

KIC 008552540

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})
008552540-01	OBS	7054.01	1.061937	131.719327	464832.6	2.500	5892.2	-1.0	0.99	5951	8.46	2686.41
008552540-02	OBS	No	1.061933	132.259359	263095.9	3.485	4171.9	2059.9	0.99	5951	62.63	2686.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008552540-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
008552540-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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 008552540-01

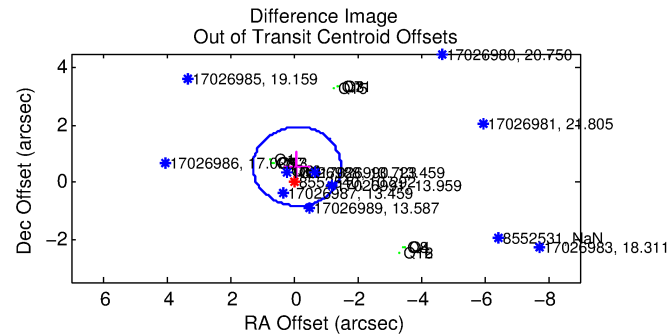
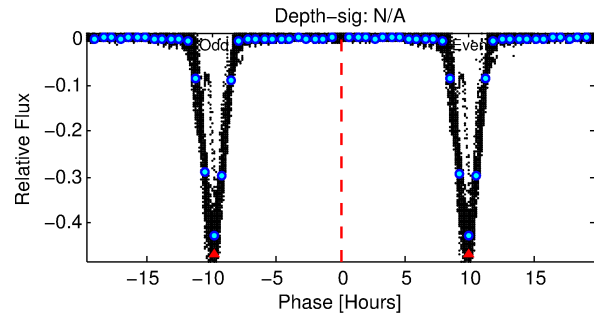
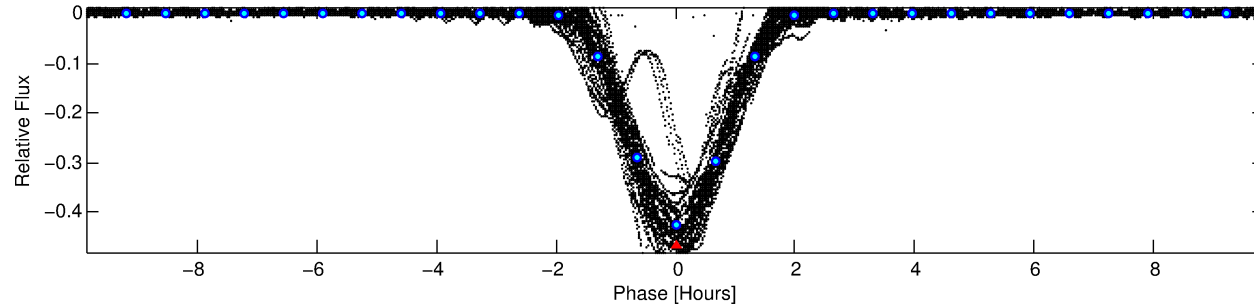
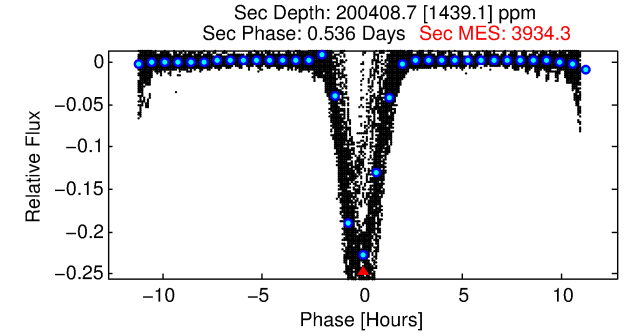
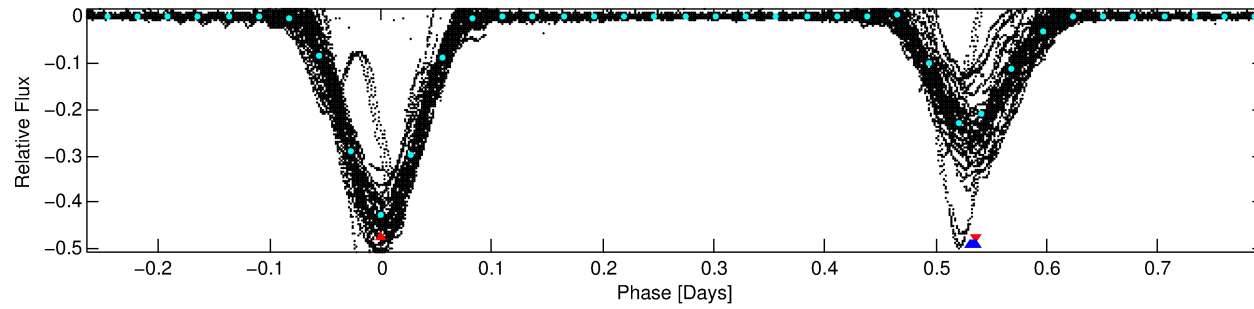
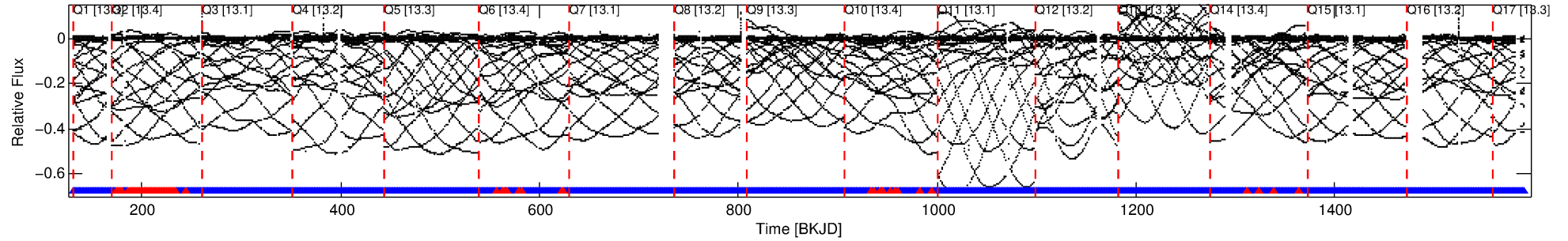
No Significant Match Found

DV One-Page Summary

KIC: 8552540 Candidate: 1 of 2 Period: 1.062 d

KOI: K07054 Corr: No Ephemeris Match

Kp: 10.29 R*: 0.99 Rs Teff: 5951.0 K Logg: 4.44 Fe/H: -0.140



TPS TCE Results:

Period = 1.06194 d
Epoch = 131.7193 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]

LongPeriod-sig: N/A

ModelChiSquare2-sig: N/A

ModelChiSquareGof-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 0.94 [1135/1208]

GhostDiagnostic-chr: N/A

Centroid-sig: N/A

Centroid-so: N/A

OotOffset-rm: 0.556 arcsec [1.21σ]

KicOffset-rm: 1.569 arcsec [2.99σ]

OotOffset-st: 4/4/4/5 [17]

KicOffset-st: 4/4/4/5 [17]

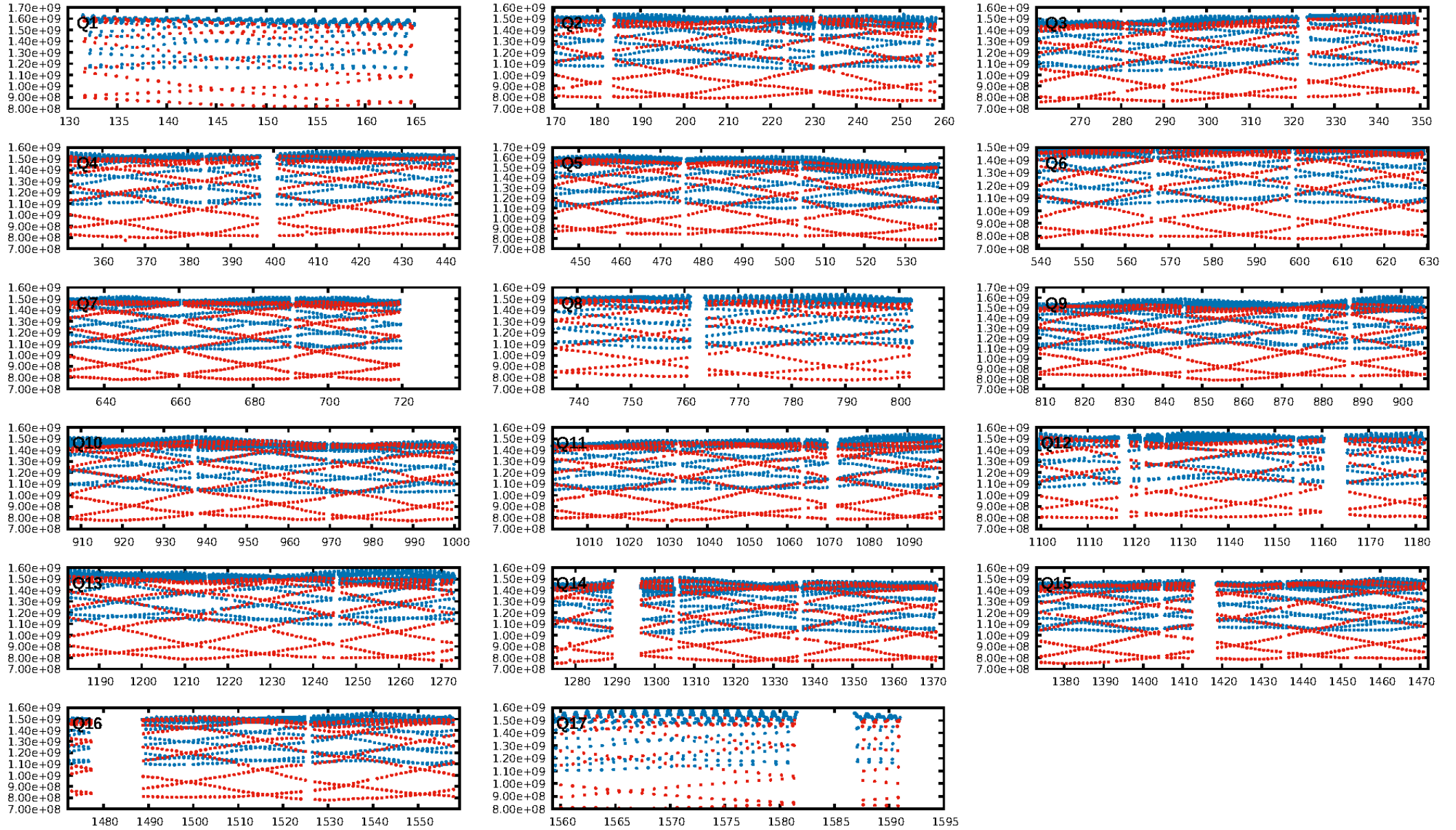
DiffImageQuality-fgm: 0.12 [2/17]

DiffImageOverlap-fno: 1.00 [17/17]

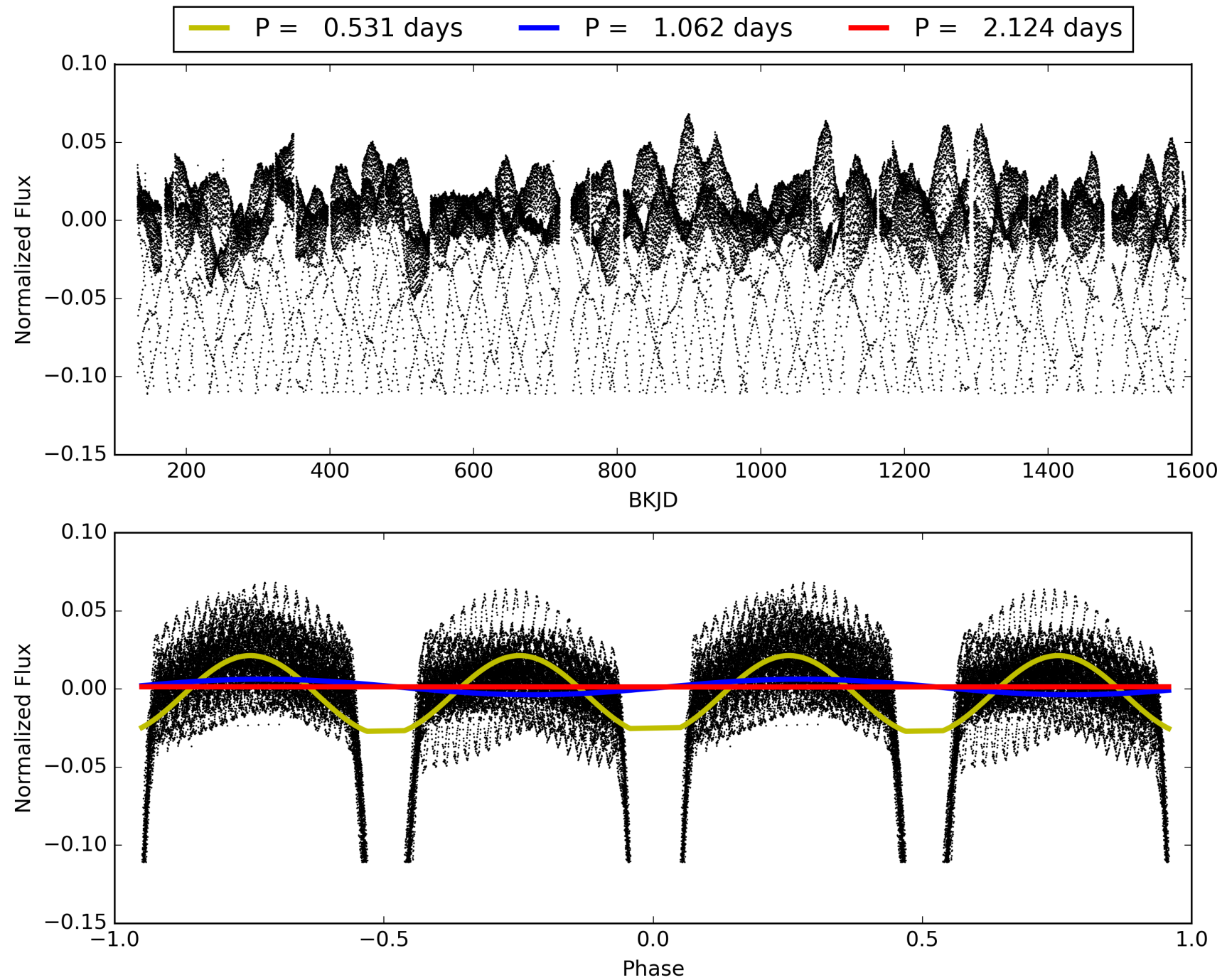
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:10:10 Z

