

KIC 006302655

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})
006302655-01	OBS	No	3.471113	132.274611	277.7	4.304	13.7	14.5	2.33	7957	4.51	6411.53
006302655-02	OBS	No	1.735538	132.430658	224.4	4.195	11.7	11.9	2.33	7957	4.07	16156.27
006302655-03	OBS	No	0.946593	131.993021	102.7	3.689	9.5	7.6	2.33	7957	2.75	36255.09
006302655-04	OBS	No	2.165184	133.413045	237.0	6.076	10.0	12.2	2.33	7957	4.17	12029.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006302655-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006302655-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

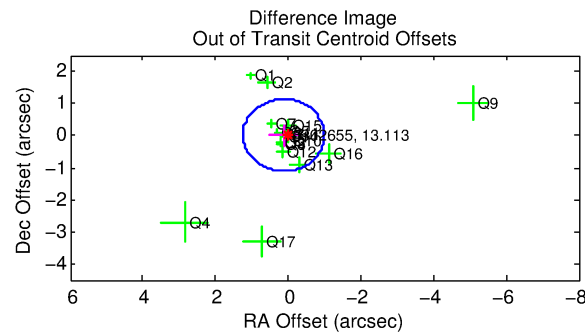
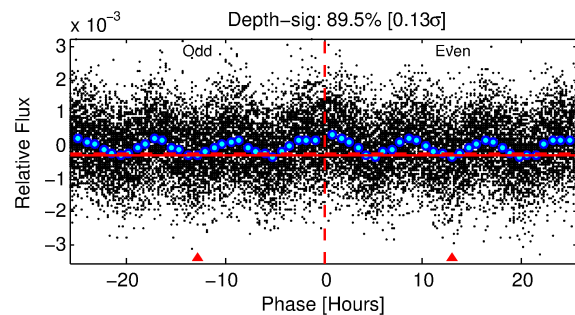
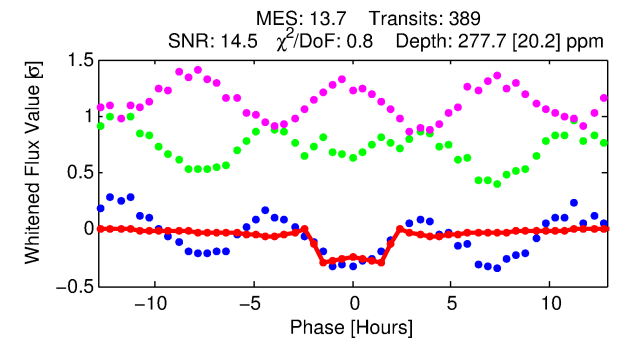
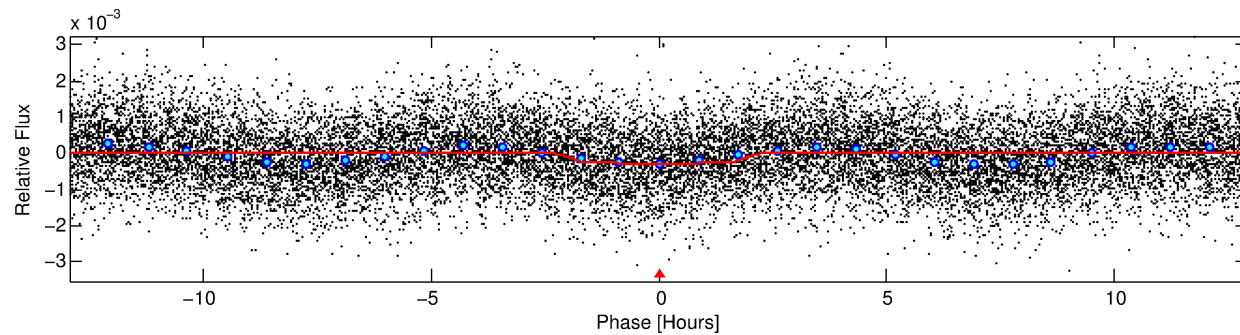
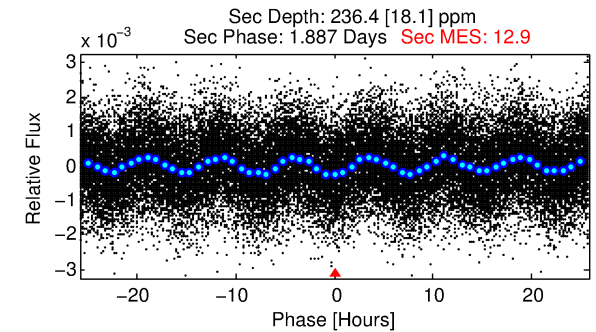
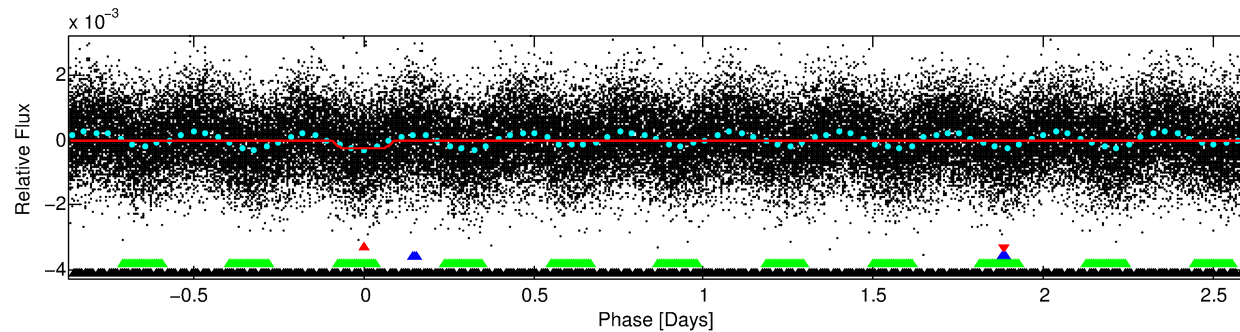
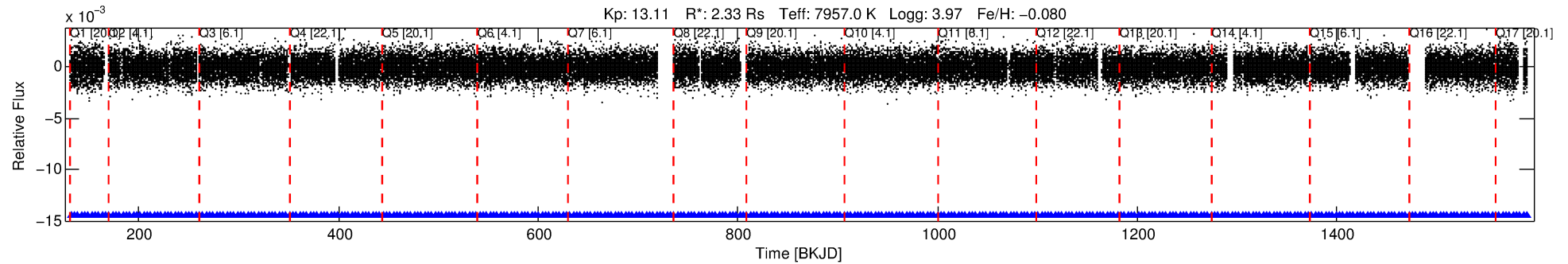
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006302655-01

No Significant Match Found

DV One-Page Summary

KIC: 6302655 Candidate: 1 of 4 Period: 3.471 d



DV Fit Results:

Period = 3.47111 [0.00002] d
Epoch = 132.2746 [0.0034] BKJD
Rp/R* = 0.0177 [0.0025]
a/R* = 3.08 [2.31]
b = 0.90 [0.18]
Seff = 6411.53 [1593.37]
Teq = 2282 [142] K
Rp = 4.51 [1.06] Re
a = 0.0552 [0.0090] AU
Ag = 19.45 [7.39] [2.50σ]
Teffp = 7409 [544] K [9.12σ]

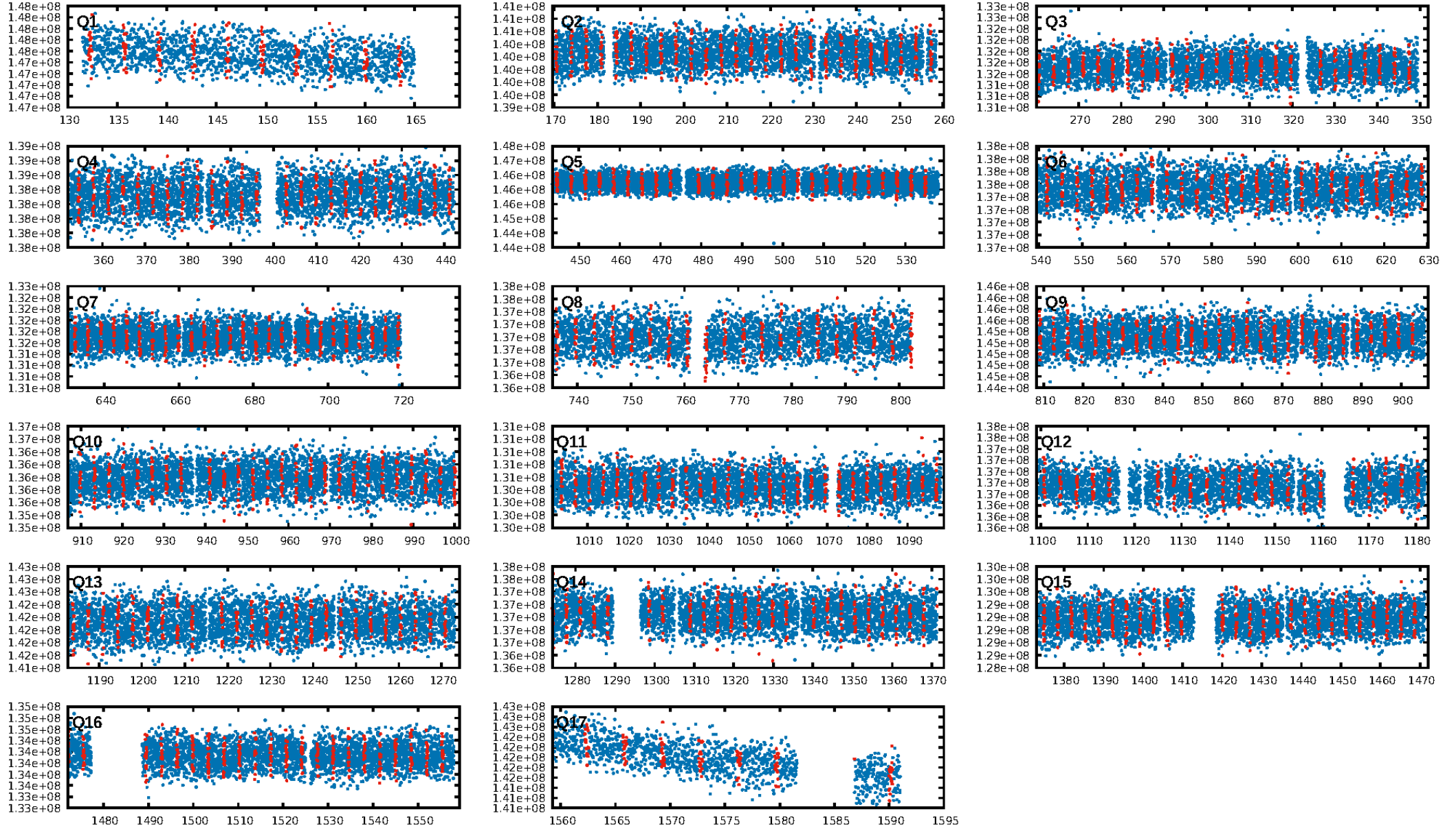
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.21σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.85e-27
RollingBand-fgt: 1.00 [372/372]
GhostDiagnostic-chr: 1.545
Centroid-sig: 16.8%
Centroid-so: 0.107 arcsec [0.86σ]
OotOffset-rm: 0.131 arcsec [0.35σ]
KicOffset-rm: 0.212 arcsec [0.77σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

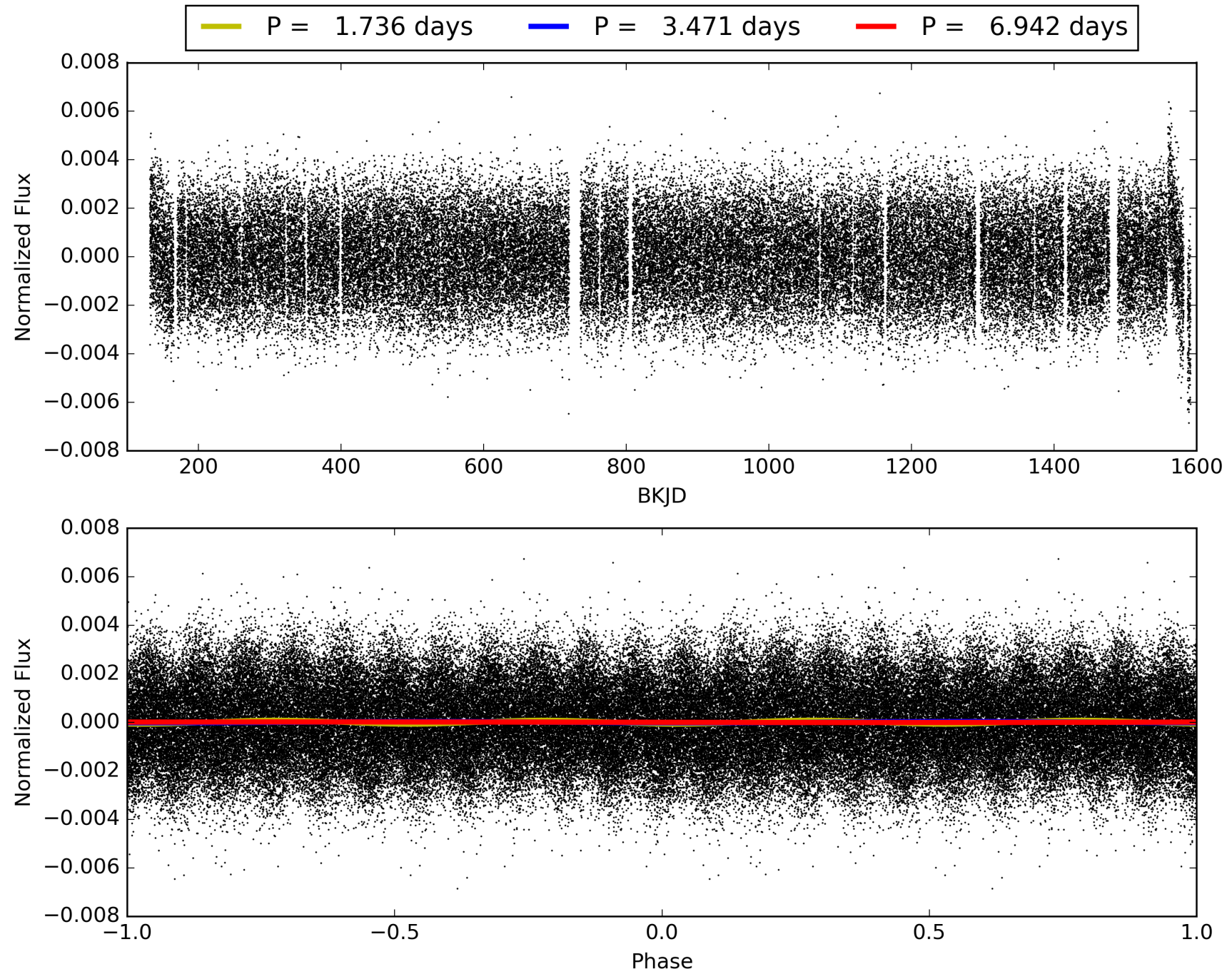
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:35:22 Z

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

TCE 006302655-01, PDC Light Curves

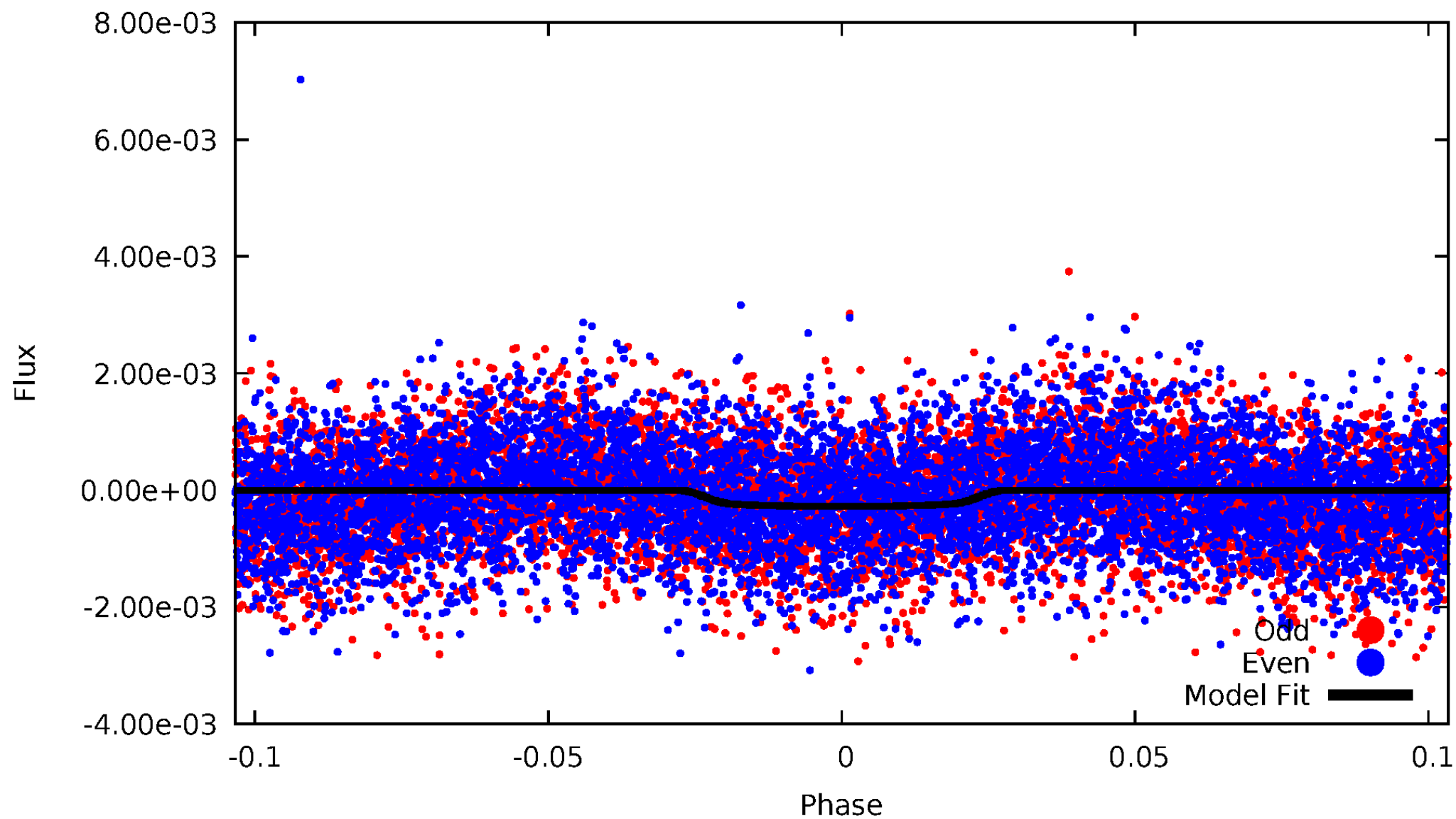


TCE 006302655-01



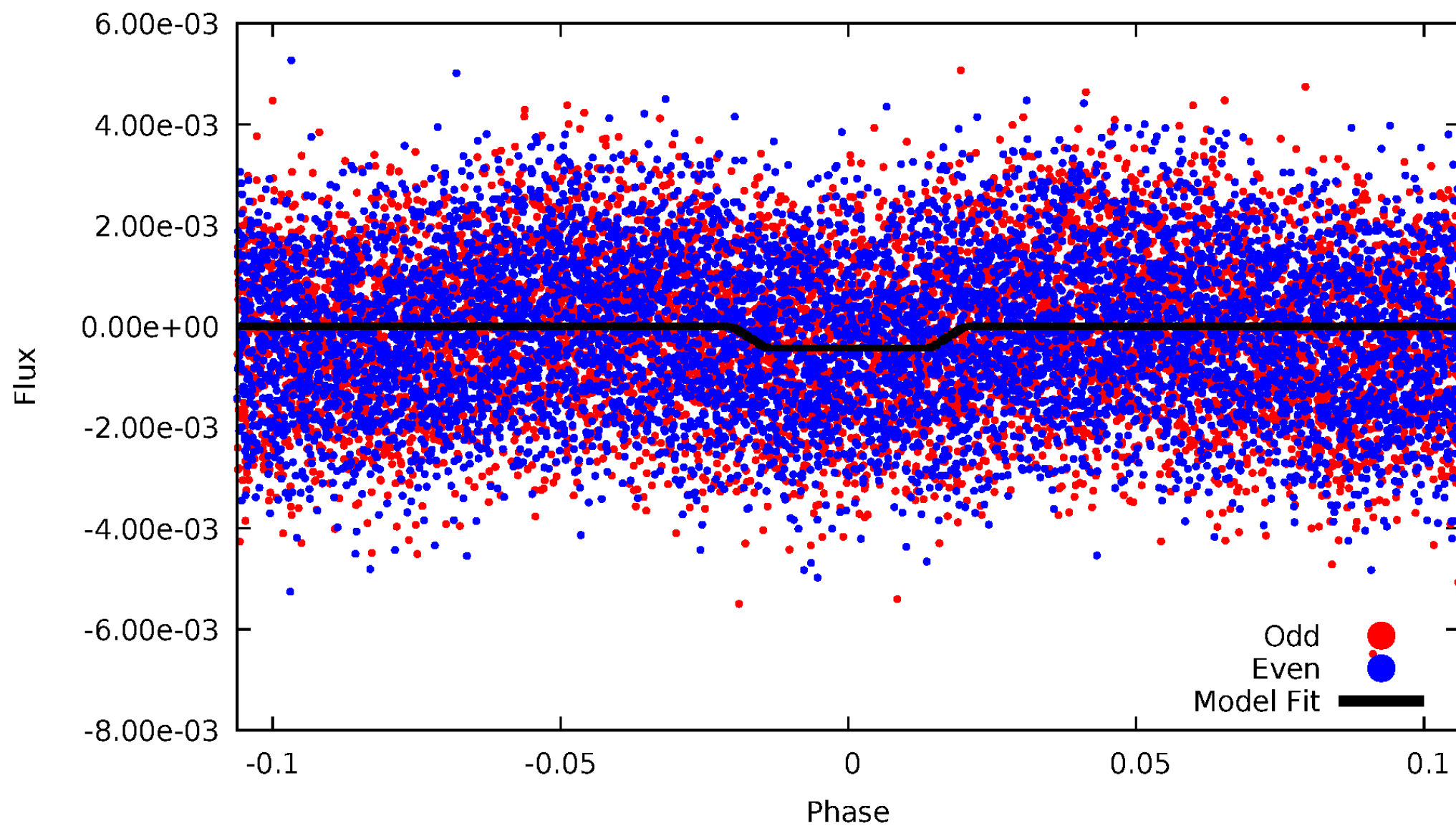
DV Odd/Even

TCE 006302655-01

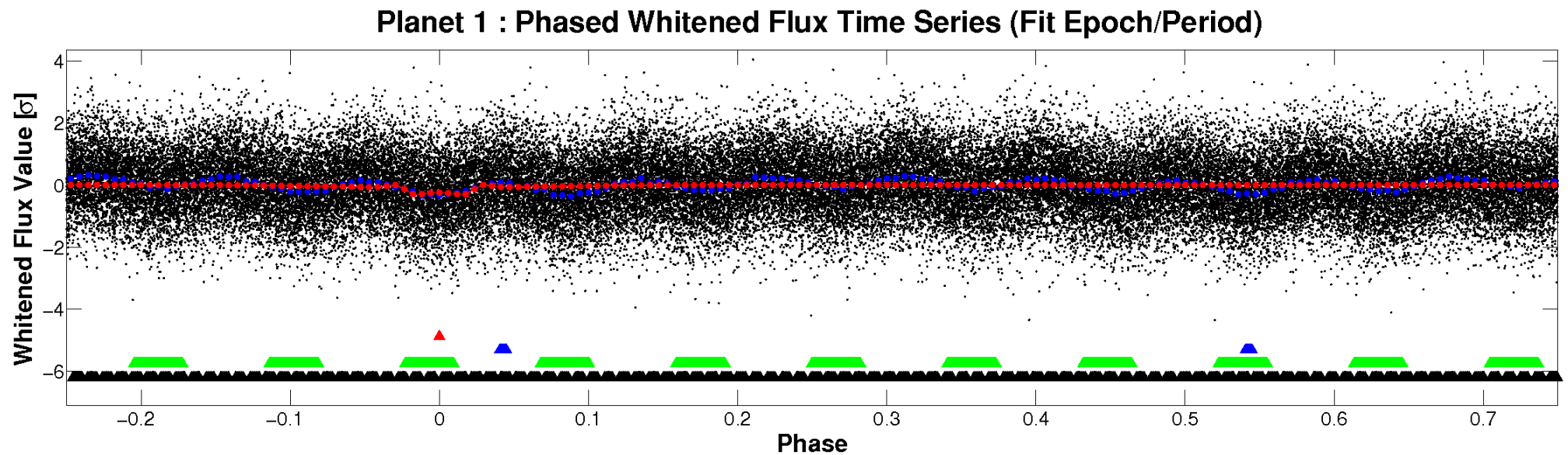
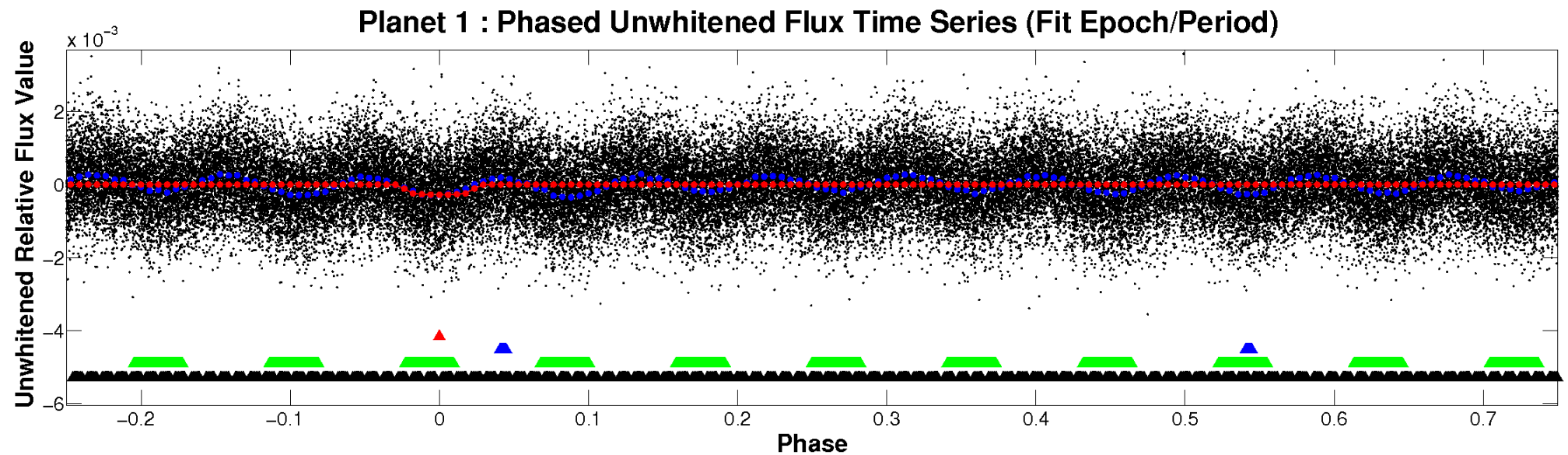


ALT Odd/Even

TCE 006302655-01

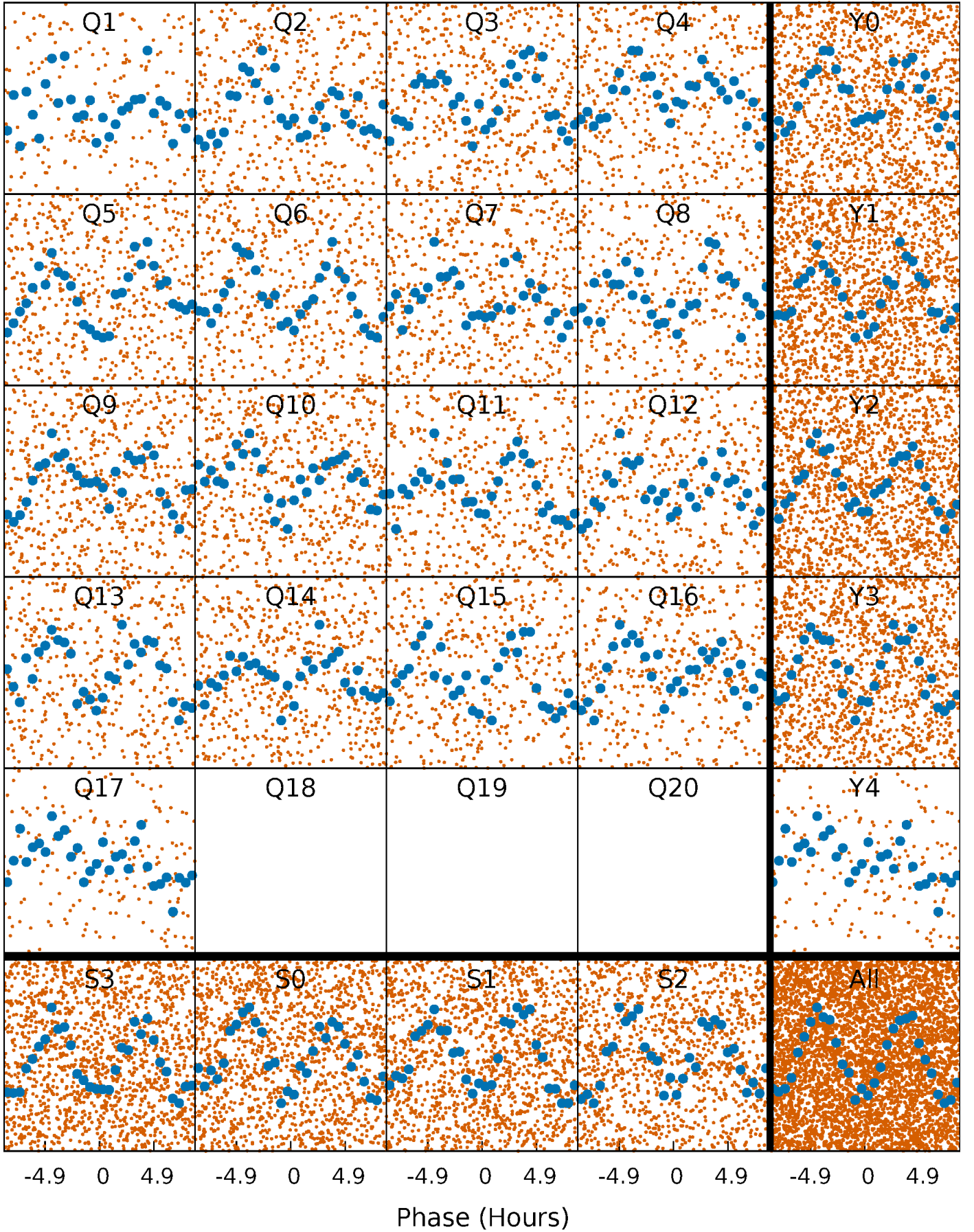


Non-Whitened Vs. Whitened Light Curve



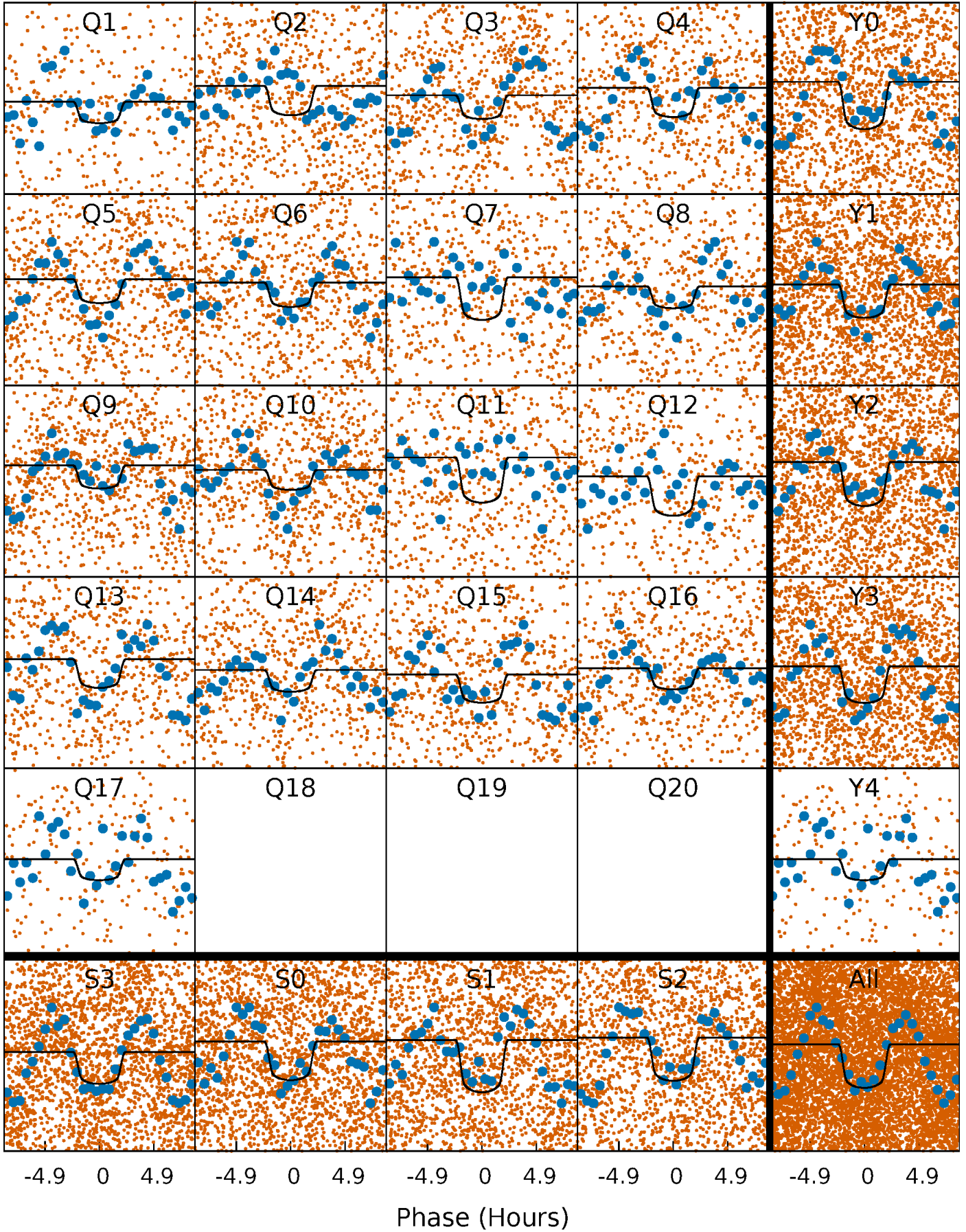
PDC Quarter-Phased Transit Curves

TCE 006302655-01 P= 3.471113 Days $T_0=132.274611$ (BKJD)



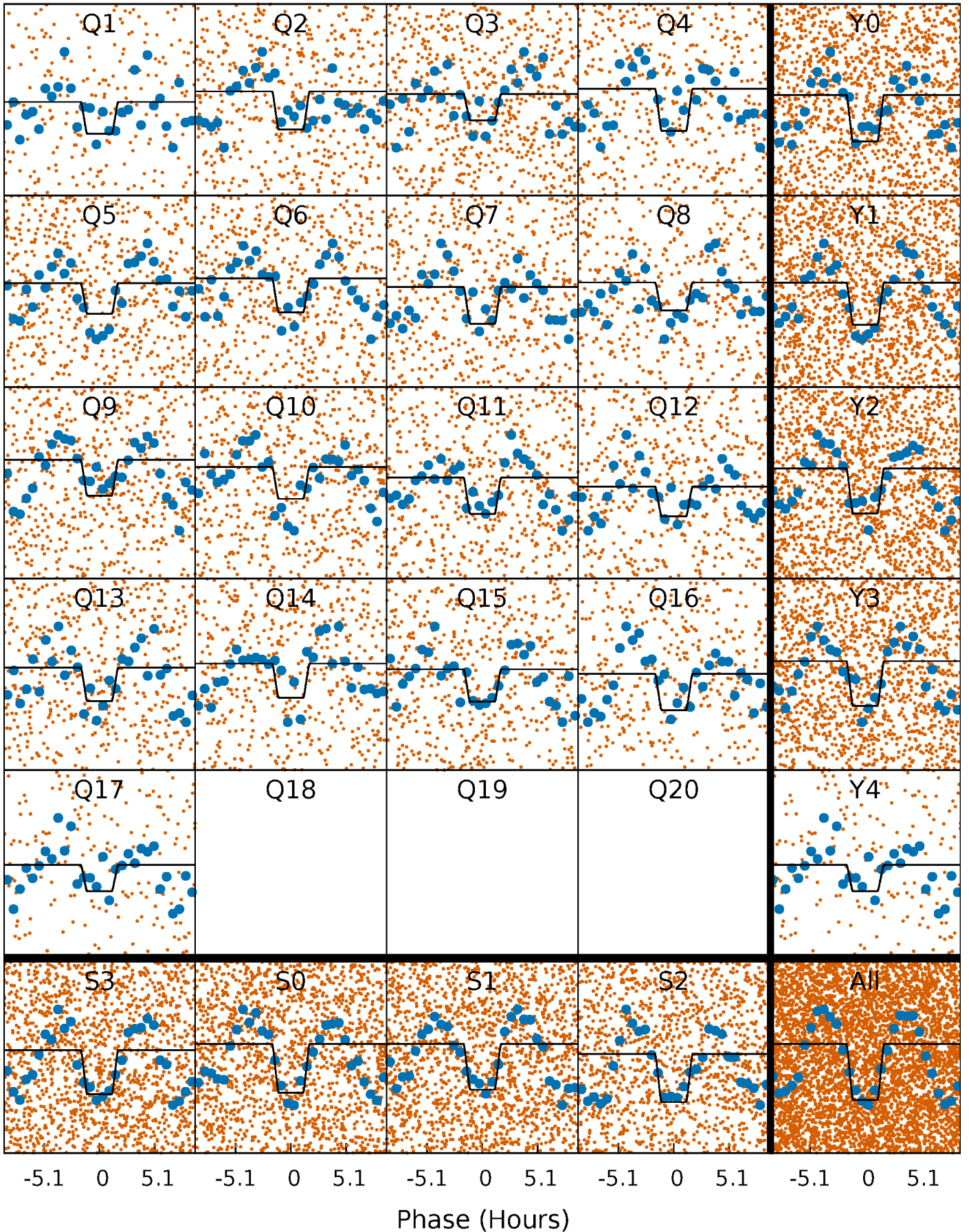
DV Quarter-Phased Transit Curves

TCE 006302655-01 P= 3.471113 Days $T_0=132.274611$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

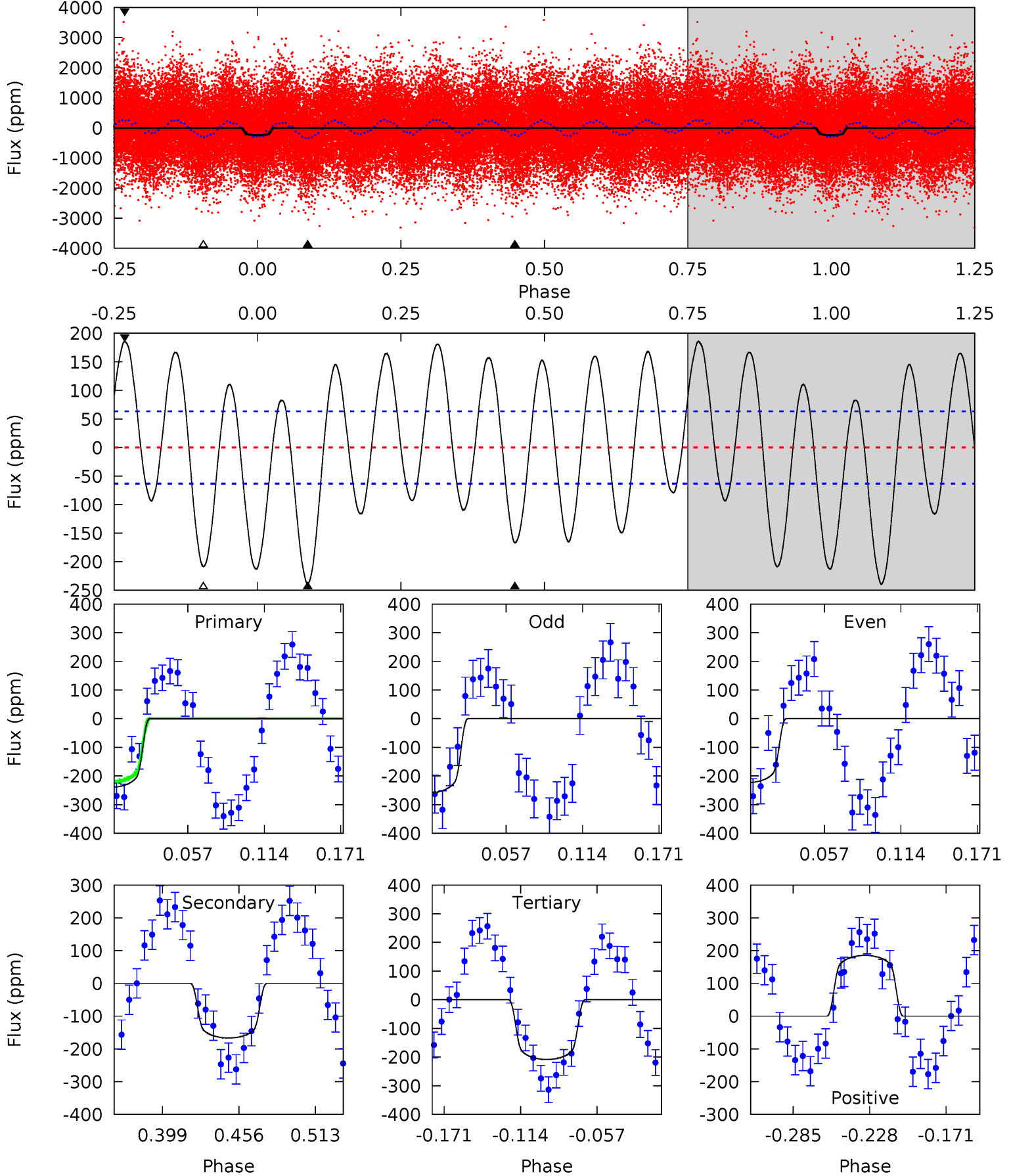
TCE 006302655-01 P= 3.471071 Days $T_0=132.273415$ (BKJD)



