

KIC 011519226

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})
011519226-01	OBS	6087.01	22.161010	140.007959	6153.8	3.196	408.6	350.3	1.75	5893	24.95	139.95
011519226-02	OBS	No	22.160653	148.480156	6185.8	2.437	400.0	327.8	1.75	5893	15.51	139.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011519226-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
011519226-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 011519226-01

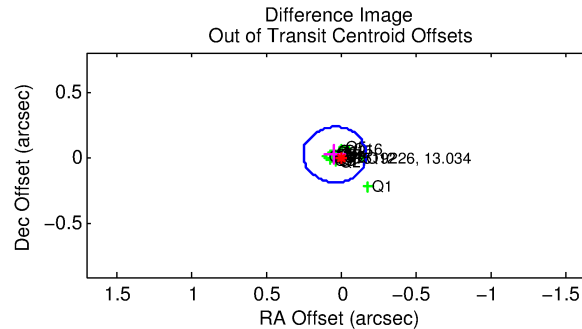
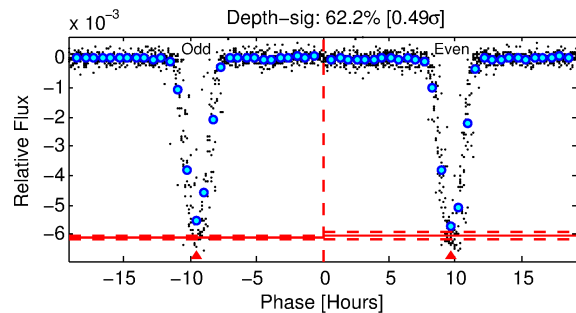
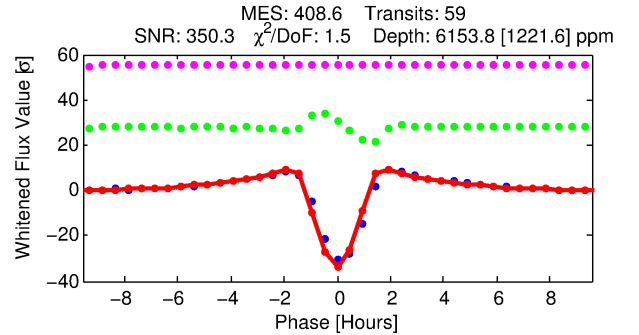
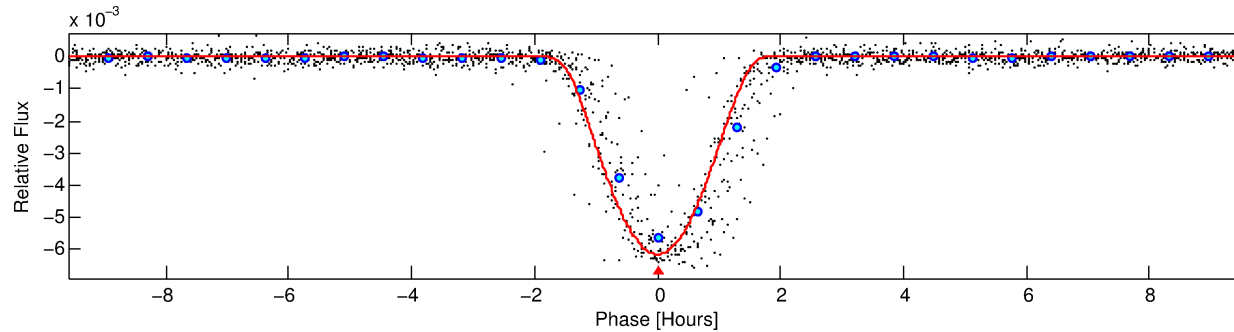
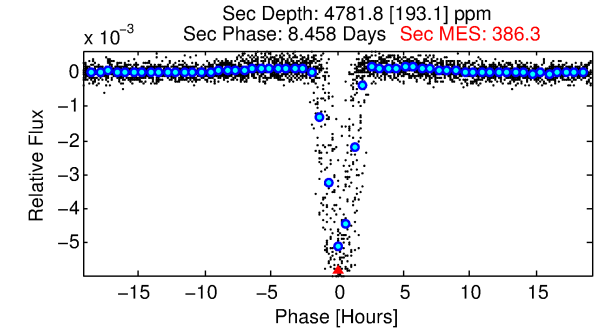
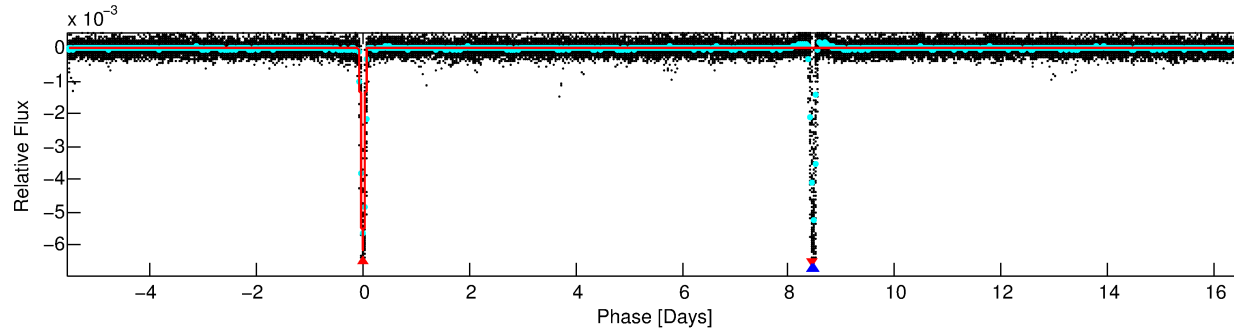
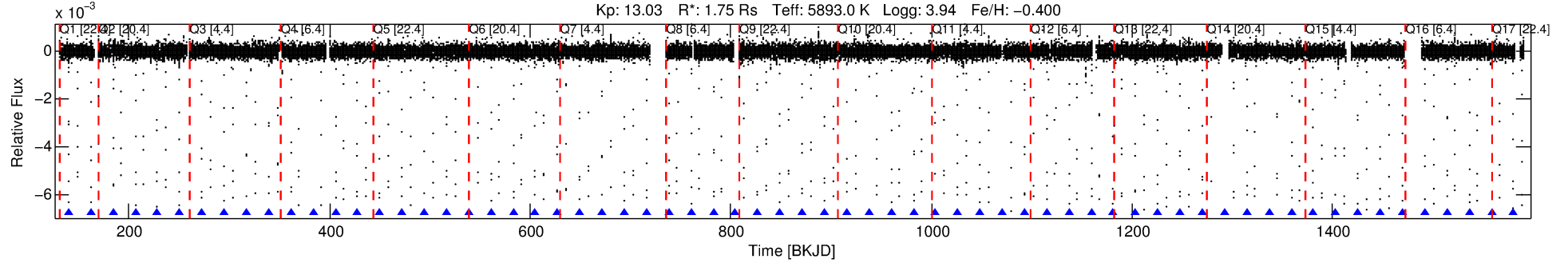
No Significant Match Found

DV One-Page Summary

KIC: 11519226 Candidate: 1 of 2 Period: 22.161 d

KOI: K06087 Corr: No Ephemeris Match

Kp: 13.03 R*: 1.75 Rs Teff: 5893.0 K Logg: 3.94 Fe/H: -0.400



DV Fit Results:

Period = 22.16101 [0.00001] d
Epoch = 140.0080 [0.0002] BKJD
Rp/R* = 0.1310 [0.0188]
a/R* = 28.01 [0.70]
b = 1.00 [0.04]
Seff = 139.95 [75.50]
Teff = 877 [118] K
Rp = 24.95 [8.72] Re
a = 0.1533 [0.0493] AU
Ag = 99.36 [59.86] [1.64σ]
Teffp = 4281 [332] K [9.66σ]

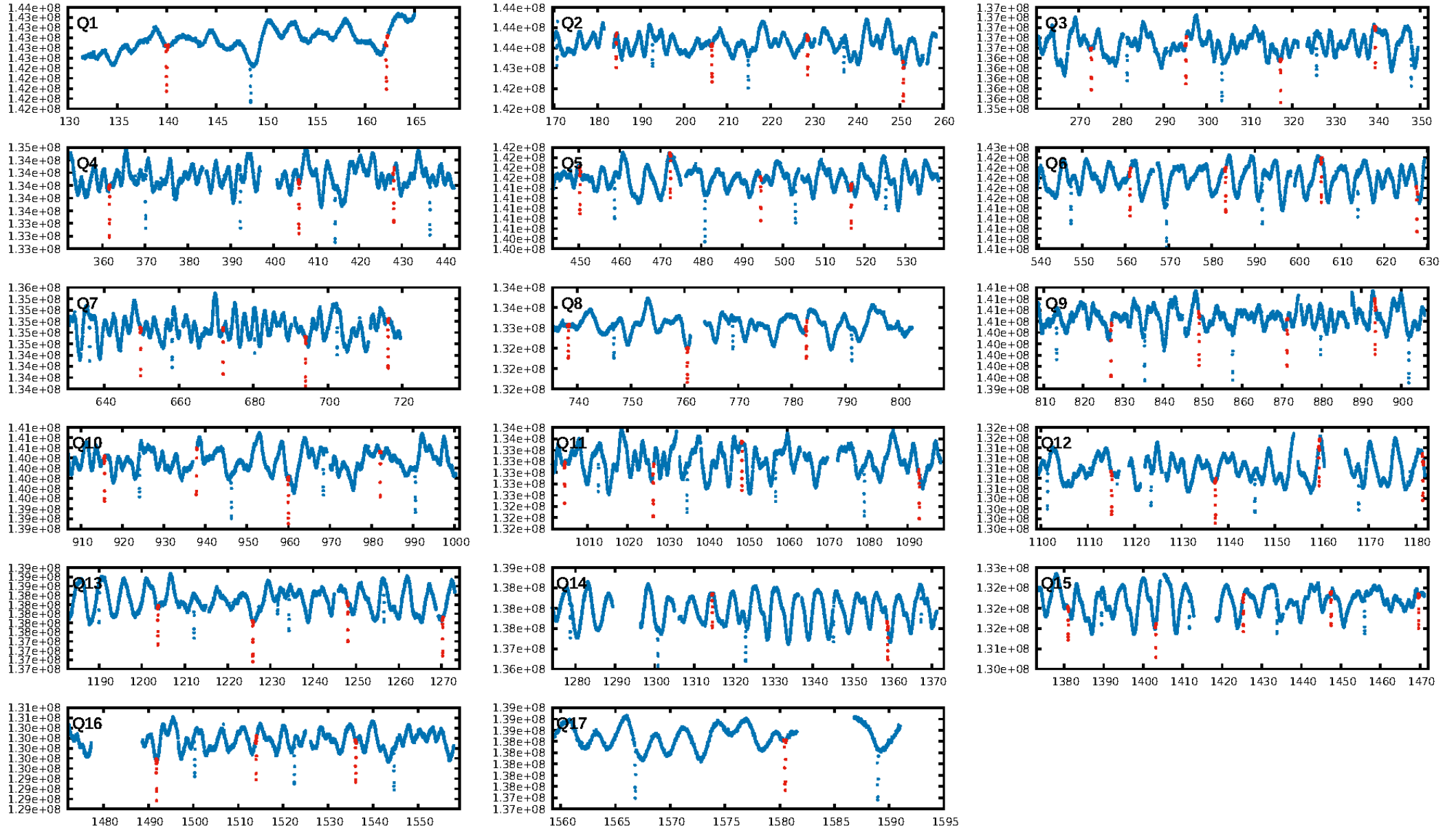
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 91.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [56/56]
GhostDiagnostic-chr: 3.778
Centroid-sig: 0.0%
Centroid-so: 0.184 arcsec [8.10σ]
OotOffset-rm: 0.047 arcsec [0.67σ]
KicOffset-rm: 0.183 arcsec [2.58σ]
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]

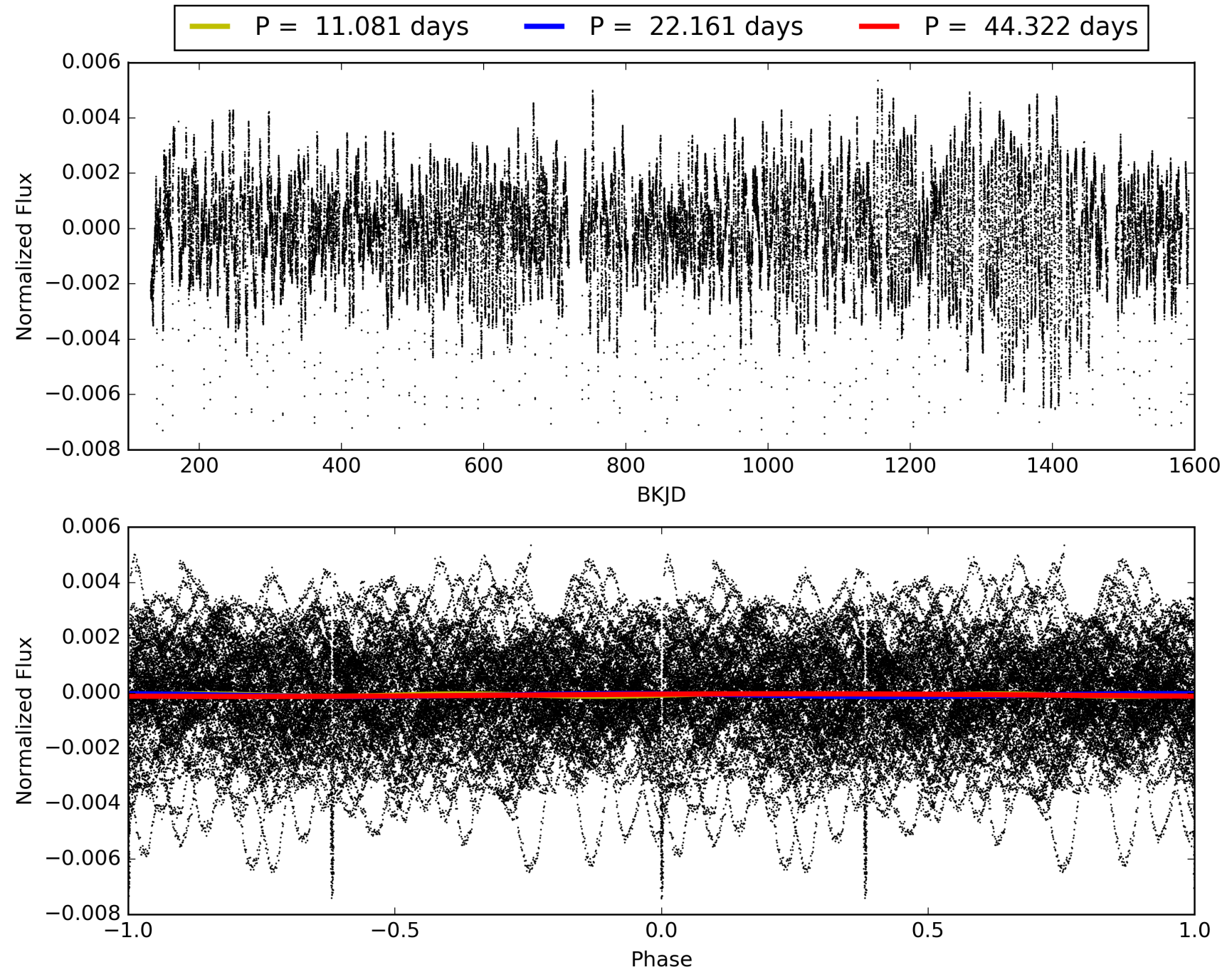
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:05:52 Z

