

KIC 007549852

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})
007549852-01	OBS	No	0.937175	132.251856	435.8	1.104	19.4	23.5	2.37	7068	5.10	26154.13
007549852-02	OBS	No	0.562312	131.771638	331.2	0.966	25.2	19.5	2.37	7068	5.06	51681.03
007549852-03	OBS	No	0.561932	132.109140	0.0	2.232	21.9	0.0	2.37	7068	0.01	51727.66
007549852-04	OBS	No	0.562312	132.054744	207.1	1.500	13.0	-1.0	2.37	7068	3.44	51681.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007549852-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007549852-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

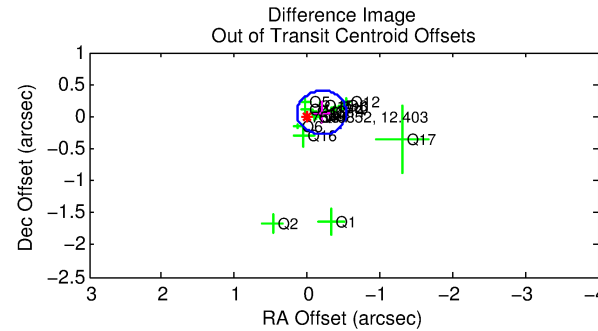
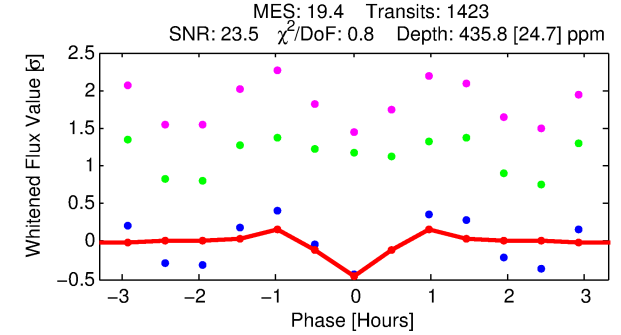
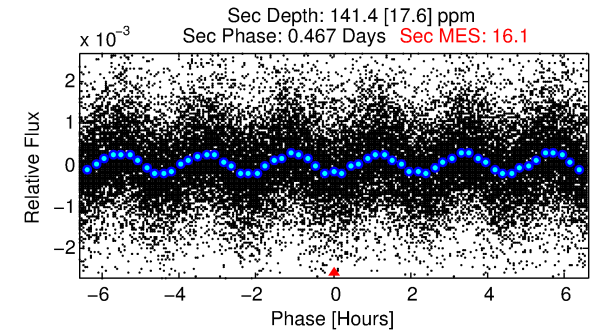
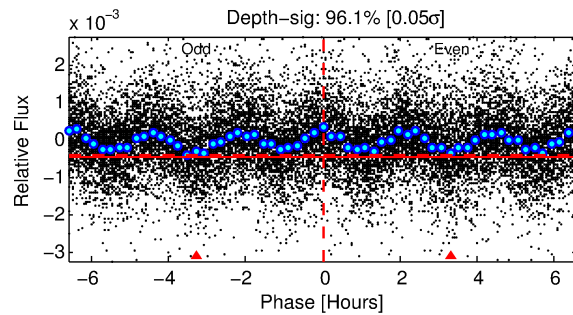
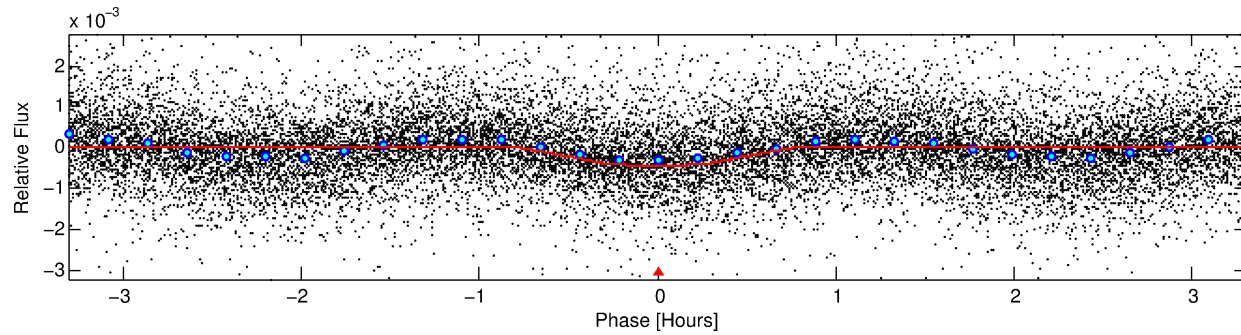
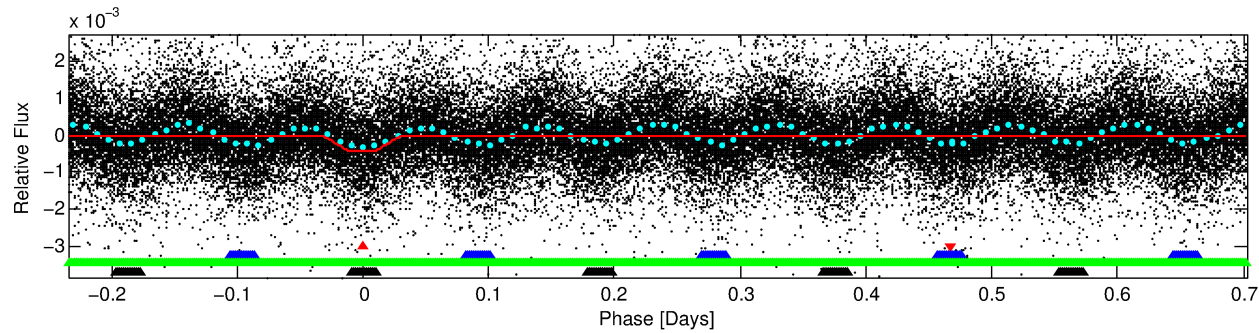
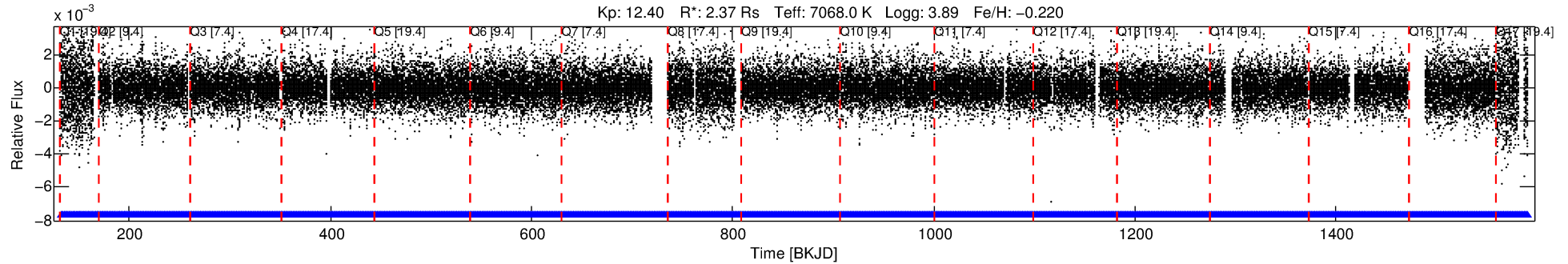
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007549852-01

No Significant Match Found

DV One-Page Summary

KIC: 7549852 Candidate: 1 of 4 Period: 0.937 d



DV Fit Results:

Period = 0.93718 [0.00000] d
Epoch = 132.2519 [0.0005] BKJD
Rp/R* = 0.0198 [0.0038]
a/R* = 6.02 [6.09]
b = 0.44 [1.95]
Seff = 26154.13 [16653.98]
Teq = 3243 [516] K
Rp = 5.10 [2.27] Re
a = 0.0219 [0.0084] AU
Ag = 1.43 [1.05] [0.41 σ]
Teffp = 5480 [596] K [2.84 σ]

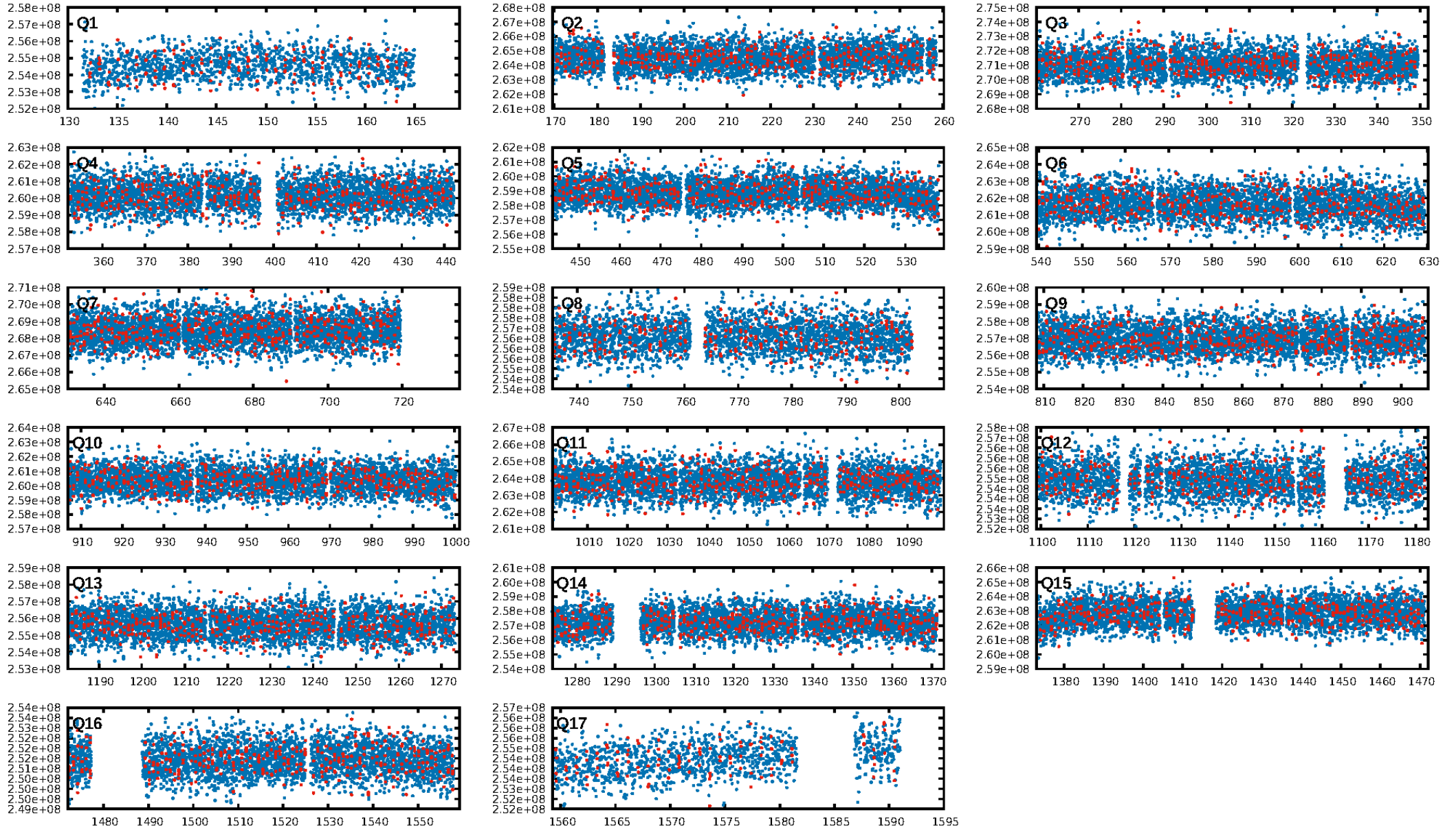
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.83 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1360/1360]
GhostDiagnostic-chr: 21.56
Centroid-sig: 1.8%
Centroid-so: 0.123 arcsec [2.62 σ]
OotOffset-rm: 0.209 arcsec [1.84 σ]
KicOffset-rm: 0.212 arcsec [1.74 σ]
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]

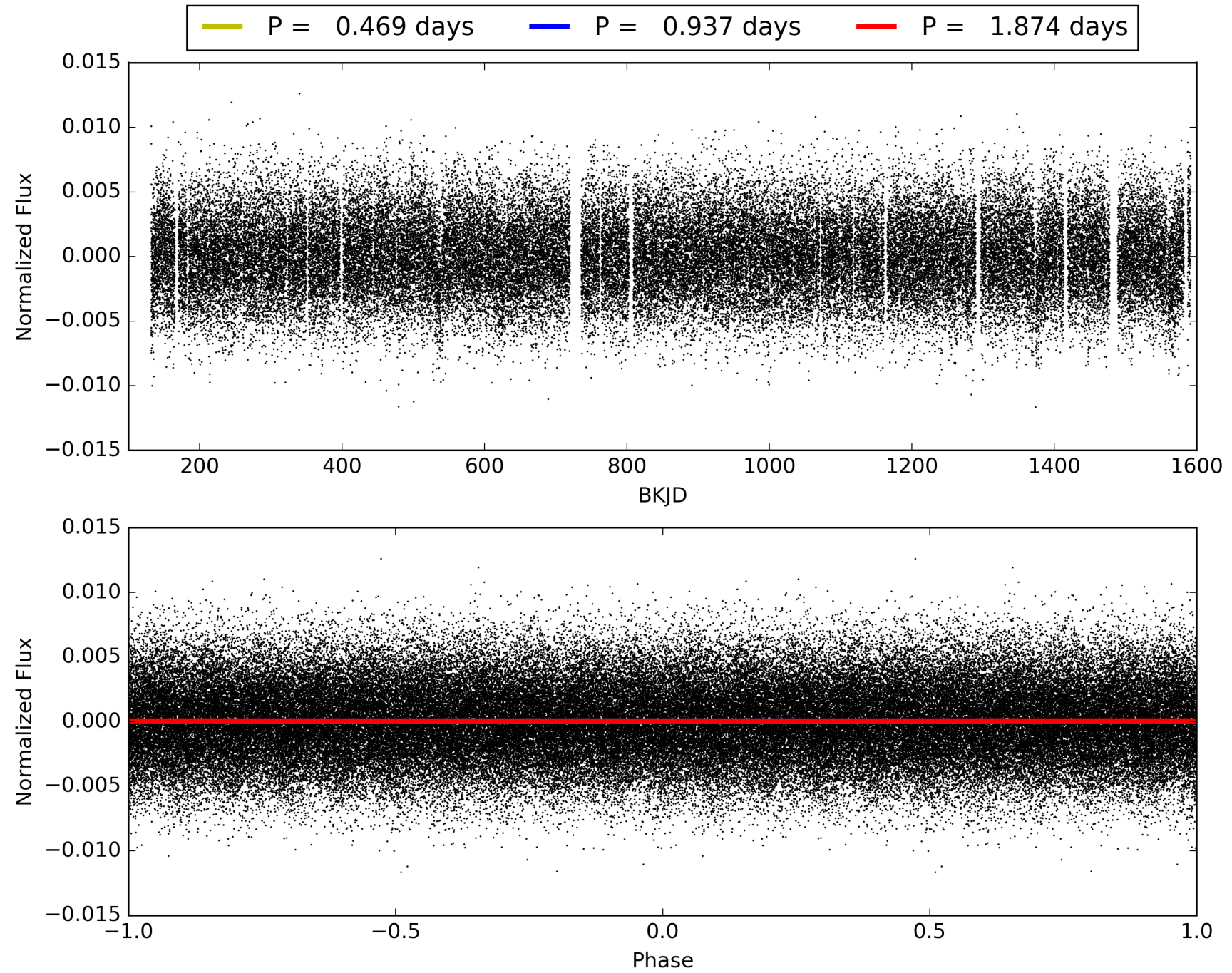
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:14:56 Z

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

TCE 007549852-01, PDC Light Curves

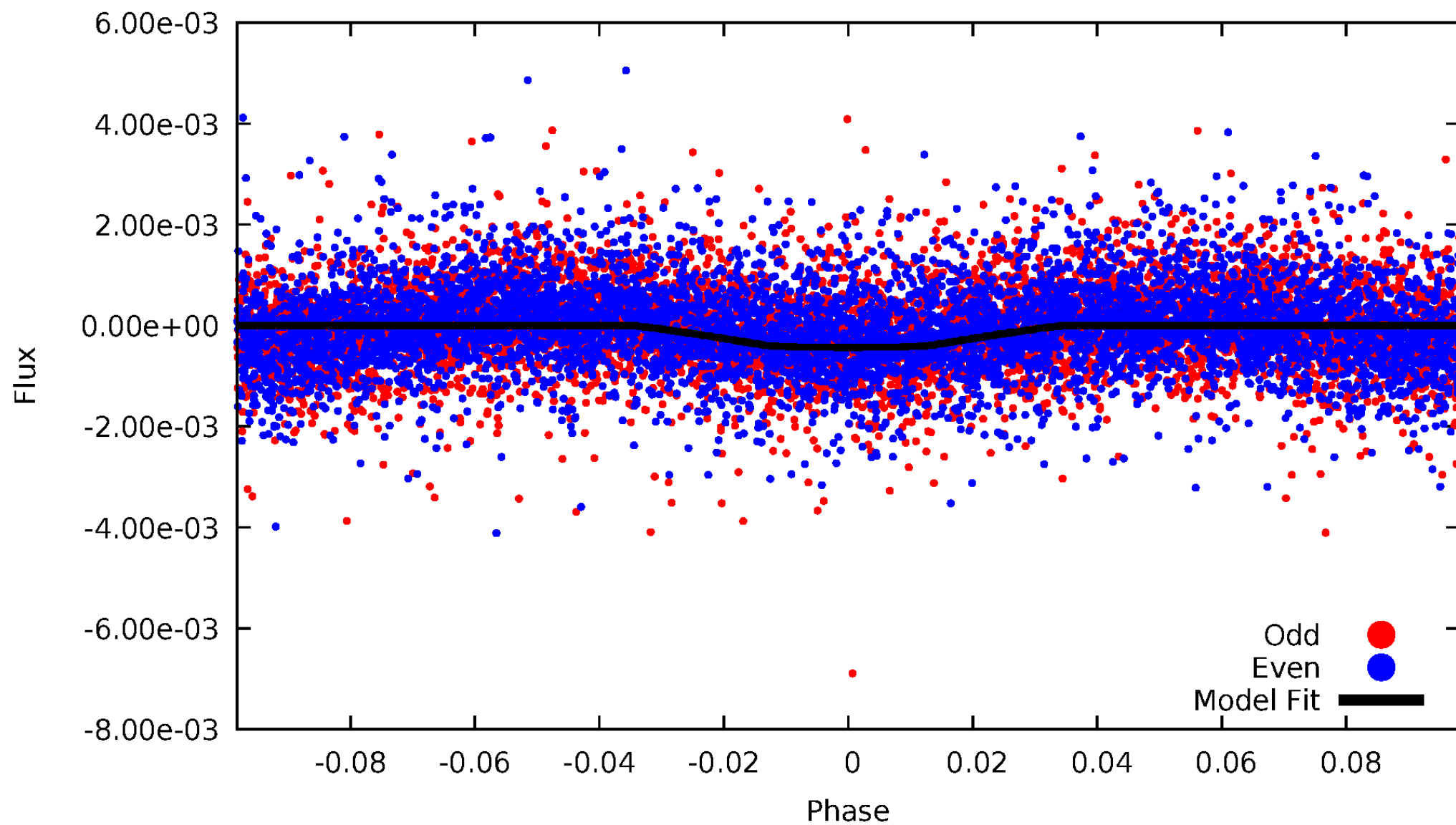


TCE 007549852-01



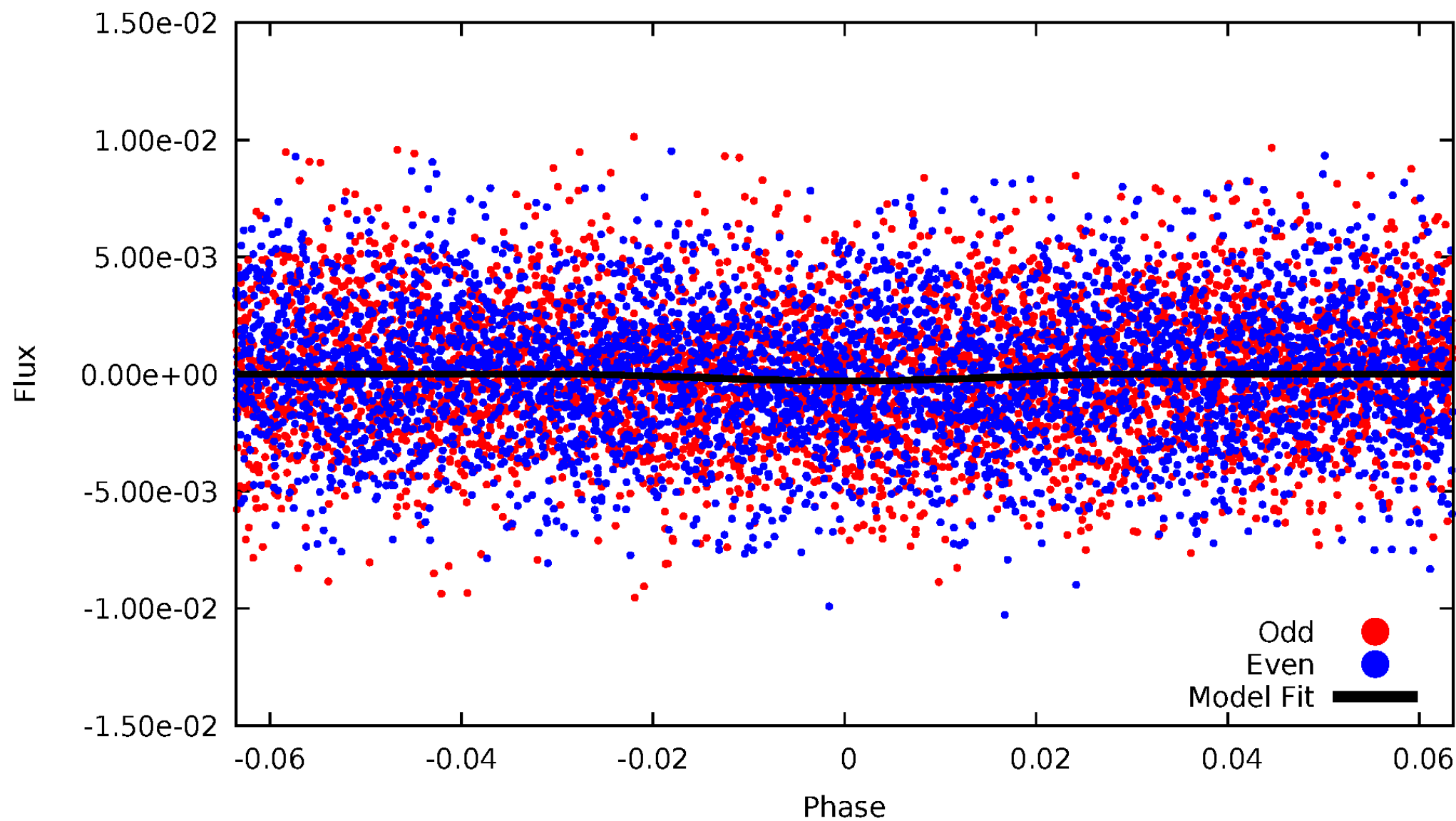
DV Odd/Even

TCE 007549852-01

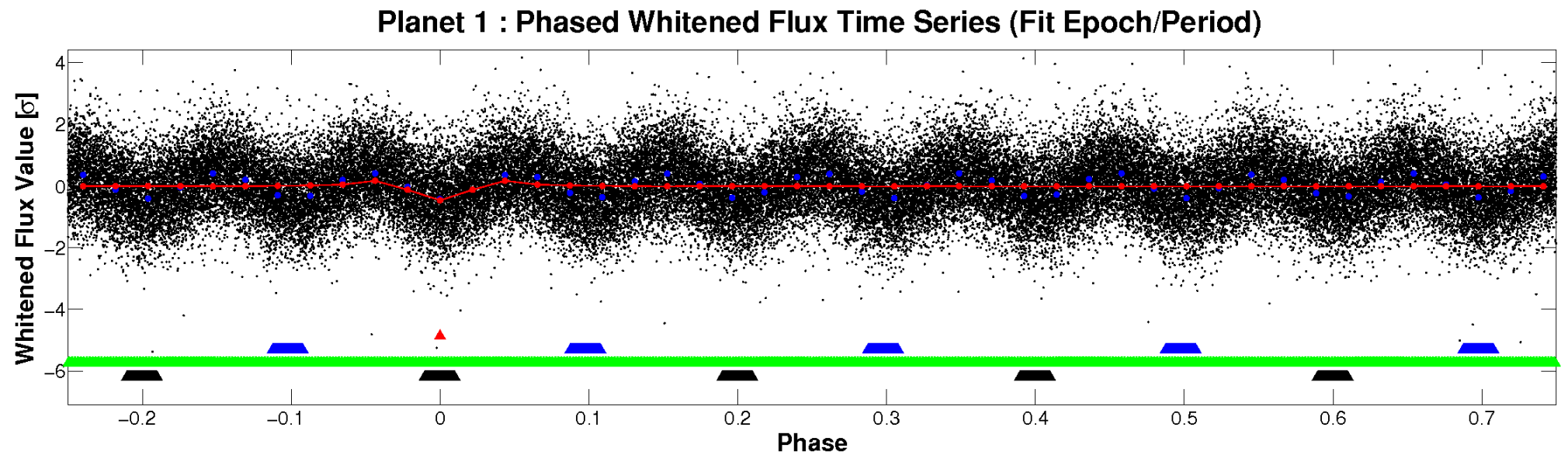
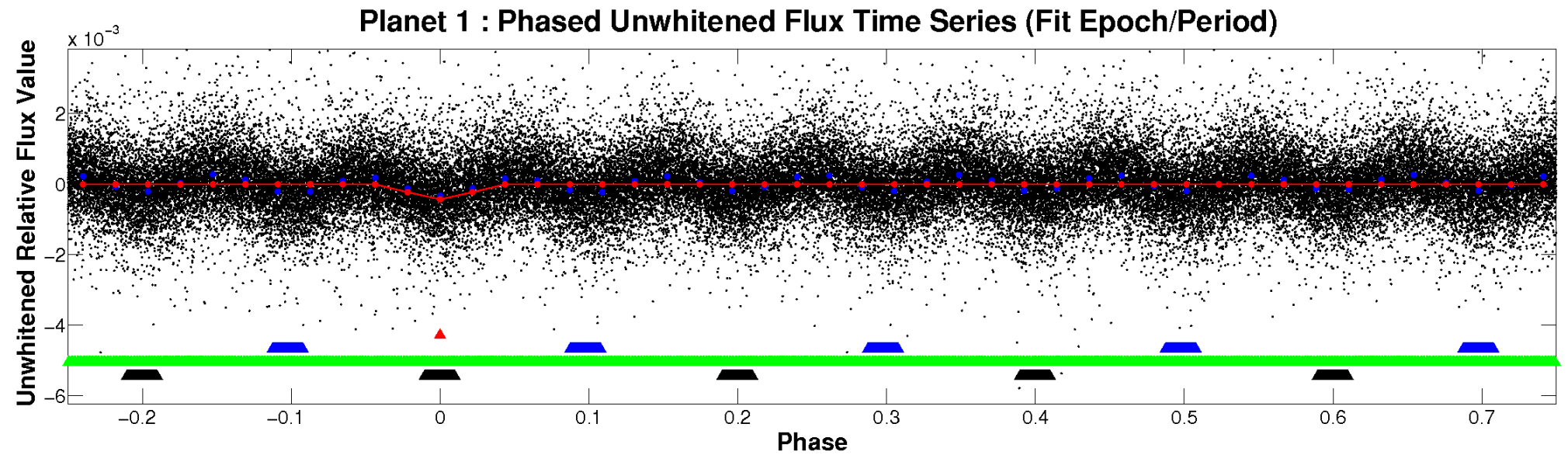


ALT Odd/Even

TCE 007549852-01

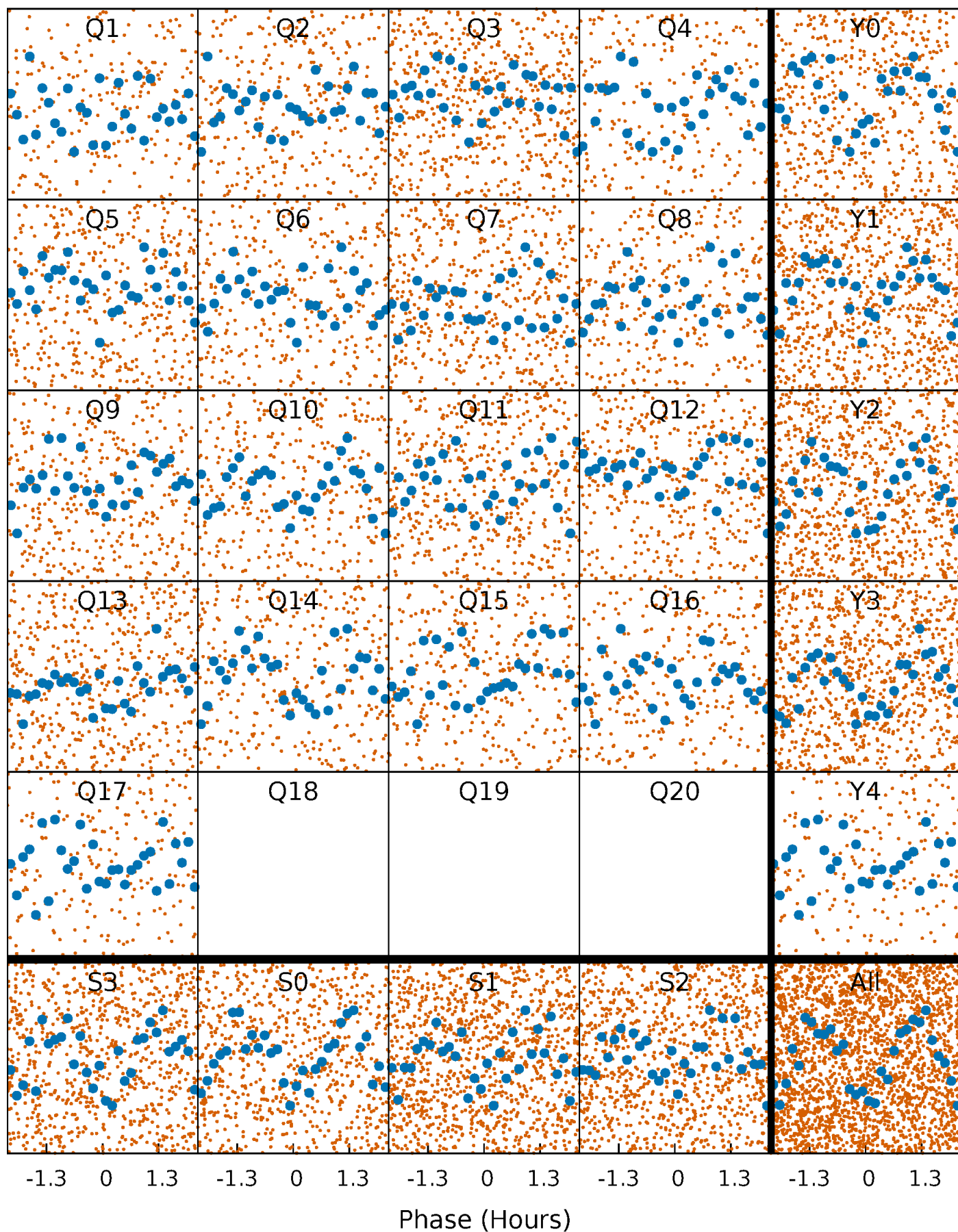


Non-Whitened Vs. Whitened Light Curve



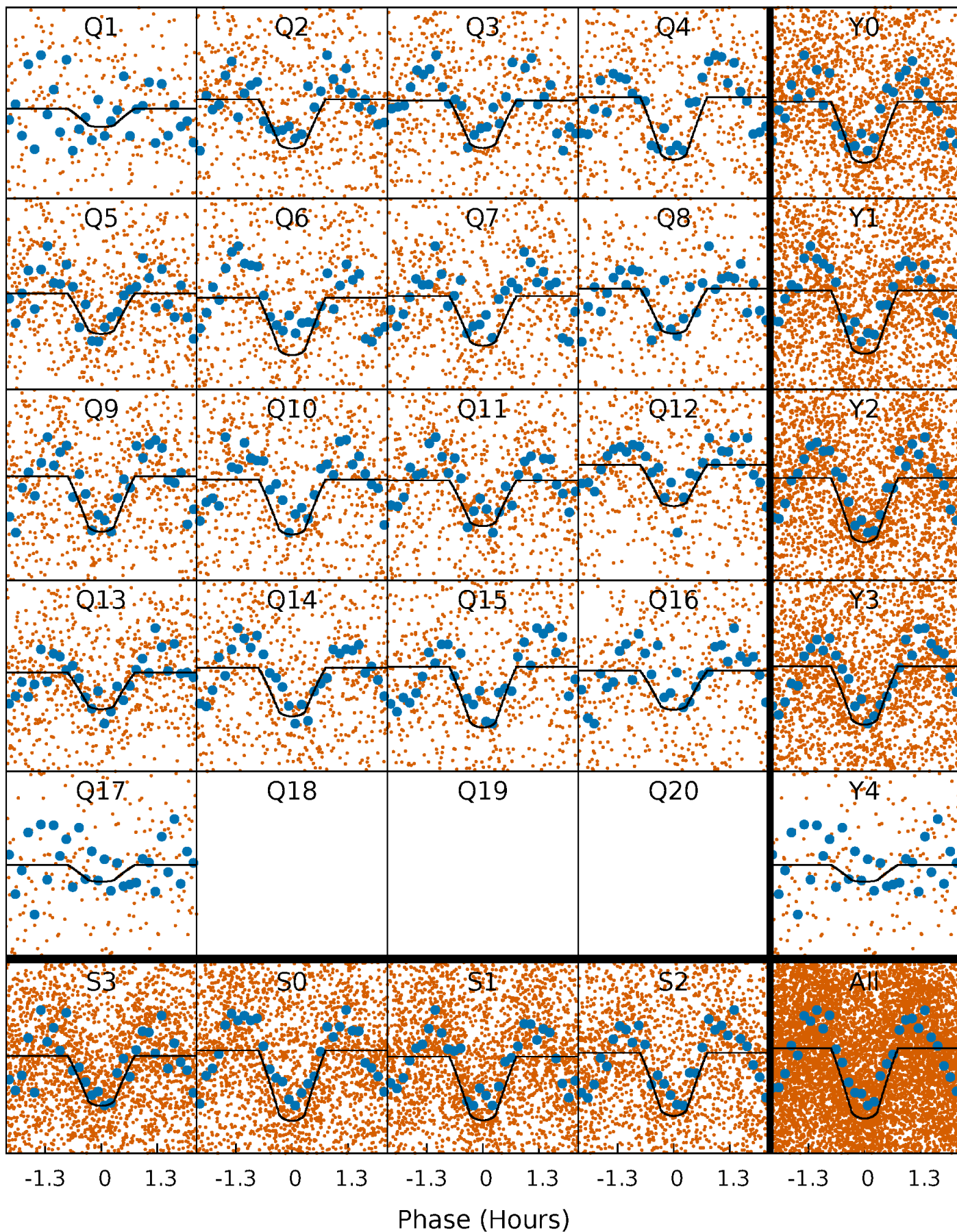
PDC Quarter-Phased Transit Curves

TCE 007549852-01 P= 0.937175 Days $T_0=132.251856$ (BKJD)



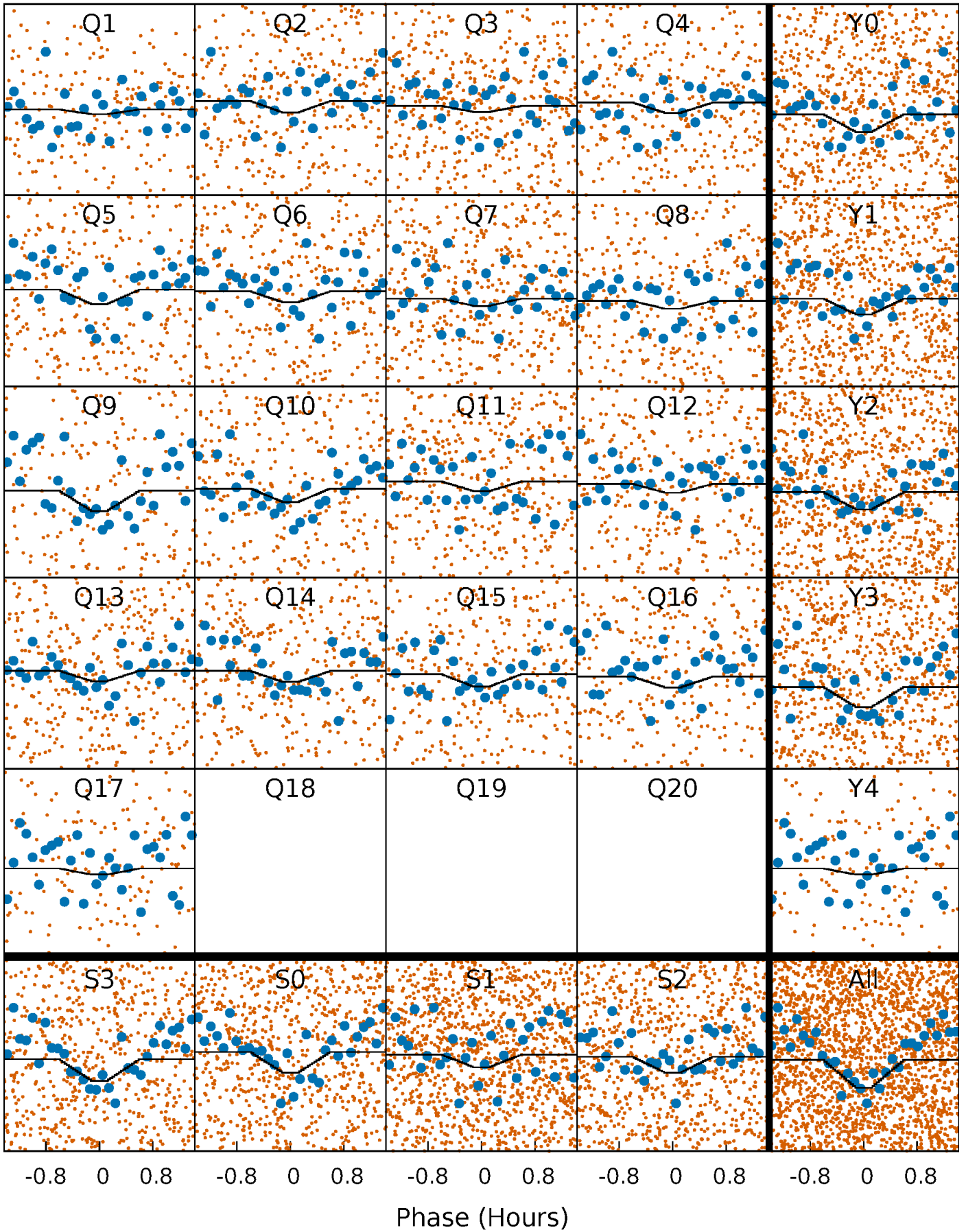
DV Quarter-Phased Transit Curves

TCE 007549852-01 P= 0.937175 Days $T_0=132.251856$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

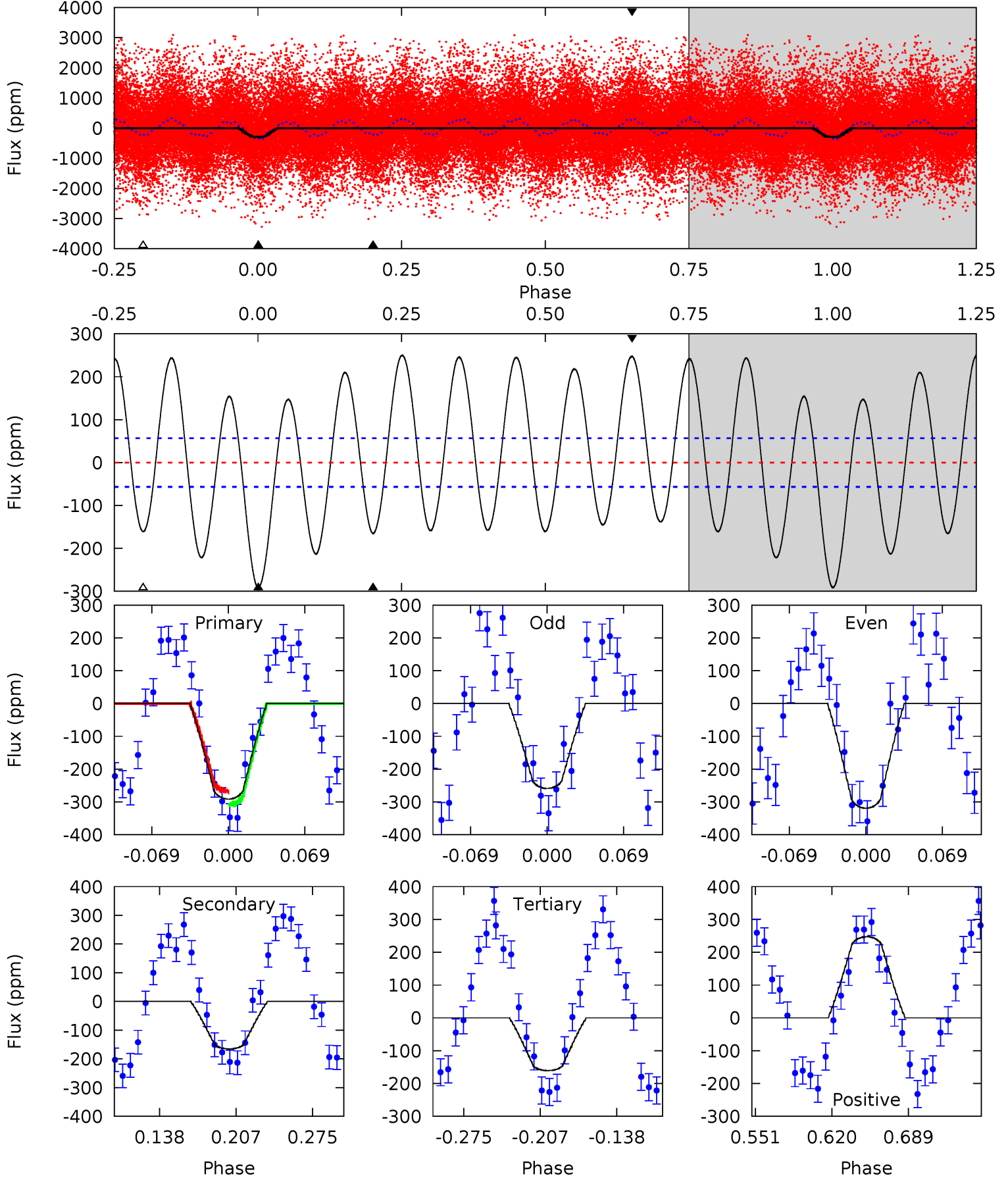
TCE 007549852-01 P= 0.937179 Days $T_0=132.250310$ (BKJD)



DV Model-Shift Uniqueness Test

007549852-01, P = 0.937175 Days, E = 131.314681 Days

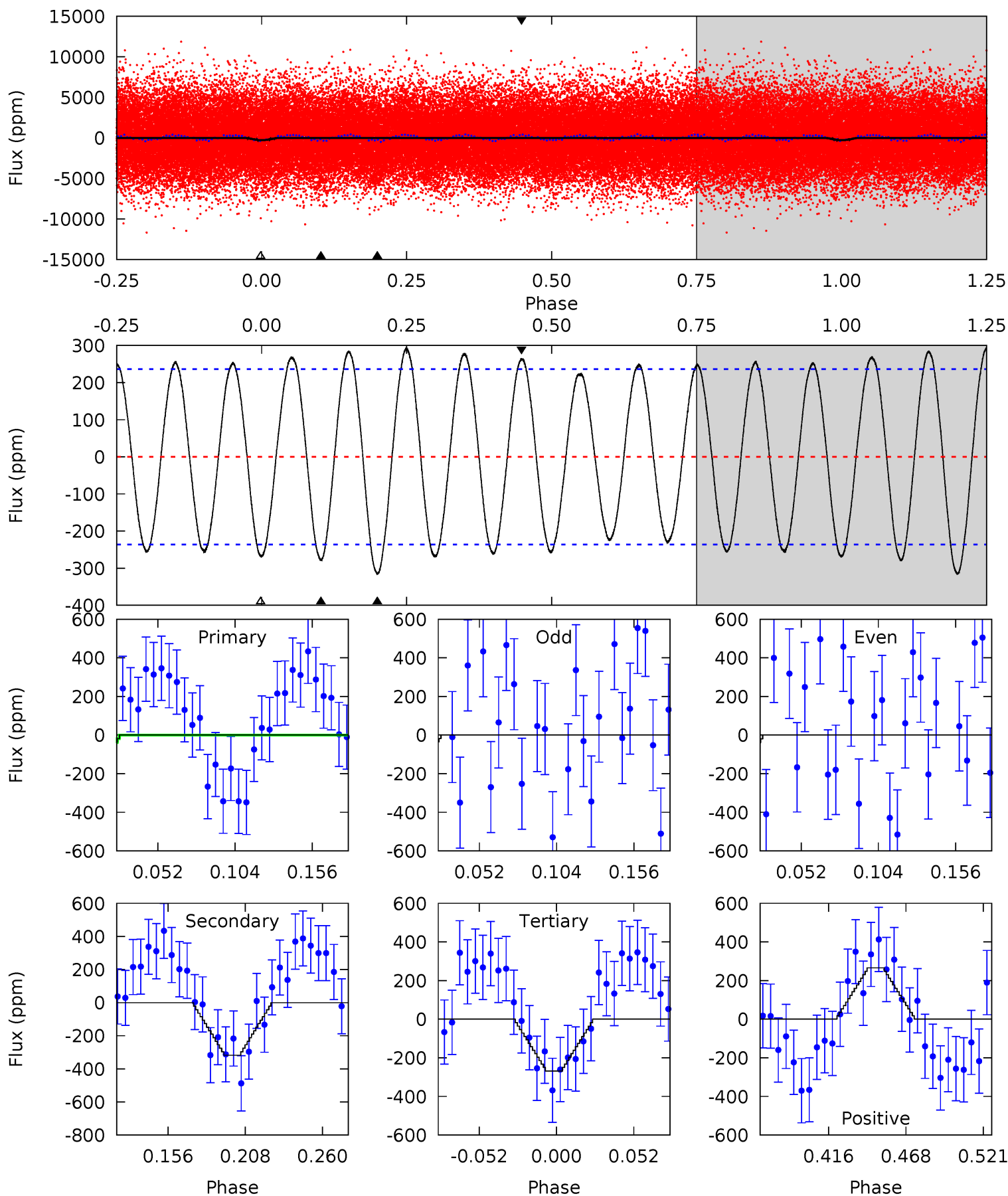
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.9	13.6	13.2	20.3	4.64	1.82	11.8	10.7	3.62	0.36	-6.73	2.50	0.89	0.46	1.72



