

KIC 006389098

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})
006389098-01	OBS	No	0.620569	132.103933	194.1	1.664	11.4	11.4	1.39	6962	2.25	16281.83
006389098-02	OBS	No	0.590739	132.042002	0.4	1.718	11.5	0.0	1.39	6962	0.11	17387.19
006389098-03	OBS	No	0.590494	132.098911	180.4	4.645	11.5	10.4	1.39	6962	1.91	17396.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006389098-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006389098-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006389098-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—SAME_NTL_PERIOD

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

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

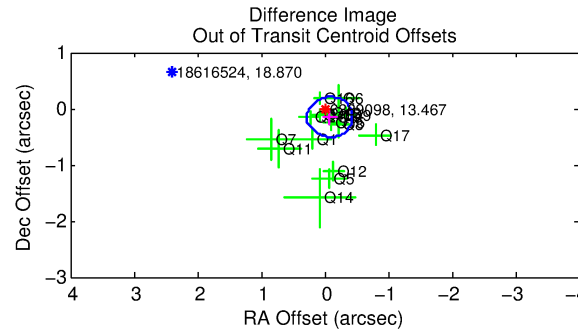
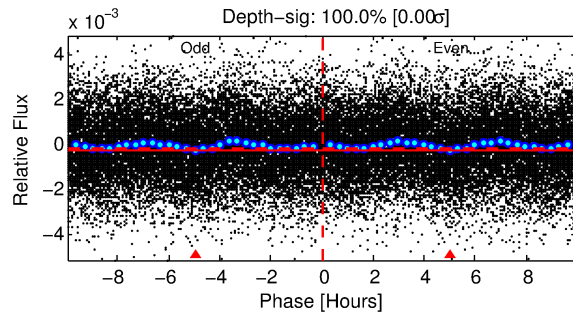
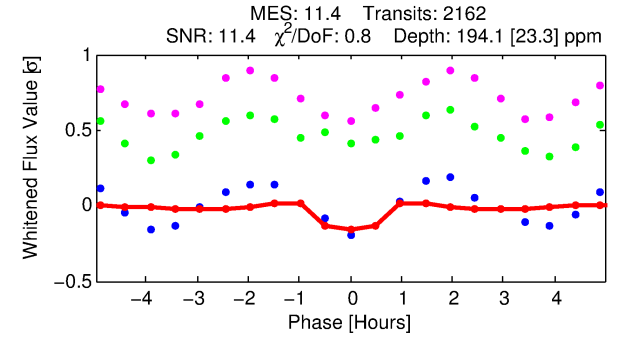
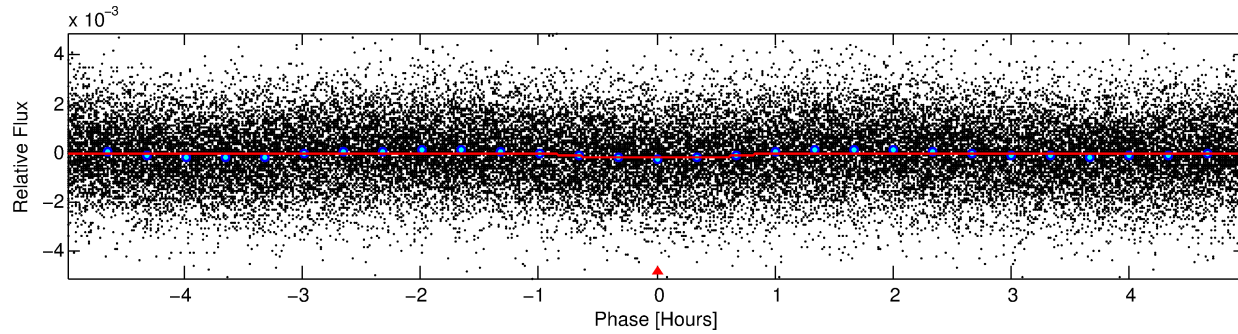
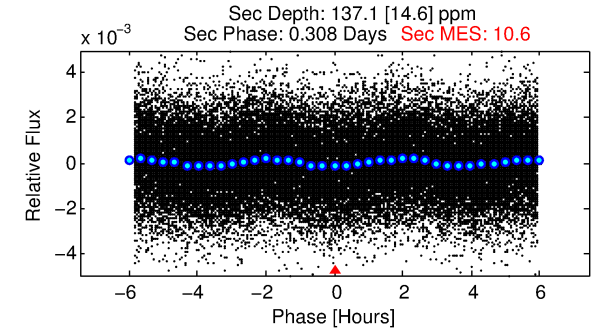
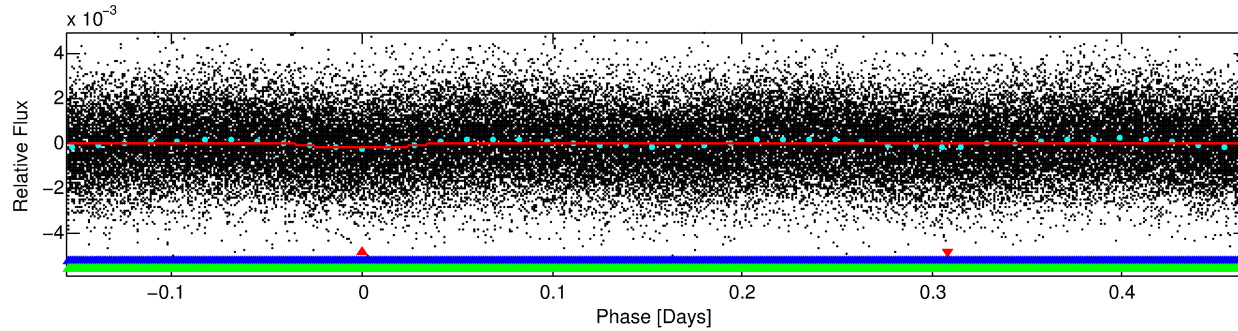
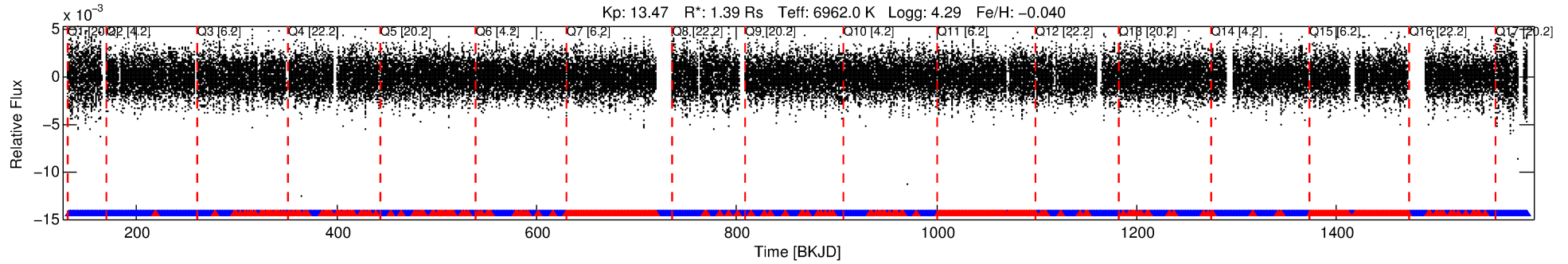
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006389098-01

No Significant Match Found

DV One-Page Summary

KIC: 6389098 Candidate: 1 of 3 Period: 0.621 d



DV Fit Results:

Period = 0.62057 [0.00001] d
Epoch = 132.1039 [0.0017] BKJD
Rp/R* = 0.0149 [0.0060]
a/R* = 1.63 [2.49]
b = 0.90 [0.52]
Seff = 16281.84 [7274.65]
Teq = 2880 [322] K
Rp = 2.25 [1.24] Re
a = 0.0158 [0.0047] AU
Ag = 3.70 [3.39] [0.80σ]
Teffp = 6176 [1290] K [2.48σ]

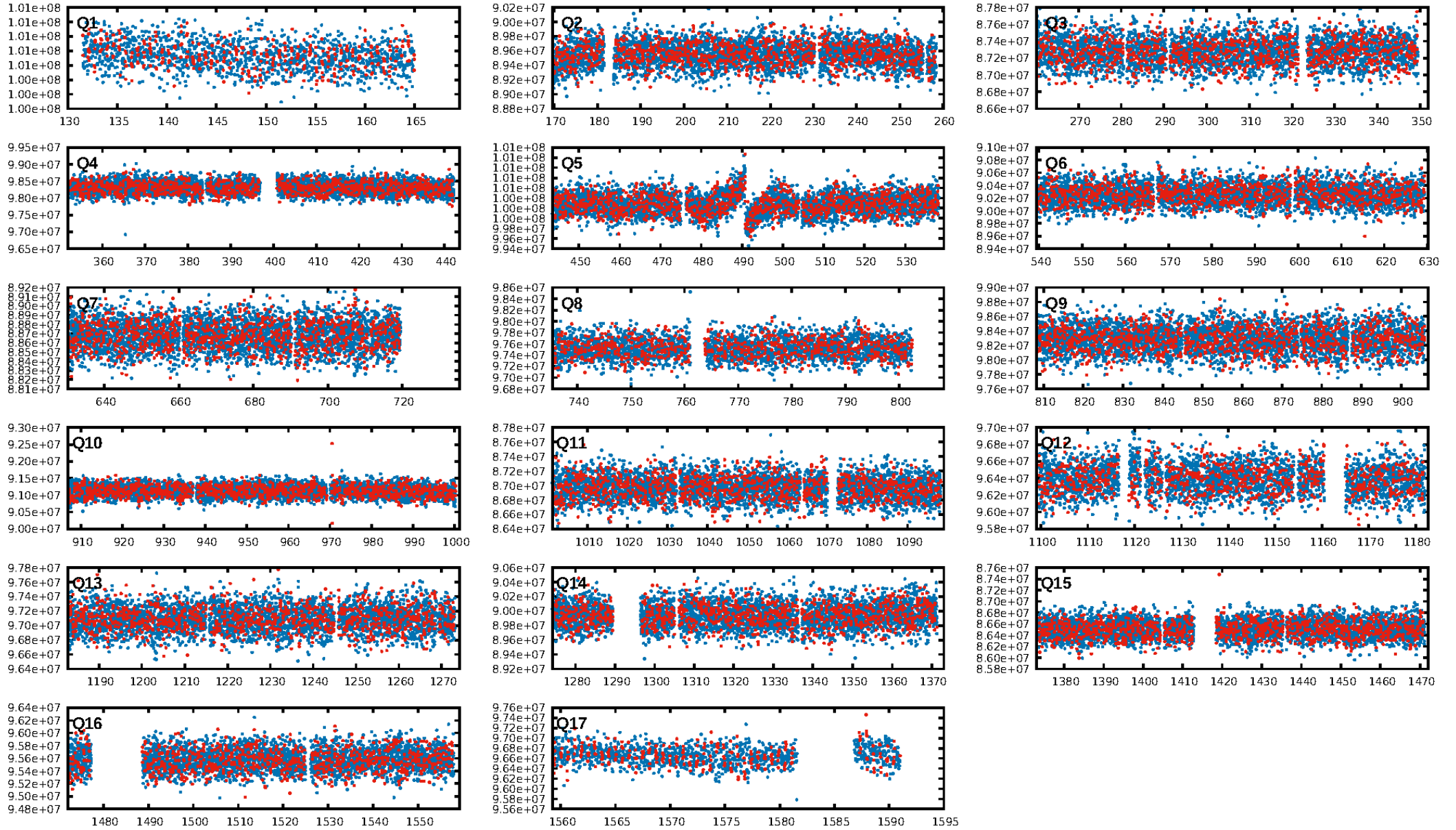
DV Diagnostic Results:

ShortPeriod-sig: 23.5% [0.30σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.72 [1477/2065]
GhostDiagnostic-chr: 4.115
Centroid-sig: 11.6%
Centroid-so: 0.308 arcsec [1.58σ]
OotOffset-rm: 0.171 arcsec [1.44σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.167 arcsec [1.40σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

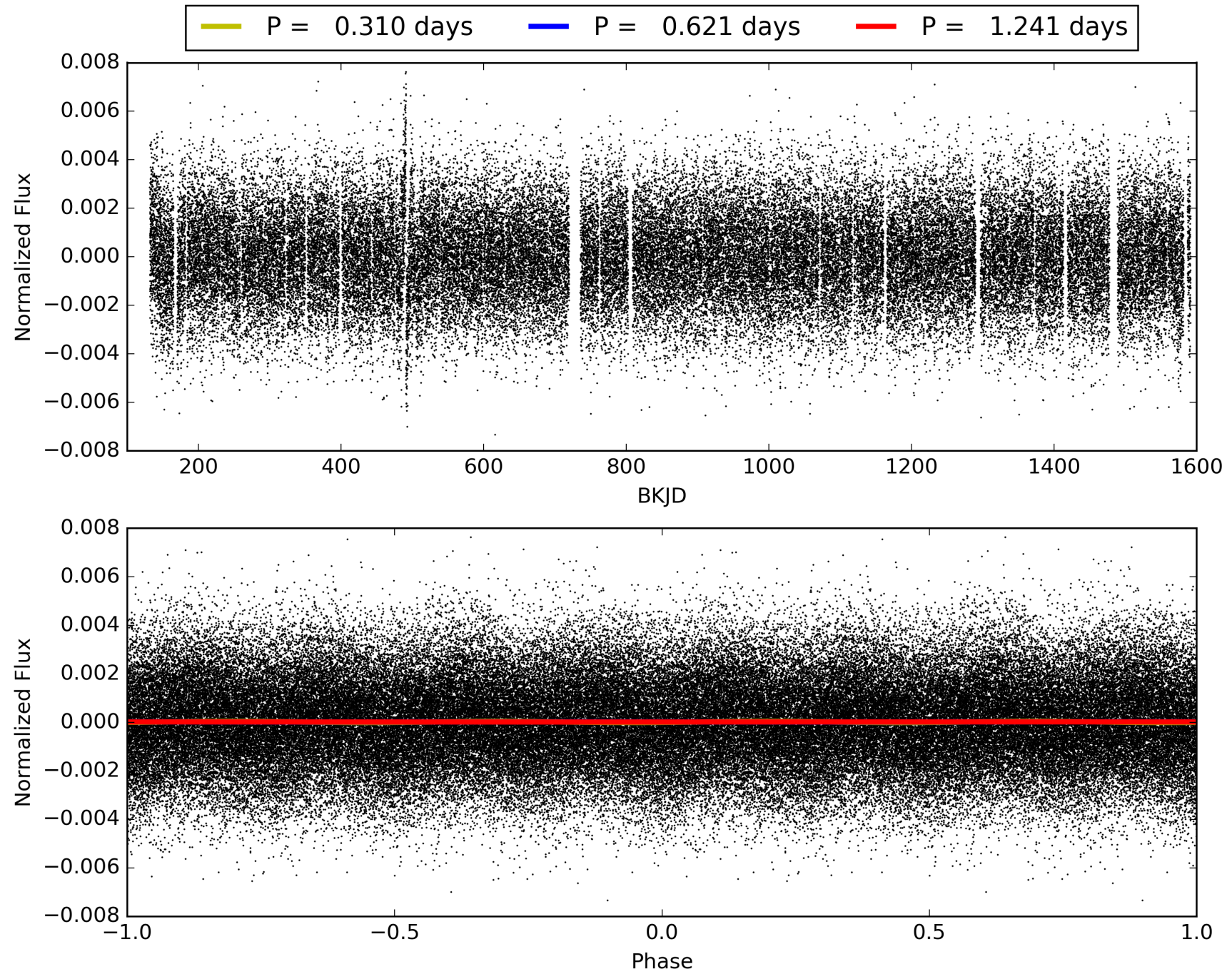
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:55:44 Z

