

KIC 002556127

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})
002556127-01	OBS	No	0.837737	131.609049	6805.4	1.202	528.7	601.0	1.01	6152	13.77	4099.62
002556127-02	OBS	No	0.837738	132.037036	3876.1	2.500	600.1	-1.0	1.01	6152	6.29	4099.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002556127-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
002556127-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

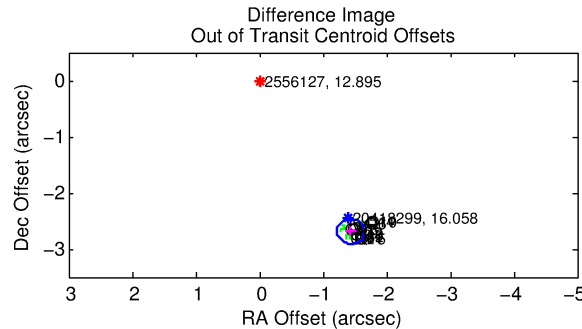
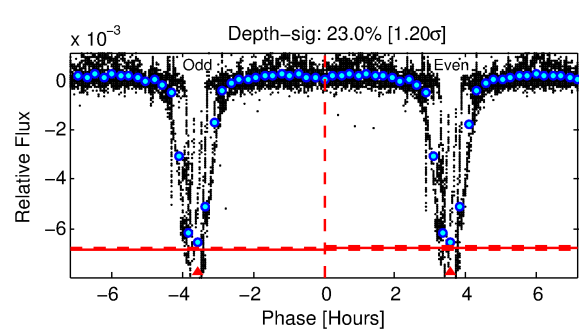
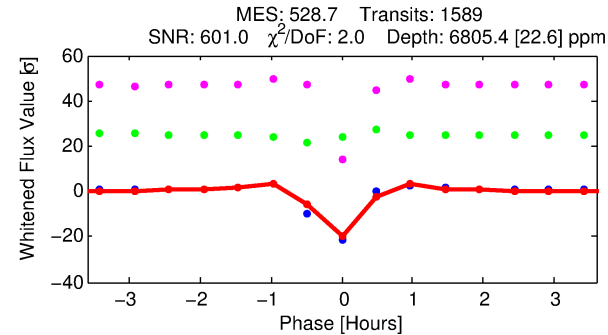
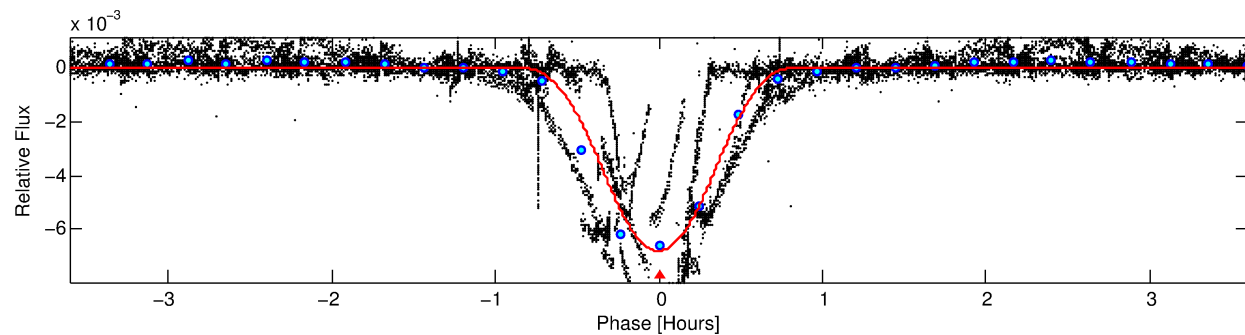
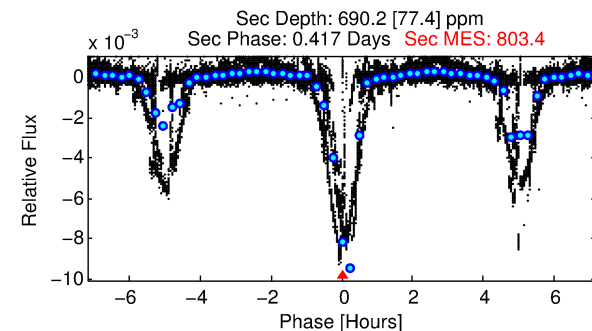
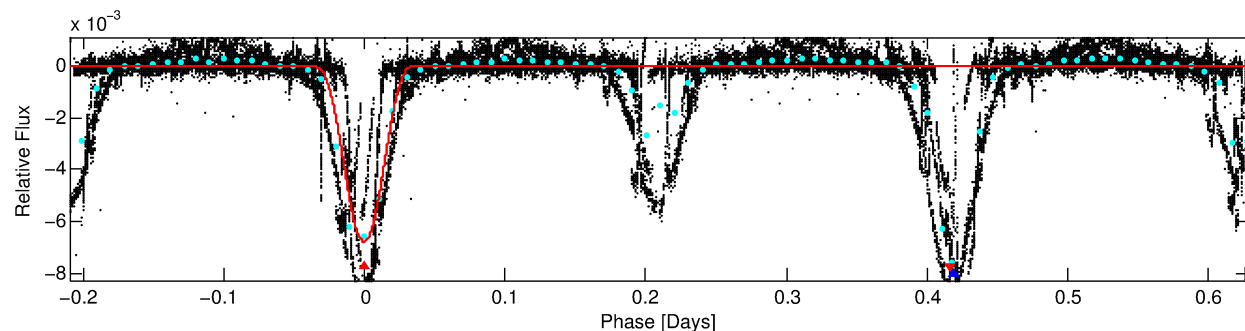
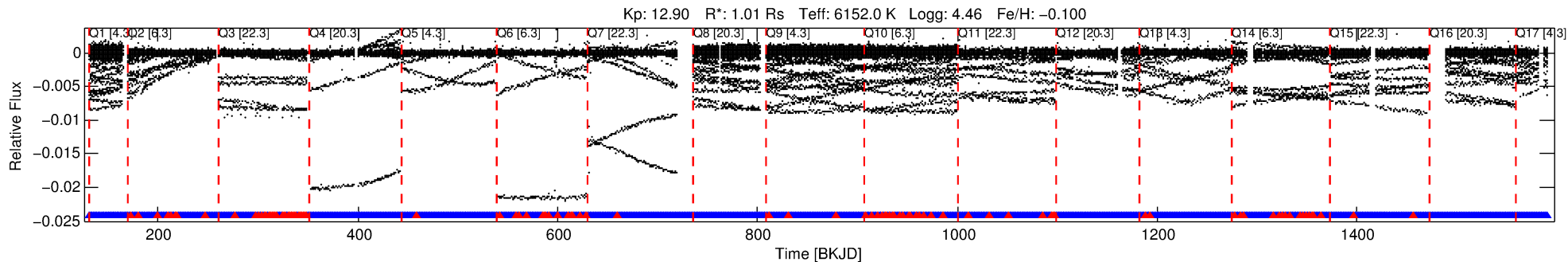
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002556127-01

No Significant Match Found

DV One-Page Summary

KIC: 2556127 Candidate: 1 of 2 Period: 0.838 d



DV Fit Results:

Period = 0.83774 [0.00000] d
Epoch = 131.6090 [0.0000] BKJD
Rp/R* = 0.1251 [0.0201]
a/R* = 3.16 [0.09]
b = 0.97 [0.03]
Seff = 4099.62 [1592.07]
Teq = 2040 [198] K
Rp = 13.77 [4.68] Re
a = 0.0179 [0.0045] AU
Ag = 0.64 [0.32] [-1.14σ]
Teffp = 2819 [256] K [2.40σ]

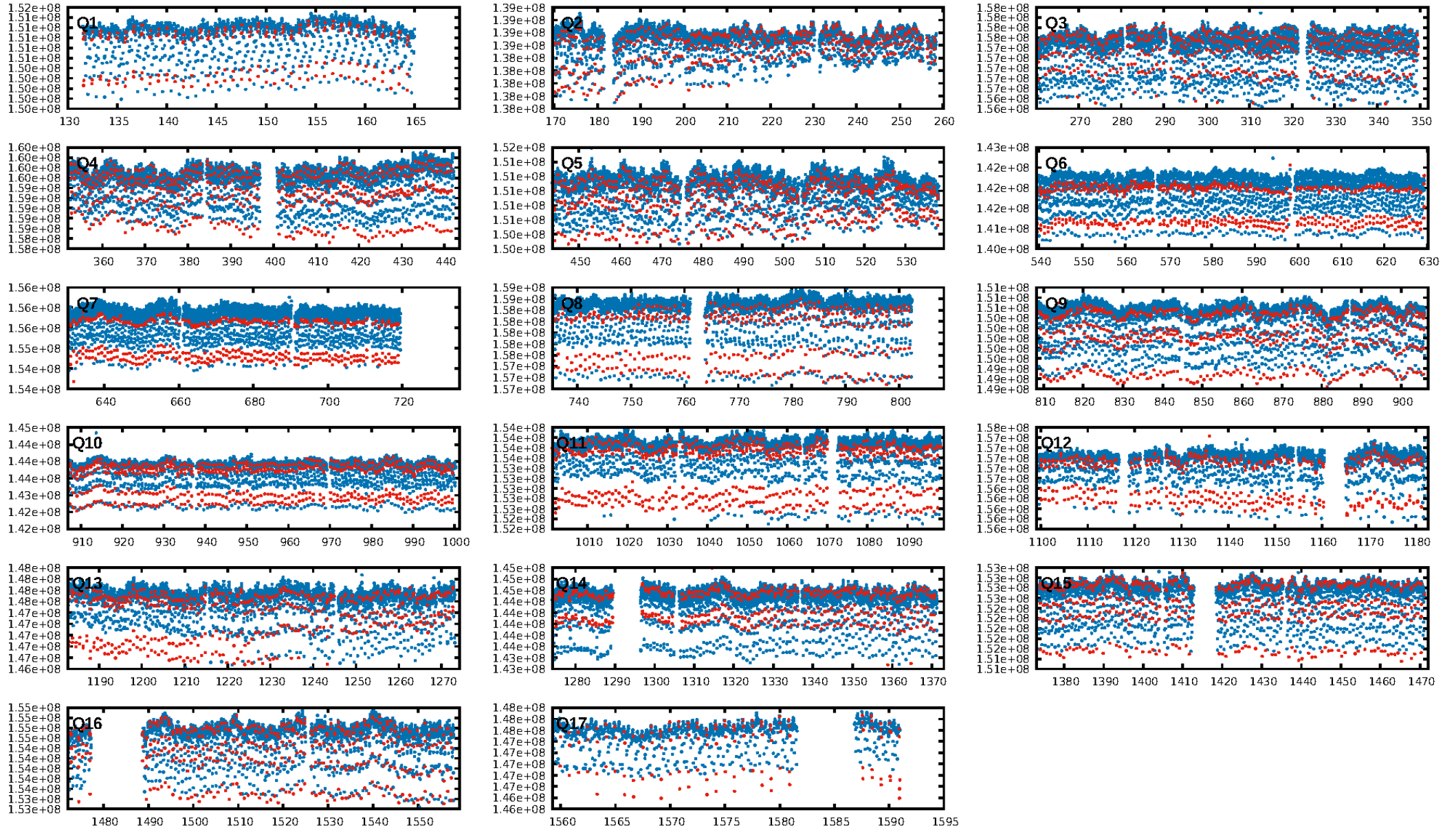
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [1404/1518]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.045 arcsec [41.78σ]
KicOffset-rm: 2.865 arcsec [39.82σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

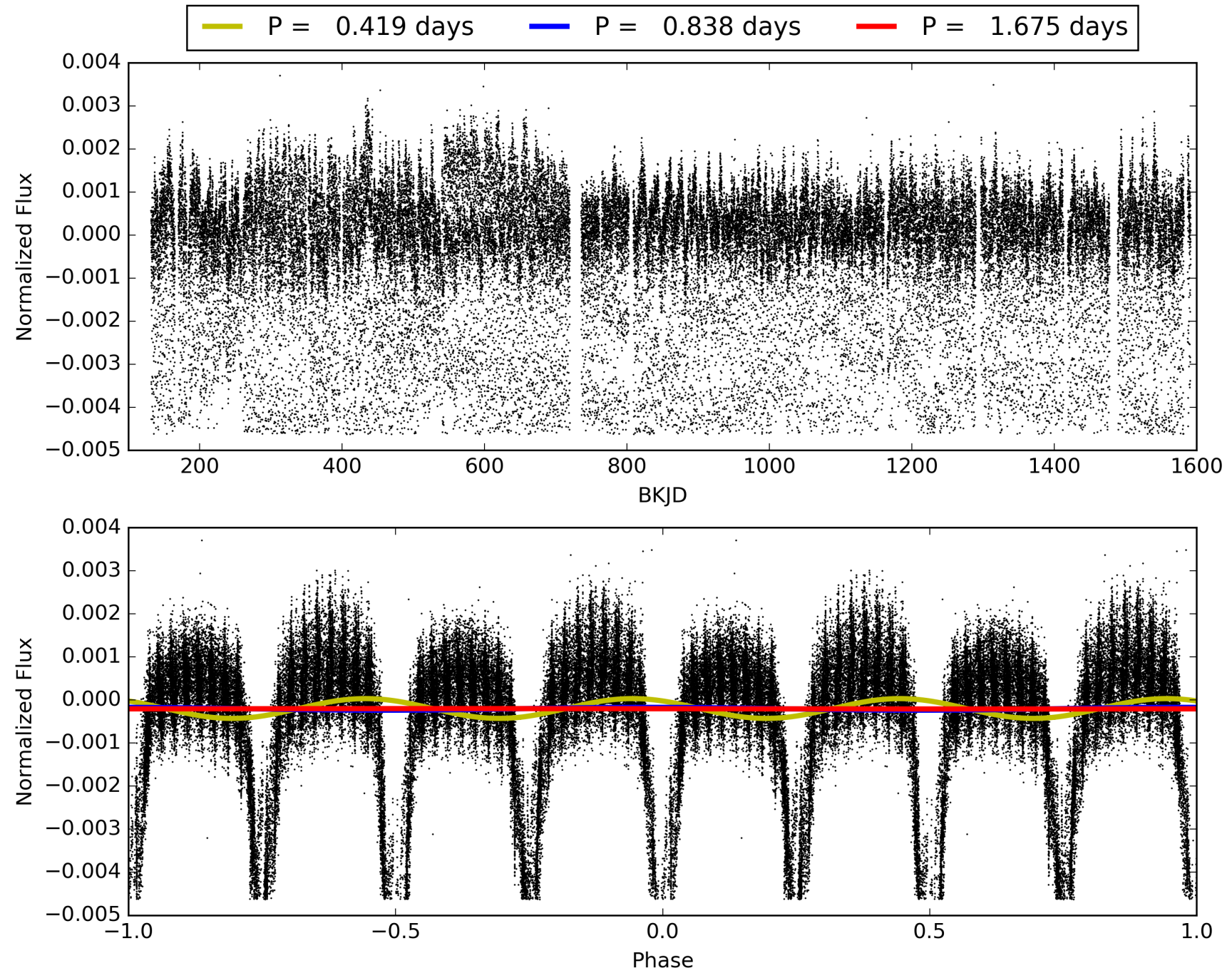
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 05:27:22 Z

