

KIC 005305128

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})
005305128-01	OBS	No	3.131670	133.940877	69.5	18.464	15.4	15.9	1.71	6214	2.00	1996.86
005305128-02	OBS	No	85.359634	196.099312	143.5	10.753	13.7	7.3	1.71	6214	2.28	24.34
005305128-03	OBS	No	3.131673	131.754919	114.3	37.580	12.1	18.5	1.71	6214	2.31	1996.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305128-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
005305128-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005305128-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

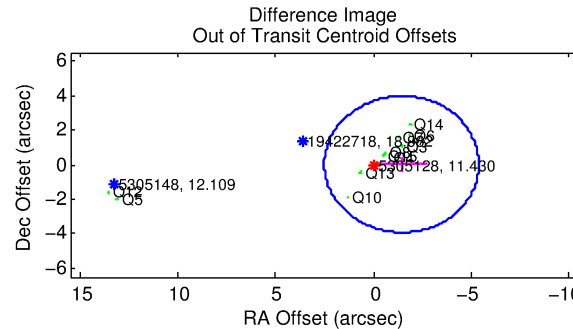
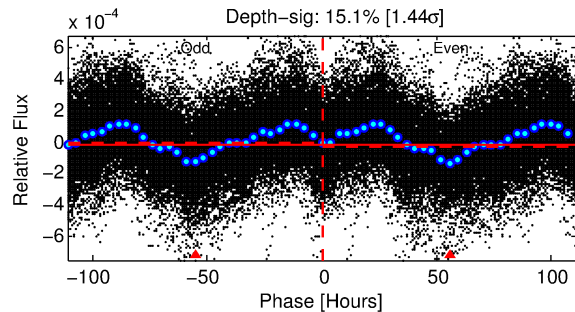
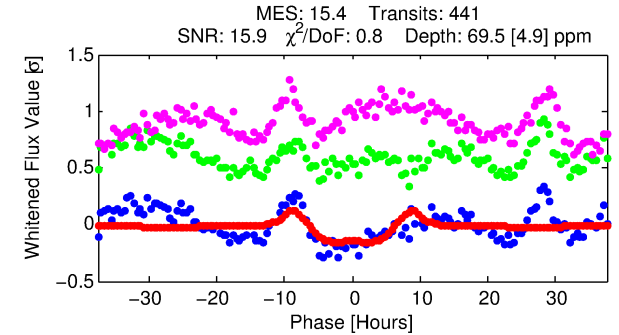
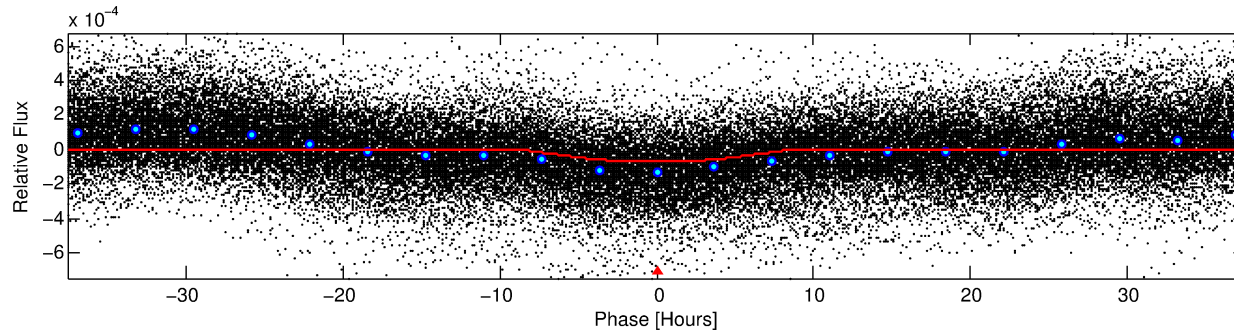
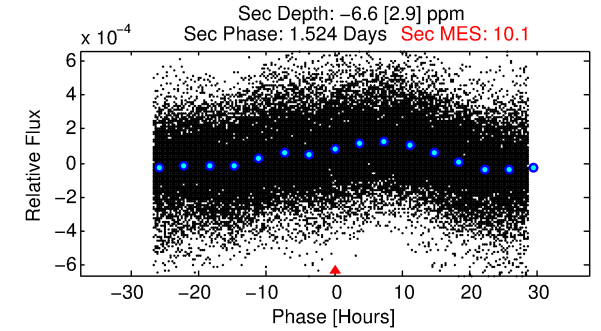
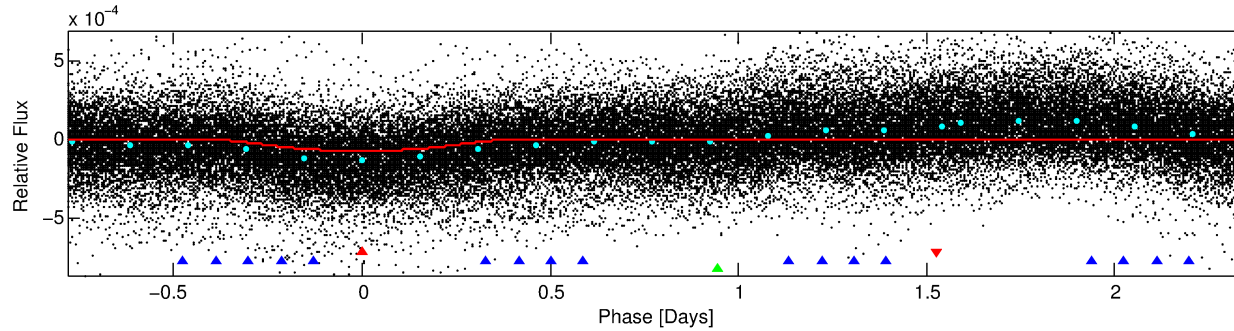
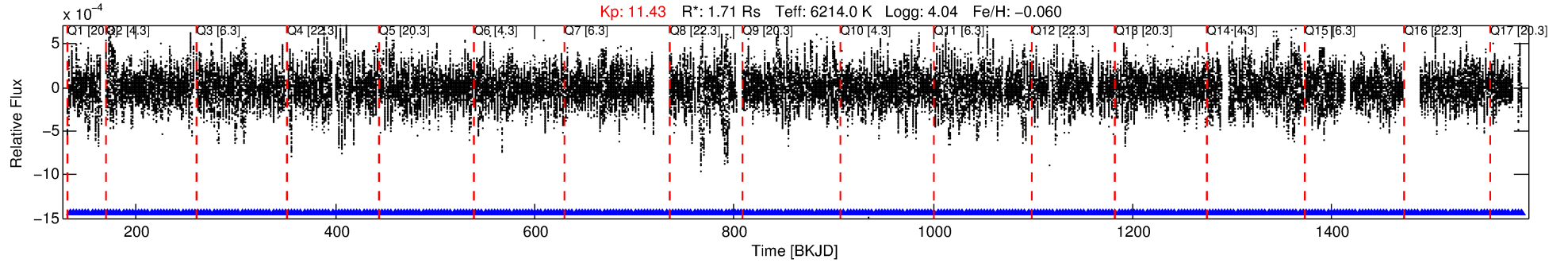
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305128-01

No Significant Match Found

DV One-Page Summary

KIC: 5305128 Candidate: 1 of 3 Period: 3.132 d



DV Fit Results:

Period = 3.13167 [0.00005] d
Epoch = 133.9409 [0.0131] BKJD
Rp/R* = 0.0107 [0.0004]
a/R* = 1.03 [0.00]
b = 0.99 [0.00]
Seff = 1996.86 [901.66]
Teq = 1705 [192] K
Rp = 2.00 [0.56] Re
a = 0.0443 [0.0118] AU
Ag = N/A
Teffp = N/A

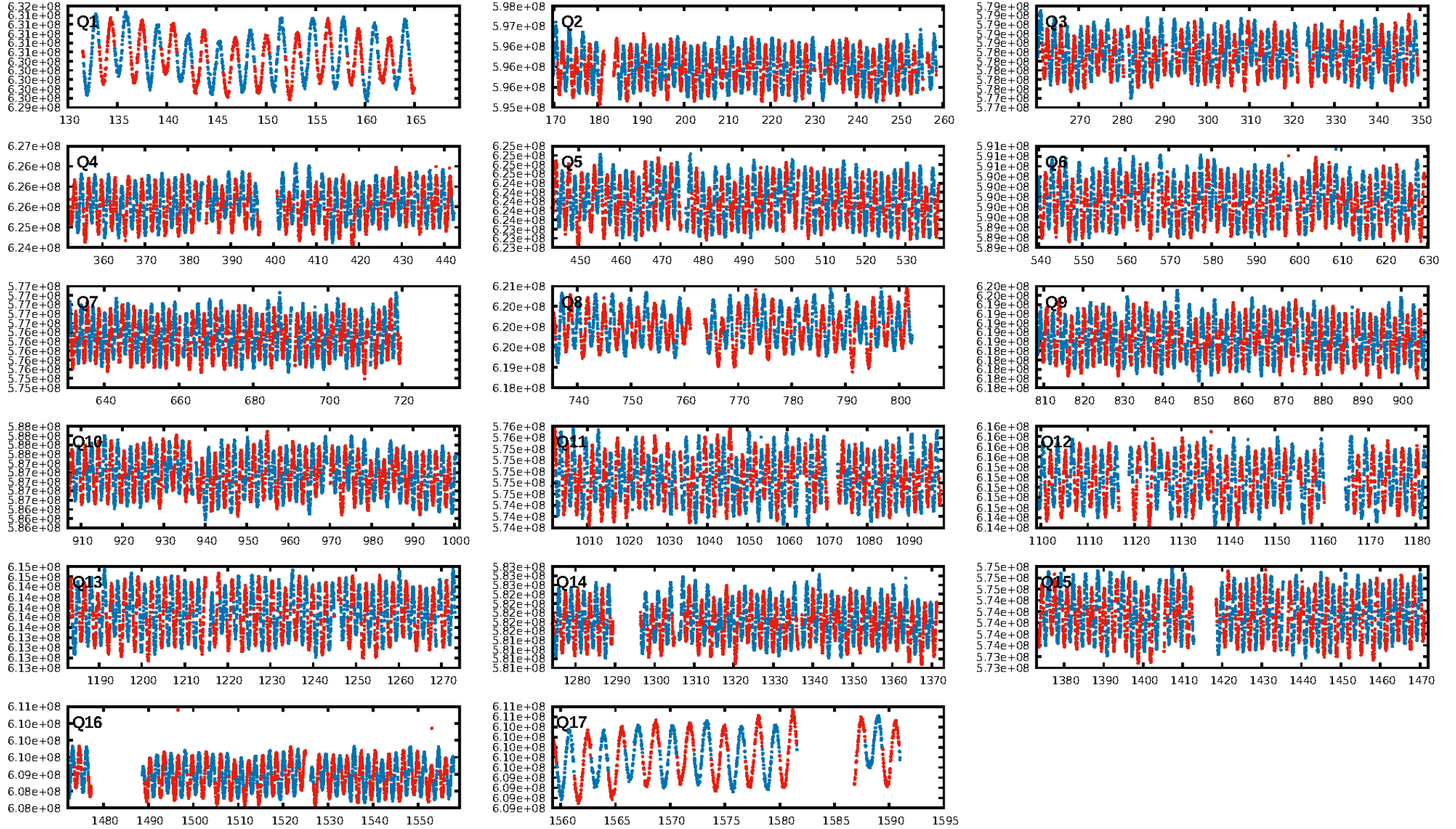
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [421/421]
GhostDiagnostic-chr: 4.918
Centroid-sig: 0.0%
Centroid-so: 1.853 arcsec [1.84σ]
OotOffset-rm: 1.433 arcsec [1.09σ]
KicOffset-rm: 1.443 arcsec [0.83σ]
OotOffset-st: 3/3/3/2 [11]
KicOffset-st: 3/3/3/2 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 0.00 [0/17]

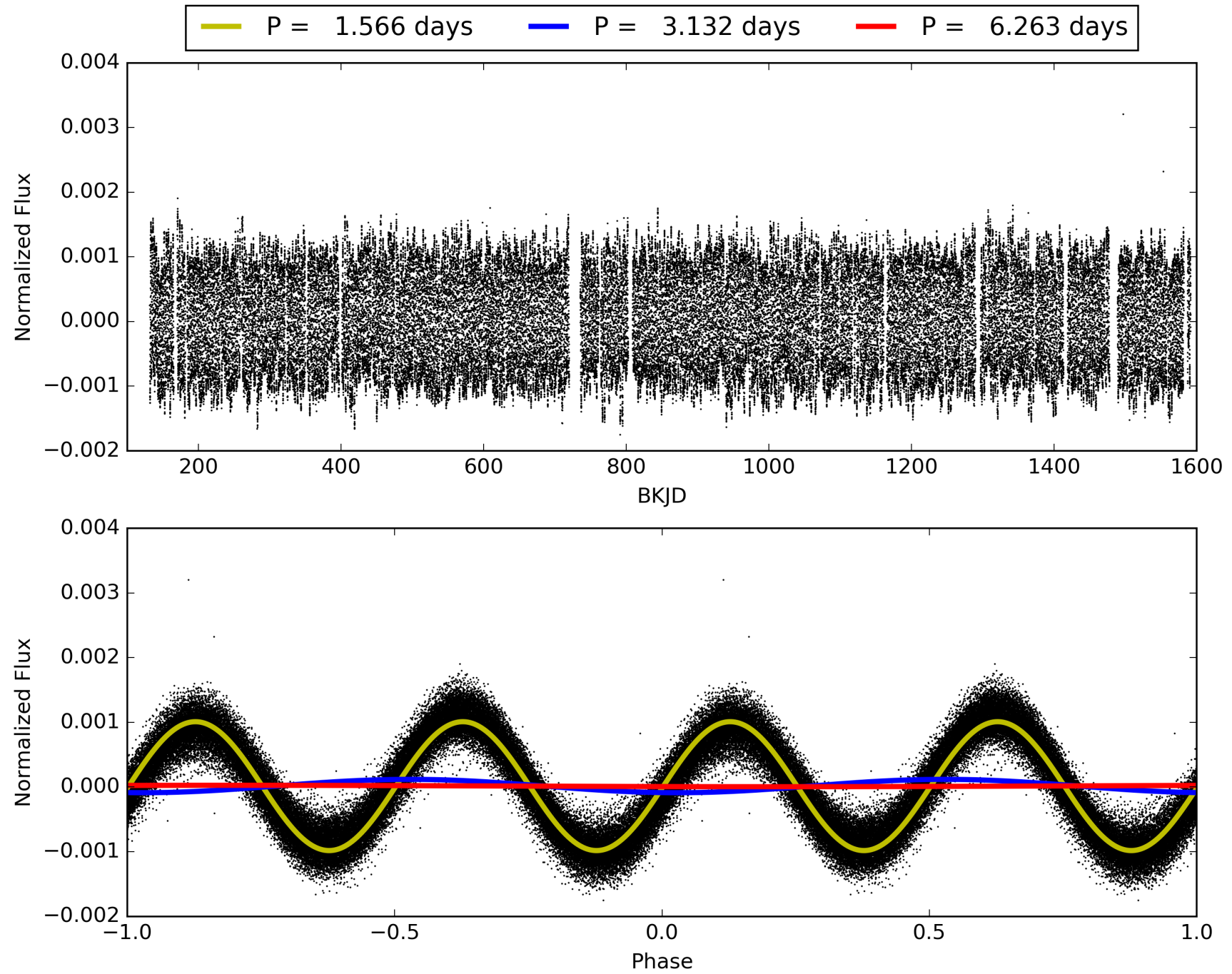
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005305128-01, PDC Light Curves

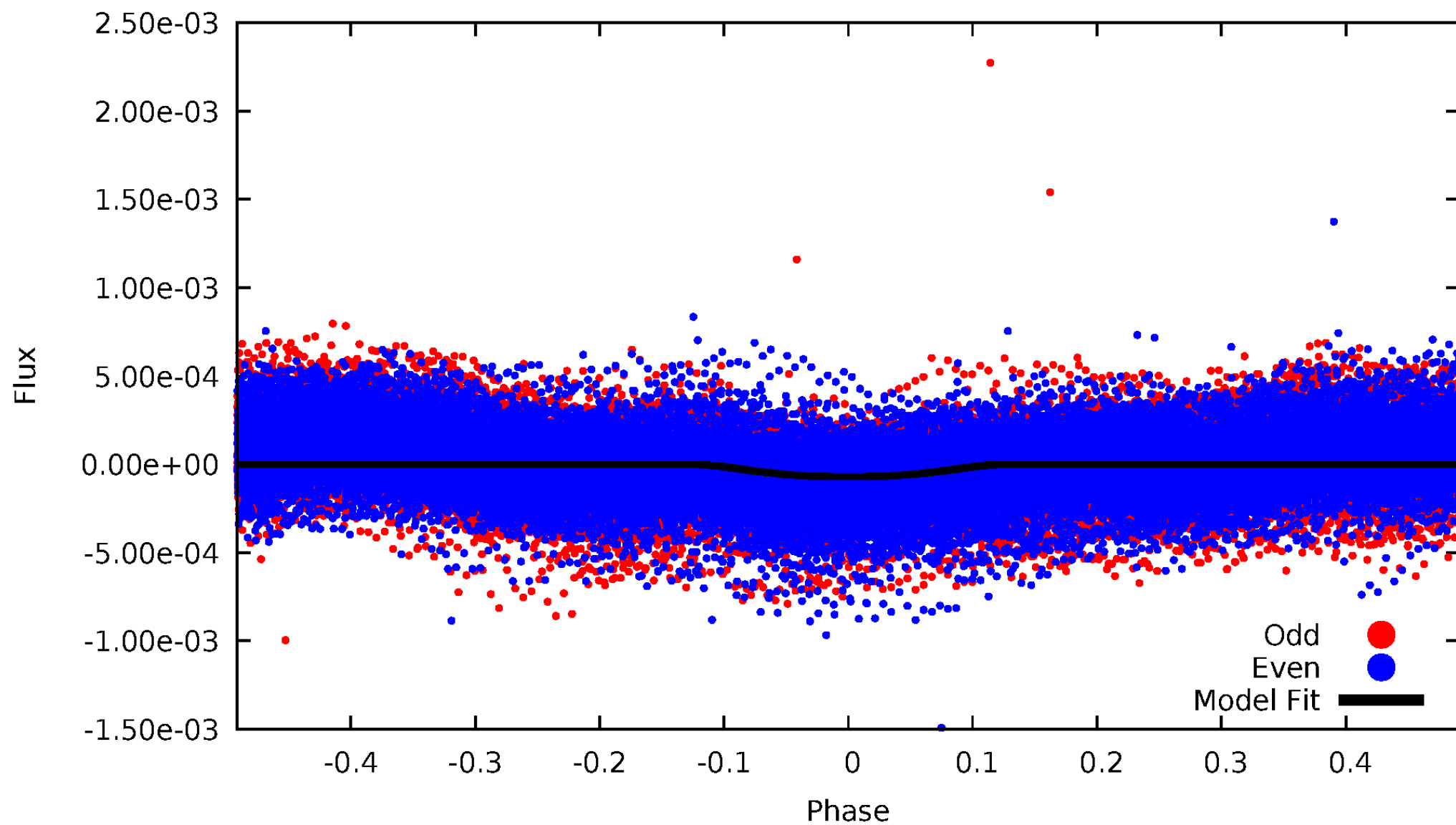


TCE 005305128-01



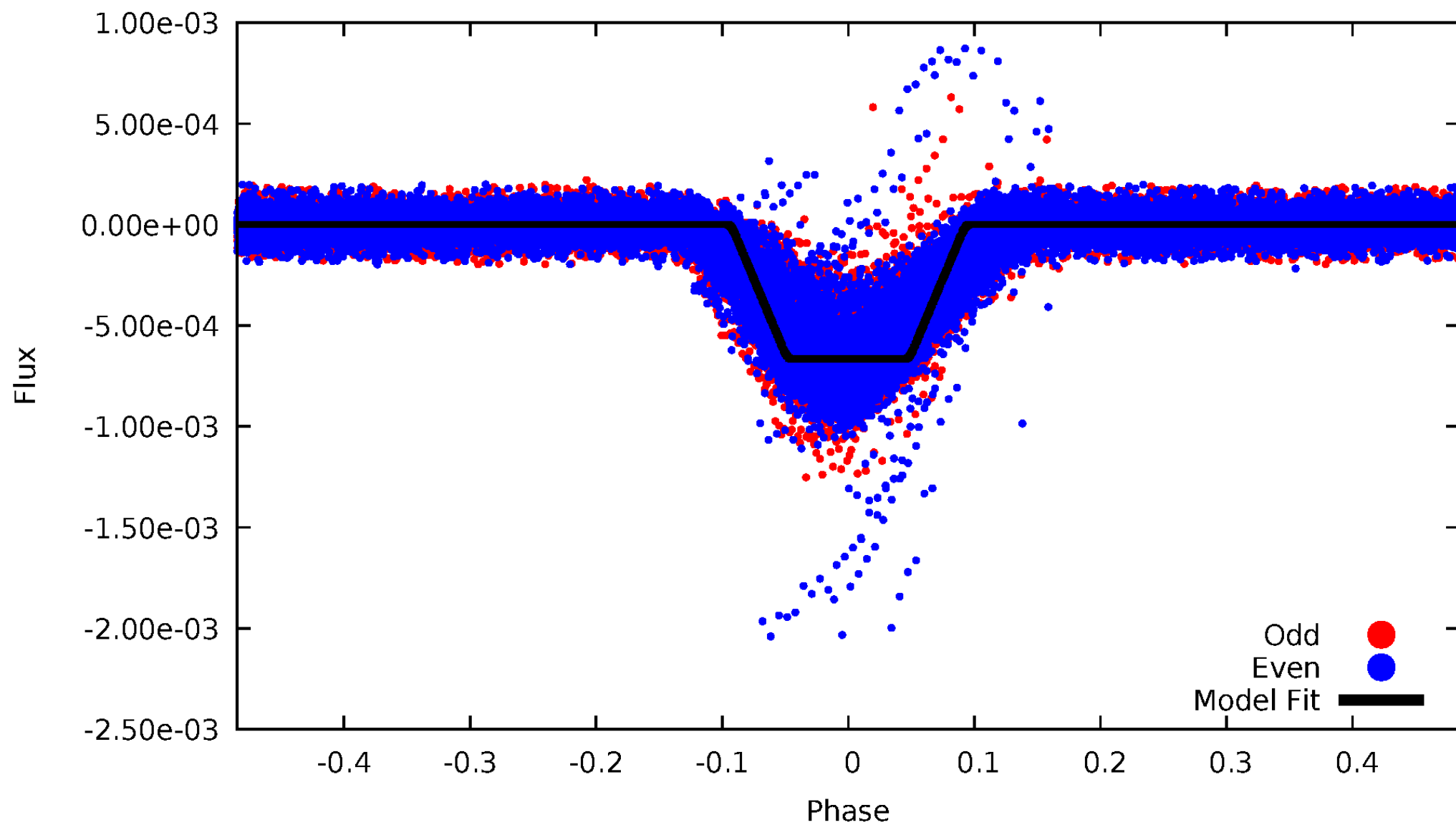
DV Odd/Even

TCE 005305128-01

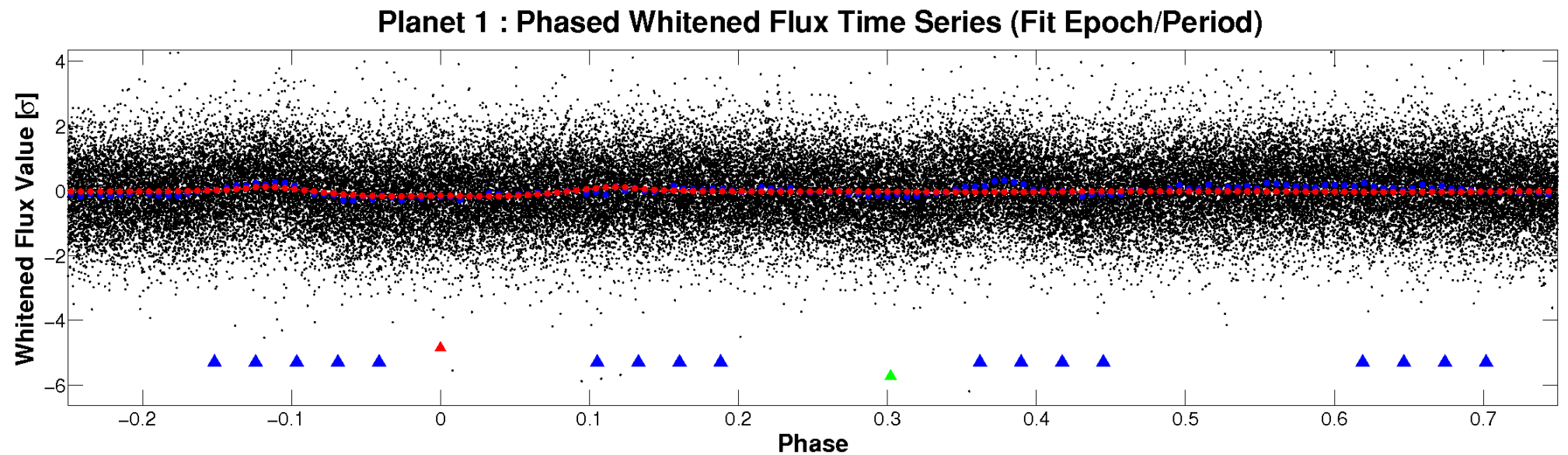
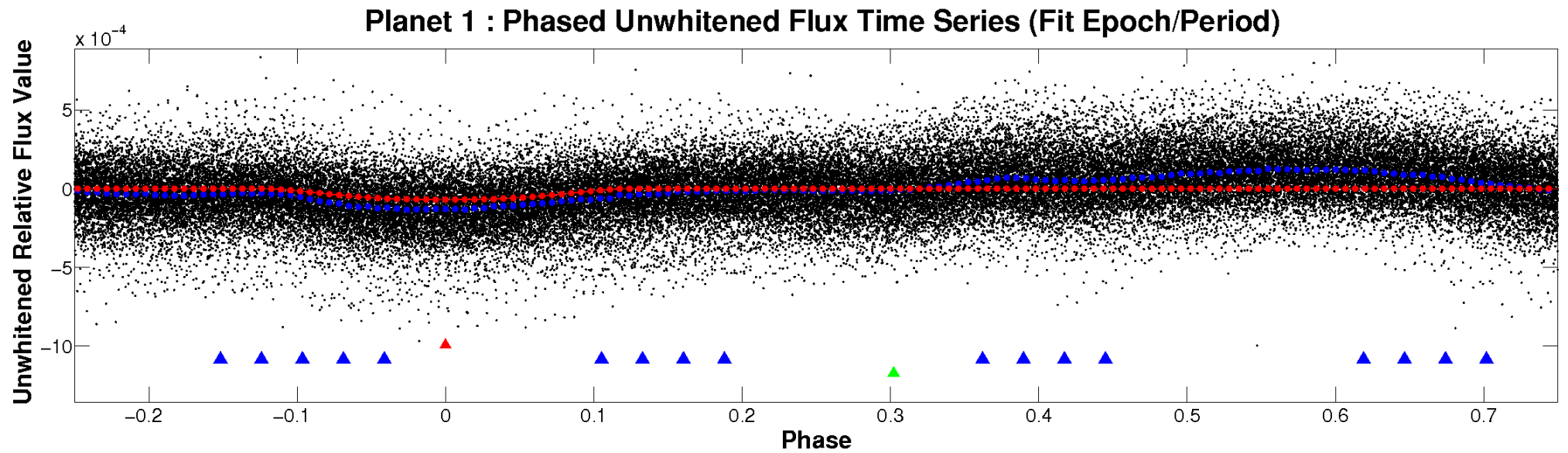


ALT Odd/Even

TCE 005305128-01

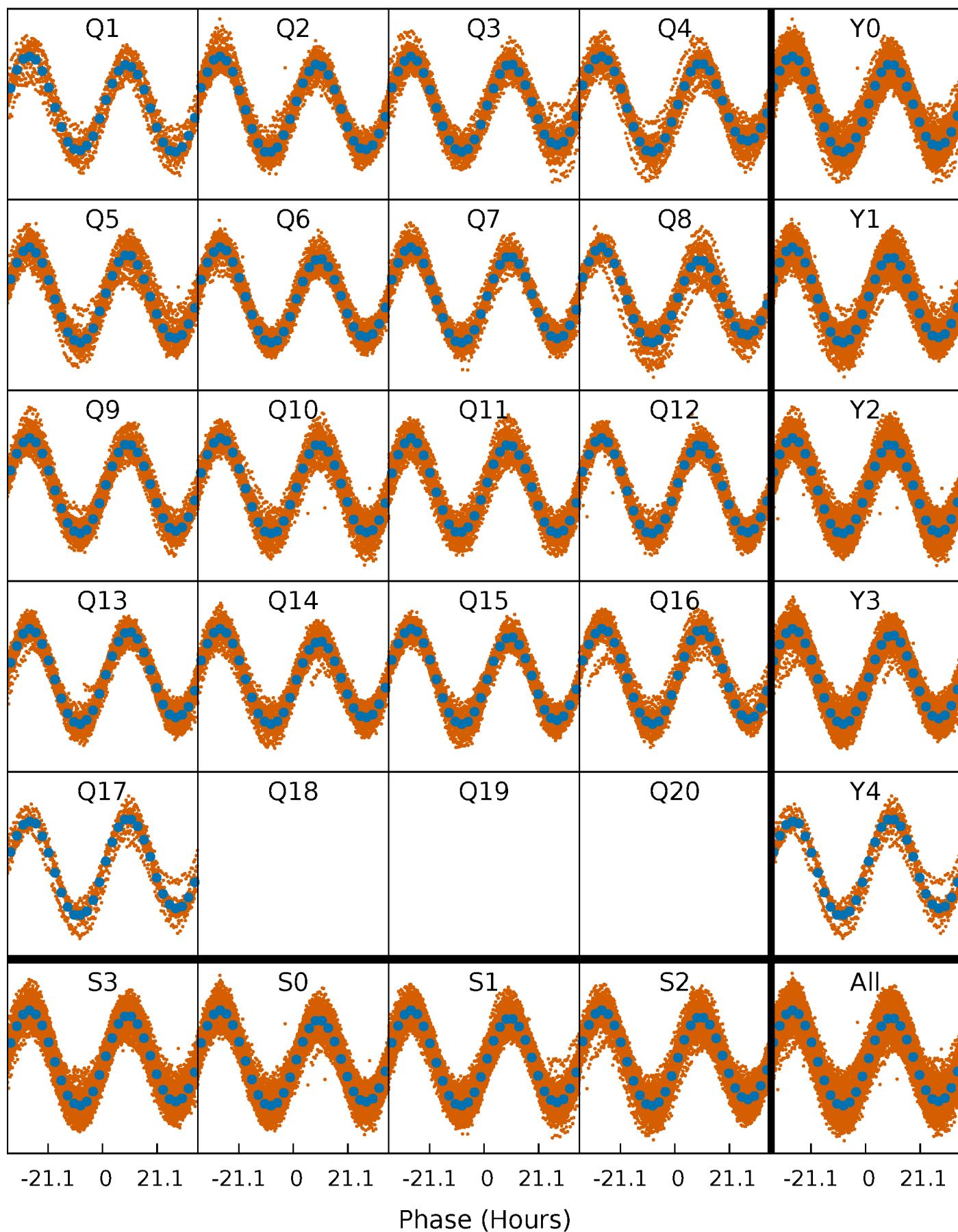


Non-Whitened Vs. Whitened Light Curve



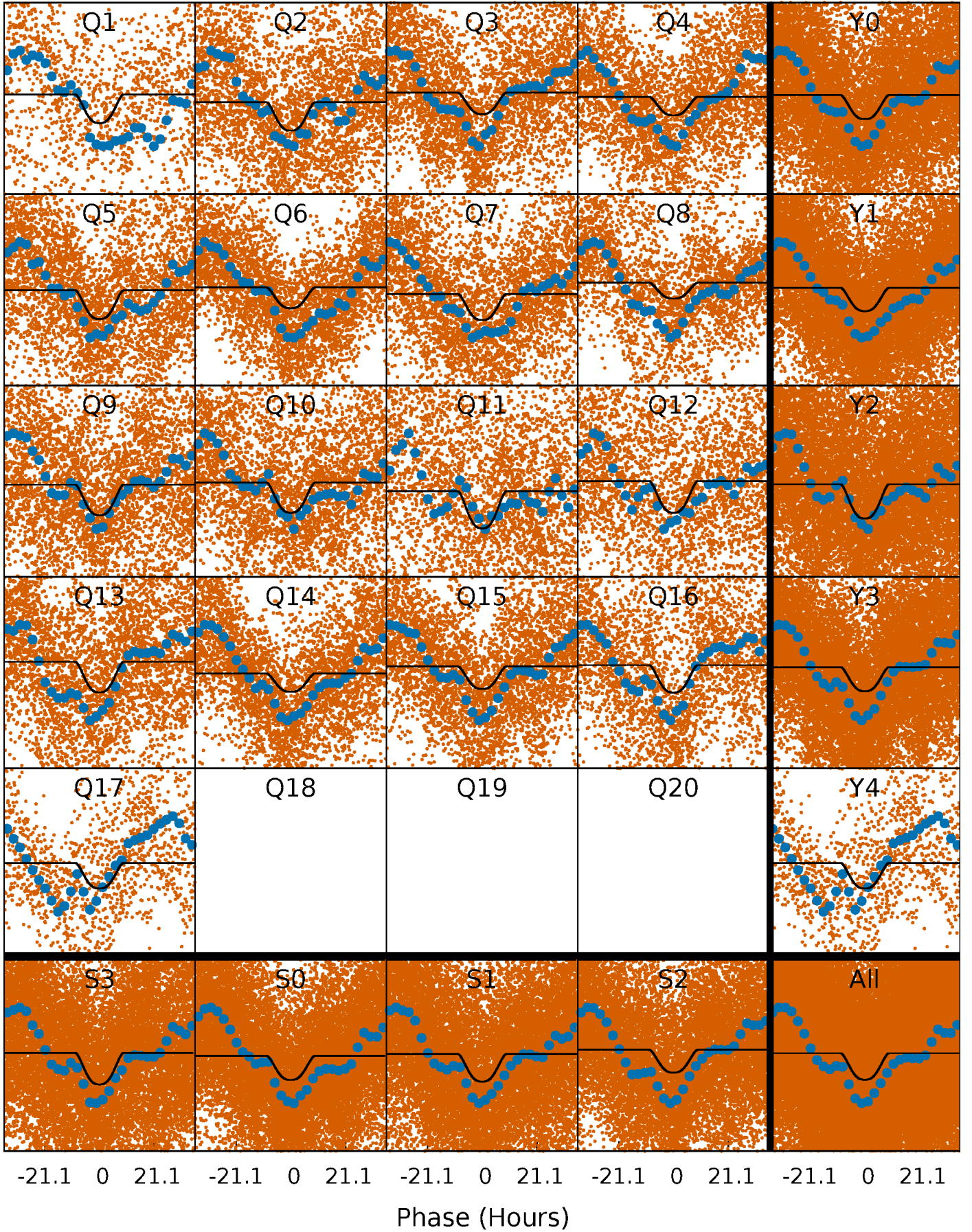
PDC Quarter-Phased Transit Curves

TCE 005305128-01 P= 3.131670 Days $T_0=133.940877$ (BKJD)



