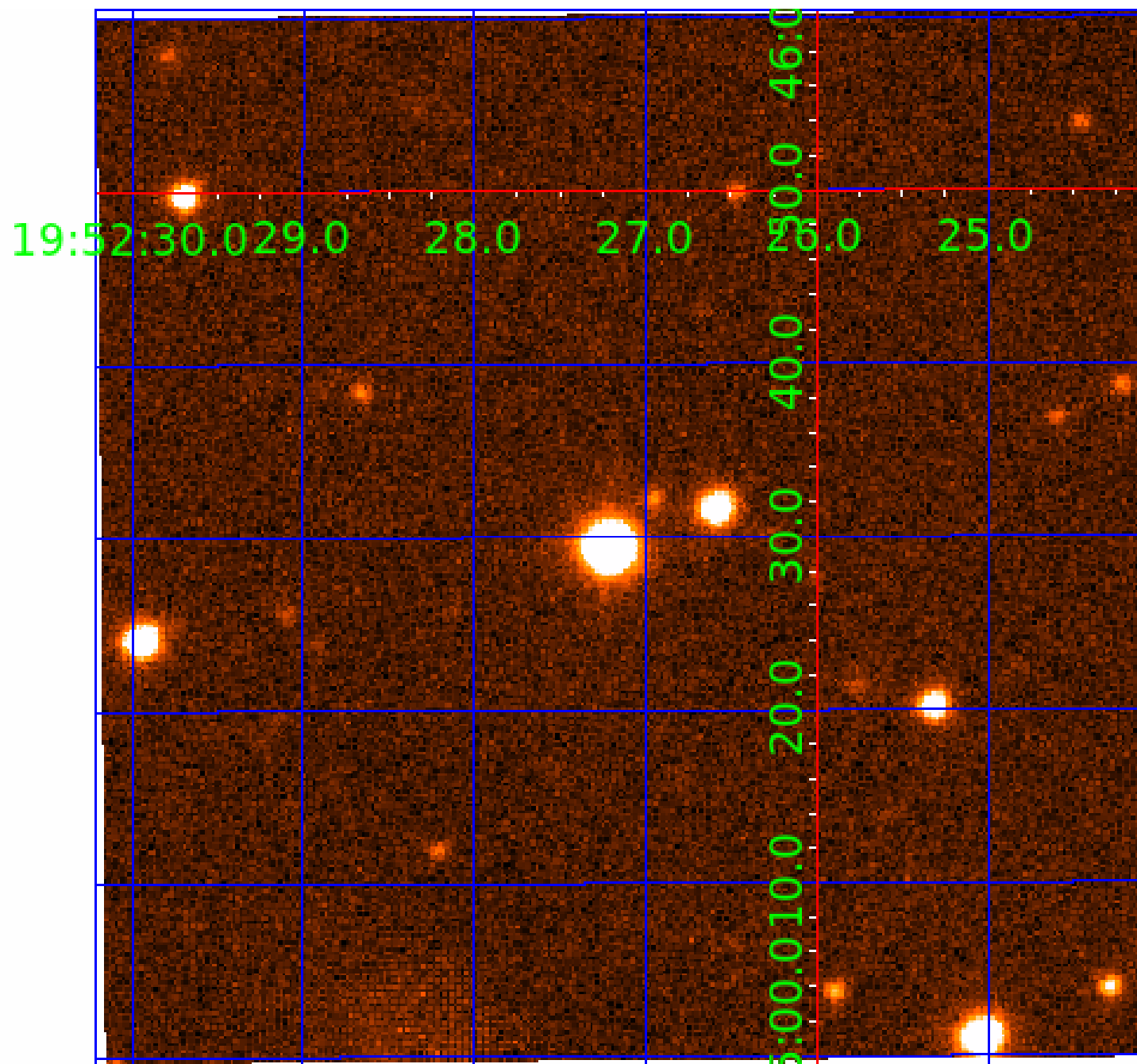


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011152649

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})
011152649-01	OBS	No	1.253797	132.777276	300.0	6.732	10.4	11.0	2.05	7440	6.40	15207.30
011152649-02	OBS	No	84.424211	144.194661	1861.0	4.170	7.6	7.8	2.05	7440	10.59	55.51
011152649-03	OBS	No	35.210383	151.685900	1511.8	2.100	7.7	6.5	2.05	7440	9.02	178.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011152649-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS
011152649-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
011152649-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS

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

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

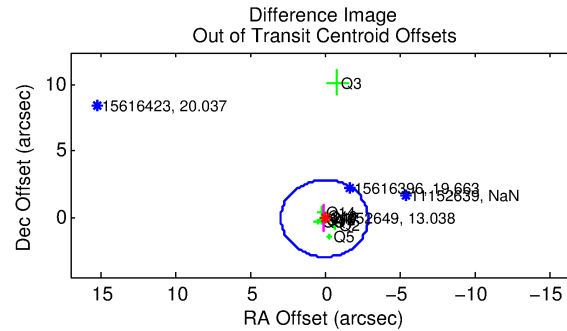
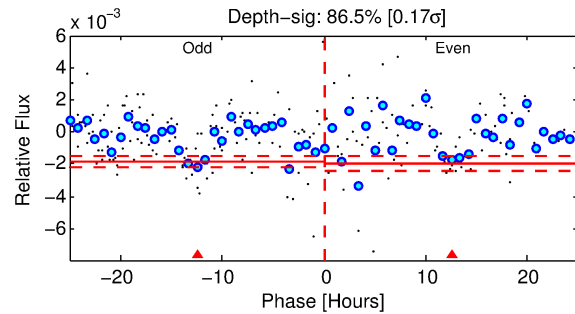
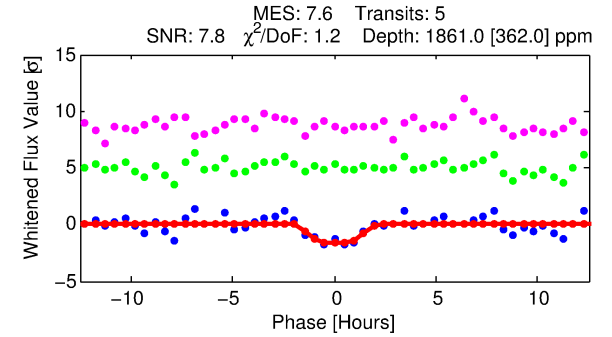
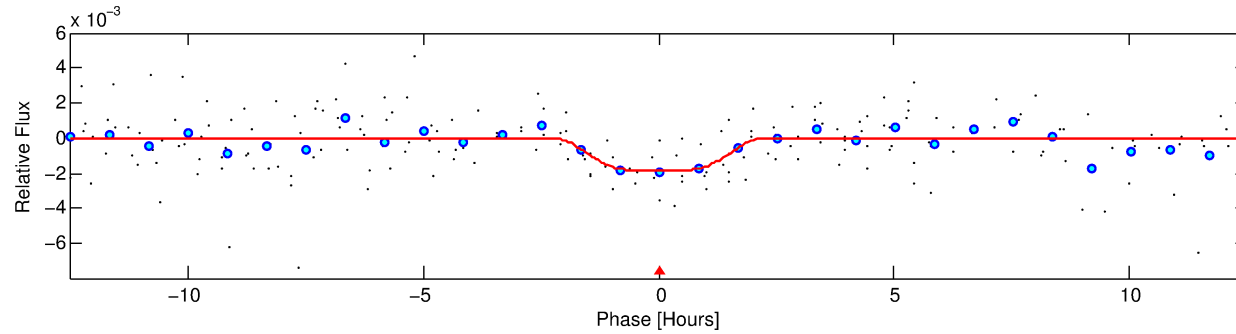
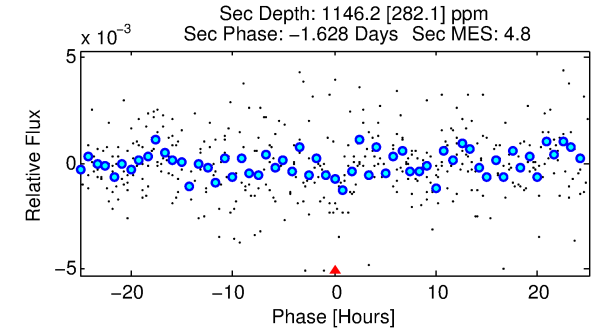
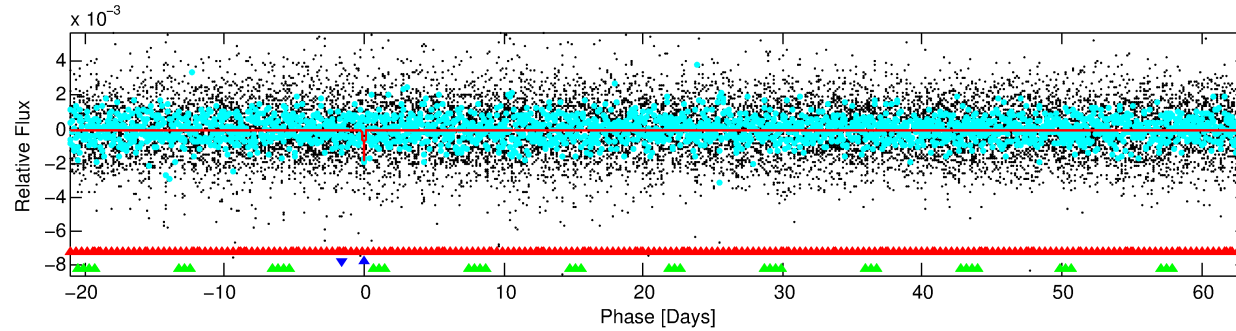
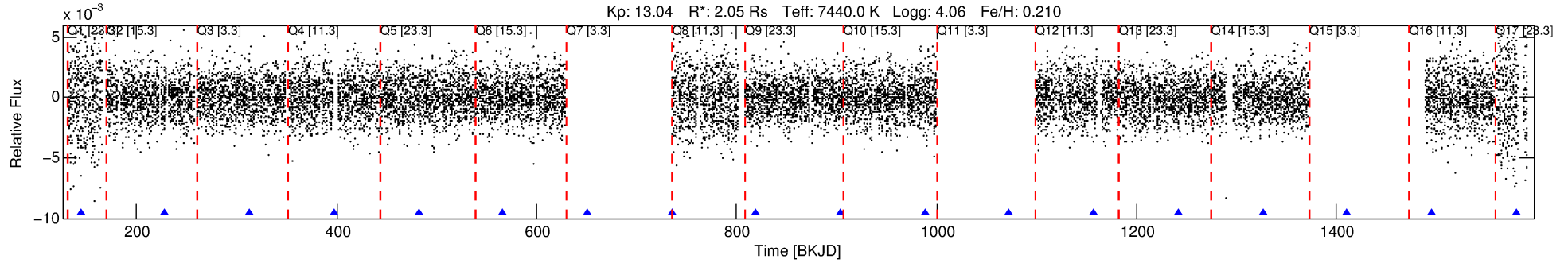
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011152649-02

No Significant Match Found

DV One-Page Summary

KIC: 11152649 Candidate: 2 of 3 Period: 84.424 d



DV Fit Results:

Period = 84.42421 [0.00145] d
Epoch = 144.1947 [0.0140] BKJD
Rp/R* = 0.0473 [0.0069]
a/R* = 73.23 [31.30]
b = 0.93 [0.06]
Seff = 55.51 [20.11]
Teq = 696 [63] K
Rp = 10.59 [3.20] Re
a = 0.4559 [0.0989] AU
Ag = 1168.89 [575.00] [2.03σ]
Teffp = 6292 [673] K [8.28σ]

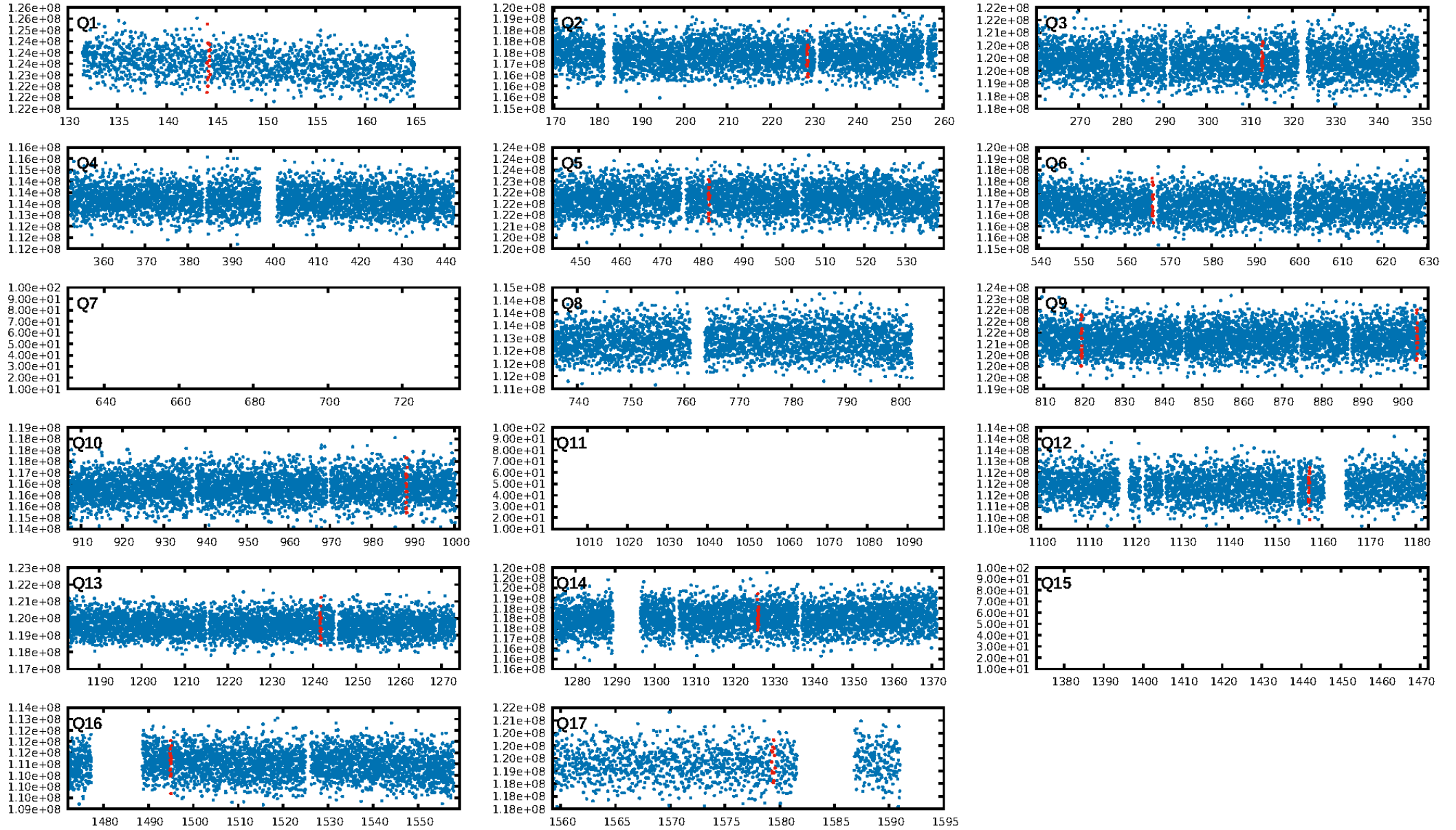
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [253.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.4%
ModelChiSquareGof-sig: 92.5%
Bootstrap-pfa: 1.18e-08
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.507
Centroid-sig: 6.0%
Centroid-so: 0.611 arcsec [3.40σ]
OotOffset-rm: 0.072 arcsec [0.07σ]
KicOffset-rm: 0.924 arcsec [1.30σ]
OotOffset-st: 3/1/2/4 [10]
KicOffset-st: 3/1/2/4 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.40 [4/10]

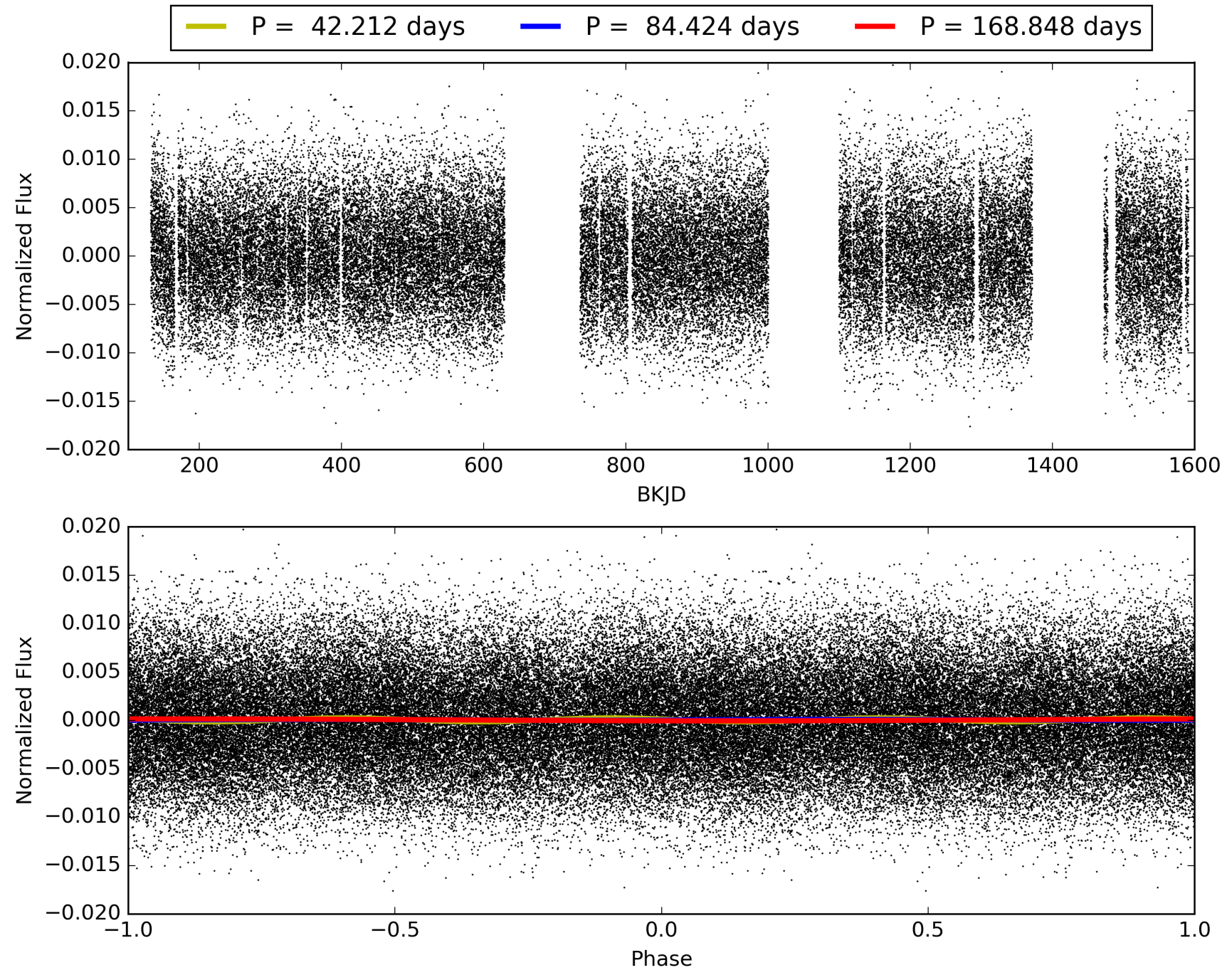
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:58:27 Z

