

KIC 005128966

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})
005128966-01	OBS	8098.01	0.505320	131.553957	762.1	1.272	63.6	64.7	0.92	5941	2.69	6339.07
005128966-02	OBS	No	174.792758	219.913101	1053.0	5.213	19.7	5.6	0.92	5941	3.15	2.61
005128966-03	OBS	No	176.390642	181.632039	3459.9	3.000	20.6	-1.0	0.92	5941	5.42	2.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005128966-01	OBS	FP	0.00	0	1	1	1	SWEET_EB—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005128966-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005128966-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

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

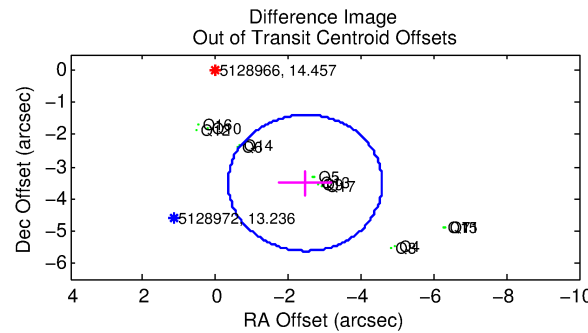
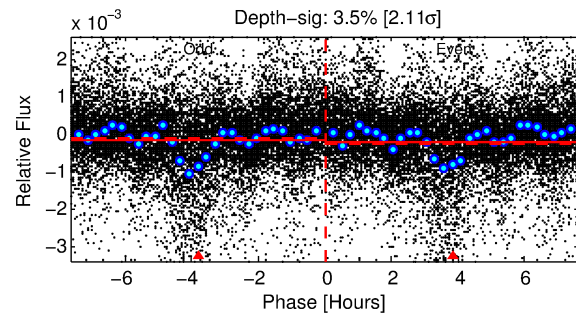
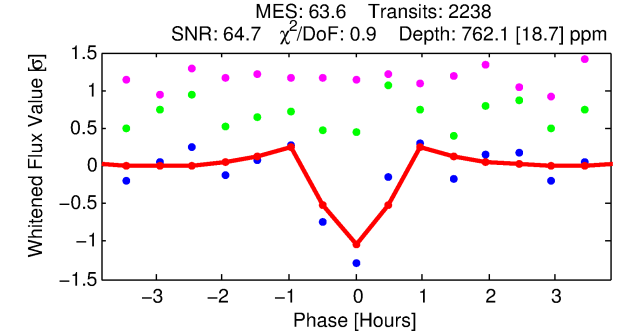
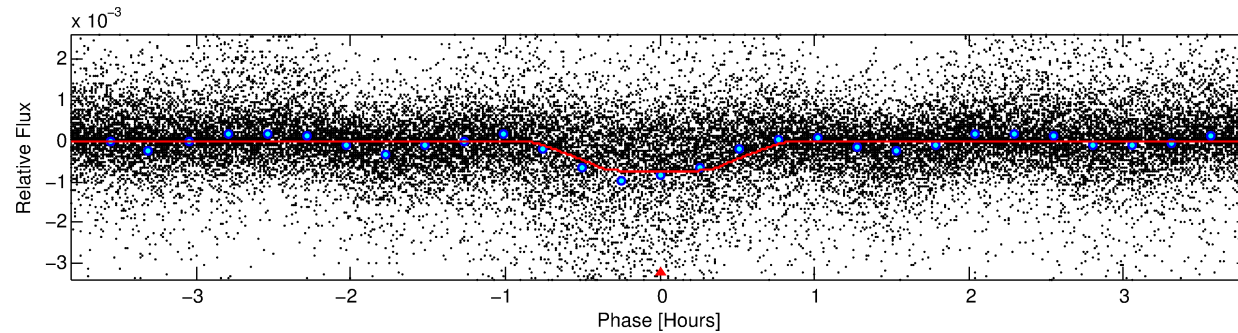
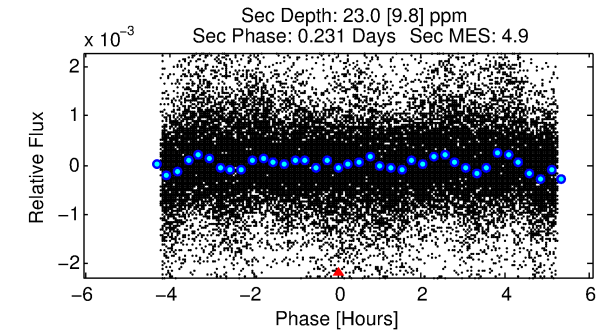
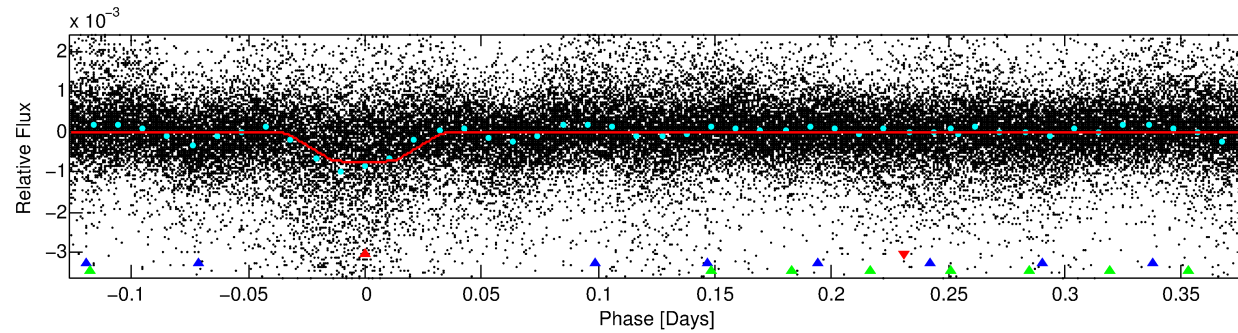
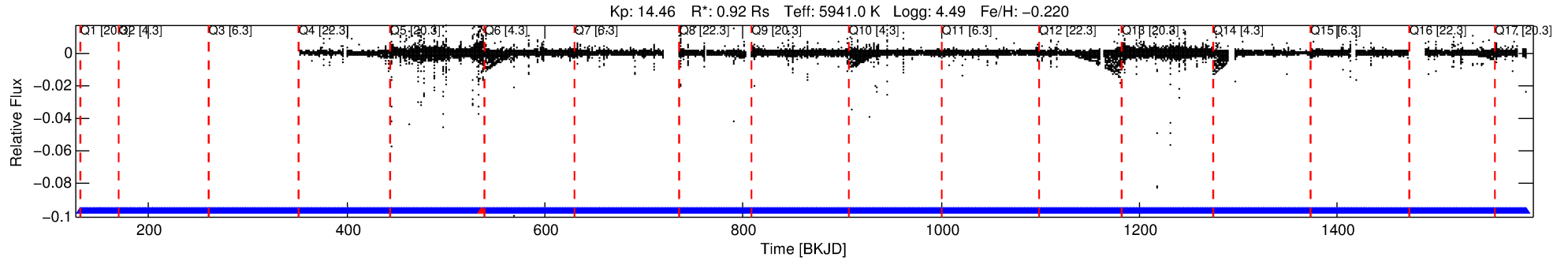
Ephemeris Match Information For 005128966-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (μ)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
005128966-01	5128966	005128972-pri	5128972	1:1	4.8	2	0	13.24	14.46	158.66	Direct-PRF	0	0.96	1.17

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 5128966 Candidate: 1 of 3 Period: 0.505 d



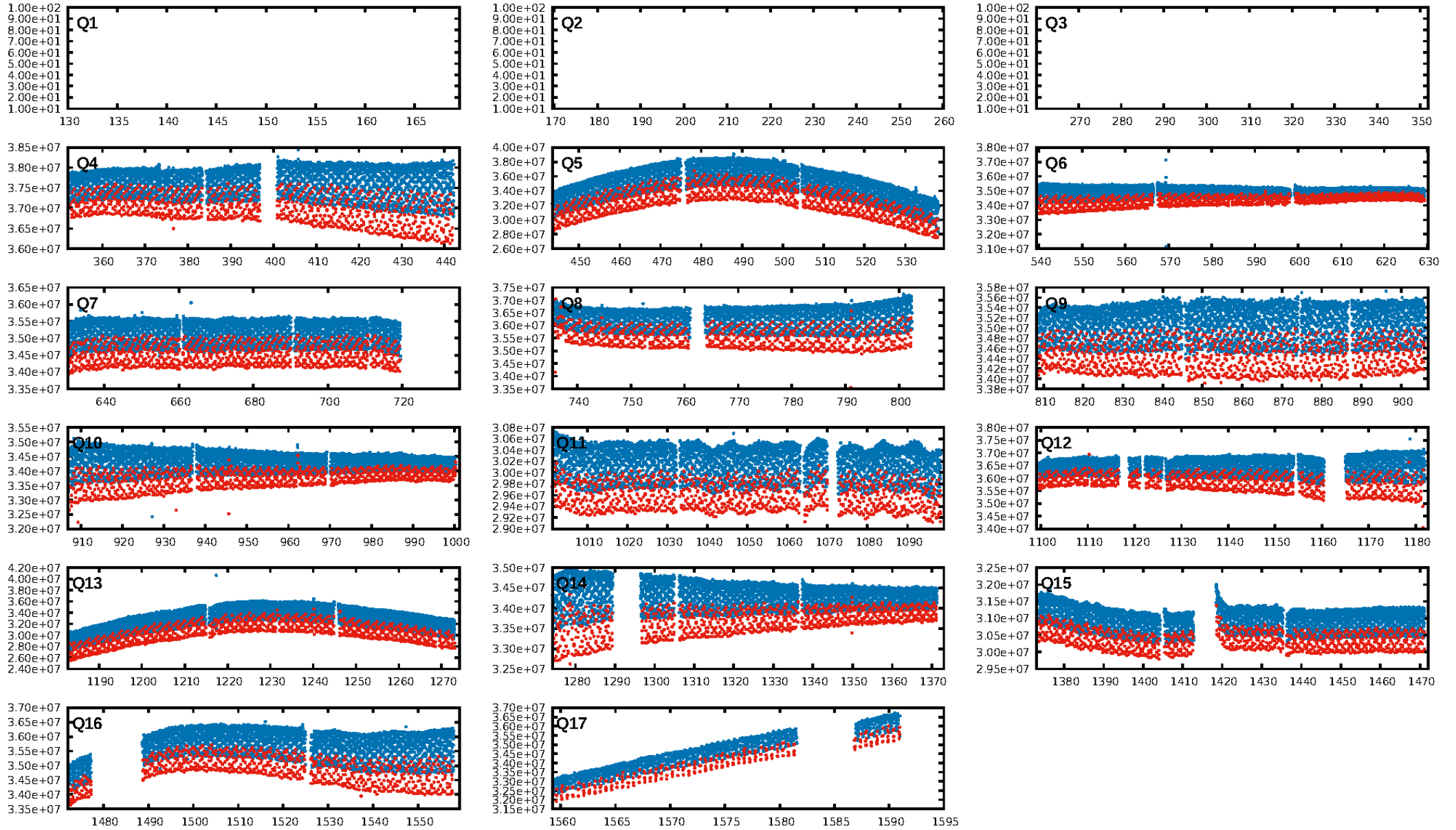
DV Fit Results:

Period = 0.50532 [0.00000] d
Epoch = 131.5540 [0.0003] BKJD
Rp/R* = 0.0267 [0.0032]
a/R* = 2.59 [1.23]
b = 0.63 [0.55]
Seff = 6339.07 [2568.22]
Teq = 2275 [230] K
Rp = 2.69 [0.89] Re
a = 0.0123 [0.0032] AU
Ag = 0.26 [0.16] [-4.55σ]
Teffp = 2518 [319] K [0.62σ]

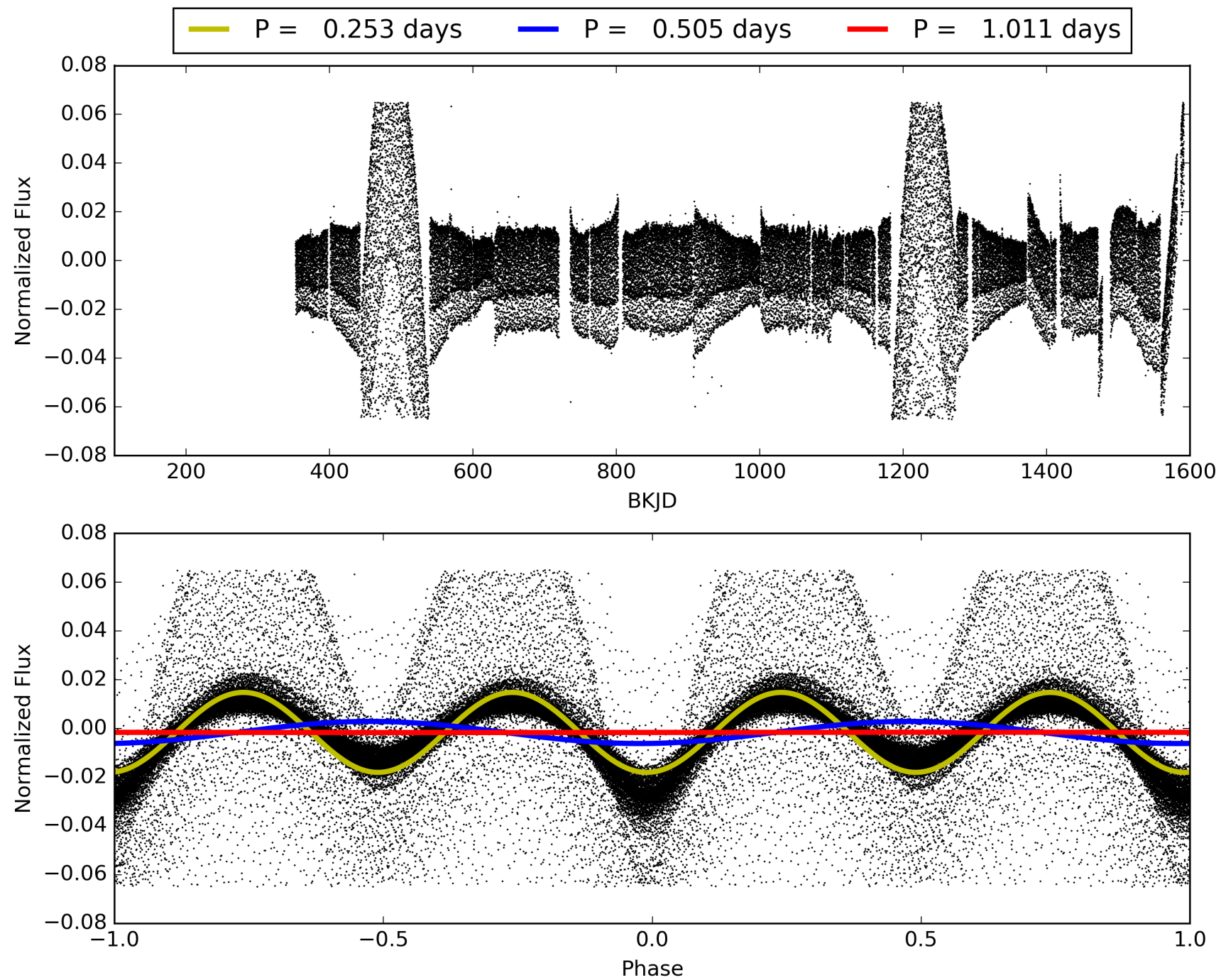
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [779.54σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2184/2185]
GhostDiagnostic-chr: -0.4626
Centroid-sig: N/A
Centroid-so: 3.813 arcsec [20.63σ]
OotOffset-rm: 4.287 arcsec [6.07σ]
KicOffset-rm: 4.830 arcsec [34.31σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005128966-01, PDC Light Curves