Alt Model-Shift Uniqueness Test

007549852-01, P = 0.937179 Days, E = 131.313131 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.59	6.33	5.34	5.29	4.70	1.94	3.56	0.25	0.30	0.99	1.04	0.34	1.28	0.48	0.21



Stellar Parameters For KIC 007549852

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7068^{+197}_{-296}	$3.891^{+0.360}_{-0.120}$	$-0.220^{+0.250}_{-0.350}$	$2.365^{+0.513}_{-0.952}$	$1.584^{+0.203}_{-0.376}$	$0.169^{+0.480}_{-0.060}$
	+3%/-4%	+9%/-3%	+114%/-159%	+22%/-40%	+13%/-24%	+285%/-36%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007549852-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-165 ± 12	$4.72^{+1.40}_{-1.21}$	4423^{+336}_{-470}	5406^{+683}_{-507}	$1.911^{+1.341}_{-0.742}$
Alt.	-318 ± 50	$4.01^{+1.34}_{-1.17}$	4431^{+325}_{-466}	7116^{+1445}_{-868}	$5.124^{+5.056}_{-2.310}$

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

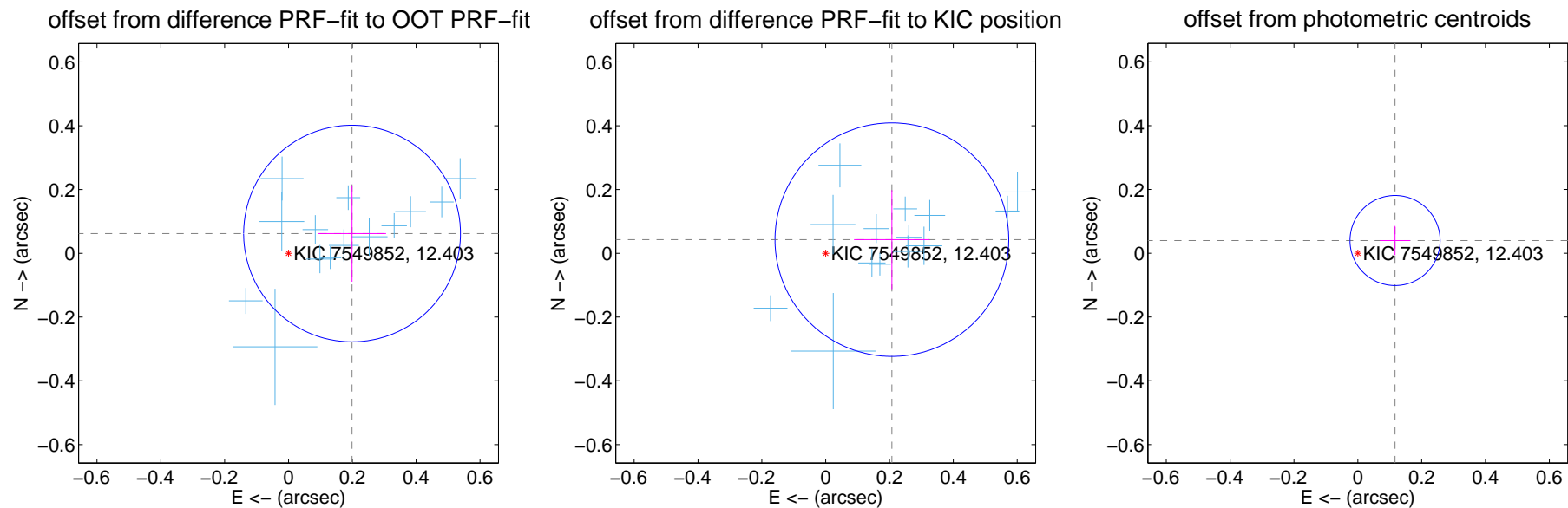
DV Centroid Data

Supplemental centroid analysis for 007549852-01. Kepler magnitude: 12.40. Transit SNR 23.45

There are 17 quarters with good PRF difference image offsets

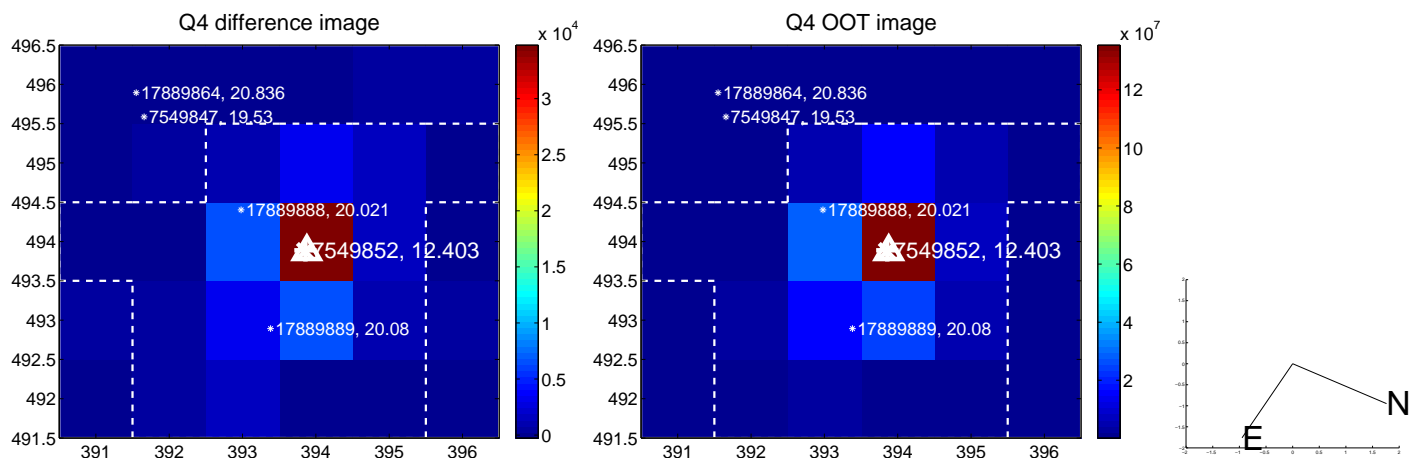
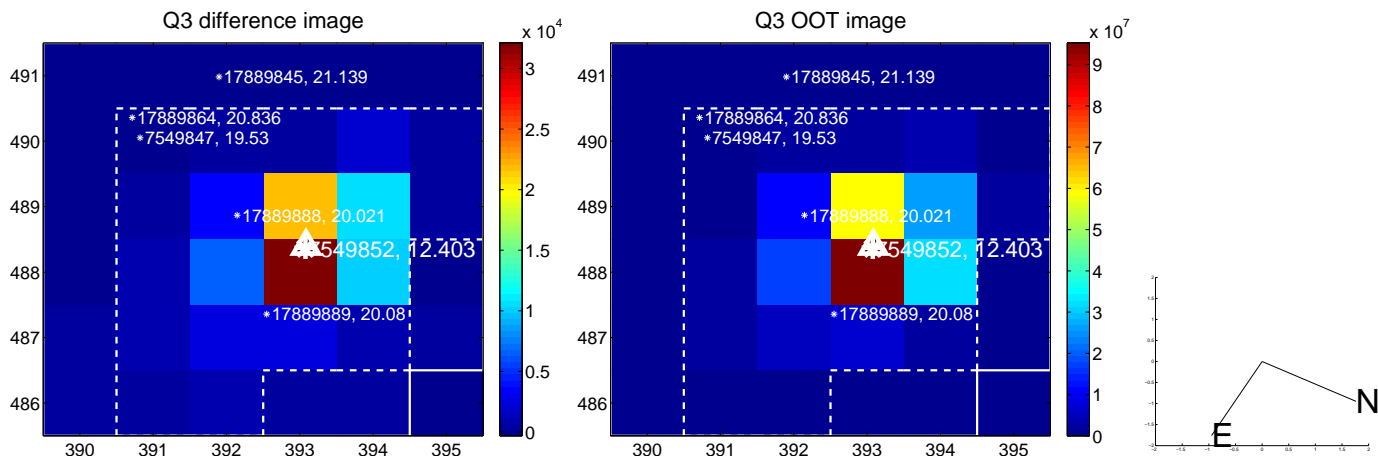
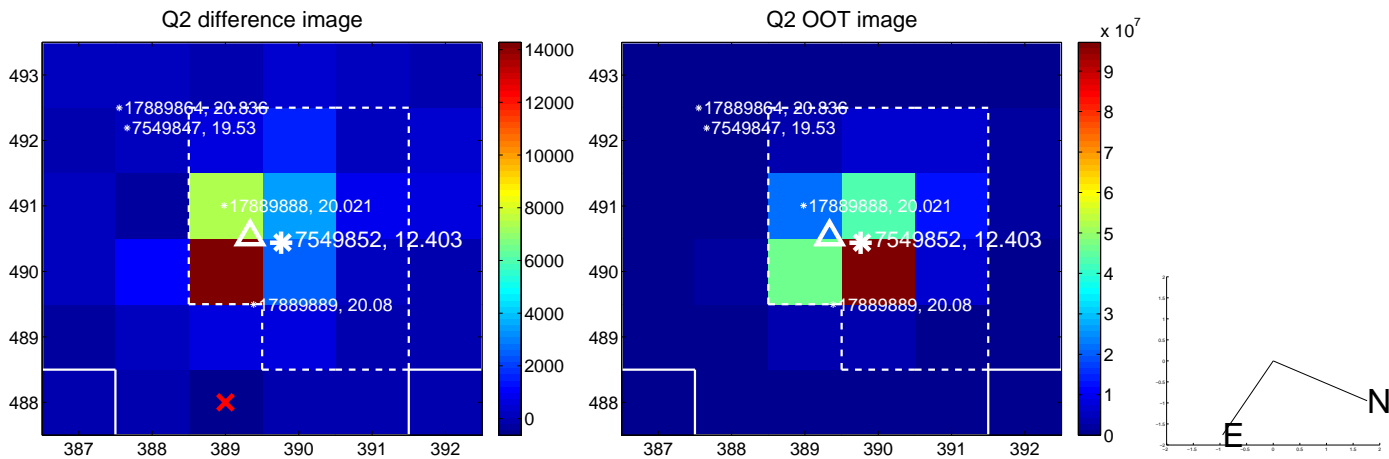
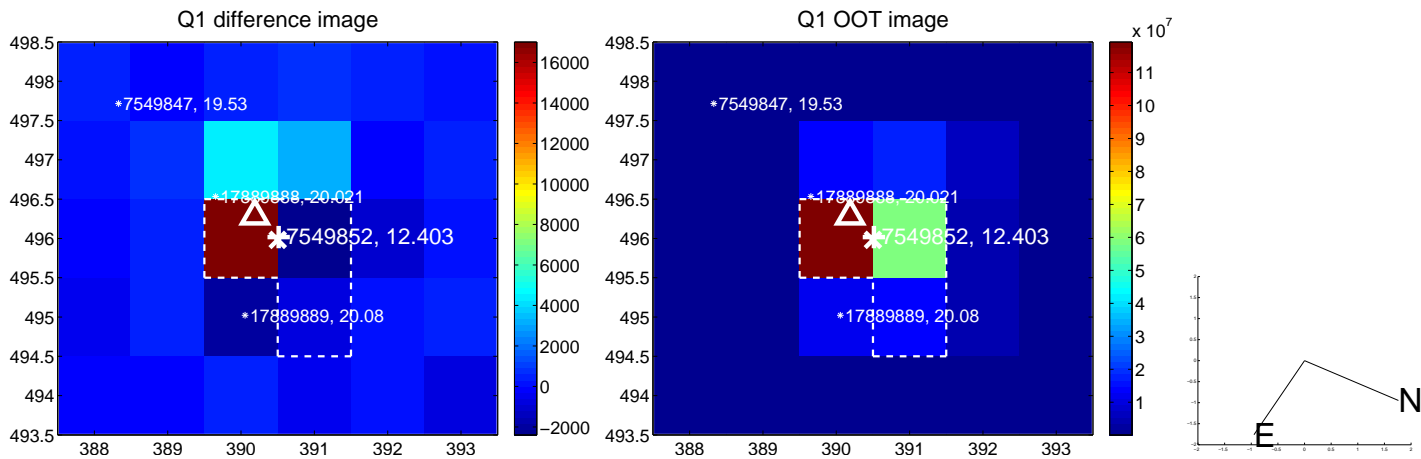
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.209 ± 0.113	1.84	-0.199 ± 0.106	0.062 ± 0.151
PRF-fit source offset from KIC position	0.212 ± 0.122	1.74	-0.207 ± 0.119	0.043 ± 0.155
photometric centroid source offset	0.12 ± 0.05	2.62	-0.12 ± 0.05	0.04 ± 0.05

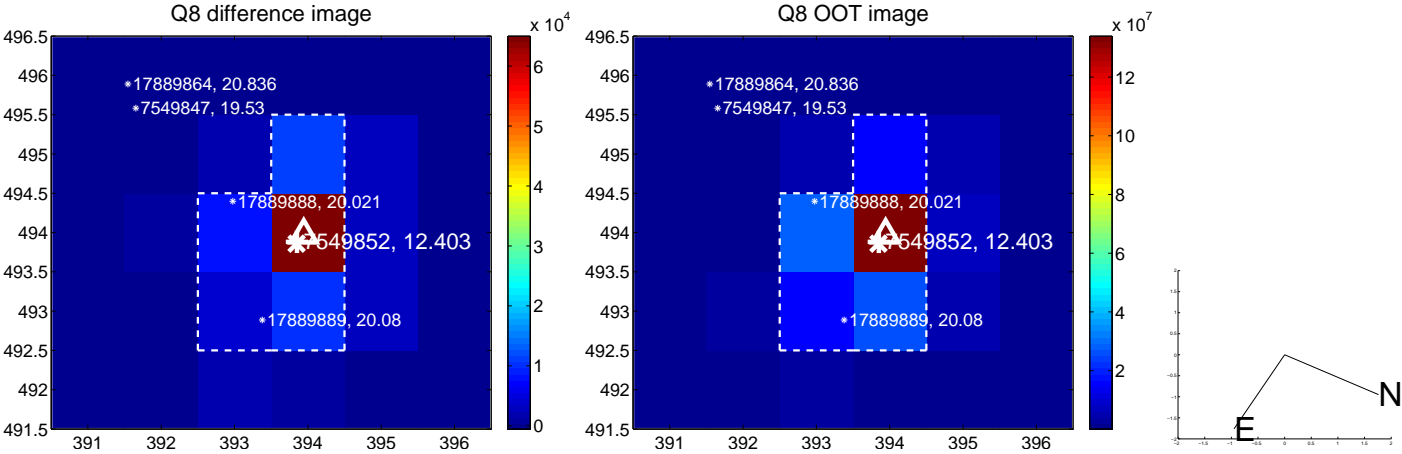
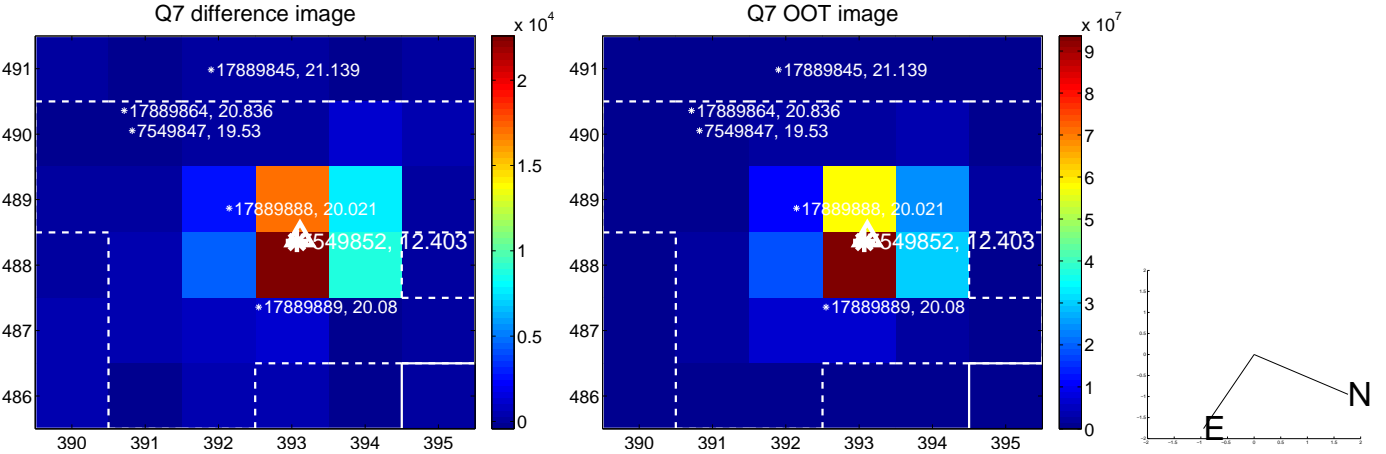
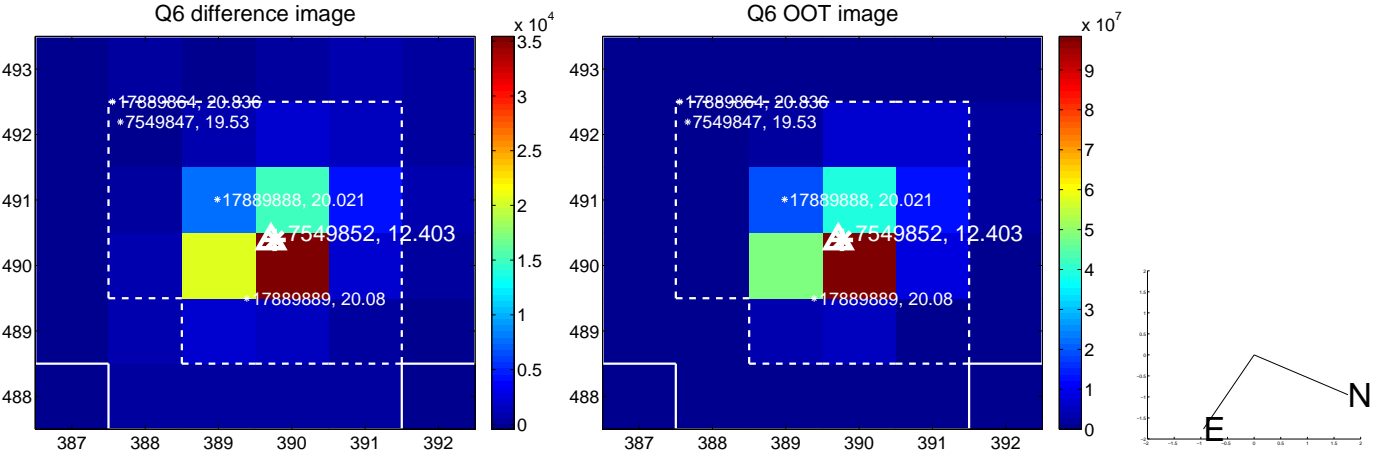
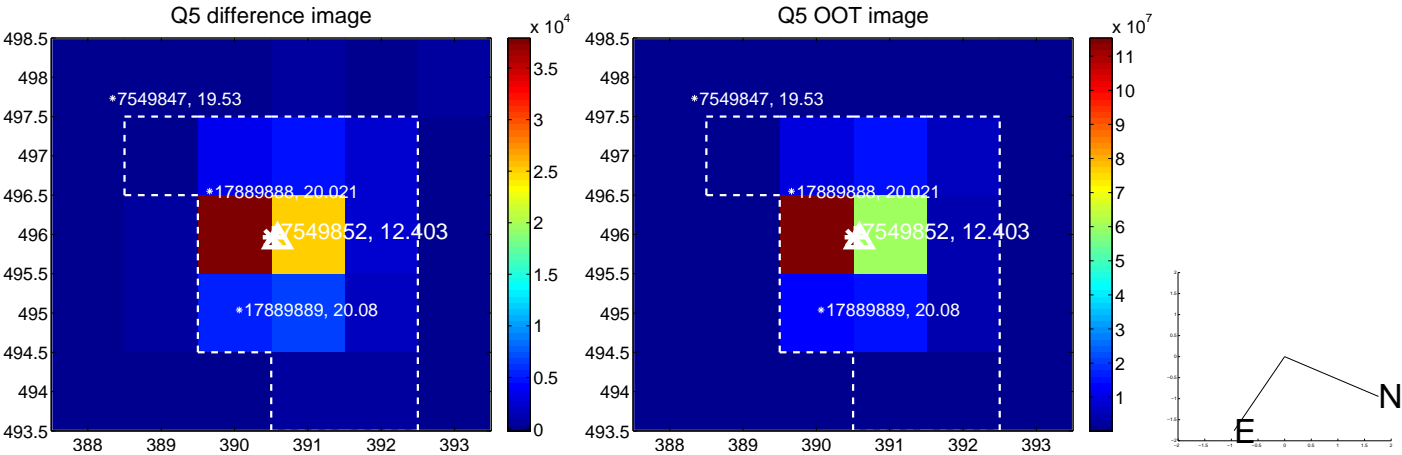


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

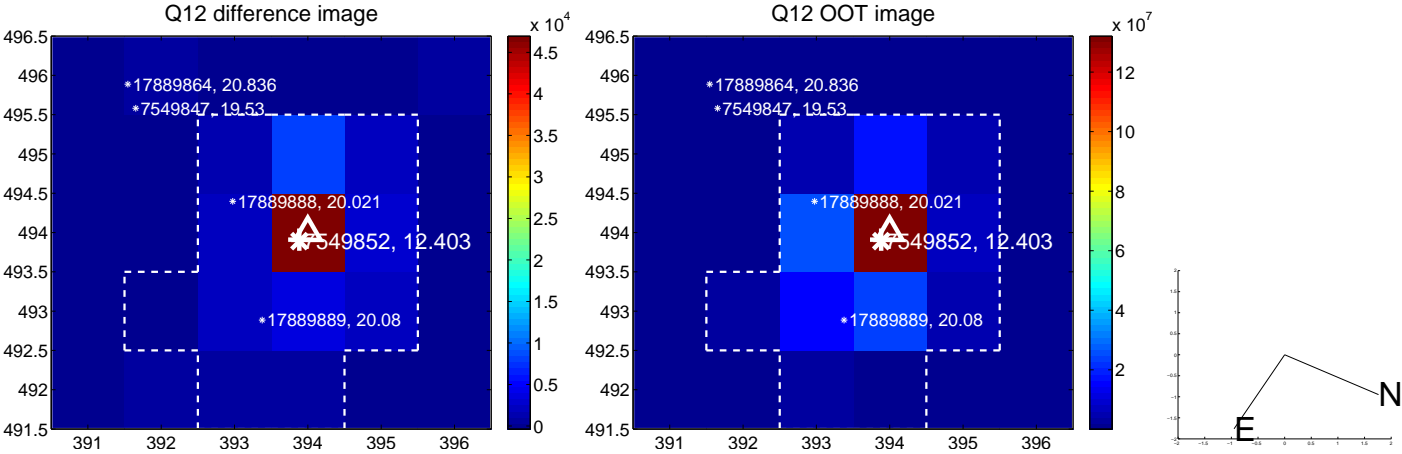
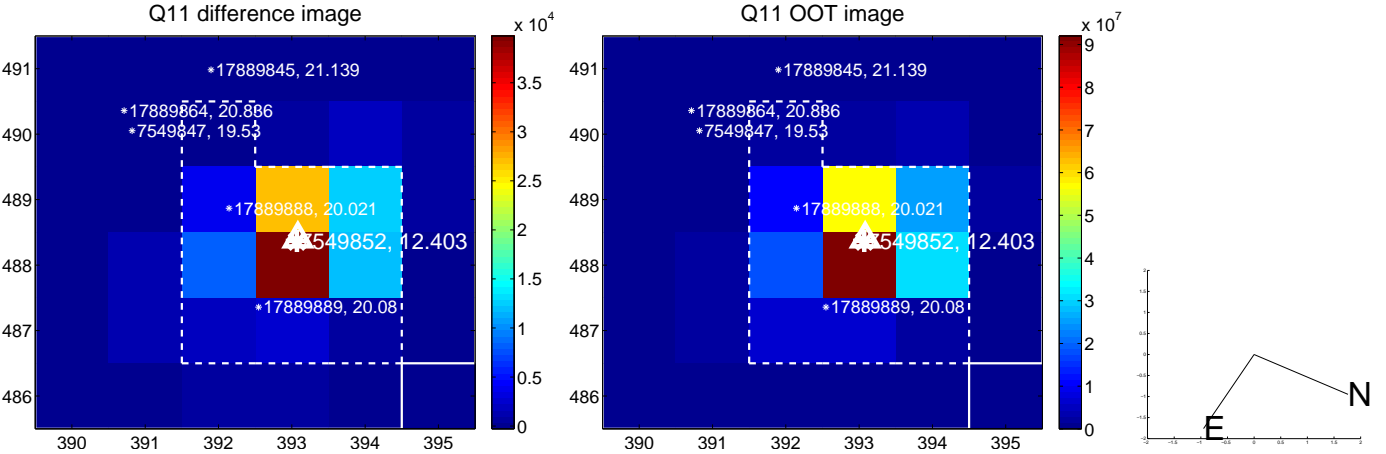
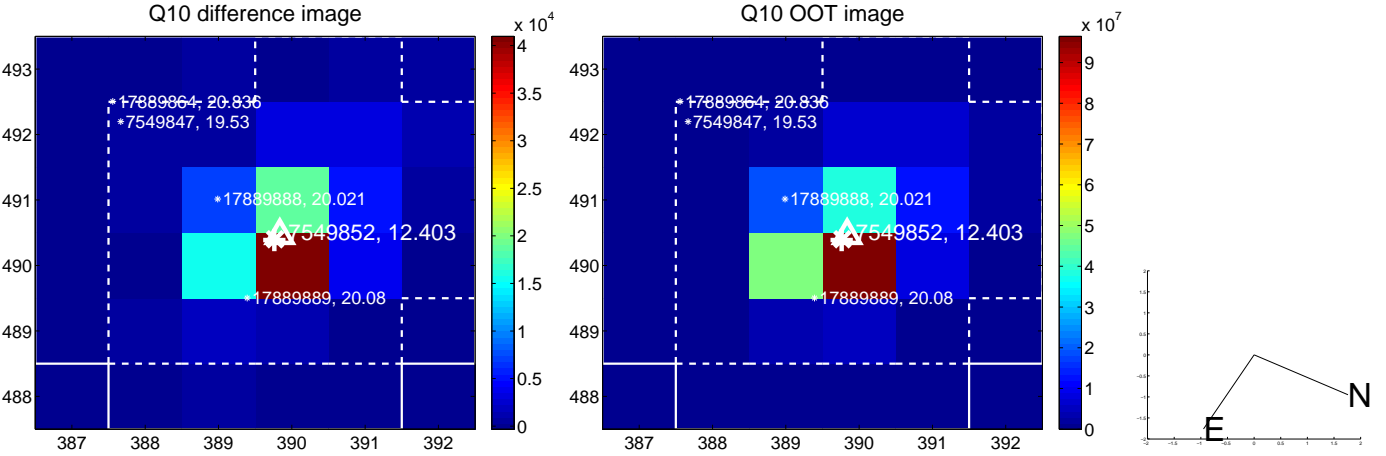
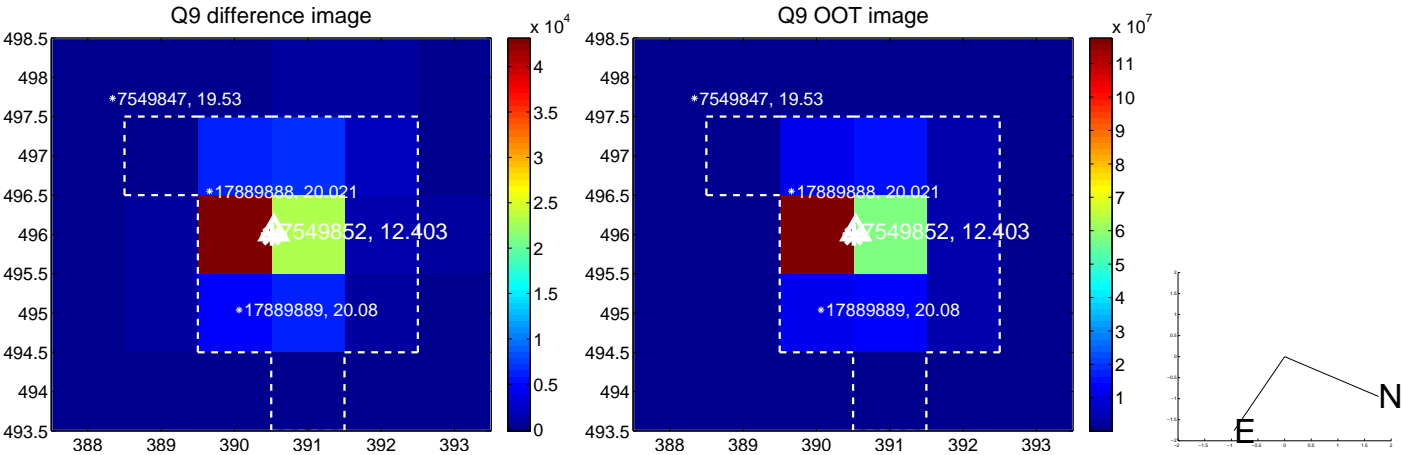
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



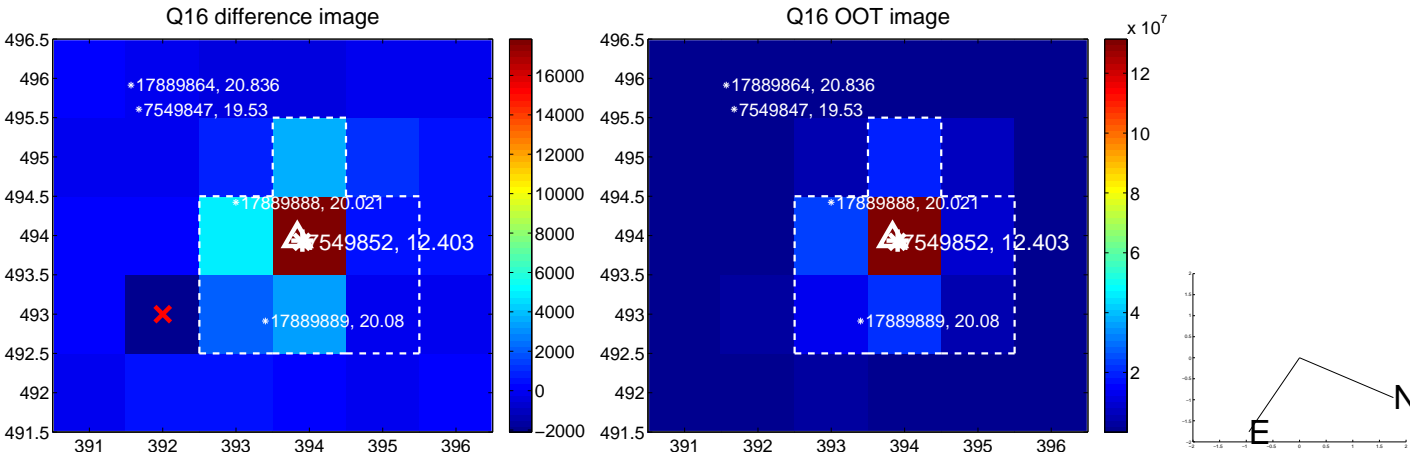
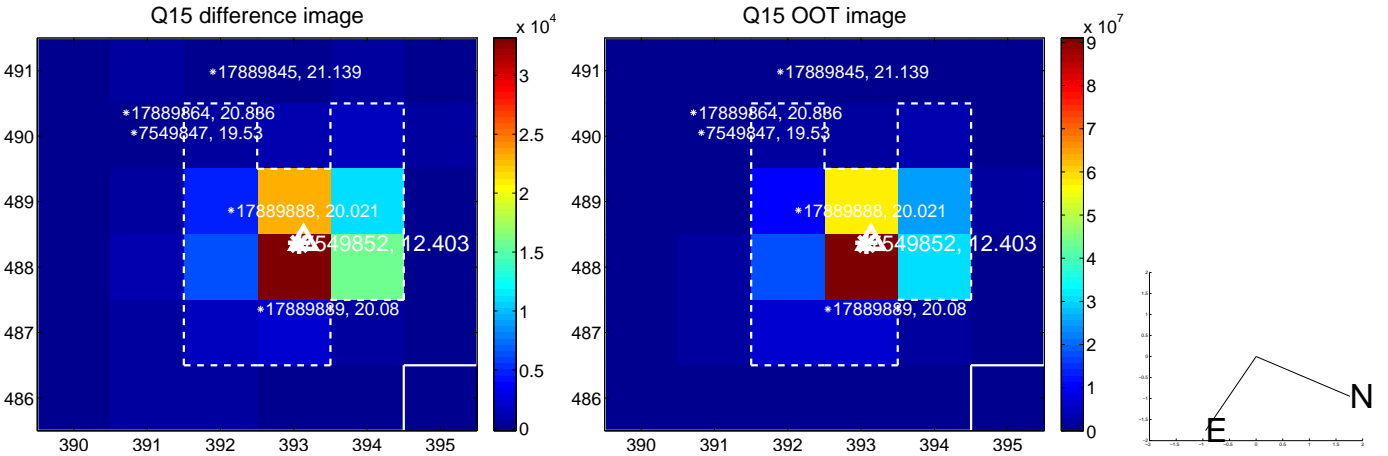
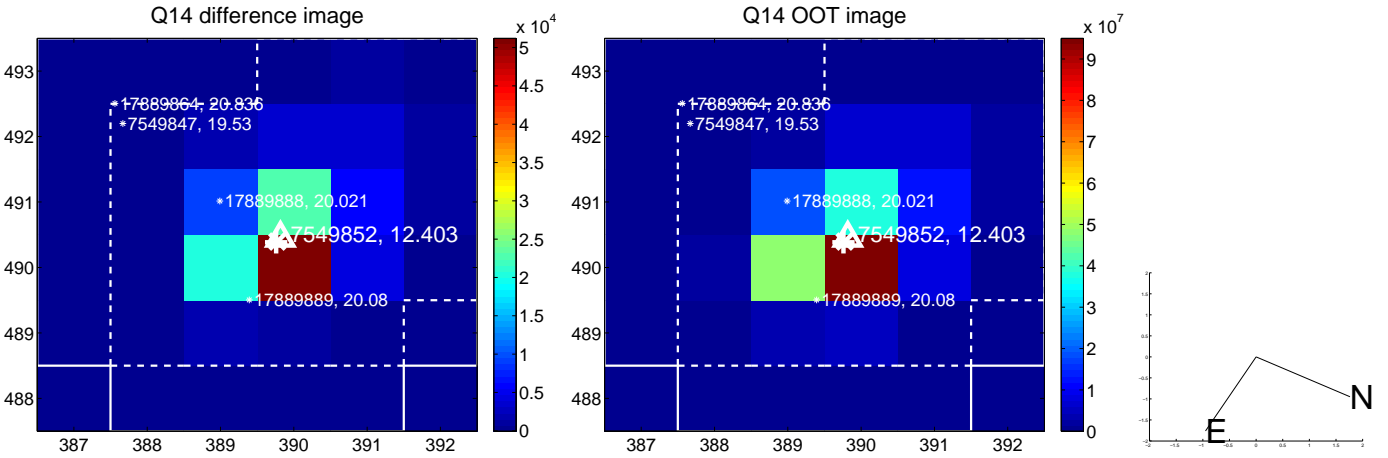
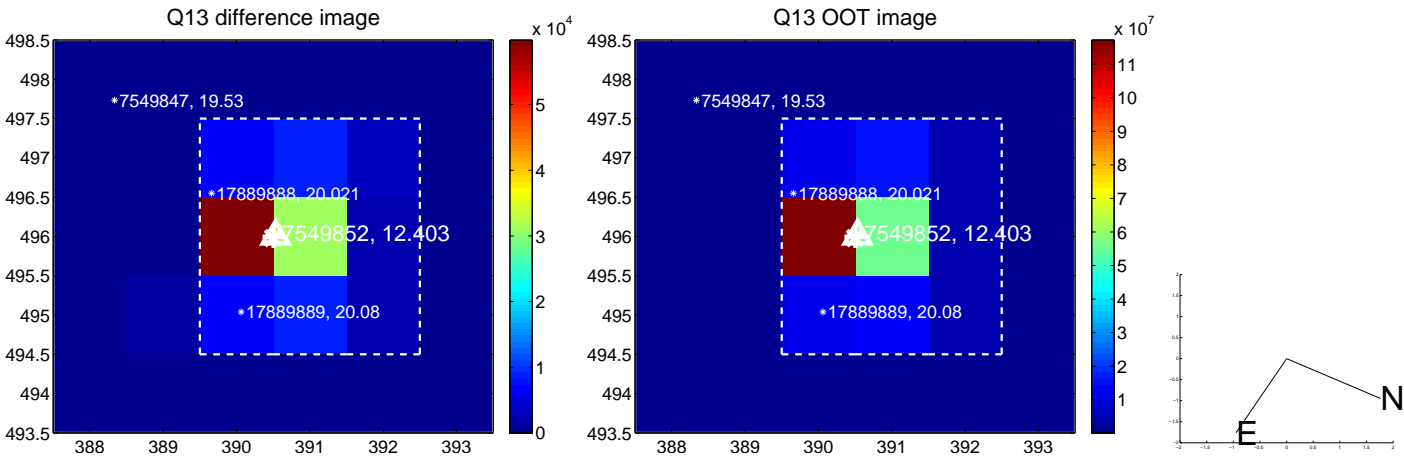
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



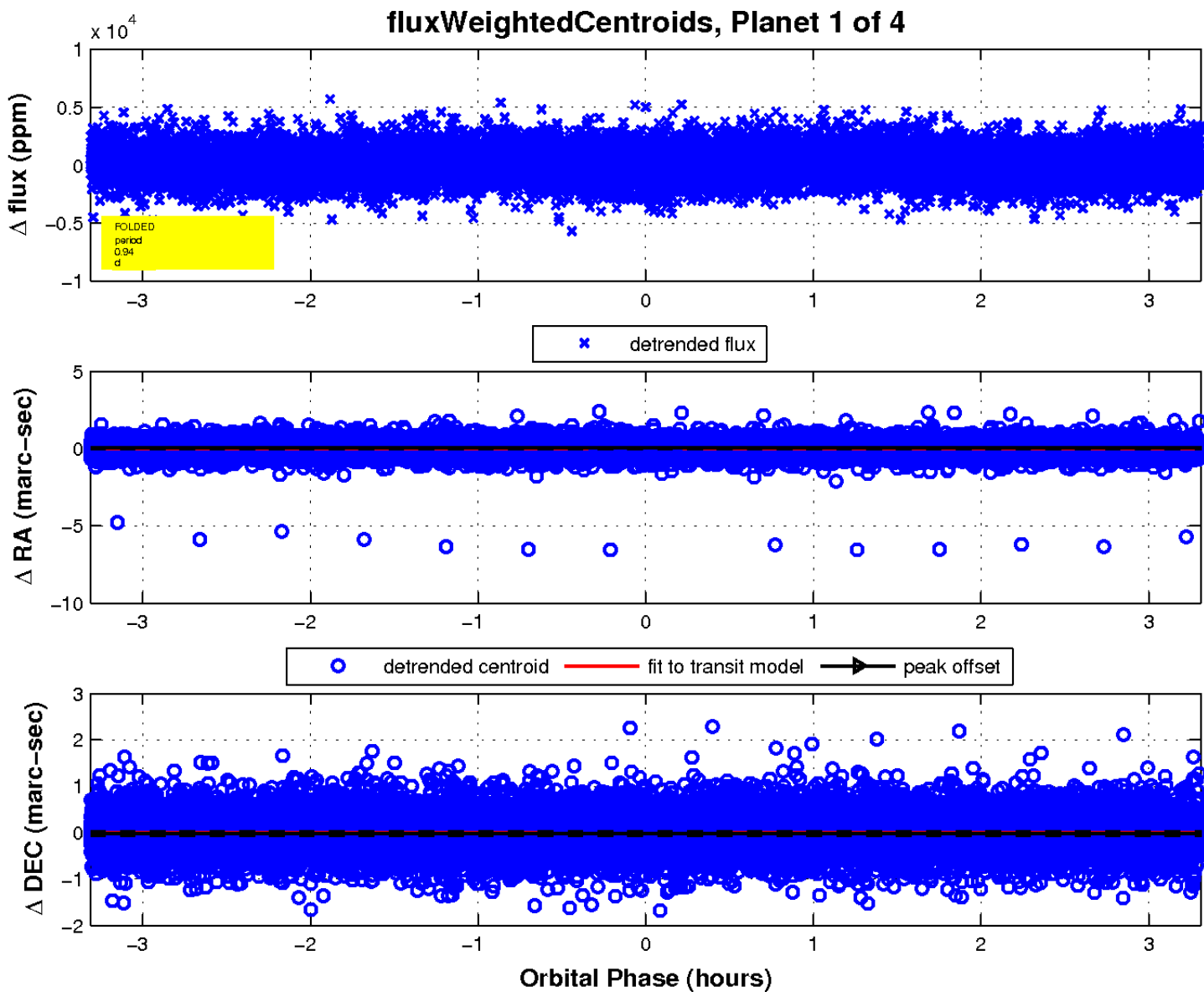
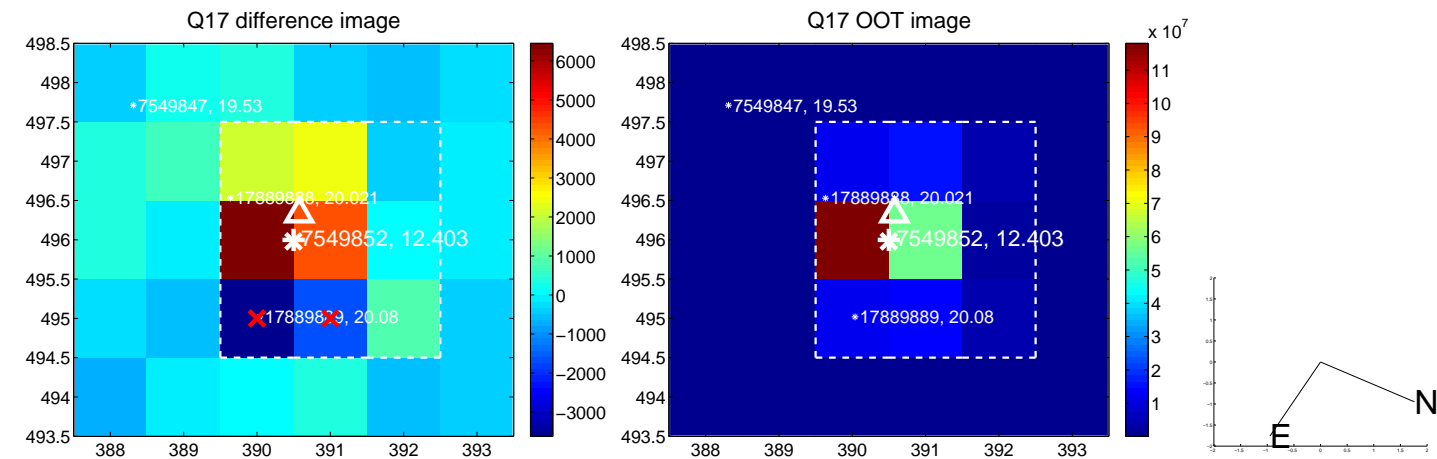
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

