

KIC 009542697

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})
009542697-01	OBS	No	1.757100	132.991927	63.3	7.811	10.8	11.8	1.06	5997	0.85	1579.31
009542697-02	OBS	No	167.848073	171.897925	1258.9	12.000	20.9	-1.0	1.06	5997	3.76	3.62
009542697-03	OBS	No	311.000278	276.343866	499.4	13.572	11.7	7.2	1.06	5997	2.37	1.59
009542697-04	OBS	No	65.994994	179.810913	308.3	10.286	11.0	6.7	1.06	5997	2.03	12.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009542697-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009542697-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
009542697-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009542697-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

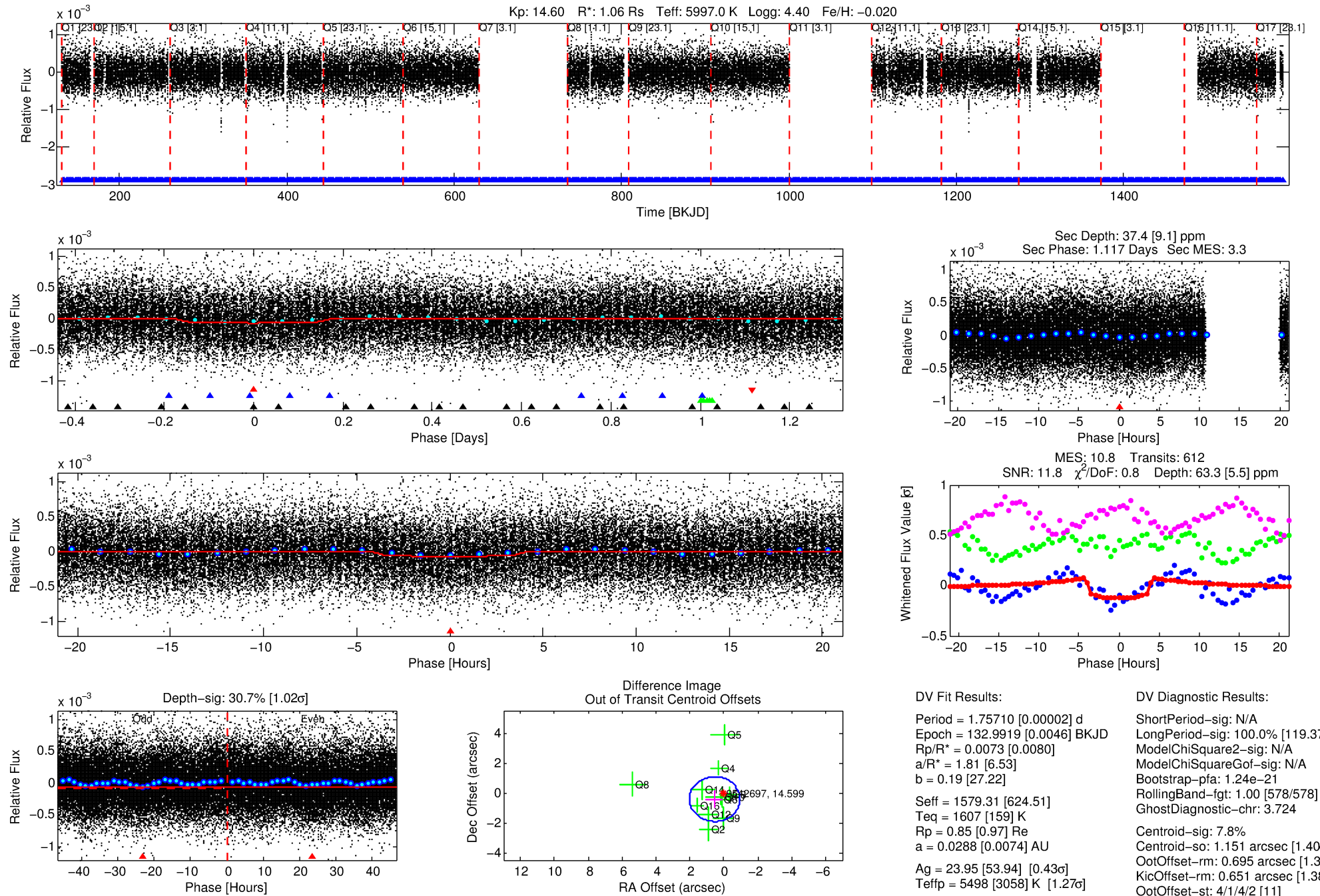
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009542697-01

No Significant Match Found

DV One-Page Summary

KIC: 9542697 Candidate: 1 of 4 Period: 1.757 d



DV Fit Results:

Period = 1.75710 [0.00002] d
Epoch = 132.9919 [0.0046] BKJD
Rp/R* = 0.0073 [0.0080]
a/R* = 1.81 [6.53]
b = 0.19 [27.22]
Seff = 1579.31 [624.51]
Teq = 1607 [159] K
Rp = 0.85 [0.97] Re
a = 0.0288 [0.0074] AU
Ag = 23.95 [53.94] [0.43 σ]
Teffp = 5498 [3058] K [1.27 σ]

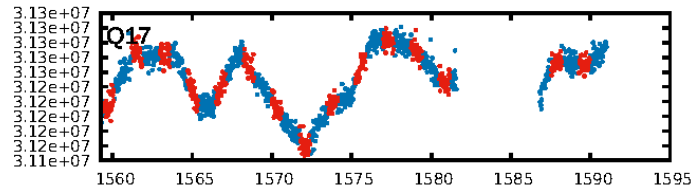
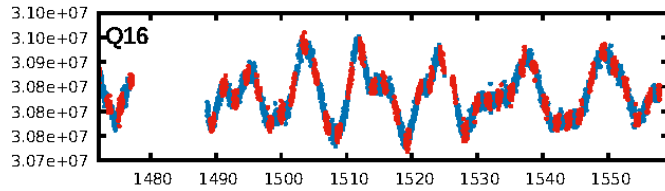
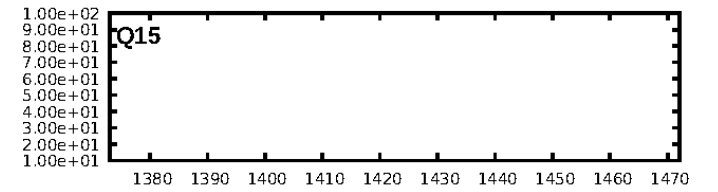
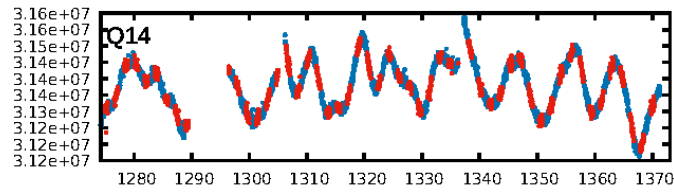
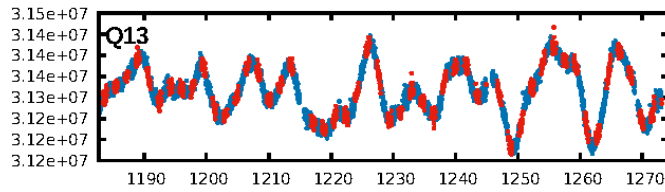
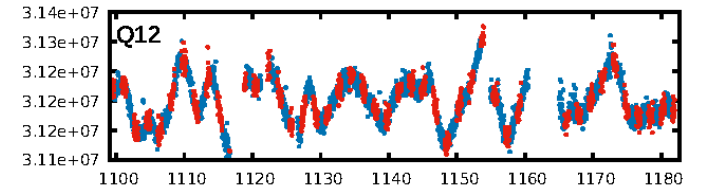
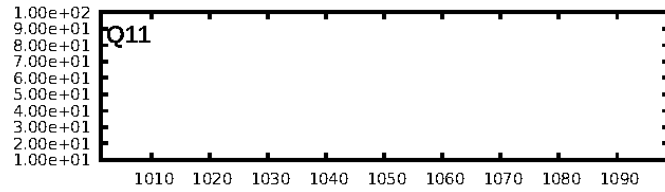
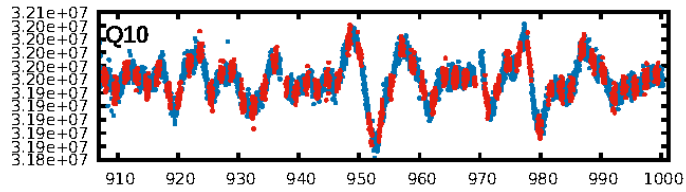
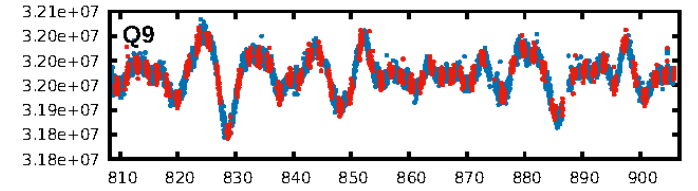
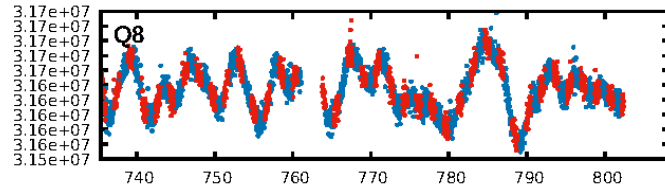
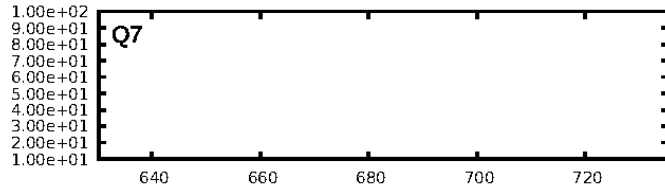
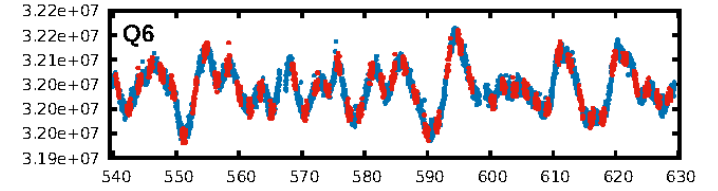
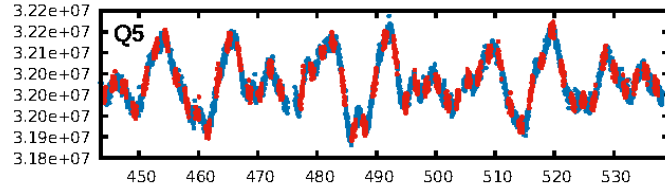
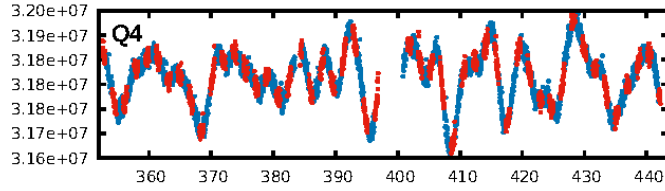
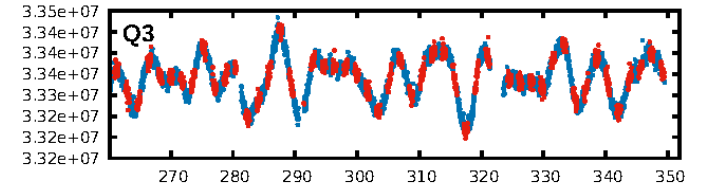
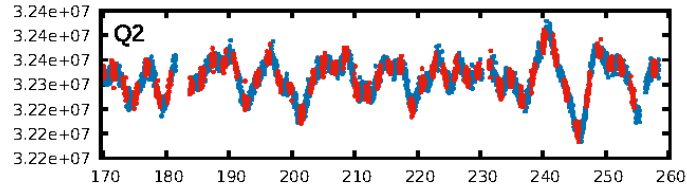
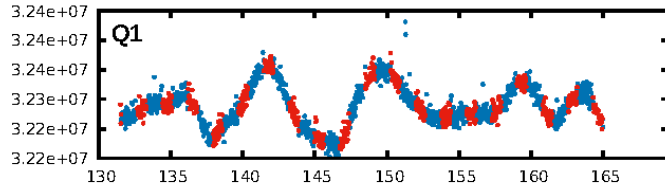
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [119.37 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.24e-21
RollingBand-fgt: 1.00 [578/578]
GhostDiagnostic-chr: 3.724
Centroid-sig: 7.8%
Centroid-so: 1.151 arcsec [1.40 σ]
OotOffset-rm: 0.695 arcsec [1.39 σ]
KicOffset-rm: 0.651 arcsec [1.38 σ]
OotOffset-st: 4/1/4/2 [11]
KicOffset-st: 4/1/4/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [14/14]

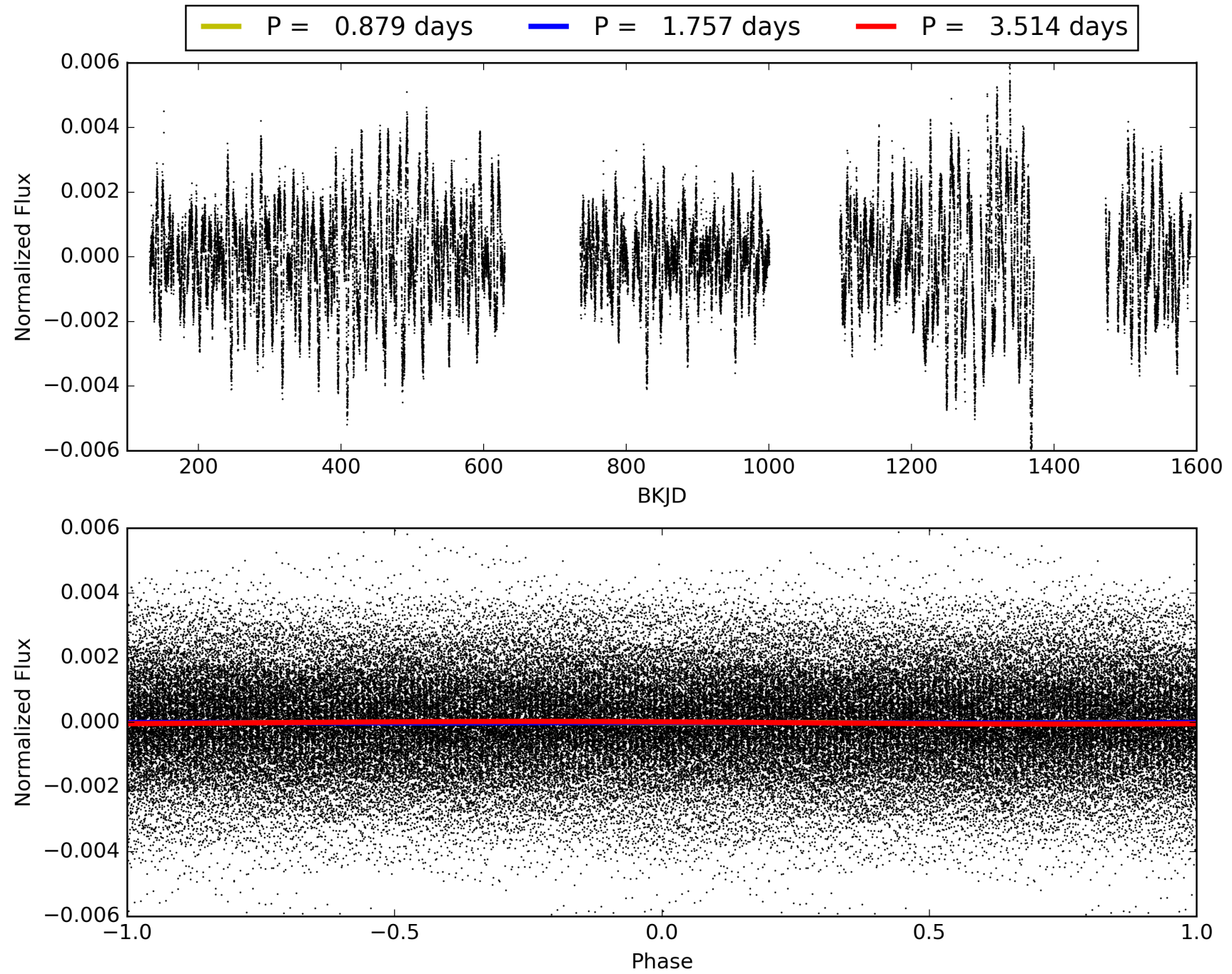
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:29:17 Z

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

TCE 009542697-01, PDC Light Curves

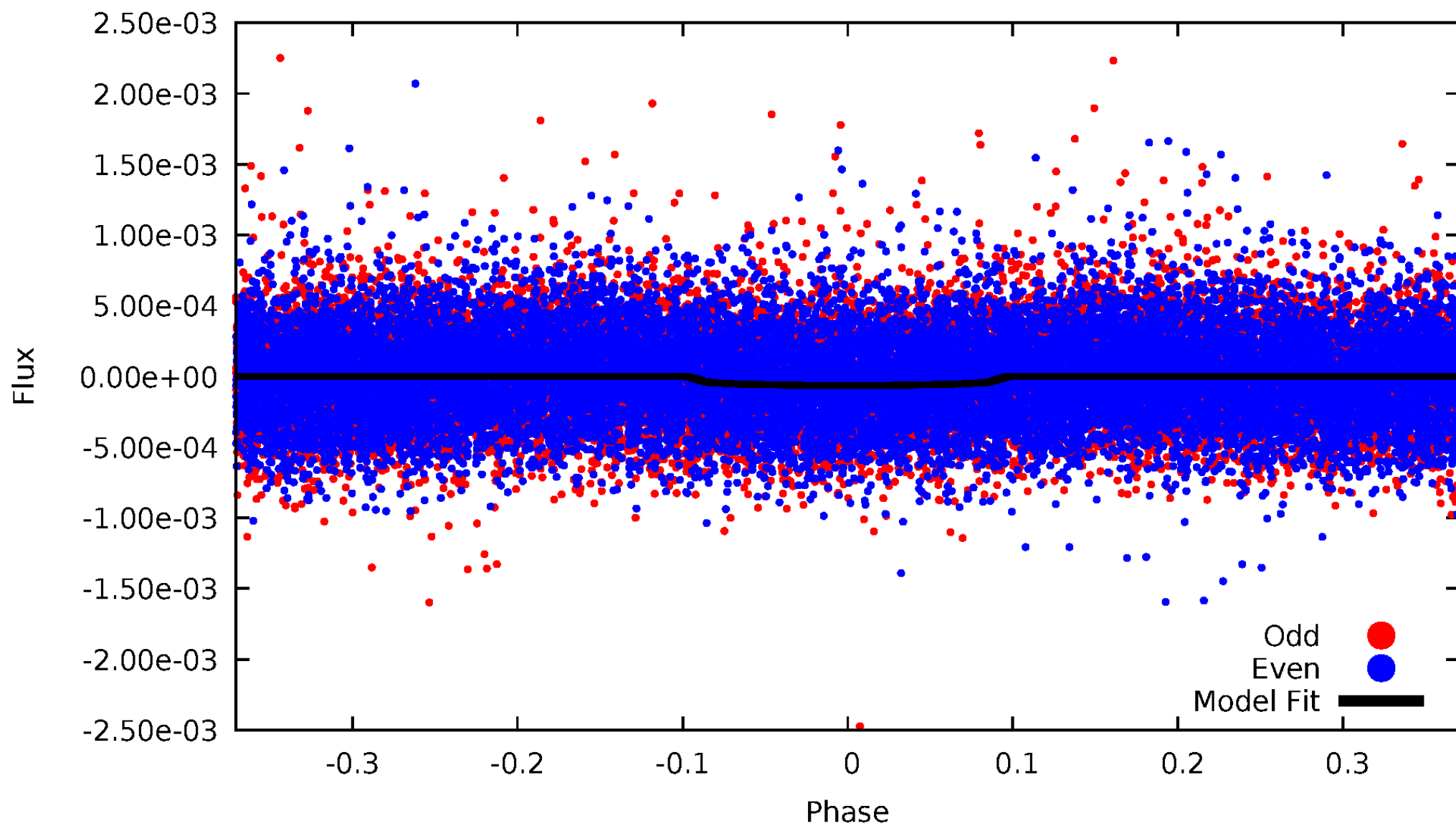


TCE 009542697-01



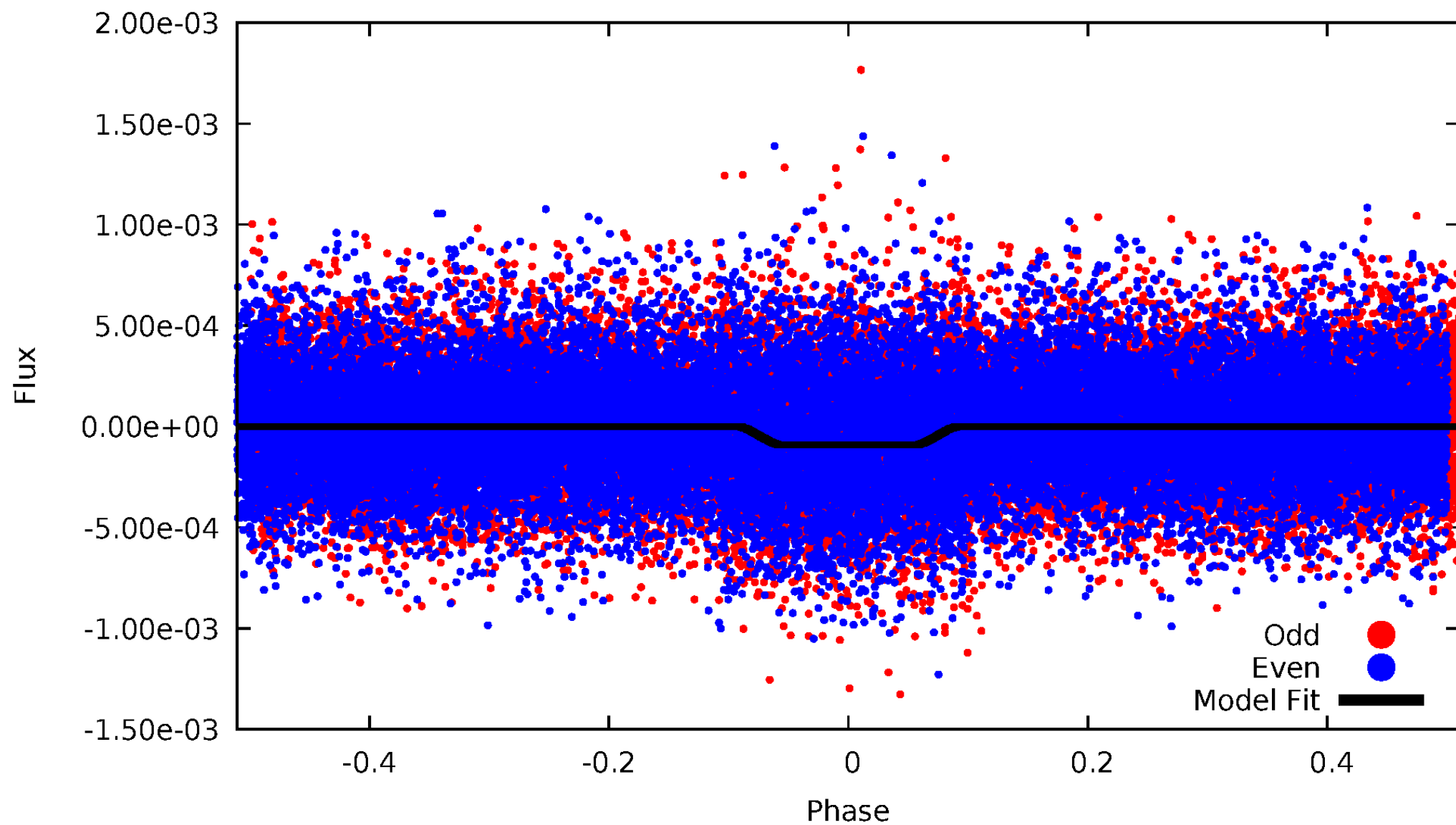
DV Odd/Even

TCE 009542697-01



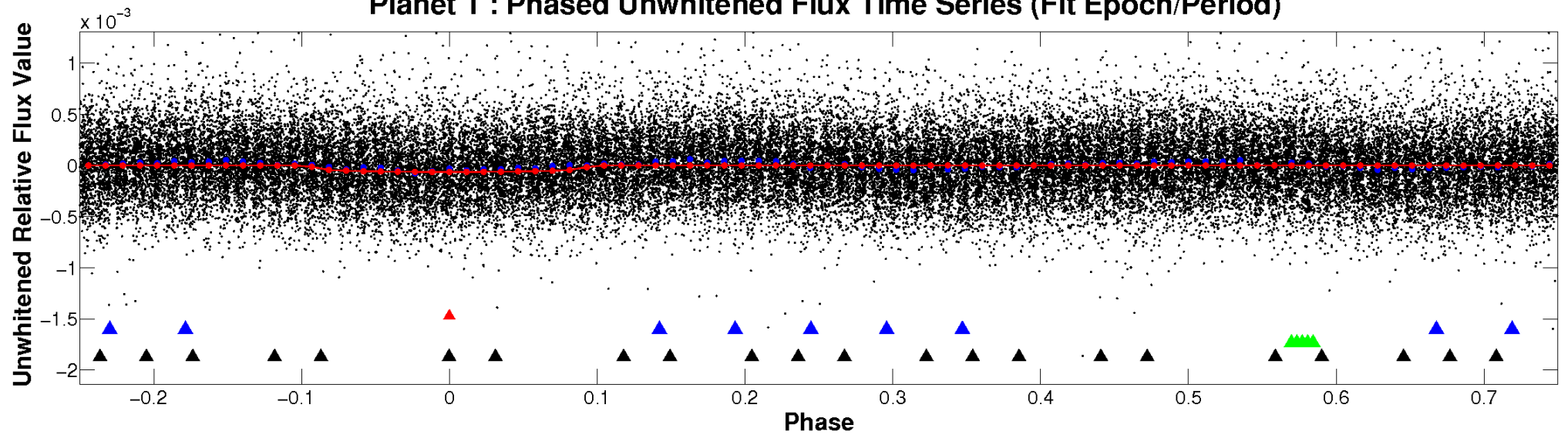
ALT Odd/Even

TCE 009542697-01

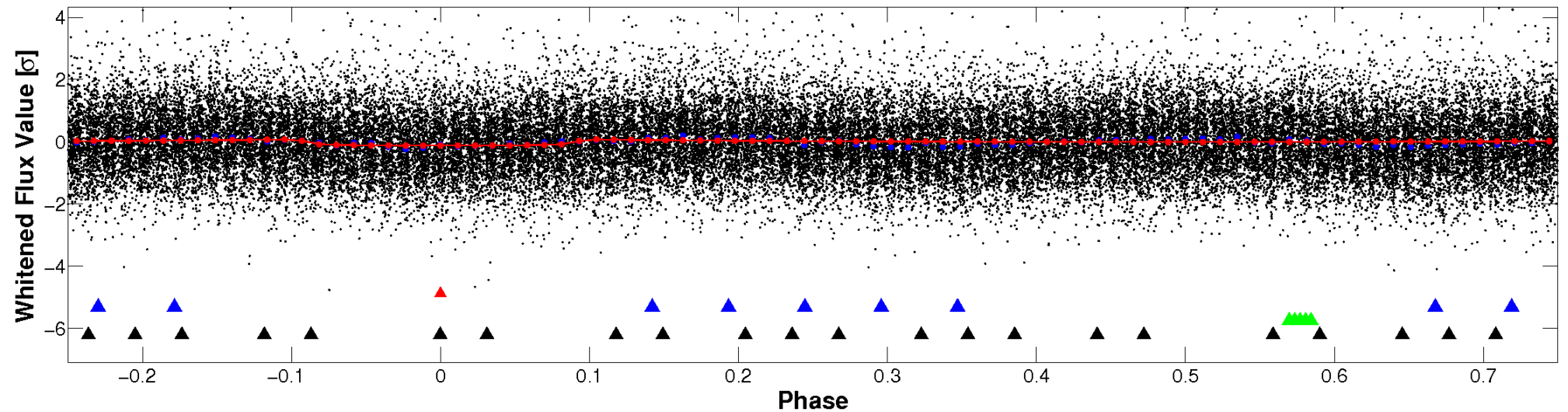


Non-Whitened Vs. Whitened Light Curve

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

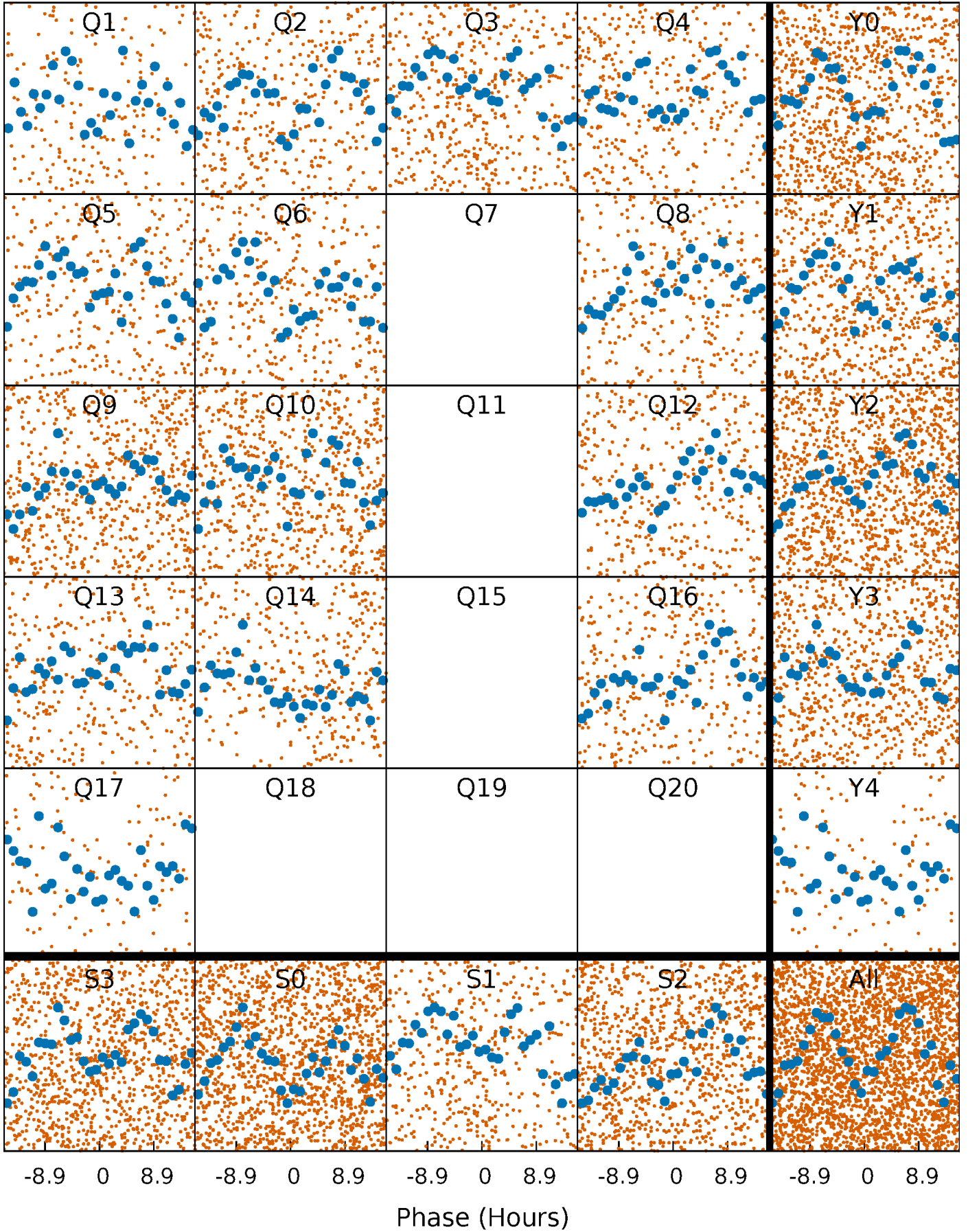


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



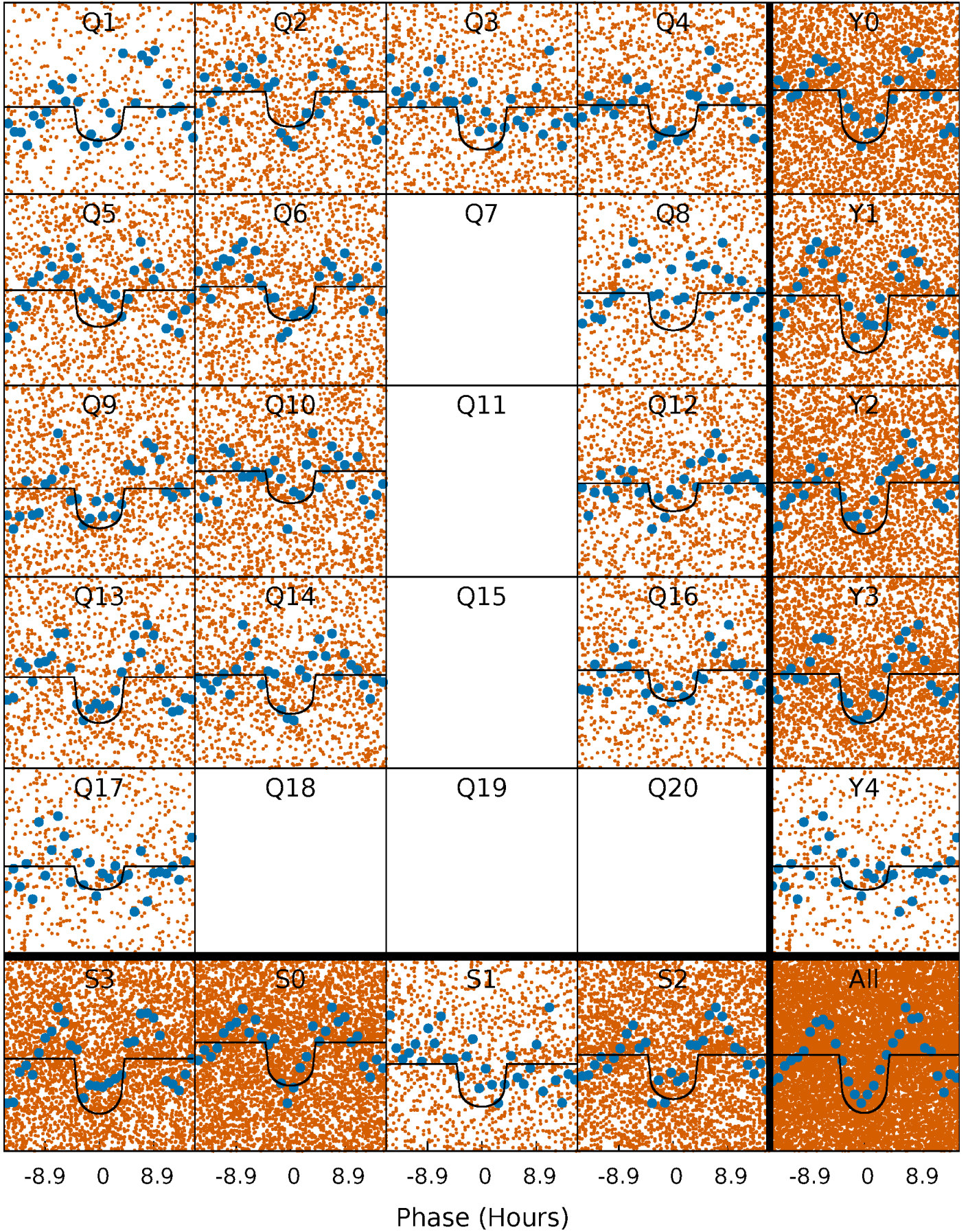
PDC Quarter-Phased Transit Curves

TCE 009542697-01 P= 1.757100 Days $T_0=132.991927$ (BKJD)



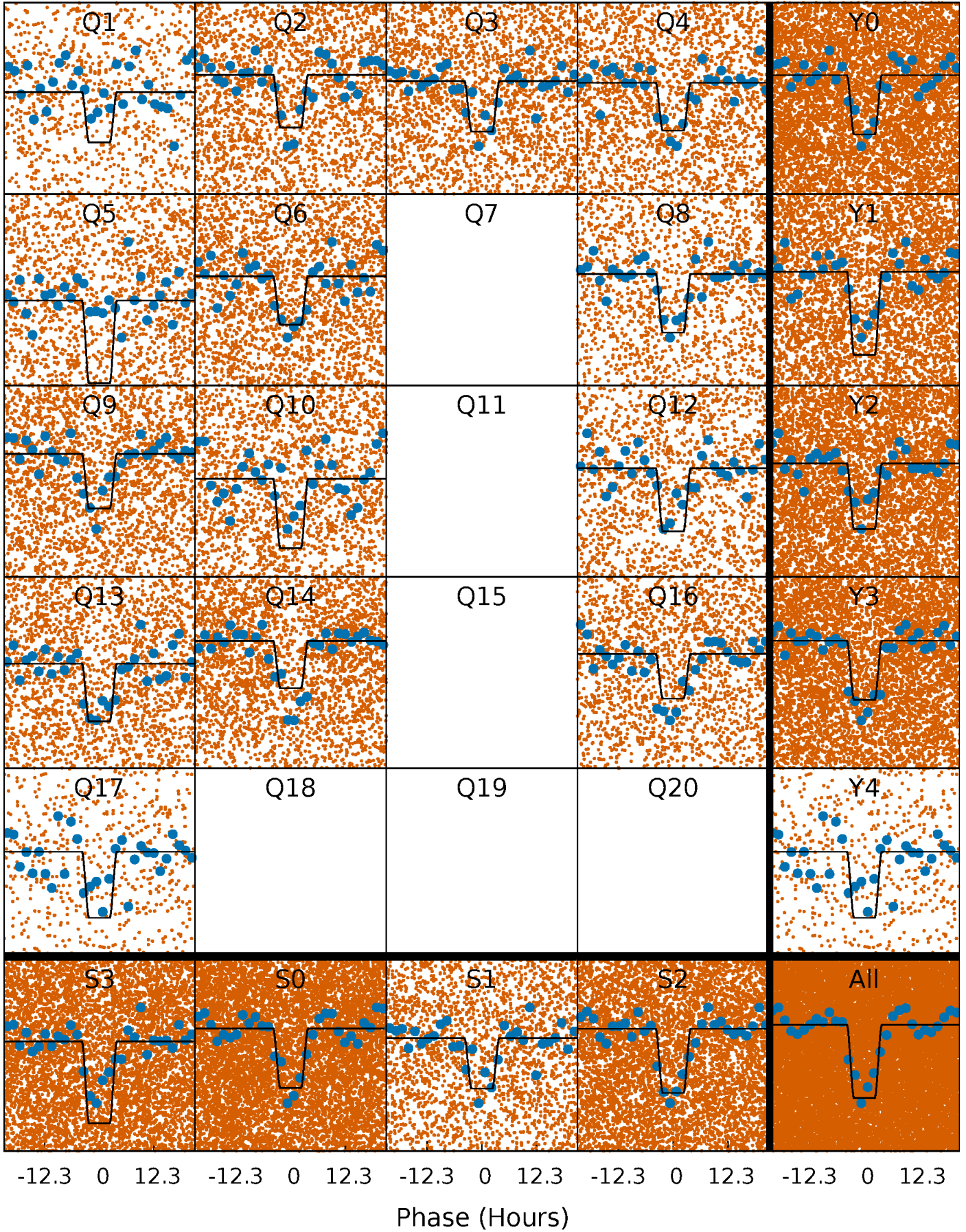
DV Quarter-Phased Transit Curves

TCE 009542697-01 P= 1.757100 Days $T_0=132.991927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

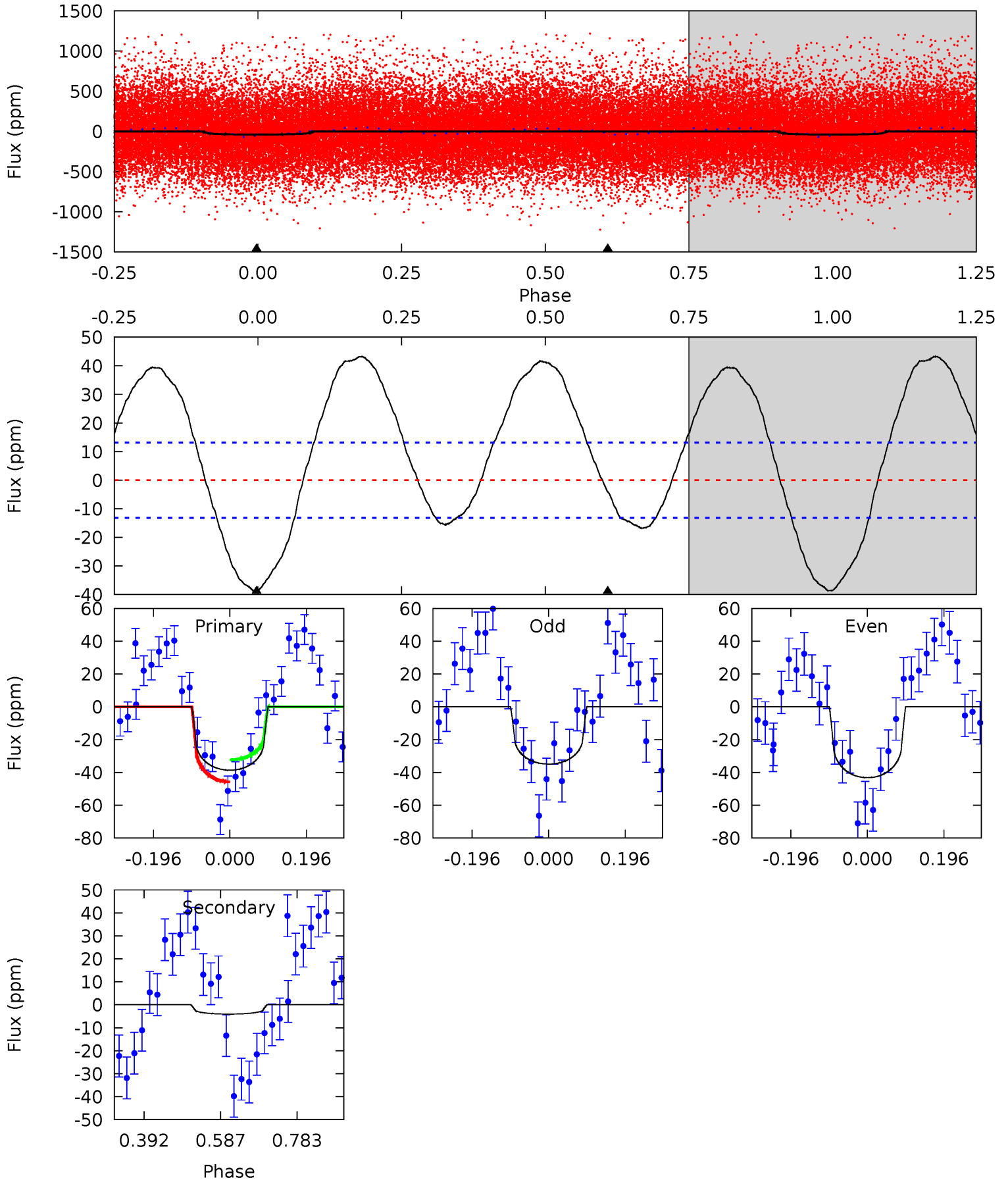
TCE 009542697-01 P= 1.757023 Days $T_0=133.008956$ (BKJD)



