

KIC 003457192

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})
003457192-01	OBS	No	2.139256	133.346241	28.0	9.133	9.1	8.9	1.56	6818	0.86	3634.78
003457192-02	OBS	No	2.139993	132.758106	121.2	13.454	11.6	12.2	1.56	6818	2.55	3633.11
003457192-03	OBS	No	68.249375	175.845276	250.7	11.911	12.8	9.2	1.56	6818	2.67	35.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003457192-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003457192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SAME_NTL_PERIOD
003457192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

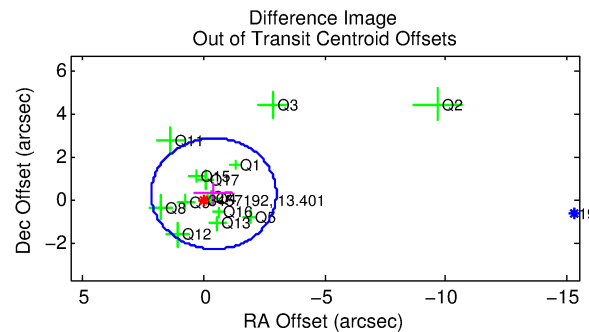
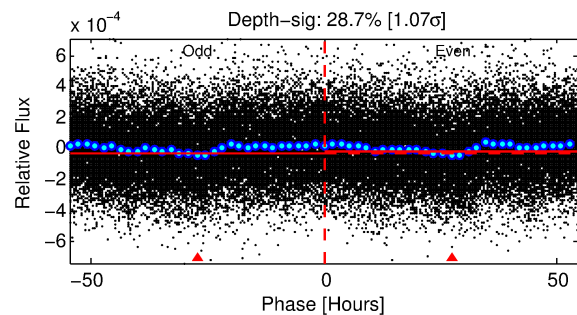
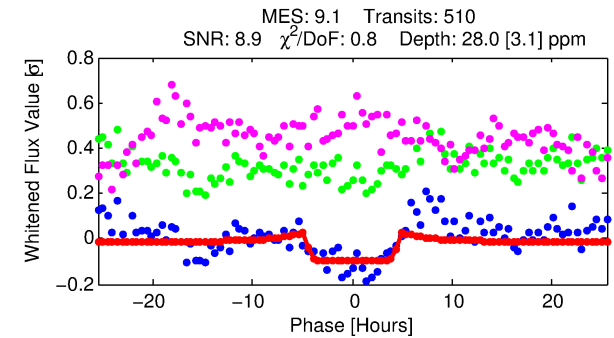
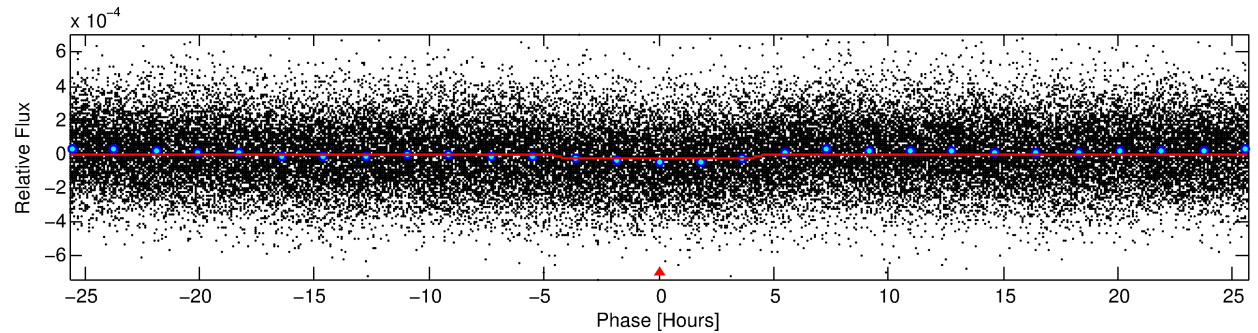
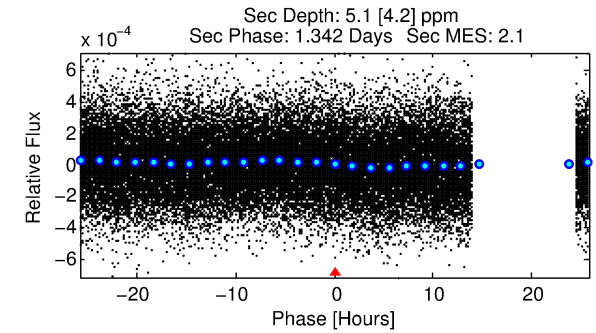
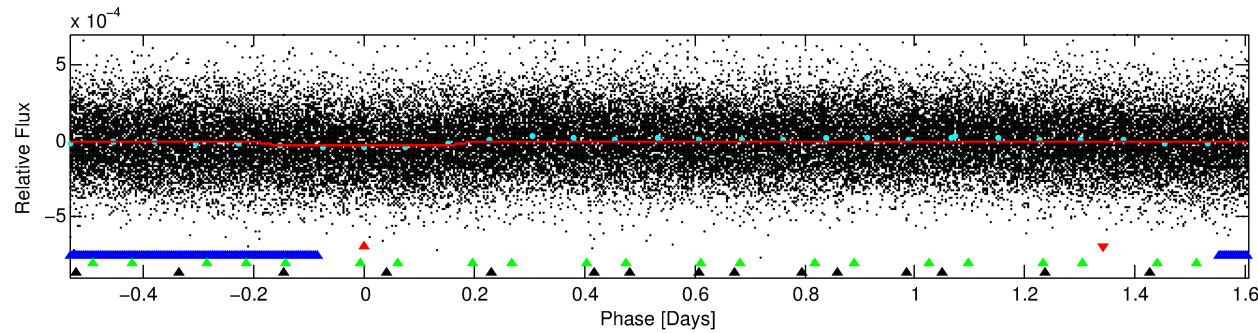
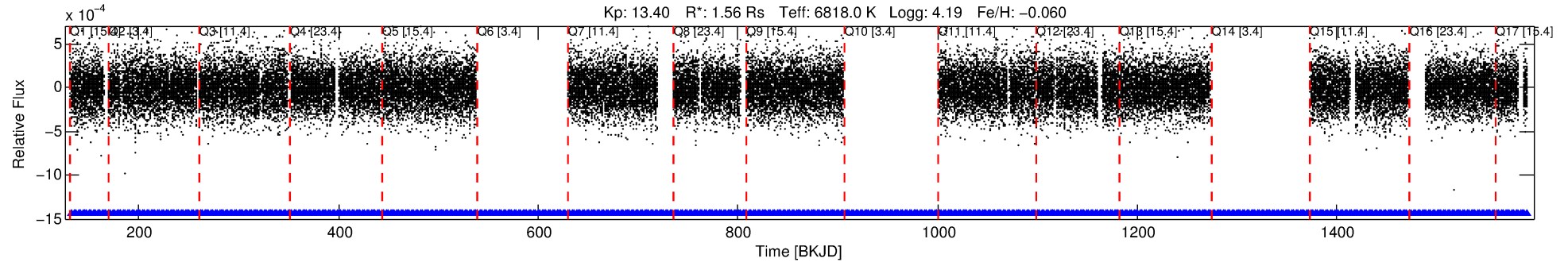
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003457192-01

No Significant Match Found

DV One-Page Summary

KIC: 3457192 Candidate: 1 of 4 Period: 2.139 d



DV Fit Results:

Period = 2.13926 [0.00003] d
Epoch = 133.3462 [0.0070] BKJD
Rp/R* = 0.0051 [0.0020]
a/R* = 1.66 [2.33]
b = 0.57 [2.61]
Seff = 3634.78 [1433.23]
Teff = 1980 [195] K
Rp = 0.86 [0.43] Re
a = 0.0361 [0.0090] AU
Ag = 4.87 [5.77] [0.67σ]
Teffp = 4547 [1298] K [1.96σ]

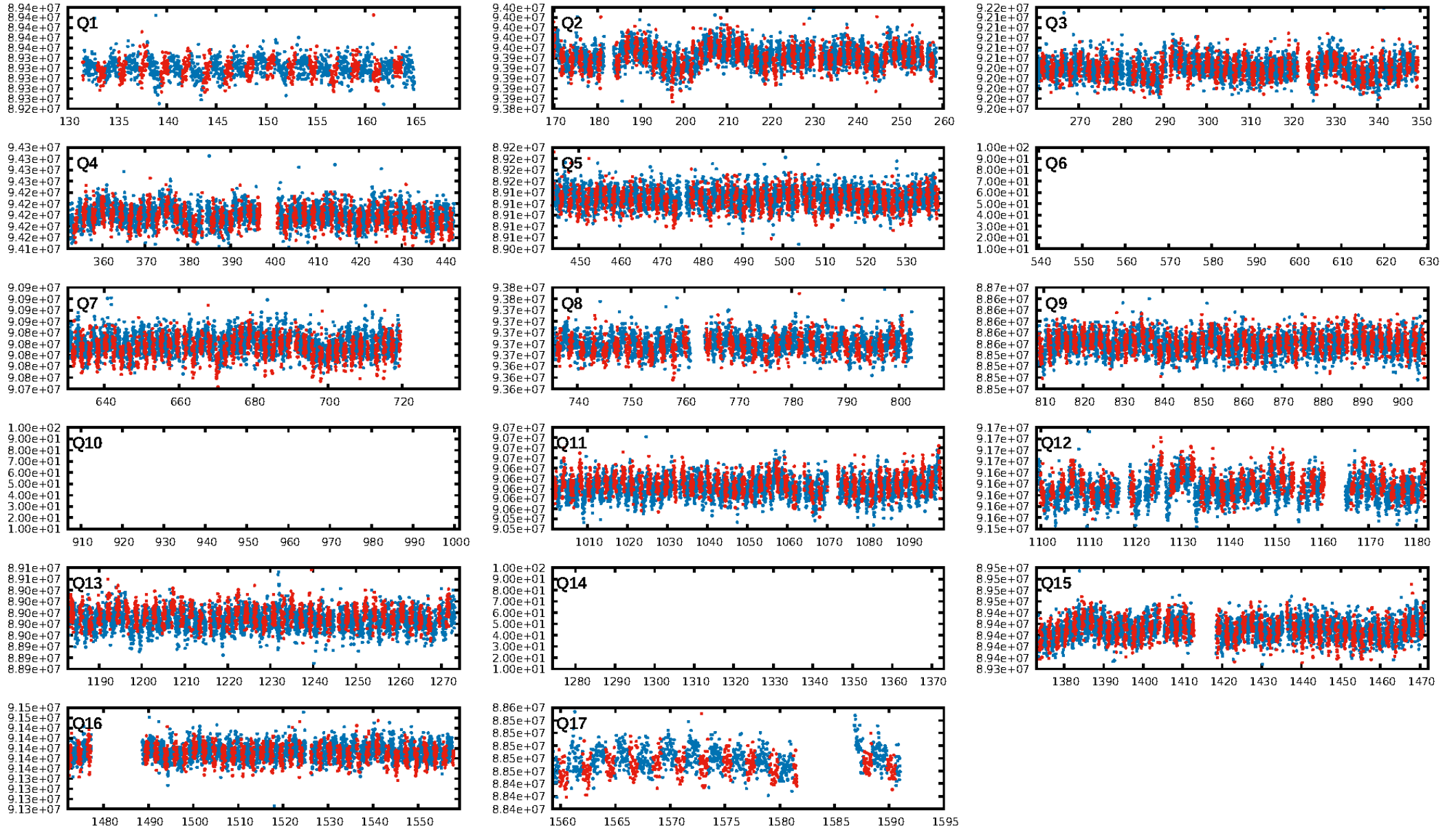
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [482/482]
GhostDiagnostic-chr: 2.64
Centroid-sig: 0.0%
Centroid-so: 2.240 arcsec [1.83σ]
OotOffset-rm: 0.504 arcsec [0.58σ]
KicOffset-rm: 0.542 arcsec [0.74σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.00 [0/14]

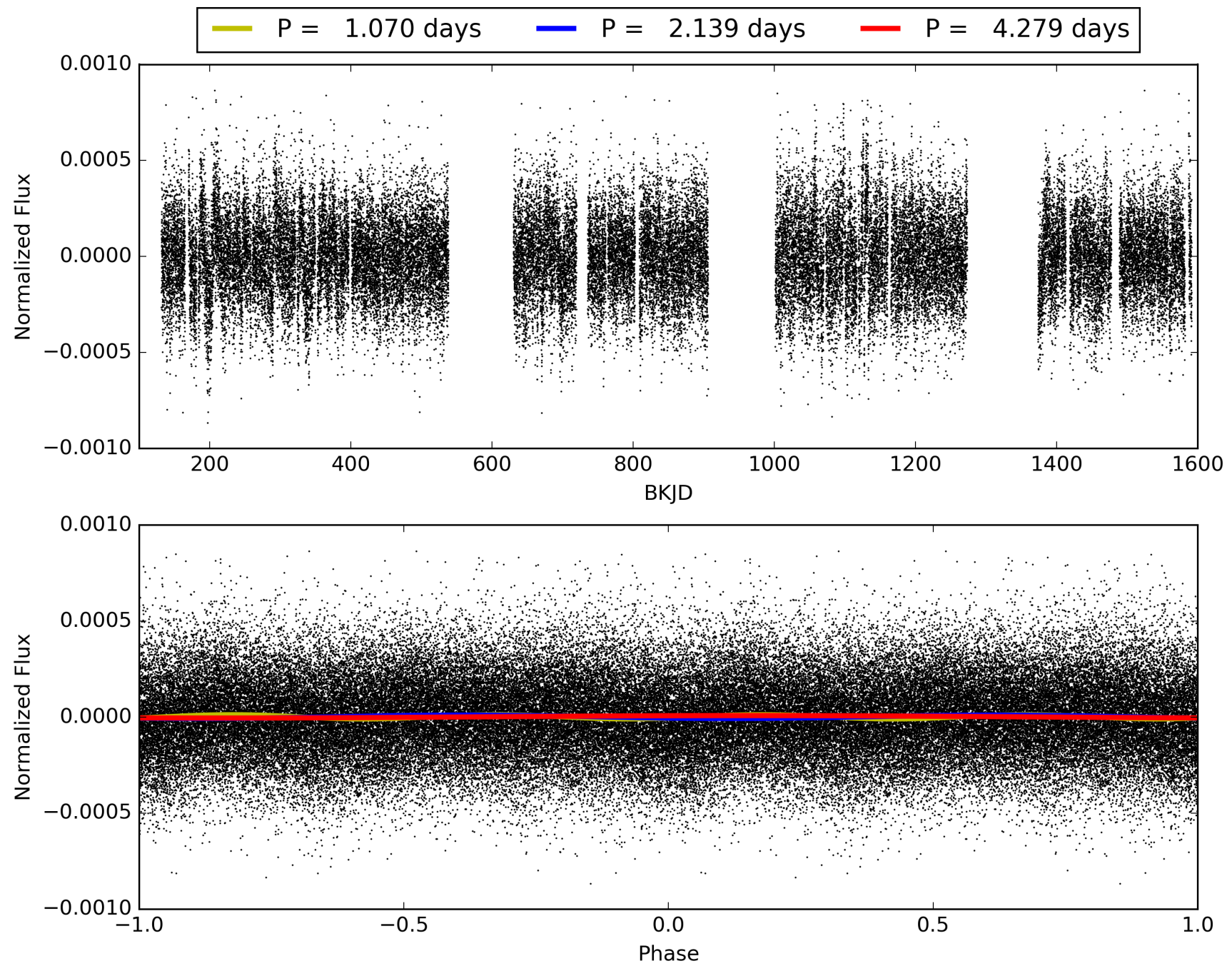
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003457192-01, PDC Light Curves

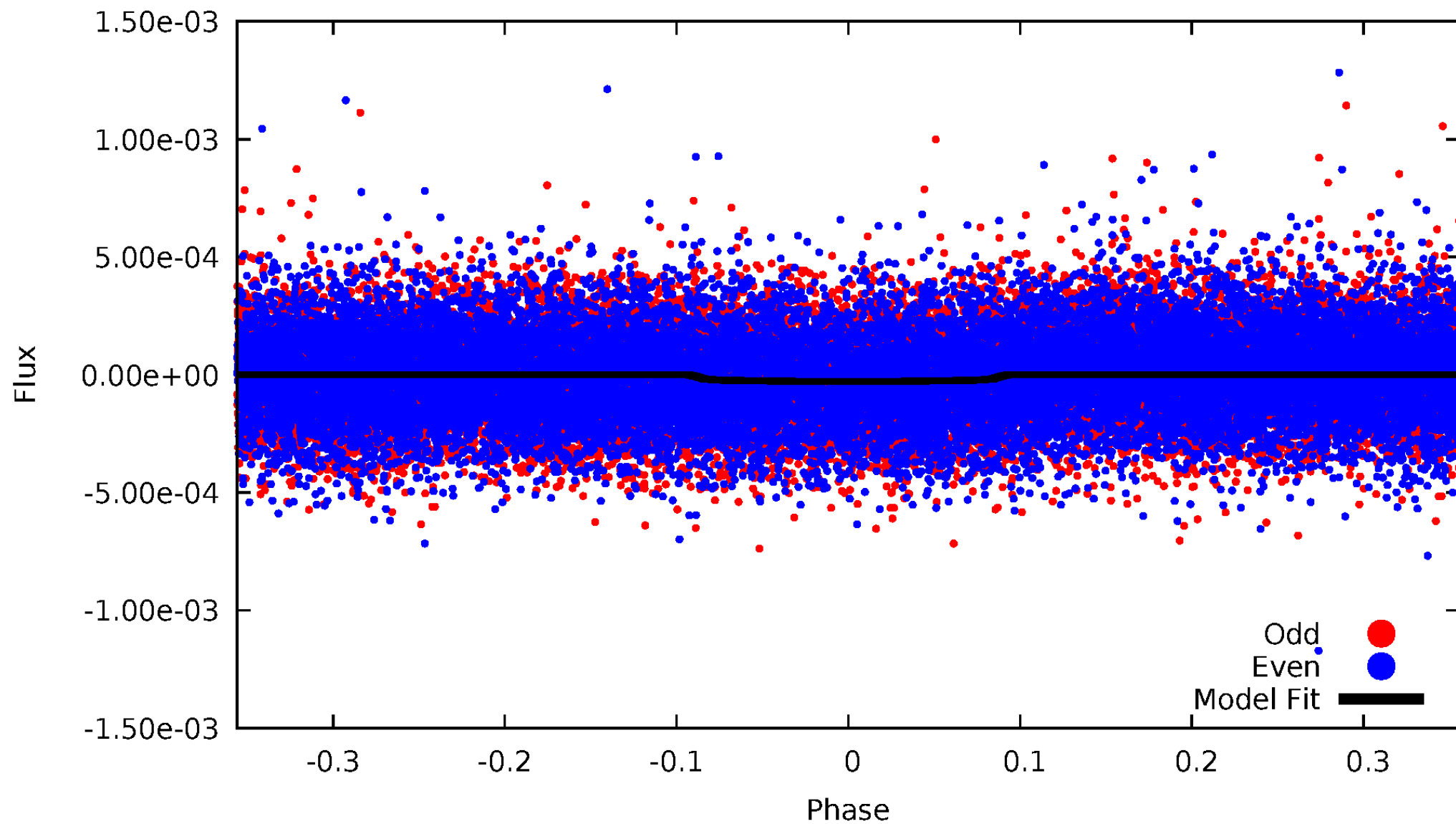


TCE 003457192-01



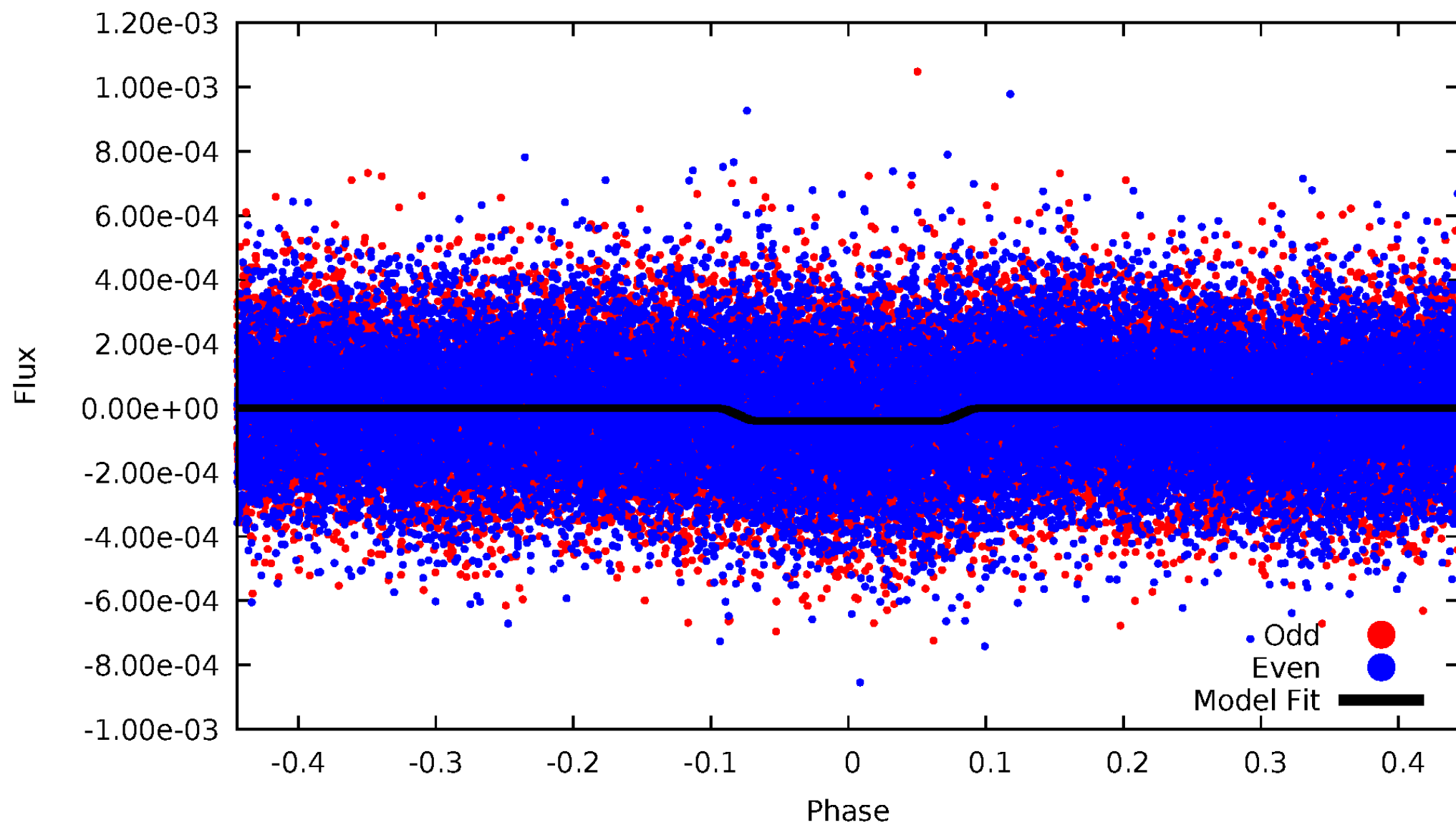
DV Odd/Even

TCE 003457192-01

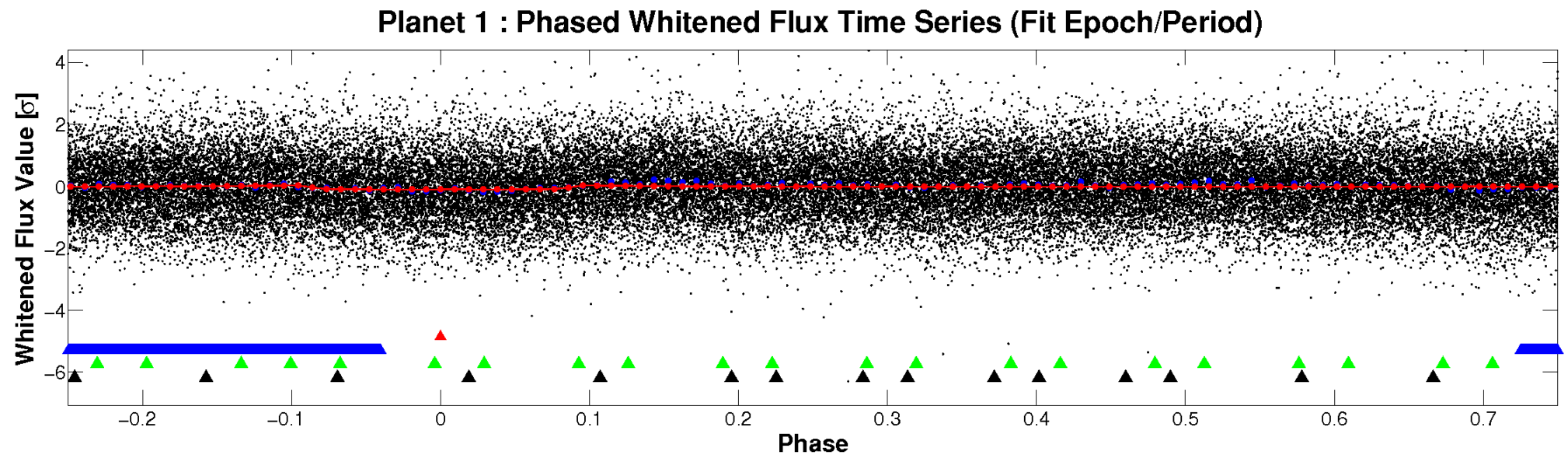
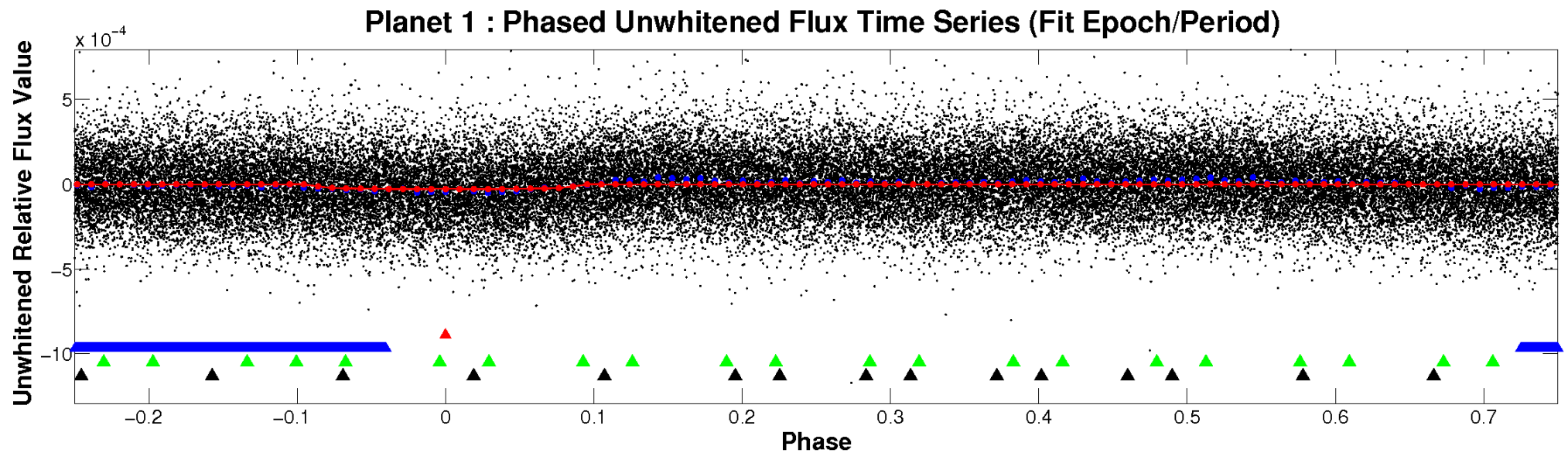