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

TCE 011152649-02, PDC Light Curves

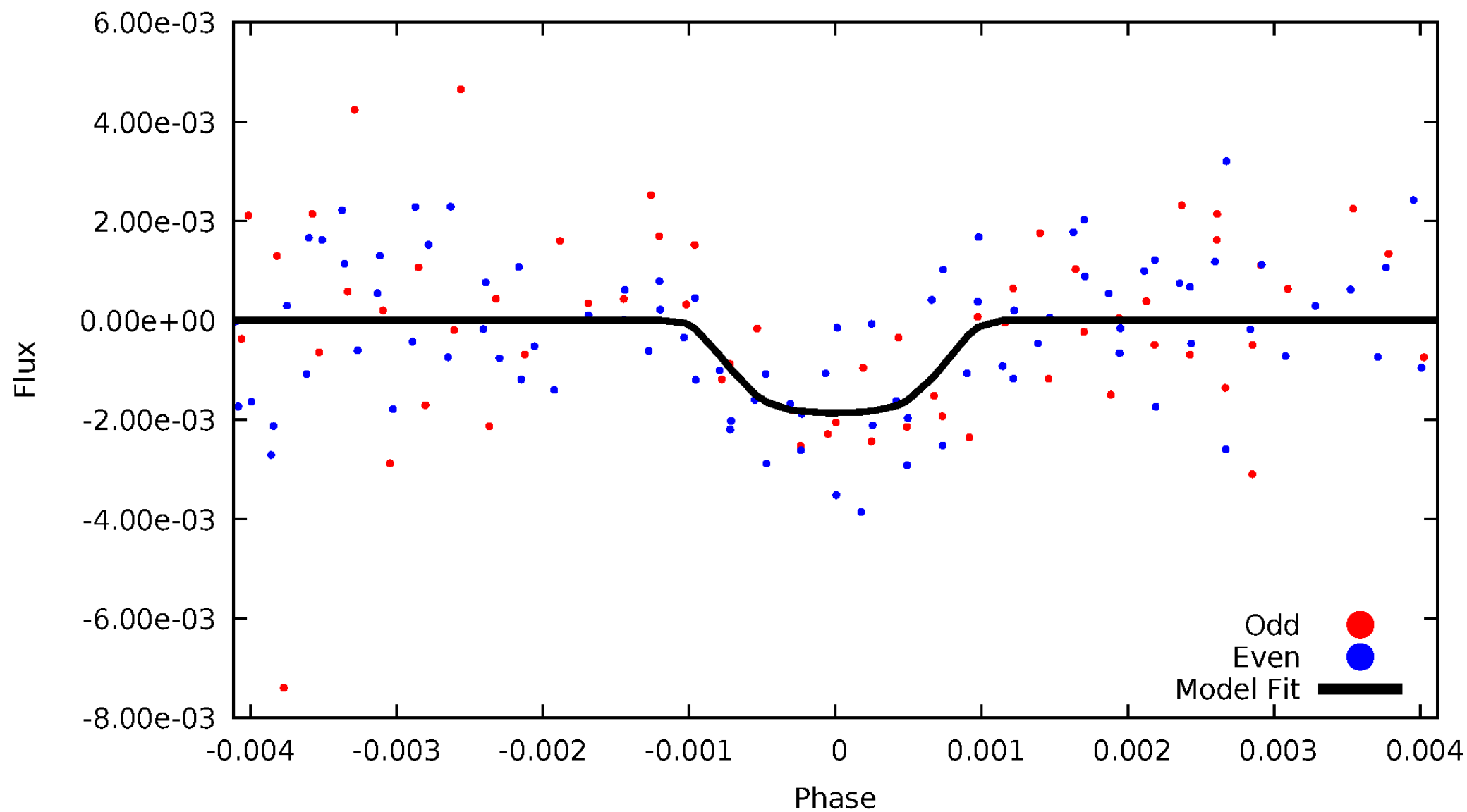


TCE 011152649-02



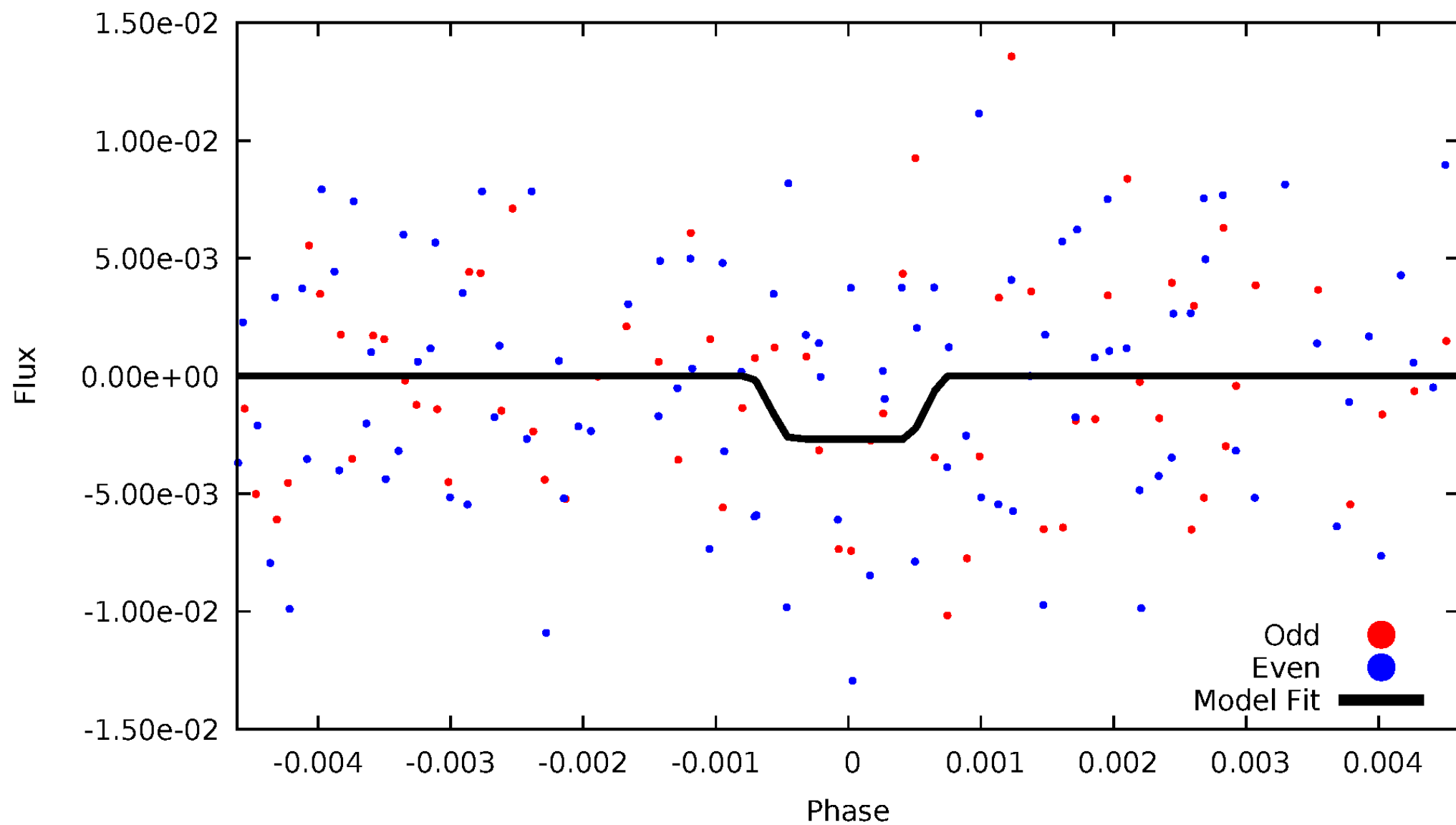
DV Odd/Even

TCE 011152649-02



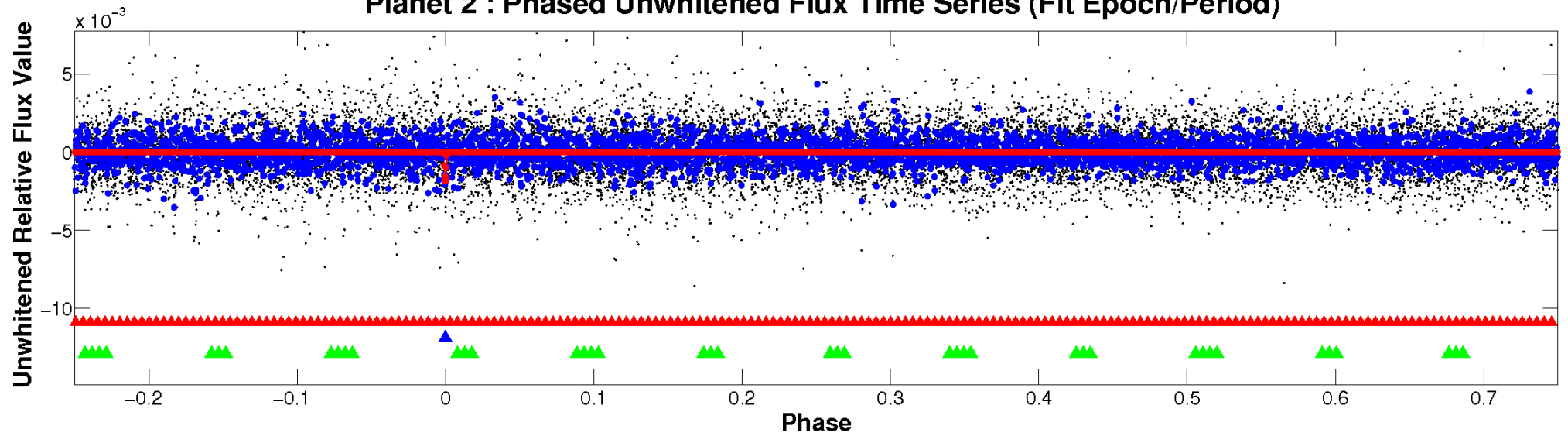
ALT Odd/Even

TCE 011152649-02

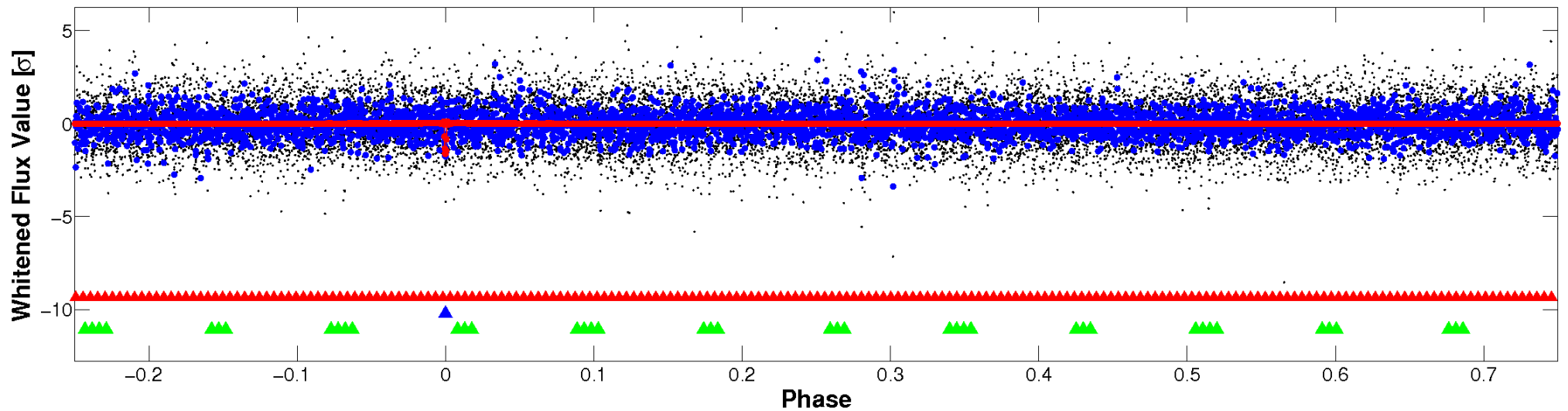


Non-Whitened Vs. Whitened Light Curve

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

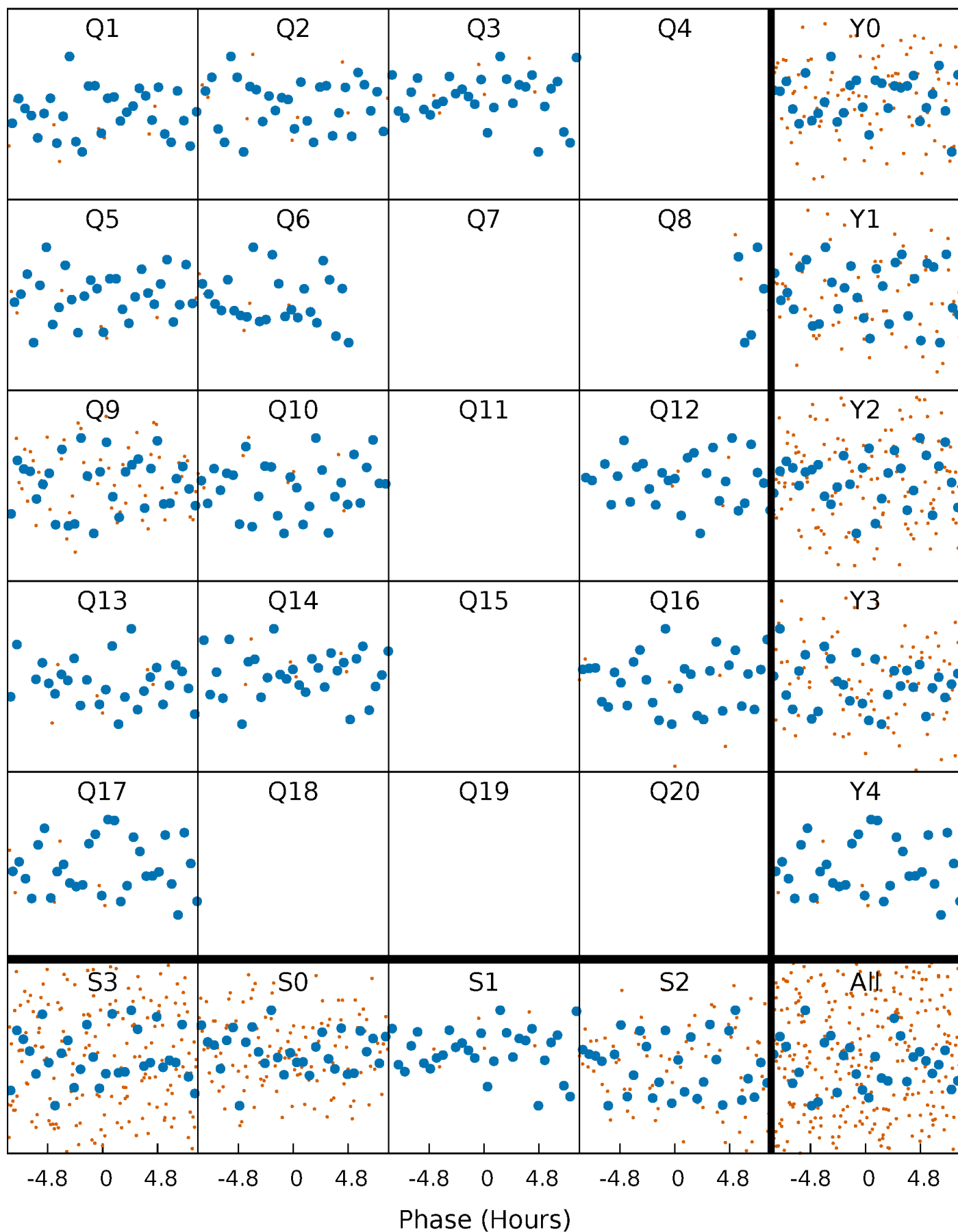


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



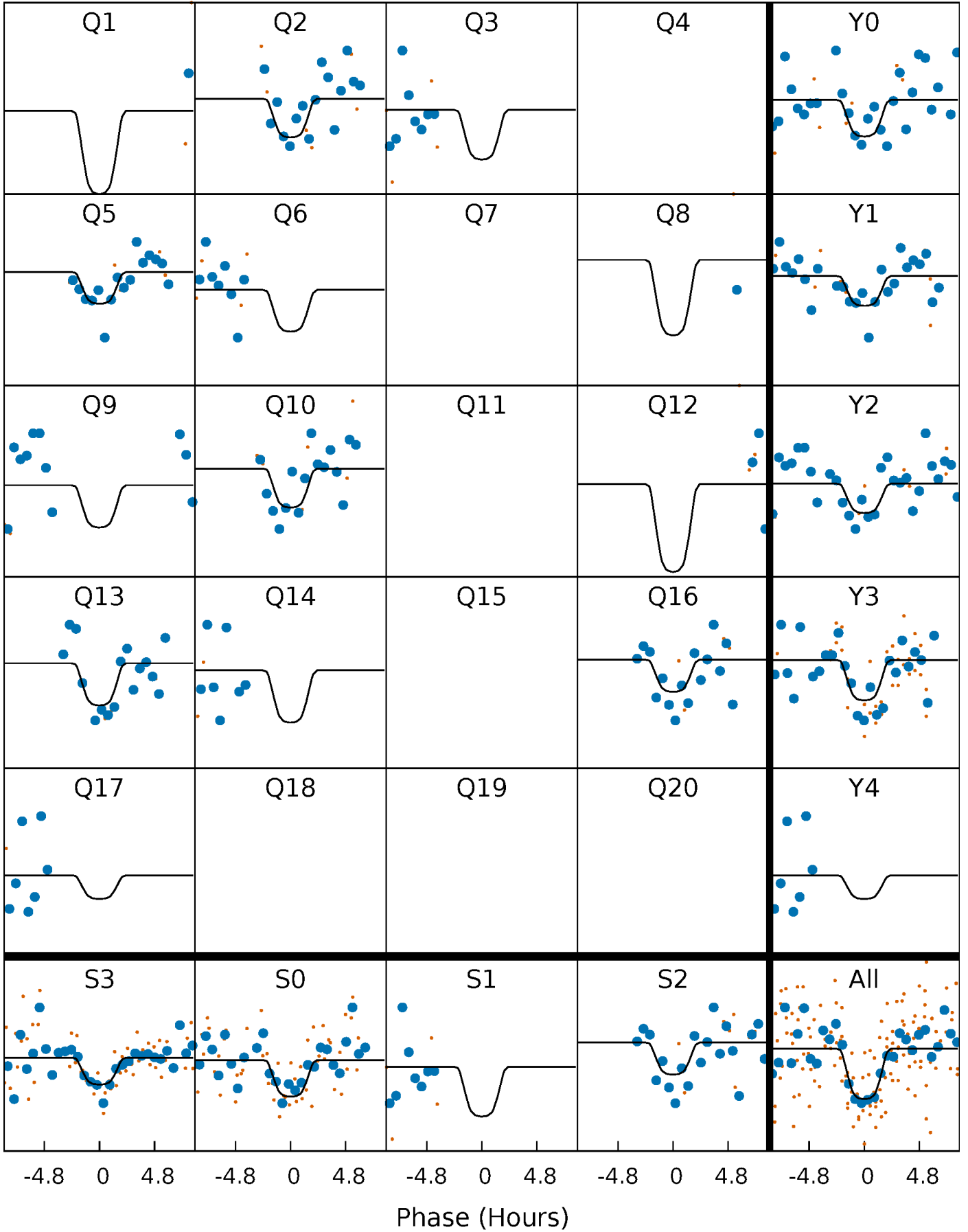
PDC Quarter-Phased Transit Curves

TCE 011152649-02 P= 84.424211 Days $T_0=144.194661$ (BKJD)



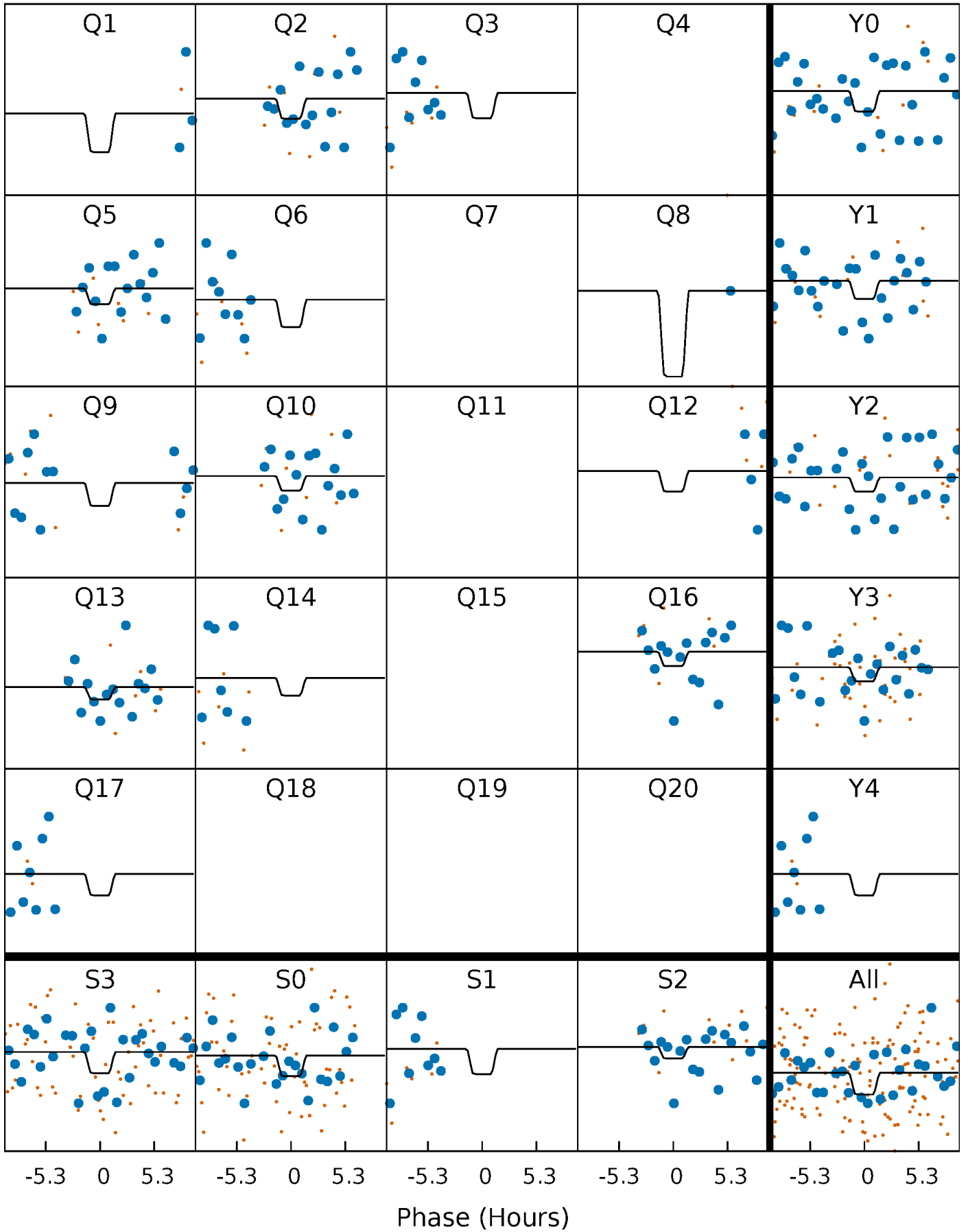
DV Quarter-Phased Transit Curves

TCE 011152649-02 P= 84.424211 Days $T_0=144.194661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

