

KIC 011508397

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})
011508397-01	OBS	No	0.611559	131.546271	36.1	3.750	12.6	6.9	2.51	7287	1.55	54192.79
011508397-02	OBS	No	0.537056	131.633137	124.0	1.576	12.6	14.3	2.51	7287	2.99	64441.61
011508397-03	OBS	No	12.674851	139.148429	364.3	3.227	9.0	9.3	2.51	7287	5.55	951.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011508397-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011508397-02	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED—HALO_GHOST
011508397-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

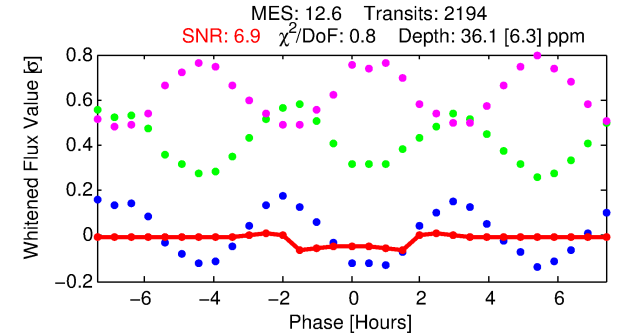
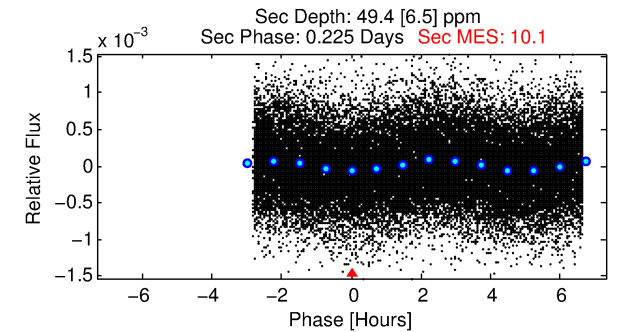
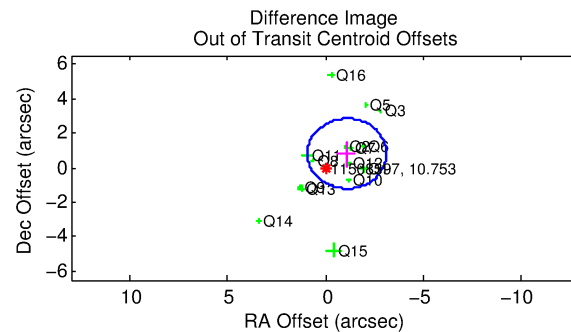
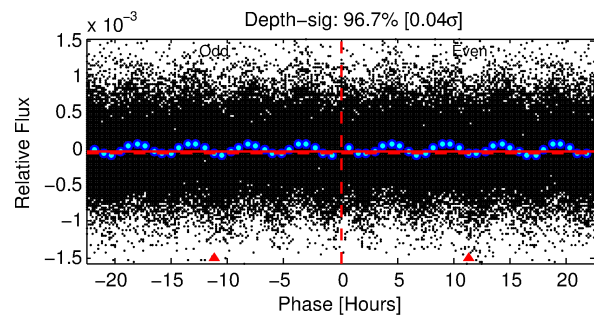
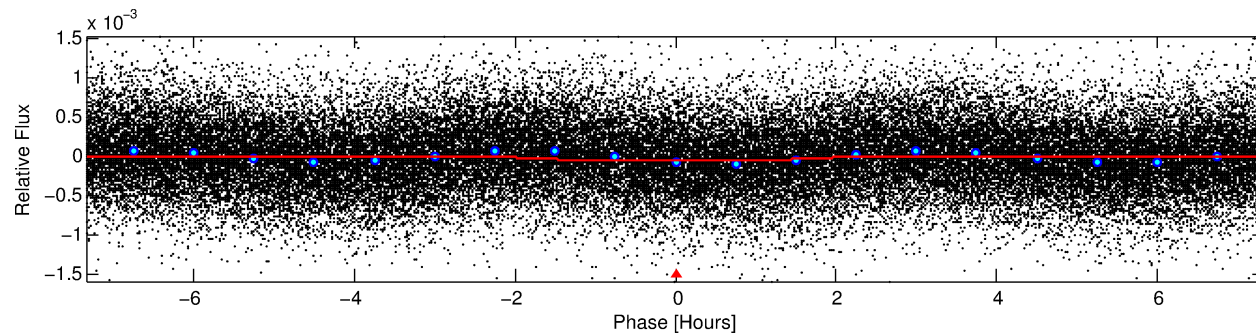
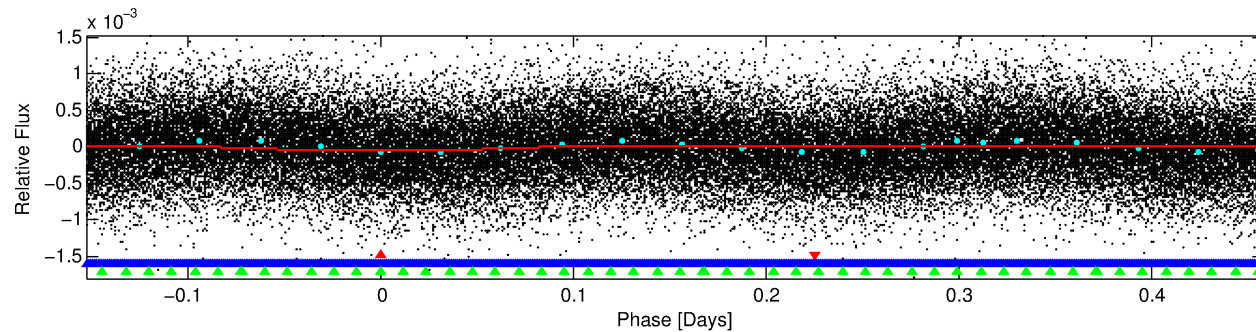
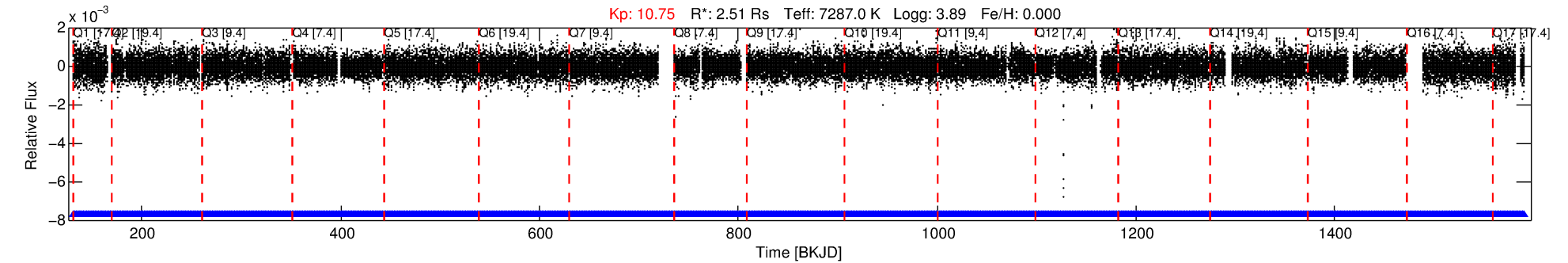
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011508397-01

No Significant Match Found

DV One-Page Summary

KIC: 11508397 Candidate: 1 of 3 Period: 0.612 d



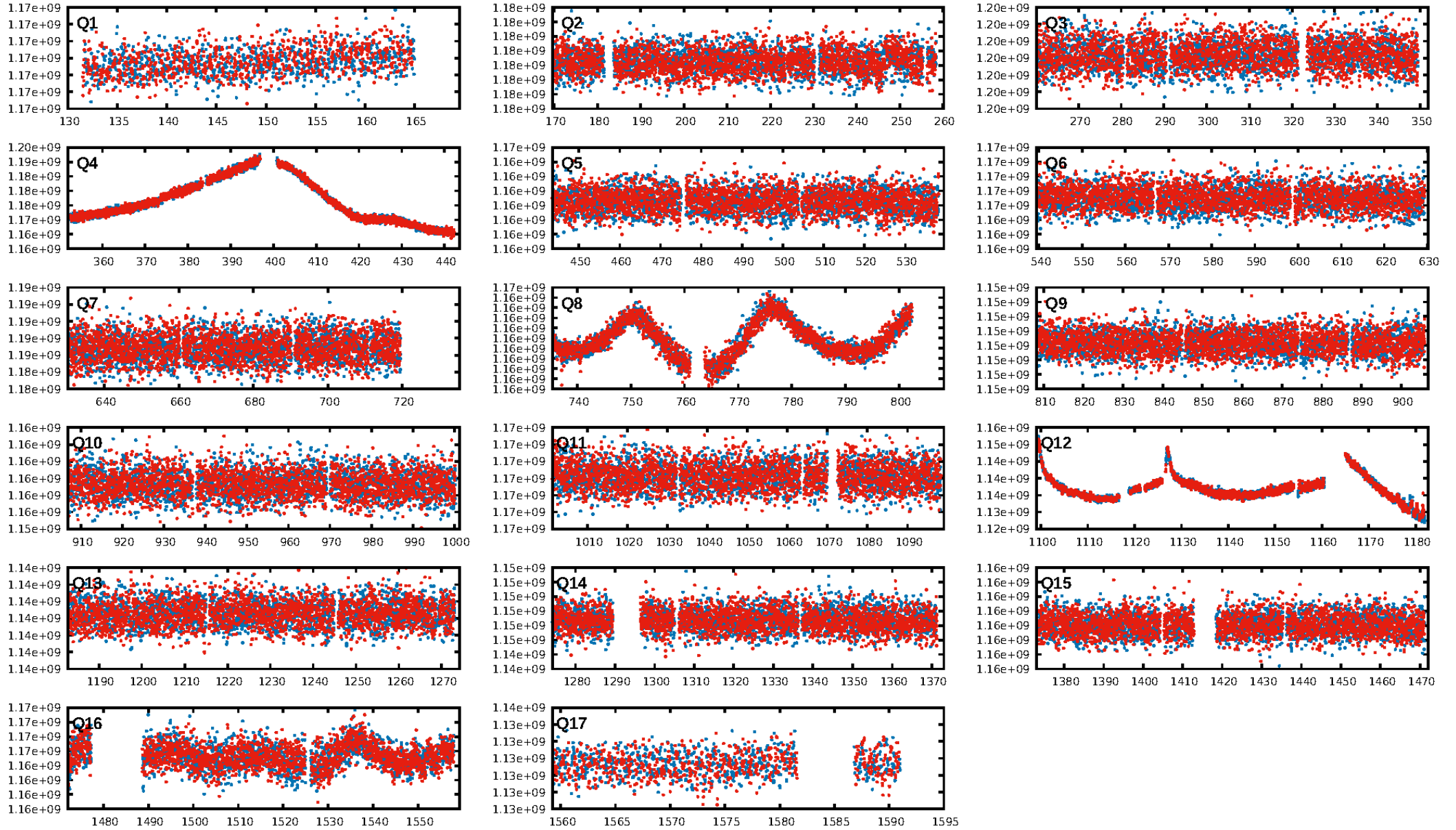
DV Fit Results:

Period = 0.61156 [0.00001] d
Epoch = 131.5463 [0.0032] BKJD
Rp/R* = 0.0057 [0.0029]
a/R* = 1.34 [1.86]
b = 0.40 [6.63]
Seff = 54192.79 [17528.43]
Teq = 3891 [315] K
Rp = 1.55 [0.88] Re
a = 0.0171 [0.0036] AU
Ag = 3.32 [3.61] [0.64 σ]
Teffp = 8121 [2113] K [1.98 σ]

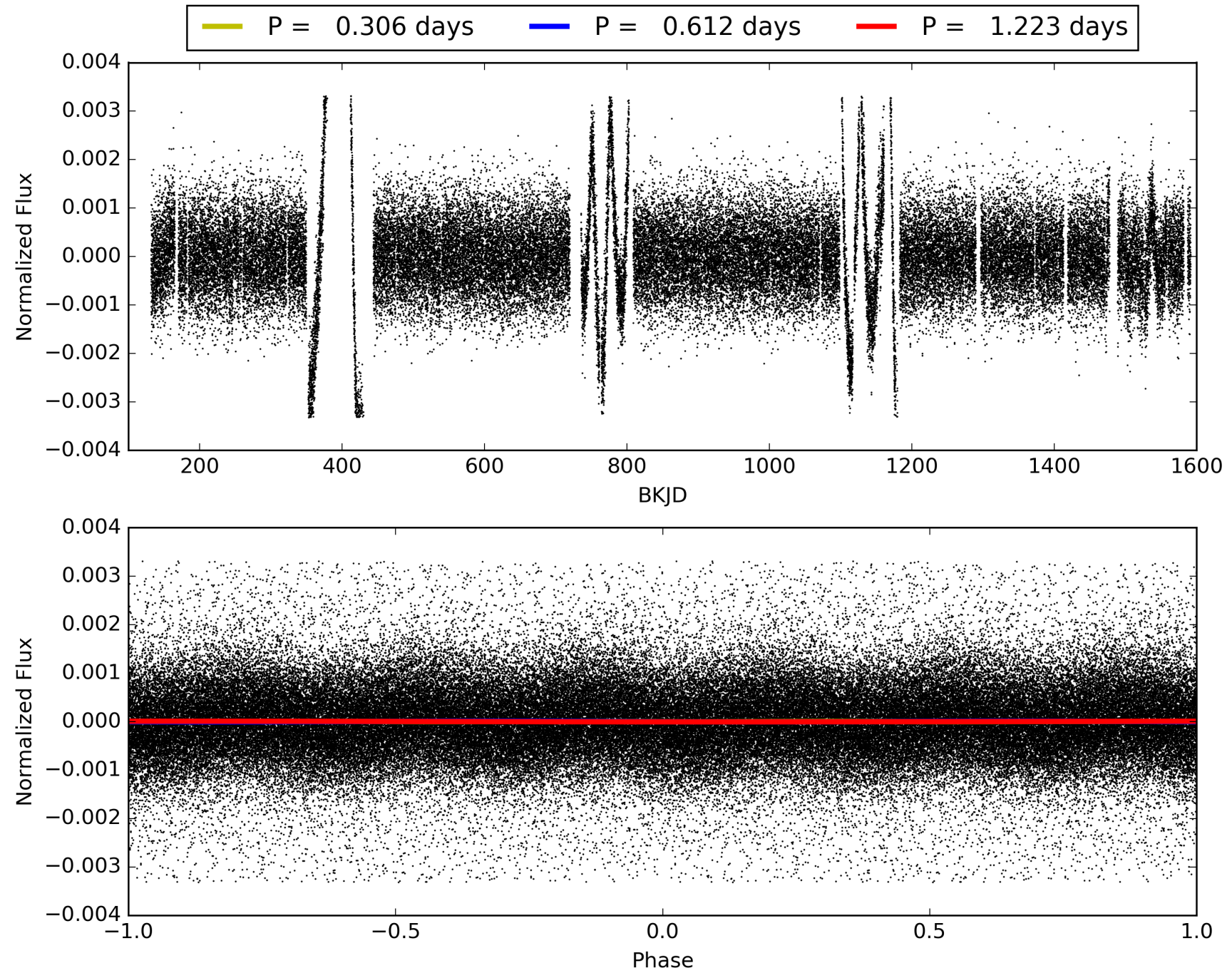
DV Diagnostic Results:

ShortPeriod-sig: 34.0% [0.44 σ]
LongPeriod-sig: 100.0% [58.52 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.91e-09
RollingBand-fgt: 1.00 [2095/2095]
GhostDiagnostic-chr: 0.2934
Centroid-sig: N/A
Centroid-so: 0.460 arcsec [2.12 σ]
OotOffset-rm: 1.355 arcsec [2.01 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-rm: 1.740 arcsec [3.28 σ]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 011508397-01, PDC Light Curves

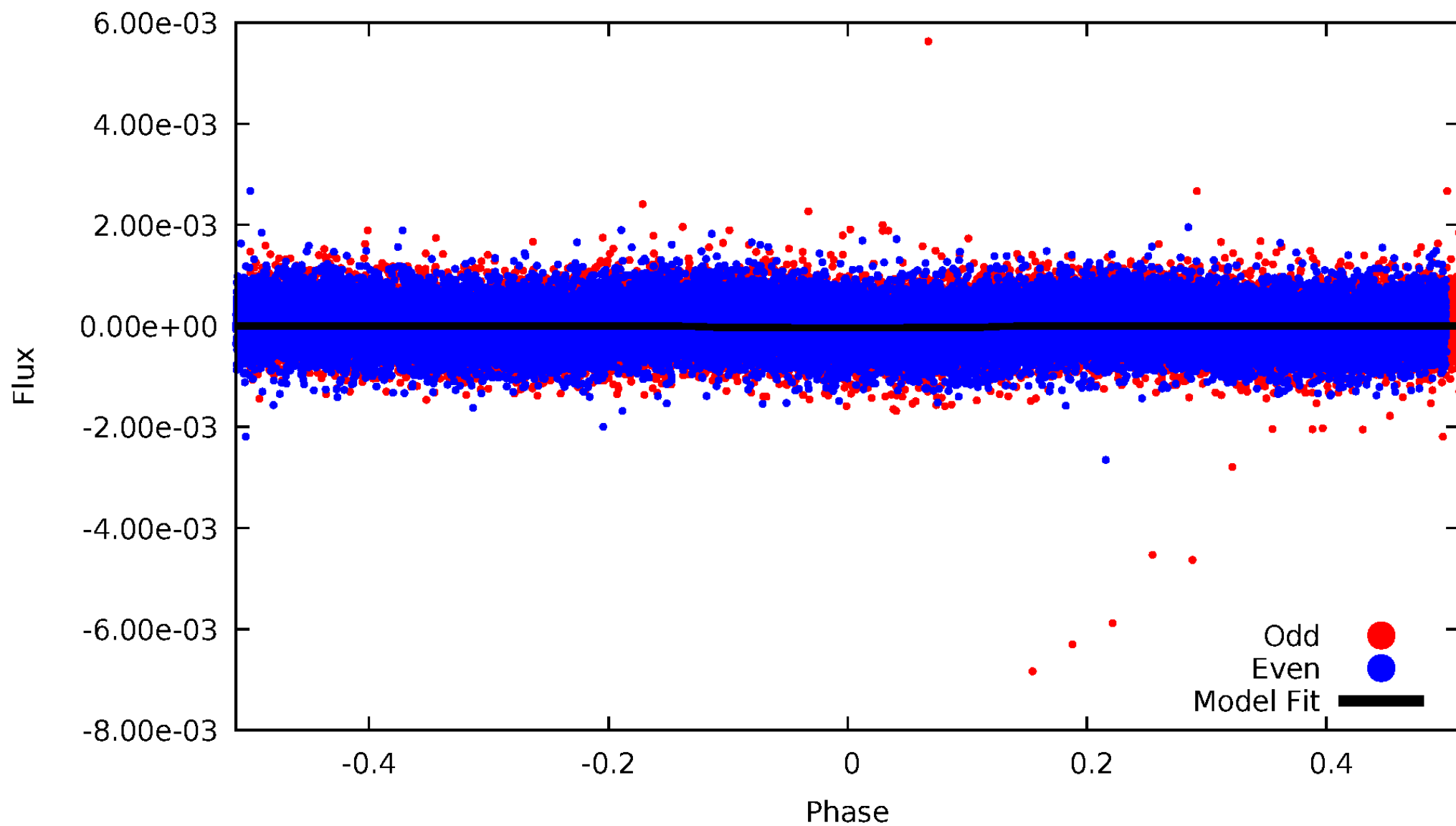


TCE 011508397-01



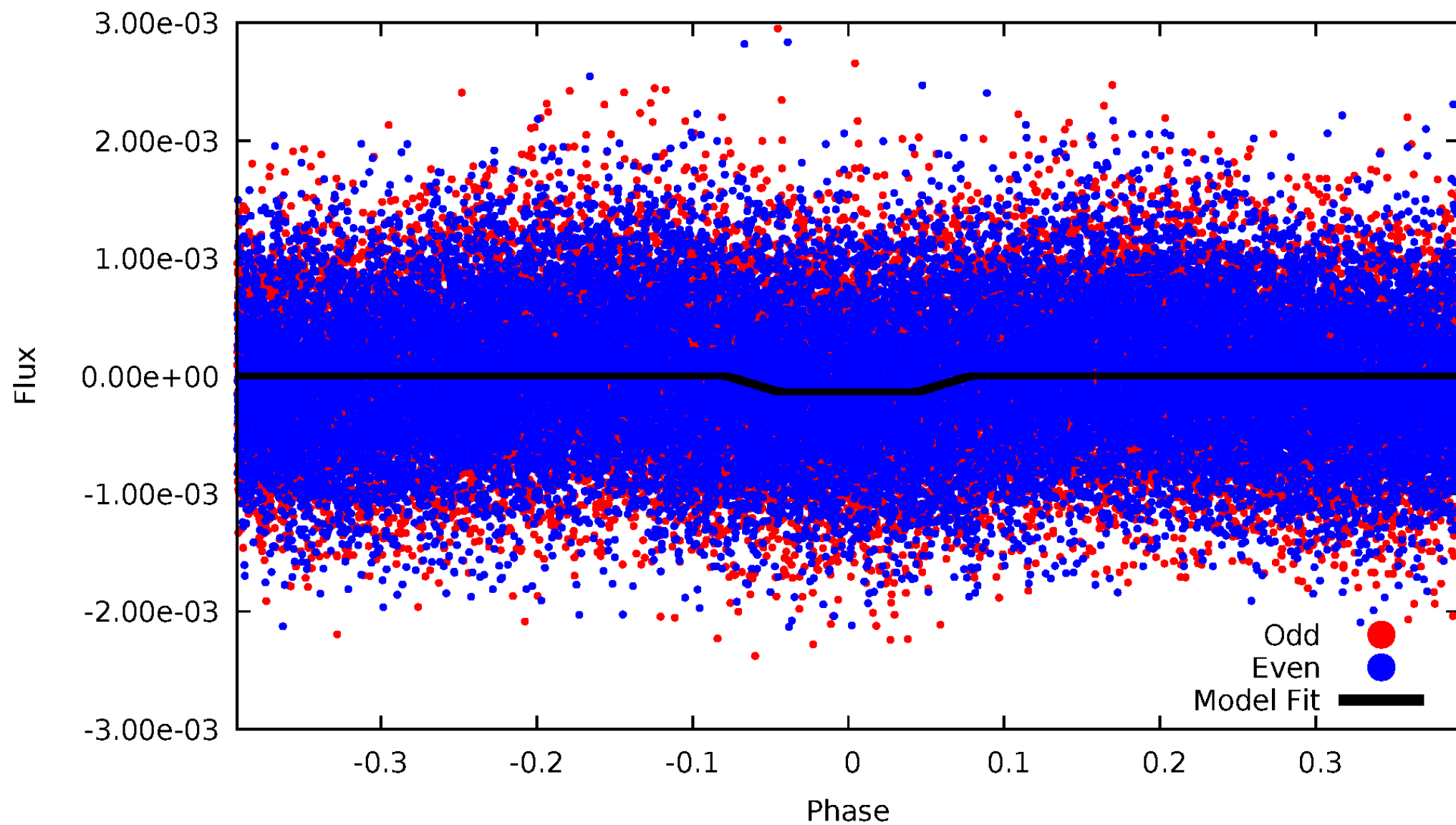
DV Odd/Even

TCE 011508397-01



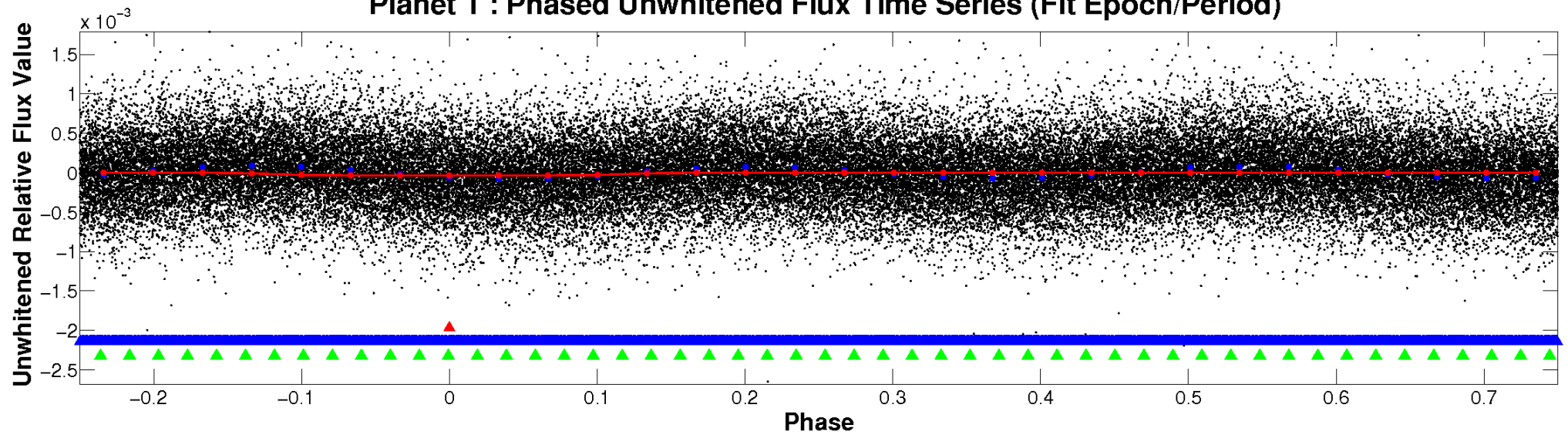
ALT Odd/Even

TCE 011508397-01

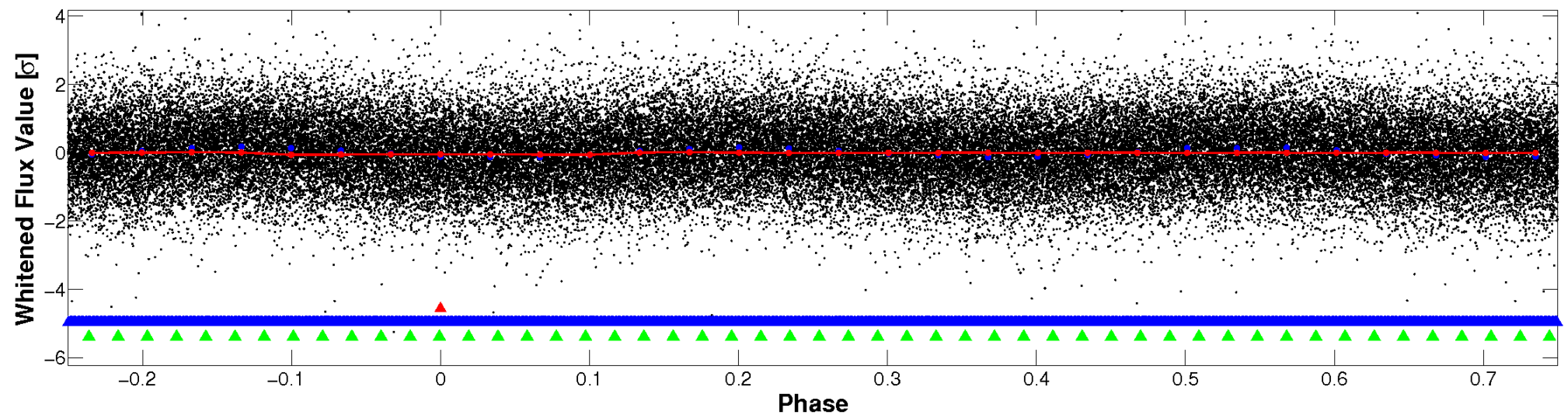


Non-Whitened Vs. Whitened Light Curve

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

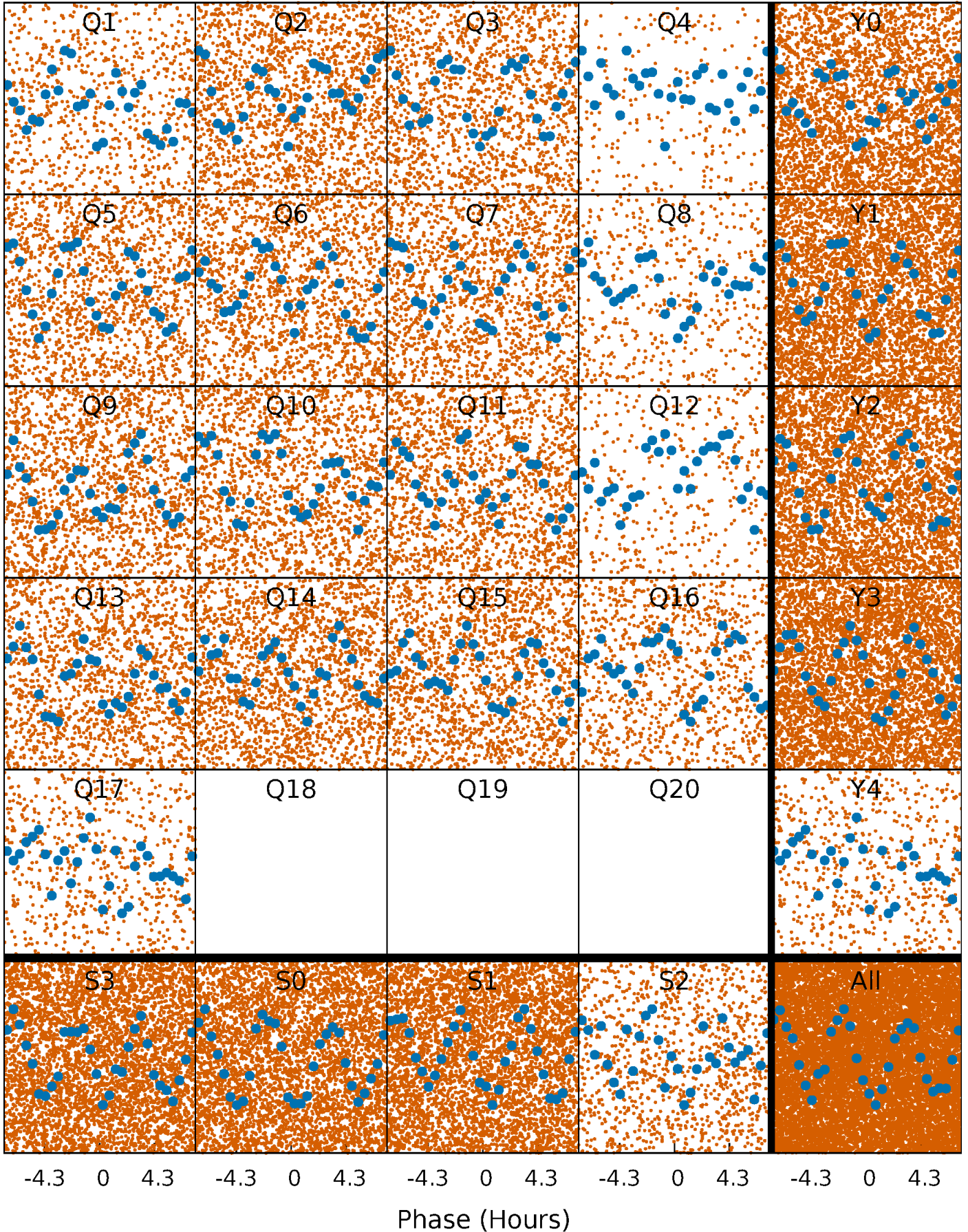


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



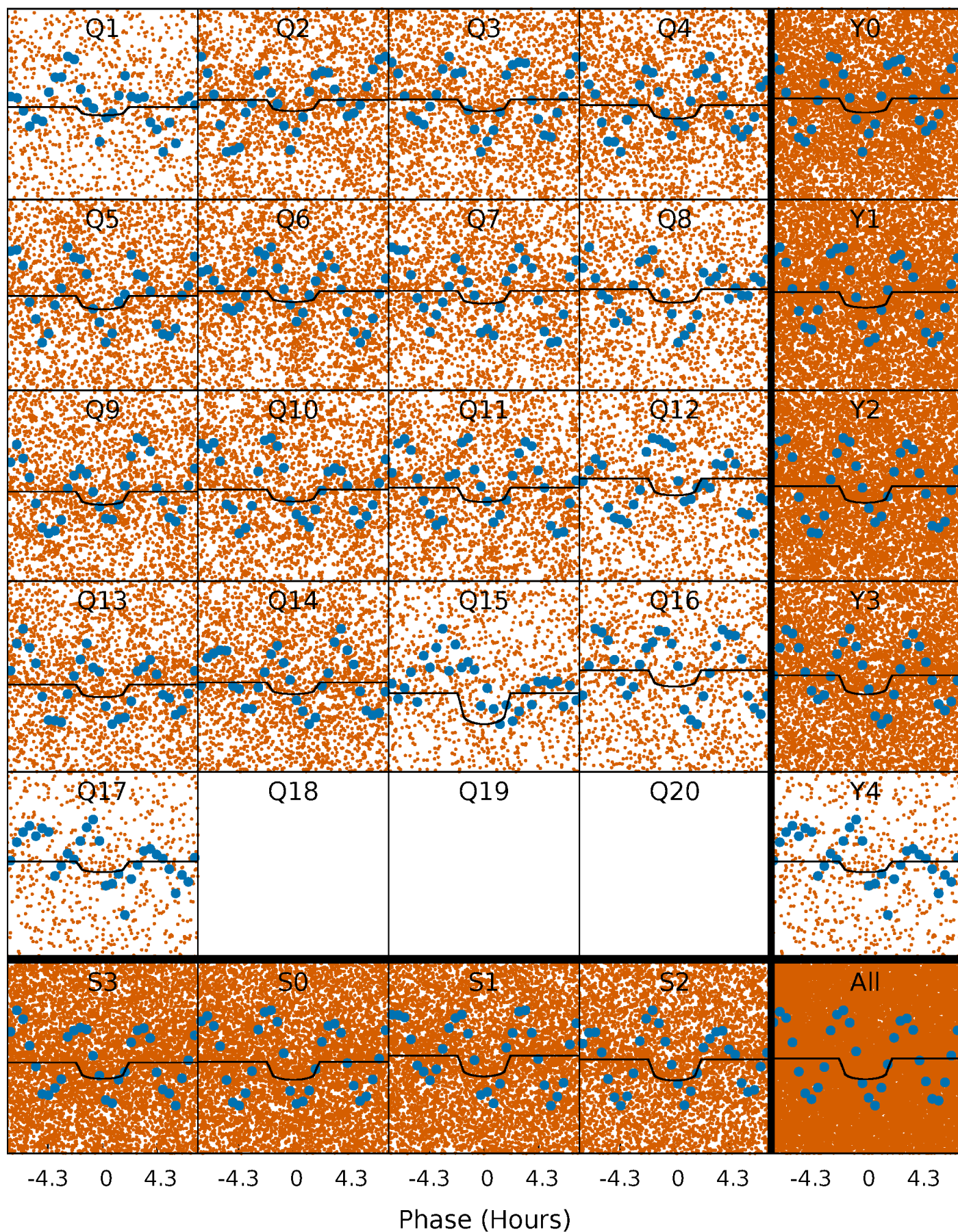
PDC Quarter-Phased Transit Curves

TCE 011508397-01 P= 0.611559 Days $T_0=131.546271$ (BKJD)