DV Model-Shift Uniqueness Test

009542697-01, P = 1.757100 Days, E = 131.234827 Days

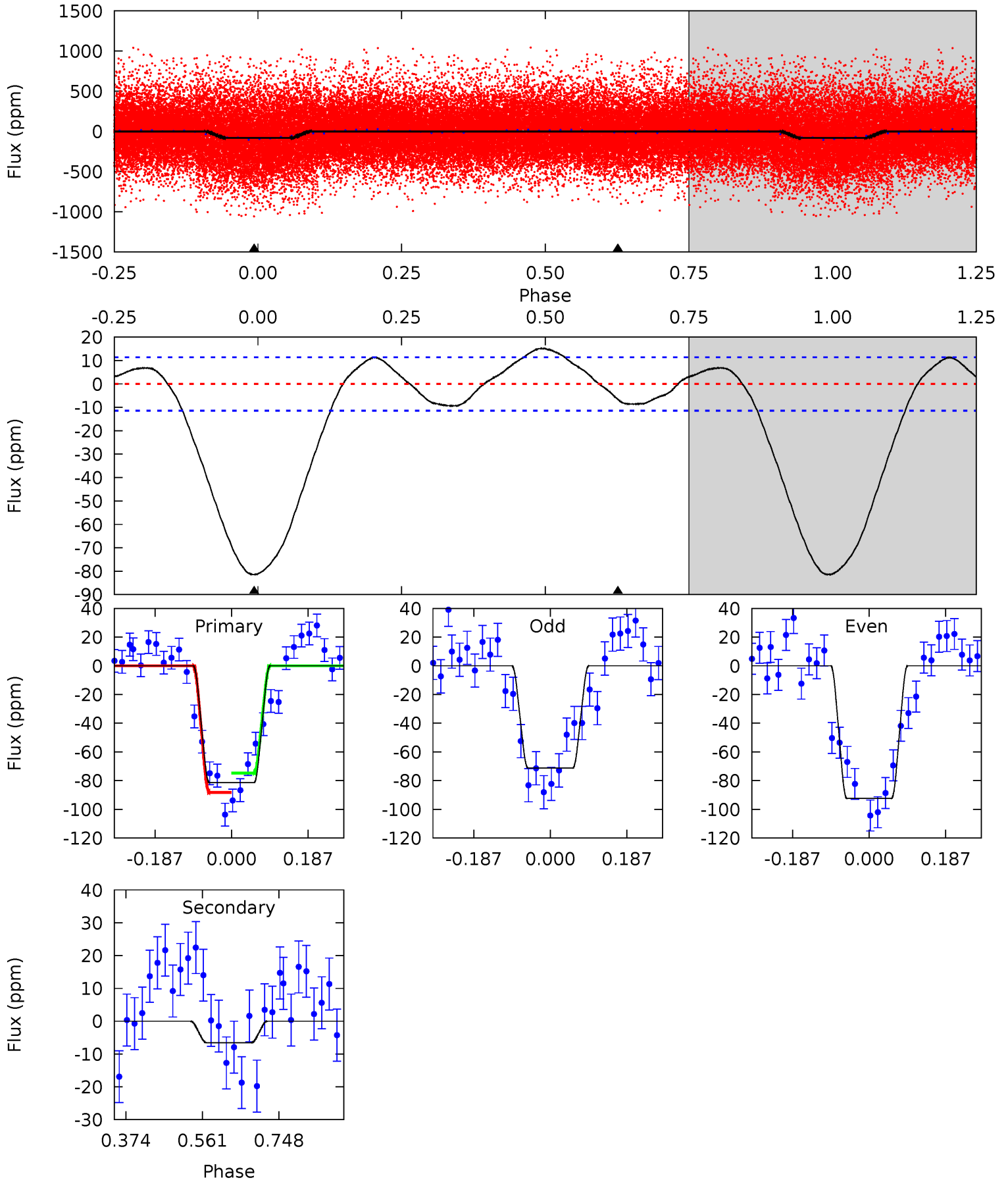
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	1.37	0	0	4.42	1.29	5.95	13.0	13.0	1.37	1.37	1.40	0.79	0.53	2.28



Alt Model-Shift Uniqueness Test

009542697-01, P = 1.757023 Days, E = 131.251933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.6	2.54	0	0	4.43	1.32	2.69	31.6	31.6	2.54	2.54	4.09	1.08	0.16	2.60



Stellar Parameters For KIC 009542697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+181}_{-199}	$4.399^{+0.101}_{-0.203}$	$-0.020^{+0.250}_{-0.300}$	$1.065^{+0.326}_{-0.140}$	$1.038^{+0.145}_{-0.130}$	$1.210^{+0.486}_{-0.634}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+31%/-13%	+14%/-13%	+40%/-52%
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 009542697-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 3	$1.15^{+0.87}_{-0.72}$	2270^{+176}_{-131}	3106^{+1463}_{-5500}	$1.270^{+7.469}_{-1.087}$
Alt.	-7 ± 3	$1.30^{+0.92}_{-0.77}$	2266^{+171}_{-125}	3288^{+1350}_{-777}	$1.648^{+8.840}_{-1.137}$

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 $A_{obs} \gg 1.0$

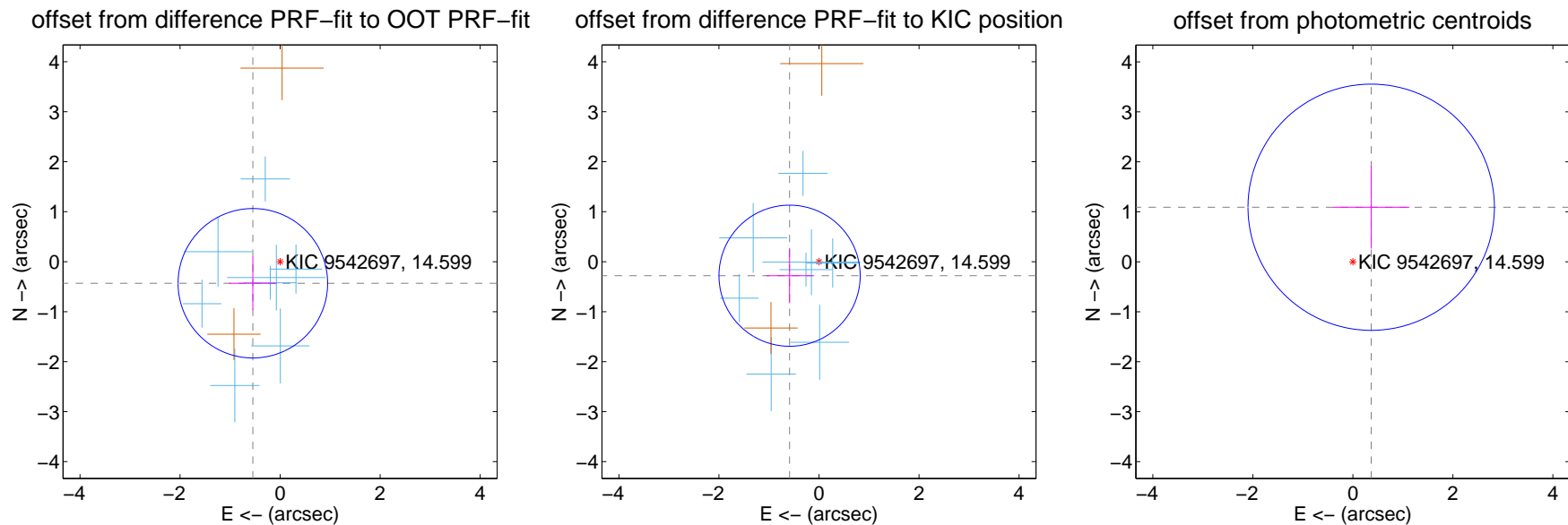
DV Centroid Data

Supplemental centroid analysis for 009542697-01. Kepler magnitude: 14.60. Transit SNR 11.76

There are 8 quarters with good PRF difference image offsets

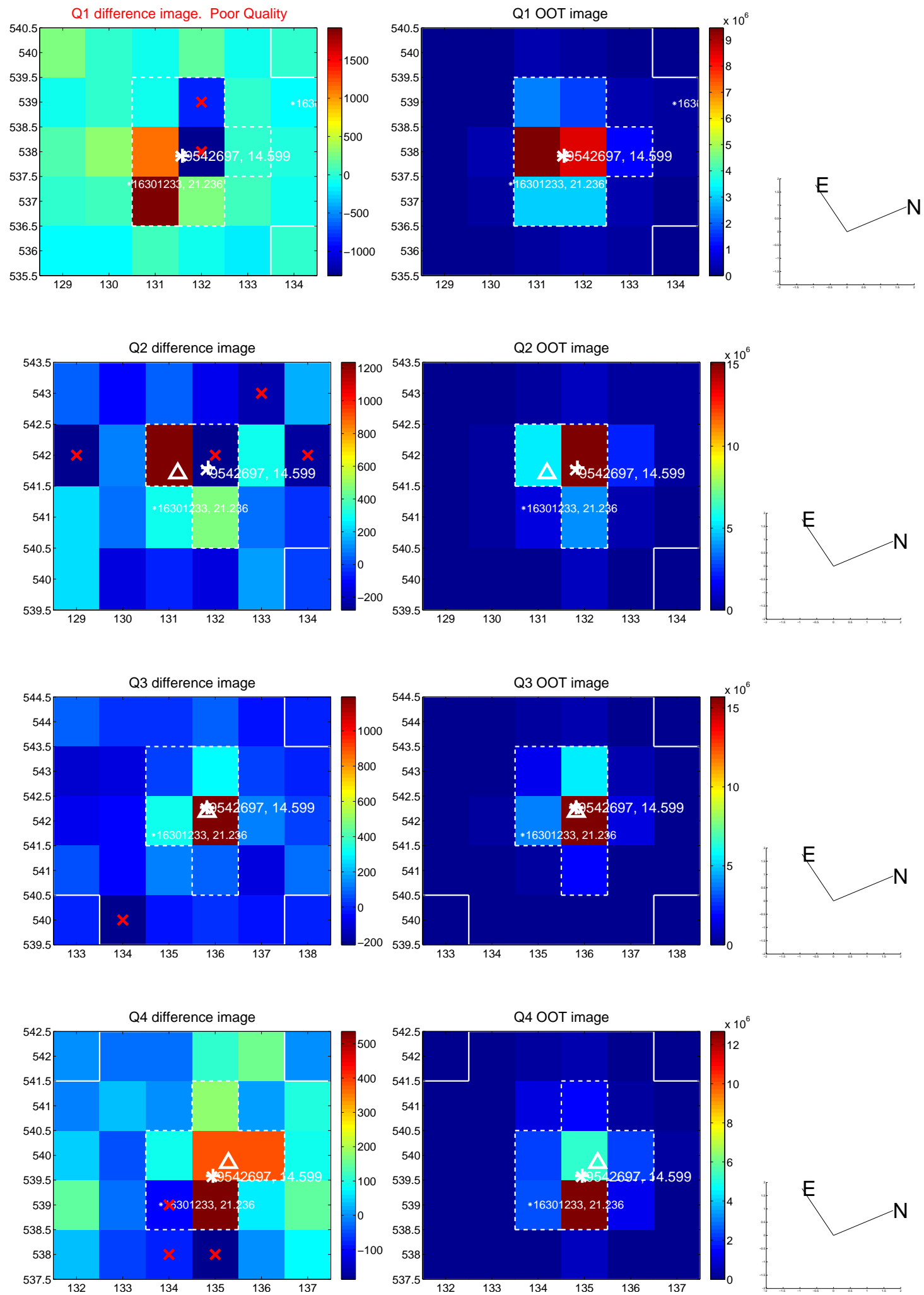
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.695 ± 0.498	1.39	0.545 ± 0.477	-0.431 ± 0.536
PRF-fit source offset from KIC position	0.651 ± 0.471	1.38	0.588 ± 0.464	-0.281 ± 0.550
photometric centroid source offset	1.15 ± 0.82	1.40	-0.37 ± 0.76	1.09 ± 0.83

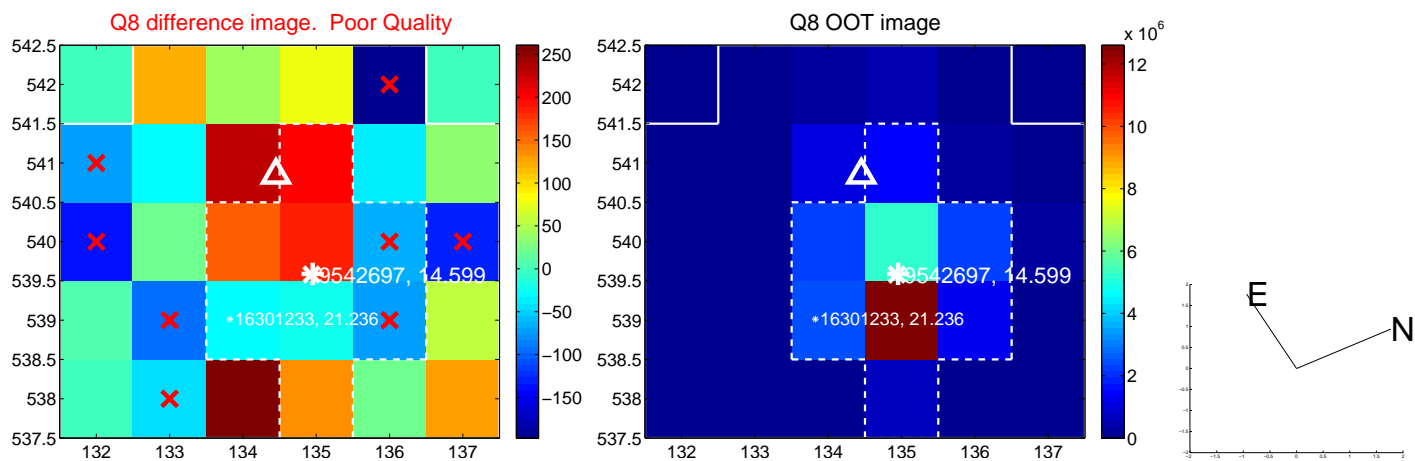
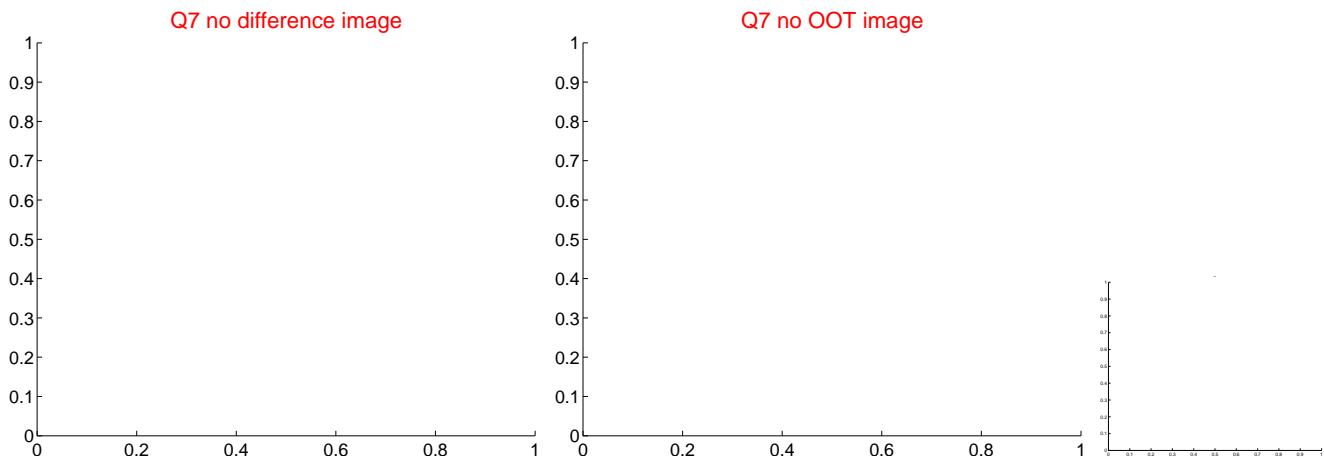
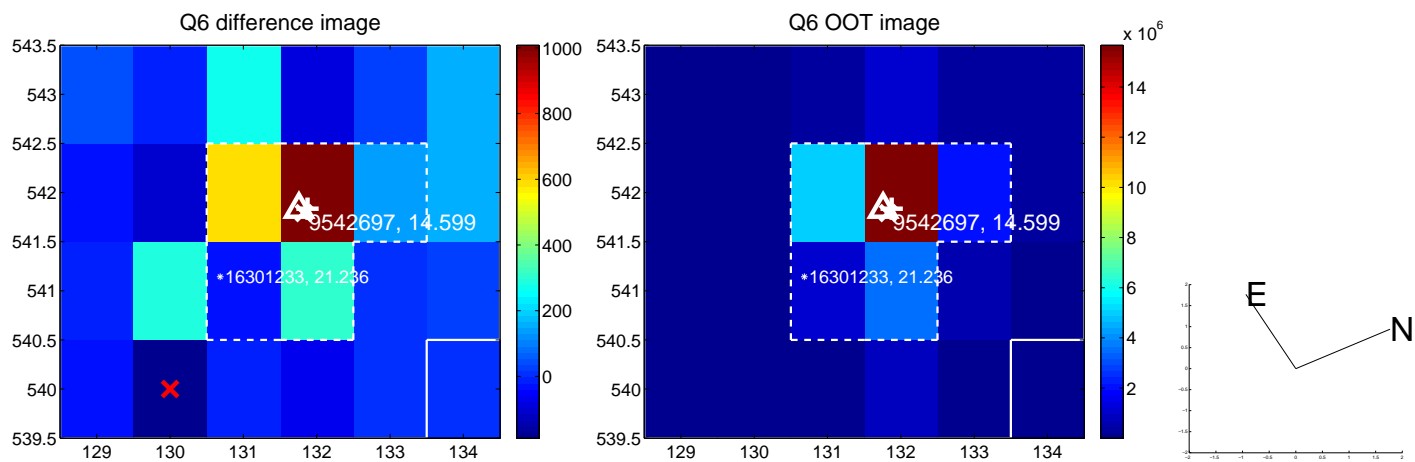
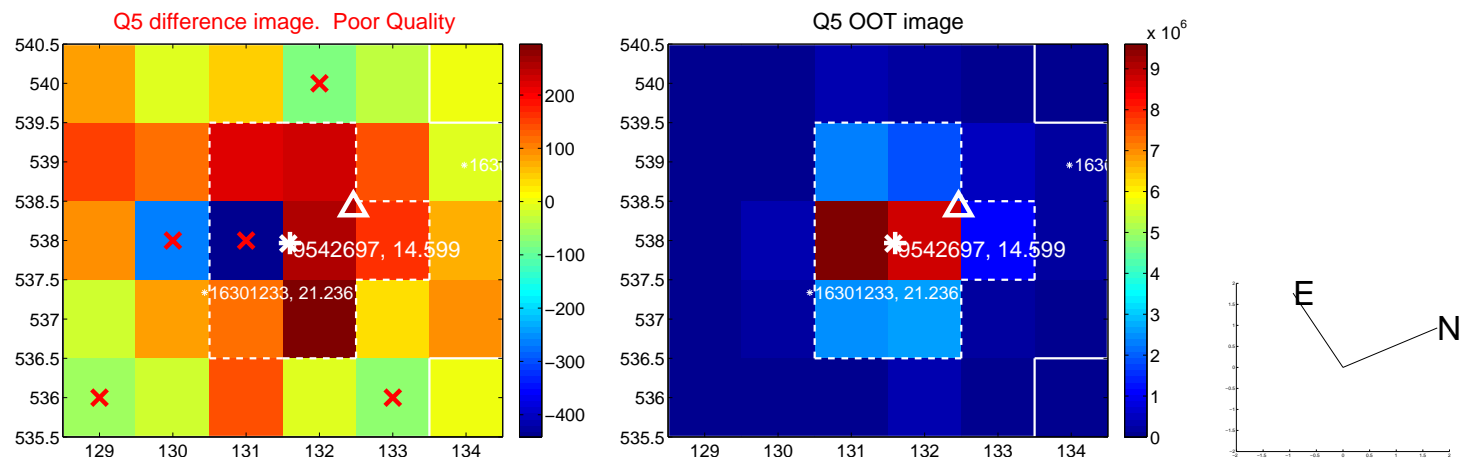


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

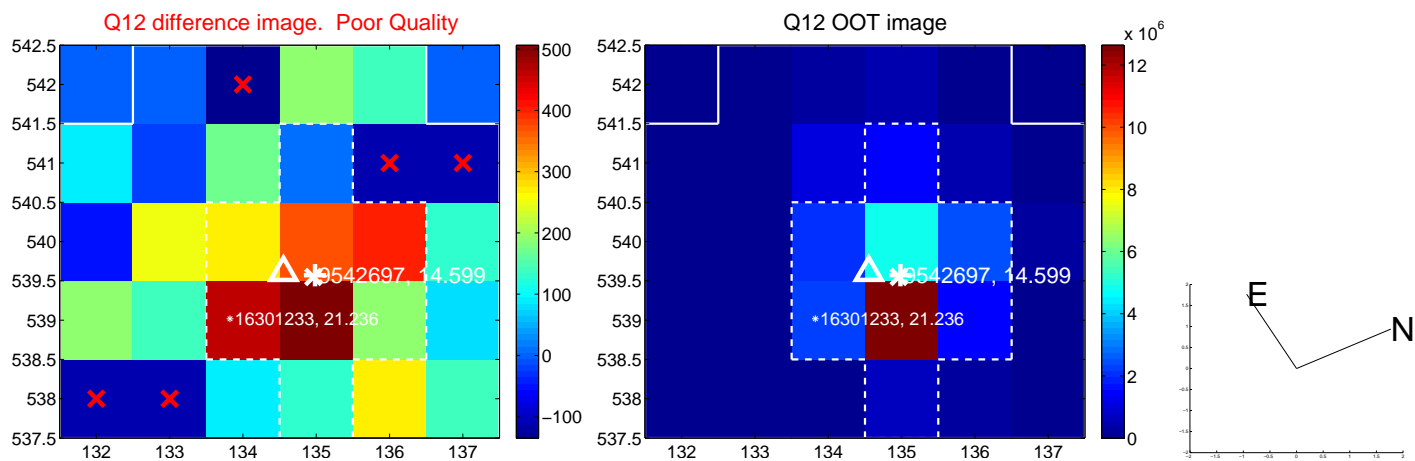
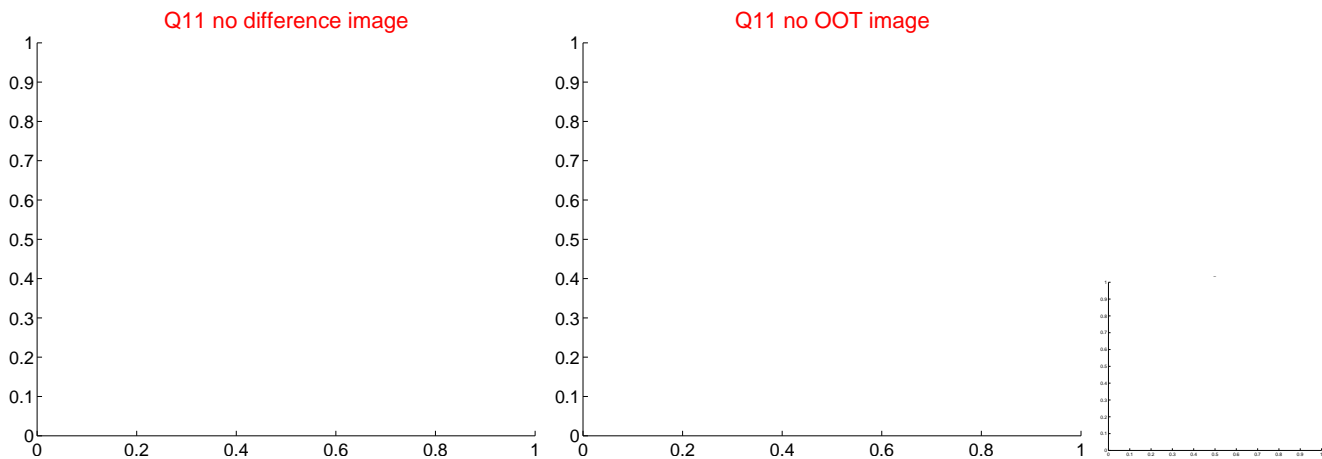
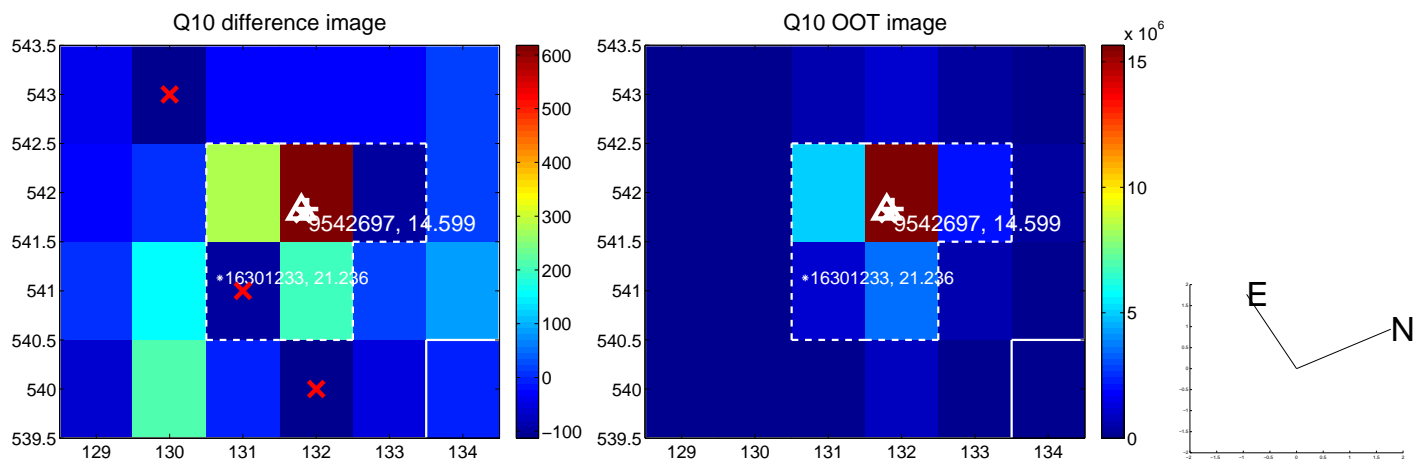
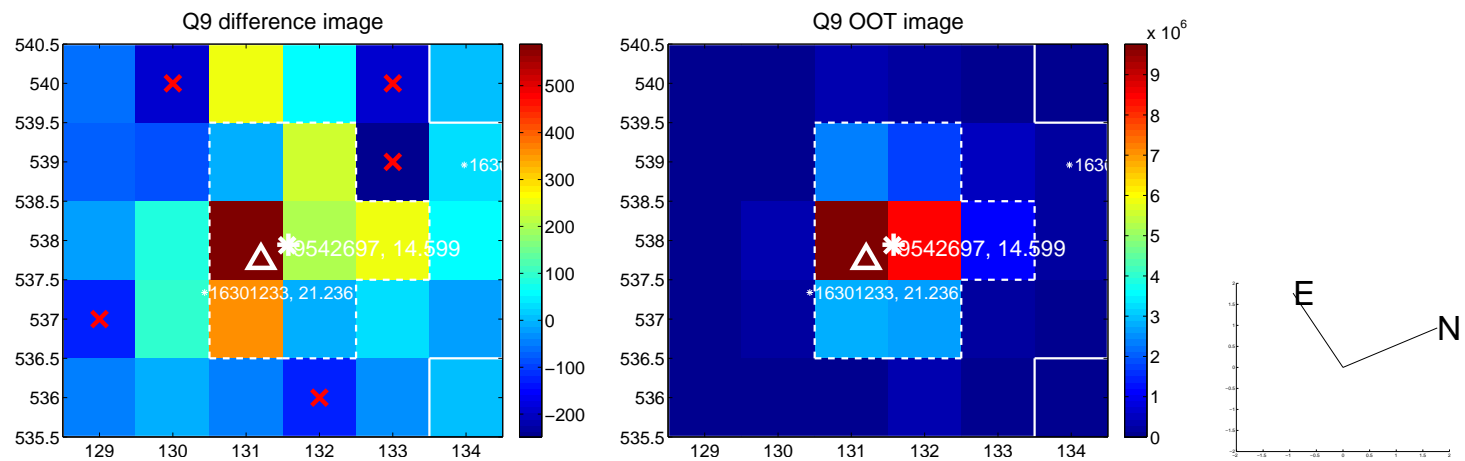
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



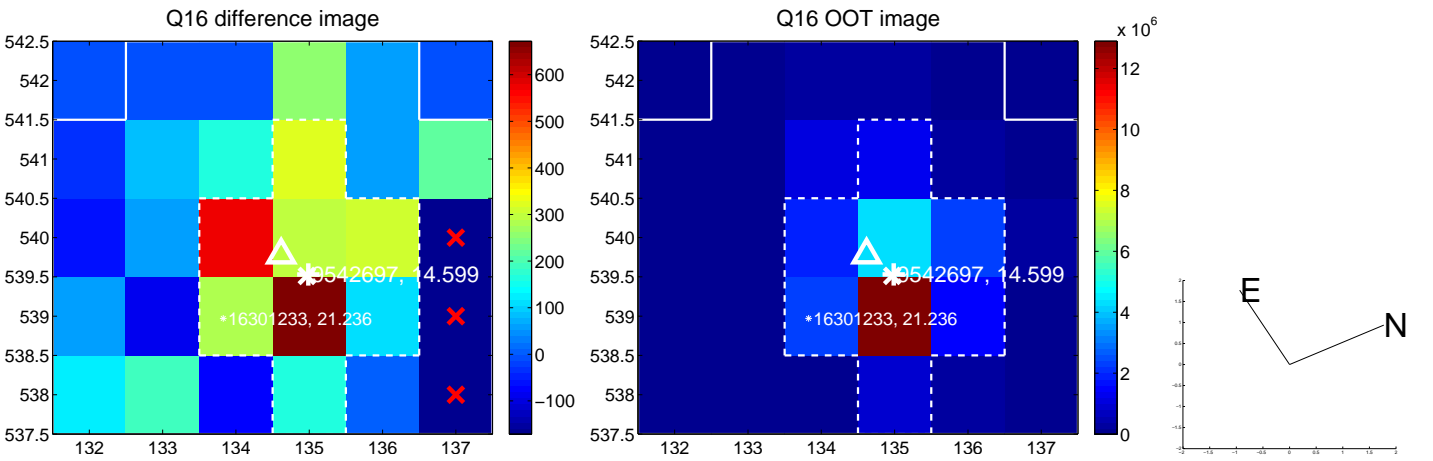
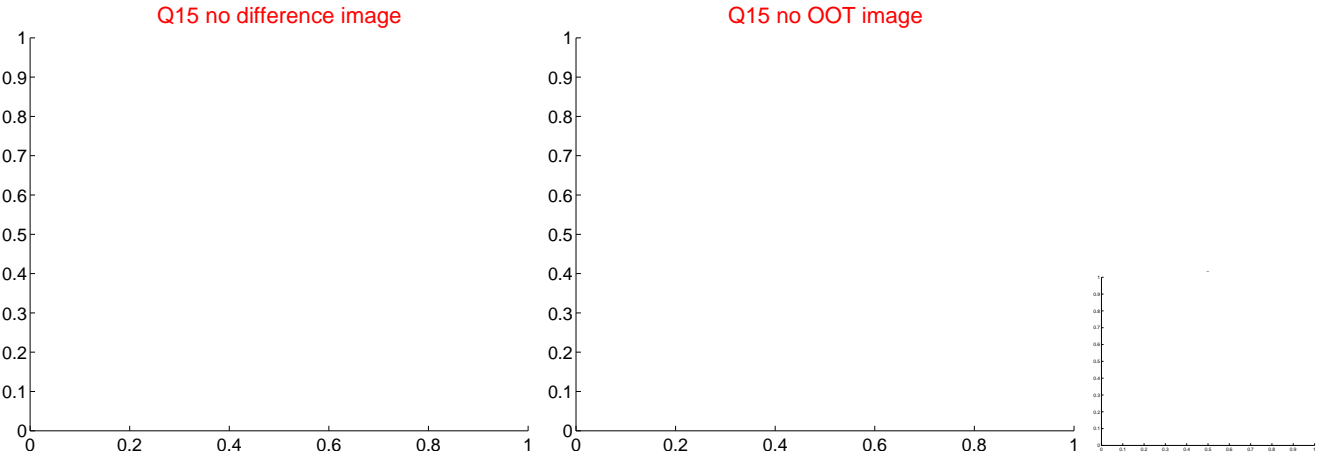
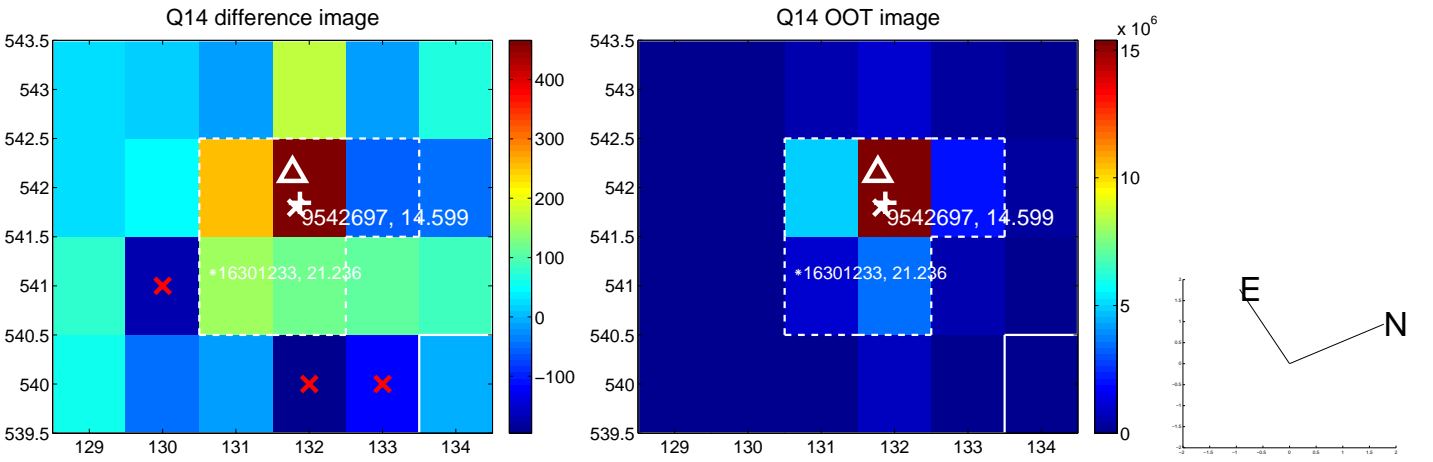
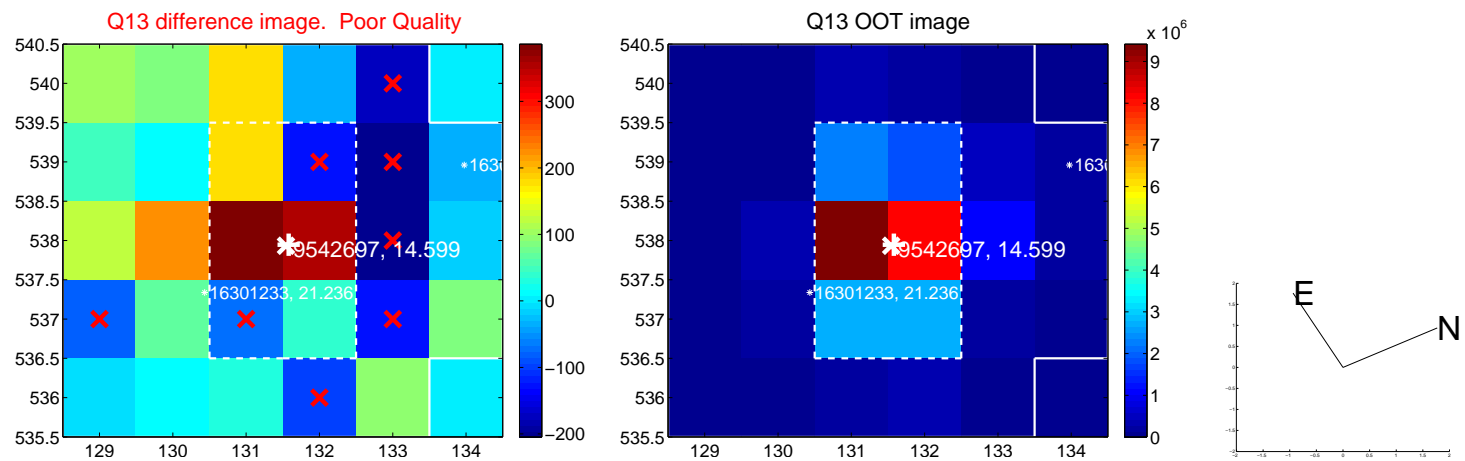
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



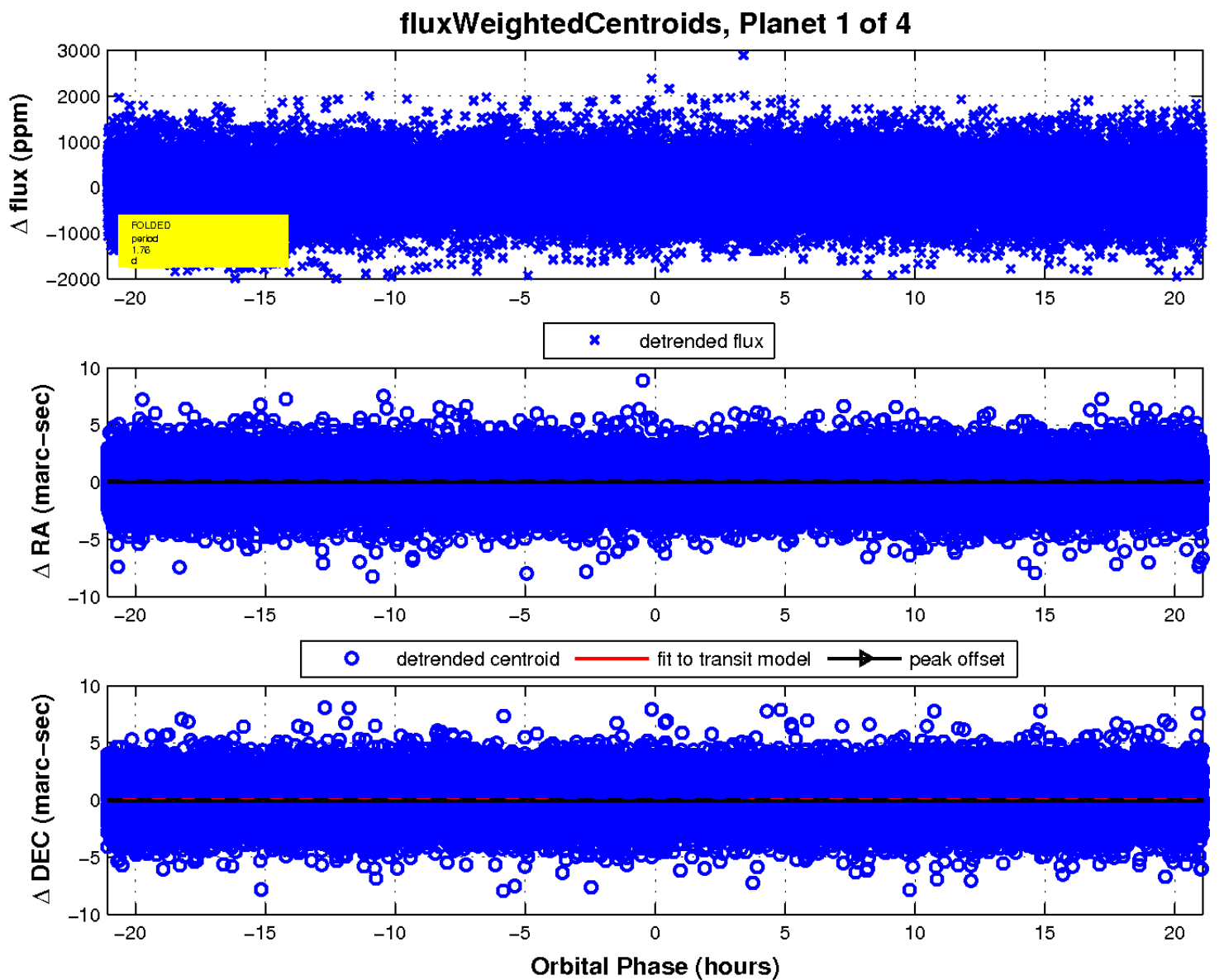
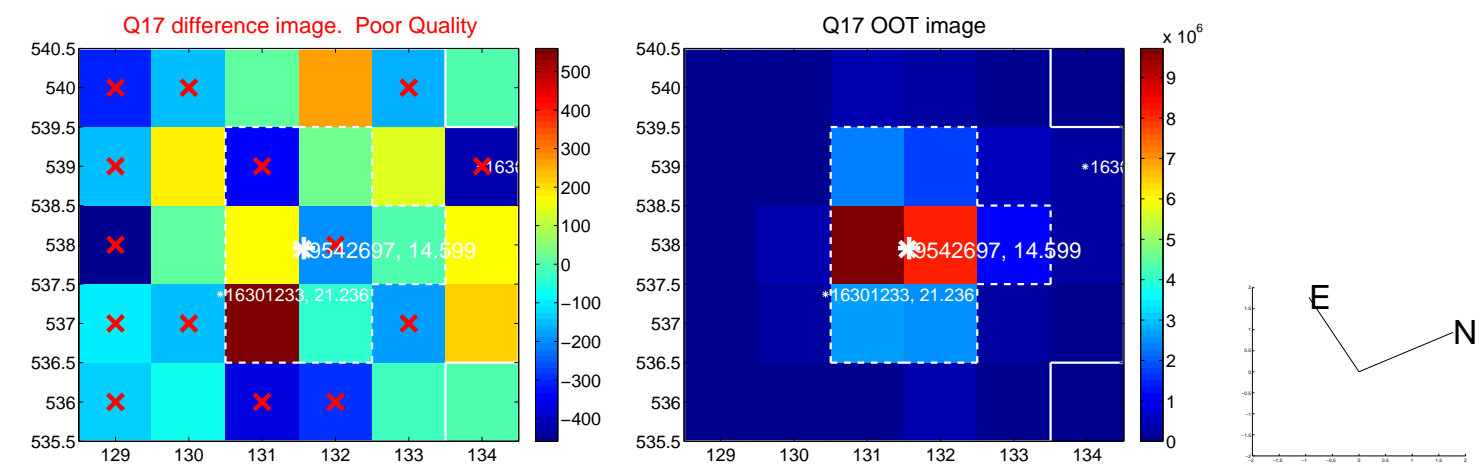
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