ALT Odd/Even

TCE 003457192-01

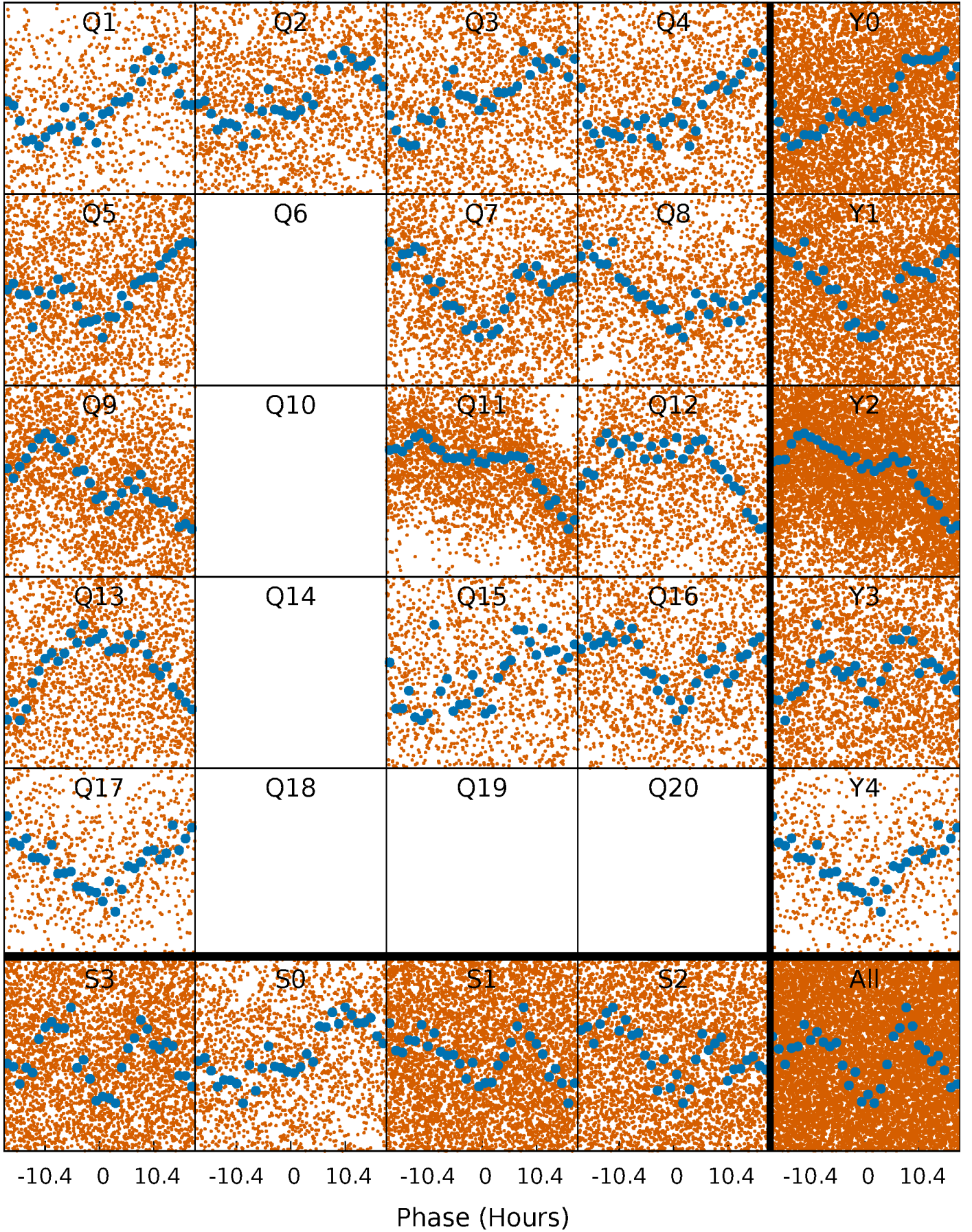


Non-Whitened Vs. Whitened Light Curve



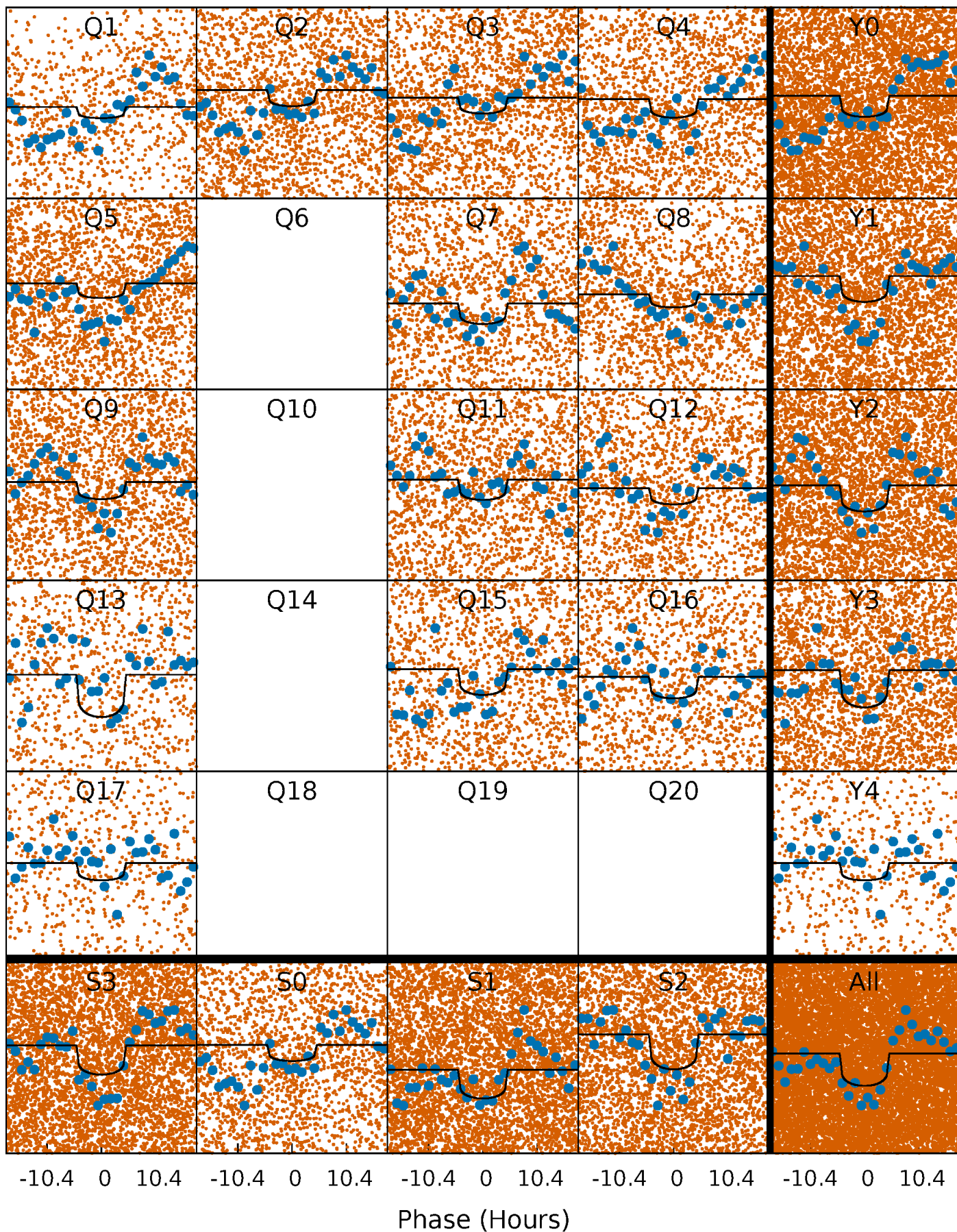
PDC Quarter-Phased Transit Curves

TCE 003457192-01 P= 2.139256 Days $T_0=133.346241$ (BKJD)



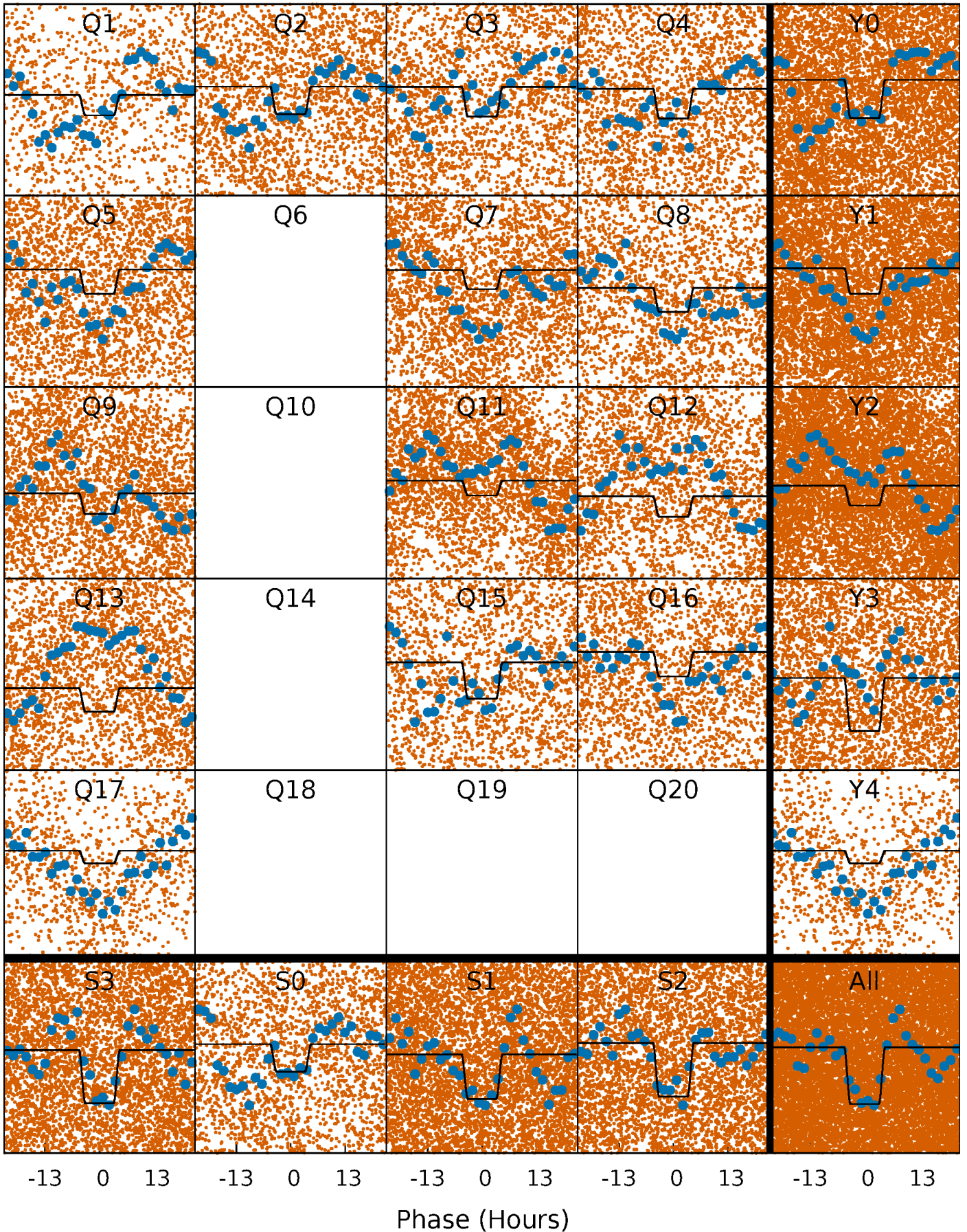
DV Quarter-Phased Transit Curves

TCE 003457192-01 P= 2.139256 Days $T_0=133.346241$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

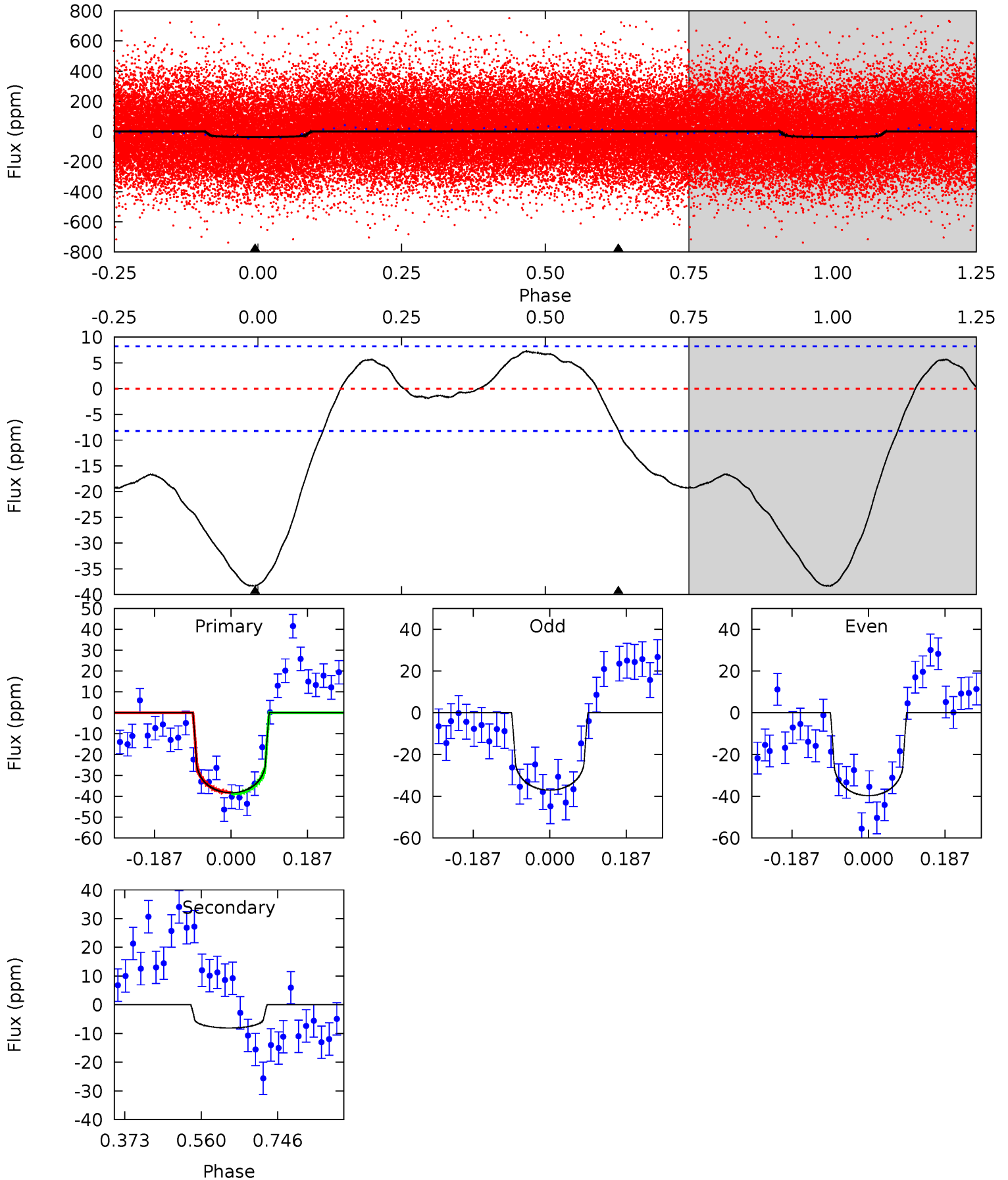
TCE 003457192-01 P= 2.139236 Days $T_0=133.348270$ (BKJD)



DV Model-Shift Uniqueness Test

003457192-01, P = 2.139256 Days, E = 131.206985 Days

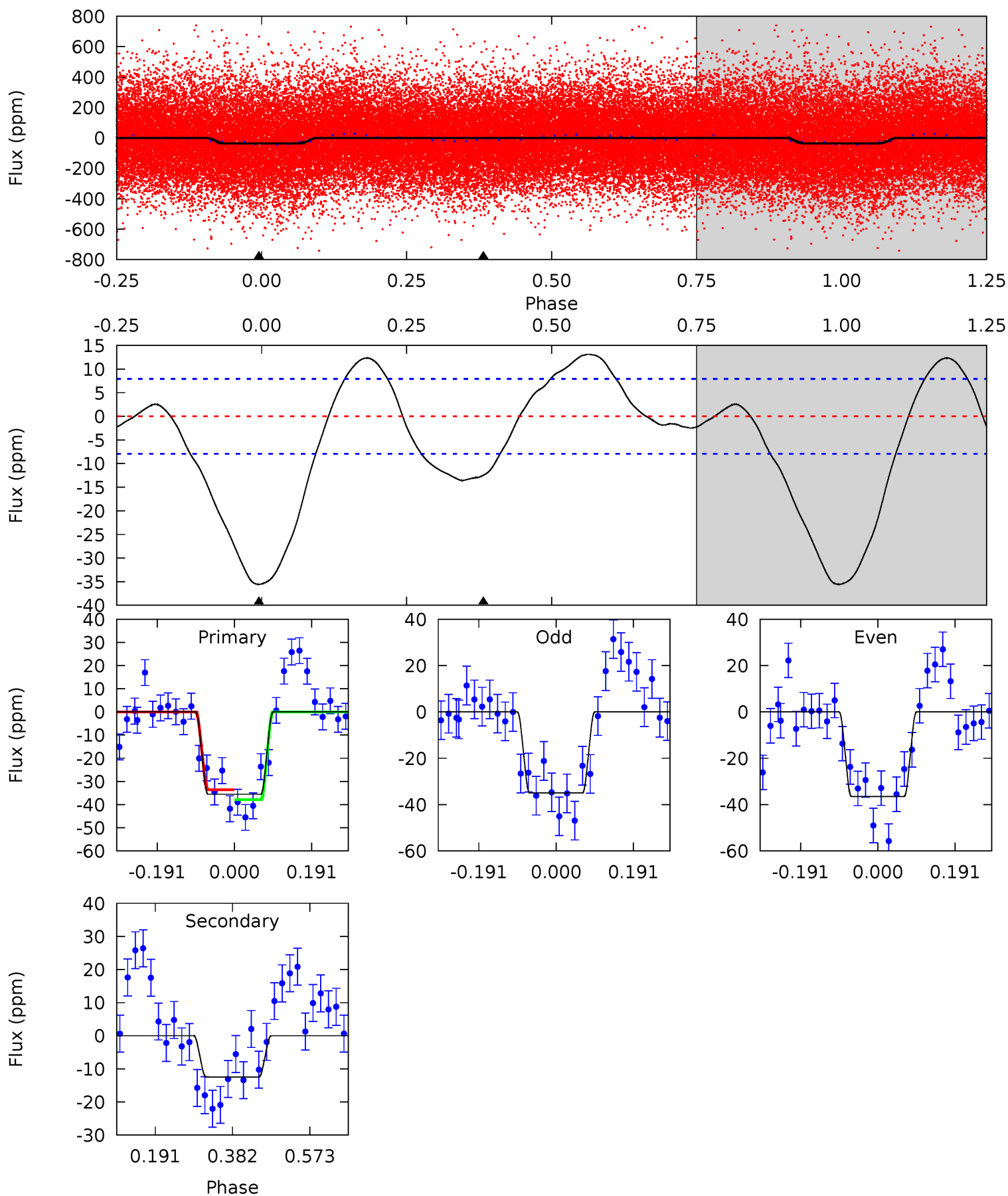
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	4.37	0	0	4.43	1.32	1.41	20.7	20.7	4.37	4.37	0.71	0.96	0.16	0.19



Alt Model-Shift Uniqueness Test

003457192-01, P = 2.139236 Days, E = 131.209034 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	6.97	0	0	4.43	1.31	2.72	19.9	19.9	6.97	6.97	0.41	1.06	0.27	1.21



Stellar Parameters For KIC 003457192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6818^{+189}_{-283}	$4.186^{+0.128}_{-0.192}$	$-0.060^{+0.250}_{-0.350}$	$1.563^{+0.475}_{-0.317}$	$1.372^{+0.204}_{-0.224}$	$0.507^{+0.326}_{-0.250}$
	+3%/-4%	+3%/-5%	+417%/-583%	+30%/-20%	+15%/-16%	+64%/-49%
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 003457192-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 2	$0.85^{+0.40}_{-0.32}$	2785^{+218}_{-183}	5087^{+1273}_{-689}	$7.519^{+12.167}_{-3.948}$
Alt.	-12 ± 2	$1.10^{+0.40}_{-0.35}$	2783^{+205}_{-177}	5063^{+985}_{-606}	$7.328^{+8.474}_{-3.498}$

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 $A_{obs} \gg 1.0$

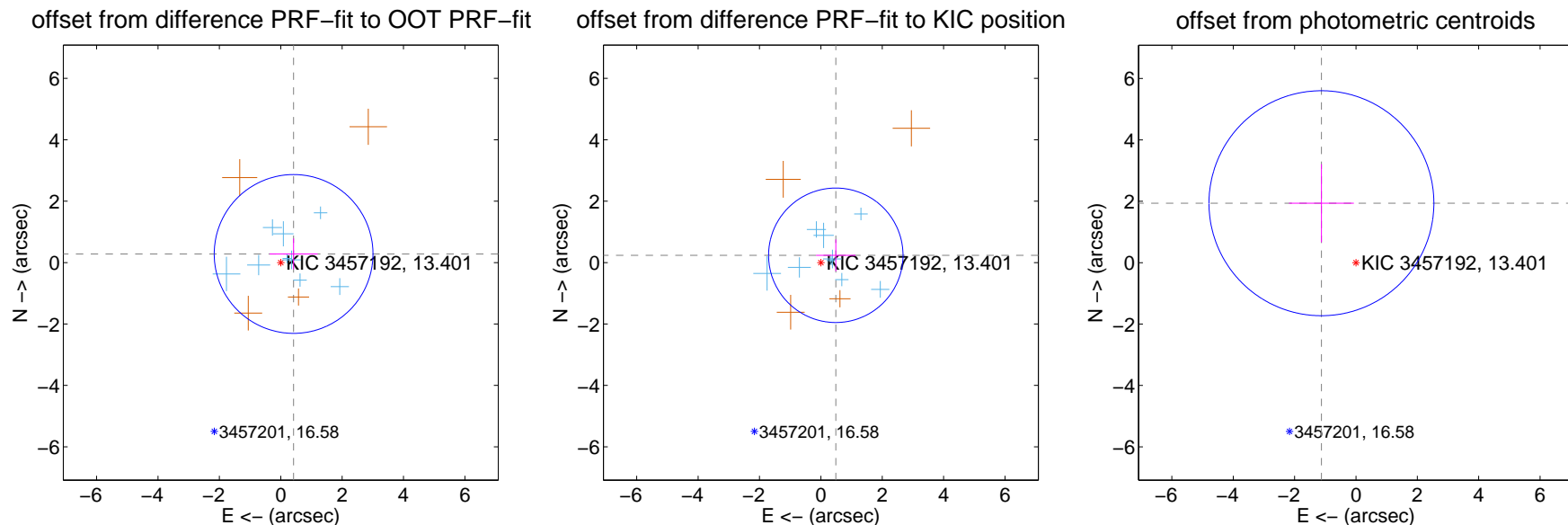
DV Centroid Data

Supplemental centroid analysis for 003457192-01. Kepler magnitude: 13.40. Transit SNR 8.90

There are 9 quarters with good PRF difference image offsets

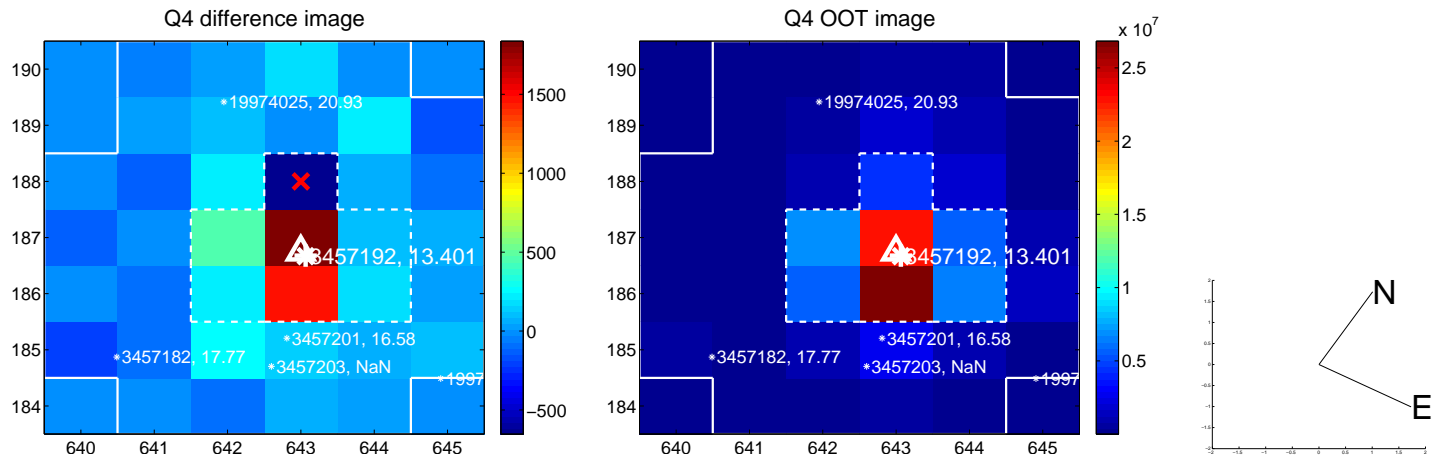
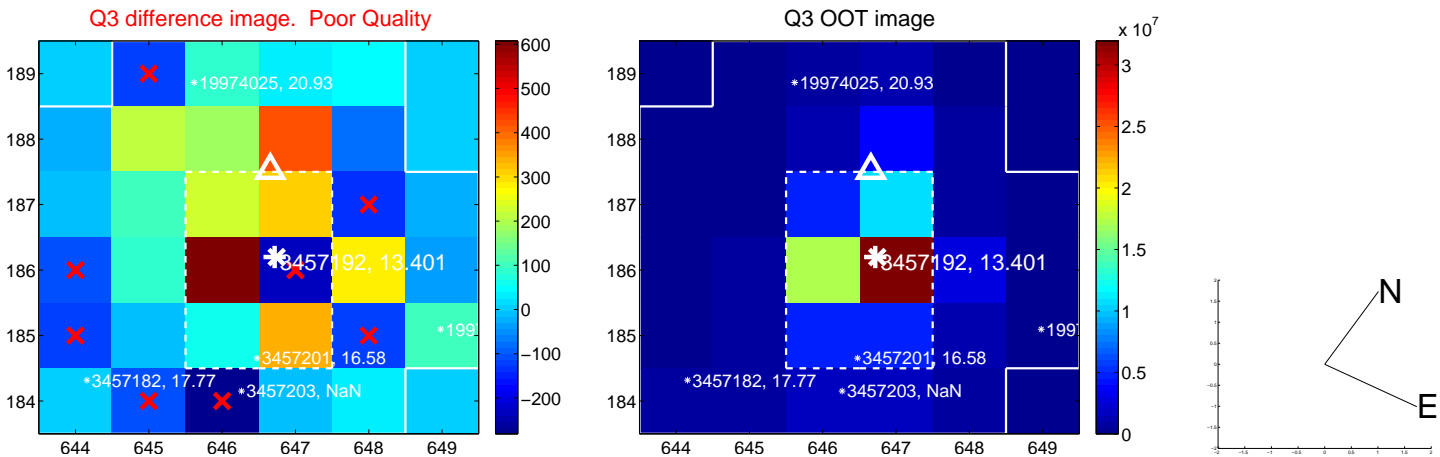
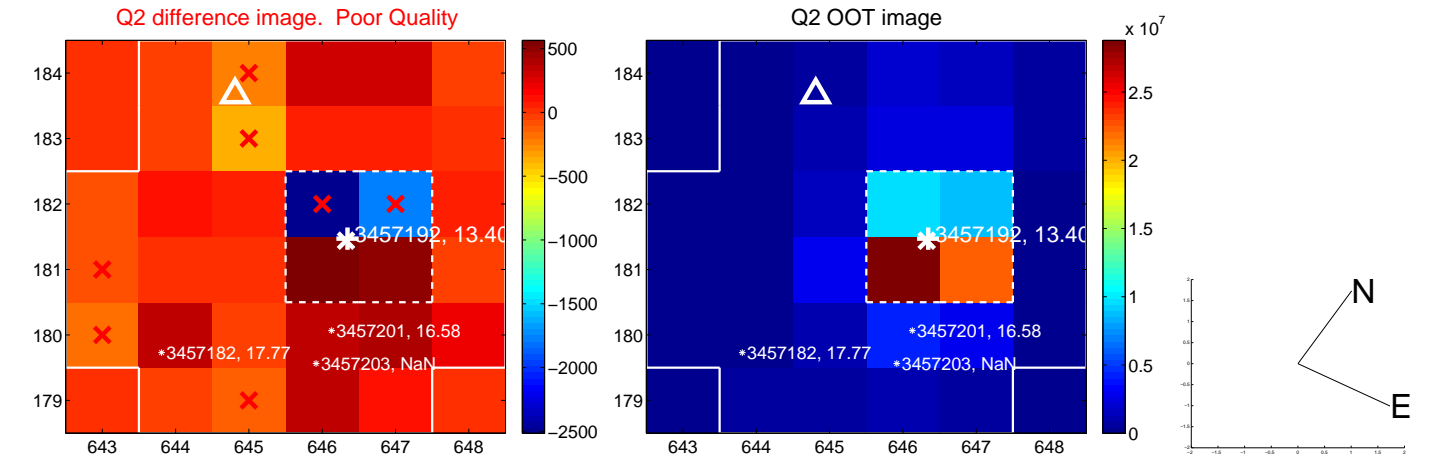
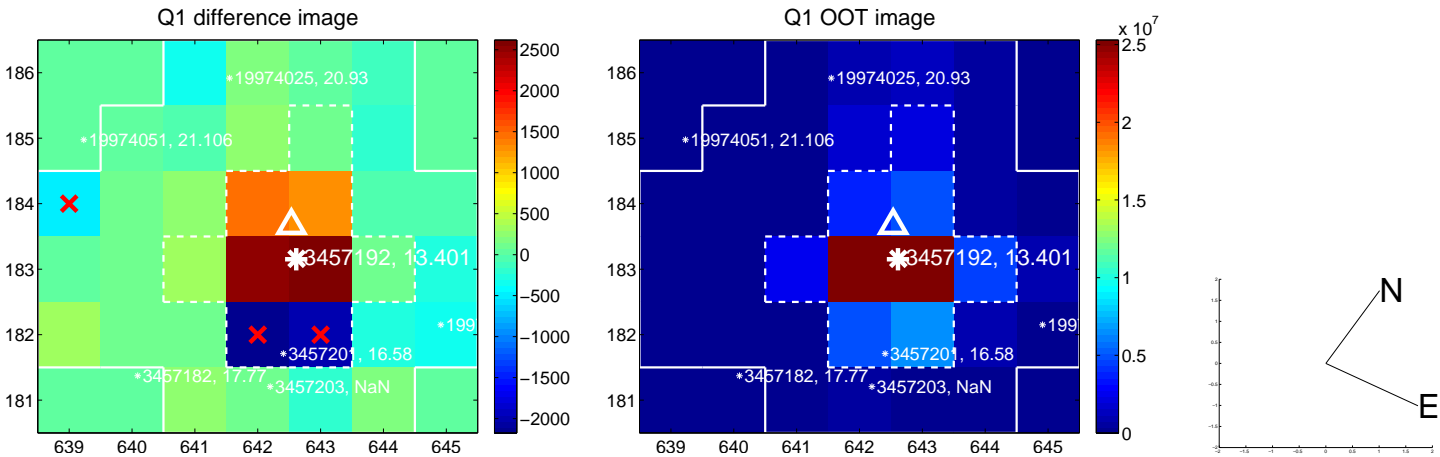
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.504 ± 0.862	0.58	-0.419 ± 0.784	0.281 ± 0.505
PRF-fit source offset from KIC position	0.542 ± 0.730	0.74	-0.487 ± 0.642	0.238 ± 0.516
photometric centroid source offset	2.24 ± 1.22	1.83	1.13 ± 1.06	1.94 ± 1.27