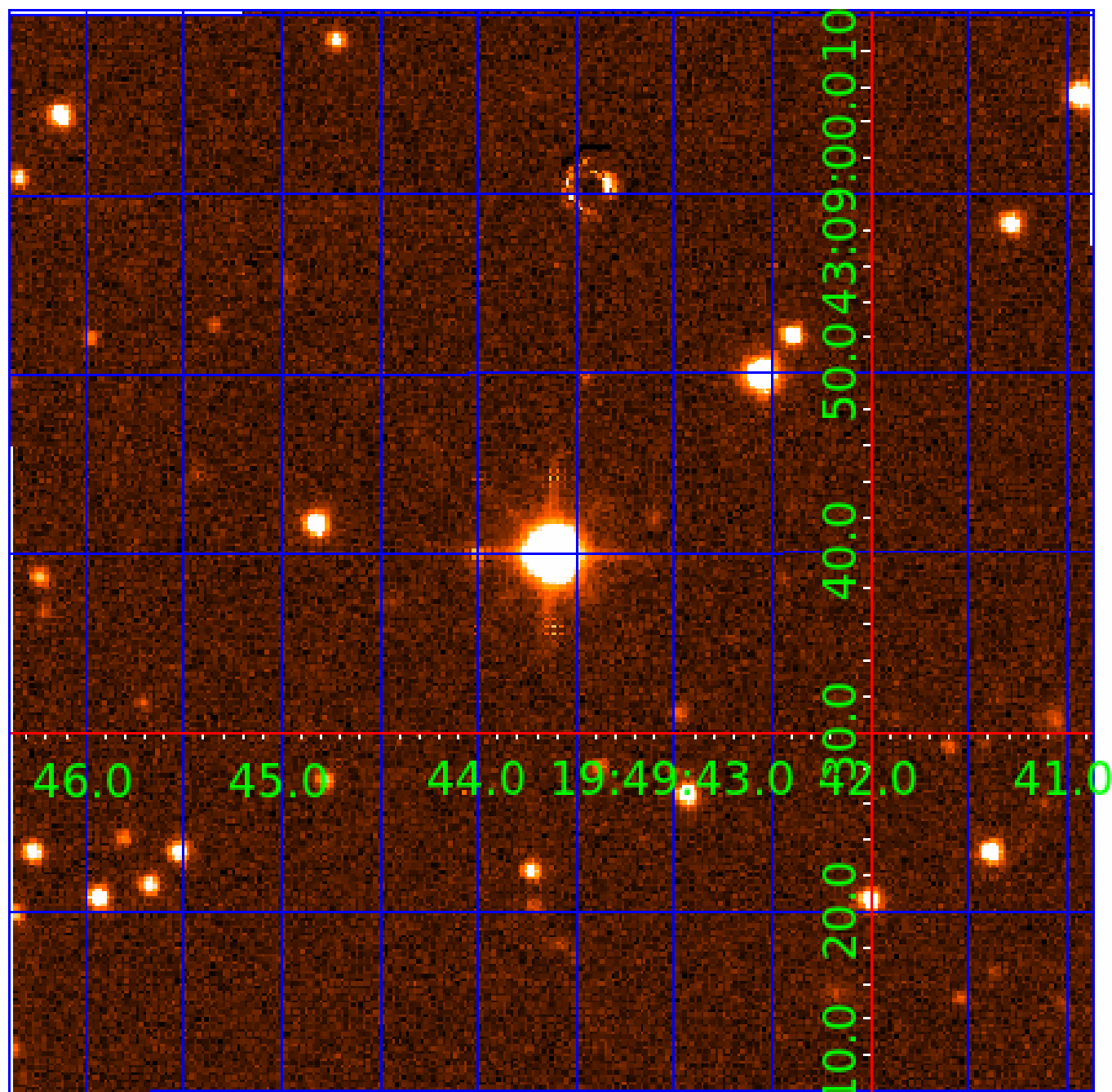


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007549852

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})
007549852-01	OBS	No	0.937175	132.251856	435.8	1.104	19.4	23.5	2.37	7068	5.10	26154.13
007549852-02	OBS	No	0.562312	131.771638	331.2	0.966	25.2	19.5	2.37	7068	5.06	51681.03
007549852-03	OBS	No	0.561932	132.109140	0.0	2.232	21.9	0.0	2.37	7068	0.01	51727.66
007549852-04	OBS	No	0.562312	132.054744	207.1	1.500	13.0	-1.0	2.37	7068	3.44	51681.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007549852-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007549852-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

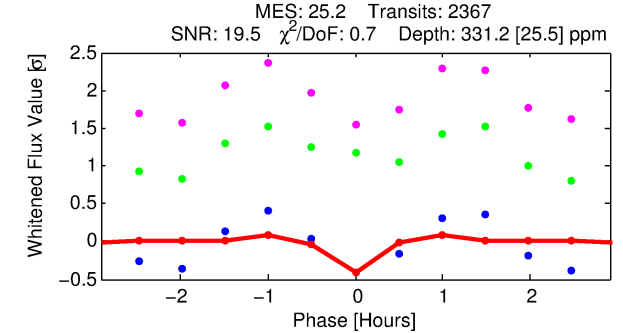
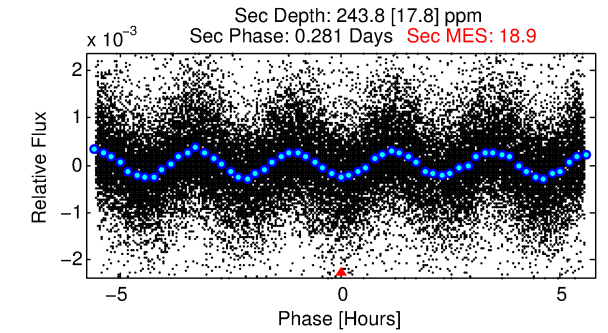
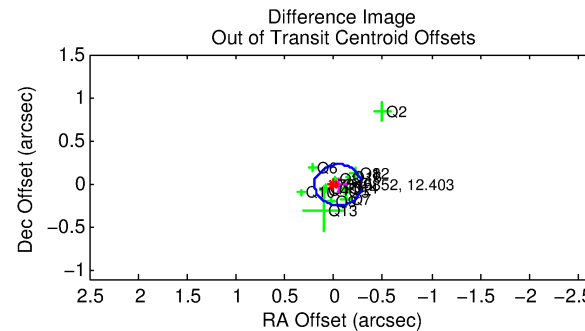
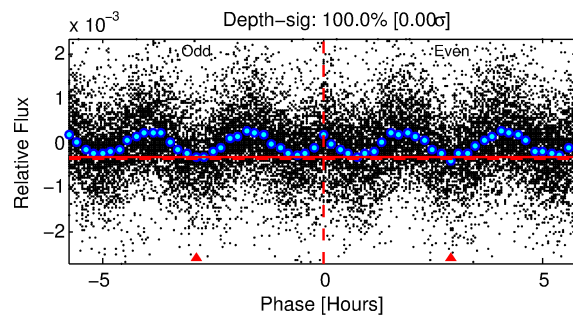
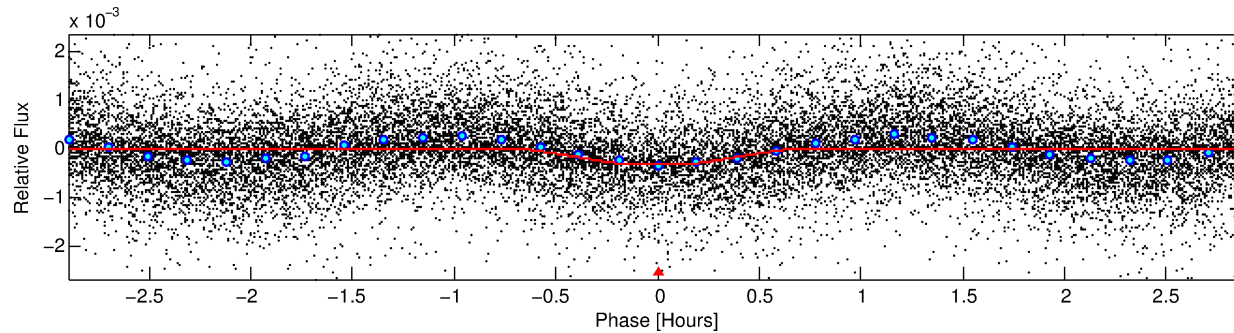
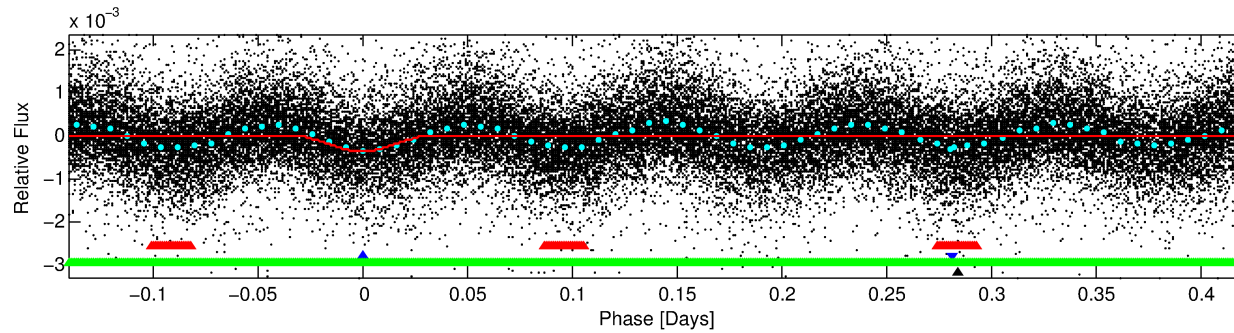
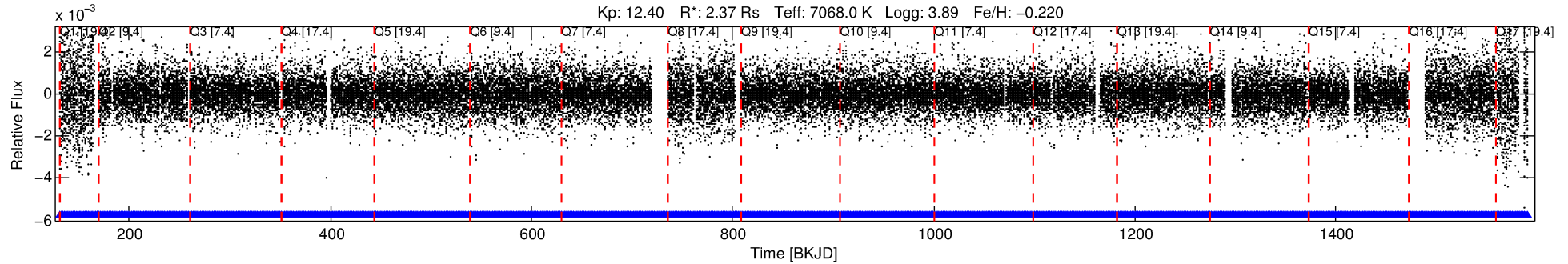
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007549852-02

No Significant Match Found

DV One-Page Summary

KIC: 7549852 Candidate: 2 of 4 Period: 0.562 d



DV Fit Results:

Period = 0.56231 [0.00001] d
Epoch = 131.7716 [0.0006] BKJD
Rp/R* = 0.0196 [0.0037]
a/R* = 2.33 [2.03]
b = 0.90 [0.23]
Seff = 51681.03 [32908.55]
Teq = 3845 [612] K
Rp = 5.06 [2.25] Re
a = 0.0156 [0.0060] AU
Ag = 1.27 [0.92] [0.29σ]
Teffp = 6306 [660] K [2.74σ]

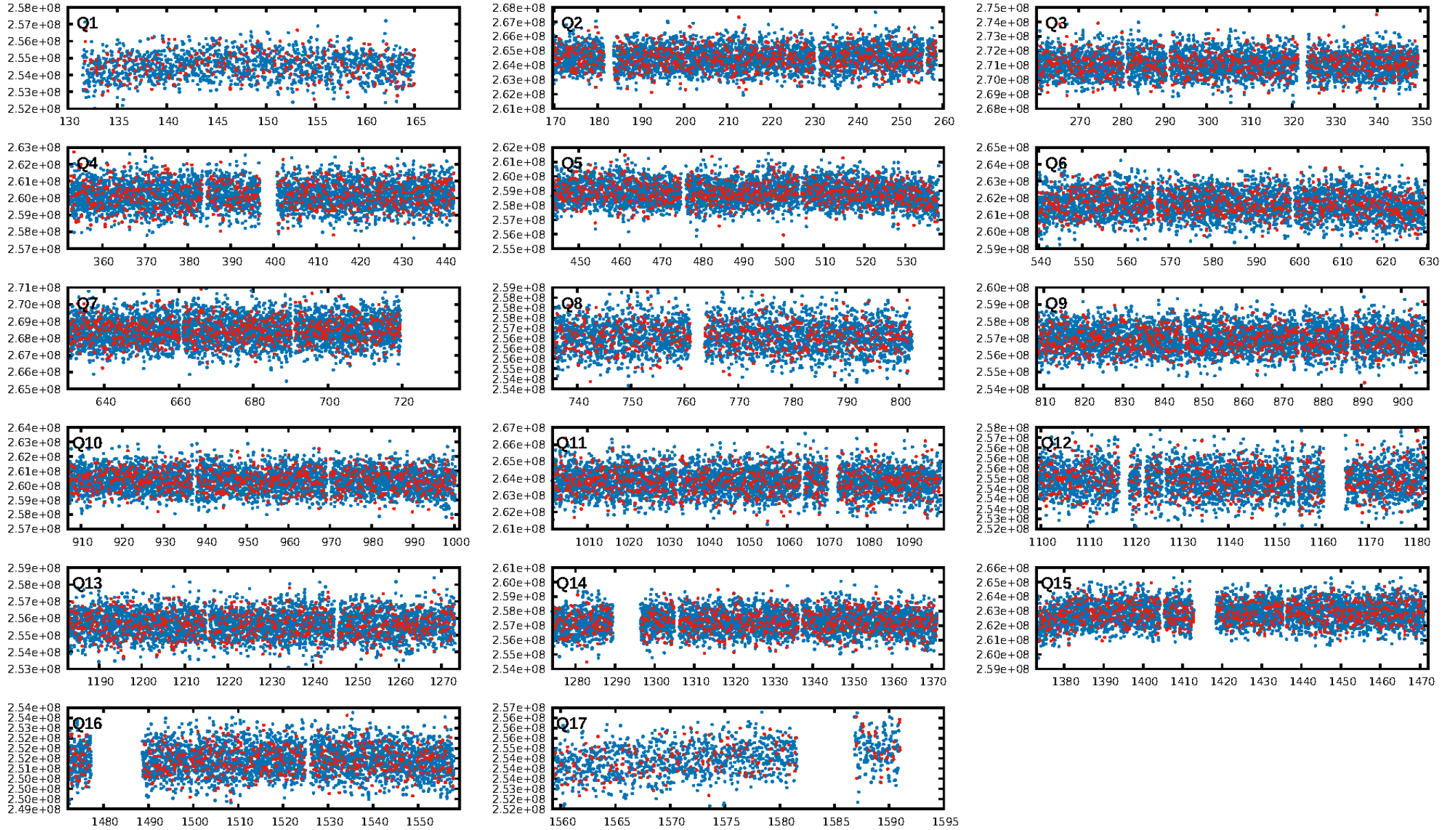
DV Diagnostic Results:

ShortPeriod-sig: 0.3% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2259/2259]
GhostDiagnostic-chr: 2.692
Centroid-sig: 0.0%
Centroid-so: 0.121 arcsec [2.41σ]
OotOffset-rm: 0.045 arcsec [0.57σ]
KicOffset-rm: 0.093 arcsec [1.14σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 0.12 [2/17]

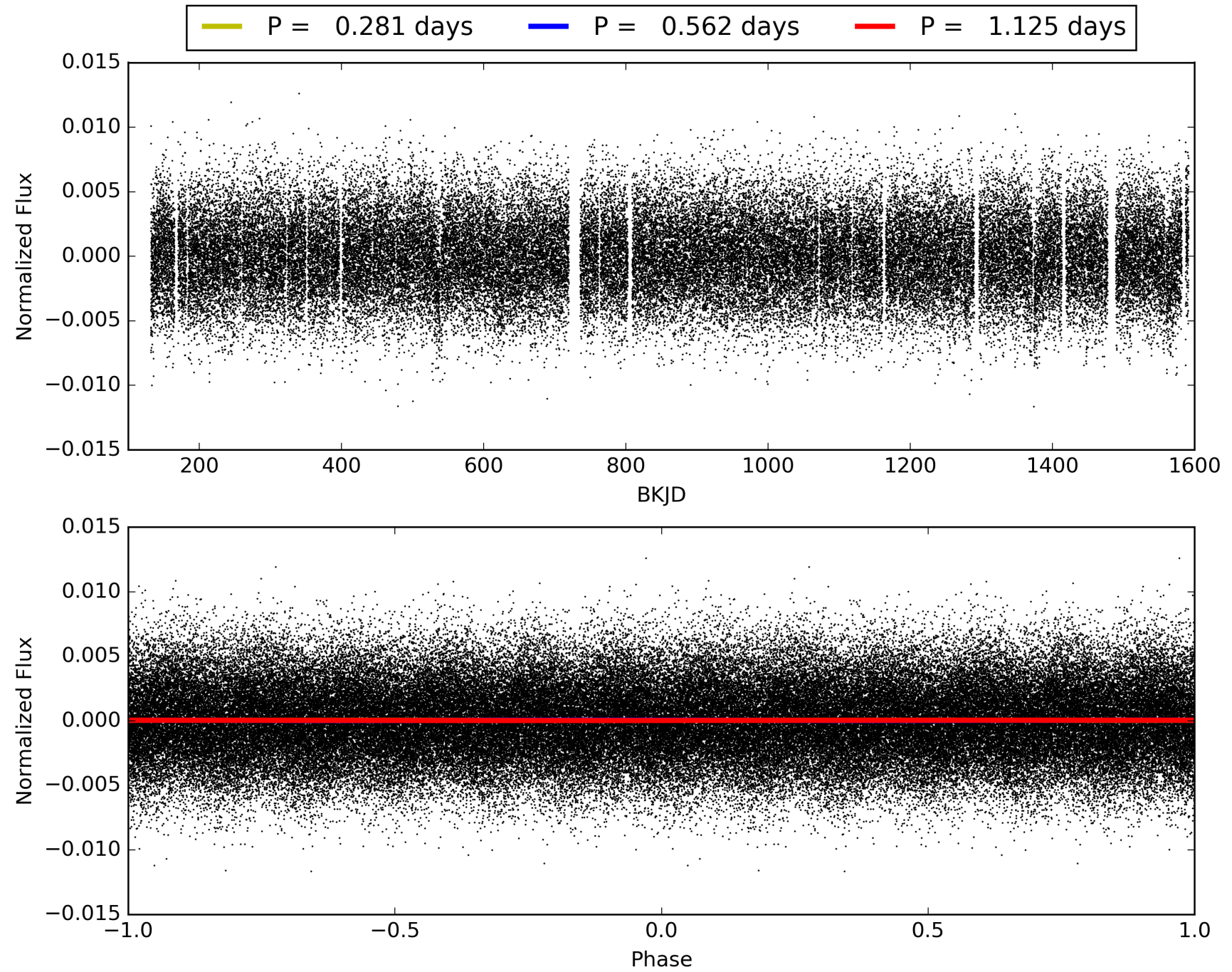
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:15:05 Z

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

TCE 007549852-02, PDC Light Curves

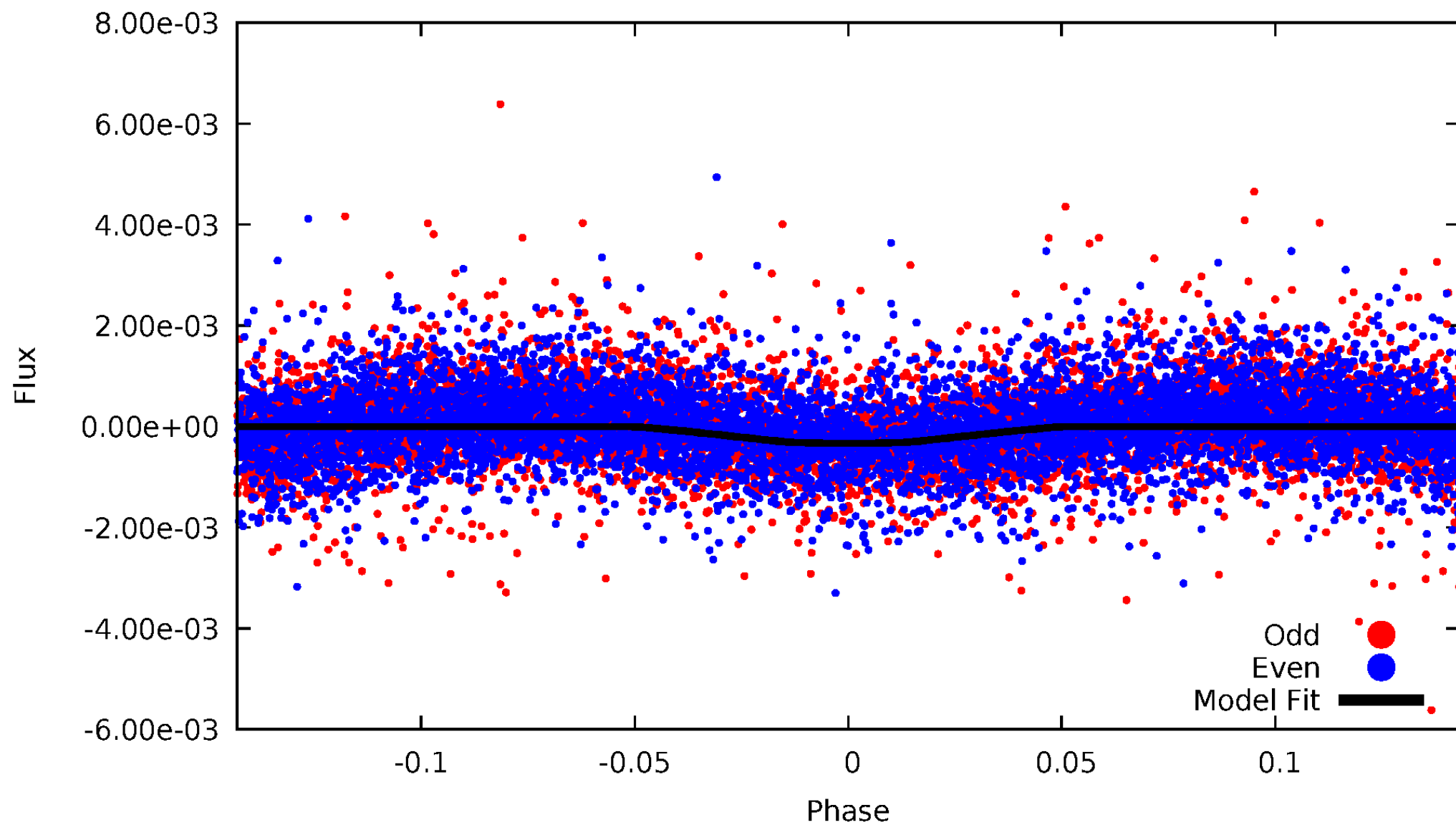


TCE 007549852-02



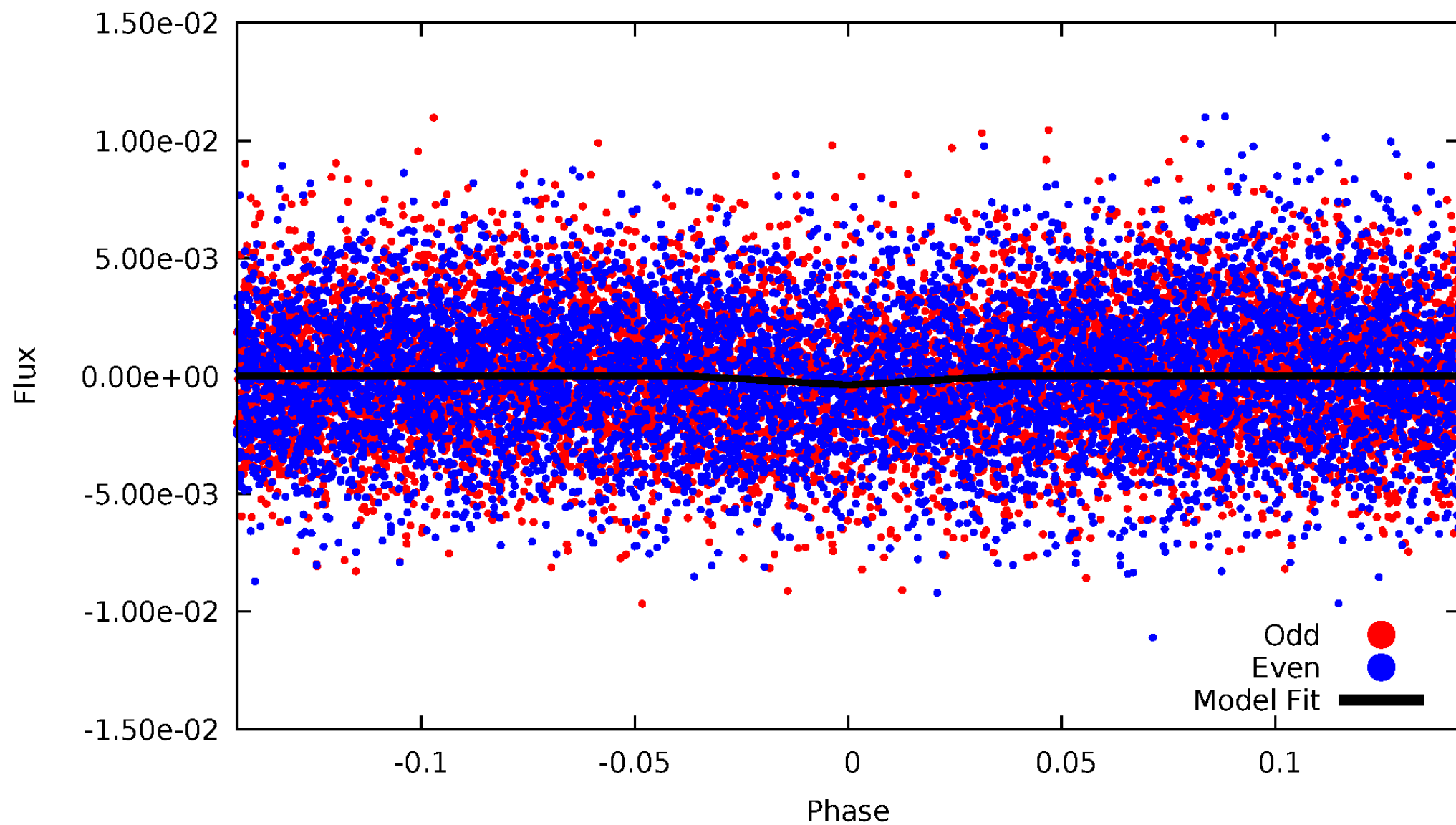
DV Odd/Even

TCE 007549852-02



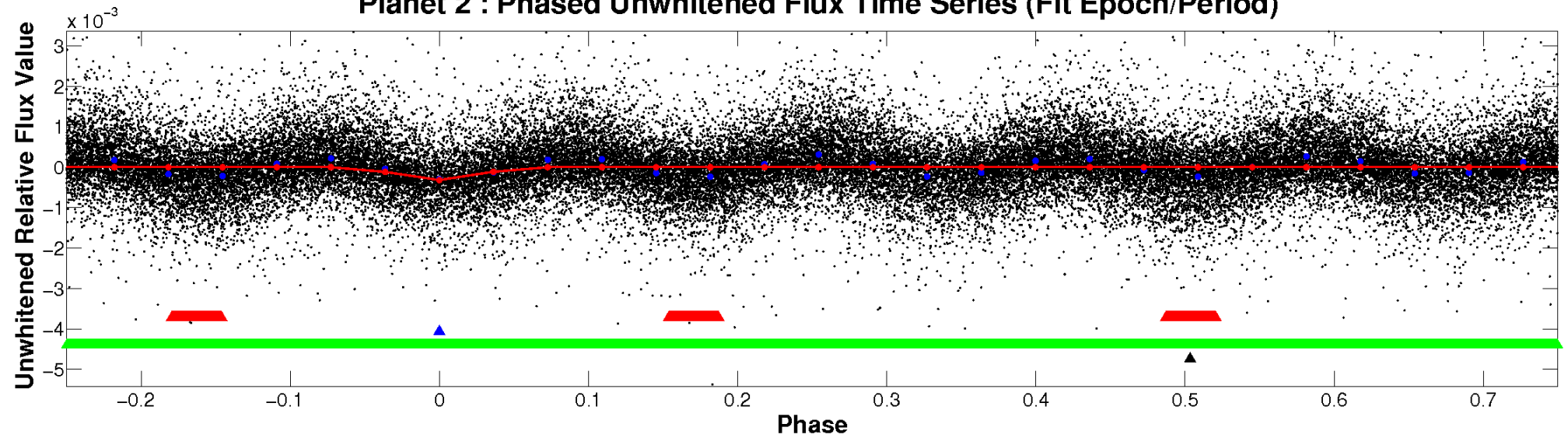
ALT Odd/Even

TCE 007549852-02

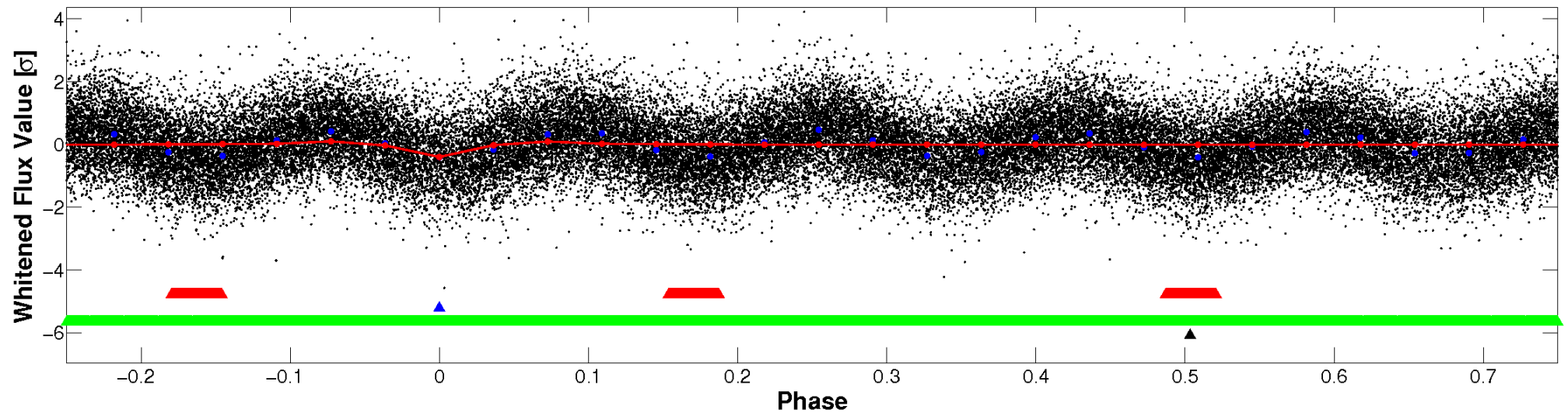


Non-Whitened Vs. Whitened Light Curve

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

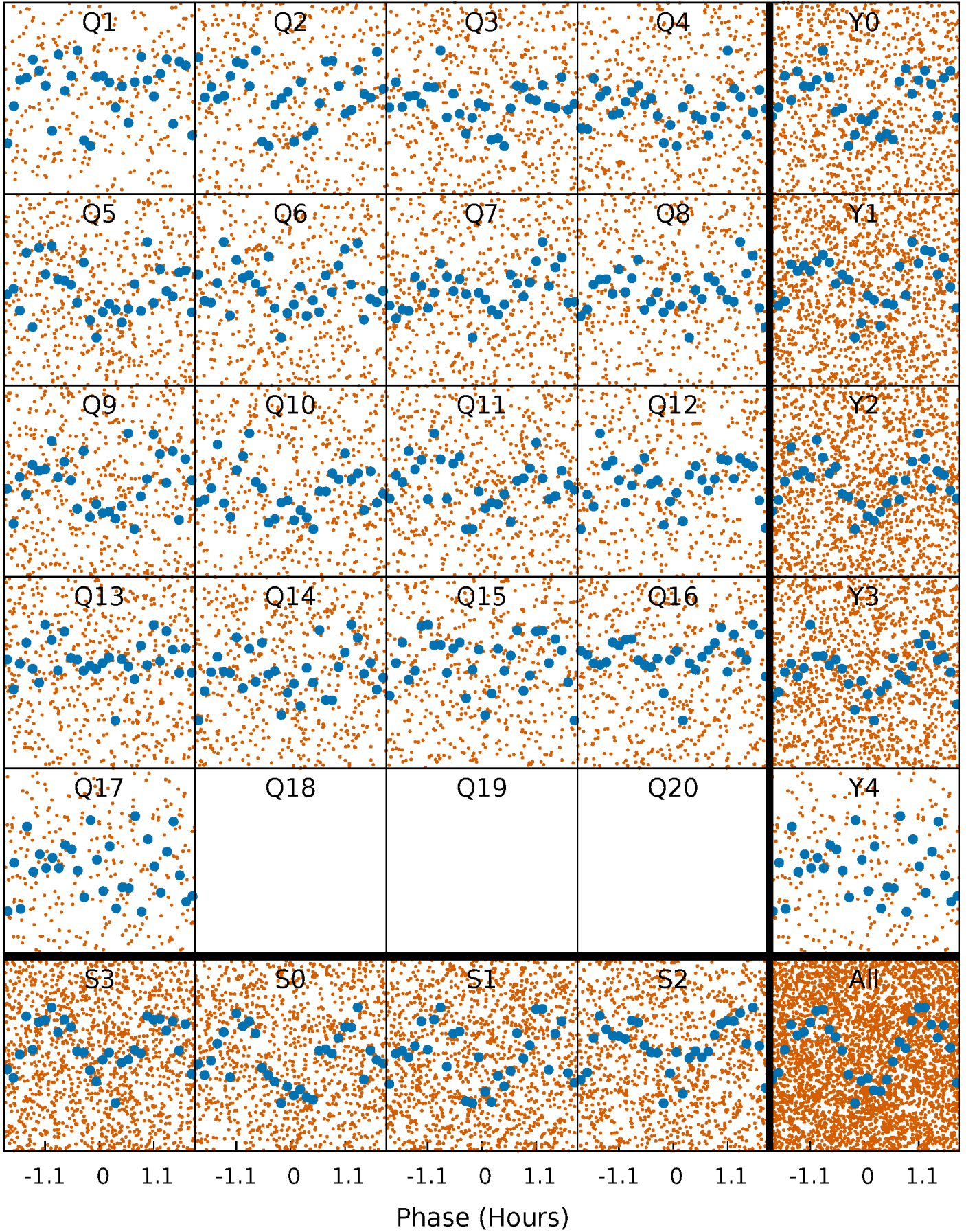


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



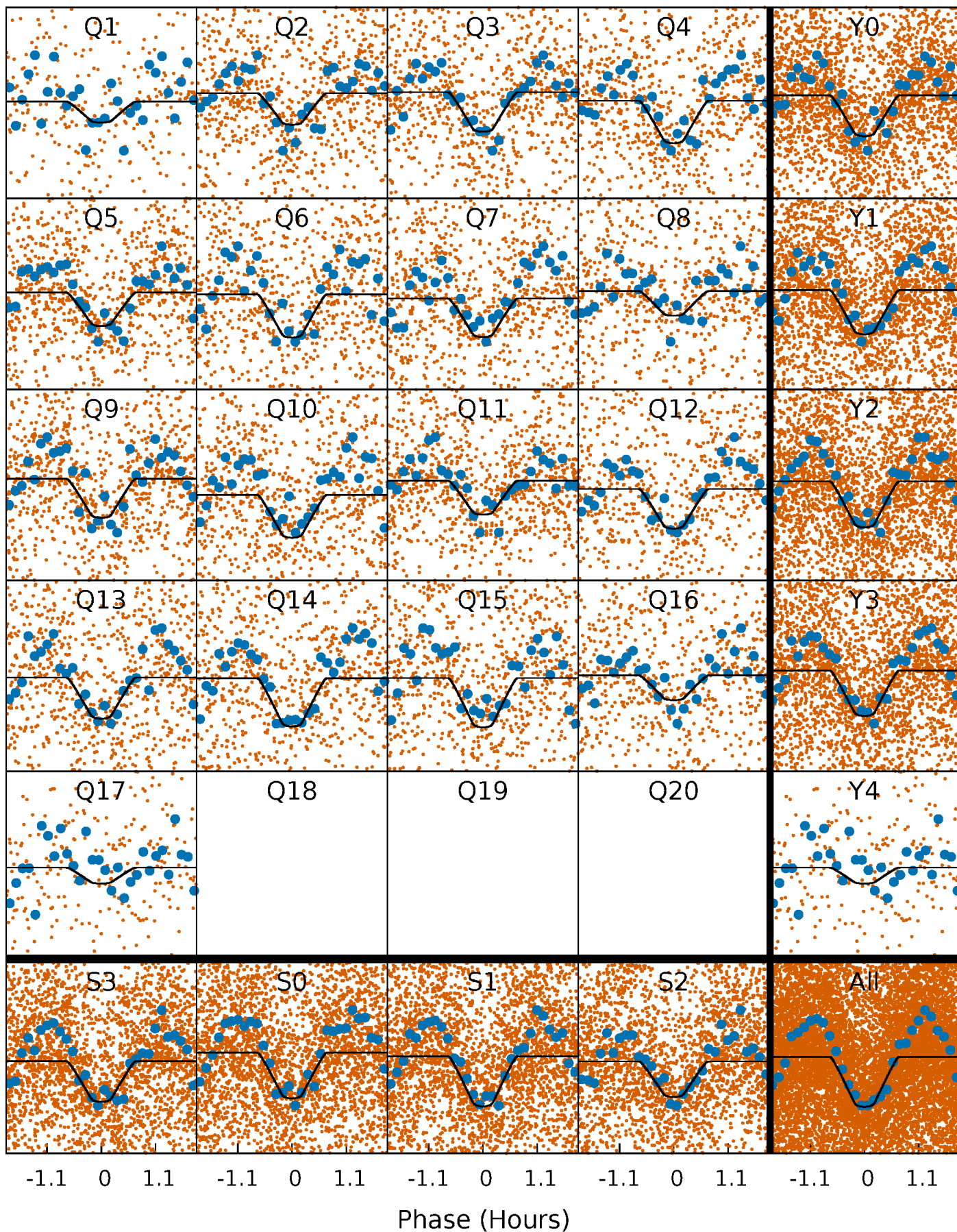
PDC Quarter-Phased Transit Curves

TCE 007549852-02 P= 0.562312 Days $T_0=131.771638$ (BKJD)



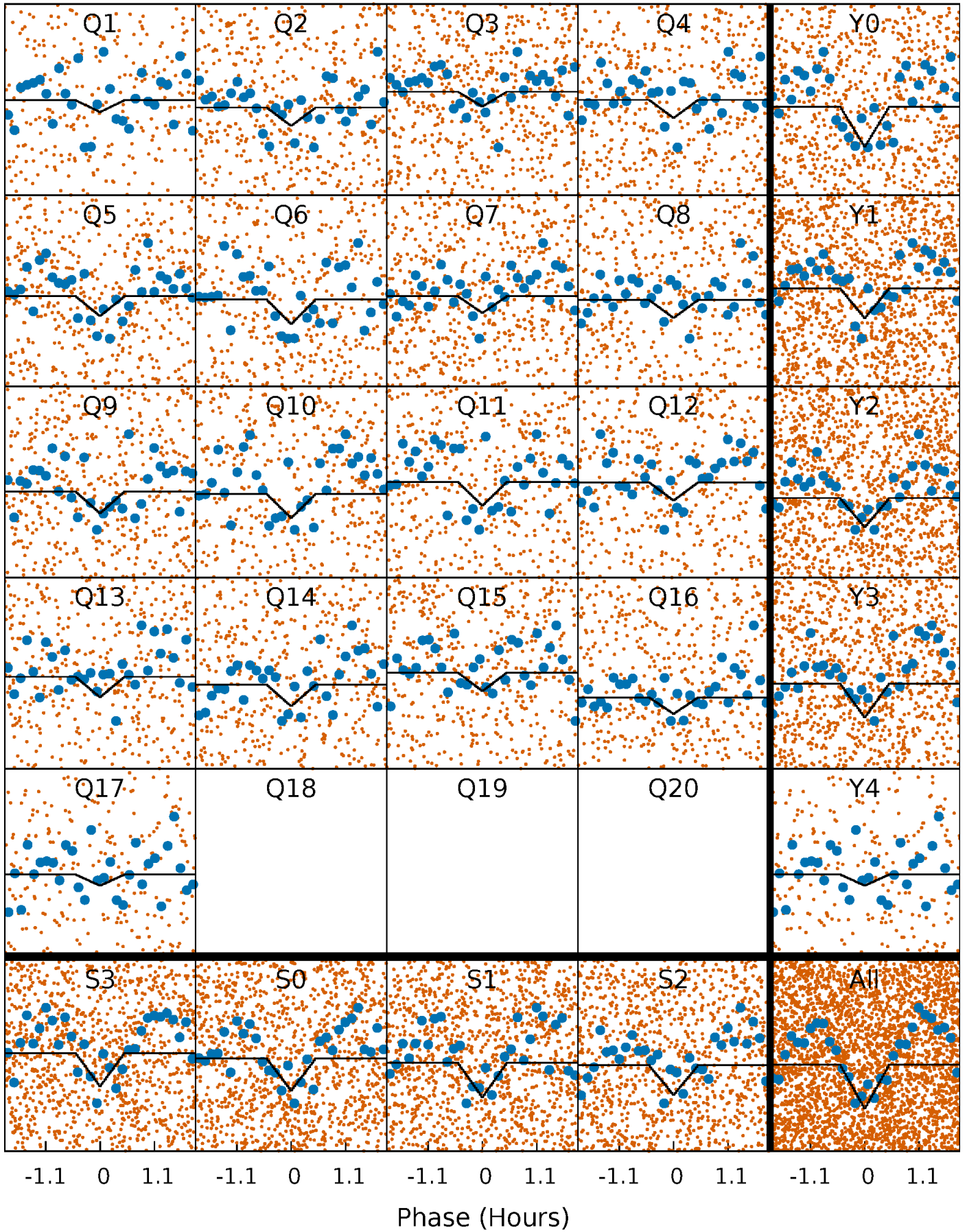
DV Quarter-Phased Transit Curves

TCE 007549852-02 P= 0.562312 Days $T_0=131.771638$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

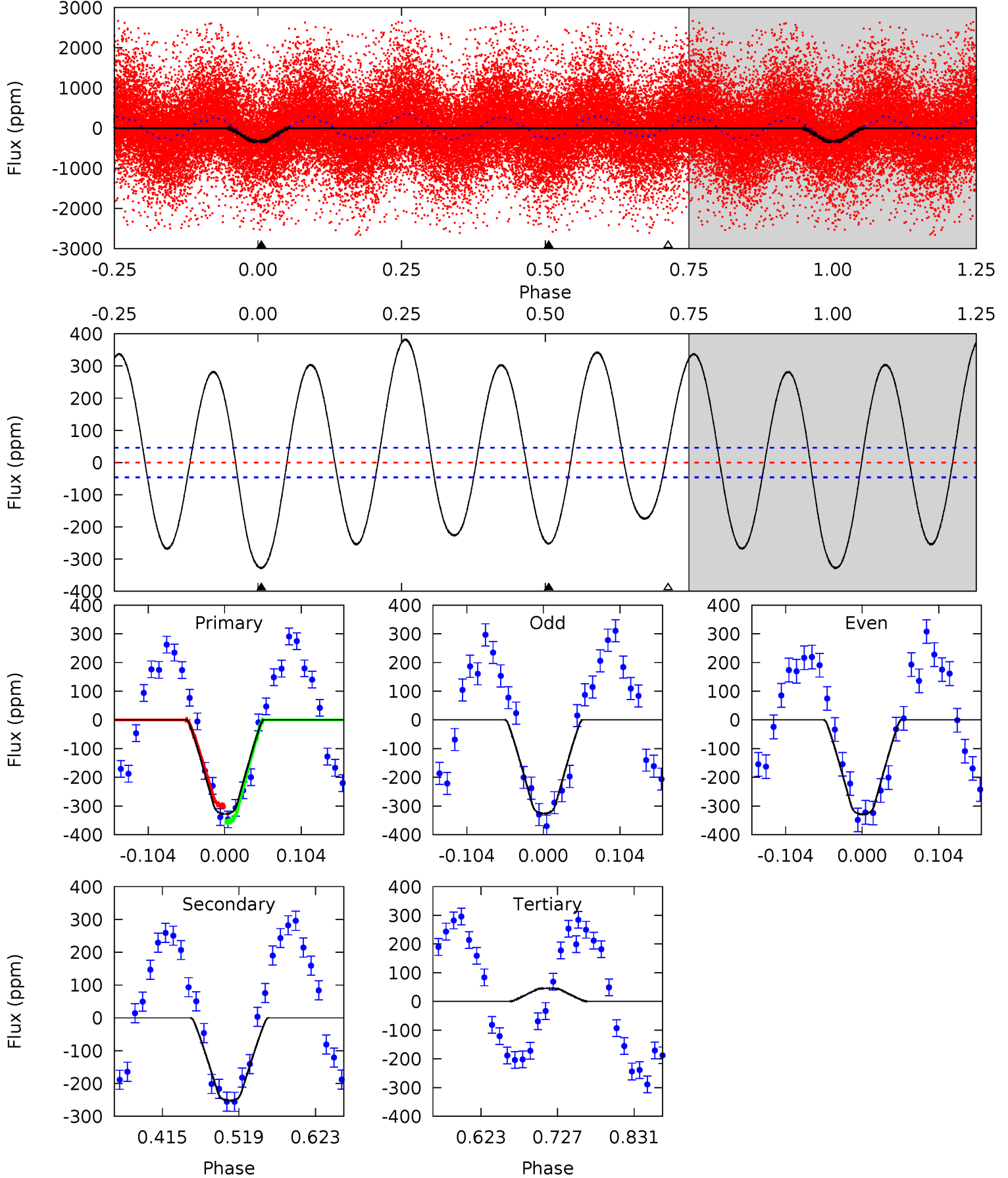
TCE 007549852-02 P= 0.562312 Days $T_0=131.771638$ (BKJD)



