

KIC 008526241

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})
008526241-01	OBS	No	2.543826	131.728299	65.1	5.131	8.3	6.7	2.25	6661	2.11	5420.12
008526241-02	OBS	No	2.543724	132.405340	90.5	21.677	8.5	5.1	2.25	6661	2.23	5420.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008526241-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008526241-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

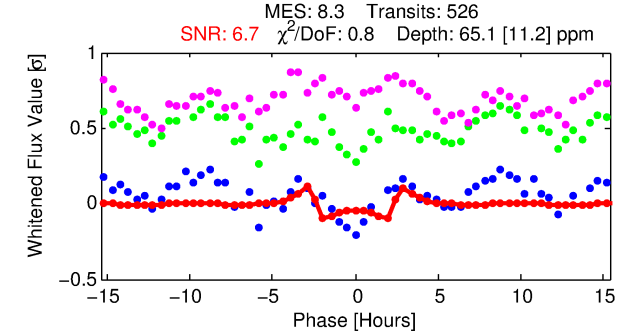
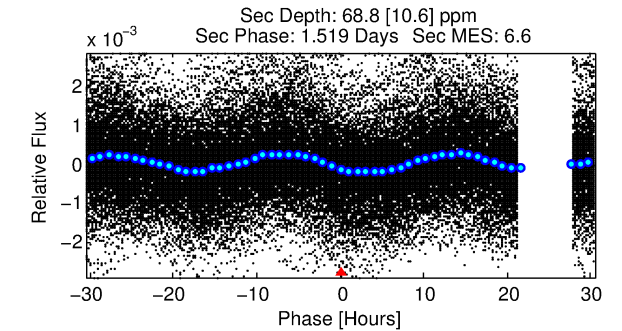
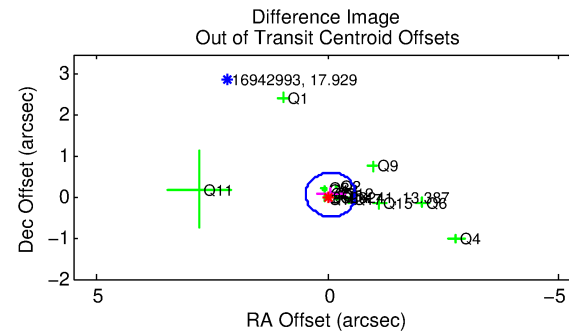
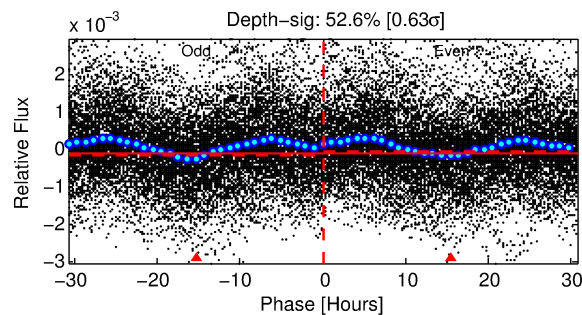
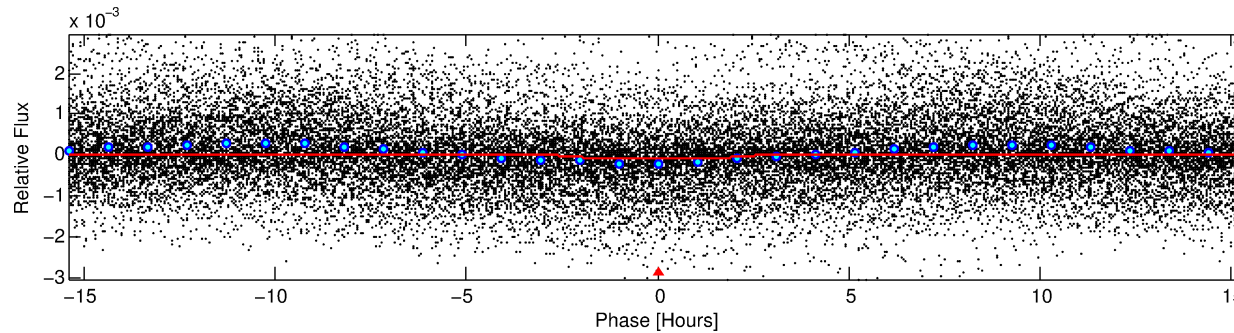
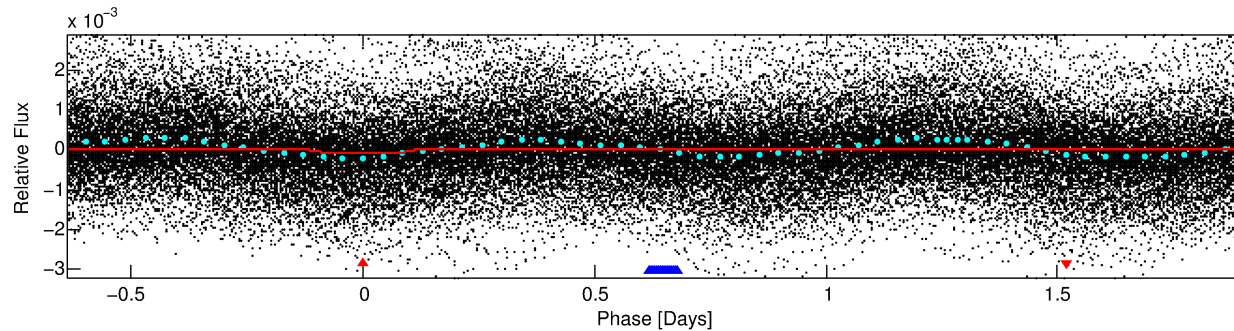
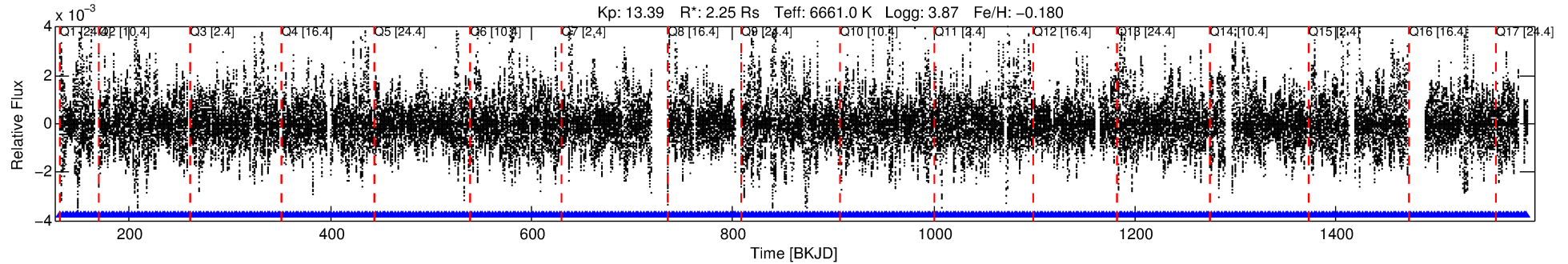
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008526241-01

No Significant Match Found

DV One-Page Summary

KIC: 8526241 Candidate: 1 of 2 Period: 2.544 d



DV Fit Results:

Period = 2.54383 [0.00002] d
Epoch = 131.7283 [0.0032] BKJD
Rp/R* = 0.0086 [0.0019]
a/R* = 1.95 [1.60]
b = 0.90 [0.23]
Seff = 5420.12 [3716.99]
Teq = 2188 [375] K
Rp = 2.11 [0.98] Re
a = 0.0405 [0.0166] AU
Ag = 13.89 [11.29] [1.14 σ]
Teffp = 6531 [796] K [4.93 σ]

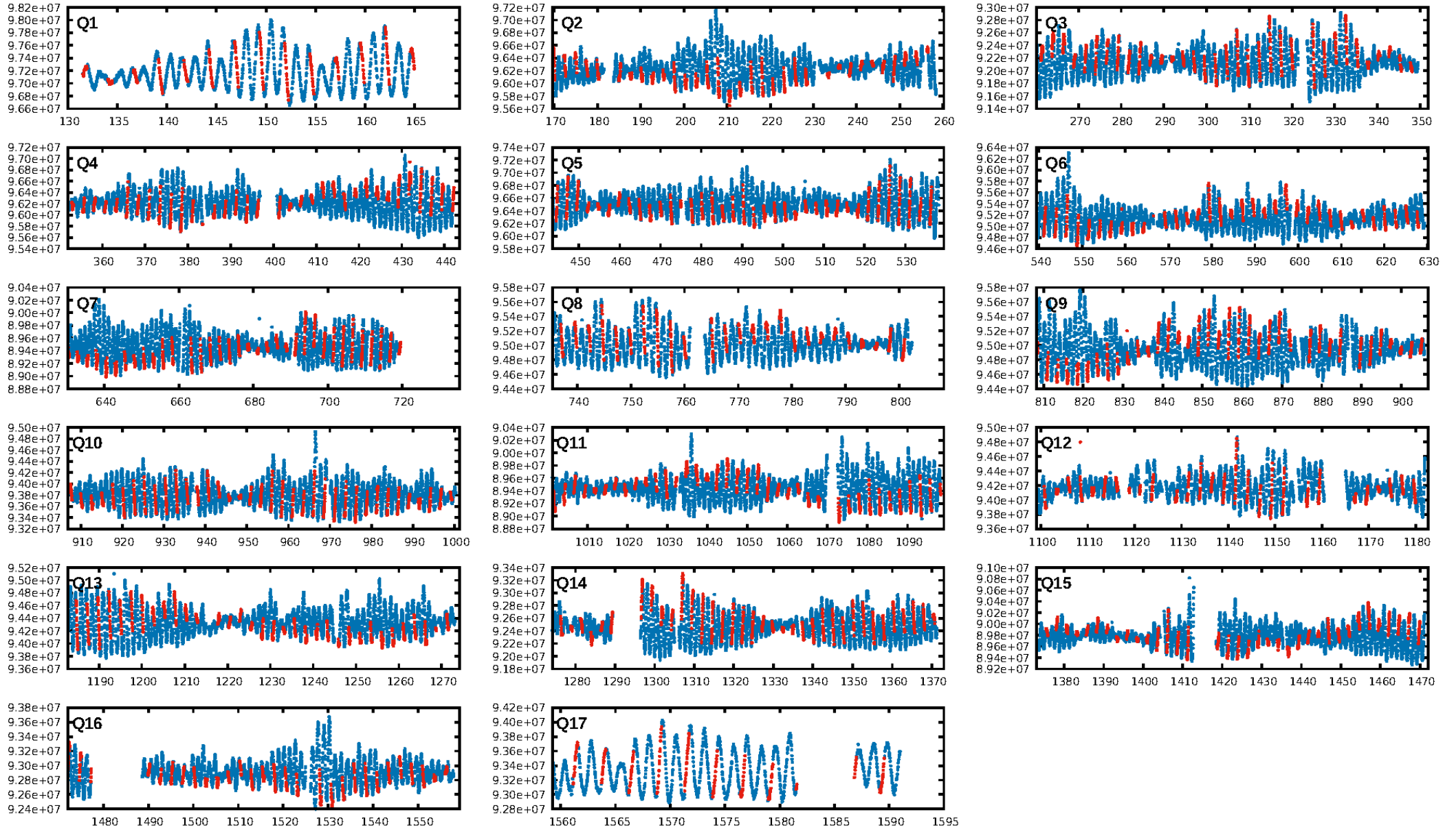
DV Diagnostic Results:

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: 1.00 [502/502]
GhostDiagnostic-chr: 1.645
Centroid-sig: N/A
Centroid-so: 0.417 arcsec [0.64 σ]
OotOffset-rm: 0.092 arcsec [0.51 σ]
KicOffset-rm: 0.139 arcsec [0.97 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.00 [0/17]

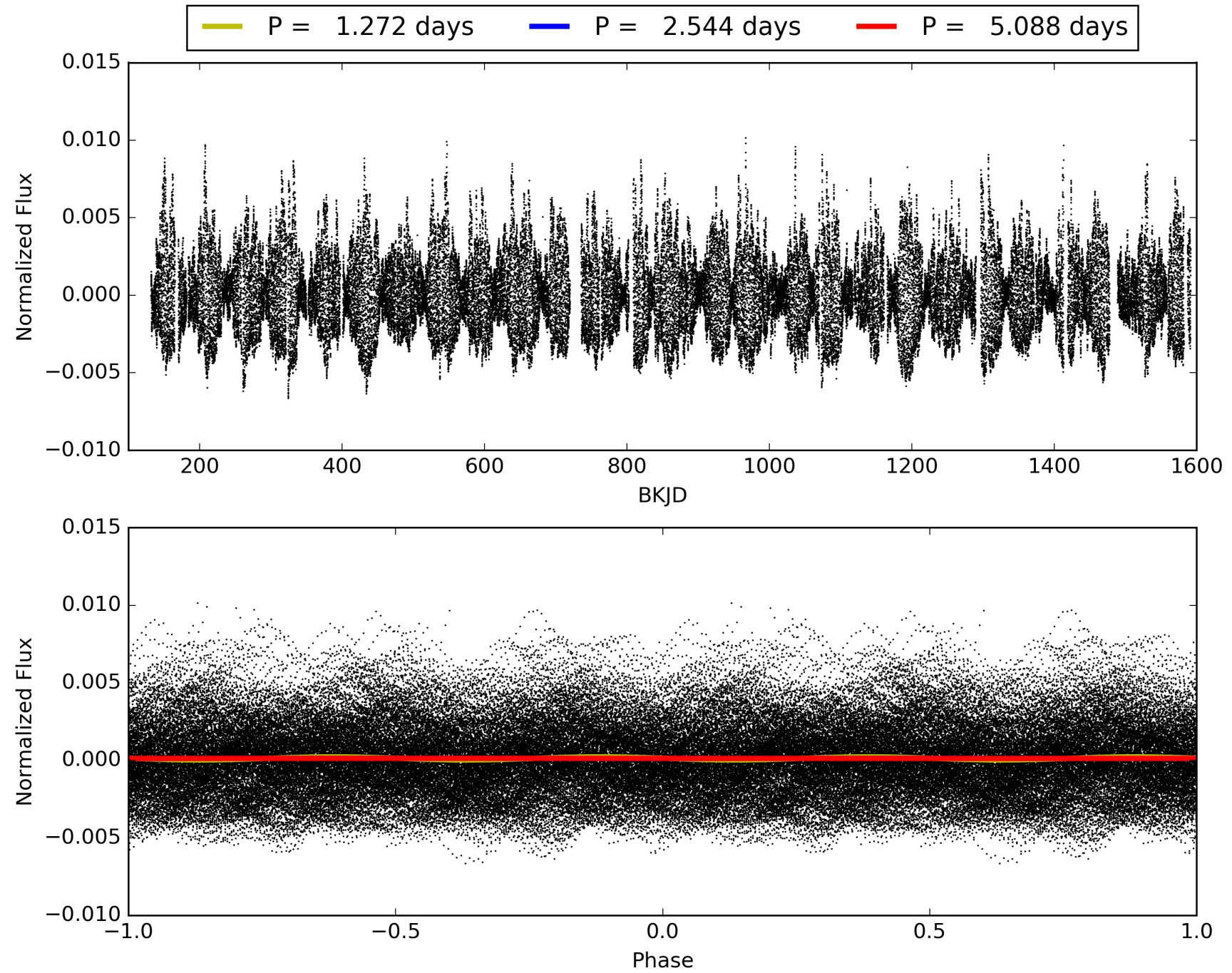
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:55:32 Z