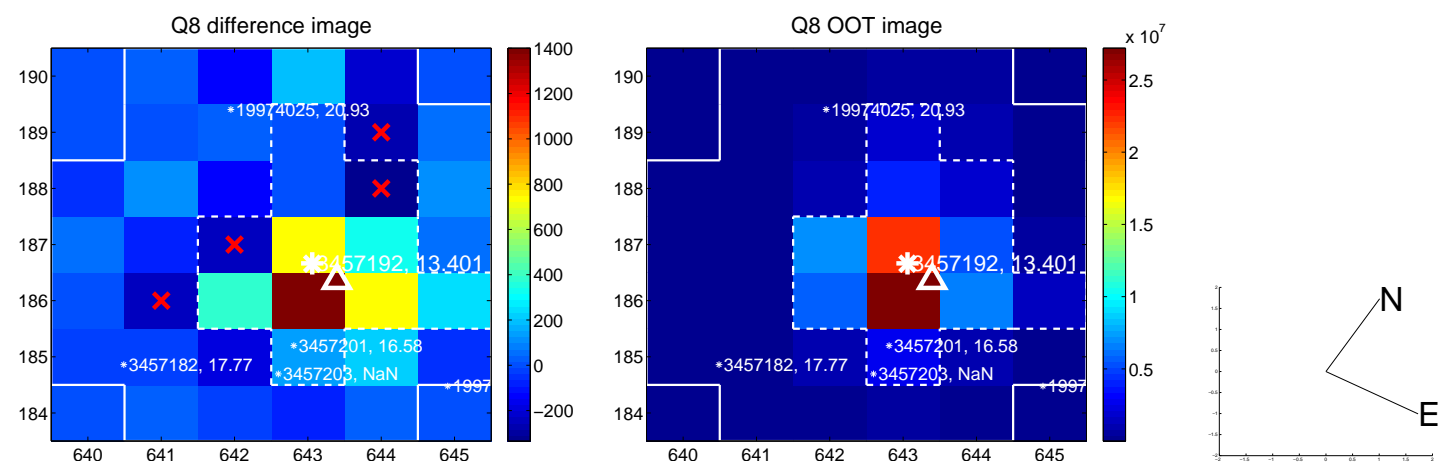
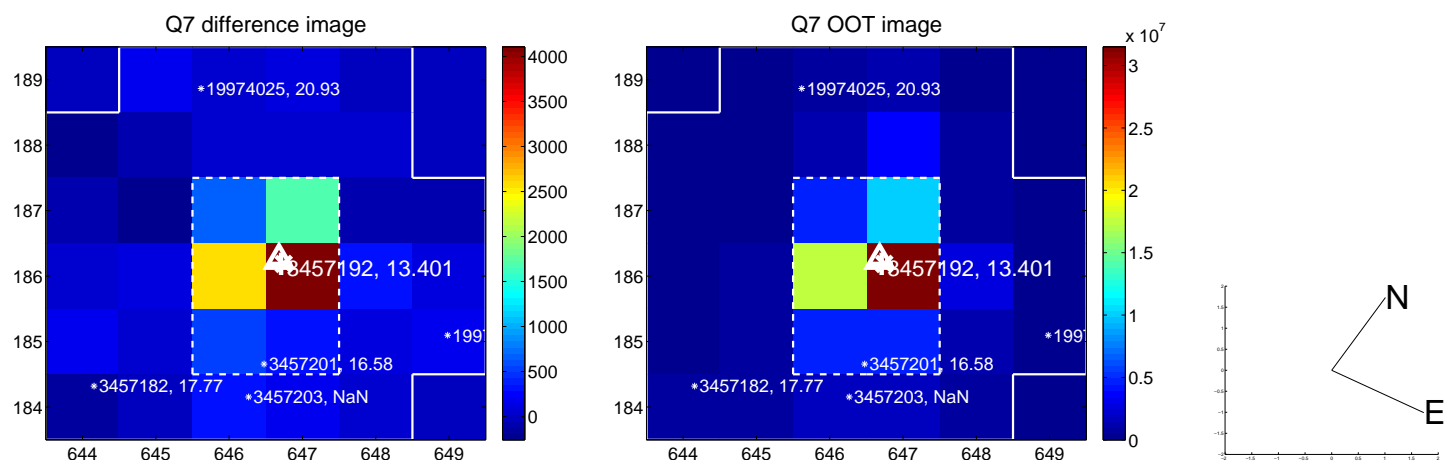
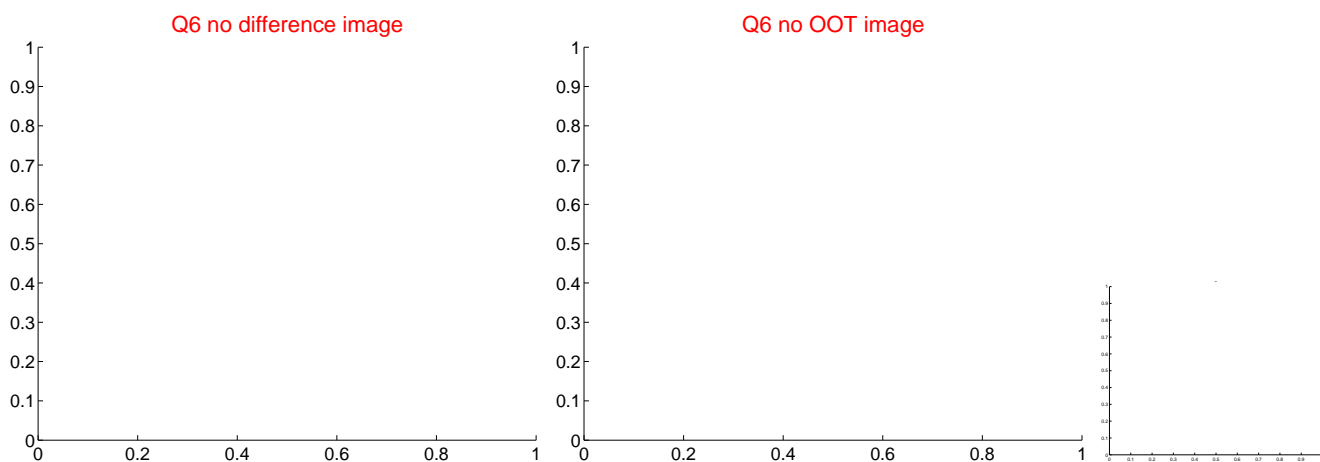
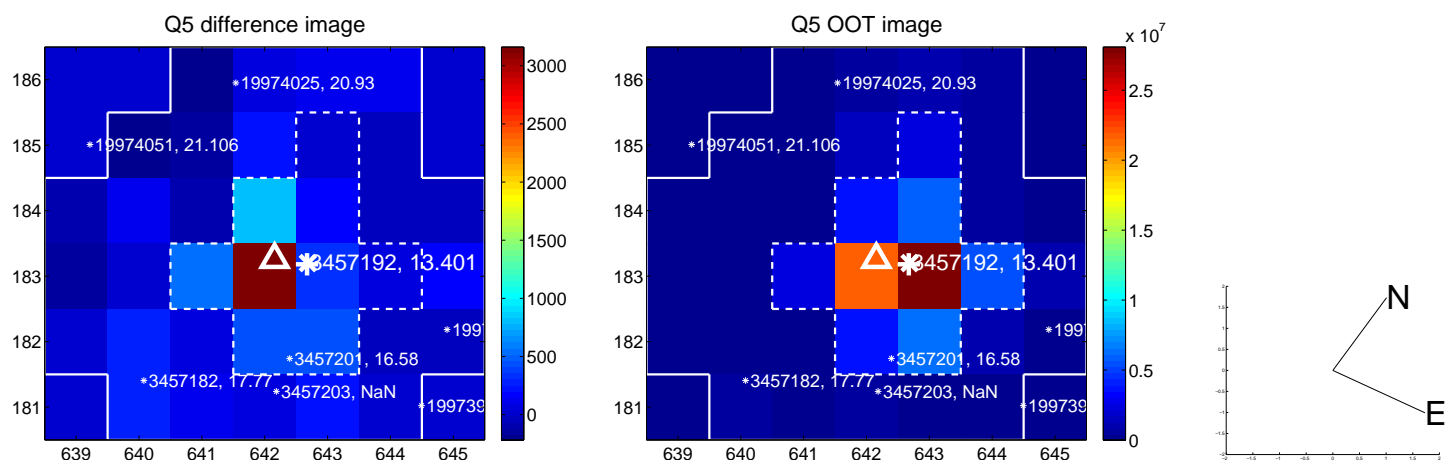


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

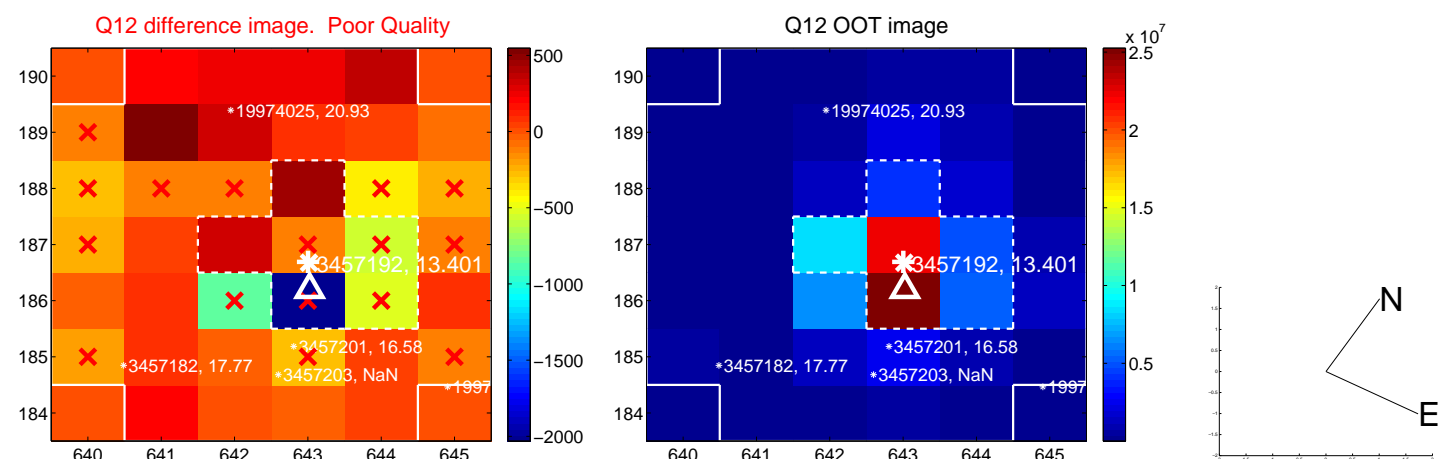
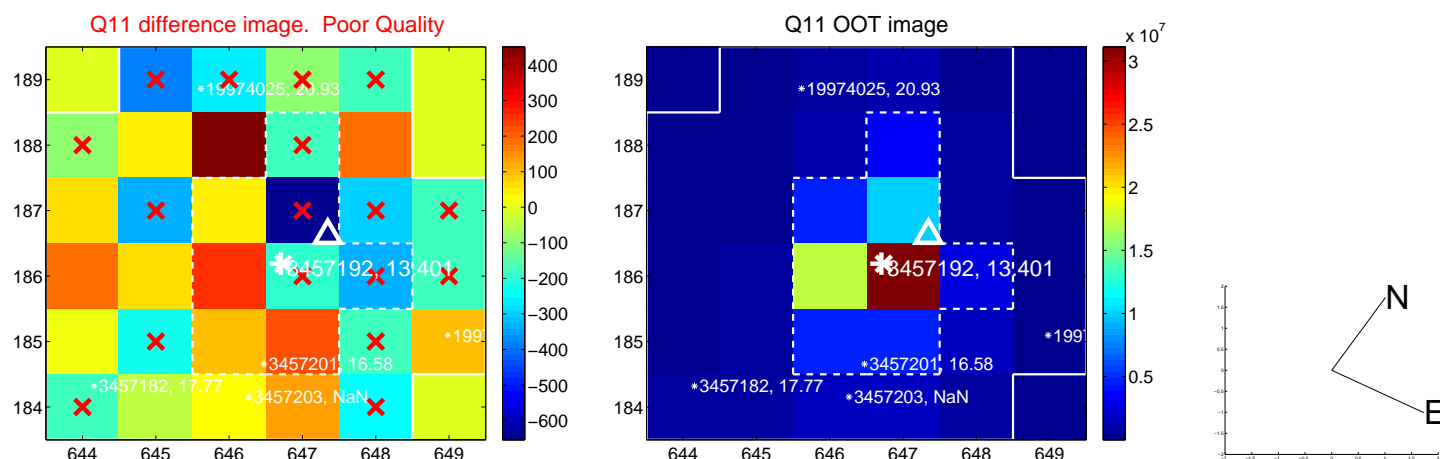
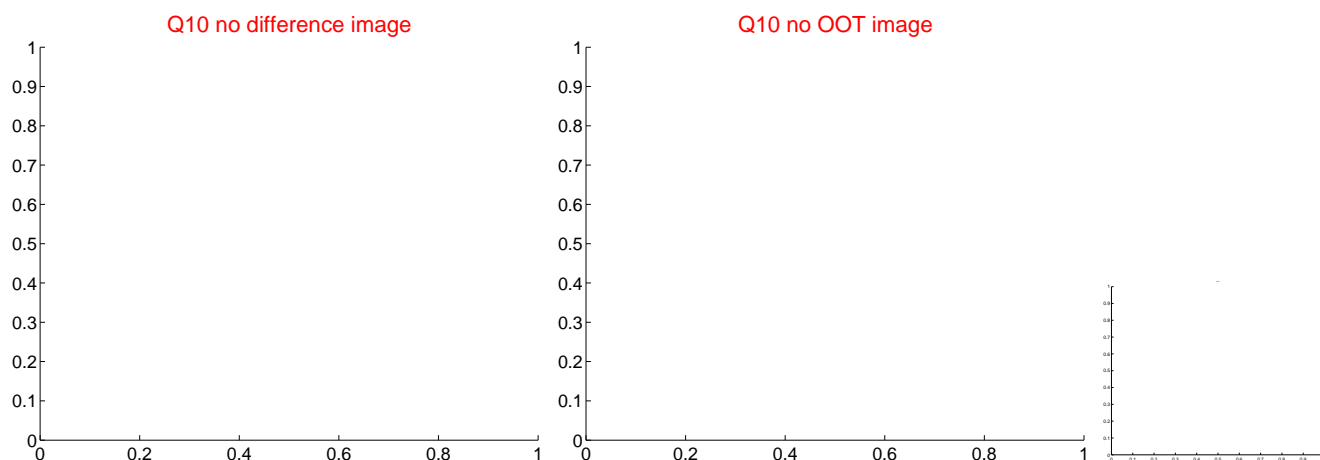
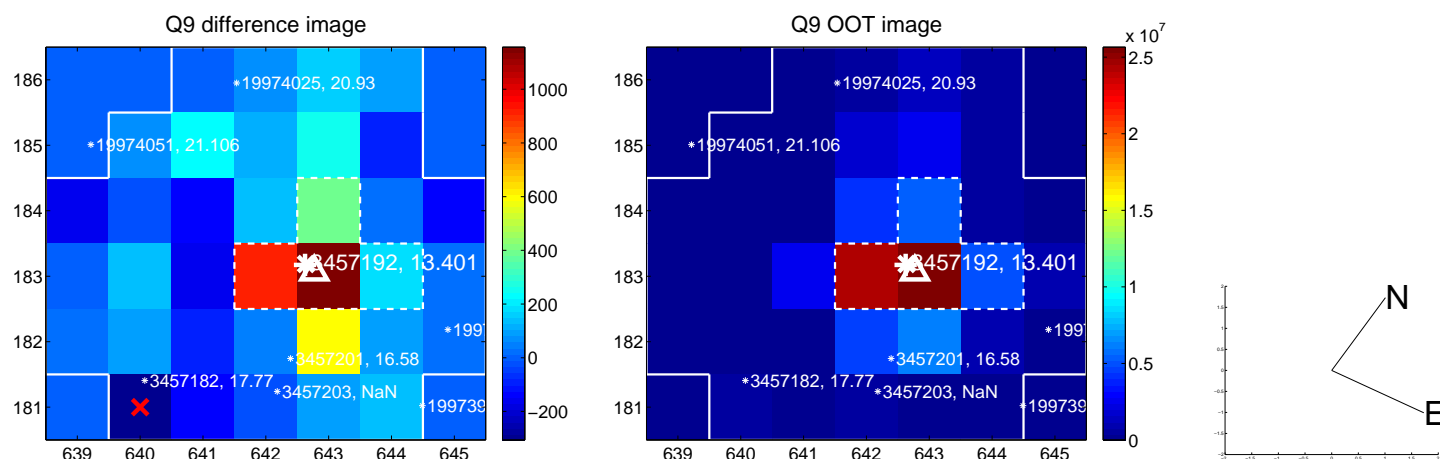
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



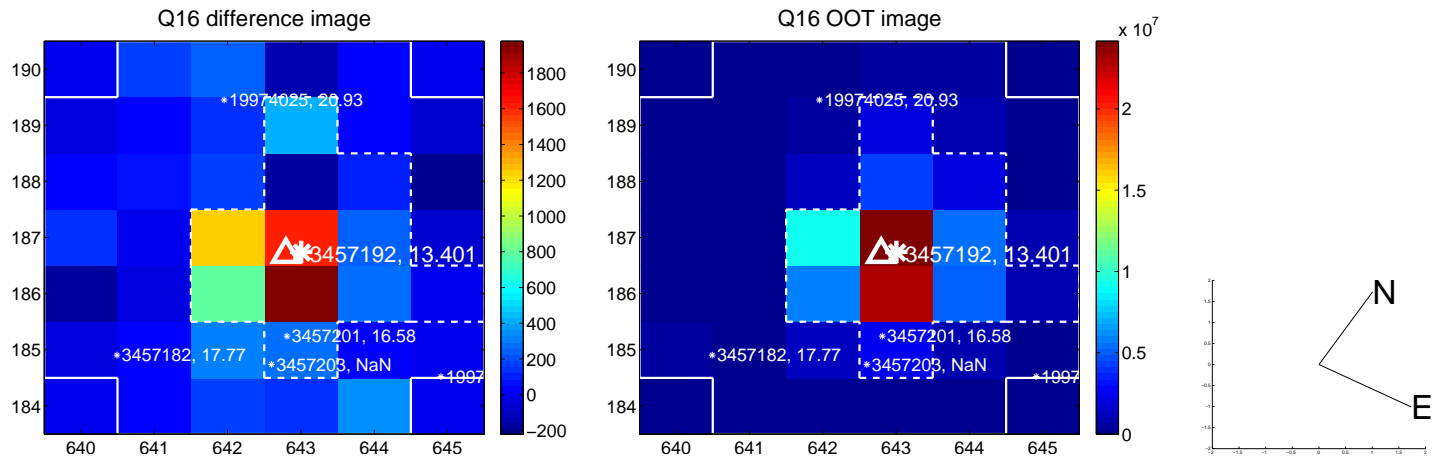
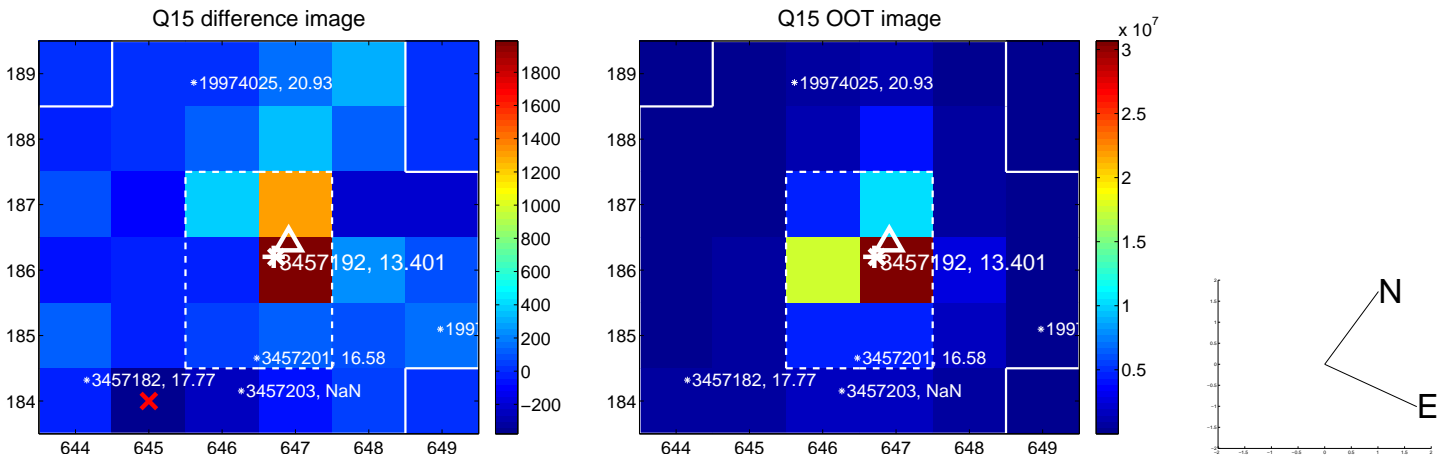
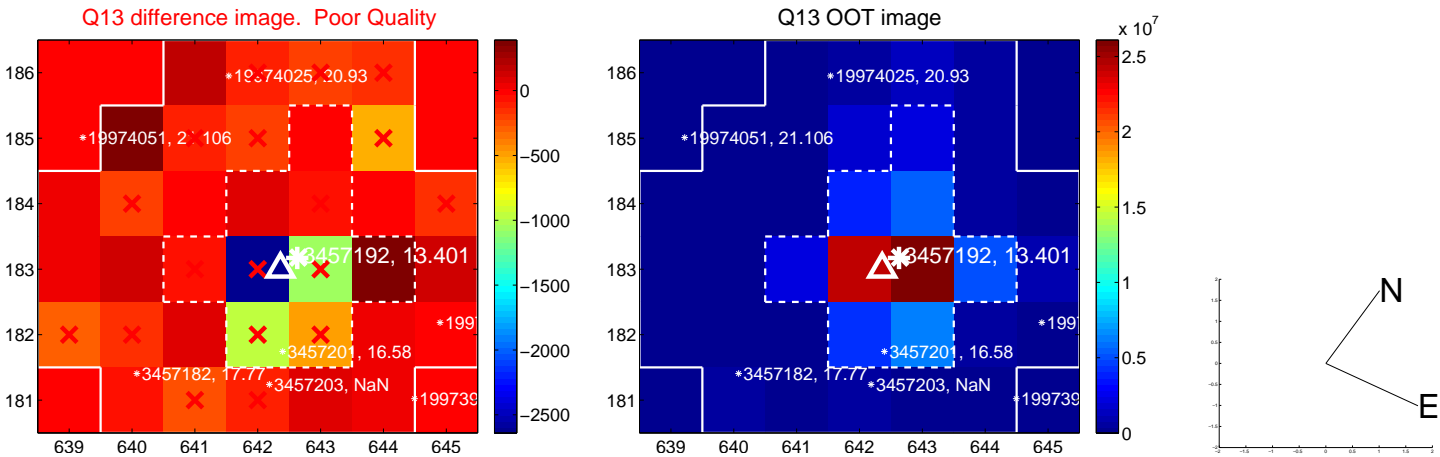
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

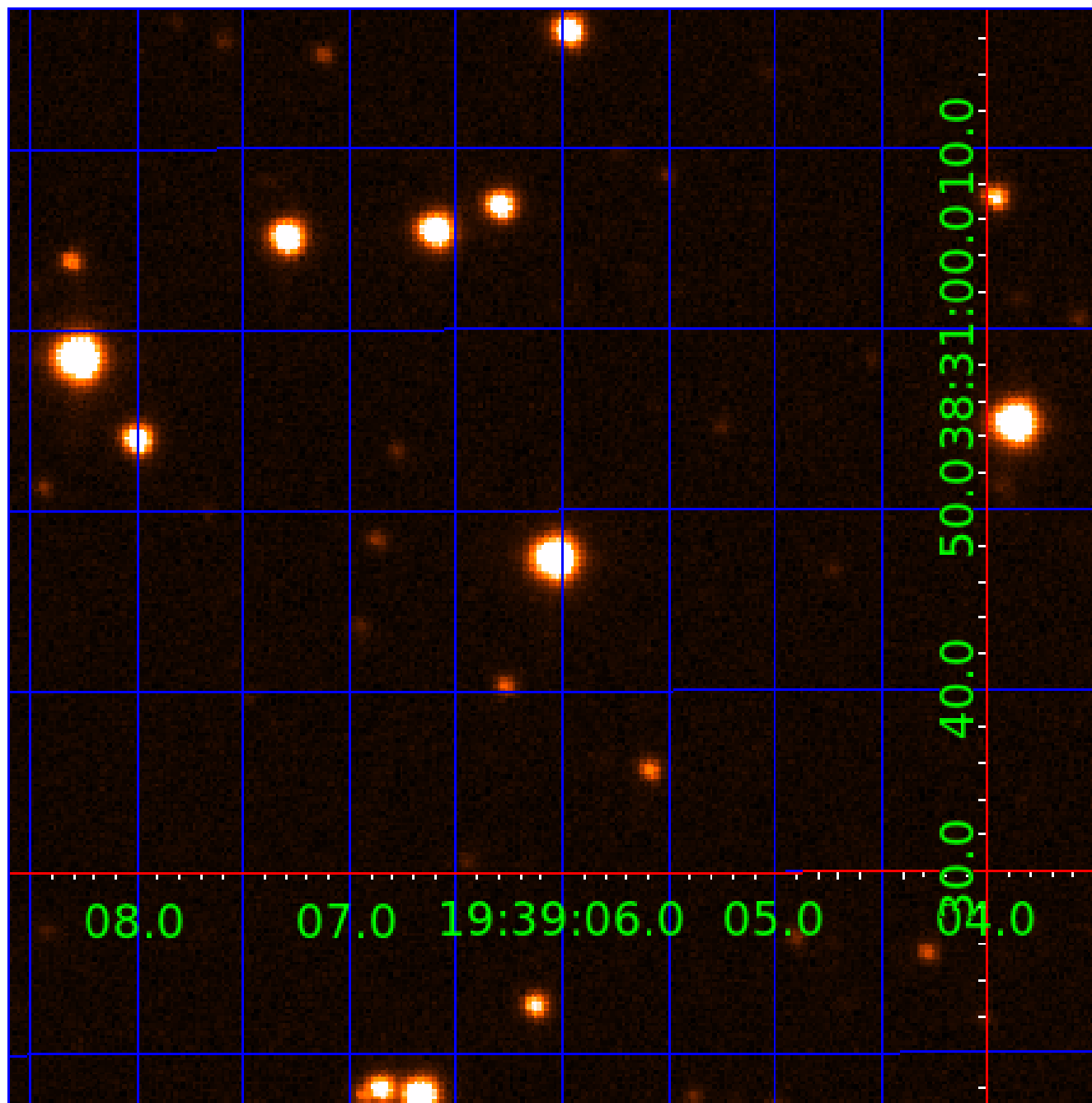


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003457192

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})
003457192-01	OBS	No	2.139256	133.346241	28.0	9.133	9.1	8.9	1.56	6818	0.86	3634.78
003457192-02	OBS	No	2.139993	132.758106	121.2	13.454	11.6	12.2	1.56	6818	2.55	3633.11
003457192-03	OBS	No	68.249375	175.845276	250.7	11.911	12.8	9.2	1.56	6818	2.67	35.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003457192-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003457192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SAME_NTL_PERIOD
003457192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

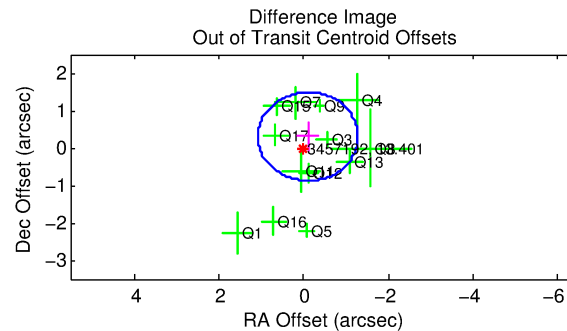
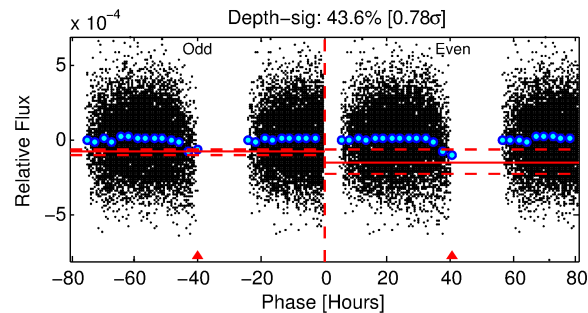
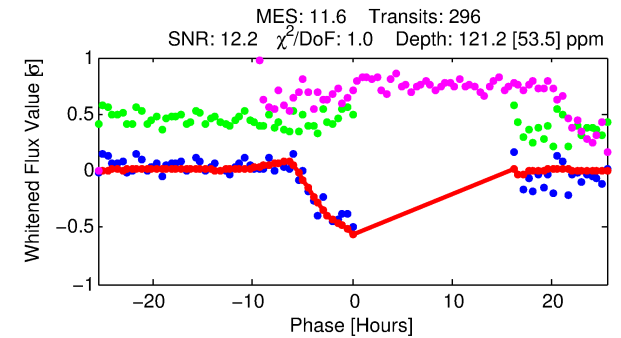
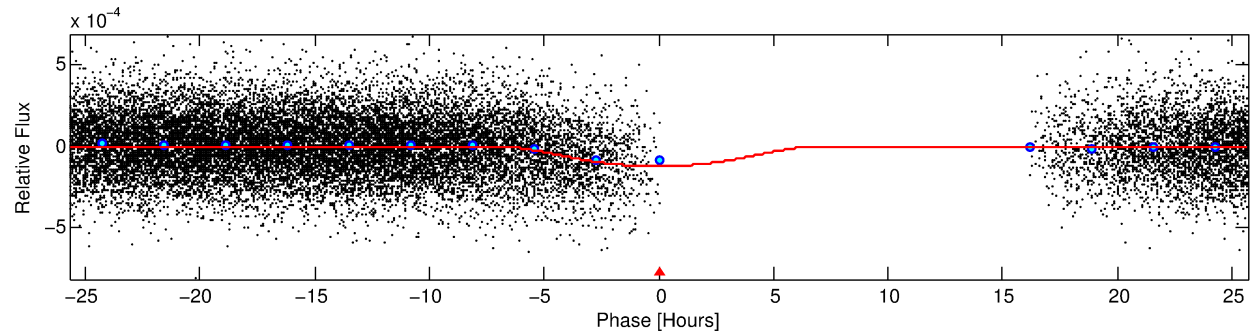
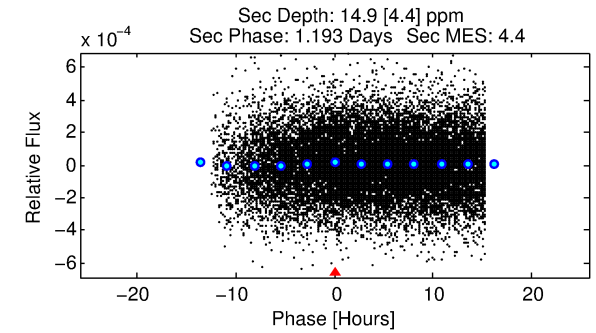
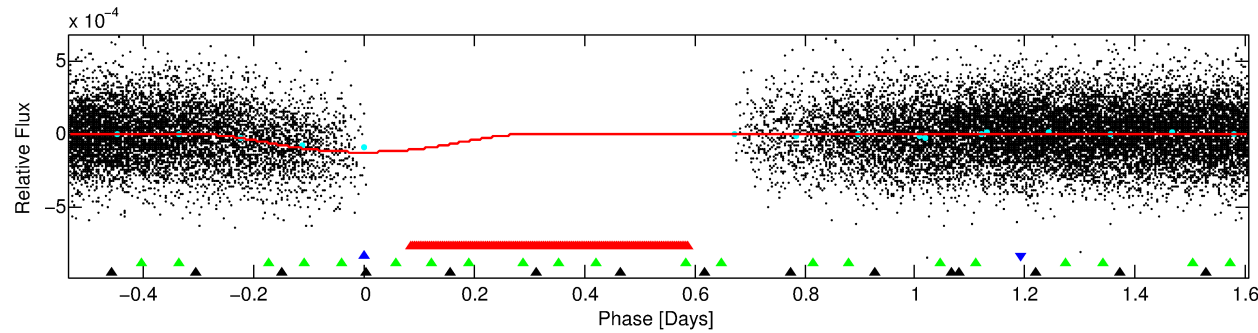
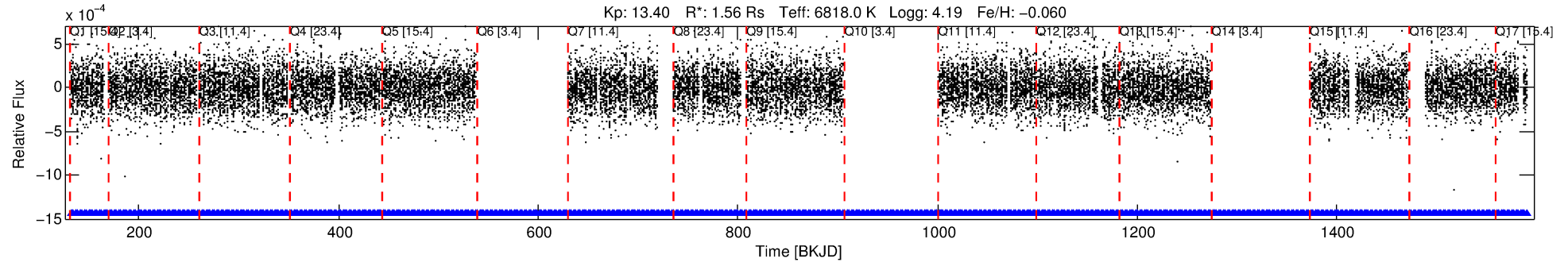
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003457192-02