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

TCE 011519226-01, PDC Light Curves

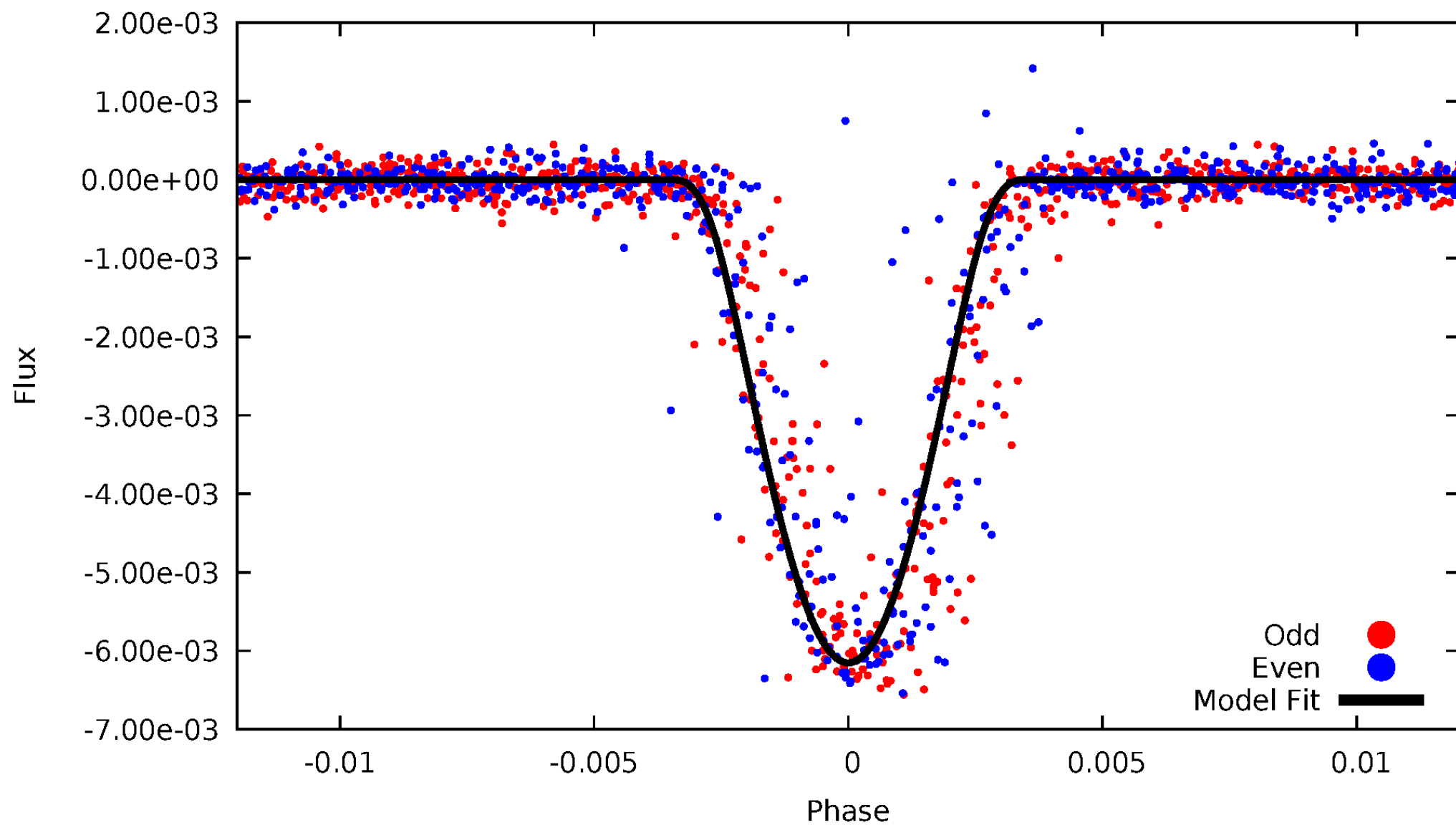


TCE 011519226-01



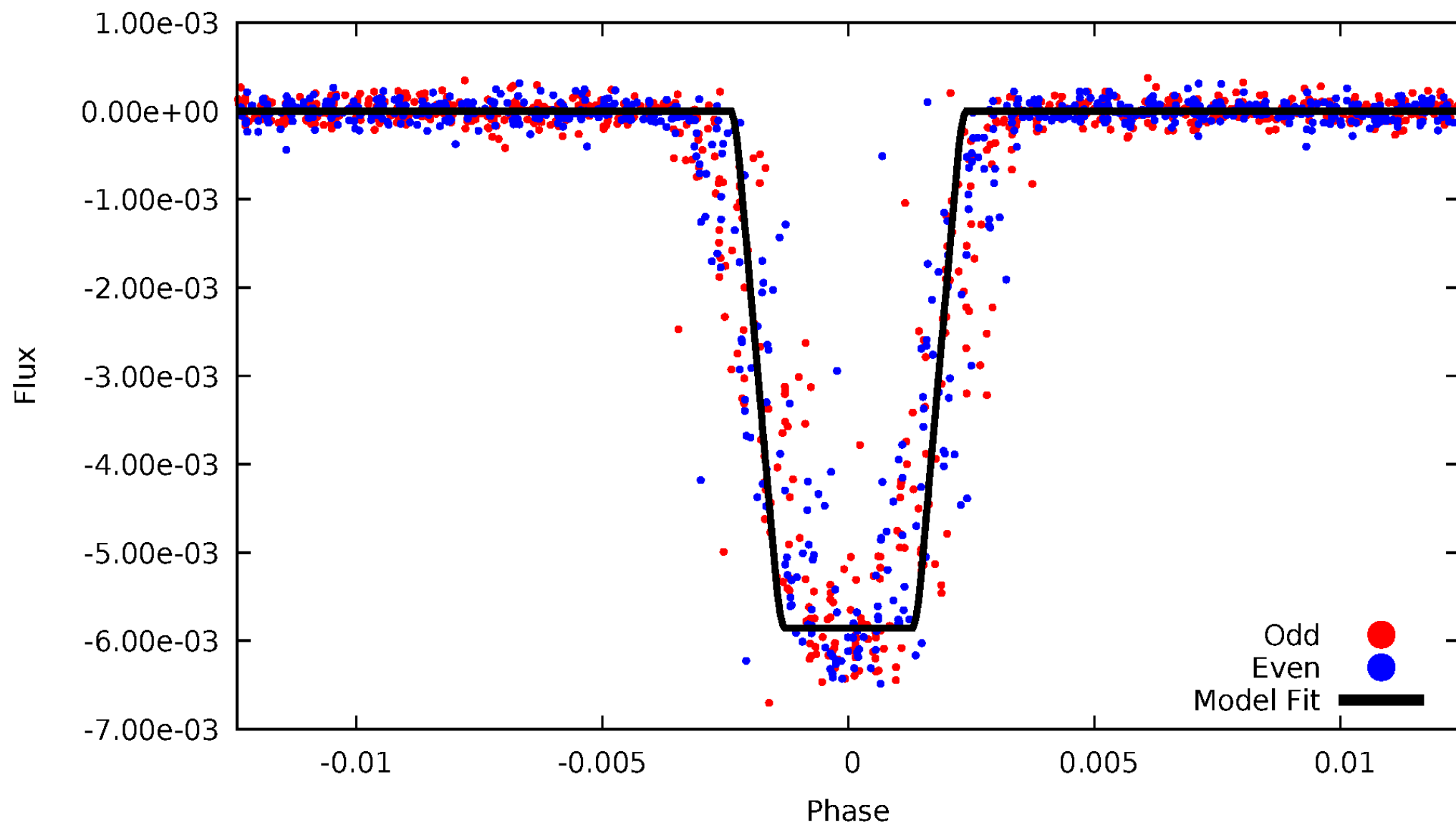
DV Odd/Even

TCE 011519226-01



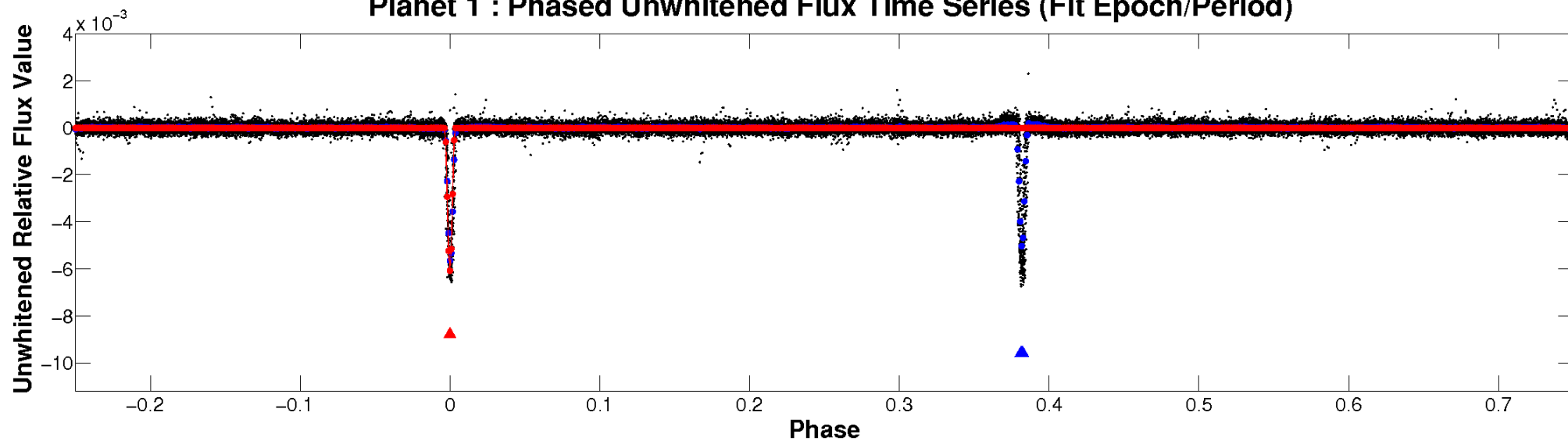
ALT Odd/Even

TCE 011519226-01

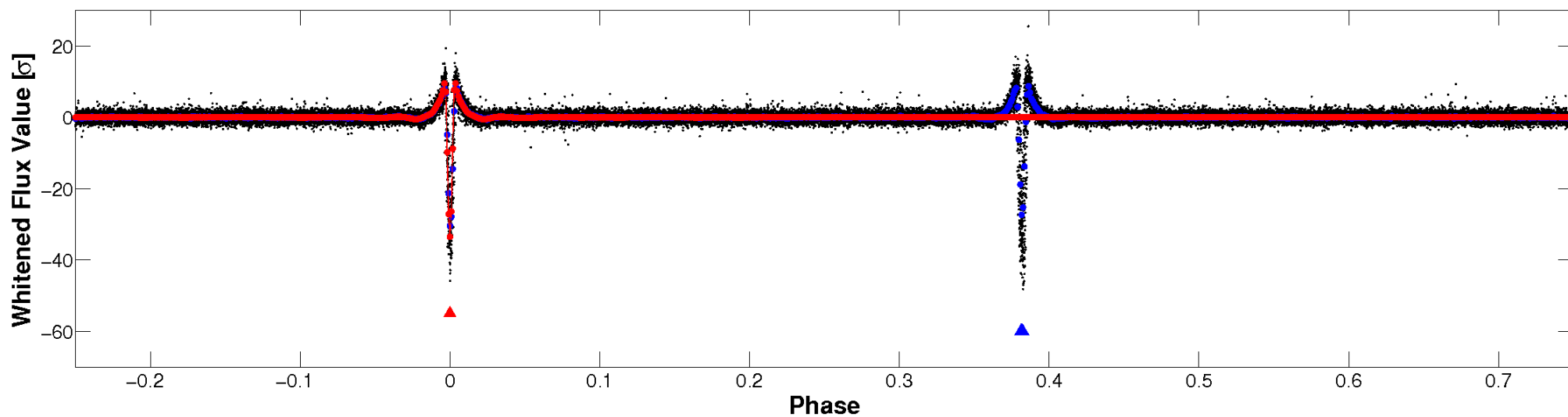


Non-Whitened Vs. Whitened Light Curve

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

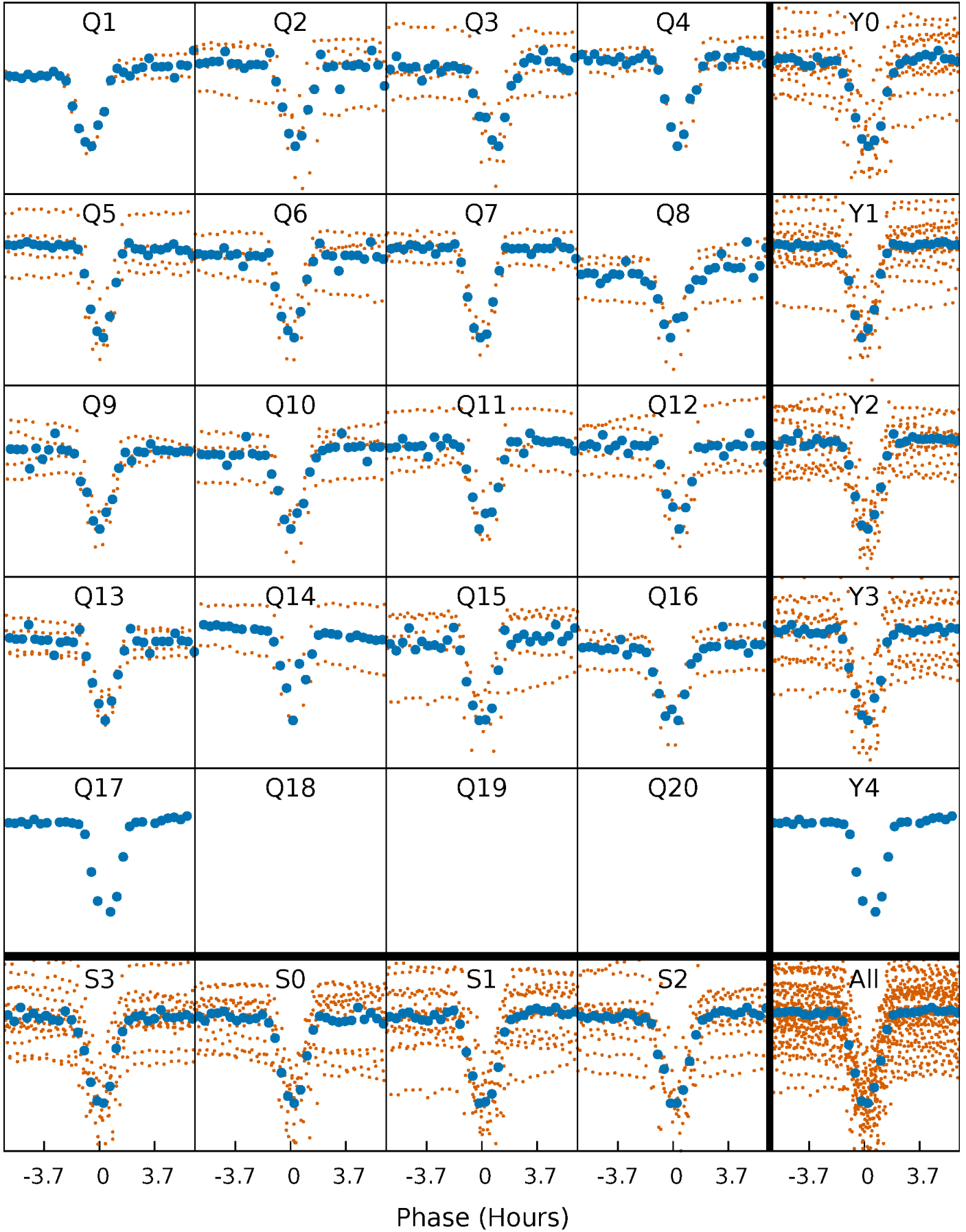


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



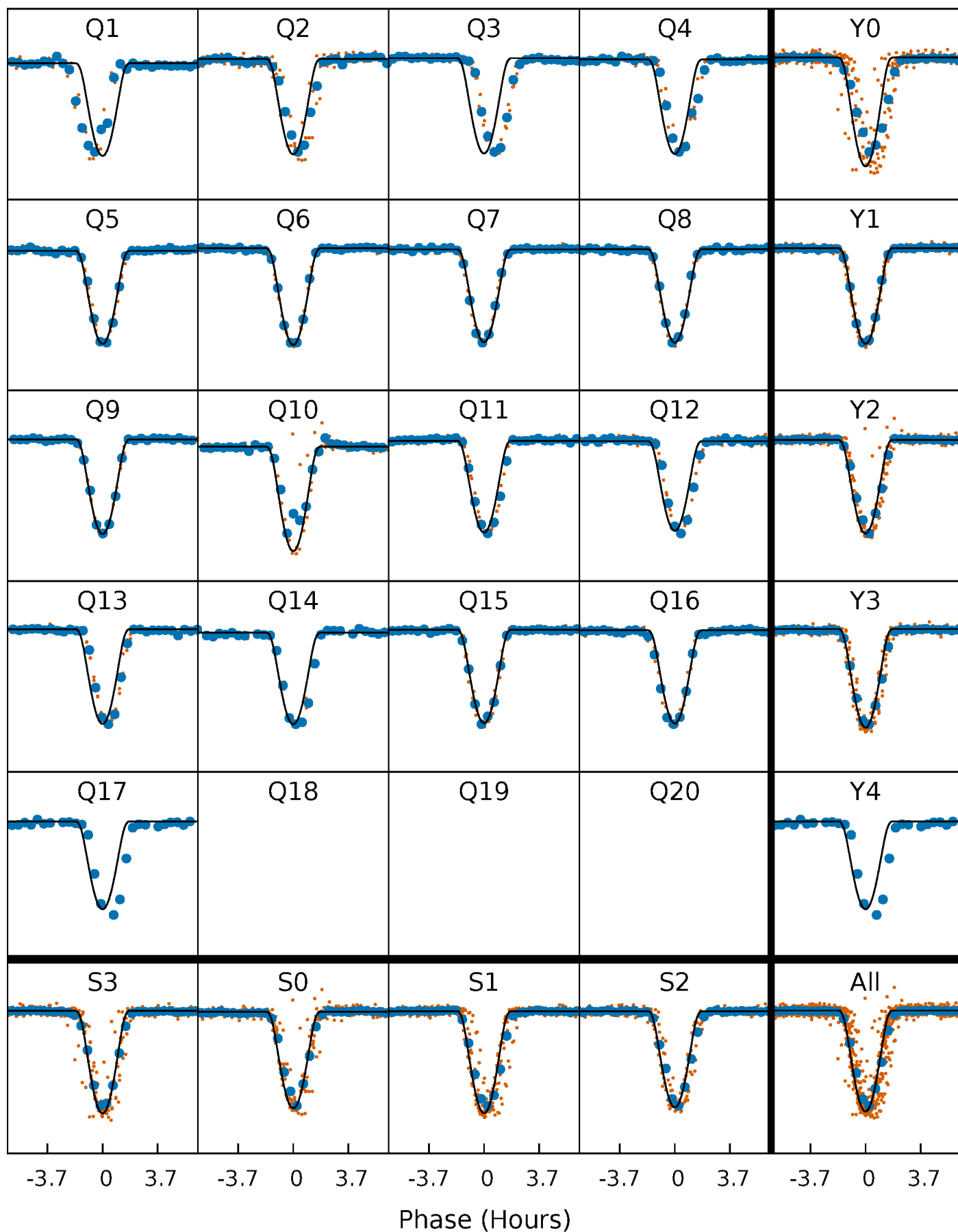
PDC Quarter-Phased Transit Curves

TCE 011519226-01 P= 22.161010 Days $T_0=140.007959$ (BKJD)



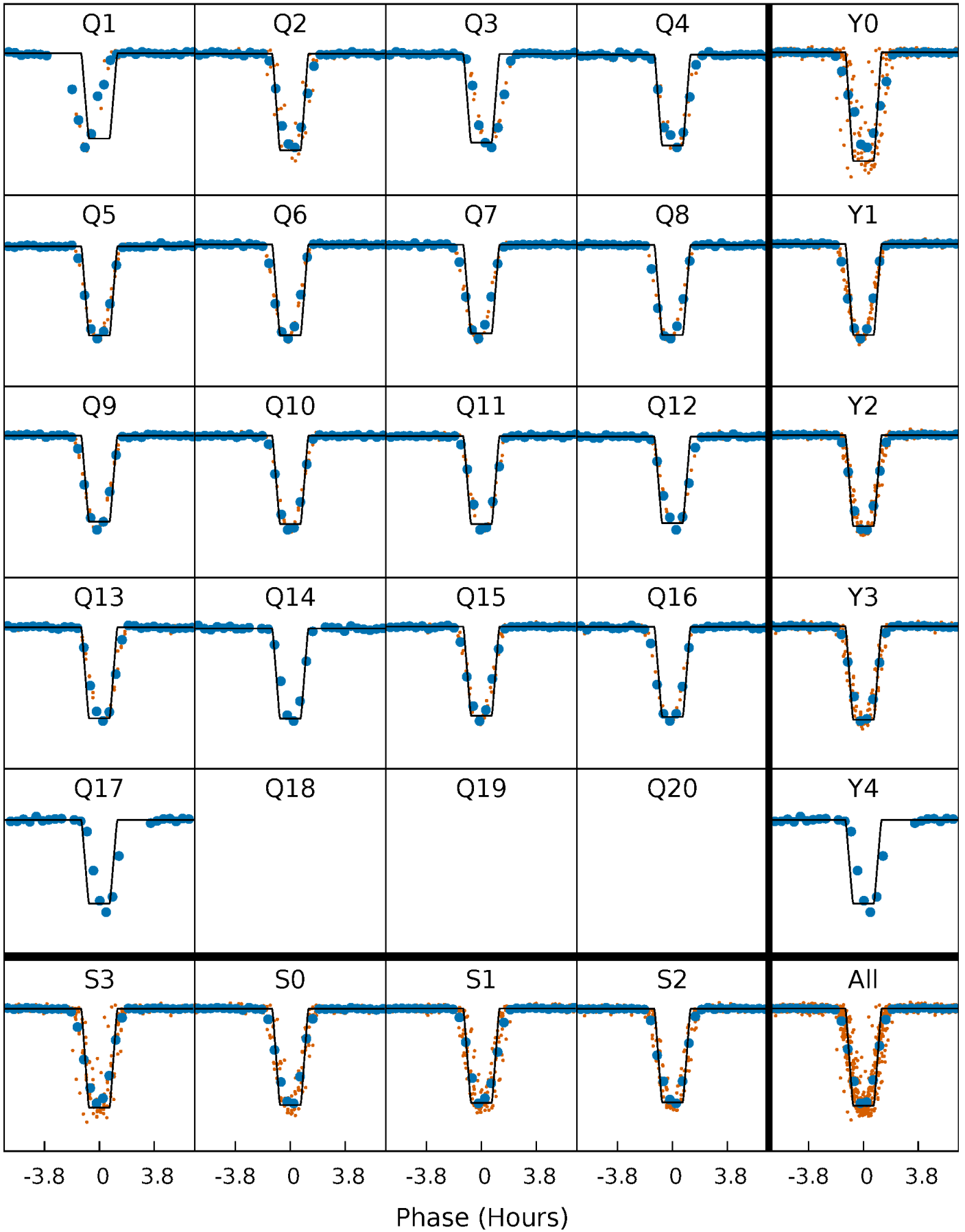
DV Quarter-Phased Transit Curves

TCE 011519226-01 P= 22.161010 Days $T_0=140.007959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