DV Model-Shift Uniqueness Test

006302655-01, P = 3.471113 Days, E = 128.803498 Days

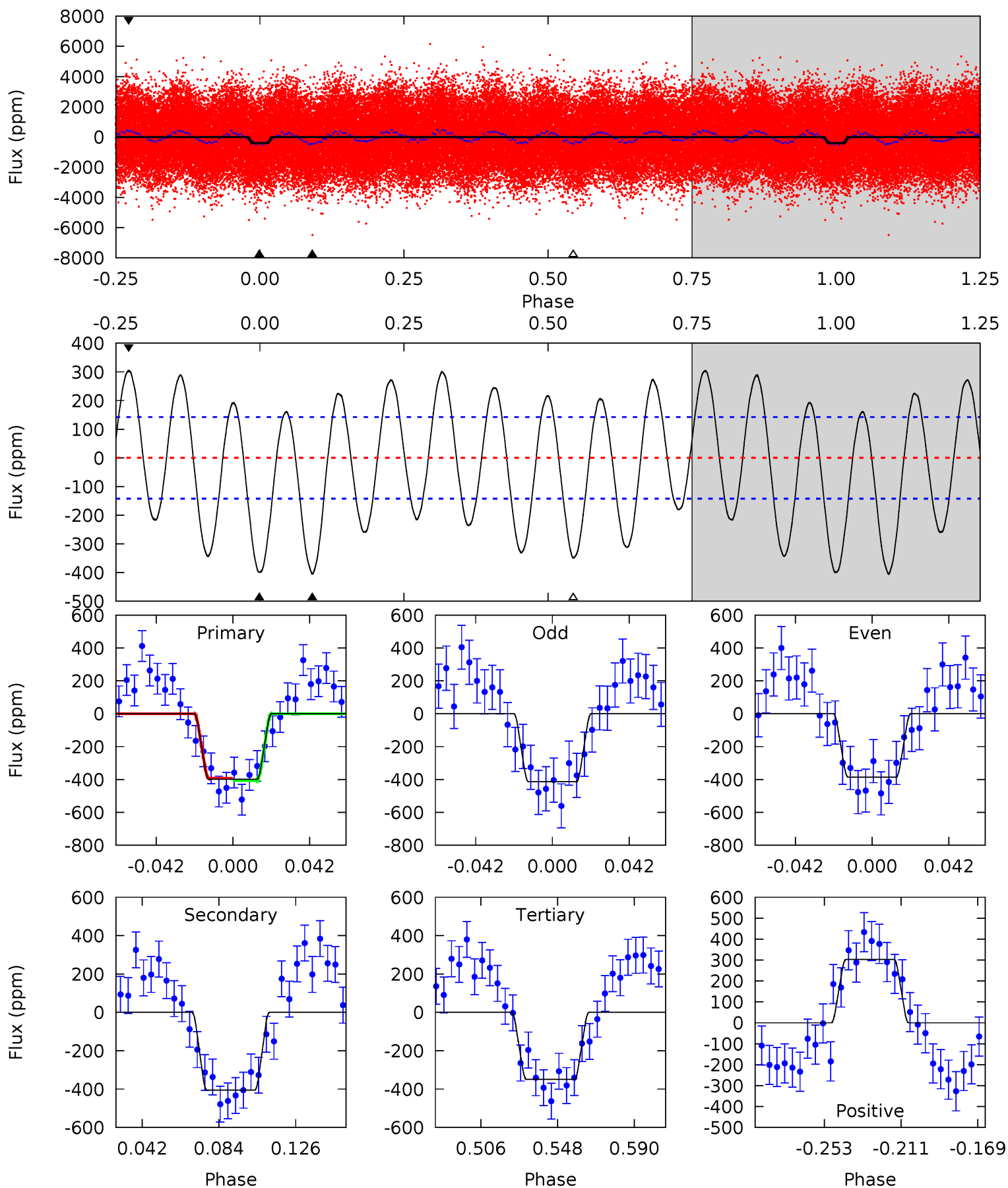
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	12.3	15.4	13.7	4.68	1.90	8.07	2.28	3.97	-3.08	-1.39	1.31	1.06	0.44	1.55



Alt Model-Shift Uniqueness Test

006302655-01, P = 3.471071 Days, E = 128.802344 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	13.5	11.6	10.1	4.74	2.03	6.40	1.67	3.20	1.86	3.38	0.46	0.97	0.43	0.21



Stellar Parameters For KIC 006302655

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7957^{+71}_{-87}	$3.972^{+0.137}_{-0.084}$	$-0.080^{+0.050}_{-0.150}$	$2.331^{+0.269}_{-0.437}$	$1.857^{+0.051}_{-0.180}$	$0.206^{+0.130}_{-0.057}$
	+1%/-1%	+3%/-2%	+62%/-188%	+12%/-19%	+3%/-10%	+63%/-28%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006302655-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-167 ± 14	$4.46^{+0.75}_{-0.73}$	3182^{+110}_{-149}	6583^{+566}_{-468}	14^{+6}_{-4}
Alt.	-405 ± 30	$5.18^{+0.77}_{-0.77}$	3175^{+121}_{-166}	7750^{+626}_{-536}	25^{+9}_{-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 $A_{\text{obs}} \gg 1.0$

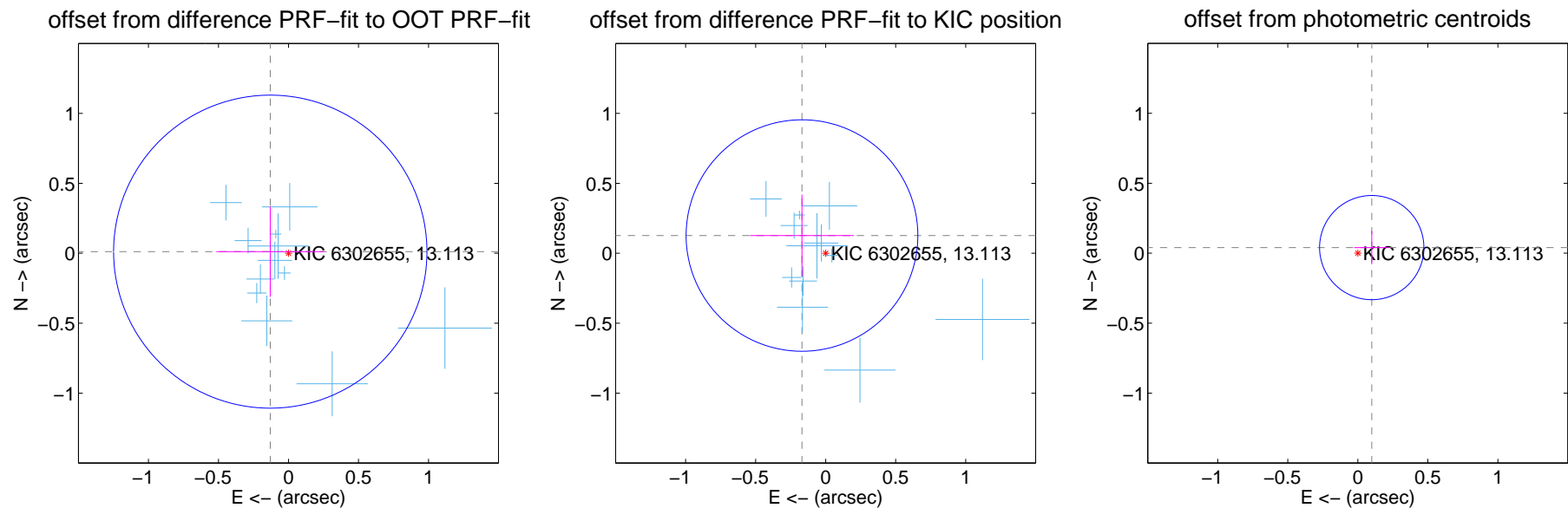
DV Centroid Data

Supplemental centroid analysis for 006302655-01. Kepler magnitude: 13.11. Transit SNR 14.47

There are 15 quarters with good PRF difference image offsets

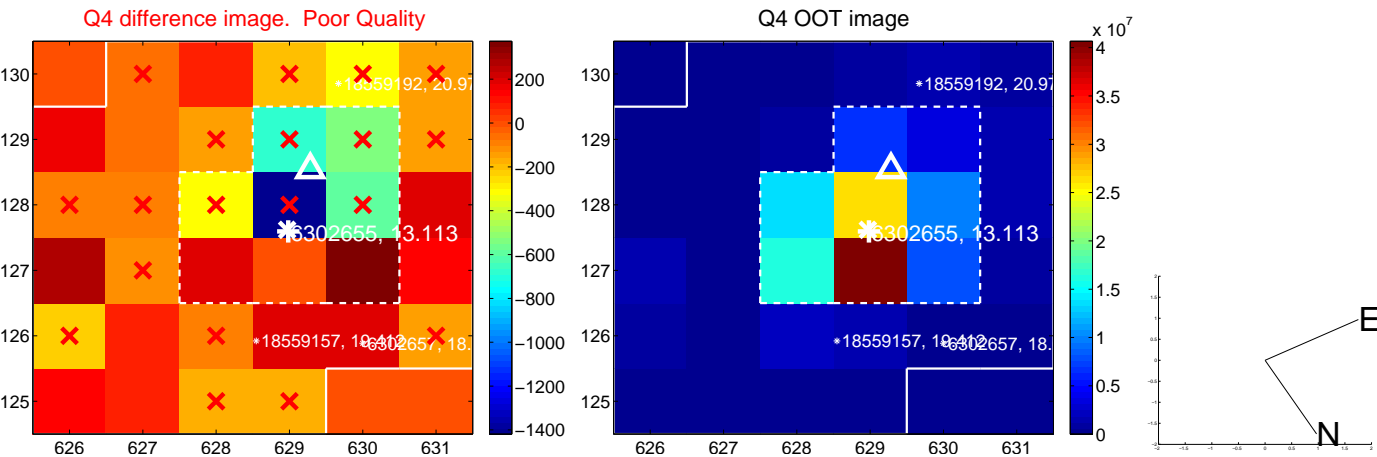
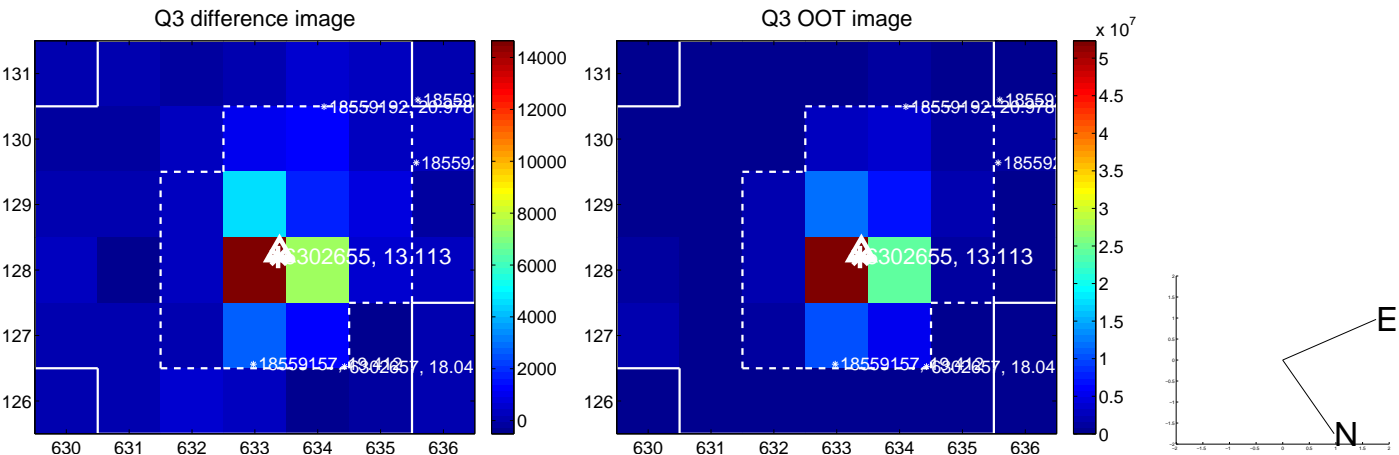
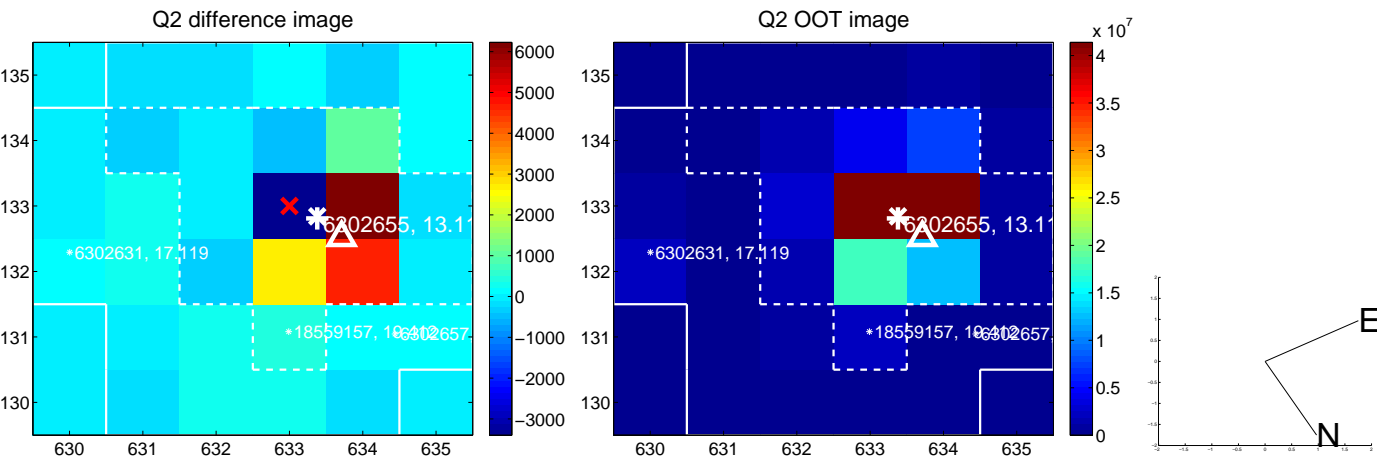
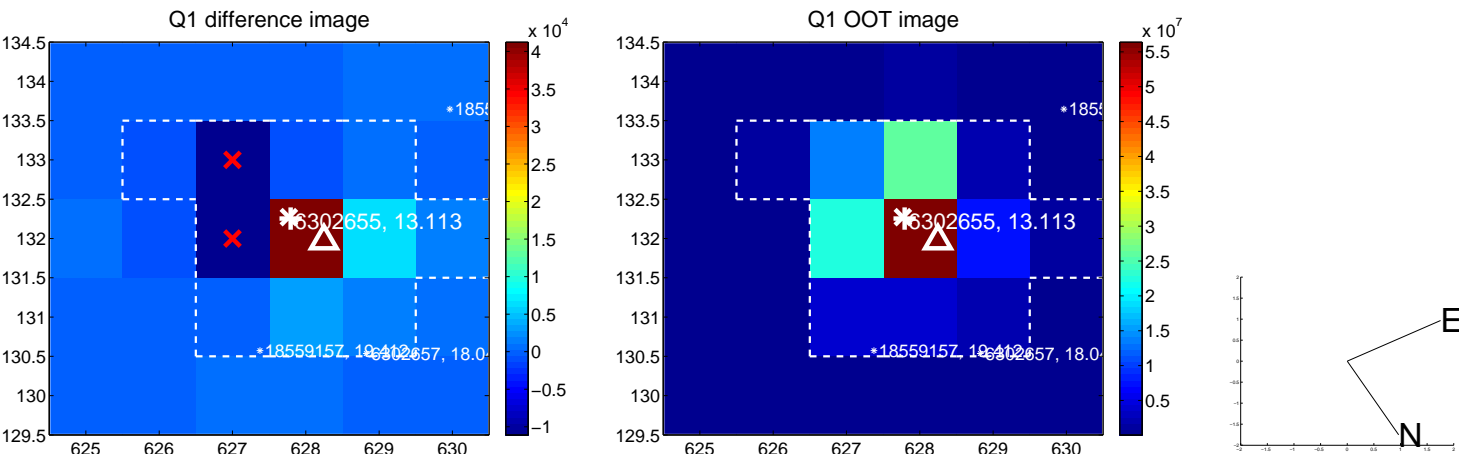
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.131 ± 0.373	0.35	0.130 ± 0.385	0.012 ± 0.322
PRF-fit source offset from KIC position	0.212 ± 0.276	0.77	0.169 ± 0.371	0.127 ± 0.293
photometric centroid source offset	0.11 ± 0.12	0.86	-0.10 ± 0.12	0.04 ± 0.12

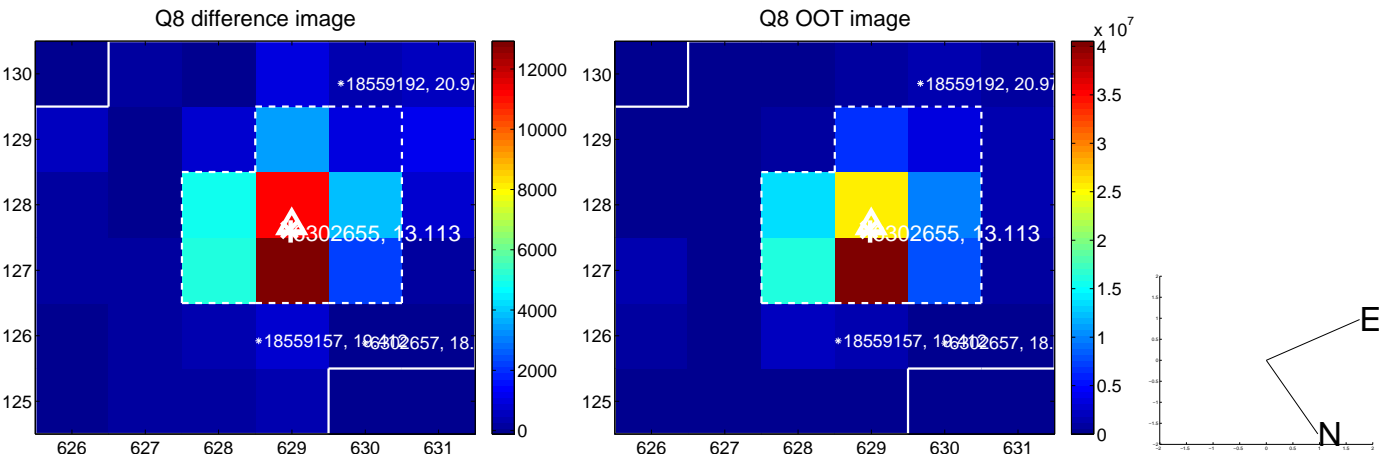
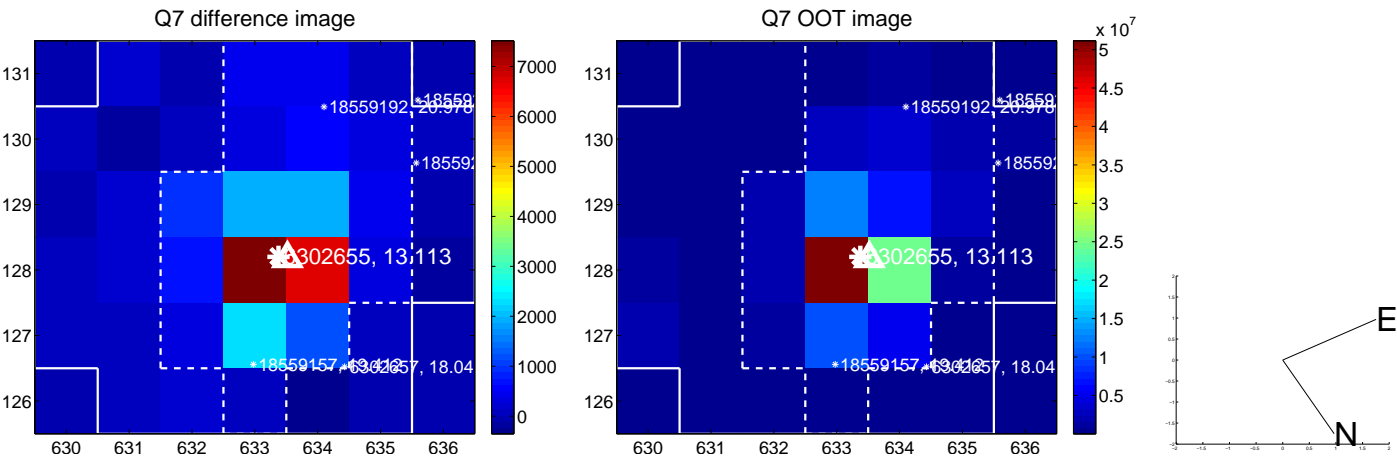
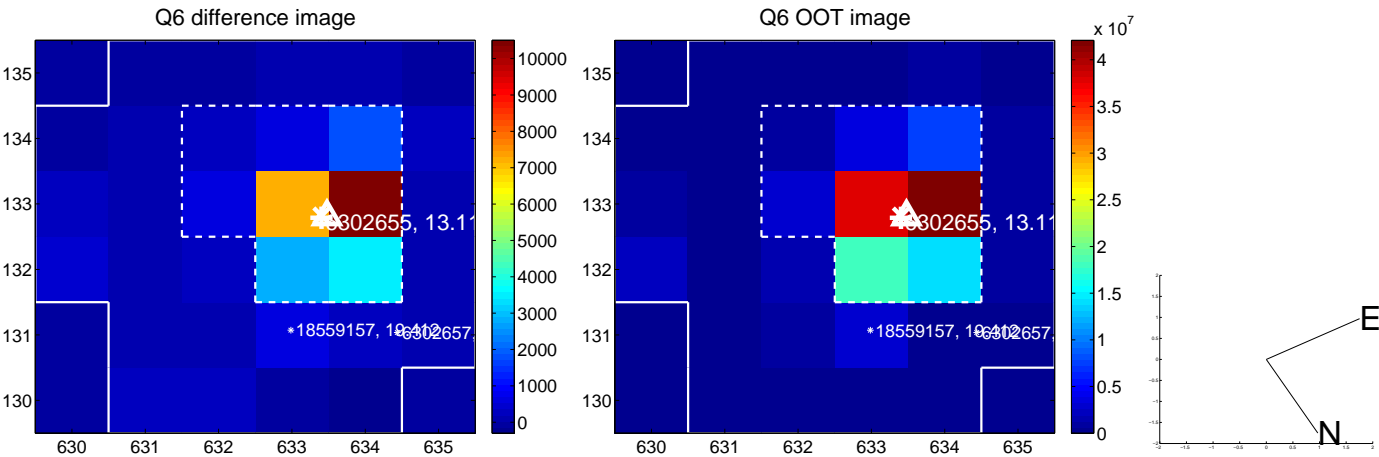
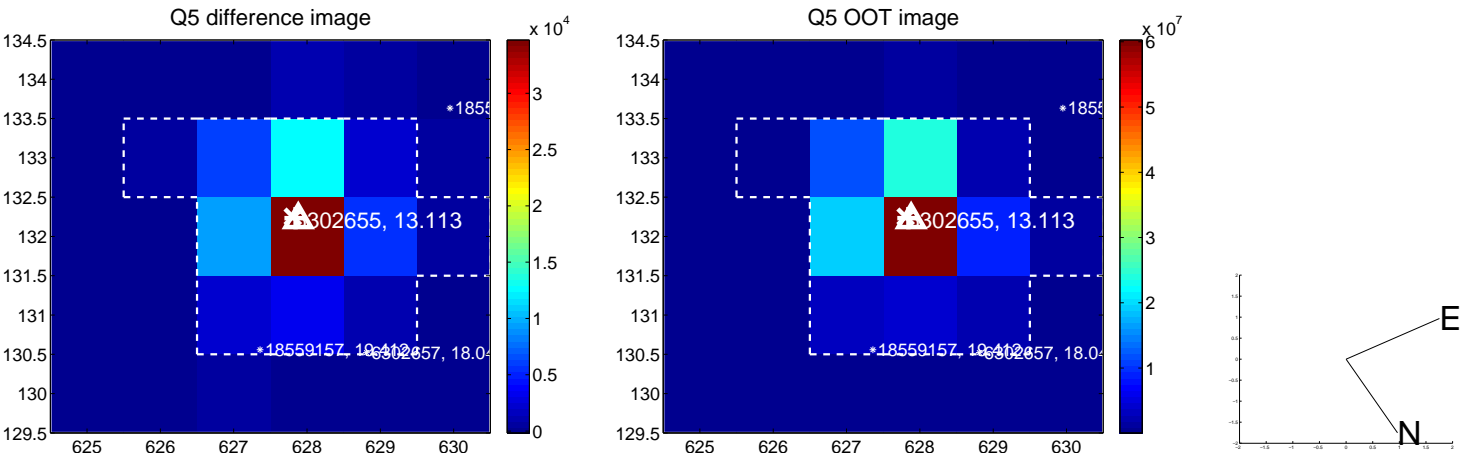


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

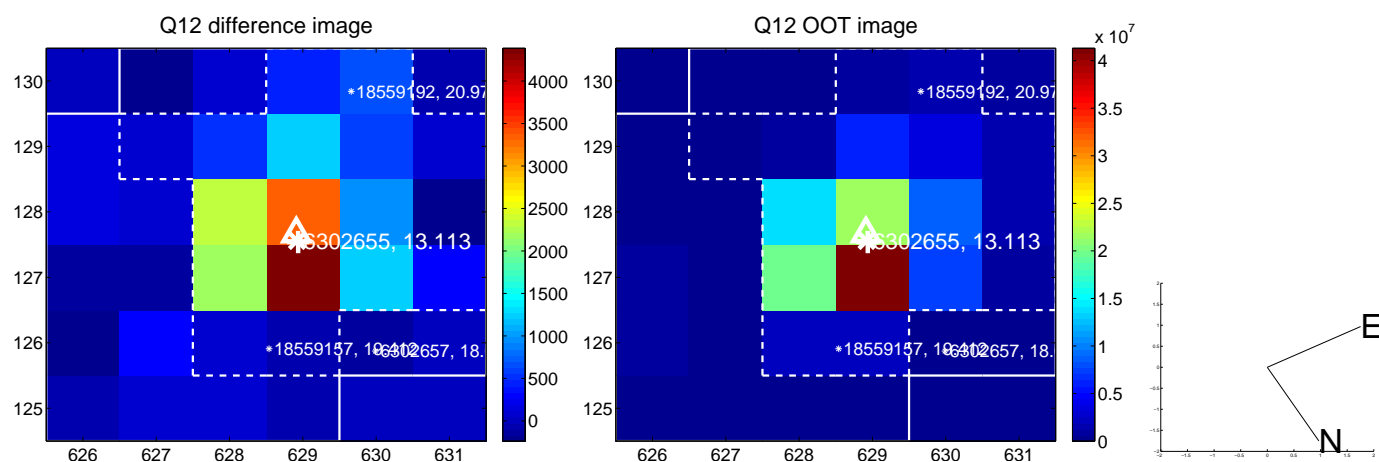
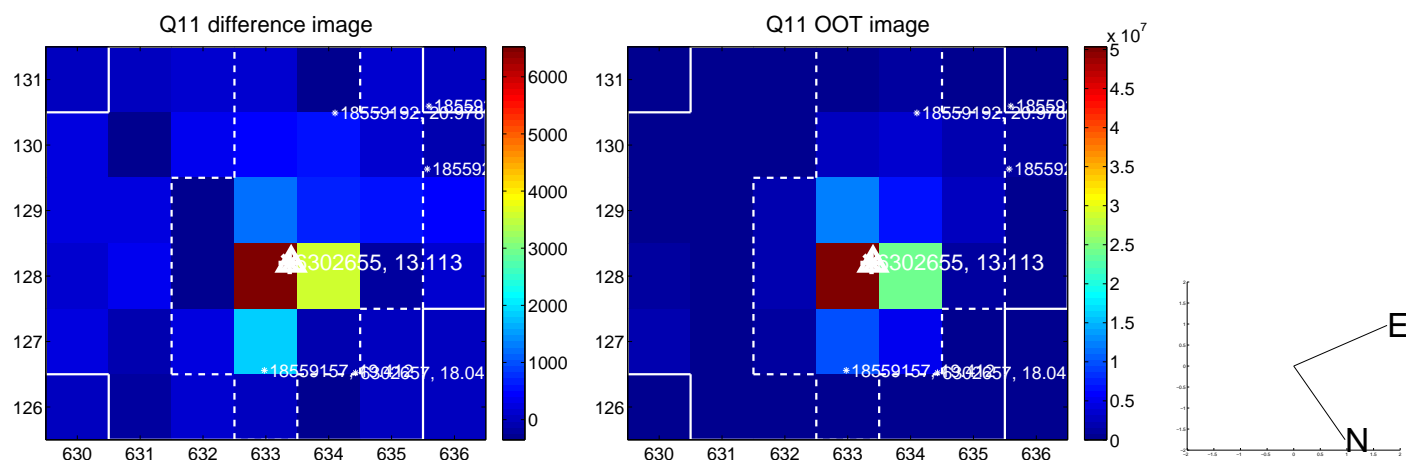
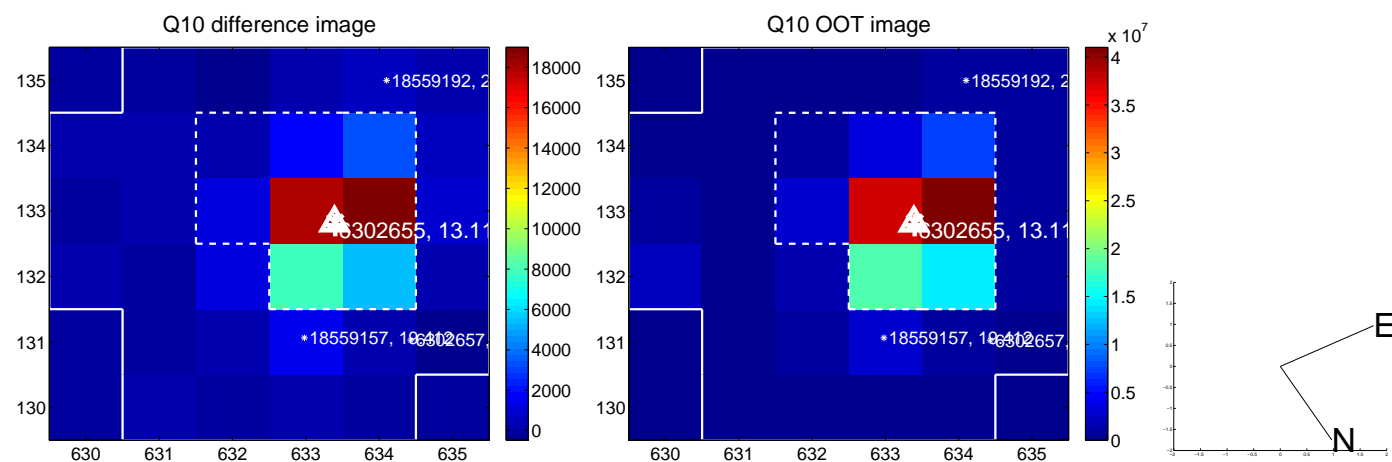
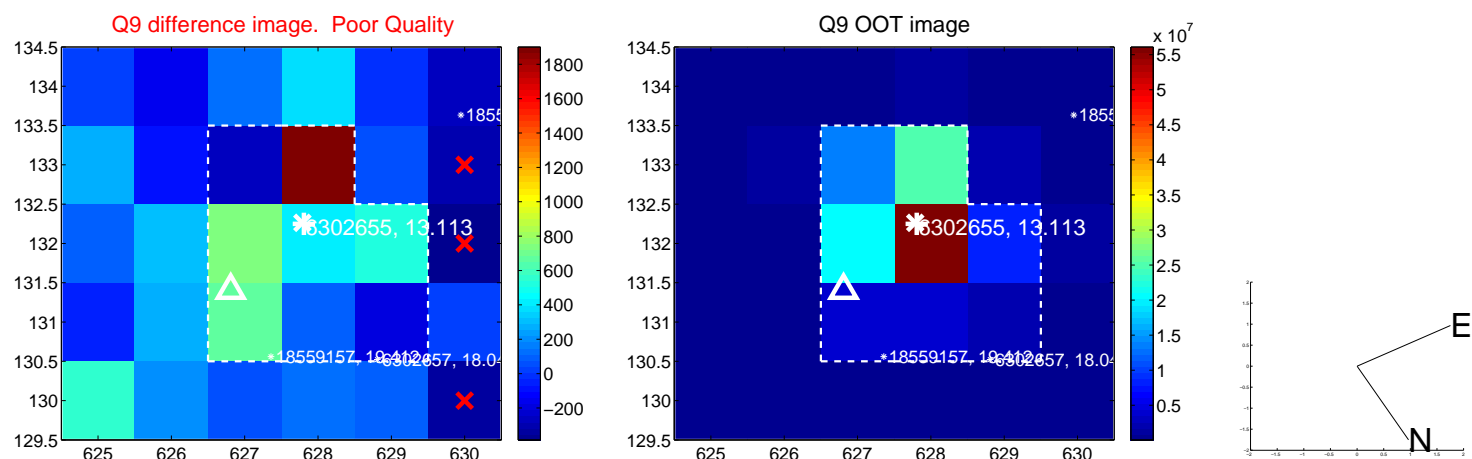
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



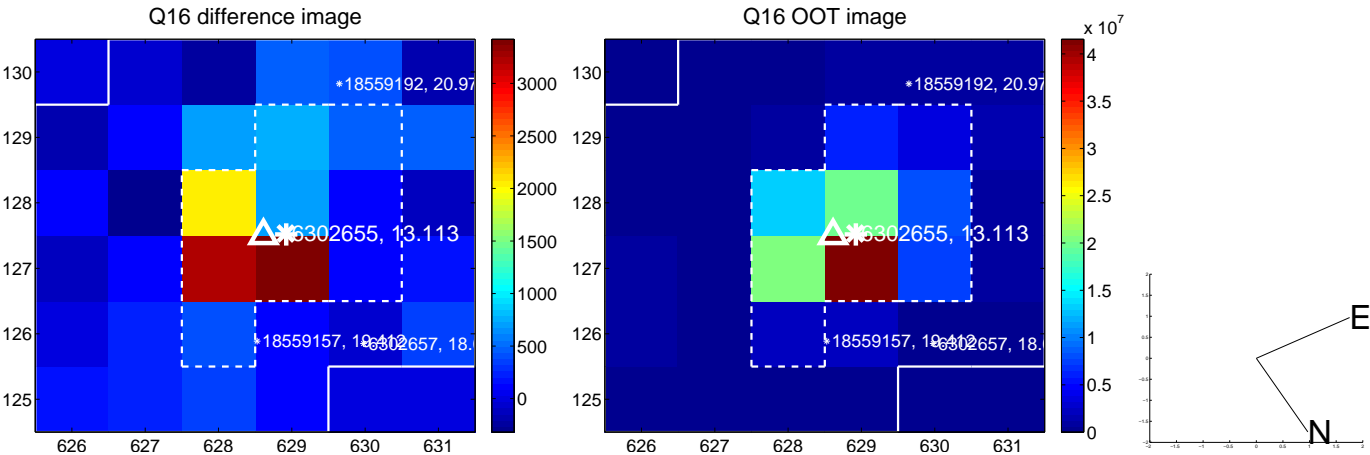
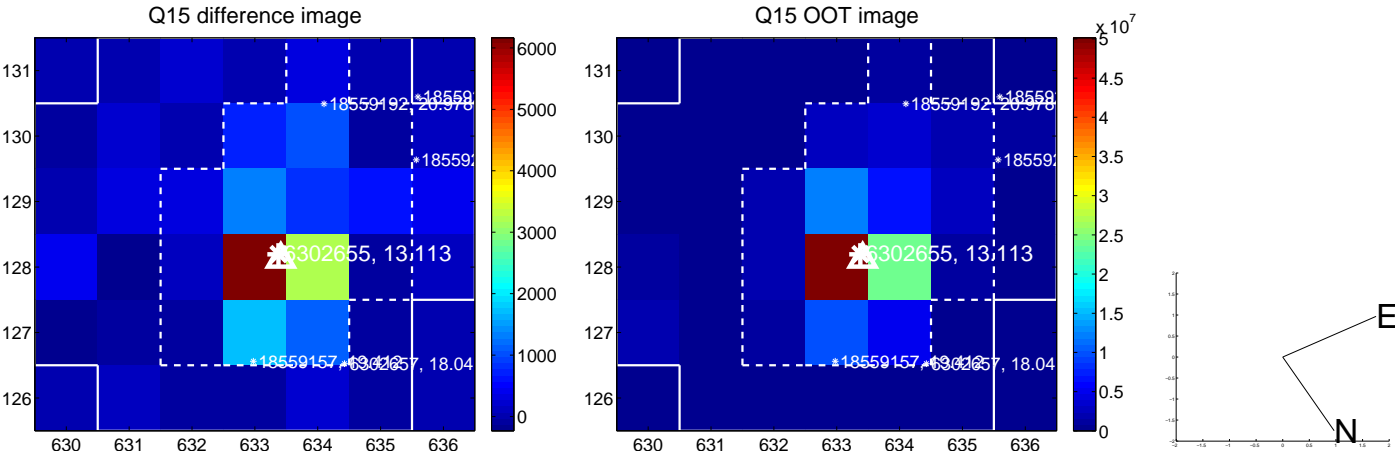
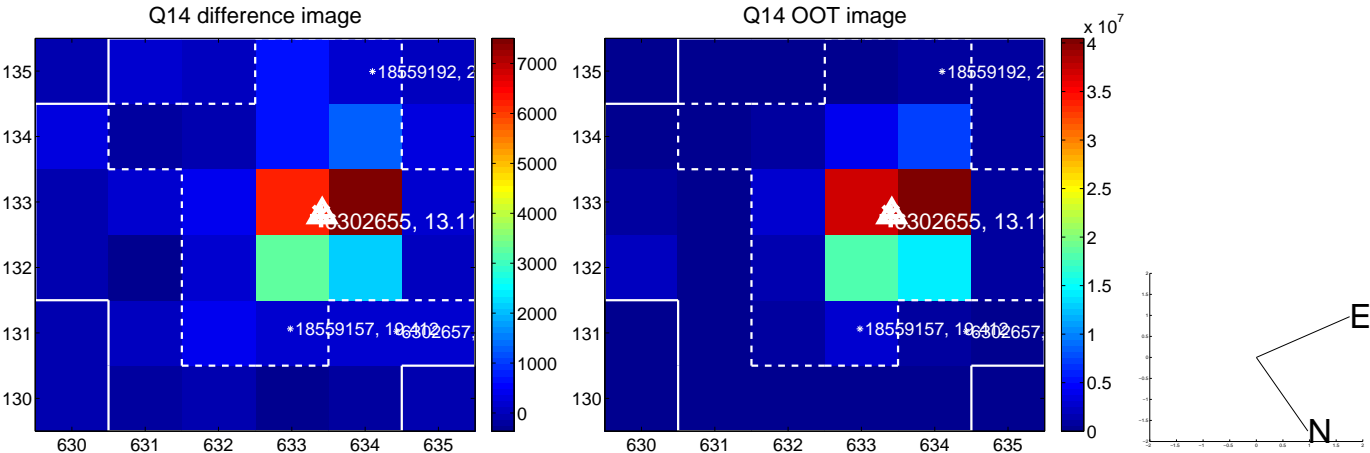
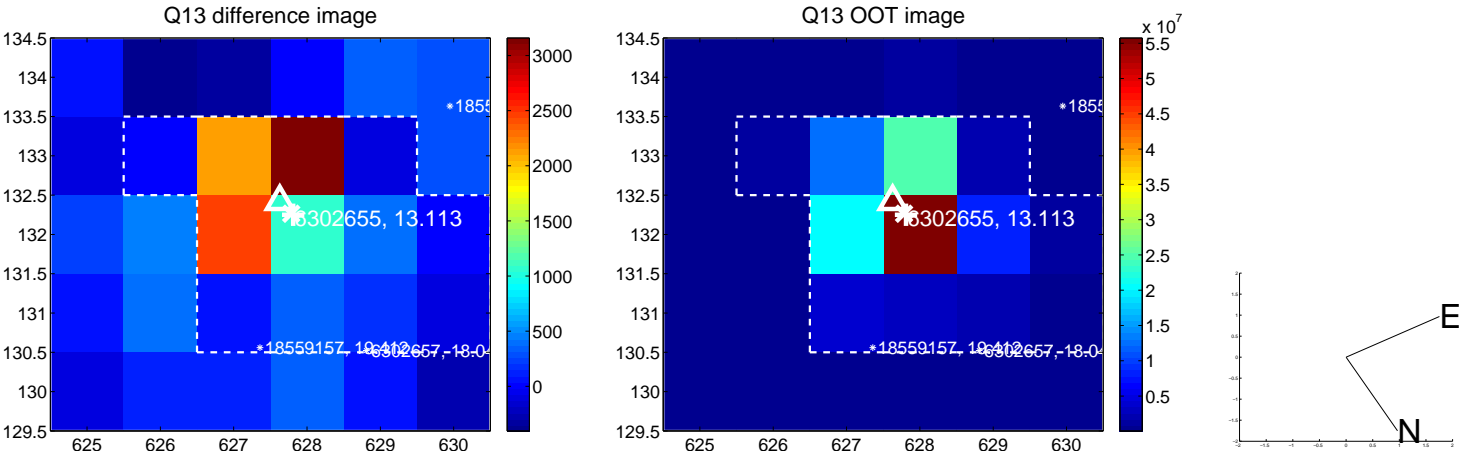
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



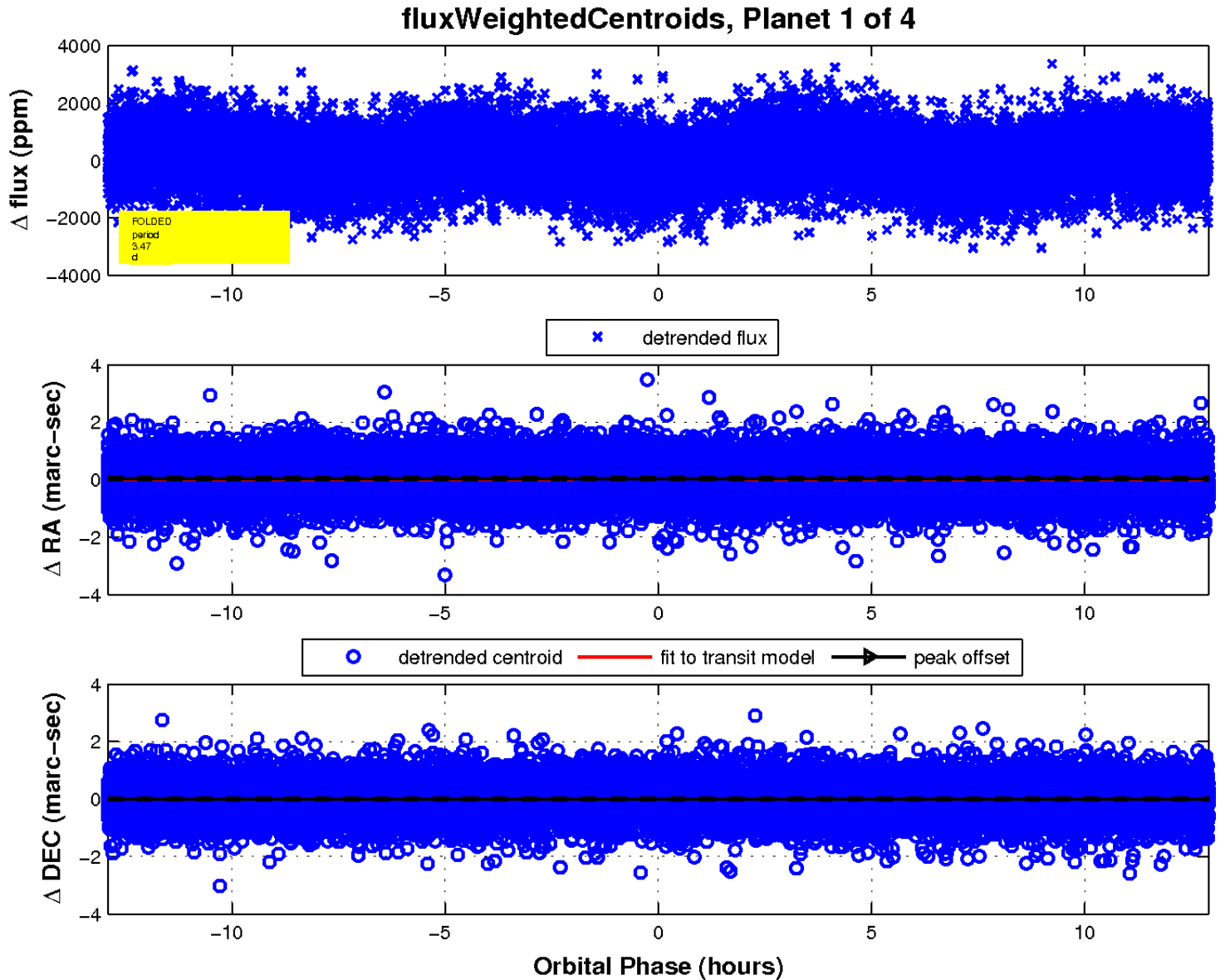
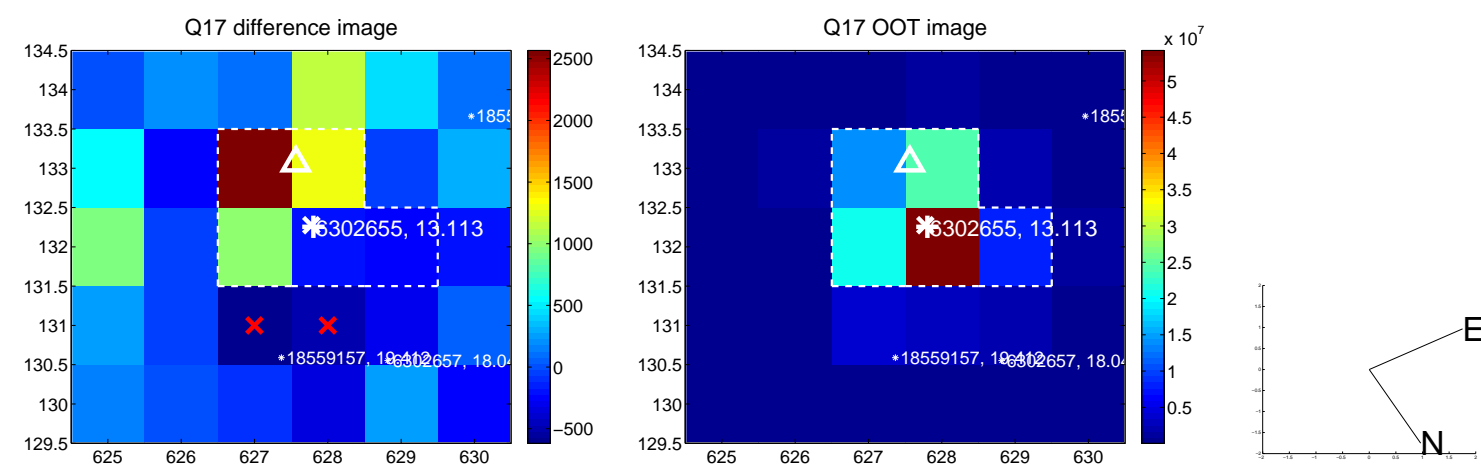
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