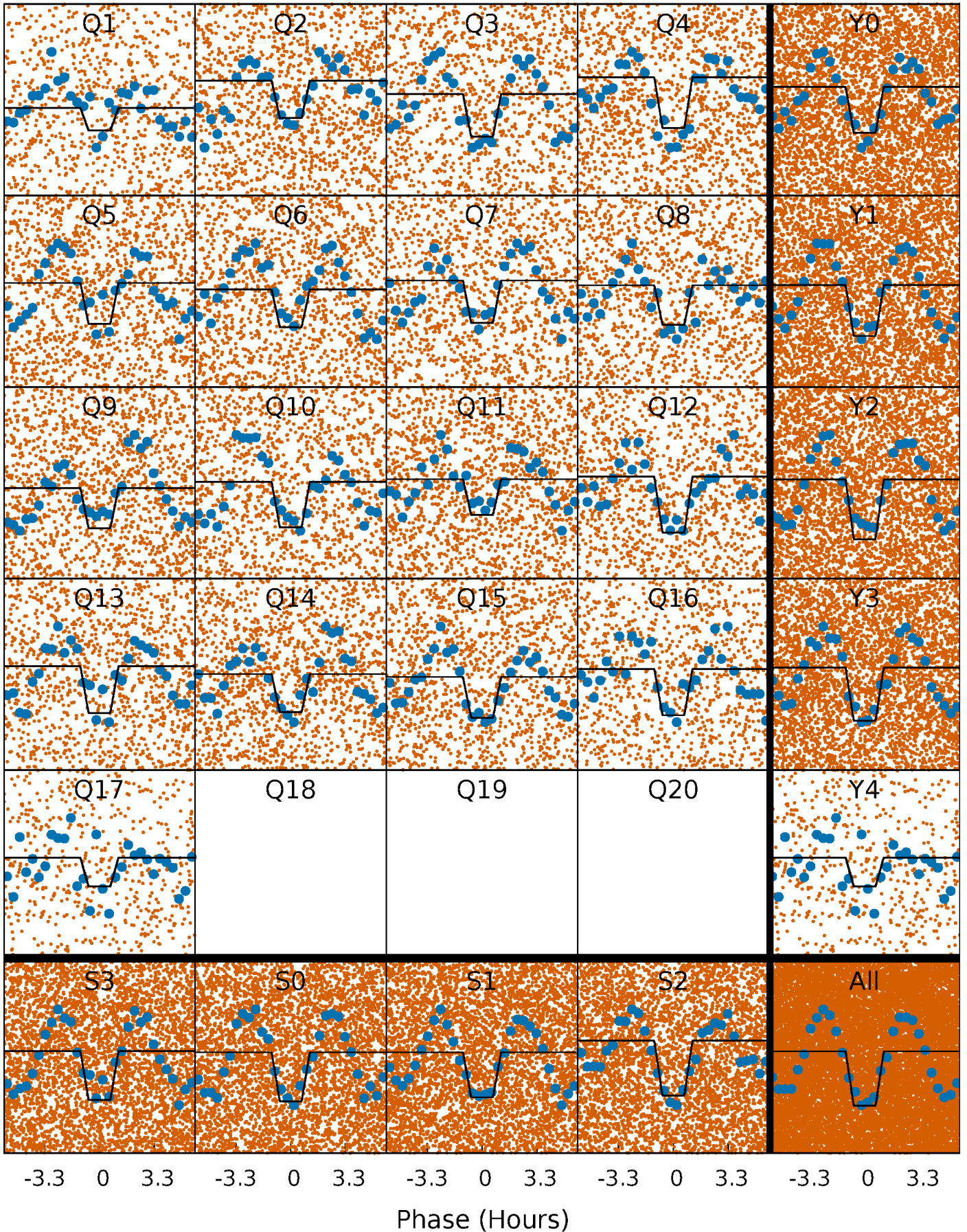
DV Quarter-Phased Transit Curves

TCE 011508397-01 P= 0.611559 Days $T_0=131.546271$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

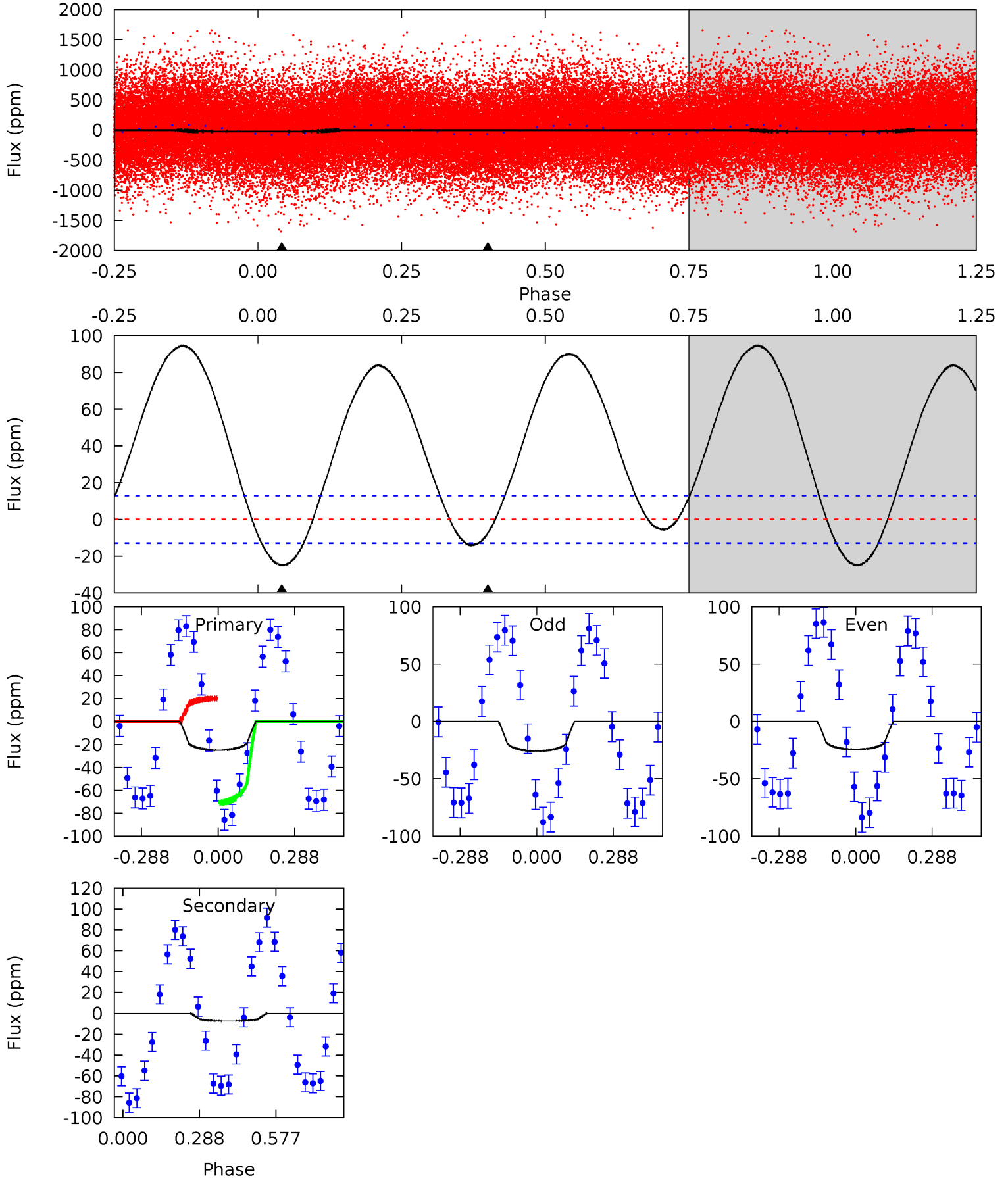
TCE 011508397-01 P= 0.611587 Days $T_0=131.541201$ (BKJD)



DV Model-Shift Uniqueness Test

011508397-01, P = 0.611559 Days, E = 130.934712 Days

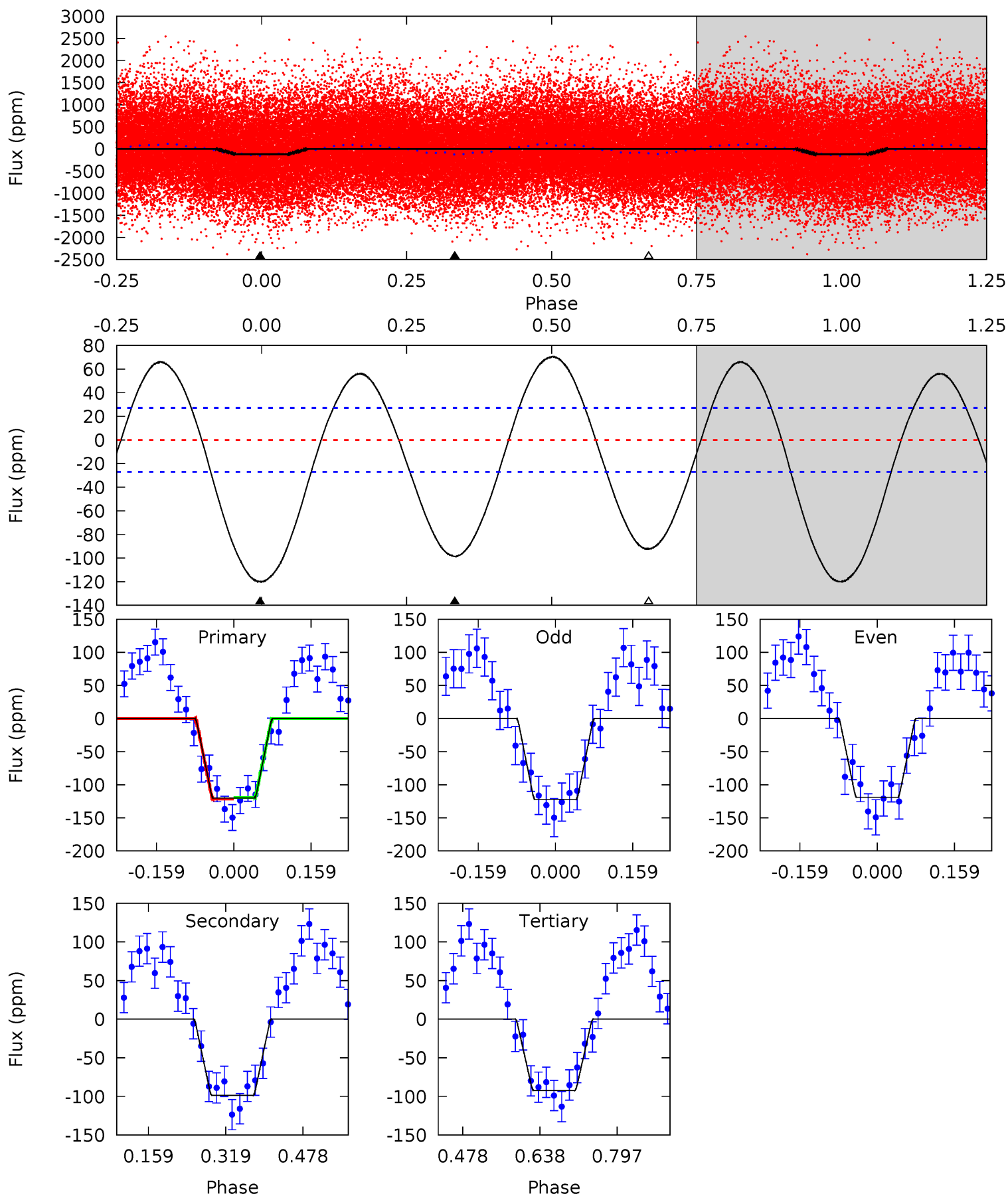
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.38	2.50	0	0	4.34	1.06	3.38	8.38	8.38	2.50	2.50	0.24	1.12	0.79	8.53



Alt Model-Shift Uniqueness Test

011508397-01, P = 0.611587 Days, E = 130.929614 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	16.3	15.2	0	4.47	1.41	9.62	4.61	19.8	1.06	16.3	0.26	1.00	0.37	0.19



Stellar Parameters For KIC 011508397

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7287^{+76}_{-87}	$3.892^{+0.182}_{-0.098}$	$0.000^{+0.150}_{-0.150}$	$2.507^{+0.391}_{-0.586}$	$1.785^{+0.128}_{-0.227}$	$0.160^{+0.156}_{-0.049}$
	+1%/-1%	+5%/-3%	+inf%/-inf%	+16%/-23%	+7%/-13%	+98%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011508397-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-7 ± 3	$1.54^{+0.76}_{-0.70}$	5394^{+233}_{-310}	4078^{+2302}_{-7963}	$0.481^{+1.267}_{-0.303}$
Alt.	-99 ± 6	$3.07^{+0.89}_{-0.83}$	5409^{+233}_{-319}	6378^{+1247}_{-909}	$1.682^{+1.464}_{-0.683}$

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 $A_{obs} \gg 1.0$

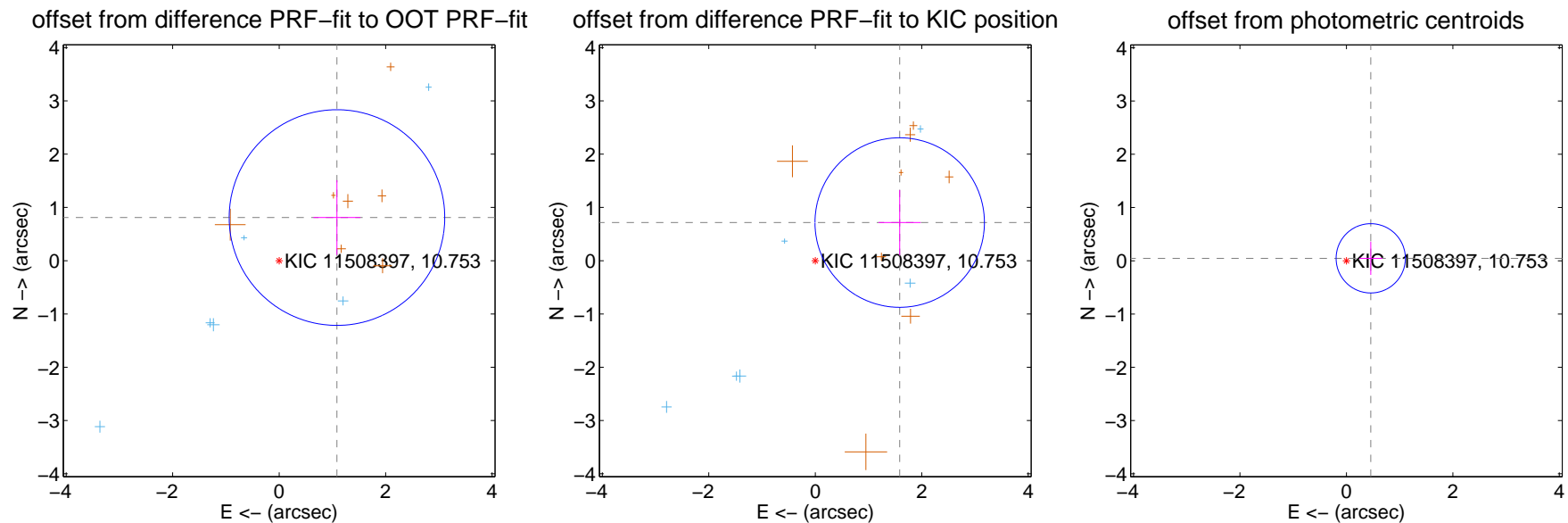
DV Centroid Data

Supplemental centroid analysis for 011508397-01. **Kepler magnitude: 10.75.** Transit SNR 6.91

There are 6 quarters with good PRF difference image offsets

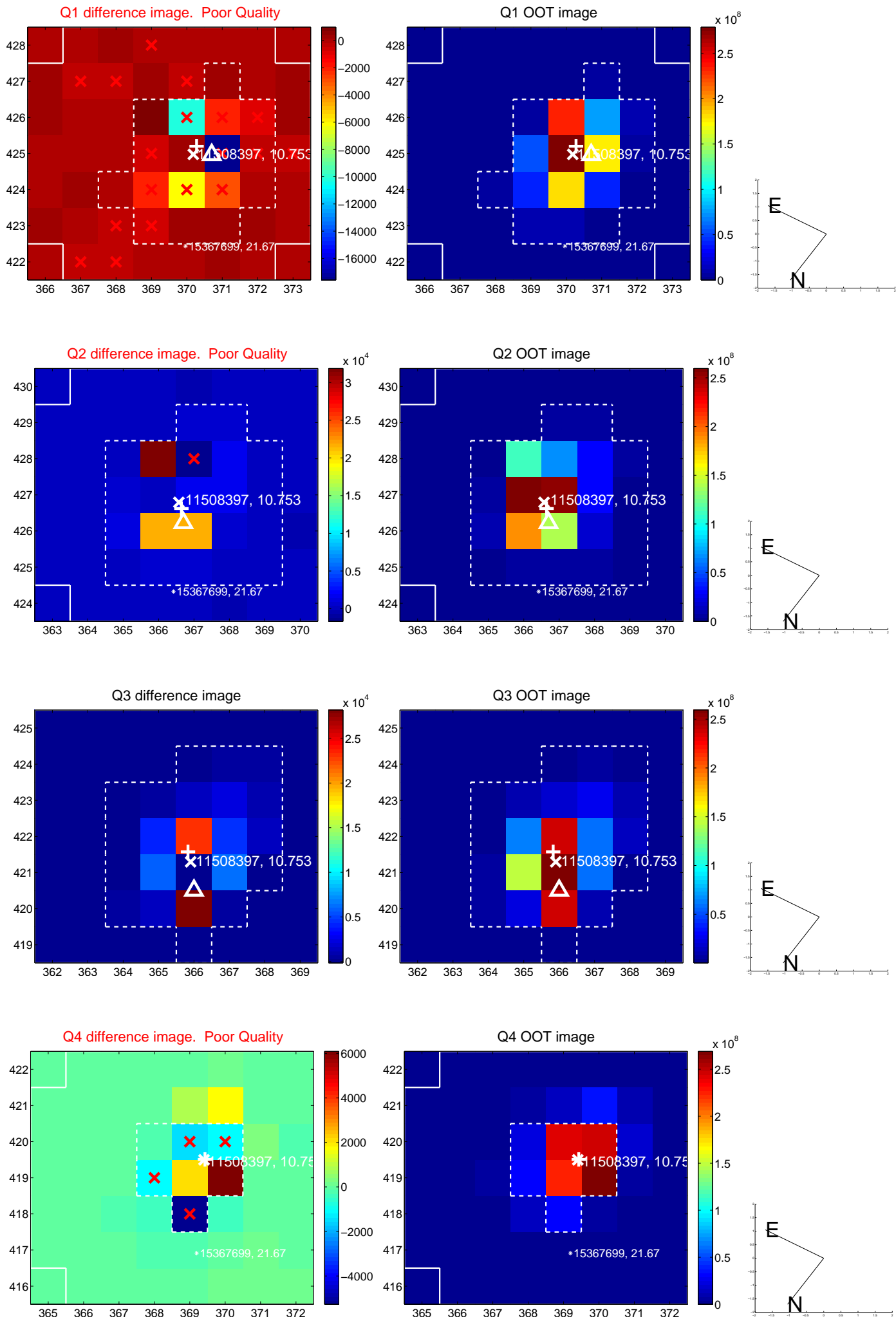
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.355 ± 0.675	2.01	-1.086 ± 0.441	0.810 ± 0.702
PRF-fit source offset from KIC position	1.740 ± 0.531	3.28	-1.586 ± 0.396	0.716 ± 0.611
photometric centroid source offset	0.46 ± 0.22	2.12	-0.46 ± 0.22	0.05 ± 0.31

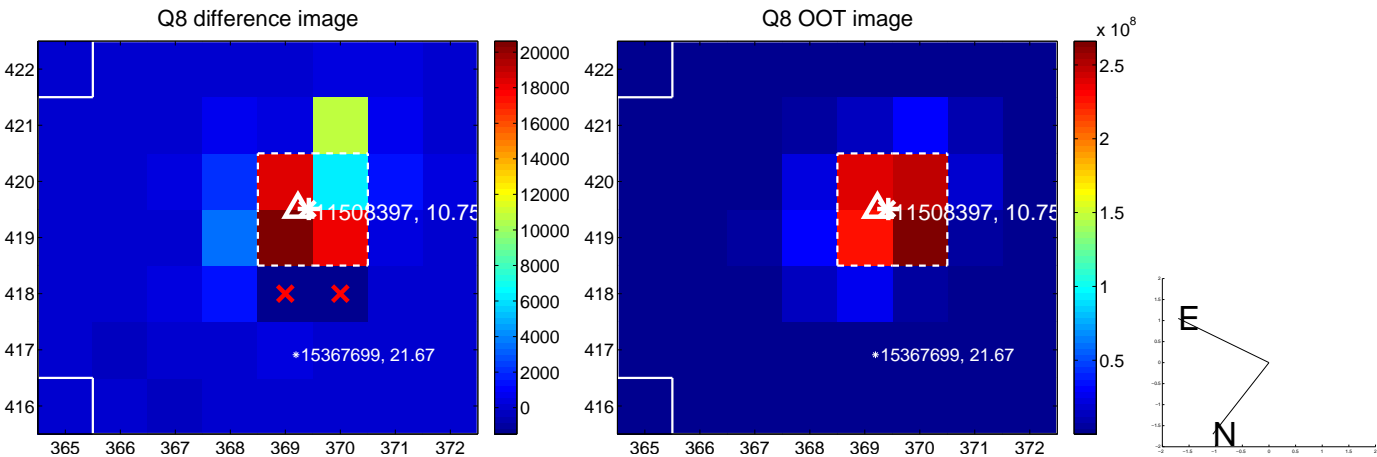
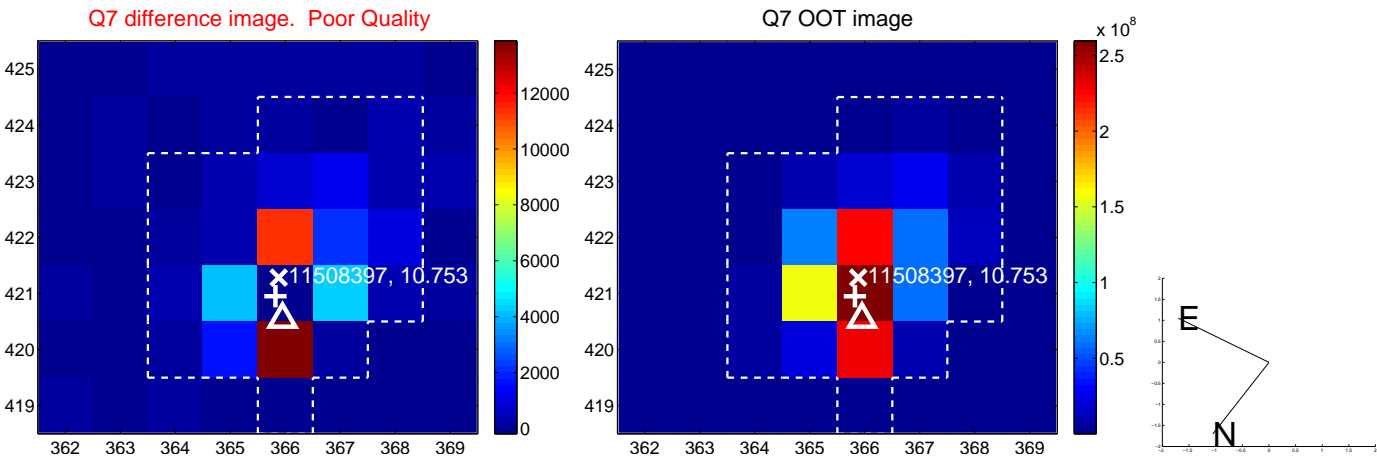
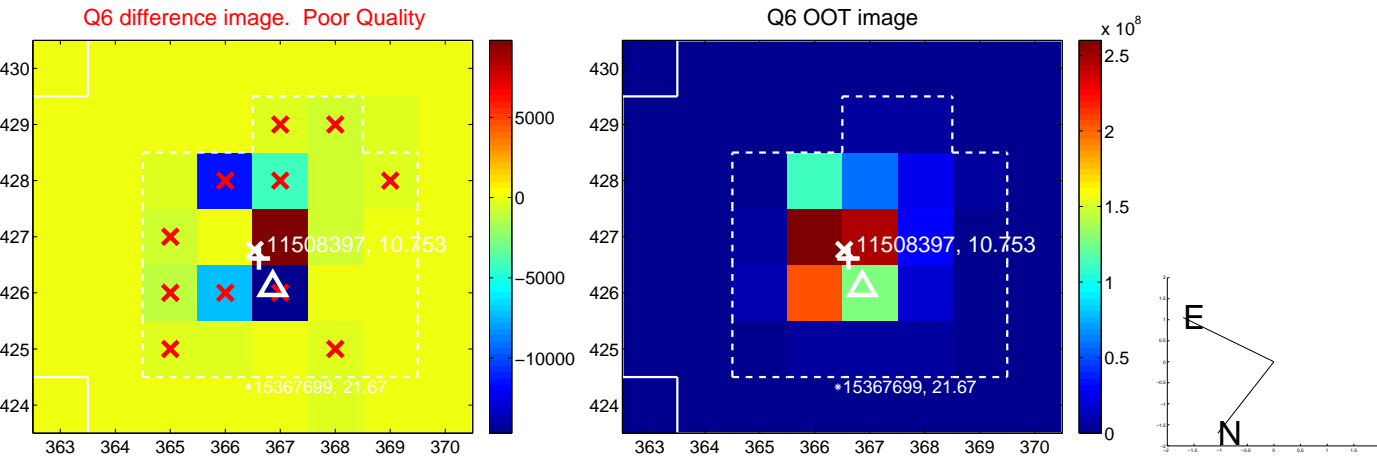
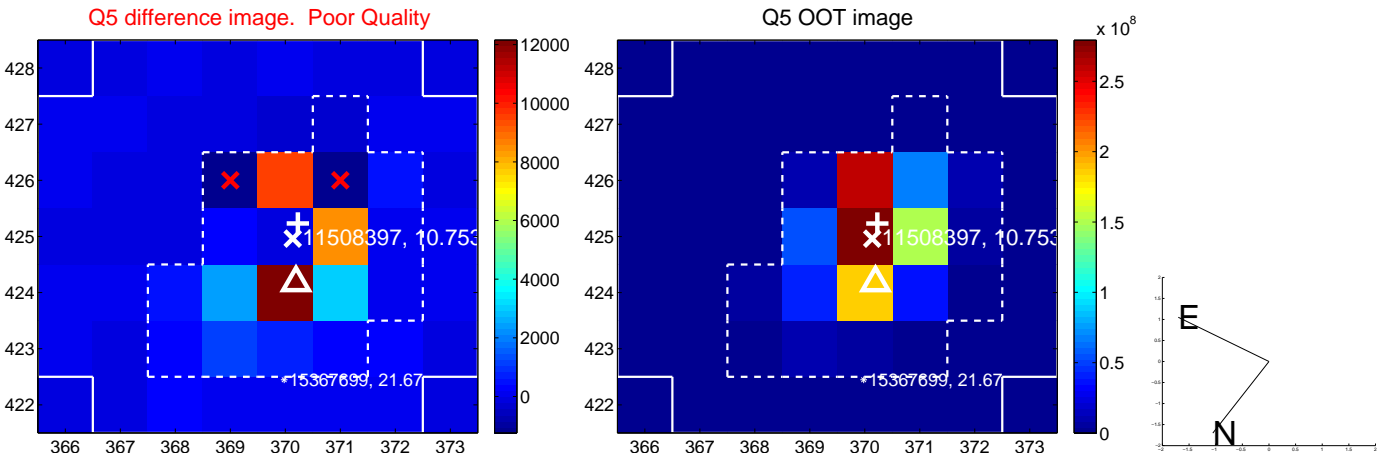