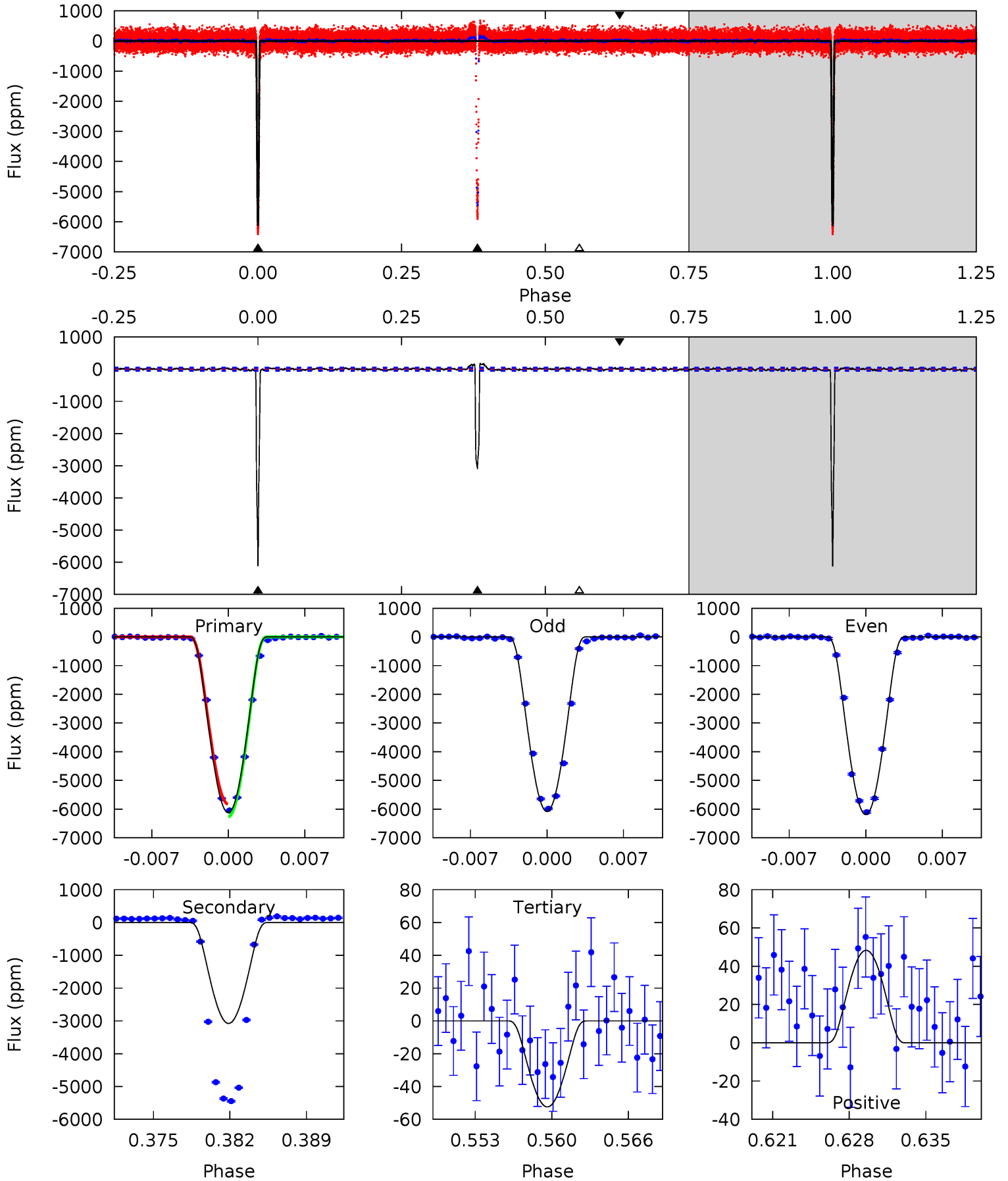
TCE 011519226-01 P= 22.160904 Days $T_0=140.017526$ (BKJD)



DV Model-Shift Uniqueness Test

011519226-01, P = 22.161010 Days, E = 117.846949 Days

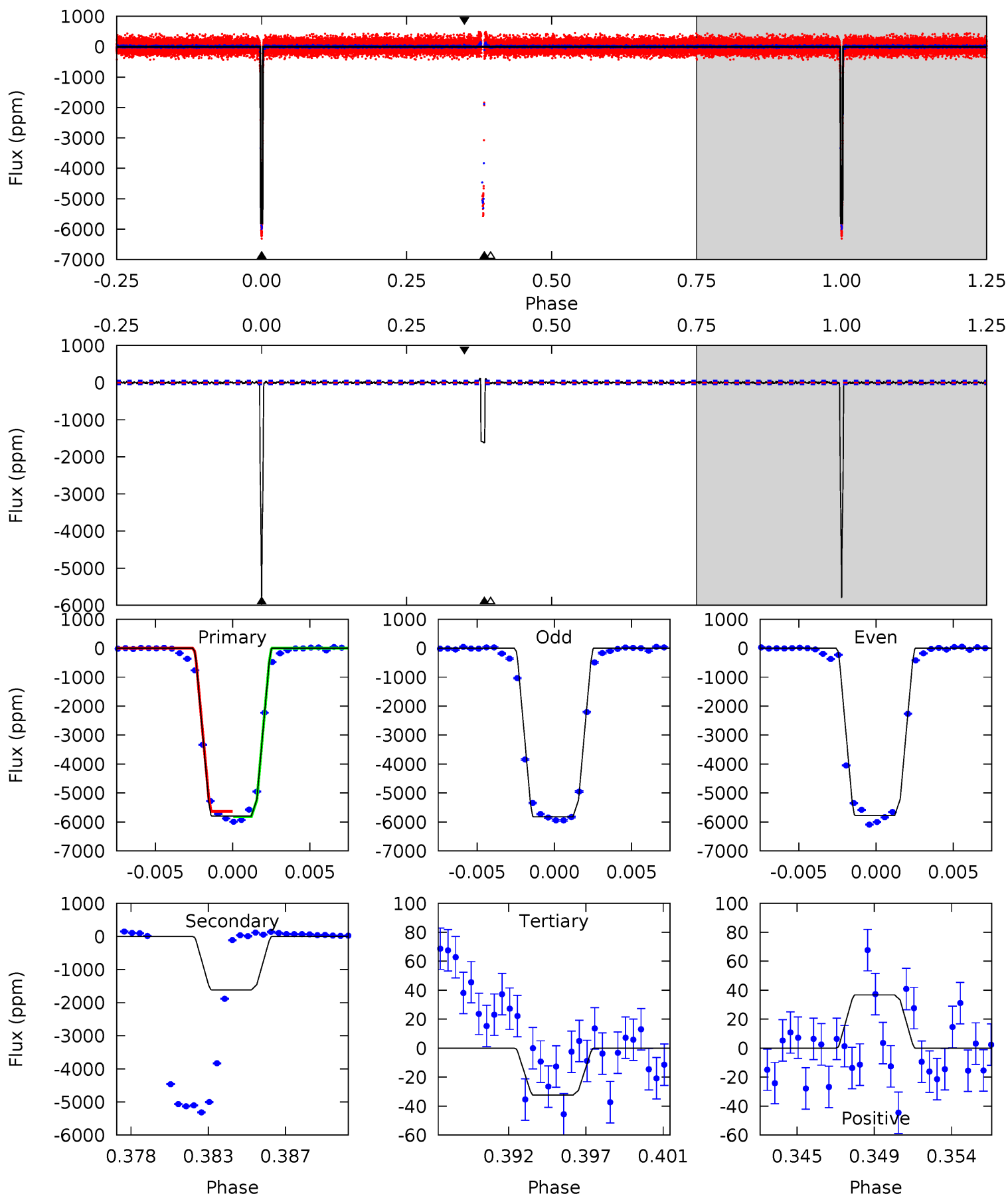
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
678.9	341.0	5.81	5.35	5.10	2.71	2.60	673.1	673.5	335.1	335.6	5.87	0.96	0.03	15.9



Alt Model-Shift Uniqueness Test

011519226-01, P = 22.160904 Days, E = 117.856622 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
589.5	164.4	3.30	3.74	5.17	2.83	3.56	586.2	585.7	161.1	160.6	2.22	0.98	0.02	6.24



Stellar Parameters For KIC 011519226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5893^{+162}_{-133}	$3.945^{+0.315}_{-0.105}$	$-0.400^{+0.350}_{-0.200}$	$1.745^{+0.371}_{-0.556}$	$0.979^{+0.155}_{-0.113}$	$0.259^{+0.490}_{-0.095}$
	+3%/-2%	+8%/-3%	+87%/-50%	+21%/-32%	+16%/-12%	+189%/-36%
Source	PHO1	FLK73	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 011519226-01 / KOI 6087.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3077 ± 9	$23.57^{+5.00}_{-5.01}$	1197^{+81}_{-102}	4128^{+272}_{-218}	73^{+42}_{-23}
Alt.	-1616 ± 10	$13.74^{+4.28}_{-3.91}$	1201^{+77}_{-111}	4480^{+524}_{-371}	112^{+108}_{-45}

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

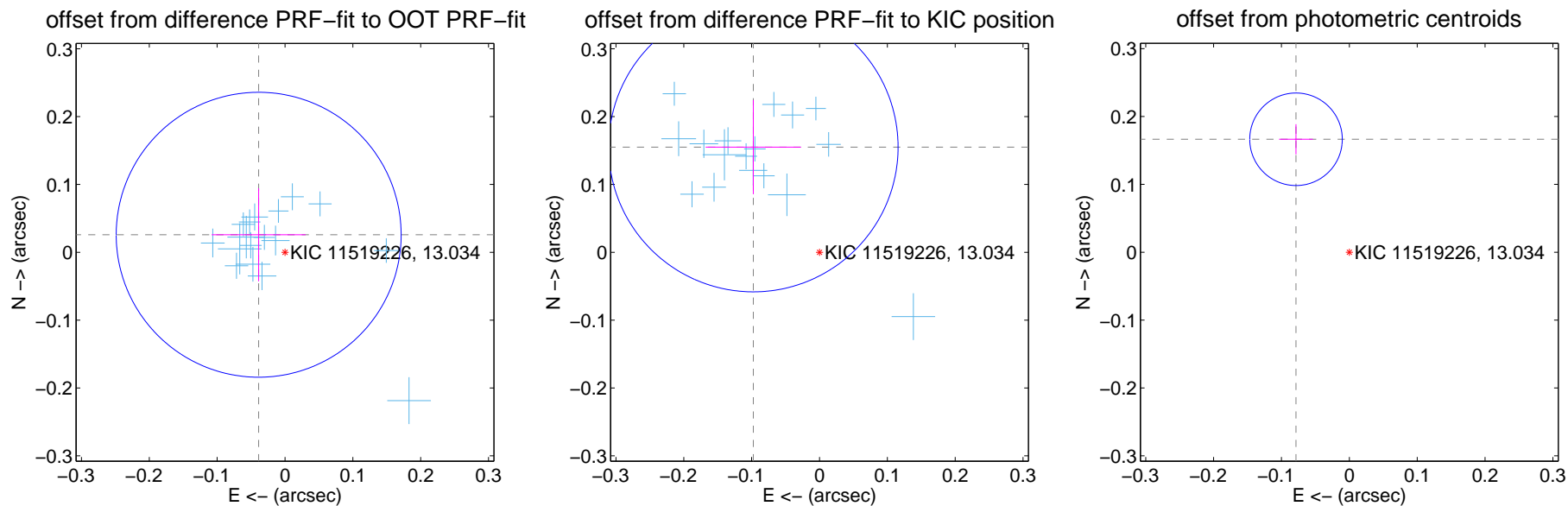
DV Centroid Data

Supplemental centroid analysis for 011519226-01. Kepler magnitude: 13.03. Transit SNR 350.31

There are 17 quarters with good PRF difference image offsets

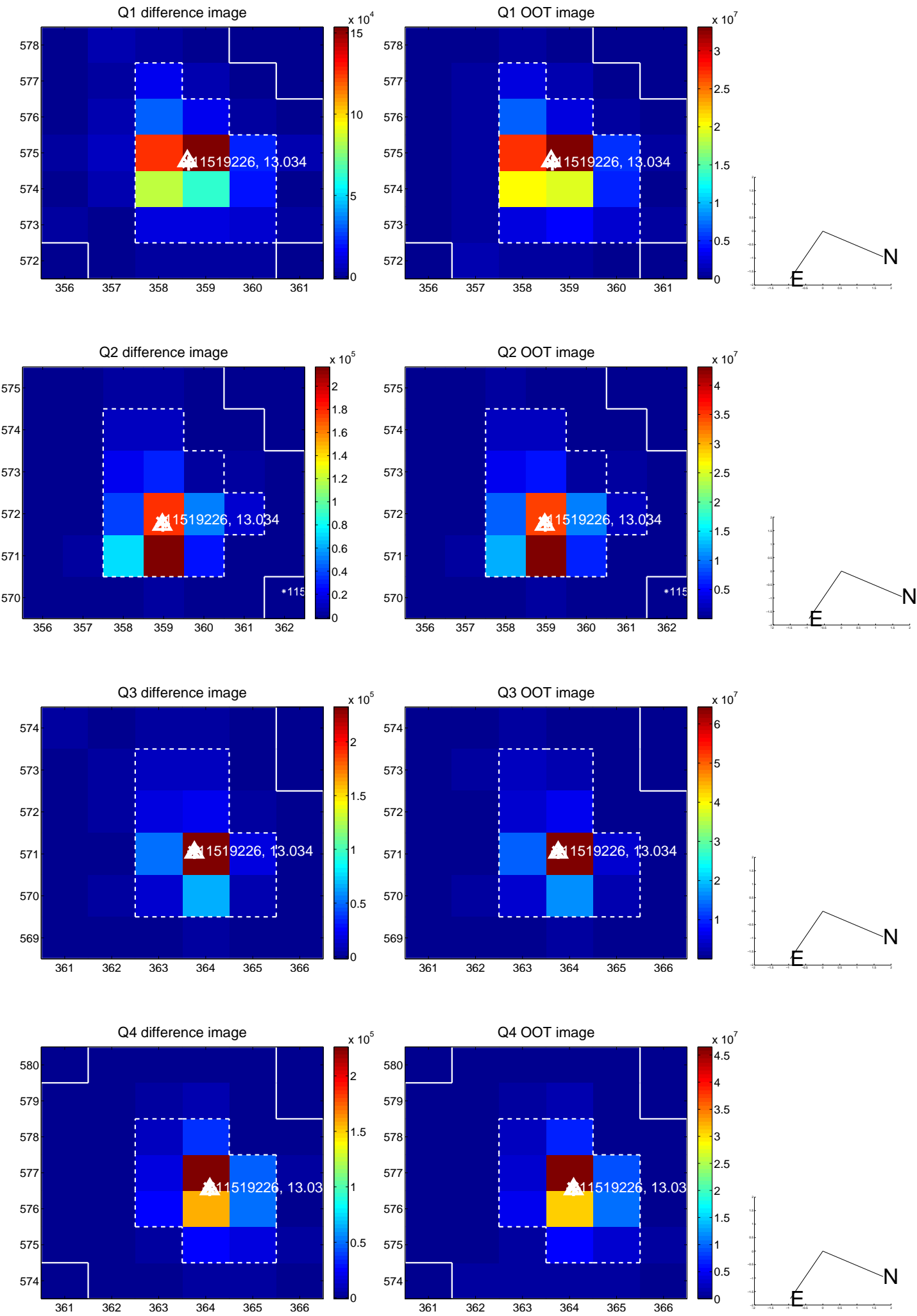
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.070	0.67	0.039 ± 0.069	0.026 ± 0.069
PRF-fit source offset from KIC position	0.183 ± 0.071	2.58	0.098 ± 0.070	0.155 ± 0.069
photometric centroid source offset	0.18 ± 0.02	8.10	0.08 ± 0.02	0.17 ± 0.02