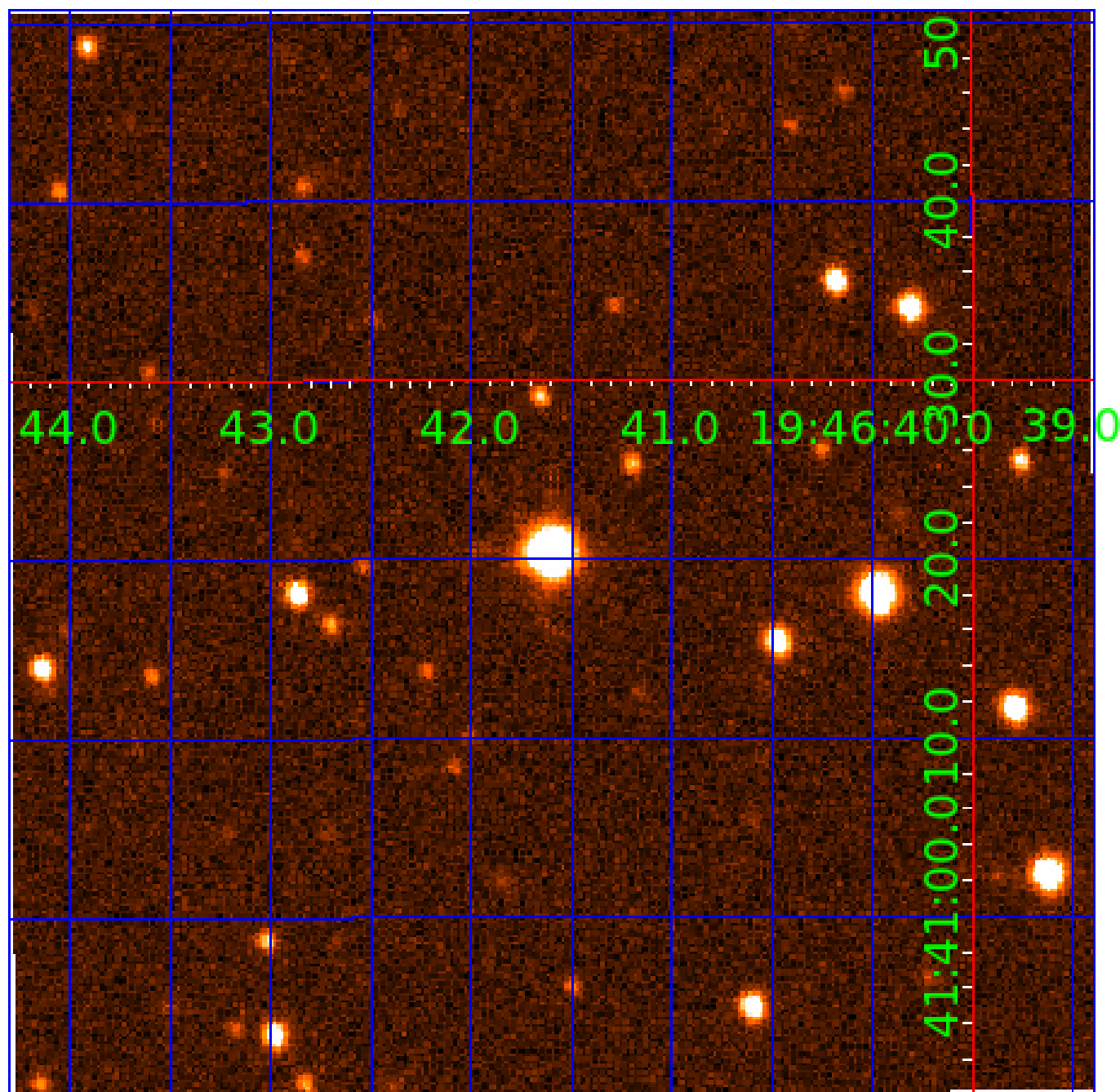


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006302655

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})
006302655-01	OBS	No	3.471113	132.274611	277.7	4.304	13.7	14.5	2.33	7957	4.51	6411.53
006302655-02	OBS	No	1.735538	132.430658	224.4	4.195	11.7	11.9	2.33	7957	4.07	16156.27
006302655-03	OBS	No	0.946593	131.993021	102.7	3.689	9.5	7.6	2.33	7957	2.75	36255.09
006302655-04	OBS	No	2.165184	133.413045	237.0	6.076	10.0	12.2	2.33	7957	4.17	12029.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006302655-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006302655-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

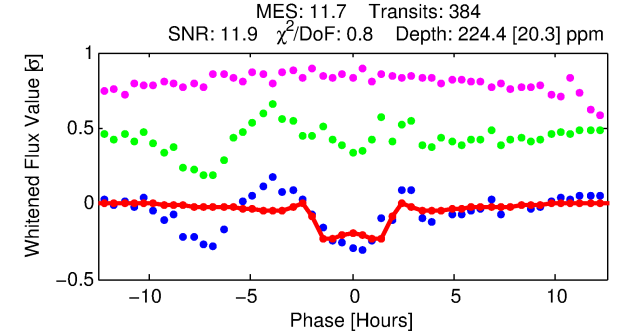
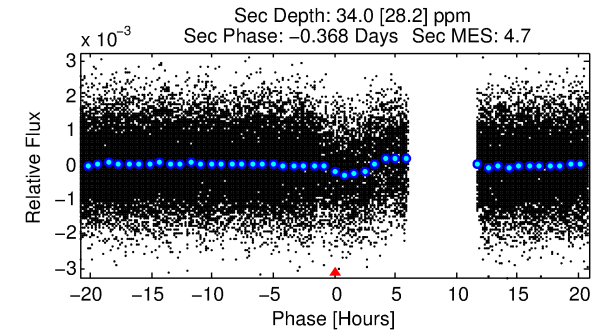
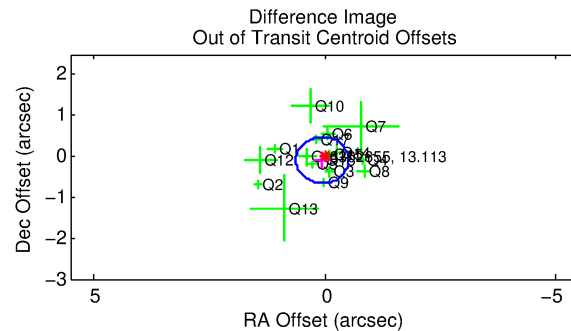
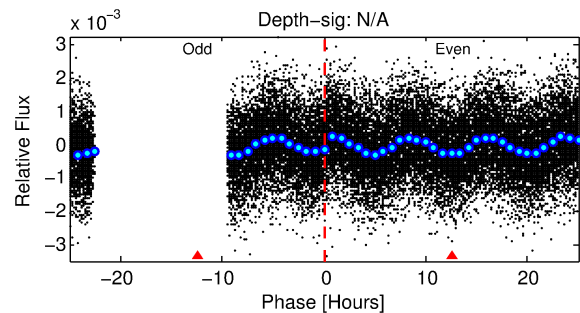
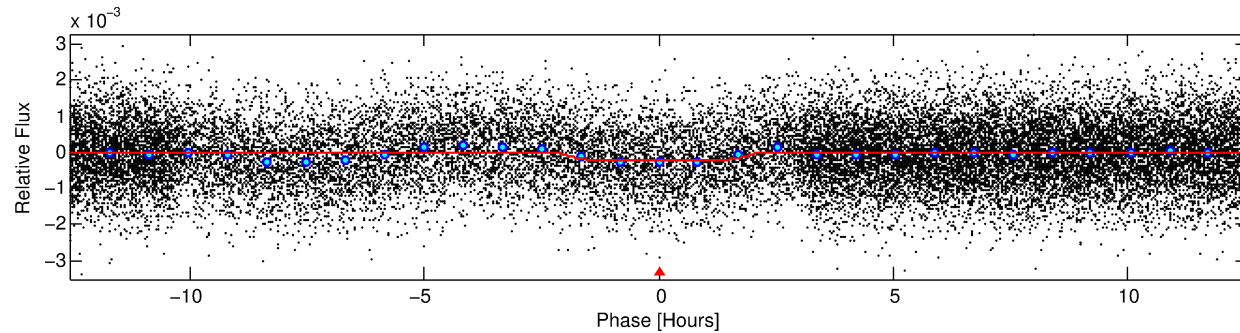
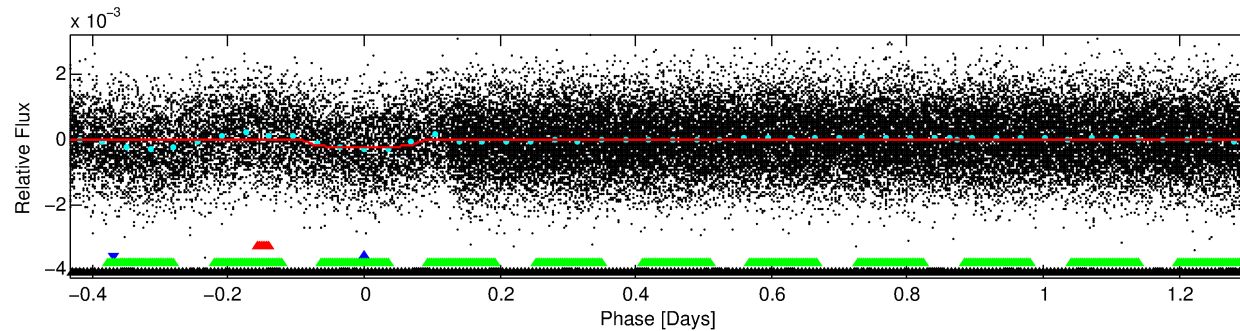
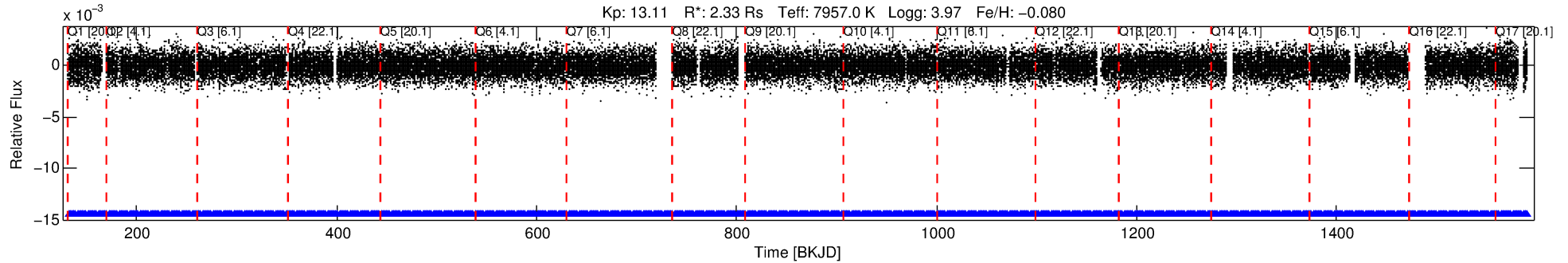
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006302655-02

No Significant Match Found

DV One-Page Summary

KIC: 6302655 Candidate: 2 of 4 Period: 1.736 d



DV Fit Results:

Period = 1.73554 [0.00001] d
Epoch = 132.4307 [0.0035] BKJD
Rp/R* = 0.0160 [0.0029]
a/R* = 1.74 [1.29]
b = 0.90 [0.23]
Seff = 16156.27 [4015.10]
Teq = 2875 [179] K
Rp = 4.07 [1.06] Re
a = 0.0348 [0.0057] AU
Ag = 1.36 [1.28] [0.29σ]
Teffp = 4804 [1089] K [1.75σ]

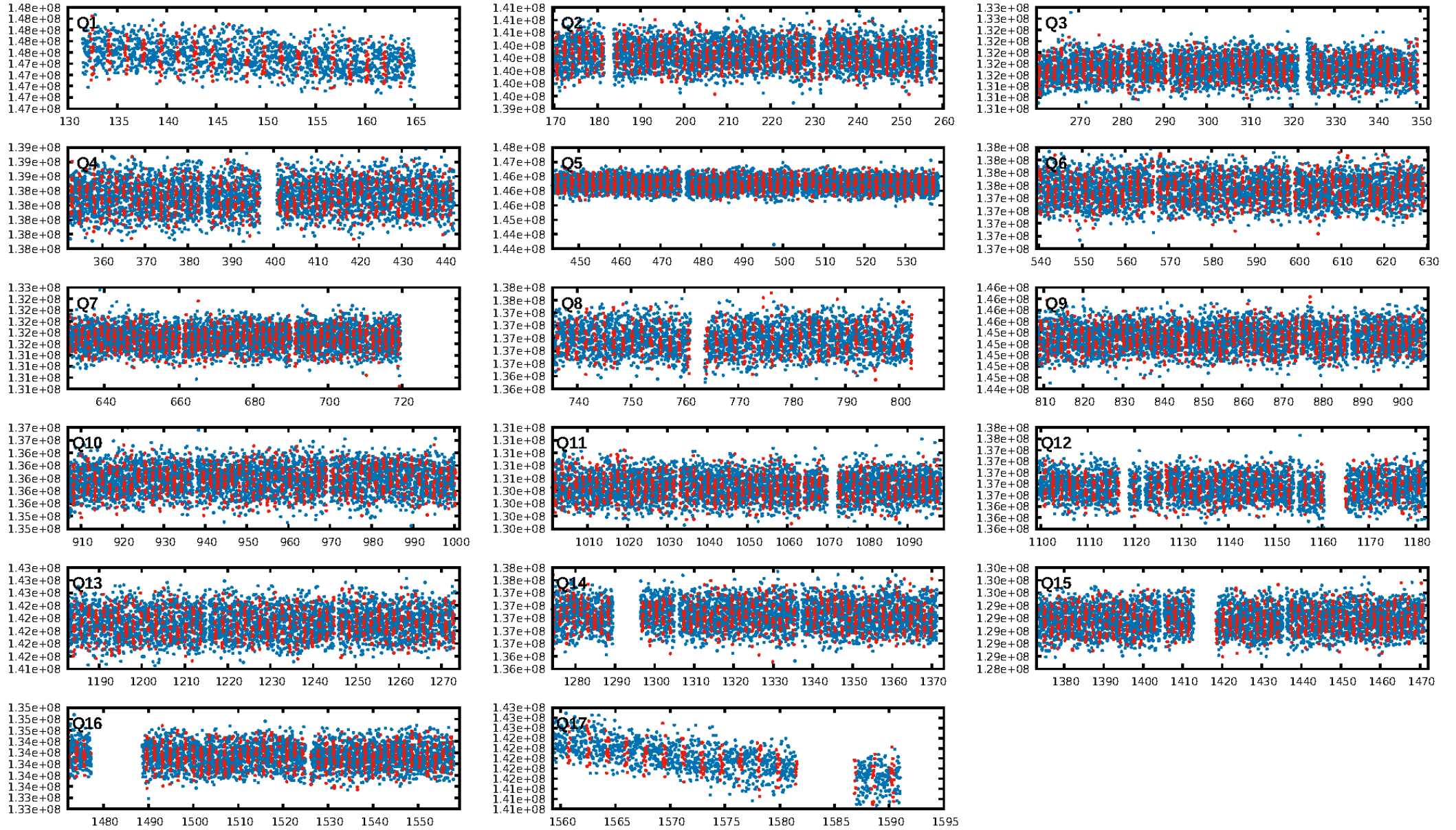
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.39σ]
LongPeriod-sig: 83.7% [1.40σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.22e-20
RollingBand-fgt: 1.00 [367/367]
GhostDiagnostic-chr: 1.239
Centroid-sig: 24.7%
Centroid-so: 0.017 arcsec [0.16σ]
OotOffset-rm: 0.107 arcsec [0.56σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.069 arcsec [0.39σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

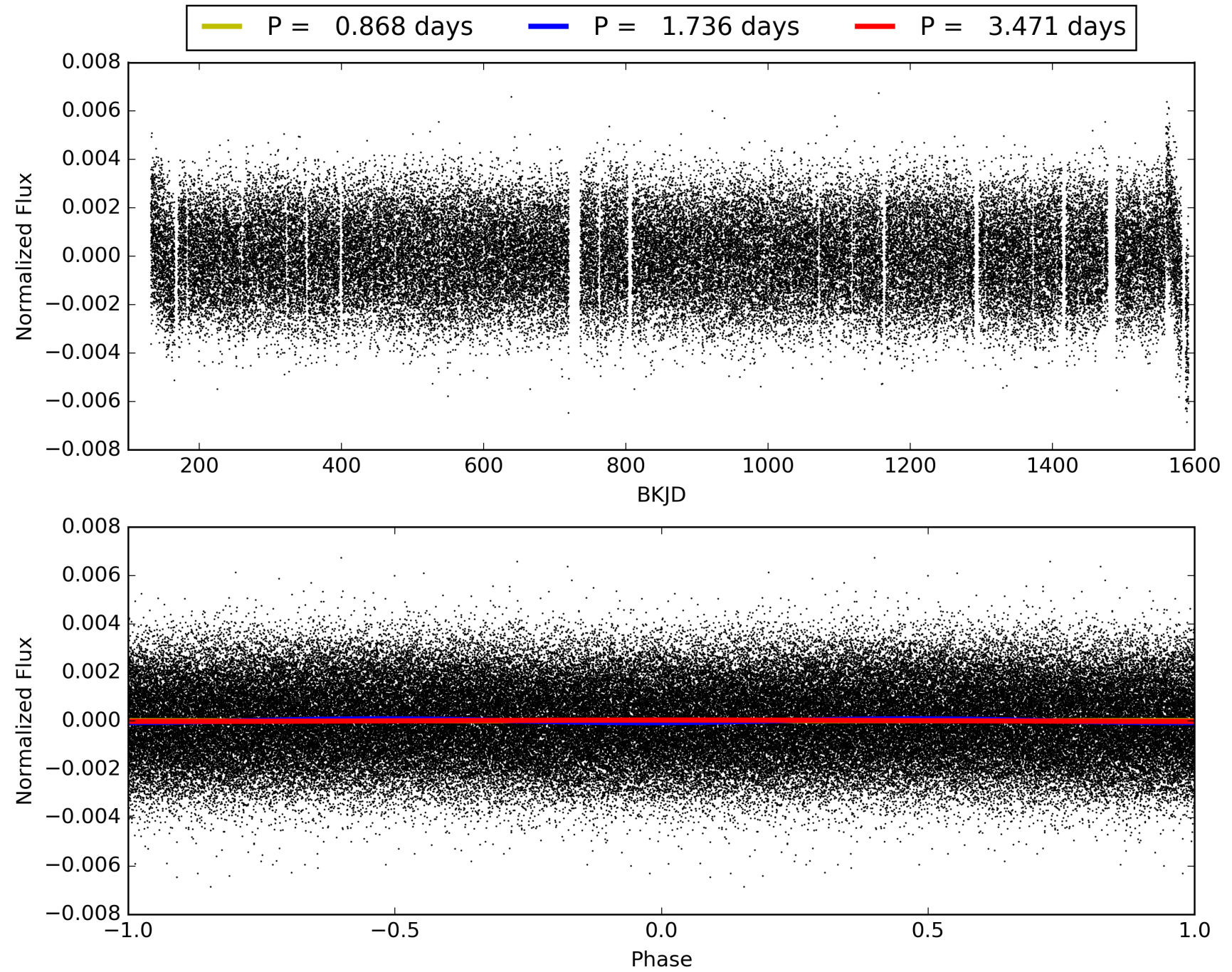
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:35:31 Z

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

TCE 006302655-02, PDC Light Curves

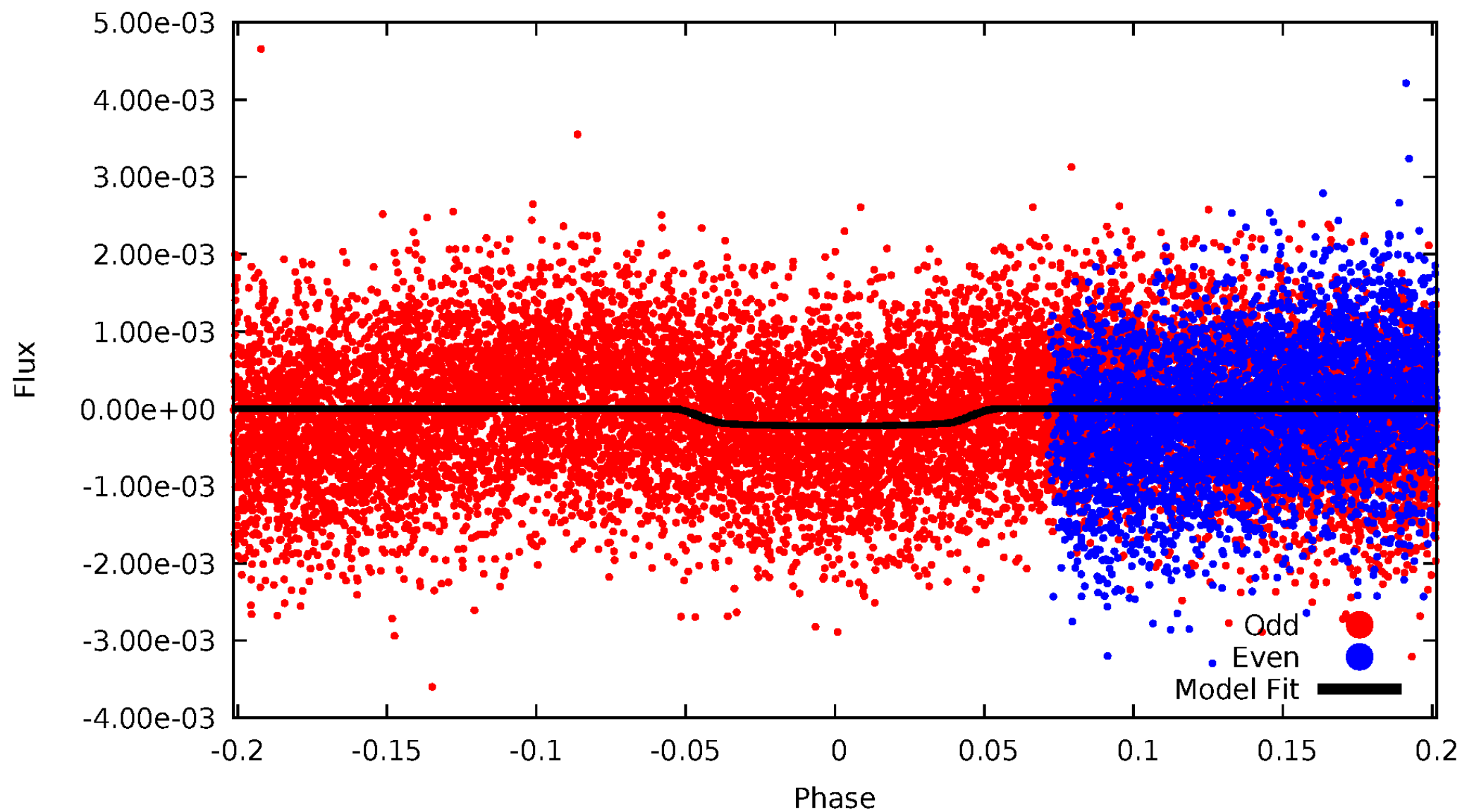


TCE 006302655-02



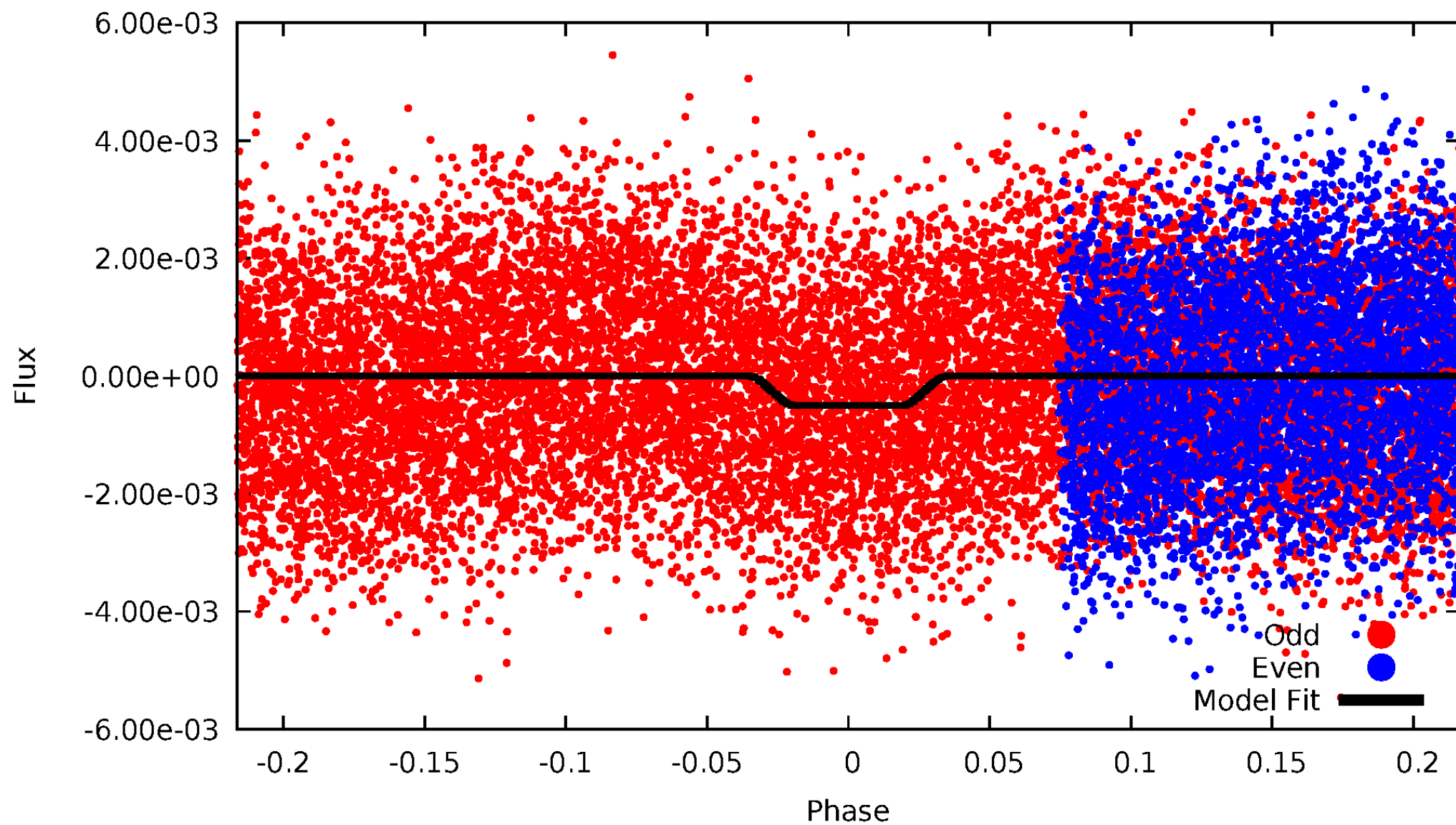
DV Odd/Even

TCE 006302655-02



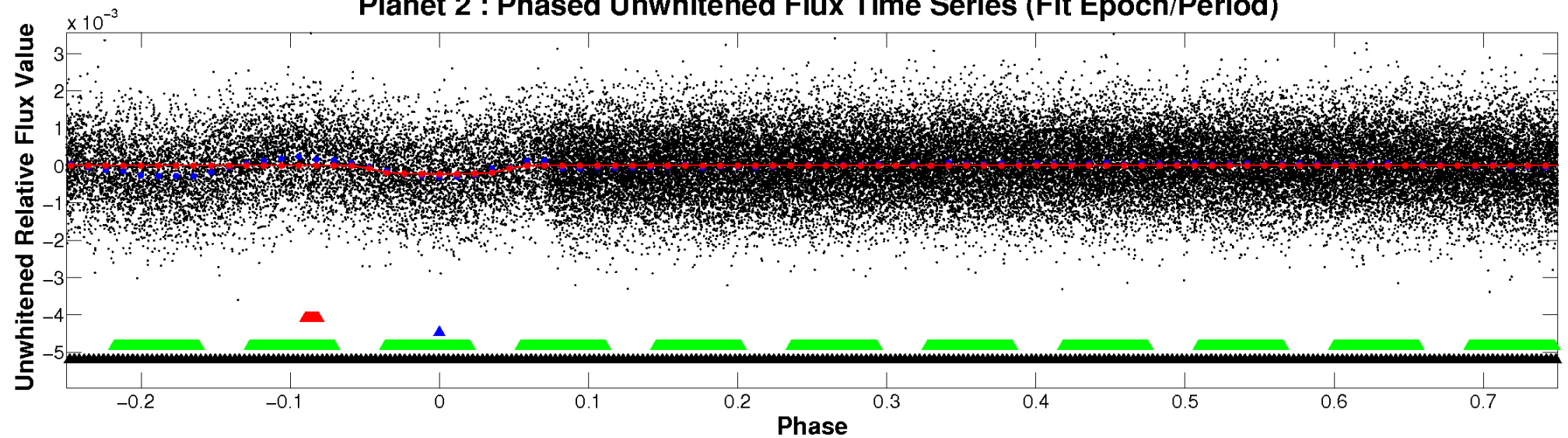
ALT Odd/Even

TCE 006302655-02

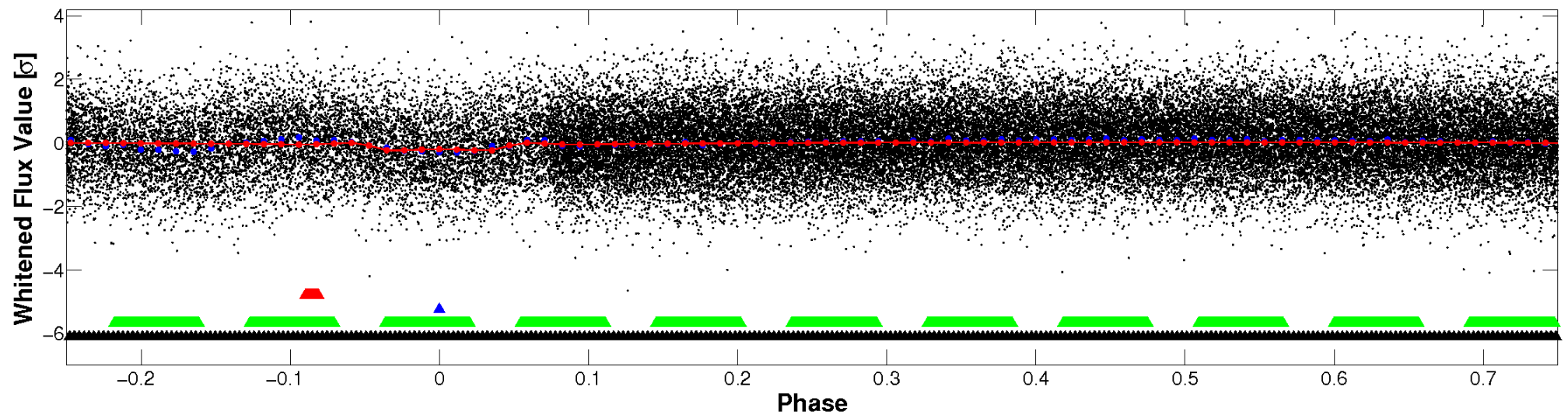


Non-Whitened Vs. Whitened Light Curve

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

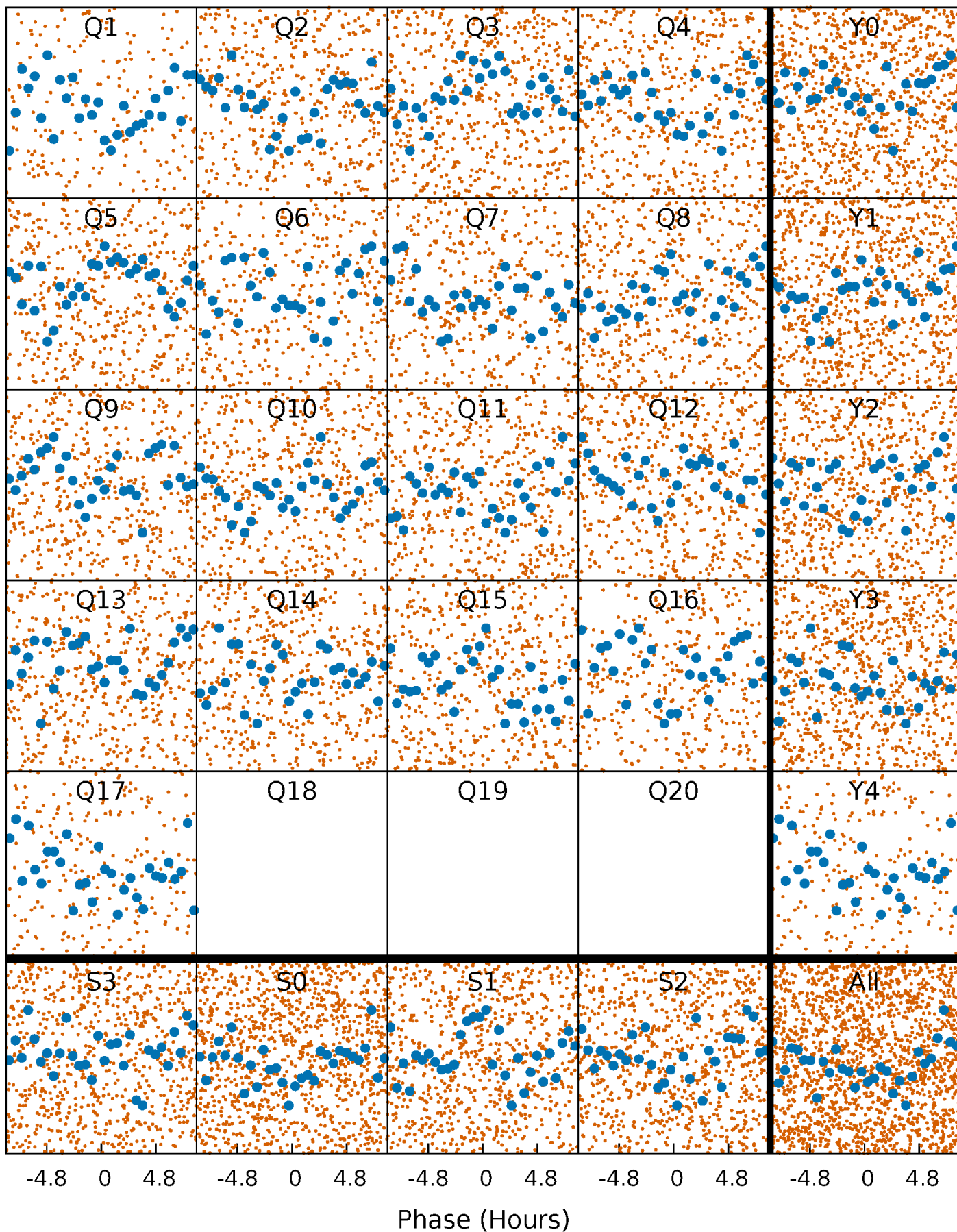


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



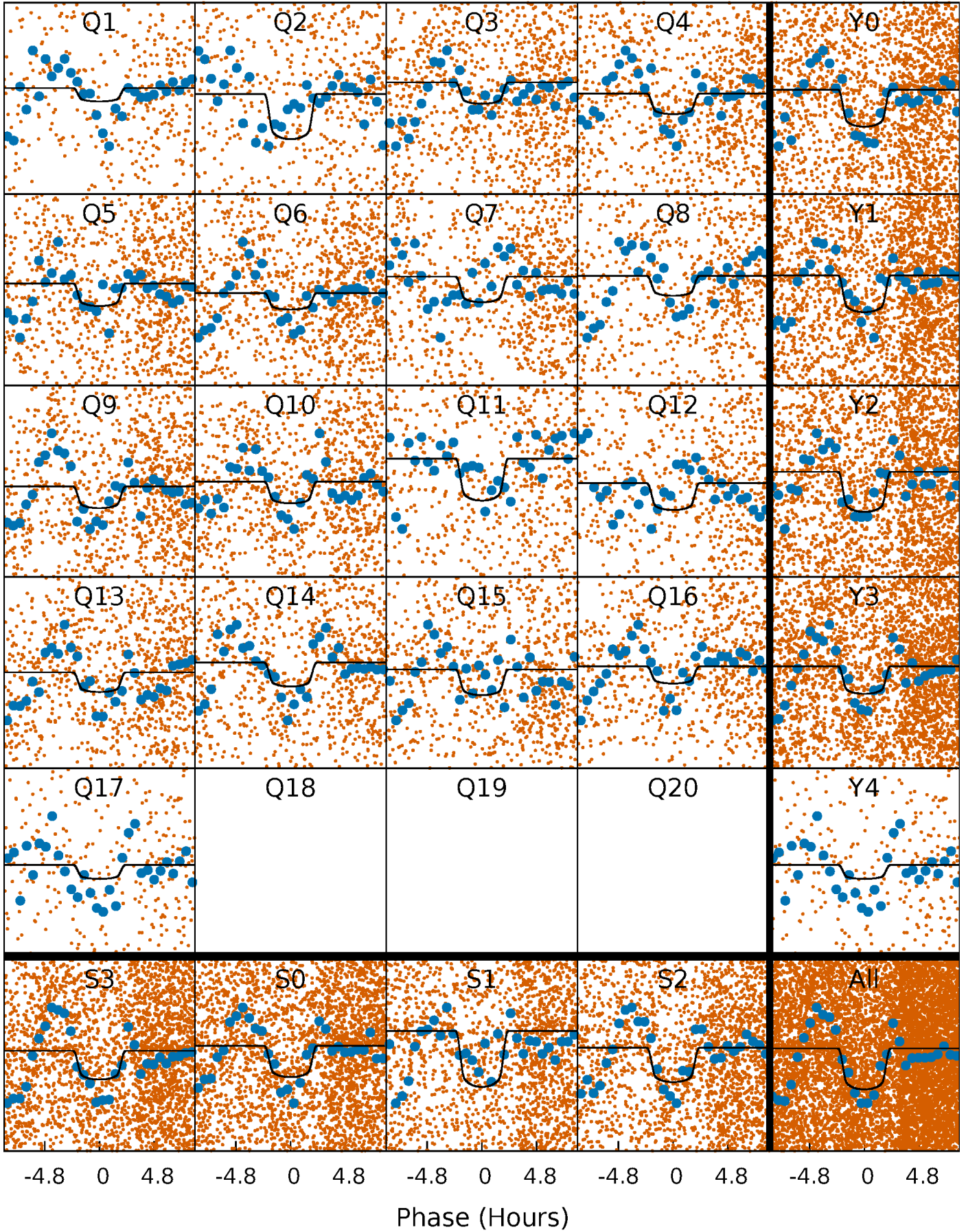
PDC Quarter-Phased Transit Curves

TCE 006302655-02 $P = 1.735538$ Days $T_0 = 132.430658$ (BKJD)



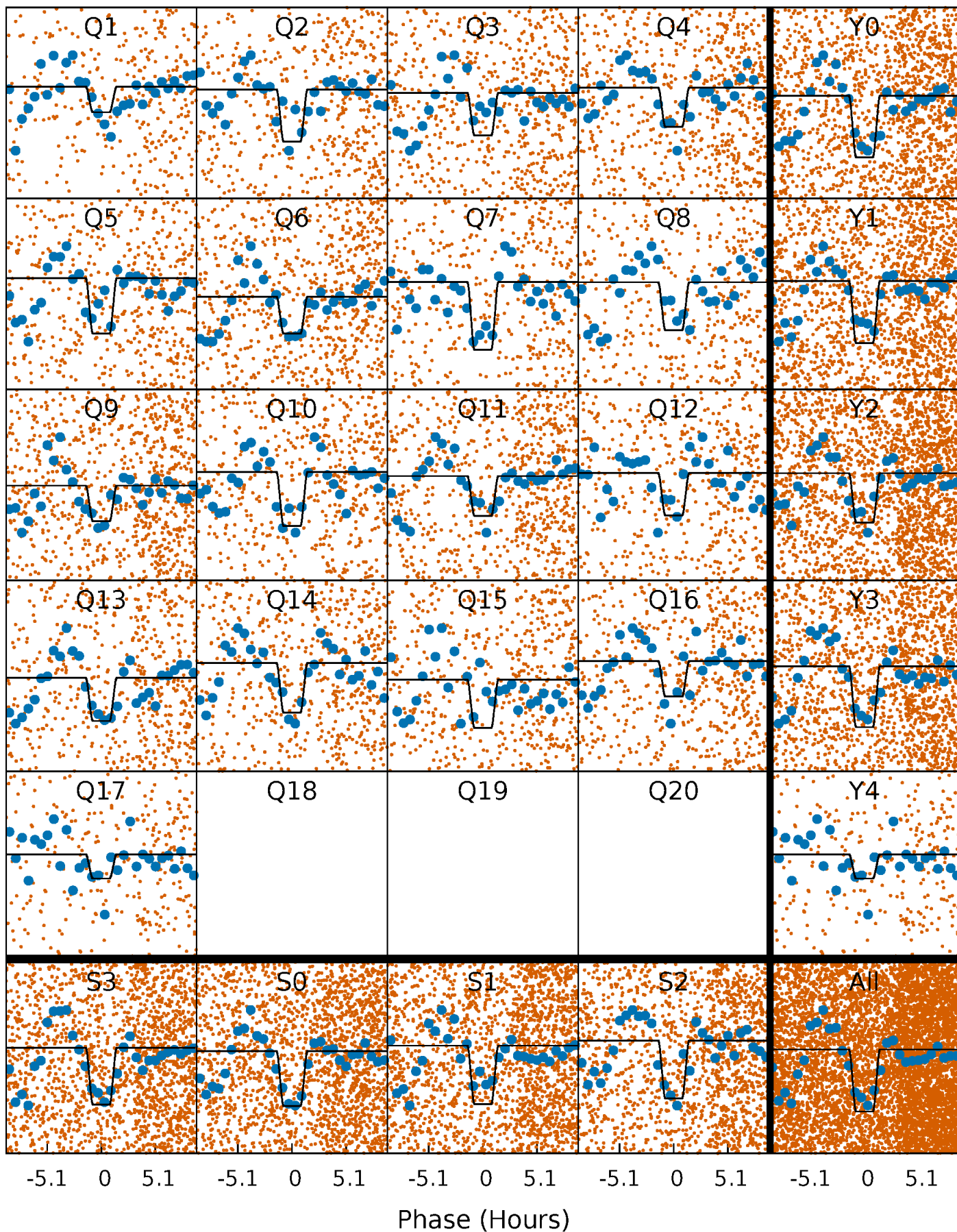
DV Quarter-Phased Transit Curves

TCE 006302655-02 P= 1.735538 Days $T_0=132.430658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

