

KIC 010789864

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})
010789864-01	OBS	No	2.818063	132.670314	8.8	12.434	12.7	4.4	3.14	9063	0.95	21295.00
010789864-02	OBS	No	244.473923	263.348323	575.9	15.000	21.4	-1.0	3.14	9063	7.69	55.45
010789864-03	OBS	No	2.820065	132.821591	23.6	25.492	11.8	9.7	3.14	9063	1.63	21274.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010789864-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010789864-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010789864-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV

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

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

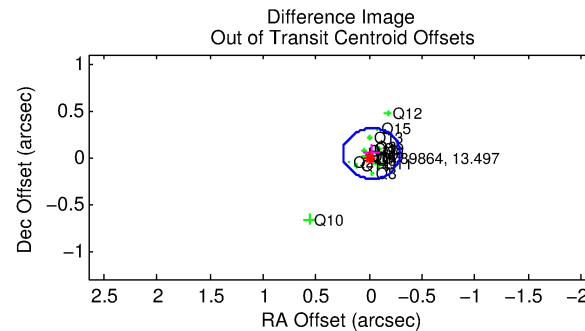
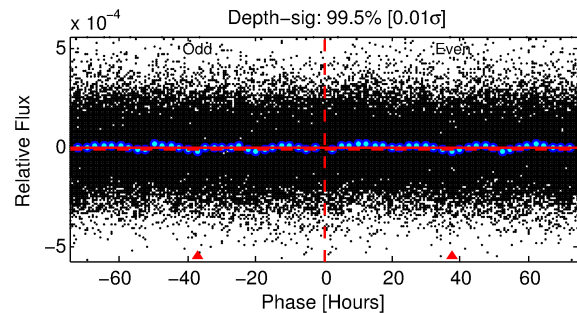
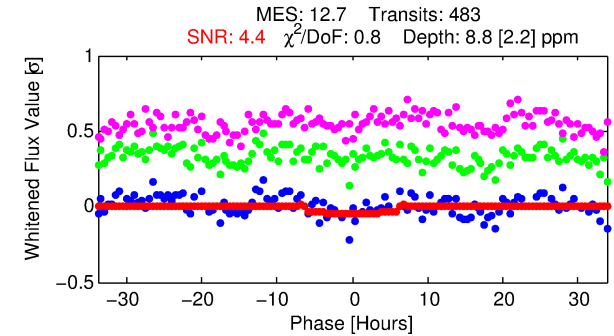
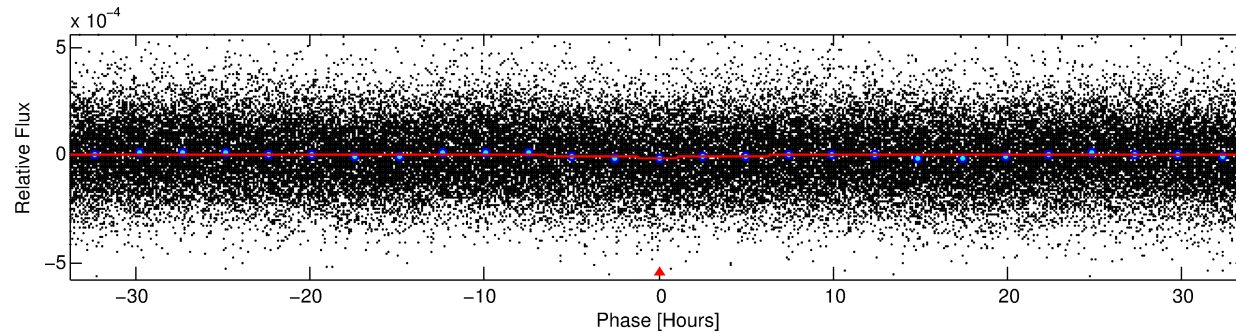
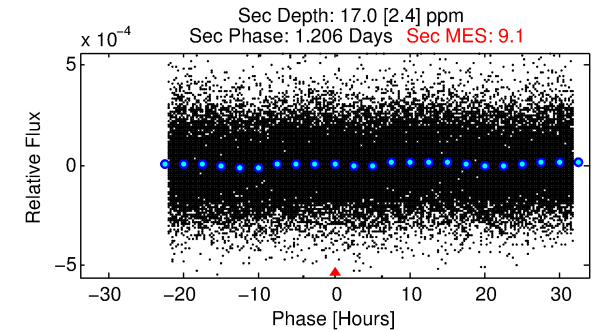
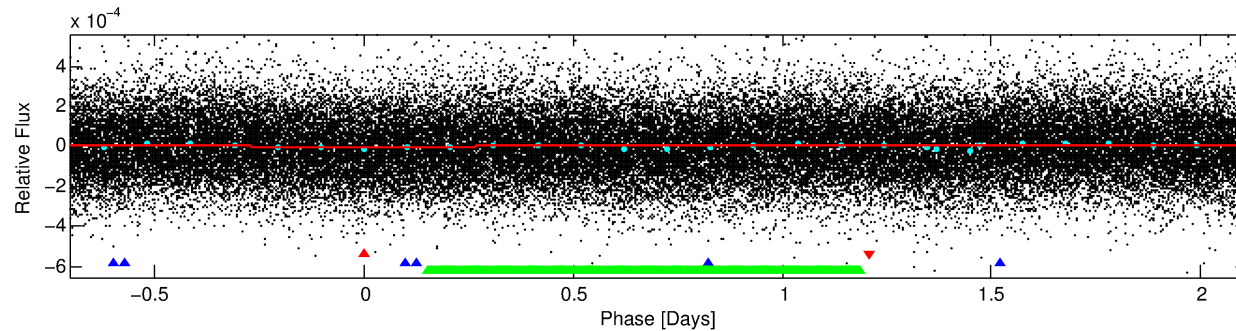
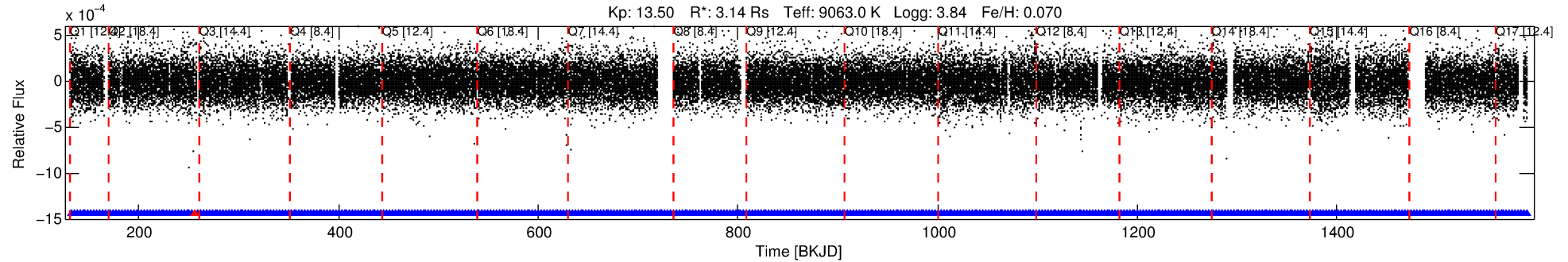
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010789864-01

No Significant Match Found

DV One-Page Summary

KIC: 10789864 Candidate: 1 of 3 Period: 2.818 d



DV Fit Results:

Period = 2.81806 [0.00010] d
Epoch = 132.6703 [0.0198] BKJD
Rp/R* = 0.0028 [0.0054]
a/R* = 1.83 [16.50]
b = 0.09 [140.68]
Seff = 21295.00 [14219.49]
Teff = 3080 [514] K
Rp = 0.95 [1.92] Re
a = 0.0530 [0.0218] AU
Ag = 29.16 [116.40] [0.24σ]
Teffp = 11067 [10918] K [0.73σ]

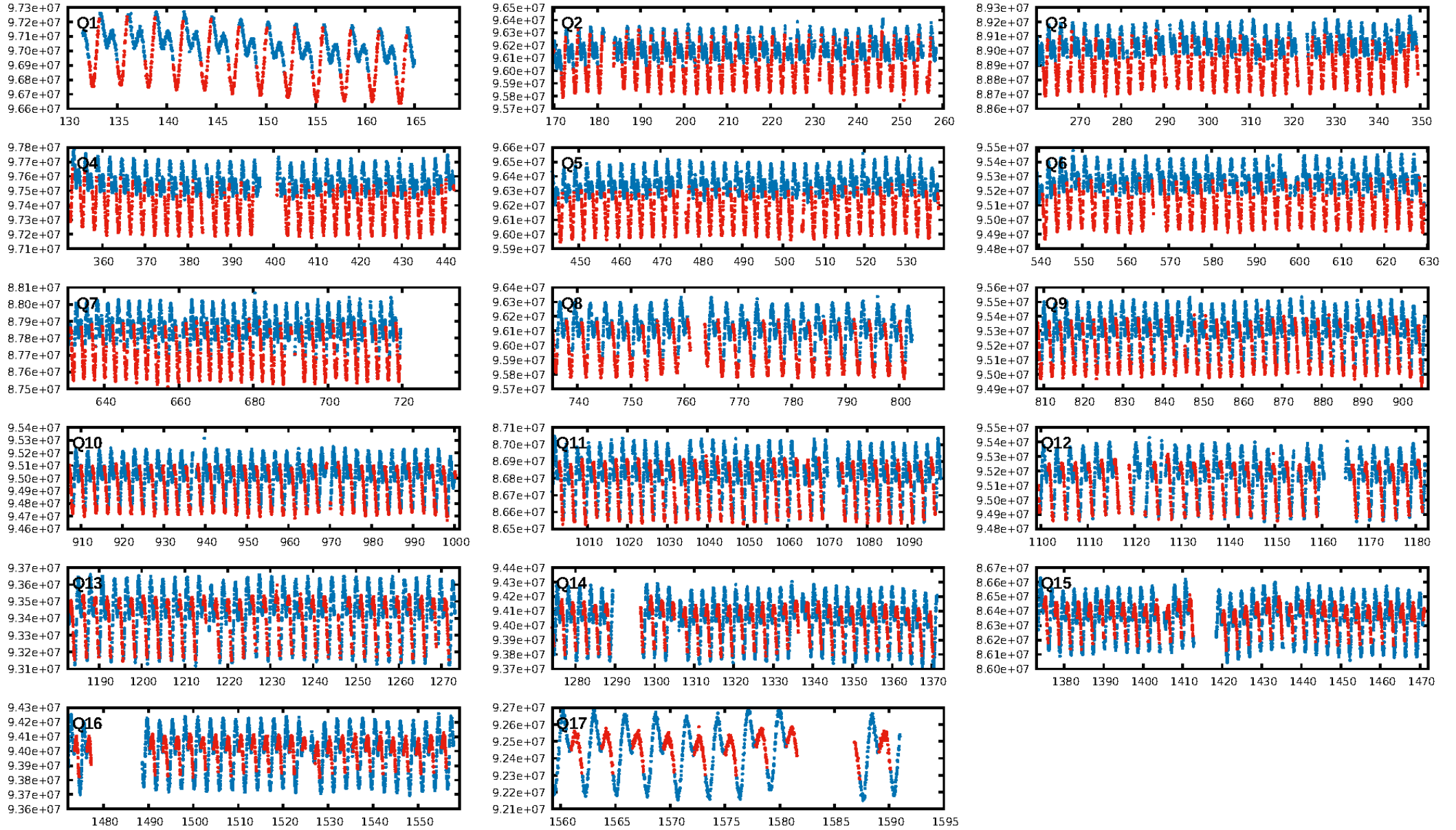
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [460/461]
GhostDiagnostic-chr: 1.565
Centroid-sig: 59.1%
Centroid-so: 1.676 arcsec [0.68σ]
OotOffset-rm: 0.046 arcsec [0.52σ]
KicOffset-rm: 0.084 arcsec [0.97σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 0.00 [0/17]

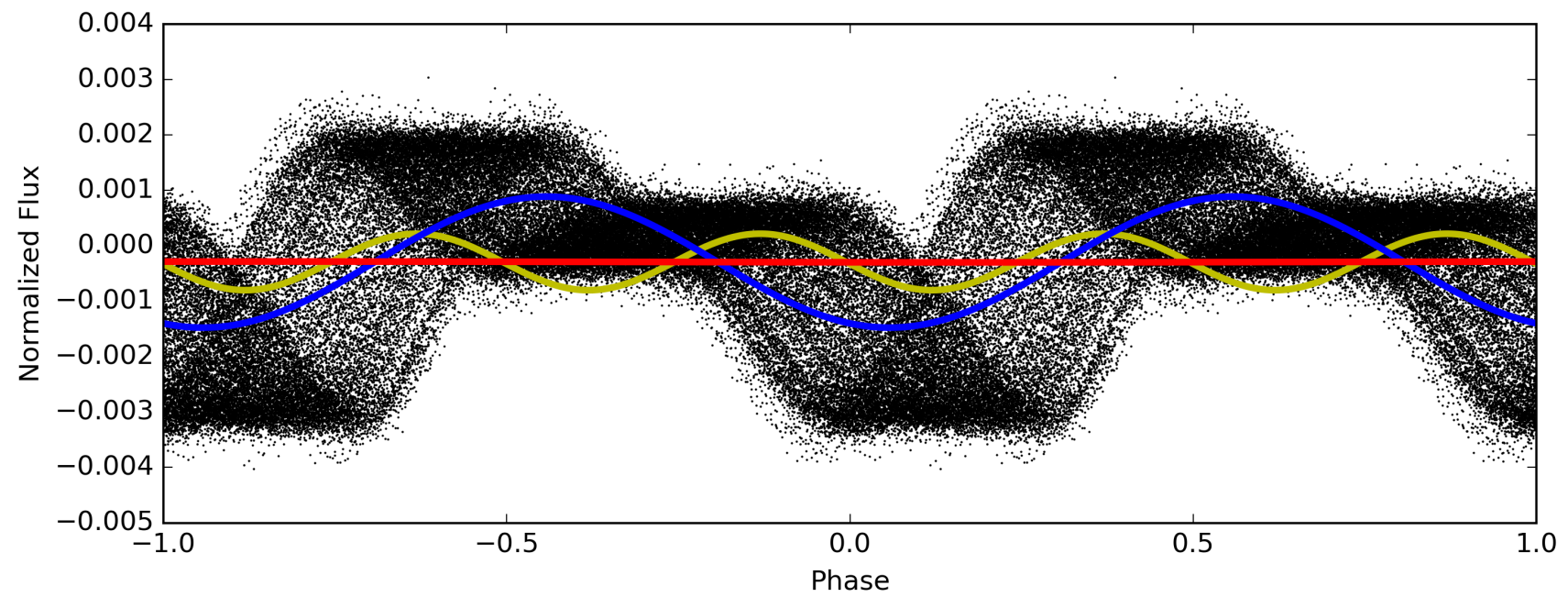
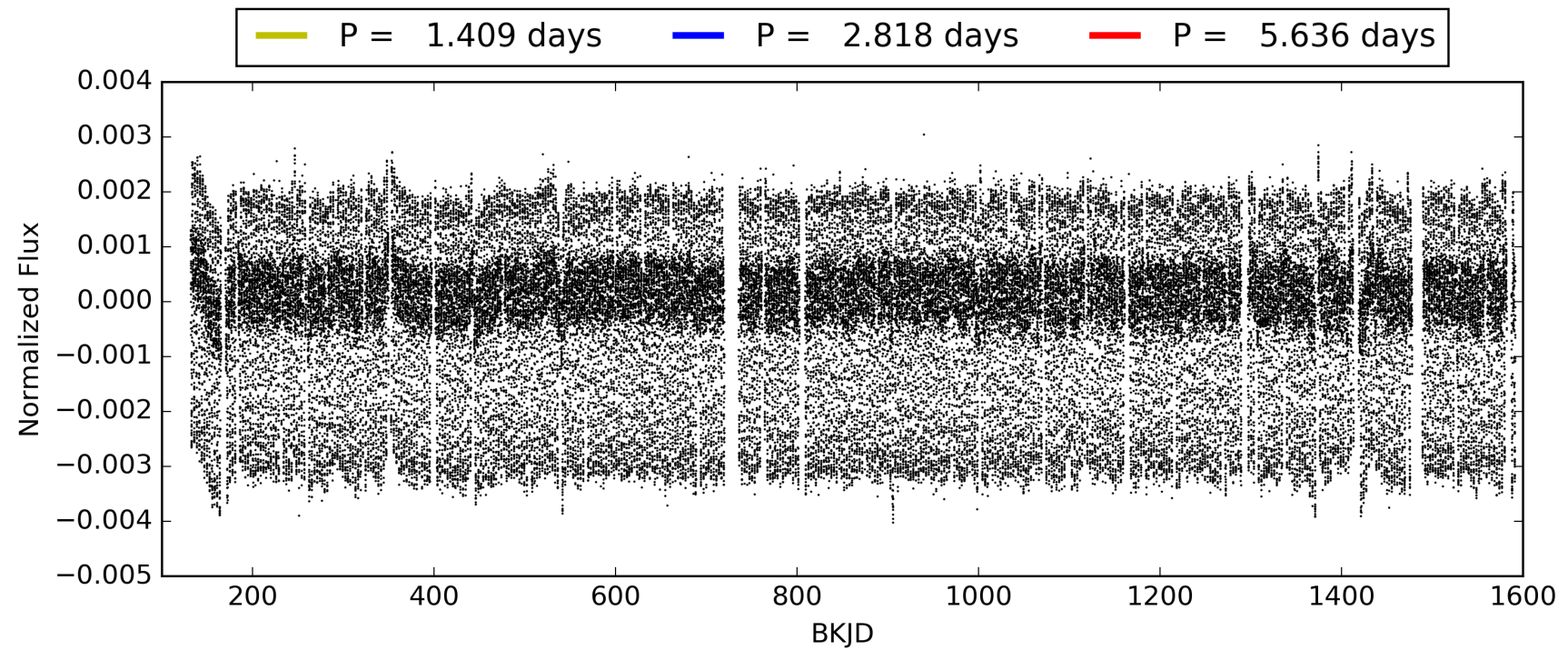
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:29:33 Z

