

KIC 002580872

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})
002580872-01	OBS	6283.01	15.926728	145.542038	274695.9	4.500	8439.2	-1.0	0.92	5496	43.33	47.77
002580872-02	OBS	No	15.926621	137.041425	171793.6	11.142	5962.9	4227.6	0.92	5496	57.09	47.77
002580872-03	OBS	No	7.963280	136.551272	3886.2	15.000	194.1	-1.0	0.92	5496	5.61	120.38
002580872-04	OBS	No	15.925751	146.645451	3463.4	12.500	128.6	-1.0	0.92	5496	5.30	47.77
002580872-05	OBS	No	15.948718	143.399920	1134.5	12.000	20.3	-1.0	0.92	5496	3.03	47.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
002580872-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
002580872-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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 002580872-01

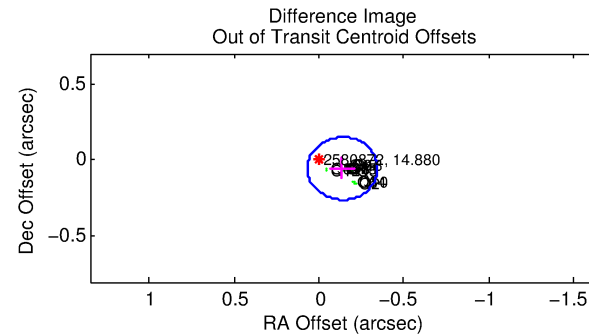
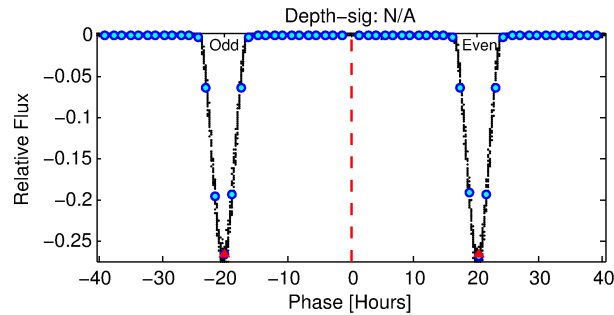
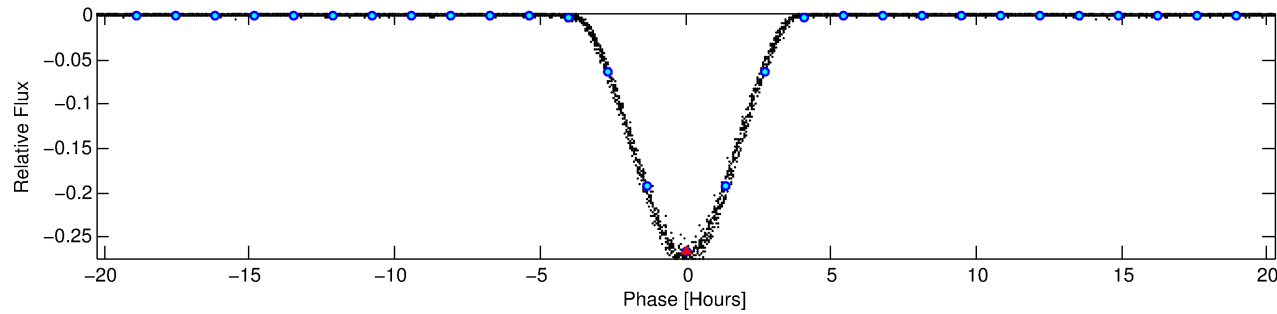
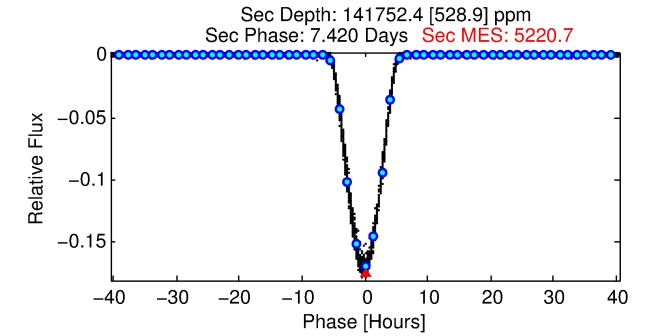
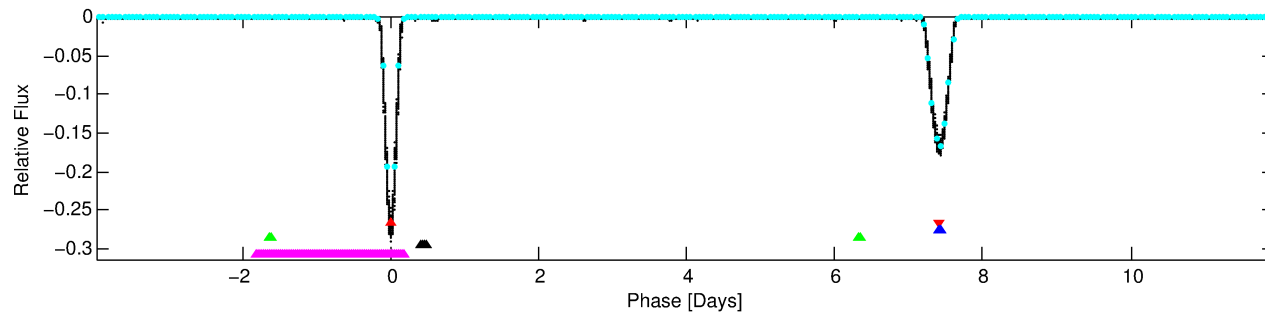
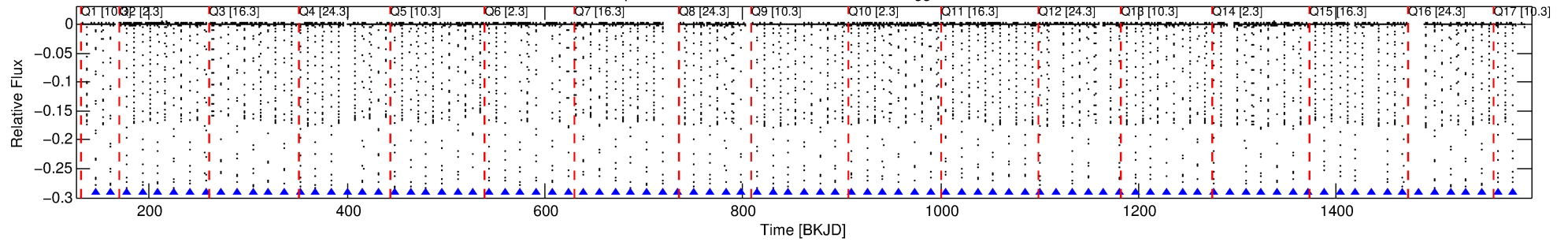
No Significant Match Found