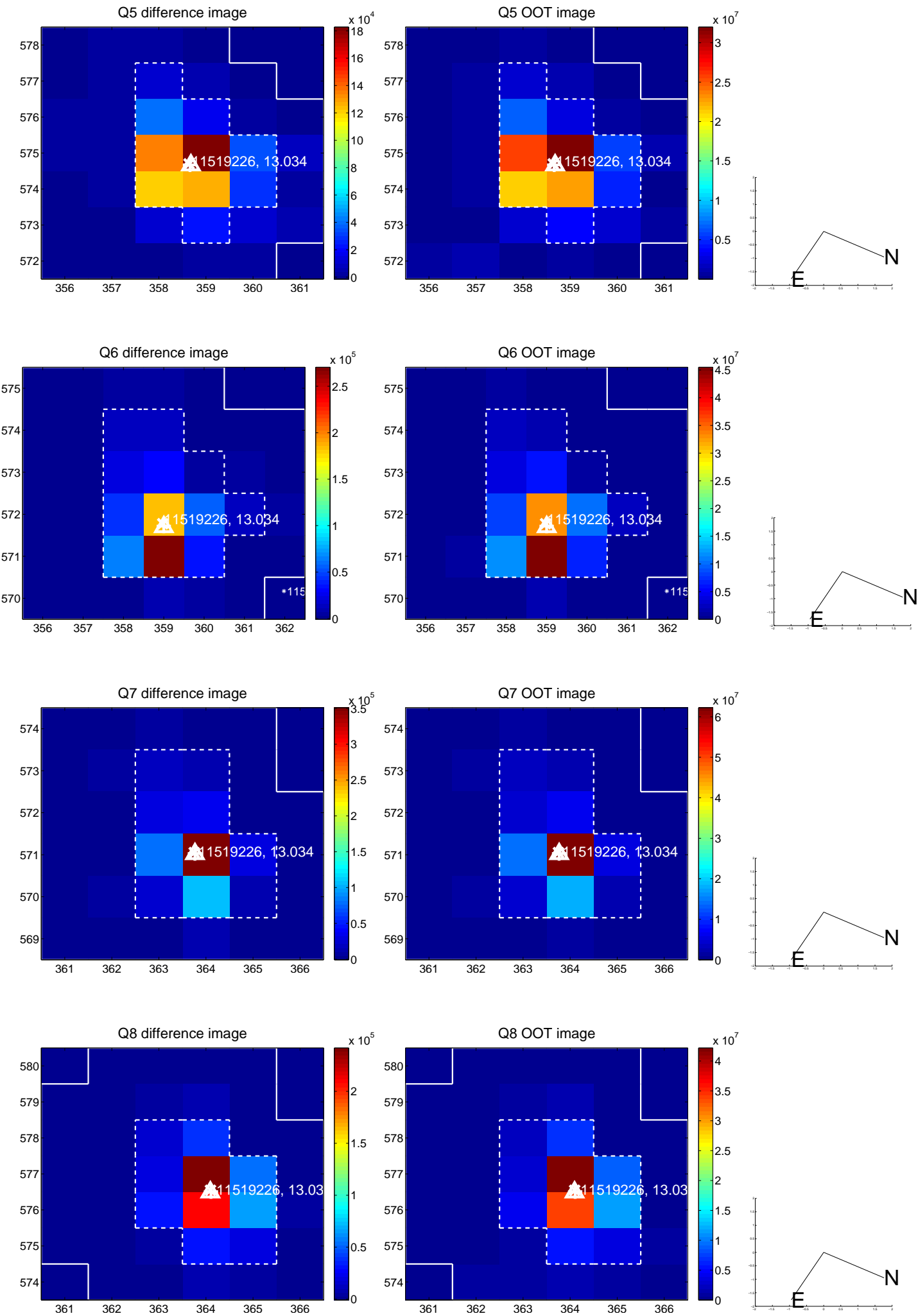


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

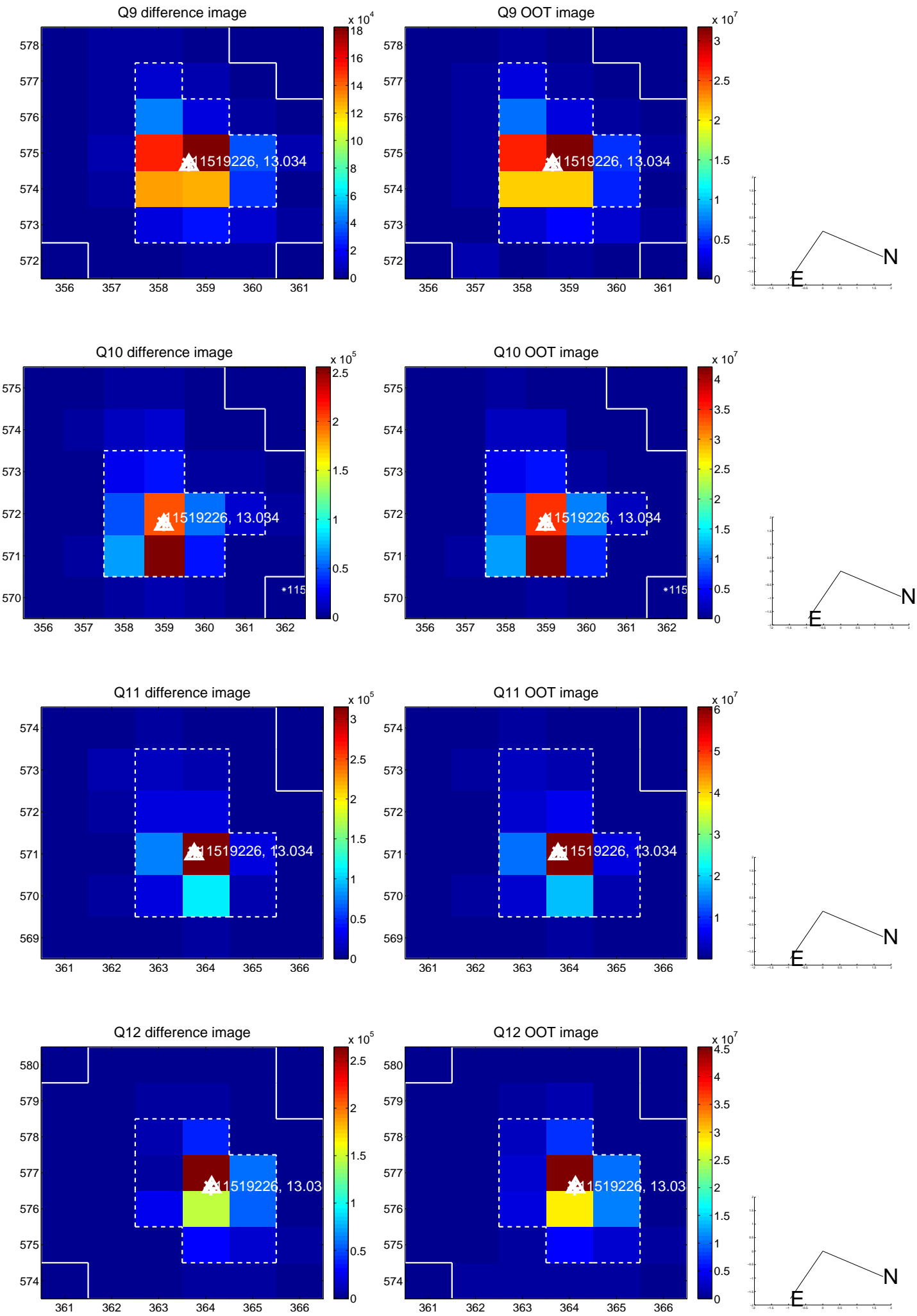
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



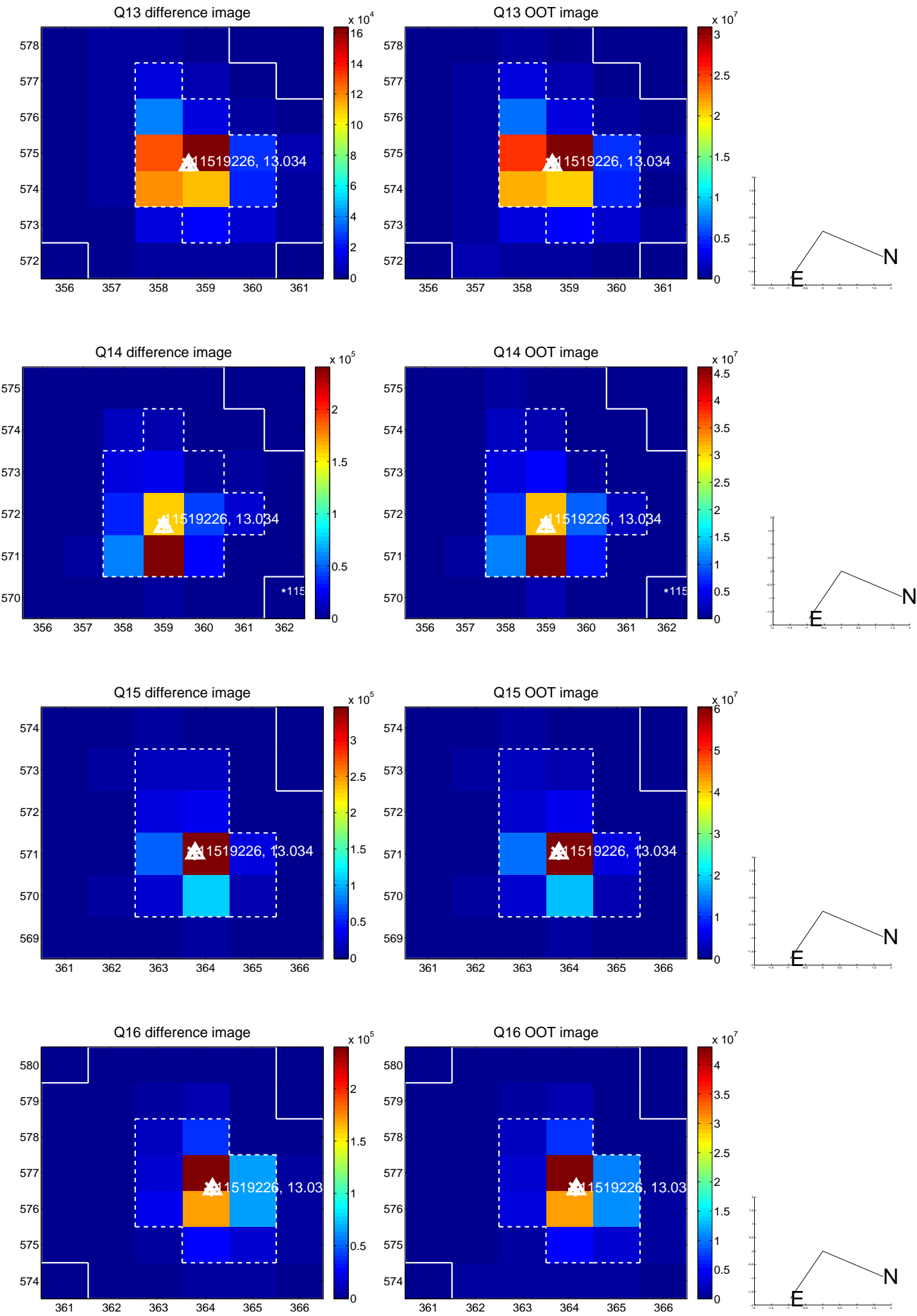
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



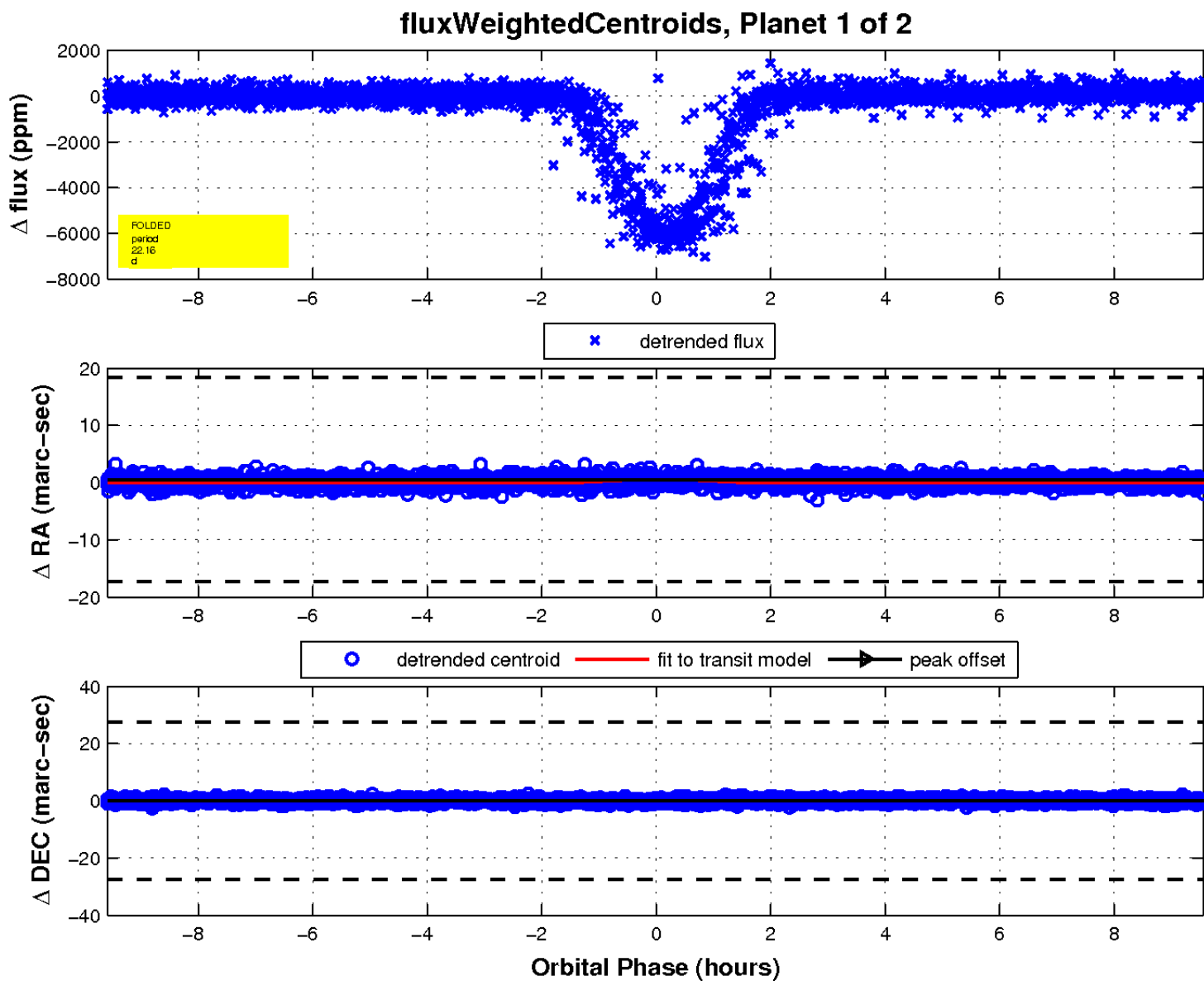
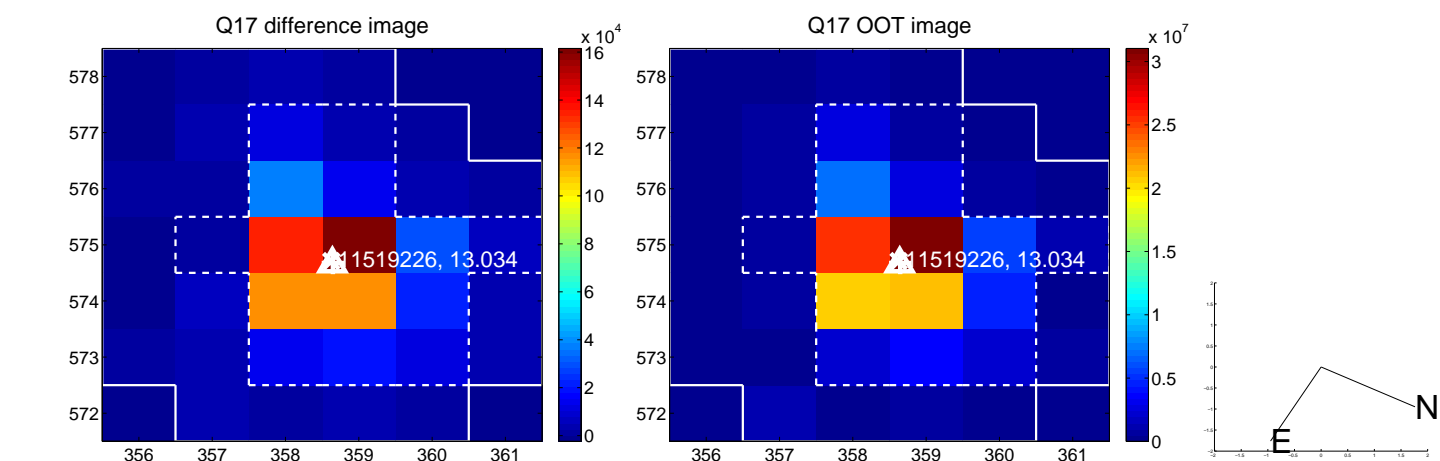
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



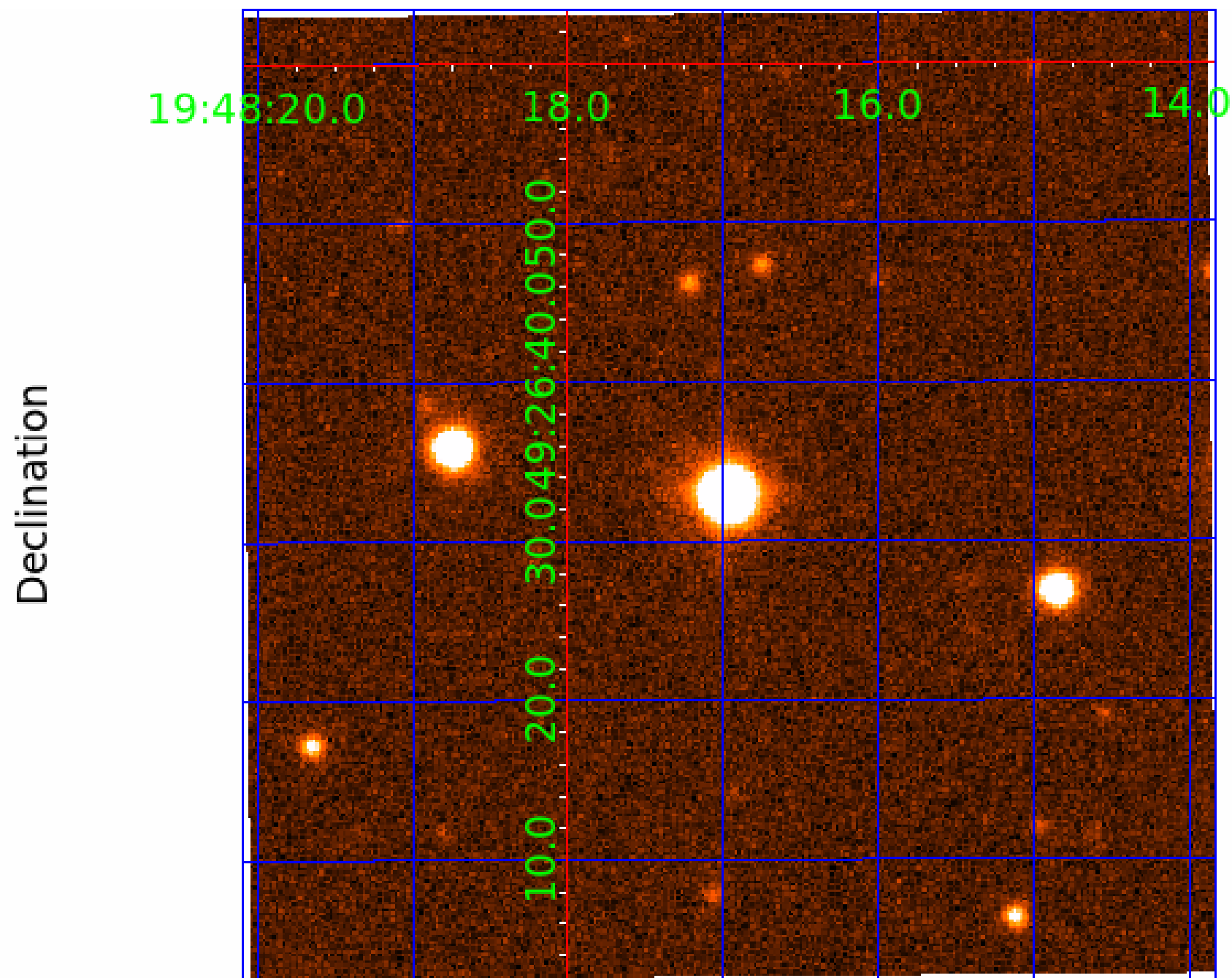
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011519226