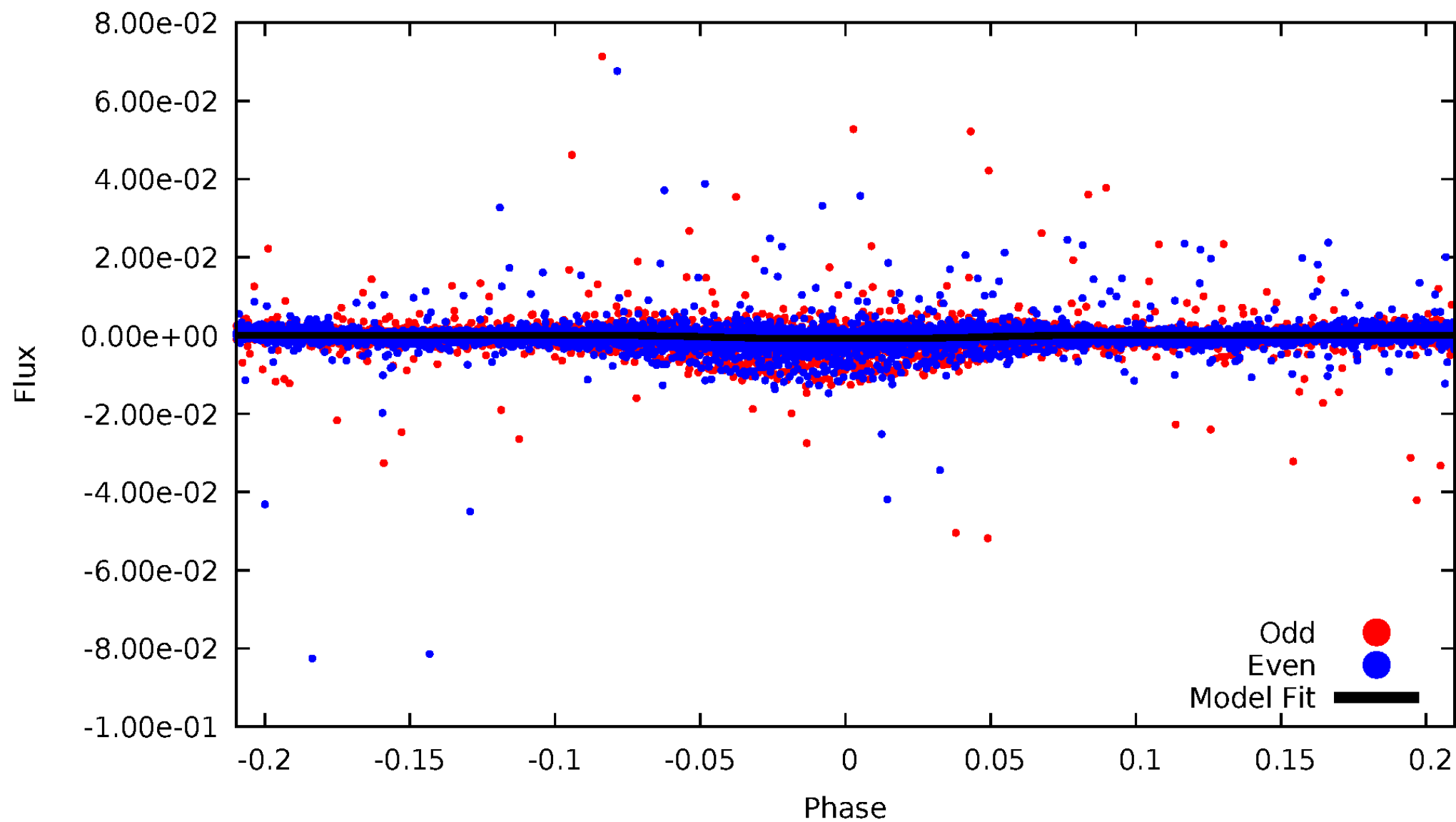


TCE 005128966-01



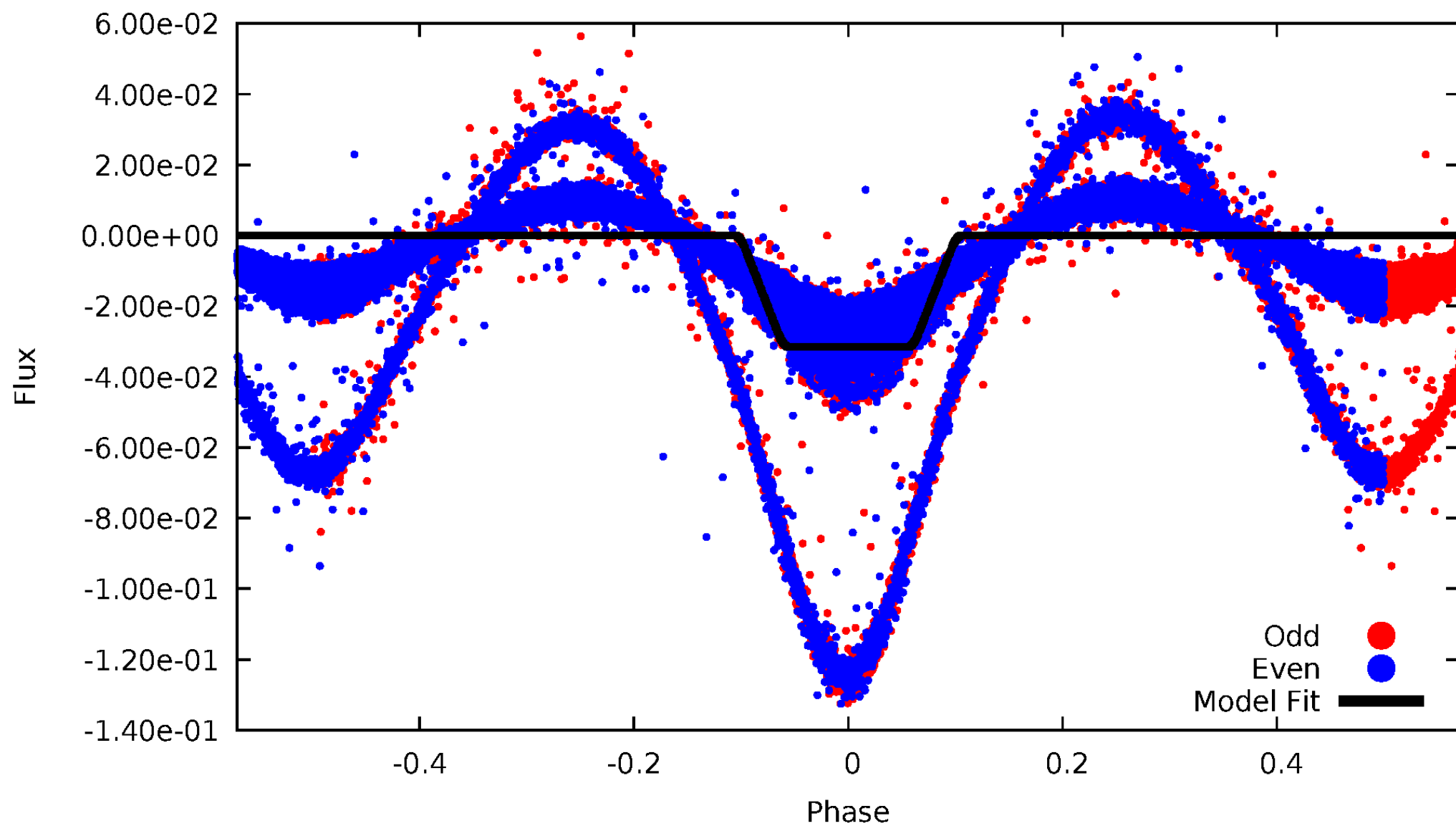
DV Odd/Even

TCE 005128966-01



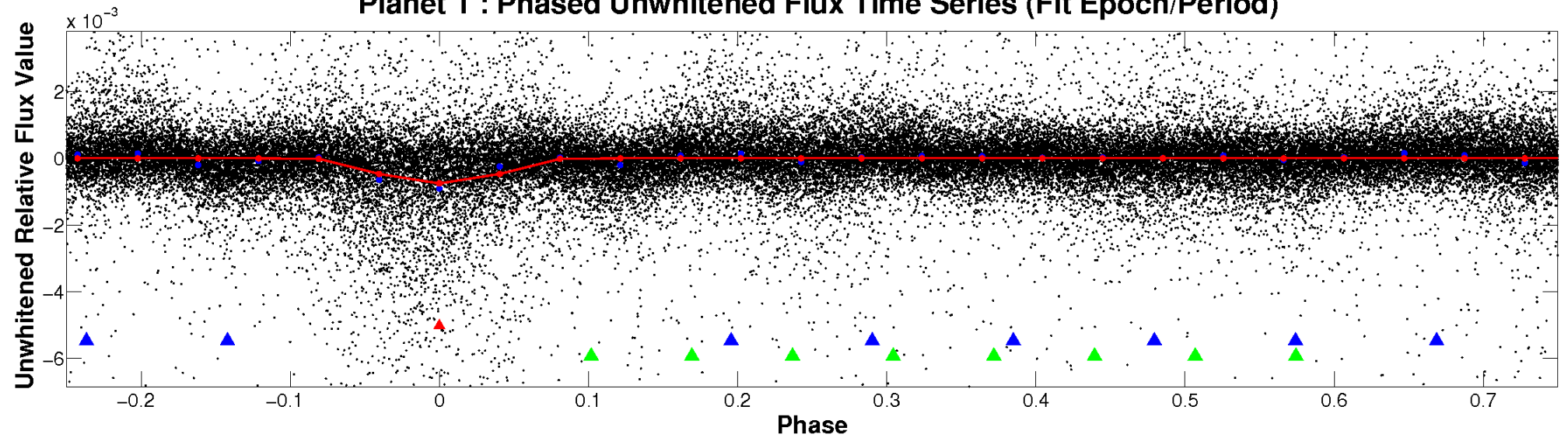
ALT Odd/Even

TCE 005128966-01

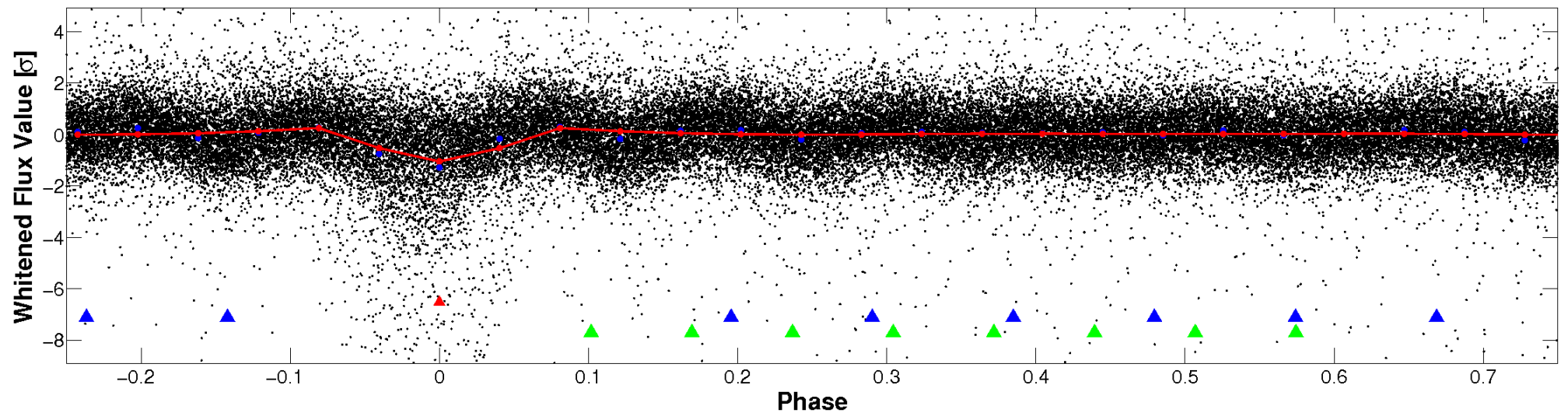


Non-Whitened Vs. Whitened Light Curve

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

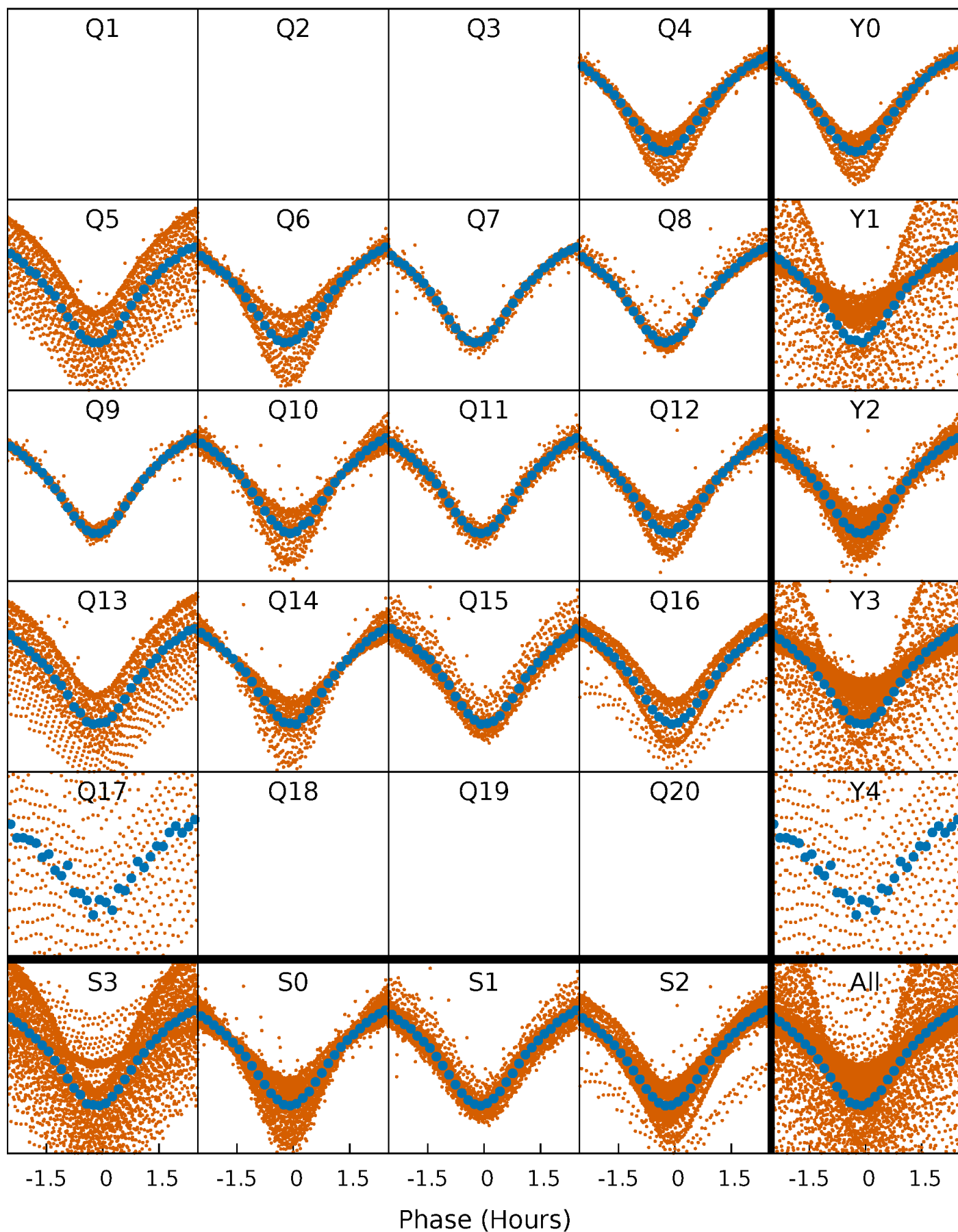


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



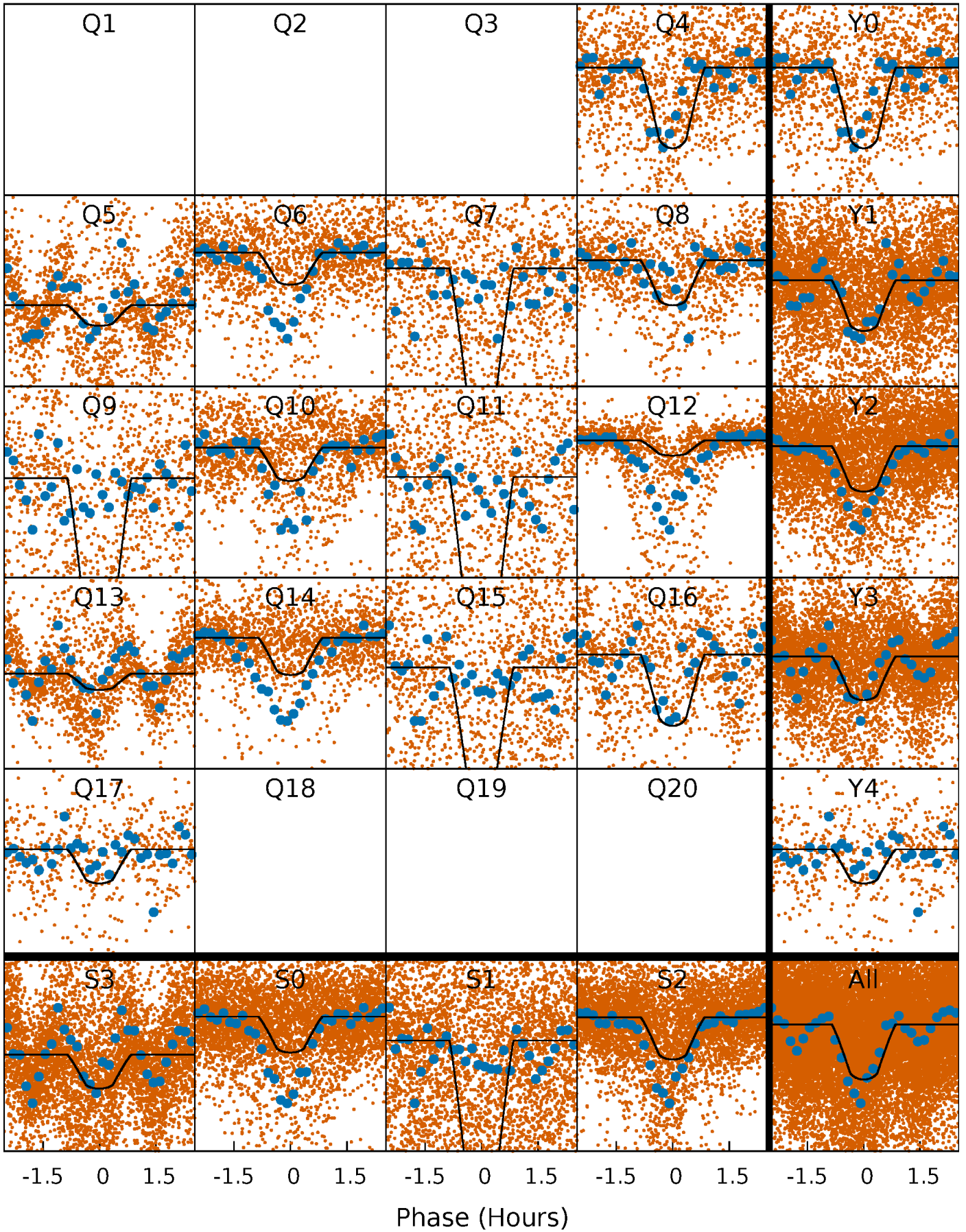
PDC Quarter-Phased Transit Curves

TCE 005128966-01 P= 0.505320 Days $T_0=131.553957$ (BKJD)



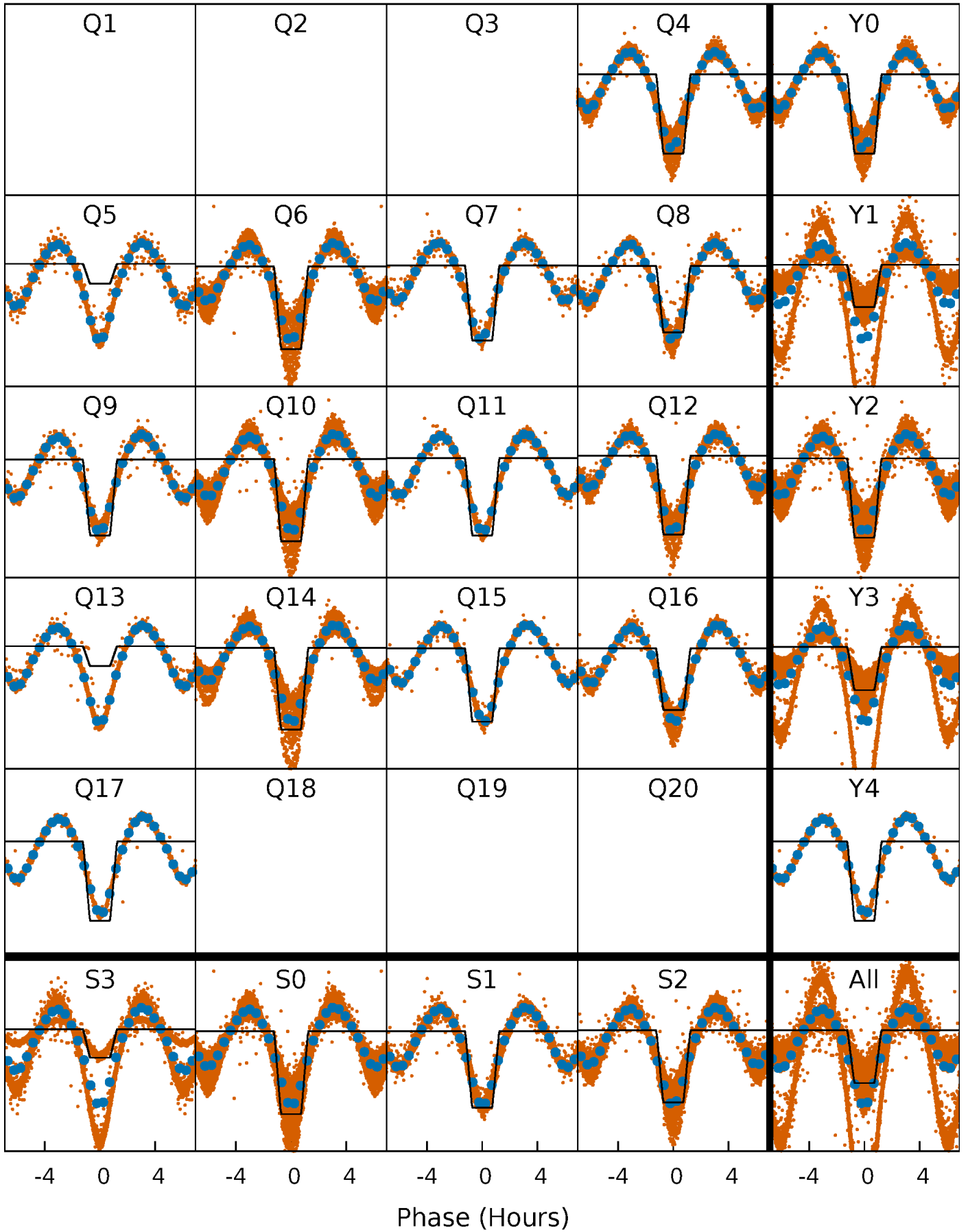
DV Quarter-Phased Transit Curves

TCE 005128966-01 P= 0.505320 Days $T_0=131.553957$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

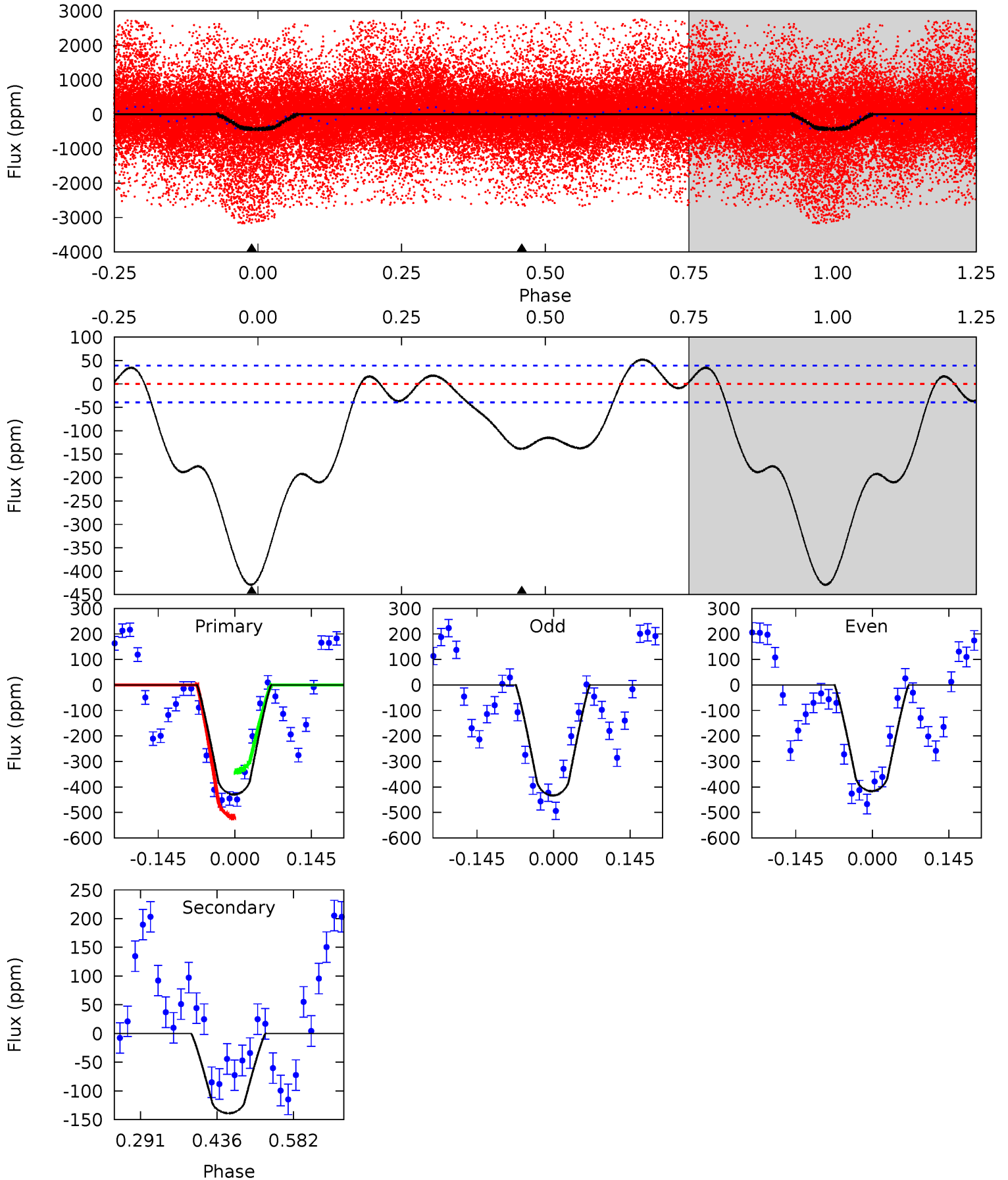
TCE 005128966-01 P= 0.505320 Days $T_0=131.547494$ (BKJD)



DV Model-Shift Uniqueness Test

005128966-01, P = 0.505320 Days, E = 131.553957 Days

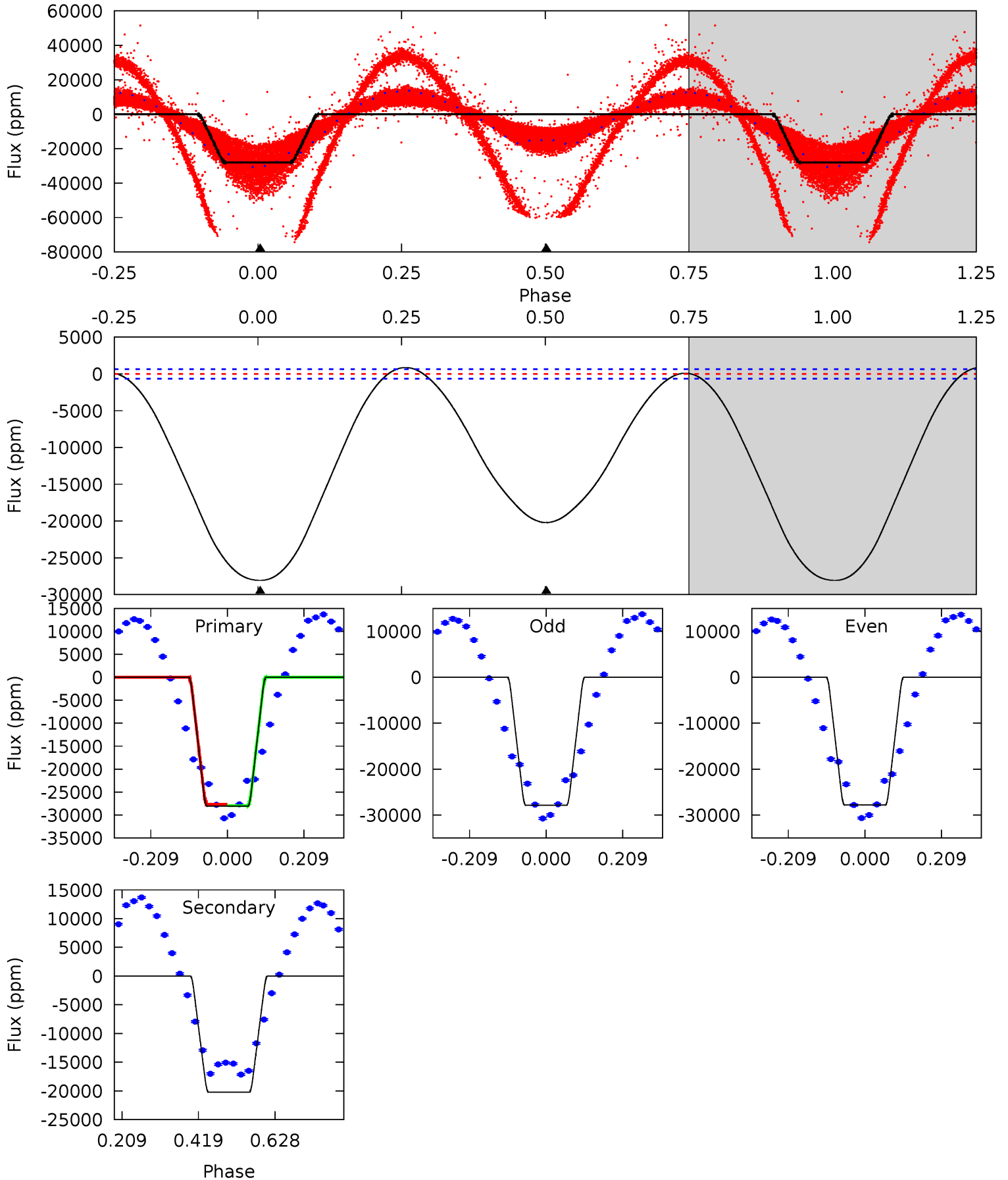
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	15.9	0	0	4.49	1.46	5.29	49.1	49.1	15.9	15.9	0.98	2.05	0.11	10.2



Alt Model-Shift Uniqueness Test

005128966-01, P = 0.505320 Days, E = 131.547494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
191.5	137.9	0	0	4.41	1.26	5.03	191.5	191.5	137.9	137.9	0.13	1.44	0.03	0.92



Stellar Parameters For KIC 005128966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+187}_{-208}	$4.490^{+0.065}_{-0.208}$	$-0.220^{+0.300}_{-0.300}$	$0.924^{+0.286}_{-0.114}$	$0.962^{+0.131}_{-0.119}$	$1.719^{+0.507}_{-0.935}$
	+3%/-4%	+1%/-5%	+136%/-136%	+31%/-12%	+14%/-12%	+29%/-54%
Source	KIC0	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 005128966-01 / KOI 8098.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-139 ± 9	$2.80^{+0.51}_{-0.43}$	3249^{+239}_{-174}	4022^{+272}_{-231}	$1.434^{+0.570}_{-0.409}$
Alt.	-20207 ± 147	$18.46^{+3.02}_{-1.68}$	3242^{+268}_{-172}	5293^{+181}_{-171}	$4.960^{+0.891}_{-1.263}$

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

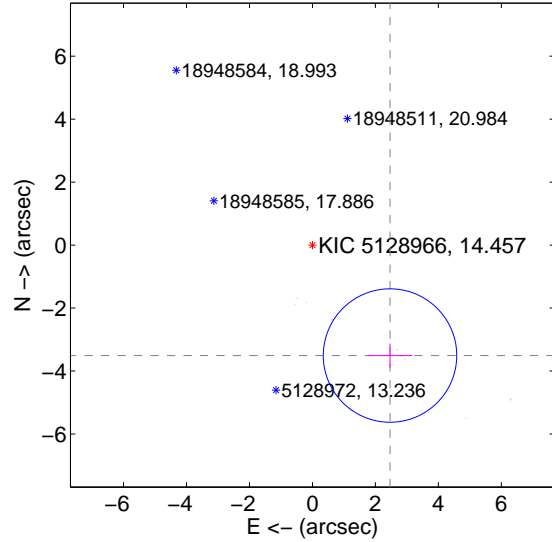
Supplemental centroid analysis for 005128966-01. Kepler magnitude: 14.46. Transit SNR 64.67

There are 14 quarters with good PRF difference image offsets

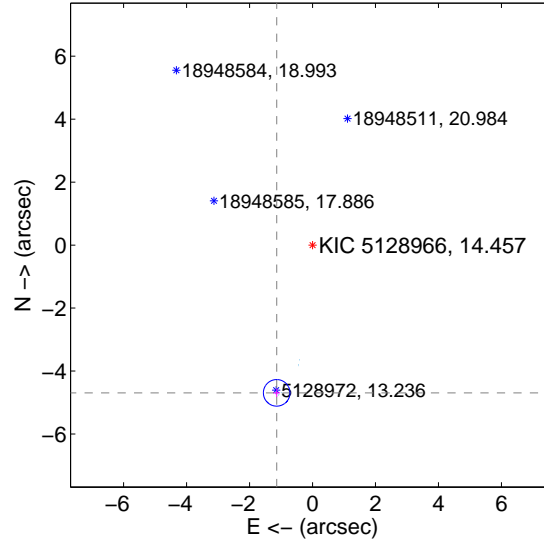
The OOT PRF centroid is offset from the target star catalog position by about 4.20 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.287 ± 0.706	6.07	-2.464 ± 0.705	-3.508 ± 0.383
PRF-fit source offset from KIC position	4.830 ± 0.141	34.31	1.138 ± 0.103	-4.693 ± 0.128
photometric centroid source offset	3.81 ± 0.18	20.63	1.55 ± 0.09	-3.48 ± 0.20

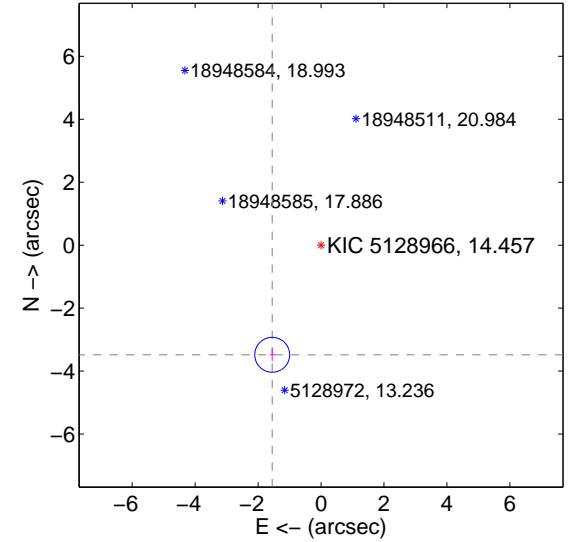
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