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

TCE 010789864-01, PDC Light Curves

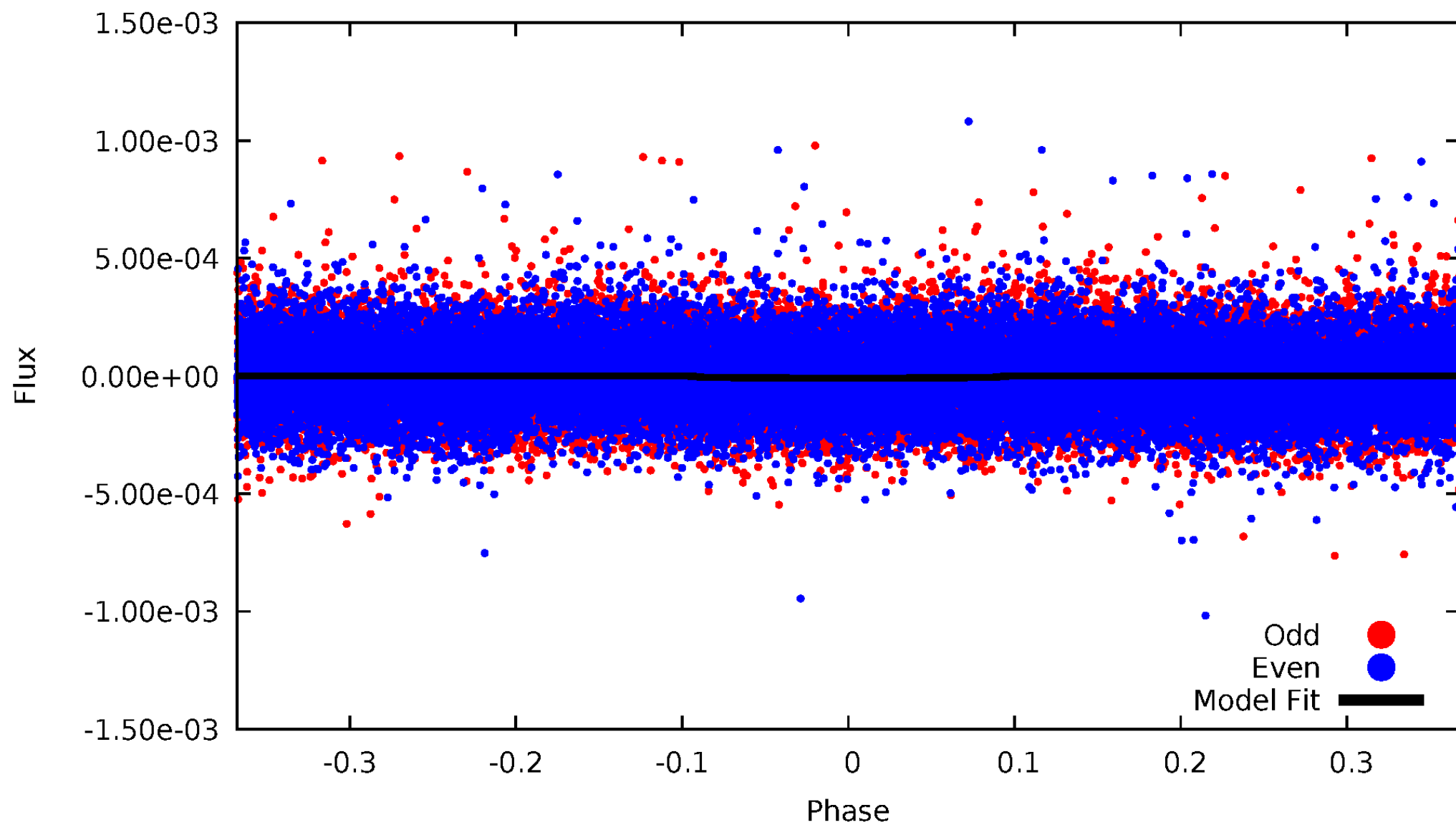


TCE 010789864-01



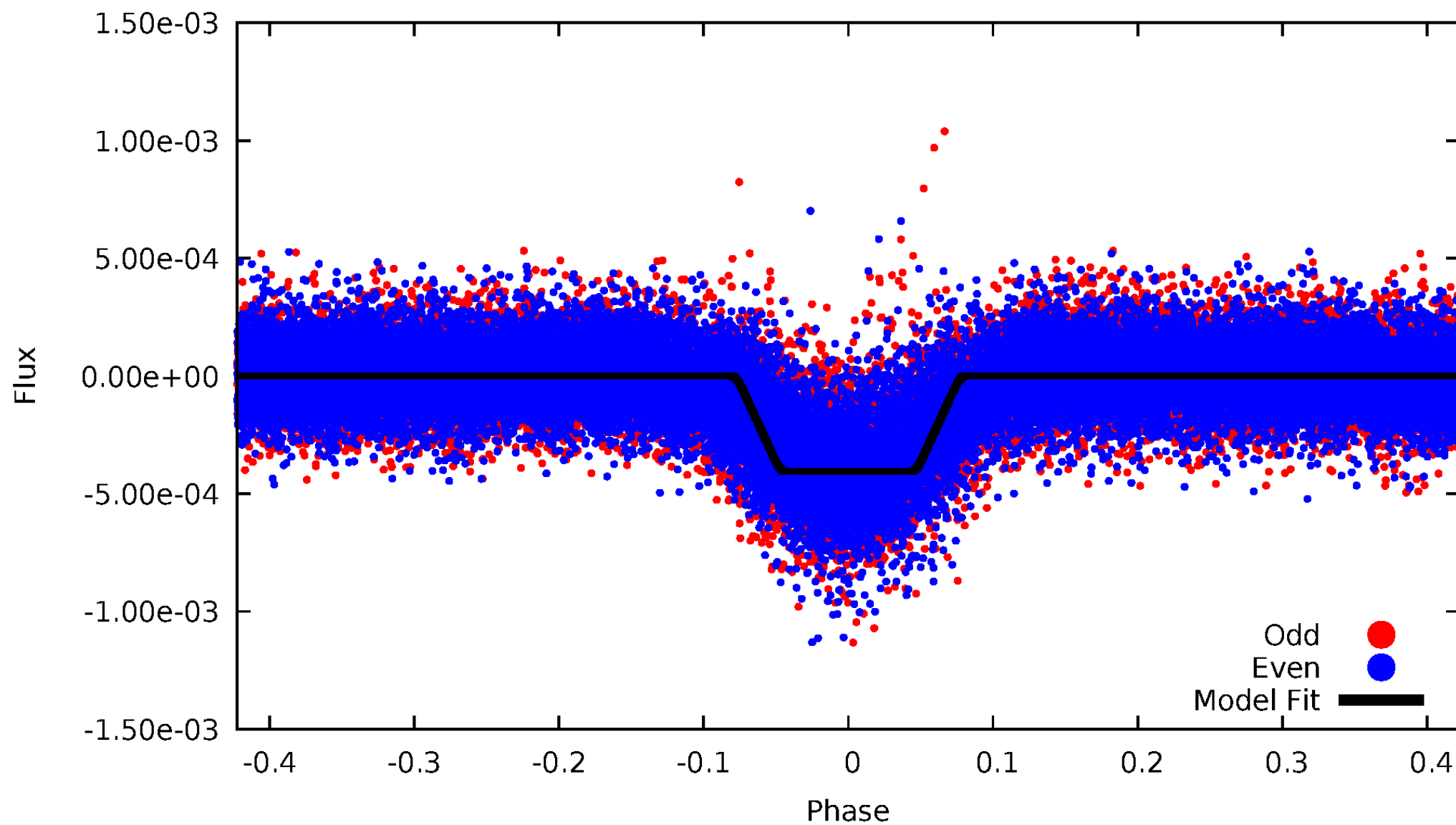
DV Odd/Even

TCE 010789864-01



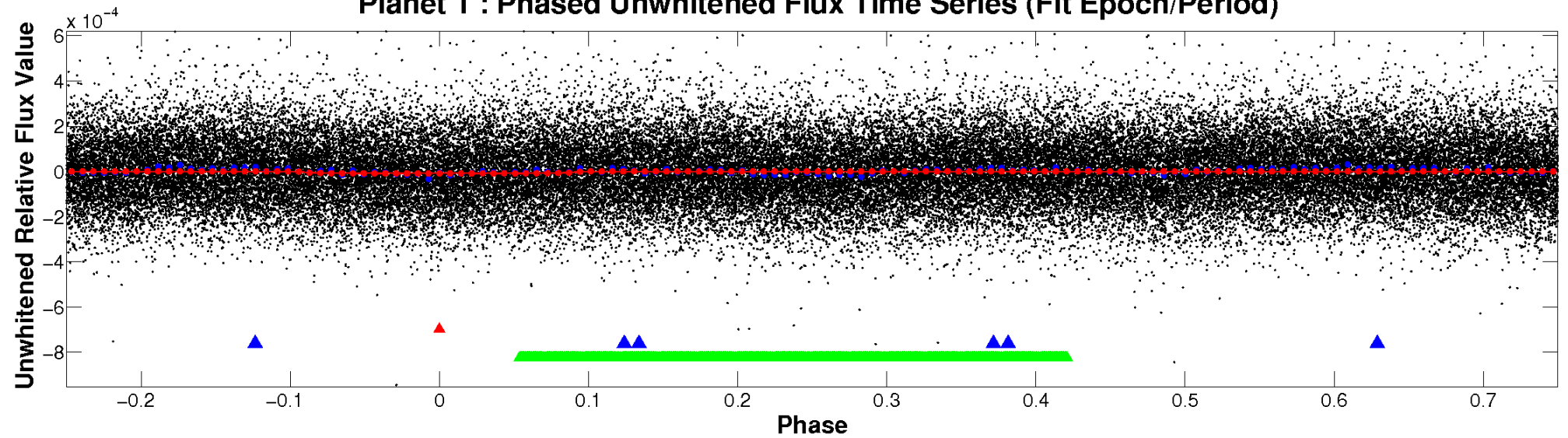
ALT Odd/Even

TCE 010789864-01

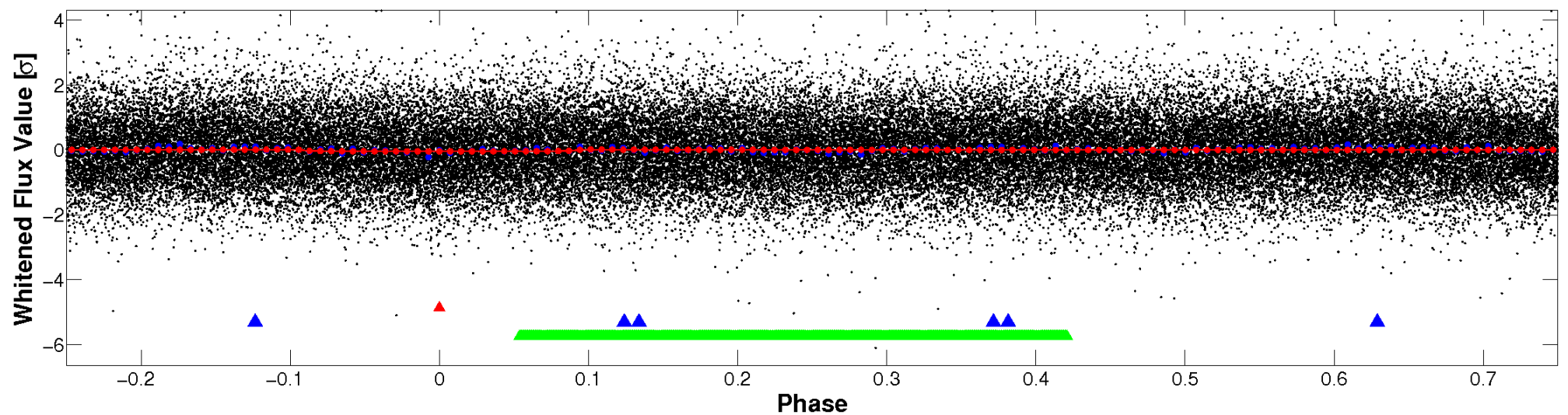


Non-Whitened Vs. Whitened Light Curve

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

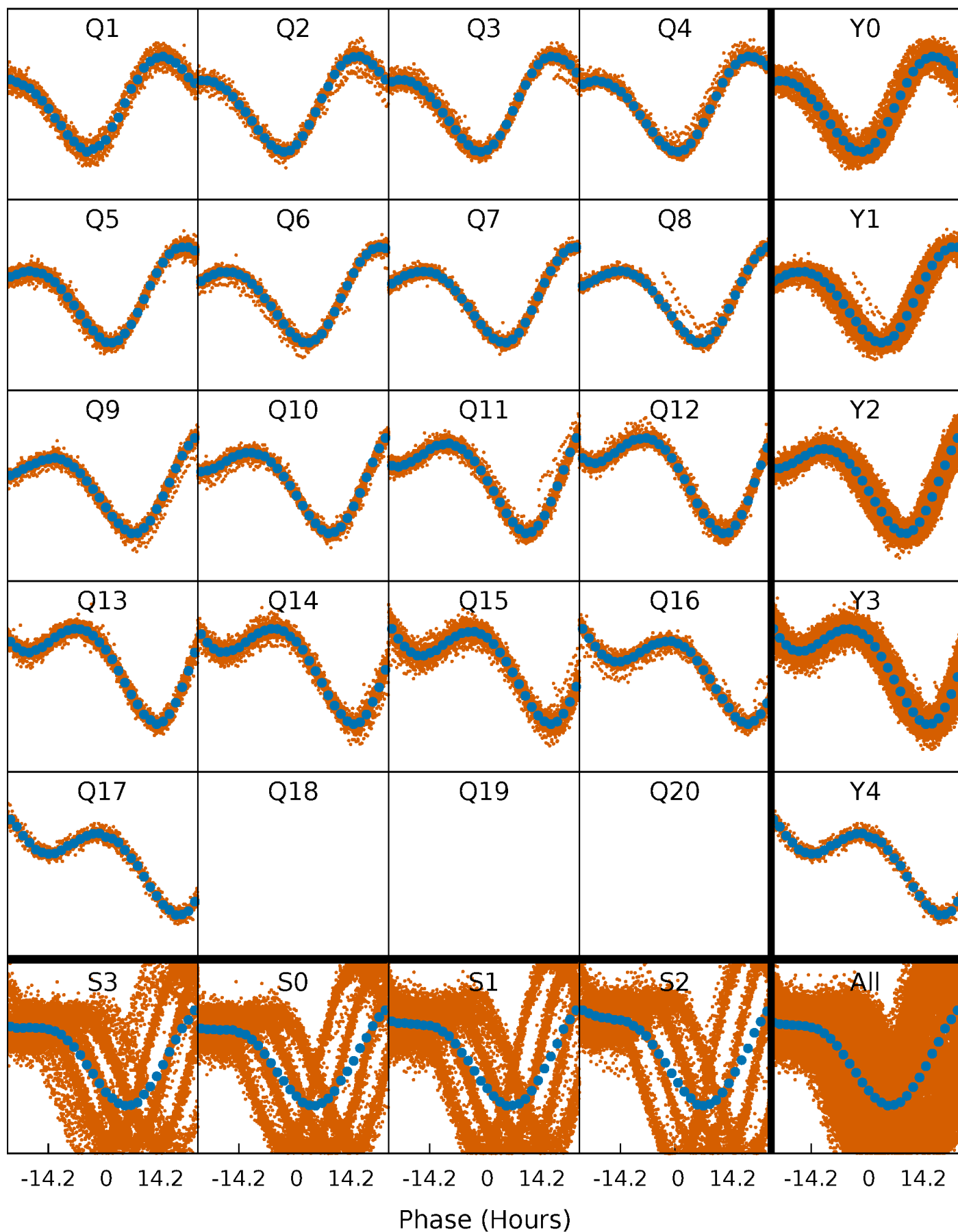


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



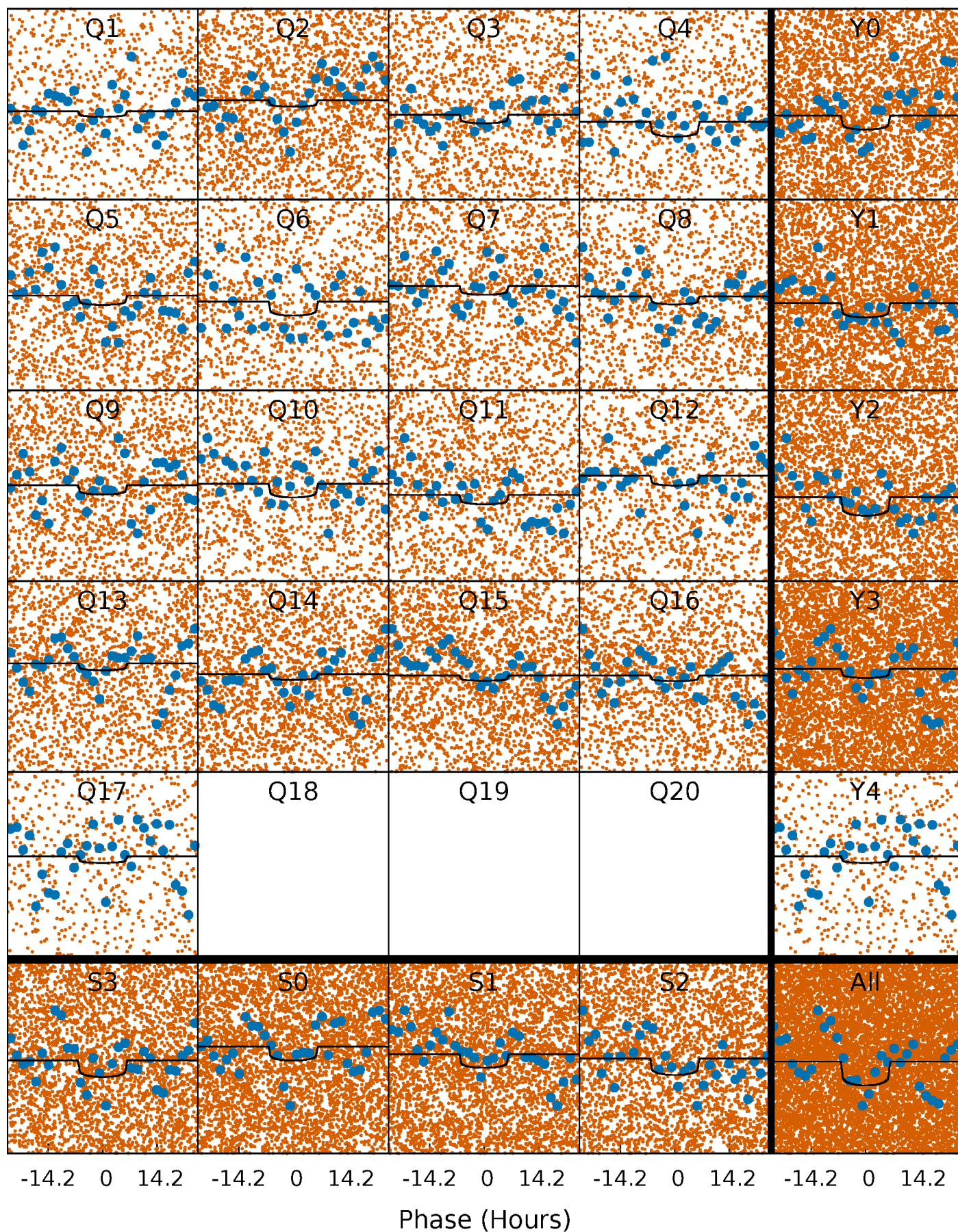
PDC Quarter-Phased Transit Curves

TCE 010789864-01 P= 2.818063 Days $T_0=132.670314$ (BKJD)



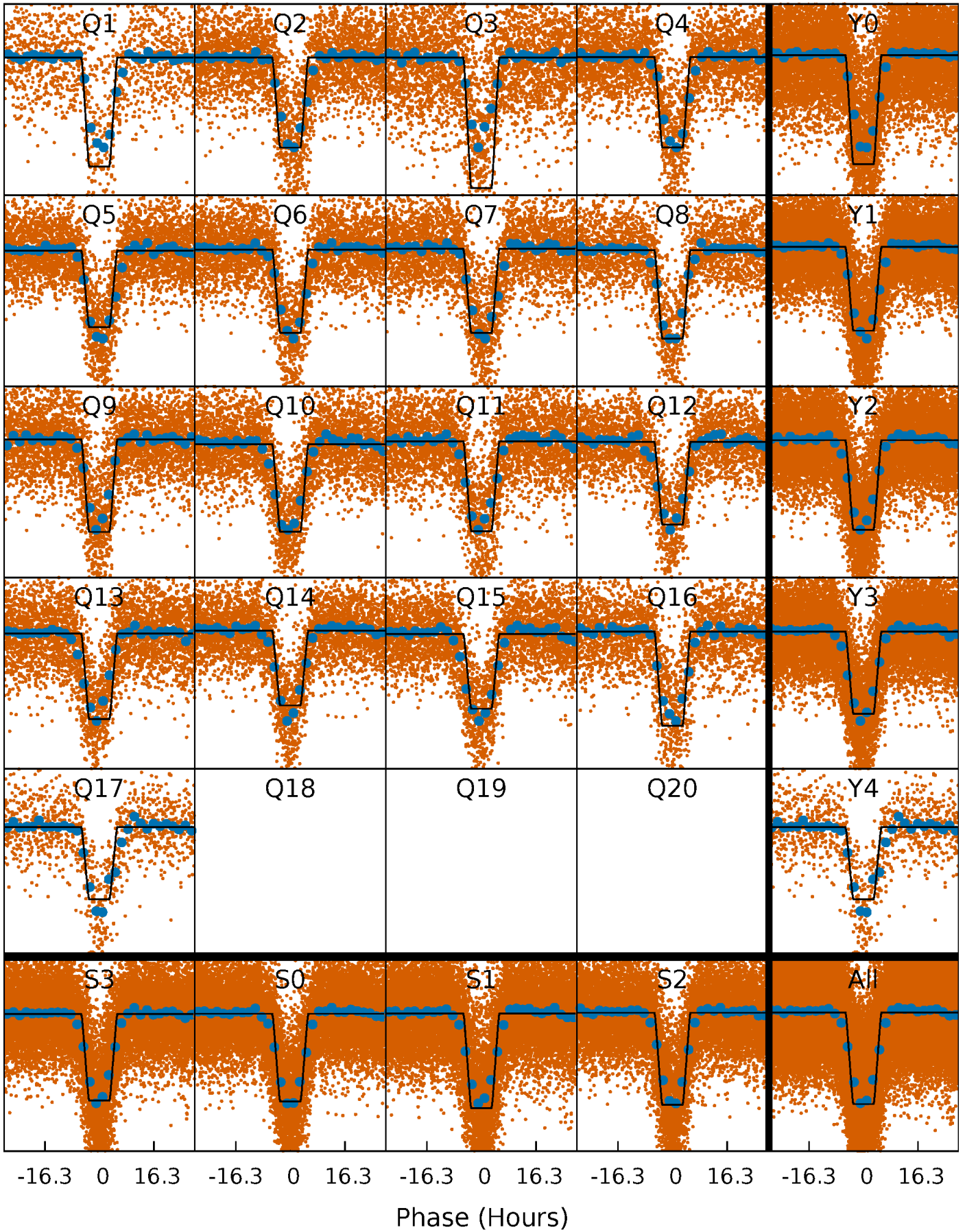
DV Quarter-Phased Transit Curves

TCE 010789864-01 P= 2.818063 Days $T_0=132.670314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

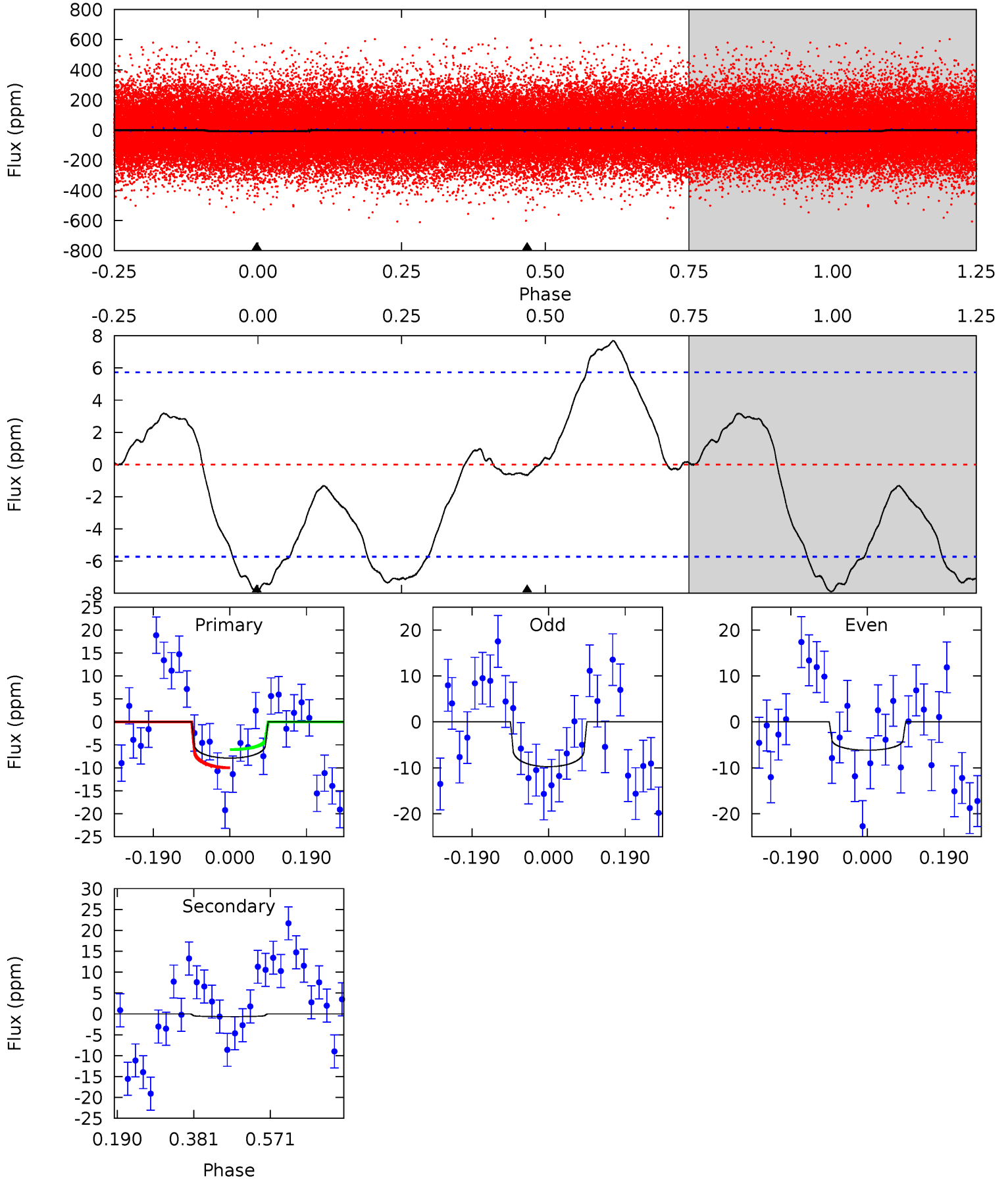
TCE 010789864-01 P= 2.820061 Days $T_0=132.564321$ (BKJD)



DV Model-Shift Uniqueness Test

010789864-01, P = 2.818063 Days, E = 129.852251 Days

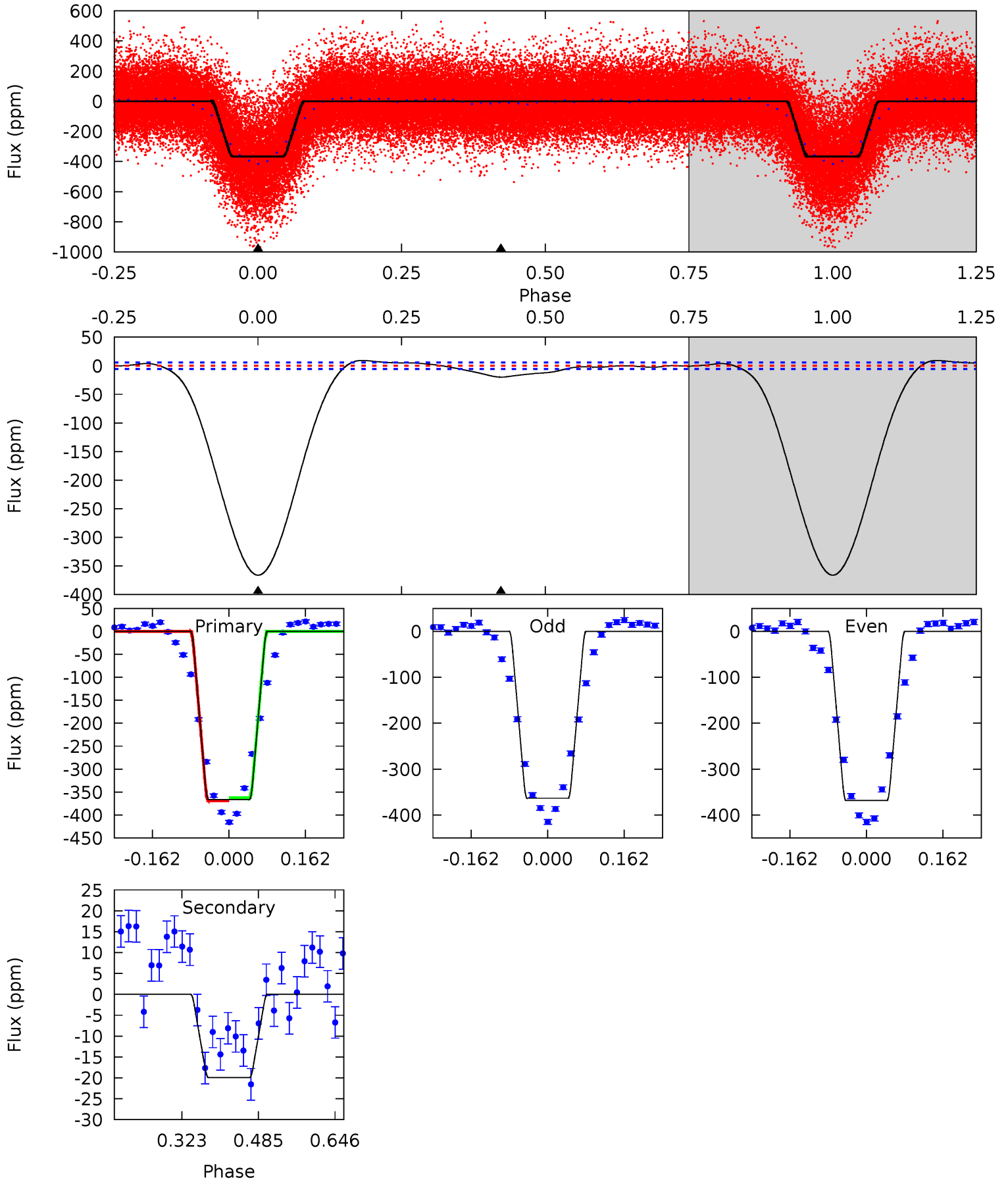
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.10	0.51	0	0	4.43	1.31	3.16	6.10	6.10	0.51	0.51	1.39	1.47	0.49	1.54



Alt Model-Shift Uniqueness Test

010789864-01, P = 2.820061 Days, E = 129.744260 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
293.5	16.0	0	0	4.46	1.40	2.89	293.5	293.5	16.0	16.0	2.01	0.97	0.02	2.72



Stellar Parameters For KIC 010789864

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9063^{+251}_{-466}	$3.840^{+0.364}_{-0.156}$	$0.070^{+0.200}_{-0.650}$	$3.143^{+0.950}_{-1.425}$	$2.490^{+0.291}_{-0.872}$	$0.113^{+0.366}_{-0.052}$
	+3%/-5%	+9%/-4%	+286%/-929%	+30%/-45%	+12%/-35%	+324%/-46%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010789864-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 1	$1.58^{+1.44}_{-1.05}$	4175^{+375}_{-446}	-2715^{+8479}_{-1445}	$0.261^{+3.476}_{-0.547}$
Alt.	-20 ± 1	$6.19^{+2.45}_{-1.97}$	4154^{+388}_{-462}	3879^{+756}_{-697}	$0.764^{+0.867}_{-0.354}$

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

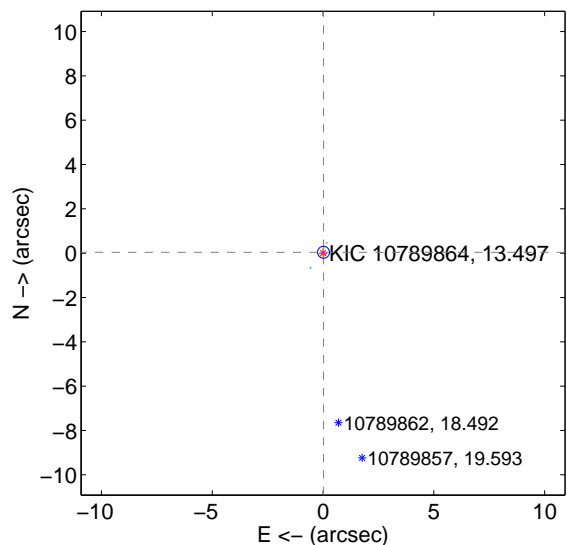
Supplemental centroid analysis for 010789864-01. Kepler magnitude: 13.50. Transit SNR 4.38

There are 10 quarters with good PRF difference image offsets

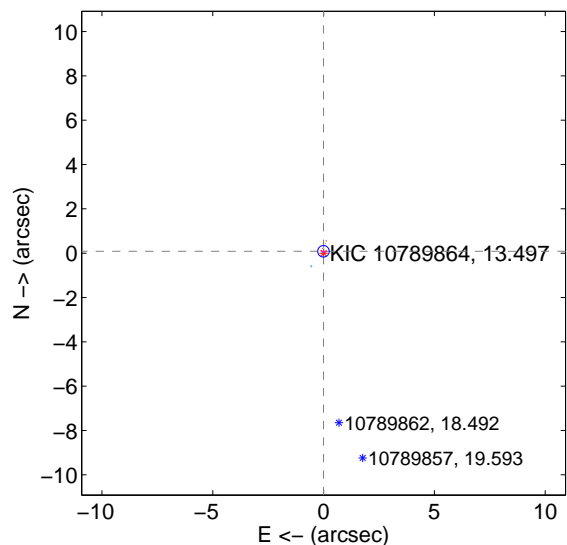
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.089	0.52	-0.022 ± 0.076	0.040 ± 0.084
PRF-fit source offset from KIC position	0.084 ± 0.087	0.97	0.005 ± 0.076	0.084 ± 0.088
photometric centroid source offset	1.68 ± 2.47	0.68	1.29 ± 2.56	-1.07 ± 2.34

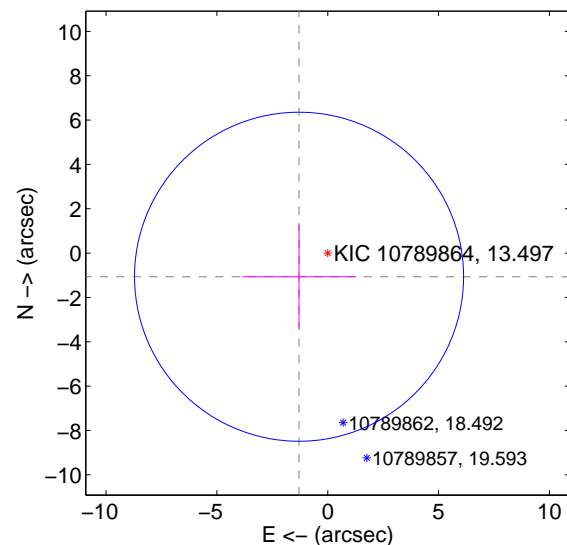
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

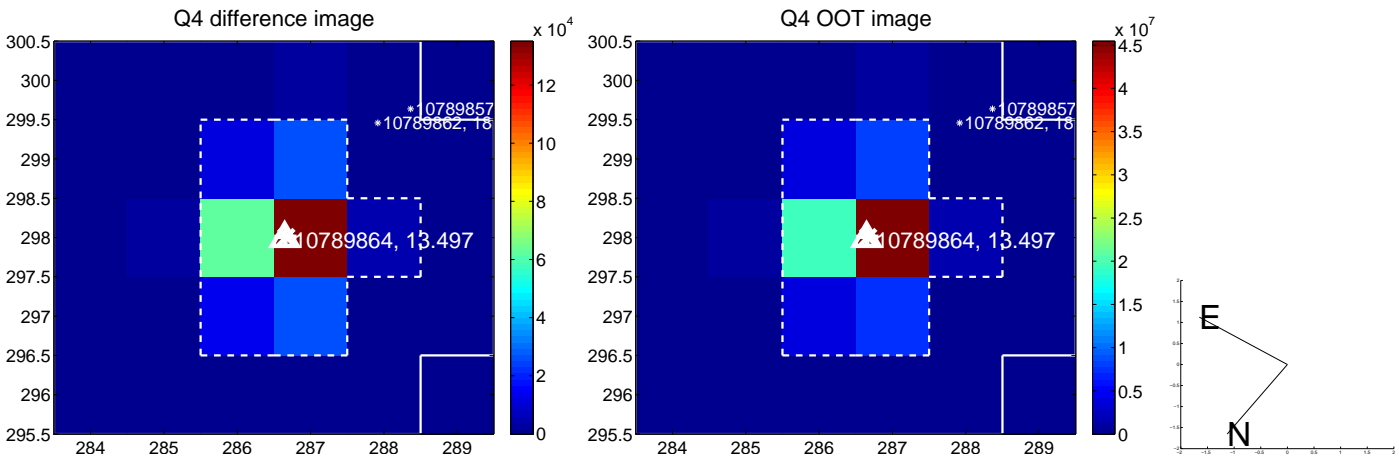
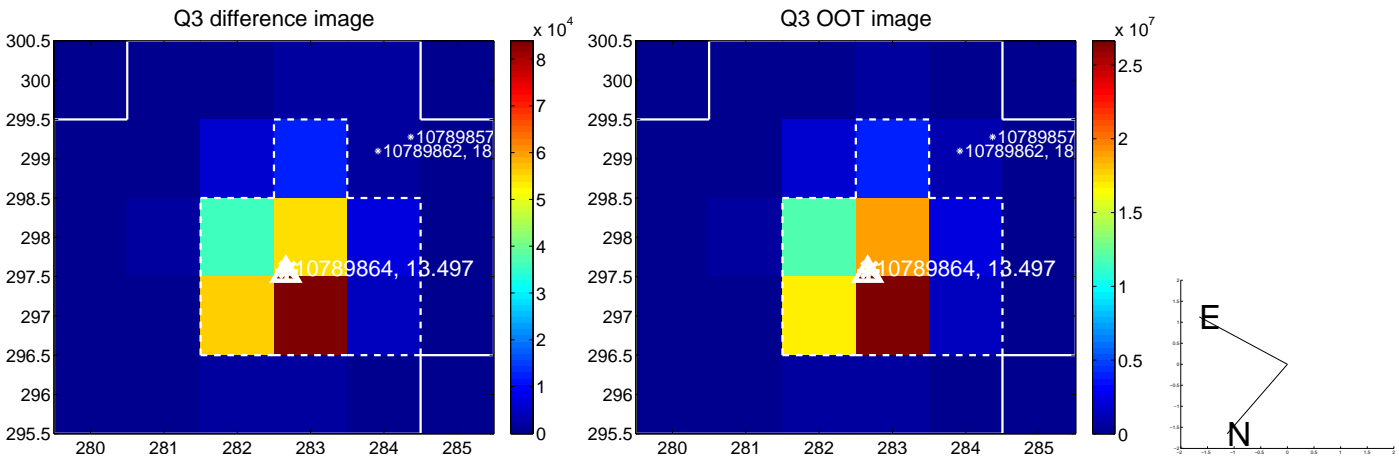
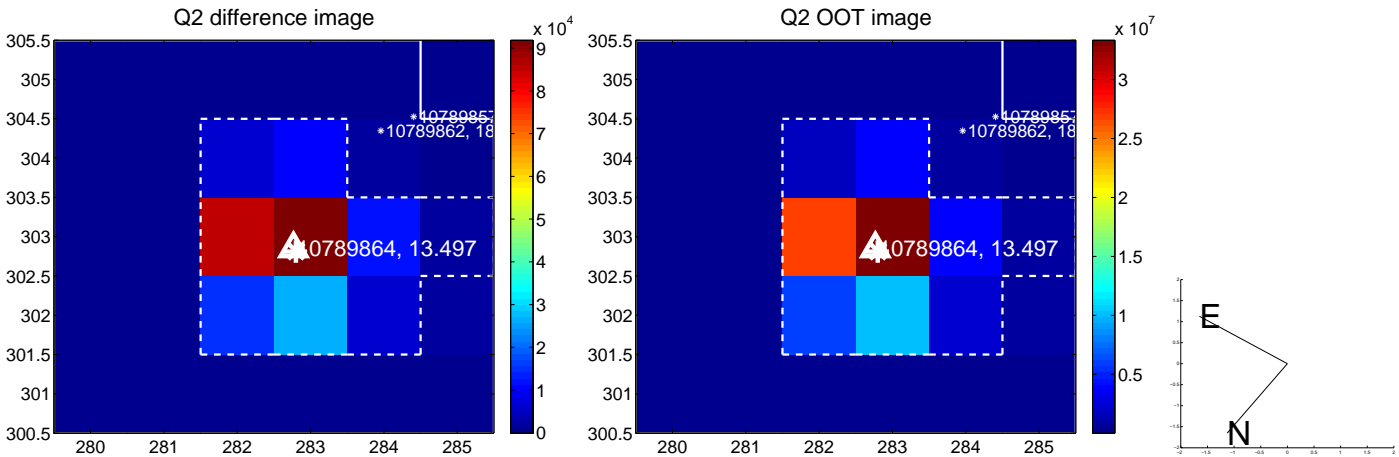
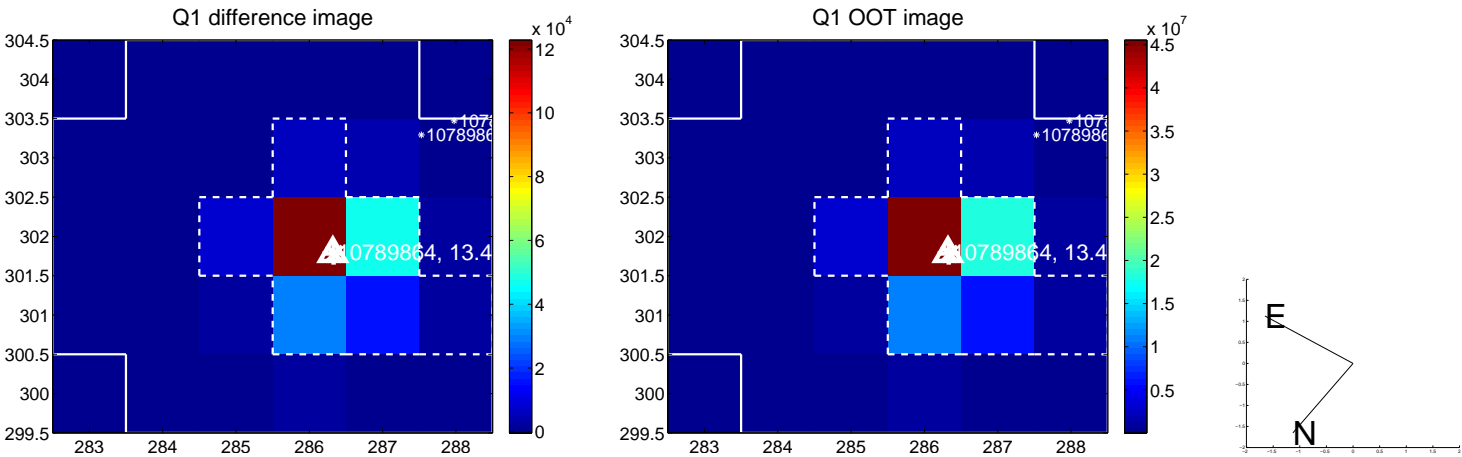