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

TCE 008526241-01, PDC Light Curves

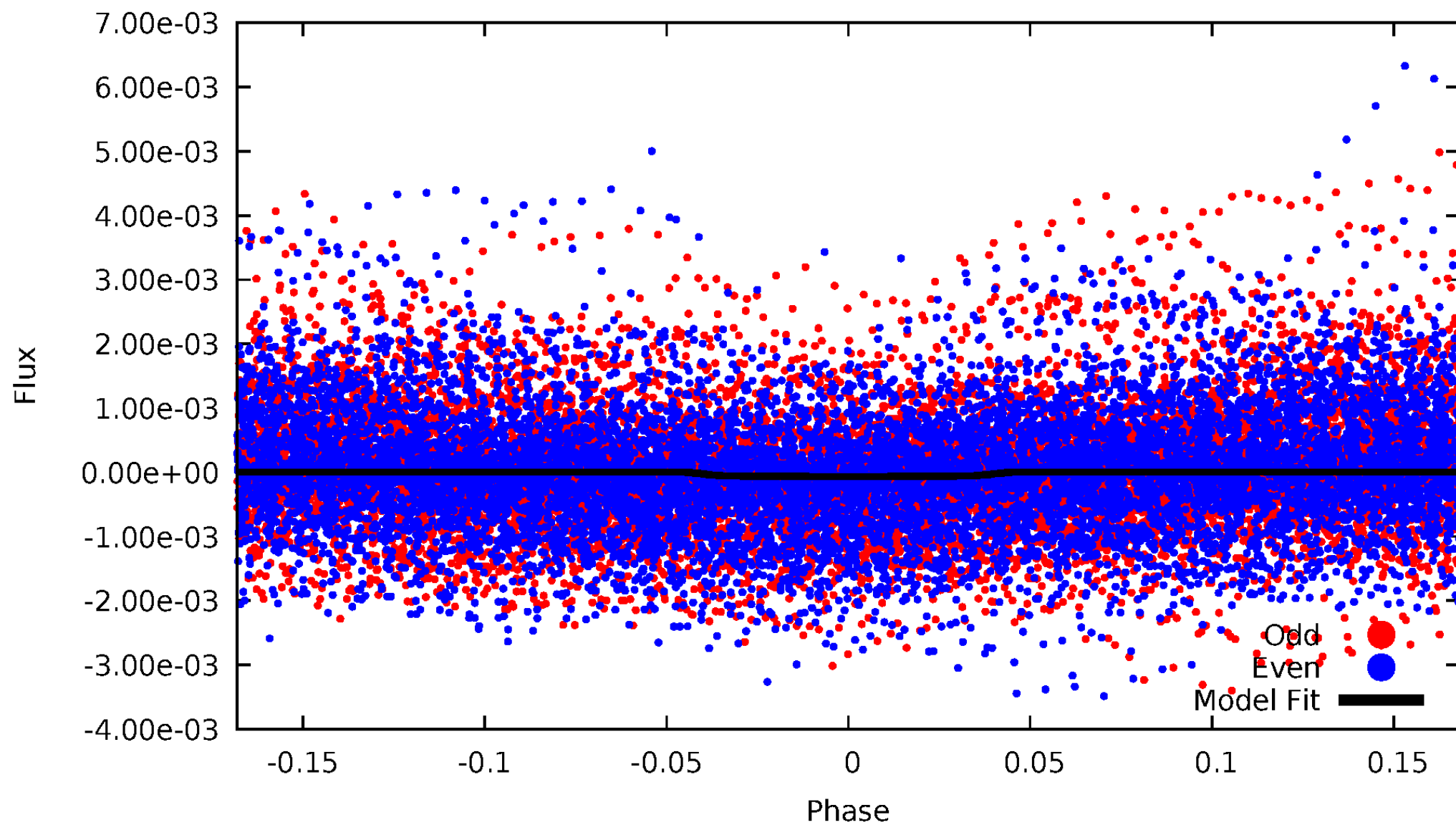


TCE 008526241-01



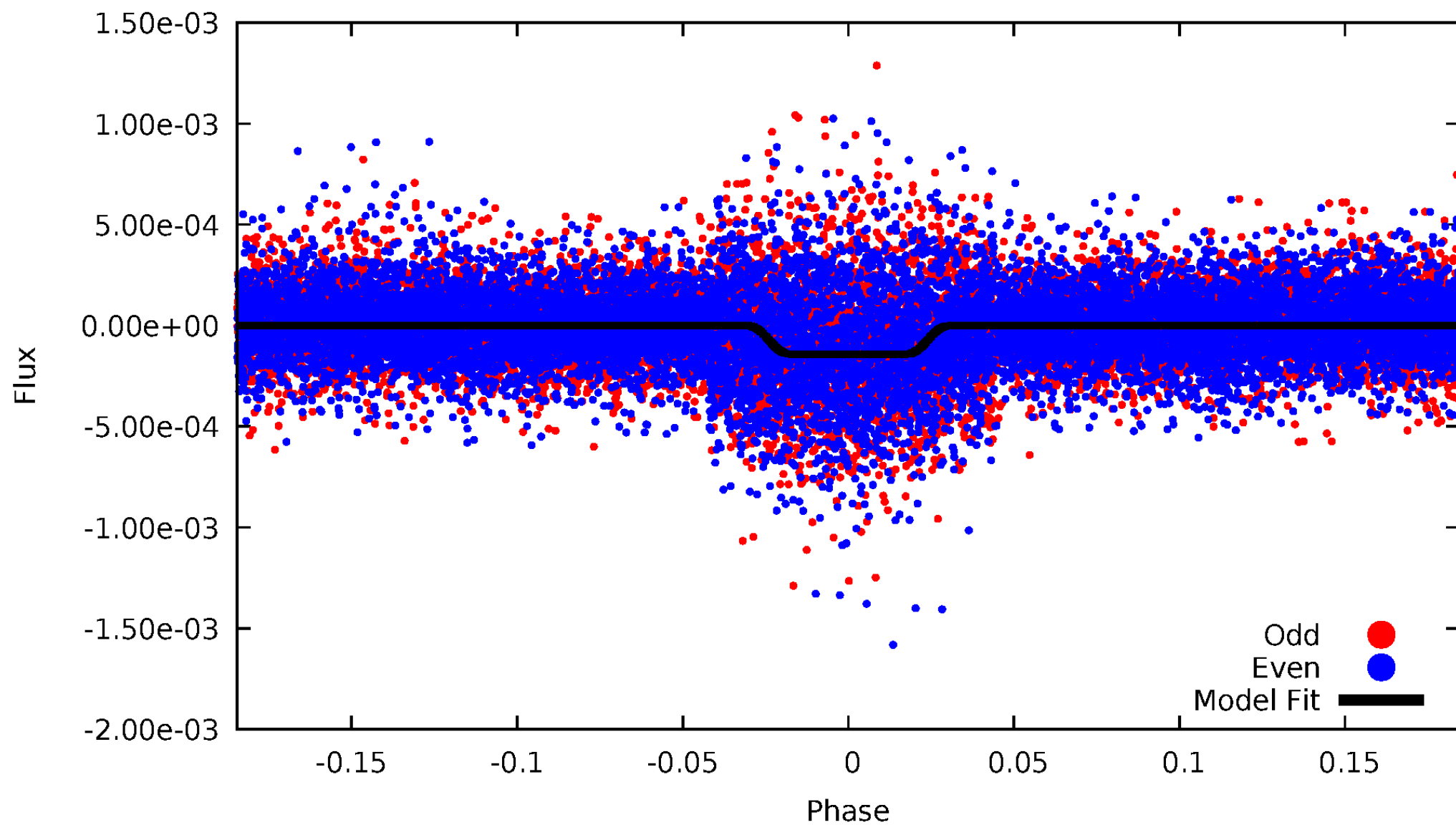
DV Odd/Even

TCE 008526241-01



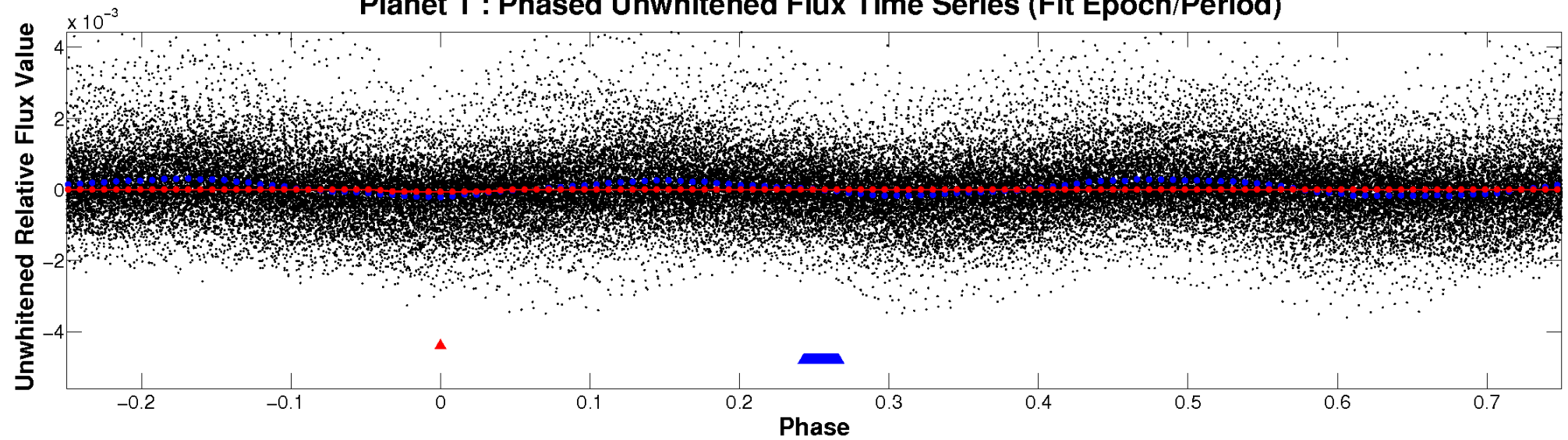
ALT Odd/Even

TCE 008526241-01

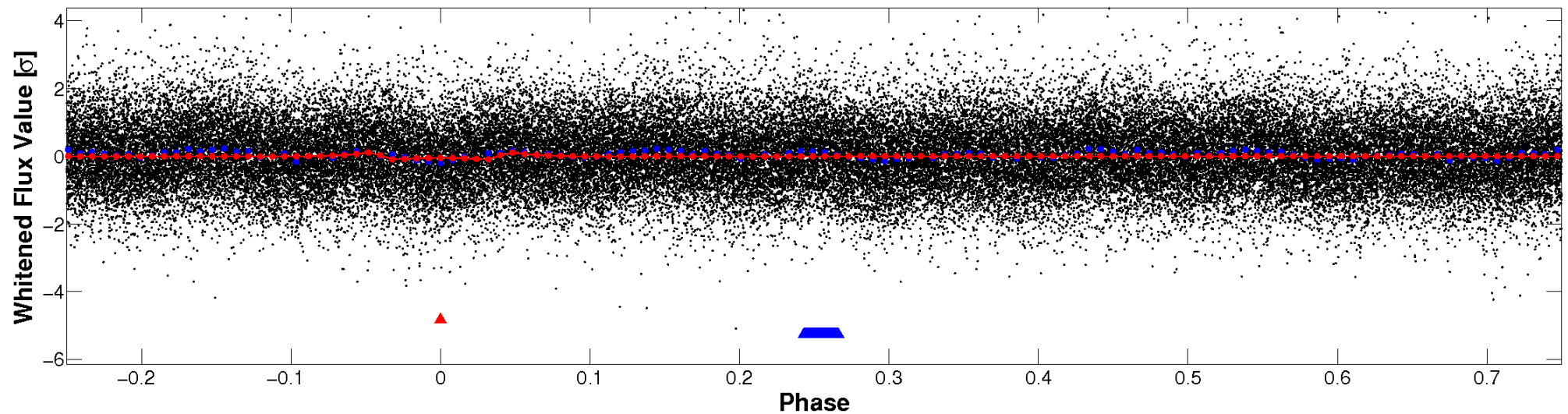


Non-Whitened Vs. Whitened Light Curve

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

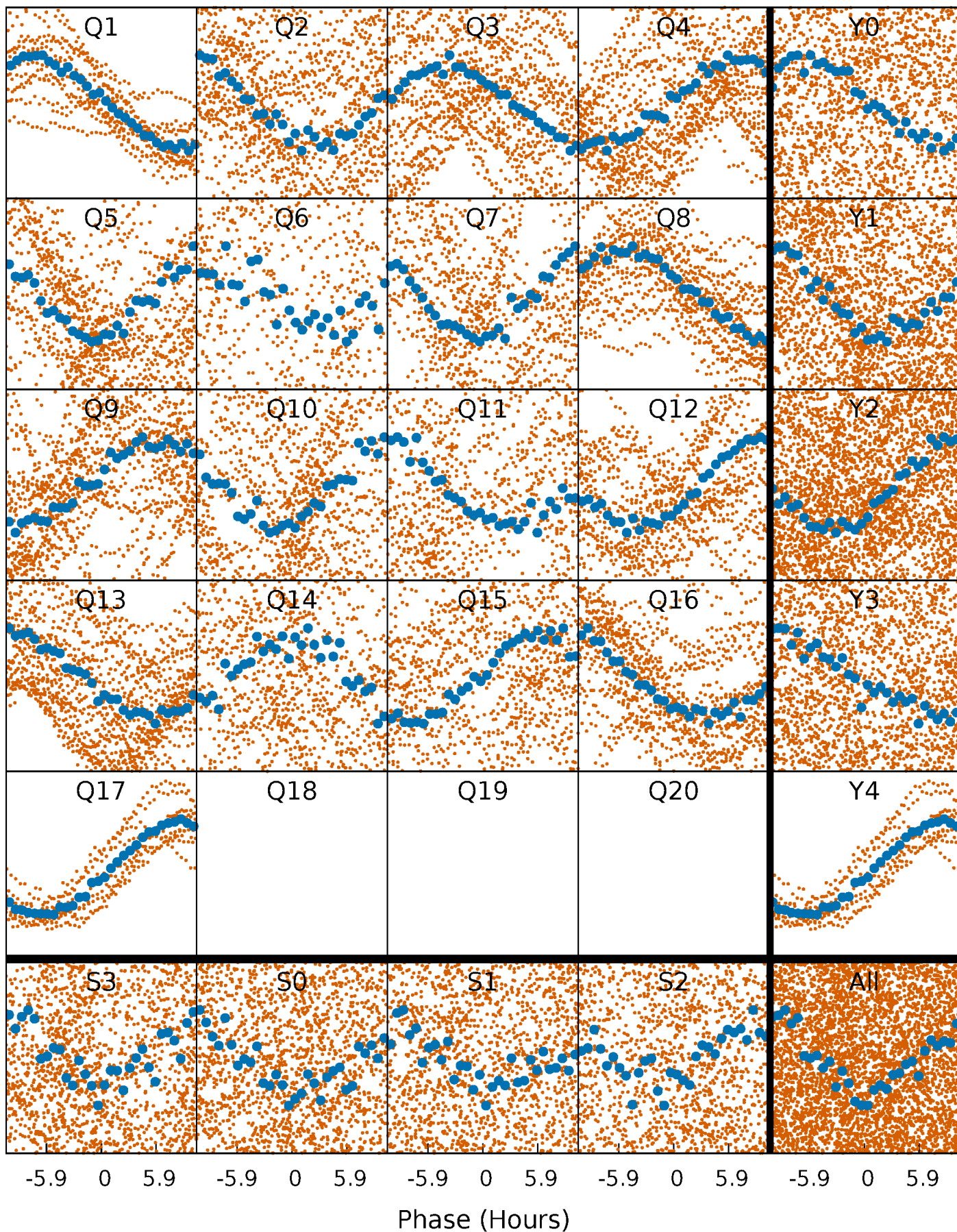


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



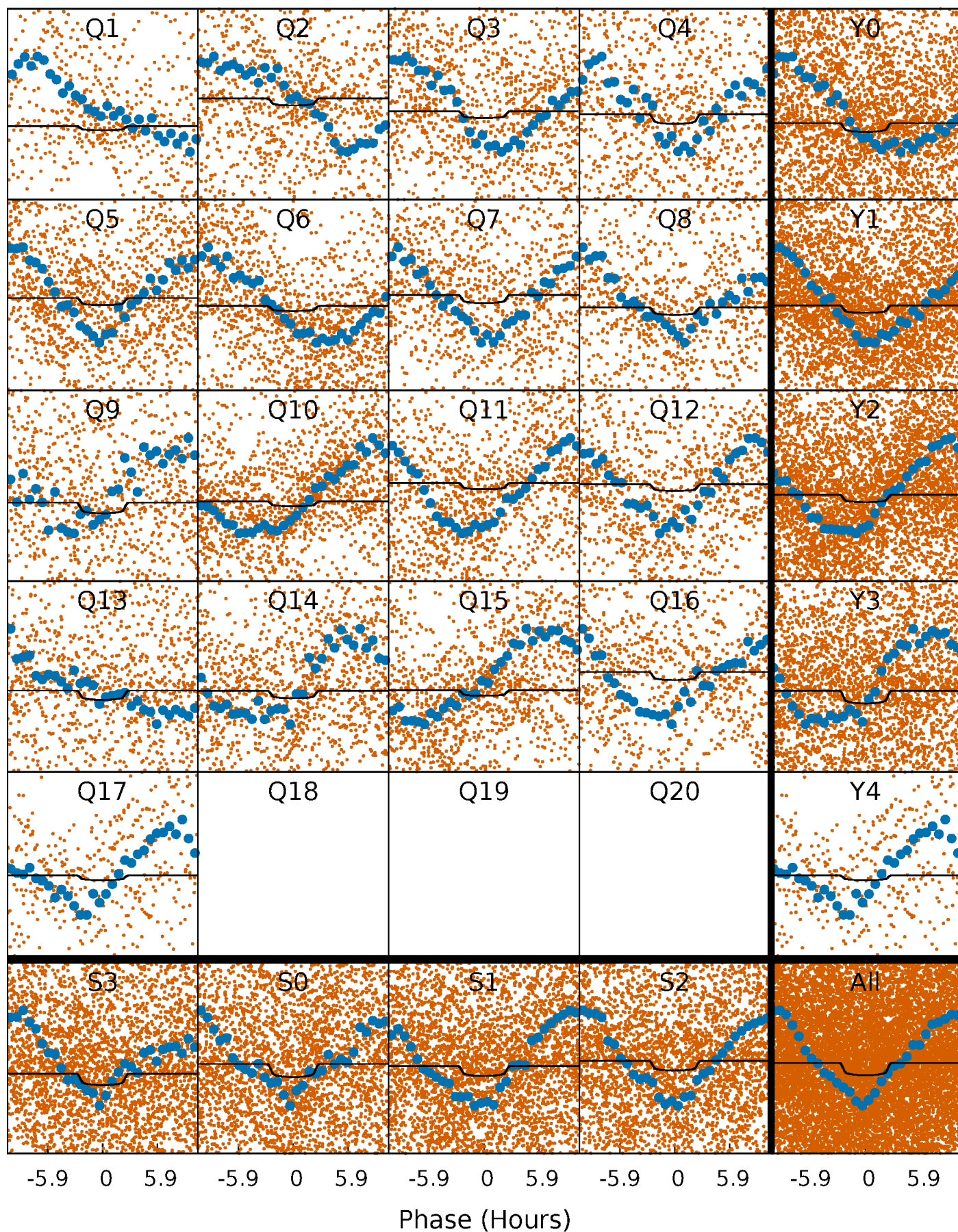
PDC Quarter-Phased Transit Curves

TCE 008526241-01 P= 2.543826 Days $T_0=131.728299$ (BKJD)