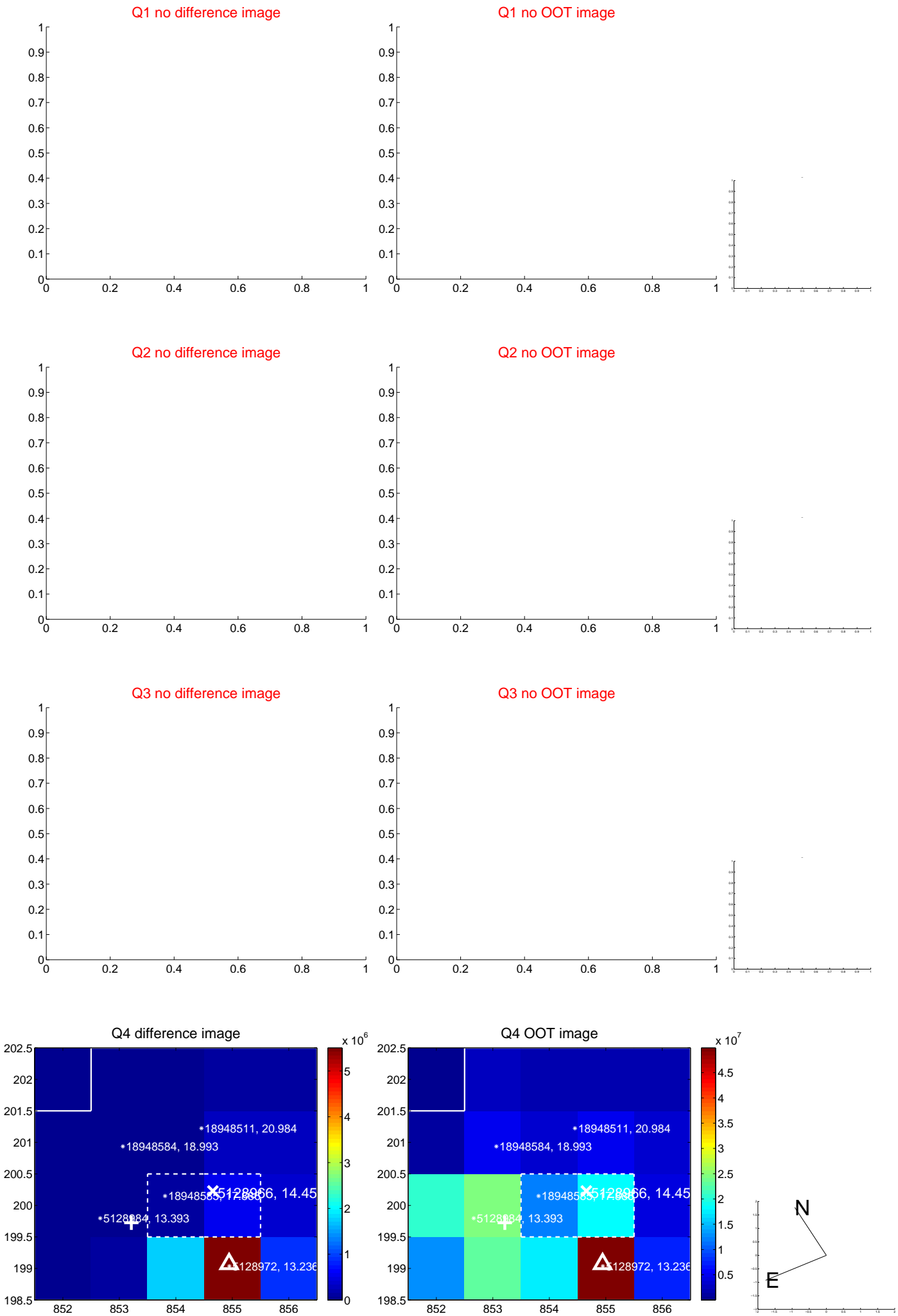


offset from photometric centroids

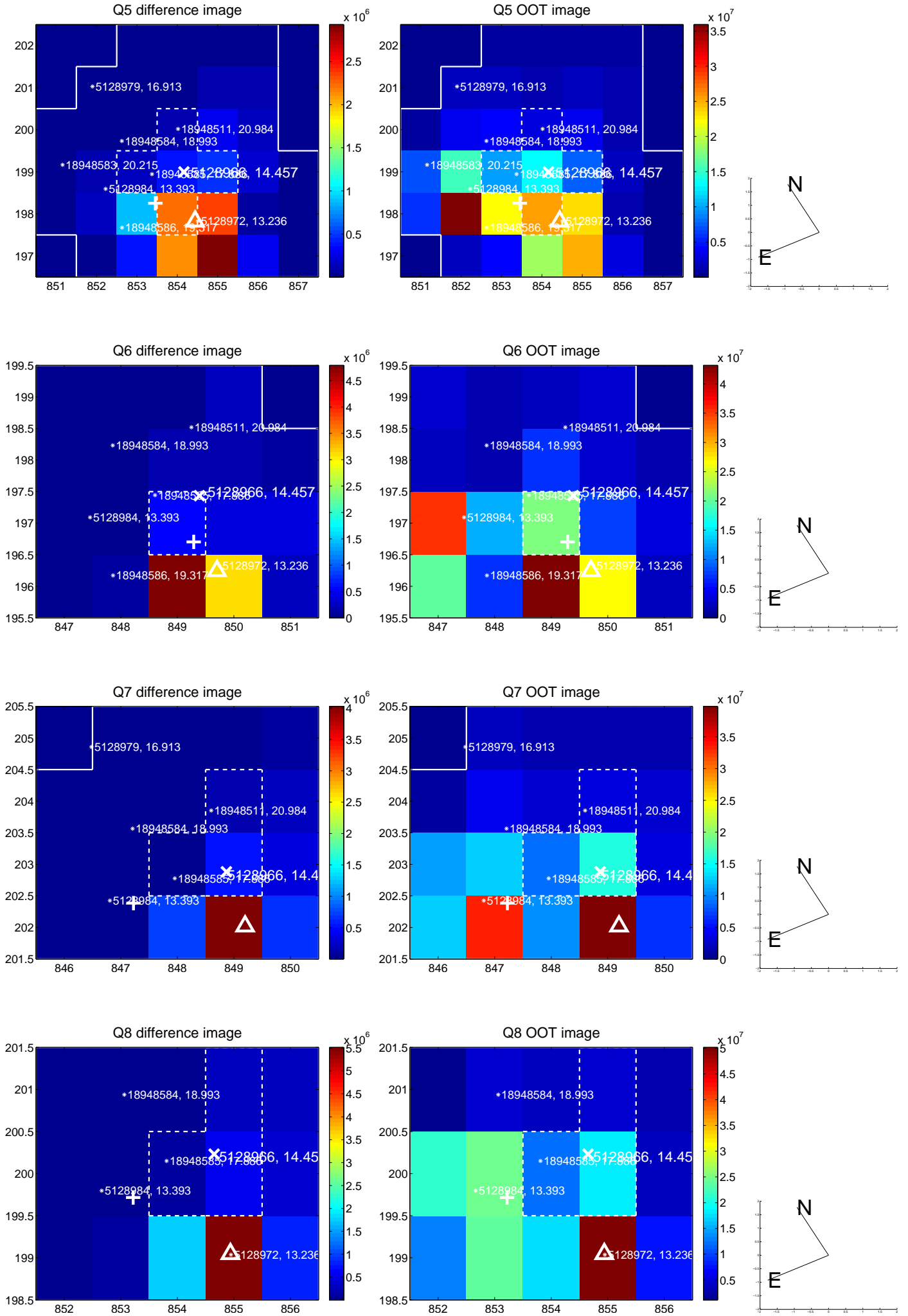


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

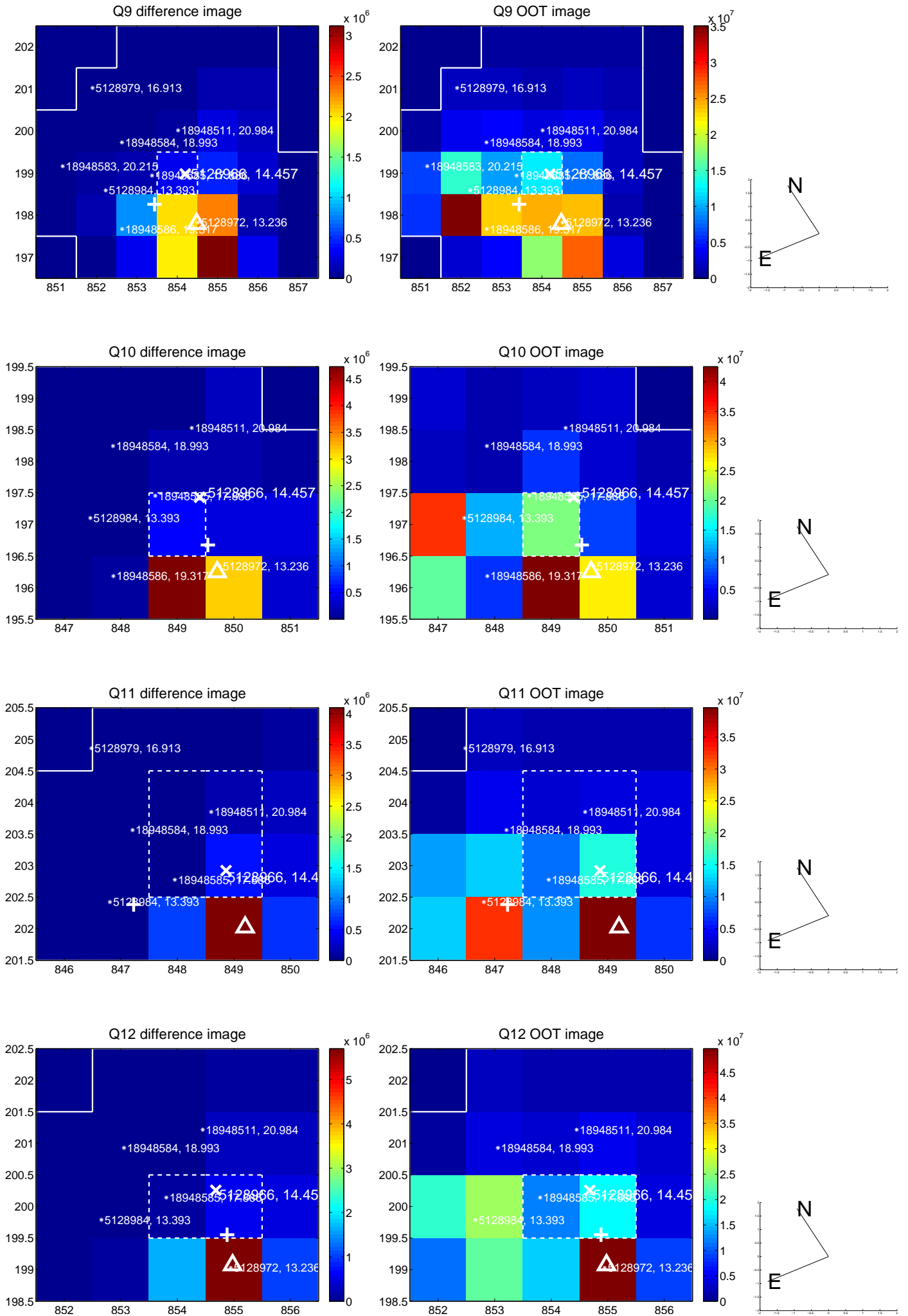
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



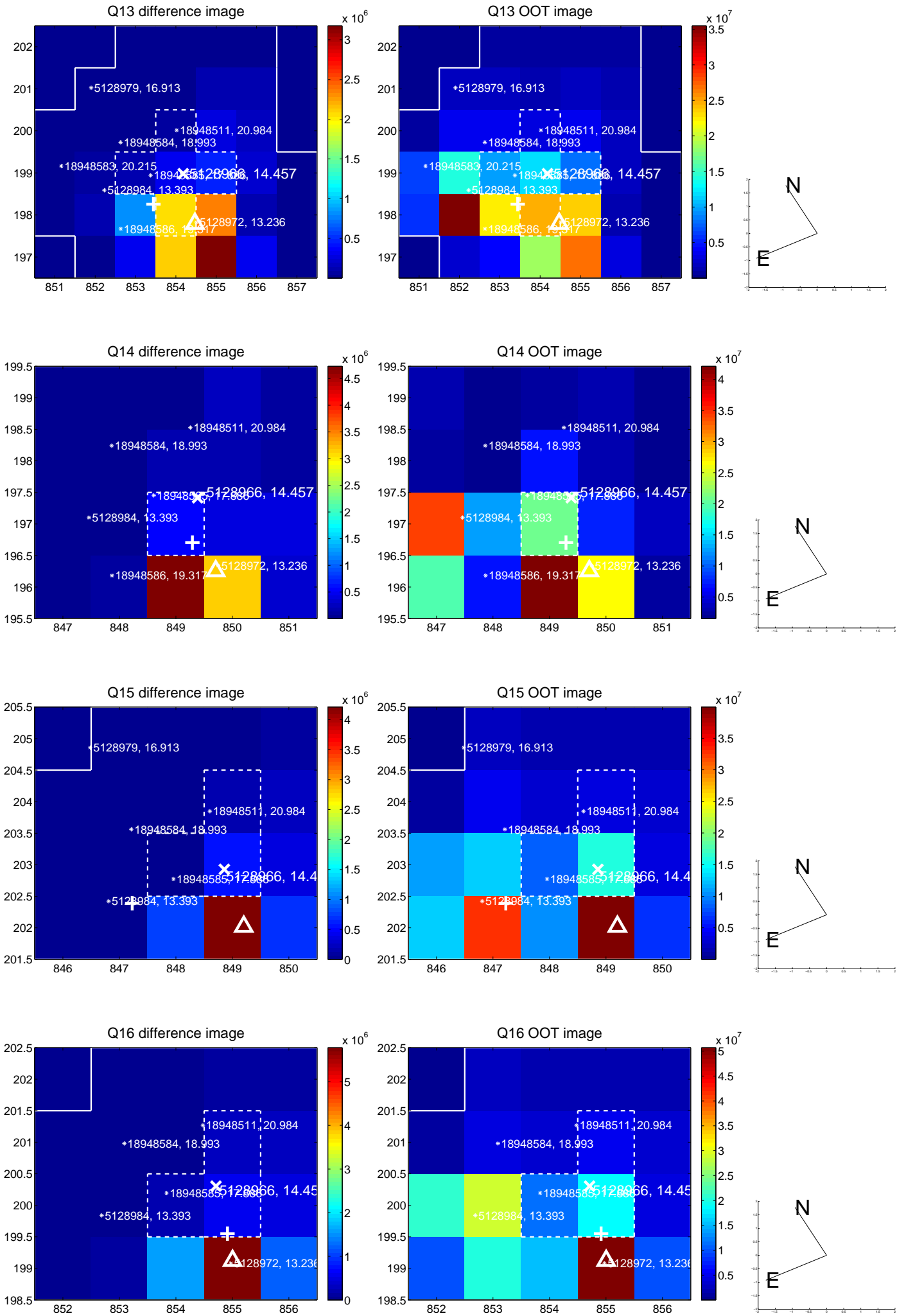
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



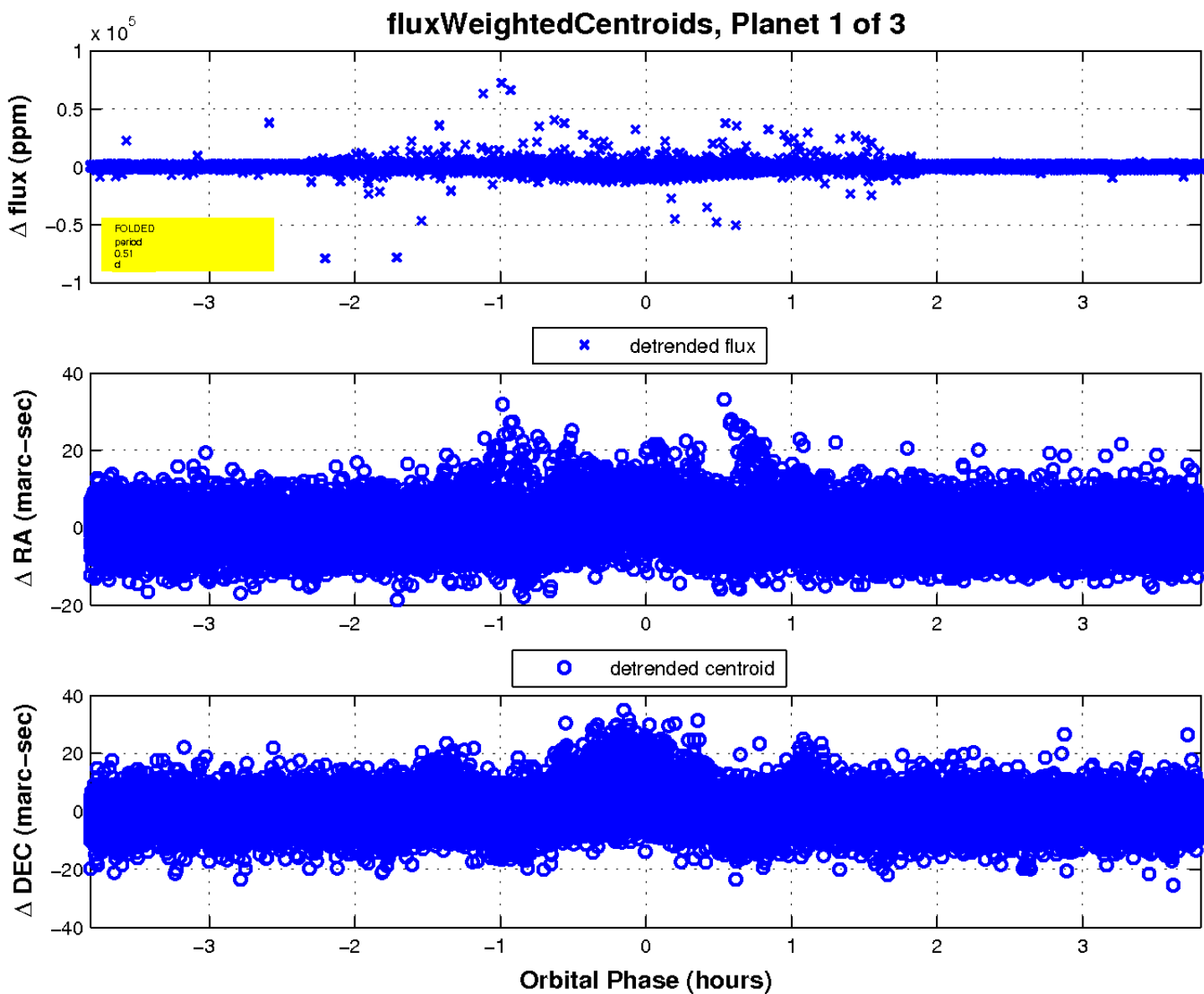
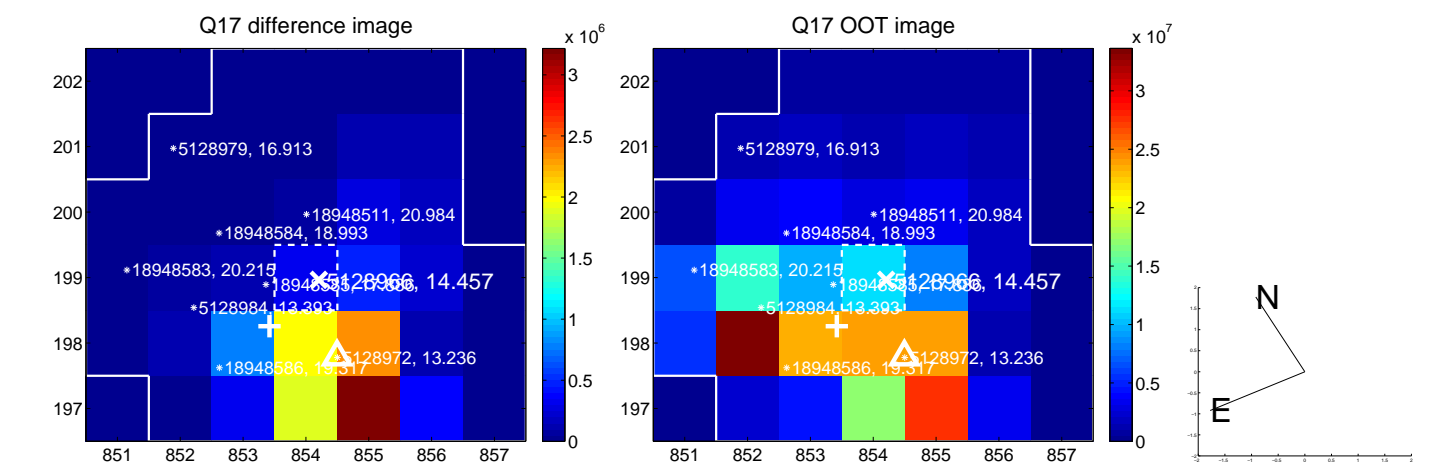
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

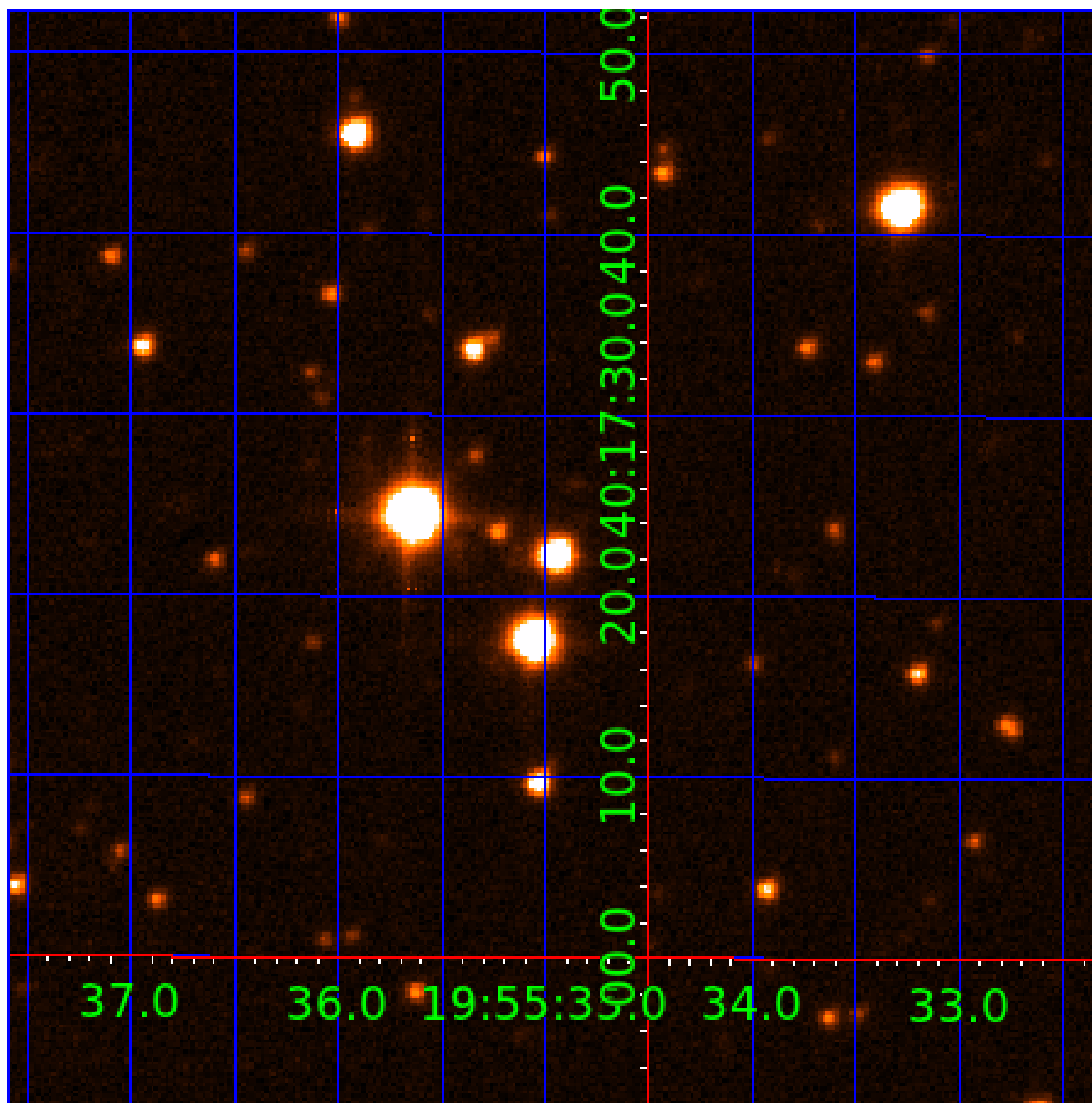


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005128966

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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005128966-03	OBS	No	176.390642	181.632039	3459.9	3.000	20.6	-1.0	0.92	5941	5.42	2.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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005128966-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005128966-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

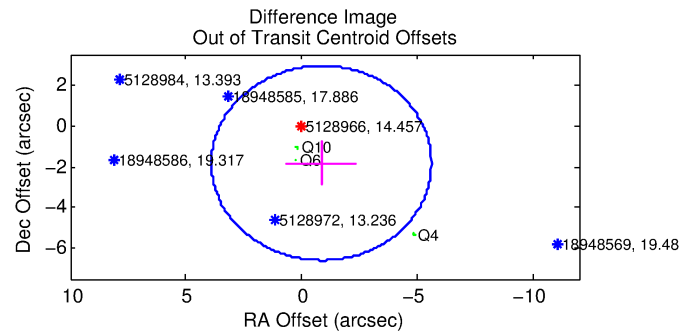
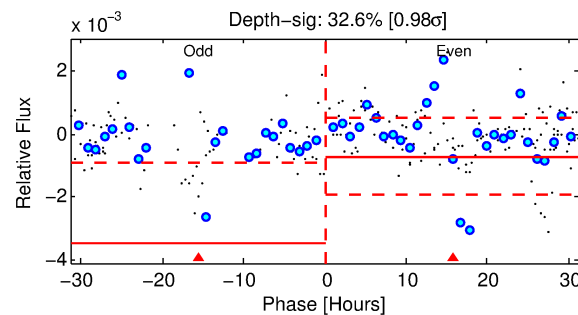
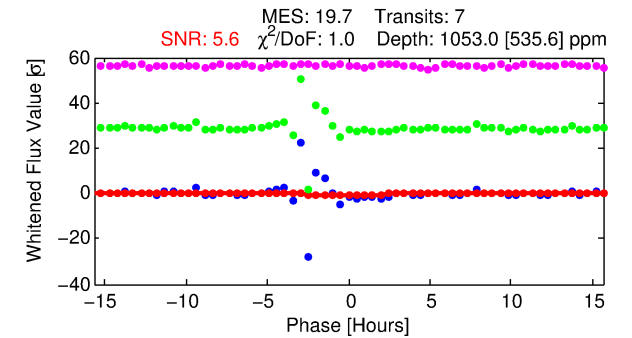
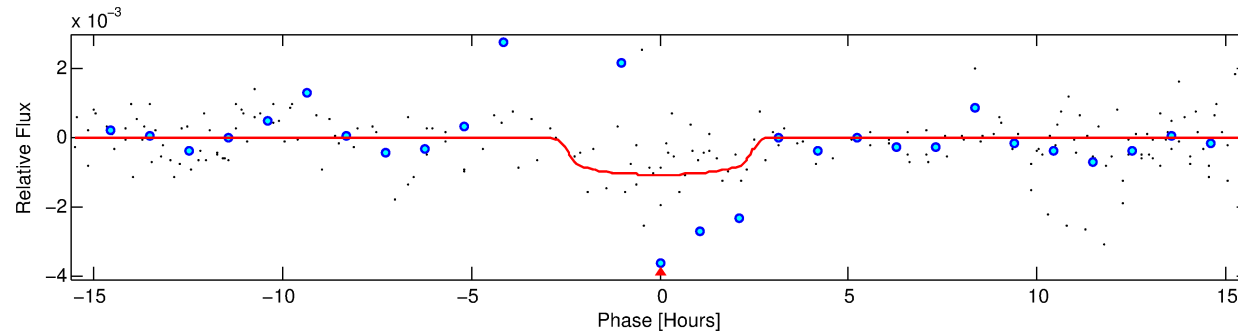
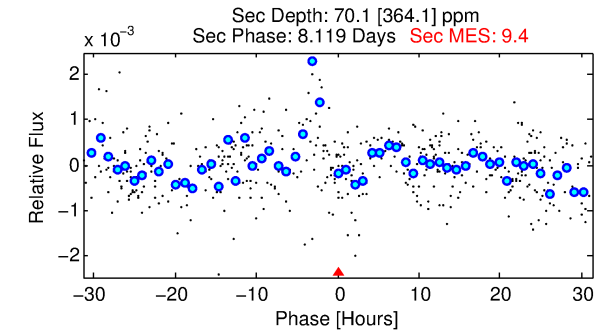
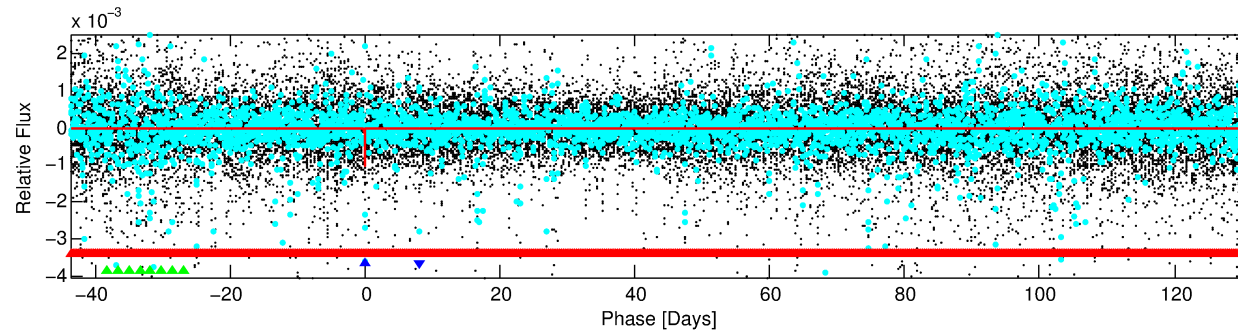
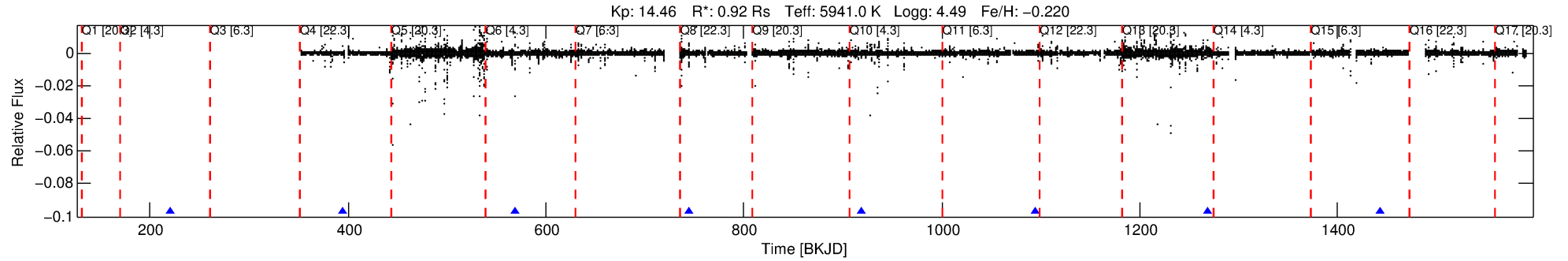
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005128966-02