offset from photometric centroids

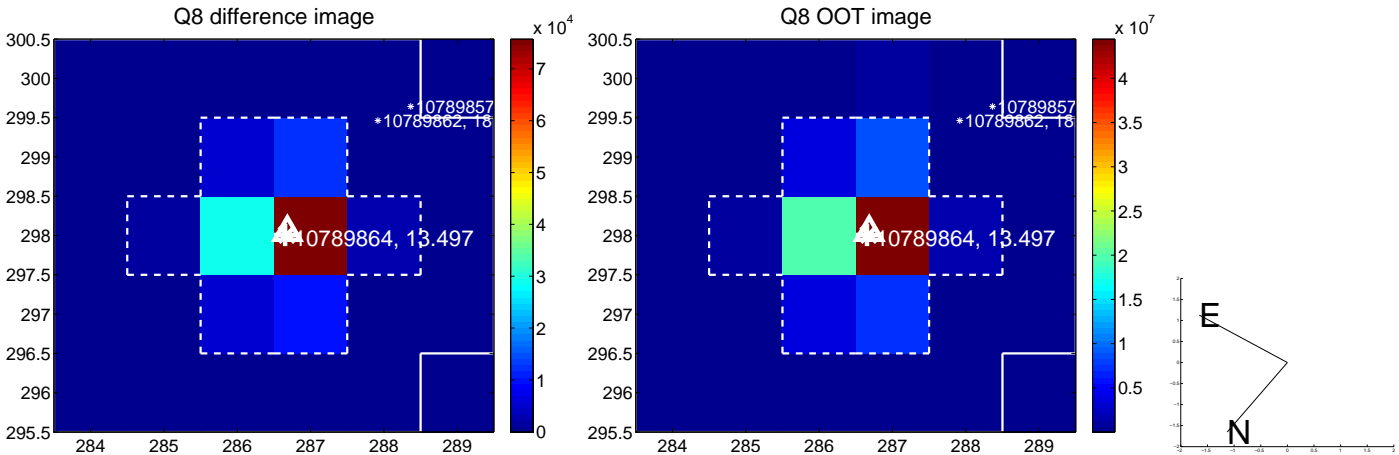
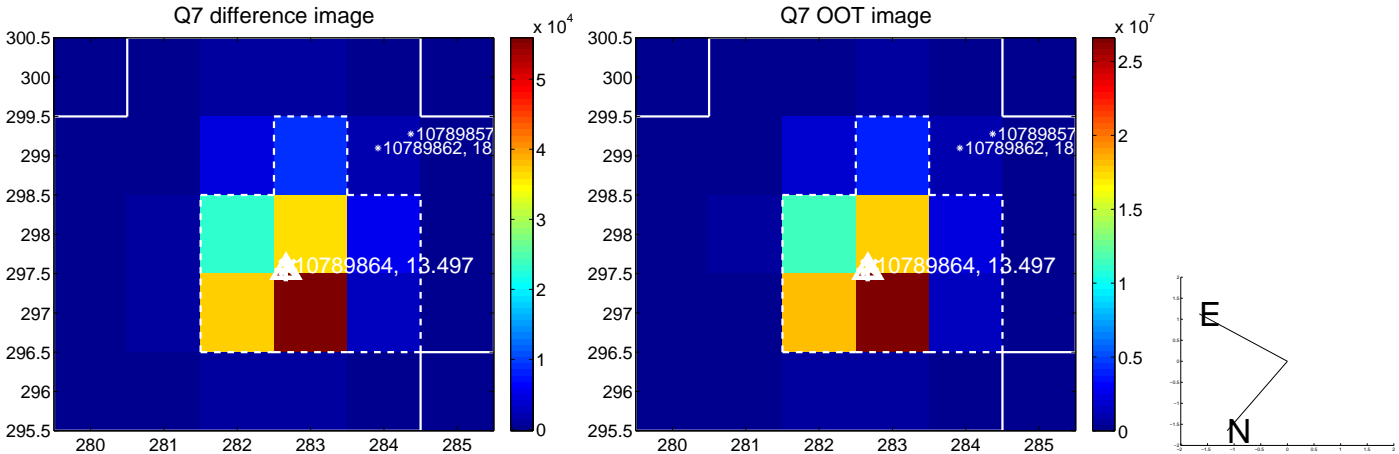
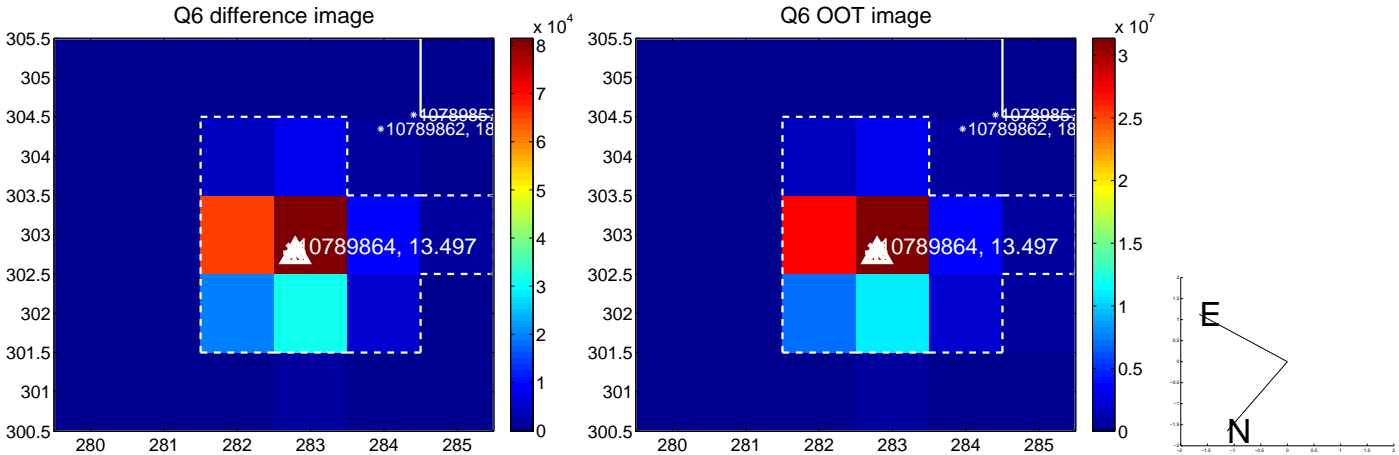
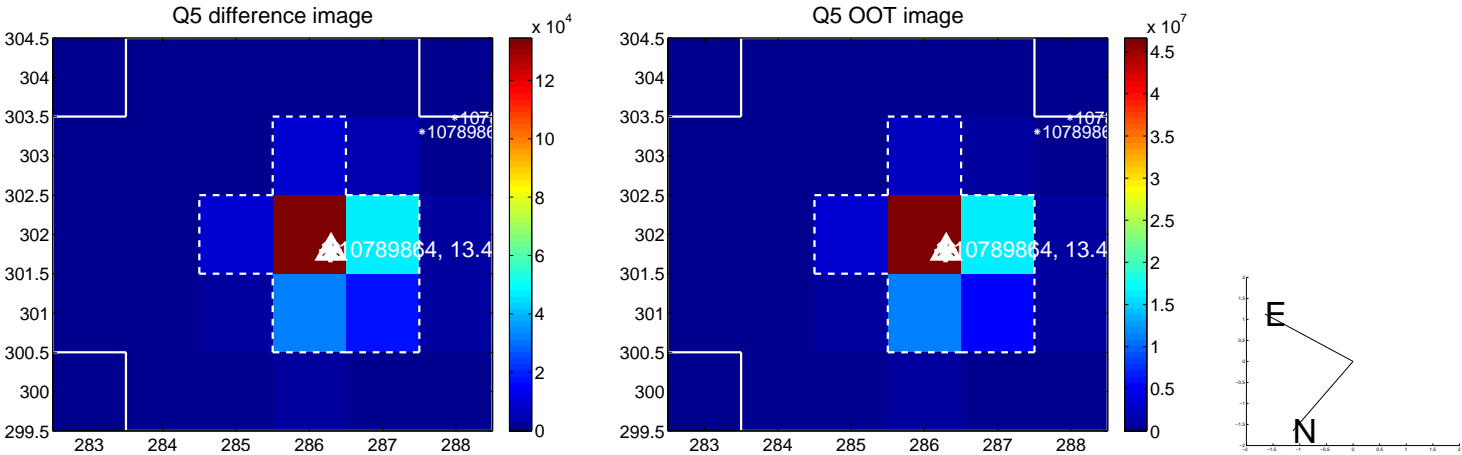


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

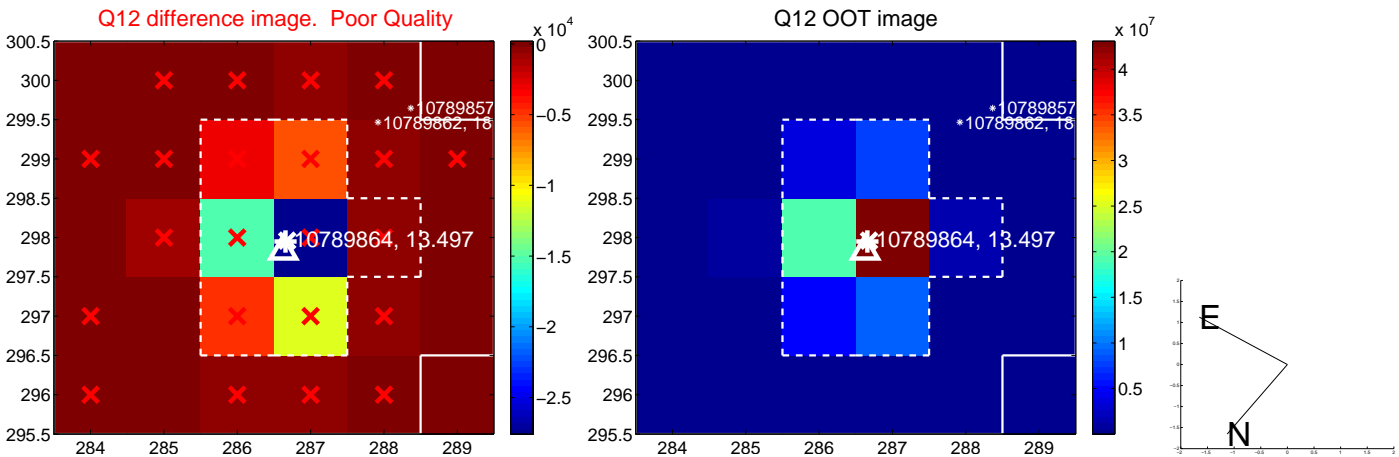
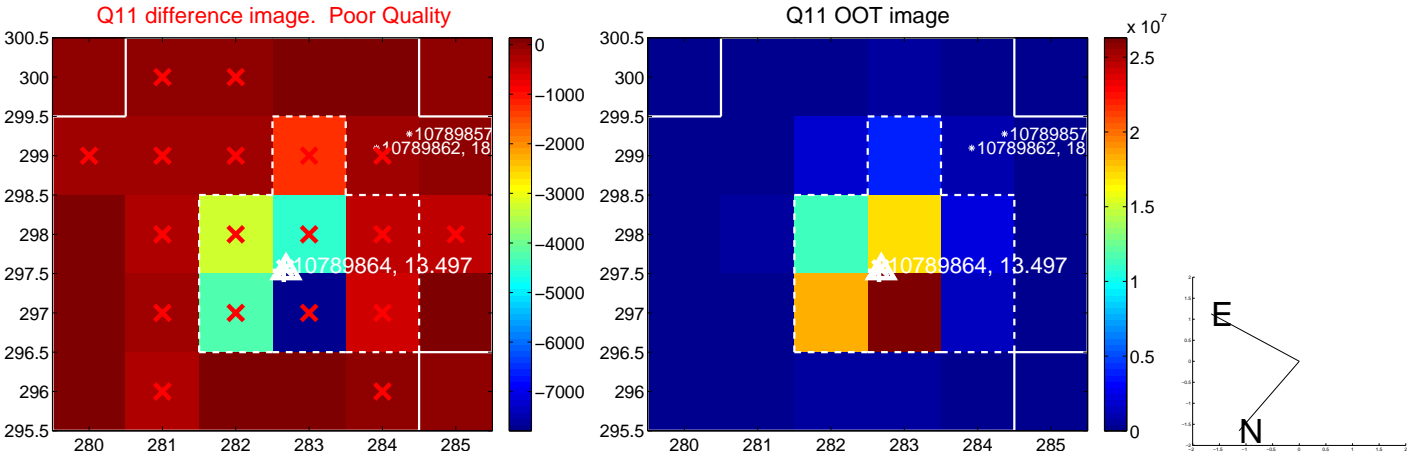
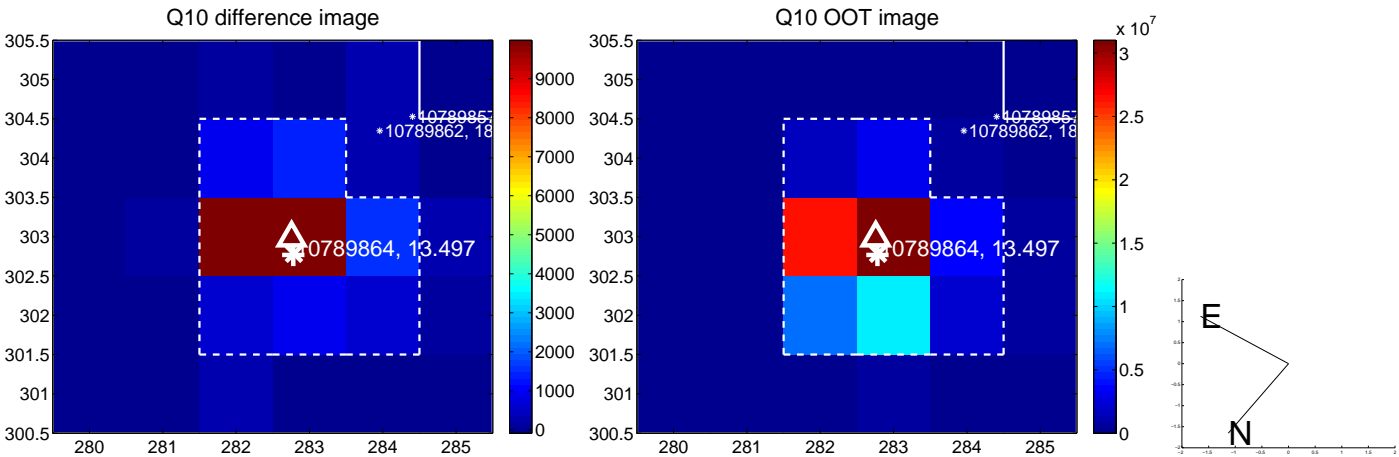
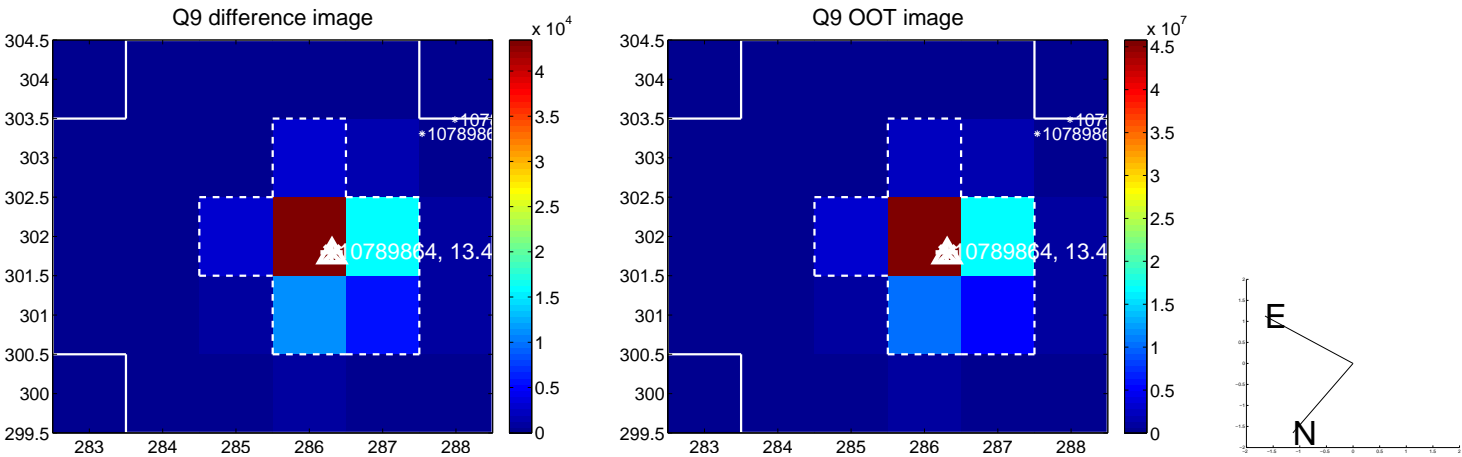
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



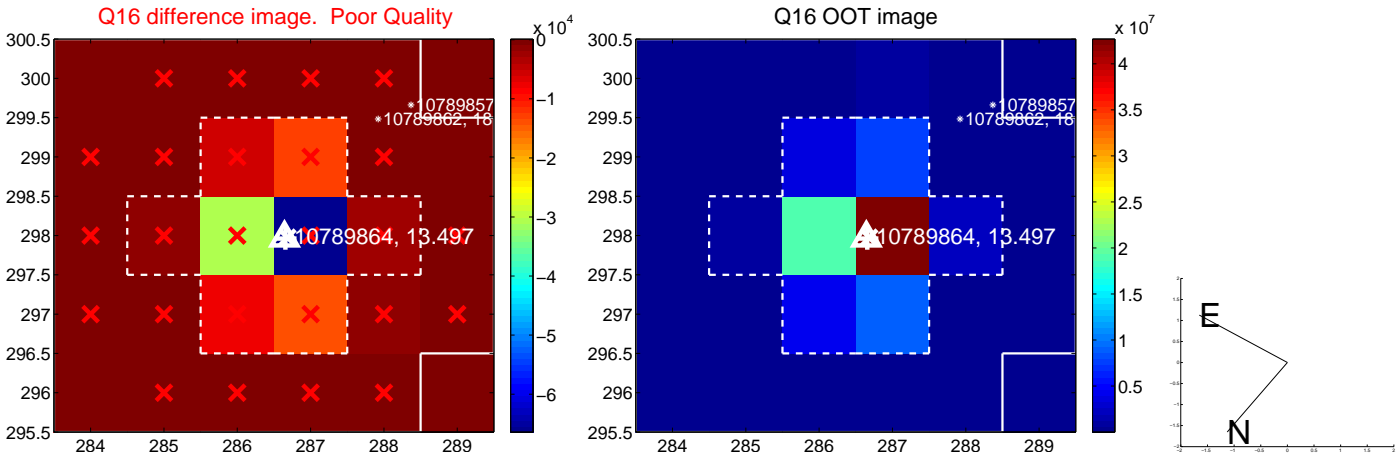
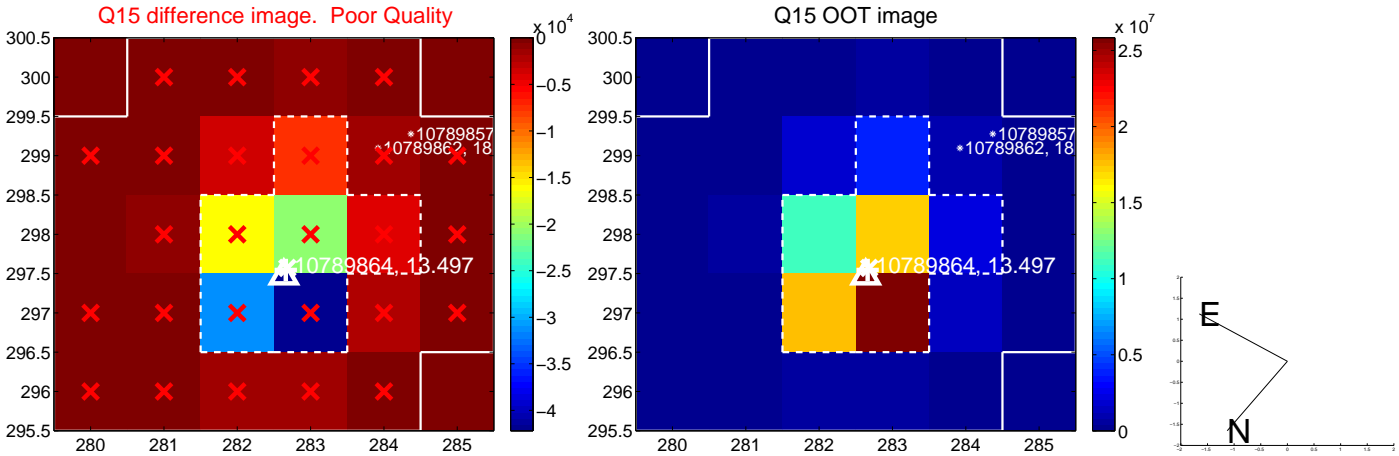
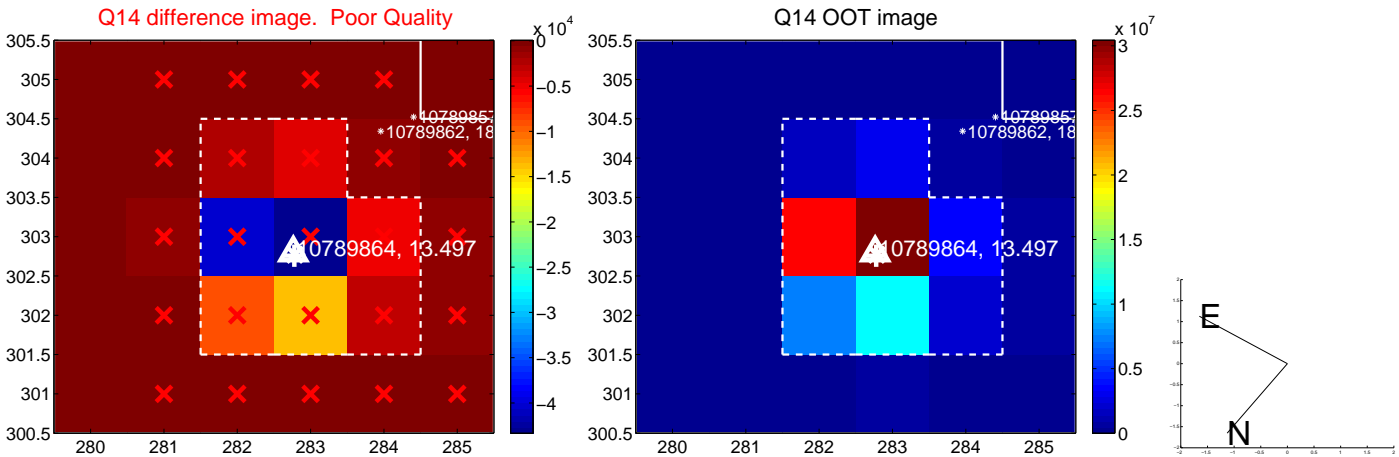
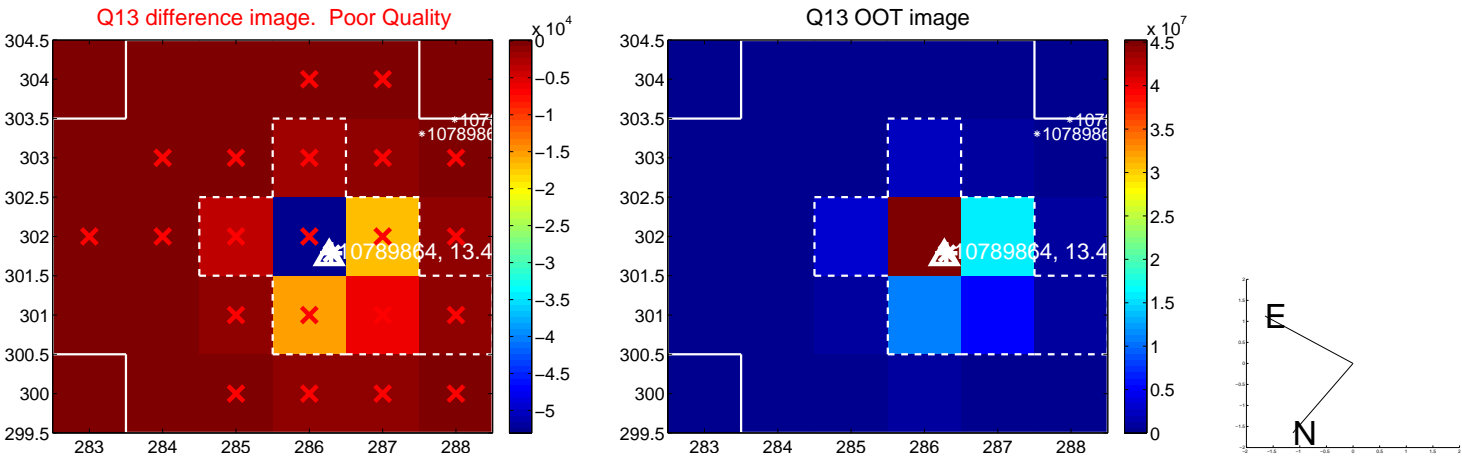
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



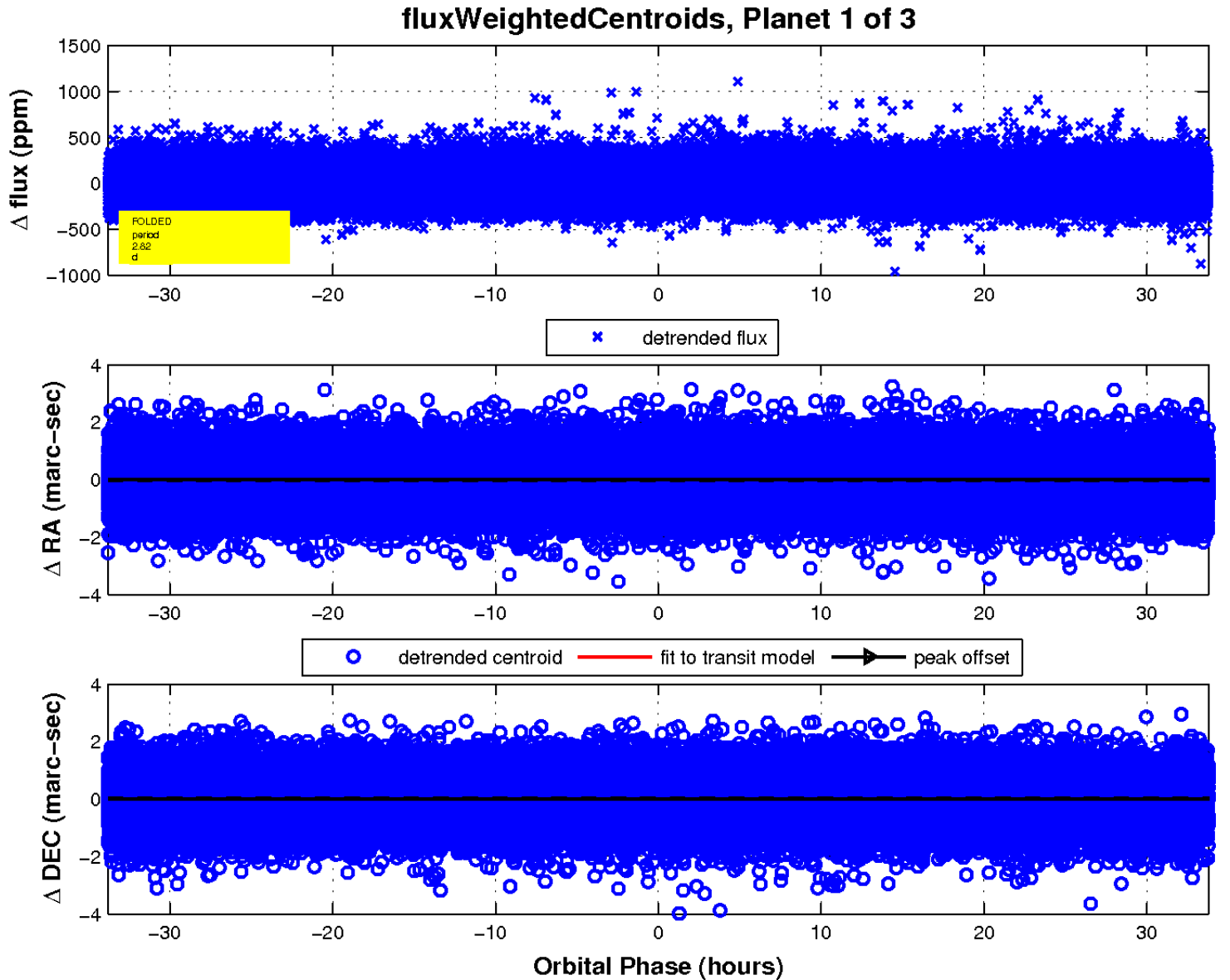
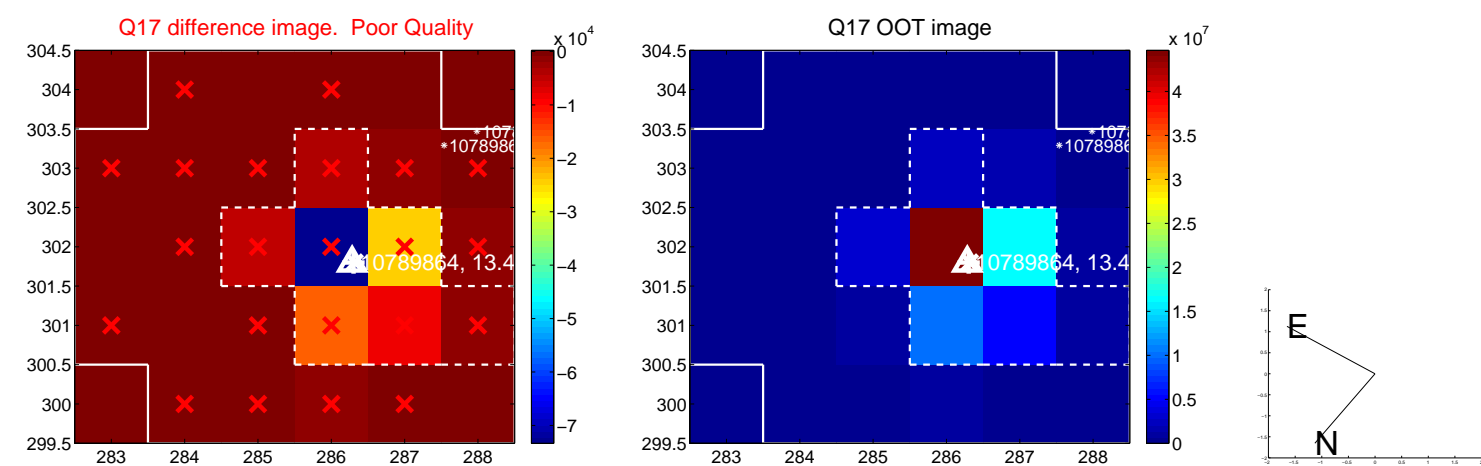
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

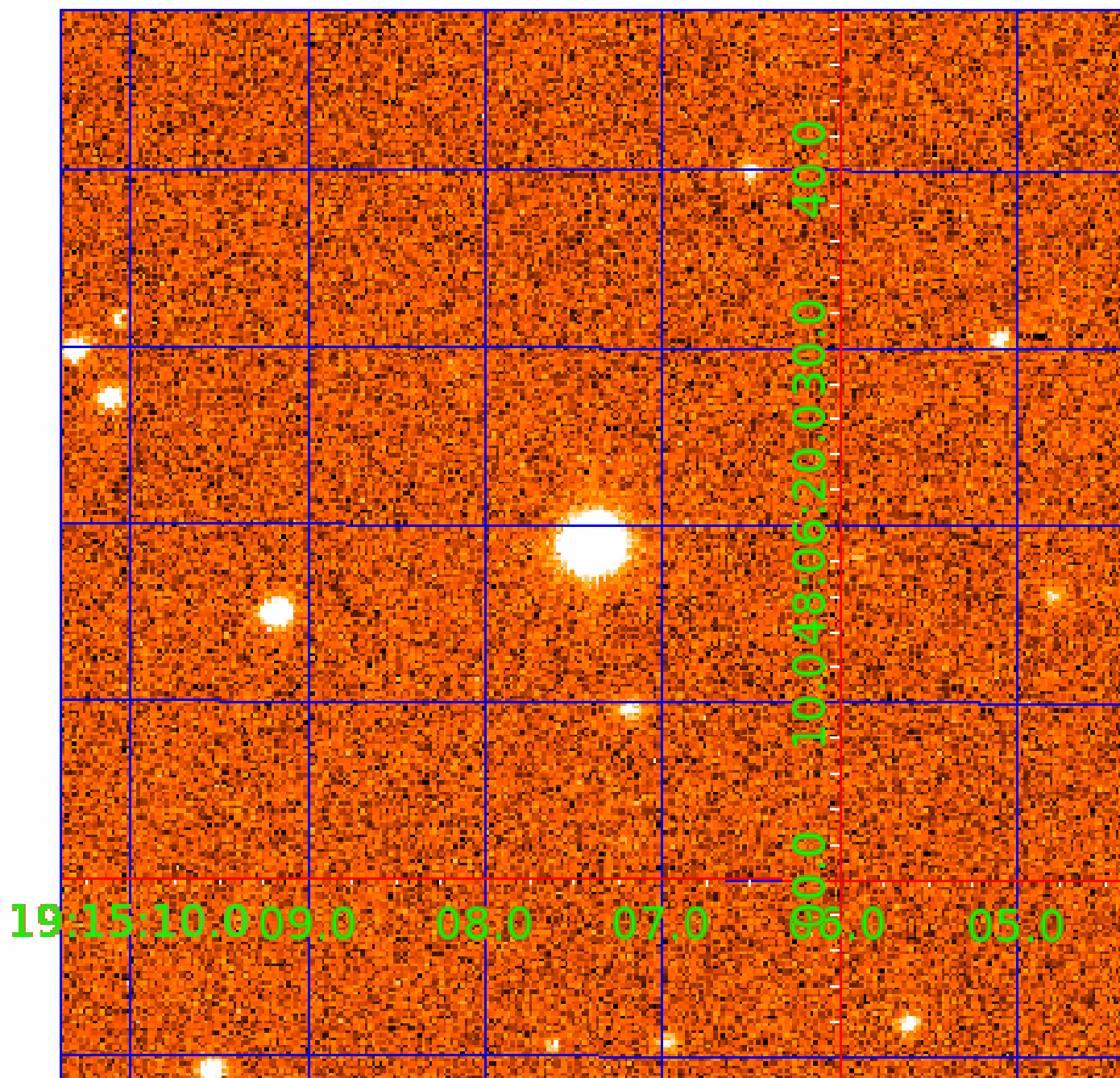


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010789864

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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010789864-03	OBS	No	2.820065	132.821591	23.6	25.492	11.8	9.7	3.14	9063	1.63	21274.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010789864-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010789864-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010789864-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV