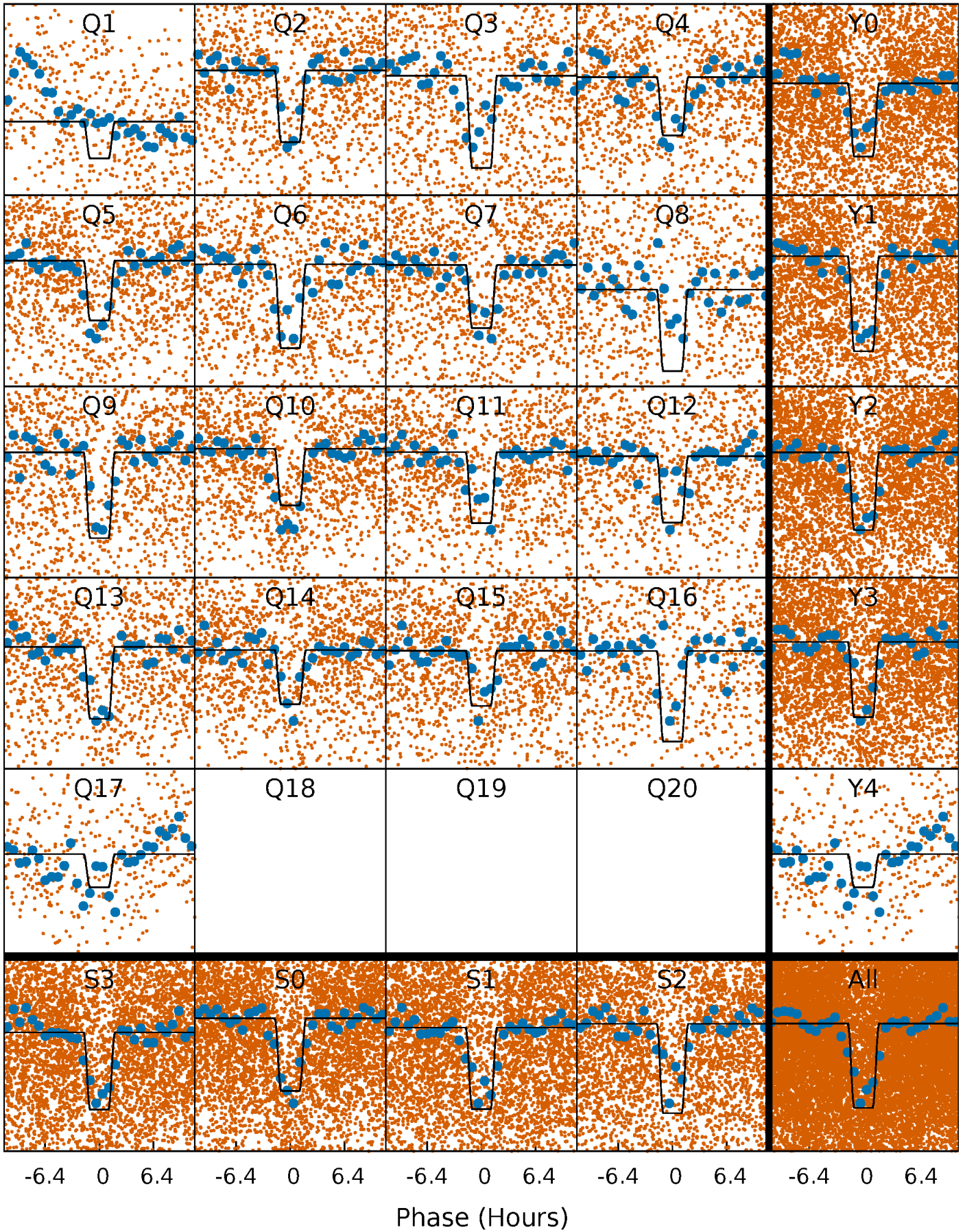
DV Quarter-Phased Transit Curves

TCE 008526241-01 P= 2.543826 Days $T_0=131.728299$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

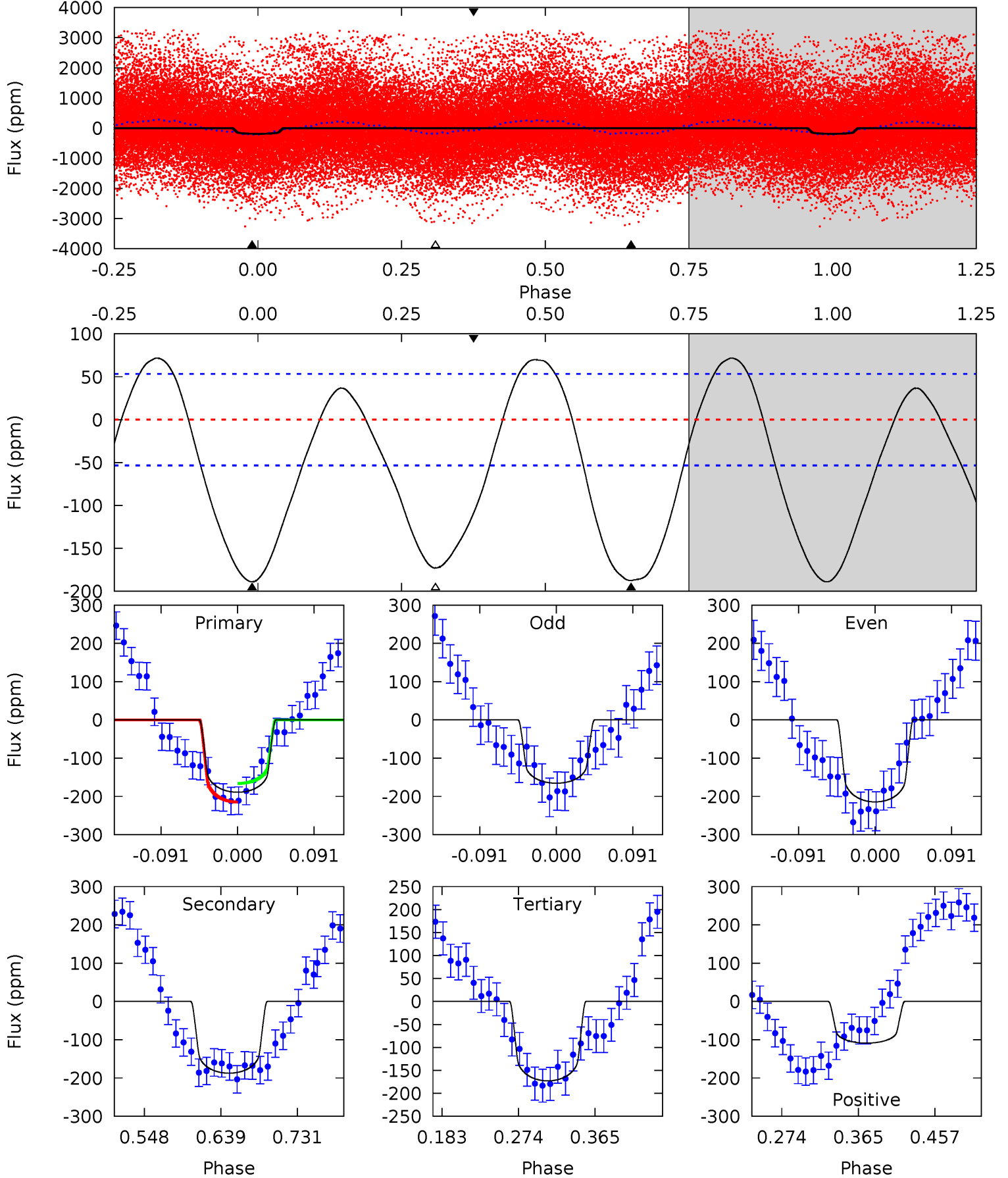
TCE 008526241-01 P= 2.543788 Days $T_0=131.733882$ (BKJD)



DV Model-Shift Uniqueness Test

008526241-01, P = 2.543826 Days, E = 129.184473 Days

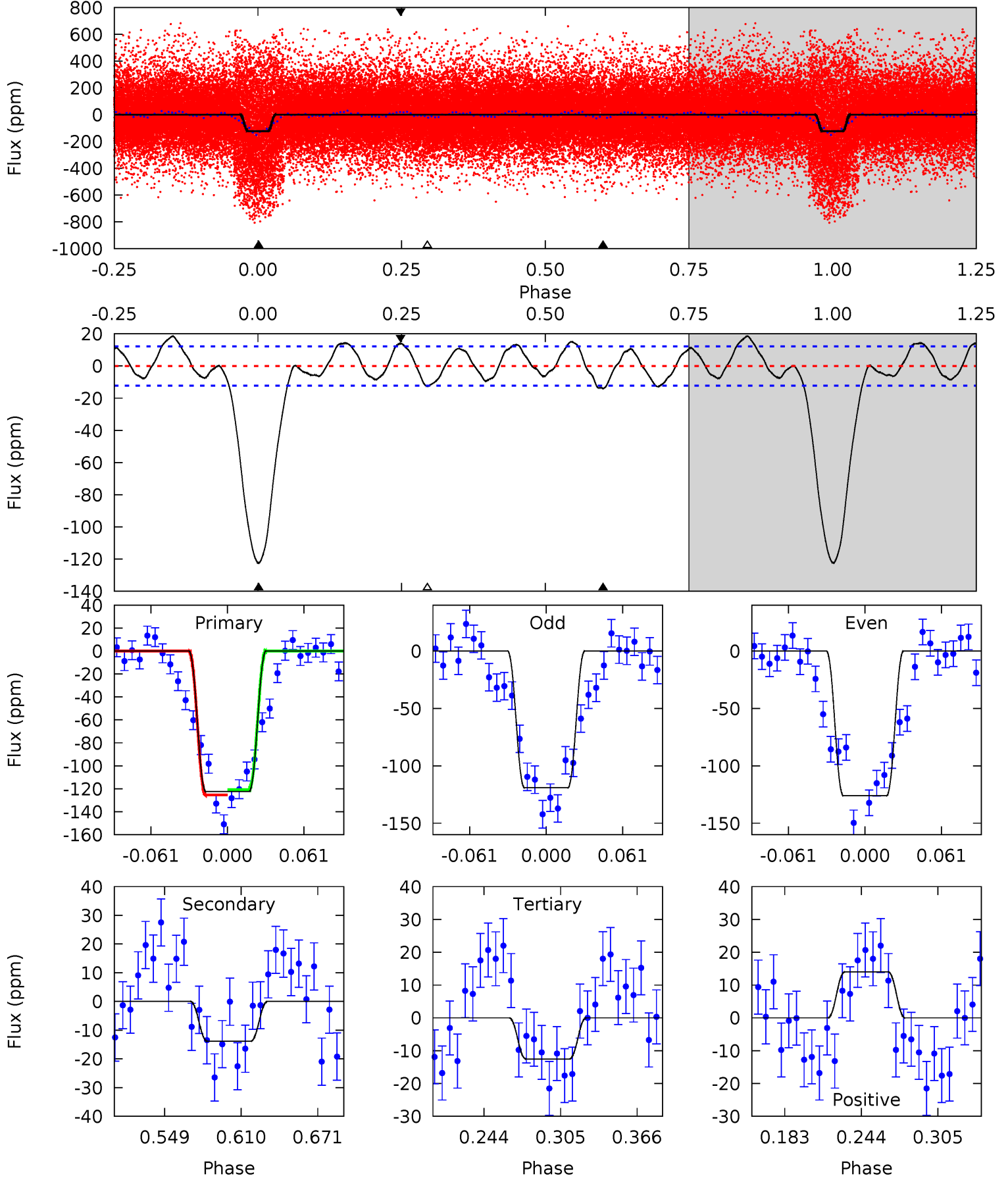
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	16.1	14.9	-9.37	4.58	1.69	6.54	1.38	25.6	1.25	25.5	2.12	1.18	0.28	2.09



Alt Model-Shift Uniqueness Test

008526241-01, P = 2.543788 Days, E = 129.190094 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.8	5.30	4.79	5.35	4.67	1.87	3.03	42.0	41.4	0.51	-0.04	1.31	0.94	0.13	0.90



Stellar Parameters For KIC 008526241

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6661^{+187}_{-258}	$3.872^{+0.397}_{-0.132}$	$-0.180^{+0.250}_{-0.300}$	$2.246^{+0.538}_{-0.922}$	$1.373^{+0.222}_{-0.271}$	$0.171^{+0.578}_{-0.067}$
	+3%/-4%	+10%/-3%	+139%/-167%	+24%/-41%	+16%/-20%	+339%/-39%
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 008526241-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-187 ± 12	$2.00^{+0.64}_{-0.59}$	2993^{+230}_{-354}	8637^{+1743}_{-1037}	42^{+42}_{-17}
Alt.	-14 ± 3	$2.79^{+0.70}_{-0.71}$	2983^{+234}_{-317}	3856^{+330}_{-304}	$1.601^{+1.291}_{-0.601}$

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 $A_{obs} \gg 1.0$

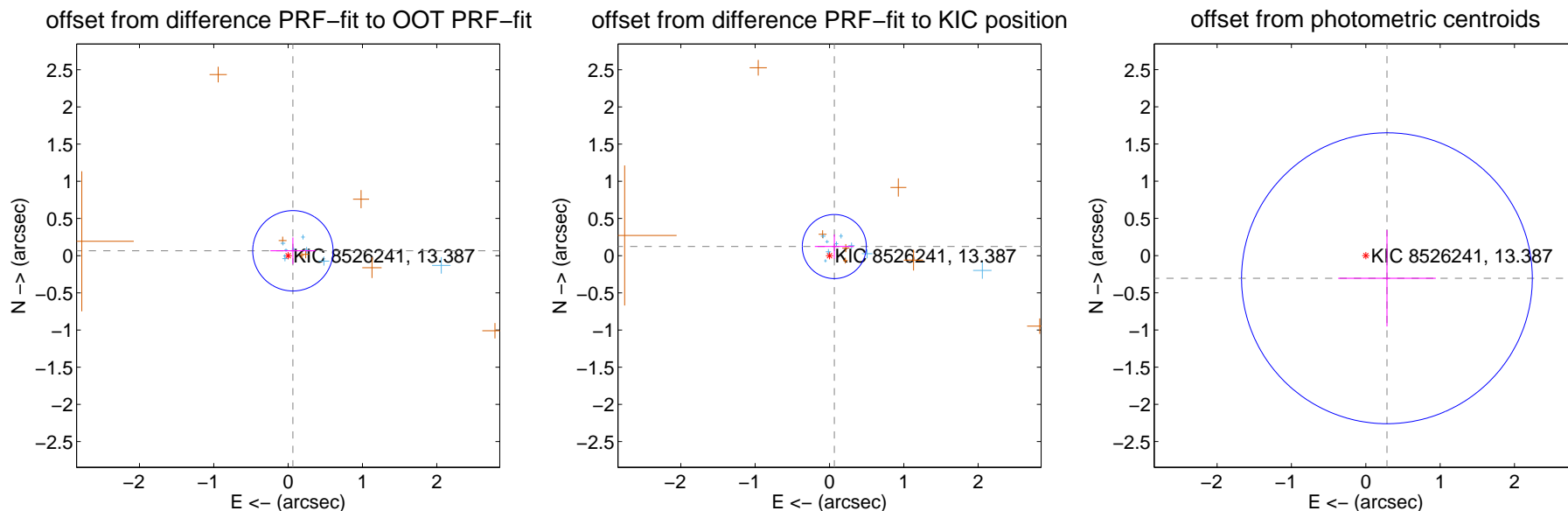
DV Centroid Data

Supplemental centroid analysis for 008526241-01. Kepler magnitude: 13.39. Transit SNR 6.69

There are 9 quarters with good PRF difference image offsets

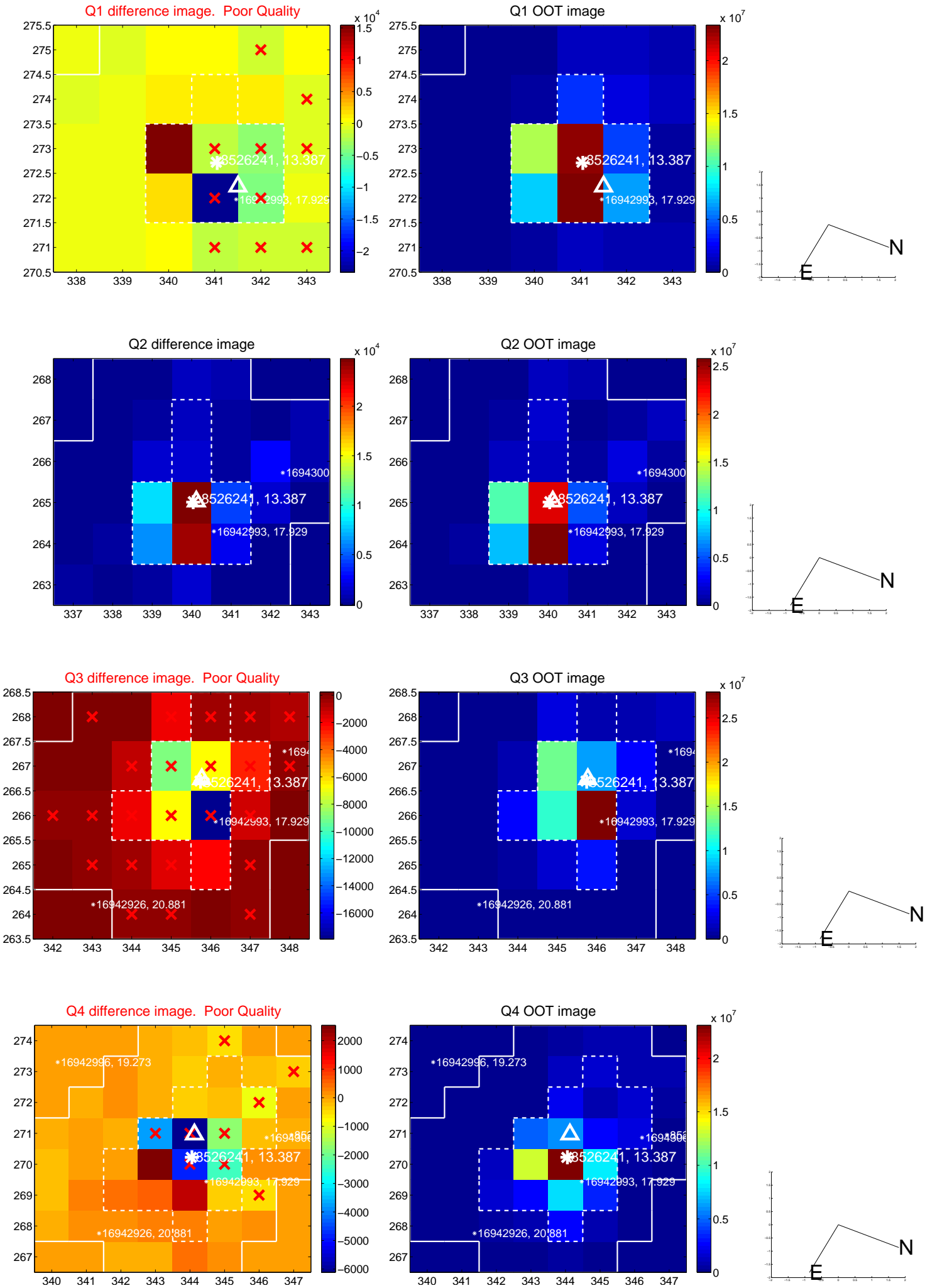
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.092 ± 0.180	0.51	-0.064 ± 0.303	0.065 ± 0.178
PRF-fit source offset from KIC position	0.139 ± 0.144	0.97	-0.065 ± 0.262	0.123 ± 0.163
photometric centroid source offset	0.42 ± 0.65	0.64	-0.28 ± 0.66	-0.30 ± 0.65