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

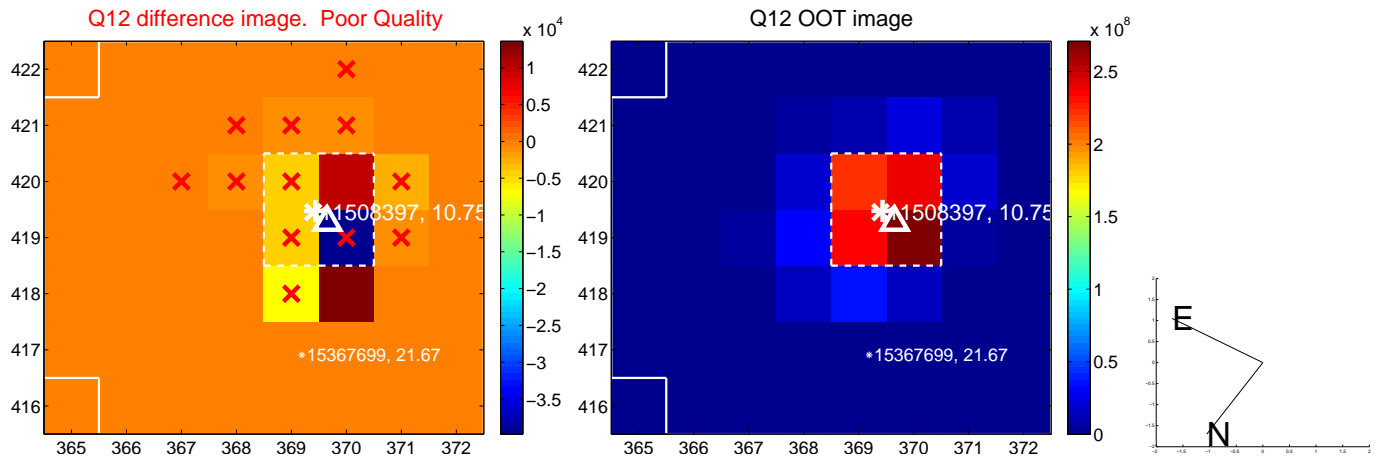
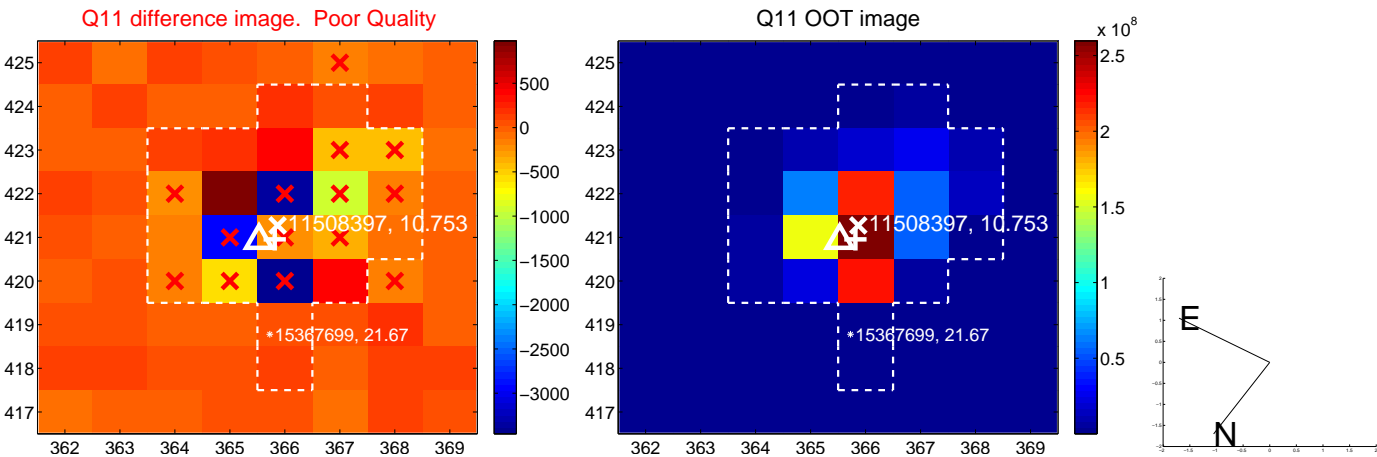
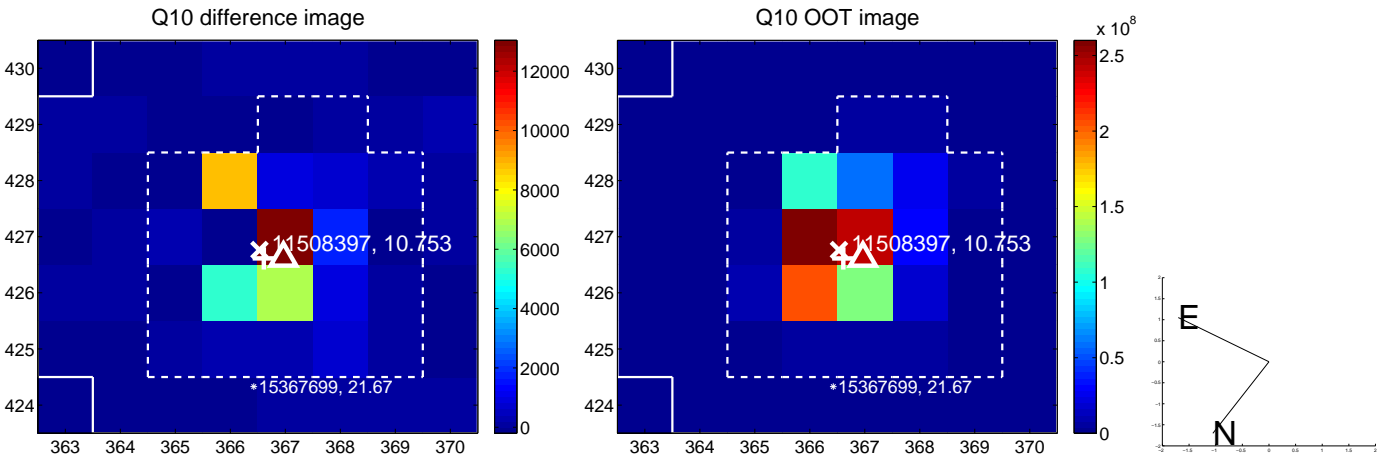
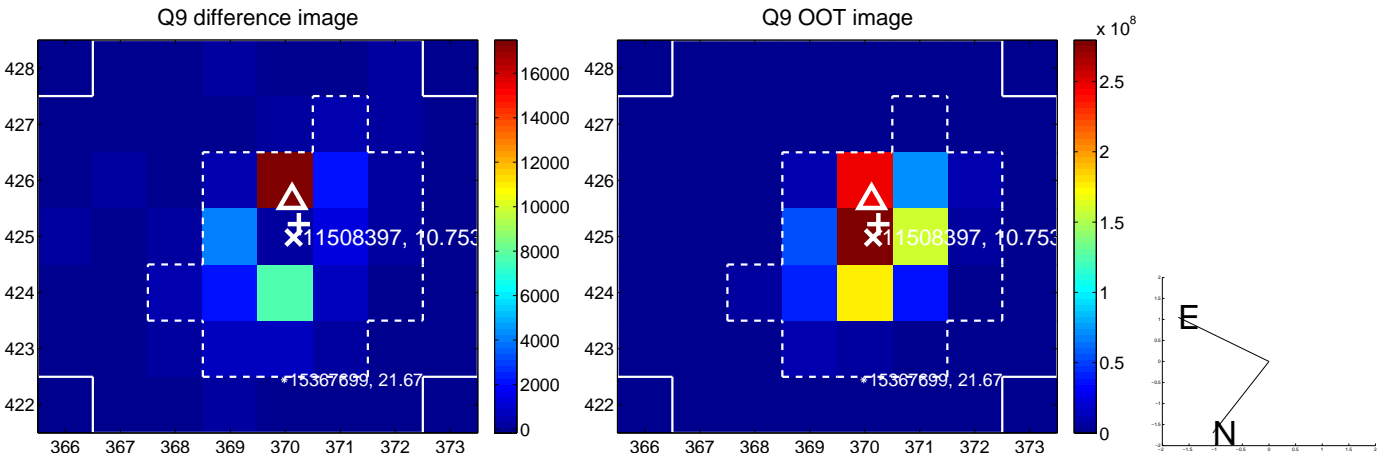
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



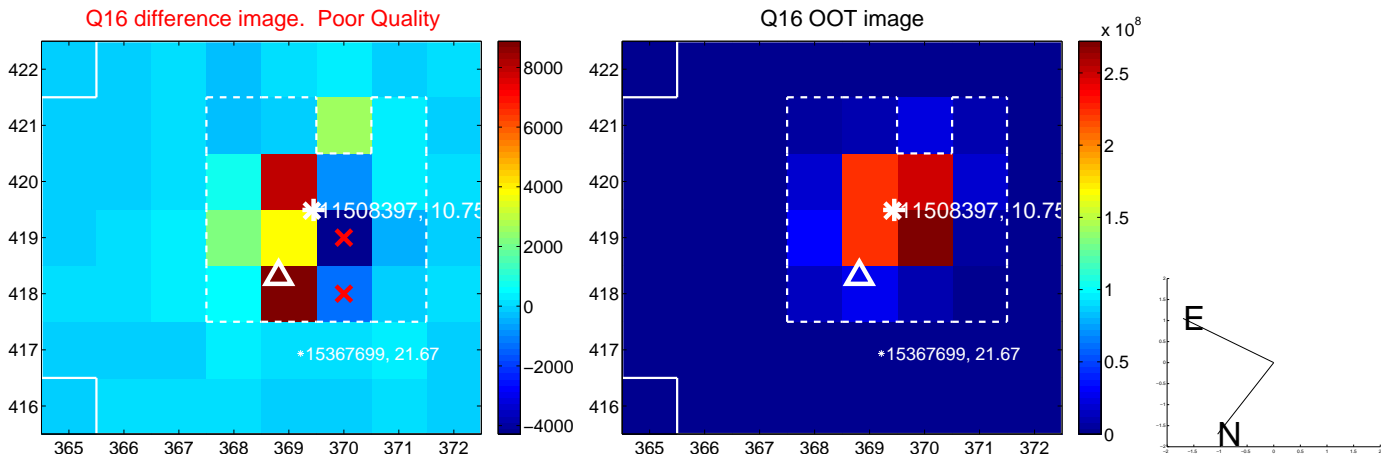
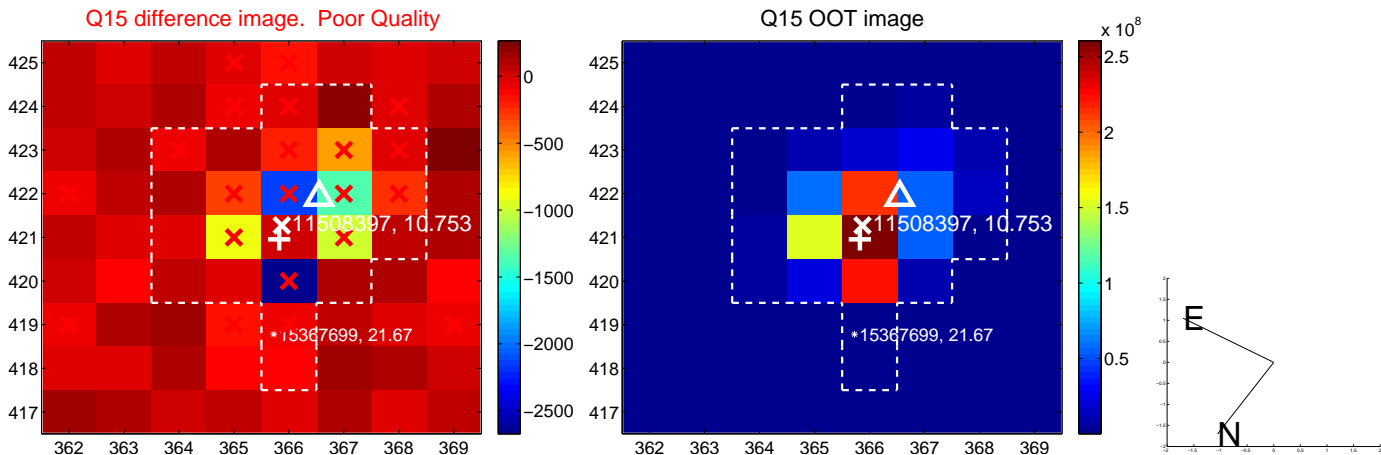
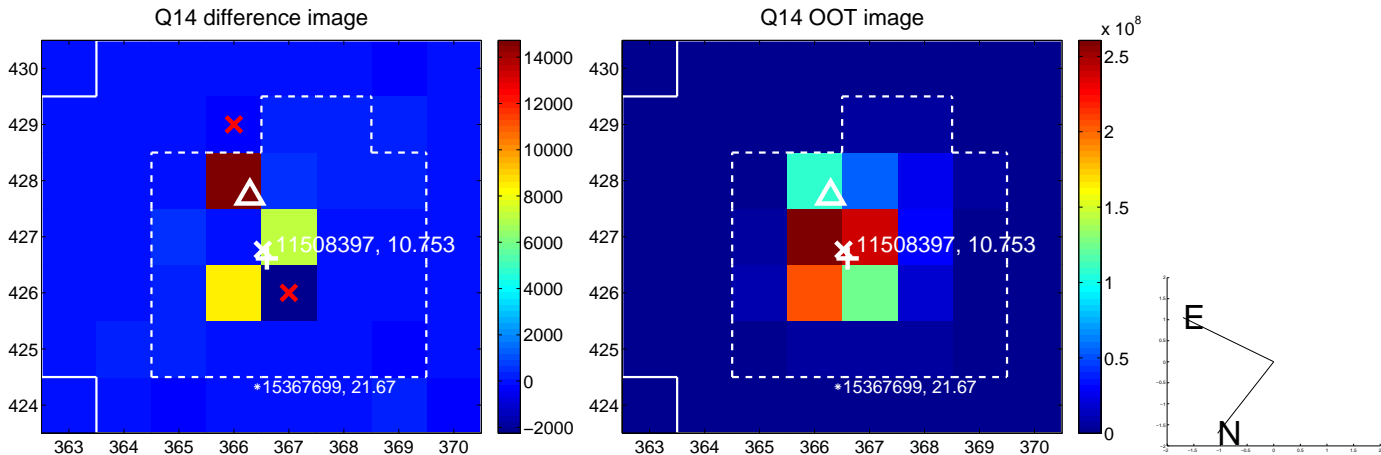
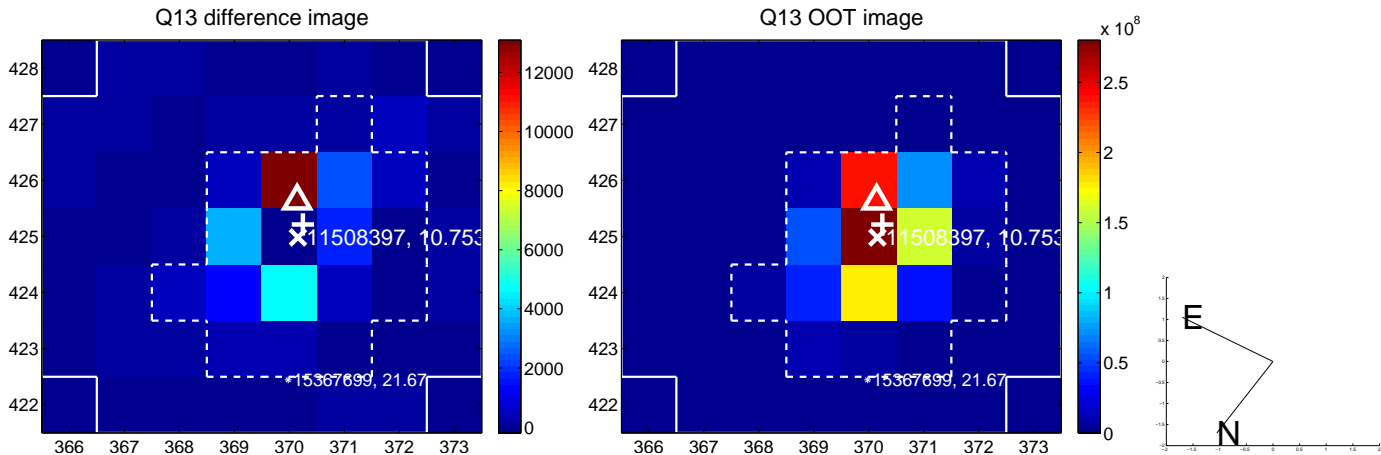
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



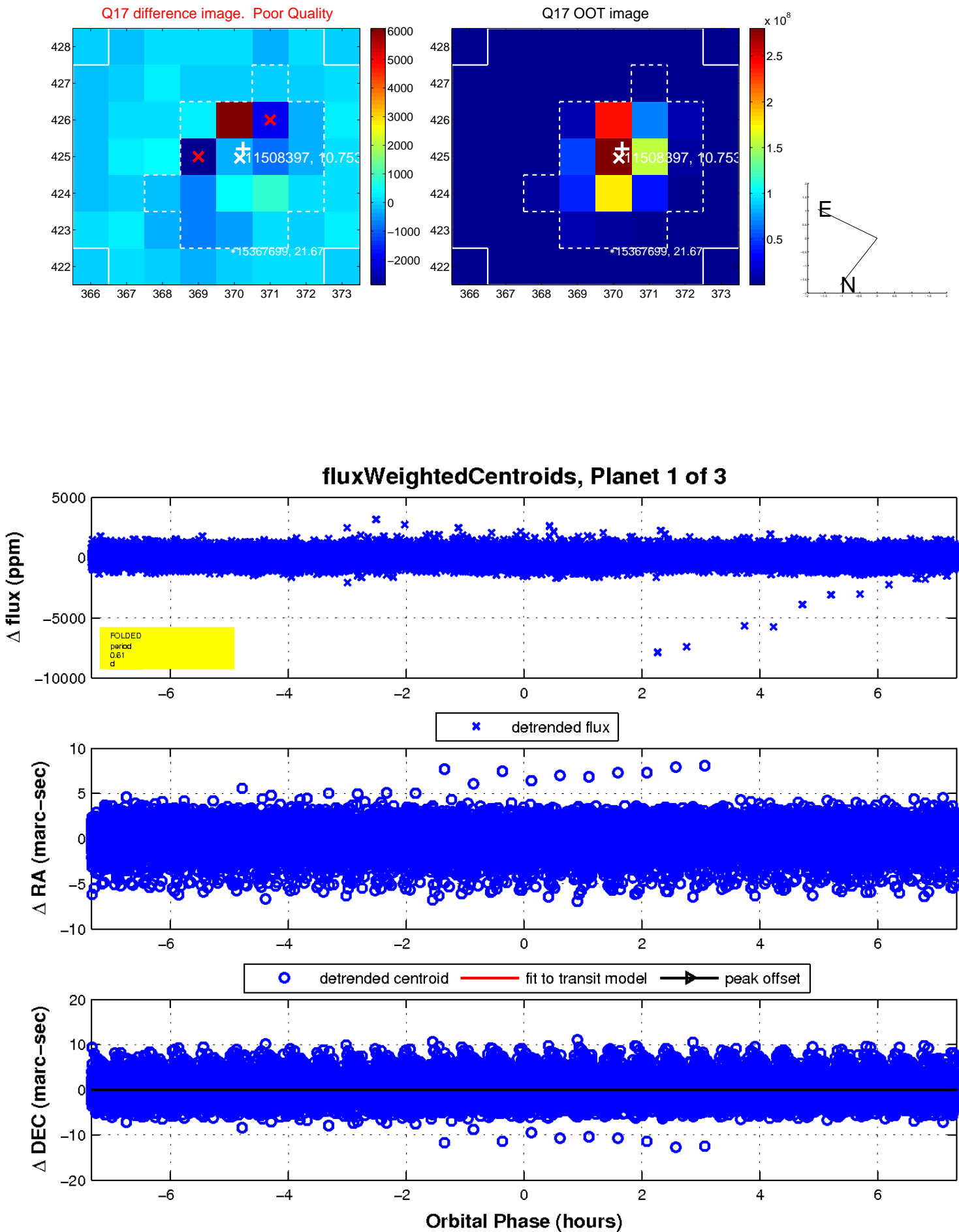
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

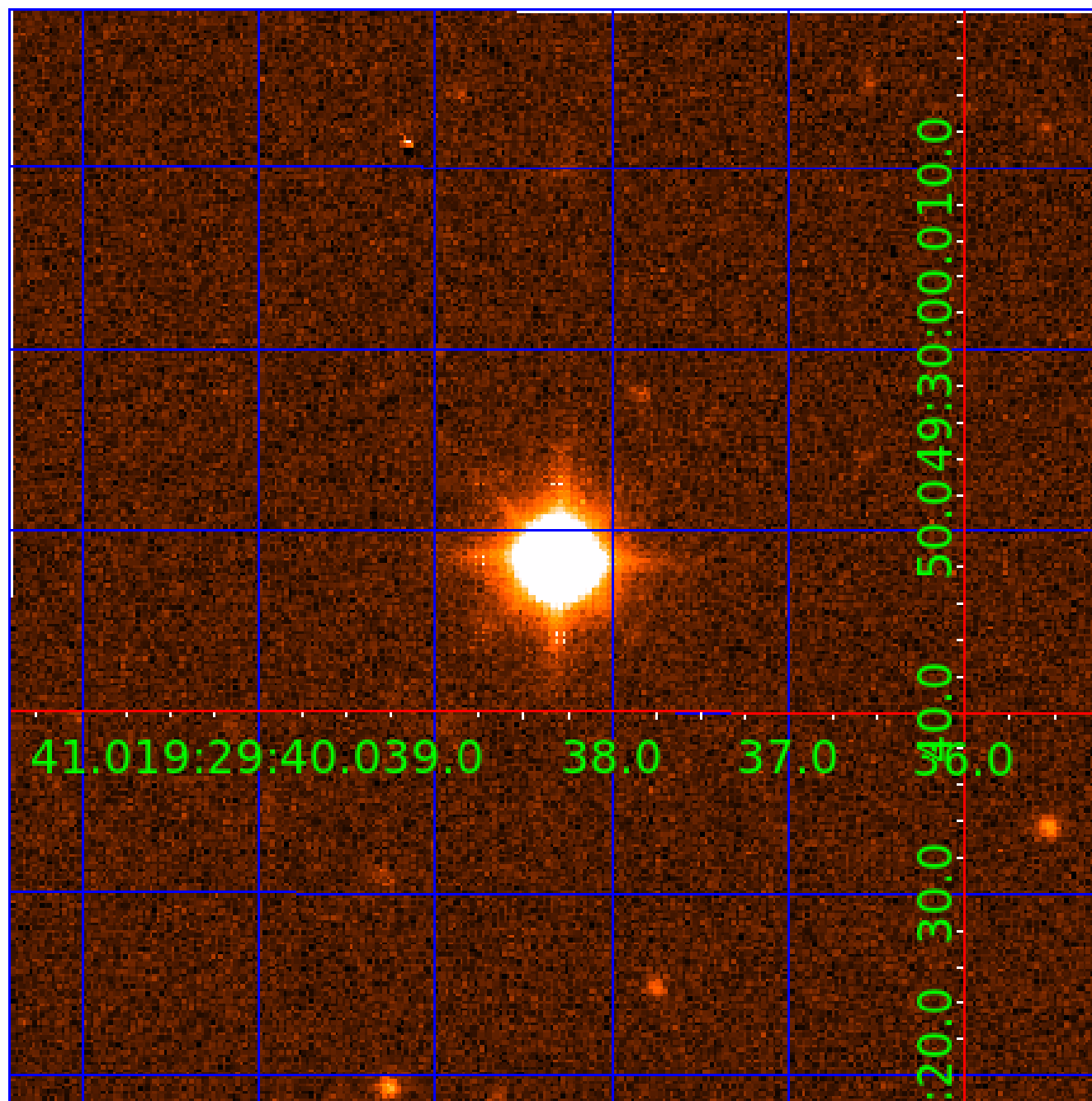


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011508397

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})
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011508397-02	OBS	No	0.537056	131.633137	124.0	1.576	12.6	14.3	2.51	7287	2.99	64441.61
011508397-03	OBS	No	12.674851	139.148429	364.3	3.227	9.0	9.3	2.51	7287	5.55	951.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011508397-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011508397-02	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED—HALO_GHOST
011508397-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

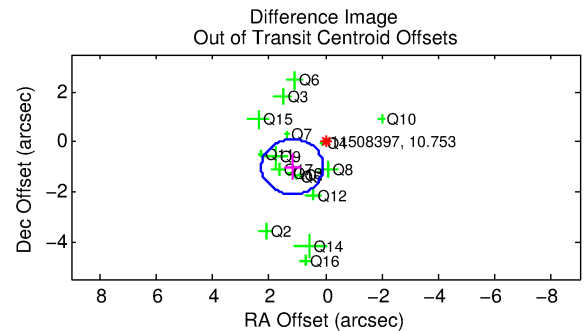
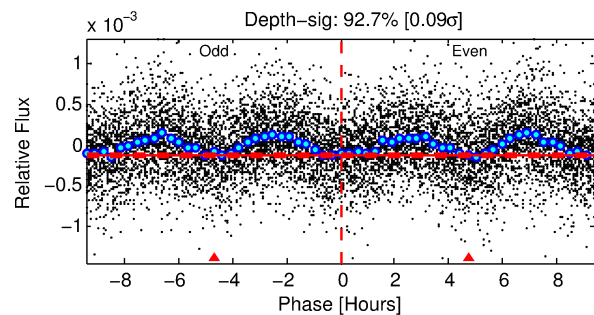
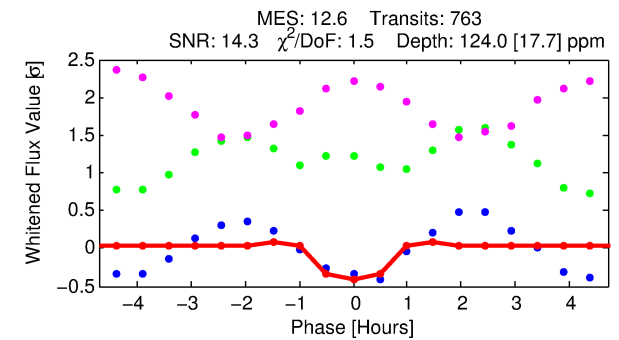
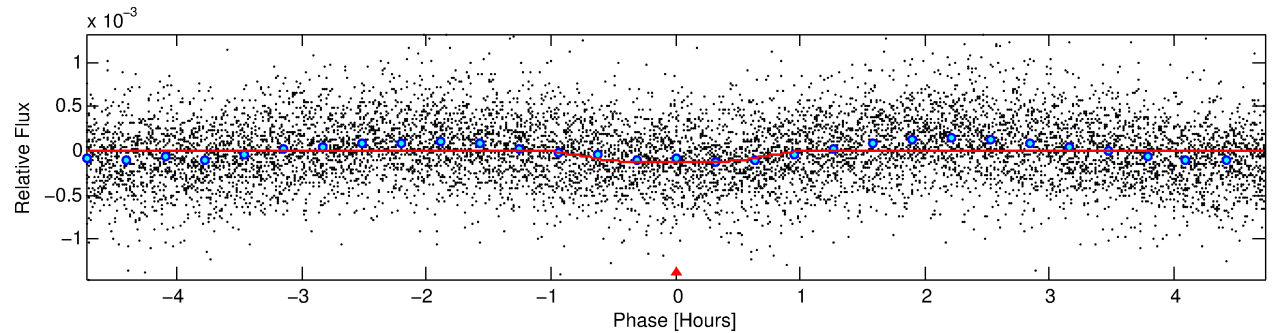
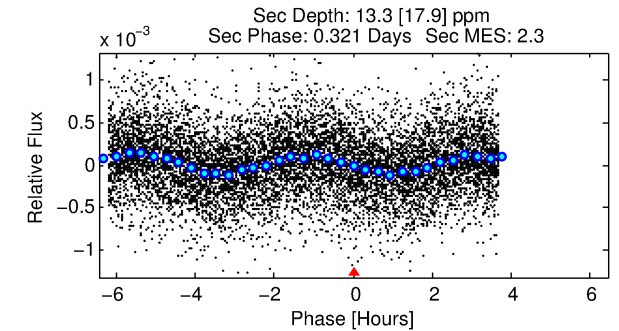
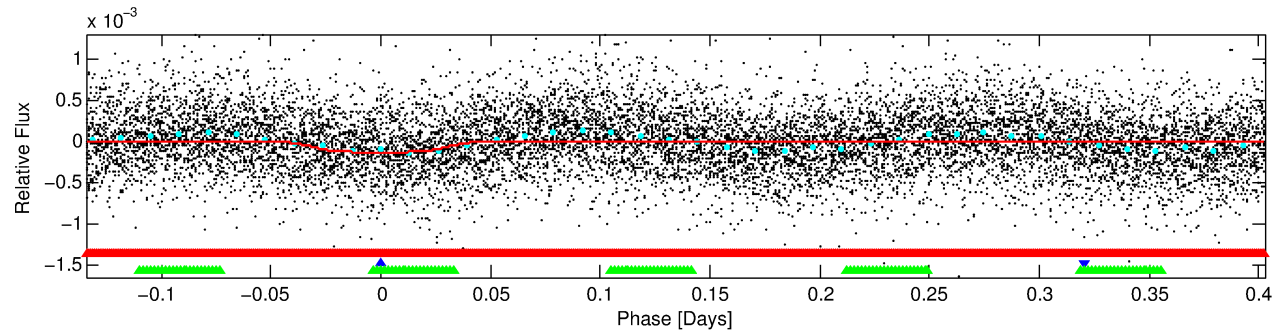
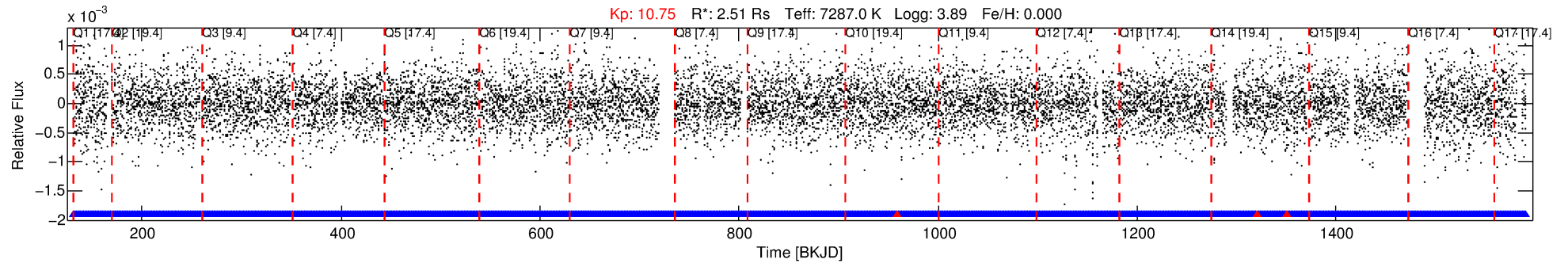
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011508397-02

No Significant Match Found

DV One-Page Summary

KIC: 11508397 Candidate: 2 of 3 Period: 0.537 d



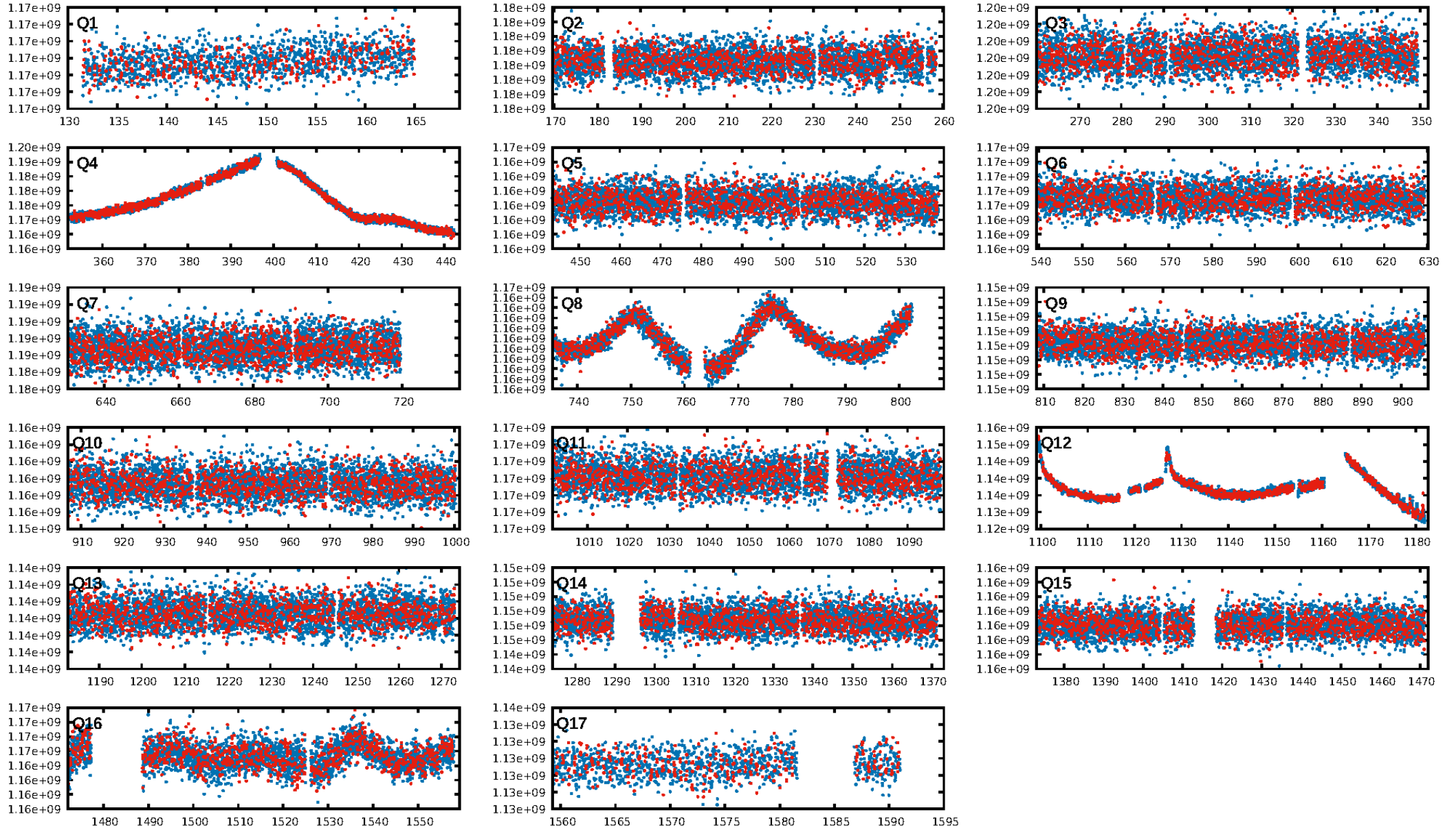
DV Fit Results:

Period = 0.53706 [0.00001] d
Epoch = 131.6331 [0.0018] BKJD
 $R_p/R^* = 0.0109$ [0.0034]
 $a/R^* = 2.09$ [3.01]
 $b = 0.69$ [1.43]
 $\text{Seff} = 64441.61$ [20843.36]
 $\text{Teq} = 4063$ [329] K
 $R_p = 2.99$ [1.17] R_e
 $a = 0.0157$ [0.0033] AU
 $\text{Ag} = 0.20$ [0.31] $[-2.62\sigma]$
 $\text{Teffp} = 4207$ [1561] K [0.09σ]

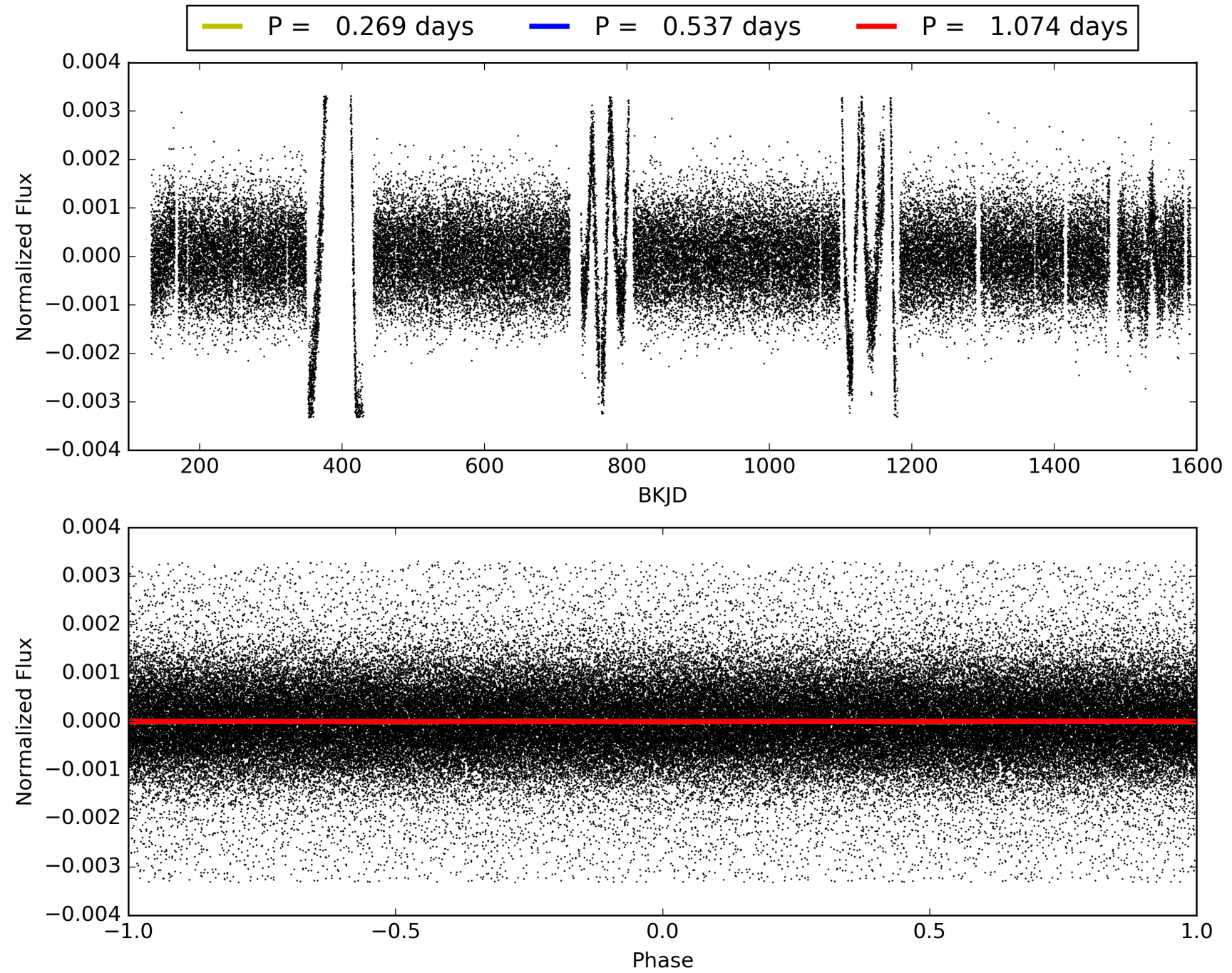
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 34.0% [0.44σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.63e-09
RollingBand-fgt: 1.00 [727/730]
GhostDiagnostic-chr: 0.03827
Centroid-sig: N/A
Centroid-so: 0.139 arcsec [1.83σ]
OotOffset-rm: 1.546 arcsec [4.22σ]
KicOffset-rm: 2.039 arcsec [4.39σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.35 [6/17]

TCE 011508397-02, PDC Light Curves

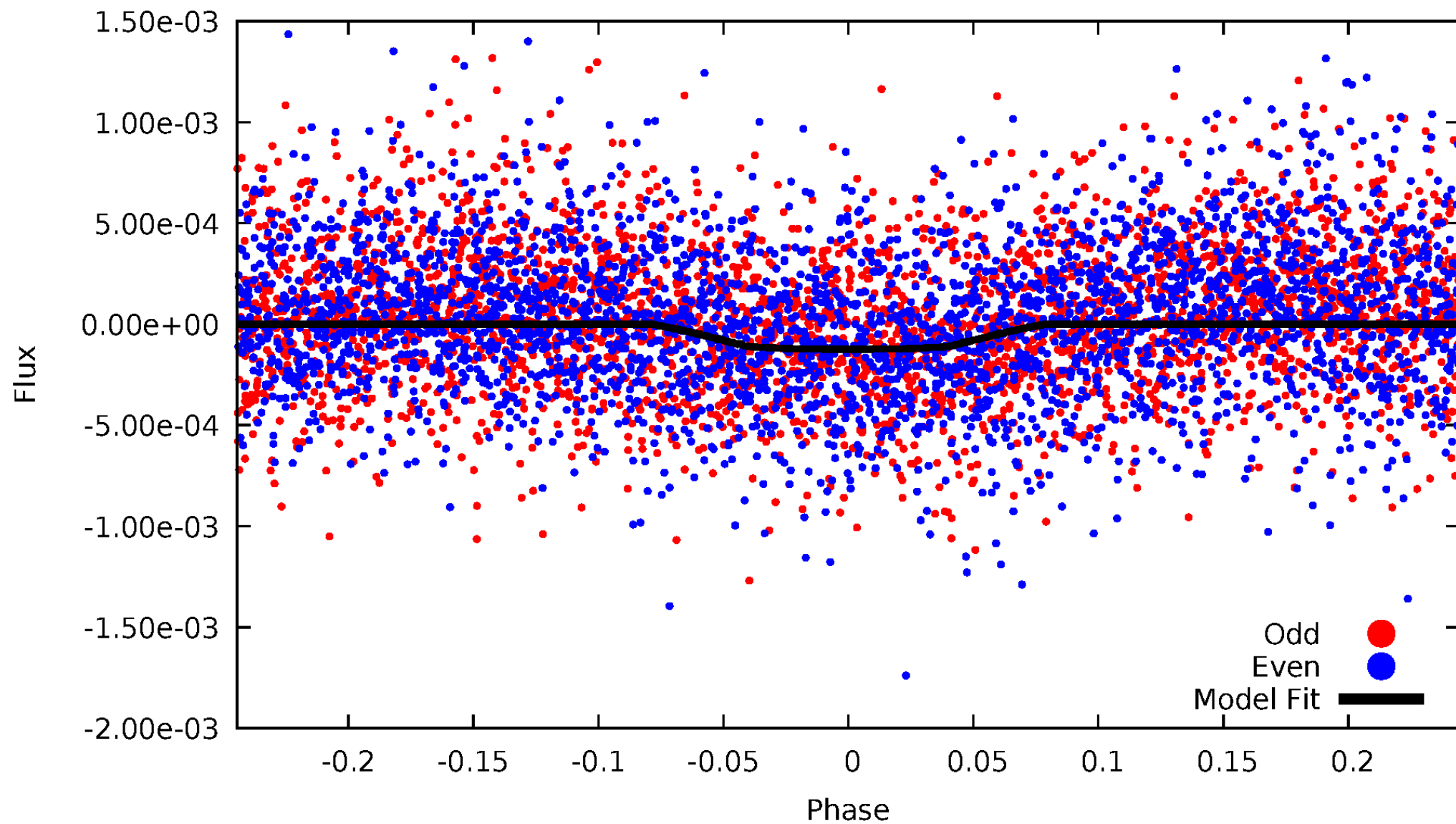


TCE 011508397-02



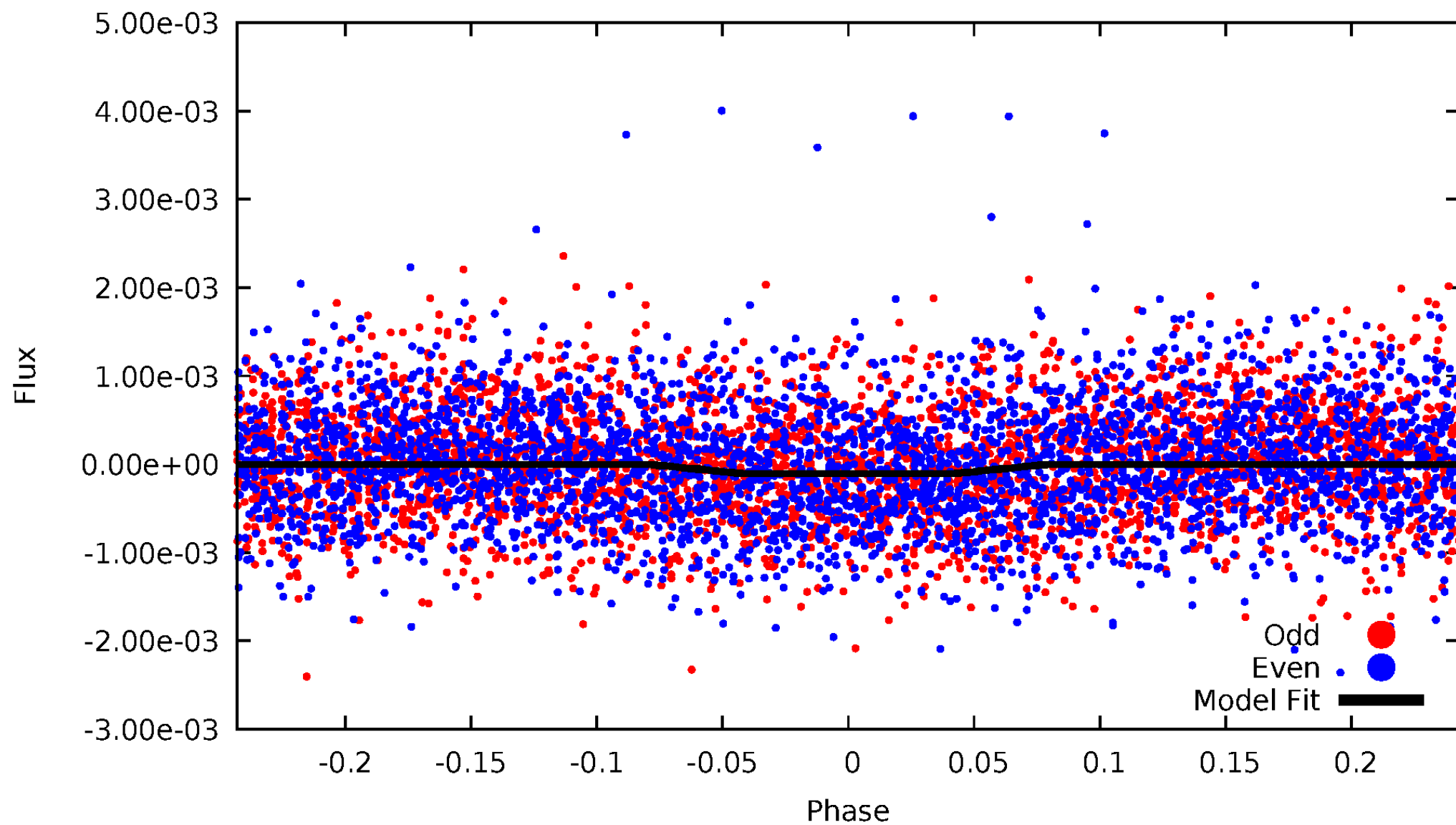
DV Odd/Even

TCE 011508397-02



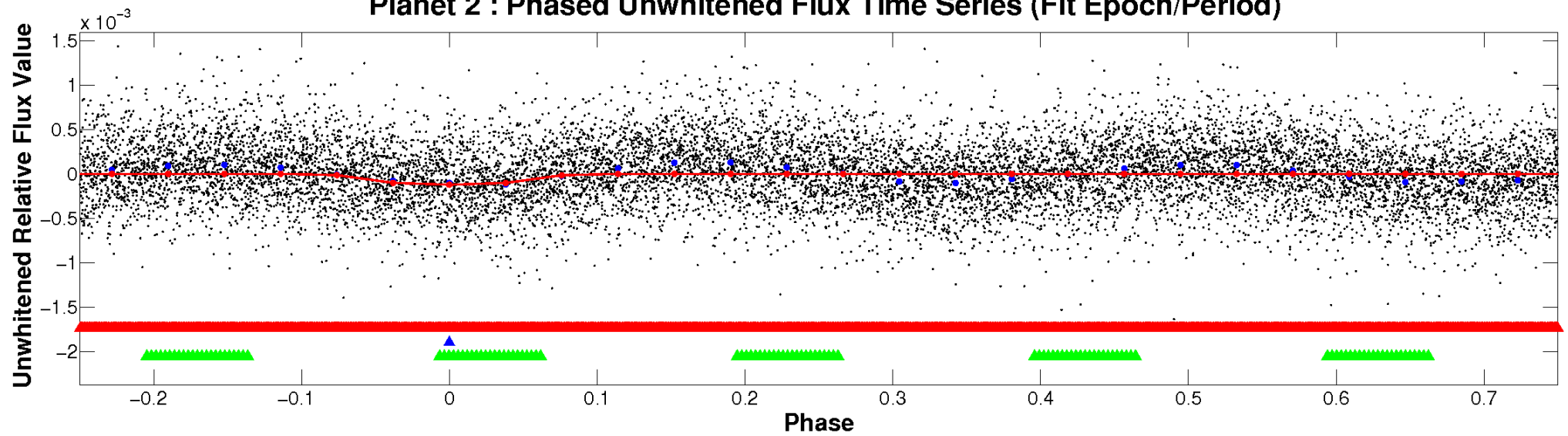
ALT Odd/Even

TCE 011508397-02

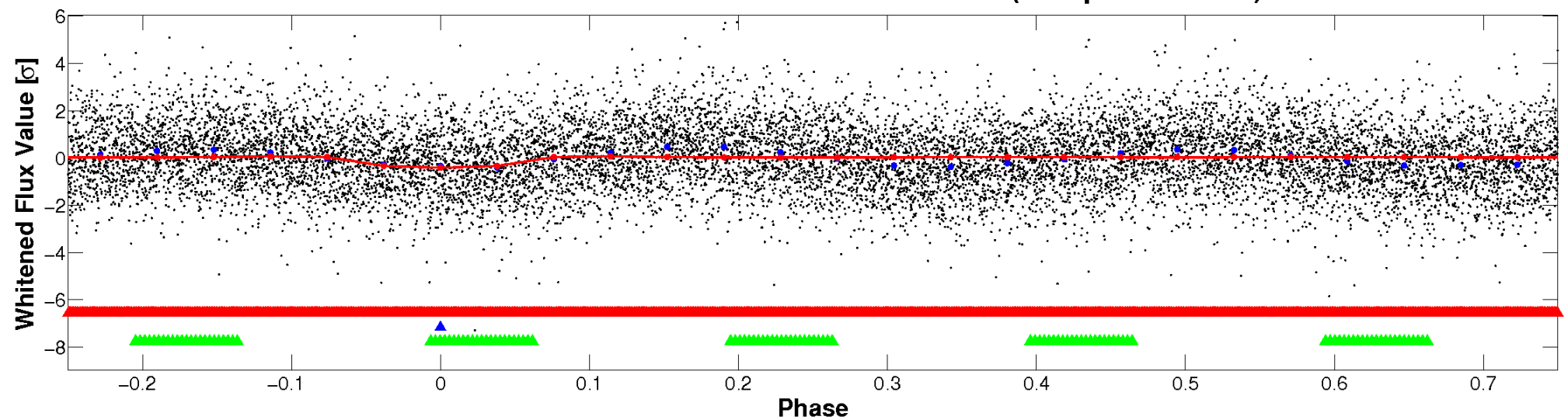


Non-Whitened Vs. Whitened Light Curve

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

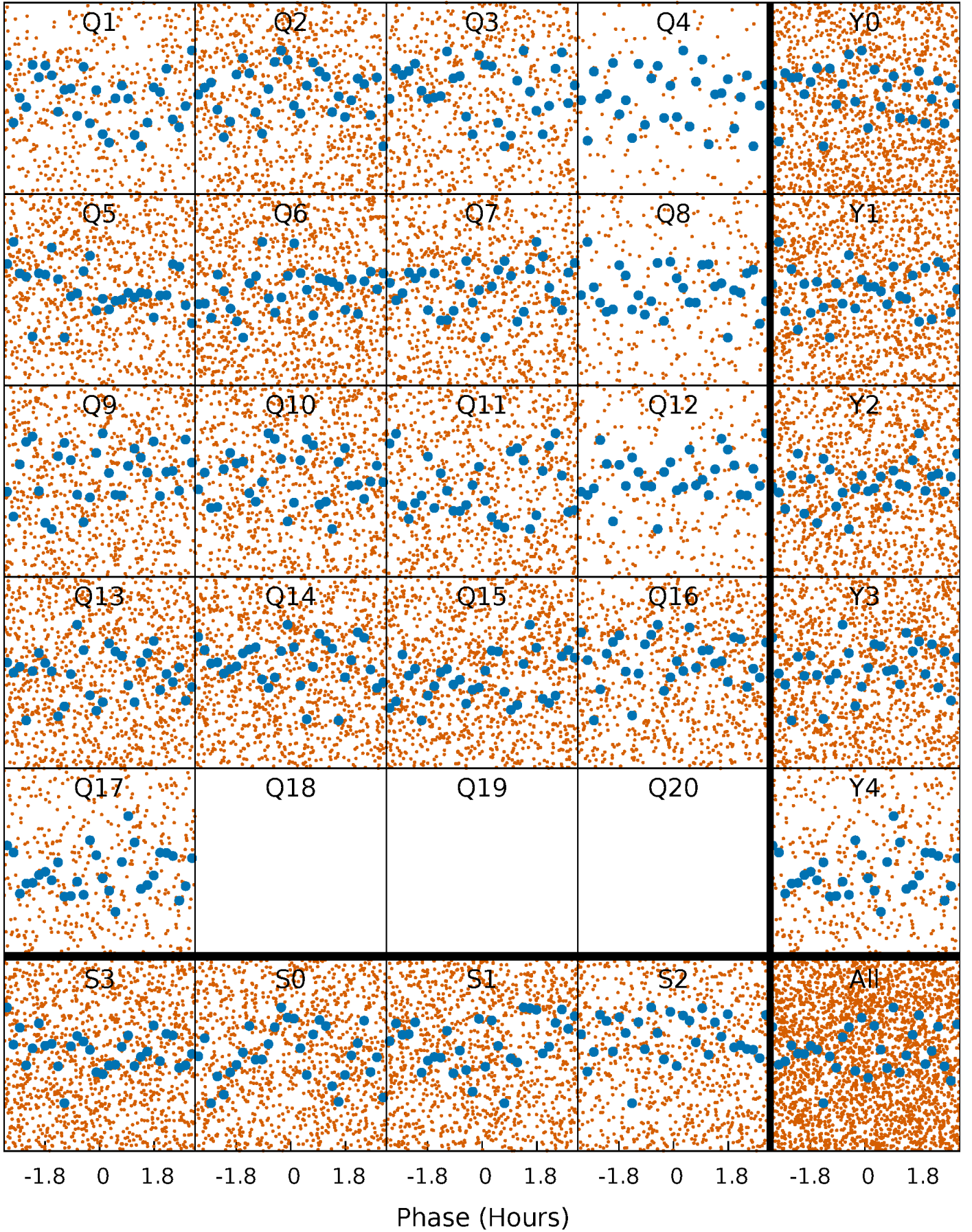


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



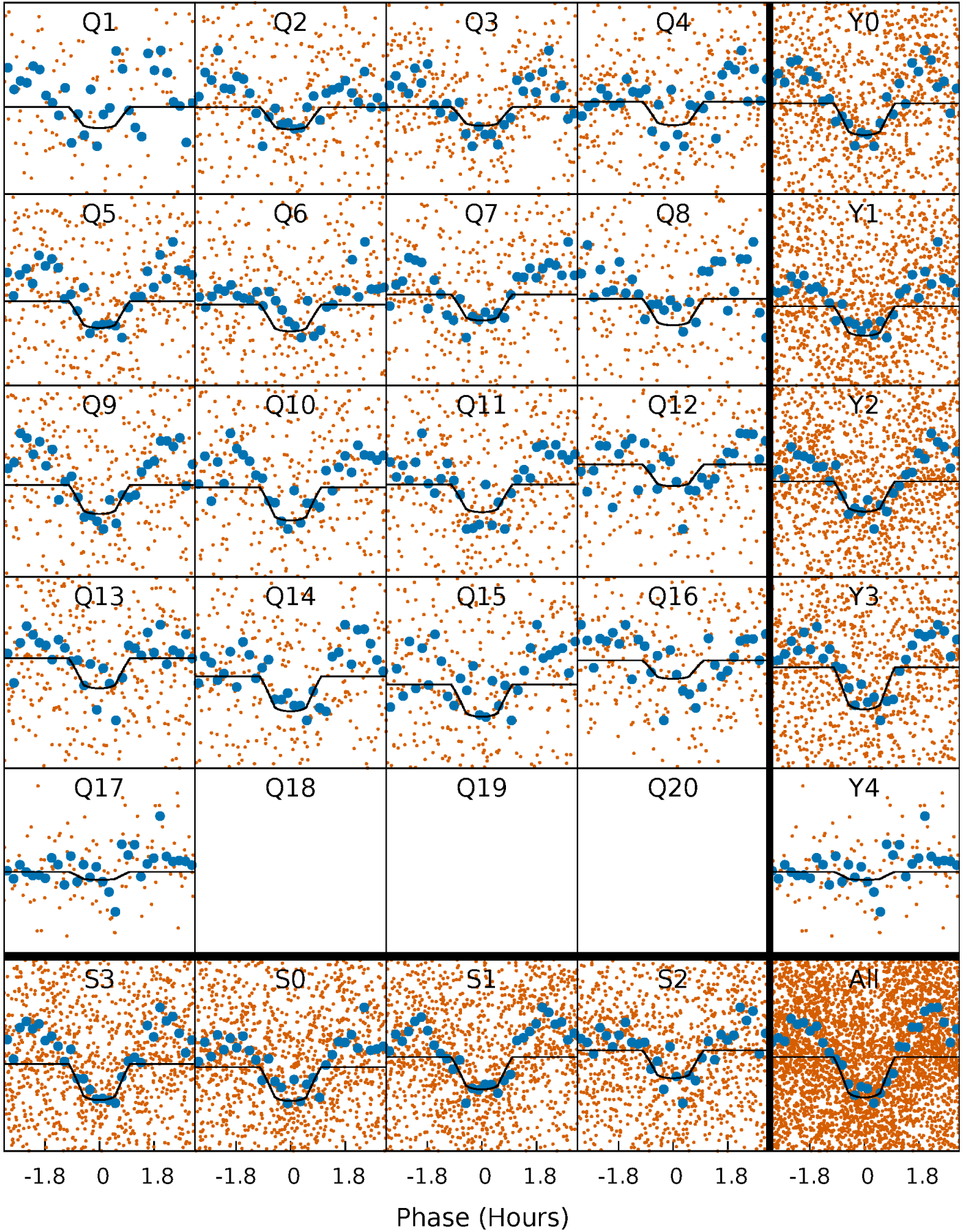
PDC Quarter-Phased Transit Curves

TCE 011508397-02 P= 0.537056 Days $T_0=131.633137$ (BKJD)



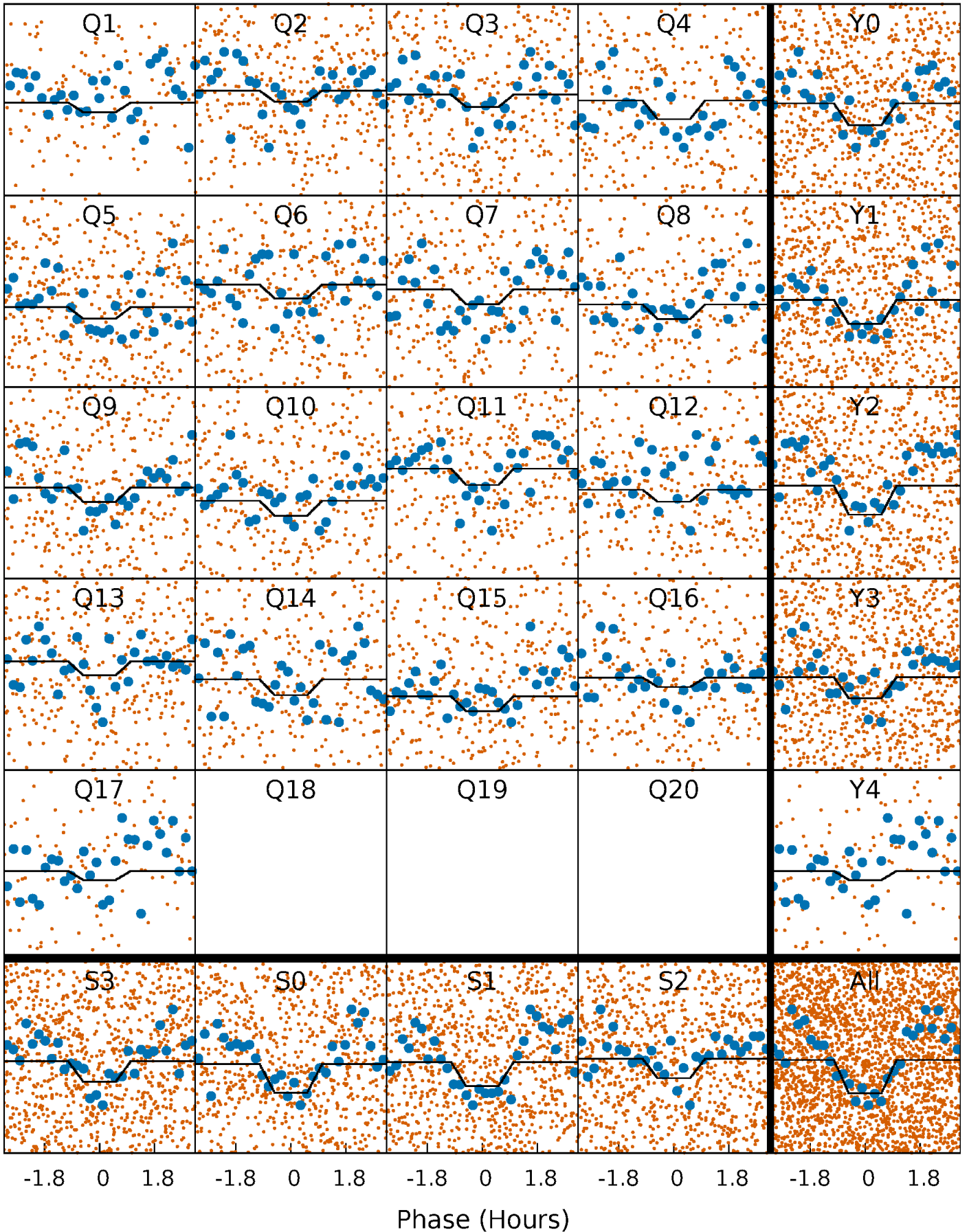
DV Quarter-Phased Transit Curves

TCE 011508397-02 P= 0.537056 Days $T_0=131.633137$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

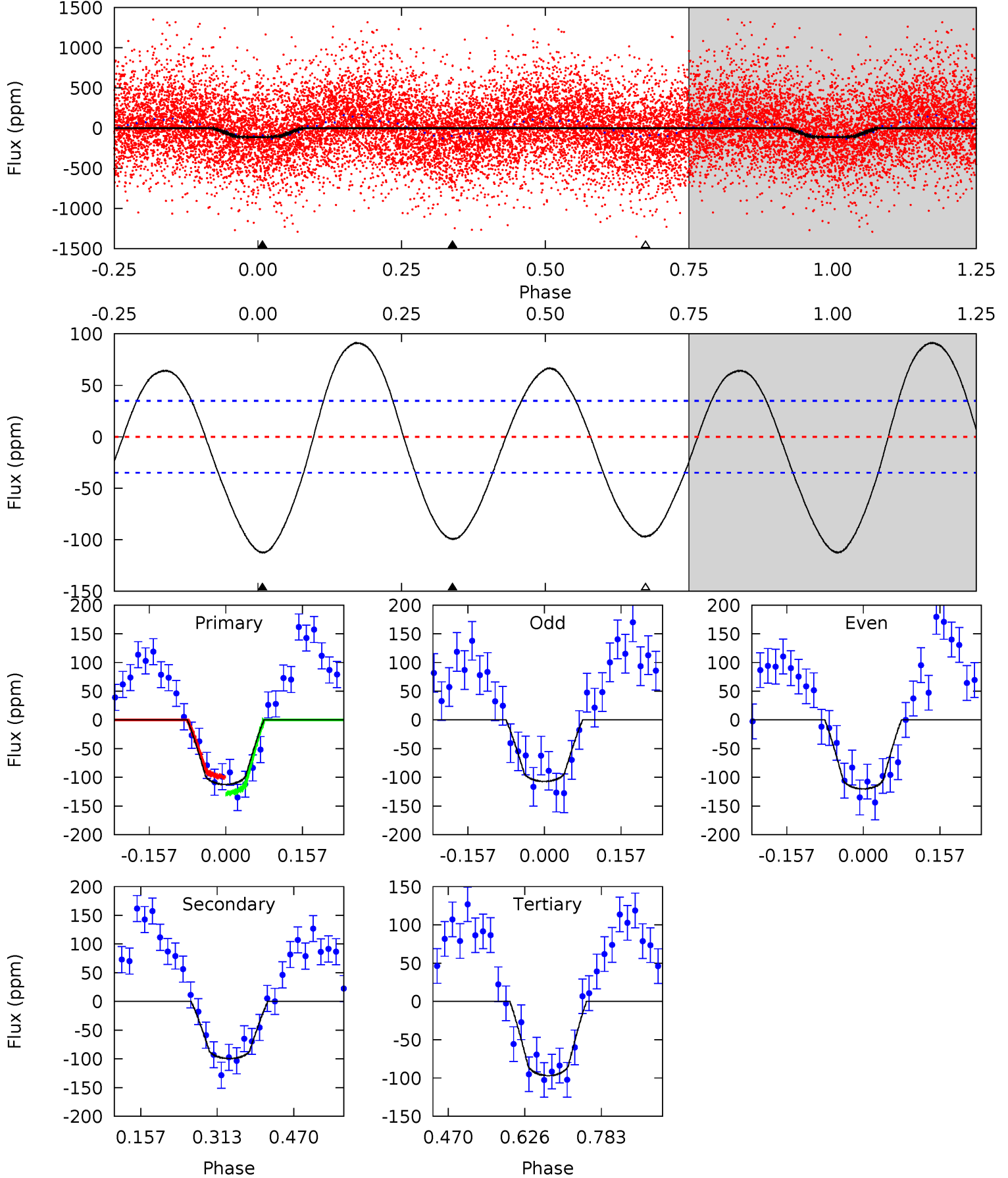
TCE 011508397-02 P= 0.537059 Days $T_0=131.629280$ (BKJD)