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

TCE 002556127-01, PDC Light Curves

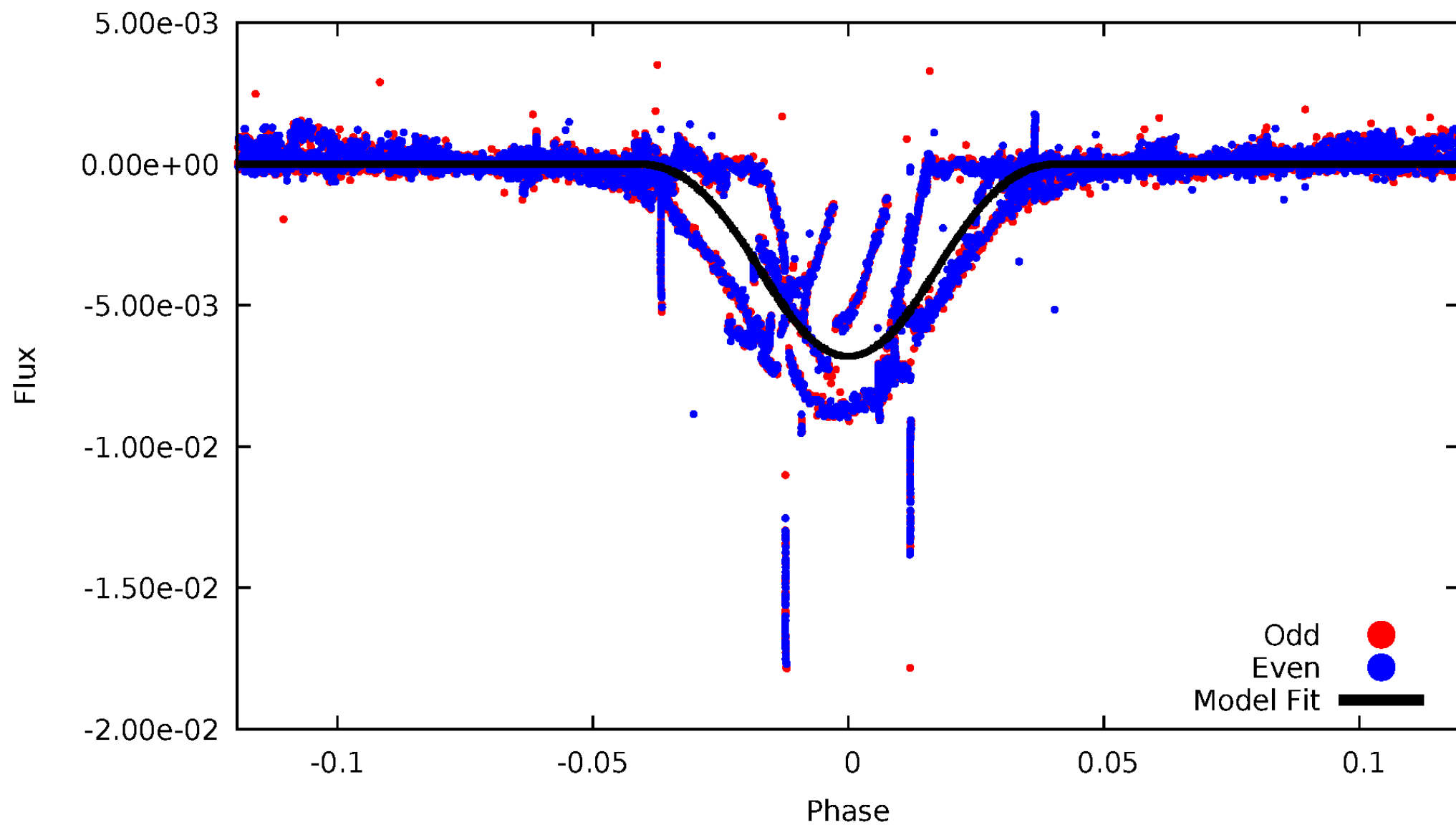


TCE 002556127-01



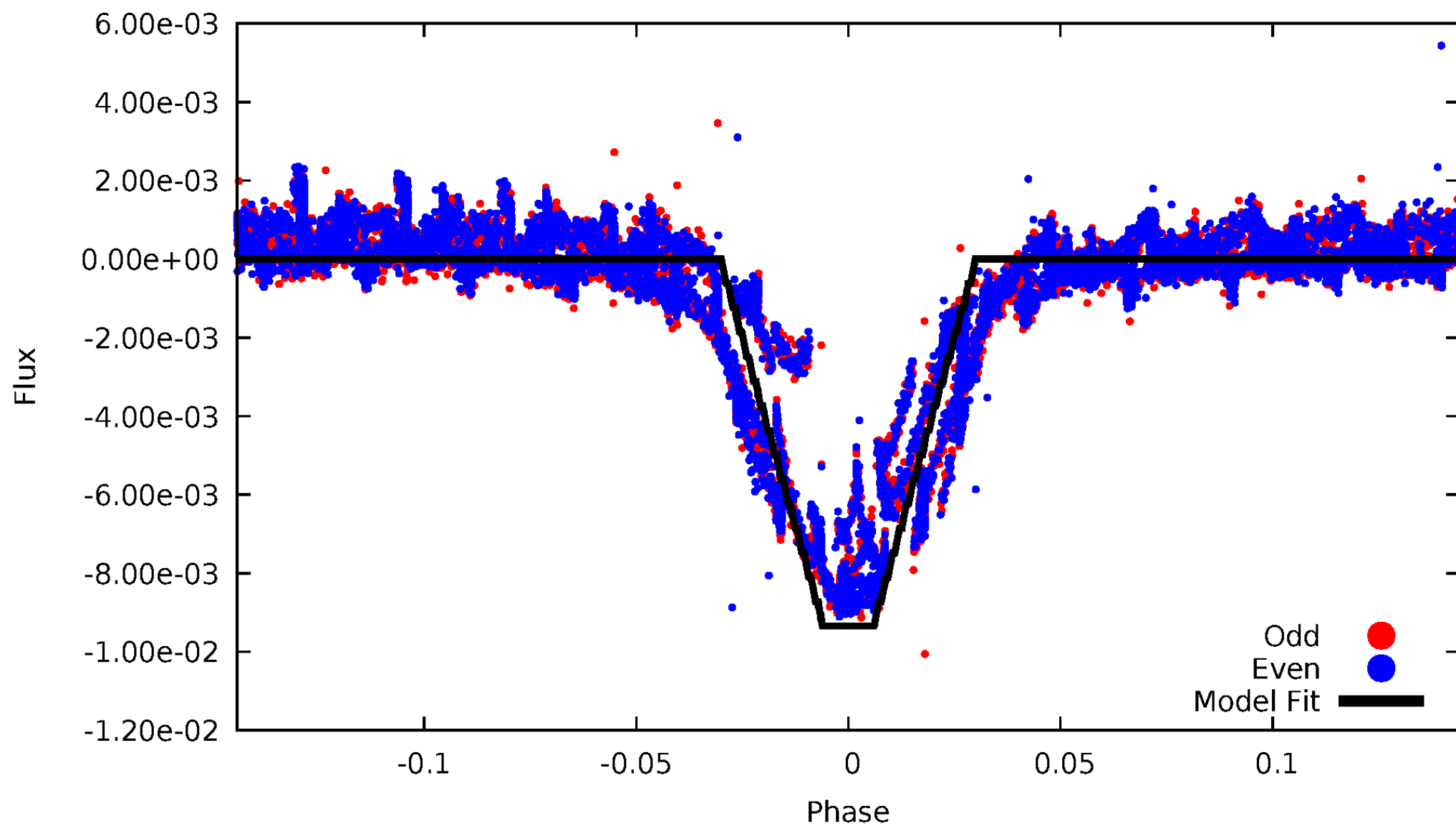
DV Odd/Even

TCE 002556127-01



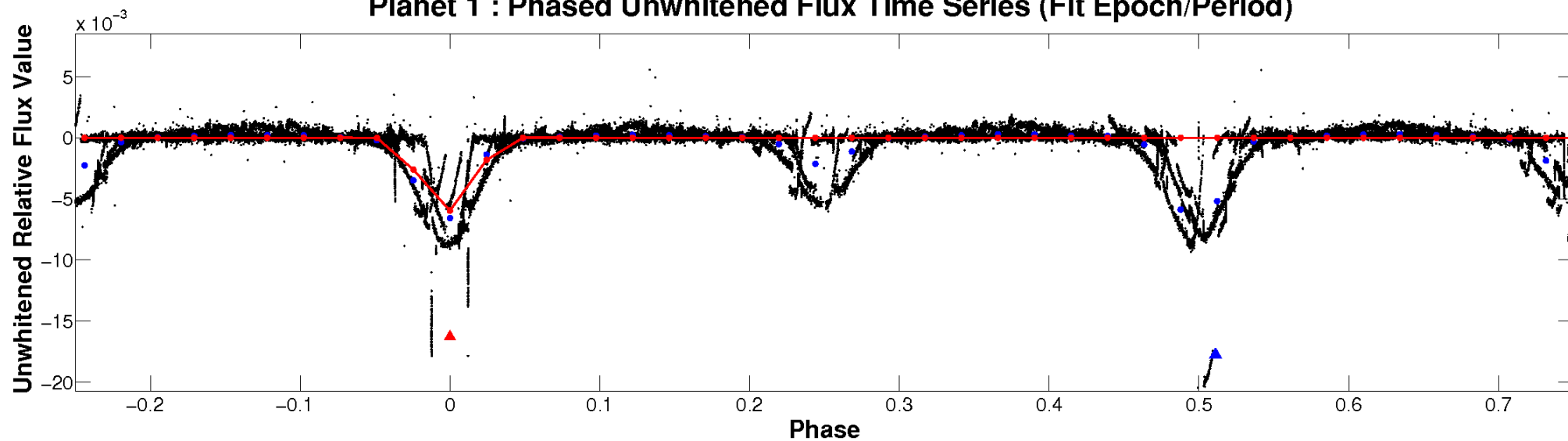
ALT Odd/Even

TCE 002556127-01

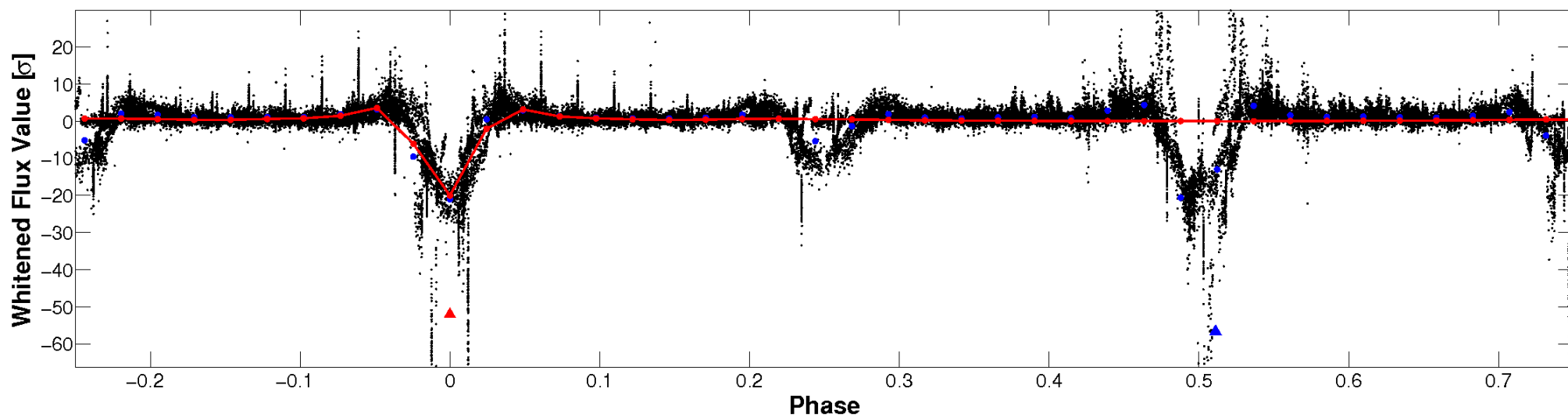


Non-Whitened Vs. Whitened Light Curve

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

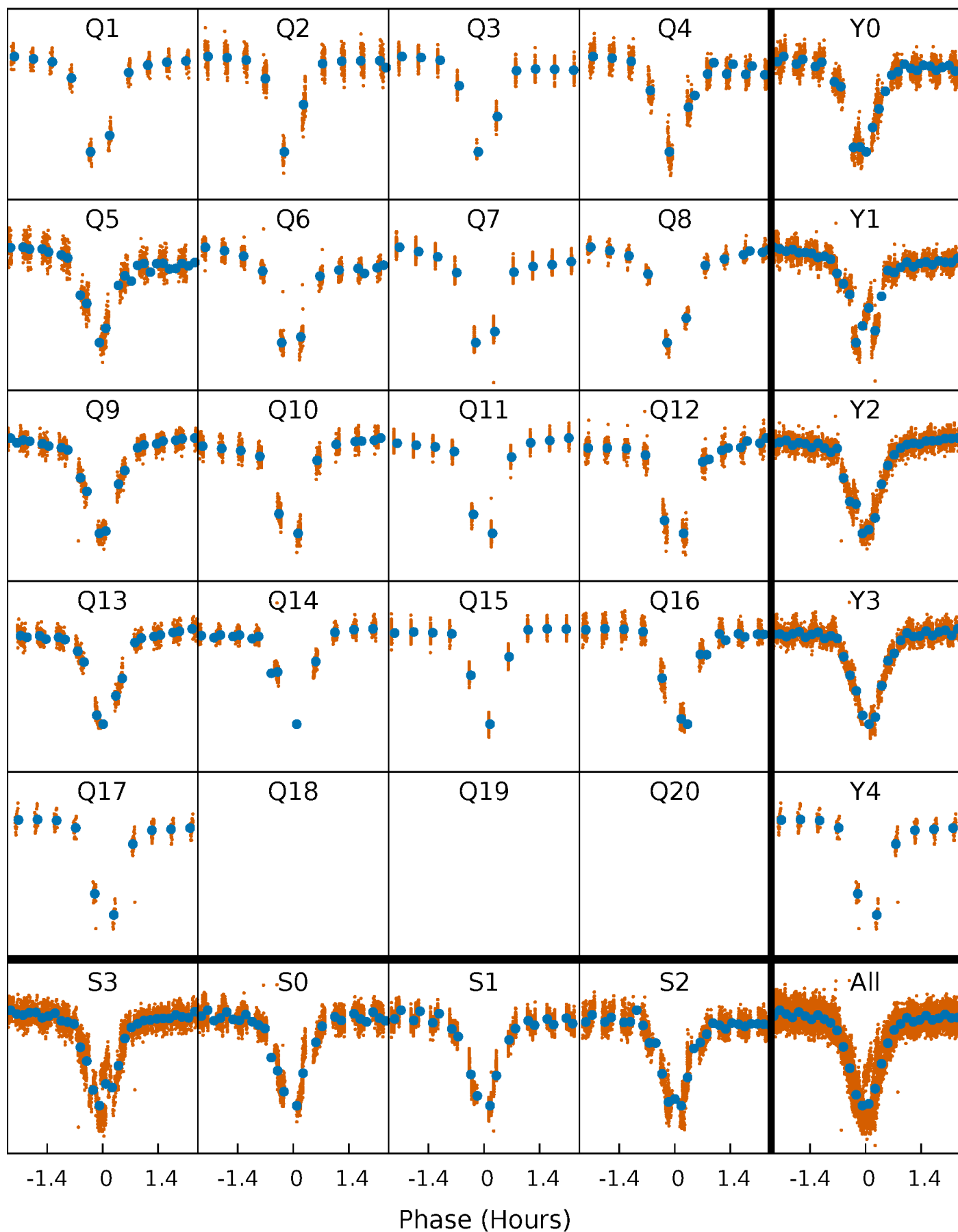


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



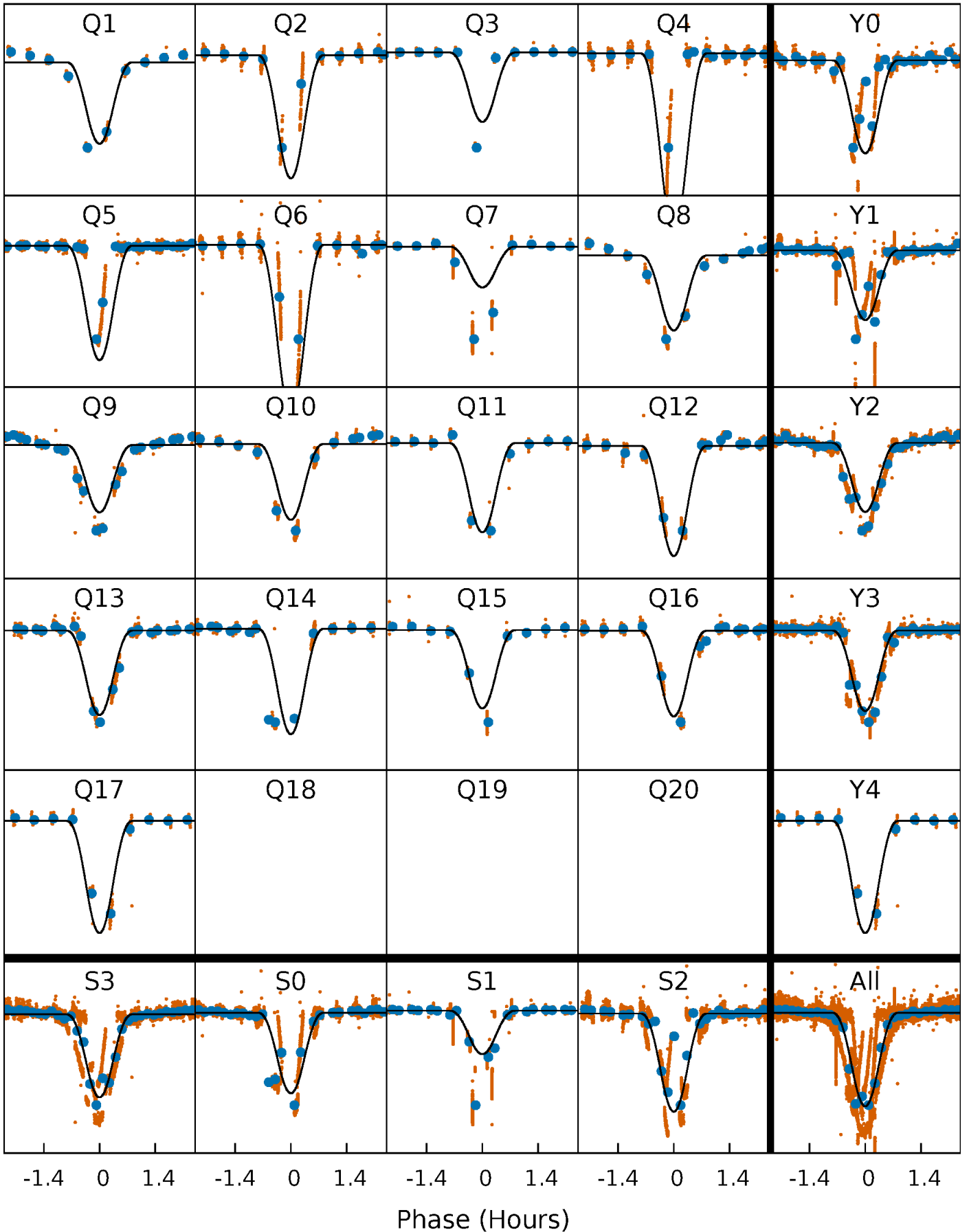
PDC Quarter-Phased Transit Curves

TCE 002556127-01 P= 0.837737 Days $T_0=131.609049$ (BKJD)