No Significant Match Found

DV One-Page Summary

KIC: 5128966 Candidate: 2 of 3 Period: 174.793 d



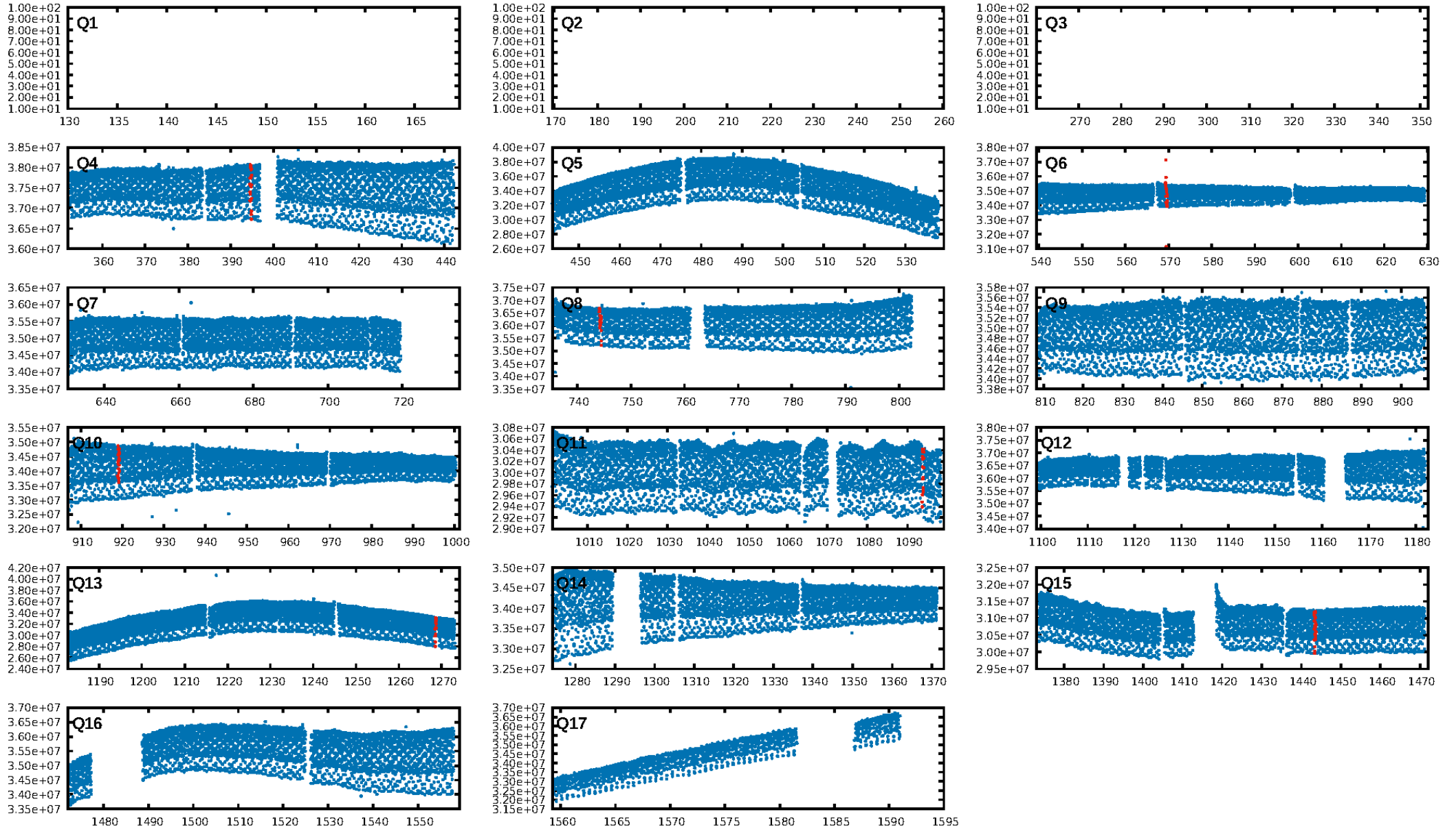
DV Fit Results:

Period = 174.79276 [0.01445] d
Epoch = 219.9131 [0.0549] BKJD
Rp/R* = 0.0312 [0.0930]
a/R* = 209.82 [2942.78]
b = 0.63 [13.77]
Seff = 2.61 [1.06]
Teq = 324 [33] K
Rp = 3.15 [9.43] Re
a = 0.6042 [0.1576] AU
Ag = 1421.76 [11253.83] [0.13σ]
Teffp = 3077 [6083] K [0.45σ]

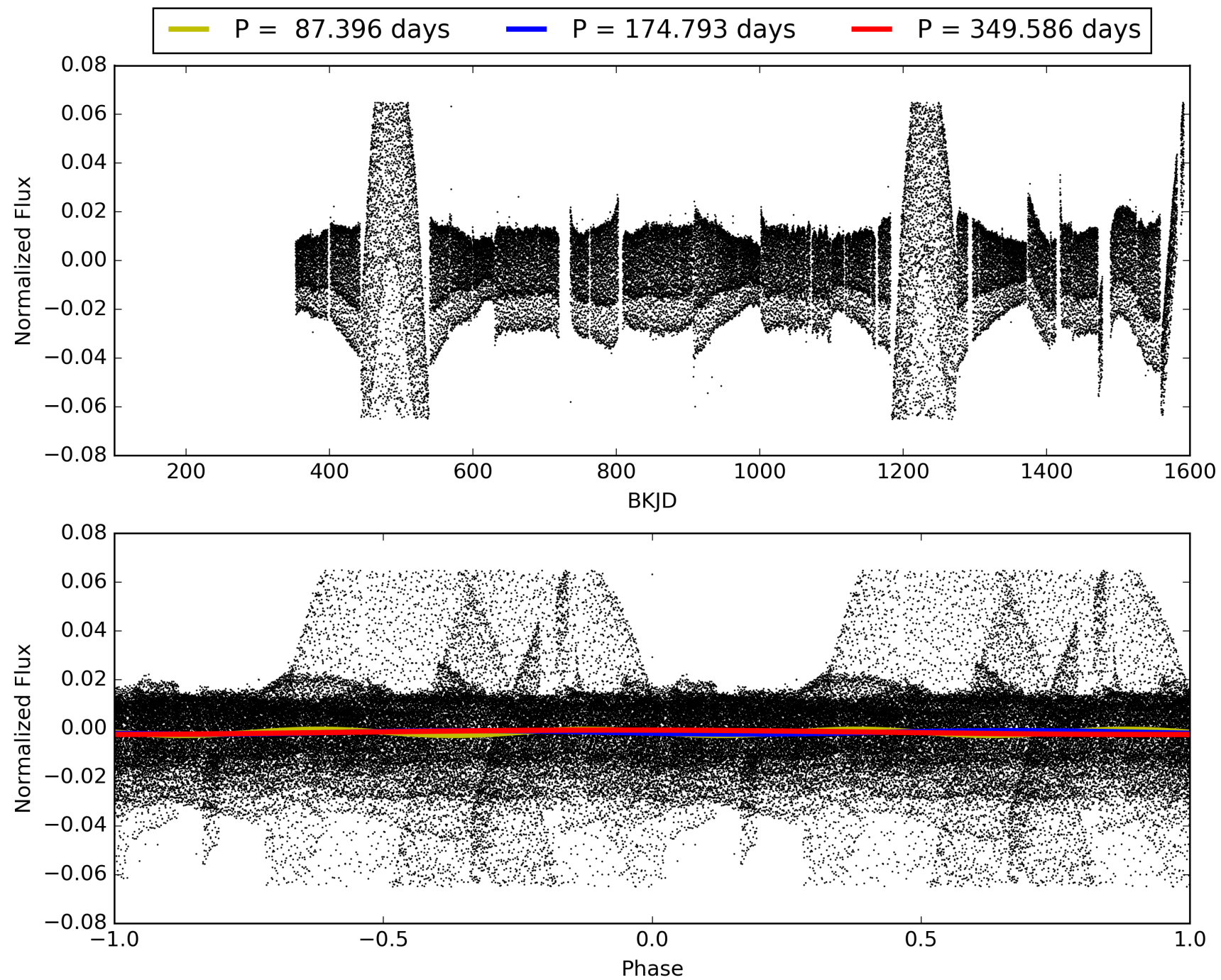
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [779.54σ]
LongPeriod-sig: 100.0% [6.38σ]
ModelChiSquare2-sig: 9.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.1747
Centroid-sig: N/A
Centroid-so: 2.764 arcsec [2.39σ]
OotOffset-rm: 2.018 arcsec [1.27σ]
KicOffset-rm: 4.923 arcsec [37.32σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/5]

TCE 005128966-02, PDC Light Curves

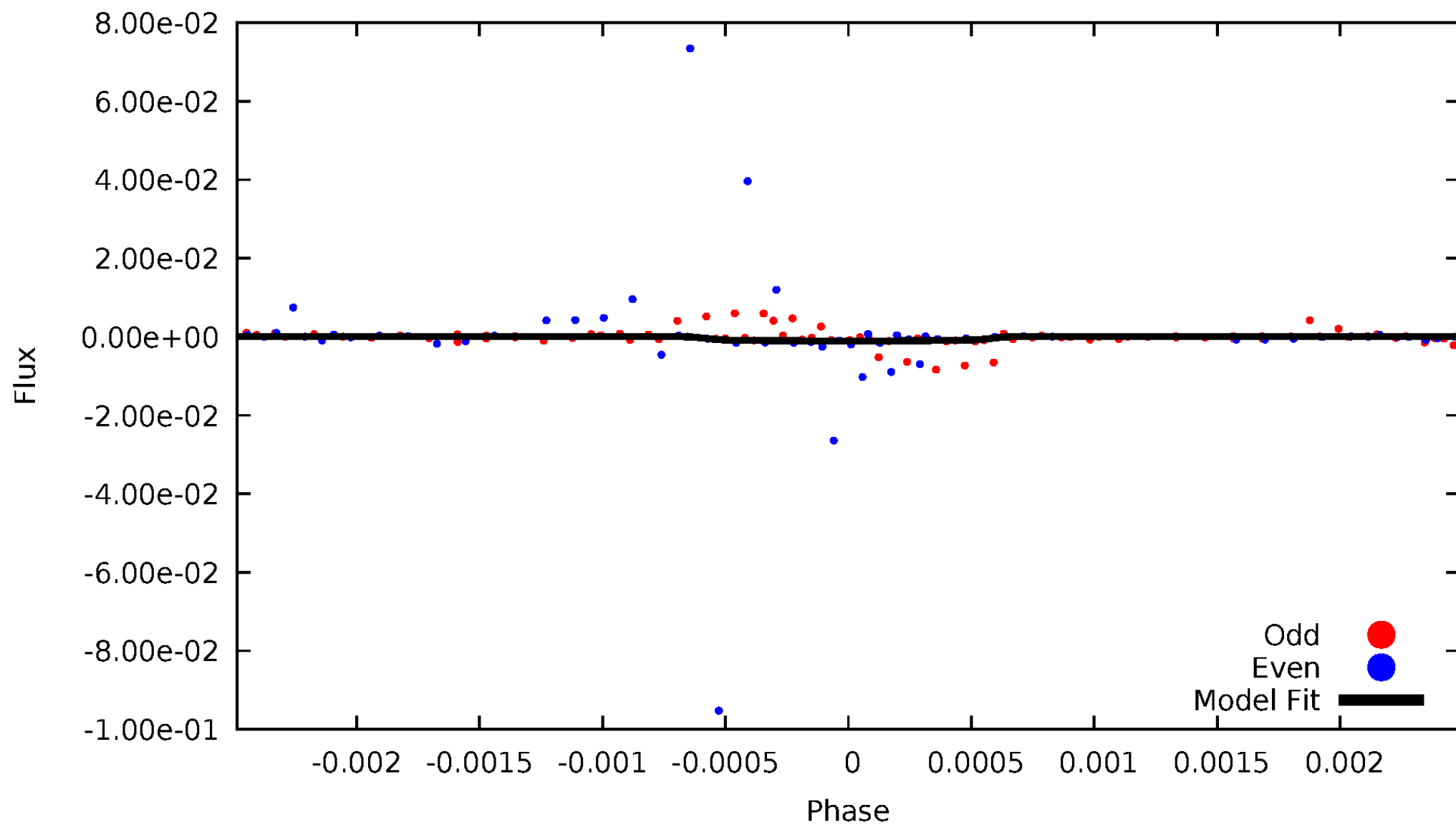


TCE 005128966-02



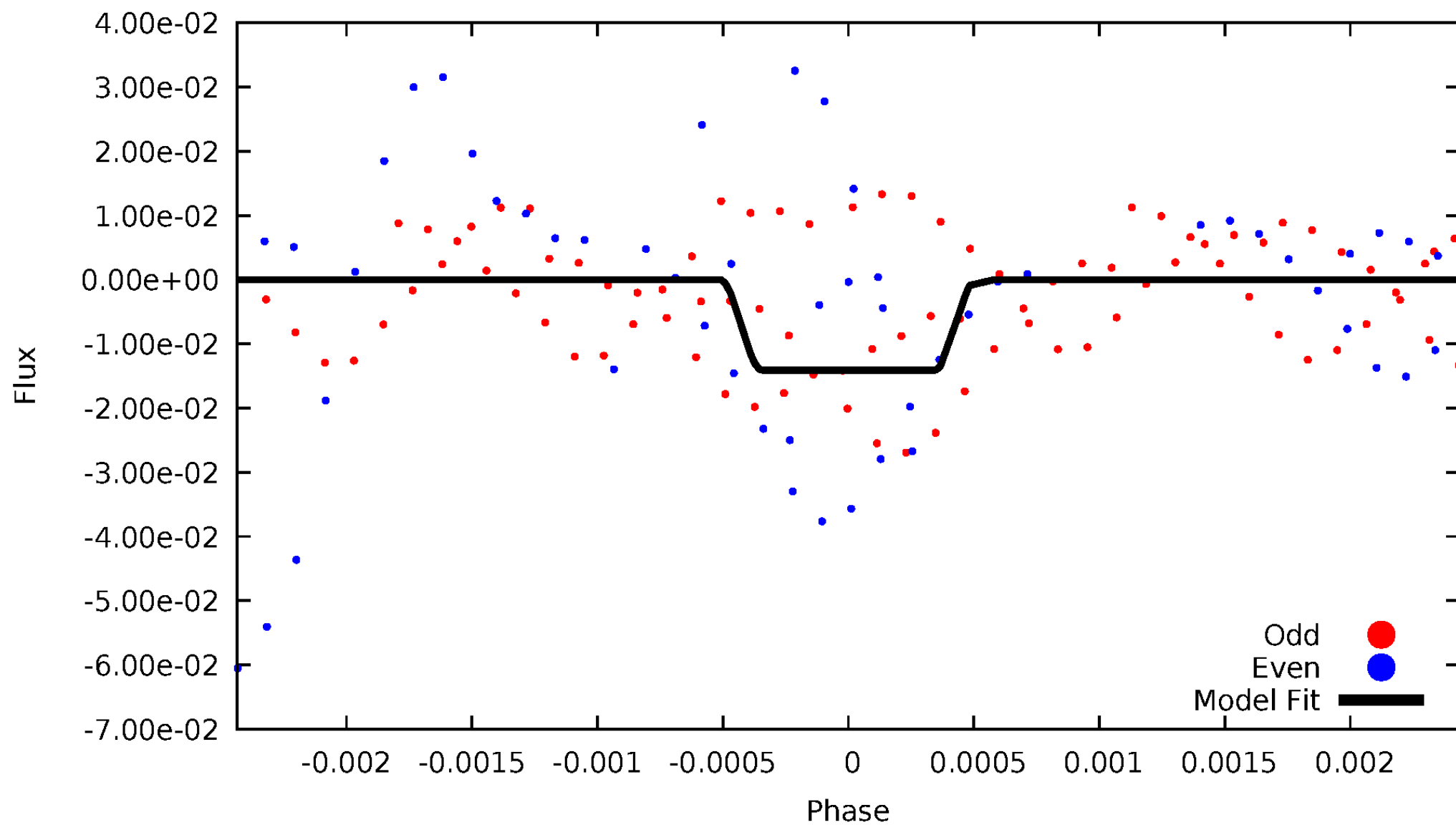
DV Odd/Even

TCE 005128966-02



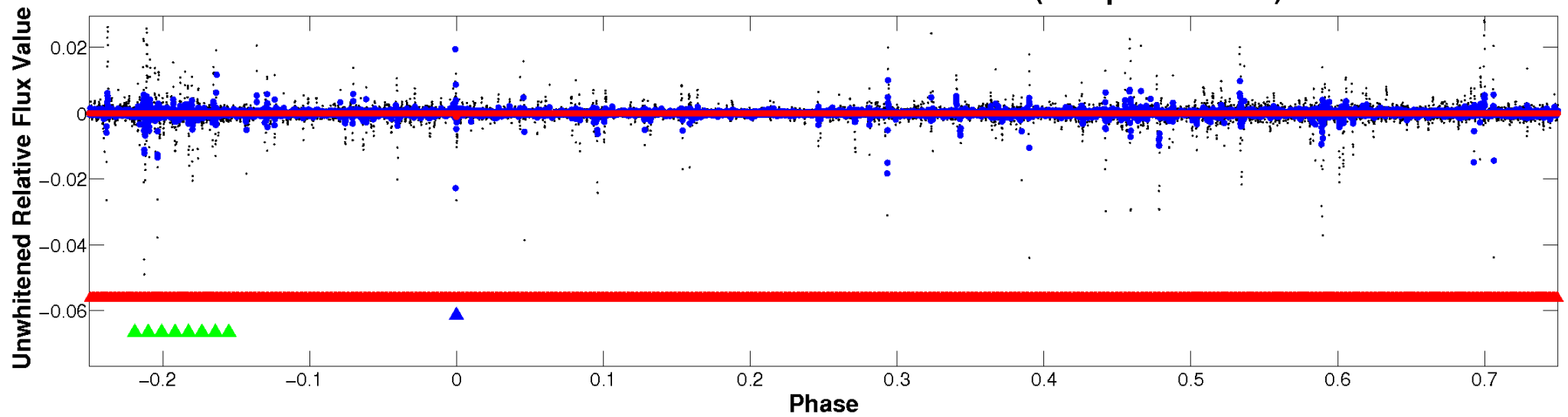
ALT Odd/Even

TCE 005128966-02

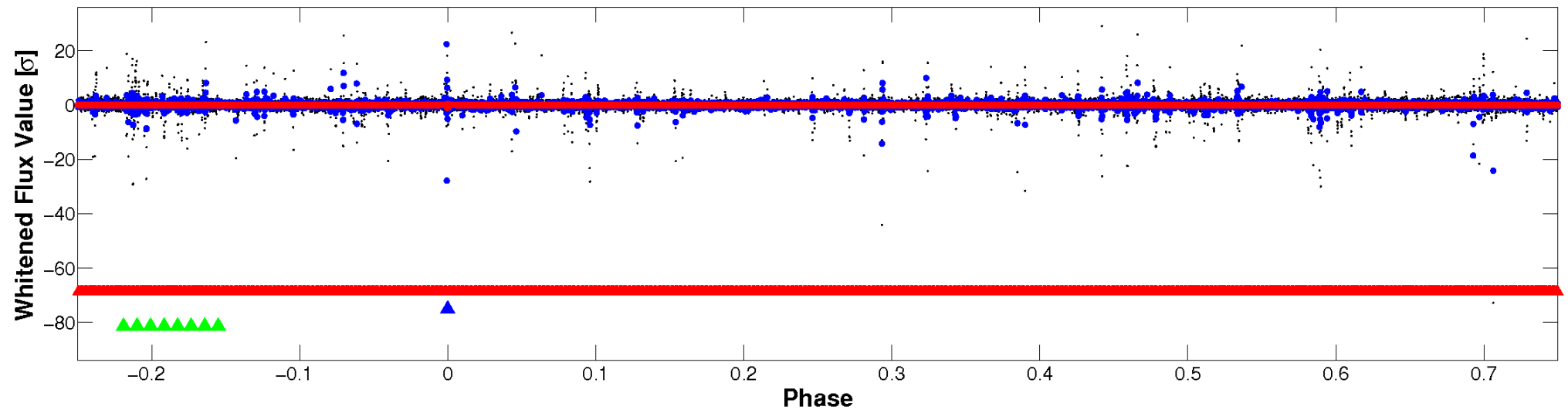


Non-Whitened Vs. Whitened Light Curve

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

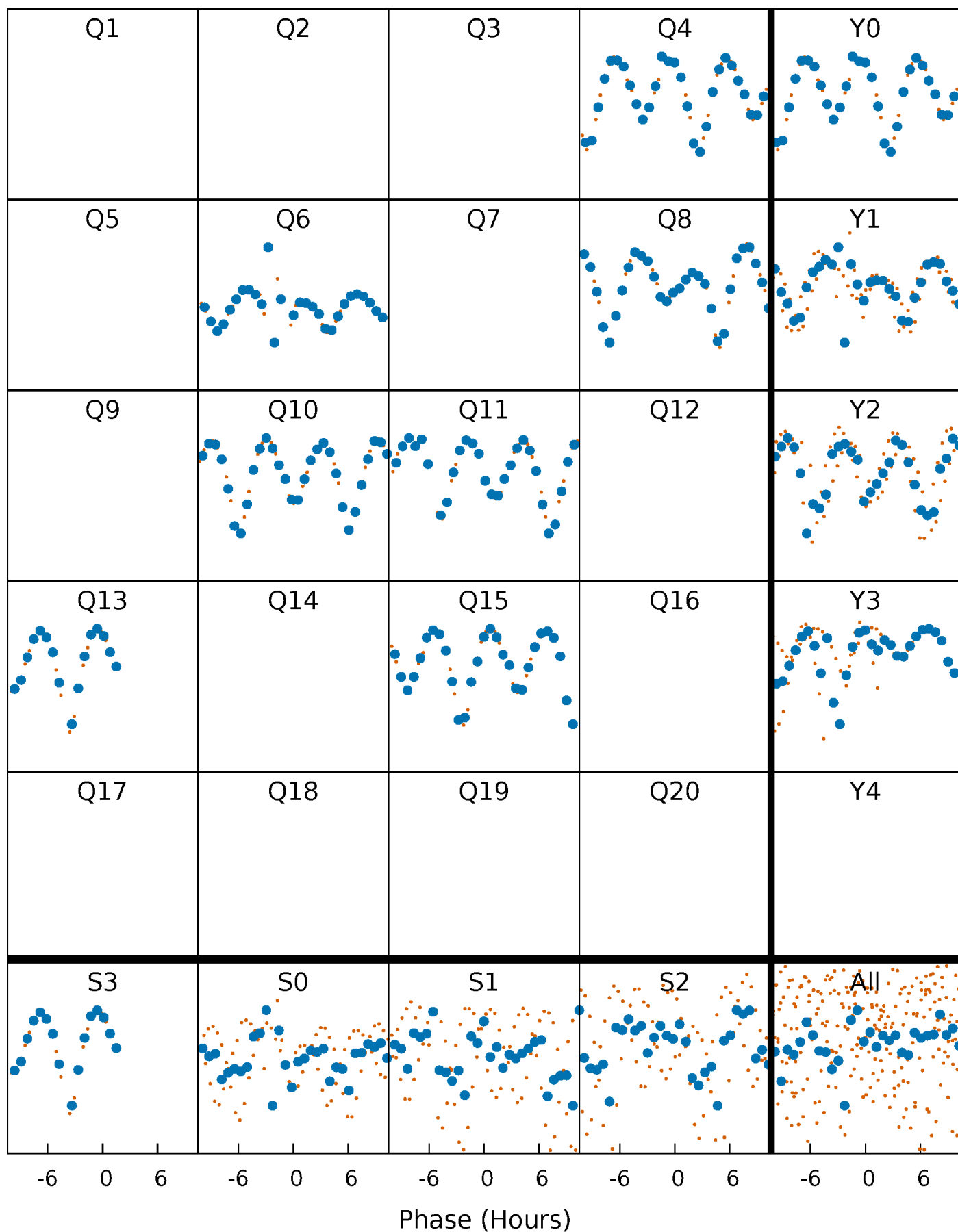


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



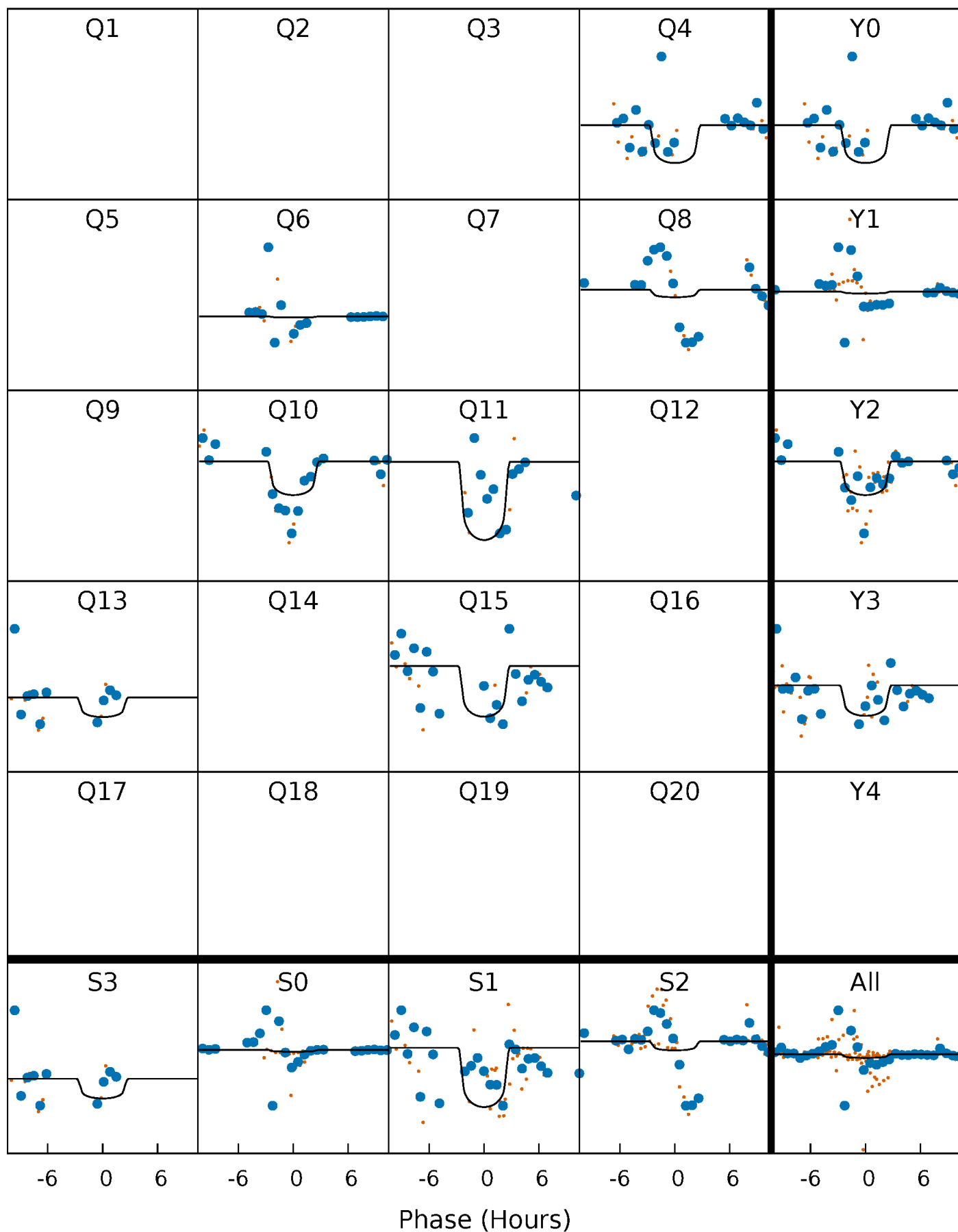
PDC Quarter-Phased Transit Curves

TCE 005128966-02 P=174.792758 Days $T_0=219.913101$ (BKJD)