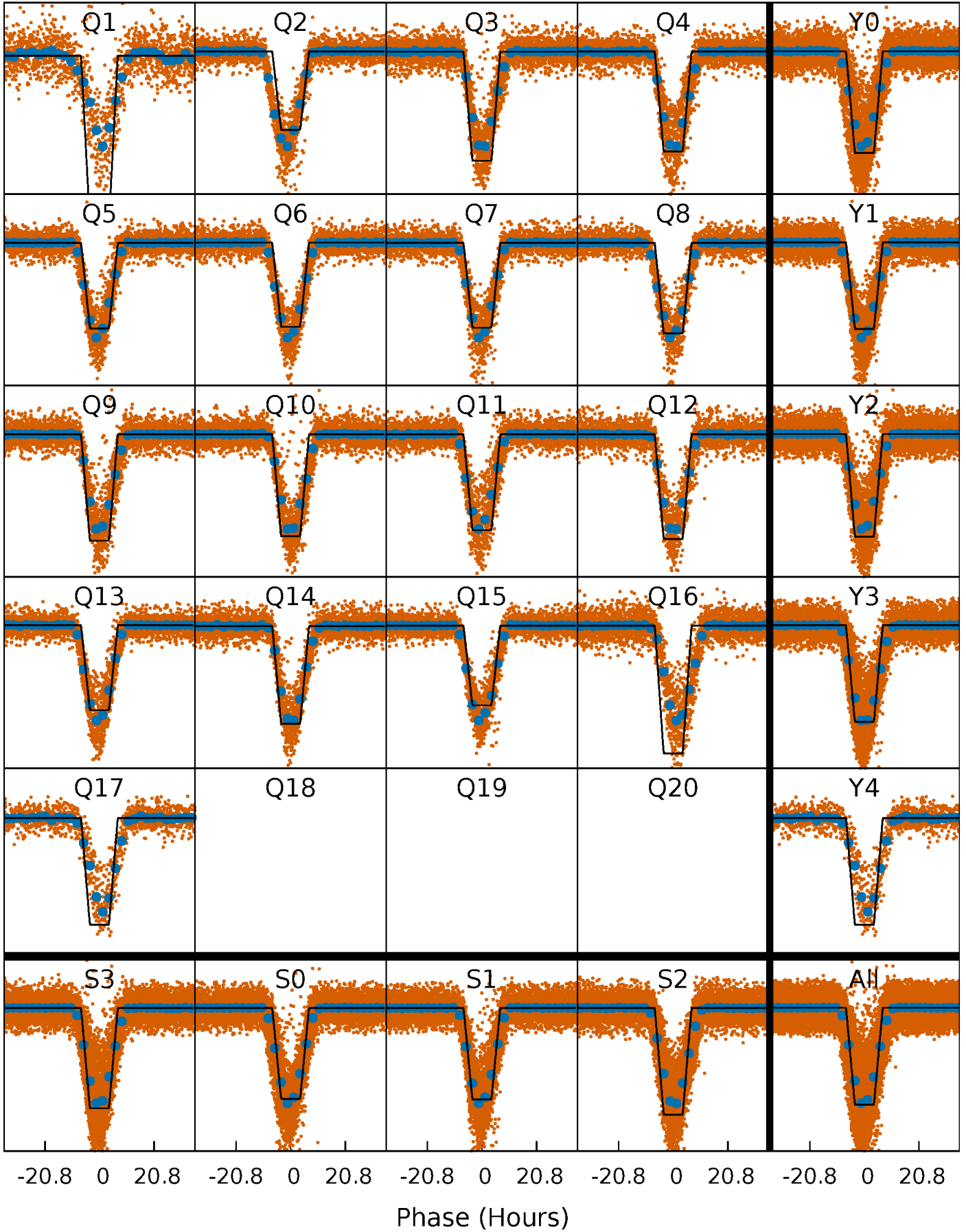
DV Quarter-Phased Transit Curves

TCE 005305128-01 P= 3.131670 Days $T_0=133.940877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

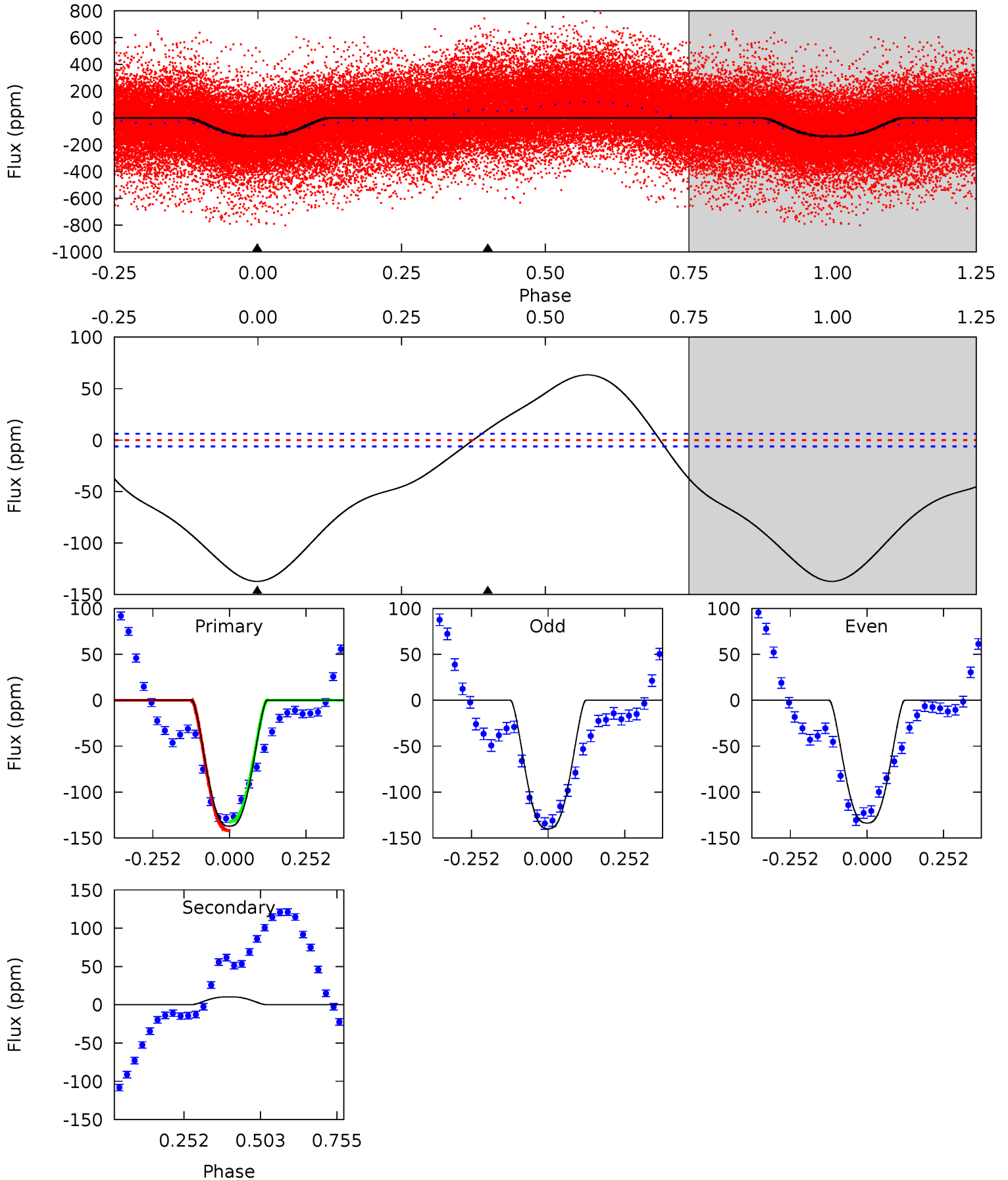
TCE 005305128-01 P= 3.131637 Days $T_0=133.751144$ (BKJD)



DV Model-Shift Uniqueness Test

005305128-01, P = 3.131670 Days, E = 130.809207 Days

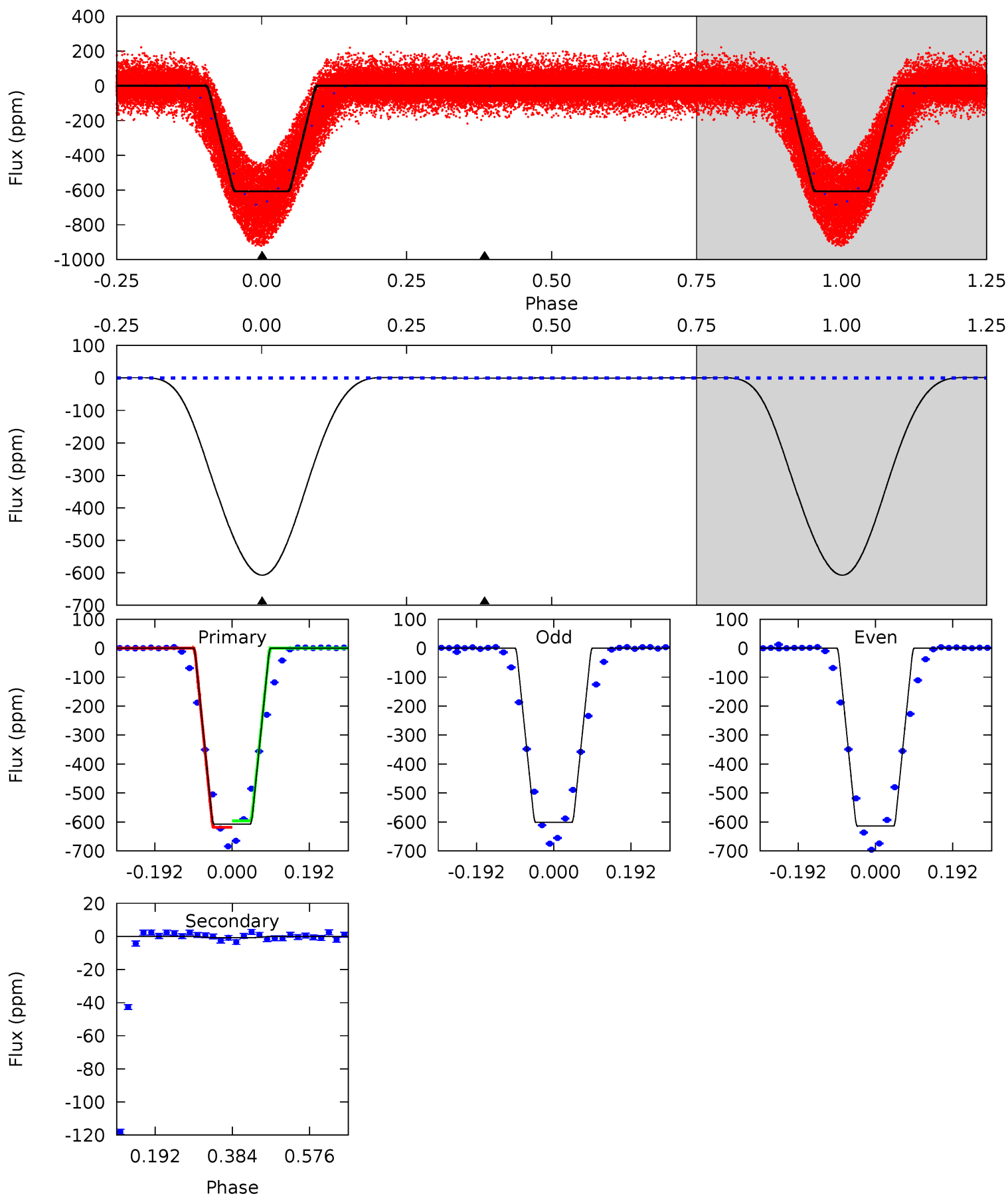
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
97.7	-7.34	0	0	4.37	1.15	15.8	97.7	97.7	-7.34	-7.34	2.18	0.93	0.32	3.68



Alt Model-Shift Uniqueness Test

005305128-01, P = 3.131637 Days, E = 130.619507 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1247	1.67	0	0	4.43	1.30	0.76	1247	1247	1.67	1.67	13.4	1.00	0.00	22.5



Stellar Parameters For KIC 005305128

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6214^{+204}_{-223}	$4.043^{+0.252}_{-0.126}$	$-0.060^{+0.300}_{-0.250}$	$1.712^{+0.385}_{-0.471}$	$1.179^{+0.185}_{-0.167}$	$0.331^{+0.472}_{-0.126}$
	+3%/-4%	+6%/-3%	+500%/-417%	+22%/-28%	+16%/-14%	+143%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305128-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	10 ± 1	$1.97^{+0.27}_{-0.29}$	2348^{+167}_{-171}	-3848^{+135}_{-130}	$-2.900^{+0.717}_{-1.040}$
Alt.	-1 ± 0	$4.76^{+0.61}_{-0.69}$	2352^{+162}_{-192}	-2660^{+134}_{-109}	$0.040^{+0.029}_{-0.026}$

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 $A_{obs} \gg 1.0$

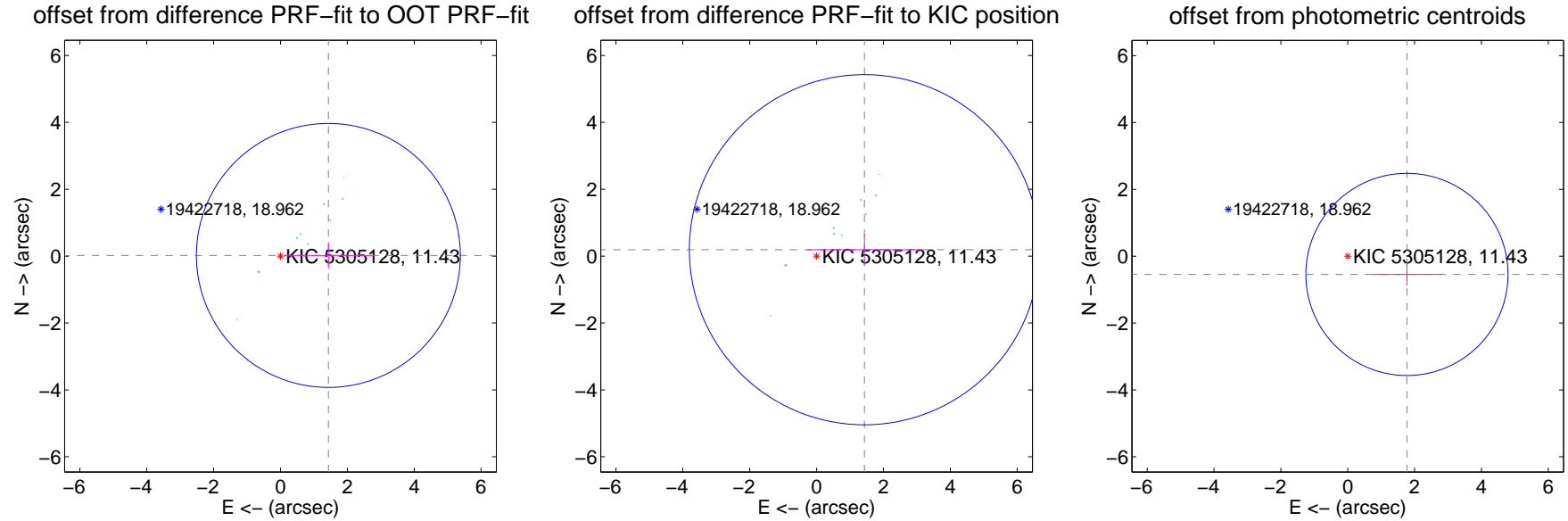
DV Centroid Data

Supplemental centroid analysis for 005305128-01. **Kepler magnitude: 11.43.** Transit SNR 15.86

There are 11 quarters with good PRF difference image offsets

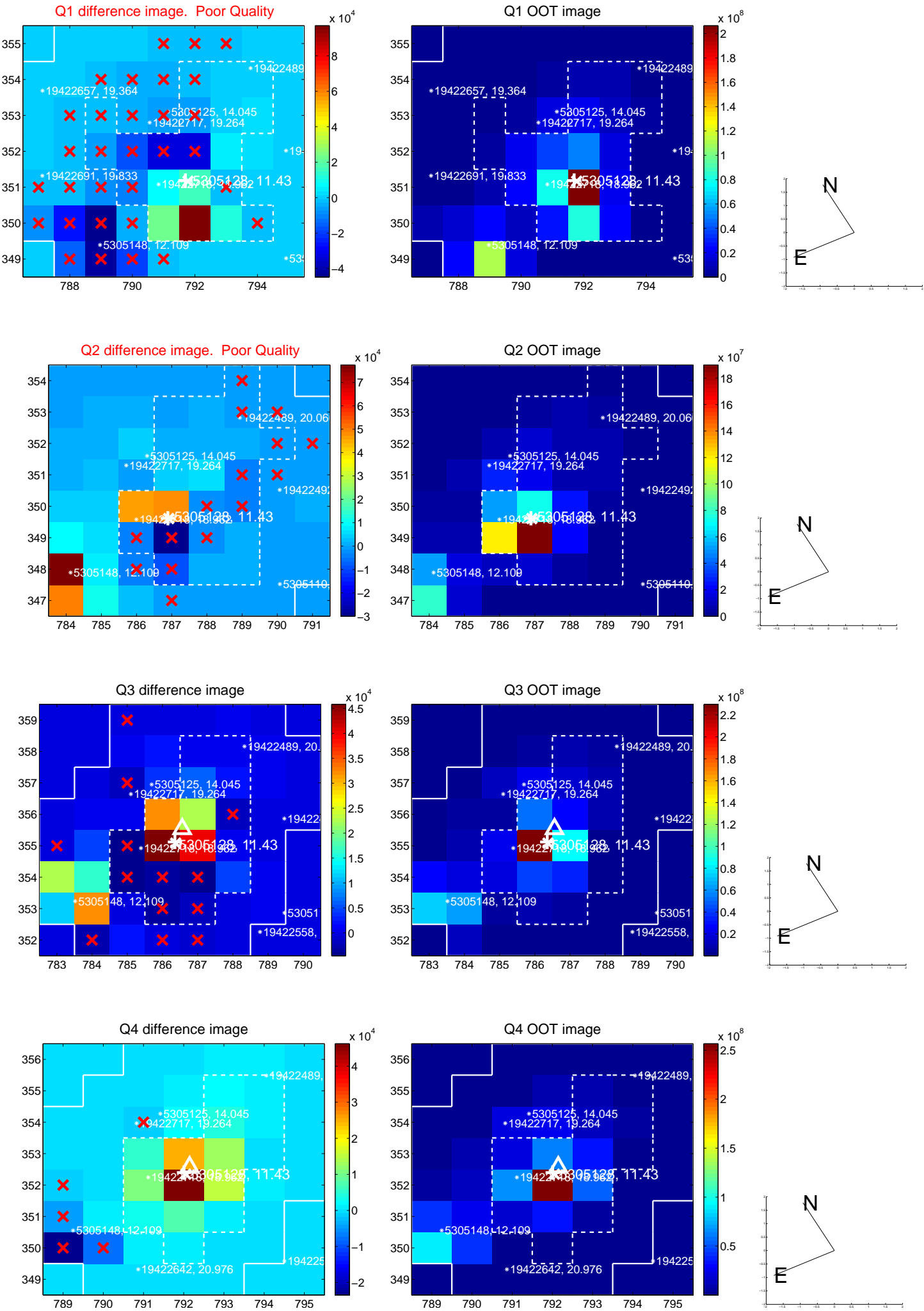
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.433 ± 1.316	1.09	-1.433 ± 1.312	0.021 ± 0.388
PRF-fit source offset from KIC position	1.443 ± 1.745	0.83	-1.430 ± 1.712	0.191 ± 0.457
photometric centroid source offset	1.85 ± 1.01	1.84	-1.77 ± 1.05	-0.55 ± 0.34

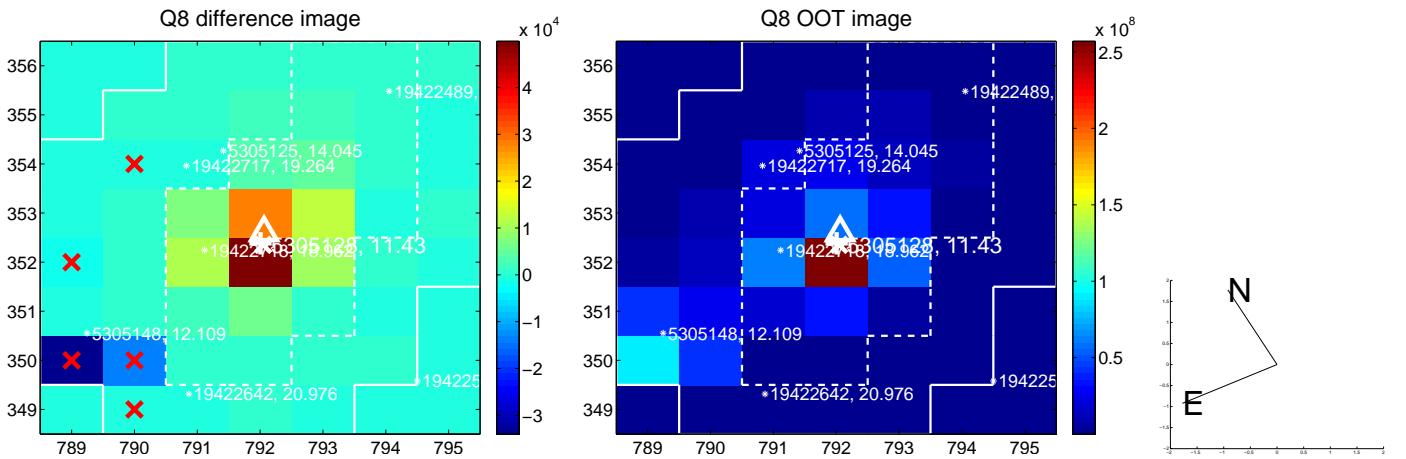
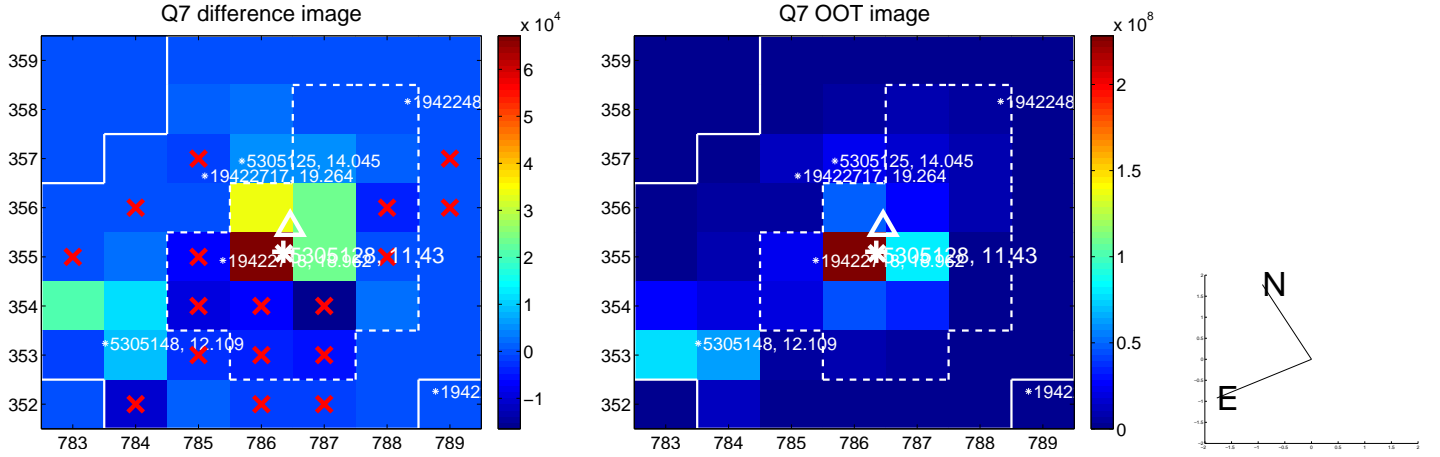
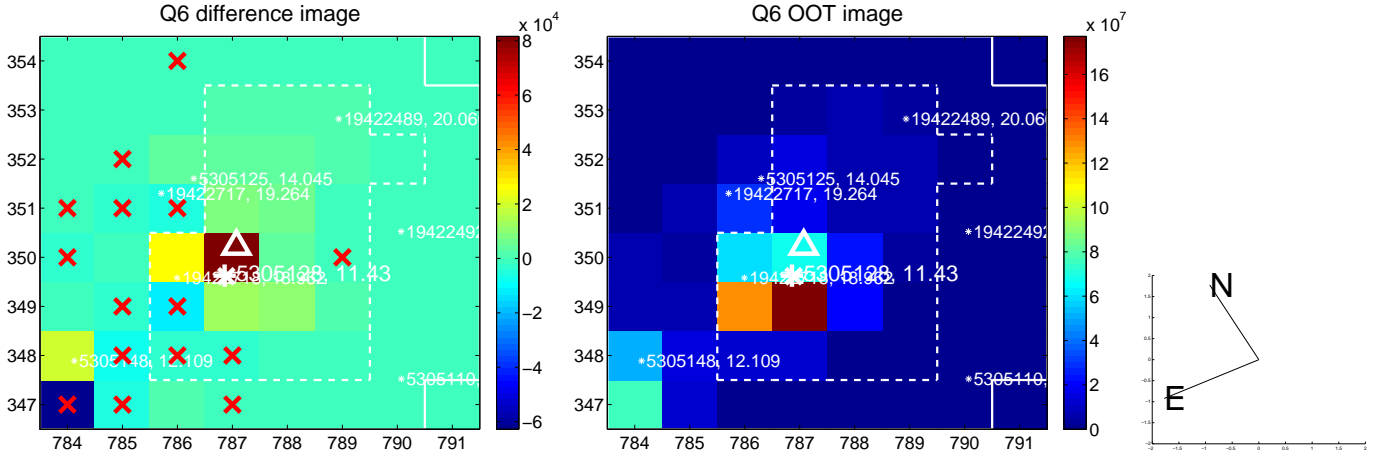
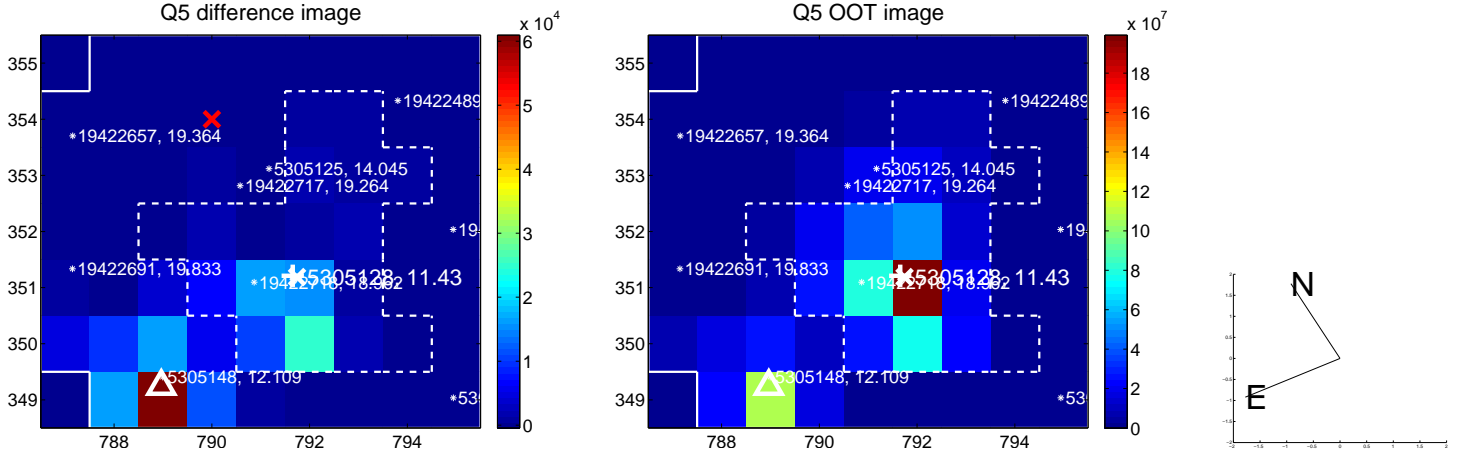