DV Model-Shift Uniqueness Test

011508397-02, P = 0.537056 Days, E = 131.633137 Days

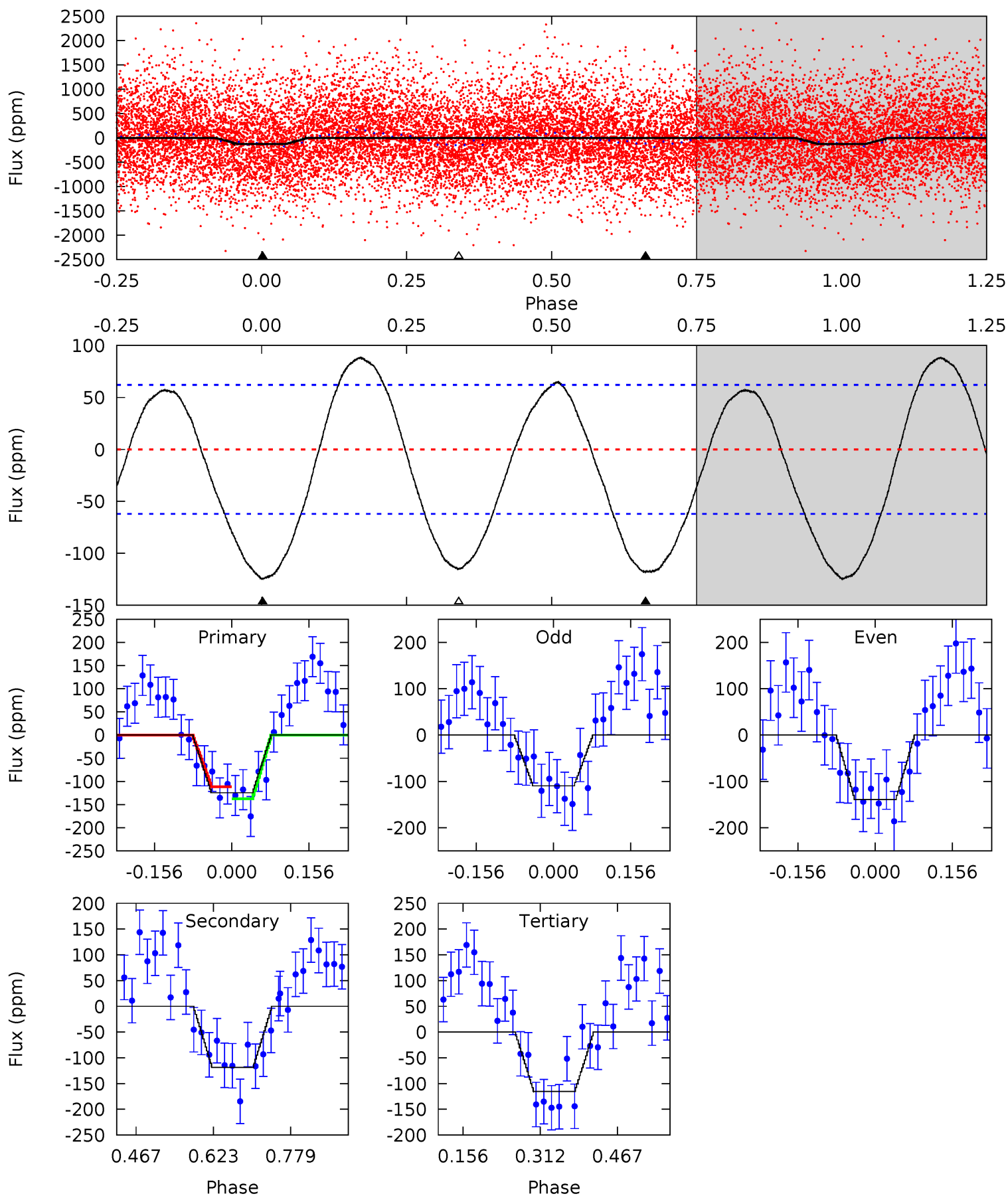
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	12.7	12.4	0	4.47	1.42	7.85	1.99	14.4	0.31	12.7	0.84	1.05	0.45	1.84



Alt Model-Shift Uniqueness Test

011508397-02, P = 0.537059 Days, E = 131.629280 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.97	8.52	8.31	0	4.47	1.42	4.96	0.65	8.97	0.21	8.52	1.08	0.71	0.42	0.93



Stellar Parameters For KIC 011508397

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7287^{+76}_{-87}	$3.892^{+0.182}_{-0.098}$	$0.000^{+0.150}_{-0.150}$	$2.507^{+0.391}_{-0.586}$	$1.785^{+0.128}_{-0.227}$	$0.160^{+0.156}_{-0.049}$
	+1%/-1%	+5%/-3%	+inf%/-inf%	+16%/-23%	+7%/-13%	+98%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011508397-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-99 ± 8	$2.94^{+1.03}_{-0.95}$	5658^{+226}_{-310}	6526^{+1933}_{-1145}	$1.547^{+1.837}_{-0.706}$
Alt.	-118 ± 14	$2.80^{+0.94}_{-0.93}$	5645^{+239}_{-341}	7099^{+2177}_{-1194}	$2.043^{+2.513}_{-0.919}$

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

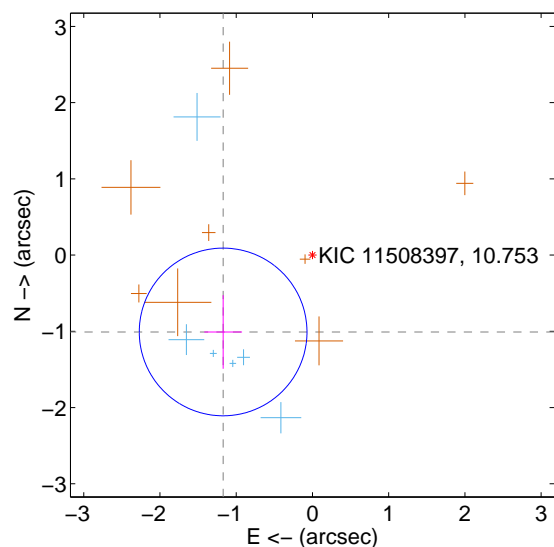
Supplemental centroid analysis for 011508397-02. **Kepler magnitude: 10.75.** Transit SNR 14.30

There are 6 quarters with good PRF difference image offsets

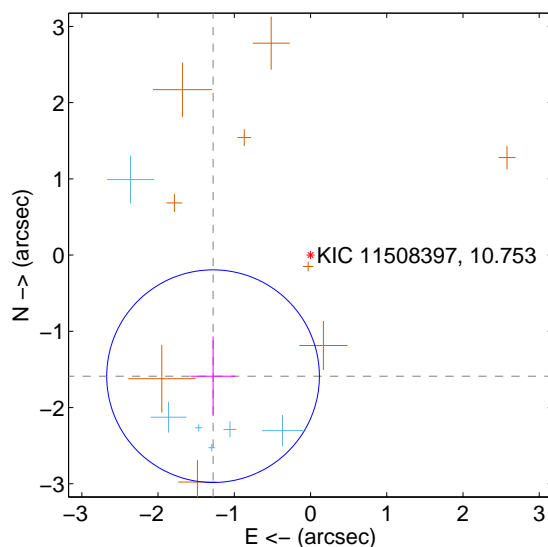
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.546 ± 0.367	4.22	1.172 ± 0.248	-1.008 ± 0.483
PRF-fit source offset from KIC position	2.039 ± 0.465	4.39	1.279 ± 0.295	-1.588 ± 0.521
photometric centroid source offset	0.14 ± 0.08	1.83	-0.14 ± 0.08	0.00 ± 0.12

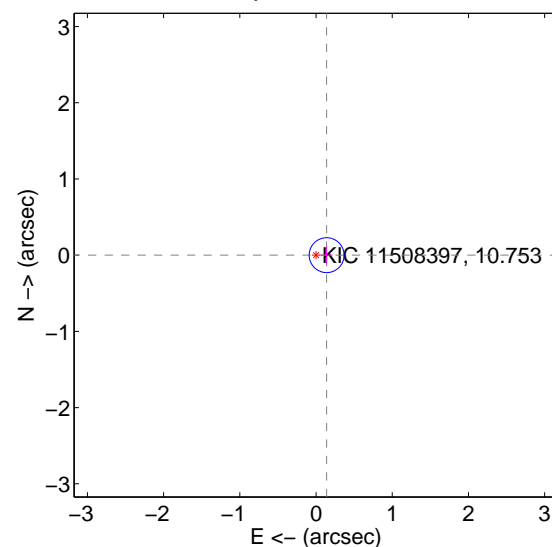
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

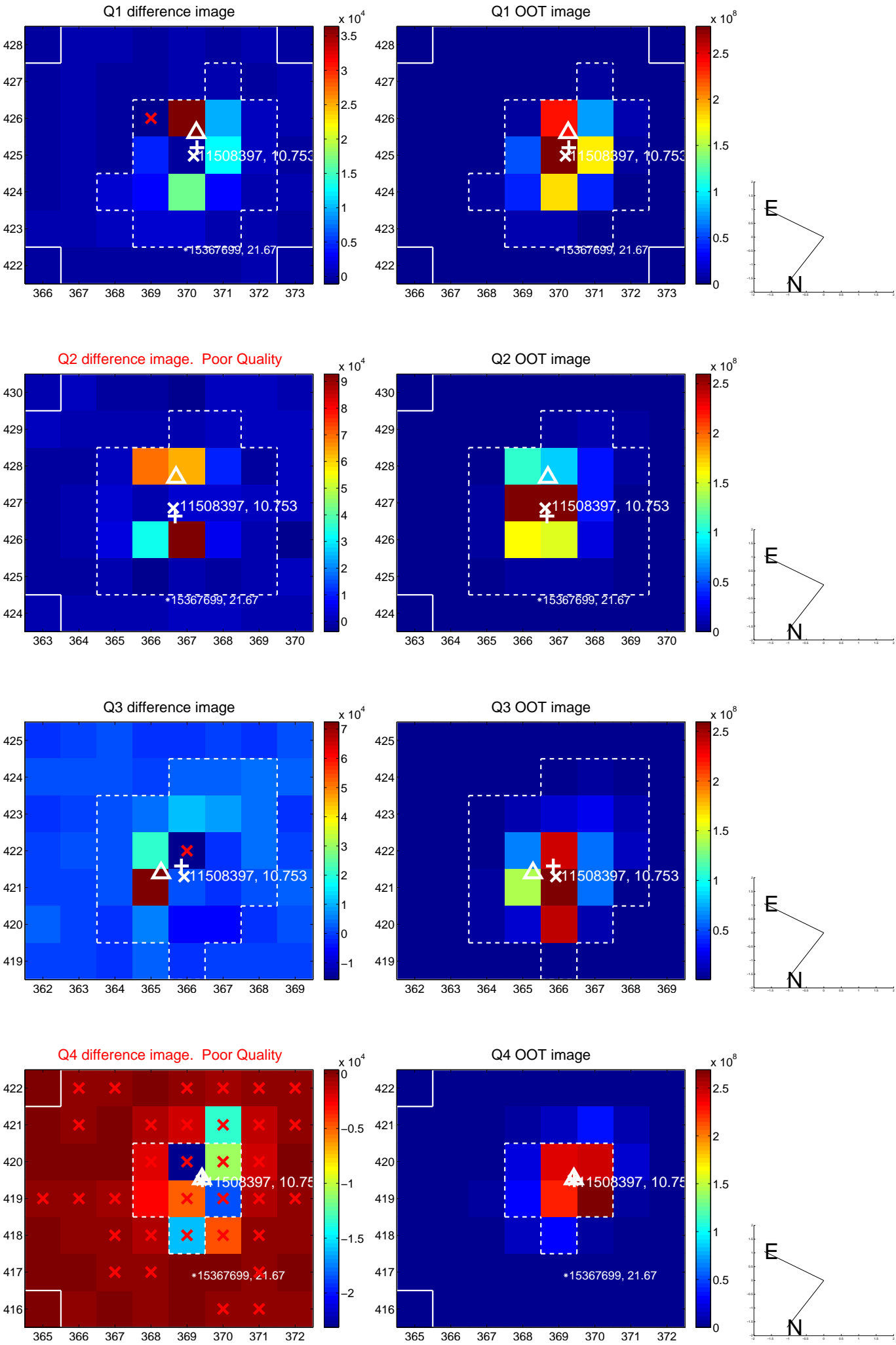


offset from photometric centroids

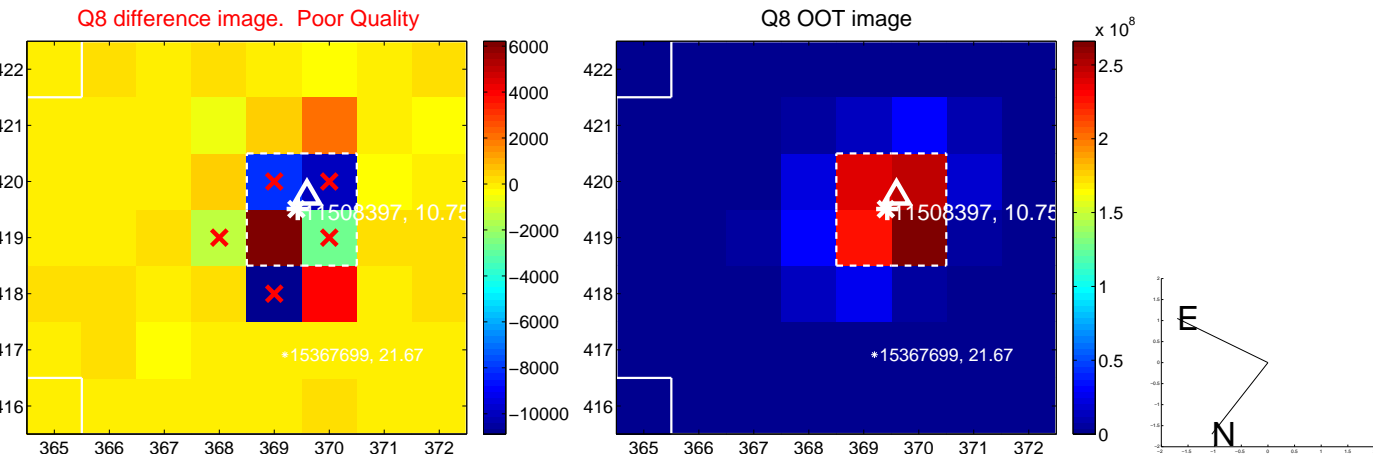
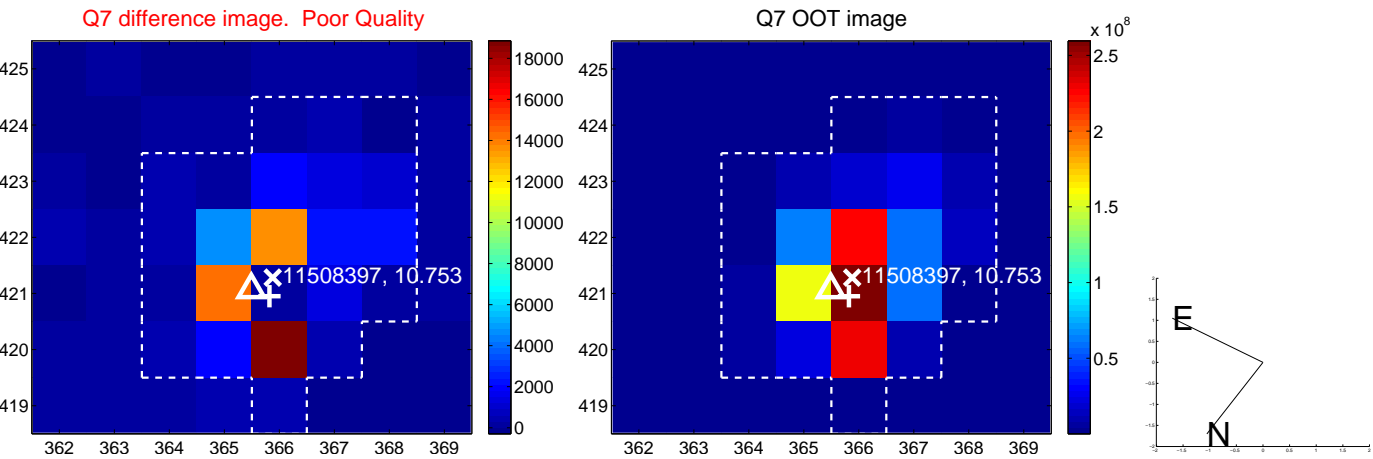
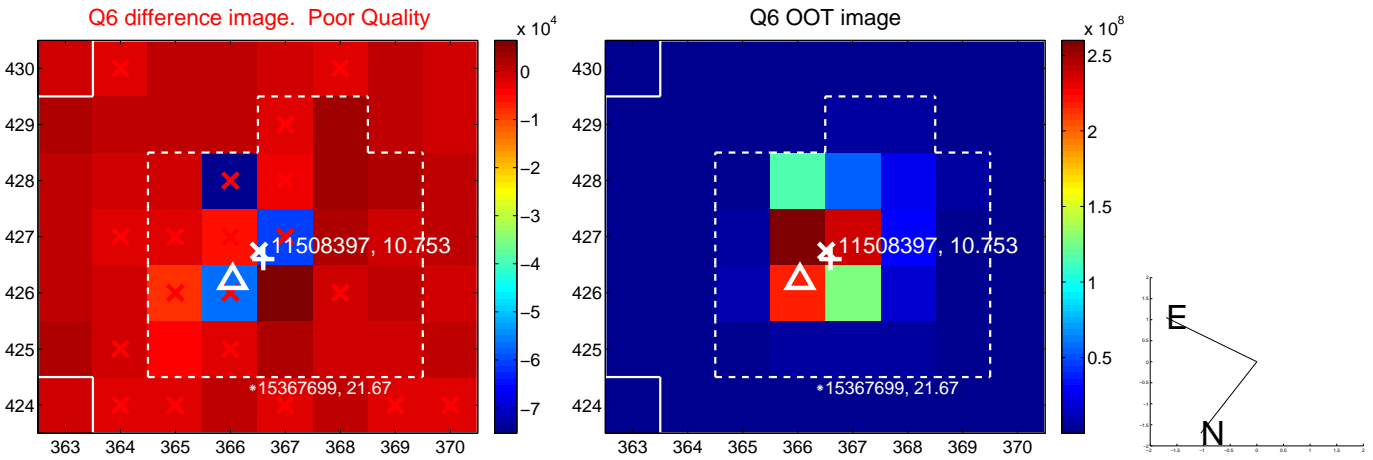
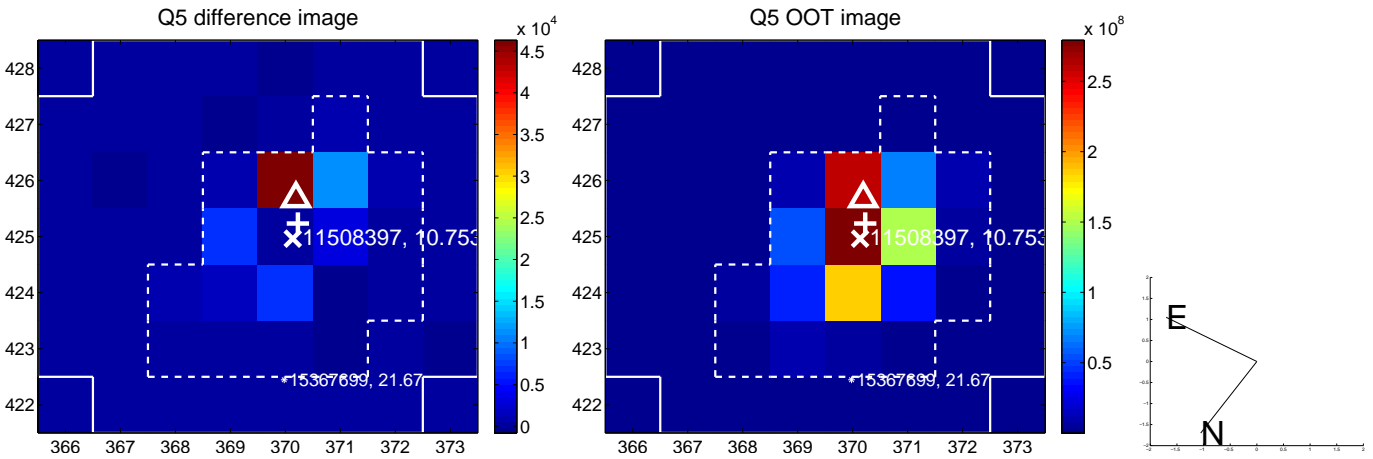


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

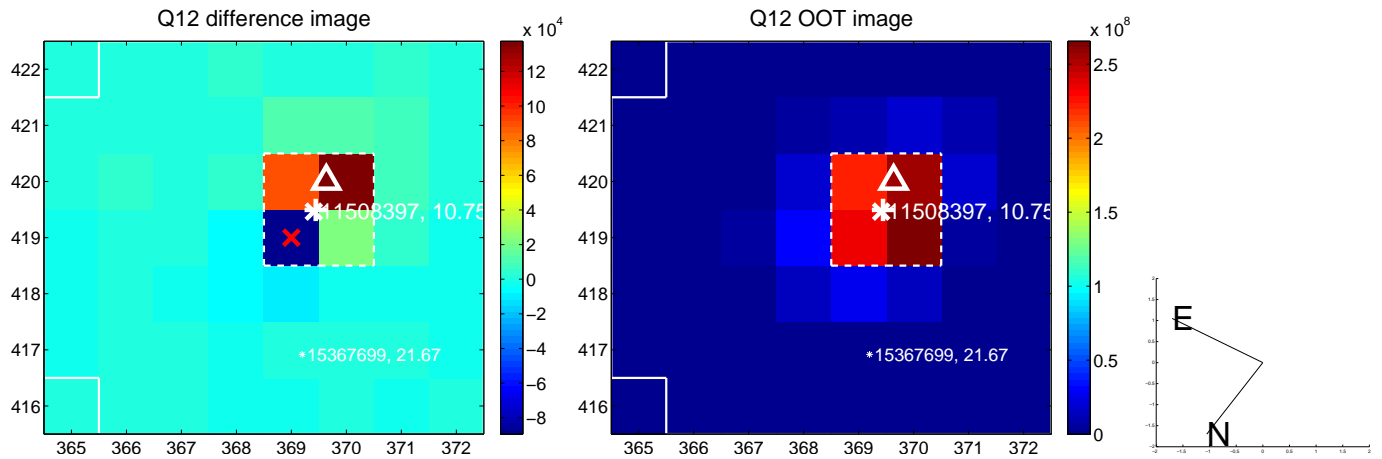
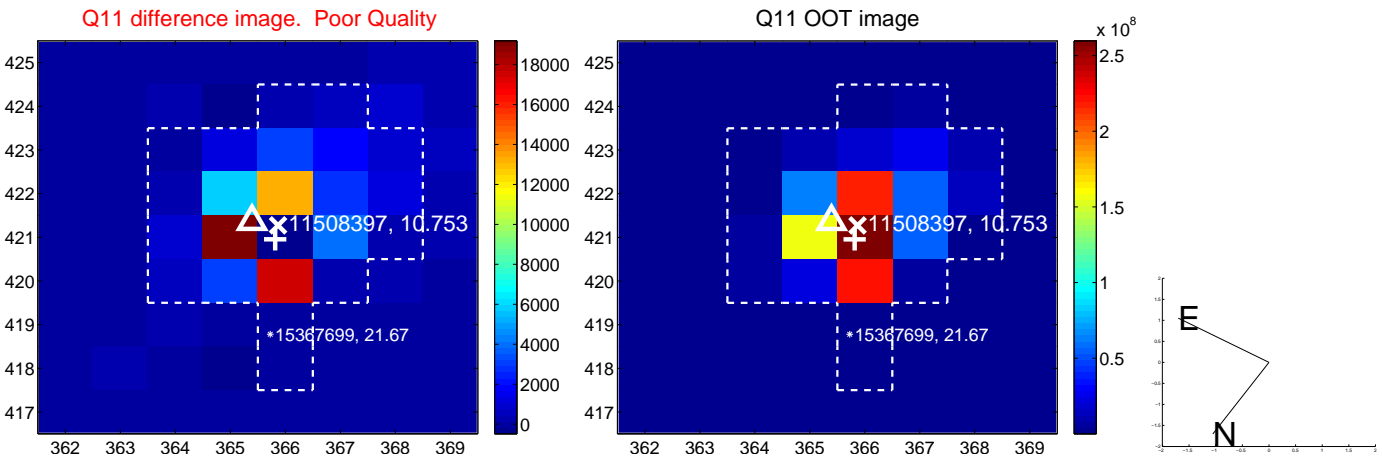
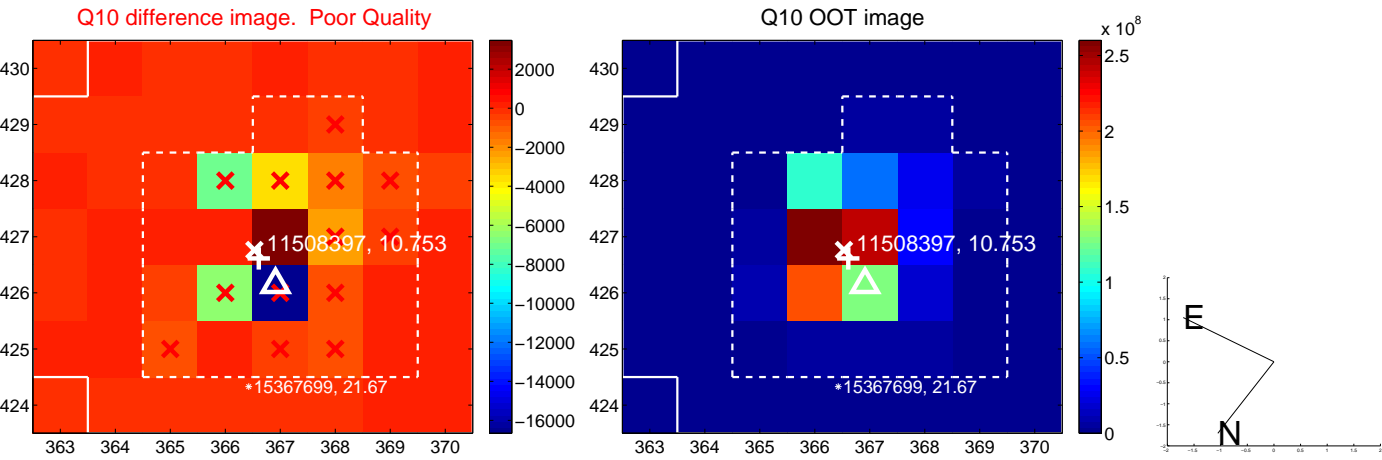
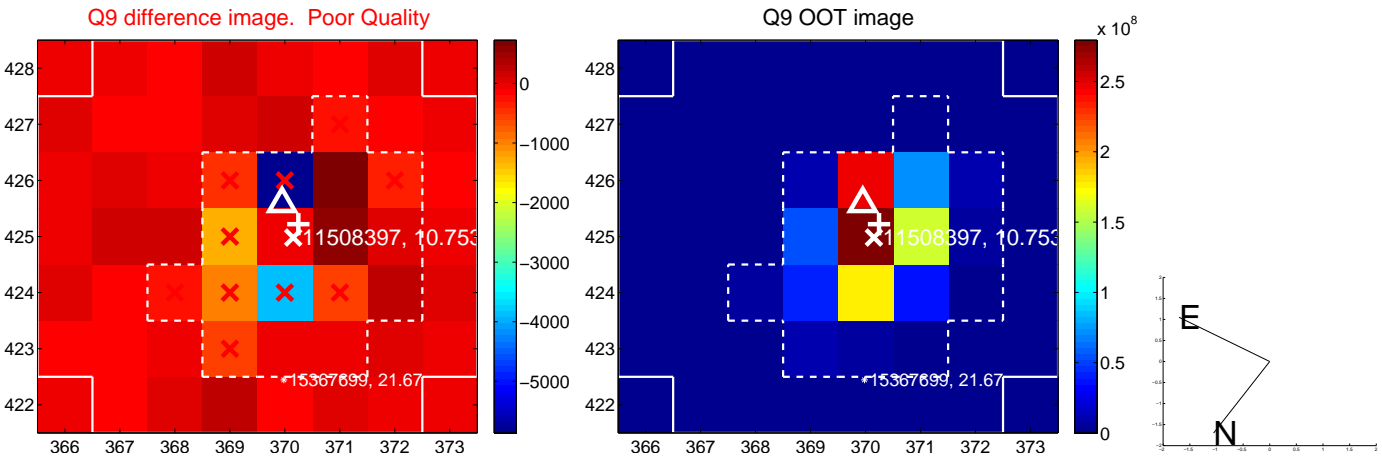
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