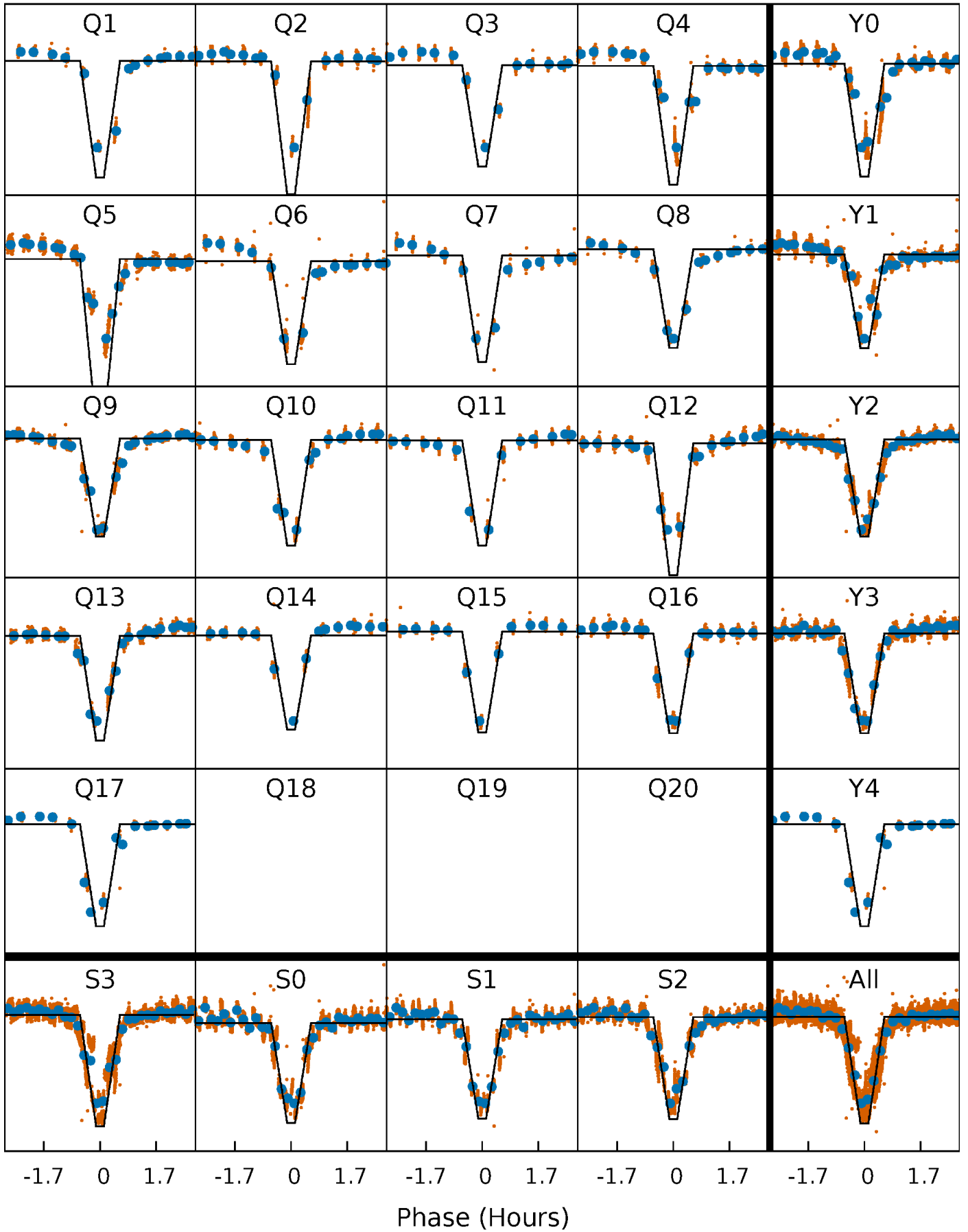
DV Quarter-Phased Transit Curves

TCE 002556127-01 P= 0.837737 Days $T_0=131.609049$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

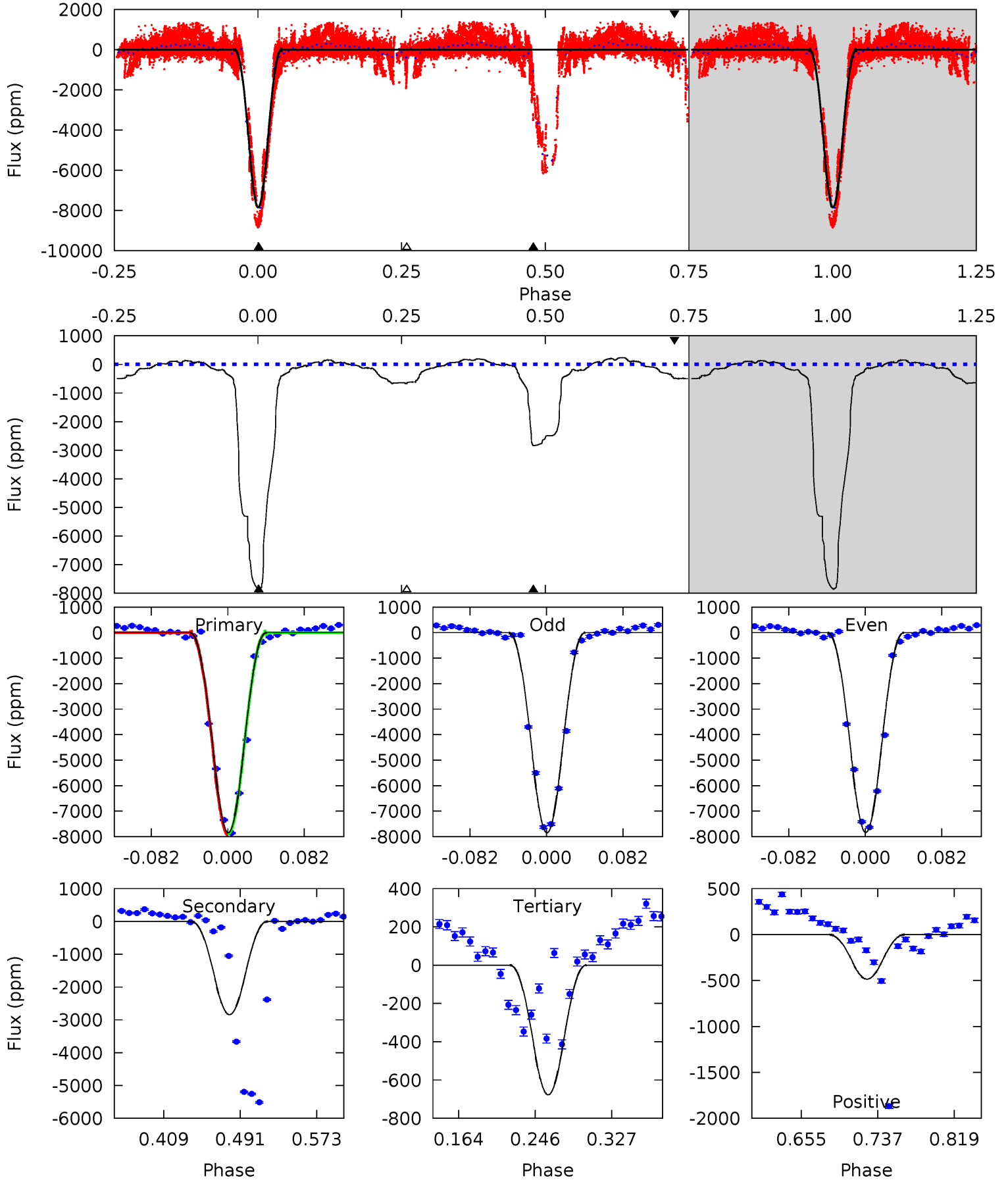
TCE 002556127-01 P= 0.837749 Days $T_0=131.596907$ (BKJD)



DV Model-Shift Uniqueness Test

002556127-01, P = 0.837737 Days, E = 130.771312 Days

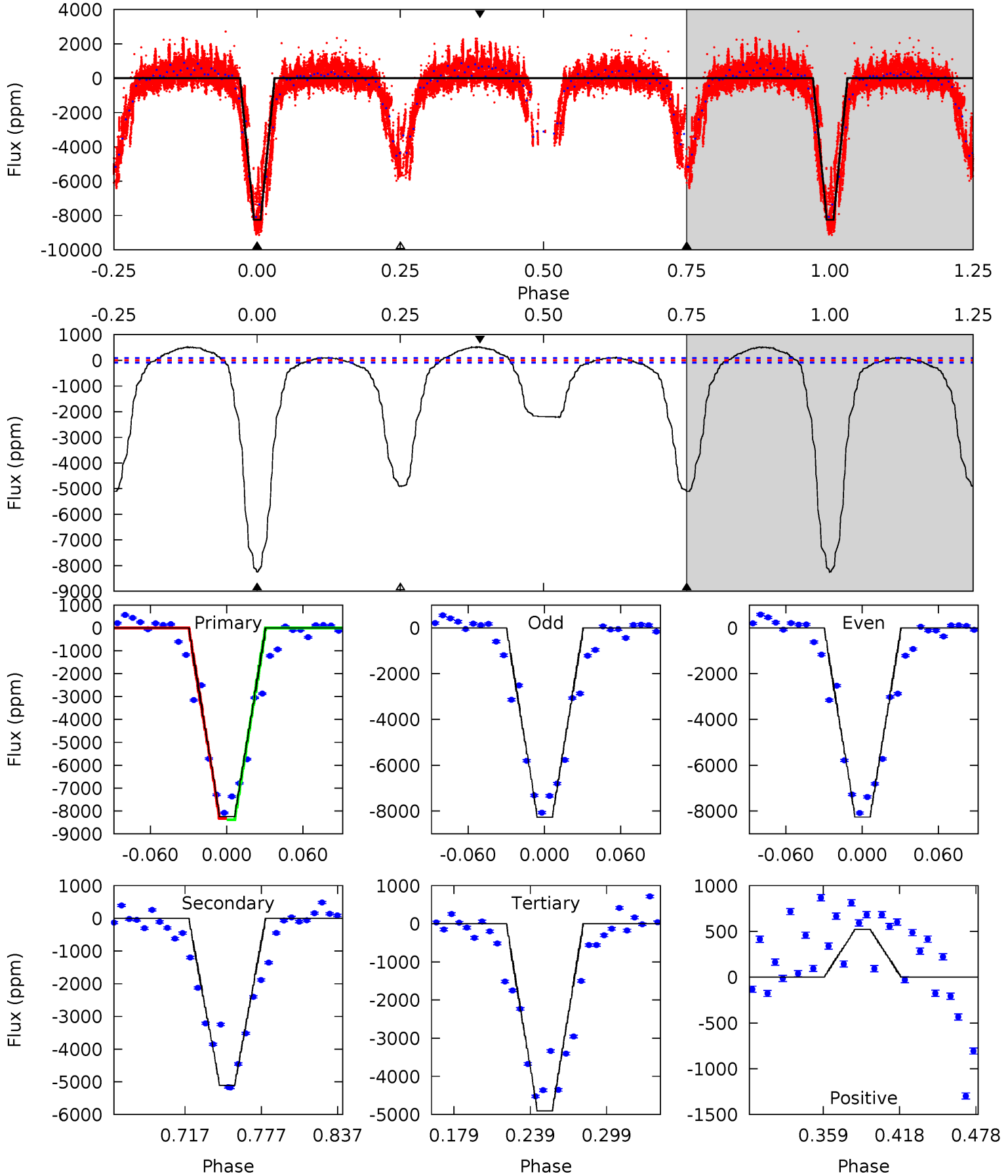
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1243	450.0	107.3	-76.9	4.61	1.74	32.6	1135	1319	342.7	526.8	1.15	0.97	0.03	4.10



Alt Model-Shift Uniqueness Test

002556127-01, P = 0.837749 Days, E = 130.759158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
433.4	268.3	257.5	27.5	4.67	1.88	60.4	175.9	405.9	10.8	240.8	0.20	0.95	0.06	1.00



Stellar Parameters For KIC 002556127

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6152^{+153}_{-199}	$4.464^{+0.050}_{-0.200}$	$-0.100^{+0.250}_{-0.300}$	$1.009^{+0.302}_{-0.108}$	$1.079^{+0.139}_{-0.153}$	$1.480^{+0.399}_{-0.753}$
	+2%/-3%	+1%/-4%	+250%/-300%	+30%/-11%	+13%/-14%	+27%/-51%
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 002556127-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2840 ± 6	$14.32^{+2.81}_{-2.53}$	2906^{+199}_{-133}	4160^{+355}_{-278}	$2.391^{+1.142}_{-0.708}$
Alt.	-5107 ± 19	$11.14^{+2.74}_{-2.60}$	2901^{+203}_{-138}	5277^{+624}_{-463}	$7.200^{+4.761}_{-2.540}$

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

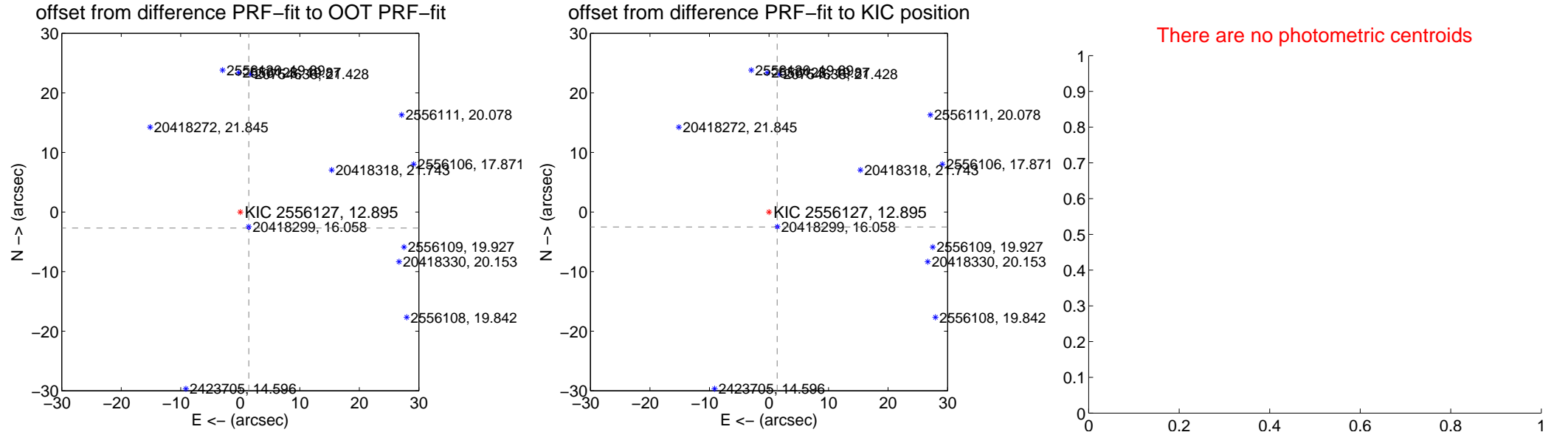
DV Centroid Data

Supplemental centroid analysis for 002556127-01. Kepler magnitude: 12.89. Transit SNR 601.00

There are 17 quarters with good PRF difference image offsets

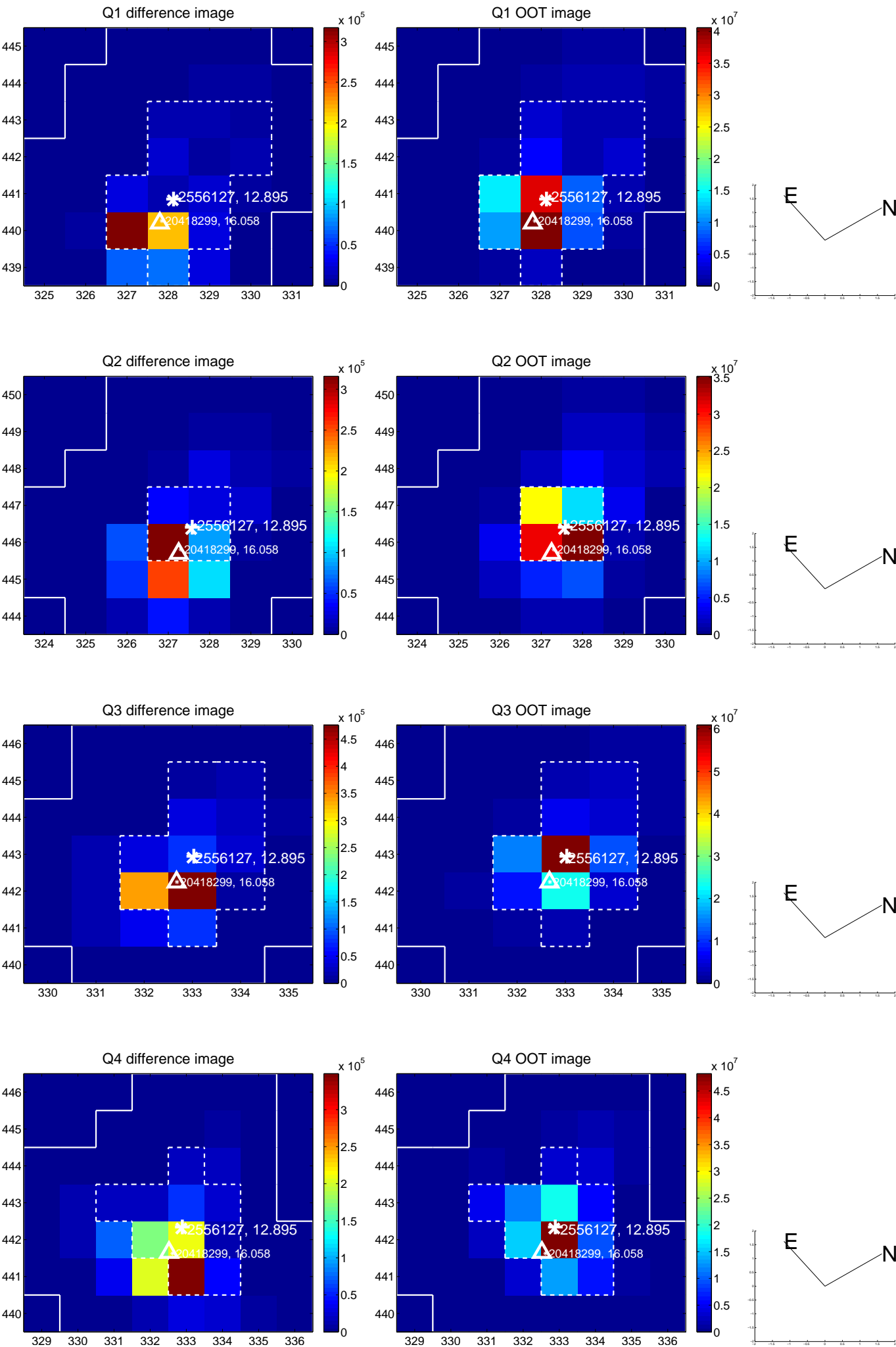
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.045 ± 0.073	41.78	-1.431 ± 0.074	-2.688 ± 0.073
PRF-fit source offset from KIC position	2.865 ± 0.072	39.82	-1.376 ± 0.073	-2.513 ± 0.072
photometric centroid source offset	—	—	—	—