No Significant Match Found

DV One-Page Summary

KIC: 3457192 Candidate: 2 of 4 Period: 2.140 d



DV Fit Results:

Period = 2.13999 [0.00012] d
Epoch = 132.7581 [0.0313] BKJD
Rp/R* = 0.0149 [0.0080]
a/R* = 1.04 [0.01]
b = 0.99 [0.02]
Seff = 3633.11 [1432.57]
Teq = 1980 [195] K
Rp = 2.55 [1.57] Re
a = 0.0361 [0.0090] AU
Ag = 1.64 [1.92] [0.34σ]
Teffp = 3466 [971] K [1.50σ]

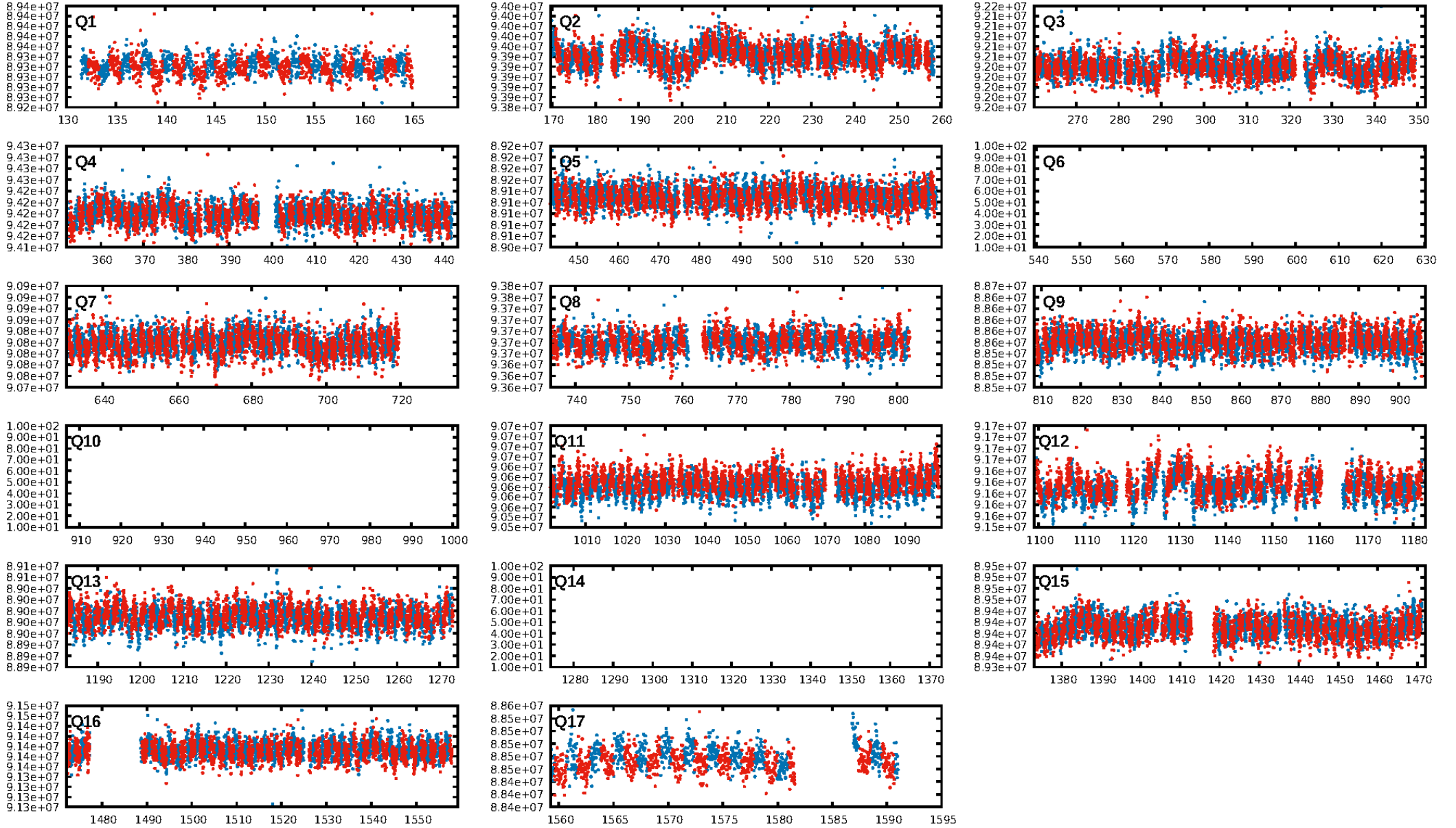
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [88.30σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [280/280]
GhostDiagnostic-chr: 6.324
Centroid-sig: 22.9%
Centroid-so: 0.559 arcsec [1.77σ]
OotOffset-rm: 0.320 arcsec [0.81σ]
KicOffset-rm: 0.302 arcsec [0.78σ]
OotOffset-st: 0/4/4/5 [13]
KicOffset-st: 0/4/4/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/14]

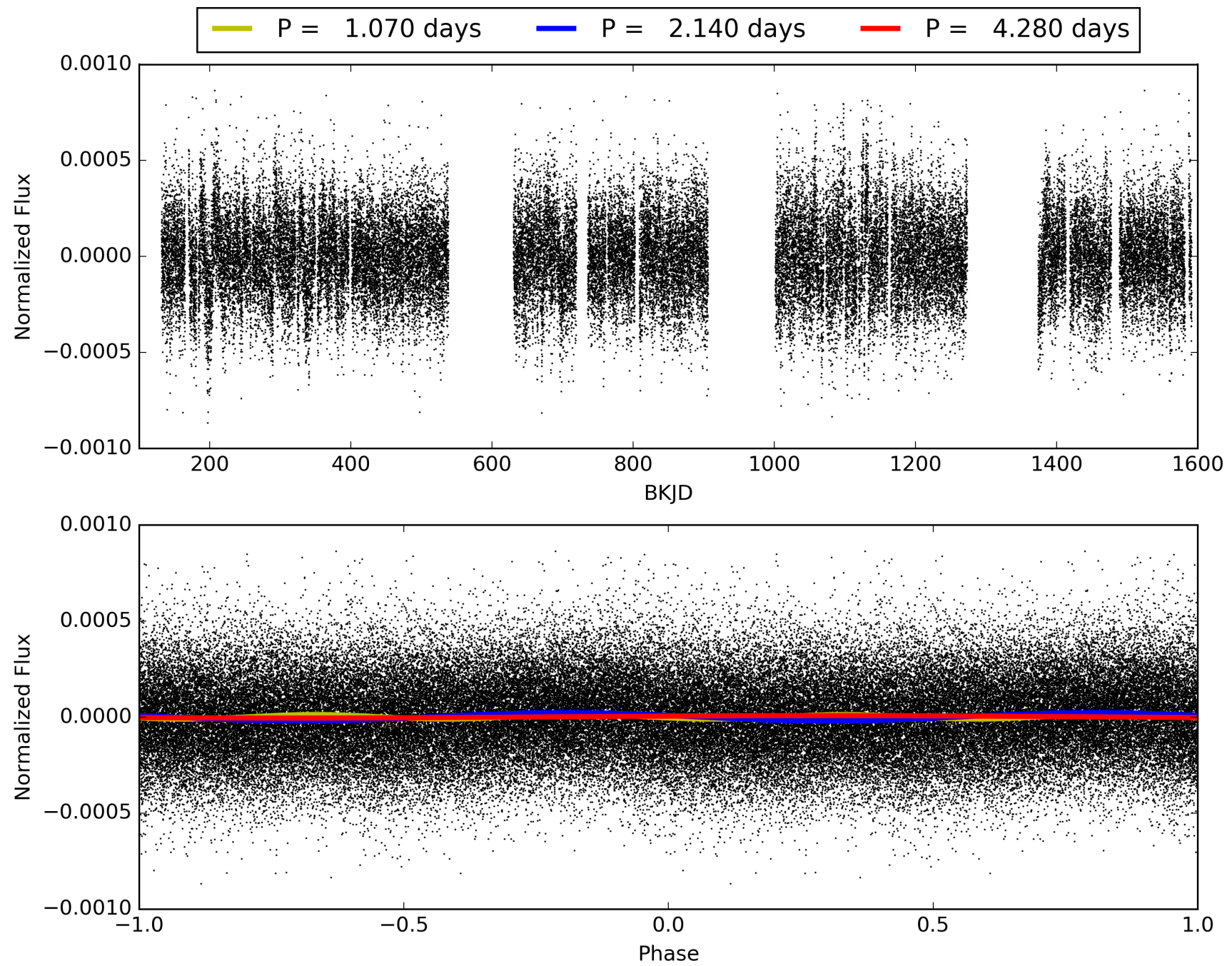
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:11:43 Z

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

TCE 003457192-02, PDC Light Curves

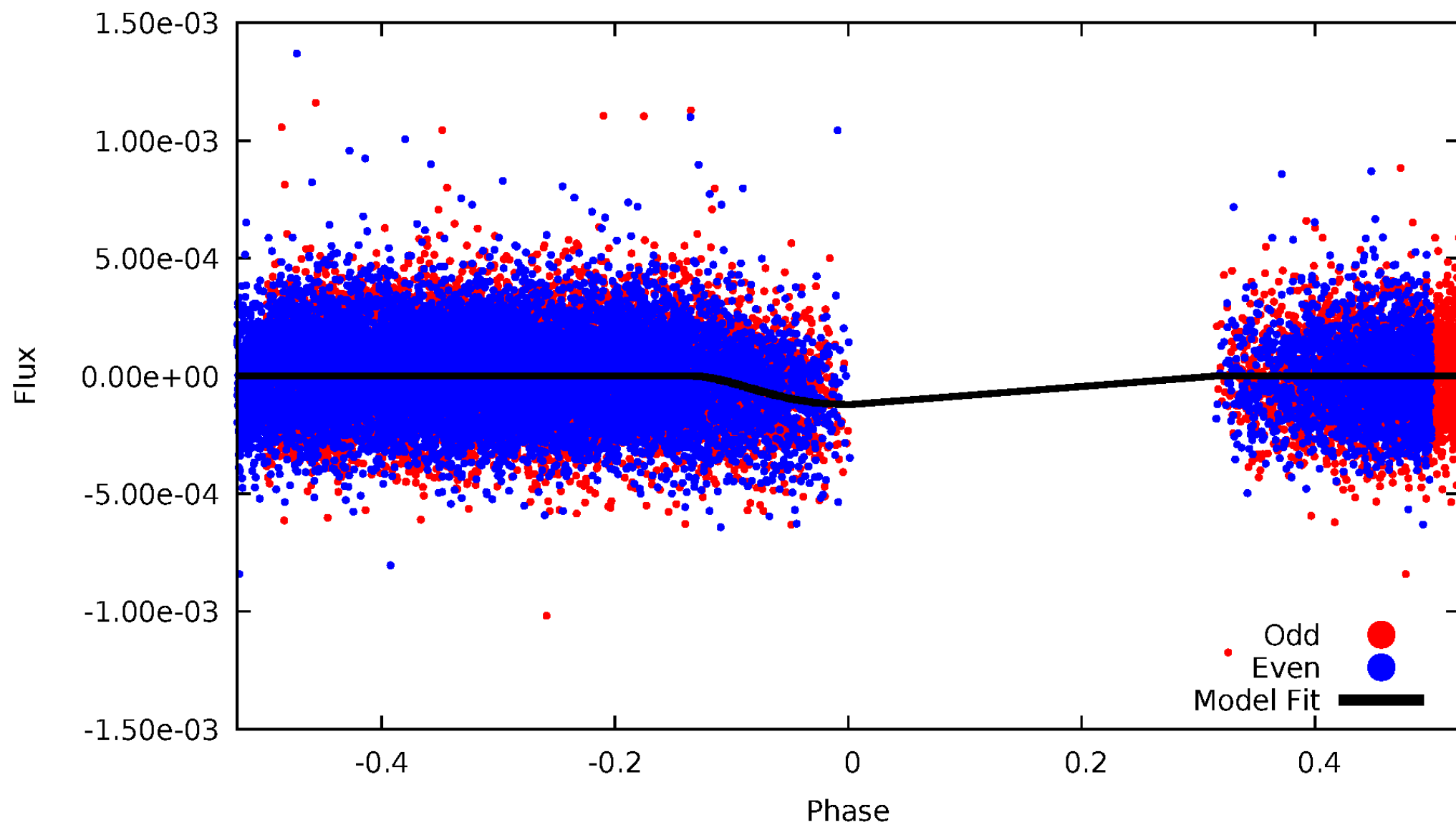


TCE 003457192-02



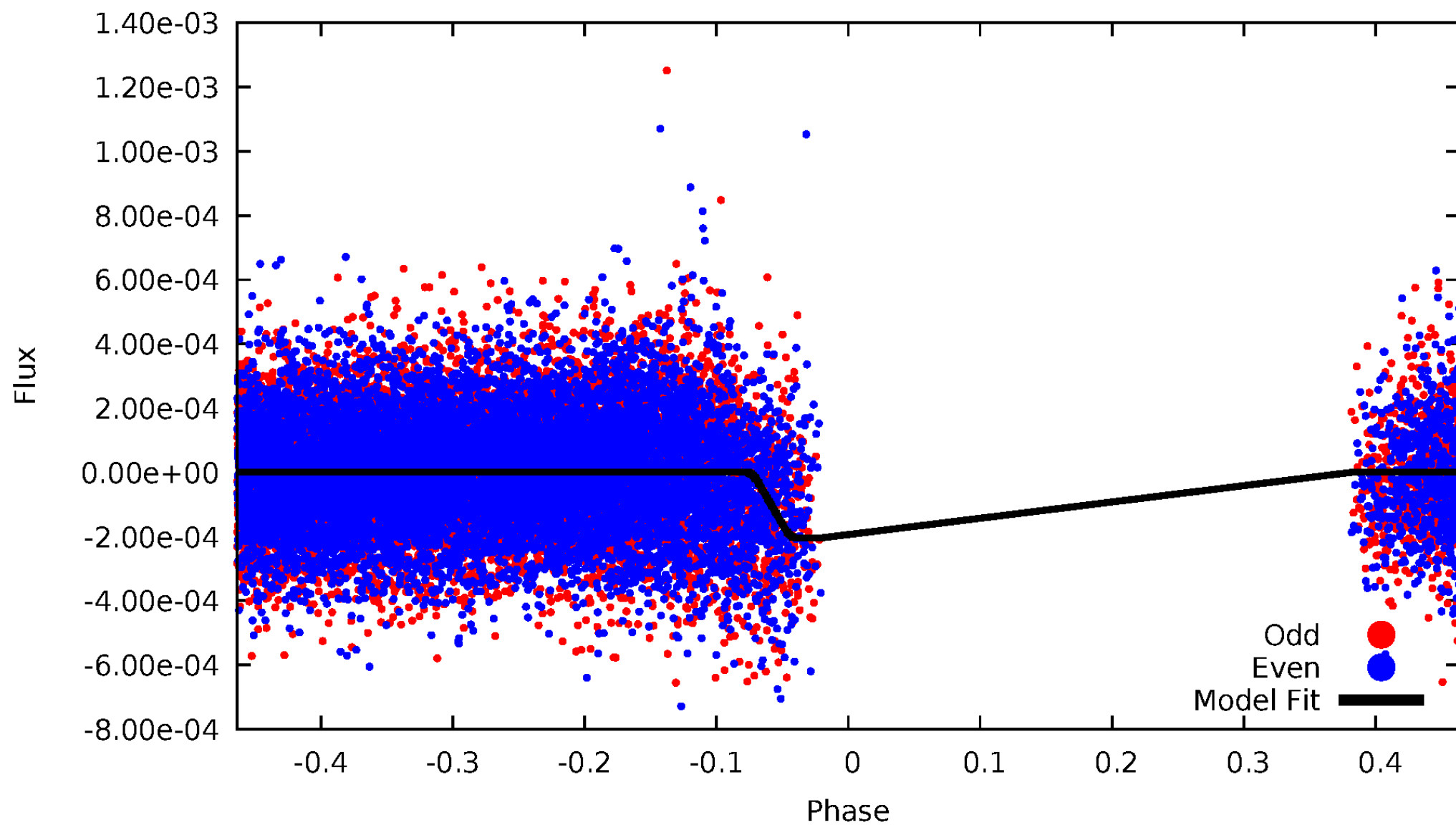
DV Odd/Even

TCE 003457192-02



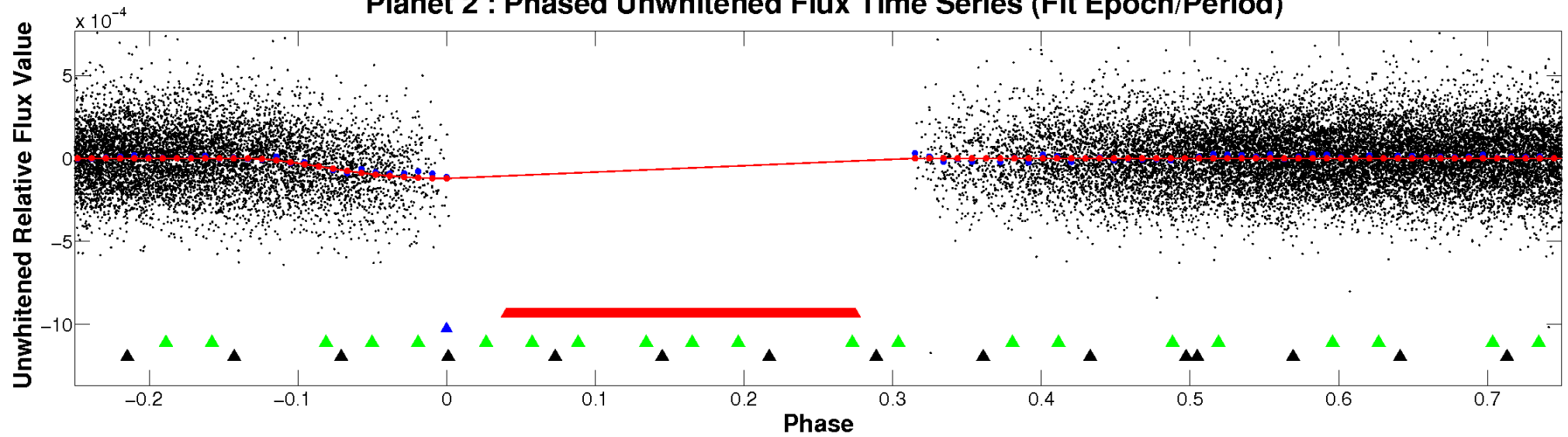
ALT Odd/Even

TCE 003457192-02

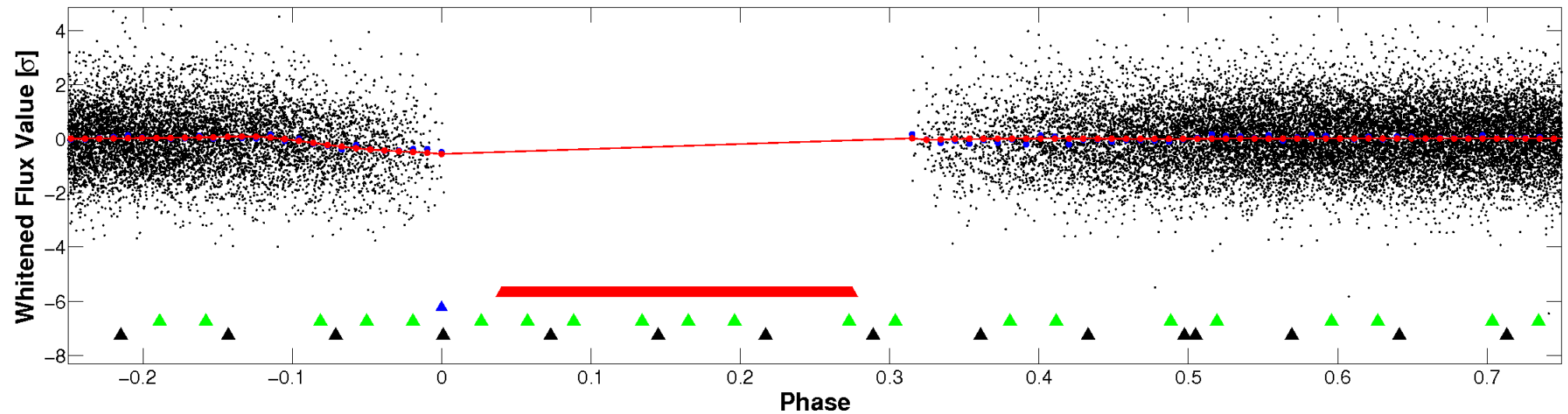


Non-Whitened Vs. Whitened Light Curve

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

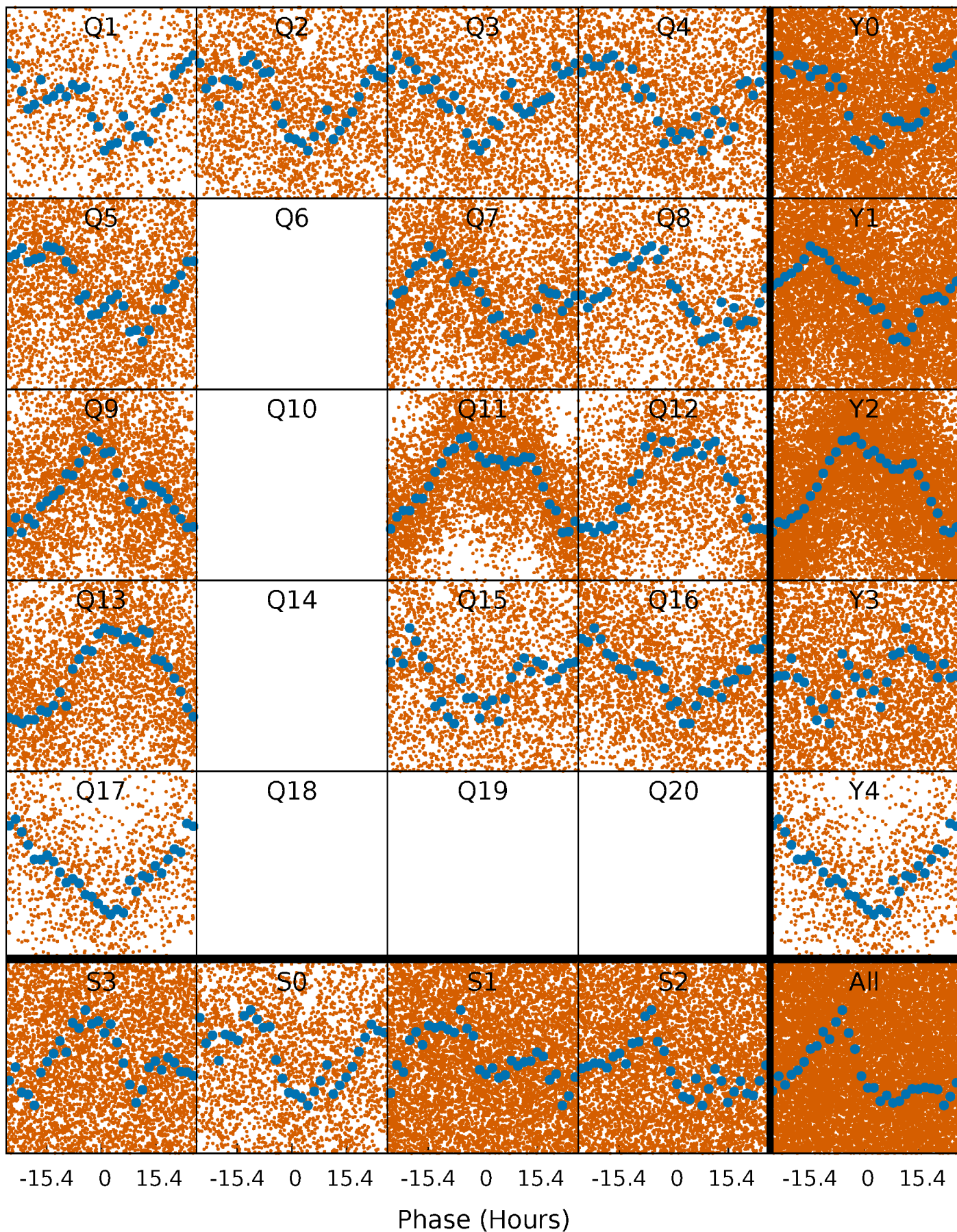


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



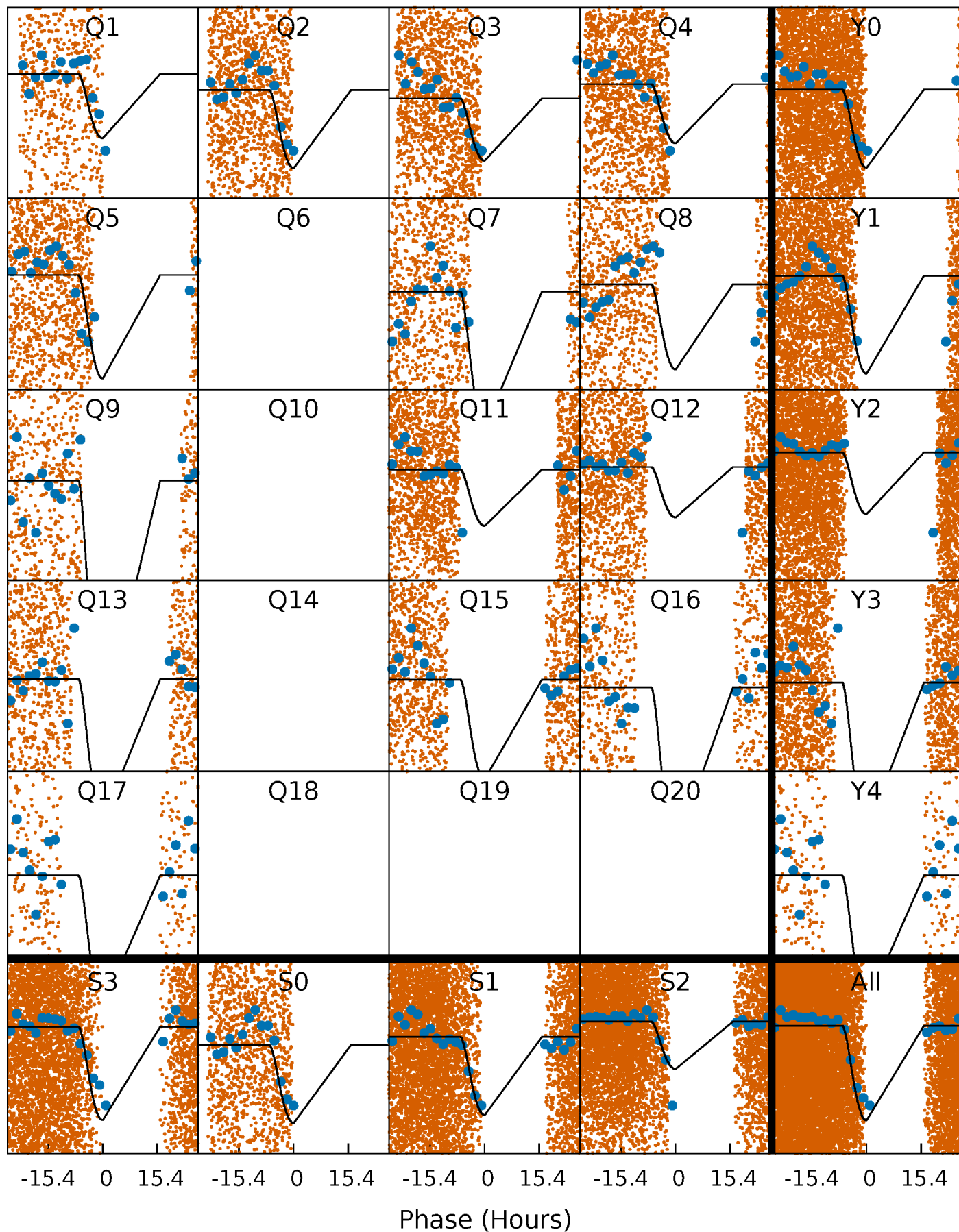
PDC Quarter-Phased Transit Curves

TCE 003457192-02 P= 2.139993 Days $T_0=132.758106$ (BKJD)



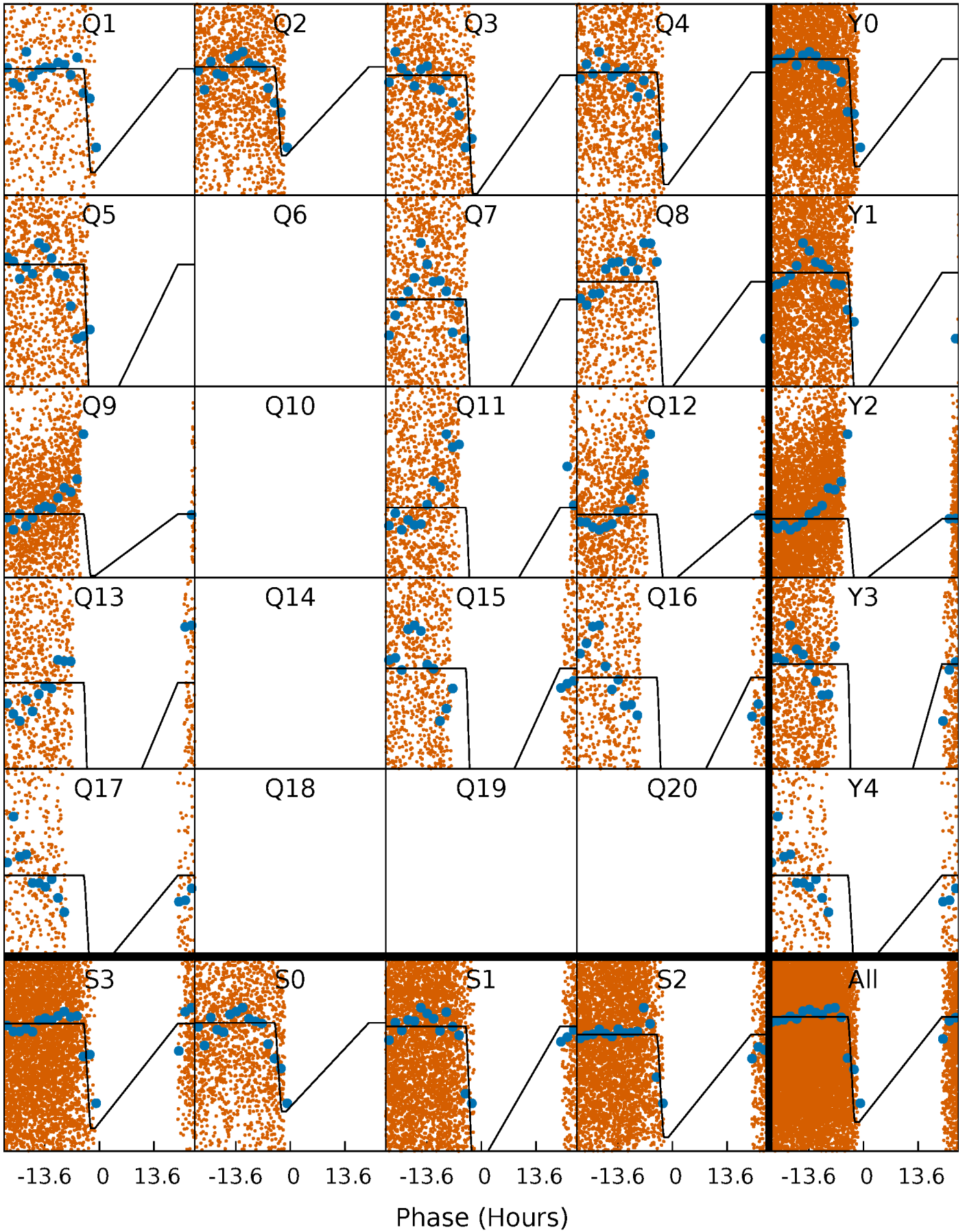
DV Quarter-Phased Transit Curves

TCE 003457192-02 P= 2.139993 Days $T_0=132.758106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