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

TCE 006389098-01, PDC Light Curves

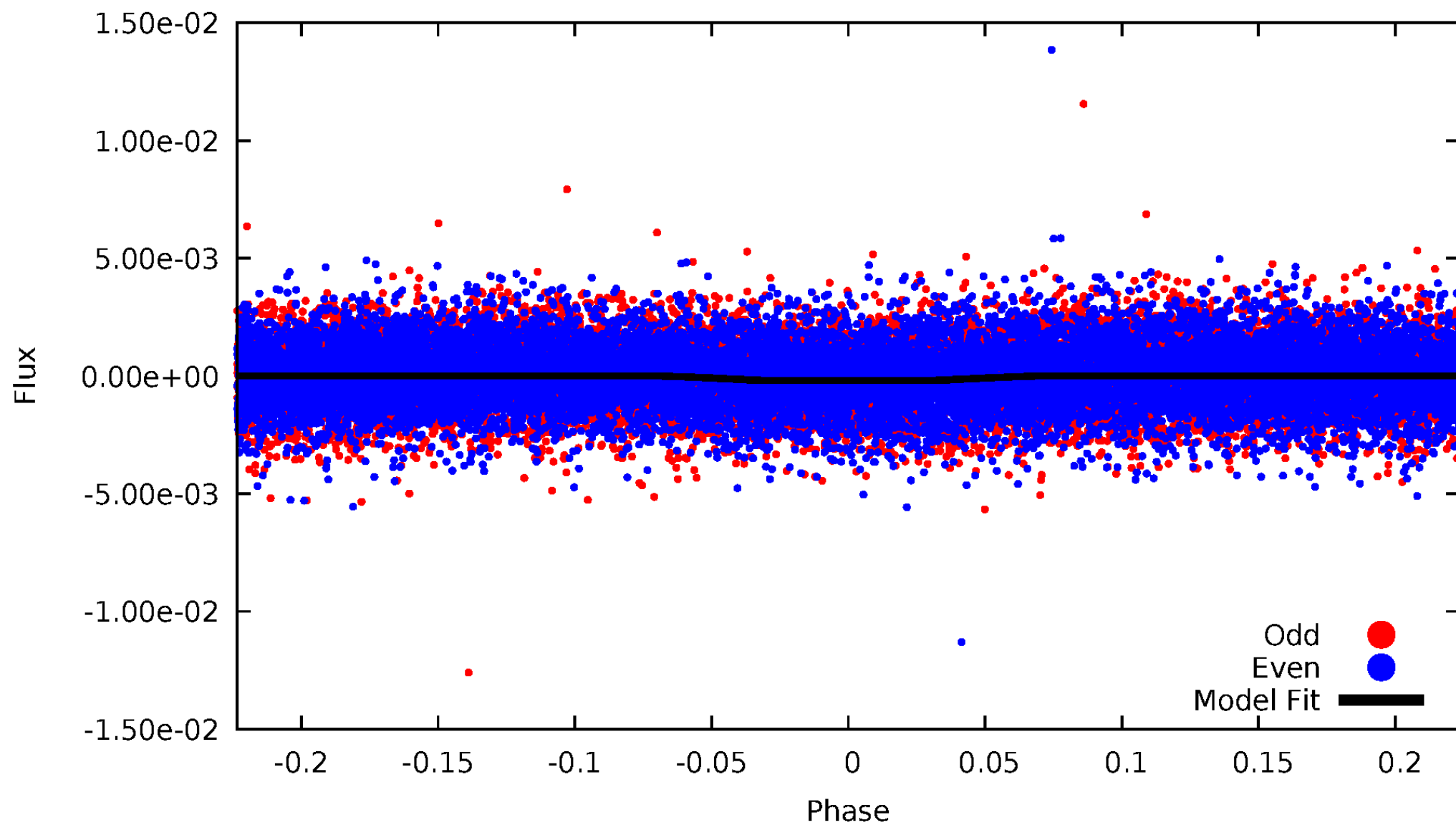


TCE 006389098-01



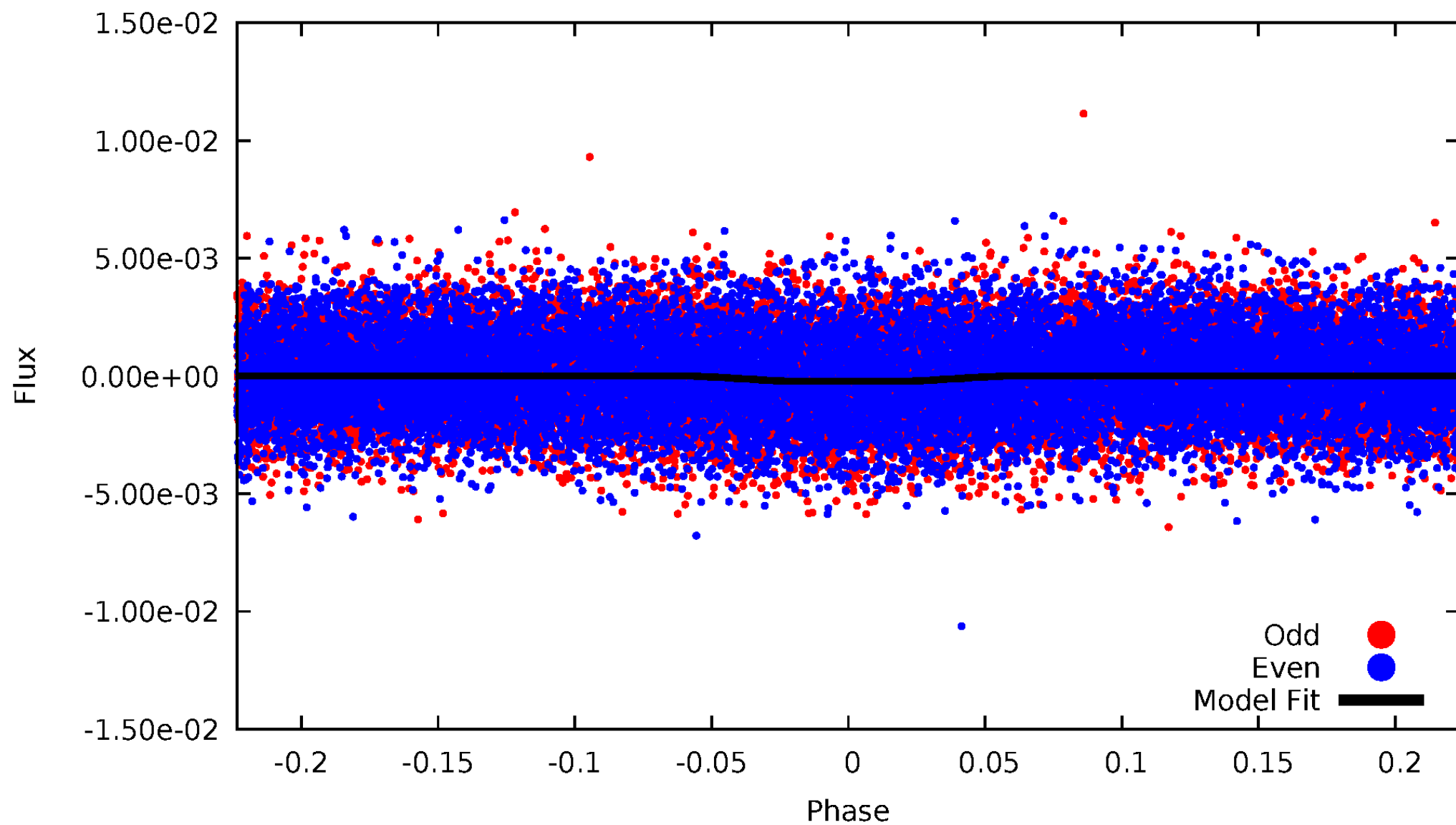
DV Odd/Even

TCE 006389098-01



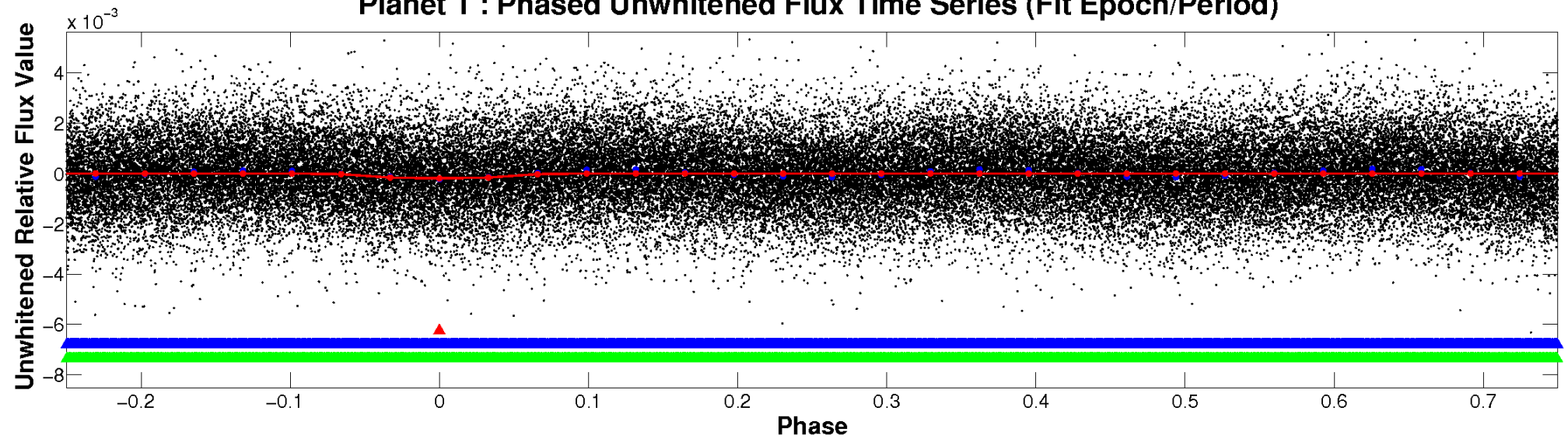
ALT Odd/Even

TCE 006389098-01

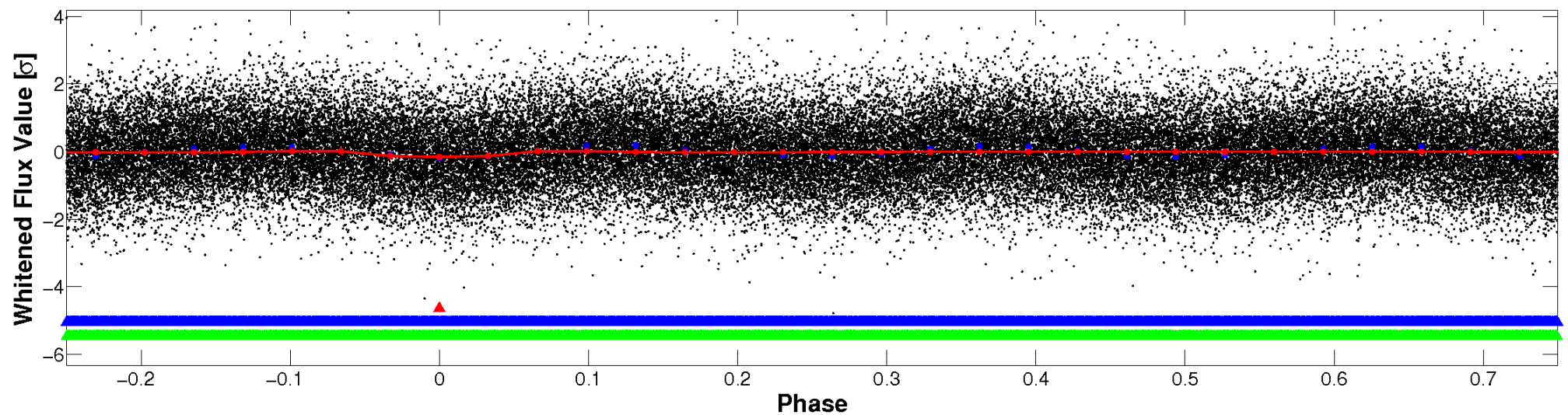


Non-Whitened Vs. Whitened Light Curve

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

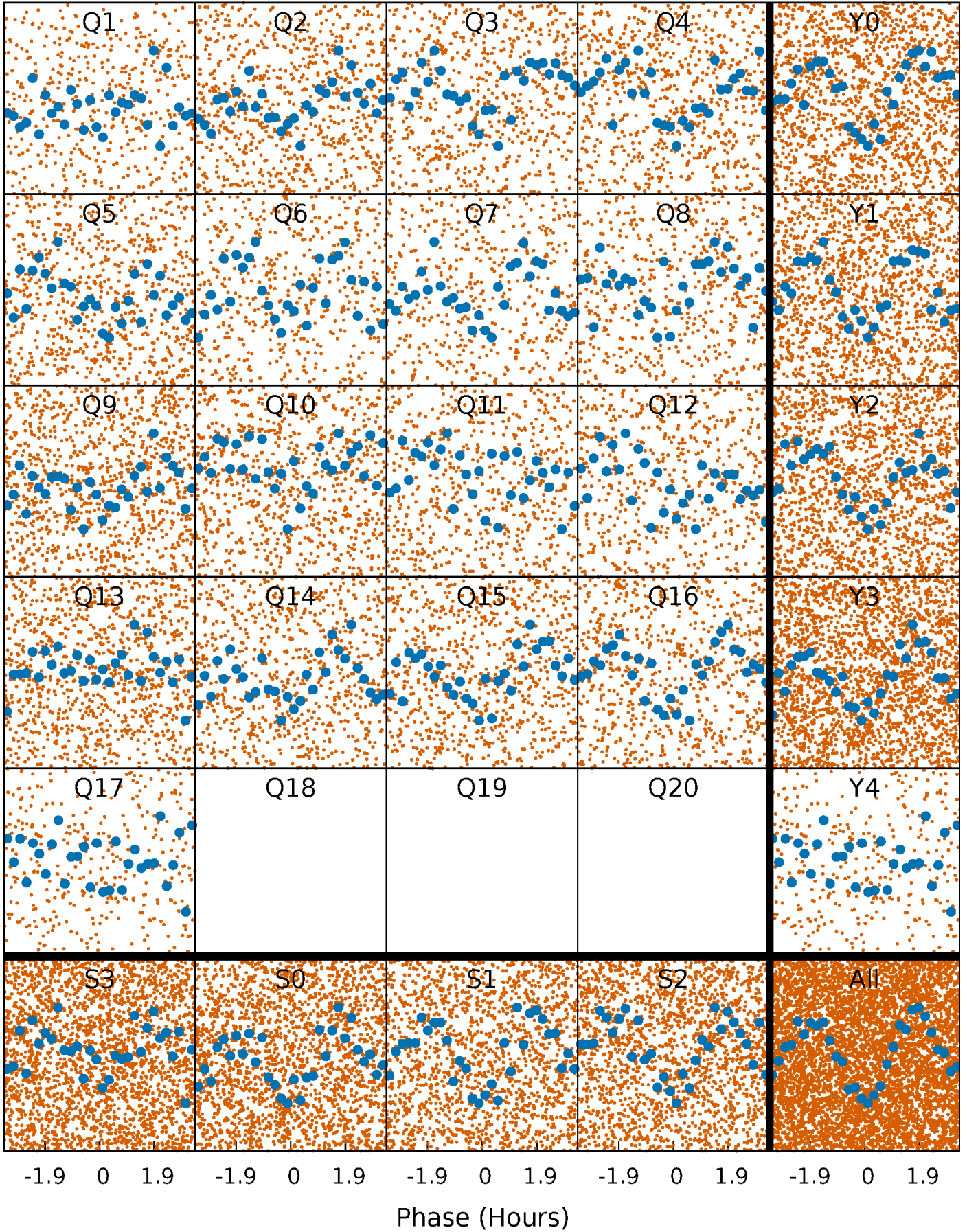


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



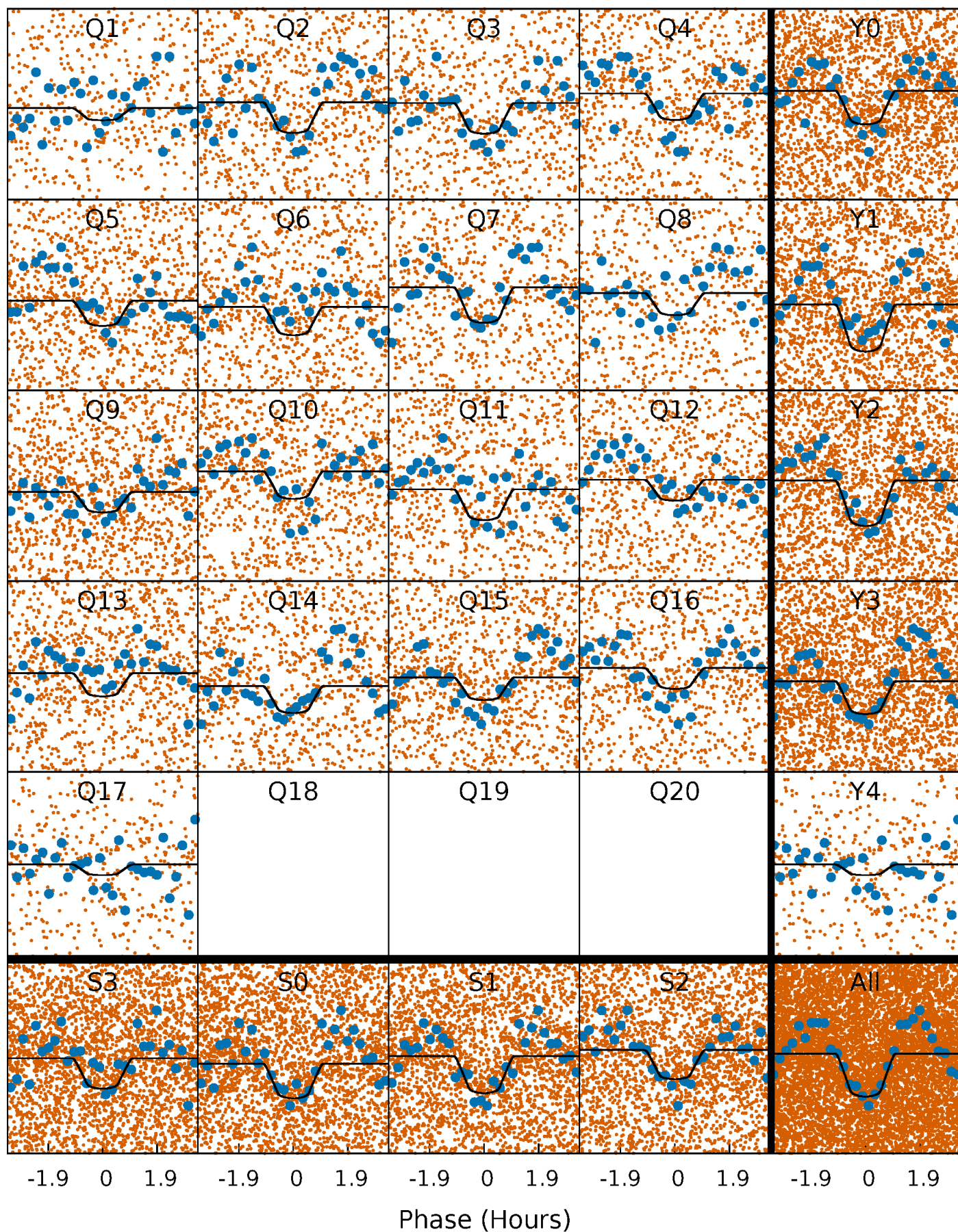
PDC Quarter-Phased Transit Curves

TCE 006389098-01 P= 0.620569 Days $T_0=132.103933$ (BKJD)



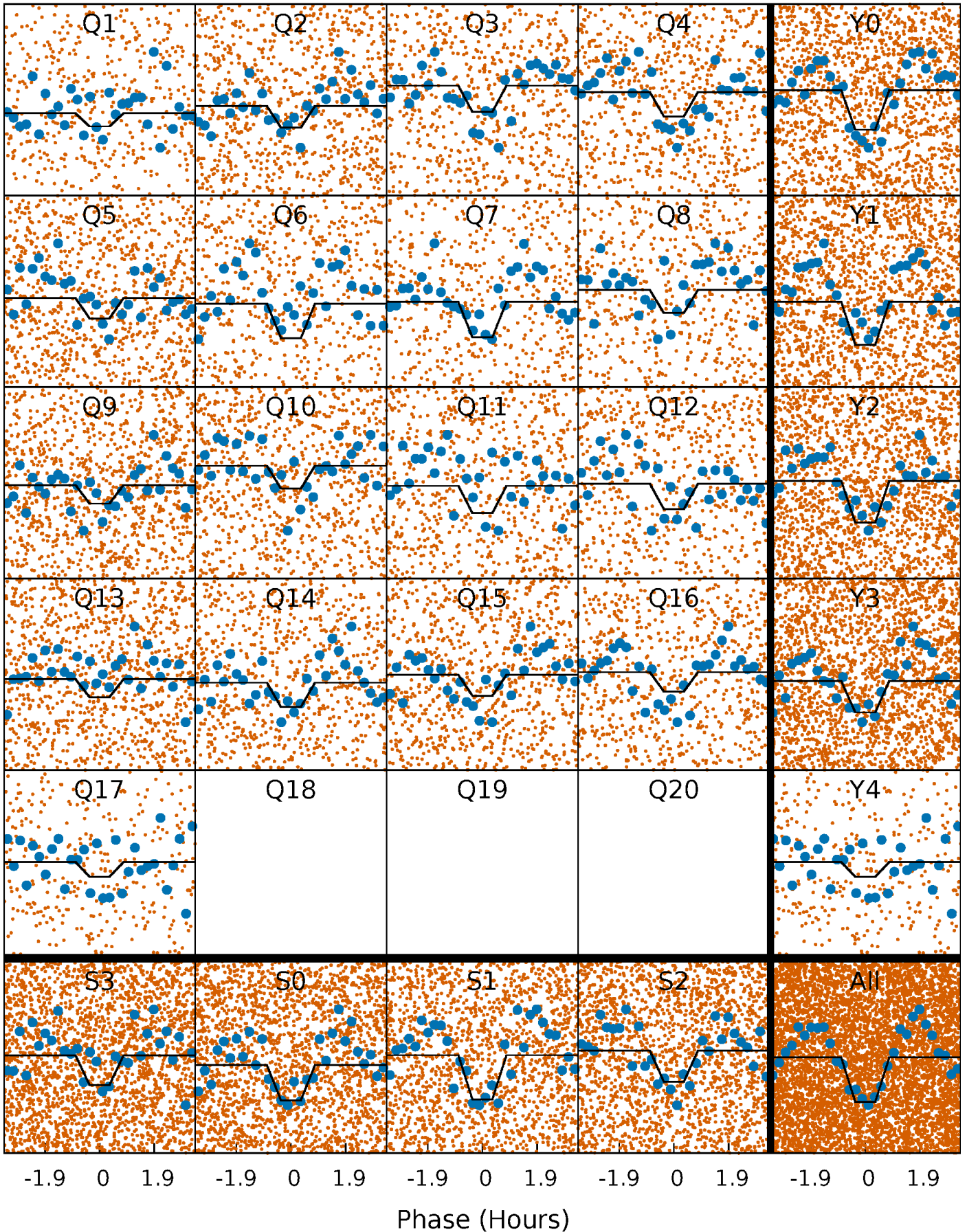
DV Quarter-Phased Transit Curves

TCE 006389098-01 P= 0.620569 Days $T_0=132.103933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

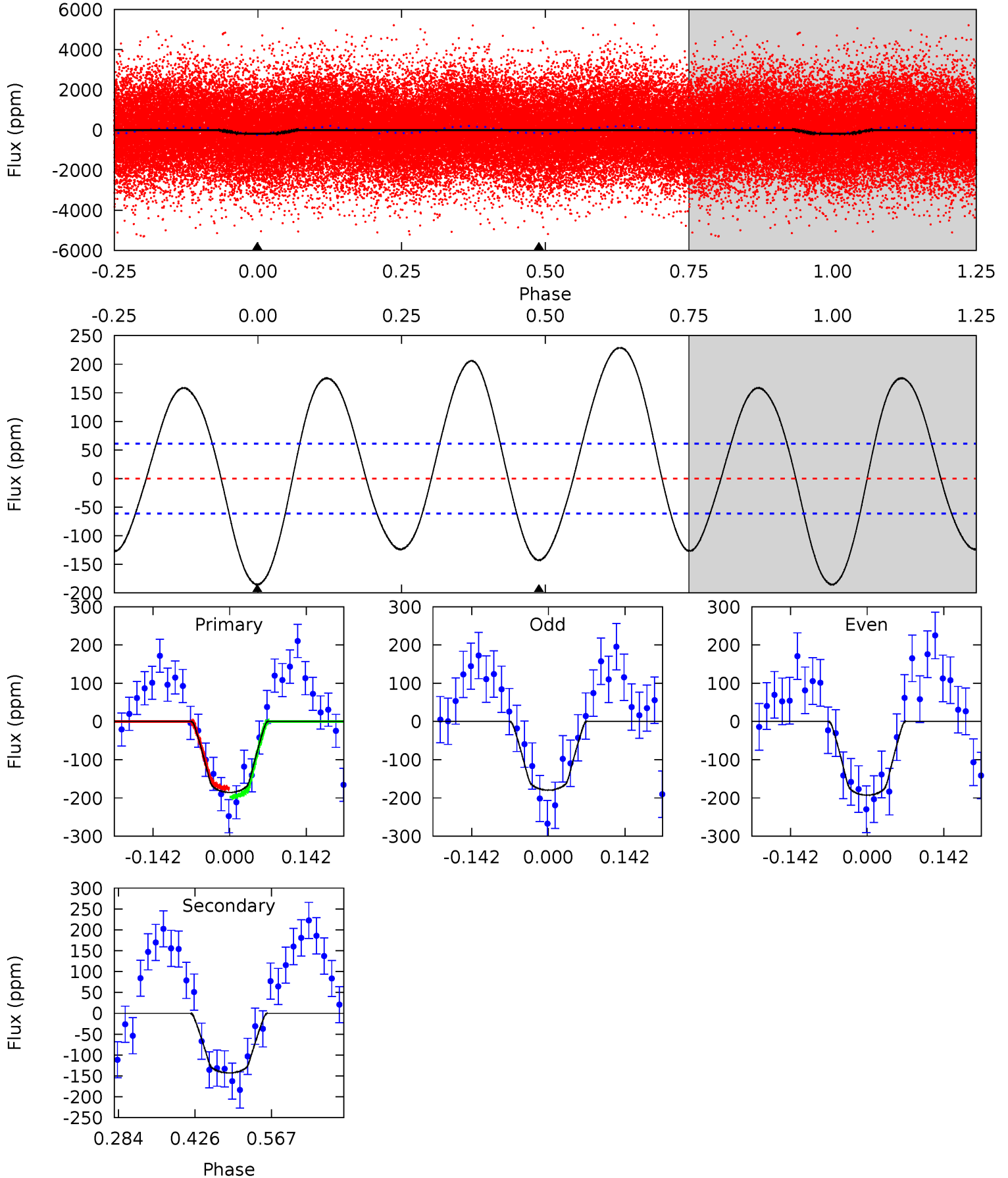
TCE 006389098-01 P= 0.620569 Days $T_0=132.103933$ (BKJD)



DV Model-Shift Uniqueness Test

006389098-01, P = 0.620569 Days, E = 131.483364 Days

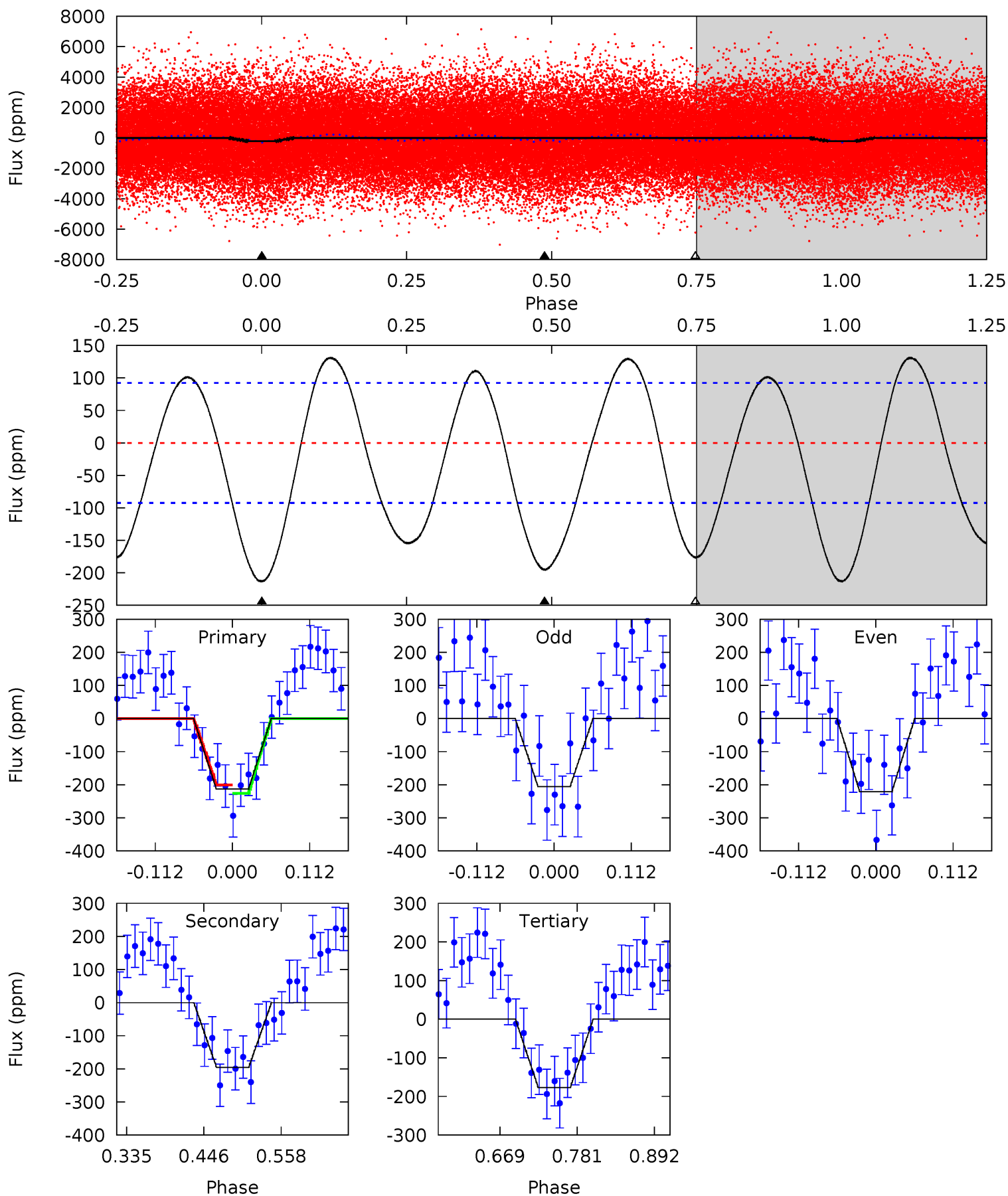
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	10.5	0	0	4.49	1.47	7.84	13.6	13.6	10.5	10.5	0.49	0.91	0.55	0.84



Alt Model-Shift Uniqueness Test

006389098-01, P = 0.620569 Days, E = 131.483364 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	9.61	8.68	0	4.54	1.59	5.13	1.80	10.5	0.93	9.61	0.39	0.92	0.38	0.61



Stellar Parameters For KIC 006389098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6962^{+194}_{-291}	$4.287^{+0.072}_{-0.217}$	$-0.040^{+0.250}_{-0.350}$	$1.388^{+0.513}_{-0.205}$	$1.366^{+0.222}_{-0.202}$	$0.720^{+0.285}_{-0.387}$
	+3%/-4%	+2%/-5%	+625%/-875%	+37%/-15%	+16%/-15%	+40%/-54%
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 006389098-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-143 ± 14	$2.39^{+1.05}_{-1.00}$	4101^{+368}_{-235}	6010^{+2272}_{-996}	$3.387^{+6.717}_{-1.798}$
Alt.	-195 ± 20	$2.36^{+0.98}_{-0.97}$	4099^{+309}_{-233}	6595^{+2530}_{-1154}	$4.637^{+9.097}_{-2.288}$

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

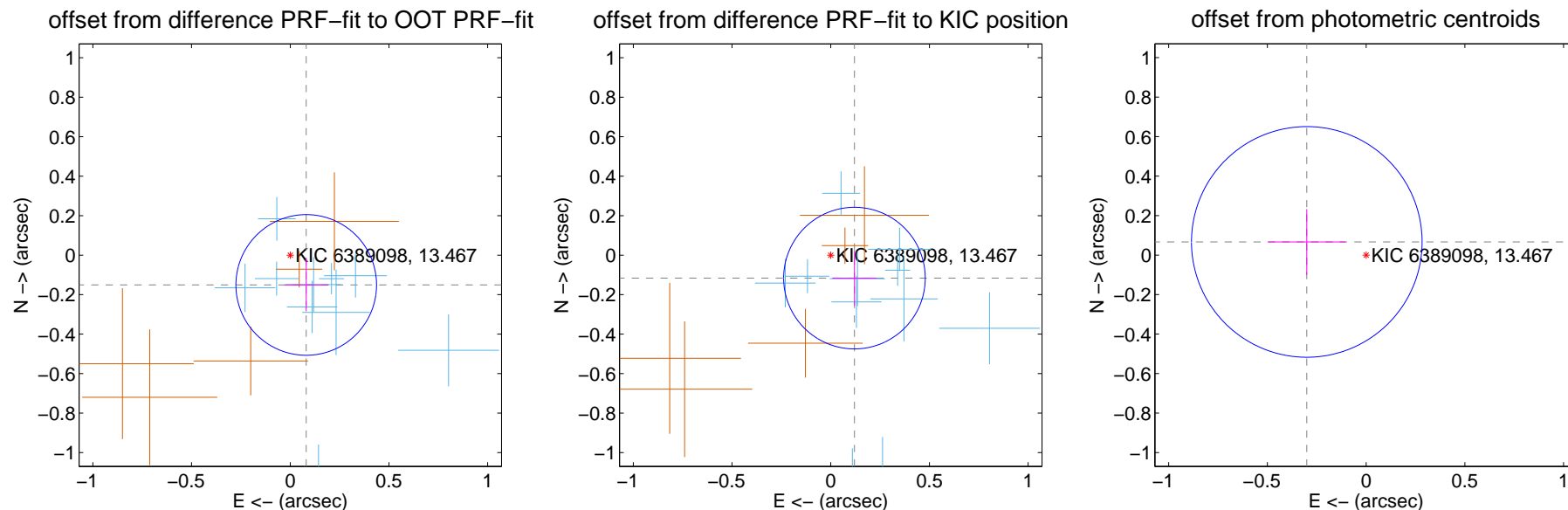
DV Centroid Data

Supplemental centroid analysis for 006389098-01. Kepler magnitude: 13.47. Transit SNR 11.37

There are 12 quarters with good PRF difference image offsets

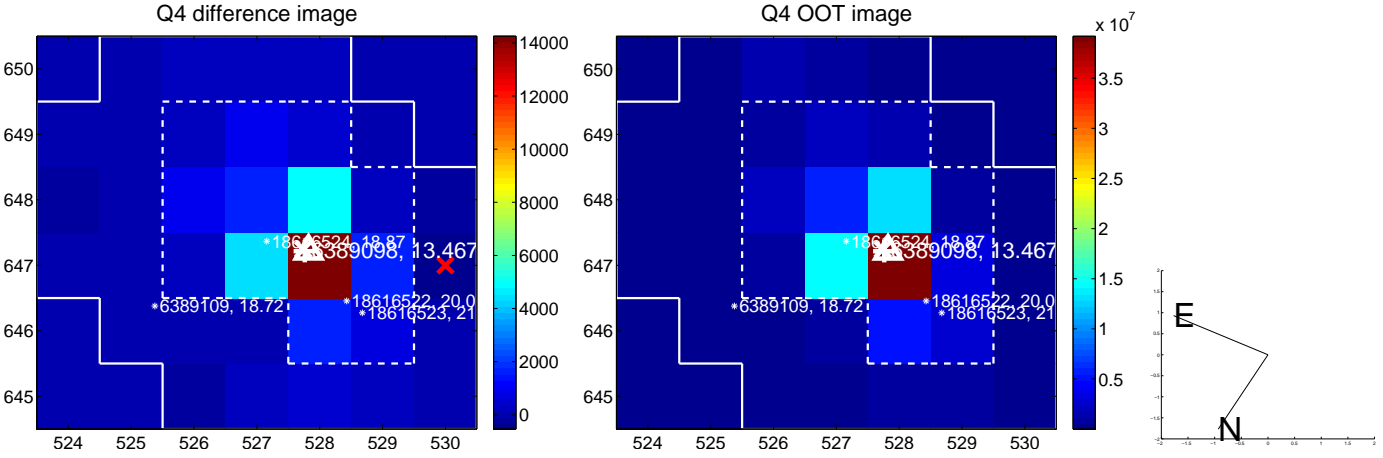
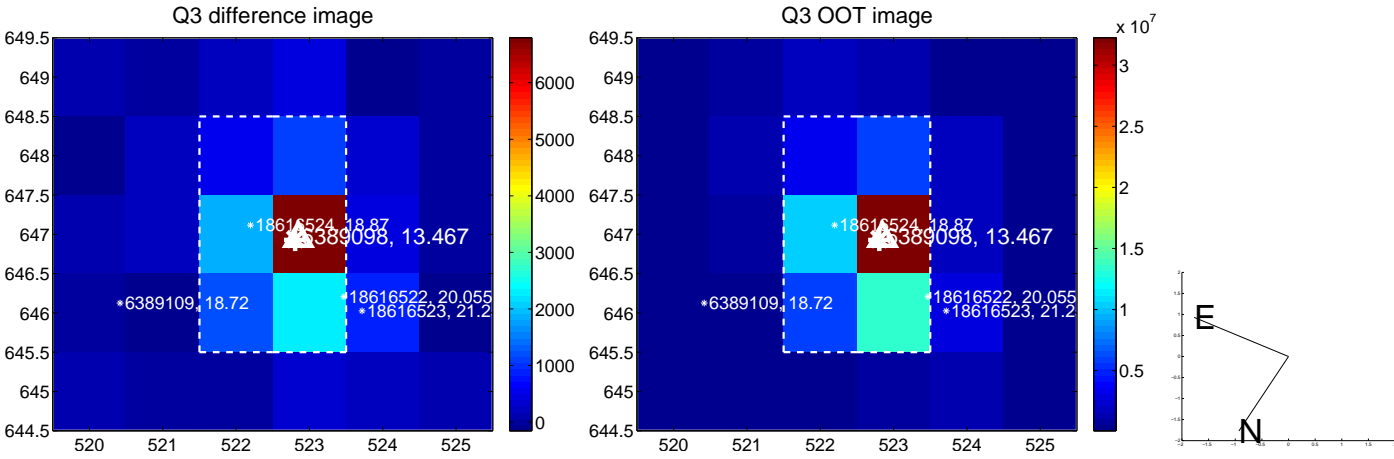
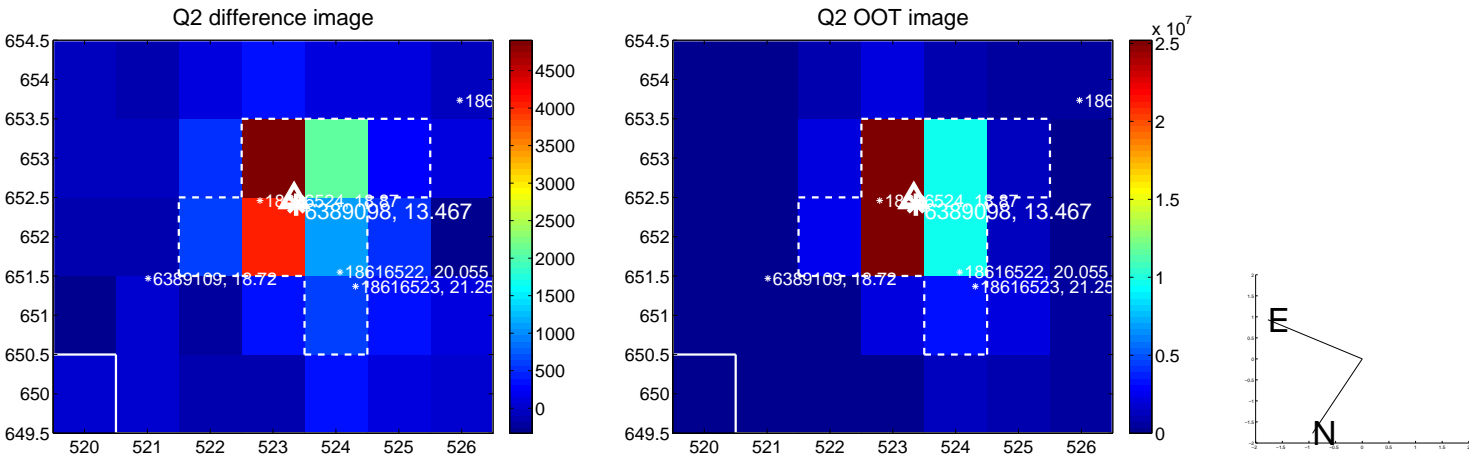
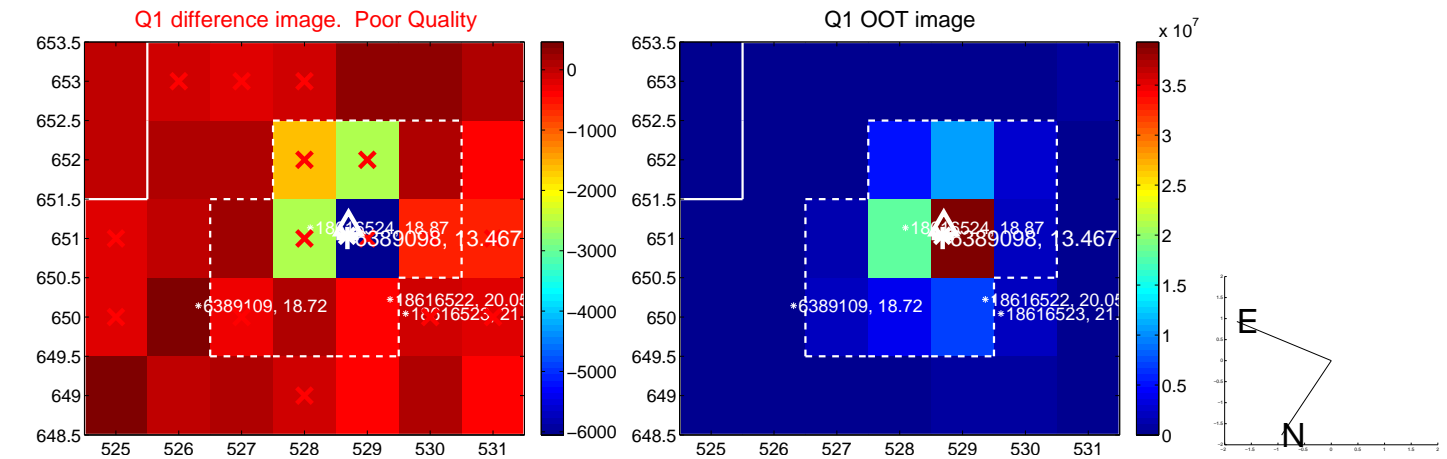
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.171 ± 0.119	1.44	-0.081 ± 0.110	-0.151 ± 0.134
PRF-fit source offset from KIC position	0.167 ± 0.120	1.40	-0.120 ± 0.113	-0.116 ± 0.139
photometric centroid source offset	0.31 ± 0.19	1.58	0.30 ± 0.20	0.07 ± 0.17