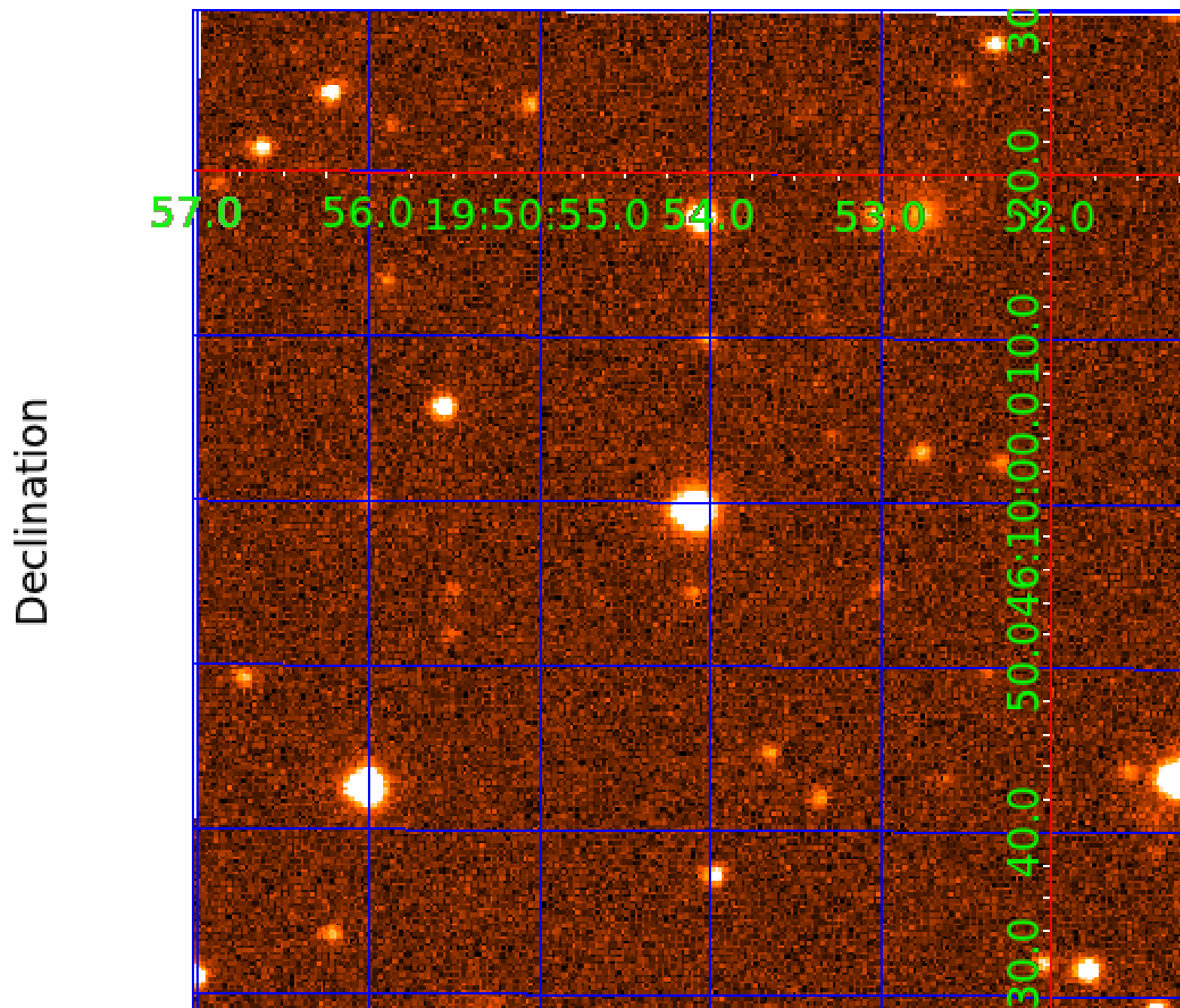
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image



KIC 009542697

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009542697-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009542697-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
009542697-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009542697-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

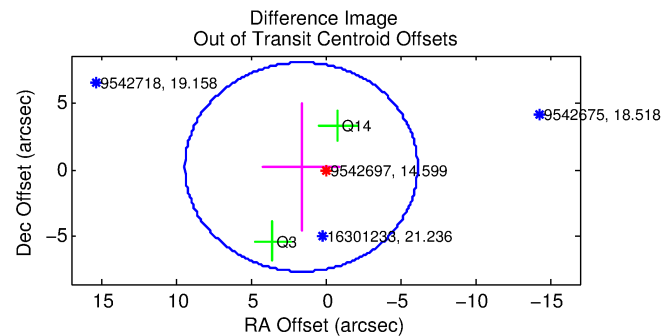
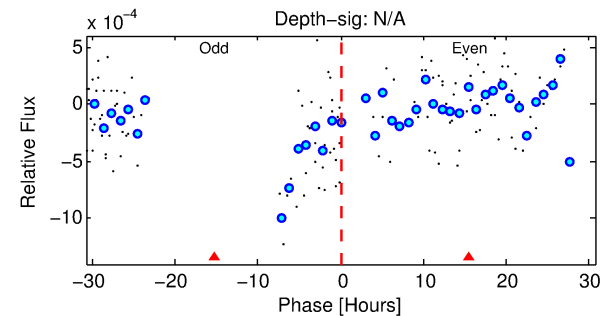
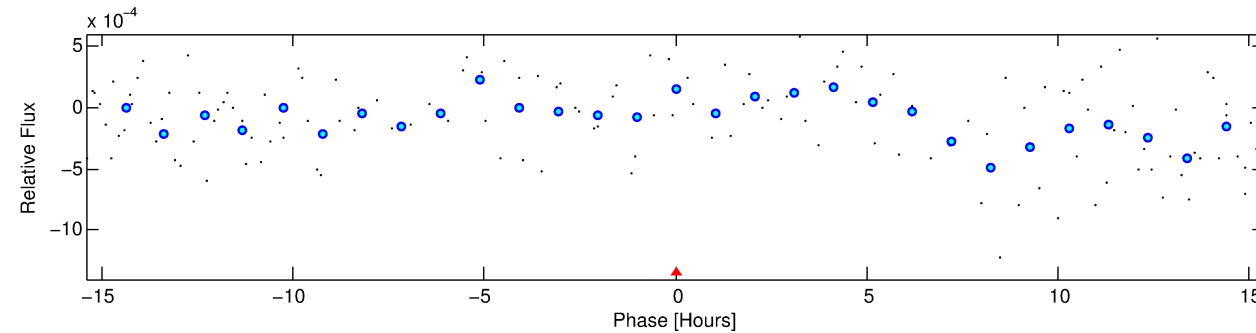
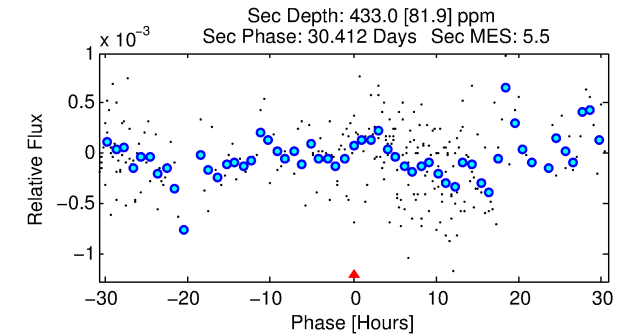
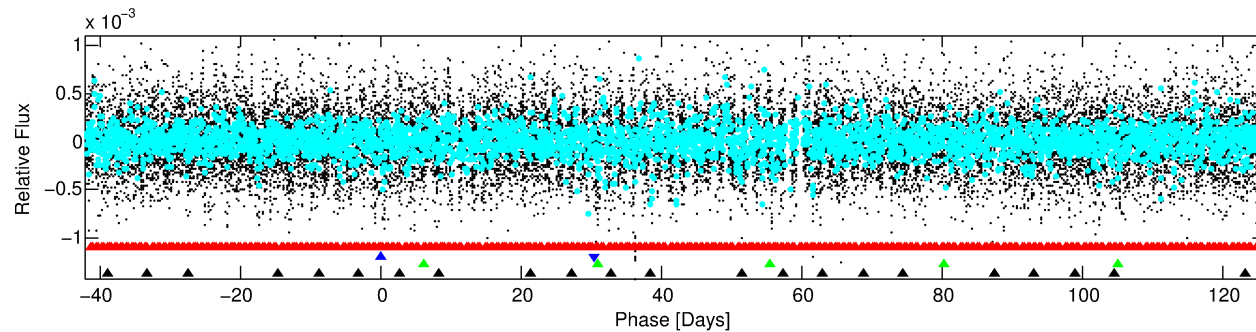
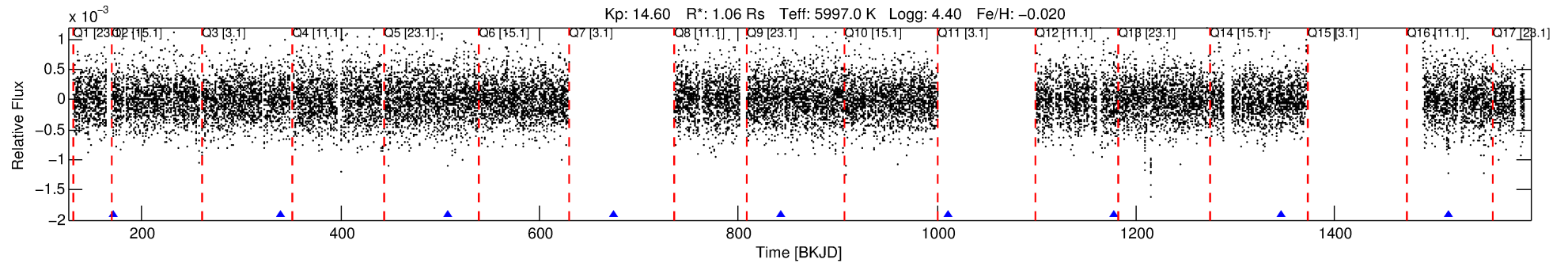
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009542697-02

No Significant Match Found

DV One-Page Summary

KIC: 9542697 Candidate: 2 of 4 Period: 167.848 d



TPS TCE Results:

Period = 167.84807 d
Epoch = 171.8979 BKJD

DV fit results are unavailable

DV Diagnostic Results:

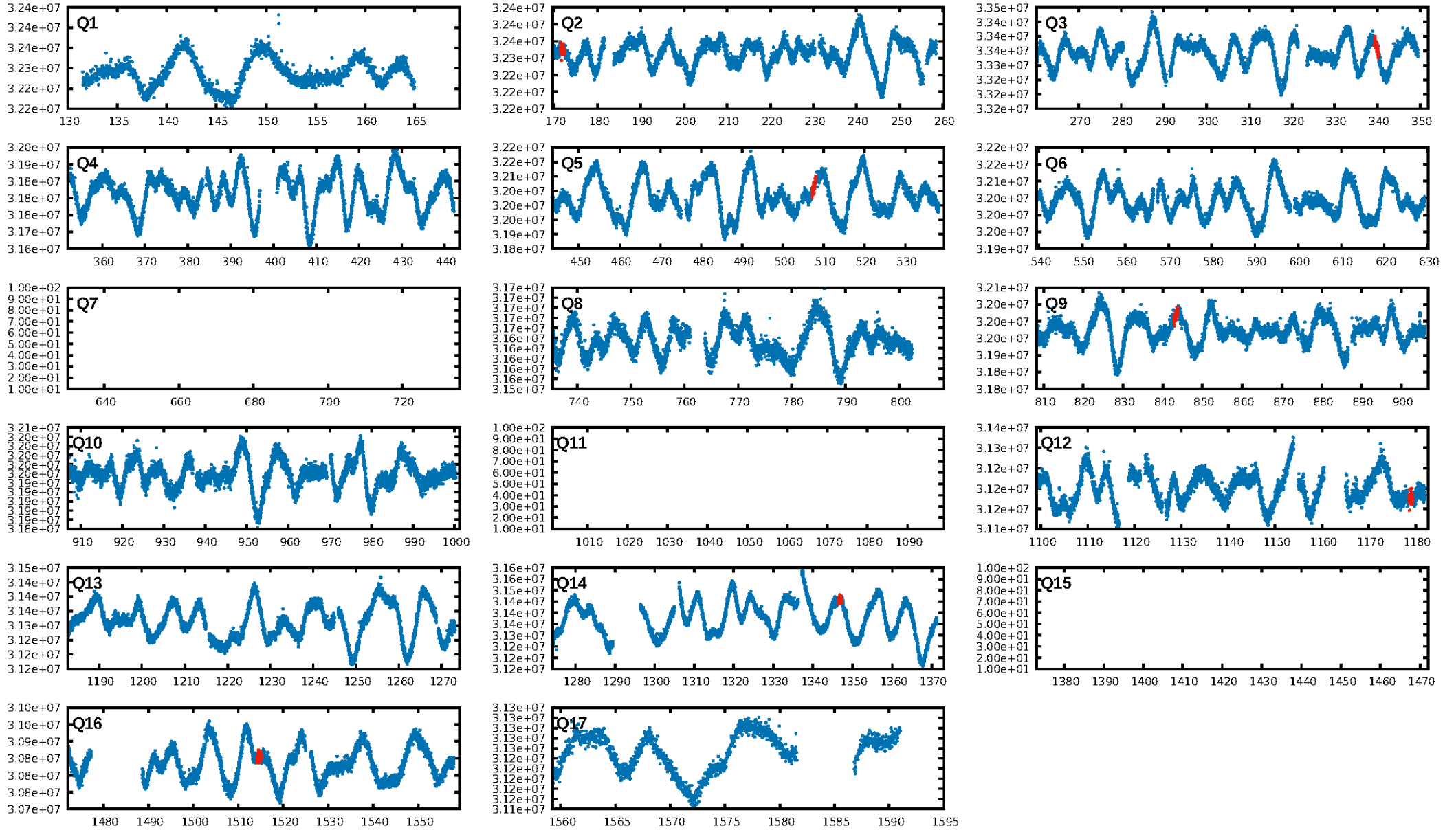
ShortPeriod-sig: 100.0% [154.66 σ]
LongPeriod-sig: 100.0% [189.64 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.21e-40
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -19.56

Centroid-sig: 52.1%
Centroid-so: 5.922 arcsec [0.58 σ]
OotOffset-rm: 1.622 arcsec [0.63 σ]
KicOffset-rm: 1.689 arcsec [0.62 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.33 [2/6]

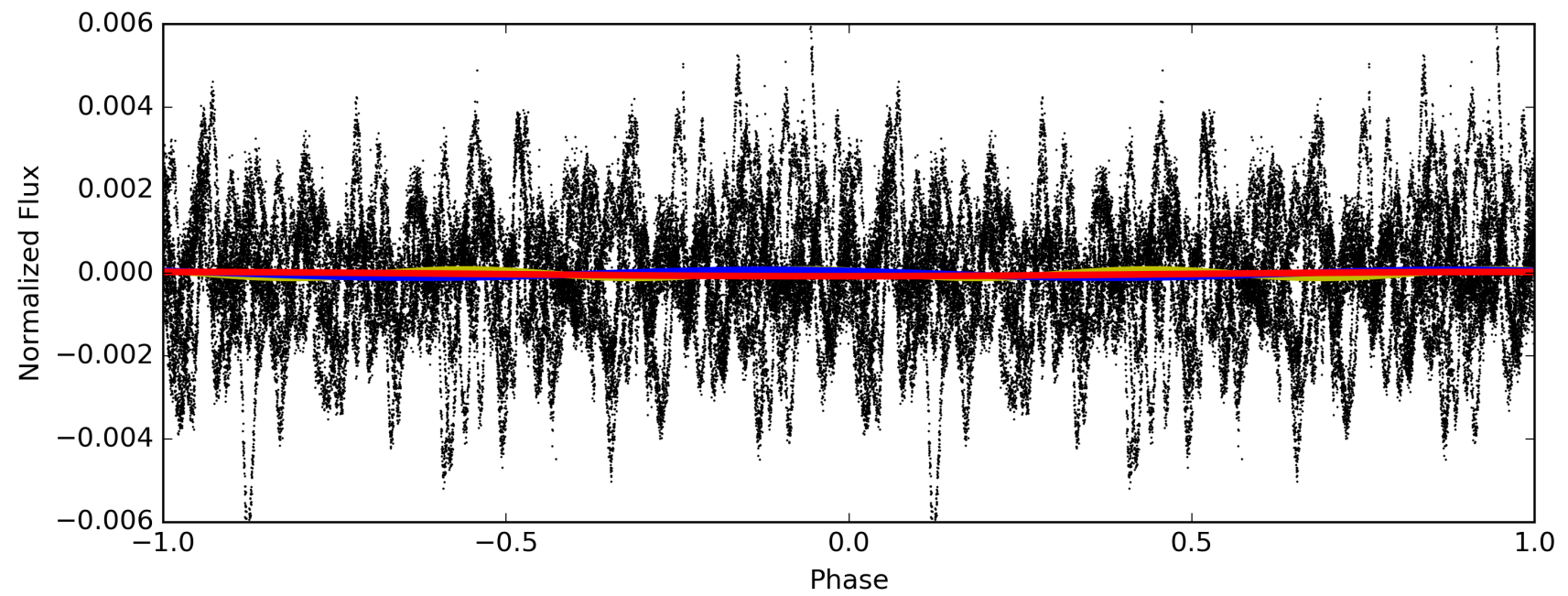
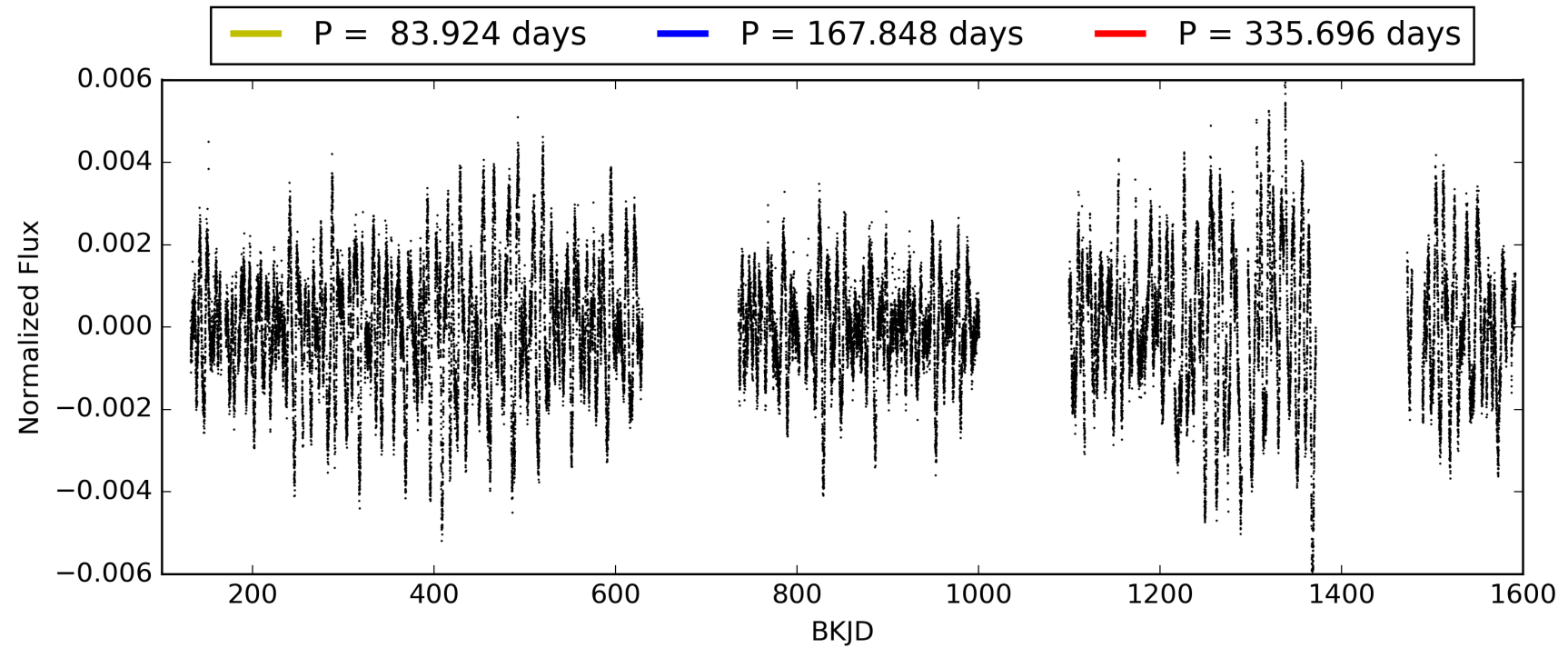
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:29:26 Z

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

TCE 009542697-02, PDC Light Curves

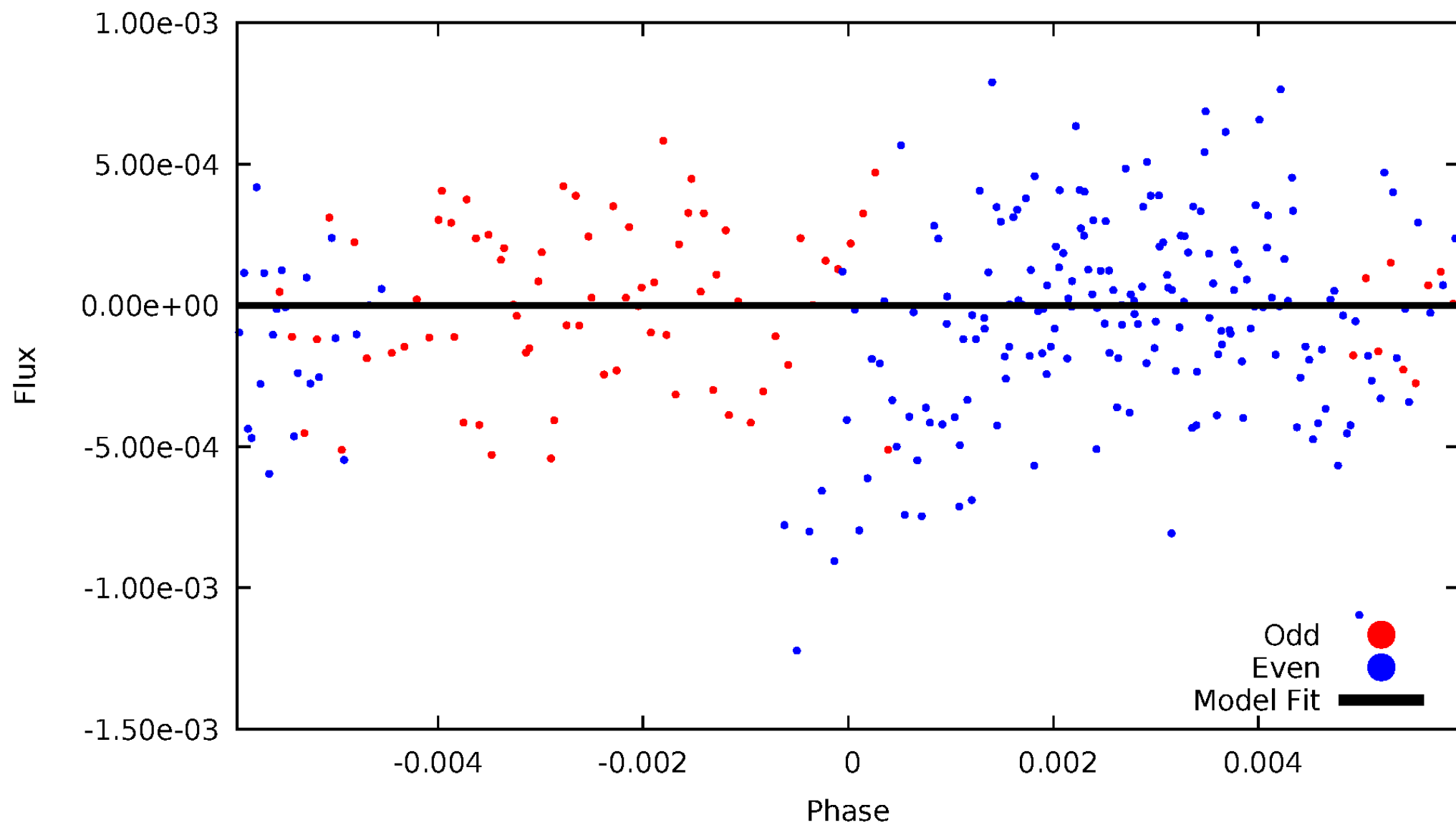


TCE 009542697-02



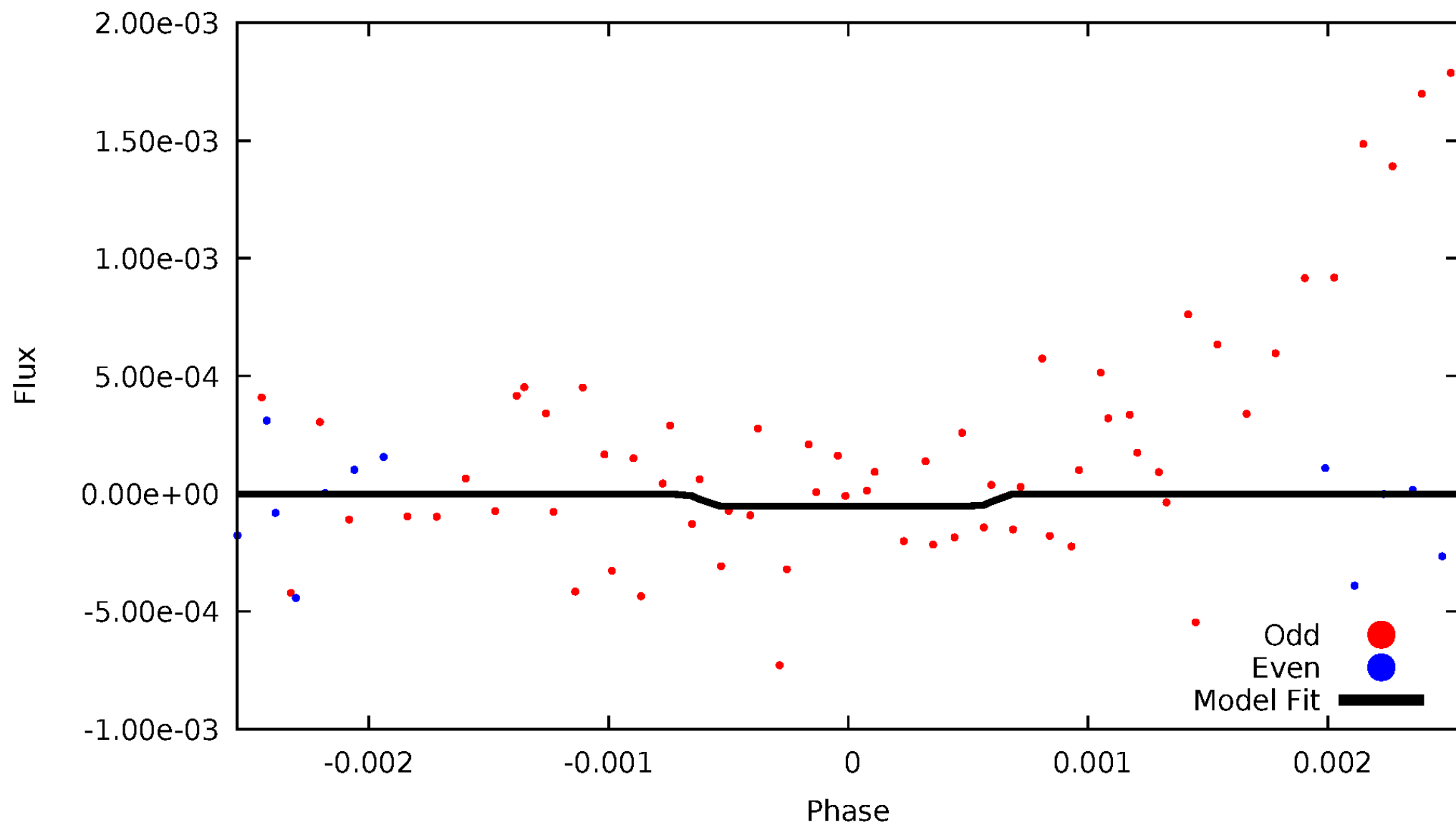
DV Odd/Even

TCE 009542697-02



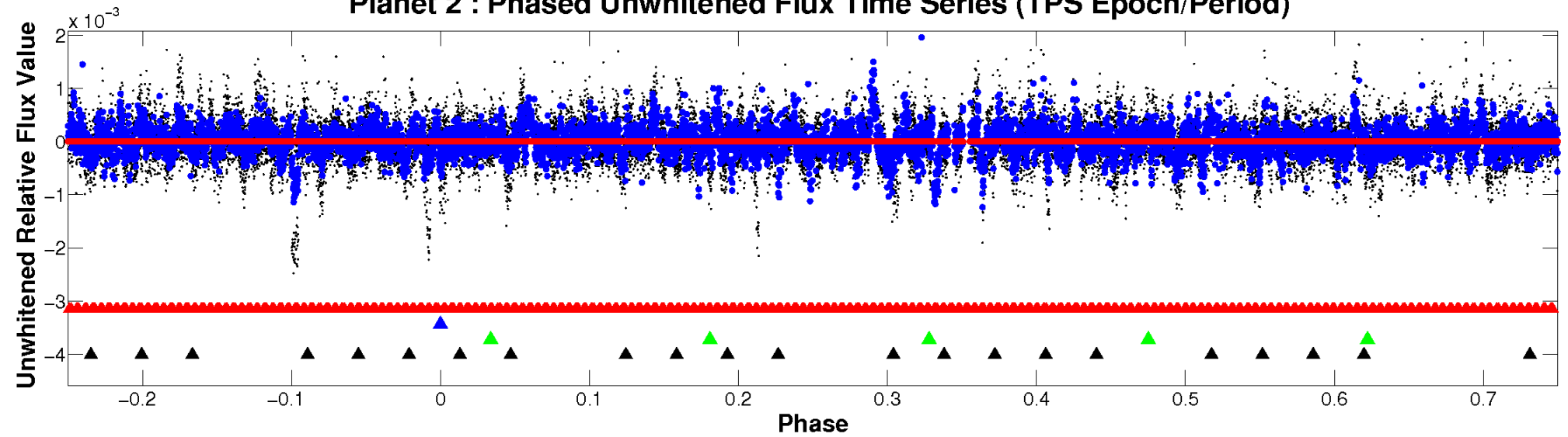
ALT Odd/Even

TCE 009542697-02

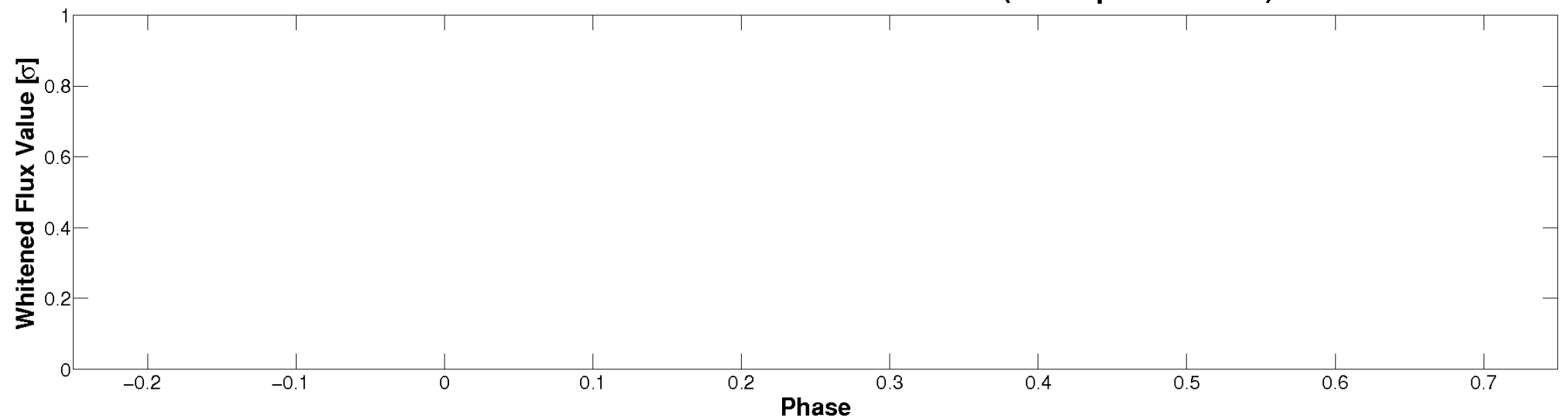


Non-Whitened Vs. Whitened Light Curve

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

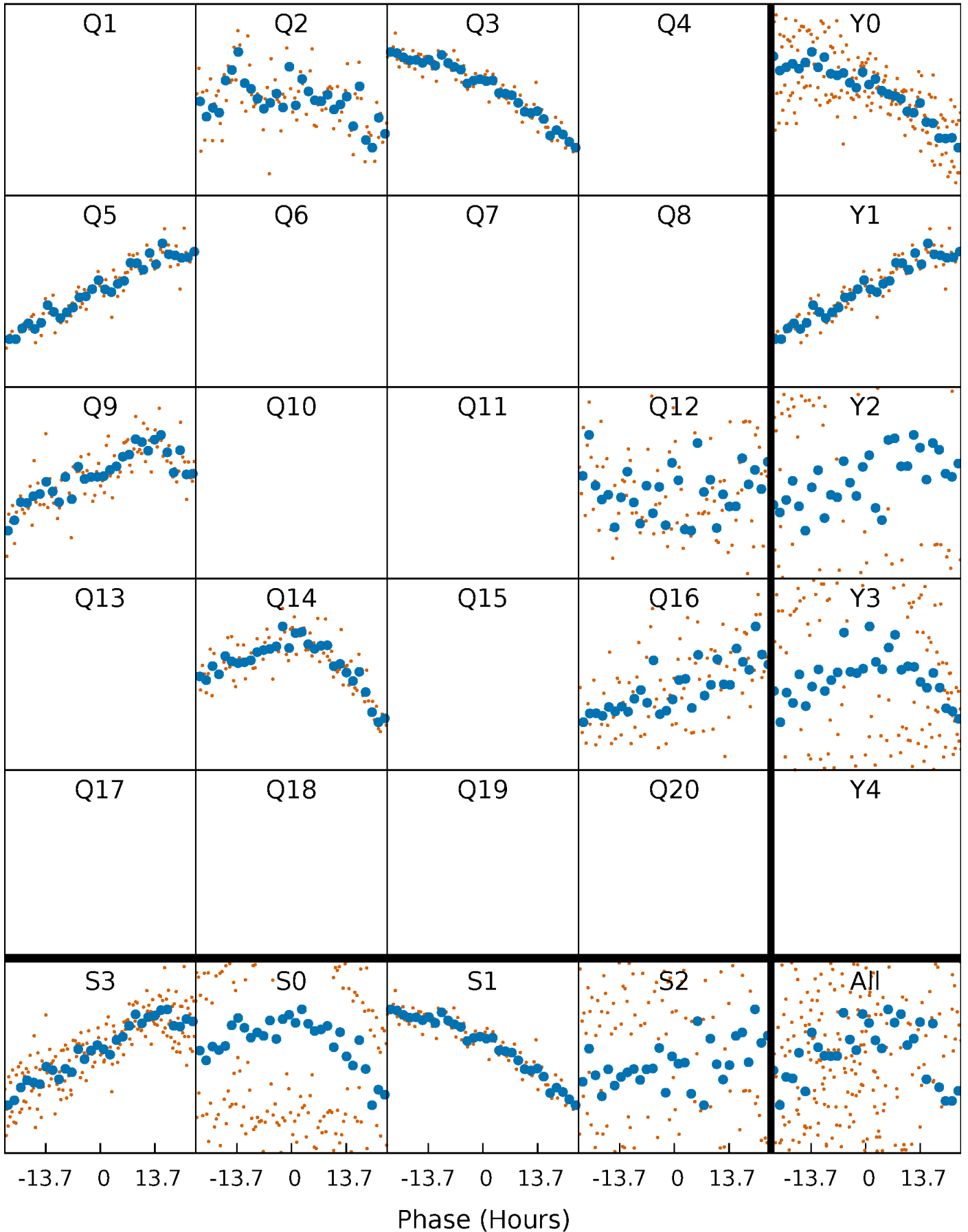


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



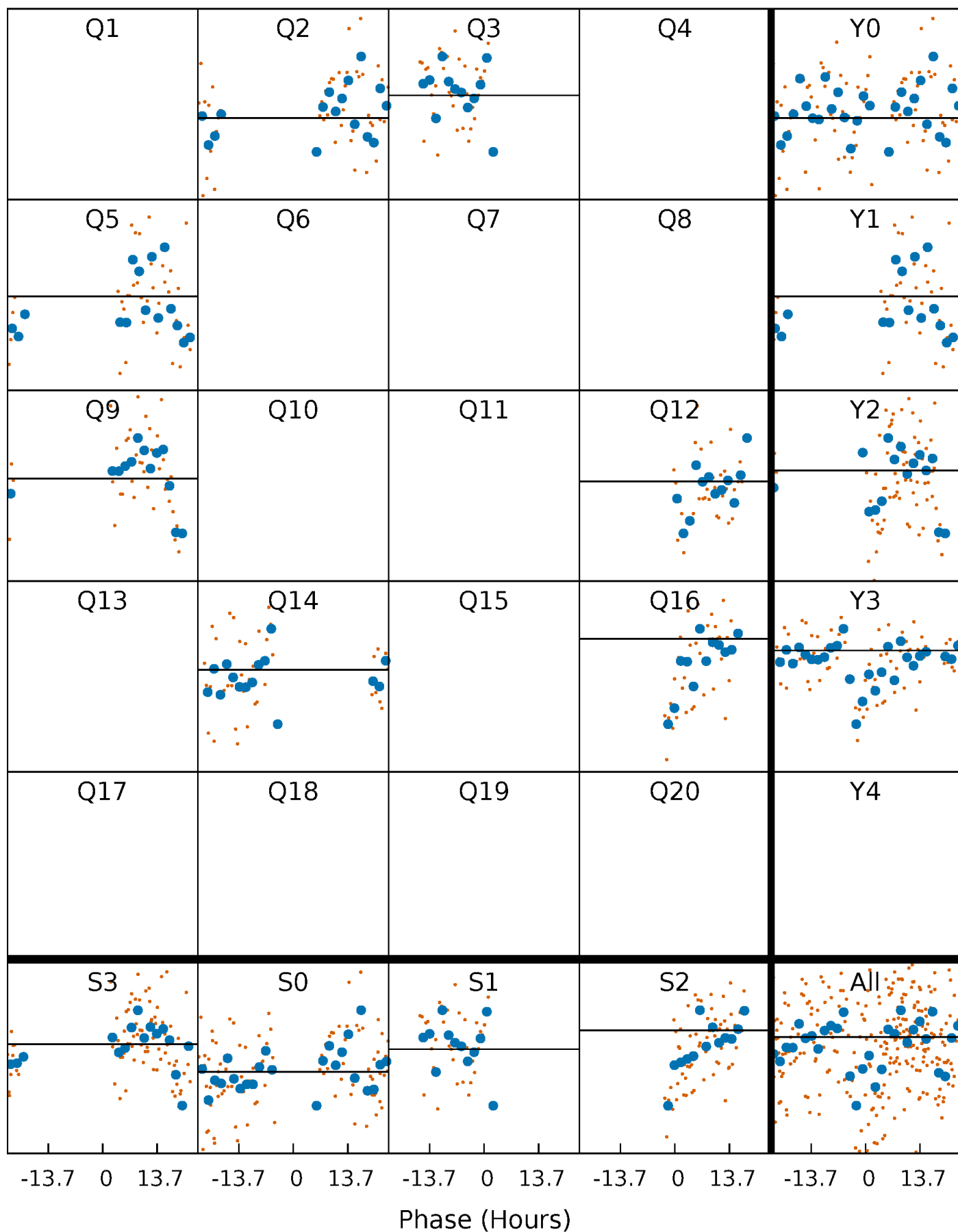
PDC Quarter-Phased Transit Curves

TCE 009542697-02 P=167.848073 Days $T_0=171.897925$ (BKJD)