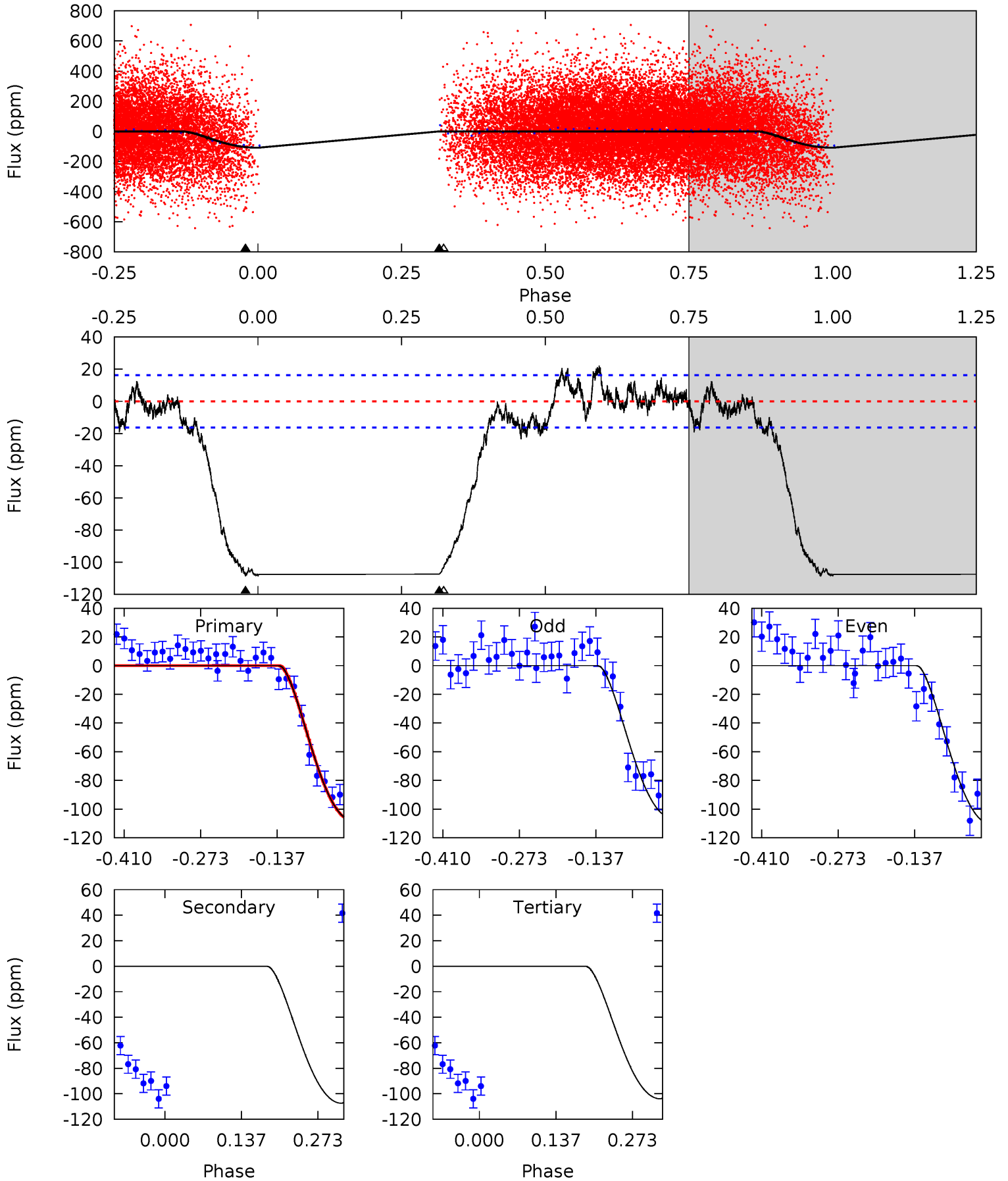
TCE 003457192-02 P= 2.139712 Days $T_0=132.806653$ (BKJD)



DV Model-Shift Uniqueness Test

003457192-02, P = 2.139993 Days, E = 130.618113 Days

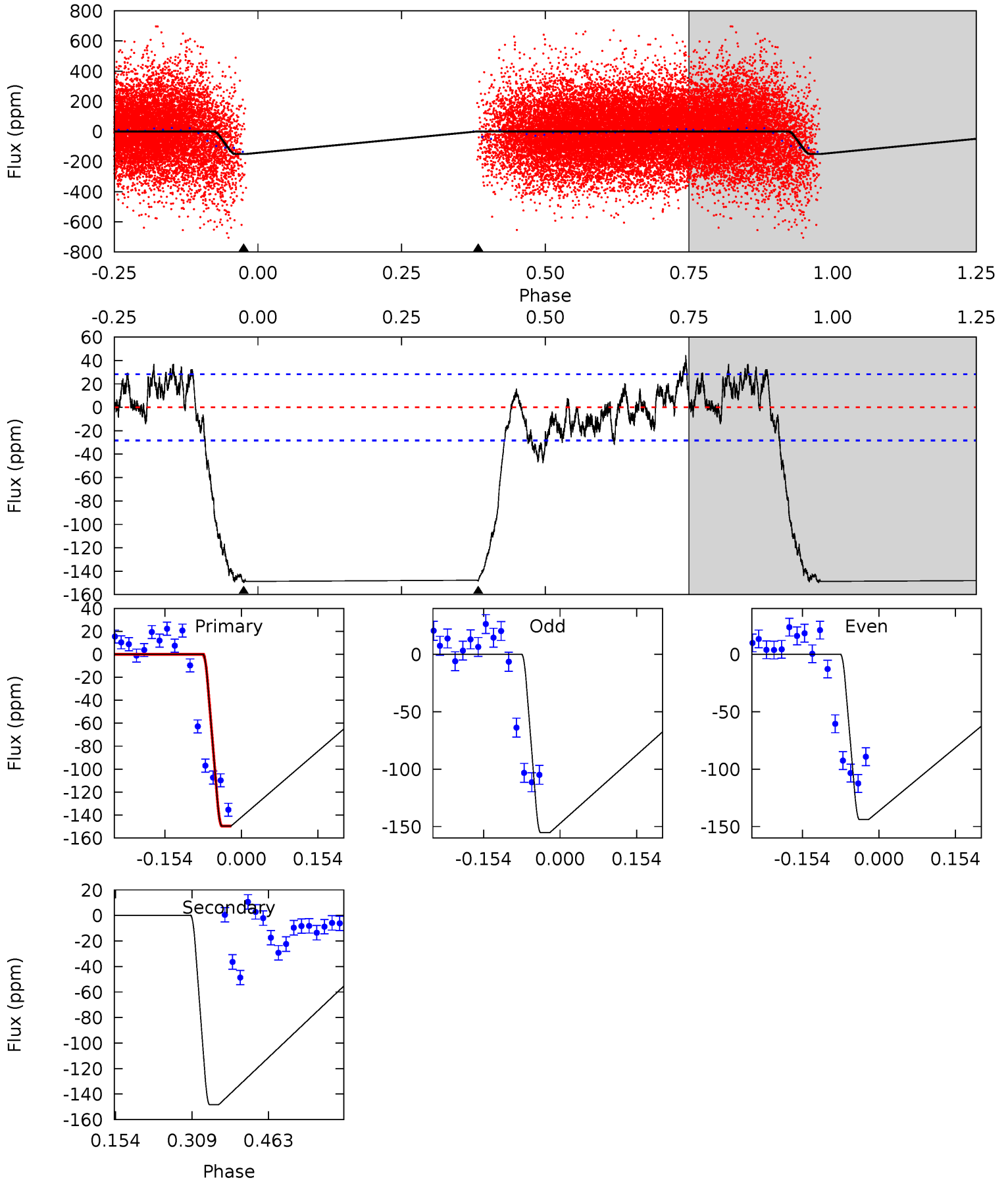
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	29.7	28.8	0	4.50	1.49	5.21	1.22	30.0	0.96	29.7	0.61	0.91	0.17	0.04



Alt Model-Shift Uniqueness Test

003457192-02, P = 2.139712 Days, E = 130.666941 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	23.4	0	0	4.47	1.42	2.22	23.6	23.6	23.4	23.4	0.90	0	0.23	0



Stellar Parameters For KIC 003457192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6818^{+189}_{-283}	$4.186^{+0.128}_{-0.192}$	$-0.060^{+0.250}_{-0.350}$	$1.563^{+0.475}_{-0.317}$	$1.372^{+0.204}_{-0.224}$	$0.507^{+0.326}_{-0.250}$
	+3%/-4%	+3%/-5%	+417%/-583%	+30%/-20%	+15%/-16%	+64%/-49%
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 003457192-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-107 ± 4	$2.58^{+1.46}_{-1.28}$	2785^{+207}_{-177}	5616^{+2599}_{-989}	11^{+34}_{-7}
Alt.	-148 ± 6	$2.49^{+1.45}_{-1.29}$	2770^{+217}_{-164}	6200^{+3665}_{-1199}	17^{+58}_{-10}

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 $A_{obs} \gg 1.0$

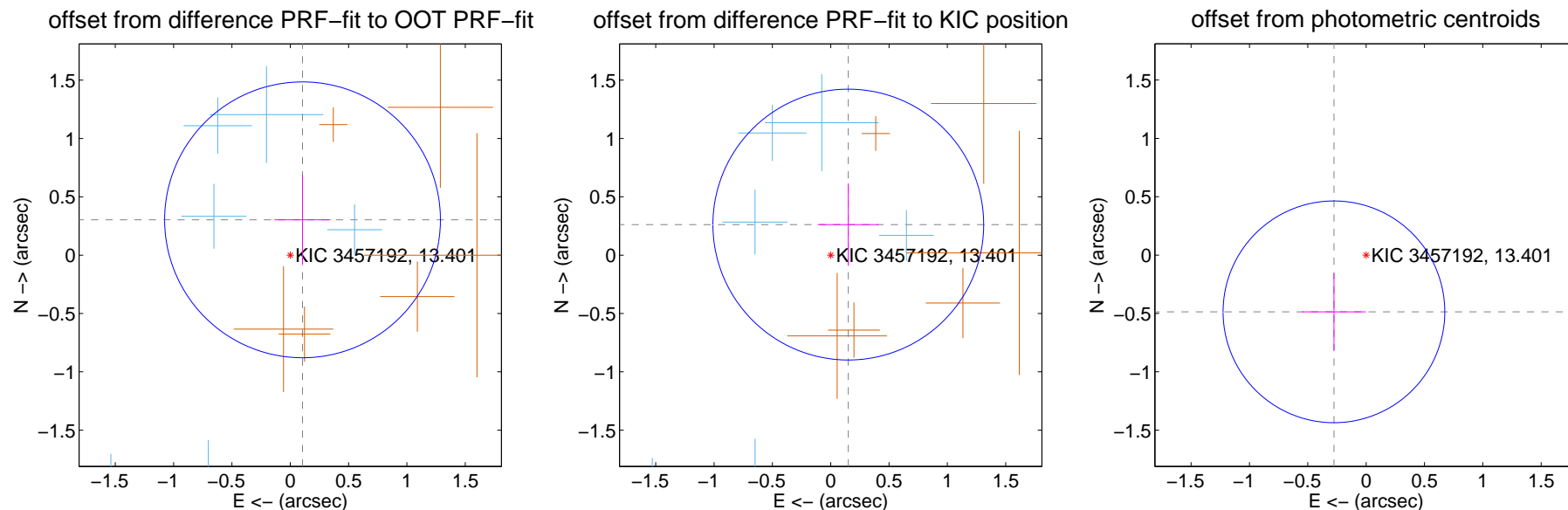
DV Centroid Data

Supplemental centroid analysis for 003457192-02. Kepler magnitude: 13.40. Transit SNR 12.24

There are 7 quarters with good PRF difference image offsets

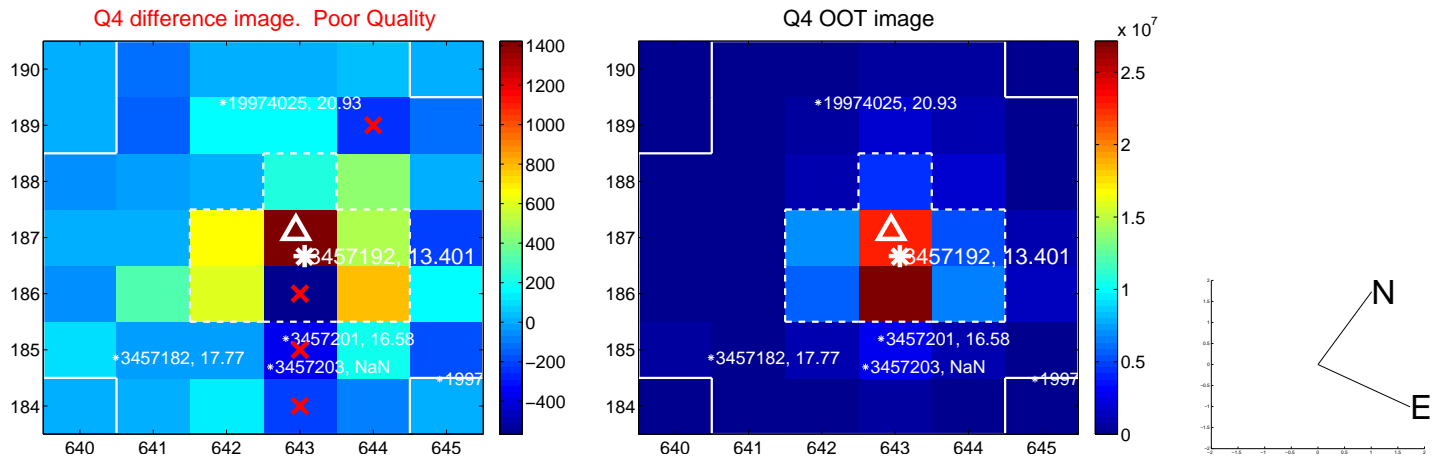
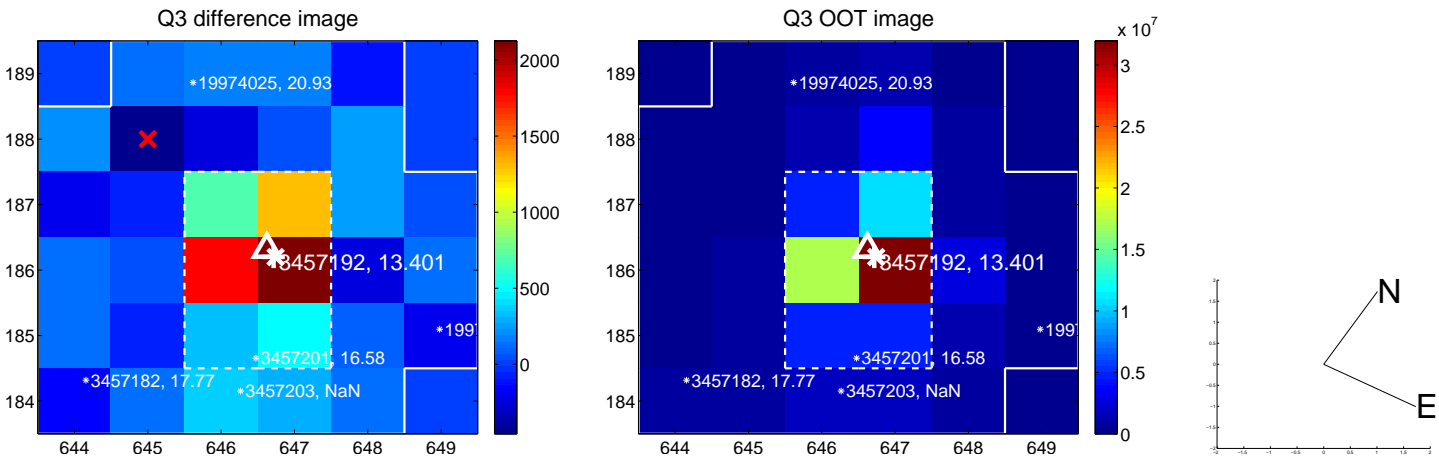
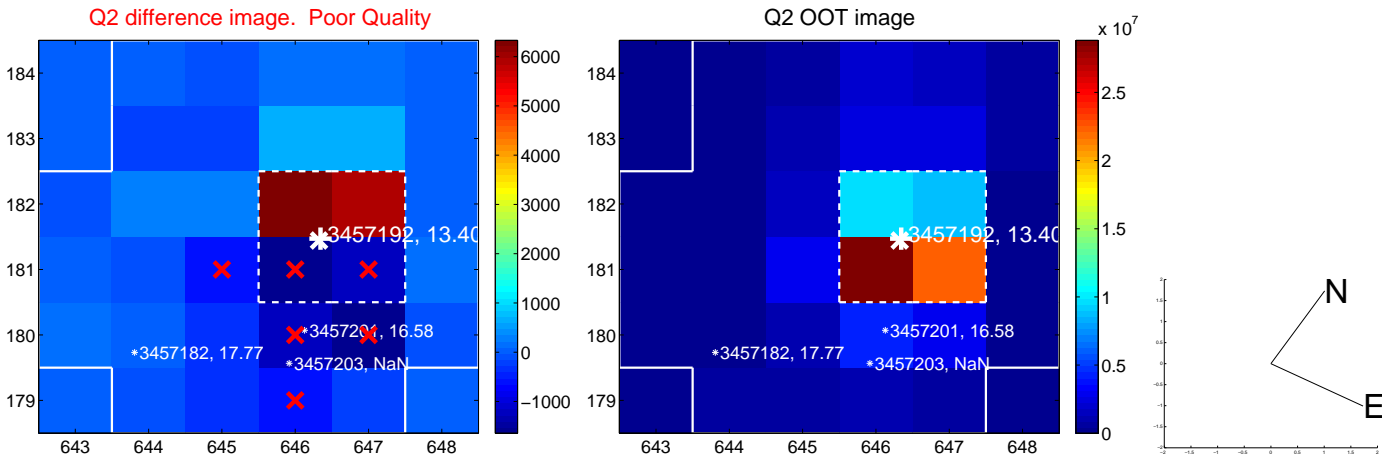
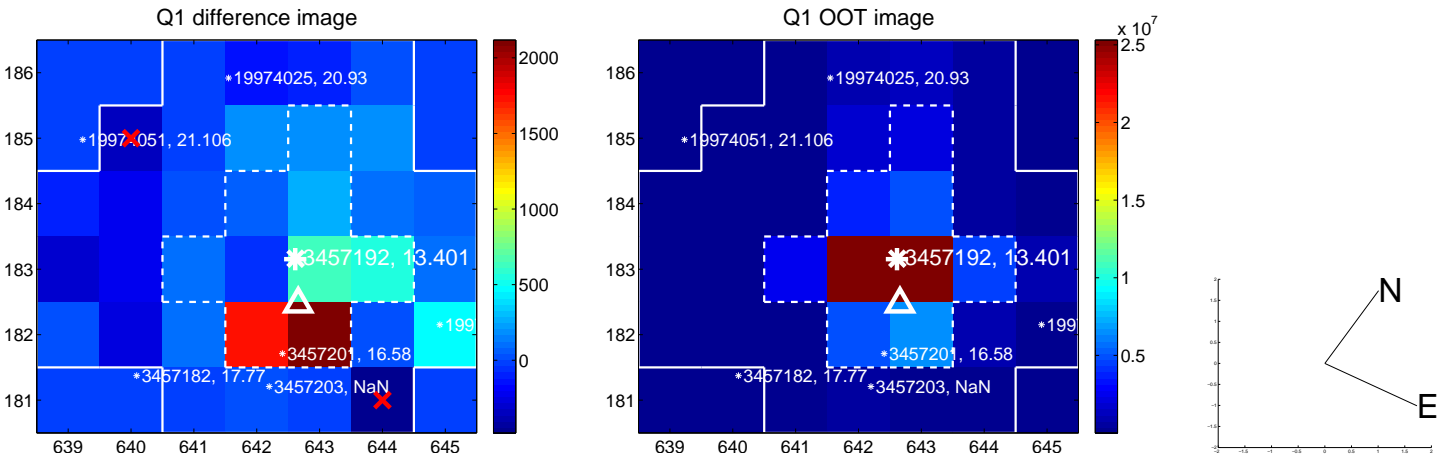
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.320 ± 0.394	0.81	-0.105 ± 0.241	0.303 ± 0.385
PRF-fit source offset from KIC position	0.302 ± 0.387	0.78	-0.151 ± 0.261	0.262 ± 0.353
photometric centroid source offset	0.56 ± 0.32	1.77	0.28 ± 0.27	-0.49 ± 0.33

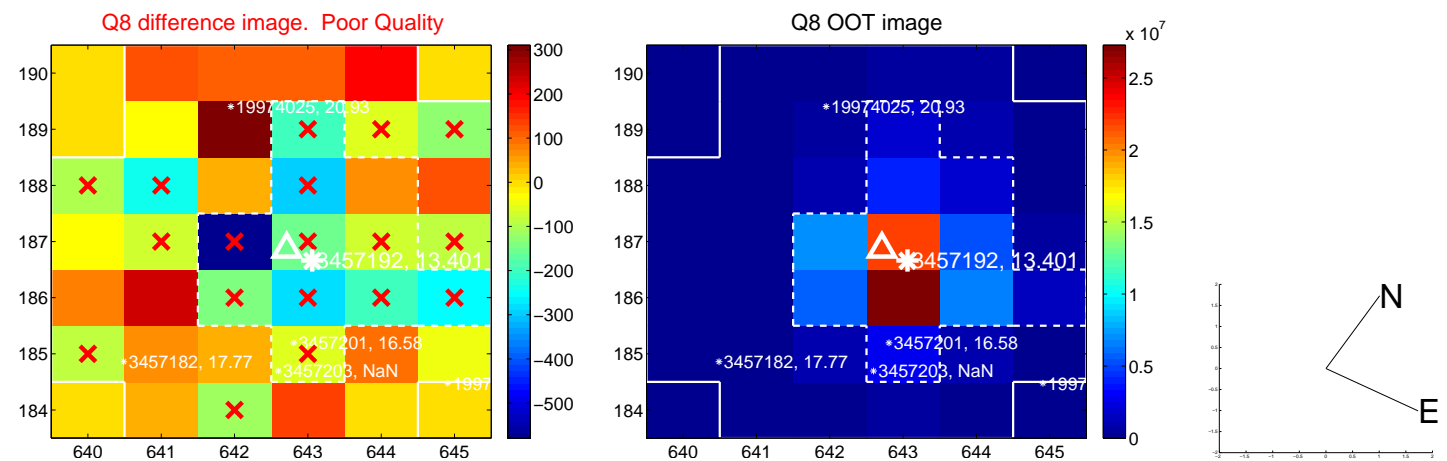
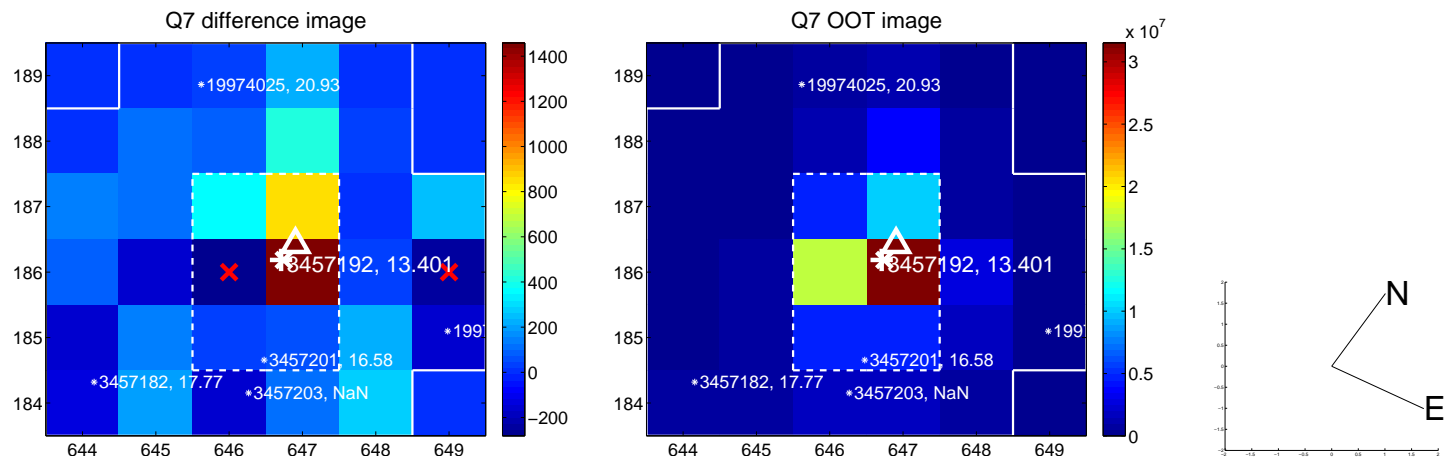
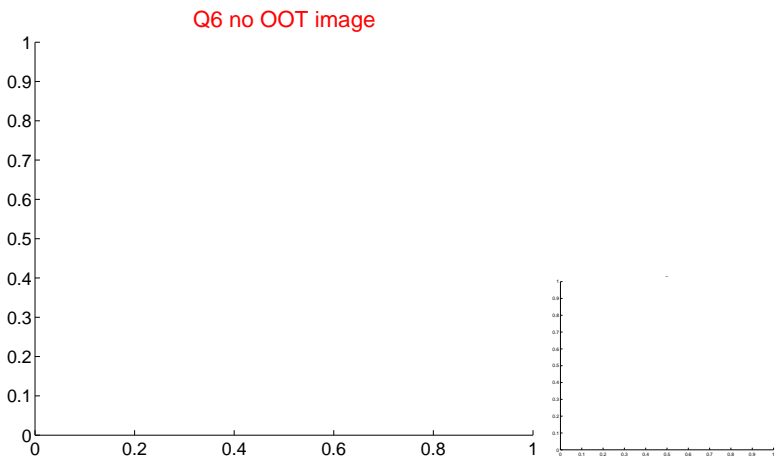
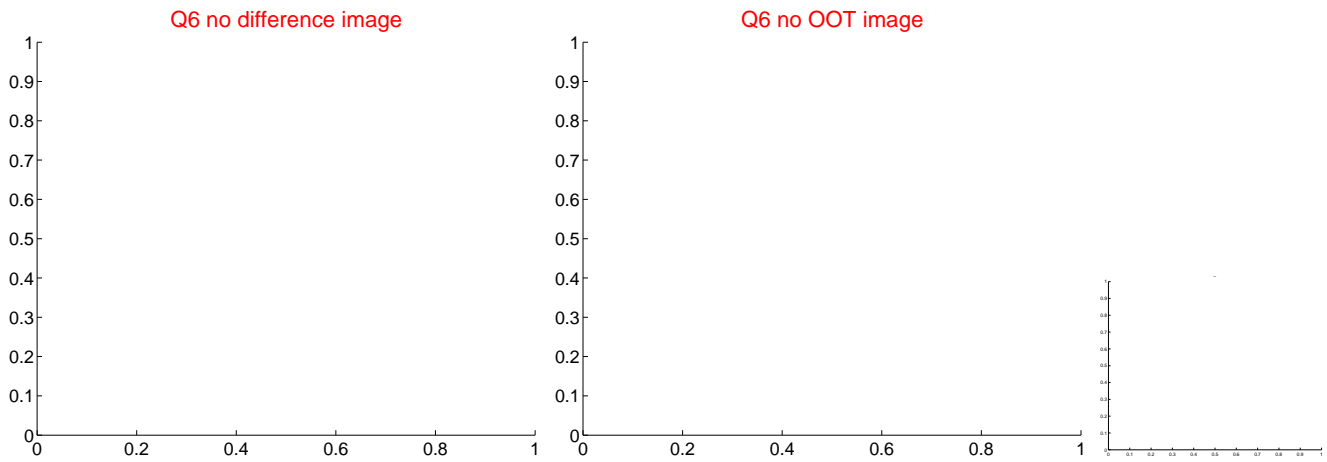
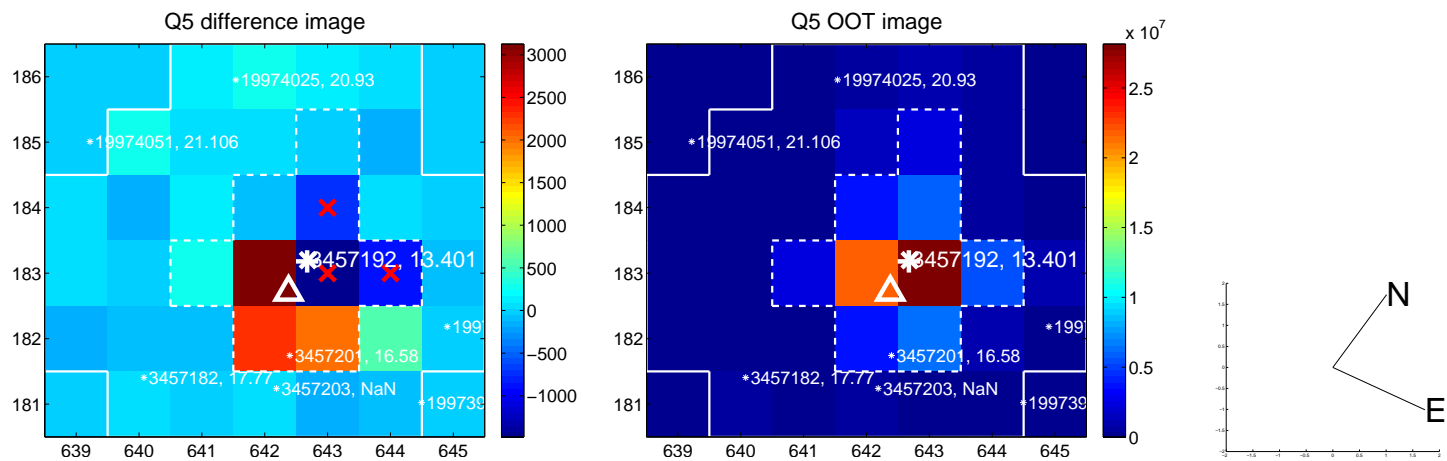