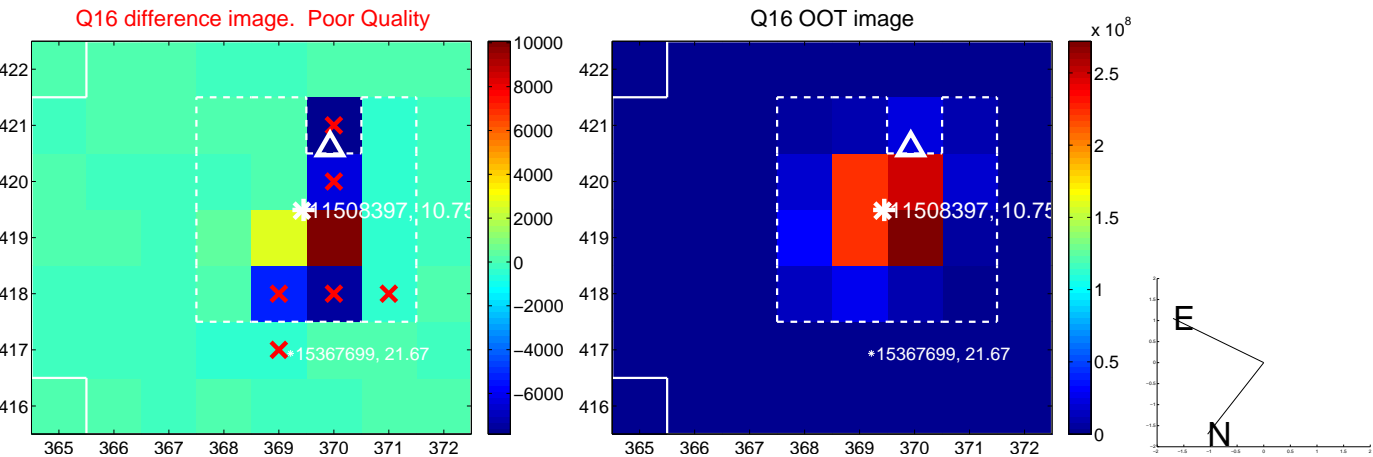
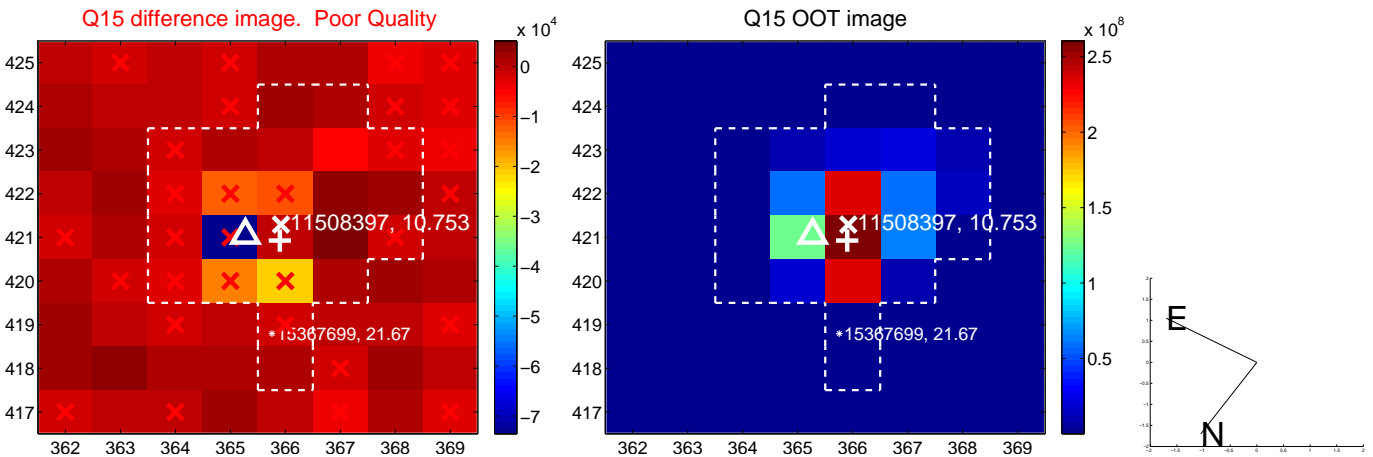
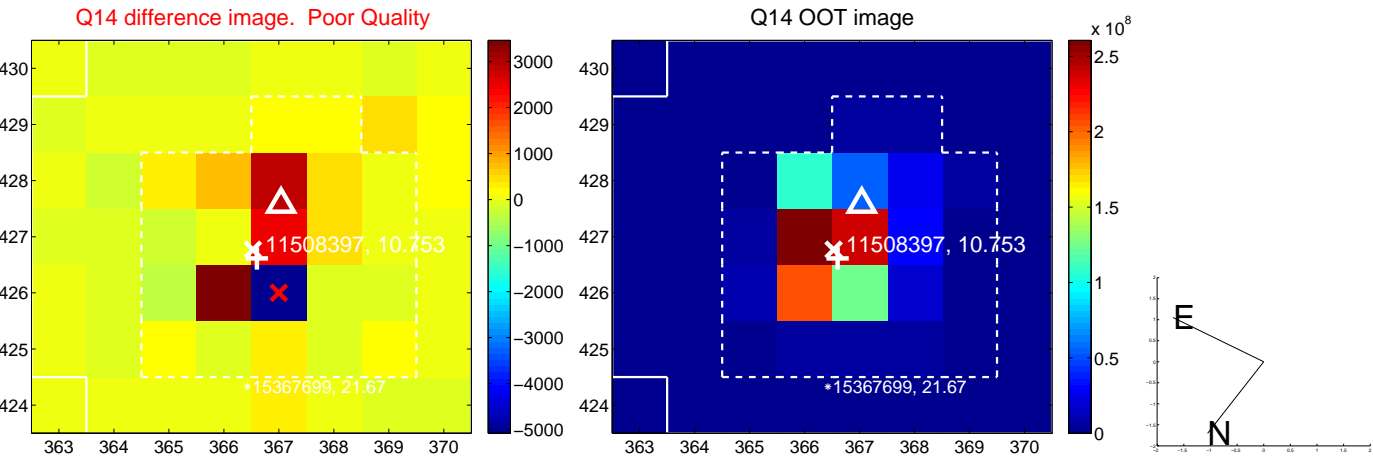
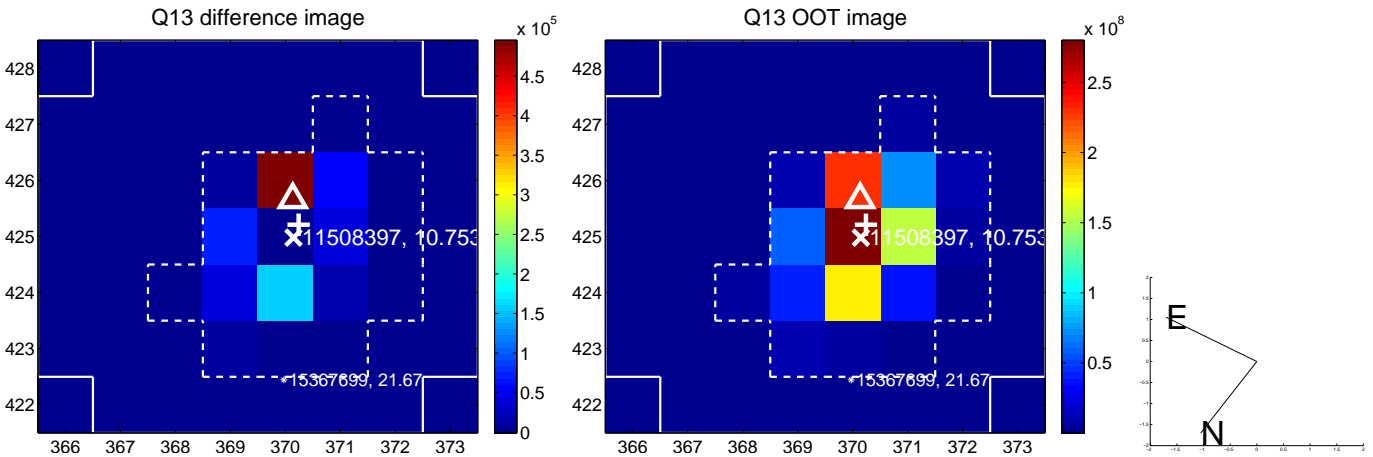
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



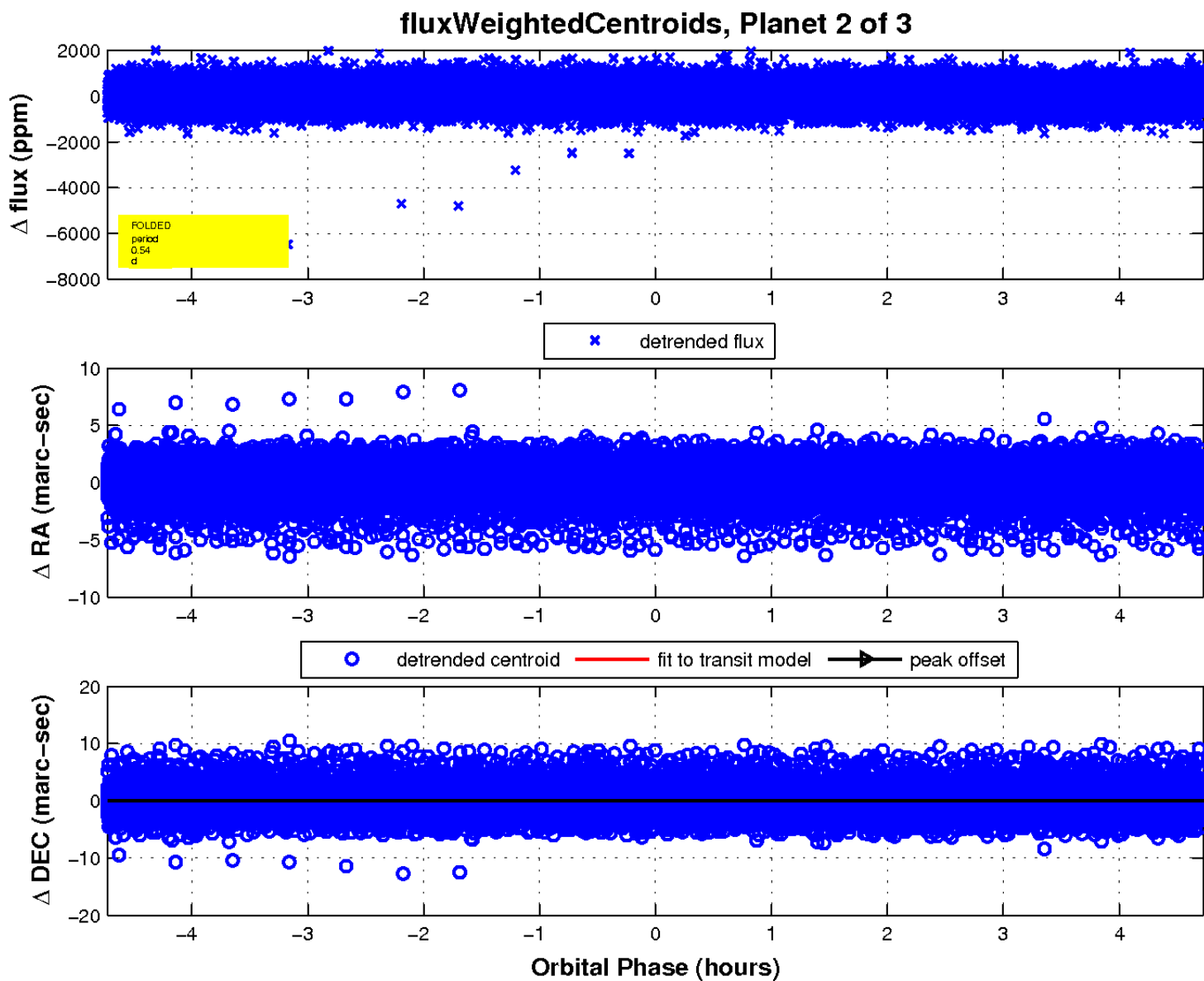
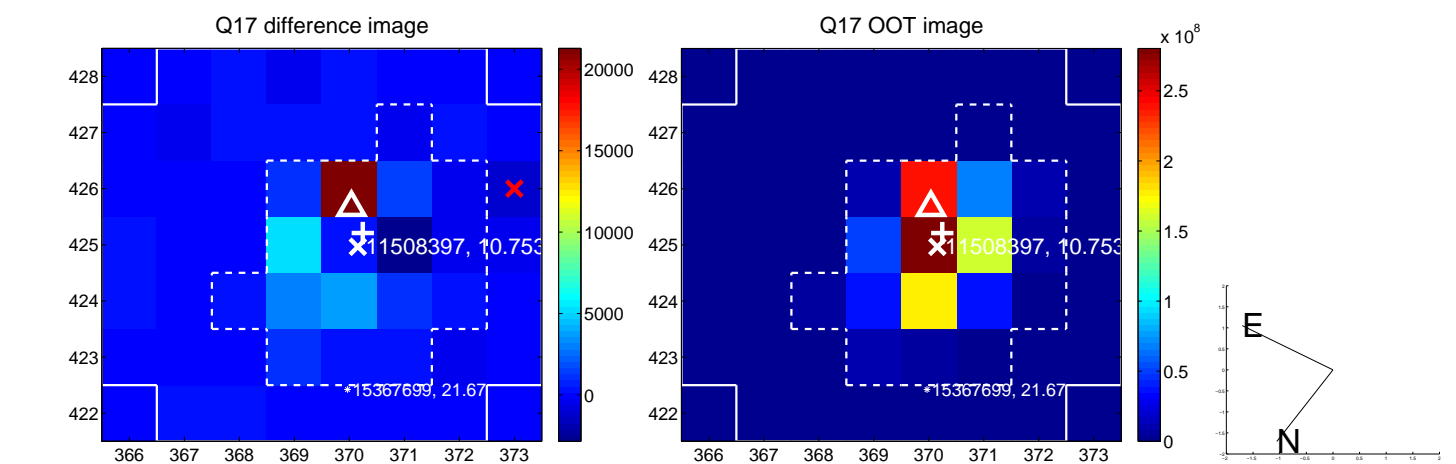
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

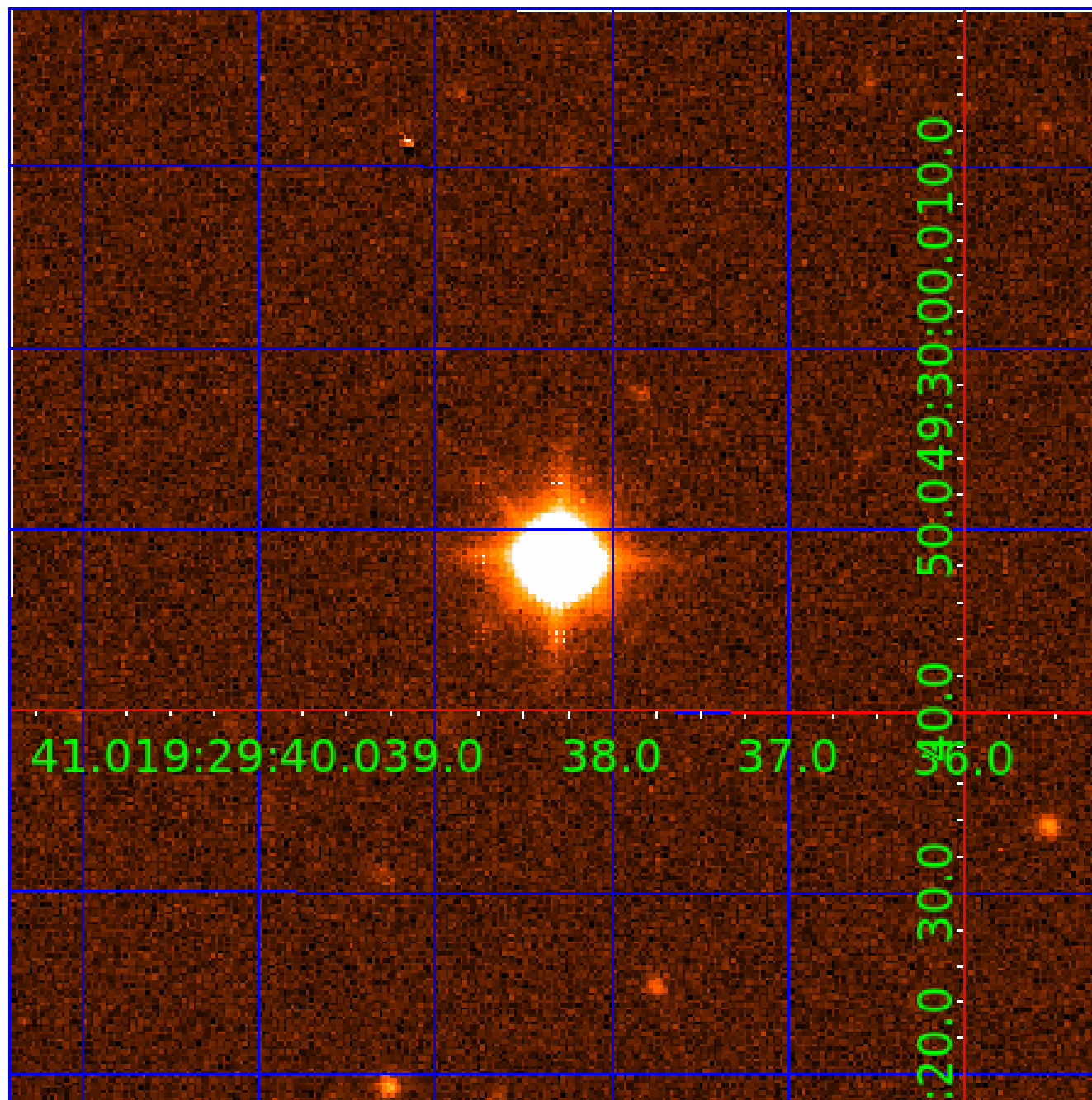


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011508397

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})
011508397-01	OBS	No	0.611559	131.546271	36.1	3.750	12.6	6.9	2.51	7287	1.55	54192.79
011508397-02	OBS	No	0.537056	131.633137	124.0	1.576	12.6	14.3	2.51	7287	2.99	64441.61
011508397-03	OBS	No	12.674851	139.148429	364.3	3.227	9.0	9.3	2.51	7287	5.55	951.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011508397-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
011508397-02	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED—HALO_GHOST
011508397-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

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

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

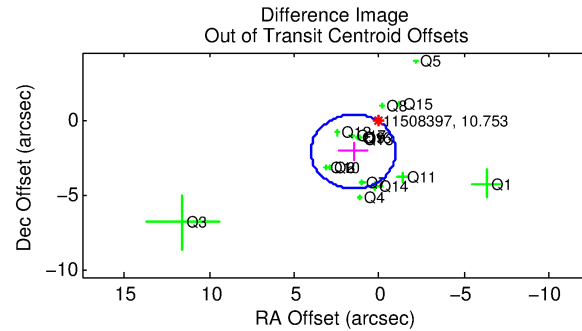
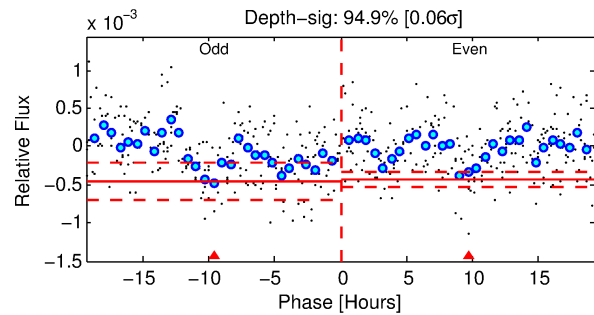
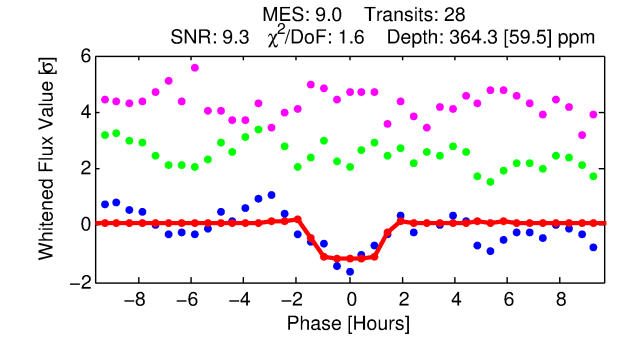
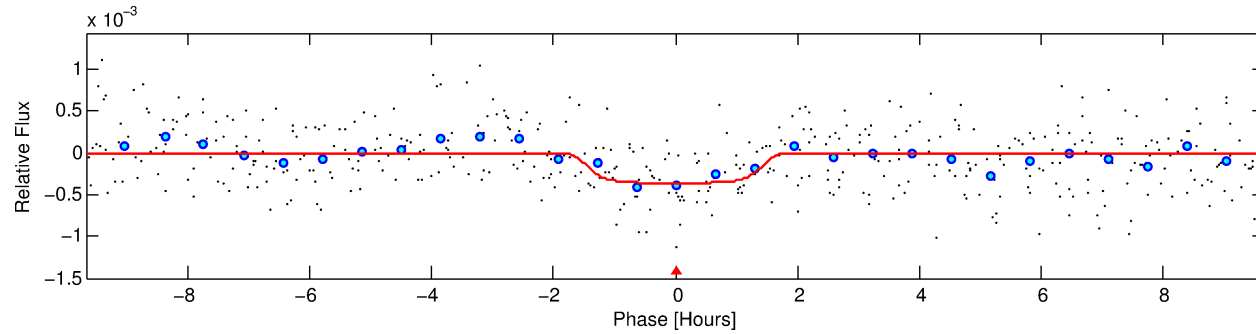
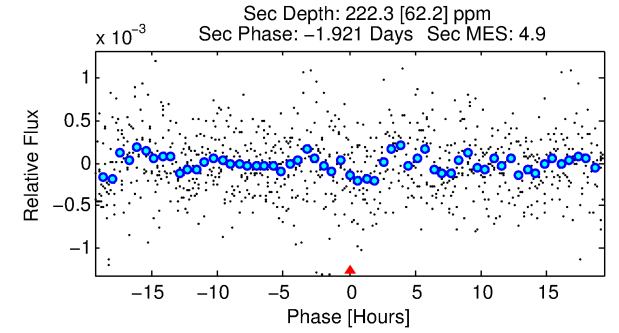
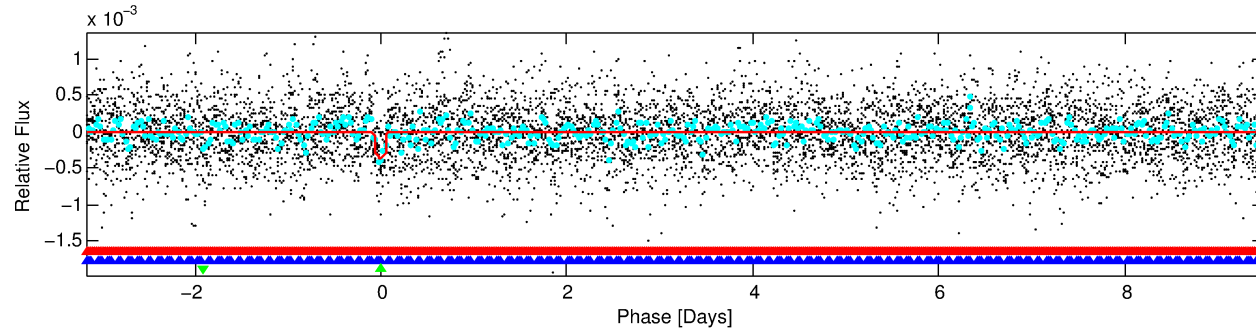
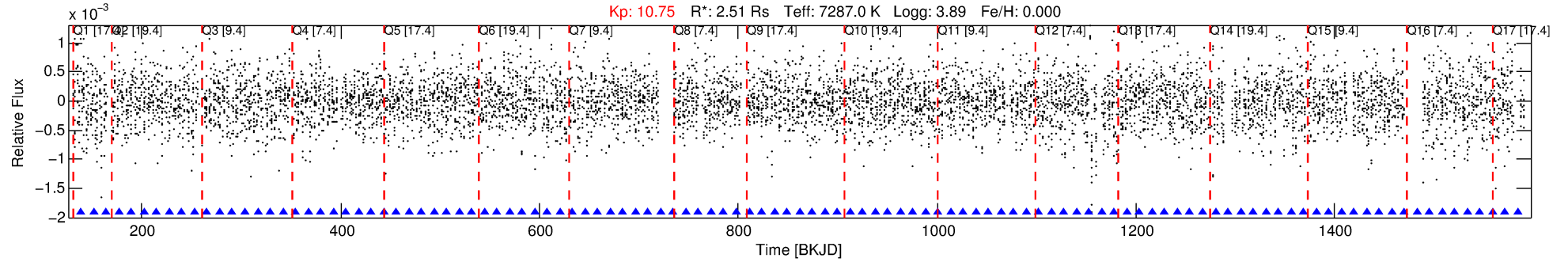
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011508397-03

No Significant Match Found

DV One-Page Summary

KIC: 11508397 Candidate: 3 of 3 Period: 12.675 d



DV Fit Results:

Period = 12.67485 [0.00016] d
Epoch = 139.1484 [0.0094] BKJD
 R_p/R^* = 0.0203 [0.0077]
 a/R^* = 14.40 [32.70]
 b = 0.90 [0.48]
 T_{eff} = 951.92 [307.90]
 T_{eq} = 1416 [115] K
 R_p = 5.55 [2.48] R_e
 a = 0.1292 [0.0270] AU
 A_g = 66.24 [57.71] [1.13 σ]
 T_{eff} = 6247 [1268] K [3.80 σ]

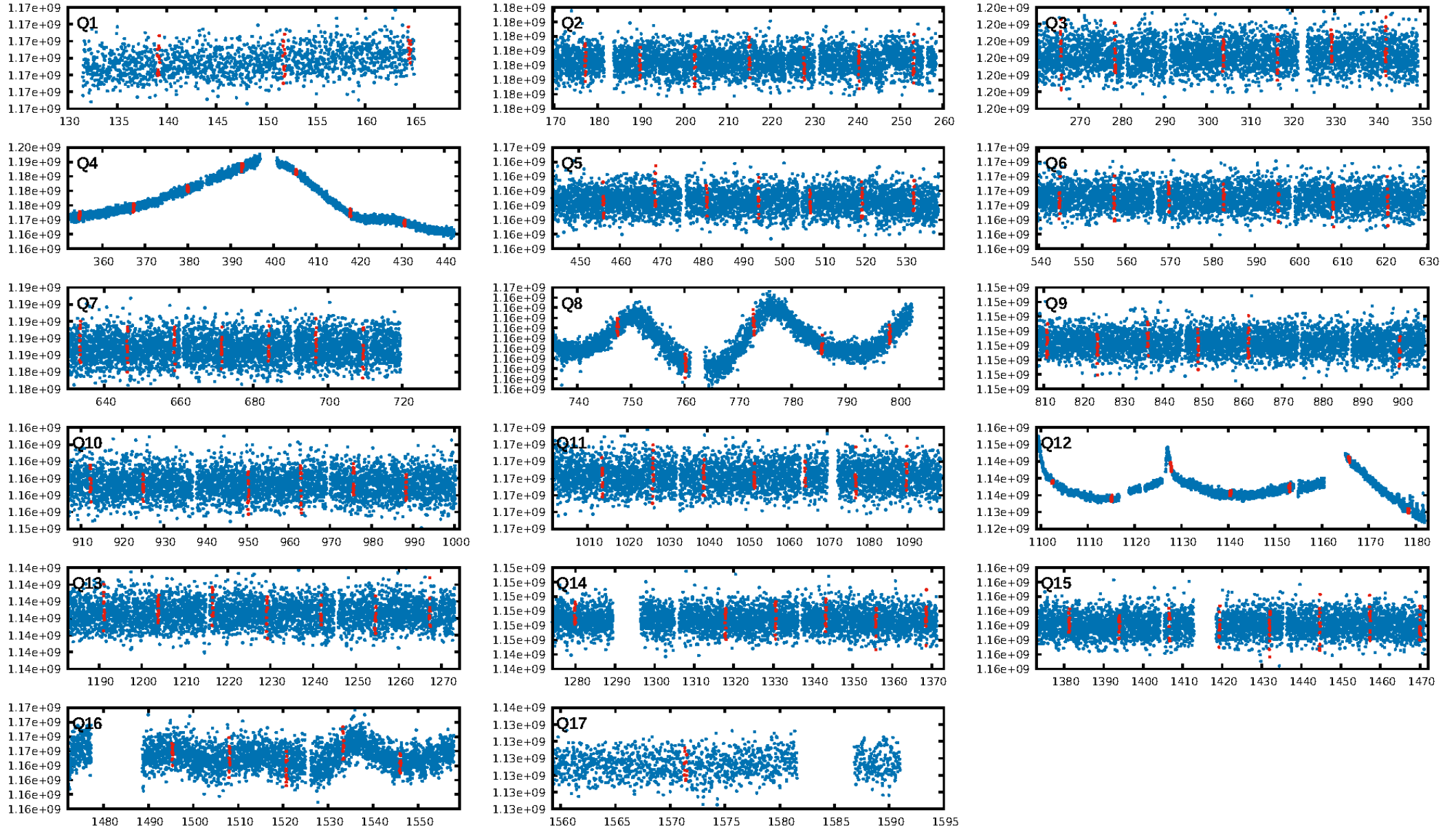
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [58.52 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.02e-08
RollingBand-fgt: 1.00 [28/28]
GhostDiagnostic-chr: -4.164
Centroid-sig: N/A
Centroid-so: 0.107 arcsec [1.00 σ]
OotOffset-rm: 2.601 arcsec [3.13 σ]
KicOffset-rm: 2.918 arcsec [3.57 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.35 [6/17]
DiffImageOverlap-fno: 0.00 [0/17]

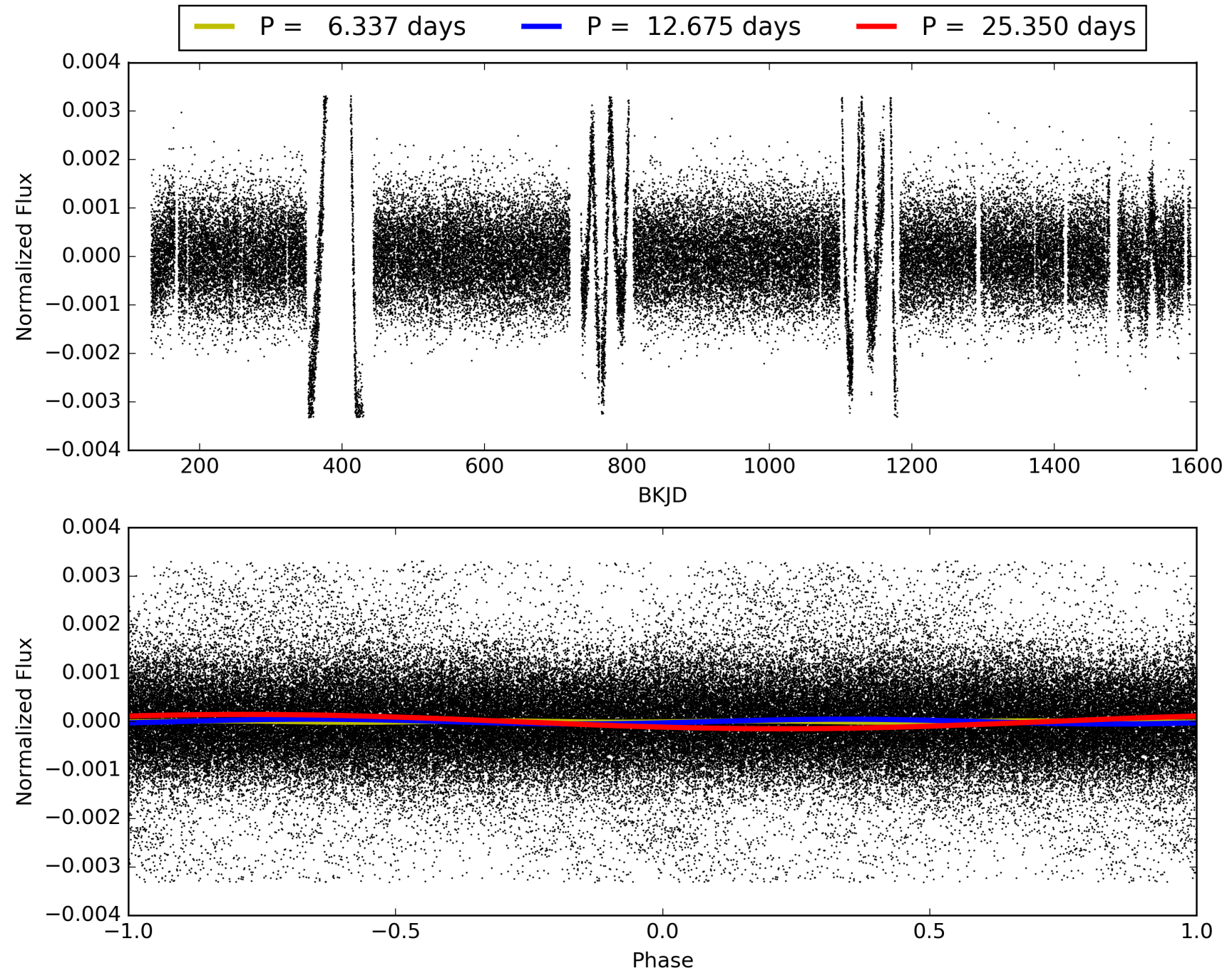
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:30:29 Z