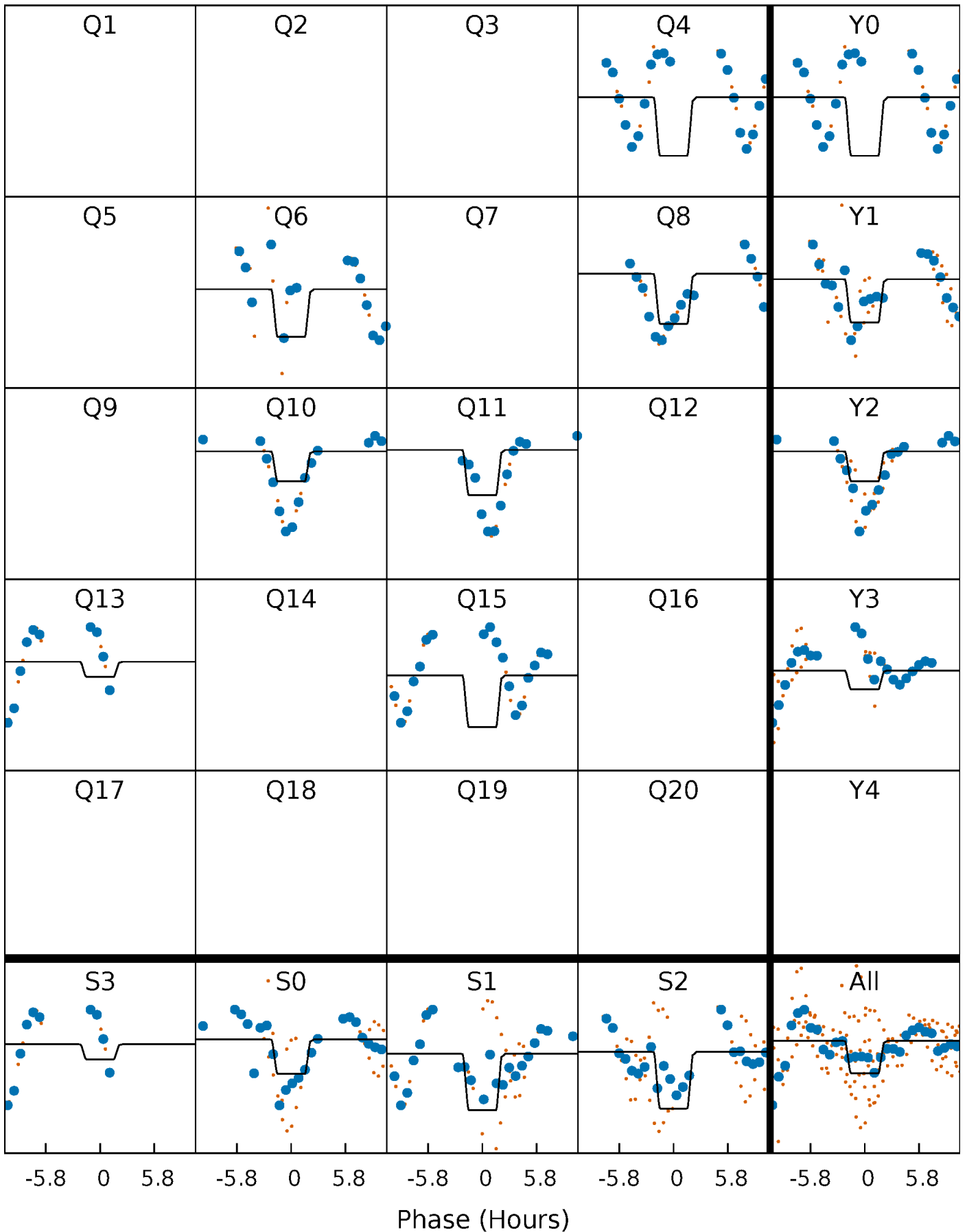
DV Quarter-Phased Transit Curves

TCE 005128966-02 P=174.792758 Days $T_0=219.913101$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

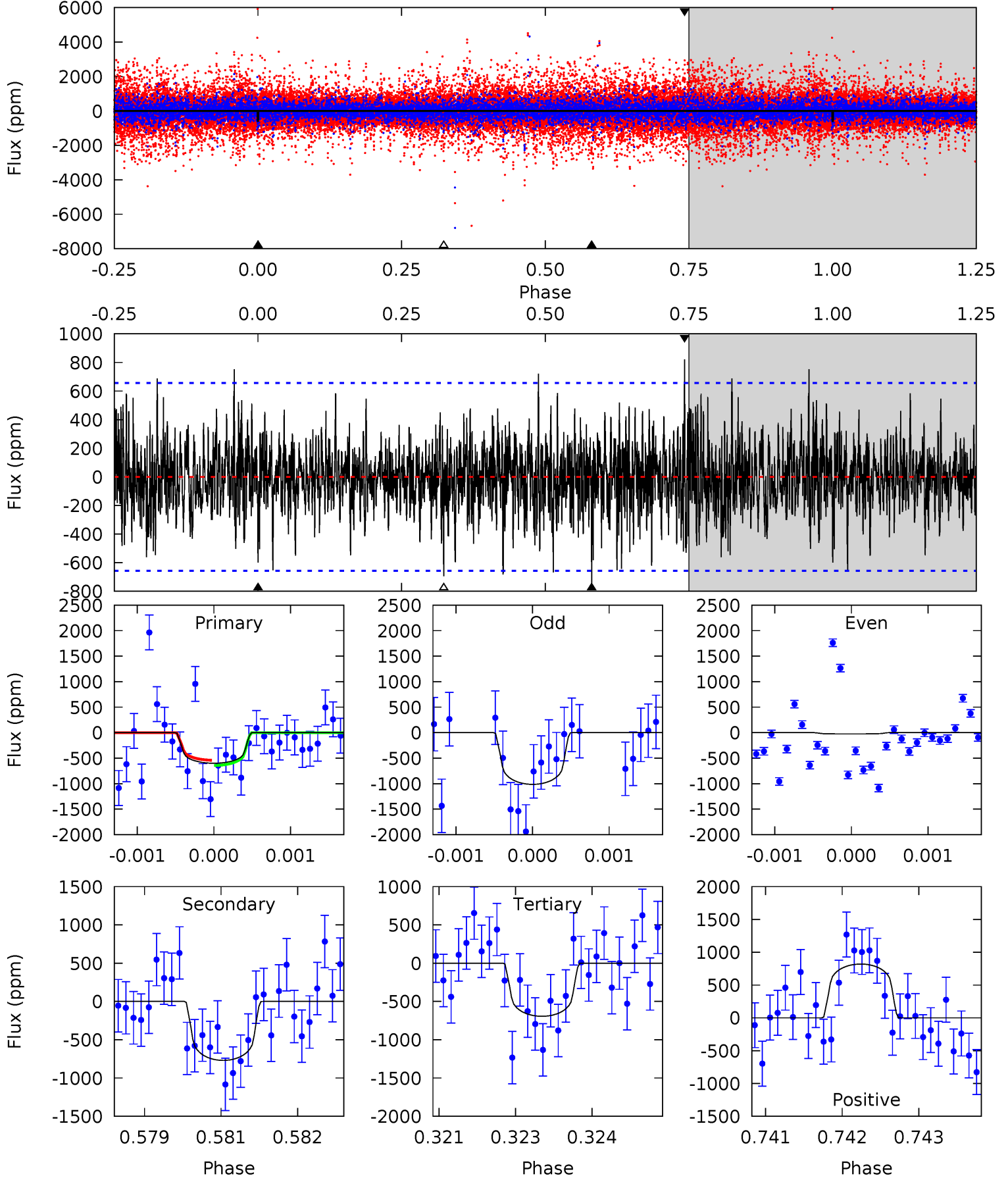
TCE 005128966-02 P=174.787750 Days $T_0=219.953511$ (BKJD)



DV Model-Shift Uniqueness Test

005128966-02, P = 174.792758 Days, E = 219.913101 Days

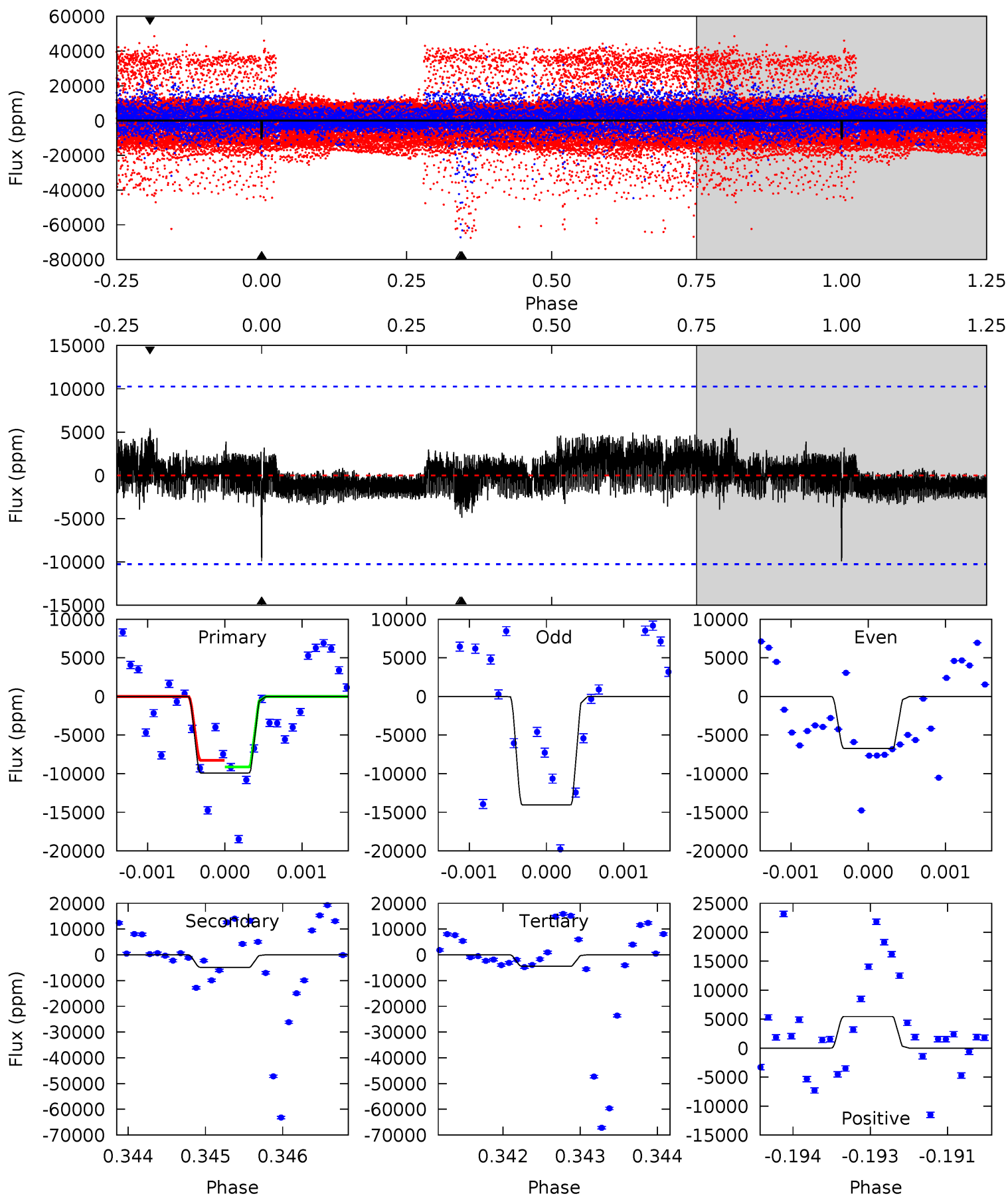
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.93	6.33	5.70	6.74	5.40	3.20	1.61	-0.78	-1.81	0.62	-0.41	3.16	2.46	0.52	0.41



Alt Model-Shift Uniqueness Test

005128966-02, P = 174.787750 Days, E = 219.953511 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.25	2.58	2.37	2.90	5.44	3.27	0.87	2.89	2.35	0.22	-0.31	1.54	0.72	0.36	0.23



Stellar Parameters For KIC 005128966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+187}_{-208}	$4.490^{+0.065}_{-0.208}$	$-0.220^{+0.300}_{-0.300}$	$0.924^{+0.286}_{-0.114}$	$0.962^{+0.131}_{-0.119}$	$1.719^{+0.507}_{-0.935}$
	+3%/-4%	+1%/-5%	+136%/-136%	+31%/-12%	+14%/-12%	+29%/-54%
Source	KIC0	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 005128966-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-770 ± 122	$8.43^{+7.98}_{-6.09}$	463^{+36}_{-24}	3871^{+2747}_{-740}	2119^{+25168}_{-1588}
Alt.	-4877 ± 1888	$14.19^{+9.61}_{-8.33}$	462^{+36}_{-25}	4436^{+2120}_{-847}	4655^{+22402}_{-3325}

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

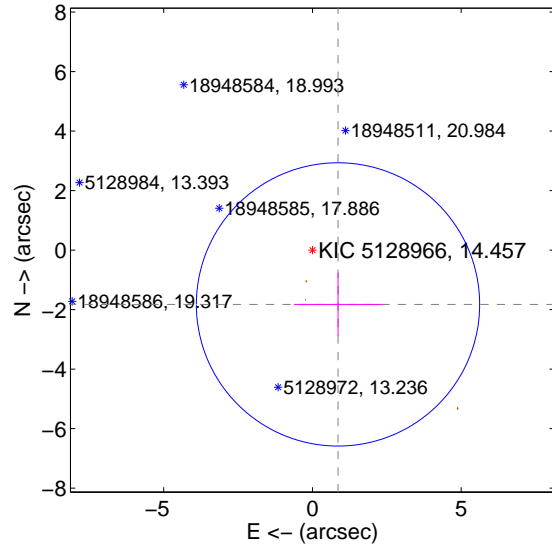
Supplemental centroid analysis for 005128966-02. Kepler magnitude: 14.46. Transit SNR 5.65

There are 0 quarters with good PRF difference image offsets

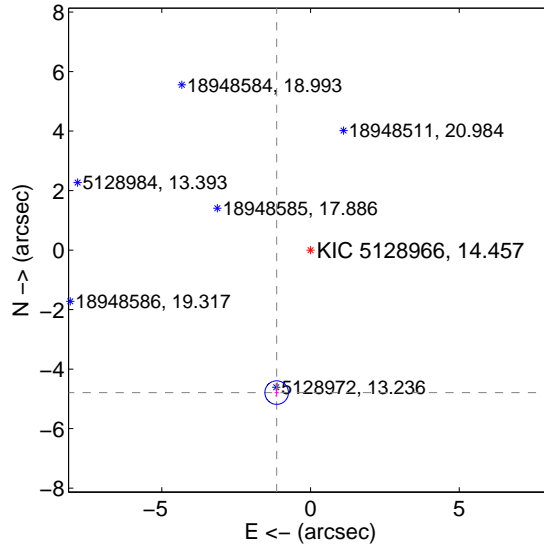
The OOT PRF centroid is offset from the target star catalog position by about 3.72 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.018 ± 1.587	1.27	-0.859 ± 1.477	-1.826 ± 1.061
PRF-fit source offset from KIC position	4.923 ± 0.132	37.32	1.138 ± 0.069	-4.790 ± 0.135
photometric centroid source offset	2.76 ± 1.16	2.39	2.27 ± 0.89	-1.58 ± 1.57

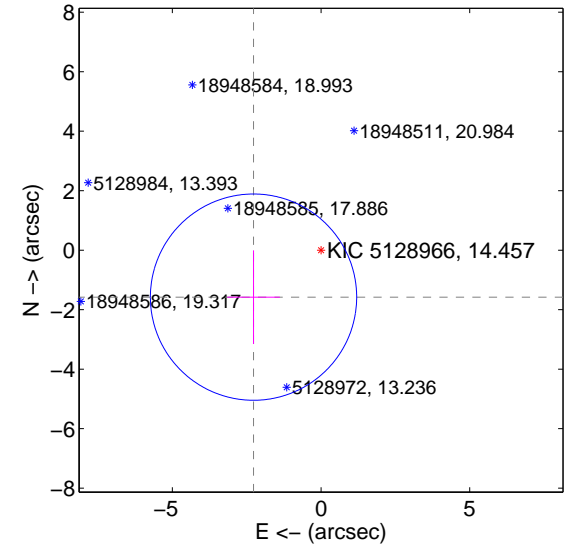
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

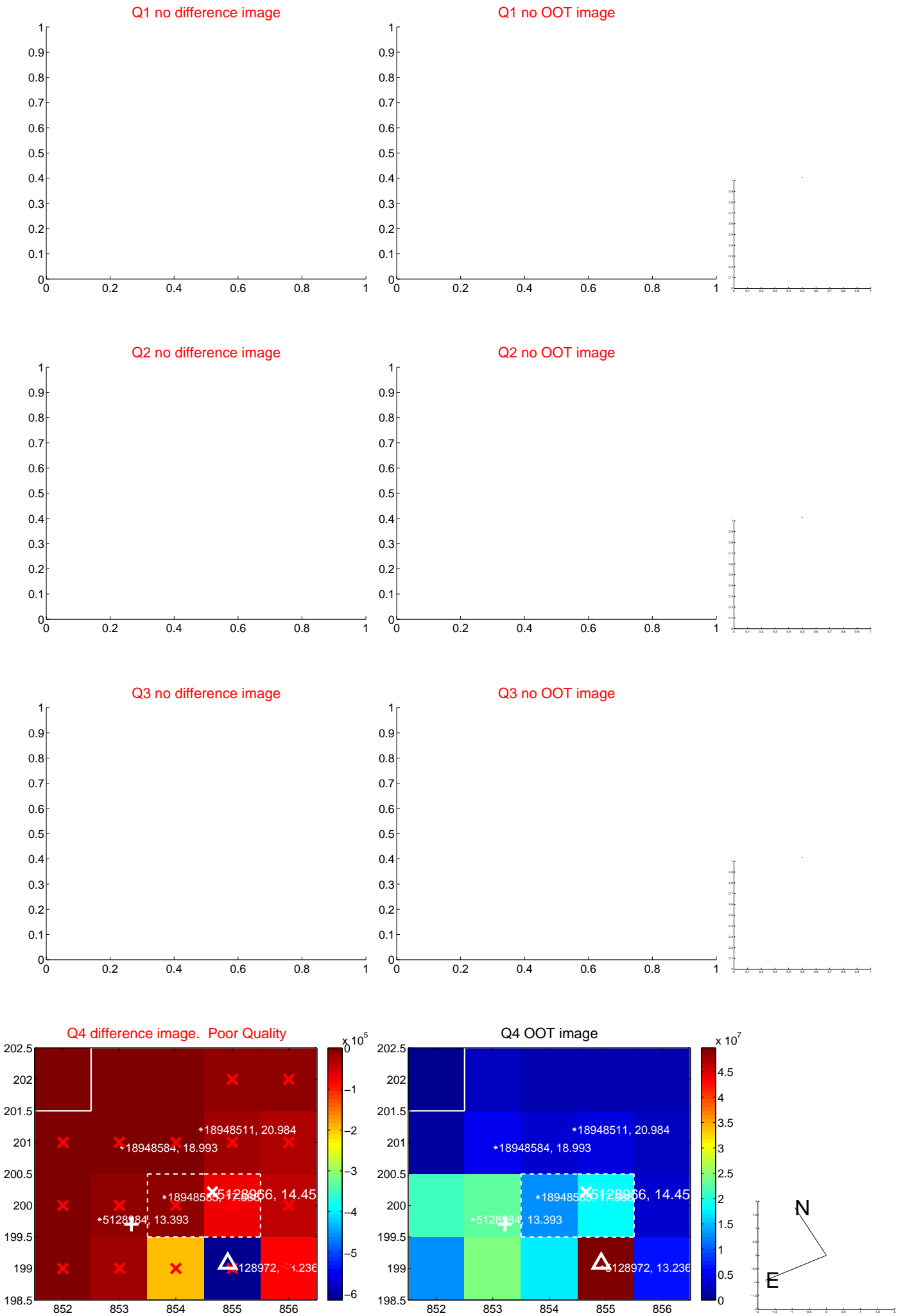


offset from photometric centroids

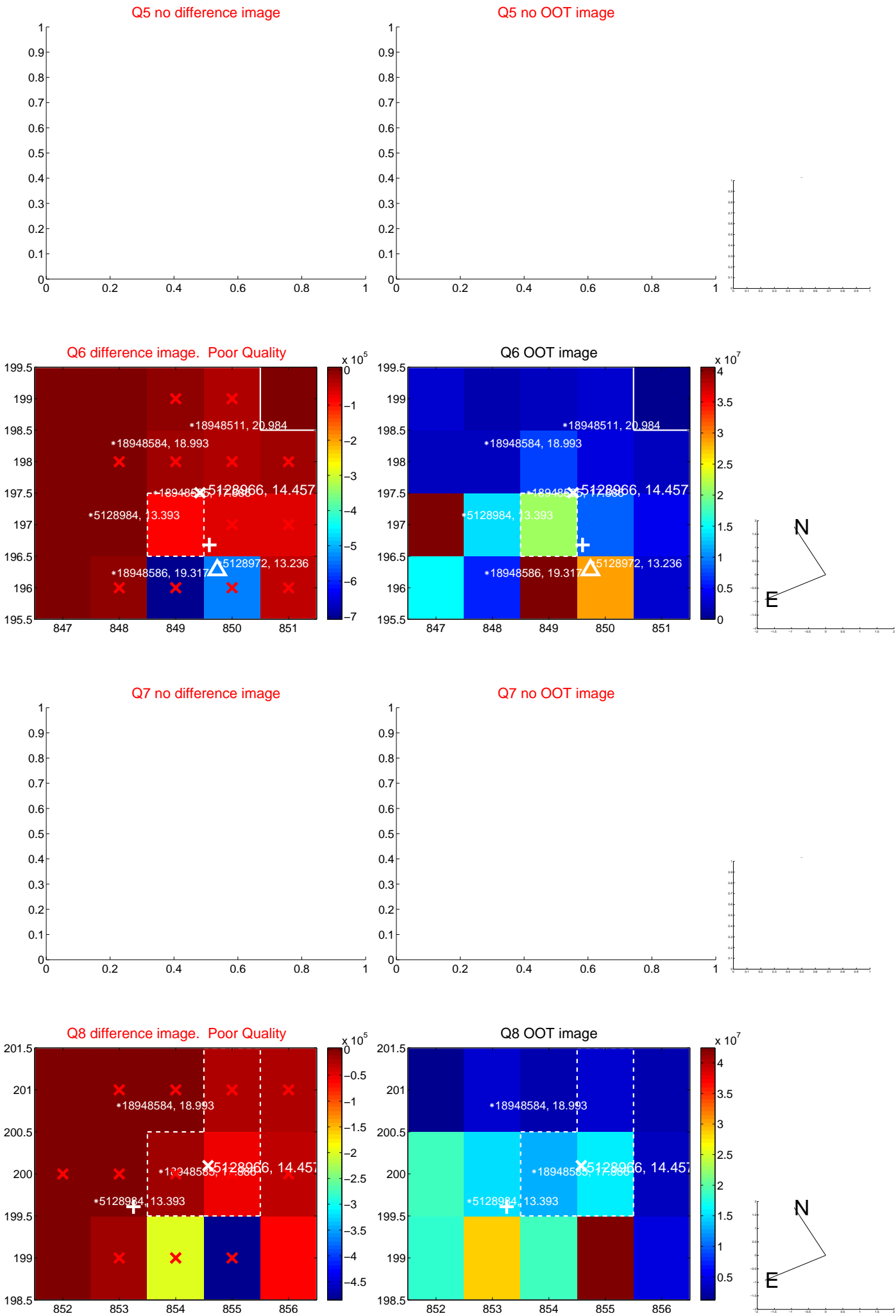


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

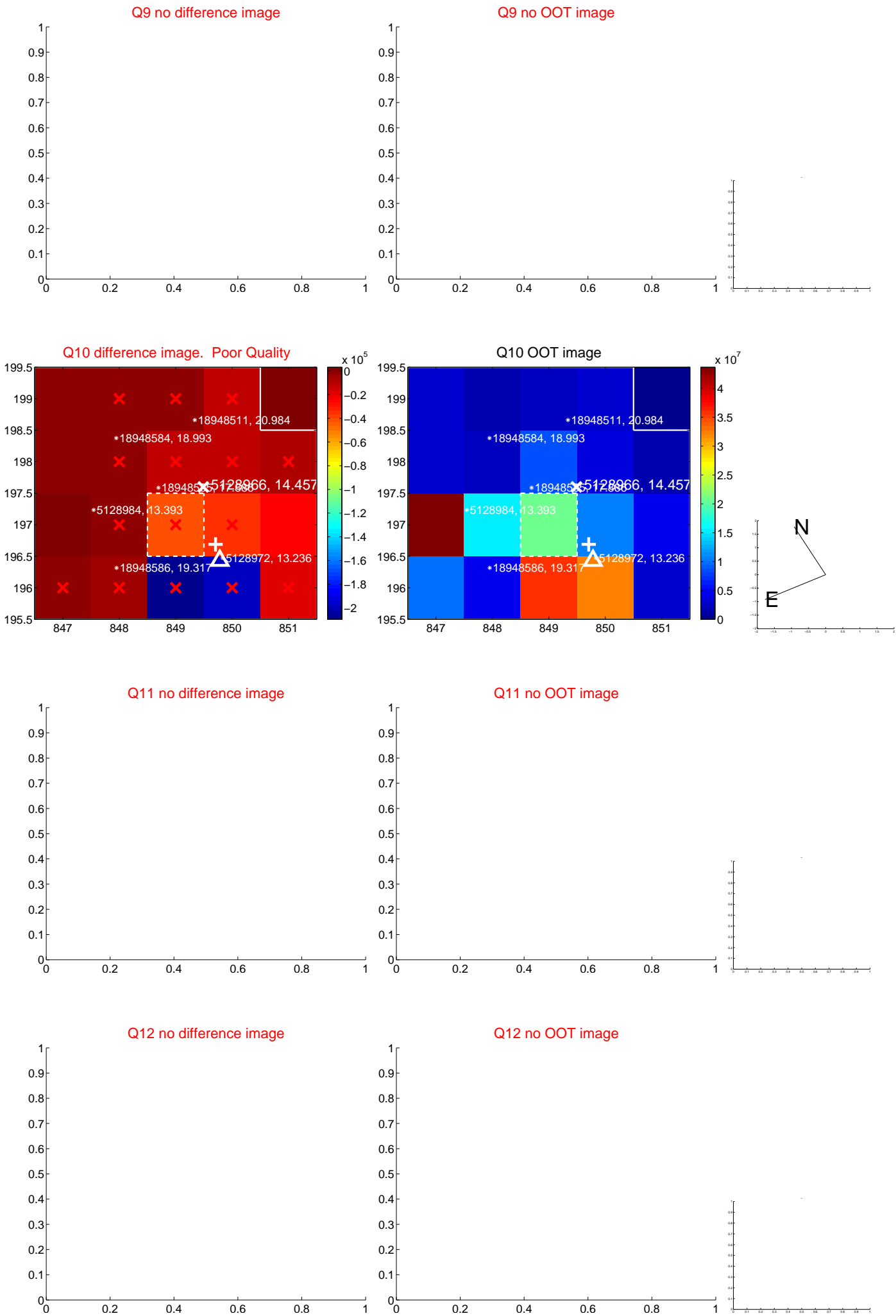
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