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

TCE 008552540-01, PDC Light Curves

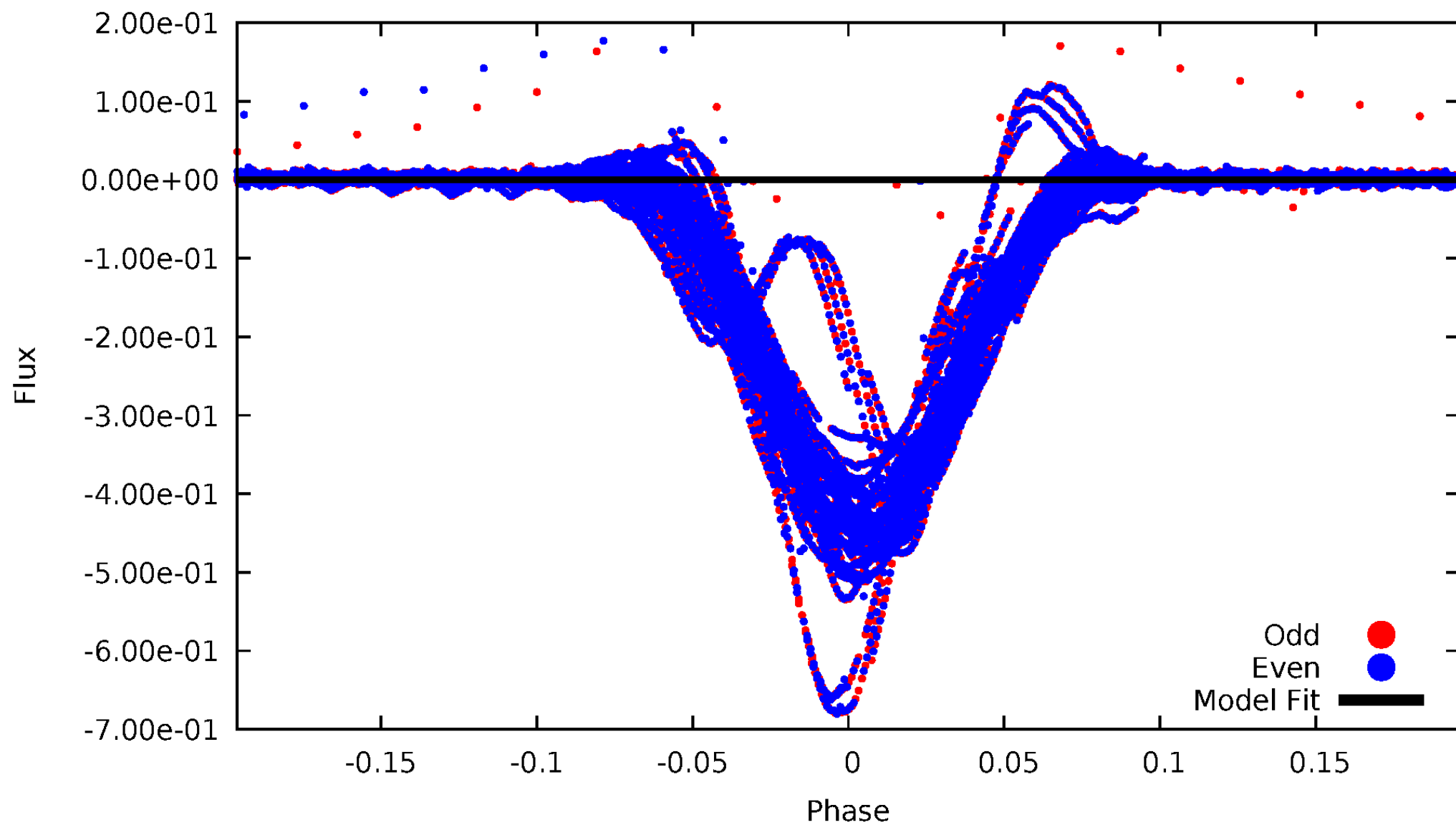


TCE 008552540-01



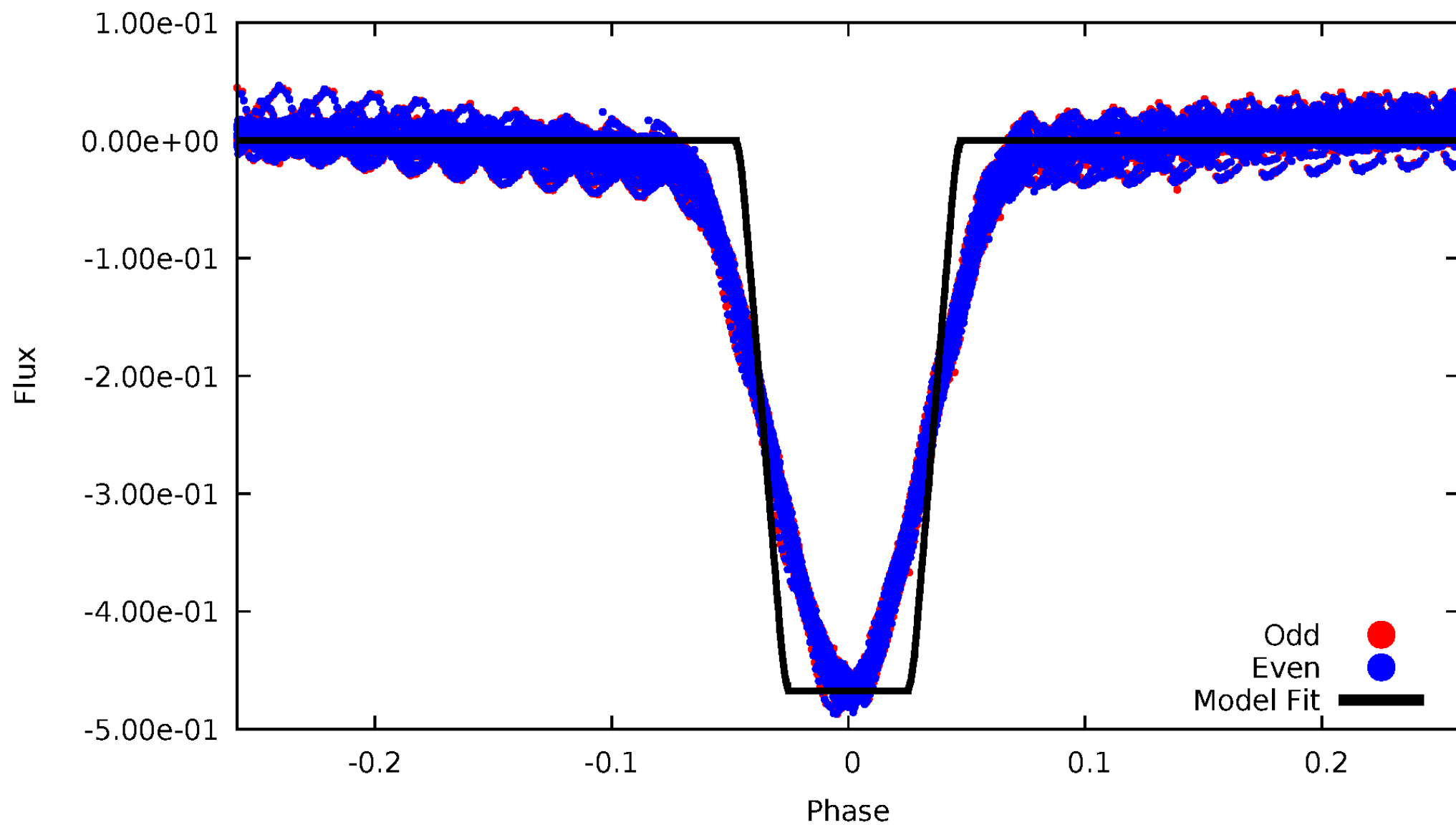
DV Odd/Even

TCE 008552540-01



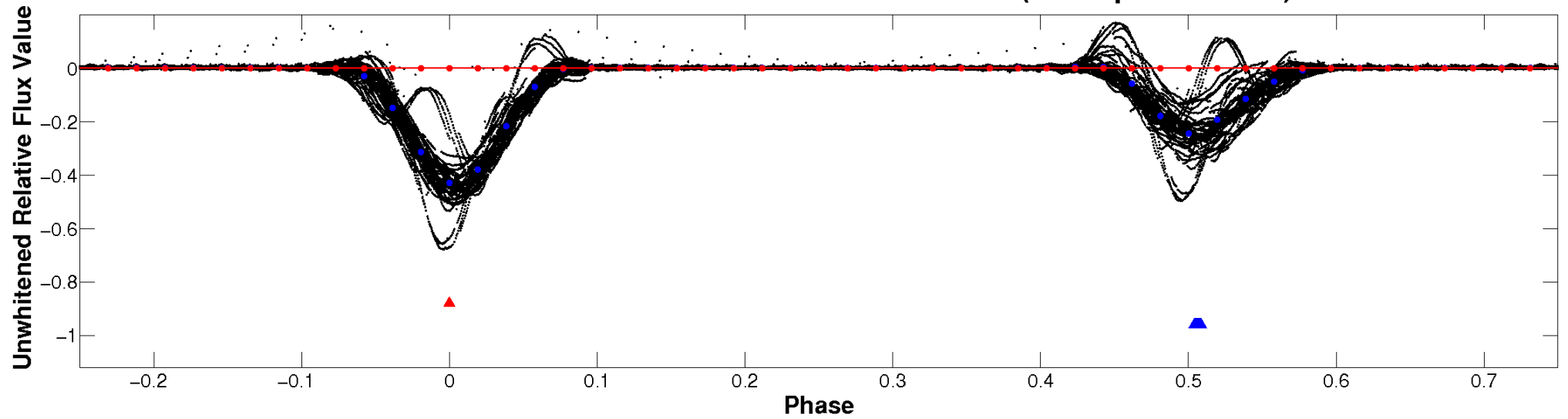
ALT Odd/Even

TCE 008552540-01



Non-Whitened Vs. Whitened Light Curve

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

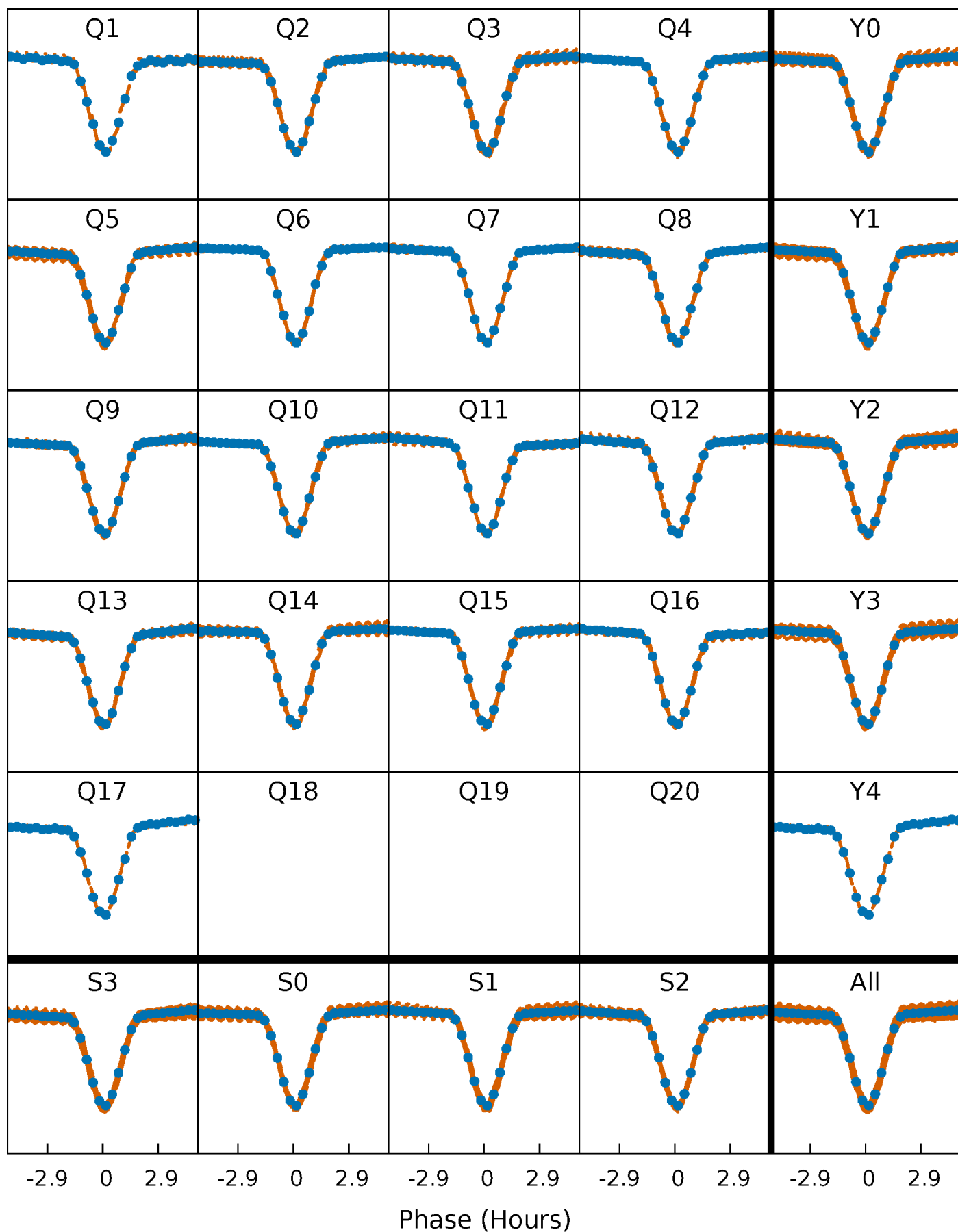


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



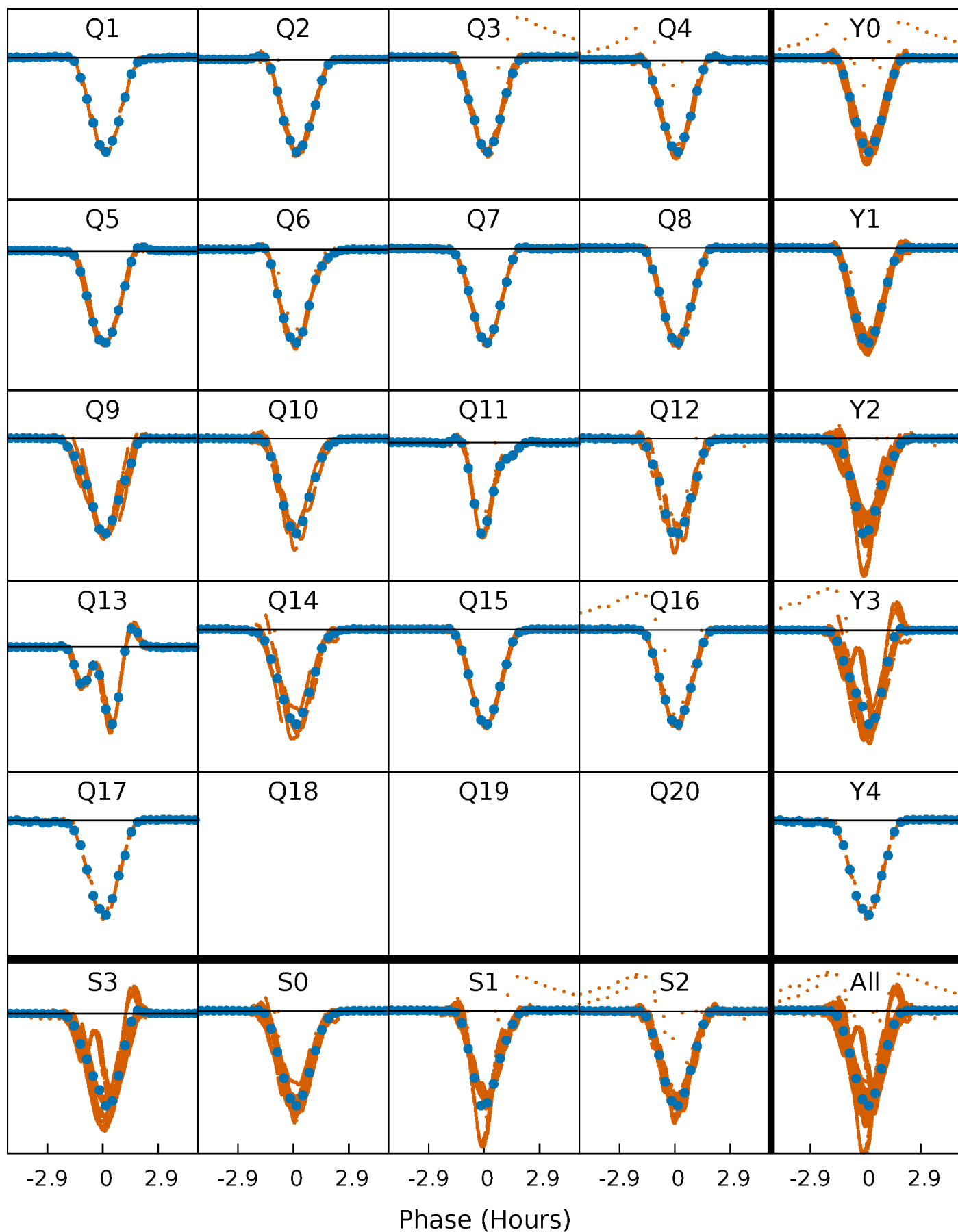
PDC Quarter-Phased Transit Curves

TCE 008552540-01 P= 1.061937 Days $T_0=131.719327$ (BKJD)