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})
011519226-01	OBS	6087.01	22.161010	140.007959	6153.8	3.196	408.6	350.3	1.75	5893	24.95	139.95
011519226-02	OBS	No	22.160653	148.480156	6185.8	2.437	400.0	327.8	1.75	5893	15.51	139.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011519226-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
011519226-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 011519226-02

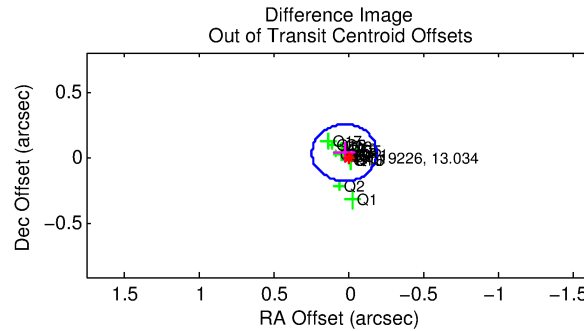
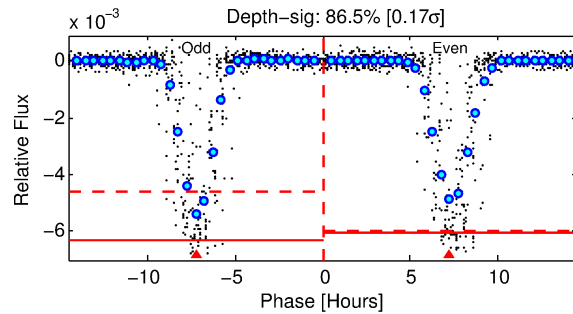
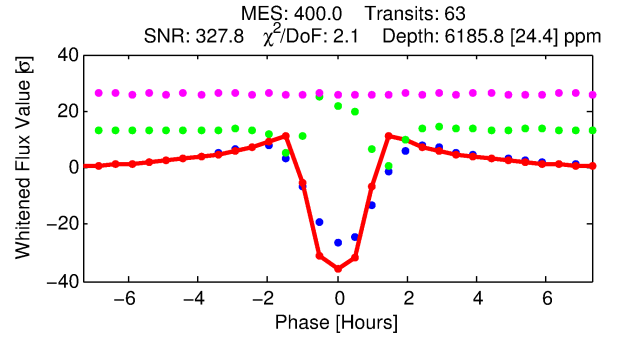
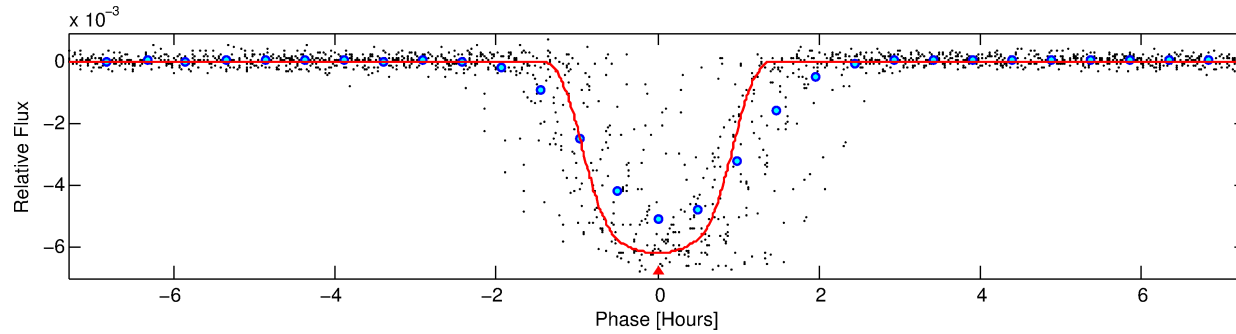
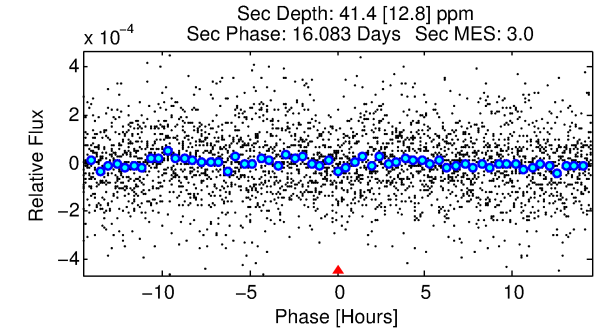
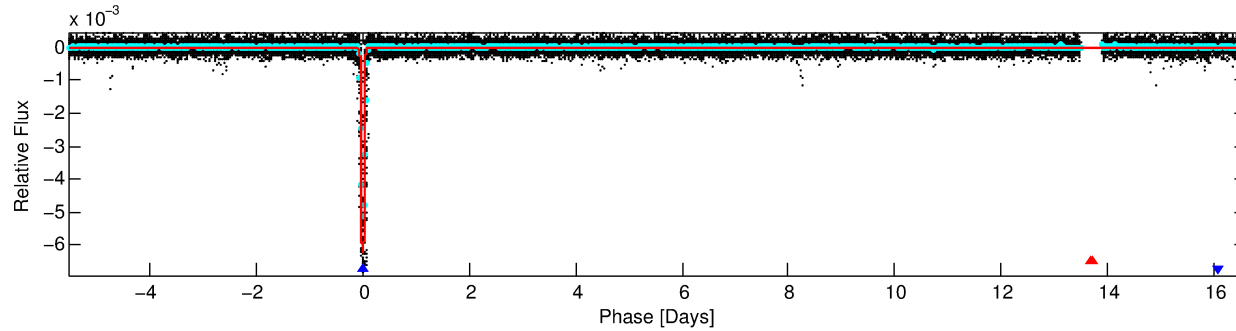
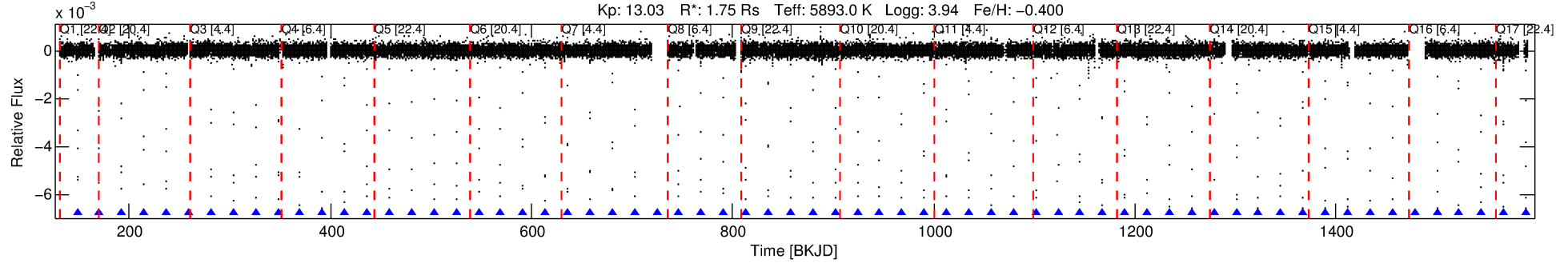
No Significant Match Found

DV One-Page Summary

KIC: 11519226 Candidate: 2 of 2 Period: 22.161 d

KOI: K06087.01 Corr: 0.809

Kp: 13.03 R*: 1.75 Rs Teff: 5893.0 K Logg: 3.94 Fe/H: -0.400



DV Fit Results:

Period = 22.16065 [0.00000] d
Epoch = 148.4802 [0.0002] BKJD
Rp/R* = 0.0815 [0.0004]
a/R* = 47.96 [0.84]
b = 0.83 [0.01]
Seff = 139.96 [75.50]
Teff = 877 [118] K
Rp = 15.51 [4.94] Re
a = 0.1533 [0.0493] AU
Ag = 2.23 [1.36] [0.90σ]
Teffp = 1657 [136] K [4.33σ]

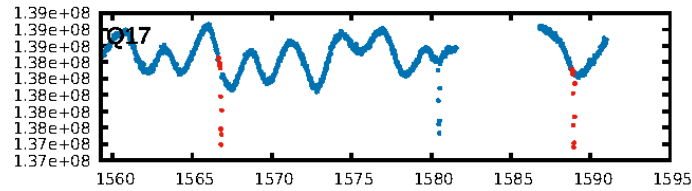
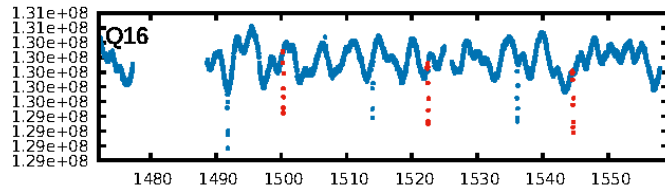
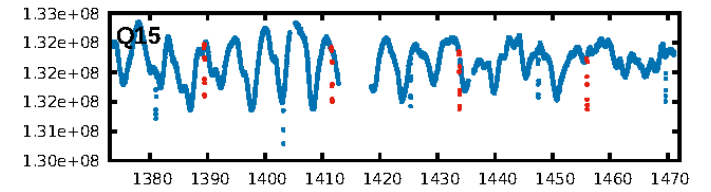
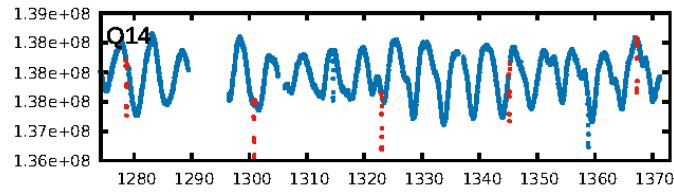
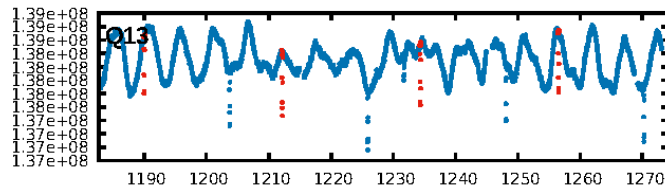
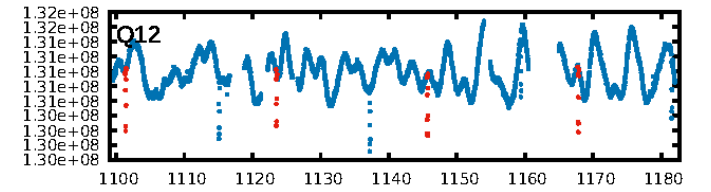
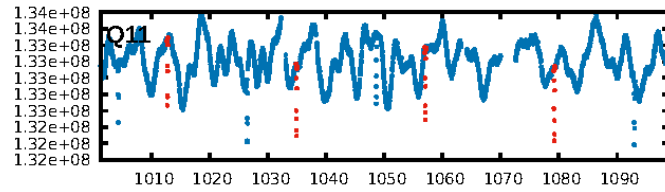
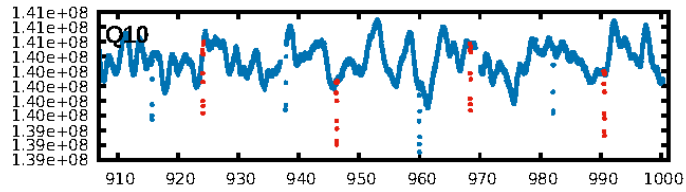
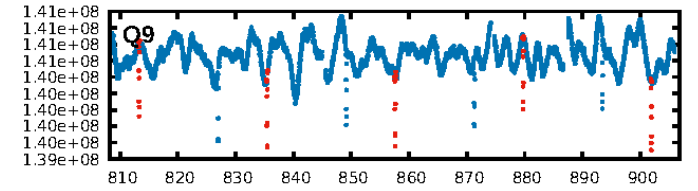
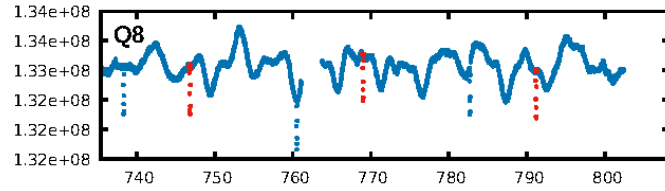
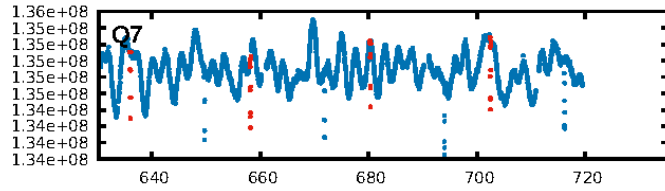
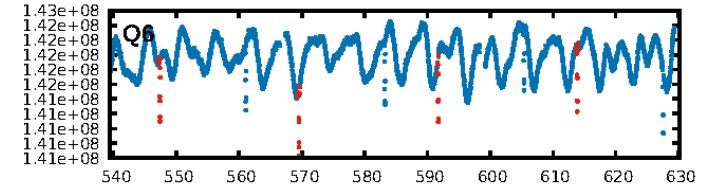
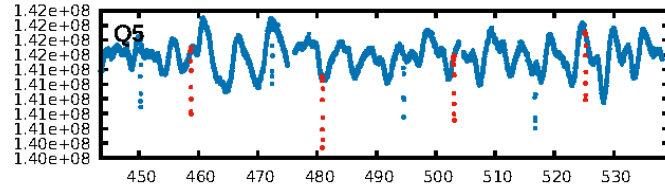
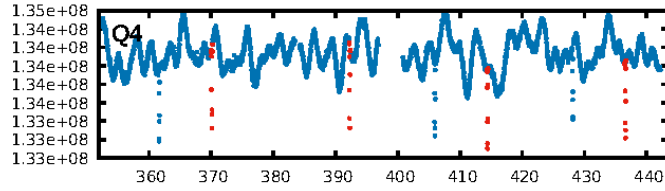
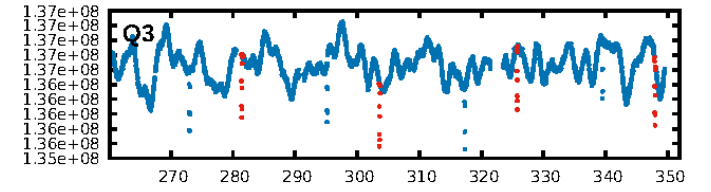
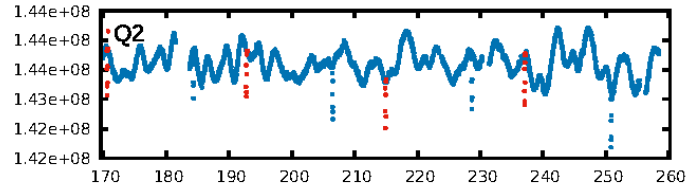
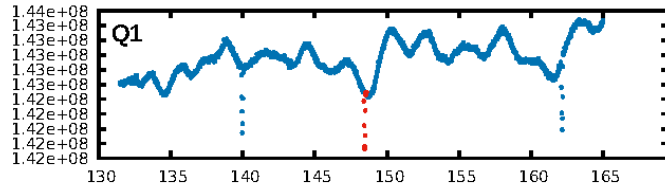
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.2% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 6.7%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [60/60]
GhostDiagnostic-chr: 3.476
Centroid-sig: 0.0%
Centroid-so: 0.270 arcsec [12.55σ]
OotOffset-rm: 0.047 arcsec [0.66σ]
KicOffset-rm: 0.189 arcsec [2.58σ]
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]

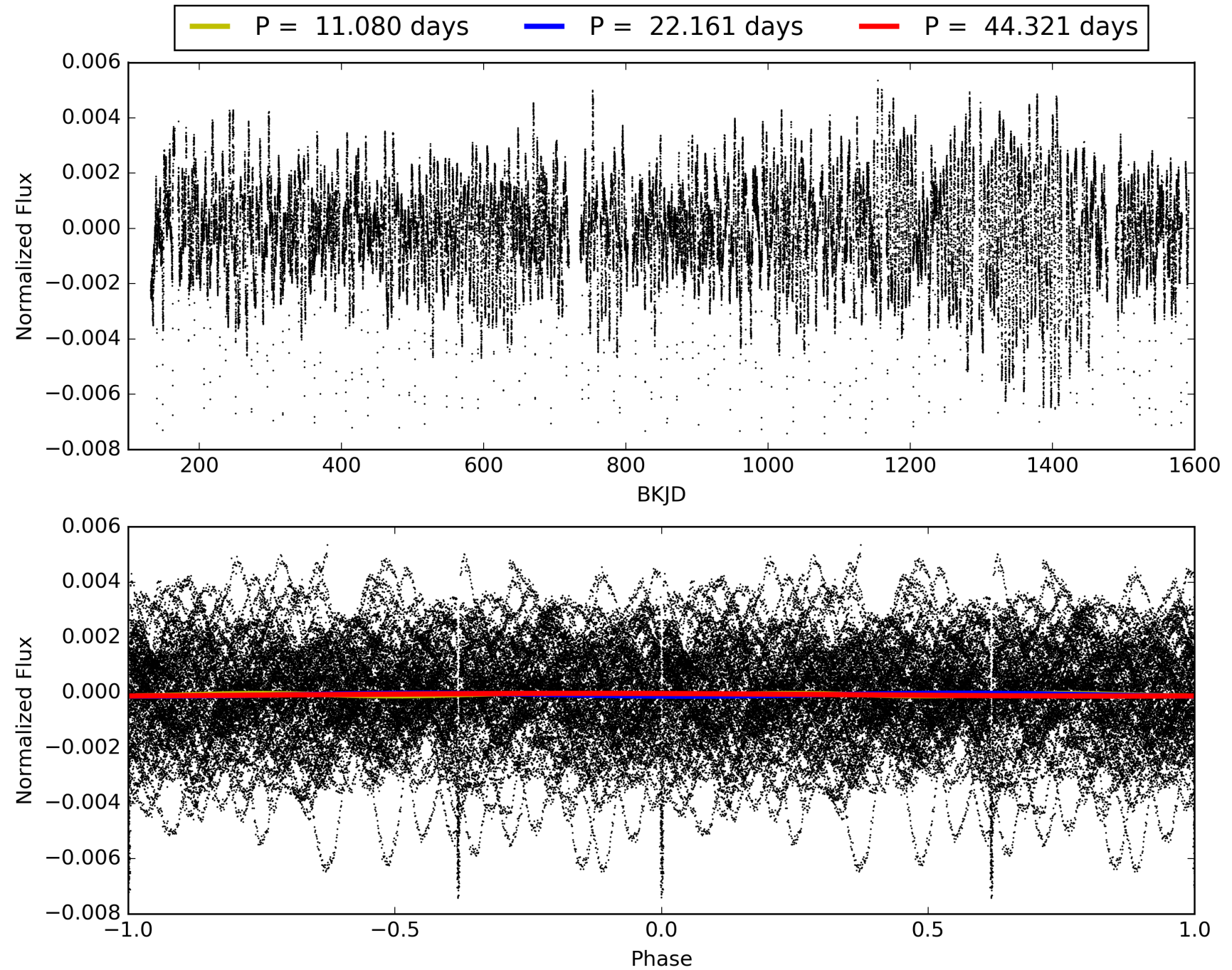
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:05:58 Z