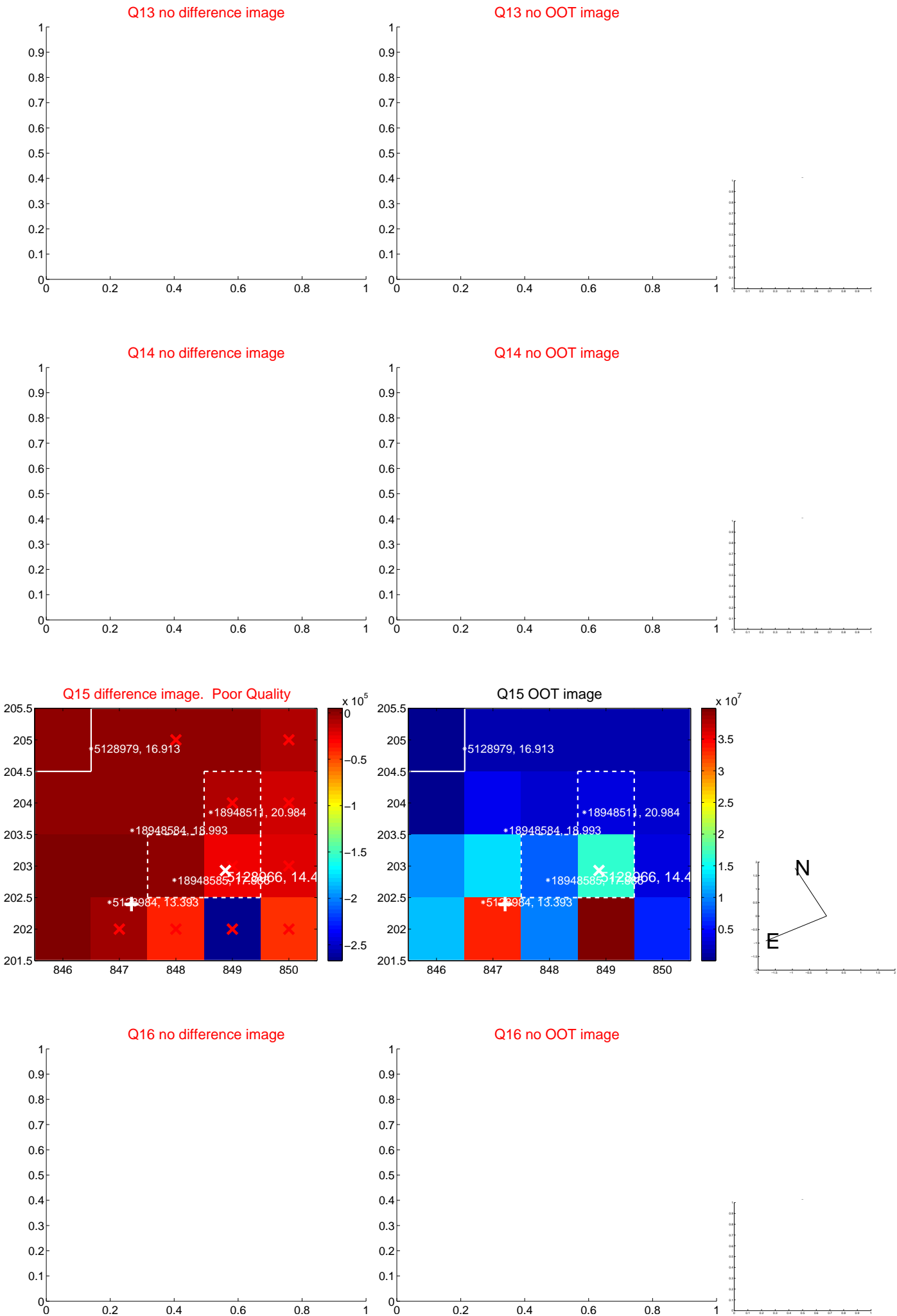
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

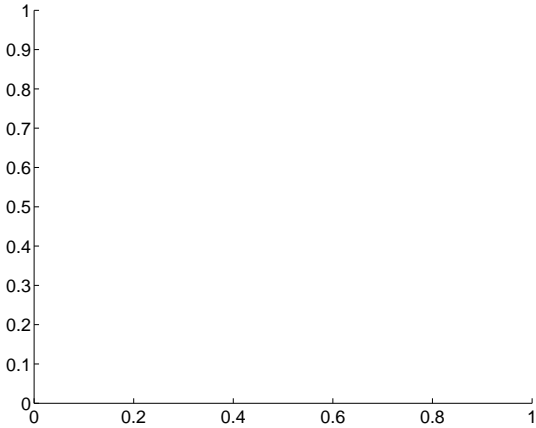


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

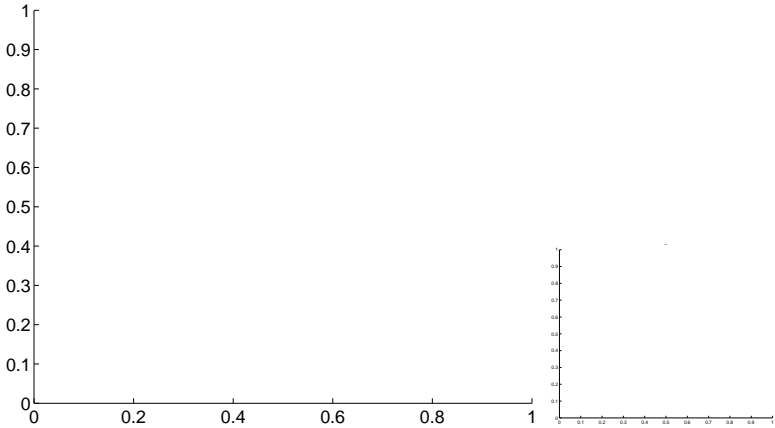


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

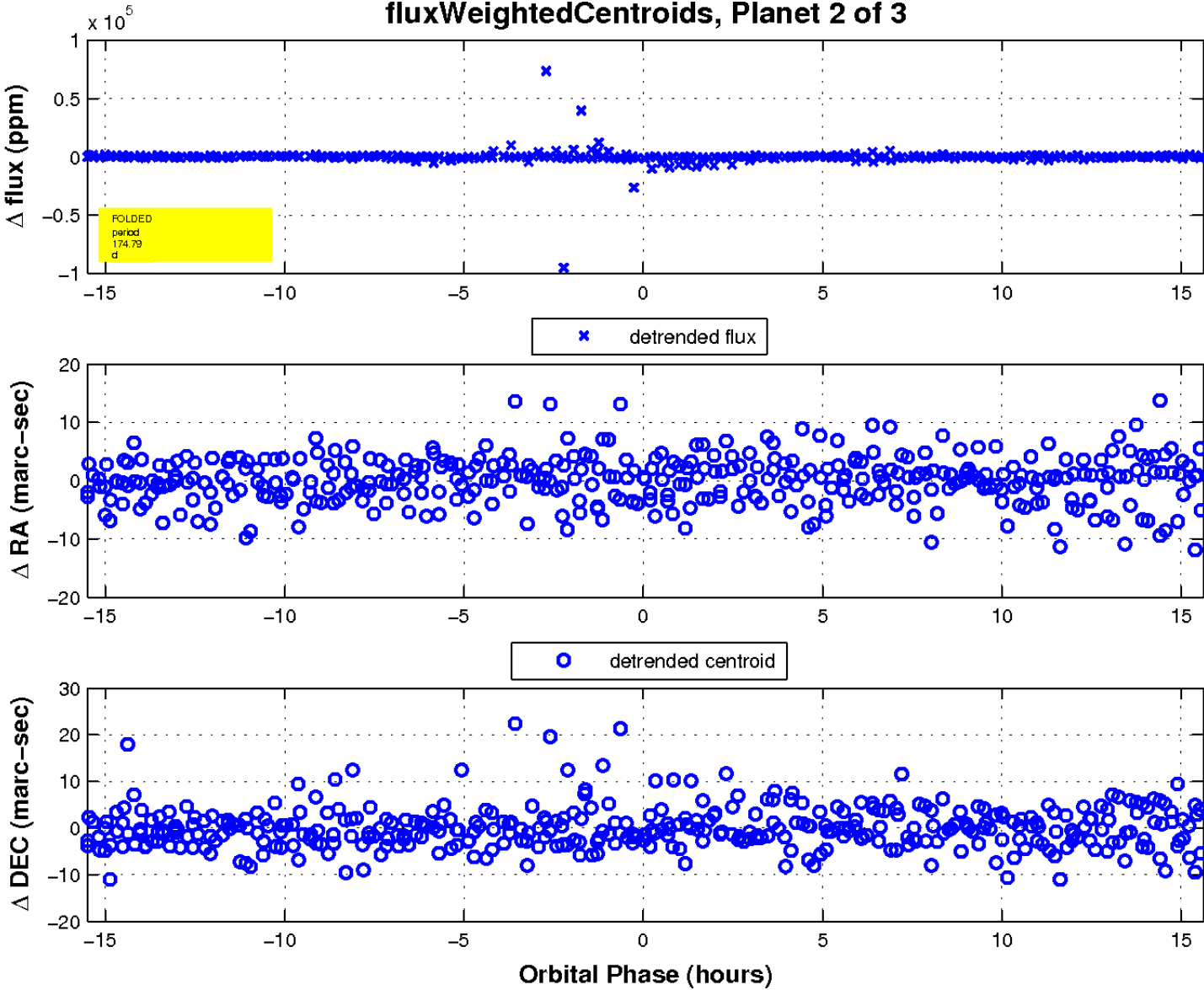
Q17 no difference image



Q17 no OOT image

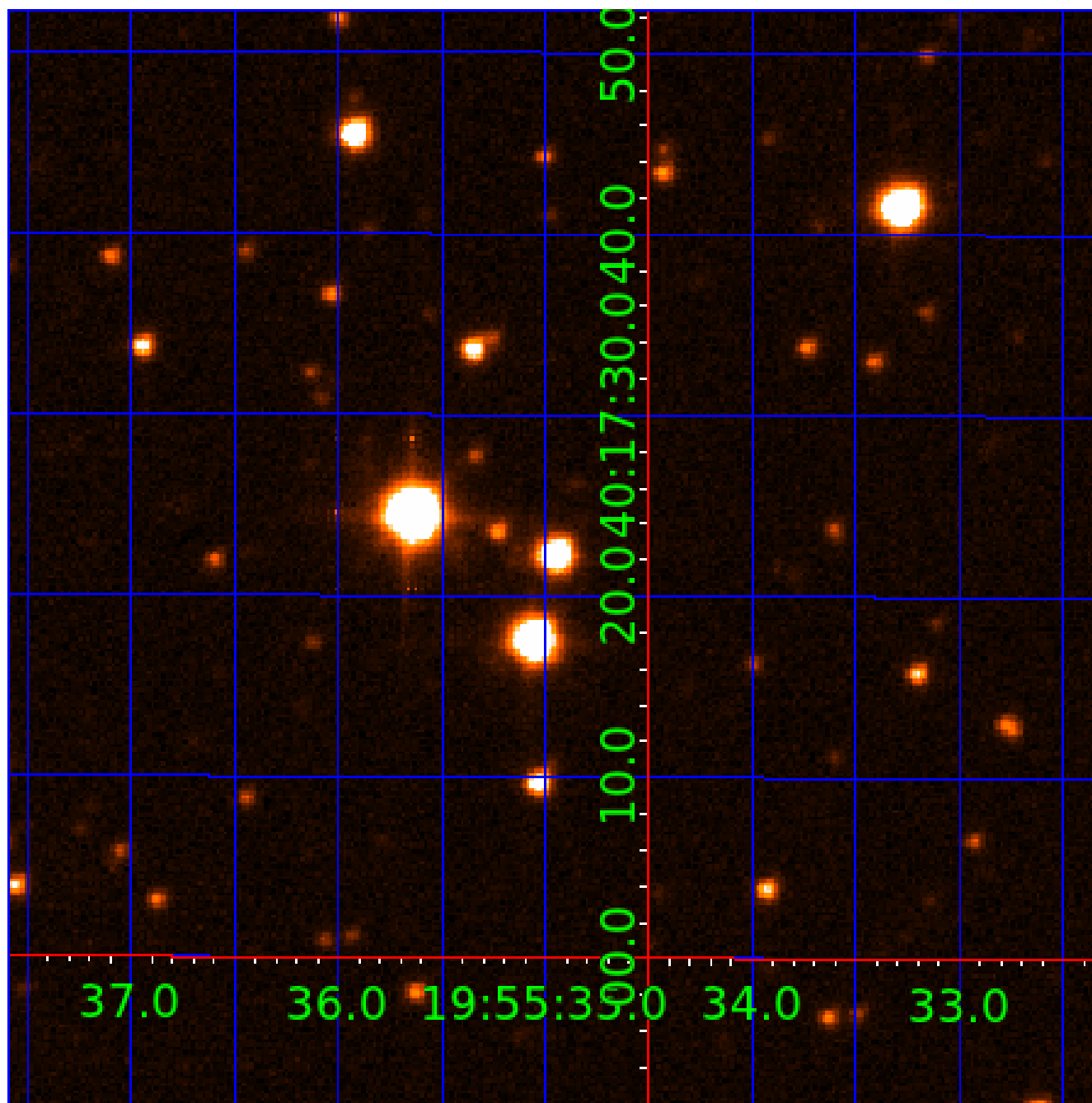


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 005128966

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})
005128966-01	OBS	8098.01	0.505320	131.553957	762.1	1.272	63.6	64.7	0.92	5941	2.69	6339.07
005128966-02	OBS	No	174.792758	219.913101	1053.0	5.213	19.7	5.6	0.92	5941	3.15	2.61
005128966-03	OBS	No	176.390642	181.632039	3459.9	3.000	20.6	-1.0	0.92	5941	5.42	2.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005128966-01	OBS	FP	0.00	0	1	1	1	SWEET_EB—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—EPHEM_MATCH
005128966-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
005128966-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

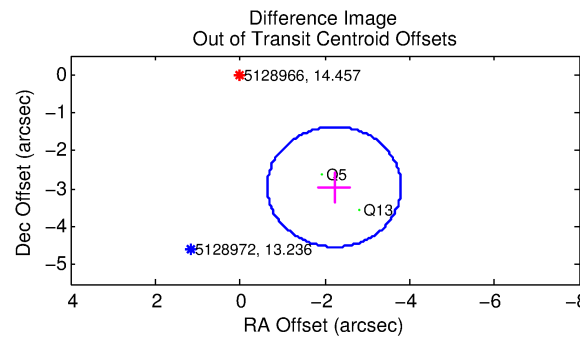
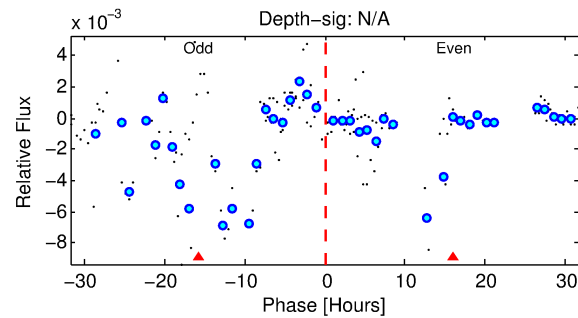
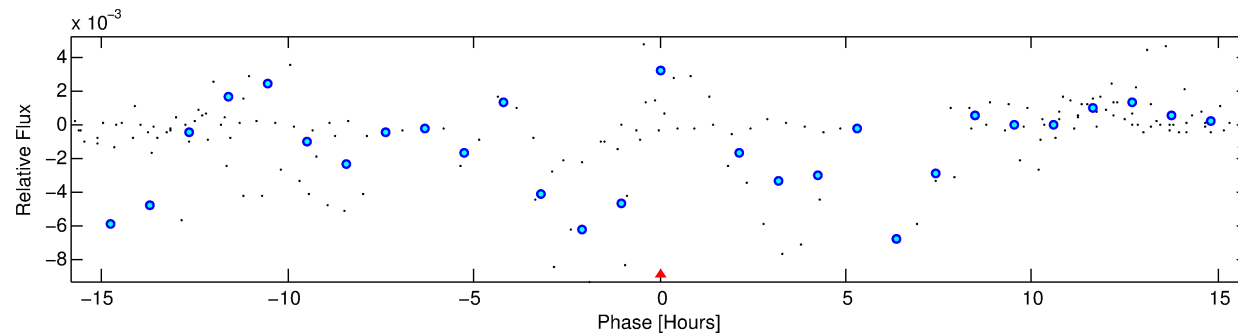
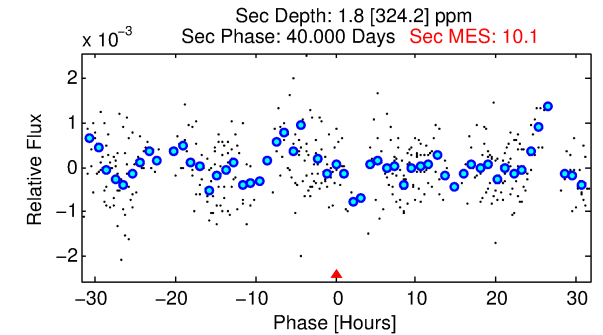
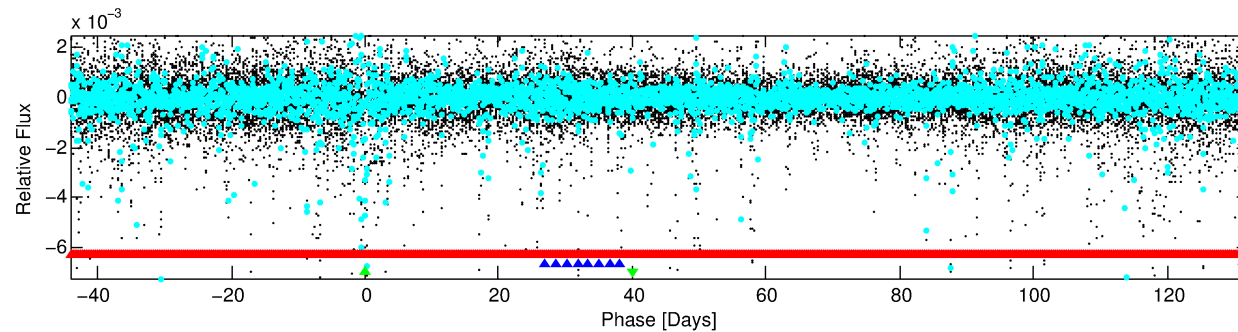
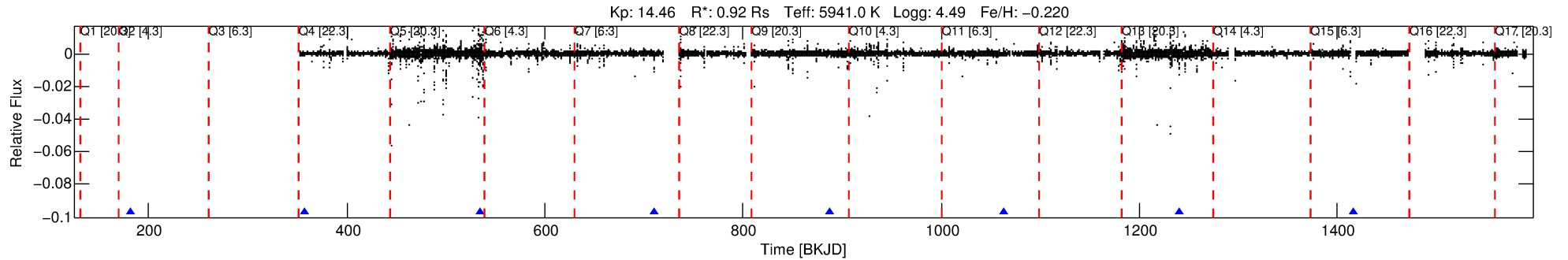
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005128966-03

No Significant Match Found

DV One-Page Summary

KIC: 5128966 Candidate: 3 of 3 Period: 176.391 d



TPS TCE Results:

Period = 176.39064 d
Epoch = 181.6320 BKJD

DV fit results are unavailable

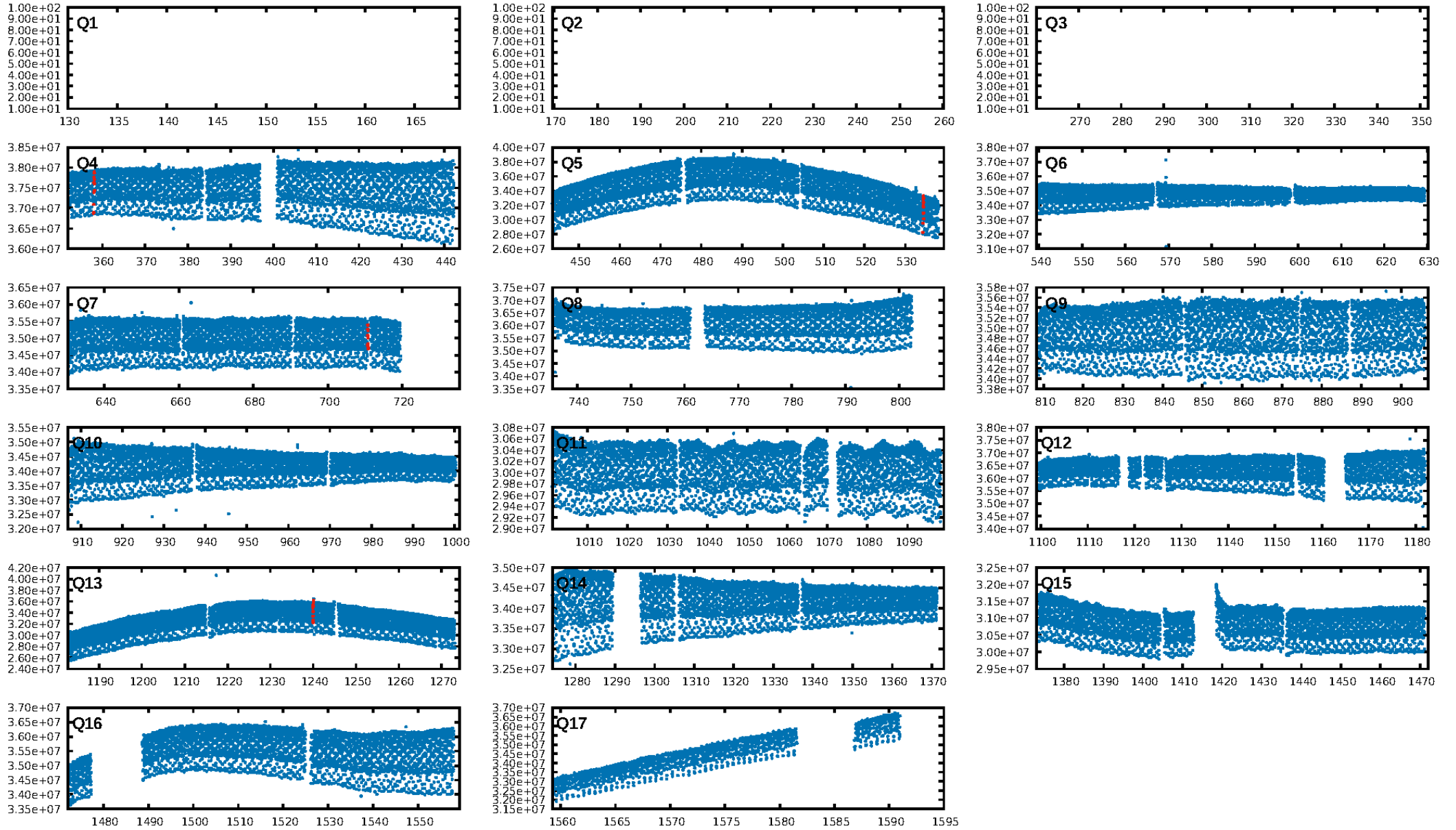
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.38 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.035
Centroid-sig: N/A
Centroid-so: 3.235 arcsec [6.18 σ]
OotOffset-rm: 3.694 arcsec [7.02 σ]
KicOffset-rm: 4.894 arcsec [72.86 σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/3]

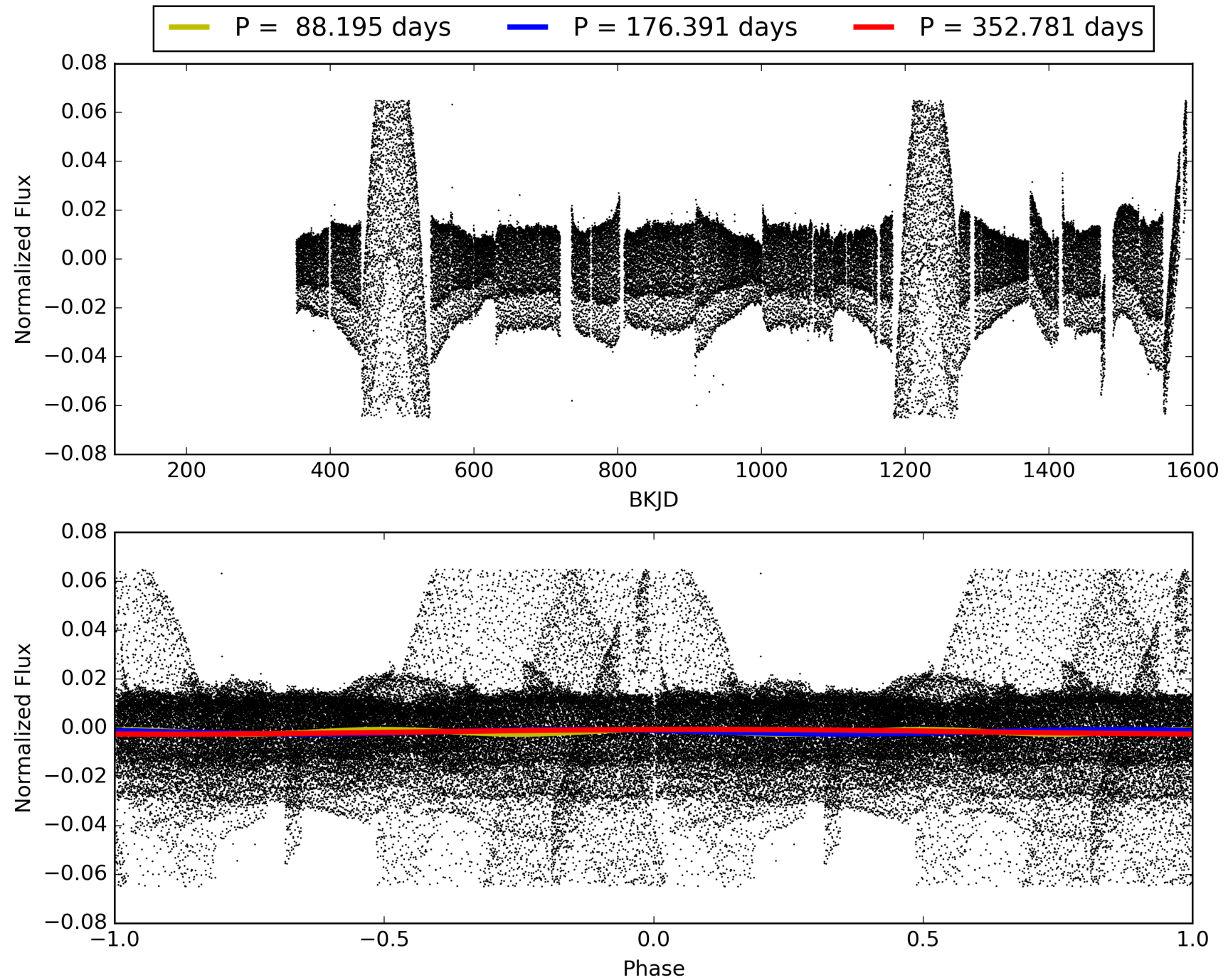
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:12:05 Z