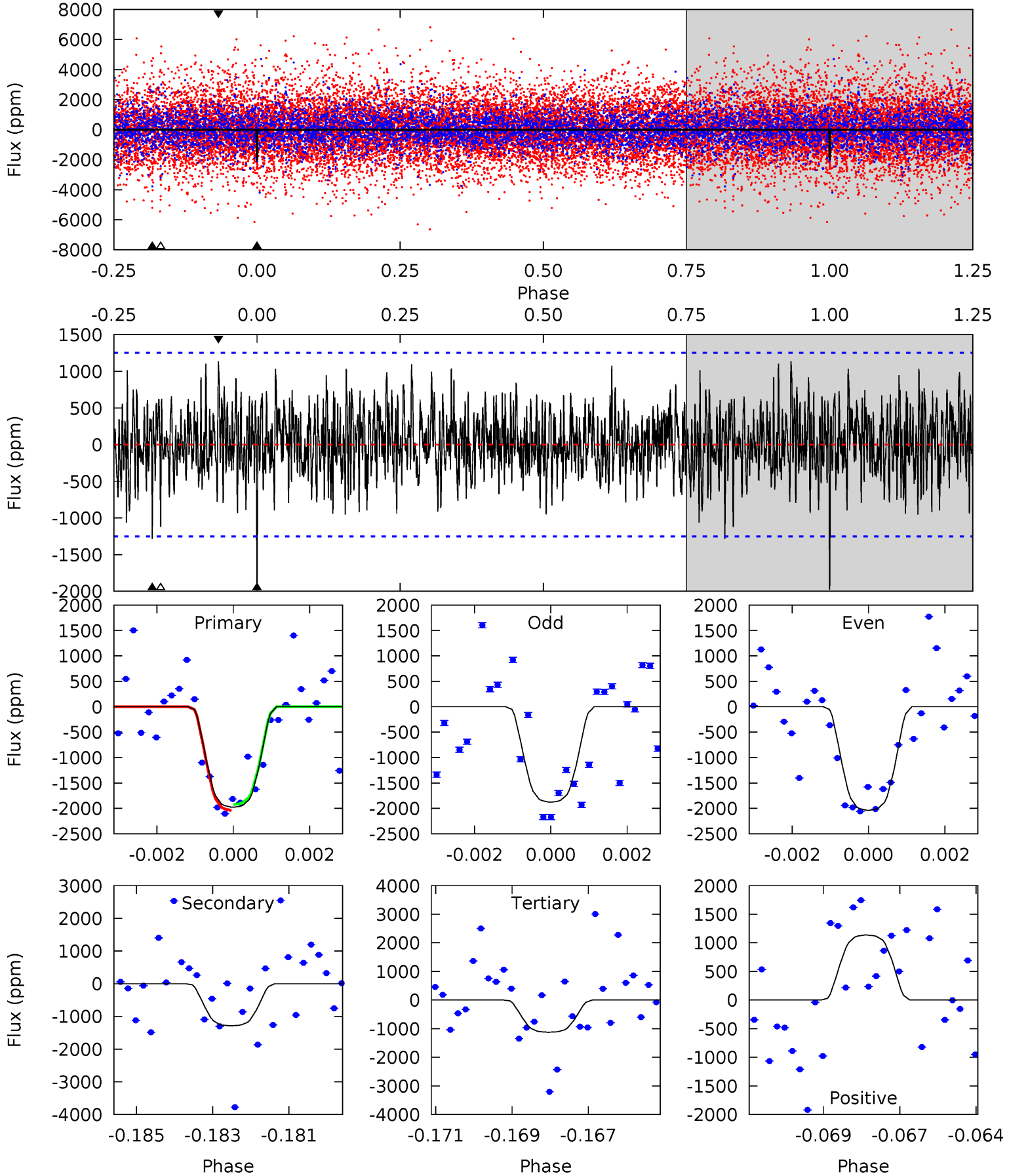
TCE 011152649-02 P= 84.423942 Days $T_0=144.196757$ (BKJD)



DV Model-Shift Uniqueness Test

011152649-02, P = 84.424211 Days, E = 59.770450 Days

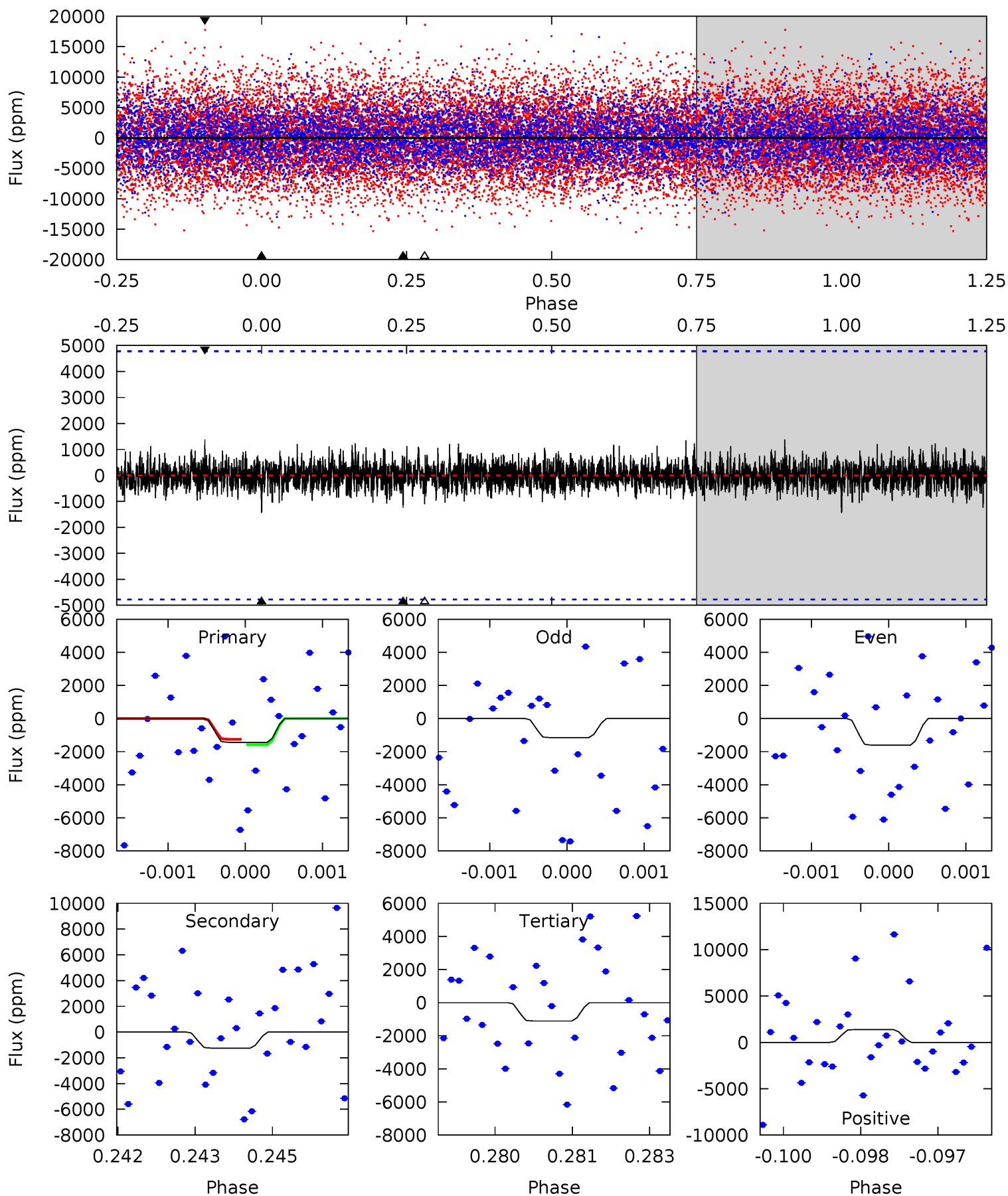
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	5.46	4.77	4.83	5.33	3.09	1.53	3.62	3.57	0.69	0.63	0.33	1.03	0.37	0.25



Alt Model-Shift Uniqueness Test

011152649-02, P = 84.423942 Days, E = 59.772815 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.62	1.40	1.25	1.55	5.38	3.18	0.40	0.37	0.07	0.15	-0.15	0.25	1.19	0.49	0.19



Stellar Parameters For KIC 011152649

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7440^{+206}_{-353}	$4.063^{+0.135}_{-0.165}$	$0.210^{+0.150}_{-0.350}$	$2.050^{+0.542}_{-0.443}$	$1.770^{+0.184}_{-0.299}$	$0.289^{+0.206}_{-0.141}$
	+3%/-5%	+3%/-4%	+71%/-167%	+26%/-22%	+10%/-17%	+71%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011152649-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1285 ± 235	$10.54^{+2.39}_{-1.84}$	970^{+68}_{-65}	6301^{+729}_{-509}	1266^{+690}_{-421}
Alt.	-1246 ± 888	$11.34^{+2.52}_{-2.00}$	972^{+67}_{-69}	5944^{+1133}_{-1345}	990^{+1010}_{-682}

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

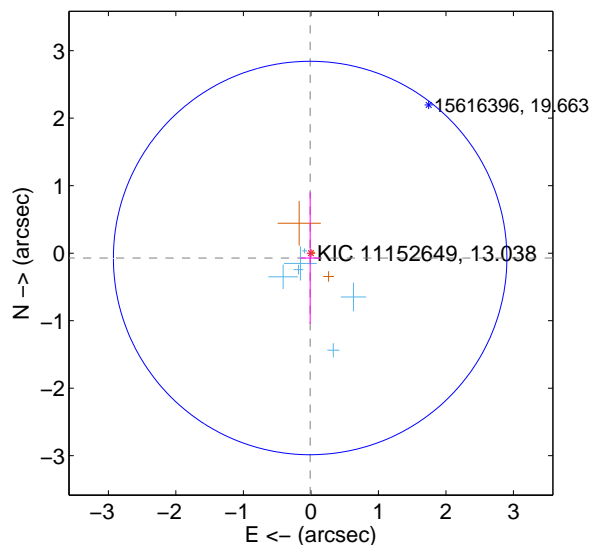
Supplemental centroid analysis for 011152649-02. Kepler magnitude: 13.04. Transit SNR 7.80

There are 6 quarters with good PRF difference image offsets

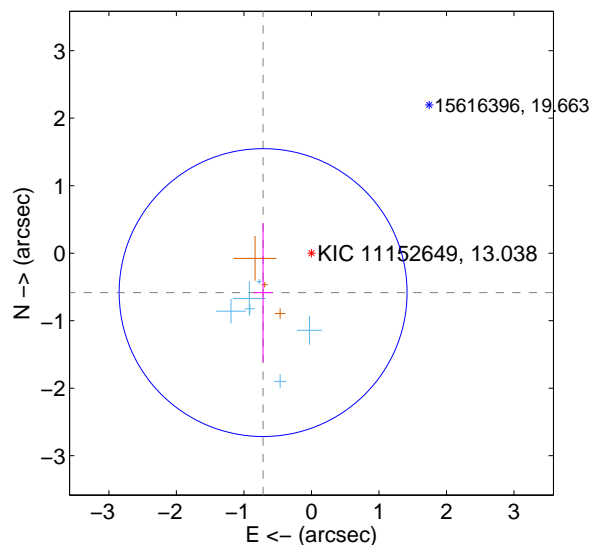
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.072 ± 0.971	0.07	0.012 ± 0.144	-0.071 ± 0.971
PRF-fit source offset from KIC position	0.924 ± 0.711	1.30	0.716 ± 0.140	-0.584 ± 1.026
photometric centroid source offset	0.61 ± 0.18	3.40	0.20 ± 0.22	-0.58 ± 0.17

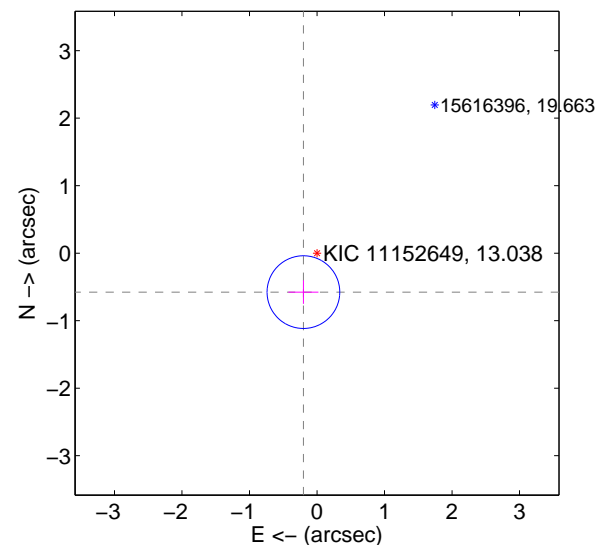
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