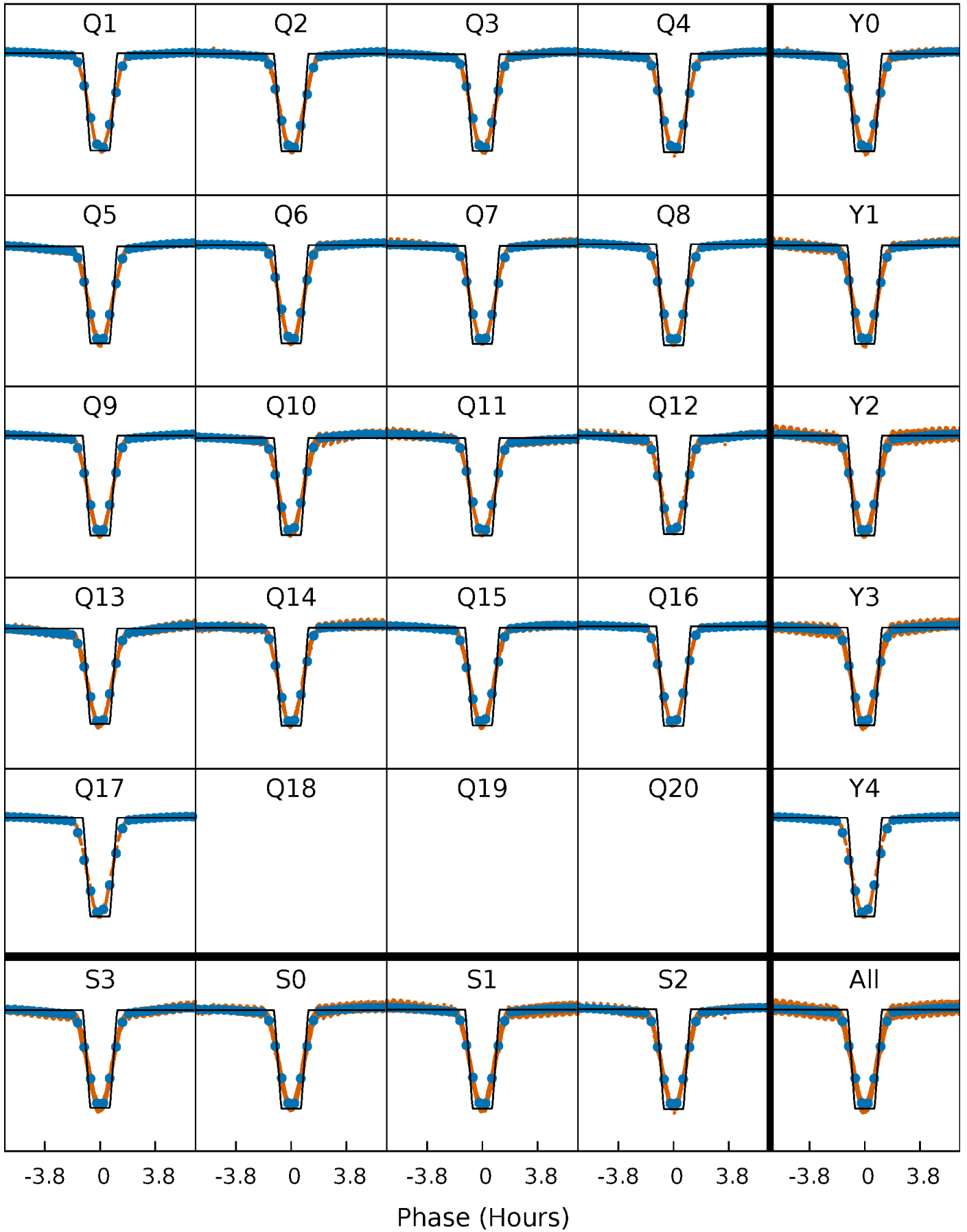
DV Quarter-Phased Transit Curves

TCE 008552540-01 P= 1.061937 Days $T_0=131.719327$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

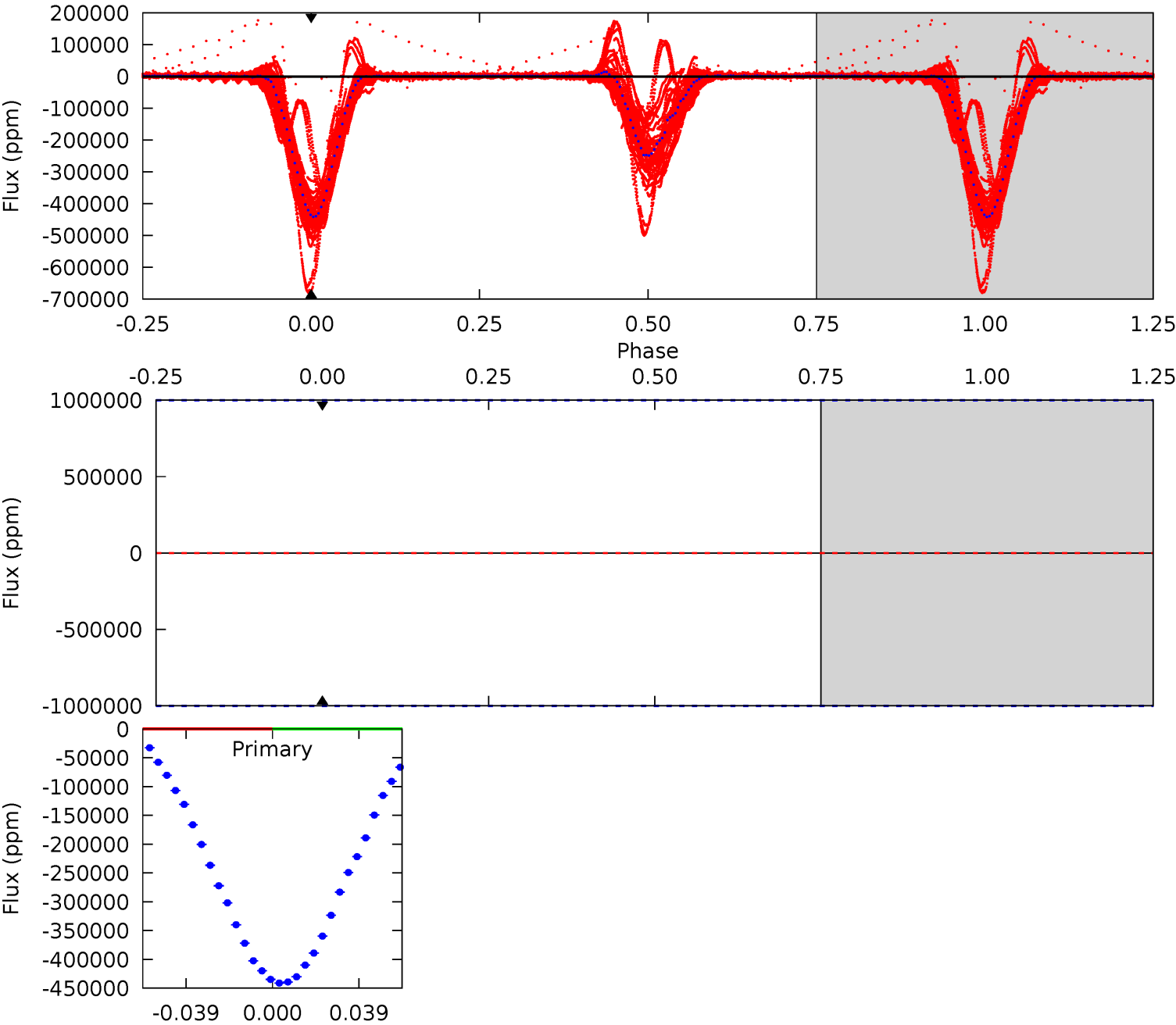
TCE 008552540-01 P= 1.061937 Days $T_0=131.723479$ (BKJD)



DV Model-Shift Uniqueness Test

008552540-01, P = 1.061937 Days, E = 130.657390 Days

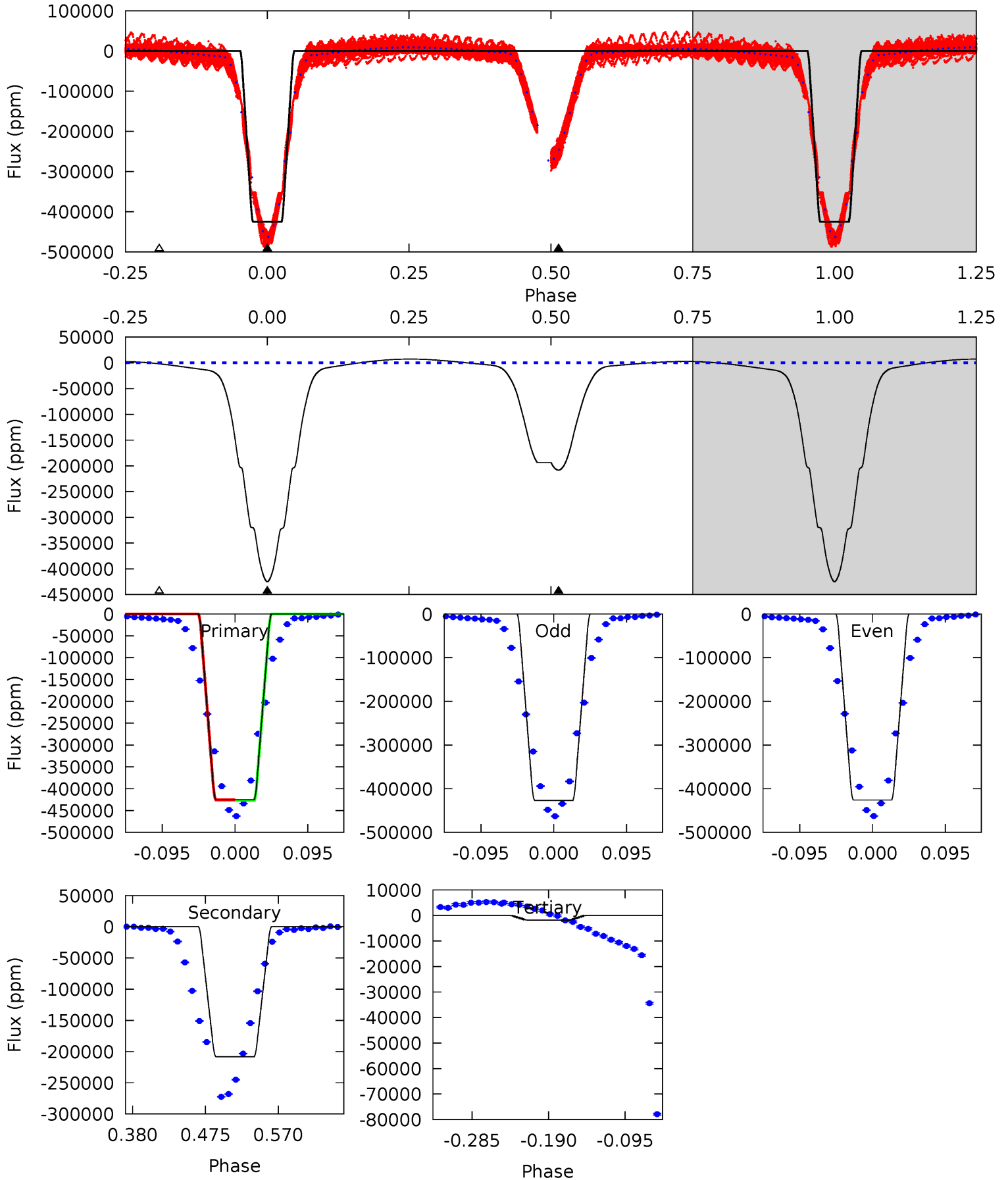
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008552540-01, P = 1.061937 Days, E = 130.661542 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2820	1381	12.1	0	4.58	1.67	37.3	2808	2820	1369	1381	2.57	1.00	0.02	2.93



Stellar Parameters For KIC 008552540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5951^{+148}_{-163}	$4.439^{+0.084}_{-0.196}$	$-0.140^{+0.300}_{-0.300}$	$0.991^{+0.288}_{-0.123}$	$0.983^{+0.134}_{-0.122}$	$1.423^{+0.524}_{-0.742}$
	+2%/-3%	+2%/-4%	+214%/-214%	+29%/-12%	+14%/-12%	+37%/-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 008552540-01 / KOI 7054.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$11.87^{+8.81}_{-7.85}$	2594^{+178}_{-125}	3579^{+11580}_{-17917}	$1.657^{+267.335}_{-256.447}$
Alt.	-208249 ± 151	$75.22^{+16.61}_{-13.05}$	2603^{+176}_{-136}	5193^{+409}_{-323}	10^{+5}_{-3}

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

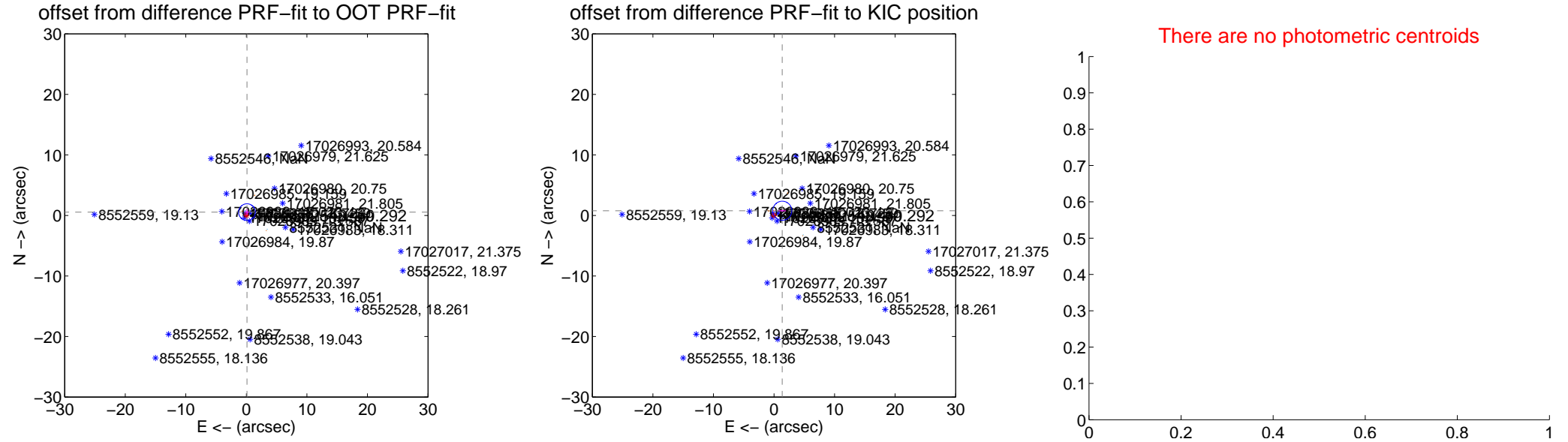
DV Centroid Data

Supplemental centroid analysis for 008552540-01. **Kepler magnitude: 10.29.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

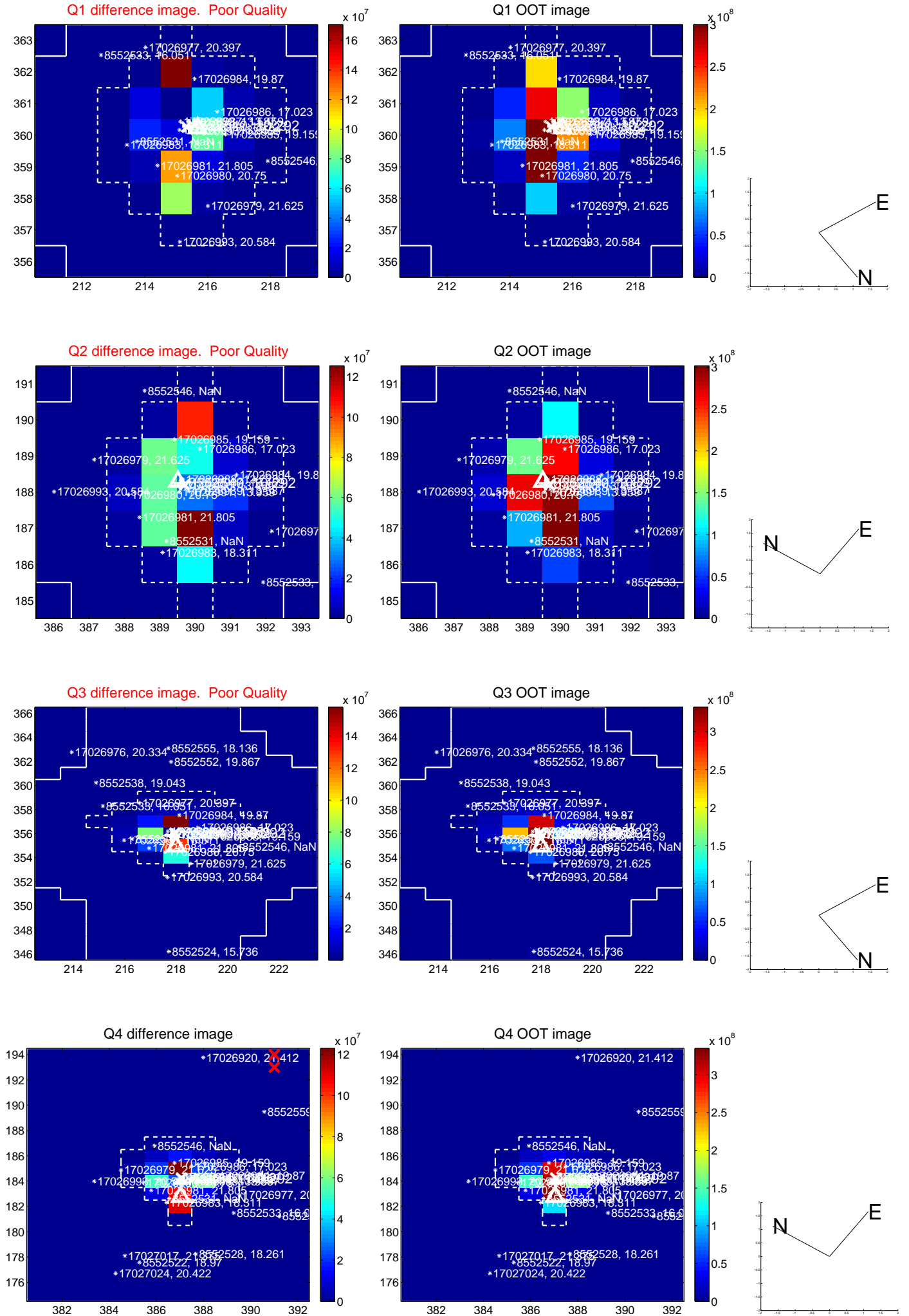
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.556 ± 0.461	1.21	-0.104 ± 0.368	0.546 ± 0.492
PRF-fit source offset from KIC position	1.569 ± 0.525	2.99	-1.363 ± 0.597	0.777 ± 0.160
photometric centroid source offset	—	—	—	—