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

TCE 005128966-03, PDC Light Curves

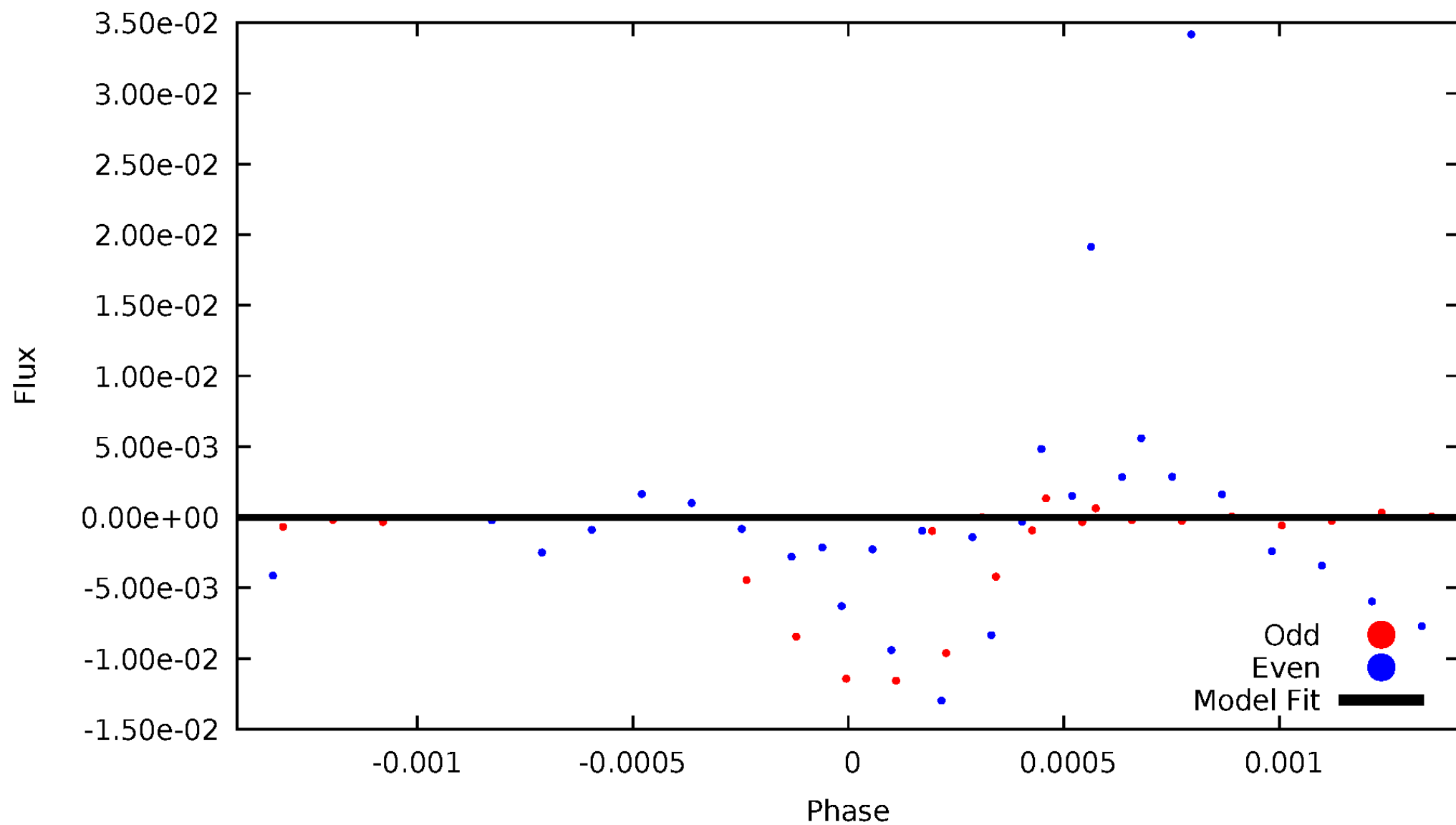


TCE 005128966-03



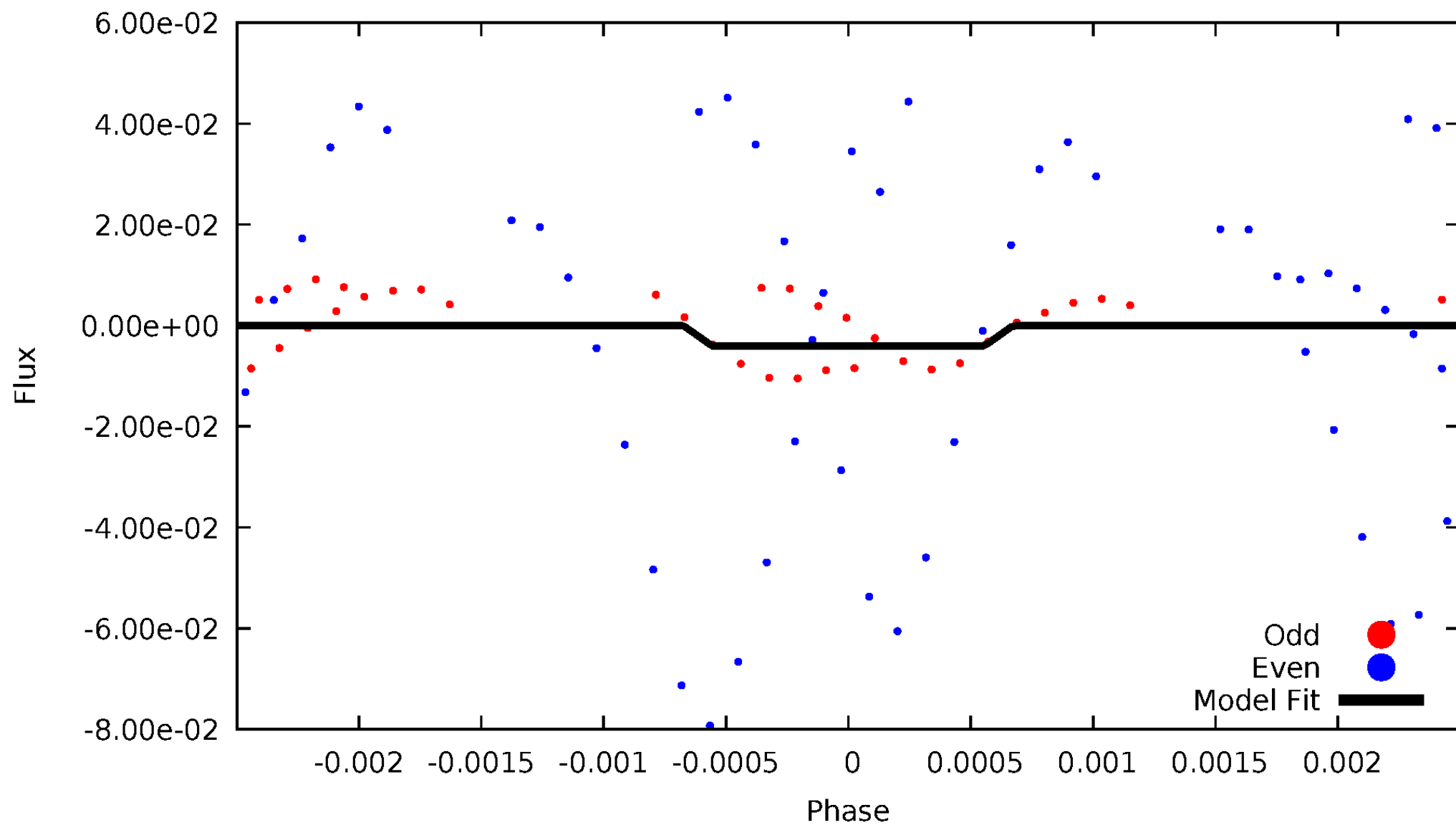
DV Odd/Even

TCE 005128966-03



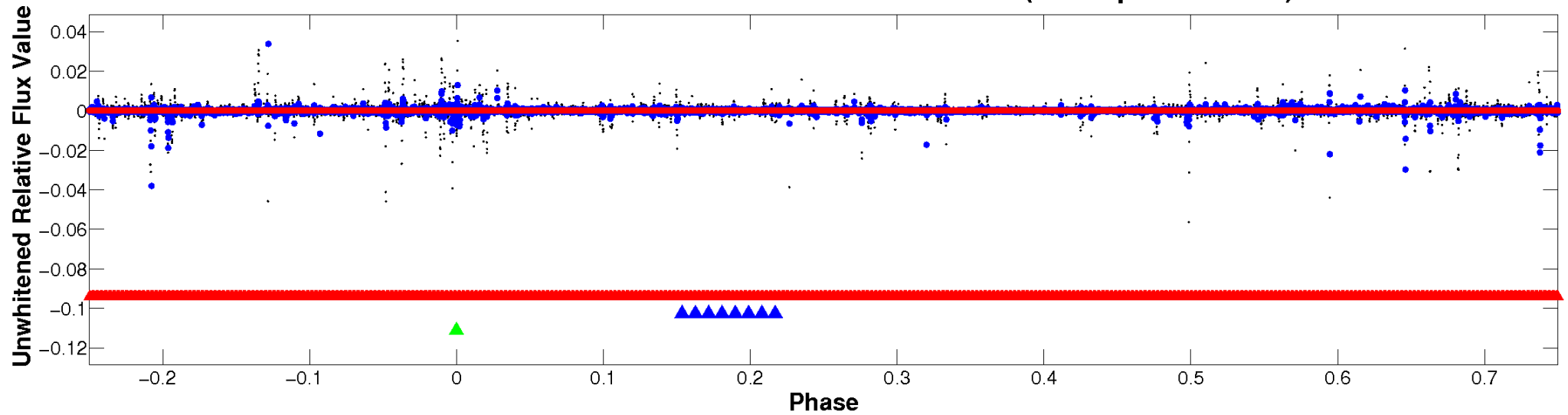
ALT Odd/Even

TCE 005128966-03

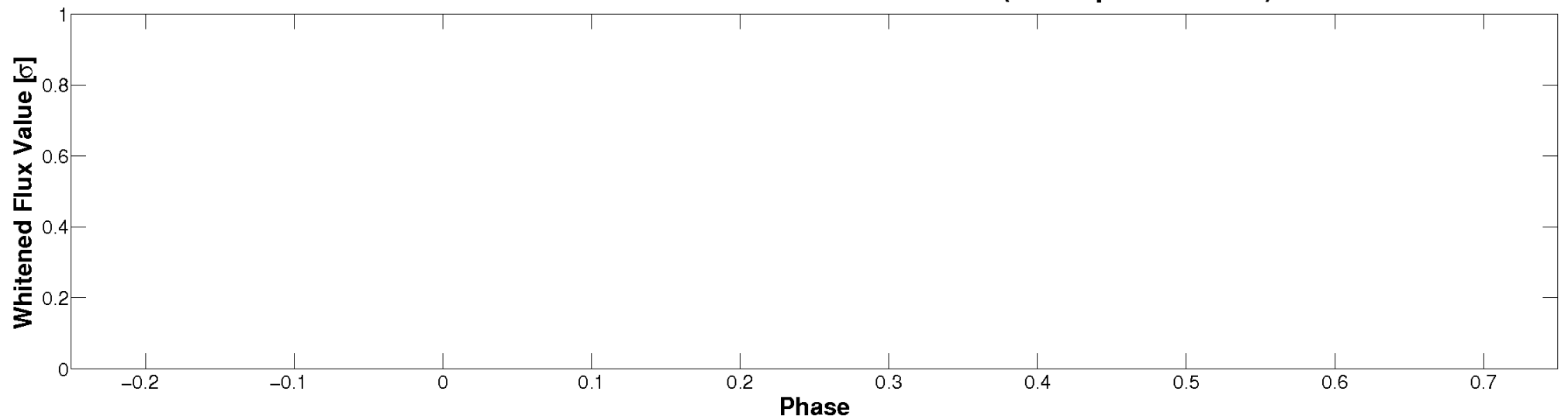


Non-Whitened Vs. Whitened Light Curve

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

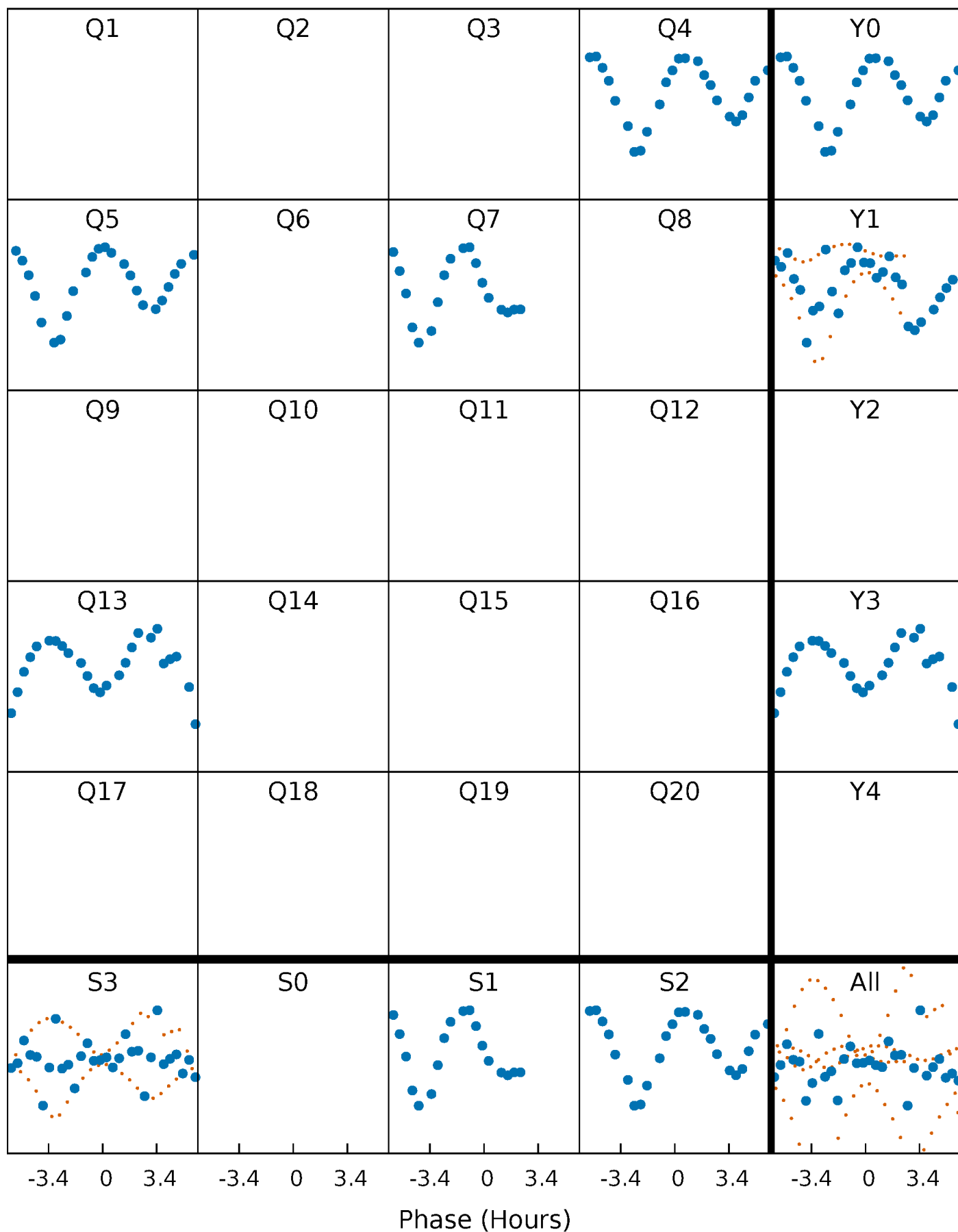


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



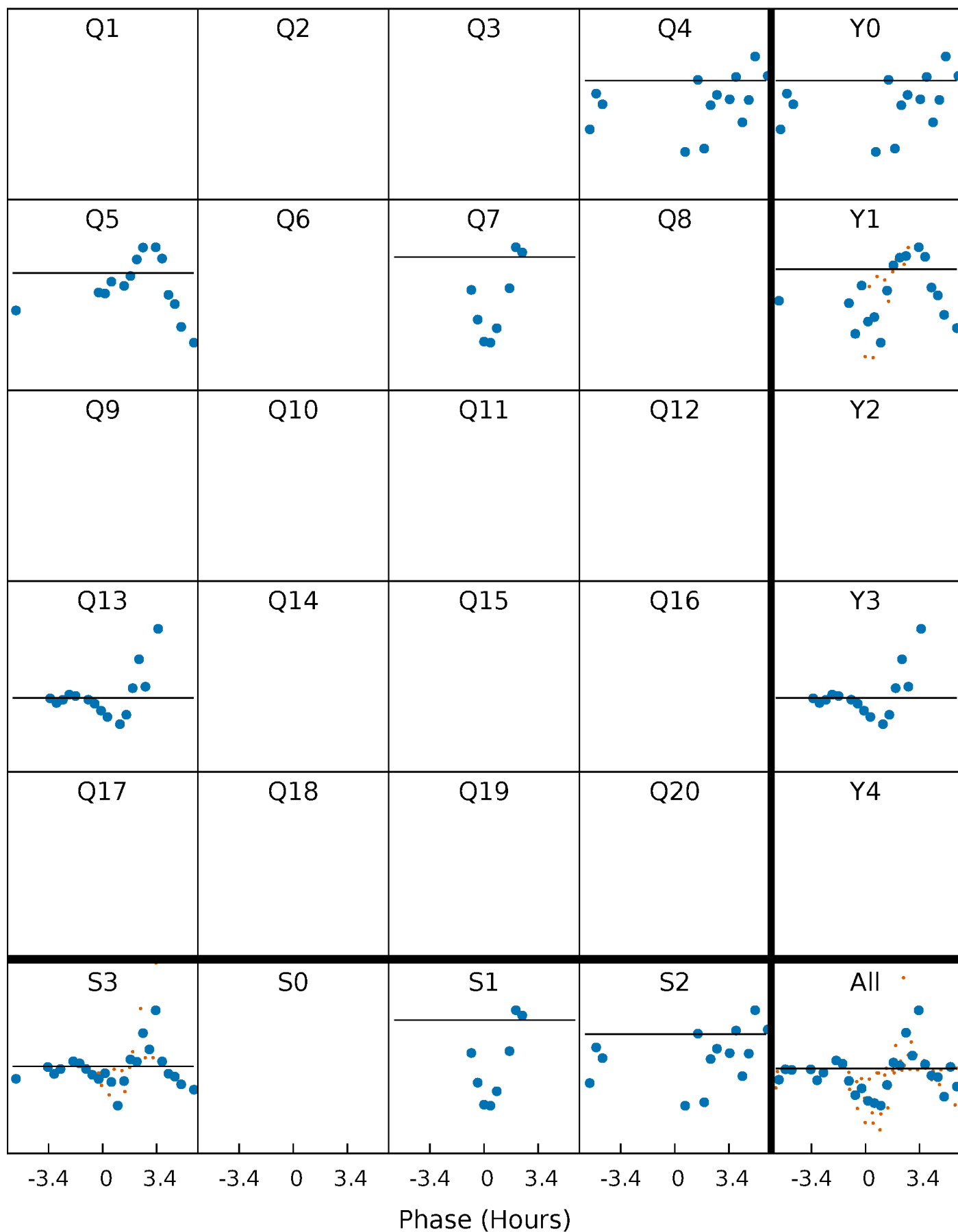
PDC Quarter-Phased Transit Curves

TCE 005128966-03 $P=176.390642$ Days $T_0=181.632039$ (BKJD)



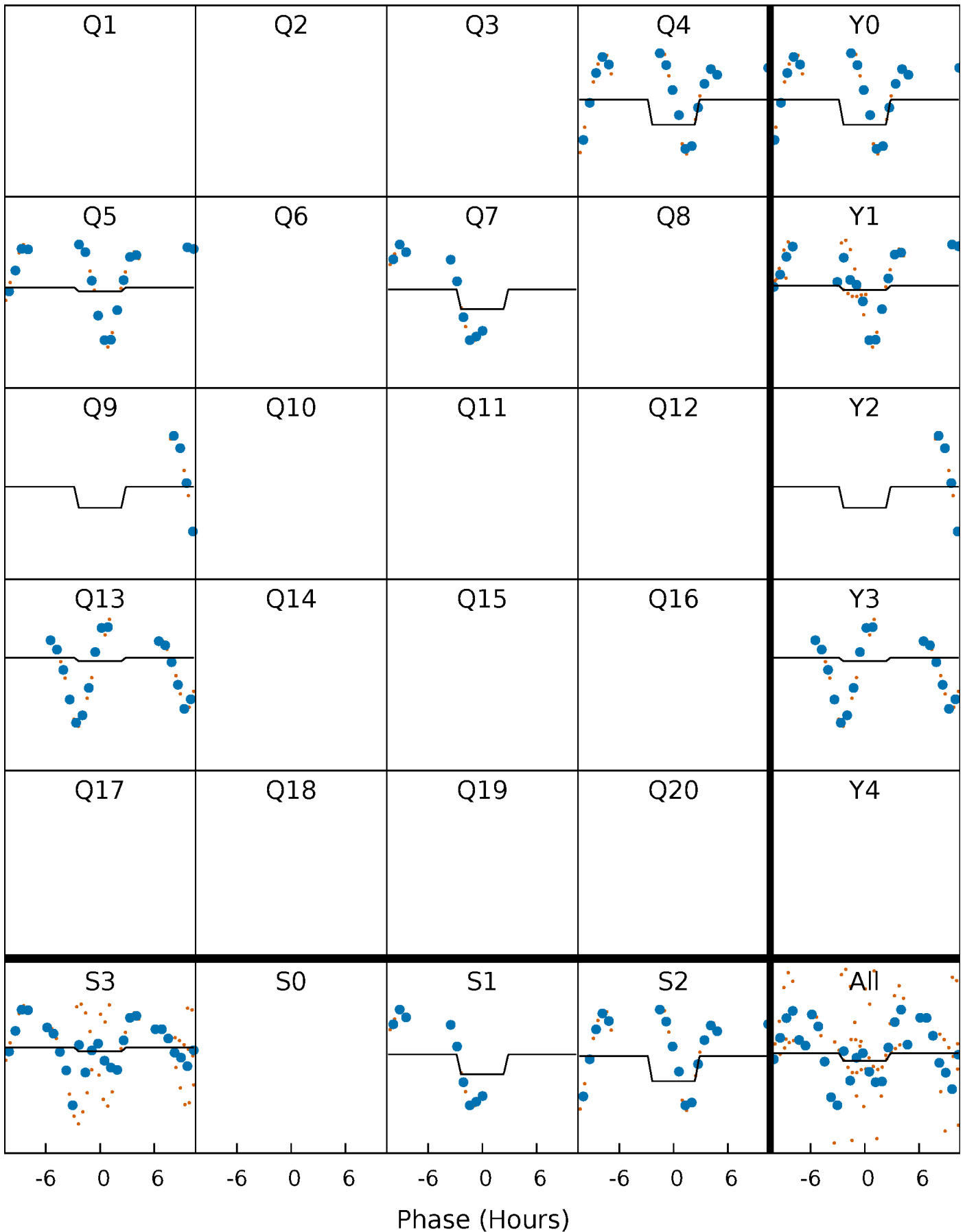
DV Quarter-Phased Transit Curves

TCE 005128966-03 $P=176.390642$ Days $T_0=181.632039$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

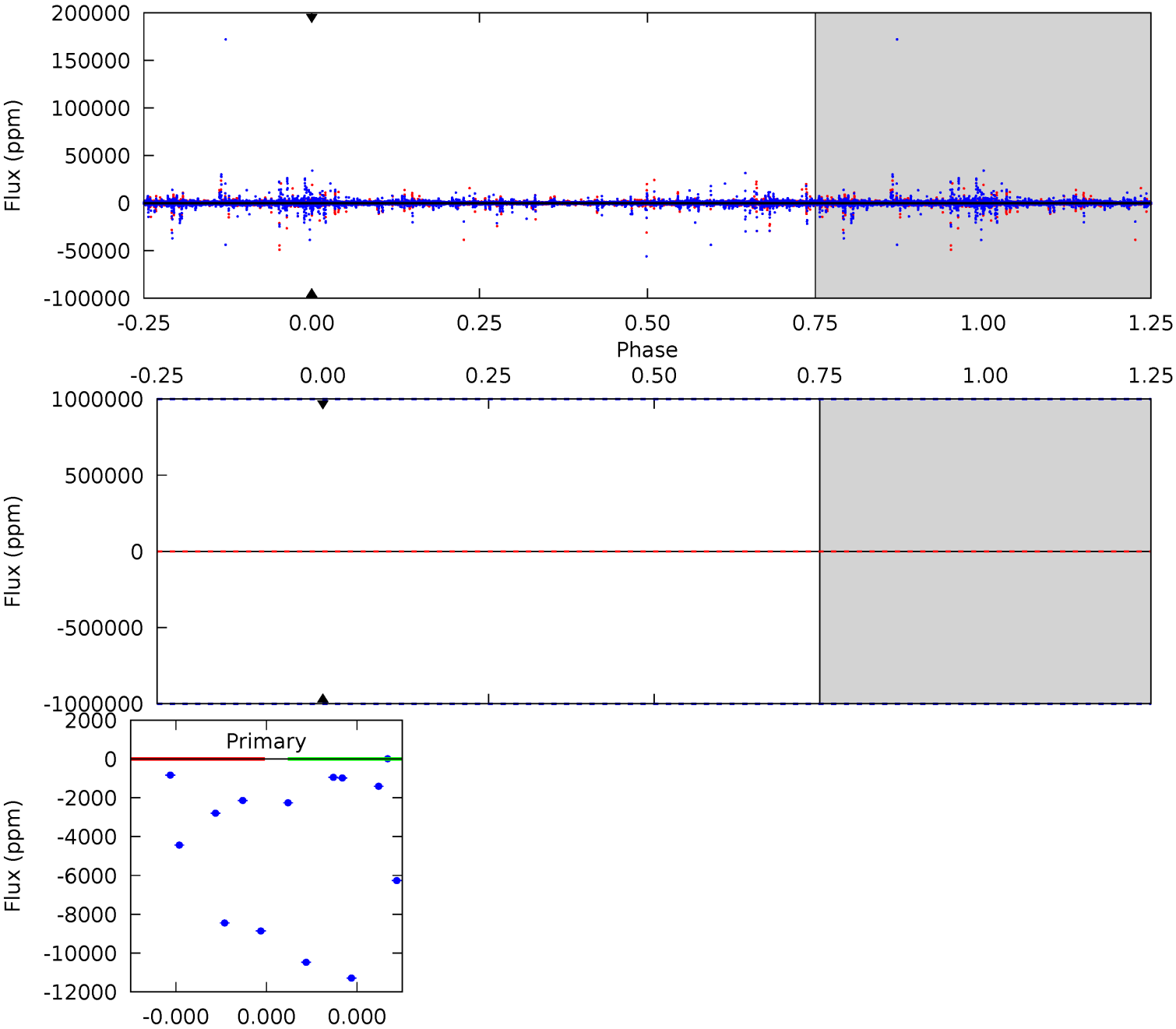
TCE 005128966-03 P=176.390642 Days $T_0=181.728989$ (BKJD)