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

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

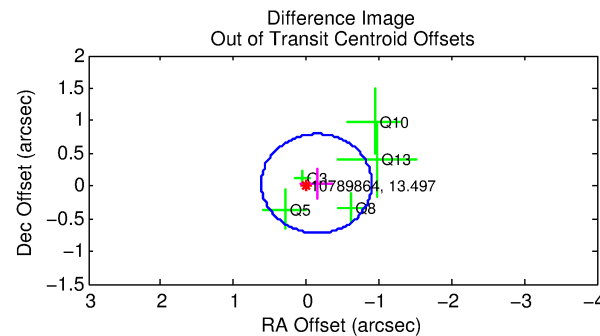
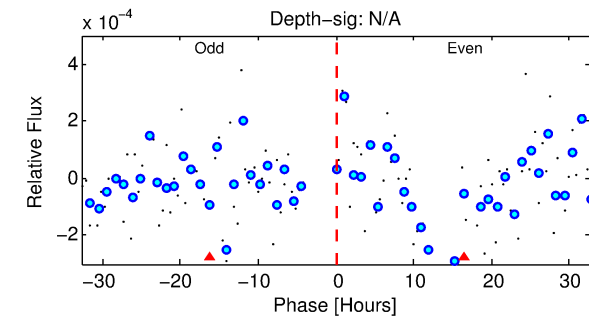
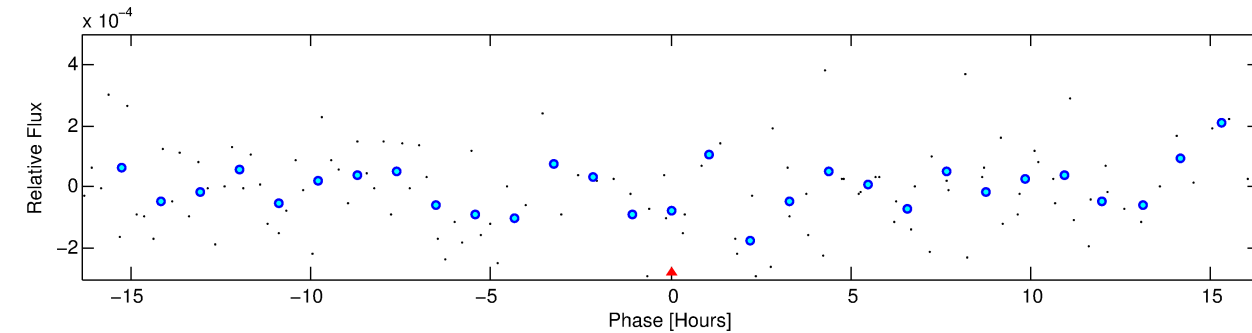
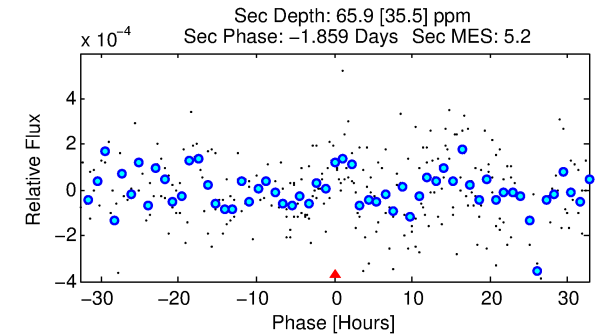
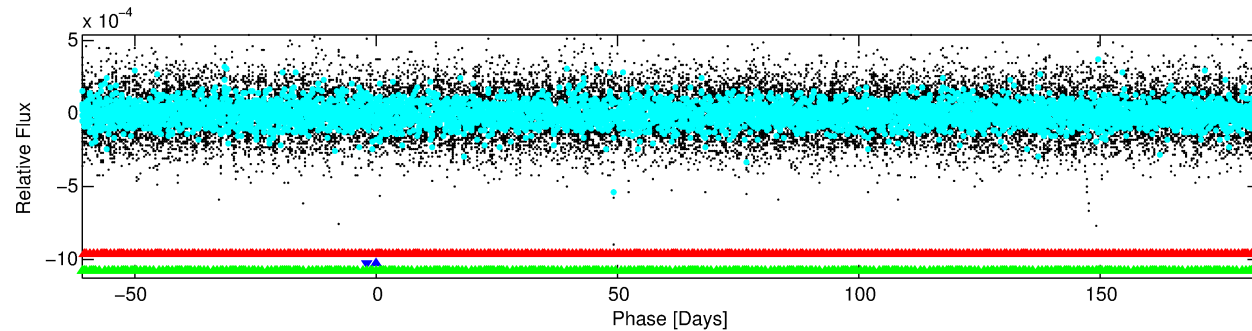
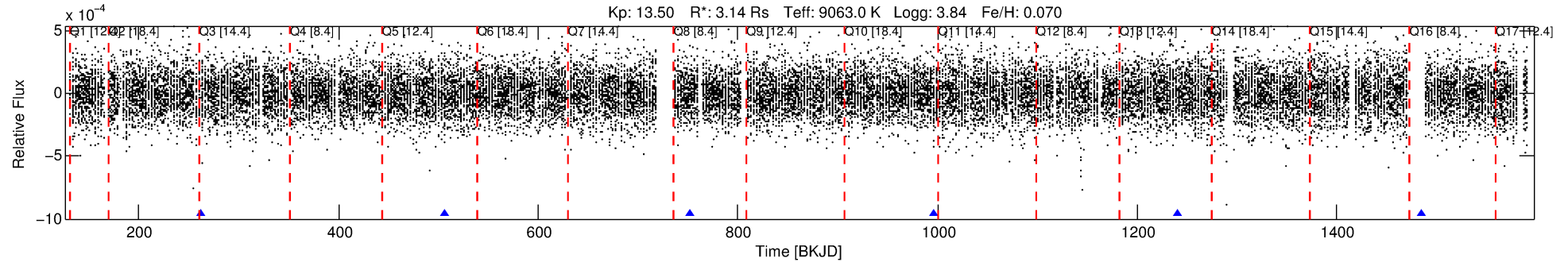
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010789864-02

No Significant Match Found

DV One-Page Summary

KIC: 10789864 Candidate: 2 of 3 Period: 244.474 d



TPS TCE Results:

Period = 244.47392 d
Epoch = 263.3483 BKJD

DV fit results are unavailable

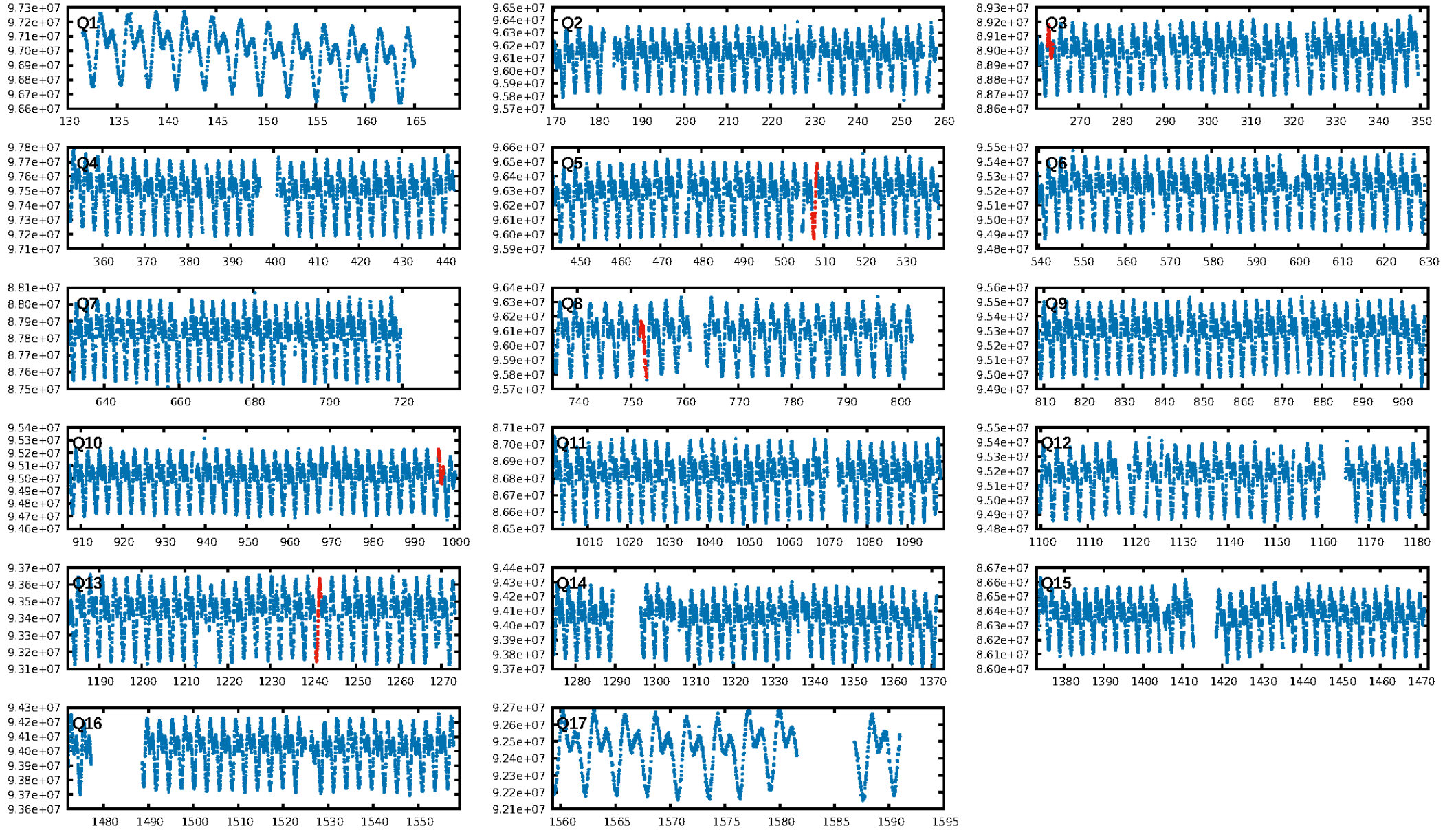
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [196.08σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.06227
Centroid-sig: 5.6%
Centroid-so: 1.156 arcsec [1.41σ]
OotOffset-rm: 0.147 arcsec [0.58σ]
KicOffset-rm: 0.184 arcsec [0.57σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.00 [0/5]

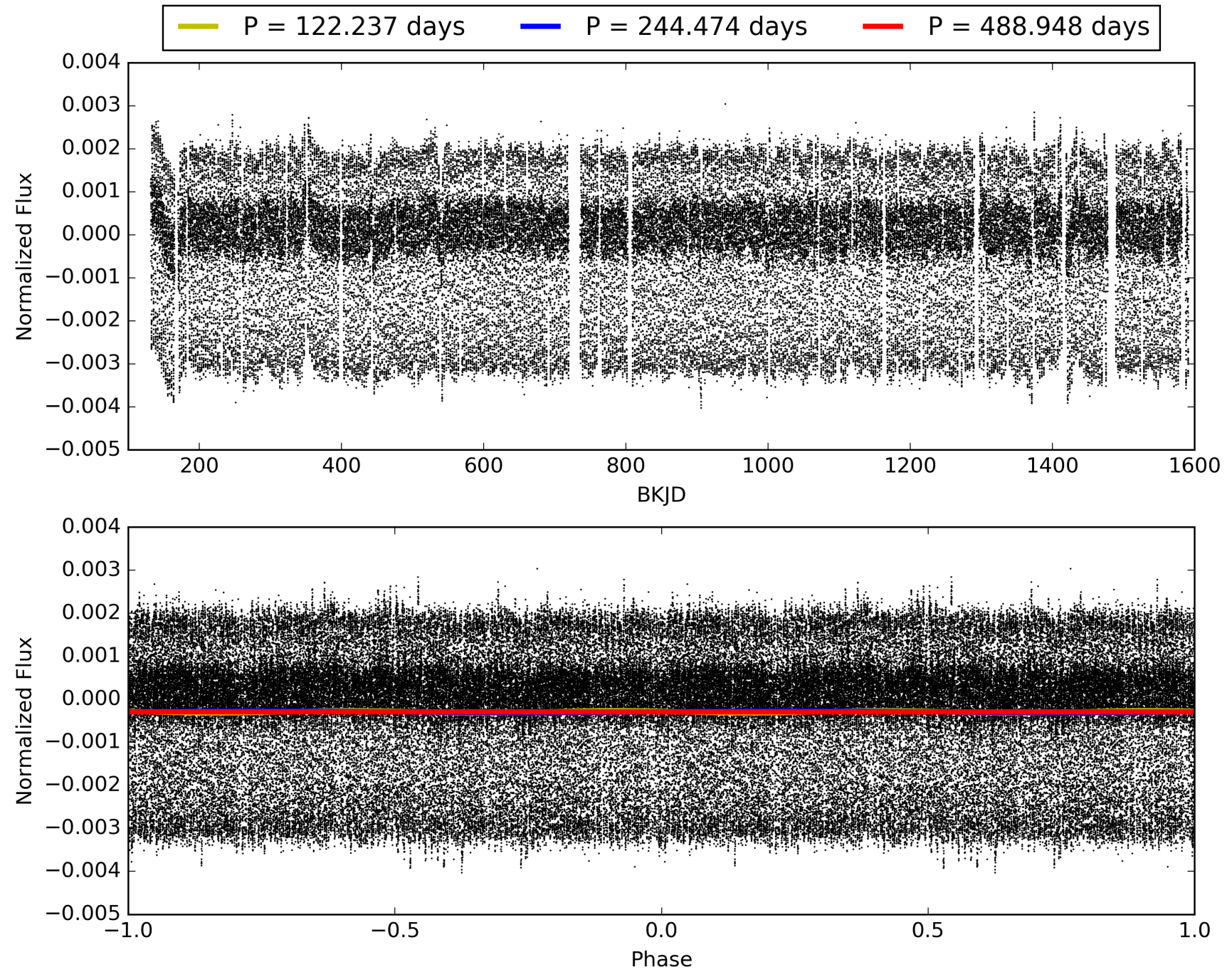
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:29:45 Z

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

TCE 010789864-02, PDC Light Curves

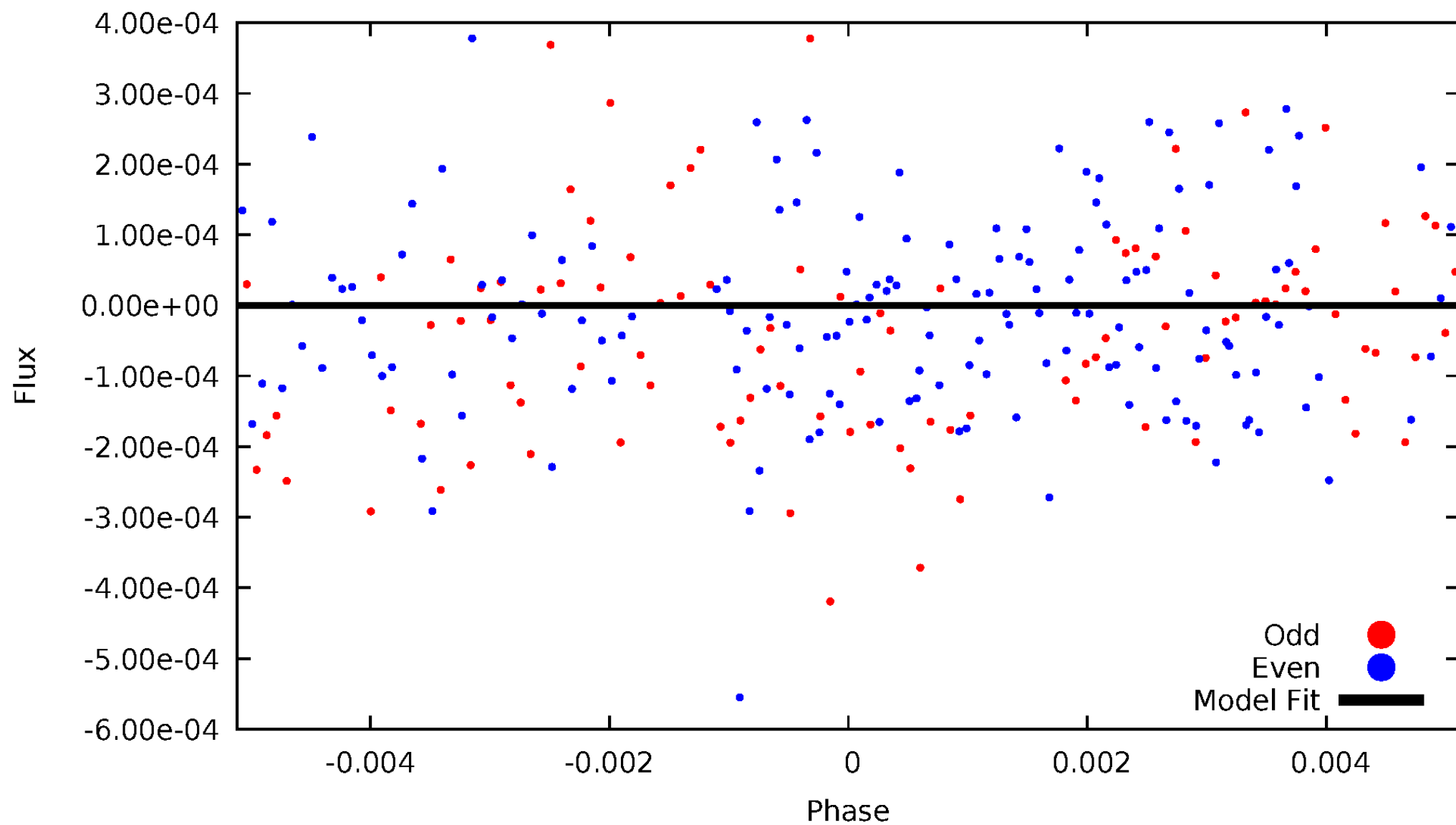


TCE 010789864-02



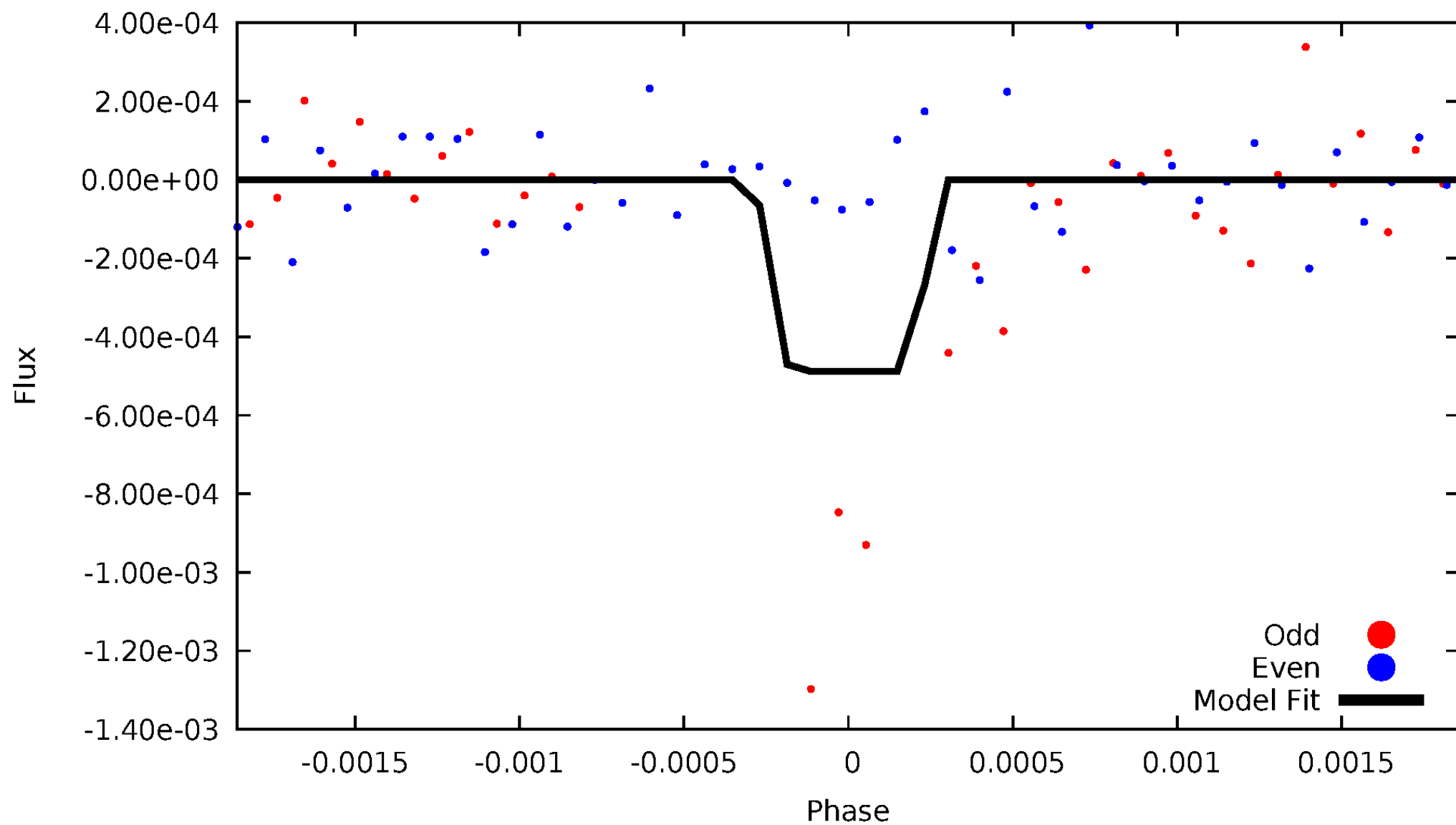
DV Odd/Even

TCE 010789864-02



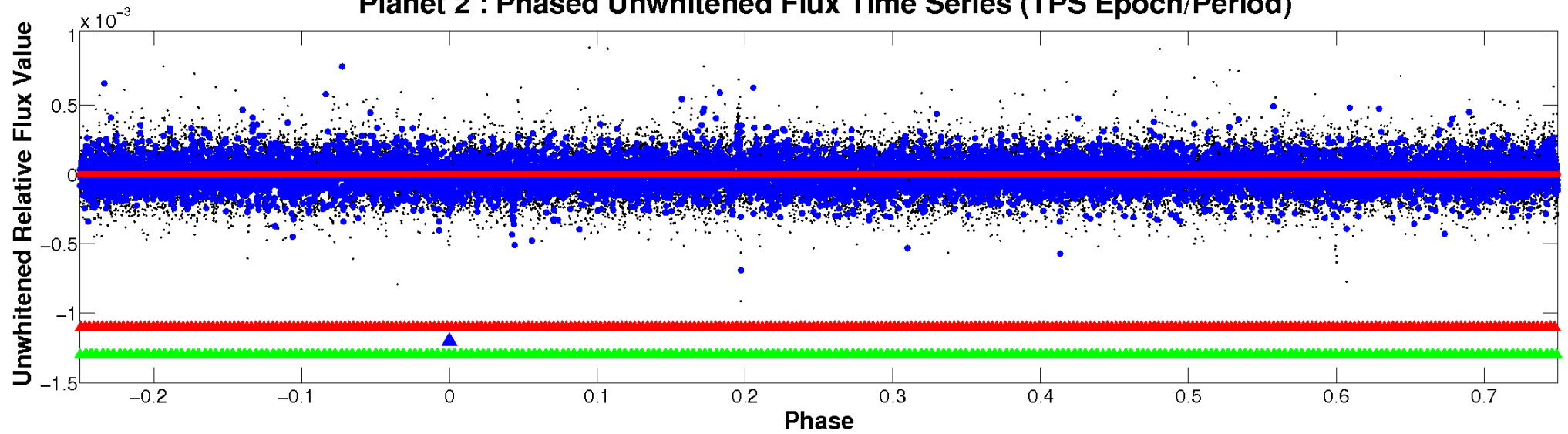
ALT Odd/Even

TCE 010789864-02

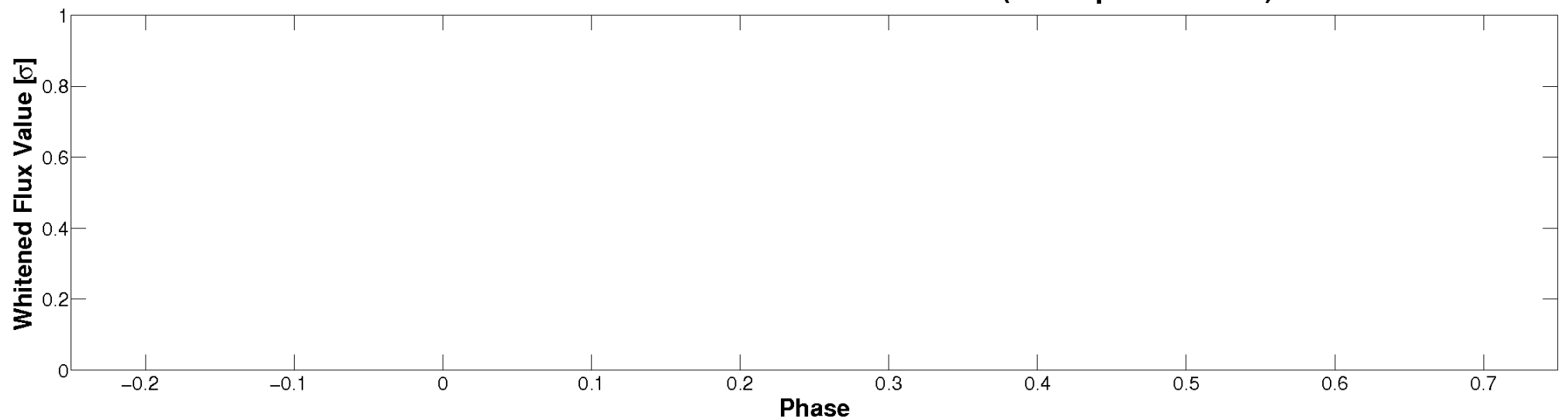


Non-Whitened Vs. Whitened Light Curve

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

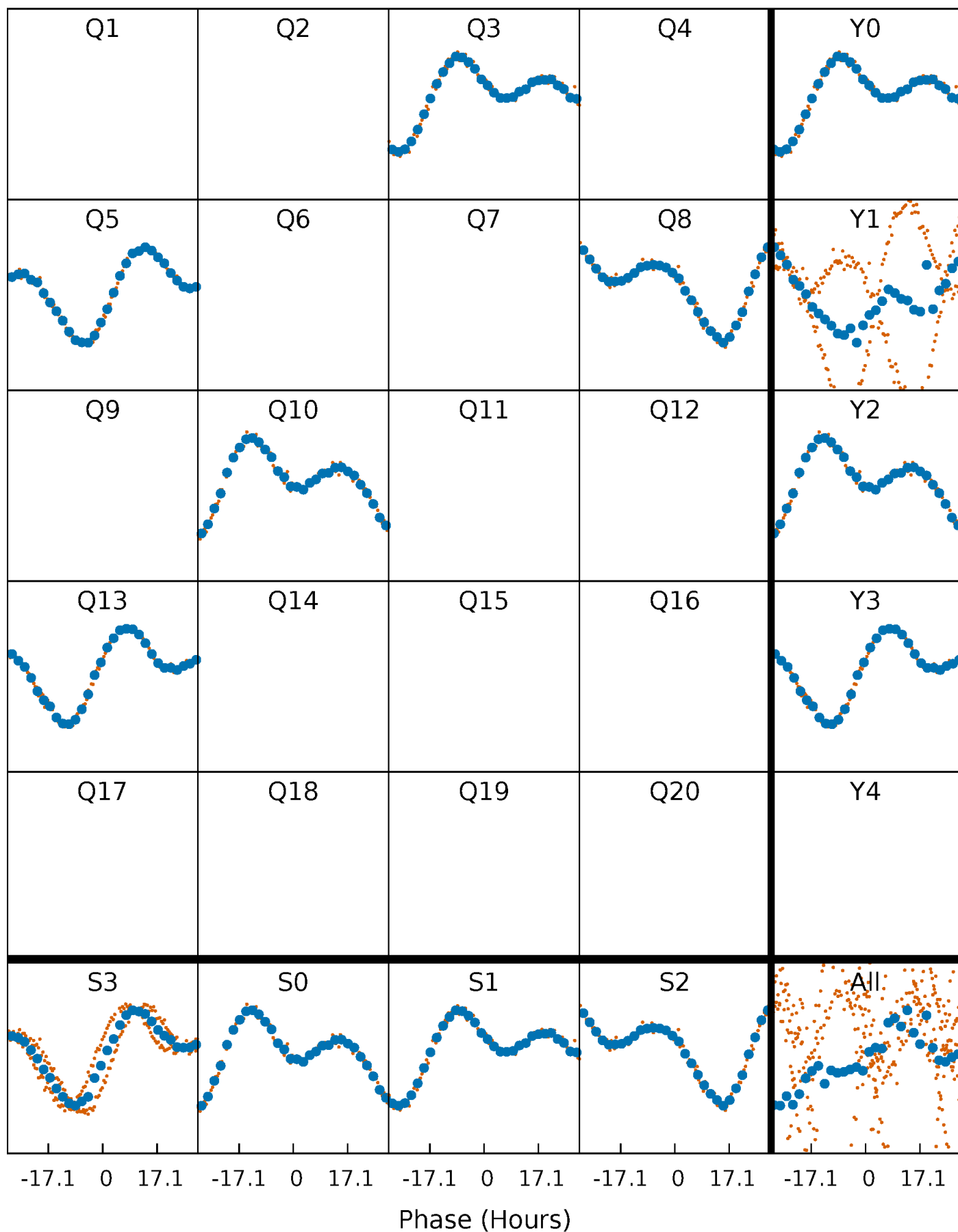


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010789864-02 $P=244.473923$ Days $T_0=263.348323$ (BKJD)