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

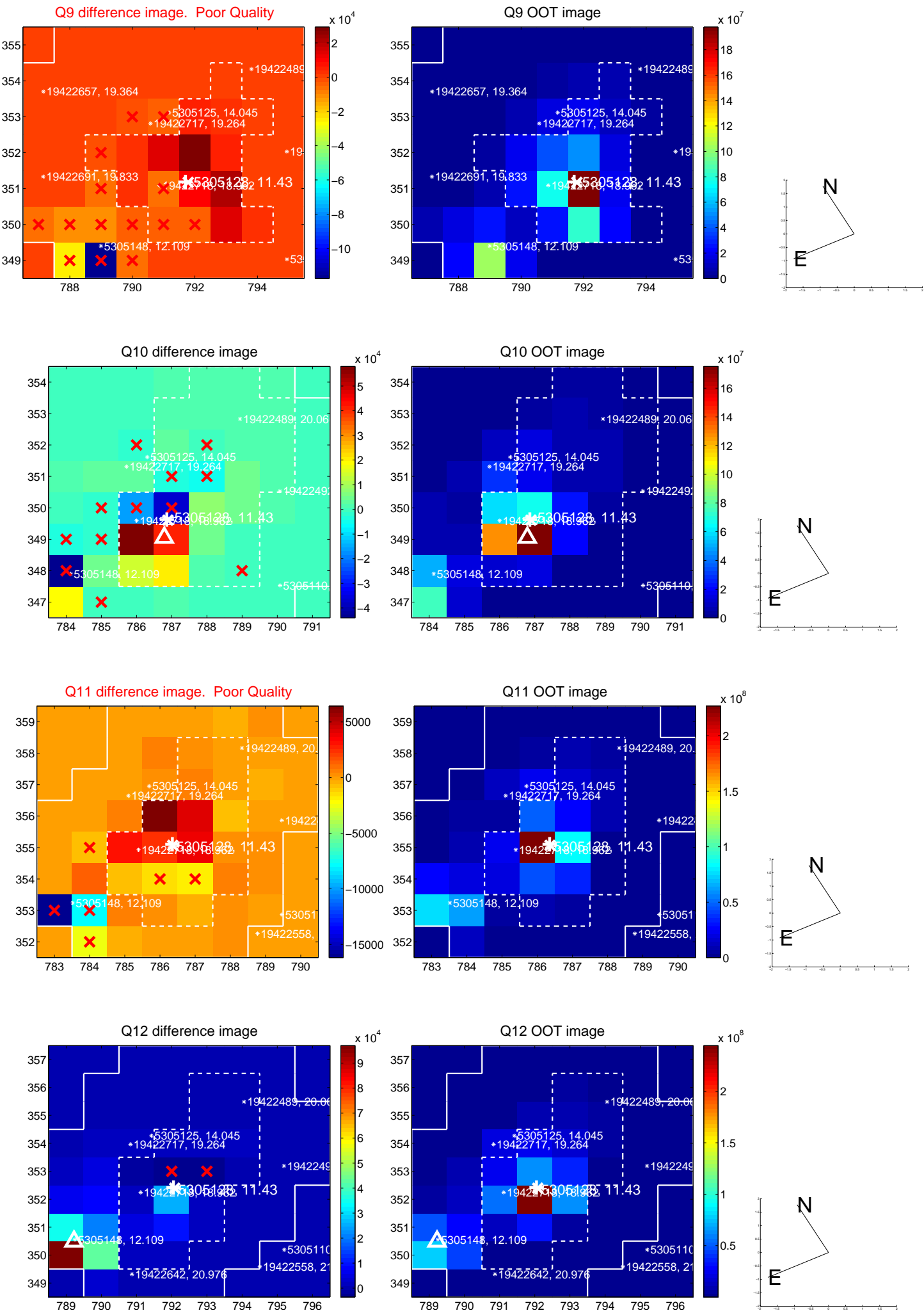
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



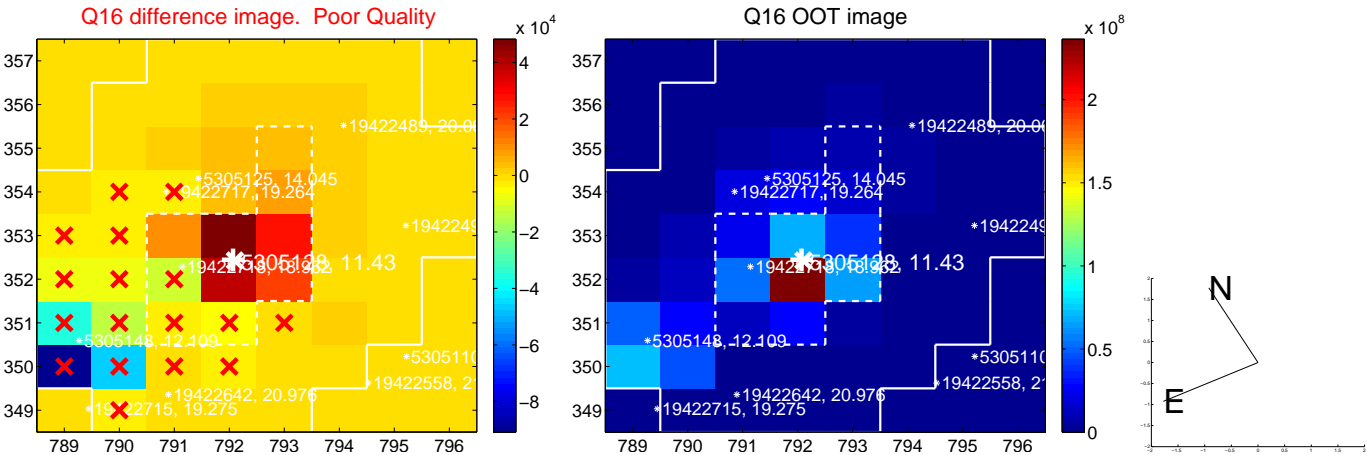
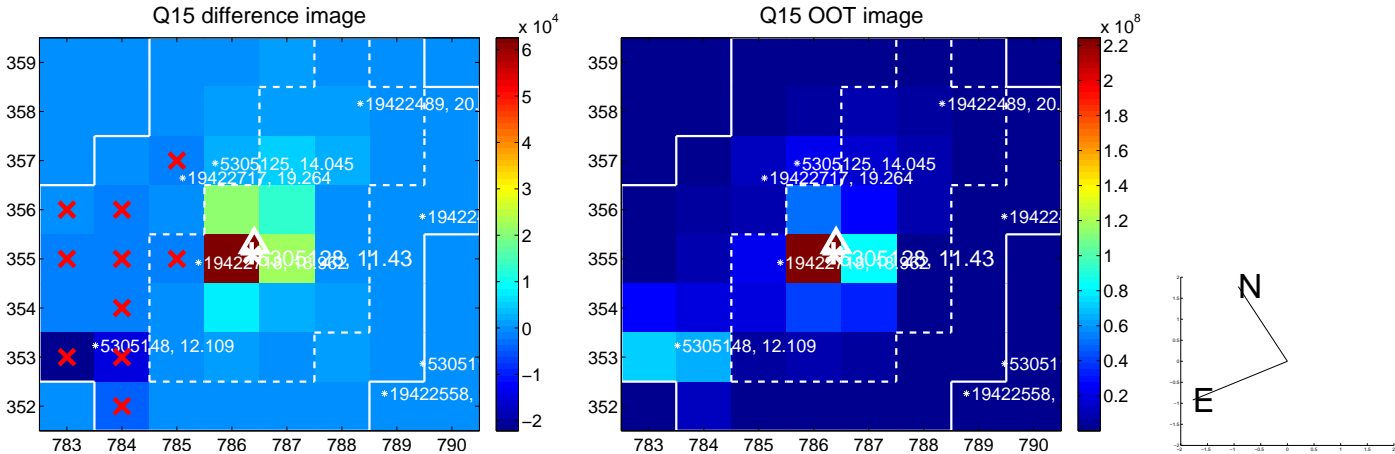
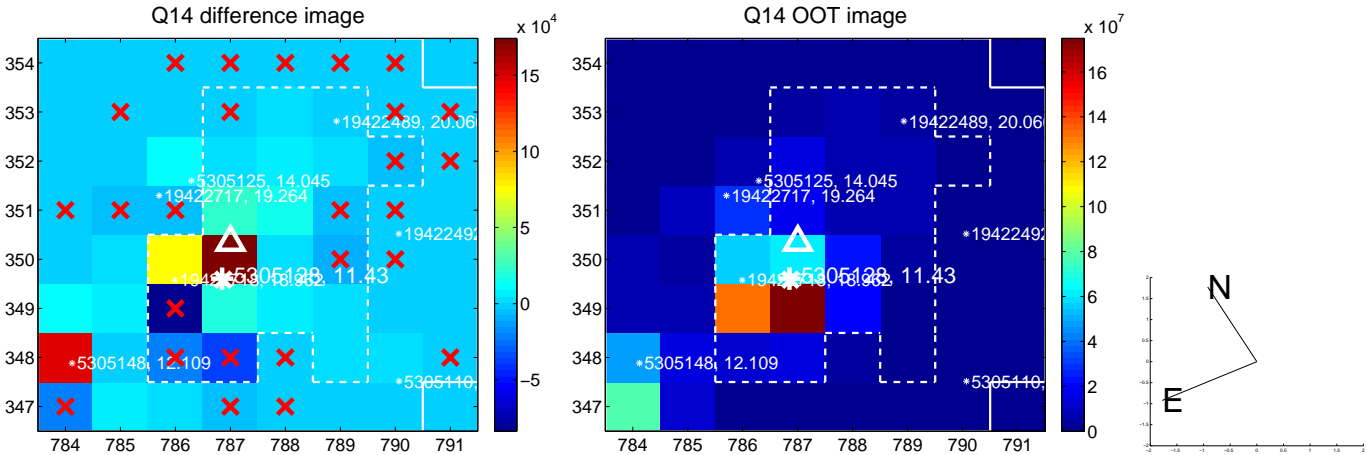
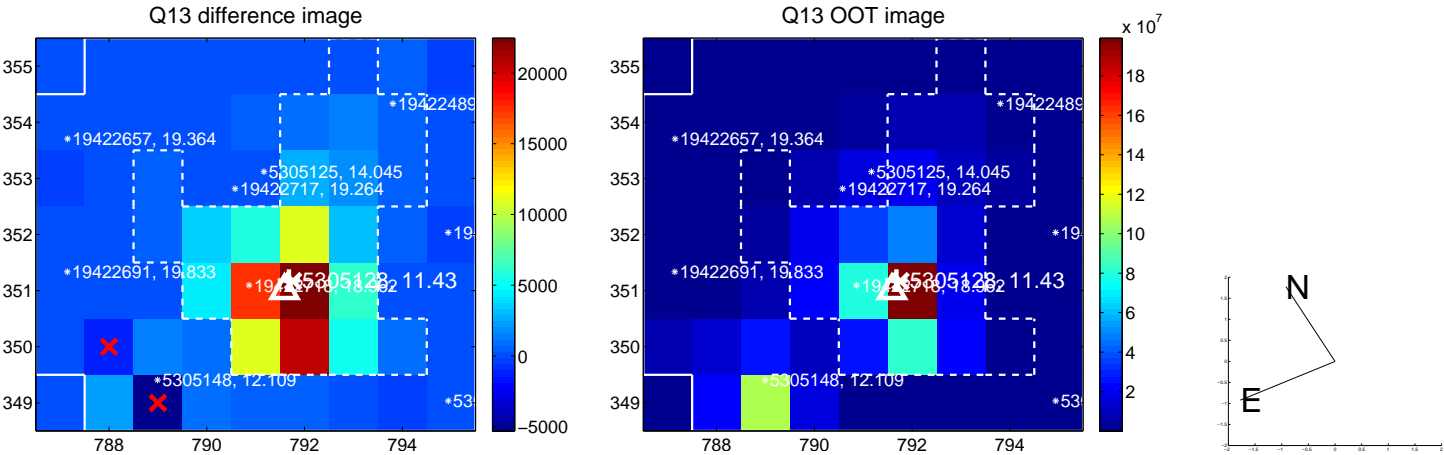
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



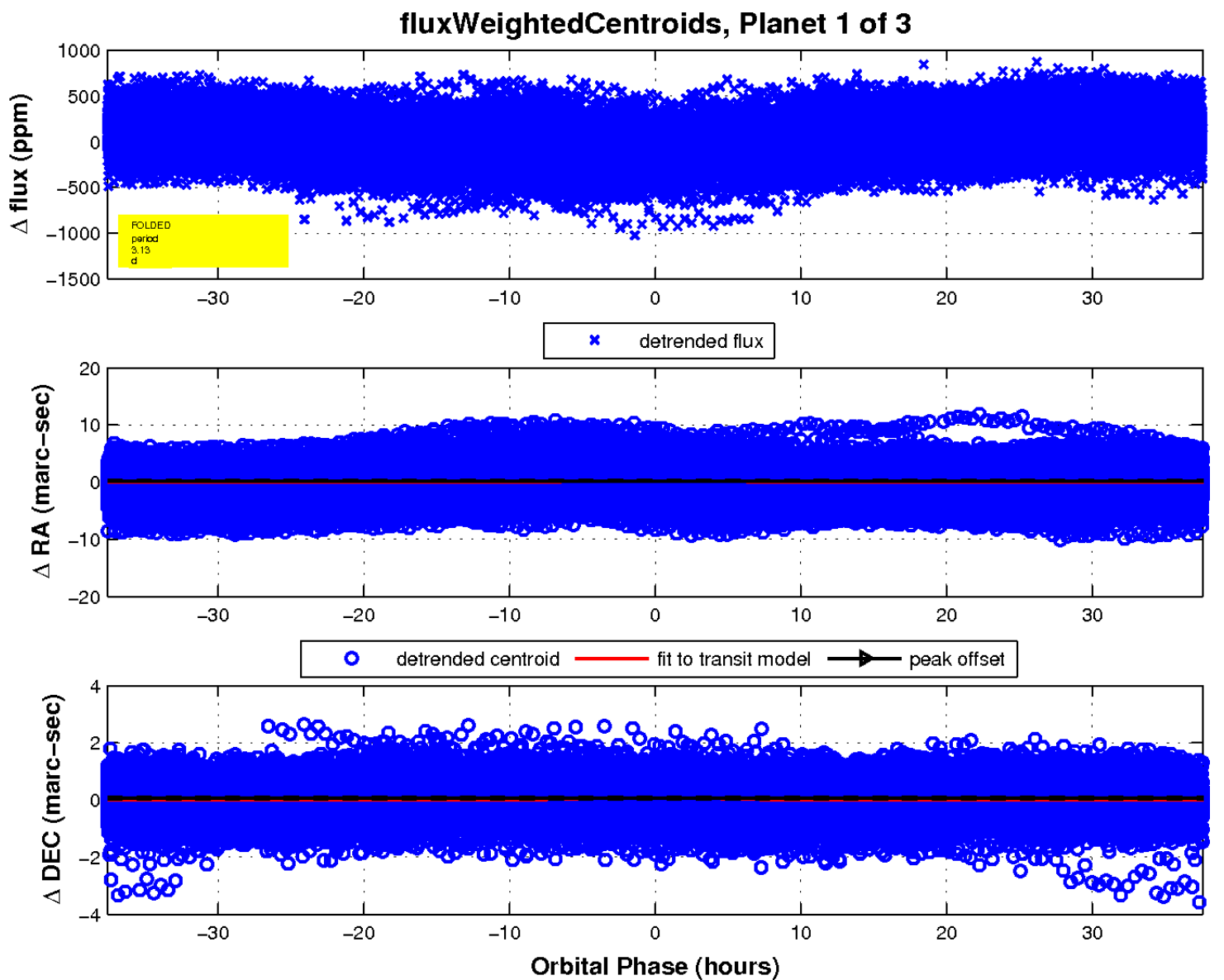
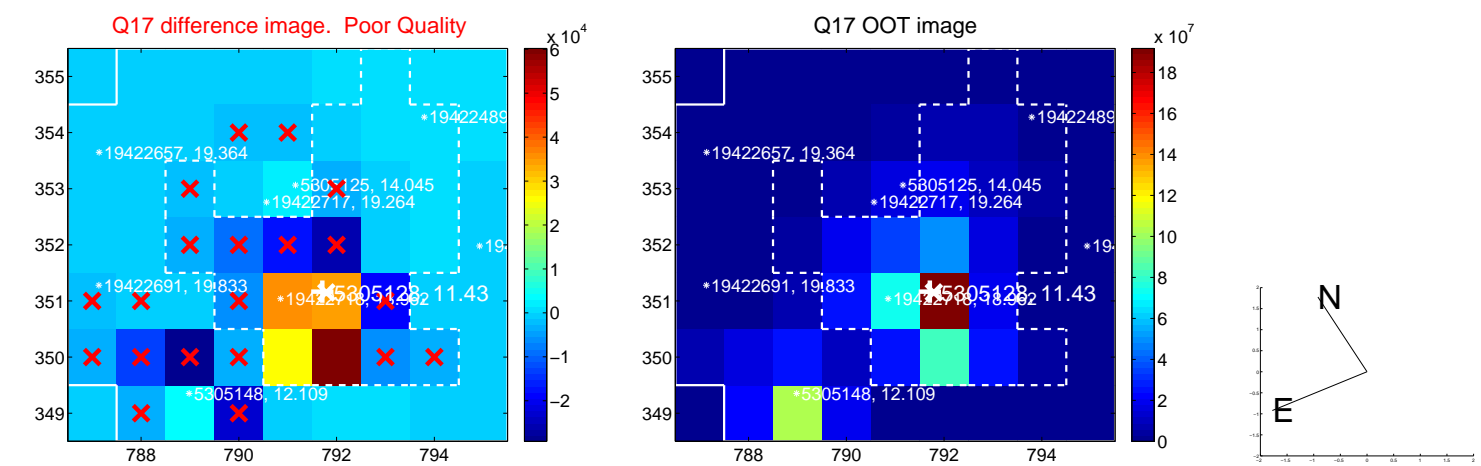
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



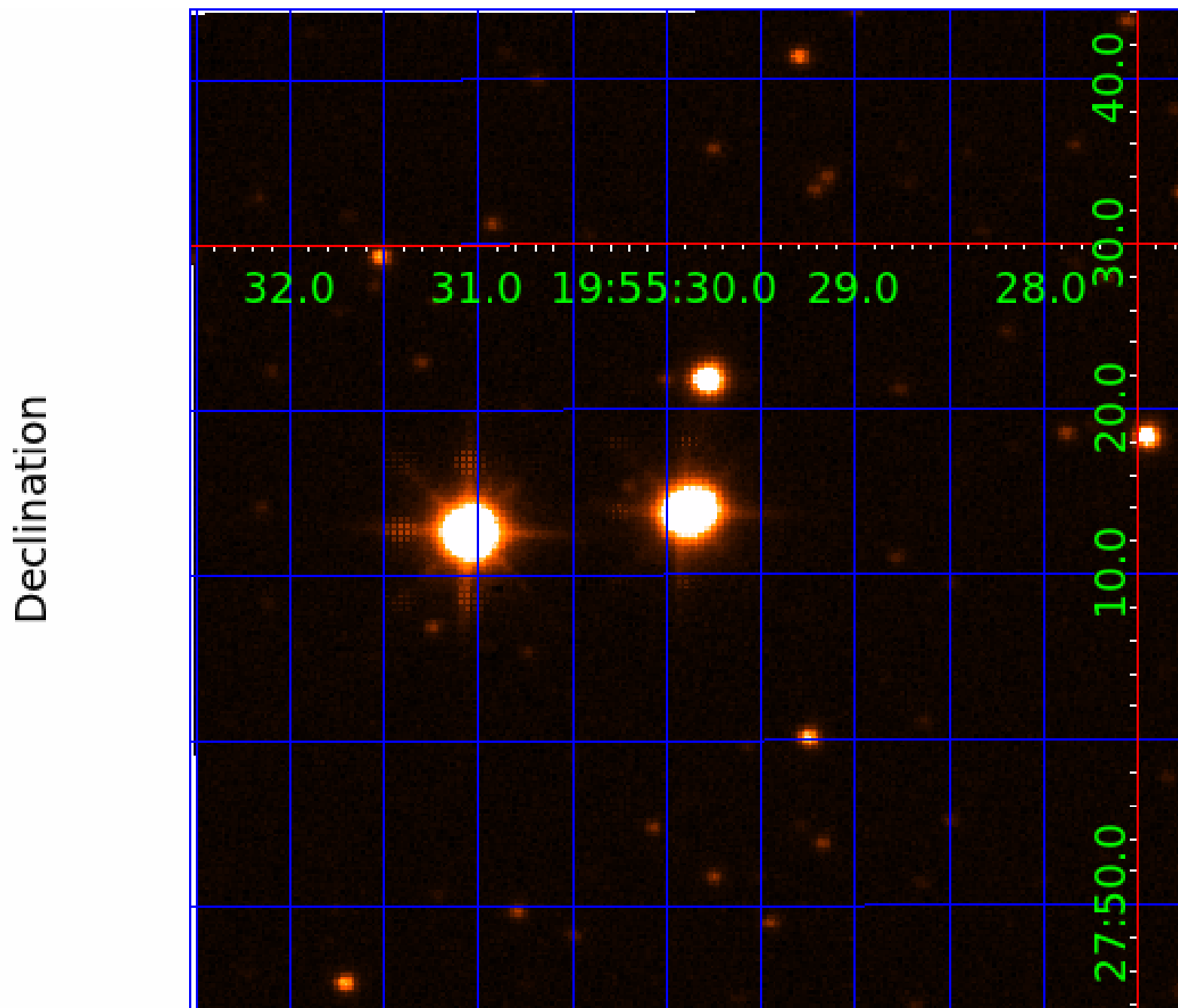
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image



KIC 005305128

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})
005305128-01	OBS	No	3.131670	133.940877	69.5	18.464	15.4	15.9	1.71	6214	2.00	1996.86
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305128-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
005305128-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005305128-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

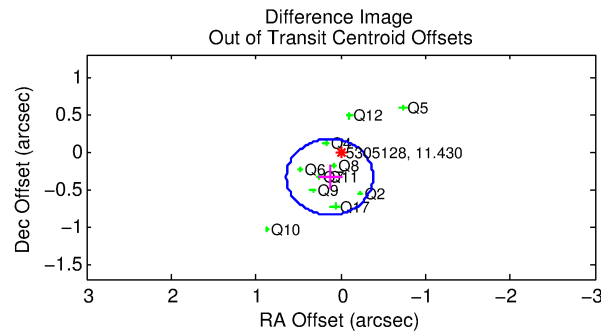
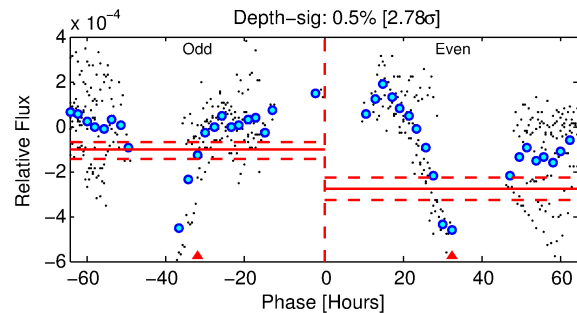
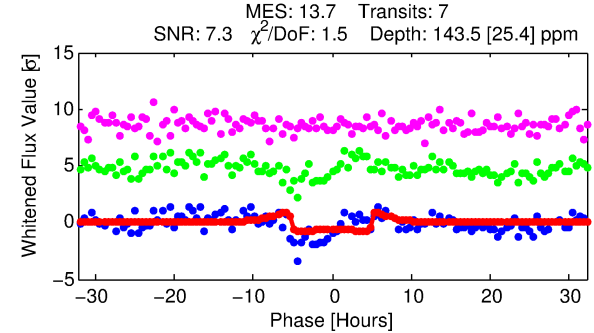
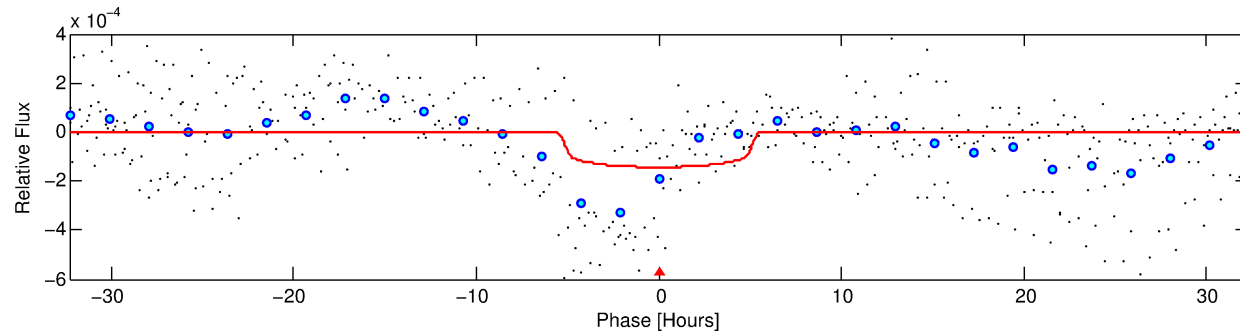
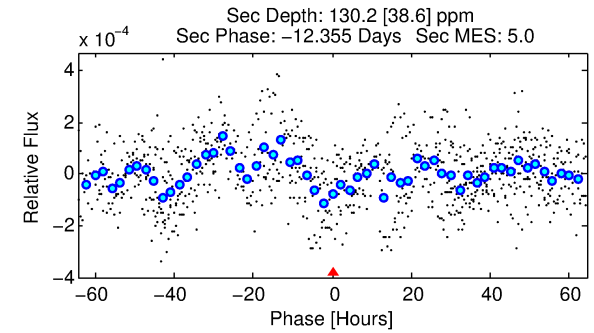
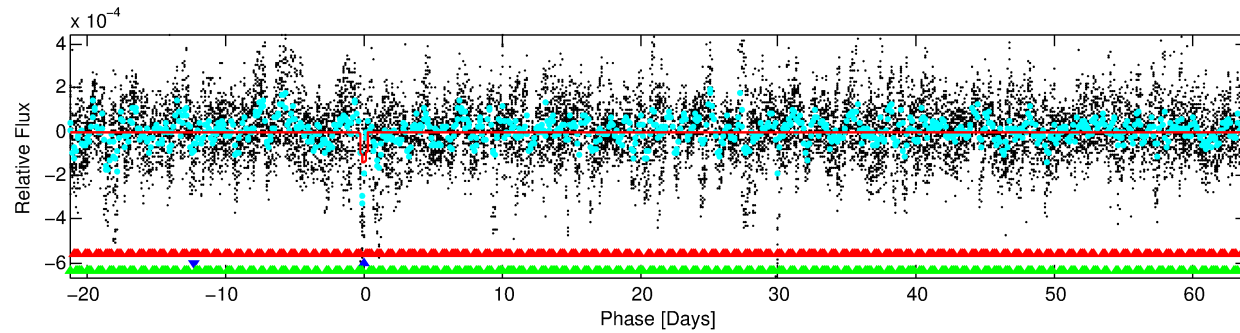
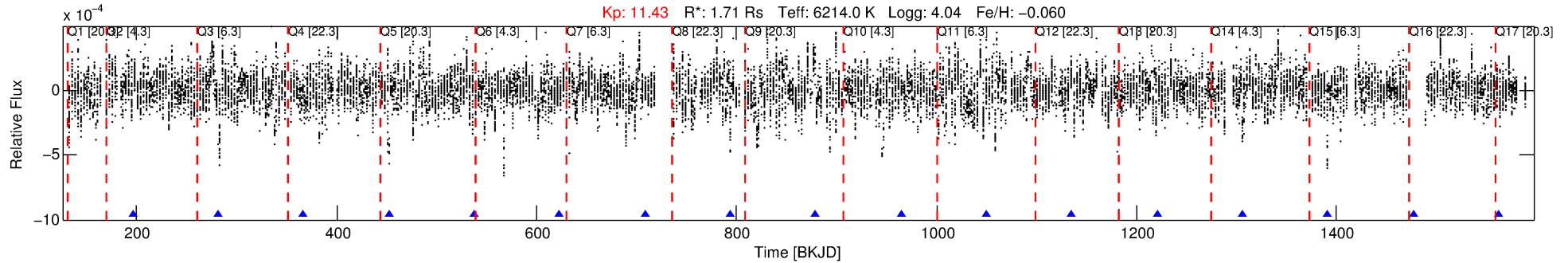
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305128-02

No Significant Match Found

DV One-Page Summary

KIC: 5305128 Candidate: 2 of 3 Period: 85.360 d



DV Fit Results:

Period = 85.35963 [0.00139] d
Epoch = 196.0993 [0.0142] BKJD
Rp/R* = 0.0122 [0.0032]
a/R* = 36.45 [45.74]
b = 0.81 [0.52]
Seff = 24.34 [10.99]
Teq = 566 [64] K
Rp = 2.28 [0.87] Re
a = 0.4011 [0.1069] AU
Ag = 2210.35 [1636.59] [1.35σ]
Teffp = 6004 [932] K [5.82σ]

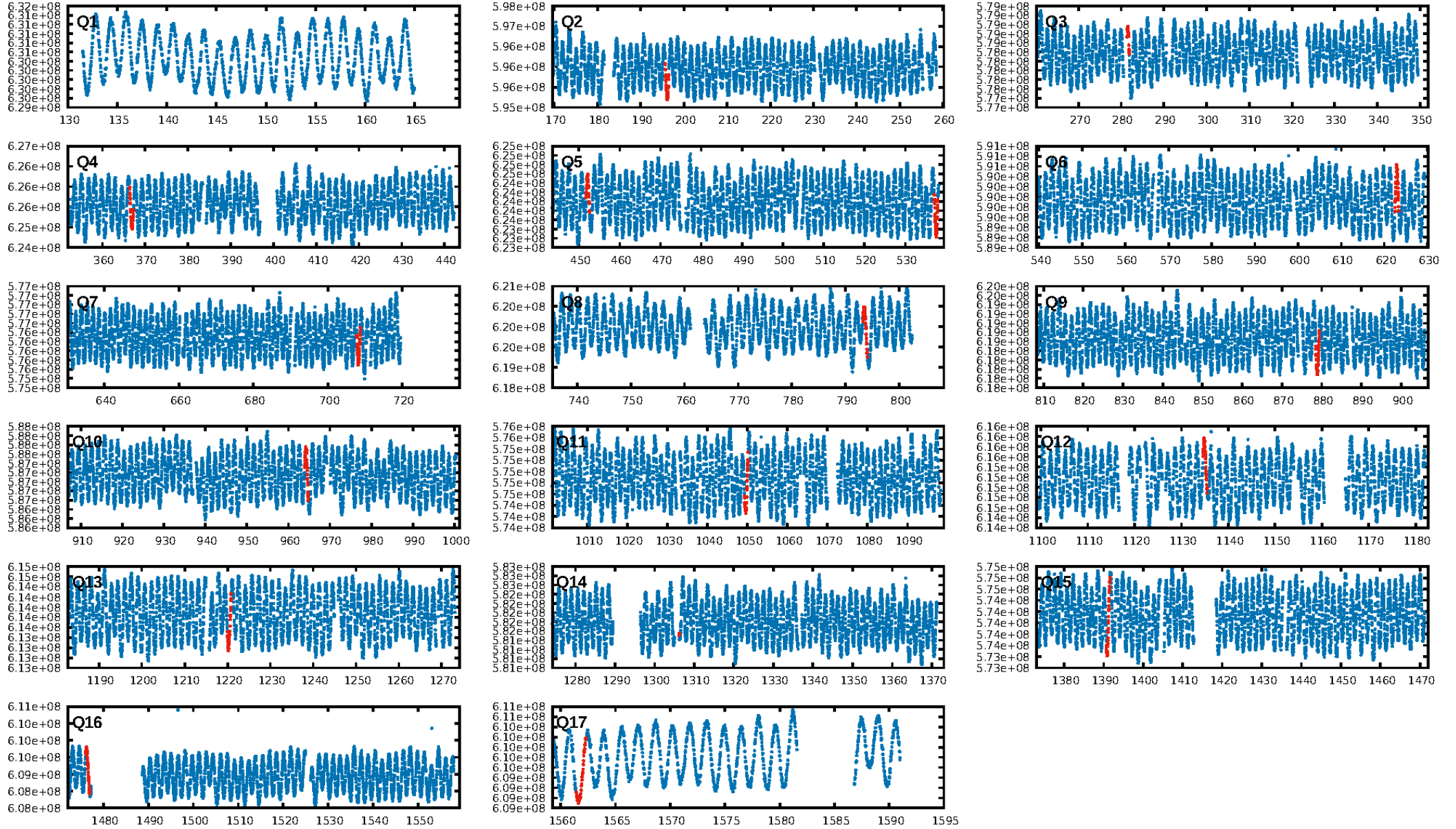
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.49σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.652
Centroid-sig: 83.3%
Centroid-so: 0.531 arcsec [0.47σ]
OotOffset-rm: 0.361 arcsec [2.13σ]
KicOffset-rm: 0.343 arcsec [1.93σ]
OotOffset-st: 3/2/3/3 [11]
KicOffset-st: 3/2/3/3 [11]
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DiffImageOverlap-fno: 0.00 [0/12]