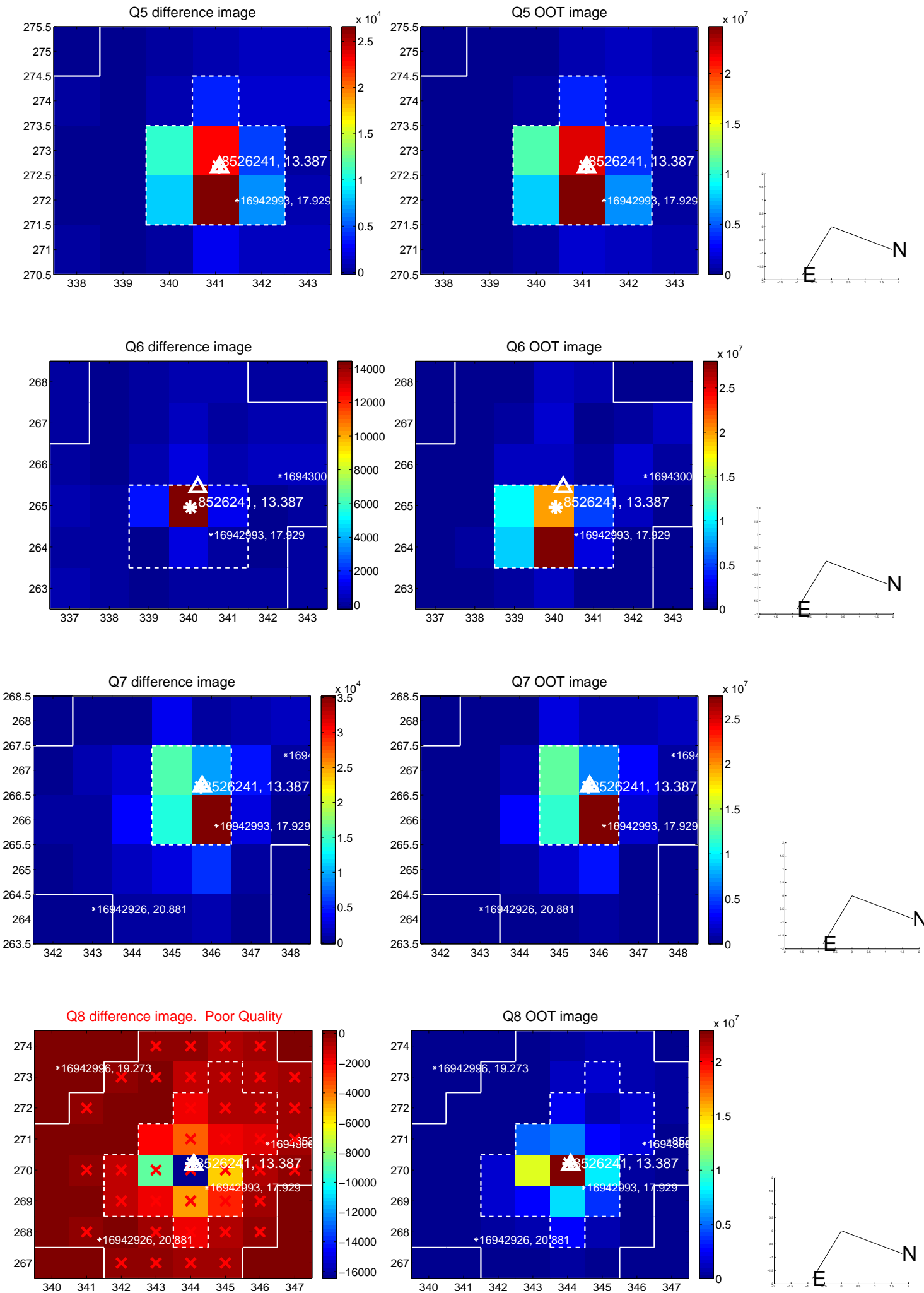


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

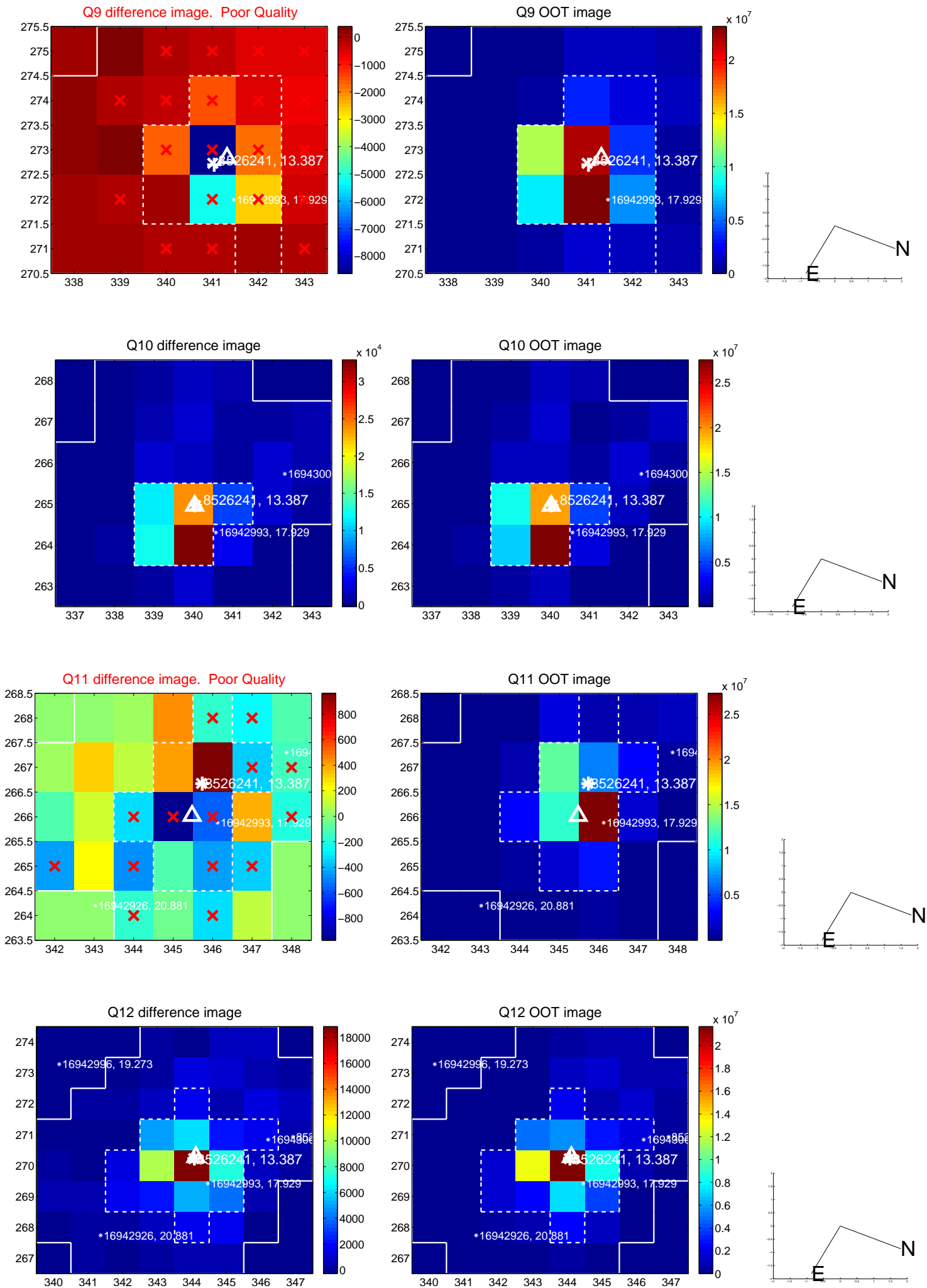
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



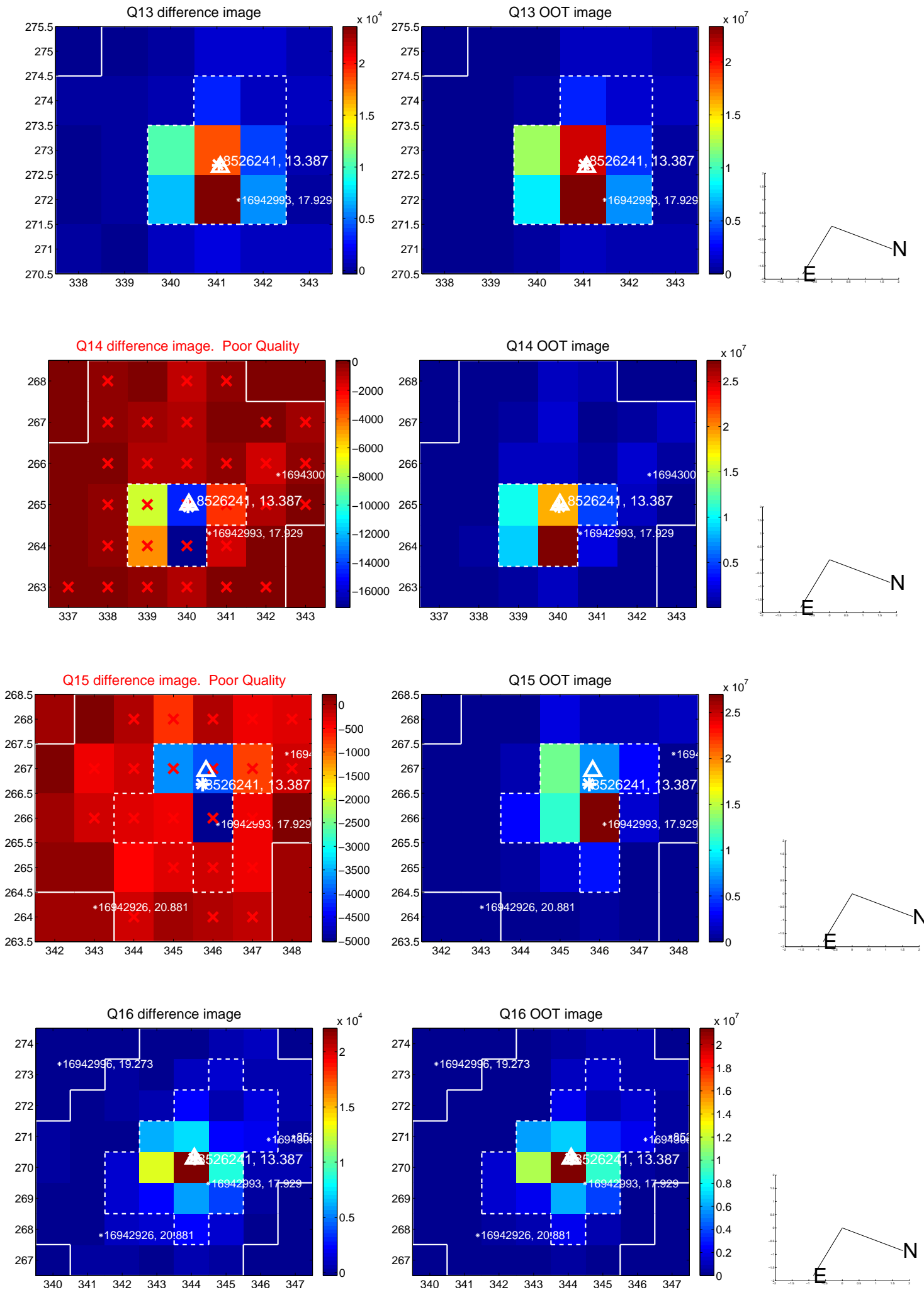
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

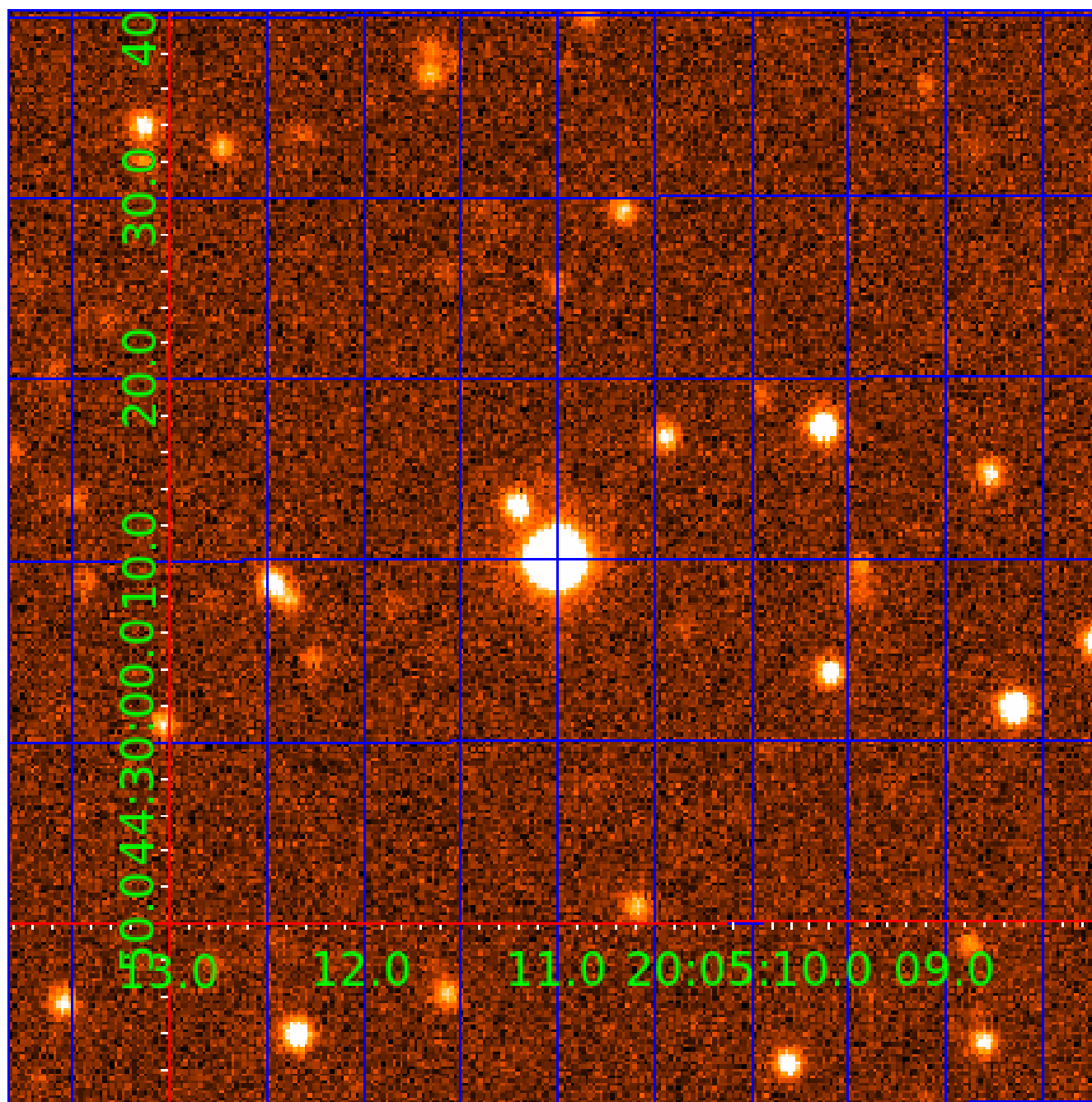


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008526241

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})
008526241-01	OBS	No	2.543826	131.728299	65.1	5.131	8.3	6.7	2.25	6661	2.11	5420.12
008526241-02	OBS	No	2.543724	132.405340	90.5	21.677	8.5	5.1	2.25	6661	2.23	5420.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008526241-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008526241-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD

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

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

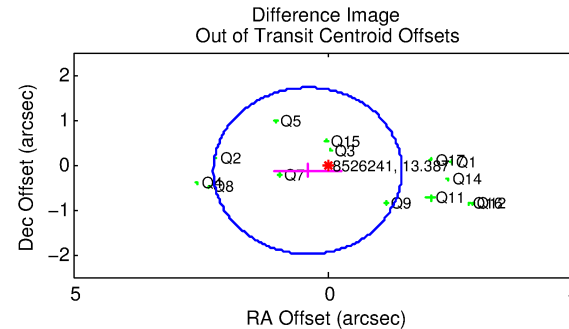
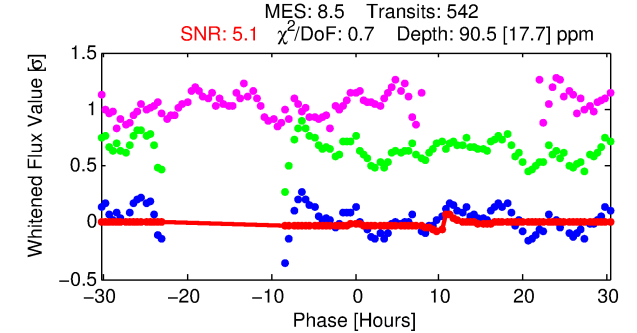
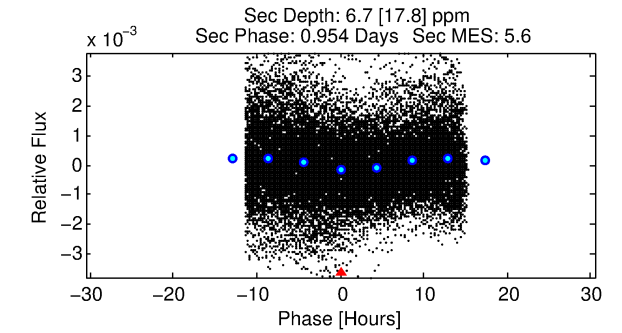
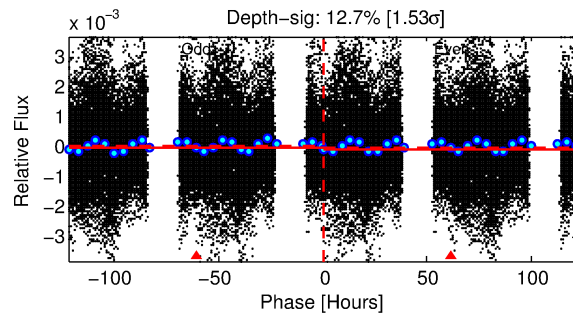
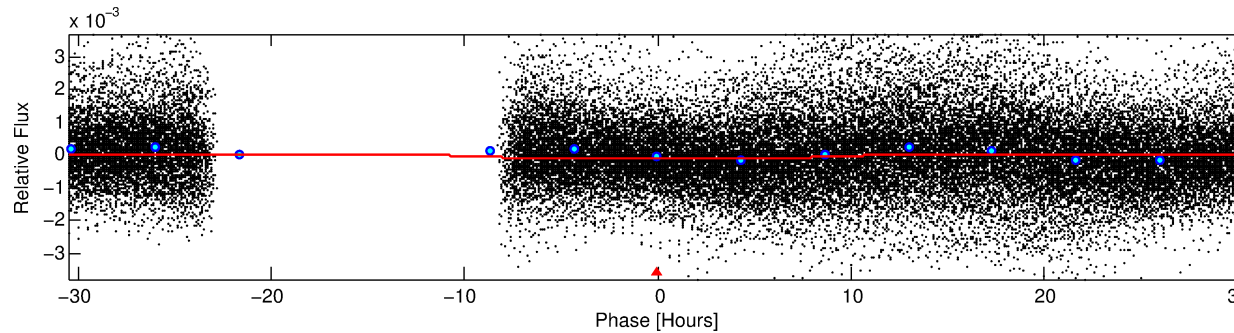
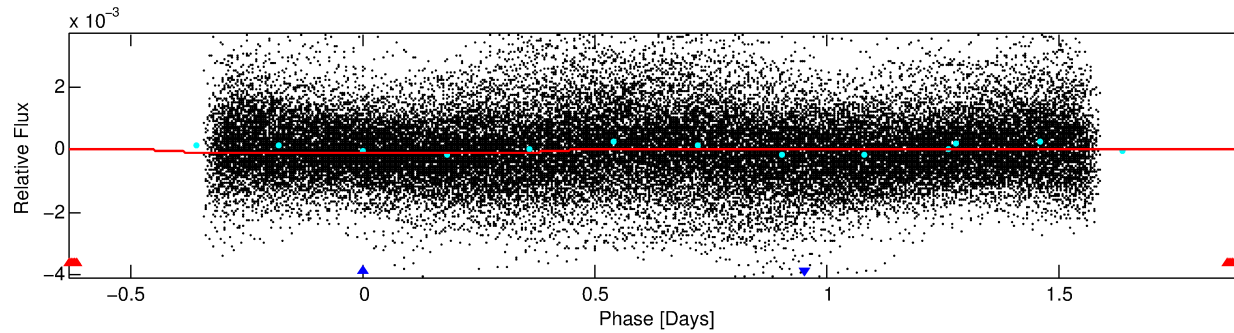
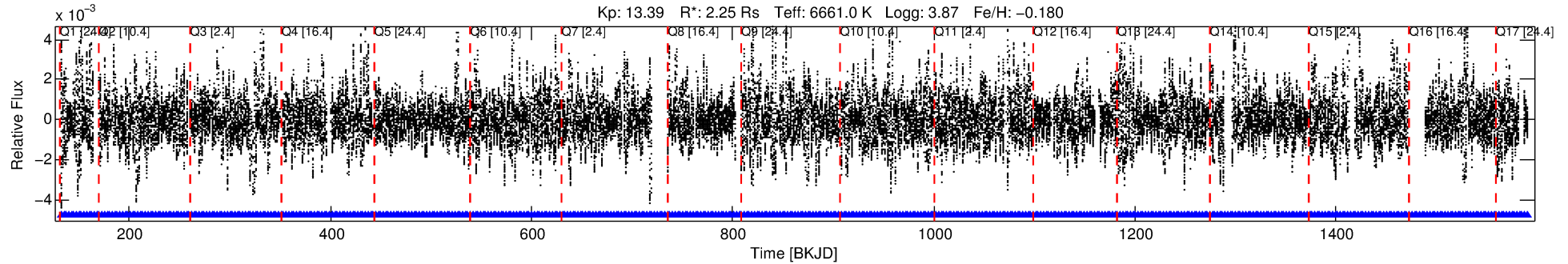
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008526241-02

No Significant Match Found

DV One-Page Summary

KIC: 8526241 Candidate: 2 of 2 Period: 2.544 d



DV Fit Results:

Period = 2.54372 [0.00003] d
Epoch = 132.4053 [0.0521] BKJD
Rp/R* = 0.0091 [0.0029]
a/R* = 1.09 [0.33]
b = 0.56 [2.02]
Seff = 5420.41 [3717.19]
Teq = 2188 [375] K
Rp = 2.23 [1.15] Re
a = 0.0405 [0.0166] AU
Ag = 1.22 [3.42] [0.06σ]
Teffp = 3556 [2426] K [0.56σ]

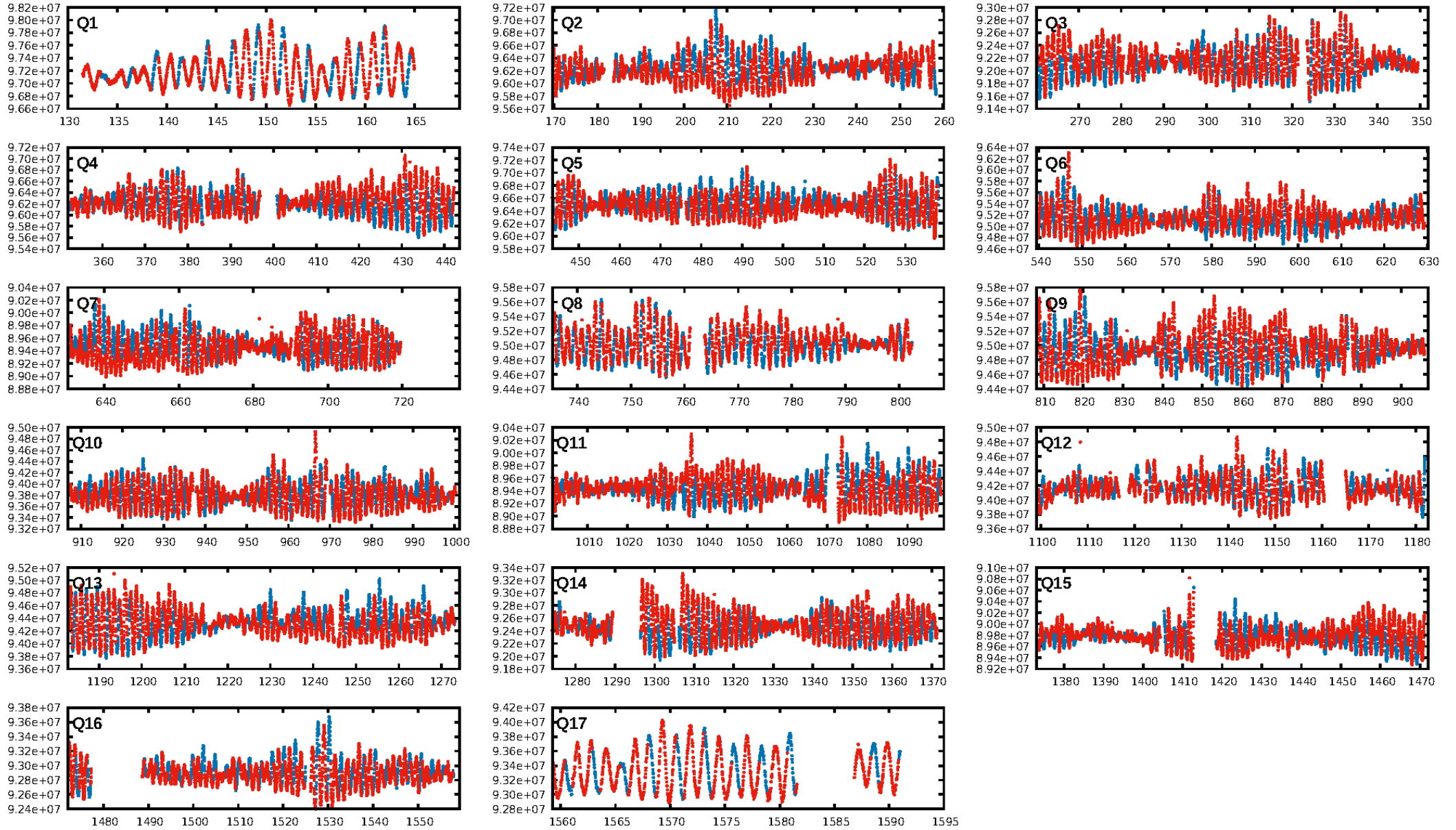
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [518/518]
GhostDiagnostic-chr: 0.5669
Centroid-sig: N/A
Centroid-so: 0.654 arcsec [2.53σ]
OotOffset-rm: 0.416 arcsec [0.67σ]
KicOffset-rm: 0.407 arcsec [0.64σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/17]

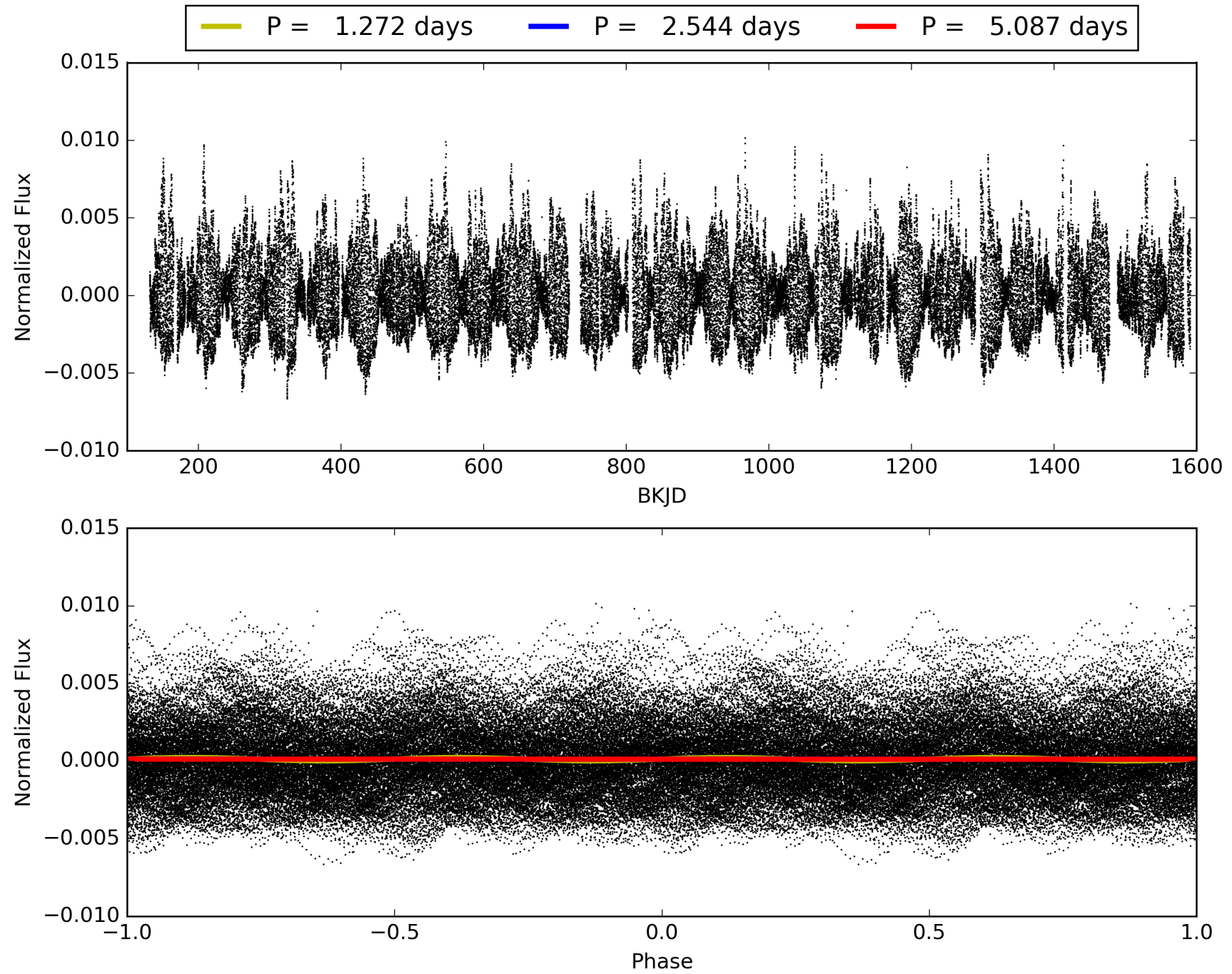
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:55:46 Z