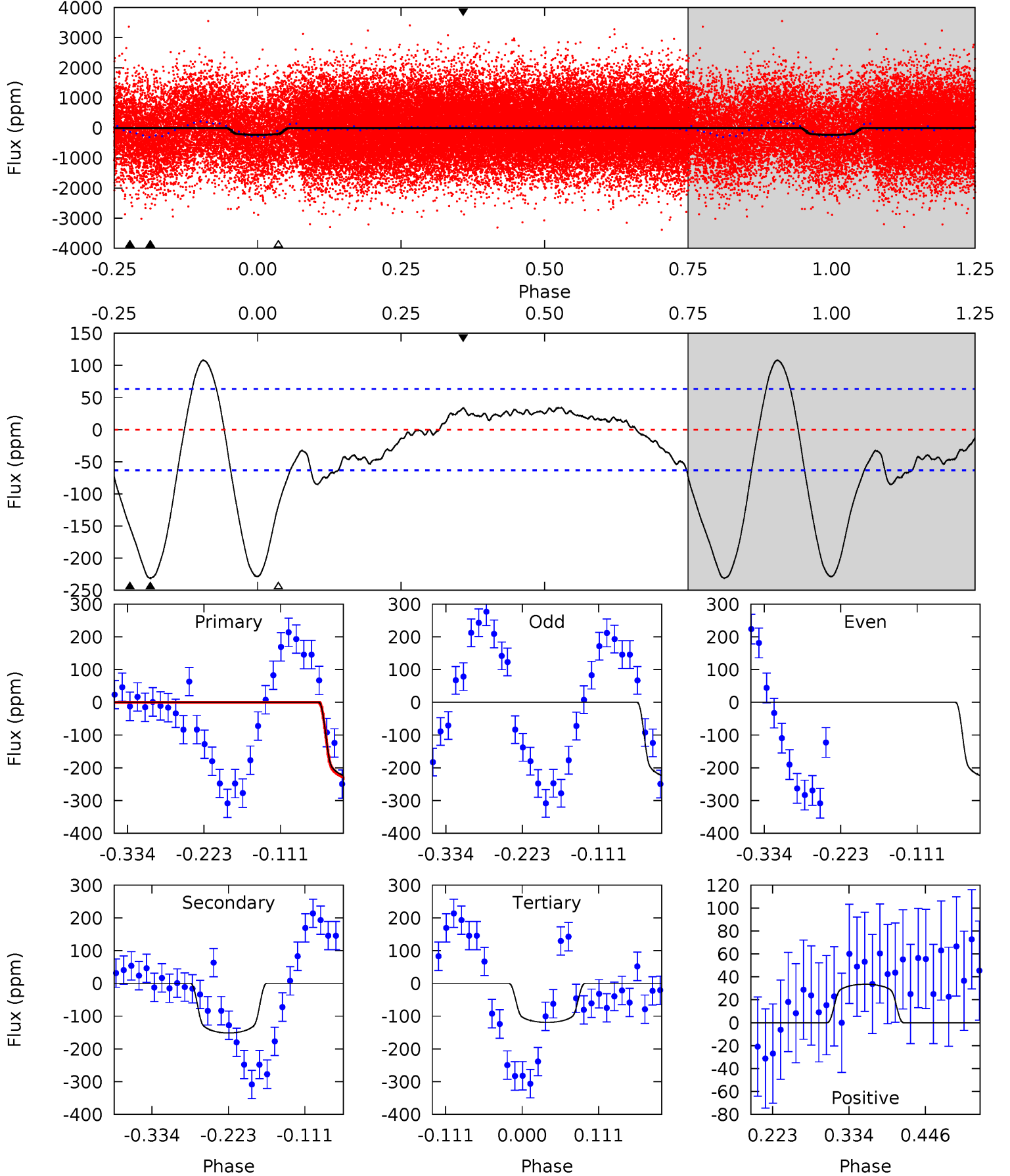
TCE 006302655-02 P= 1.735547 Days $T_0=132.425371$ (BKJD)



DV Model-Shift Uniqueness Test

006302655-02, P = 1.735538 Days, E = 130.695120 Days

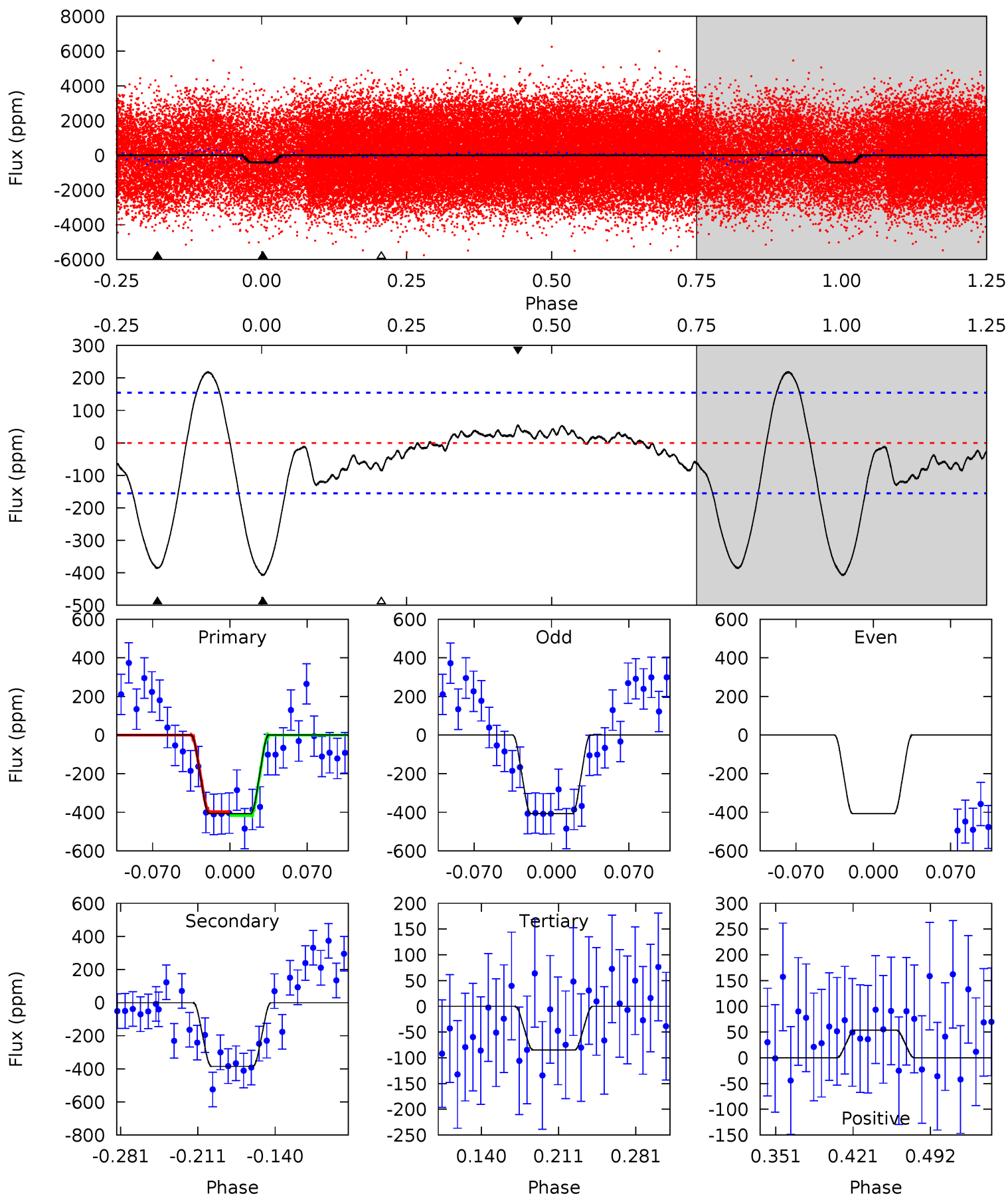
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	10.9	8.56	2.41	4.54	1.59	3.84	8.02	14.2	2.32	8.47	0	1.05	0.32	0.30



Alt Model-Shift Uniqueness Test

006302655-02, P = 1.735547 Days, E = 130.689824 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	11.5	2.54	1.60	4.64	1.81	1.70	9.64	10.6	9.00	9.94	0	1.07	0.35	0.31



Stellar Parameters For KIC 006302655

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7957^{+71}_{-87}	$3.972^{+0.137}_{-0.084}$	$-0.080^{+0.050}_{-0.150}$	$2.331^{+0.269}_{-0.437}$	$1.857^{+0.051}_{-0.180}$	$0.206^{+0.130}_{-0.057}$
	+1%/-1%	+3%/-2%	+62%/-188%	+12%/-19%	+3%/-10%	+63%/-28%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006302655-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-152 ± 14	$4.02^{+0.84}_{-0.86}$	4006^{+144}_{-176}	6699^{+962}_{-595}	$6.107^{+3.835}_{-1.929}$
Alt.	-385 ± 33	$5.66^{+0.90}_{-0.92}$	4015^{+140}_{-185}	7221^{+734}_{-536}	$7.854^{+3.446}_{-2.030}$

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

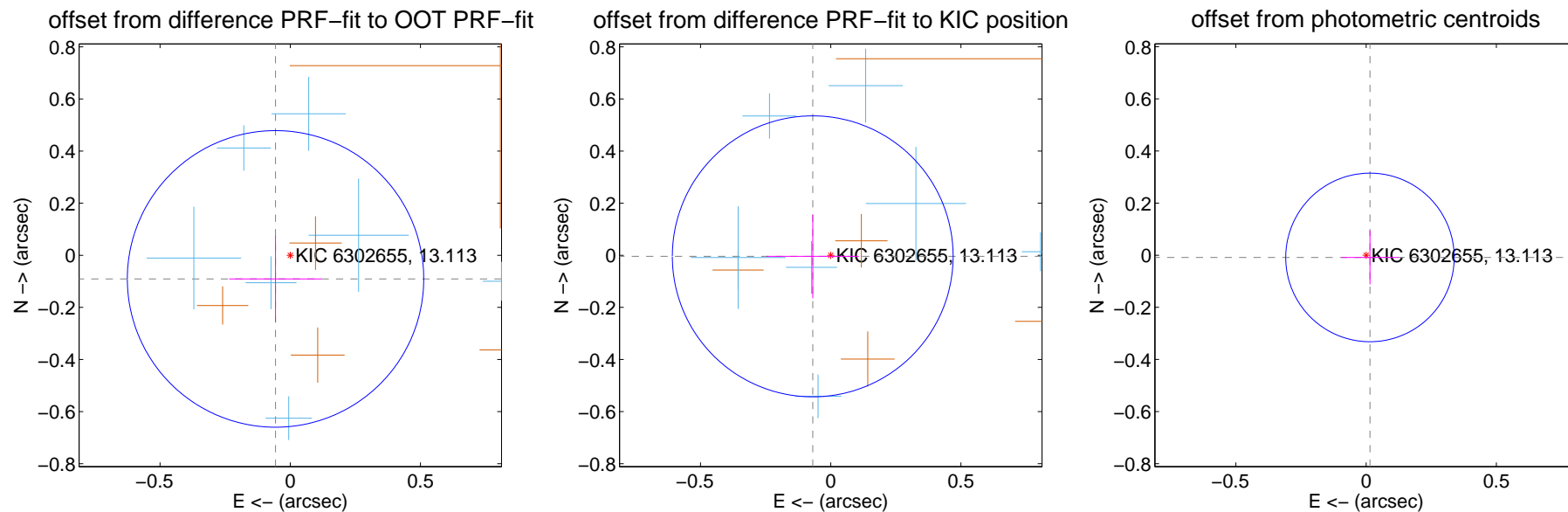
DV Centroid Data

Supplemental centroid analysis for 006302655-02. Kepler magnitude: 13.11. Transit SNR 11.92

There are 12 quarters with good PRF difference image offsets

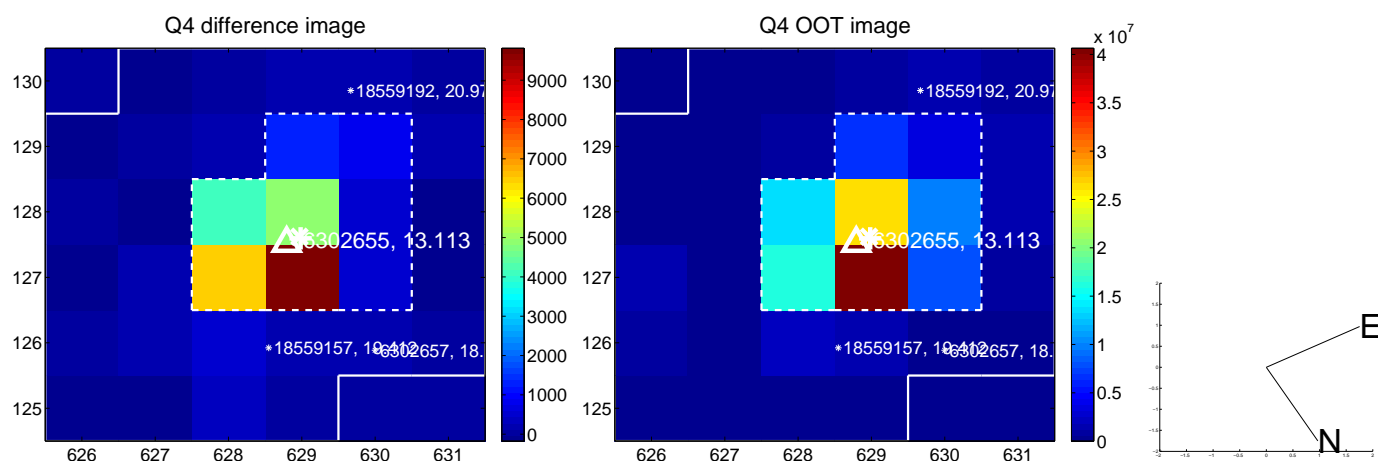
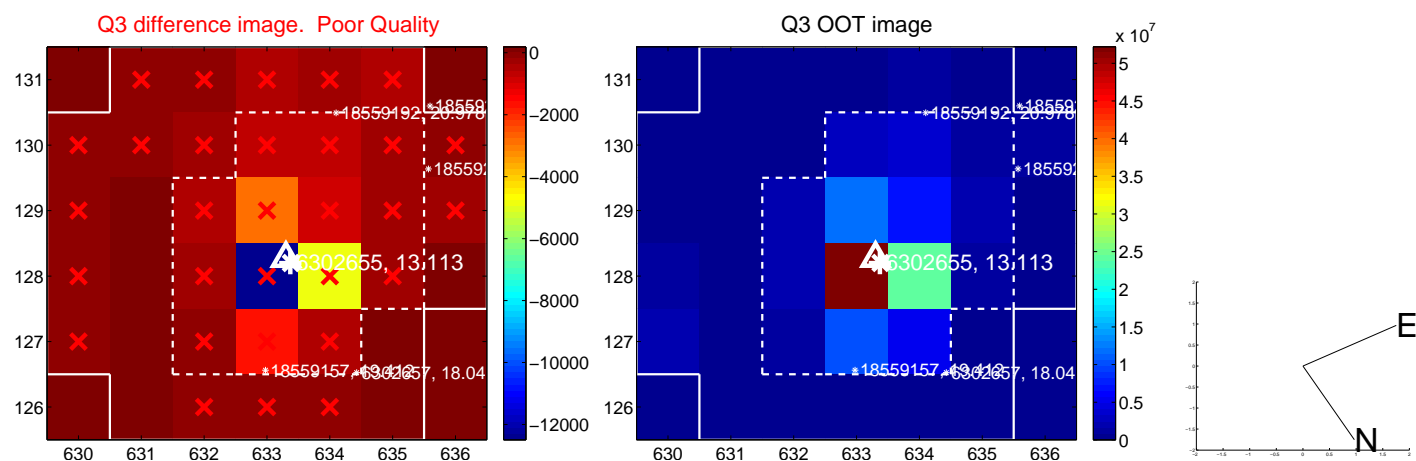
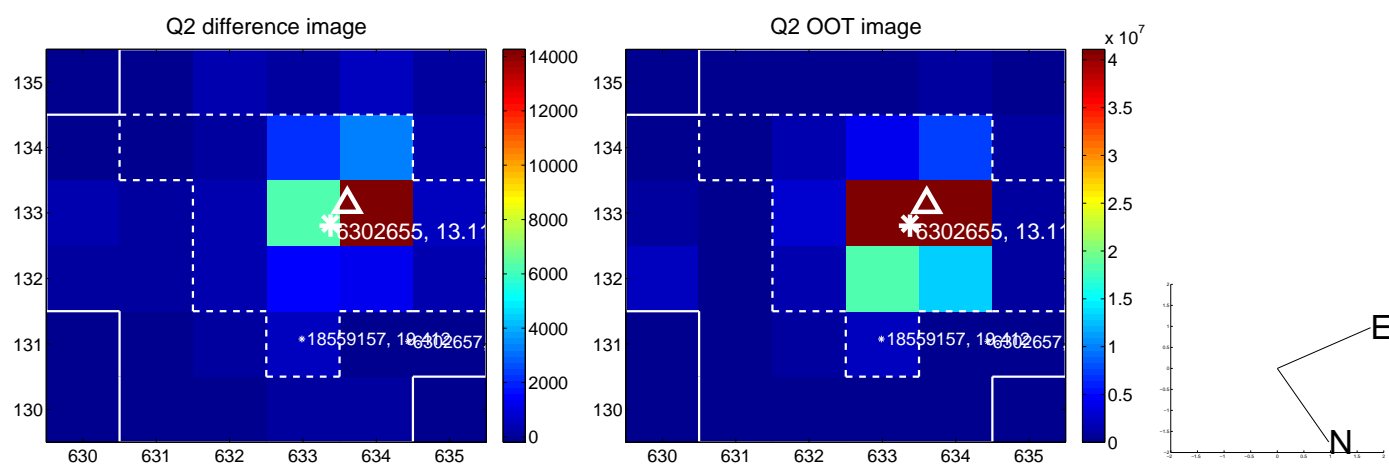
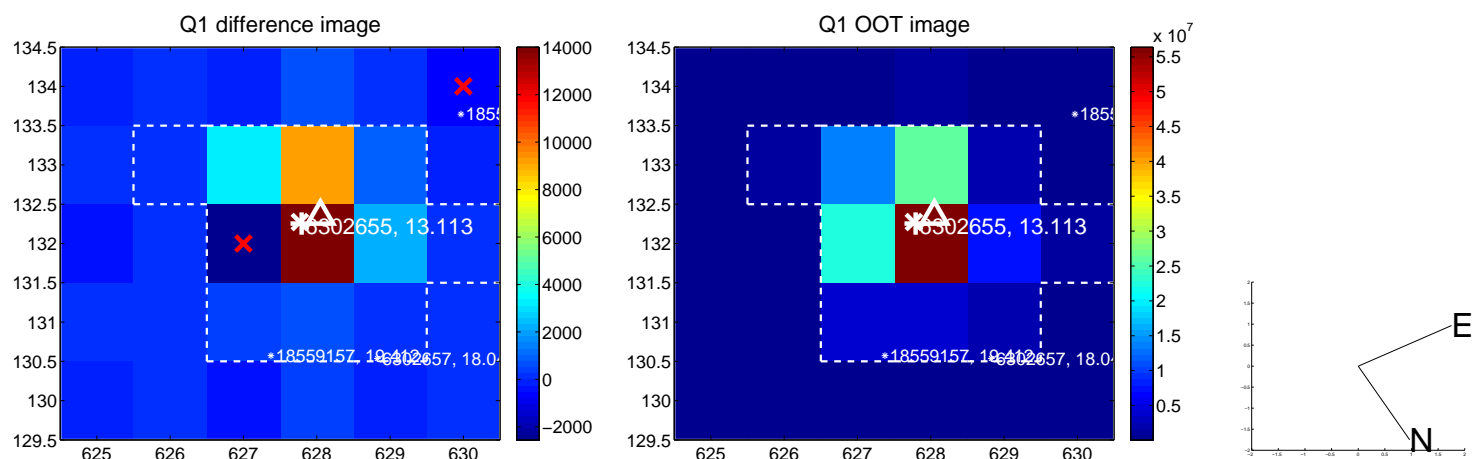
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.190	0.56	0.057 ± 0.178	-0.091 ± 0.165
PRF-fit source offset from KIC position	0.069 ± 0.180	0.39	0.069 ± 0.178	-0.004 ± 0.161
photometric centroid source offset	0.02 ± 0.11	0.16	-0.01 ± 0.11	-0.01 ± 0.10

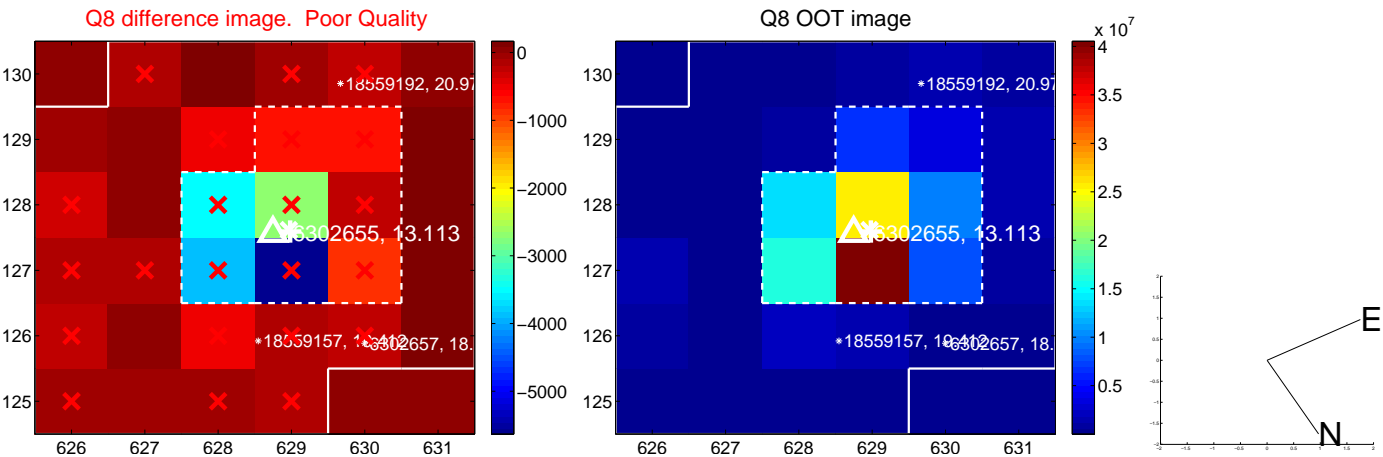
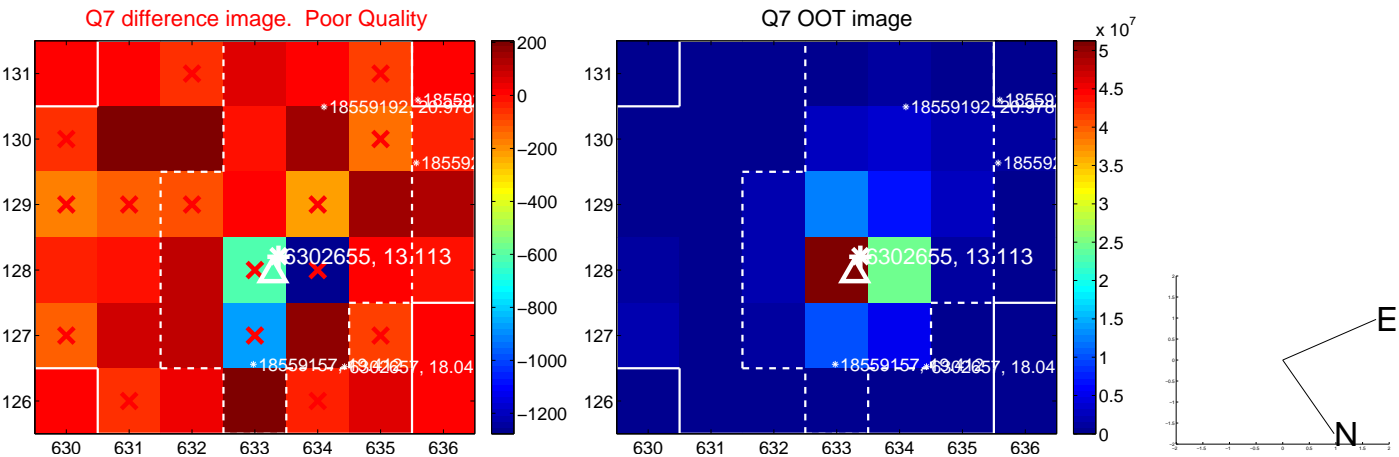
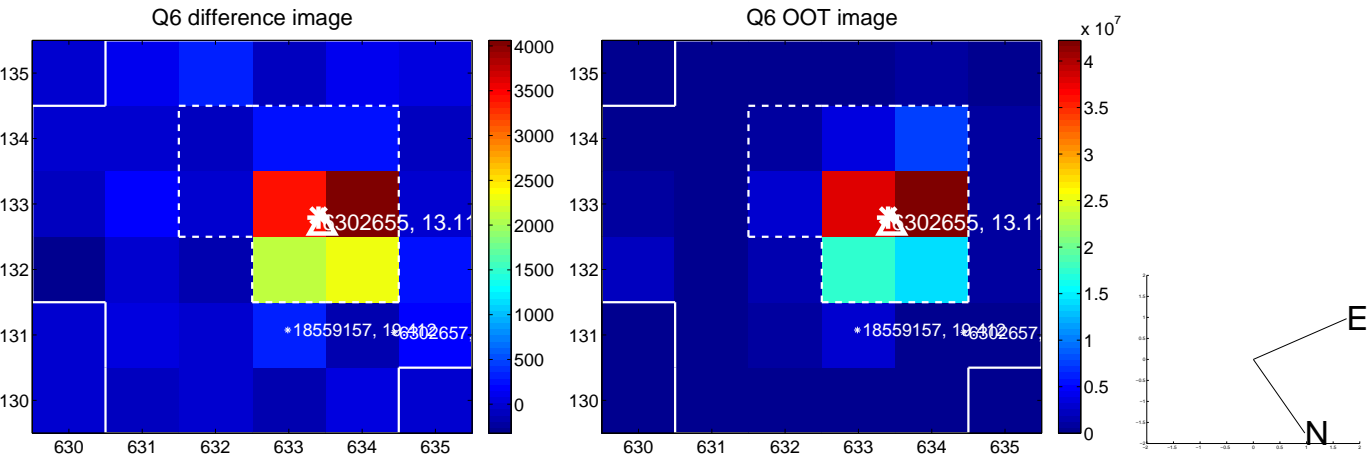
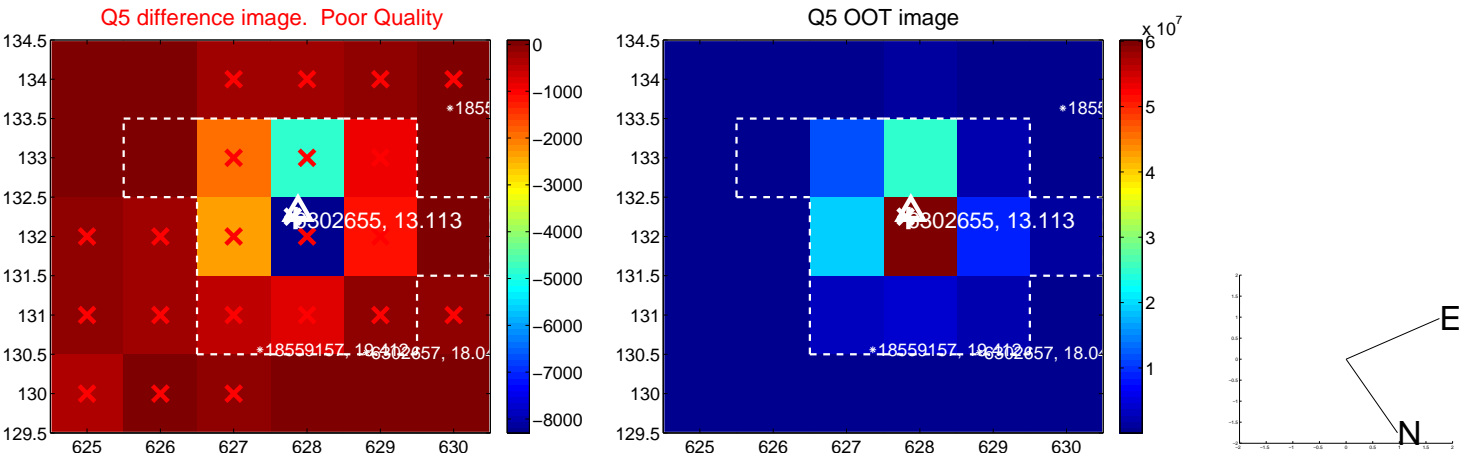


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

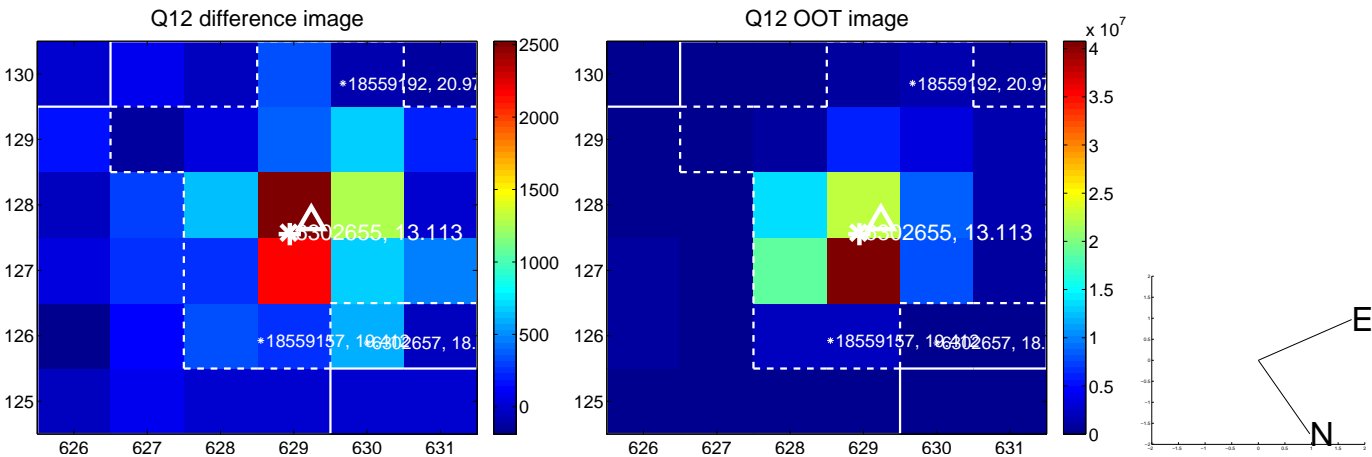
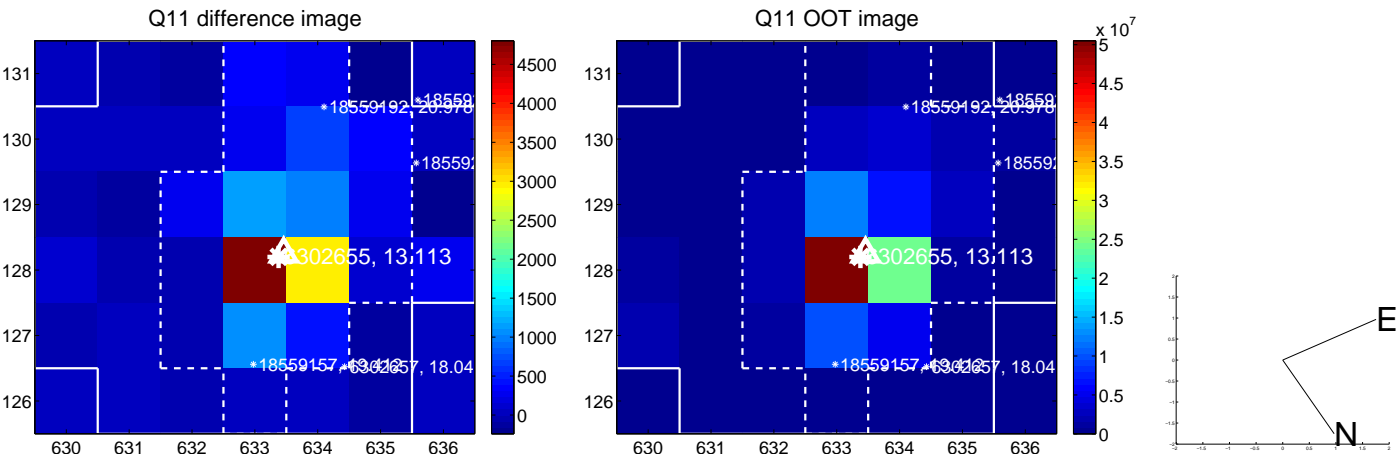
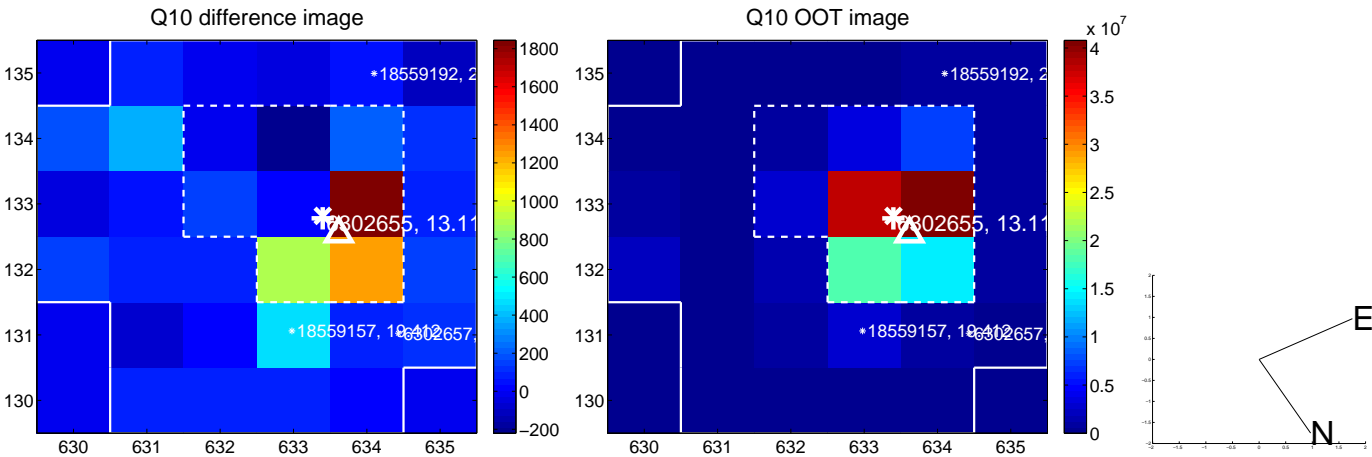
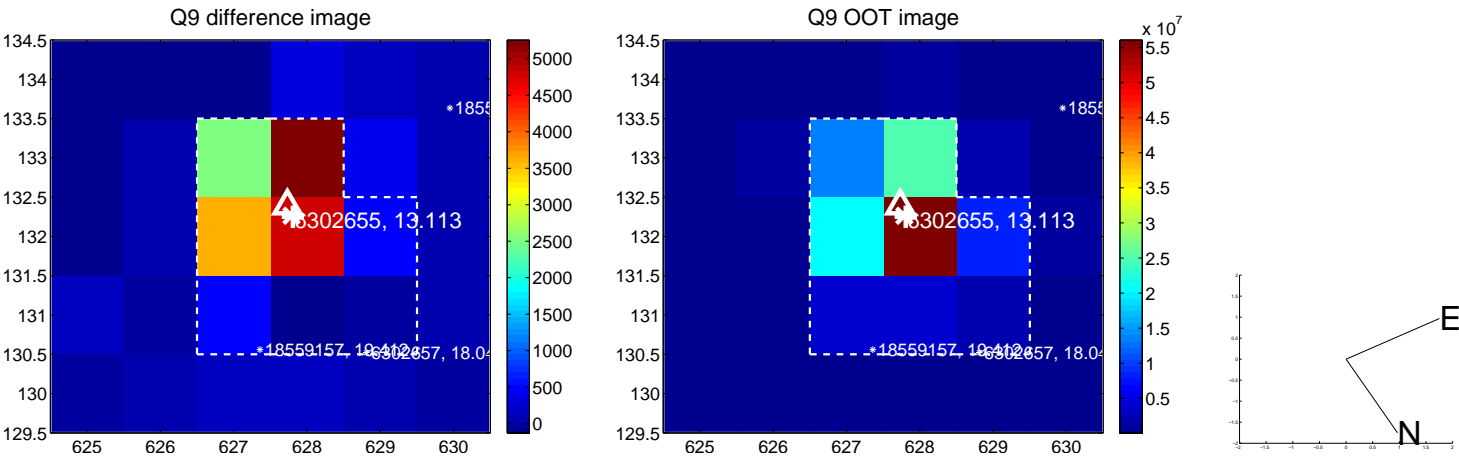
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



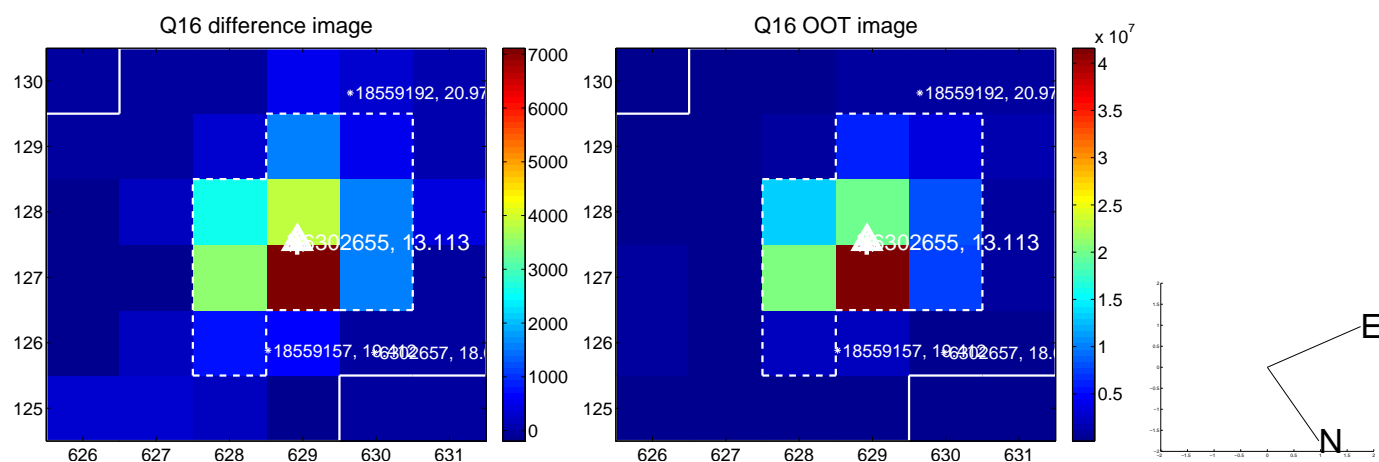
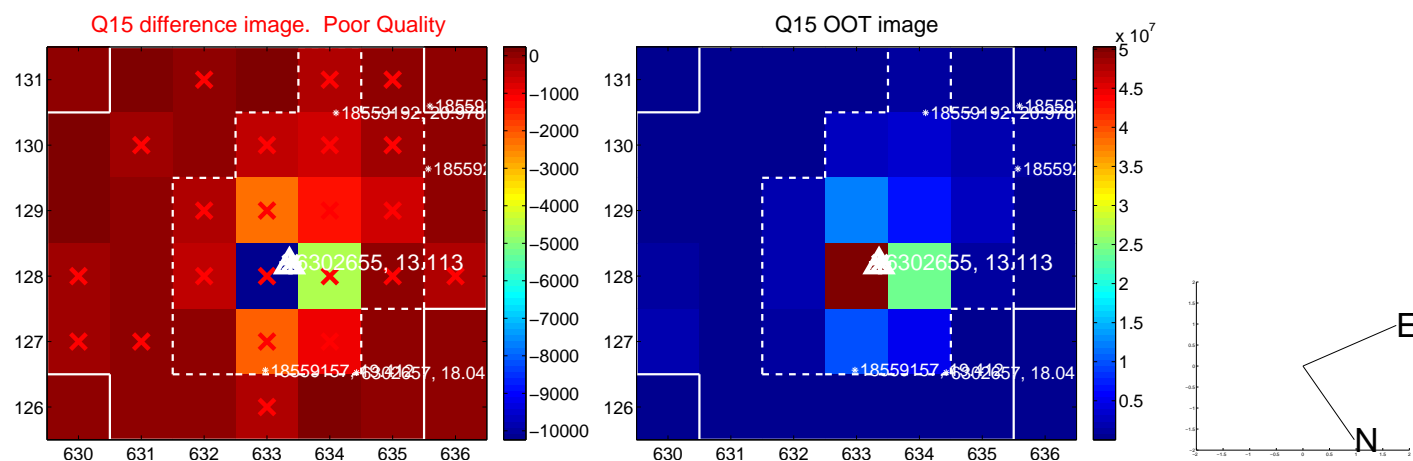
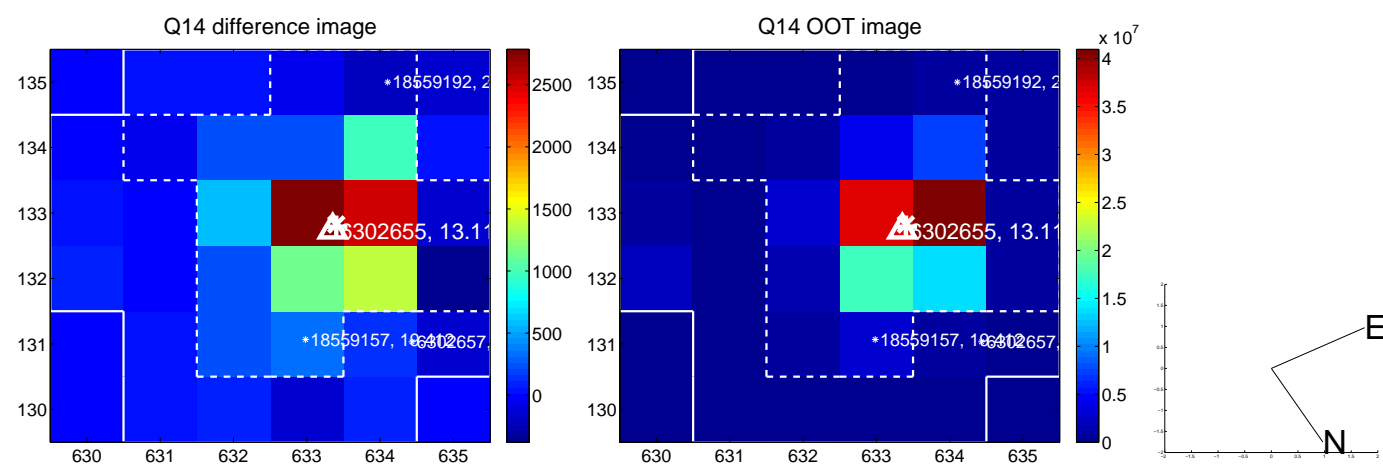
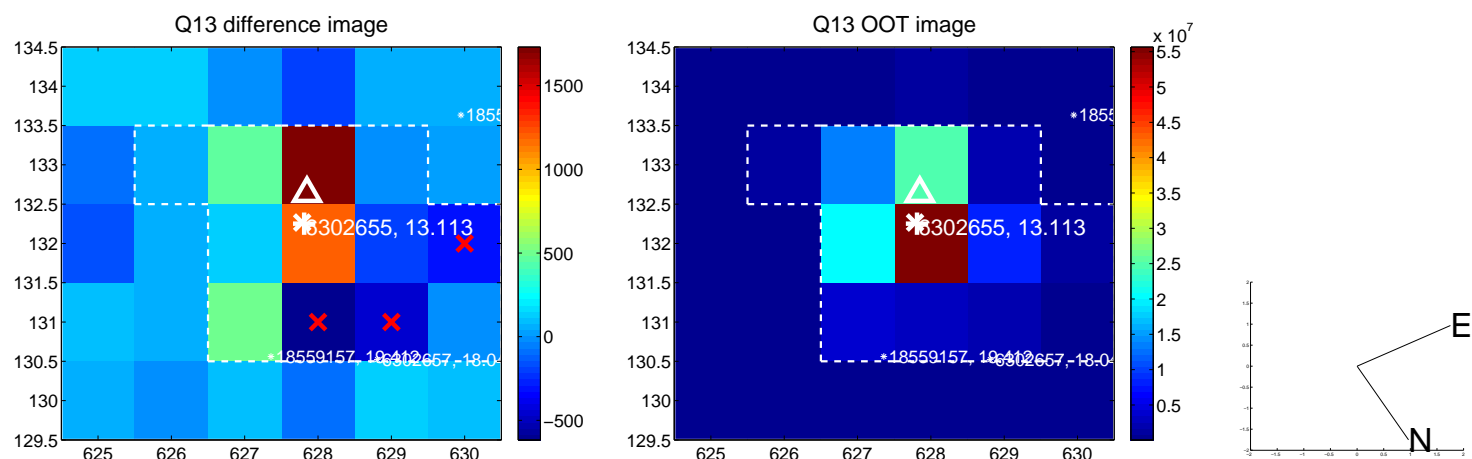
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