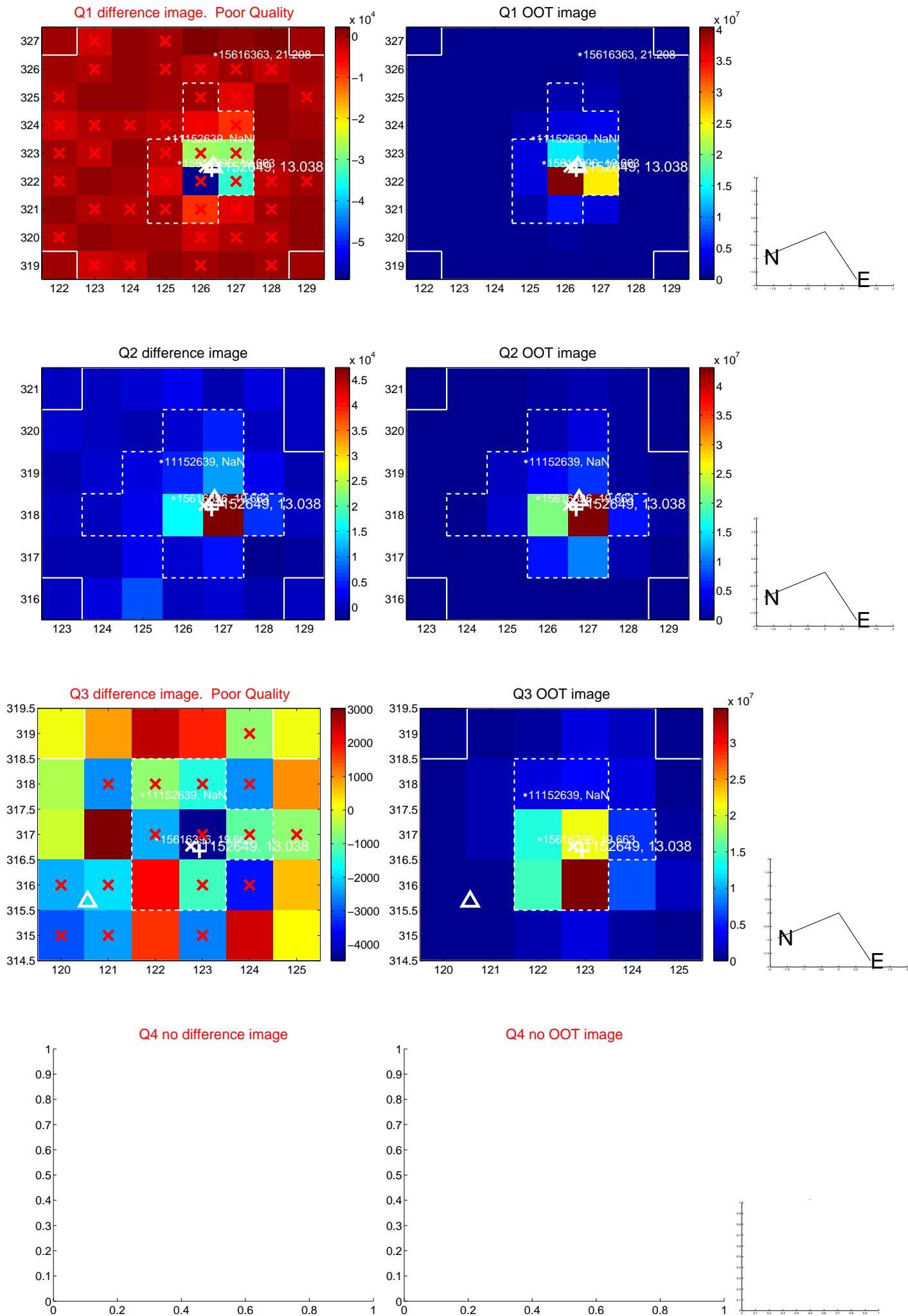


offset from photometric centroids

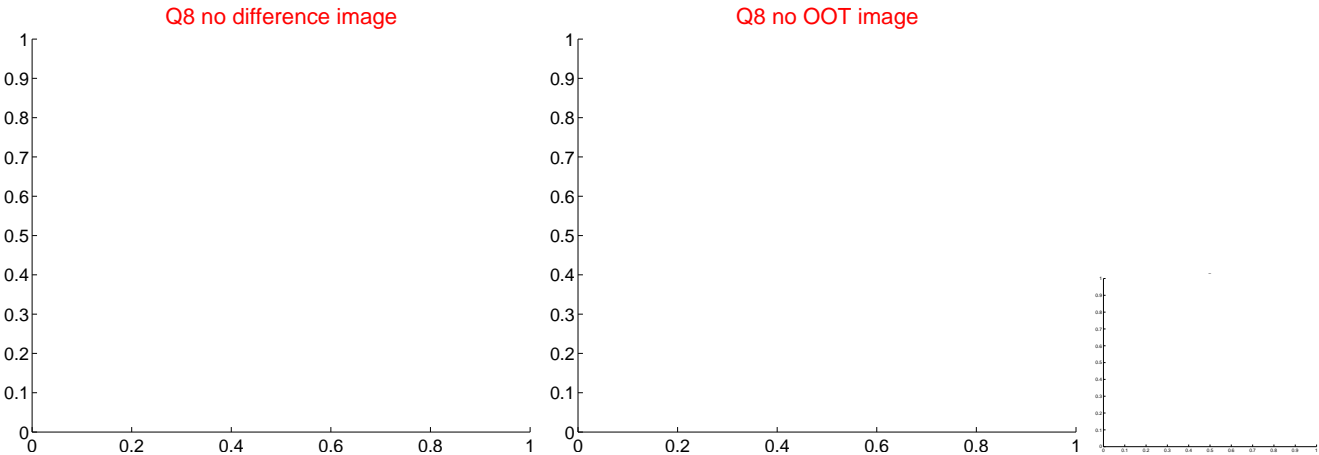
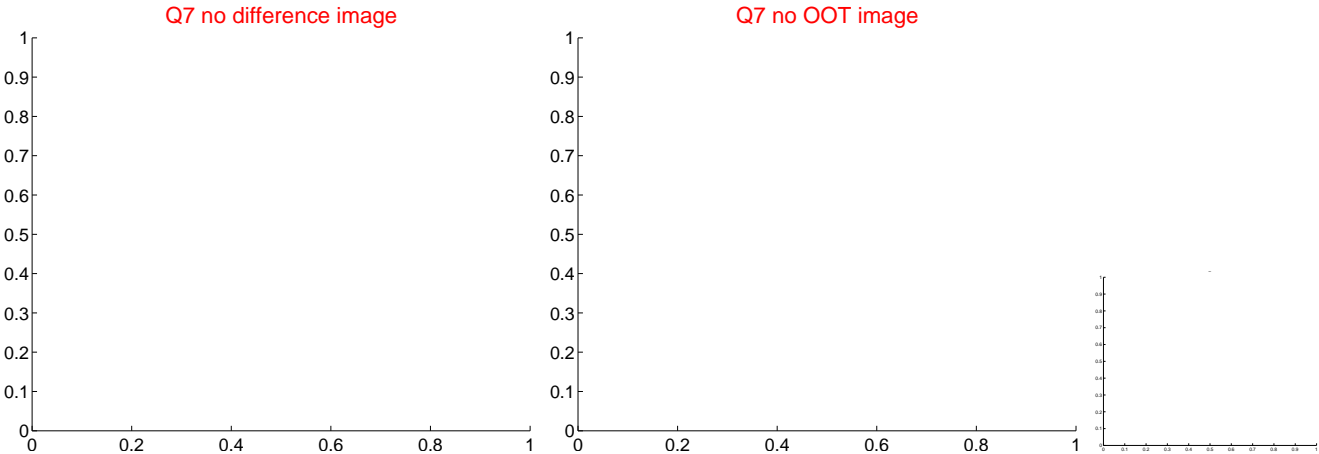
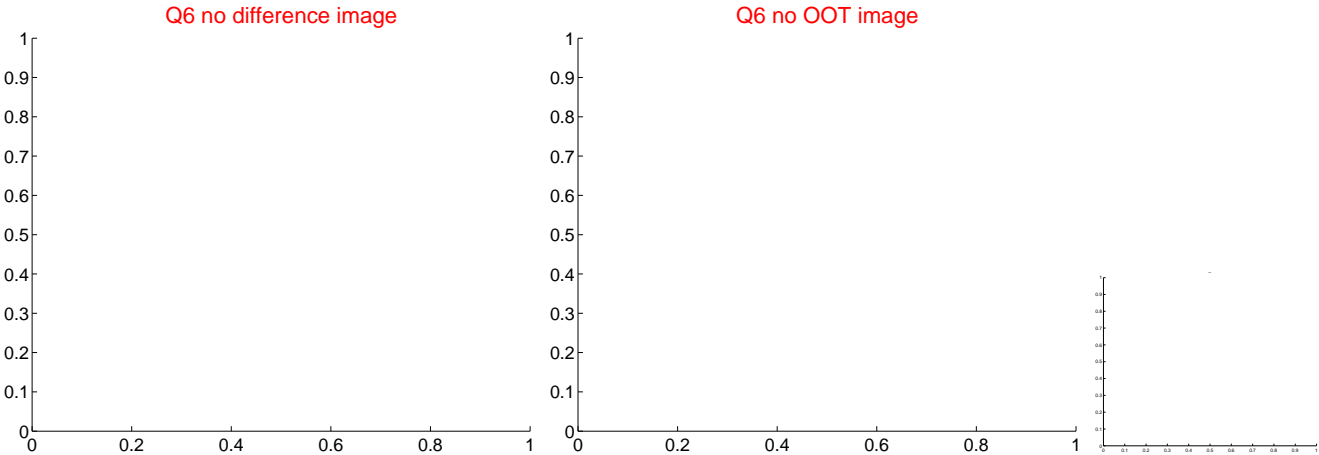
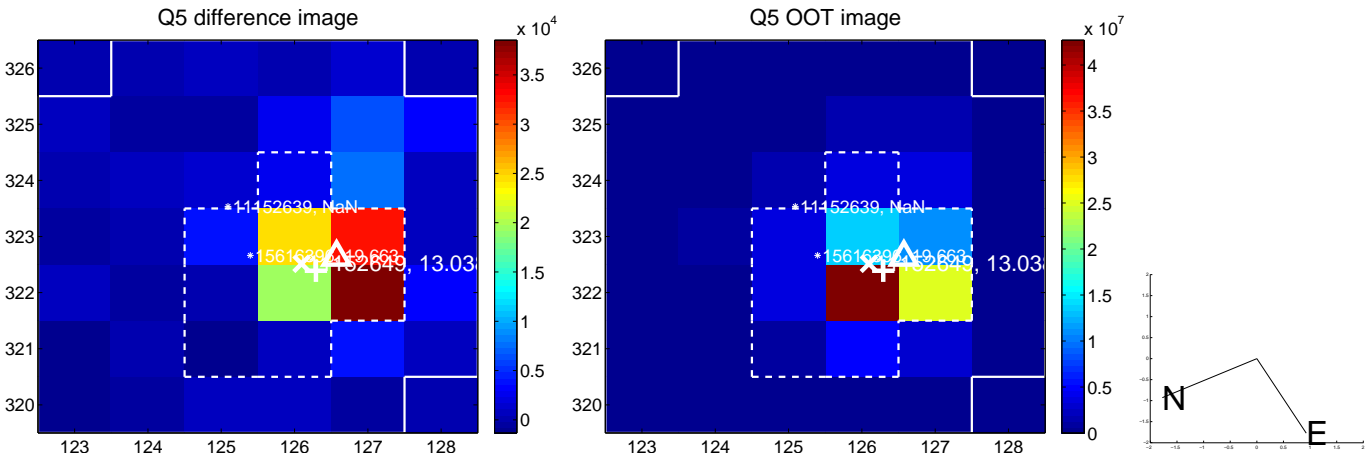


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

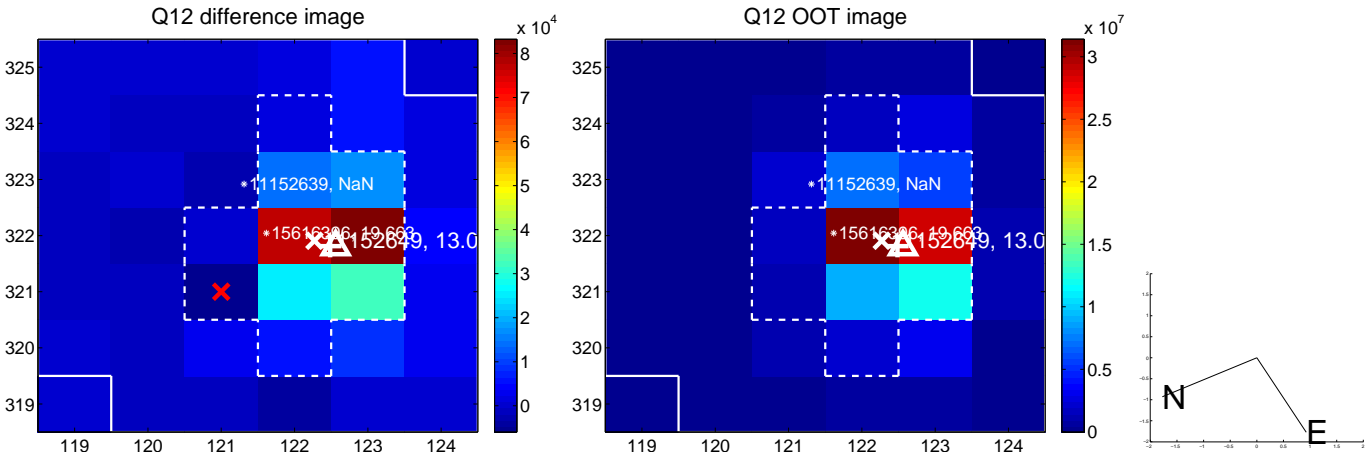
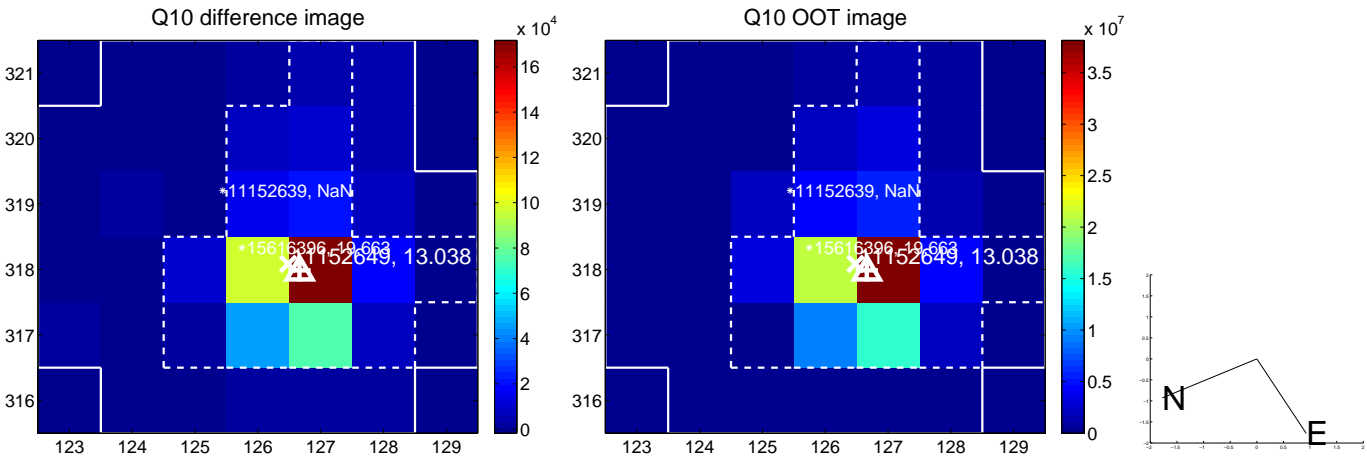
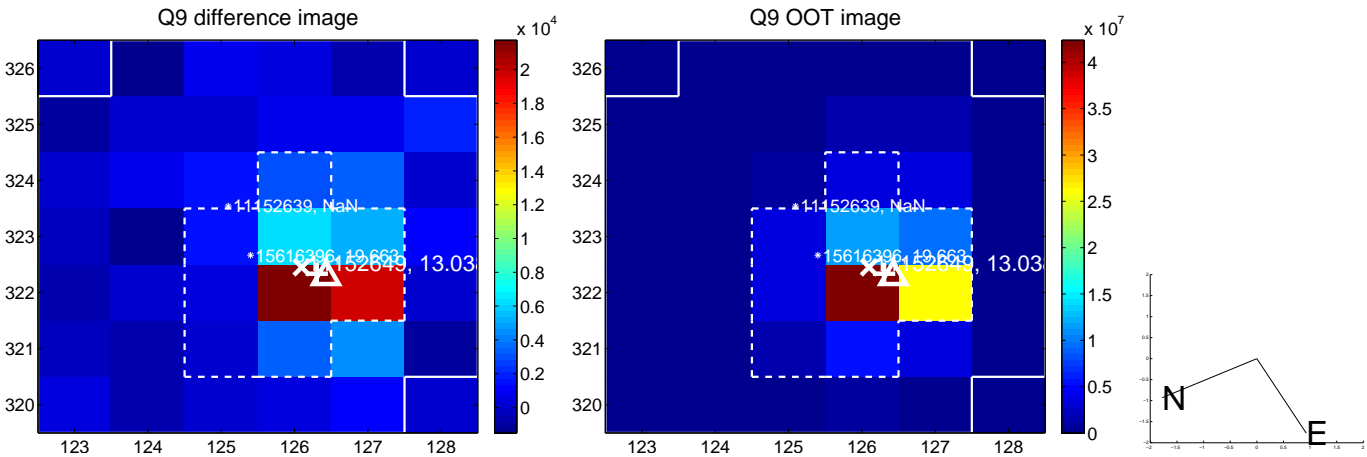
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

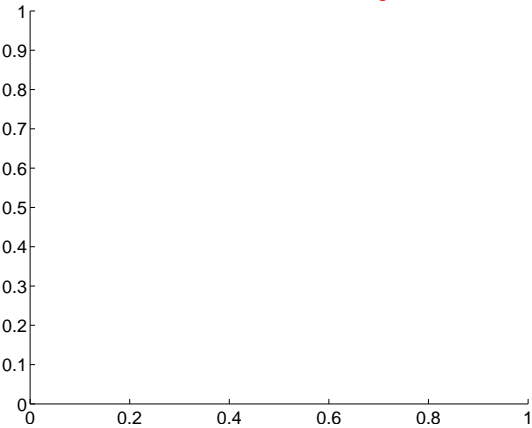


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

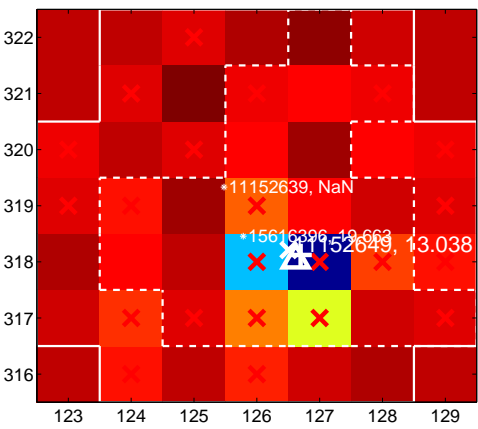
Q13 no difference image



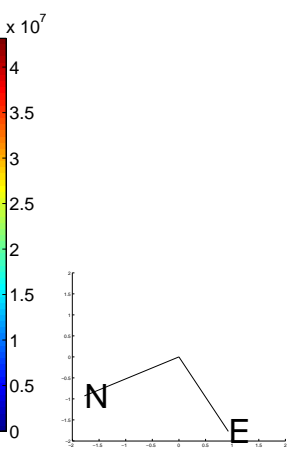
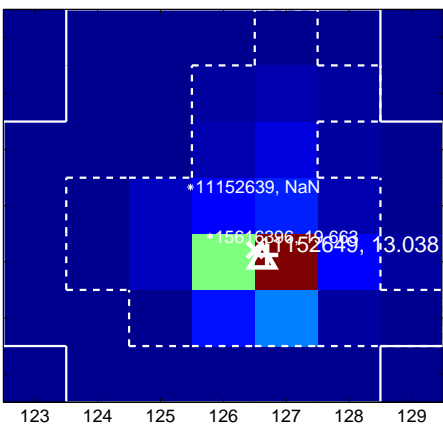
Q13 no OOT image



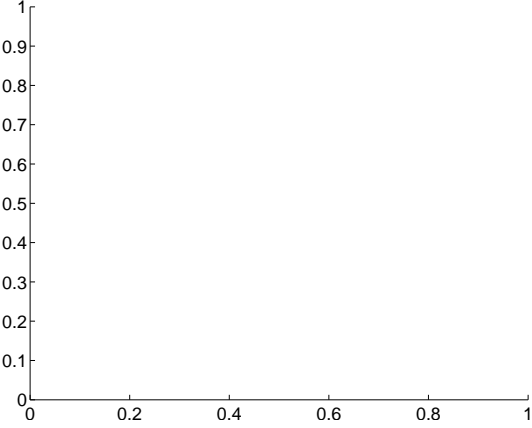
Q14 difference image. Poor Quality



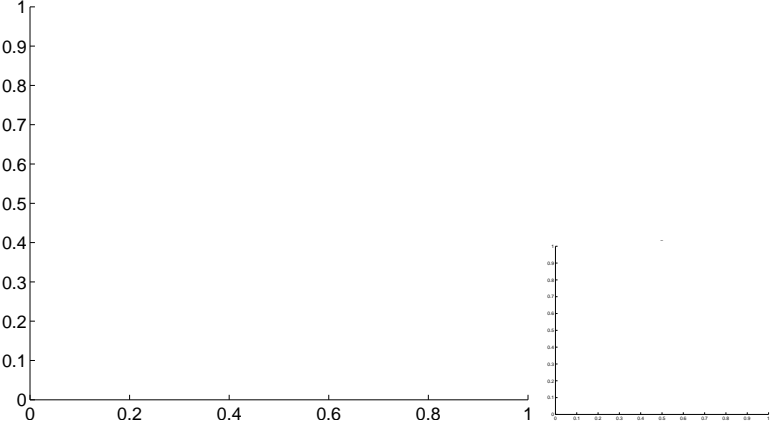
Q14 OOT image



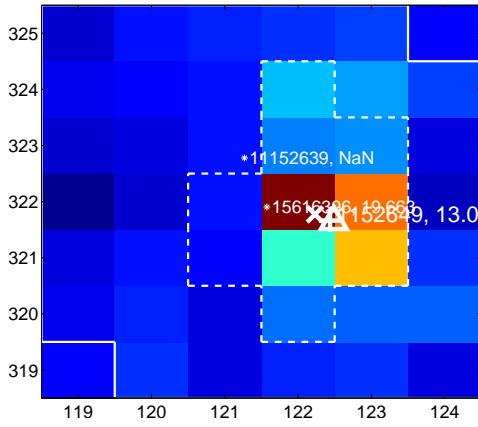
Q15 no difference image



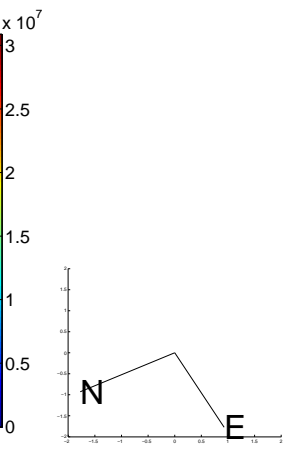
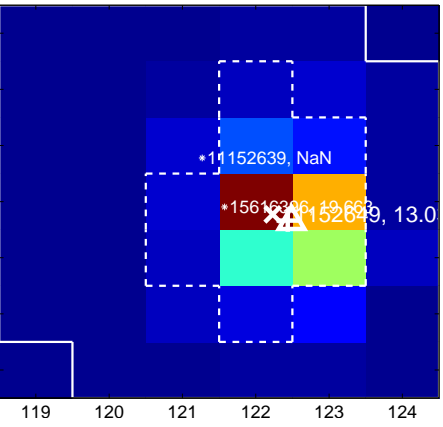
Q15 no OOT image



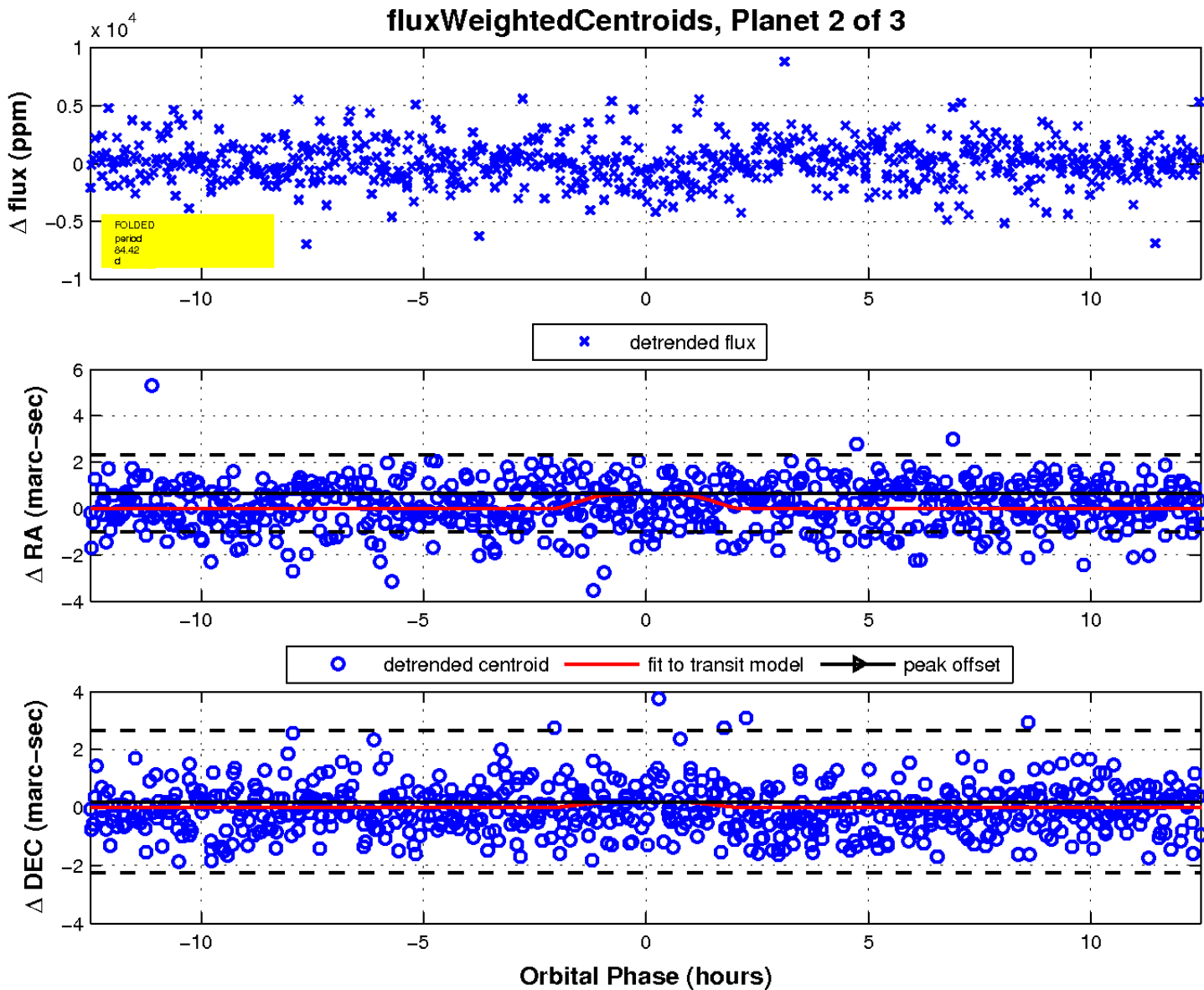
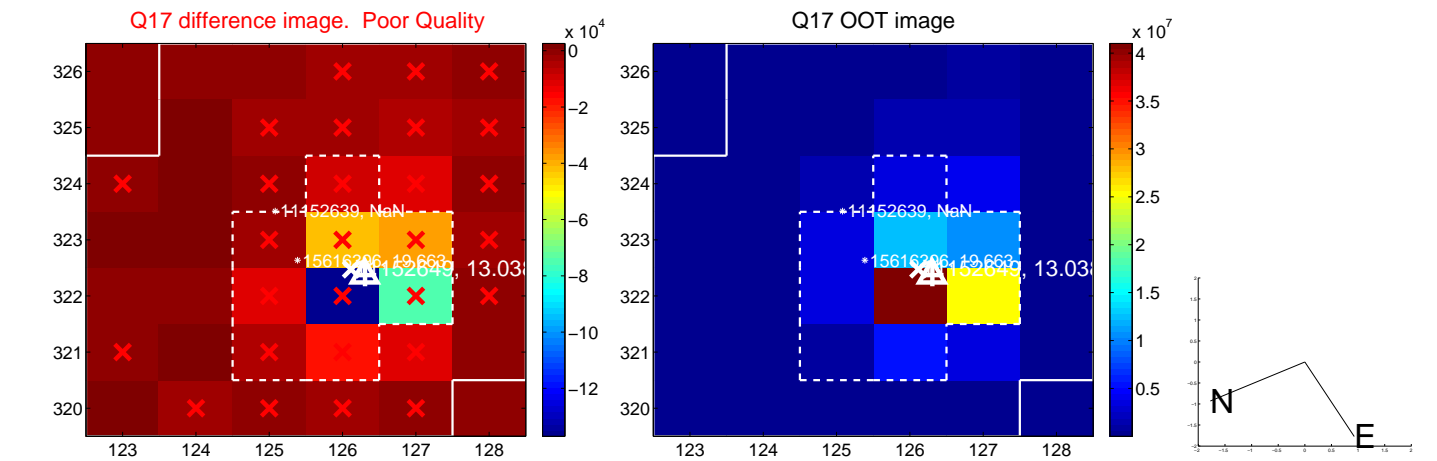
Q16 difference image