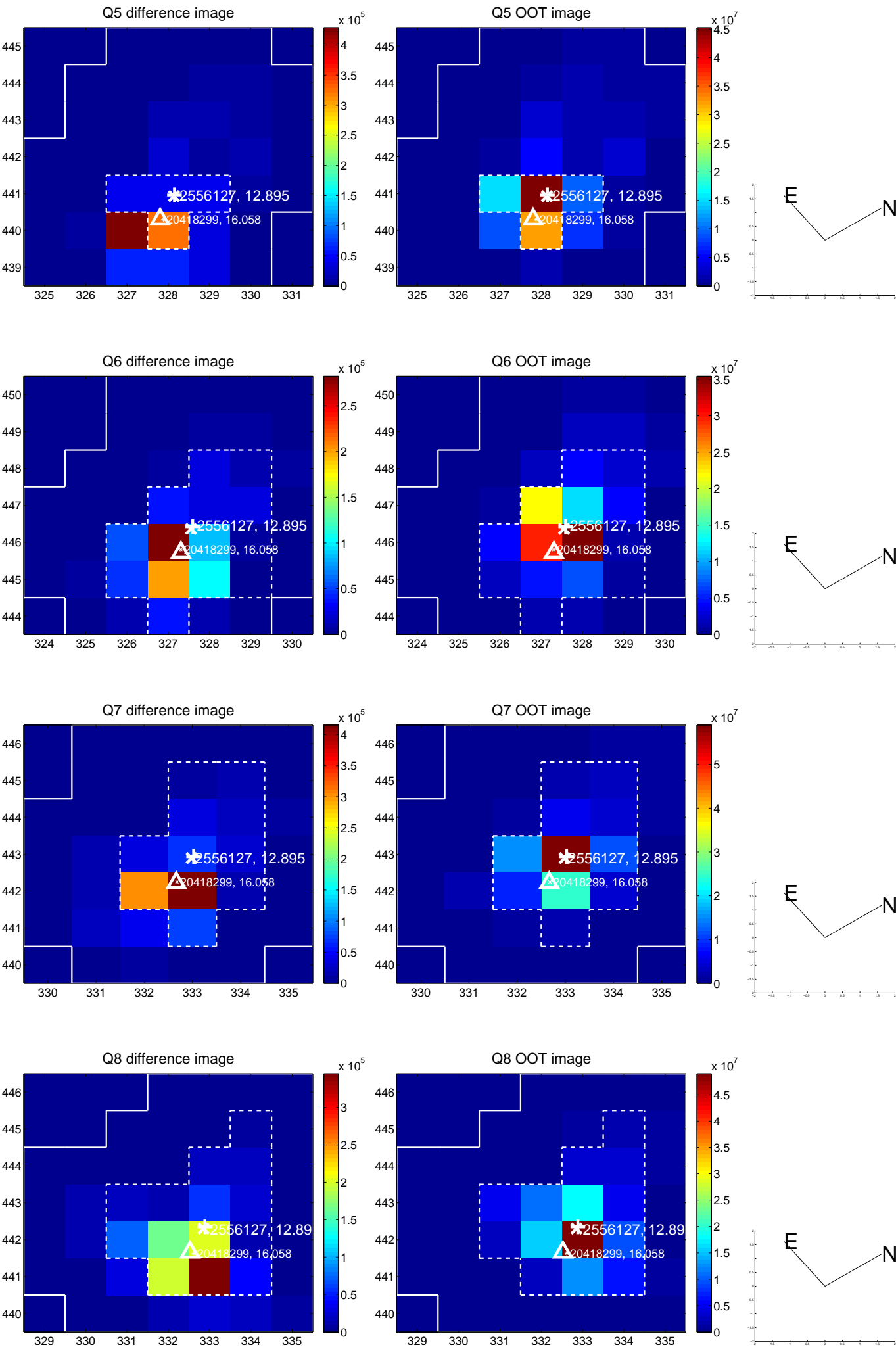


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

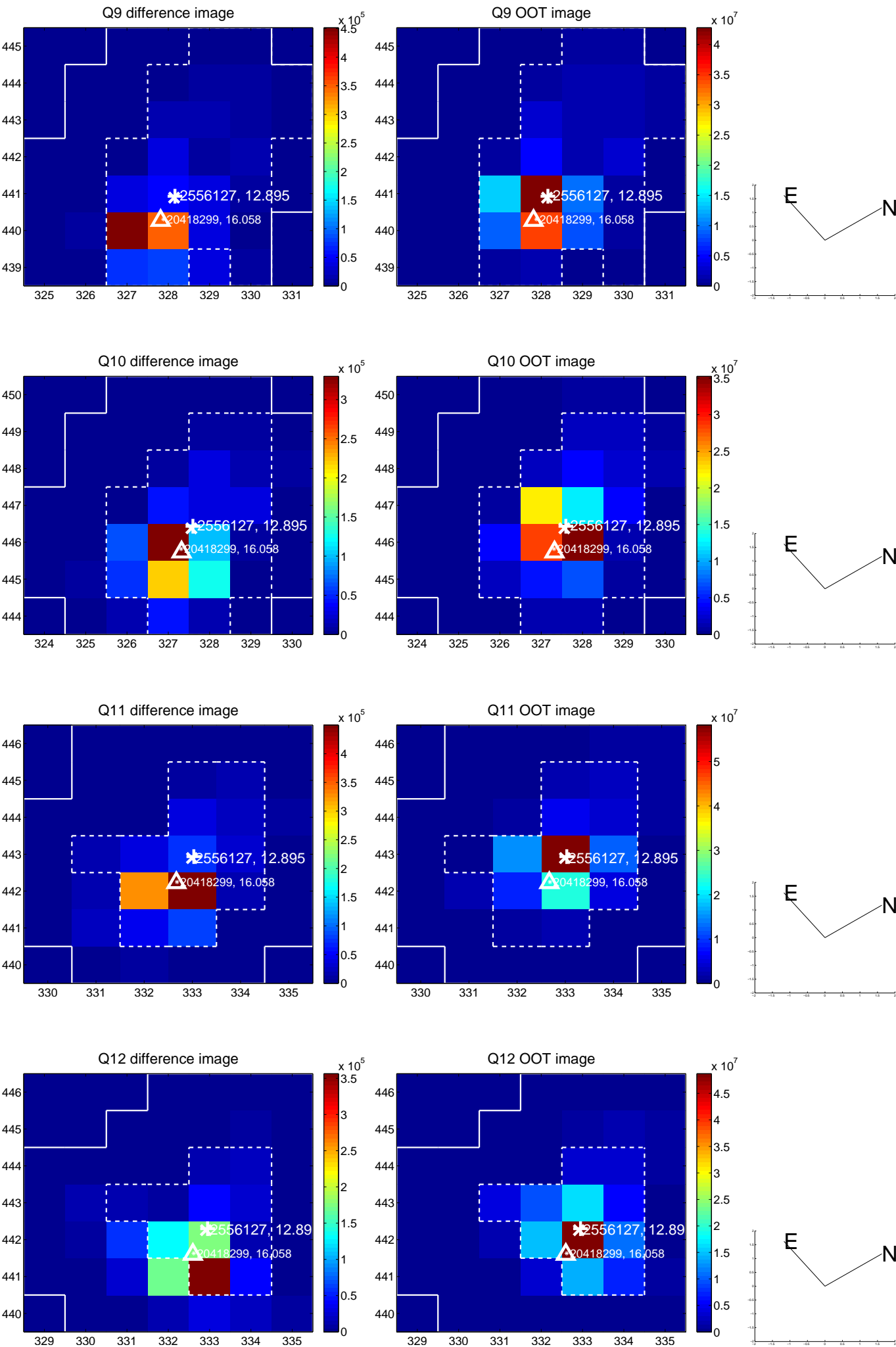
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



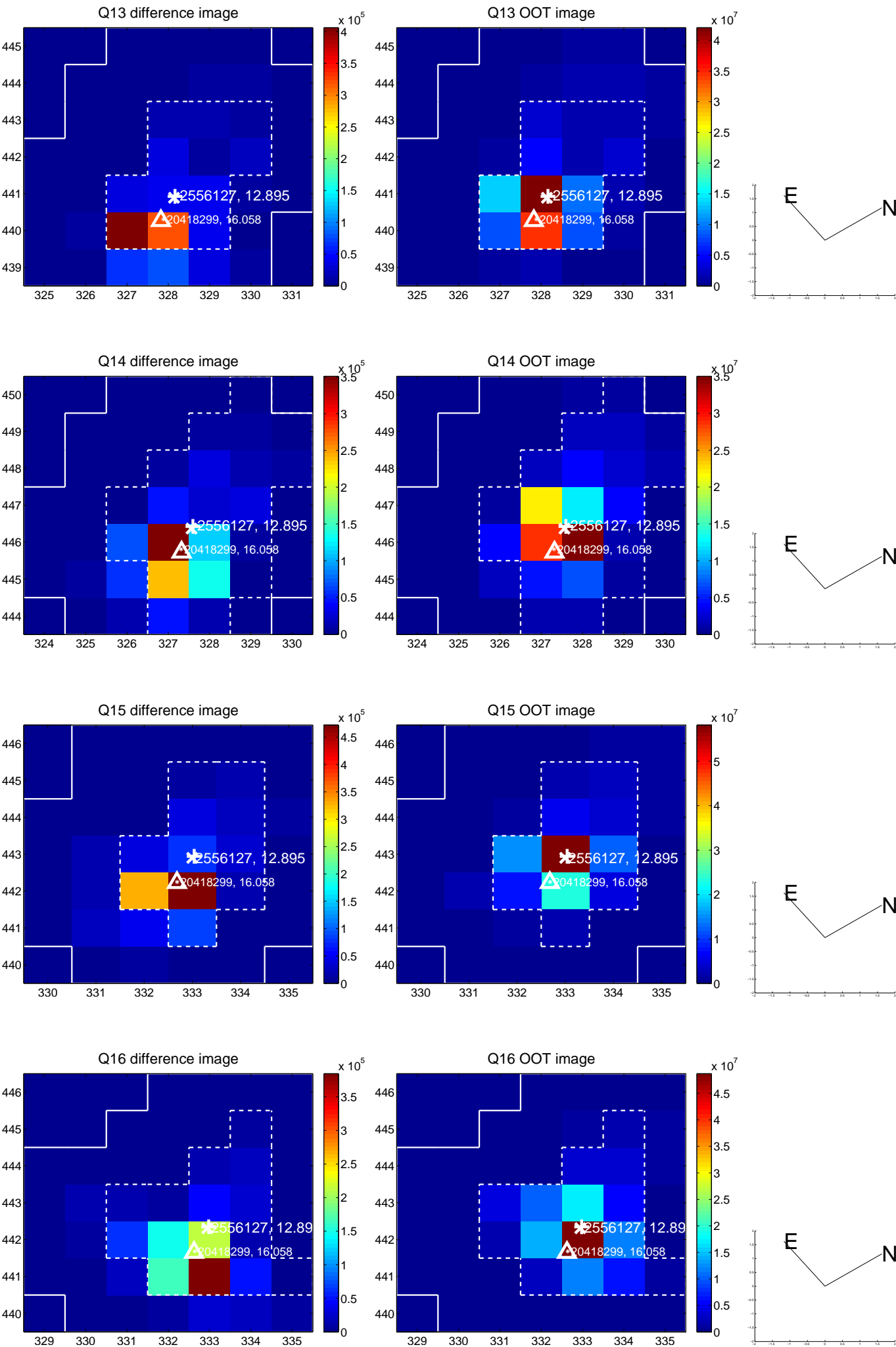
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



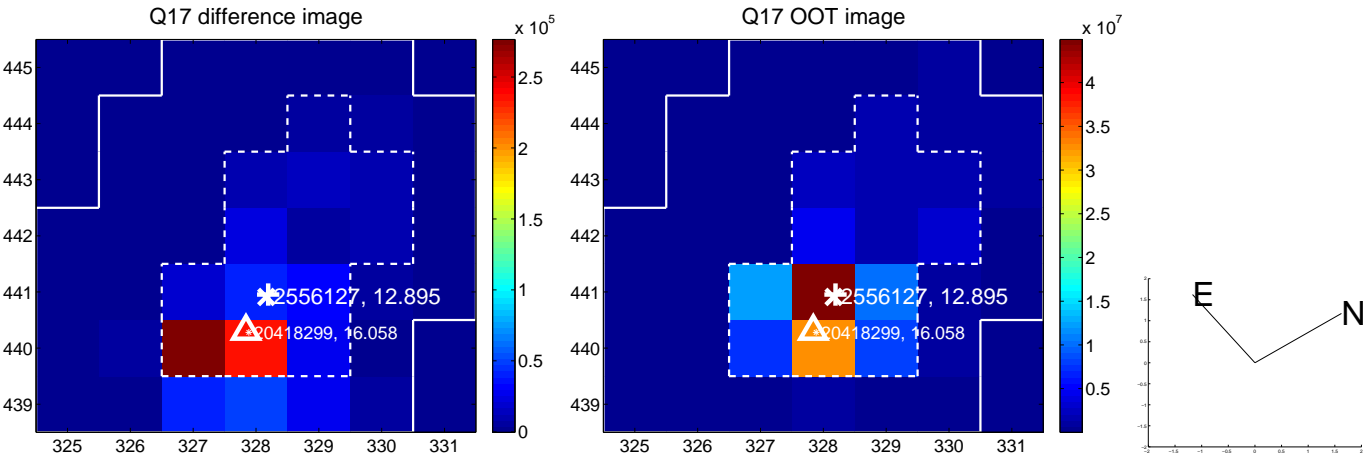
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



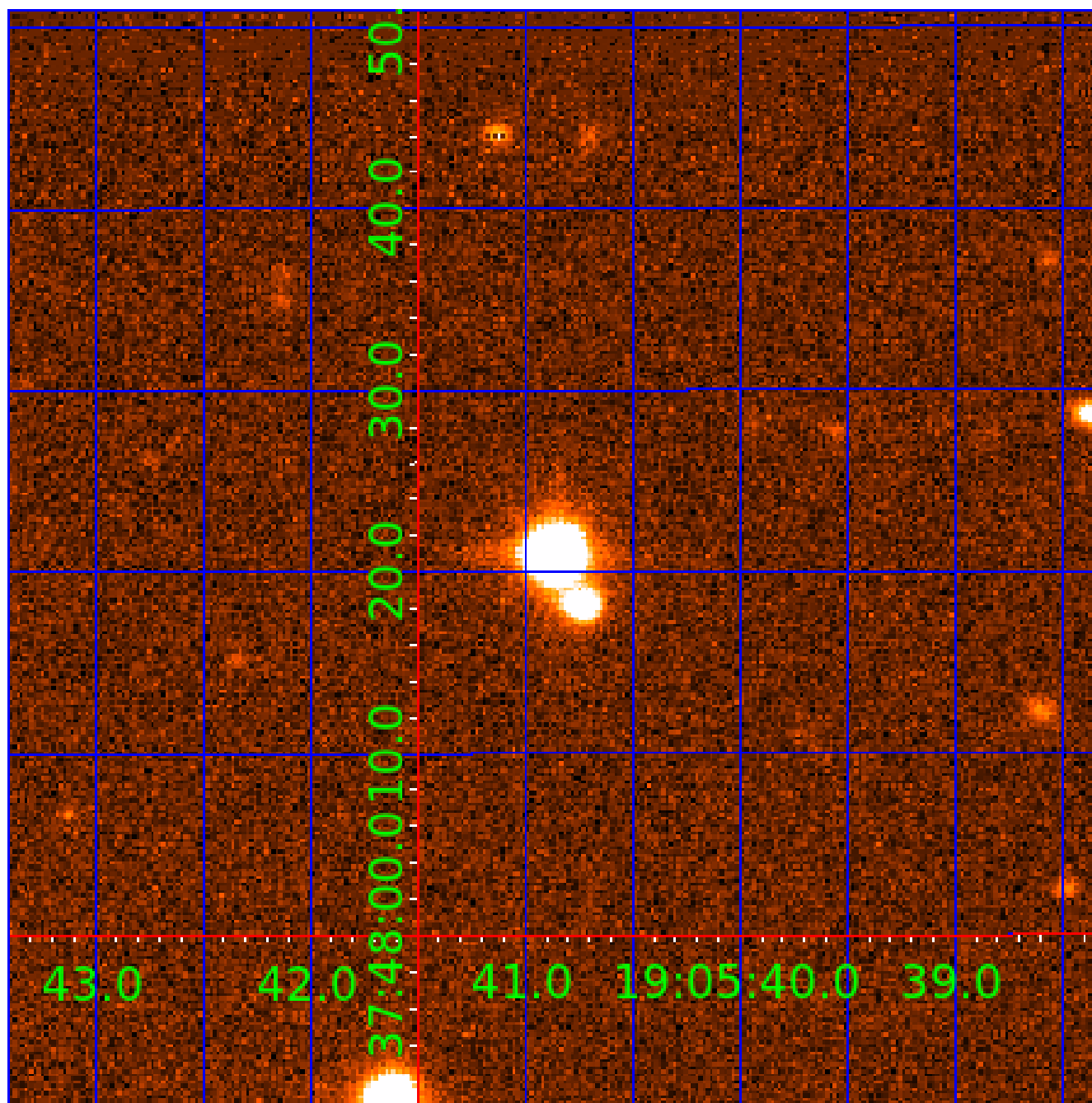
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 002556127