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

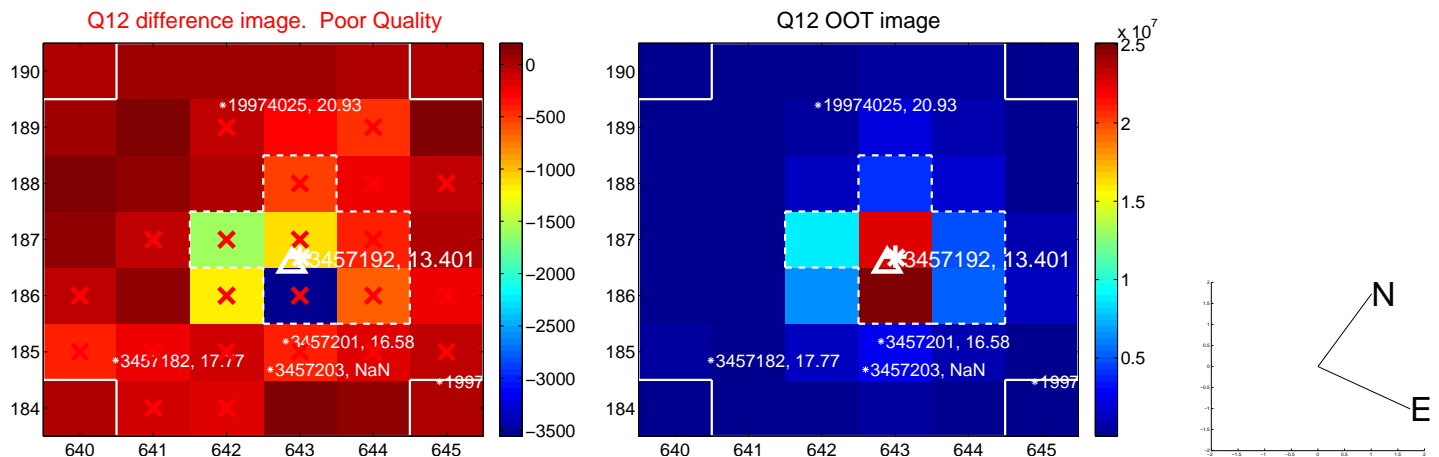
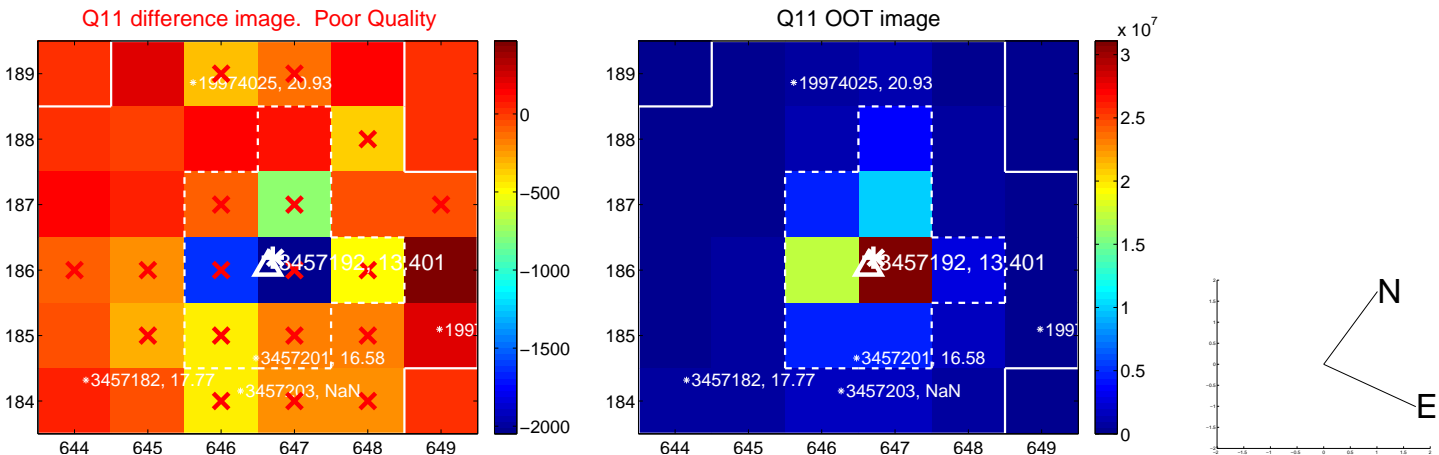
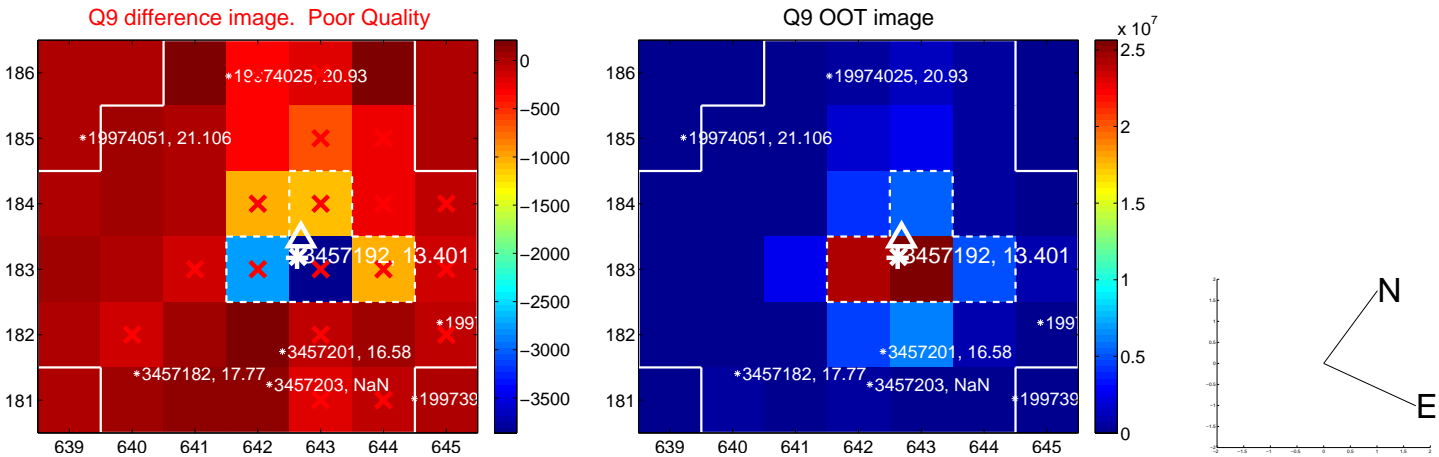
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



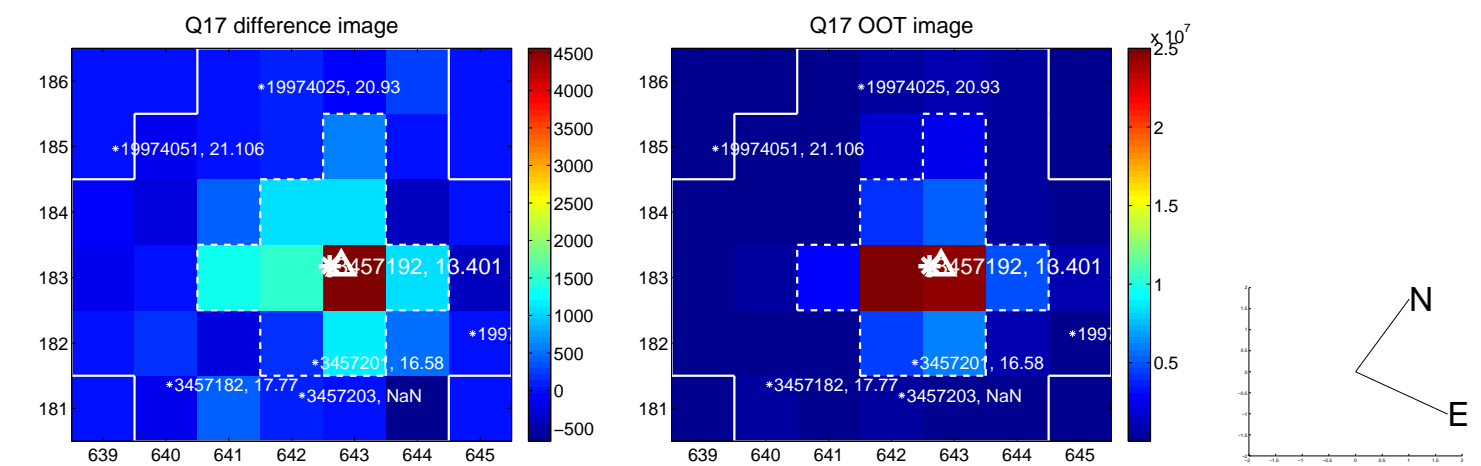
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



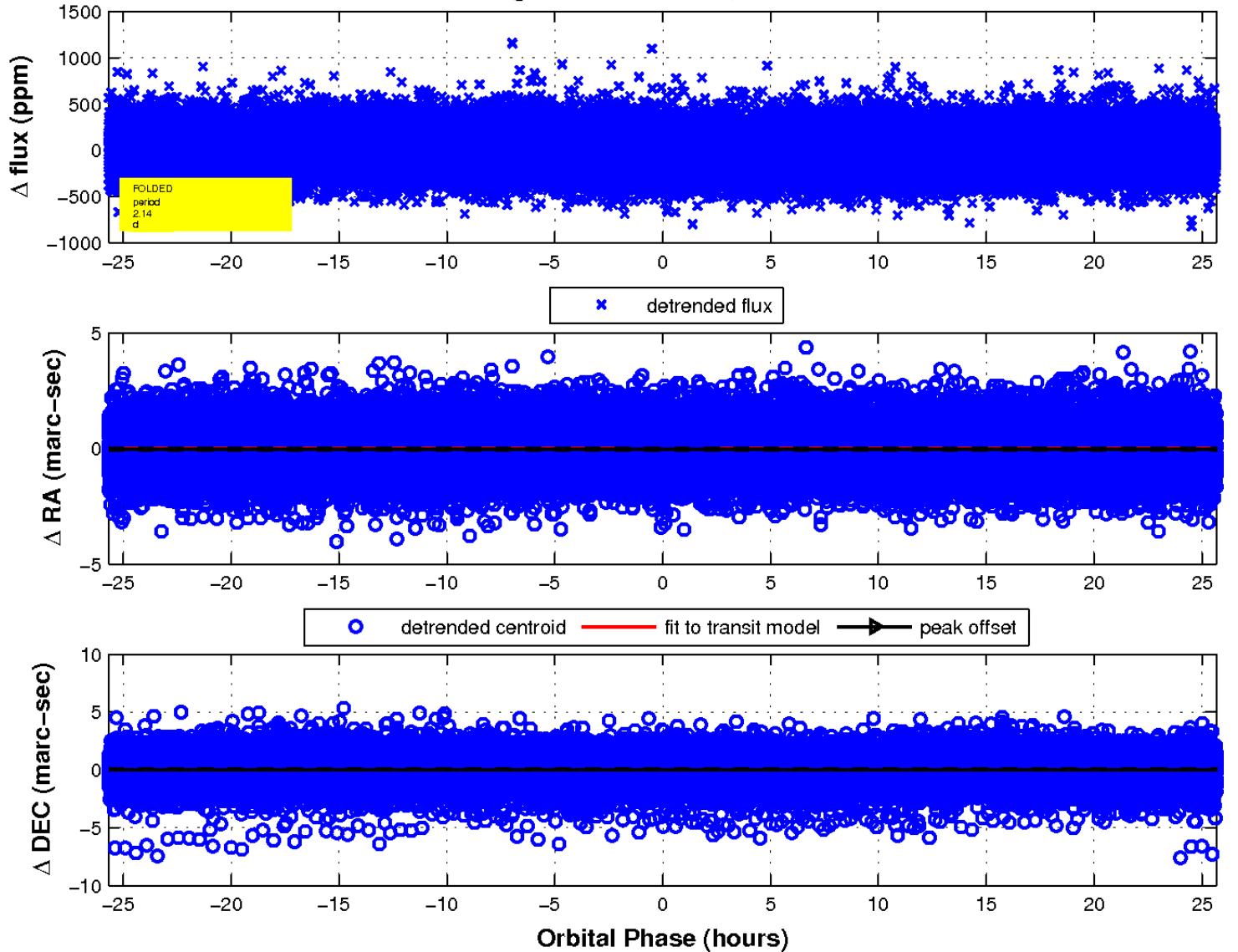
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

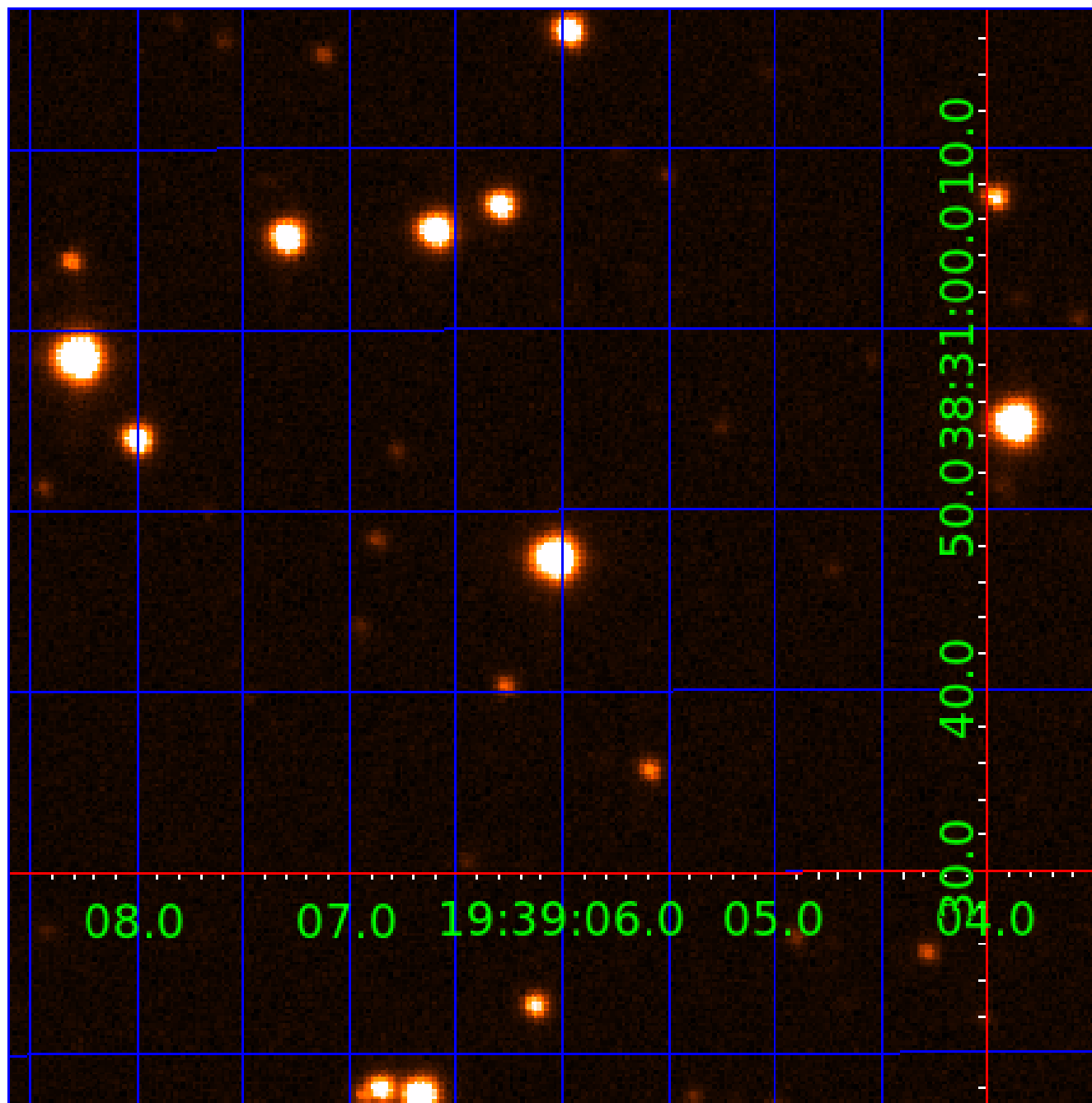


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 003457192

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})
003457192-01	OBS	No	2.139256	133.346241	28.0	9.133	9.1	8.9	1.56	6818	0.86	3634.78
003457192-02	OBS	No	2.139993	132.758106	121.2	13.454	11.6	12.2	1.56	6818	2.55	3633.11
003457192-03	OBS	No	68.249375	175.845276	250.7	11.911	12.8	9.2	1.56	6818	2.67	35.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003457192-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
003457192-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—SAME_NTL_PERIOD
003457192-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

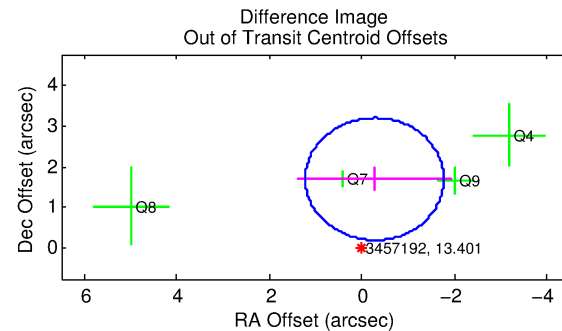
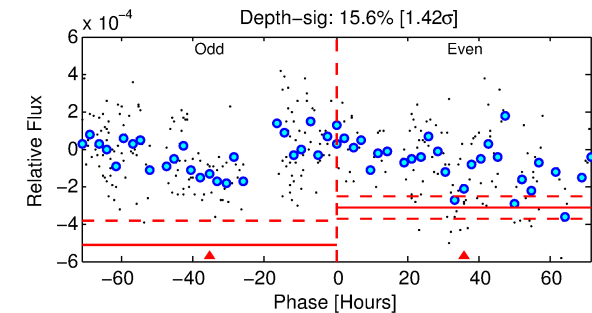
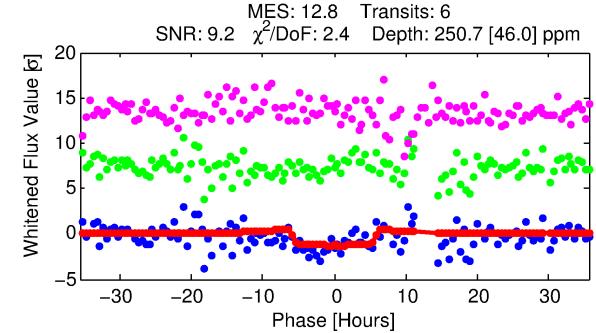
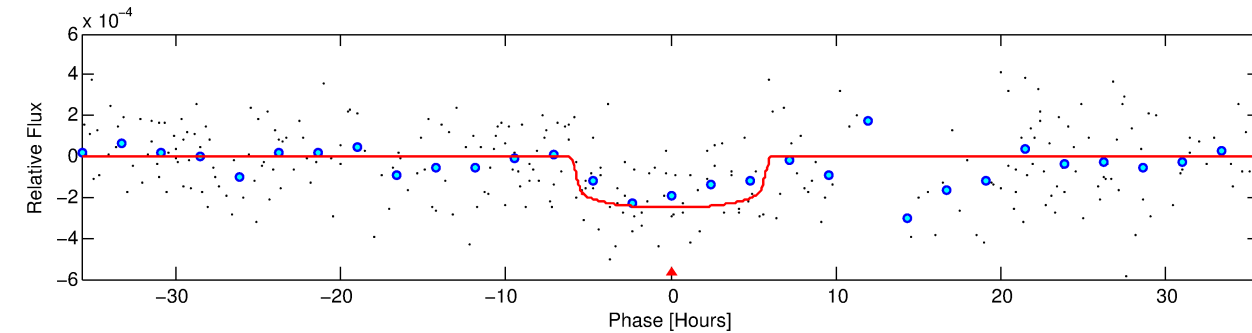
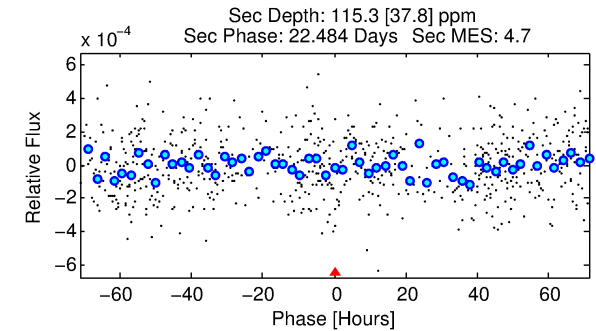
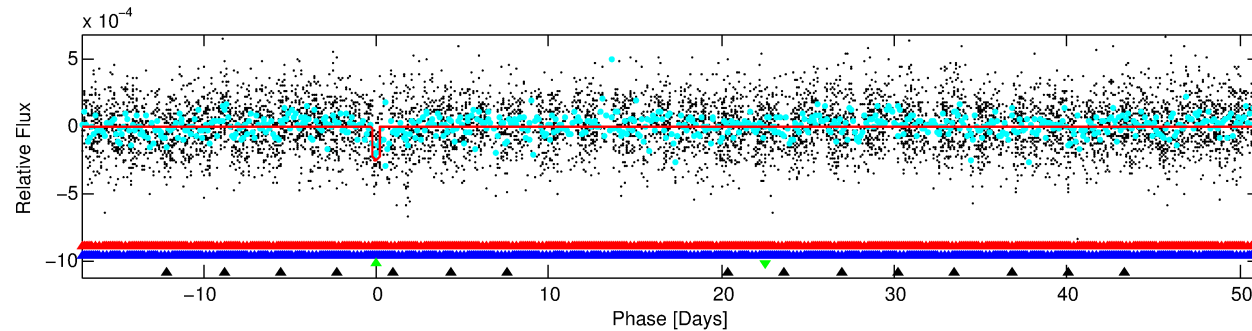
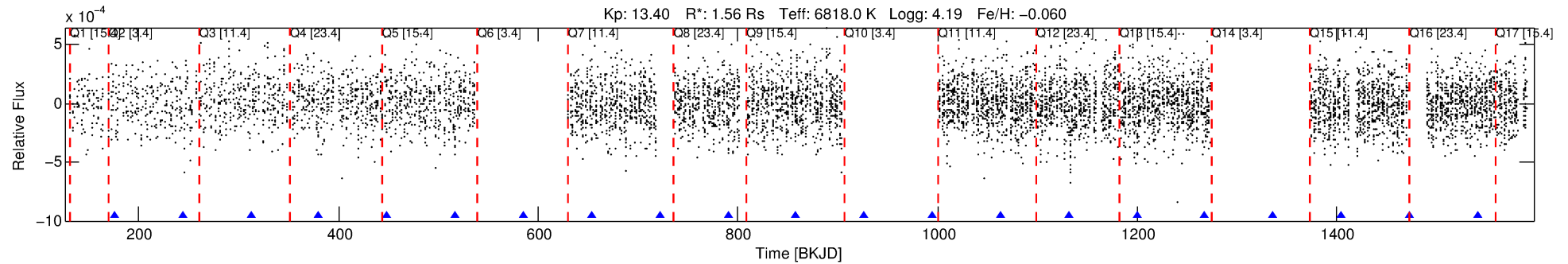
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003457192-03

No Significant Match Found

DV One-Page Summary

KIC: 3457192 Candidate: 3 of 4 Period: 68.249 d



DV Fit Results:

Period = 68.24937 [0.00239] d
Epoch = 175.8453 [0.0292] BKJD
Rp/R* = 0.0157 [0.0086]
a/R* = 30.82 [94.50]
b = 0.73 [1.96]
Seff = 35.92 [14.16]
Teff = 624 [62] K
Rp = 2.67 [1.67] Re
a = 0.3629 [0.0909] AU
Ag = 1169.64 [1401.26] [0.83σ]
Teffp = 5644 [1630] K [3.08σ]

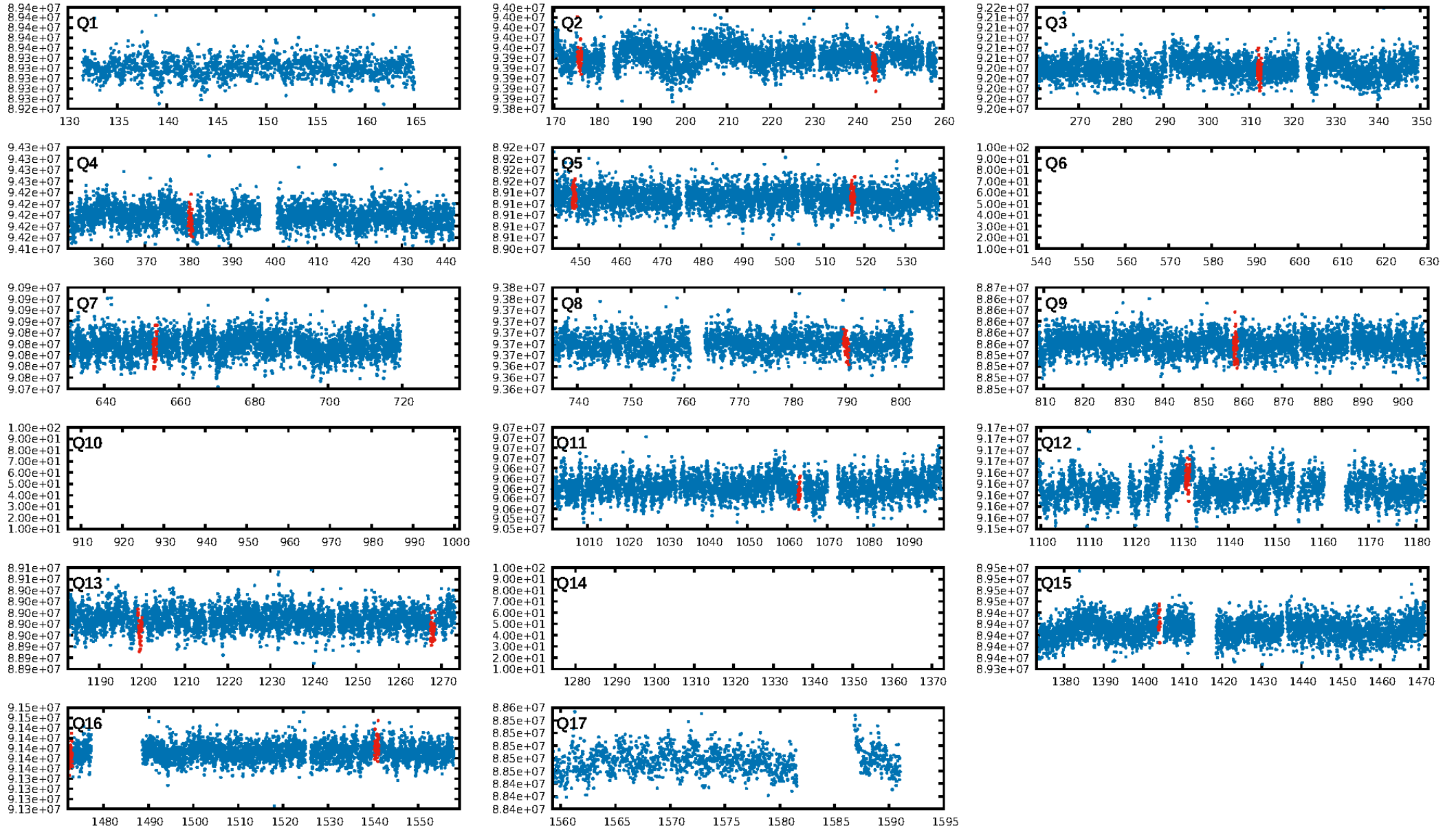
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [88.30σ]
LongPeriod-sig: 100.0% [64.55σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -7.1
Centroid-sig: 85.4%
Centroid-so: 0.440 arcsec [0.54σ]
OotOffset-rm: 1.718 arcsec [3.44σ]
KicOffset-rm: 1.623 arcsec [4.10σ]
OotOffset-st: 0/1/2/1 [4]
KicOffset-st: 0/1/2/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/9]

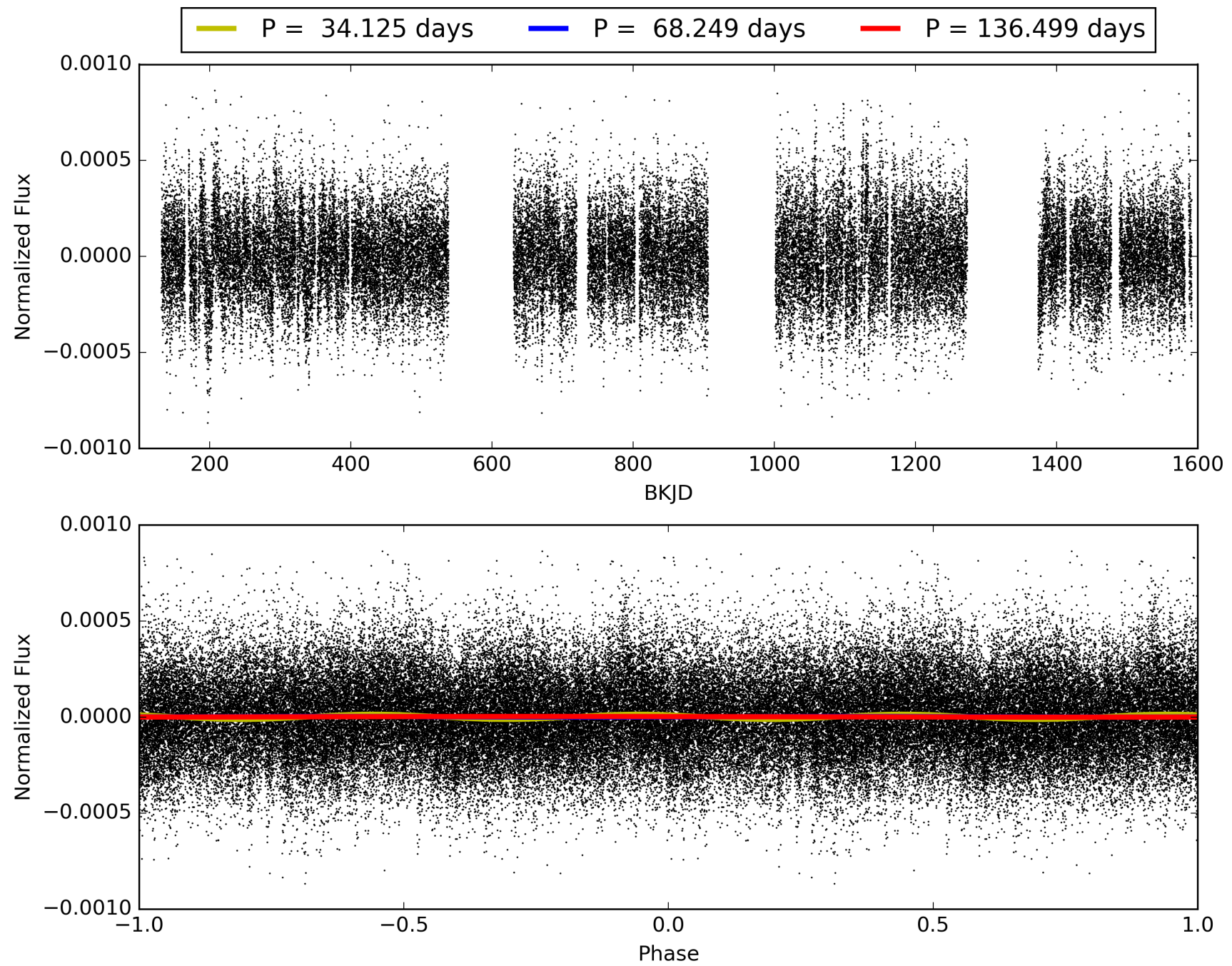
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:11:50 Z