DV Model-Shift Uniqueness Test

007549852-02, P = 0.562312 Days, E = 131.209326 Days

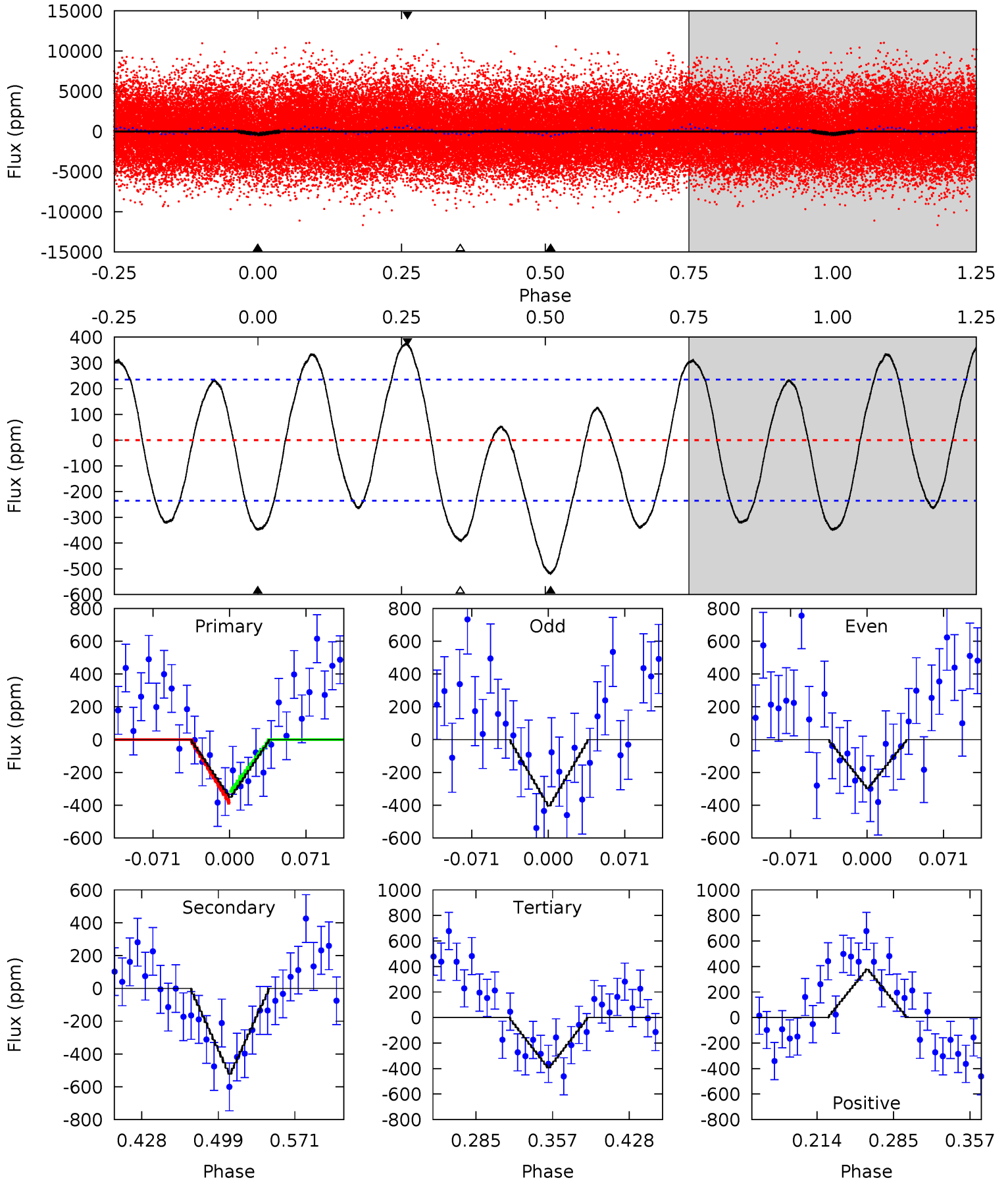
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.5	25.0	-4.59	0	4.56	1.63	19.4	37.1	32.5	29.6	25.0	0.12	0.97	0.54	2.83



Alt Model-Shift Uniqueness Test

007549852-02, P = 0.562312 Days, E = 131.209326 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.90	10.3	7.78	7.43	4.64	1.80	4.37	-0.87	-0.52	2.51	2.87	1.07	0.82	0.42	0.70



Stellar Parameters For KIC 007549852

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7068^{+197}_{-296}	$3.891^{+0.360}_{-0.120}$	$-0.220^{+0.250}_{-0.350}$	$2.365^{+0.513}_{-0.952}$	$1.584^{+0.203}_{-0.376}$	$0.169^{+0.480}_{-0.060}$
	+3%/-4%	+9%/-3%	+114%/-159%	+22%/-40%	+13%/-24%	+285%/-36%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007549852-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-252 ± 10	$4.78^{+1.34}_{-1.26}$	5231^{+401}_{-539}	5873^{+853}_{-666}	$1.434^{+1.206}_{-0.531}$
Alt.	-522 ± 51	$4.65^{+1.37}_{-1.17}$	5241^{+397}_{-559}	7497^{+1149}_{-891}	$3.180^{+2.424}_{-1.231}$

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

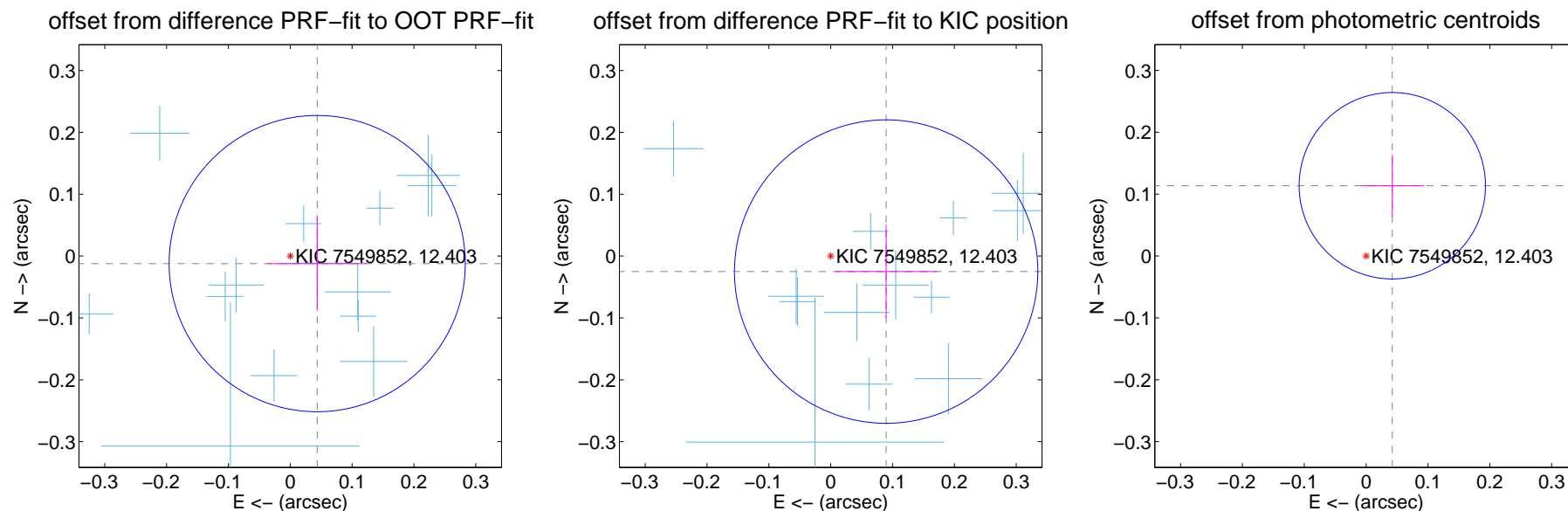
DV Centroid Data

Supplemental centroid analysis for 007549852-02. Kepler magnitude: 12.40. Transit SNR 19.53

There are 14 quarters with good PRF difference image offsets

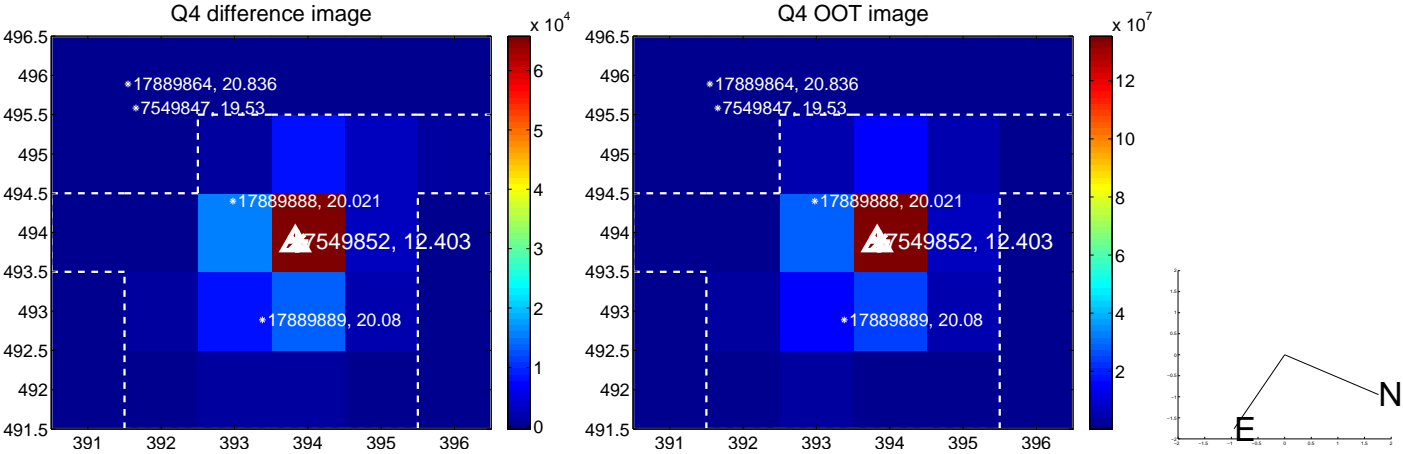
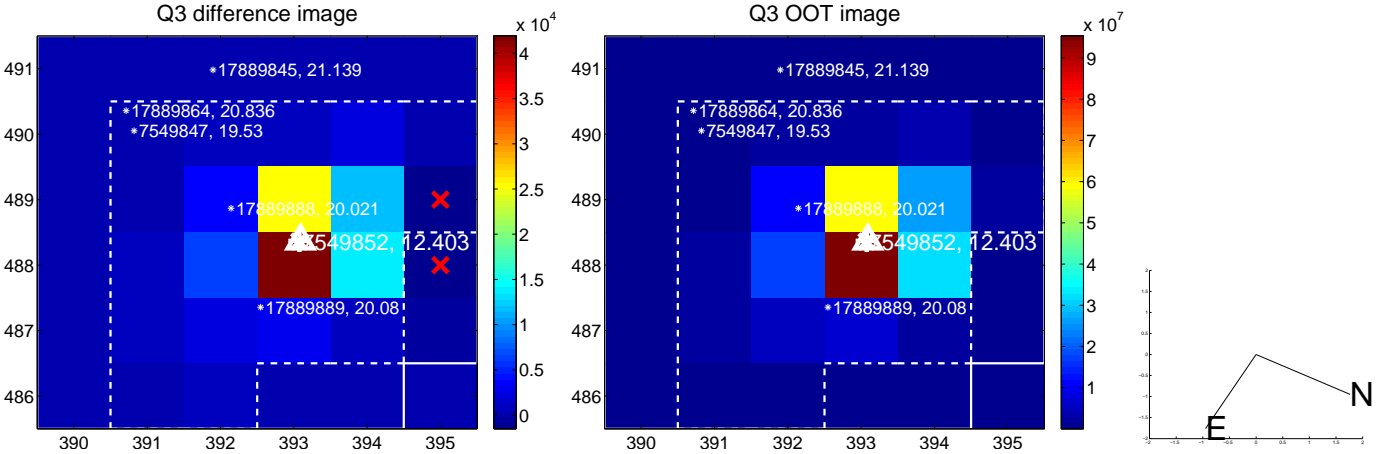
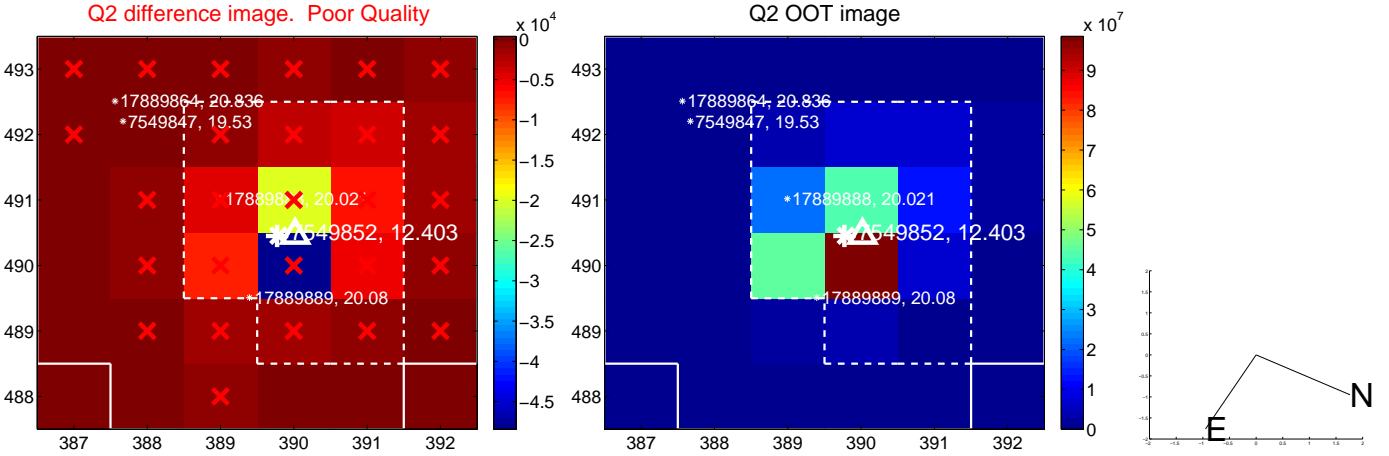
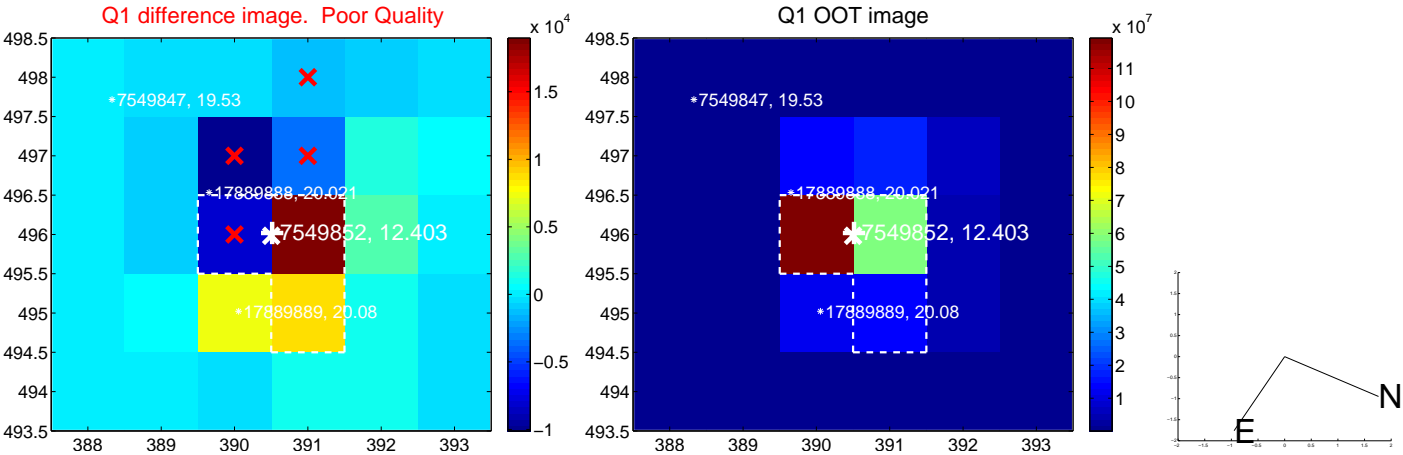
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.045 ± 0.080	0.57	-0.044 ± 0.080	-0.012 ± 0.076
PRF-fit source offset from KIC position	0.093 ± 0.082	1.14	-0.090 ± 0.082	-0.025 ± 0.075
photometric centroid source offset	0.12 ± 0.05	2.41	-0.04 ± 0.05	0.11 ± 0.05

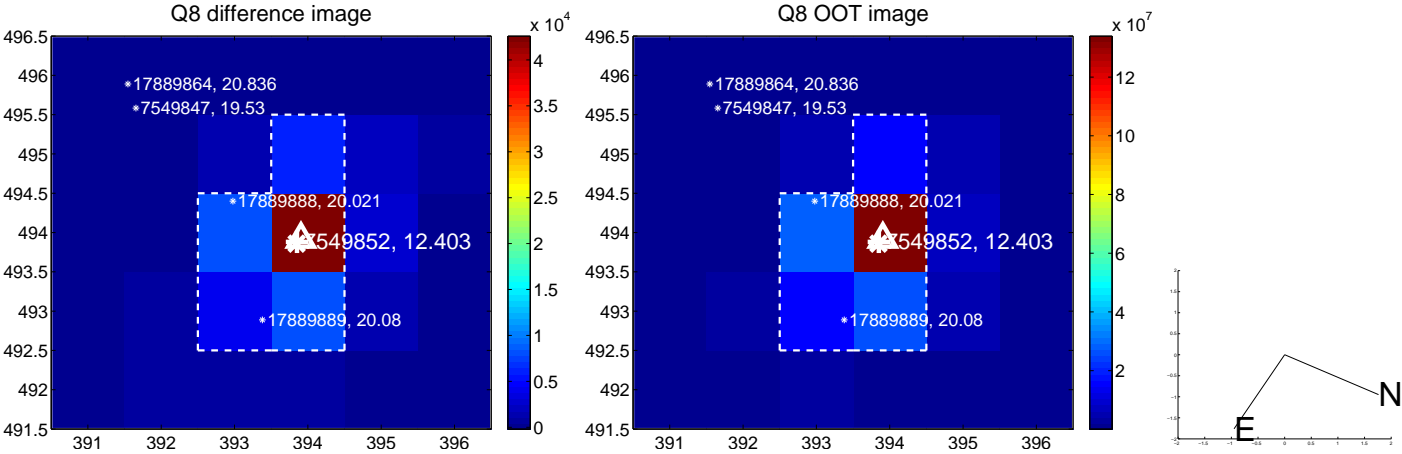
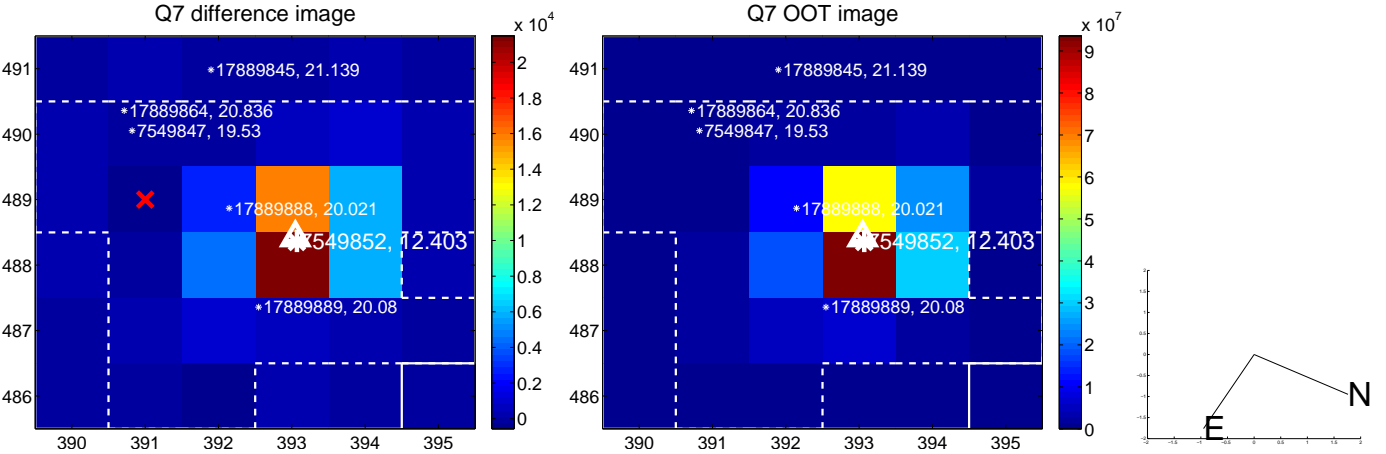
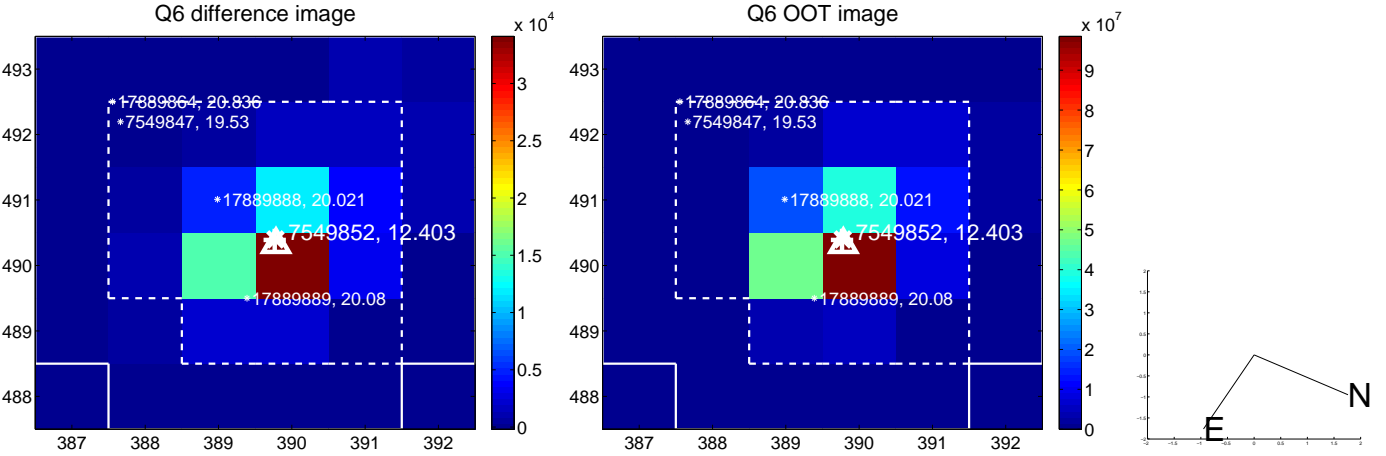
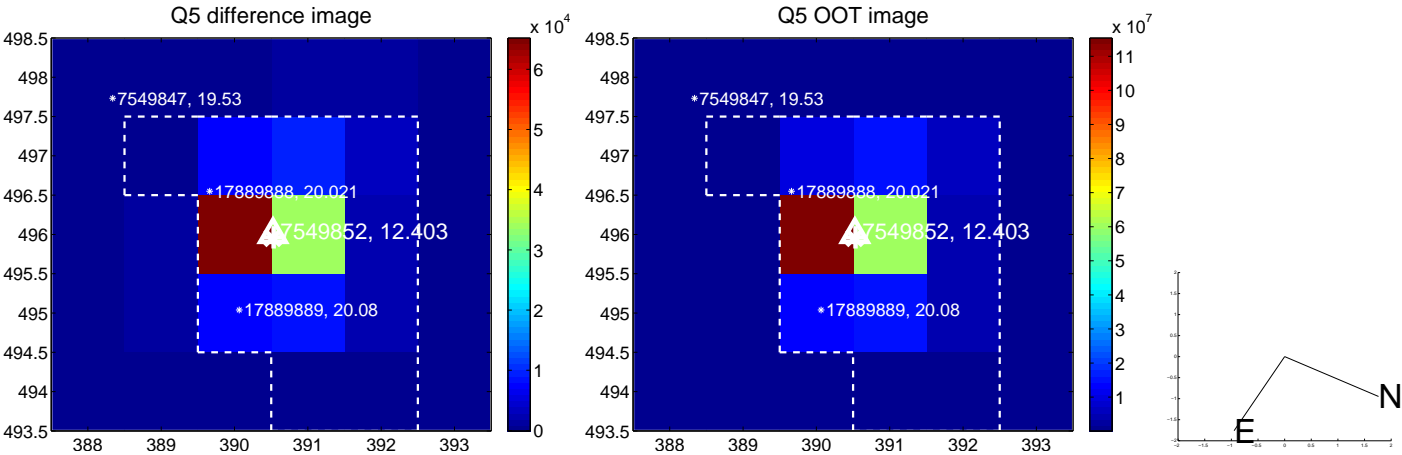


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

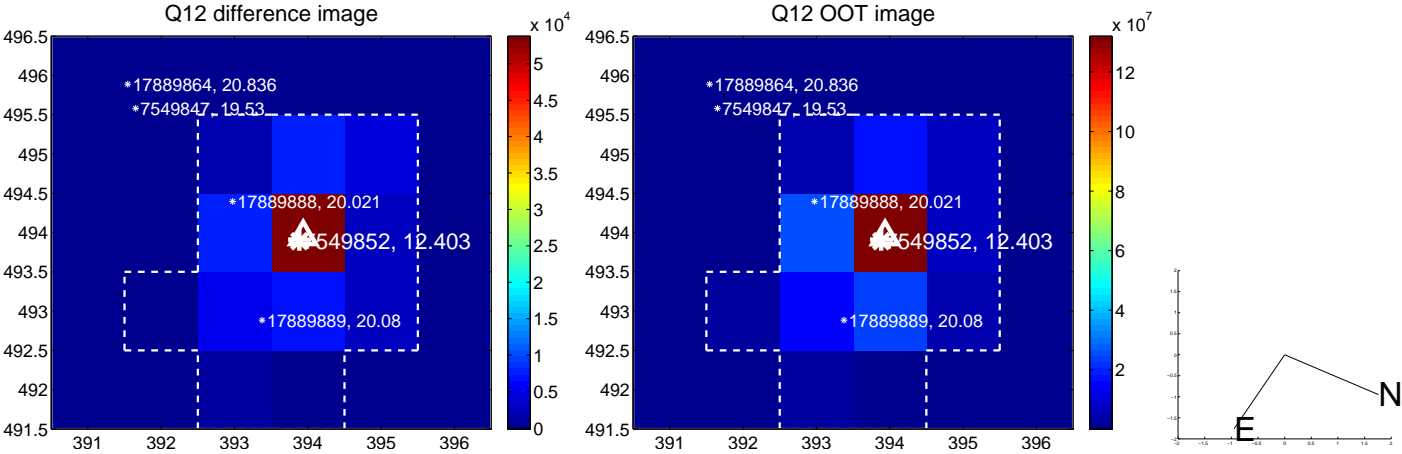
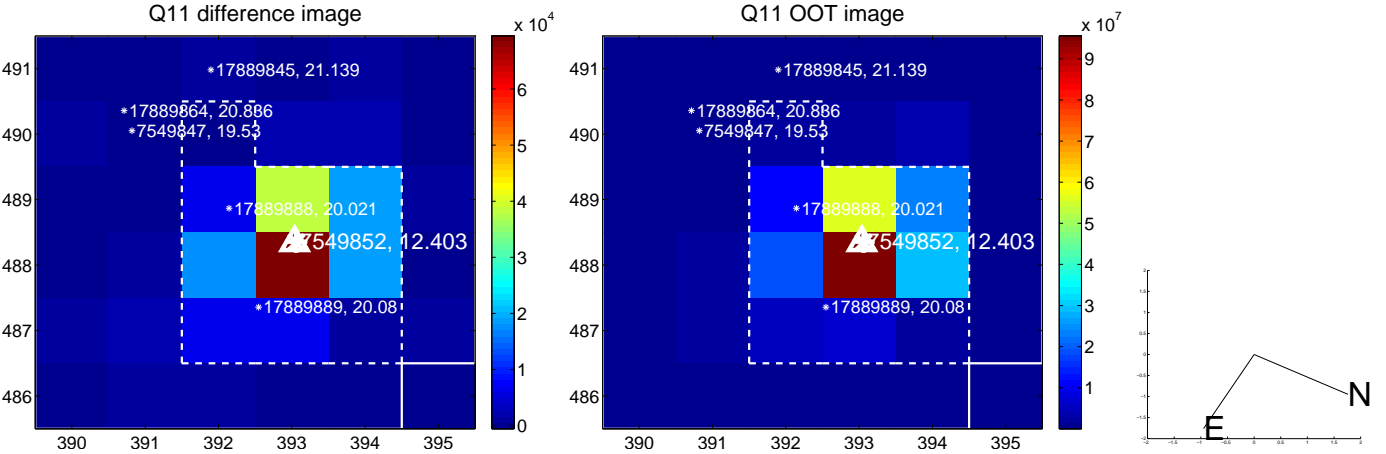
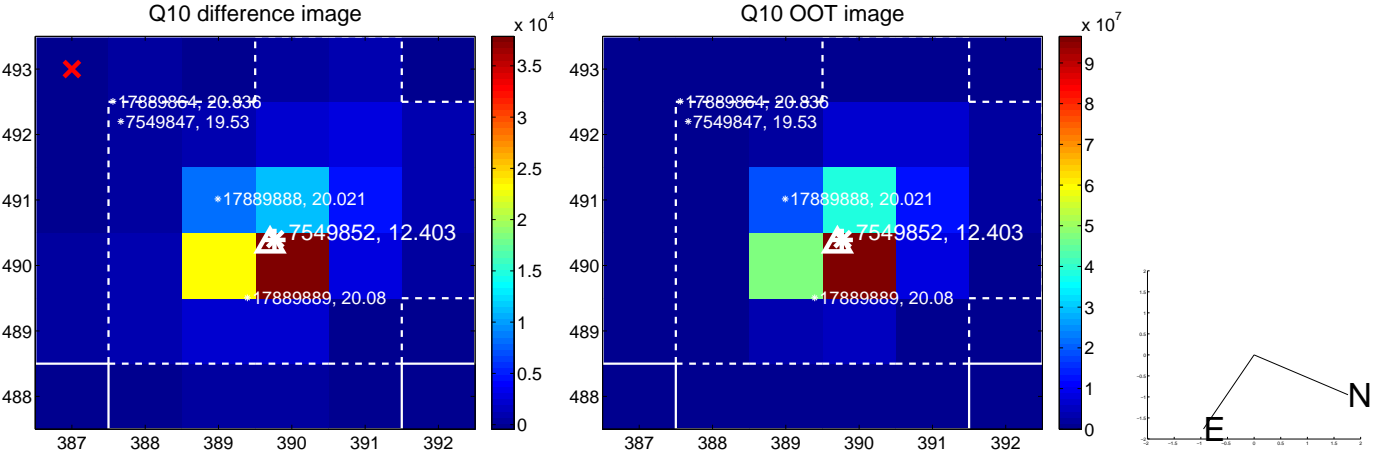
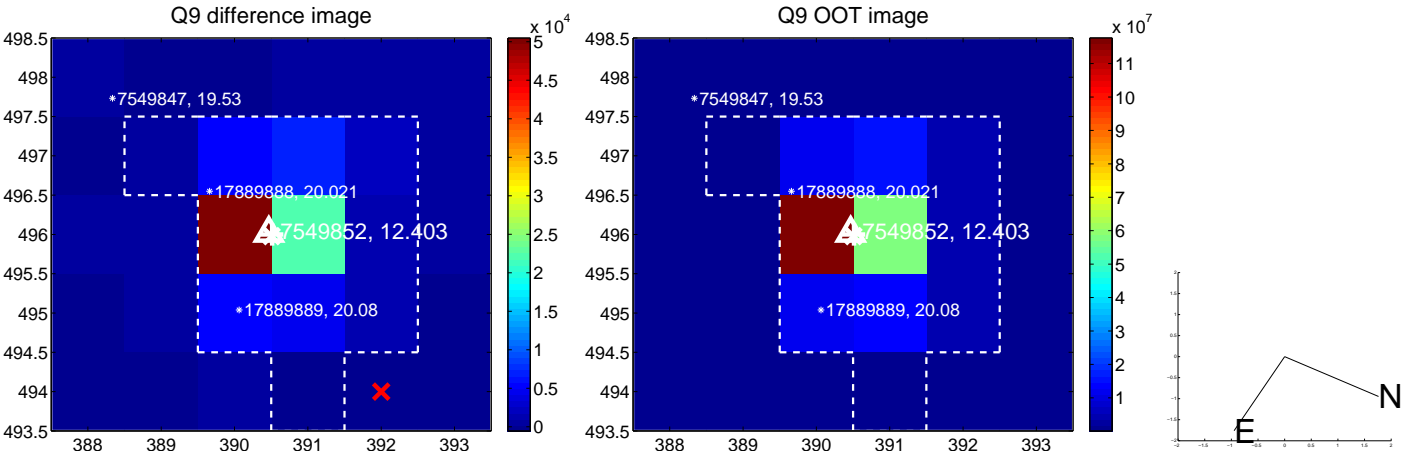
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



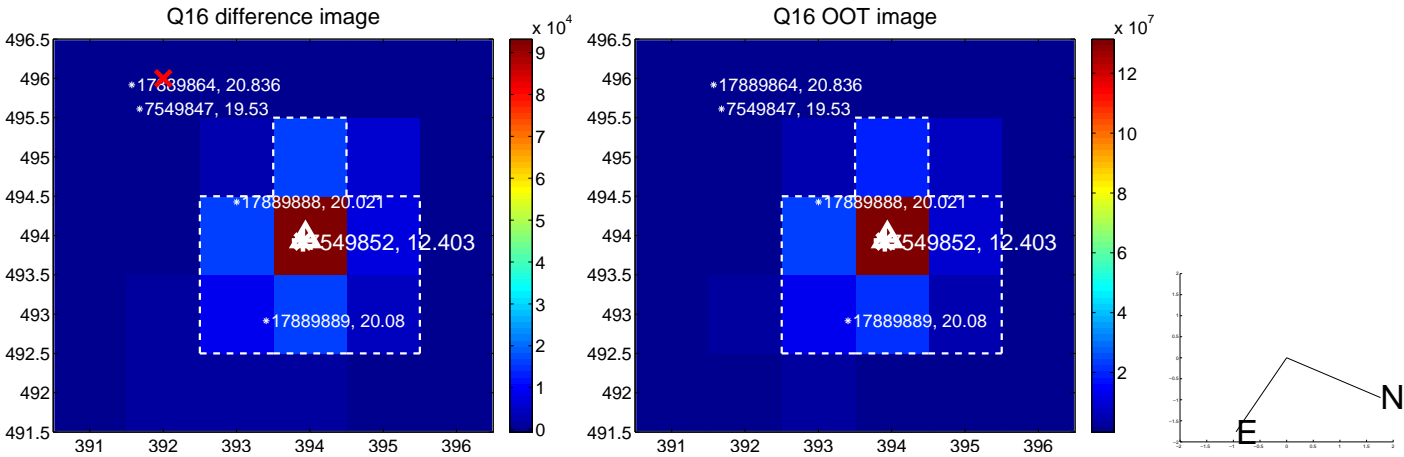
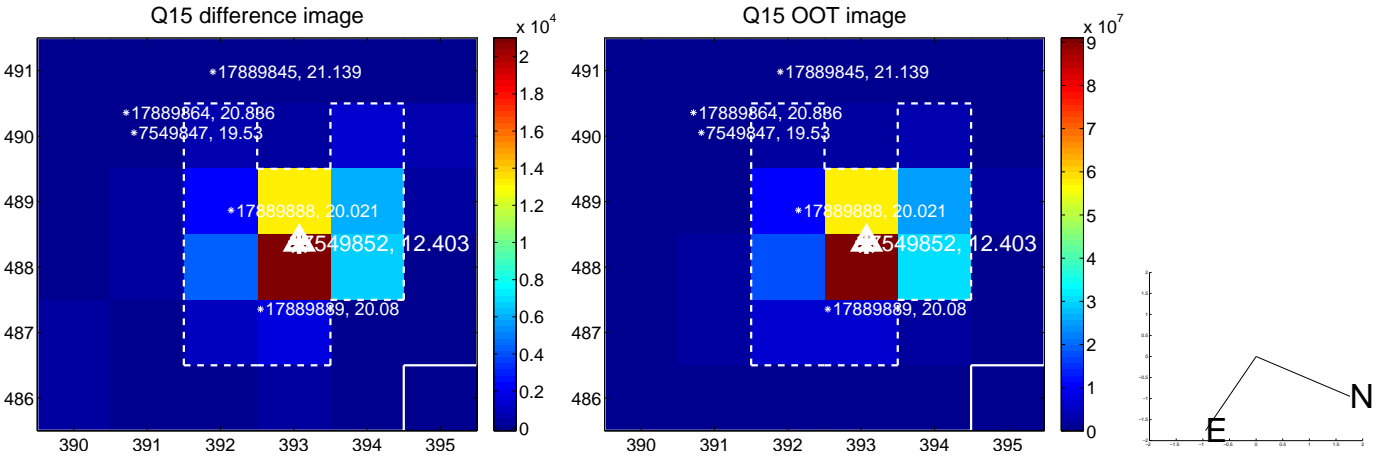
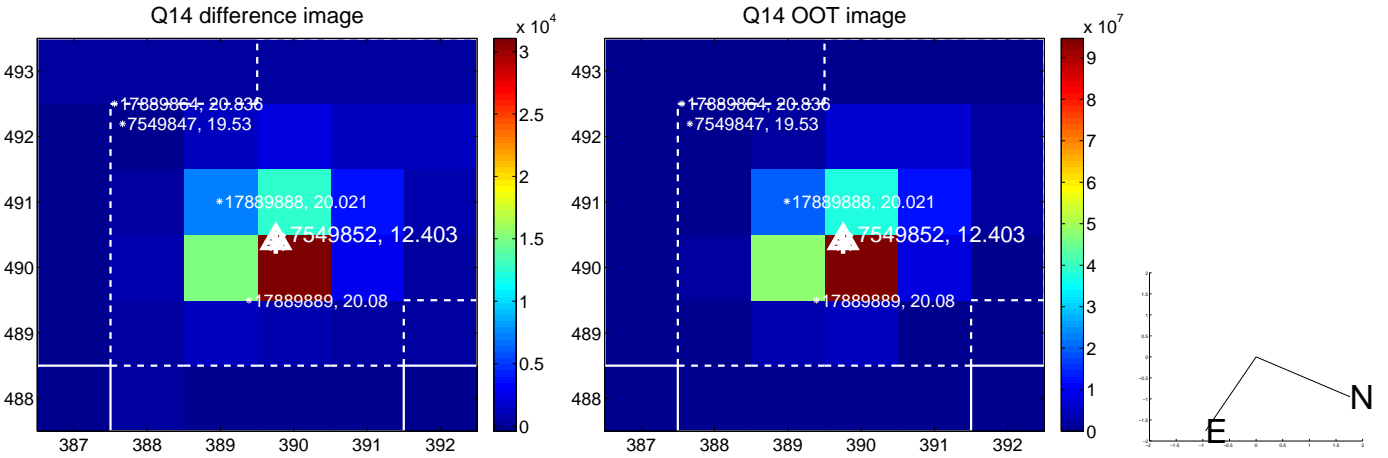
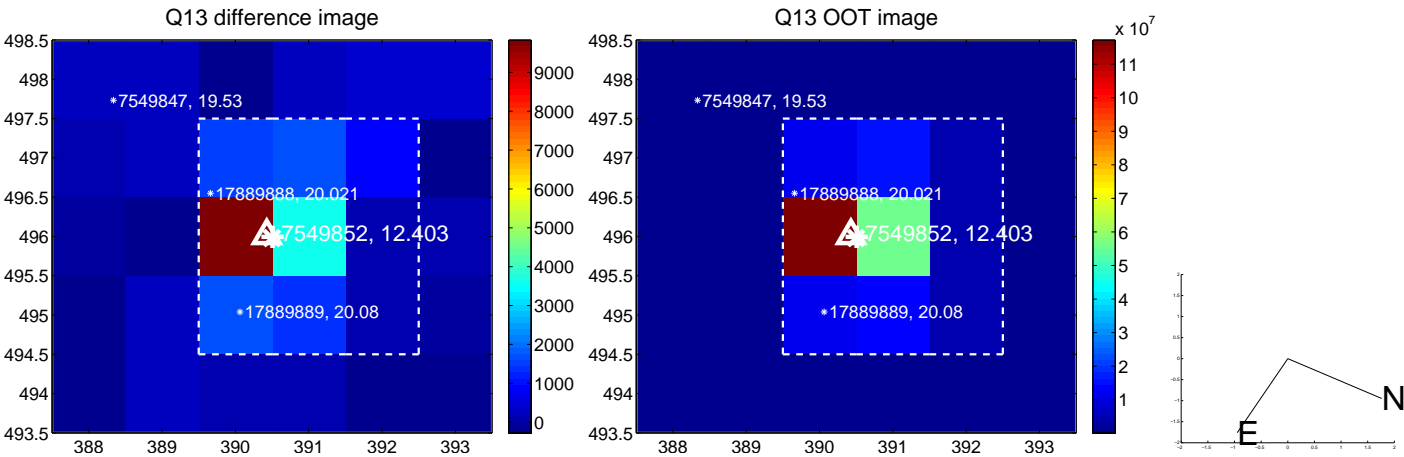
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



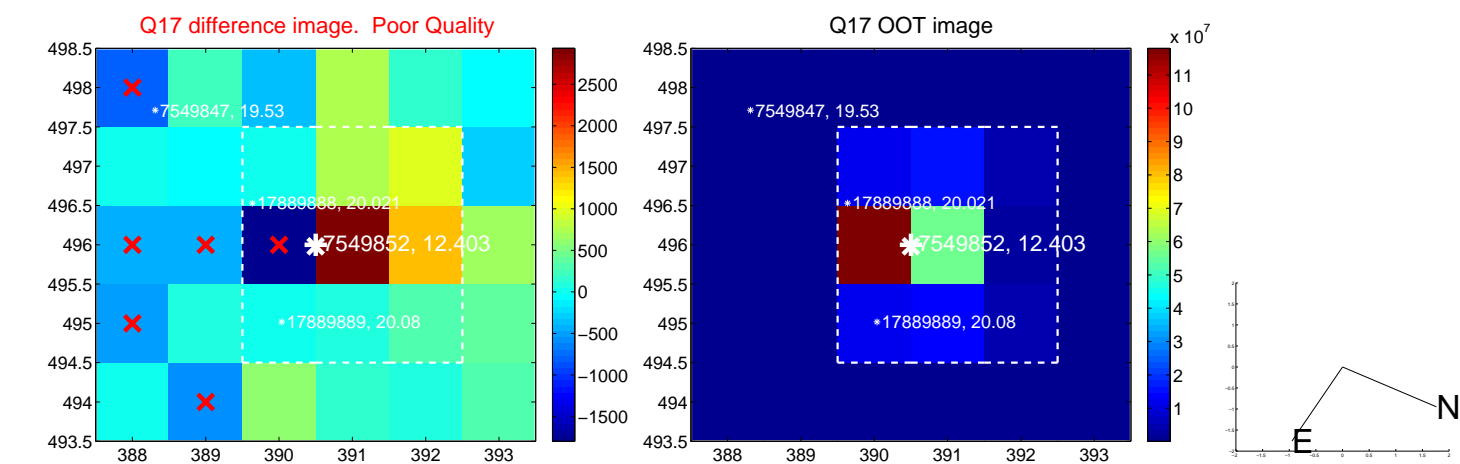
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



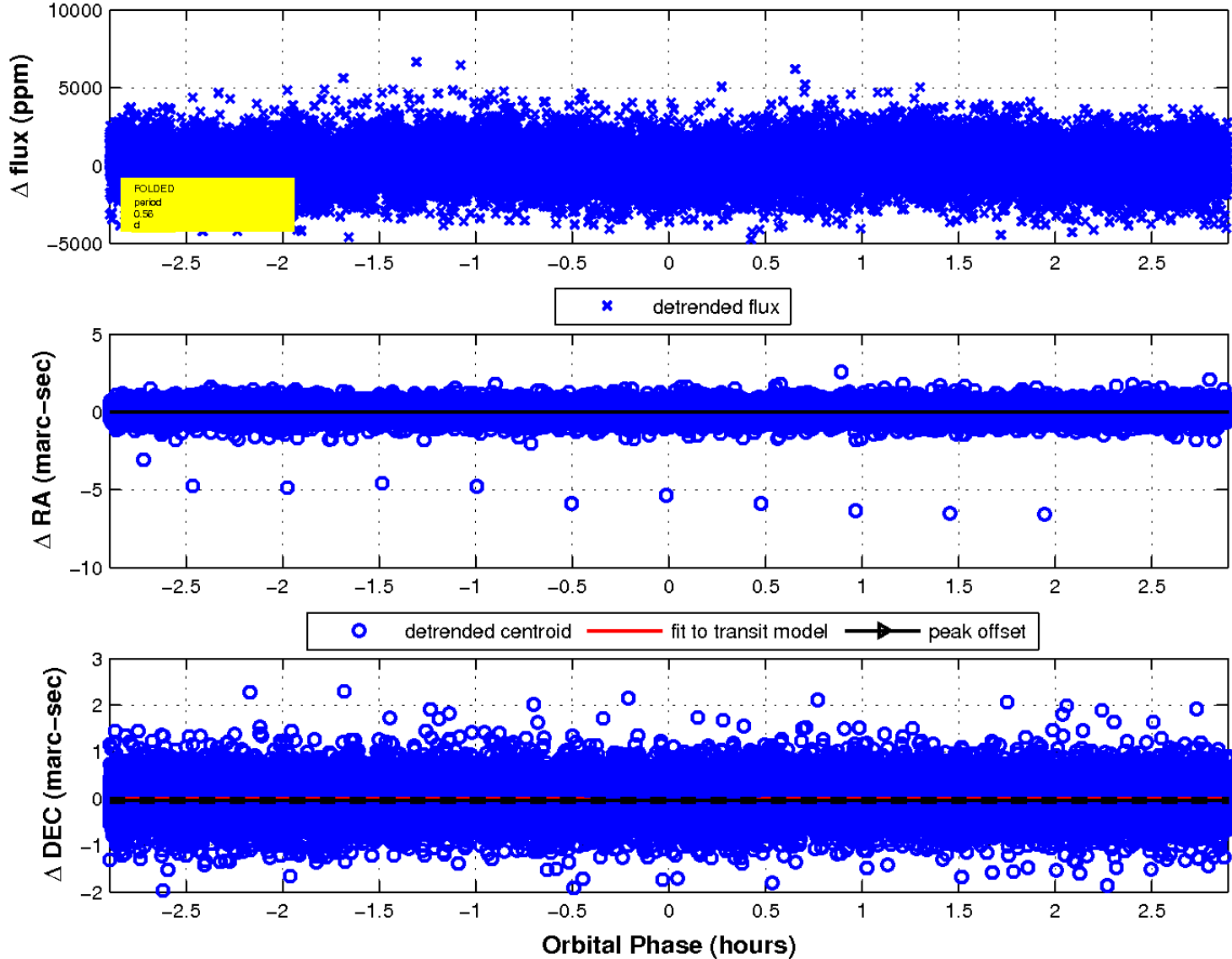
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