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})
002556127-01	OBS	No	0.837737	131.609049	6805.4	1.202	528.7	601.0	1.01	6152	13.77	4099.62
002556127-02	OBS	No	0.837738	132.037036	3876.1	2.500	600.1	-1.0	1.01	6152	6.29	4099.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002556127-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET
002556127-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

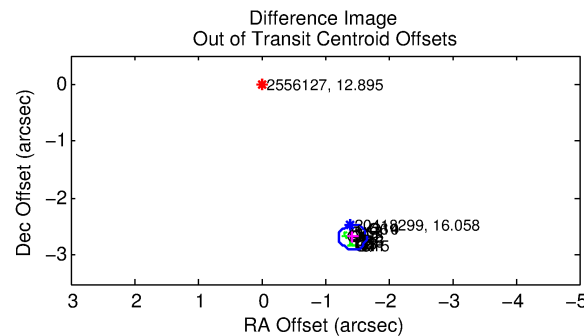
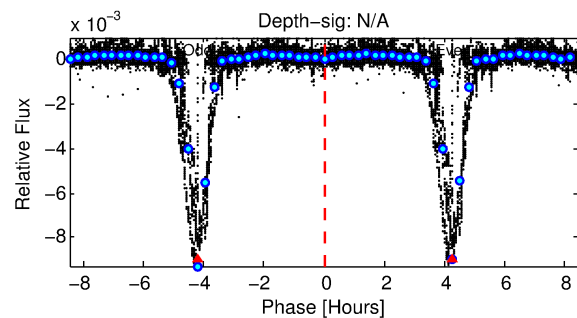
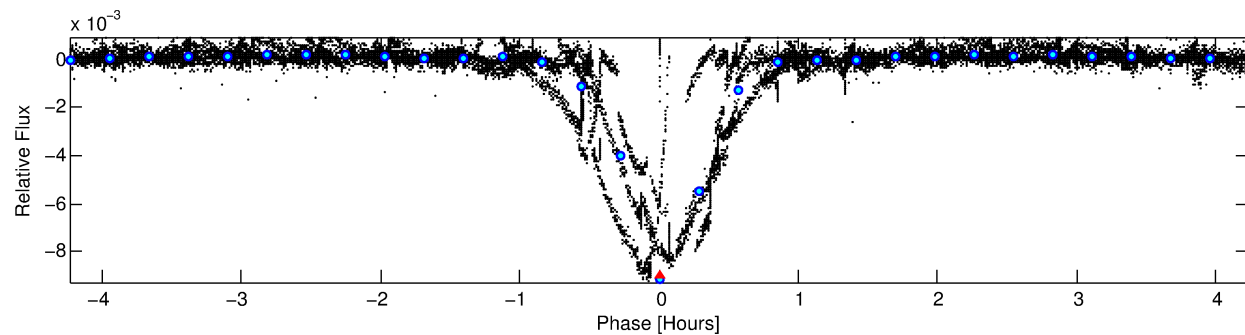
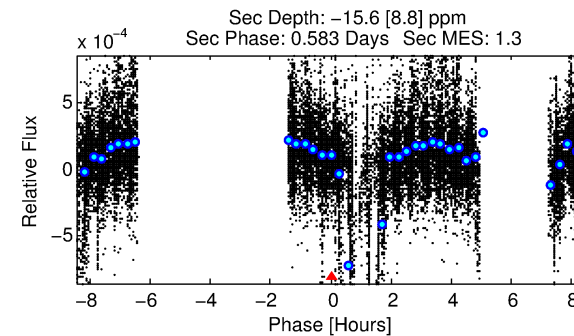
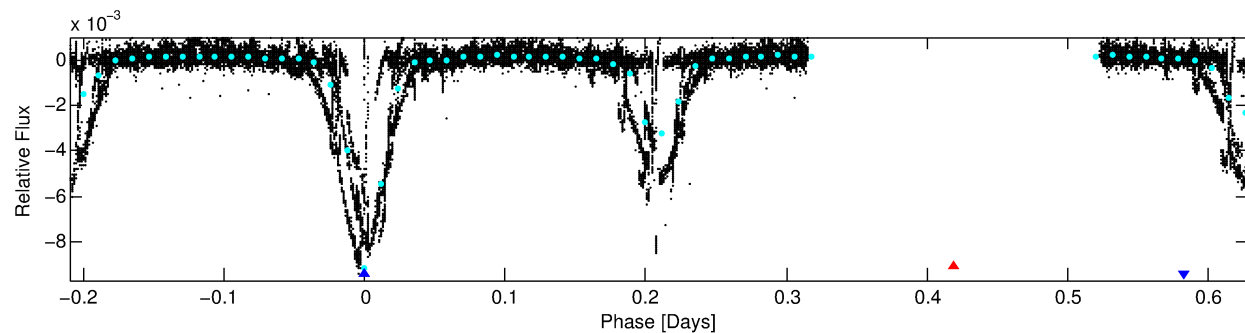
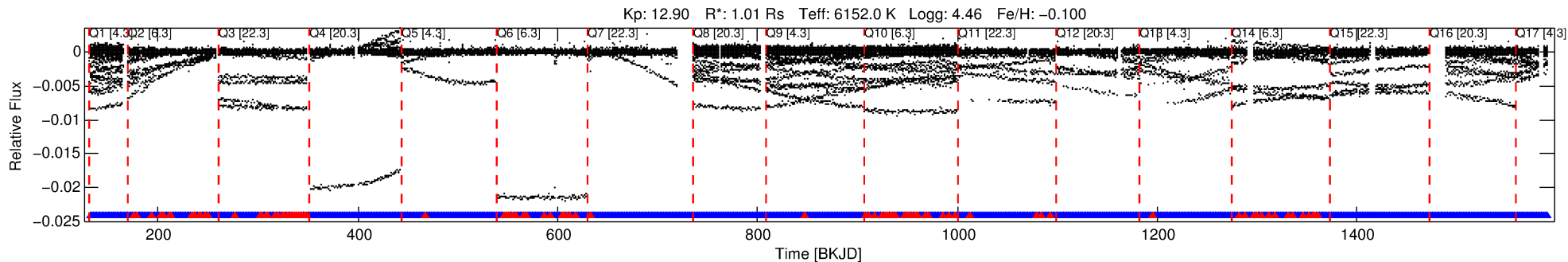
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002556127-02

No Significant Match Found

DV One-Page Summary

KIC: 2556127 Candidate: 2 of 2 Period: 0.838 d



TPS TCE Results:

Period = 0.83774 d
Epoch = 132.0370 BKJD

DV fit results are unavailable

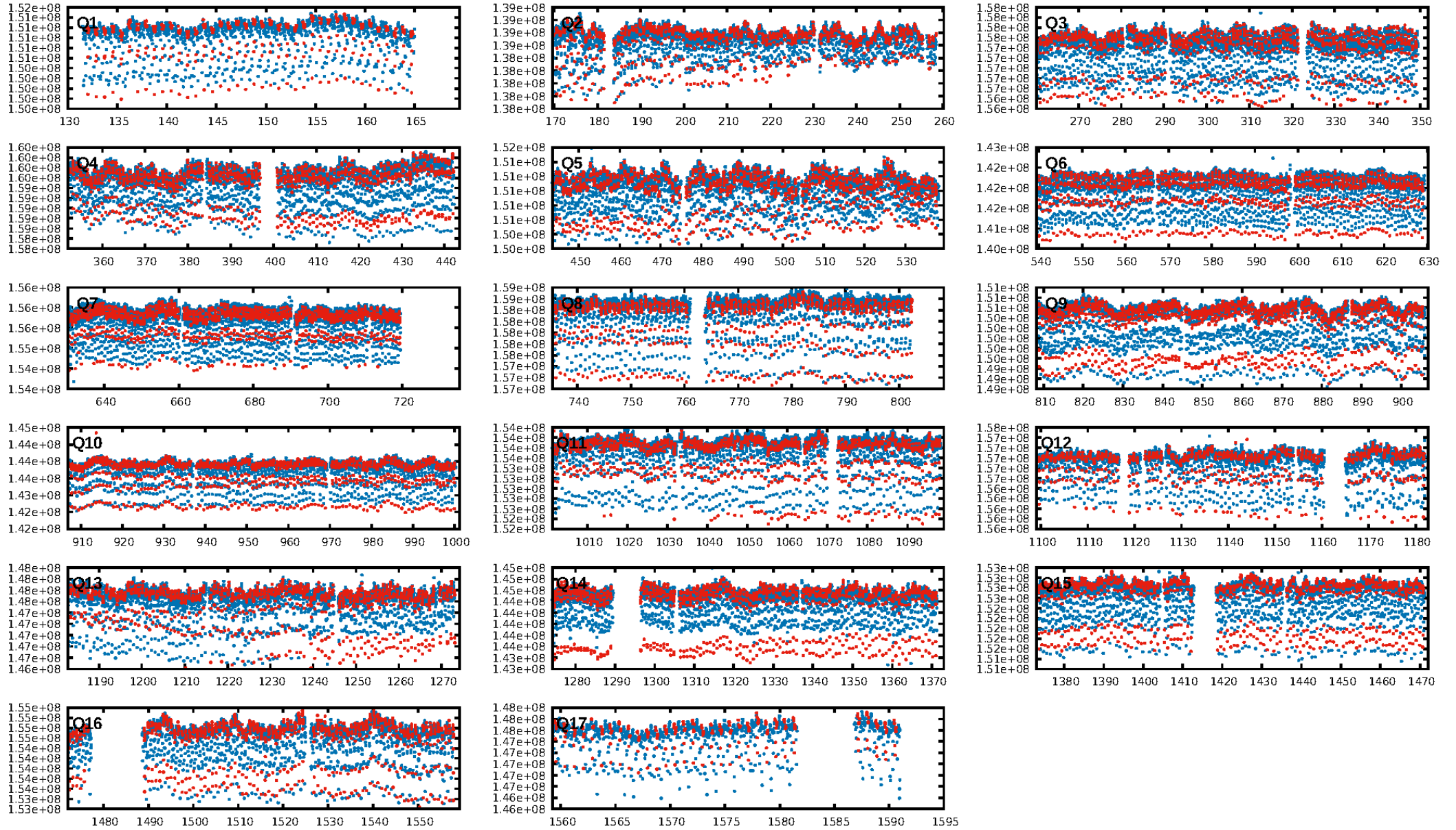
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1421/1524]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 3.041 arcsec [41.96 σ]
KicOffset-rm: 2.851 arcsec [38.85 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

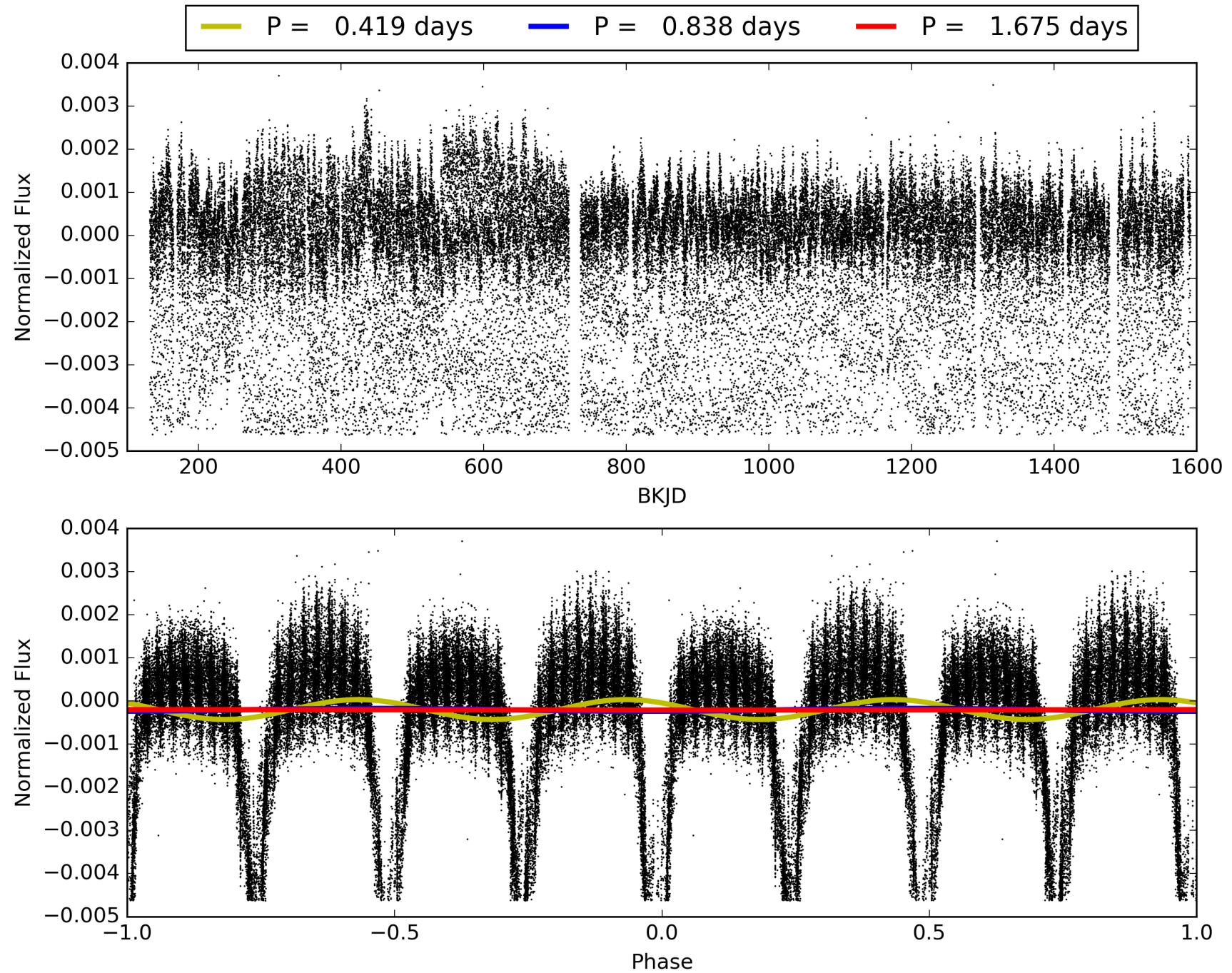
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 05:27:30 Z