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

TCE 003457192-03, PDC Light Curves

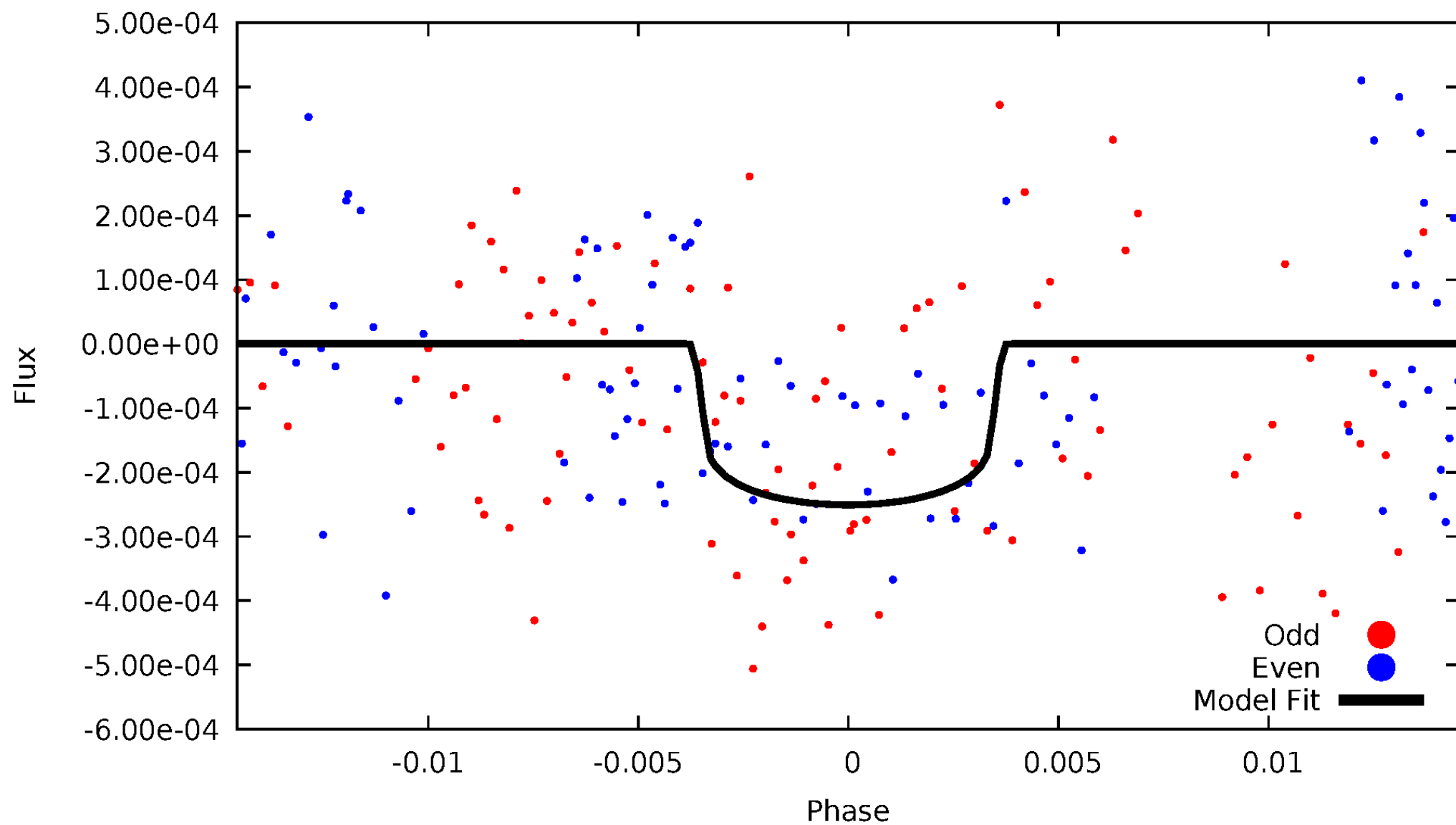


TCE 003457192-03



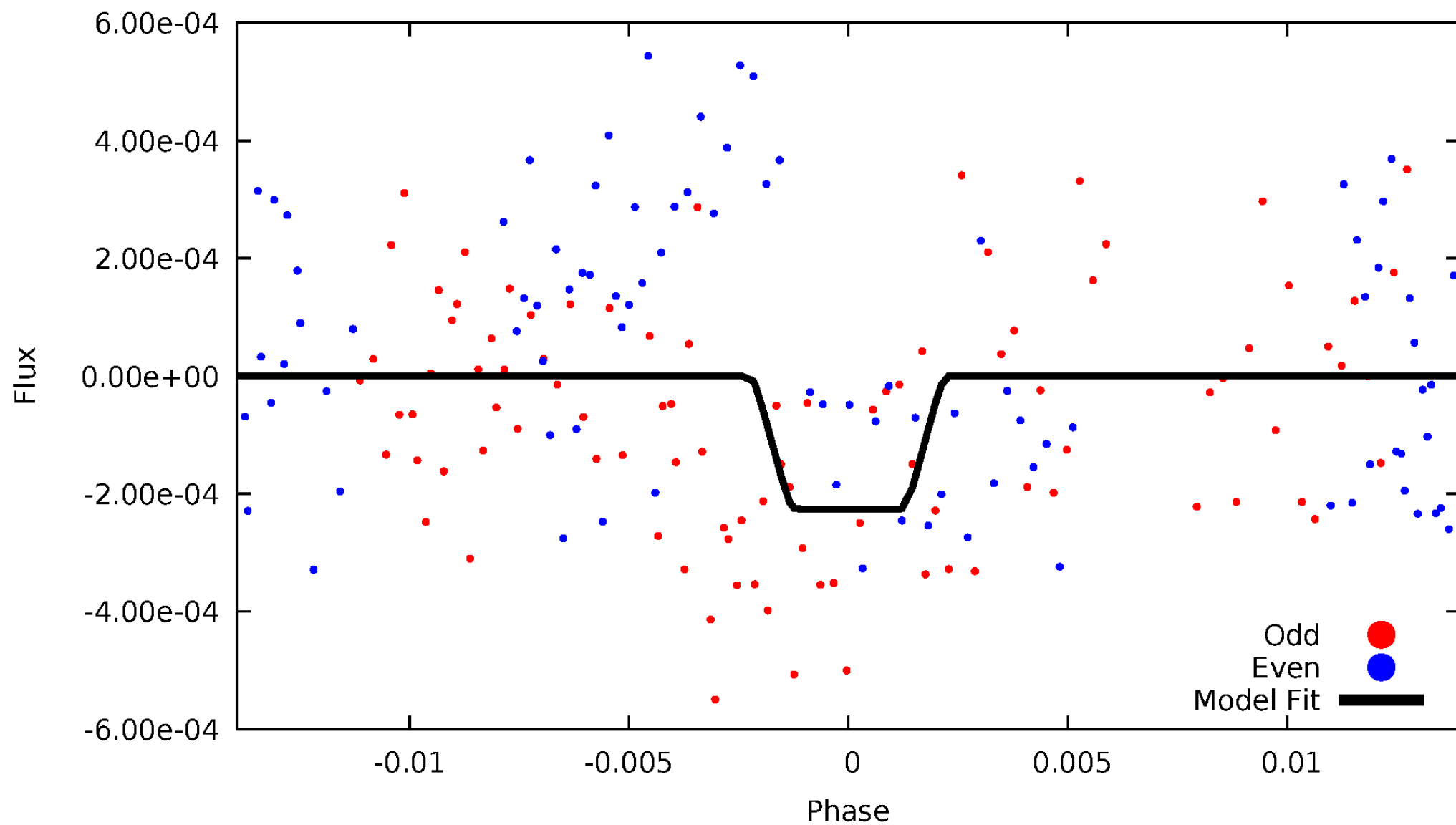
DV Odd/Even

TCE 003457192-03

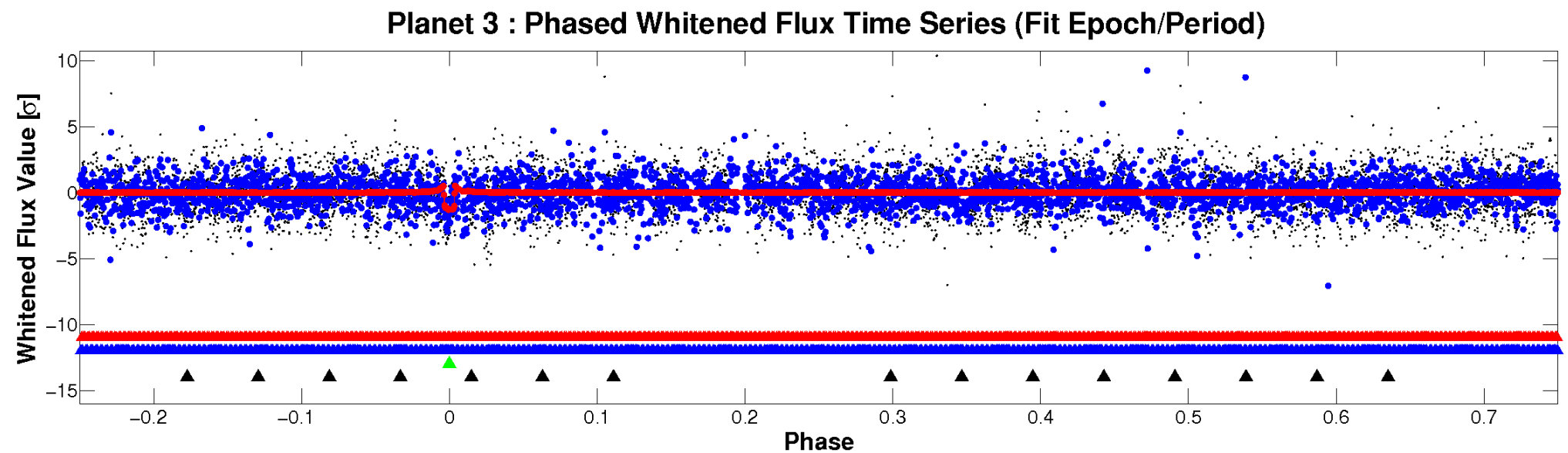
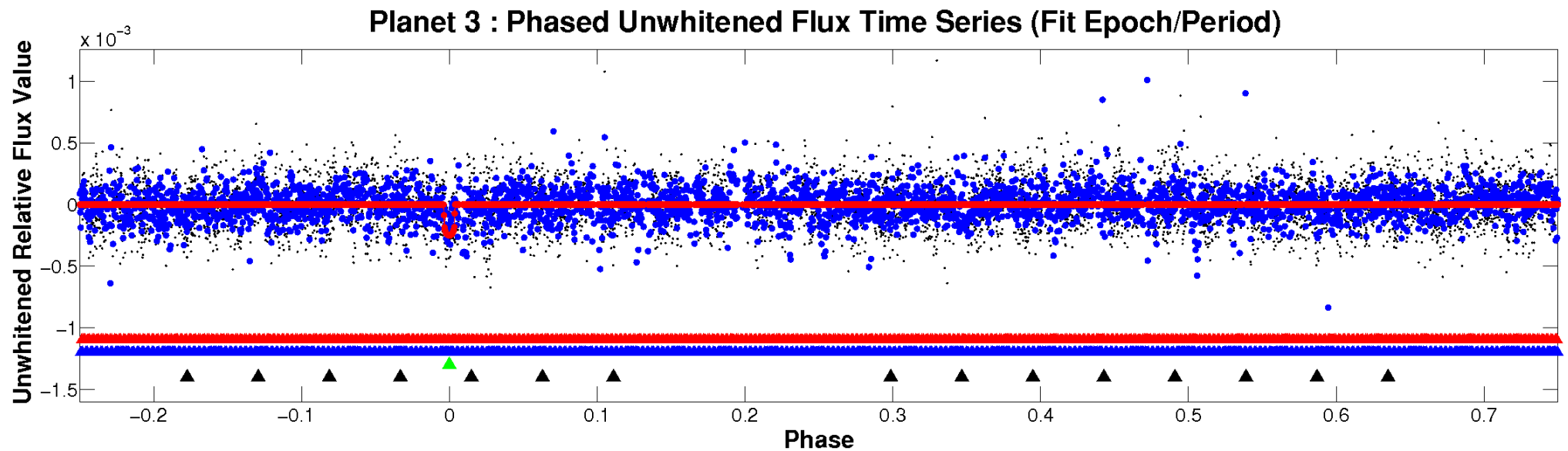


ALT Odd/Even

TCE 003457192-03



Non-Whitened Vs. Whitened Light Curve



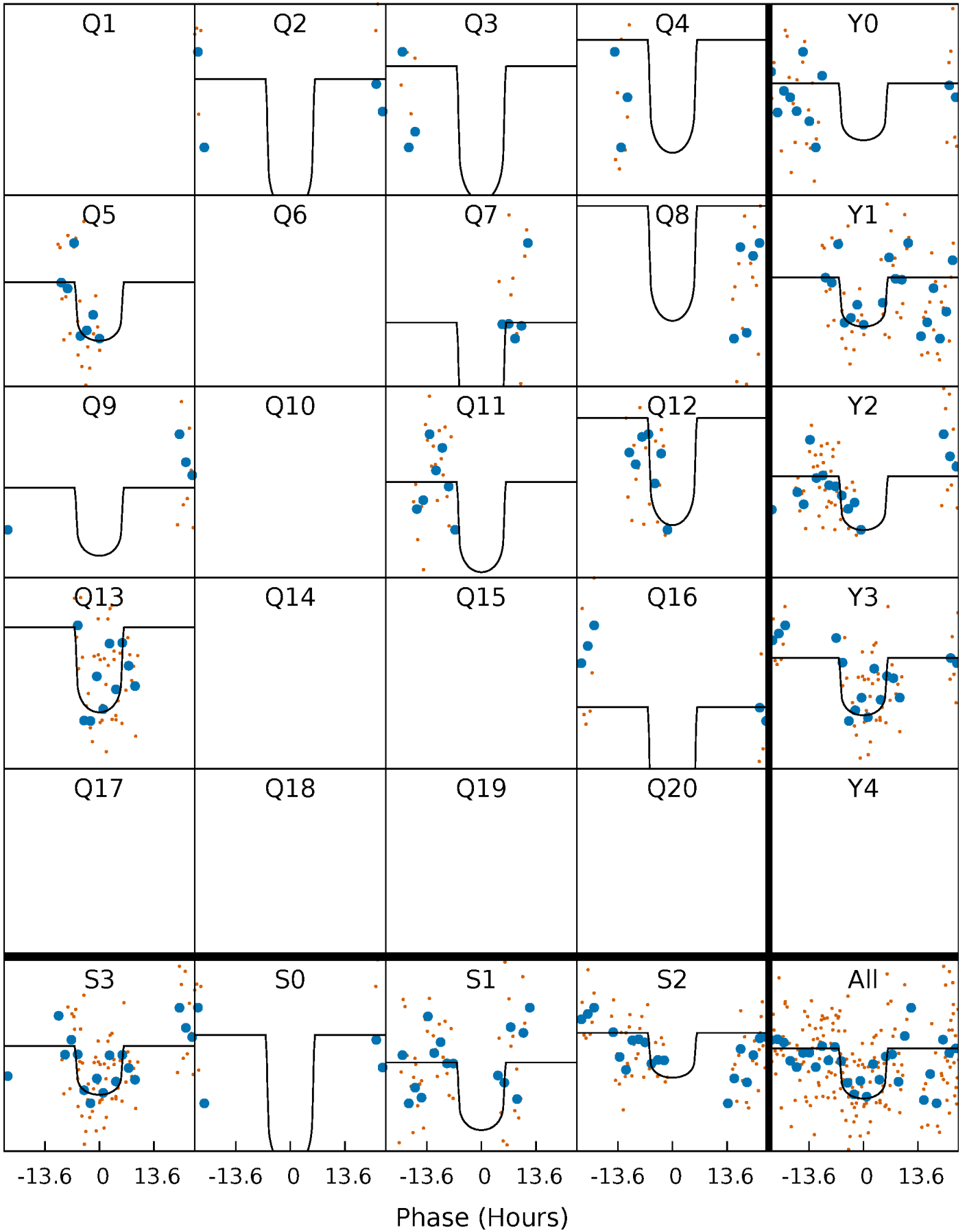
PDC Quarter-Phased Transit Curves

TCE 003457192-03 P= 68.249375 Days $T_0=175.845276$ (BKJD)



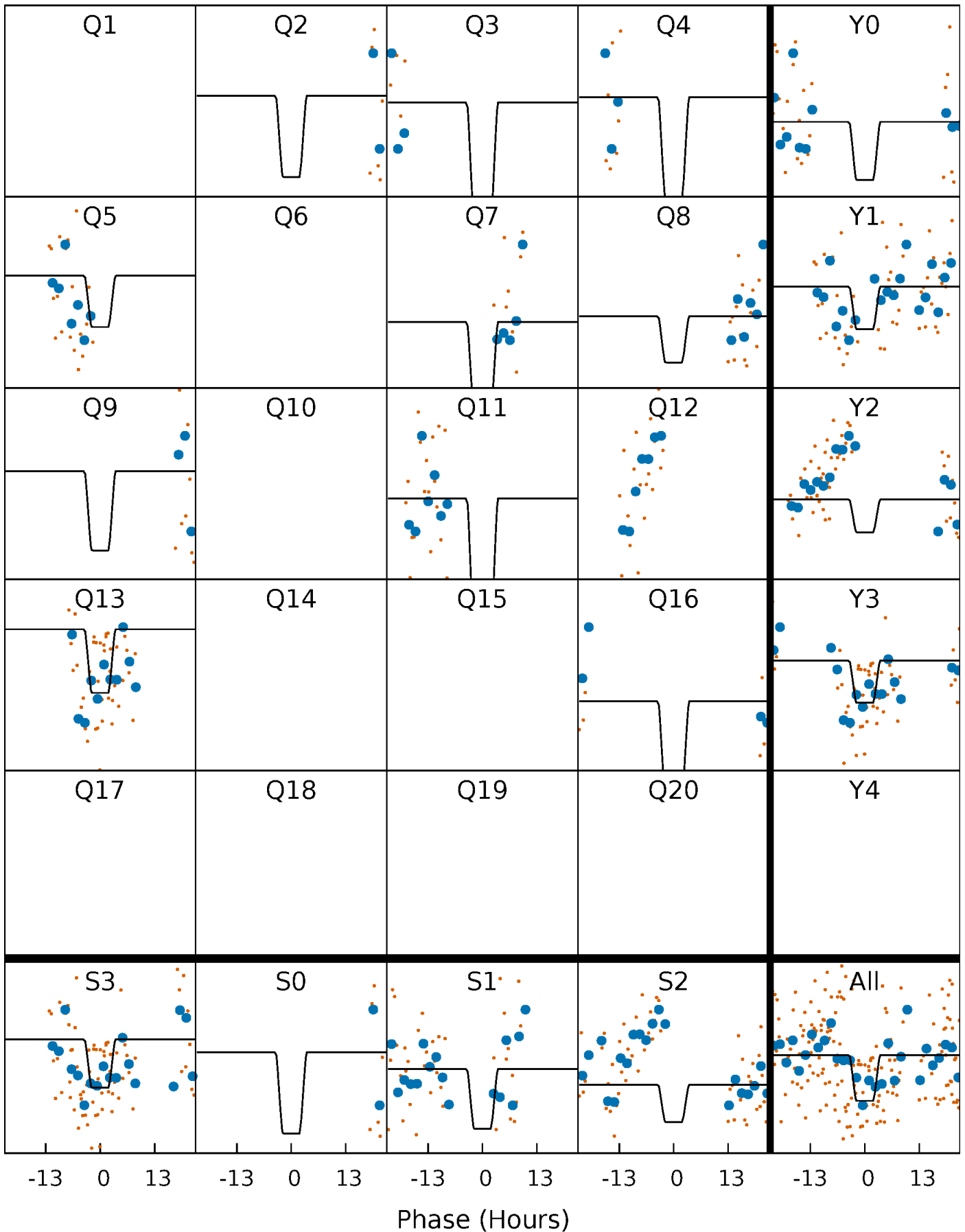
DV Quarter-Phased Transit Curves

TCE 003457192-03 P= 68.249375 Days $T_0=175.845276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

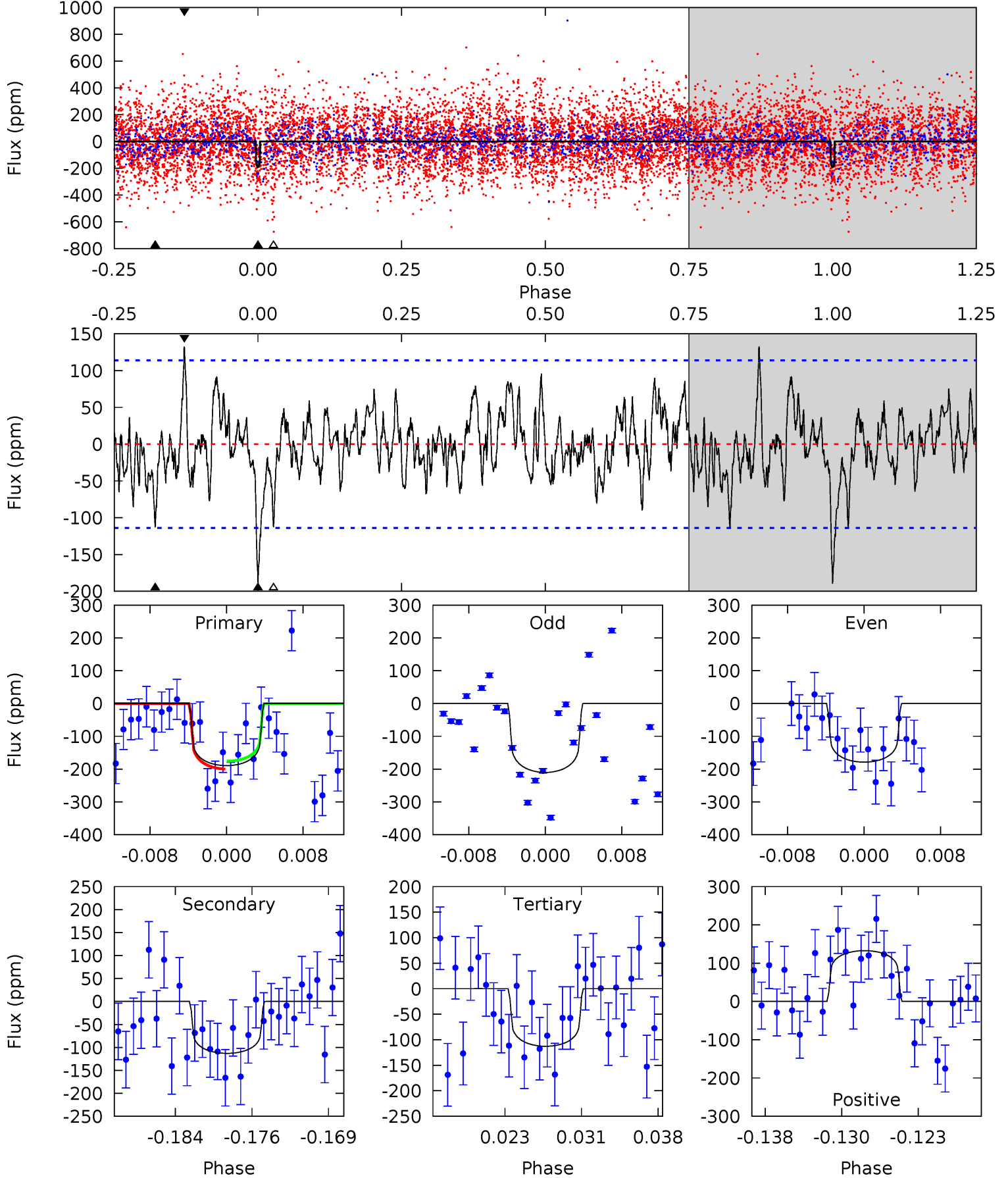
TCE 003457192-03 $P = 68.247204$ Days $T_0 = 175.930095$ (BKJD)



DV Model-Shift Uniqueness Test

003457192-03, P = 68.249375 Days, E = 107.595901 Days

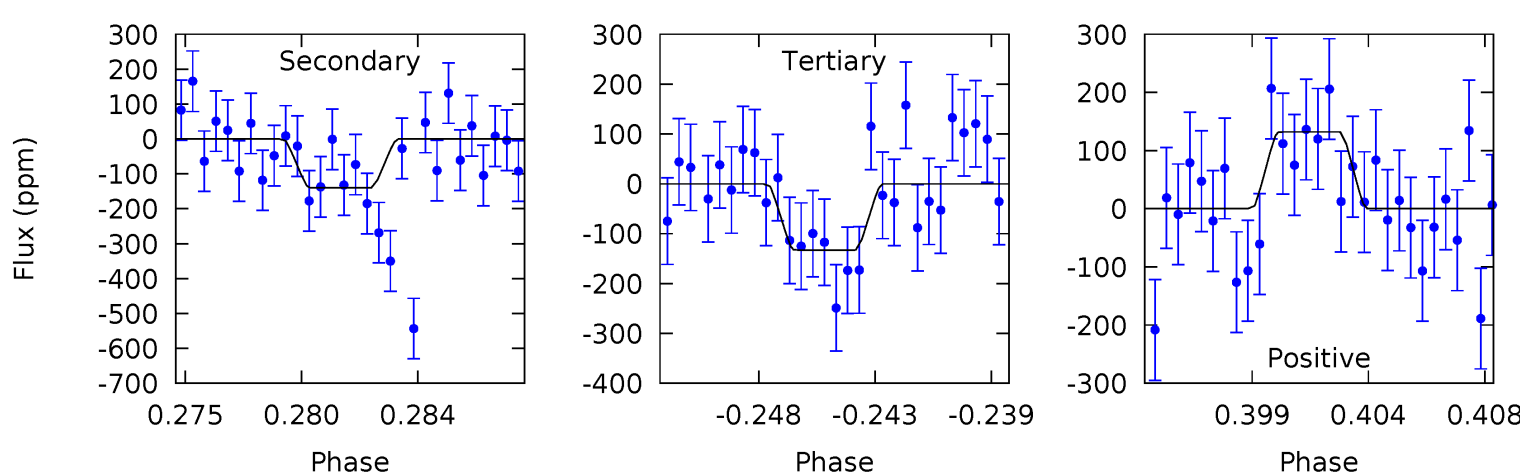
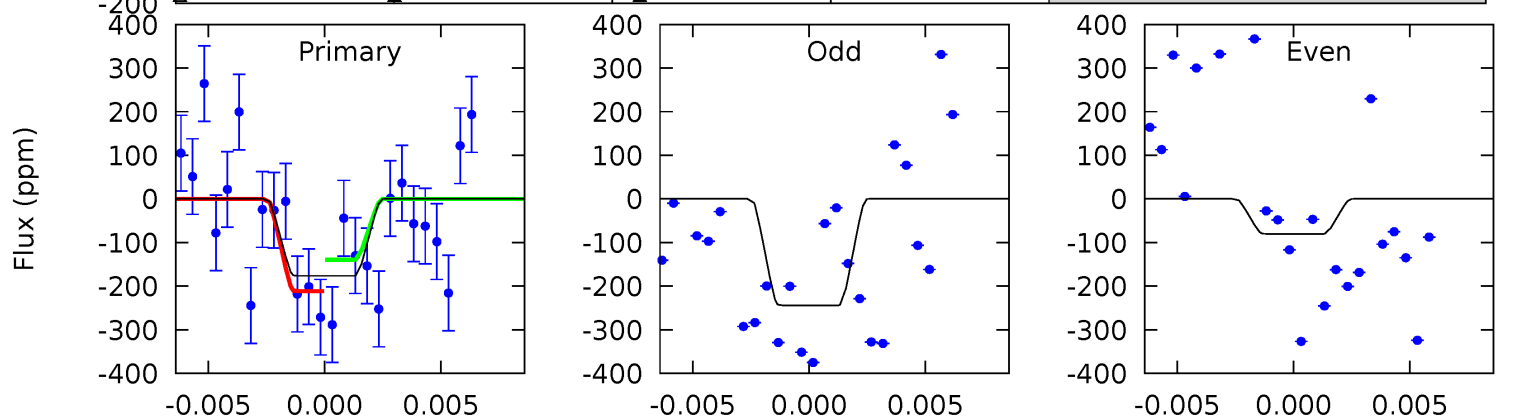
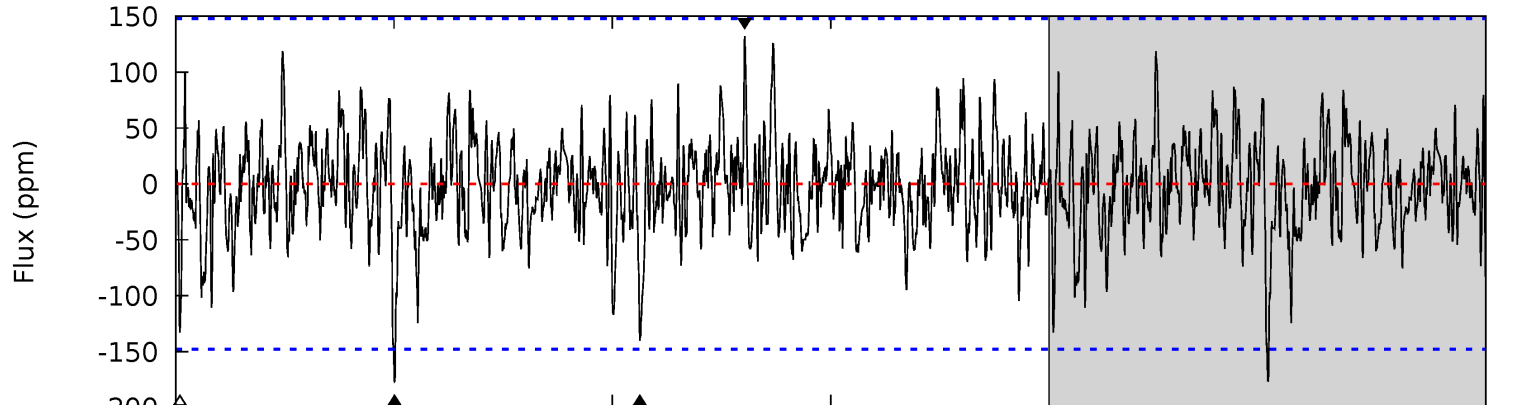
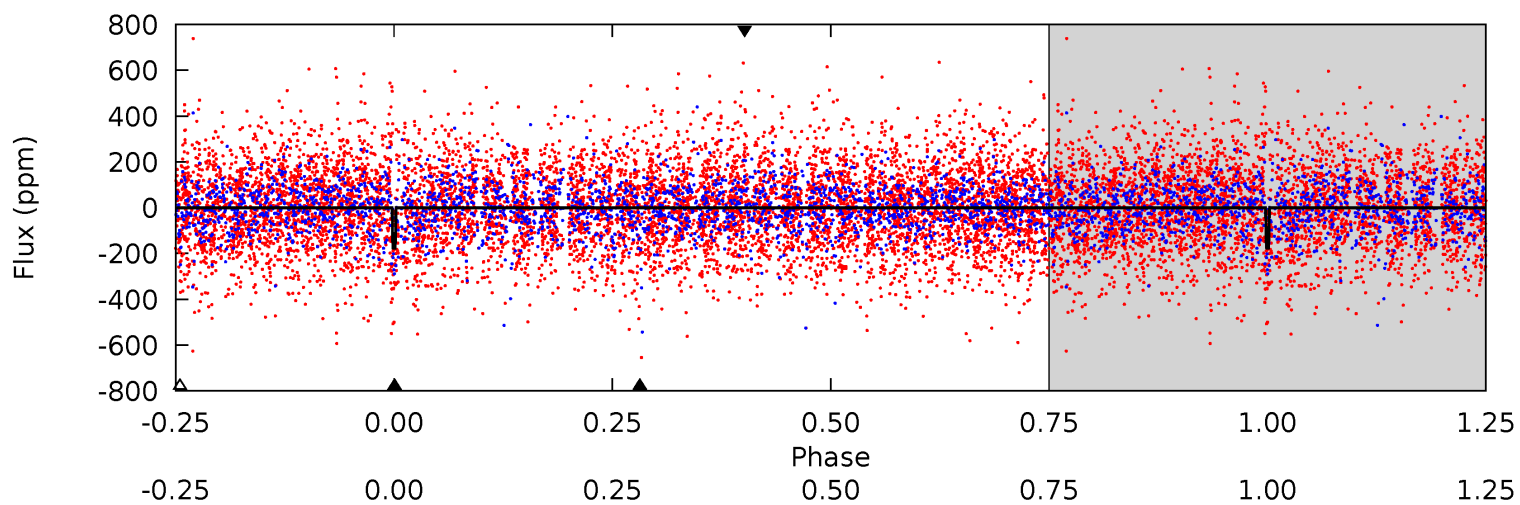
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	5.04	5.03	5.92	5.08	2.67	1.62	3.42	2.53	0.01	-0.88	0.69	0.98	0.41	0.53