Q16 OOT image

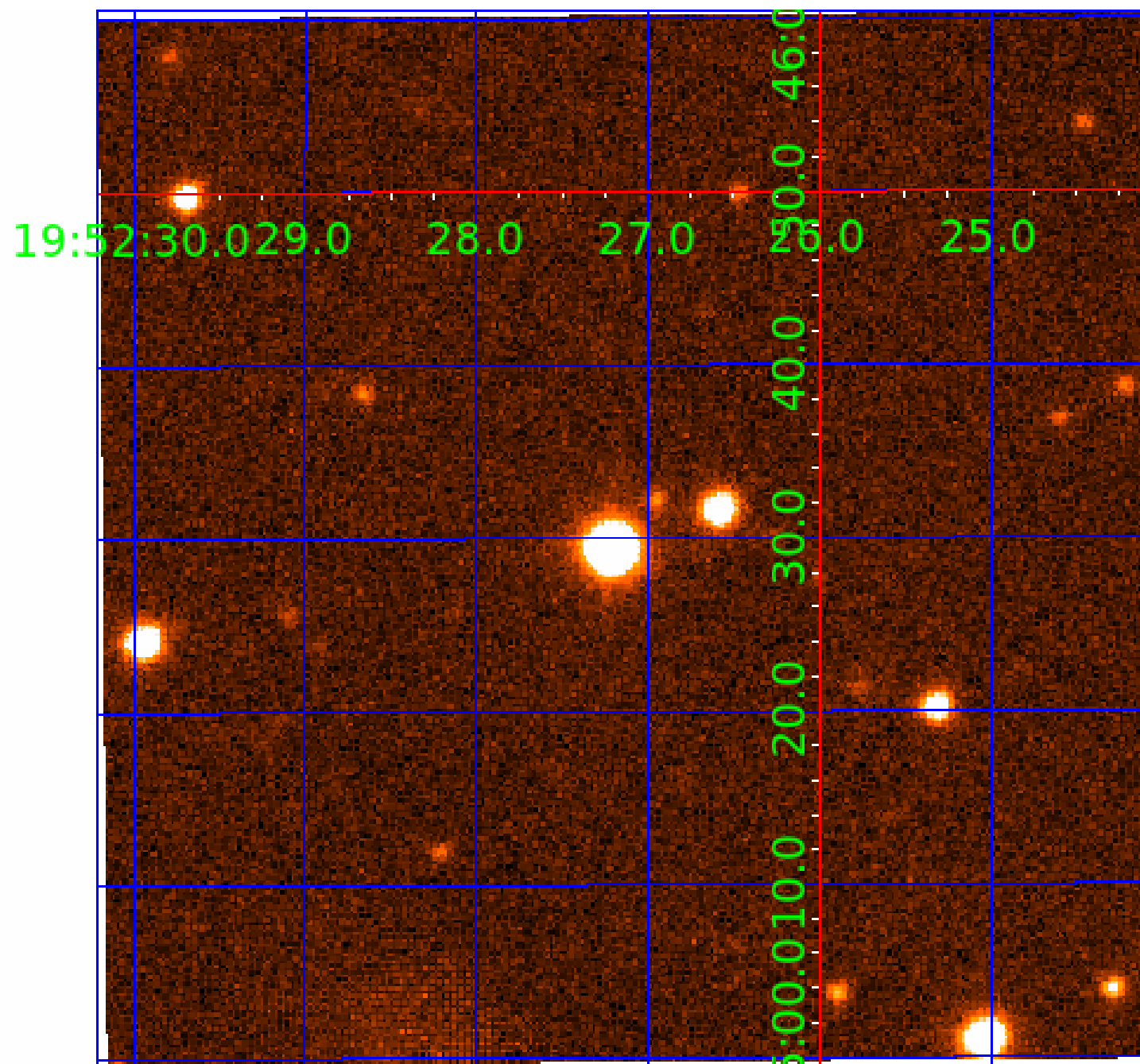


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011152649

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})
011152649-01	OBS	No	1.253797	132.777276	300.0	6.732	10.4	11.0	2.05	7440	6.40	15207.30
011152649-02	OBS	No	84.424211	144.194661	1861.0	4.170	7.6	7.8	2.05	7440	10.59	55.51
011152649-03	OBS	No	35.210383	151.685900	1511.8	2.100	7.7	6.5	2.05	7440	9.02	178.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011152649-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS
011152649-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
011152649-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS

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

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

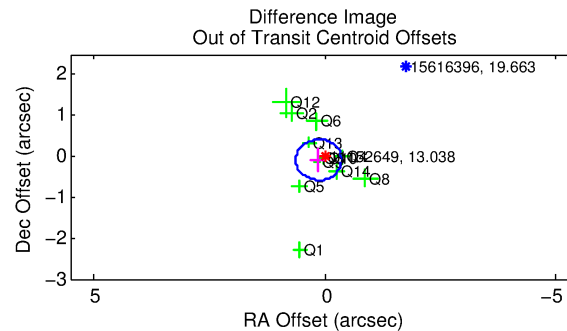
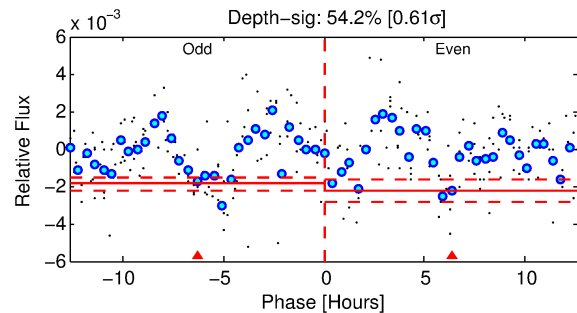
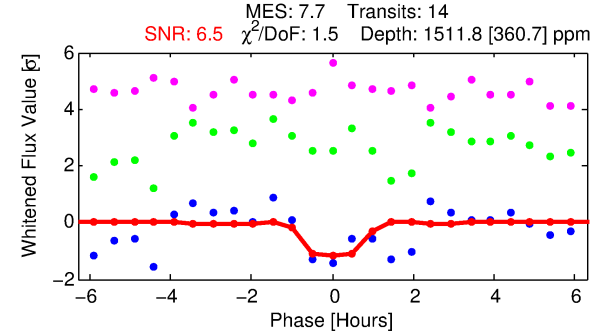
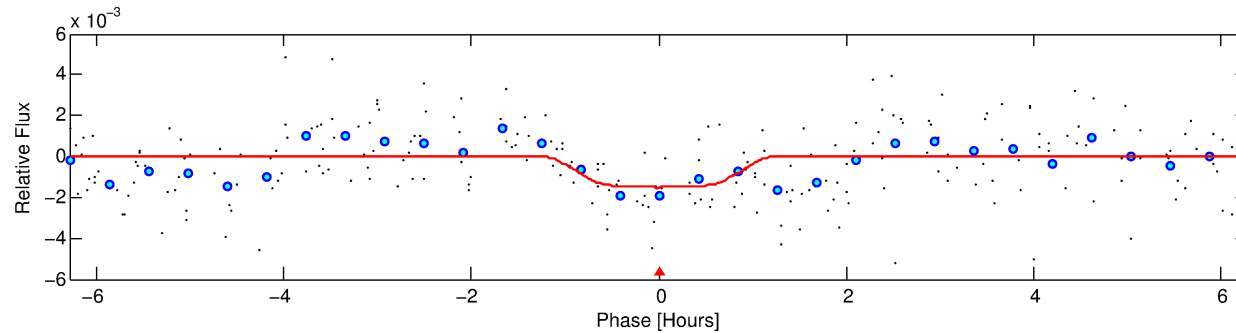
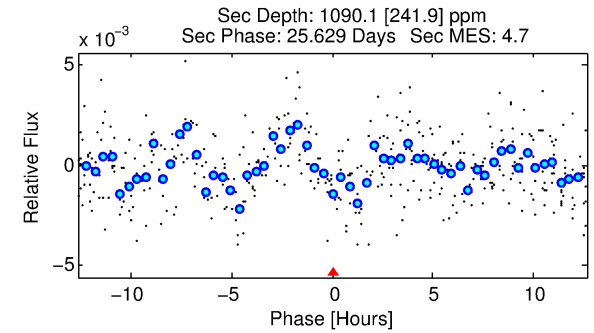
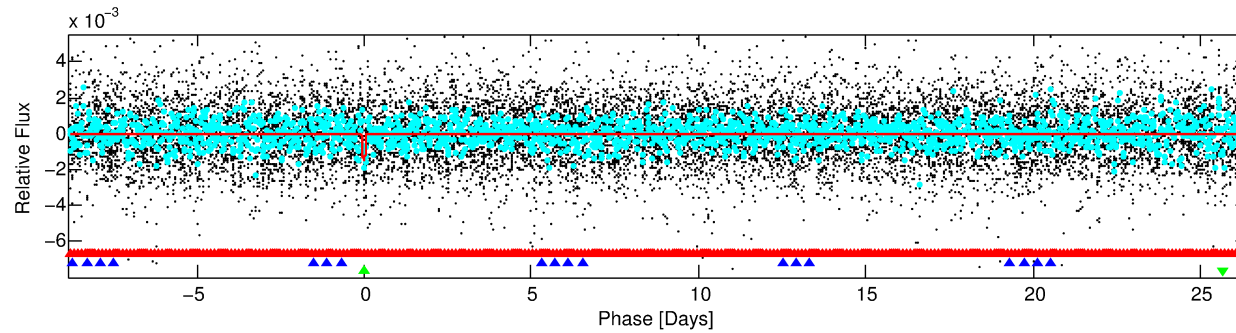
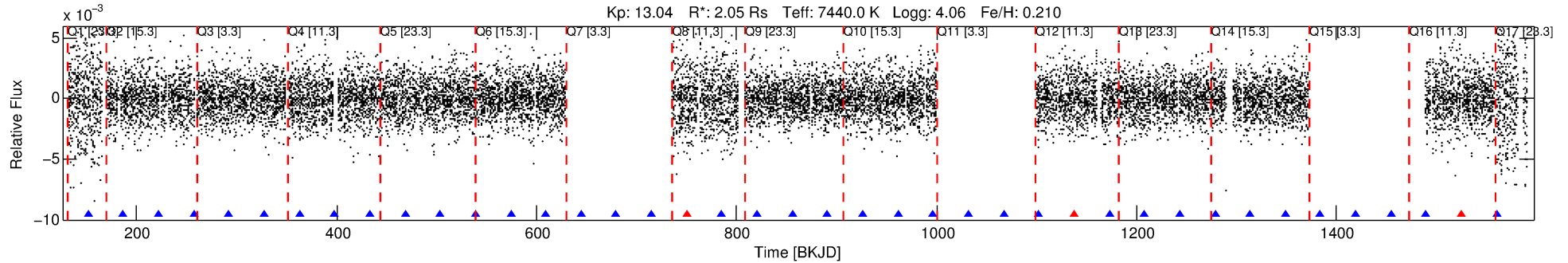
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011152649-03

No Significant Match Found

DV One-Page Summary

KIC: 11152649 Candidate: 3 of 3 Period: 35.210 d



DV Fit Results:

Period = 35.21038 [0.00046] d
Epoch = 151.6859 [0.0110] BKJD
Rp/R* = 0.0403 [0.0203]
a/R* = 75.36 [213.33]
b = 0.86 [0.89]
Seff = 178.15 [64.54]
Teq = 932 [84] K
Rp = 9.01 [5.12] Re
a = 0.2545 [0.0552] AU
Ag = 477.92 [514.22] [0.93σ]
Teffp = 6734 [1765] K [3.28σ]

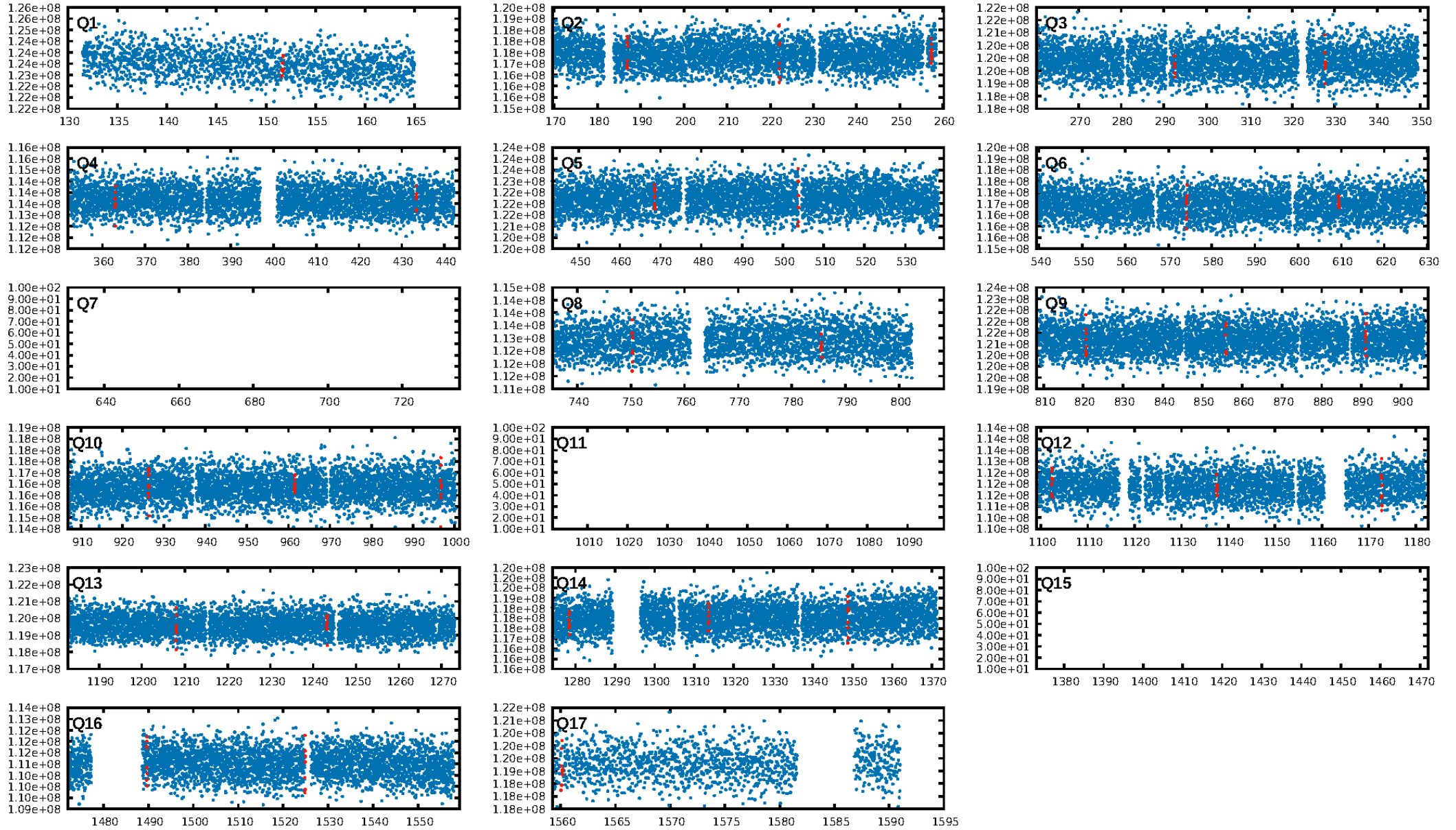
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [115.56σ]
LongPeriod-sig: 100.0% [253.00σ]
ModelChiSquare2-sig: 64.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.98e-09
RollingBand-fgt: 0.77 [10/13]
GhostDiagnostic-chr: 0.7075
Centroid-sig: 11.1%
Centroid-so: 1.004 arcsec [4.95σ]
OotOffset-rm: 0.155 arcsec [0.94σ]
KicOffset-rm: 1.029 arcsec [6.15σ]
OotOffset-st: 4/1/3/4 [12]
KicOffset-st: 4/1/3/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 0.58 [7/12]

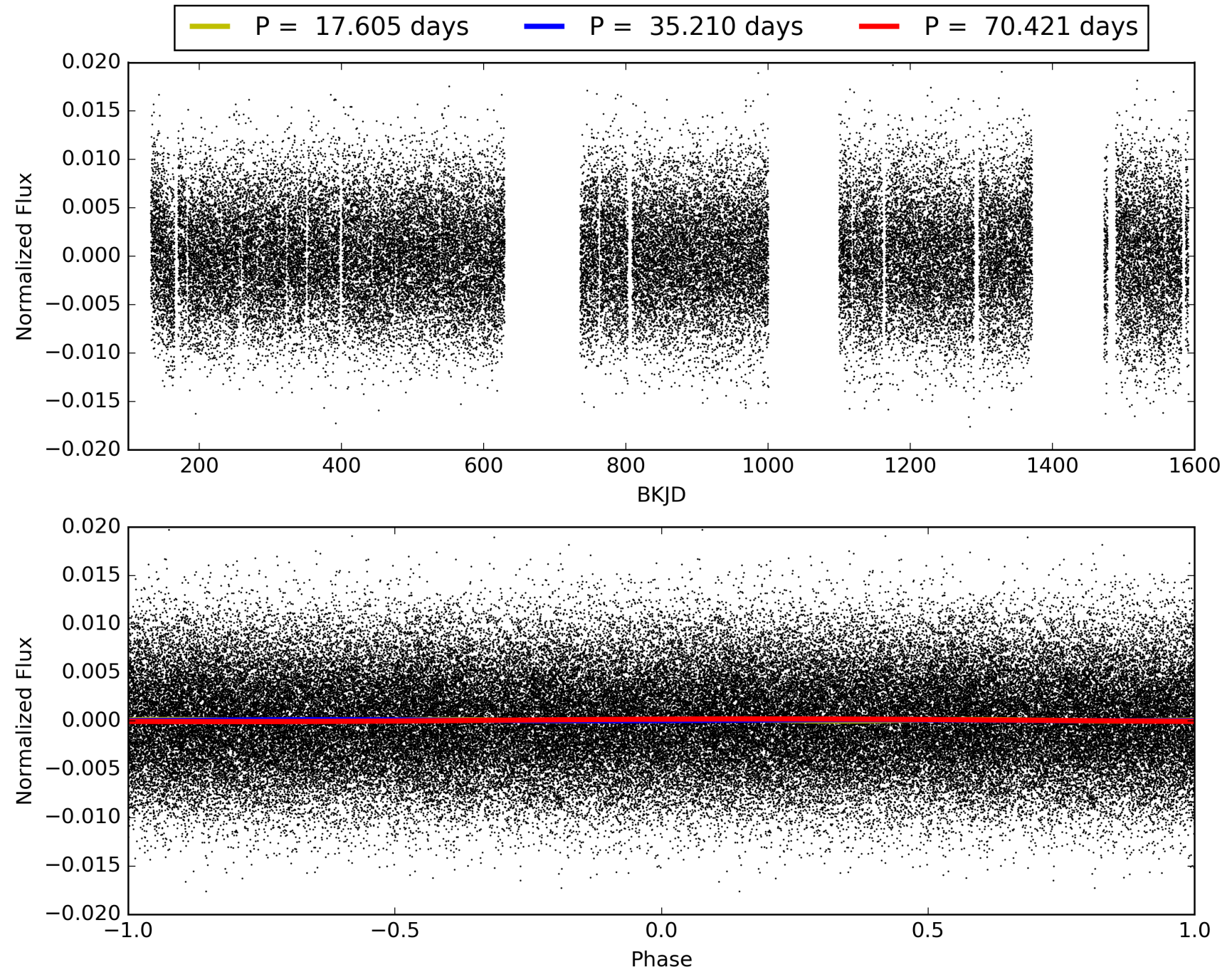
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:58:32 Z