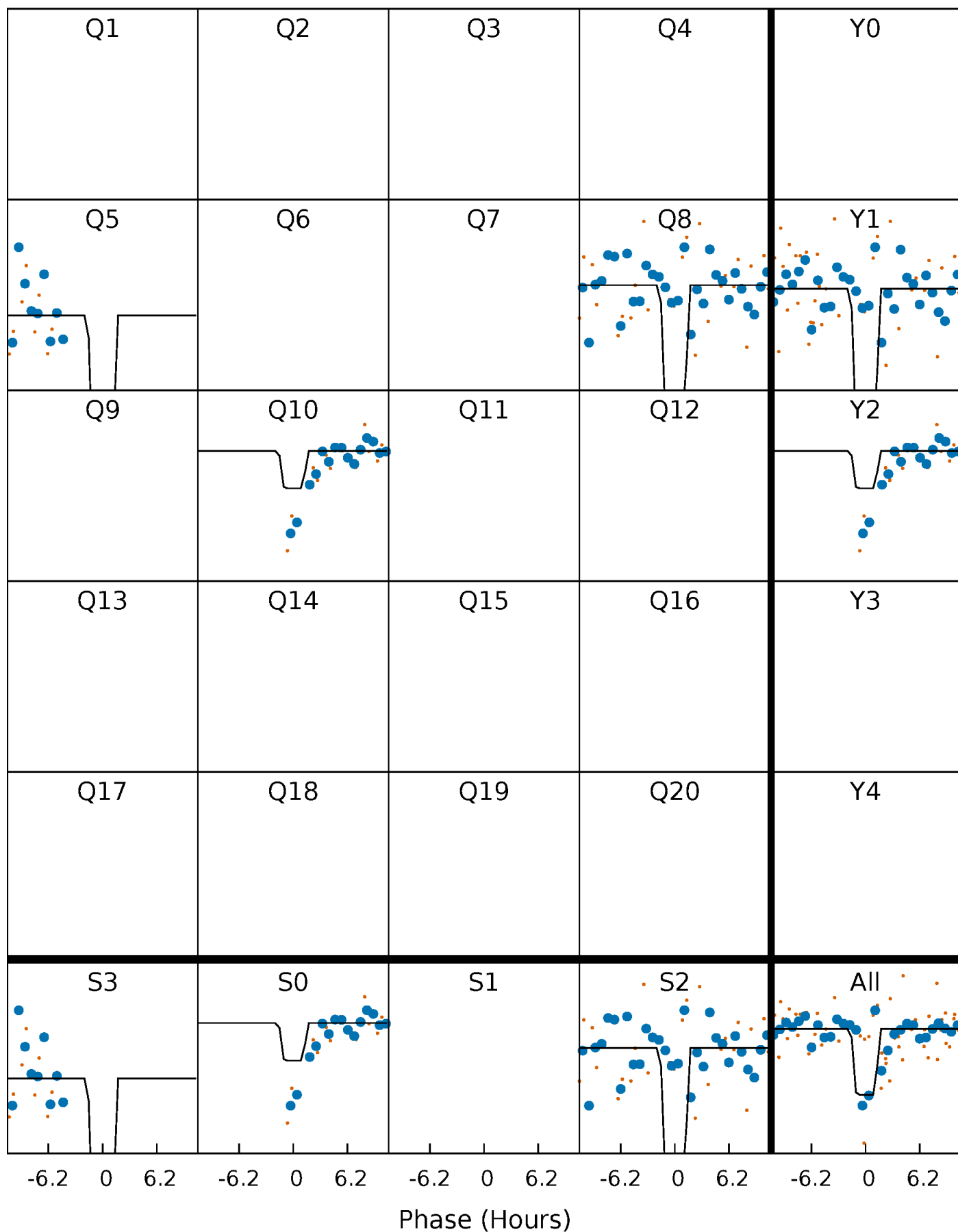
DV Quarter-Phased Transit Curves

TCE 010789864-02 P=244.473923 Days $T_0=263.348323$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

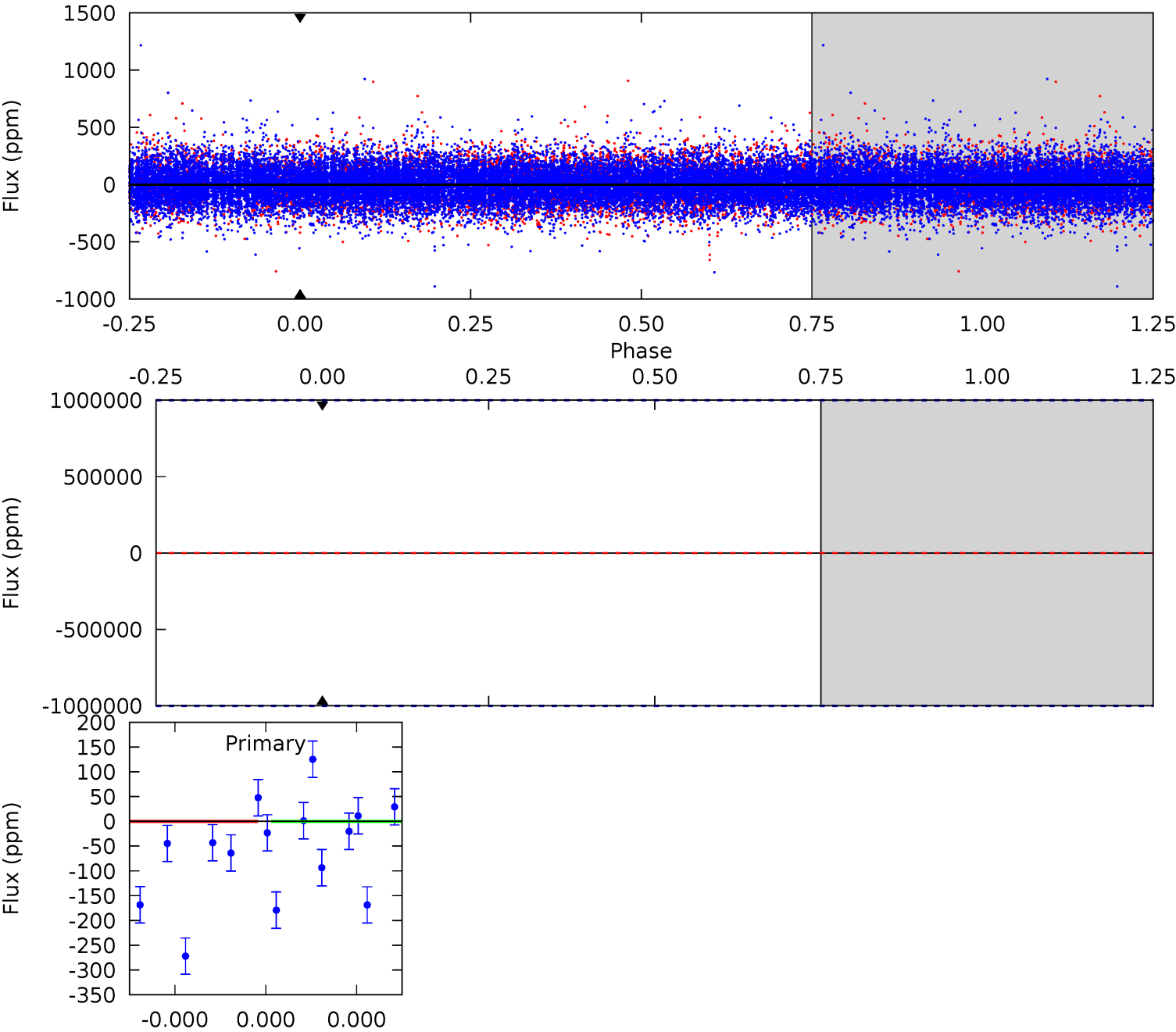
TCE 010789864-02 $P=244.473923$ Days $T_0=262.399306$ (BKJD)



DV Model-Shift Uniqueness Test

010789864-02, P = 244.473923 Days, E = 18.874400 Days

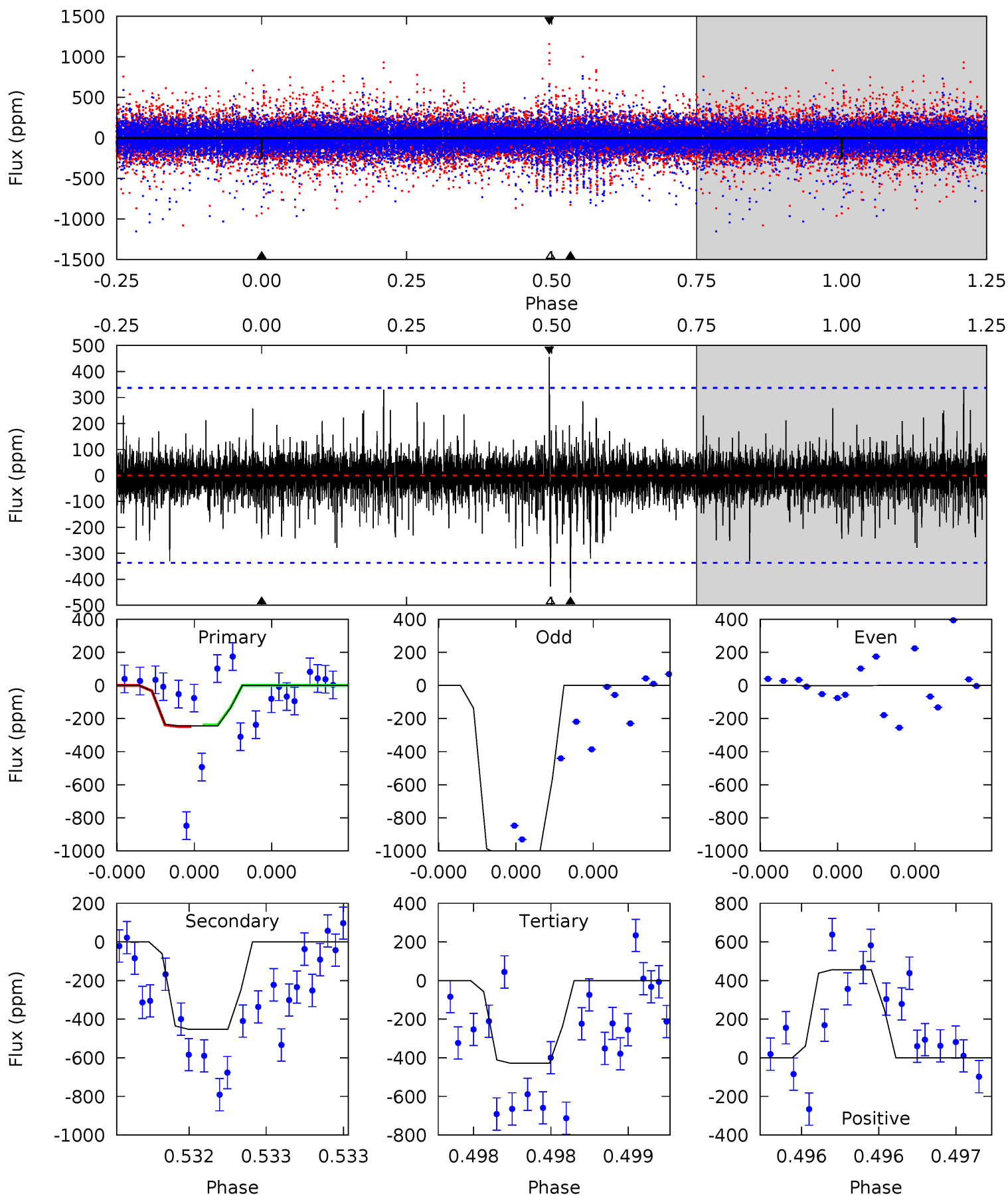
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010789864-02, P = 244.473923 Days, E = 17.925383 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.04	7.49	7.08	7.54	5.58	3.49	0.89	-3.04	-3.50	0.41	-0.06	8.29	1.00	0.50	0.08



Stellar Parameters For KIC 010789864

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9063^{+251}_{-466}	$3.840^{+0.364}_{-0.156}$	$0.070^{+0.200}_{-0.650}$	$3.143^{+0.950}_{-1.425}$	$2.490^{+0.291}_{-0.872}$	$0.113^{+0.366}_{-0.052}$
	+3%/-5%	+9%/-4%	+286%/-929%	+30%/-45%	+12%/-35%	+324%/-46%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010789864-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$24.84^{+24.76}_{-18.17}$	944^{+94}_{-106}	4823^{+53954}_{-61517}	$383^{+184389}_{-177370}$
Alt.	-452 ± 60	$23.08^{+26.85}_{-16.04}$	952^{+86}_{-110}	4646^{+4053}_{-1005}	456^{+4924}_{-351}

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

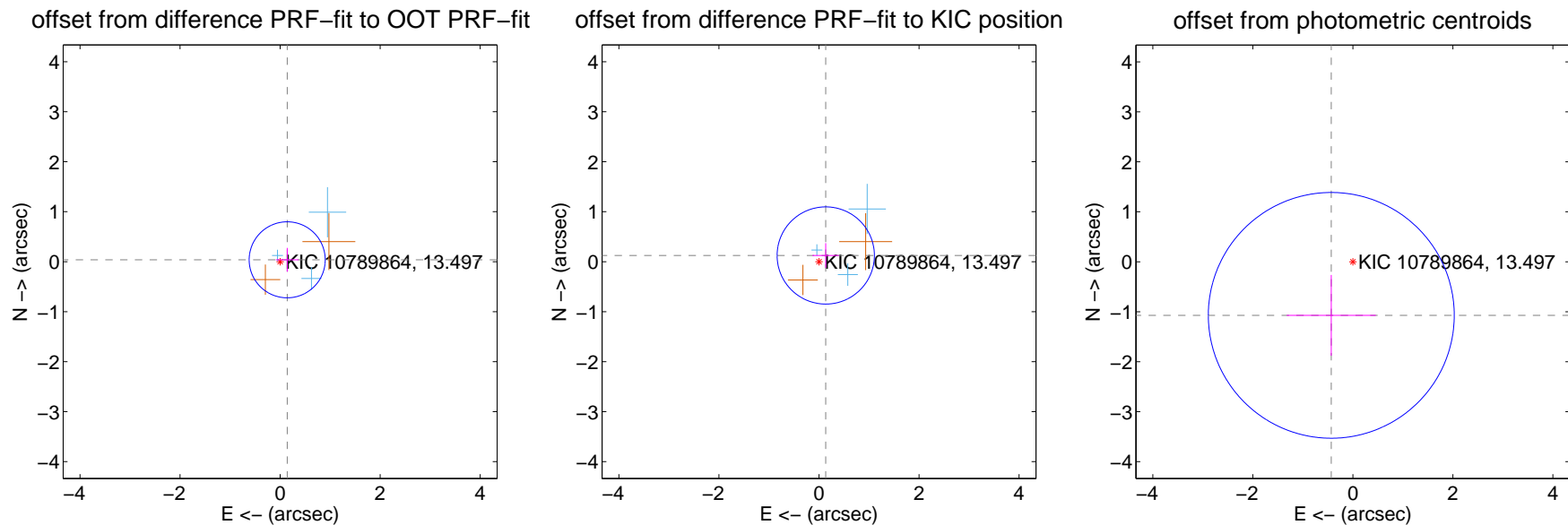
DV Centroid Data

Supplemental centroid analysis for 010789864-02. Kepler magnitude: 13.50. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.147 ± 0.253	0.58	-0.142 ± 0.227	0.038 ± 0.239
PRF-fit source offset from KIC position	0.184 ± 0.324	0.57	-0.135 ± 0.265	0.125 ± 0.246
photometric centroid source offset	1.16 ± 0.82	1.41	0.43 ± 0.89	-1.07 ± 0.81



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.

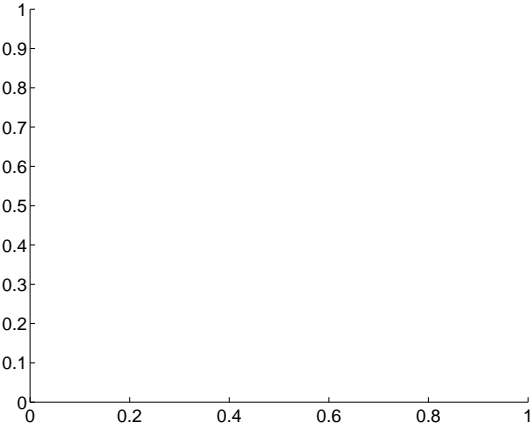
Q1 no difference image



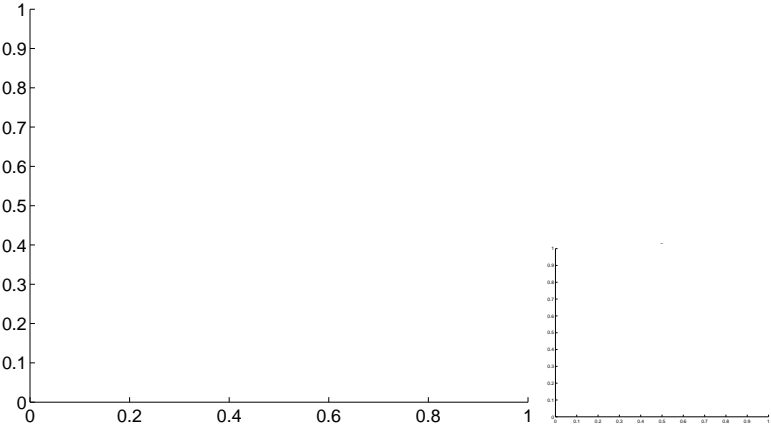
Q1 no OOT image



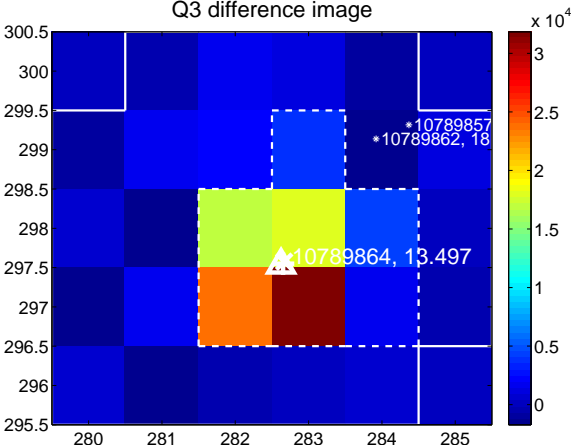
Q2 no difference image



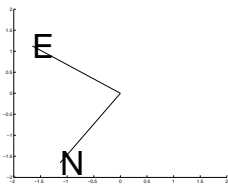
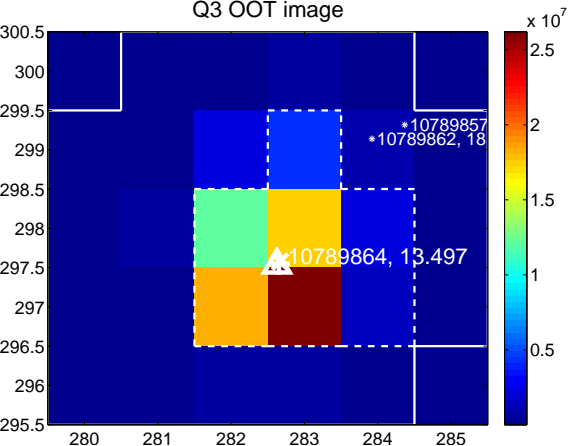
Q2 no OOT image



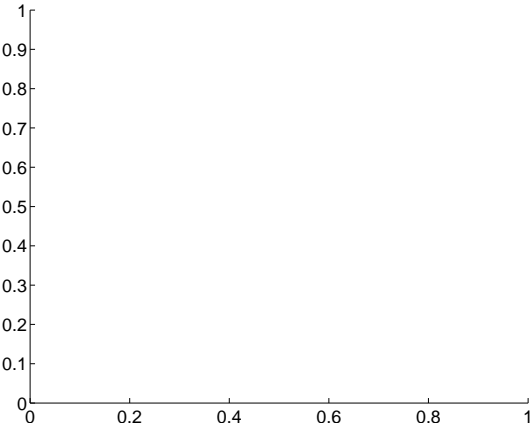
Q3 difference image



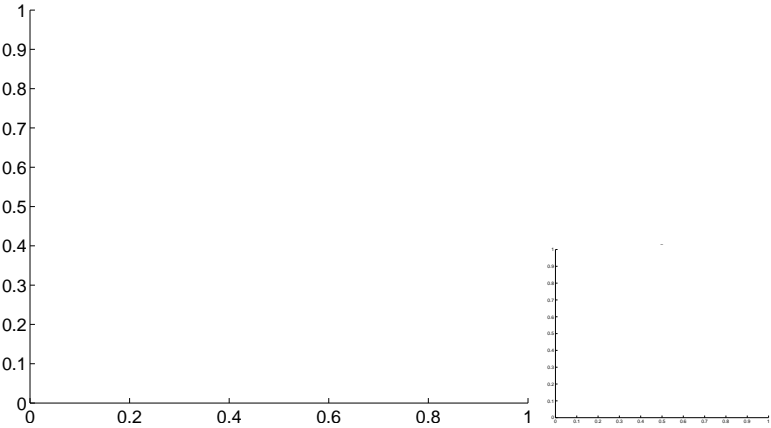
Q3 OOT image



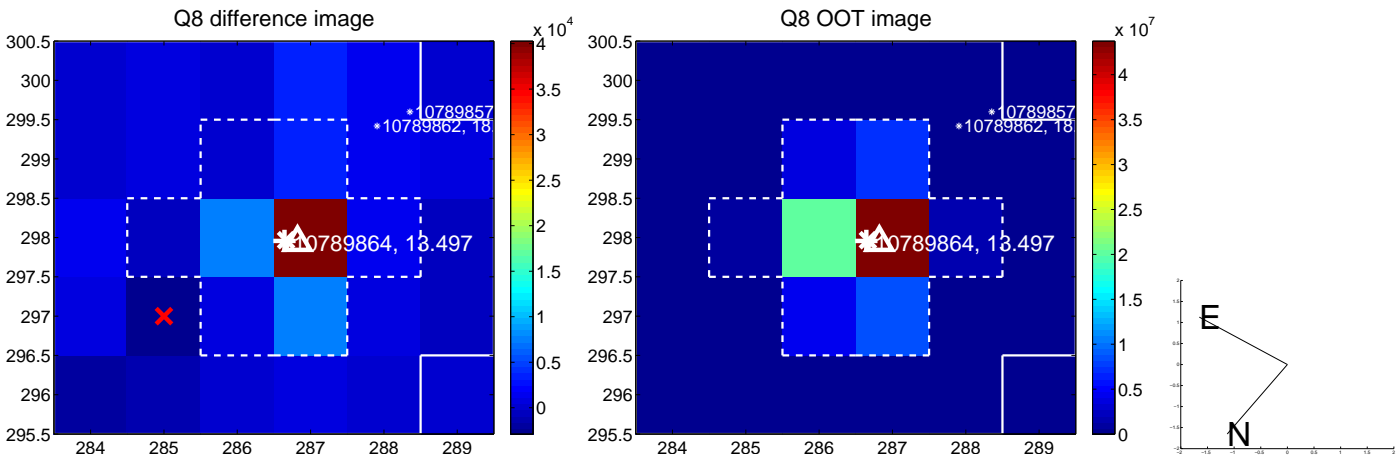
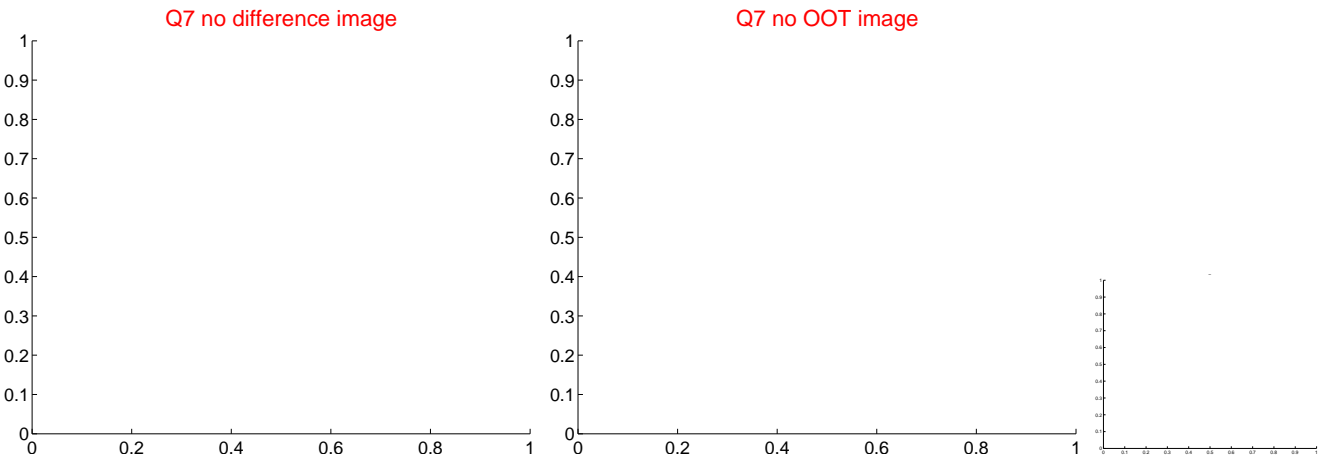
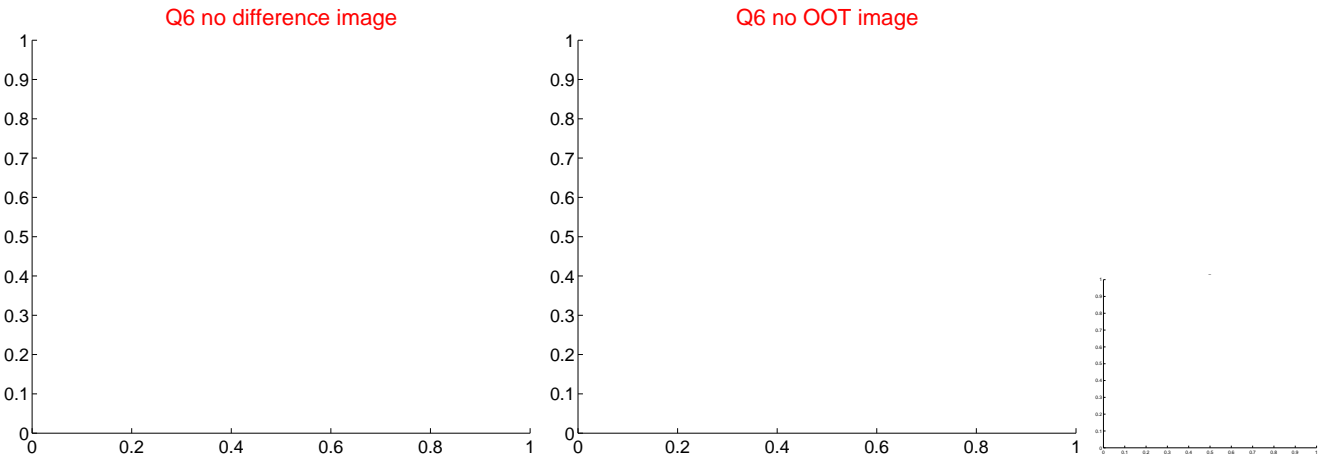
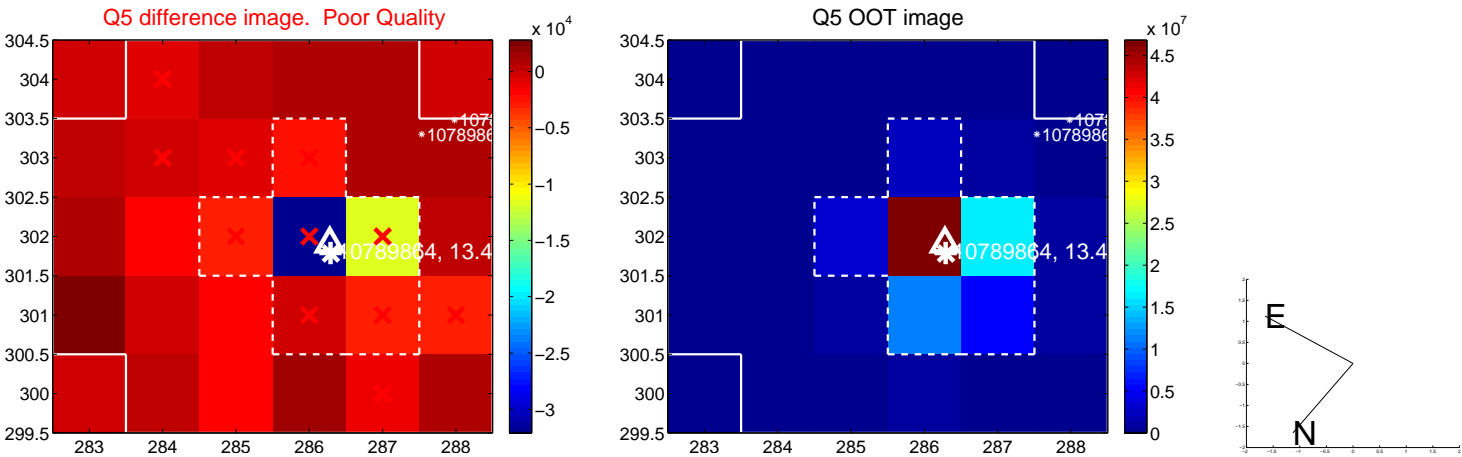
Q4 no difference image