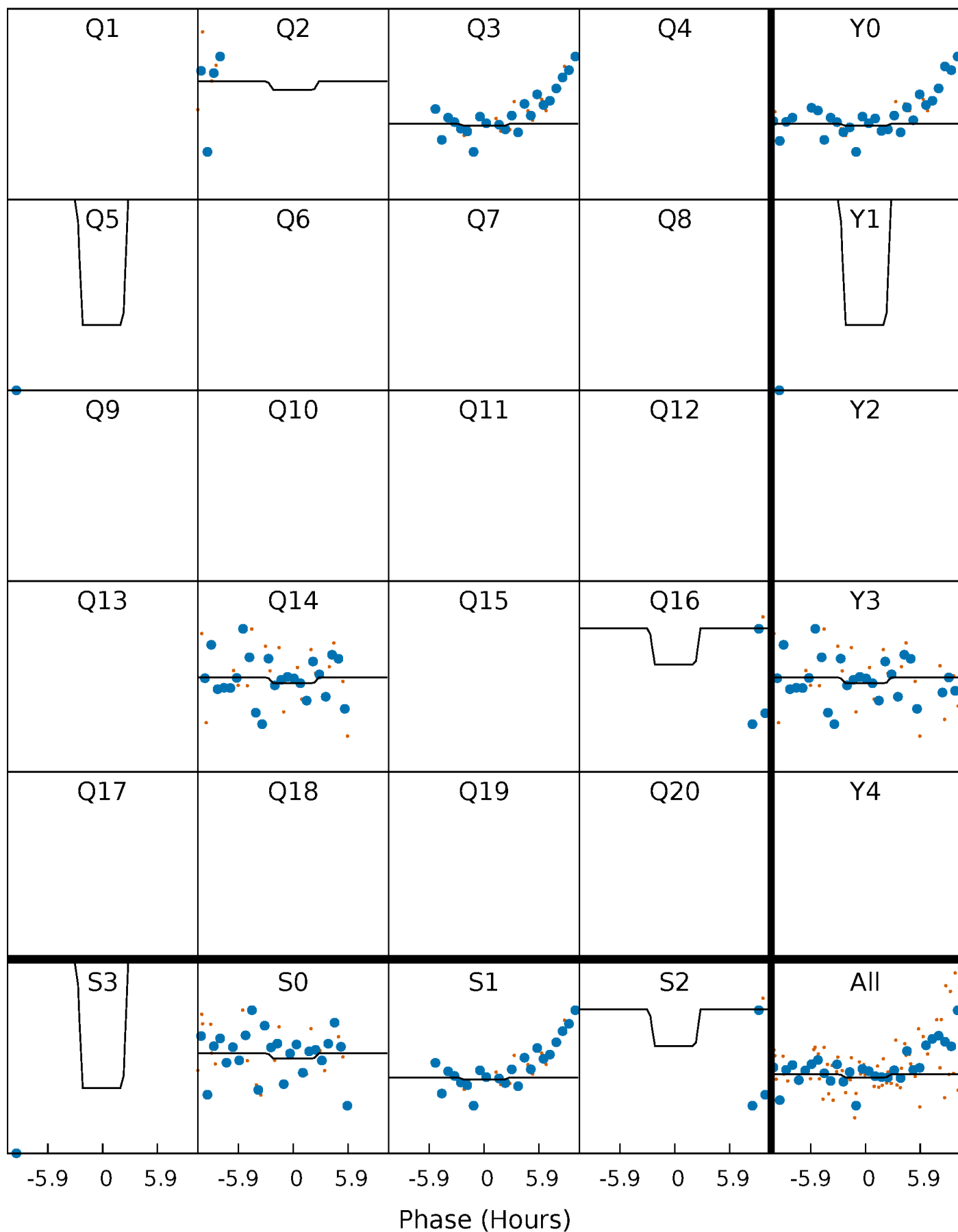
DV Quarter-Phased Transit Curves

TCE 009542697-02 $P=167.848073$ Days $T_0=171.897925$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

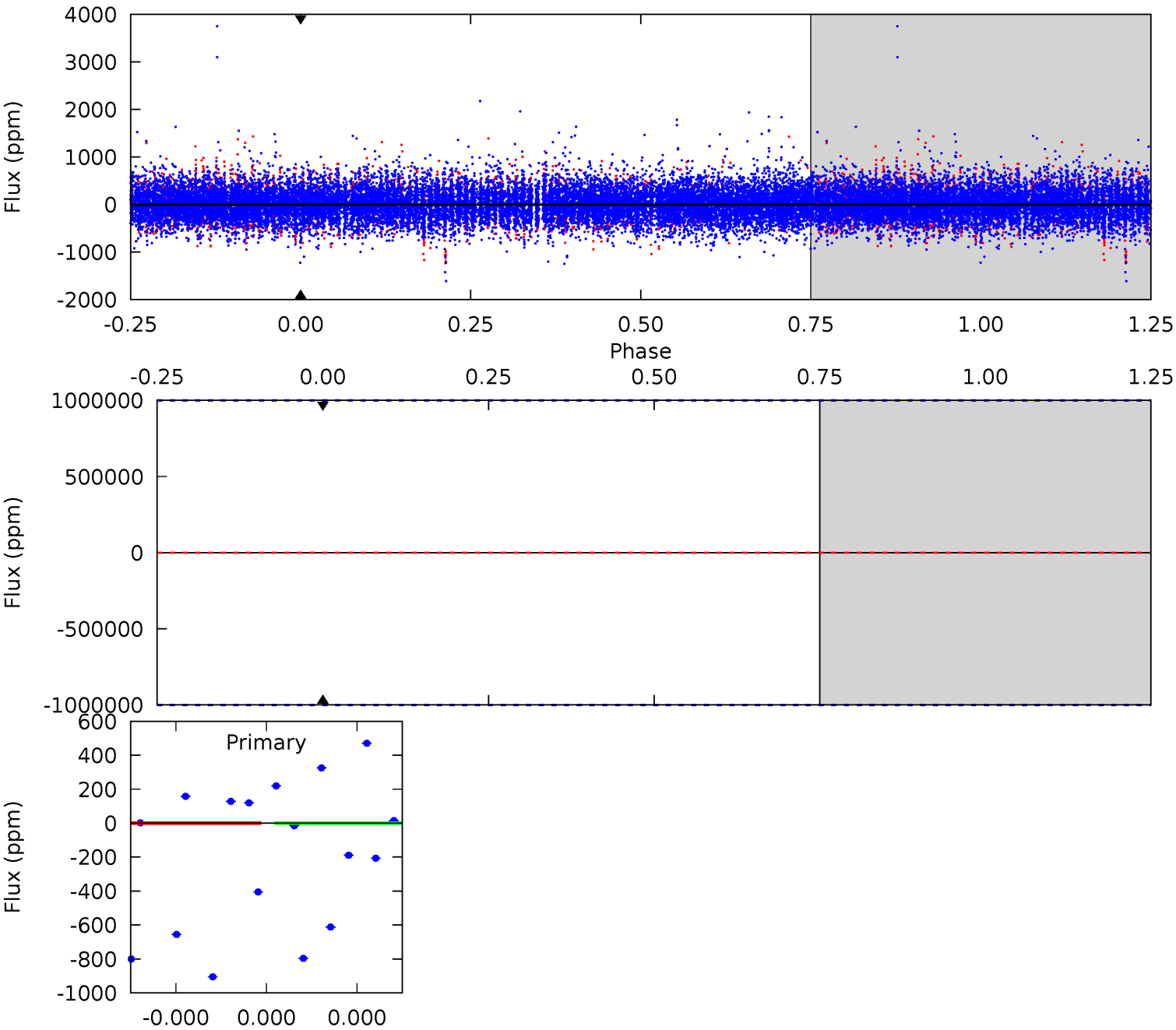
TCE 009542697-02 P=167.848073 Days $T_0=171.459391$ (BKJD)



DV Model-Shift Uniqueness Test

009542697-02, P = 167.848073 Days, E = 4.049852 Days

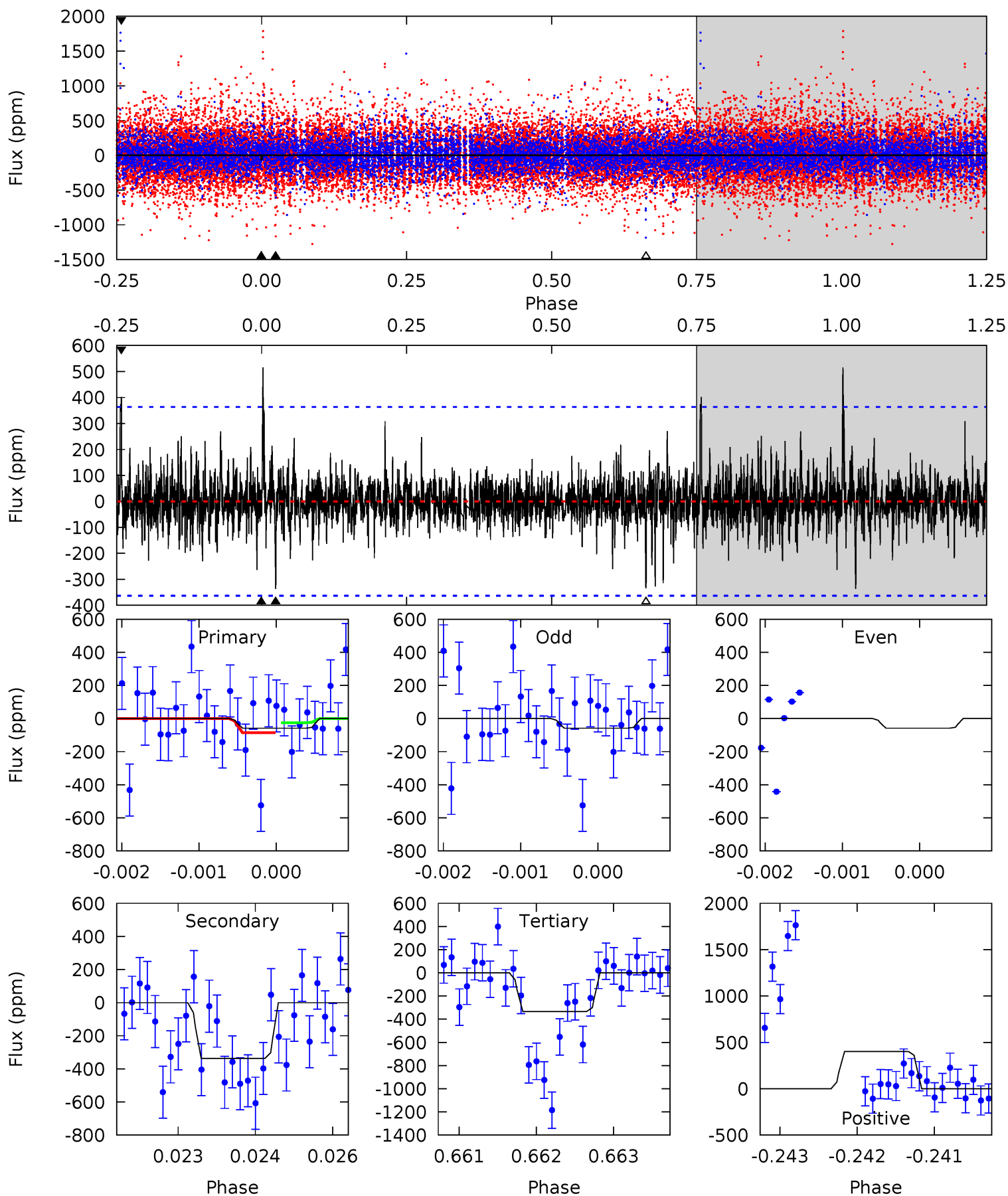
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009542697-02, P = 167.848073 Days, E = 3.611318 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.87	5.01	4.97	5.98	5.42	3.23	1.00	-4.10	-5.11	0.04	-0.97	0	1.00	0.61	0.45



Stellar Parameters For KIC 009542697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+181}_{-199}	$4.399^{+0.101}_{-0.203}$	$-0.020^{+0.250}_{-0.300}$	$1.065^{+0.326}_{-0.140}$	$1.038^{+0.145}_{-0.130}$	$1.210^{+0.486}_{-0.634}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+31%/-13%	+14%/-13%	+40%/-52%
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 009542697-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$9.13^{+10.04}_{-6.41}$	496^{+36}_{-25}	4667^{+18559}_{-23668}	$4868^{+450000}_{-329256}$
Alt.	-336 ± 67	$8.31^{+9.66}_{-5.79}$	496^{+36}_{-27}	3543^{+1980}_{-705}	988^{+9336}_{-782}

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

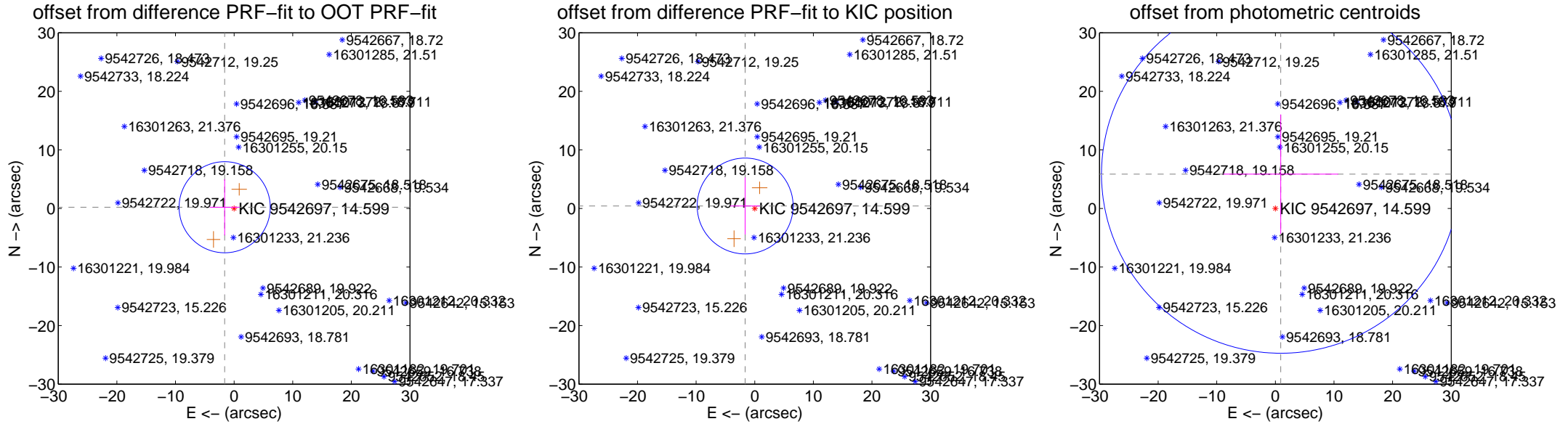
DV Centroid Data

Supplemental centroid analysis for 009542697-02. Kepler magnitude: 14.60. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

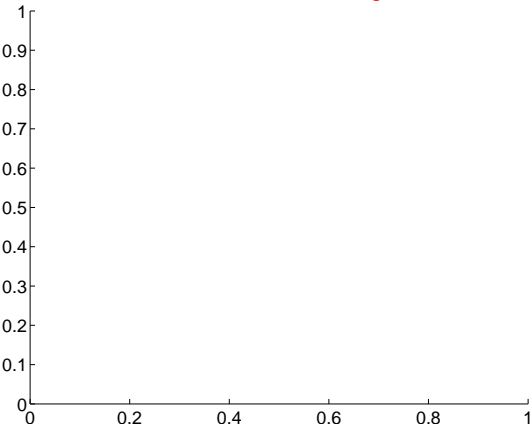
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.622 ± 2.592	0.63	1.609 ± 2.540	0.206 ± 4.796
PRF-fit source offset from KIC position	1.689 ± 2.728	0.62	1.636 ± 2.527	0.417 ± 4.865
photometric centroid source offset	5.92 ± 10.19	0.58	-0.91 ± 9.80	5.85 ± 10.20



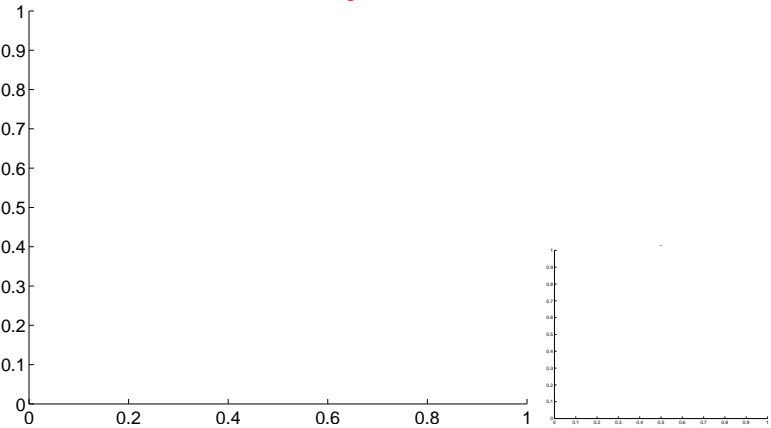
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

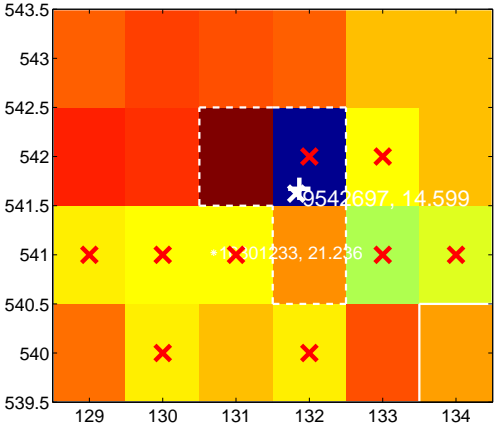
Q1 no difference image



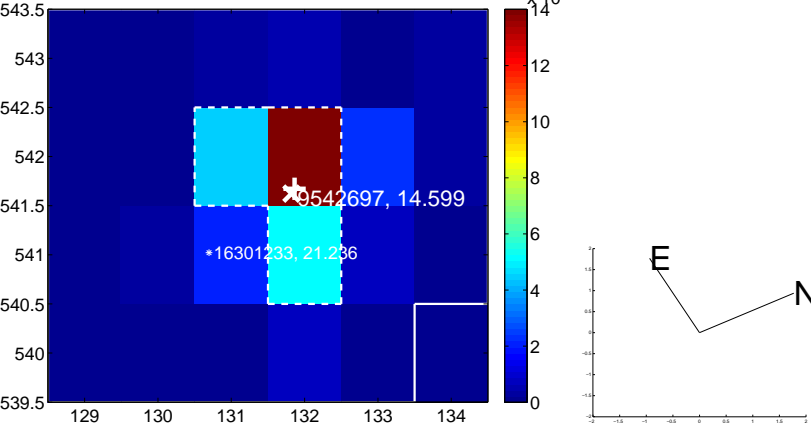
Q1 no OOT image



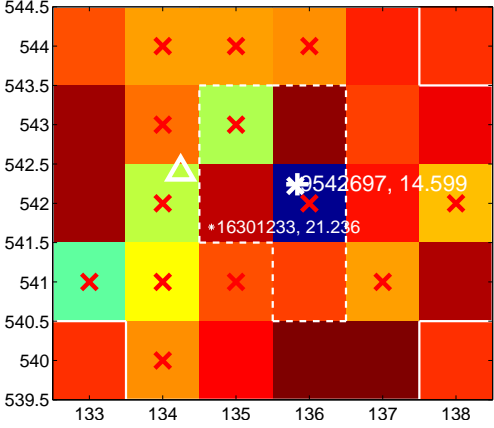
Q2 difference image. Poor Quality



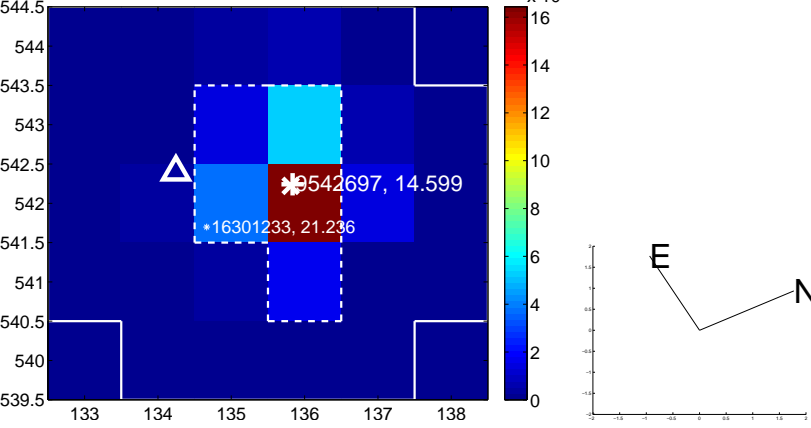
Q2 OOT image



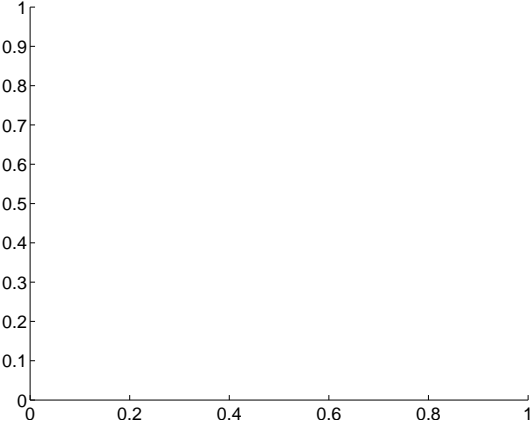
Q3 difference image. Poor Quality



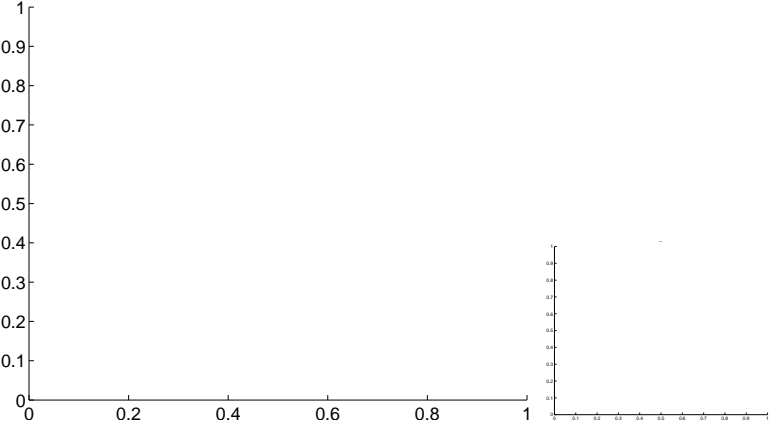
Q3 OOT image



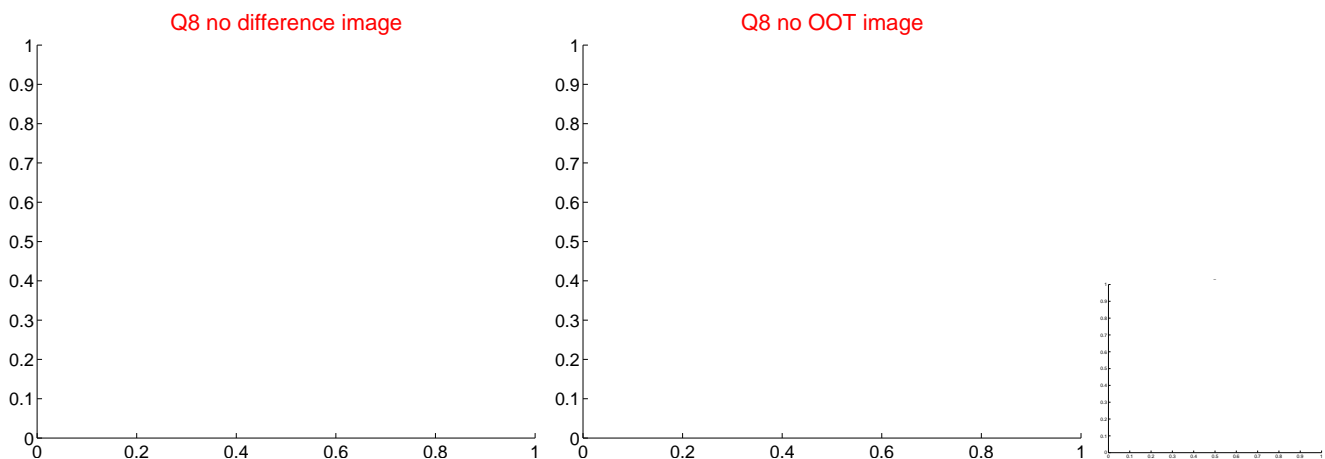
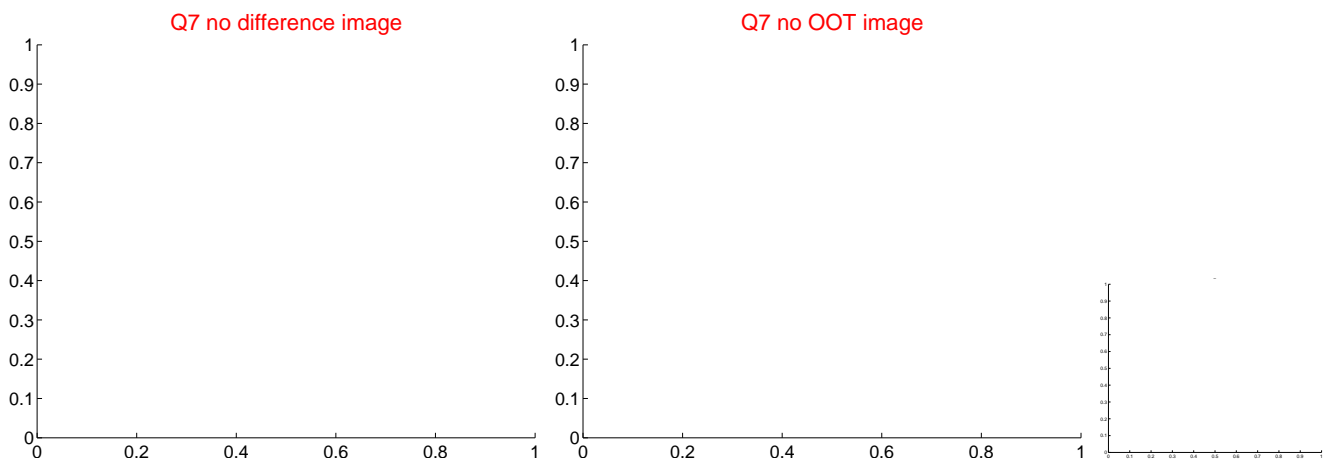
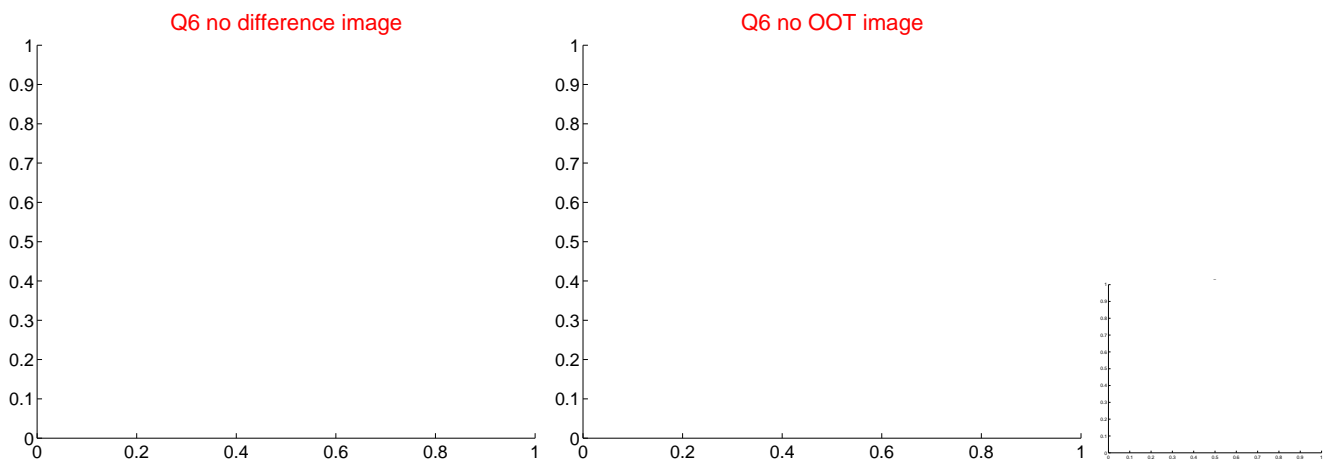
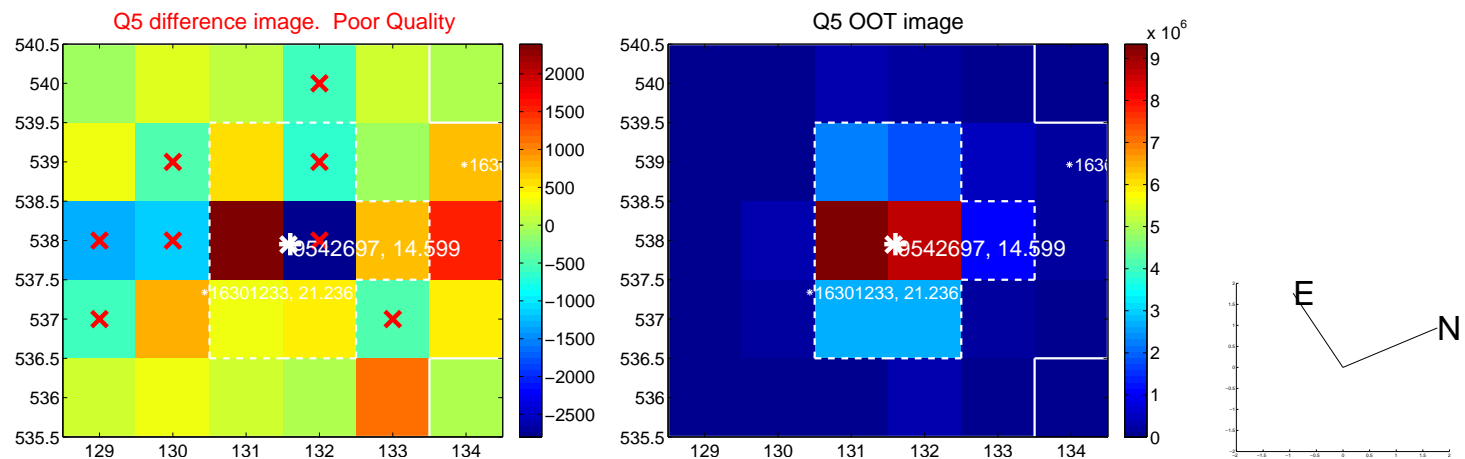
Q4 no difference image



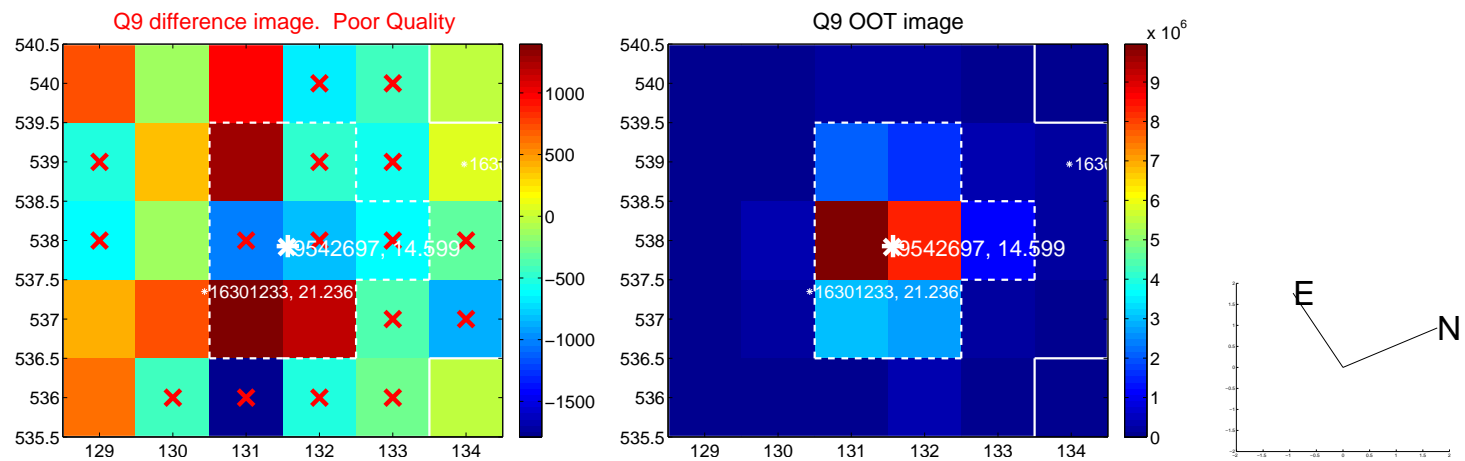
Q4 no OOT image



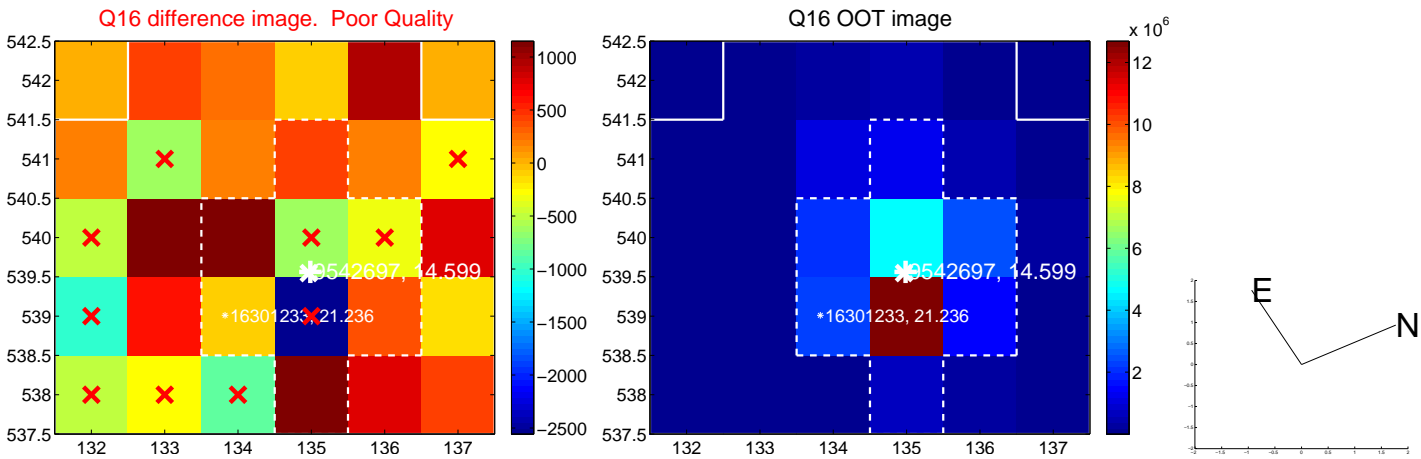
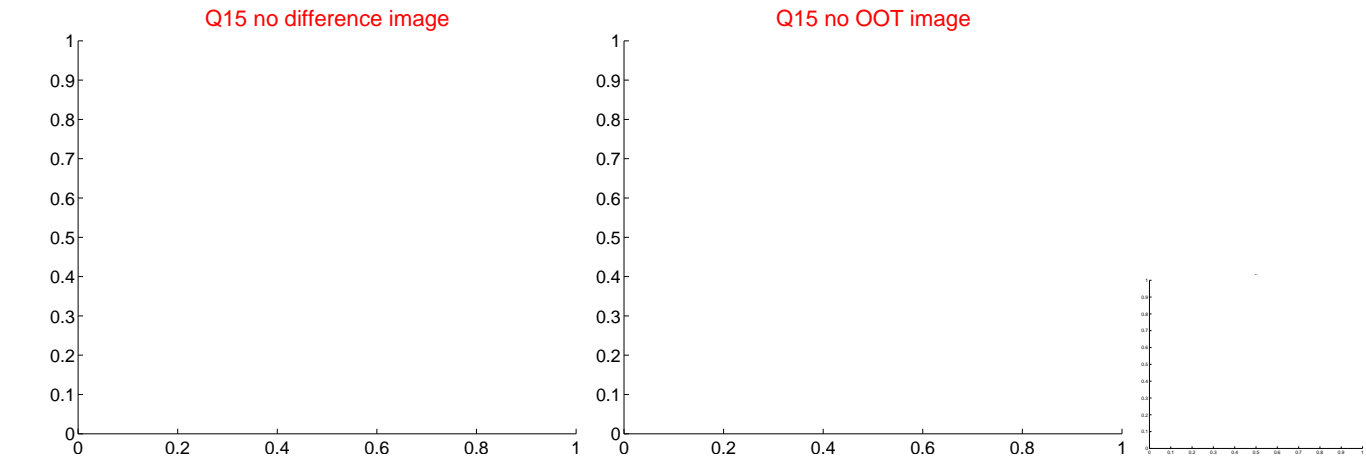
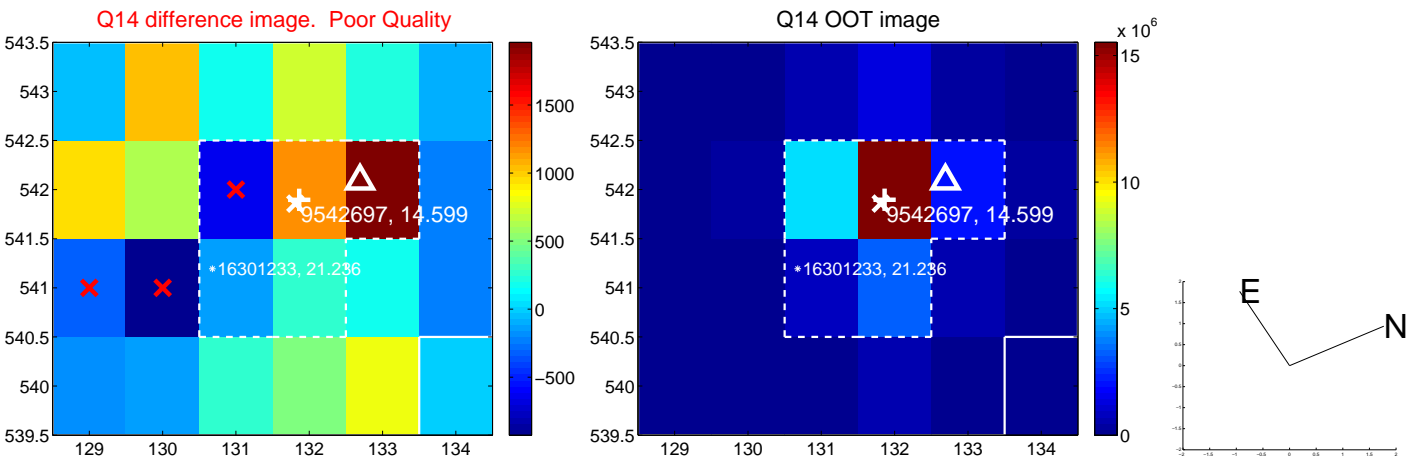
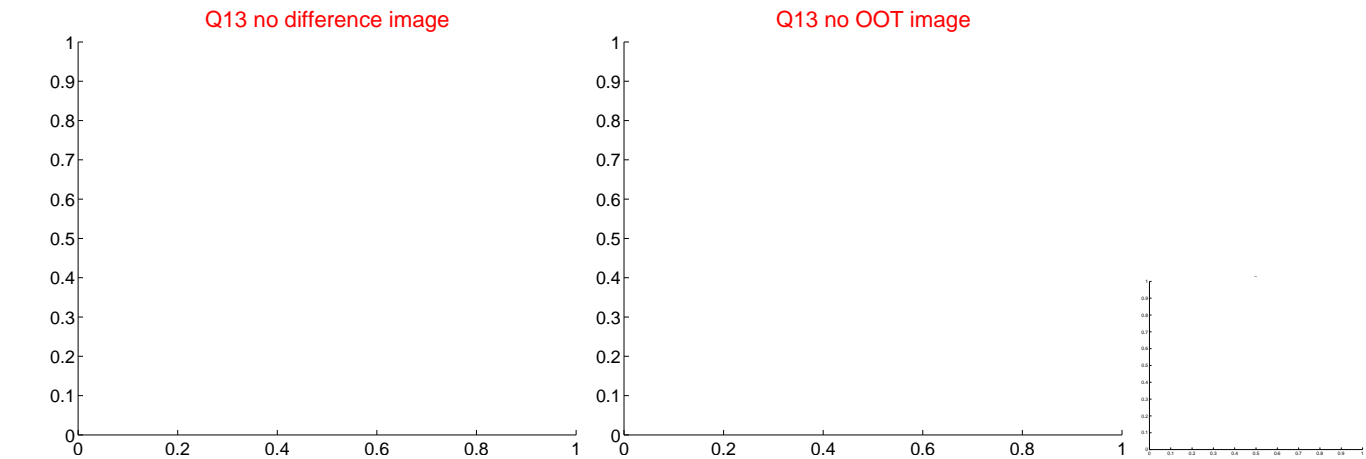
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



