

KIC 006526377

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})
006526377-01	OBS	5295.01	1.395083	132.090560	164.7	2.385	30.7	34.1	12.17	4789	19.48	0.00
006526377-02	OBS	No	2.790225	132.067011	55.8	10.952	8.9	4.7	12.17	4789	11.42	0.00
006526377-03	OBS	No	374.855770	309.004302	1480.7	21.533	13.5	8.5	12.17	4789	52.77	41.20
006526377-04	OBS	No	2.790490	133.417989	97.1	19.708	12.2	8.1	12.17	4789	11.70	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006526377-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—CENT_UNRESOLVED_OFFSET
006526377-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
006526377-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006526377-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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 006526377-01

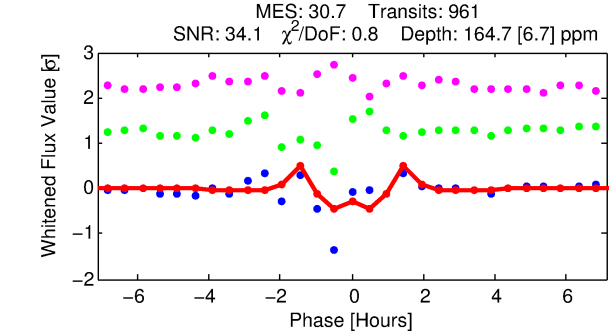
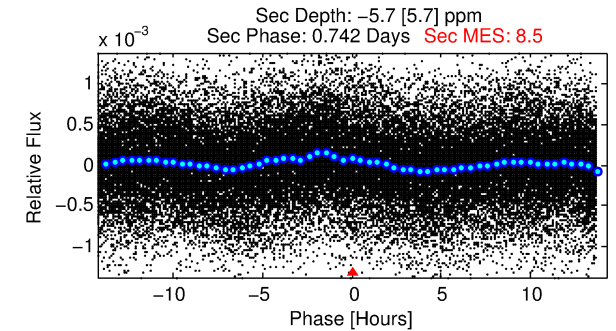
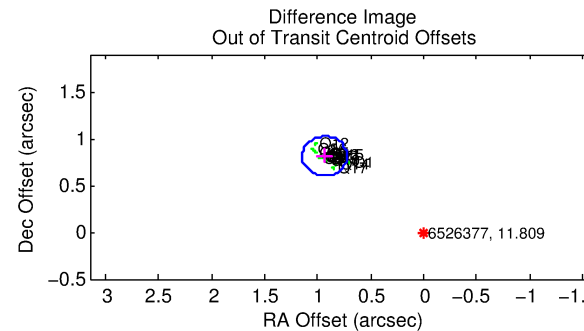
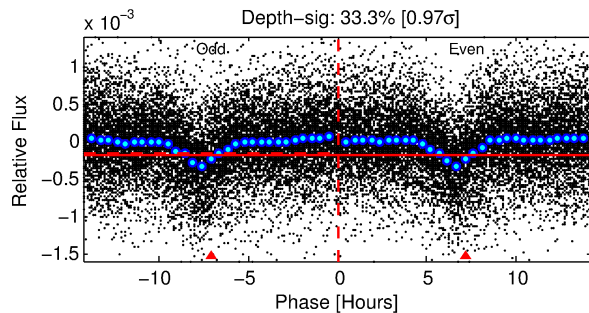
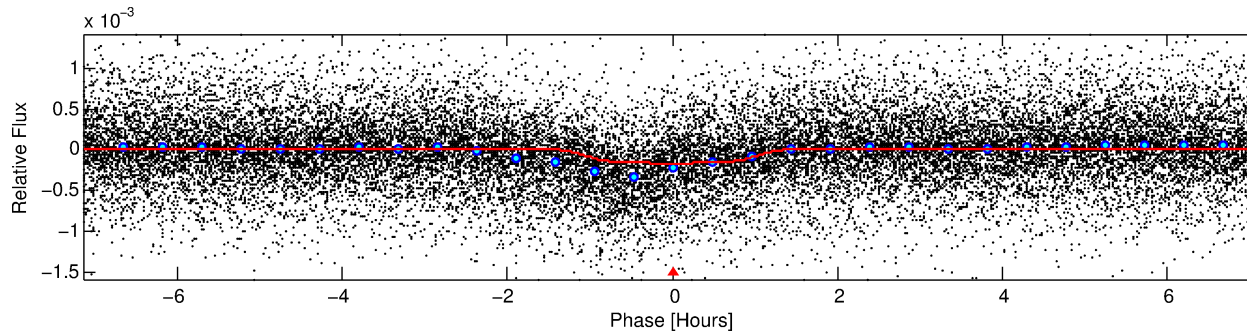
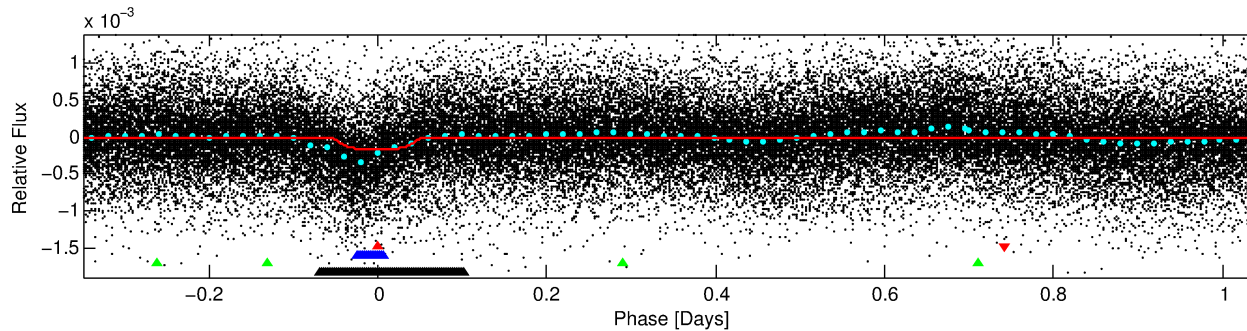
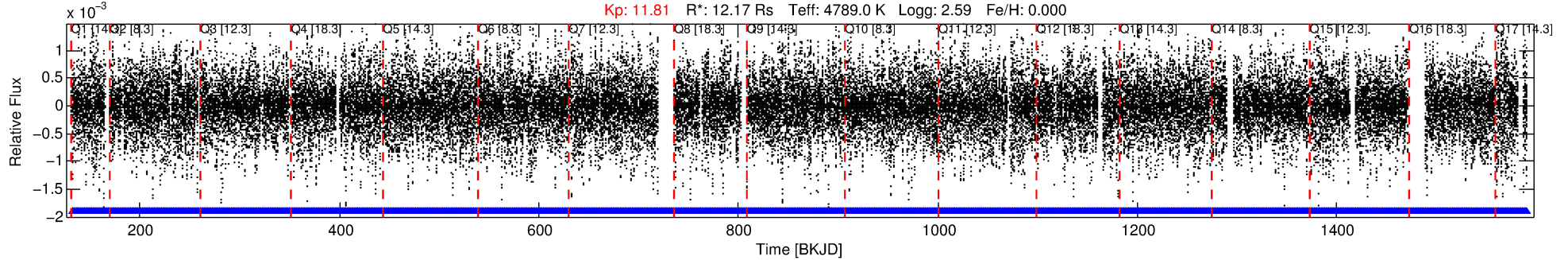
No Significant Match Found

DV One-Page Summary

KIC: 6526377 Candidate: 1 of 4 Period: 1.395 d

KOI: K05295 Corr: No Ephemeris Match

Kp: 11.81 R*: 12.17 Rs Teff: 4789.0 K Logg: 2.59 Fe/H: 0.000



DV Fit Results:

Period = 1.39508 [0.00000] d
Epoch = 132.0906 [0.0003] BKJD
Rp/R* = 0.0147 [0.0011]
a/R* = 2.19 [0.46]
b = 0.91 [0.05]
Seff = N/A
Teq = N/A
Rp = 19.47 [6.83] Re
a = N/A
Ag = N/A
Teffp = N/A

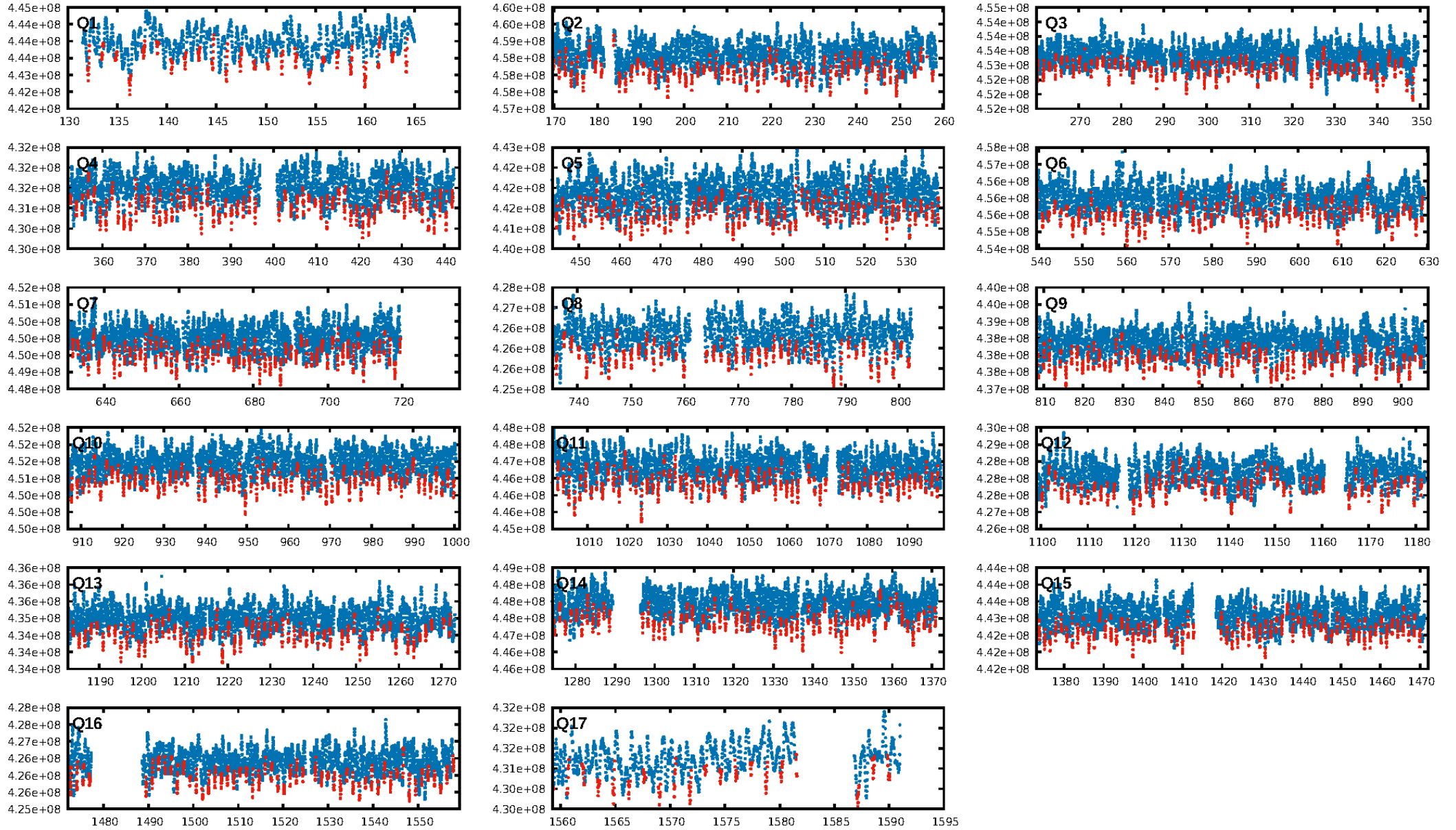
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.7% [2.99σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [917/917]
GhostDiagnostic-chr: 2.095
Centroid-sig: 0.0%
Centroid-so: 1.166 arcsec [9.95σ]
OotOffset-rm: 1.238 arcsec [17.53σ]
KicOffset-rm: 1.260 arcsec [18.09σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

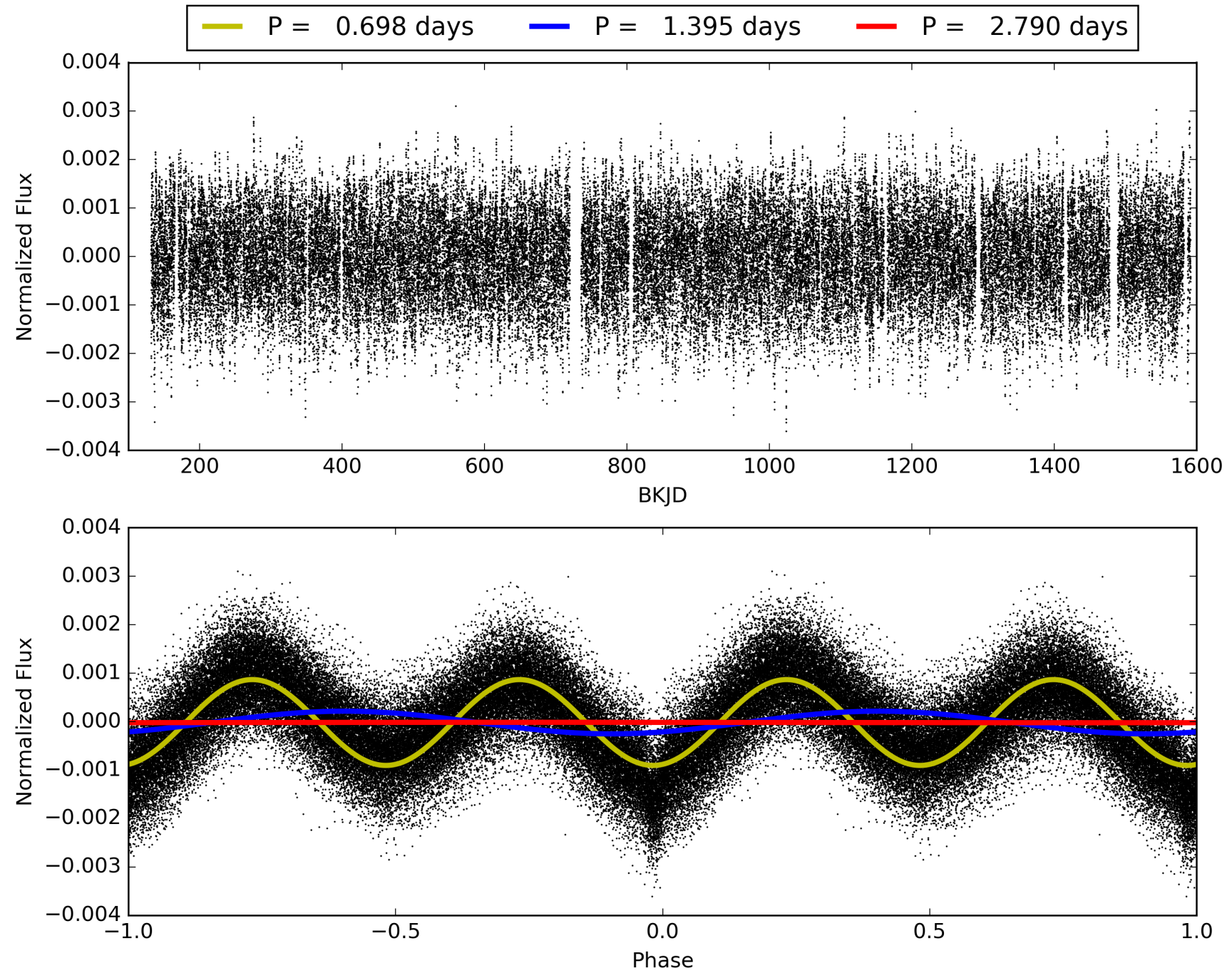
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:13:24 Z

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

TCE 006526377-01, PDC Light Curves

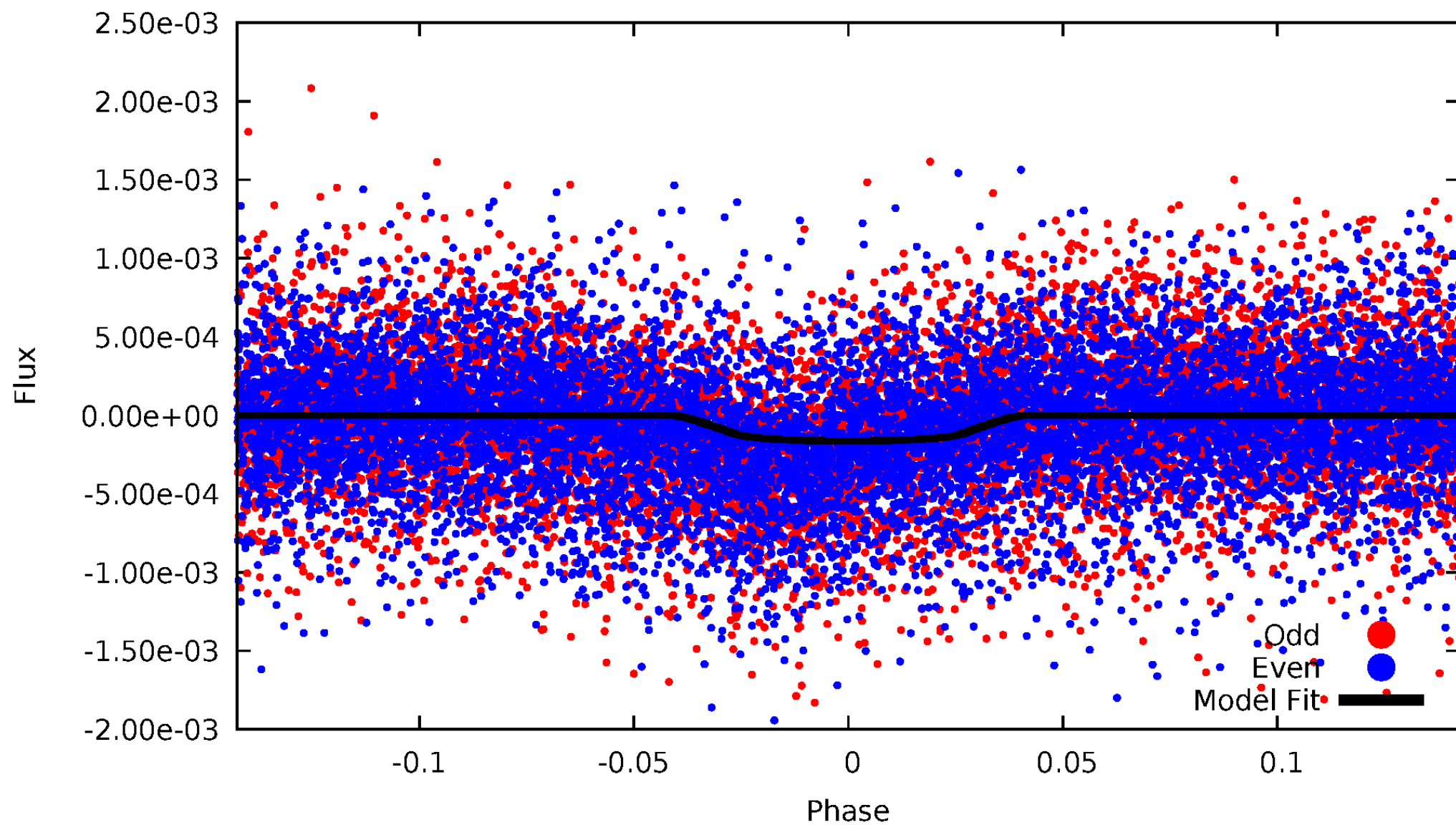


TCE 006526377-01



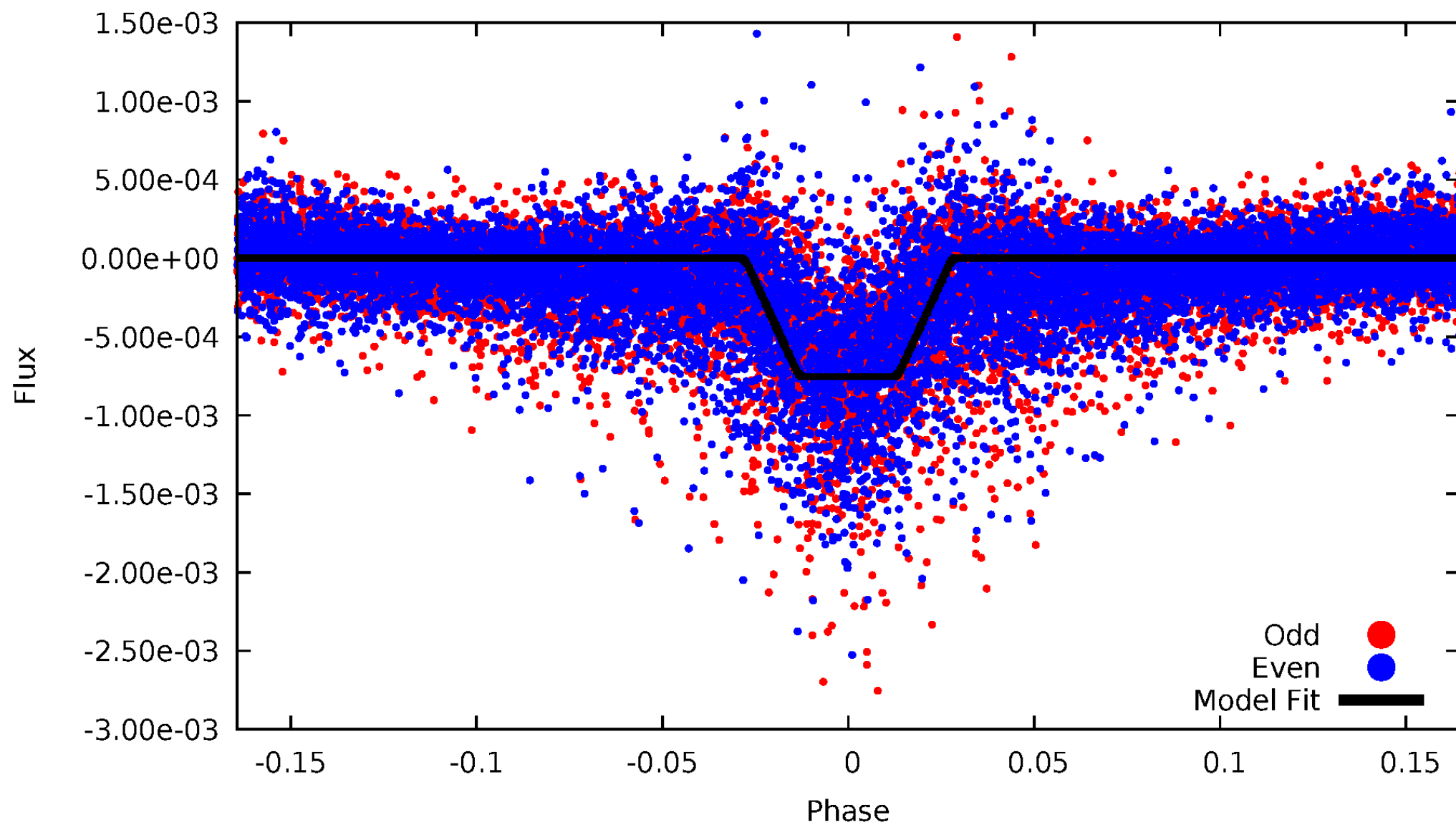
DV Odd/Even

TCE 006526377-01



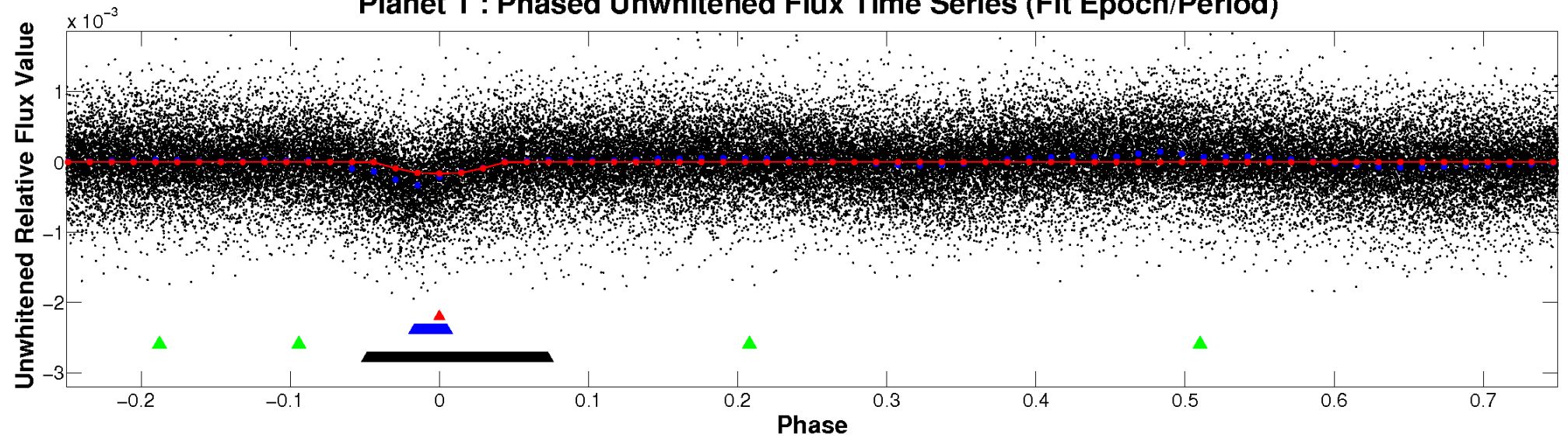
ALT Odd/Even

TCE 006526377-01

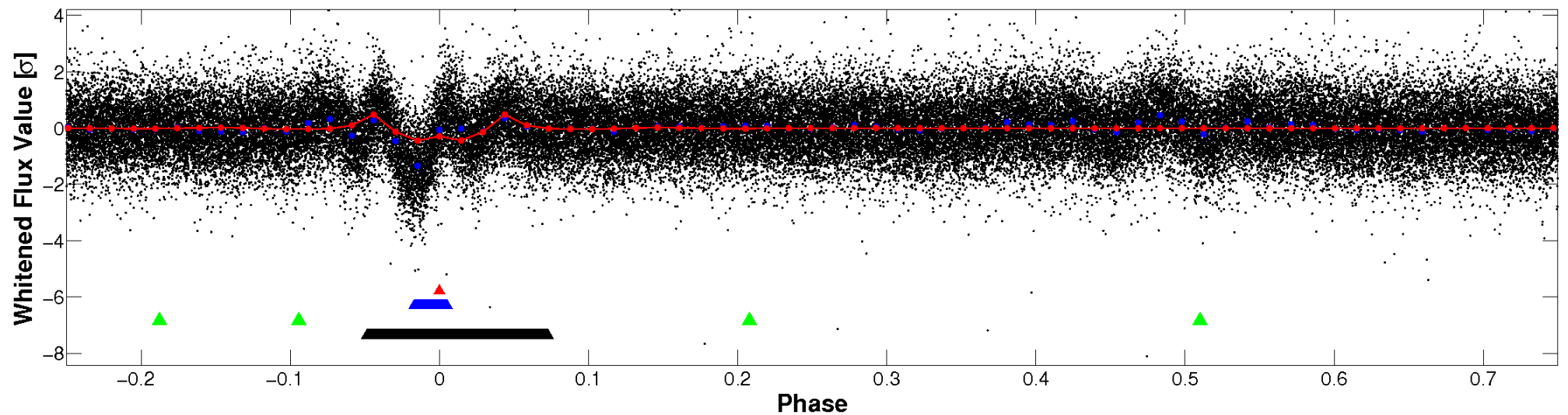


Non-Whitened Vs. Whitened Light Curve

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

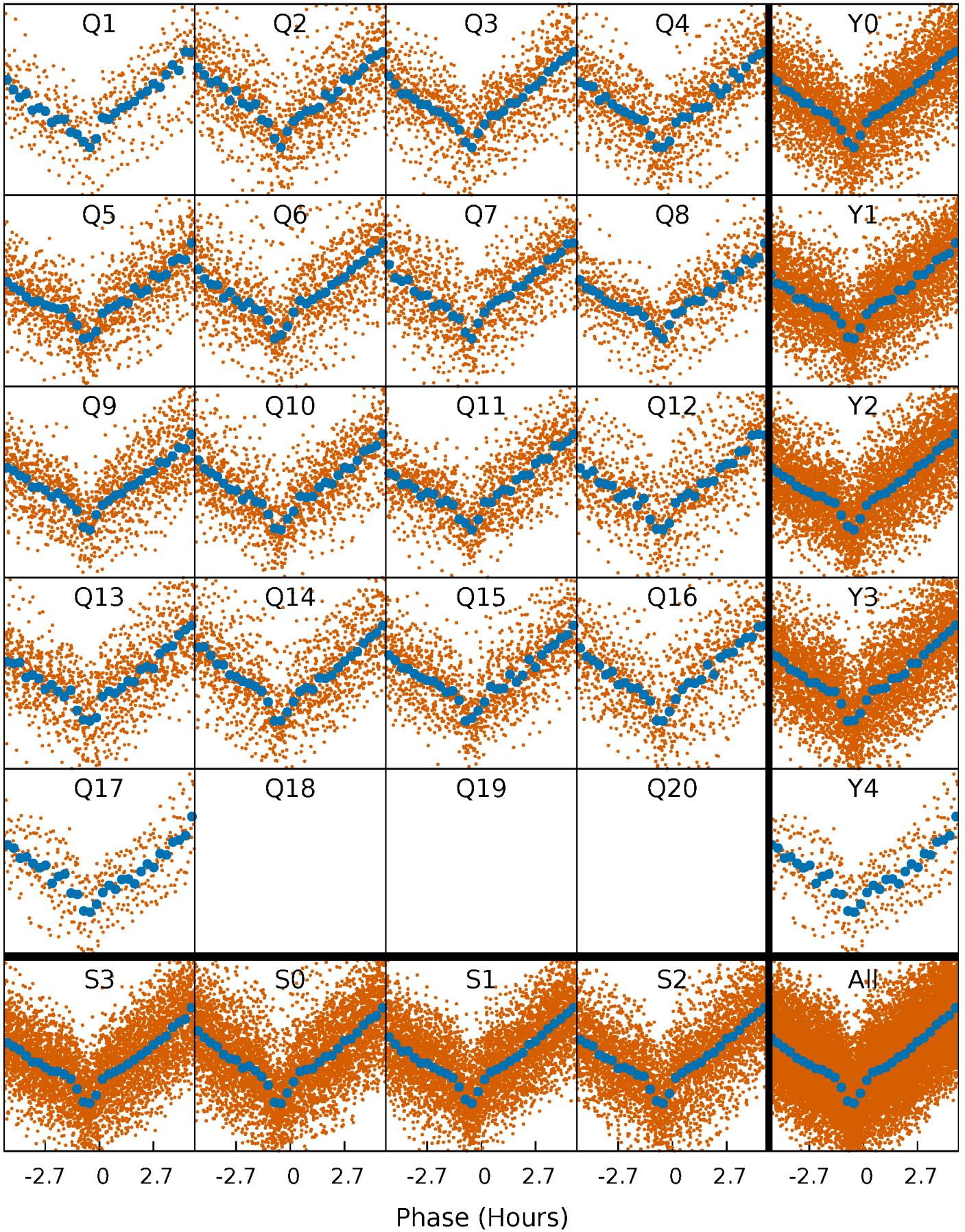


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



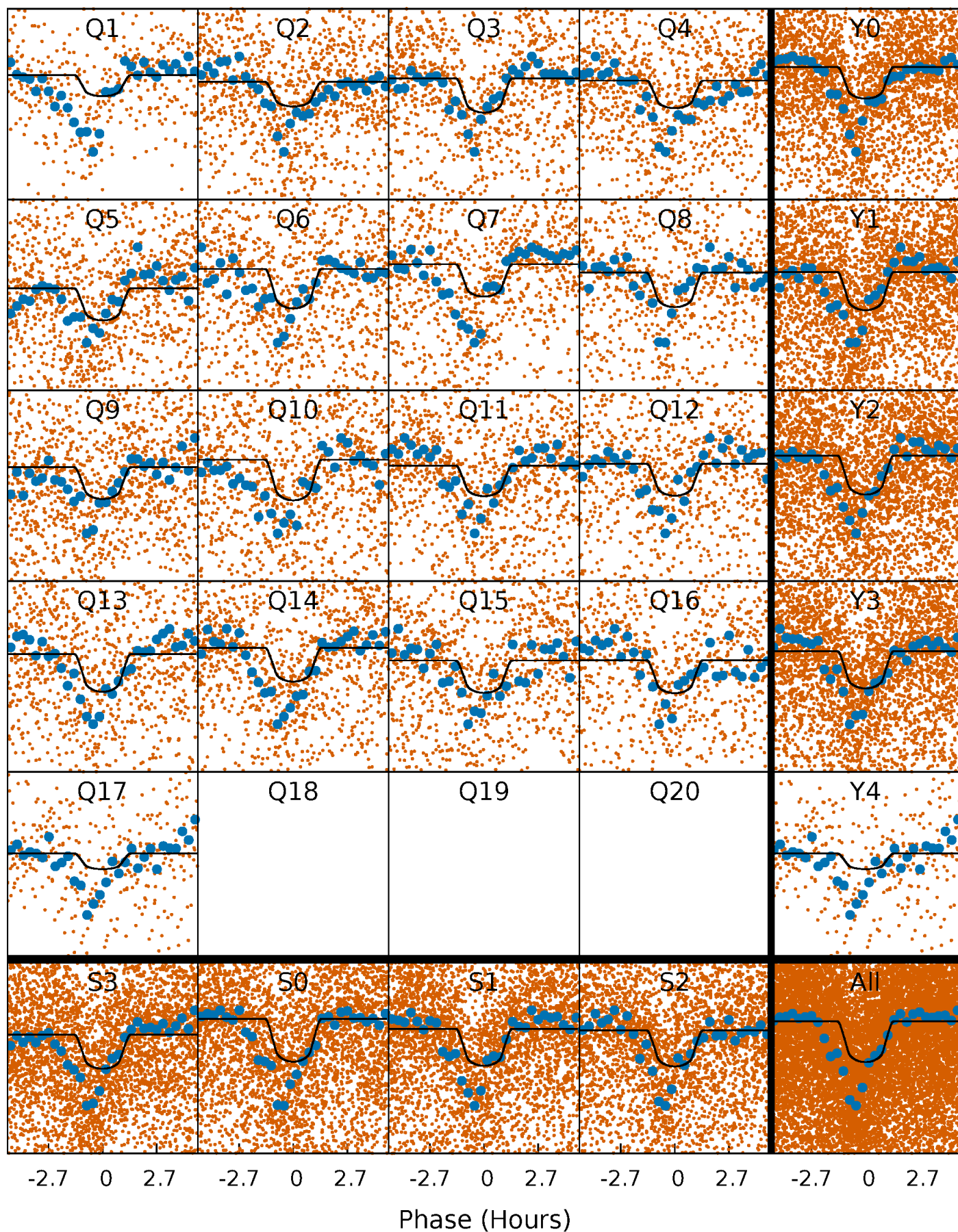
PDC Quarter-Phased Transit Curves

TCE 006526377-01 P= 1.395083 Days $T_0=132.090560$ (BKJD)



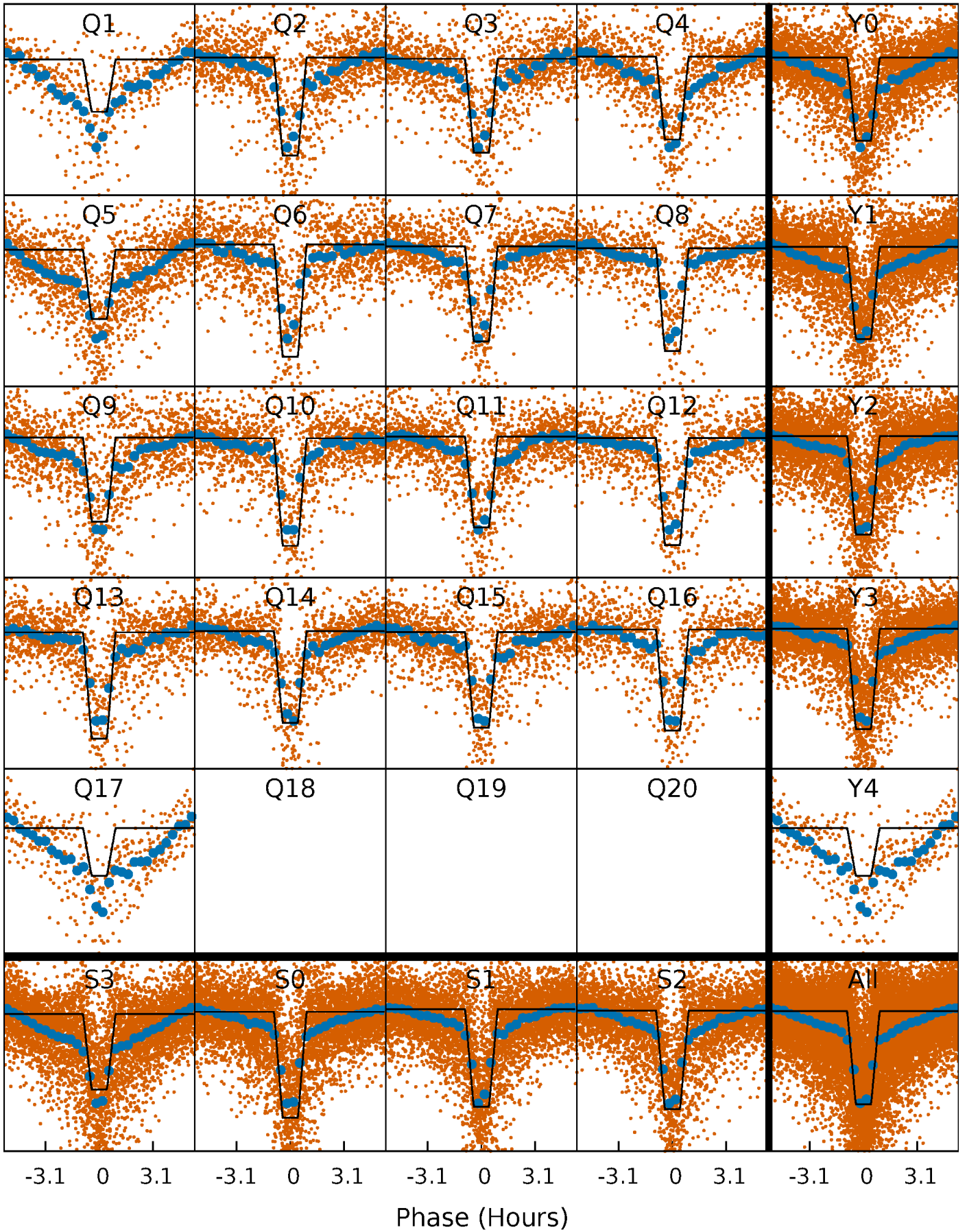
DV Quarter-Phased Transit Curves

TCE 006526377-01 P= 1.395083 Days $T_0=132.090560$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