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

TCE 002556127-02, PDC Light Curves

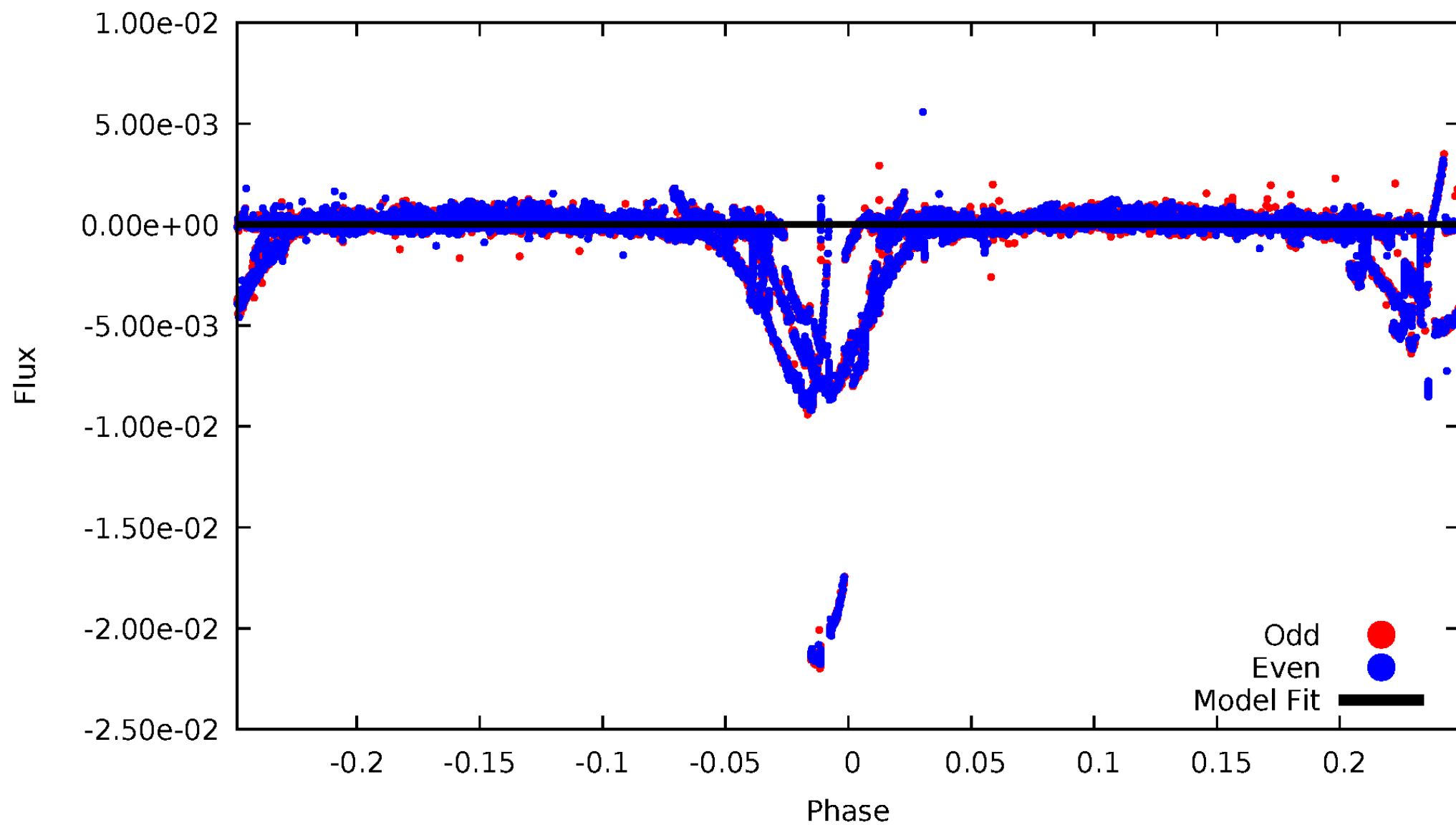


TCE 002556127-02



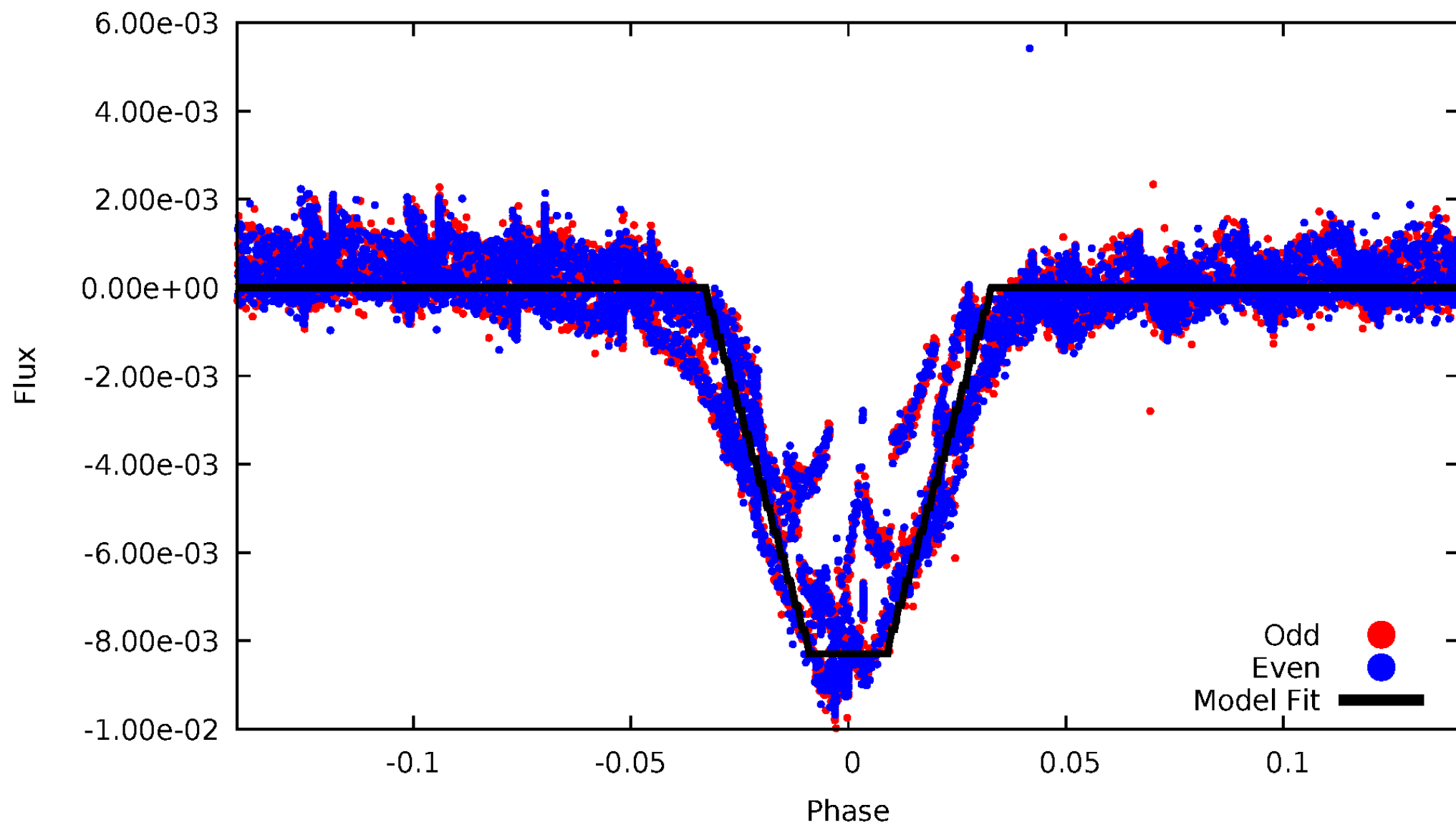
DV Odd/Even

TCE 002556127-02



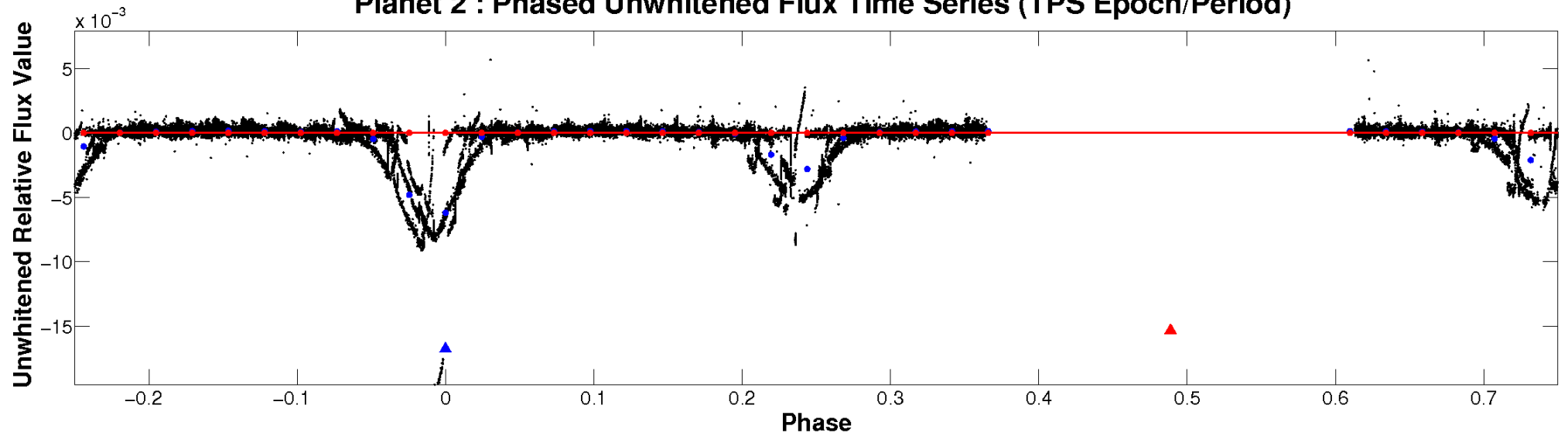
ALT Odd/Even

TCE 002556127-02

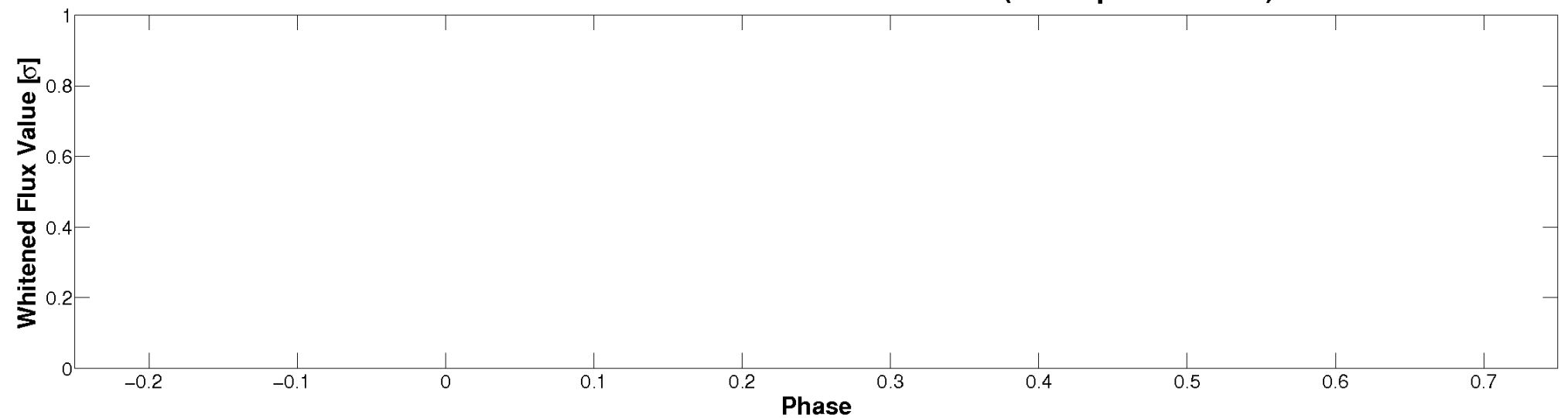


Non-Whitened Vs. Whitened Light Curve

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

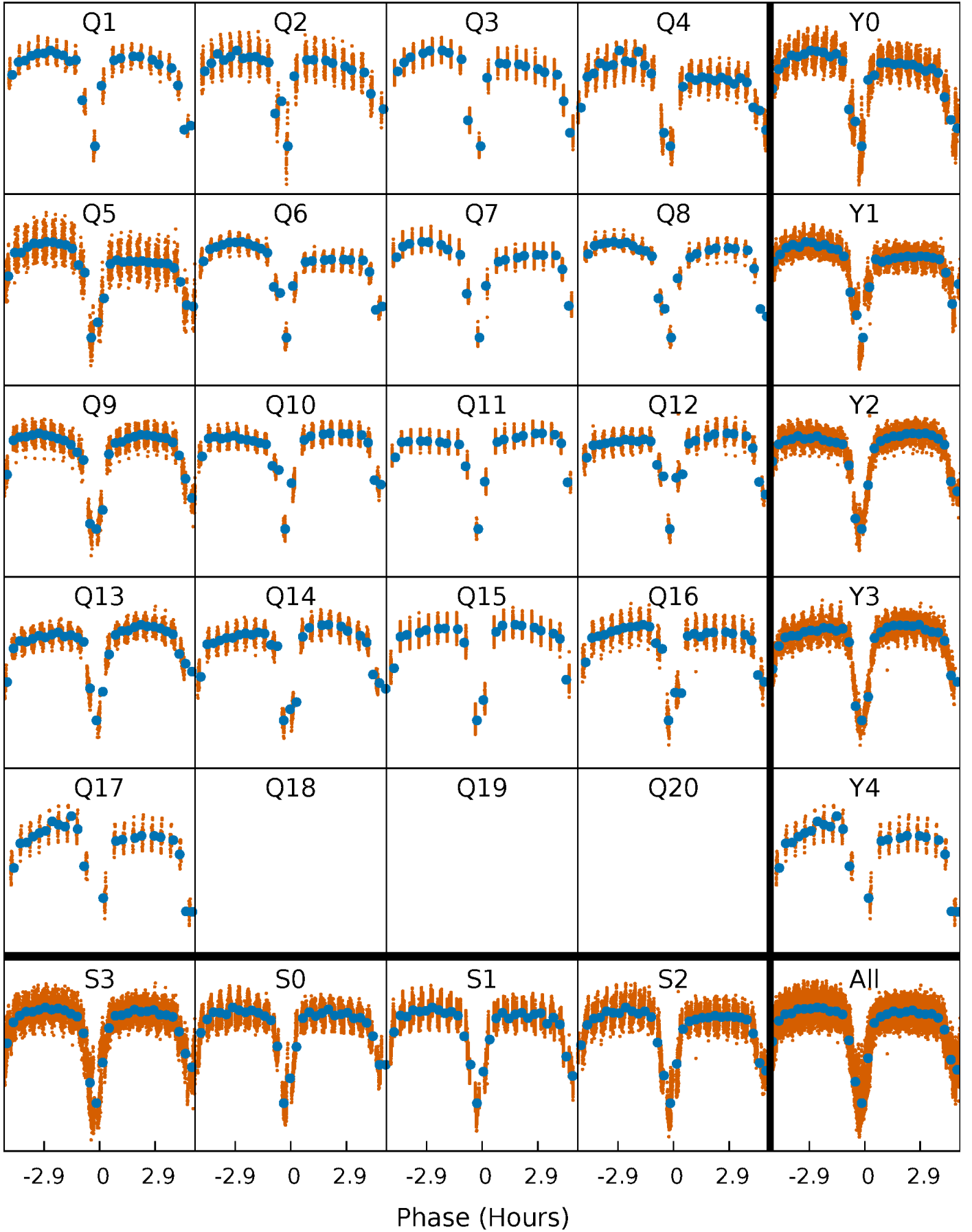


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



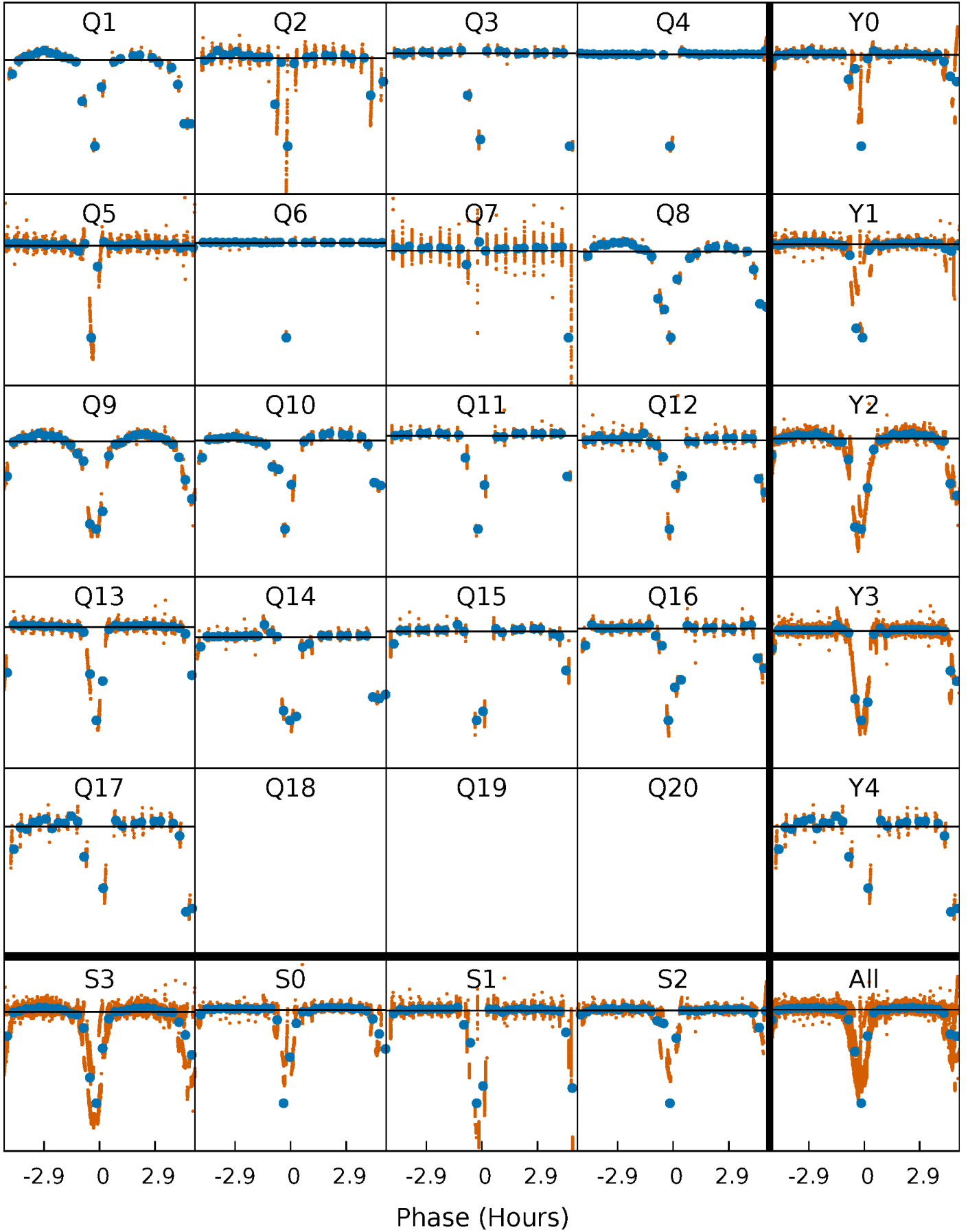
PDC Quarter-Phased Transit Curves

TCE 002556127-02 P= 0.837738 Days $T_0=132.037036$ (BKJD)