DV One-Page Summary

KIC: 2580872 Candidate: 1 of 5 Period: 15.927 d

KOI: K06283.01 Corr: 0.778

Kp: 14.88 R*: 0.92 Rs Teff: 5496.0 K Logg: 4.47 Fe/H: 0.060



TPS TCE Results:

Period = 15.92673 d
Epoch = 145.5420 BKJD

DV fit results are unavailable

DV Diagnostic Results:

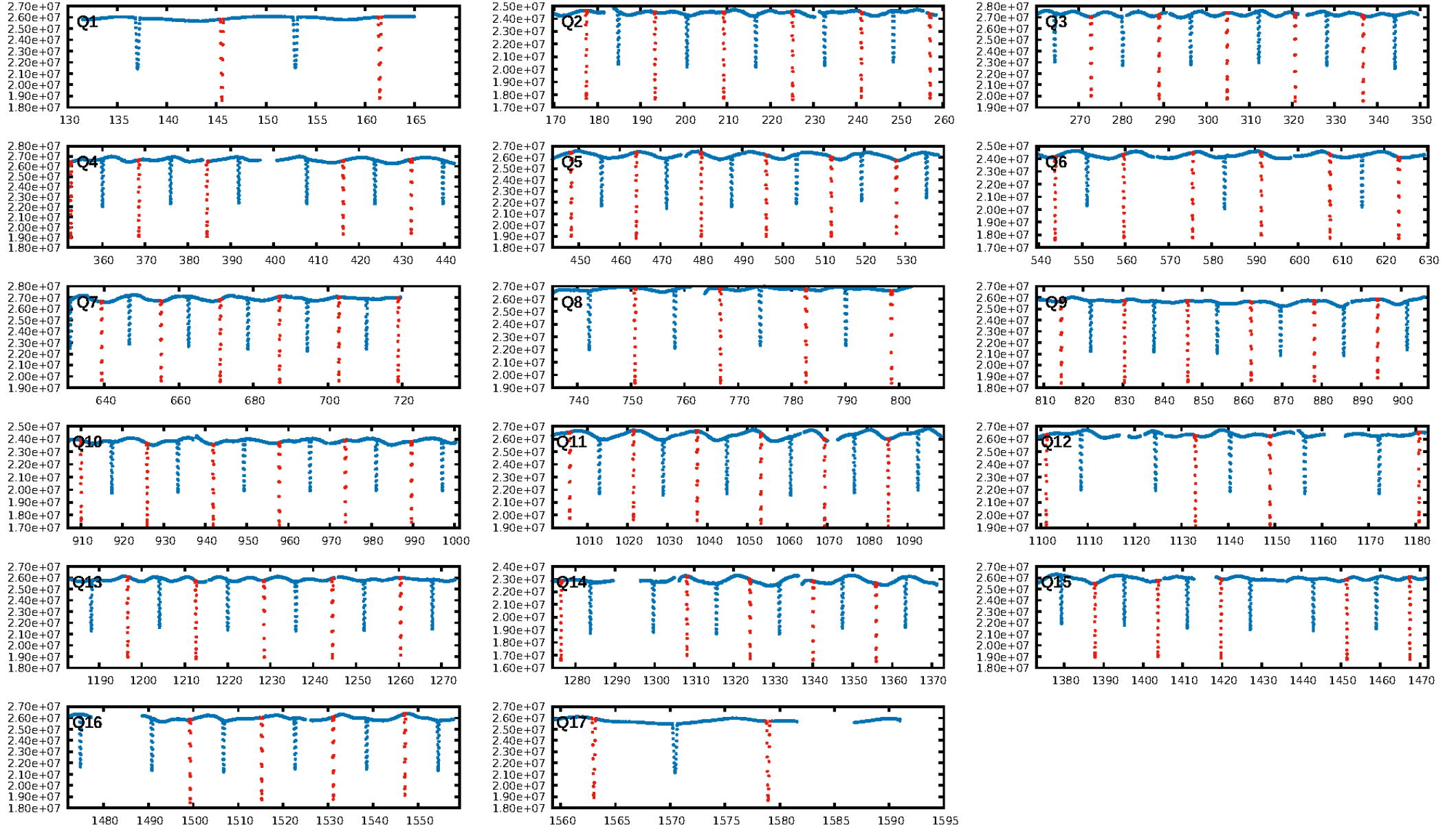
ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 3.3% [0.04σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [79/79]
GhostDiagnostic-chr: 1.287

Centroid-sig: N/A
Centroid-so: 0.661 arcsec [606.72σ]
OotOffset-rm: 0.149 arcsec [2.17σ]
KicOffset-rm: 0.031 arcsec [0.46σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