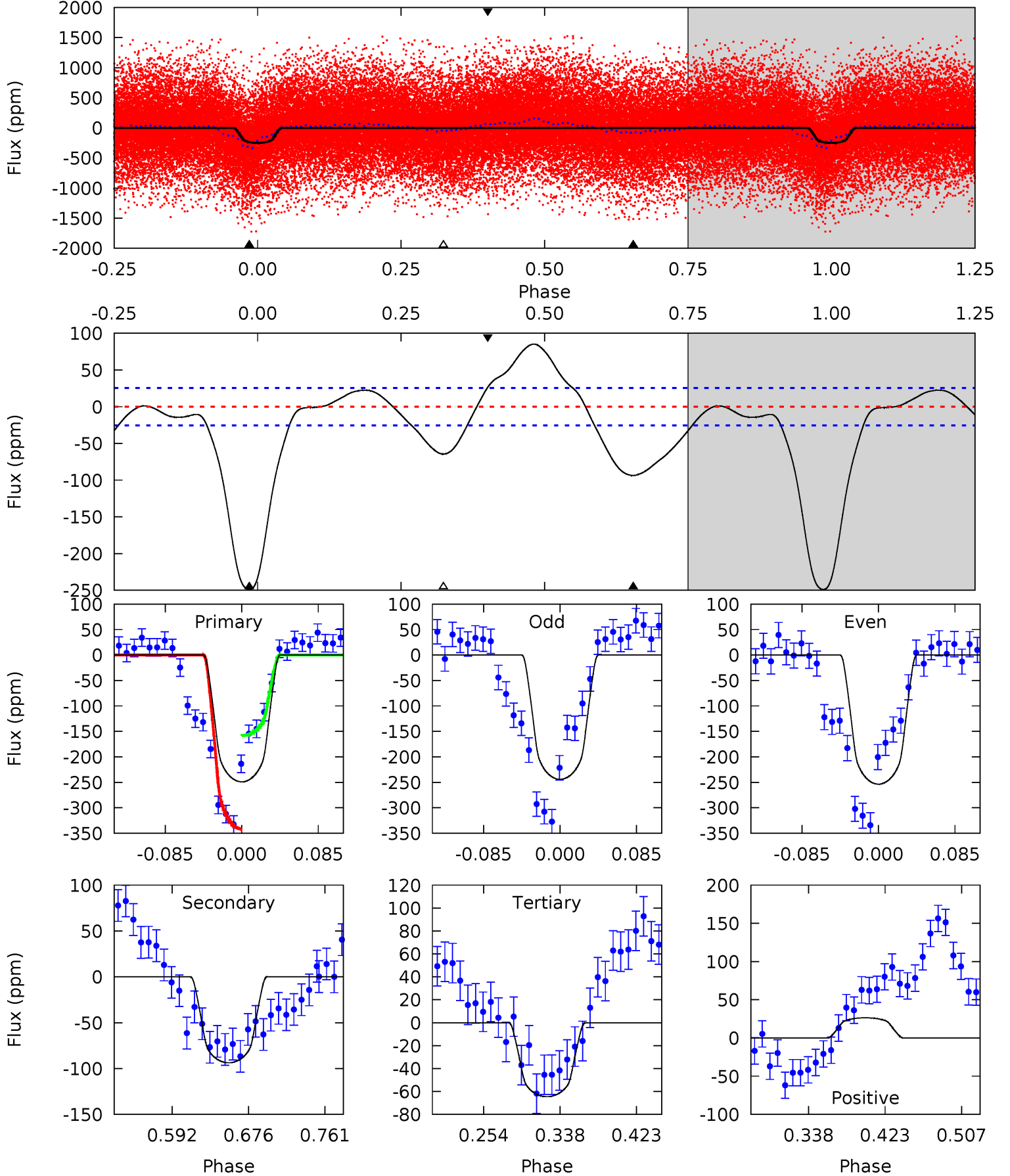
TCE 006526377-01 P= 1.395082 Days $T_0=132.068591$ (BKJD)



DV Model-Shift Uniqueness Test

006526377-01, P = 1.395083 Days, E = 130.695477 Days

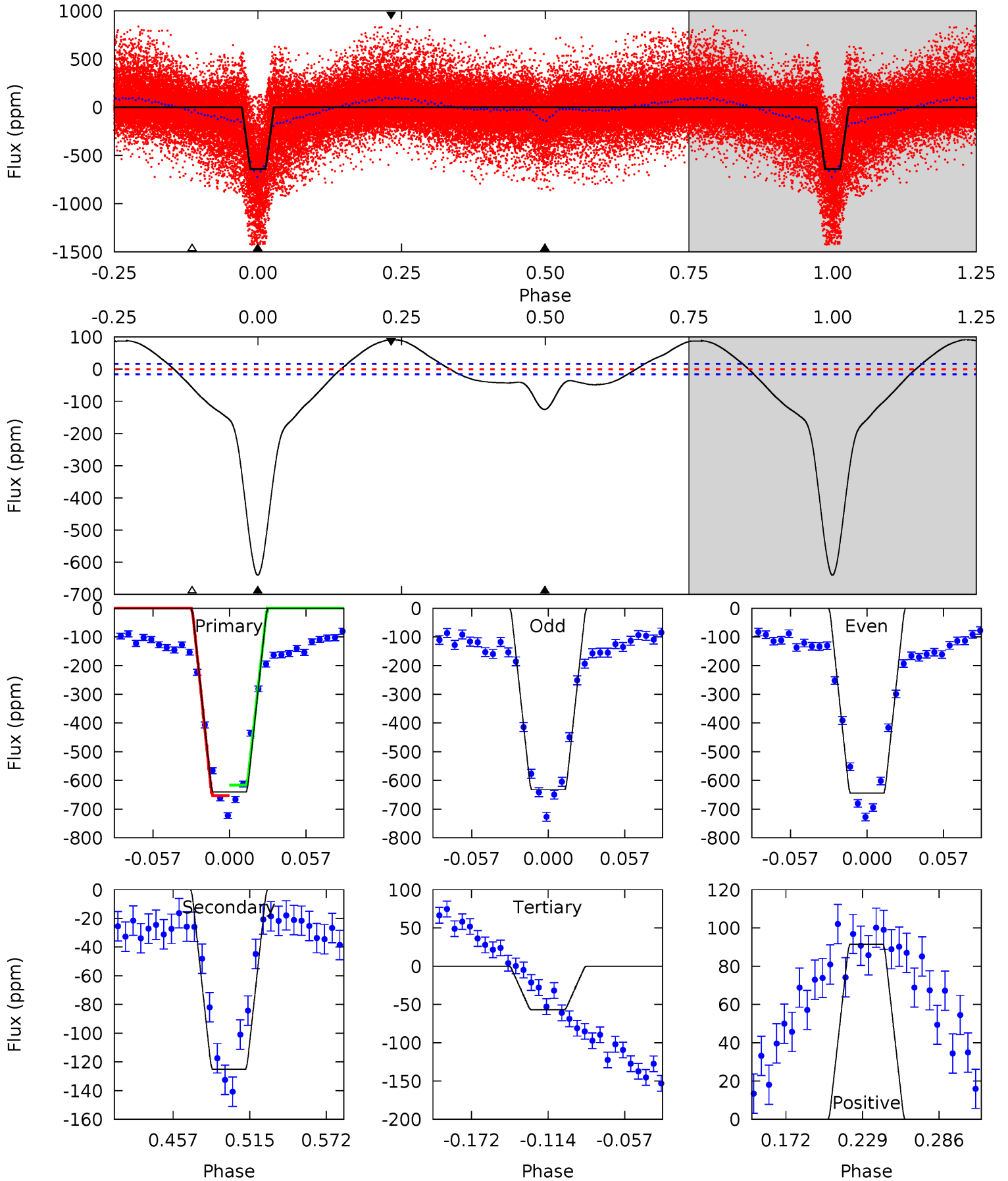
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.7	16.9	11.6	4.74	4.60	1.72	6.50	33.1	40.0	5.25	12.1	0.85	1.08	0.26	16.7



Alt Model-Shift Uniqueness Test

006526377-01, P = 1.395082 Days, E = 130.673509 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
188.3	36.8	16.7	26.9	4.68	1.90	18.8	171.6	161.4	20.1	9.87	1.83	1.06	0.13	5.45



Stellar Parameters For KIC 006526377

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4789^{+49}_{-106}	$2.588^{+0.188}_{-0.101}$	$0.000^{+0.100}_{-0.200}$	$12.169^{+2.783}_{-4.175}$	$2.094^{+0.870}_{-0.870}$	$0.002^{+0.002}_{-0.000}$
	+1%/-2%	+7%/-4%	+inf%/-inf%	+23%/-34%	+42%/-42%	+121%/-29%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006526377-01 / KOI 5295.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-94 ± 6	$19.61^{+3.32}_{-3.74}$	5754^{+300}_{-376}	-4172^{+414}_{-305}	$0.141^{+0.047}_{-0.032}$
Alt.	-125 ± 3	$37.20^{+5.89}_{-7.61}$	5768^{+292}_{-433}	-4556^{+324}_{-224}	$0.053^{+0.018}_{-0.010}$

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

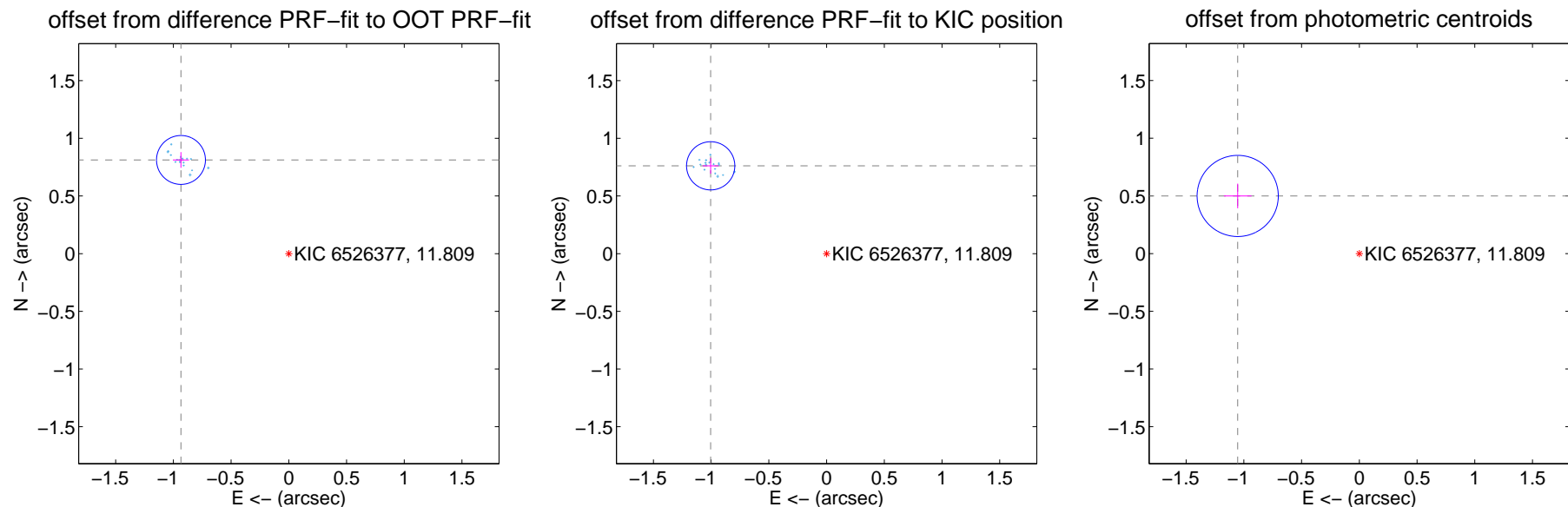
DV Centroid Data

Supplemental centroid analysis for 006526377-01. **Kepler magnitude: 11.81.** Transit SNR 34.11

There are 17 quarters with good PRF difference image offsets

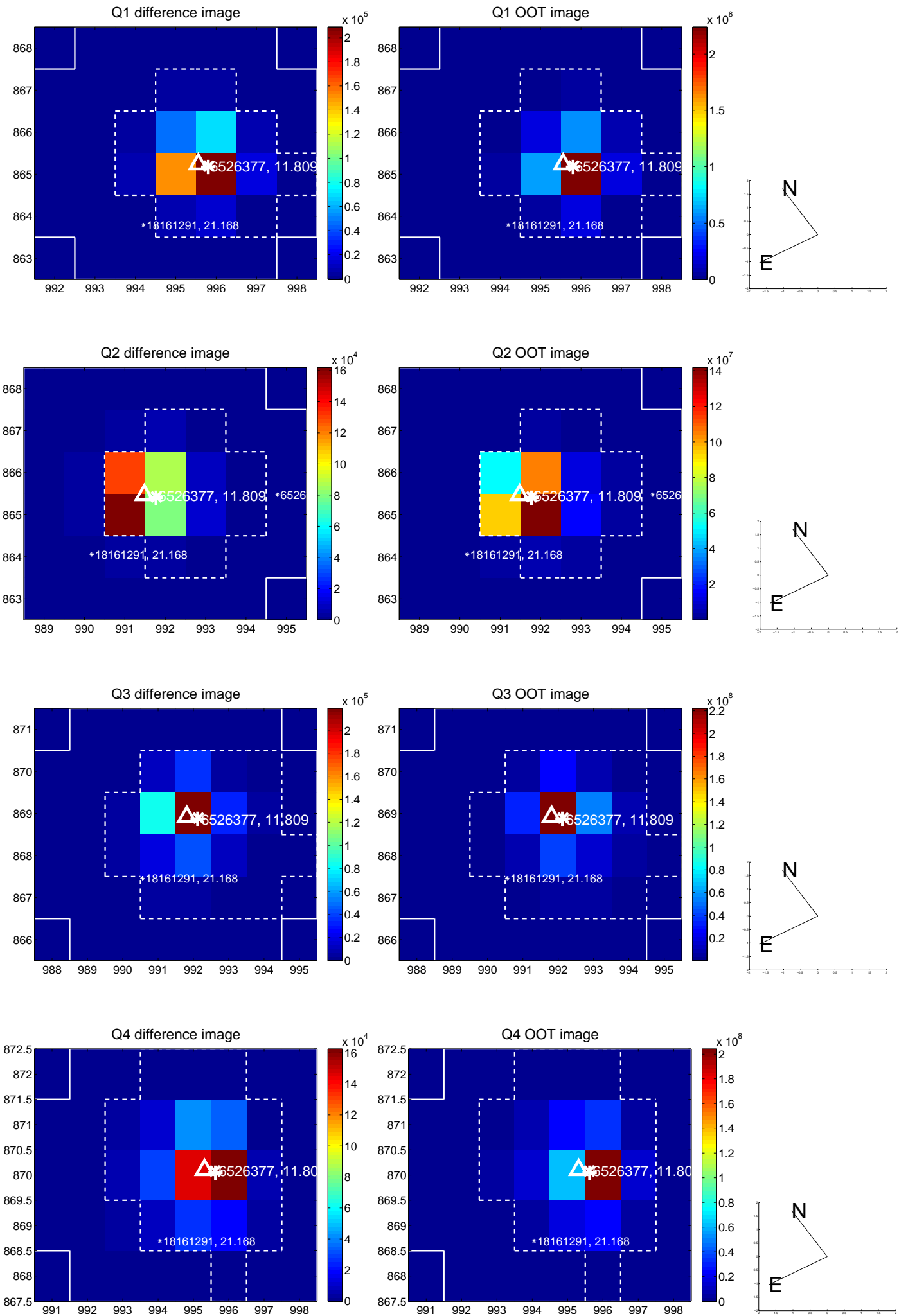
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.238 ± 0.071	17.53	0.934 ± 0.070	0.812 ± 0.068
PRF-fit source offset from KIC position	1.260 ± 0.070	18.09	1.004 ± 0.070	0.761 ± 0.068
photometric centroid source offset	1.17 ± 0.12	9.95	1.05 ± 0.12	0.50 ± 0.11

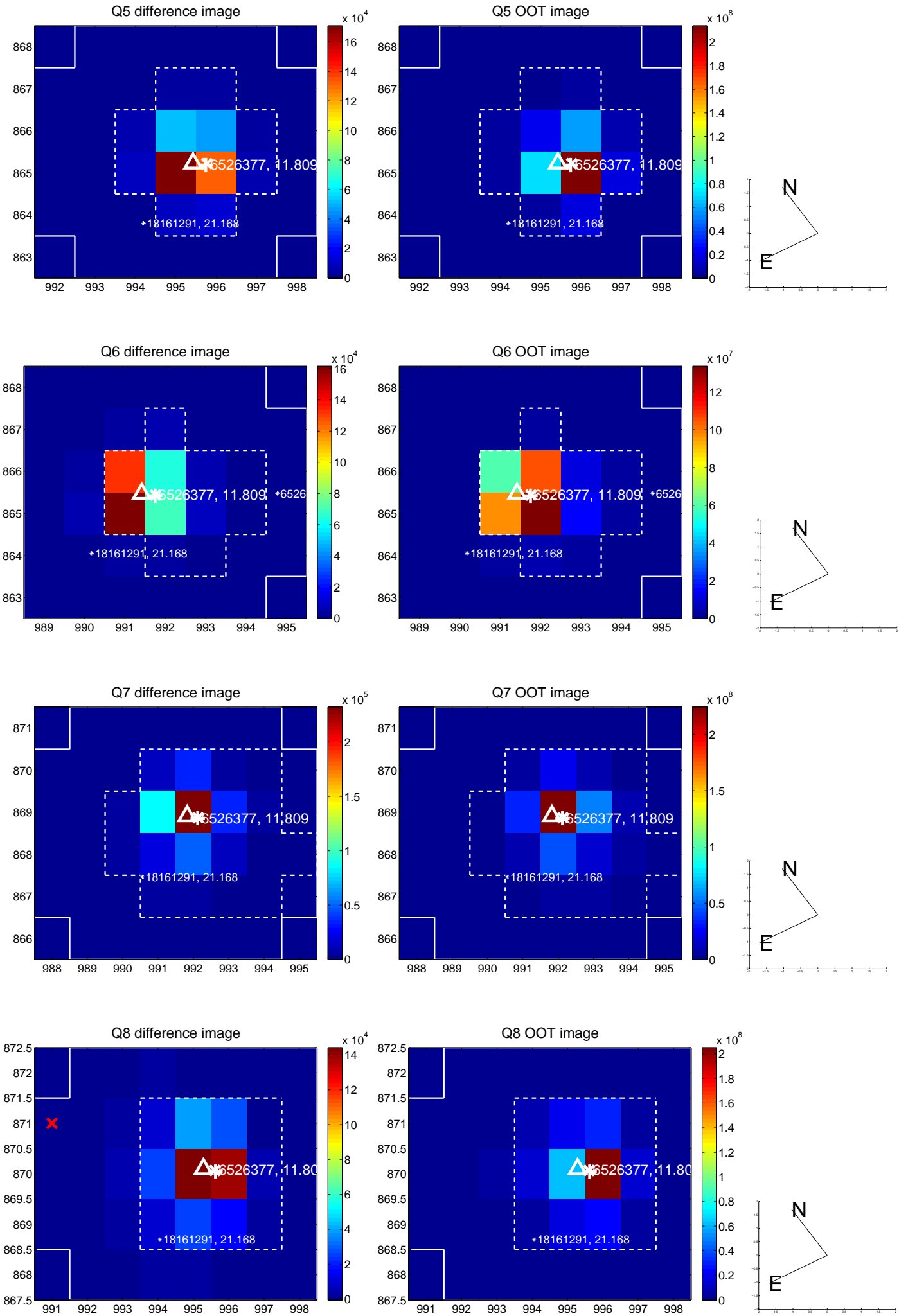


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

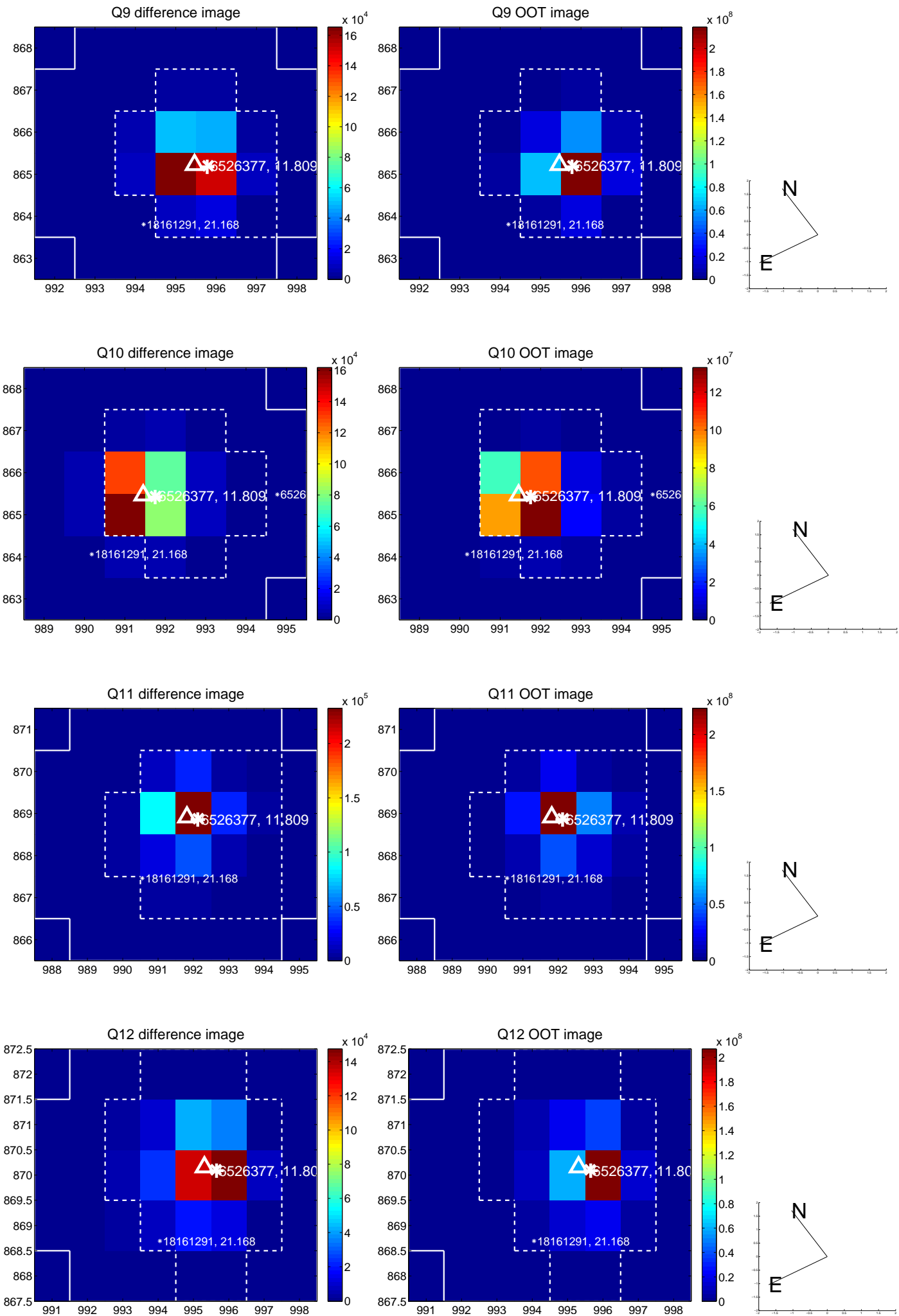
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



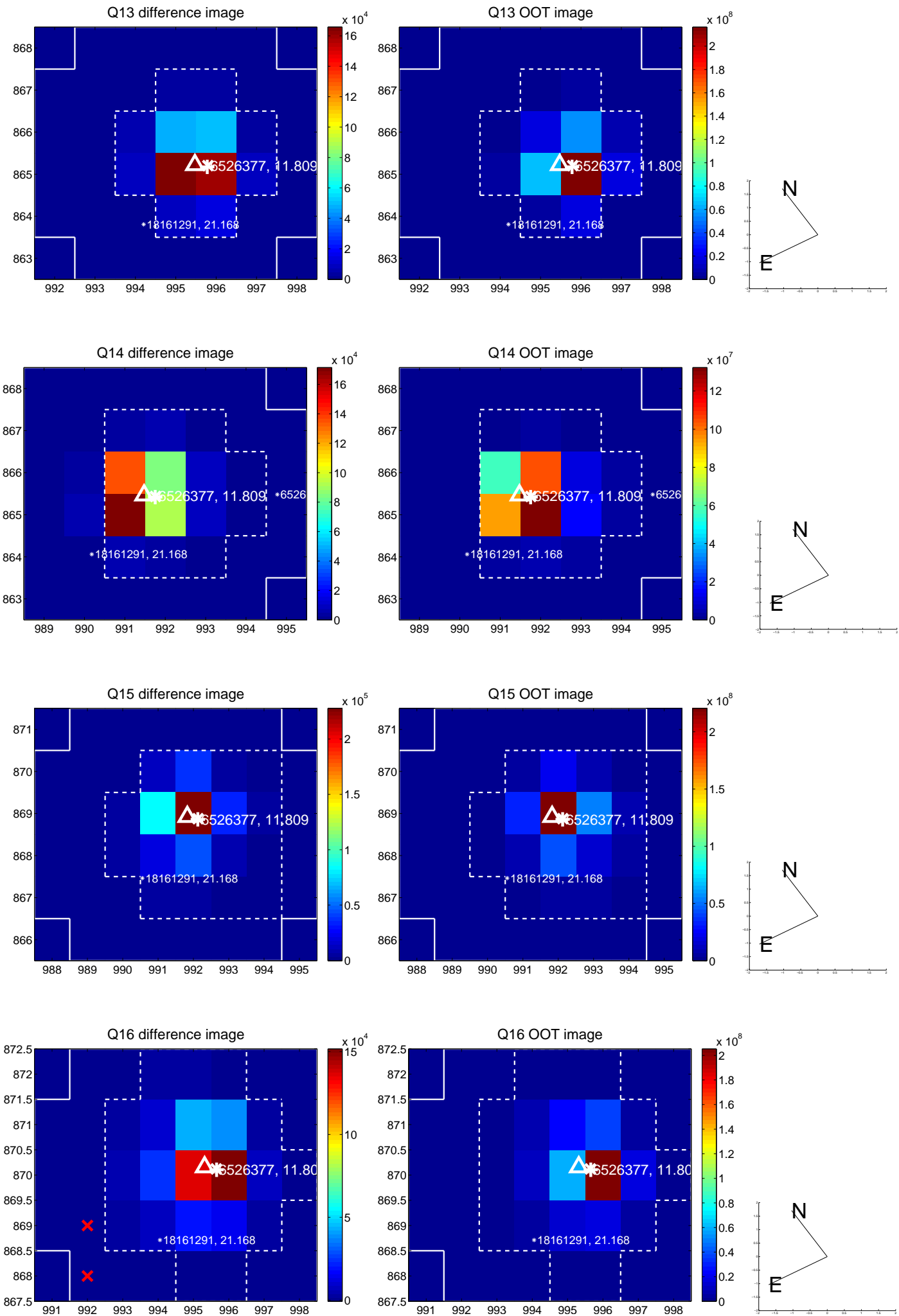
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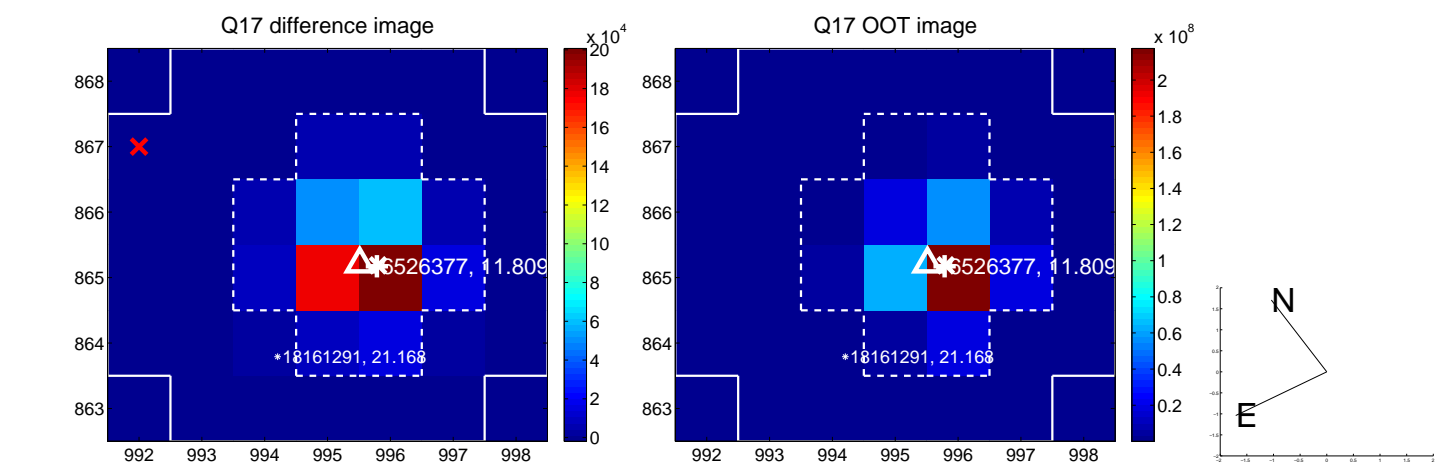
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



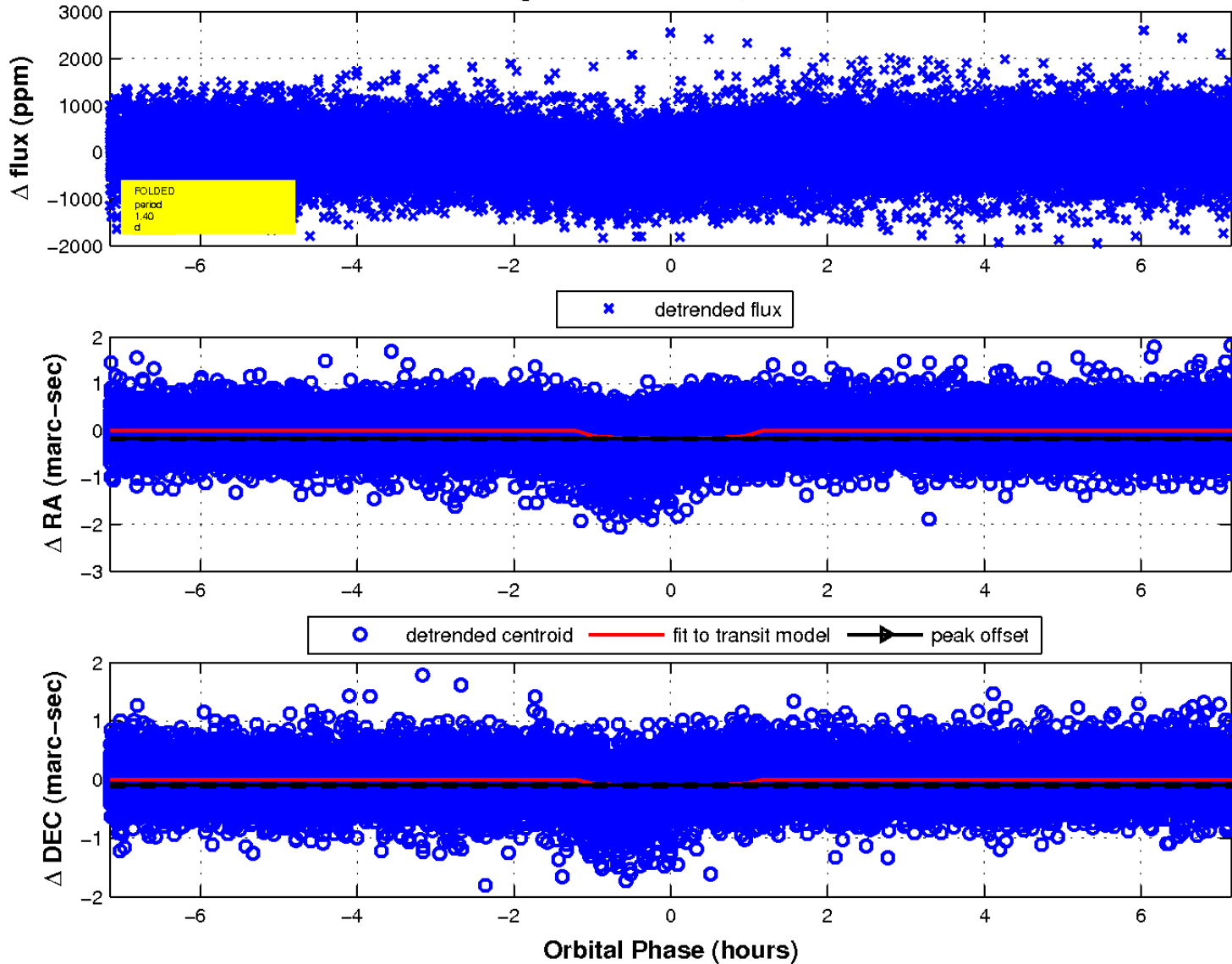
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

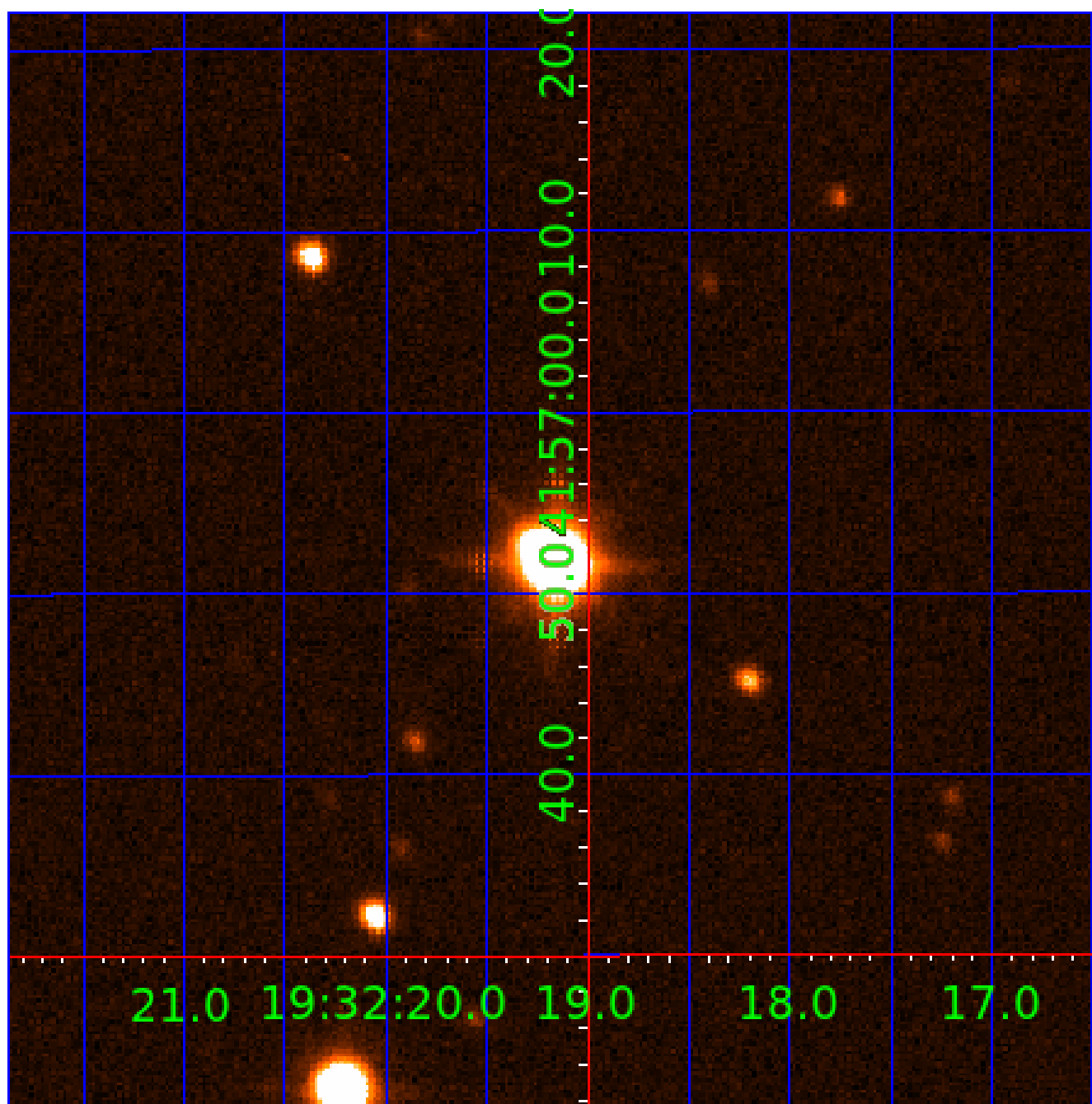


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 006526377

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})
006526377-01	OBS	5295.01	1.395083	132.090560	164.7	2.385	30.7	34.1	12.17	4789	19.48	0.00
006526377-02	OBS	No	2.790225	132.067011	55.8	10.952	8.9	4.7	12.17	4789	11.42	0.00
006526377-03	OBS	No	374.855770	309.004302	1480.7	21.533	13.5	8.5	12.17	4789	52.77	41.20
006526377-04	OBS	No	2.790490	133.417989	97.1	19.708	12.2	8.1	12.17	4789	11.70	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006526377-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—CENT_UNRESOLVED_OFFSET
006526377-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
006526377-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006526377-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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.