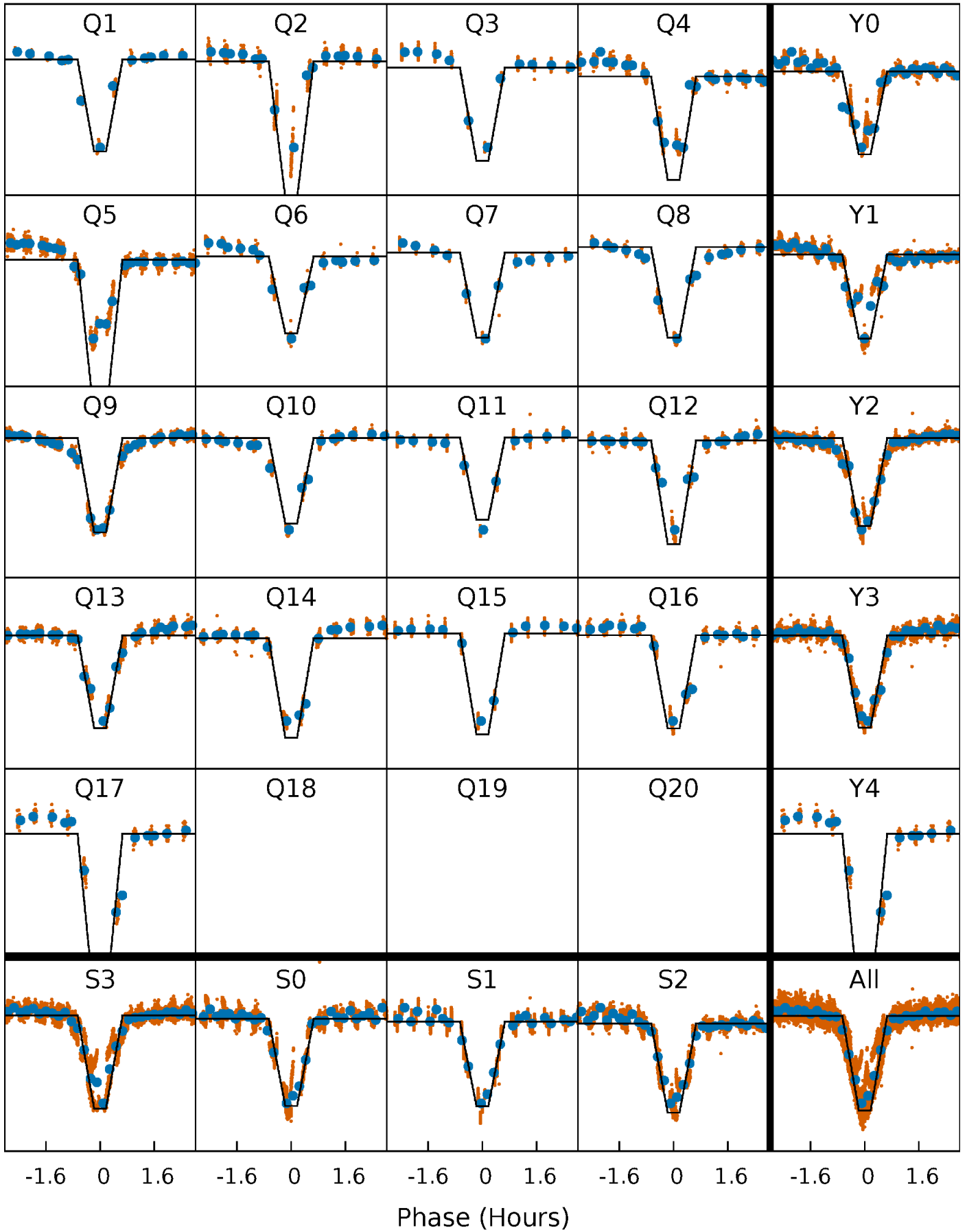
DV Quarter-Phased Transit Curves

TCE 002556127-02 P= 0.837738 Days $T_0=132.037036$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

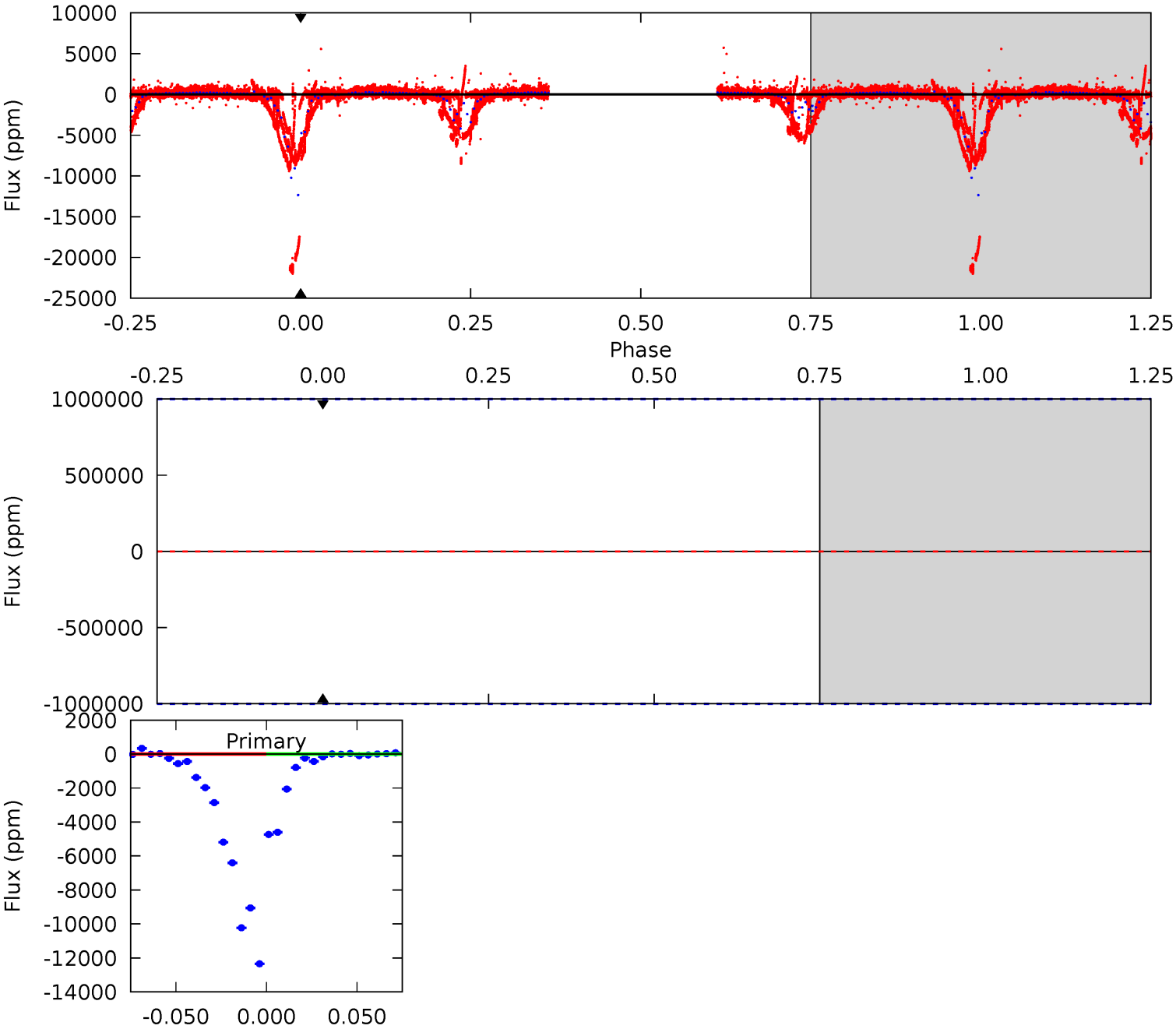
TCE 002556127-02 P= 0.837738 Days $T_0=132.027546$ (BKJD)



DV Model-Shift Uniqueness Test

002556127-02, P = 0.837738 Days, E = 131.199298 Days

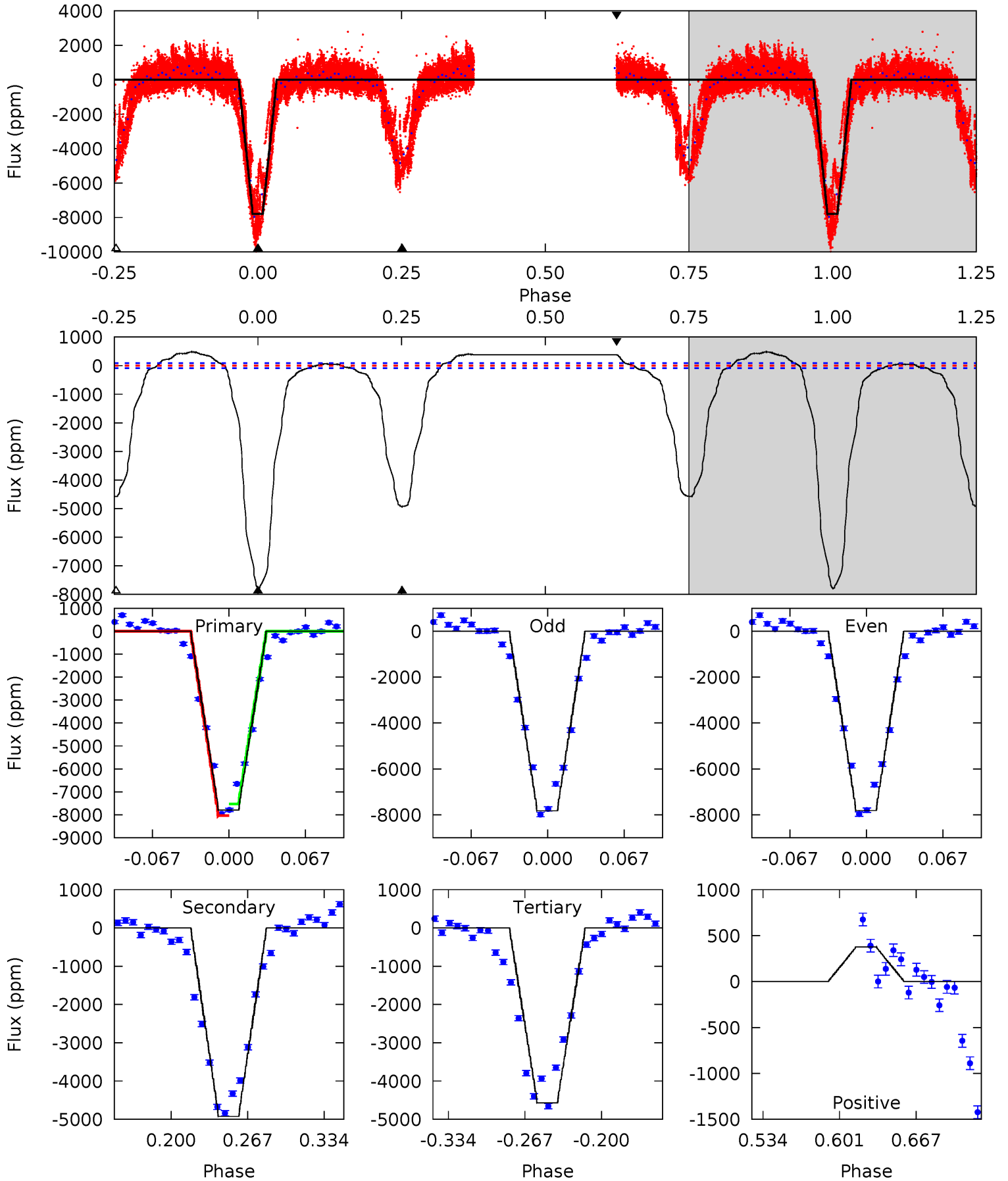
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002556127-02, P = 0.837738 Days, E = 131.189808 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
406.5	256.8	238.5	19.7	4.65	1.83	64.5	168.0	386.8	18.3	237.1	0.40	0.97	0.06	9.39



Stellar Parameters For KIC 002556127

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6152^{+153}_{-199}	$4.464^{+0.050}_{-0.200}$	$-0.100^{+0.250}_{-0.300}$	$1.009^{+0.302}_{-0.108}$	$1.079^{+0.139}_{-0.153}$	$1.480^{+0.399}_{-0.753}$
	+2%/-3%	+1%/-4%	+250%/-300%	+30%/-11%	+13%/-14%	+27%/-51%
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 002556127-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$11.02^{+9.68}_{-7.08}$	2901^{+197}_{-129}	4104^{+14086}_{-20527}	$2.054^{+263.001}_{-195.564}$
Alt.	-4924 ± 19	$12.77^{+10.31}_{-8.34}$	2907^{+212}_{-135}	4892^{+3809}_{-1053}	$5.087^{+37.575}_{-3.458}$

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 $A_{obs} \gg 1.0$

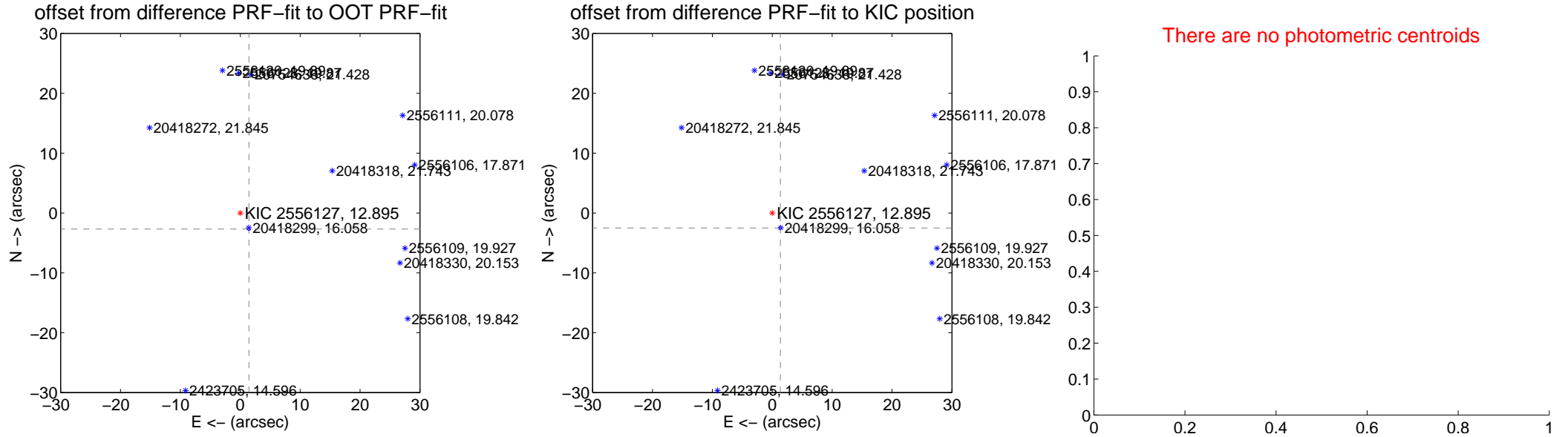
DV Centroid Data

Supplemental centroid analysis for 002556127-02. Kepler magnitude: 12.89. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

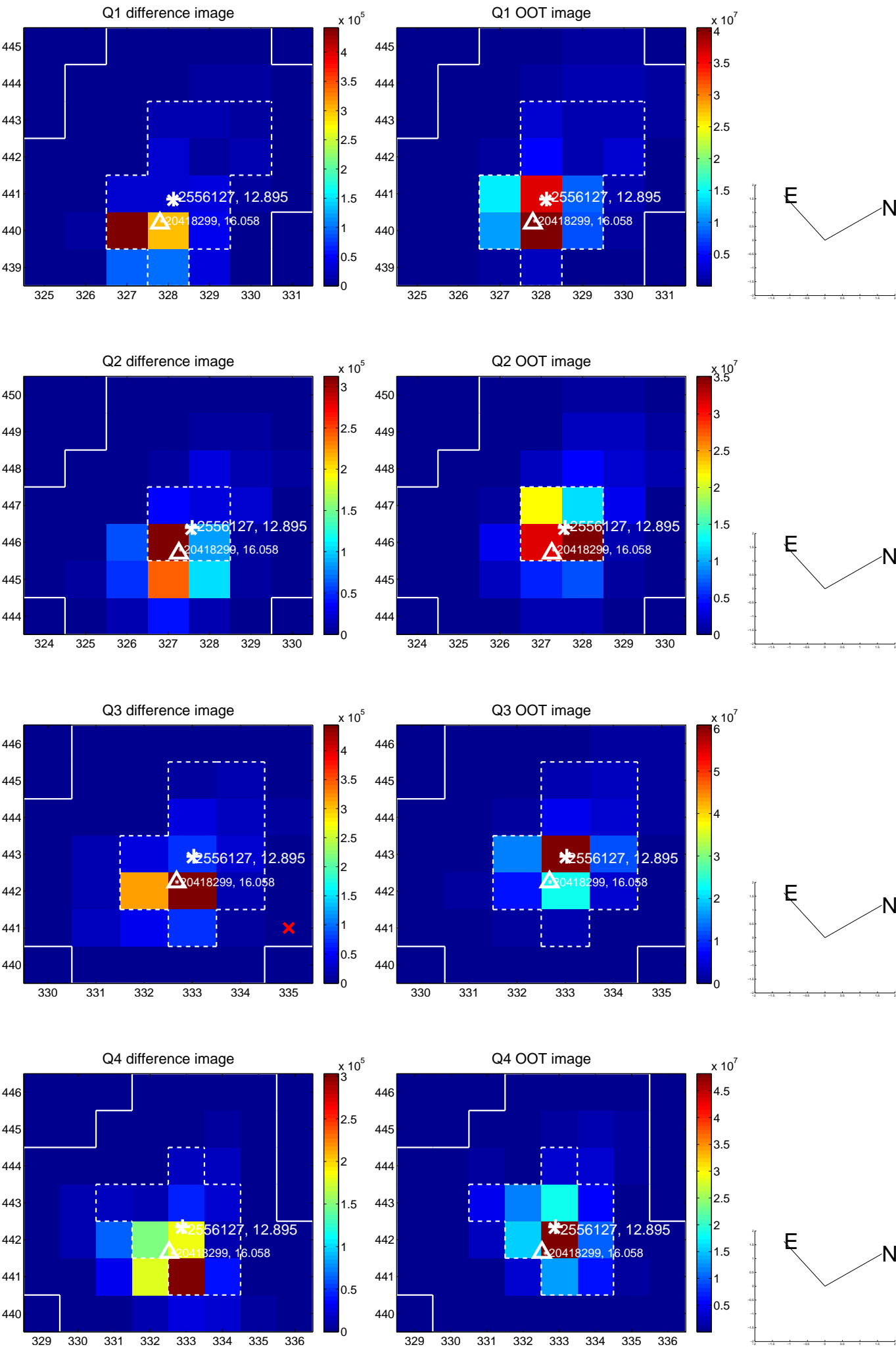
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.041 ± 0.072	41.96	-1.438 ± 0.074	-2.680 ± 0.072
PRF-fit source offset from KIC position	2.851 ± 0.073	38.85	-1.362 ± 0.073	-2.505 ± 0.073
photometric centroid source offset	—	—	—	—