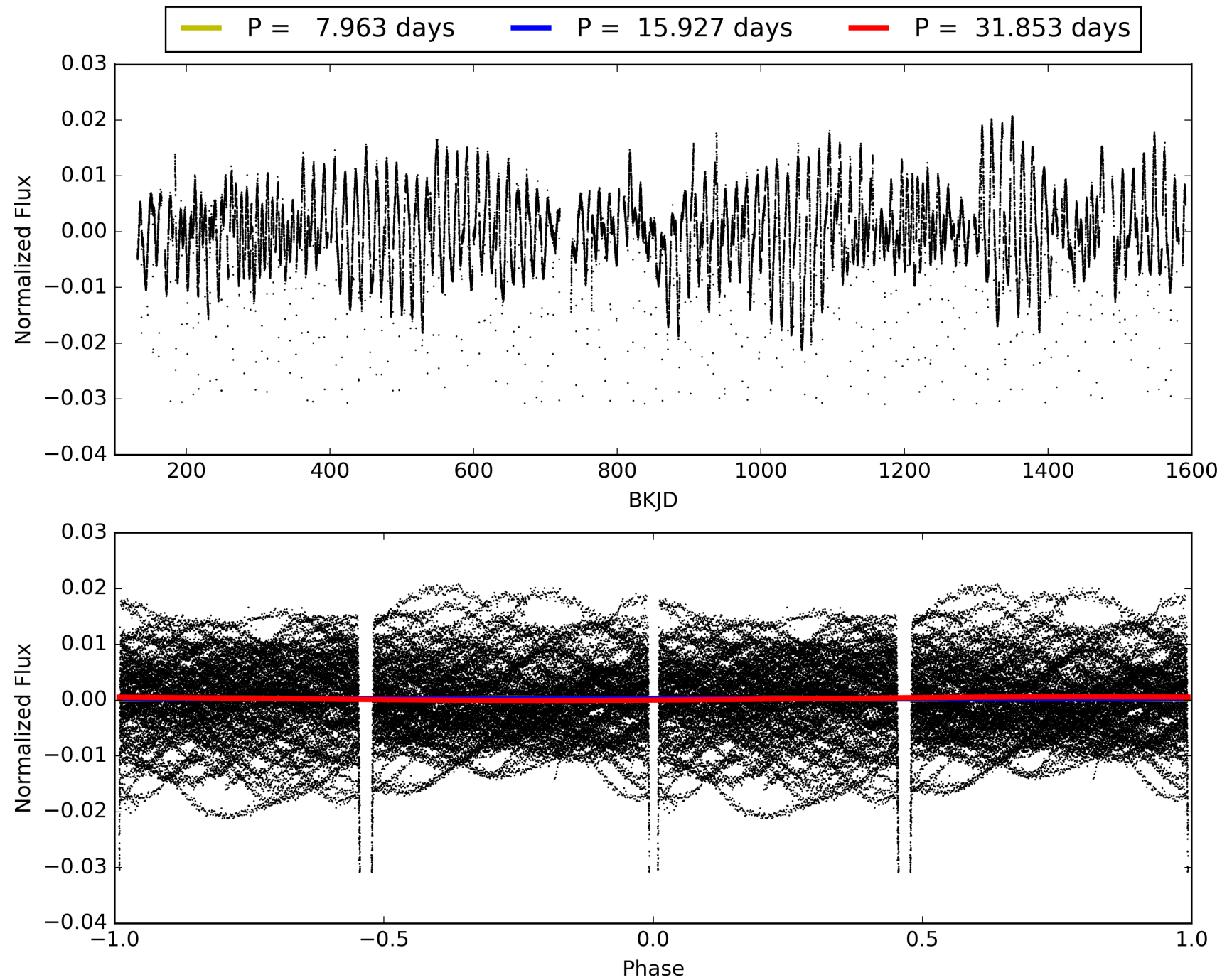
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:15:04 Z