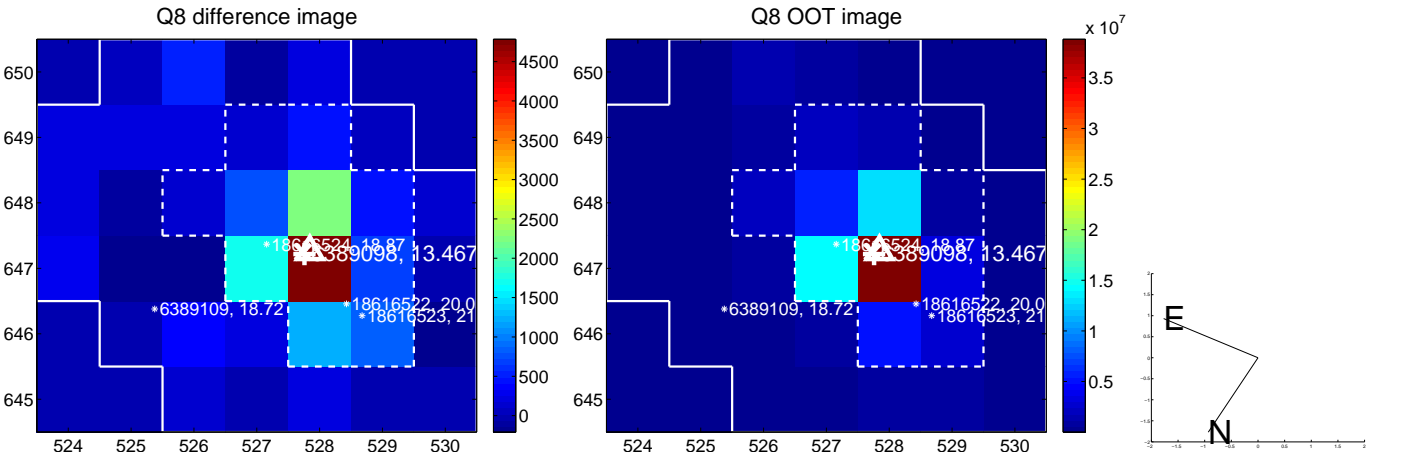
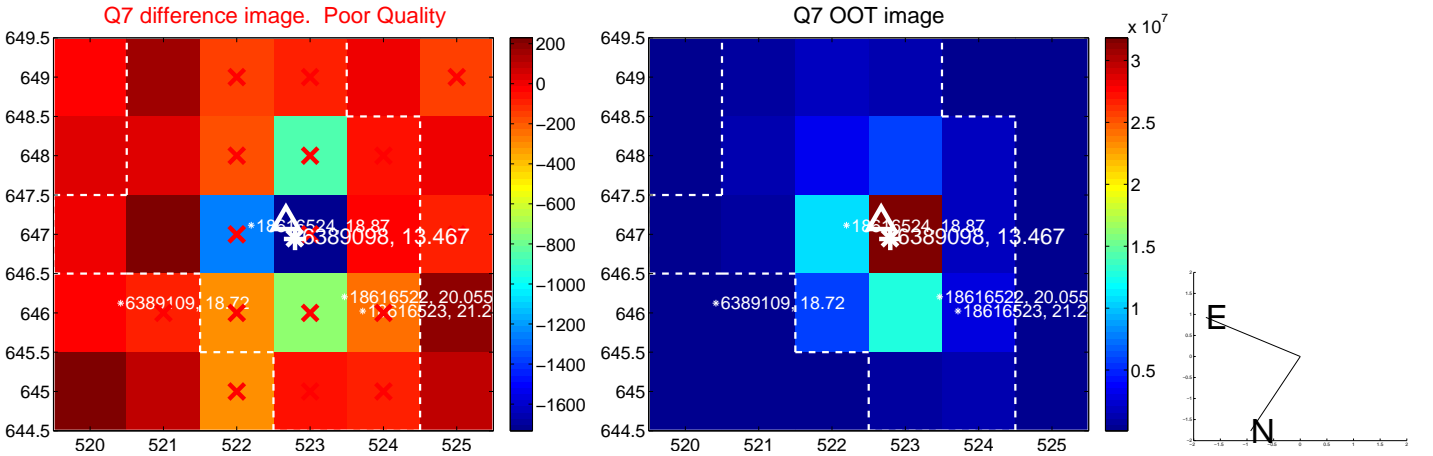
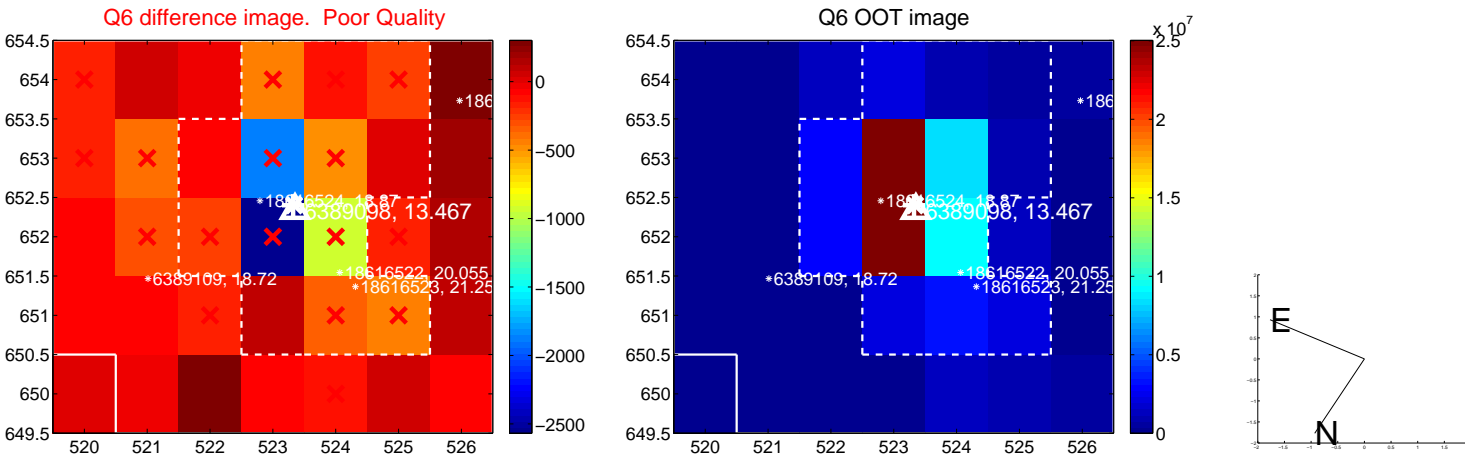
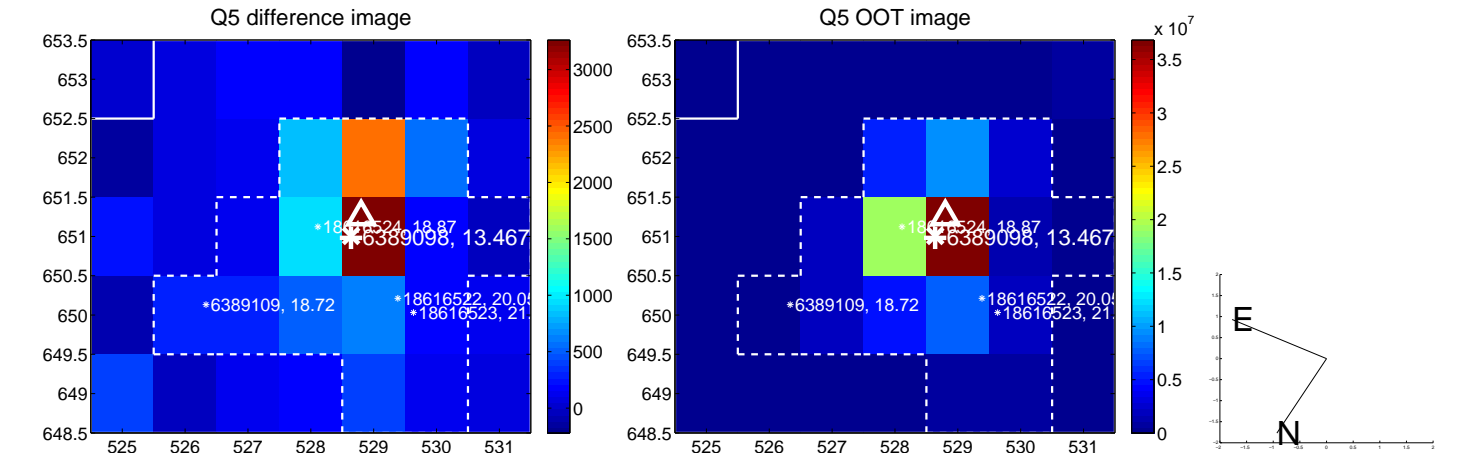


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

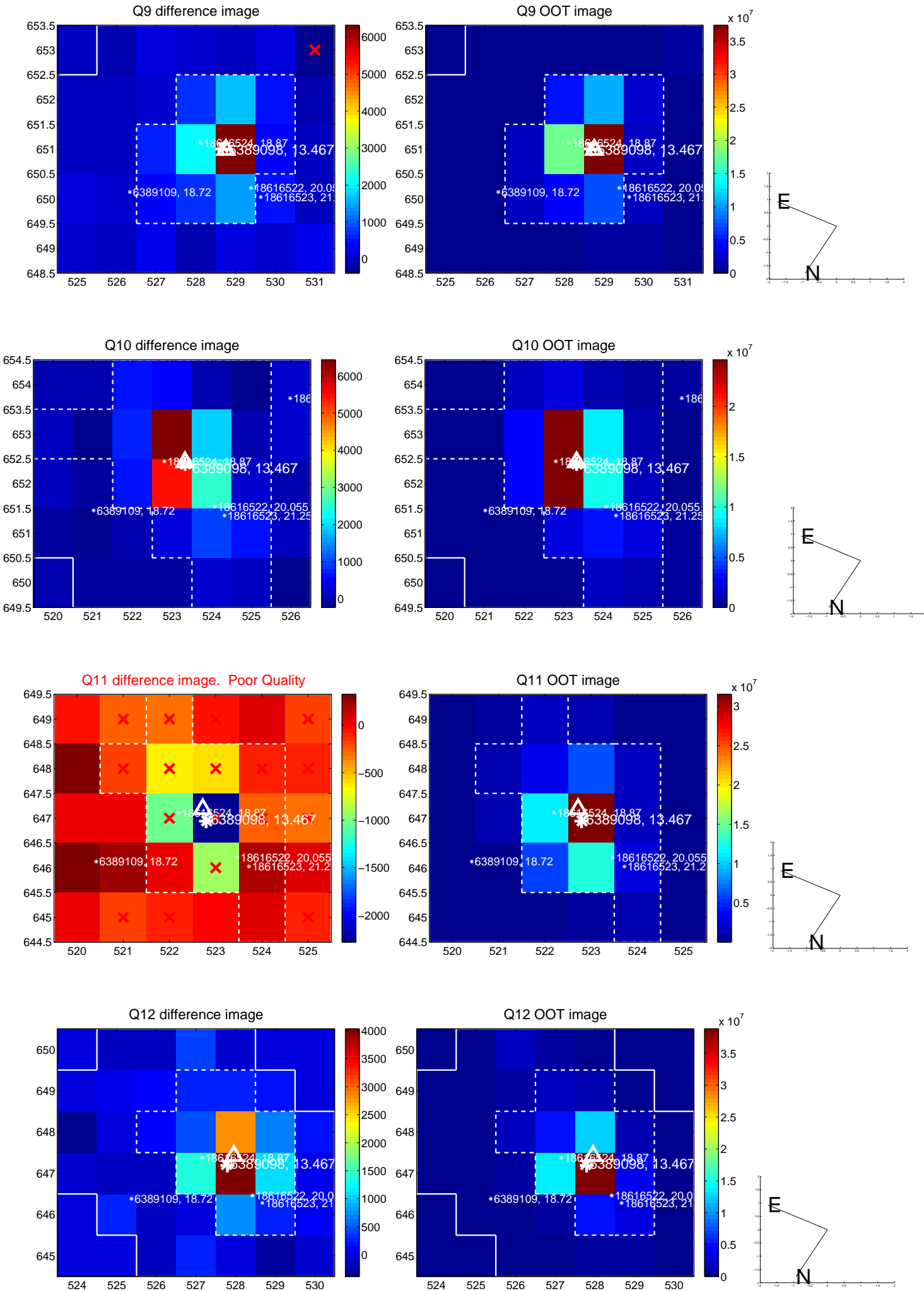
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



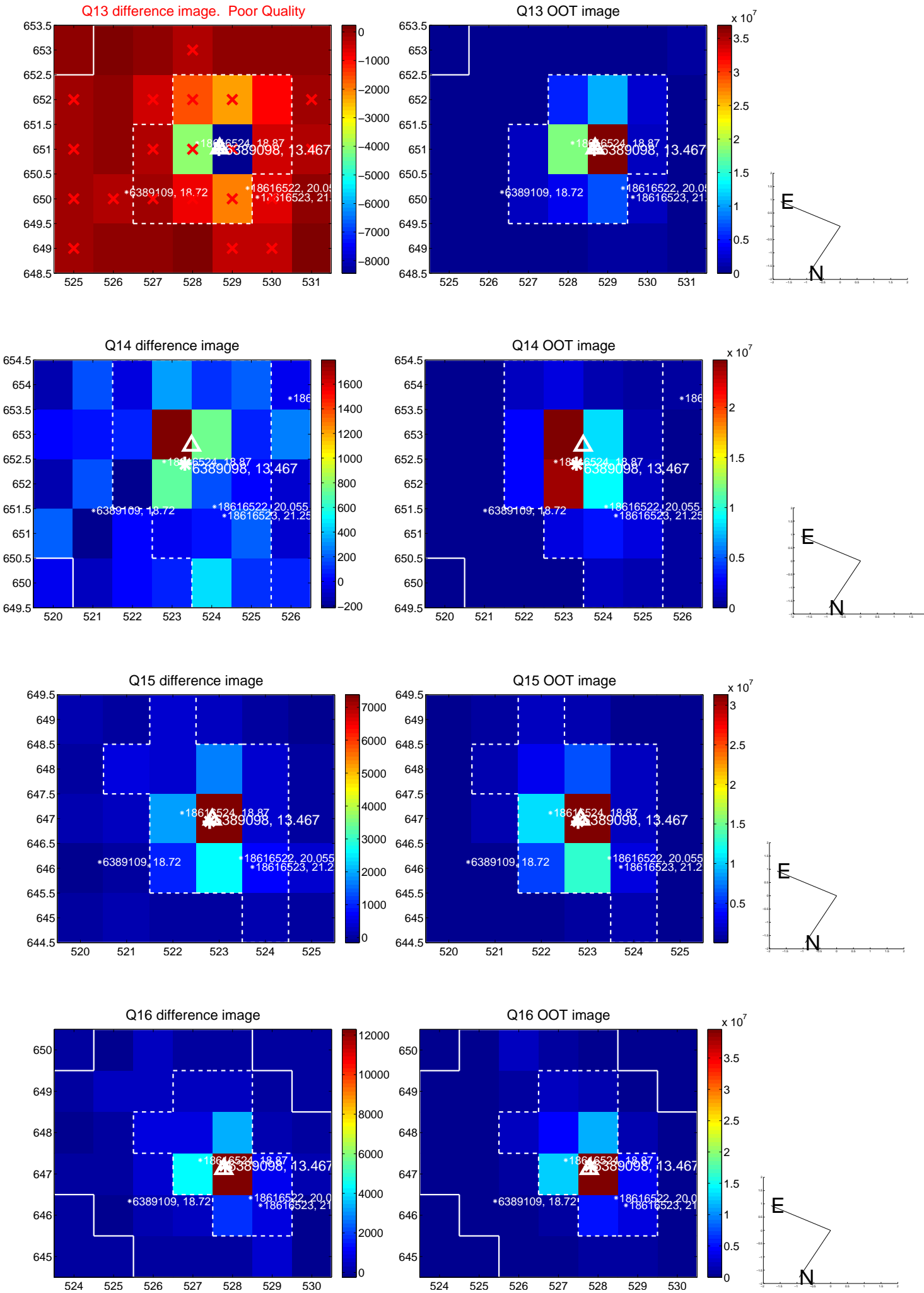
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

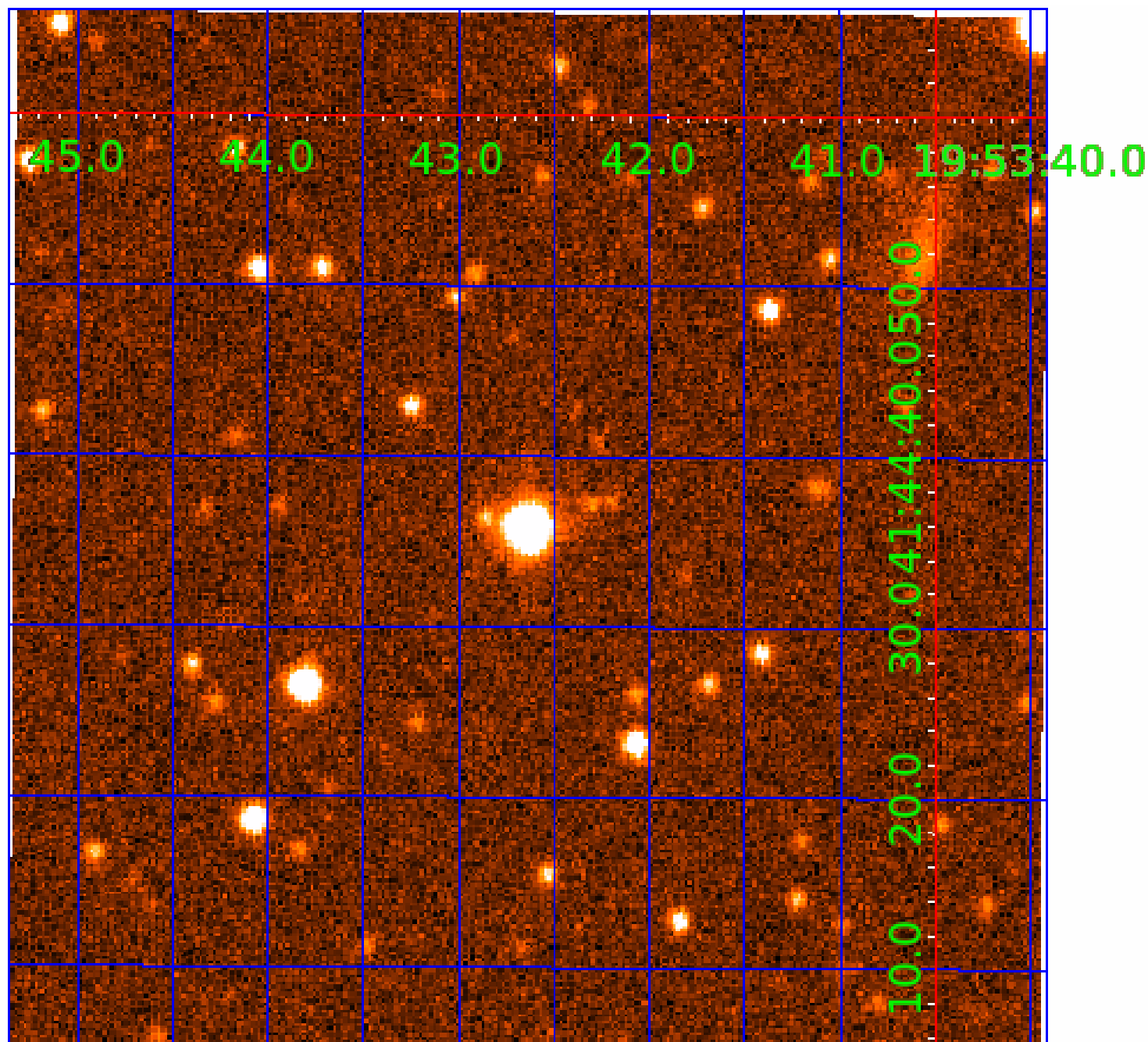


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006389098

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})
006389098-01	OBS	No	0.620569	132.103933	194.1	1.664	11.4	11.4	1.39	6962	2.25	16281.83
006389098-02	OBS	No	0.590739	132.042002	0.4	1.718	11.5	0.0	1.39	6962	0.11	17387.19
006389098-03	OBS	No	0.590494	132.098911	180.4	4.645	11.5	10.4	1.39	6962	1.91	17396.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006389098-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006389098-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006389098-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—SAME_NTL_PERIOD

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

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

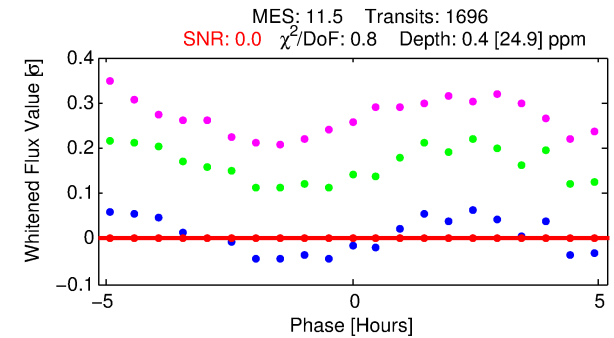
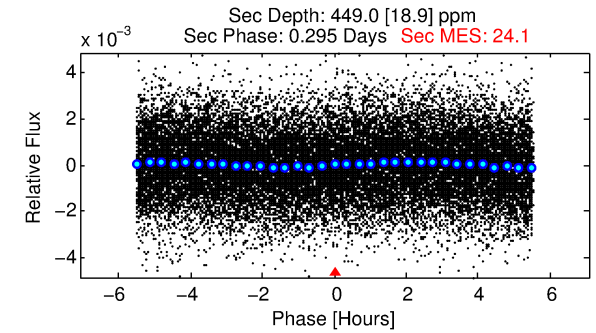
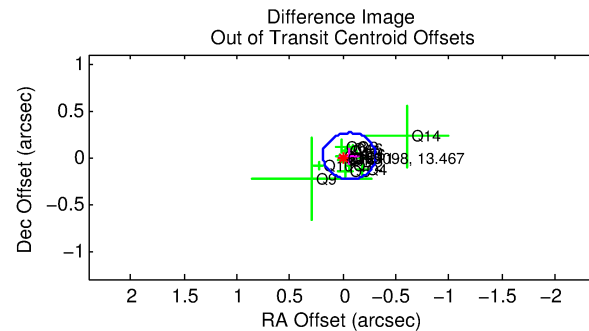
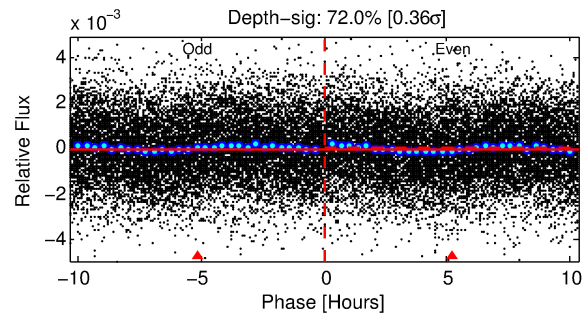
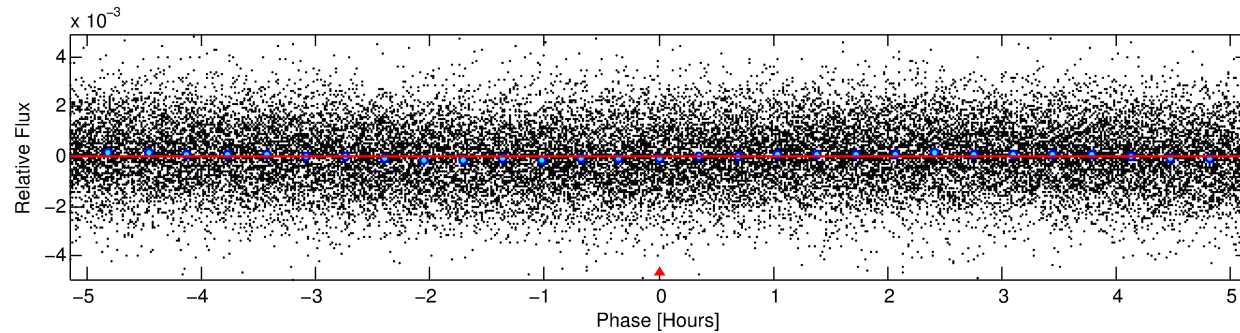
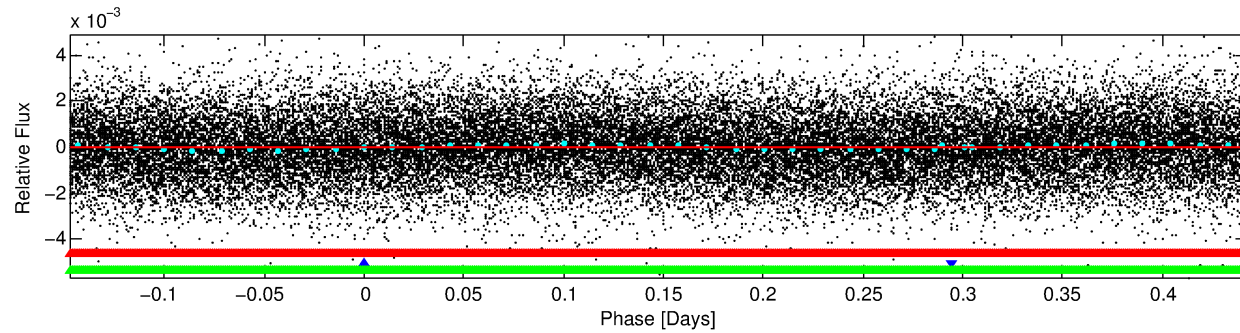
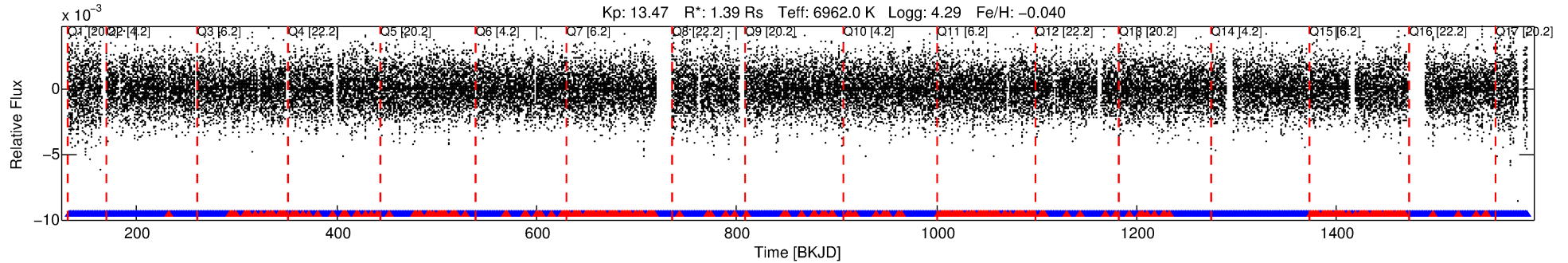
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006389098-02