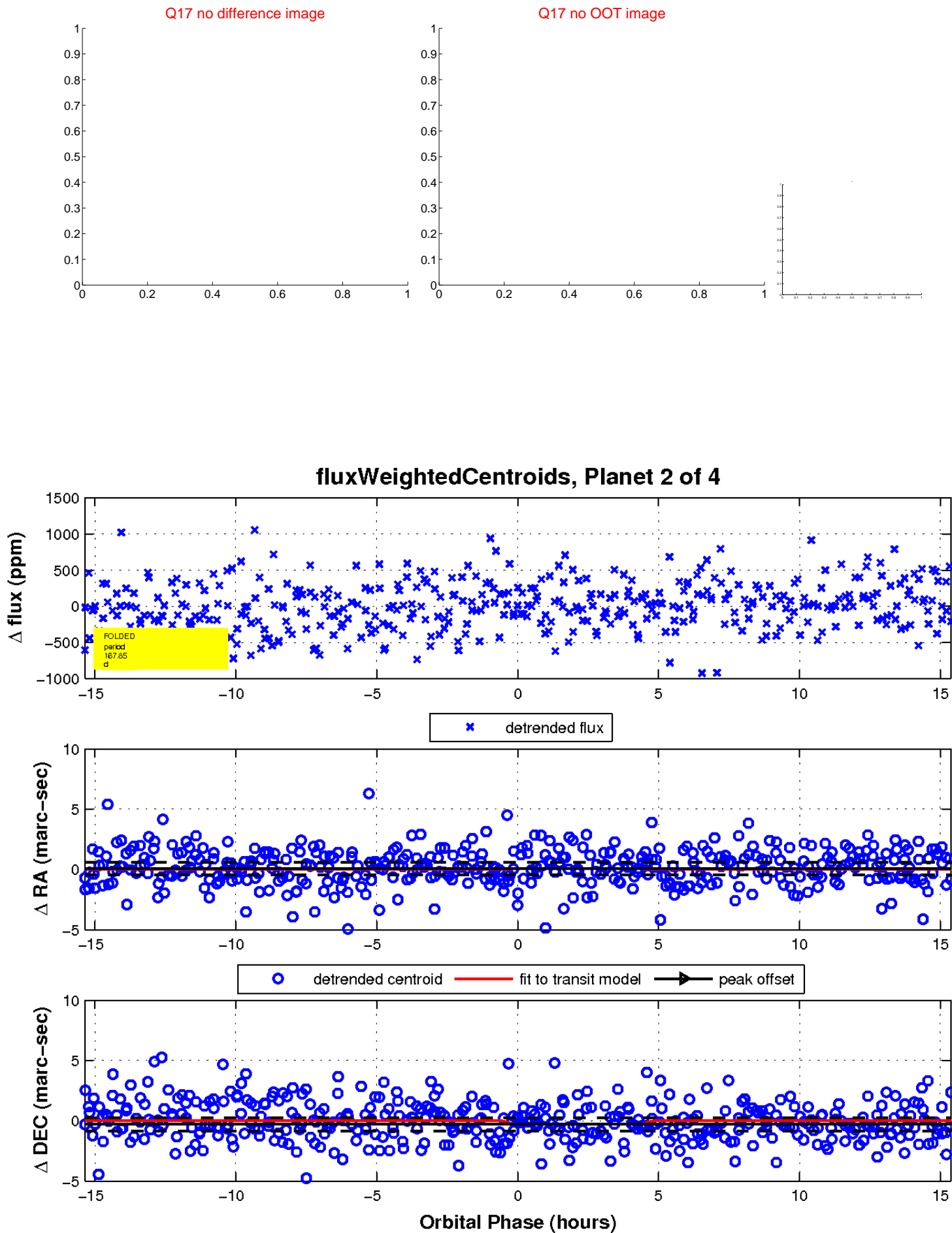
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



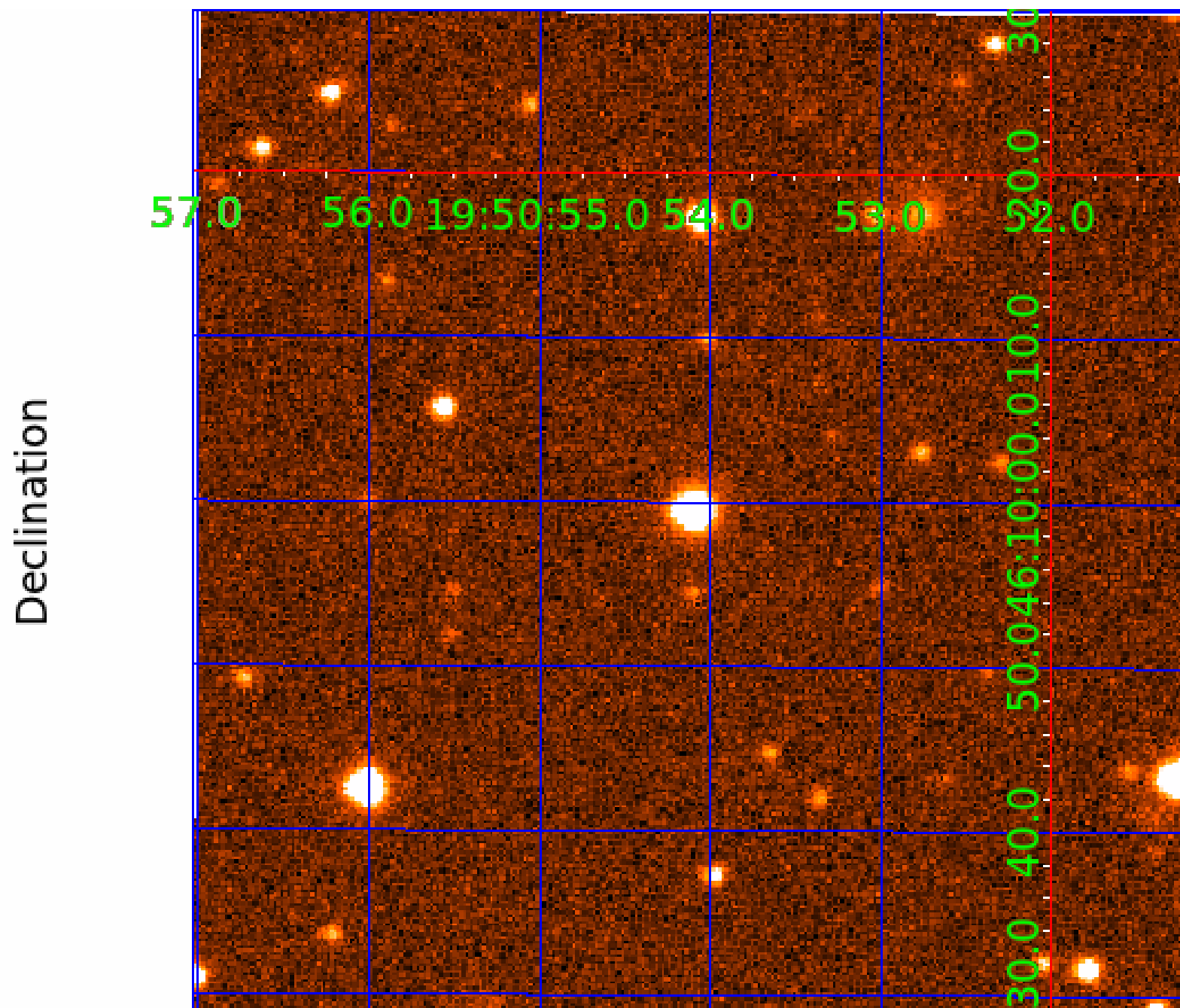
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009542697

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})
009542697-01	OBS	No	1.757100	132.991927	63.3	7.811	10.8	11.8	1.06	5997	0.85	1579.31
009542697-02	OBS	No	167.848073	171.897925	1258.9	12.000	20.9	-1.0	1.06	5997	3.76	3.62
009542697-03	OBS	No	311.000278	276.343866	499.4	13.572	11.7	7.2	1.06	5997	2.37	1.59
009542697-04	OBS	No	65.994994	179.810913	308.3	10.286	11.0	6.7	1.06	5997	2.03	12.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009542697-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009542697-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
009542697-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009542697-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

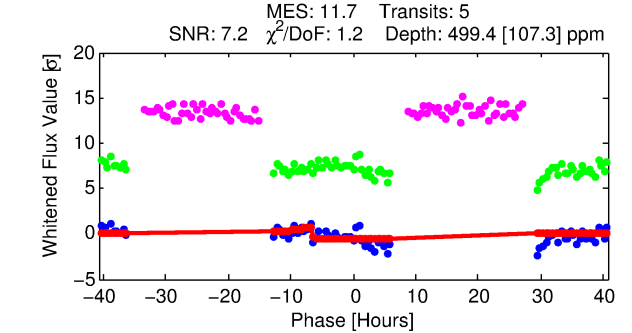
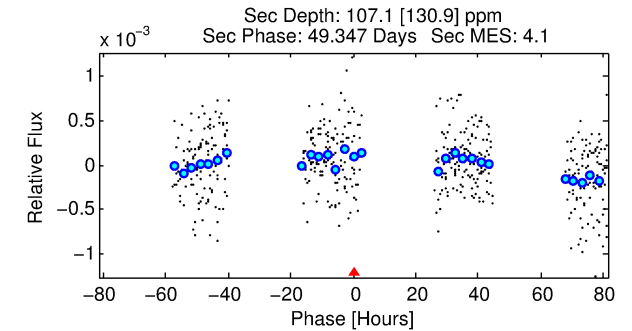
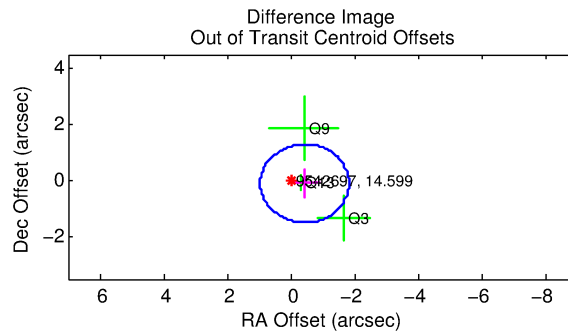
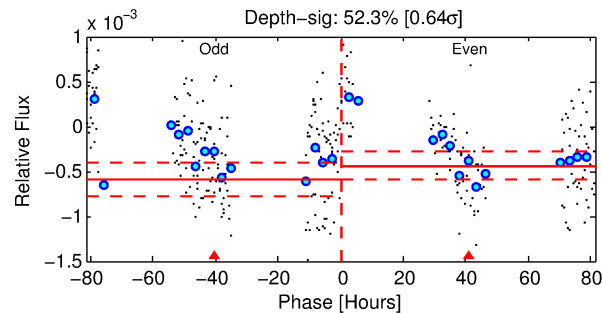
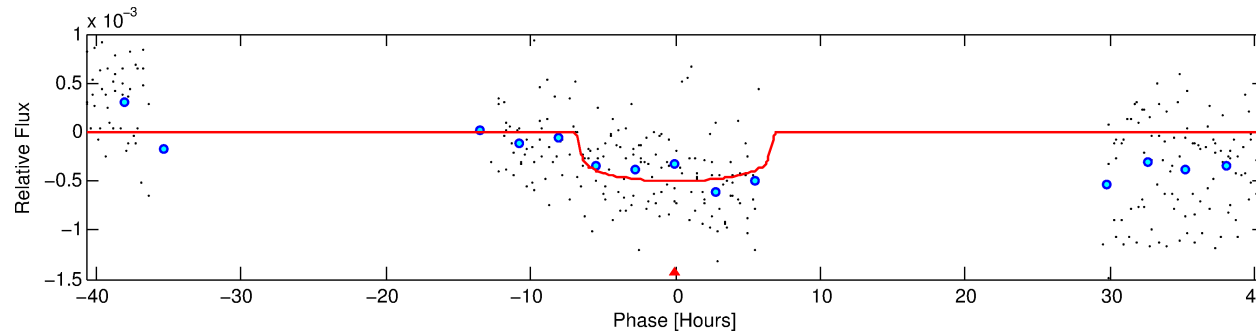
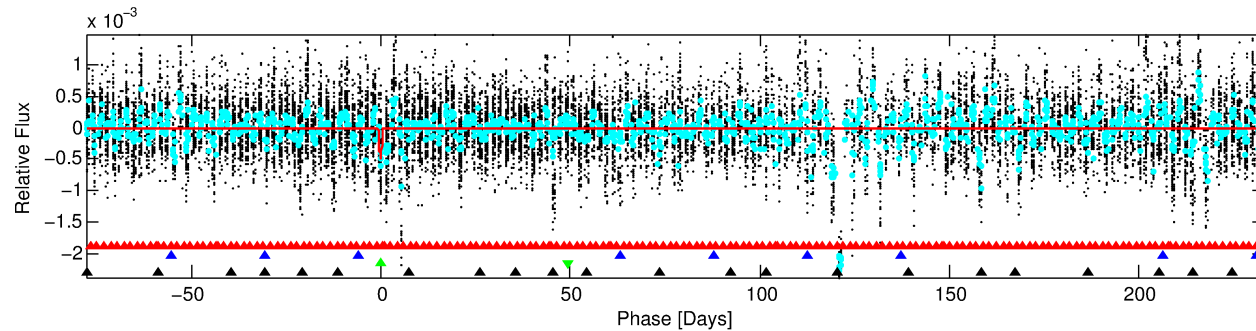
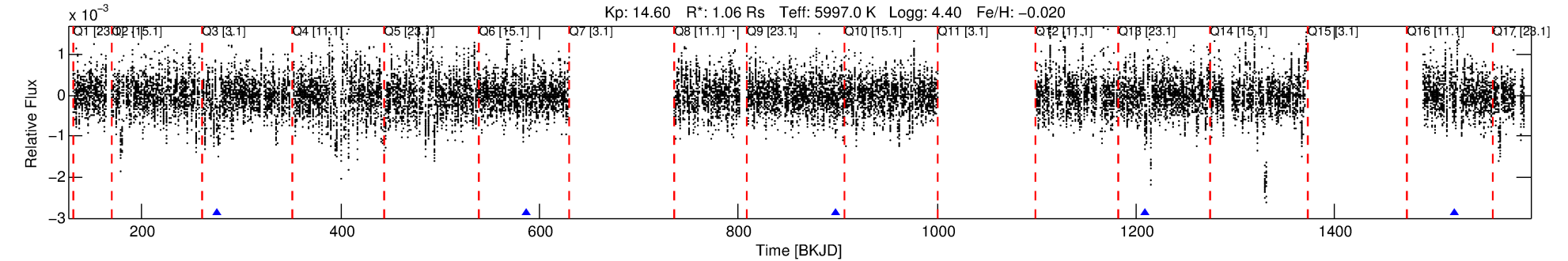
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009542697-03

No Significant Match Found

DV One-Page Summary

KIC: 9542697 Candidate: 3 of 4 Period: 311.000 d



DV Fit Results:

Period = 311.00028 [0.00753] d
Epoch = 276.3439 [0.0541] BKJD
Rp/R* = 0.0204 [0.0335]
a/R* = 177.02 [1374.29]
b = 0.14 [57.09]
Seff = 1.59 [0.63]
Teff = 286 [28] K
Rp = 2.37 [3.96] Re
a = 0.9094 [0.2335] AU
Ag = 8661.32 [30488.23] [0.28 σ]
Teffp = 4270 [3739] K [1.07 σ]

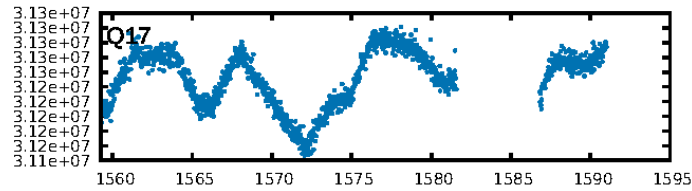
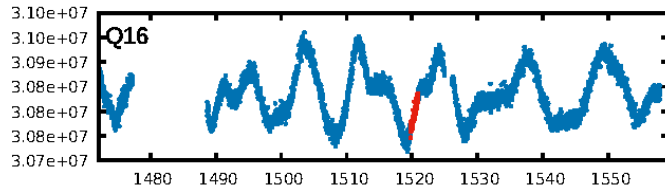
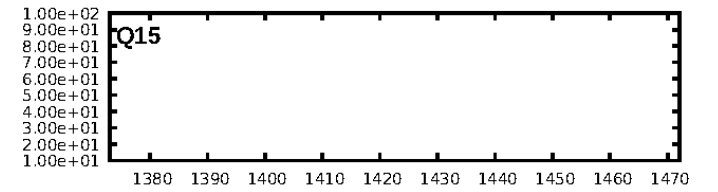
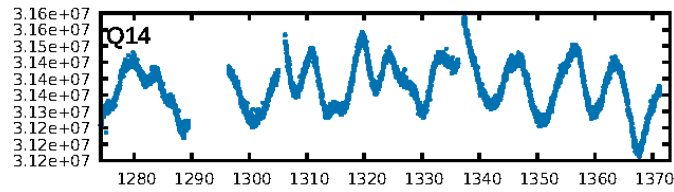
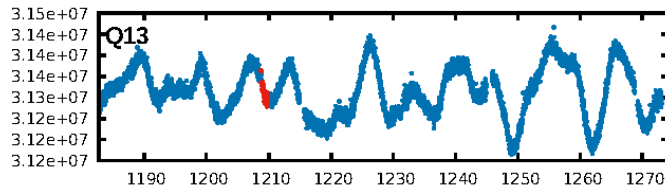
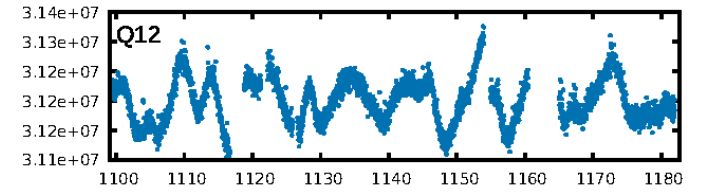
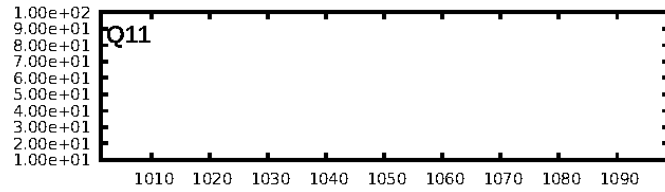
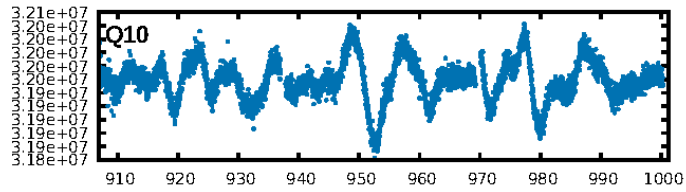
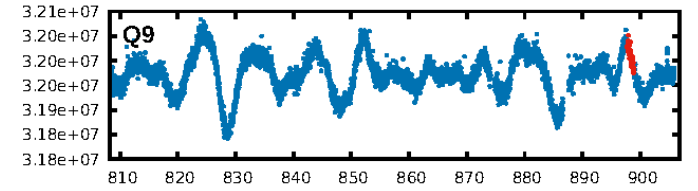
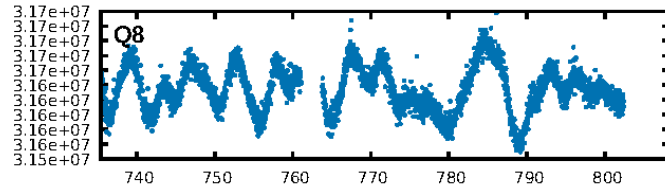
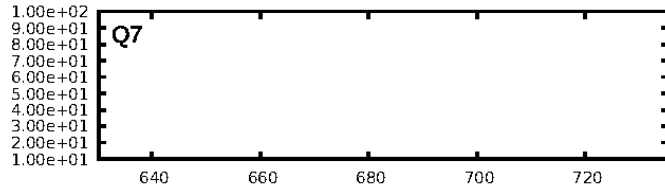
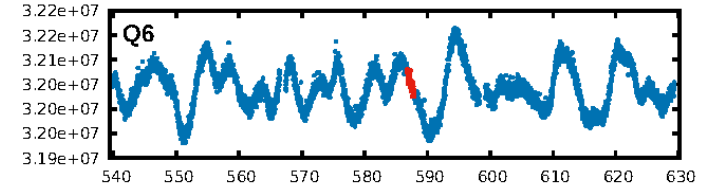
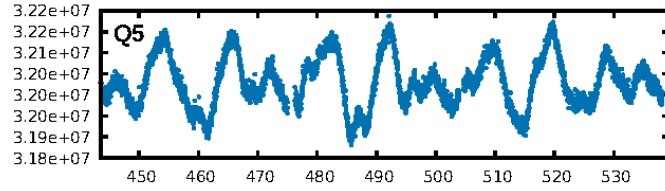
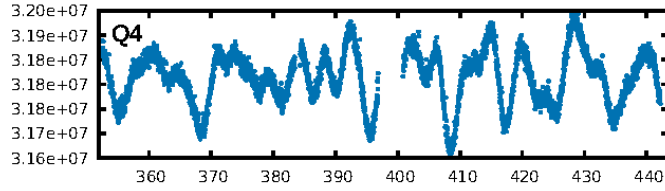
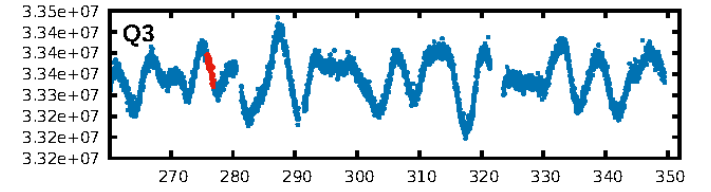
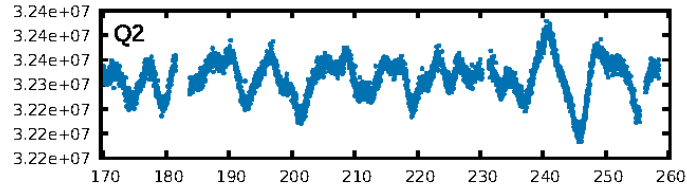
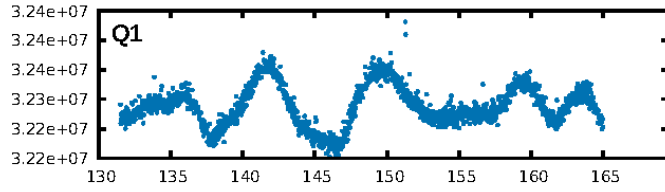
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [189.64 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 2.31e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.7651
Centroid-sig: 26.6%
Centroid-so: 0.573 arcsec [0.68 σ]
OotOffset-rm: 0.449 arcsec [0.96 σ]
KicOffset-rm: 0.416 arcsec [0.90 σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/5]

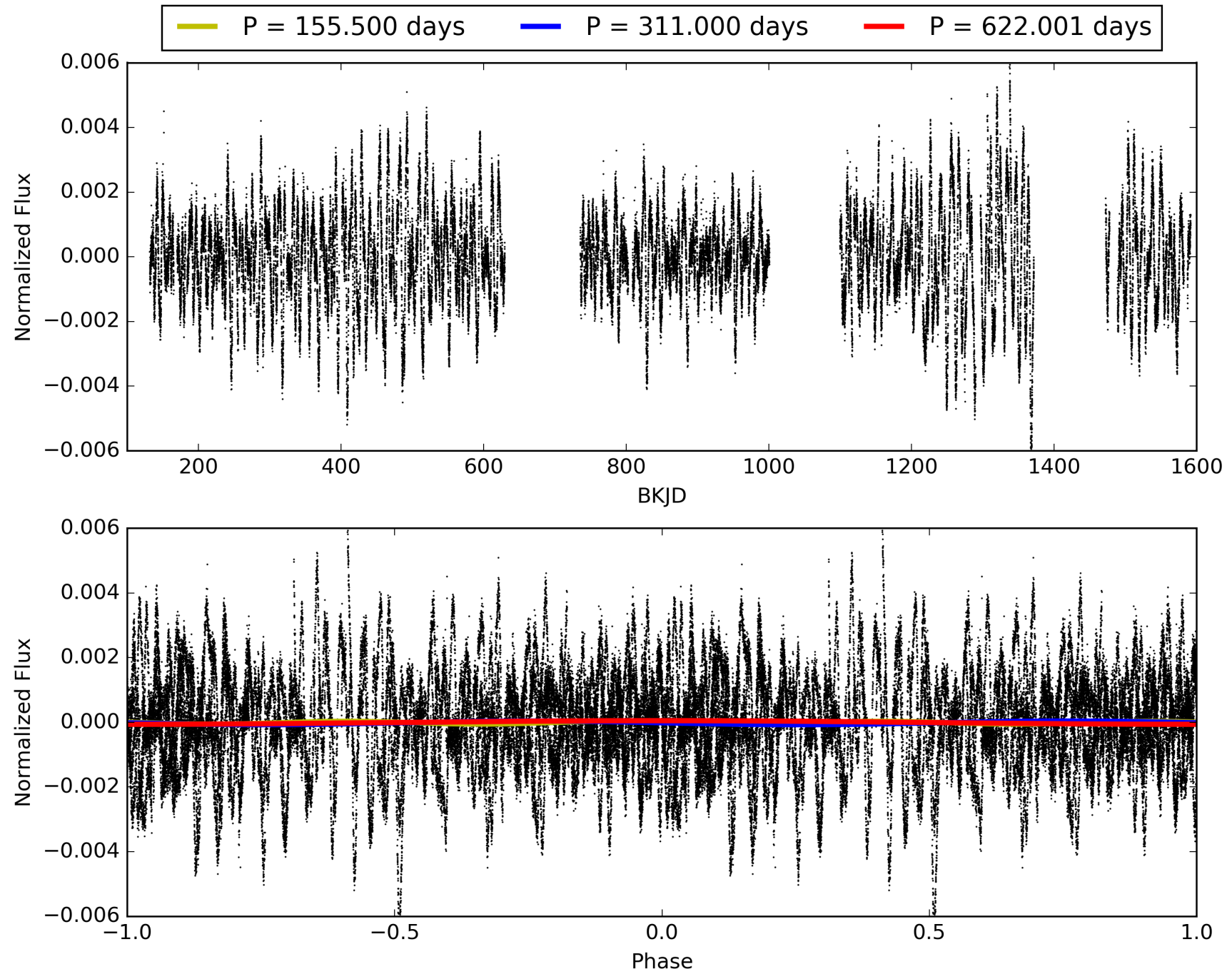
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:29:31 Z

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

TCE 009542697-03, PDC Light Curves

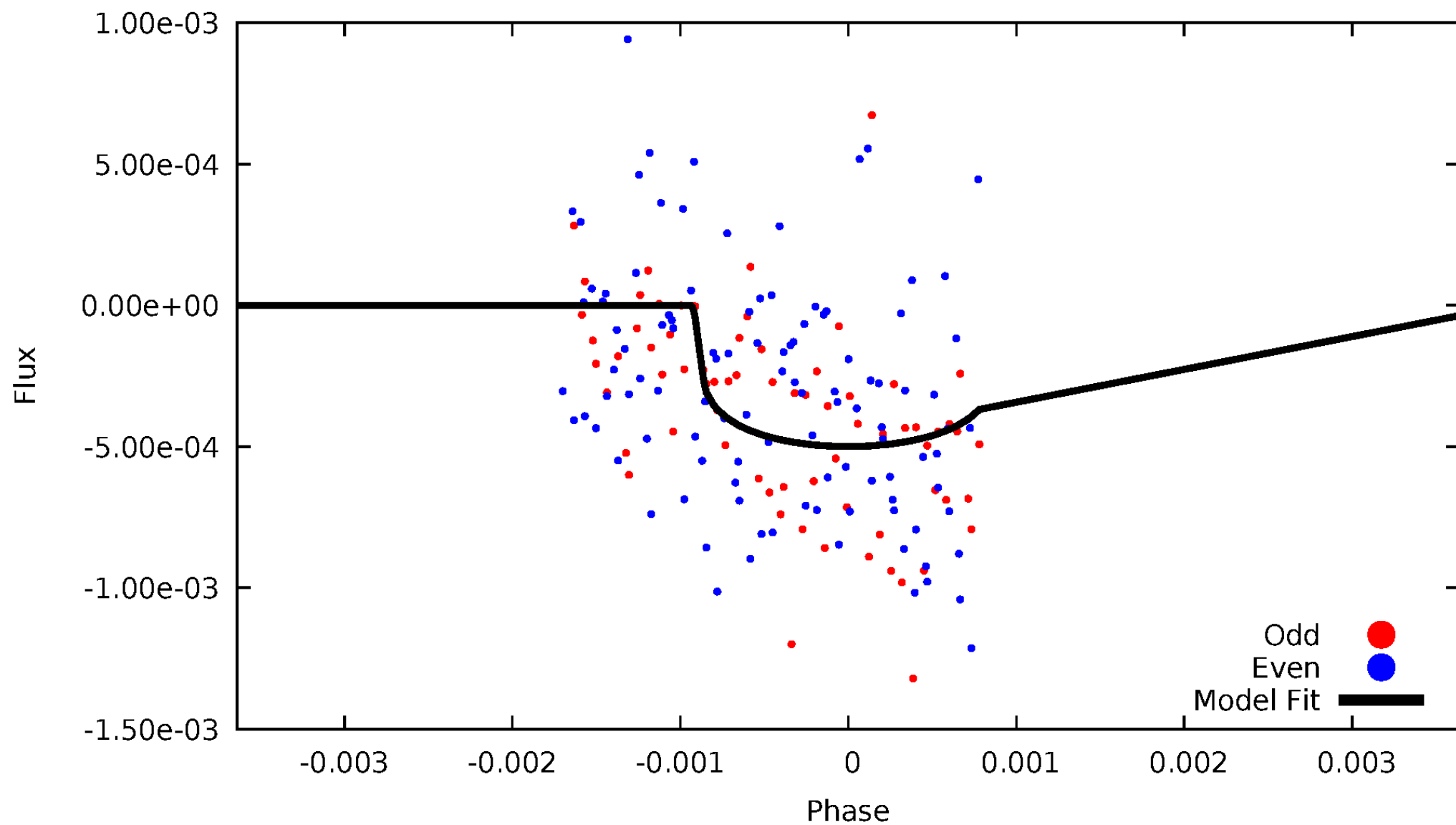


TCE 009542697-03



DV Odd/Even

TCE 009542697-03

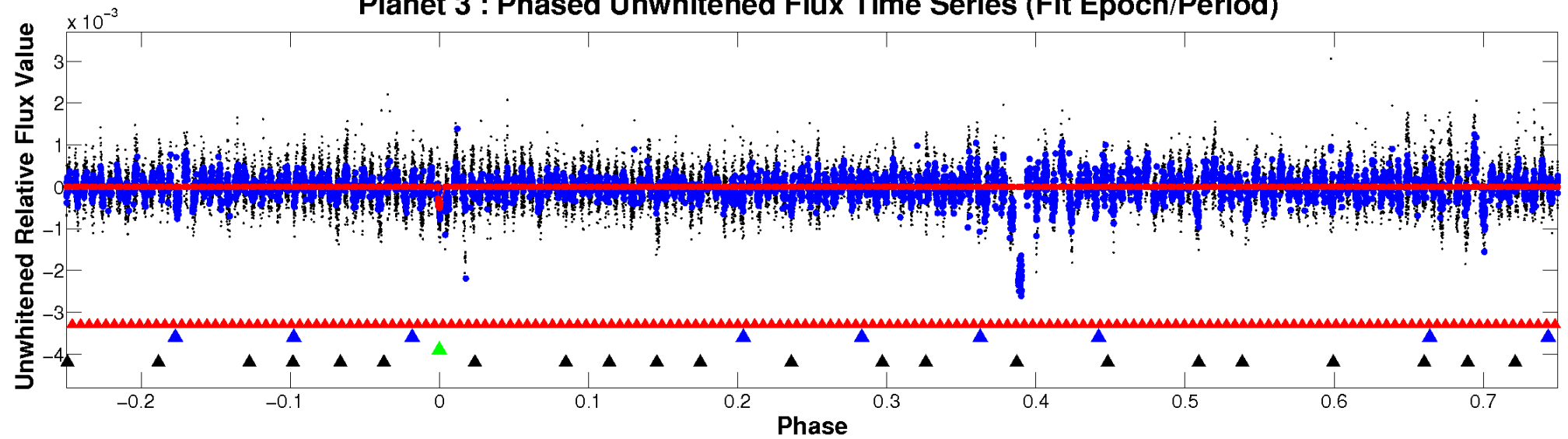


ALT Odd/Even

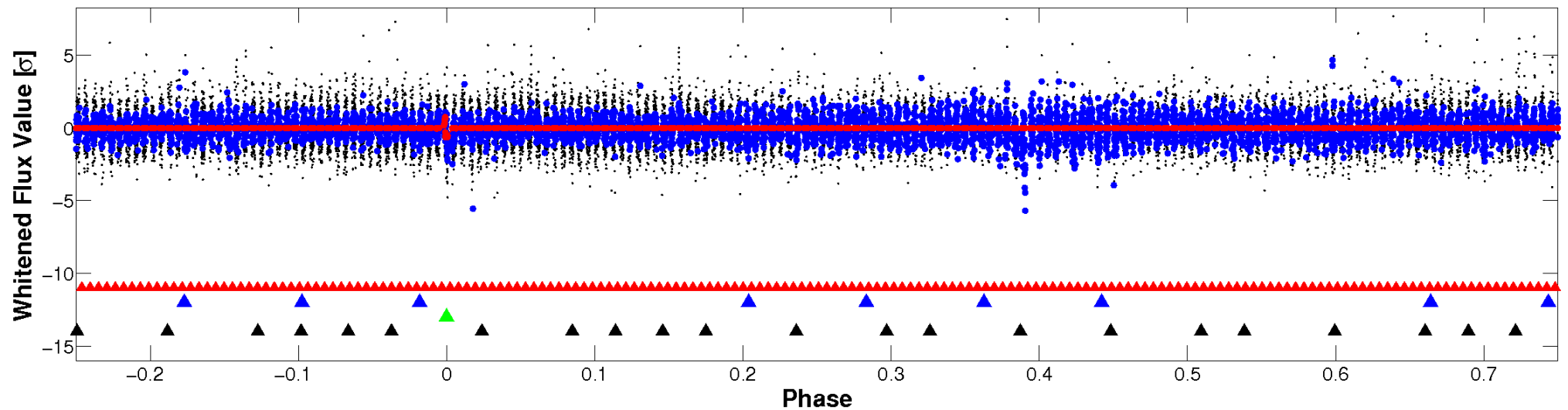
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

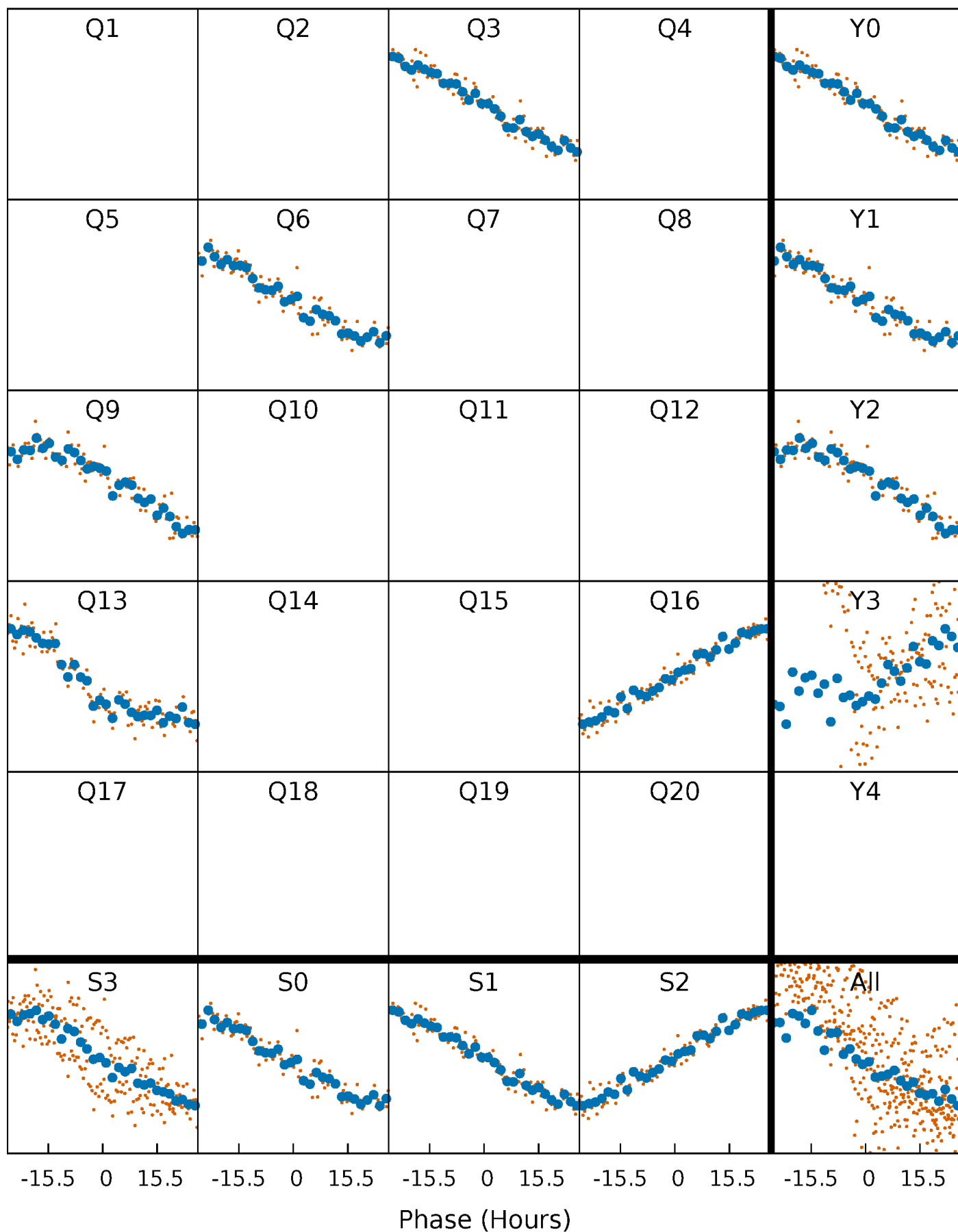


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



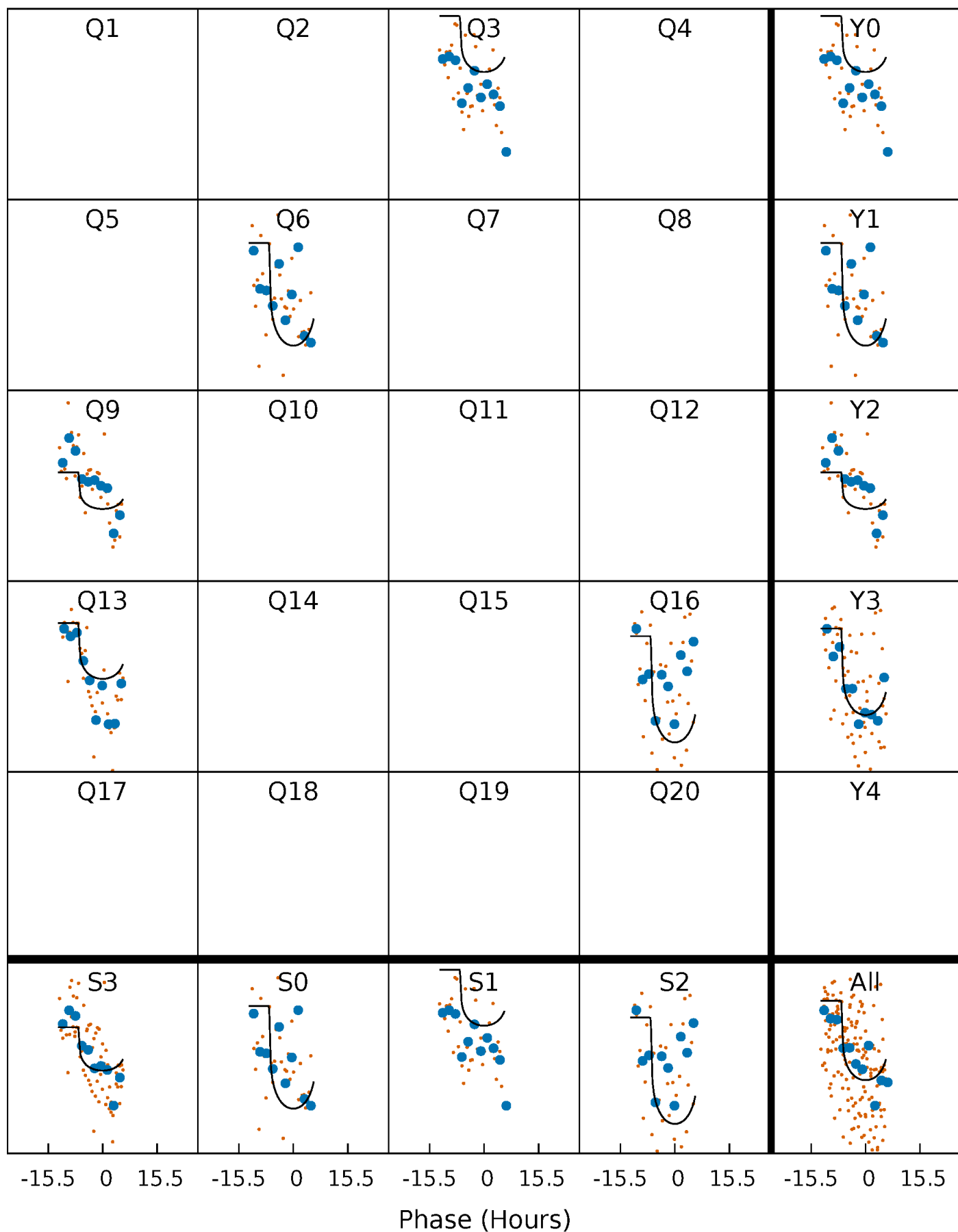
PDC Quarter-Phased Transit Curves

TCE 009542697-03 $P=311.000278$ Days $T_0=276.343866$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009542697-03 $P=311.000278$ Days $T_0=276.343866$ (BKJD)