DV Model-Shift Uniqueness Test

005128966-03, P = 176.390642 Days, E = 181.632039 Days

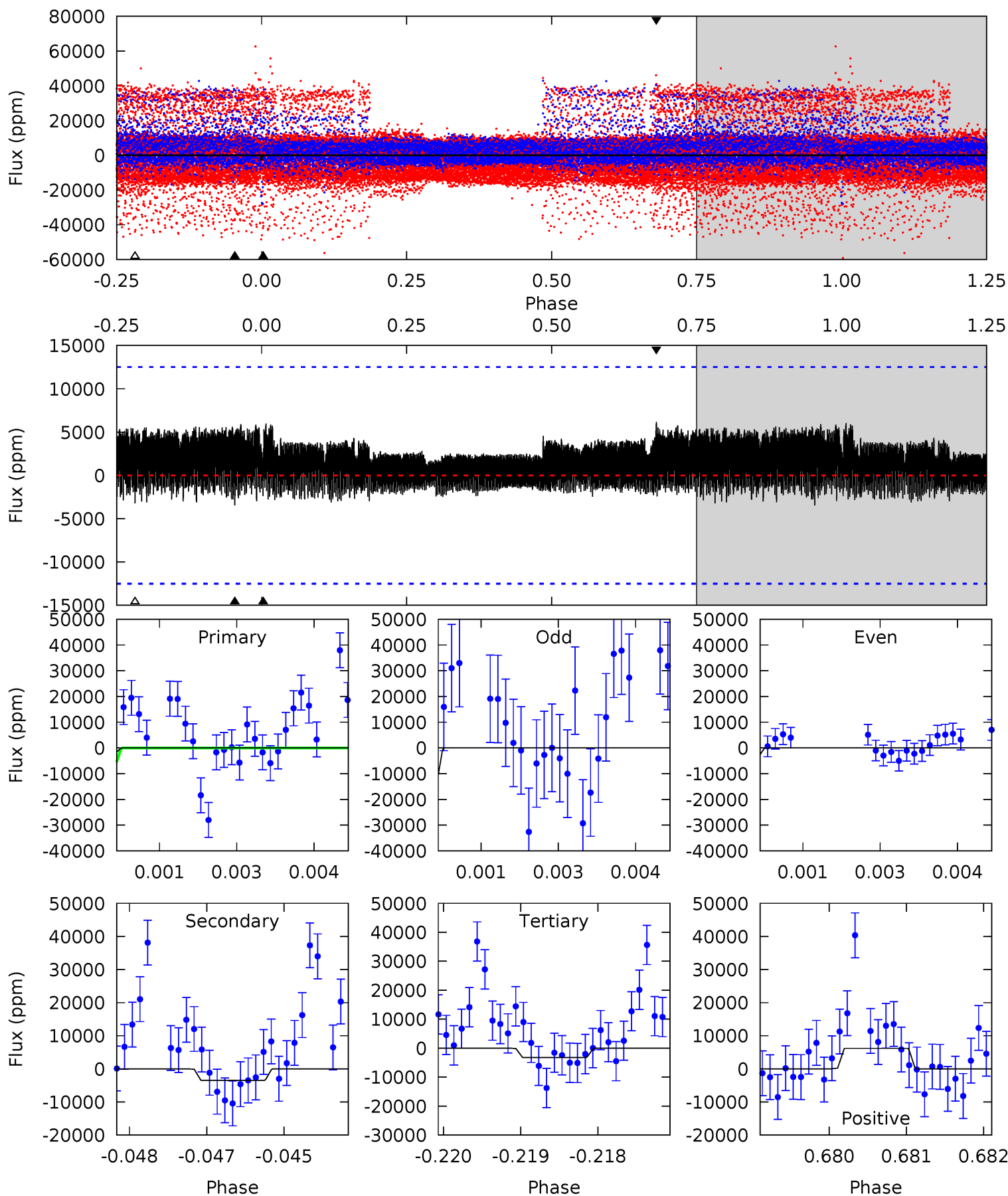
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005128966-03, P = 176.390642 Days, E = 181.728989 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.03	1.50	1.39	2.67	5.40	3.21	0.81	-0.36	-1.64	0.11	-1.17	2.36	0.89	0.64	0.91



Stellar Parameters For KIC 005128966

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+187}_{-208}	$4.490^{+0.065}_{-0.208}$	$-0.220^{+0.300}_{-0.300}$	$0.924^{+0.286}_{-0.114}$	$0.962^{+0.131}_{-0.119}$	$1.719^{+0.507}_{-0.935}$
	+3%/-4%	+1%/-5%	+136%/-136%	+31%/-12%	+14%/-12%	+29%/-54%
Source	KIC0	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 005128966-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$9.83^{+9.43}_{-6.60}$	462^{+36}_{-27}	3449^{+12771}_{-20721}	$1118^{+305559}_{-374995}$
Alt.	-3468 ± 2318	$10.08^{+9.35}_{-6.99}$	461^{+30}_{-23}	4620^{+3439}_{-1279}	5785^{+49090}_{-4884}

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

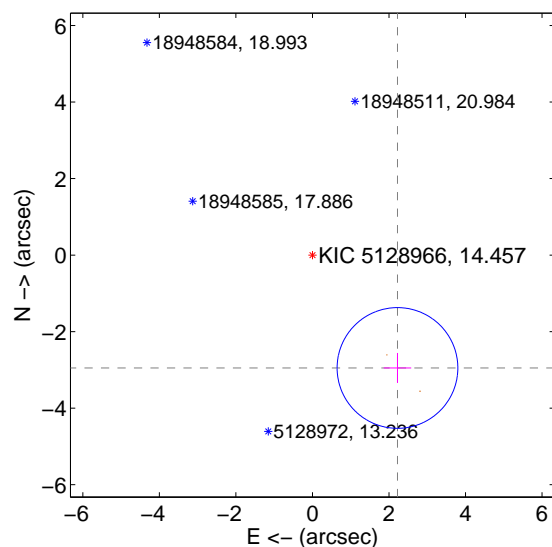
Supplemental centroid analysis for 005128966-03. Kepler magnitude: 14.46. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

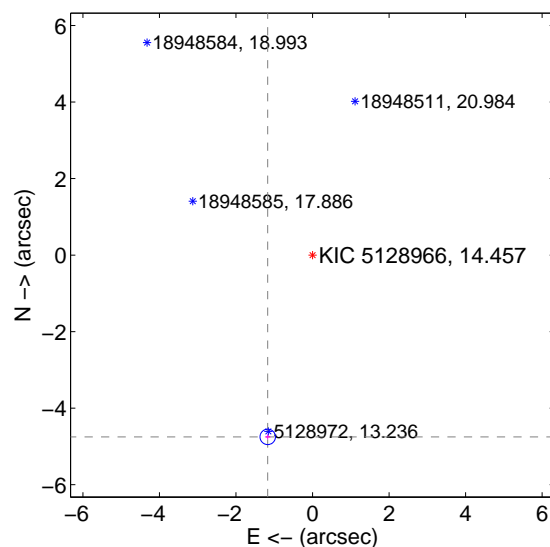
The OOT PRF centroid is offset from the target star catalog position by about 4.12 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.694 ± 0.526	7.02	-2.222 ± 0.359	-2.950 ± 0.393
PRF-fit source offset from KIC position	4.894 ± 0.067	72.86	1.171 ± 0.073	-4.751 ± 0.067
photometric centroid source offset	3.23 ± 0.52	6.18	3.19 ± 0.52	-0.54 ± 0.61

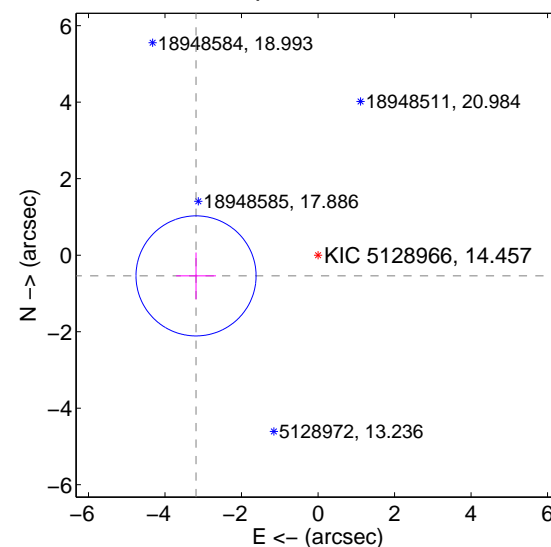
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

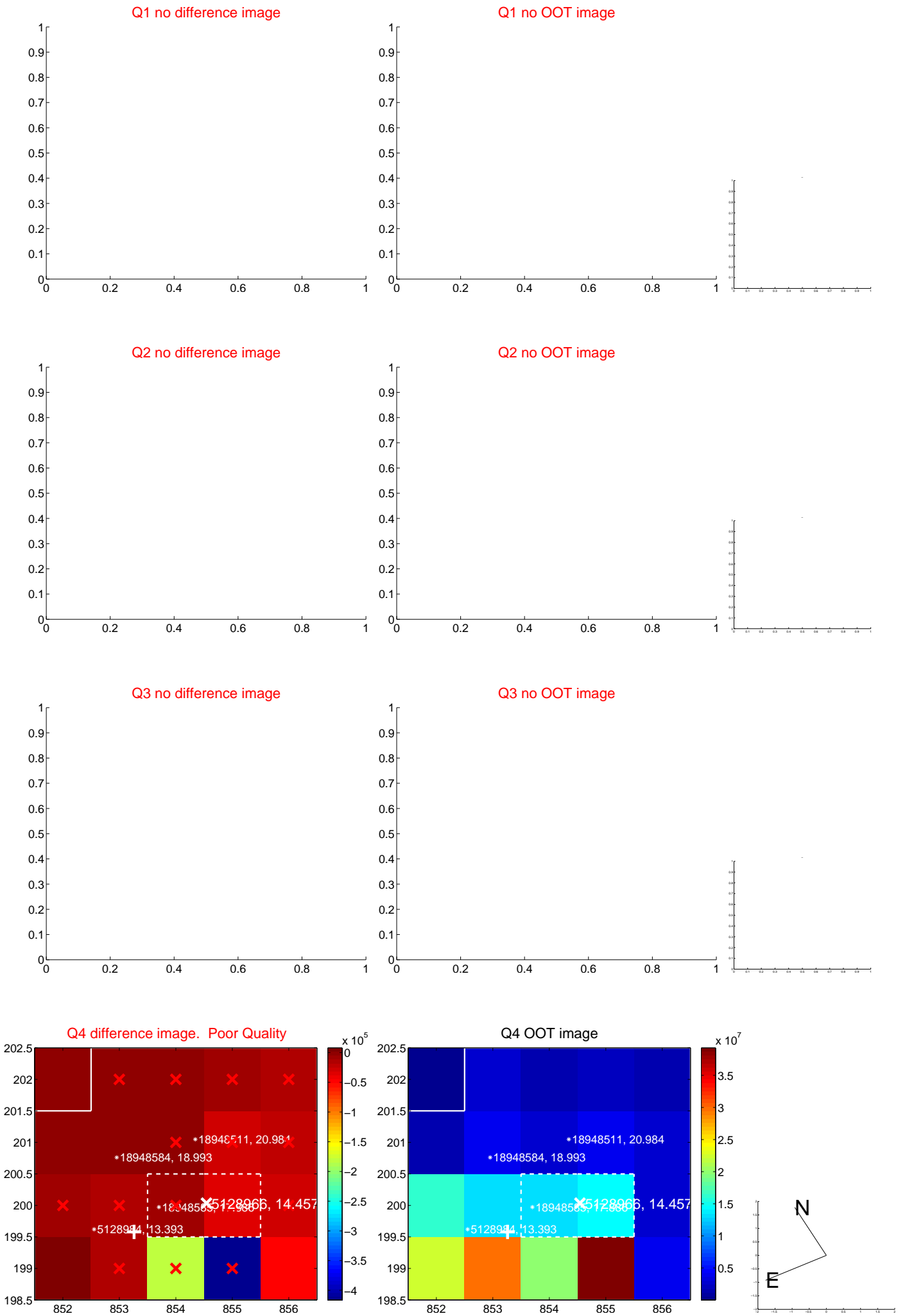


offset from photometric centroids

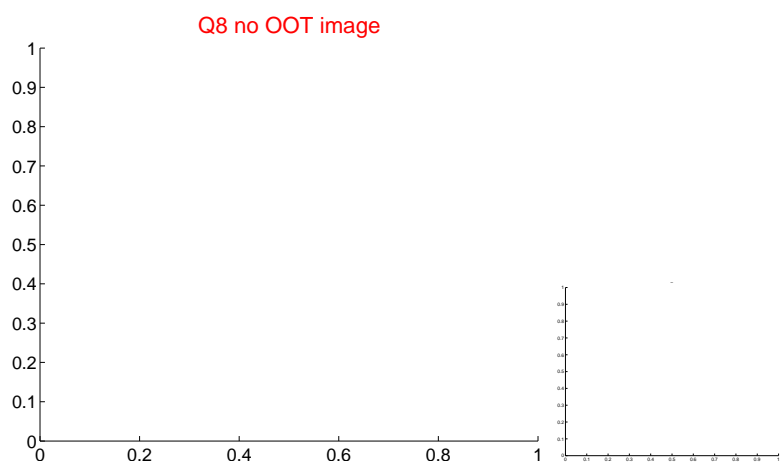
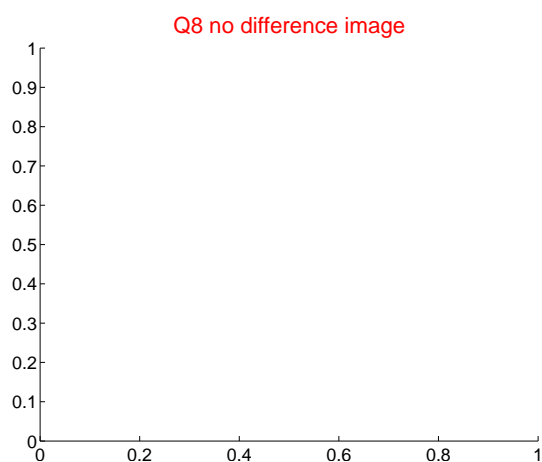
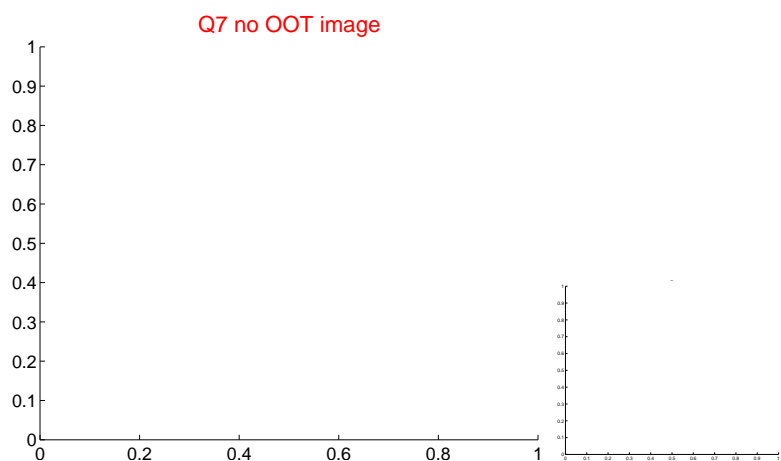
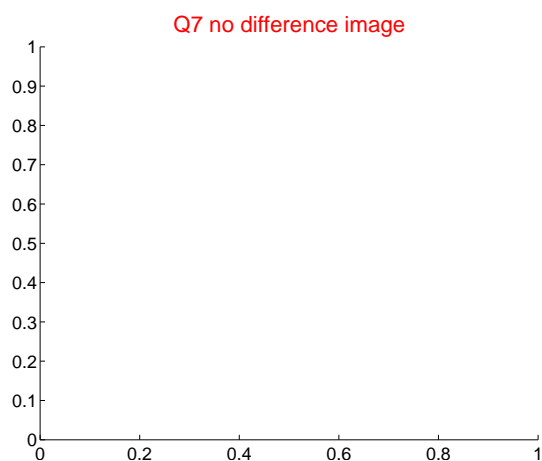
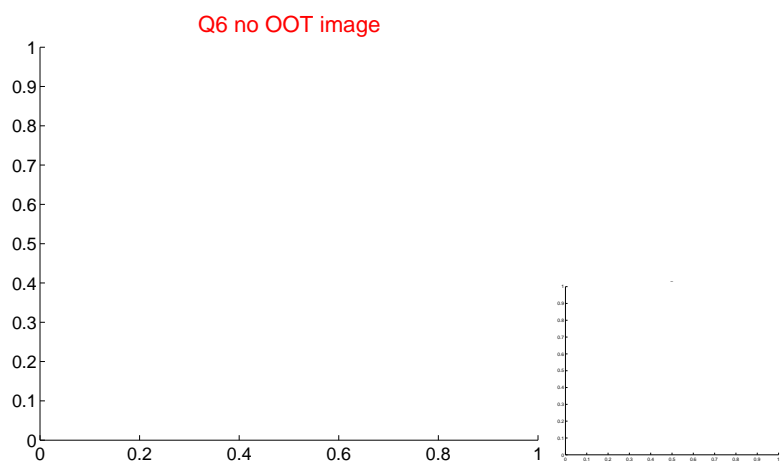
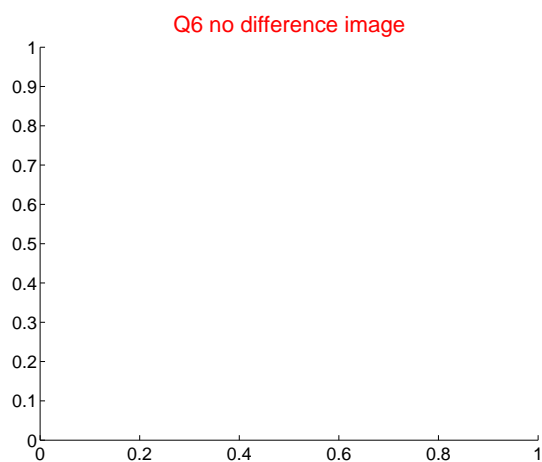
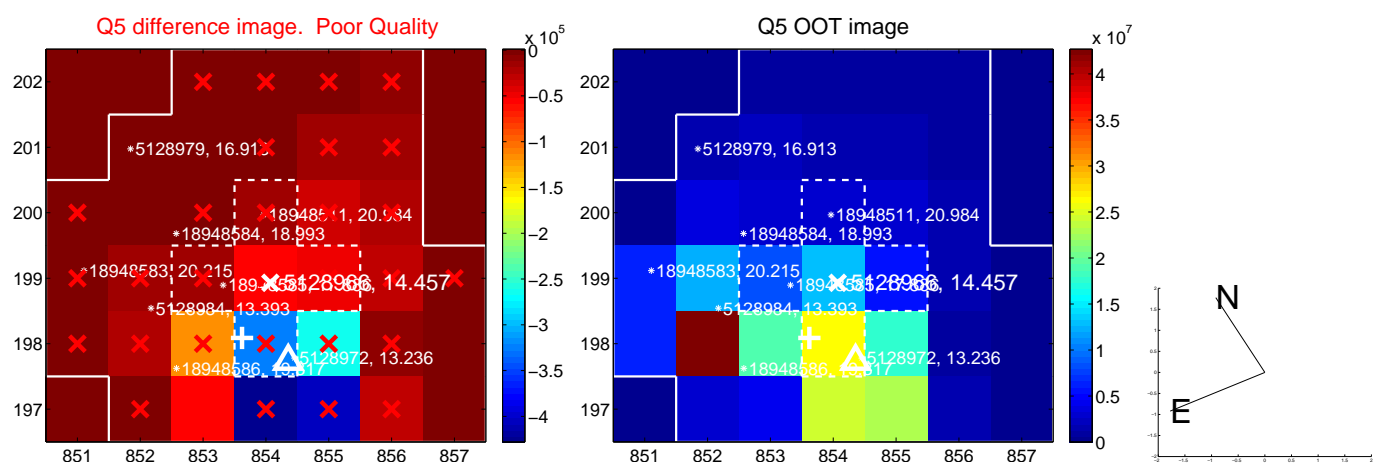


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



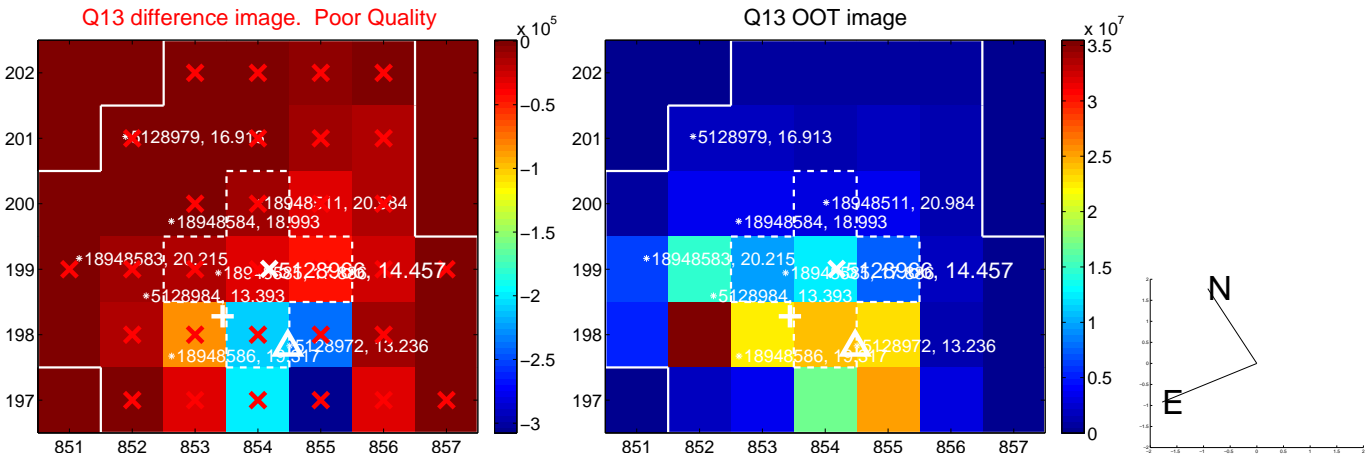
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



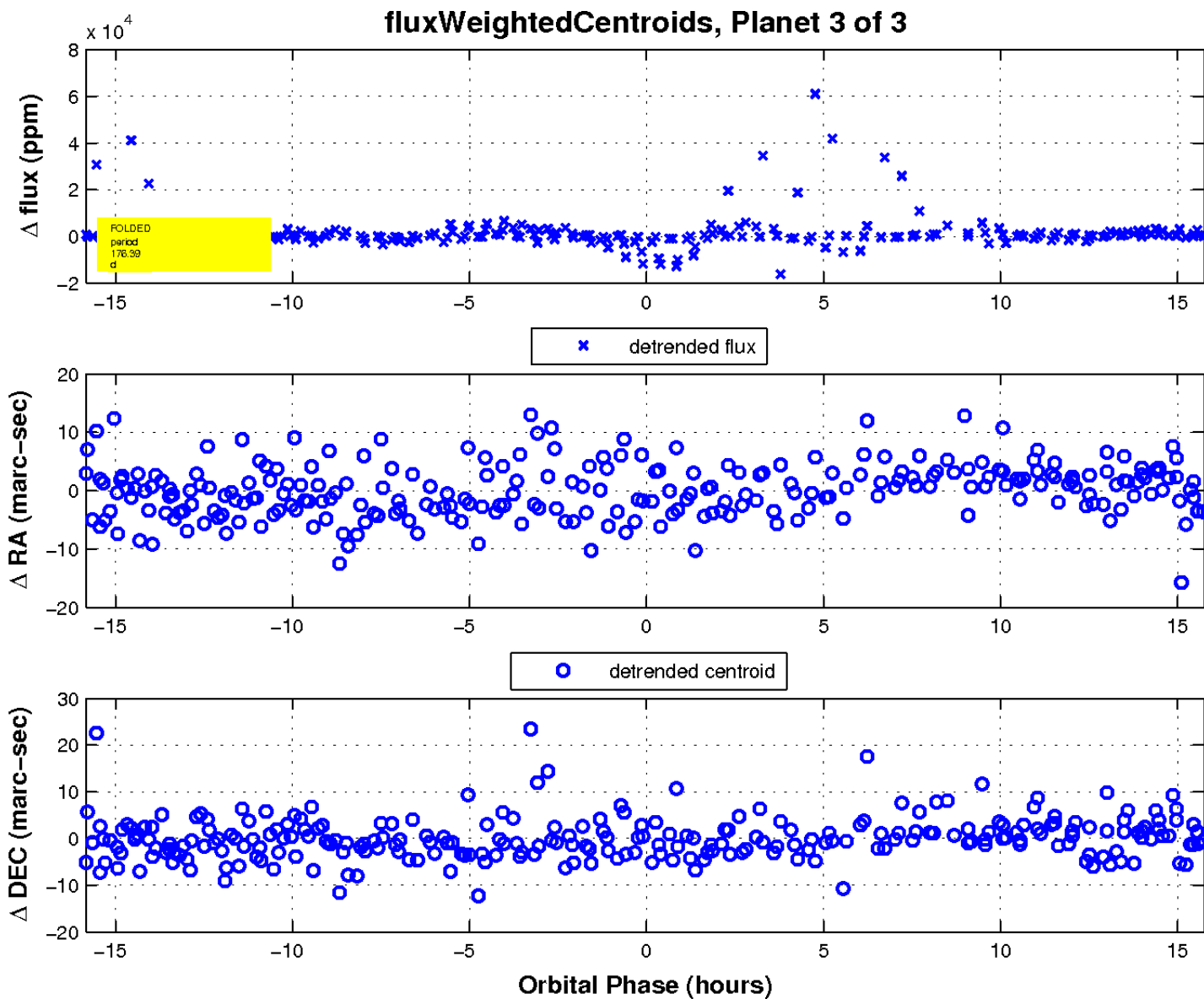
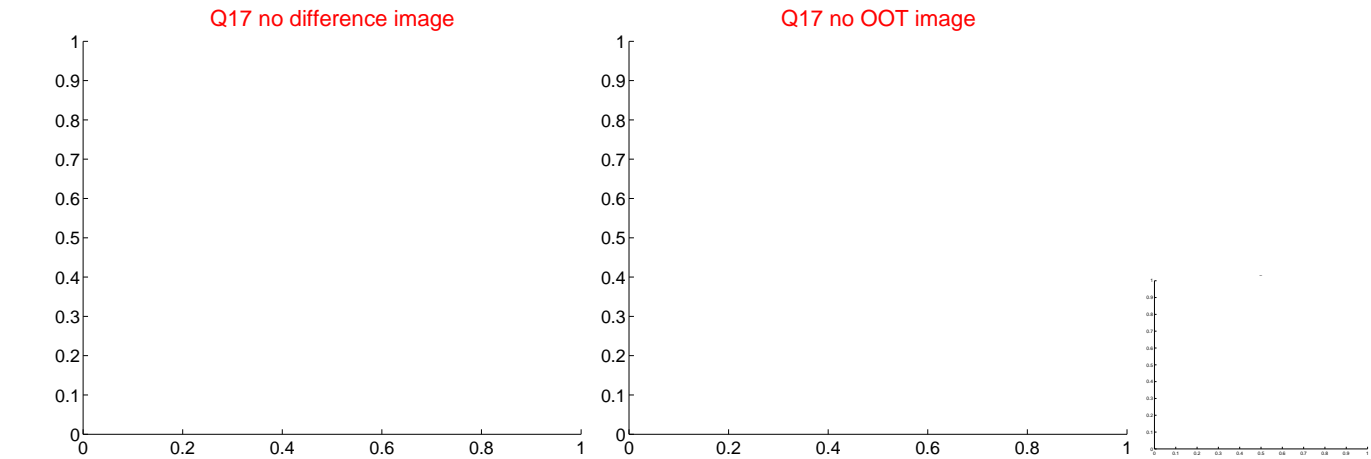
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