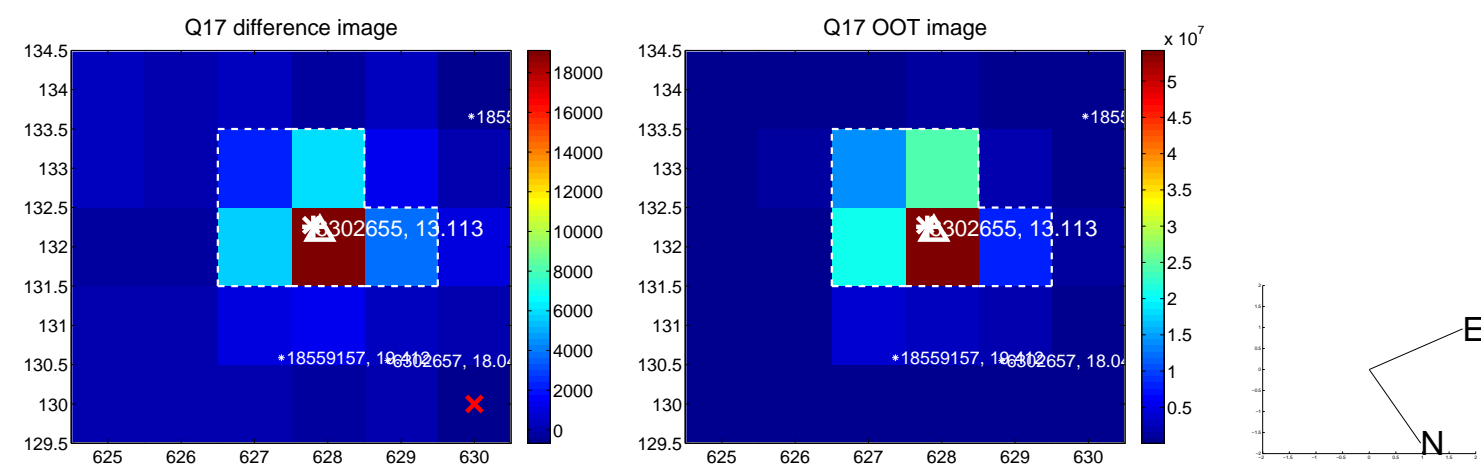
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



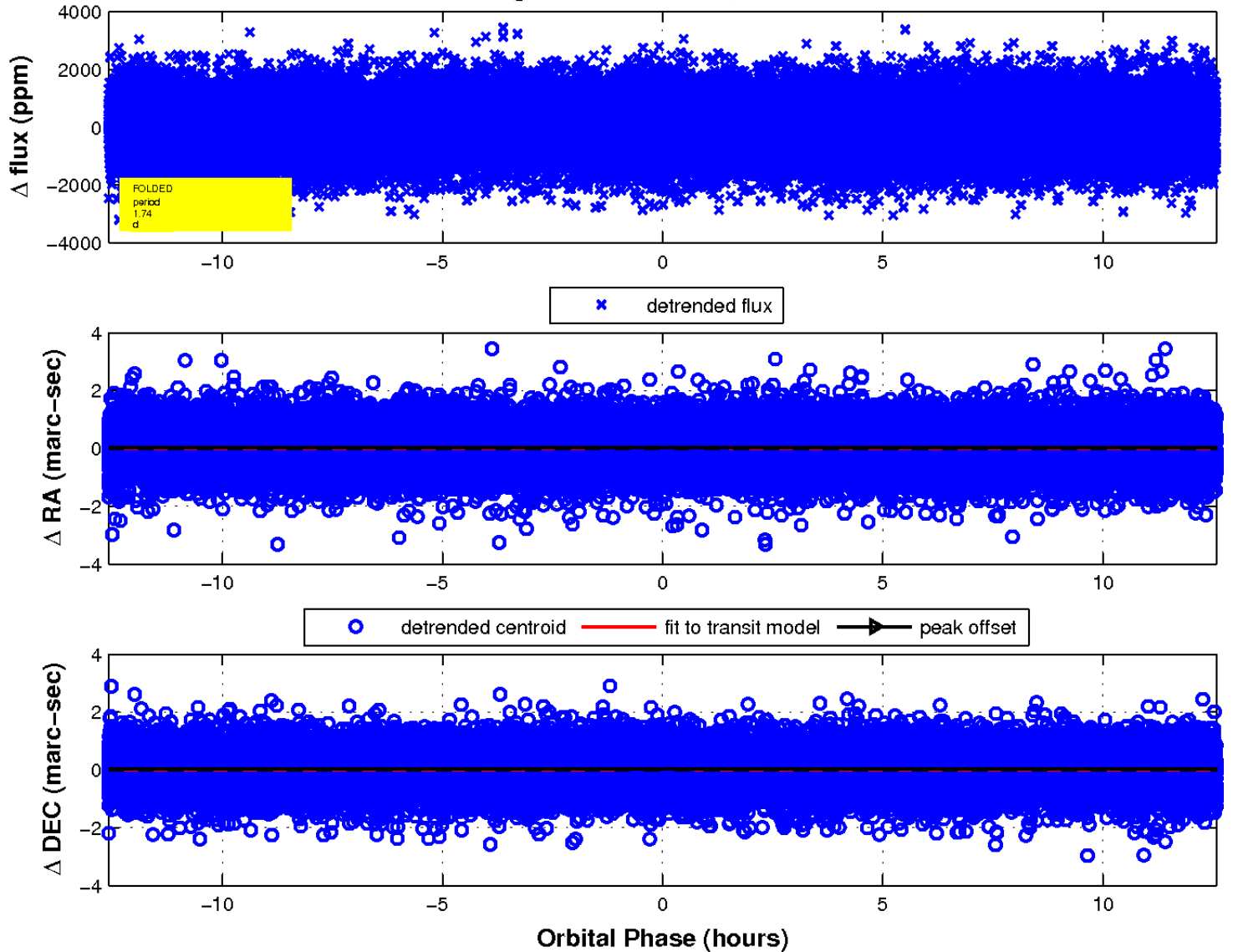
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

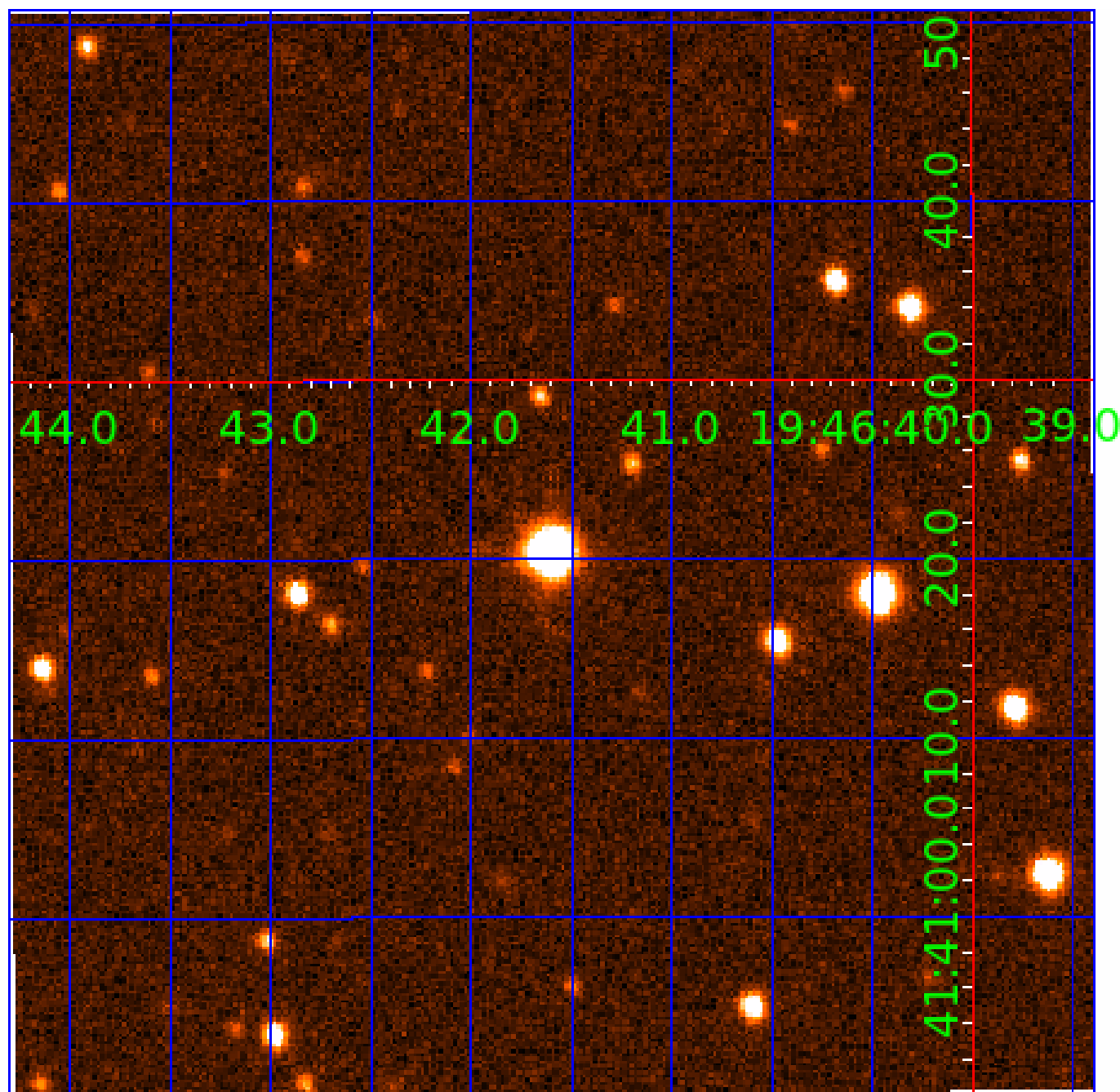


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 006302655

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})
006302655-01	OBS	No	3.471113	132.274611	277.7	4.304	13.7	14.5	2.33	7957	4.51	6411.53
006302655-02	OBS	No	1.735538	132.430658	224.4	4.195	11.7	11.9	2.33	7957	4.07	16156.27
006302655-03	OBS	No	0.946593	131.993021	102.7	3.689	9.5	7.6	2.33	7957	2.75	36255.09
006302655-04	OBS	No	2.165184	133.413045	237.0	6.076	10.0	12.2	2.33	7957	4.17	12029.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006302655-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006302655-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

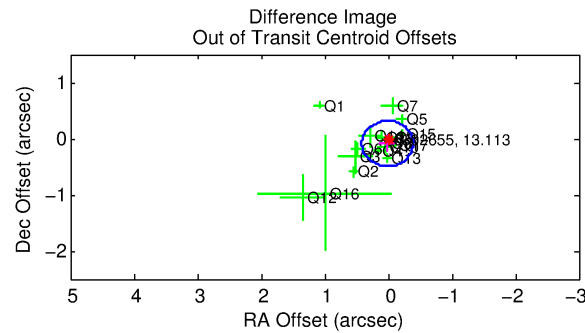
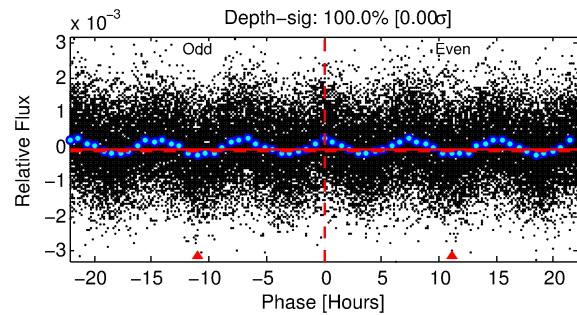
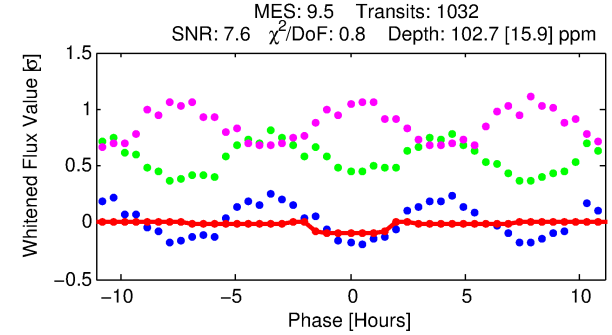
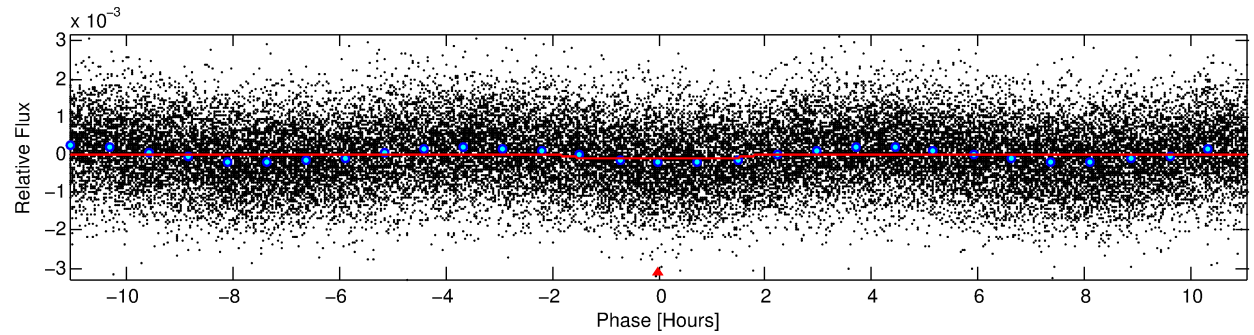
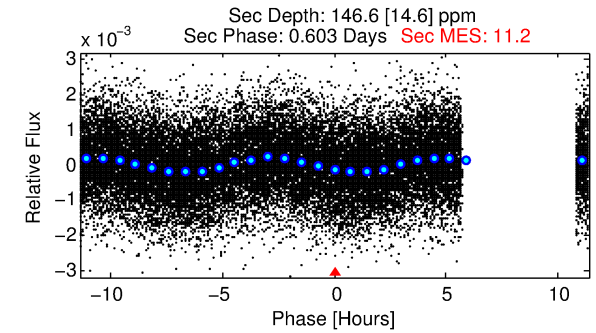
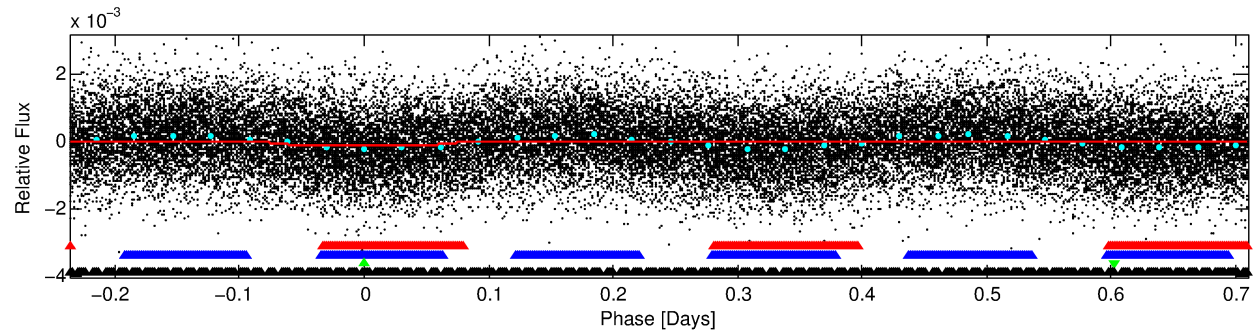
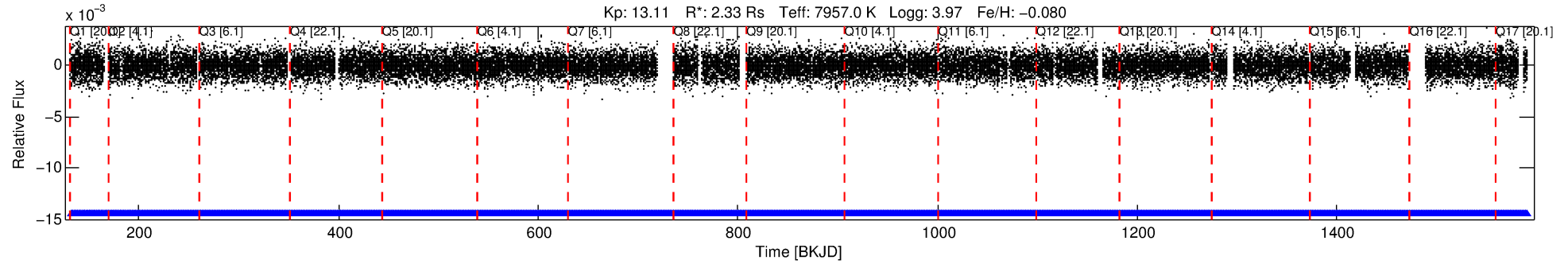
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006302655-03

No Significant Match Found

DV One-Page Summary

KIC: 6302655 Candidate: 3 of 4 Period: 0.947 d



DV Fit Results:

Period = 0.94659 [0.00002] d
Epoch = 131.9930 [0.0049] BKJD
Rp/R* = 0.0108 [0.0049]
a/R* = 1.30 [1.51]
b = 0.90 [0.60]
Seff = 36255.09 [9010.00]
Teq = 3519 [219] K
Rp = 2.75 [1.36] Re
a = 0.0232 [0.0038] AU
Ag = 5.75 [5.46] [0.87σ]
Teffp = 8424 [1935] K [2.52σ]

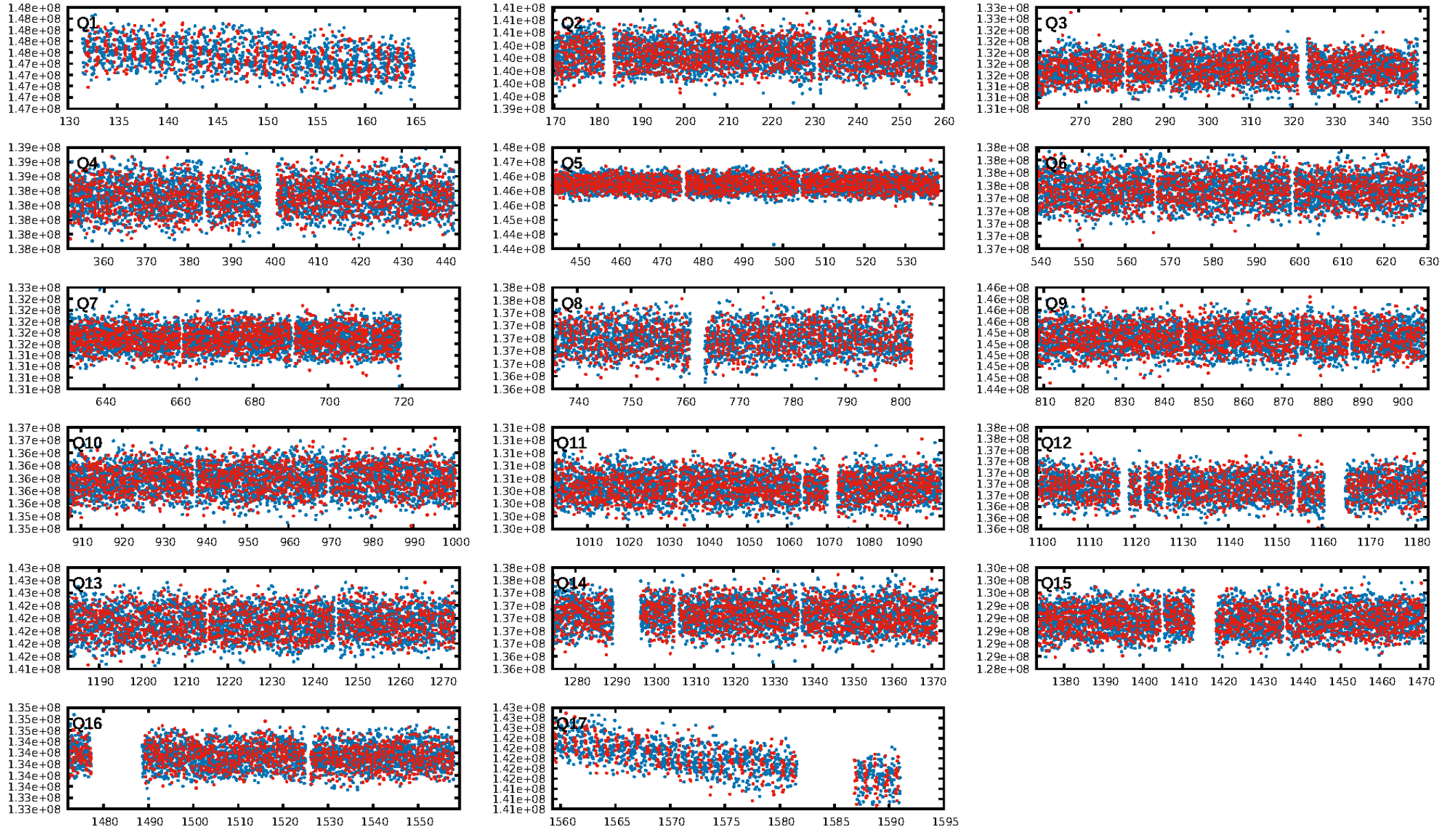
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.39σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.29e-14
RollingBand-fgt: 1.00 [984/984]
GhostDiagnostic-chr: 2.162
Centroid-sig: 1.6%
Centroid-so: 0.209 arcsec [1.17σ]
OotOffset-rm: 0.090 arcsec [0.67σ]
KicOffset-rm: 0.041 arcsec [0.34σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

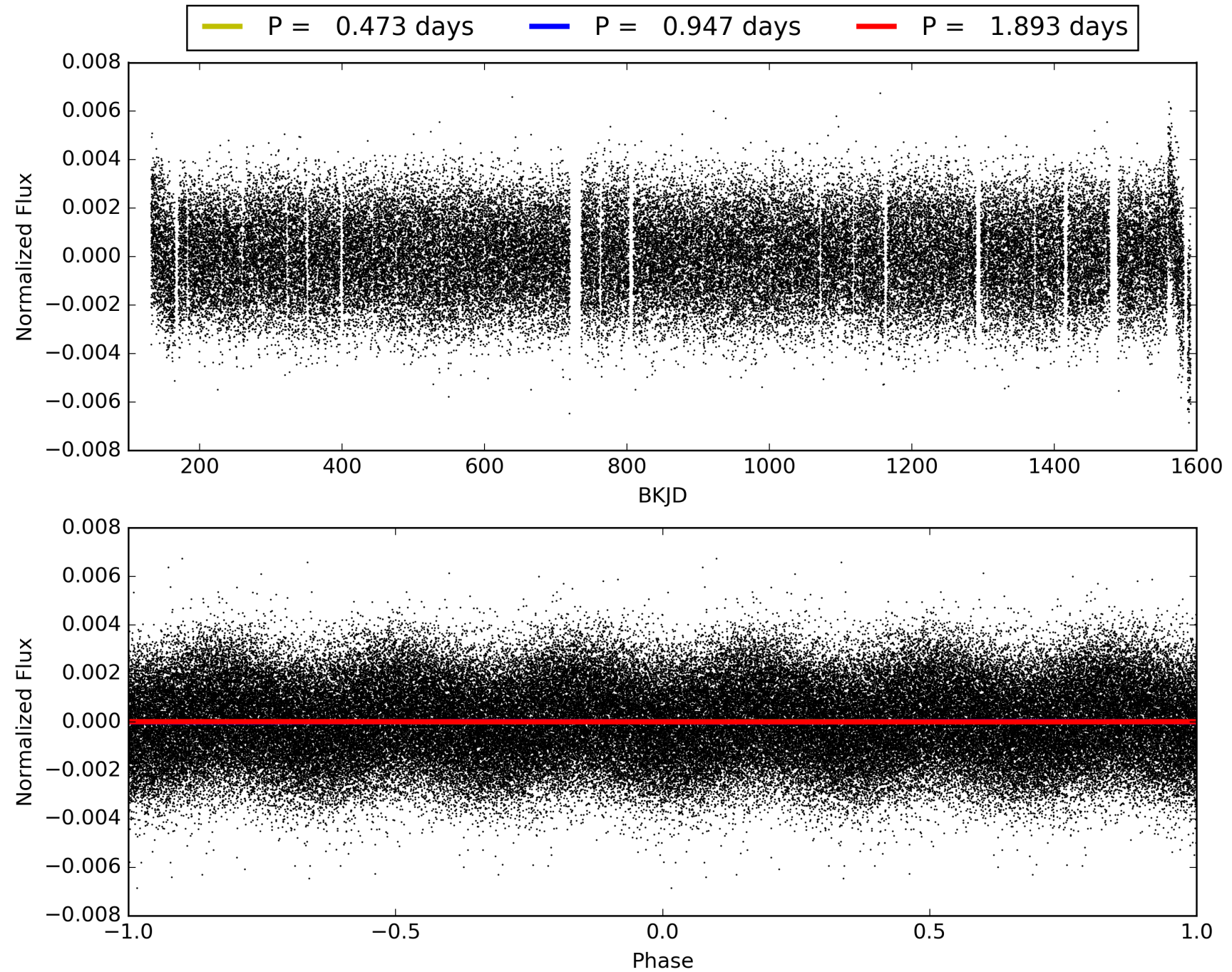
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:35:42 Z

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

TCE 006302655-03, PDC Light Curves

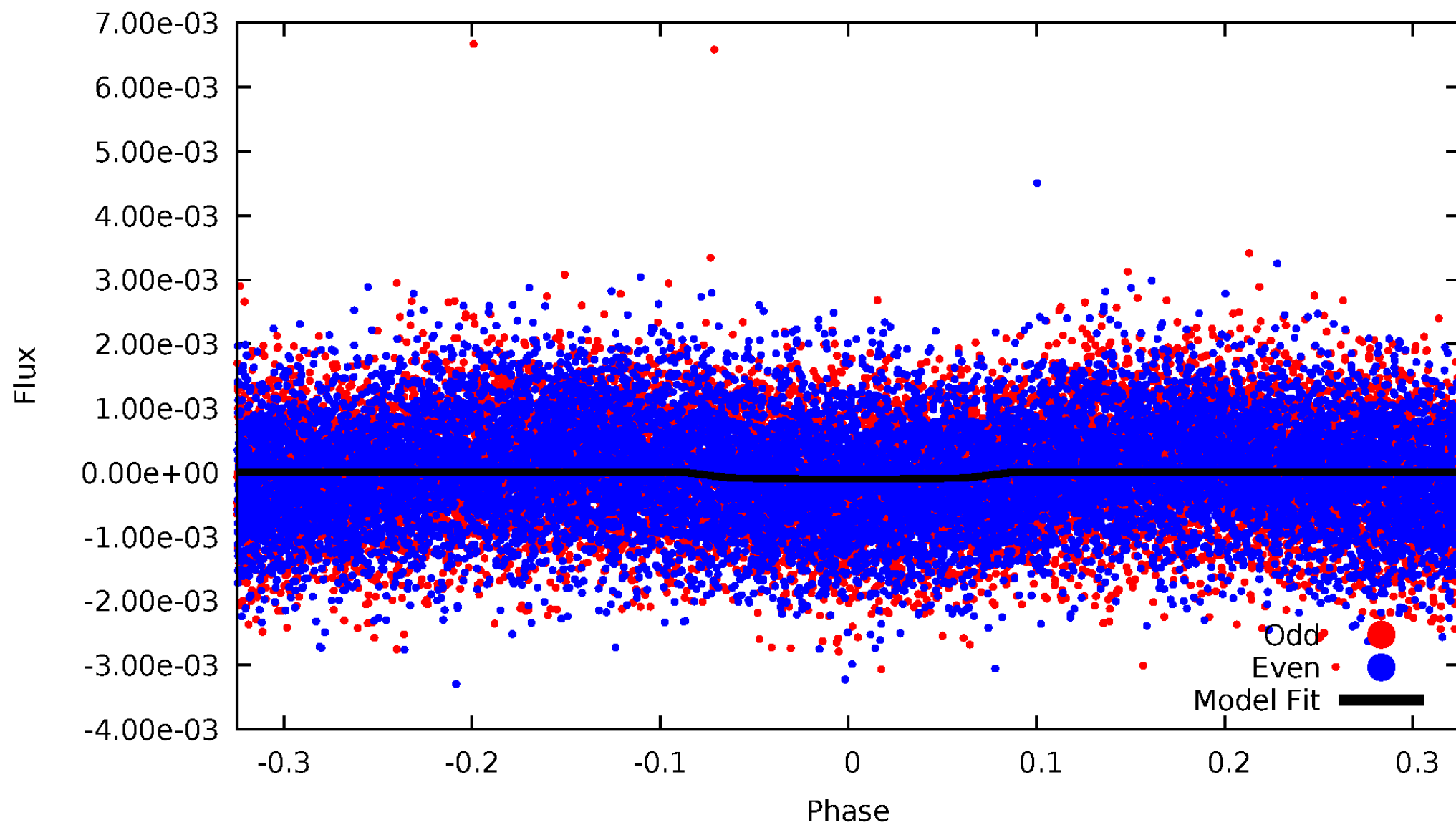


TCE 006302655-03



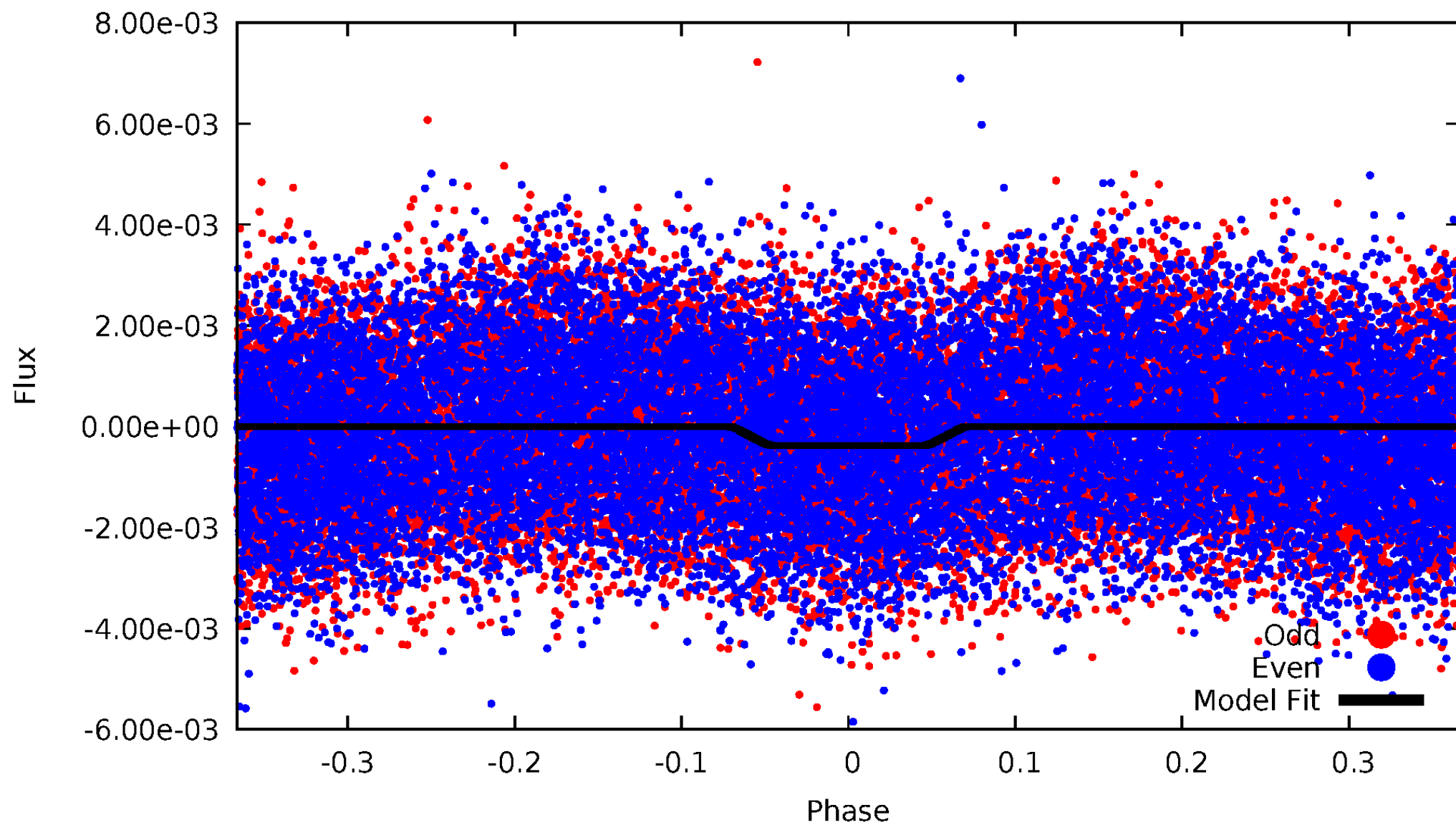
DV Odd/Even

TCE 006302655-03



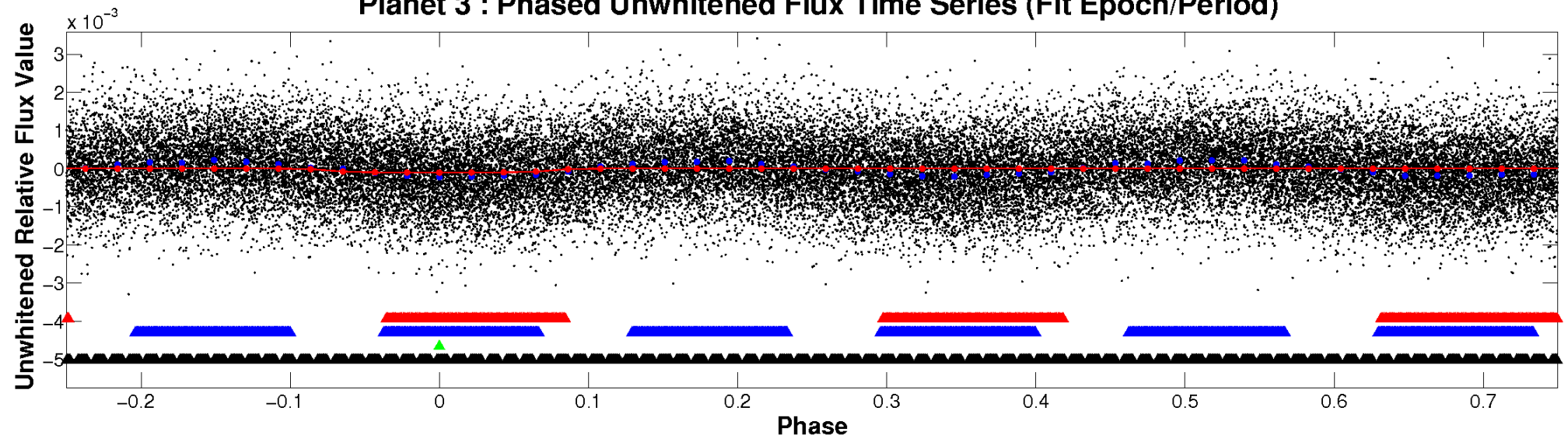
ALT Odd/Even

TCE 006302655-03

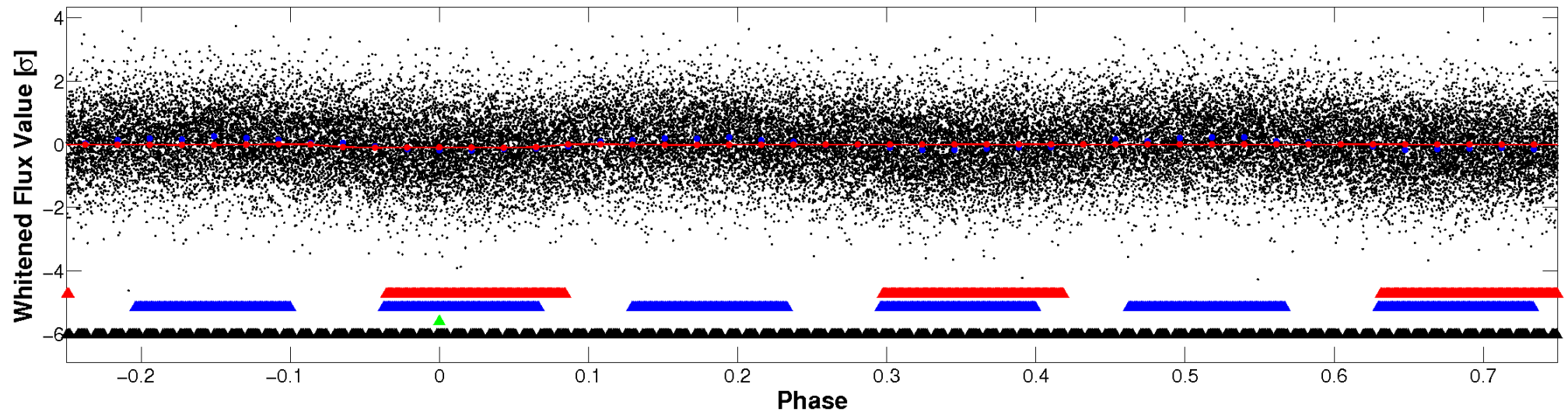


Non-Whitened Vs. Whitened Light Curve

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

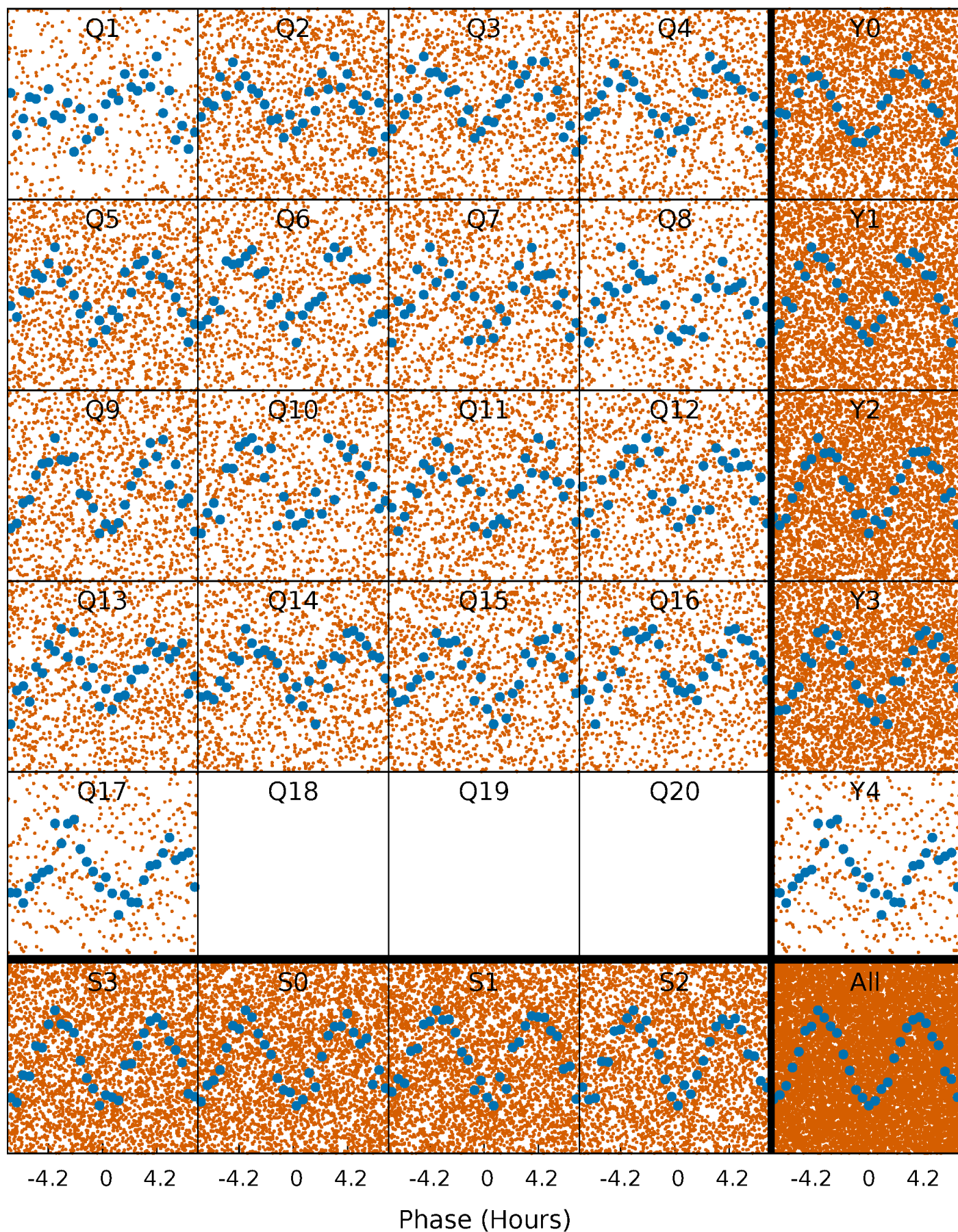


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



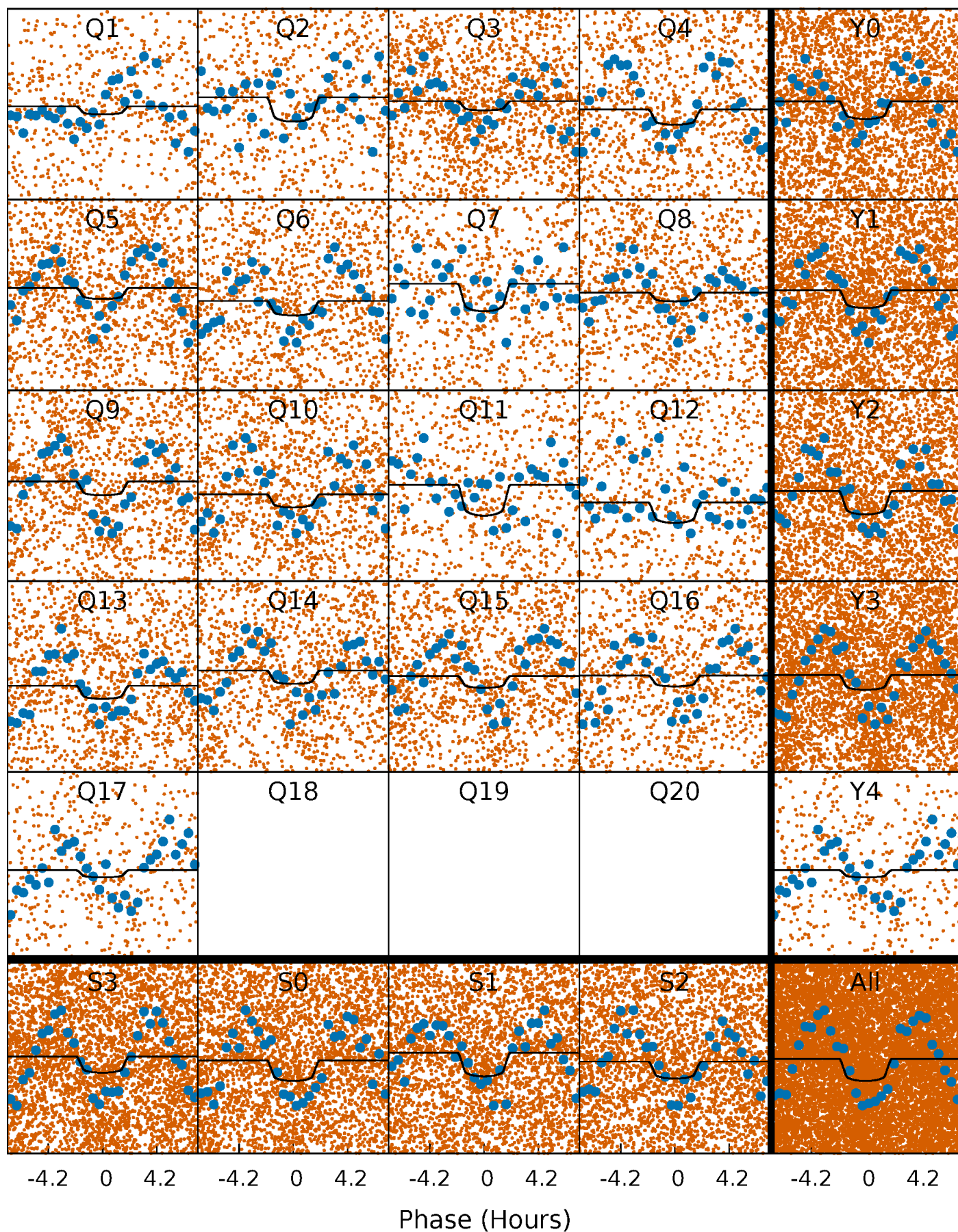
PDC Quarter-Phased Transit Curves

TCE 006302655-03 P= 0.946593 Days $T_0=131.993021$ (BKJD)