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

TCE 002580872-01, PDC Light Curves

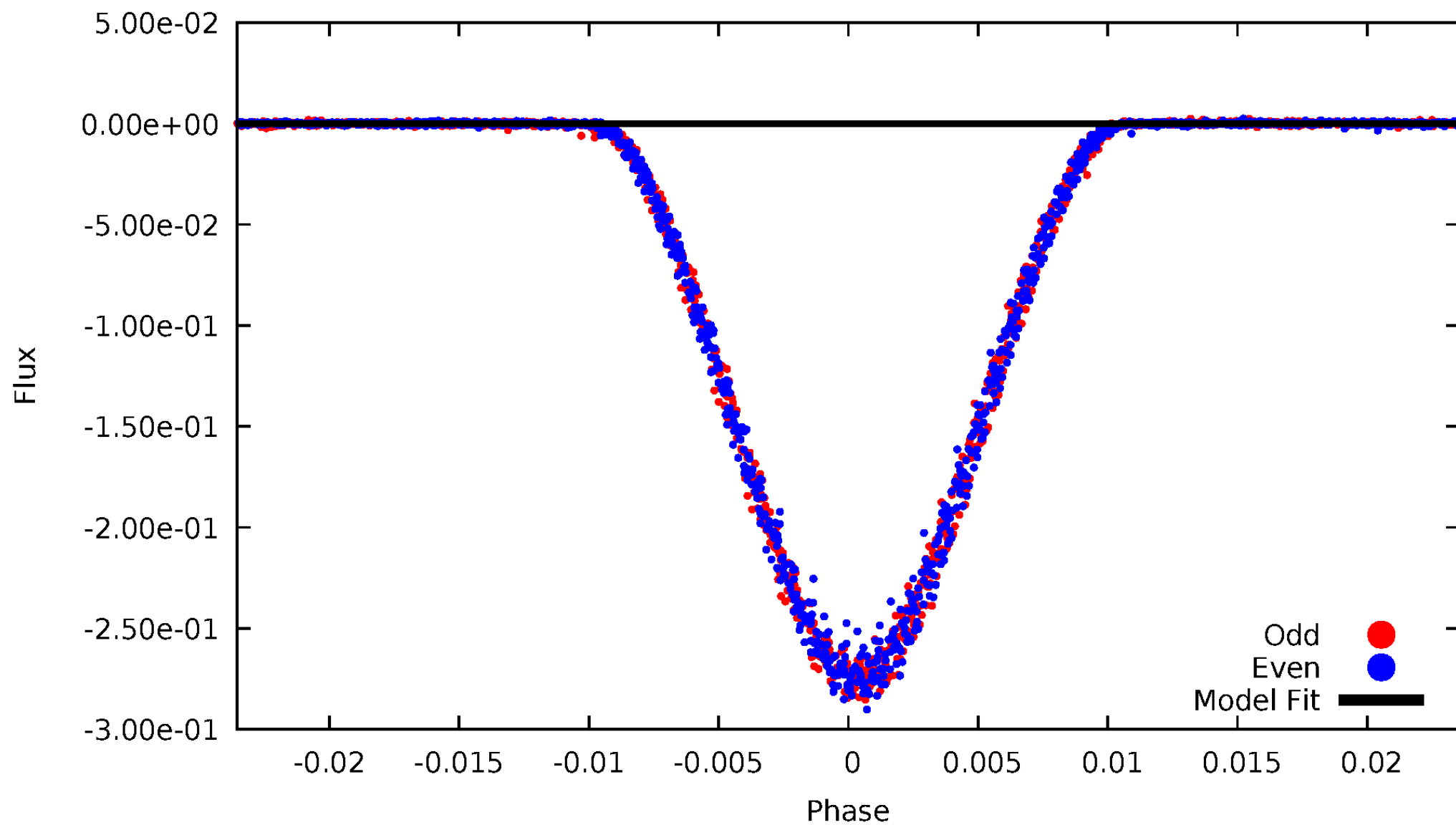


TCE 002580872-01



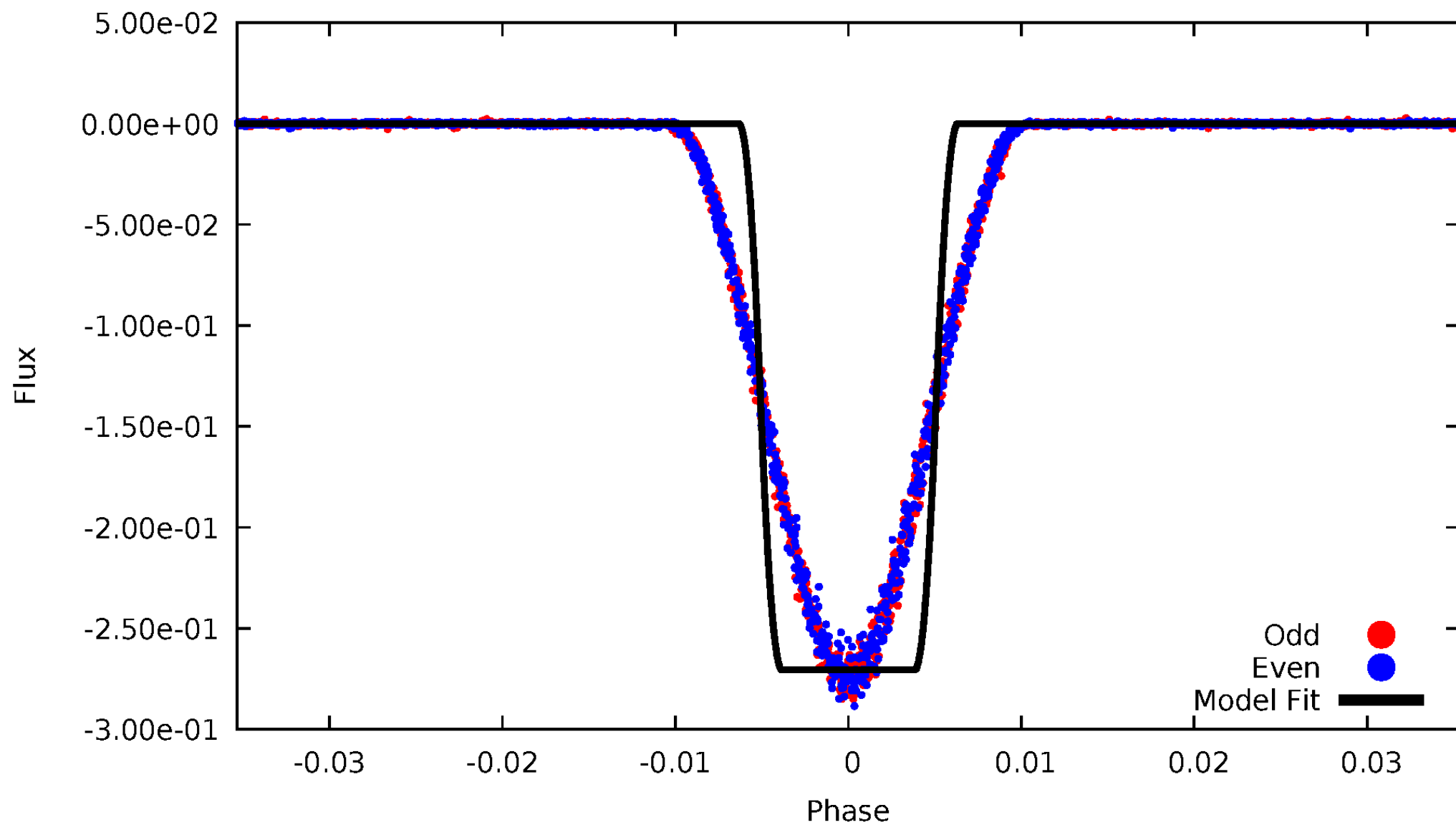