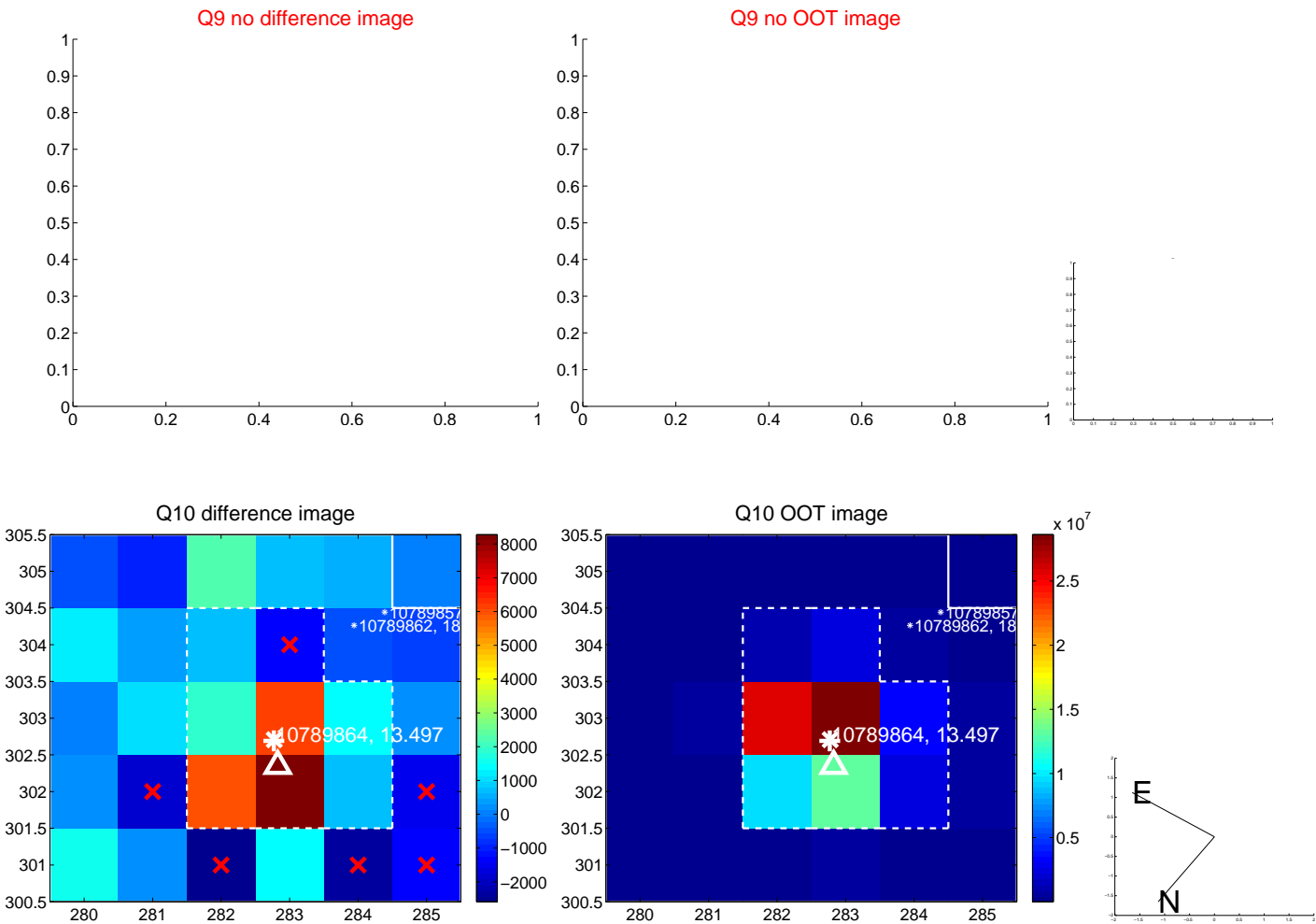
Q4 no OOT image



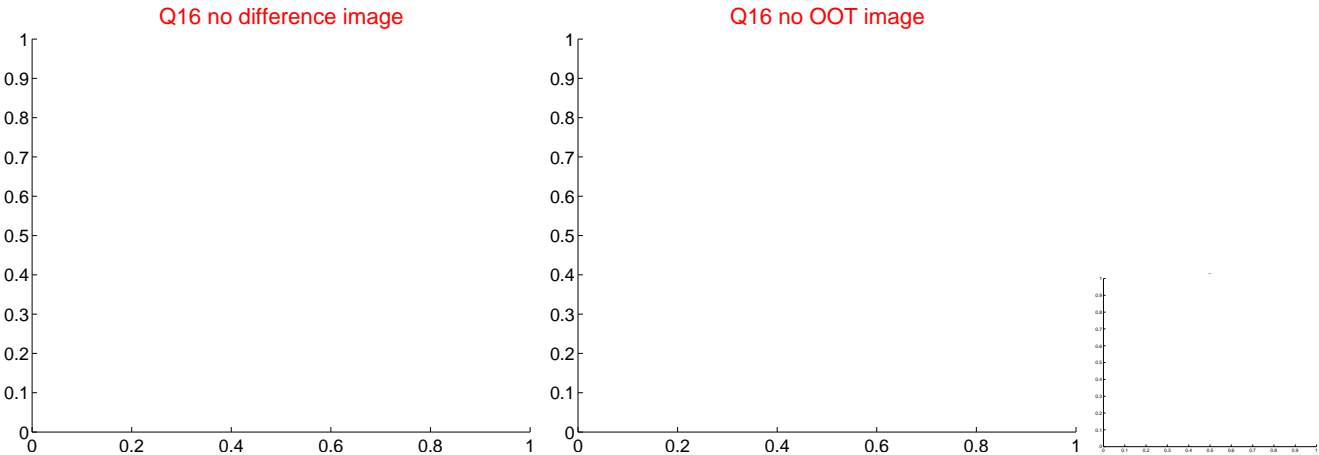
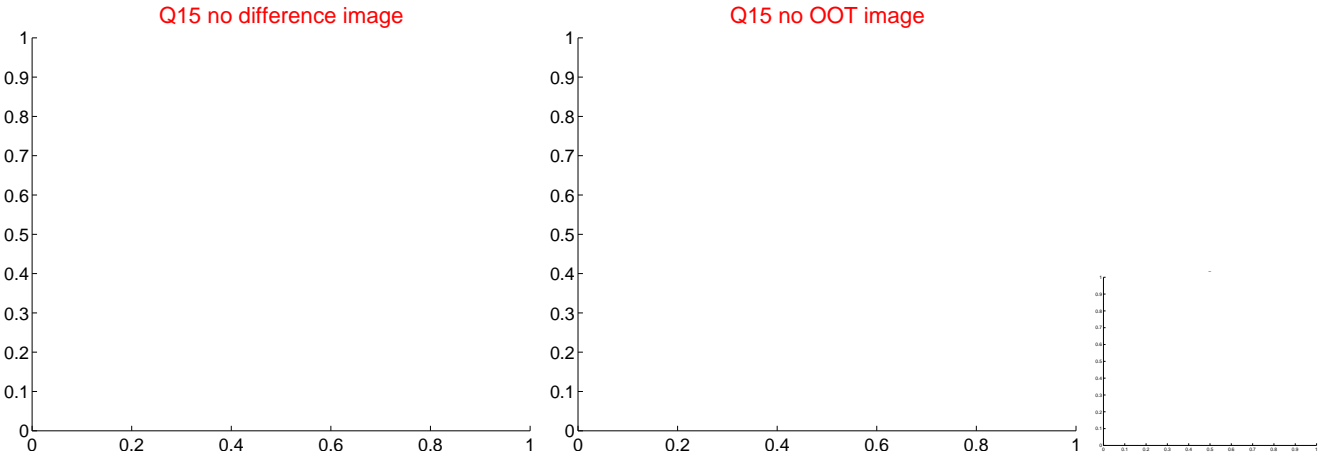
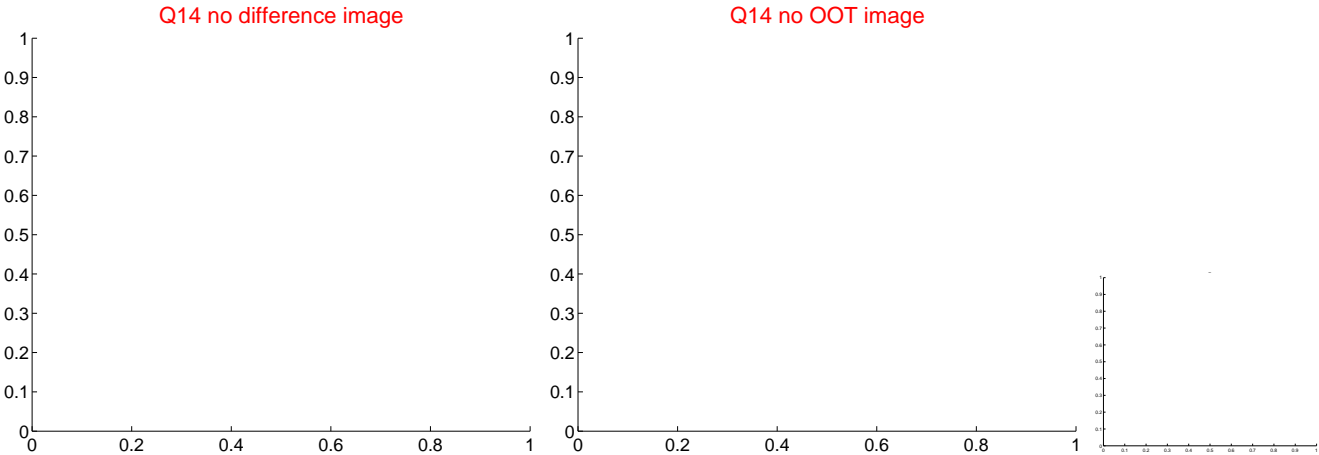
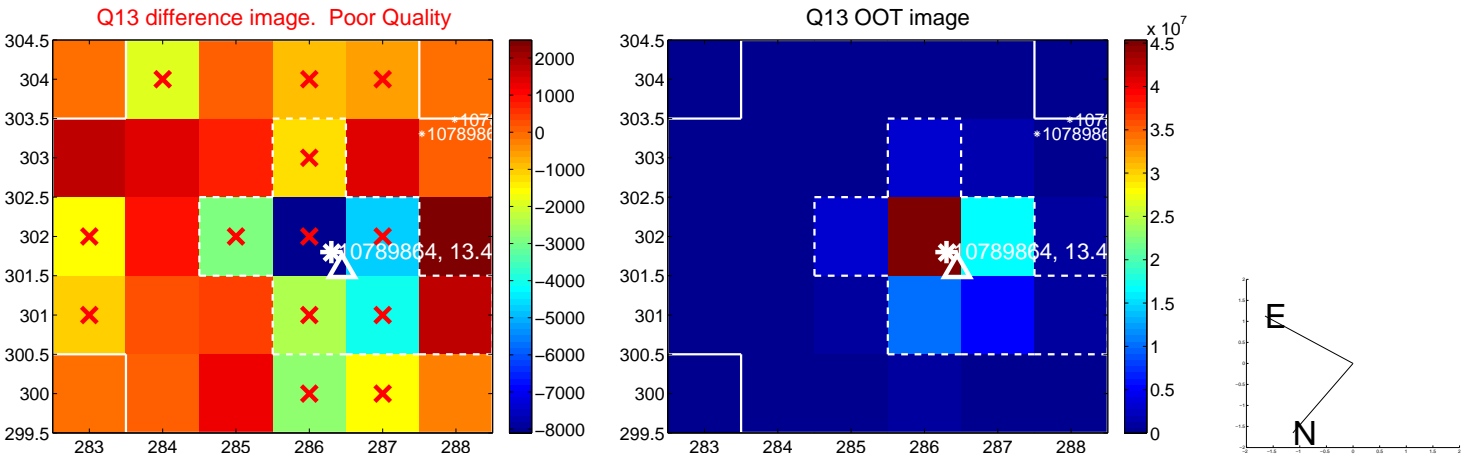
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



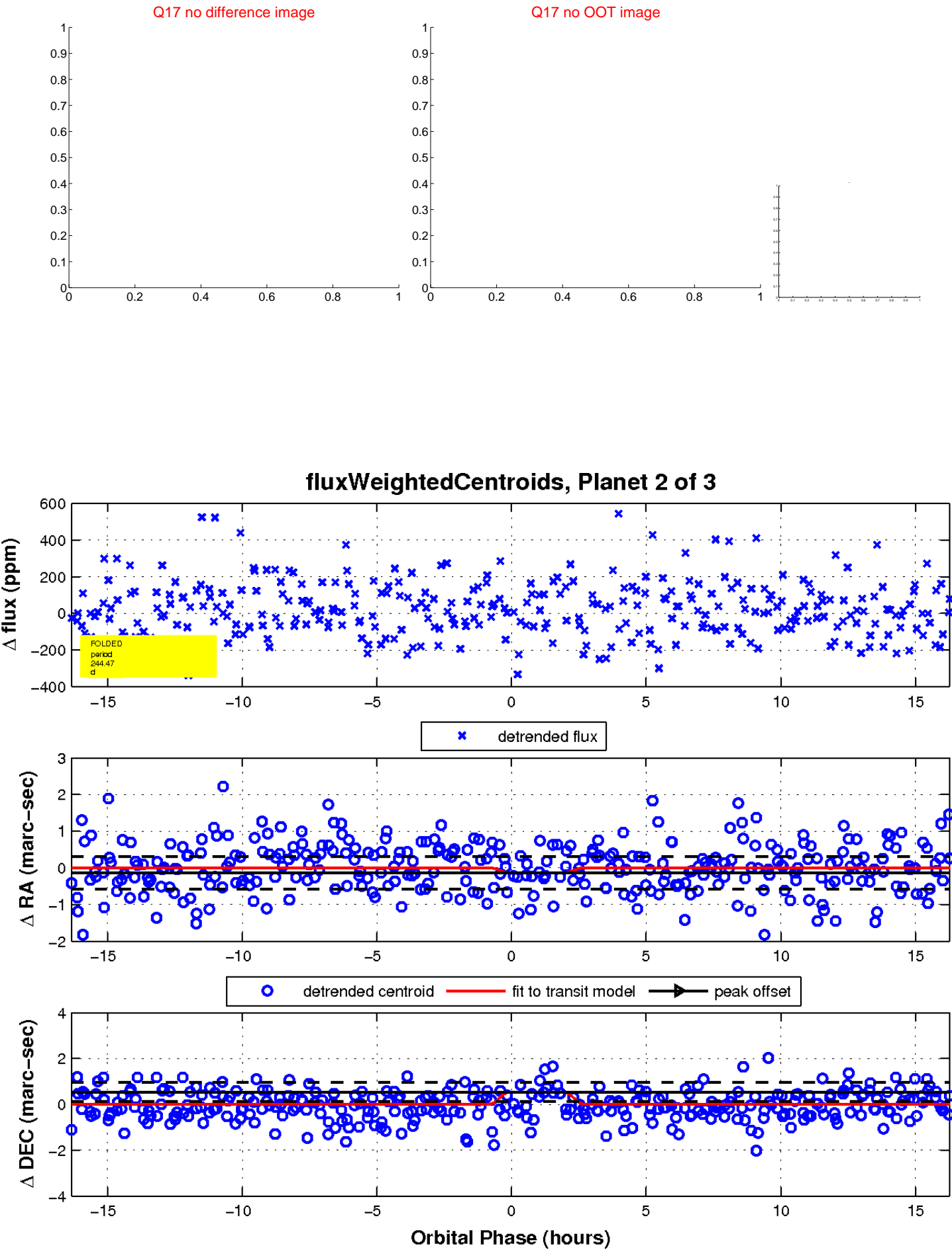
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

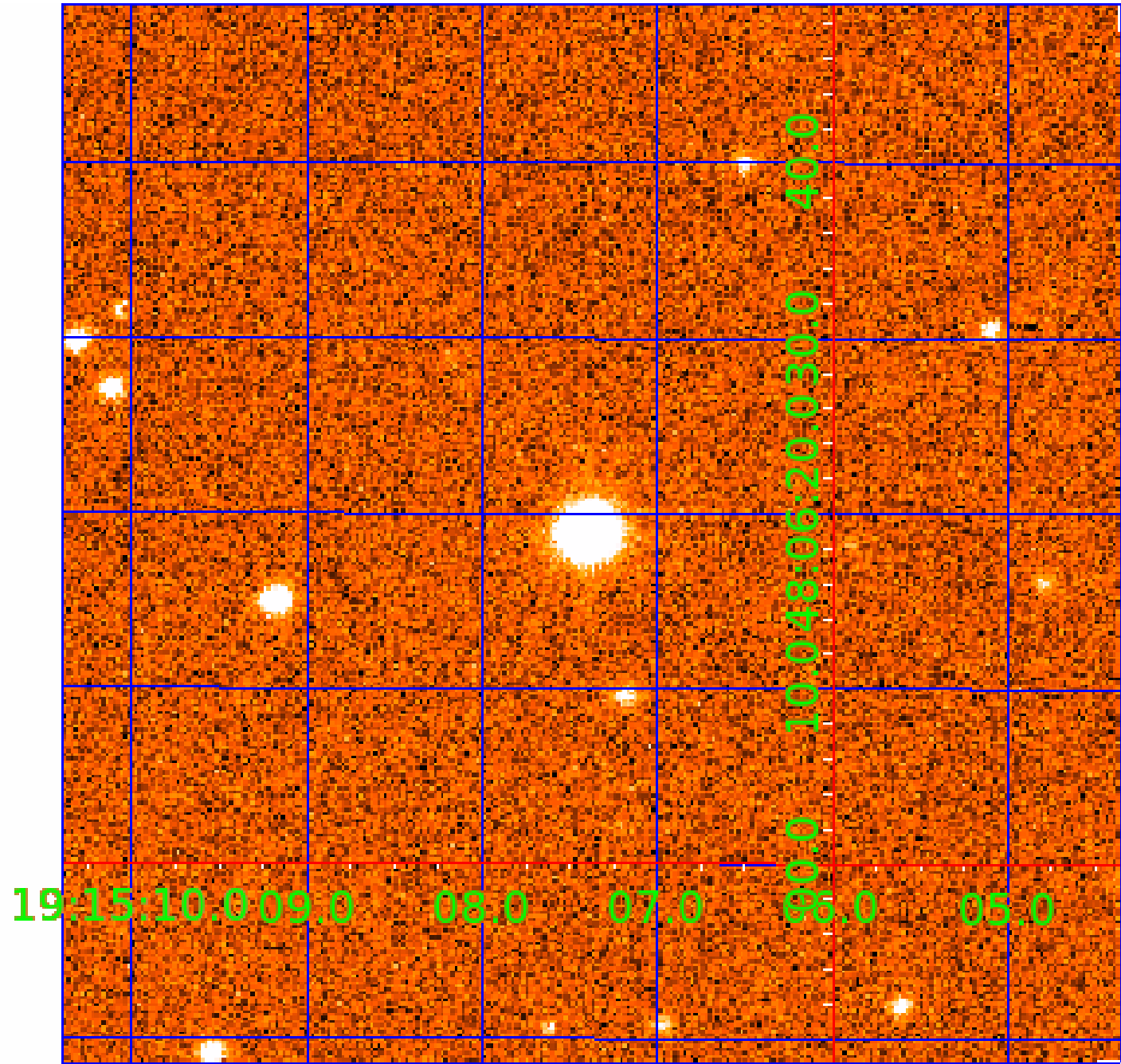


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010789864

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})
010789864-01	OBS	No	2.818063	132.670314	8.8	12.434	12.7	4.4	3.14	9063	0.95	21295.00
010789864-02	OBS	No	244.473923	263.348323	575.9	15.000	21.4	-1.0	3.14	9063	7.69	55.45
010789864-03	OBS	No	2.820065	132.821591	23.6	25.492	11.8	9.7	3.14	9063	1.63	21274.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010789864-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV
010789864-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
010789864-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV

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

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

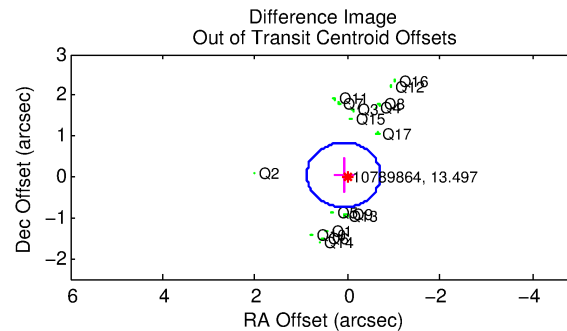
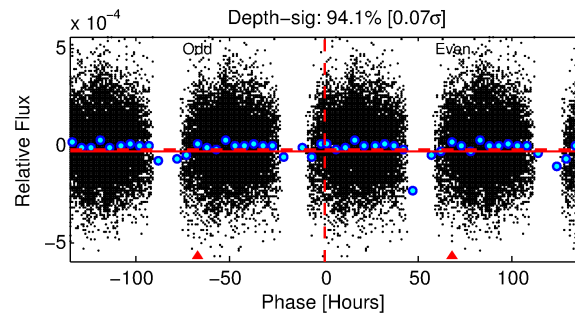
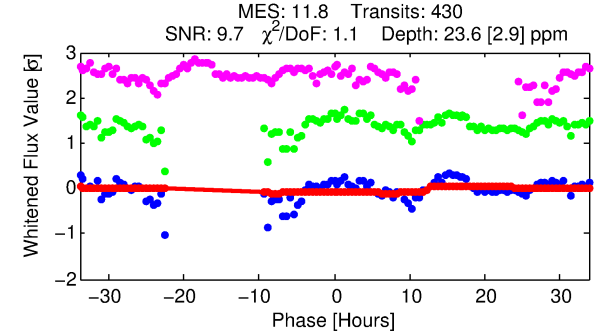
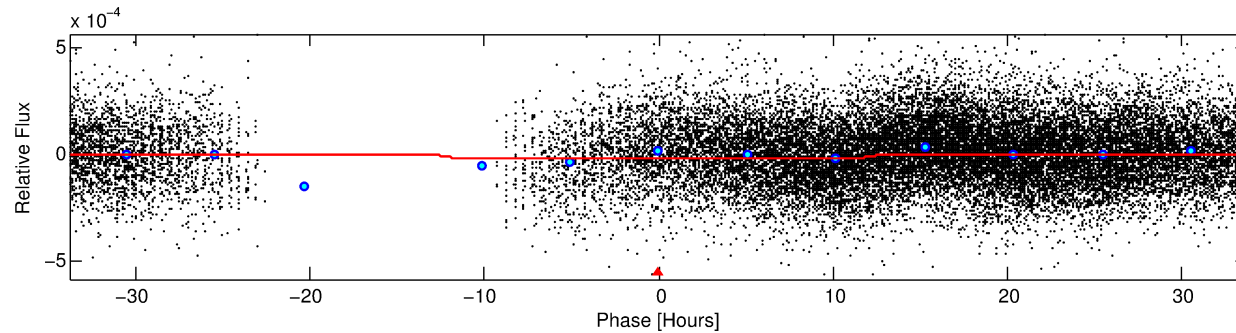
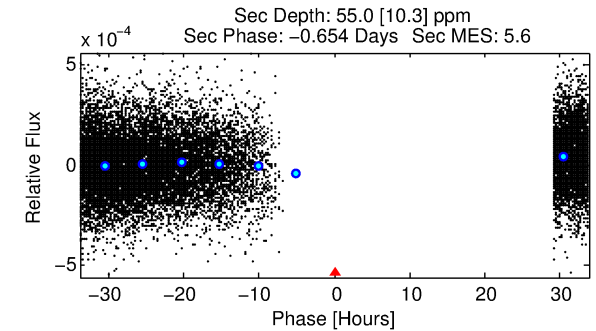
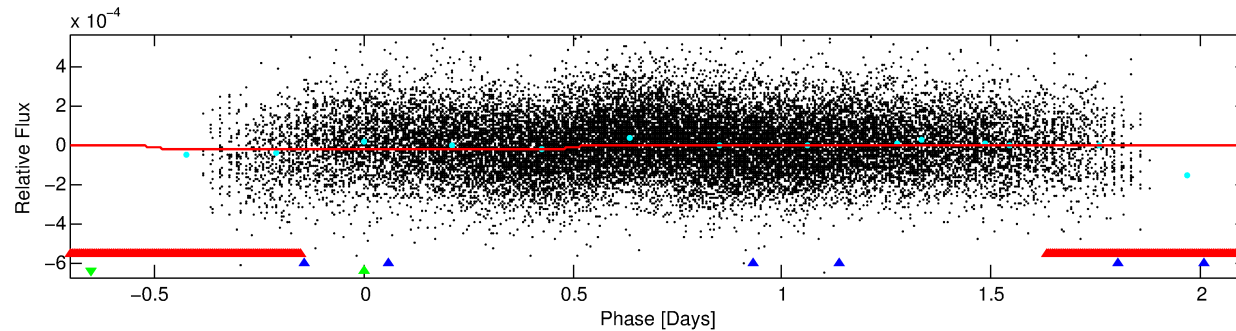
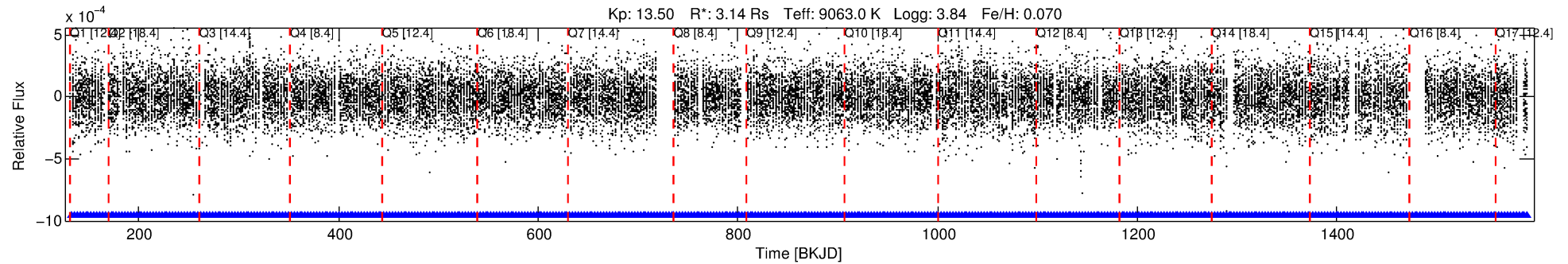
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010789864-03

No Significant Match Found

DV One-Page Summary

KIC: 10789864 Candidate: 3 of 3 Period: 2.820 d



DV Fit Results:

Period = 2.82006 [0.00007] d
Epoch = 132.8216 [0.0905] BKJD
Rp/R* = 0.0048 [0.0023]
a/R* = 1.05 [0.35]
b = 0.68 [2.65]
Seff = 21274.84 [14206.03]
Teq = 3080 [514] K
Rp = 1.63 [1.08] Re
a = 0.0530 [0.0218] AU
Ag = 31.89 [37.42] [0.83σ]
Teffp = 11315 [2850] K [2.84σ]

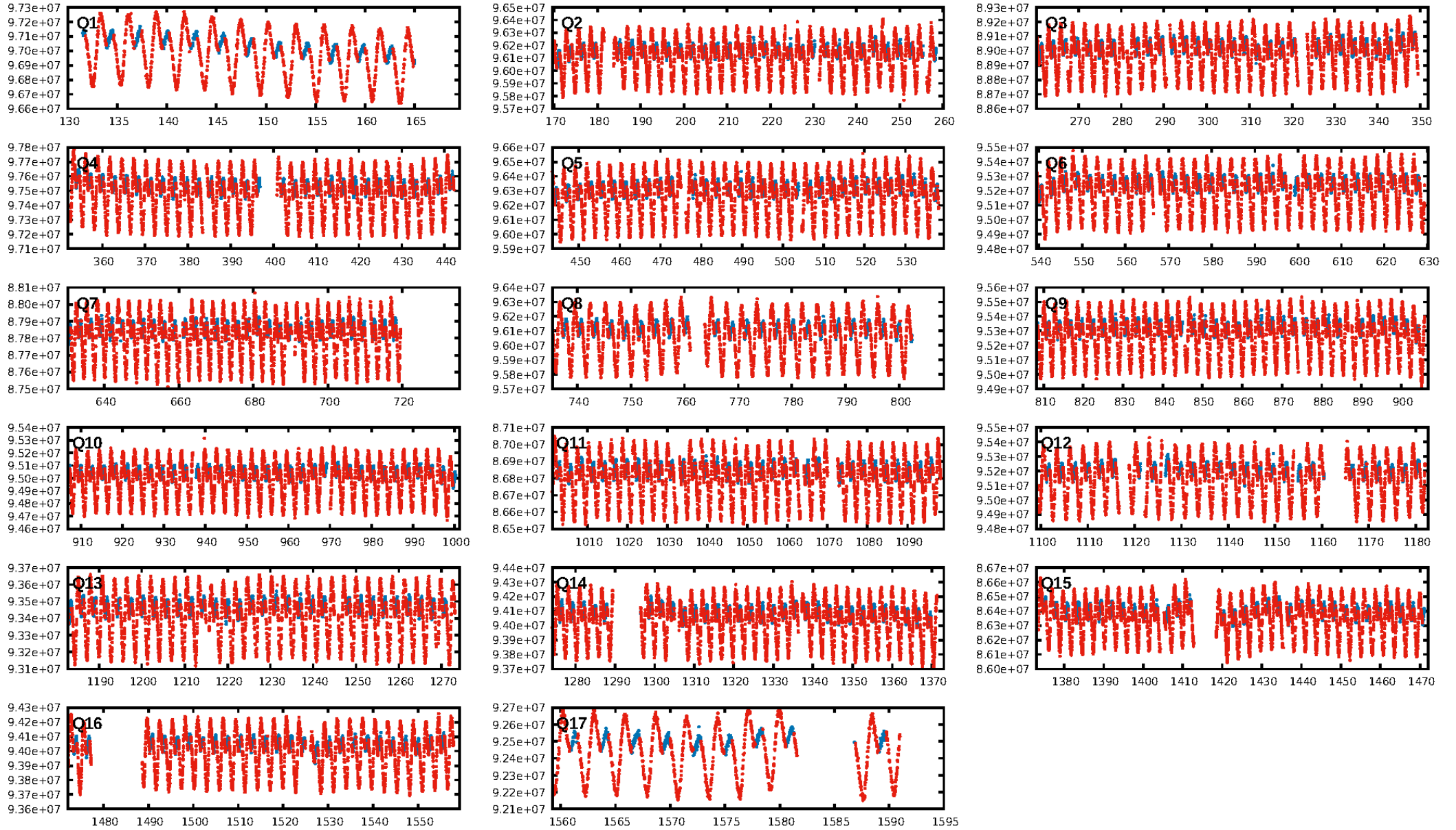
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [196.08σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [420/420]
GhostDiagnostic-chr: 5.926
Centroid-sig: 0.8%
Centroid-so: 1.063 arcsec [1.66σ]
OotOffset-rm: 0.101 arcsec [0.38σ]
KicOffset-rm: 0.153 arcsec [0.51σ]
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]

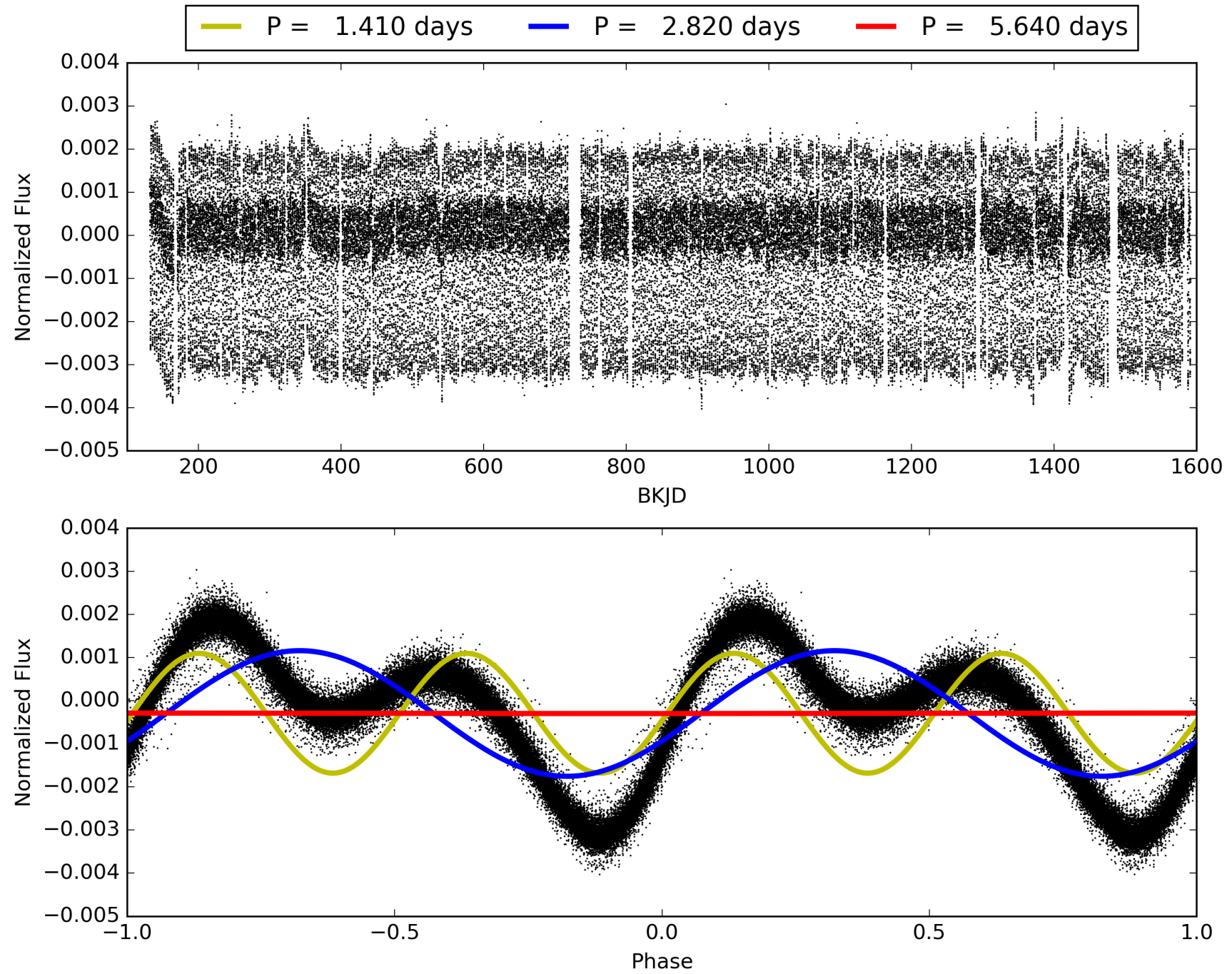
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:29:54 Z