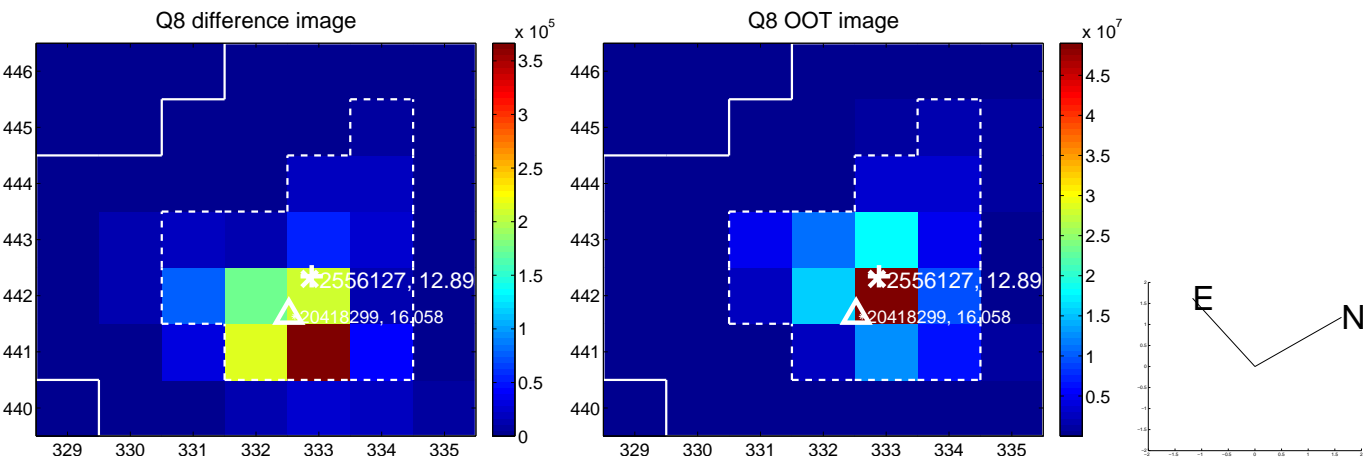
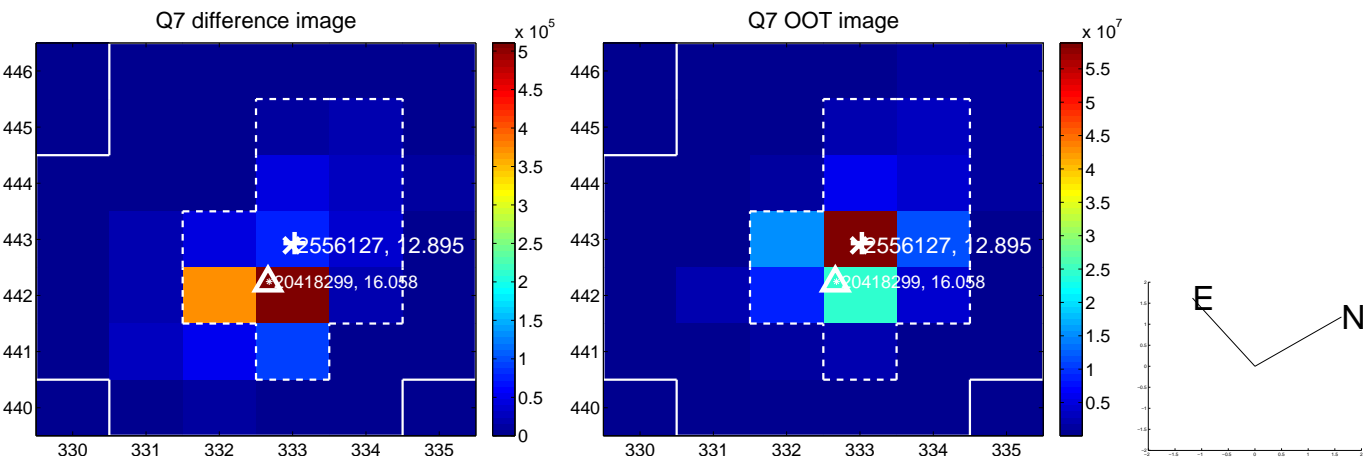
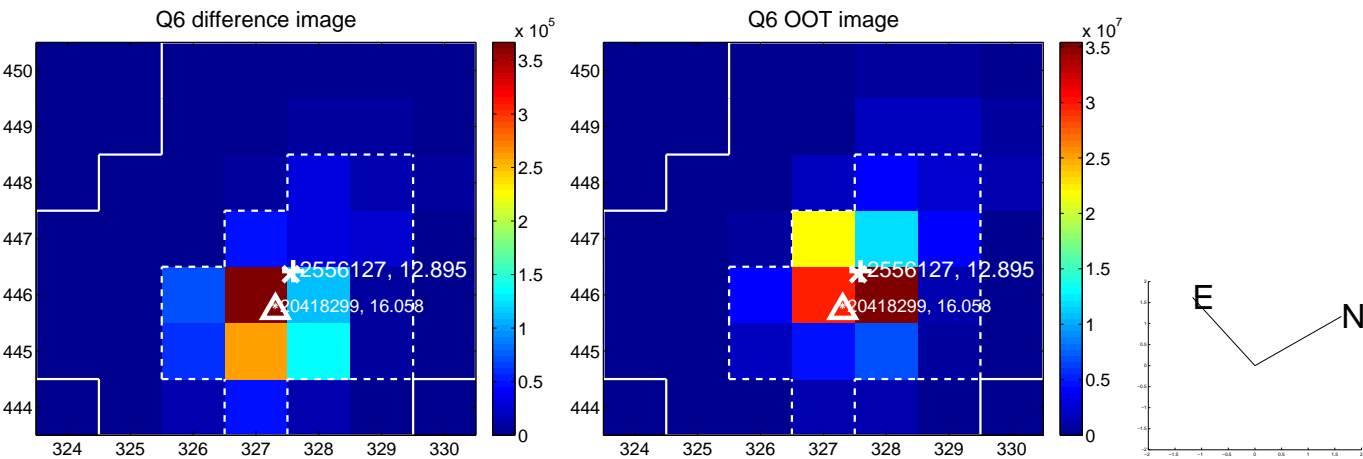
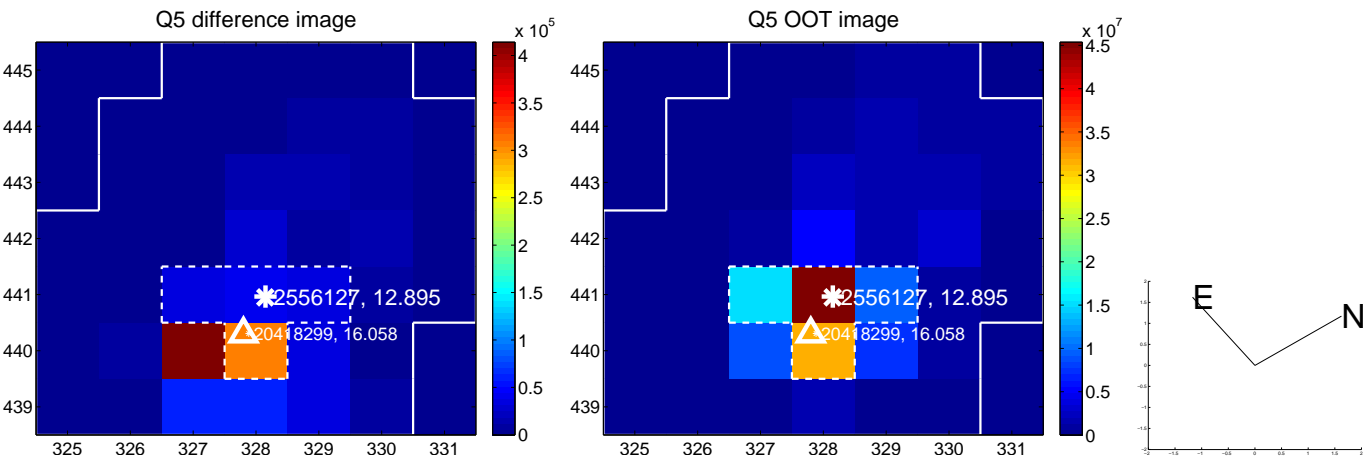


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

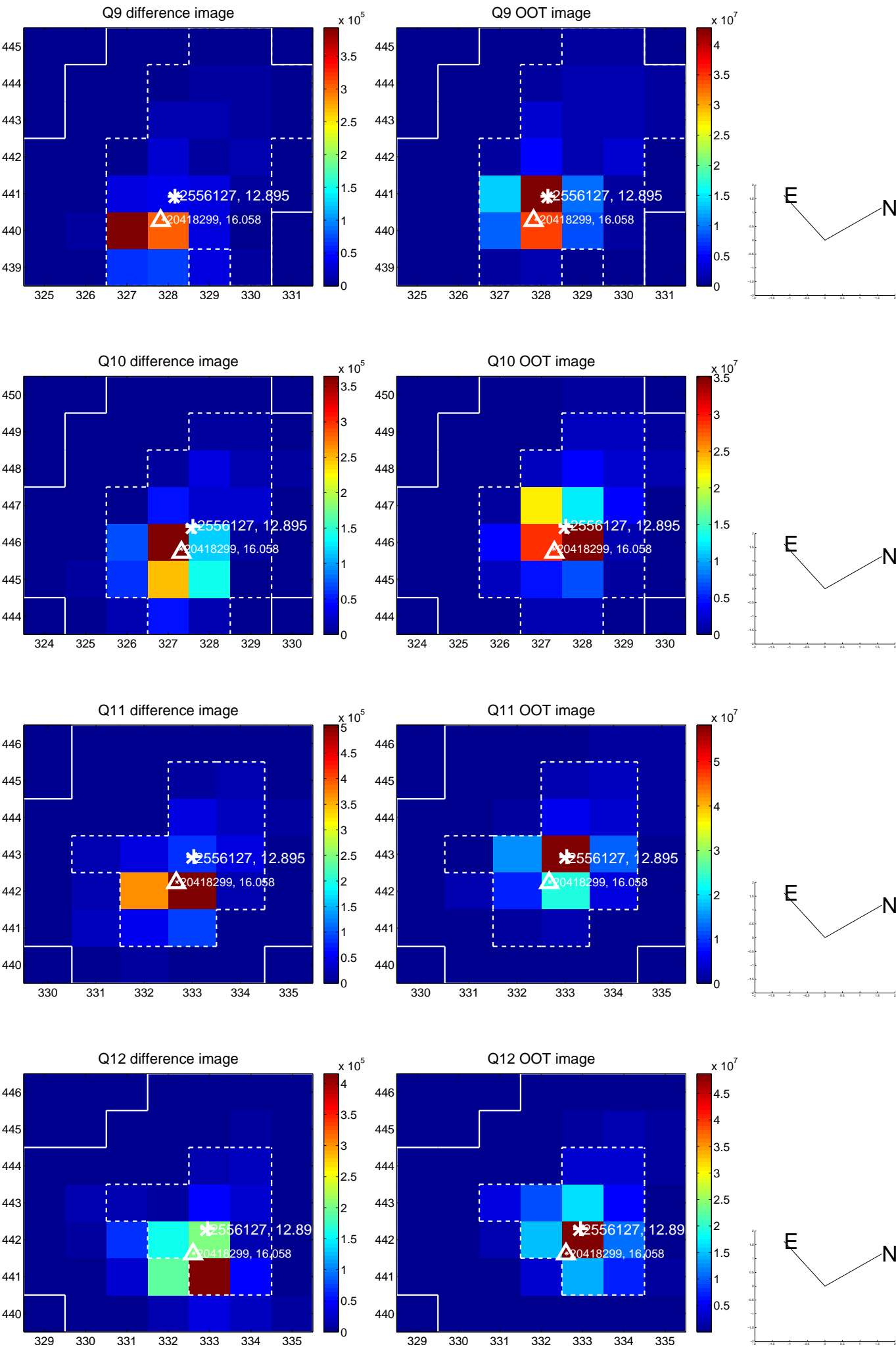
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



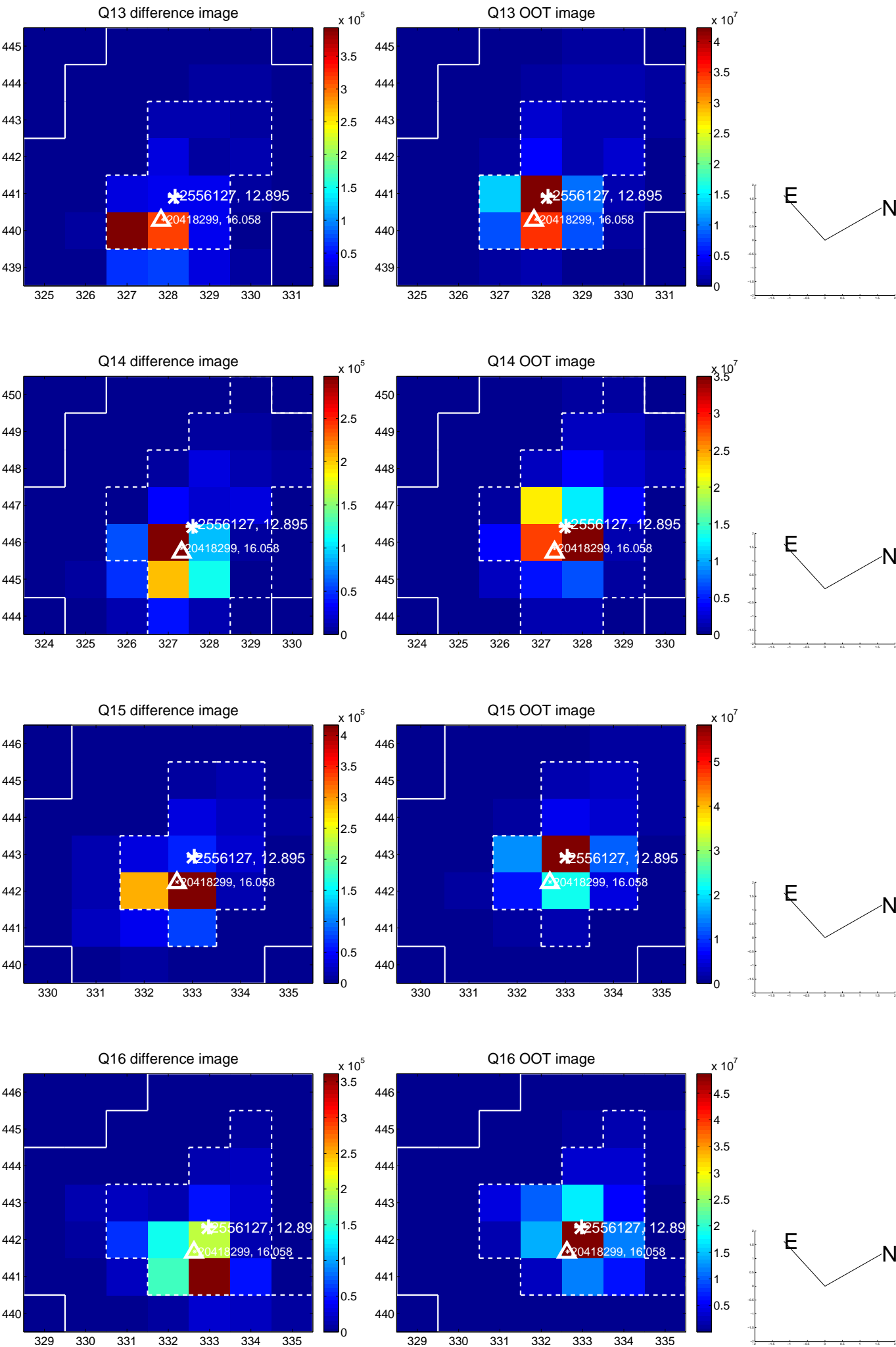
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



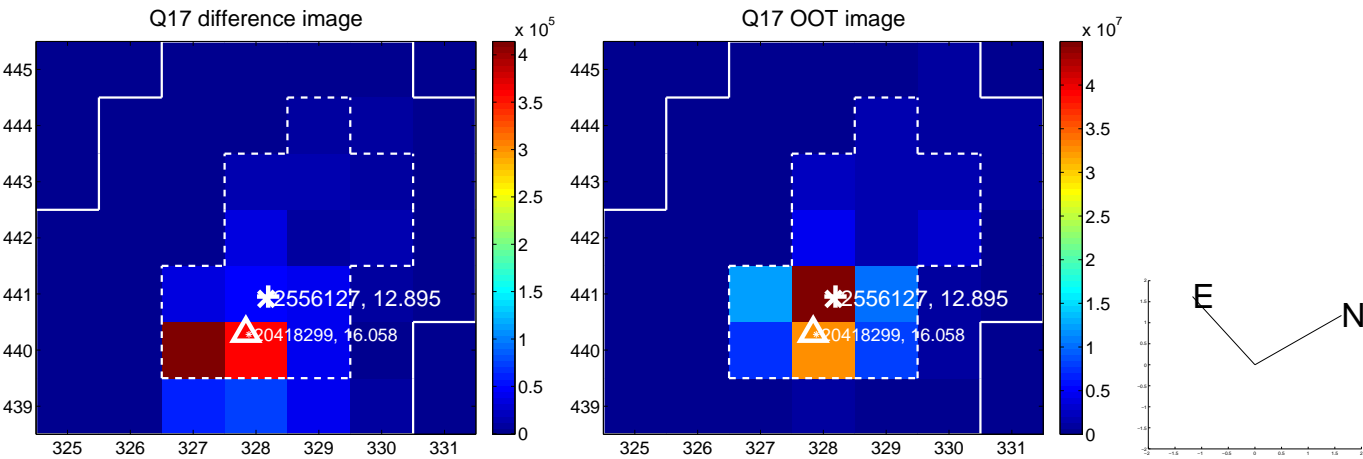
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