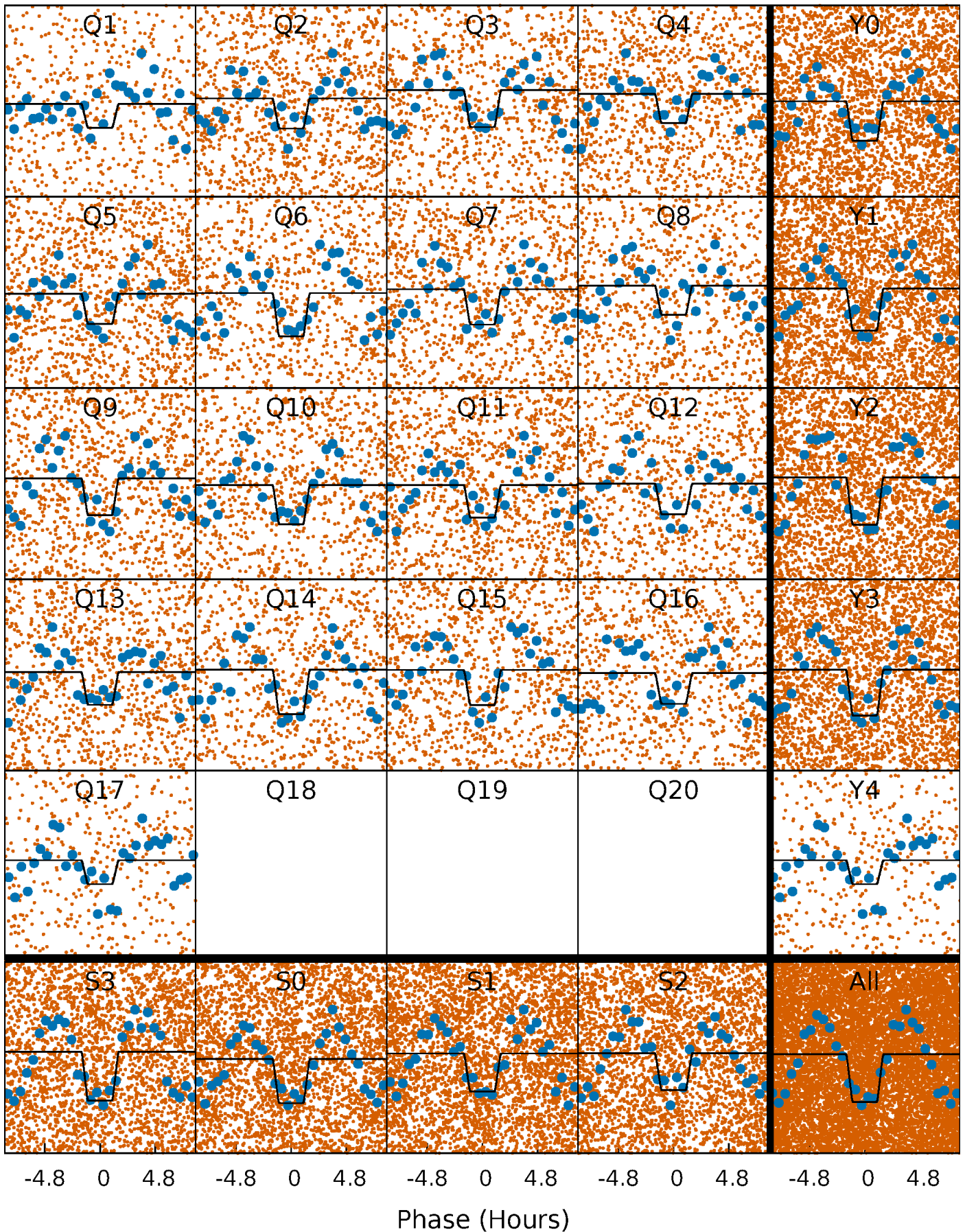
DV Quarter-Phased Transit Curves

TCE 006302655-03 P= 0.946593 Days $T_0=131.993021$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

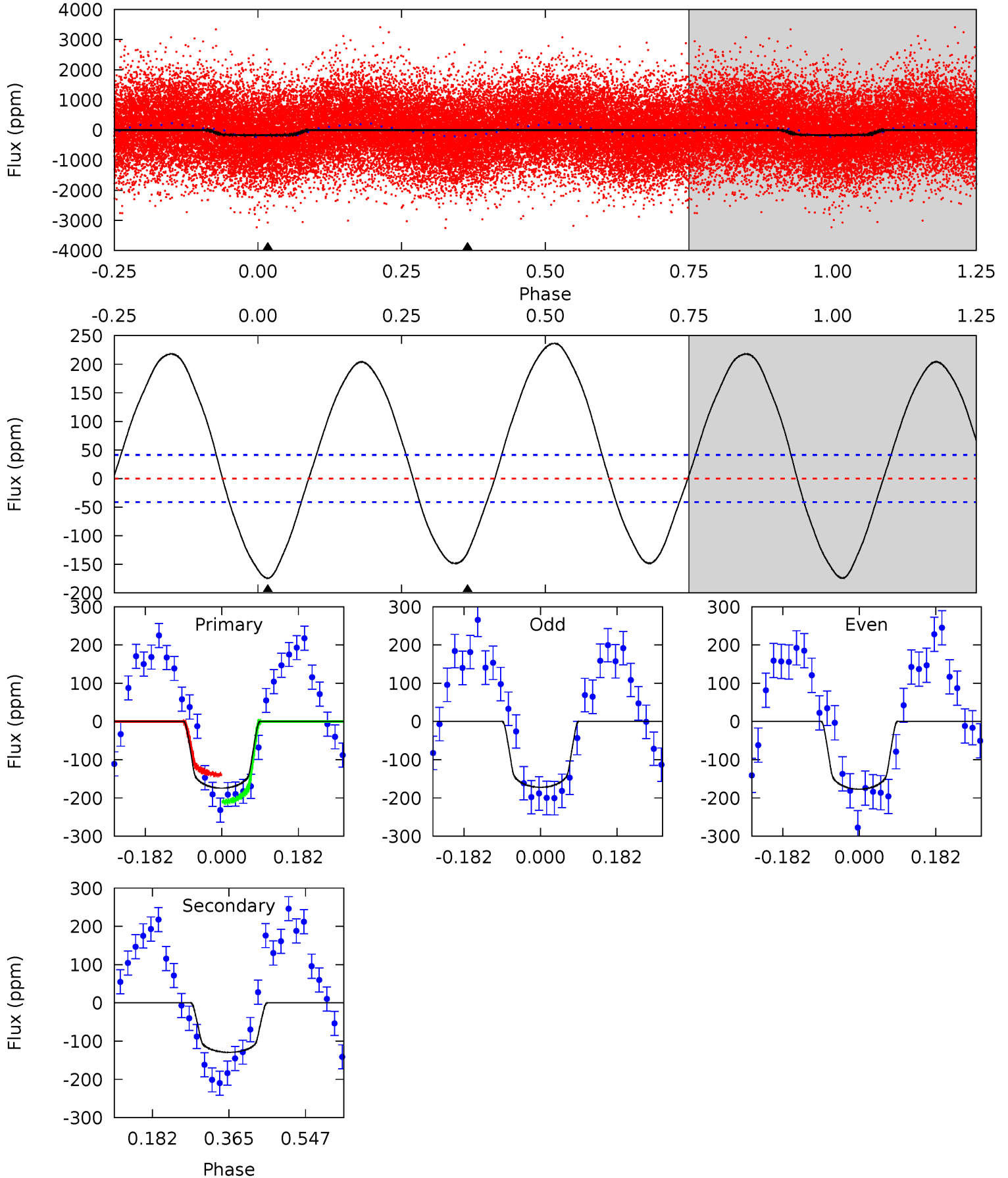
TCE 006302655-03 P= 0.946643 Days $T_0=131.969913$ (BKJD)



DV Model-Shift Uniqueness Test

006302655-03, P = 0.946593 Days, E = 131.046428 Days

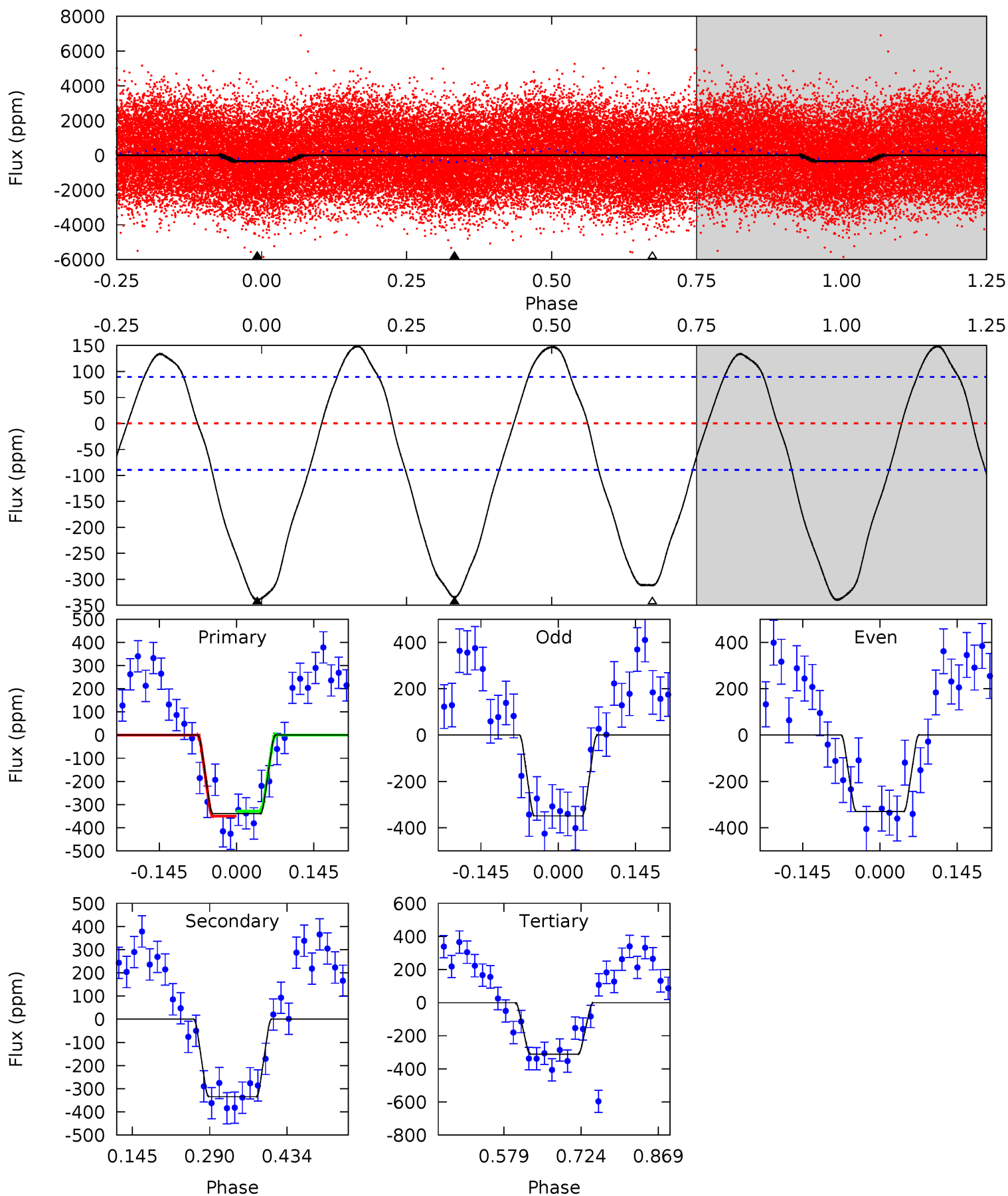
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	13.9	0	0	4.44	1.33	12.7	18.8	18.8	13.9	13.9	0.27	0.96	0.58	3.88



Alt Model-Shift Uniqueness Test

006302655-03, P = 0.946643 Days, E = 131.023270 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	16.8	15.6	0	4.49	1.46	8.52	1.39	17.0	1.15	16.8	0.49	0.97	0.30	0.54



Stellar Parameters For KIC 006302655

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7957^{+71}_{-87}	$3.972^{+0.137}_{-0.084}$	$-0.080^{+0.050}_{-0.150}$	$2.331^{+0.269}_{-0.437}$	$1.857^{+0.051}_{-0.180}$	$0.206^{+0.130}_{-0.057}$
	+1%/-1%	+3%/-2%	+62%/-188%	+12%/-19%	+3%/-10%	+63%/-28%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006302655-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-129 ± 9	$2.64^{+1.30}_{-1.20}$	4916^{+159}_{-230}	8163^{+4473}_{-1756}	$5.420^{+12.342}_{-3.012}$
Alt.	-335 ± 20	$4.81^{+1.31}_{-1.22}$	4898^{+183}_{-223}	7499^{+1552}_{-921}	$4.245^{+3.235}_{-1.649}$

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 $A_{obs} \gg 1.0$

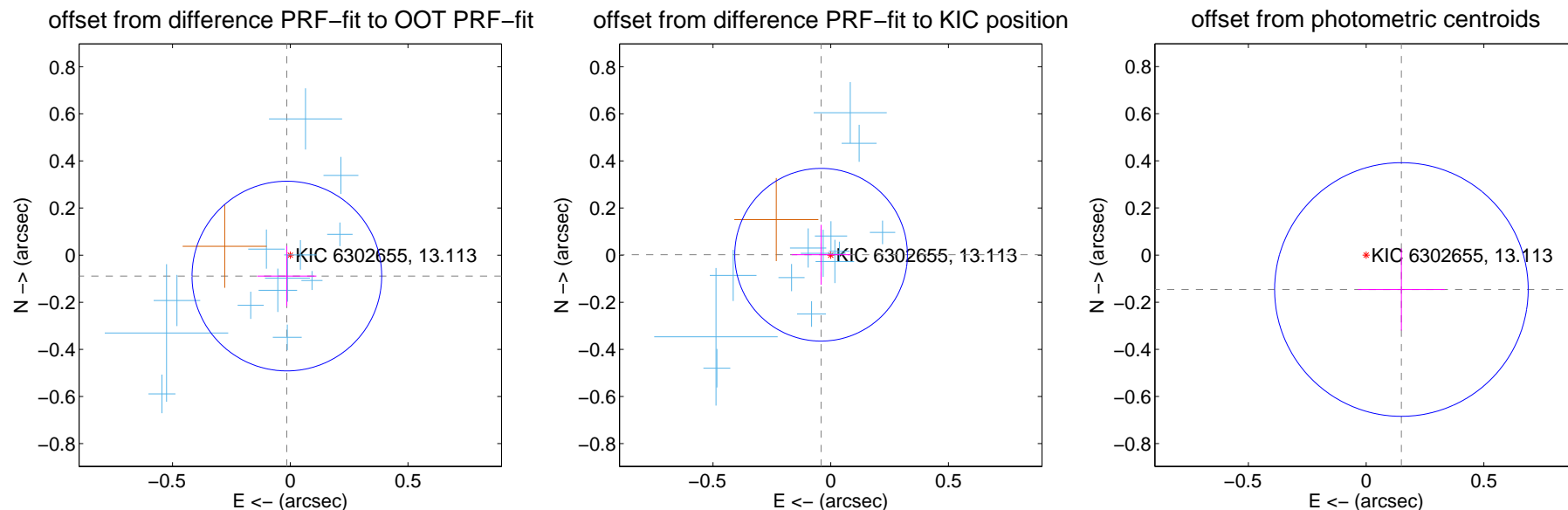
DV Centroid Data

Supplemental centroid analysis for 006302655-03. Kepler magnitude: 13.11. Transit SNR 7.56

There are 14 quarters with good PRF difference image offsets

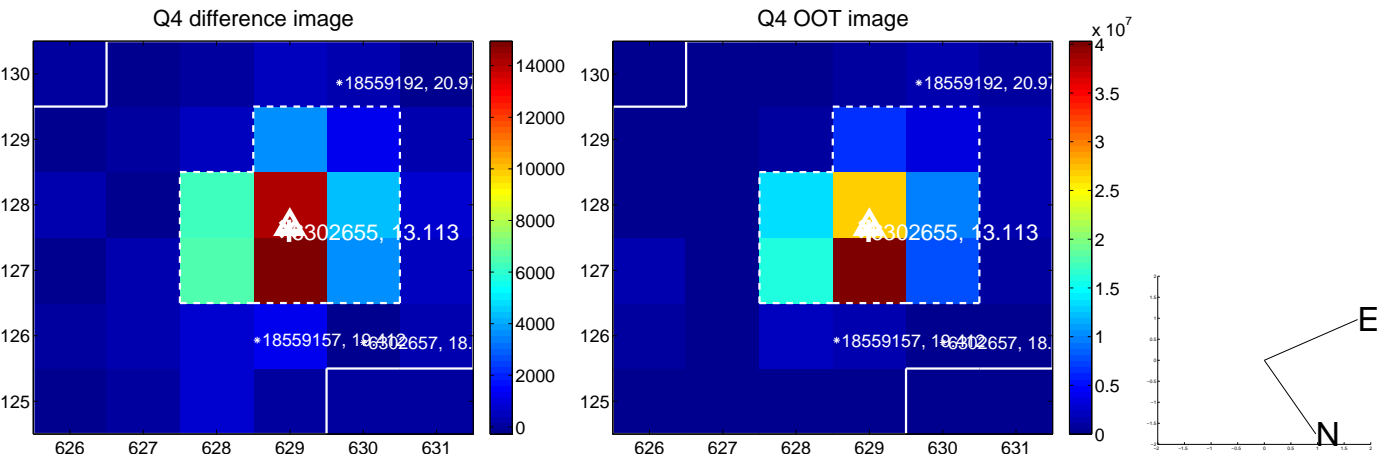
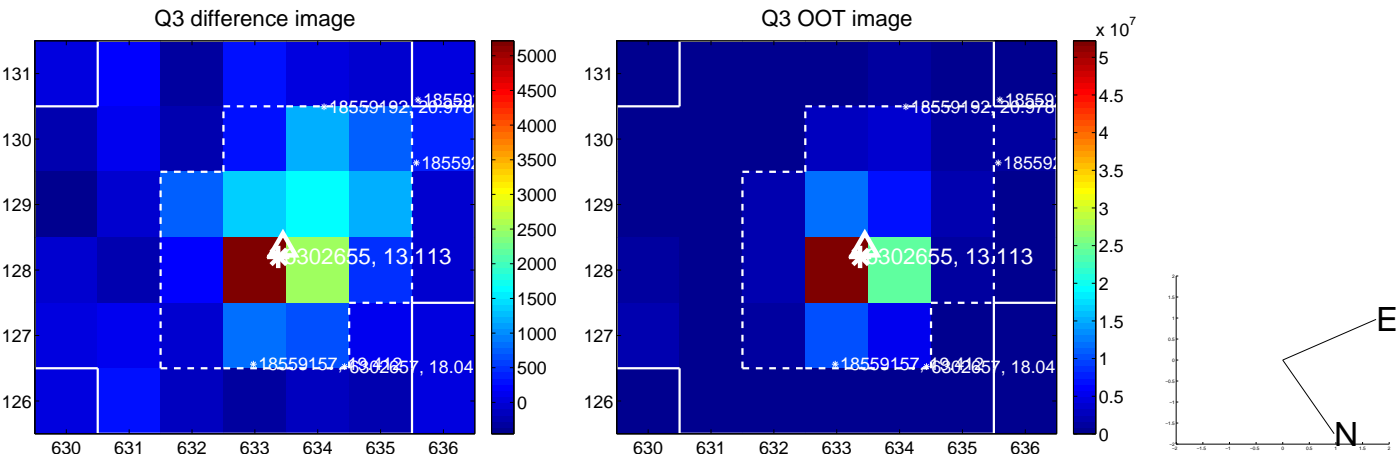
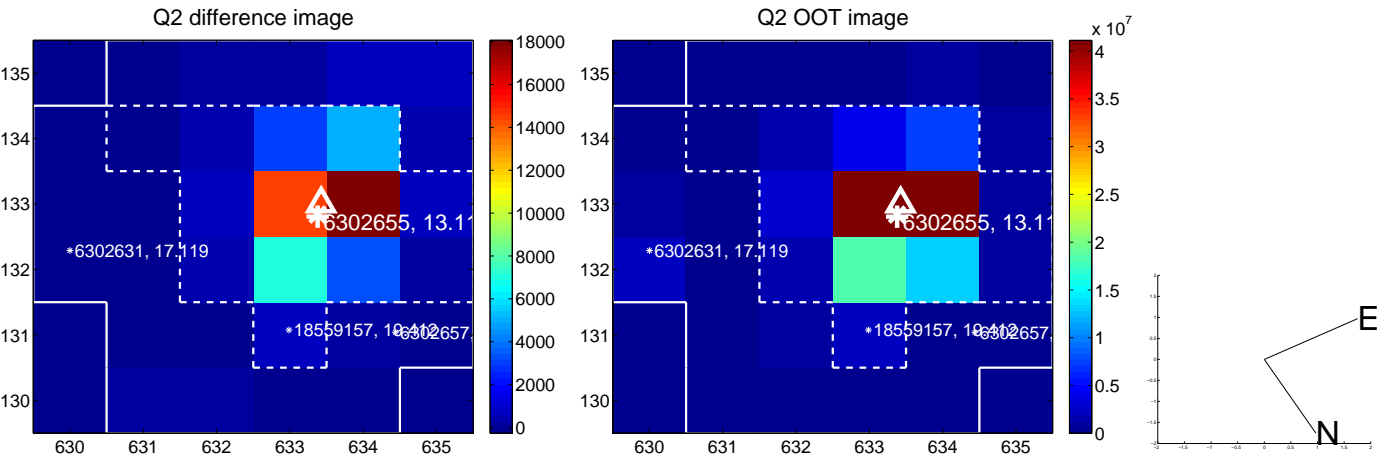
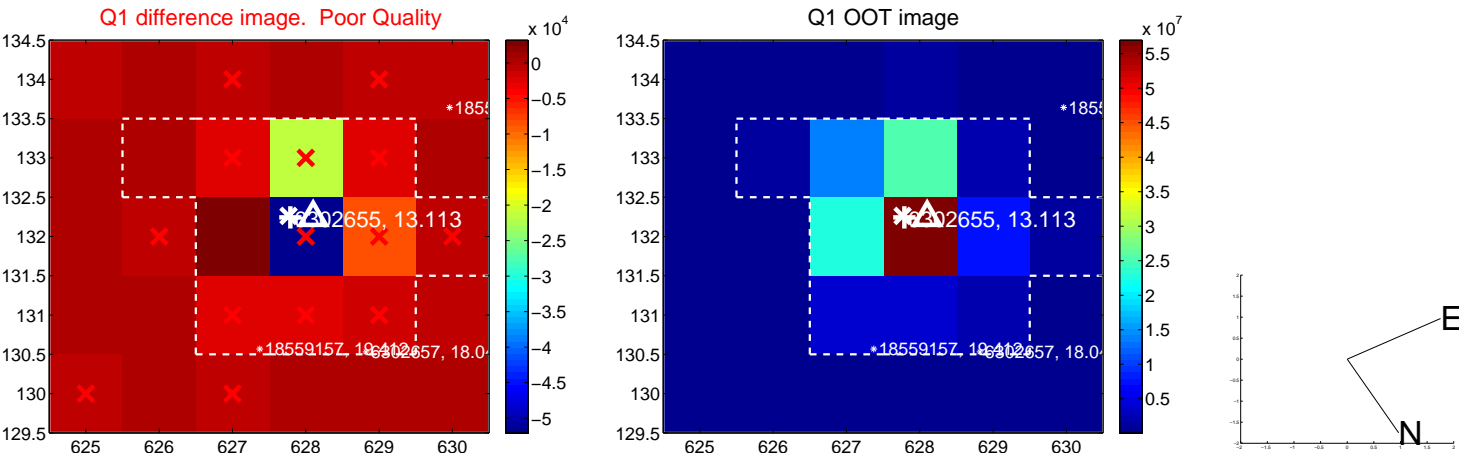
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.090 ± 0.134	0.67	0.014 ± 0.125	-0.089 ± 0.128
PRF-fit source offset from KIC position	0.041 ± 0.122	0.34	0.041 ± 0.124	0.002 ± 0.127
photometric centroid source offset	0.21 ± 0.18	1.17	-0.15 ± 0.18	-0.15 ± 0.17

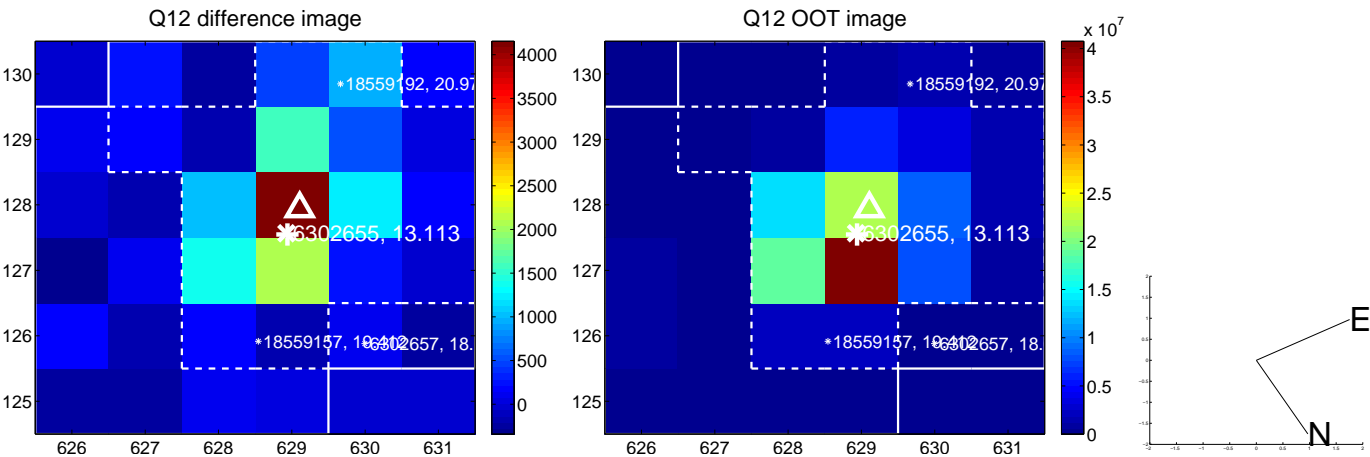
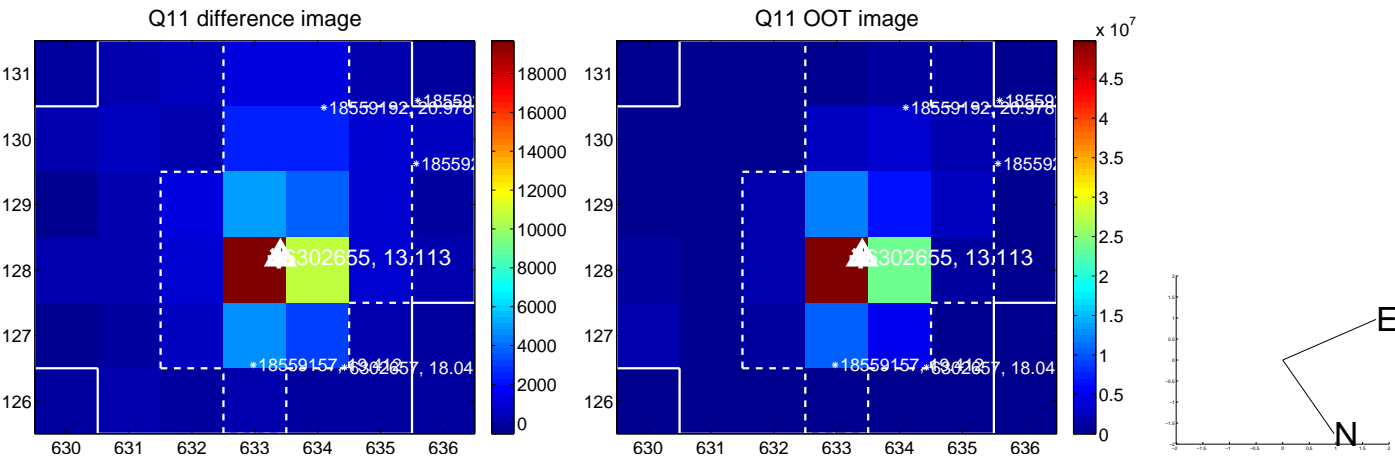
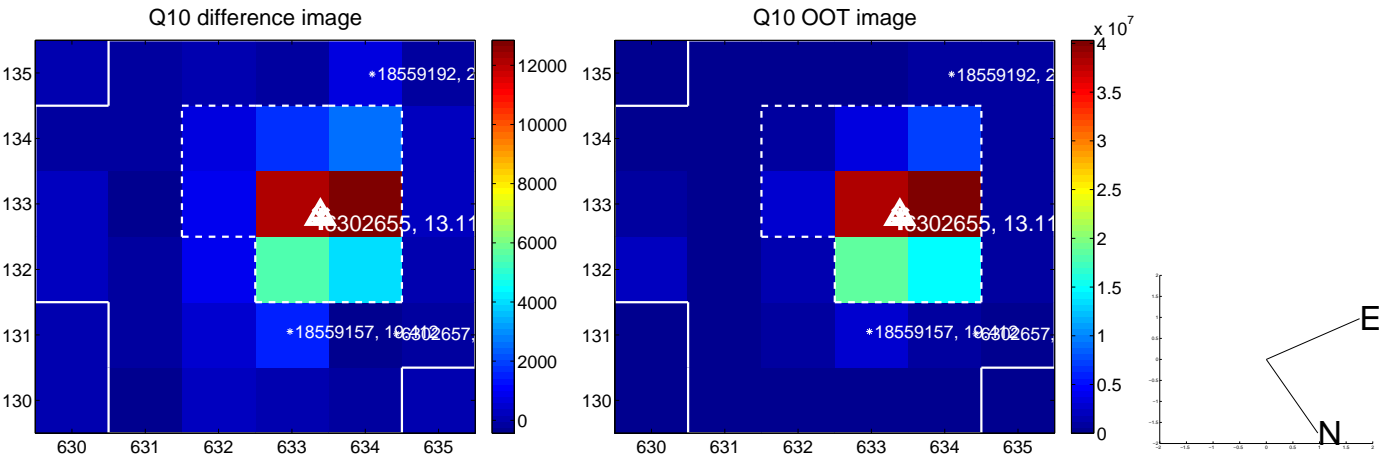
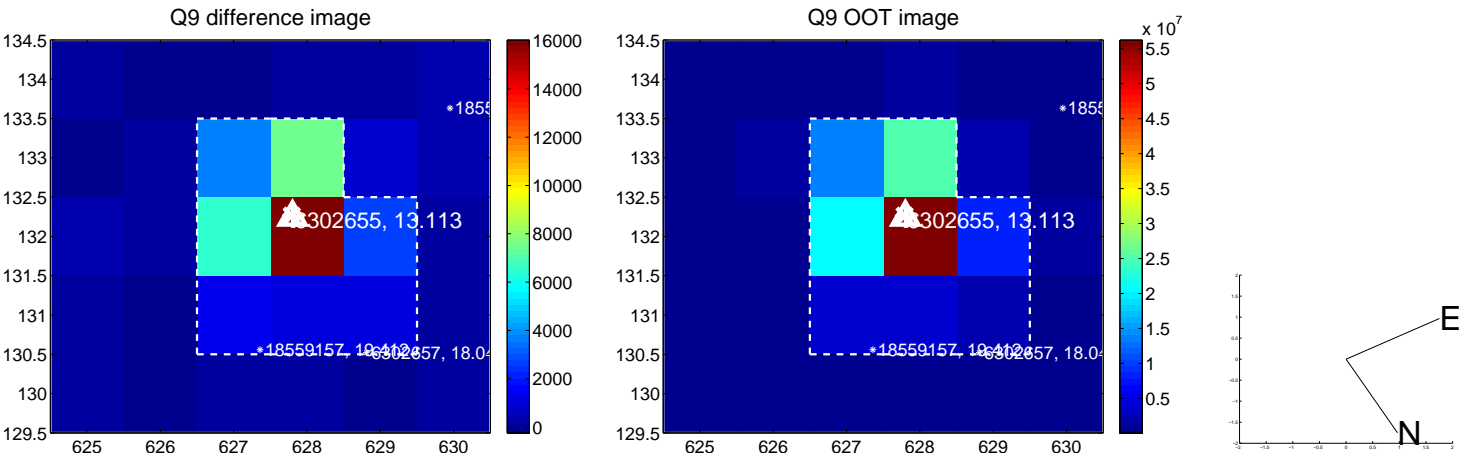


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

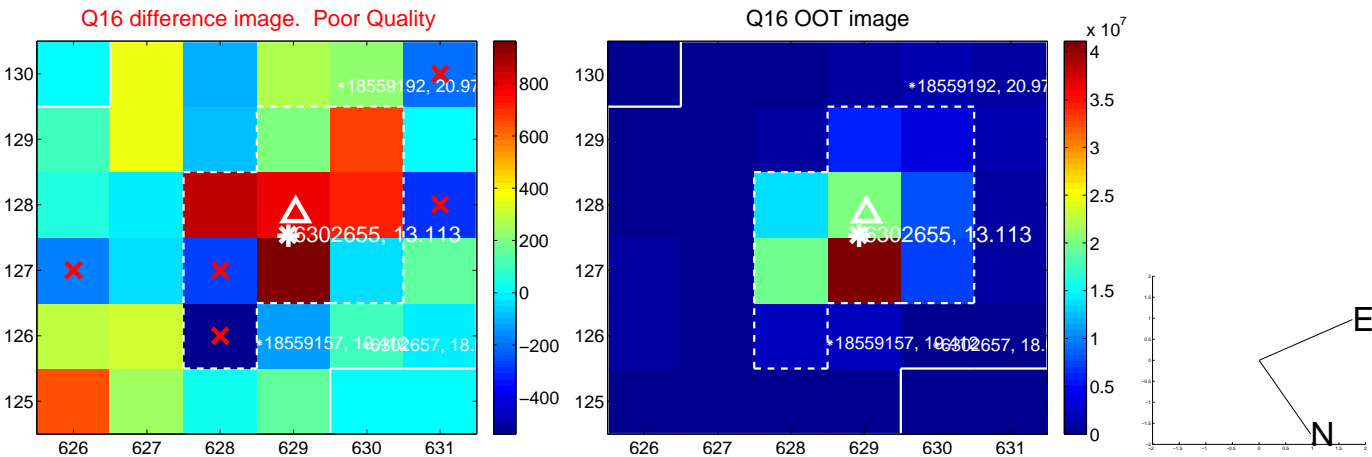
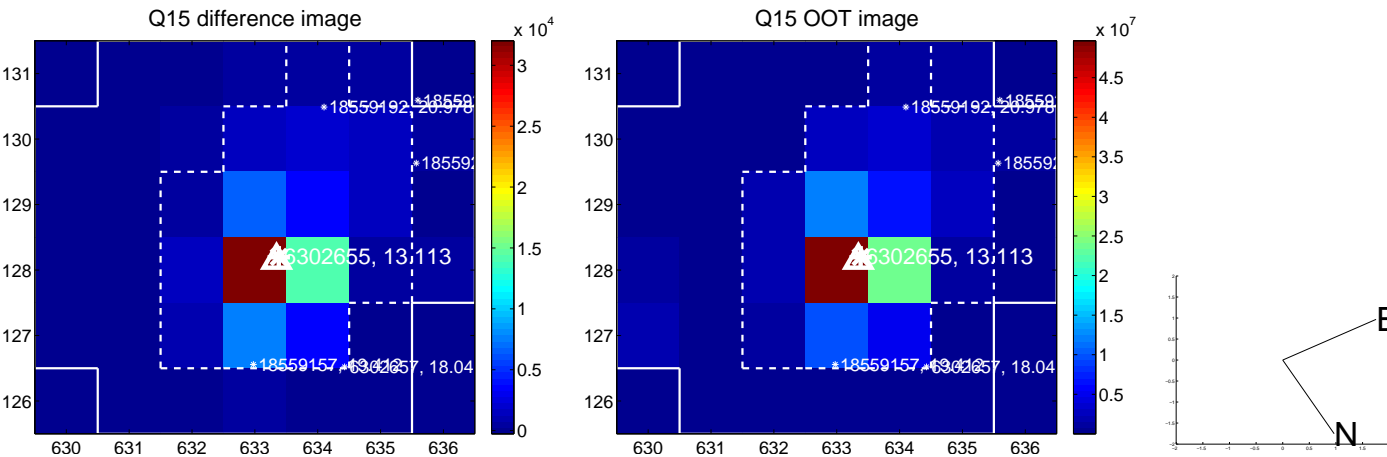
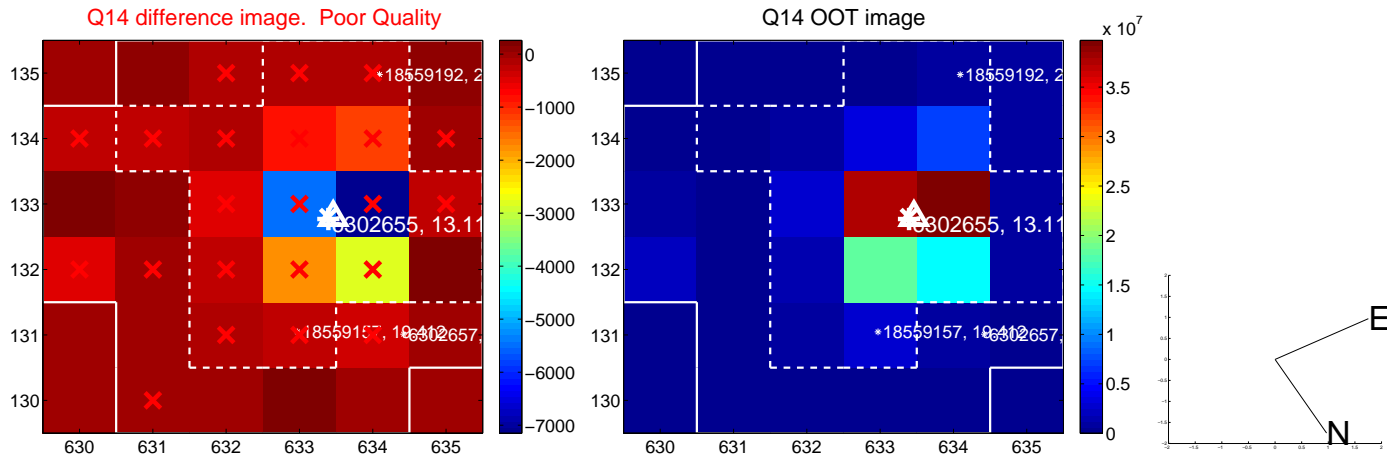
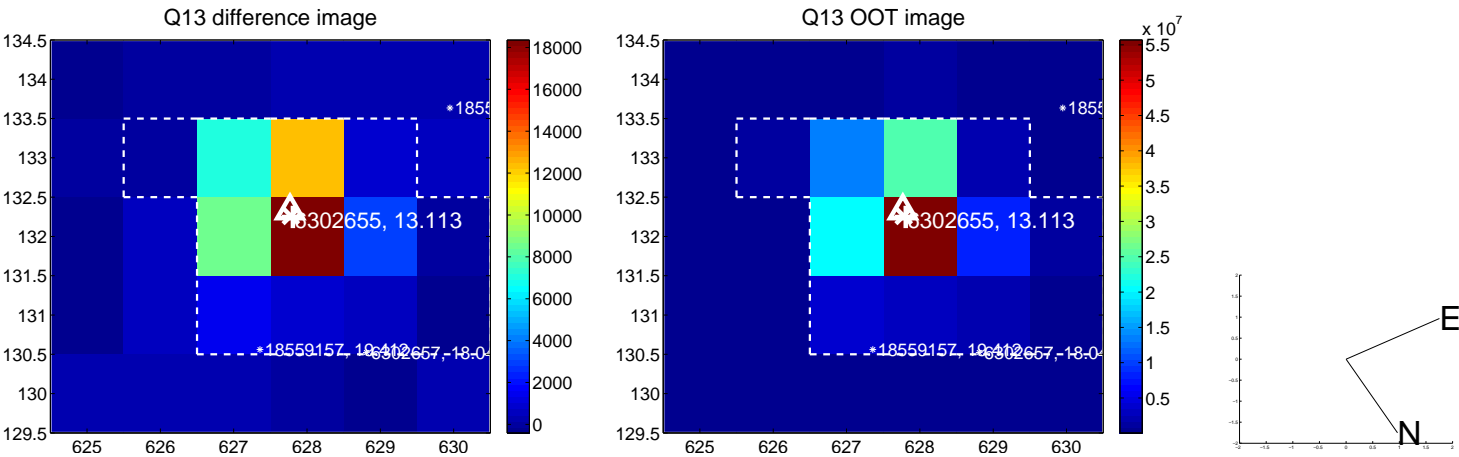
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



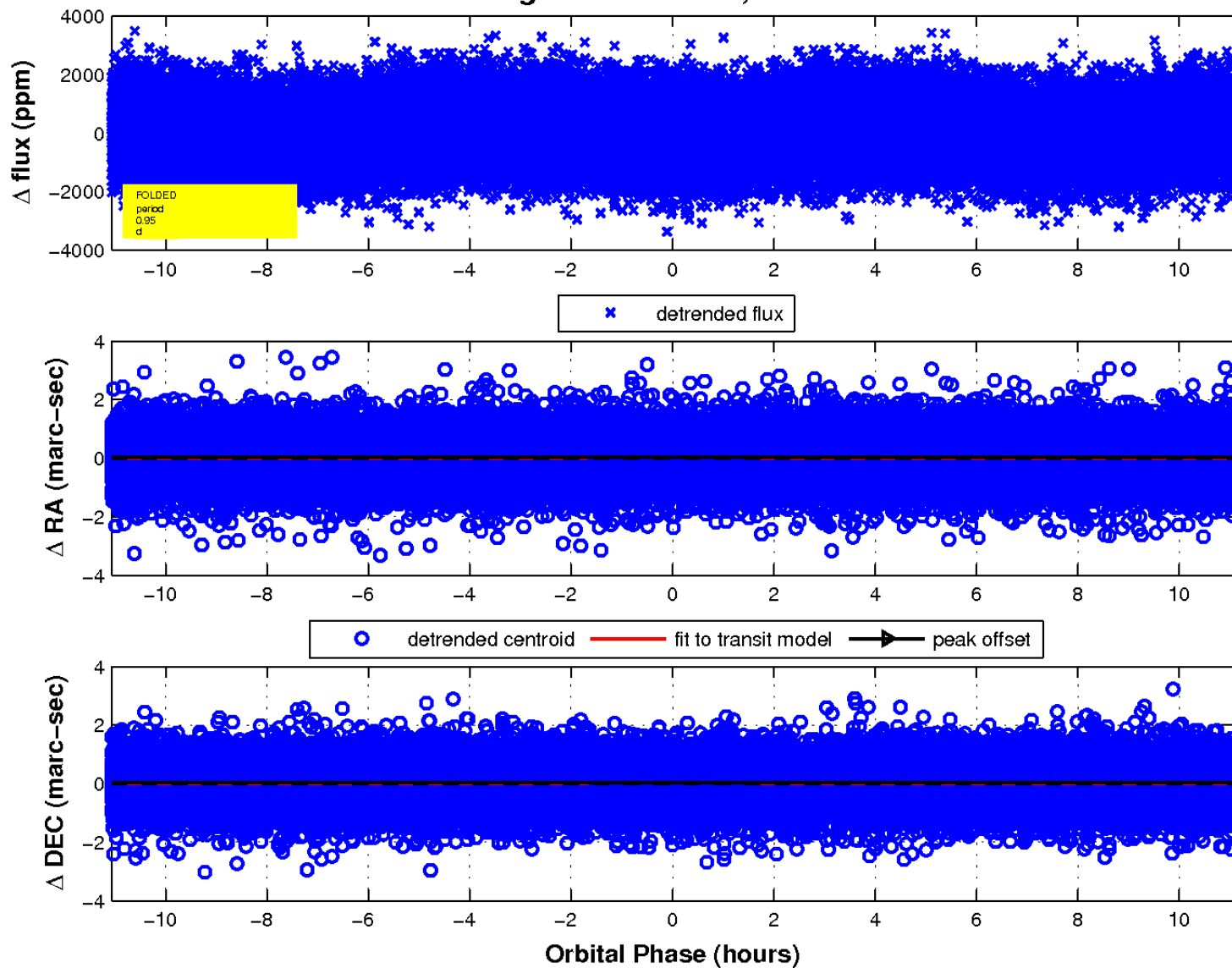
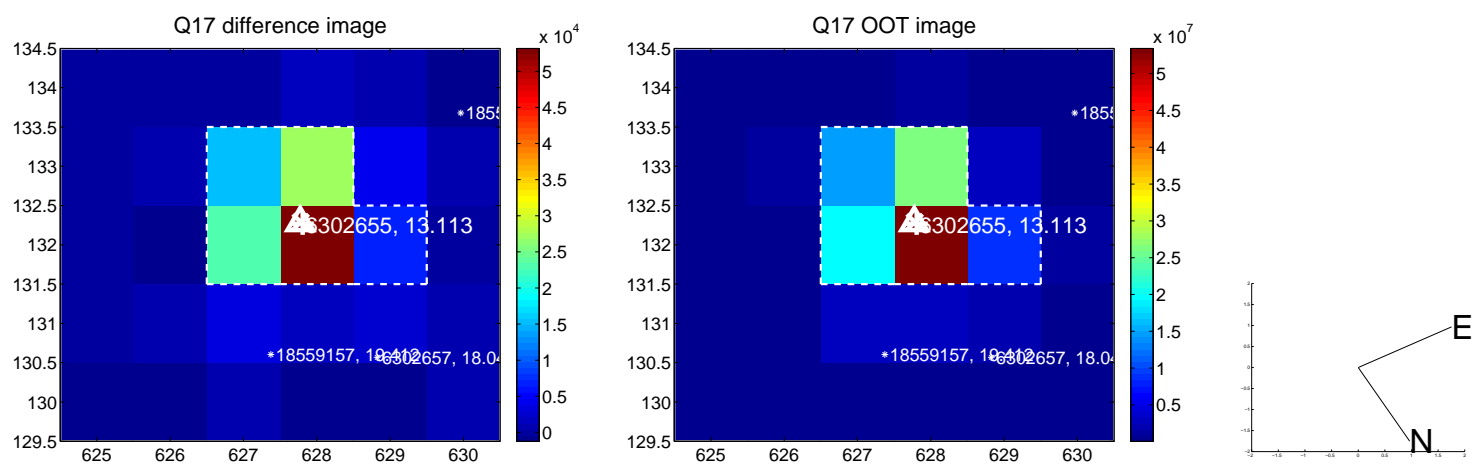
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