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

TCE 010789864-03, PDC Light Curves

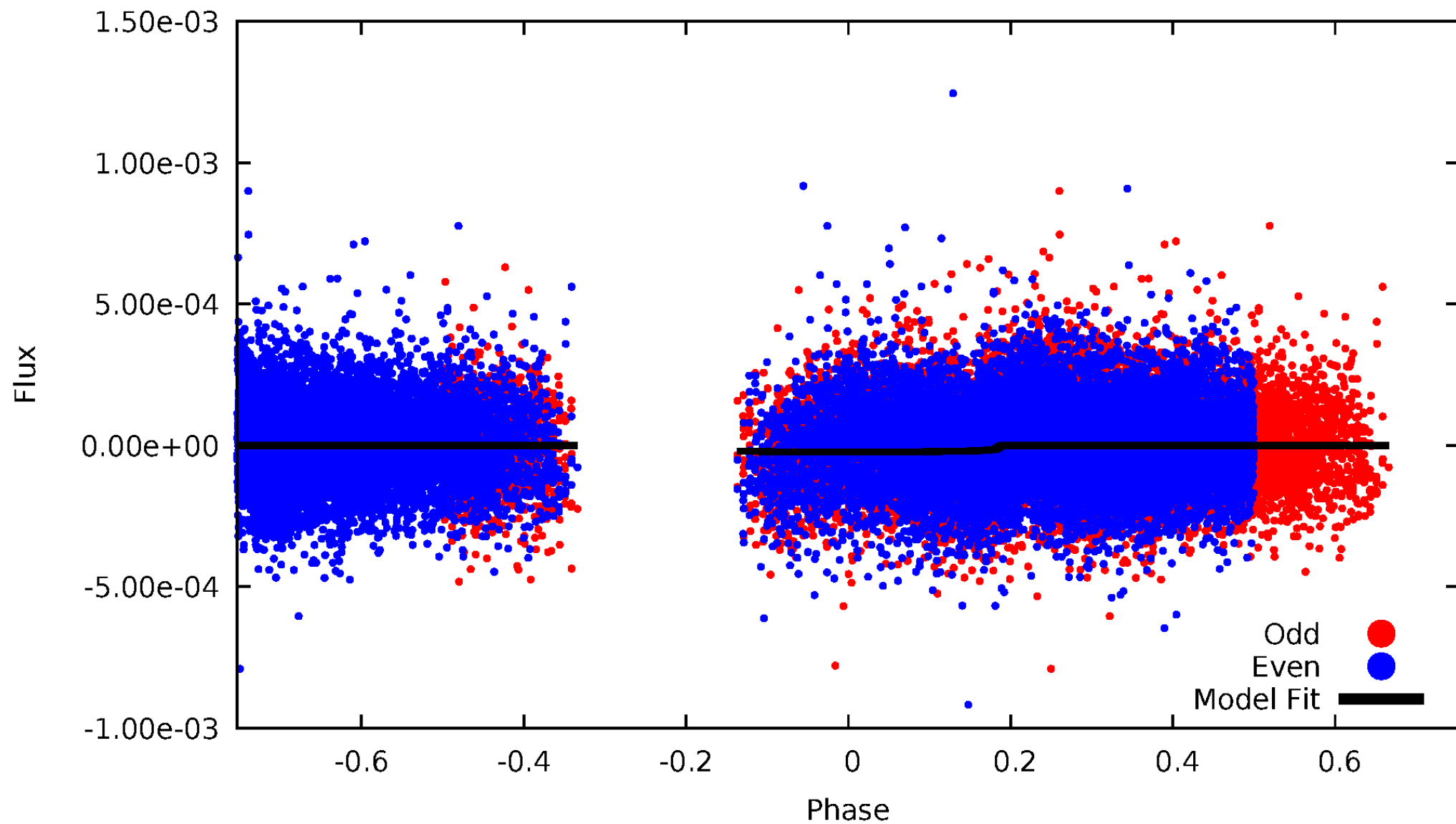


TCE 010789864-03



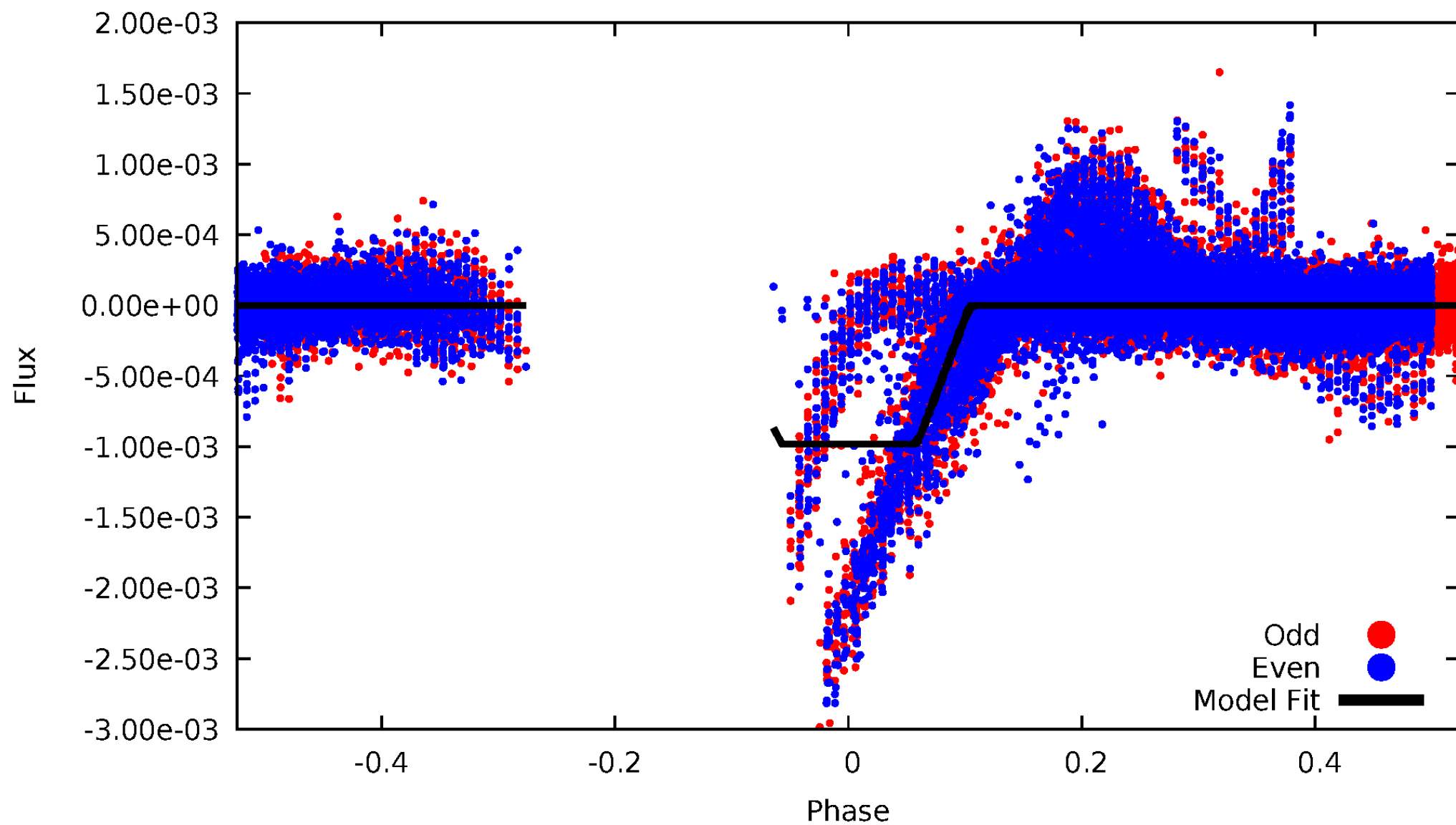
DV Odd/Even

TCE 010789864-03



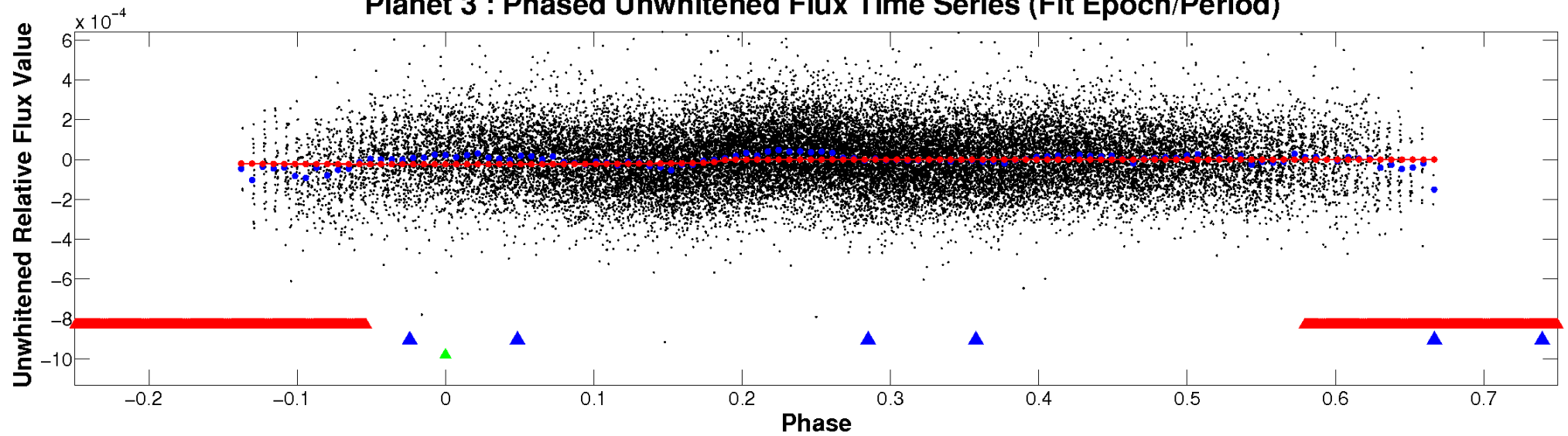
ALT Odd/Even

TCE 010789864-03

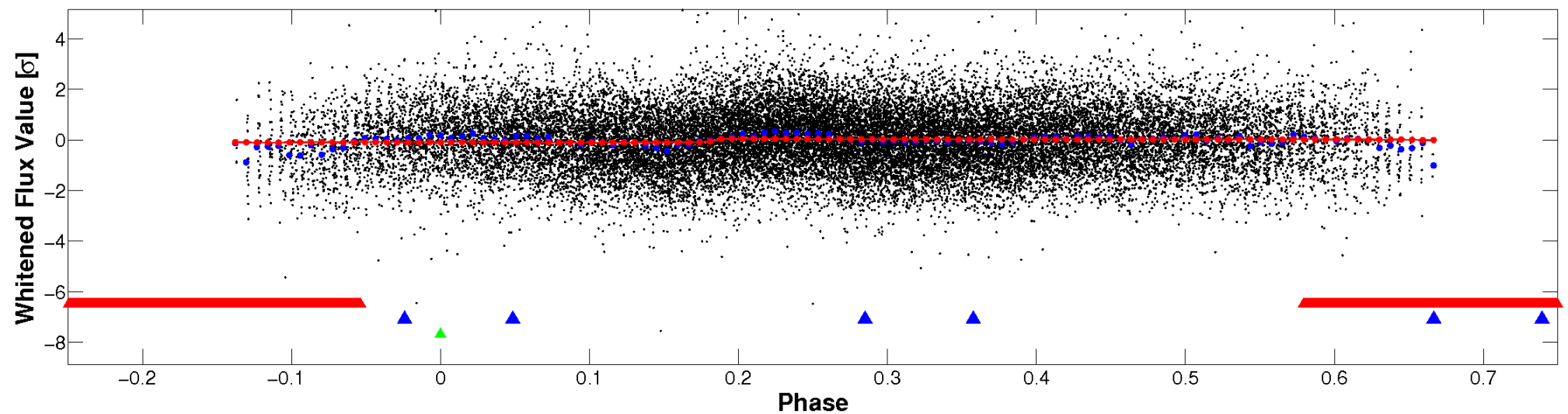


Non-Whitened Vs. Whitened Light Curve

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

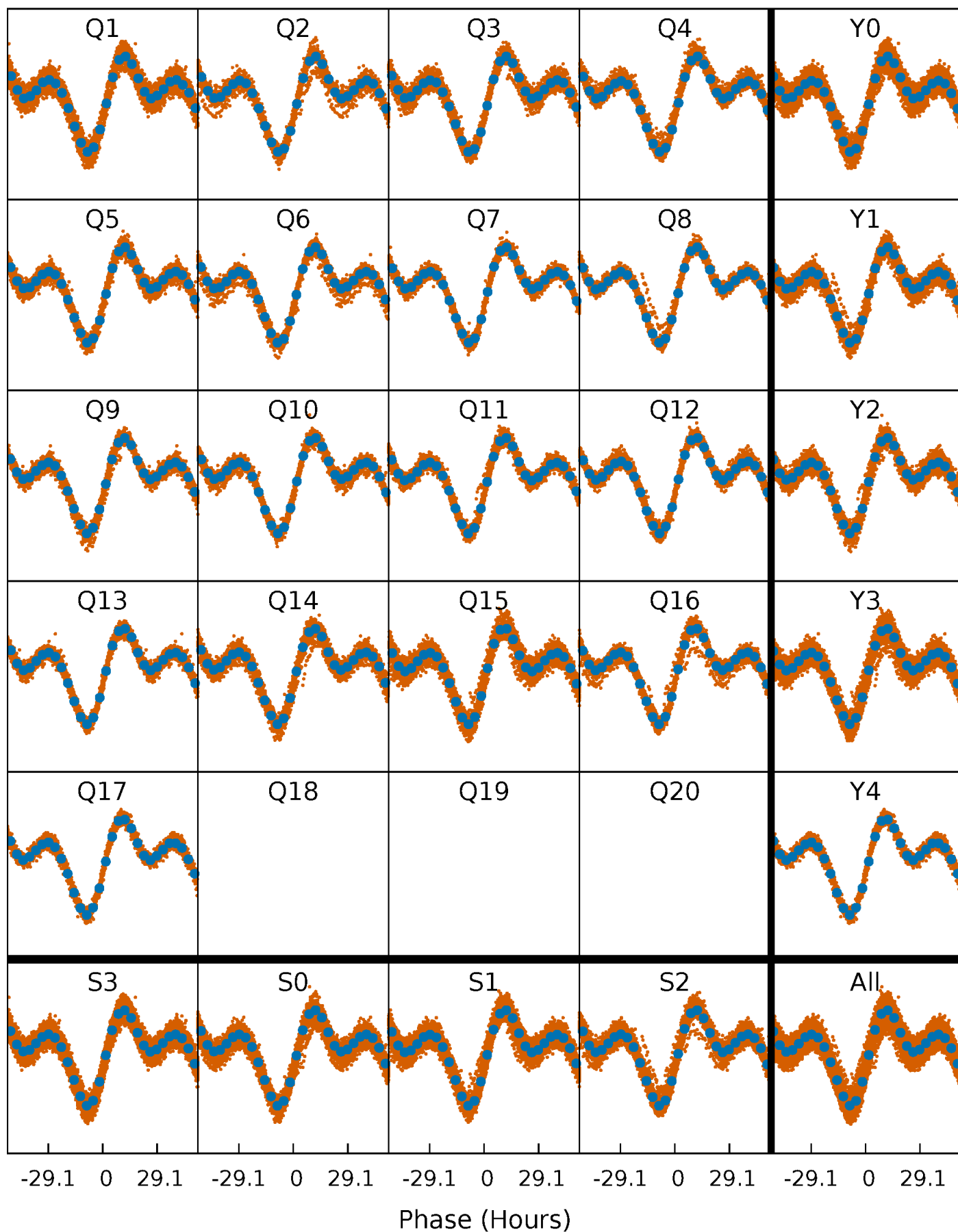


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



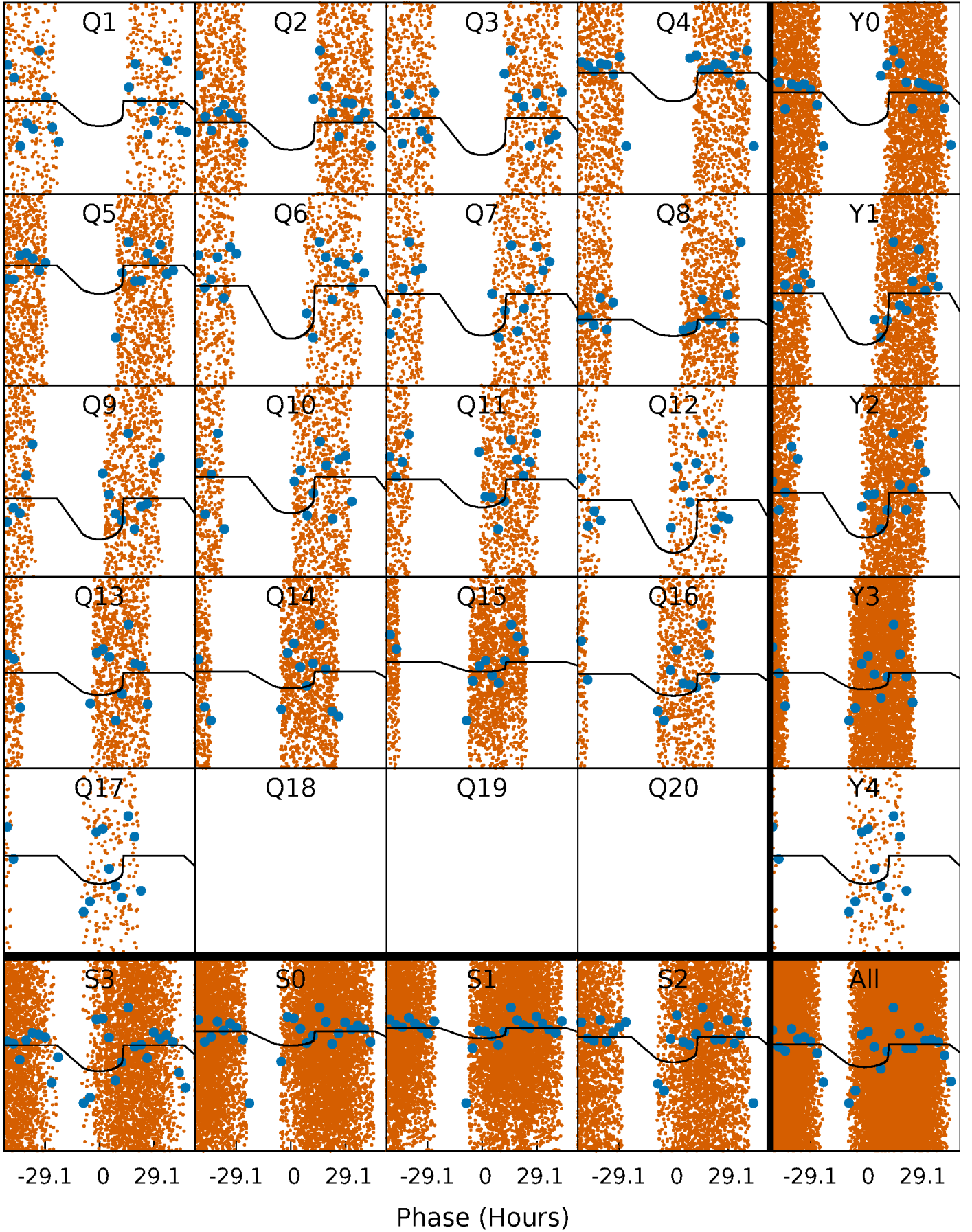
PDC Quarter-Phased Transit Curves

TCE 010789864-03 P= 2.820065 Days $T_0=132.821591$ (BKJD)



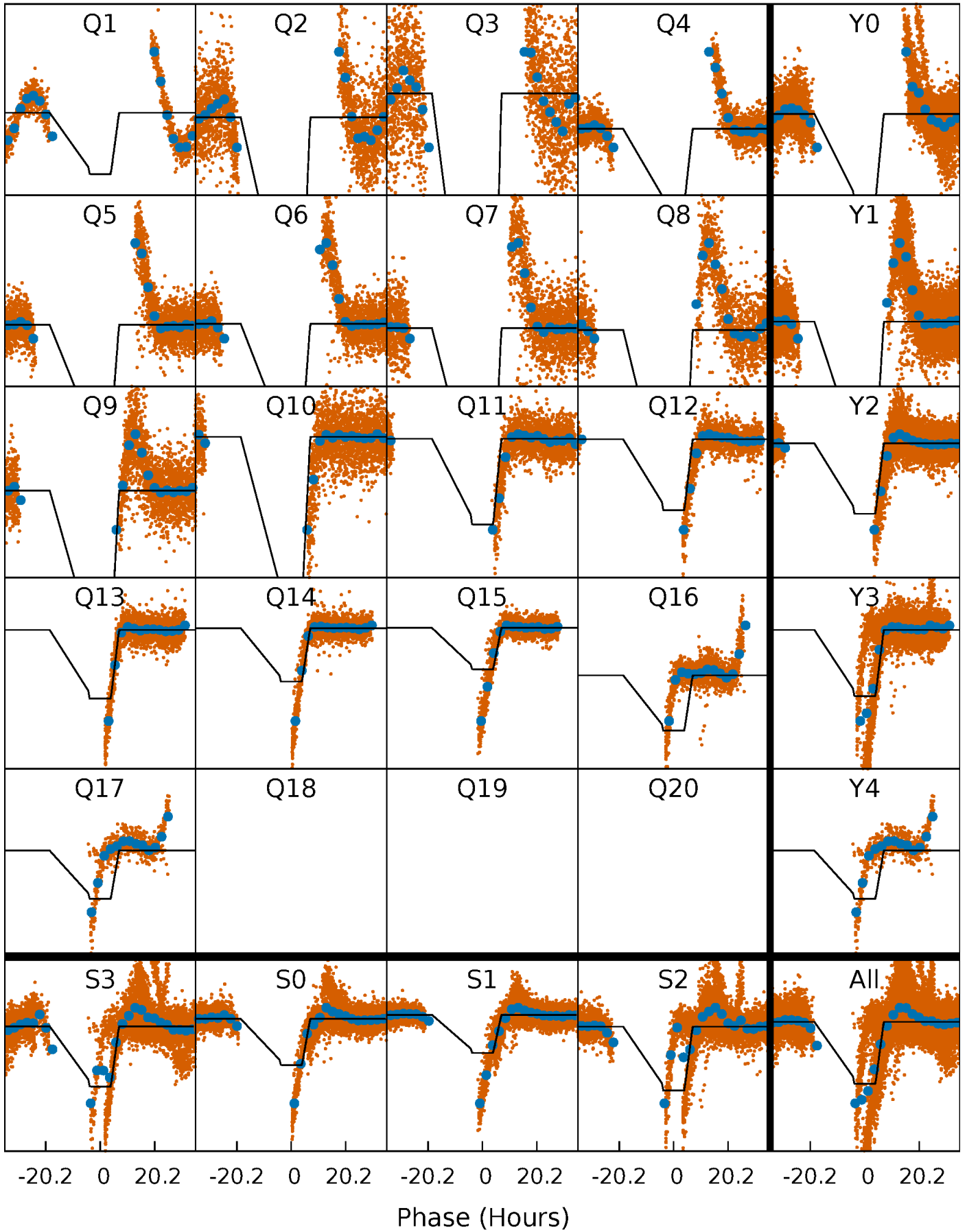
DV Quarter-Phased Transit Curves

TCE 010789864-03 P= 2.820065 Days $T_0=132.821591$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

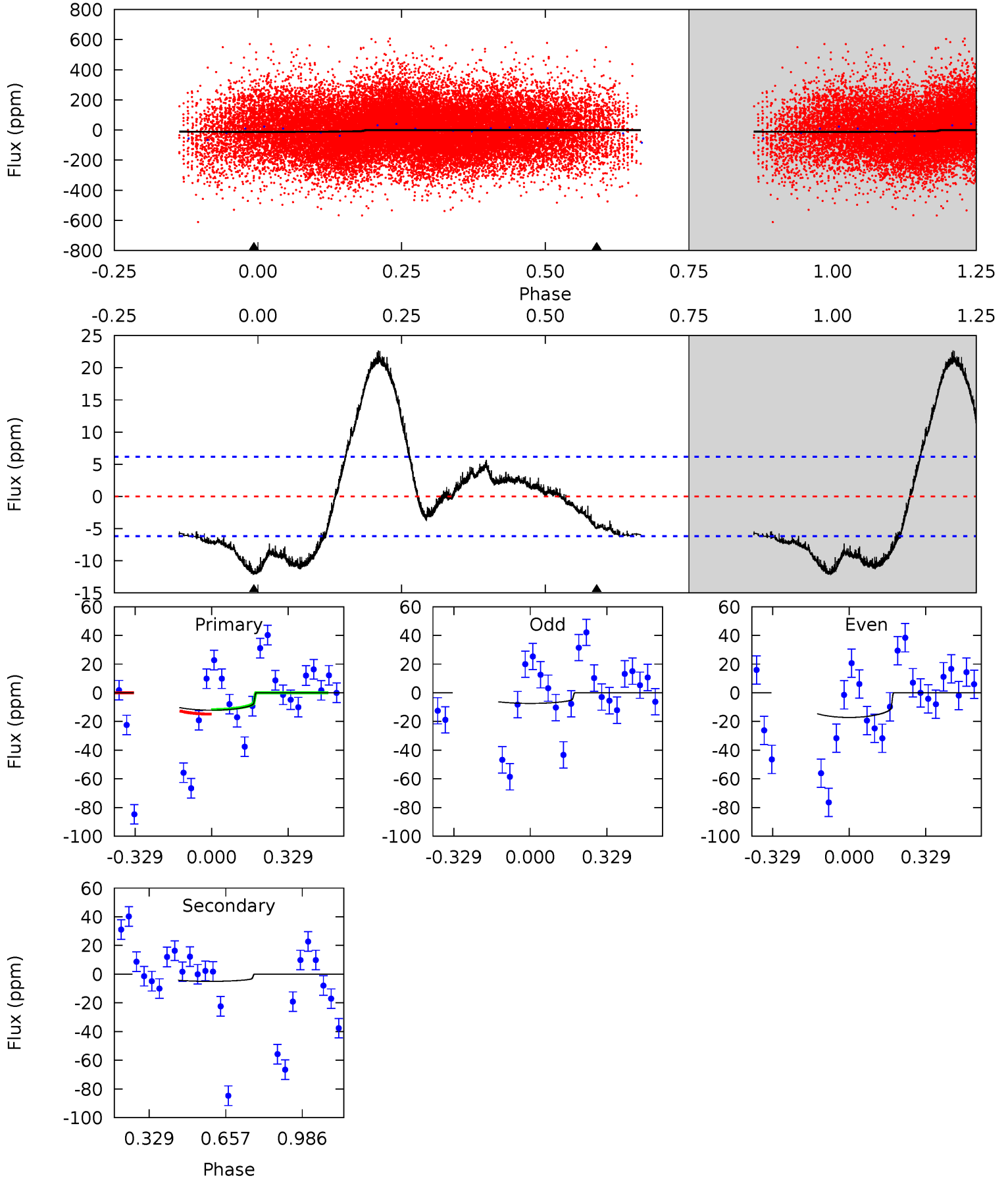
TCE 010789864-03 P= 2.819982 Days $T_0=132.658745$ (BKJD)



DV Model-Shift Uniqueness Test

010789864-03, P = 2.820065 Days, E = 130.001526 Days

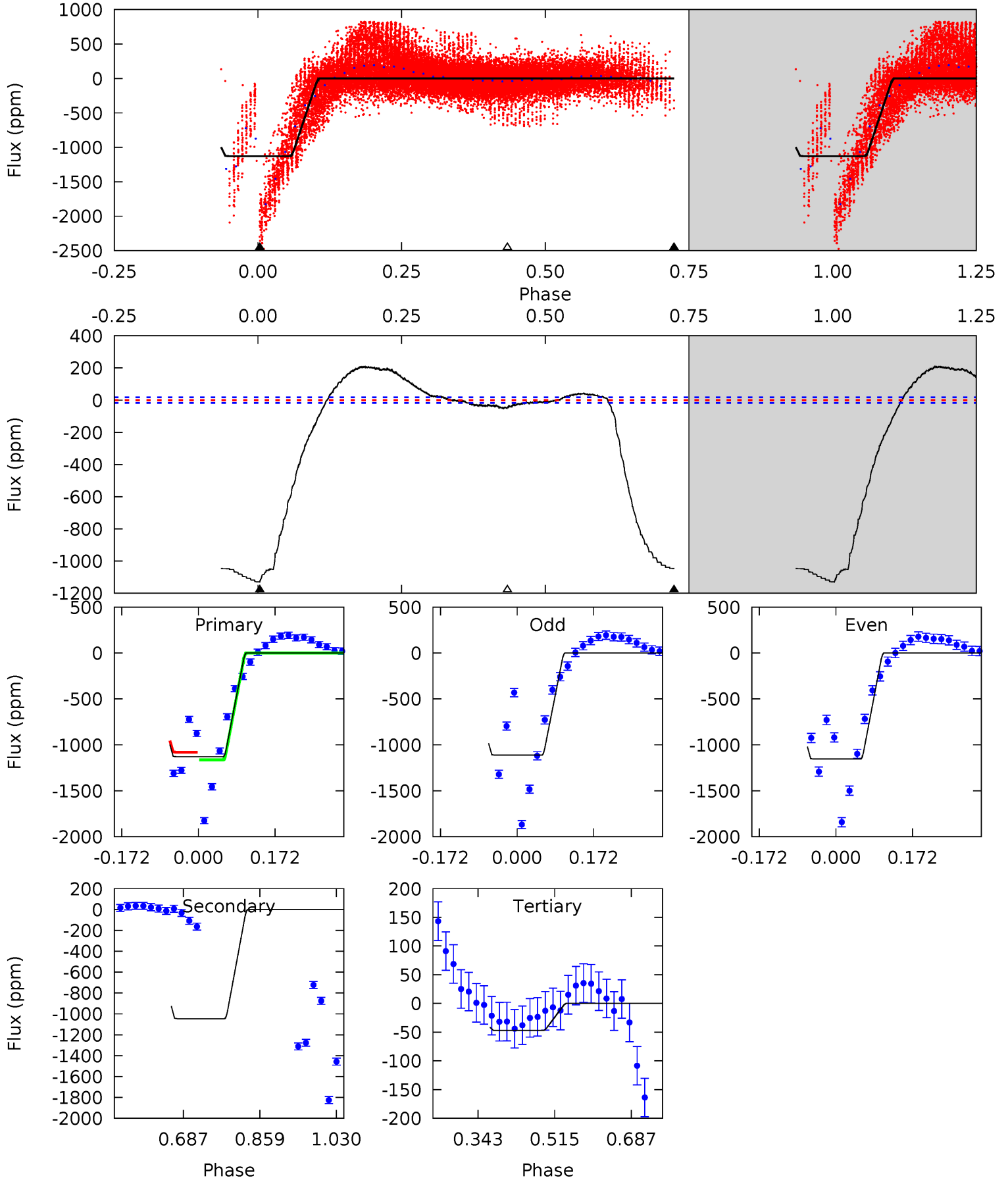
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.48	3.48	0	0	4.31	0.98	0.77	8.48	8.48	3.48	3.48	3.37	0.98	0.65	0.76



Alt Model-Shift Uniqueness Test

010789864-03, P = 2.819982 Days, E = 129.838763 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
287.2	266.1	12.0	0	4.45	1.37	16.0	275.2	287.2	254.1	266.1	5.36	1.03	0.16	0



Stellar Parameters For KIC 010789864

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9063^{+251}_{-466}	$3.840^{+0.364}_{-0.156}$	$0.070^{+0.200}_{-0.650}$	$3.143^{+0.950}_{-1.425}$	$2.490^{+0.291}_{-0.872}$	$0.113^{+0.366}_{-0.052}$
	+3%/-5%	+9%/-4%	+286%/-929%	+30%/-45%	+12%/-35%	+324%/-46%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010789864-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$1.50^{+0.90}_{-0.75}$	4202^{+386}_{-445}	5678^{+2805}_{-1186}	$3.322^{+9.635}_{-2.147}$
Alt.	-1046 ± 4	$10.22^{+2.10}_{-2.52}$	4178^{+405}_{-462}	9154^{+551}_{-588}	15^{+9}_{-4}