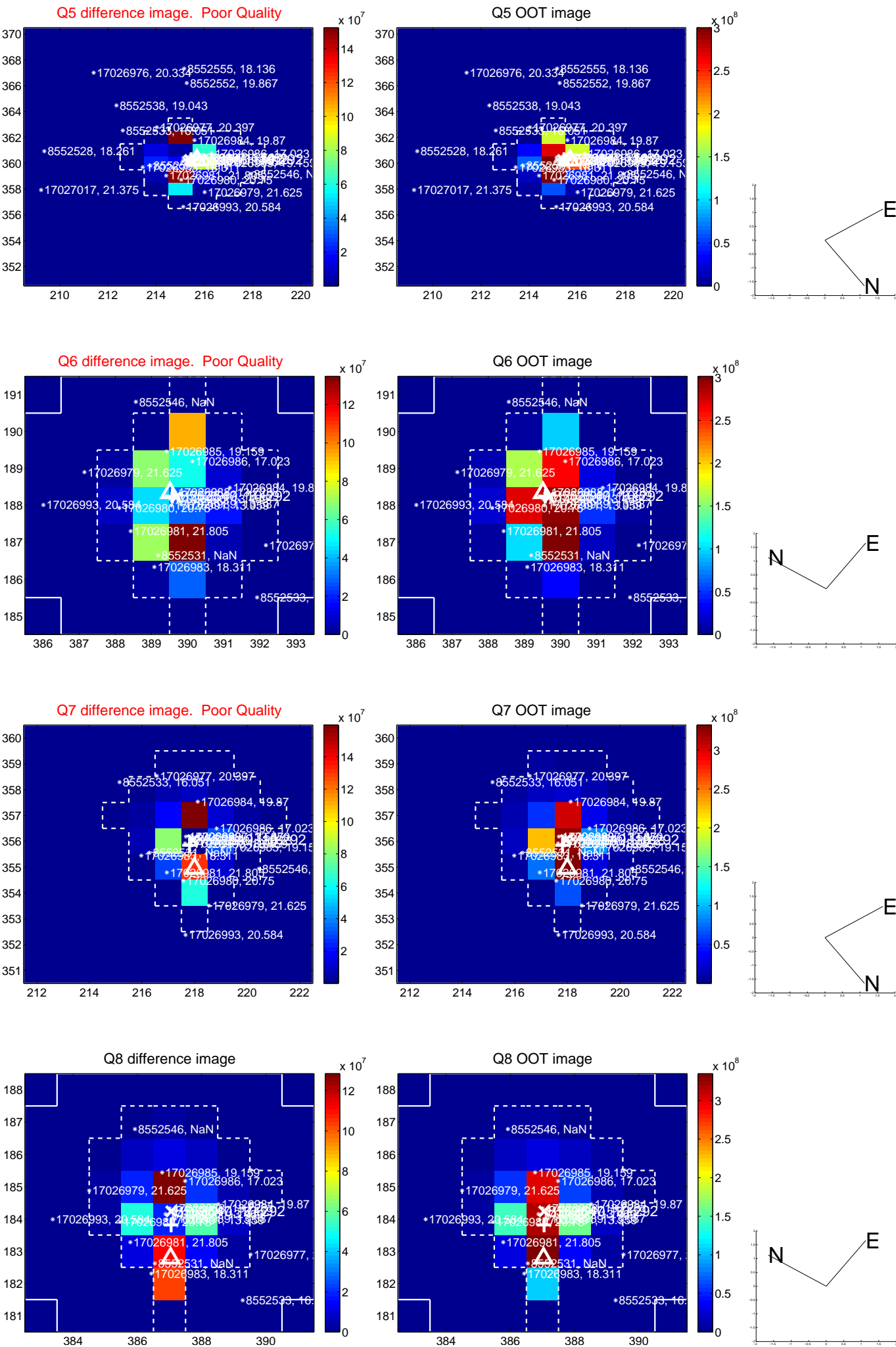


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

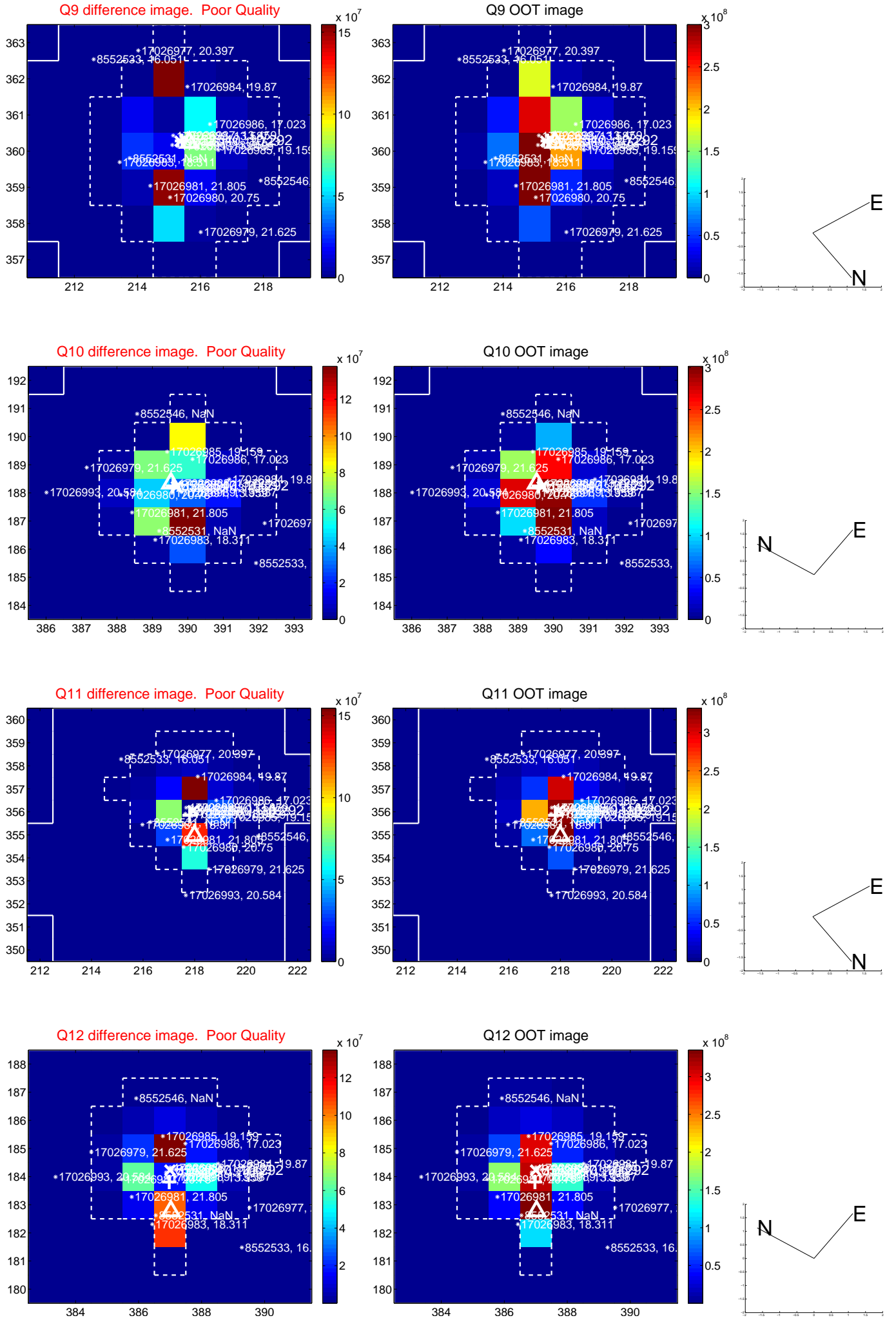
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



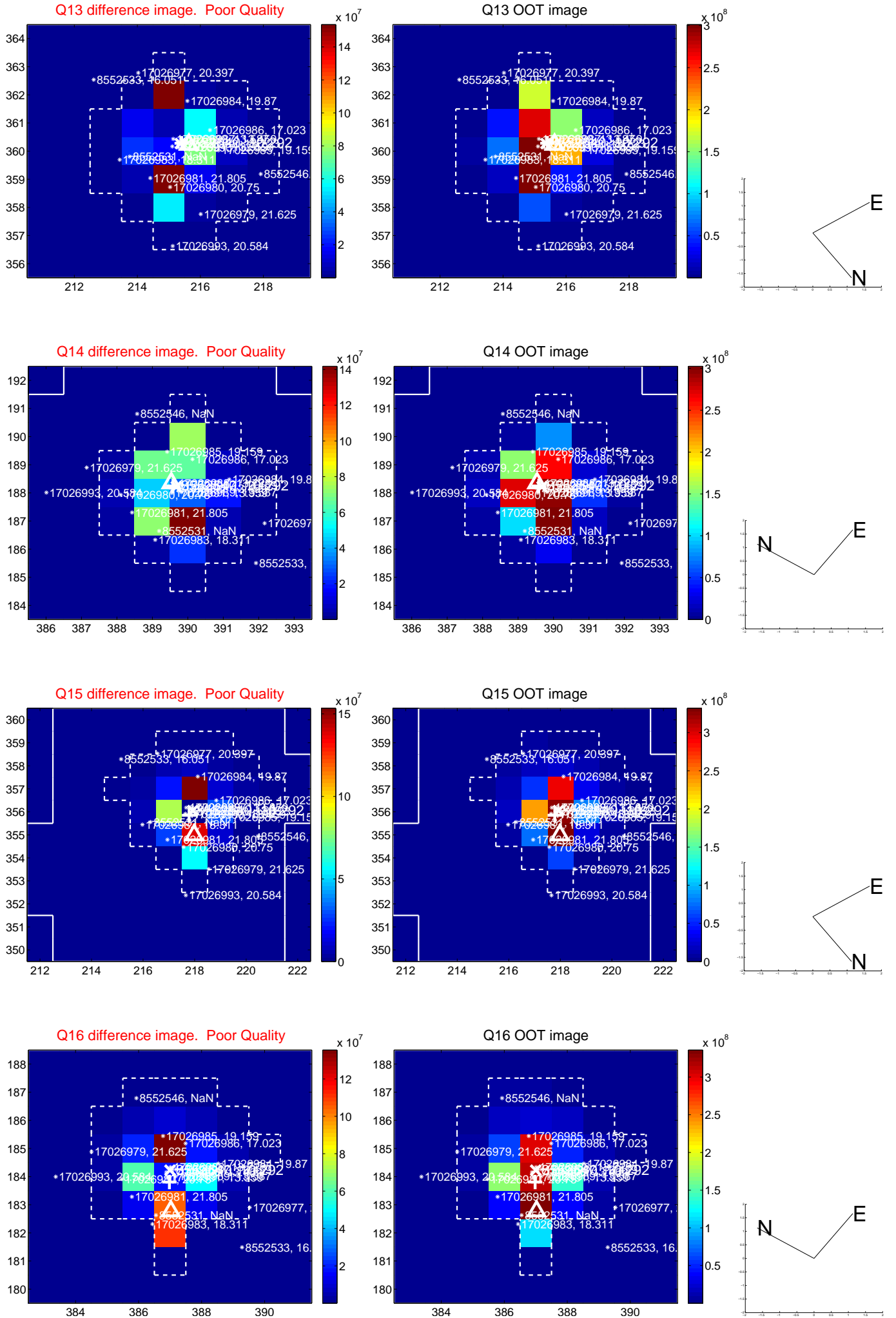
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



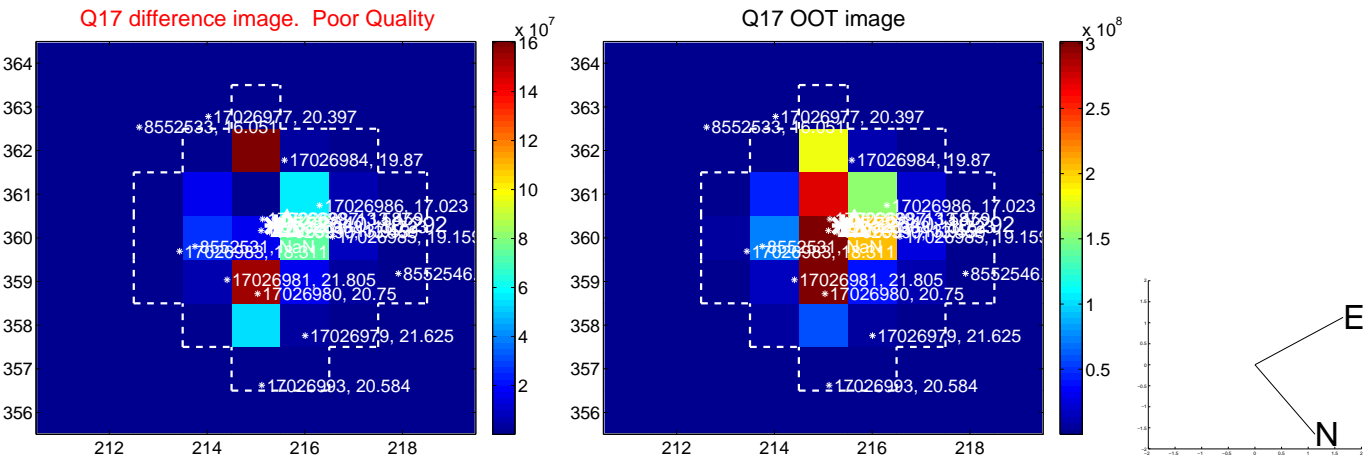
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



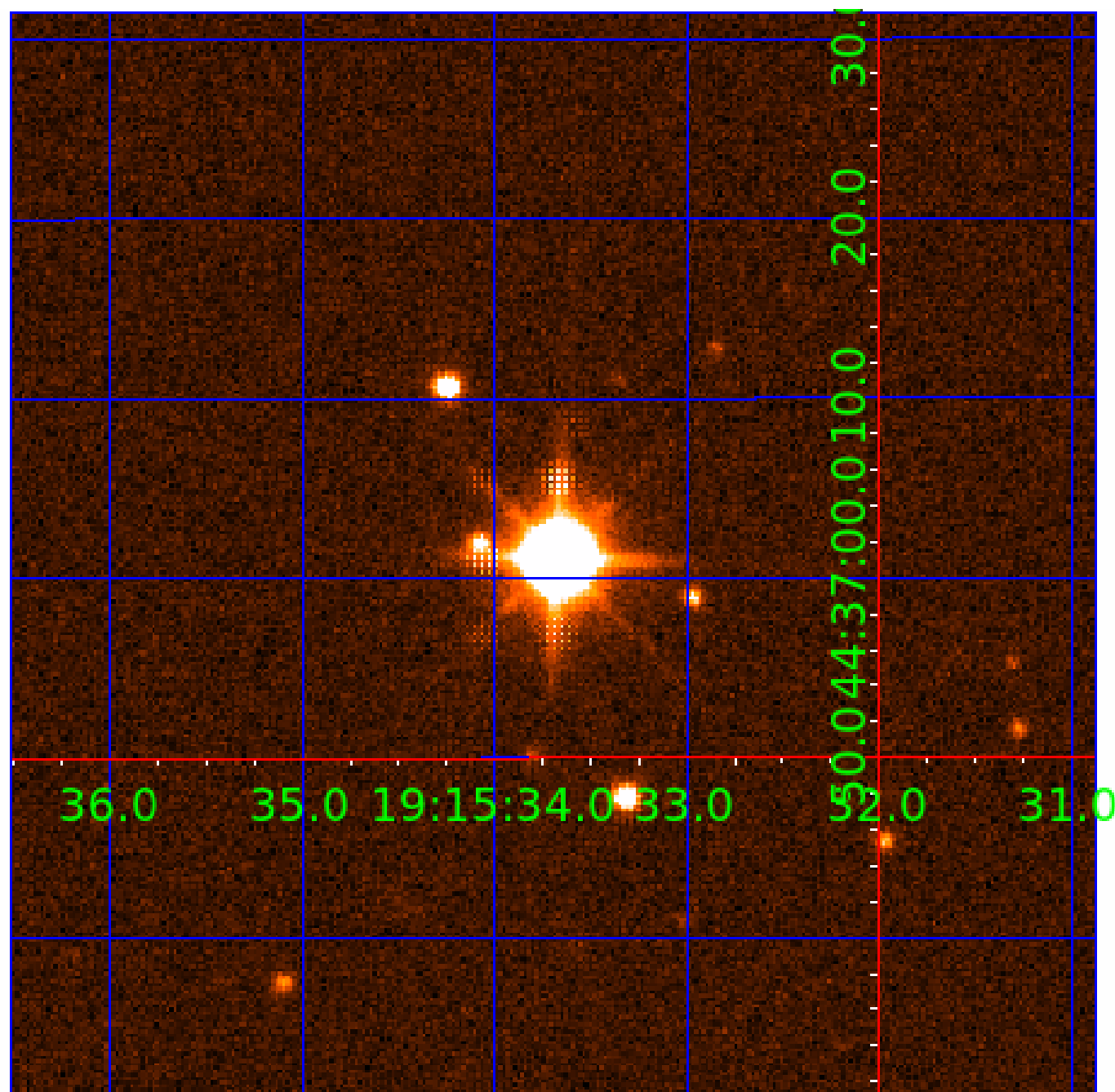
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008552540

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})
008552540-01	OBS	7054.01	1.061937	131.719327	464832.6	2.500	5892.2	-1.0	0.99	5951	8.46	2686.41
008552540-02	OBS	No	1.061933	132.259359	263095.9	3.485	4171.9	2059.9	0.99	5951	62.63	2686.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008552540-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
008552540-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD—CENT_SATURATED

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.