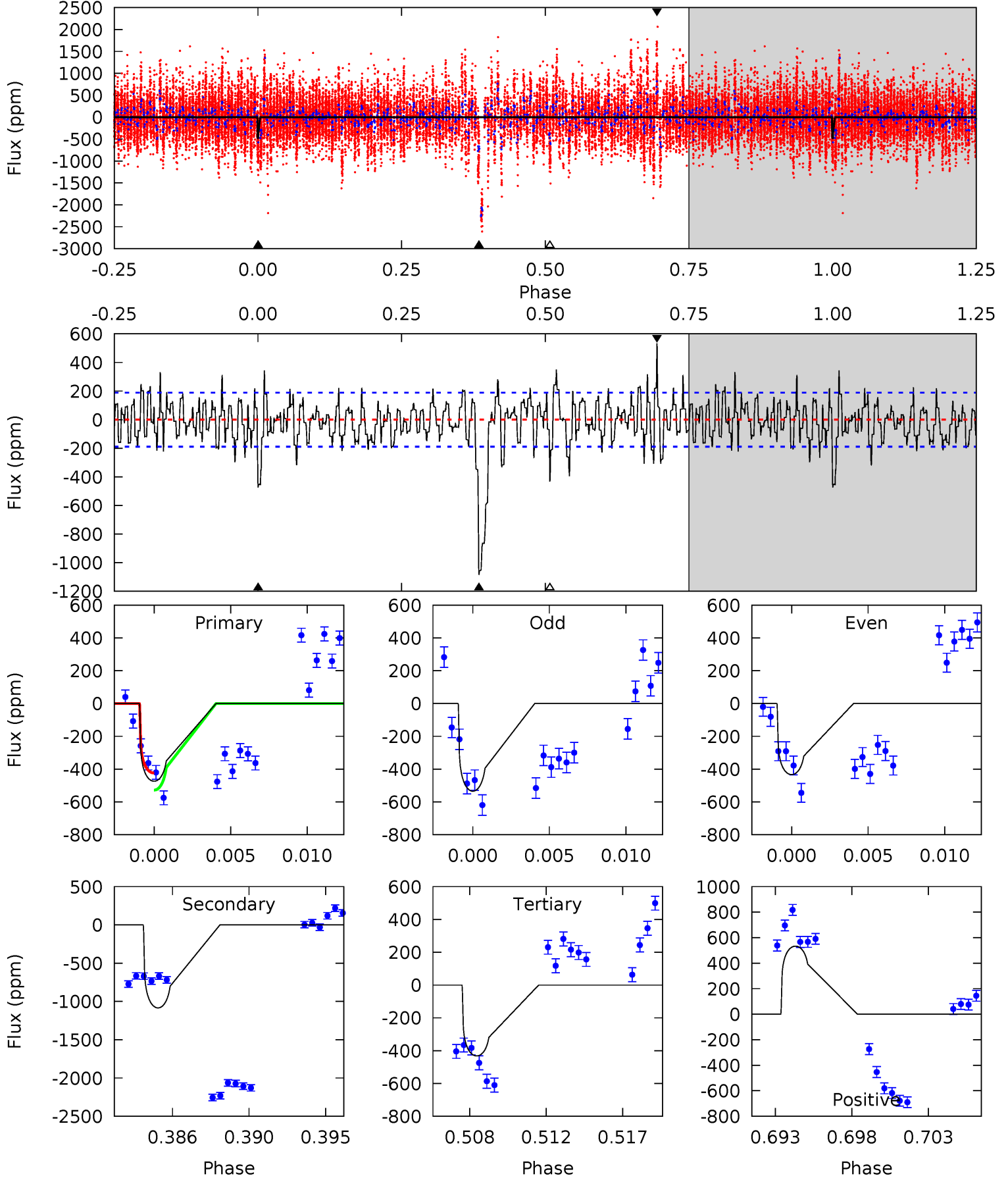


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009542697-03, P = 311.000278 Days, E = 276.343866 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	29.6	11.8	14.6	5.16	2.81	3.58	1.15	-1.63	17.8	15.1	1.34	1.44	0.33	1.43



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009542697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+181}_{-199}	$4.399^{+0.101}_{-0.203}$	$-0.020^{+0.250}_{-0.300}$	$1.065^{+0.326}_{-0.140}$	$1.038^{+0.145}_{-0.130}$	$1.210^{+0.486}_{-0.634}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+31%/-13%	+14%/-13%	+40%/-52%
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 009542697-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1084 ± 37	$3.74^{+3.59}_{-2.47}$	405^{+30}_{-23}	6073^{+6029}_{-1487}	$33738^{+268228}_{-24563}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

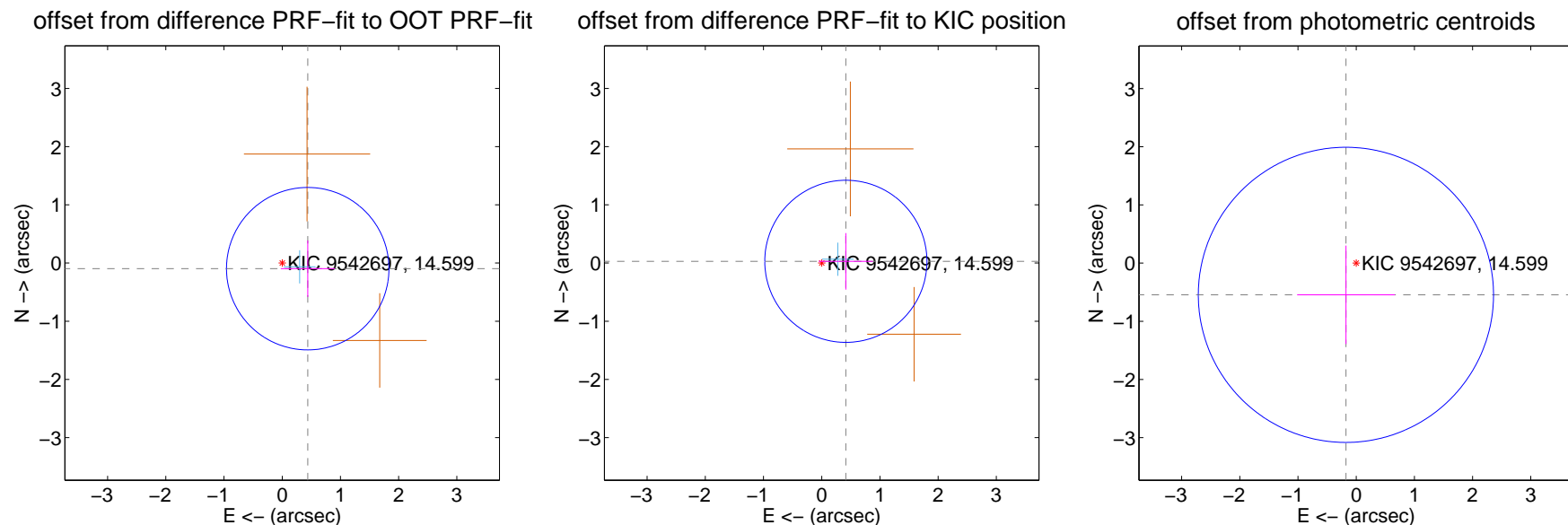
DV Centroid Data

Supplemental centroid analysis for 009542697-03. Kepler magnitude: 14.60. Transit SNR 7.23

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

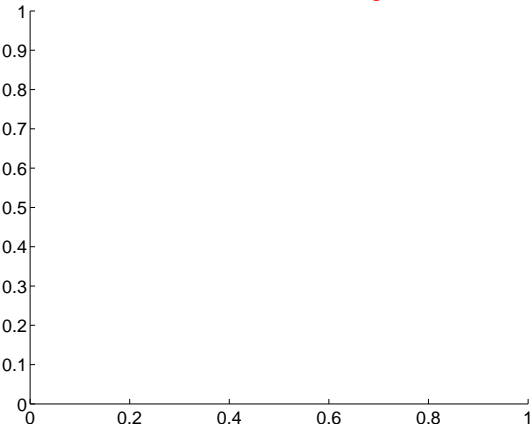
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.449 ± 0.465	0.96	-0.438 ± 0.464	-0.097 ± 0.485
PRF-fit source offset from KIC position	0.416 ± 0.464	0.90	-0.415 ± 0.464	0.030 ± 0.485
photometric centroid source offset	0.57 ± 0.85	0.68	0.18 ± 0.84	-0.55 ± 0.85



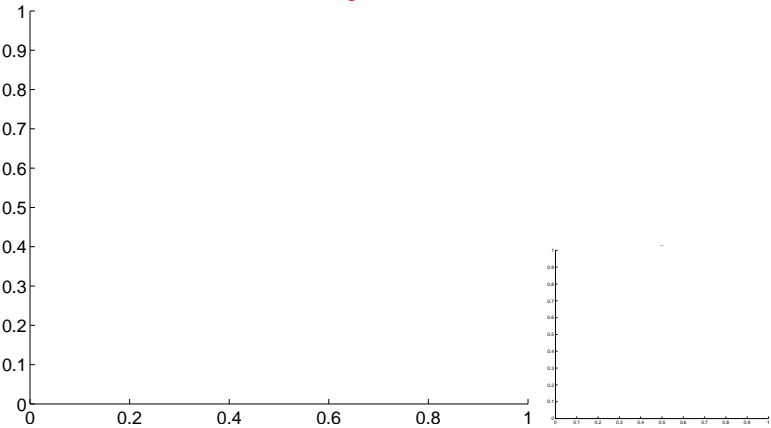
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

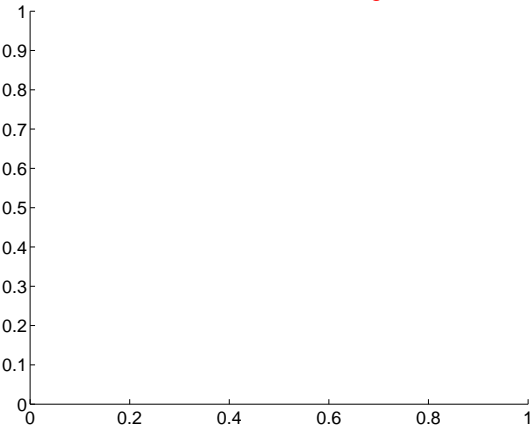
Q1 no difference image



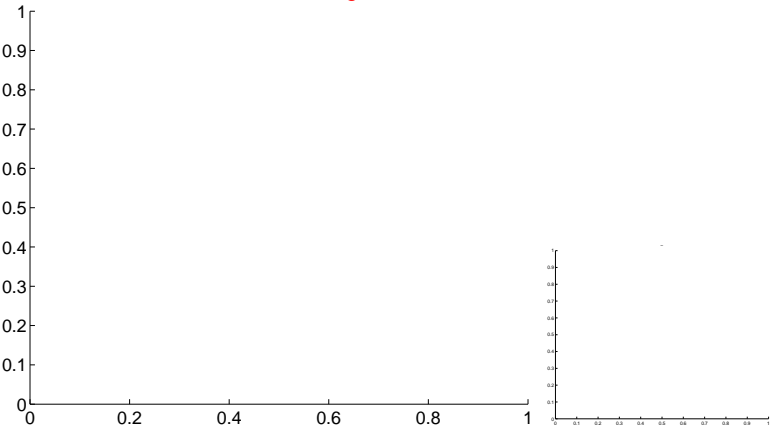
Q1 no OOT image



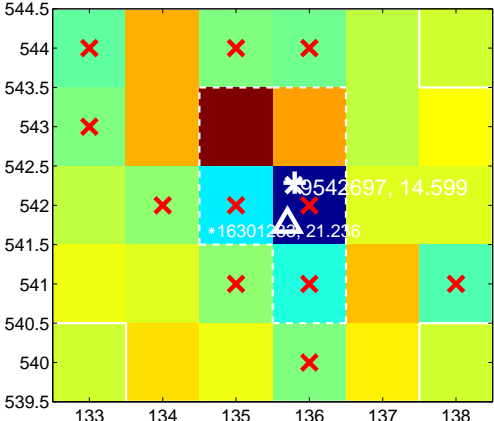
Q2 no difference image



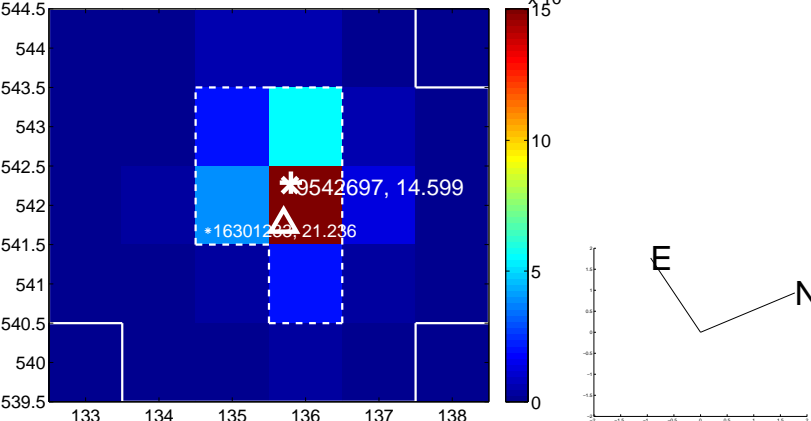
Q2 no OOT image



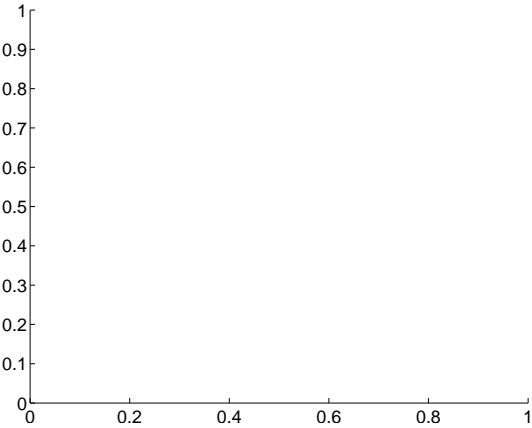
Q3 difference image. Poor Quality



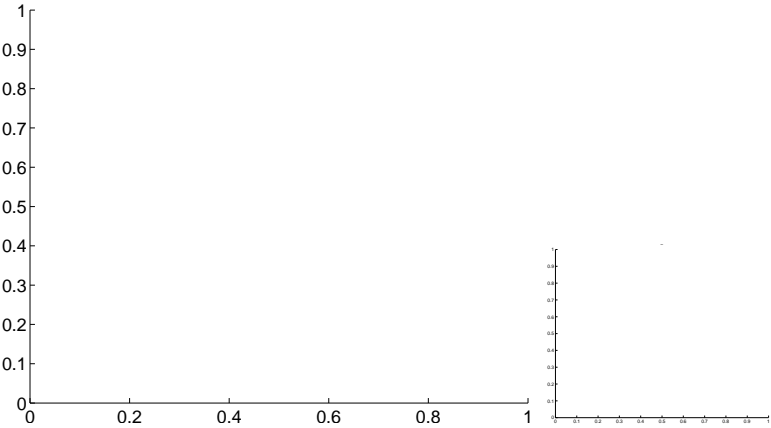
Q3 OOT image



Q4 no difference image

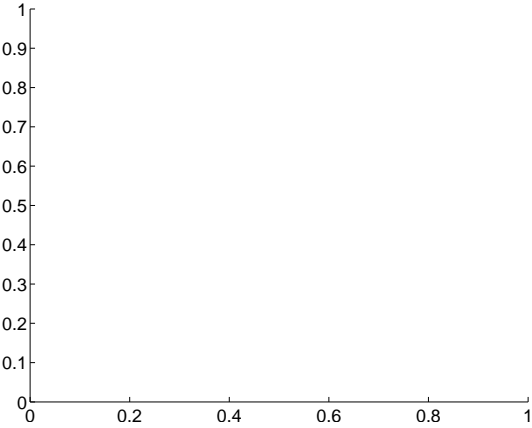


Q4 no OOT image

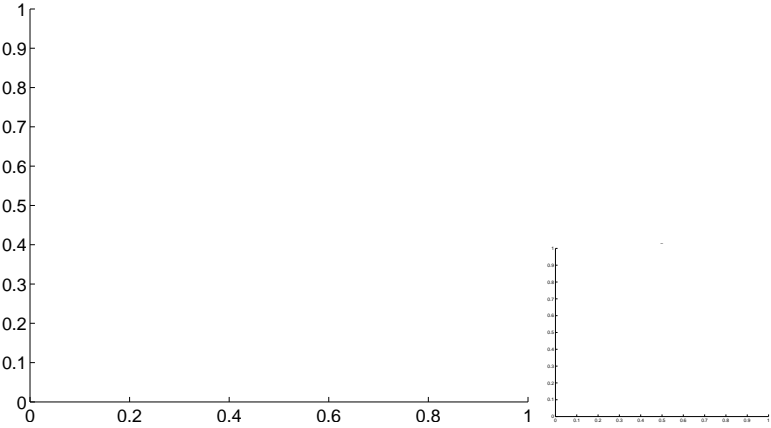


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

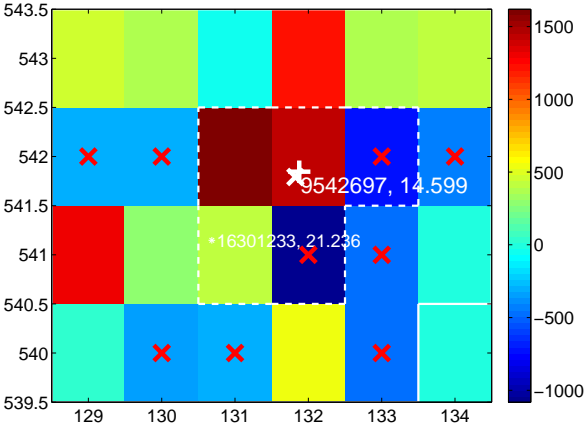
Q5 no difference image



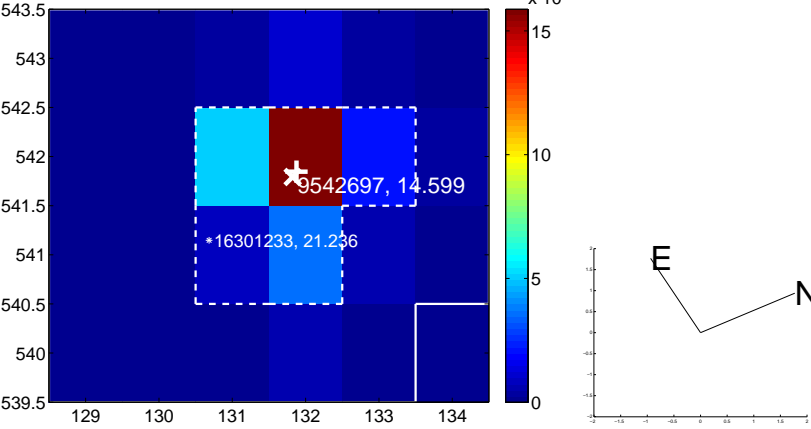
Q5 no OOT image



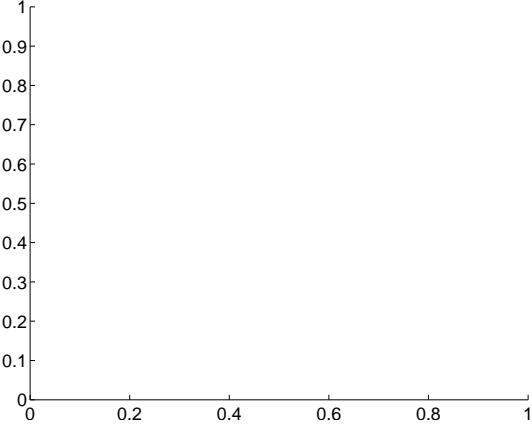
Q6 difference image. Poor Quality



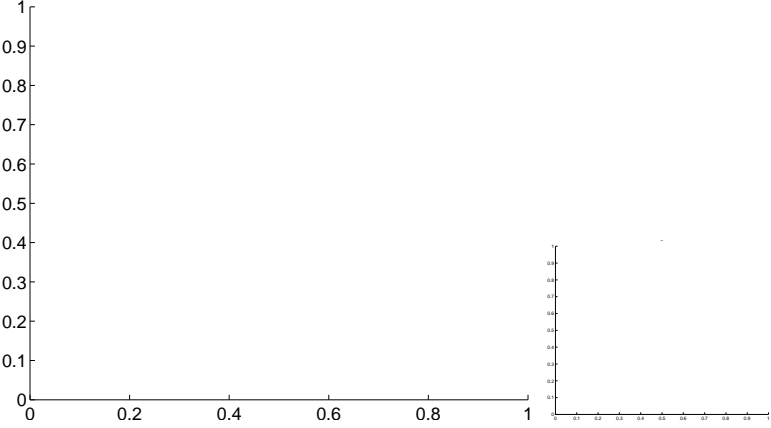
Q6 OOT image



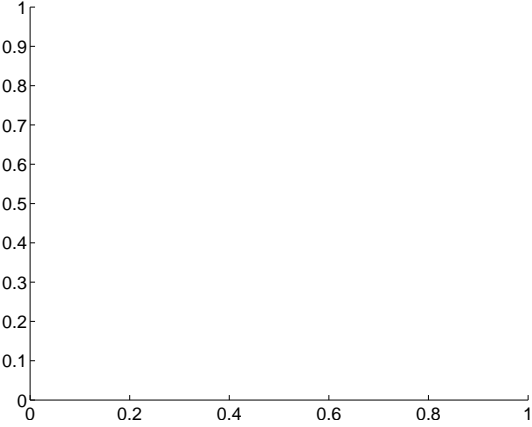
Q7 no difference image



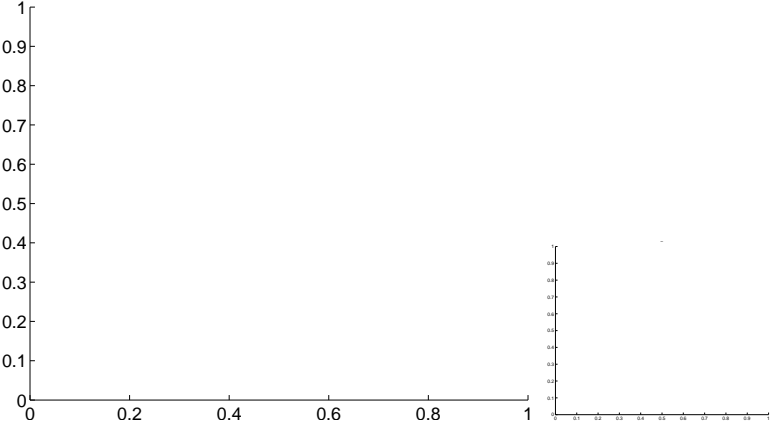
Q7 no OOT image



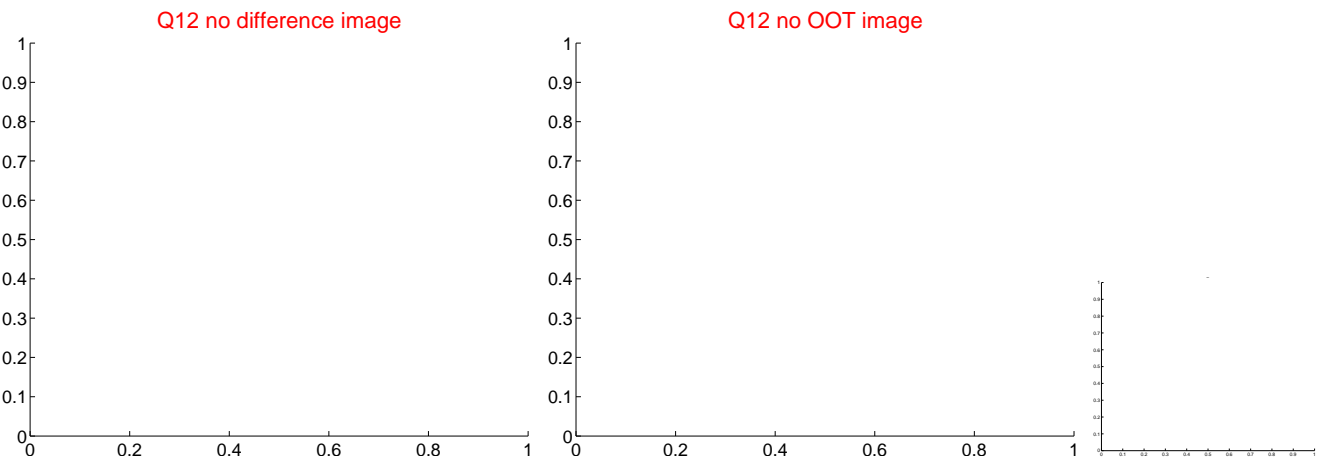
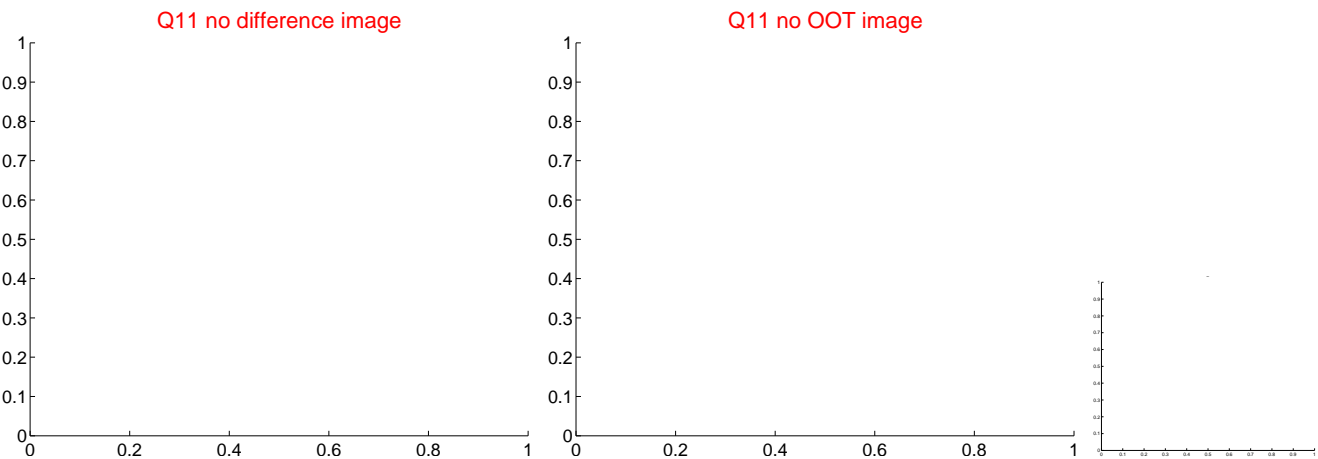
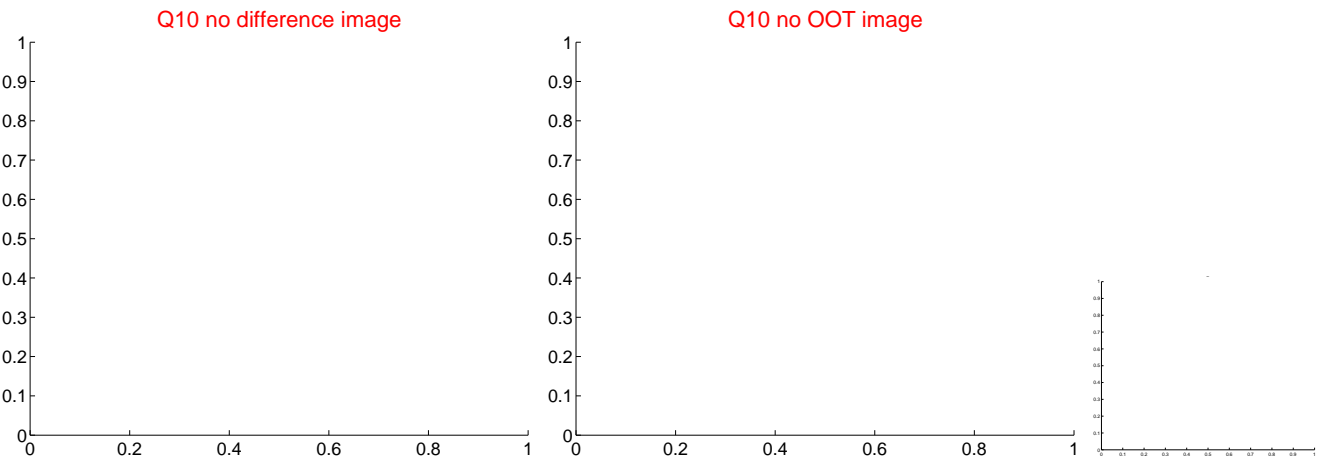
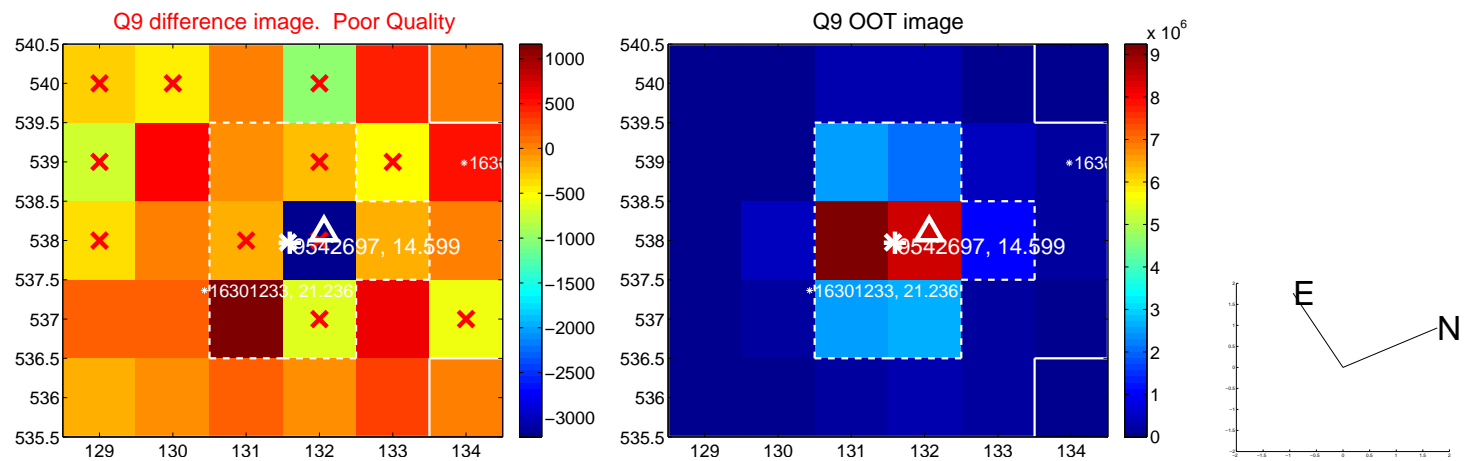
Q8 no difference image



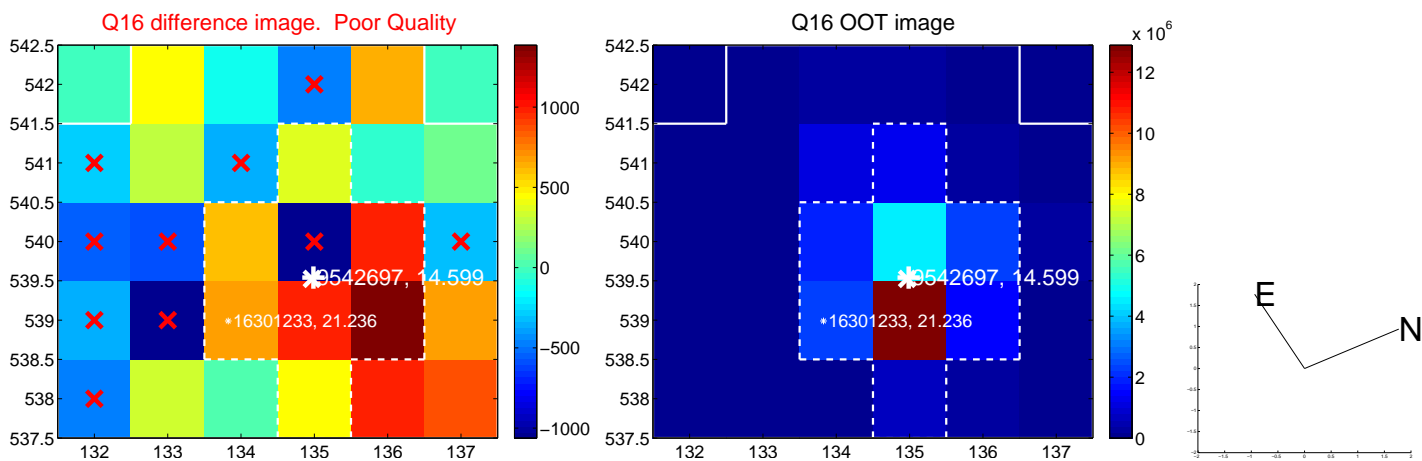
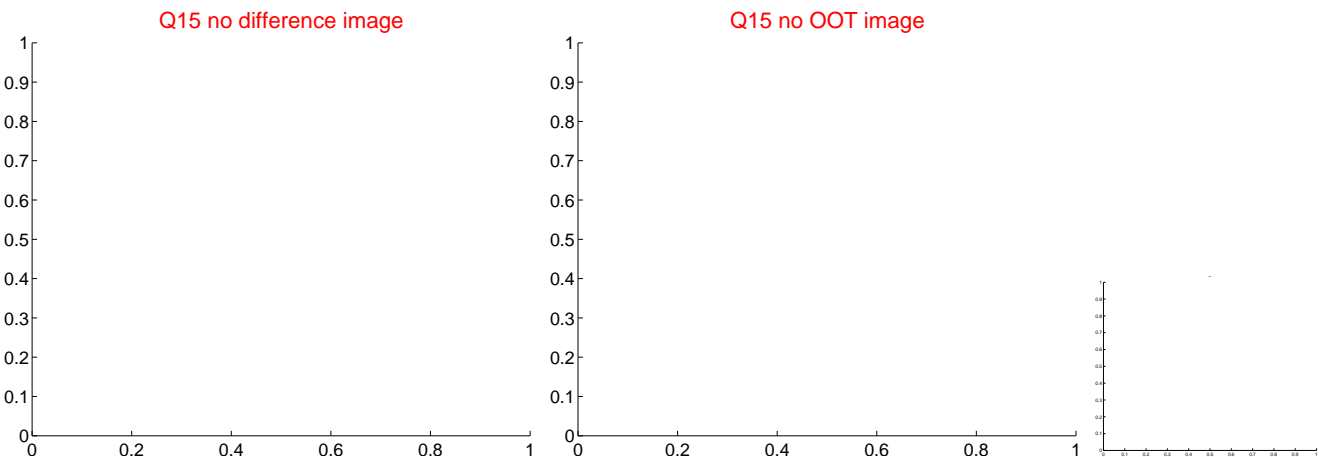
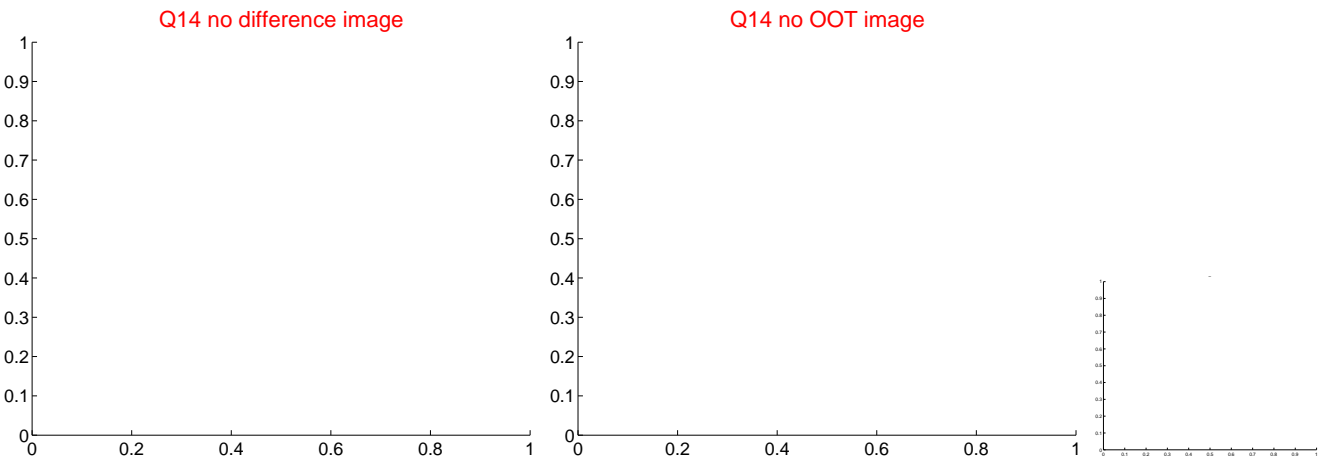
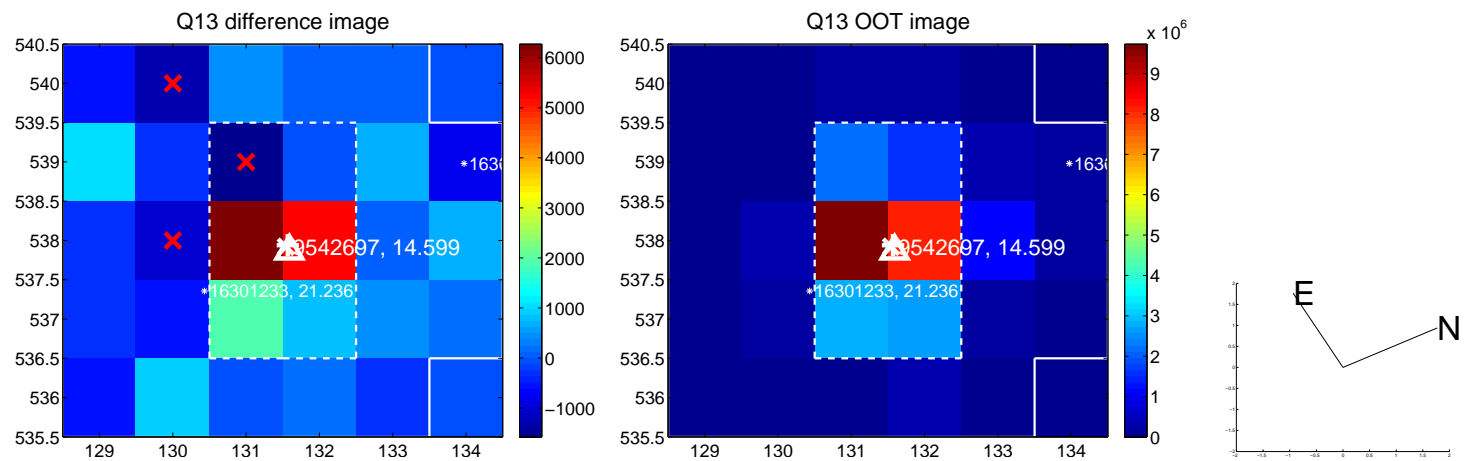
Q8 no OOT image



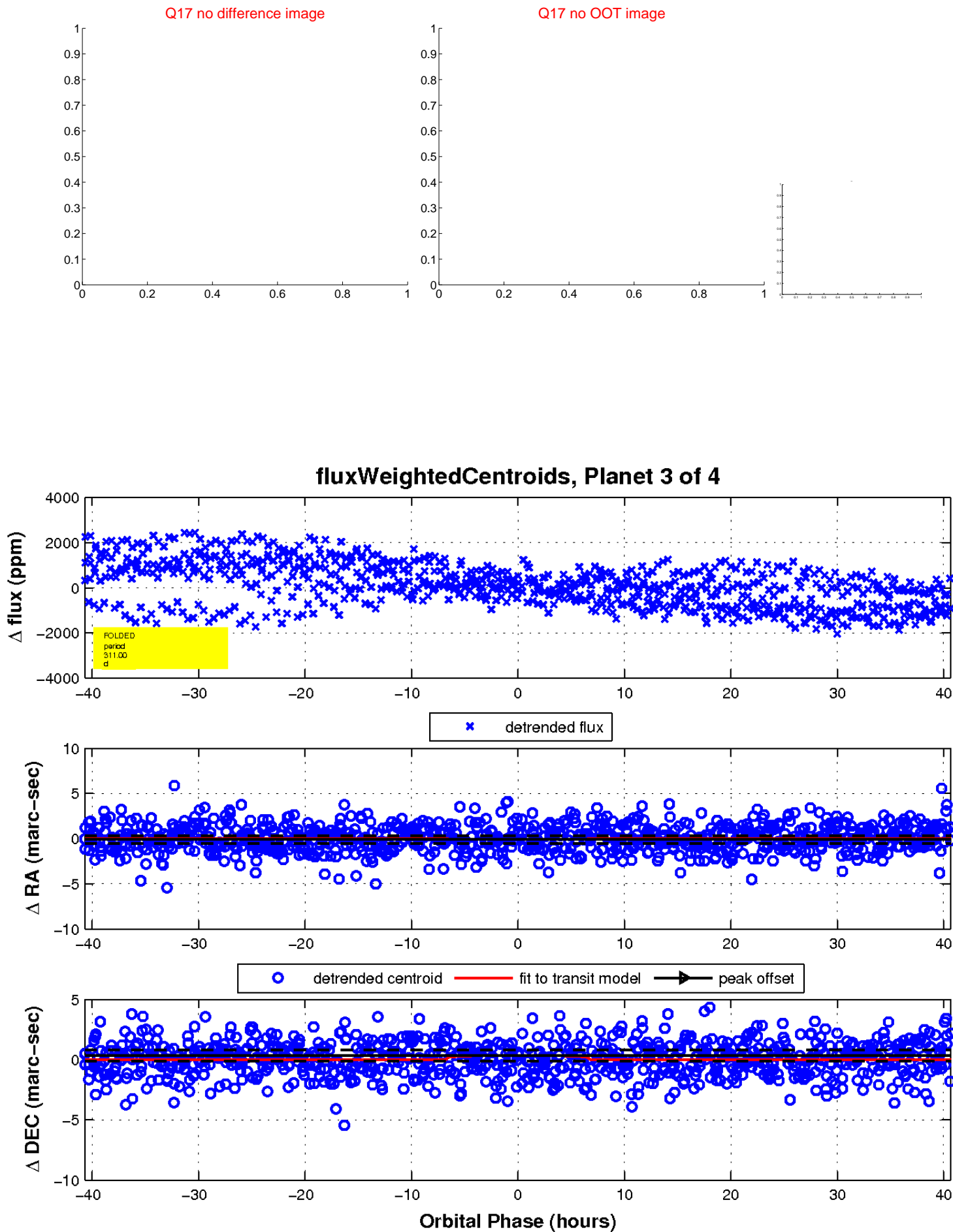
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