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

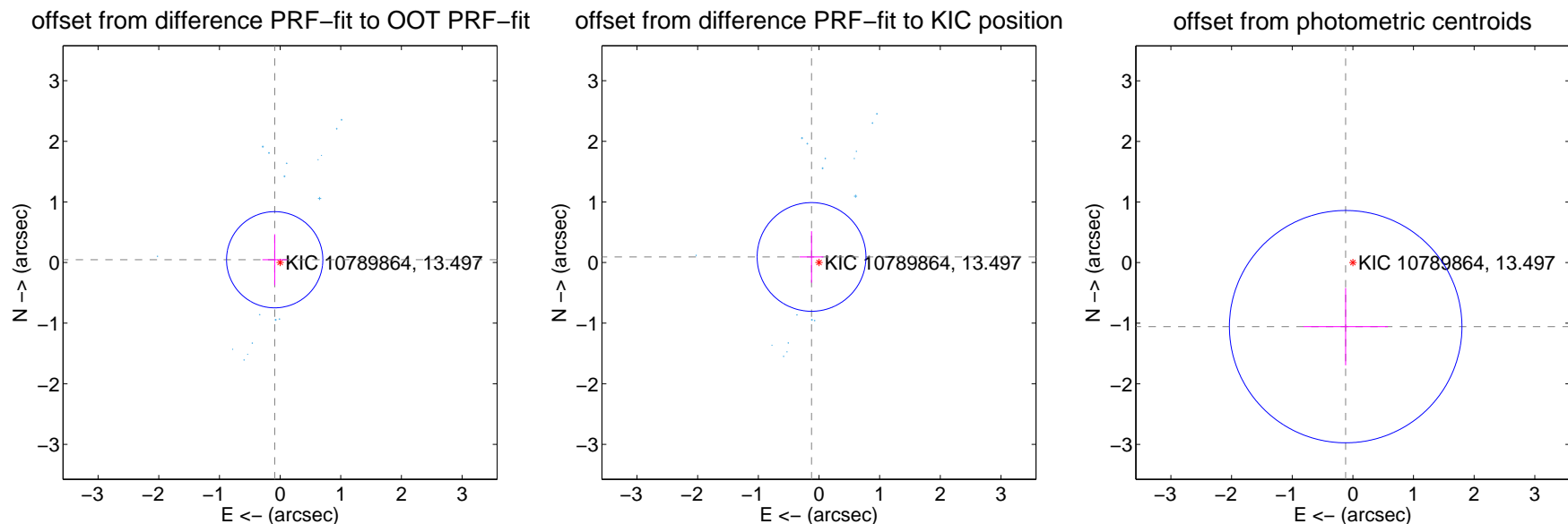
DV Centroid Data

Supplemental centroid analysis for 010789864-03. Kepler magnitude: 13.50. Transit SNR 9.70

There are 17 quarters with good PRF difference image offsets

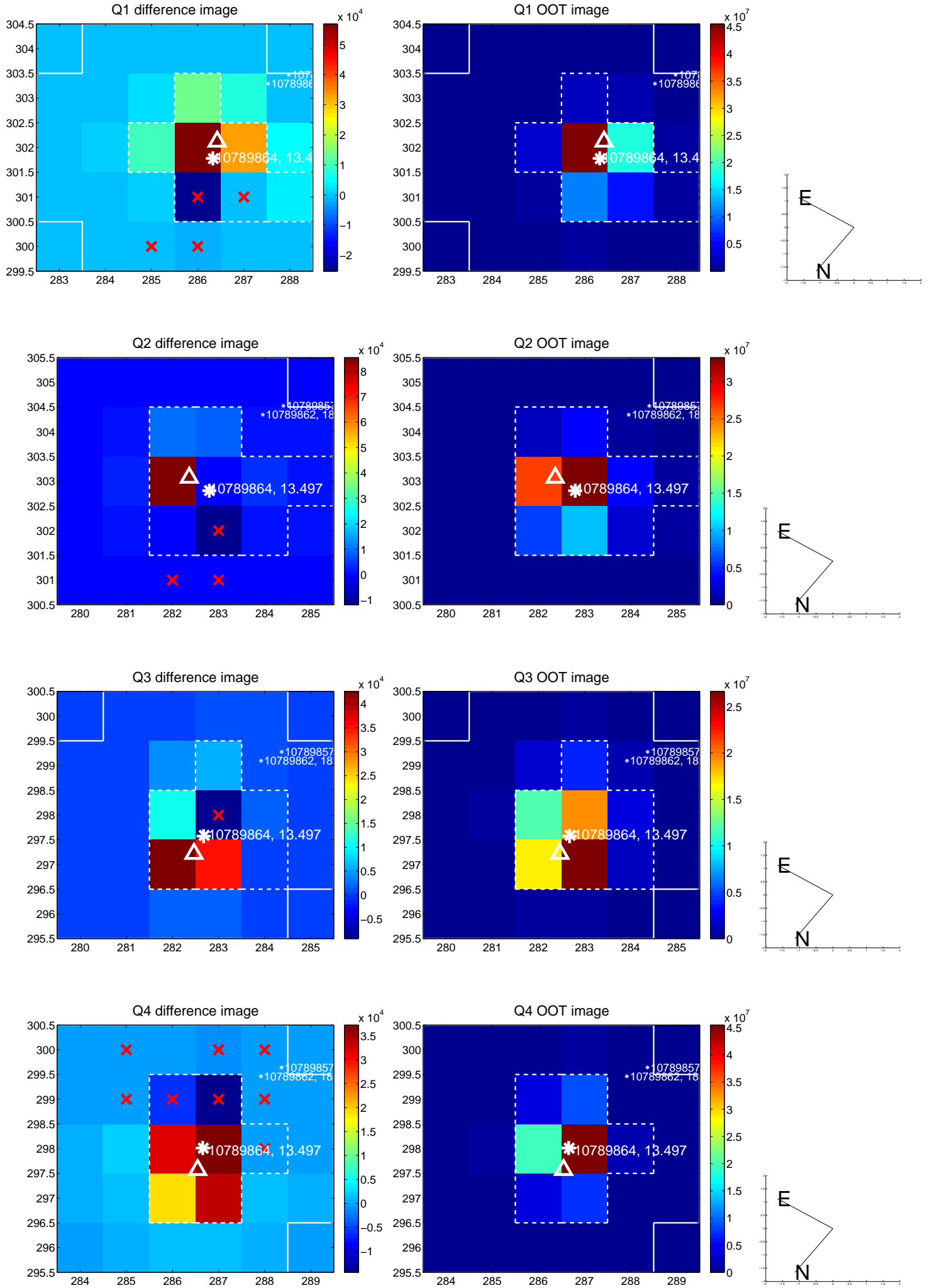
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.264	0.38	0.089 ± 0.203	0.046 ± 0.421
PRF-fit source offset from KIC position	0.153 ± 0.299	0.51	0.123 ± 0.194	0.092 ± 0.425
photometric centroid source offset	1.06 ± 0.64	1.66	0.12 ± 0.70	-1.06 ± 0.64

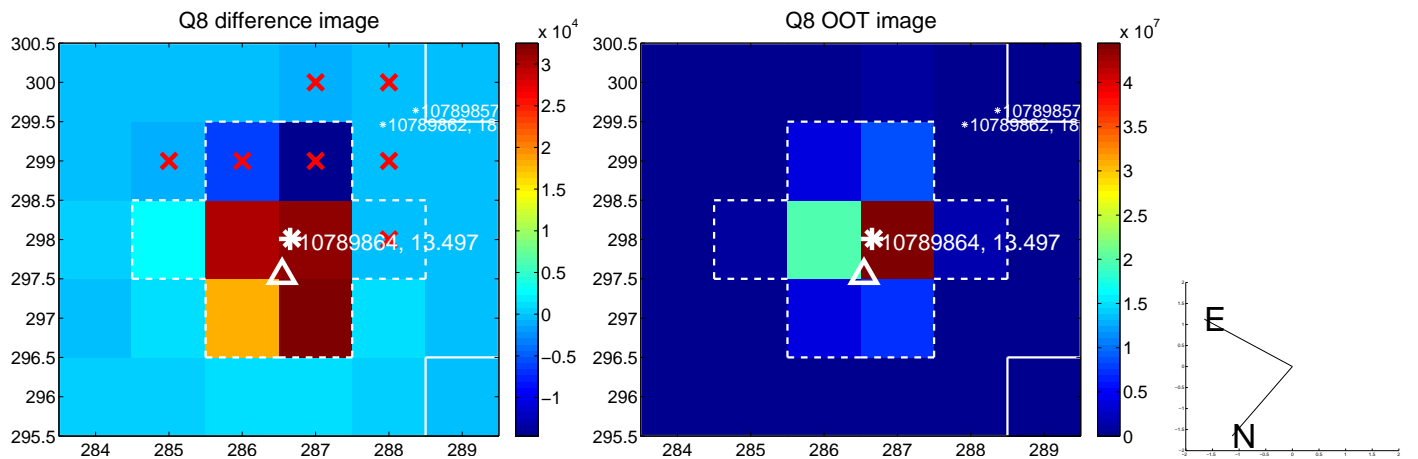
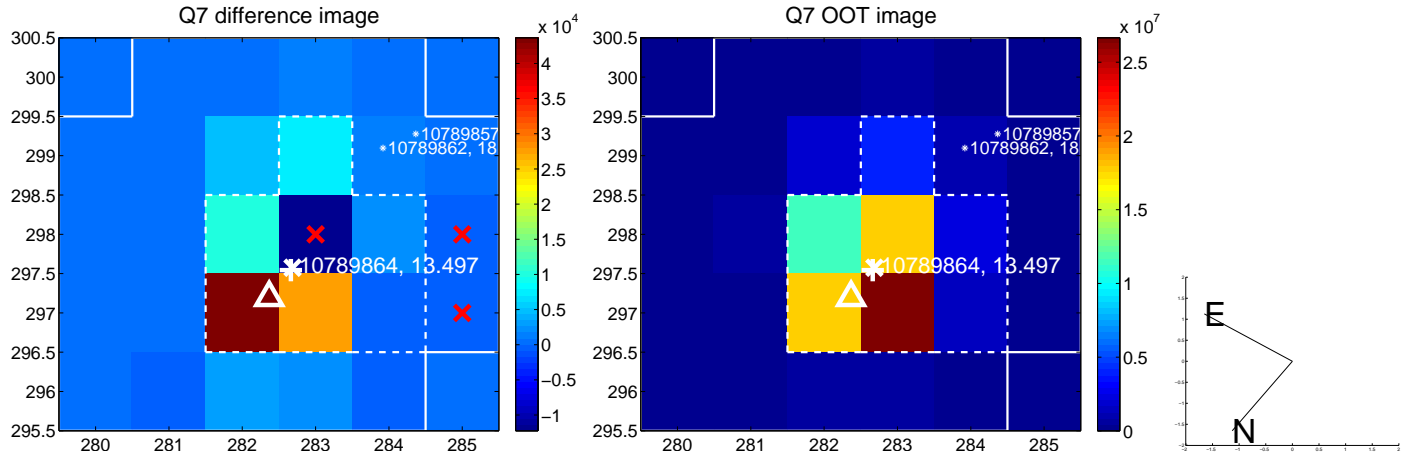
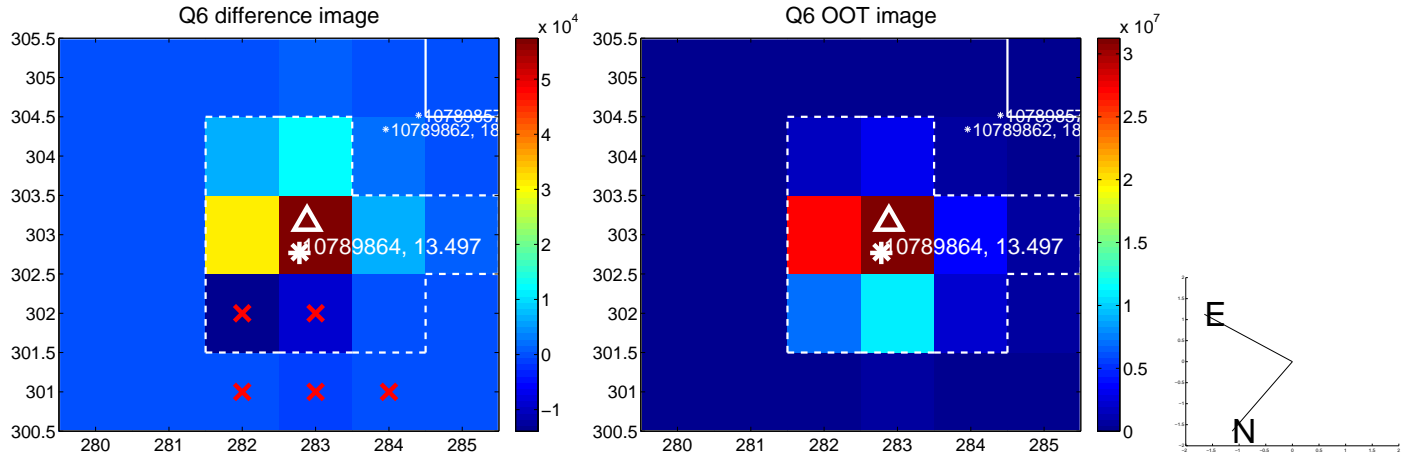
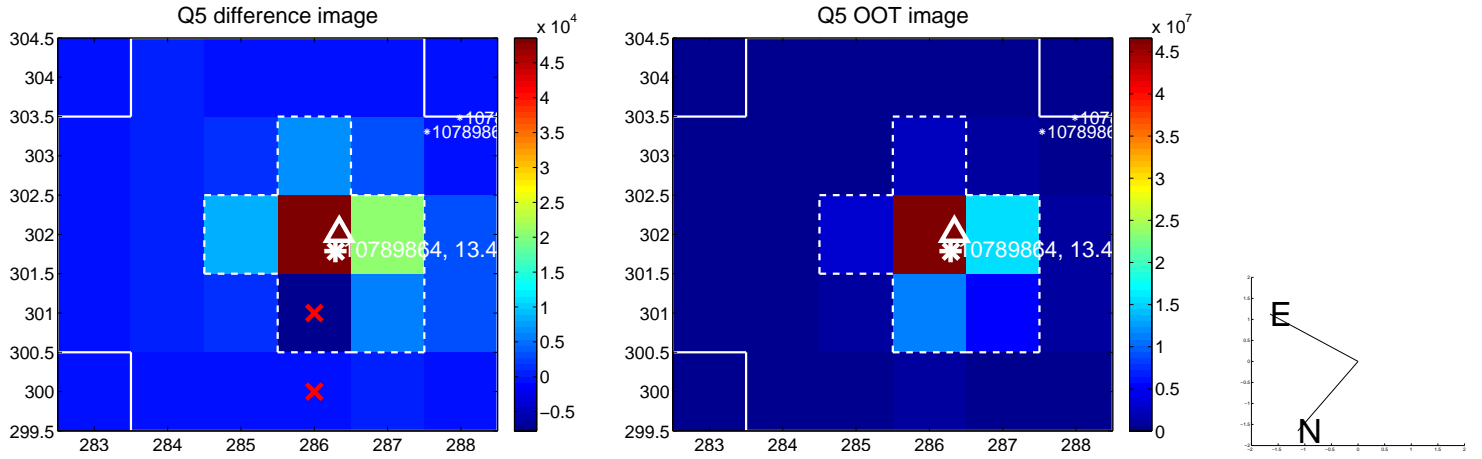


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

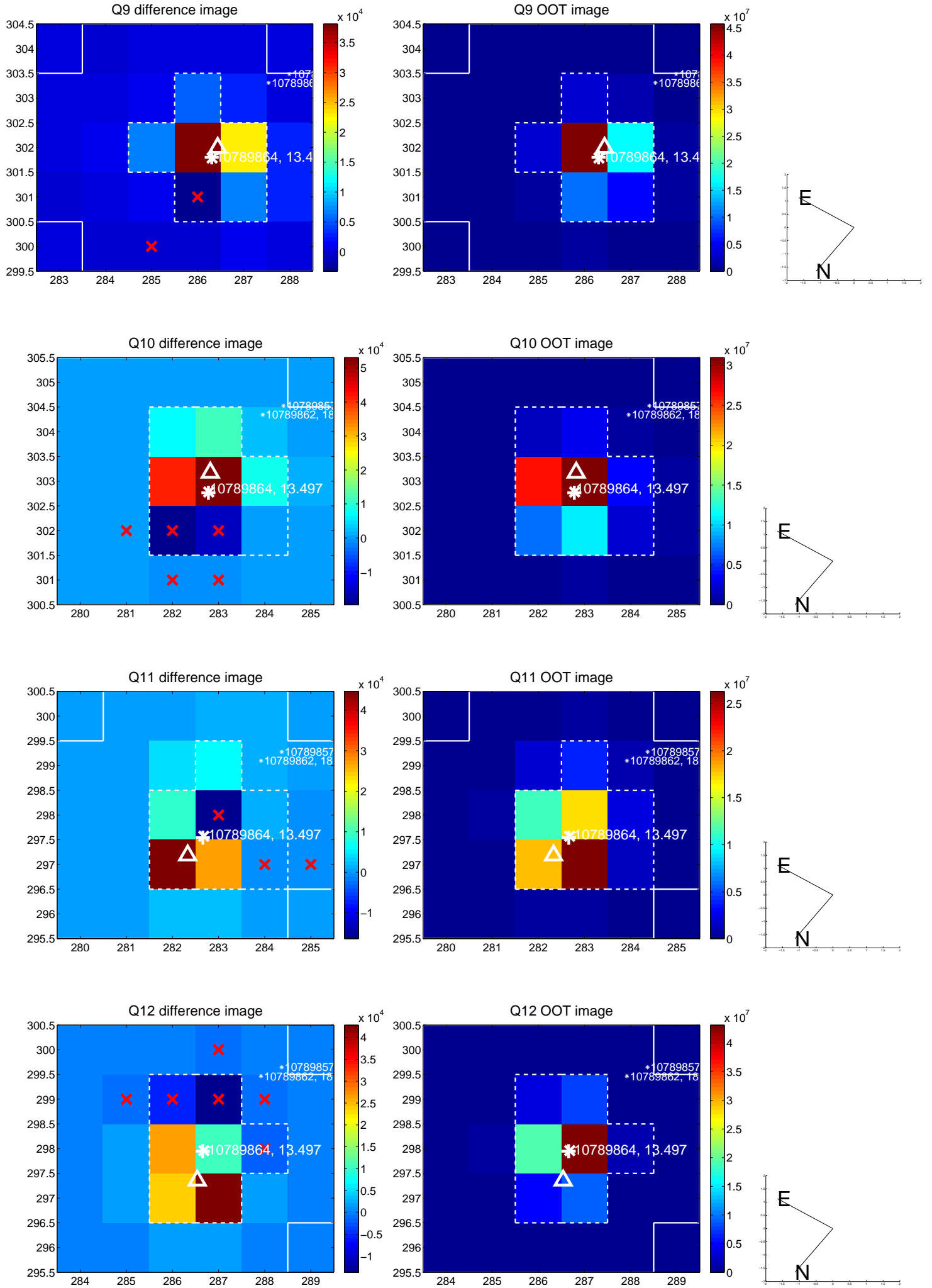
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



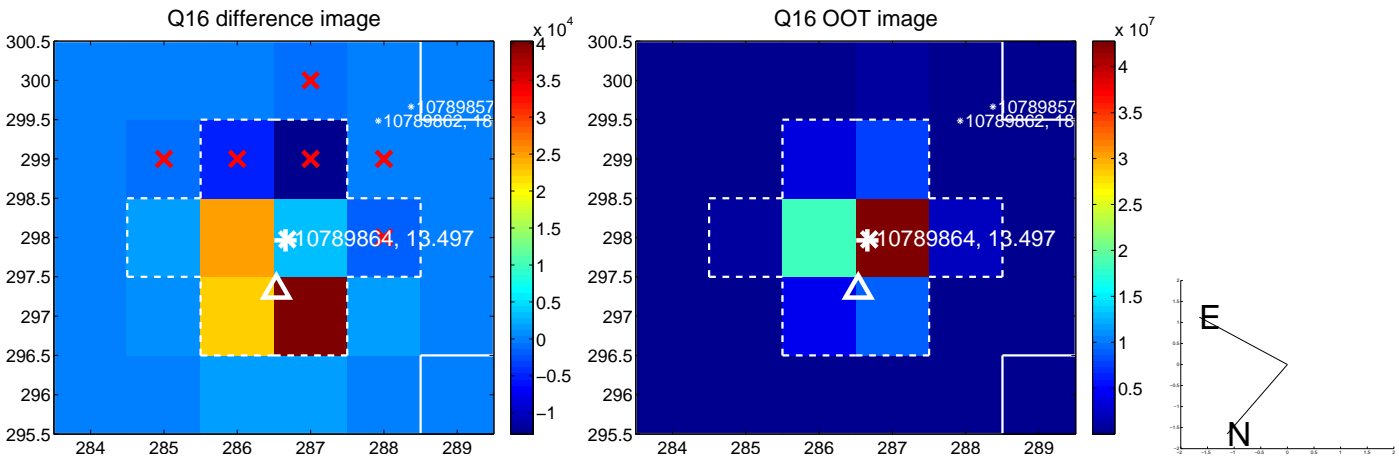
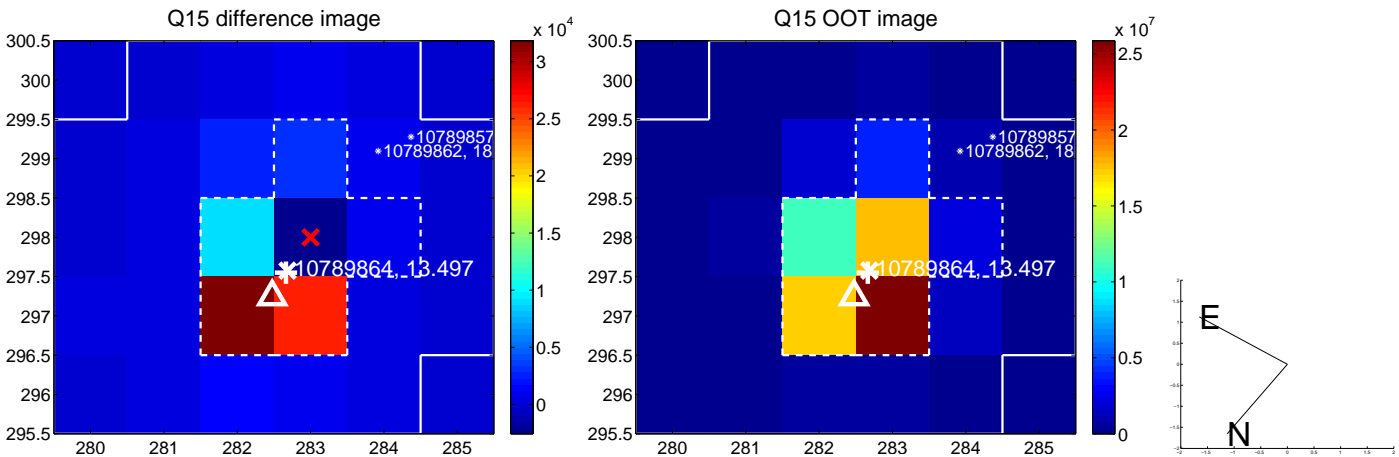
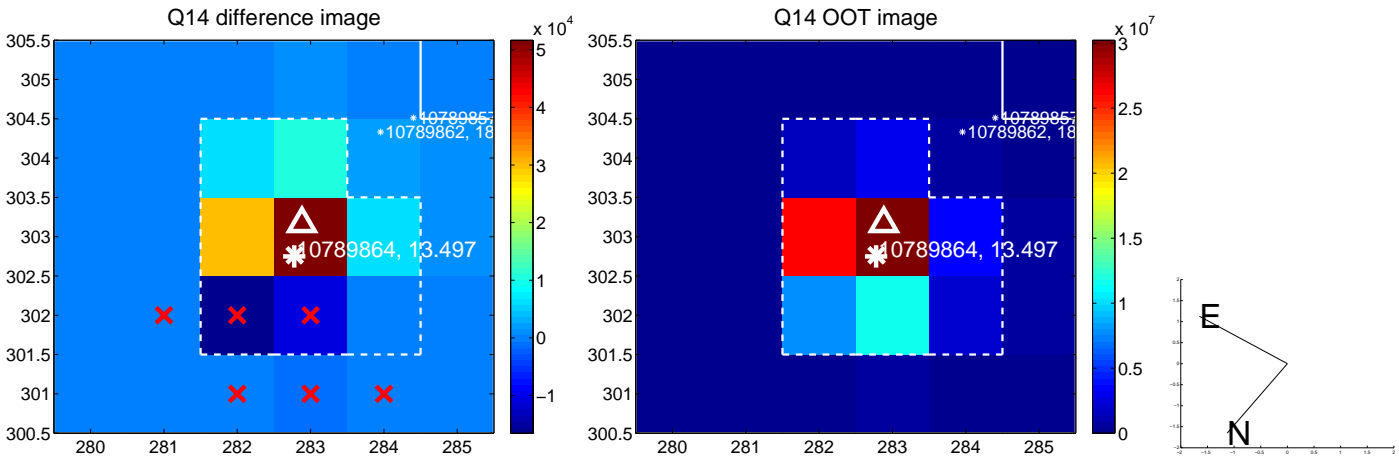
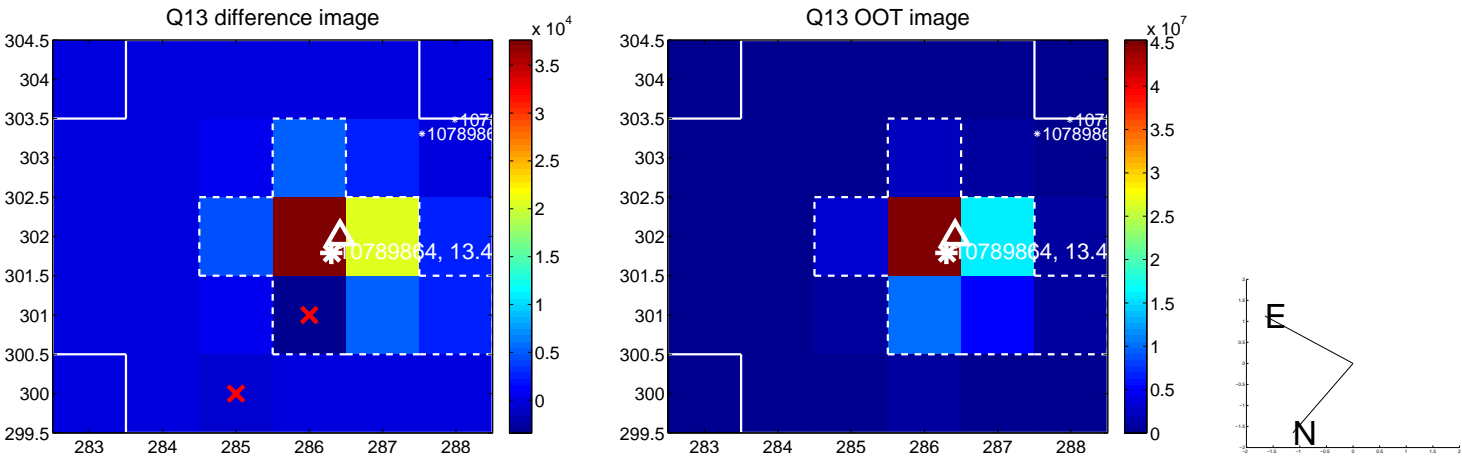
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



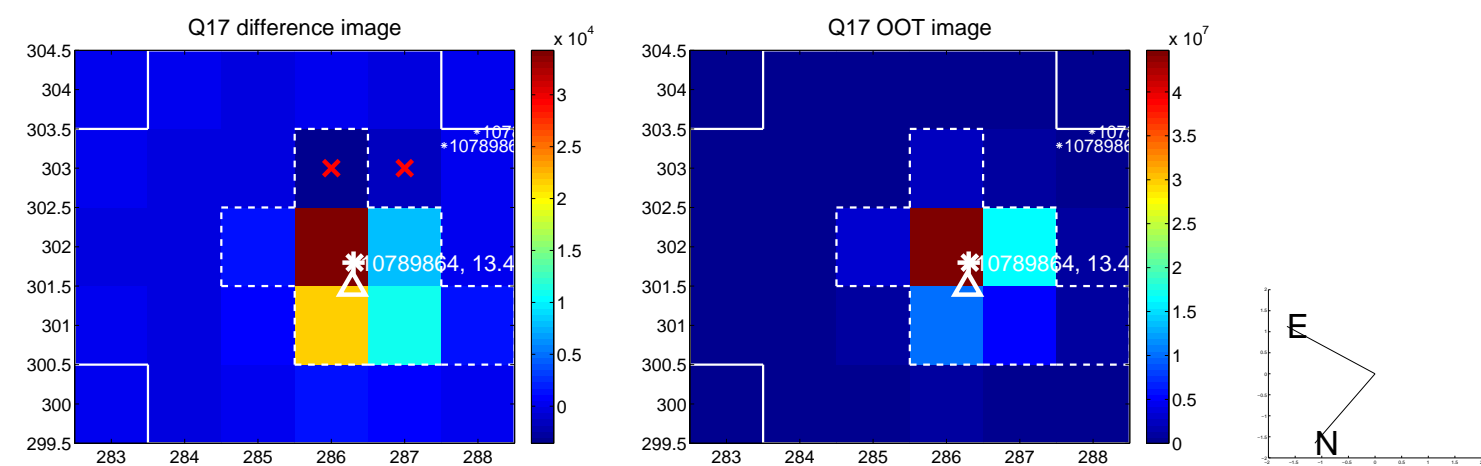
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



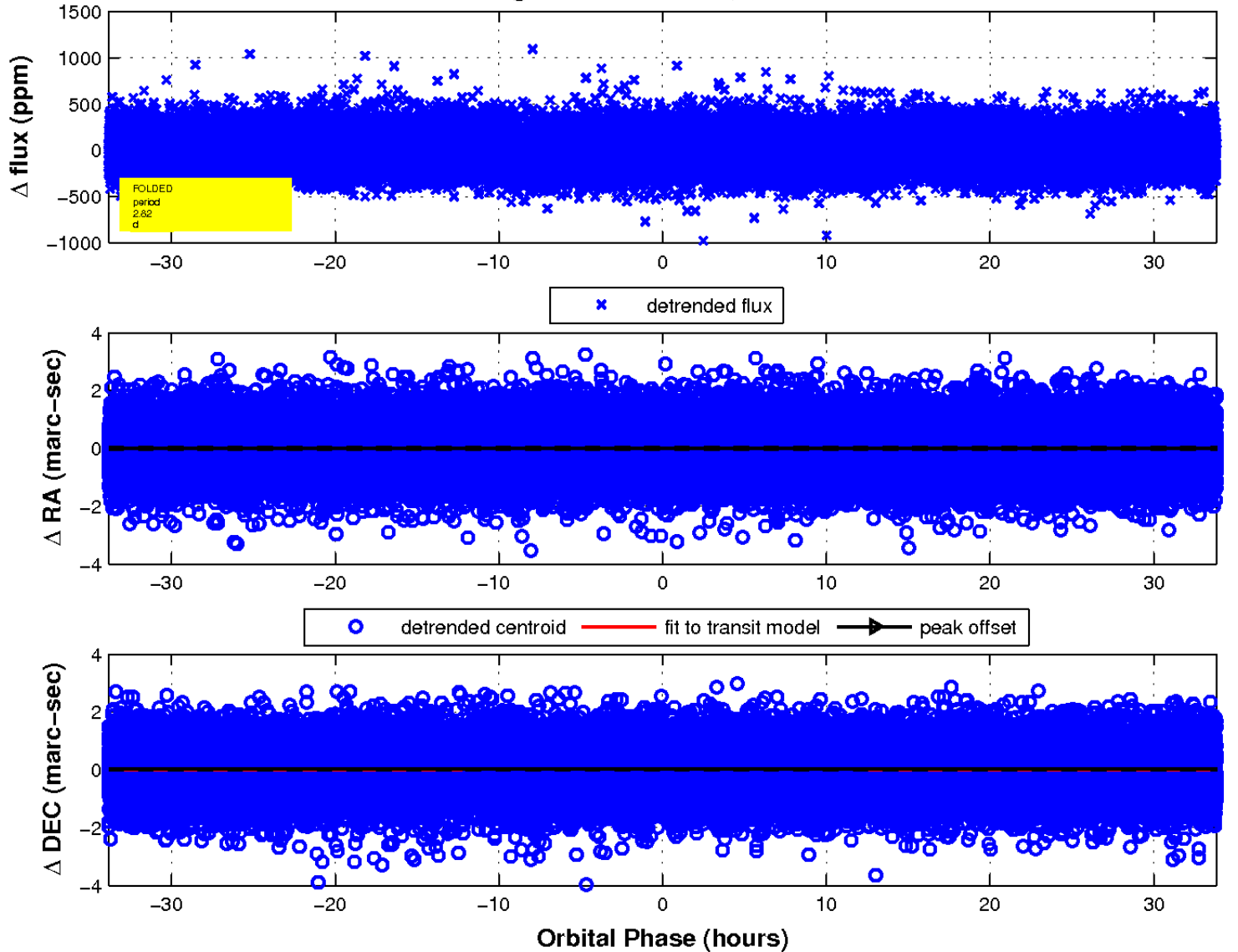
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