Alt Model-Shift Uniqueness Test

003457192-03, P = 68.247204 Days, E = 107.682891 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.18	4.90	4.65	4.63	5.17	2.83	1.27	1.53	1.55	0.25	0.28	2.85	0.08	0.43	1.26



Stellar Parameters For KIC 003457192

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6818^{+189}_{-283}	$4.186^{+0.128}_{-0.192}$	$-0.060^{+0.250}_{-0.350}$	$1.563^{+0.475}_{-0.317}$	$1.372^{+0.204}_{-0.224}$	$0.507^{+0.326}_{-0.250}$
	+3%/-4%	+3%/-5%	+417%/-583%	+30%/-20%	+15%/-16%	+64%/-49%
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 003457192-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-113 ± 22	$2.77^{+1.62}_{-1.30}$	878^{+67}_{-56}	5556^{+2163}_{-976}	1049^{+2721}_{-633}
Alt.	-140 ± 29	$2.56^{+1.62}_{-1.32}$	877^{+67}_{-55}	6083^{+3140}_{-1214}	1555^{+4665}_{-985}

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

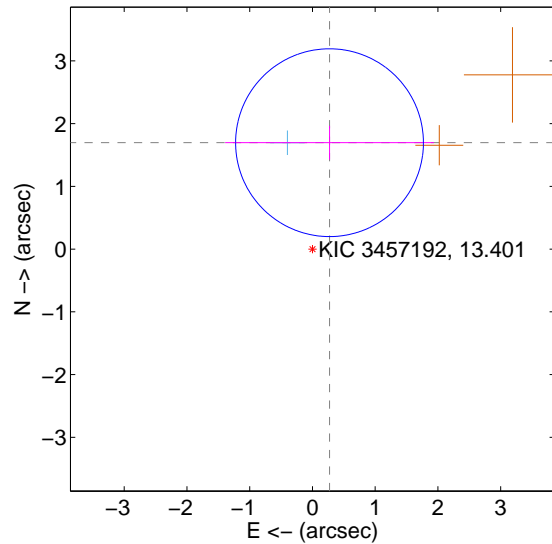
Supplemental centroid analysis for 003457192-03. Kepler magnitude: 13.40. Transit SNR 9.19

There are 1 quarters with good PRF difference image offsets

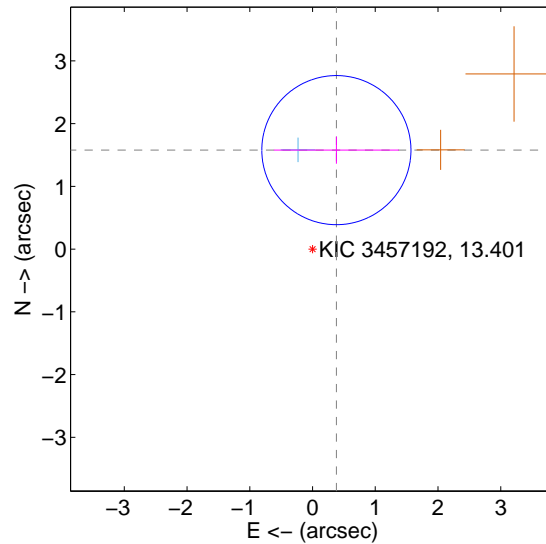
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.718 ± 0.499	3.44	-0.272 ± 1.664	1.696 ± 0.269
PRF-fit source offset from KIC position	1.623 ± 0.396	4.10	-0.380 ± 0.996	1.577 ± 0.216
photometric centroid source offset	0.44 ± 0.81	0.54	-0.08 ± 0.68	-0.43 ± 0.82

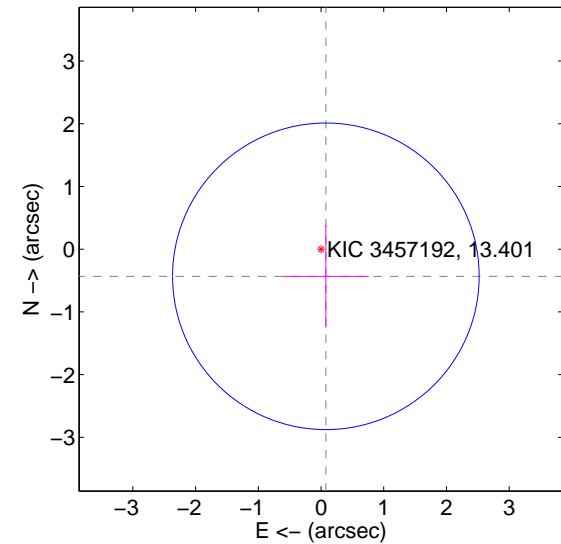
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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

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

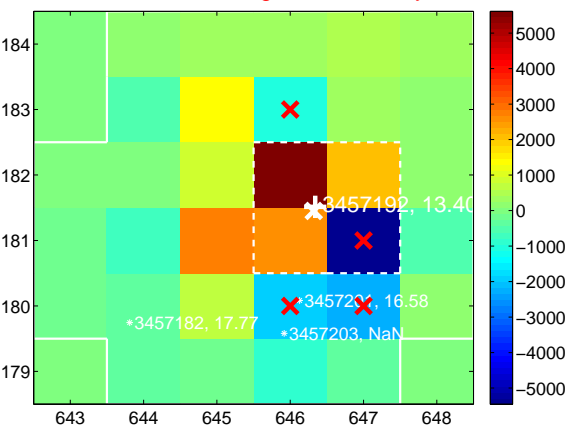
Q1 no difference image



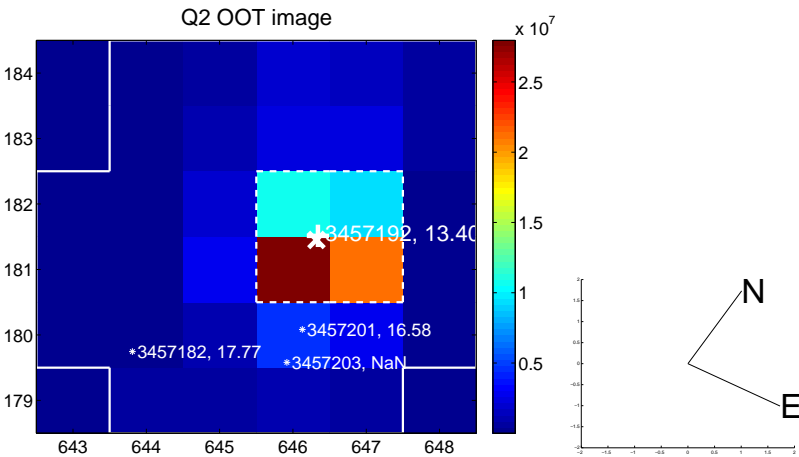
Q1 no OOT image



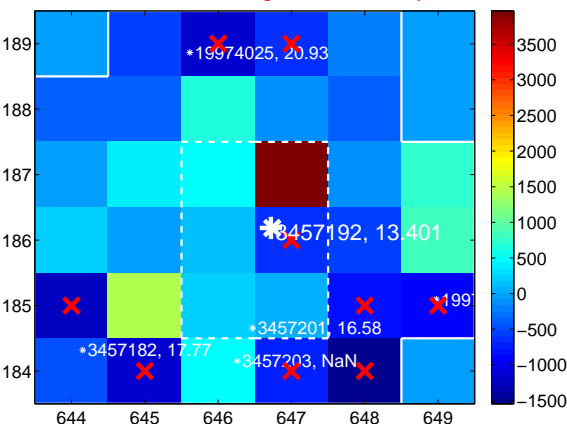
Q2 difference image. Poor Quality



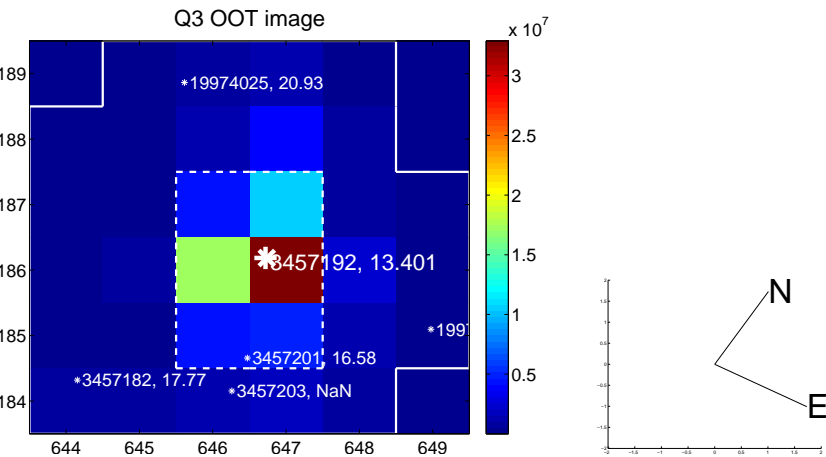
Q2 OOT image



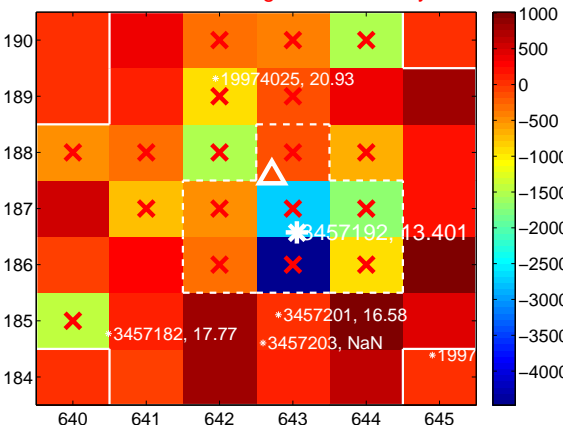
Q3 difference image. Poor Quality



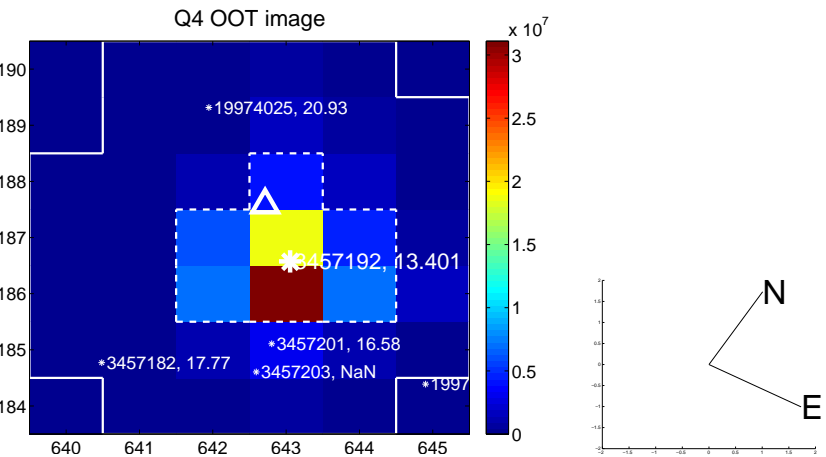
Q3 OOT image



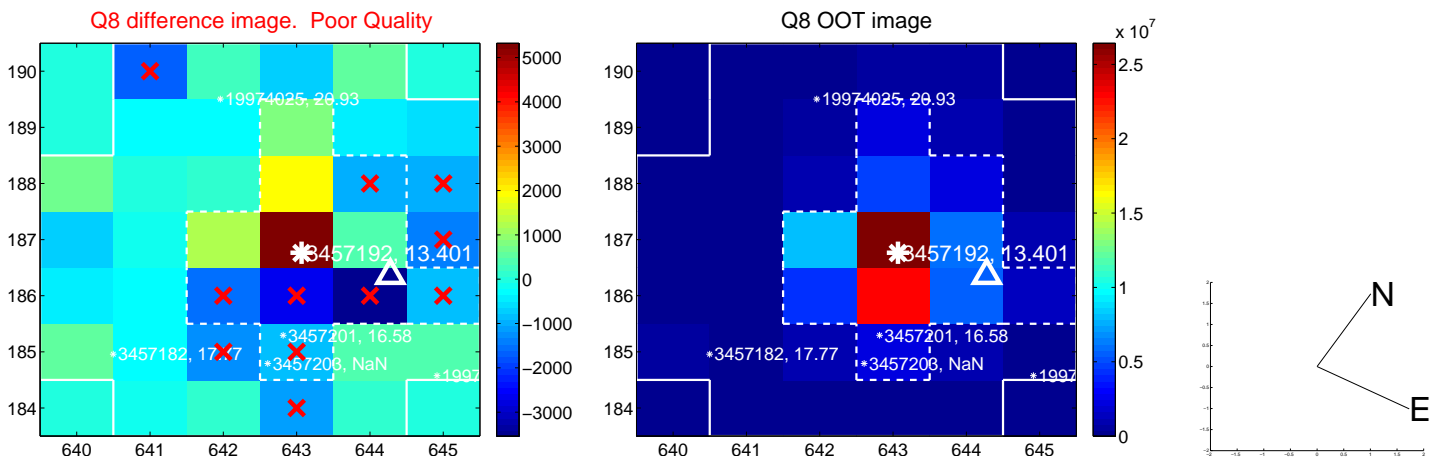
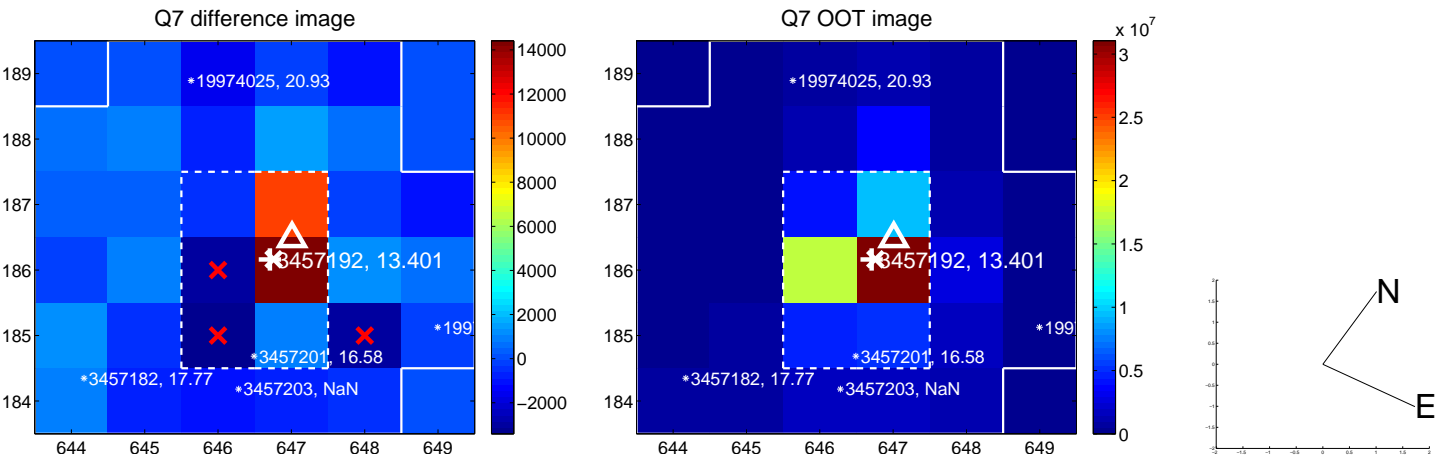
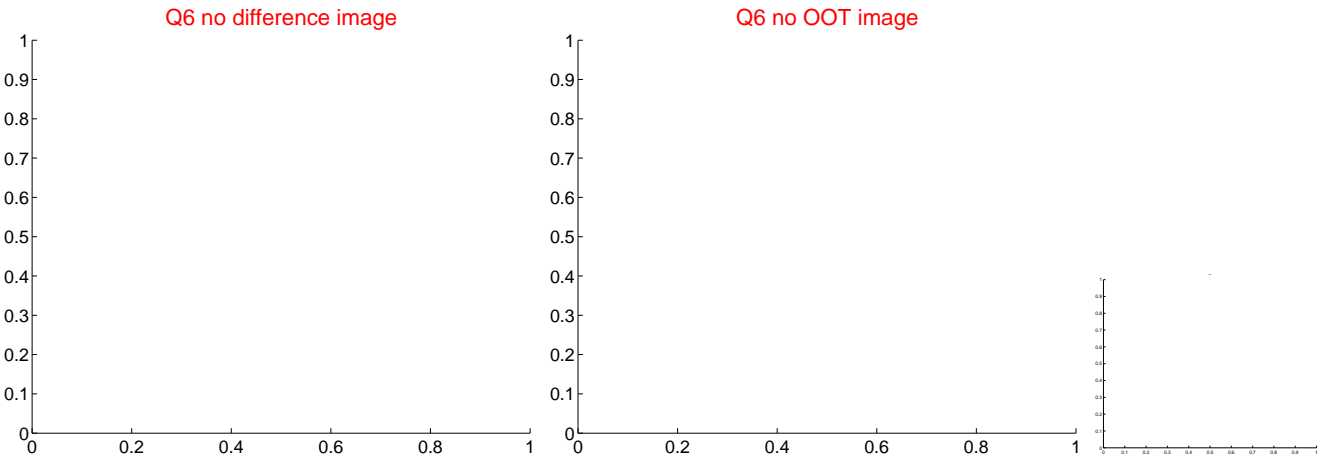
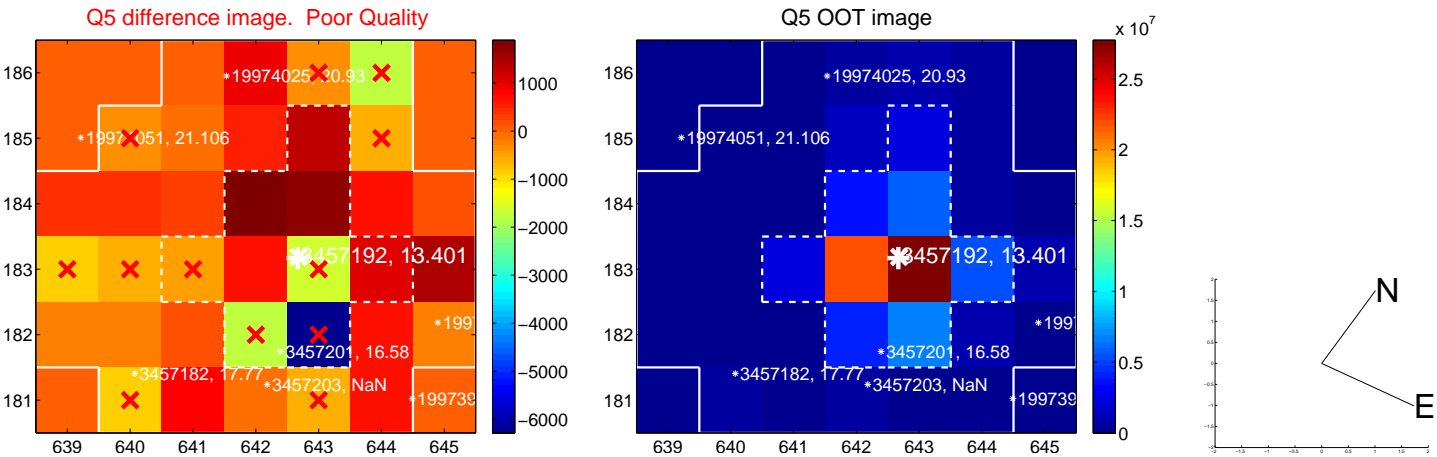
Q4 difference image. Poor Quality



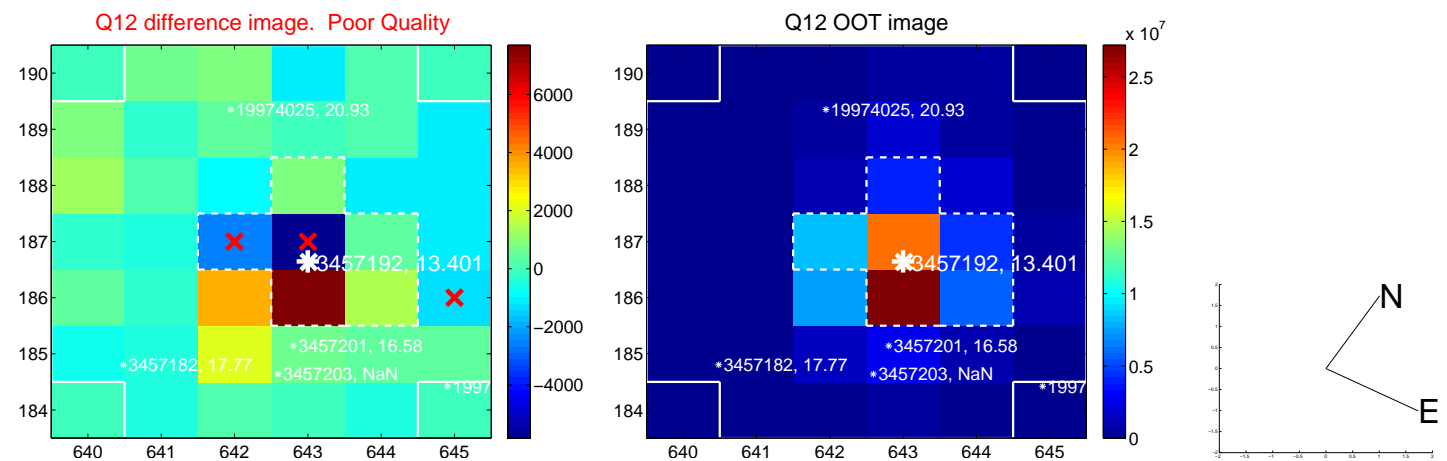
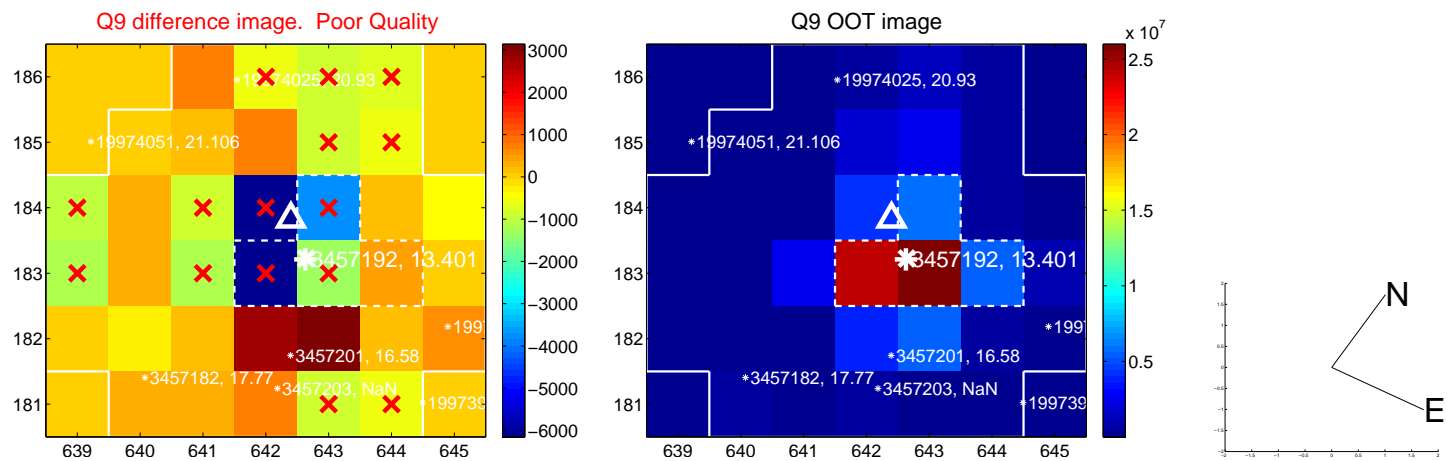
Q4 OOT image



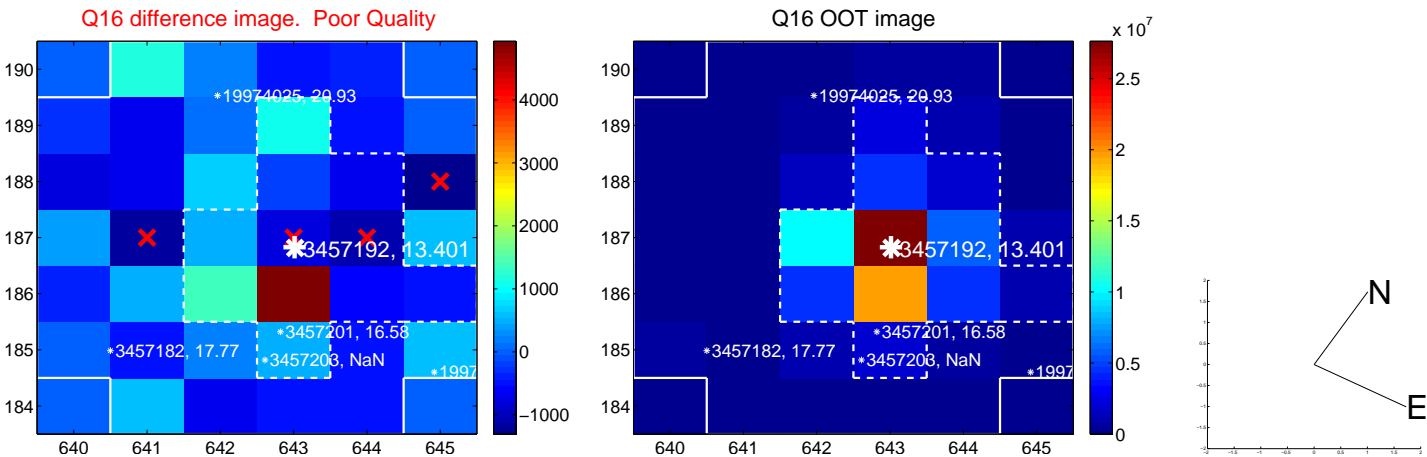
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



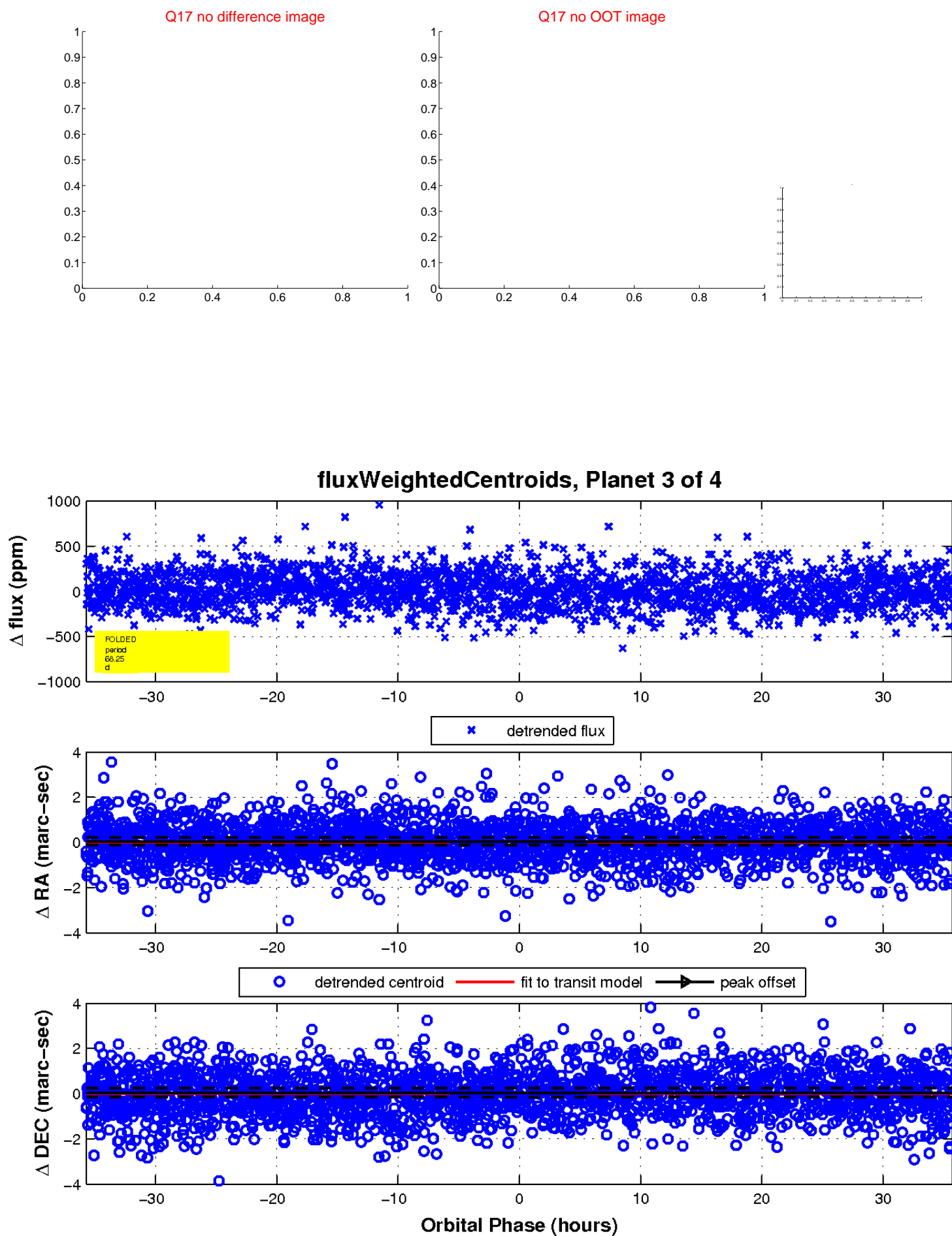
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