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

TCE 011508397-03, PDC Light Curves

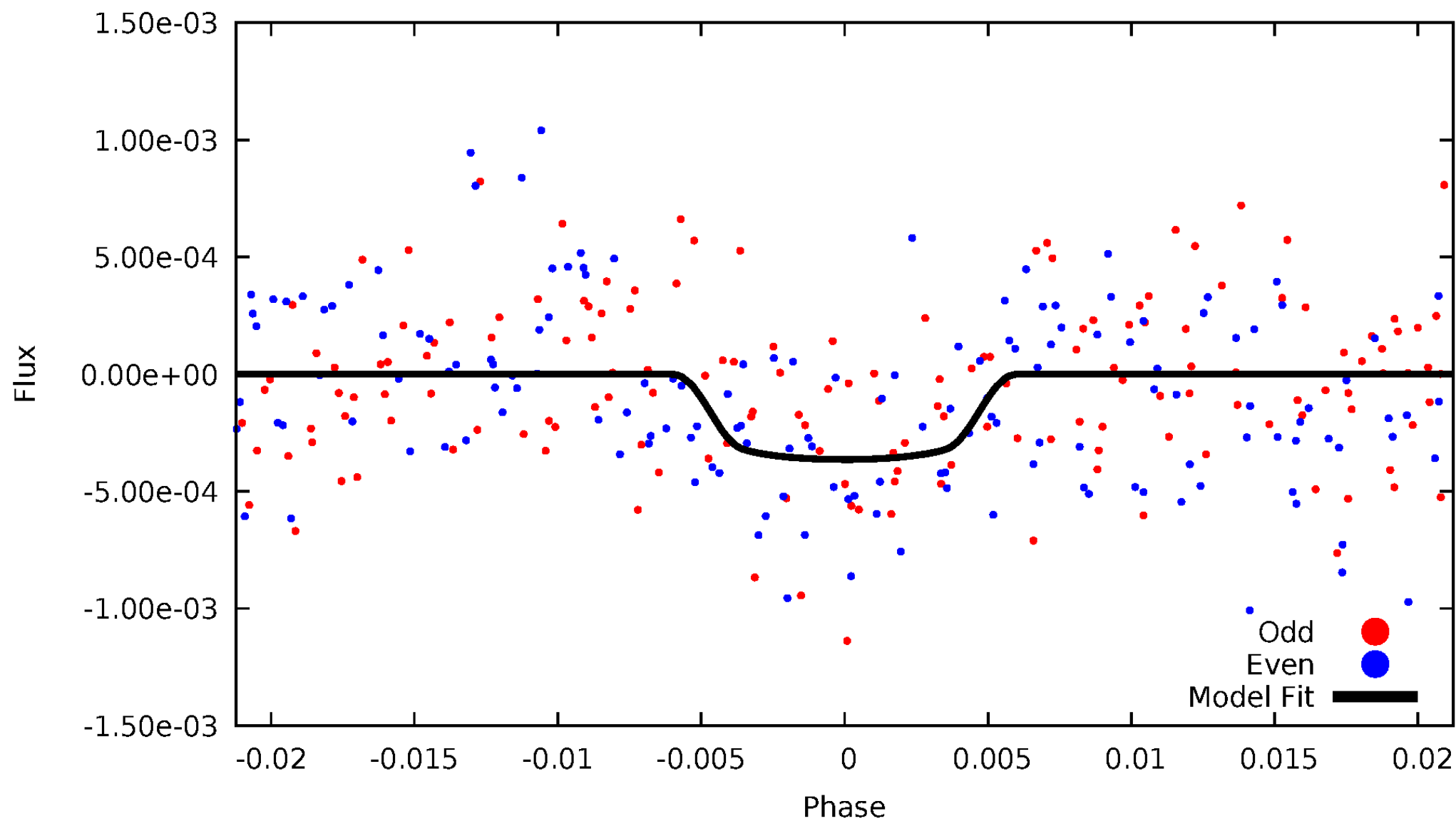


TCE 011508397-03



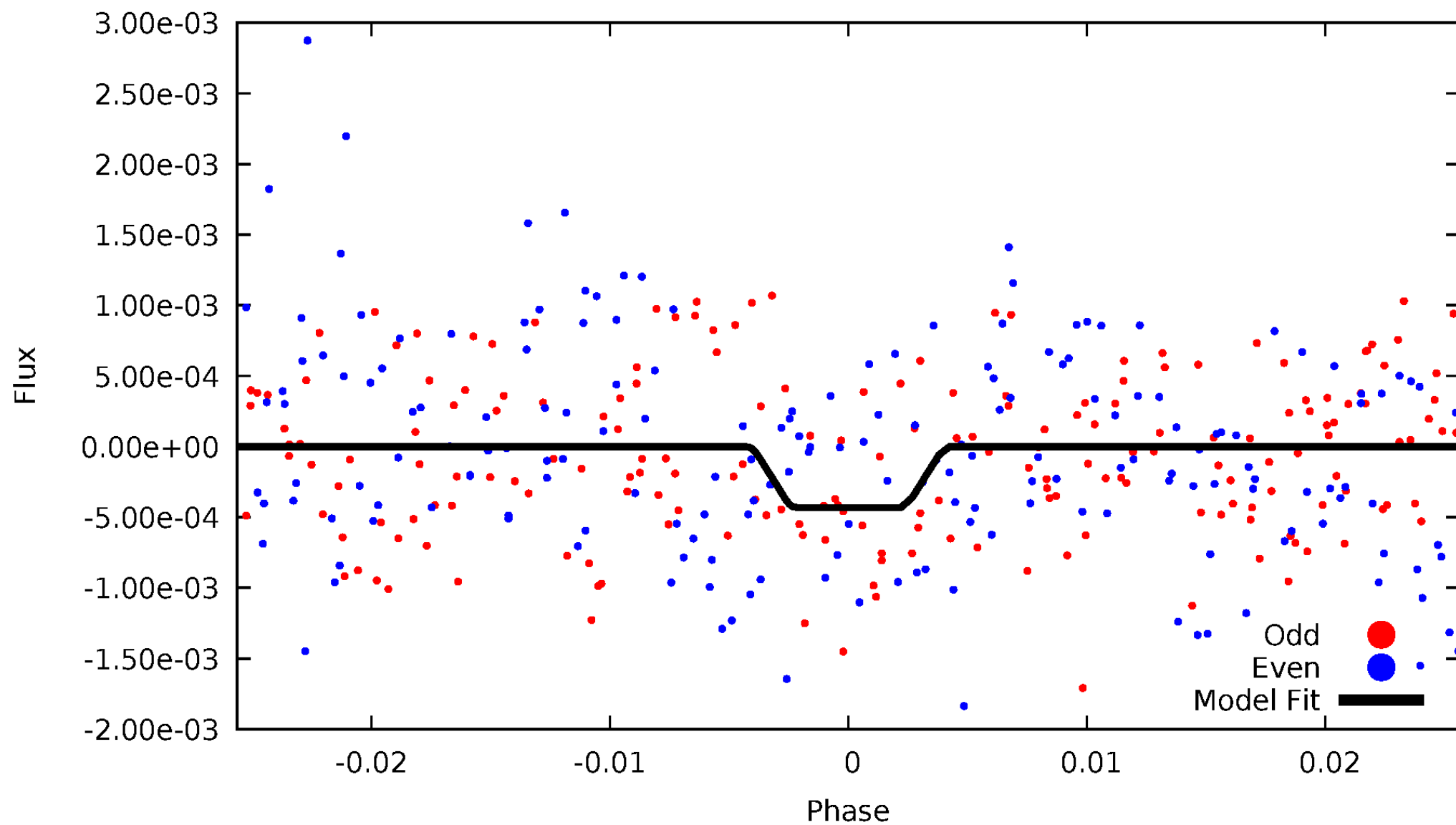
DV Odd/Even

TCE 011508397-03



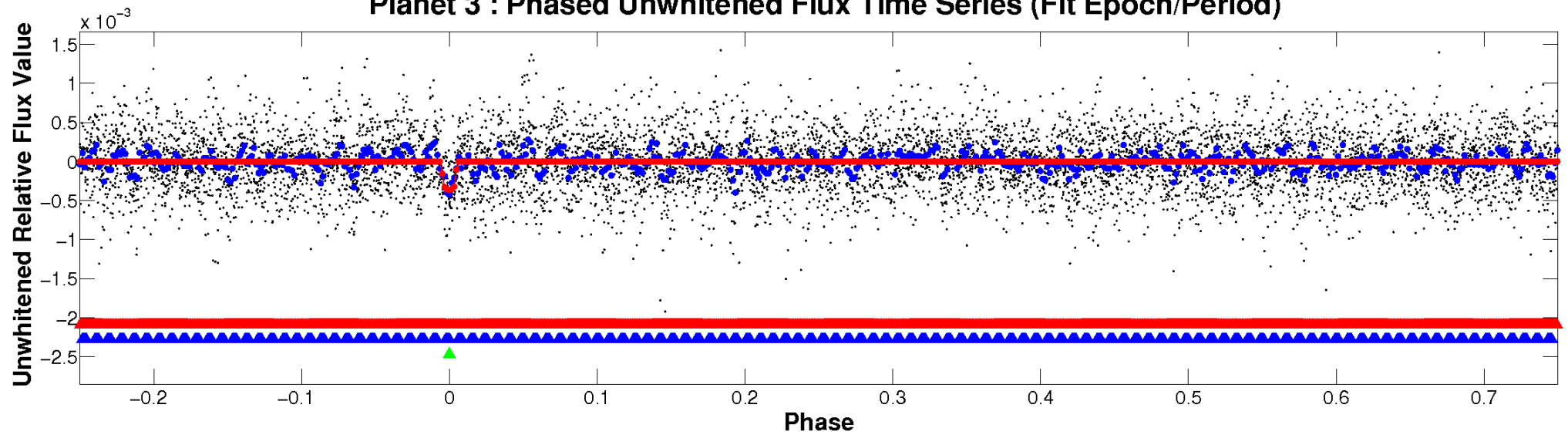
ALT Odd/Even

TCE 011508397-03

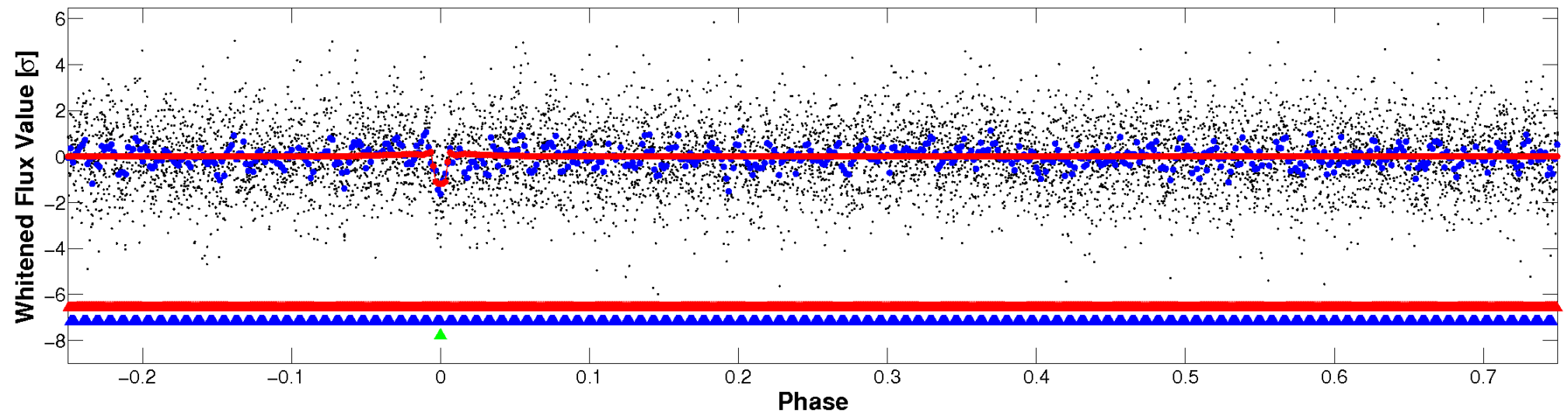


Non-Whitened Vs. Whitened Light Curve

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

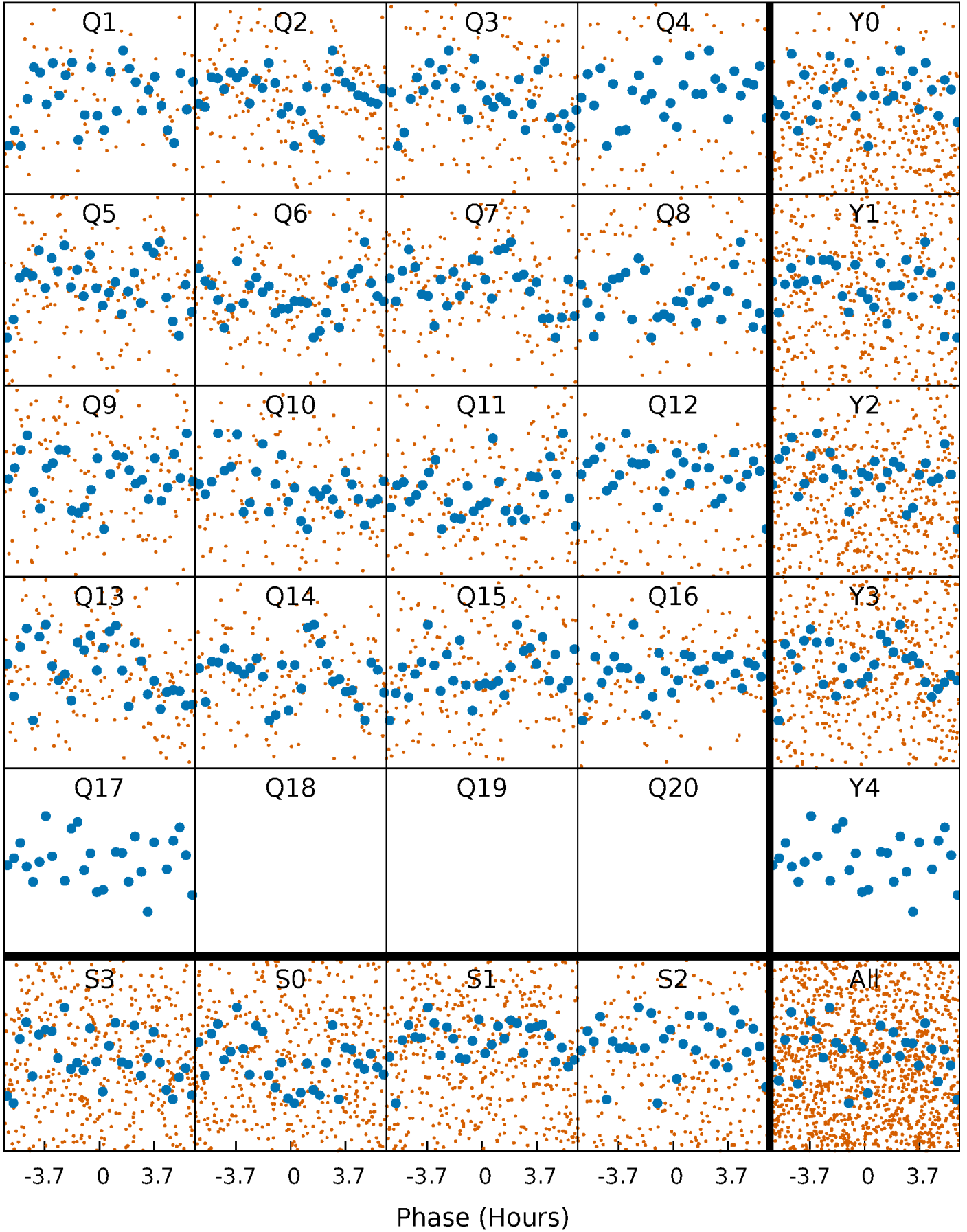


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



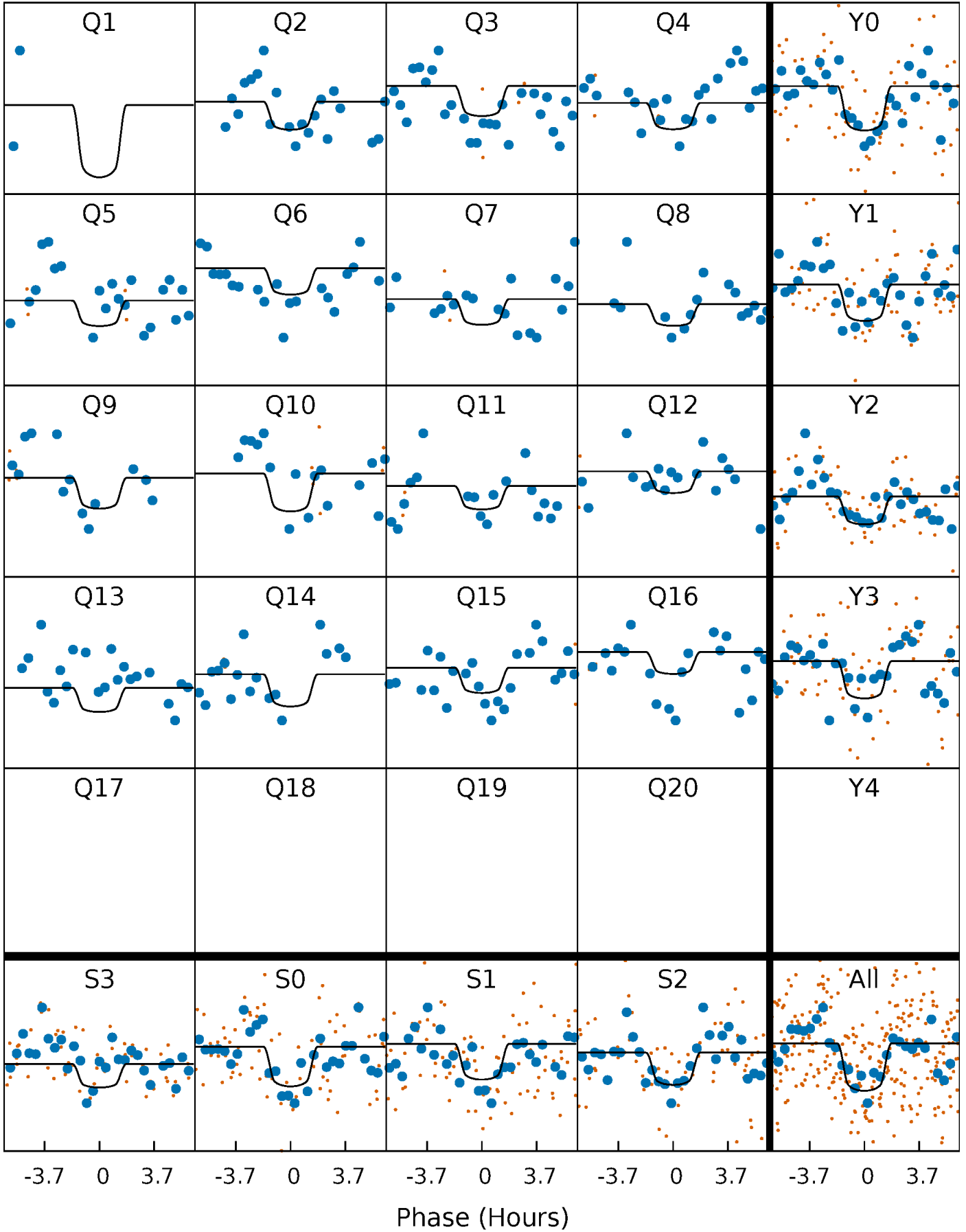
PDC Quarter-Phased Transit Curves

TCE 011508397-03 P= 12.674851 Days $T_0=139.148429$ (BKJD)



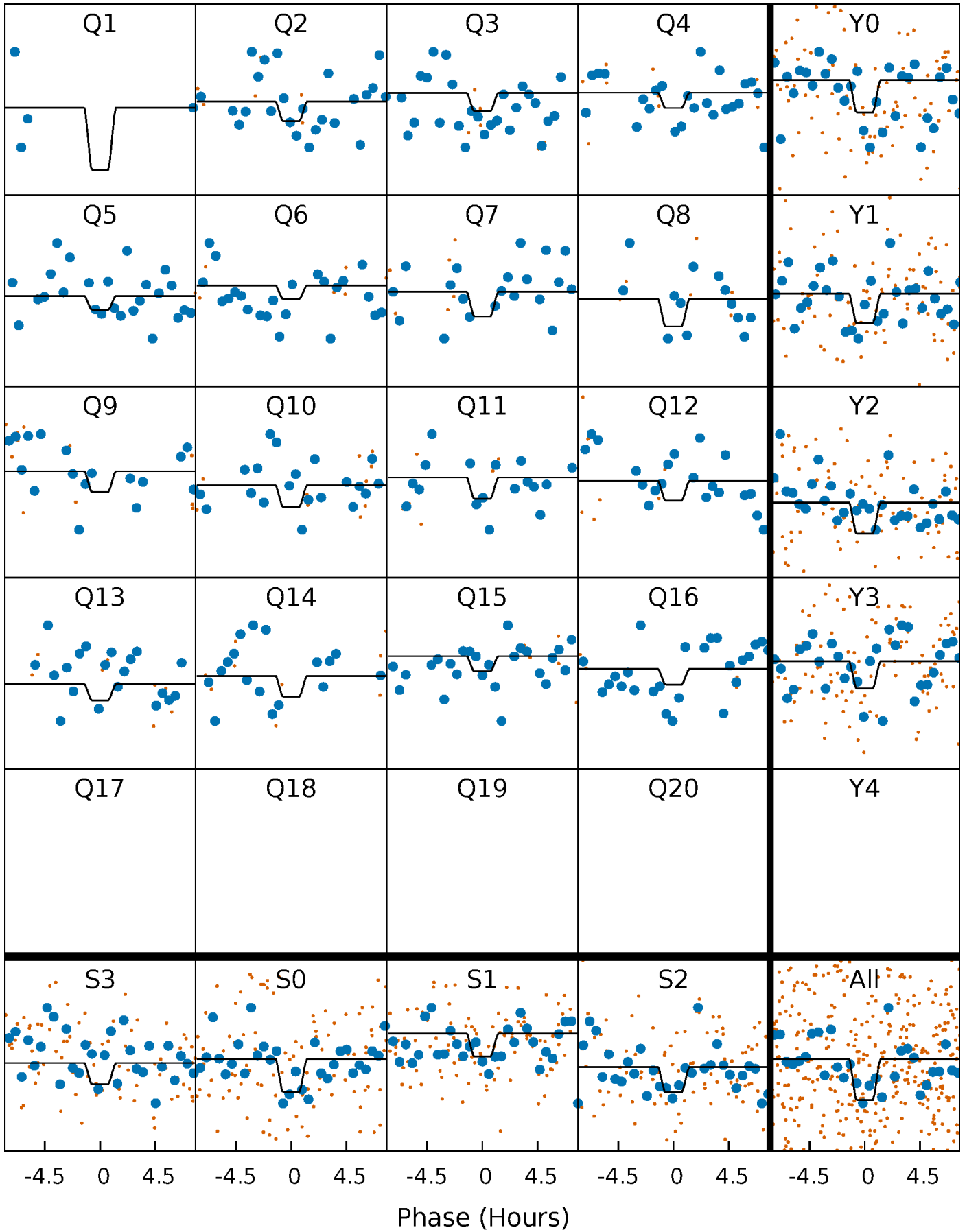
DV Quarter-Phased Transit Curves

TCE 011508397-03 P= 12.674851 Days $T_0=139.148429$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

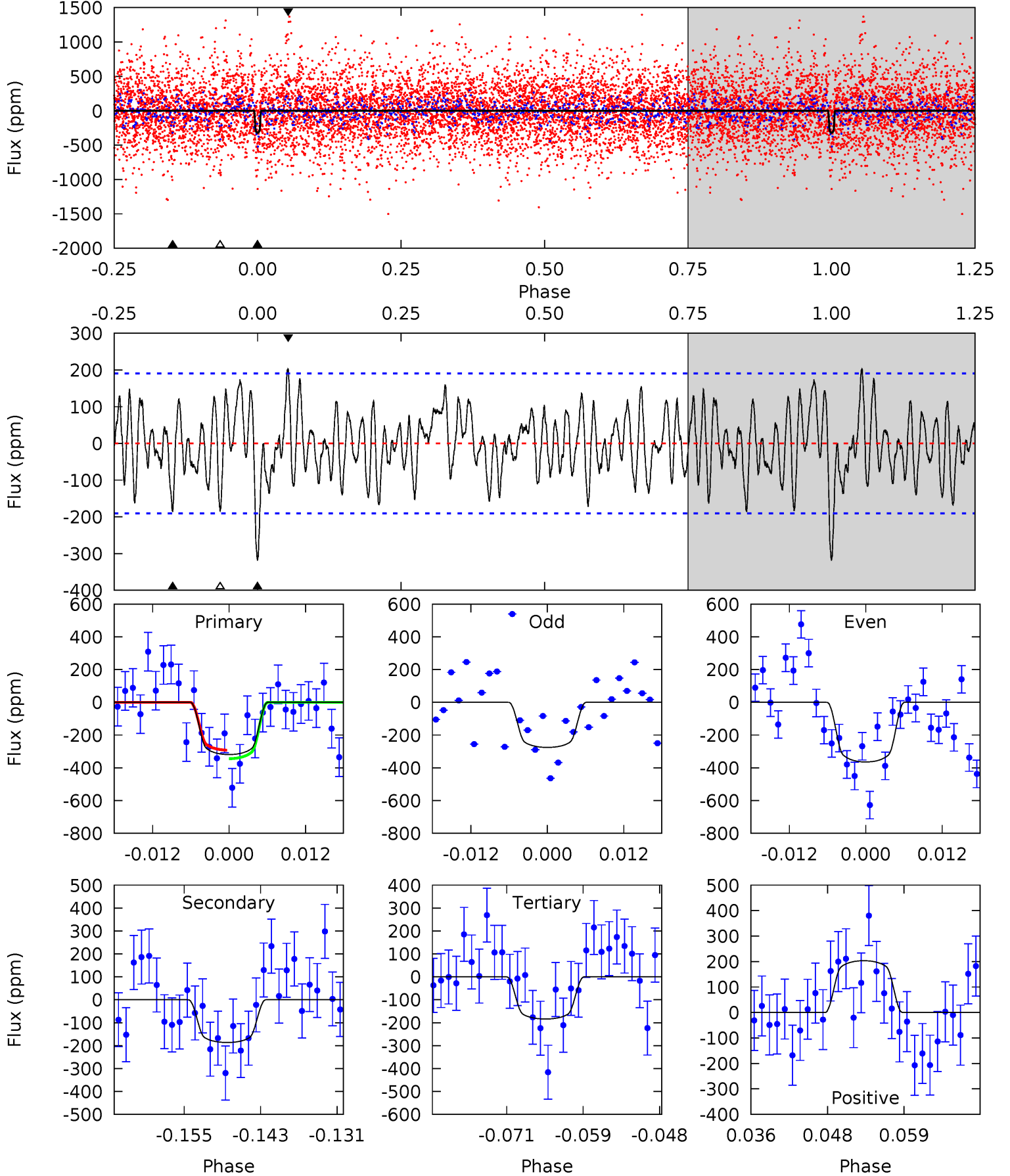
TCE 011508397-03 P= 12.674801 Days $T_0=139.157722$ (BKJD)



DV Model-Shift Uniqueness Test

011508397-03, P = 12.674851 Days, E = 126.473578 Days

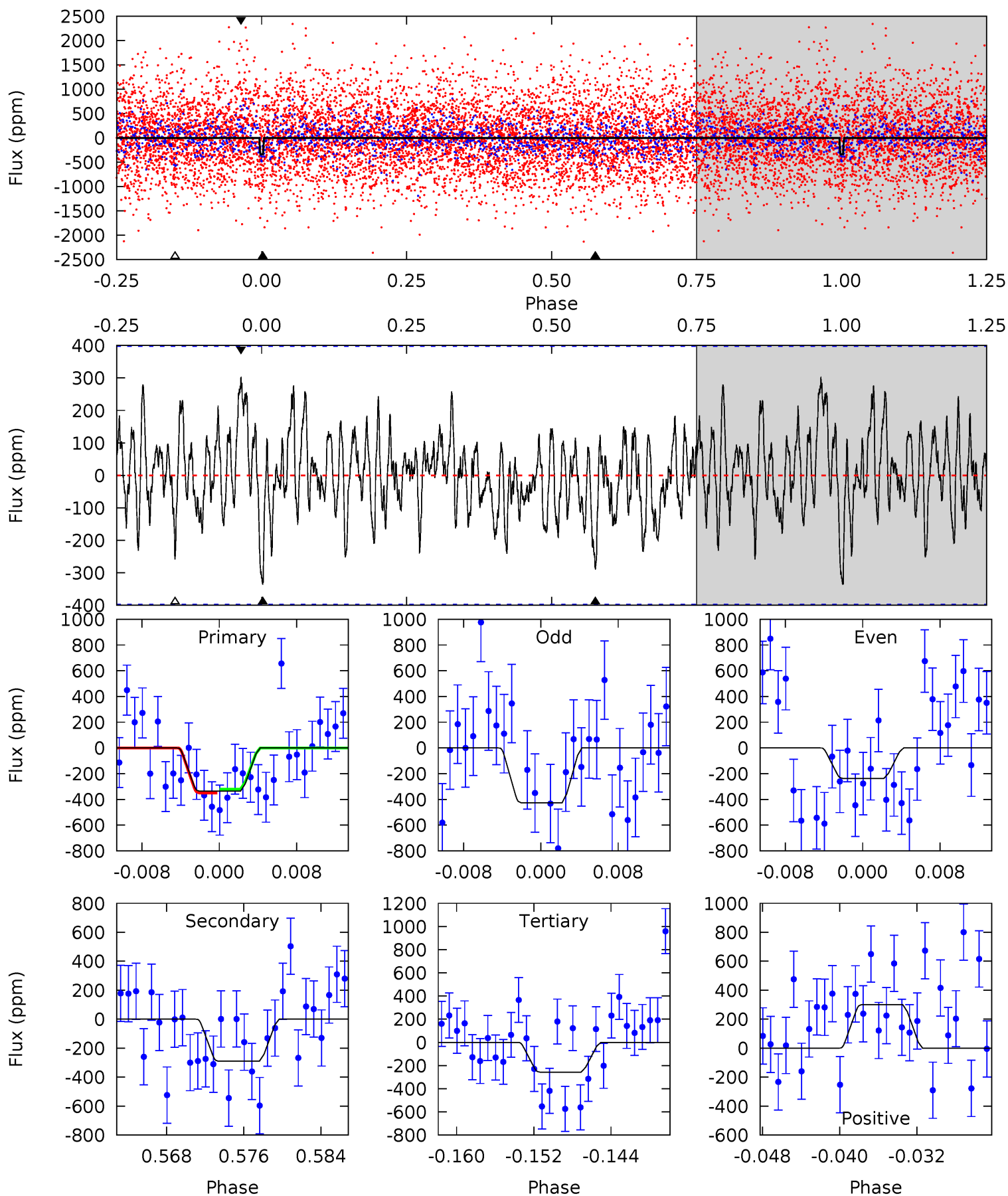
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	4.89	4.82	5.33	4.99	2.52	1.94	3.55	3.04	0.06	-0.44	1.17	0.75	0.39	0.69



Alt Model-Shift Uniqueness Test

011508397-03, P = 12.674801 Days, E = 126.482921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.27	3.69	3.28	3.83	5.07	2.65	1.31	1.00	0.45	0.42	-0.13	1.21	0.99	0.47	0.18



Stellar Parameters For KIC 011508397

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7287^{+76}_{-87}	$3.892^{+0.182}_{-0.098}$	$0.000^{+0.150}_{-0.150}$	$2.507^{+0.391}_{-0.586}$	$1.785^{+0.128}_{-0.227}$	$0.160^{+0.156}_{-0.049}$
	+1%/-1%	+5%/-3%	+inf%/-inf%	+16%/-23%	+7%/-13%	+98%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 011508397-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-186 ± 38	$5.28^{+2.24}_{-1.99}$	1968^{+84}_{-110}	5960^{+1636}_{-864}	61^{+99}_{-31}
Alt.	-290 ± 79	$5.56^{+2.11}_{-2.17}$	1964^{+87}_{-103}	6474^{+2231}_{-1005}	84^{+154}_{-43}

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

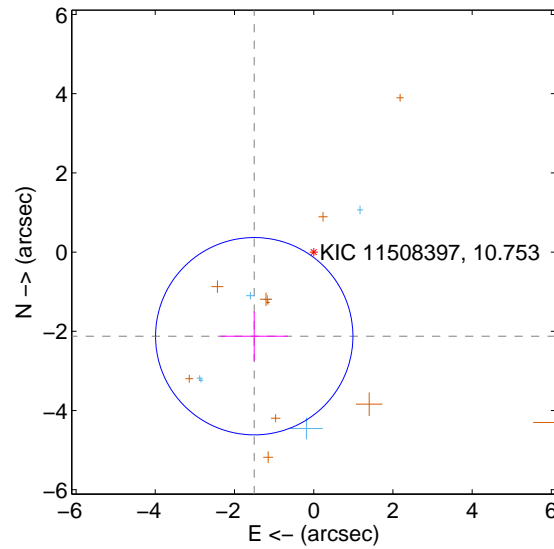
Supplemental centroid analysis for 011508397-03. **Kepler magnitude: 10.75.** Transit SNR 9.30