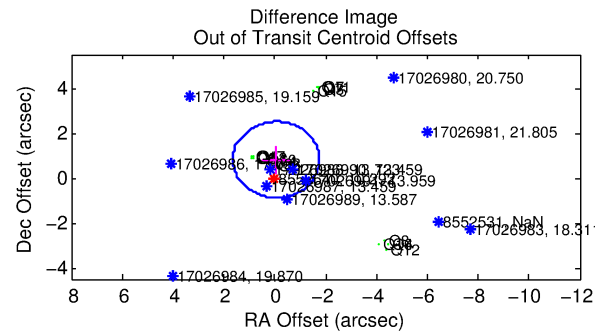
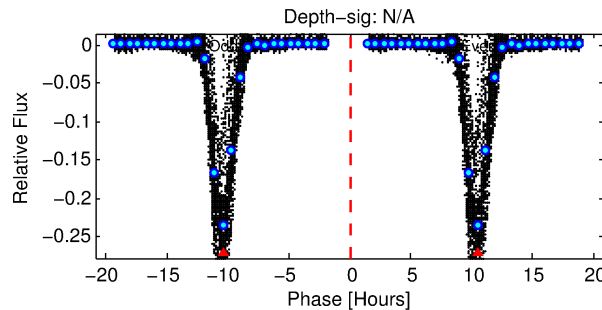
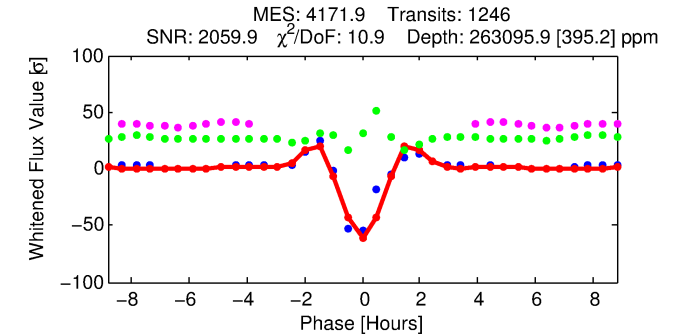
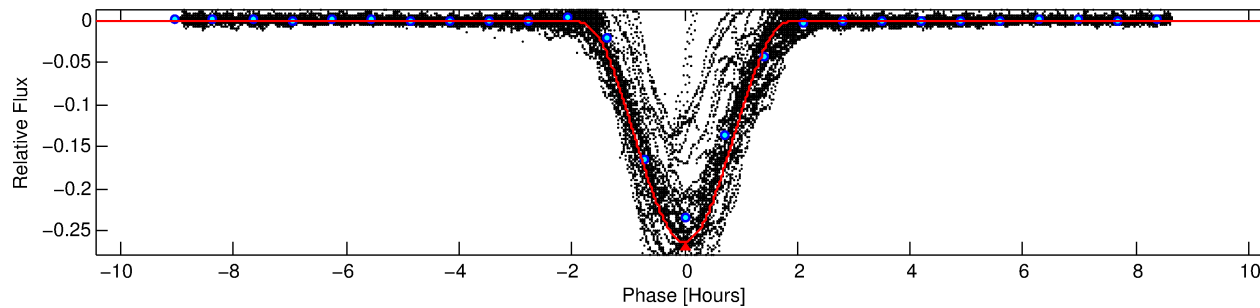
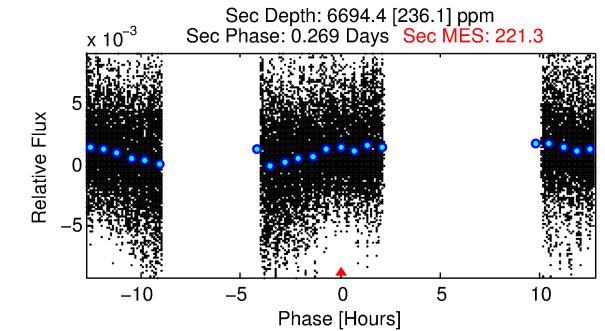
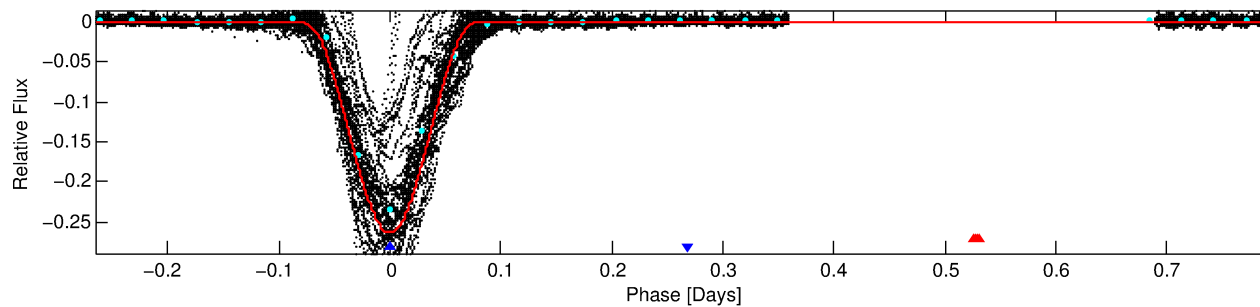
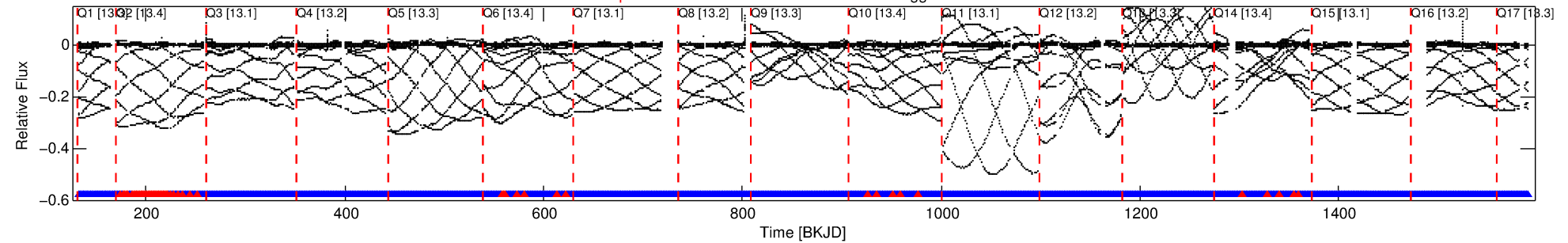
Ephemeris Match Information For 008552540-02

No Significant Match Found

DV One-Page Summary

KIC: 8552540 Candidate: 2 of 2 Period: 1.062 d
KOI: K07054 Corr: No Ephemeris Match

Kp: 10.29 R*: 0.99 Rs Teff: 5951.0 K Logg: 4.44 Fe/H: -0.140



DV Fit Results:

Period = 1.06193 [0.00000] d
Epoch = 132.2594 [0.0000] BKJD
Rp/R* = 0.5791 [0.0523]
a/R* = 3.49 [0.06]
b = 0.68 [0.09]
Seff = 2686.42 [1005.39]
Teq = 1836 [172] K
Rp = 62.63 [19.06] Re
a = 0.0203 [0.0050] AU
Ag = 0.39 [0.16] [-3.96σ]
Teffp = 2237 [120] K [1.92σ]

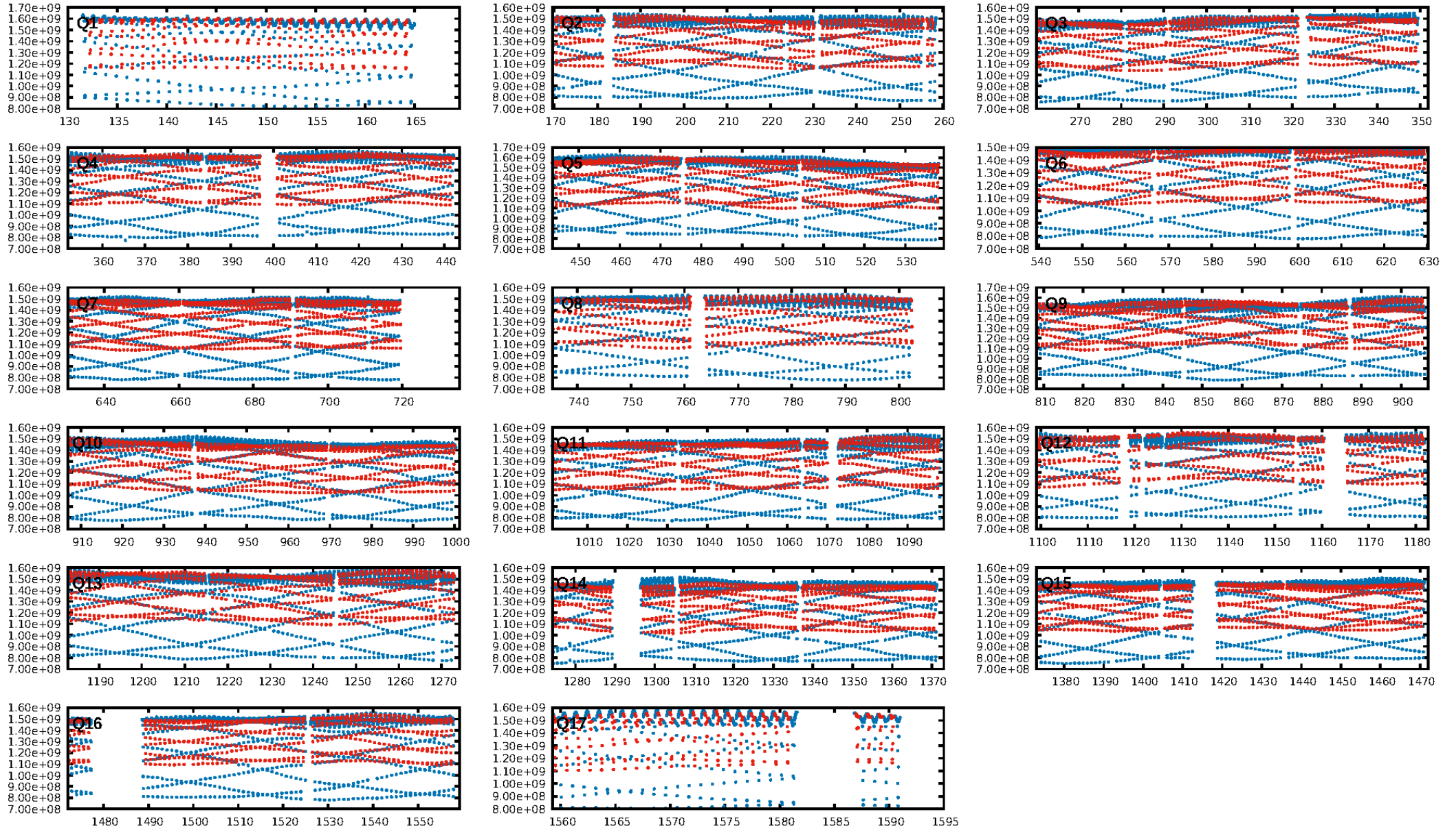
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.94 [1119/1190]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.811 arcsec [1.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 2.076 arcsec [3.37σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 1.00 [17/17]

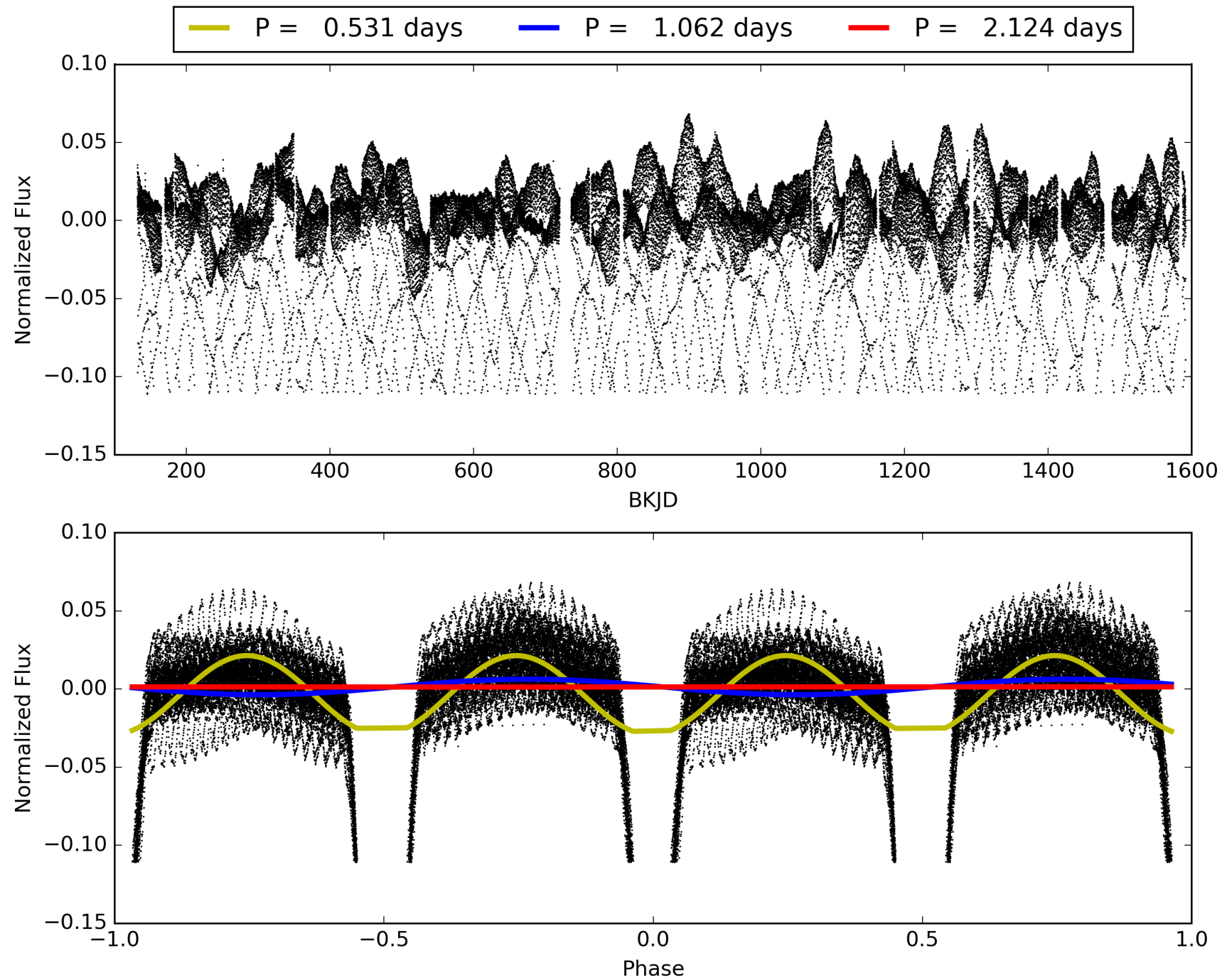
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:10:20 Z