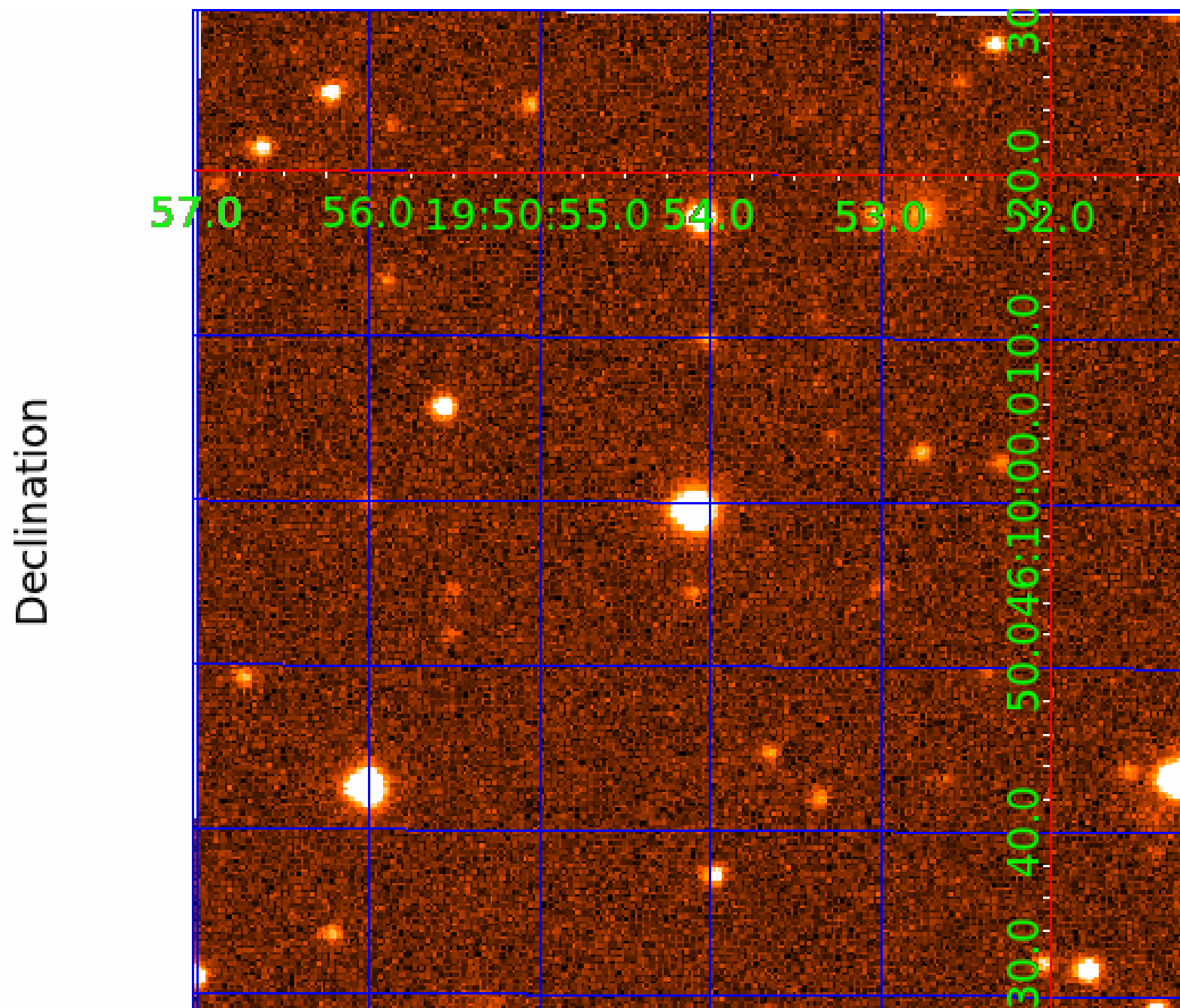
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image



KIC 009542697

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})
009542697-01	OBS	No	1.757100	132.991927	63.3	7.811	10.8	11.8	1.06	5997	0.85	1579.31
009542697-02	OBS	No	167.848073	171.897925	1258.9	12.000	20.9	-1.0	1.06	5997	3.76	3.62
009542697-03	OBS	No	311.000278	276.343866	499.4	13.572	11.7	7.2	1.06	5997	2.37	1.59
009542697-04	OBS	No	65.994994	179.810913	308.3	10.286	11.0	6.7	1.06	5997	2.03	12.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009542697-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009542697-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
009542697-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009542697-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

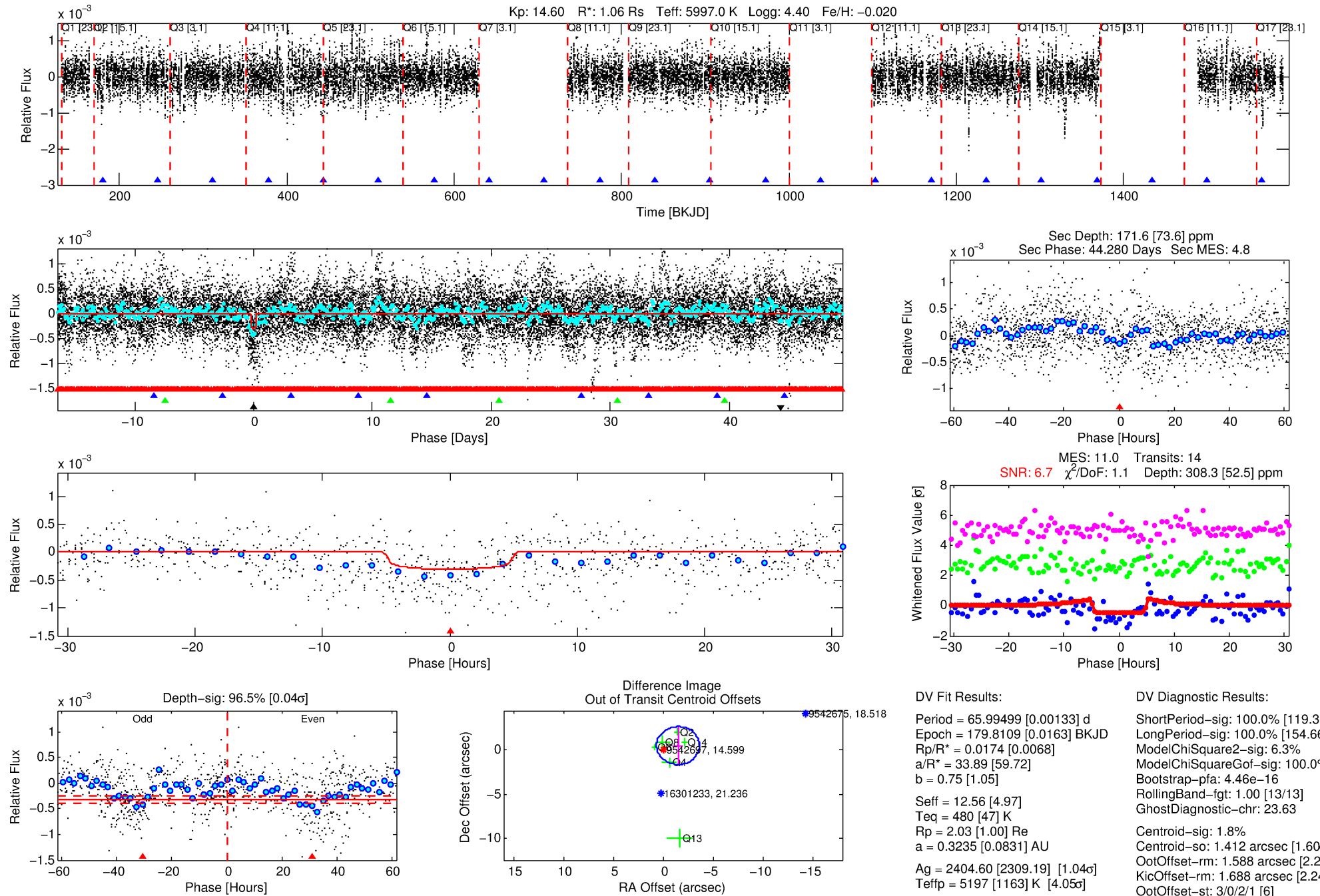
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009542697-04

No Significant Match Found

DV One-Page Summary

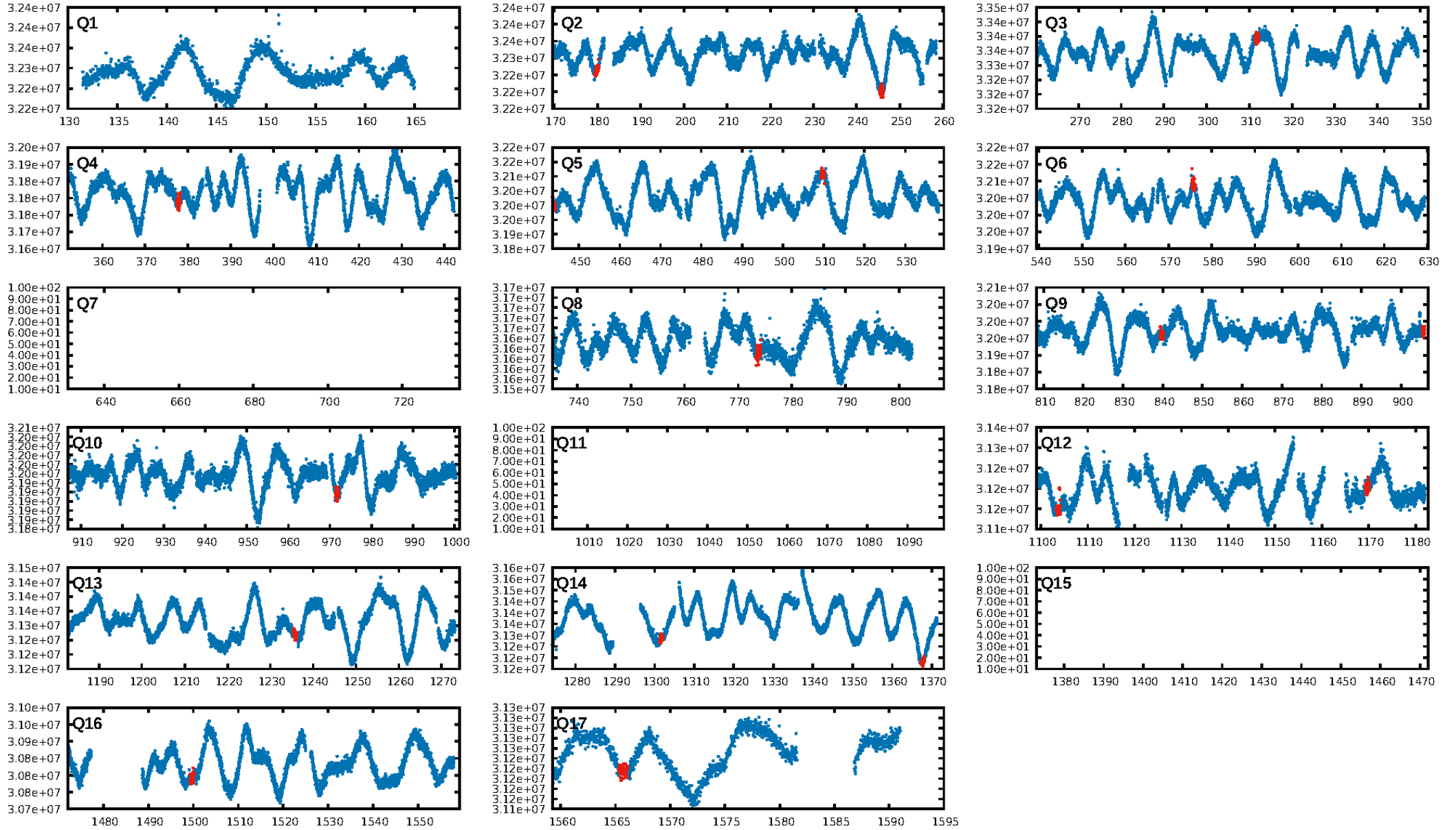
KIC: 9542697 Candidate: 4 of 4 Period: 65.995 d



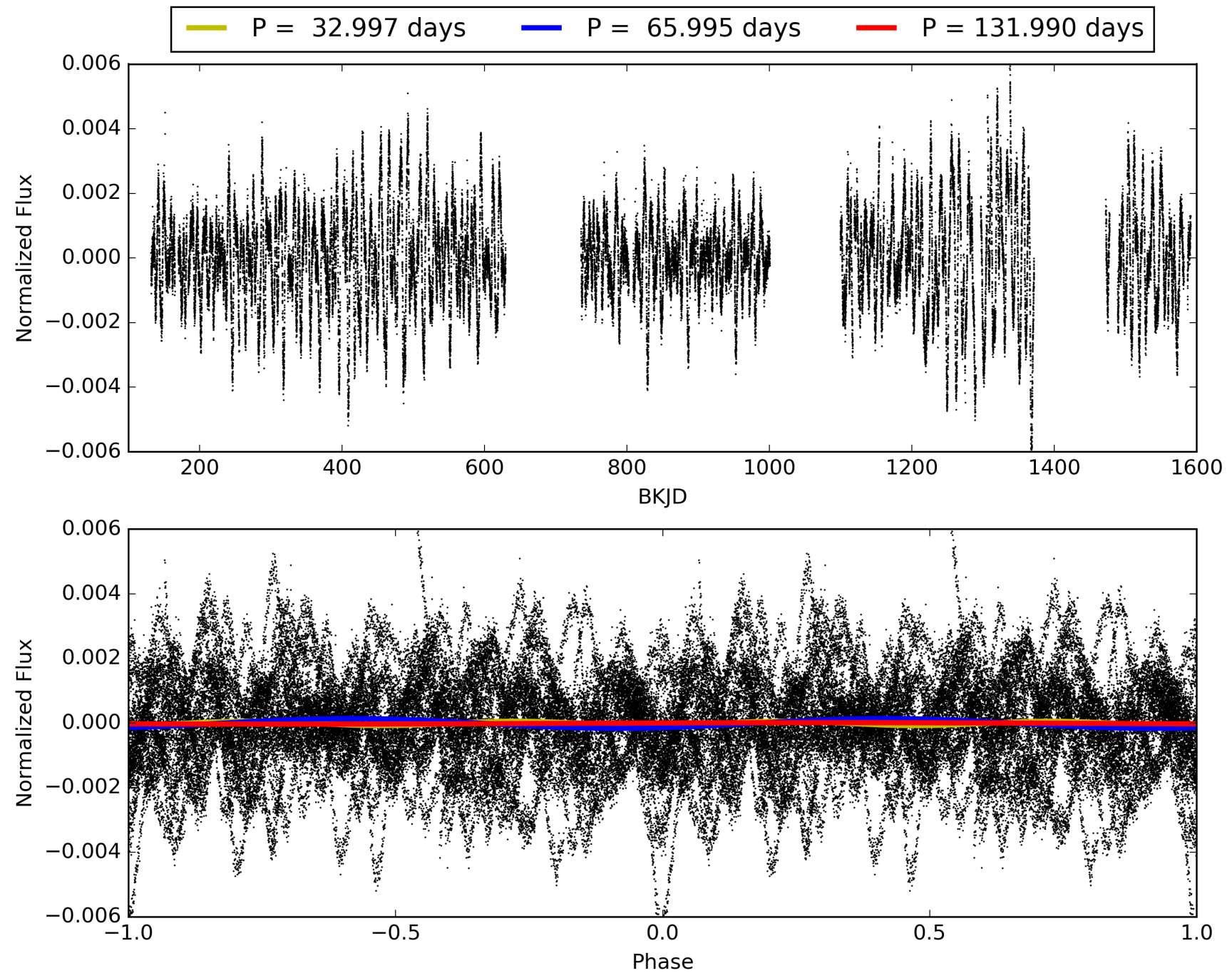
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:29:36 Z

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

TCE 009542697-04, PDC Light Curves

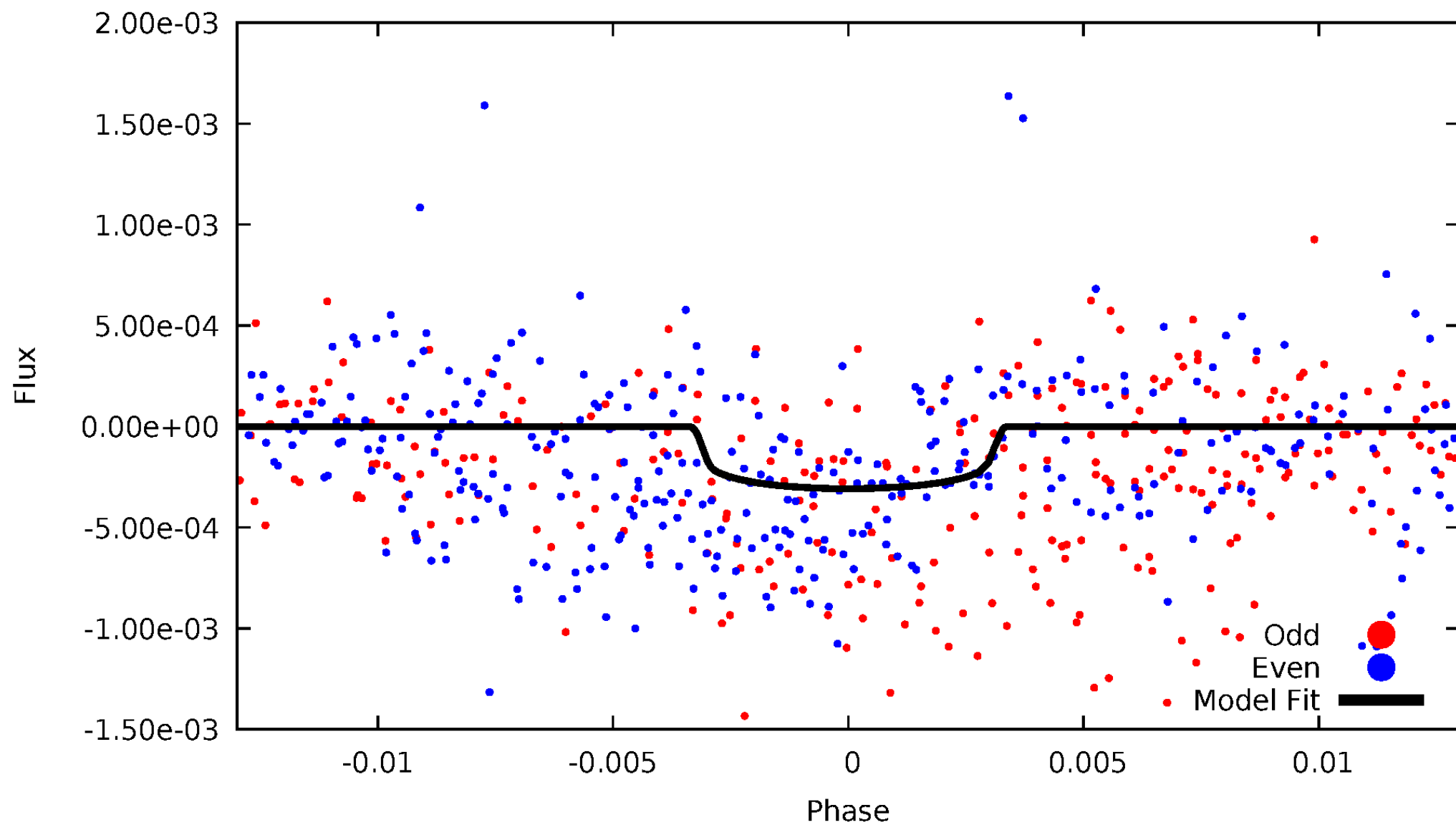


TCE 009542697-04



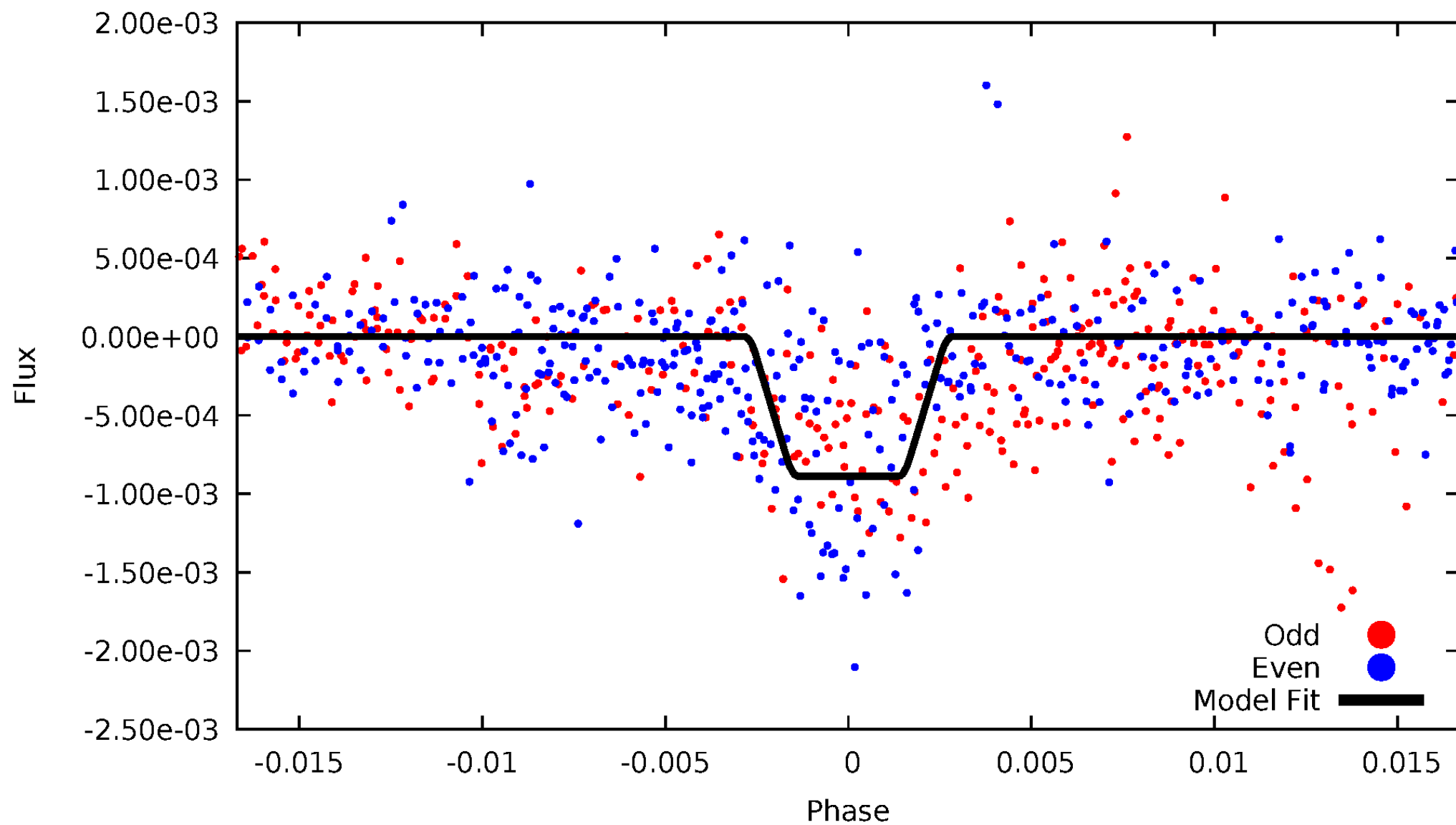
DV Odd/Even

TCE 009542697-04



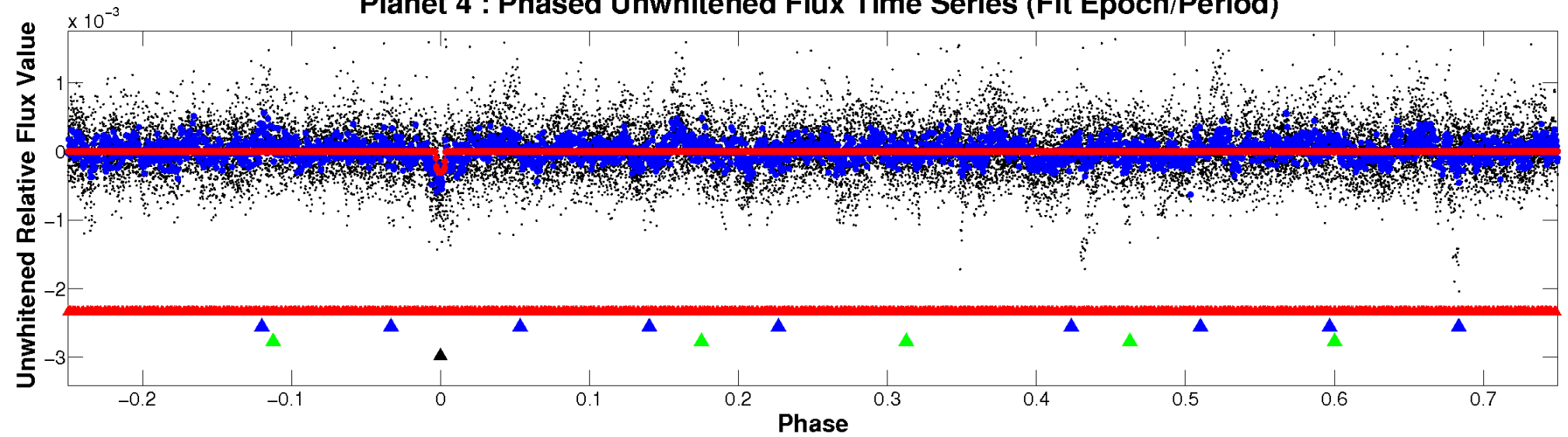
ALT Odd/Even

TCE 009542697-04

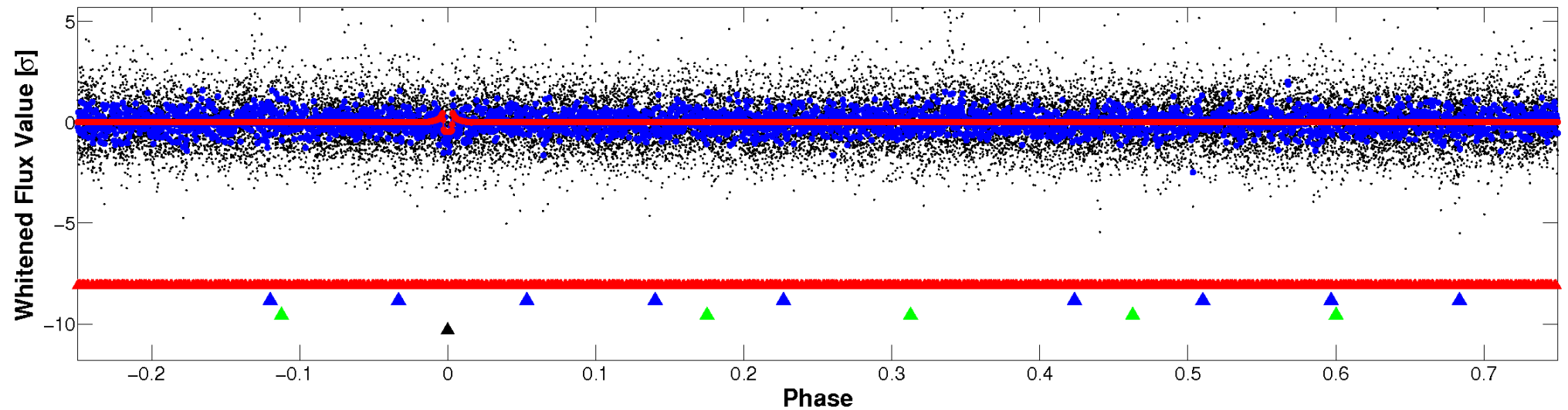


Non-Whitened Vs. Whitened Light Curve

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

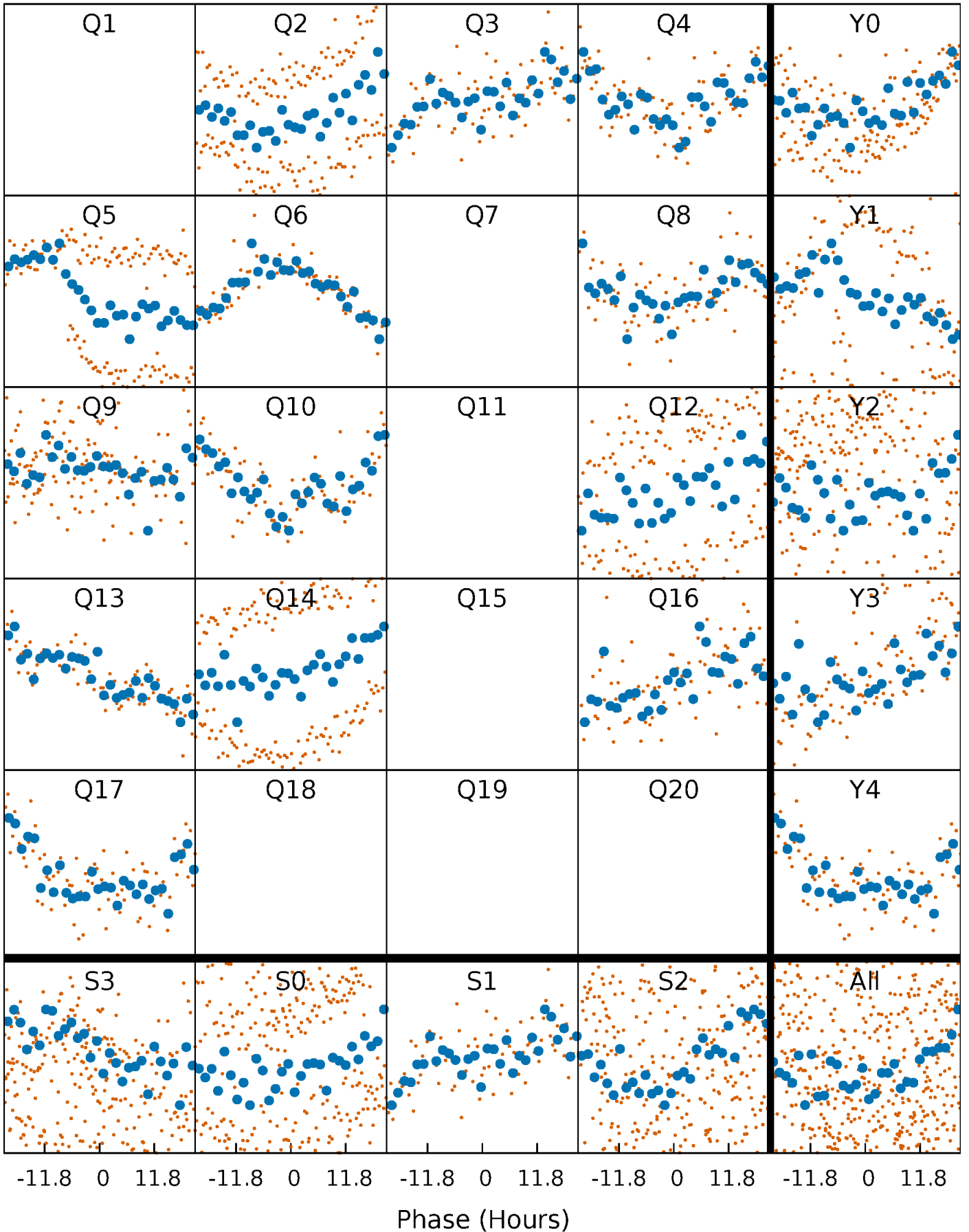


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



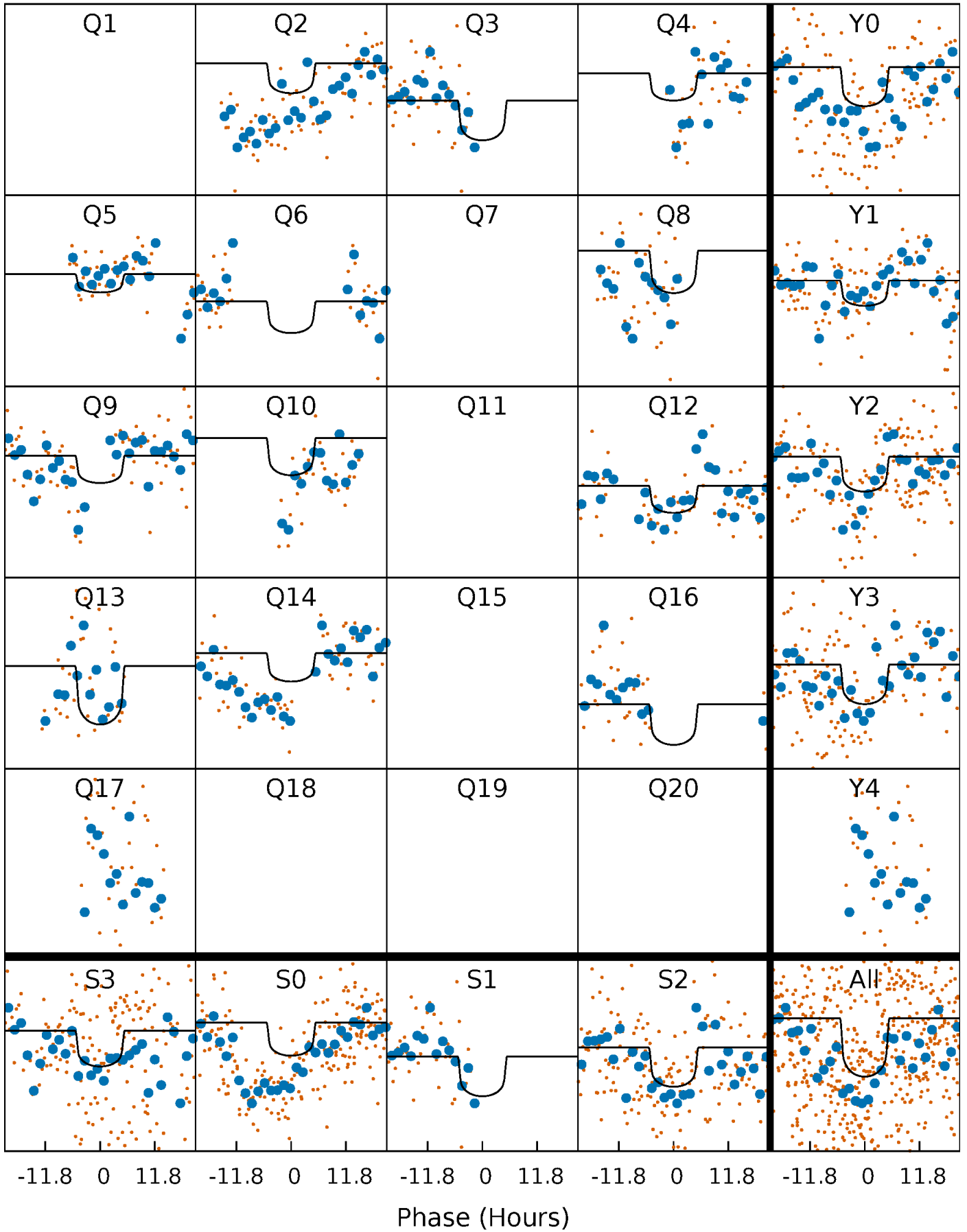
PDC Quarter-Phased Transit Curves

TCE 009542697-04 P= 65.994994 Days $T_0=179.810913$ (BKJD)



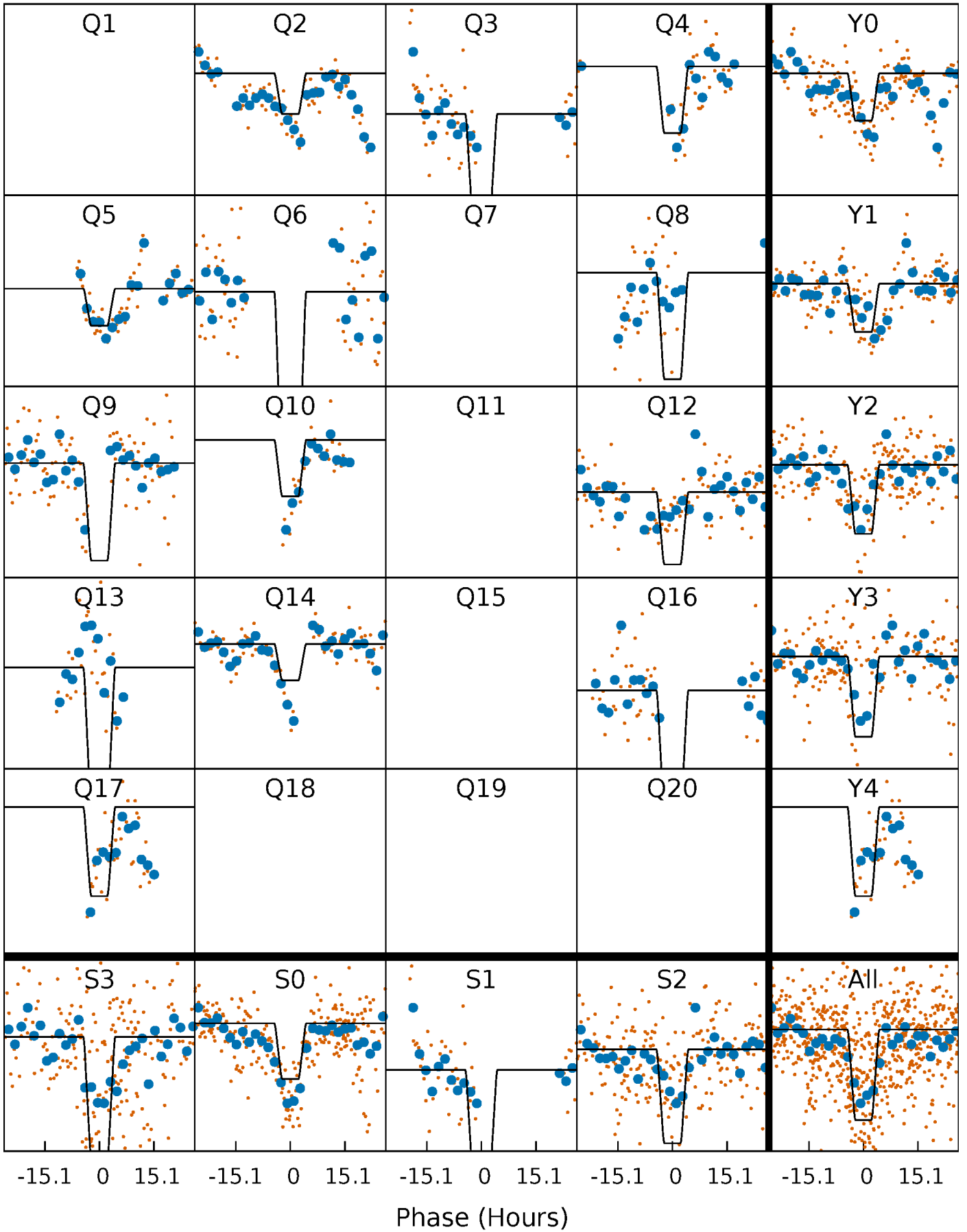
DV Quarter-Phased Transit Curves

TCE 009542697-04 P= 65.994994 Days $T_0=179.810913$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

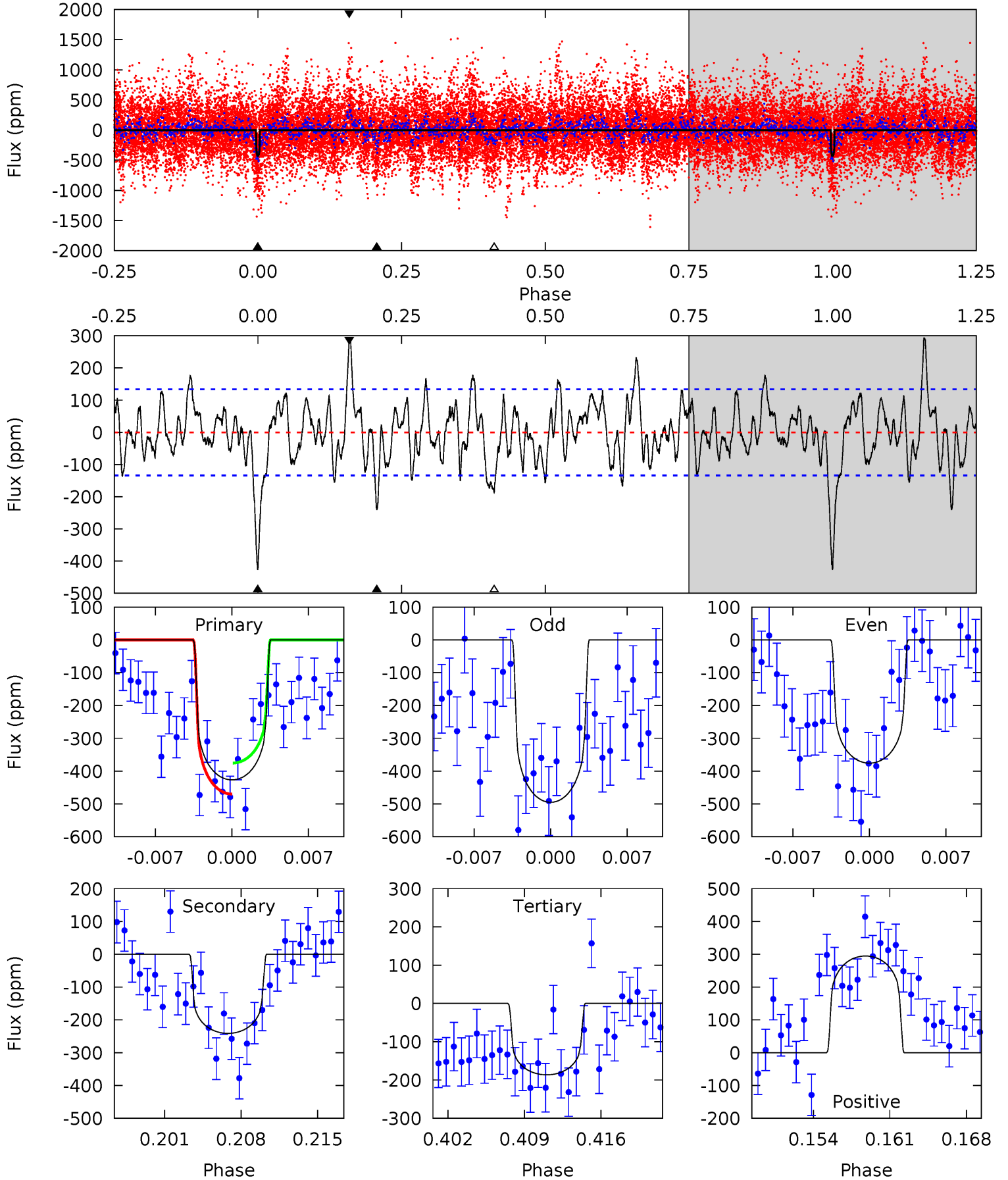
TCE 009542697-04 P= 65.994419 Days $T_0=179.794916$ (BKJD)