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

TCE 011519226-02, PDC Light Curves

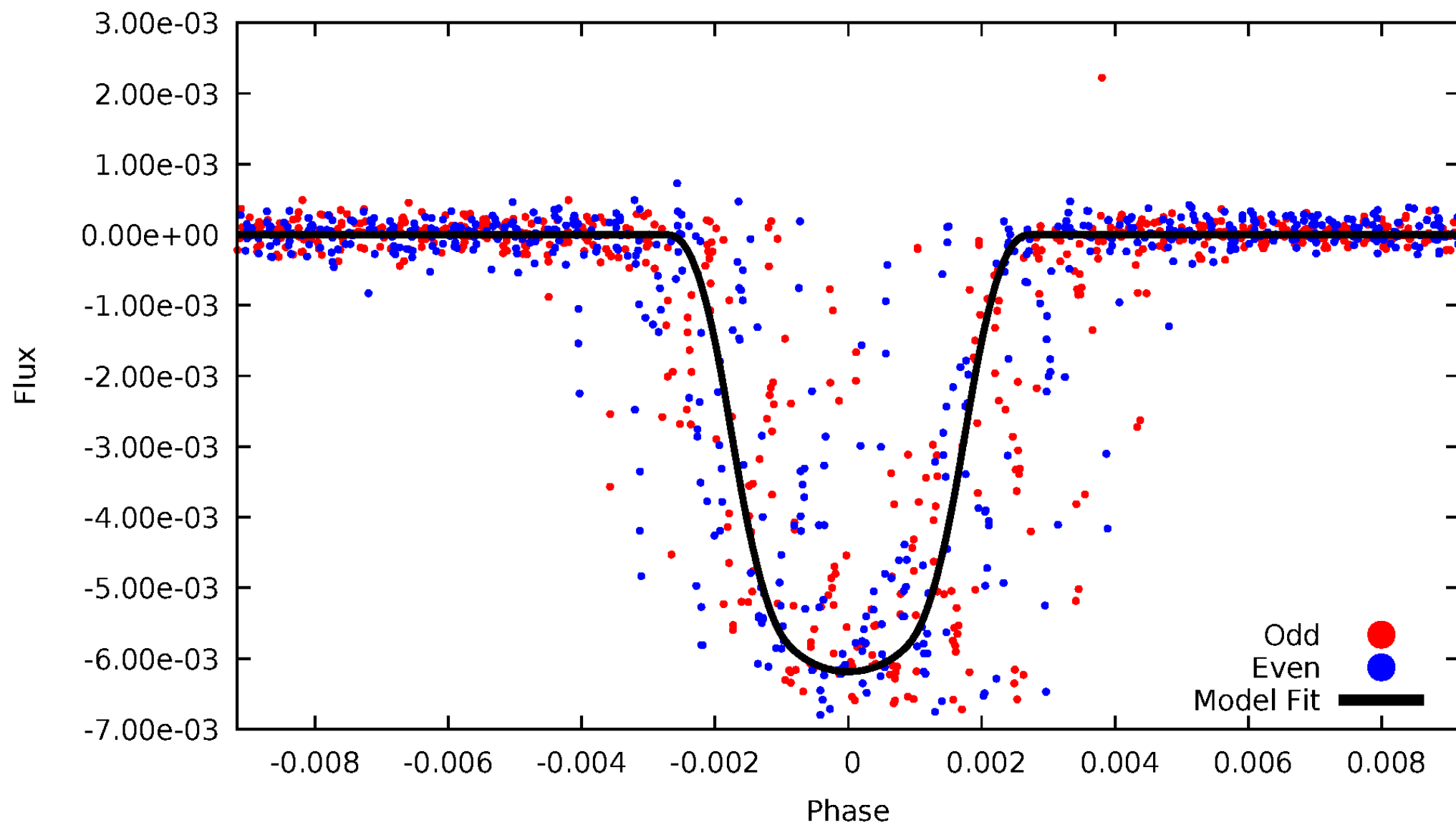


TCE 011519226-02



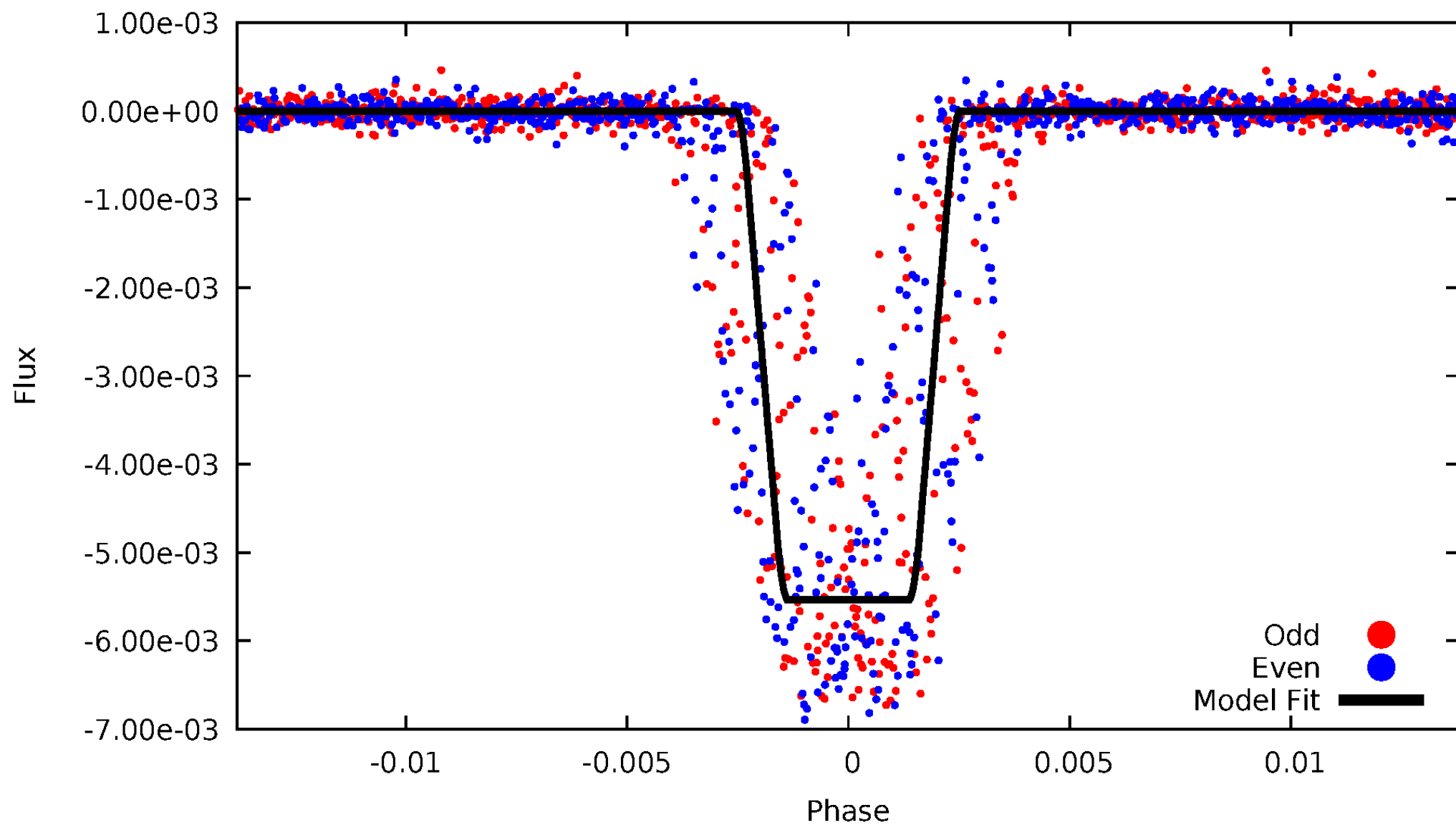
DV Odd/Even

TCE 011519226-02



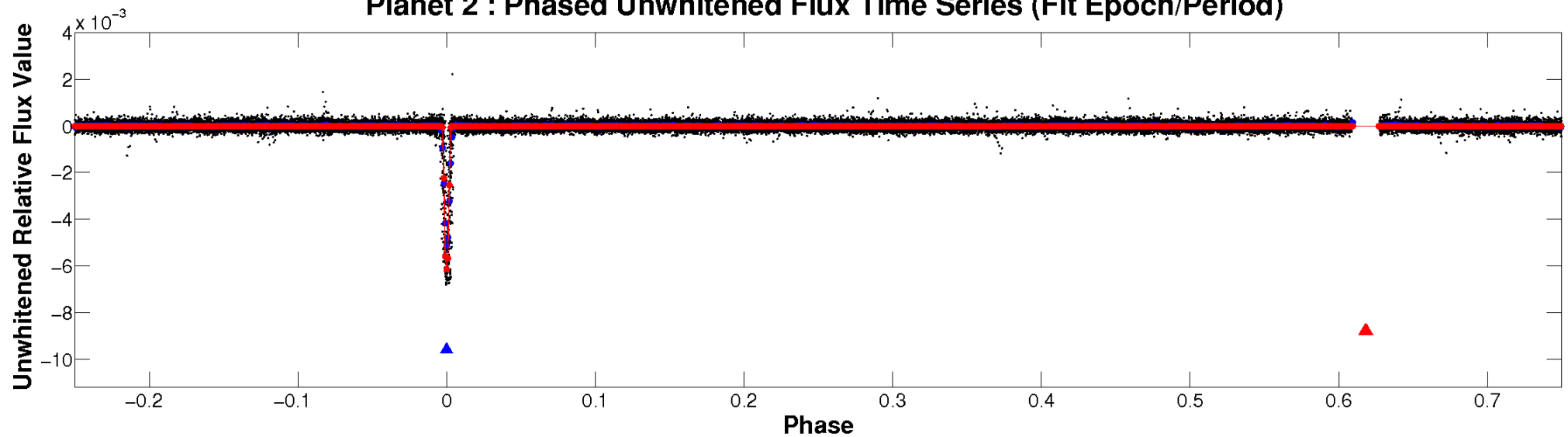
ALT Odd/Even

TCE 011519226-02

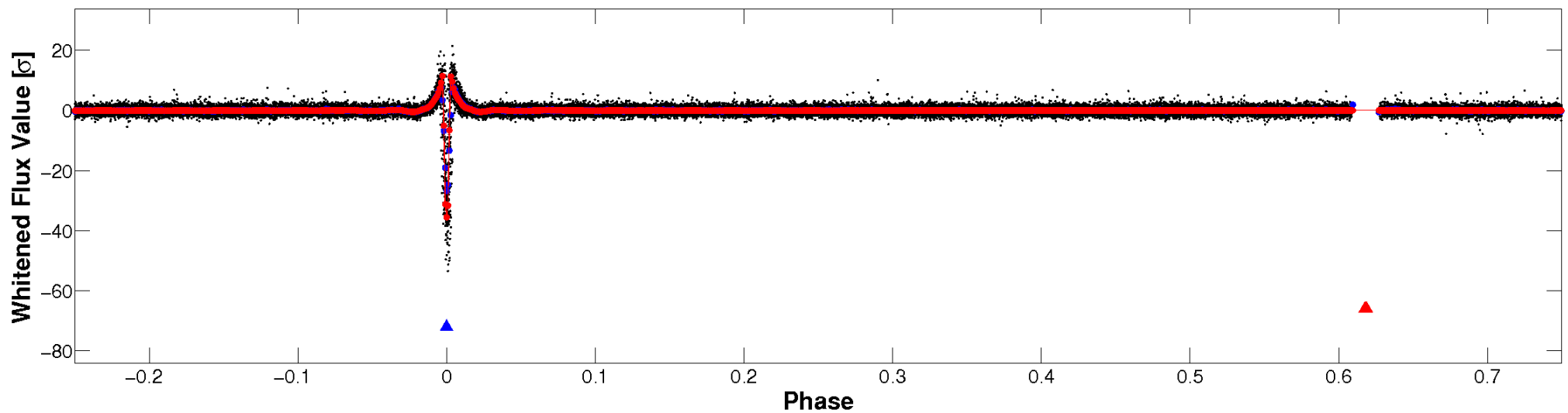


Non-Whitened Vs. Whitened Light Curve

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

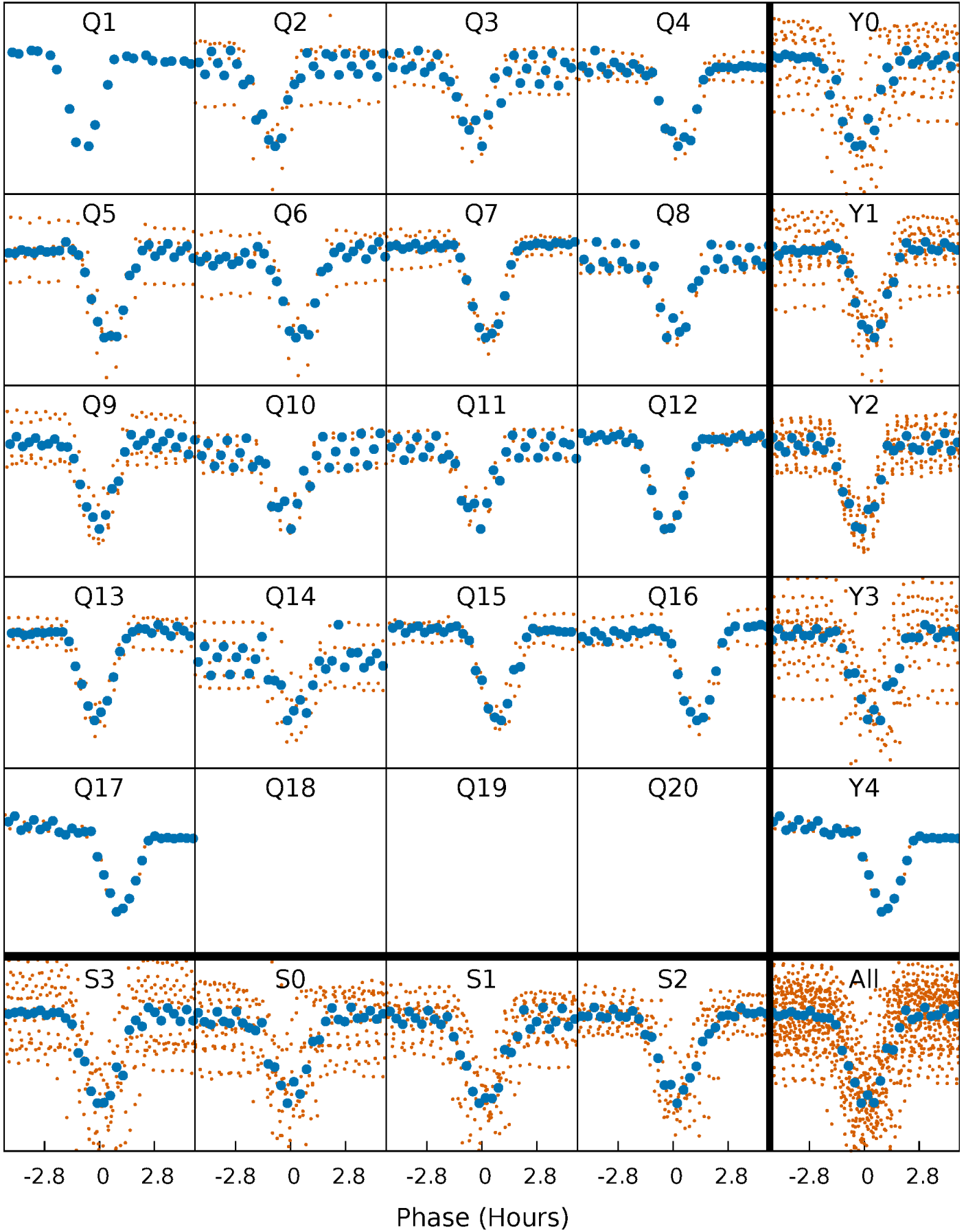


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



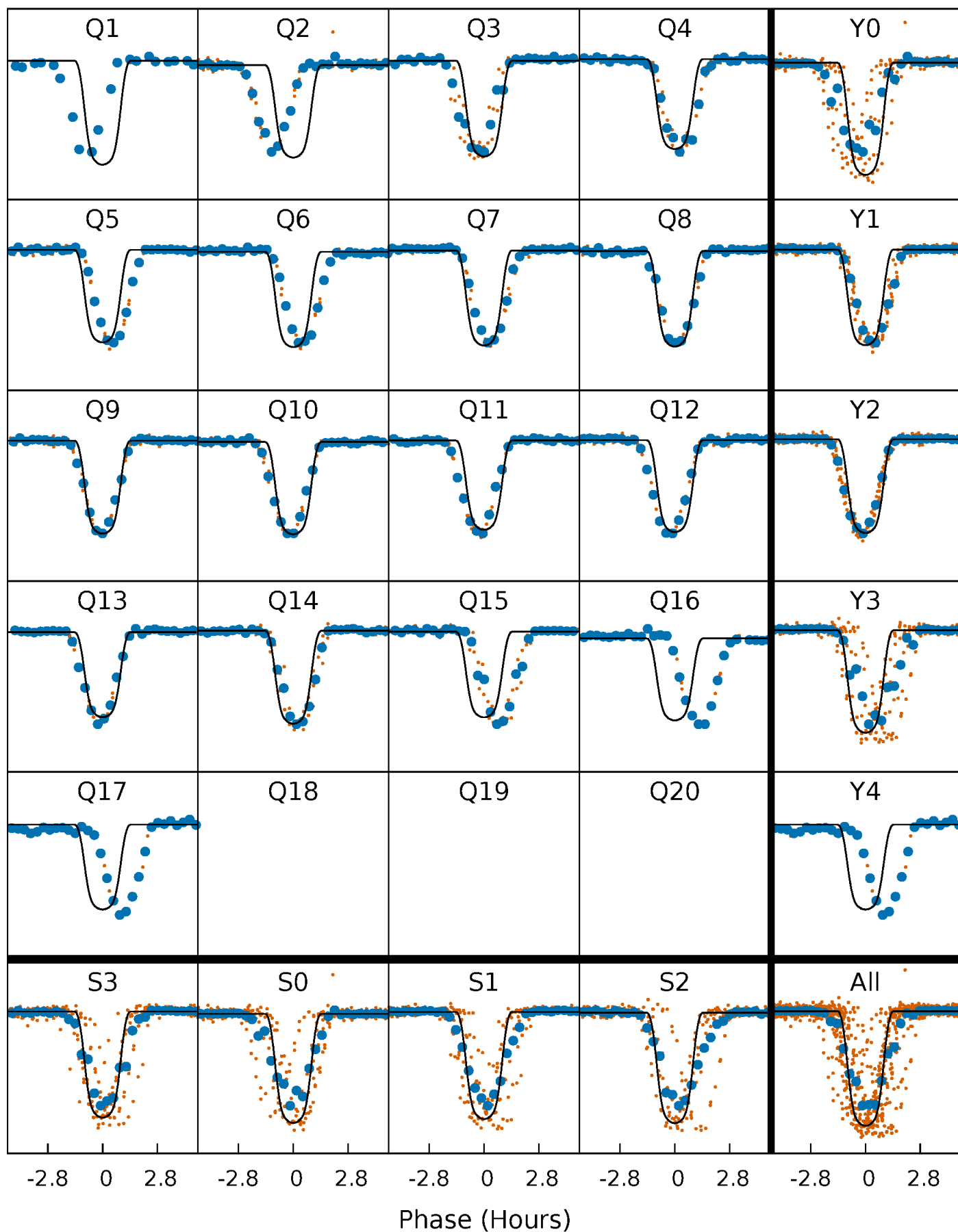
PDC Quarter-Phased Transit Curves

TCE 011519226-02 P= 22.160653 Days $T_0=148.480156$ (BKJD)