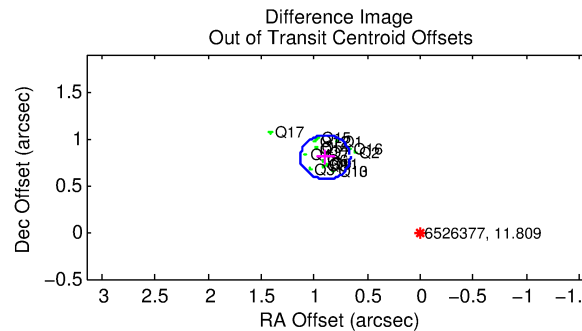
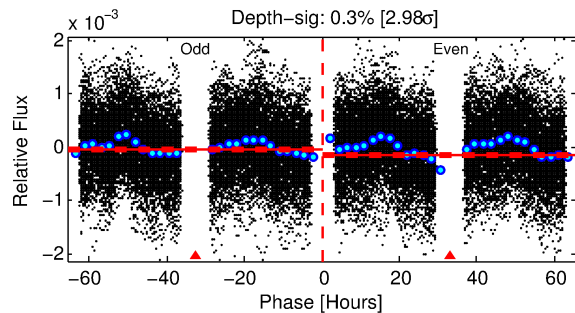
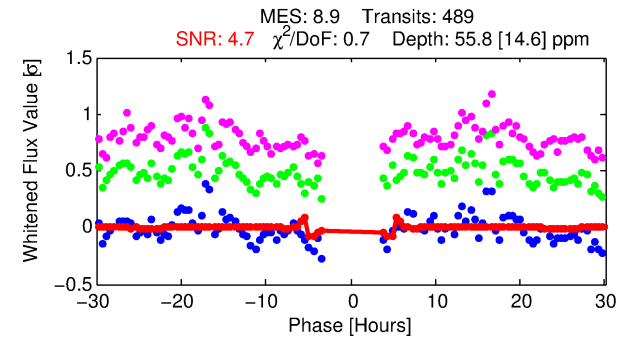
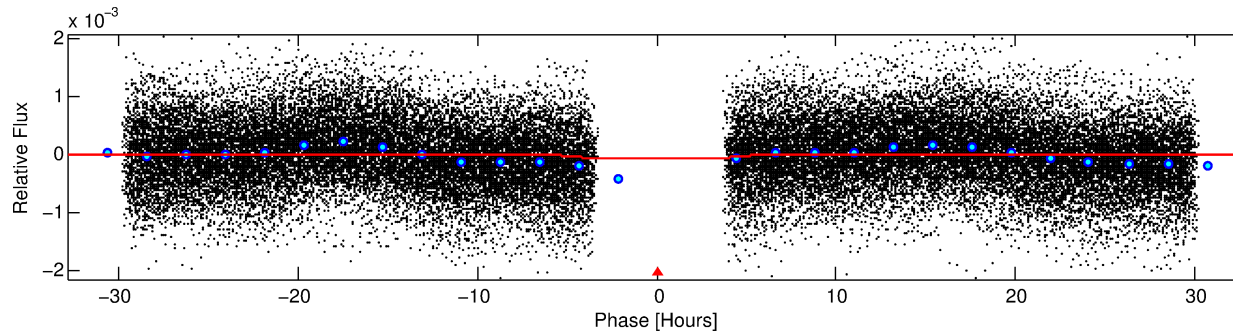
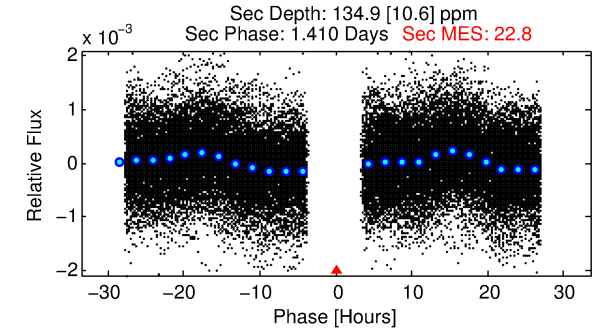
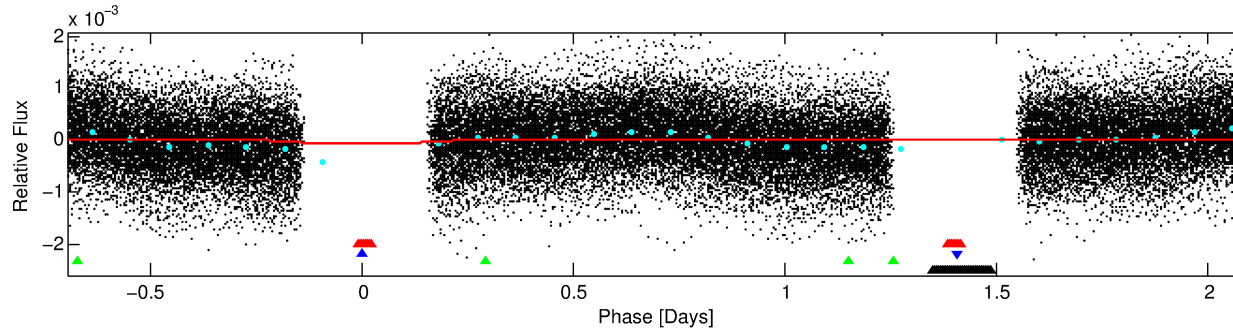
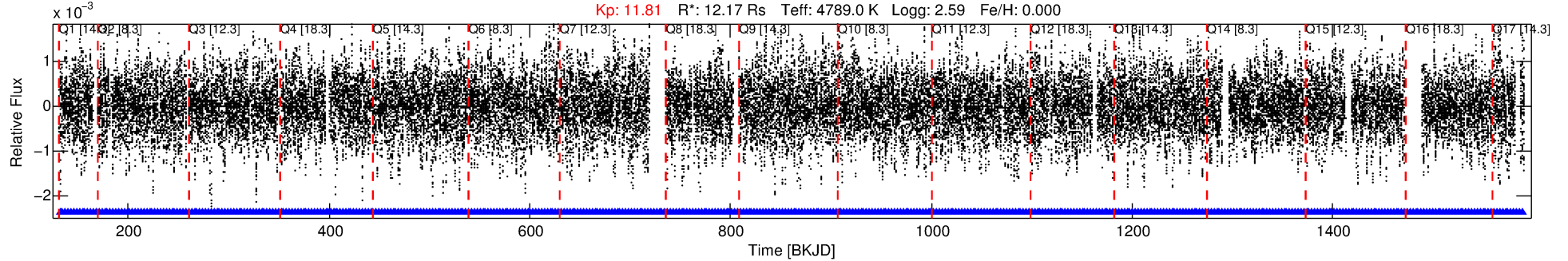
Ephemeris Match Information For 006526377-02

No Significant Match Found

DV One-Page Summary

KIC: 6526377 Candidate: 2 of 4 Period: 2.790 d
KOI: K05295 Corr: No Ephemeris Match

Kp: 11.81 R*: 12.17 Rs Teff: 4789.0 K Logg: 2.59 Fe/H: 0.000



DV Fit Results:

Period = 2.79022 [0.00002] d
Epoch = 132.0670 [0.0030] BKJD
Rp/R* = 0.0086 [0.0013]
a/R* = 1.25 [0.10]
b = 0.92 [0.04]
Seff = N/A
Teq = N/A
Rp = 11.42 [4.28] Re
a = N/A
Ag = N/A
Teff = N/A

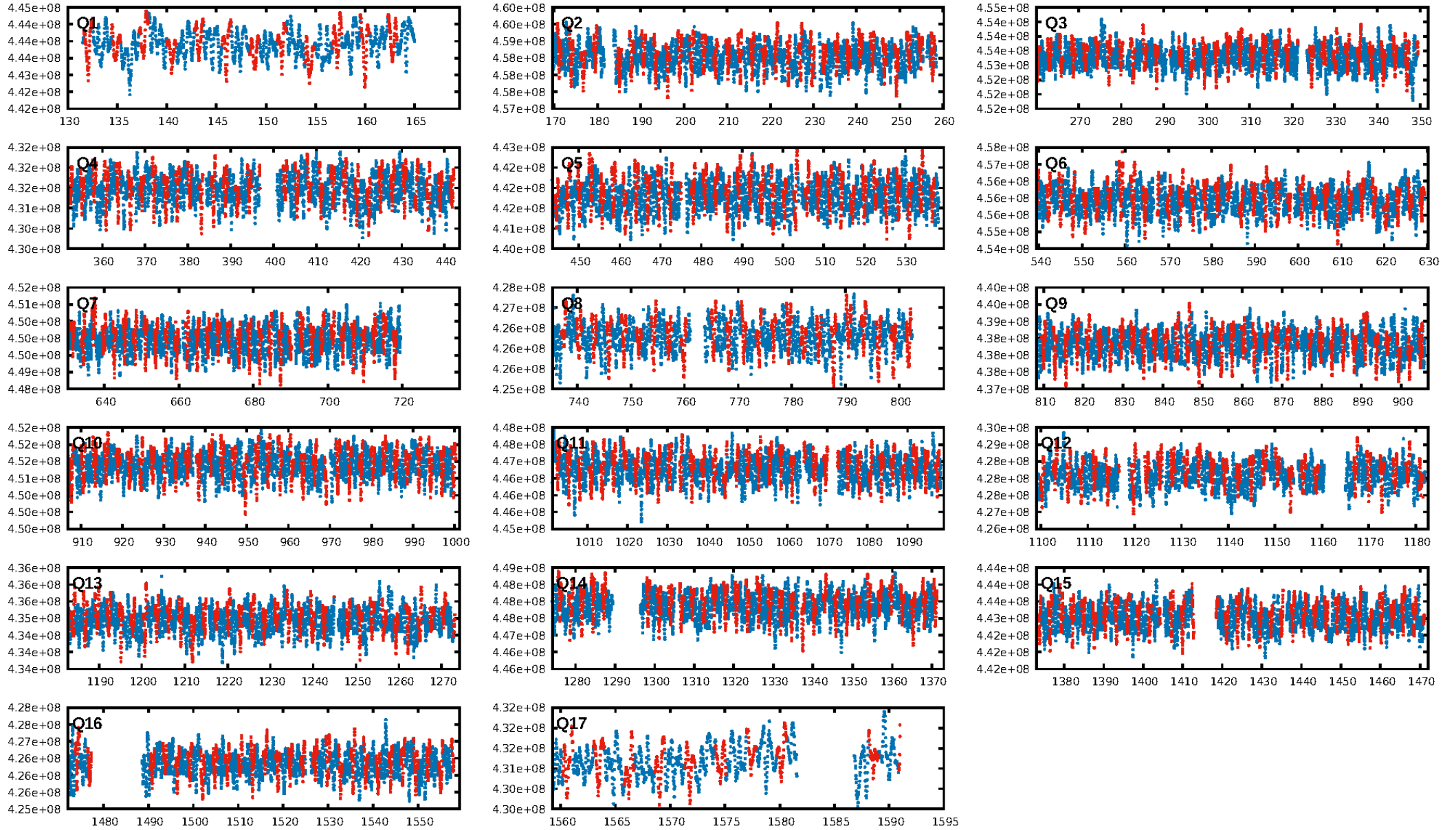
DV Diagnostic Results:

ShortPeriod-sig: 99.7% [2.99σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [468/468]
GhostDiagnostic-chr: 2.121
Centroid-sig: 7.3%
Centroid-so: 0.401 arcsec [1.47σ]
OotOffset-rm: 1.203 arcsec [15.32σ]
KicOffset-rm: 1.231 arcsec [15.06σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

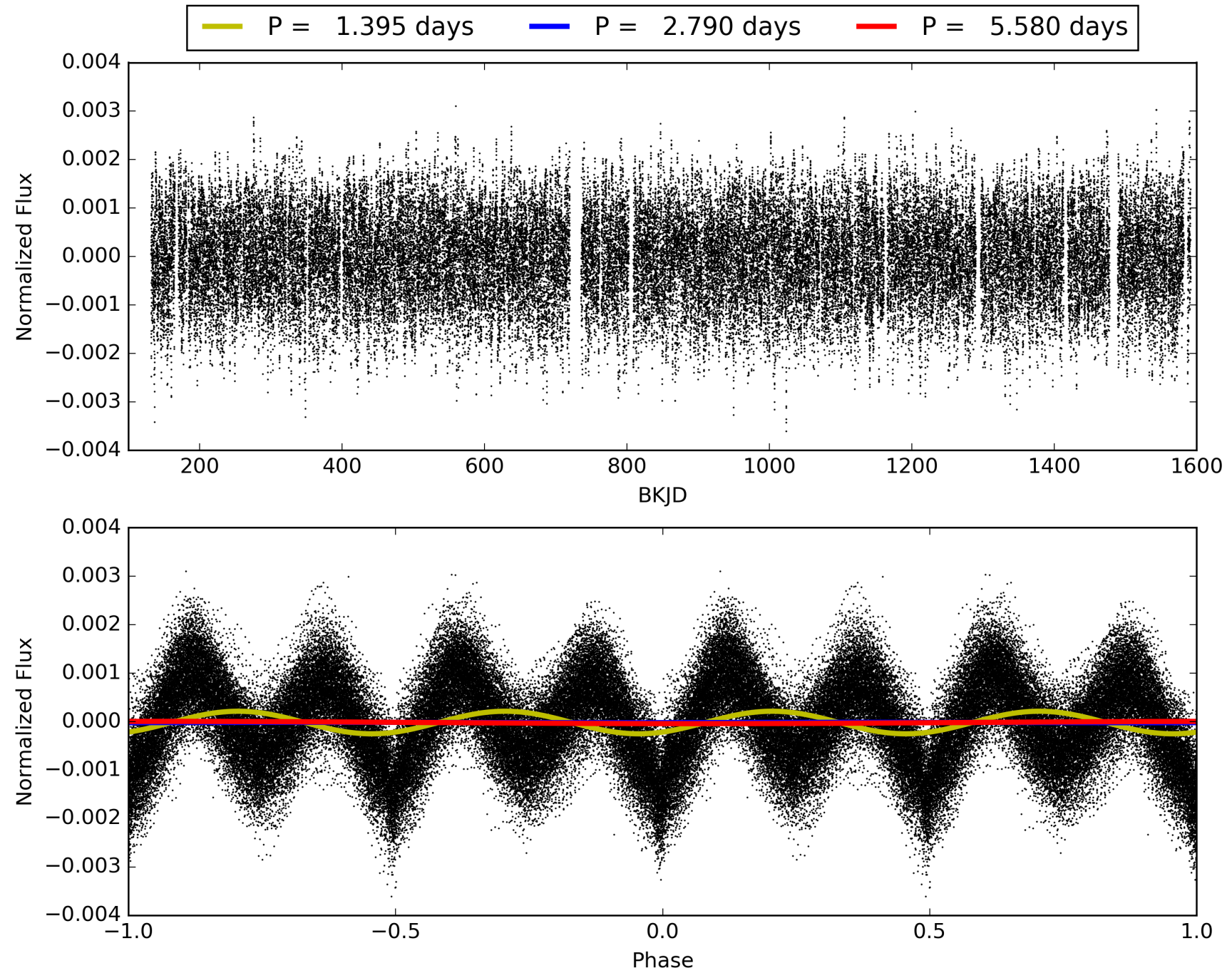
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:13:35 Z

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

TCE 006526377-02, PDC Light Curves

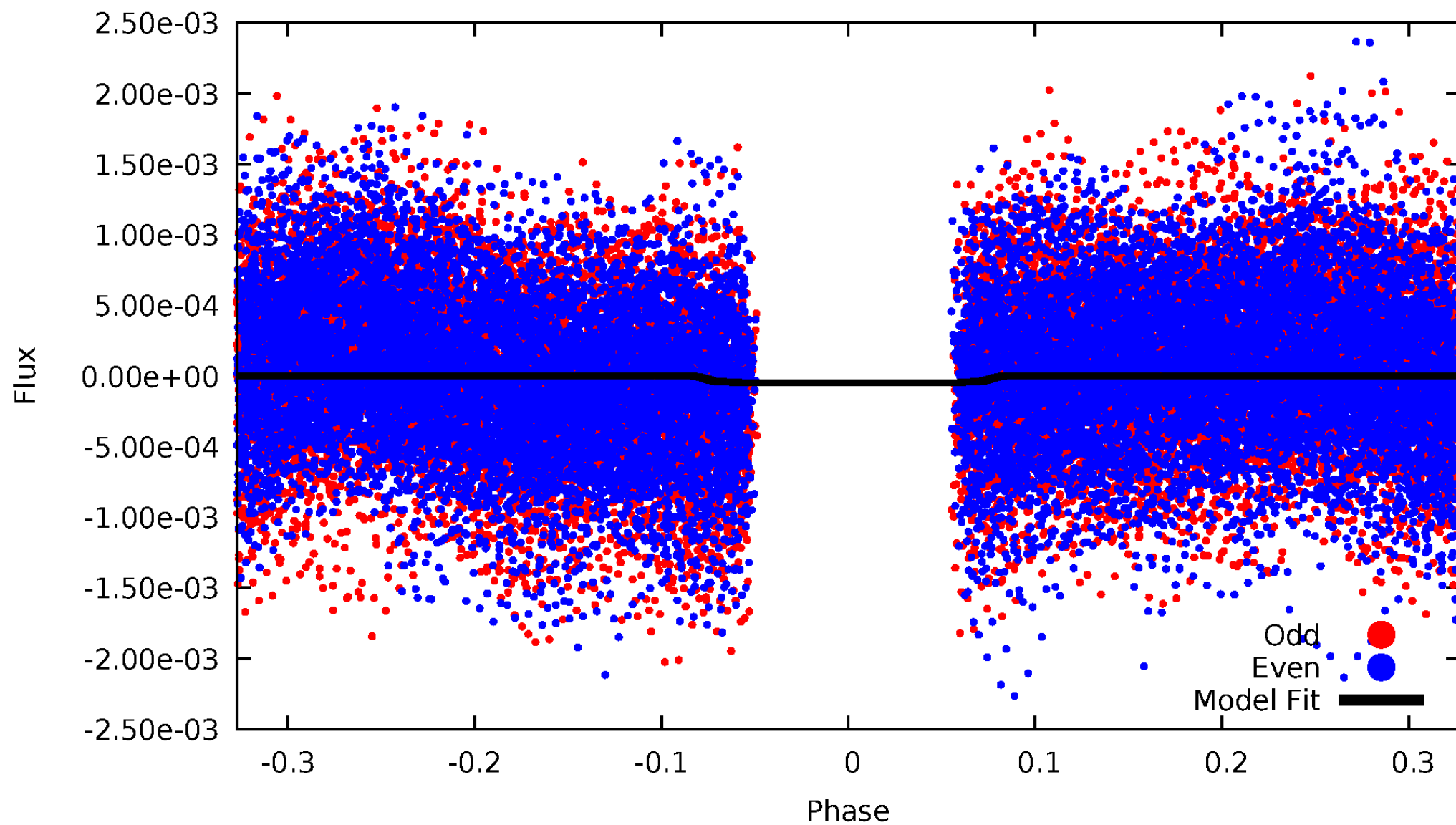


TCE 006526377-02



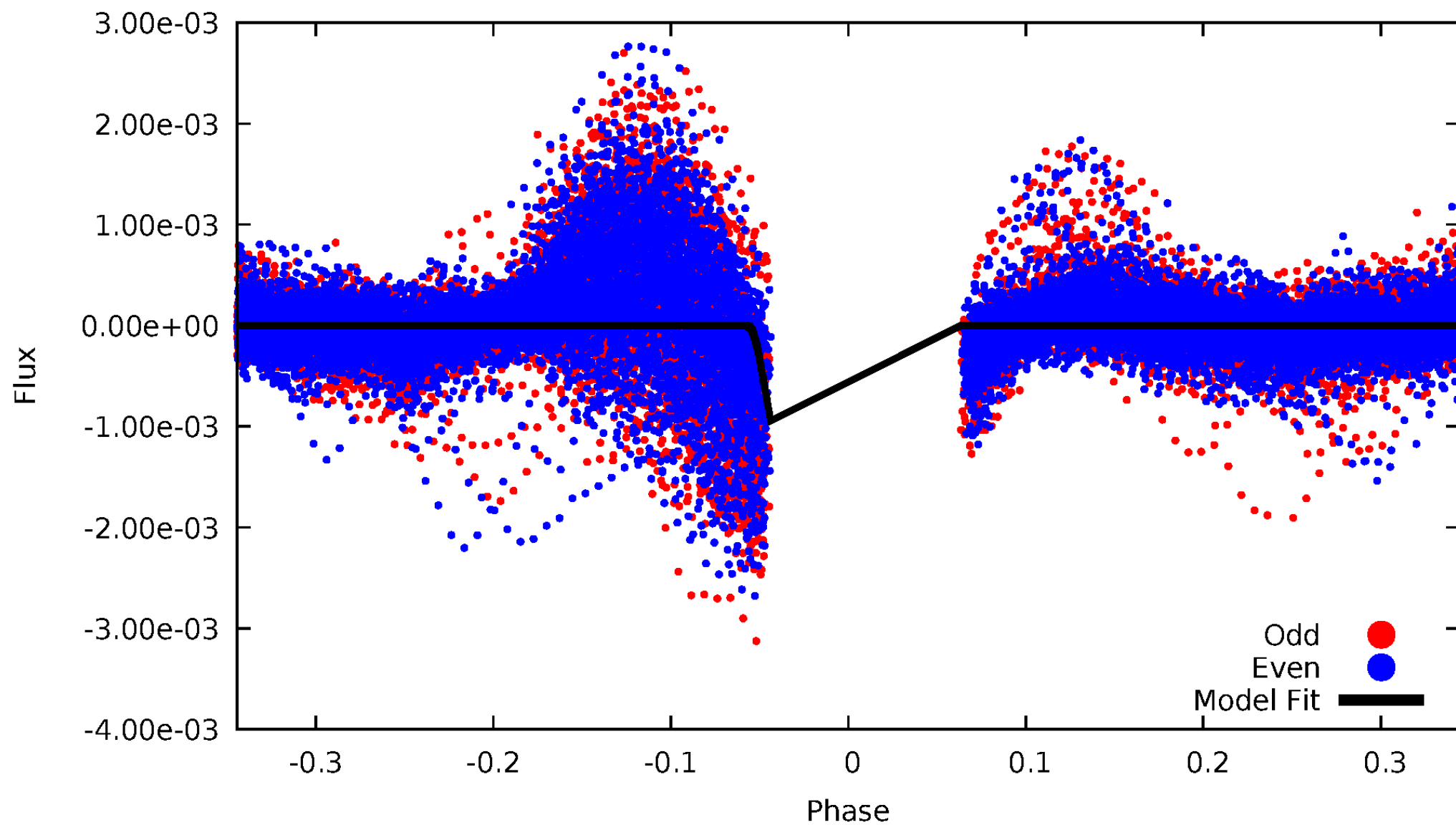
DV Odd/Even

TCE 006526377-02



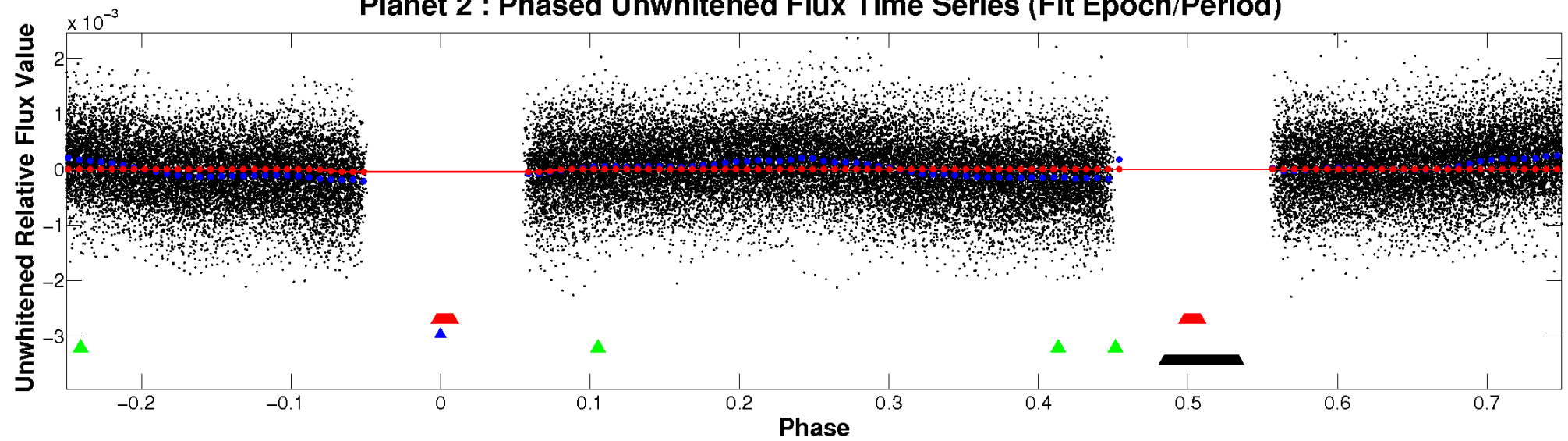
ALT Odd/Even

TCE 006526377-02

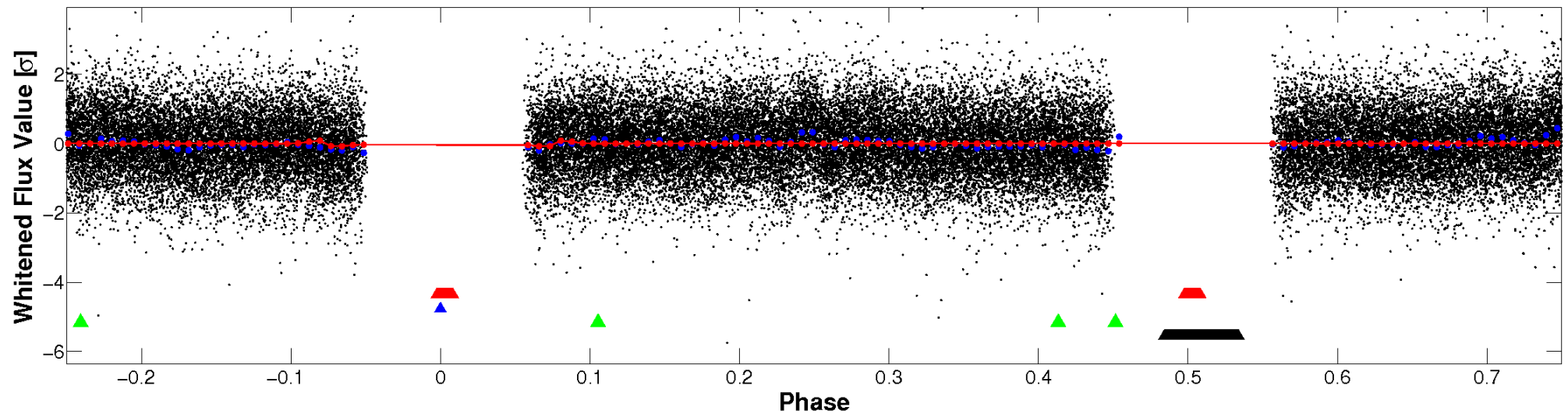


Non-Whitened Vs. Whitened Light Curve

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

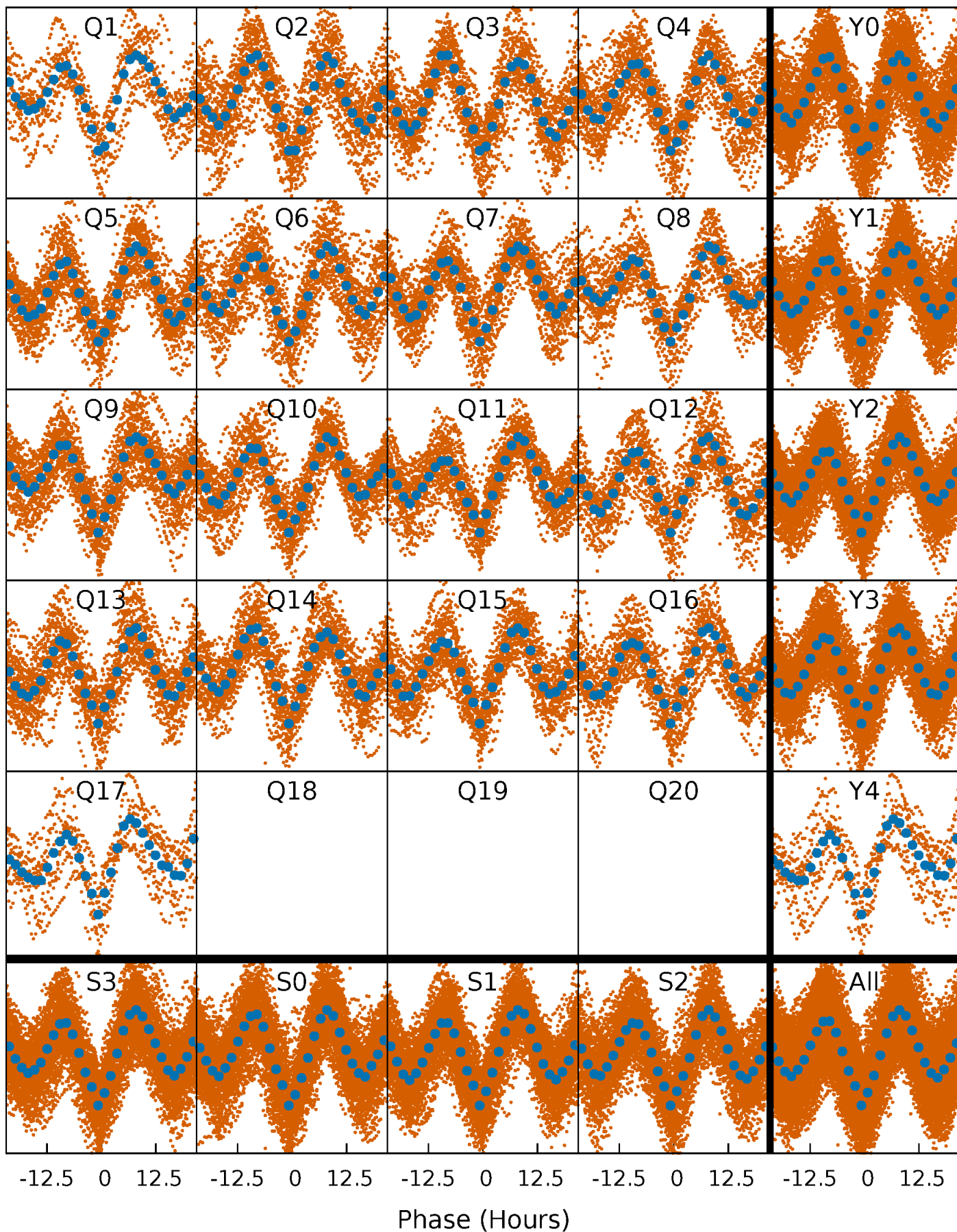


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



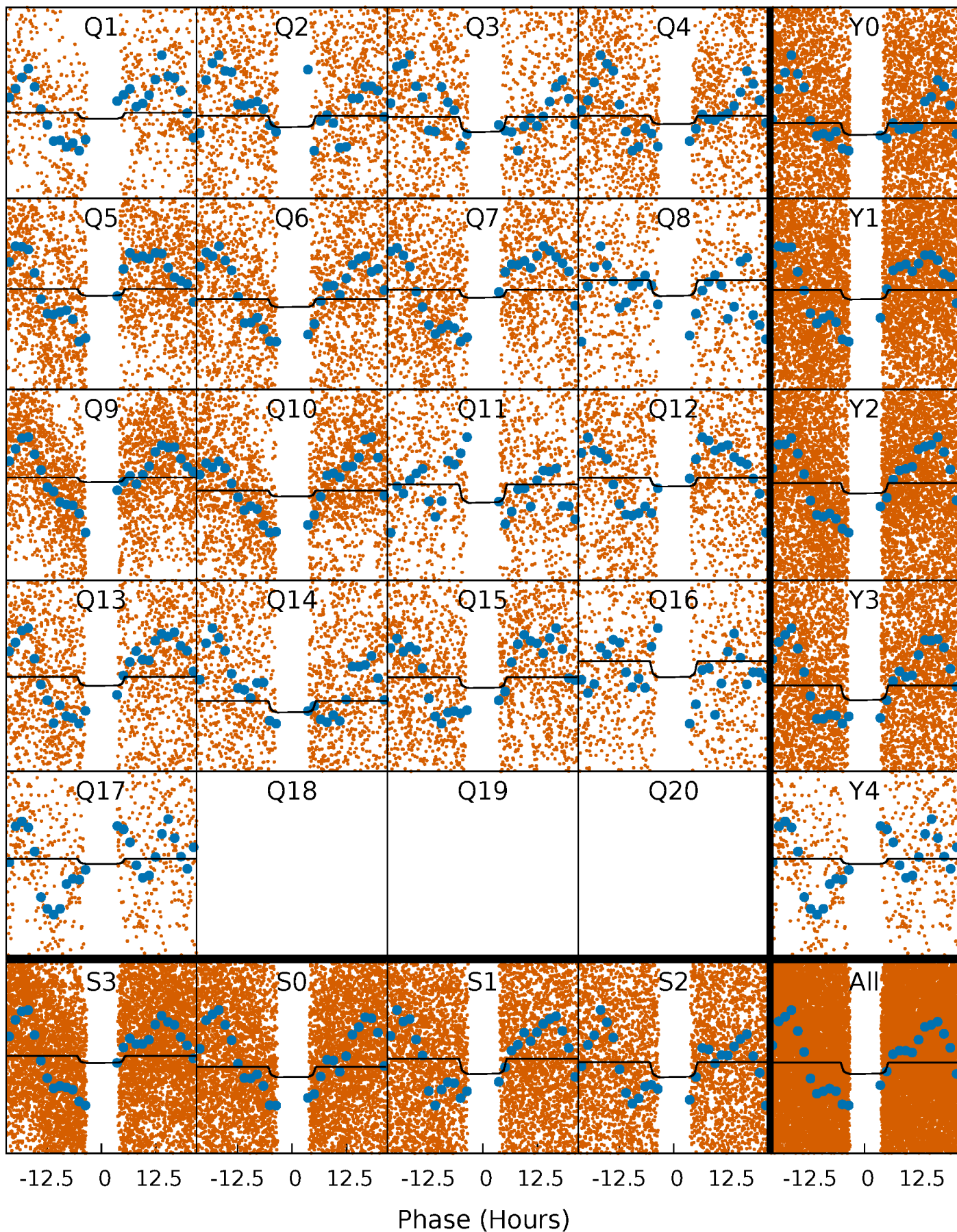
PDC Quarter-Phased Transit Curves

TCE 006526377-02 P= 2.790225 Days $T_0=132.067011$ (BKJD)



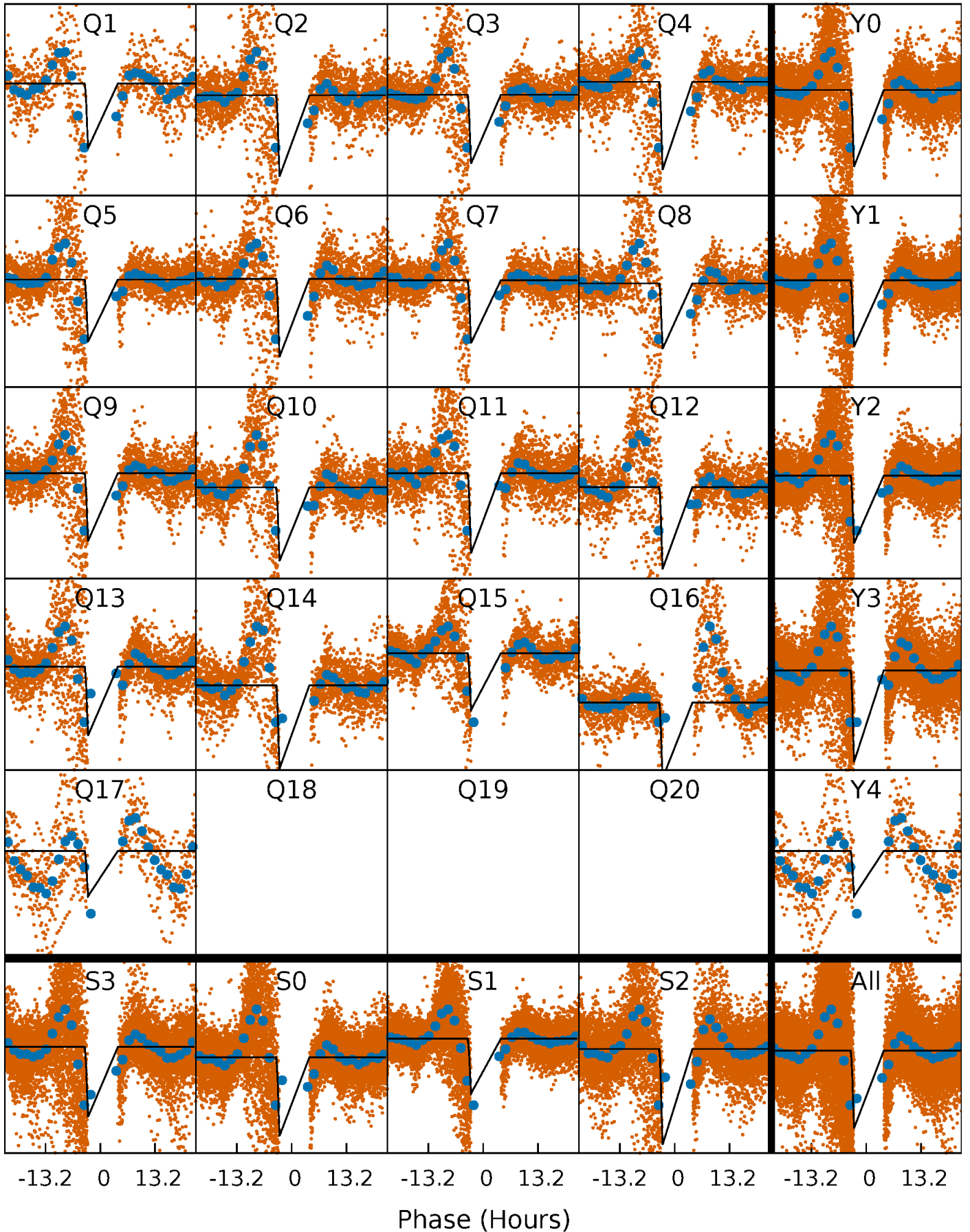
DV Quarter-Phased Transit Curves

TCE 006526377-02 P= 2.790225 Days $T_0=132.067011$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