No Significant Match Found

DV One-Page Summary

KIC: 6389098 Candidate: 2 of 3 Period: 0.591 d



DV Fit Results:

Period = 0.59074 [0.00465] d
Epoch = 132.0420 [0.9637] BKJD
Rp/R* = 0.0007 [0.0216]
a/R* = 1.45 [36.28]
b = 0.91 [9.64]
Seff = 17387.19 [7770.65]
Teff = 2928 [327] K
Rp = 0.11 [3.28] Re
a = 0.0153 [0.0045] AU
Ag = 5134.09 [317781.25] [0.02 σ]
Teffp = 38321 [593036] K [0.06 σ]

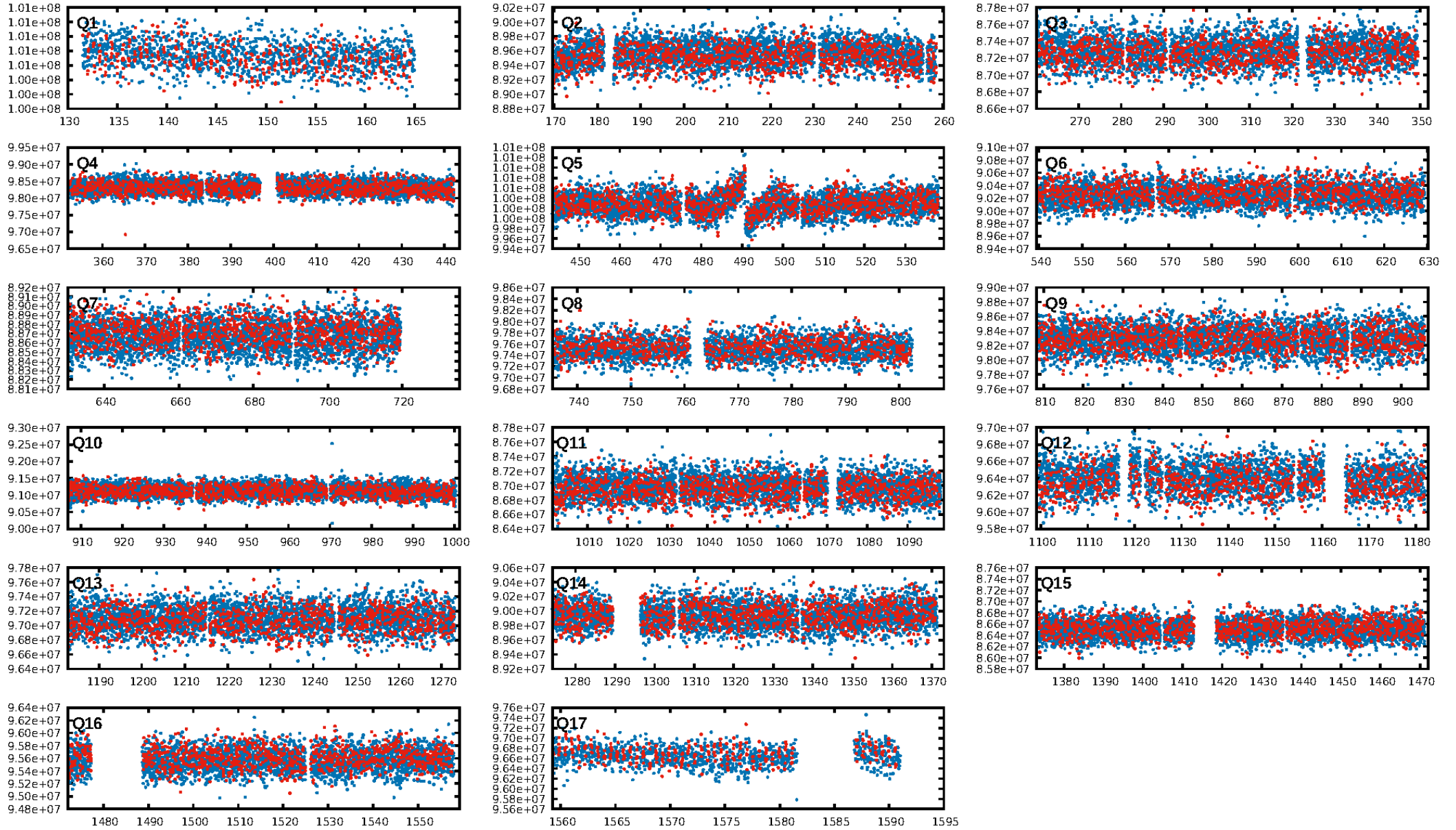
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: 23.5% [0.30 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.74 [1199/1615]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.064 arcsec [0.77 σ]
KicOffset-rm: 0.126 arcsec [1.59 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

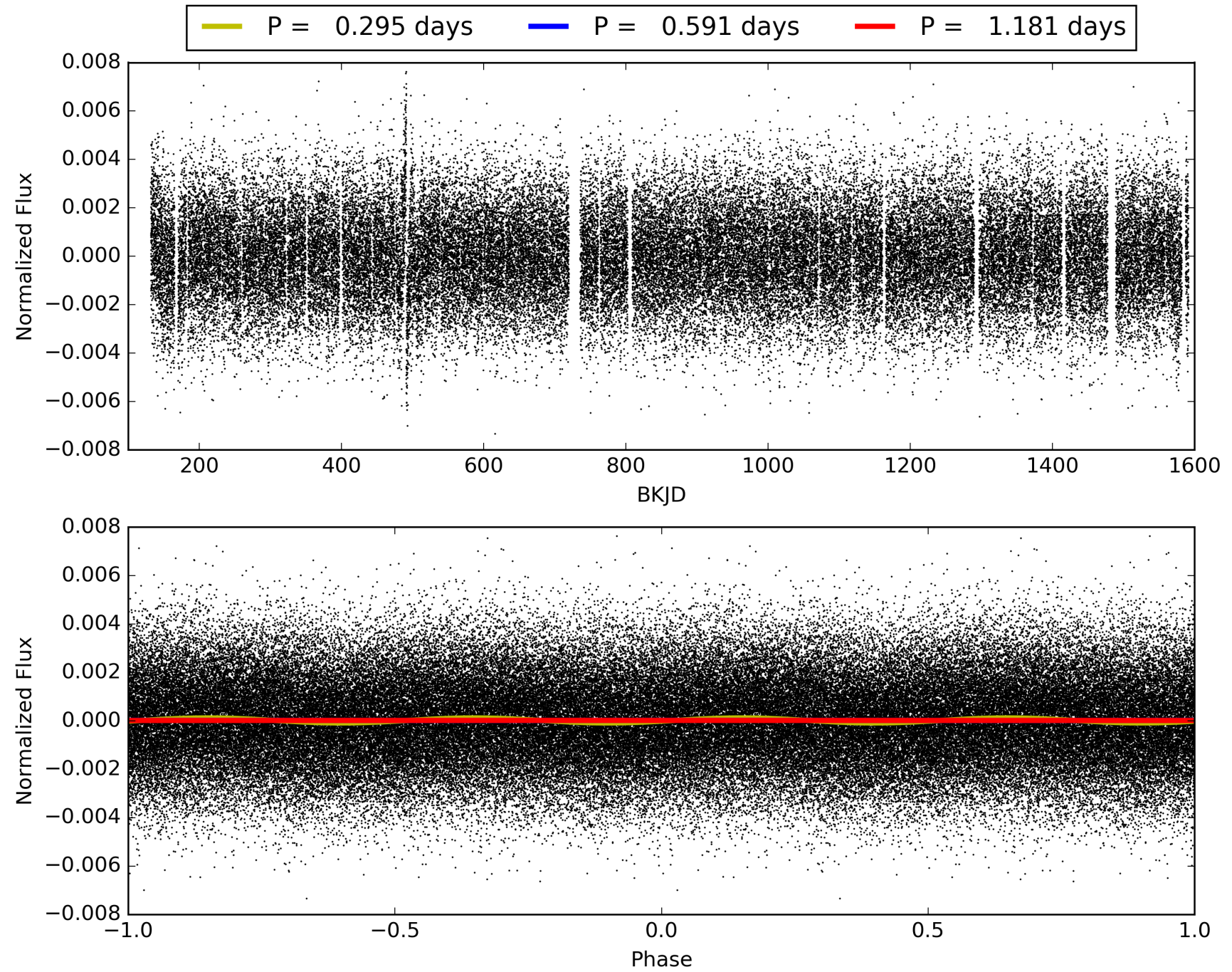
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:55:55 Z

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

TCE 006389098-02, PDC Light Curves

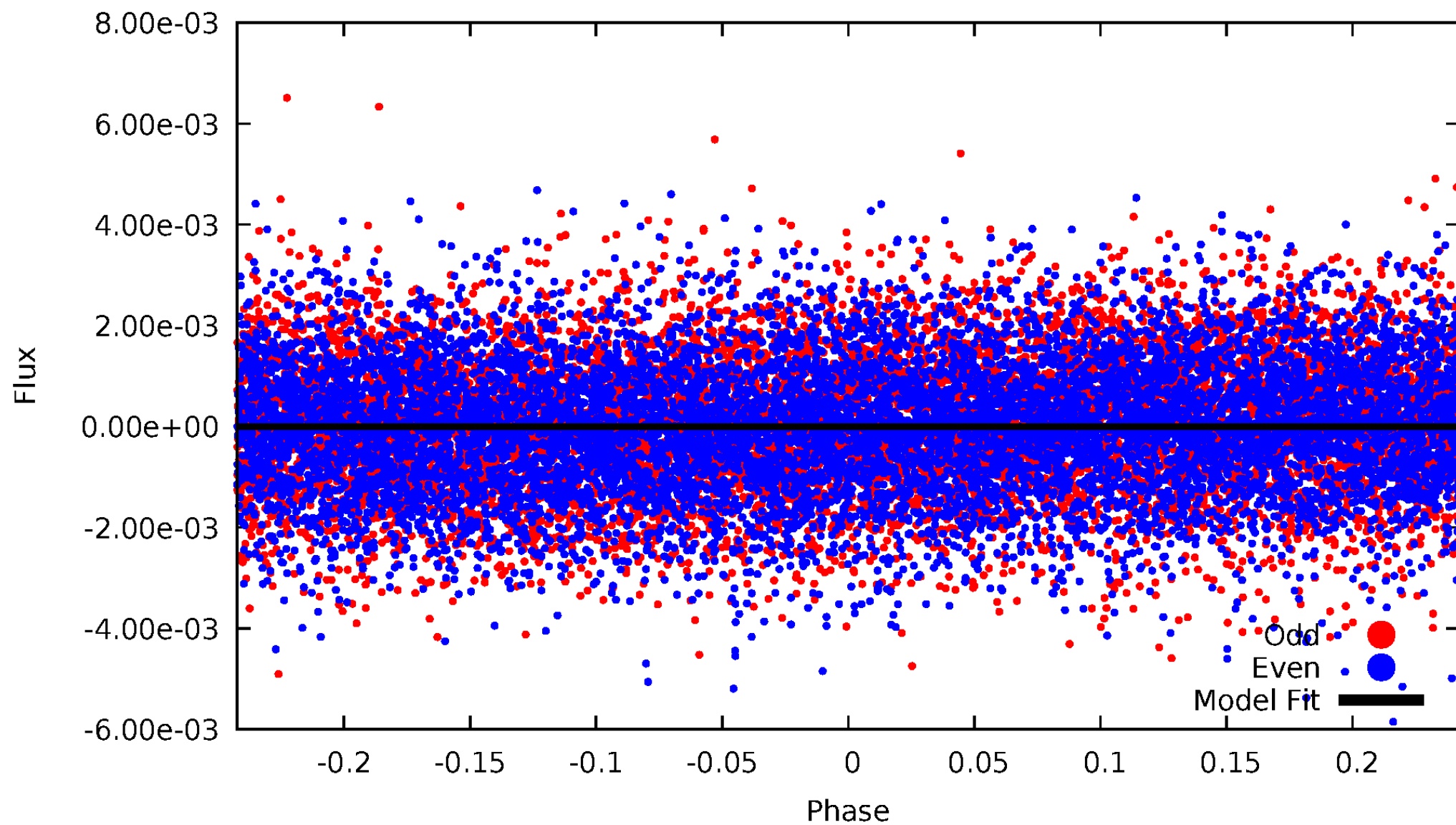


TCE 006389098-02



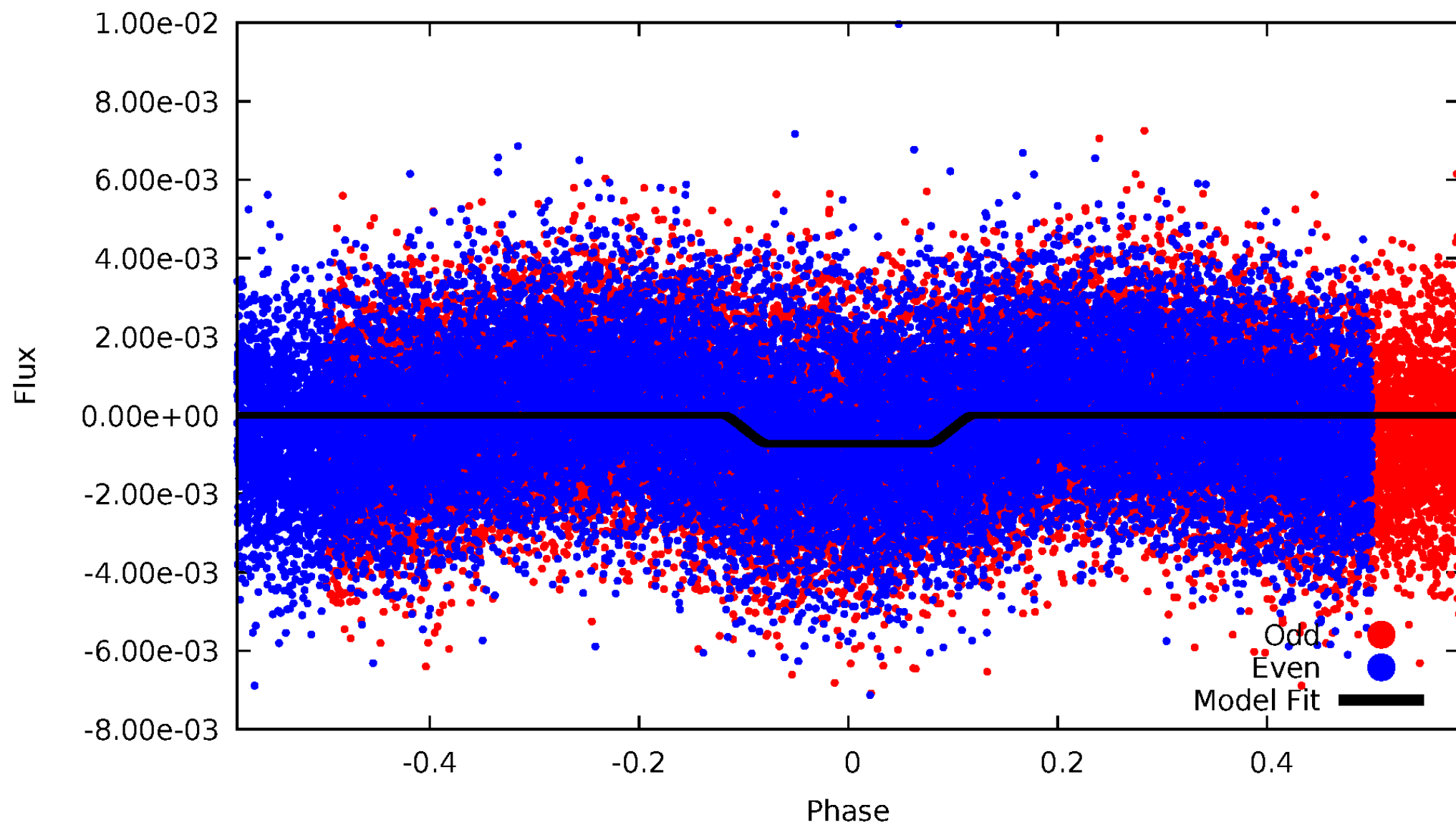
DV Odd/Even

TCE 006389098-02



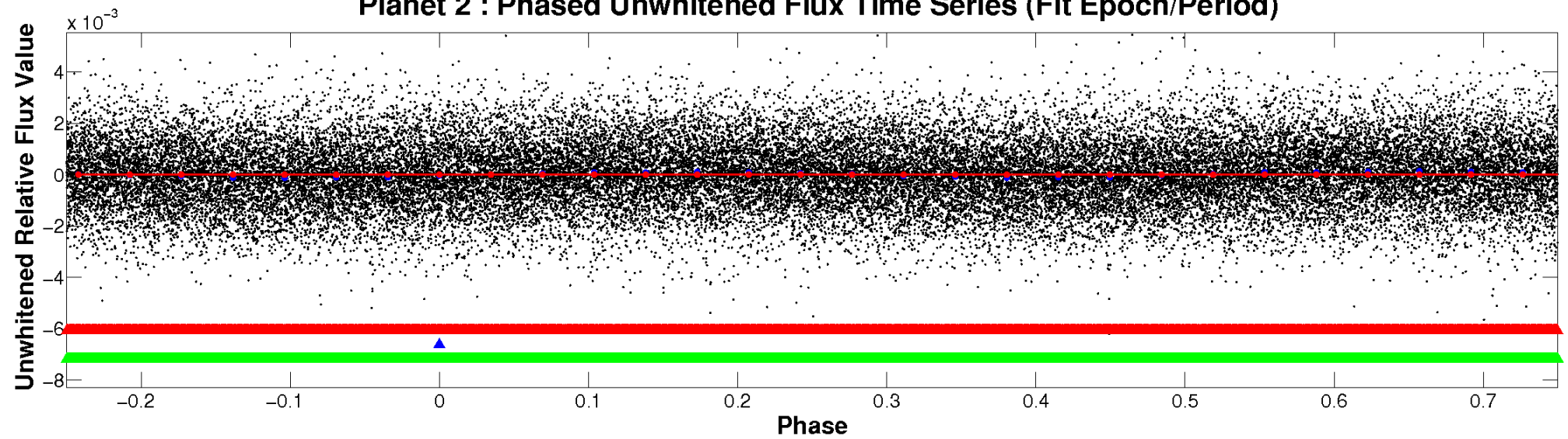
ALT Odd/Even

TCE 006389098-02

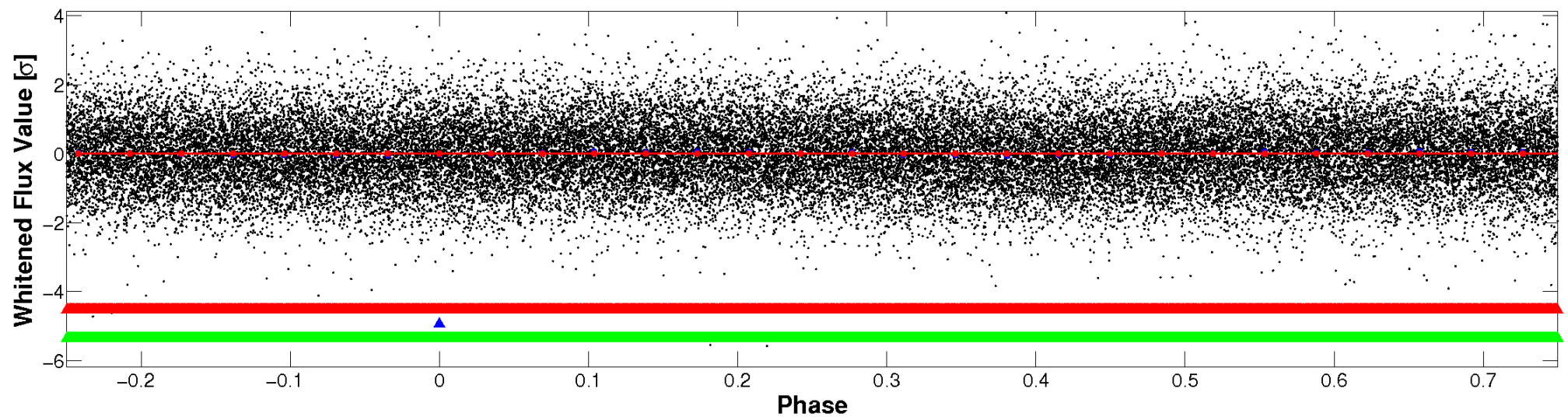


Non-Whitened Vs. Whitened Light Curve

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

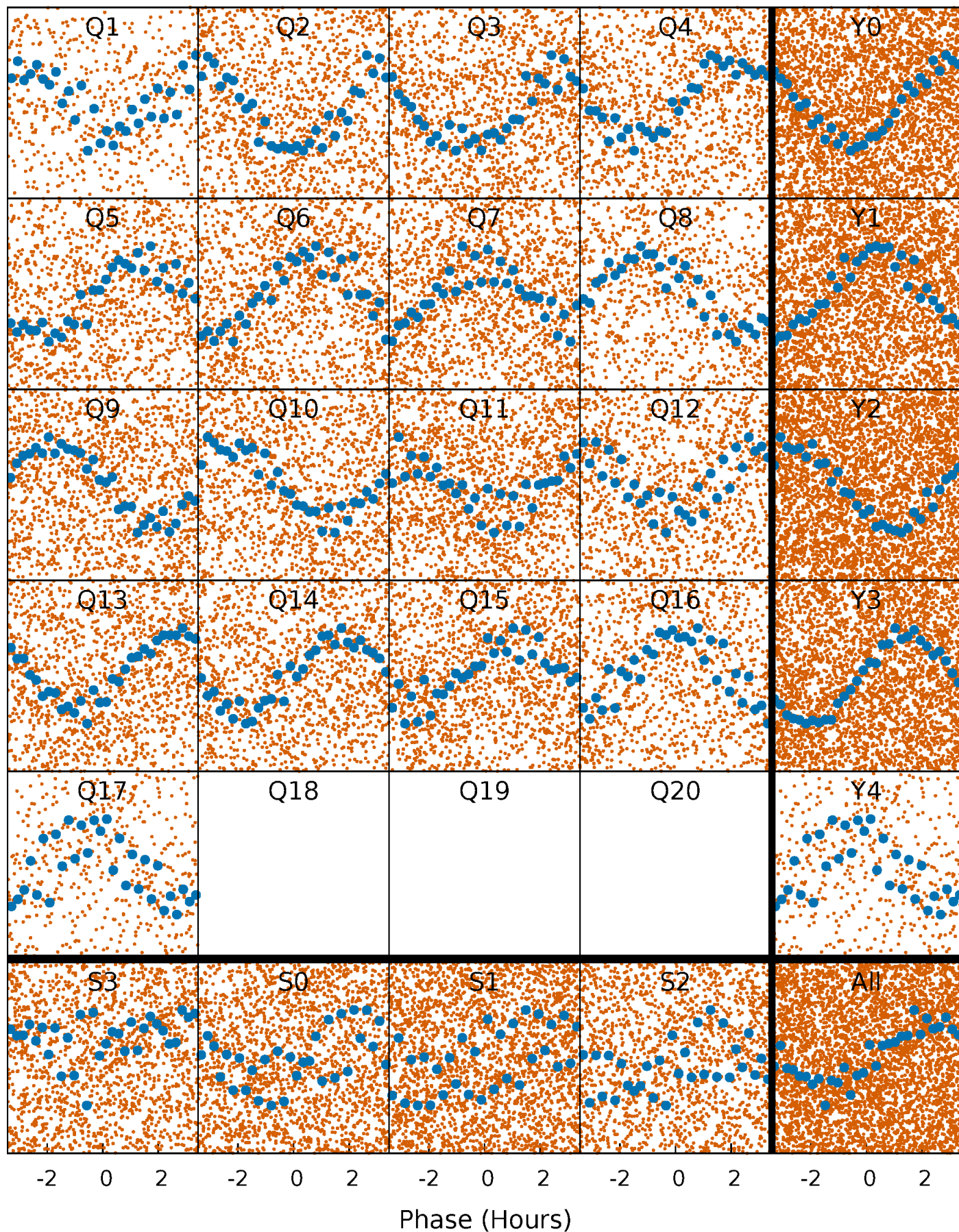


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



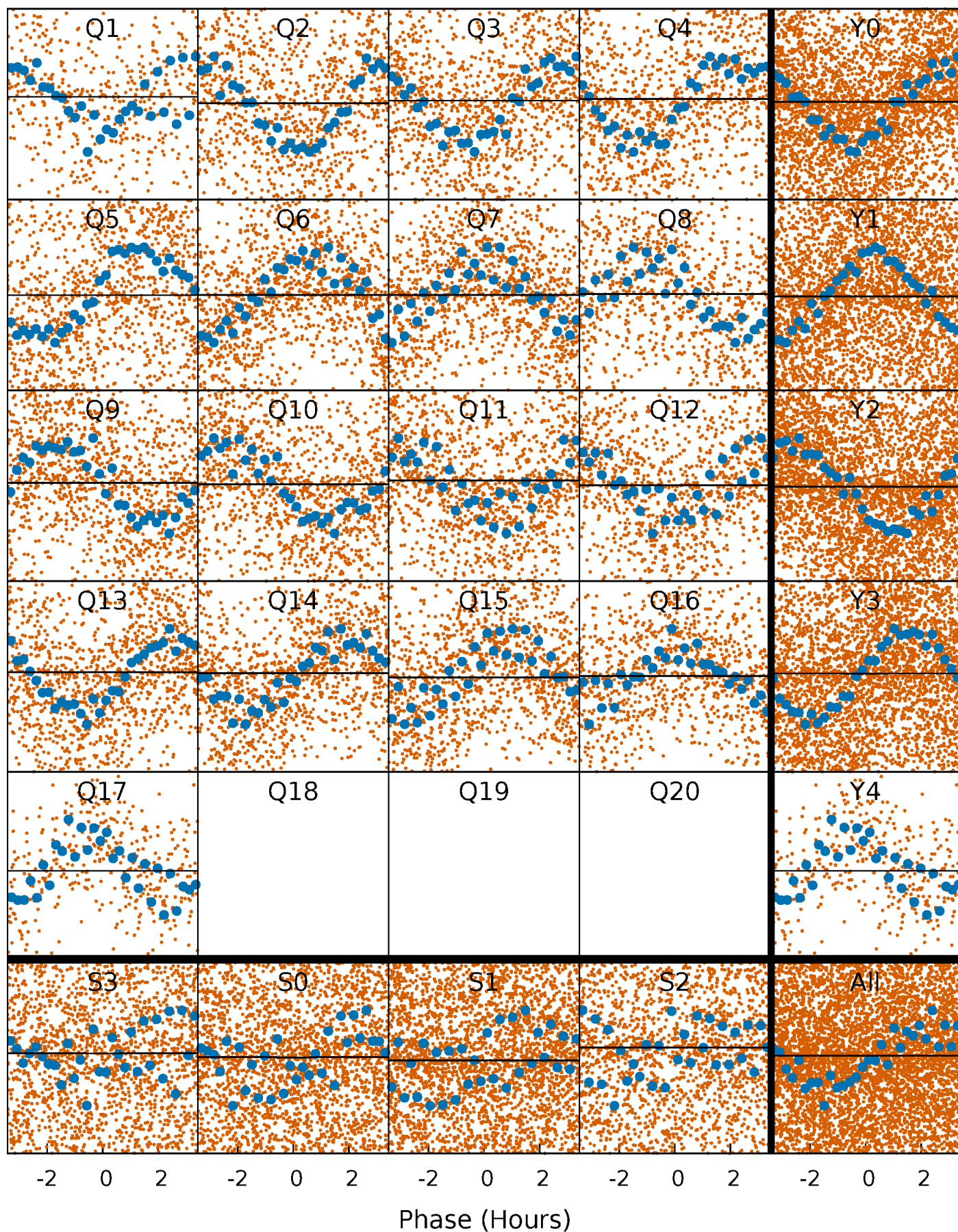
PDC Quarter-Phased Transit Curves

TCE 006389098-02 P= 0.590739 Days $T_0=132.042002$ (BKJD)