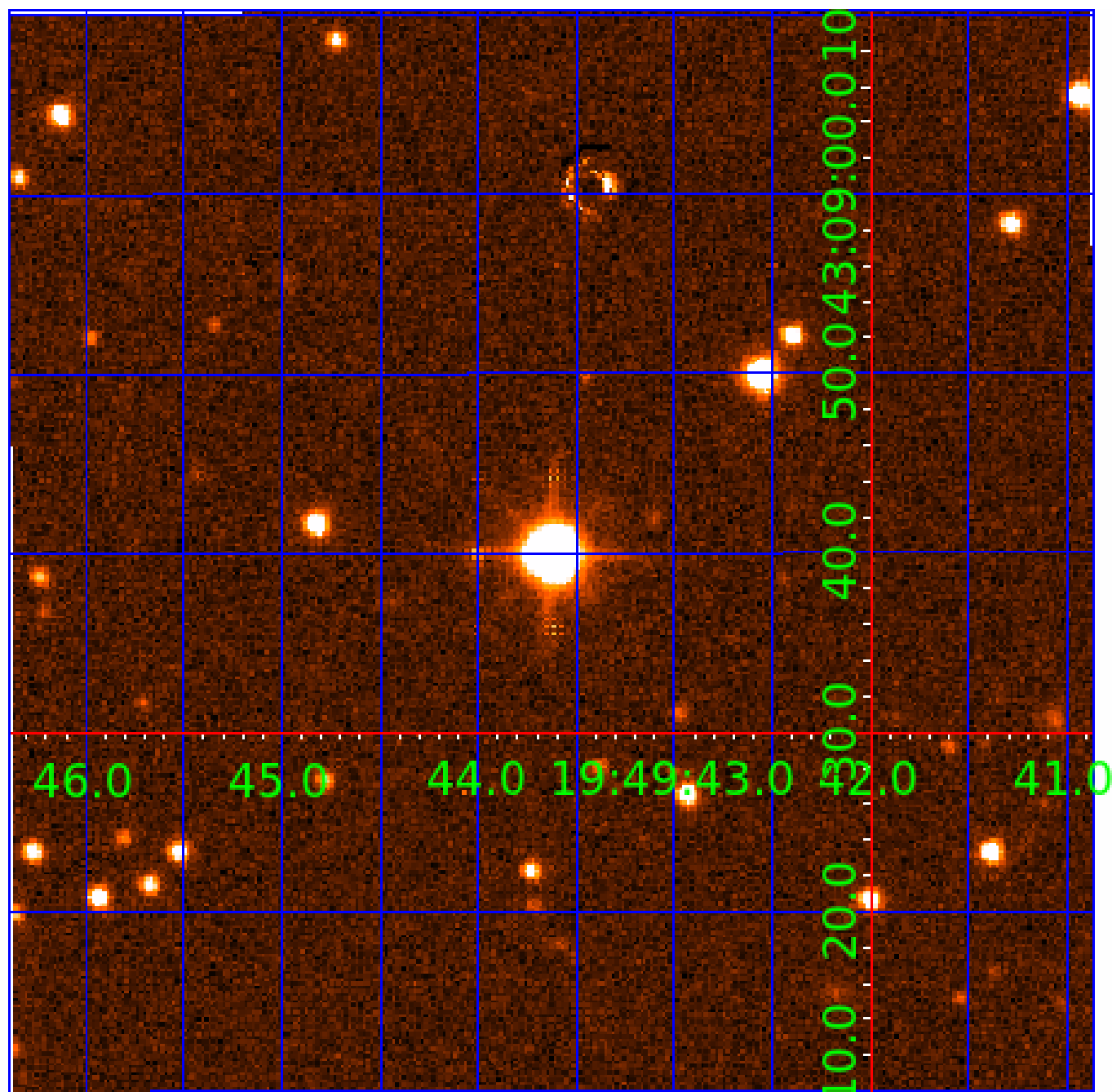


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 007549852

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})
007549852-01	OBS	No	0.937175	132.251856	435.8	1.104	19.4	23.5	2.37	7068	5.10	26154.13
007549852-02	OBS	No	0.562312	131.771638	331.2	0.966	25.2	19.5	2.37	7068	5.06	51681.03
007549852-03	OBS	No	0.561932	132.109140	0.0	2.232	21.9	0.0	2.37	7068	0.01	51727.66
007549852-04	OBS	No	0.562312	132.054744	207.1	1.500	13.0	-1.0	2.37	7068	3.44	51681.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007549852-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007549852-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

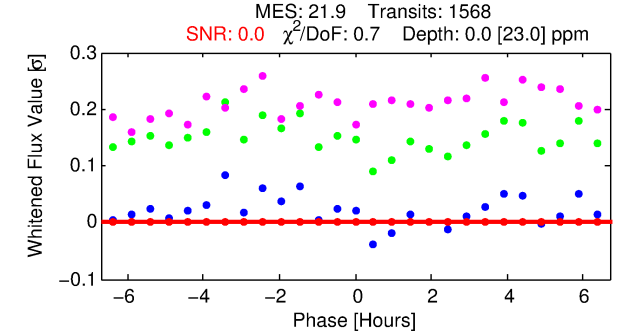
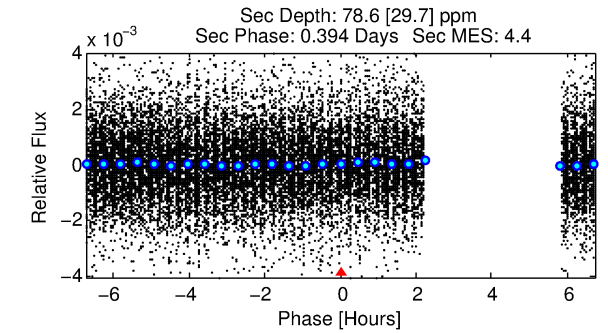
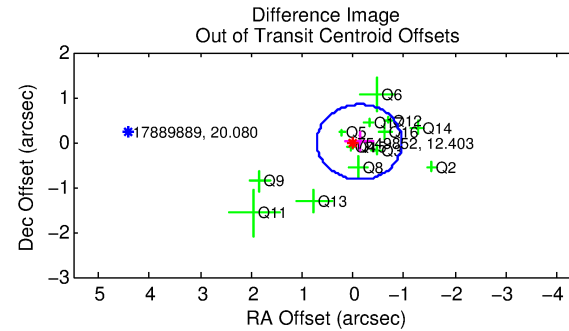
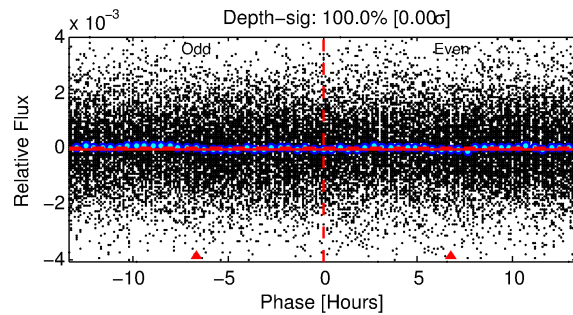
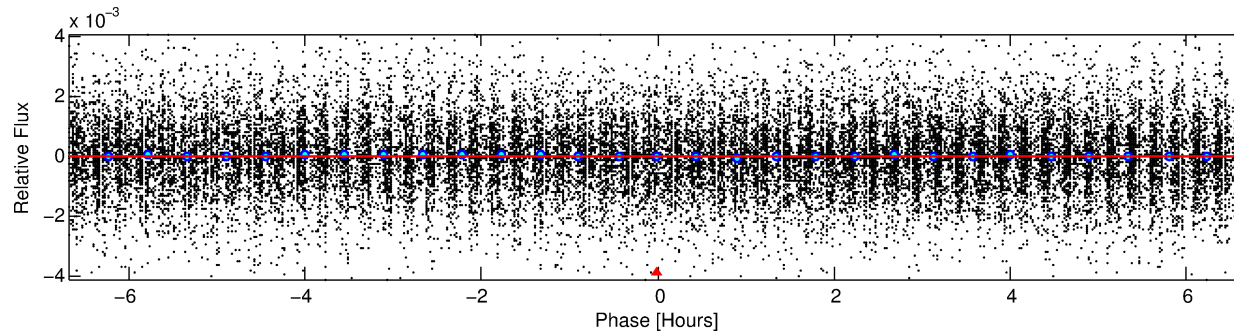
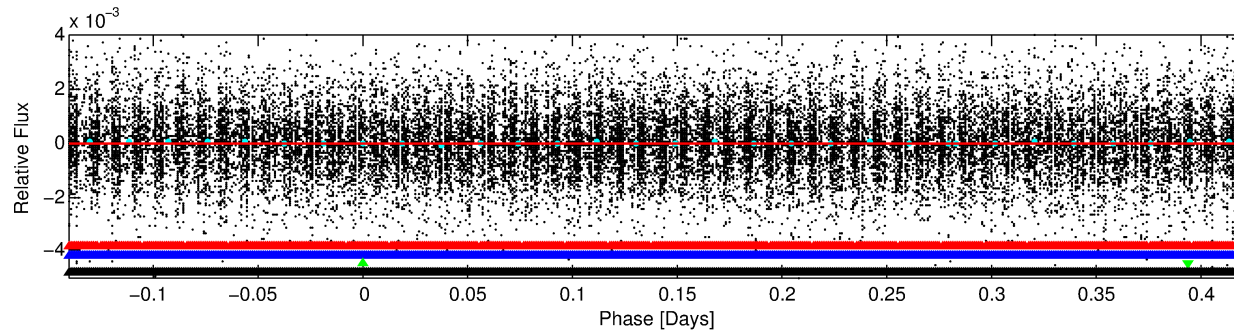
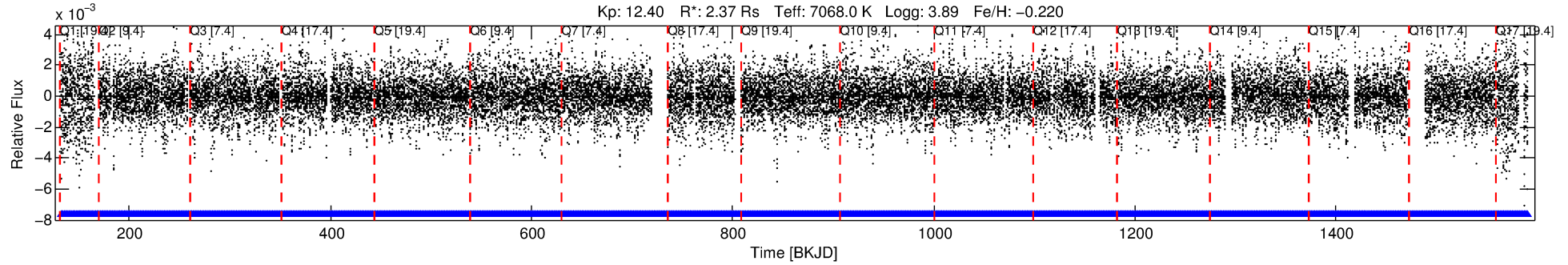
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007549852-03

No Significant Match Found

DV One-Page Summary

KIC: 7549852 Candidate: 3 of 4 Period: 0.562 d



DV Fit Results:

Period = 0.56193 [0.72116] d
Epoch = 132.1091 [126.5304] BKJD
Rp/R* = 0.0001 [0.2747]
a/R* = 1.09 [173.11]
b = 0.97 [99.37]
Seff = 51727.66 [94443.92]
Teq = 3846 [1755] K
Rp = 0.01 [70.89] Re
a = 0.0155 [0.0146] AU
Ag = 48098.68 [462622598.15] [0.00 σ]
Teffp = 88050 [211744279] K [0.00 σ]

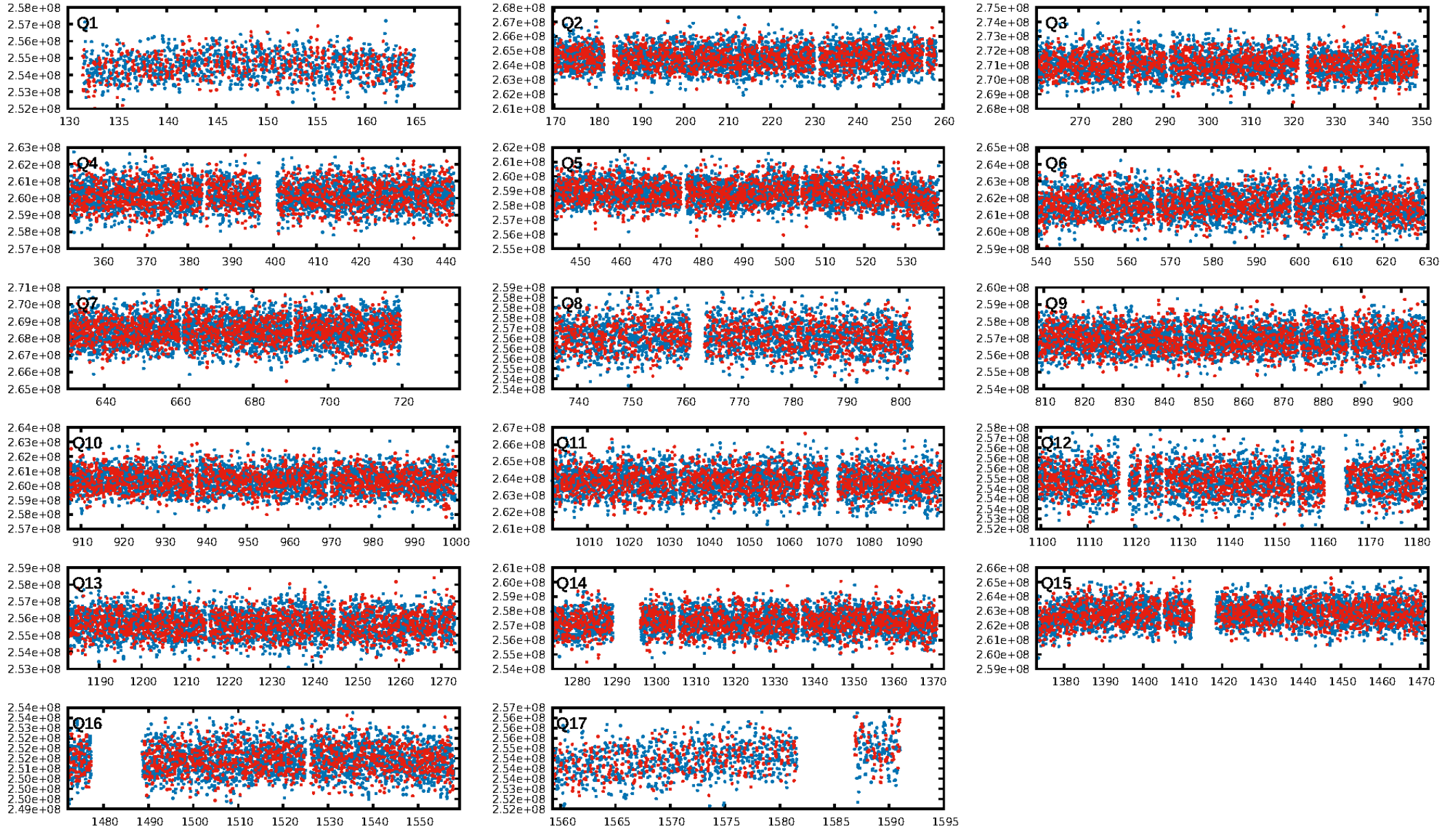
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.3% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1482/1482]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.126 arcsec [0.45 σ]
KicOffset-rm: 0.186 arcsec [0.75 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 0.00 [0/17]

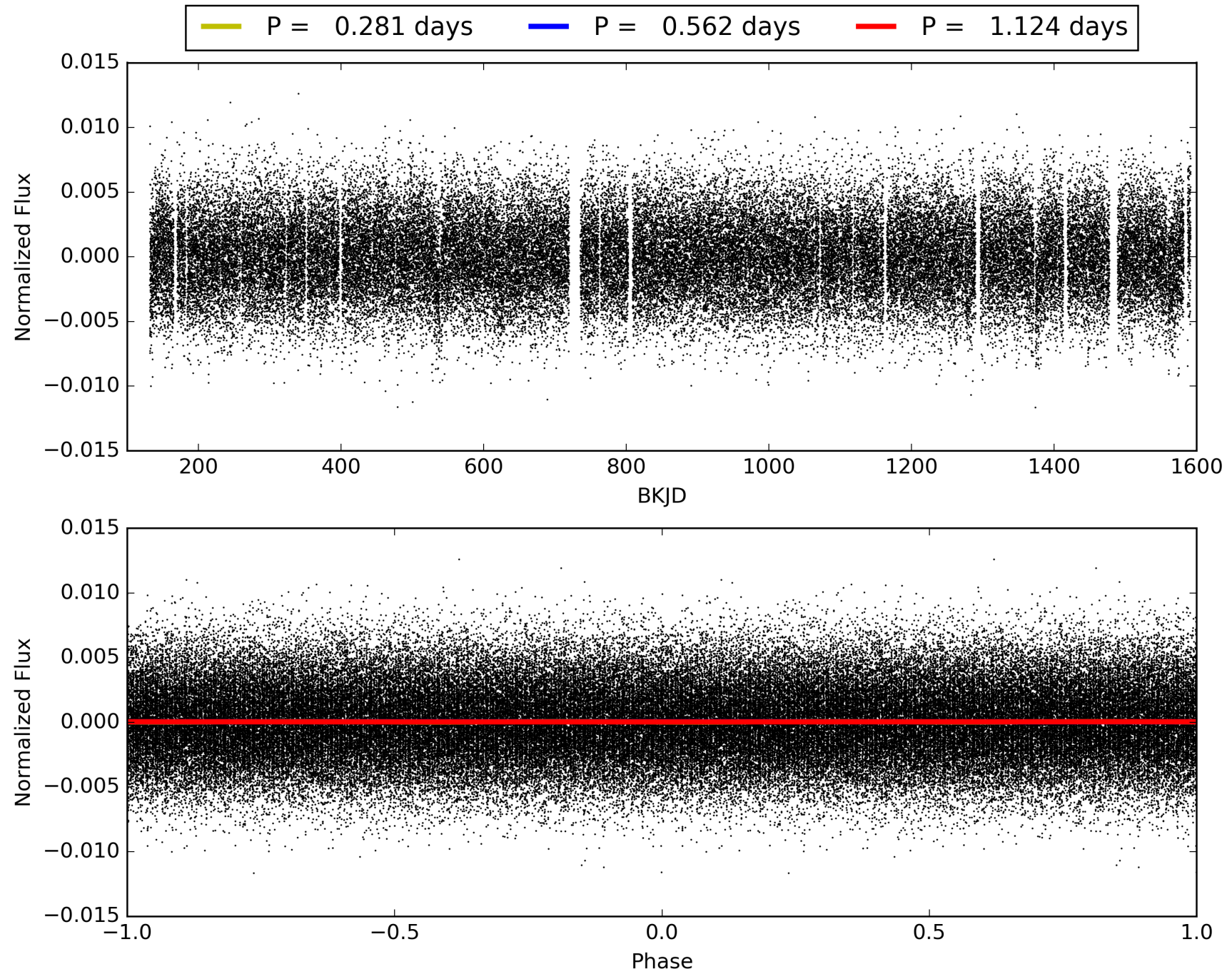
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:15:15 Z

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

TCE 007549852-03, PDC Light Curves

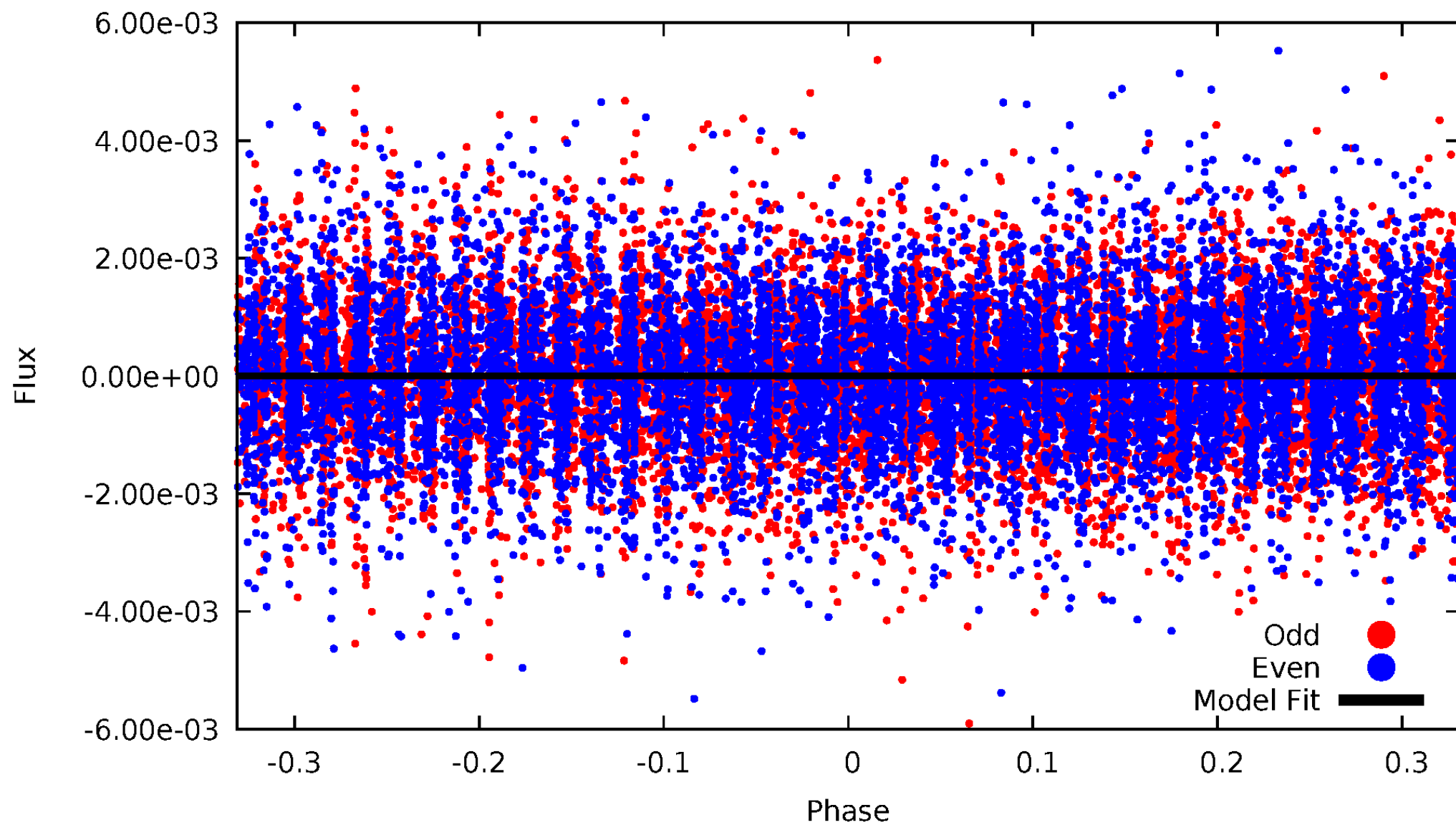


TCE 007549852-03



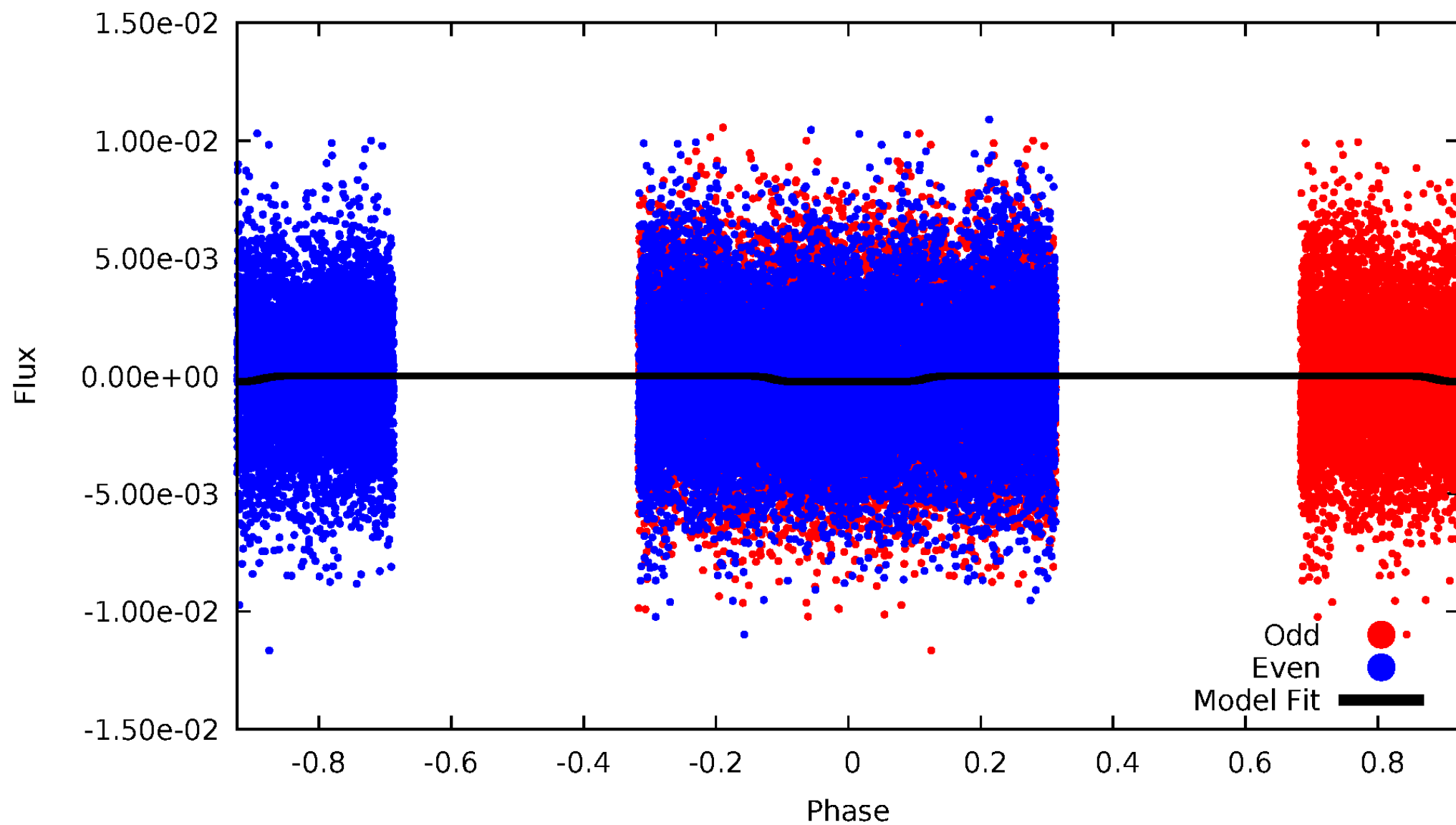
DV Odd/Even

TCE 007549852-03



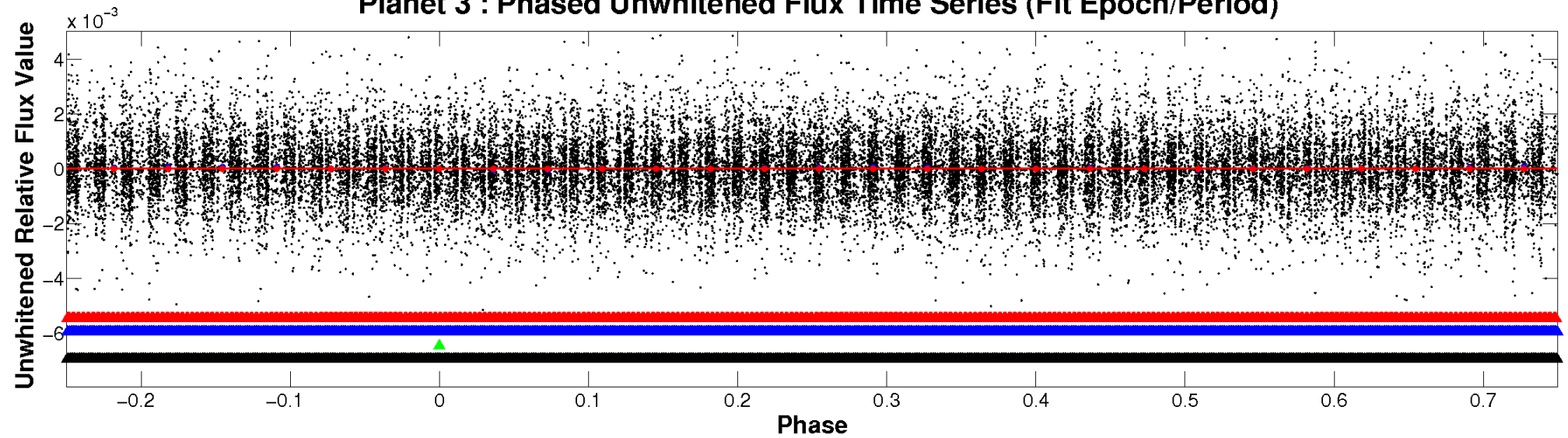
ALT Odd/Even

TCE 007549852-03

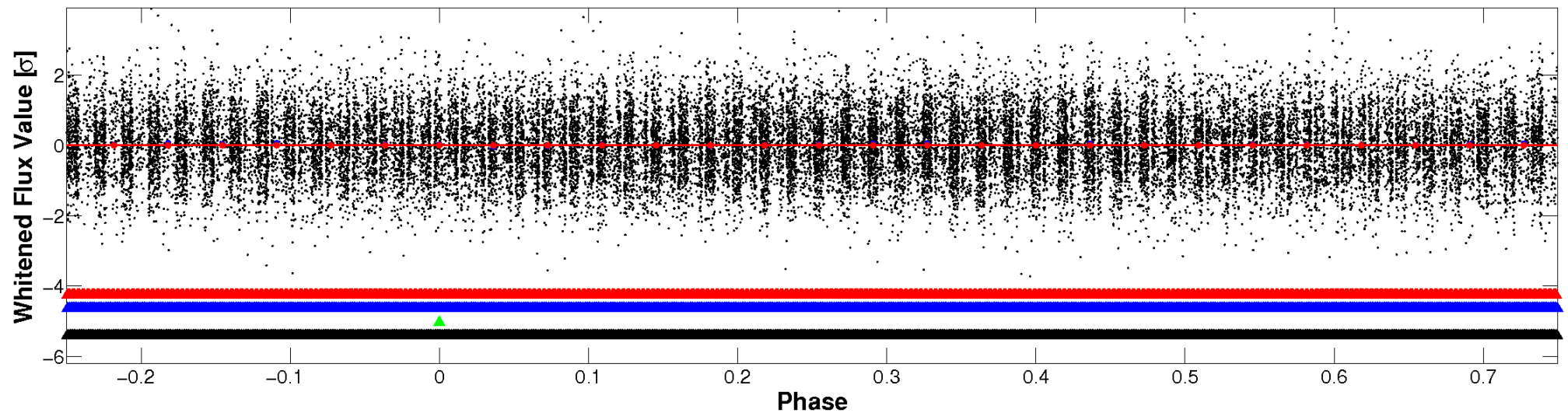


Non-Whitened Vs. Whitened Light Curve

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

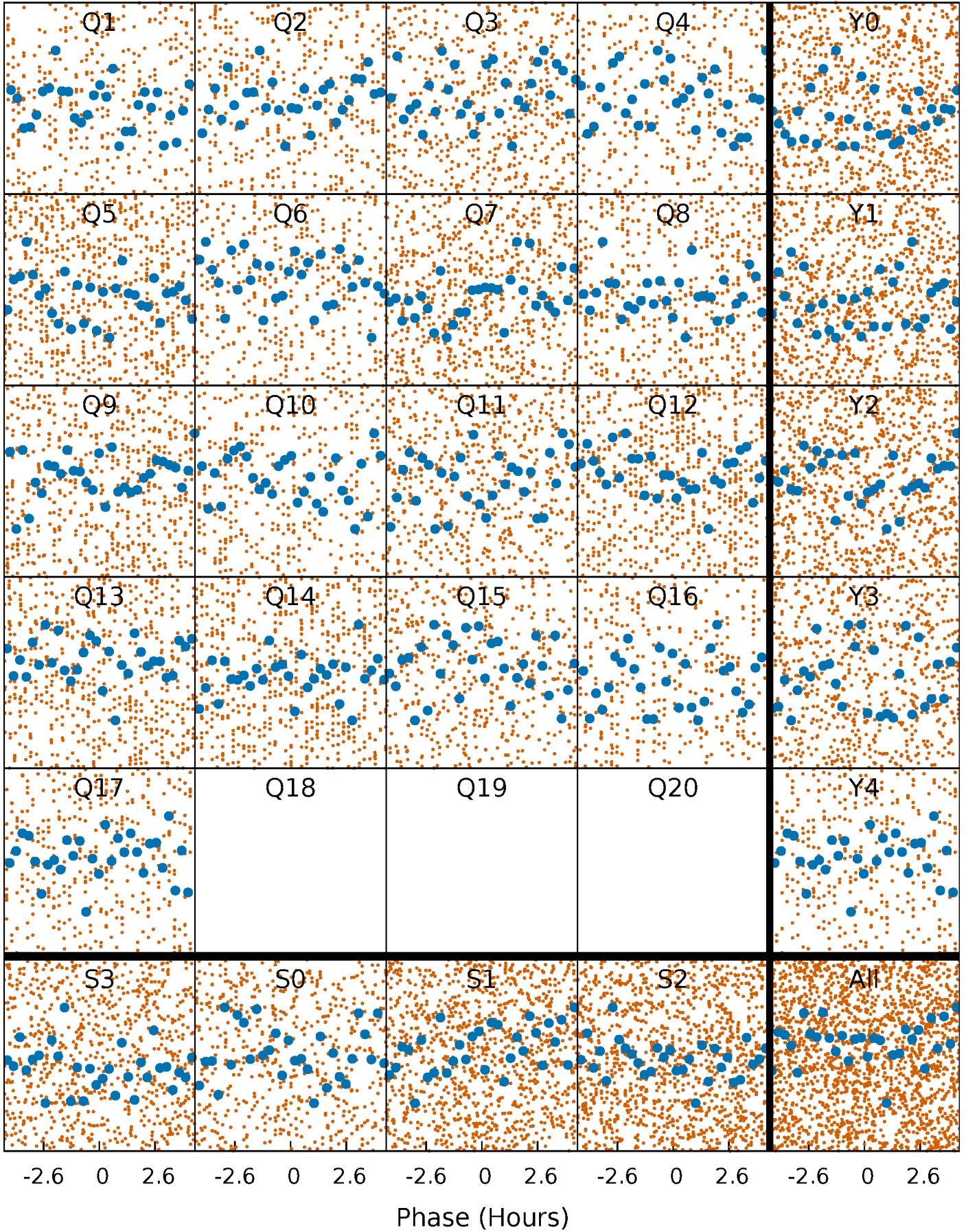


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



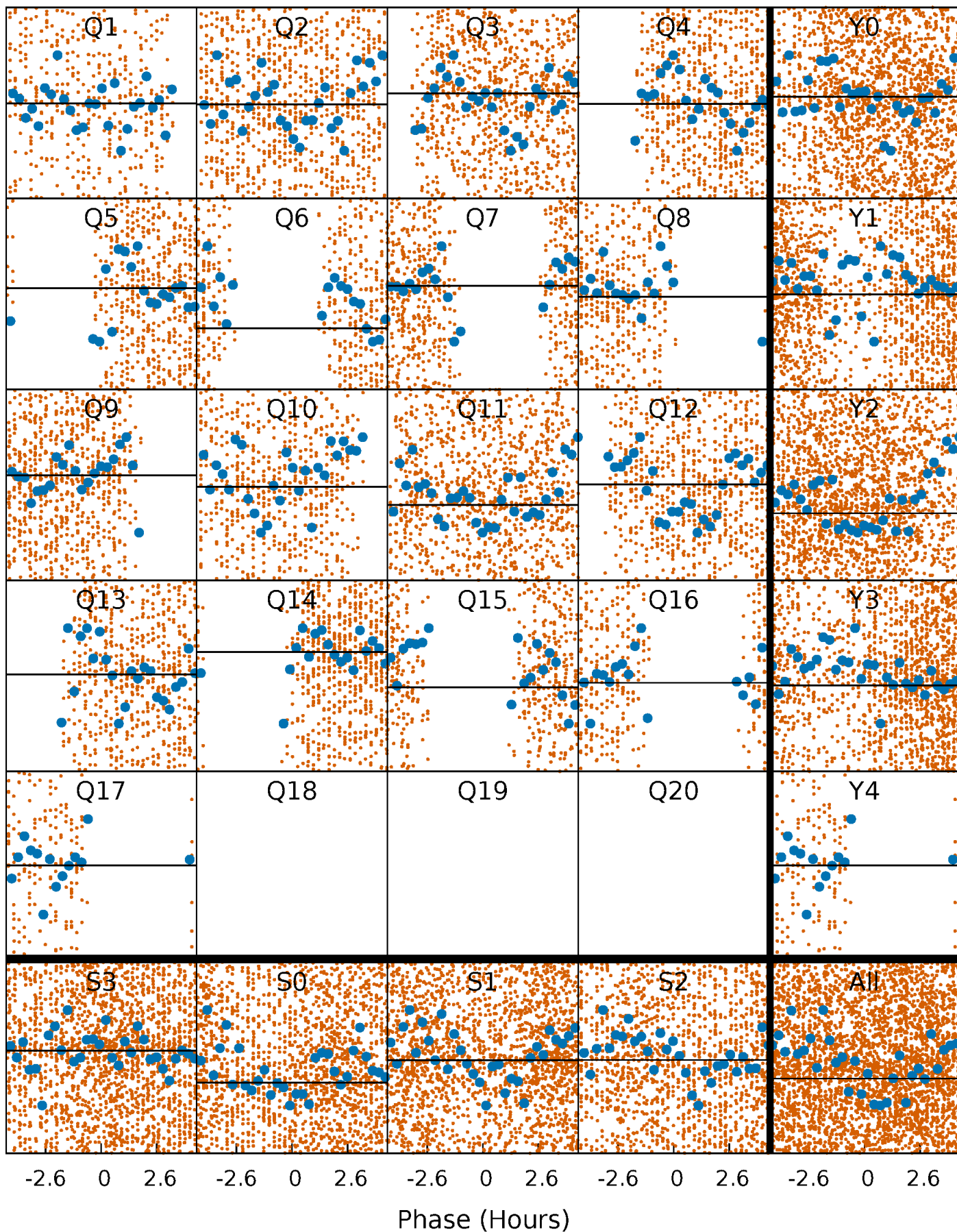
PDC Quarter-Phased Transit Curves

TCE 007549852-03 P= 0.561932 Days $T_0=132.109140$ (BKJD)



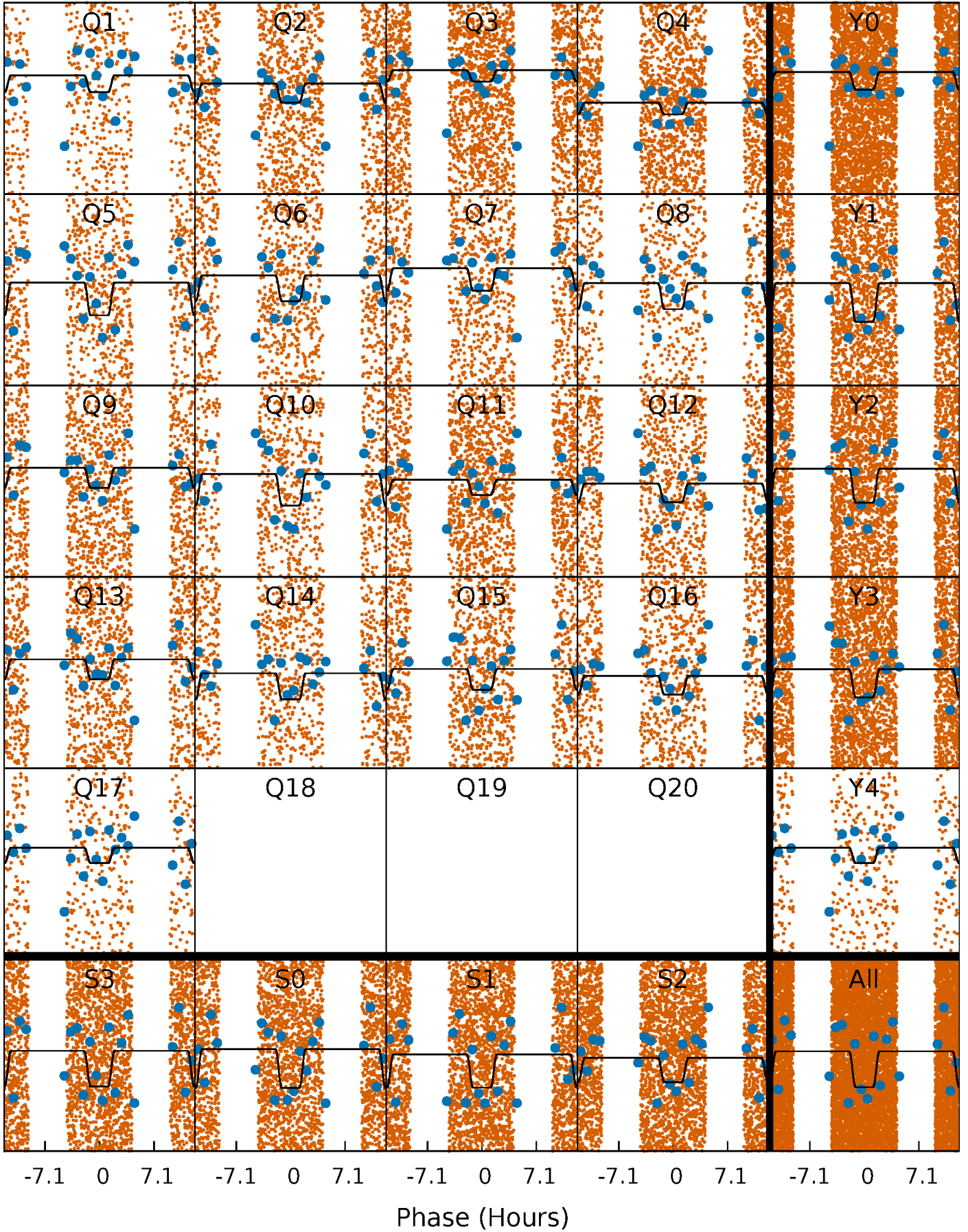
DV Quarter-Phased Transit Curves

TCE 007549852-03 P= 0.561932 Days $T_0=132.109140$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

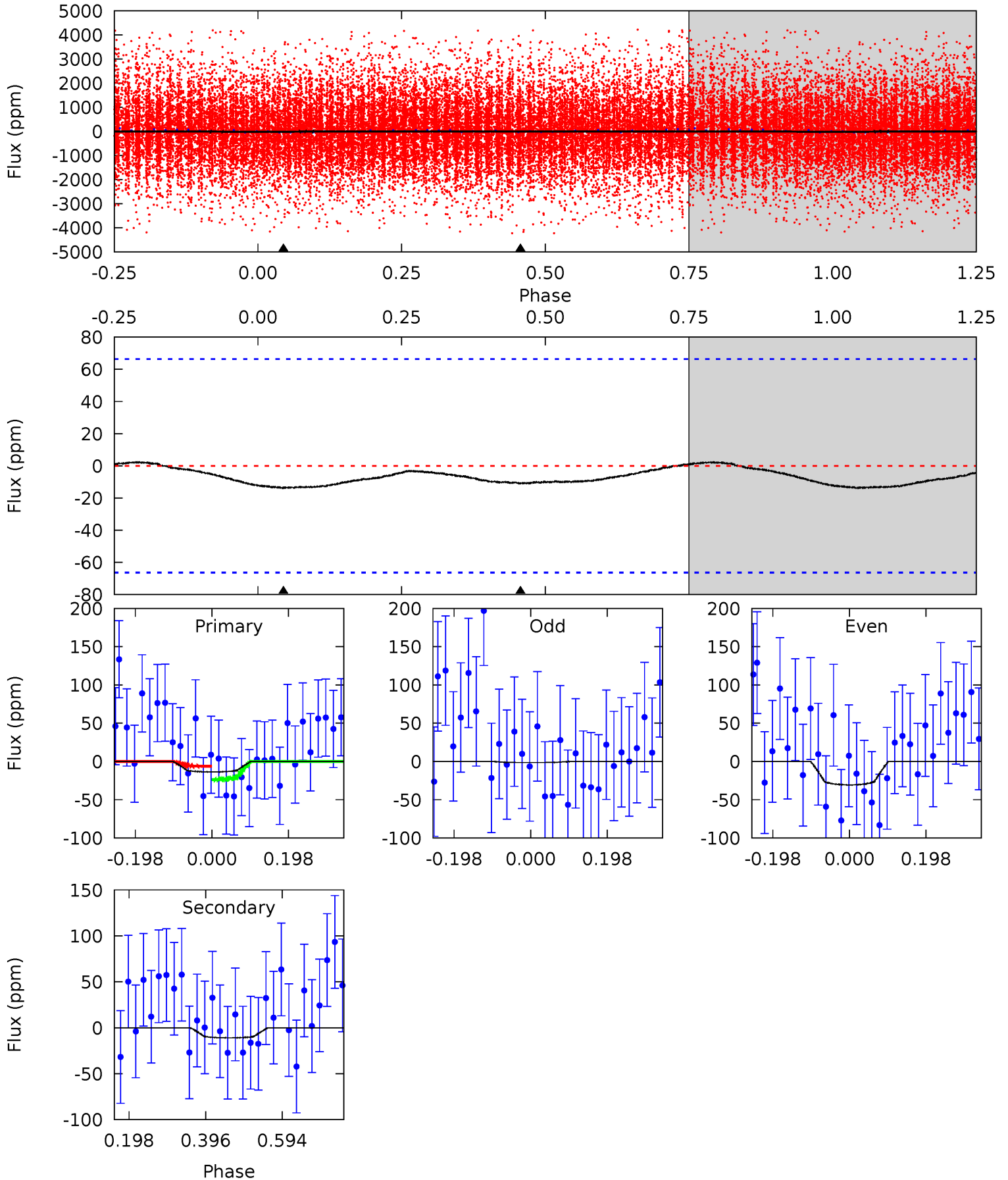
TCE 007549852-03 P= 0.562312 Days $T_0=132.053827$ (BKJD)