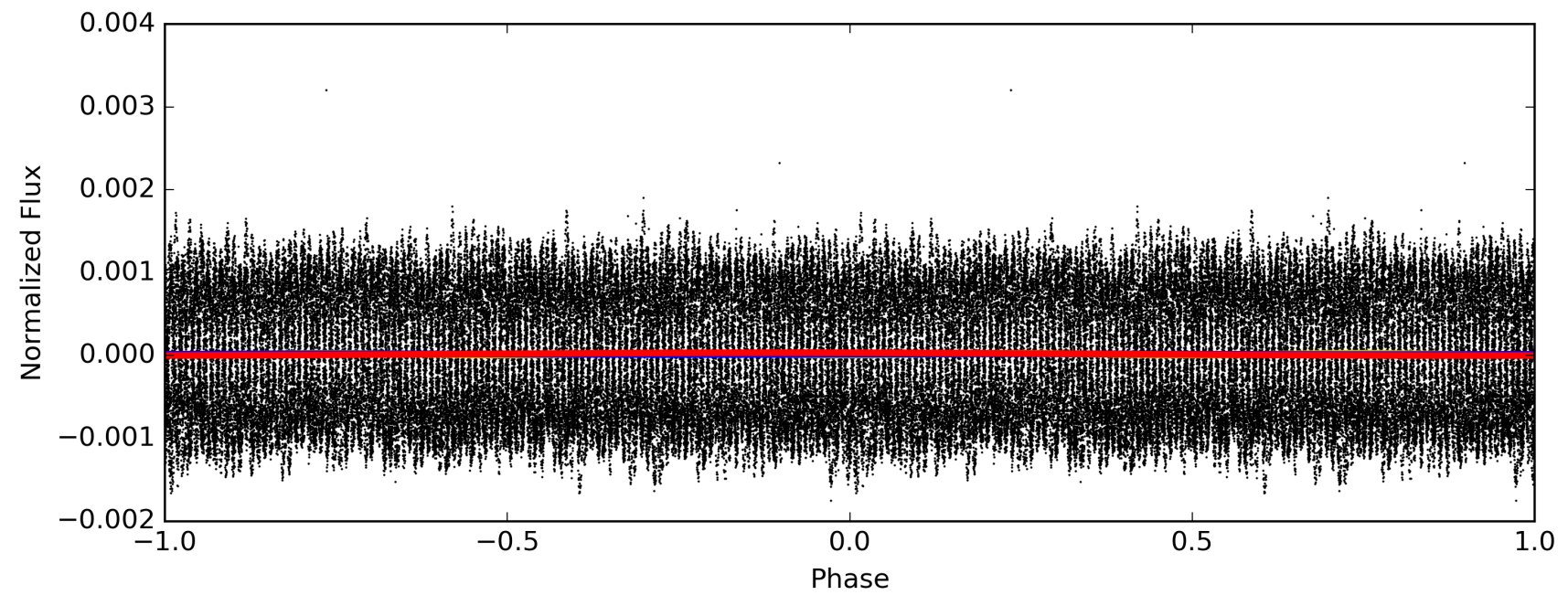
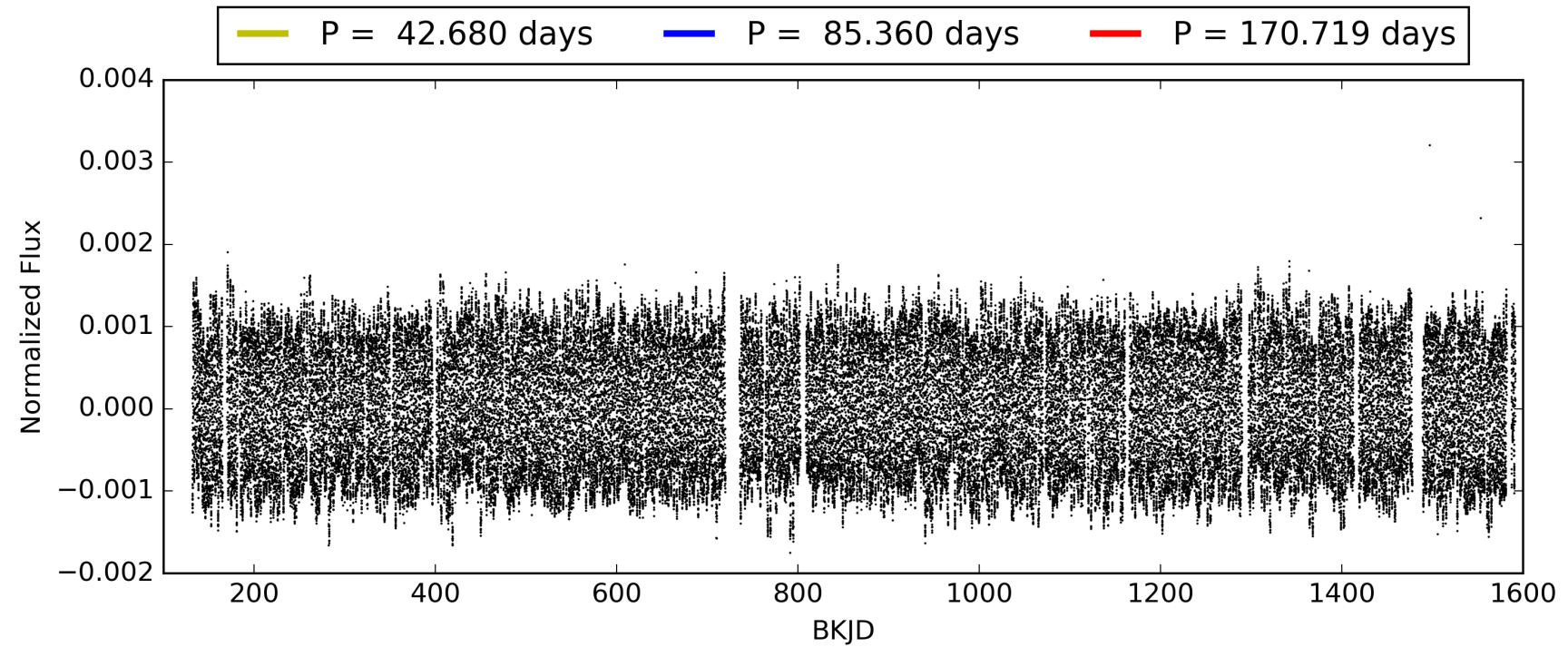
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:48:25 Z

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TCE 005305128-02, PDC Light Curves

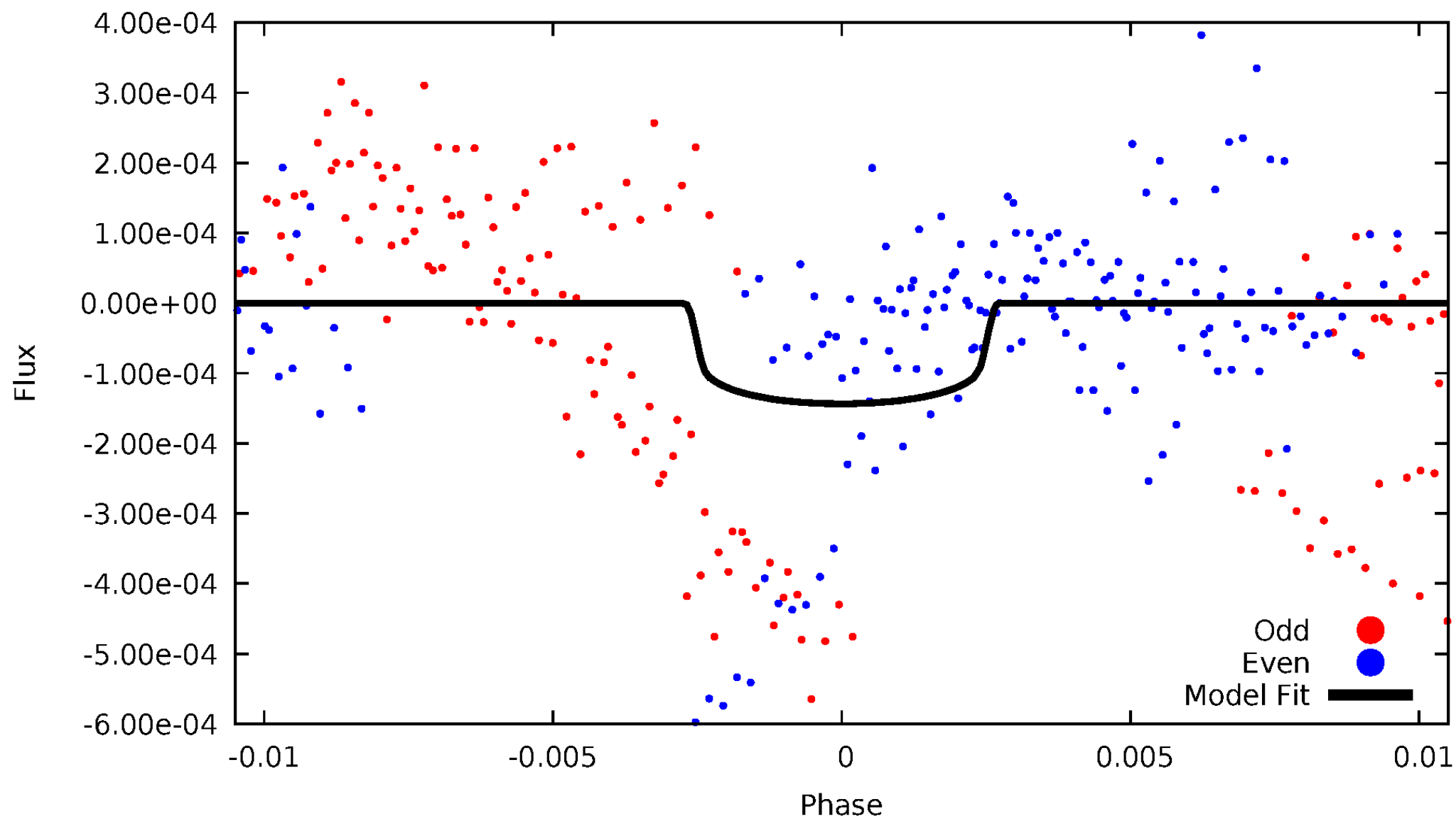


TCE 005305128-02



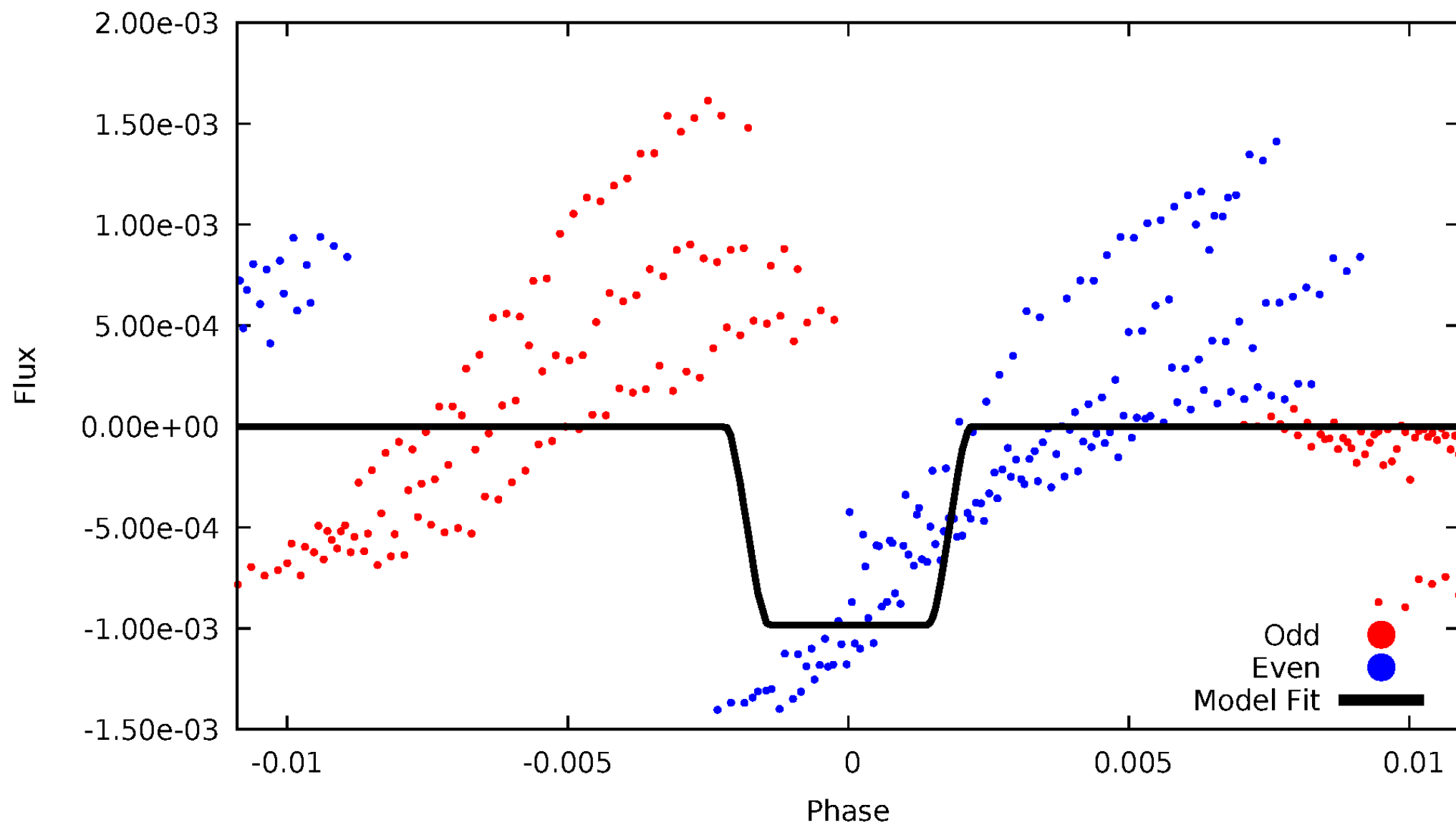
DV Odd/Even

TCE 005305128-02



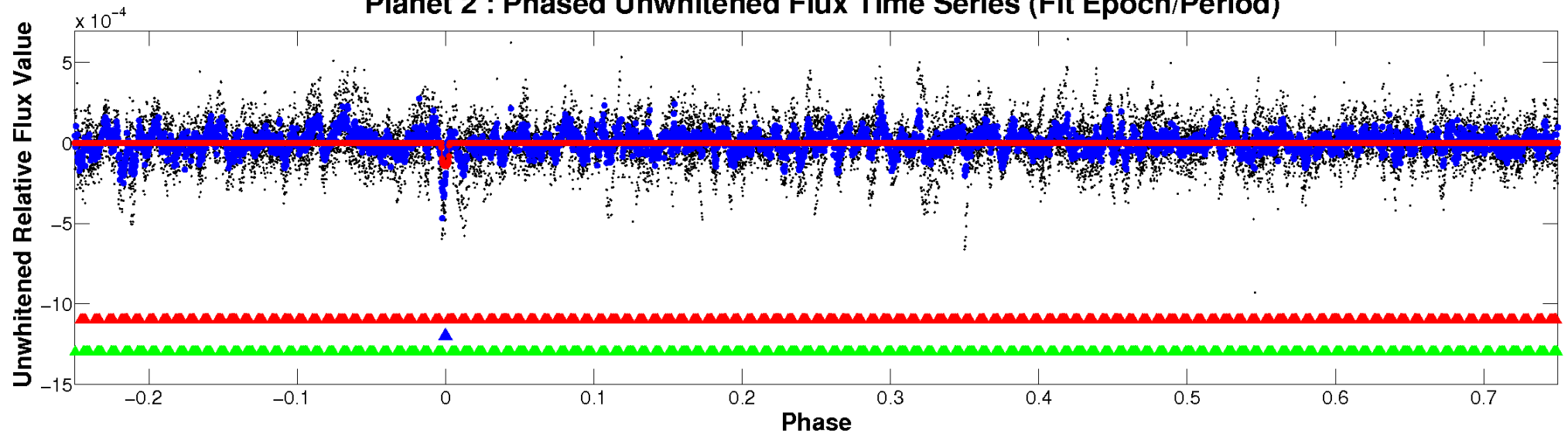
ALT Odd/Even

TCE 005305128-02

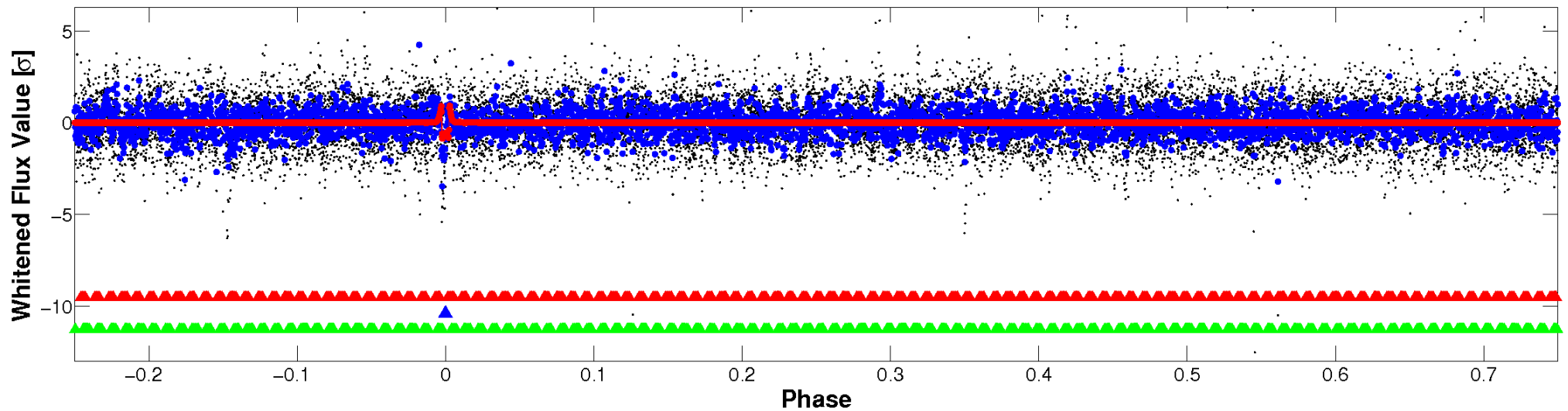


Non-Whitened Vs. Whitened Light Curve

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

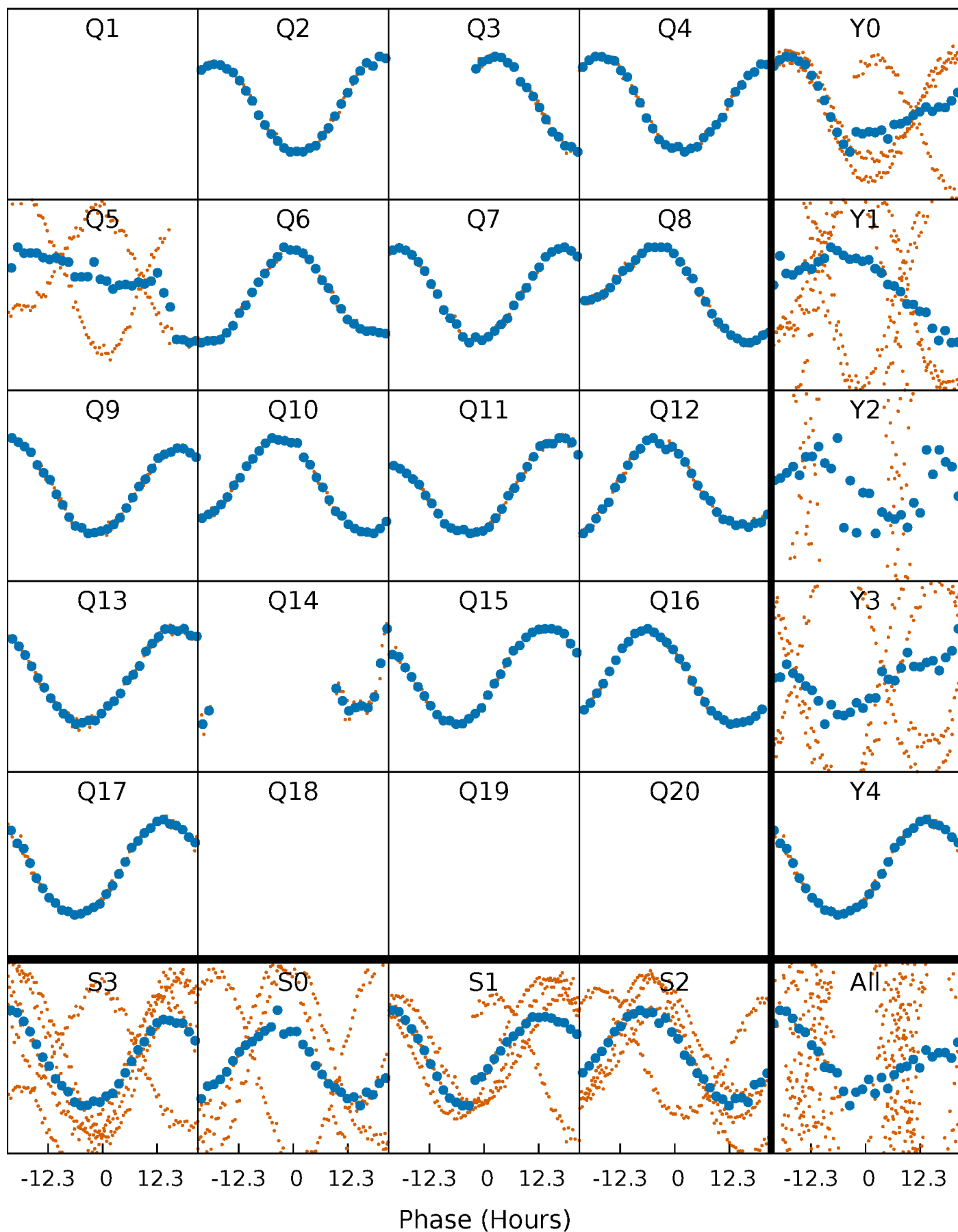


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



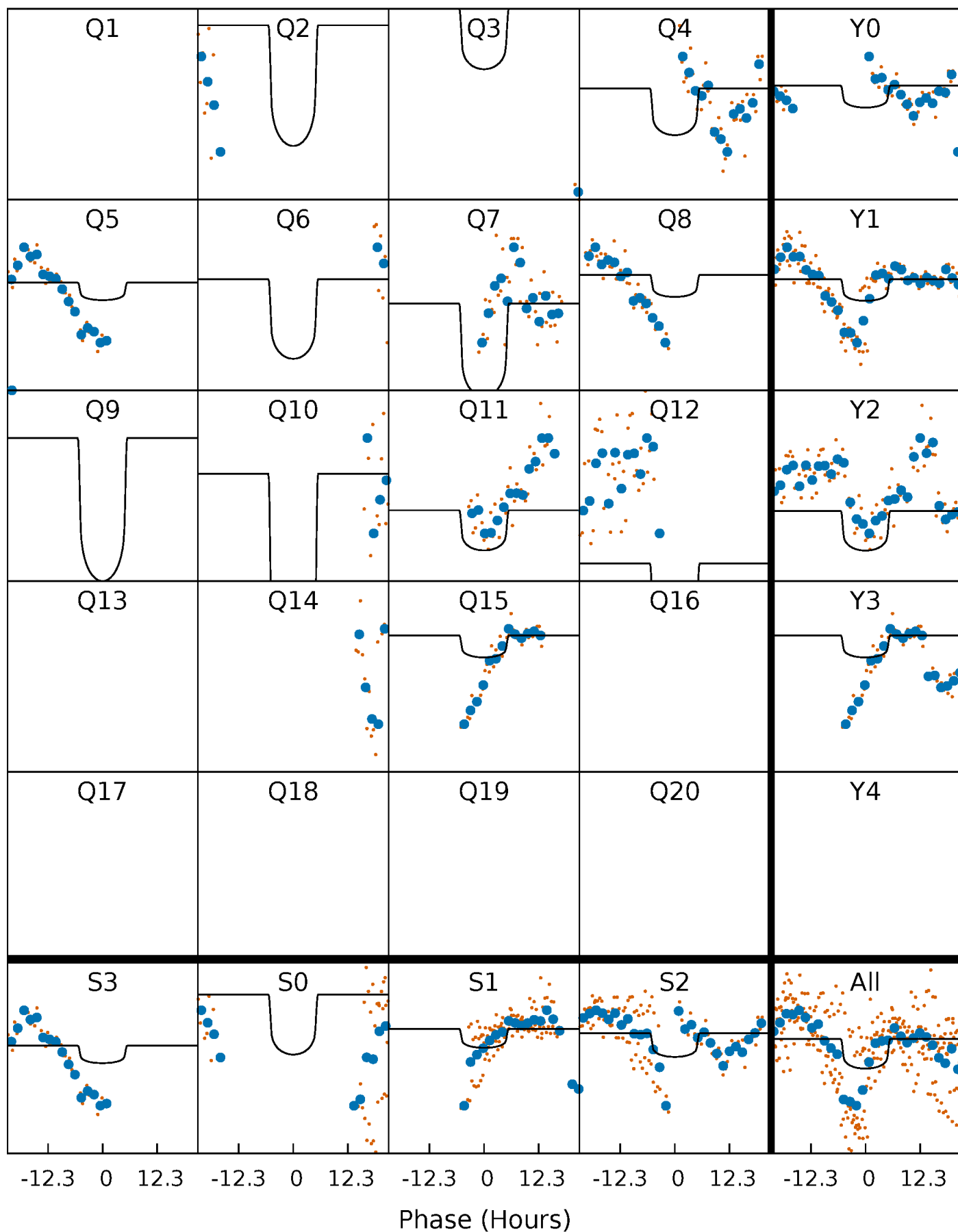
PDC Quarter-Phased Transit Curves

TCE 005305128-02 P= 85.359634 Days $T_0=196.099312$ (BKJD)



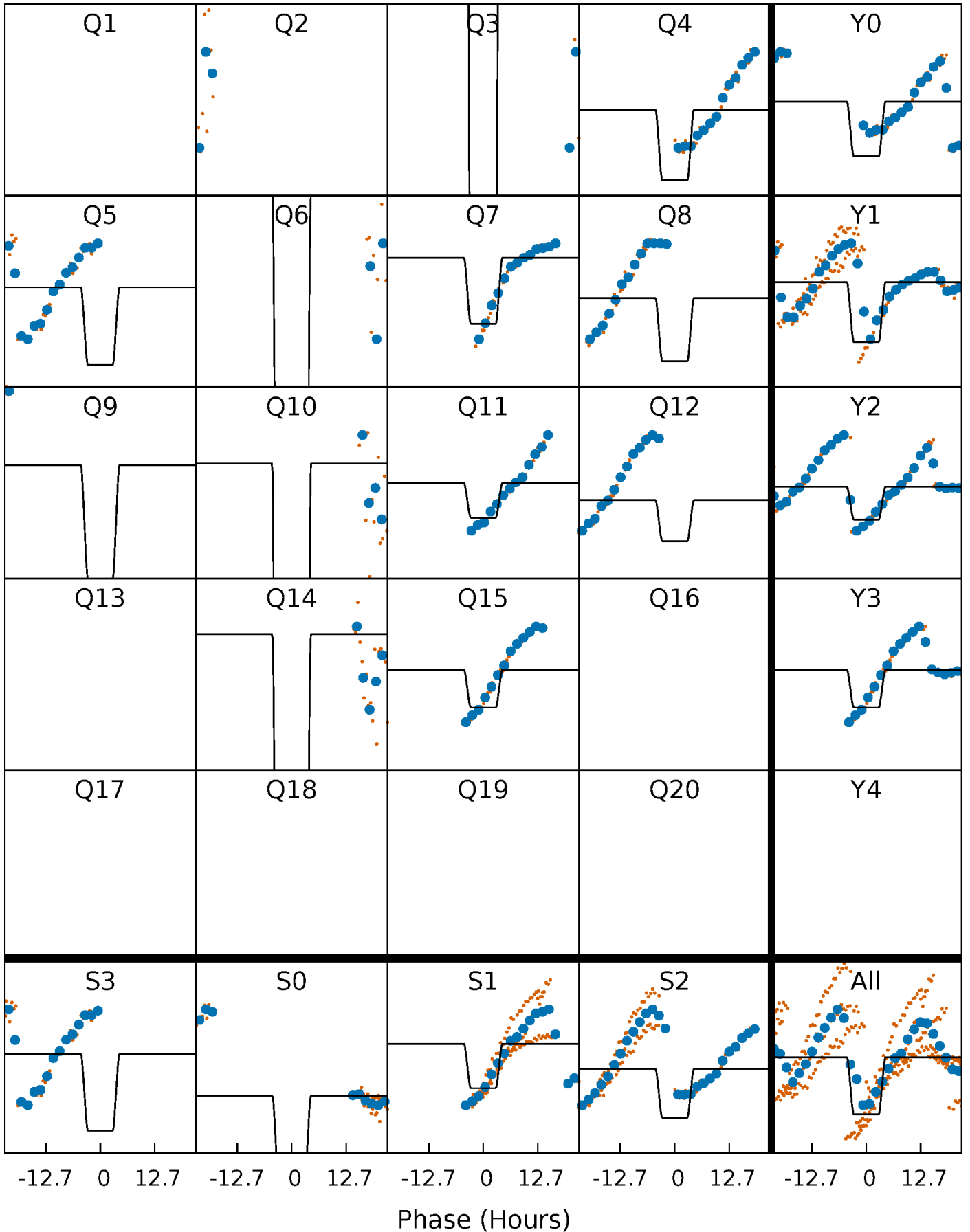
DV Quarter-Phased Transit Curves

TCE 005305128-02 $P = 85.359634$ Days $T_0 = 196.099312$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