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

TCE 008526241-02, PDC Light Curves

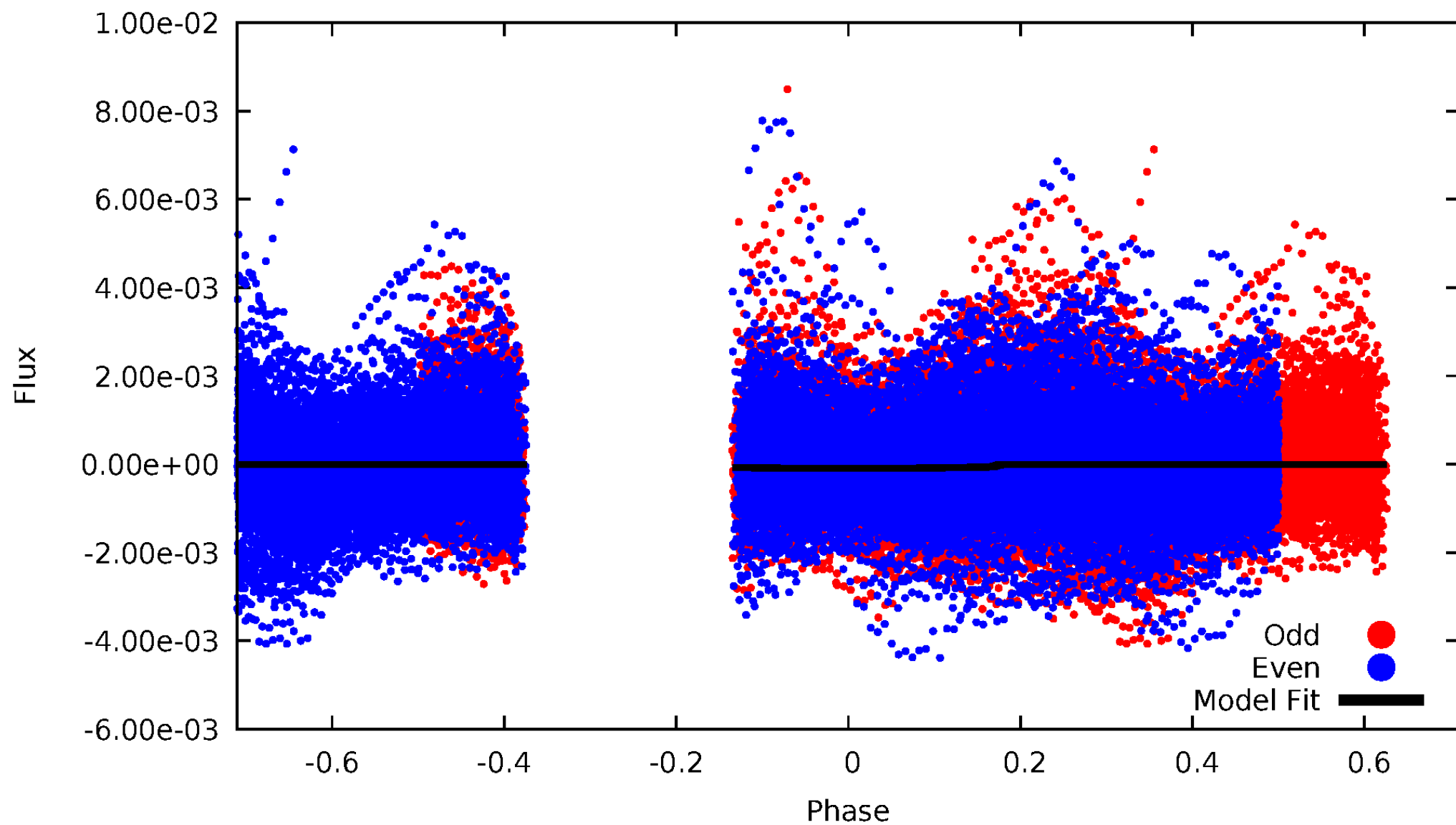


TCE 008526241-02



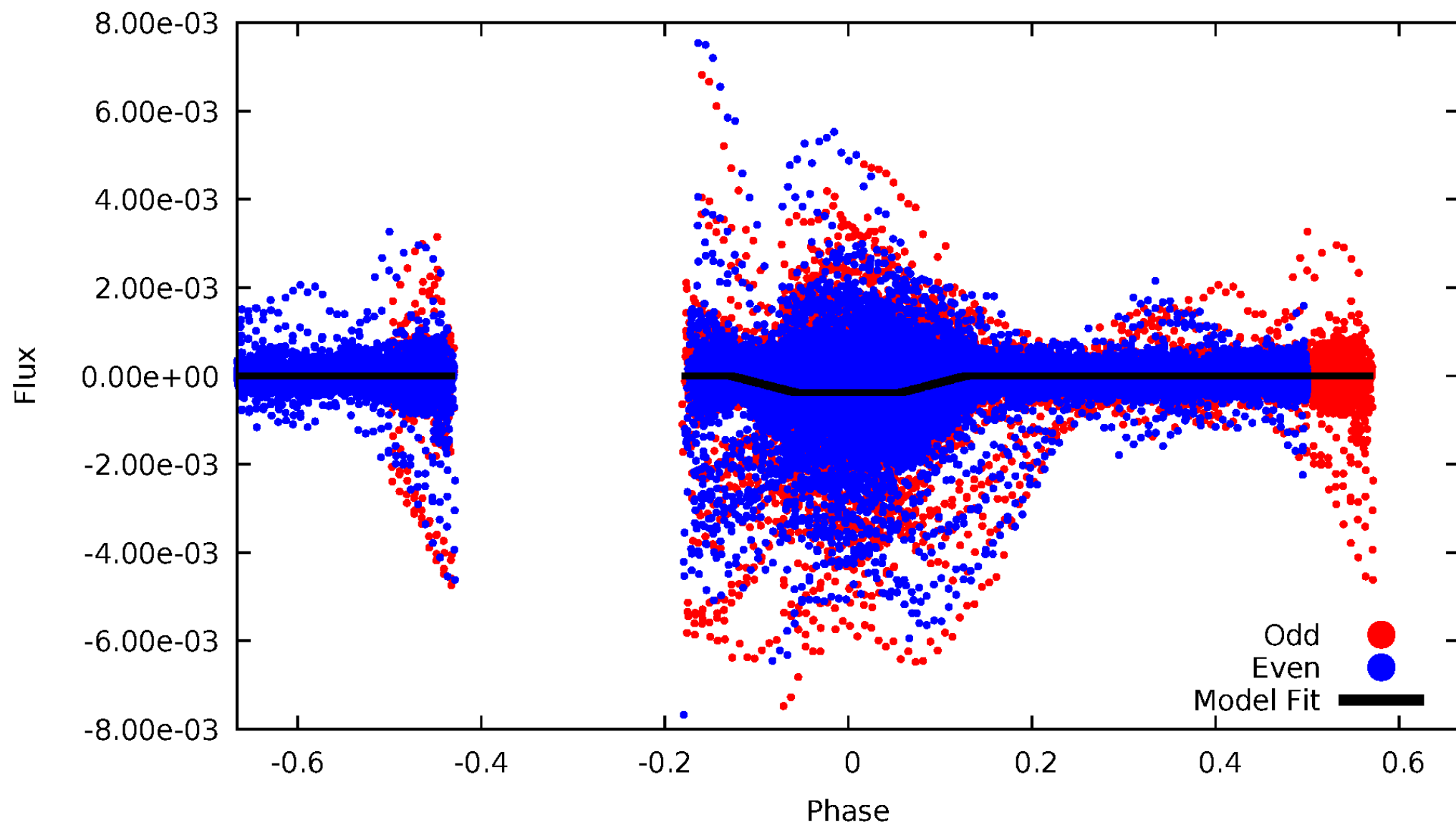
DV Odd/Even

TCE 008526241-02



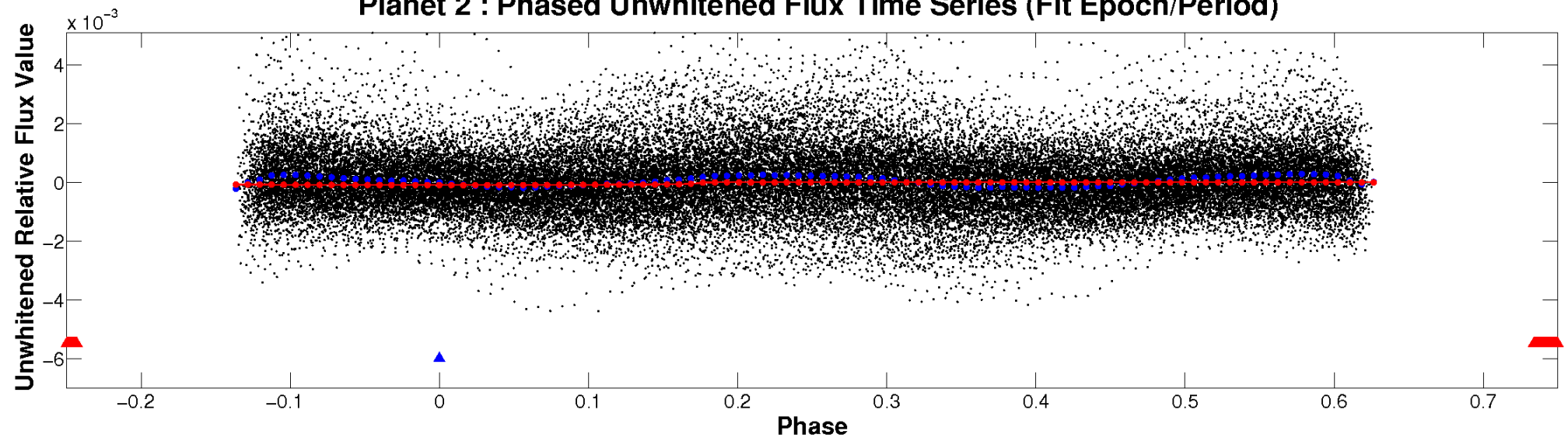
ALT Odd/Even

TCE 008526241-02

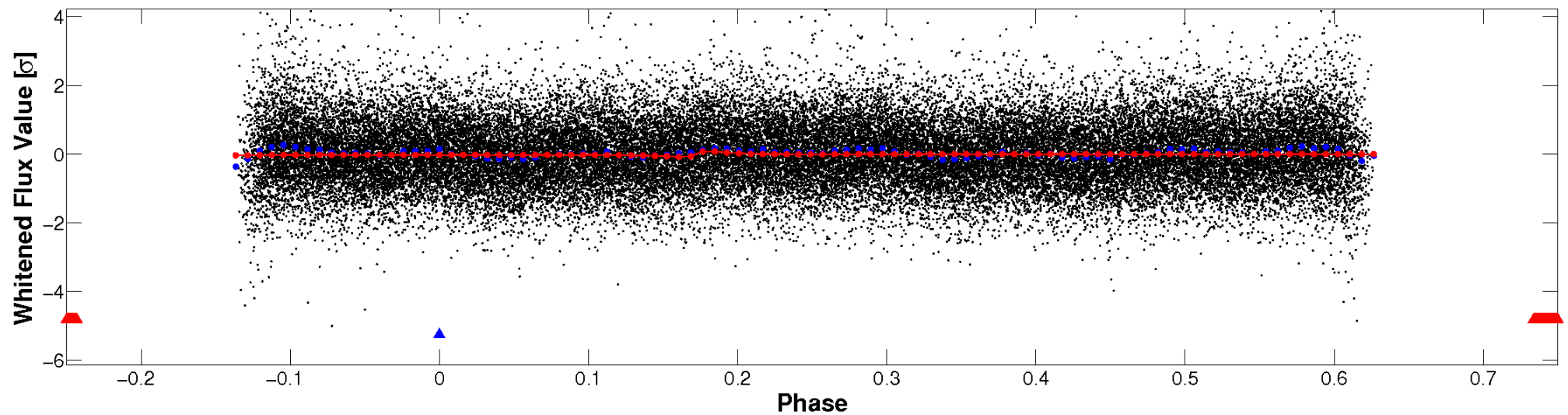


Non-Whitened Vs. Whitened Light Curve

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

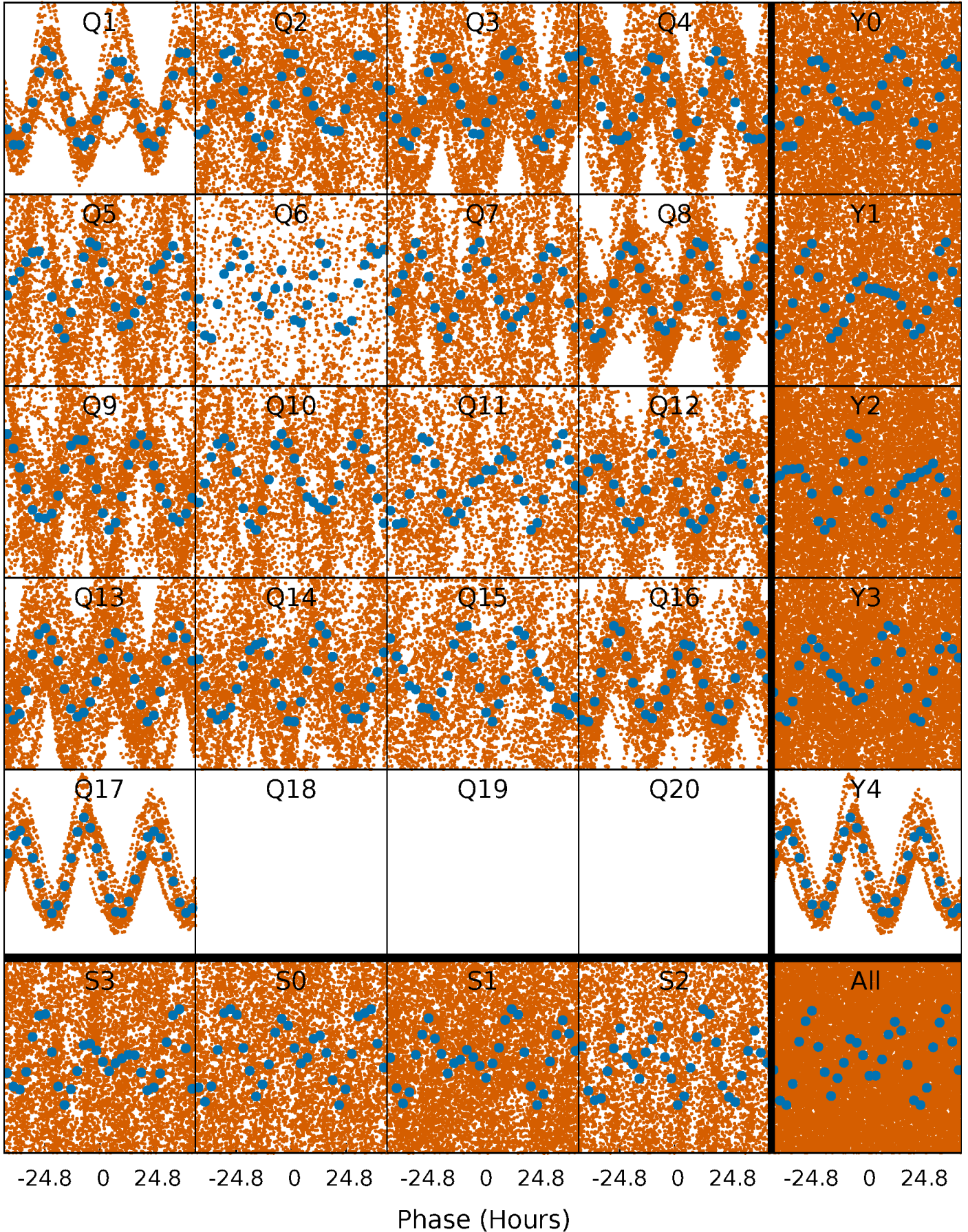


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



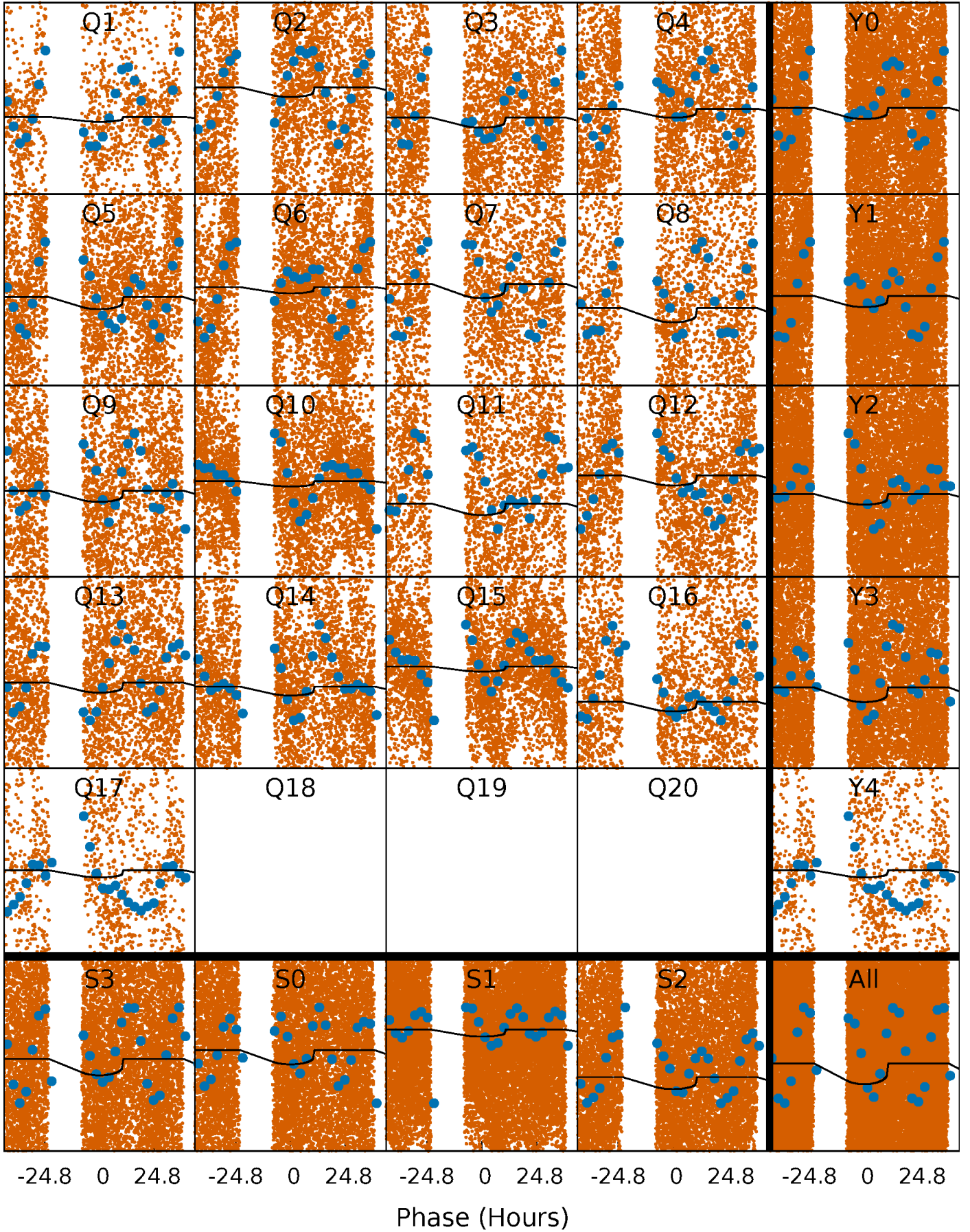
PDC Quarter-Phased Transit Curves

TCE 008526241-02 P= 2.543724 Days $T_0=132.405340$ (BKJD)