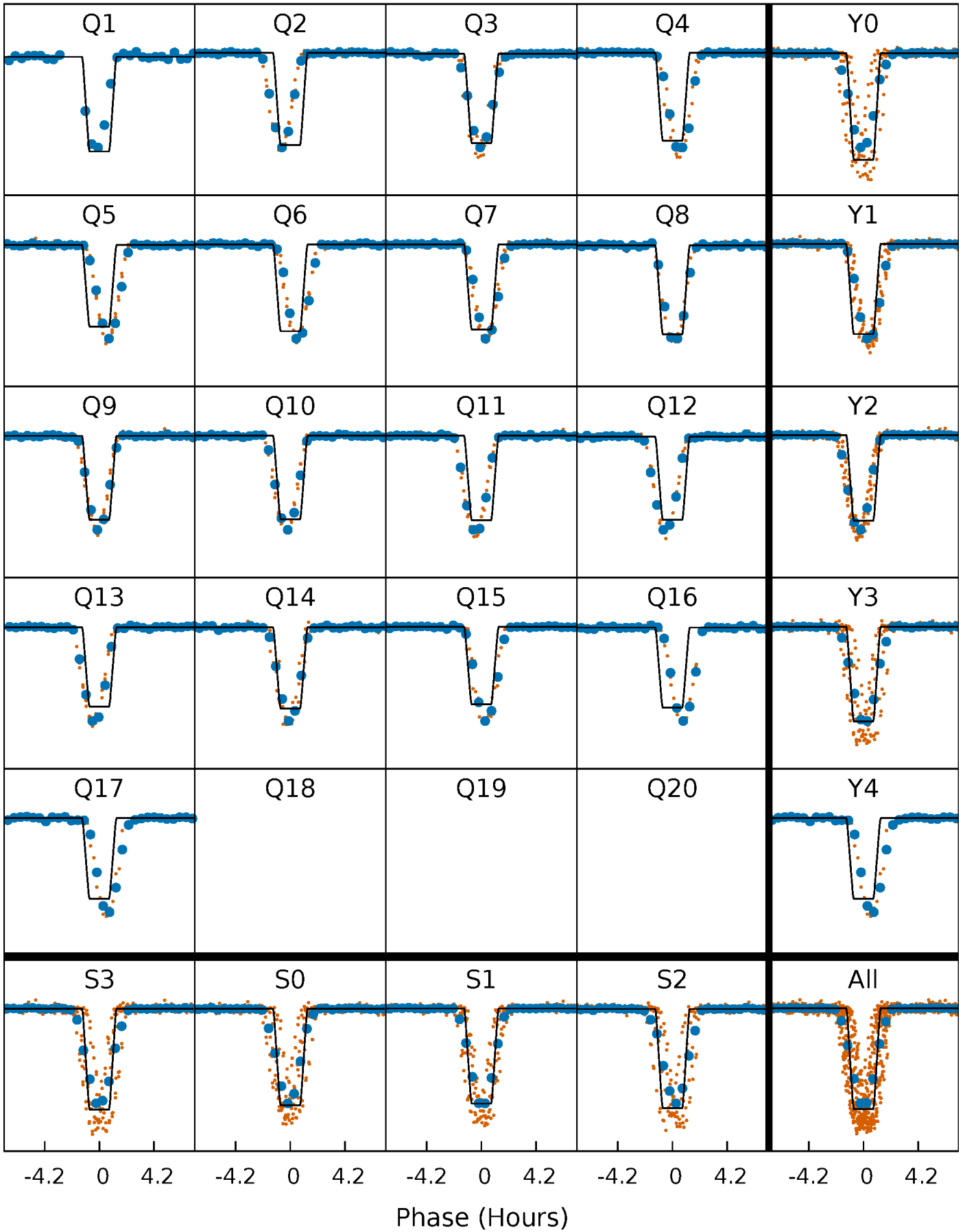
DV Quarter-Phased Transit Curves

TCE 011519226-02 P= 22.160653 Days $T_0=148.480156$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

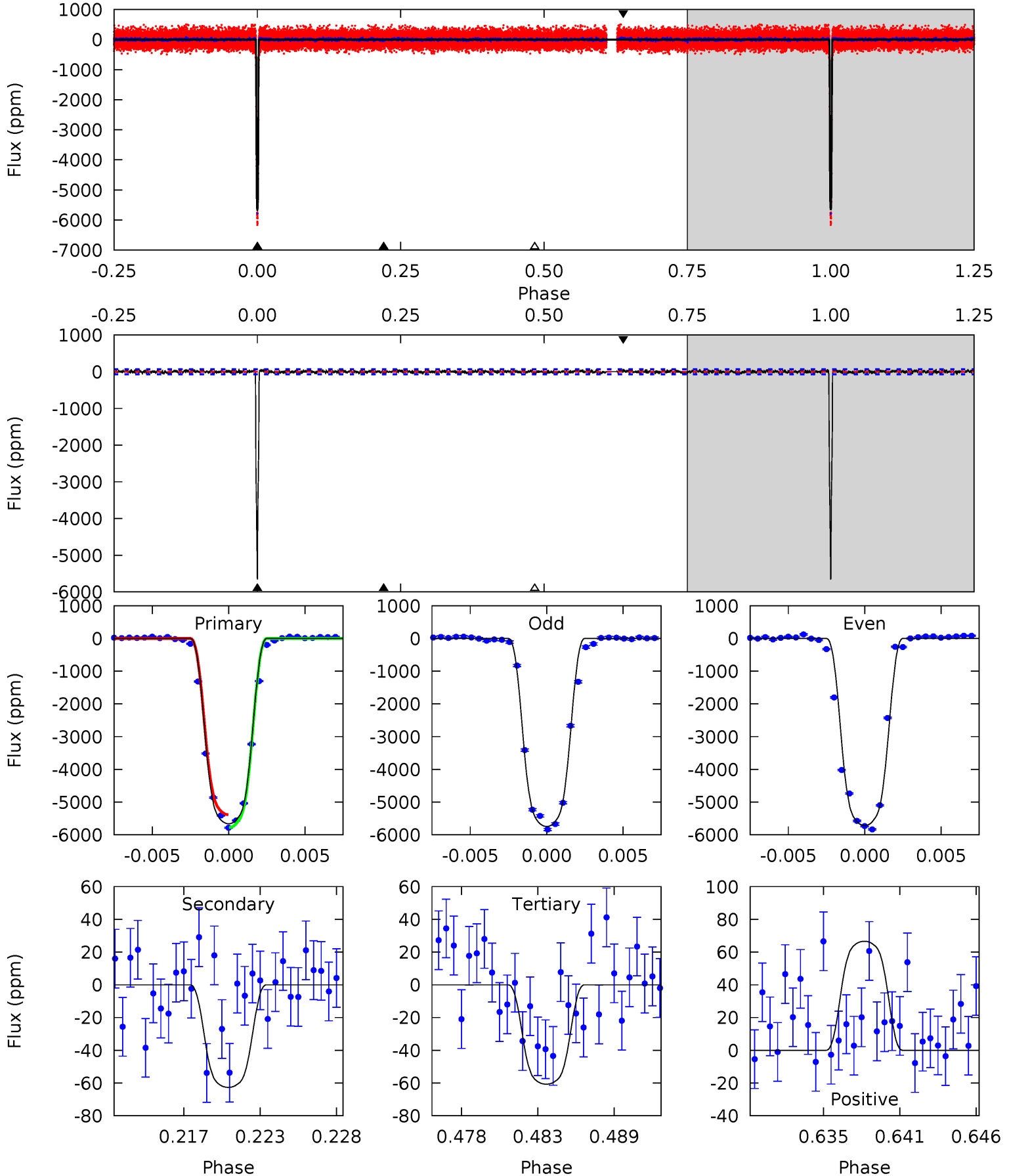
TCE 011519226-02 P= 22.161220 Days $T_0=148.465552$ (BKJD)



DV Model-Shift Uniqueness Test

011519226-02, P = 22.160653 Days, E = 126.319503 Days

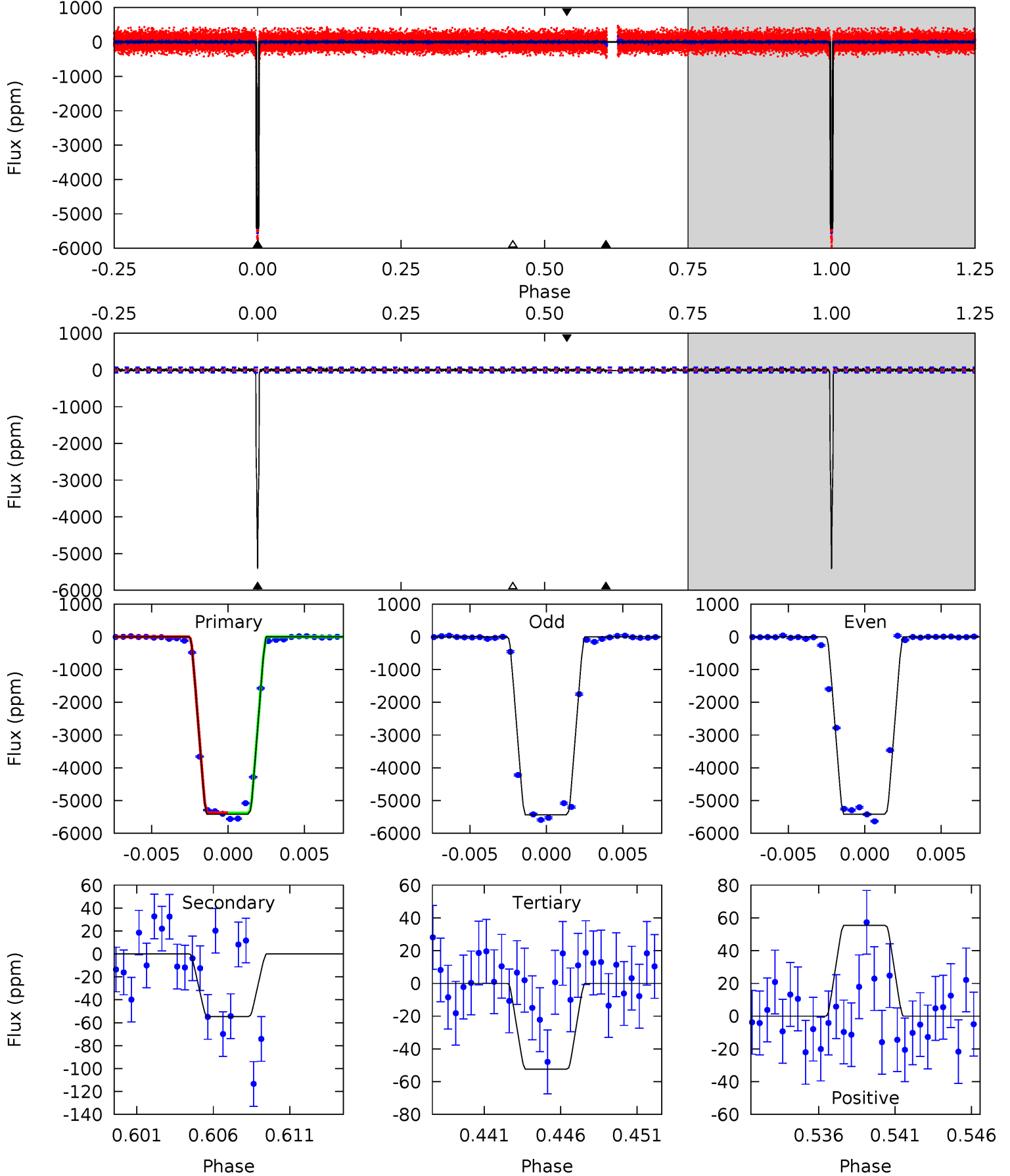
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
416.3	4.61	4.46	4.90	5.14	2.78	1.32	411.8	411.4	0.14	-0.29	1.07	0.92	0.01	13.9



Alt Model-Shift Uniqueness Test

011519226-02, P = 22.161220 Days, E = 126.304332 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
403.6	4.07	3.91	4.14	5.16	2.81	1.09	399.7	399.5	0.16	-0.06	0.56	0.98	0.01	0.59



Stellar Parameters For KIC 011519226

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5893^{+162}_{-133}	$3.945^{+0.315}_{-0.105}$	$-0.400^{+0.350}_{-0.200}$	$1.745^{+0.371}_{-0.556}$	$0.979^{+0.155}_{-0.113}$	$0.259^{+0.490}_{-0.095}$
	+3%/-2%	+8%/-3%	+87%/-50%	+21%/-32%	+16%/-12%	+189%/-36%
Source	PHO1	FLK73	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 011519226-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 14	$14.98^{+2.04}_{-2.50}$	1201^{+75}_{-98}	2612^{+84}_{-97}	$3.628^{+1.716}_{-1.059}$
Alt.	-55 ± 13	$13.68^{+1.87}_{-2.26}$	1203^{+76}_{-100}	2633^{+86}_{-112}	$3.878^{+1.706}_{-1.195}$

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 $A_{obs} \gg 1.0$

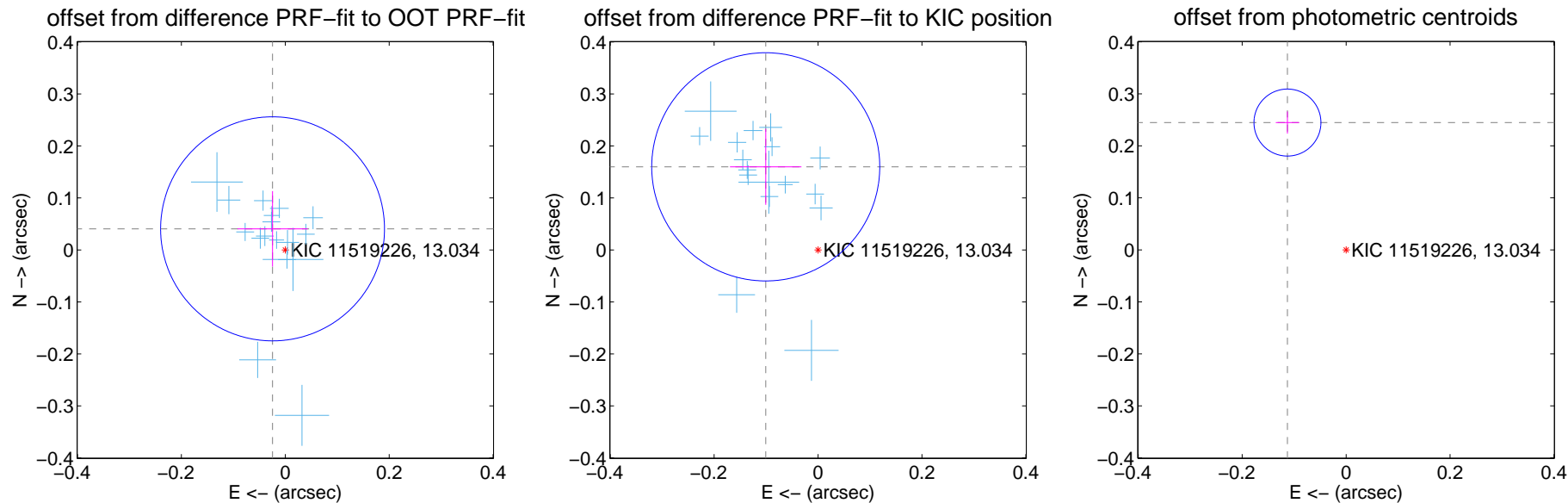
DV Centroid Data

Supplemental centroid analysis for 011519226-02. Kepler magnitude: 13.03. Transit SNR 327.80

There are 17 quarters with good PRF difference image offsets

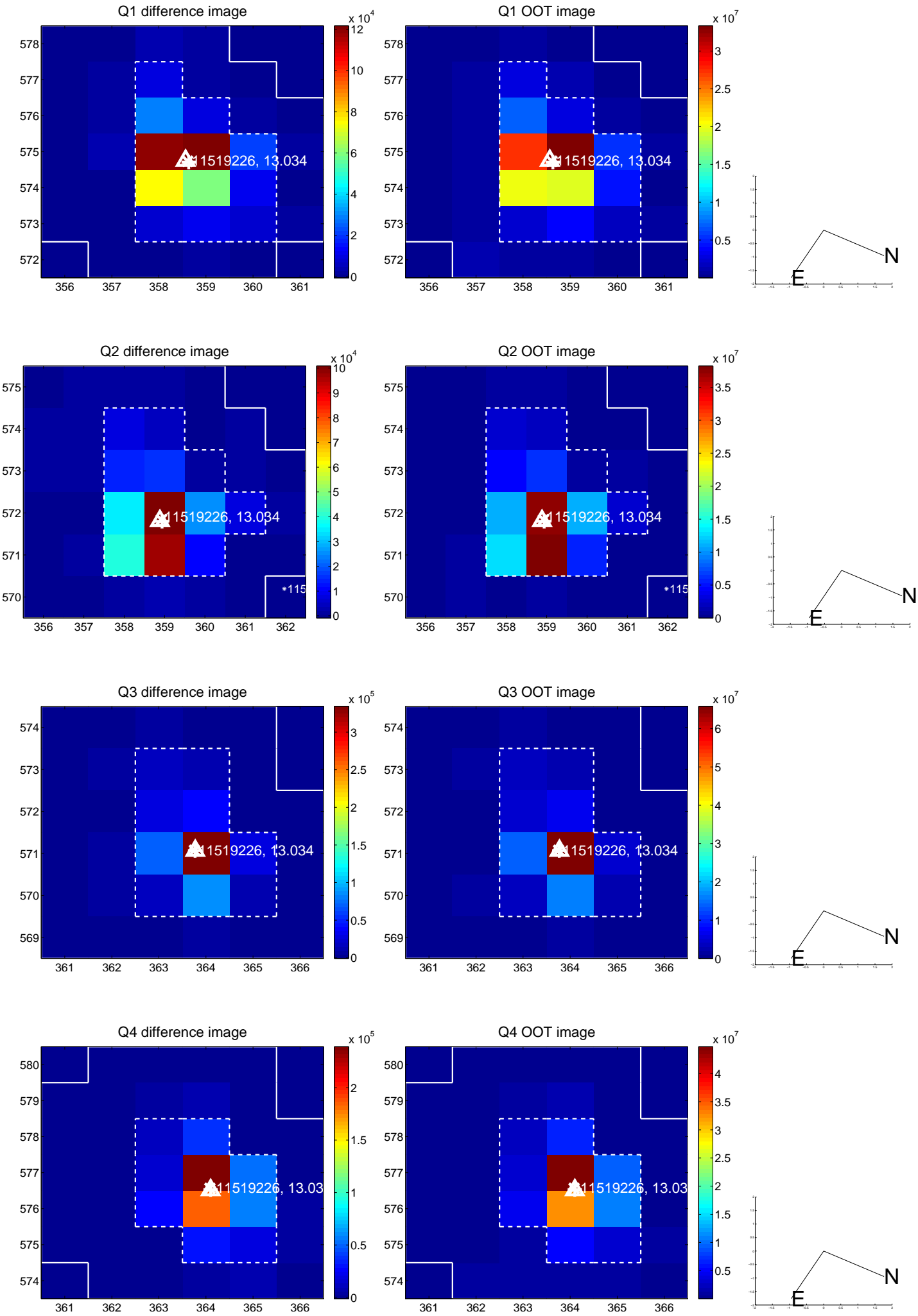
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.047 ± 0.072	0.66	0.025 ± 0.068	0.041 ± 0.072
PRF-fit source offset from KIC position	0.189 ± 0.073	2.58	0.101 ± 0.069	0.160 ± 0.073
photometric centroid source offset	0.27 ± 0.02	12.55	0.11 ± 0.02	0.24 ± 0.02