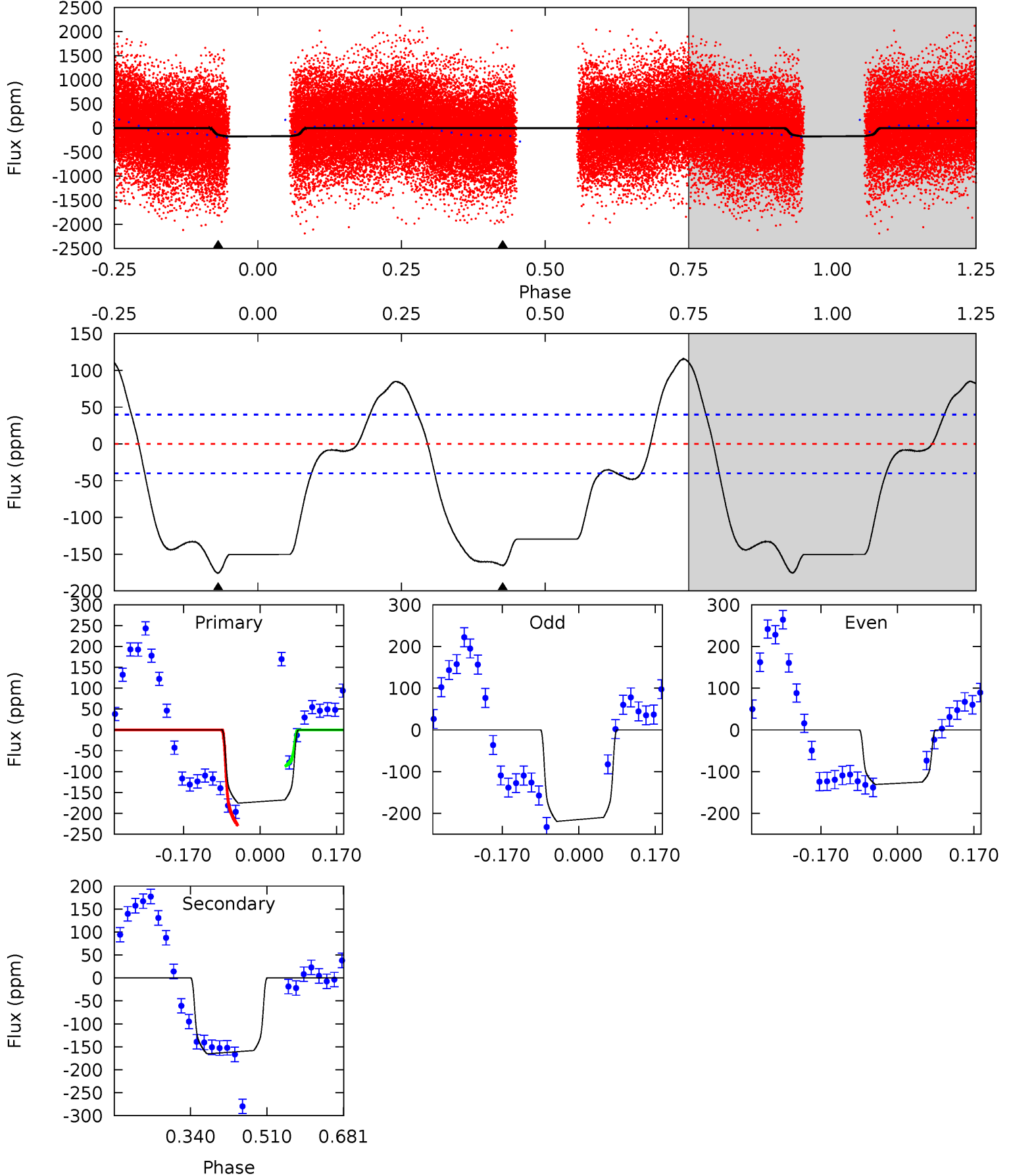
TCE 006526377-02 $P = 2.790126$ Days $T_0 = 132.073580$ (BKJD)



DV Model-Shift Uniqueness Test

006526377-02, P = 2.790225 Days, E = 129.276786 Days

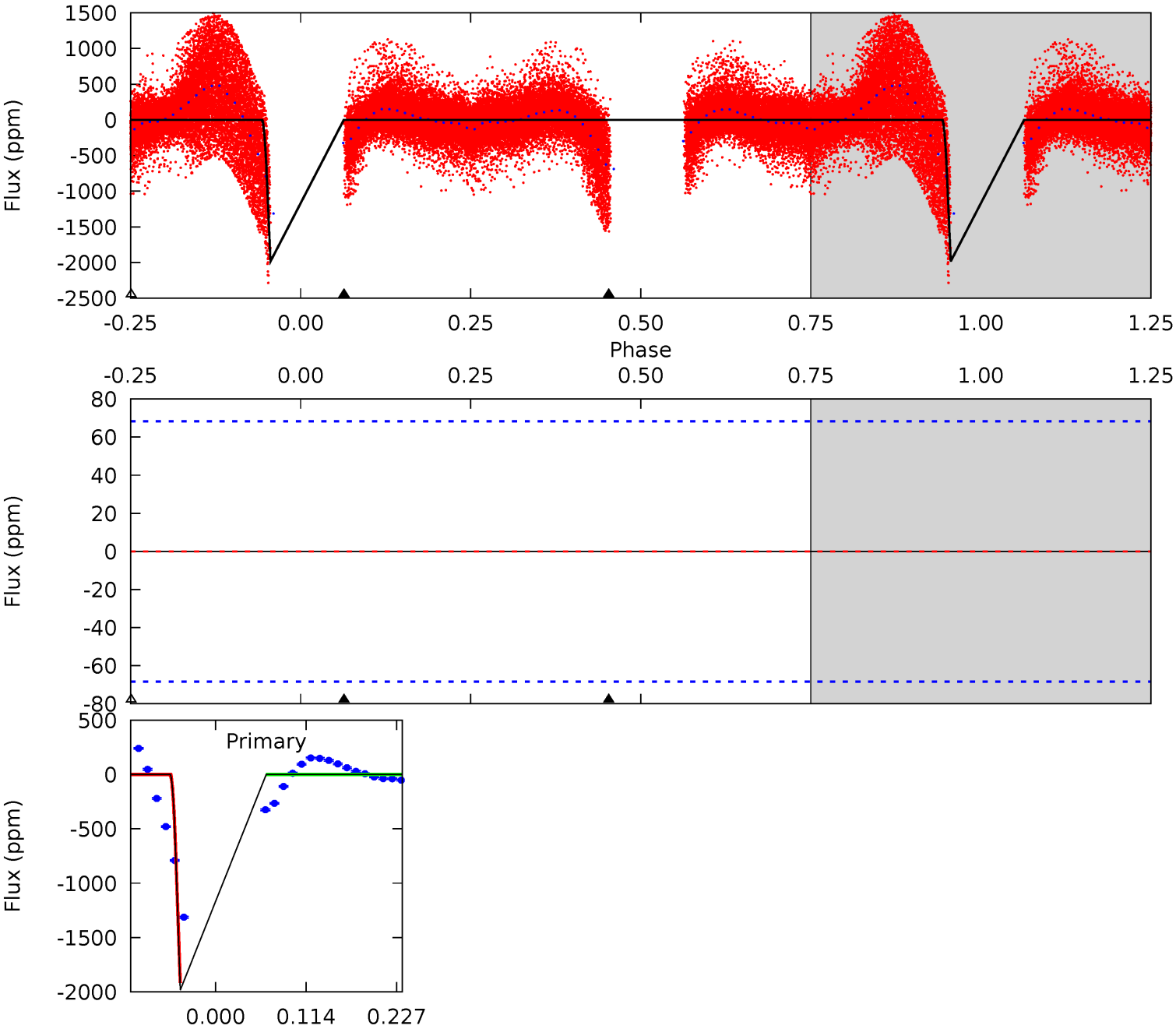
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	18.4	0	0	4.45	1.37	6.04	19.5	19.5	18.4	18.4	4.91	1.28	0.40	7.76



Alt Model-Shift Uniqueness Test

006526377-02, P = 2.790126 Days, E = 129.283454 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	4.54	1.58	0	0	0	0	0	0	0	0	0



Stellar Parameters For KIC 006526377

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4789^{+49}_{-106}	$2.588^{+0.188}_{-0.101}$	$0.000^{+0.100}_{-0.200}$	$12.169^{+2.783}_{-4.175}$	$2.094^{+0.870}_{-0.870}$	$0.002^{+0.002}_{-0.000}$
	+1%/-2%	+7%/-4%	+inf%/-inf%	+23%/-34%	+42%/-42%	+121%/-29%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006526377-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-165 ± 9	$11.31^{+2.81}_{-2.50}$	4558^{+246}_{-317}	5466^{+524}_{-440}	$1.893^{+0.815}_{-0.640}$
Alt.	-0 ± 15	$60.30^{+9.65}_{-11.13}$	4543^{+254}_{-309}	-3955^{+194}_{-159}	$-0.000^{+0.006}_{-0.006}$

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

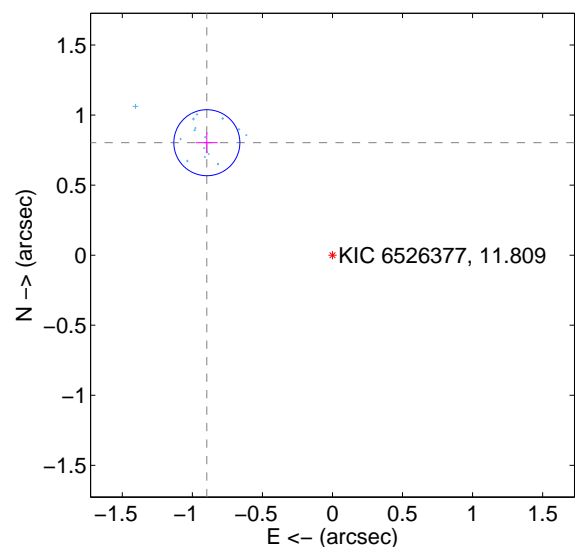
Supplemental centroid analysis for 006526377-02. **Kepler magnitude: 11.81.** Transit SNR 4.73

There are 17 quarters with good PRF difference image offsets

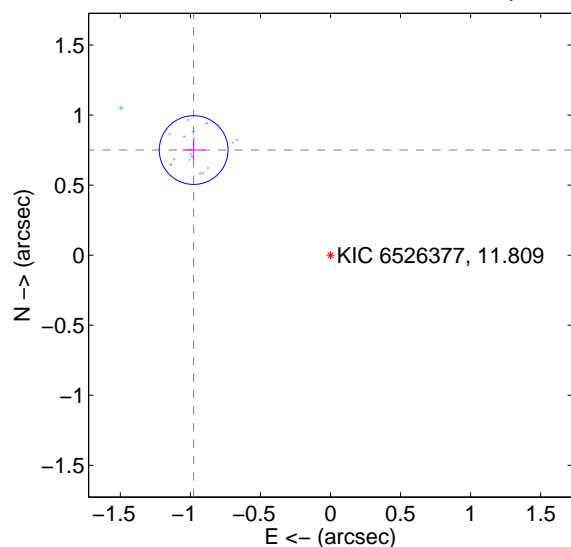
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.203 ± 0.079	15.32	0.896 ± 0.078	0.803 ± 0.074
PRF-fit source offset from KIC position	1.231 ± 0.082	15.06	0.977 ± 0.080	0.750 ± 0.075
photometric centroid source offset	0.40 ± 0.27	1.47	-0.16 ± 0.30	-0.37 ± 0.27

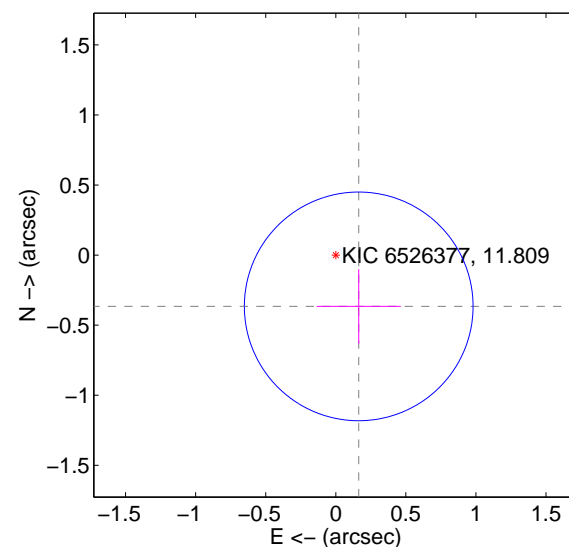
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

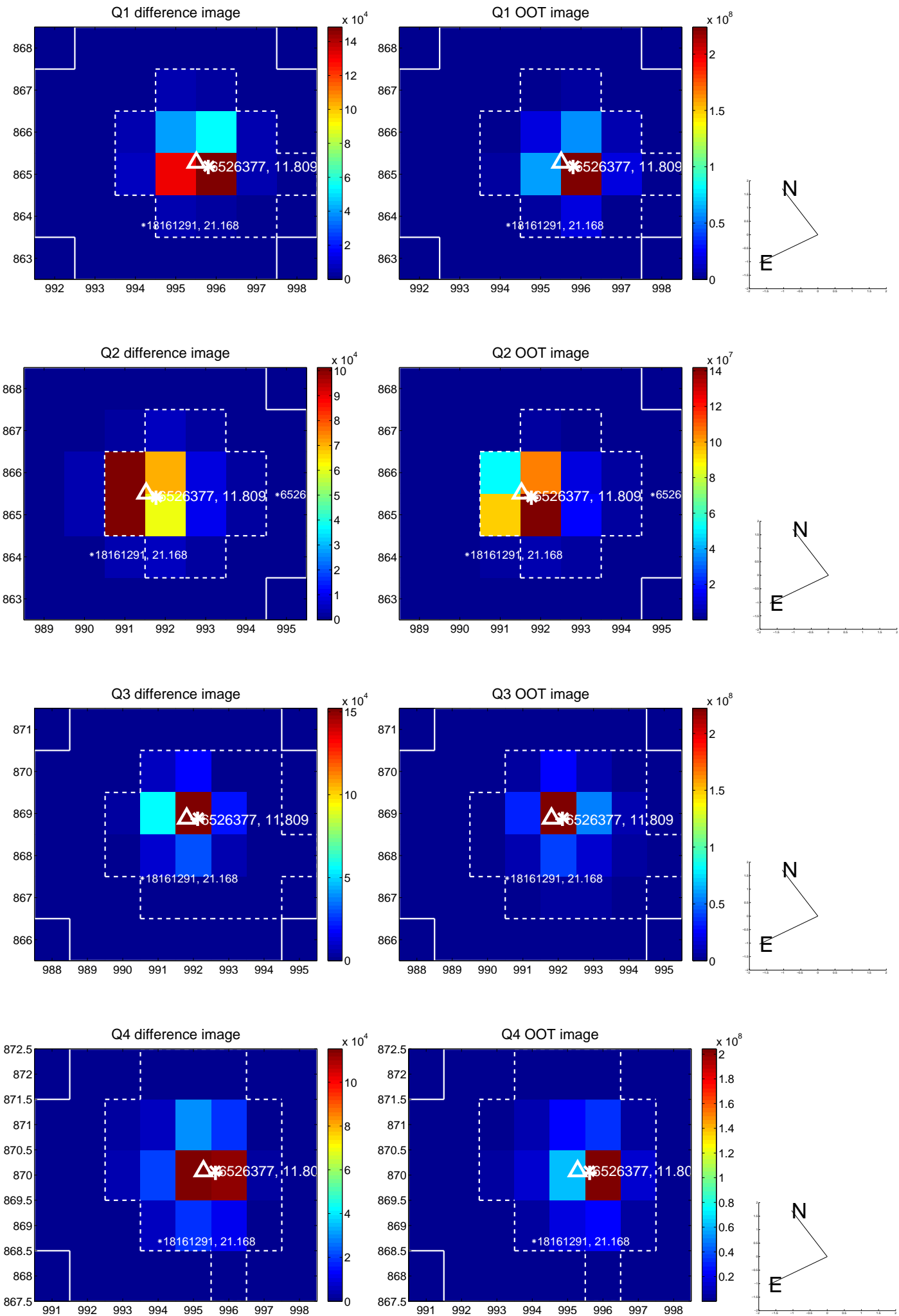


offset from photometric centroids

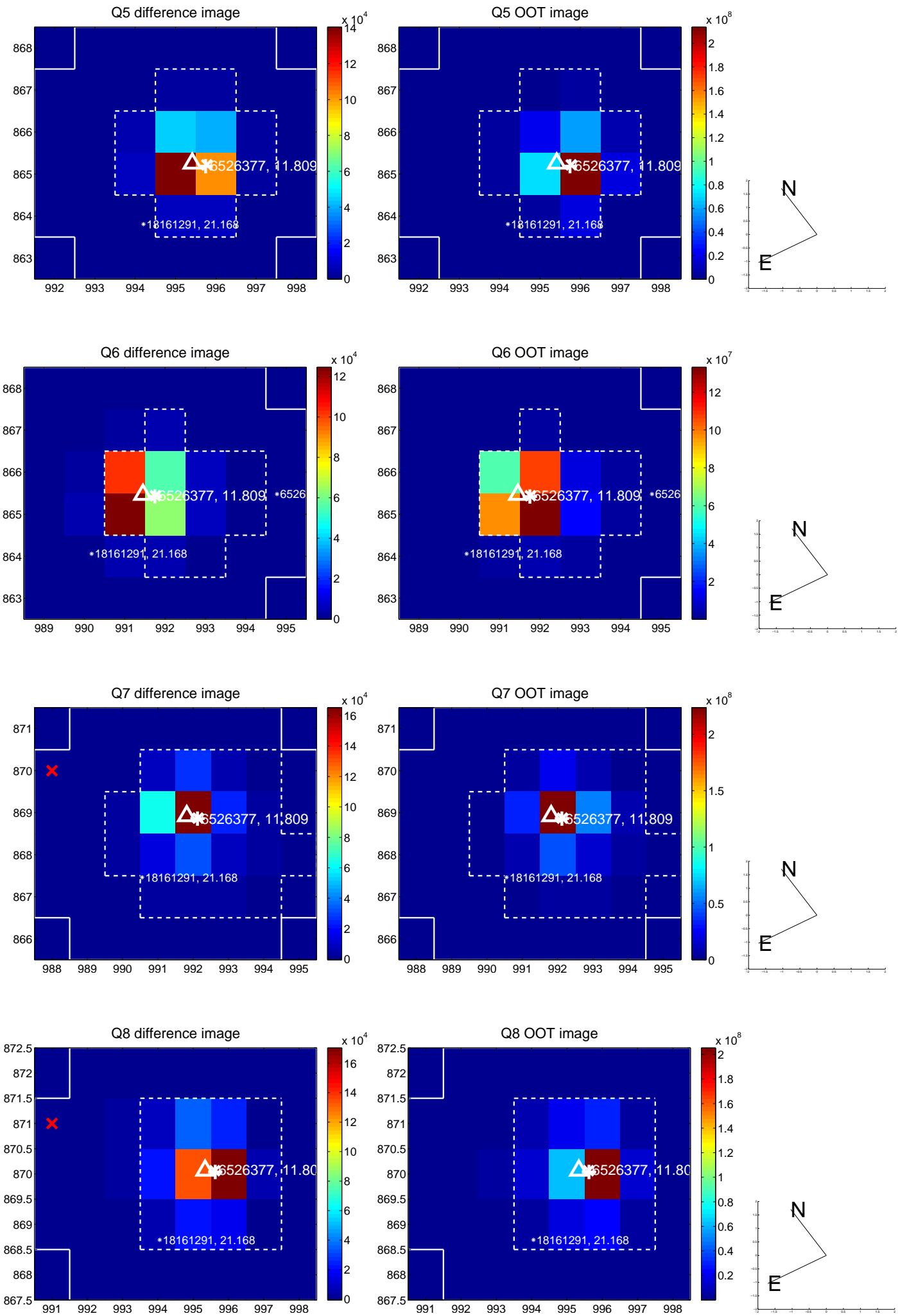


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

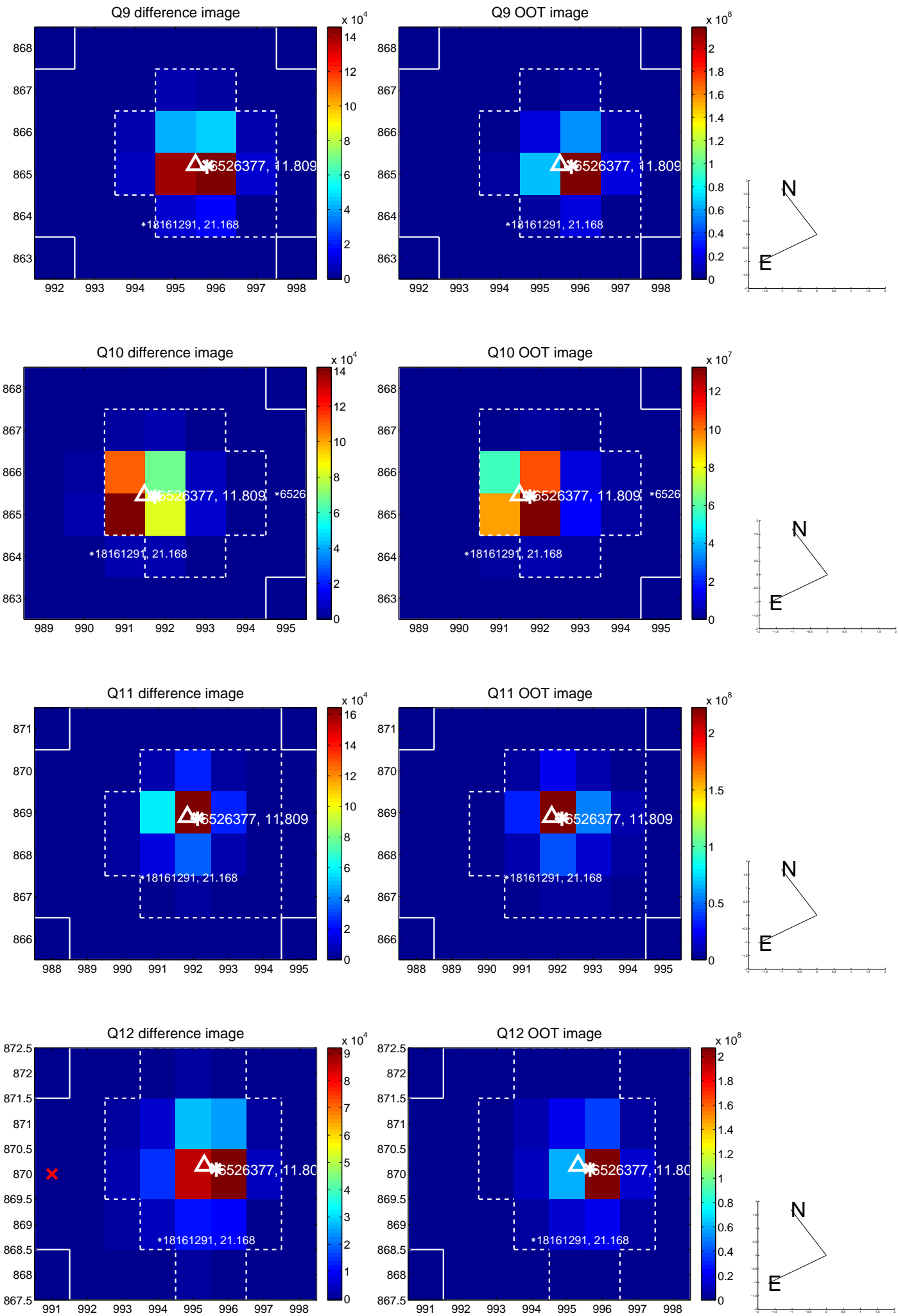
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



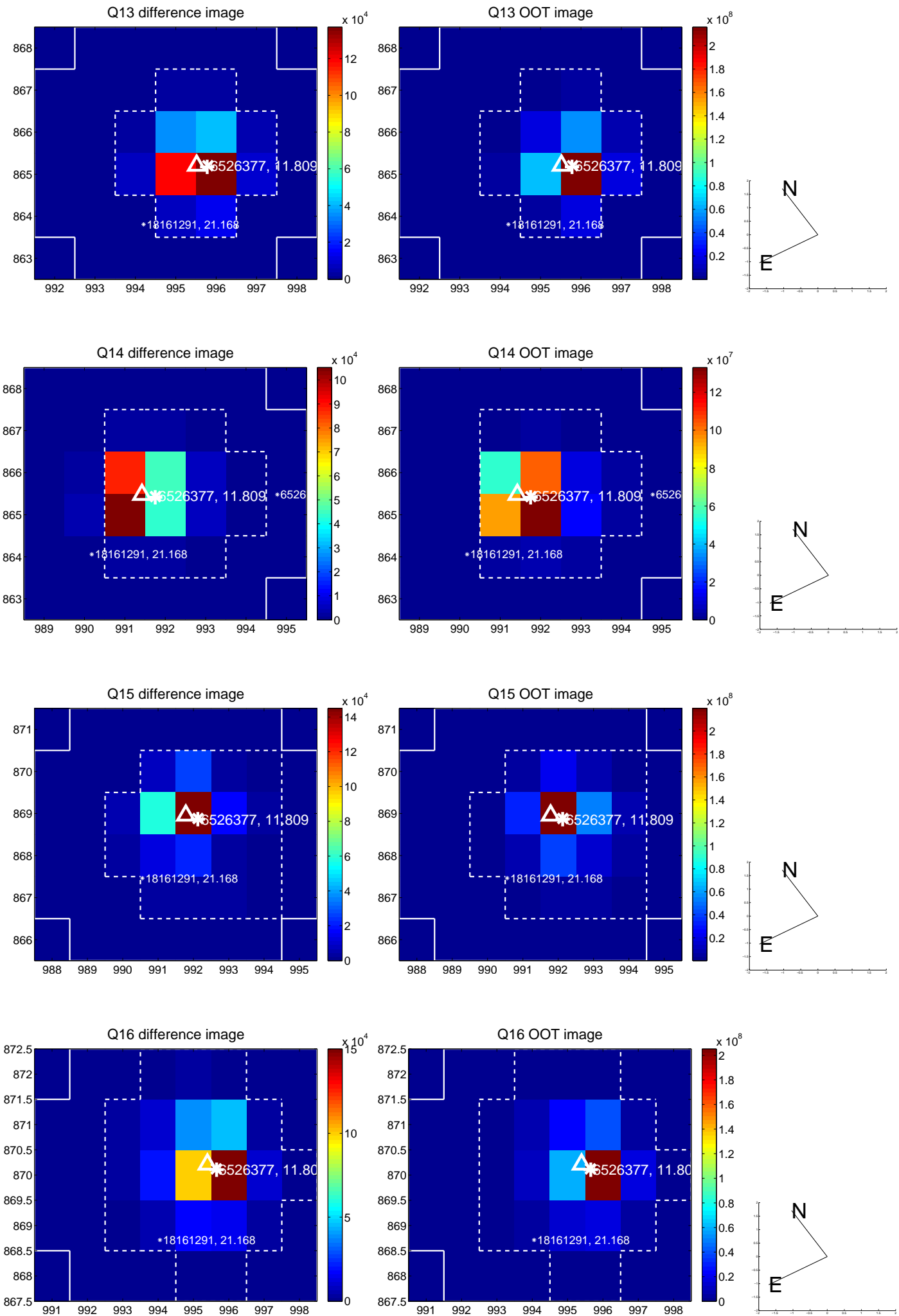
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



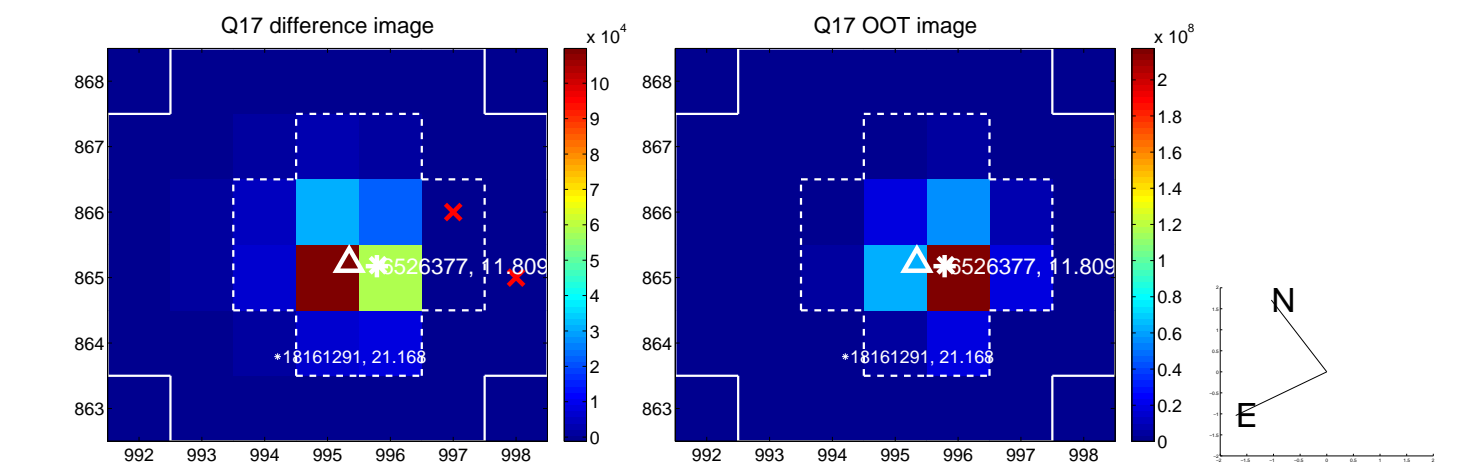
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



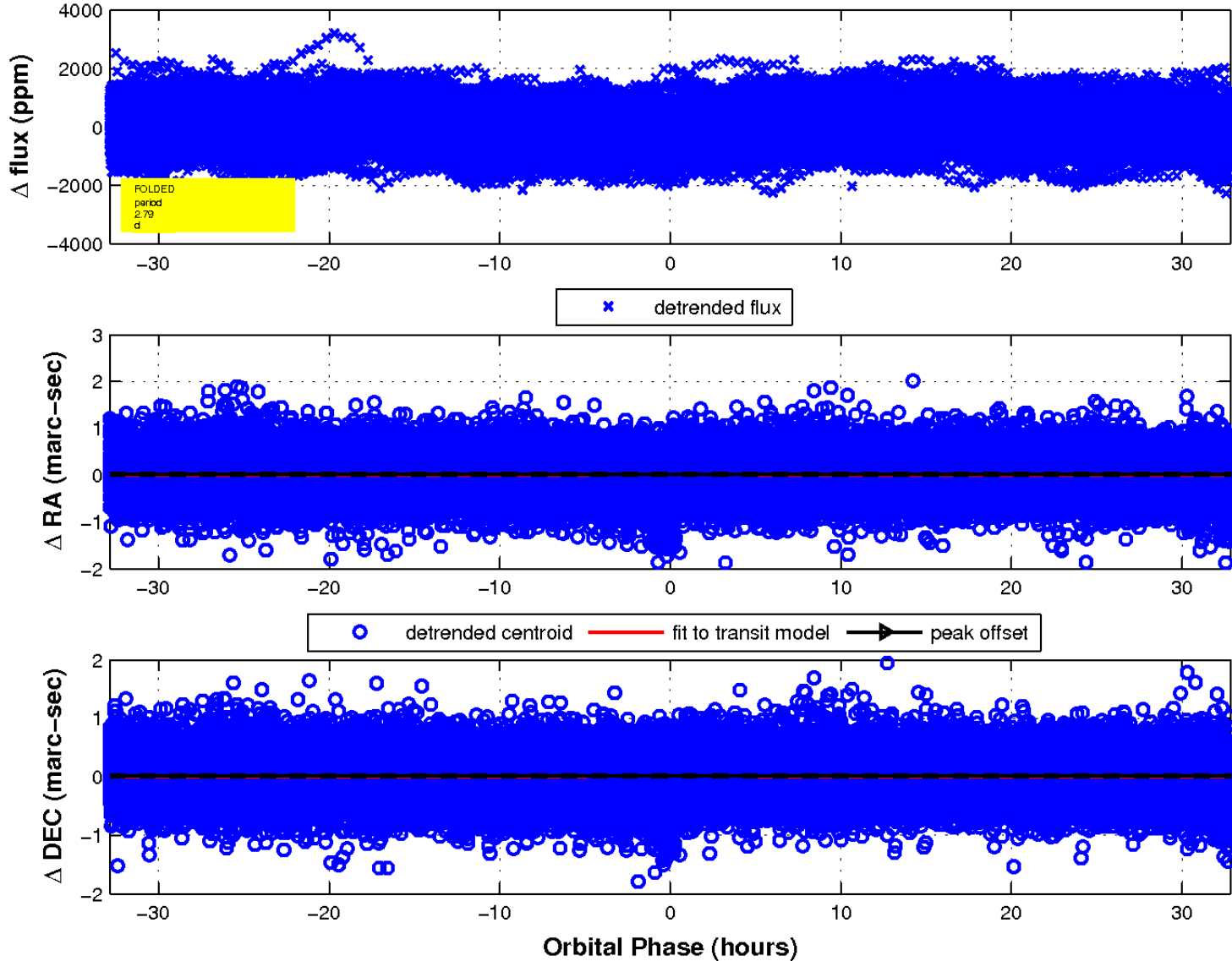
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

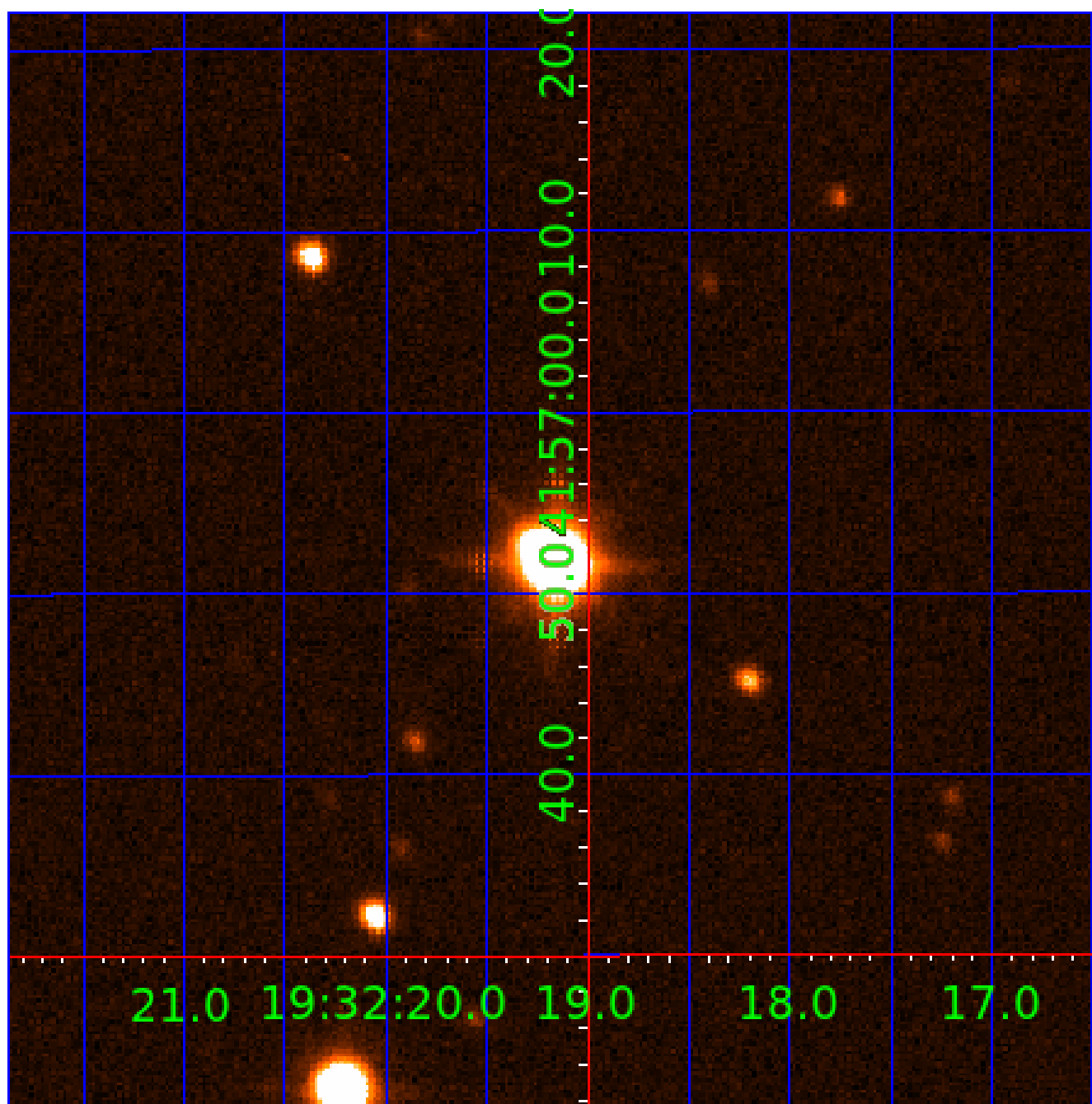


fluxWeightedCentroids, Planet 2 of 4



UKIRT Image

Declination



KIC 006526377

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})
006526377-01	OBS	5295.01	1.395083	132.090560	164.7	2.385	30.7	34.1	12.17	4789	19.48	0.00
006526377-02	OBS	No	2.790225	132.067011	55.8	10.952	8.9	4.7	12.17	4789	11.42	0.00
006526377-03	OBS	No	374.855770	309.004302	1480.7	21.533	13.5	8.5	12.17	4789	52.77	41.20
006526377-04	OBS	No	2.790490	133.417989	97.1	19.708	12.2	8.1	12.17	4789	11.70	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006526377-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—CENT_UNRESOLVED_OFFSET
006526377-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
006526377-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006526377-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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 006526377-03