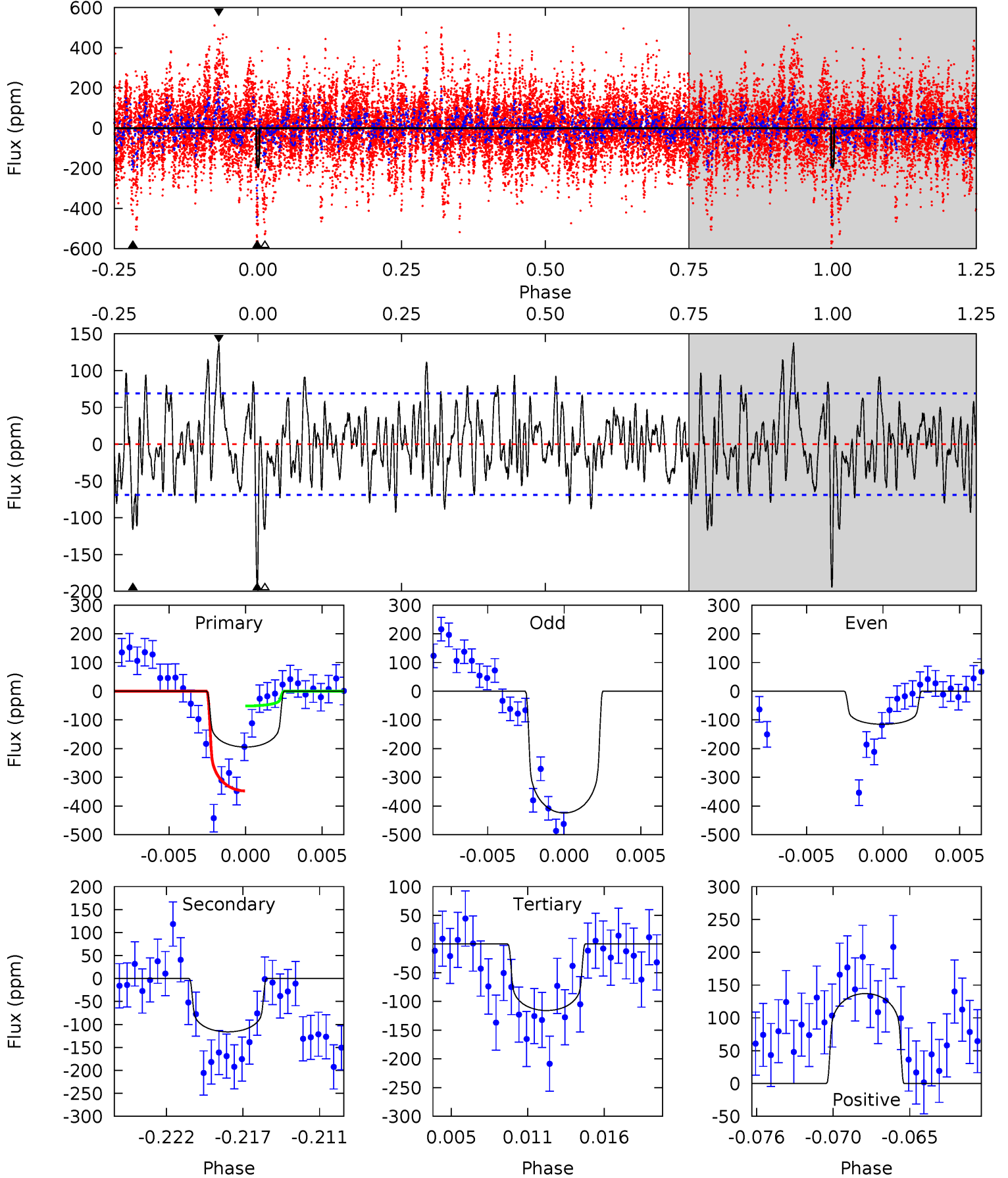
TCE 005305128-02 P= 85.354623 Days $T_0=196.152295$ (BKJD)



DV Model-Shift Uniqueness Test

005305128-02, P = 85.359634 Days, E = 110.739678 Days

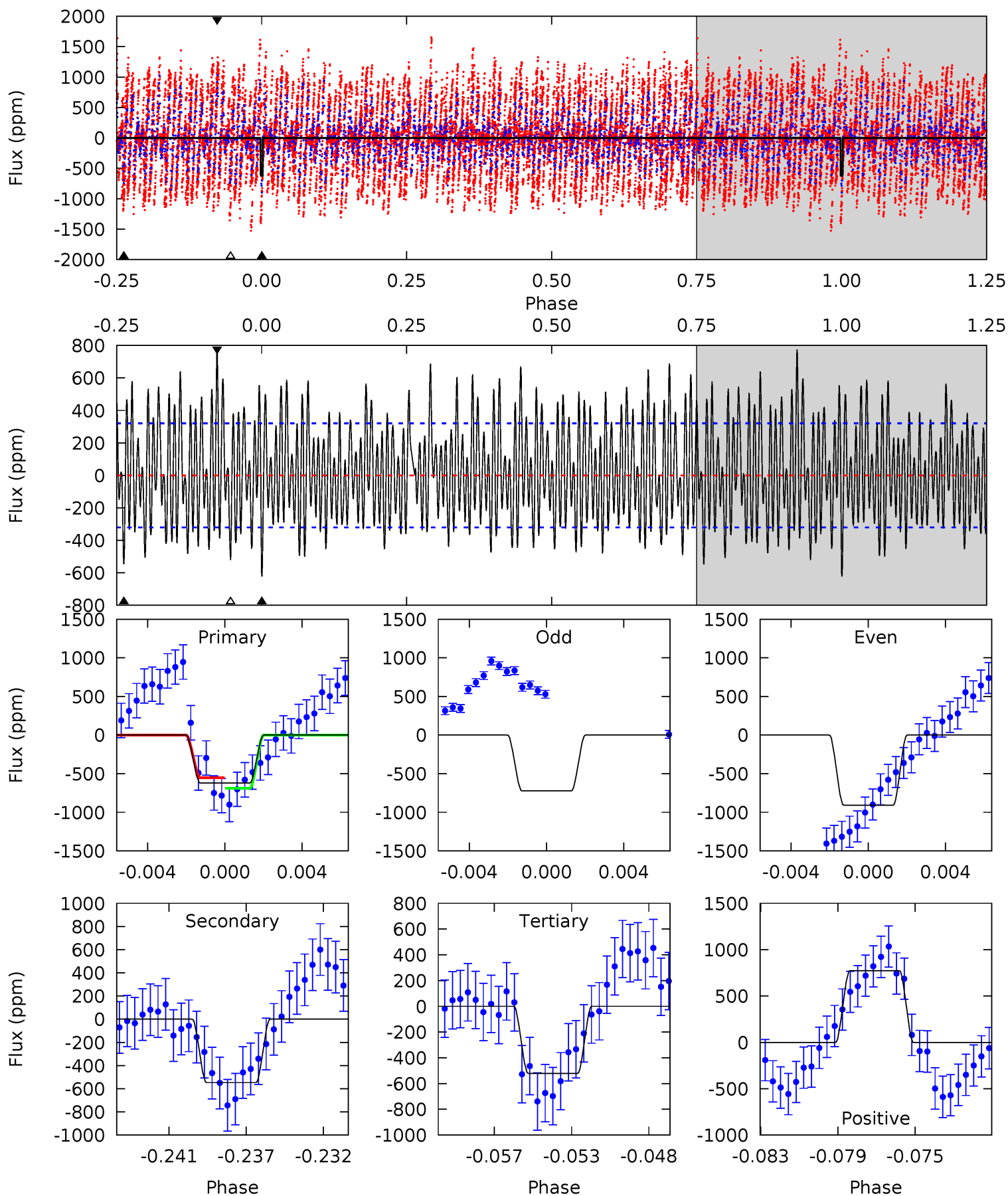
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	8.67	8.64	10.2	5.14	2.78	2.88	5.87	4.29	0.03	-1.55	10.2	4.15	0.41	11.1



Alt Model-Shift Uniqueness Test

005305128-02, P = 85.354623 Days, E = 110.797672 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	8.85	8.41	12.5	5.18	2.85	4.37	1.64	-2.46	0.44	-3.66	1.21	0.48	0.55	1.09



Stellar Parameters For KIC 005305128

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6214^{+204}_{-223}	$4.043^{+0.252}_{-0.126}$	$-0.060^{+0.300}_{-0.250}$	$1.712^{+0.385}_{-0.471}$	$1.179^{+0.185}_{-0.167}$	$0.331^{+0.472}_{-0.126}$
	+3%/-4%	+6%/-3%	+500%/-417%	+22%/-28%	+16%/-14%	+143%/-38%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305128-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-116 ± 13	$2.16^{+0.73}_{-0.61}$	782^{+53}_{-66}	5884^{+1027}_{-681}	2216^{+1973}_{-1000}
Alt.	-547 ± 62	$5.74^{+1.11}_{-1.05}$	780^{+58}_{-59}	5379^{+358}_{-292}	1488^{+721}_{-457}

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

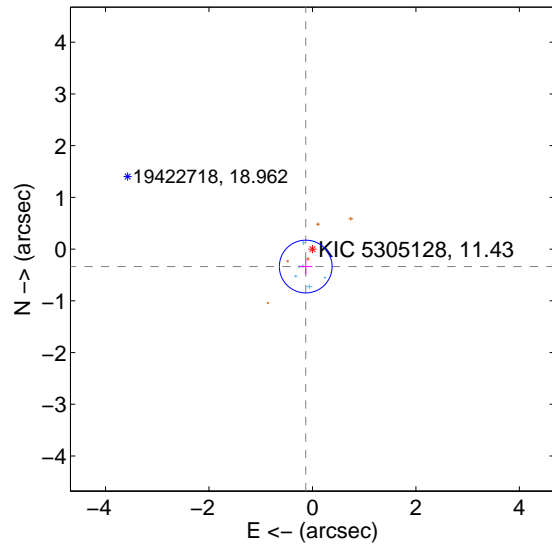
Supplemental centroid analysis for 005305128-02. **Kepler magnitude: 11.43.** Transit SNR 7.32

There are 6 quarters with good PRF difference image offsets

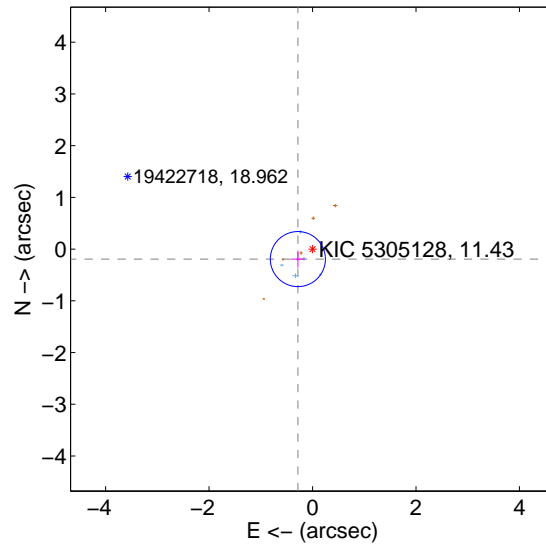
The direct PRF centroid is offset from the target star catalog position by about 0.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.361 ± 0.170	2.13	0.130 ± 0.130	-0.337 ± 0.152
PRF-fit source offset from KIC position	0.343 ± 0.177	1.93	0.283 ± 0.132	-0.193 ± 0.164
photometric centroid source offset	0.53 ± 1.12	0.47	0.28 ± 1.79	0.45 ± 0.74

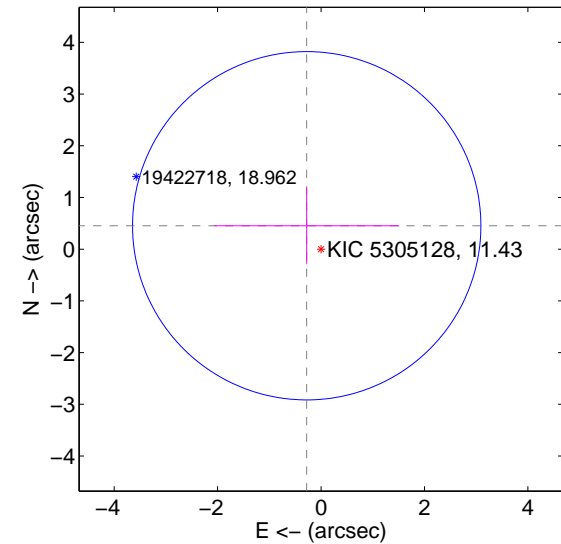
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

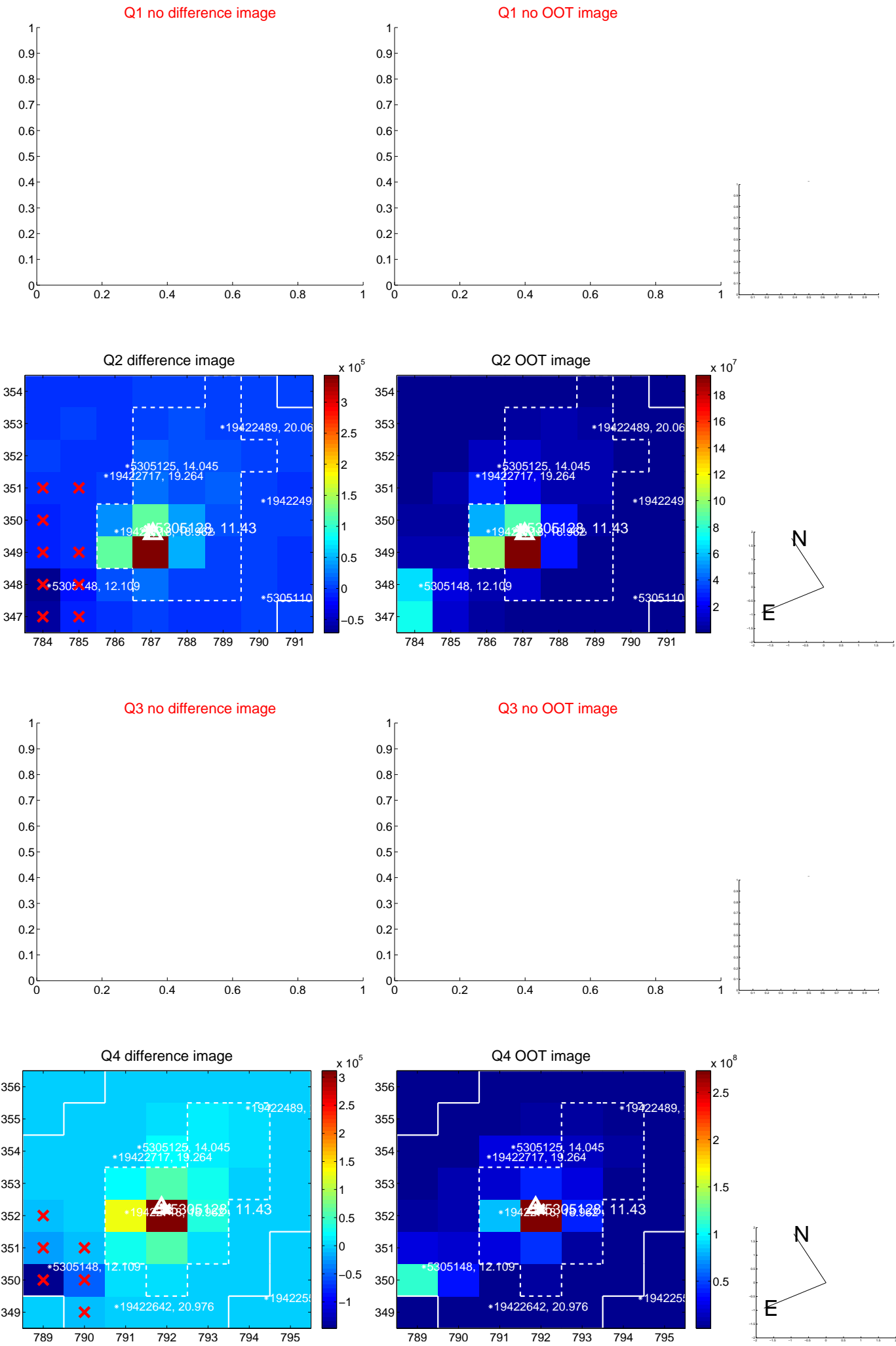


offset from photometric centroids

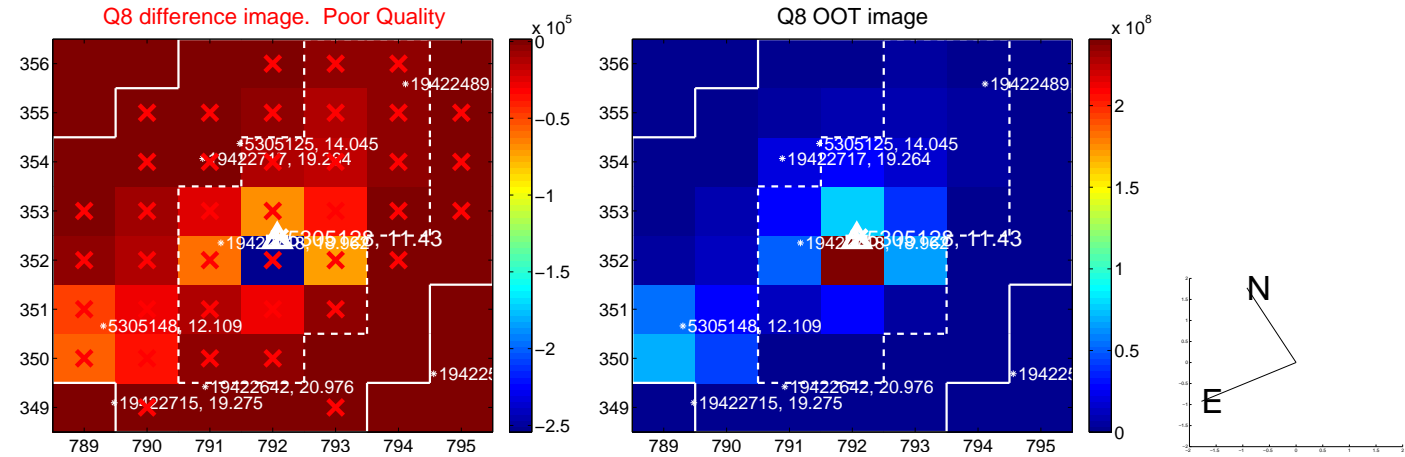
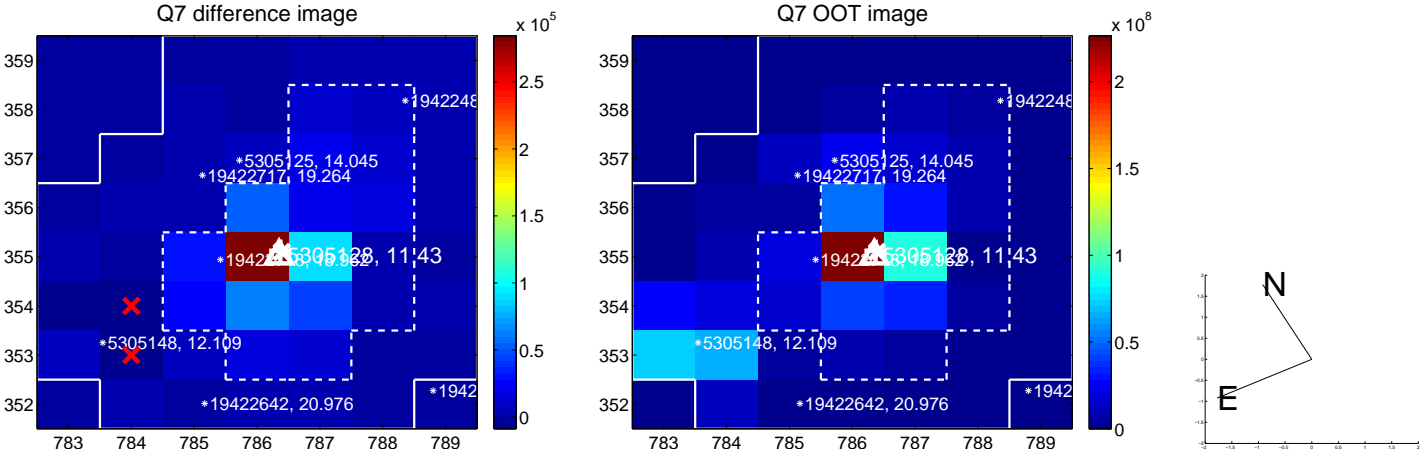
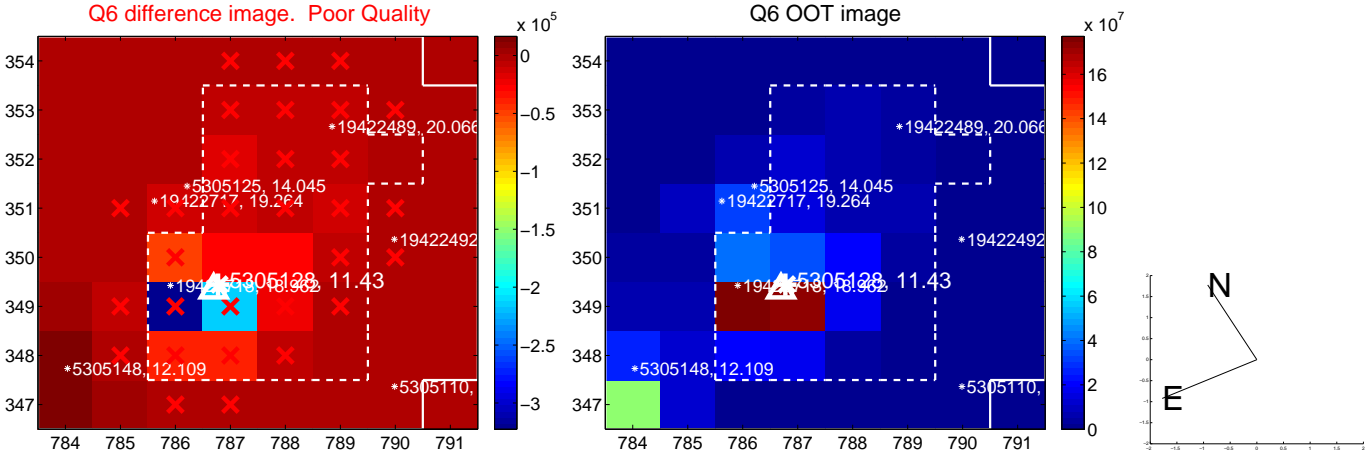
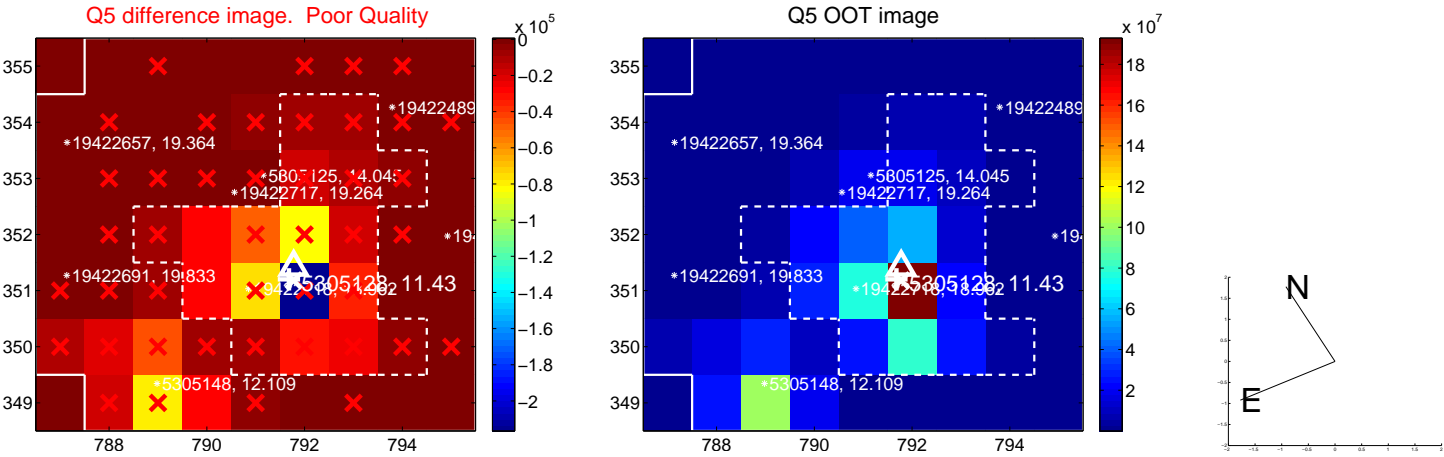


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

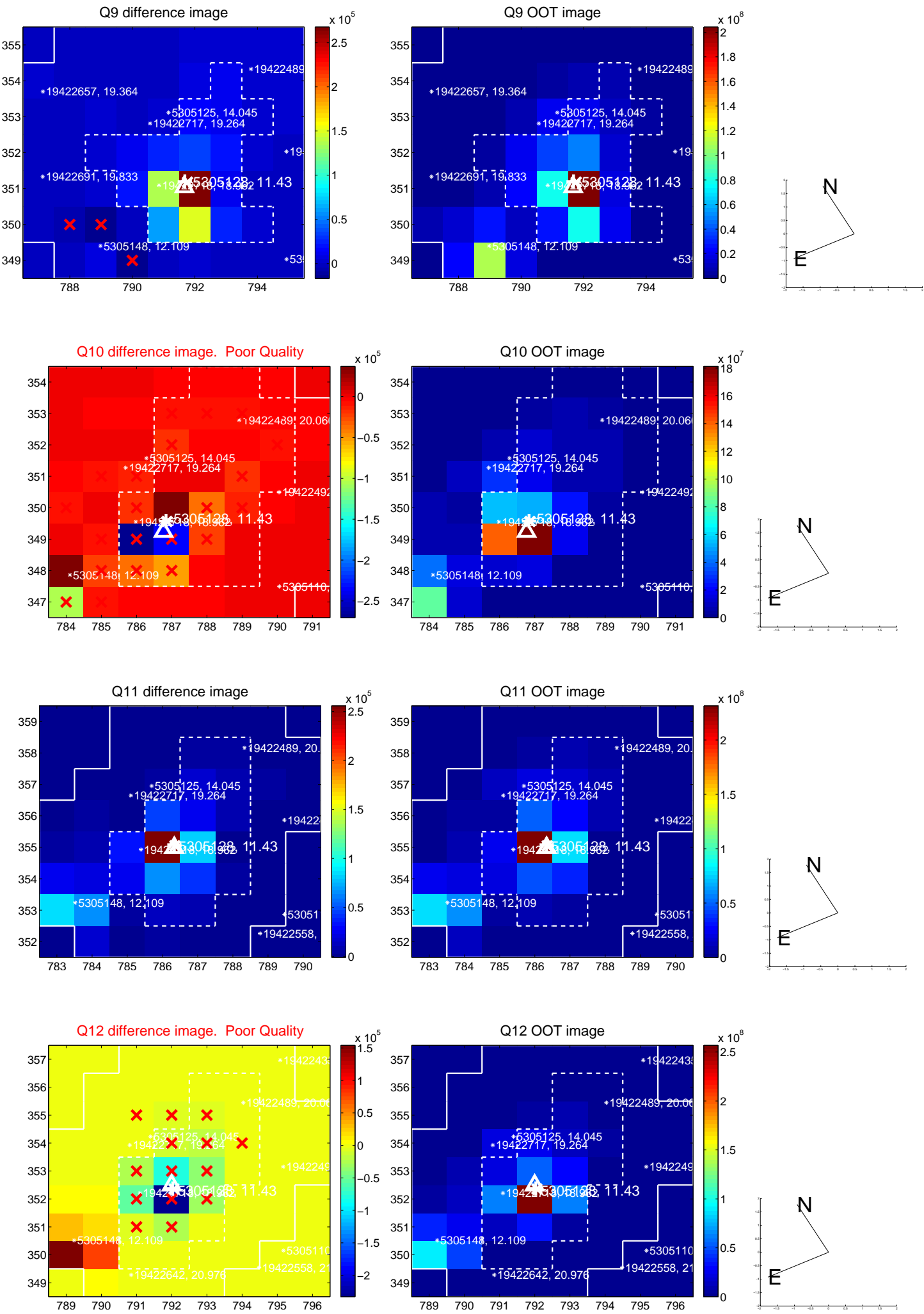
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