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

TCE 011152649-03, PDC Light Curves

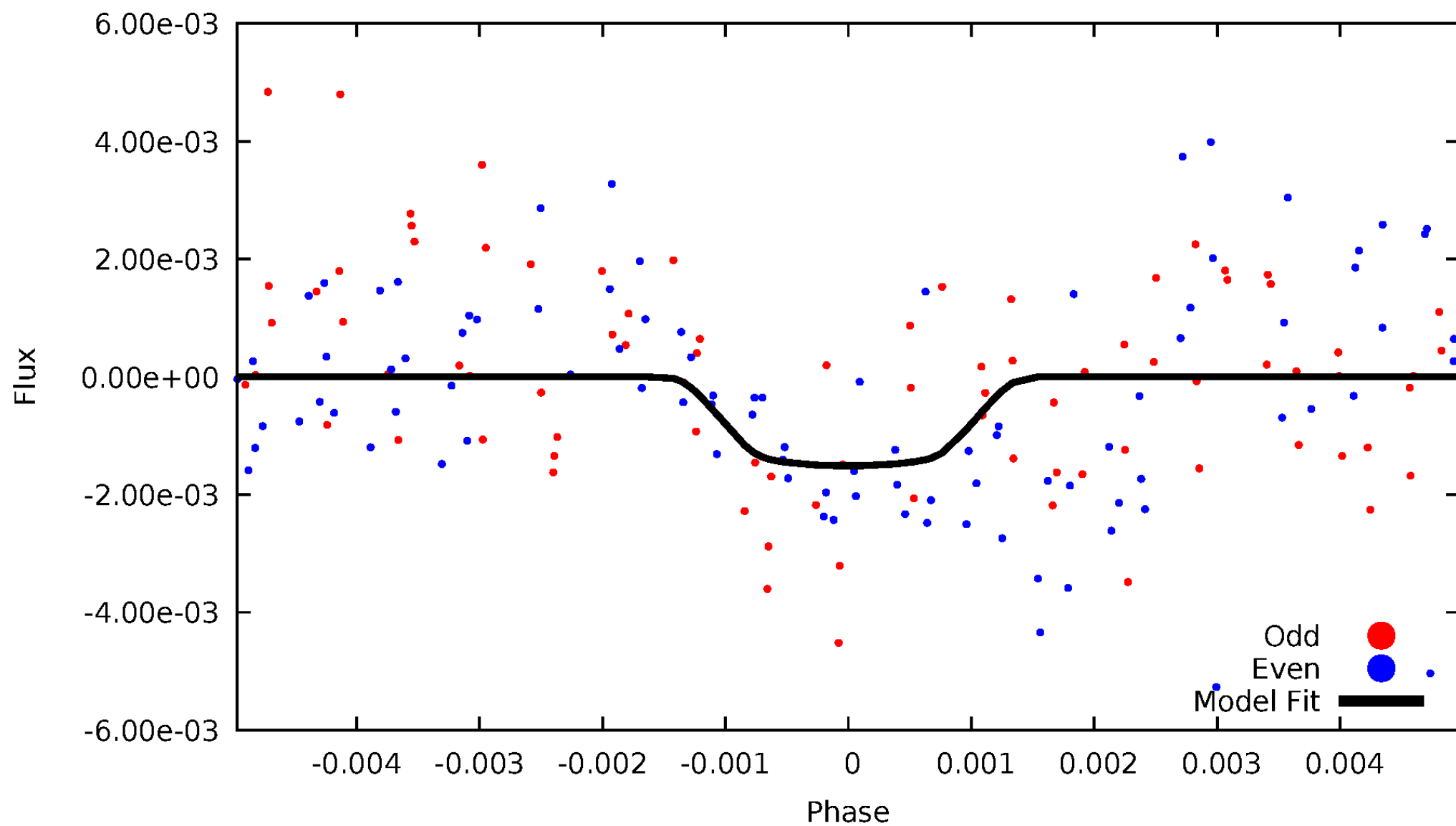


TCE 011152649-03



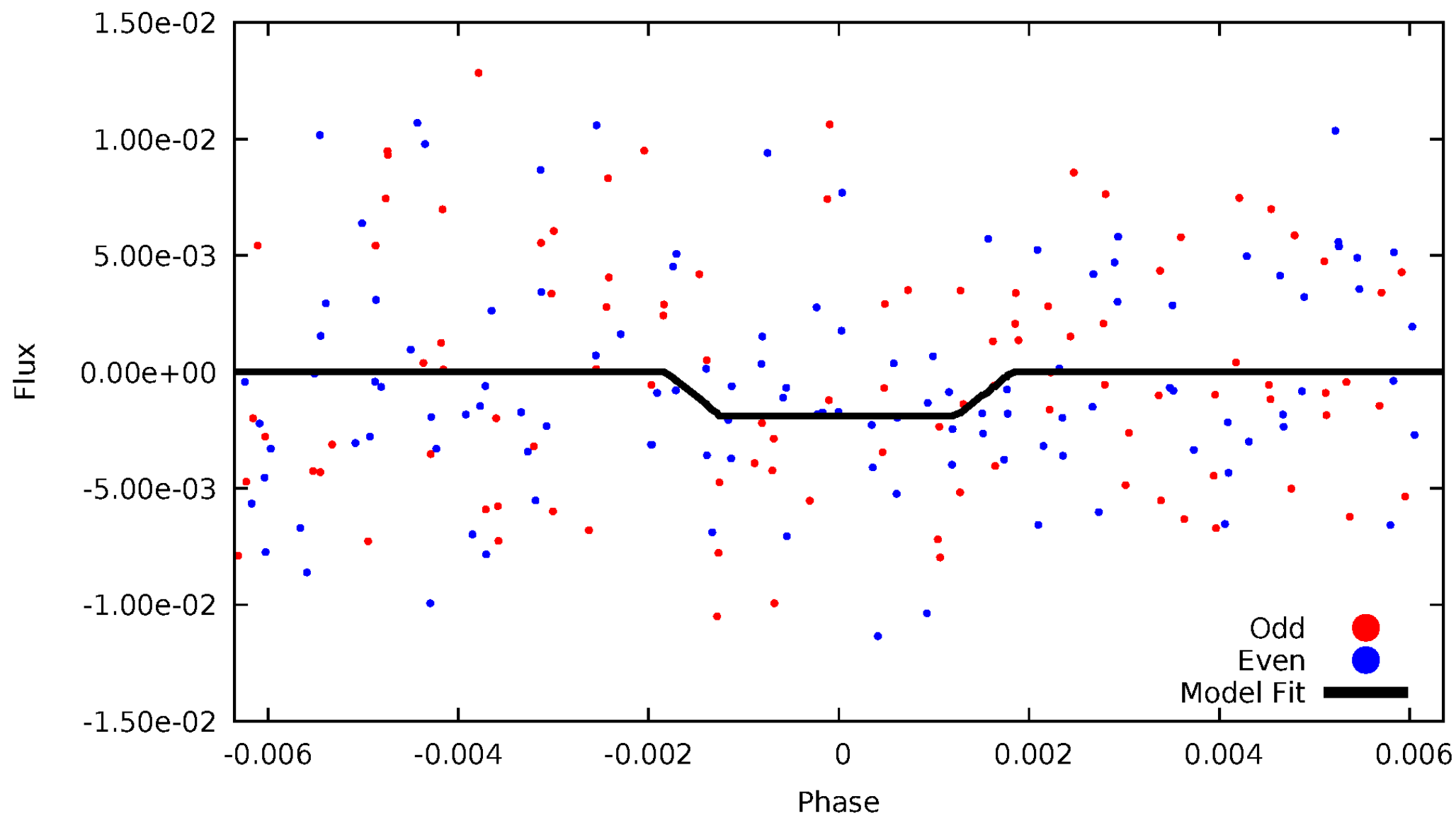
DV Odd/Even

TCE 011152649-03



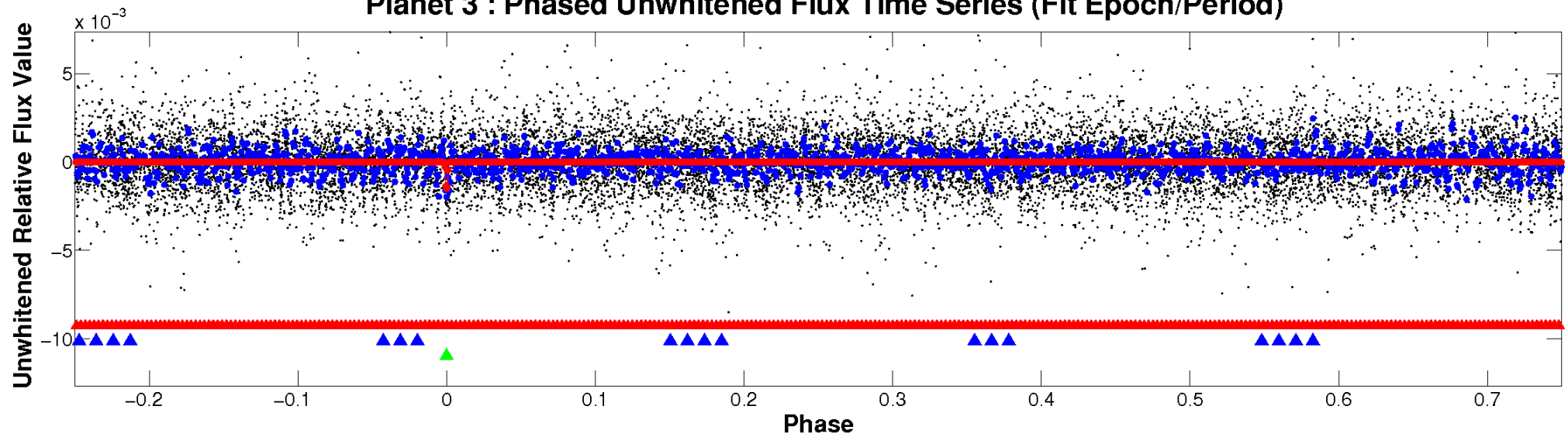
ALT Odd/Even

TCE 011152649-03

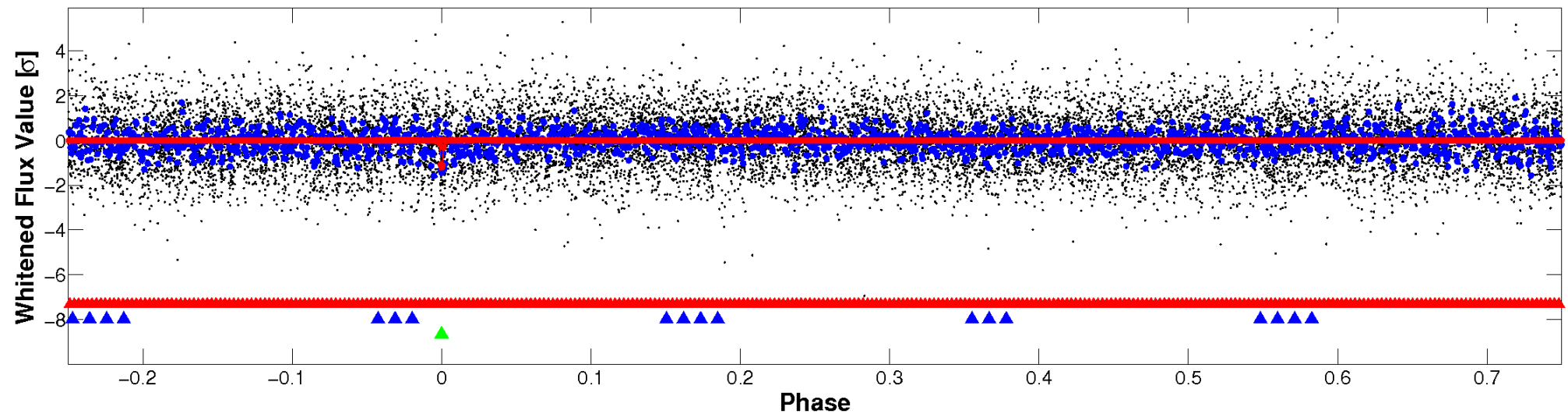


Non-Whitened Vs. Whitened Light Curve

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

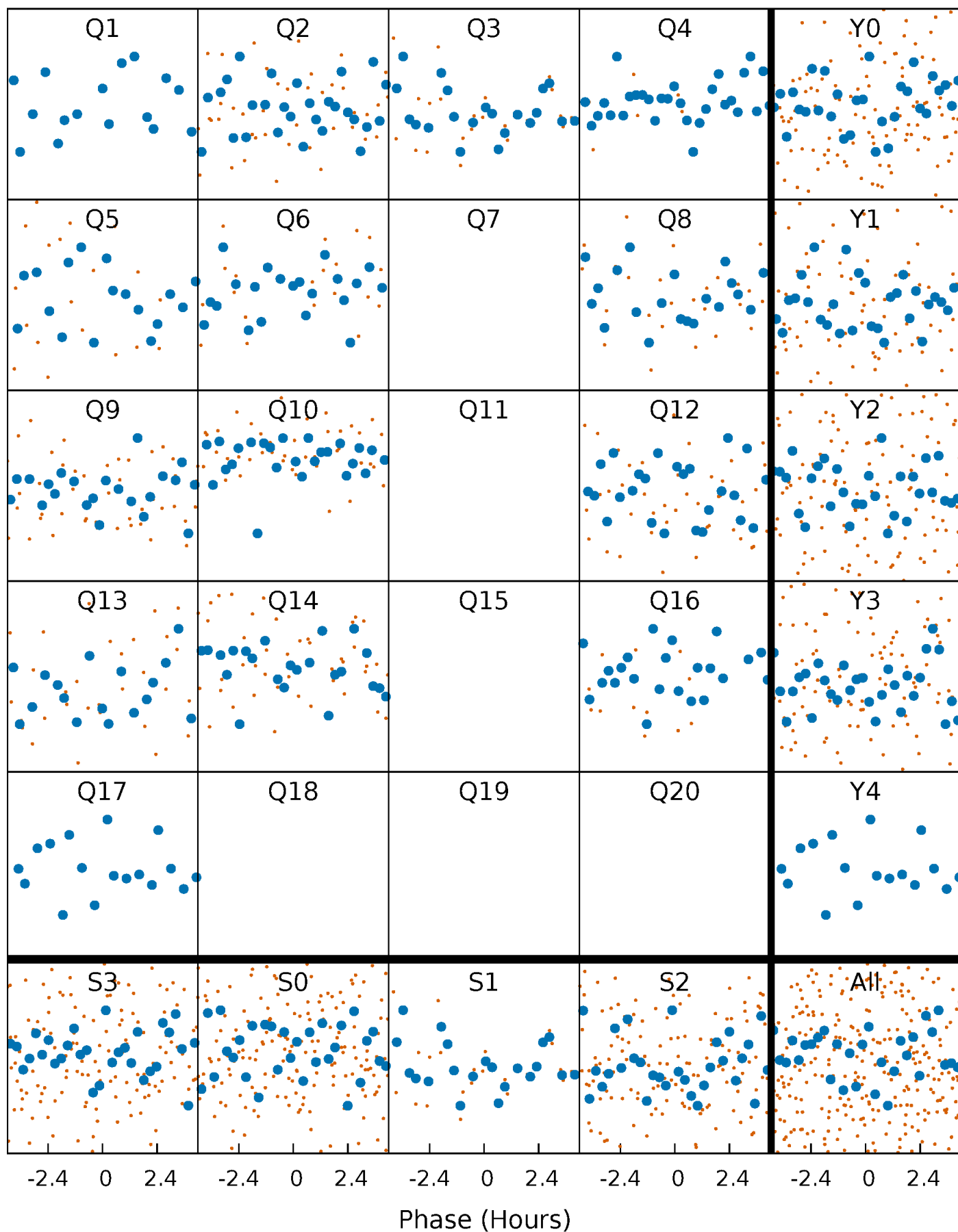


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



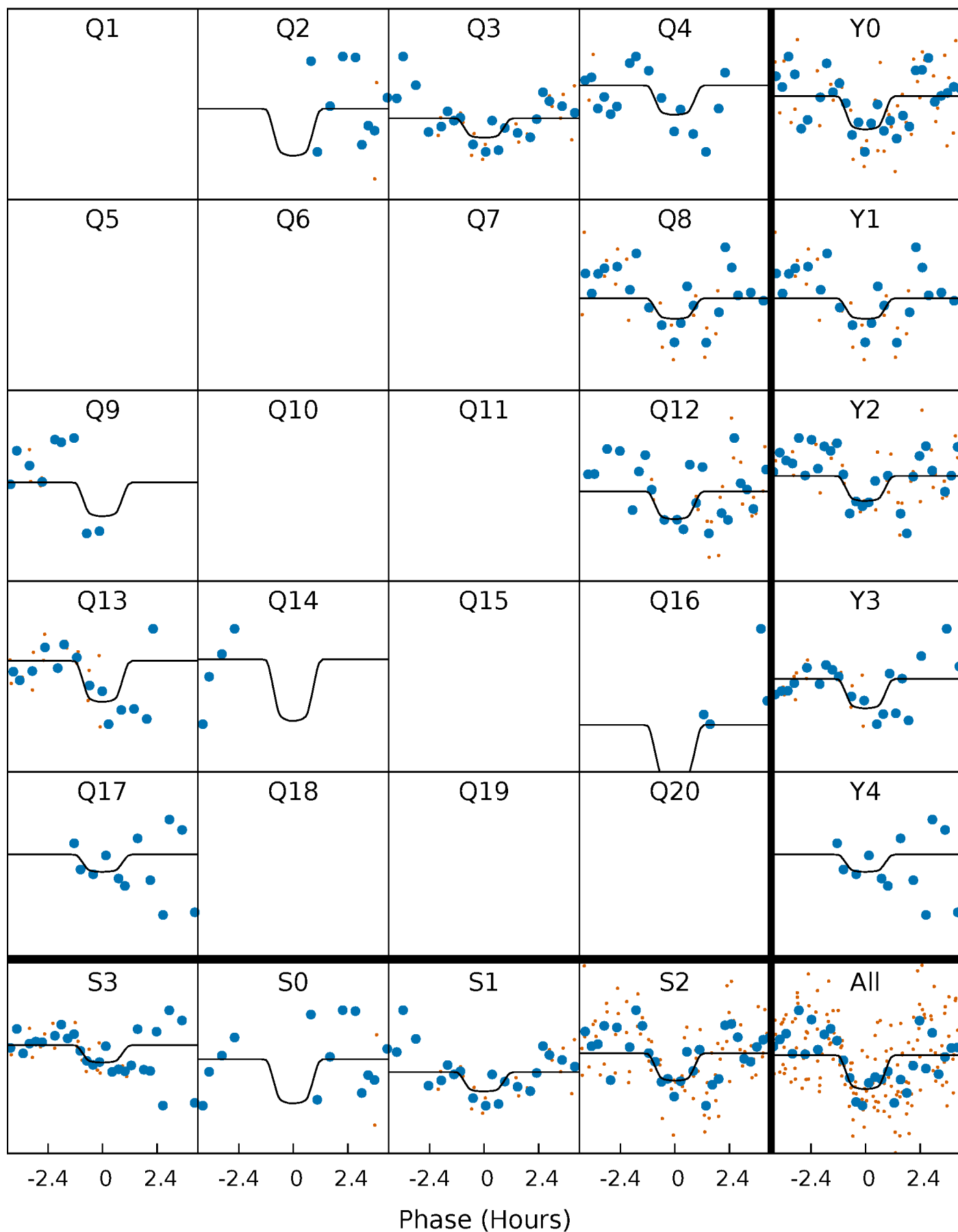
PDC Quarter-Phased Transit Curves

TCE 011152649-03 P= 35.210383 Days $T_0=151.685900$ (BKJD)