DV Model-Shift Uniqueness Test

007549852-03, P = 0.561932 Days, E = 130.985276 Days

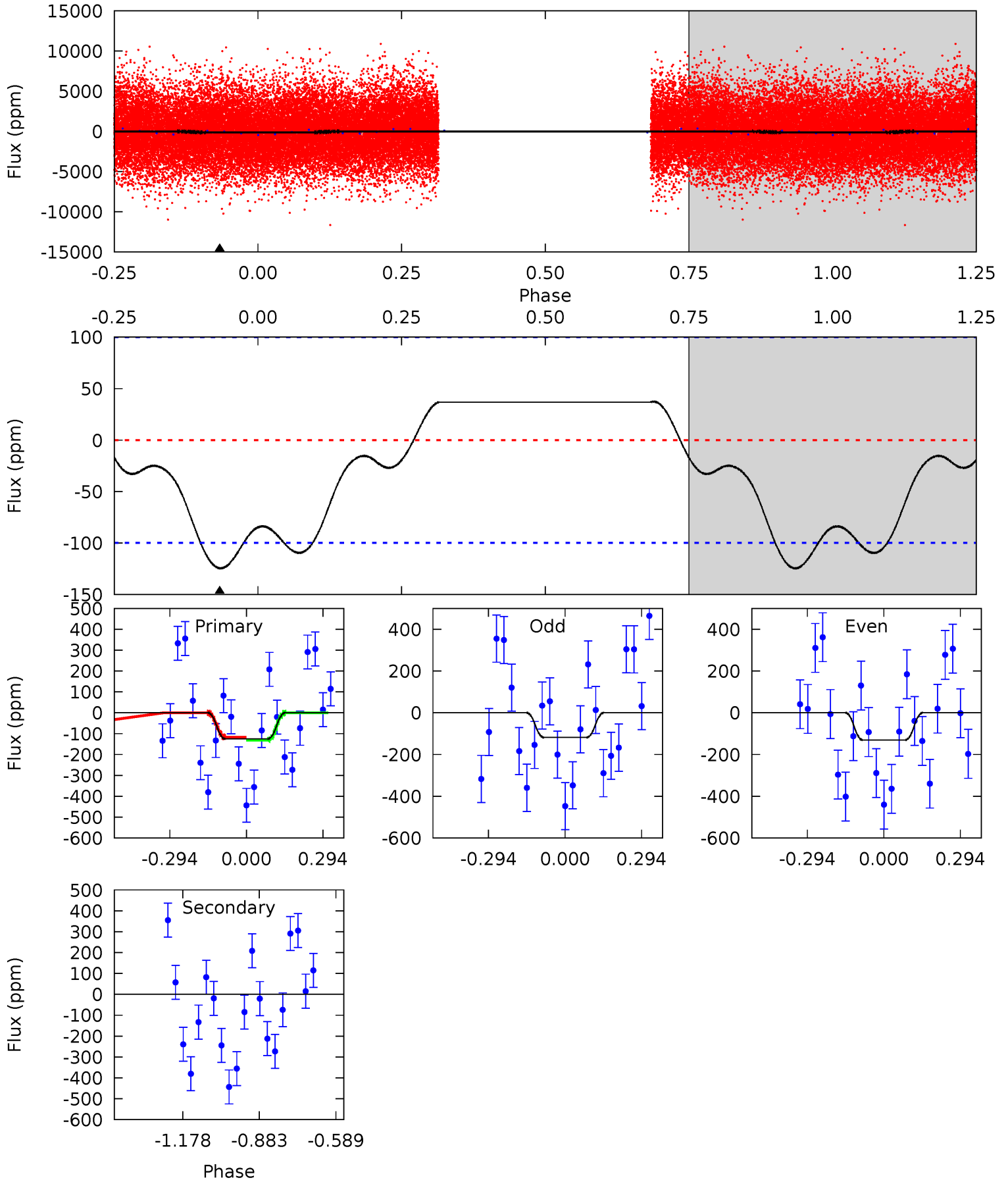
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.91	0.73	0	0	4.42	1.29	0.15	0.91	0.91	0.73	0.73	1.00	-0.58	0.14	0.60



Alt Model-Shift Uniqueness Test

007549852-03, P = 0.562312 Days, E = 131.491515 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	0	0	0	4.33	1.05	0.96	5.41	5.41	0	0	0.26	0.92	0.23	0.30



Stellar Parameters For KIC 007549852

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7068^{+197}_{-296}	$3.891^{+0.360}_{-0.120}$	$-0.220^{+0.250}_{-0.350}$	$2.365^{+0.513}_{-0.952}$	$1.584^{+0.203}_{-0.376}$	$0.169^{+0.480}_{-0.060}$
	+3%/-4%	+9%/-3%	+114%/-159%	+22%/-40%	+13%/-24%	+285%/-36%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007549852-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11±15	$42.94^{+48.79}_{-29.93}$	4711^{+2089}_{-993}	-4066^{+627}_{-1465}	$0.001^{+0.011}_{-0.001}$
Alt.	0±23	$40.74^{+47.56}_{-27.73}$	4695^{+2015}_{-1000}	-4120^{+634}_{-1444}	$-0.000^{+0.004}_{-0.004}$

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

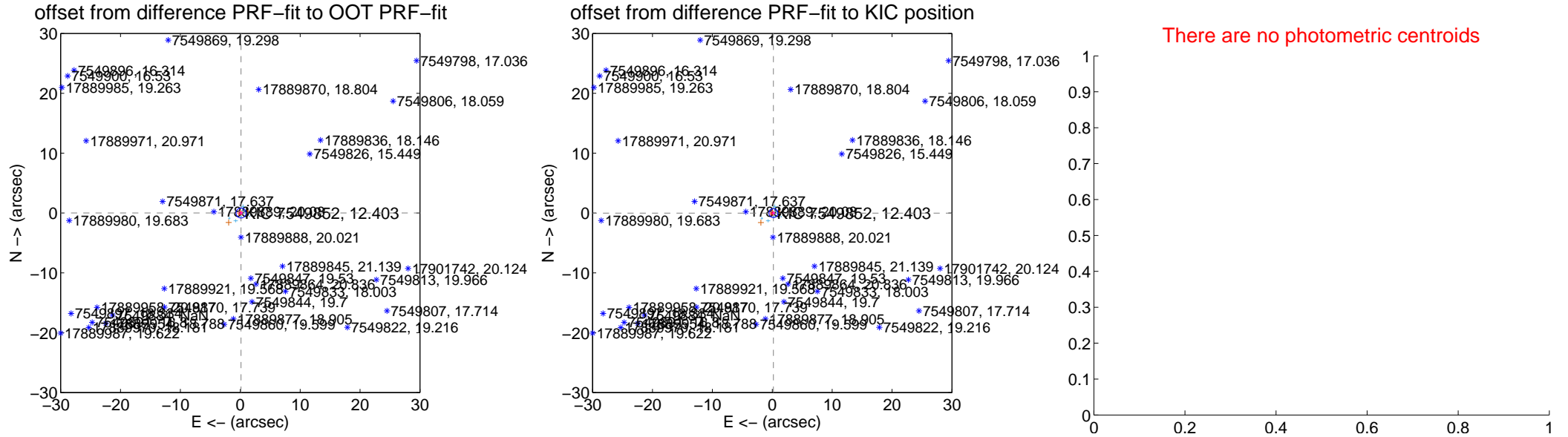
DV Centroid Data

Supplemental centroid analysis for 007549852-03. Kepler magnitude: 12.40. Transit SNR 0.00

There are 10 quarters with good PRF difference image offsets

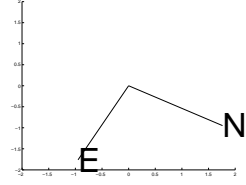
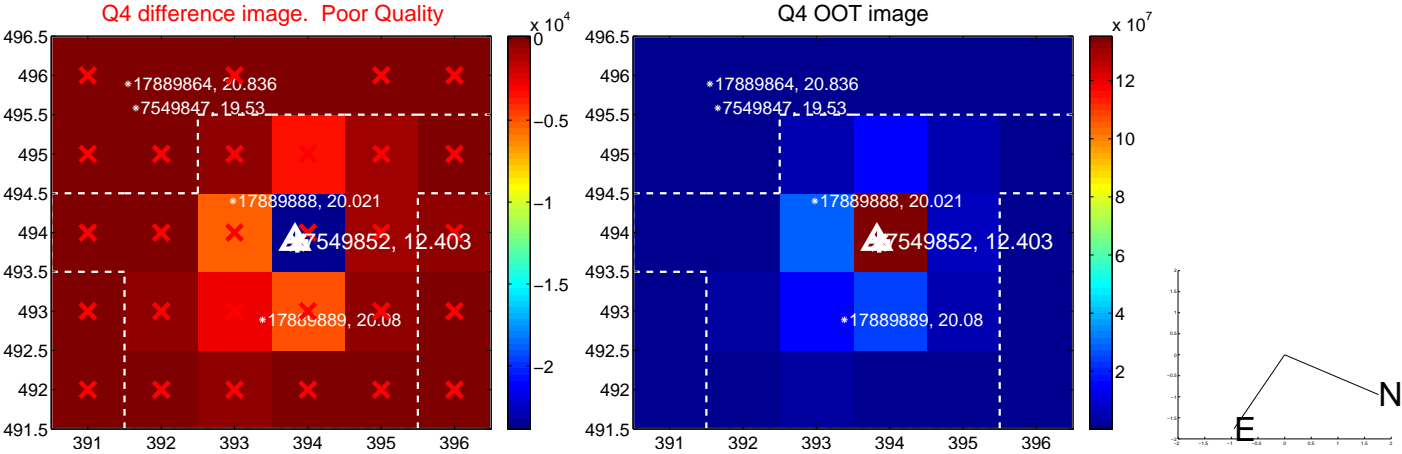
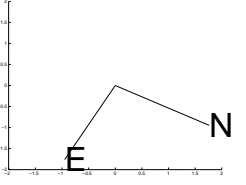
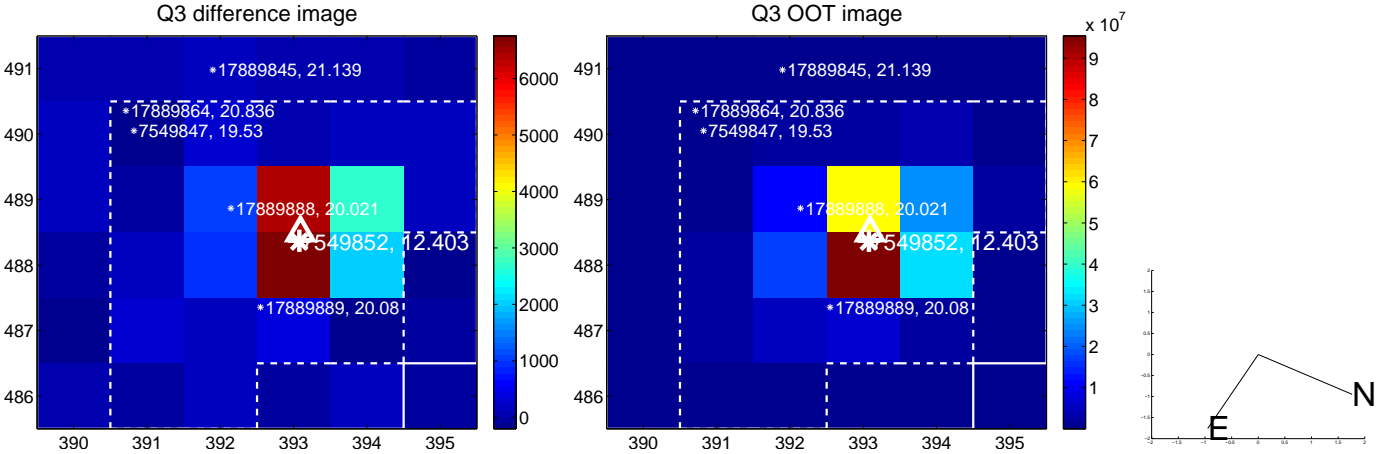
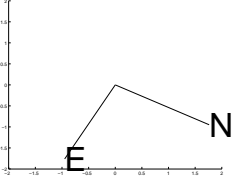
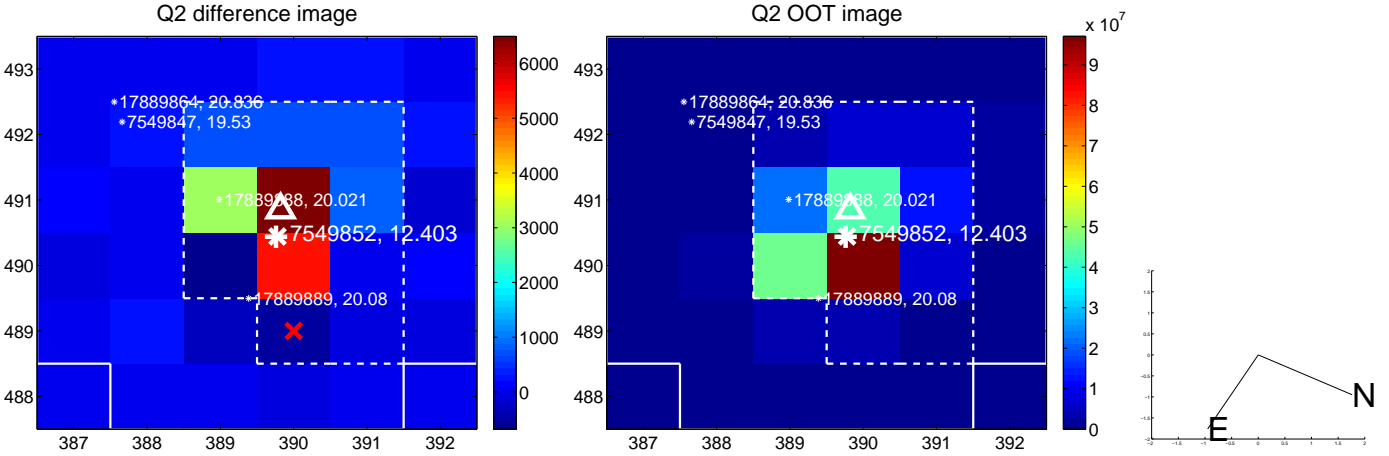
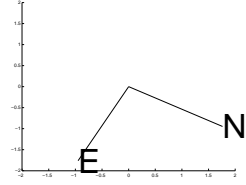
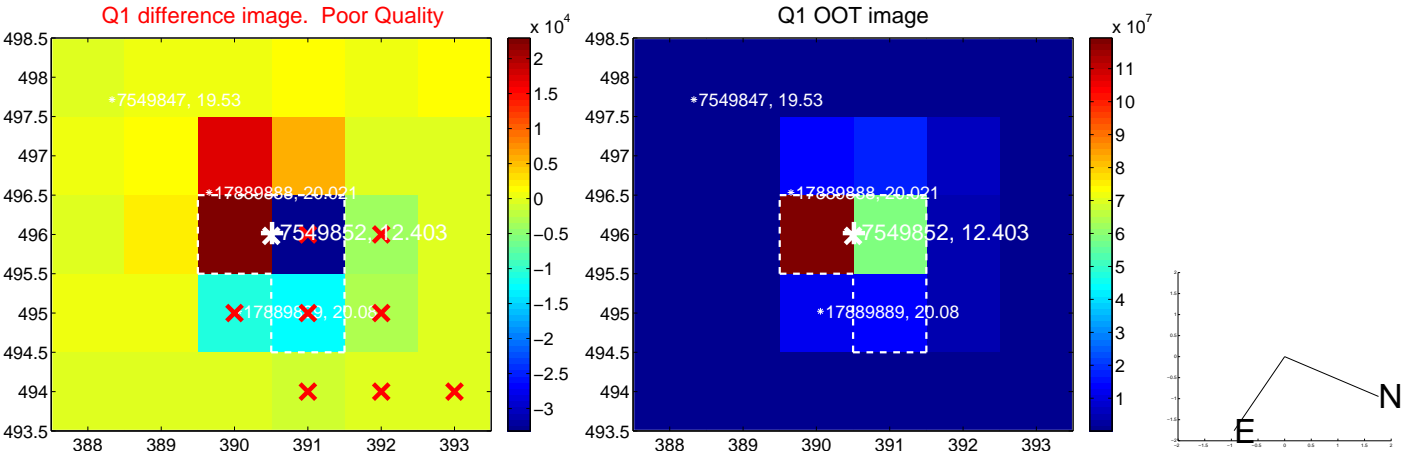
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.126 ± 0.279	0.45	-0.126 ± 0.276	0.003 ± 0.207
PRF-fit source offset from KIC position	0.186 ± 0.249	0.75	-0.185 ± 0.261	-0.017 ± 0.211
photometric centroid source offset	—	—	—	—

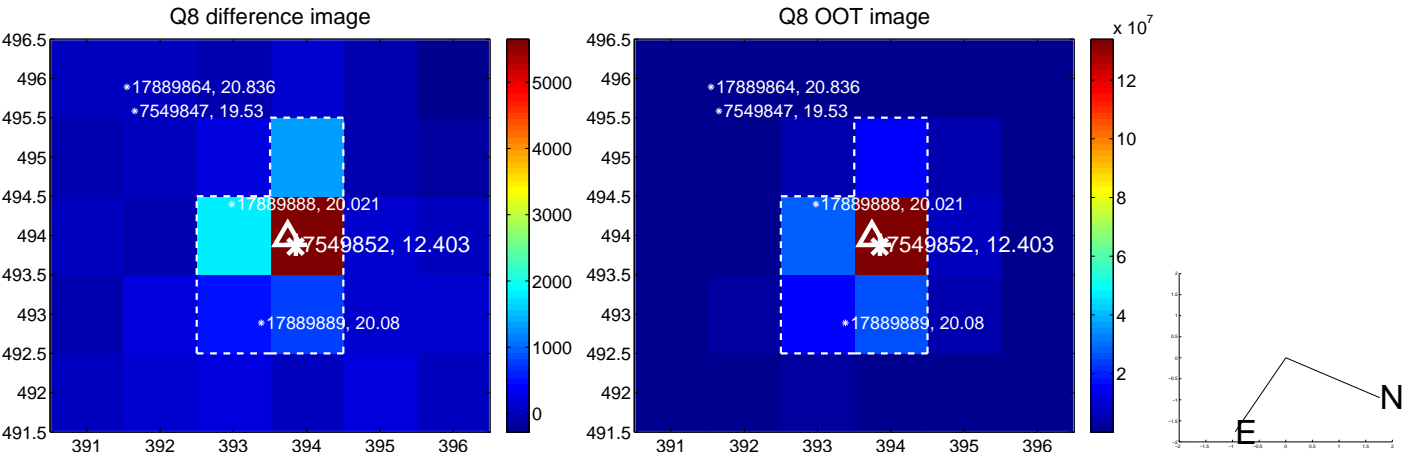
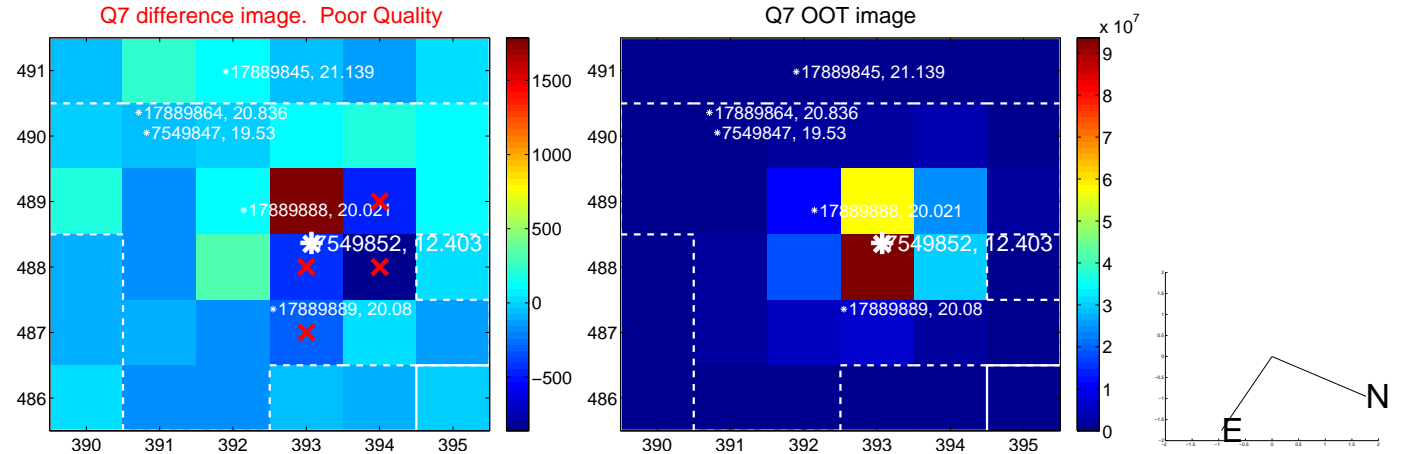
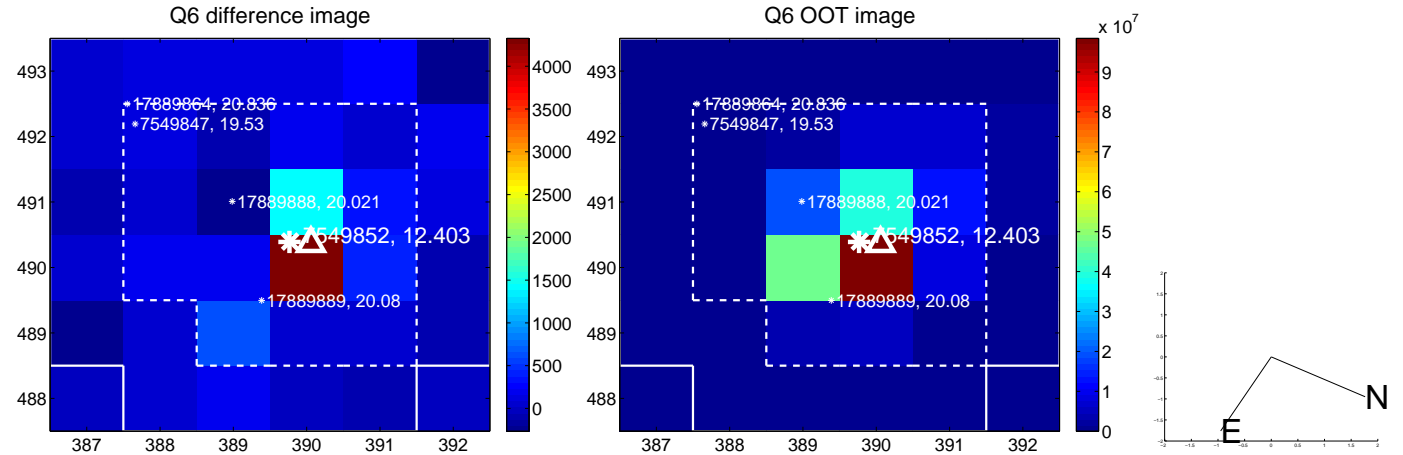
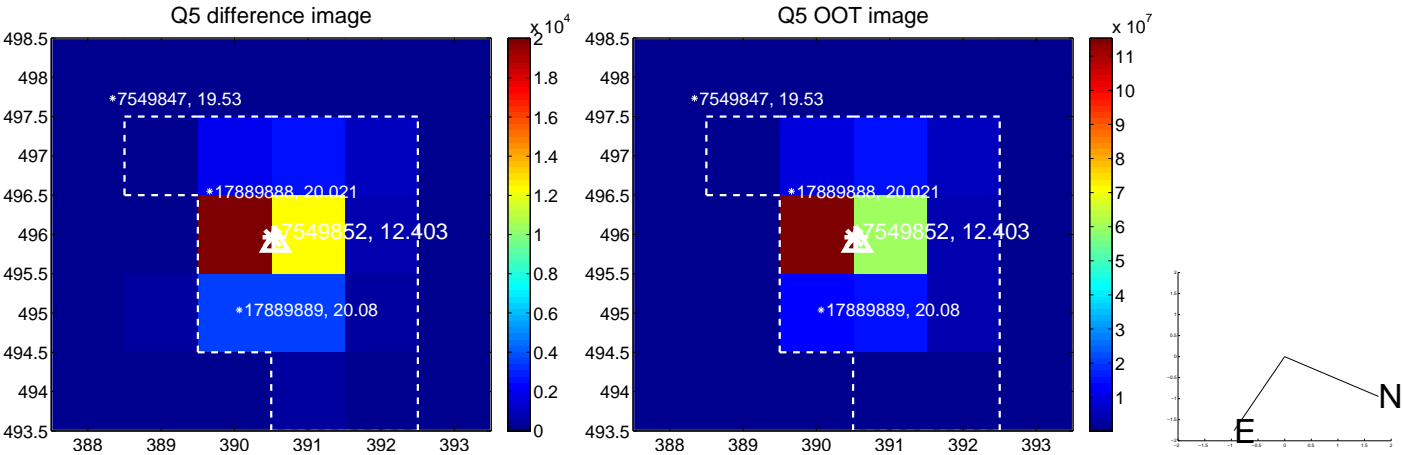


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

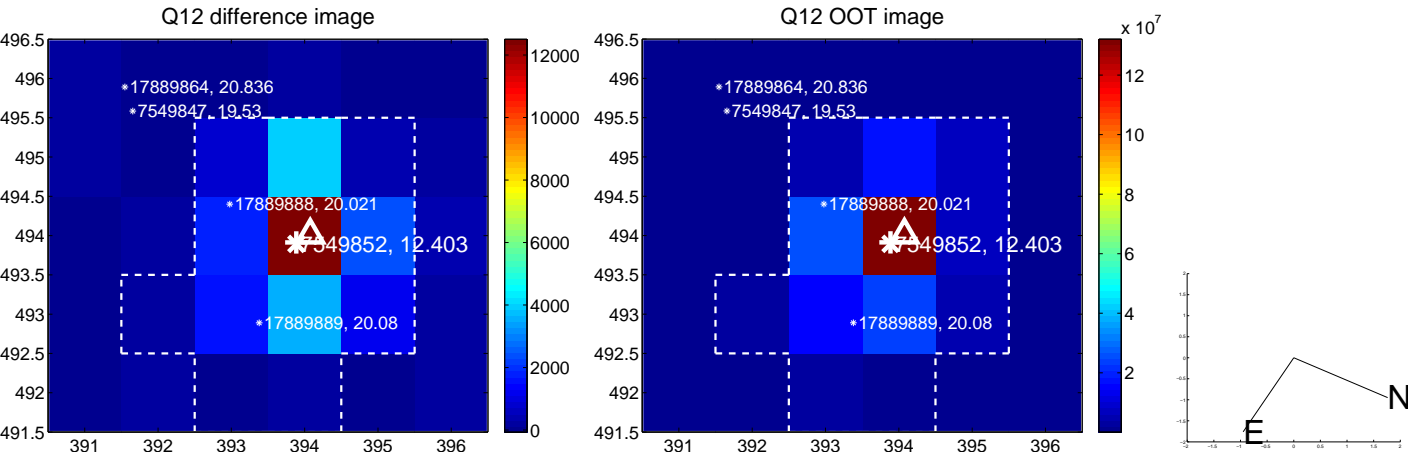
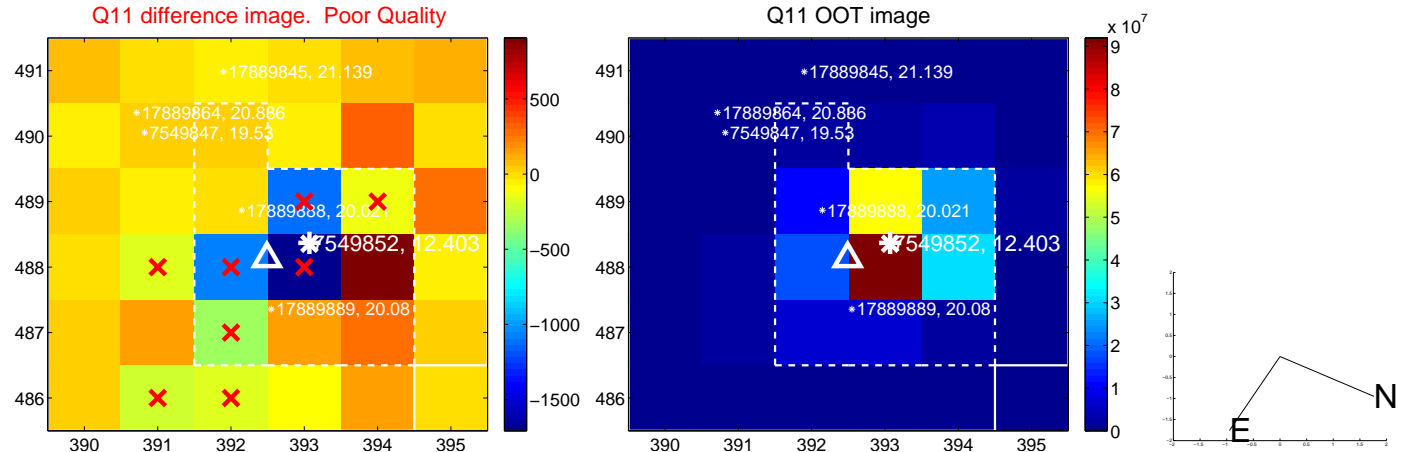
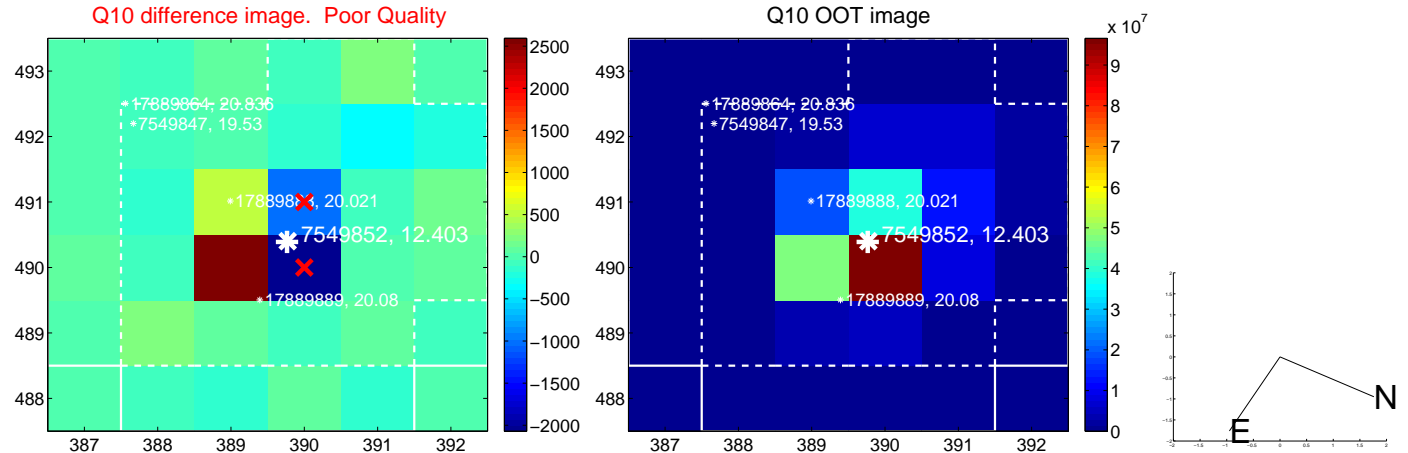
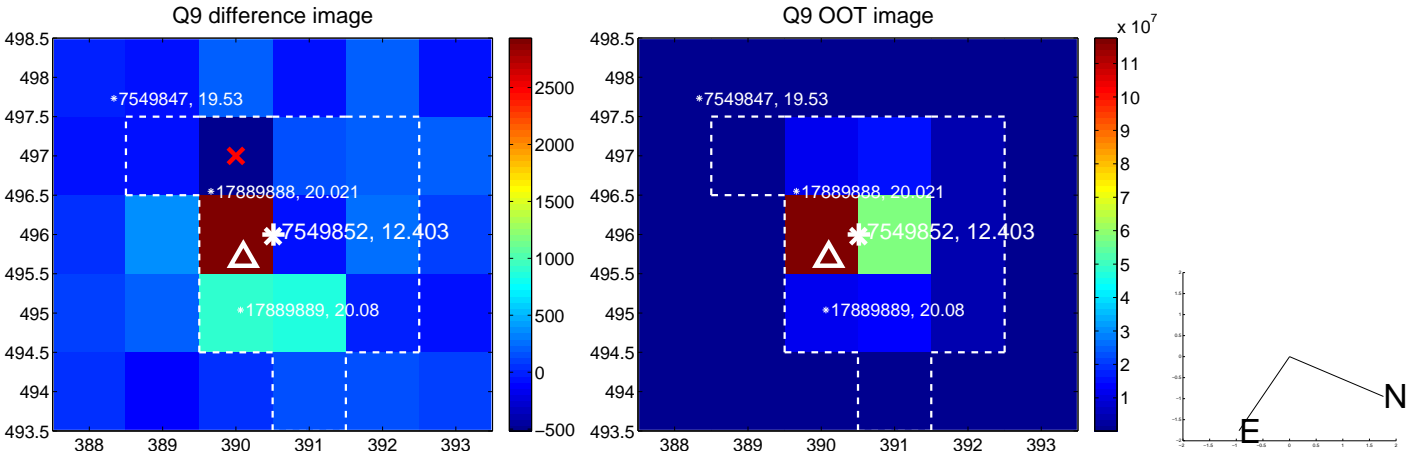
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



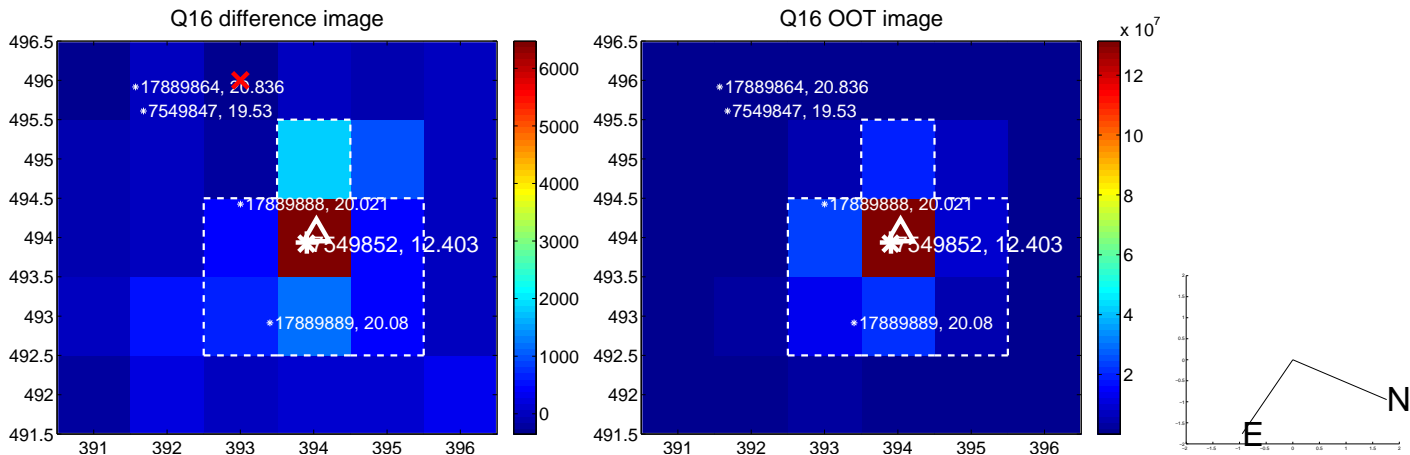
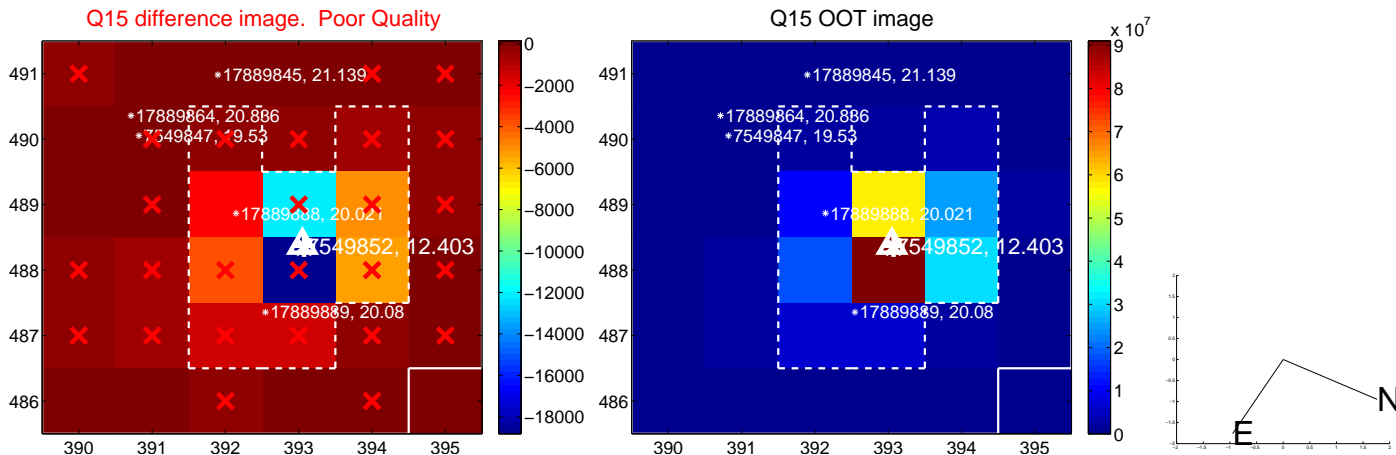
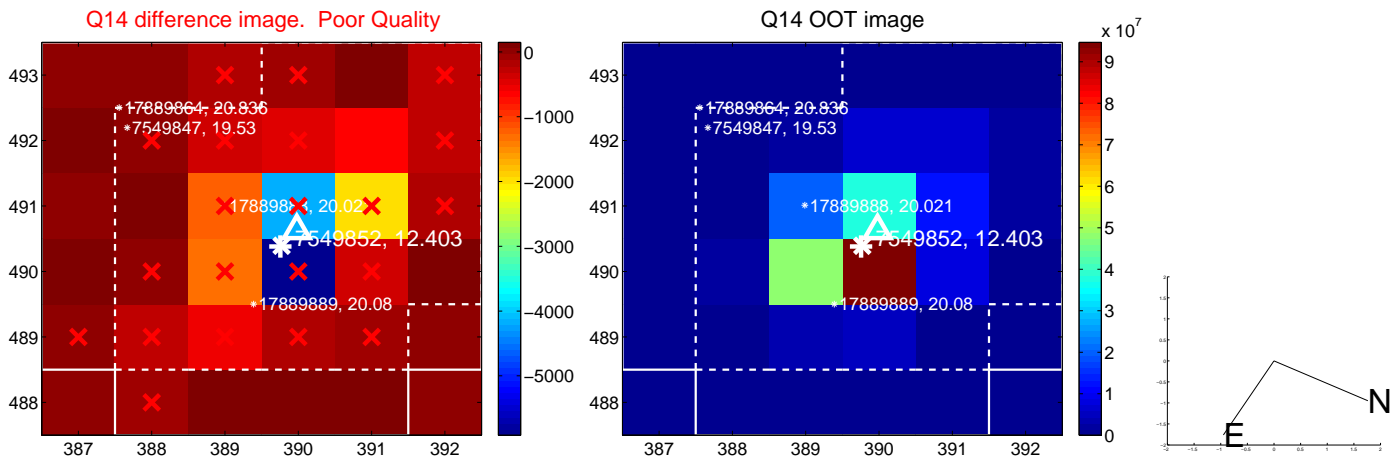
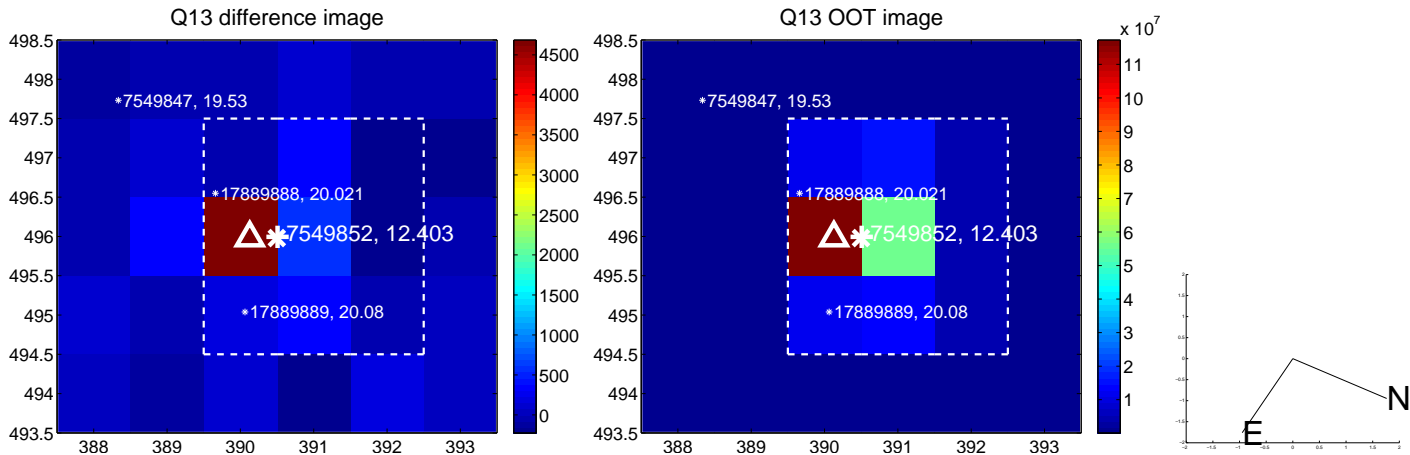
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



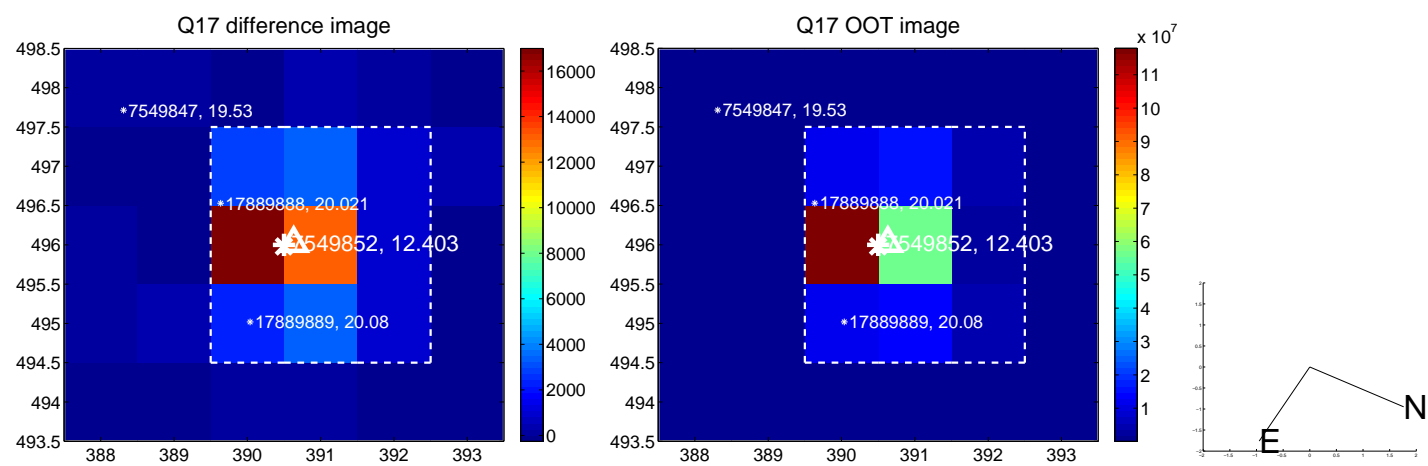
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