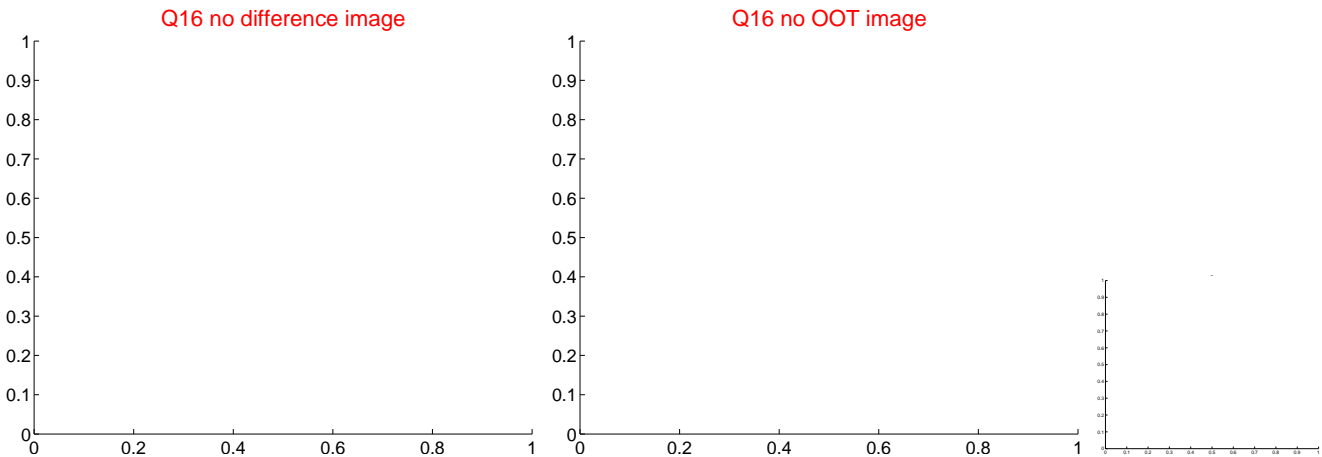
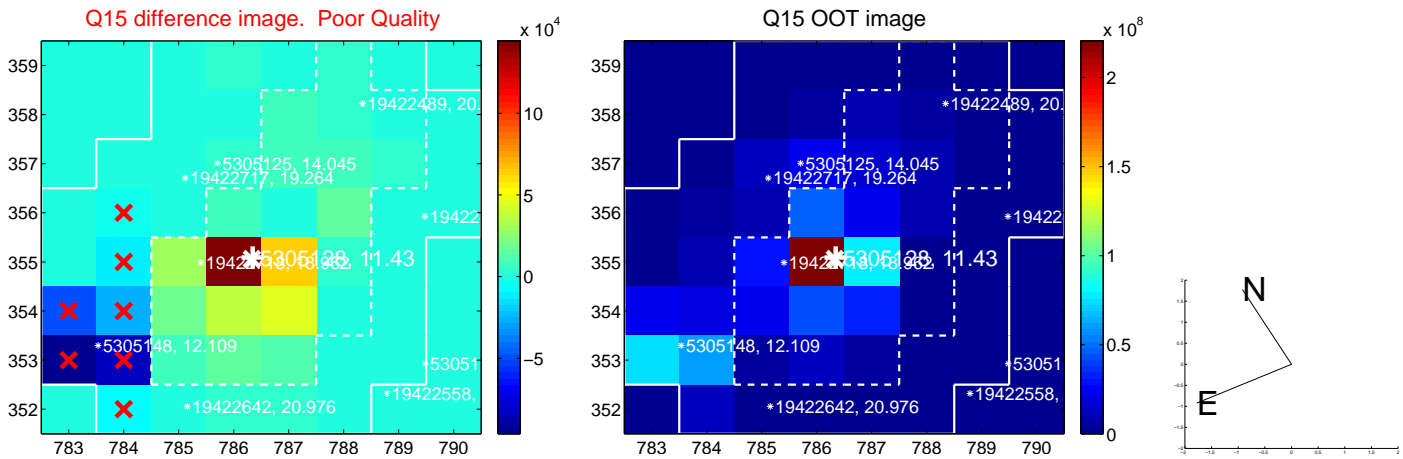
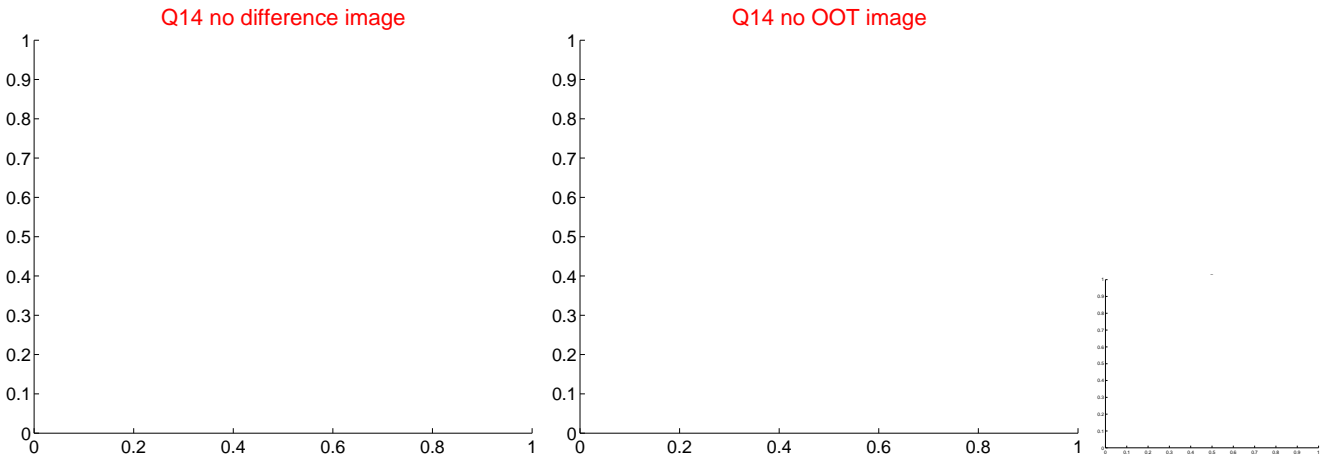
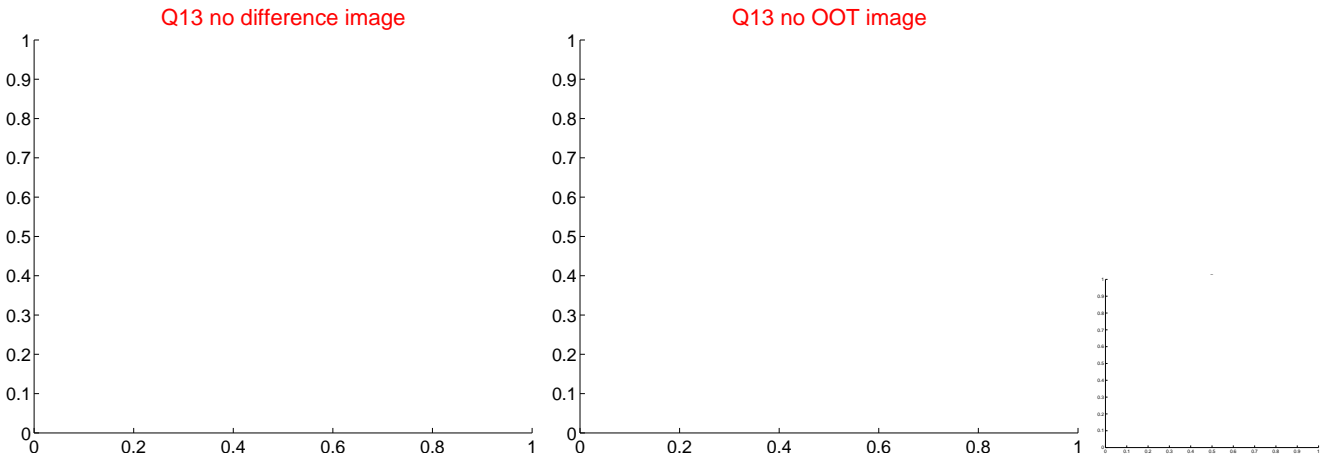
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



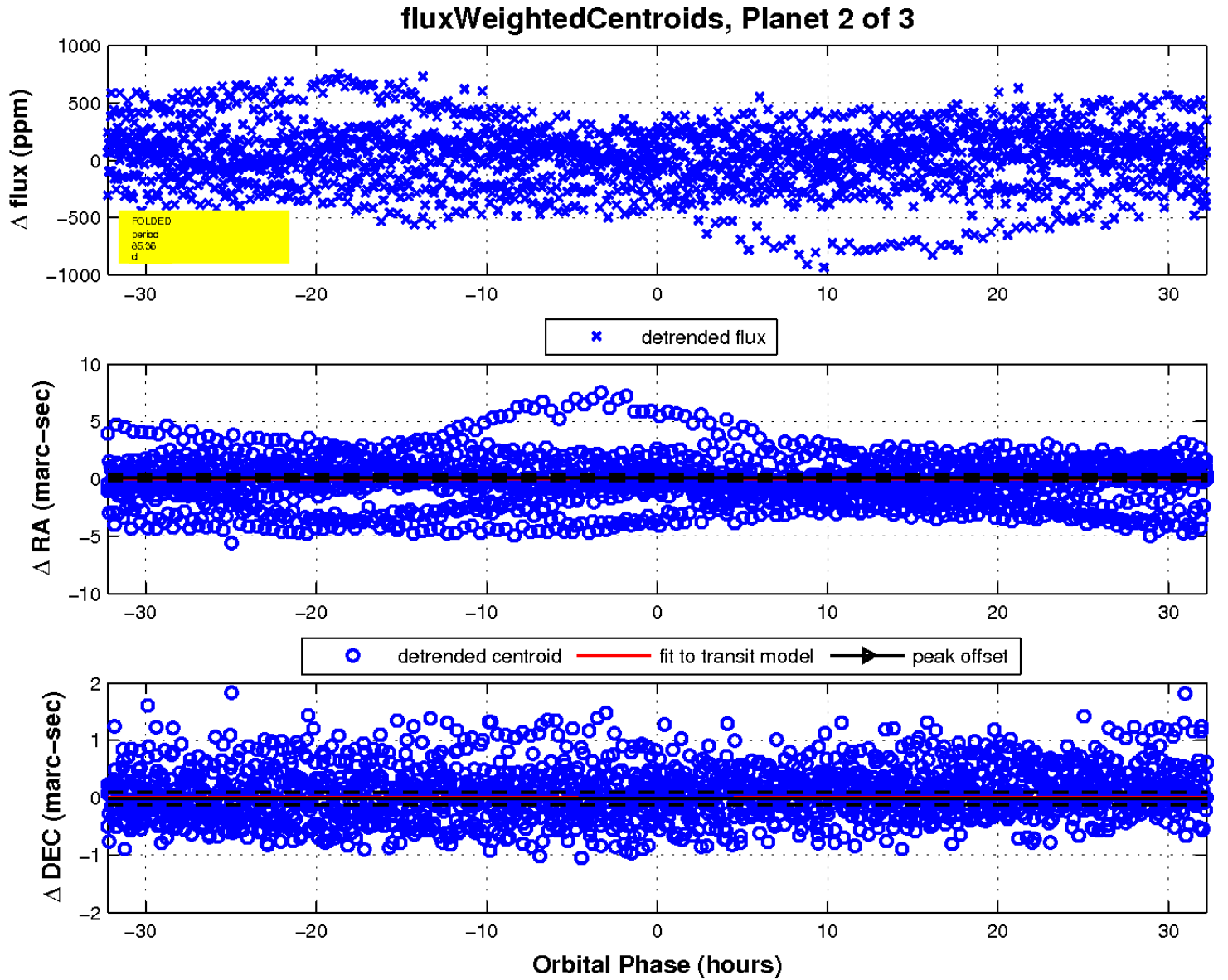
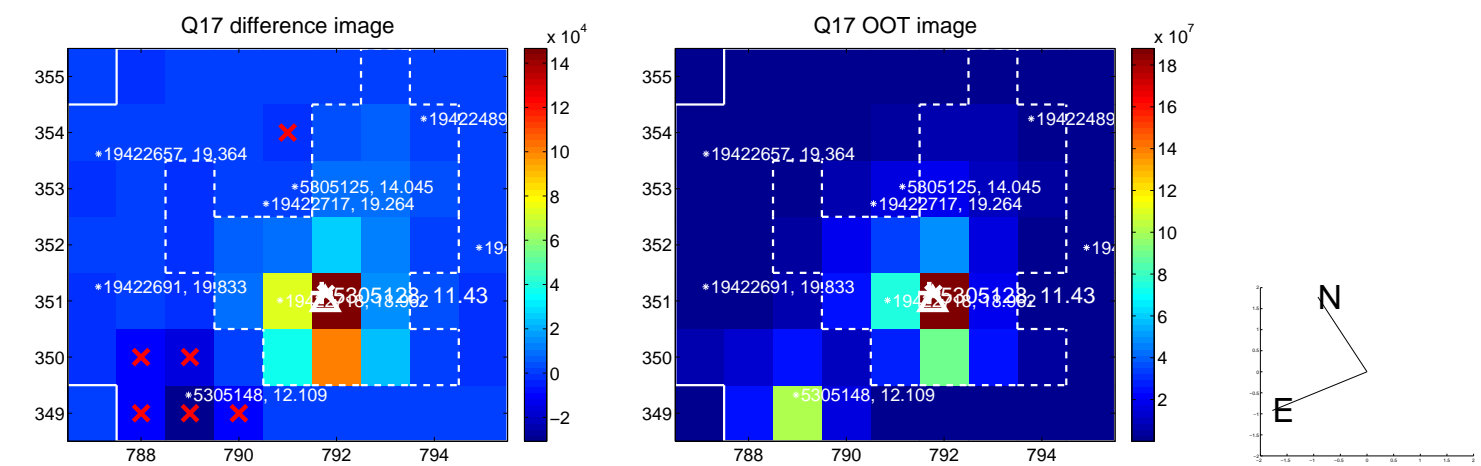
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



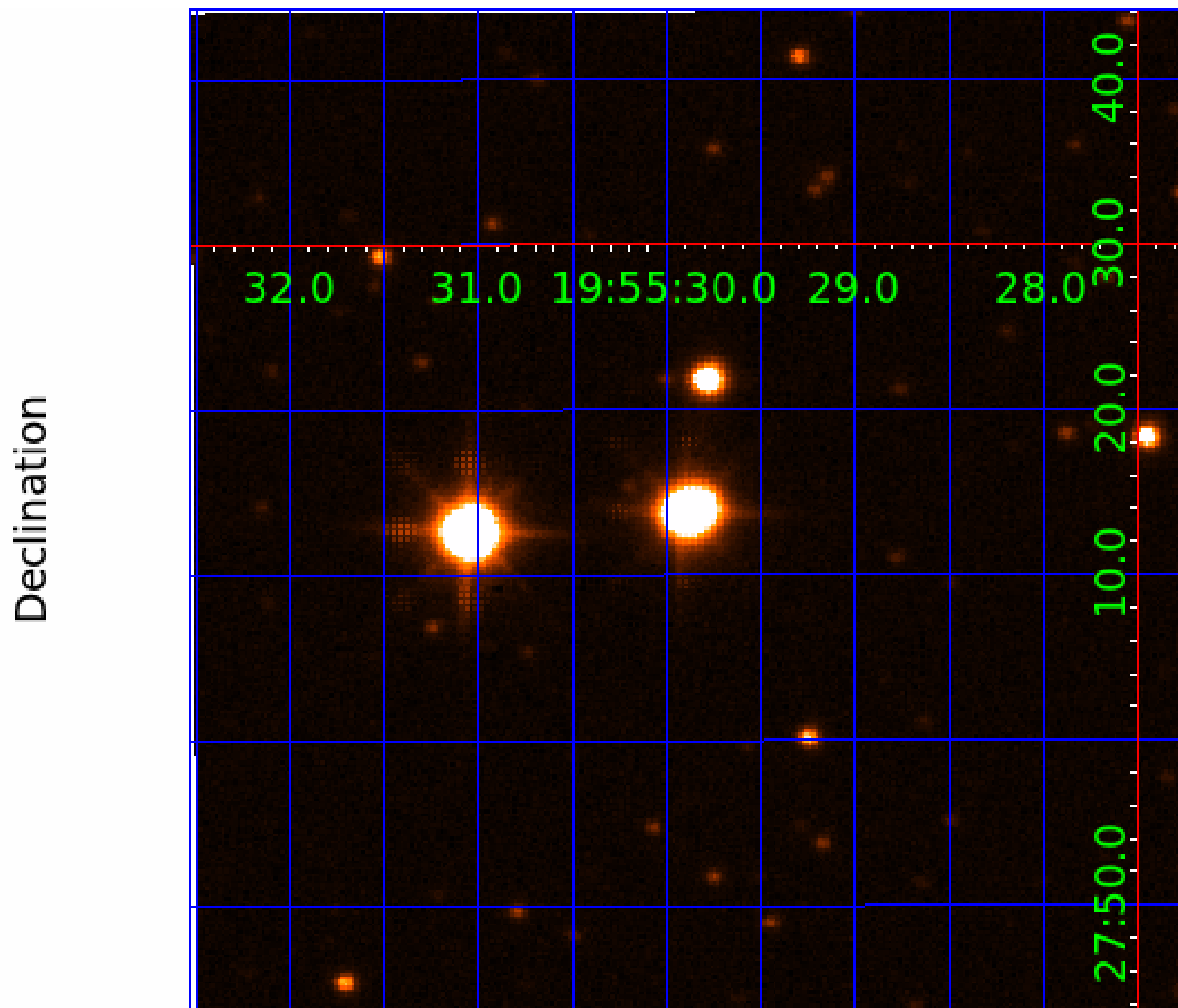
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 005305128

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})
005305128-01	OBS	No	3.131670	133.940877	69.5	18.464	15.4	15.9	1.71	6214	2.00	1996.86
005305128-02	OBS	No	85.359634	196.099312	143.5	10.753	13.7	7.3	1.71	6214	2.28	24.34
005305128-03	OBS	No	3.131673	131.754919	114.3	37.580	12.1	18.5	1.71	6214	2.31	1996.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005305128-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED
005305128-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
005305128-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

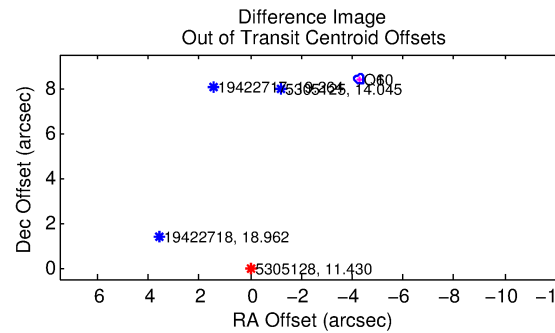
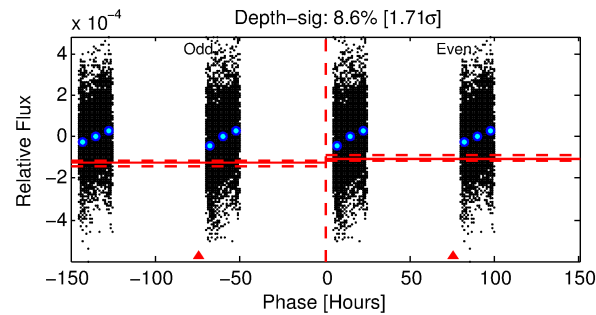
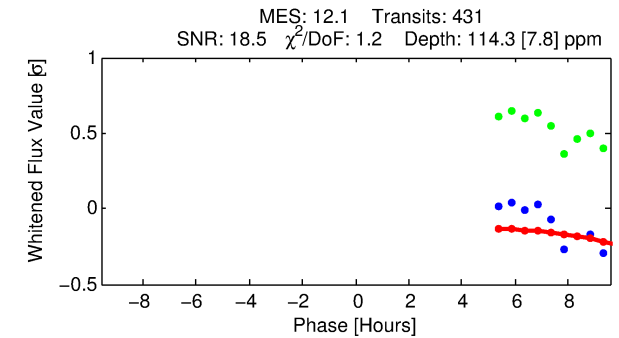
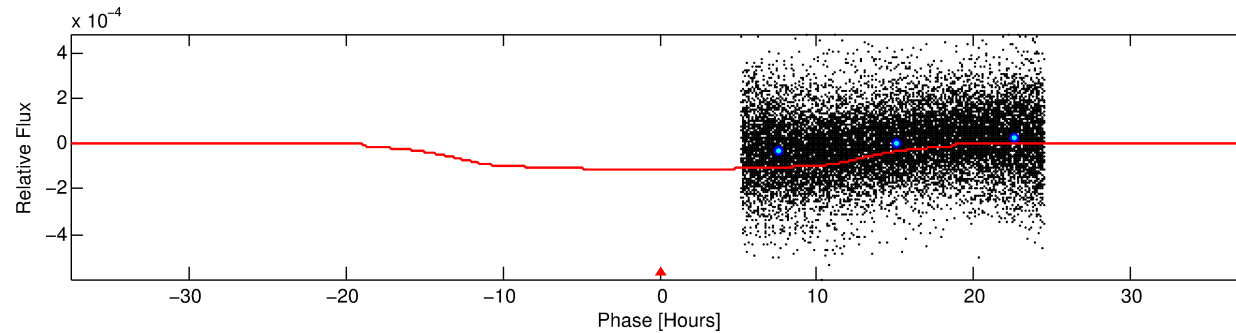
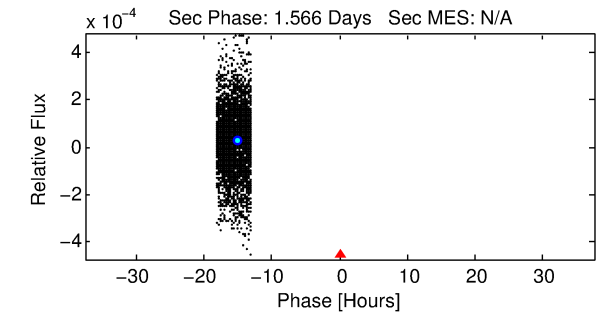
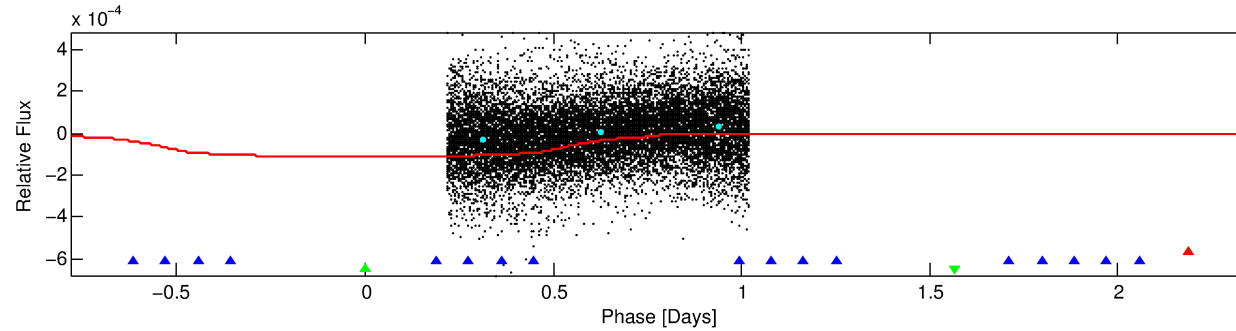
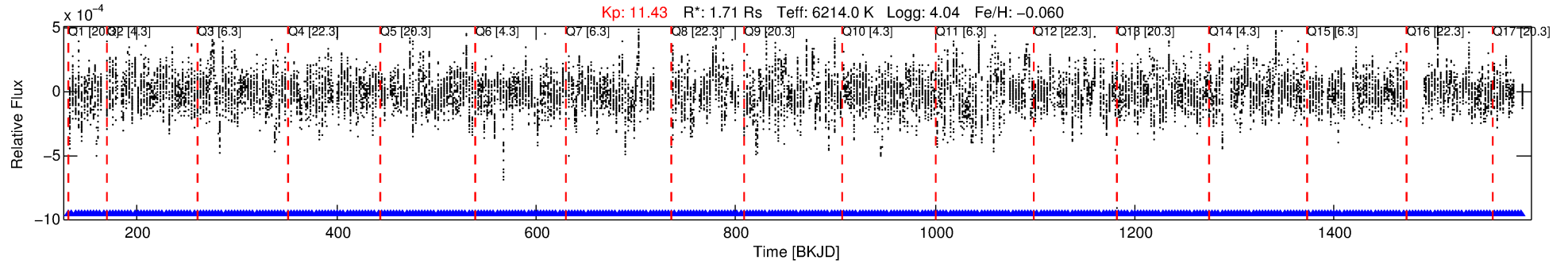
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005305128-03

No Significant Match Found

DV One-Page Summary

KIC: 5305128 Candidate: 3 of 3 Period: 3.132 d



DV Fit Results:

Period = 3.13167 [0.00003] d
Epoch = 131.7549 [0.0050] BKJD
Rp/R* = 0.0124 [0.0004]
a/R* = 1.01 [0.00]
b = 0.96 [0.00]
Seff = 1996.86 [901.66]
Teq = 1705 [192] K
Rp = 2.31 [0.64] Re
a = 0.0443 [0.0118] AU

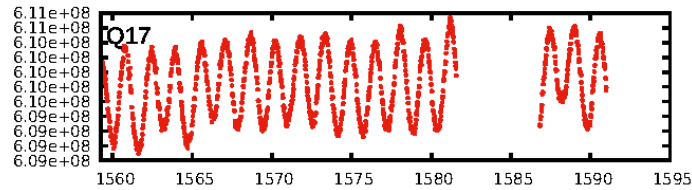
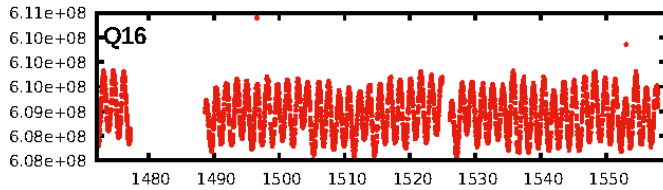
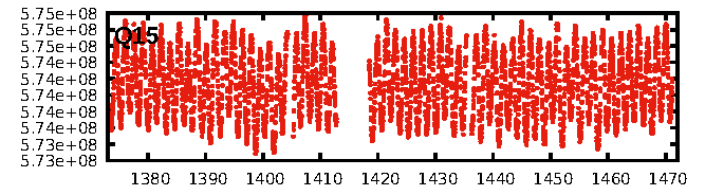
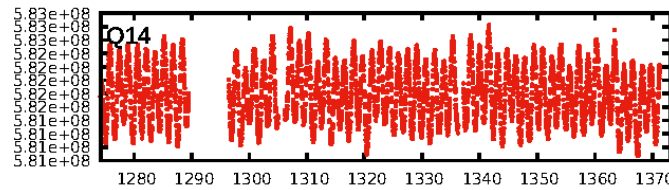
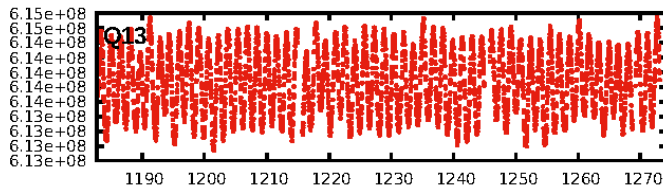
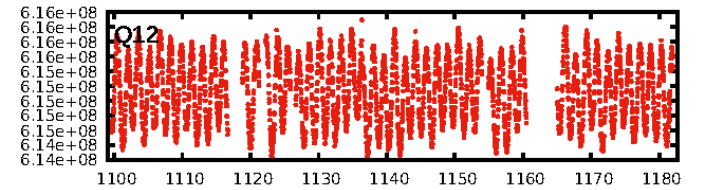
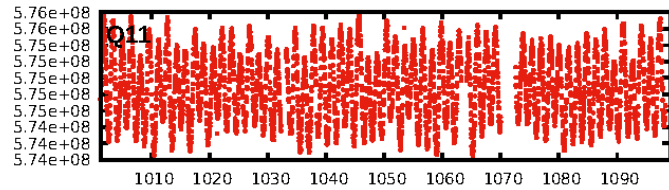
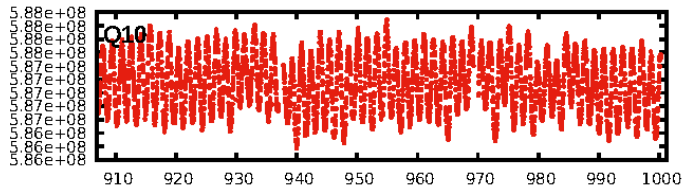
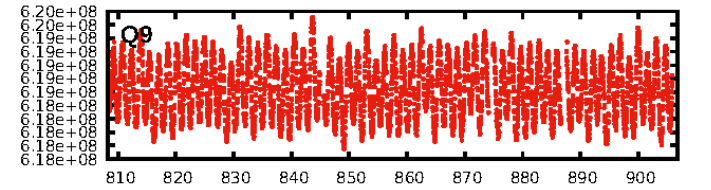
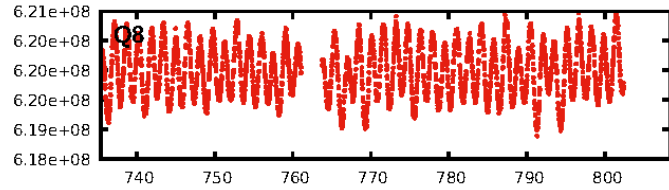
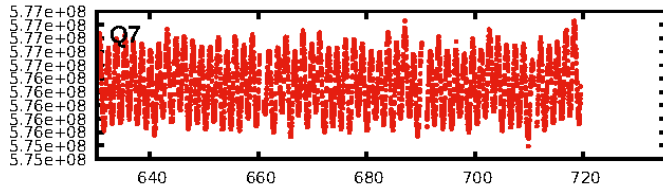
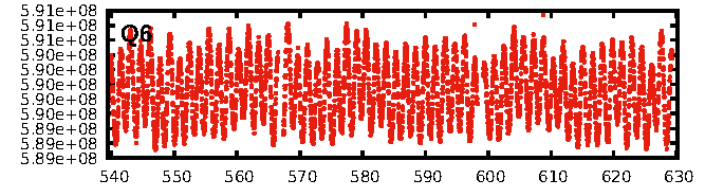
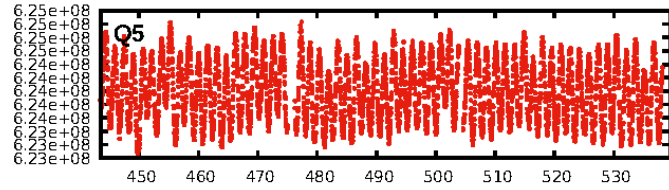
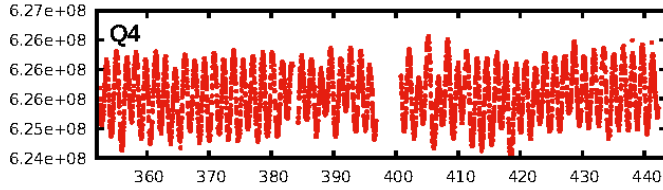
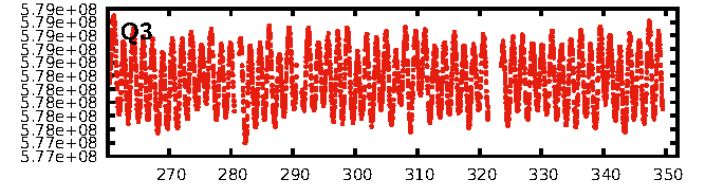
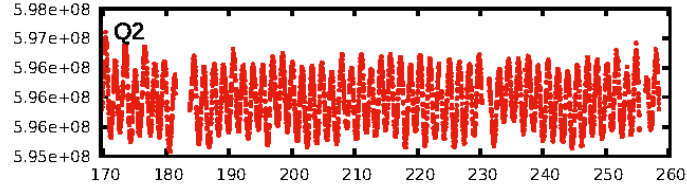
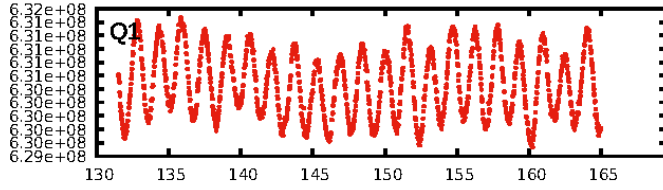
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [50.49σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [412/412]
GhostDiagnostic-chr: 0.9703
Centroid-sig: 0.0%
Centroid-so: 0.908 arcsec [1.57σ]
OotOffset-rm: 9.427 arcsec [140.34σ]
KicOffset-rm: 9.522 arcsec [142.19σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 0.00 [0/17]

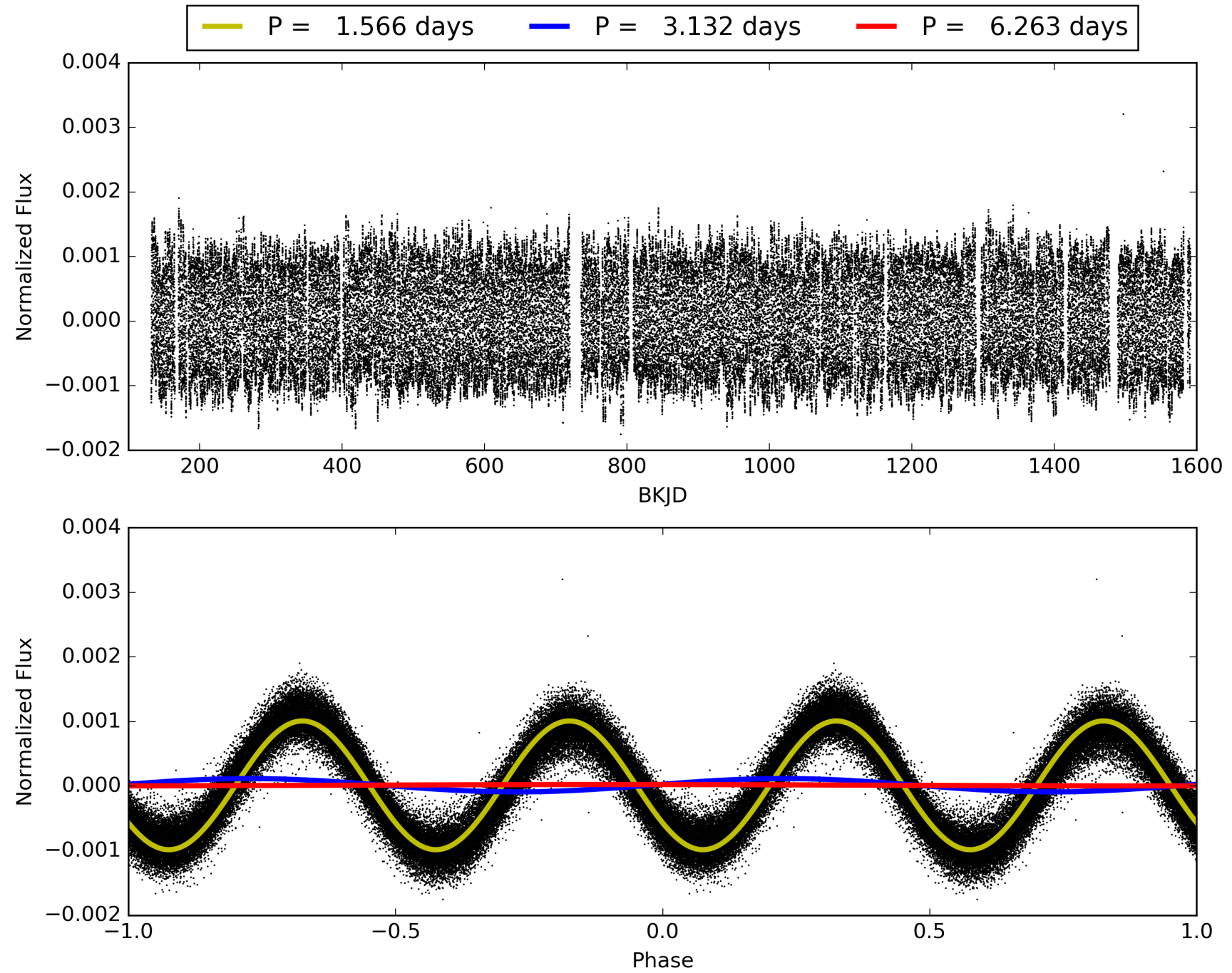
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:48:35 Z