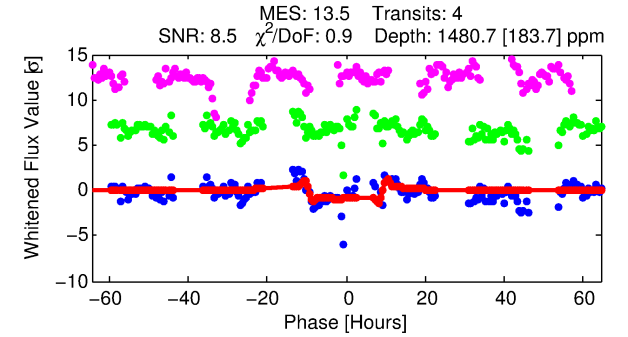
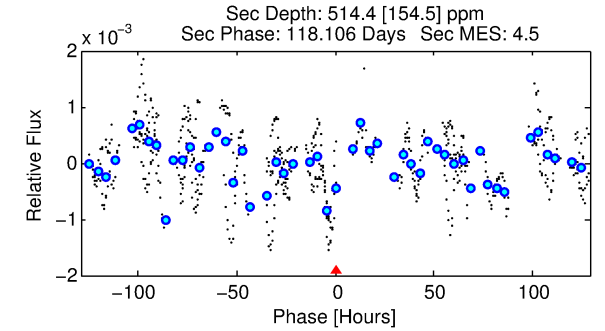
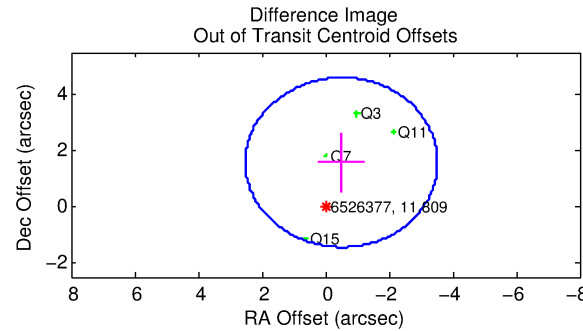
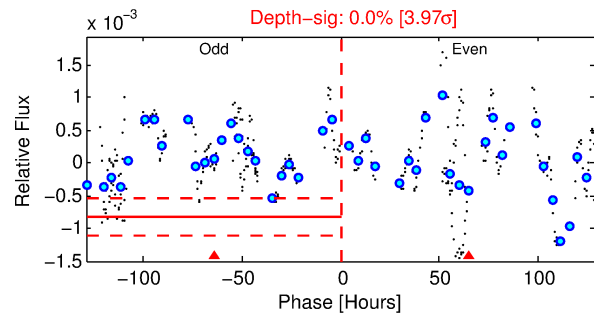
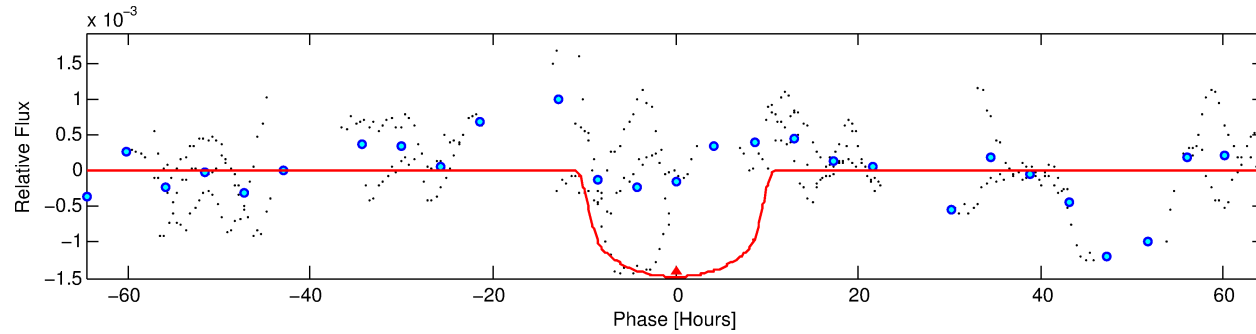
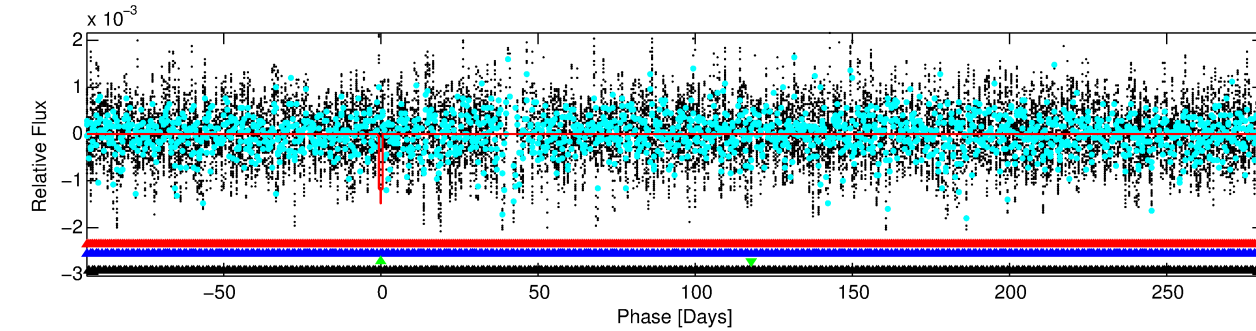
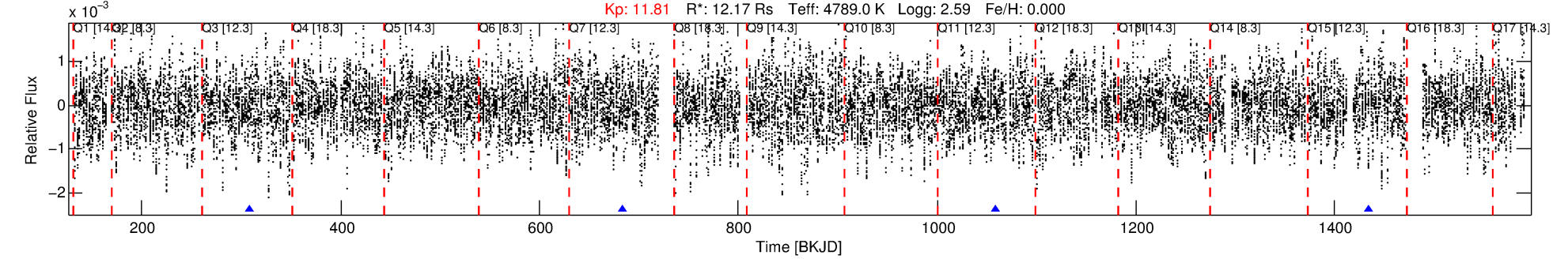
No Significant Match Found

DV One-Page Summary

KIC: 6526377 Candidate: 3 of 4 Period: 374.856 d

KOI: K05295 Corr: No Ephemeris Match

Kp: 11.81 R*: 12.17 Rs Teff: 4789.0 K Logg: 2.59 Fe/H: 0.000



DV Fit Results:

Period = 374.85577 [0.00590] d
Epoch = 309.0043 [0.0138] BKJD
Rp/R* = 0.0397 [0.0028]
a/R* = 87.29 [8.92]
b = 0.81 [0.05]
Seff = 41.20 [15.60]
Teq = 646 [61] K
Rp = 52.77 [18.49] Re
a = 1.3015 [0.3520] AU
Ag = 172.16 [85.42] [2.00σ]
Teffp = 3618 [311] K [9.37σ]

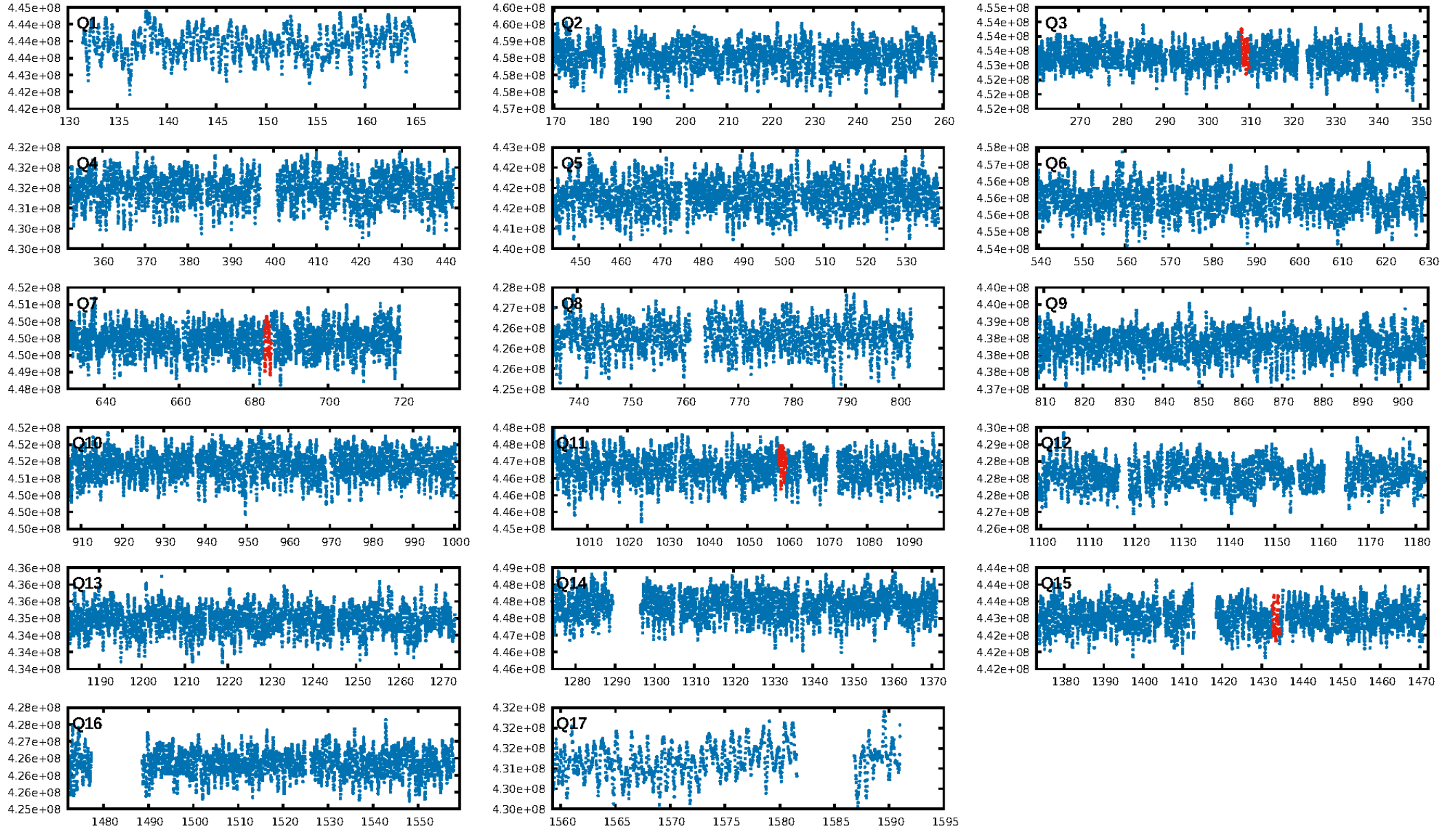
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [305.91σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.5365
Centroid-sig: 73.9%
Centroid-so: 0.086 arcsec [0.85σ]
OotOffset-rm: 1.660 arcsec [1.65σ]
KicOffset-rm: 1.670 arcsec [1.67σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.00 [0/4]

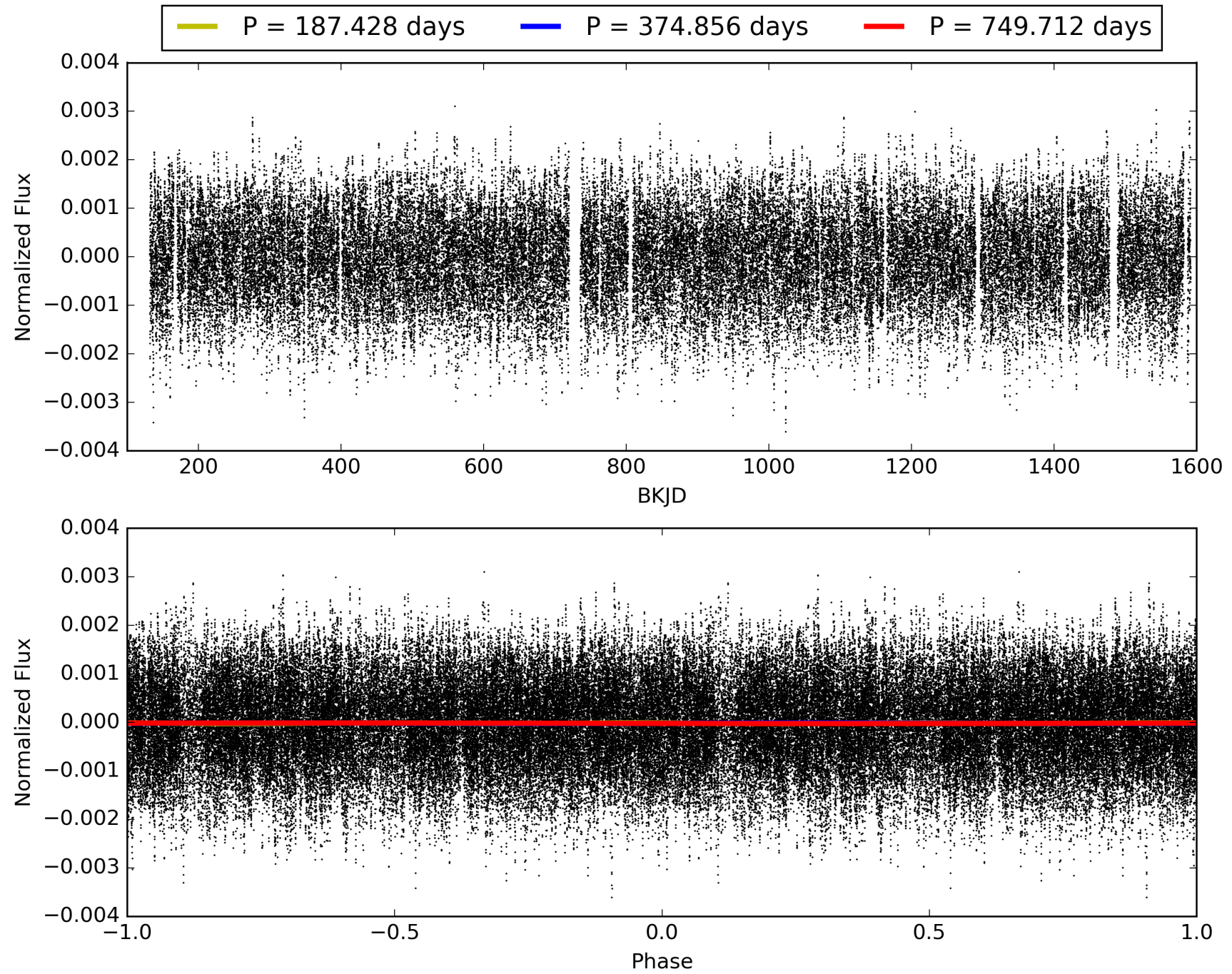
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:13:45 Z

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

TCE 006526377-03, PDC Light Curves

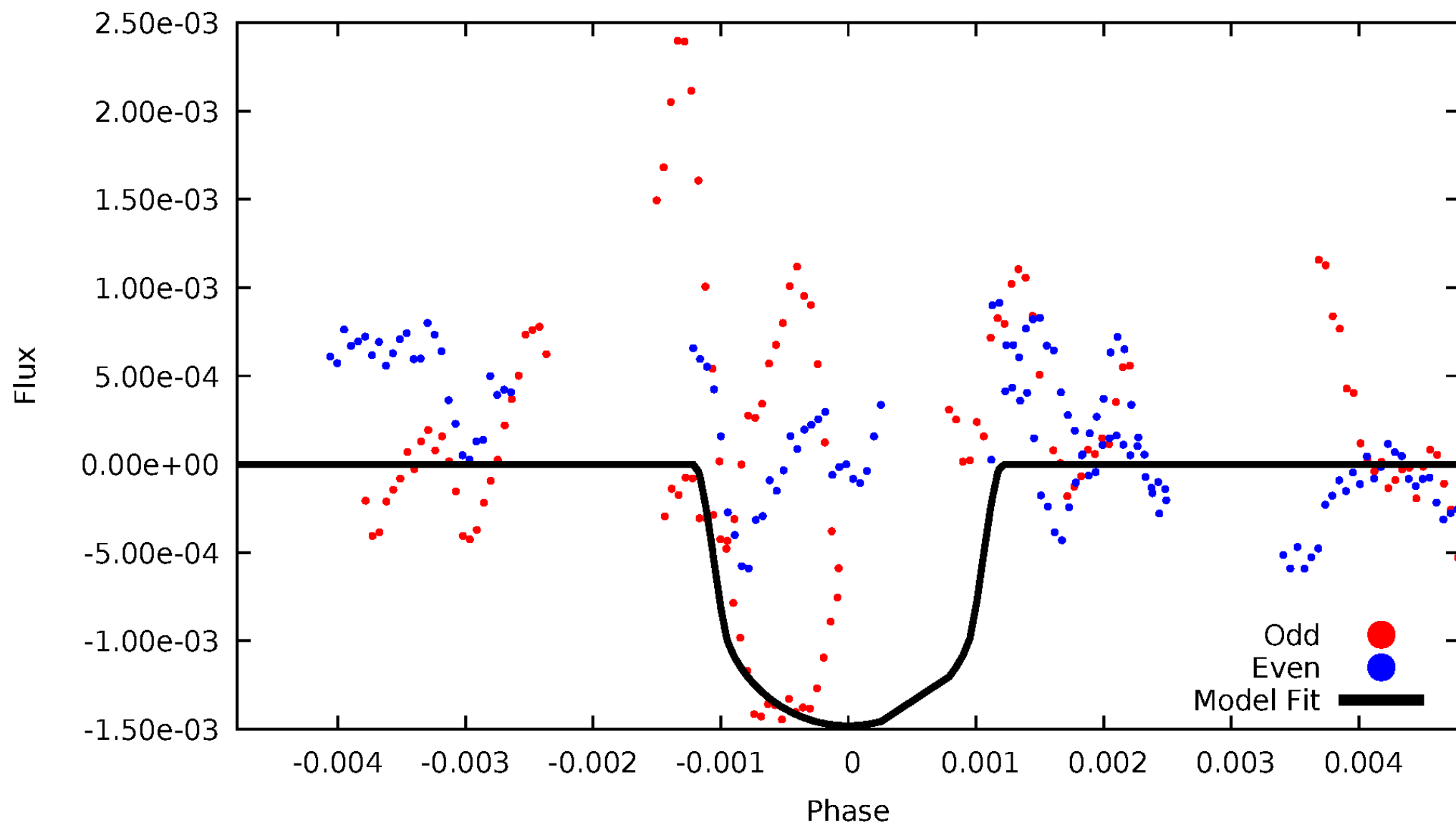


TCE 006526377-03



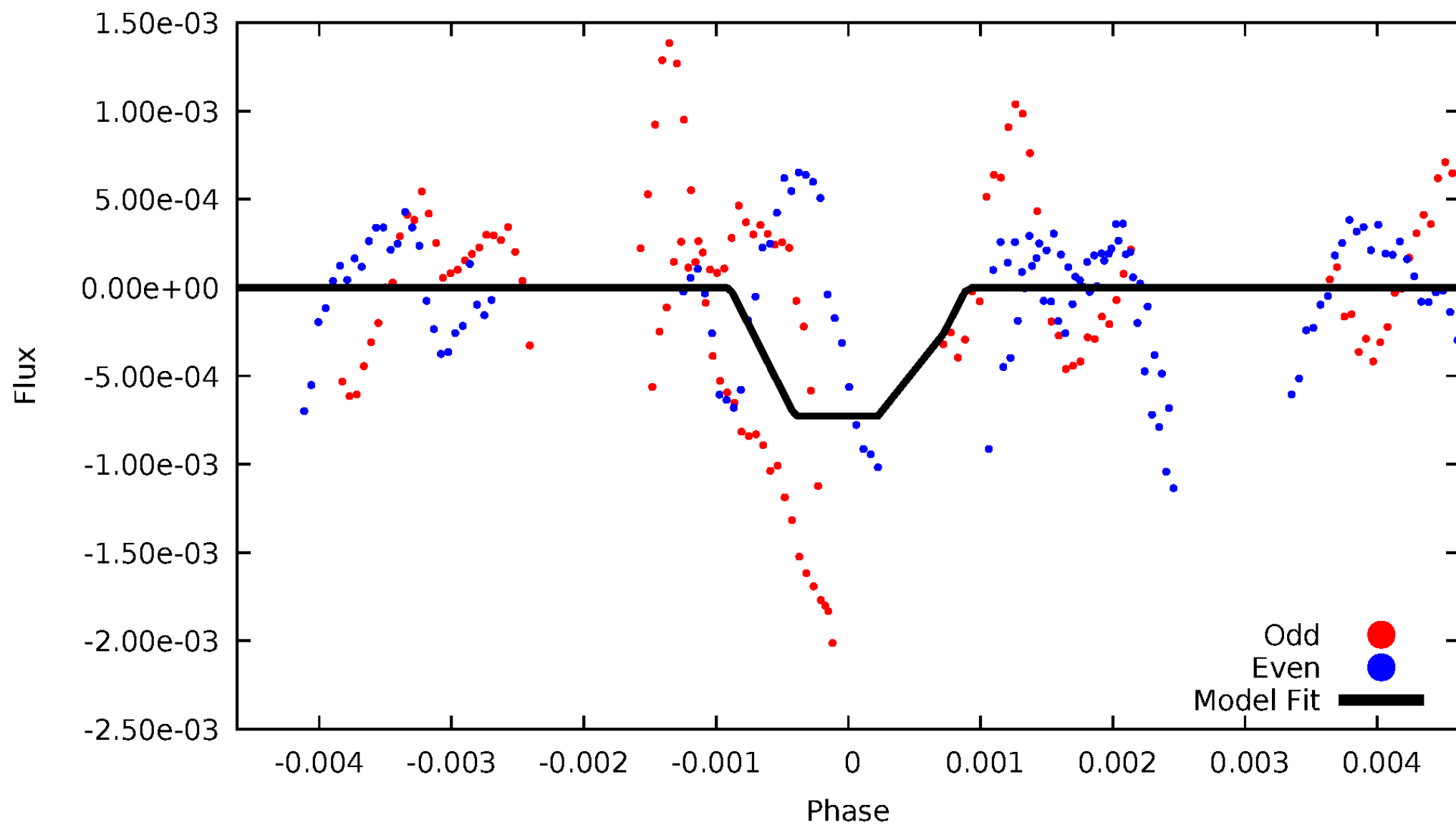
DV Odd/Even

TCE 006526377-03



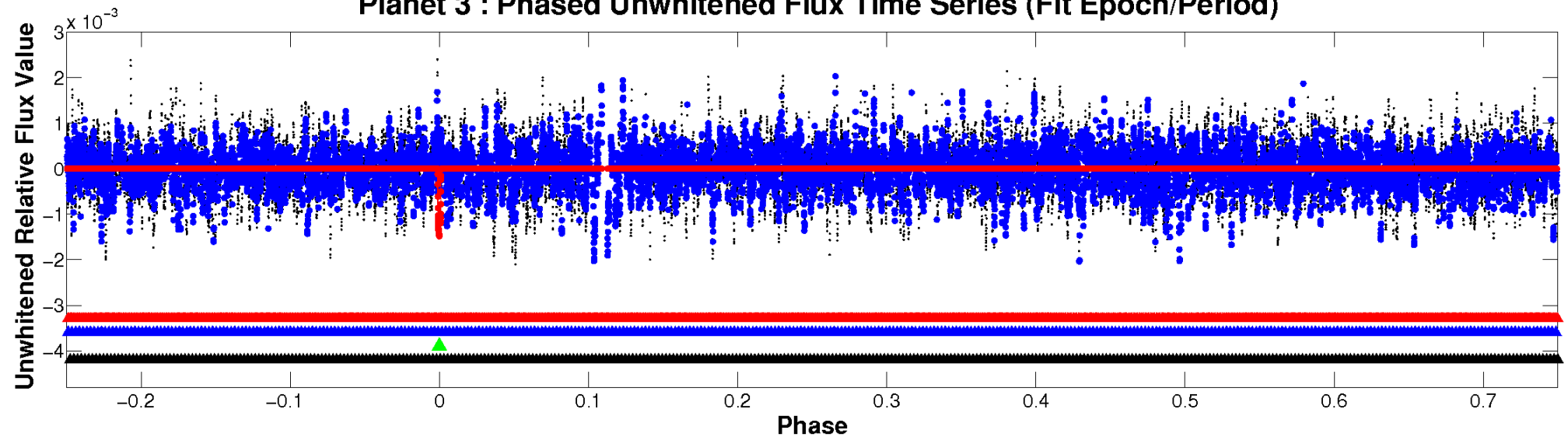
ALT Odd/Even

TCE 006526377-03

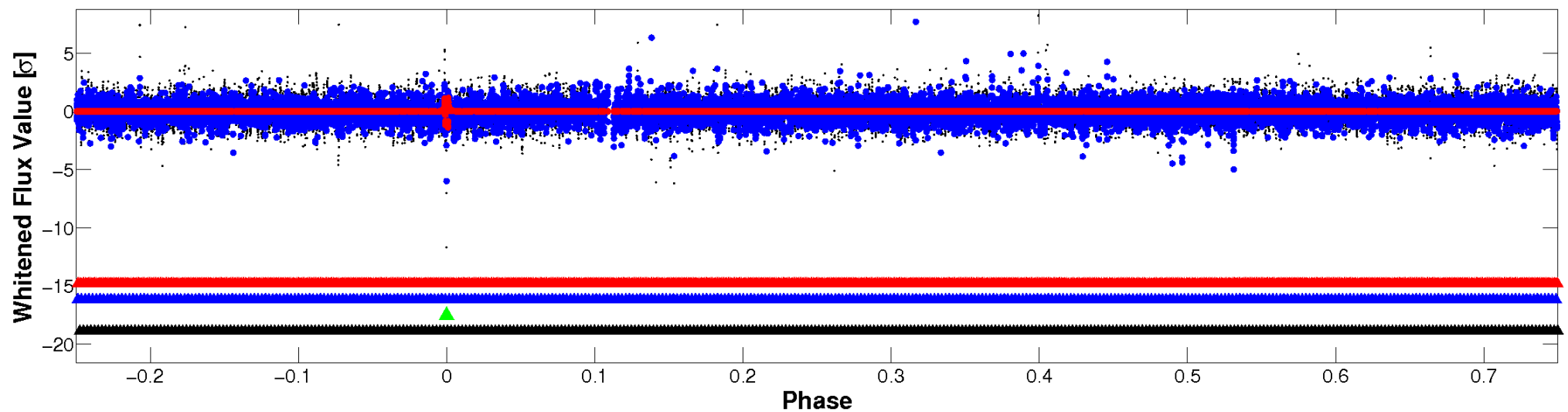


Non-Whitened Vs. Whitened Light Curve

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

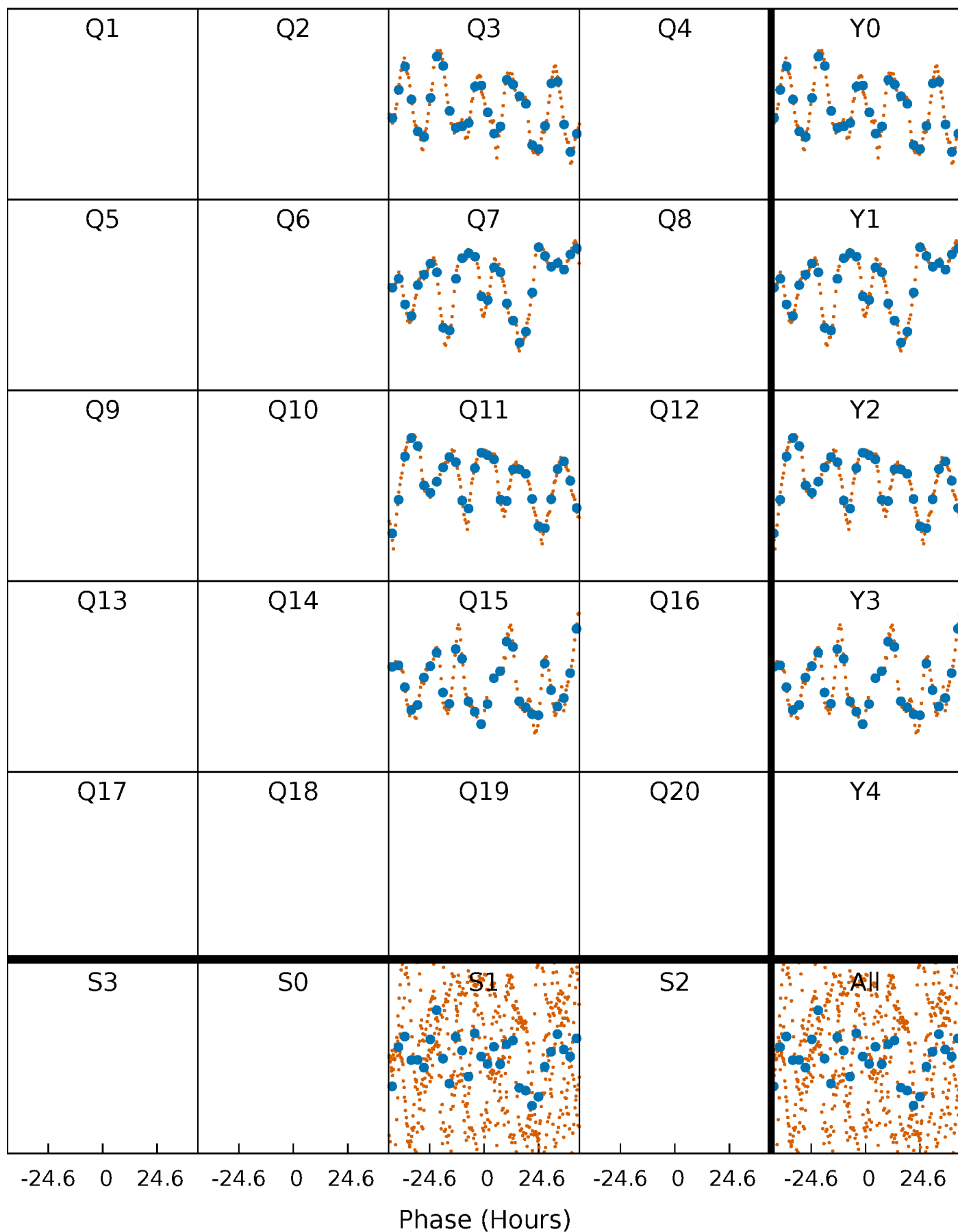


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



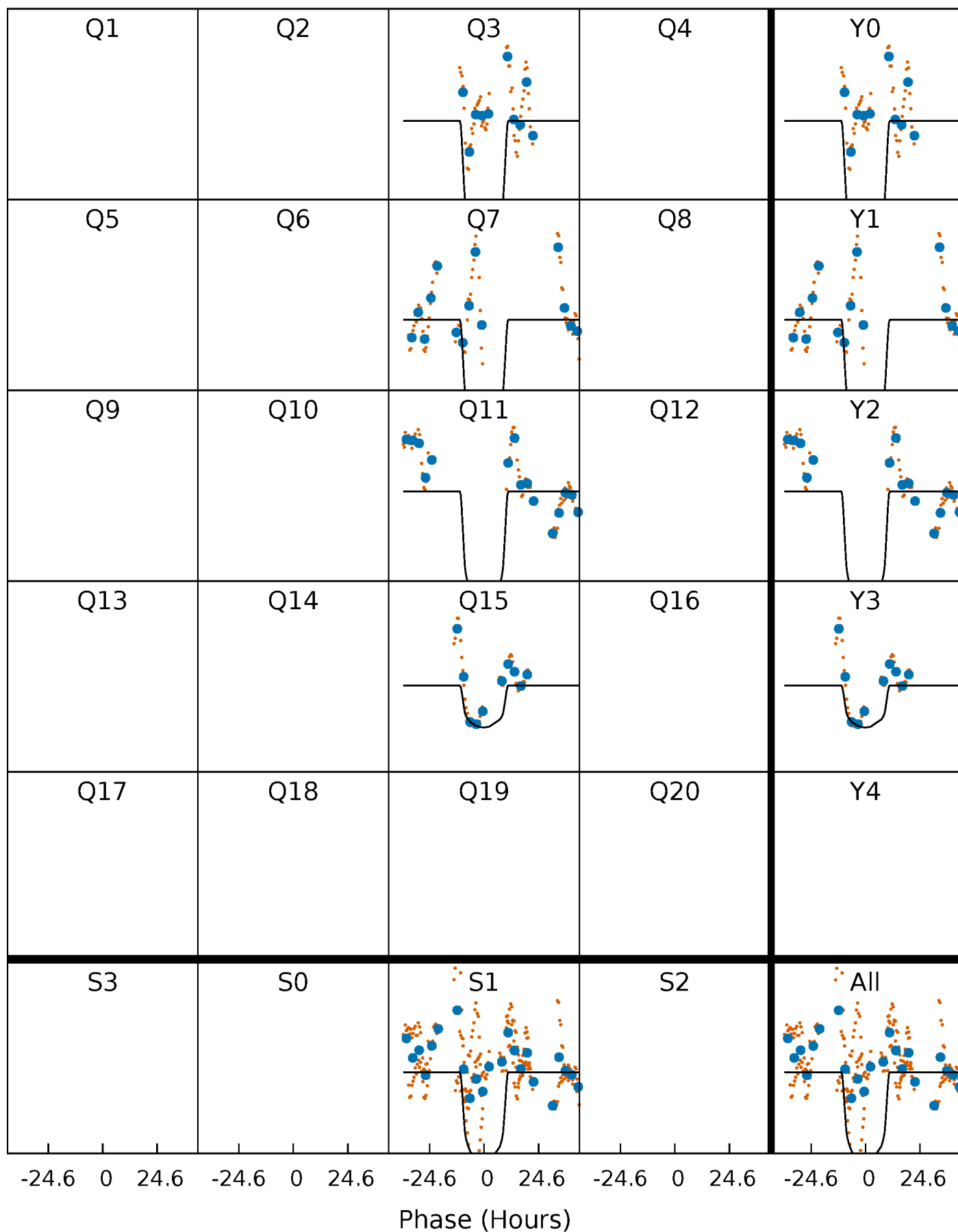
PDC Quarter-Phased Transit Curves

TCE 006526377-03 $P=374.855770$ Days $T_0=309.004302$ (BKJD)



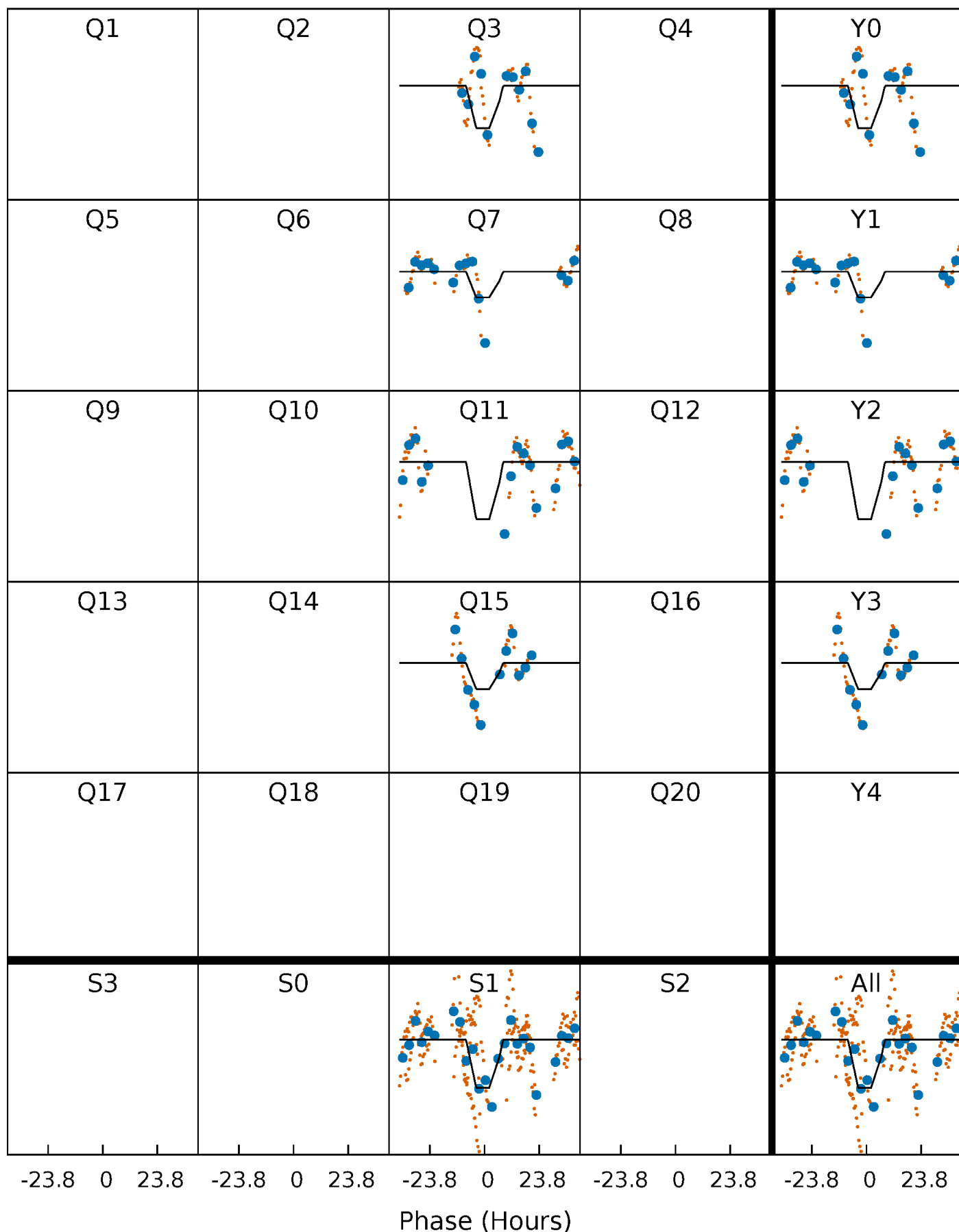
DV Quarter-Phased Transit Curves

TCE 006526377-03 $P=374.855770$ Days $T_0=309.004302$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