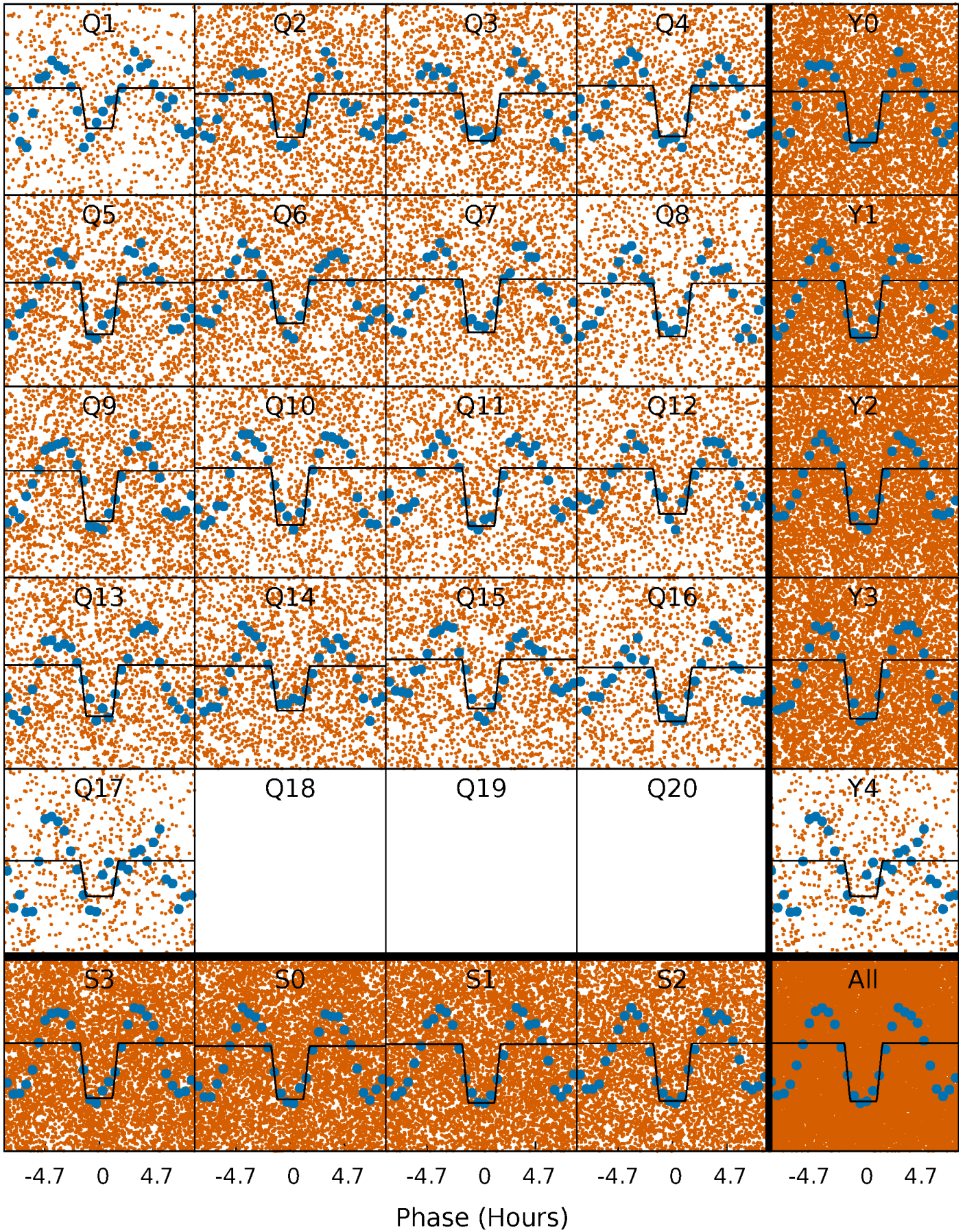
DV Quarter-Phased Transit Curves

TCE 006389098-02 $P = 0.590739$ Days $T_0 = 132.042002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

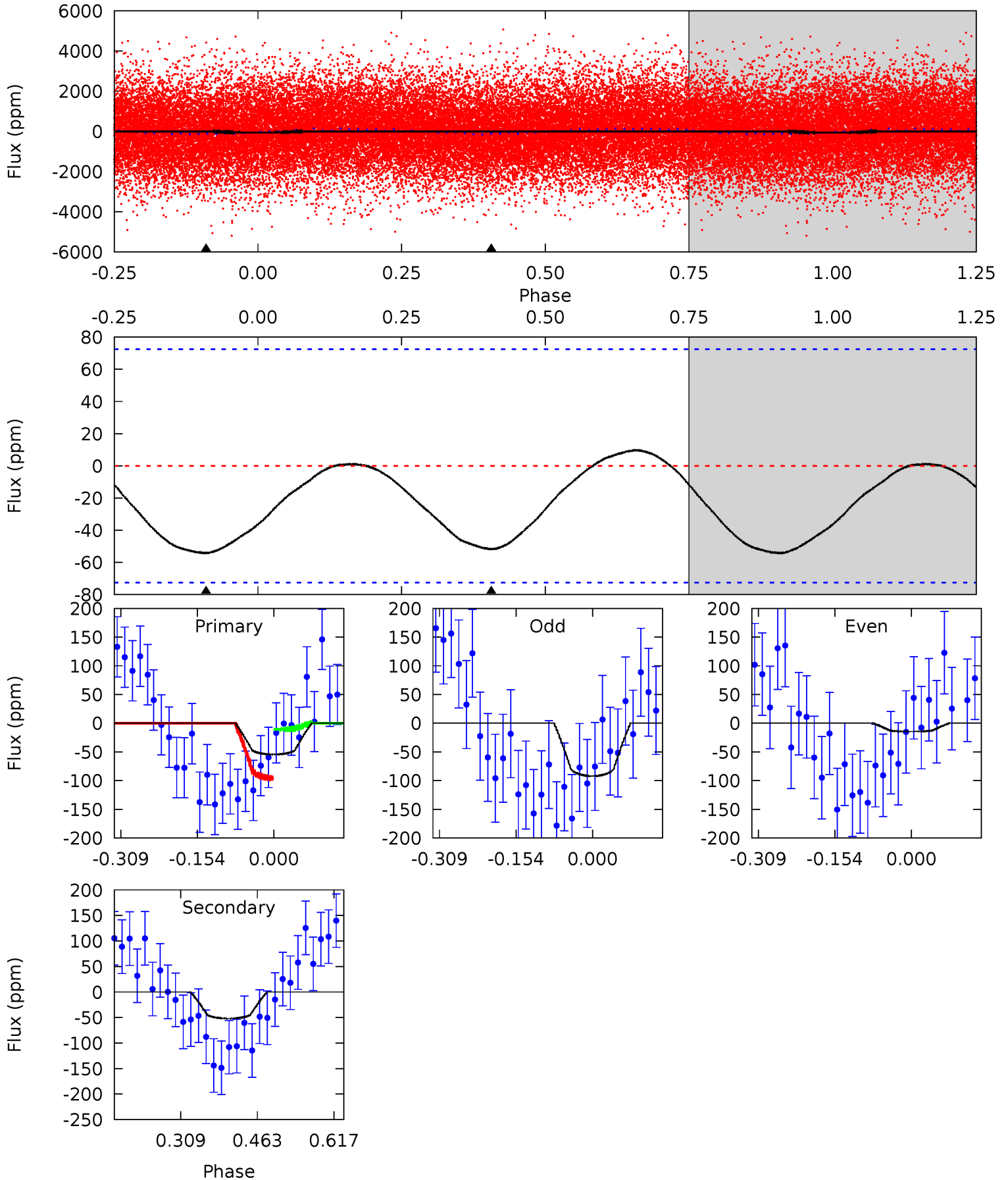
TCE 006389098-02 P= 0.590536 Days $T_0=132.078315$ (BKJD)



DV Model-Shift Uniqueness Test

006389098-02, P = 0.590739 Days, E = 131.451263 Days

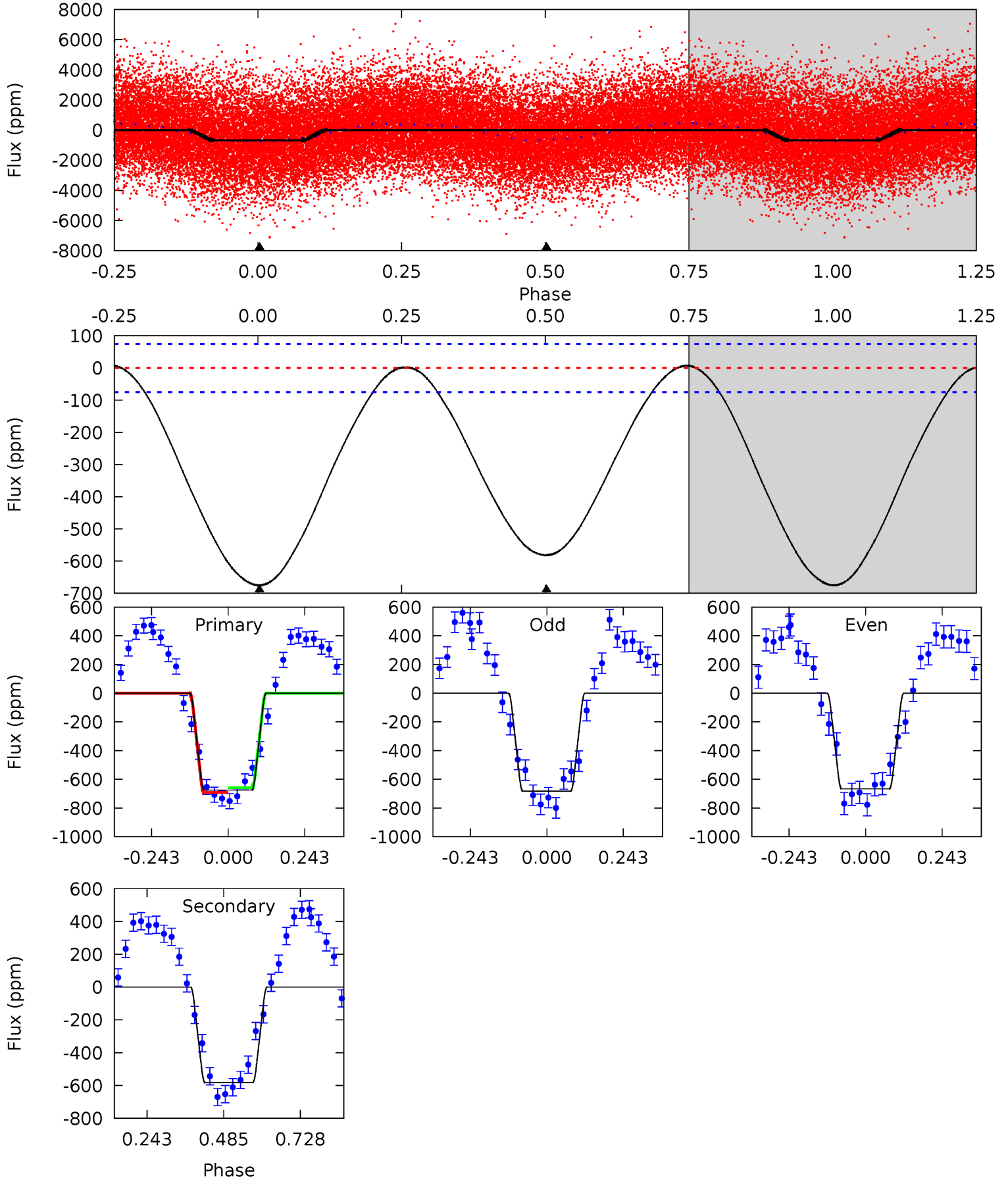
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.36	3.20	0	0	4.47	1.42	0.41	3.36	3.36	3.20	3.20	2.39	0.62	0.15	2.60



Alt Model-Shift Uniqueness Test

006389098-02, P = 0.590536 Days, E = 131.487779 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.4	33.9	0	0	4.38	1.17	0.39	39.4	39.4	33.9	33.9	0.46	0.97	0.01	0.95



Stellar Parameters For KIC 006389098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6962^{+194}_{-291}	$4.287^{+0.072}_{-0.217}$	$-0.040^{+0.250}_{-0.350}$	$1.388^{+0.513}_{-0.205}$	$1.366^{+0.222}_{-0.202}$	$0.720^{+0.285}_{-0.387}$
	+3%/-4%	+2%/-5%	+625%/-875%	+37%/-15%	+16%/-15%	+40%/-54%
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 006389098-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 16	$2.23^{+2.74}_{-1.54}$	4160^{+329}_{-253}	4735^{+4606}_{-7588}	$1.272^{+12.235}_{-1.019}$
Alt.	-582 ± 17	$4.85^{+3.51}_{-3.02}$	4161^{+313}_{-236}	5961^{+5021}_{-1442}	$3.099^{+18.547}_{-2.029}$

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 $A_{obs} \gg 1.0$

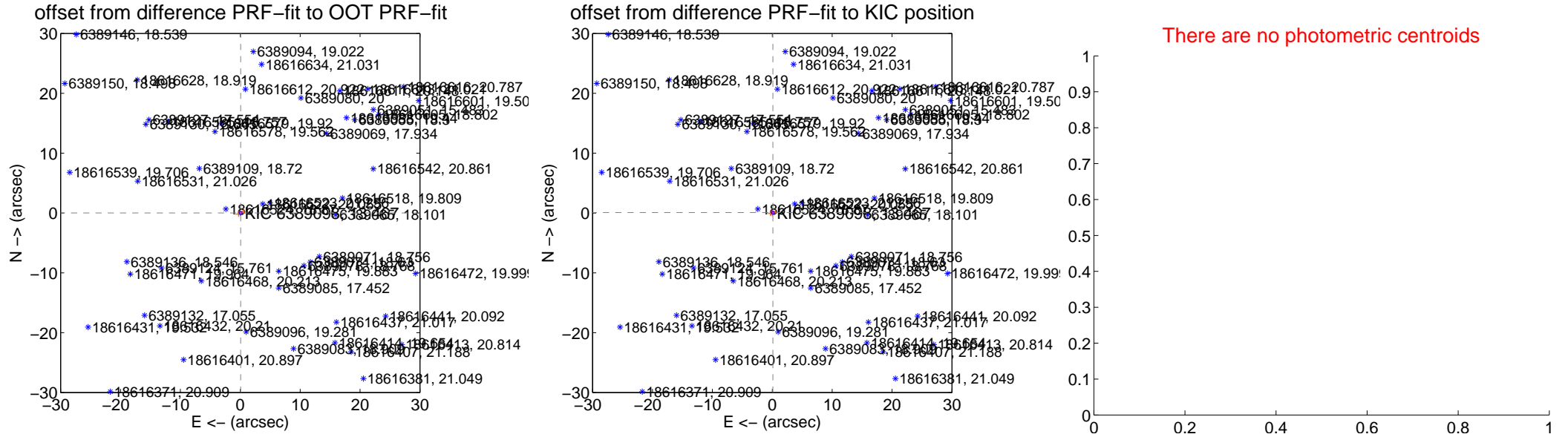
DV Centroid Data

Supplemental centroid analysis for 006389098-02. Kepler magnitude: 13.47. Transit SNR 0.02

There are 8 quarters with good PRF difference image offsets

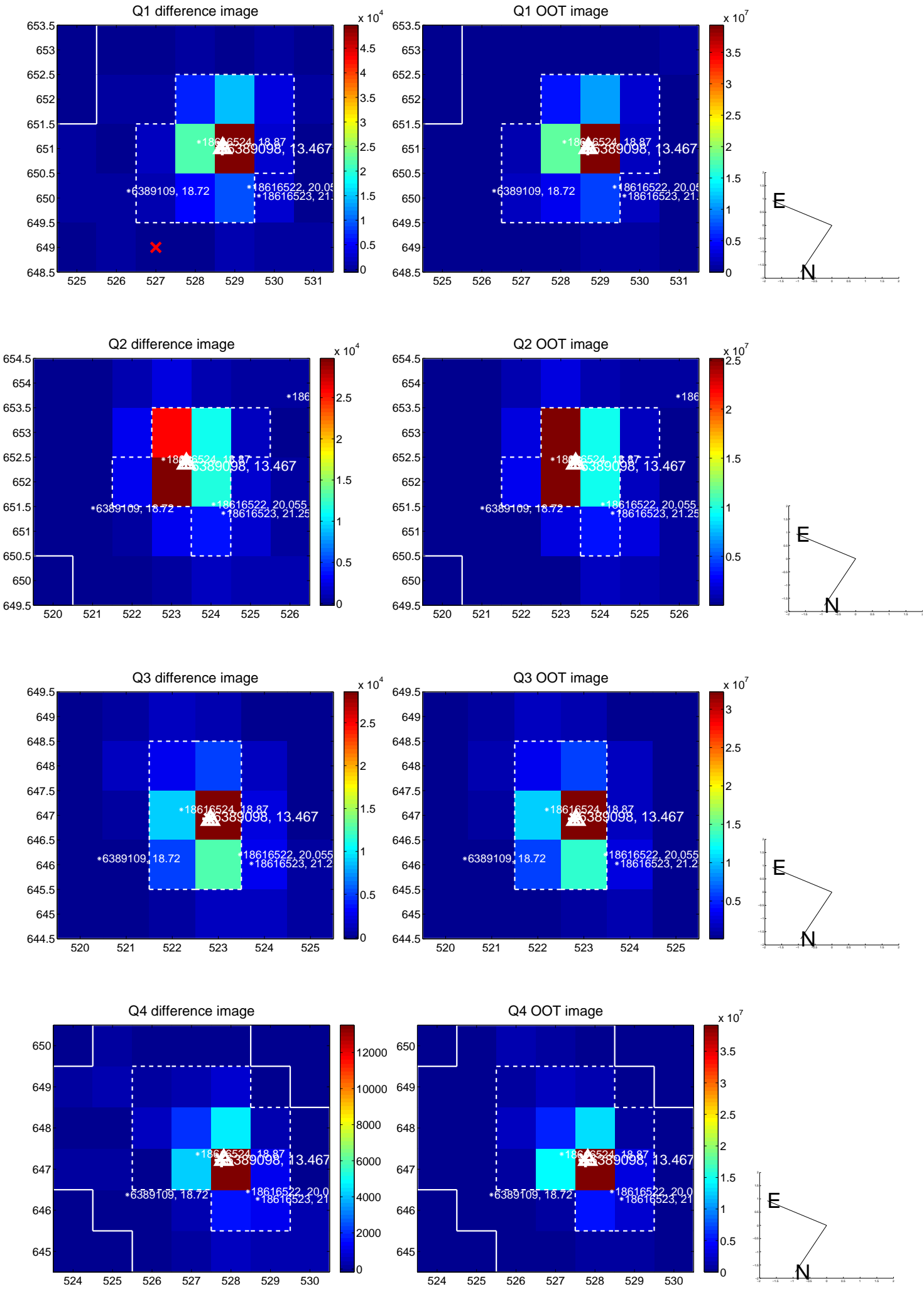
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.064 ± 0.083	0.77	-0.062 ± 0.081	0.012 ± 0.072
PRF-fit source offset from KIC position	0.126 ± 0.079	1.59	-0.103 ± 0.078	0.072 ± 0.072
photometric centroid source offset	—	—	—	—

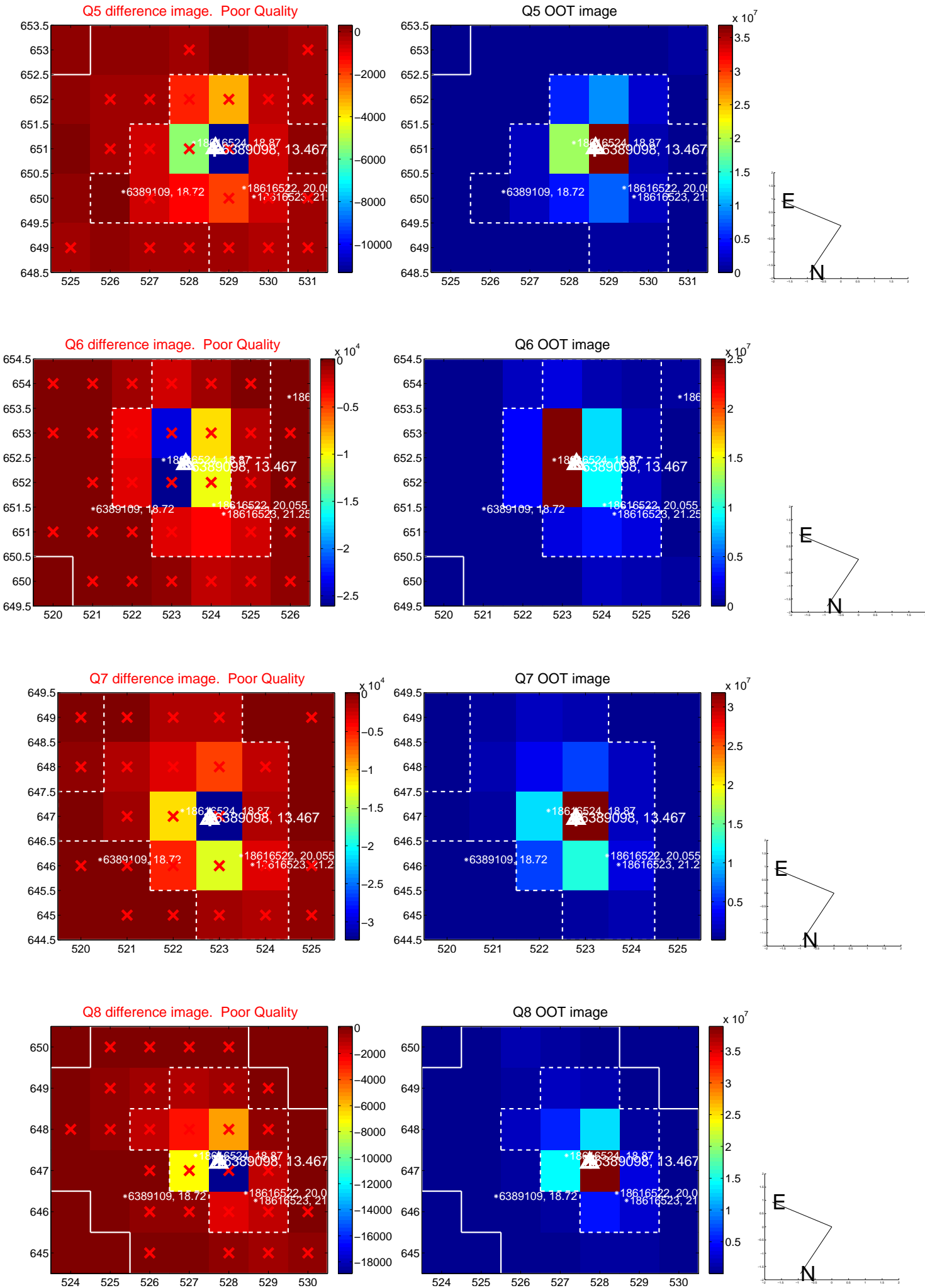


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

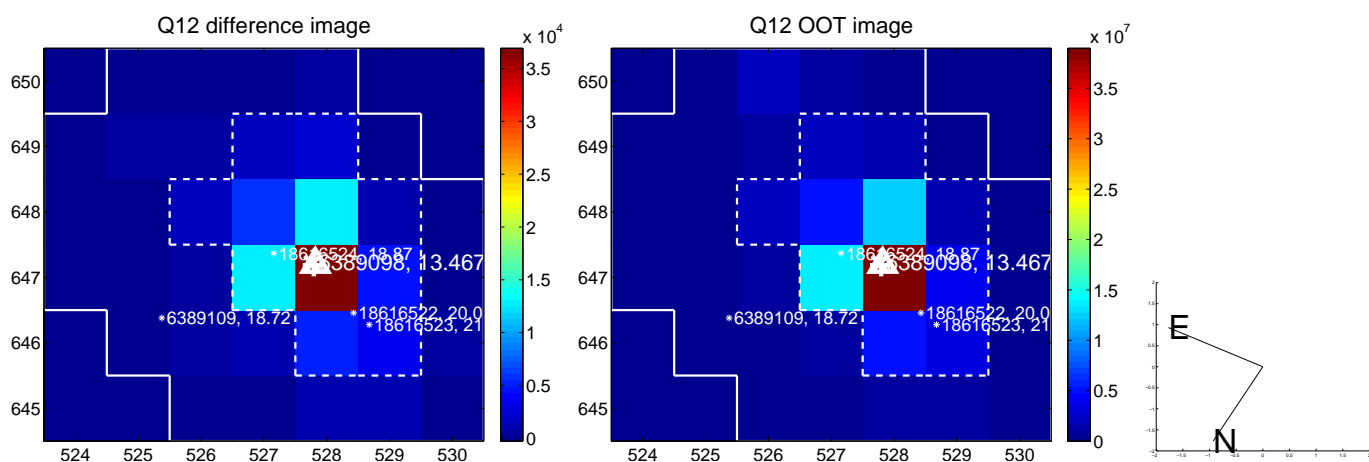
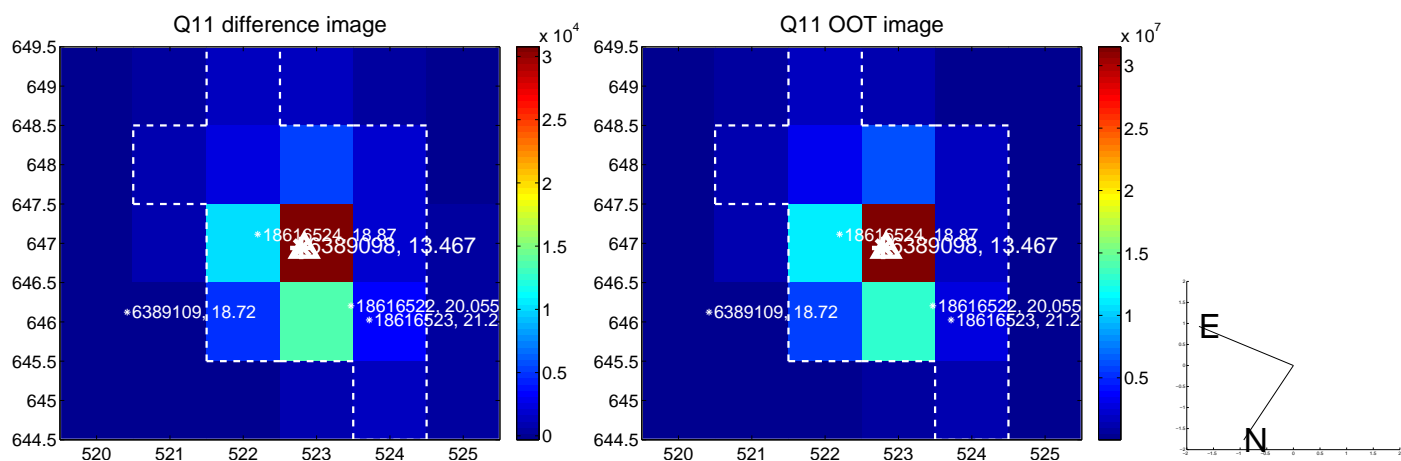
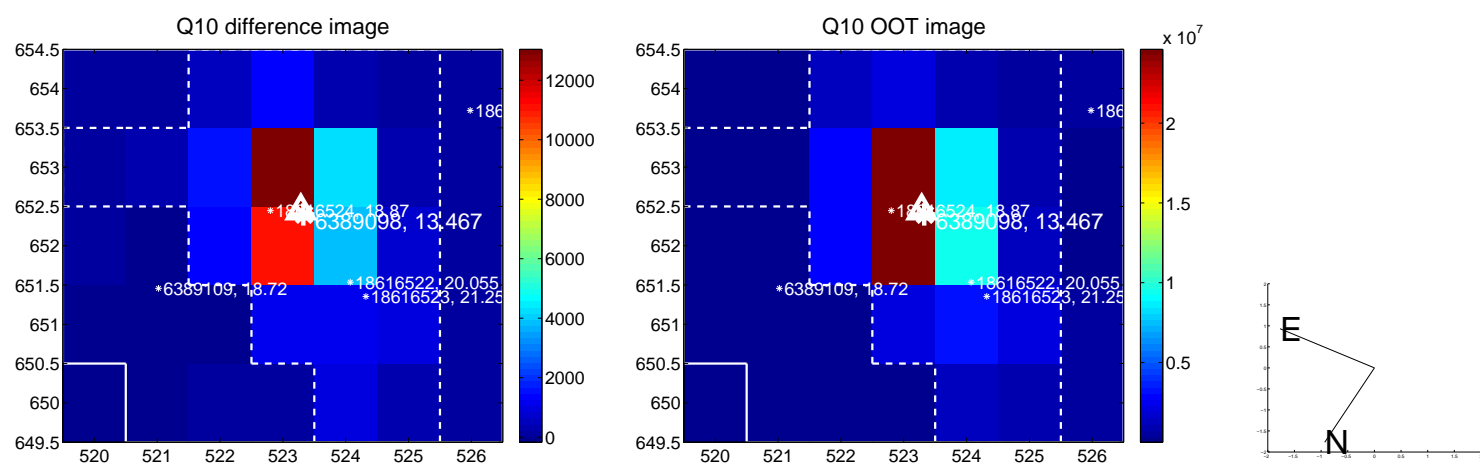
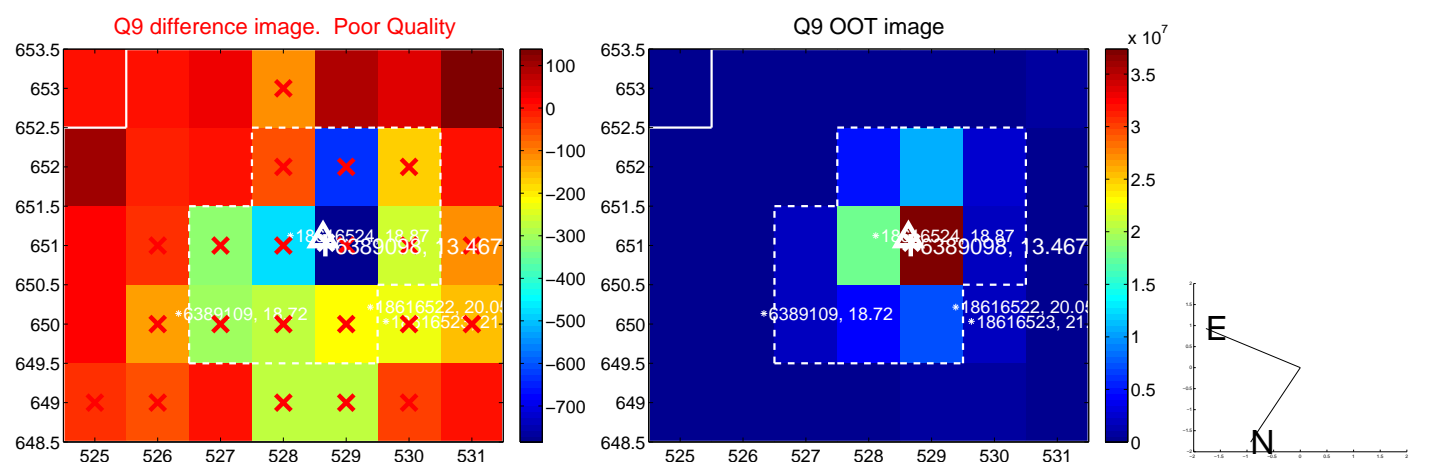
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