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

TCE 008552540-02, PDC Light Curves

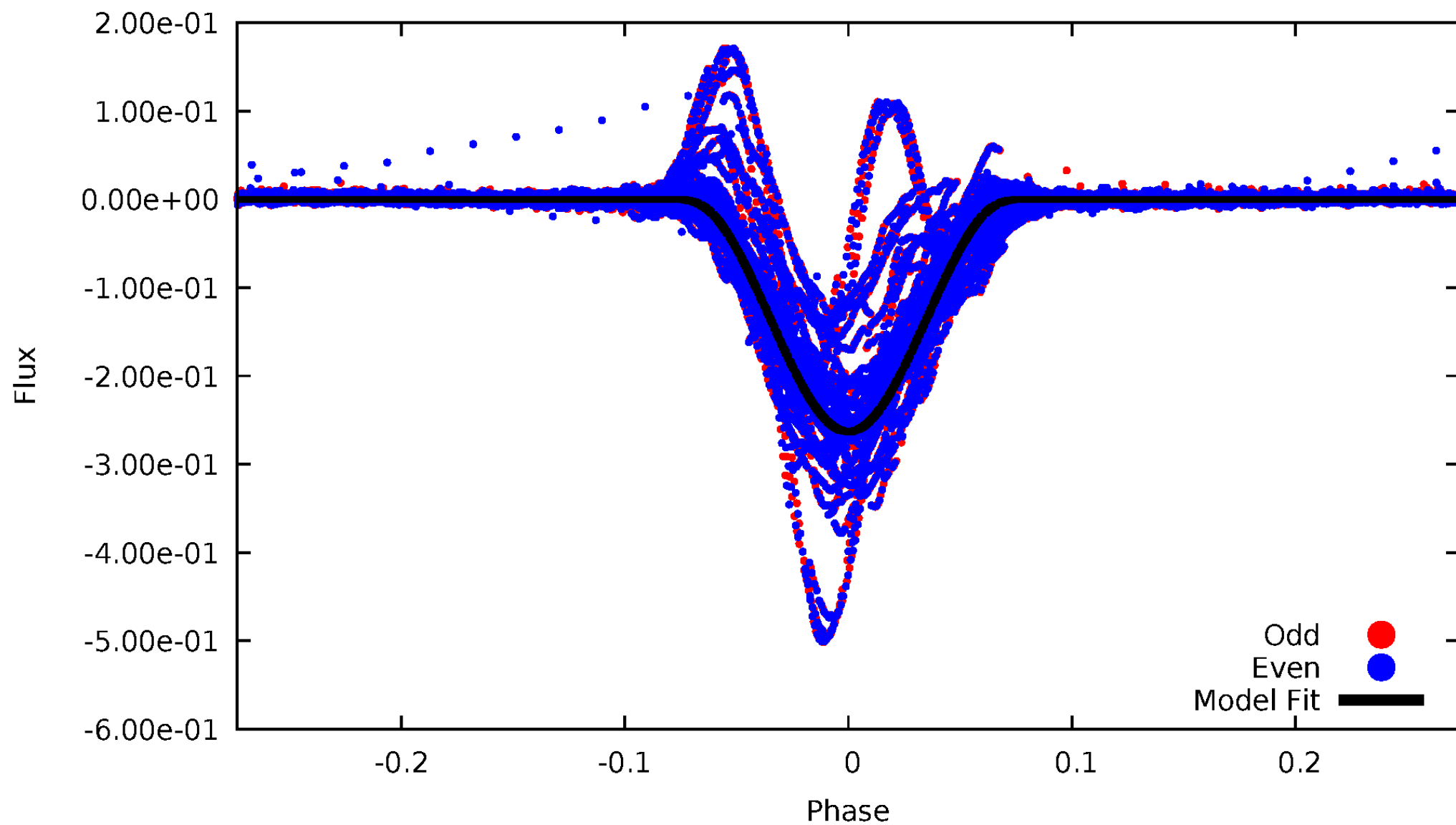


TCE 008552540-02



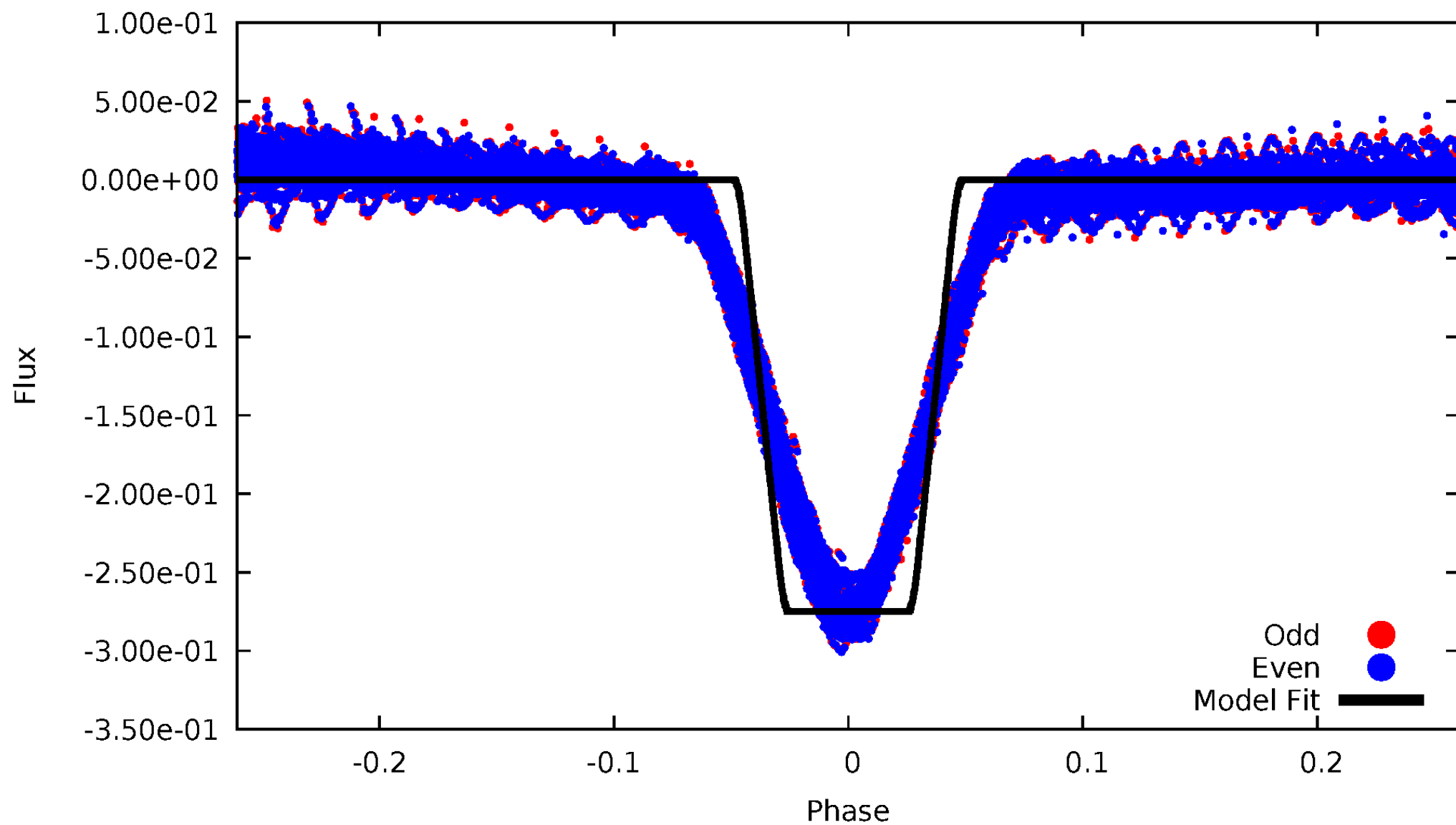
DV Odd/Even

TCE 008552540-02



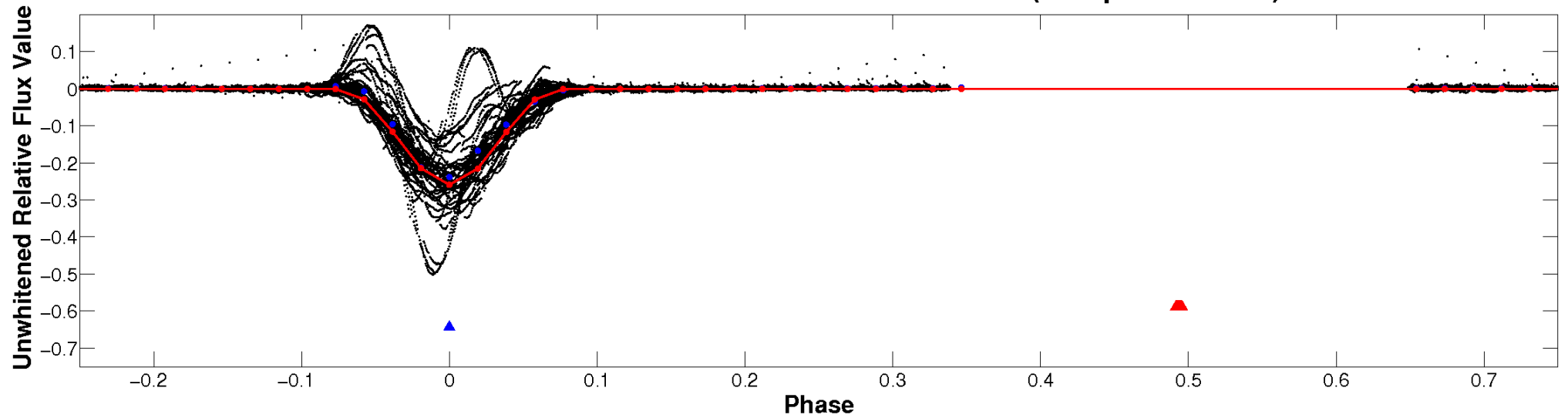
ALT Odd/Even

TCE 008552540-02

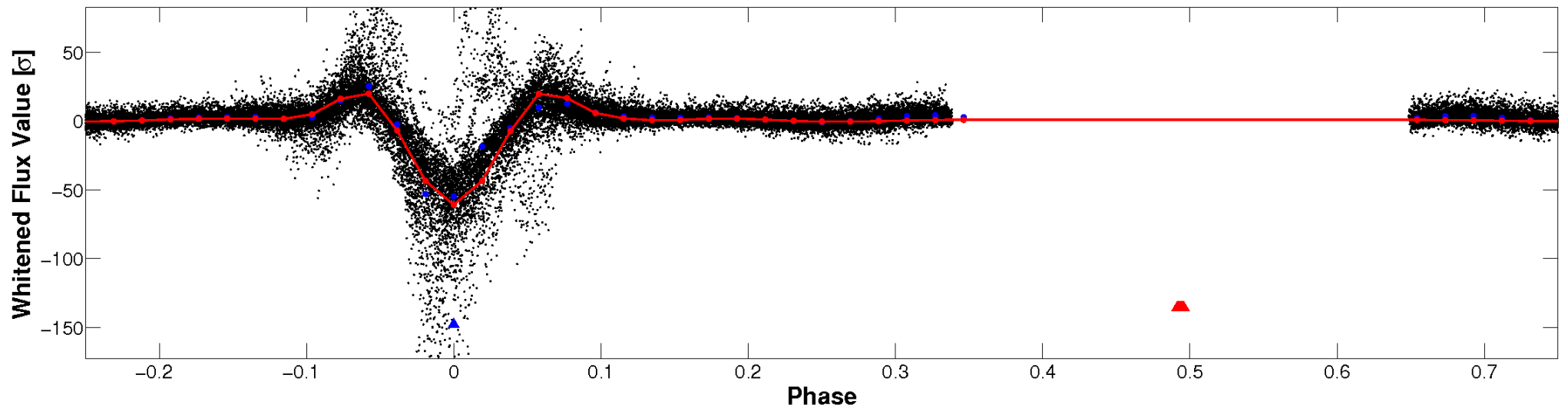


Non-Whitened Vs. Whitened Light Curve

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

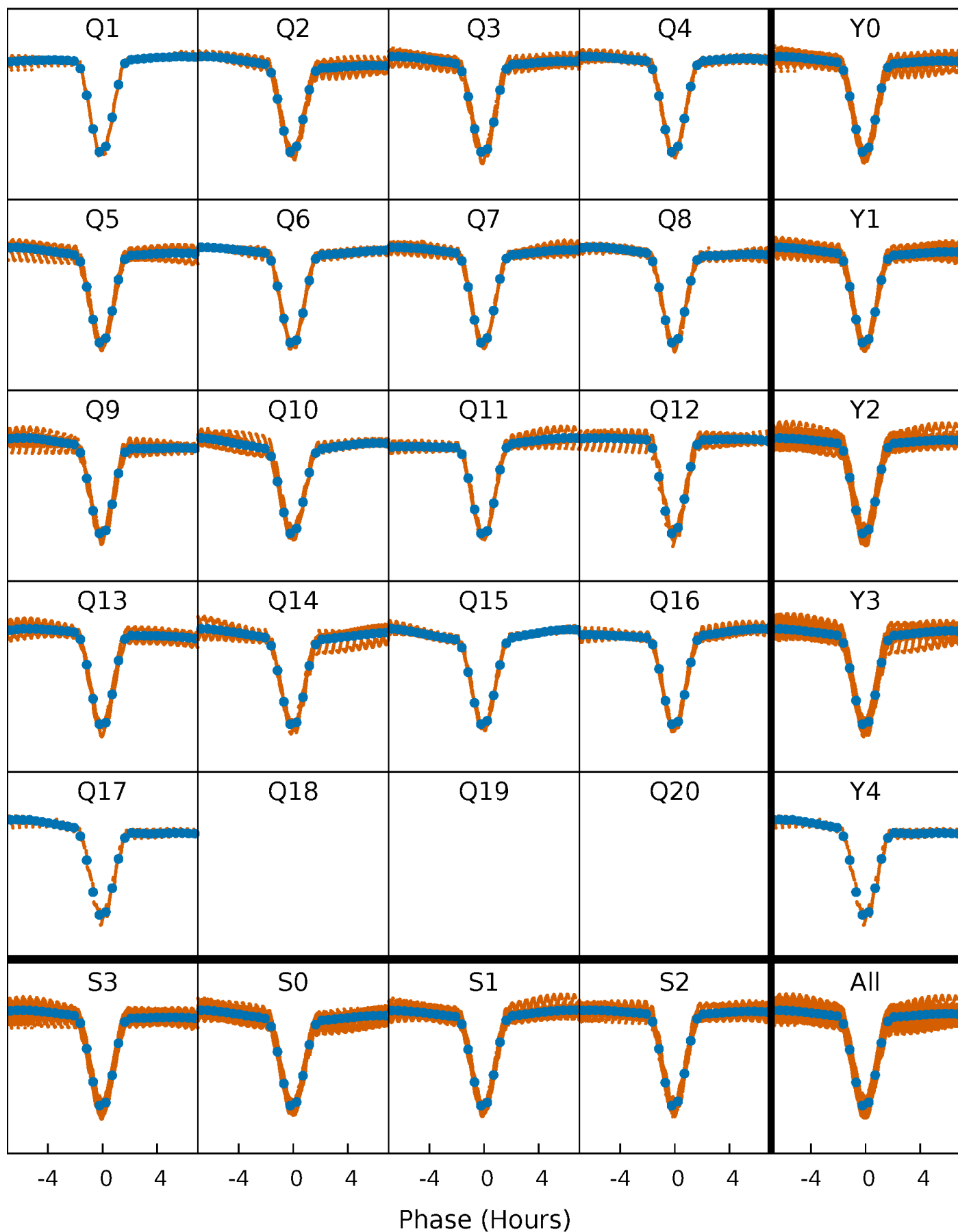


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



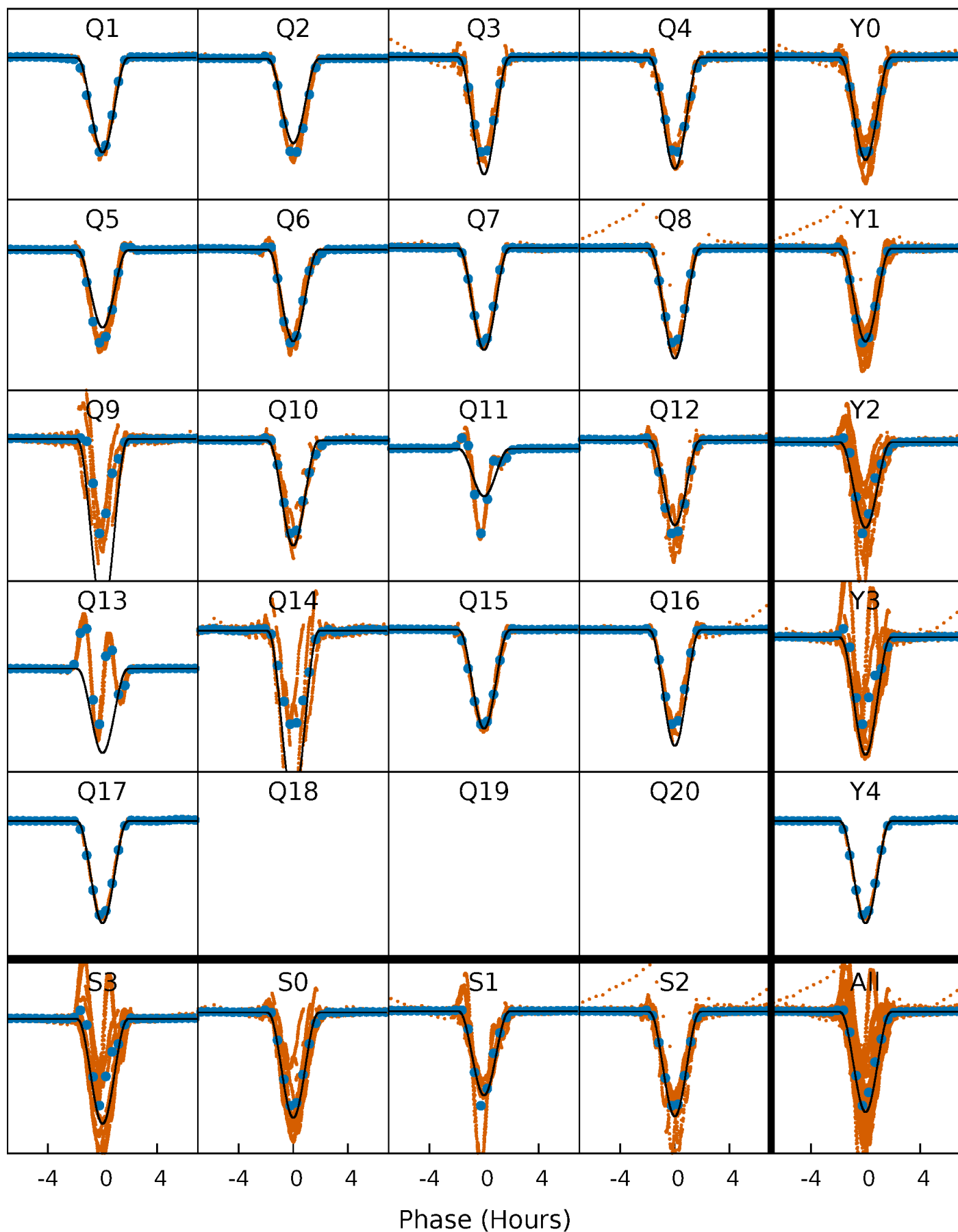
PDC Quarter-Phased Transit Curves

TCE 008552540-02 P= 1.061933 Days $T_0=132.259359$ (BKJD)