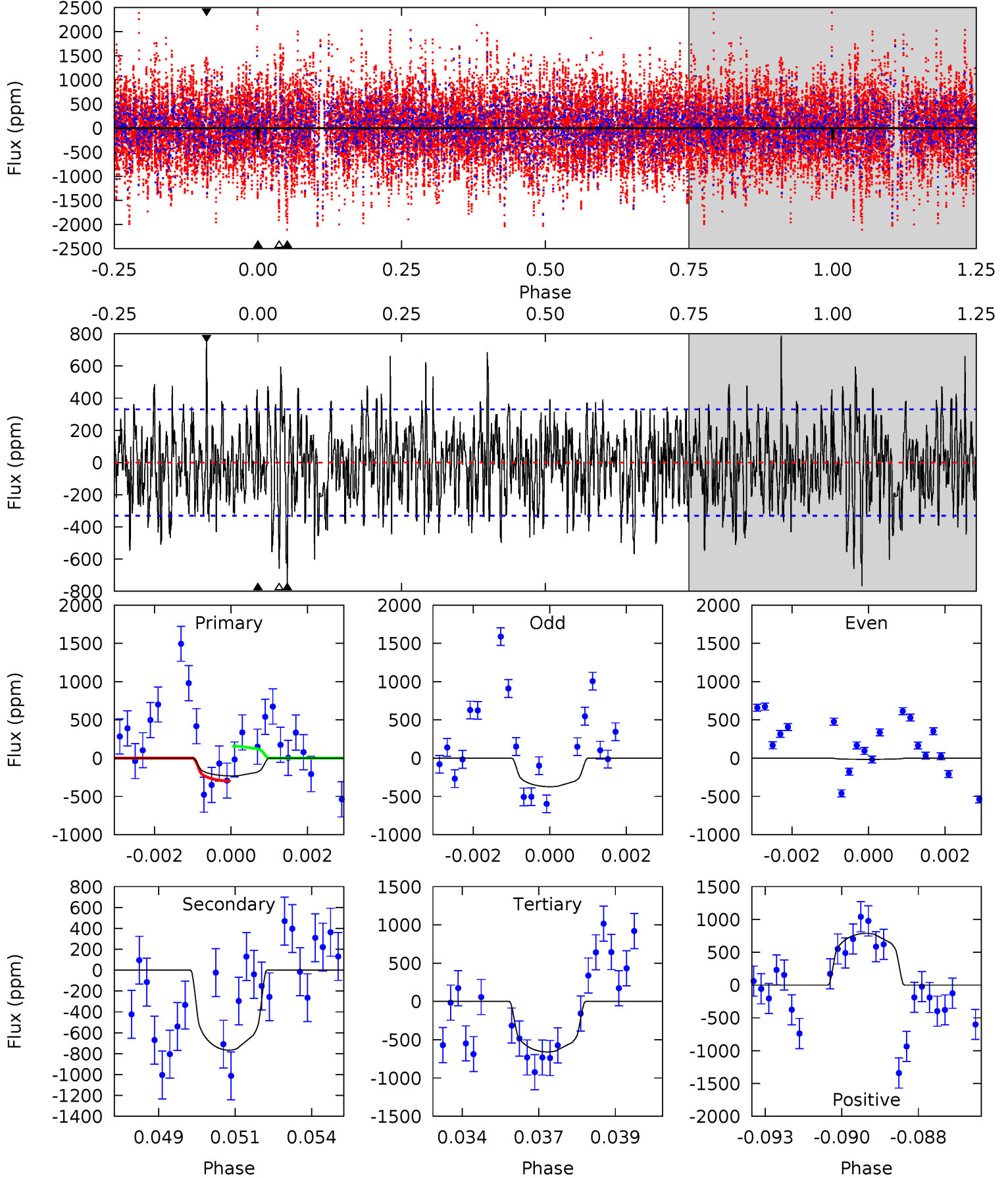
TCE 006526377-03 P=374.860469 Days $T_0=309.016188$ (BKJD)



DV Model-Shift Uniqueness Test

006526377-03, P = 374.855770 Days, E = 309.004302 Days

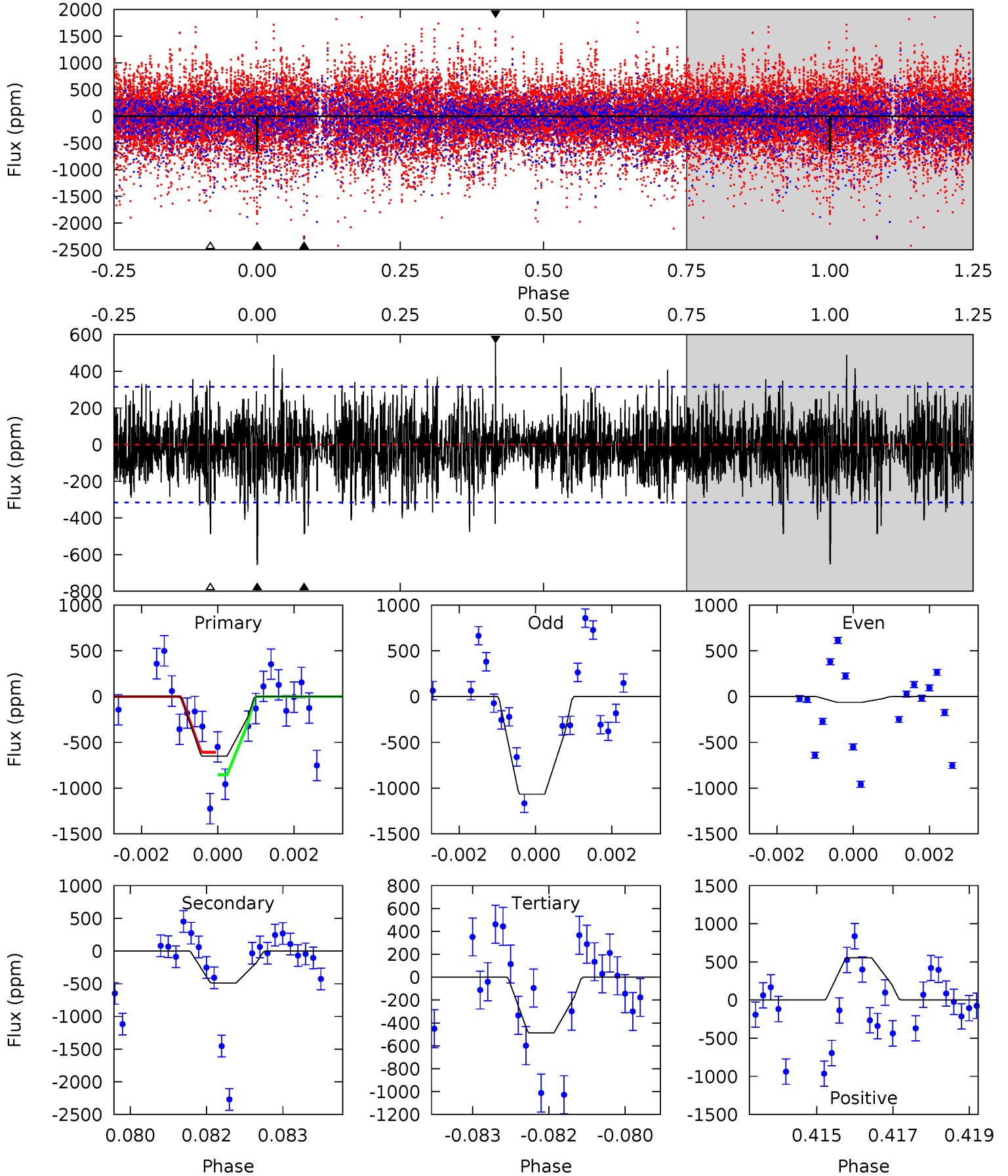
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.70	12.3	10.5	12.6	5.29	3.03	3.19	-6.84	-8.89	1.71	-0.34	2.77	14.5	0.51	0.89



Alt Model-Shift Uniqueness Test

006526377-03, P = 374.860469 Days, E = 309.016188 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	8.24	8.22	9.34	5.34	3.11	2.26	2.79	1.67	0.01	-1.10	8.58	1.40	0.46	1.53



Stellar Parameters For KIC 006526377

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4789^{+49}_{-106}	$2.588^{+0.188}_{-0.101}$	$0.000^{+0.100}_{-0.200}$	$12.169^{+2.783}_{-4.175}$	$2.094^{+0.870}_{-0.870}$	$0.002^{+0.002}_{-0.000}$
	+1%/-2%	+7%/-4%	+inf%/-inf%	+23%/-34%	+42%/-42%	+121%/-29%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006526377-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-766 ± 63	$54.12^{+9.40}_{-10.72}$	892^{+48}_{-56}	4149^{+143}_{-140}	269^{+91}_{-66}
Alt.	-487 ± 59	$36.04^{+6.97}_{-6.94}$	891^{+47}_{-53}	4404^{+237}_{-211}	376^{+147}_{-103}

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 $A_{obs} \gg 1.0$

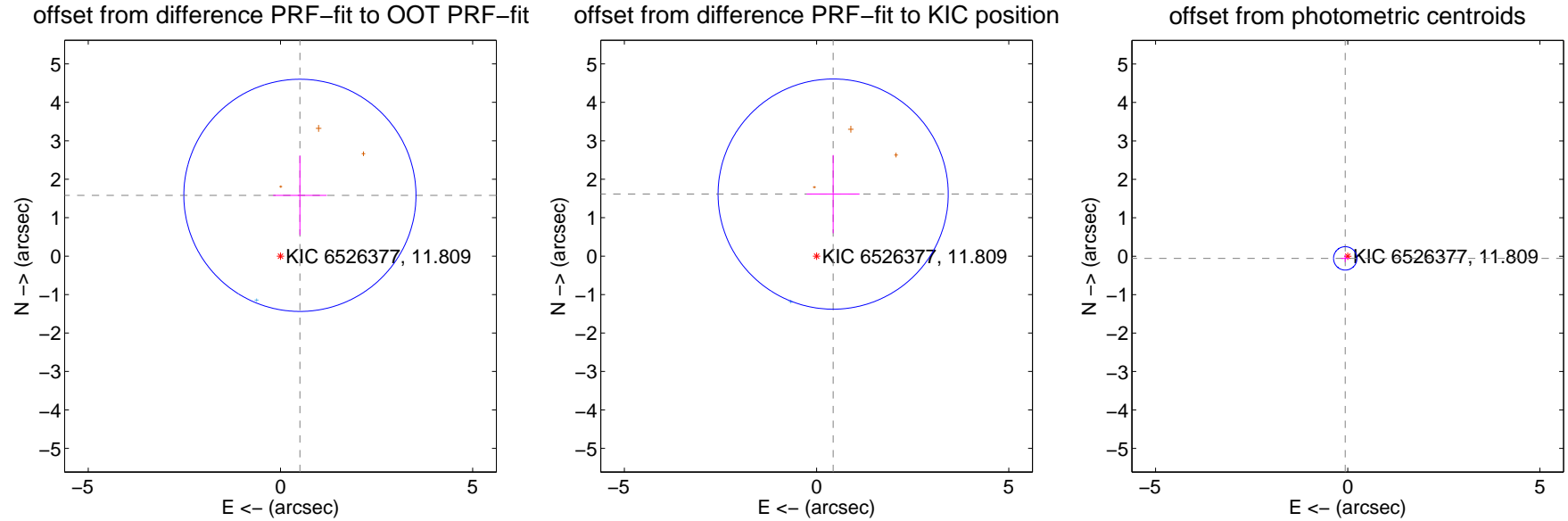
DV Centroid Data

Supplemental centroid analysis for 006526377-03. **Kepler magnitude: 11.81.** Transit SNR 8.54

There are 1 quarters with good PRF difference image offsets

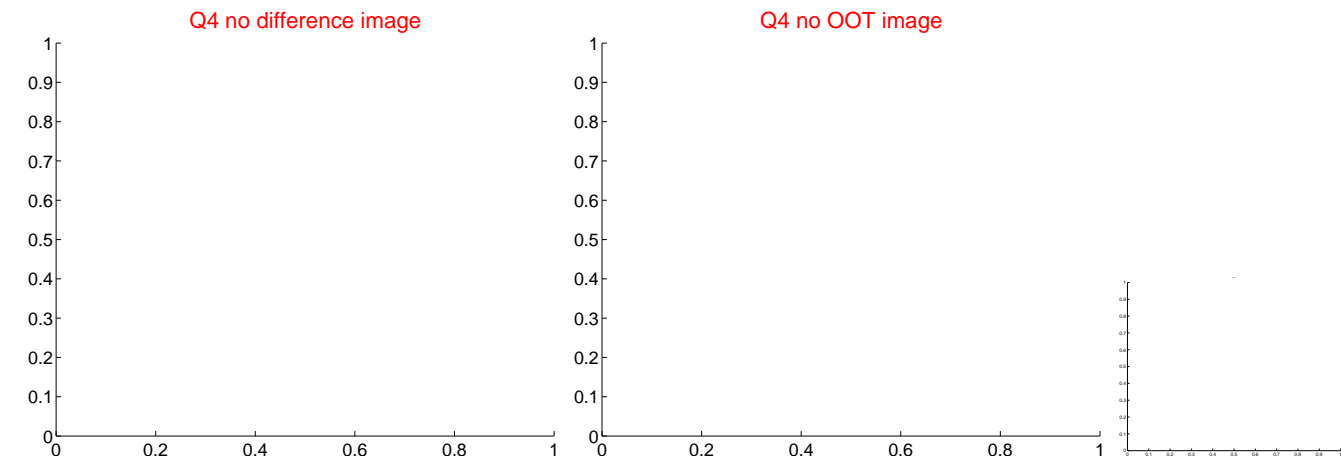
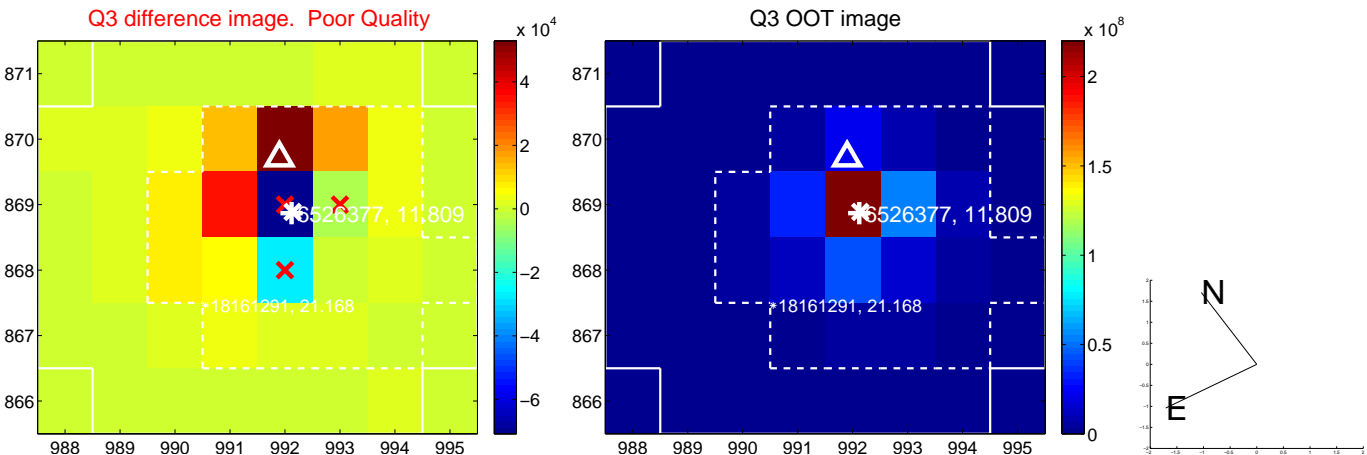
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.660 ± 1.007	1.65	-0.506 ± 0.697	1.581 ± 1.033
PRF-fit source offset from KIC position	1.670 ± 0.998	1.67	-0.431 ± 0.687	1.614 ± 1.017
photometric centroid source offset	0.09 ± 0.10	0.85	0.06 ± 0.11	-0.06 ± 0.10

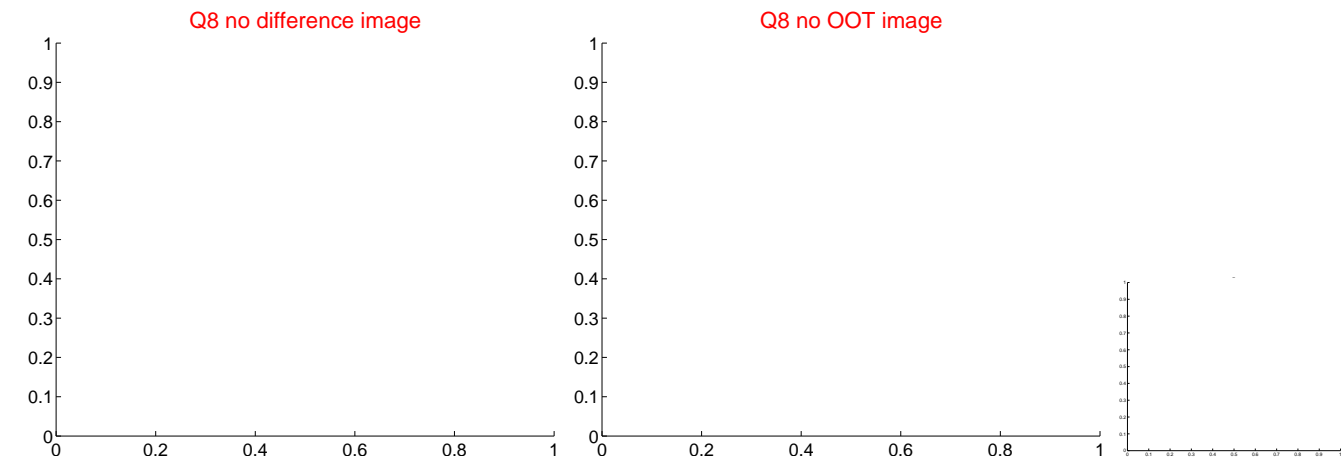
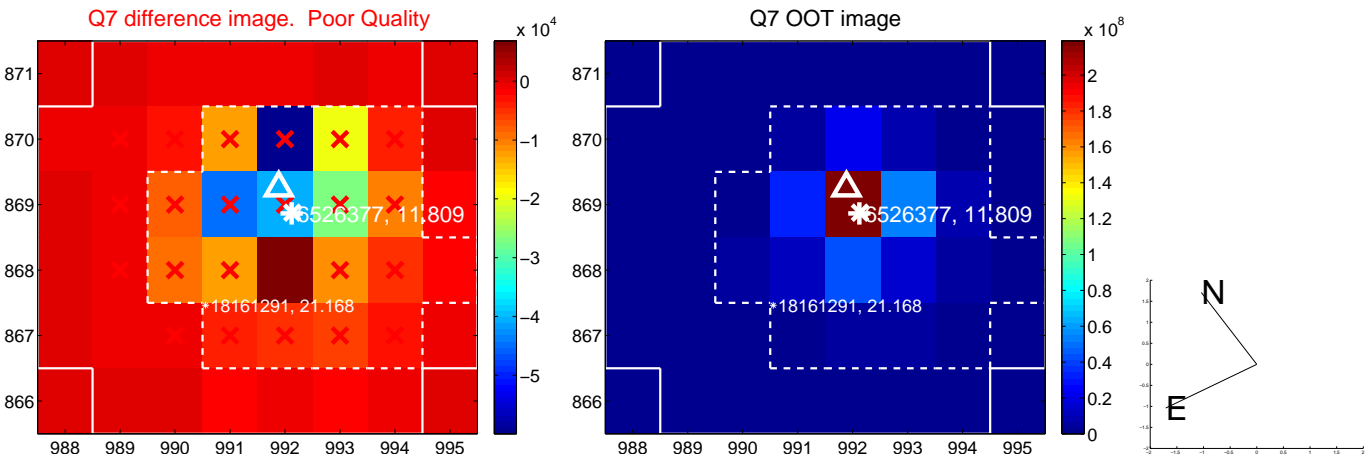


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

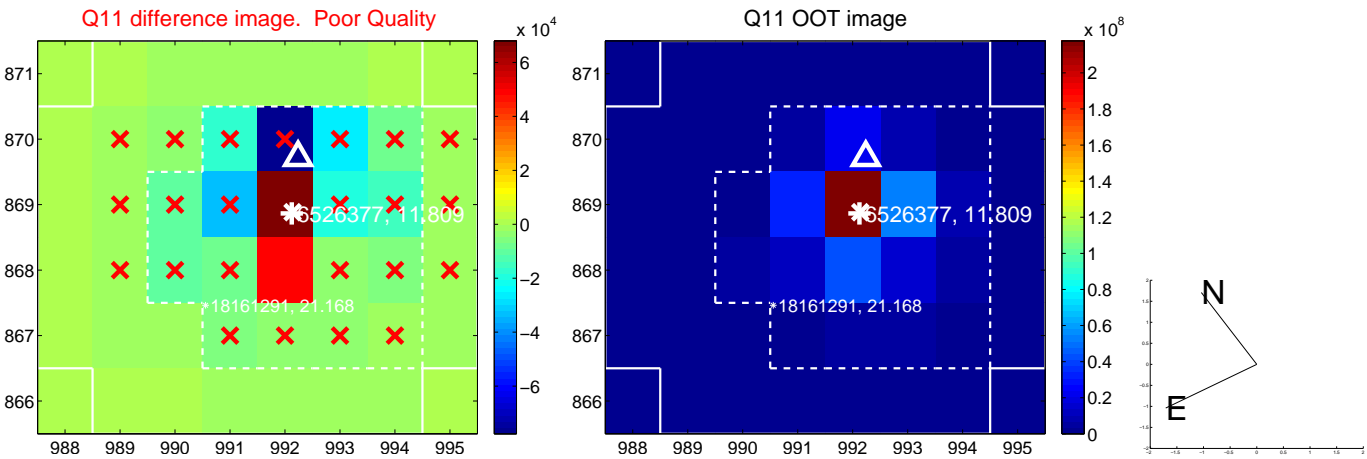
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



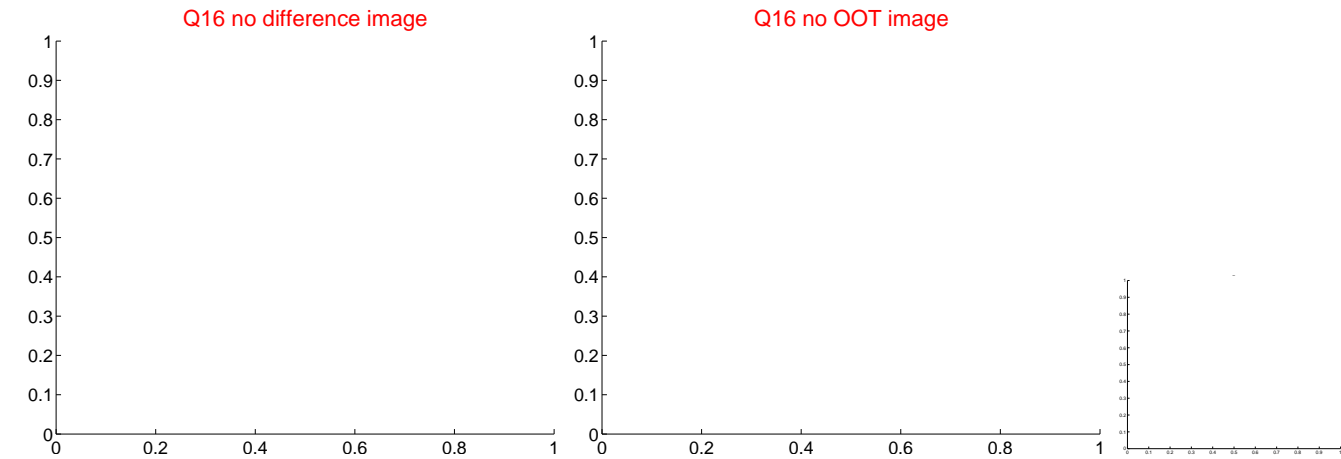
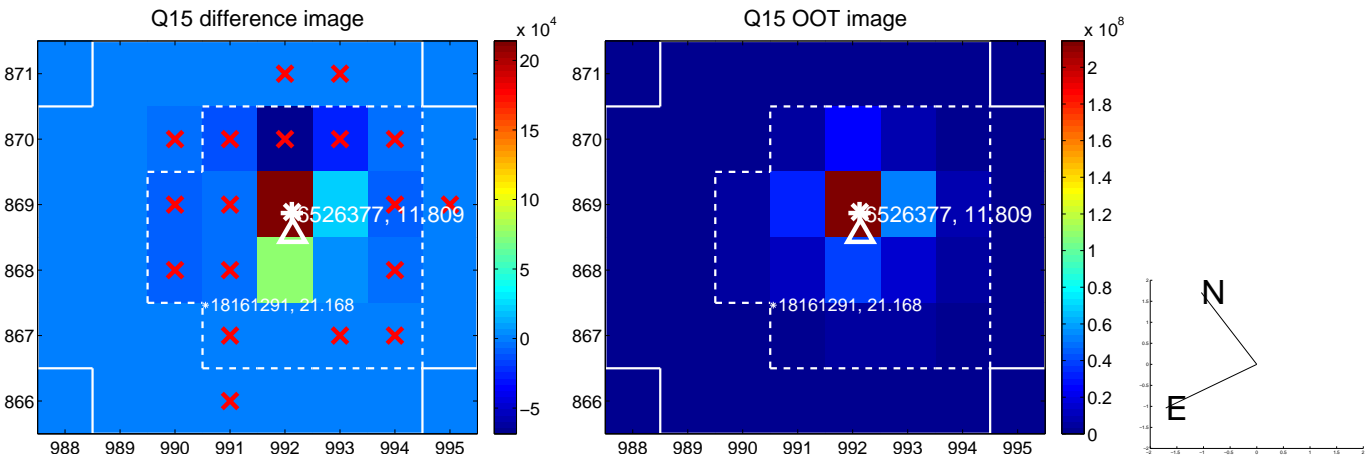
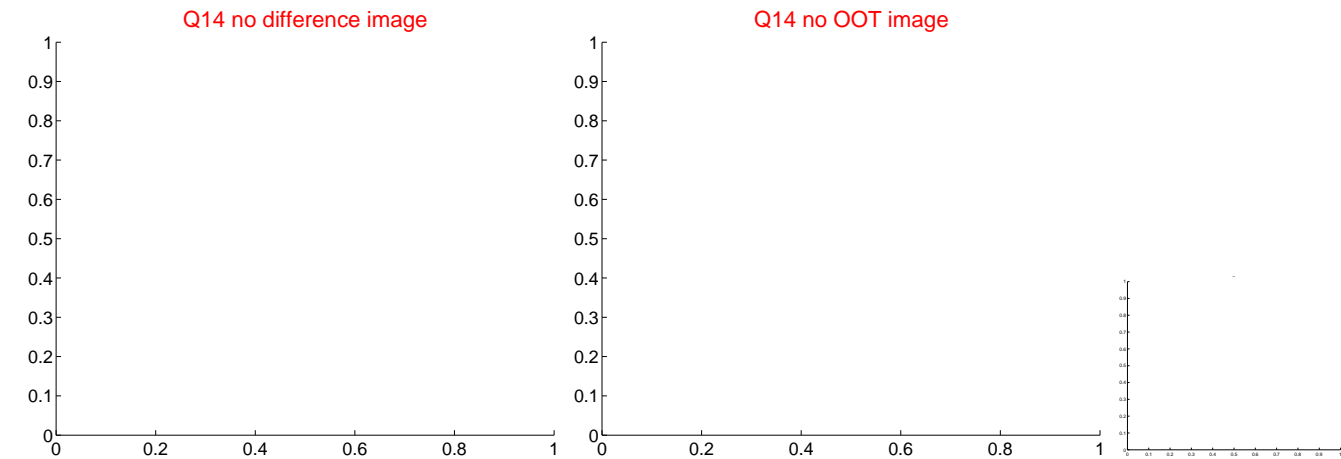
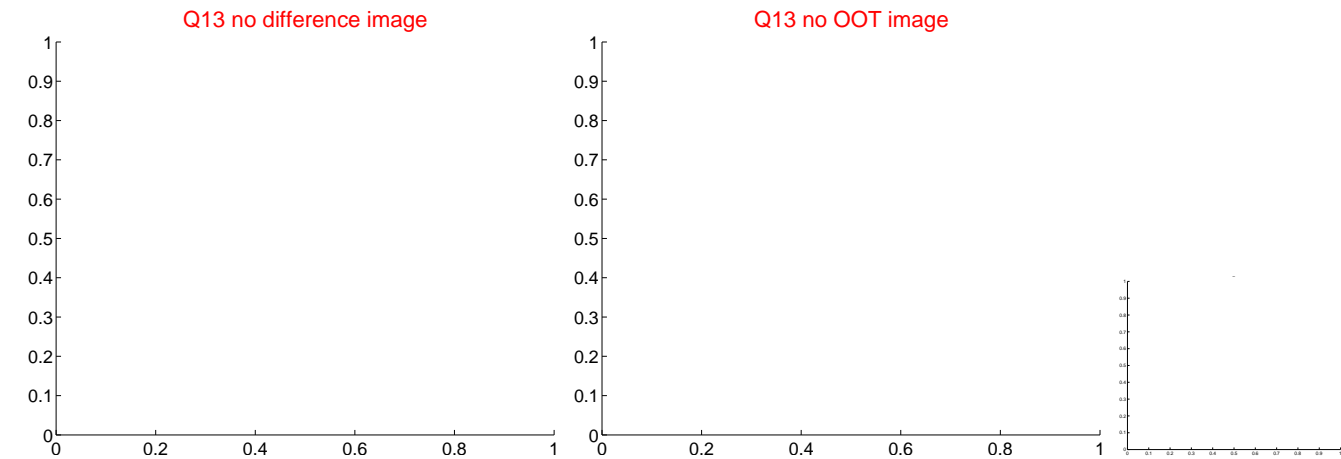
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



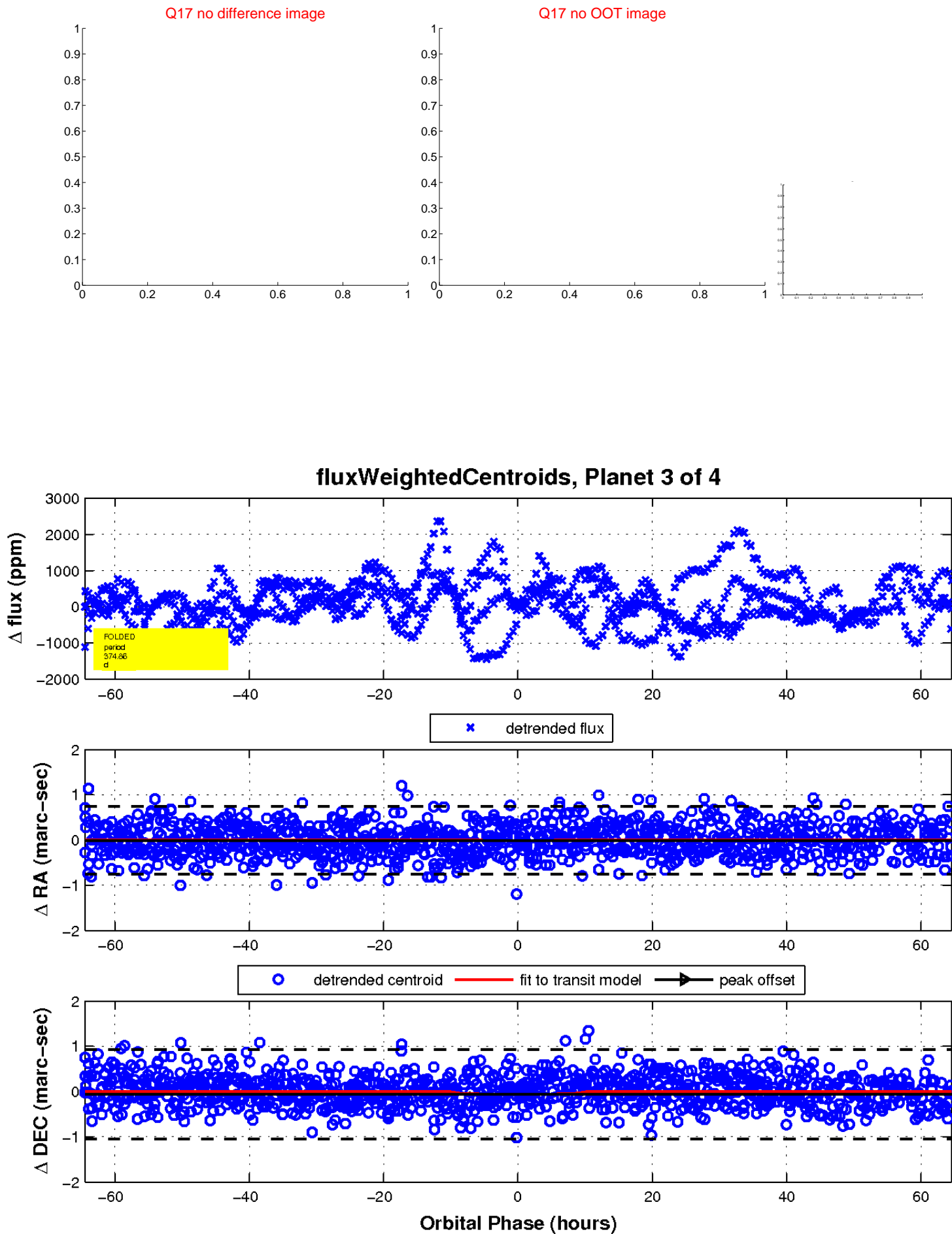
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

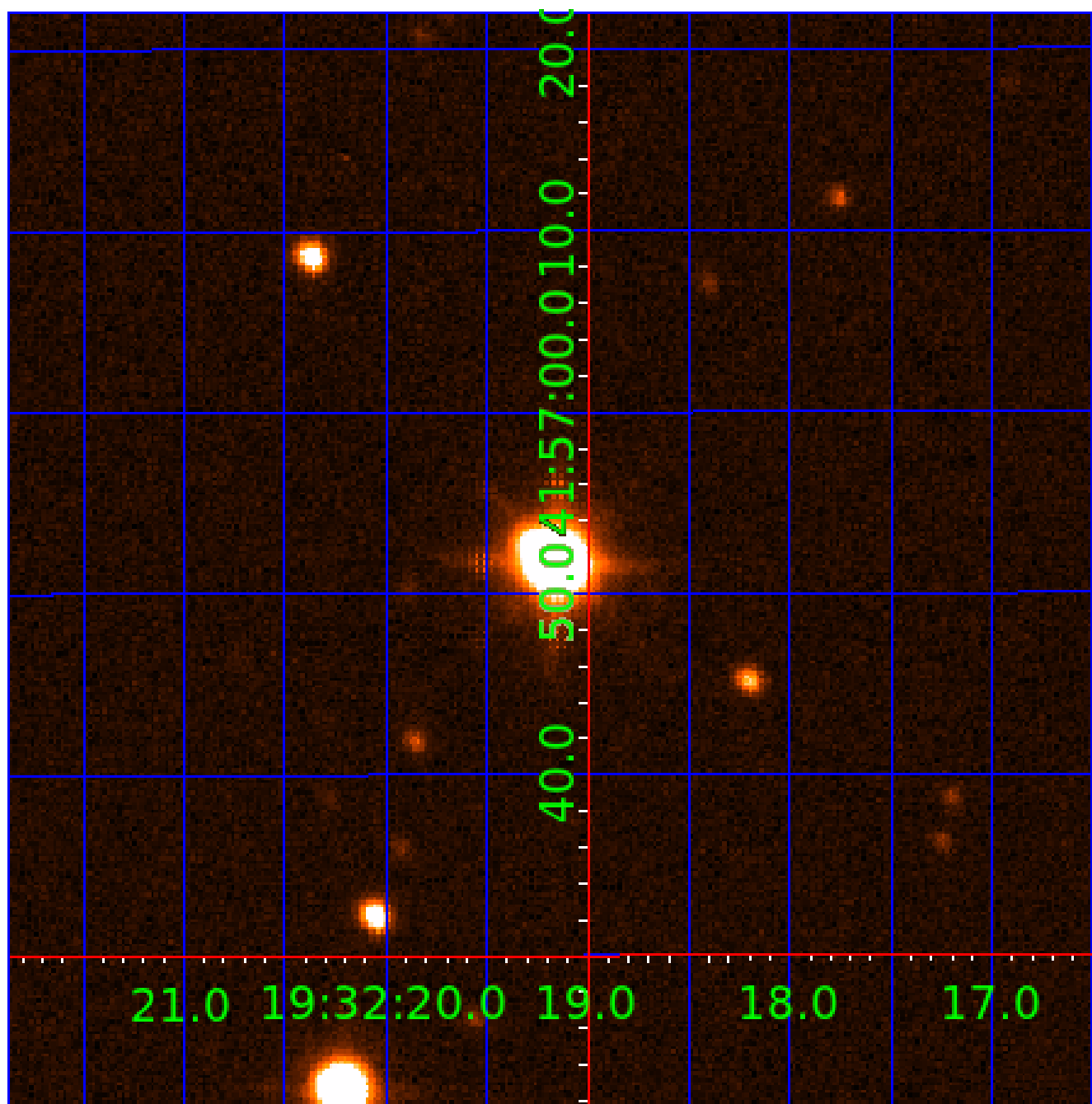


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006526377

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})
006526377-01	OBS	5295.01	1.395083	132.090560	164.7	2.385	30.7	34.1	12.17	4789	19.48	0.00
006526377-02	OBS	No	2.790225	132.067011	55.8	10.952	8.9	4.7	12.17	4789	11.42	0.00
006526377-03	OBS	No	374.855770	309.004302	1480.7	21.533	13.5	8.5	12.17	4789	52.77	41.20
006526377-04	OBS	No	2.790490	133.417989	97.1	19.708	12.2	8.1	12.17	4789	11.70	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006526377-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—CENT_UNRESOLVED_OFFSET
006526377-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
006526377-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006526377-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET

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.