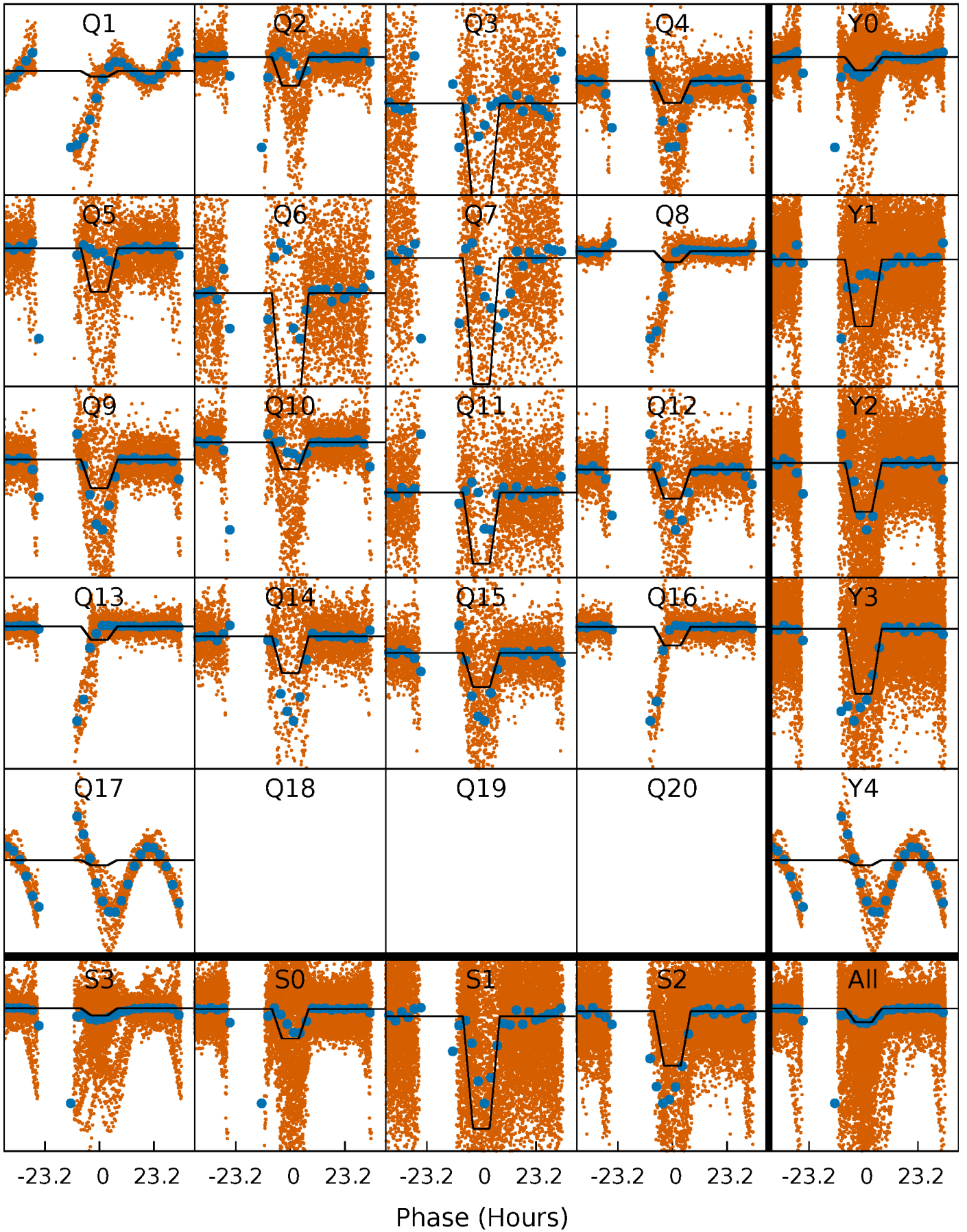
DV Quarter-Phased Transit Curves

TCE 008526241-02 P= 2.543724 Days $T_0=132.405340$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

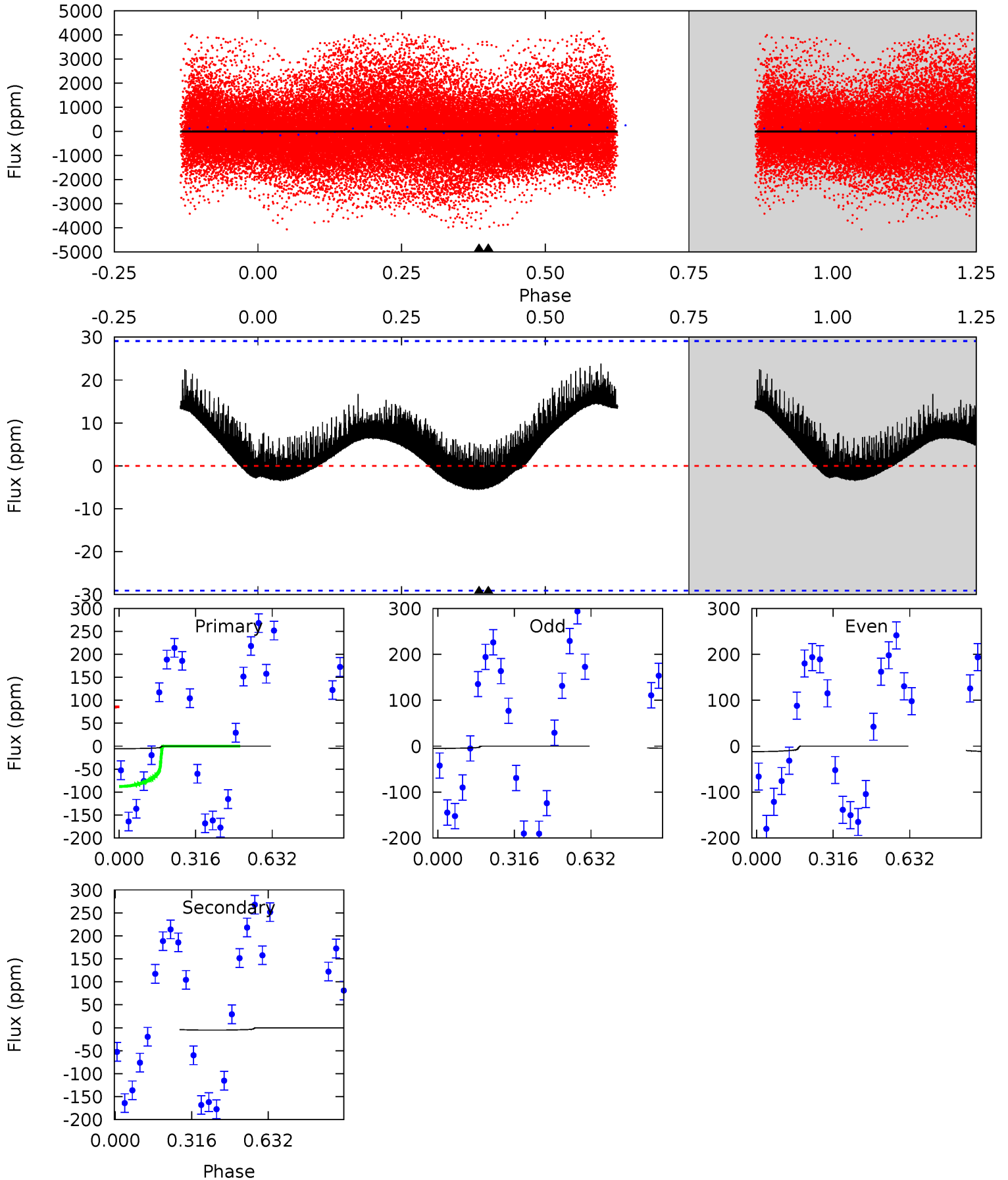
TCE 008526241-02 P= 2.543762 Days $T_0=132.521212$ (BKJD)



DV Model-Shift Uniqueness Test

008526241-02, P = 2.543724 Days, E = 129.861616 Days

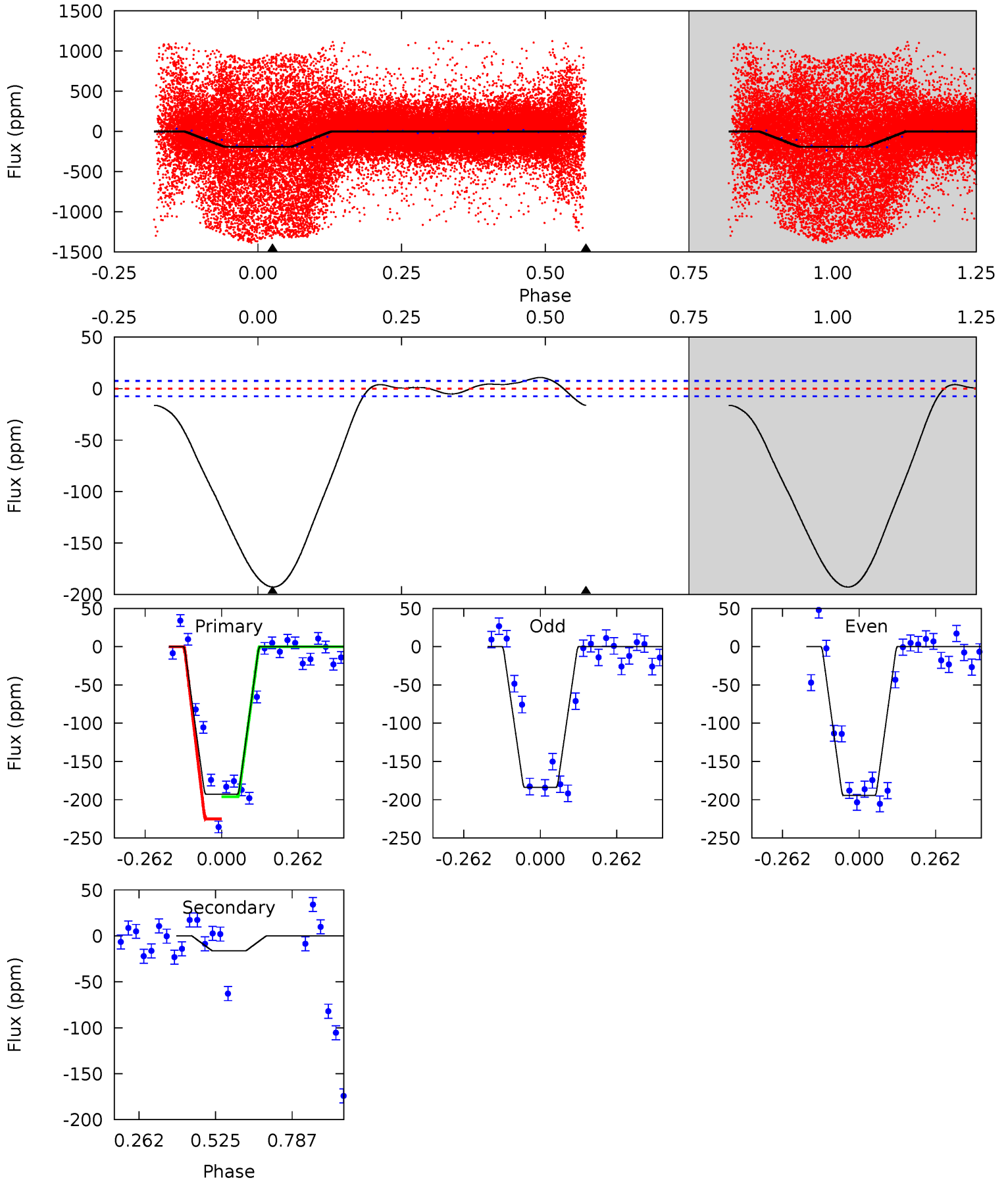
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.82	0.77	0	0	4.32	1.00	0.77	0.82	0.82	0.77	0.77	0.48	-0.48	0.81	0.17



Alt Model-Shift Uniqueness Test

008526241-02, P = 2.543762 Days, E = 129.977450 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
113.3	9.58	0	0	4.36	1.12	1.27	113.3	113.3	9.58	9.58	3.15	1.42	0.05	4.36



Stellar Parameters For KIC 008526241

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6661^{+187}_{-258}	$3.872^{+0.397}_{-0.132}$	$-0.180^{+0.250}_{-0.300}$	$2.246^{+0.538}_{-0.922}$	$1.373^{+0.222}_{-0.271}$	$0.171^{+0.578}_{-0.067}$
	+3%/-4%	+10%/-3%	+139%/-167%	+24%/-41%	+16%/-20%	+339%/-39%
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 008526241-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 7	$2.08^{+0.88}_{-0.76}$	2979^{+248}_{-339}	3469^{+908}_{-6899}	$0.998^{+2.332}_{-1.331}$
Alt.	-16 ± 2	$4.43^{+1.05}_{-1.07}$	2972^{+231}_{-340}	3229^{+291}_{-290}	$0.745^{+0.559}_{-0.245}$

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 $A_{obs} \gg 1.0$

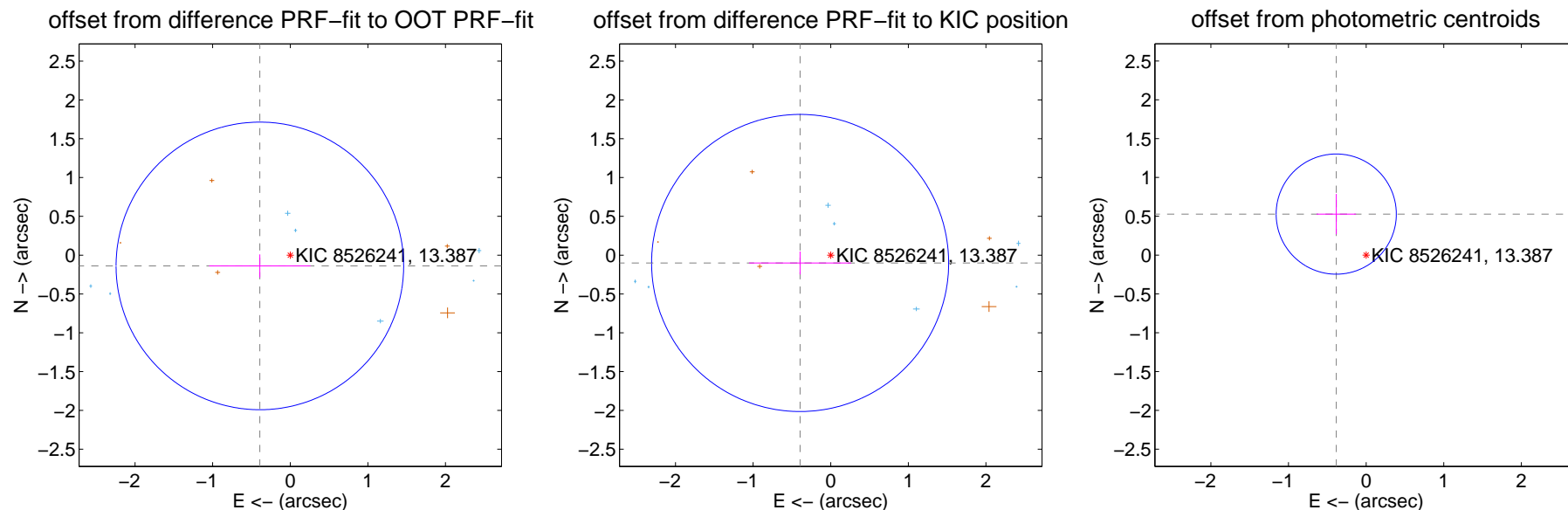
DV Centroid Data

Supplemental centroid analysis for 008526241-02. Kepler magnitude: 13.39. Transit SNR 5.13

There are 7 quarters with good PRF difference image offsets

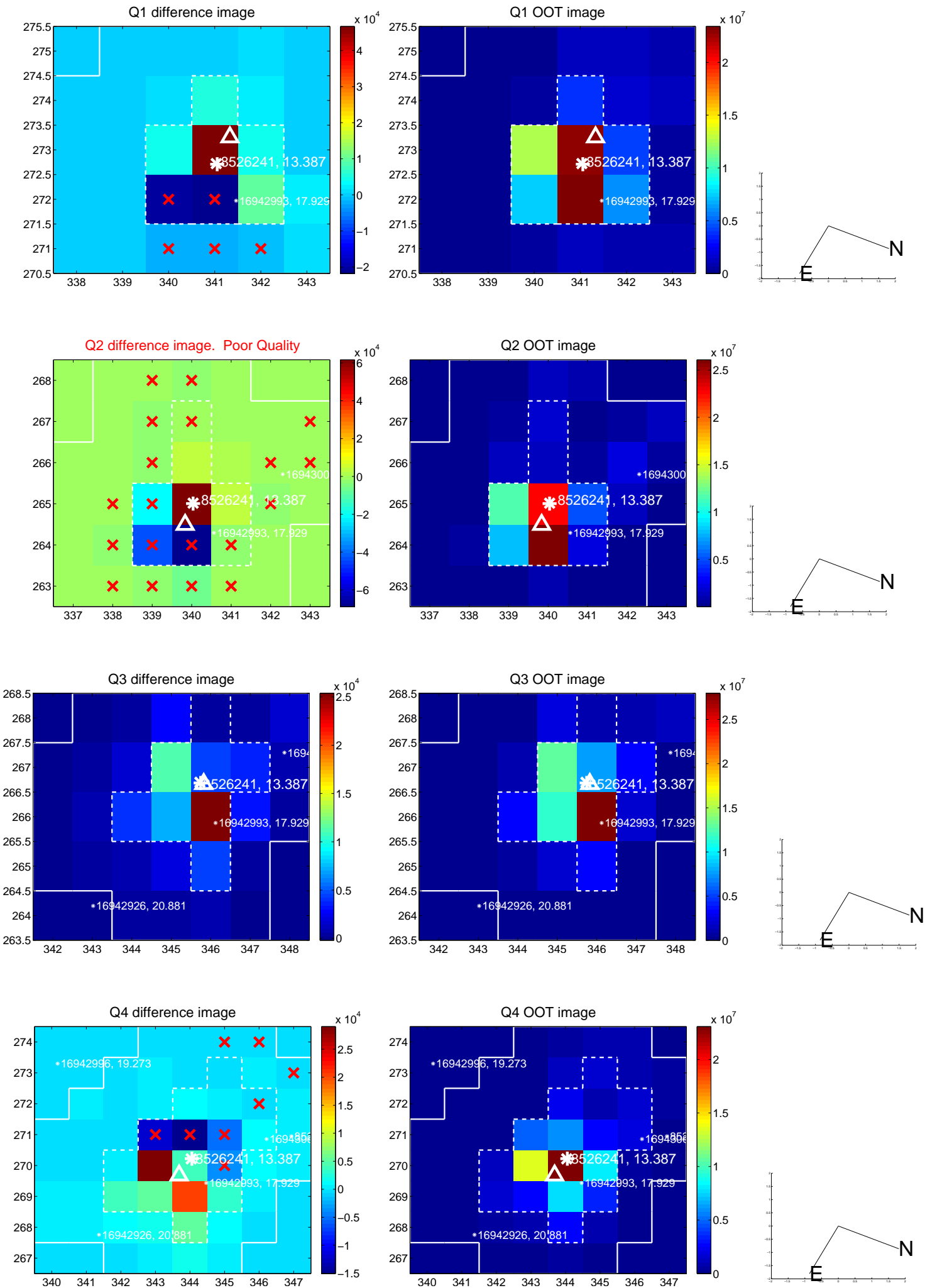
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.416 ± 0.618	0.67	0.392 ± 0.653	-0.139 ± 0.148
PRF-fit source offset from KIC position	0.407 ± 0.638	0.64	0.394 ± 0.657	-0.101 ± 0.148
photometric centroid source offset	0.65 ± 0.26	2.53	0.39 ± 0.25	0.53 ± 0.26