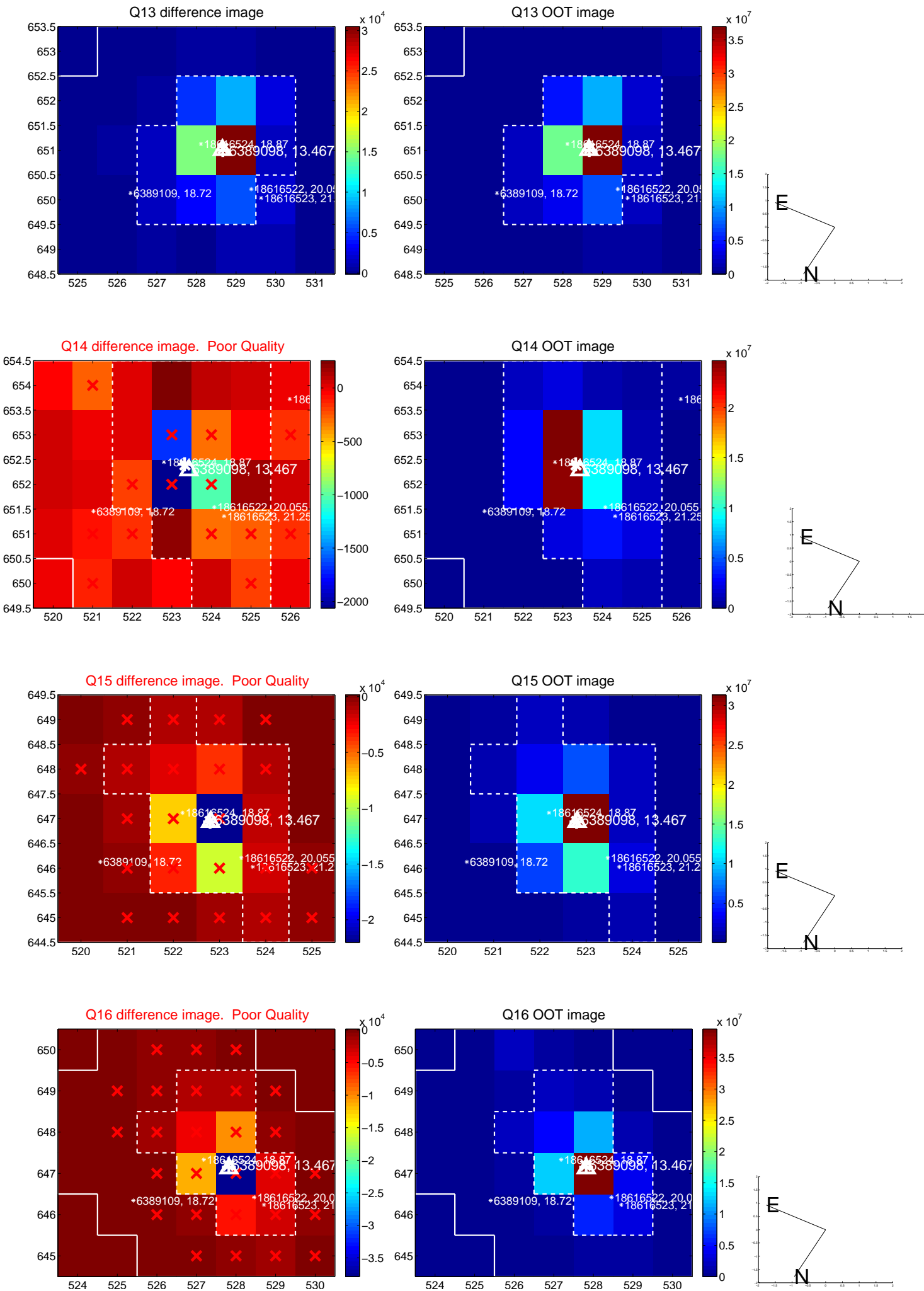
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



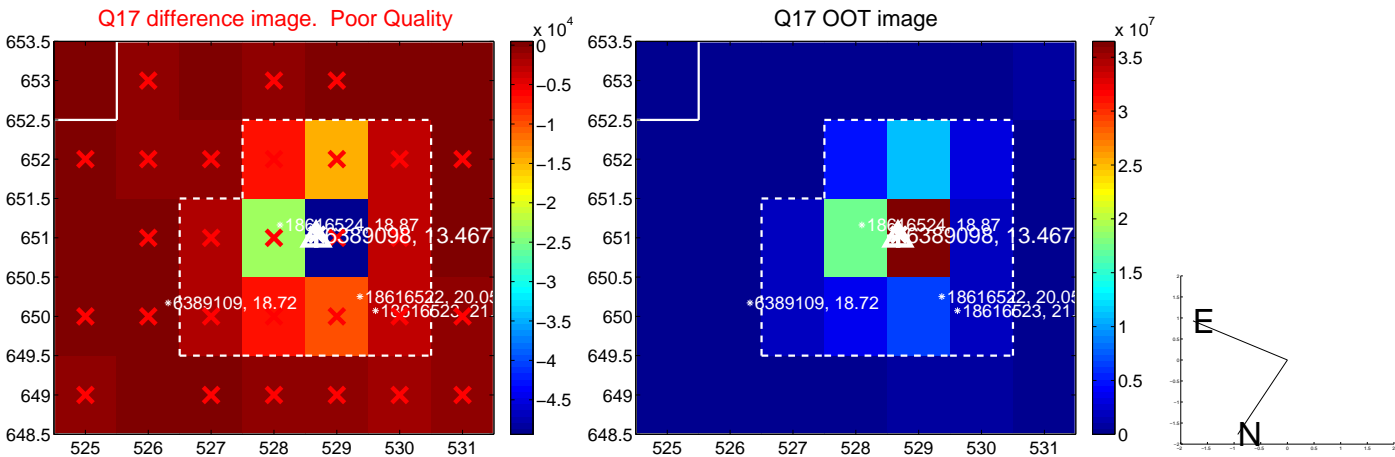
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



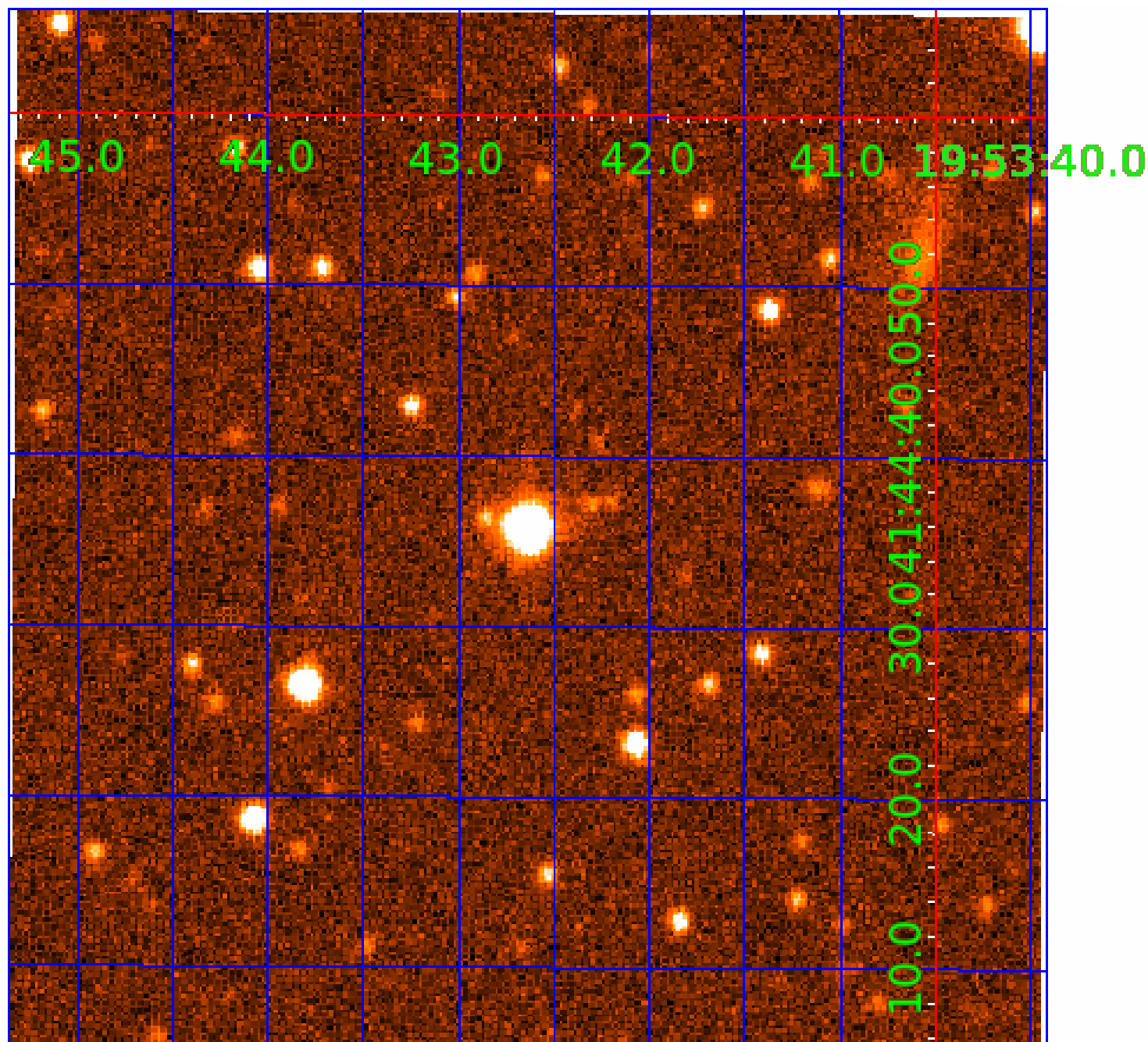
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006389098

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})
006389098-01	OBS	No	0.620569	132.103933	194.1	1.664	11.4	11.4	1.39	6962	2.25	16281.83
006389098-02	OBS	No	0.590739	132.042002	0.4	1.718	11.5	0.0	1.39	6962	0.11	17387.19
006389098-03	OBS	No	0.590494	132.098911	180.4	4.645	11.5	10.4	1.39	6962	1.91	17396.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006389098-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006389098-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
006389098-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—SAME_NTL_PERIOD

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

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

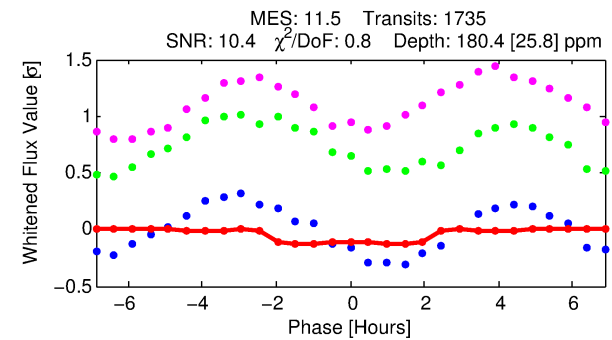
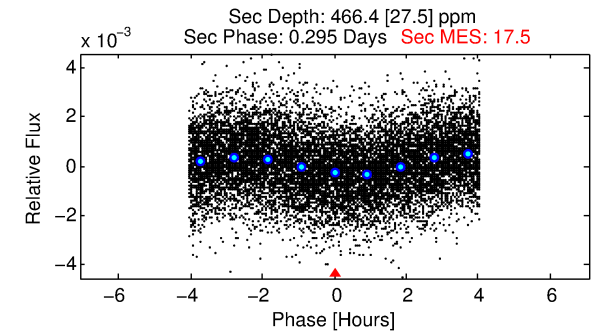
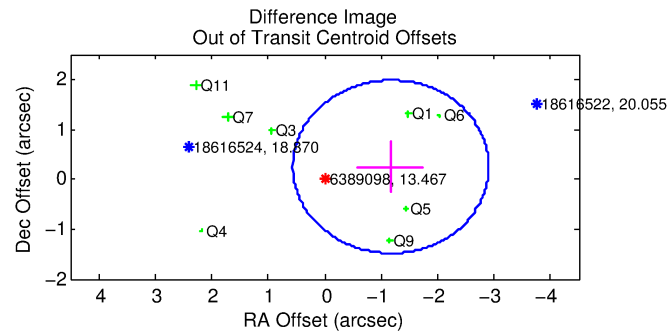
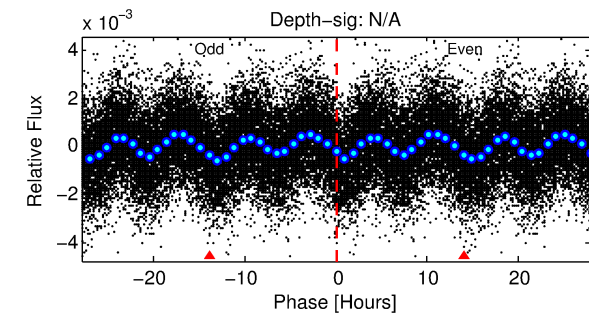
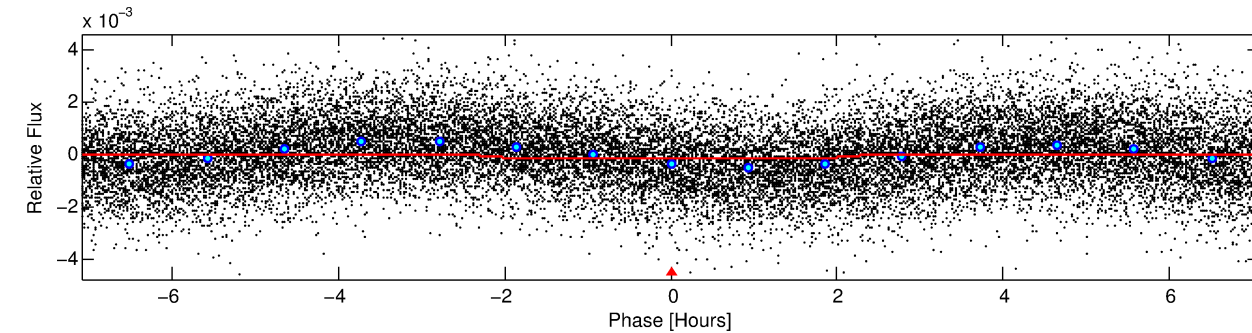
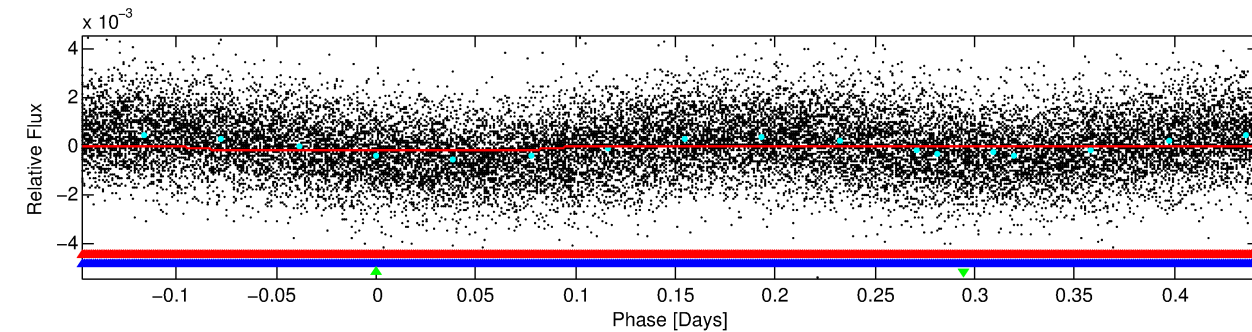
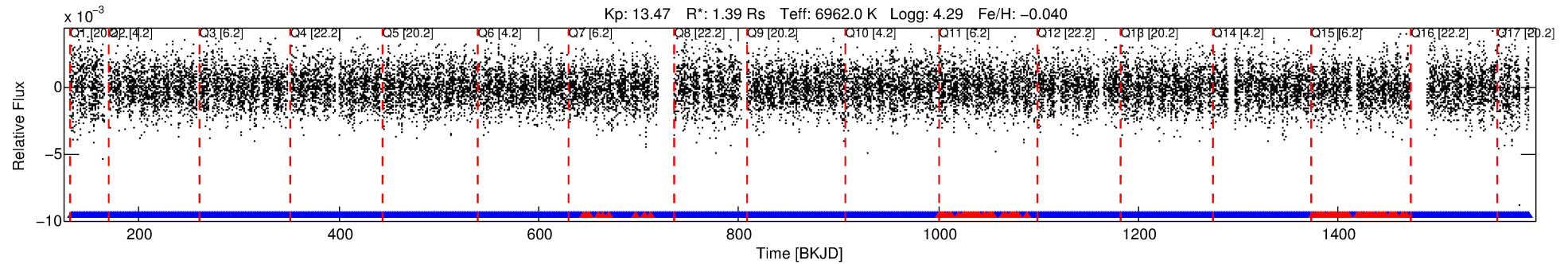
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006389098-03

No Significant Match Found

DV One-Page Summary

KIC: 6389098 Candidate: 3 of 3 Period: 0.590 d



DV Fit Results:

Period = 0.59049 [0.00001] d
Epoch = 132.0989 [0.0038] BKJD
Rp/R* = 0.0126 [0.0127]
a/R* = 1.16 [1.73]
b = 0.36 [14.15]
Seff = 17396.81 [7772.81]
Teq = 2928 [327] K
Rp = 1.91 [2.05] Re
a = 0.0153 [0.0045] AU
Ag = 16.46 [33.87] [0.46σ]
Teff = 9119 [4612] K [1.34σ]

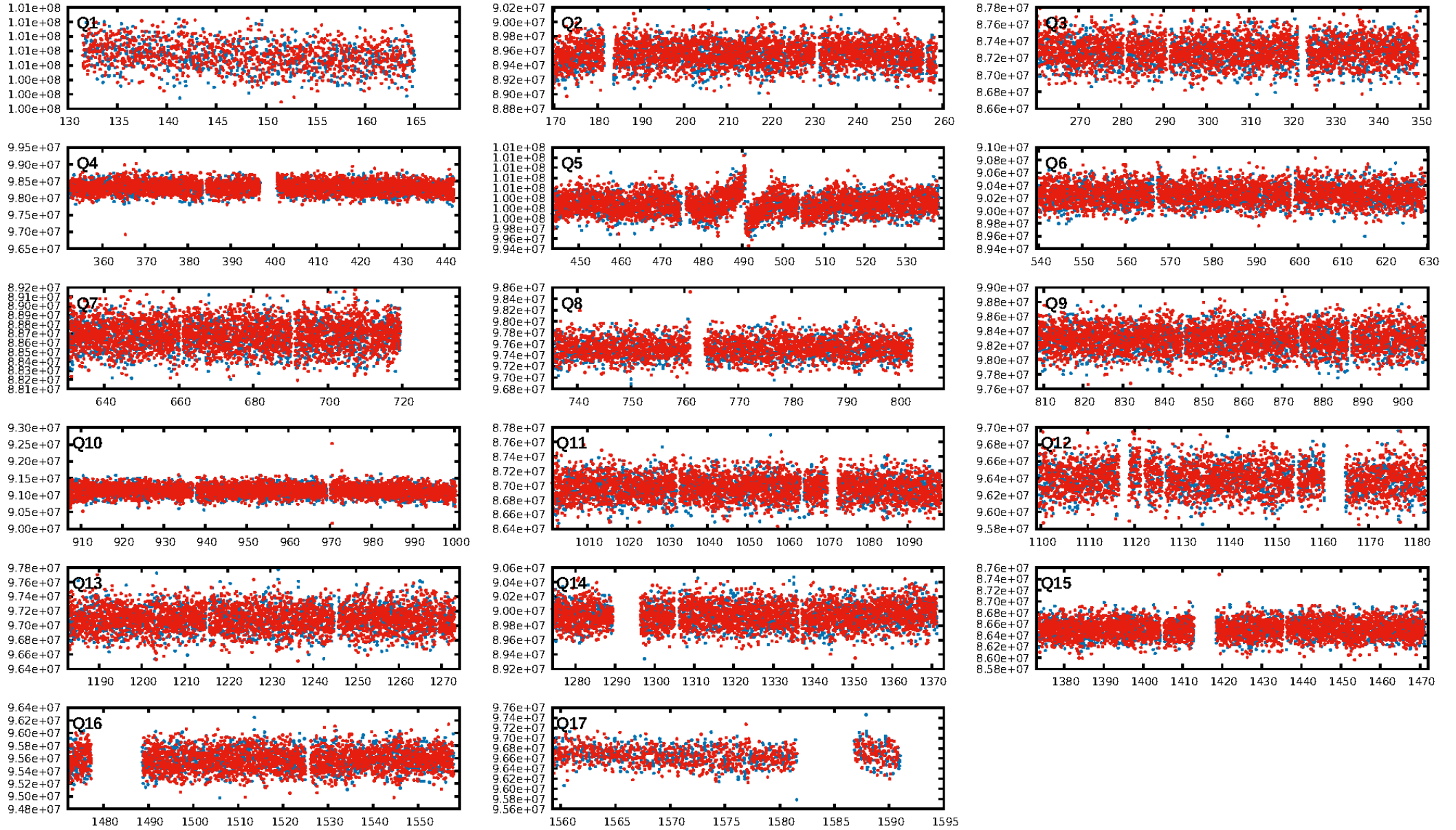
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.90 [1507/1666]
GhostDiagnostic-chr: 0.6609
Centroid-sig: 0.0%
Centroid-so: 0.388 arcsec [3.64σ]
OotOffset-rm: 1.197 arcsec [2.07σ]
KicOffset-rm: 1.182 arcsec [2.07σ]
OotOffset-st: 1/3/1/3 [8]
KicOffset-st: 1/3/1/3 [8]
DiffImageQuality-fgm: 0.88 [7/8]
DiffImageOverlap-fno: 0.00 [0/17]

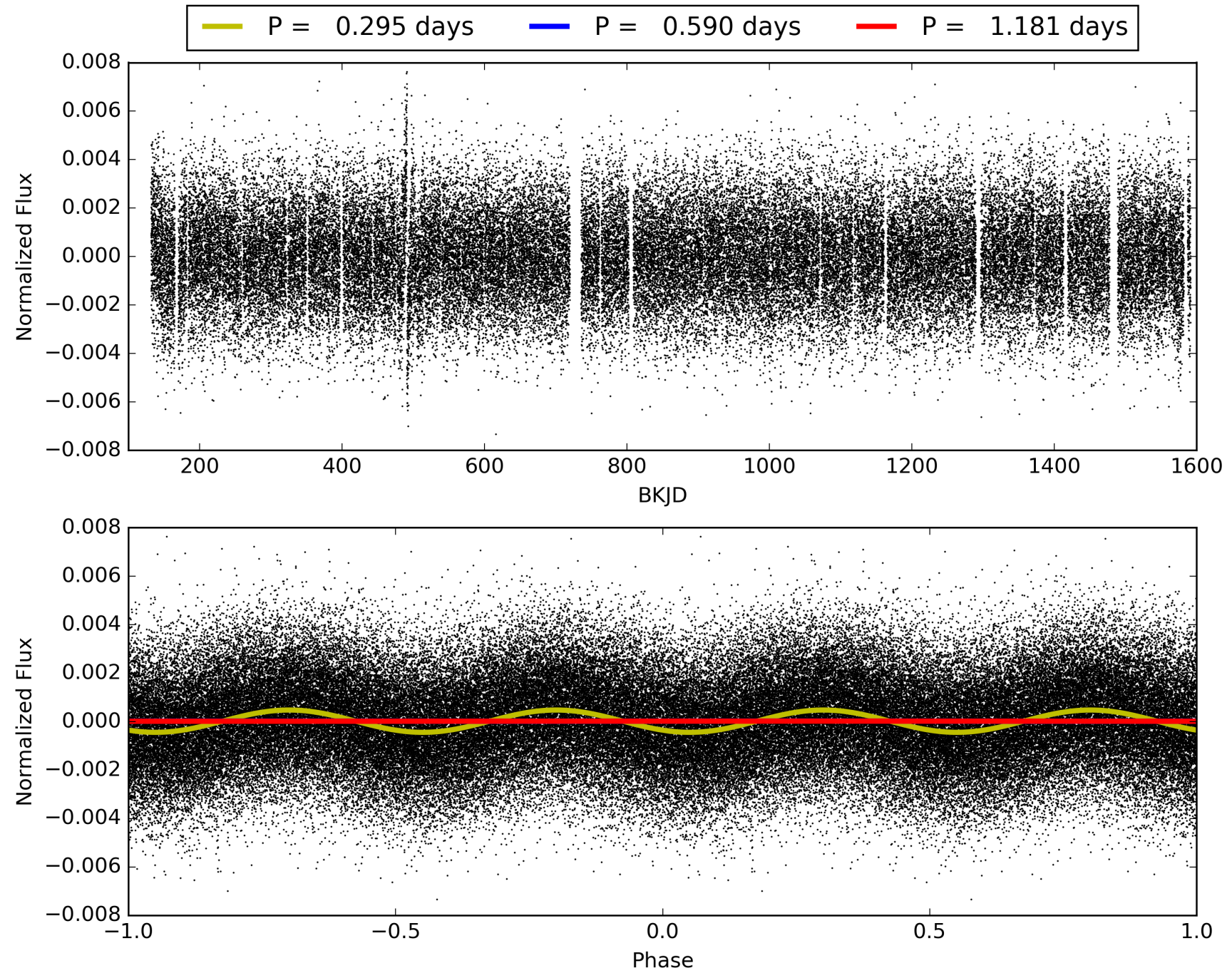
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:56:08 Z