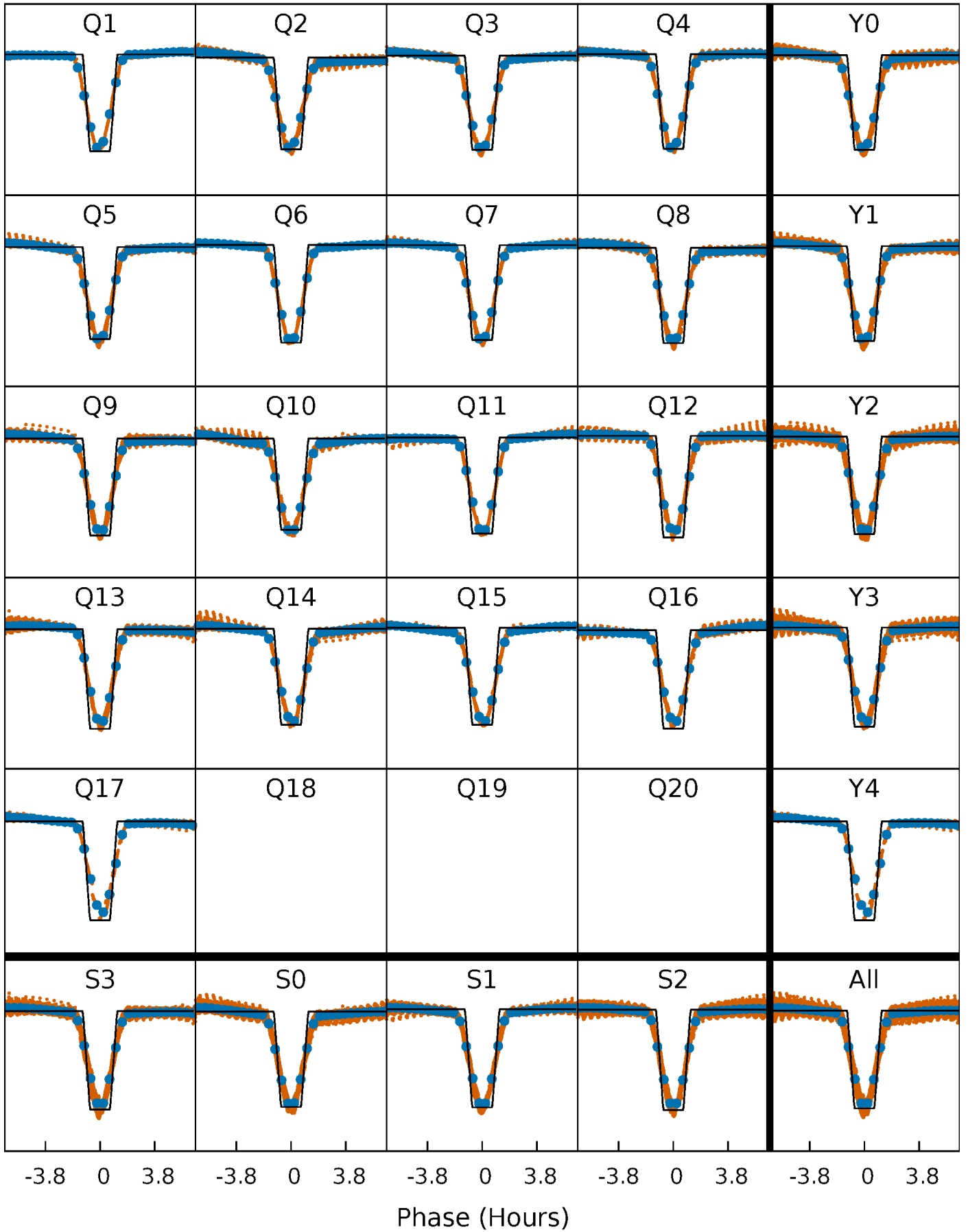
DV Quarter-Phased Transit Curves

TCE 008552540-02 P= 1.061933 Days $T_0=132.259359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

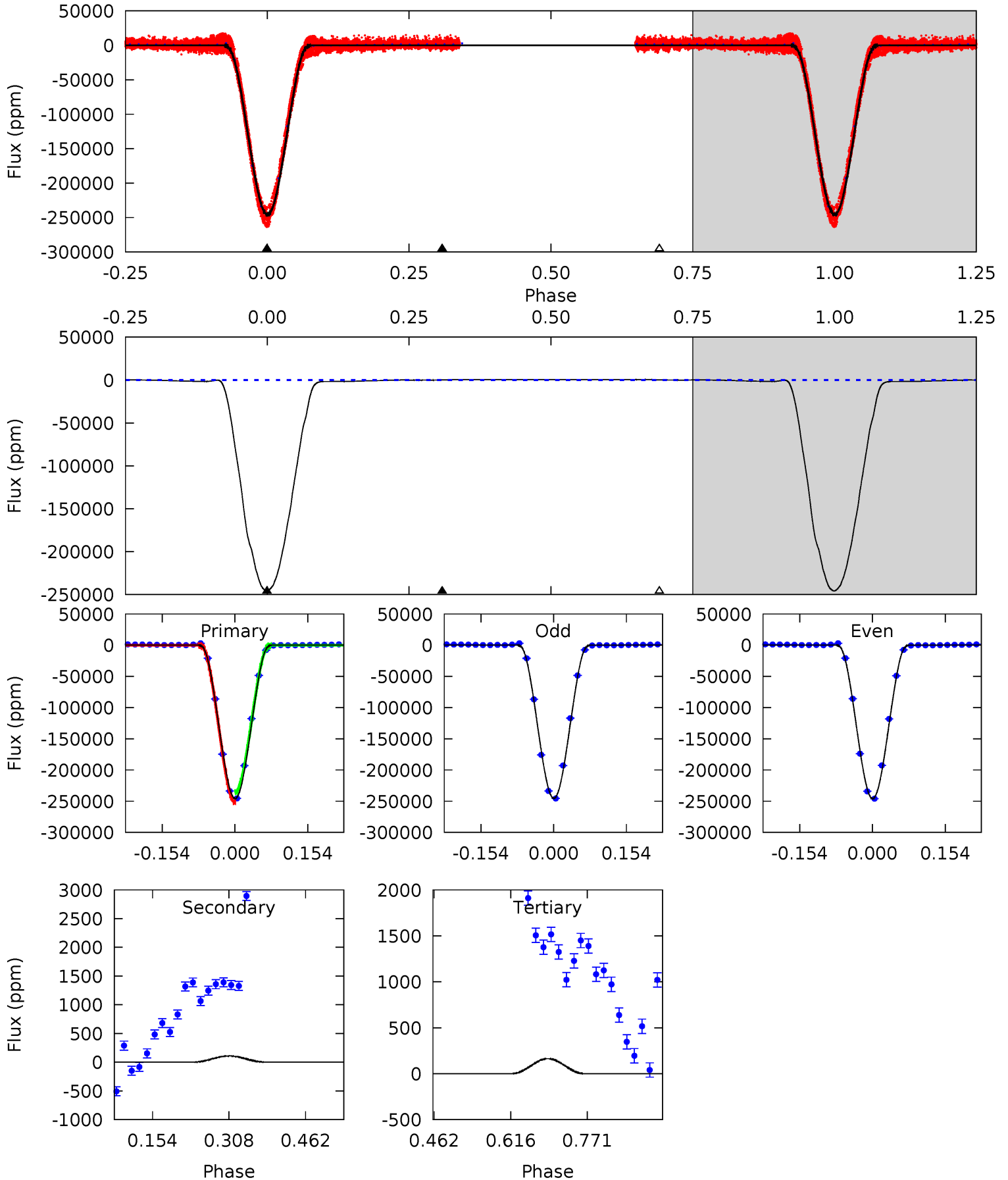
TCE 008552540-02 P= 1.061930 Days $T_0=132.259711$ (BKJD)



DV Model-Shift Uniqueness Test

008552540-02, P = 1.061933 Days, E = 131.197426 Days

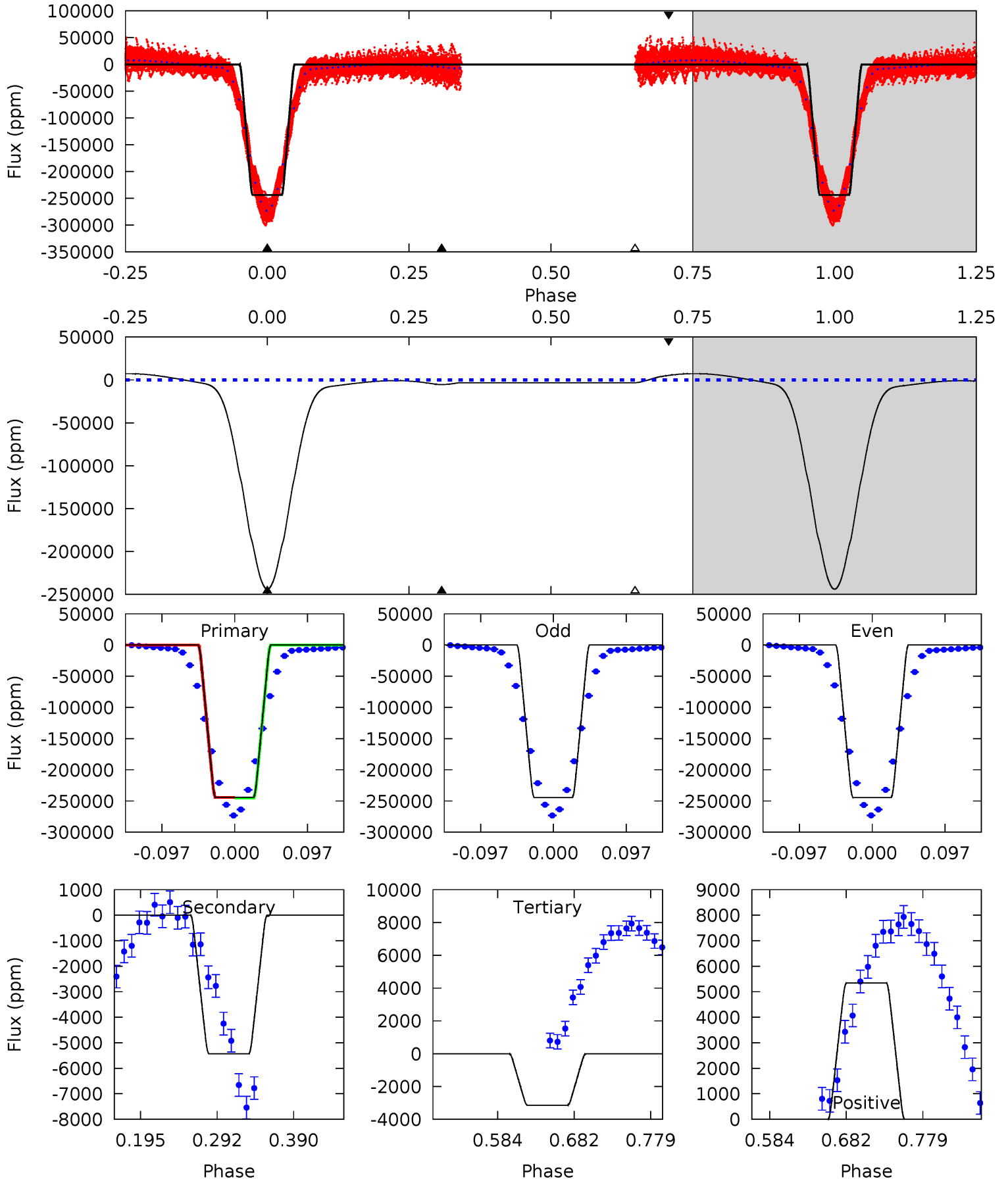
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5011	-2.21	-3.34	0	4.47	1.43	7.96	5014	5011	1.13	-2.21	5.15	0.94	0.00	0



Alt Model-Shift Uniqueness Test

008552540-02, P = 1.061930 Days, E = 131.197781 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1749	38.9	22.6	38.3	4.57	1.66	35.2	1726	1710	16.3	0.62	0.17	1.00	0.03	3.00



Stellar Parameters For KIC 008552540

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5951^{+148}_{-163}	$4.439^{+0.084}_{-0.196}$	$-0.140^{+0.300}_{-0.300}$	$0.991^{+0.288}_{-0.123}$	$0.983^{+0.134}_{-0.122}$	$1.423^{+0.524}_{-0.742}$
	+2%/-3%	+2%/-4%	+214%/-214%	+29%/-12%	+14%/-12%	+37%/-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 008552540-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	108 ± 49	$63.79^{+11.54}_{-7.87}$	2603^{+171}_{-141}	-2863^{+81}_{-100}	$-0.006^{+0.003}_{-0.004}$
Alt.	-5428 ± 139	$57.63^{+11.07}_{-7.61}$	2589^{+181}_{-135}	2359^{+272}_{-4591}	$0.367^{+0.120}_{-0.100}$

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

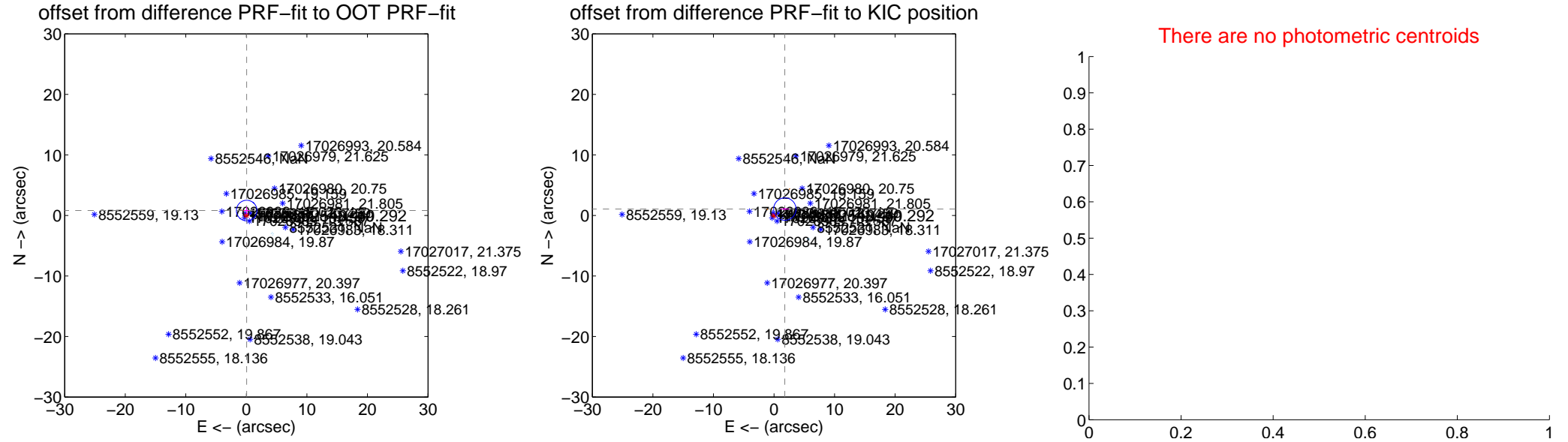
DV Centroid Data

Supplemental centroid analysis for 008552540-02. **Kepler magnitude: 10.29**. Transit SNR 2059.91