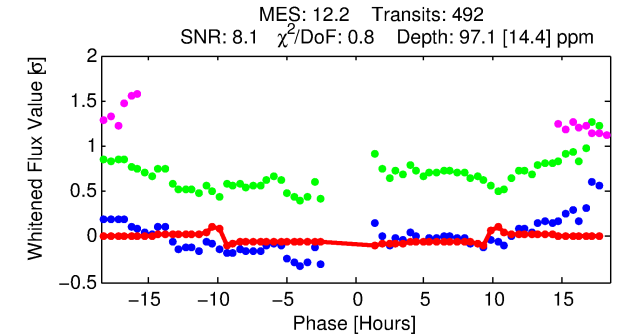
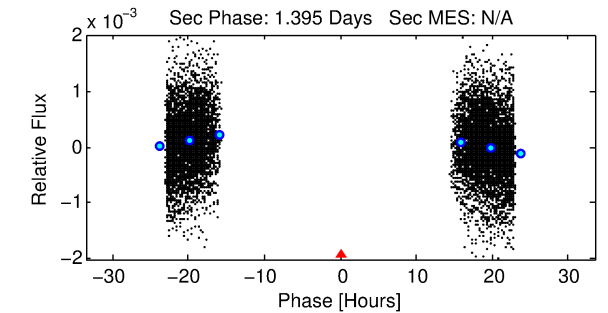
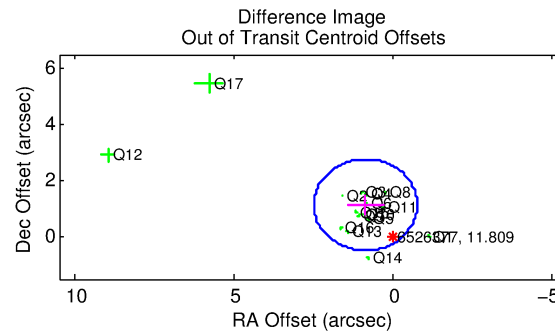
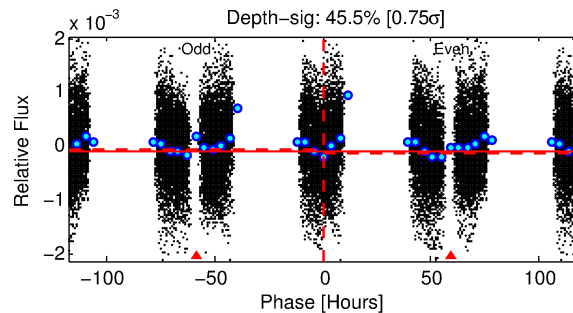
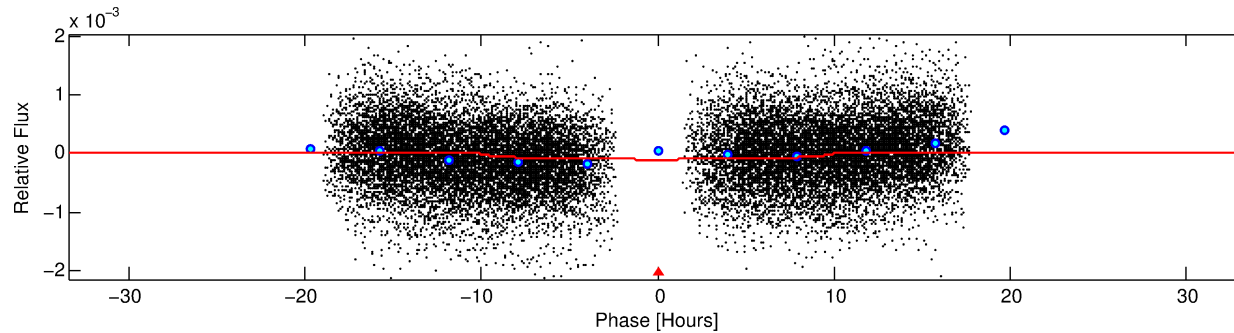
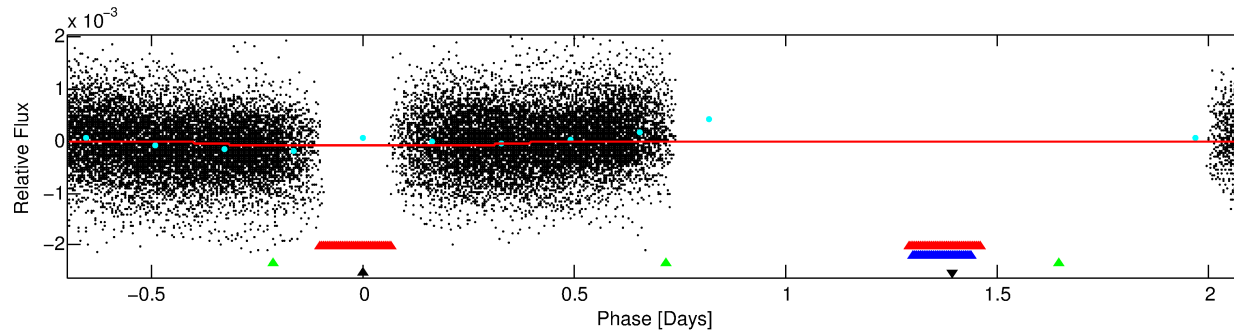
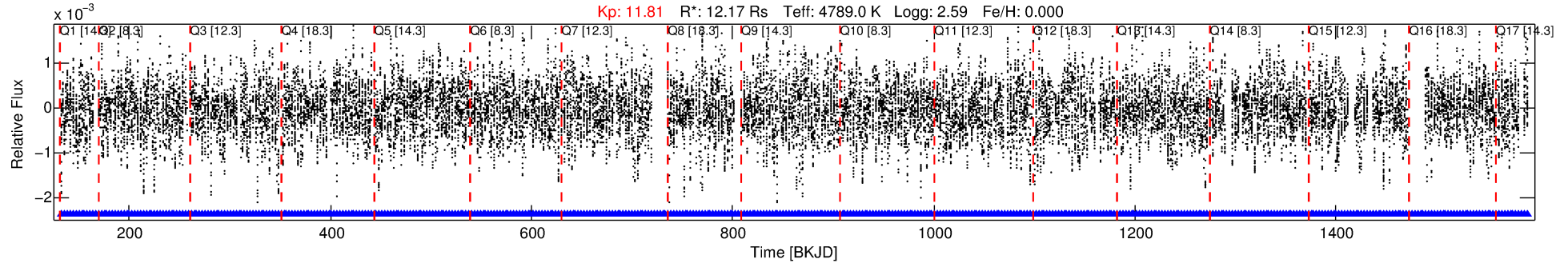
Ephemeris Match Information For 006526377-04

No Significant Match Found

DV One-Page Summary

KIC: 6526377 Candidate: 4 of 4 Period: 2.790 d
KOI: K05295 Corr: No Ephemeris Match

Kp: 11.81 R*: 12.17 Rs Teff: 4789.0 K Logg: 2.59 Fe/H: 0.000



DV Fit Results:

Period = 2.79049 [0.00002] d
Epoch = 133.4180 [0.0031] BKJD
Rp/R* = 0.0088 [0.0024]
a/R* = 1.24 [0.43]
b = 0.30 [2.97]
Seff = N/A
Teq = N/A
Rp = 11.70 [5.14] Re
a = N/A

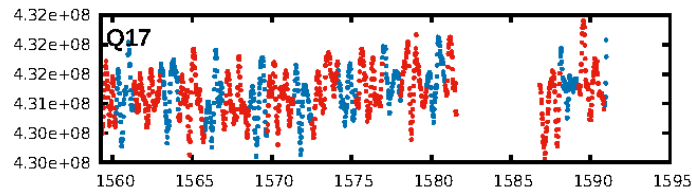
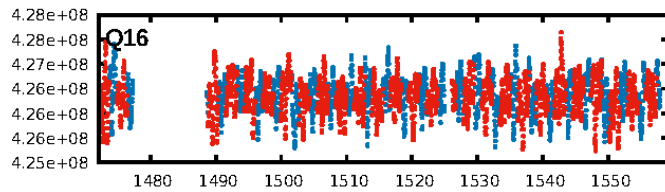
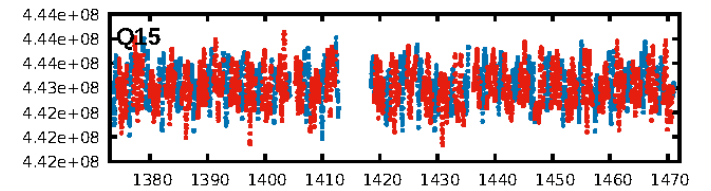
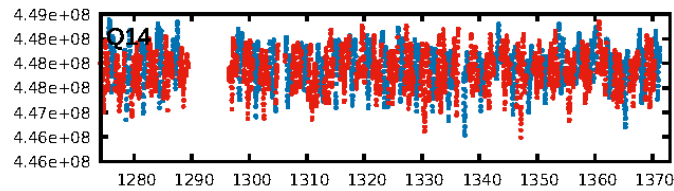
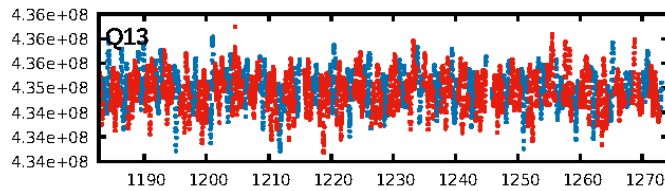
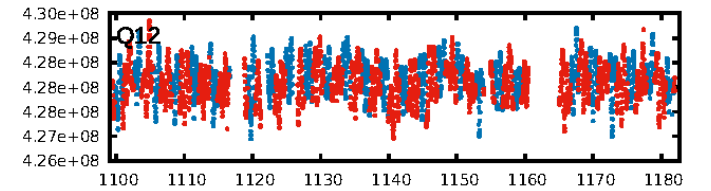
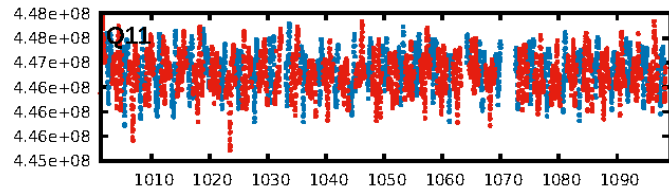
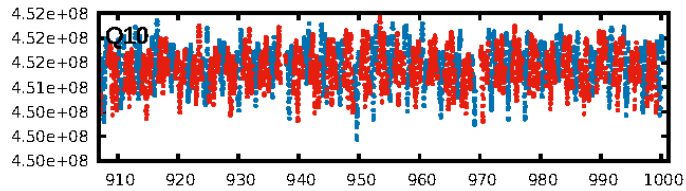
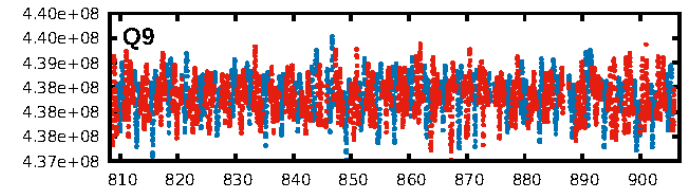
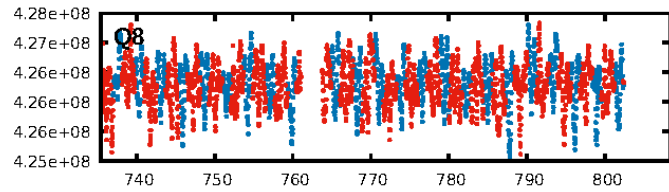
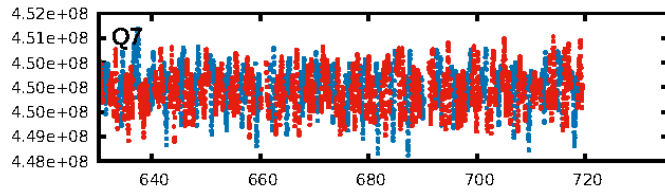
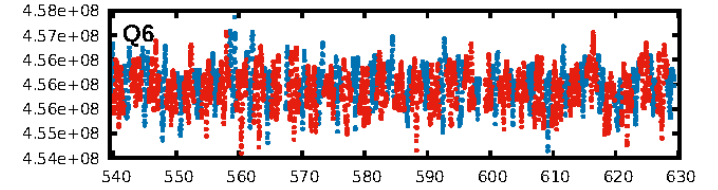
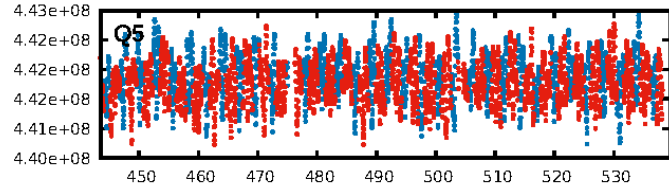
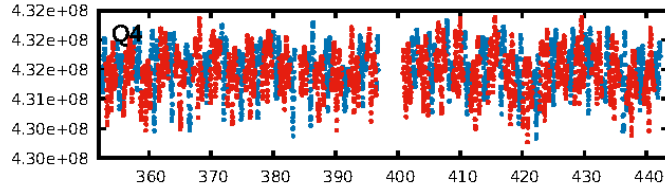
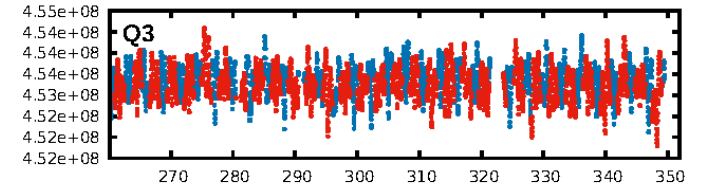
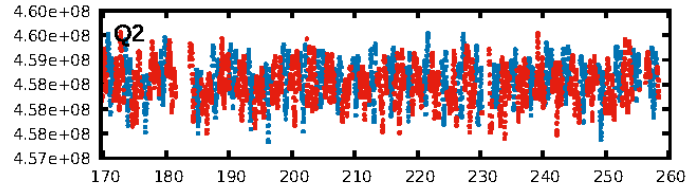
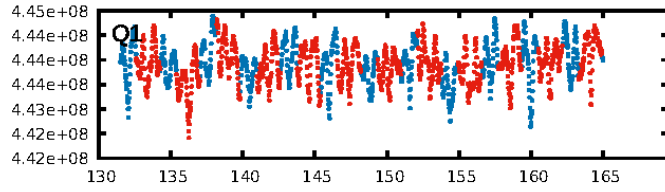
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [305.91σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [469/469]
GhostDiagnostic-chr: 1.406
Centroid-sig: 56.6%
Centroid-so: 0.158 arcsec [1.33σ]
OotOffset-rm: 1.433 arcsec [2.65σ]
KicOffset-rm: 1.454 arcsec [2.50σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 0.00 [0/17]

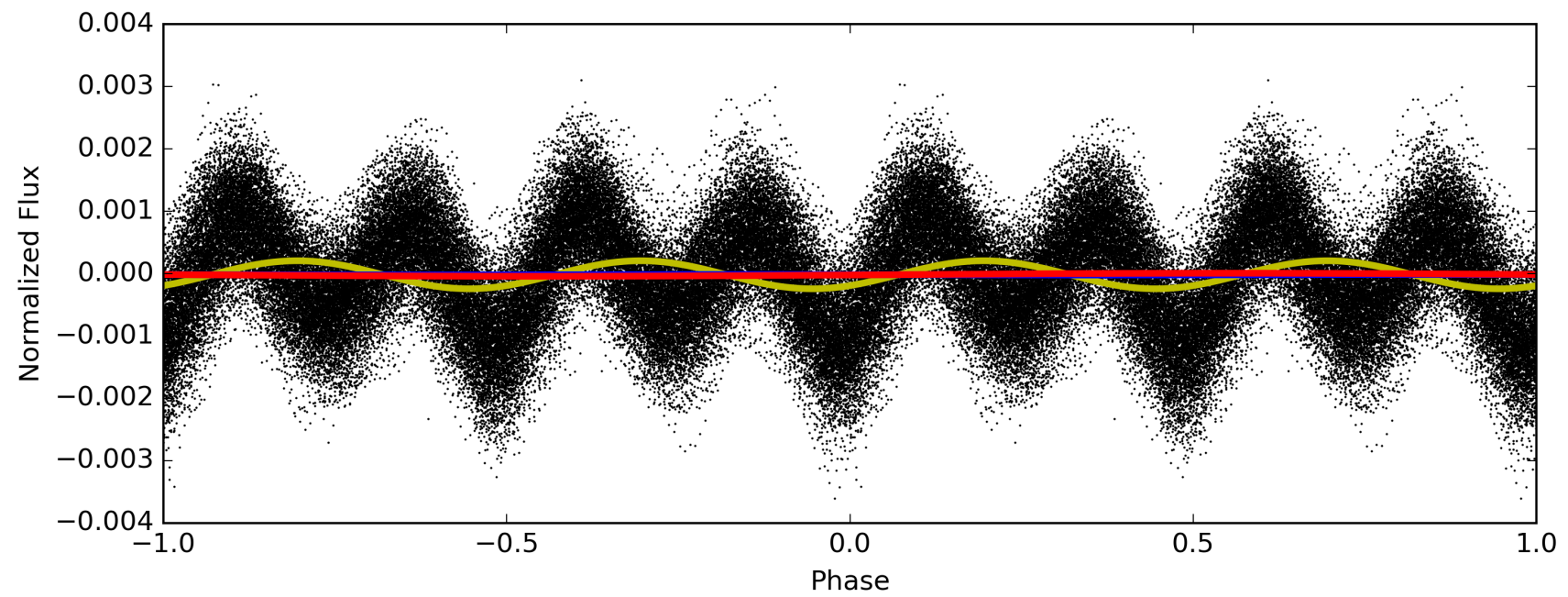
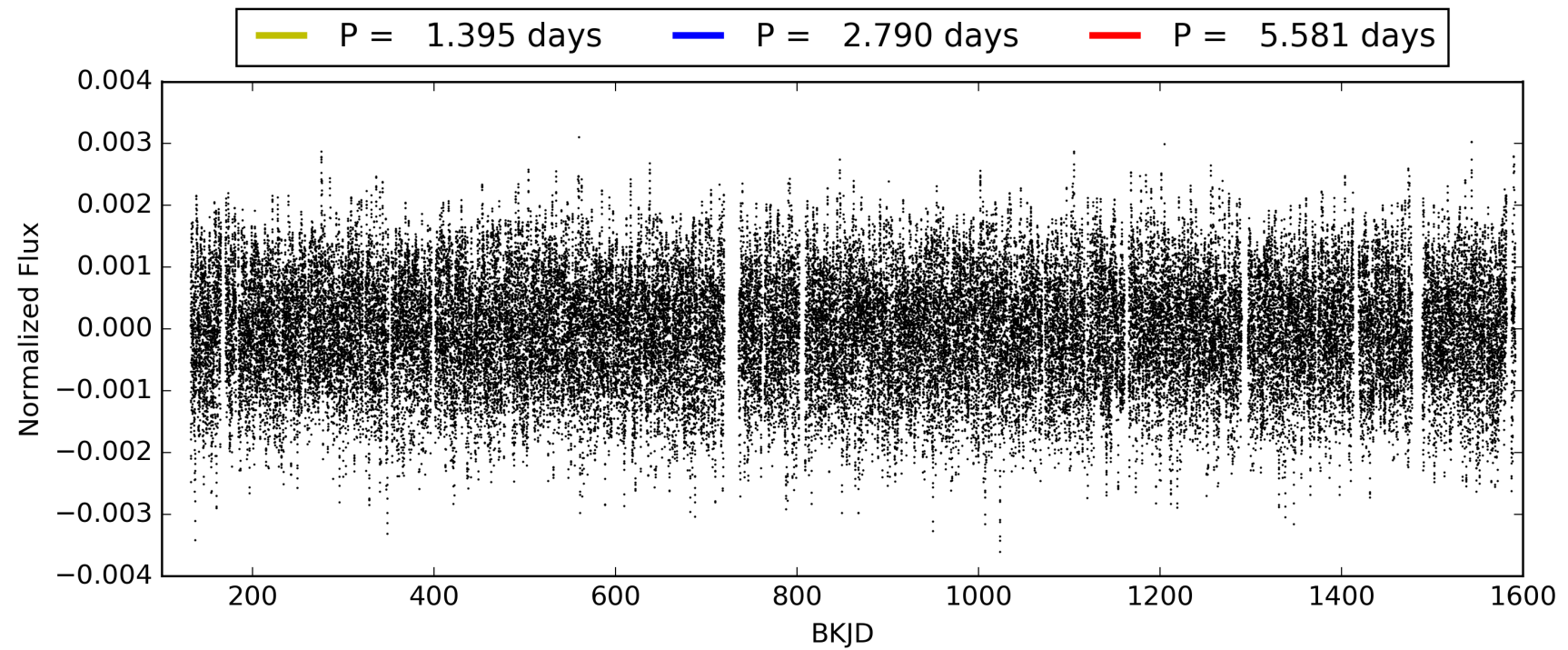
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:13:53 Z

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

TCE 006526377-04, PDC Light Curves

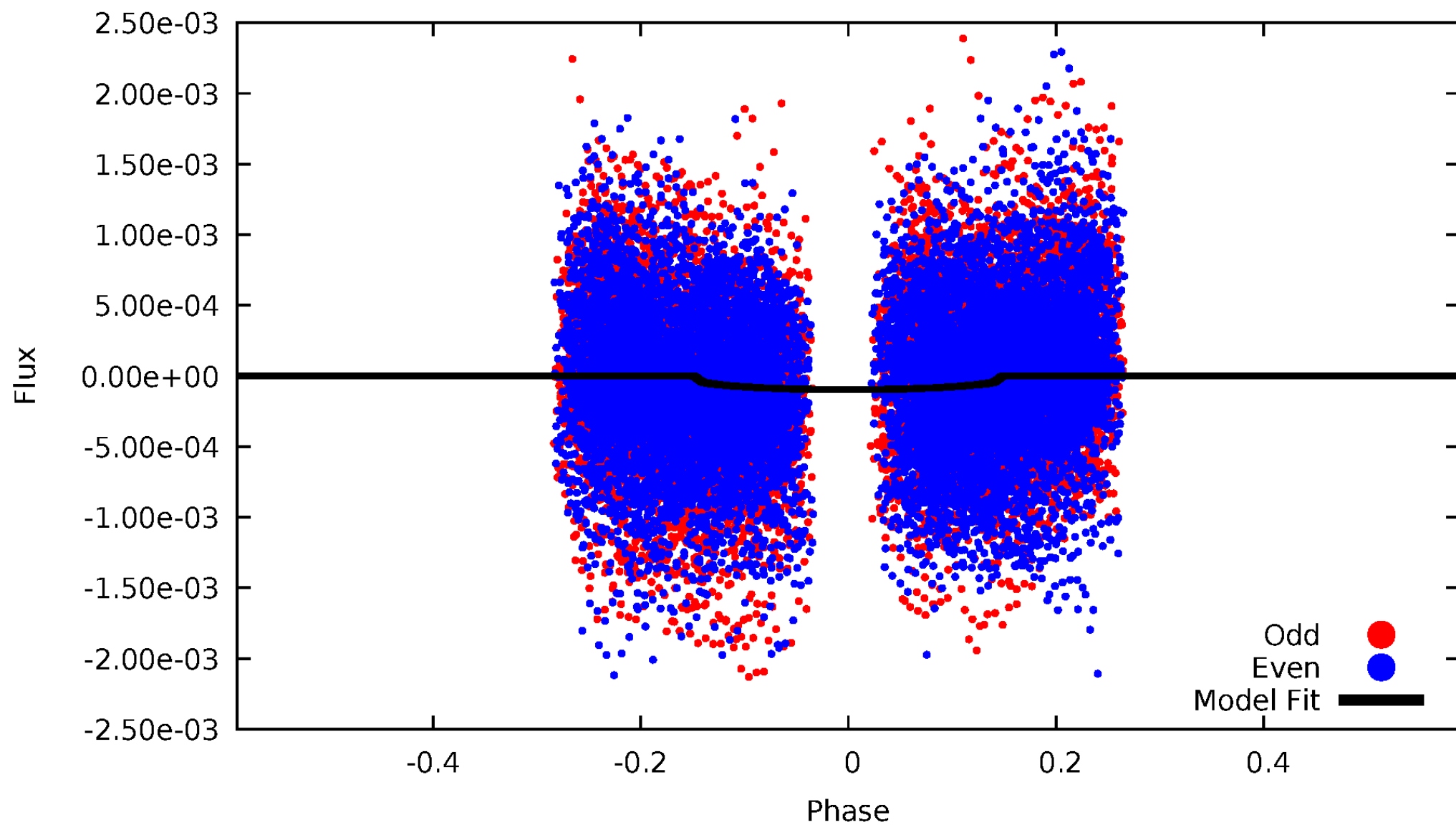


TCE 006526377-04



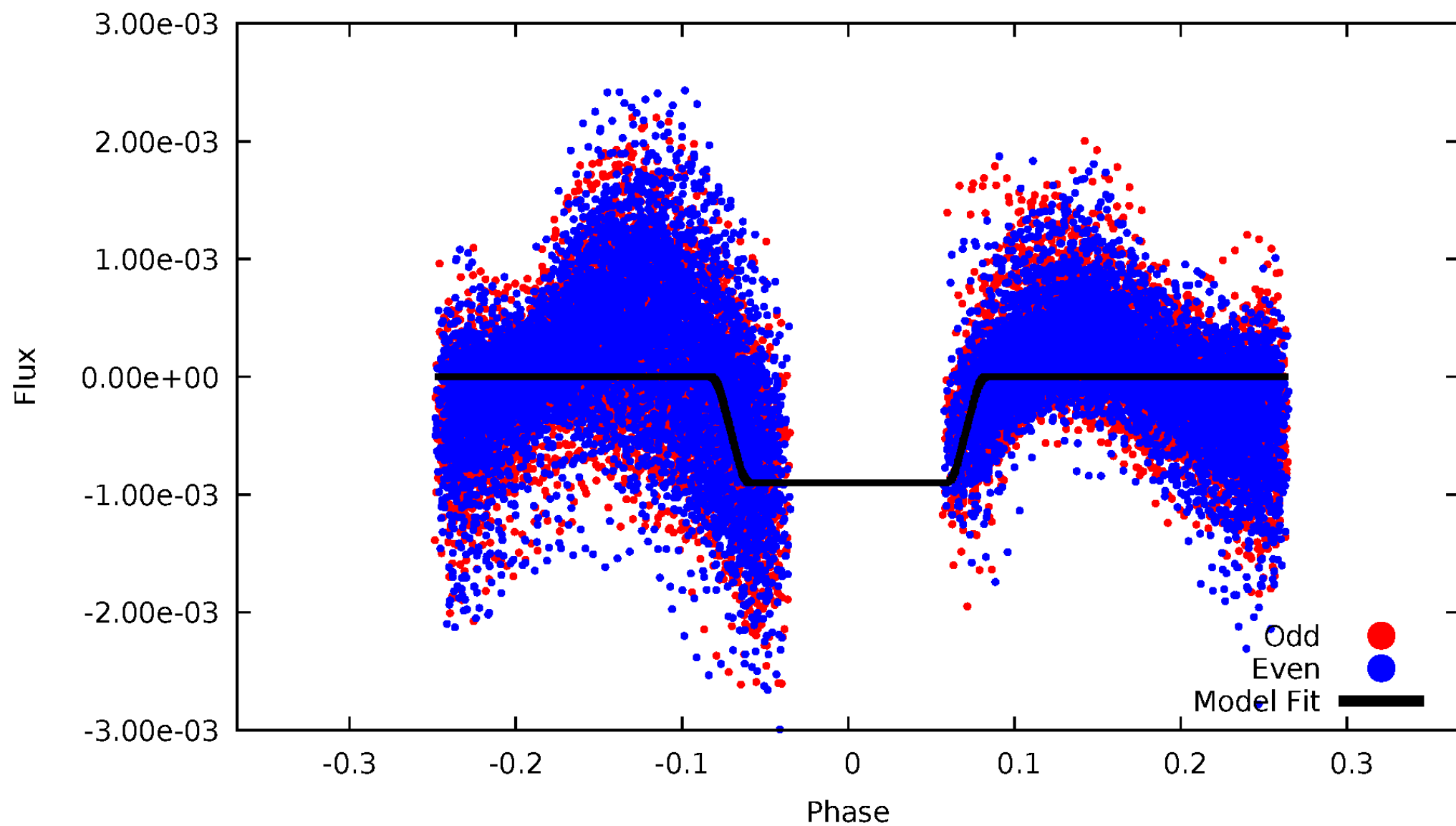
DV Odd/Even

TCE 006526377-04



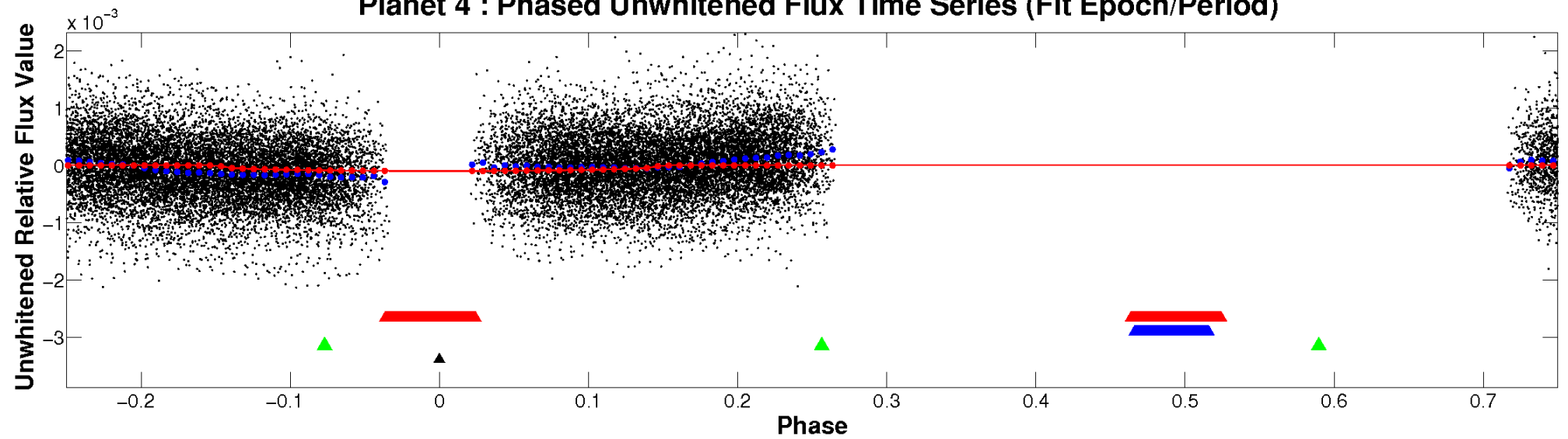
ALT Odd/Even

TCE 006526377-04

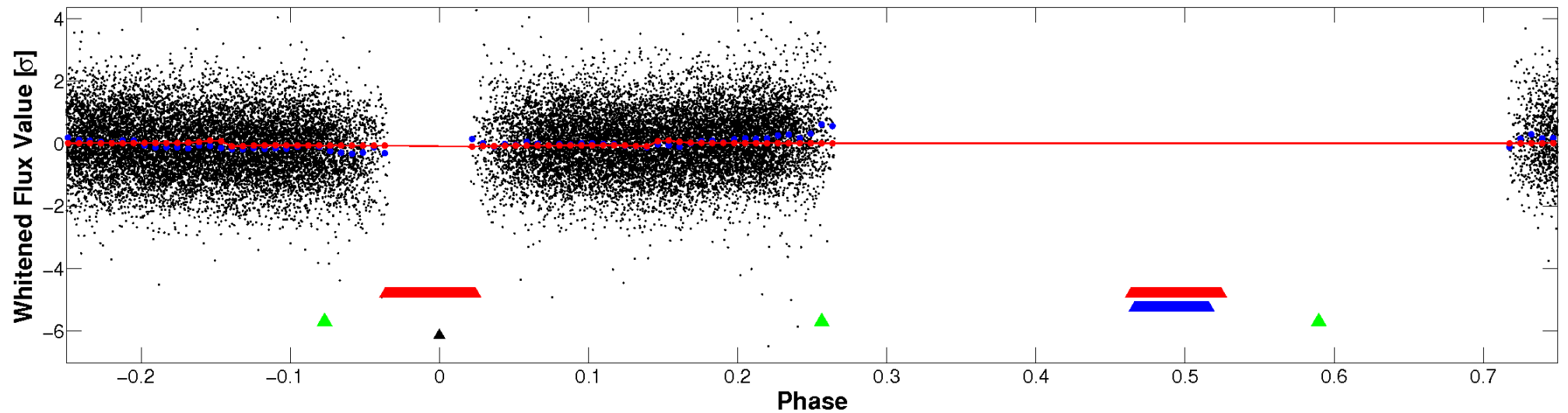


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

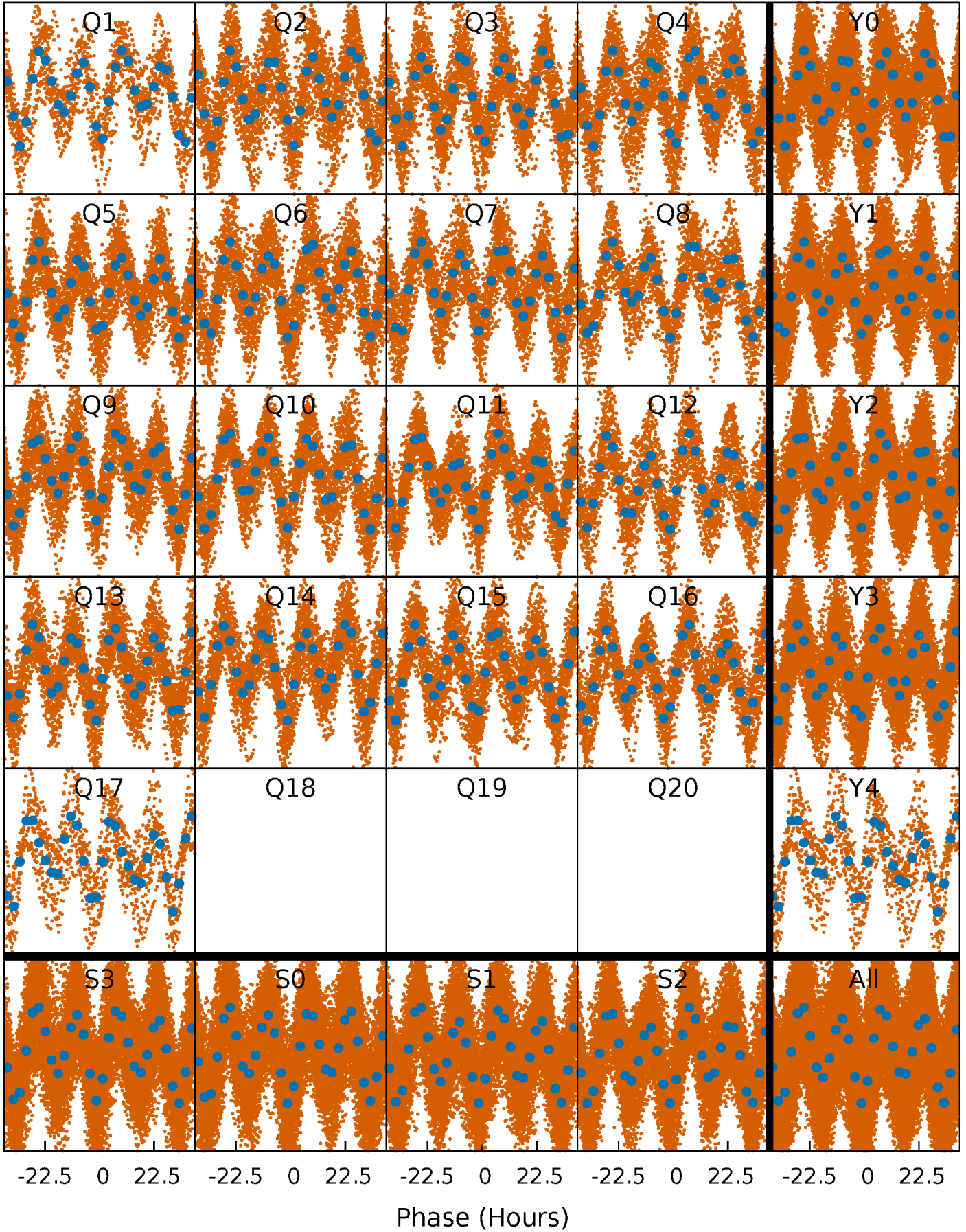


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



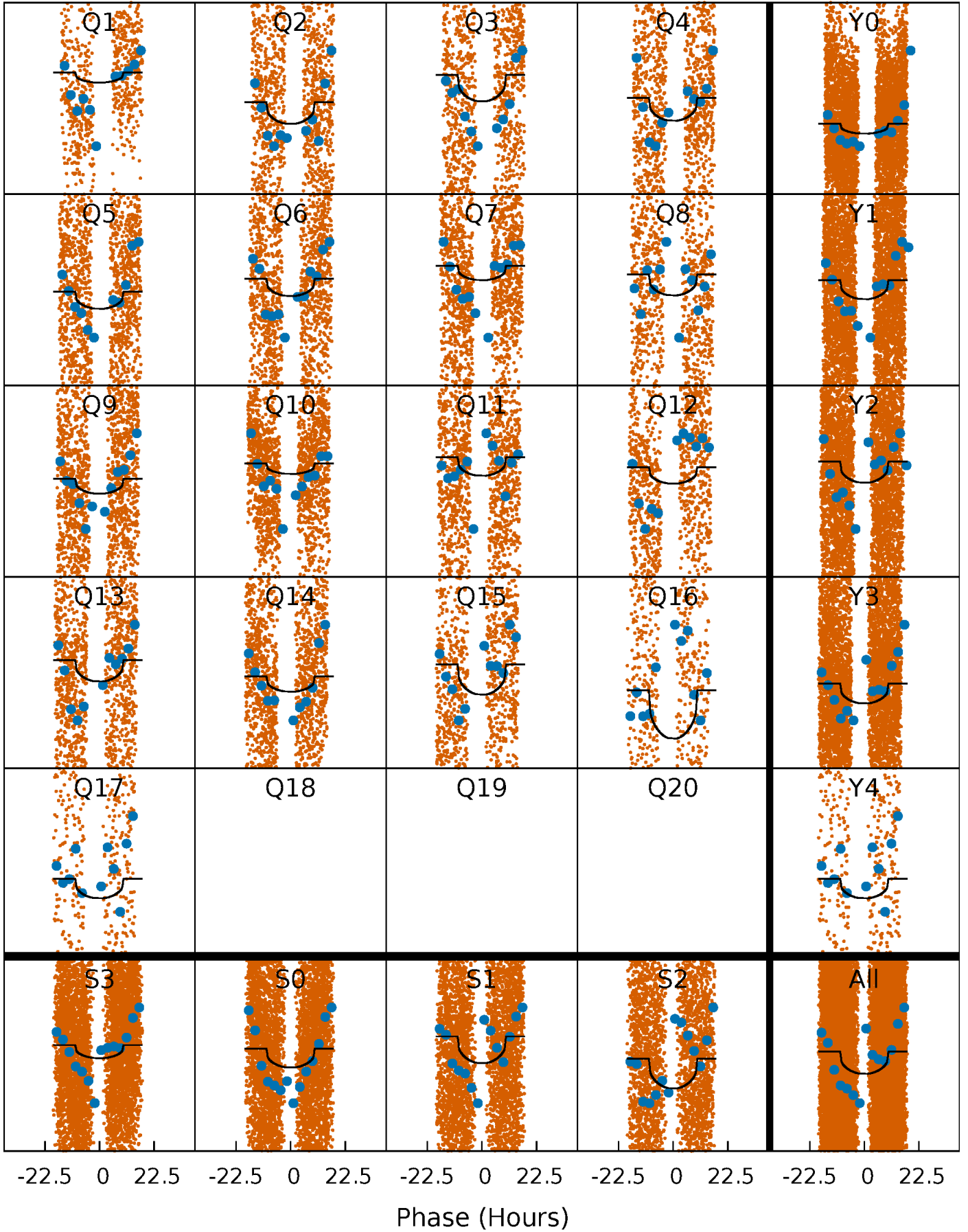
PDC Quarter-Phased Transit Curves

TCE 006526377-04 P= 2.790490 Days $T_0=133.417989$ (BKJD)