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

TCE 006389098-03, PDC Light Curves

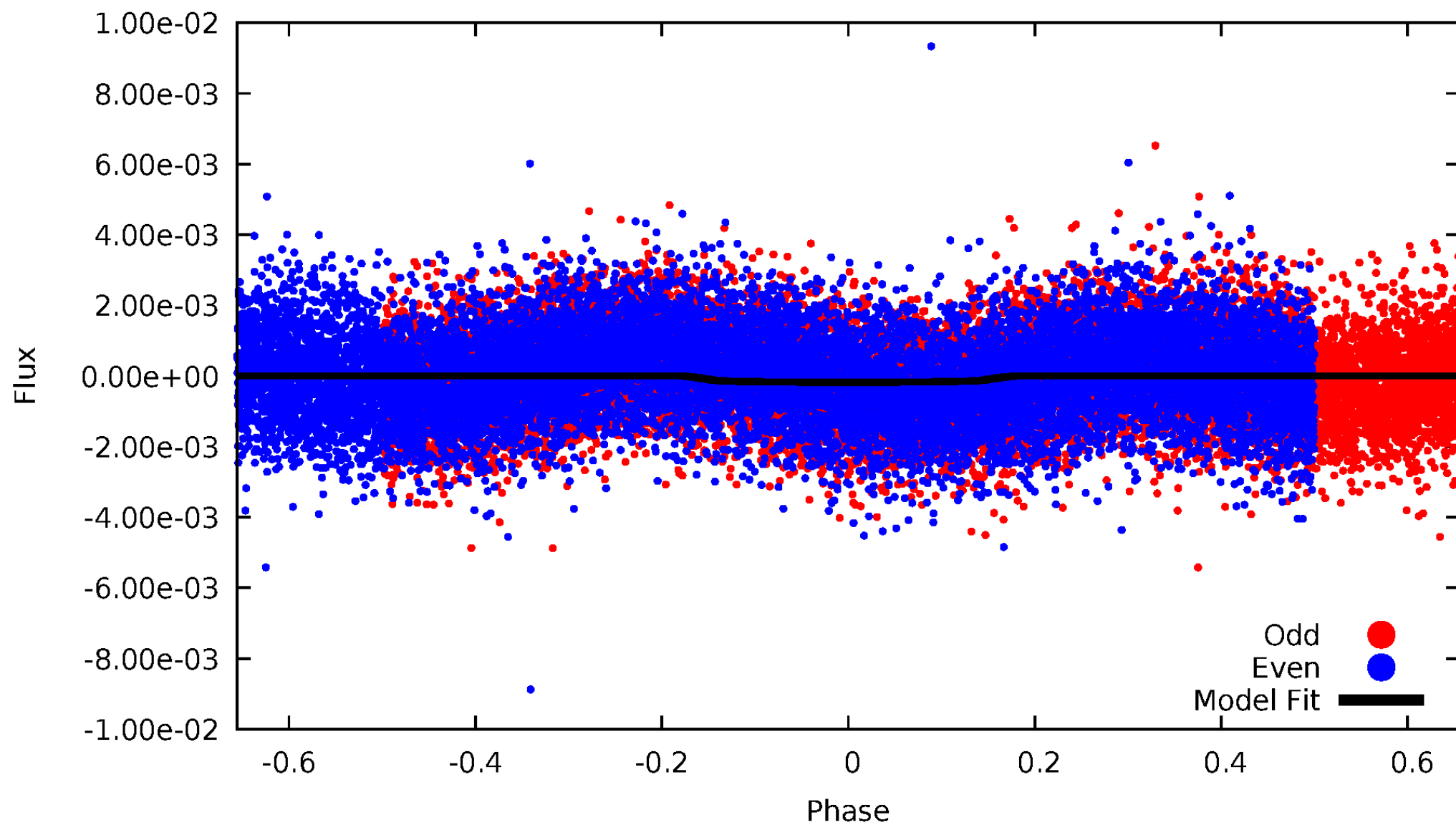


TCE 006389098-03



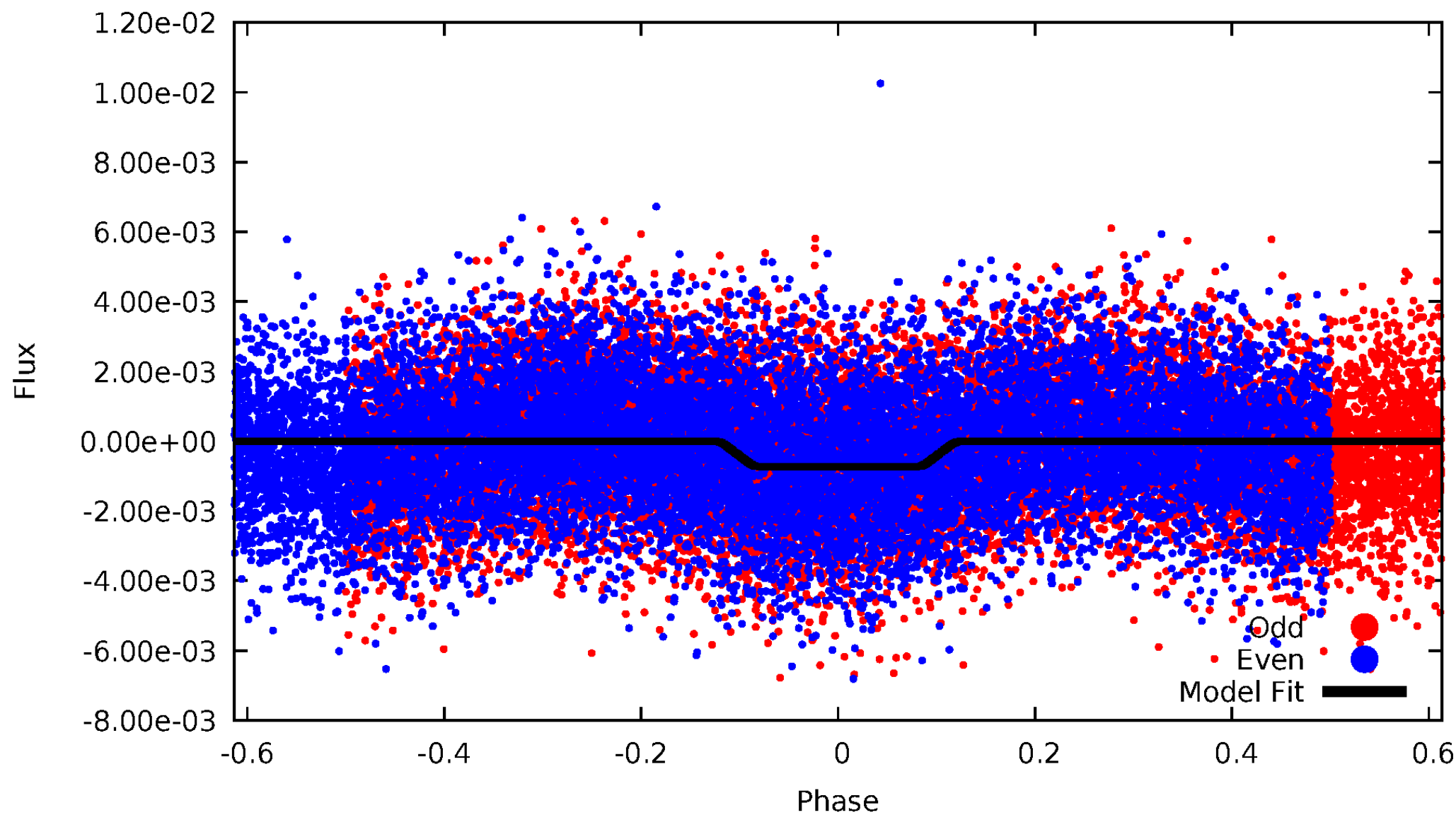
DV Odd/Even

TCE 006389098-03



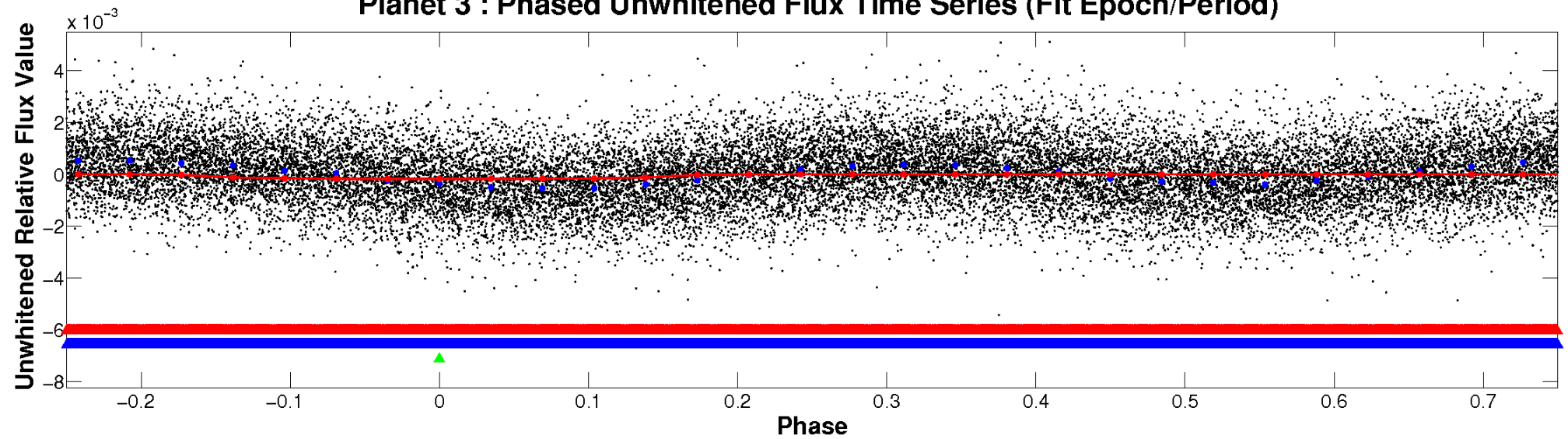
ALT Odd/Even

TCE 006389098-03

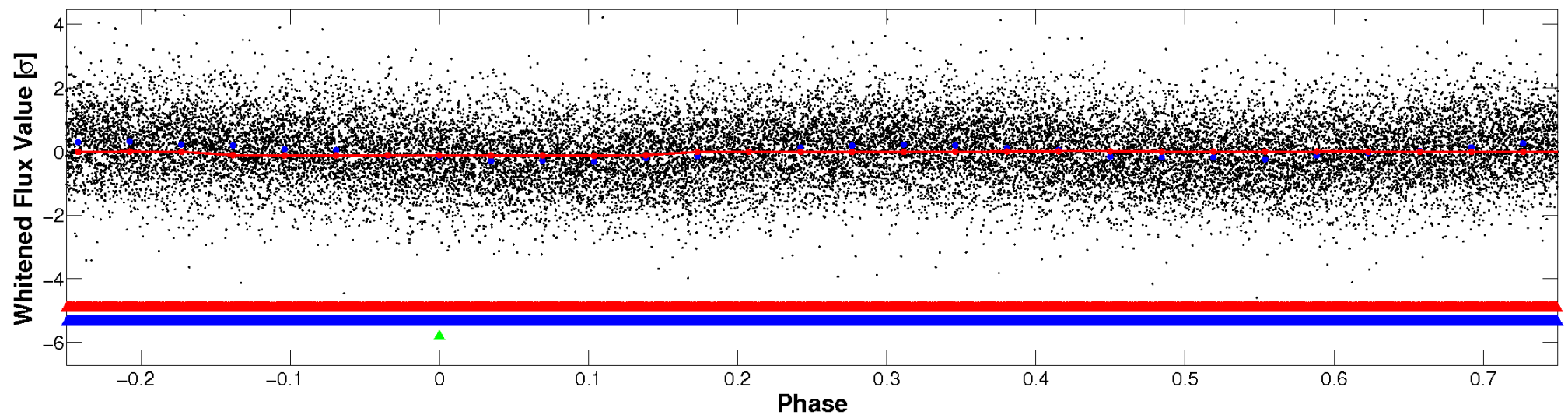


Non-Whitened Vs. Whitened Light Curve

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

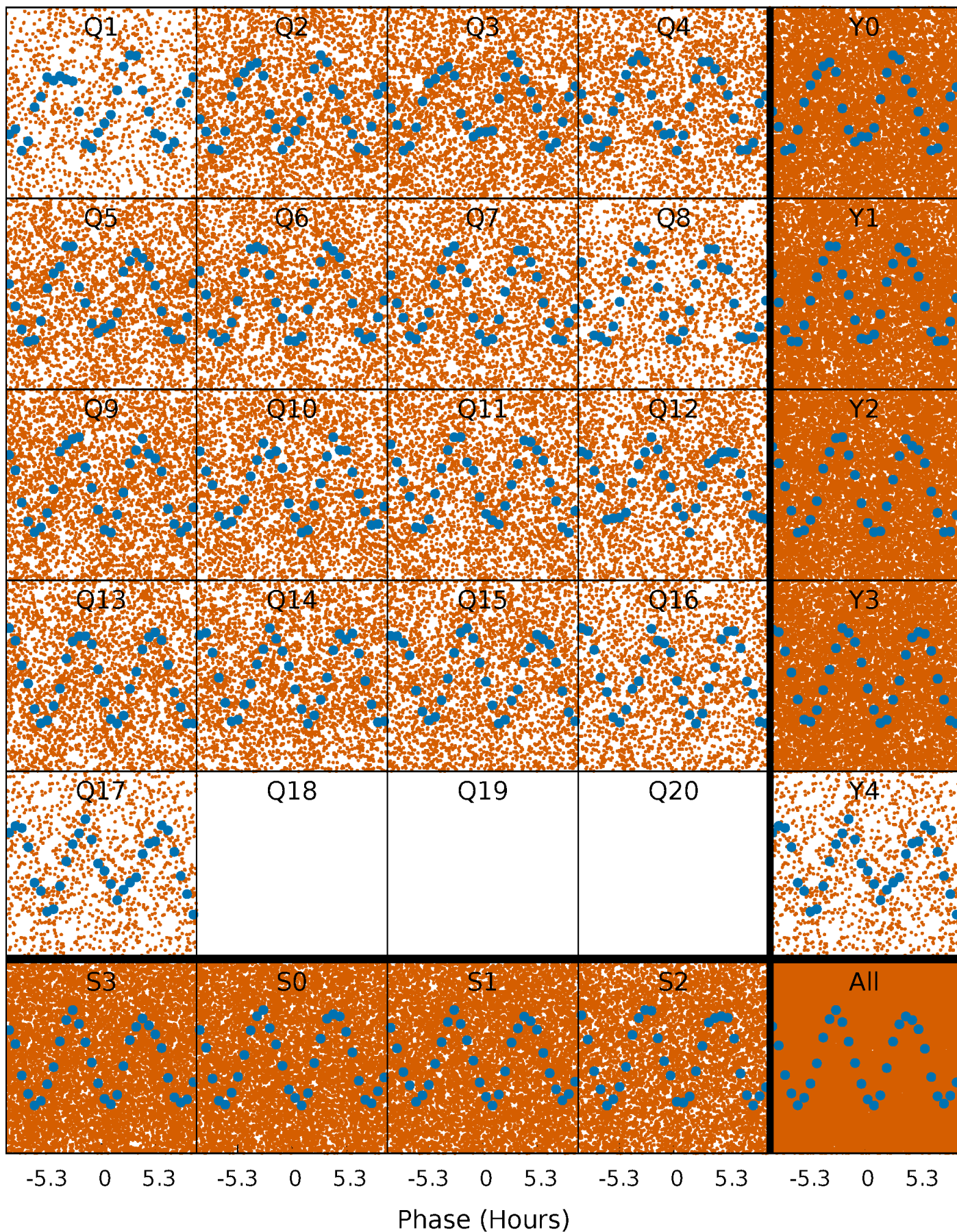


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



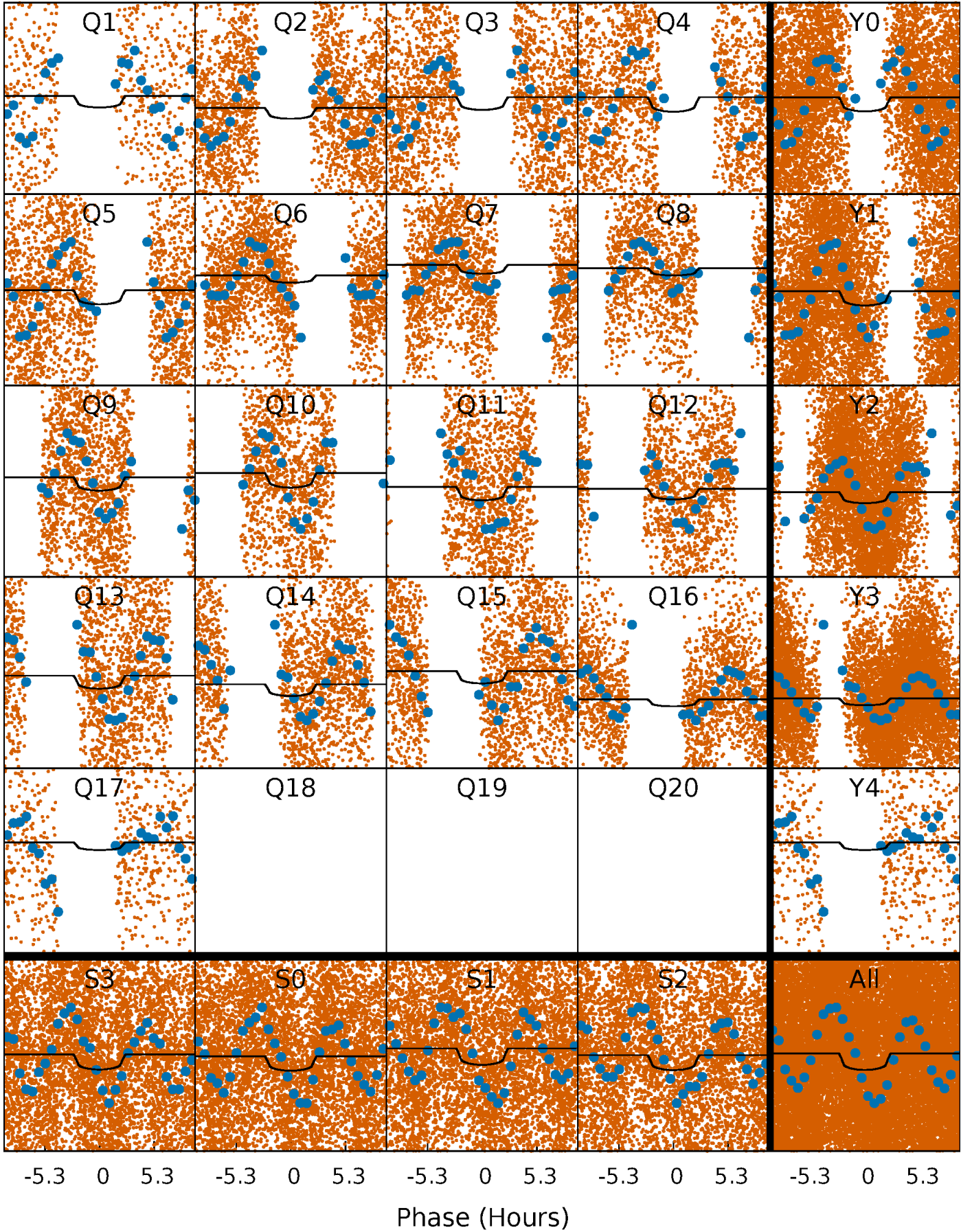
PDC Quarter-Phased Transit Curves

TCE 006389098-03 P= 0.590494 Days $T_0=132.098911$ (BKJD)



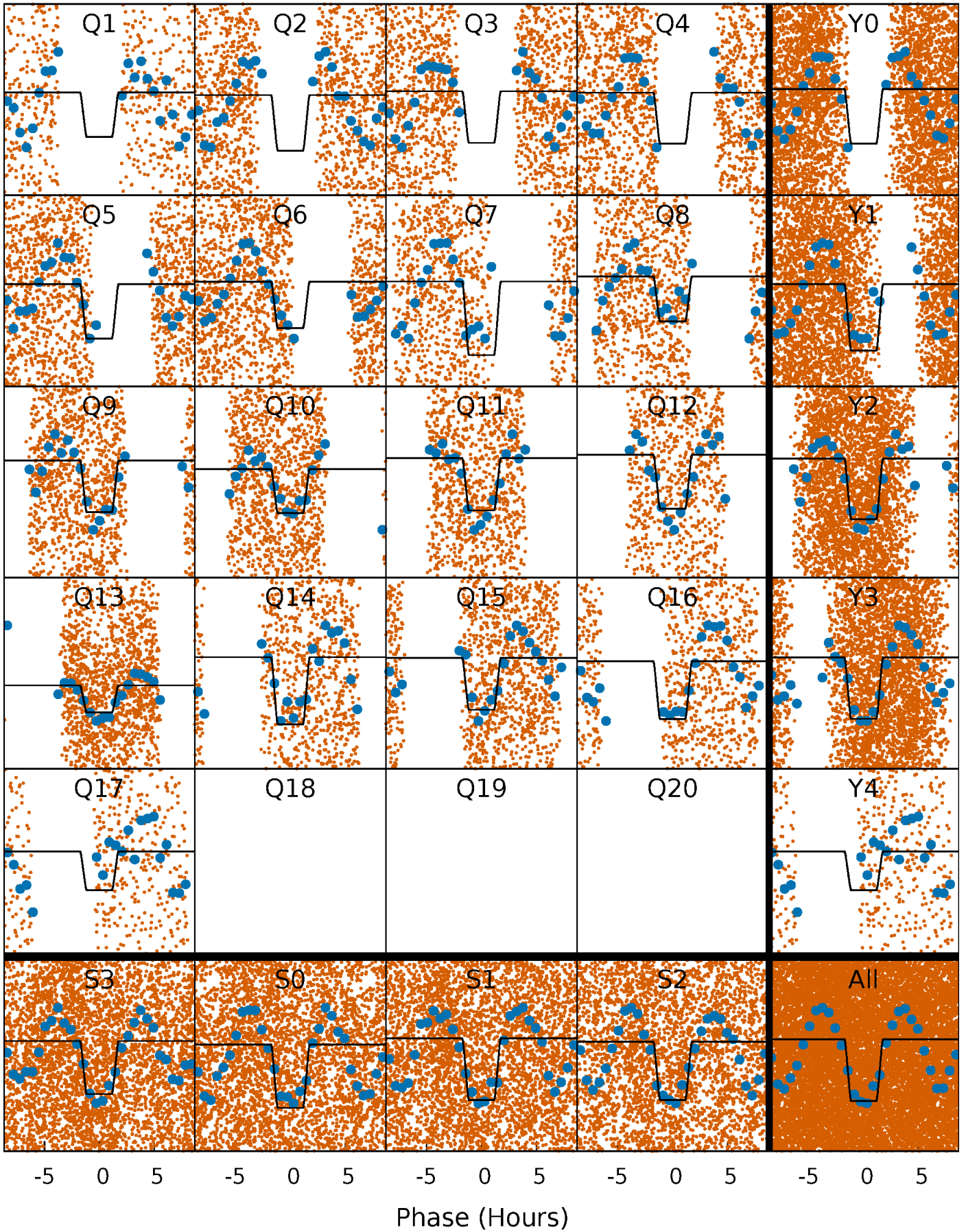
DV Quarter-Phased Transit Curves

TCE 006389098-03 P= 0.590494 Days $T_0=132.098911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

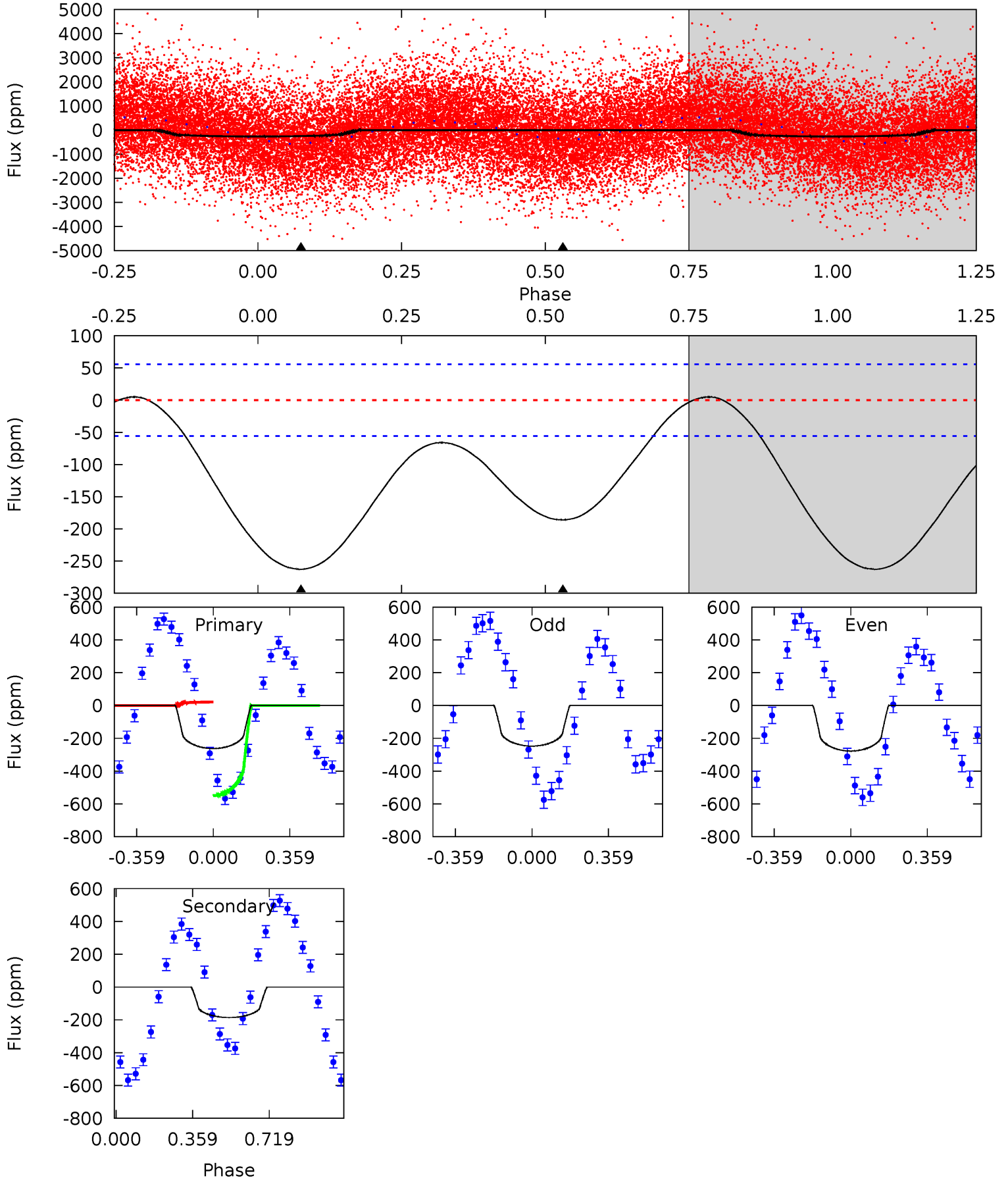
TCE 006389098-03 P= 0.590536 Days $T_0=132.081374$ (BKJD)