DV Model-Shift Uniqueness Test

009542697-04, P = 65.994994 Days, E = 113.815919 Days

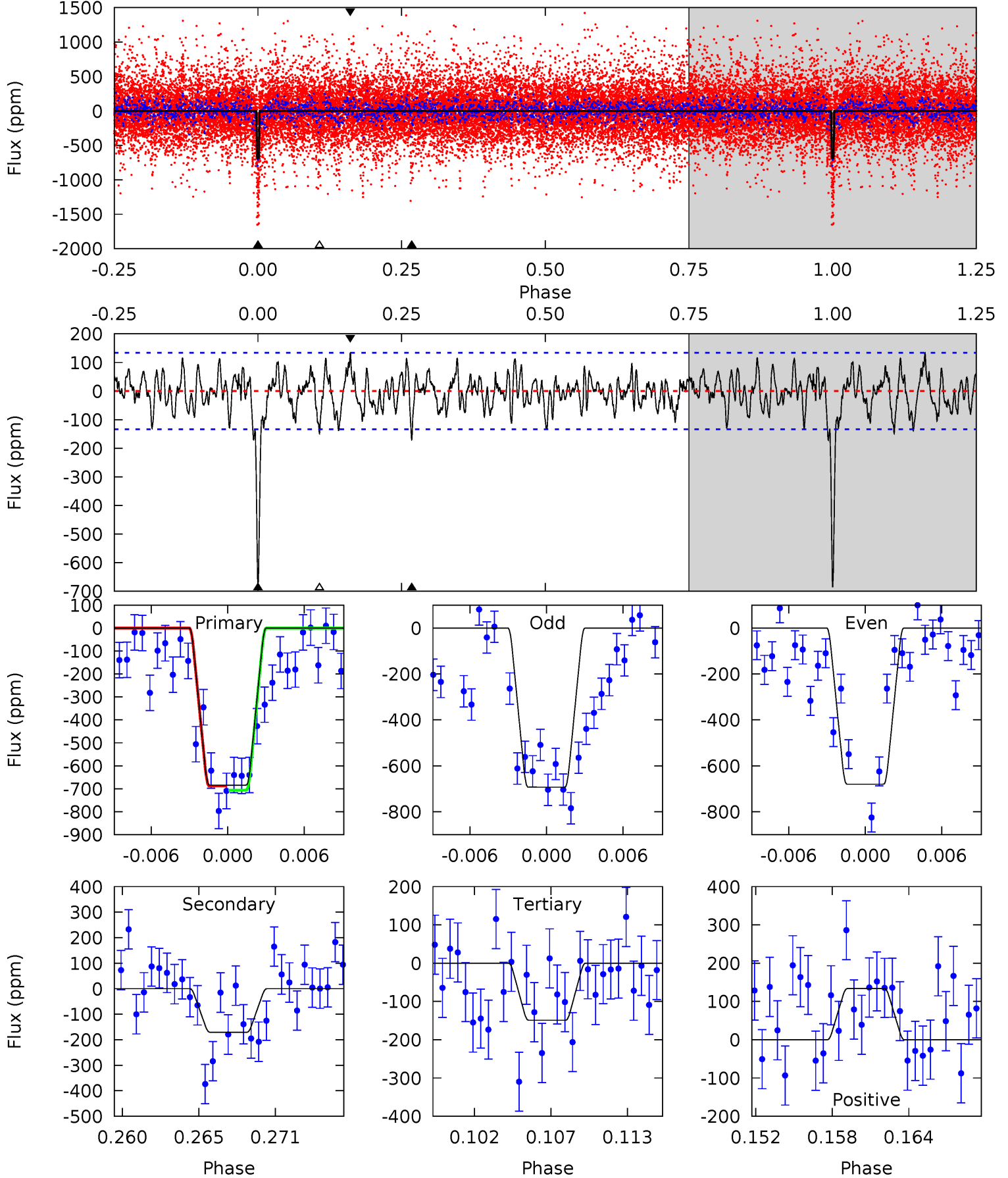
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	9.20	7.11	11.2	5.10	2.71	3.00	9.17	5.04	2.09	-2.04	2.24	1.03	0.41	1.80



Alt Model-Shift Uniqueness Test

009542697-04, P = 65.994419 Days, E = 113.800497 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	6.57	5.74	5.15	5.13	2.77	1.91	20.6	21.2	0.83	1.41	0.24	0.82	0.16	0.34



Stellar Parameters For KIC 009542697

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5997^{+181}_{-199}	$4.399^{+0.101}_{-0.203}$	$-0.020^{+0.250}_{-0.300}$	$1.065^{+0.326}_{-0.140}$	$1.038^{+0.145}_{-0.130}$	$1.210^{+0.486}_{-0.634}$
	+3%/-3%	+2%/-5%	+1250%/-1500%	+31%/-13%	+14%/-13%	+40%/-52%
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 009542697-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-241 ± 26	$2.09^{+0.87}_{-0.84}$	676^{+51}_{-36}	5675^{+1495}_{-808}	3191^{+5309}_{-1659}
Alt.	-171 ± 26	$3.57^{+1.01}_{-0.92}$	677^{+51}_{-37}	4231^{+443}_{-346}	782^{+585}_{-328}

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

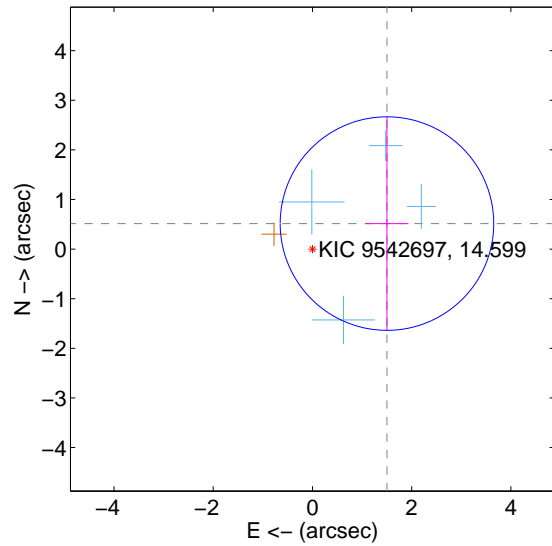
Supplemental centroid analysis for 009542697-04. Kepler magnitude: 14.60. Transit SNR 6.73

There are 4 quarters with good PRF difference image offsets

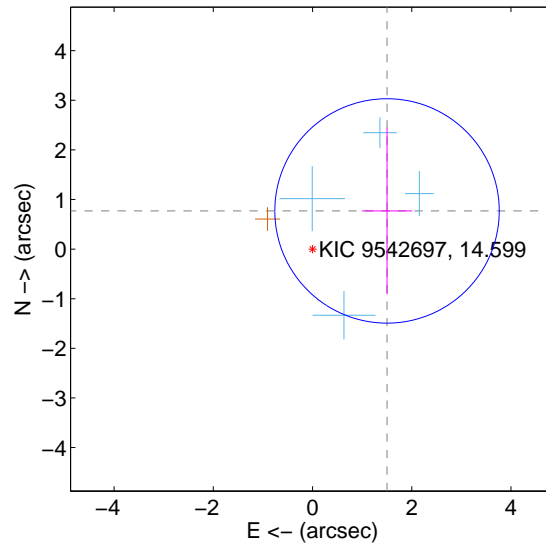
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.588 ± 0.718	2.21	-1.503 ± 0.433	0.515 ± 2.157
PRF-fit source offset from KIC position	1.688 ± 0.754	2.24	-1.502 ± 0.509	0.770 ± 1.679
photometric centroid source offset	1.41 ± 0.88	1.60	0.11 ± 0.85	1.41 ± 0.89

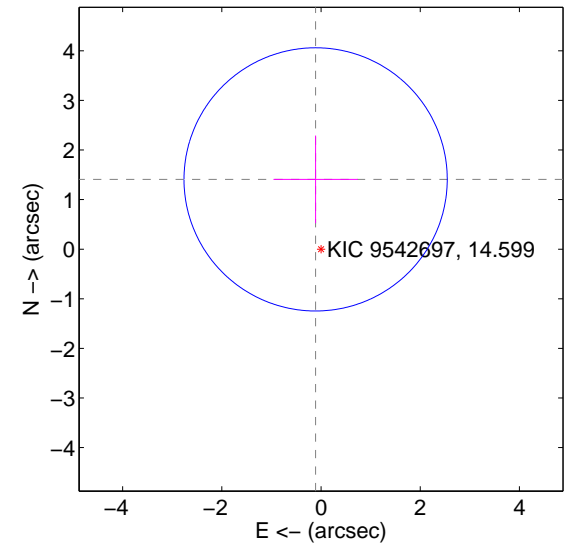
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

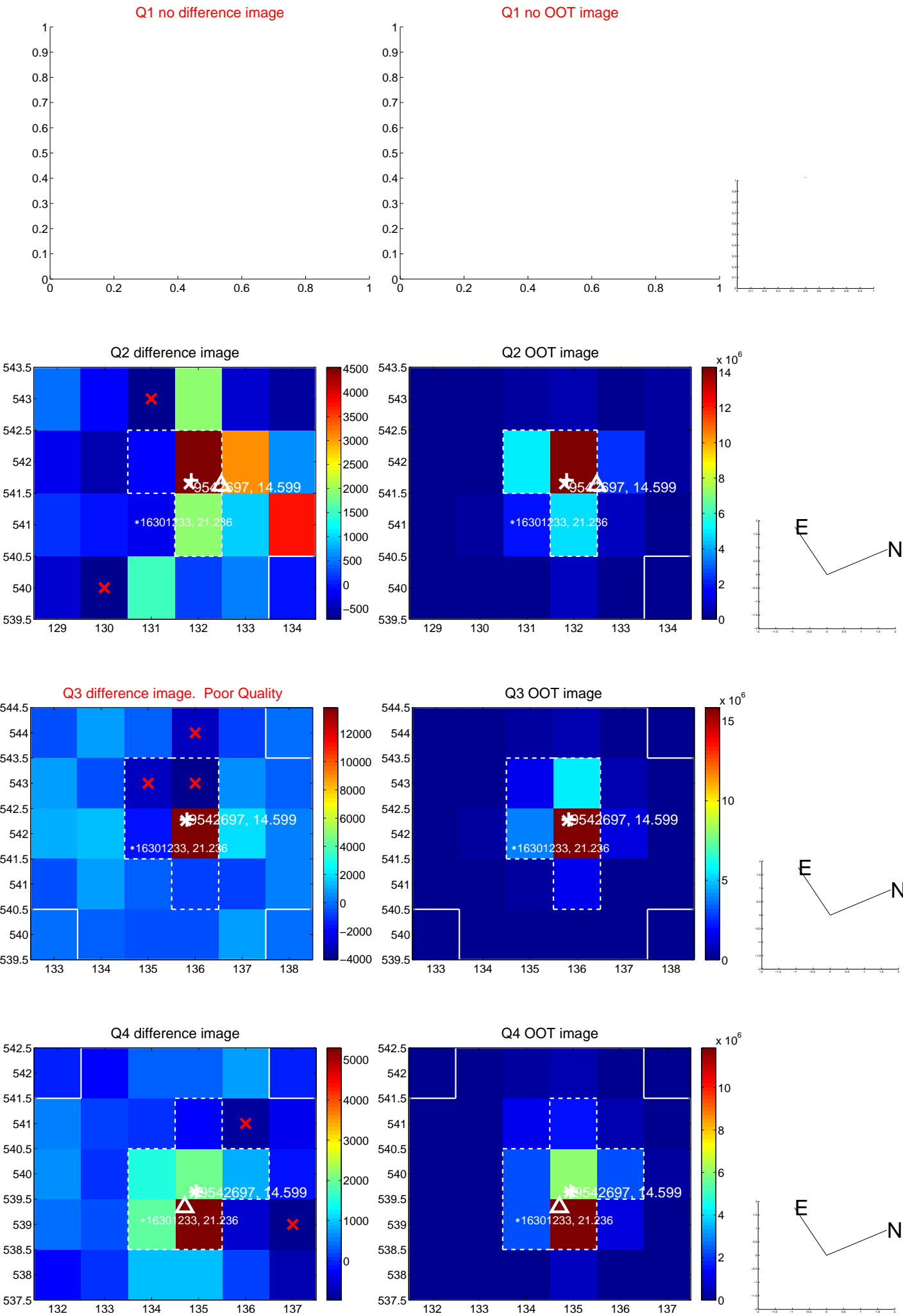


offset from photometric centroids

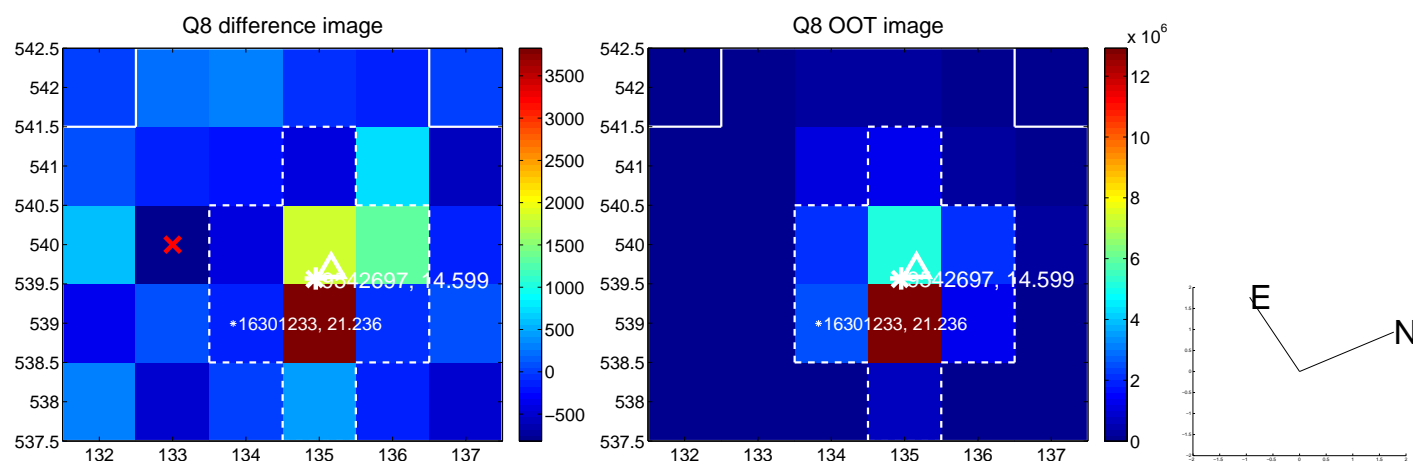
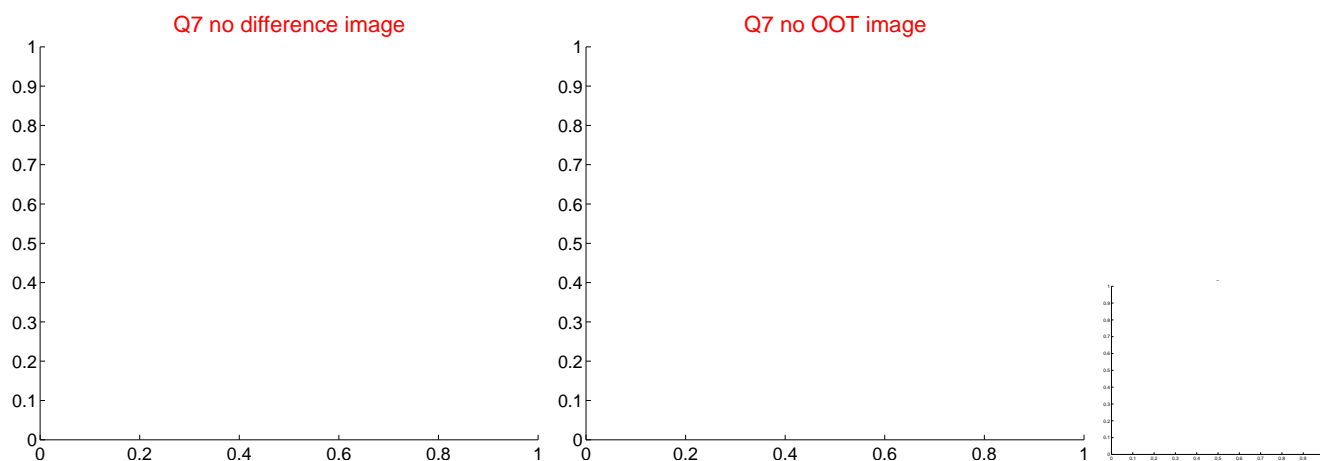
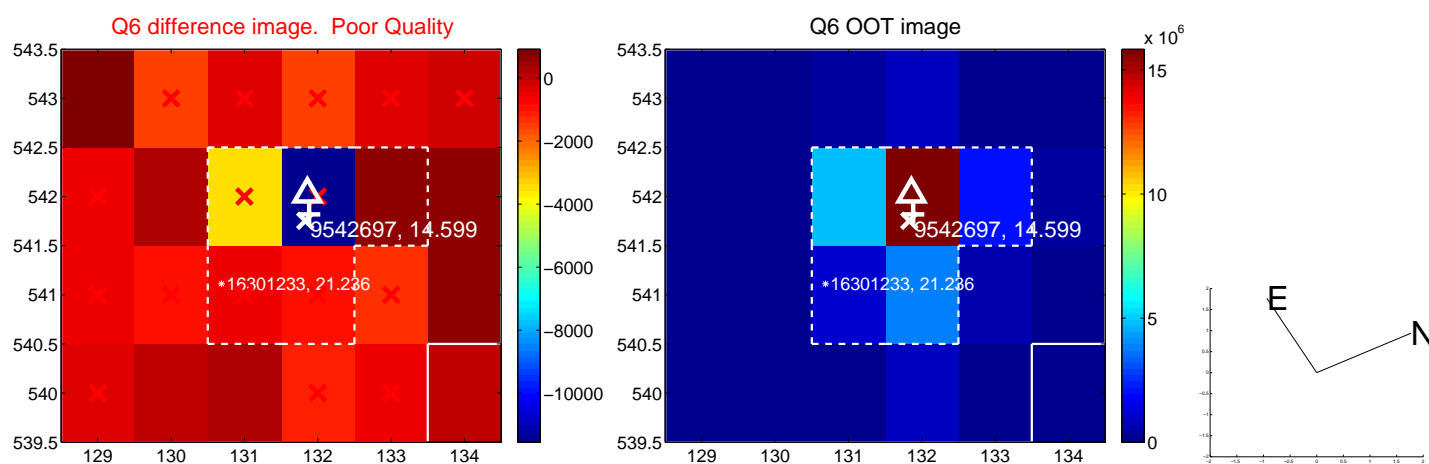
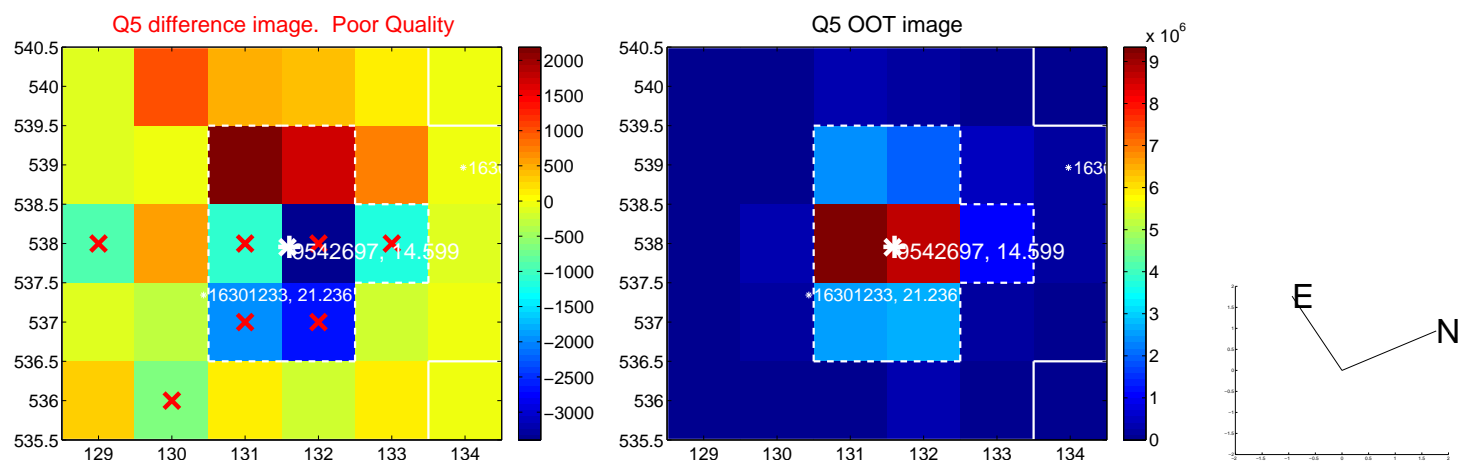


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

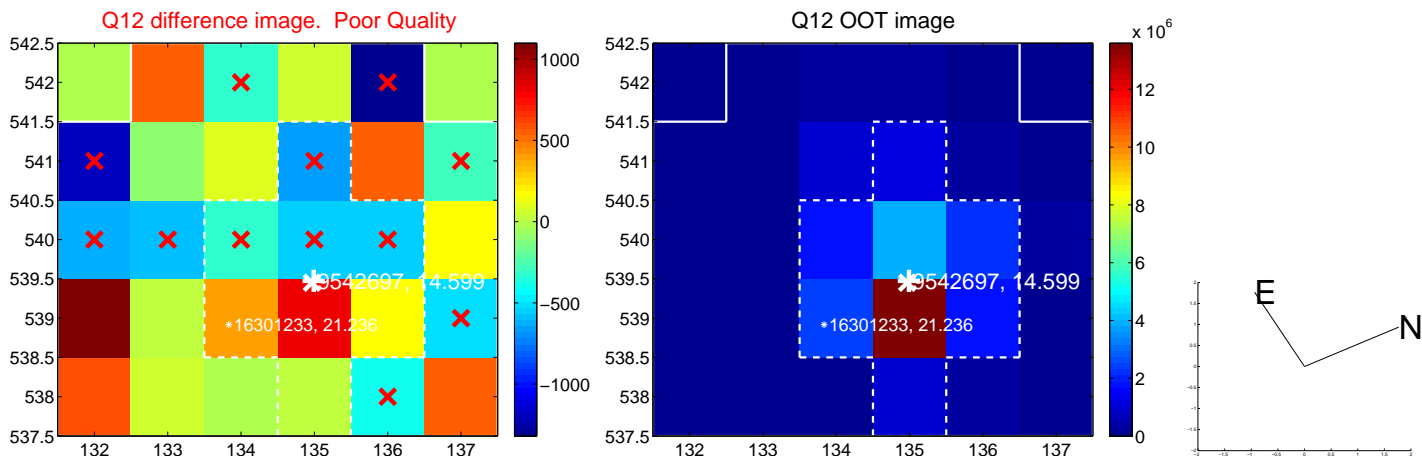
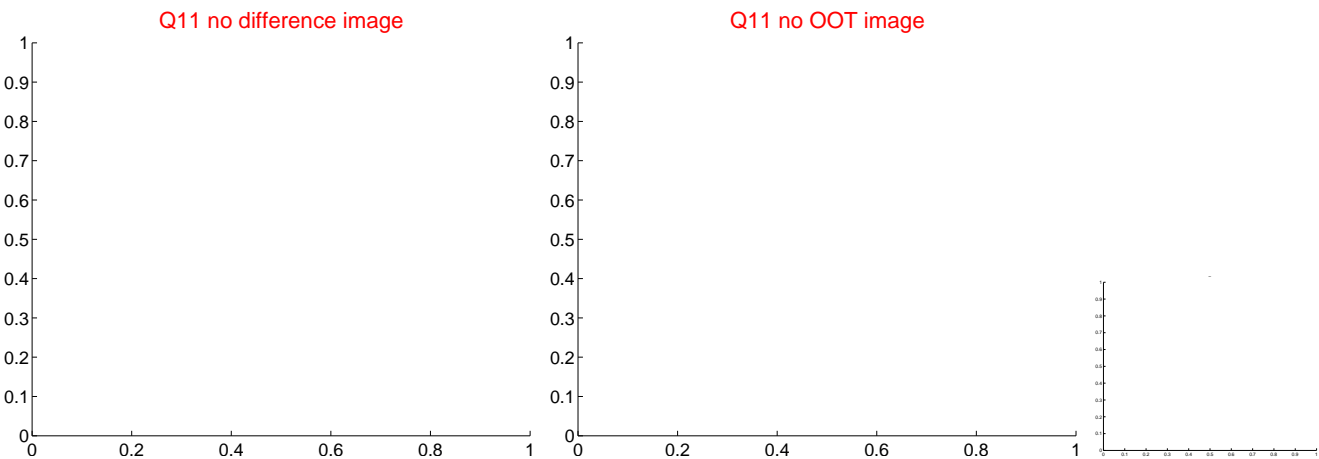
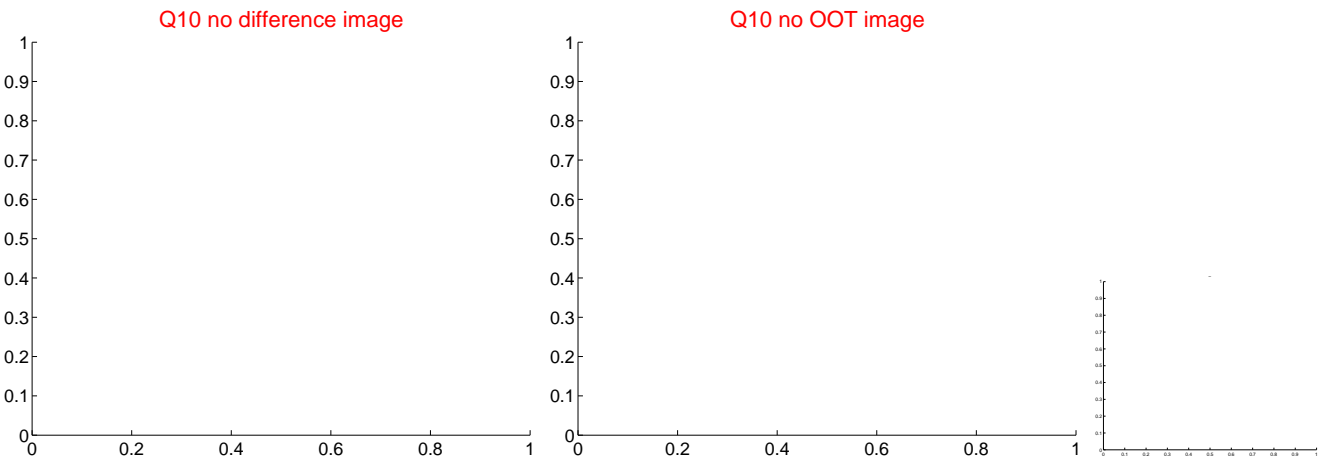
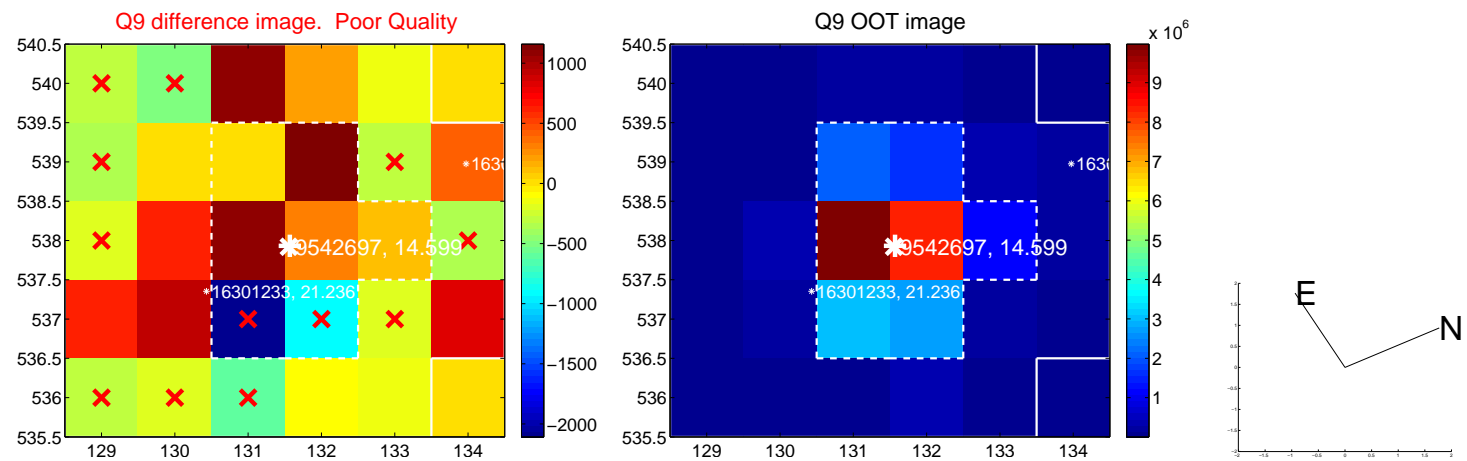
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



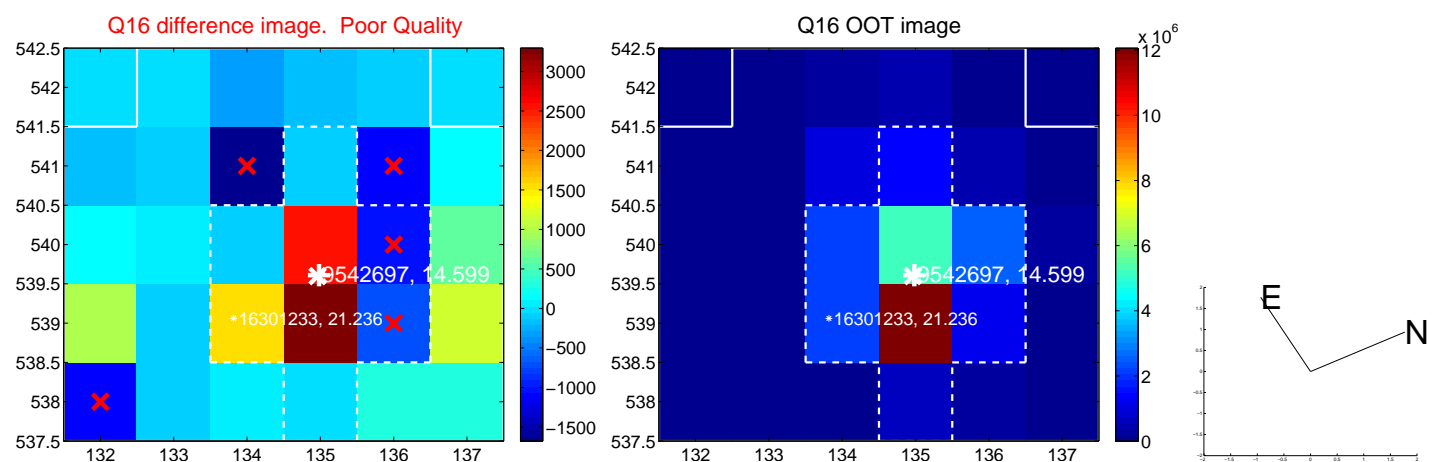
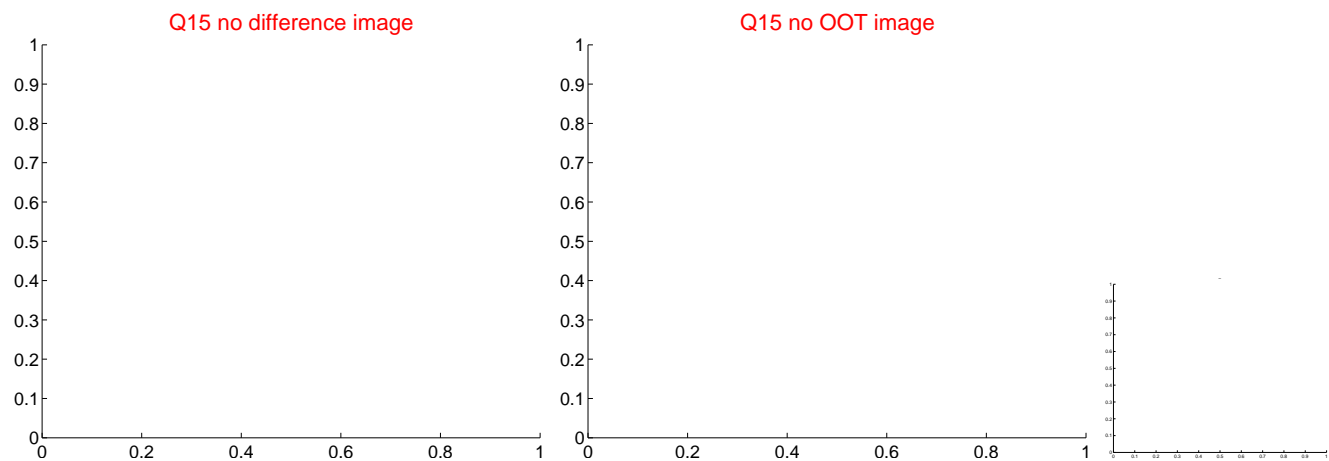
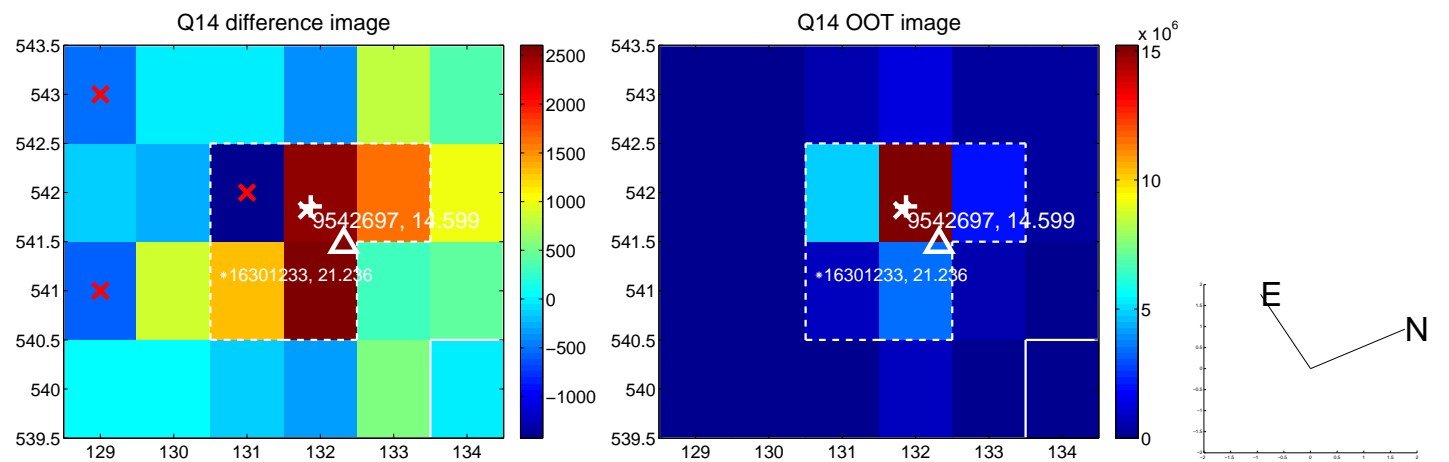
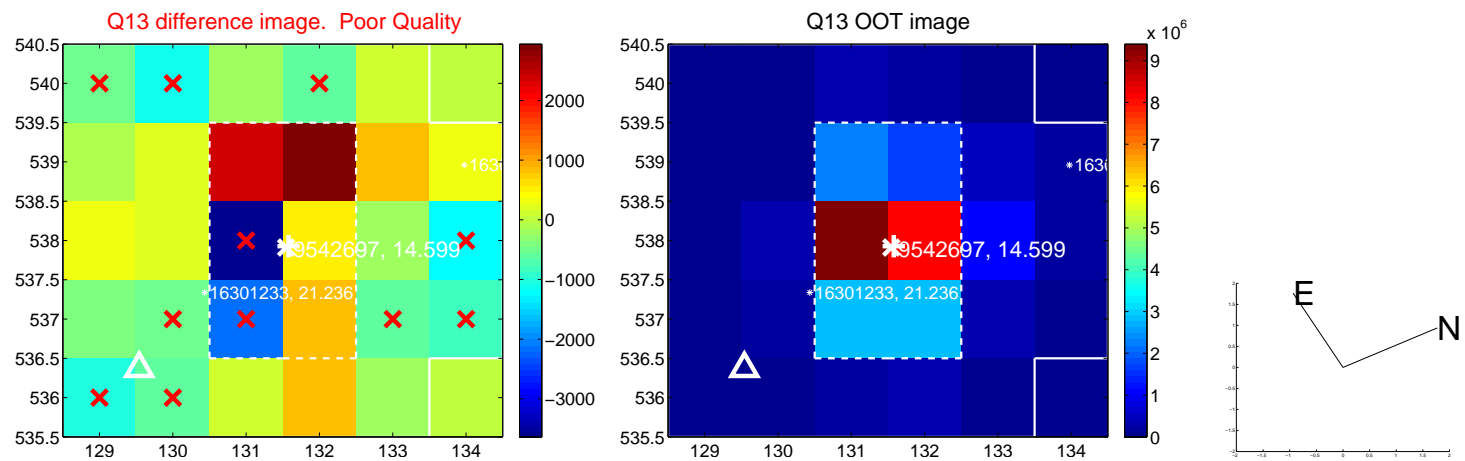
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



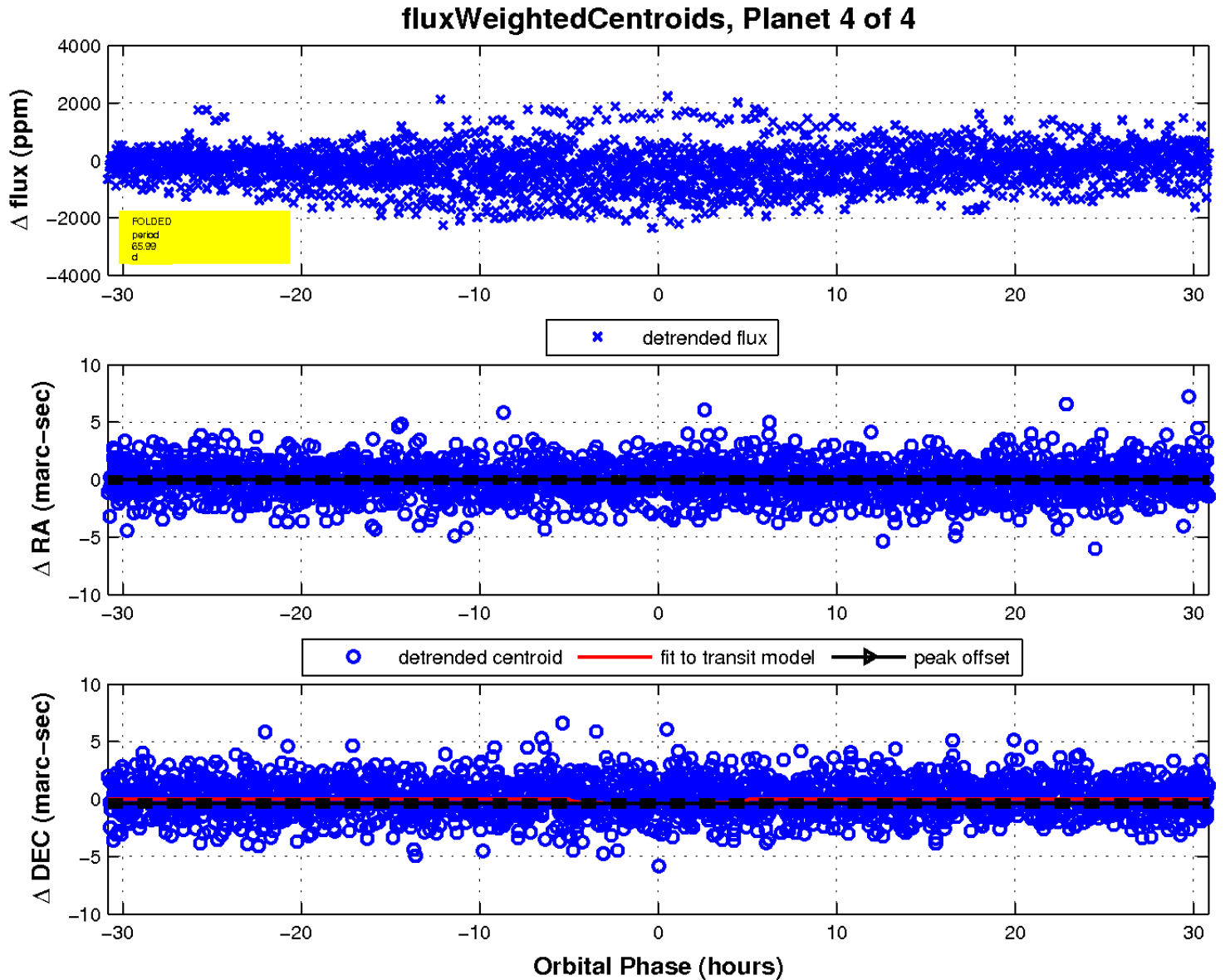
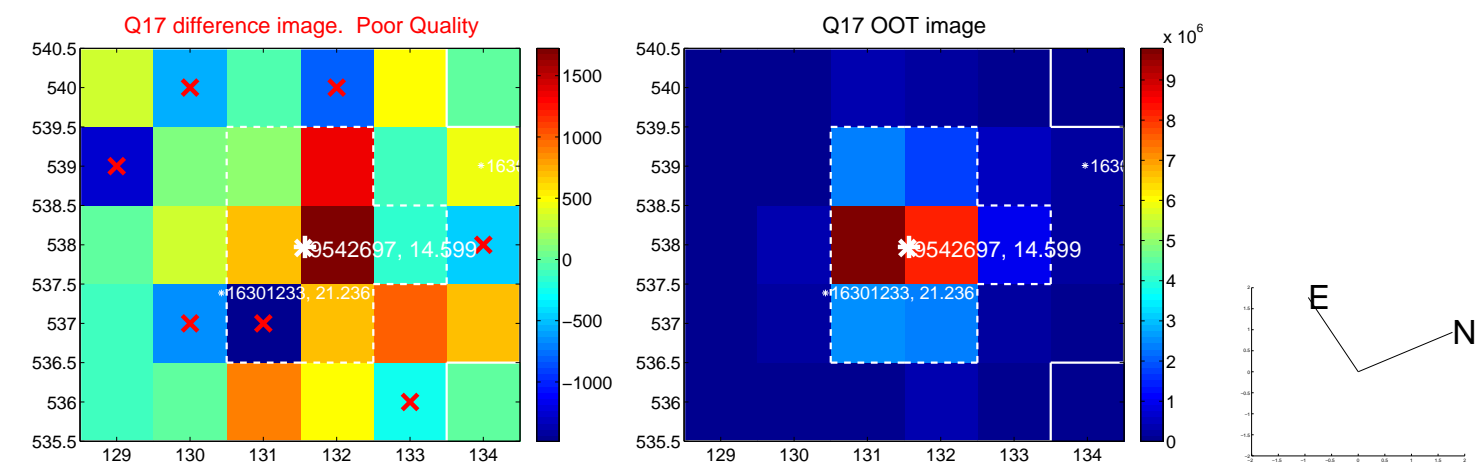
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