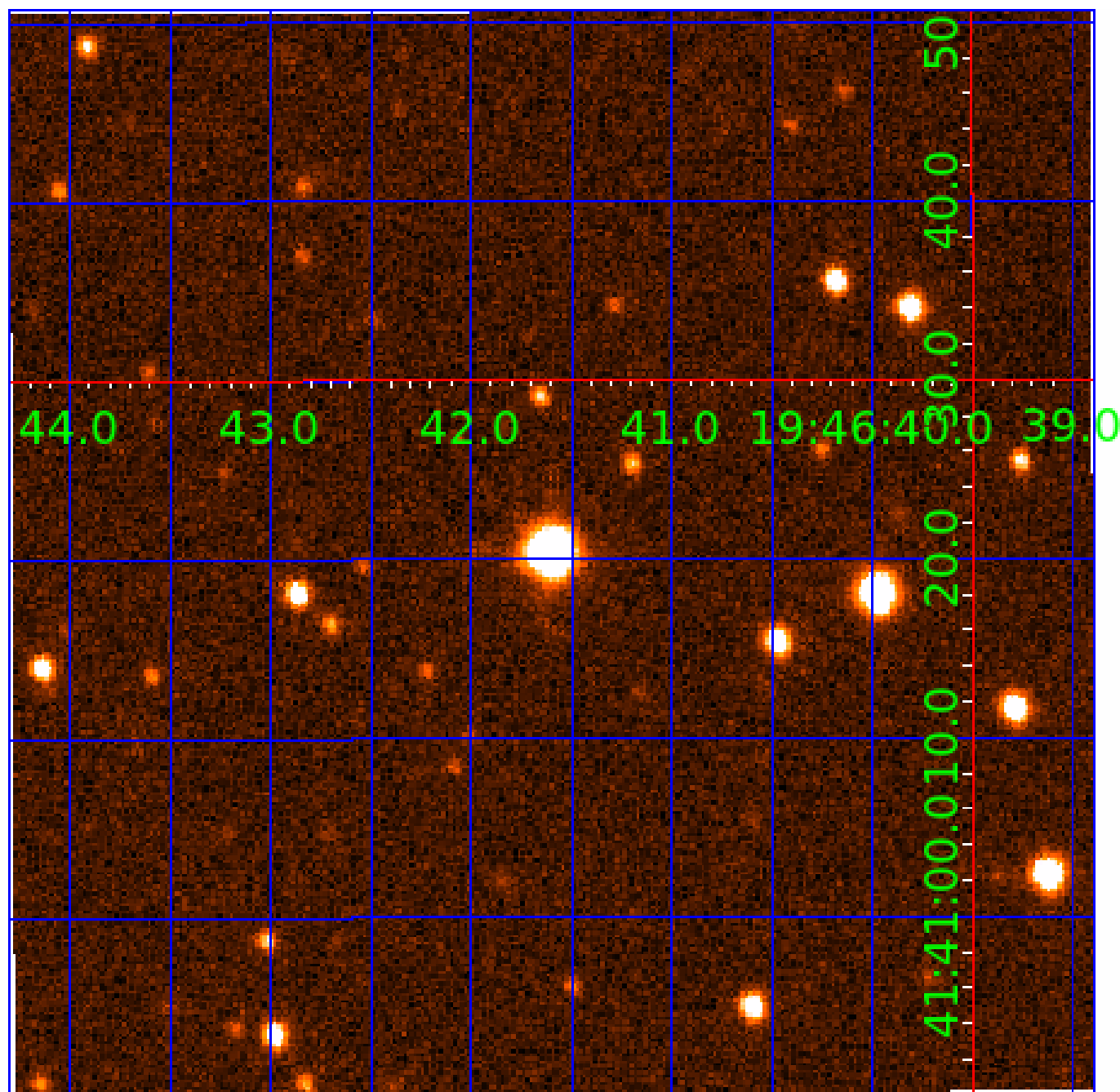


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006302655

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})
006302655-01	OBS	No	3.471113	132.274611	277.7	4.304	13.7	14.5	2.33	7957	4.51	6411.53
006302655-02	OBS	No	1.735538	132.430658	224.4	4.195	11.7	11.9	2.33	7957	4.07	16156.27
006302655-03	OBS	No	0.946593	131.993021	102.7	3.689	9.5	7.6	2.33	7957	2.75	36255.09
006302655-04	OBS	No	2.165184	133.413045	237.0	6.076	10.0	12.2	2.33	7957	4.17	12029.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006302655-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
006302655-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006302655-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

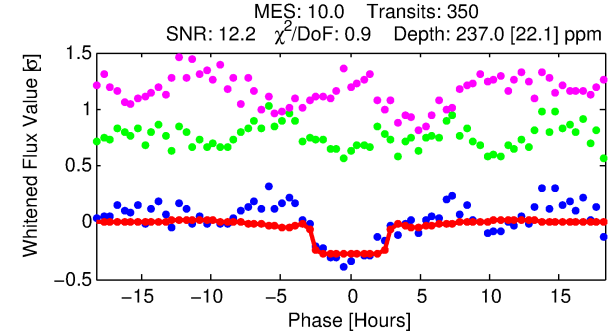
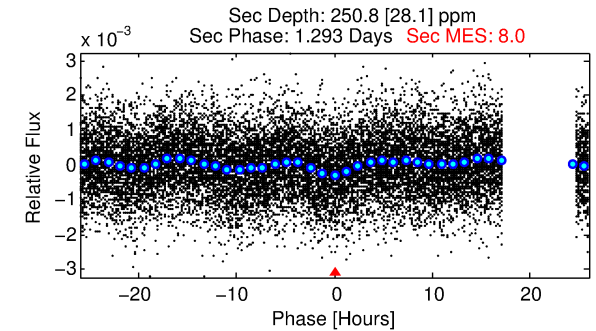
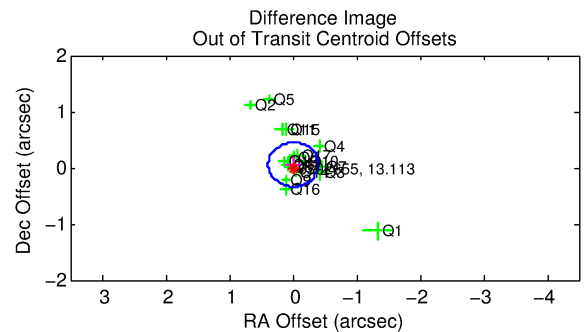
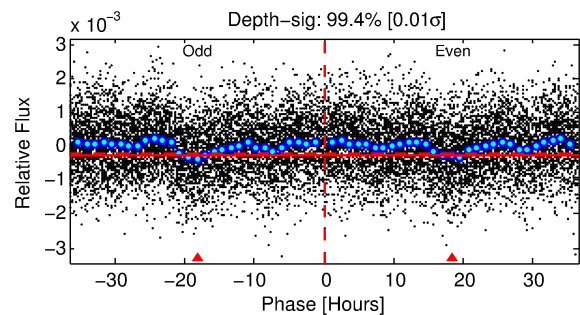
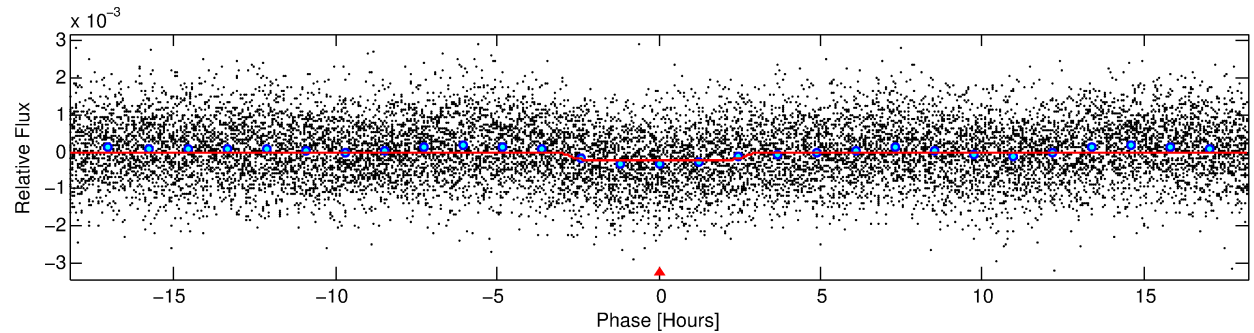
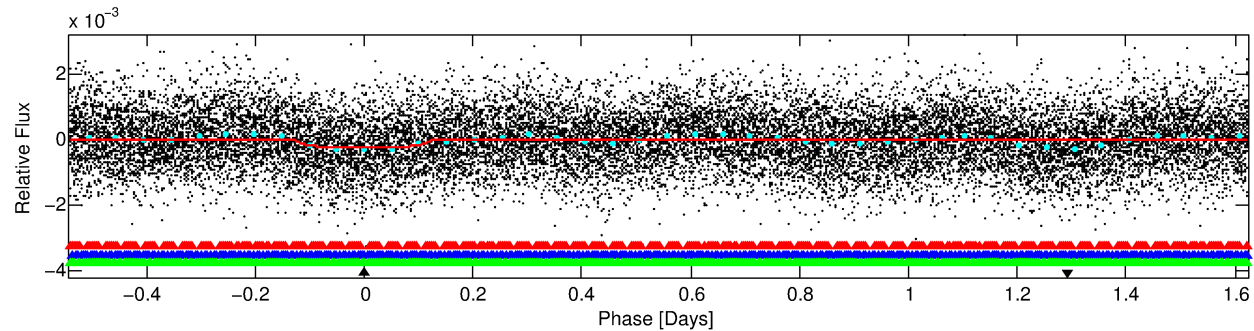
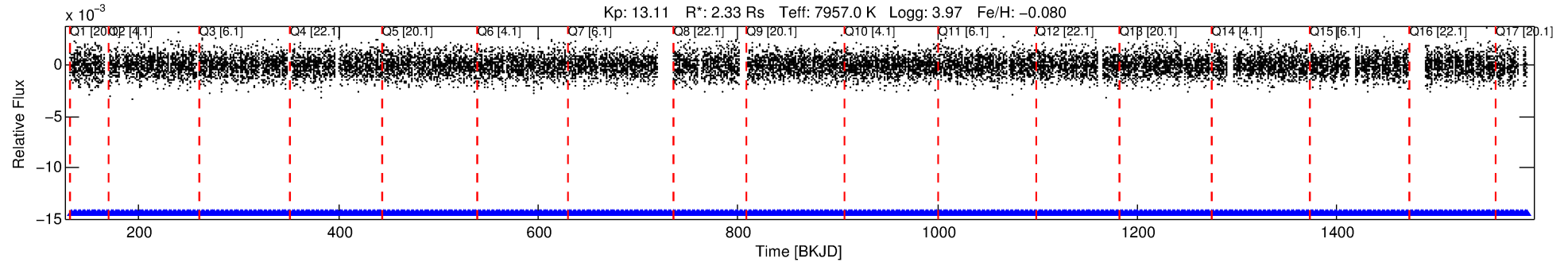
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006302655-04

No Significant Match Found

DV One-Page Summary

KIC: 6302655 Candidate: 4 of 4 Period: 2.165 d



DV Fit Results:

Period = 2.16518 [0.00002] d
Epoch = 133.4130 [0.0058] BKJD
Rp/R* = 0.0164 [0.0024]
a/R* = 1.59 [0.84]
b = 0.90 [0.19]
Seff = 12029.85 [2989.62]
Teq = 2670 [166] K
Rp = 4.17 [1.00] Re
a = 0.0403 [0.0066] AU
Ag = 12.89 [5.16] [2.30σ]
Teffp = 7823 [625] K [7.96σ]

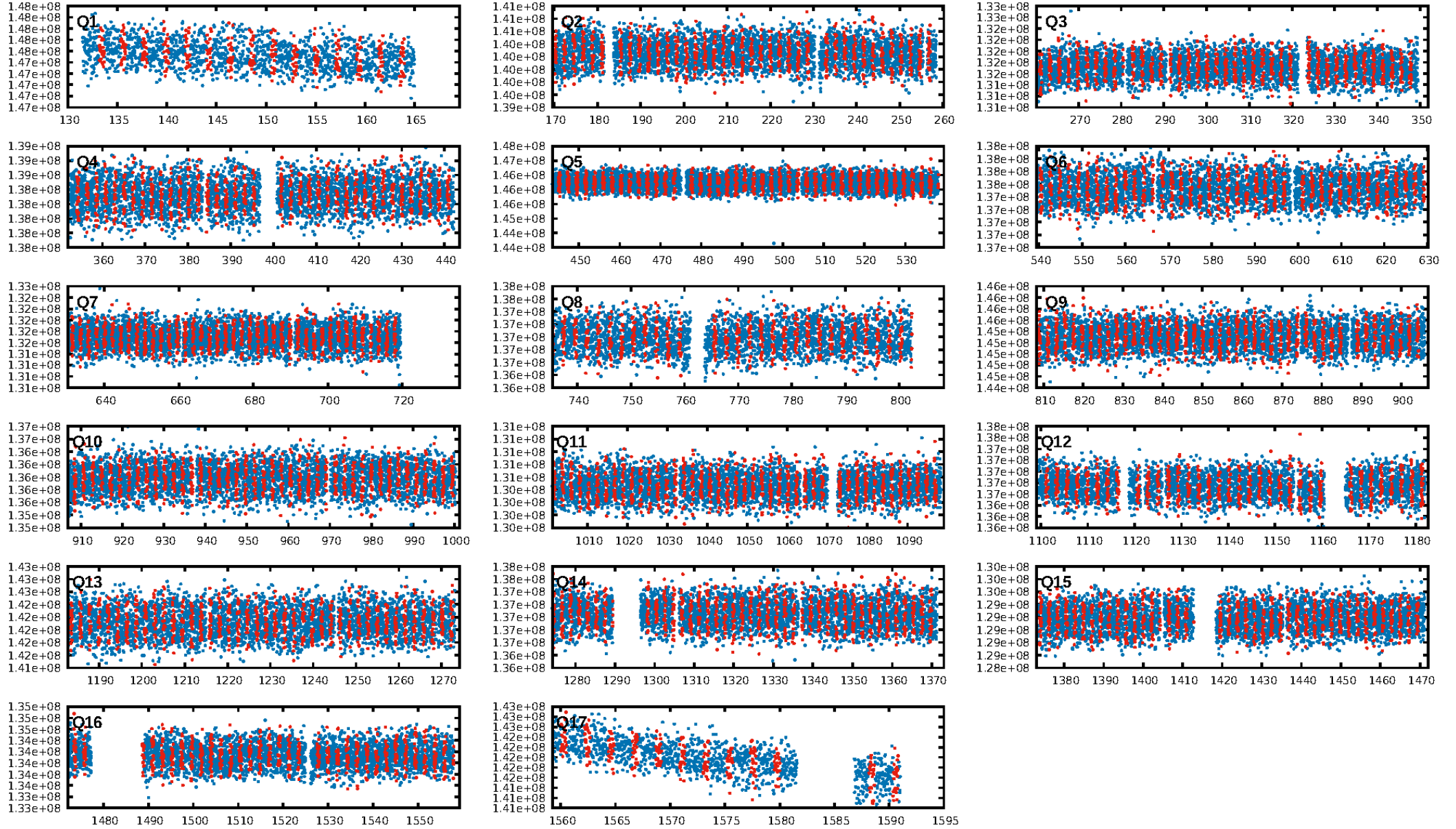
DV Diagnostic Results:

ShortPeriod-sig: 83.7% [1.40σ]
LongPeriod-sig: 100.0% [4.21σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.76e-15
RollingBand-fgt: 1.00 [337/337]
GhostDiagnostic-chr: 2.233
Centroid-sig: 0.1%
Centroid-so: 0.226 arcsec [2.42σ]
OotOffset-rm: 0.054 arcsec [0.41σ]
KicOffset-rm: 0.133 arcsec [0.96σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

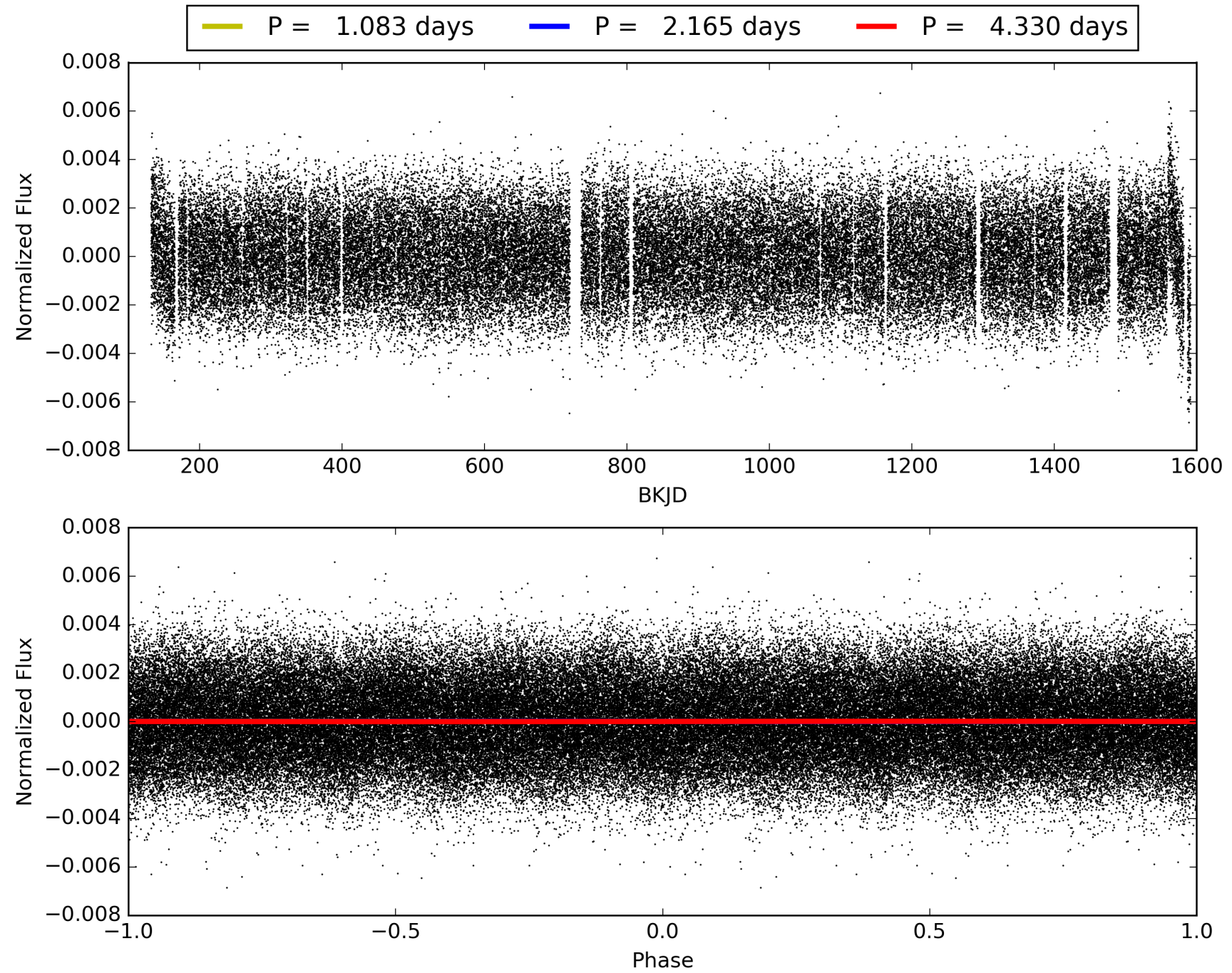
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 05:35:52 Z

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

TCE 006302655-04, PDC Light Curves

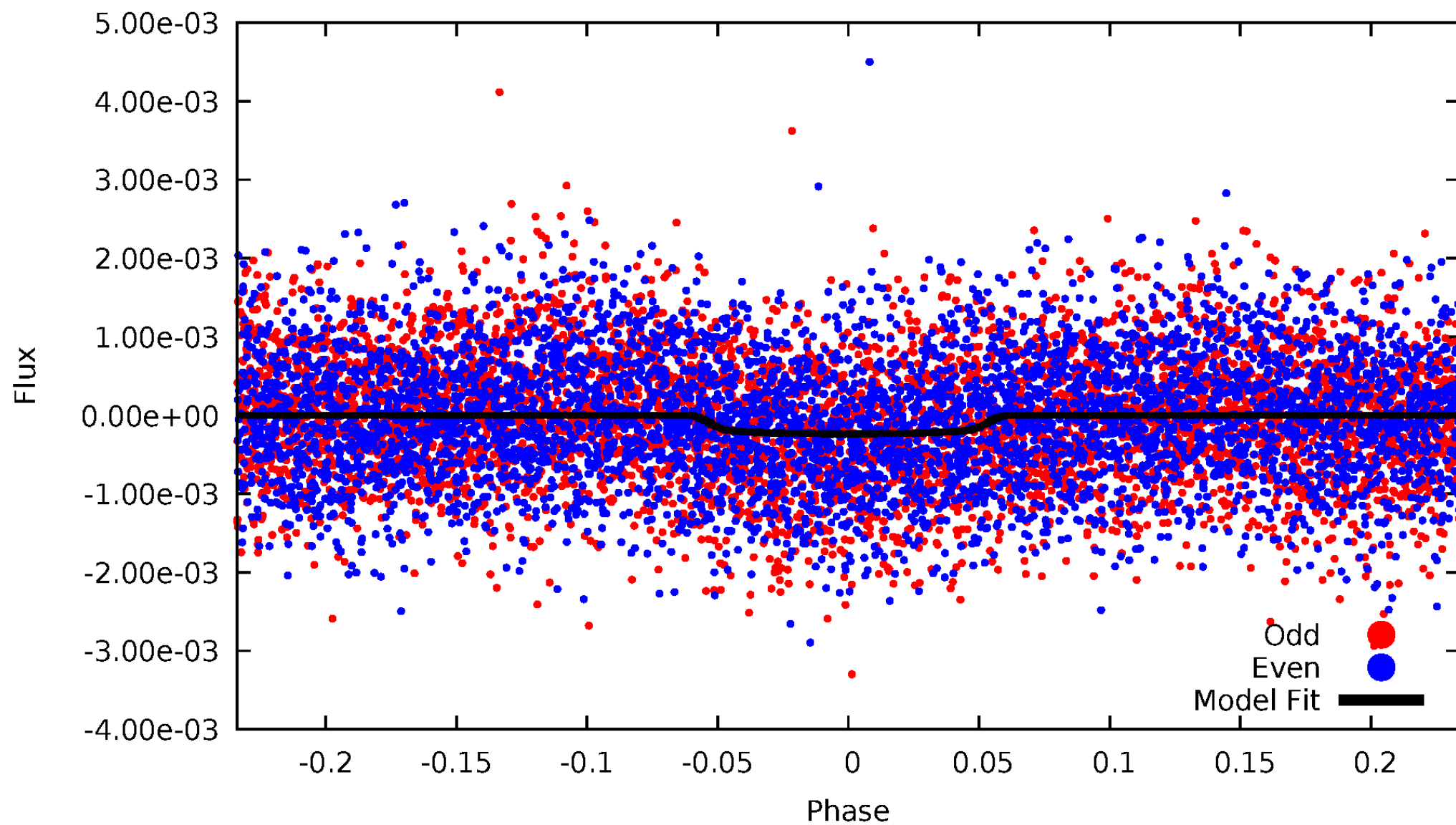


TCE 006302655-04



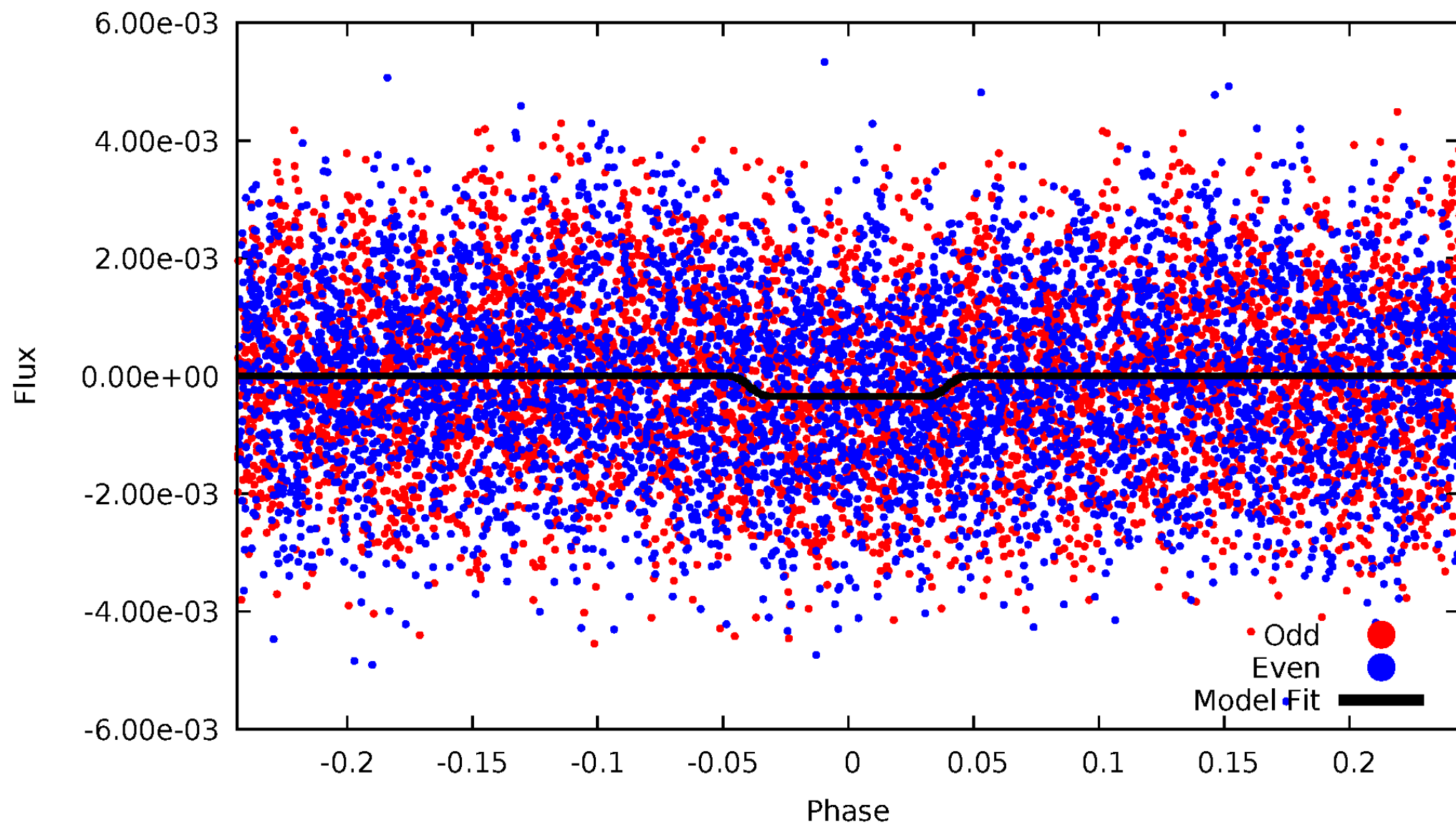
DV Odd/Even

TCE 006302655-04



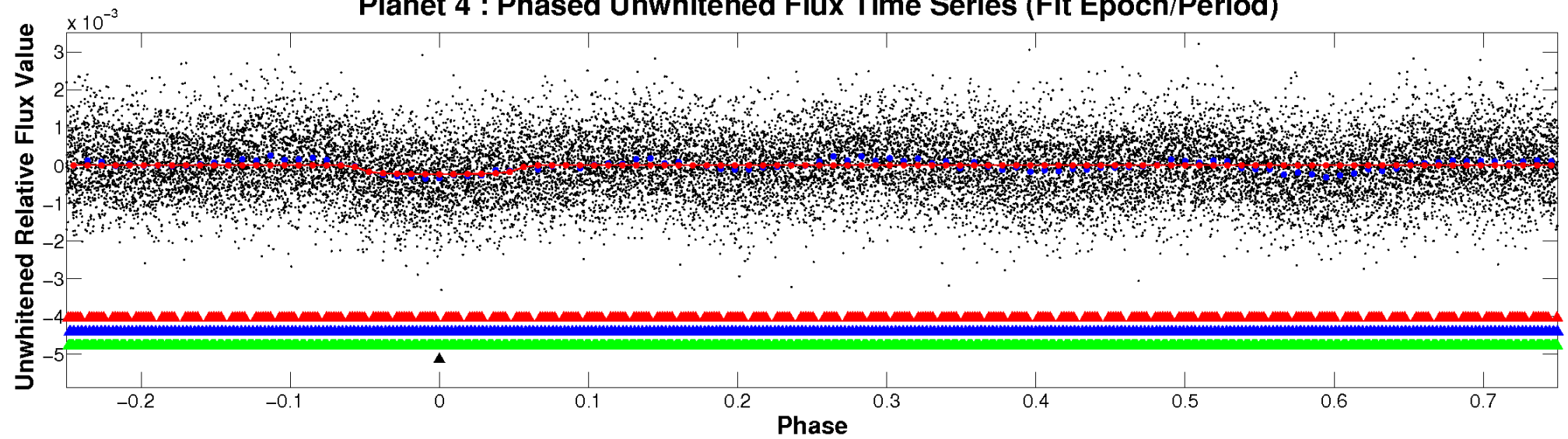
ALT Odd/Even

TCE 006302655-04

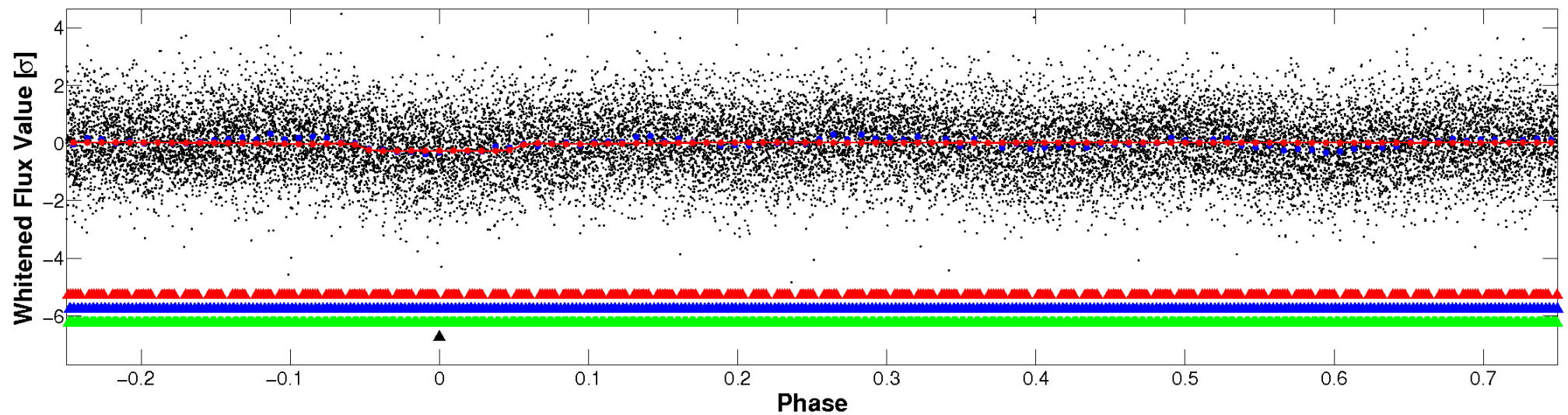


Non-Whitened Vs. Whitened Light Curve

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

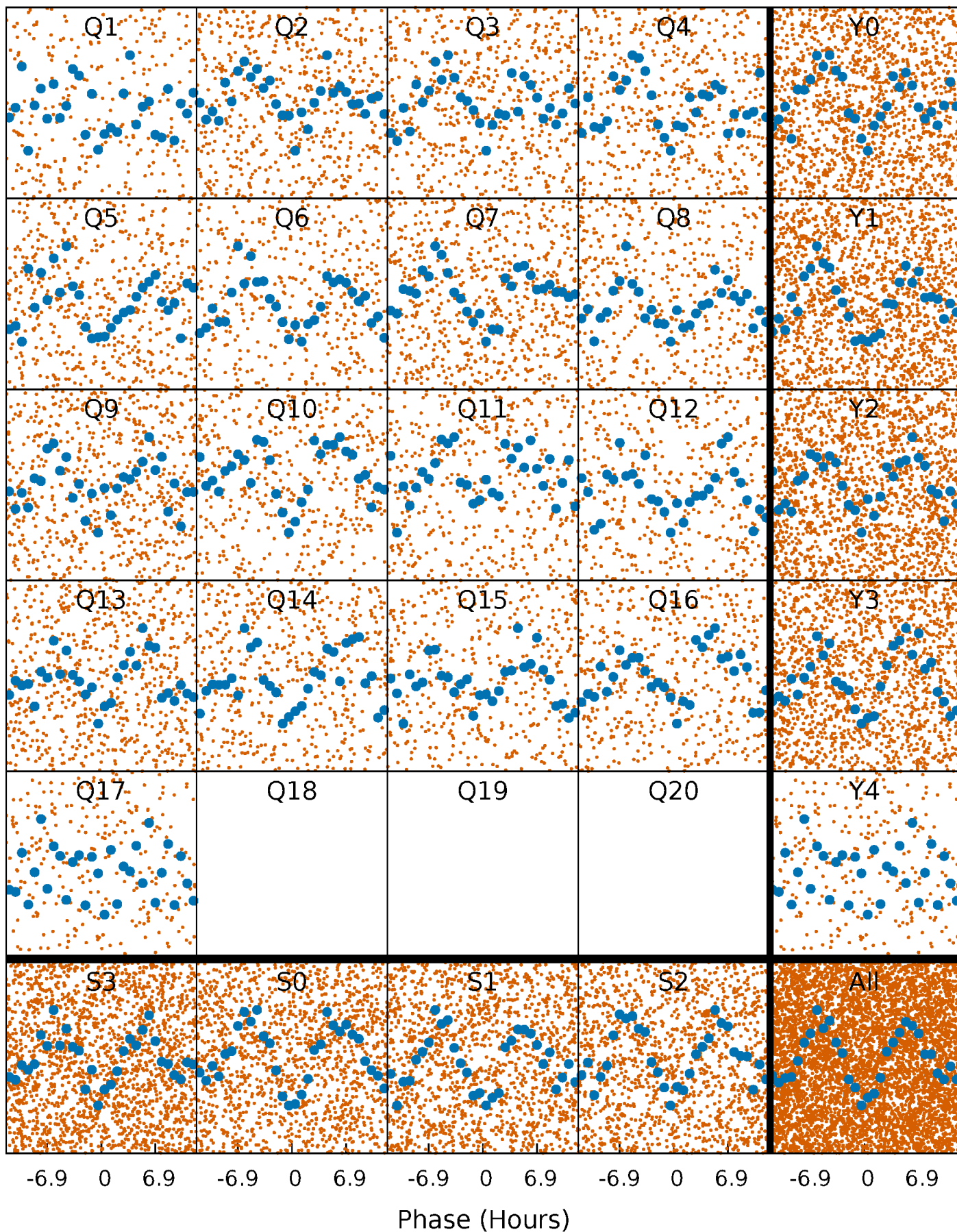


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



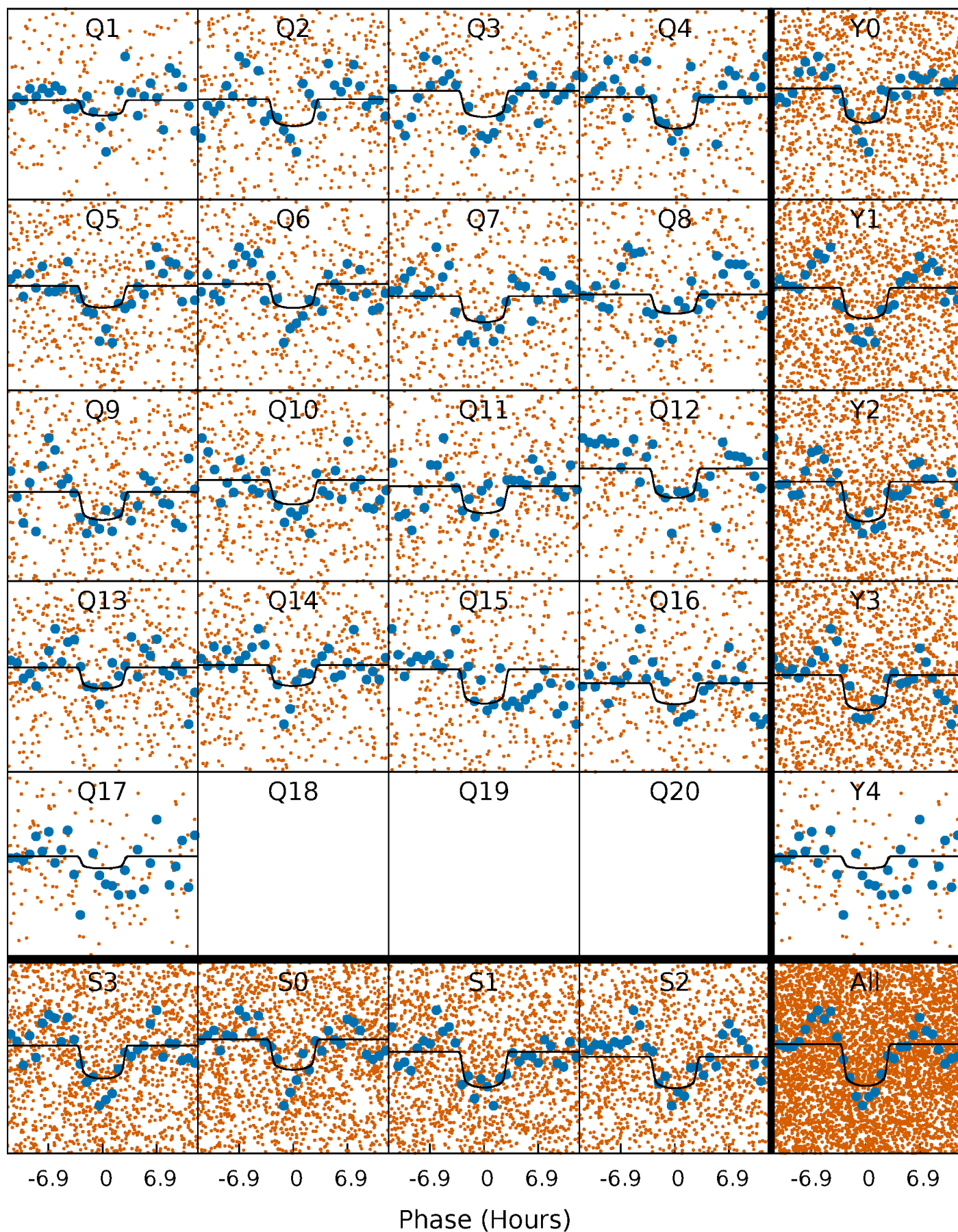
PDC Quarter-Phased Transit Curves

TCE 006302655-04 P= 2.165184 Days $T_0=133.413045$ (BKJD)



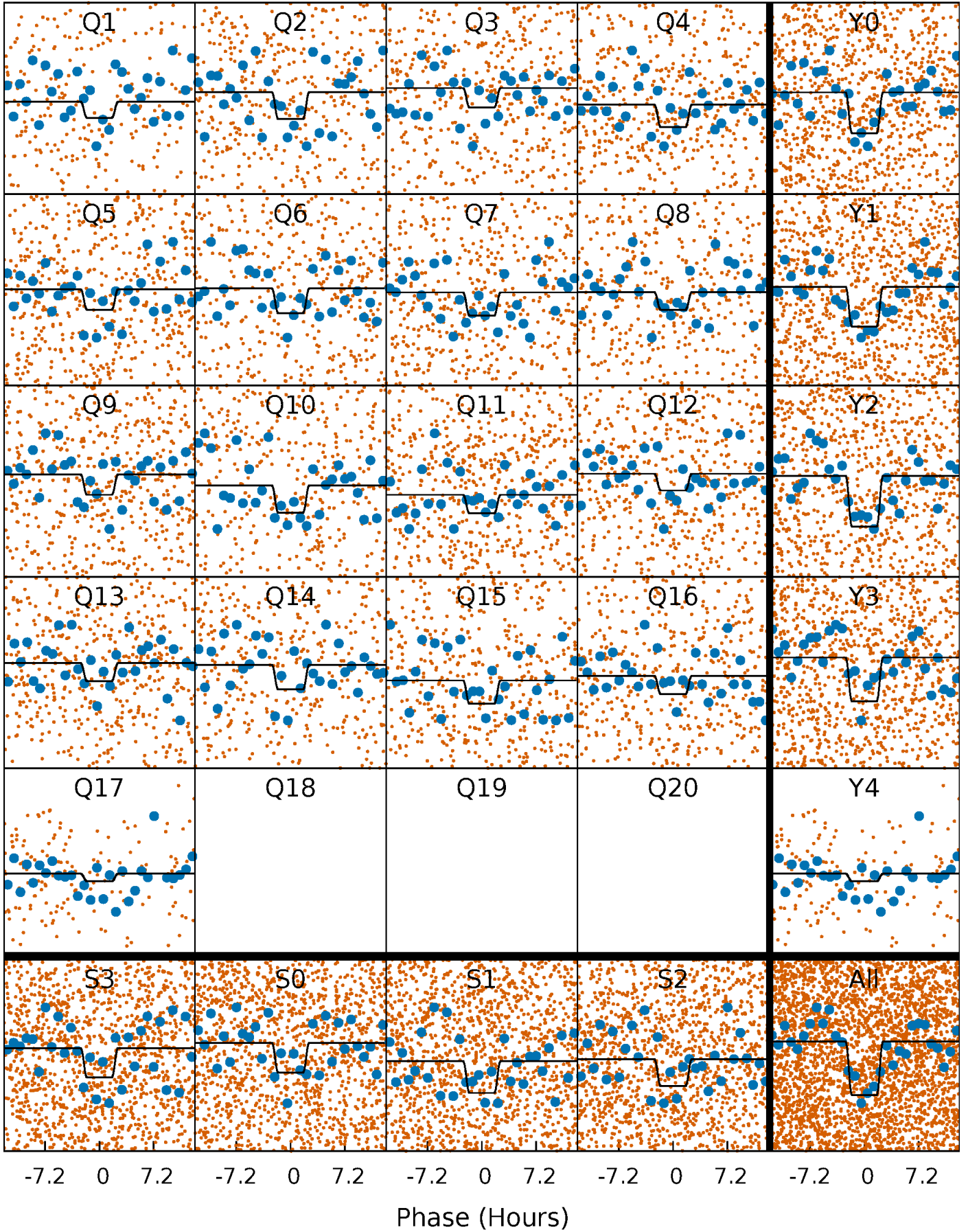
DV Quarter-Phased Transit Curves

TCE 006302655-04 P= 2.165184 Days $T_0=133.413045$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