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

TCE 005305128-03, PDC Light Curves

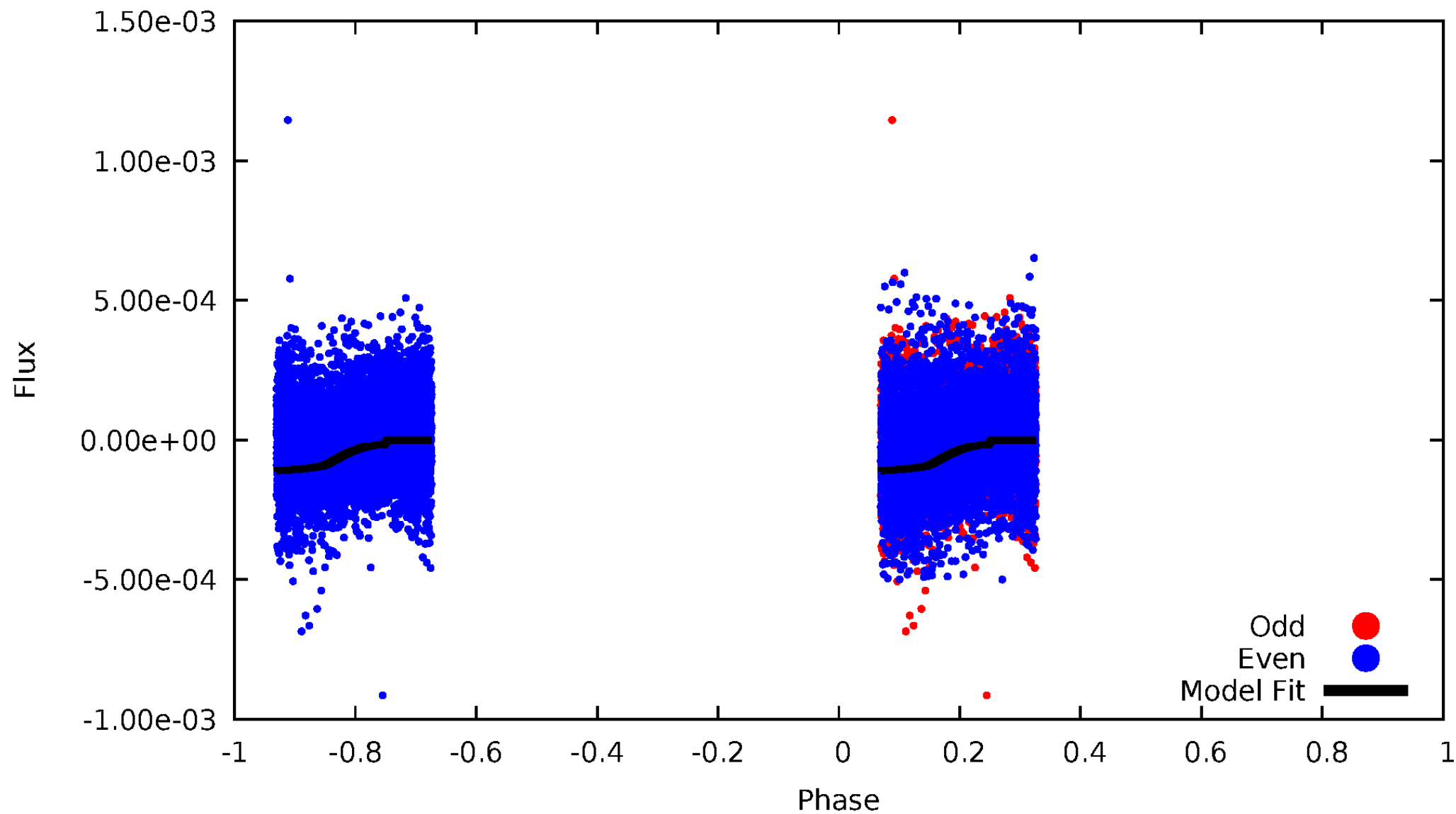


TCE 005305128-03



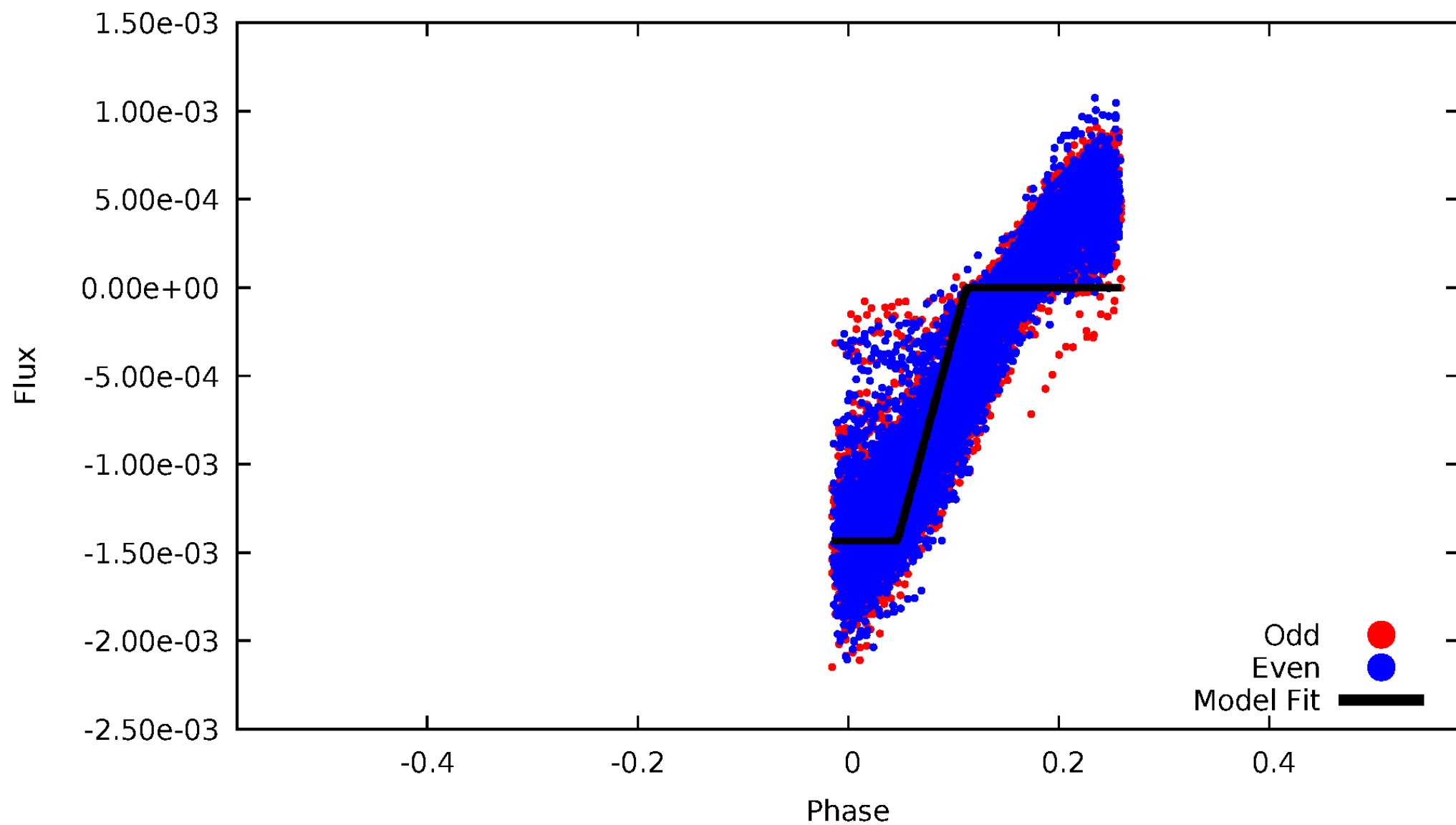
DV Odd/Even

TCE 005305128-03



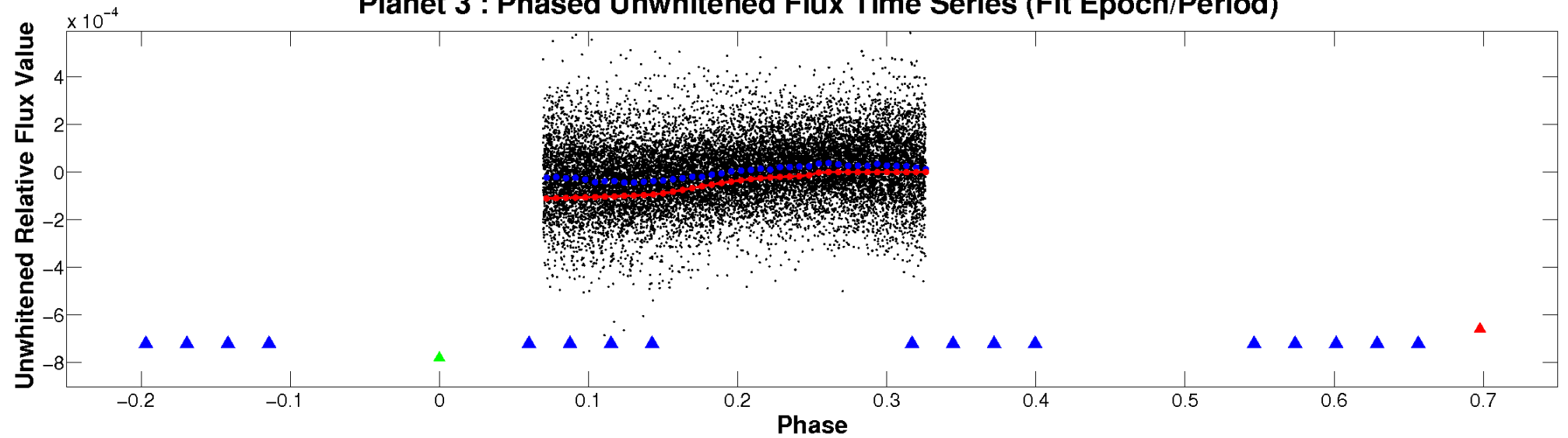
ALT Odd/Even

TCE 005305128-03

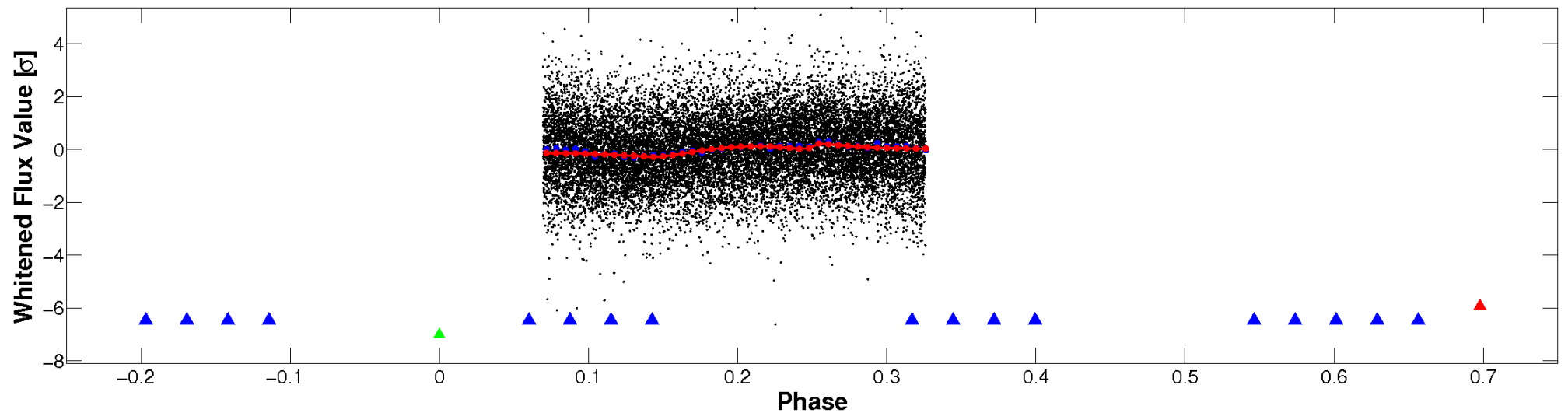


Non-Whitened Vs. Whitened Light Curve

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

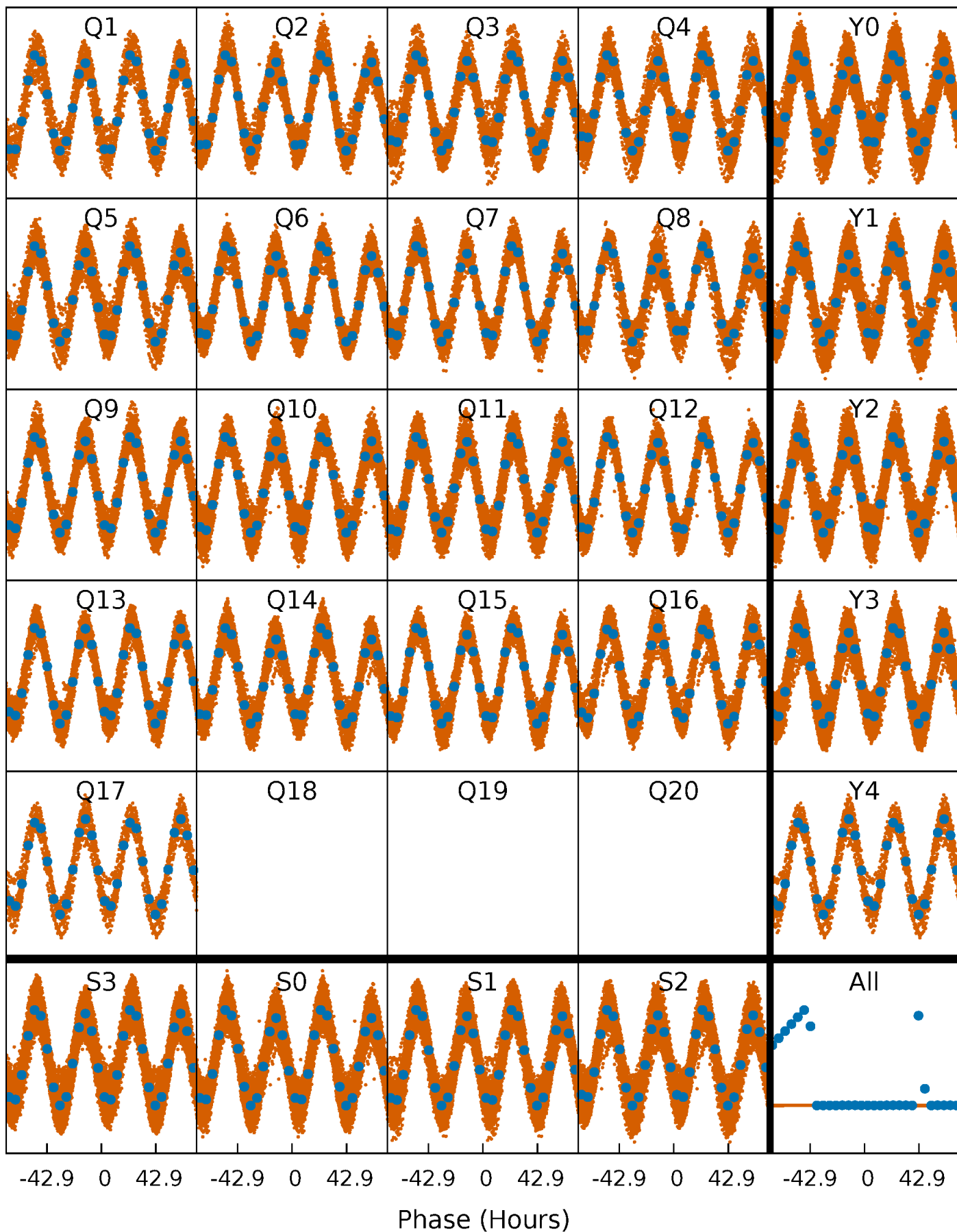


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



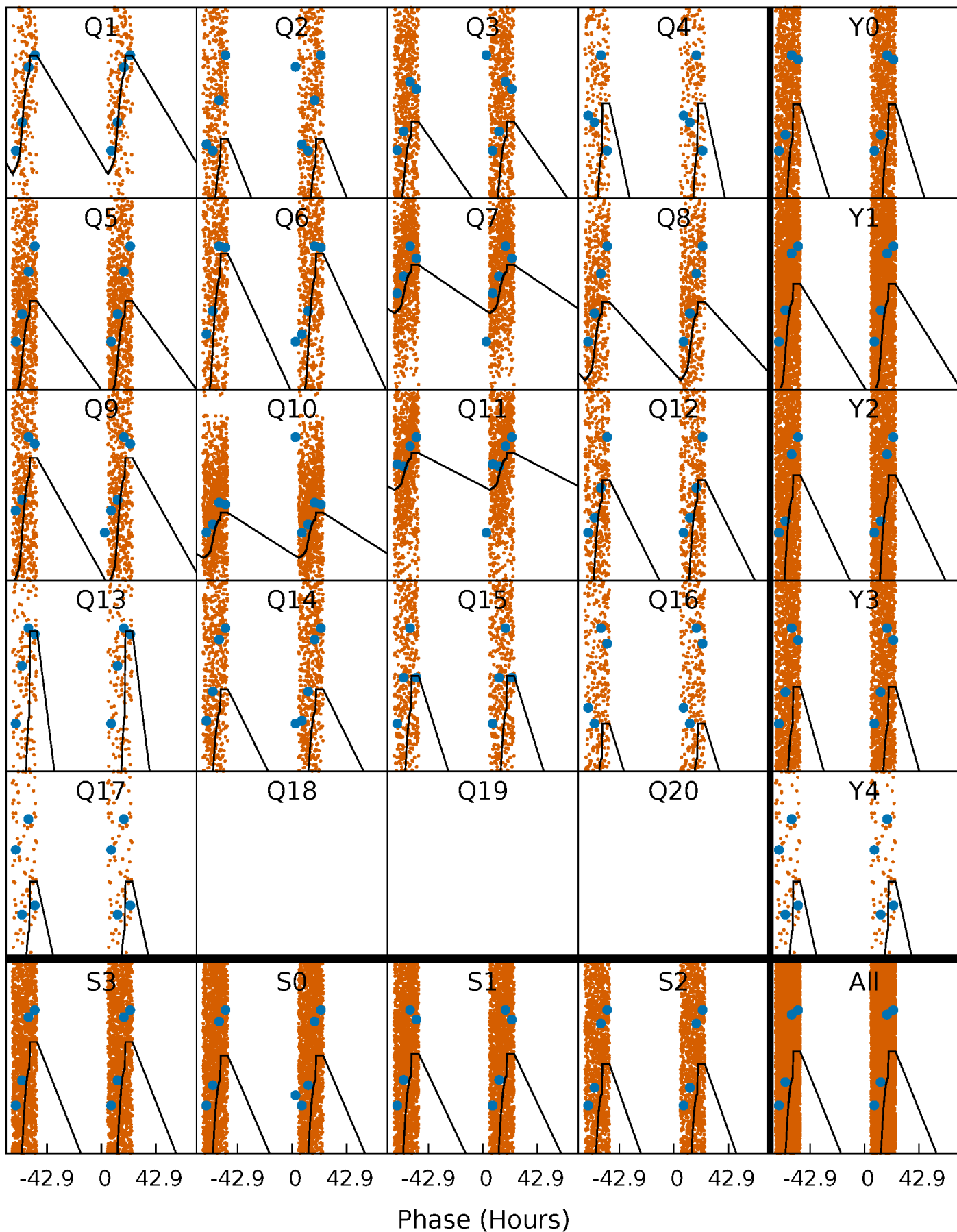
PDC Quarter-Phased Transit Curves

TCE 005305128-03 P= 3.131673 Days $T_0=131.754919$ (BKJD)



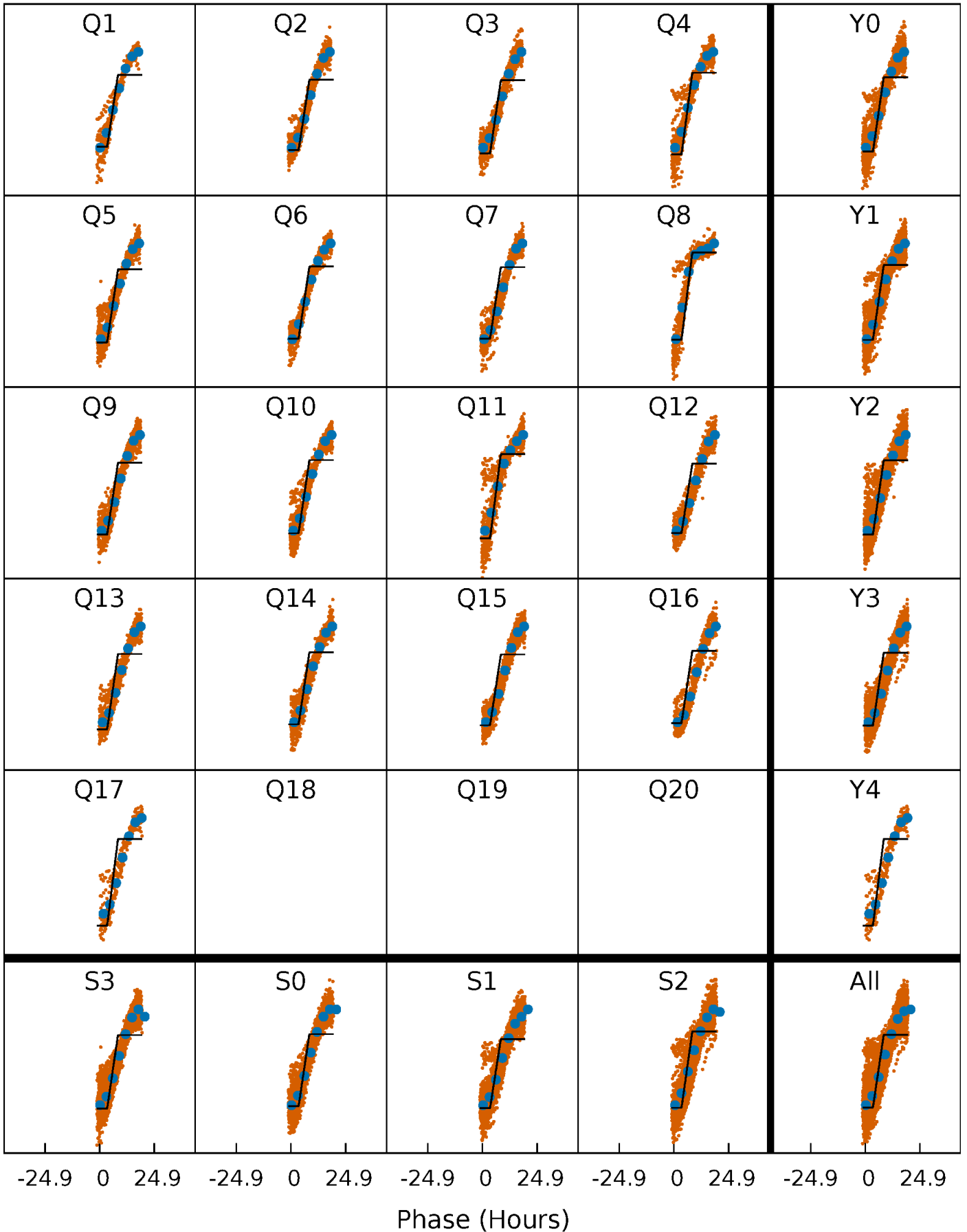
DV Quarter-Phased Transit Curves

TCE 005305128-03 P= 3.131673 Days $T_0=131.754919$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

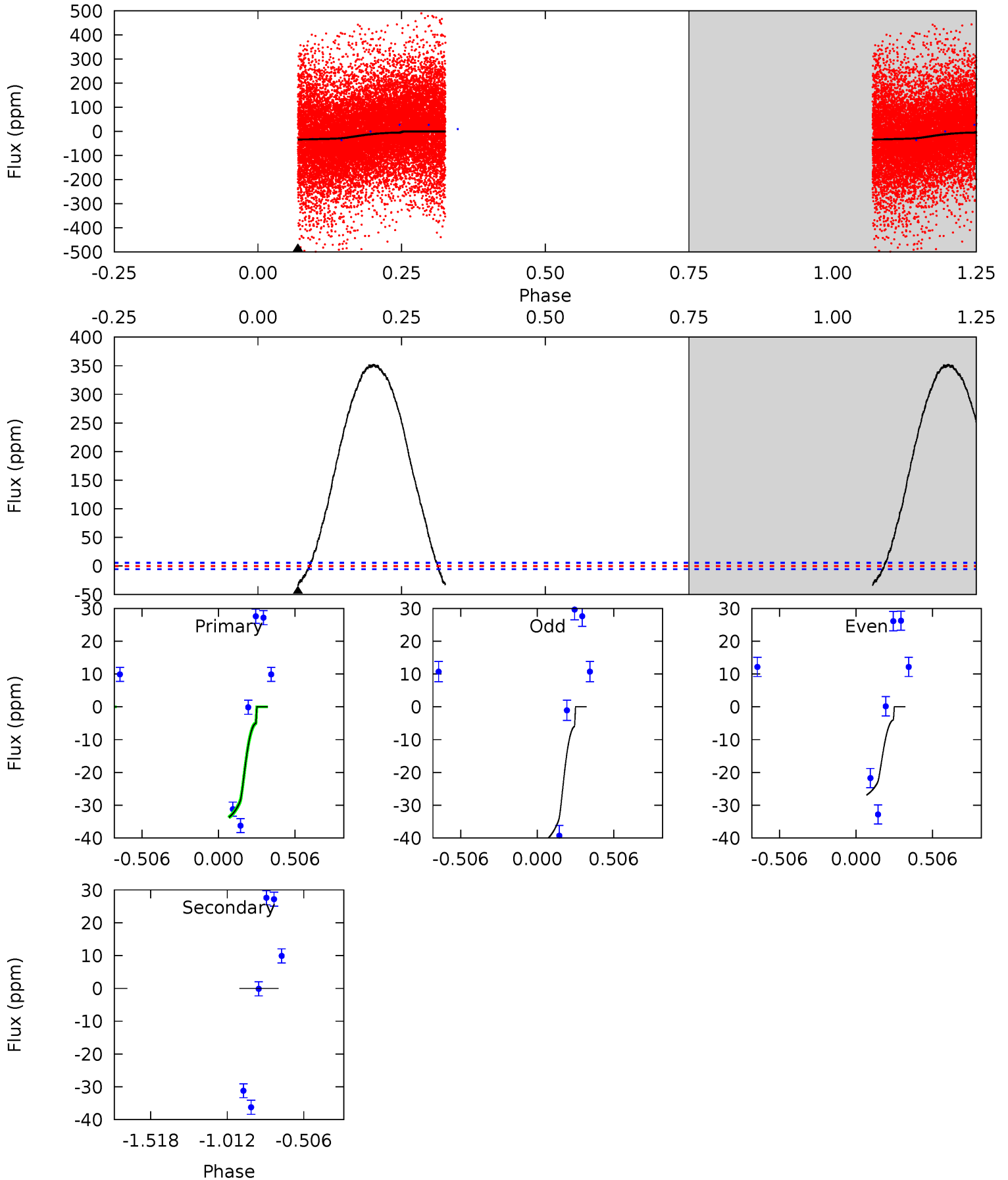
TCE 005305128-03 P= 3.131531 Days $T_0=132.025640$ (BKJD)



DV Model-Shift Uniqueness Test

005305128-03, P = 3.131673 Days, E = 131.754919 Days

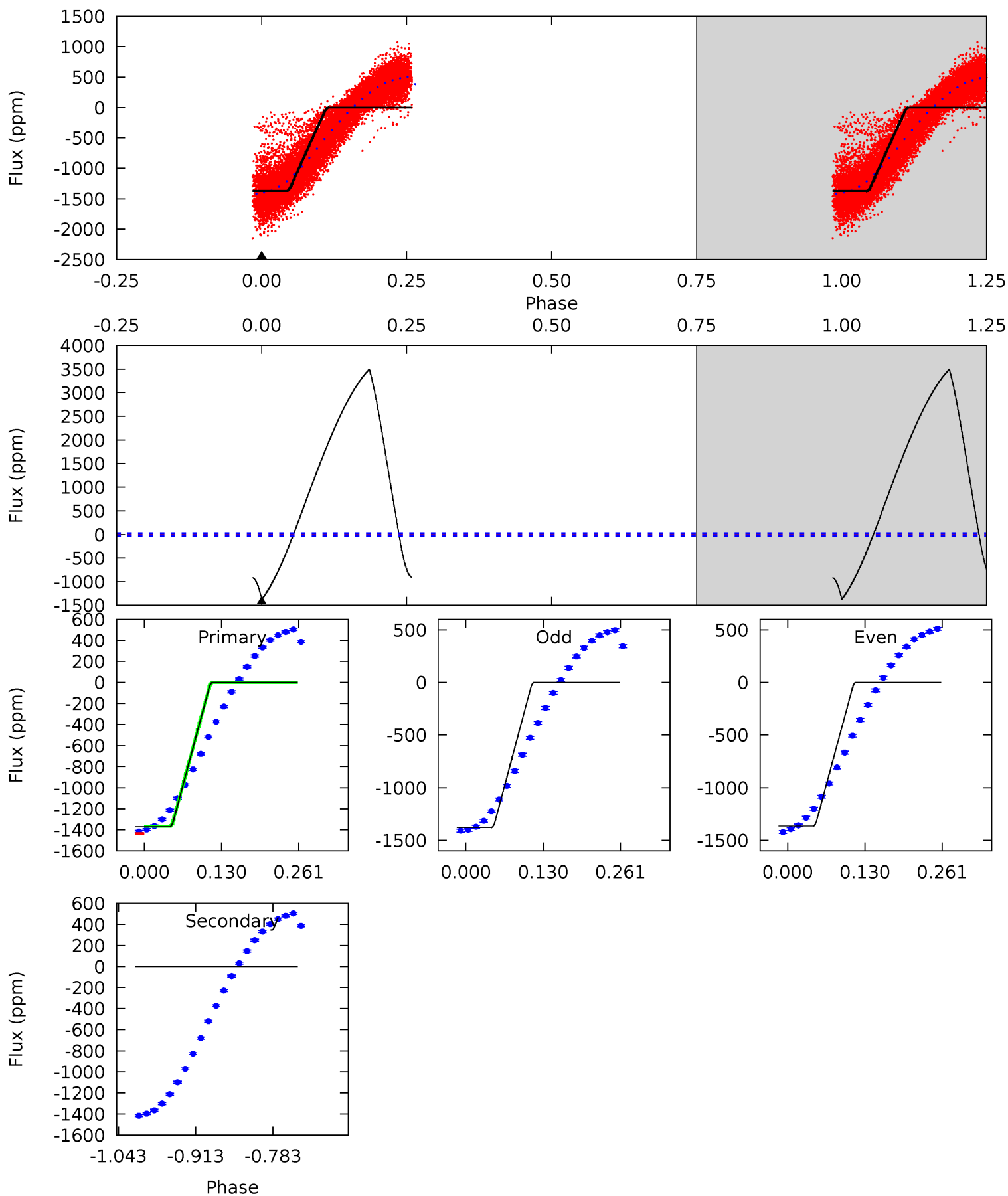
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	0	0	0	4.21	0.67	16.8	25.3	25.3	0	0	5.00	0.50	0.91	0