DV Model-Shift Uniqueness Test

006389098-03, P = 0.590494 Days, E = 131.508417 Days

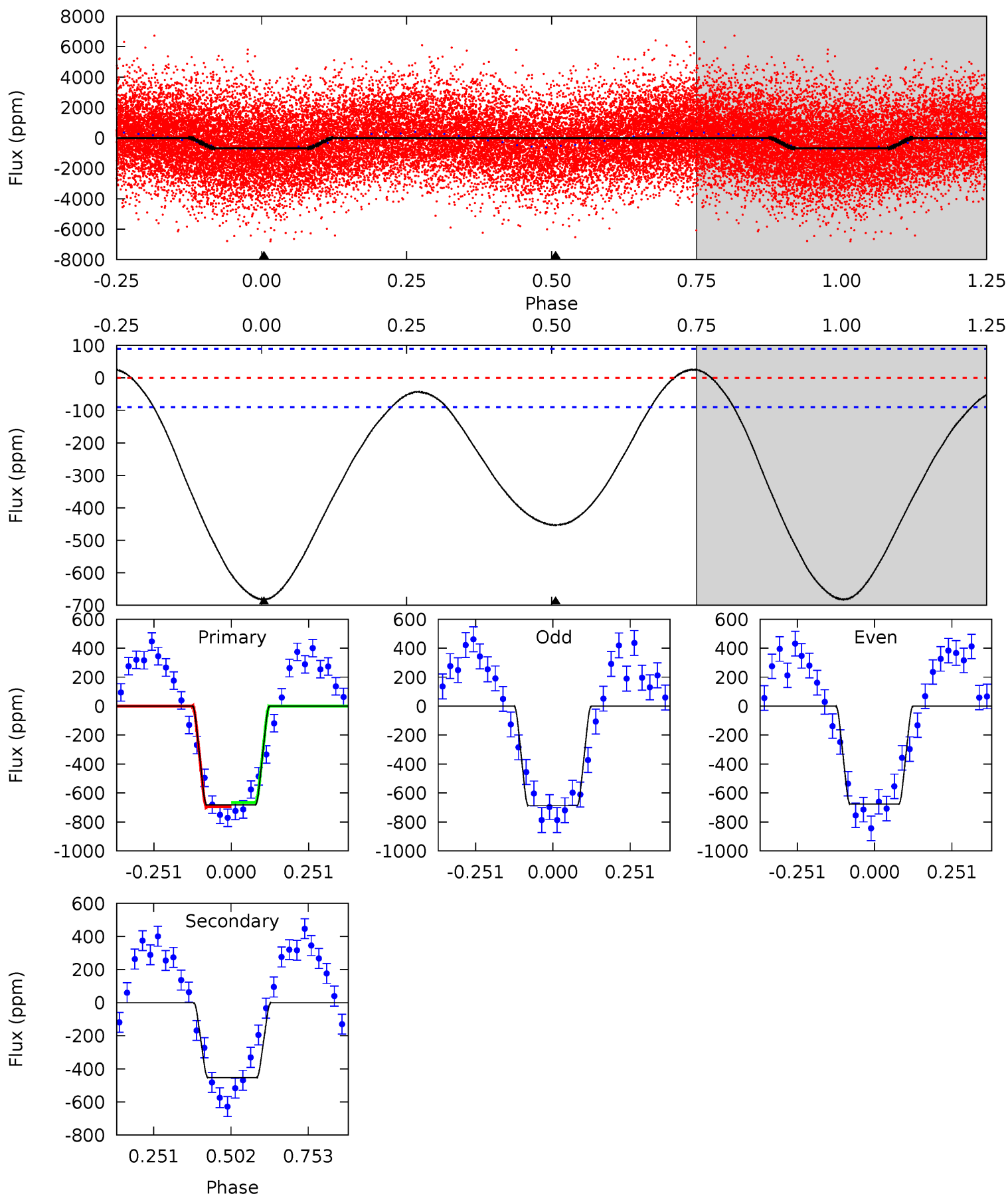
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	14.3	0	0	4.29	0.92	1.45	20.2	20.2	14.3	14.3	1.17	0.96	0.02	21.6



Alt Model-Shift Uniqueness Test

006389098-03, P = 0.590536 Days, E = 131.490838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	22.0	0	0	4.37	1.15	1.79	33.2	33.2	22.0	22.0	0.28	0.99	0.04	0.71



Stellar Parameters For KIC 006389098

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6962^{+194}_{-291}	$4.287^{+0.072}_{-0.217}$	$-0.040^{+0.250}_{-0.350}$	$1.388^{+0.513}_{-0.205}$	$1.366^{+0.222}_{-0.202}$	$0.720^{+0.285}_{-0.387}$
	+3%/-4%	+2%/-5%	+625%/-875%	+37%/-15%	+16%/-15%	+40%/-54%
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 006389098-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-186 ± 13	$2.43^{+1.98}_{-1.54}$	4175^{+337}_{-245}	6398^{+6230}_{-1724}	$3.993^{+24.941}_{-2.814}$
Alt.	-453 ± 21	$4.25^{+2.26}_{-1.91}$	4165^{+321}_{-237}	5968^{+2335}_{-1169}	$3.149^{+6.880}_{-1.772}$

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

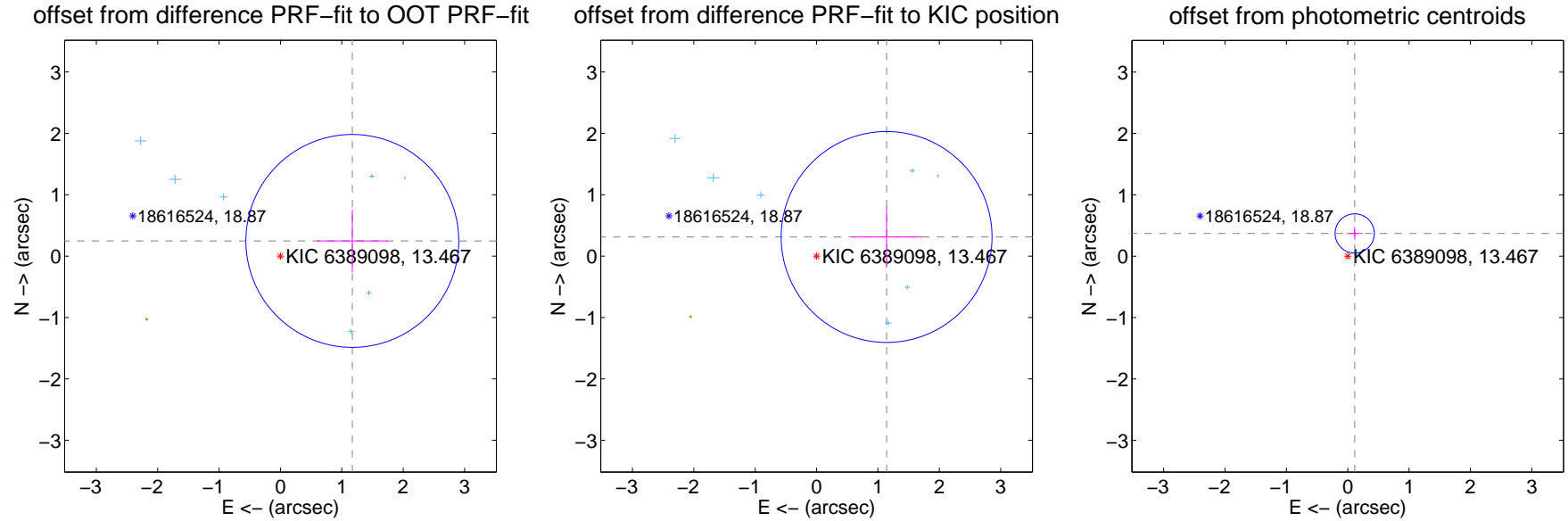
DV Centroid Data

Supplemental centroid analysis for 006389098-03. Kepler magnitude: 13.47. Transit SNR 10.37

There are 7 quarters with good PRF difference image offsets

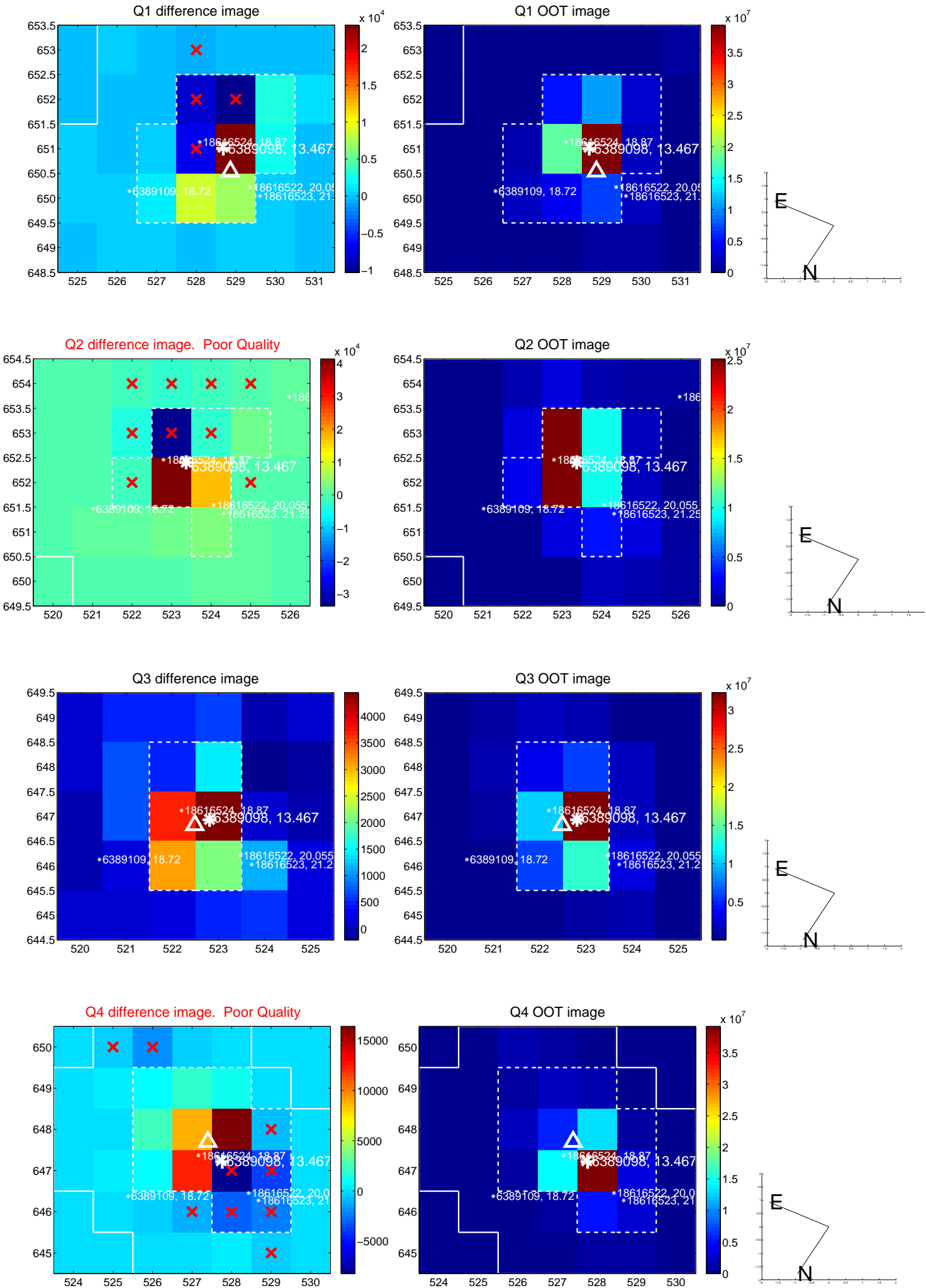
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.197 ± 0.578	2.07	-1.171 ± 0.581	0.247 ± 0.509
PRF-fit source offset from KIC position	1.182 ± 0.572	2.07	-1.140 ± 0.578	0.312 ± 0.499
photometric centroid source offset	0.39 ± 0.11	3.64	-0.11 ± 0.12	0.37 ± 0.10

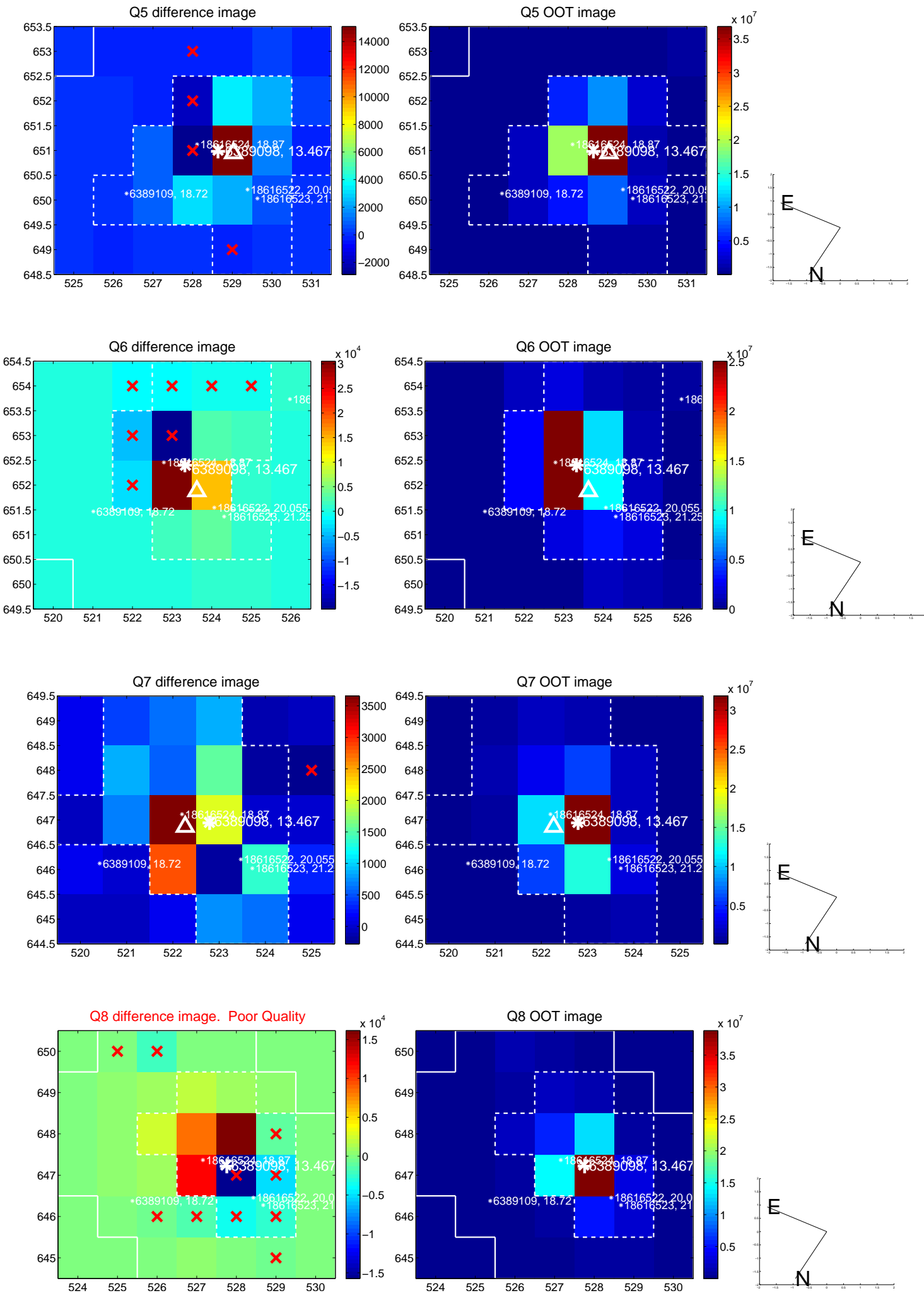


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

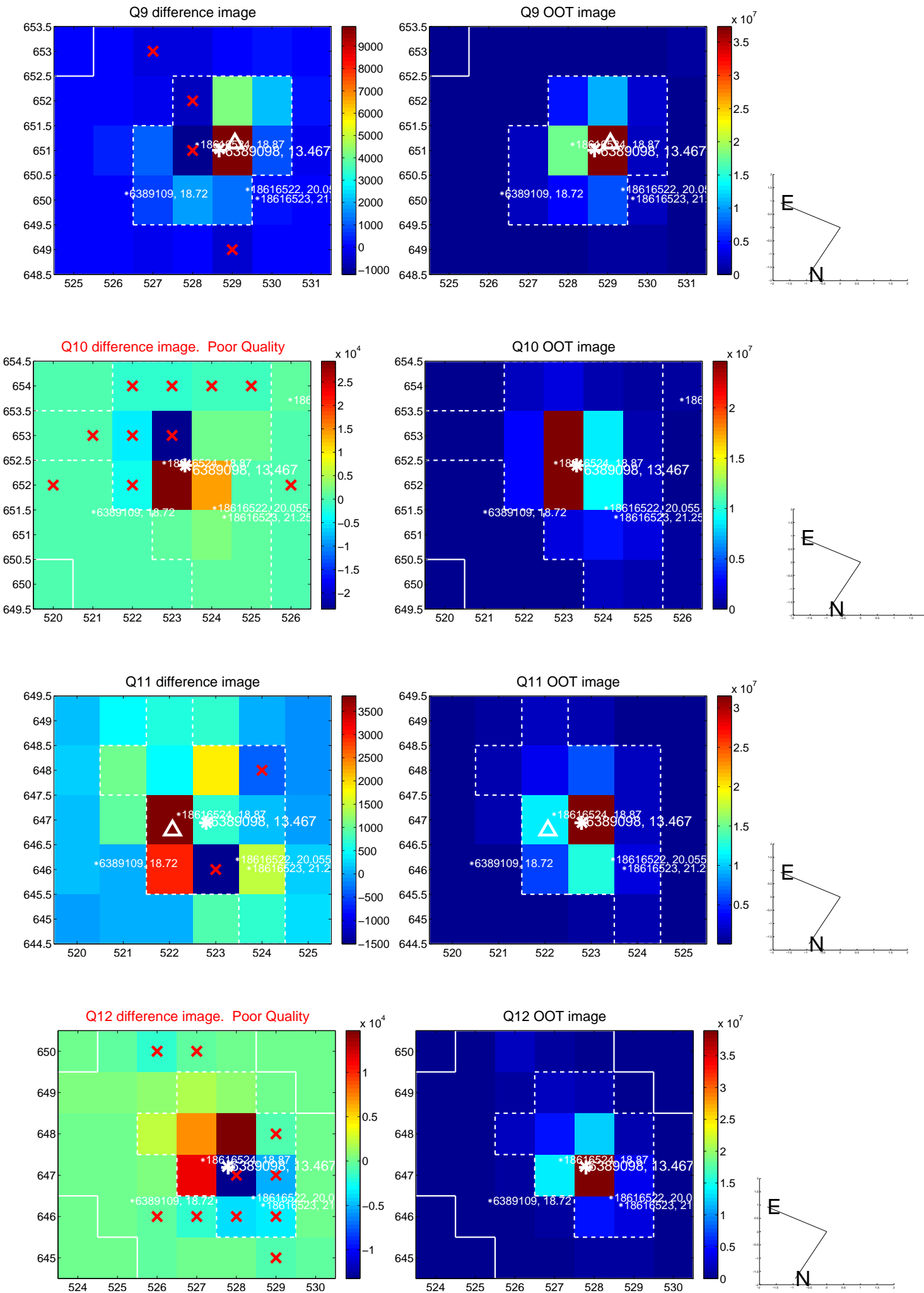
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



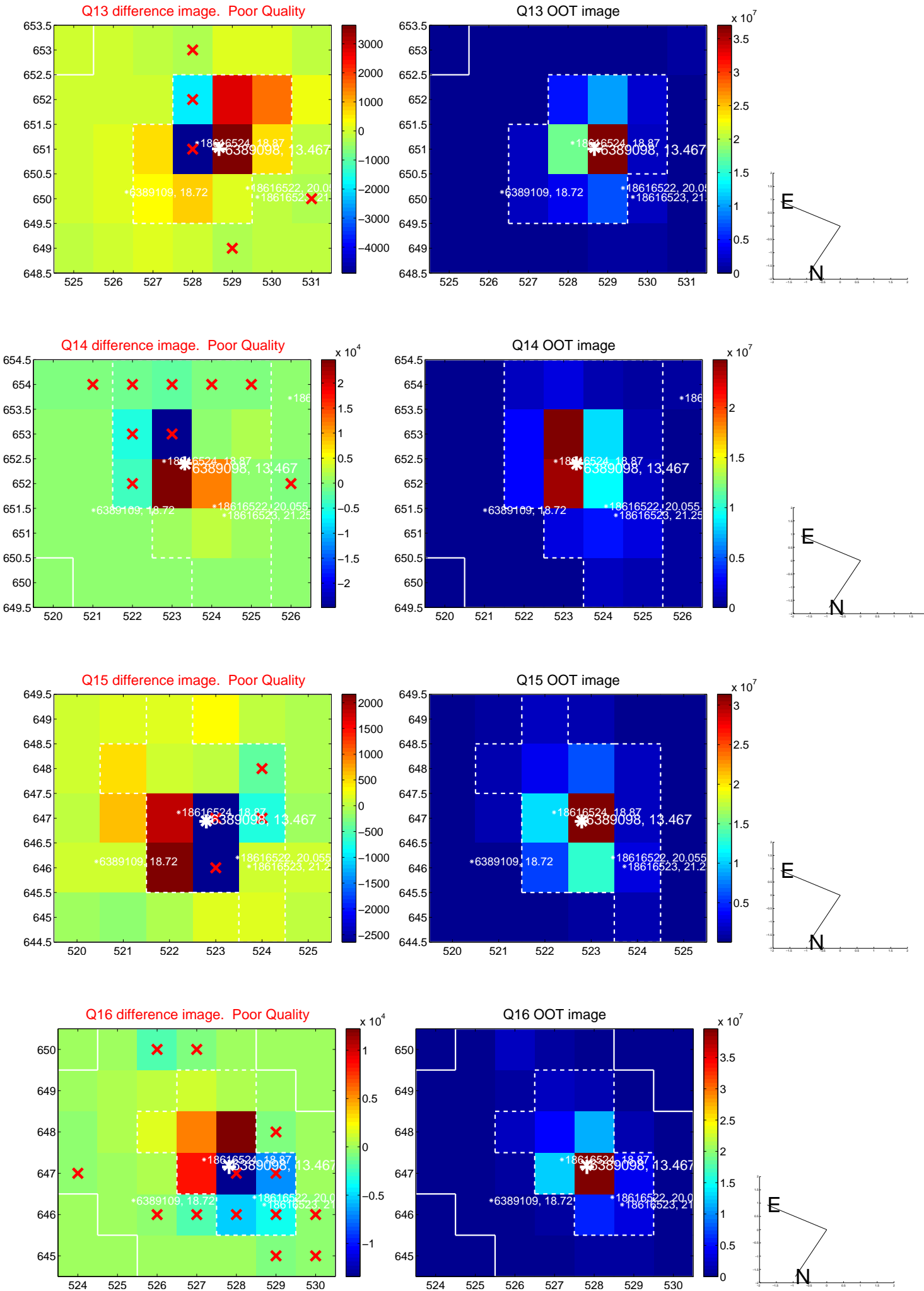
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



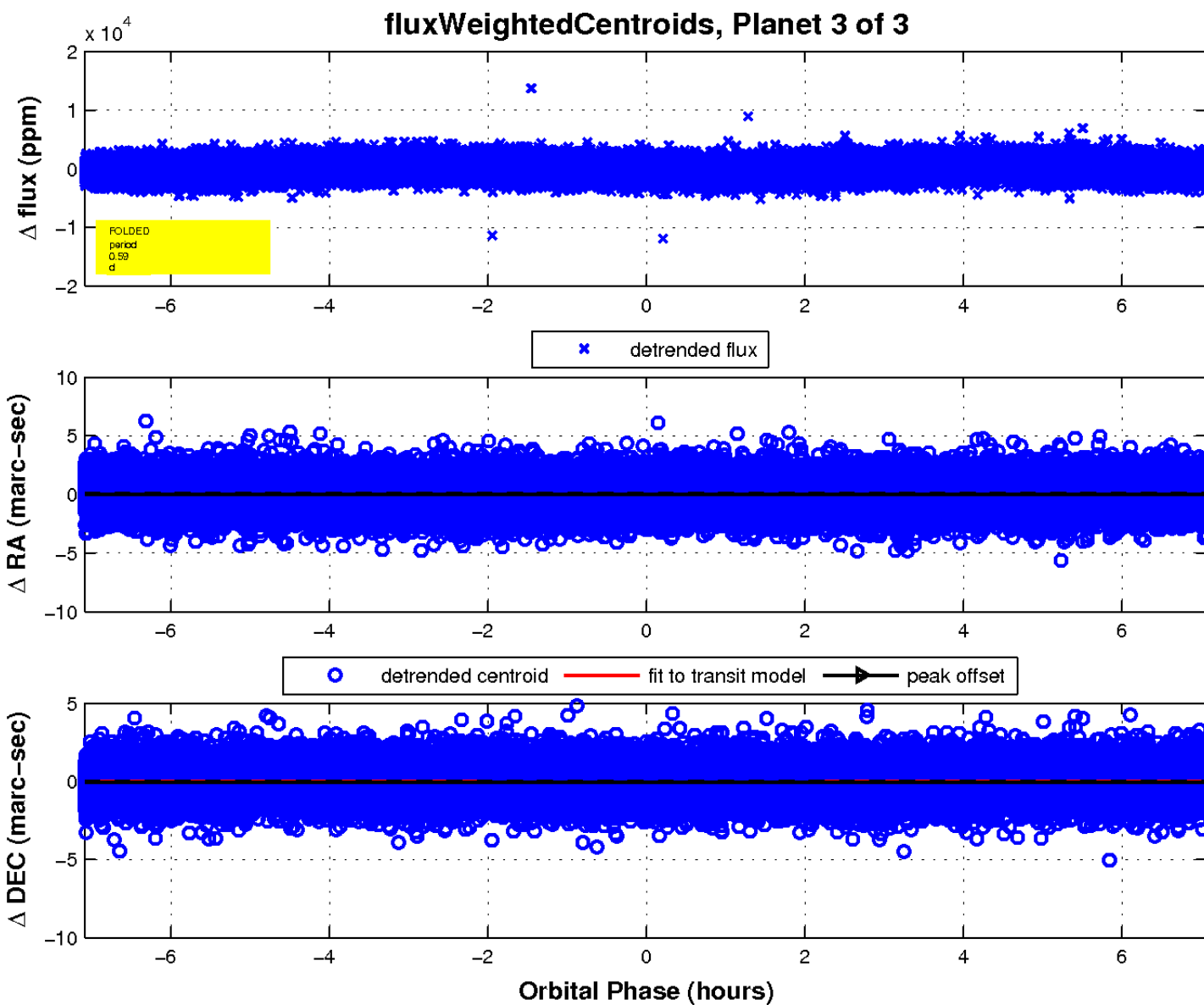
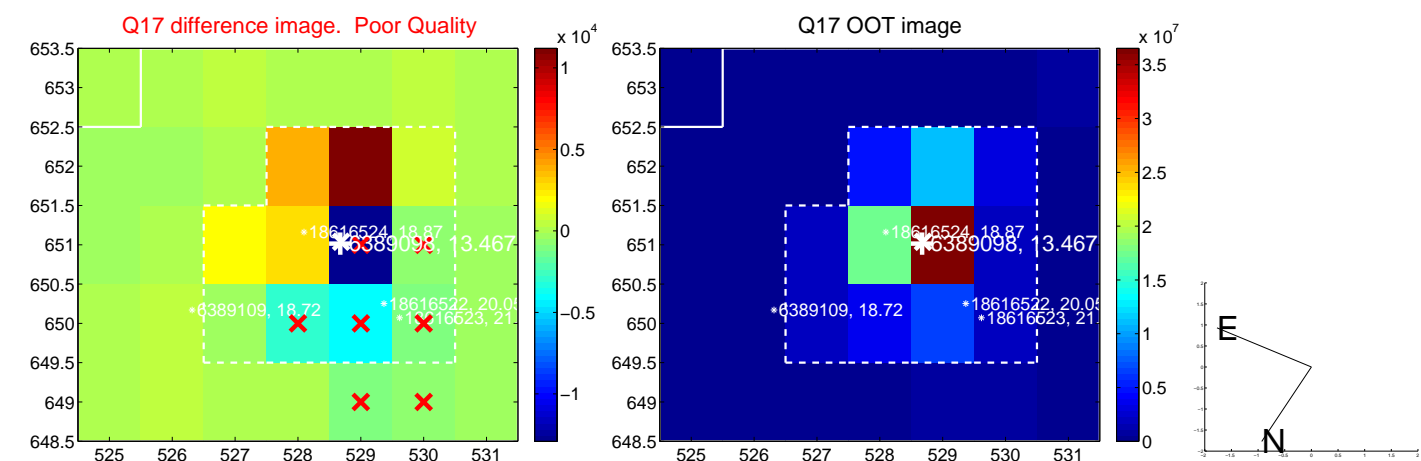
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