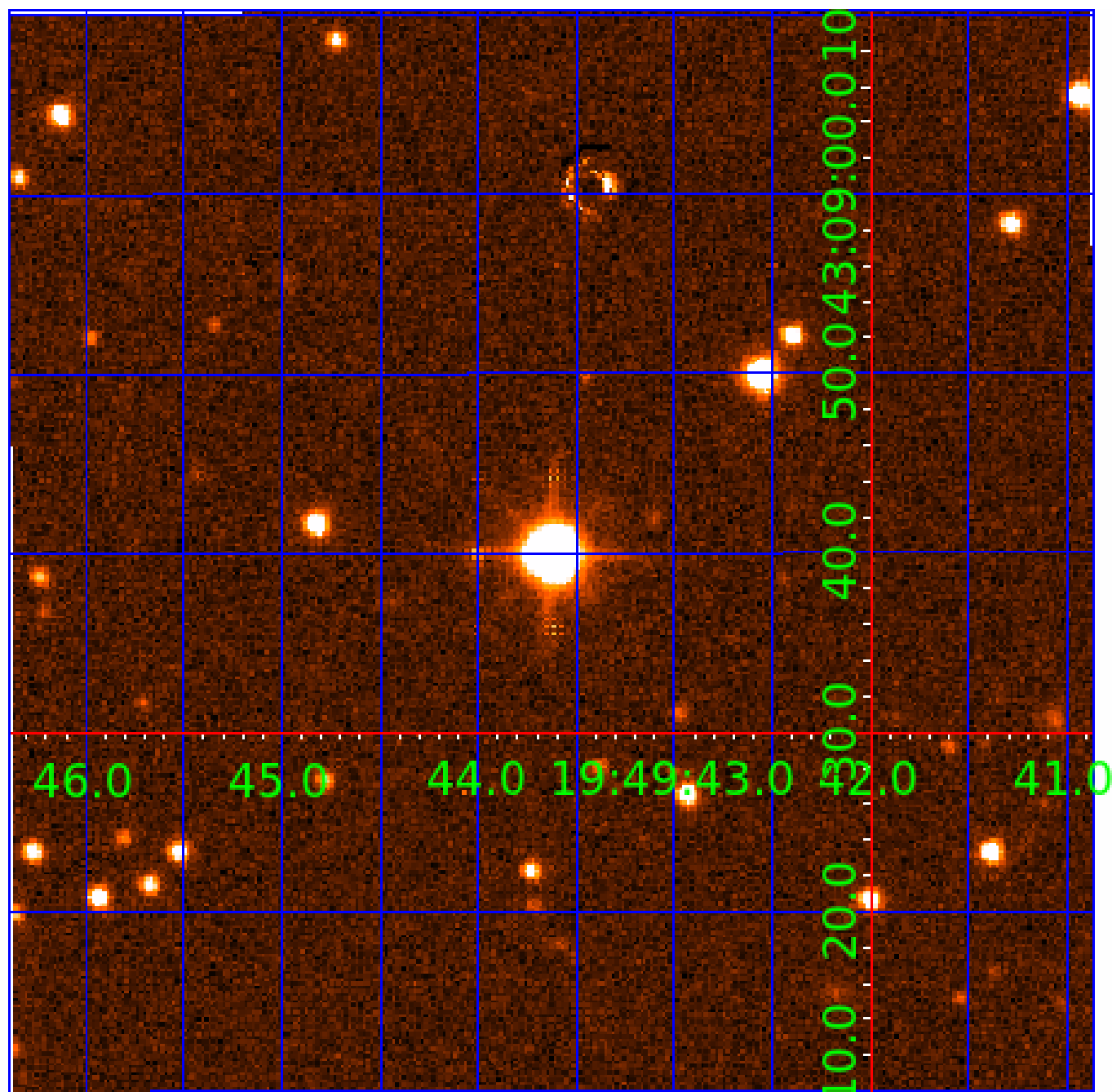
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007549852

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})
007549852-01	OBS	No	0.937175	132.251856	435.8	1.104	19.4	23.5	2.37	7068	5.10	26154.13
007549852-02	OBS	No	0.562312	131.771638	331.2	0.966	25.2	19.5	2.37	7068	5.06	51681.03
007549852-03	OBS	No	0.561932	132.109140	0.0	2.232	21.9	0.0	2.37	7068	0.01	51727.66
007549852-04	OBS	No	0.562312	132.054744	207.1	1.500	13.0	-1.0	2.37	7068	3.44	51681.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007549852-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007549852-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007549852-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

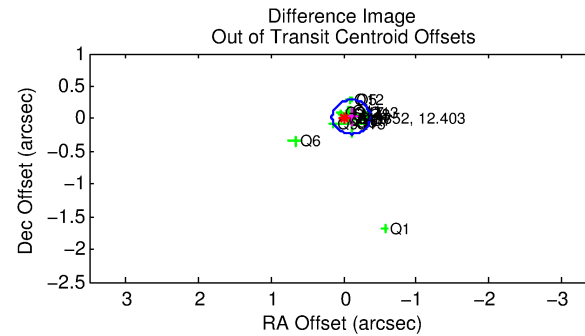
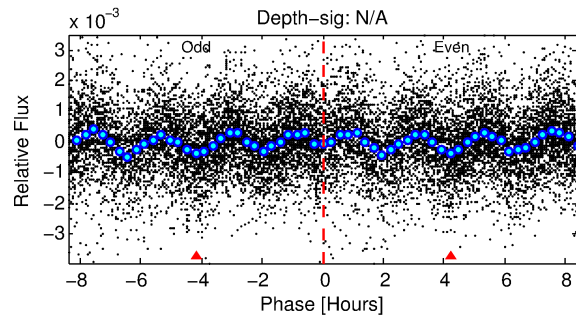
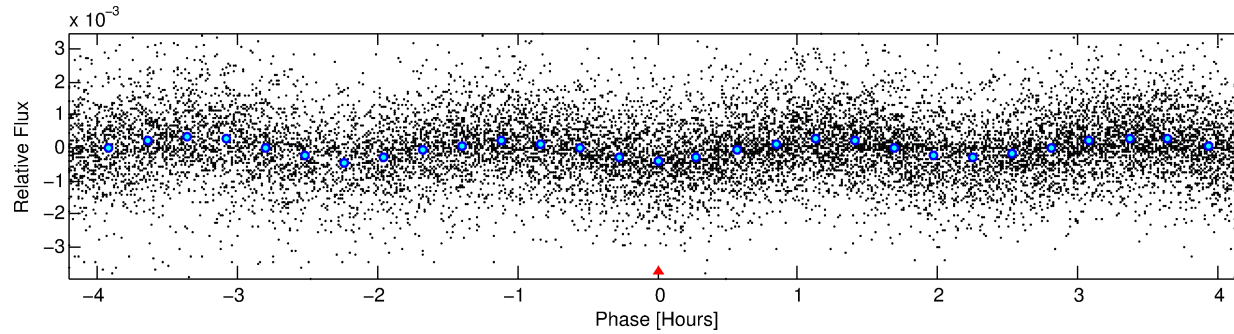
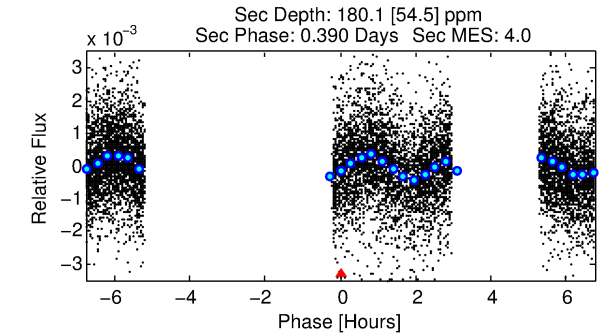
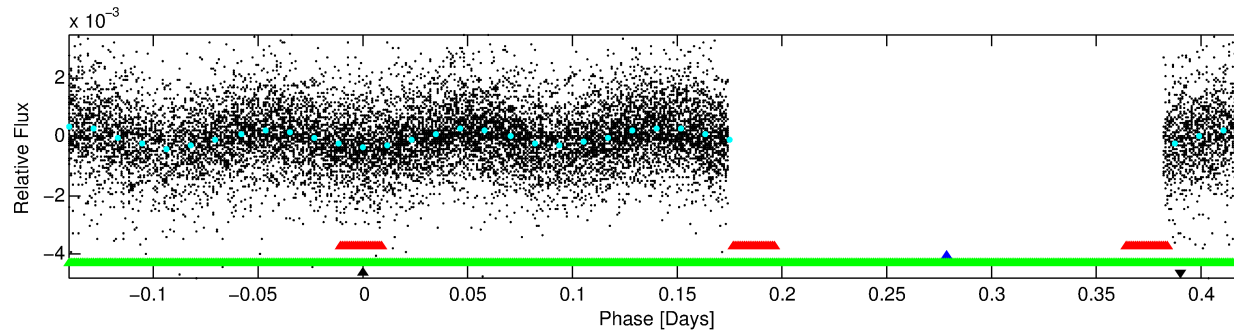
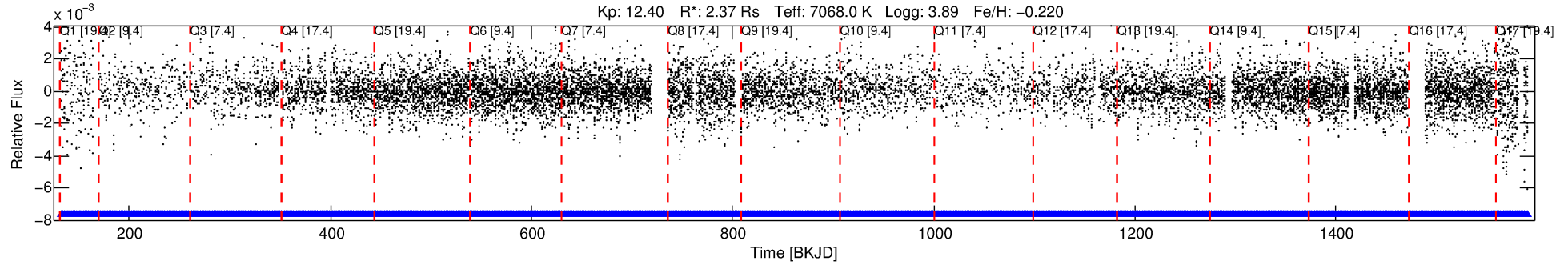
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007549852-04

No Significant Match Found

DV One-Page Summary

KIC: 7549852 Candidate: 4 of 4 Period: 0.562 d



TPS TCE Results:

Period = 0.56231 d
Epoch = 132.0547 BKJD

DV fit results are unavailable

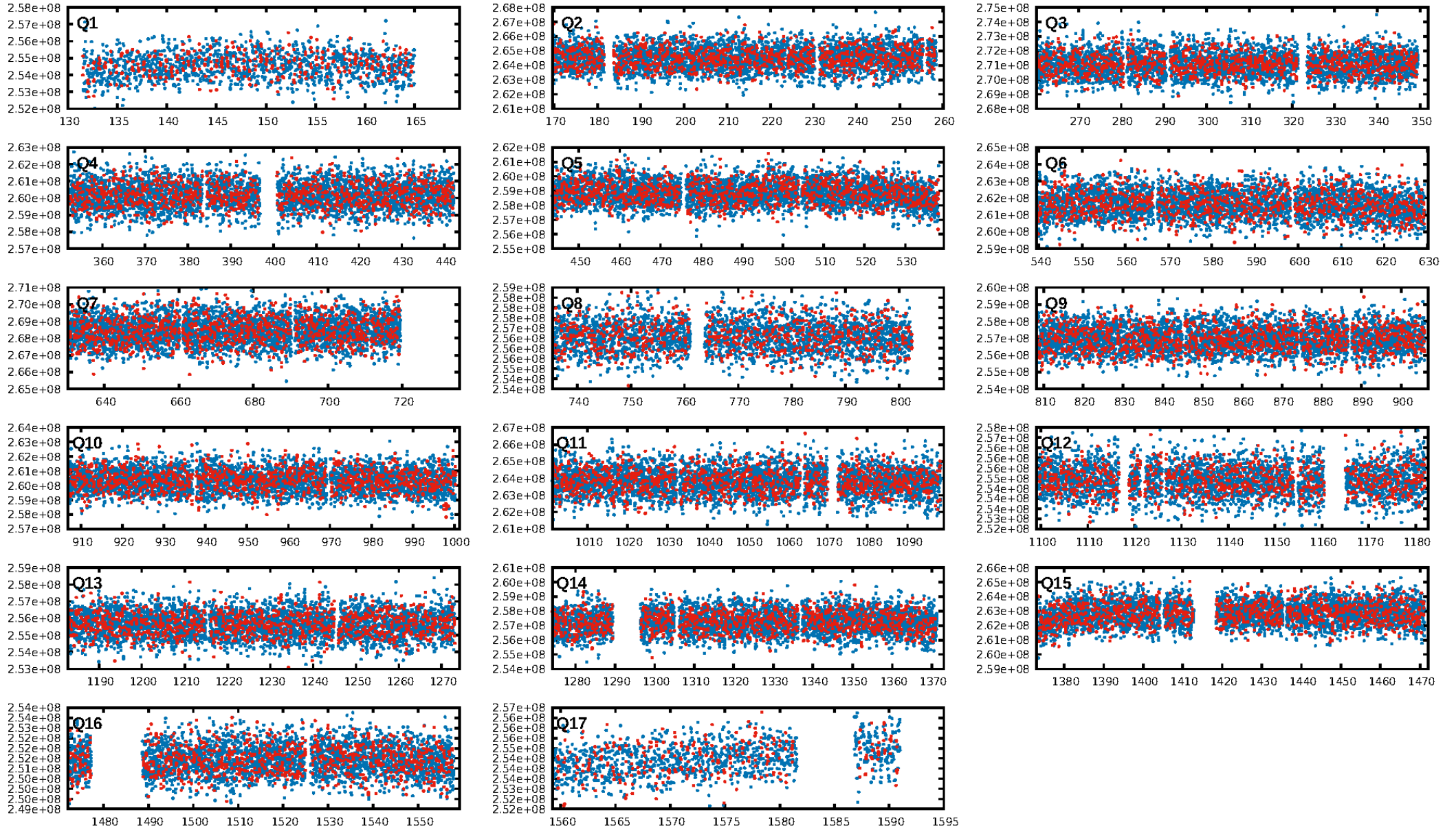
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [4.83 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1055/1055]
GhostDiagnostic-chr: 3.408
Centroid-sig: 0.0%
Centroid-so: 0.125 arcsec [3.47 σ]
OotOffset-rm: 0.108 arcsec [1.23 σ]
KicOffset-rm: 0.151 arcsec [1.64 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.18 [3/17]

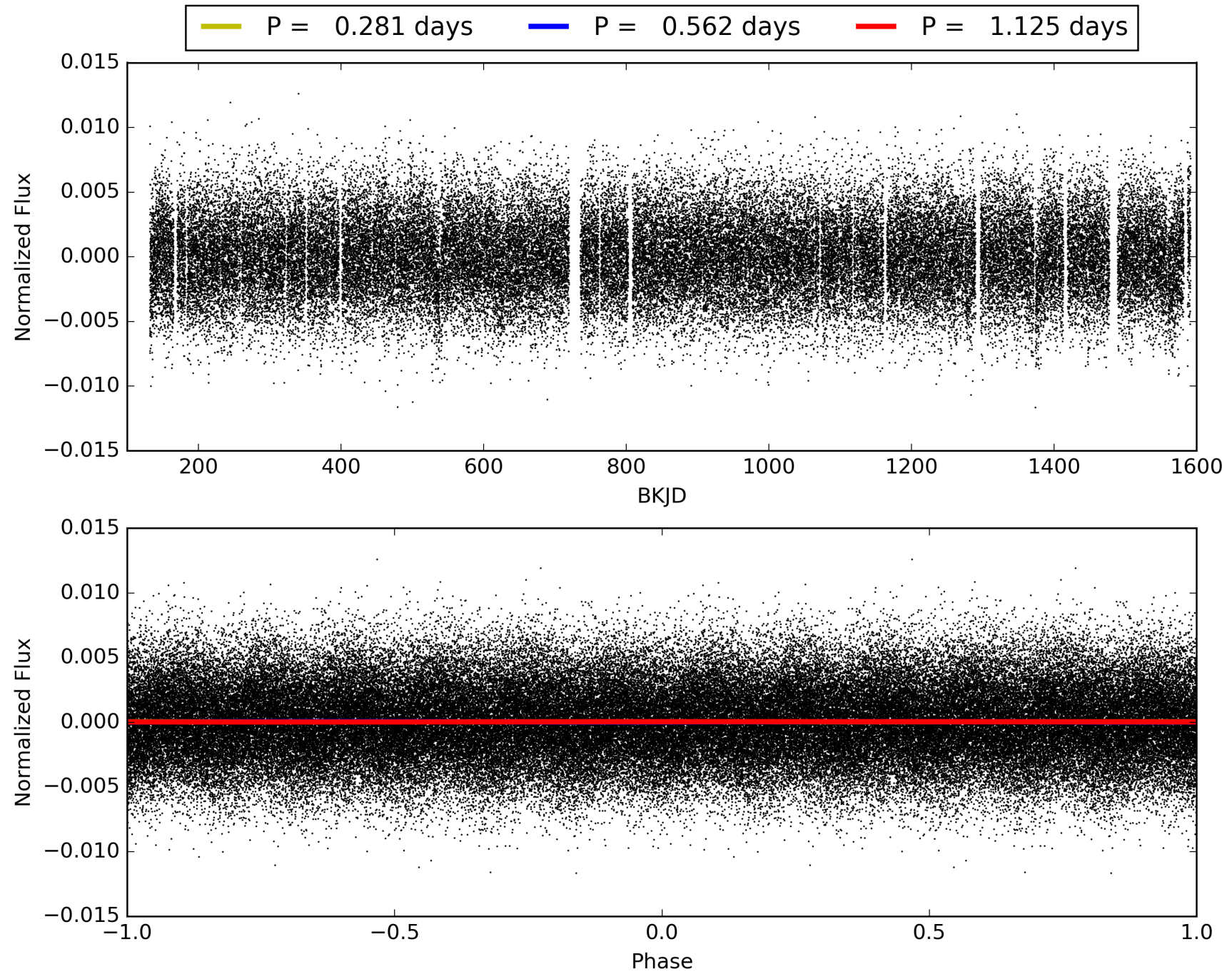
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:15:23 Z

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

TCE 007549852-04, PDC Light Curves

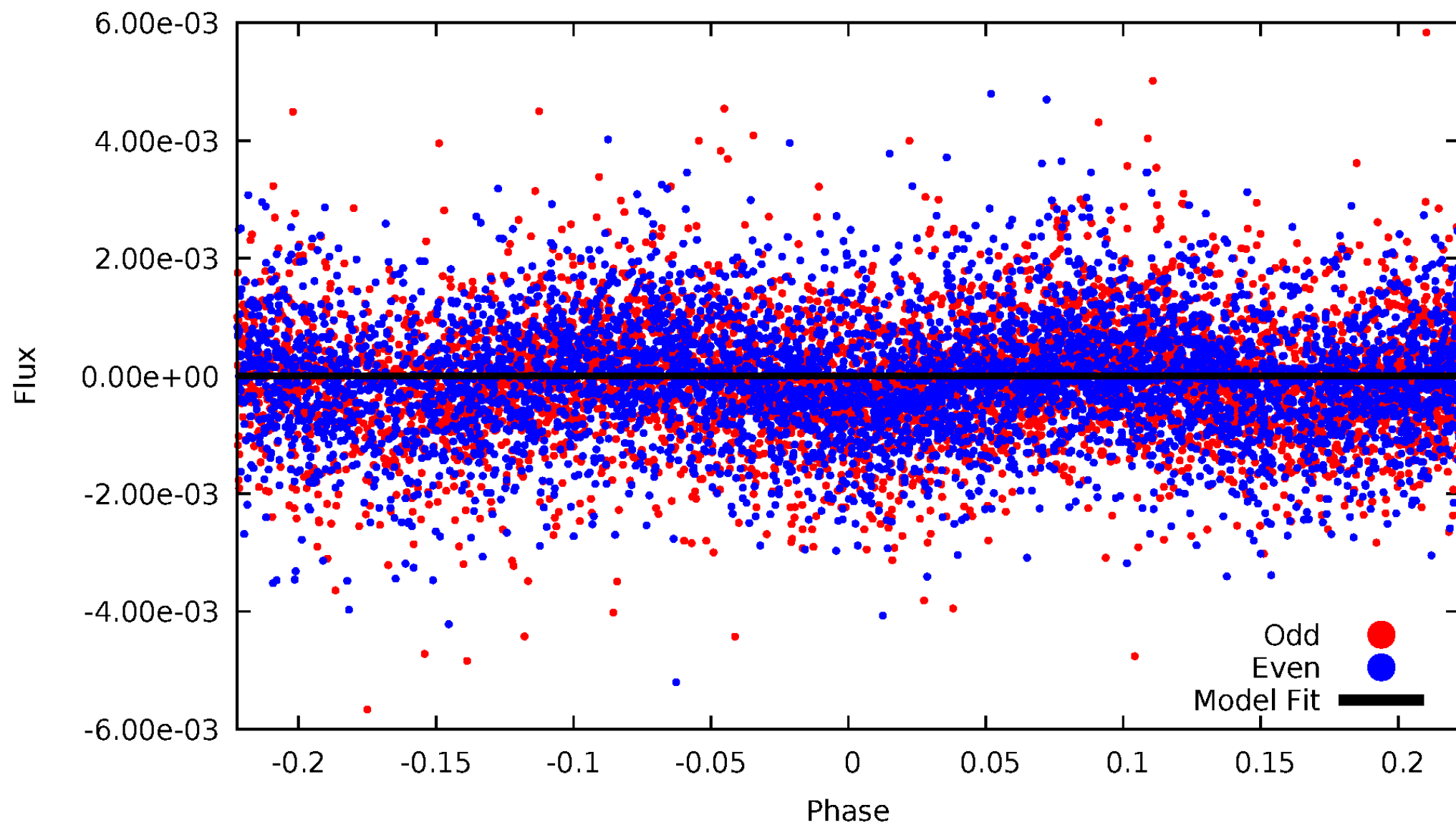


TCE 007549852-04



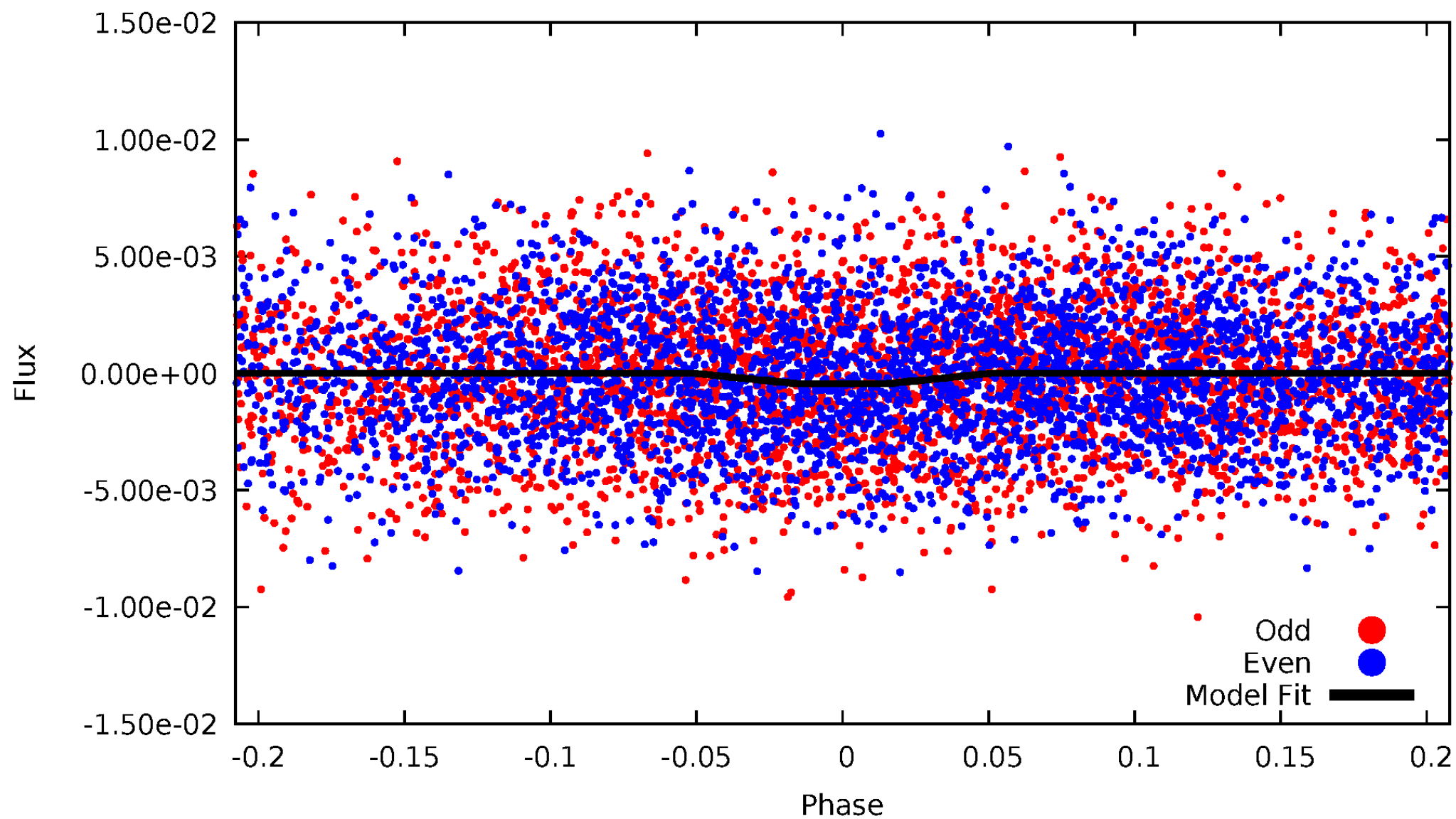
DV Odd/Even

TCE 007549852-04



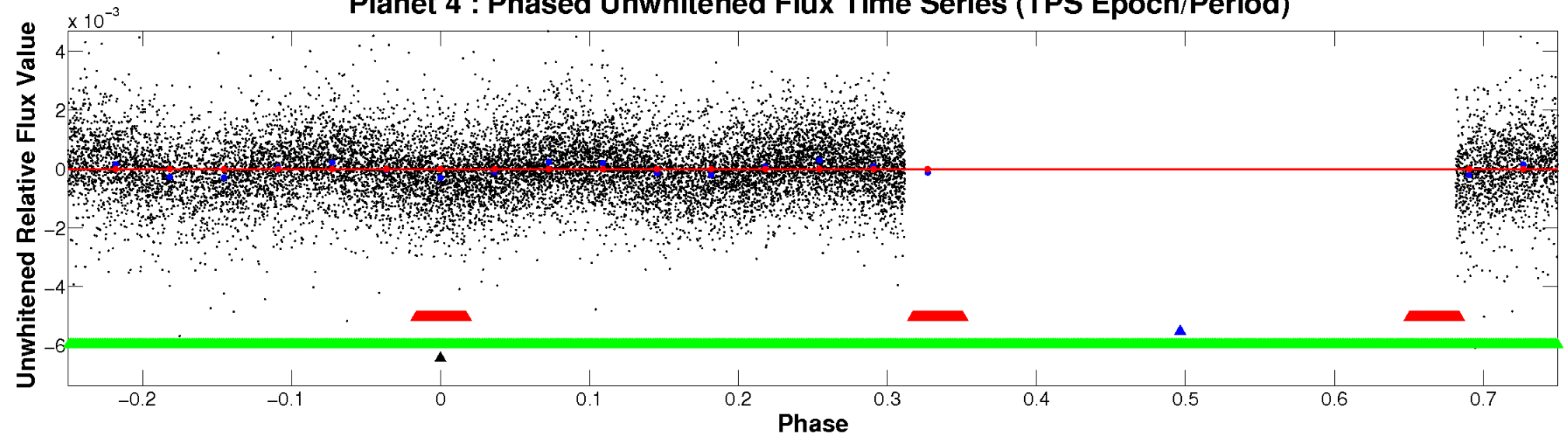
ALT Odd/Even

TCE 007549852-04

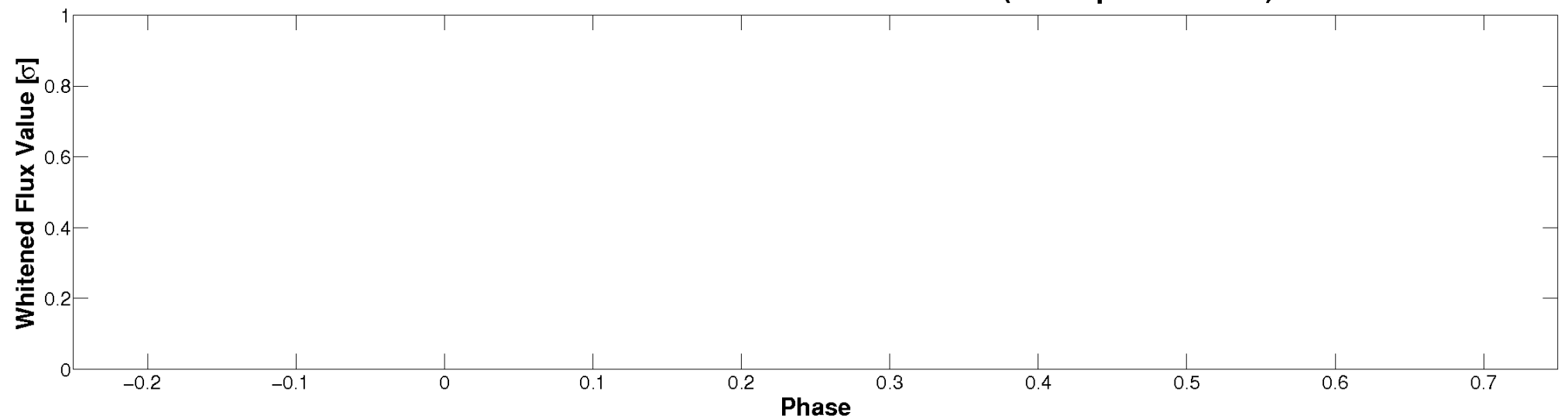


Non-Whitened Vs. Whitened Light Curve

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

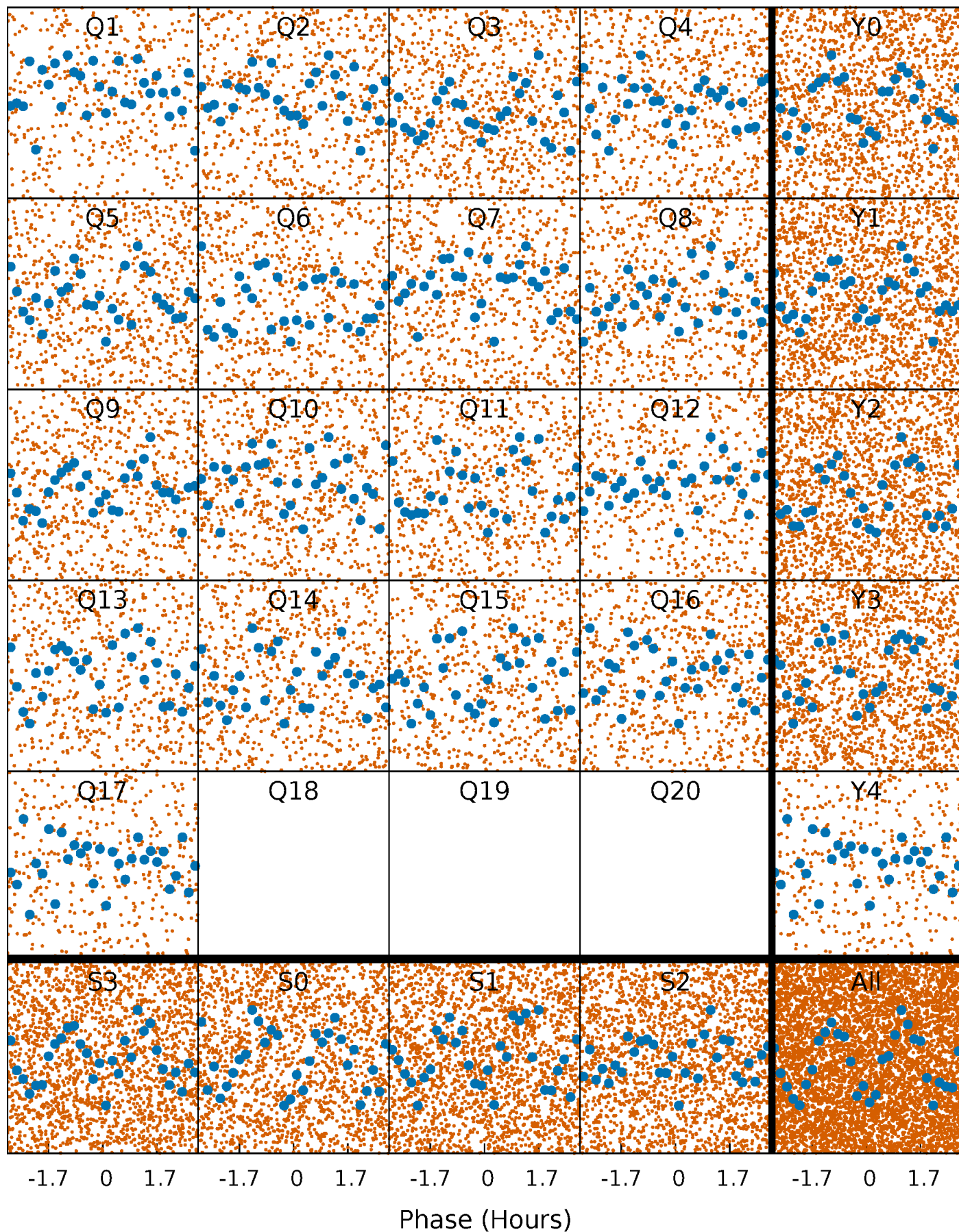


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



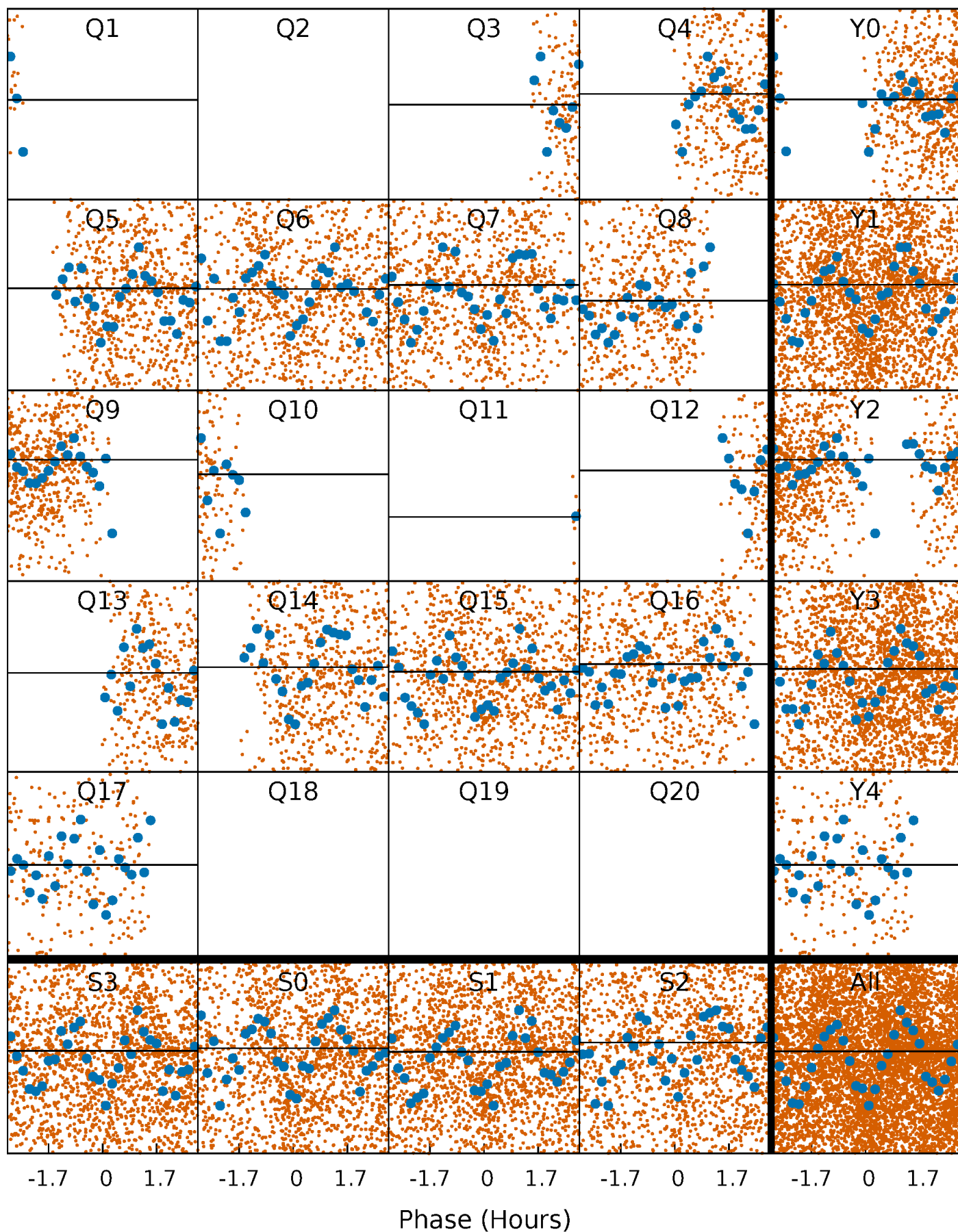
PDC Quarter-Phased Transit Curves

TCE 007549852-04 P= 0.562312 Days $T_0=132.054744$ (BKJD)



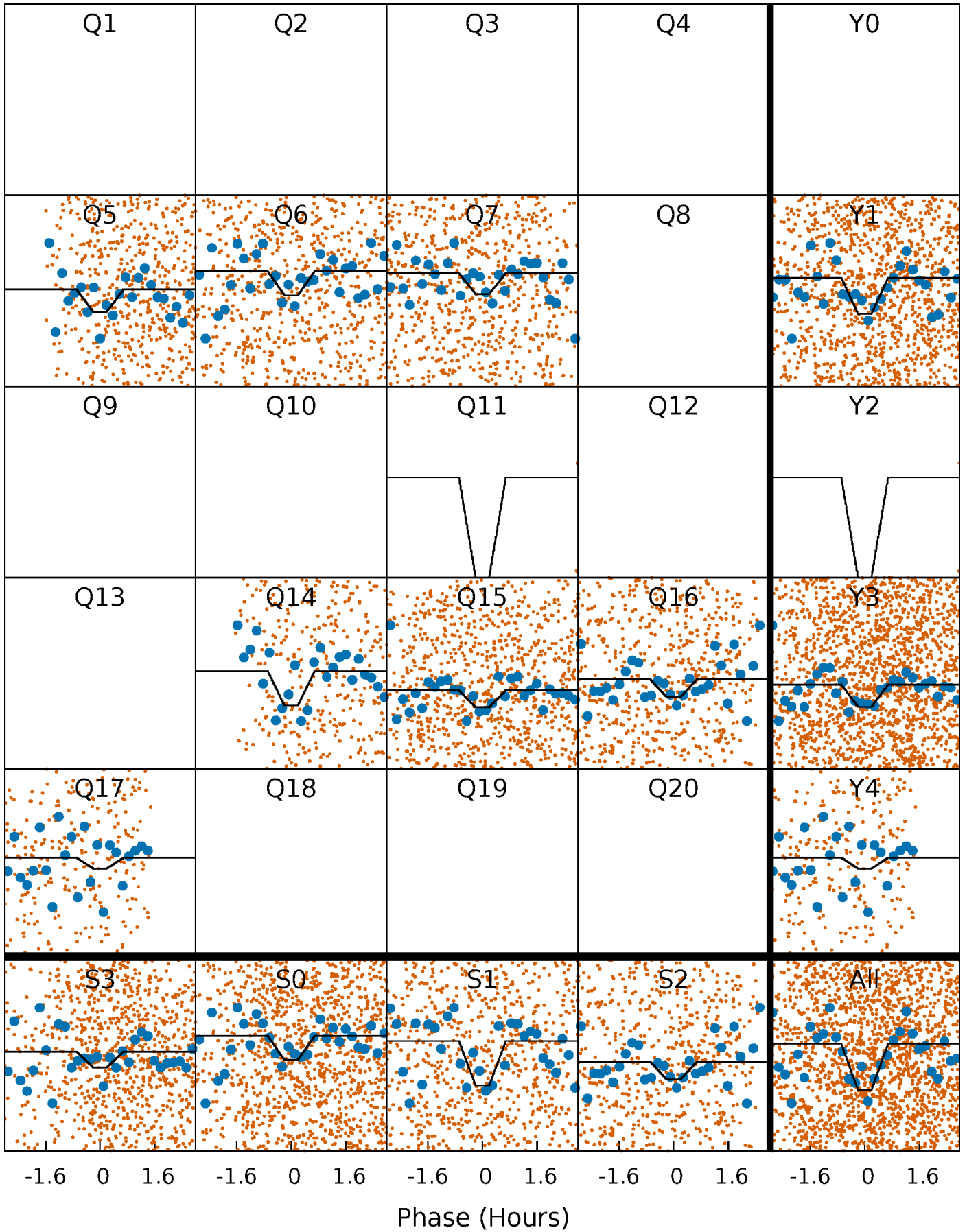
DV Quarter-Phased Transit Curves

TCE 007549852-04 P= 0.562312 Days $T_0=132.054744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

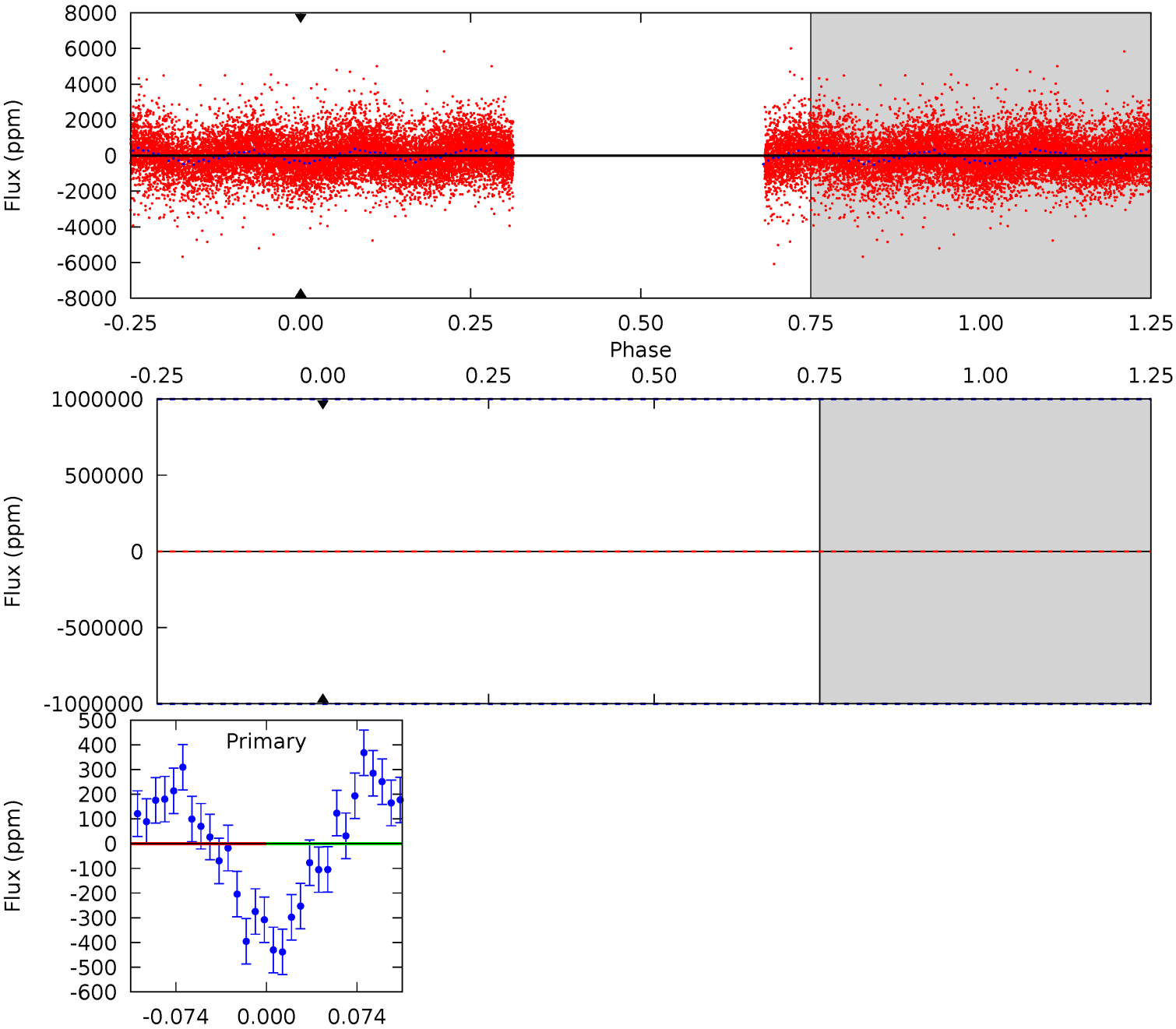
TCE 007549852-04 P= 0.562312 Days $T_0=132.055879$ (BKJD)