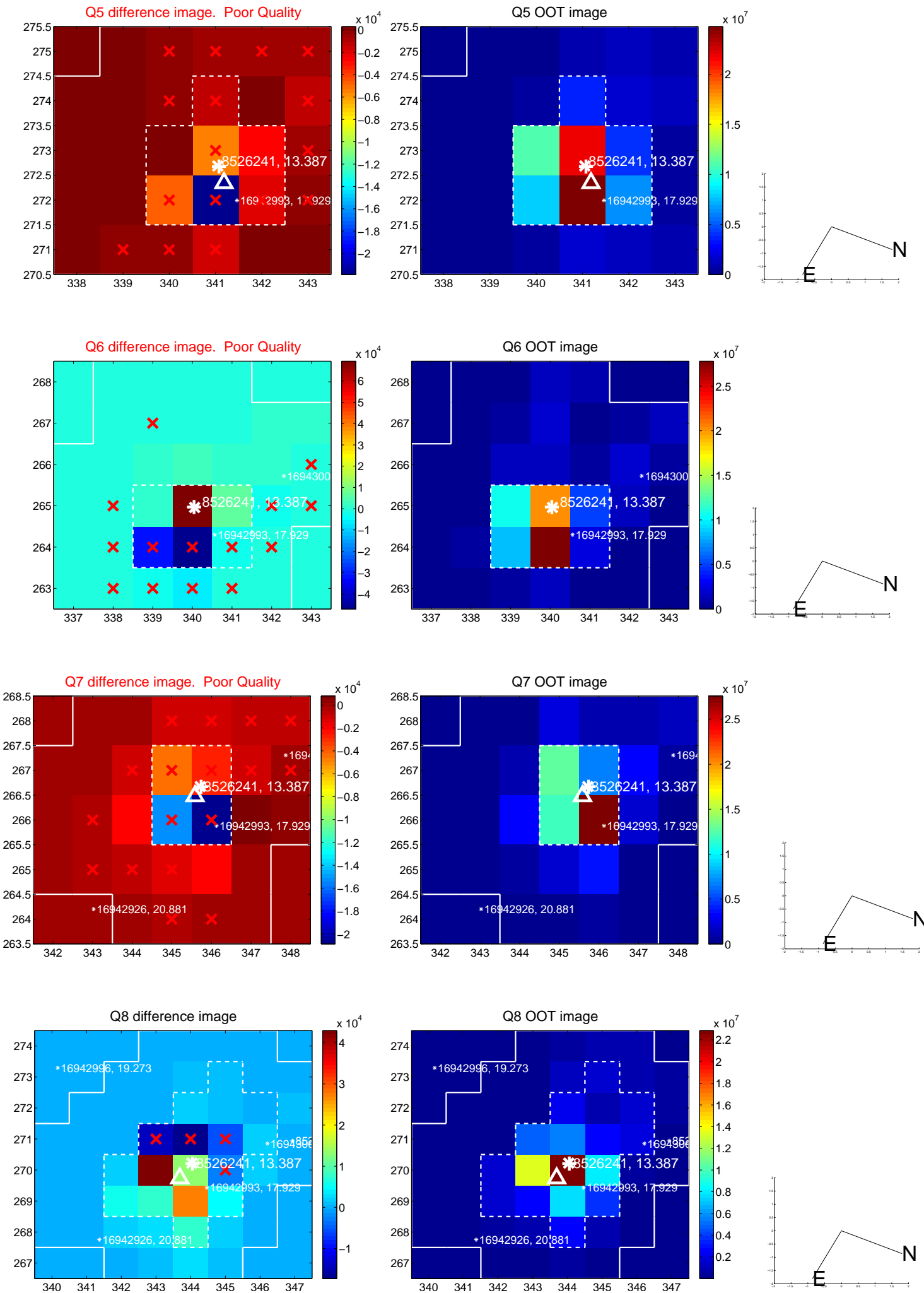


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

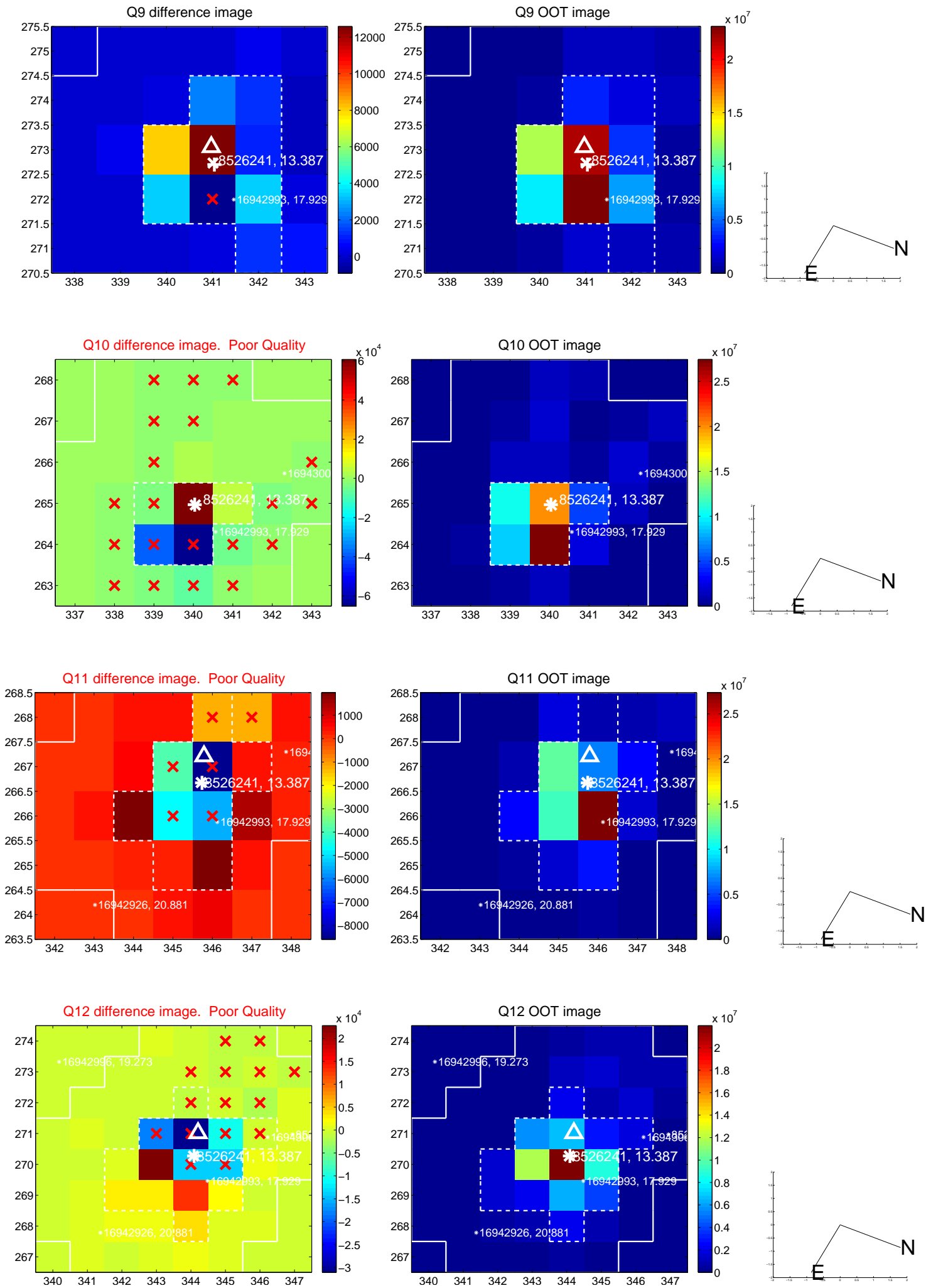
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



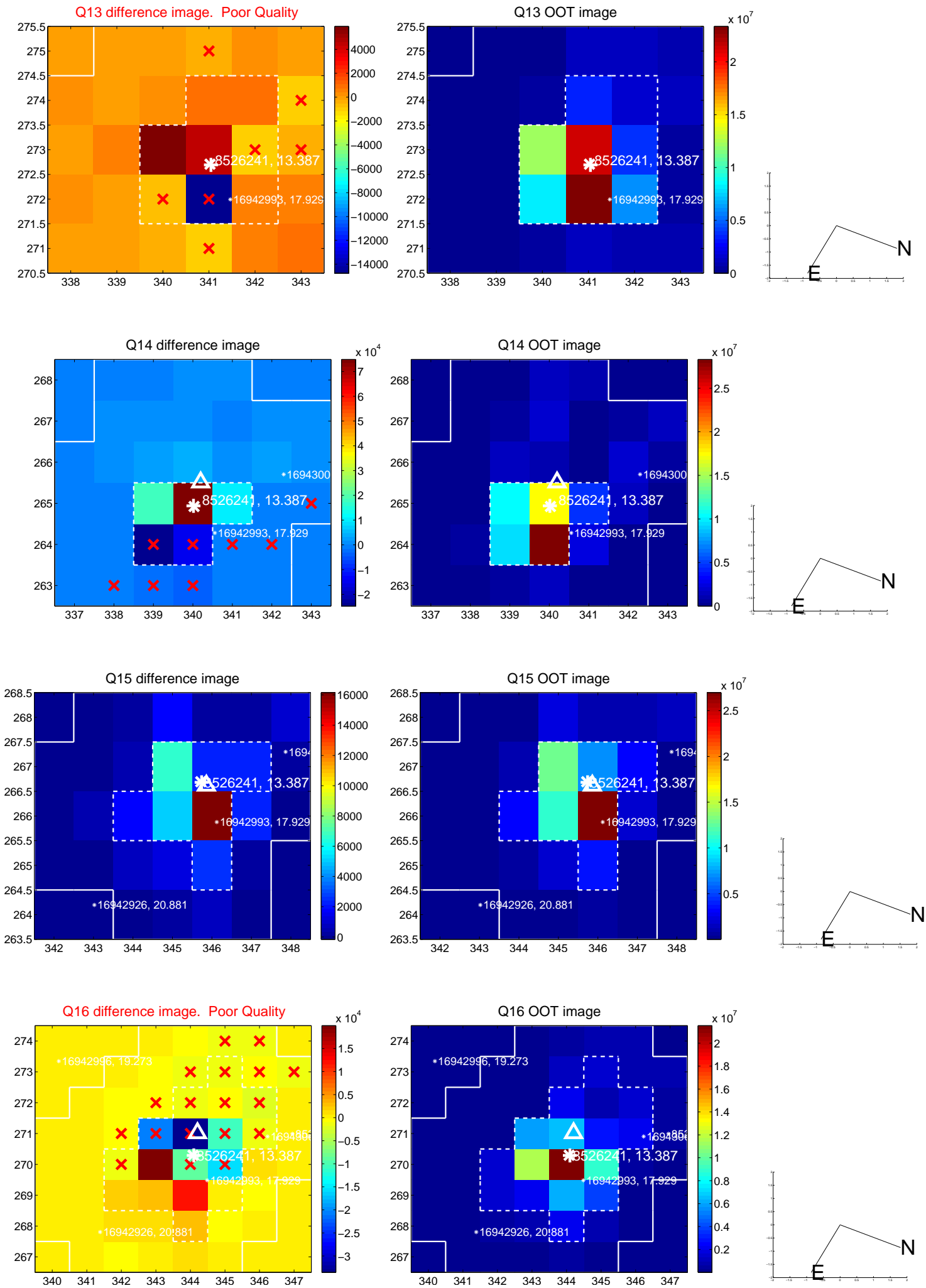
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



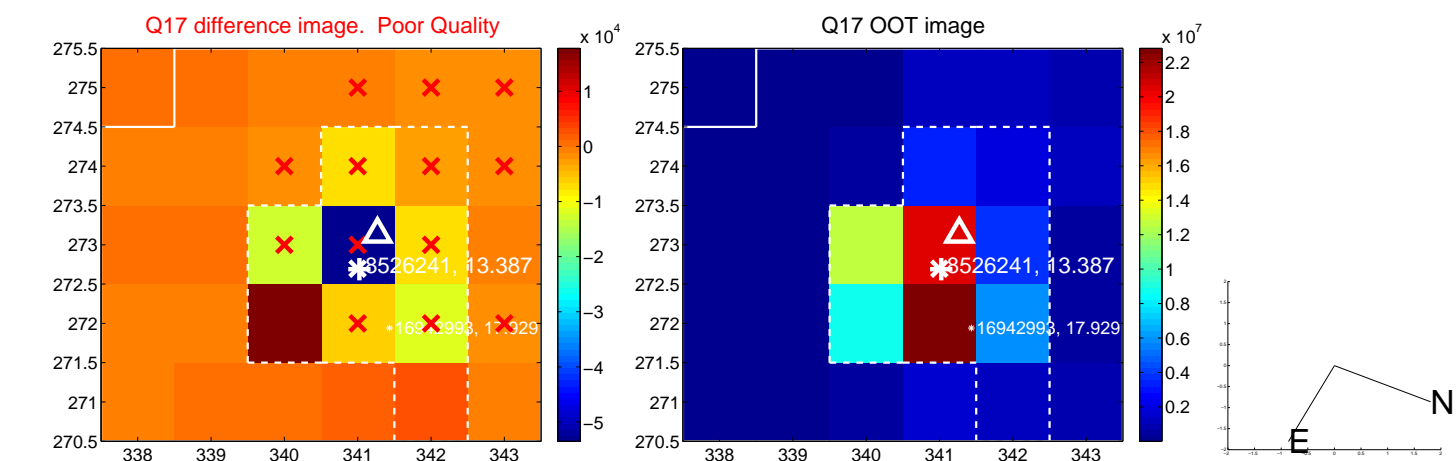
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



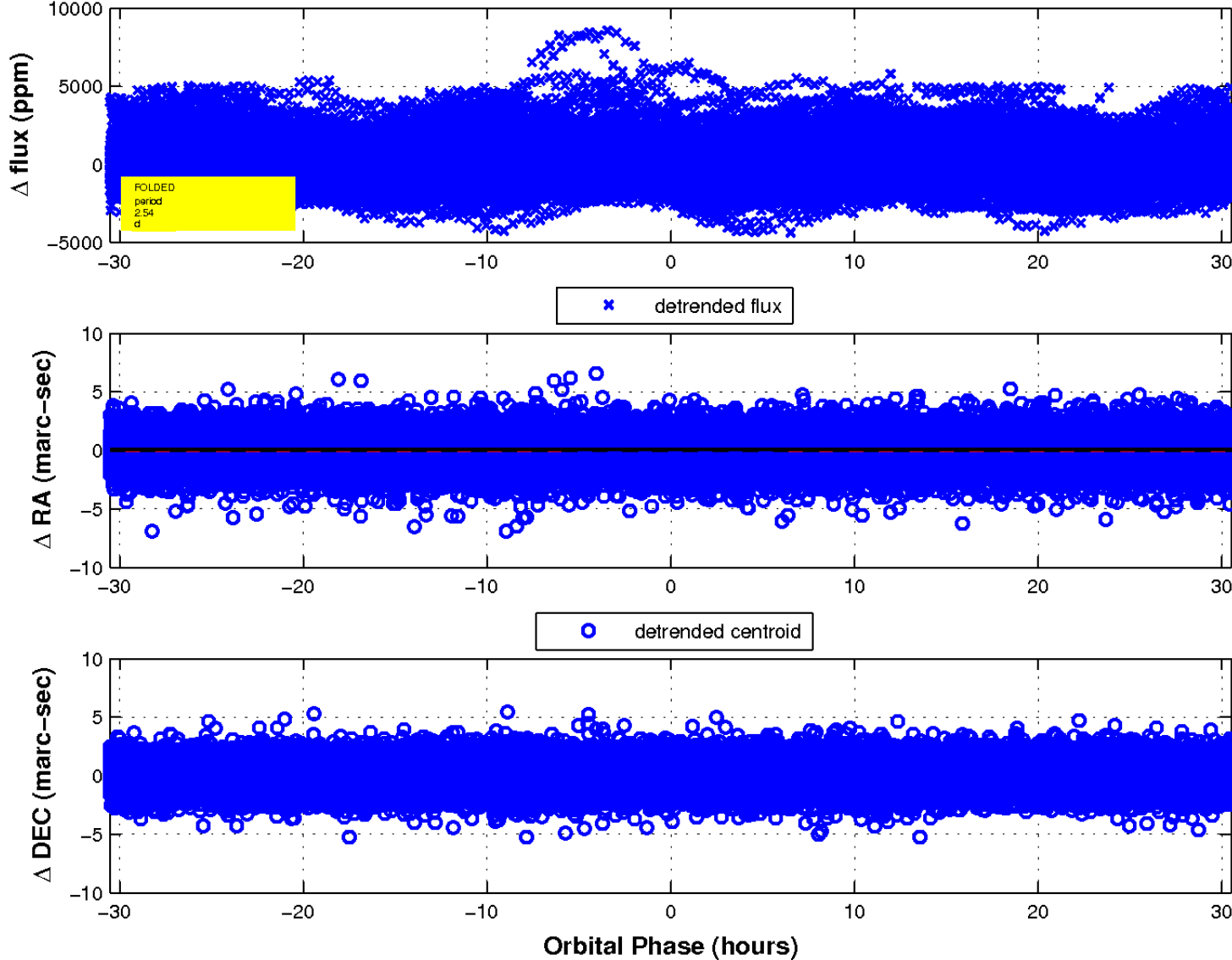
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