Alt Model-Shift Uniqueness Test

005305128-03, P = 3.131531 Days, E = 128.894109 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
235.8	0	0	0	4.51	1.51	92.8	235.8	235.8	0	0	1.14	0.98	0.72	5.14



Stellar Parameters For KIC 005305128

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6214^{+204}_{-223}	$4.043^{+0.252}_{-0.126}$	$-0.060^{+0.300}_{-0.250}$	$1.712^{+0.385}_{-0.471}$	$1.179^{+0.185}_{-0.167}$	$0.331^{+0.472}_{-0.126}$
	$+3\%/-4\%$	$+6\%/-3\%$	$+500\%/-417\%$	$+22\%/-28\%$	$+16\%/-14\%$	$+143\%/-38\%$
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 005305128-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1	$2.26^{+0.33}_{-0.35}$	2354^{+160}_{-185}	-2711^{+849}_{-268}	$-0.001^{+0.289}_{-0.302}$
Alt.	0 ± 6	$6.97^{+0.90}_{-1.05}$	2356^{+159}_{-193}	-2710^{+242}_{-168}	$0.005^{+0.130}_{-0.148}$

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

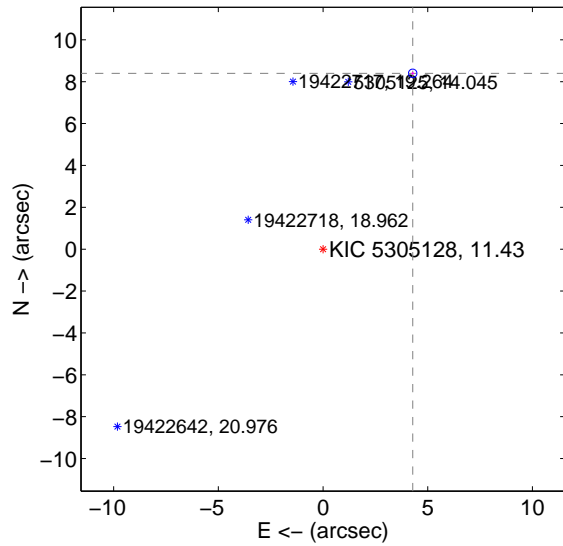
Supplemental centroid analysis for 005305128-03. **Kepler magnitude: 11.43.** Transit SNR 18.51

There are 0 quarters with good PRF difference image offsets

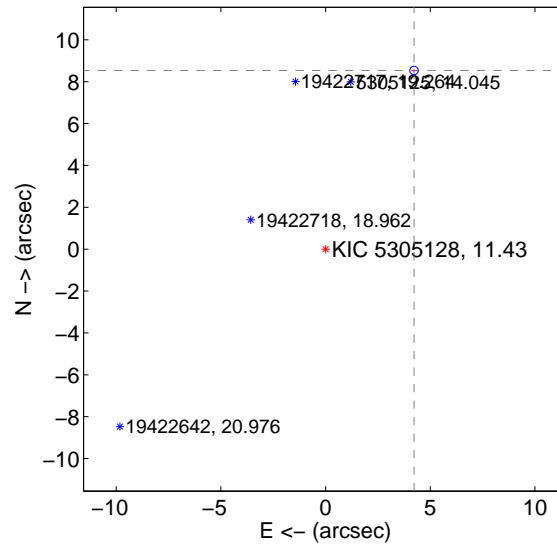
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.427 \pm 0.067	140.34	-4.282 \pm 0.067	8.399 \pm 0.067
PRF-fit source offset from KIC position	9.522 \pm 0.067	142.19	-4.224 \pm 0.067	8.534 \pm 0.067
photometric centroid source offset	0.91 \pm 0.58	1.57	-0.90 \pm 0.58	-0.14 \pm 0.16

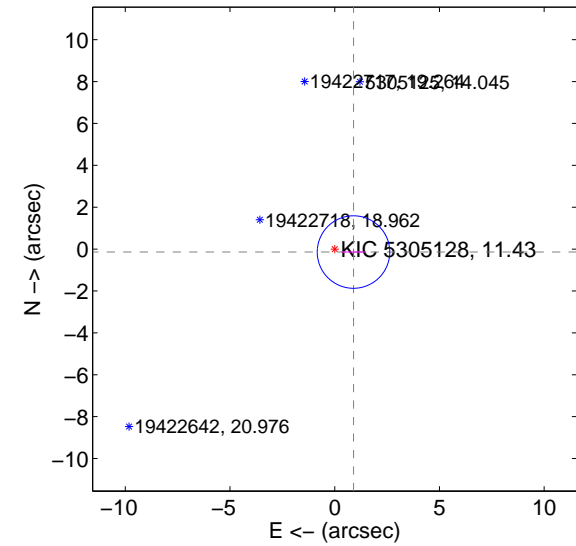
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

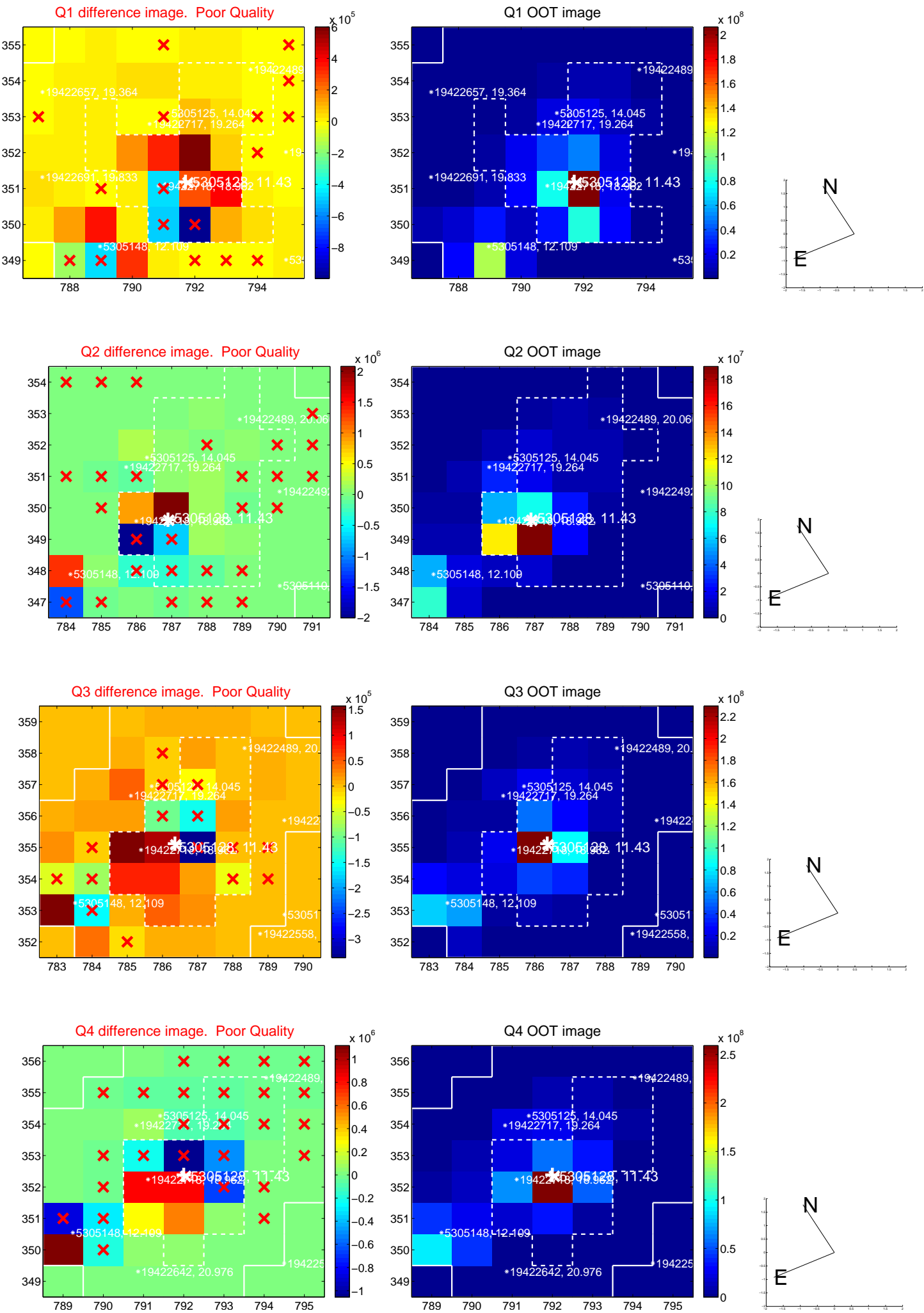


offset from photometric centroids

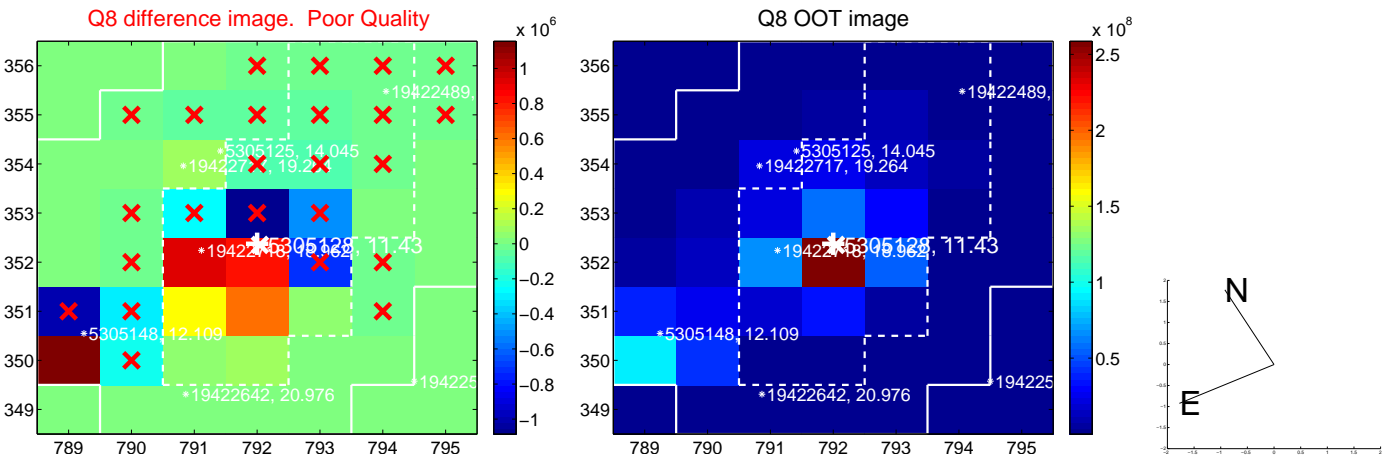
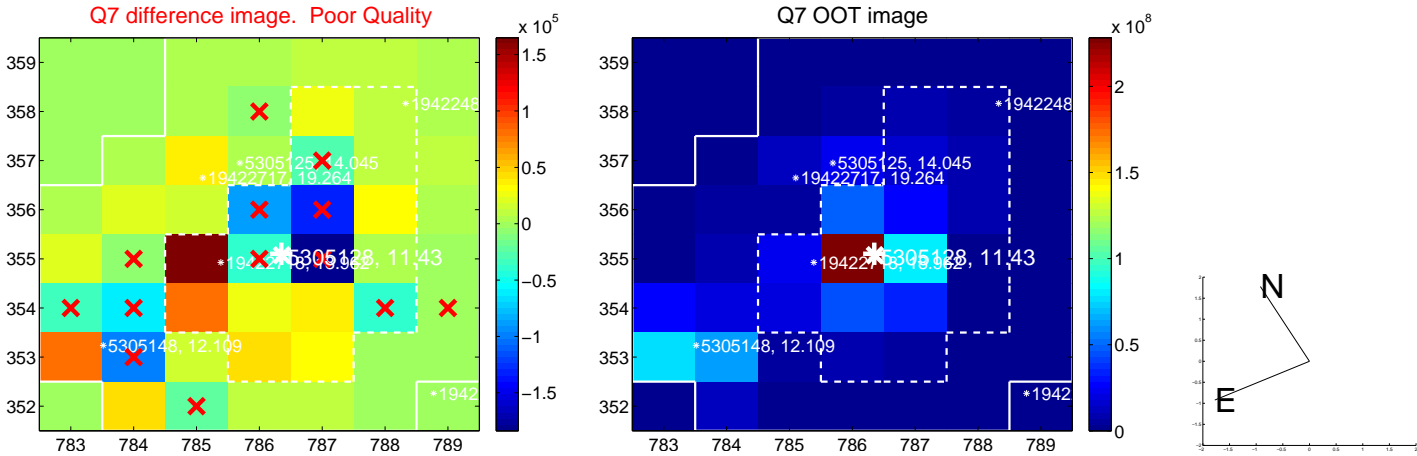
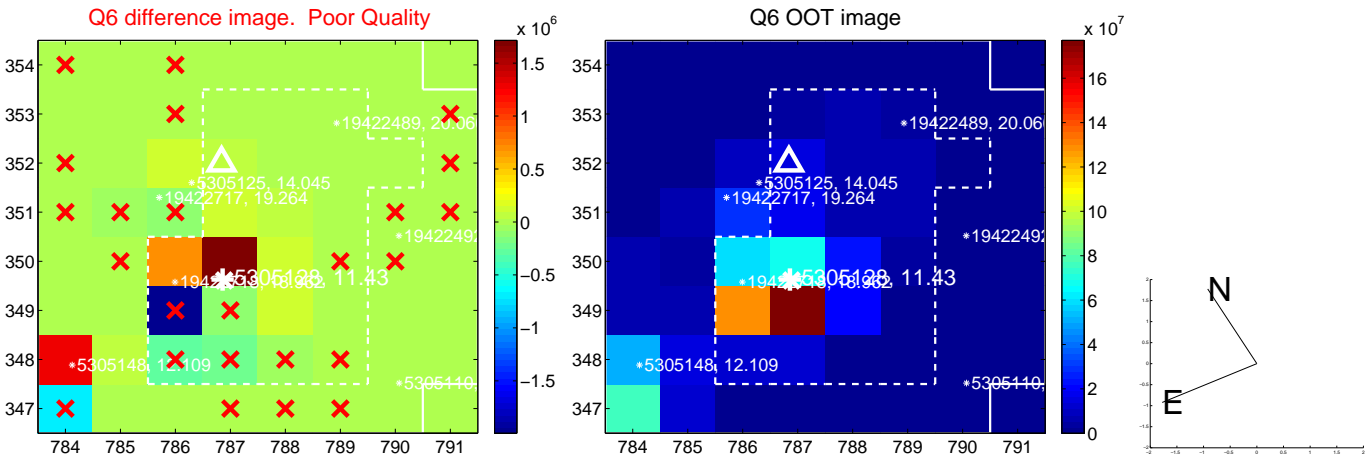
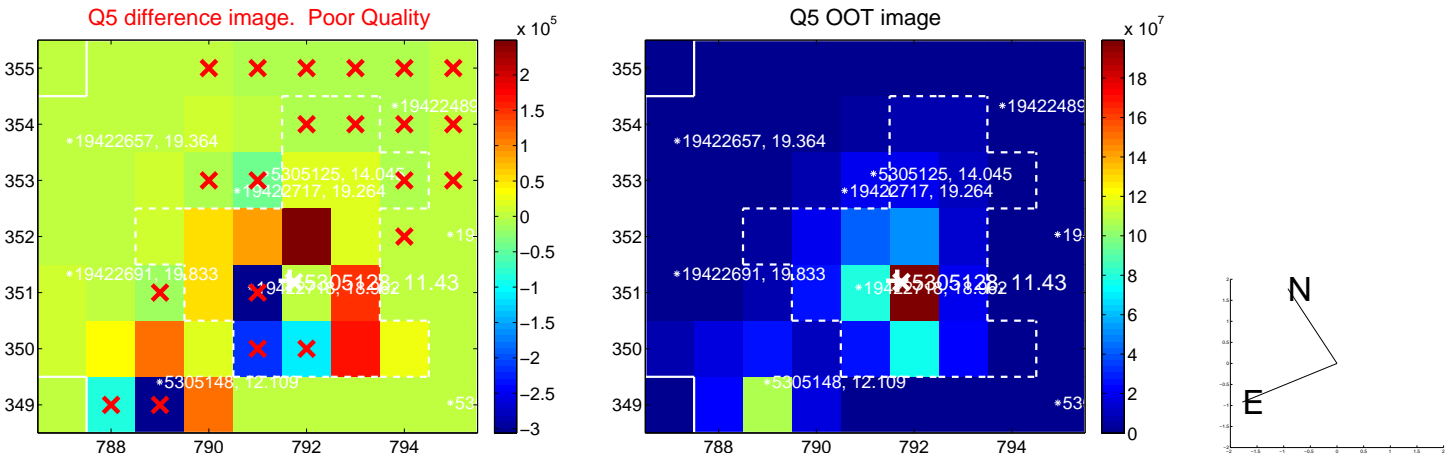


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

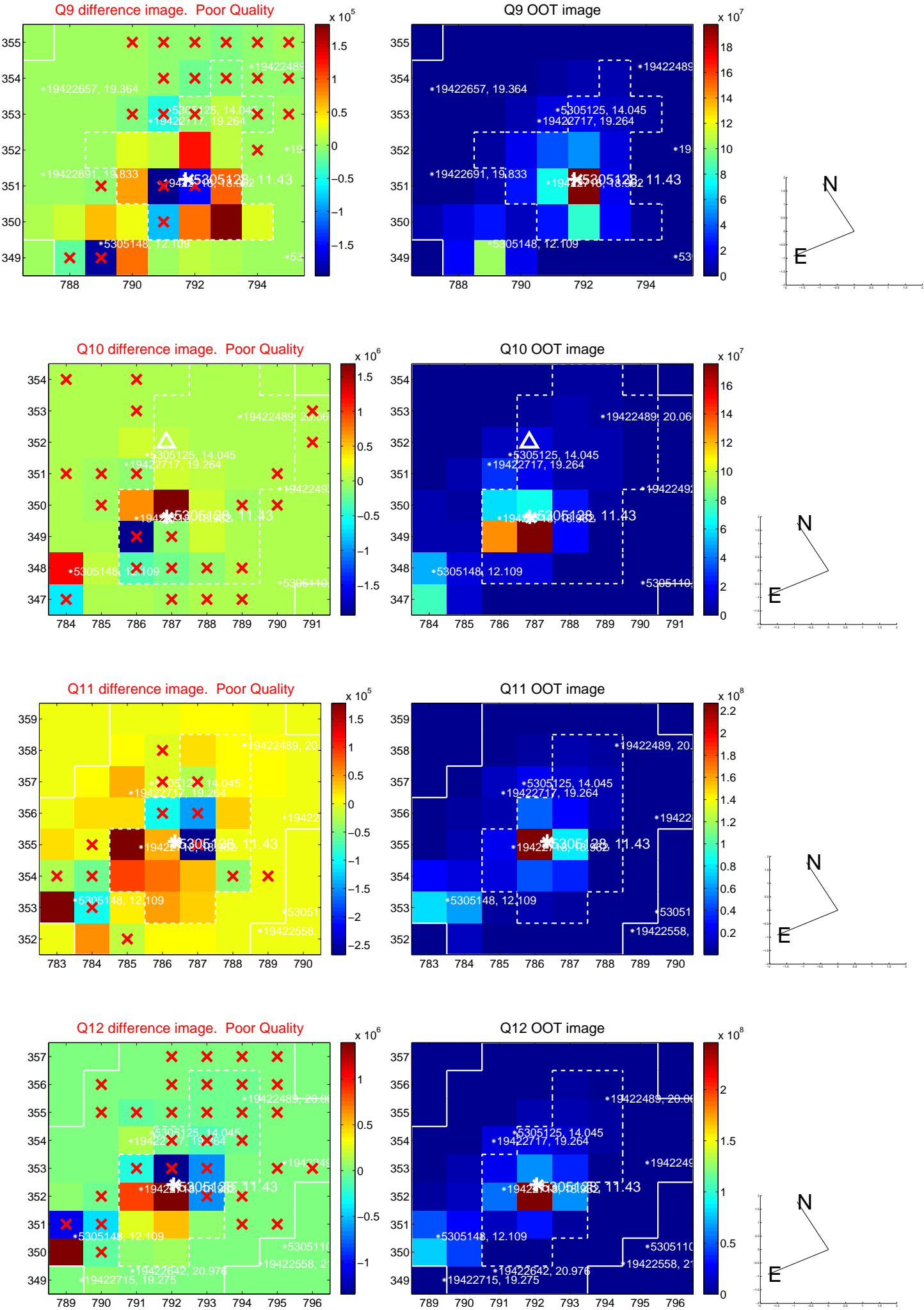
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



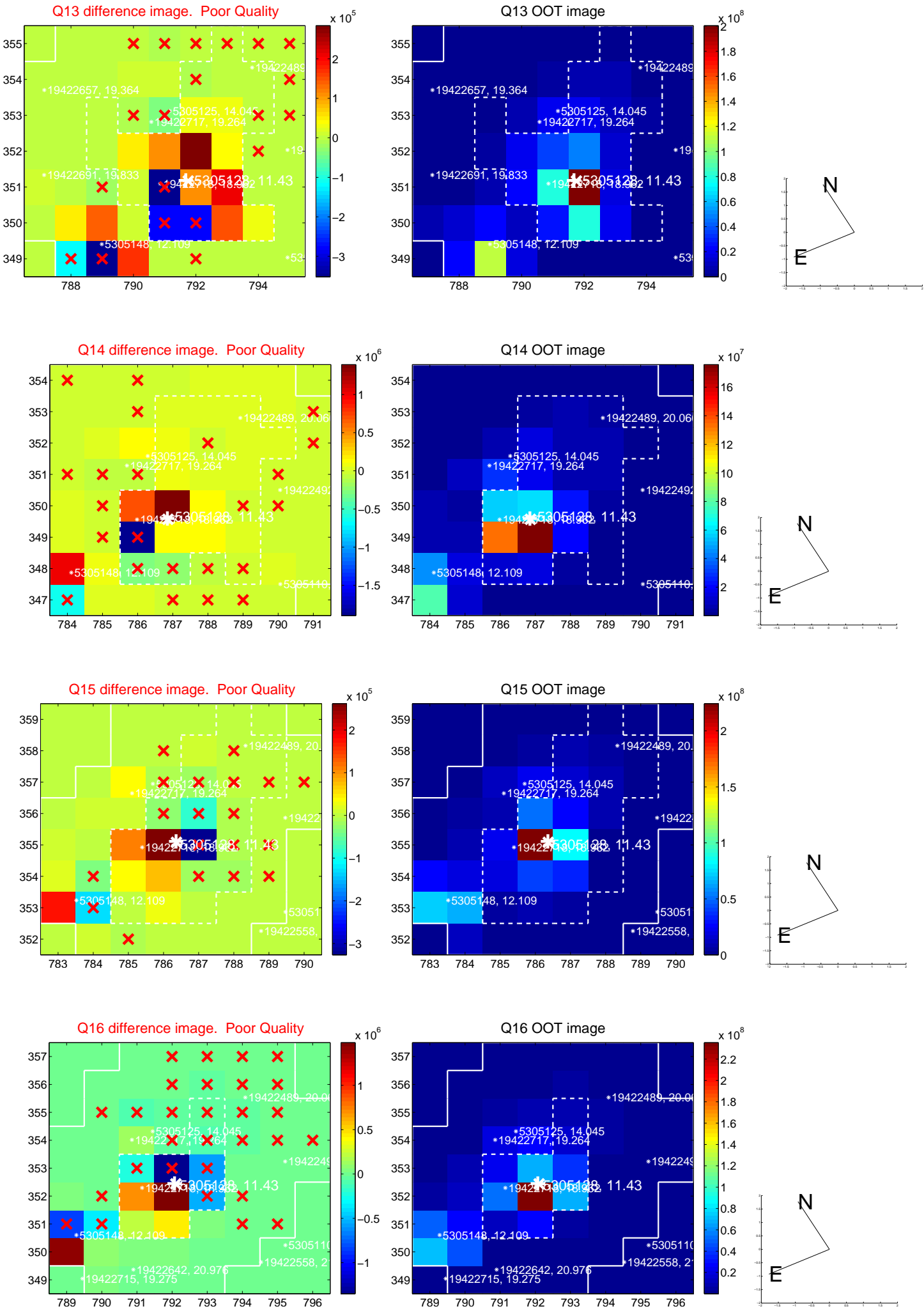
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



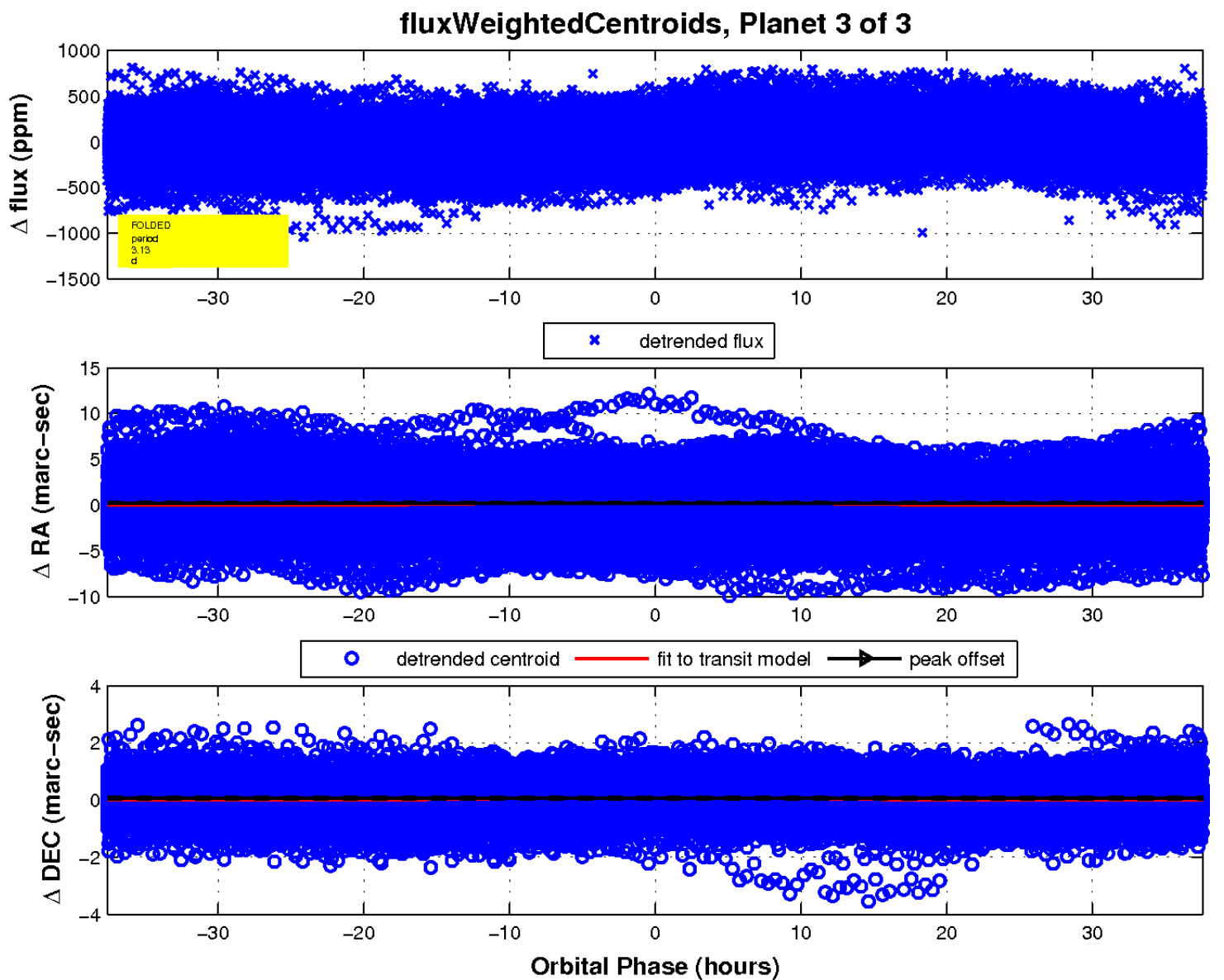
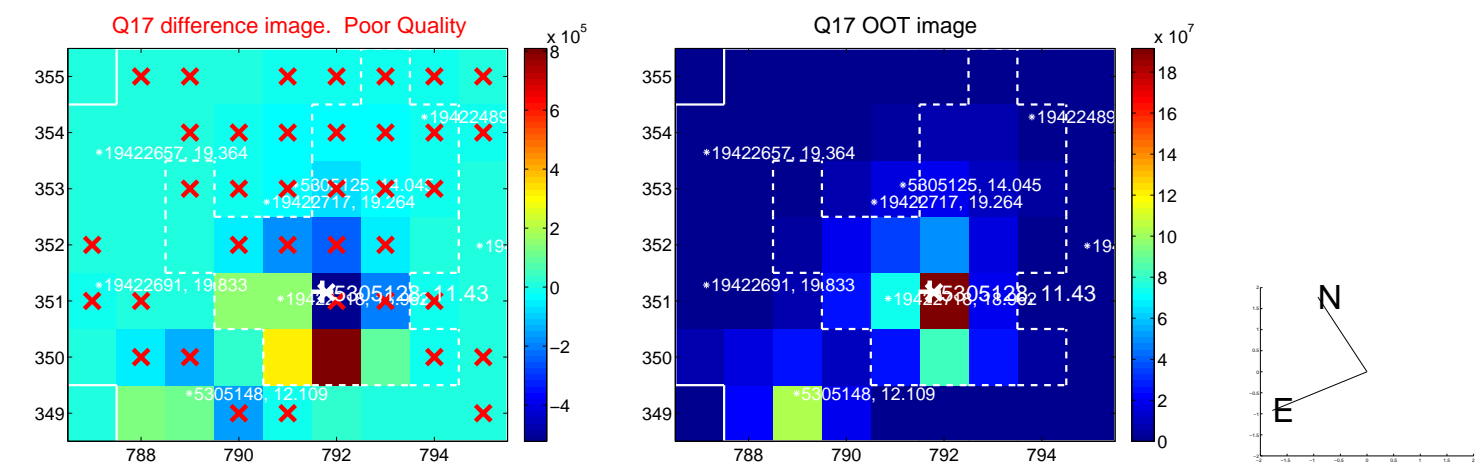
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