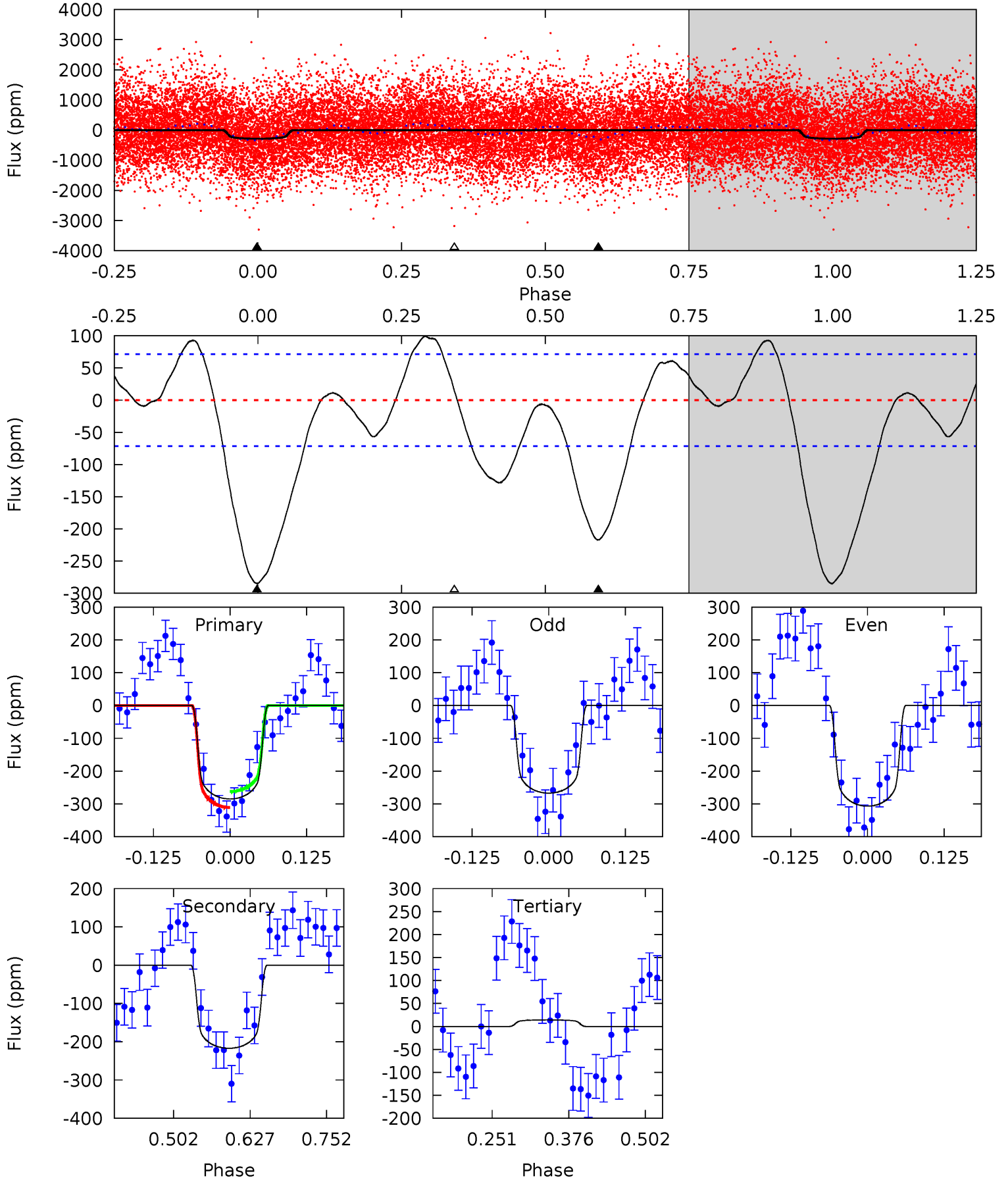
TCE 006302655-04 P= 2.165162 Days $T_0=133.419025$ (BKJD)



DV Model-Shift Uniqueness Test

006302655-04, P = 2.165184 Days, E = 131.247861 Days

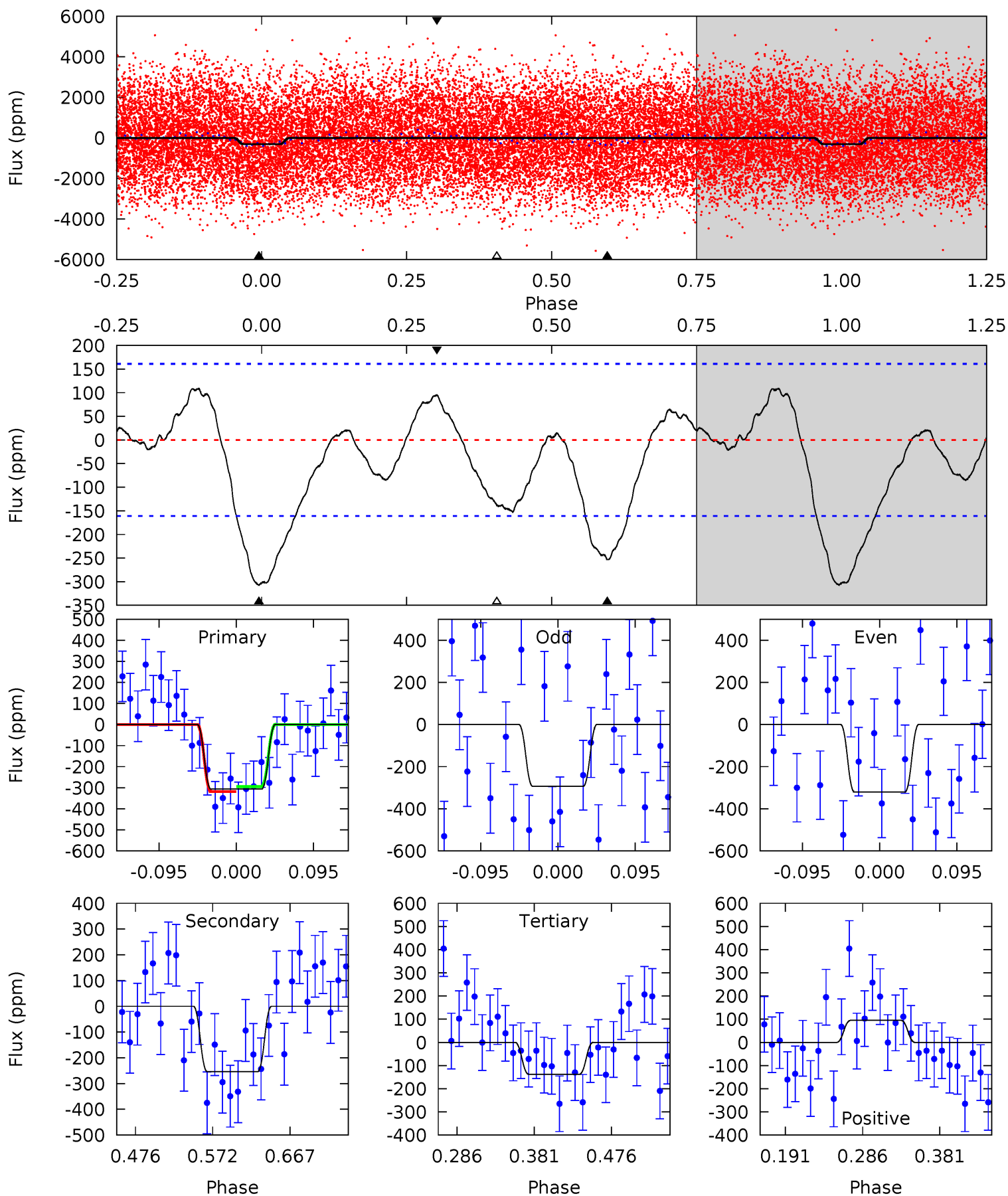
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	13.7	-0.90	0	4.52	1.53	3.93	18.9	18.0	14.6	13.7	1.26	1.15	0.26	1.56



Alt Model-Shift Uniqueness Test

006302655-04, P = 2.165162 Days, E = 131.253863 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.71	7.20	3.92	2.69	4.57	1.67	1.89	4.79	6.02	3.28	4.50	0.39	1.08	0.26	0.34



Stellar Parameters For KIC 006302655

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7957^{+71}_{-87}	$3.972^{+0.137}_{-0.084}$	$-0.080^{+0.050}_{-0.150}$	$2.331^{+0.269}_{-0.437}$	$1.857^{+0.051}_{-0.180}$	$0.206^{+0.130}_{-0.057}$
	+1%/-1%	+3%/-2%	+62%/-188%	+12%/-19%	+3%/-10%	+63%/-28%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 006302655-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-217 ± 16	$4.05^{+0.75}_{-0.69}$	3723^{+131}_{-164}	7398^{+801}_{-530}	12^{+5}_{-3}
Alt.	-253 ± 35	$4.66^{+0.72}_{-0.75}$	3720^{+133}_{-176}	7187^{+742}_{-568}	10^{+4}_{-3}

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

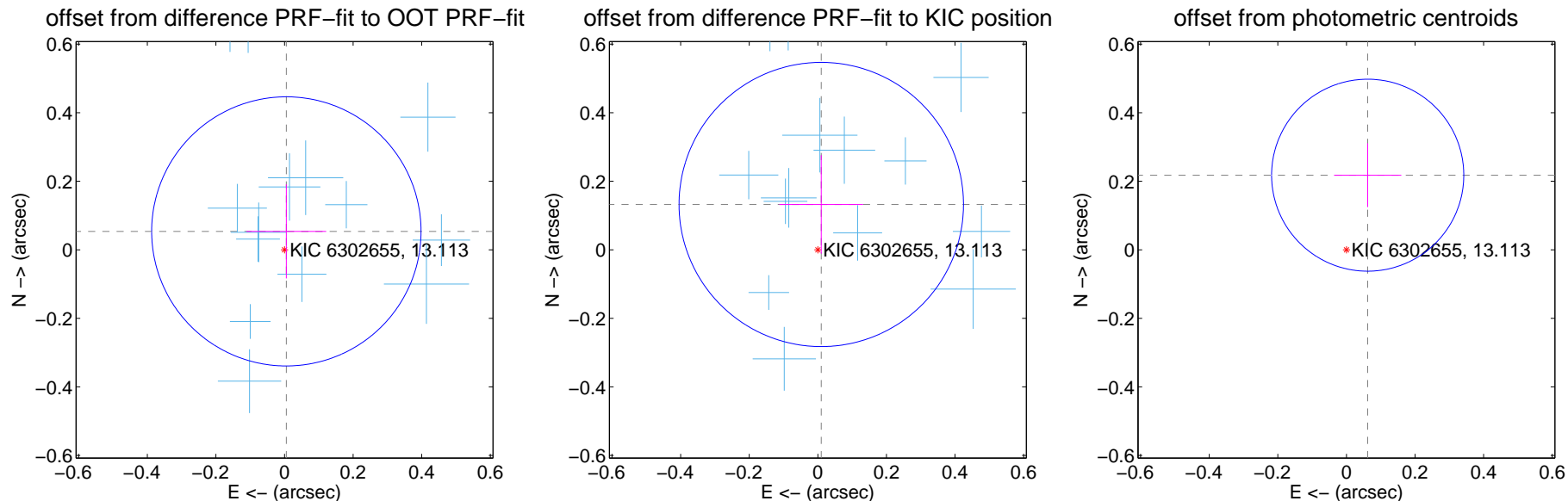
DV Centroid Data

Supplemental centroid analysis for 006302655-04. Kepler magnitude: 13.11. Transit SNR 12.22

There are 17 quarters with good PRF difference image offsets

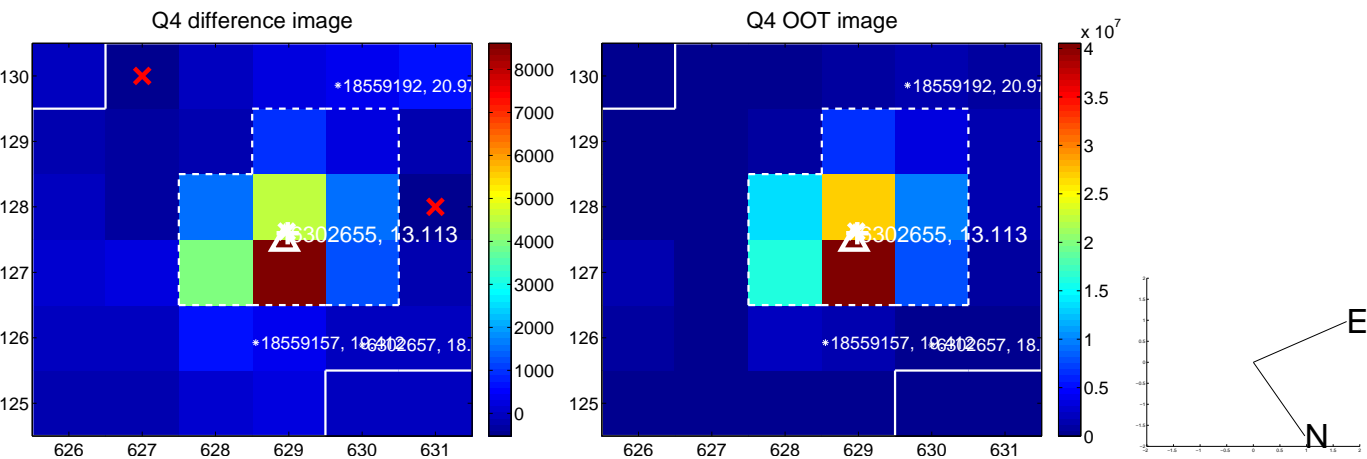
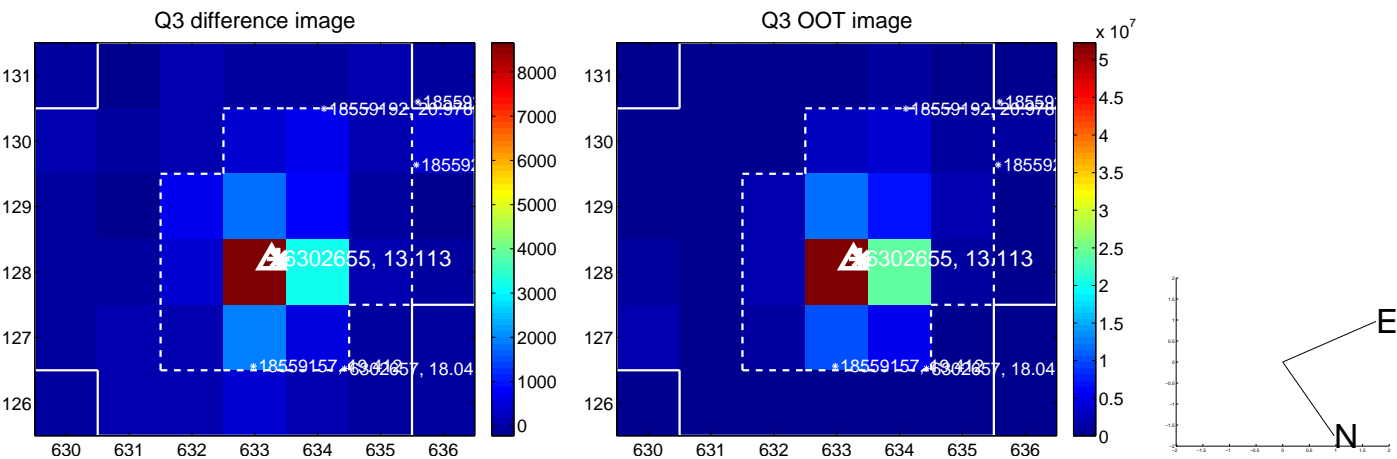
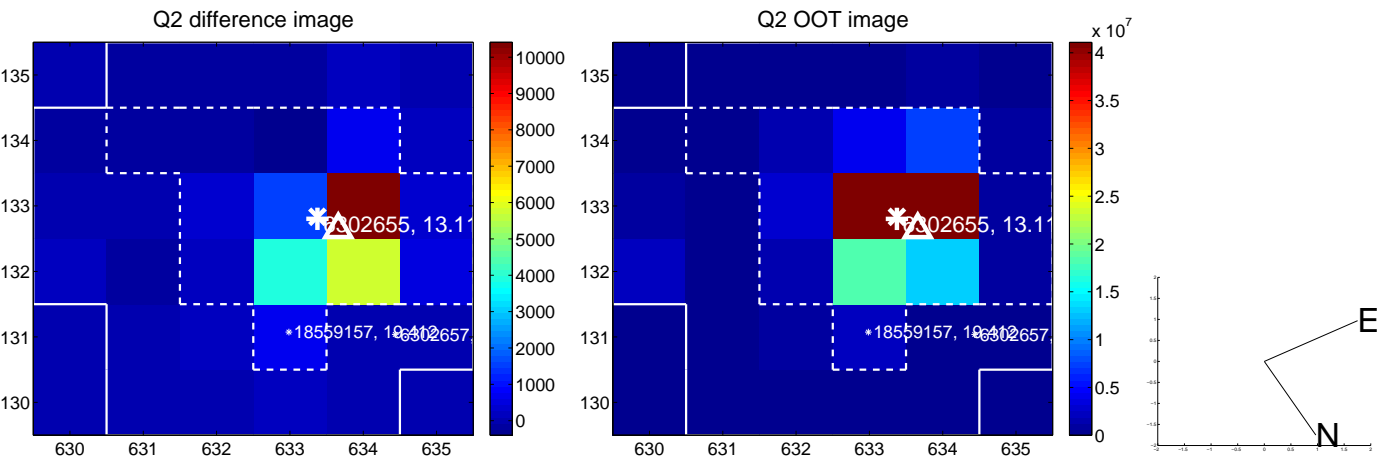
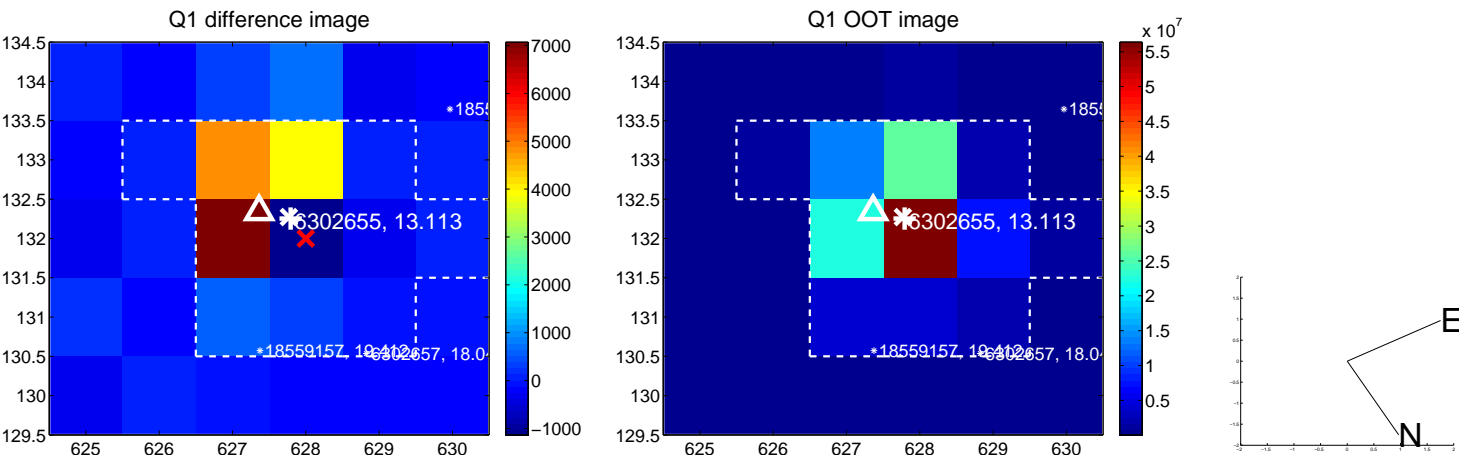
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.131	0.41	-0.005 ± 0.116	0.054 ± 0.137
PRF-fit source offset from KIC position	0.133 ± 0.138	0.96	-0.010 ± 0.122	0.132 ± 0.144
photometric centroid source offset	0.23 ± 0.09	2.42	-0.06 ± 0.10	0.22 ± 0.09

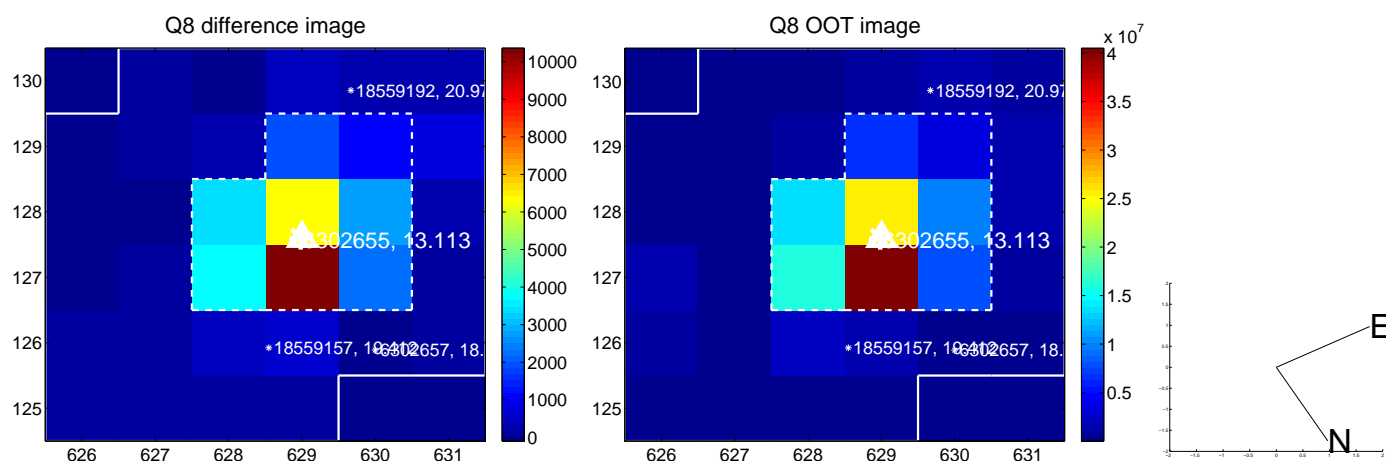
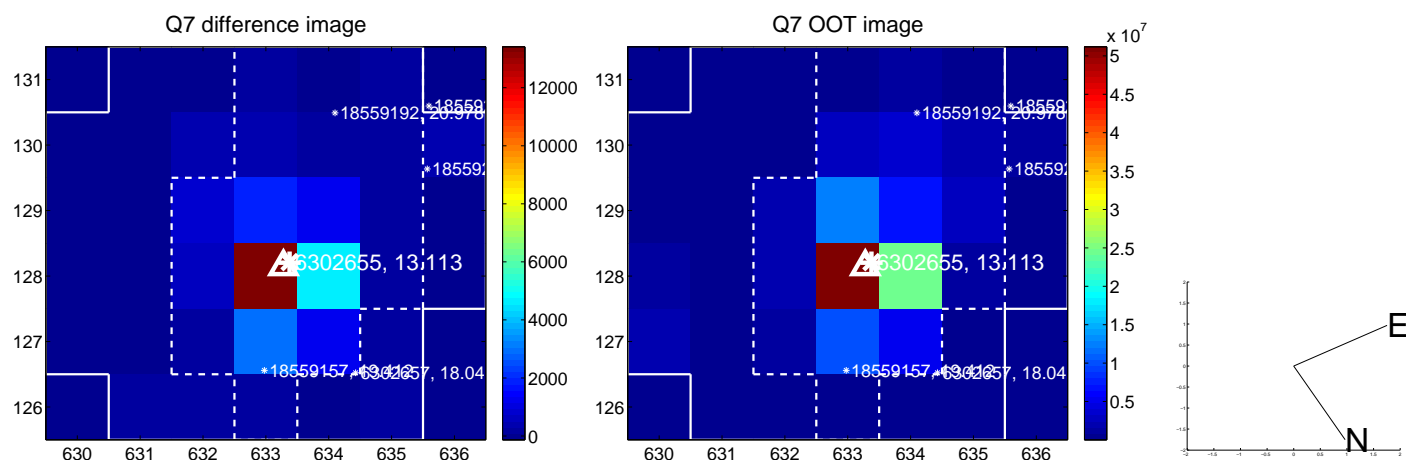
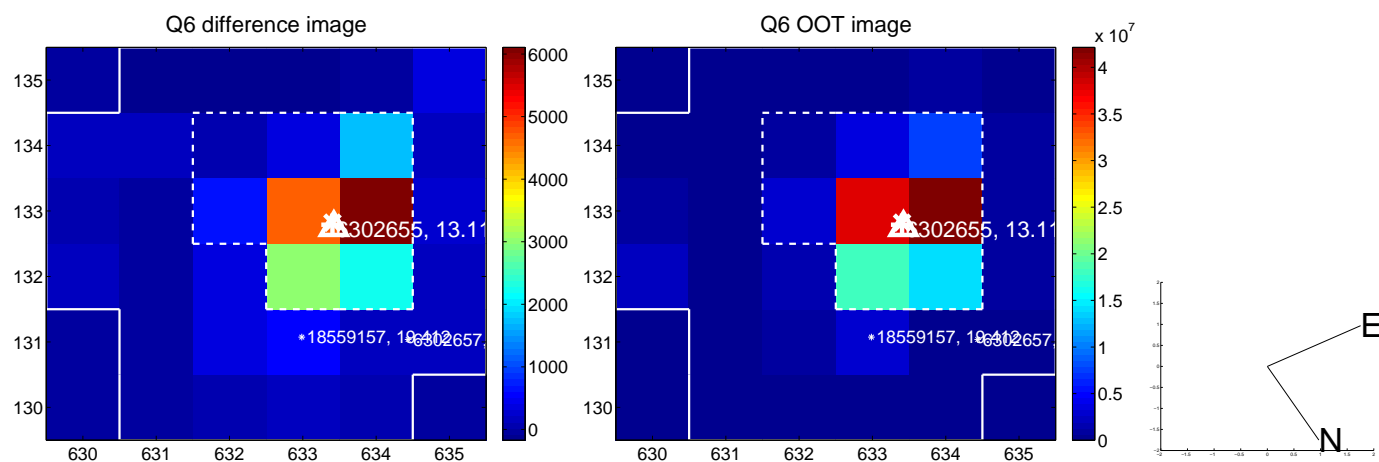
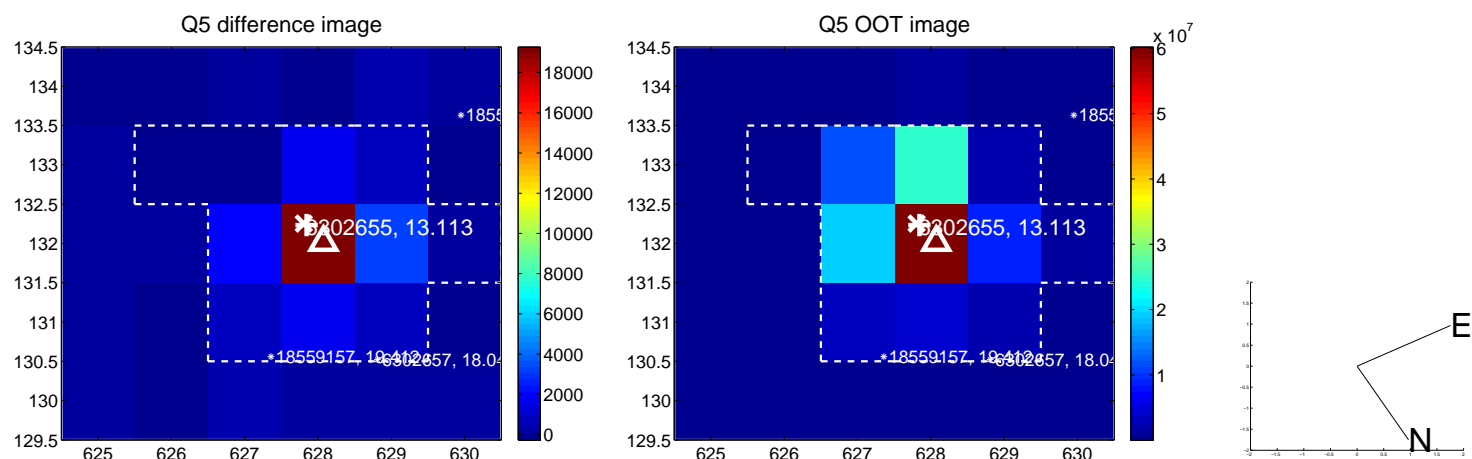


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

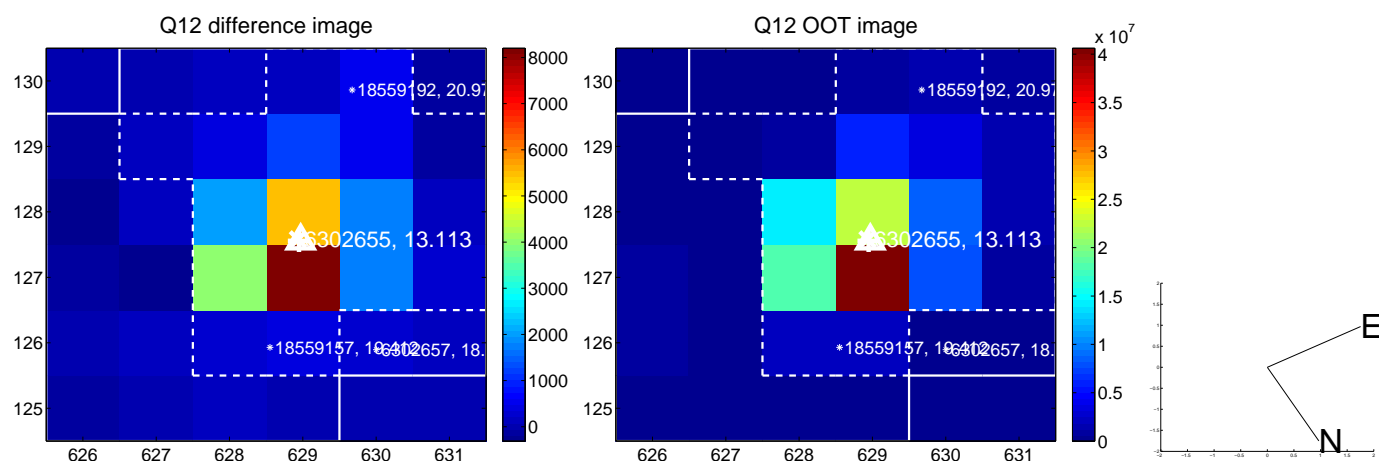
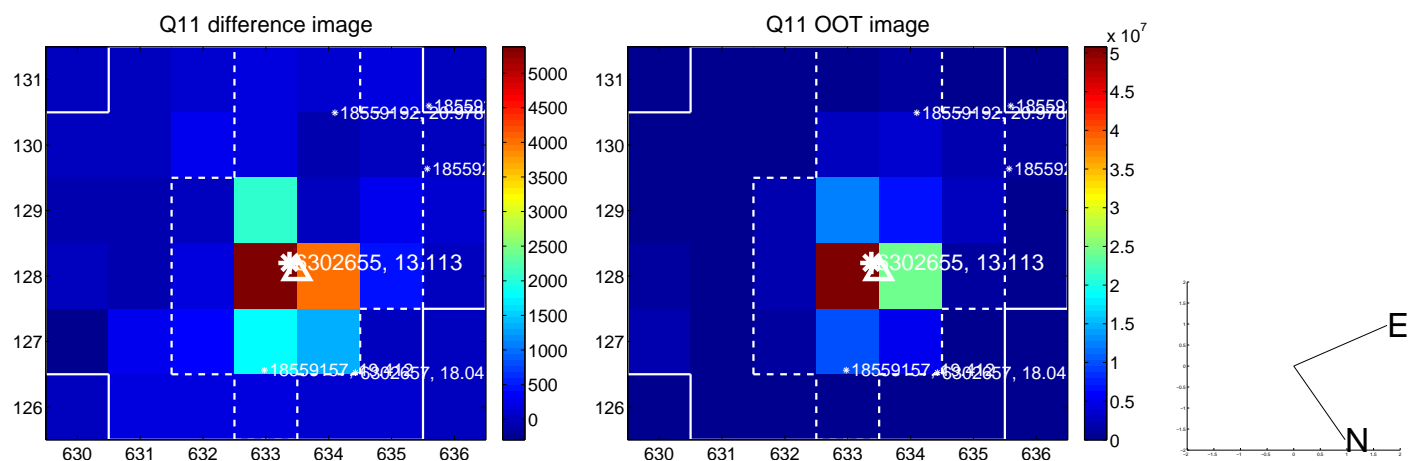
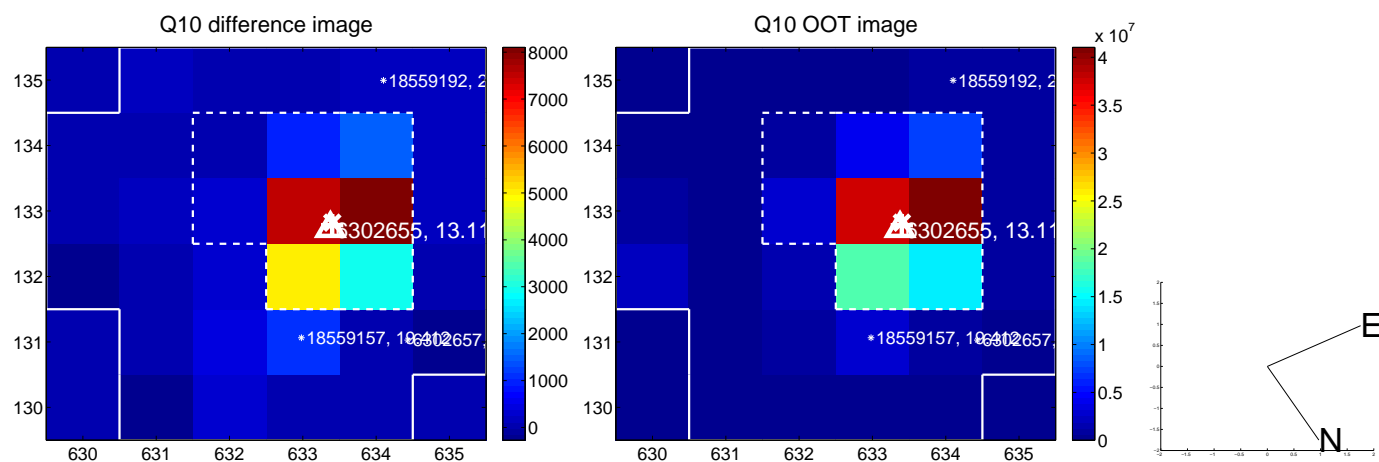
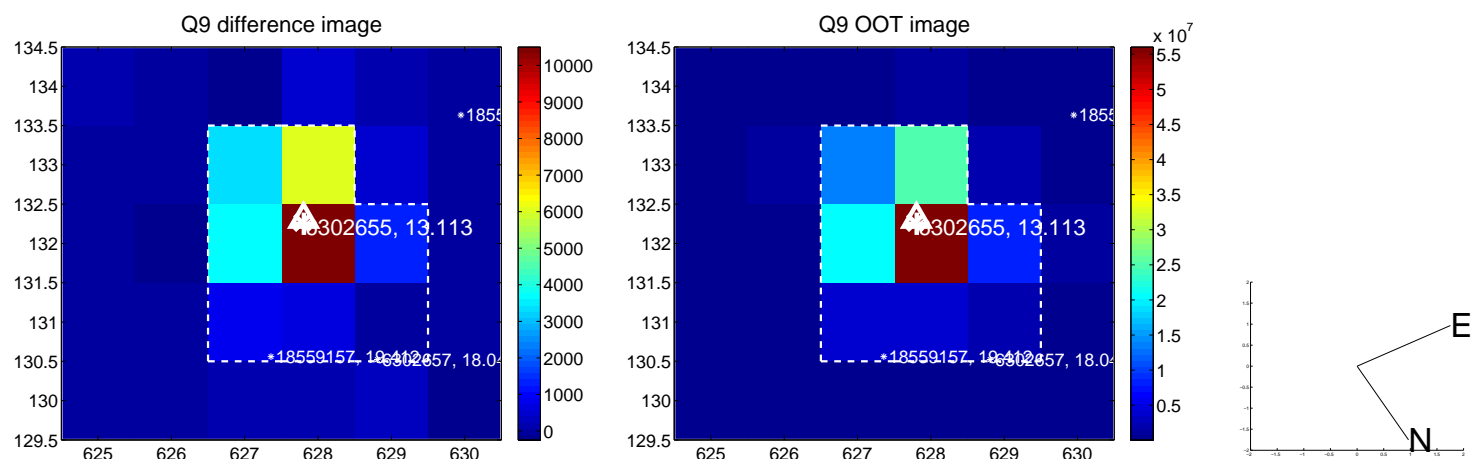
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



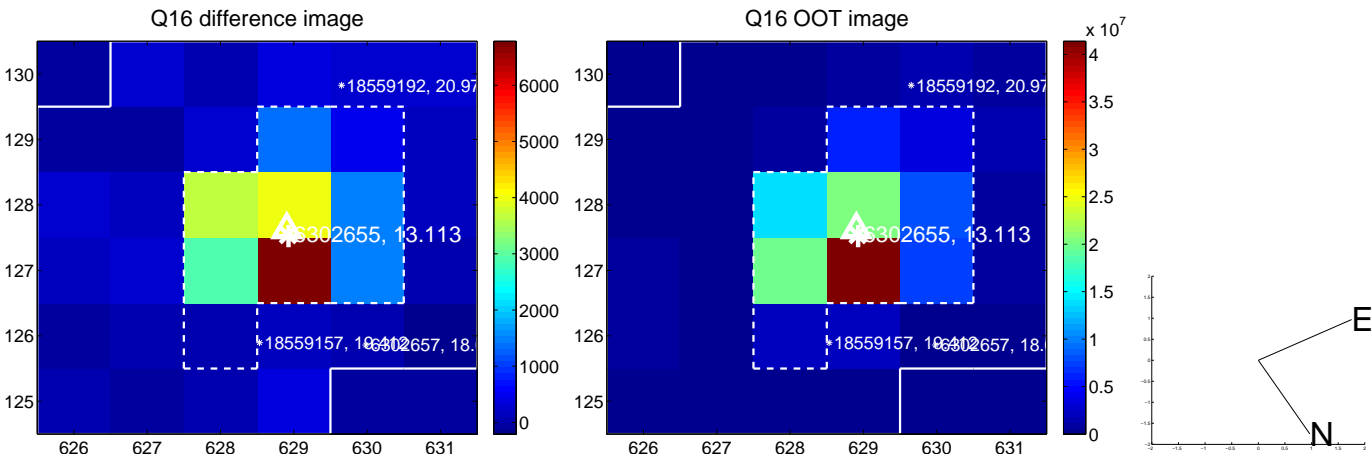
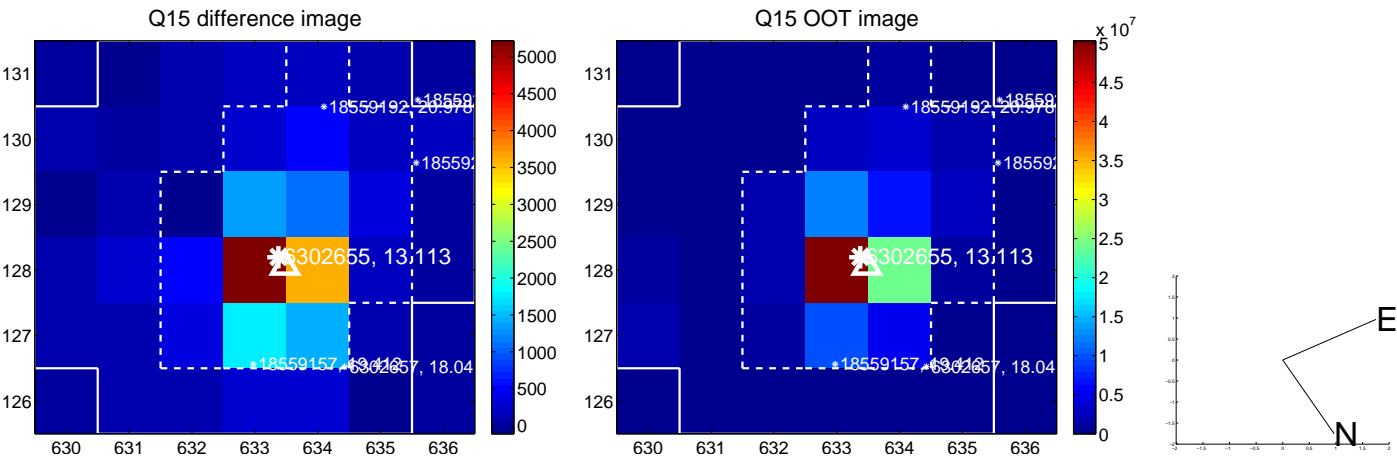
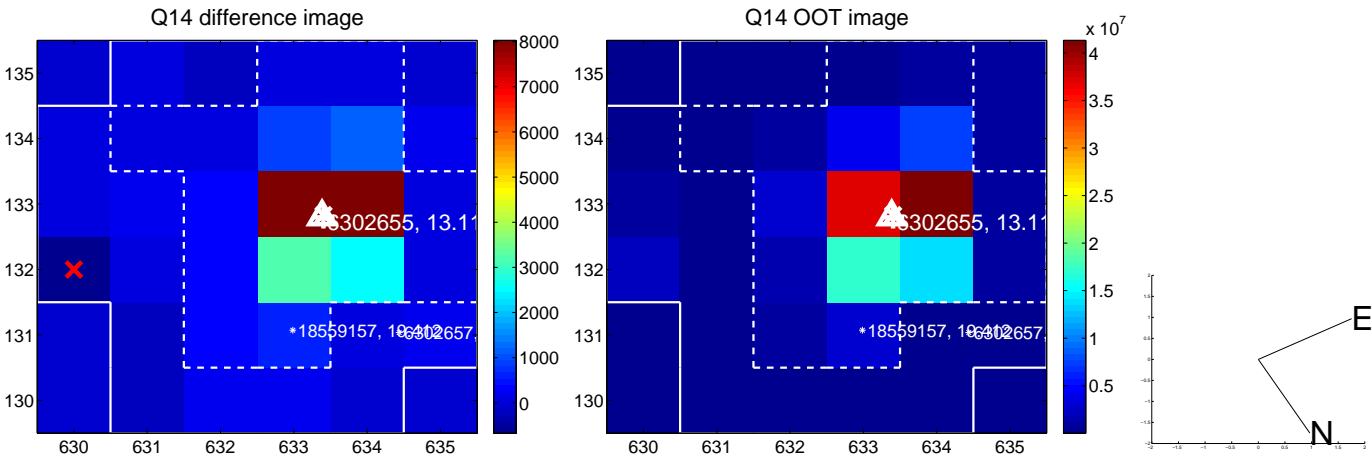
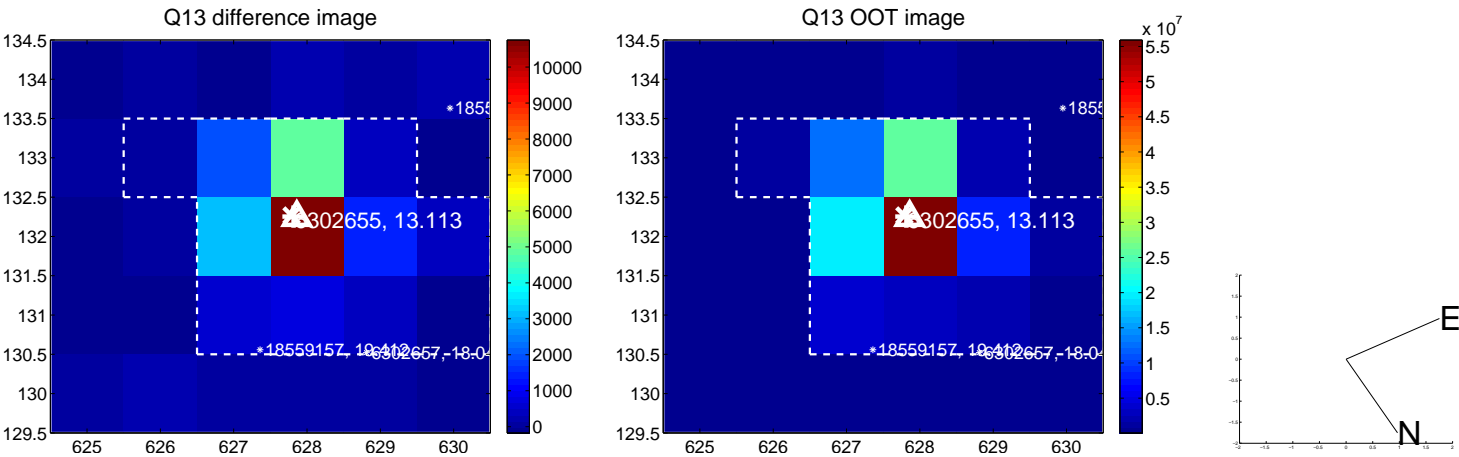
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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.



UKIRT Image

Declination