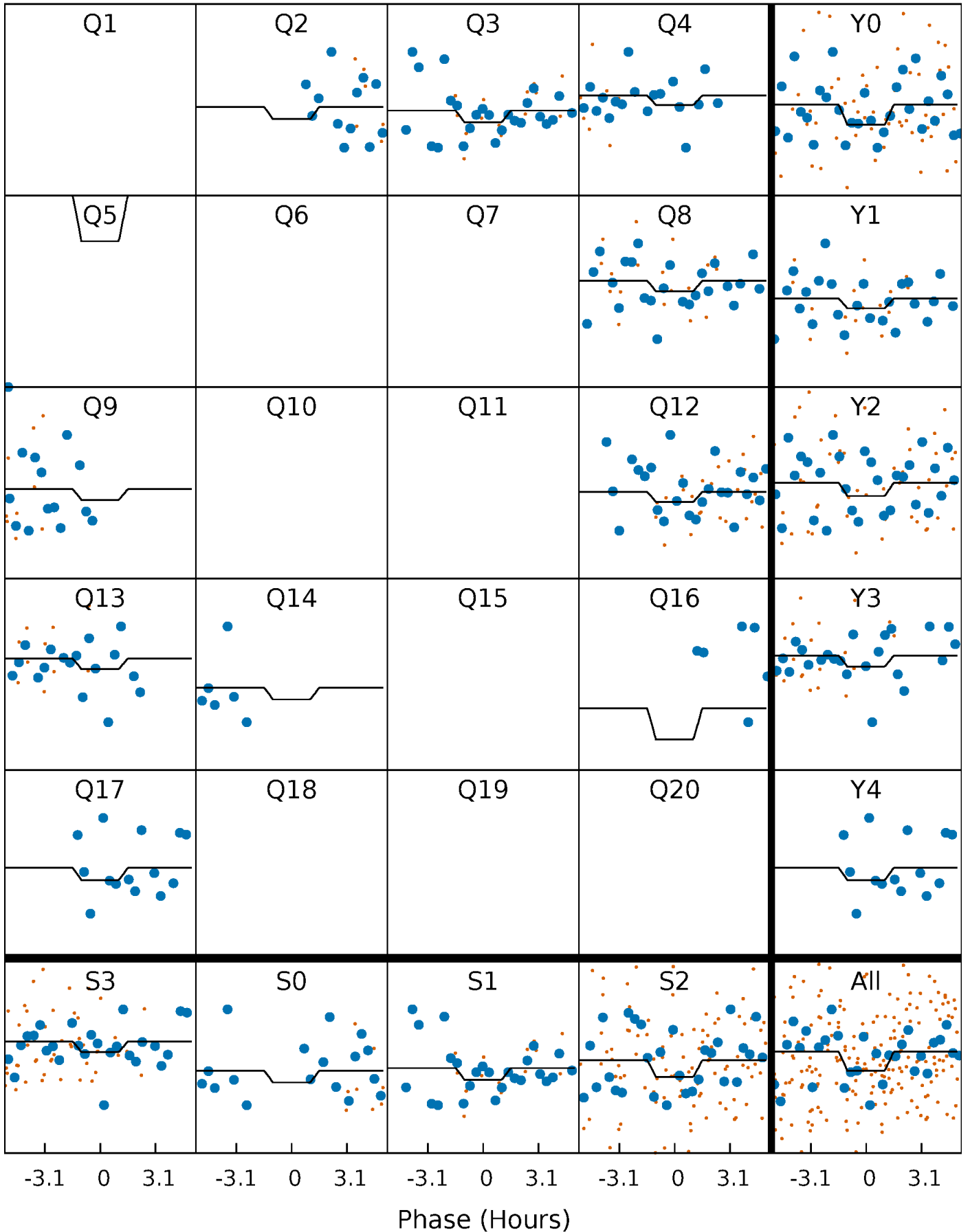
DV Quarter-Phased Transit Curves

TCE 011152649-03 P= 35.210383 Days $T_0=151.685900$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

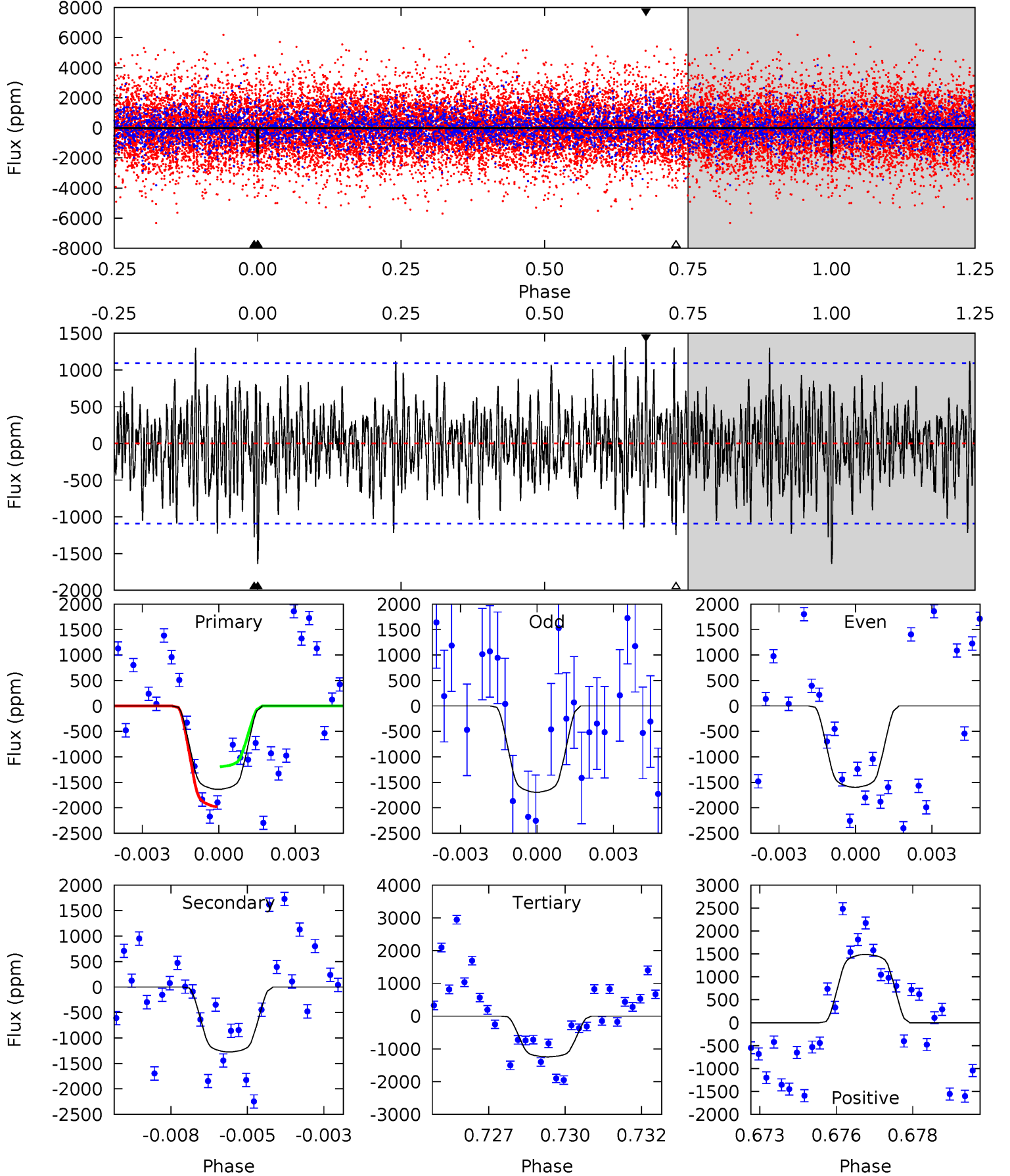
TCE 011152649-03 P= 35.210405 Days $T_0=151.687002$ (BKJD)



DV Model-Shift Uniqueness Test

011152649-03, P = 35.210383 Days, E = 116.475517 Days

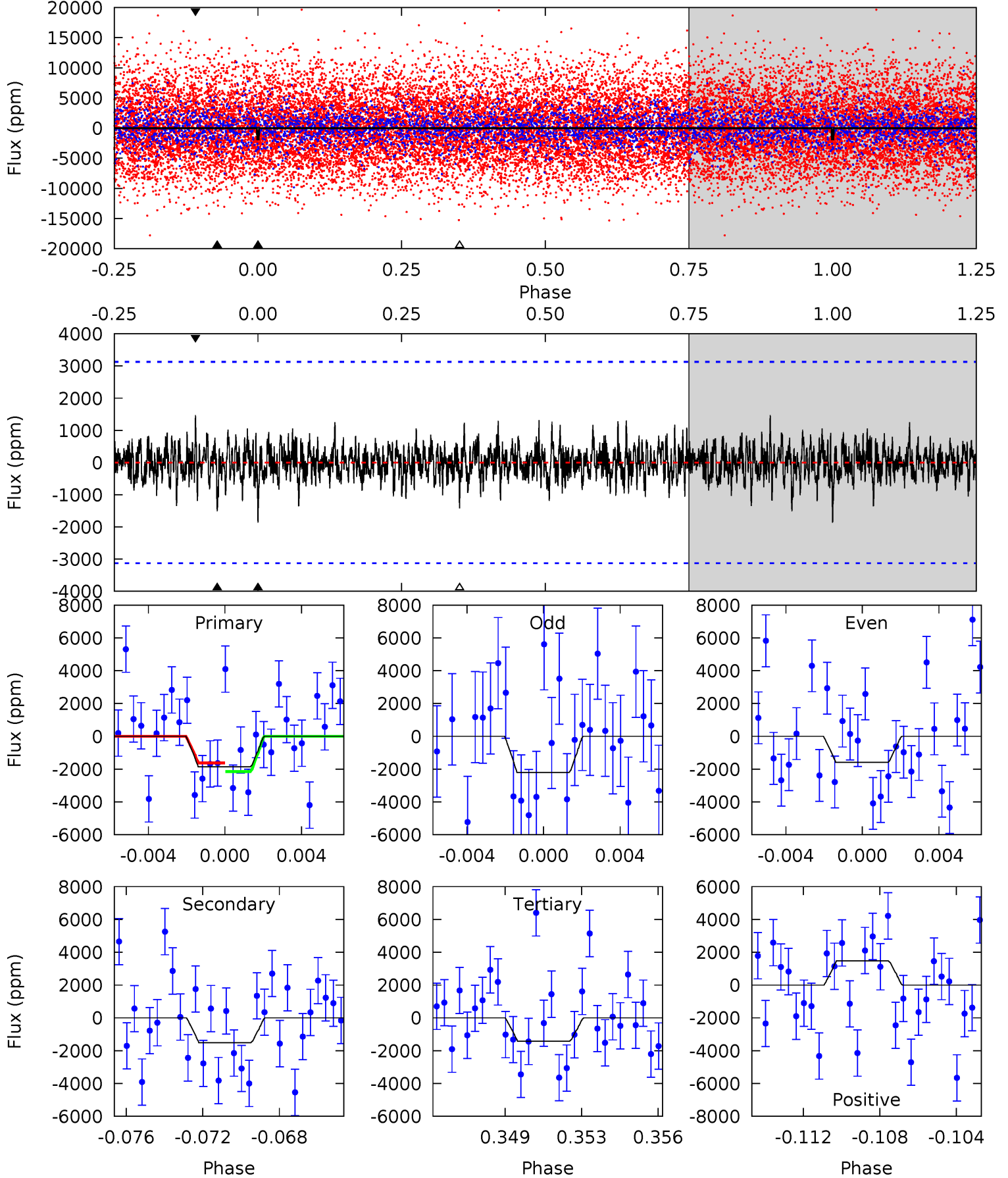
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.91	6.15	6.00	7.18	5.27	3.00	1.96	1.91	0.72	0.15	-1.03	0.24	0.81	0.48	1.90



Alt Model-Shift Uniqueness Test

011152649-03, P = 35.210405 Days, E = 116.476597 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.12	2.52	2.37	2.46	5.22	2.91	0.69	0.75	0.66	0.16	0.06	0.51	0.86	0.44	0.44



Stellar Parameters For KIC 011152649

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7440^{+206}_{-353}	$4.063^{+0.135}_{-0.165}$	$0.210^{+0.150}_{-0.350}$	$2.050^{+0.542}_{-0.443}$	$1.770^{+0.184}_{-0.299}$	$0.289^{+0.206}_{-0.141}$
	+3%/-5%	+3%/-4%	+71%/-167%	+26%/-22%	+10%/-17%	+71%/-49%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011152649-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1275 ± 207	$9.17^{+5.00}_{-4.16}$	1299^{+103}_{-88}	6770^{+3257}_{-1238}	511^{+1211}_{-293}
Alt.	-1512 ± 599	$9.65^{+4.86}_{-4.44}$	1298^{+92}_{-84}	6868^{+3197}_{-1463}	548^{+1352}_{-344}

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 $A_{obs} \gg 1.0$

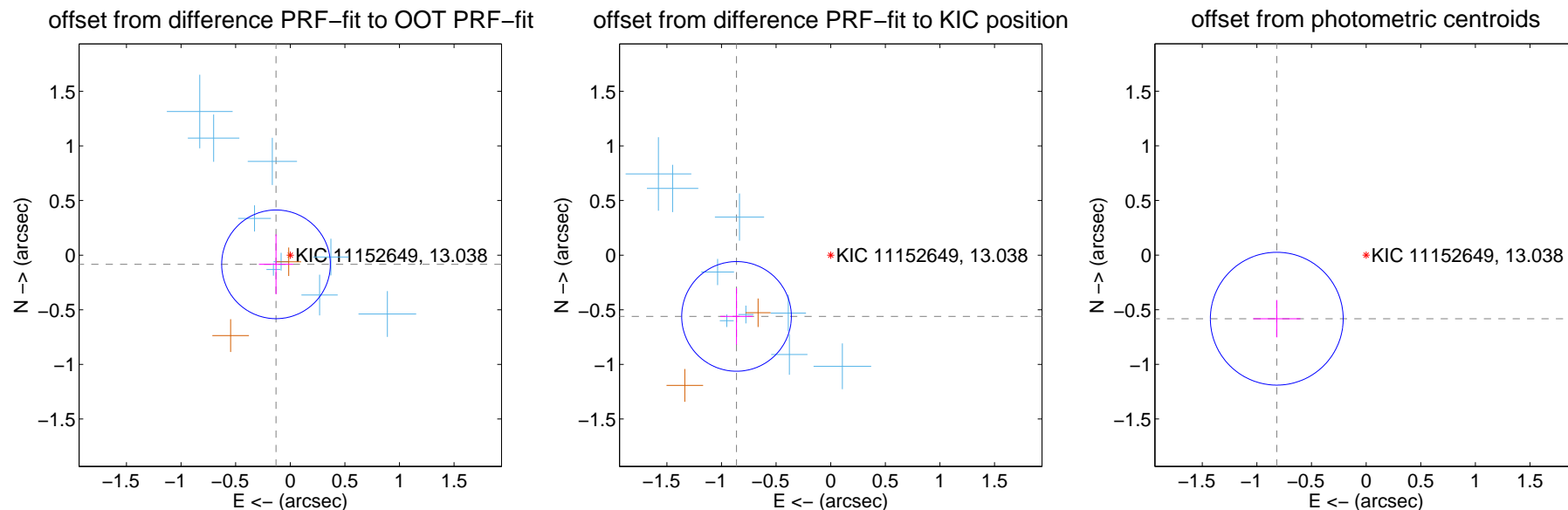
DV Centroid Data

Supplemental centroid analysis for 011152649-03. Kepler magnitude: 13.04. Transit SNR 6.49

There are 10 quarters with good PRF difference image offsets

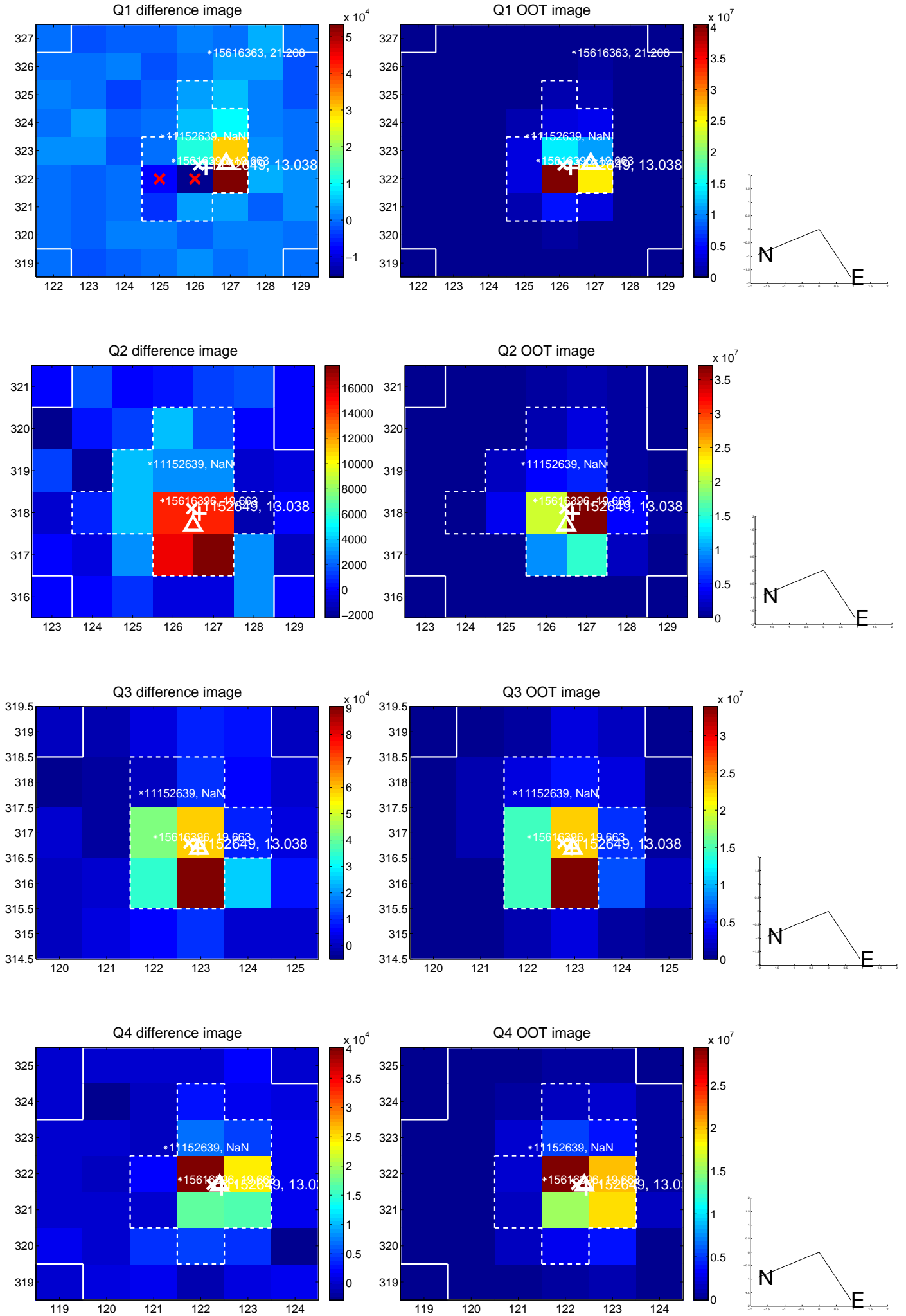
The direct PRF centroid is offset from the target star catalog position by about 0.85 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.155 ± 0.166	0.94	0.131 ± 0.157	-0.084 ± 0.274
PRF-fit source offset from KIC position	1.029 ± 0.167	6.15	0.863 ± 0.149	-0.561 ± 0.259
photometric centroid source offset	1.00 ± 0.20	4.95	0.82 ± 0.22	-0.58 ± 0.17