DV Model-Shift Uniqueness Test

007549852-04, P = 0.562312 Days, E = 131.492432 Days

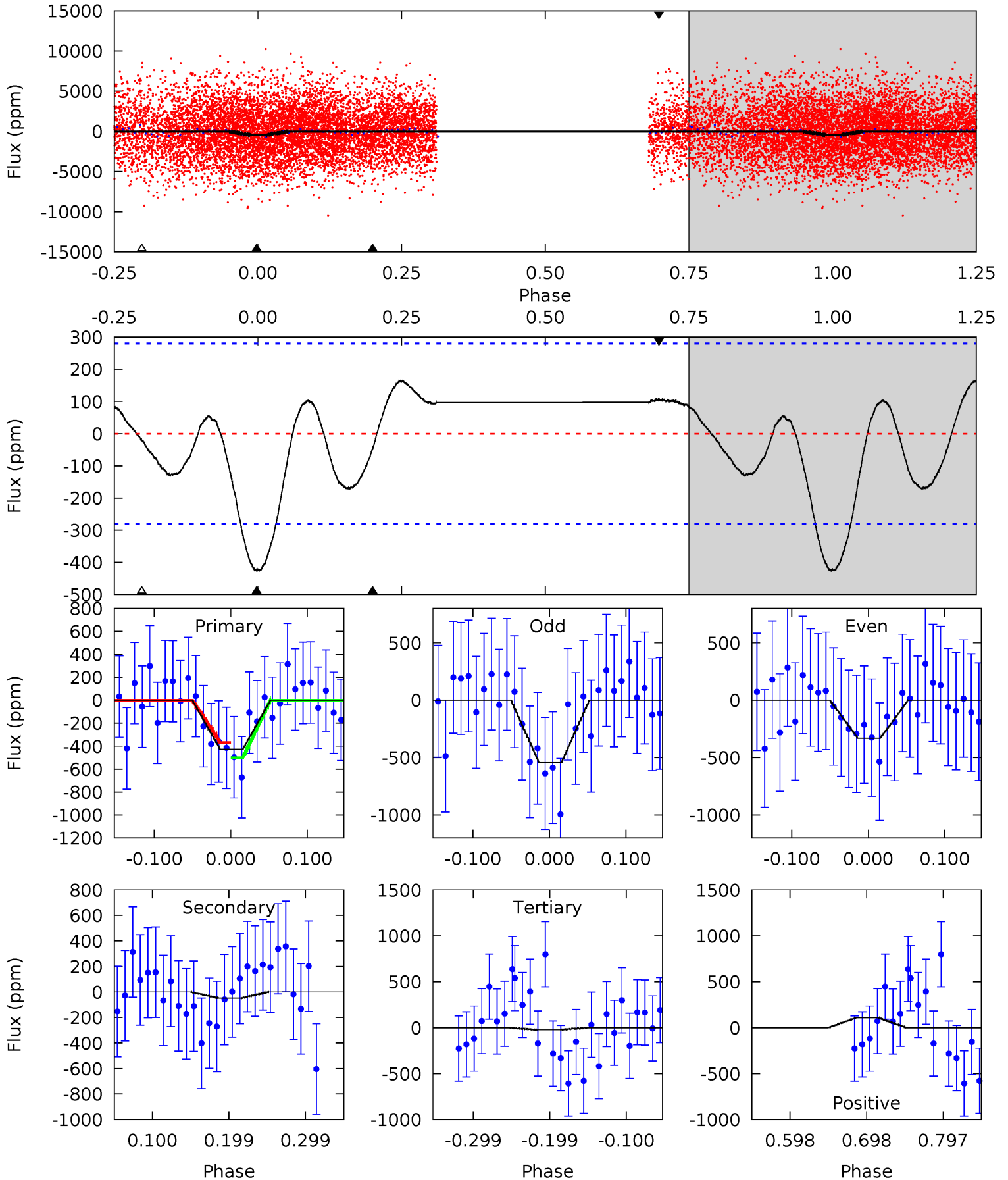
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007549852-04, P = 0.562312 Days, E = 132.055879 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.97	0.79	0.38	1.77	4.57	1.65	1.42	6.59	5.20	0.41	-0.98	1.77	0.99	0.28	1.05



Stellar Parameters For KIC 007549852

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7068^{+197}_{-296}	$3.891^{+0.360}_{-0.120}$	$-0.220^{+0.250}_{-0.350}$	$2.365^{+0.513}_{-0.952}$	$1.584^{+0.203}_{-0.376}$	$0.169^{+0.480}_{-0.060}$
	+3%/-4%	+9%/-3%	+114%/-159%	+22%/-40%	+13%/-24%	+285%/-36%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007549852-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$16.66^{+19.73}_{-11.76}$	5233^{+395}_{-618}	-4933^{+42820}_{-30703}	$-0.357^{+94.154}_{-95.211}$
Alt.	-48 ± 61	$17.97^{+18.60}_{-12.52}$	5238^{+374}_{-562}	-4315^{+636}_{-364}	$0.013^{+0.123}_{-0.016}$

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 $A_{obs} \gg 1.0$

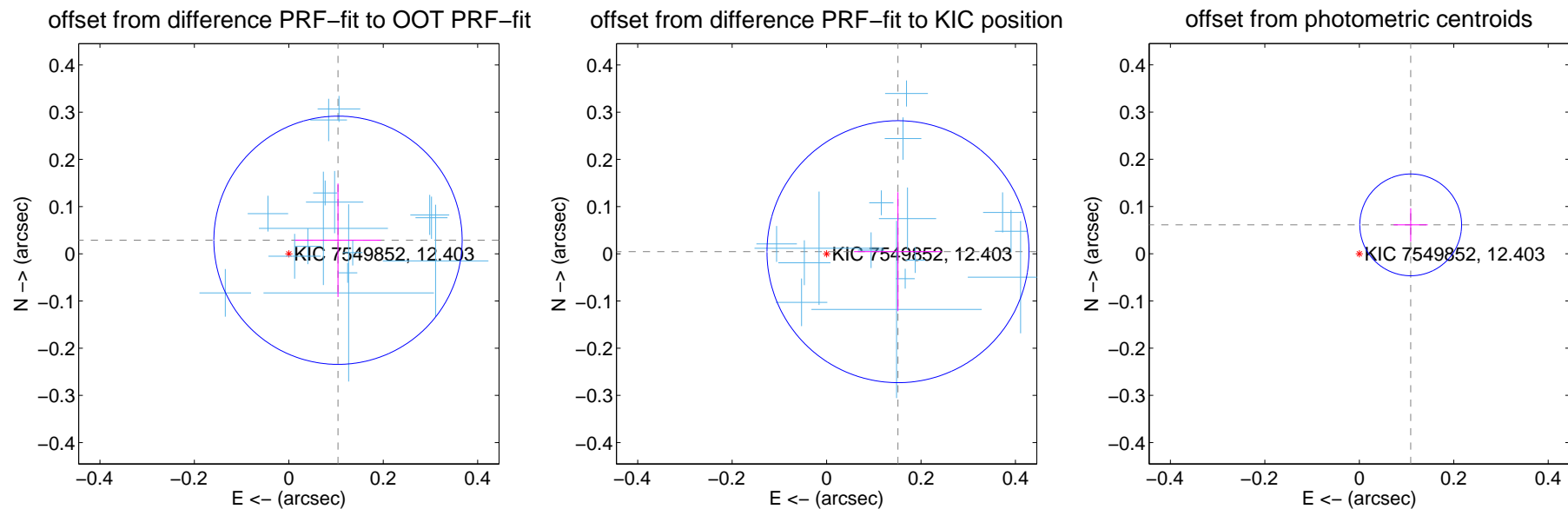
DV Centroid Data

Supplemental centroid analysis for 007549852-04. Kepler magnitude: 12.40. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

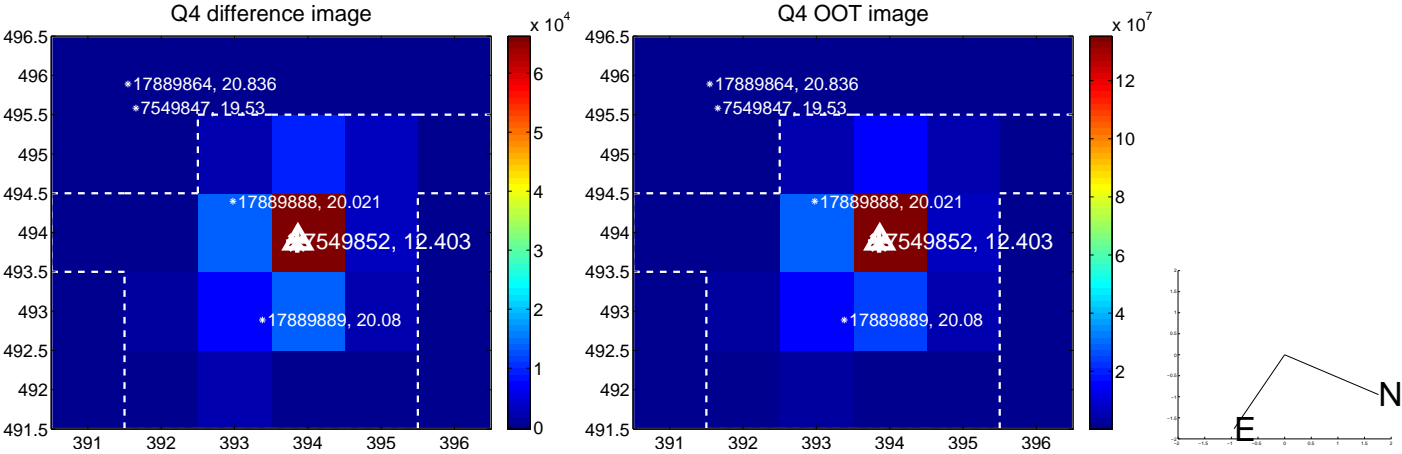
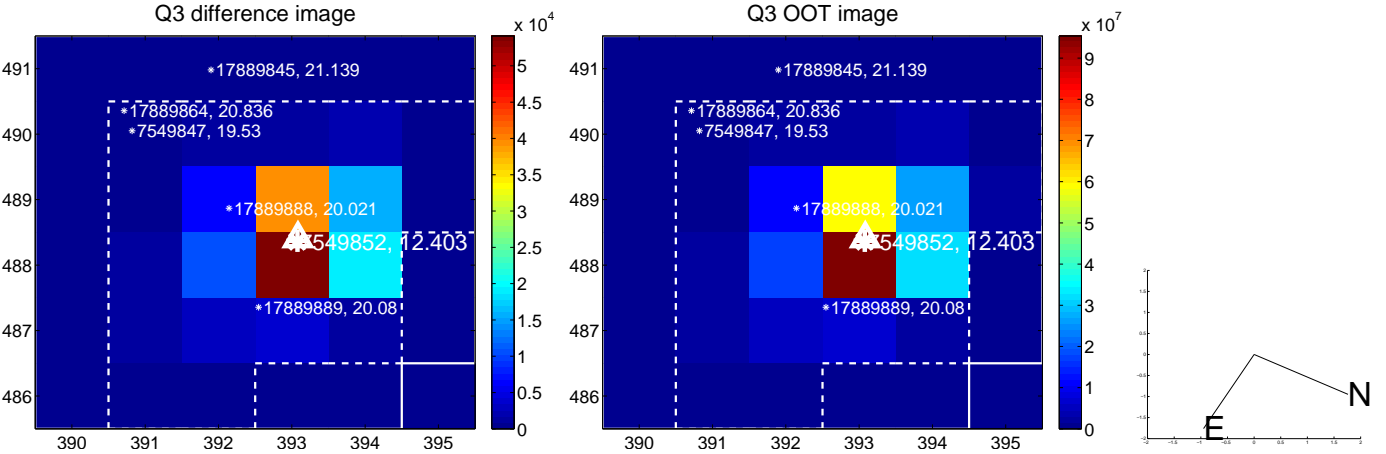
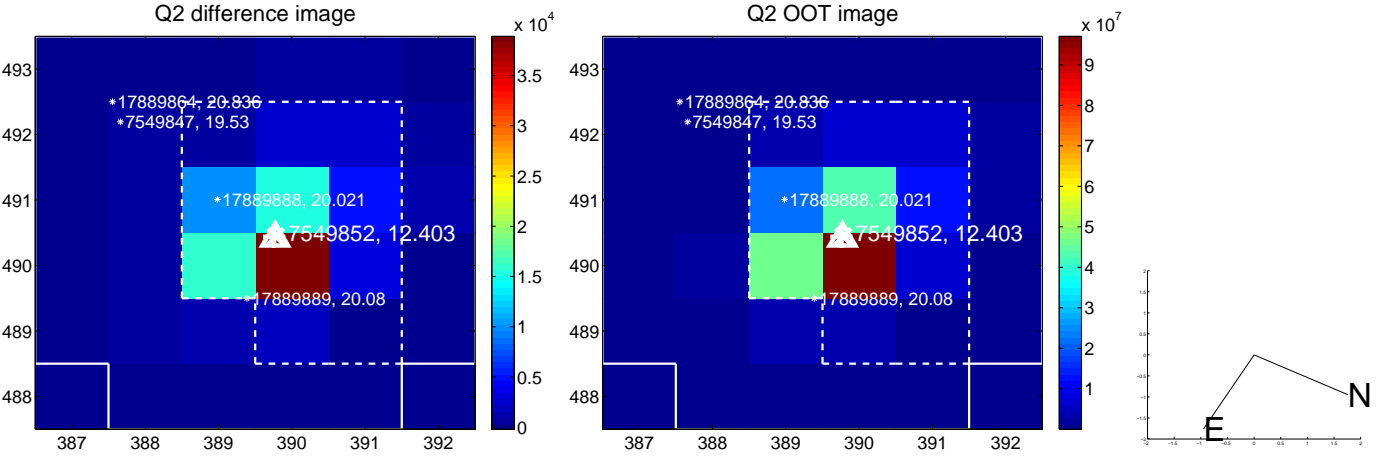
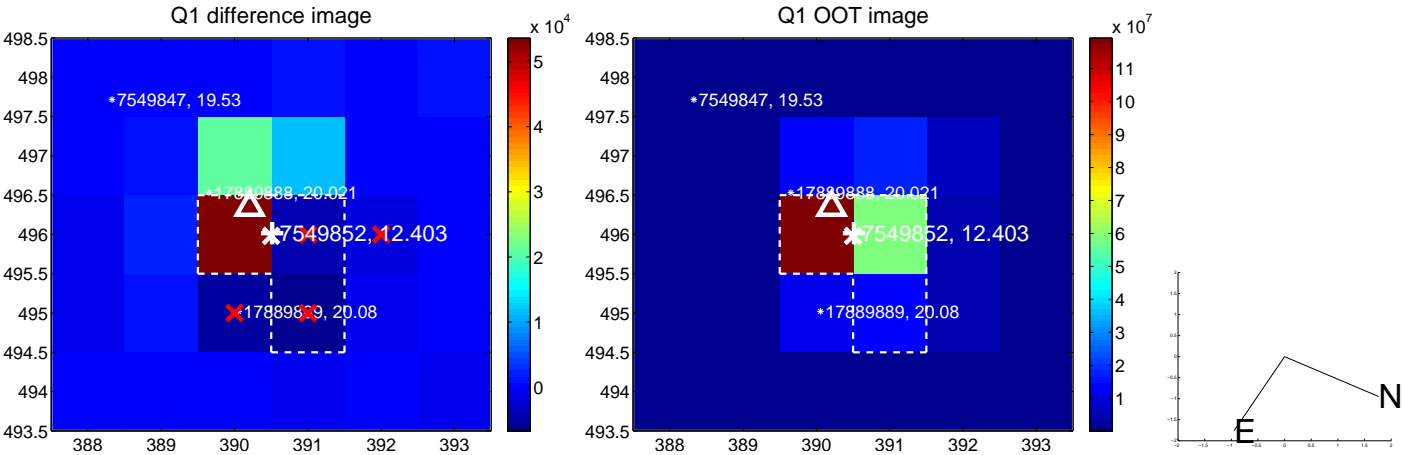
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.088	1.23	-0.104 ± 0.091	0.029 ± 0.120
PRF-fit source offset from KIC position	0.151 ± 0.093	1.64	-0.151 ± 0.093	0.004 ± 0.126
photometric centroid source offset	0.12 ± 0.04	3.47	-0.11 ± 0.04	0.06 ± 0.04

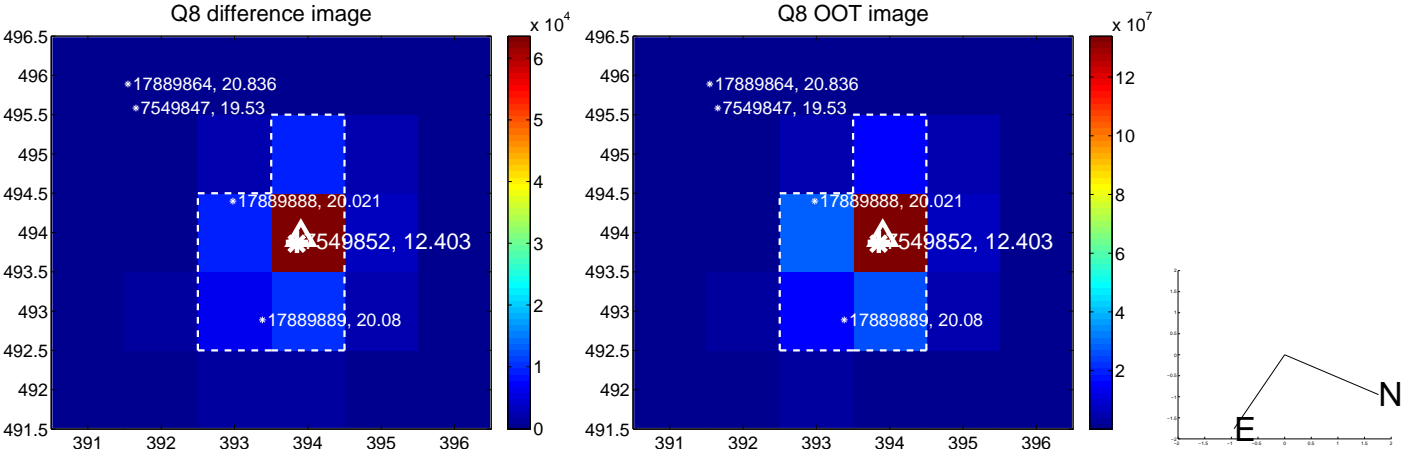
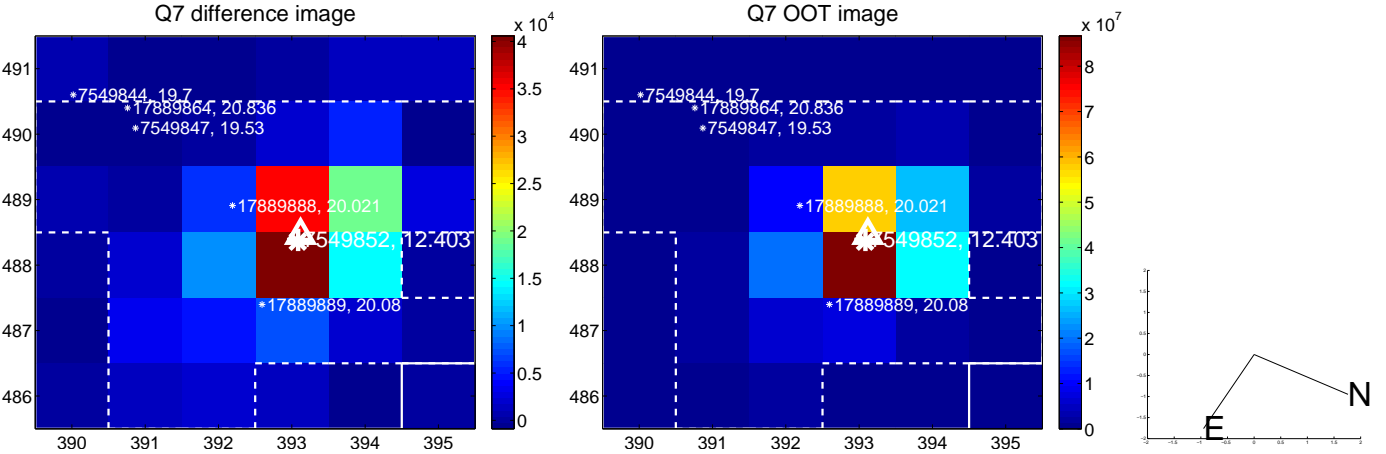
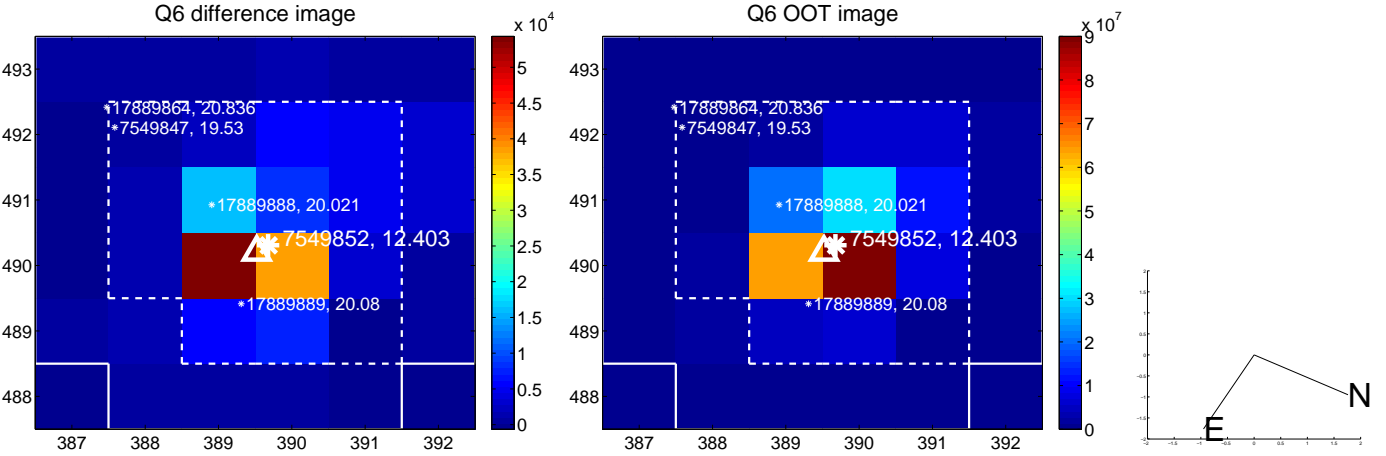
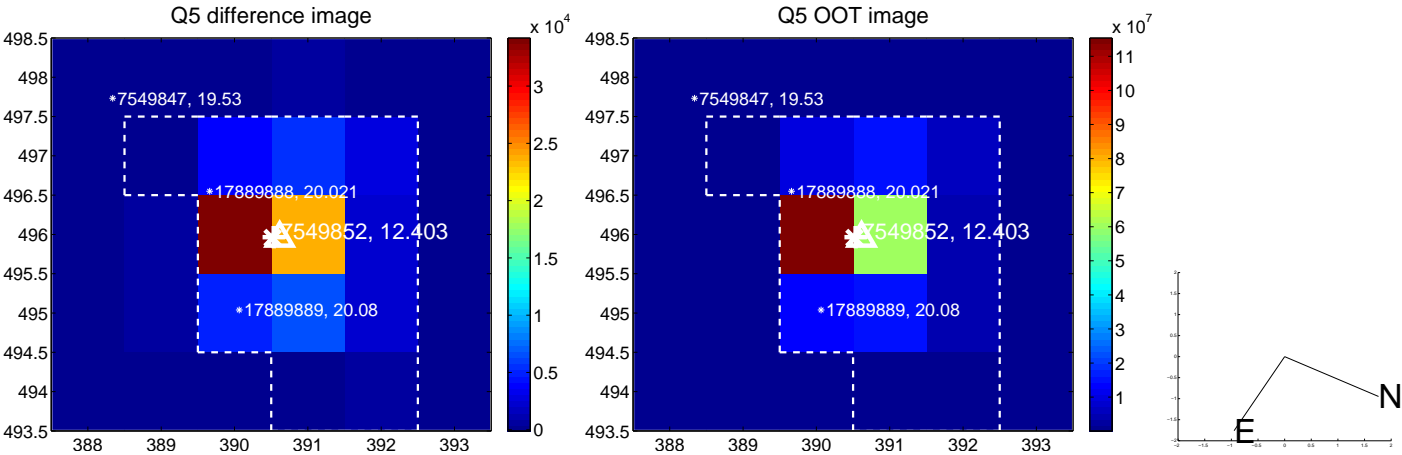


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

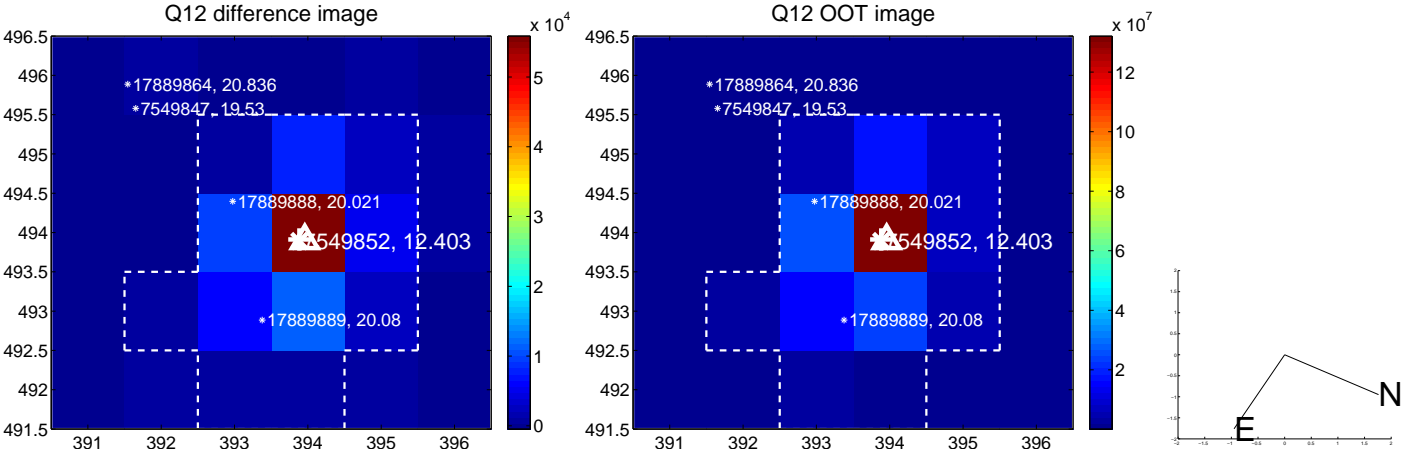
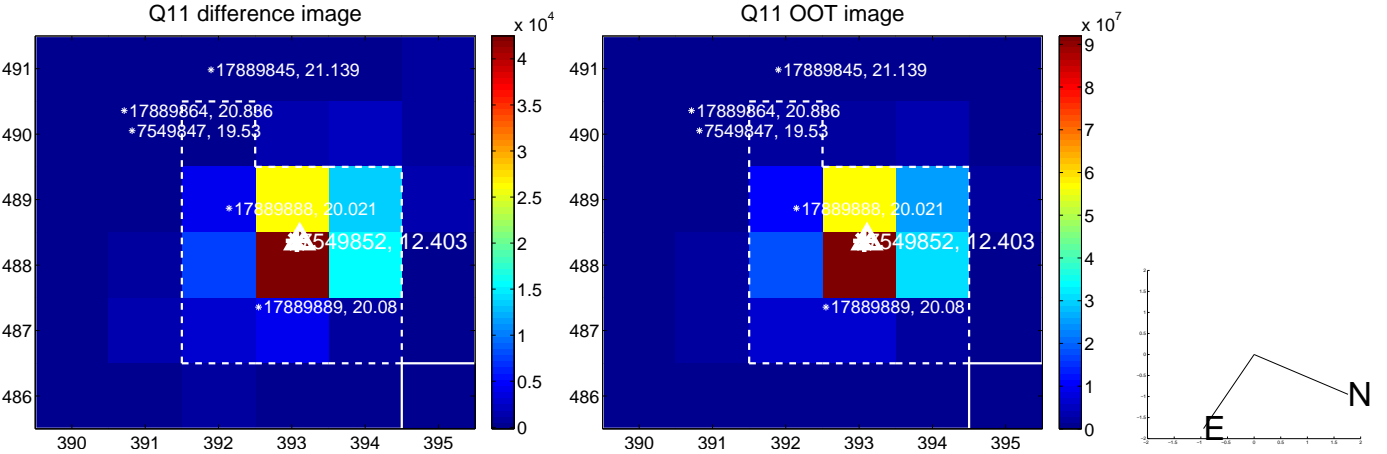
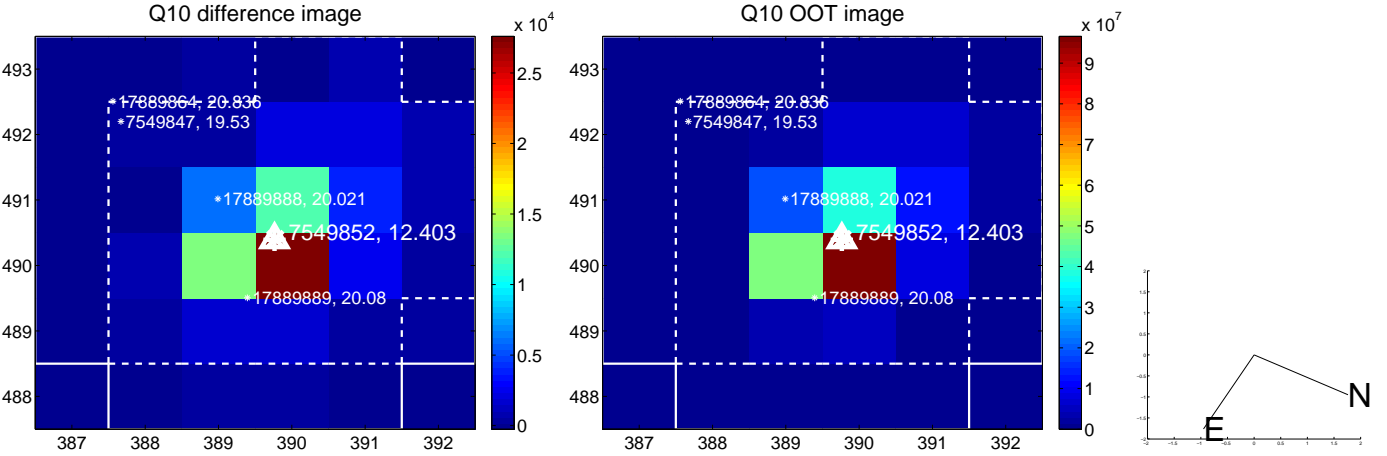
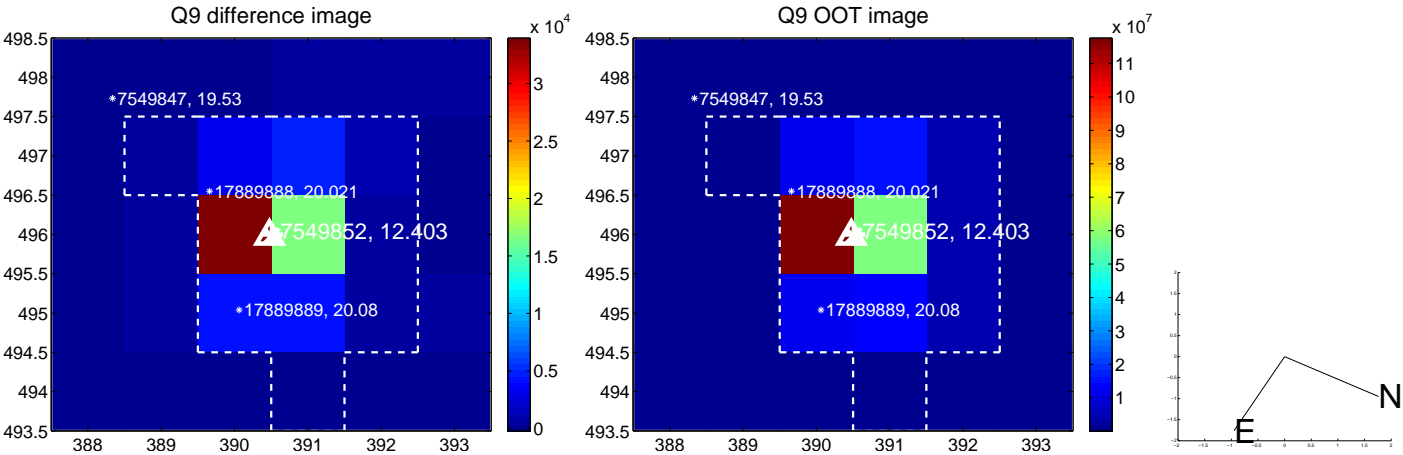
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



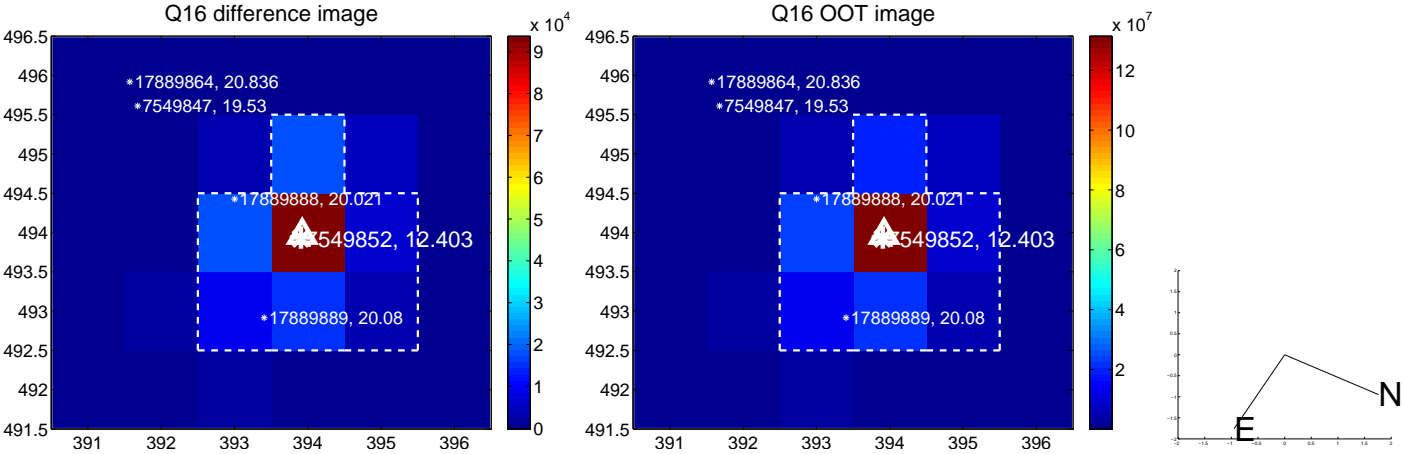
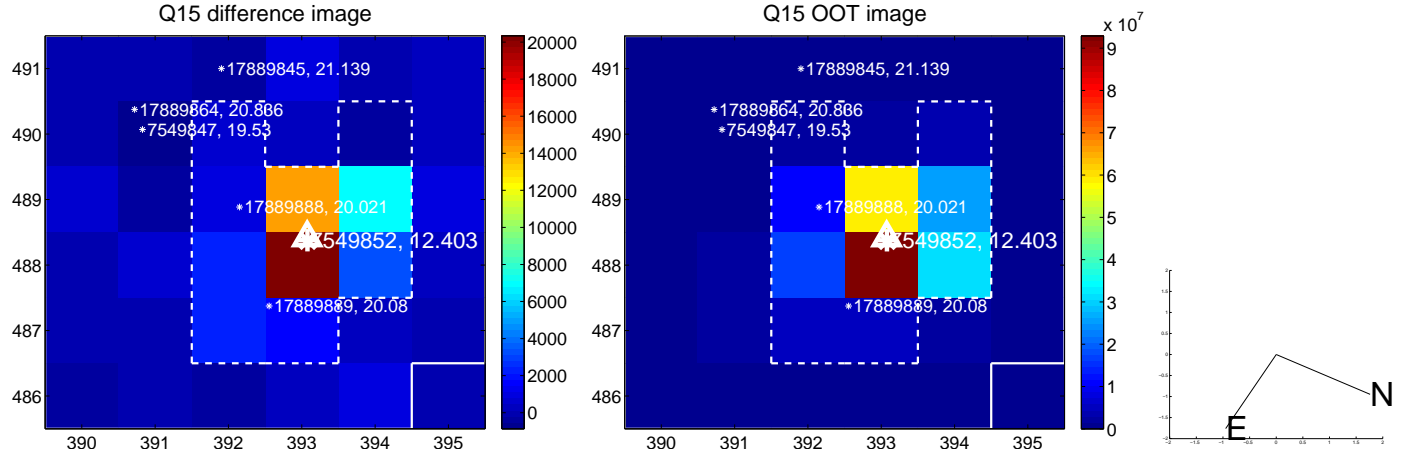
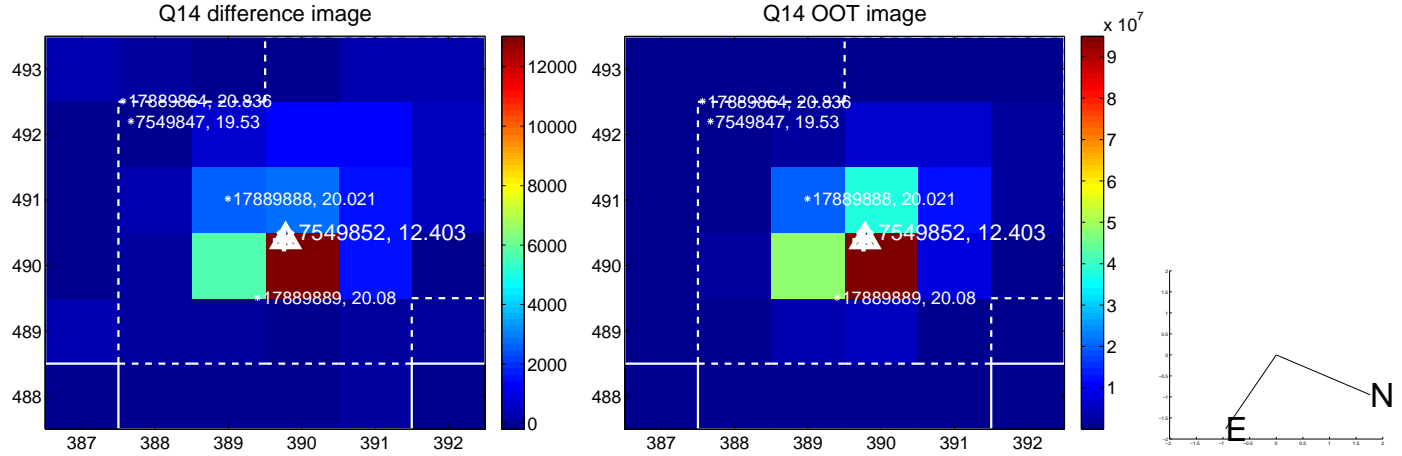
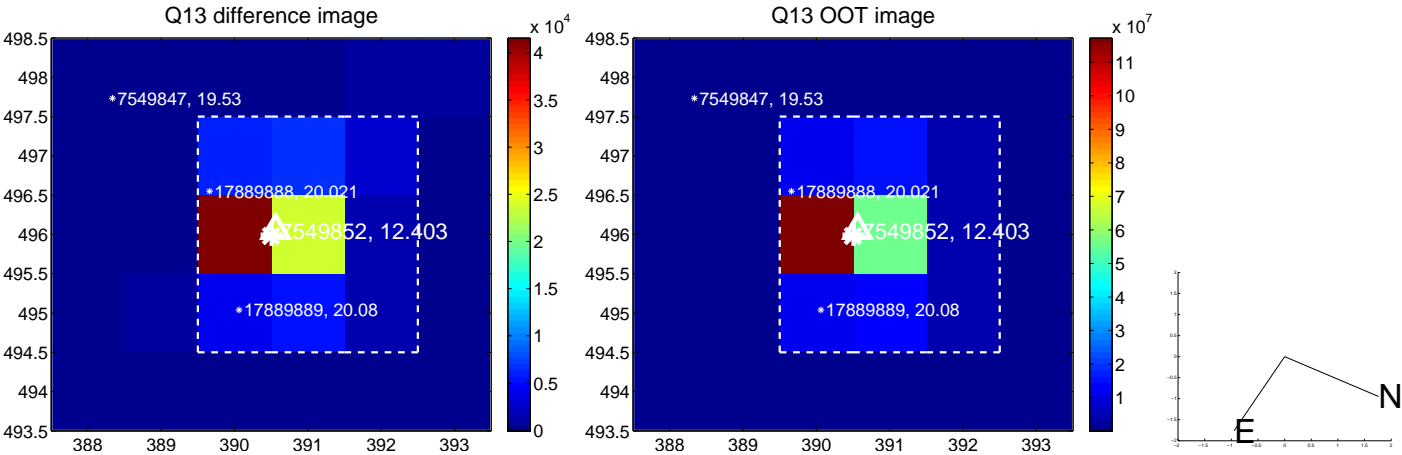
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



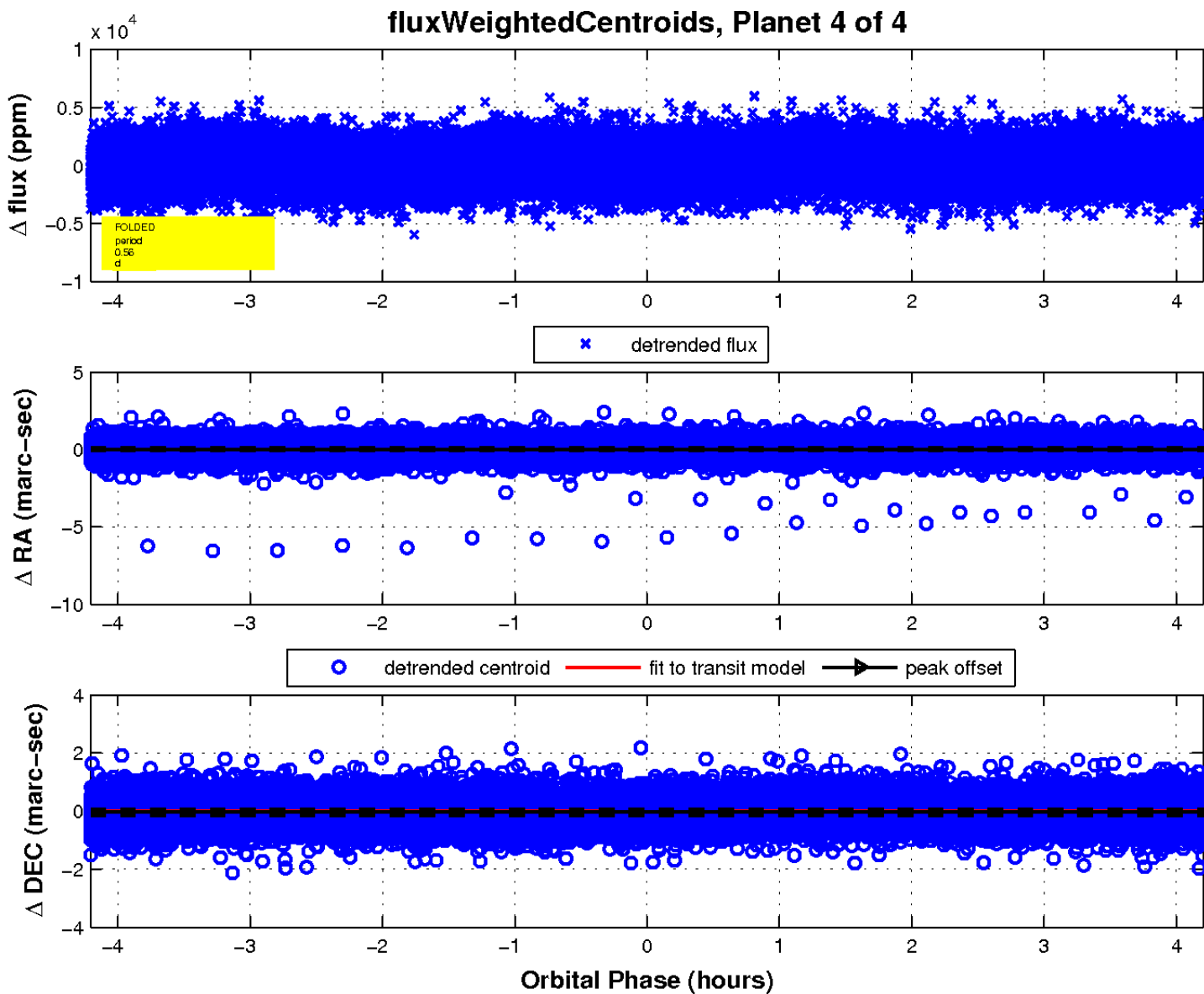
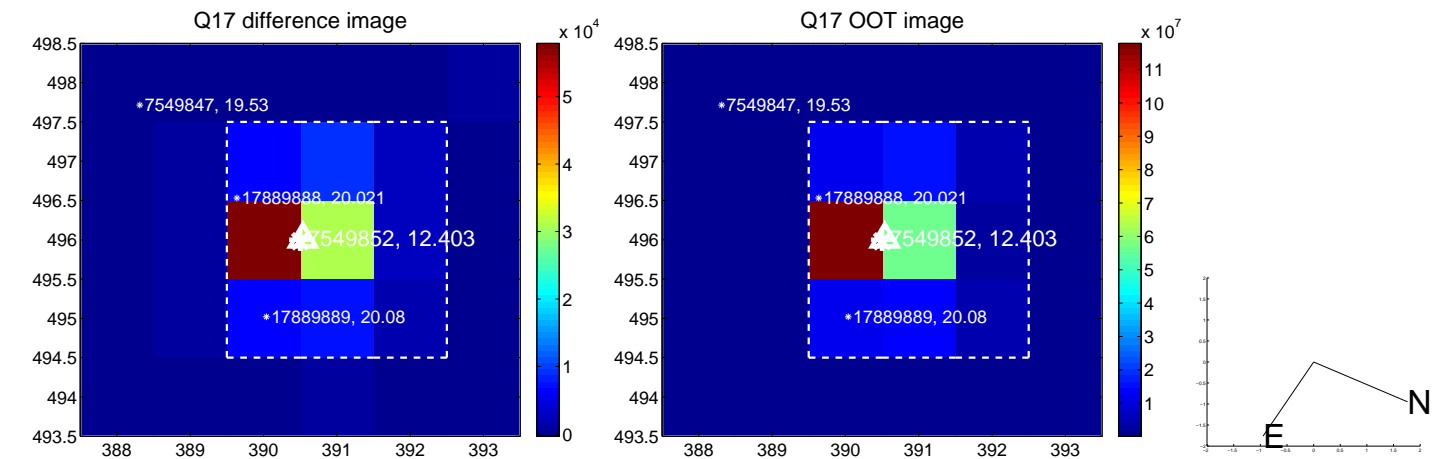
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