There are 6 quarters with good PRF difference image offsets

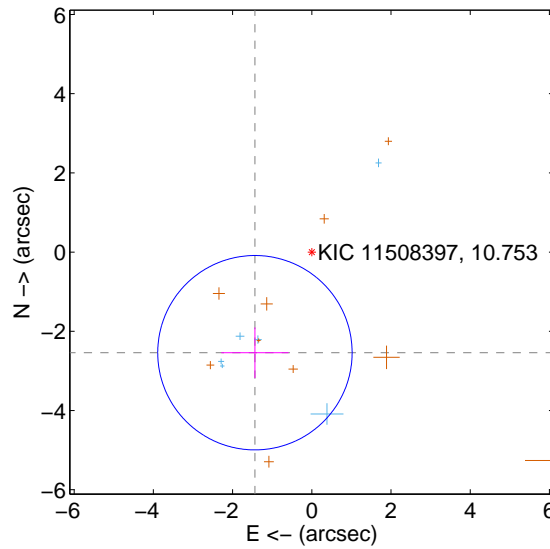
The direct PRF centroid is offset from the target star catalog position by about 1.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.601 ± 0.830	3.13	1.502 ± 0.850	-2.124 ± 0.623
PRF-fit source offset from KIC position	2.918 ± 0.818	3.57	1.436 ± 0.849	-2.540 ± 0.638
photometric centroid source offset	0.11 ± 0.11	1.00	0.11 ± 0.11	-0.00 ± 0.16

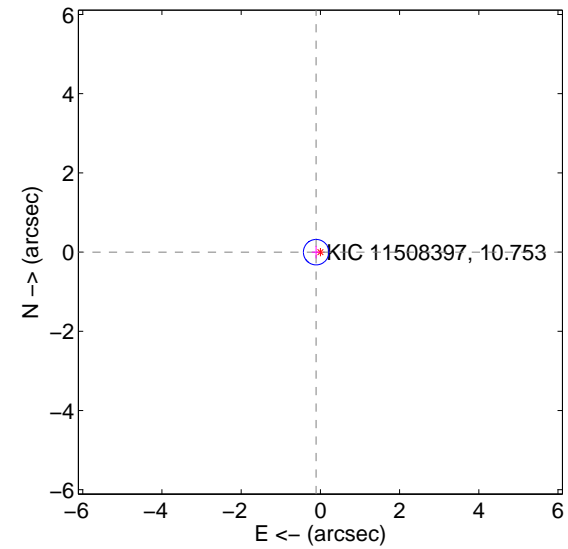
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

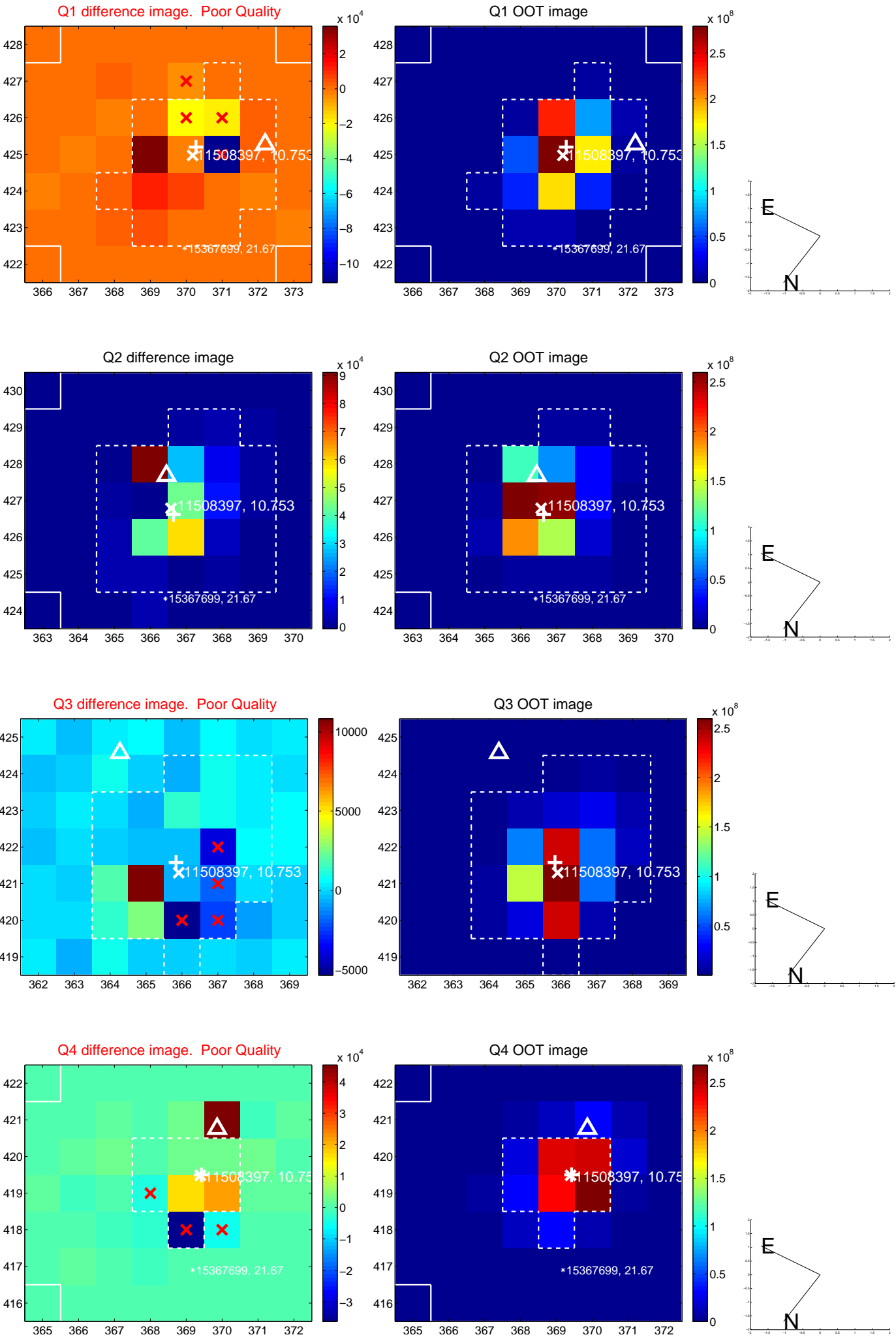


offset from photometric centroids

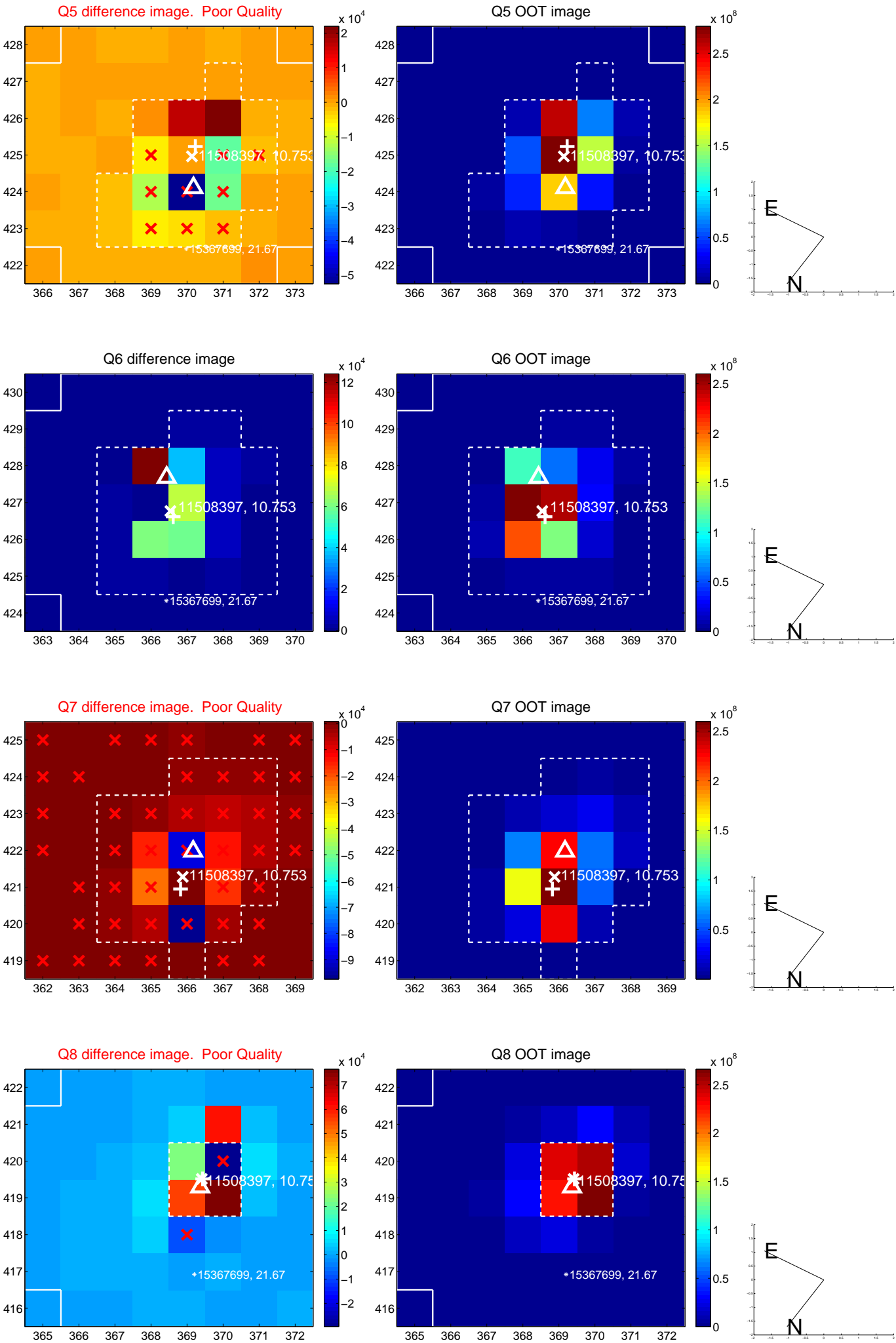


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

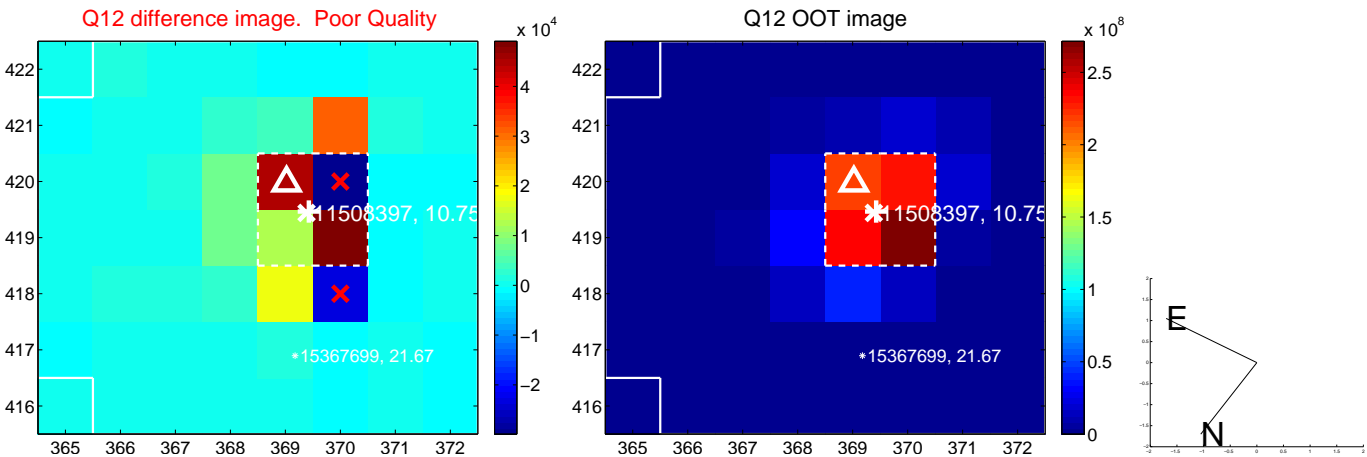
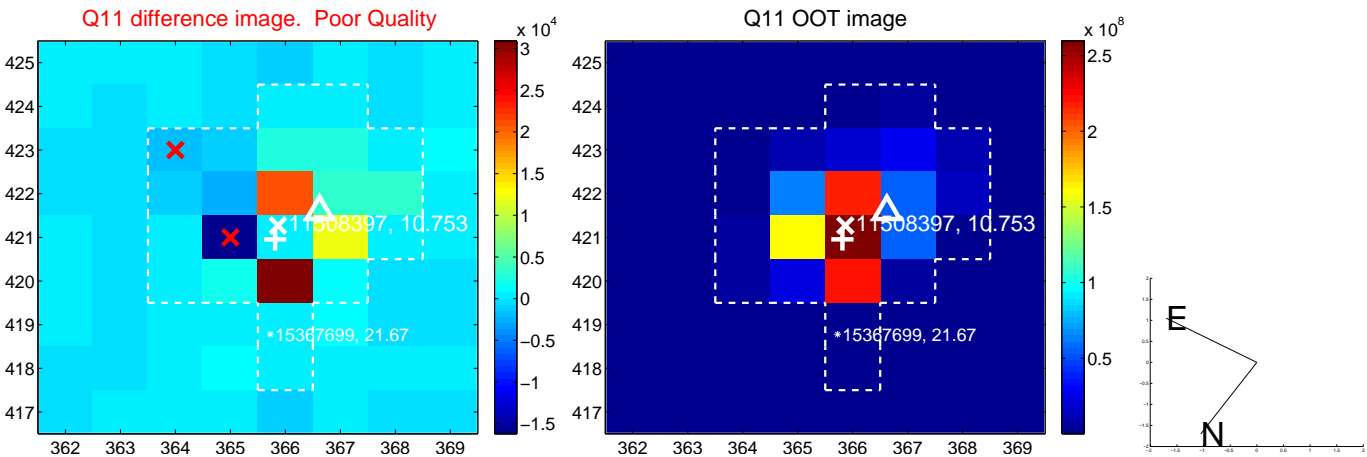
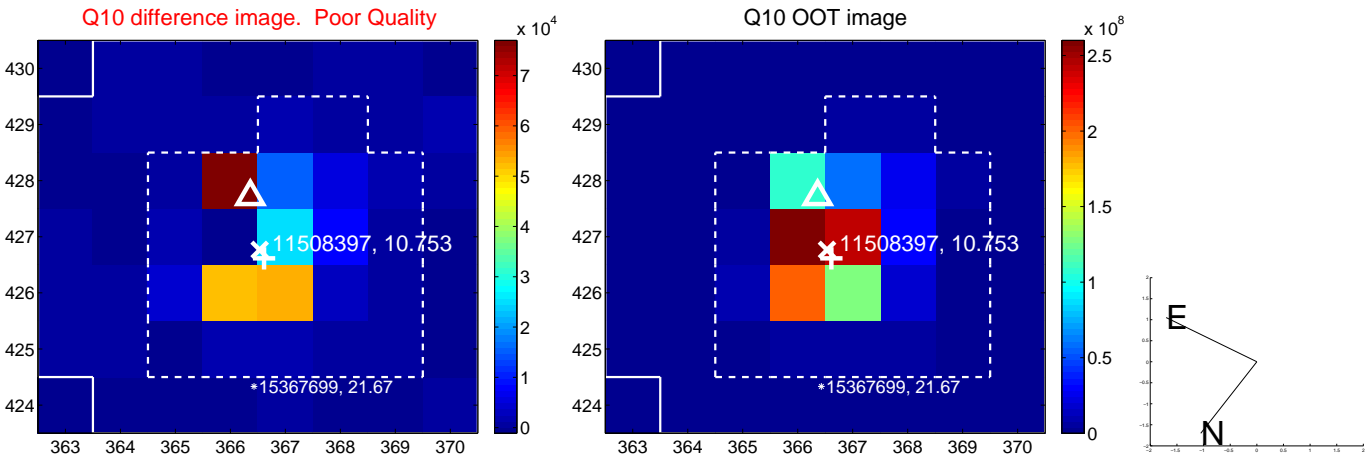
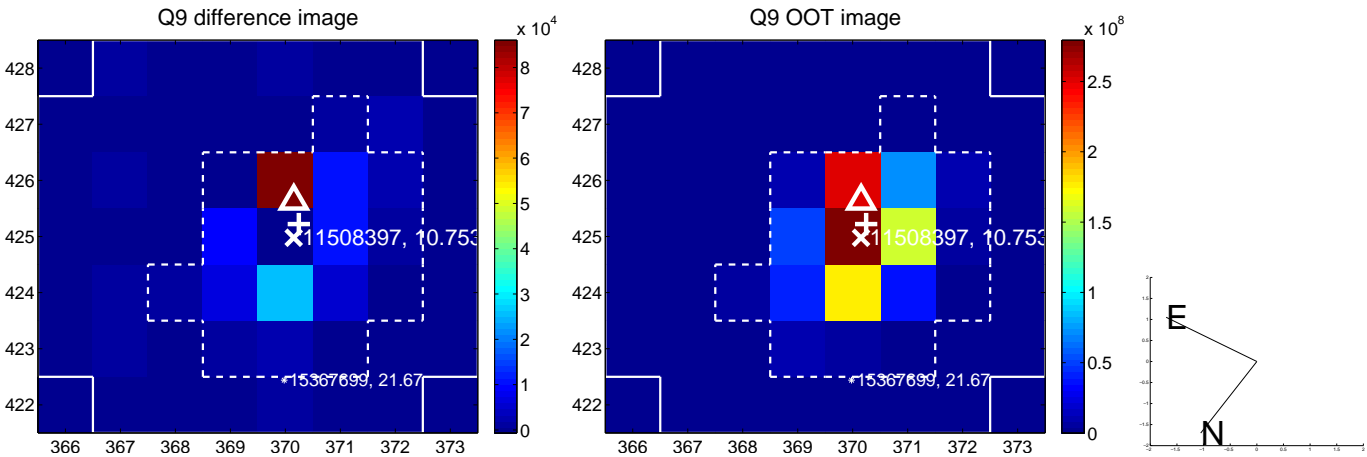
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



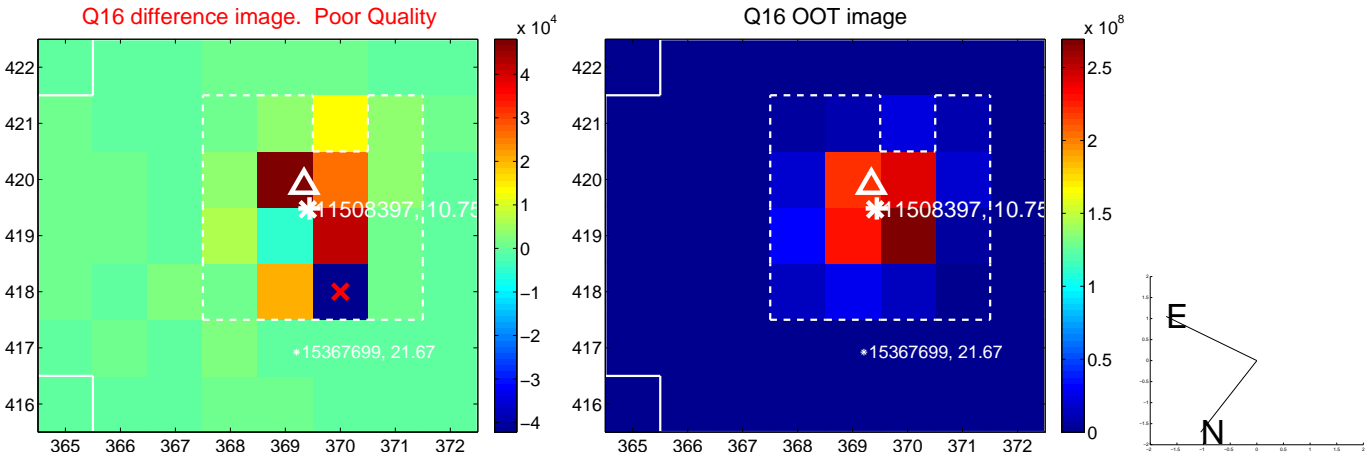
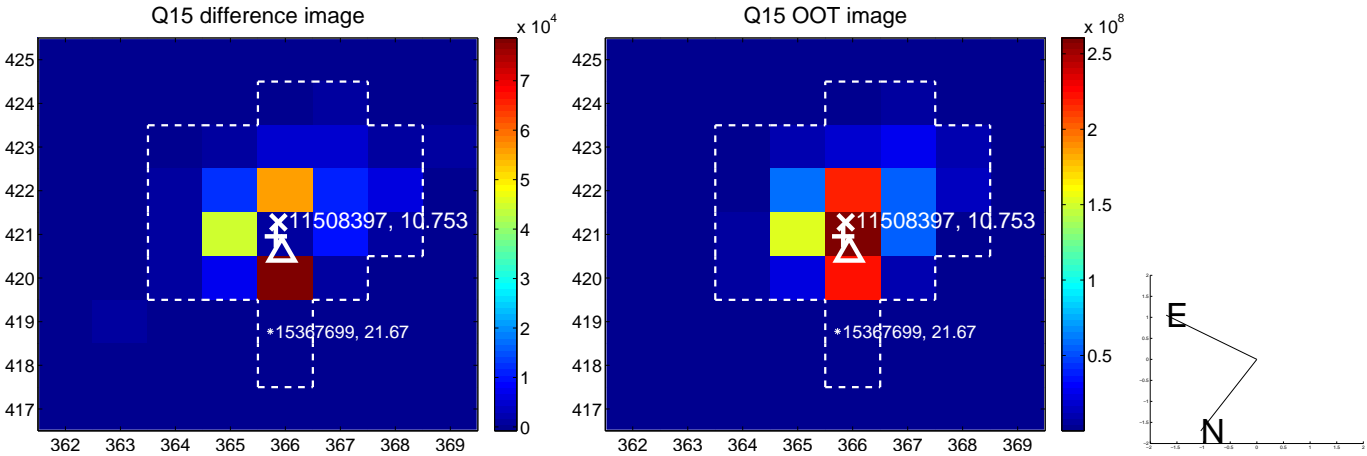
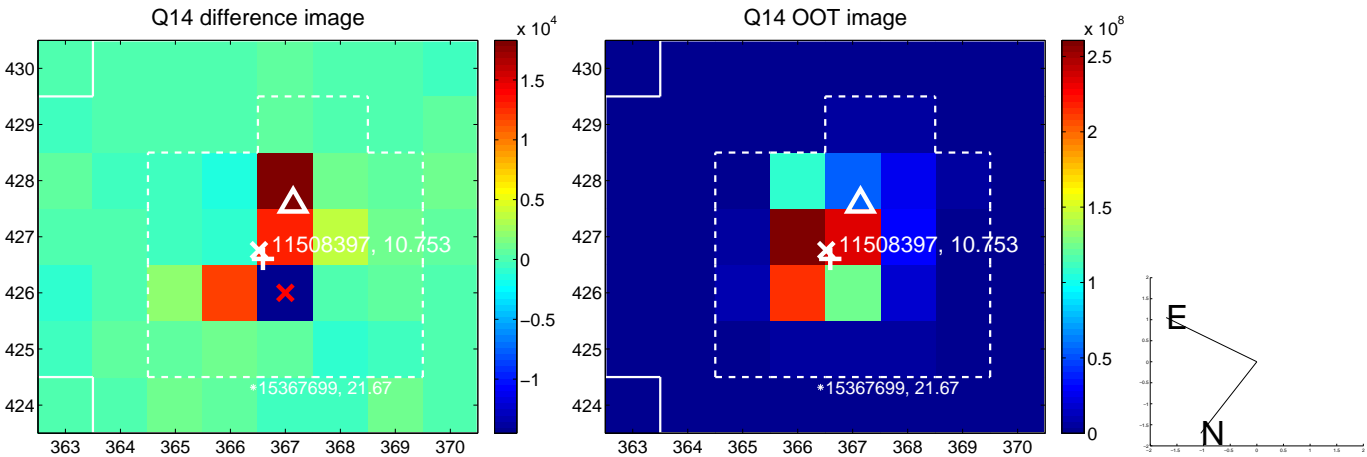
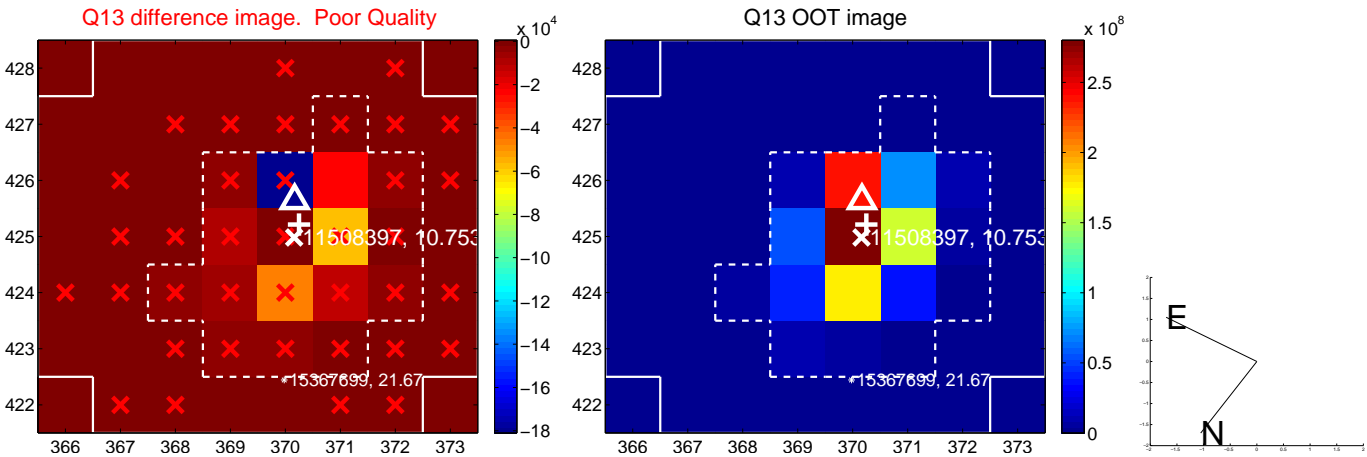
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



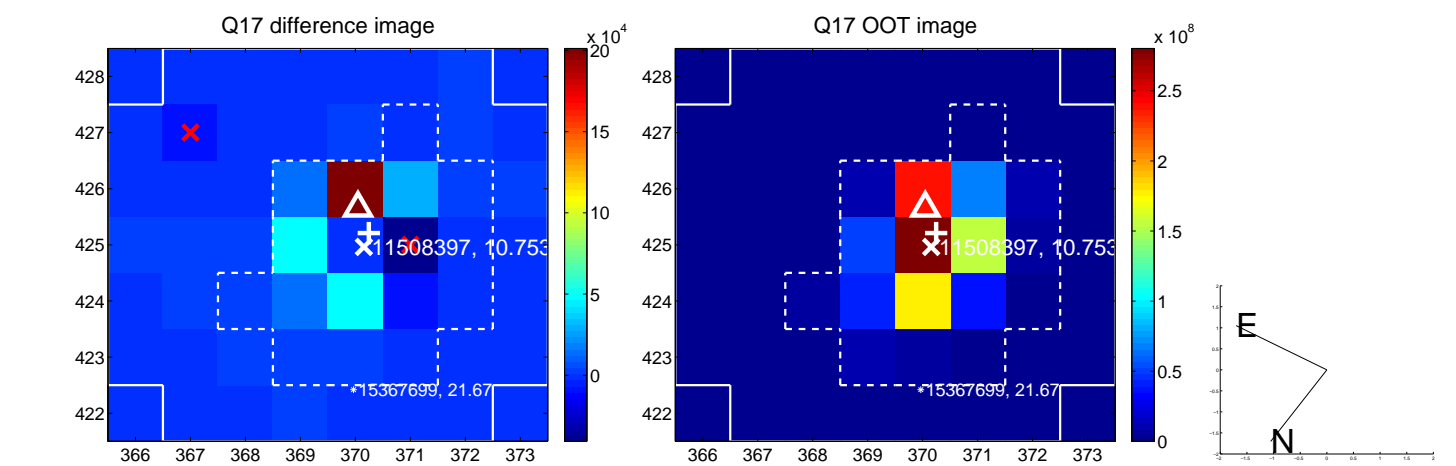
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



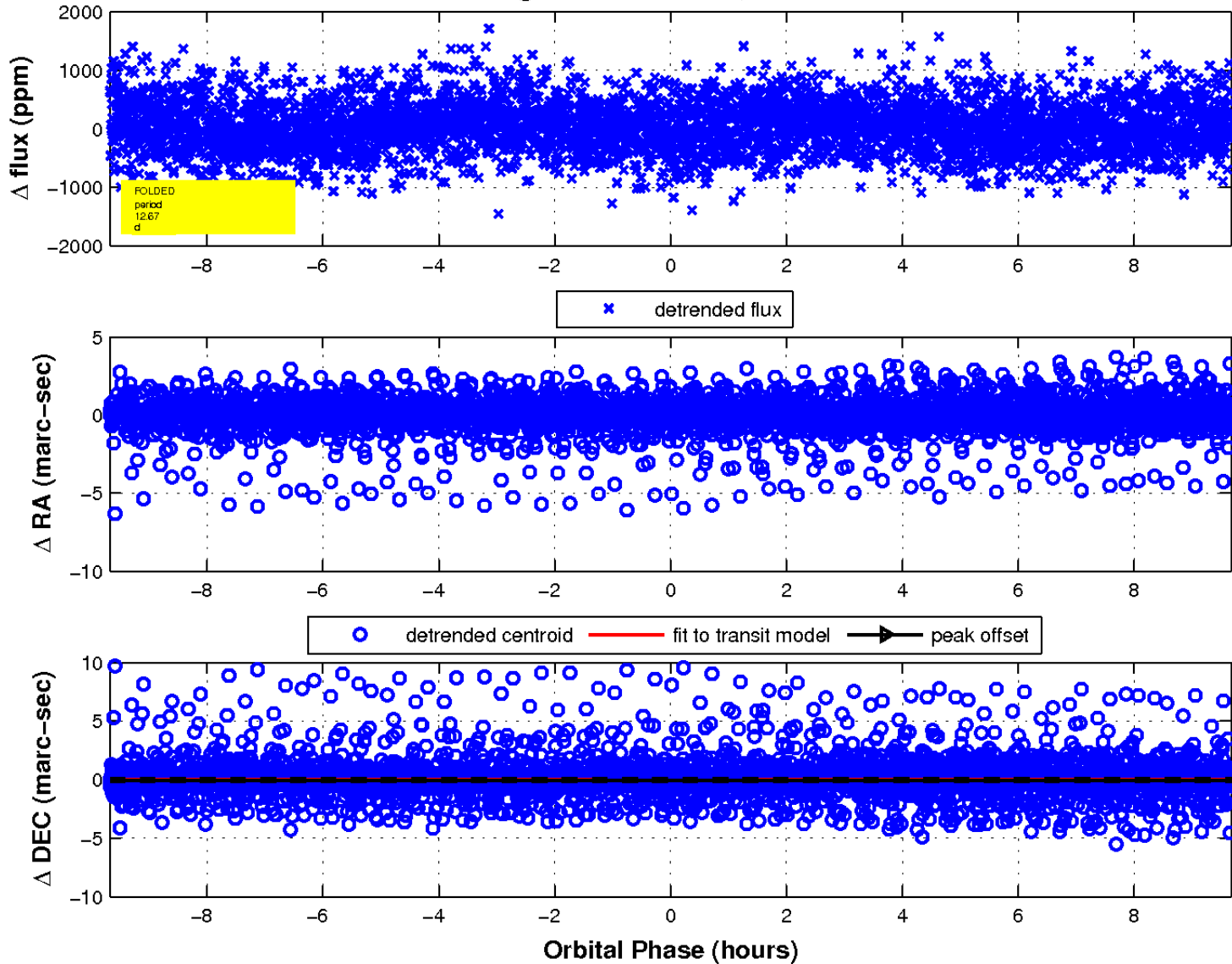
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