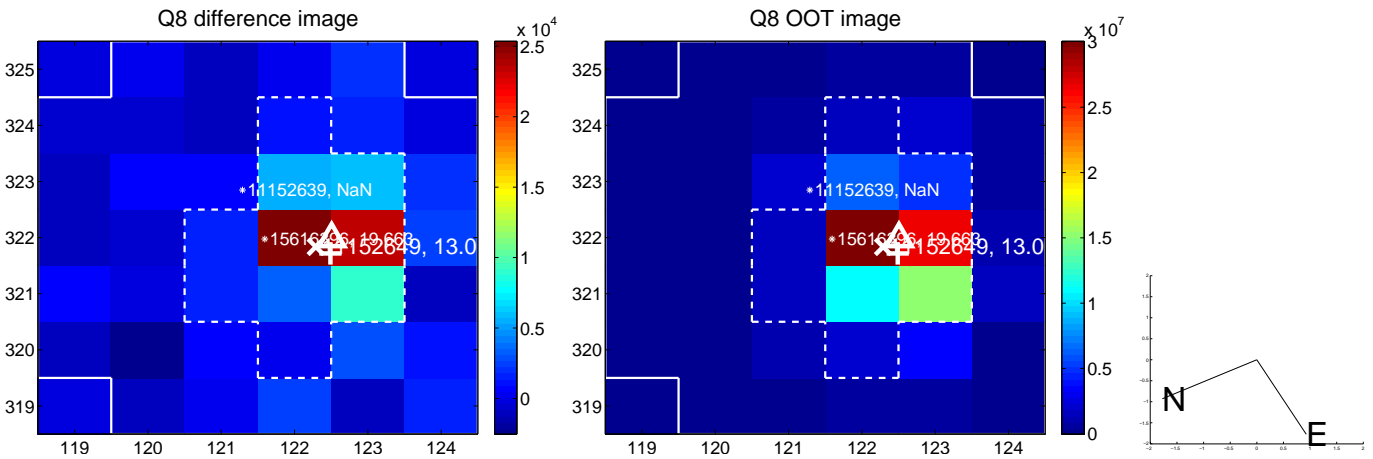
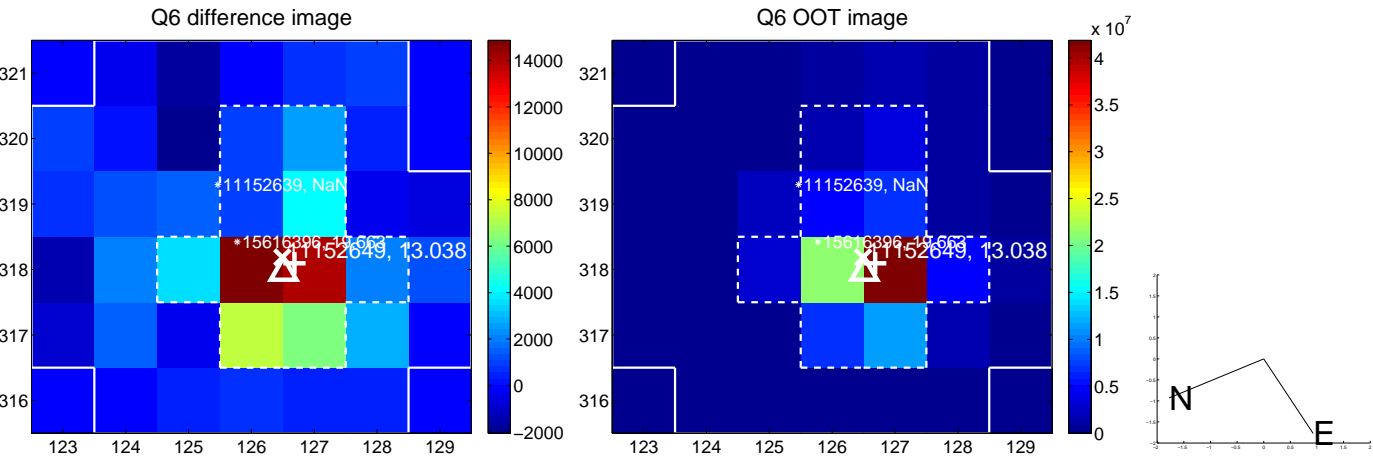
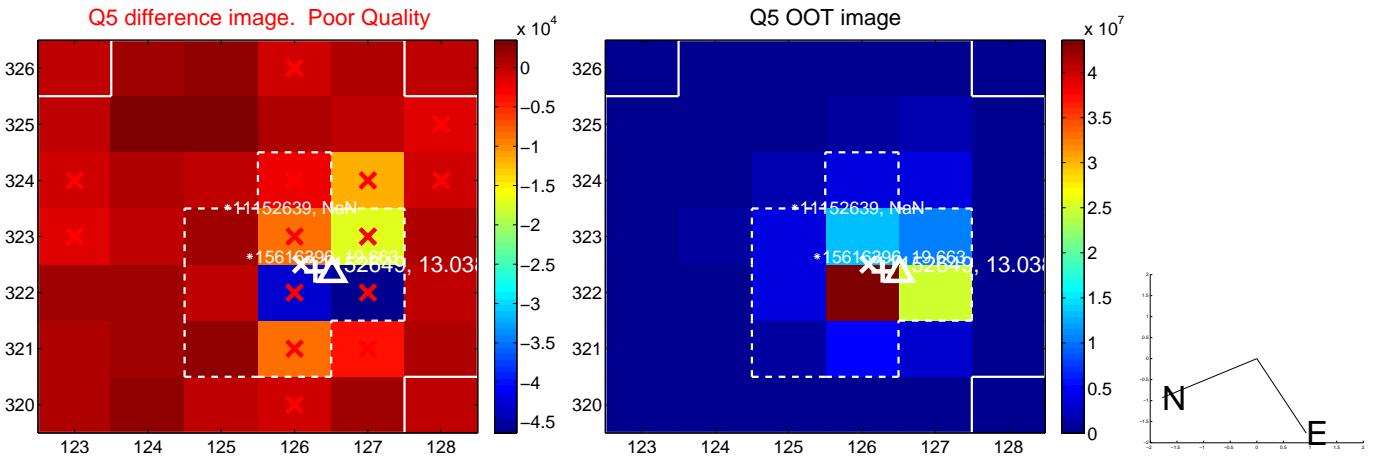


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

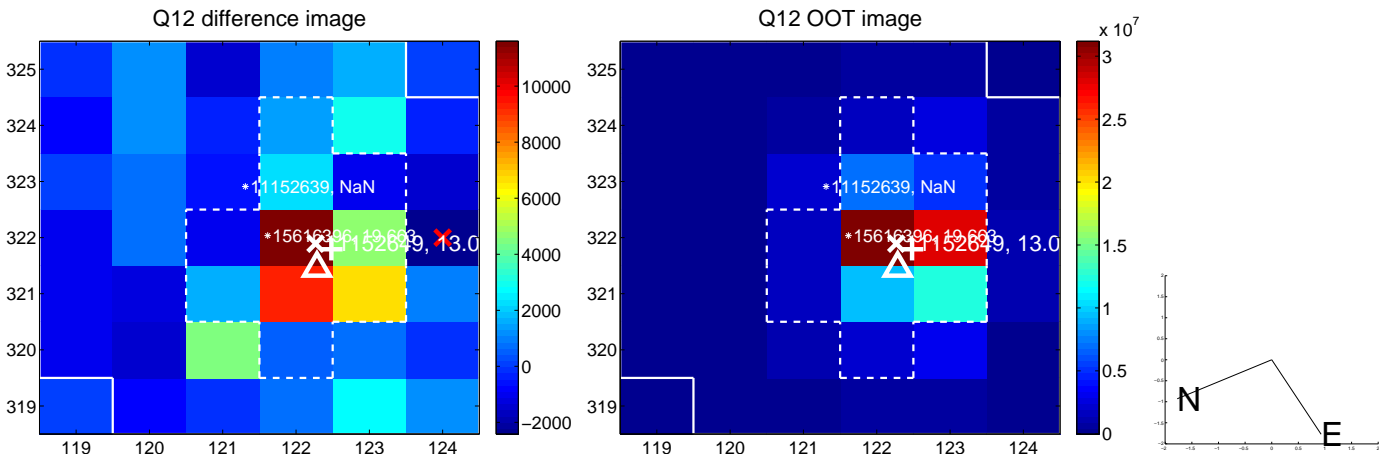
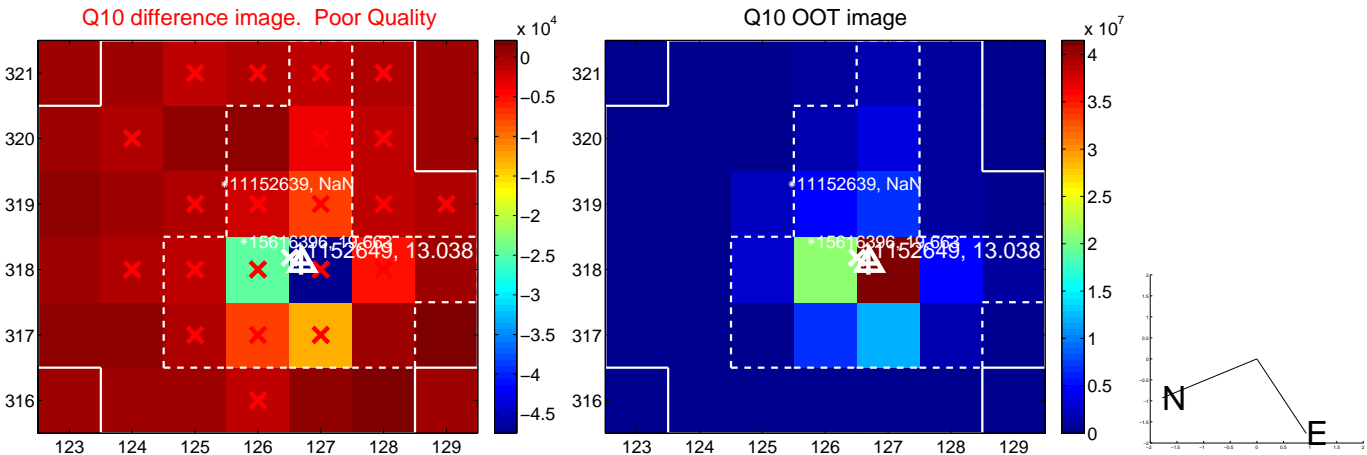
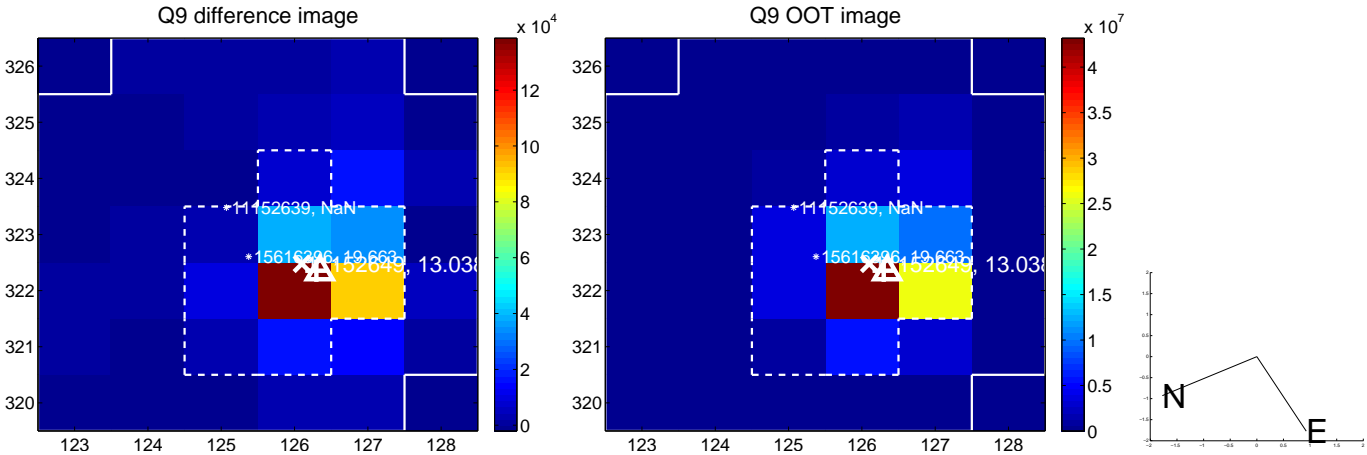
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



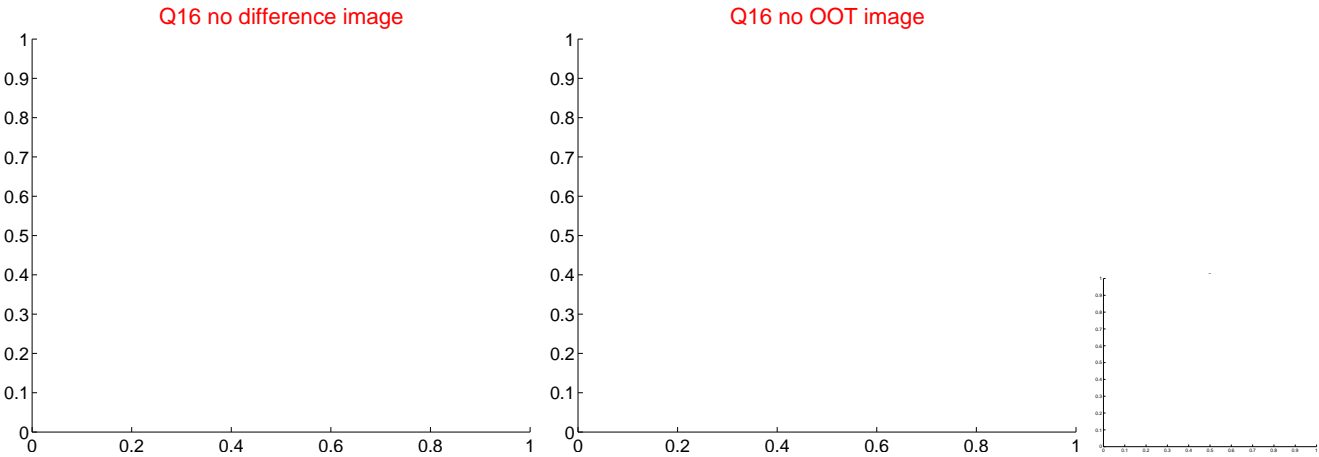
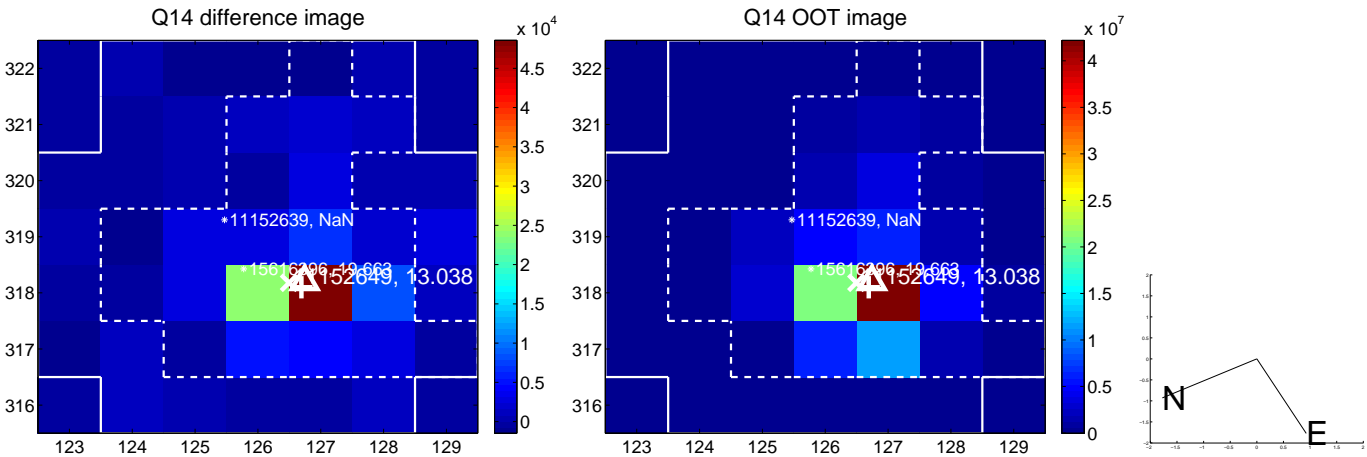
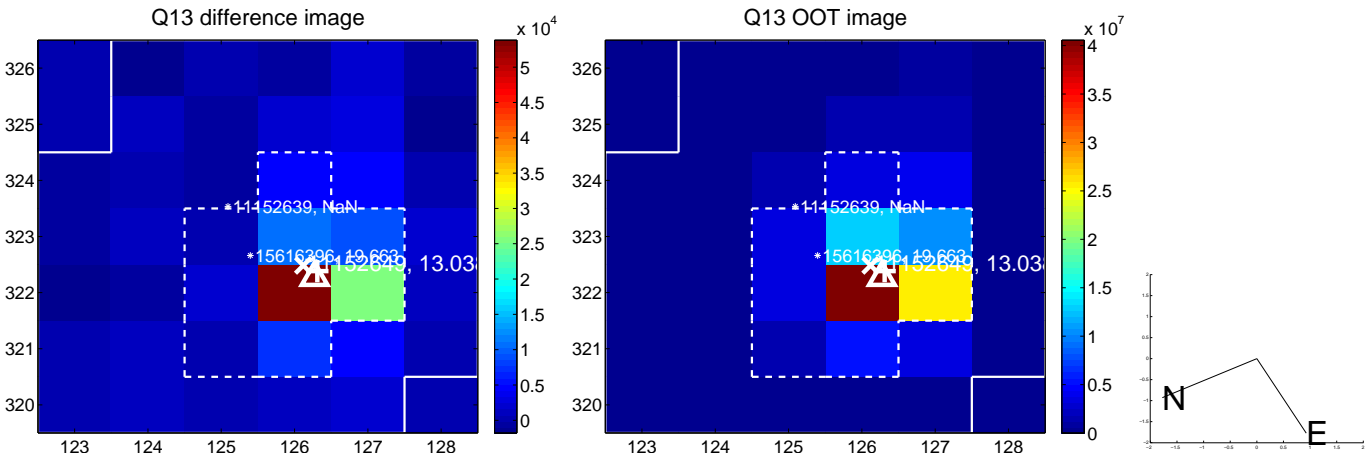
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



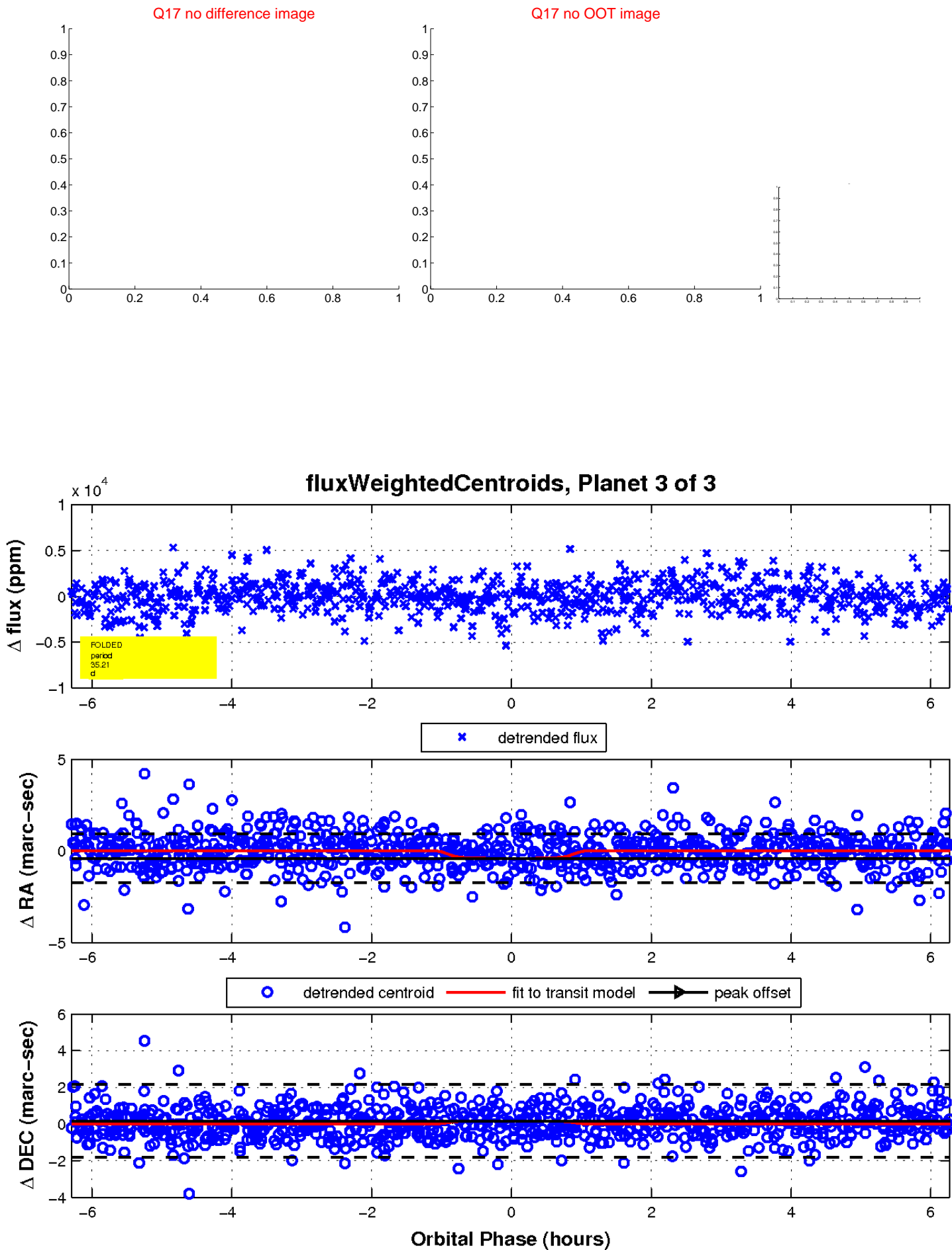
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