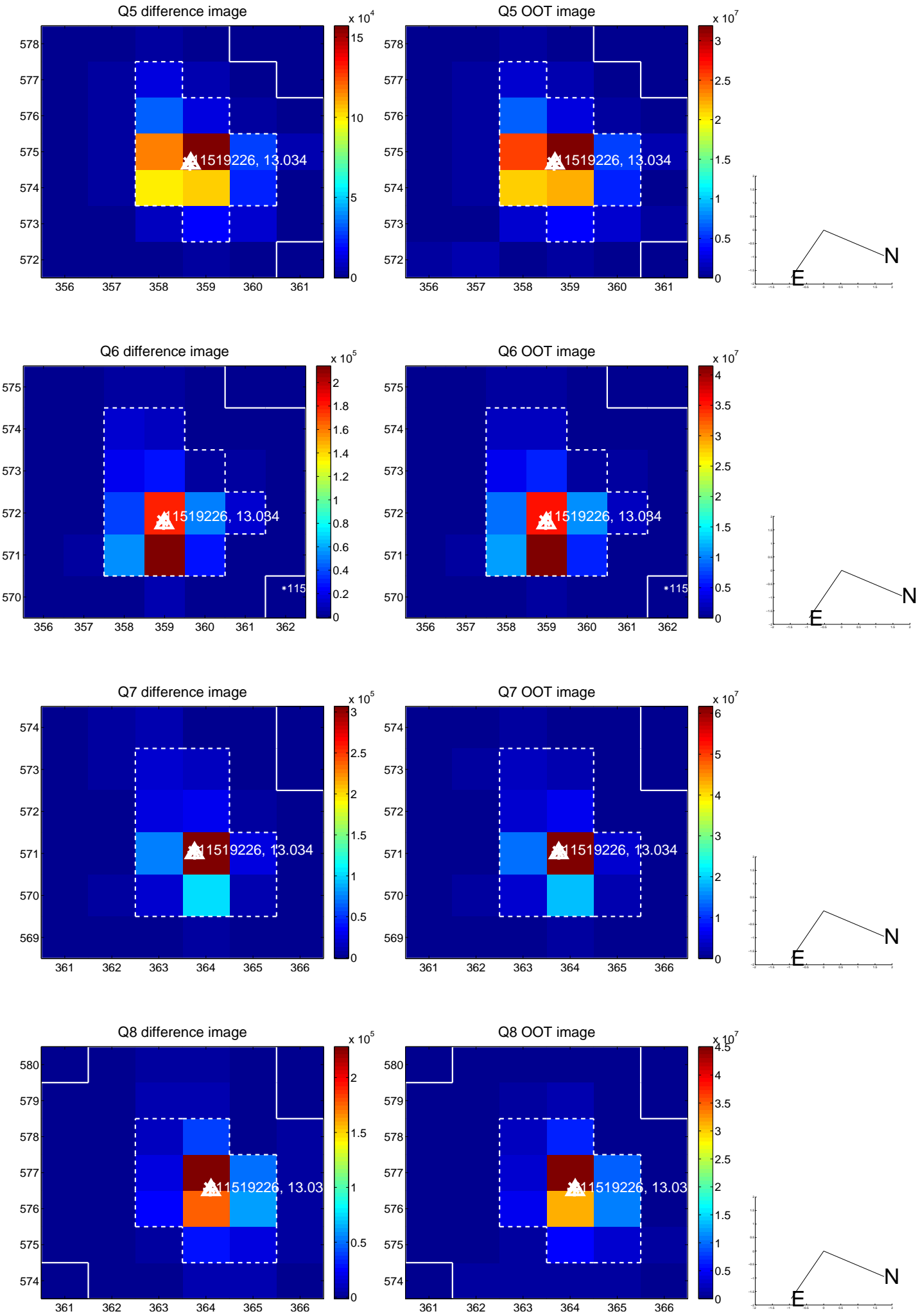


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

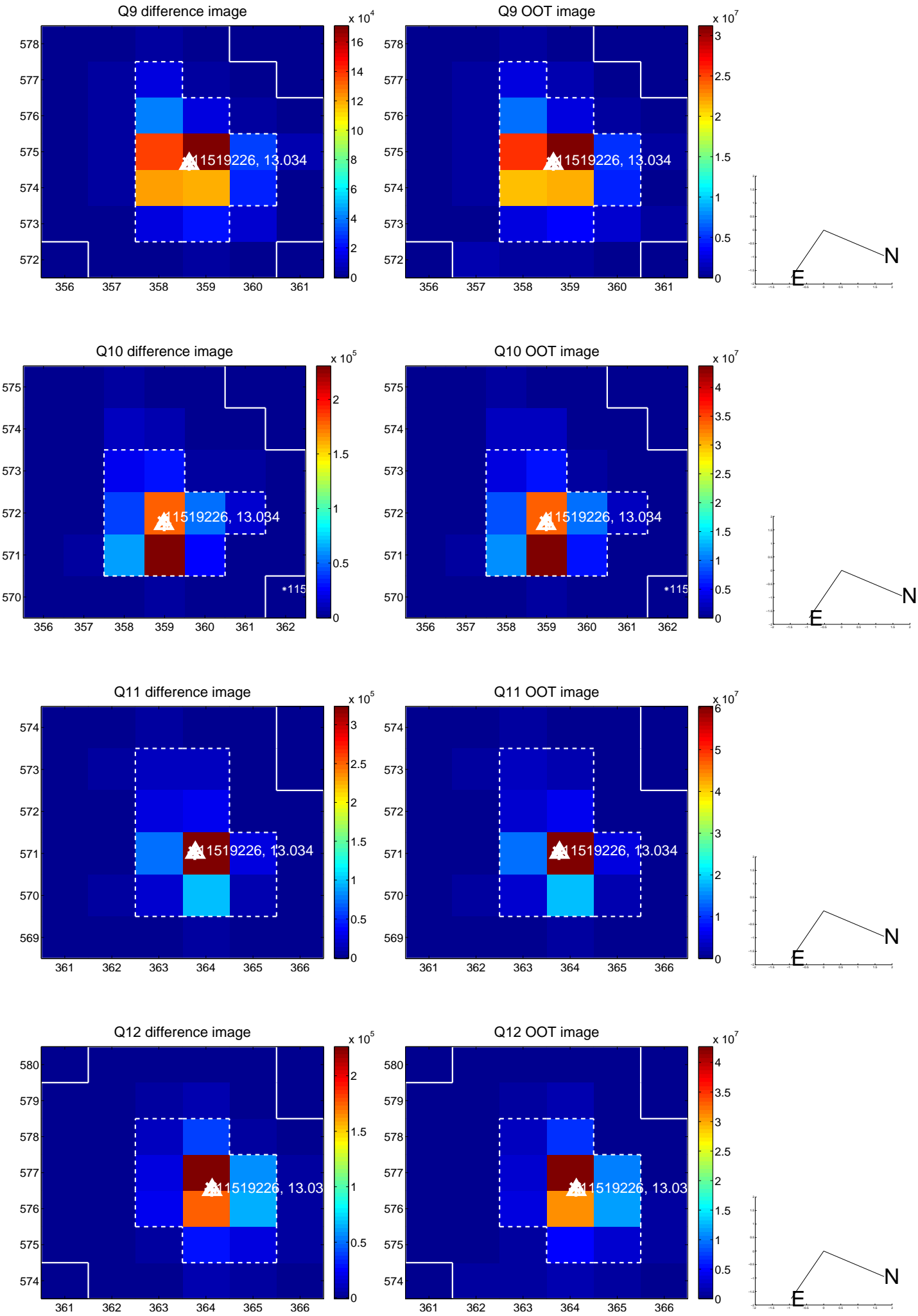
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



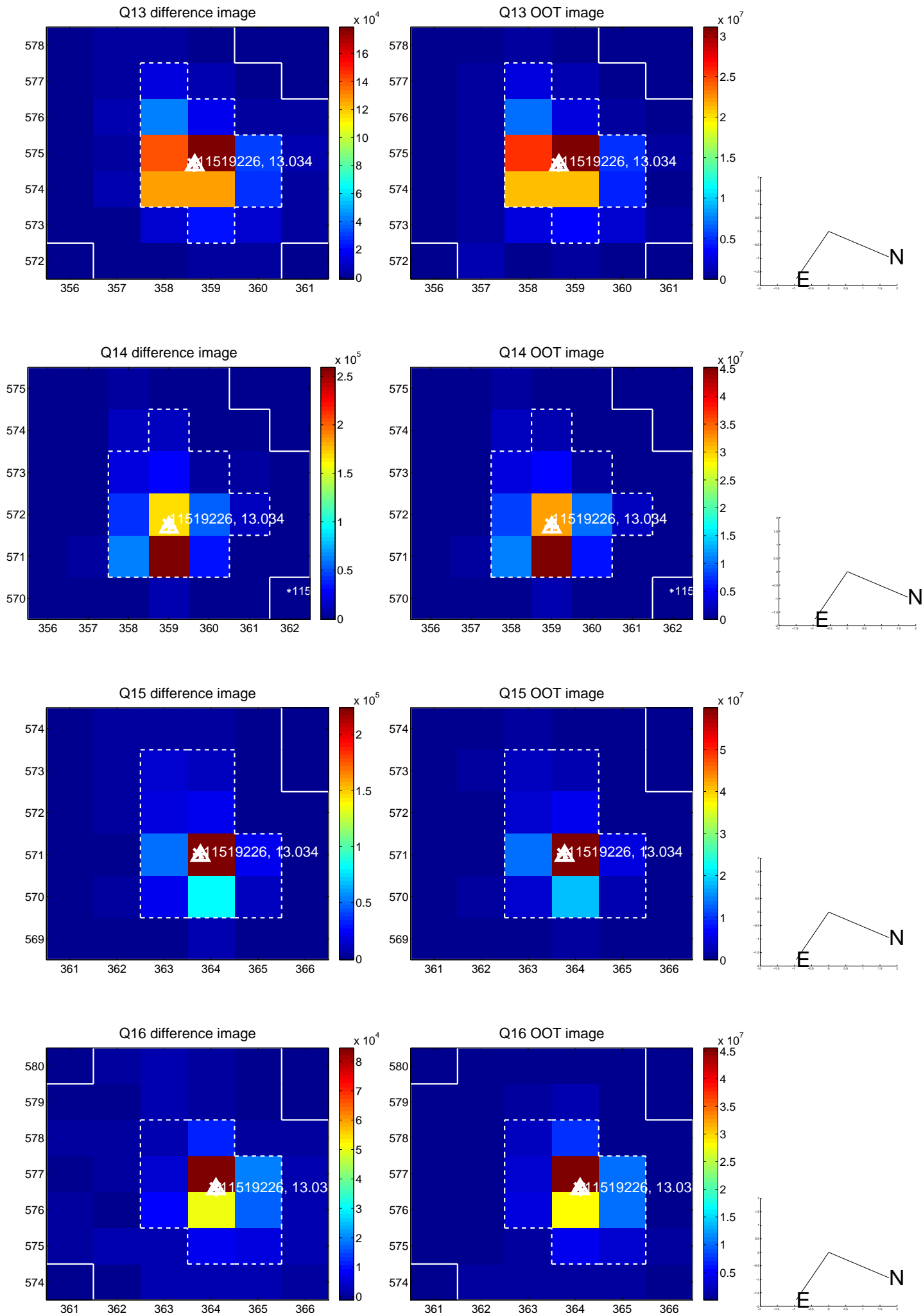
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



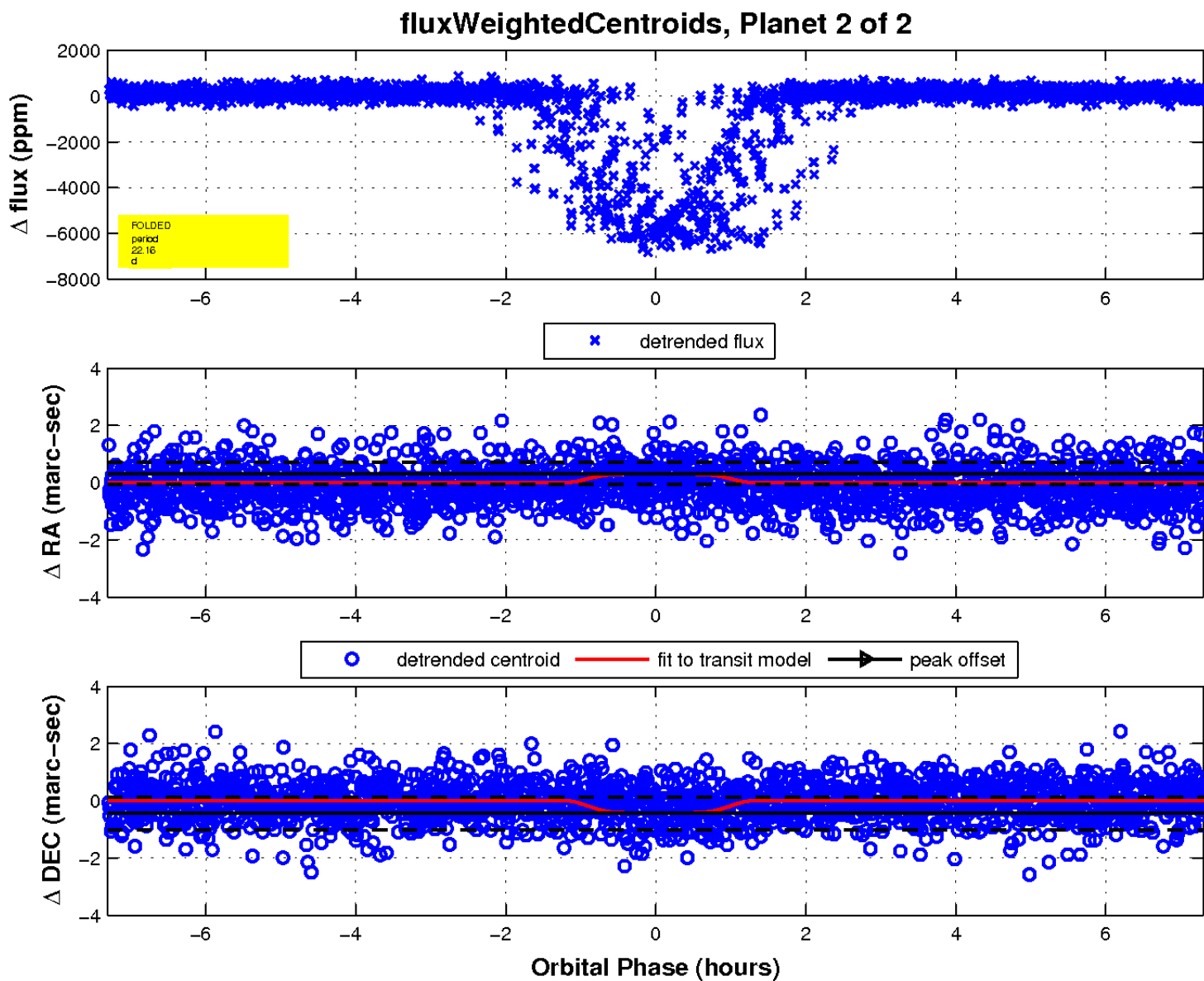
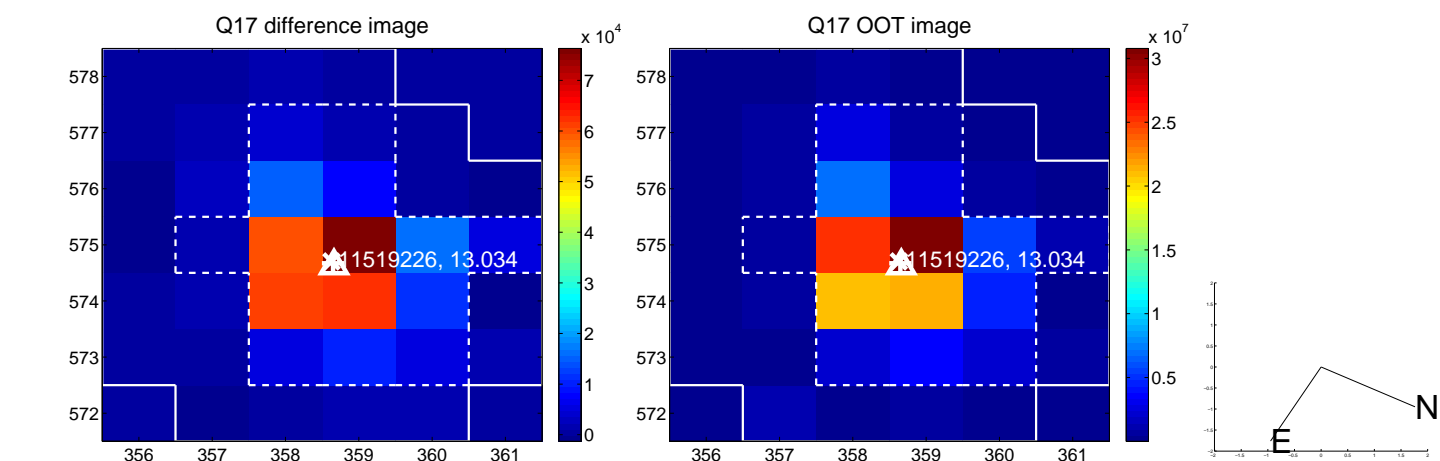
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