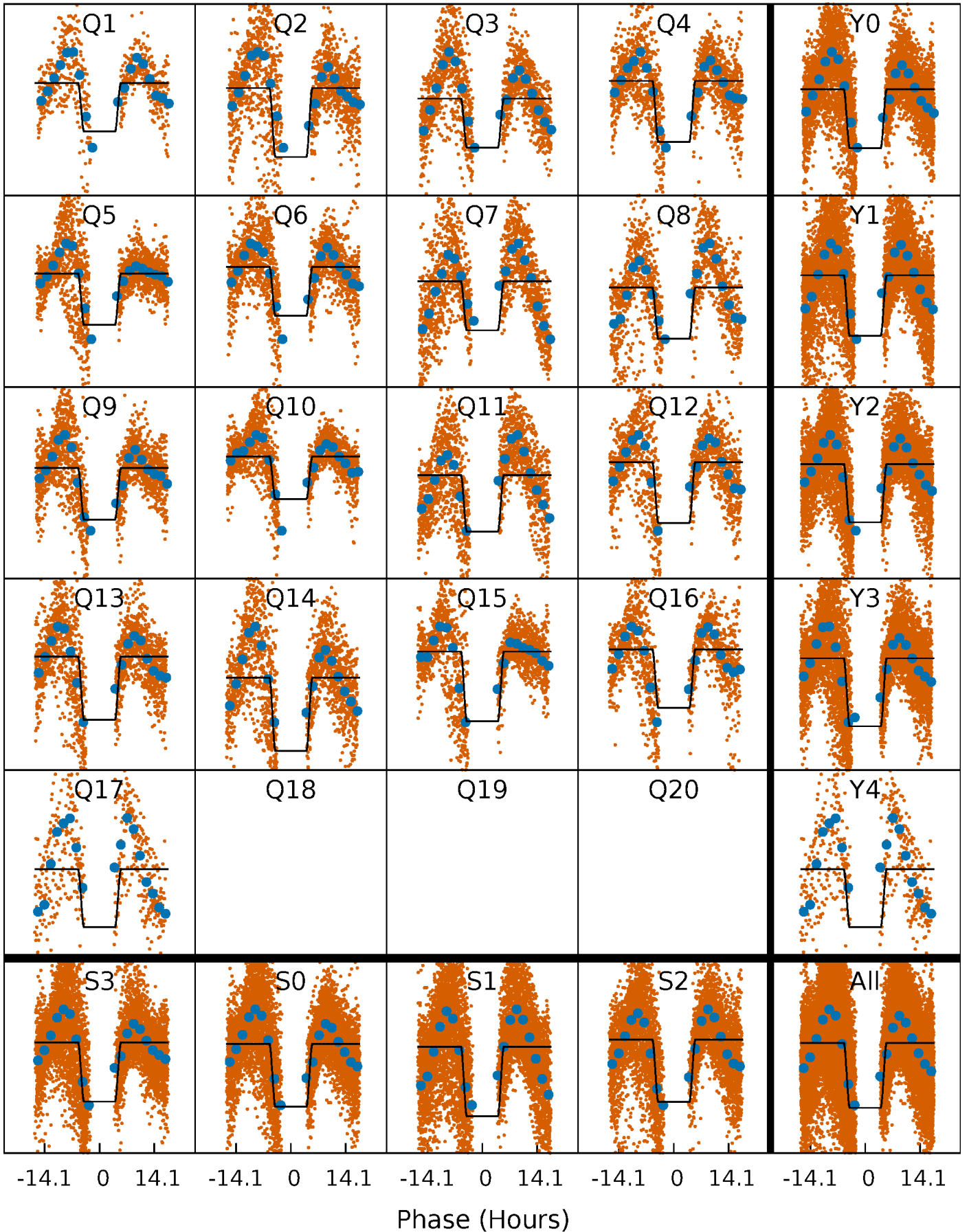
DV Quarter-Phased Transit Curves

TCE 006526377-04 P= 2.790490 Days $T_0=133.417989$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

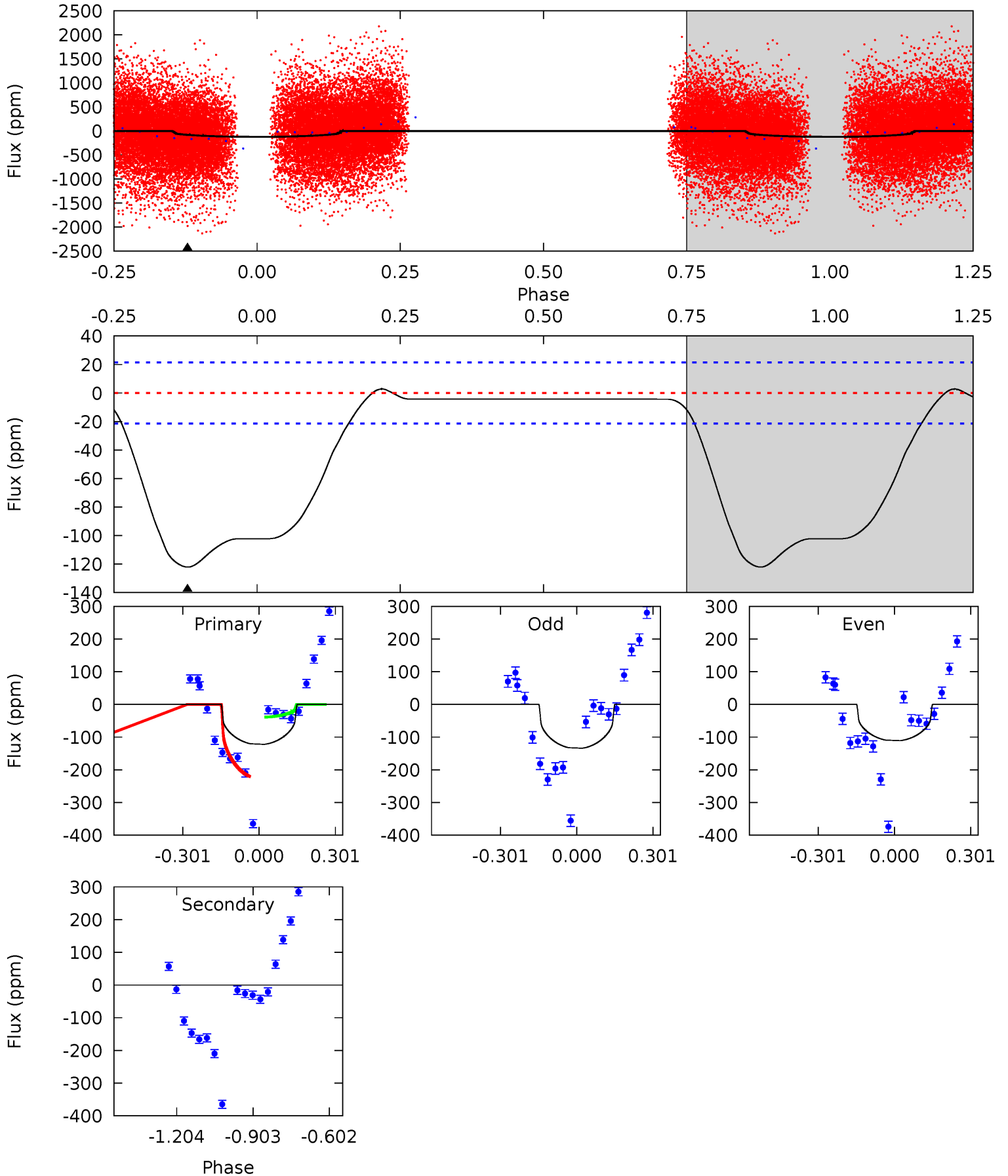
TCE 006526377-04 P= 2.790293 Days $T_0=133.422006$ (BKJD)



DV Model-Shift Uniqueness Test

006526377-04, P = 2.790490 Days, E = 130.627499 Days

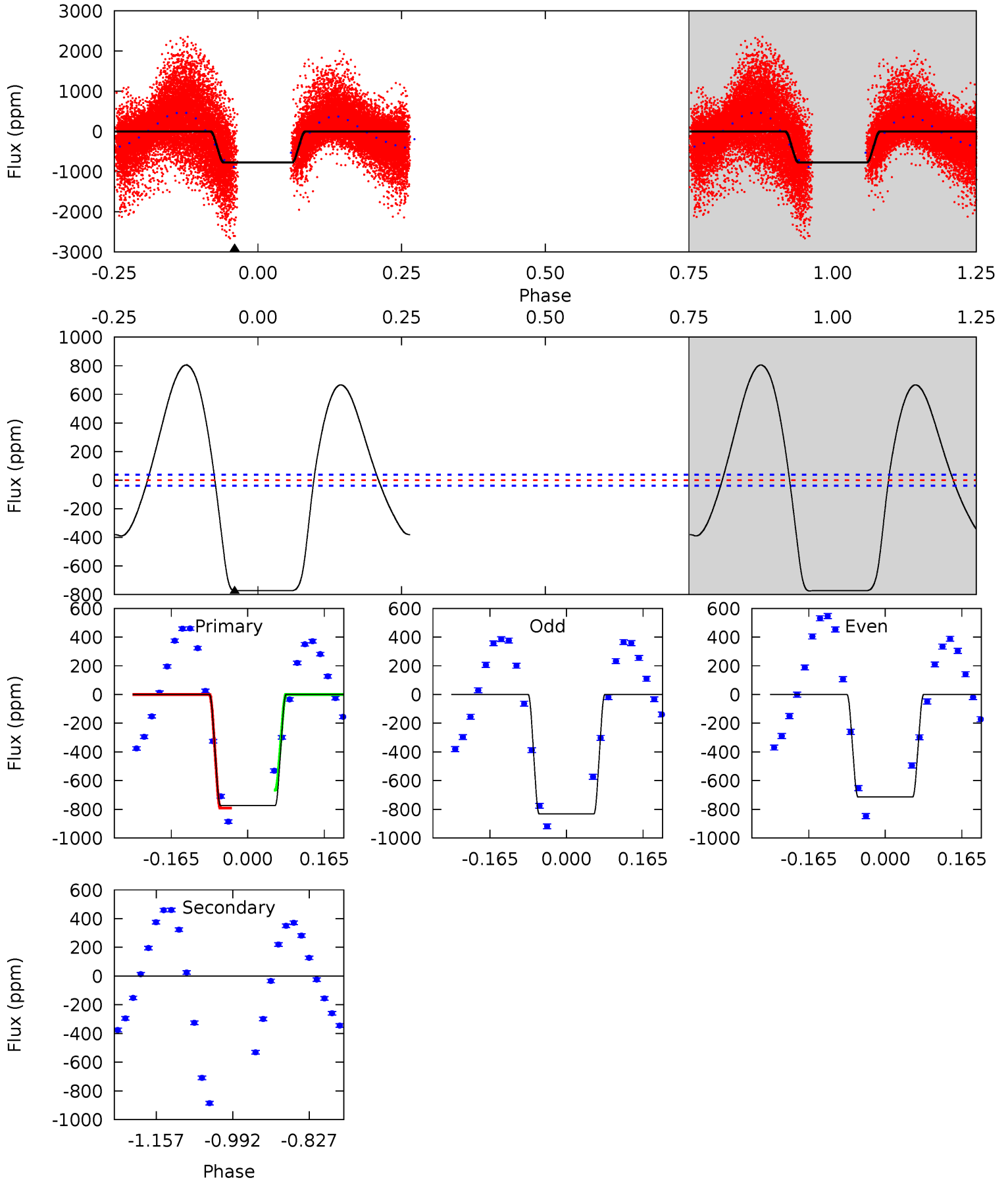
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	0	0	0	4.33	1.03	0.69	24.6	24.6	0	0	2.33	0.87	0.02	18.2



Alt Model-Shift Uniqueness Test

006526377-04, P = 2.790293 Days, E = 130.631713 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
89.0	0	0	0	4.46	1.39	44.9	89.0	89.0	0	0	6.83	1.00	0.51	6.28



Stellar Parameters For KIC 006526377

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4789^{+49}_{-106}	$2.588^{+0.188}_{-0.101}$	$0.000^{+0.100}_{-0.200}$	$12.169^{+2.783}_{-4.175}$	$2.094^{+0.870}_{-0.870}$	$0.002^{+0.002}_{-0.000}$
	+1%/-2%	+7%/-4%	+inf%/-inf%	+23%/-34%	+42%/-42%	+121%/-29%
Source	SPE74	SPE74	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006526377-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 5	$11.88^{+4.10}_{-3.86}$	4561^{+252}_{-305}	-3971^{+255}_{-202}	$-0.002^{+0.059}_{-0.057}$
Alt.	0 ± 9	$40.02^{+7.04}_{-7.70}$	4558^{+259}_{-300}	-3964^{+186}_{-168}	$-0.000^{+0.008}_{-0.008}$

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 $A_{obs} \gg 1.0$

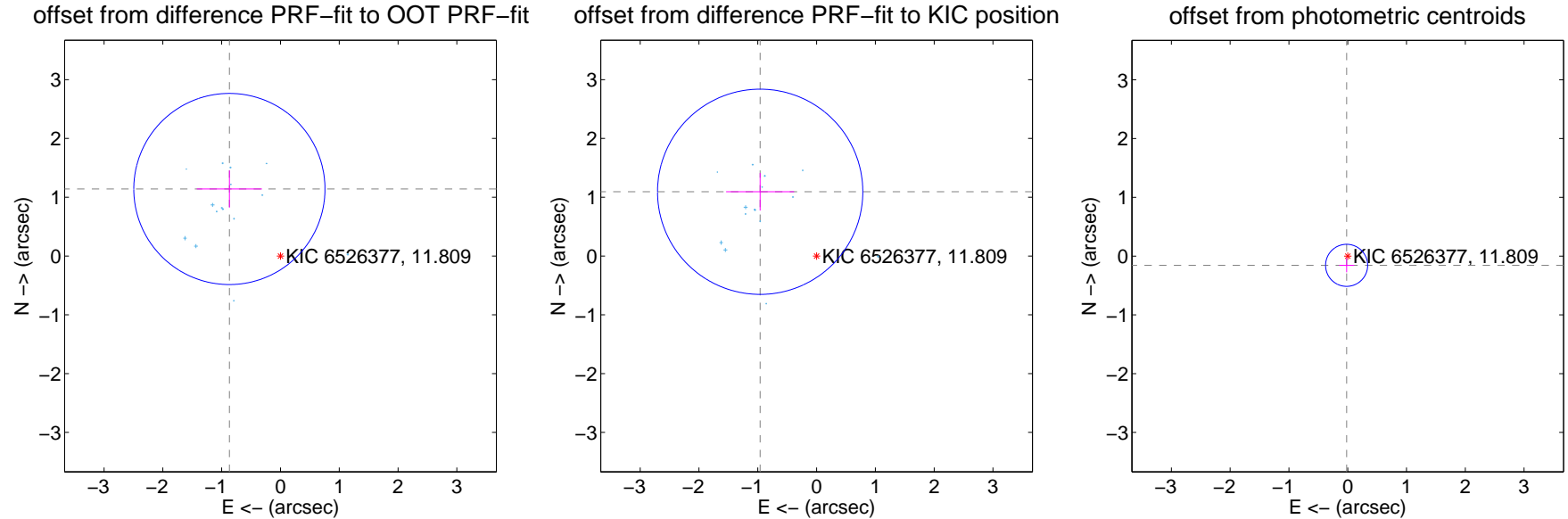
DV Centroid Data

Supplemental centroid analysis for 006526377-04. **Kepler magnitude: 11.81.** Transit SNR 8.05

There are 15 quarters with good PRF difference image offsets

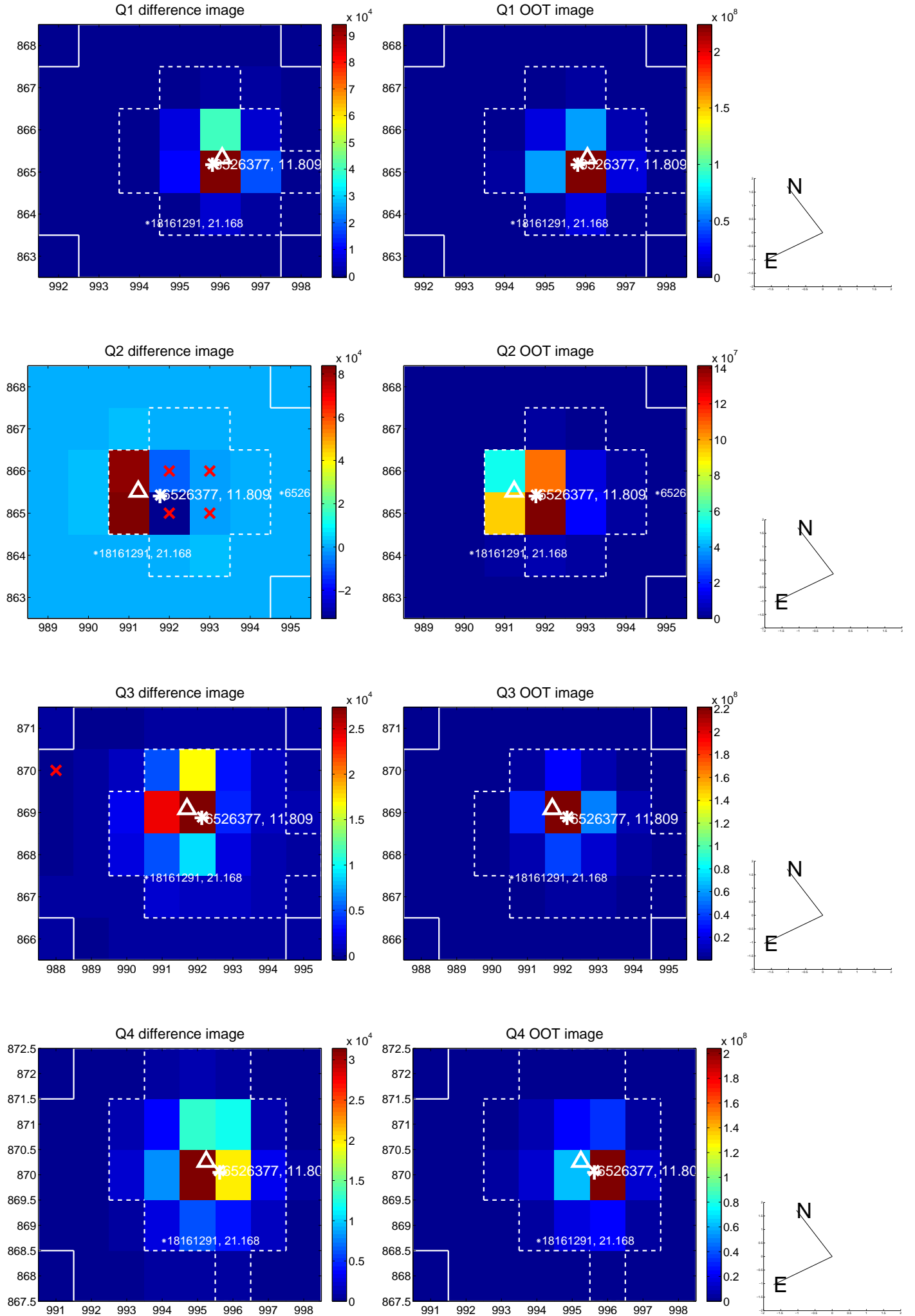
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.433 ± 0.542	2.65	0.869 ± 0.554	1.140 ± 0.317
PRF-fit source offset from KIC position	1.454 ± 0.582	2.50	0.959 ± 0.579	1.093 ± 0.319
photometric centroid source offset	0.16 ± 0.12	1.33	0.02 ± 0.13	-0.16 ± 0.12

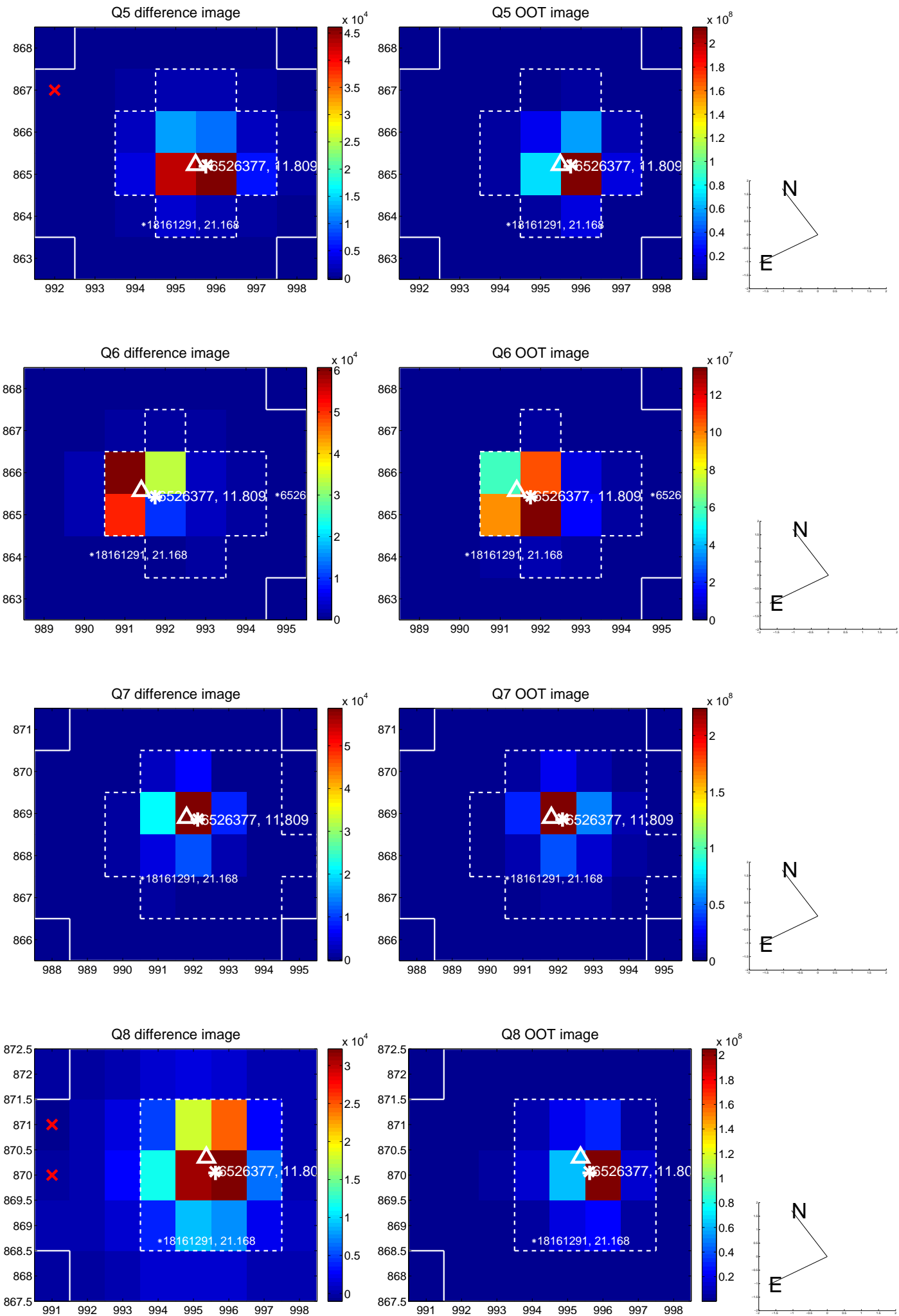


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

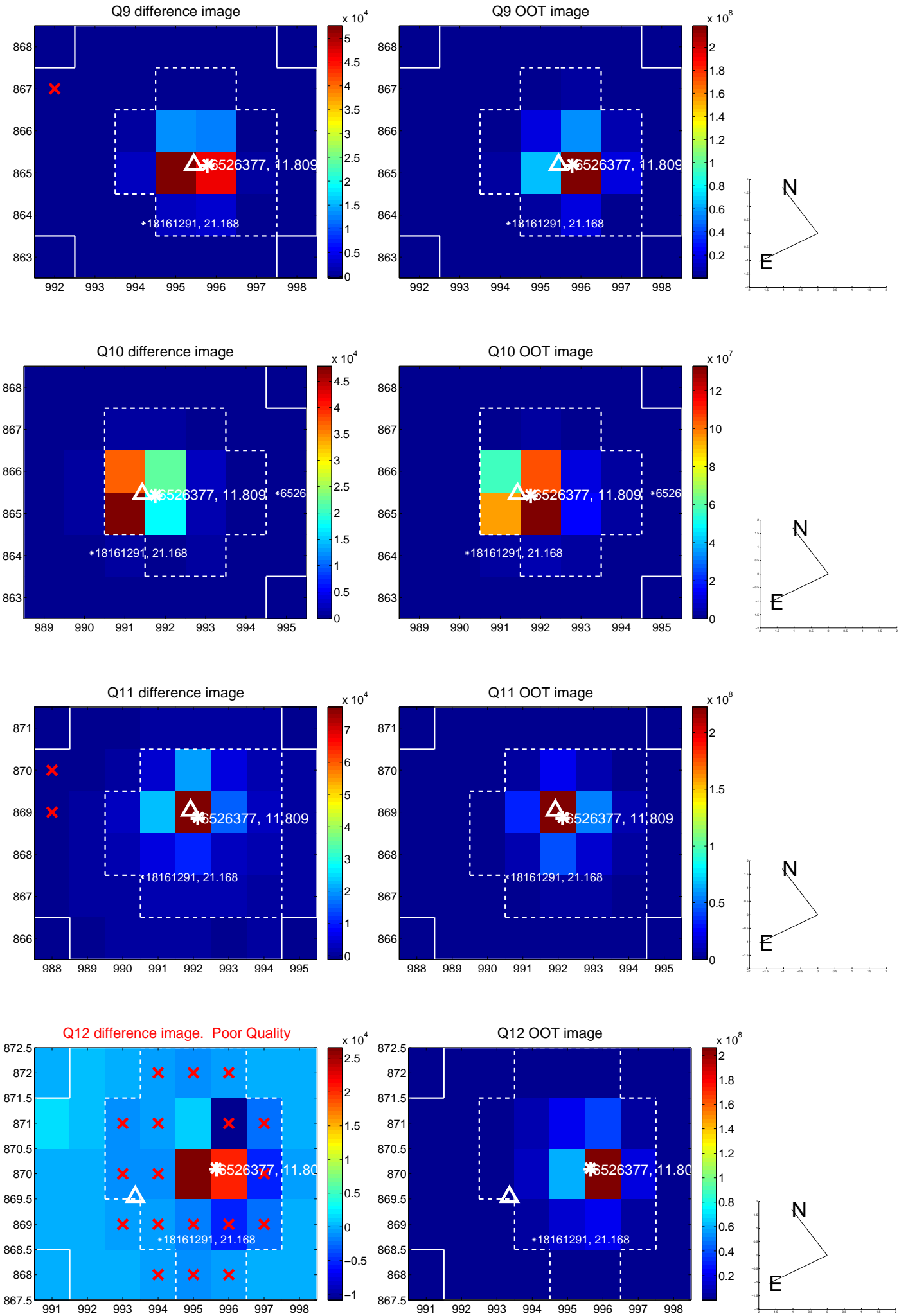
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



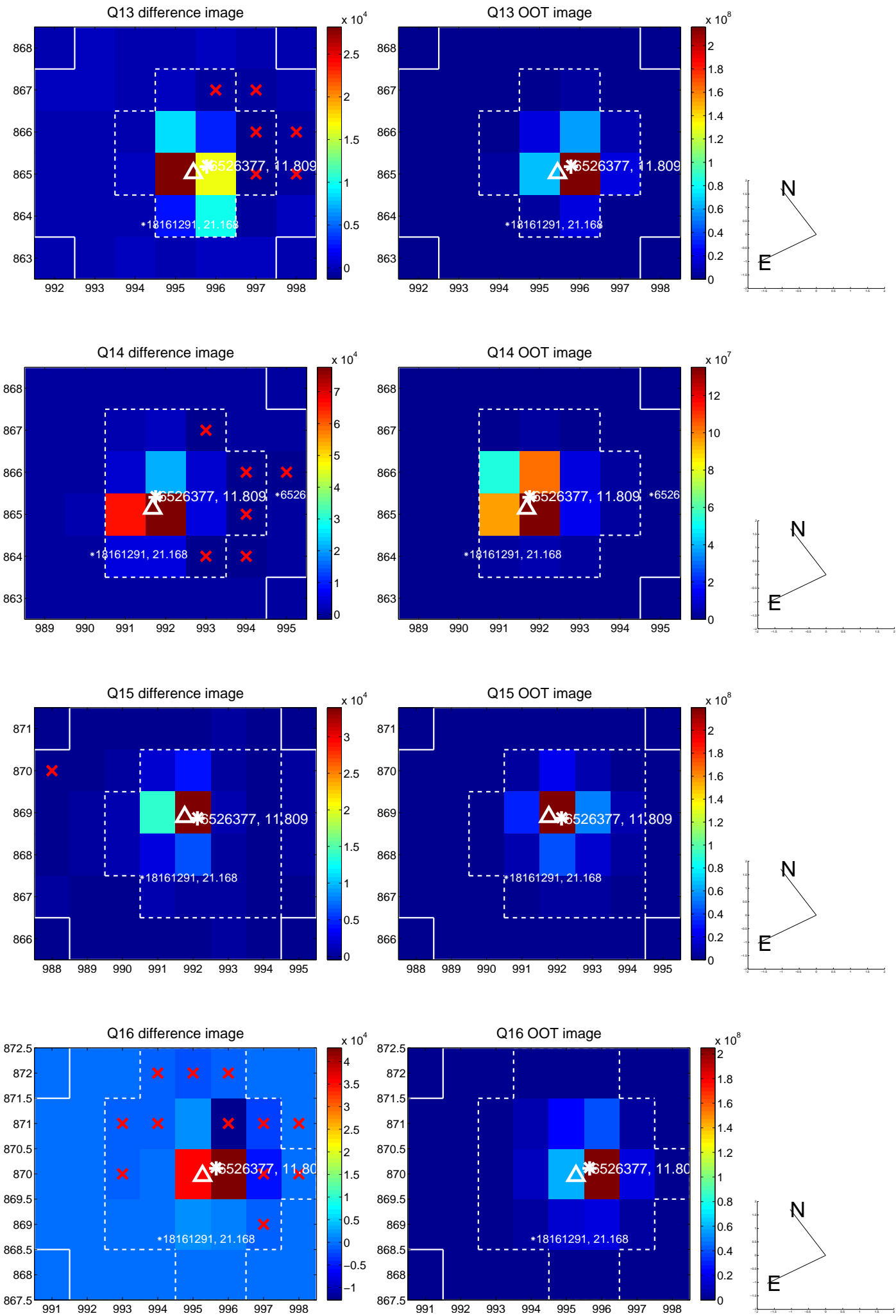
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



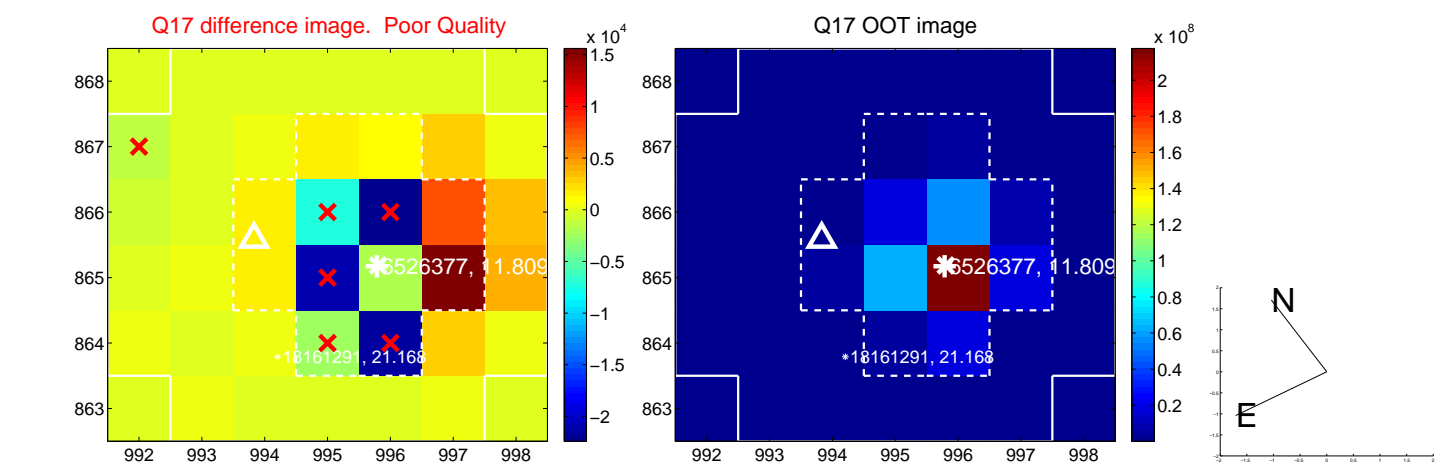
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



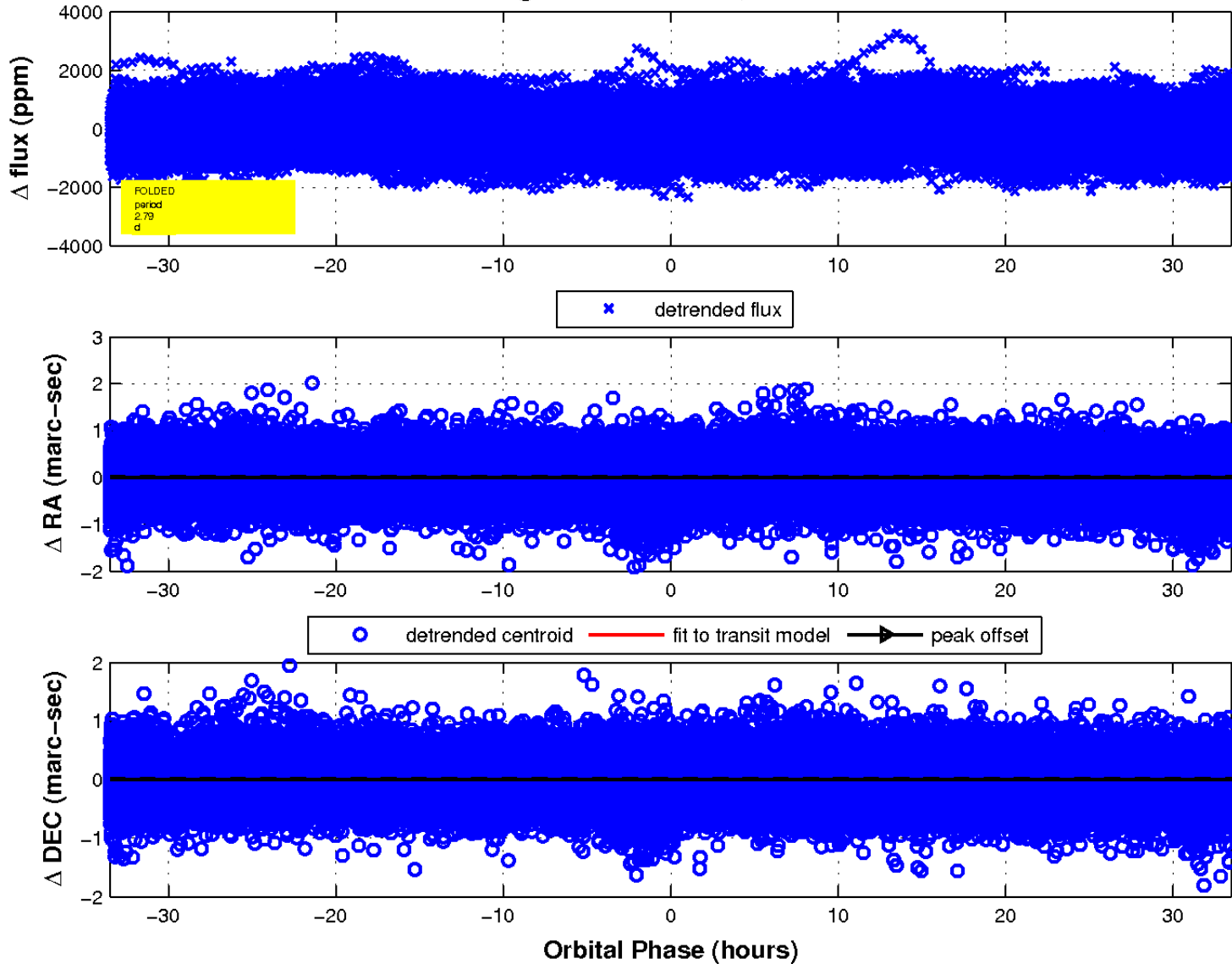
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 4 of 4



UKIRT Image

Declination