There are 4 quarters with good PRF difference image offsets

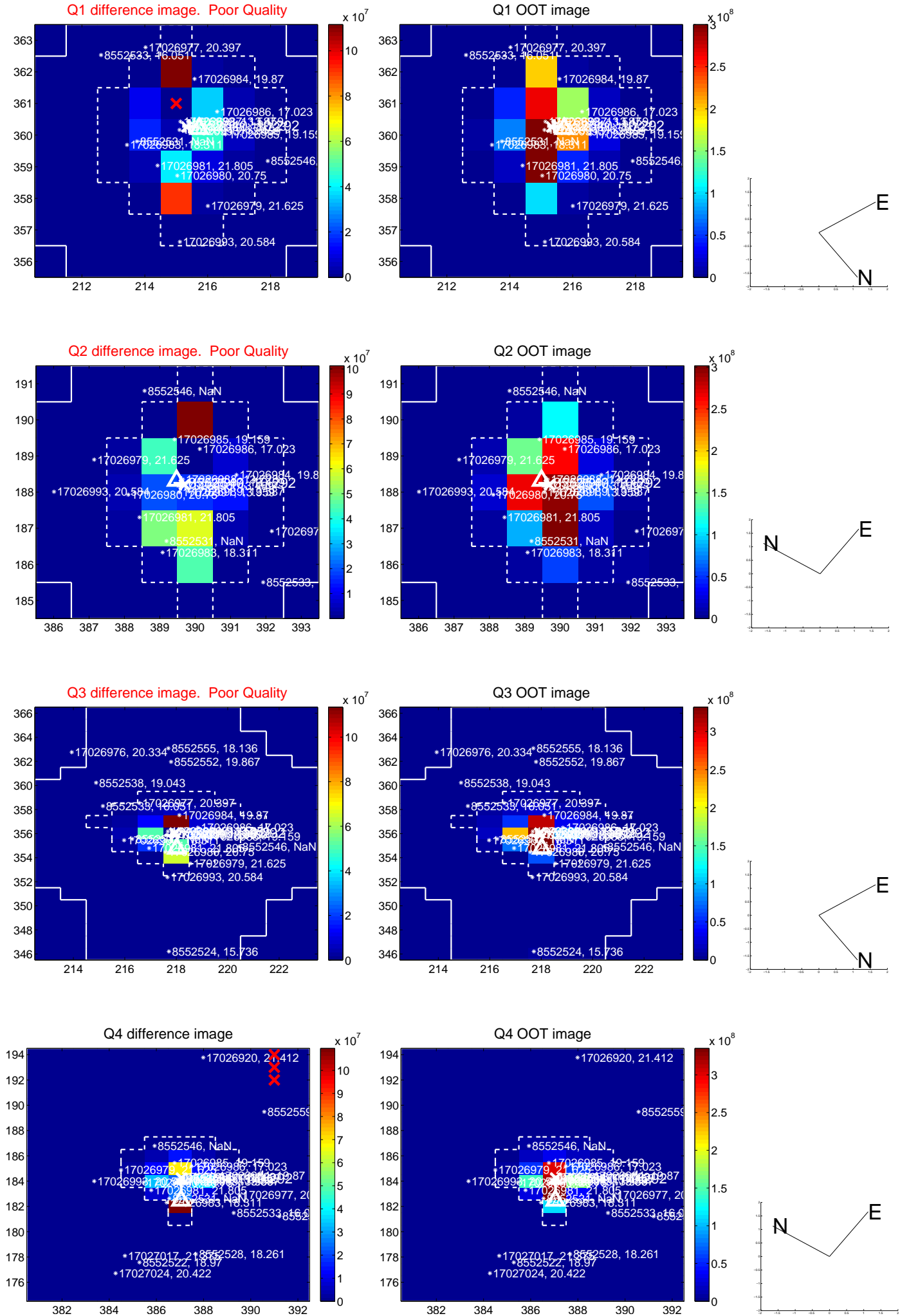
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.811 ± 0.566	1.43	-0.054 ± 0.507	0.809 ± 0.584
PRF-fit source offset from KIC position	2.076 ± 0.616	3.37	-1.789 ± 0.706	1.053 ± 0.196
photometric centroid source offset	—	—	—	—

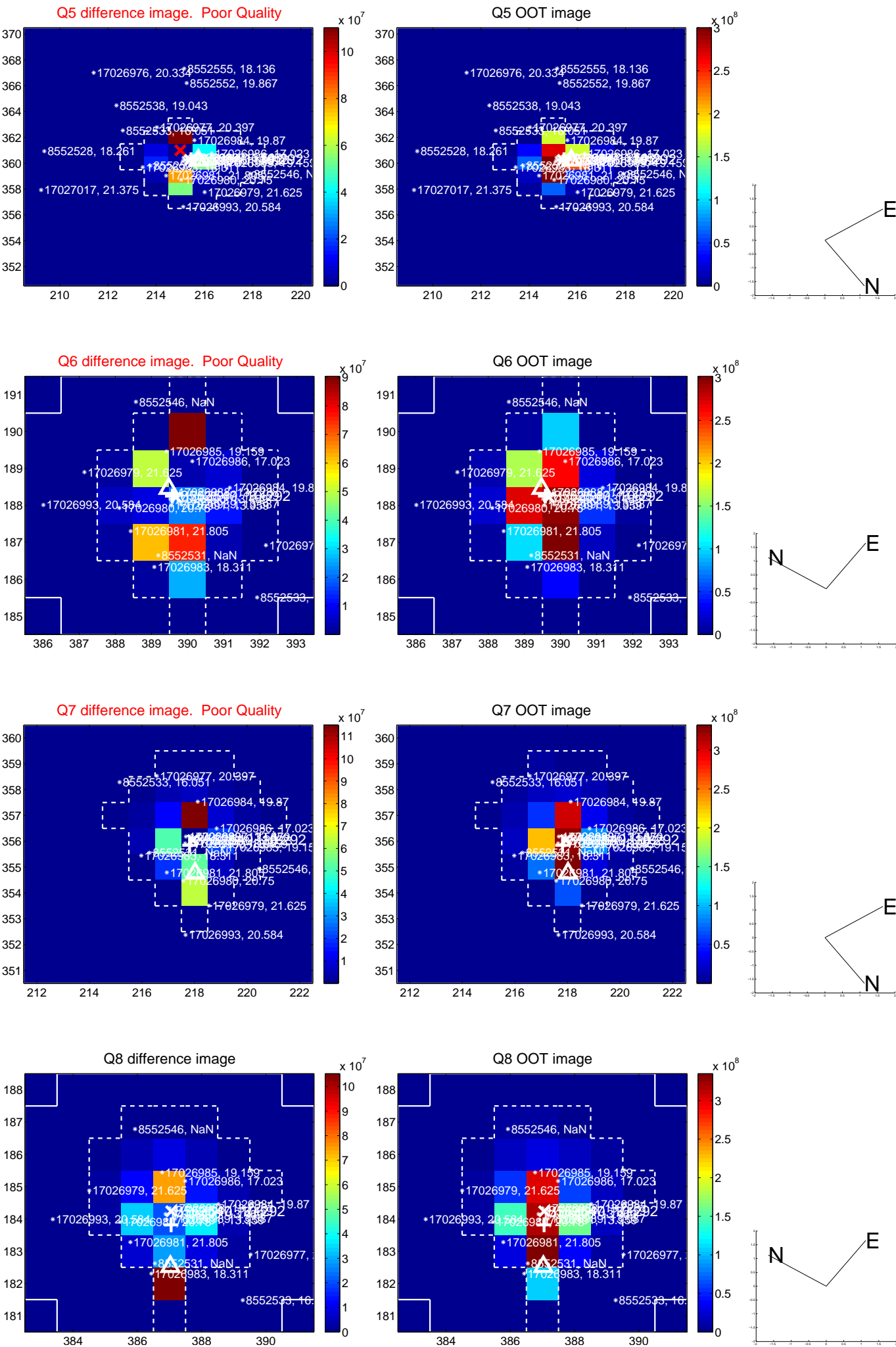


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

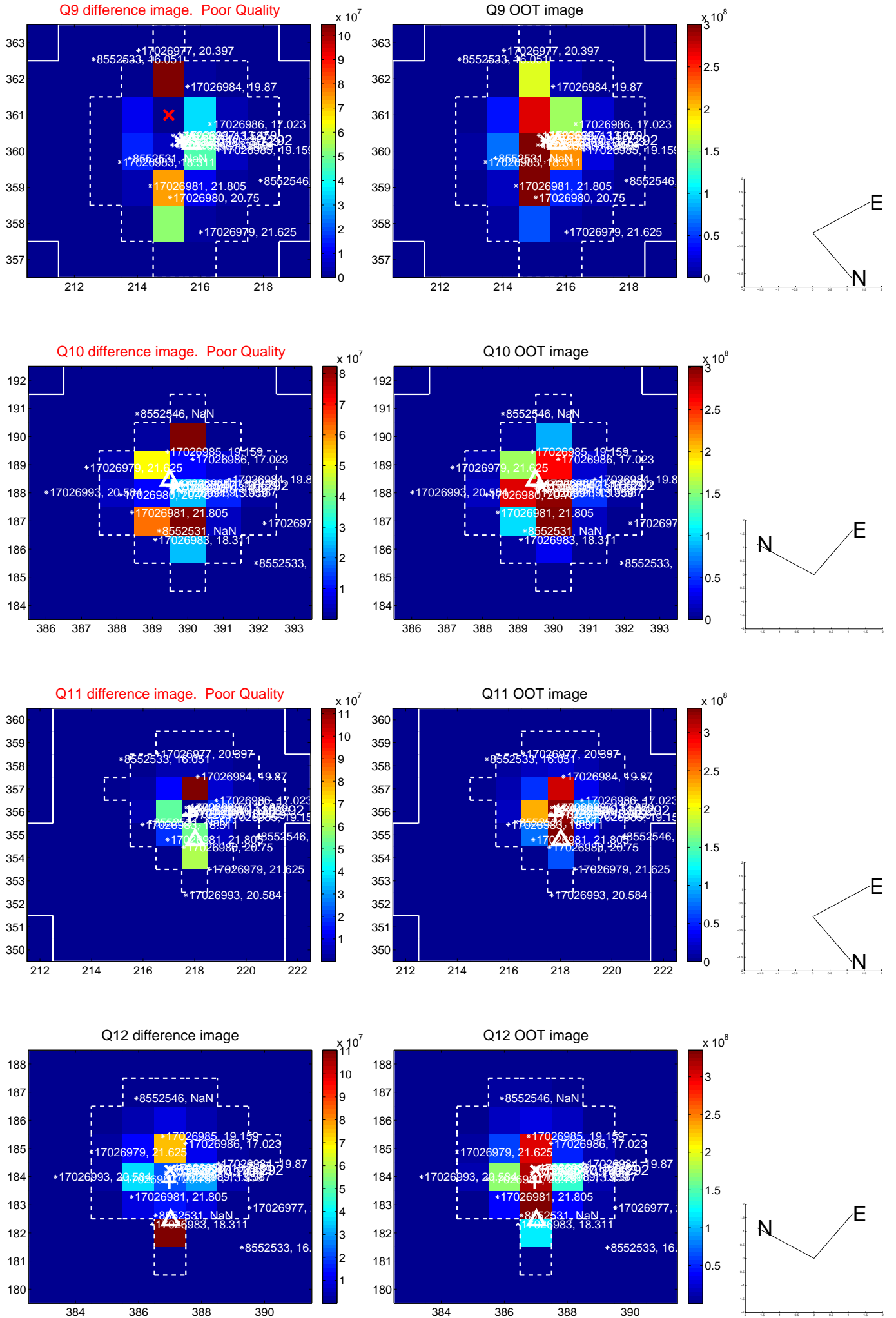
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



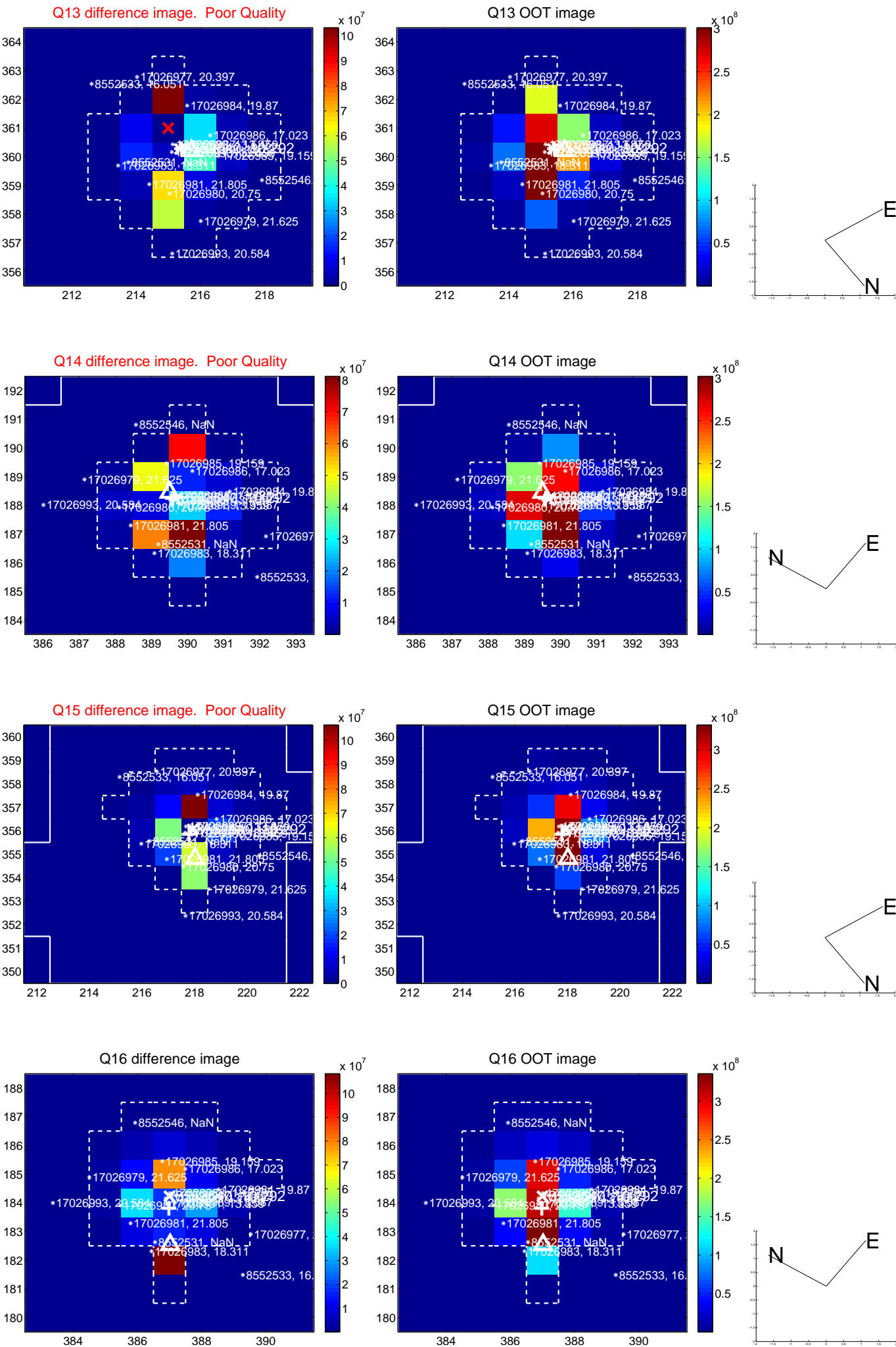
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



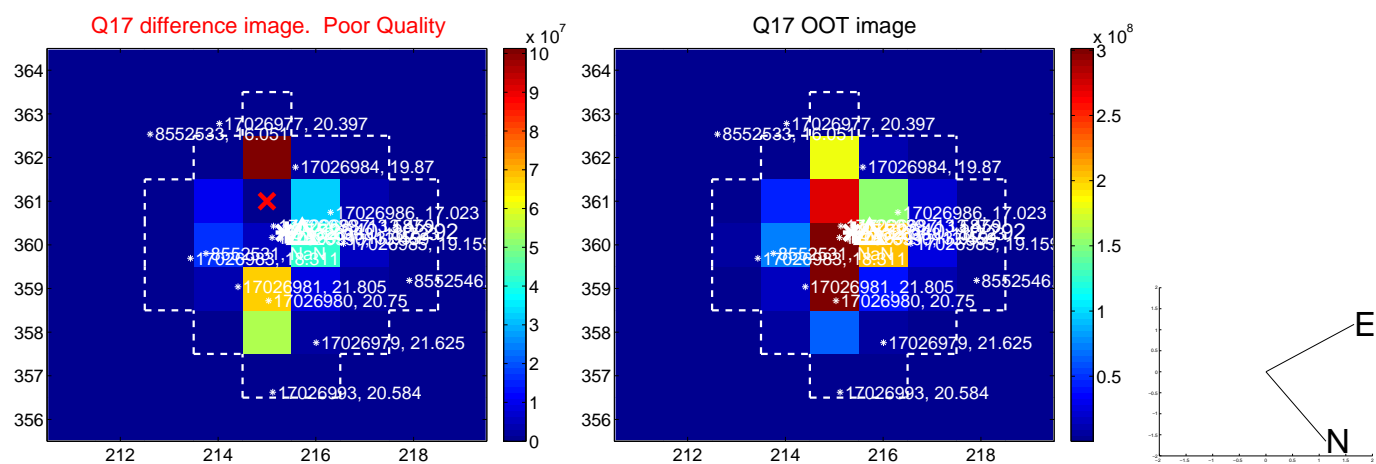
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