DV Odd/Even

TCE 002580872-01



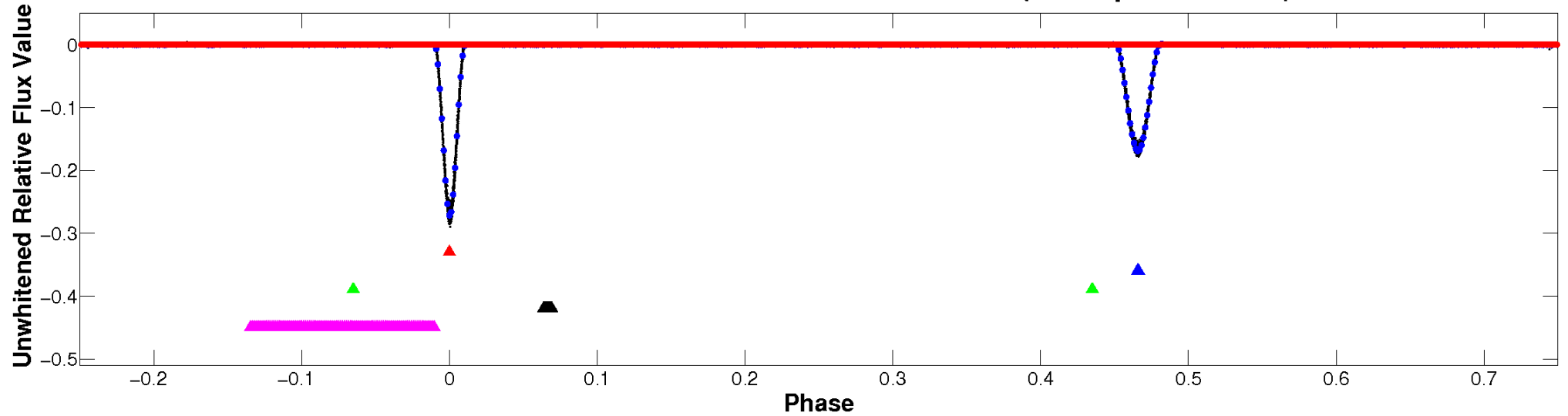
ALT Odd/Even

TCE 002580872-01



Non-Whitened Vs. Whitened Light Curve

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

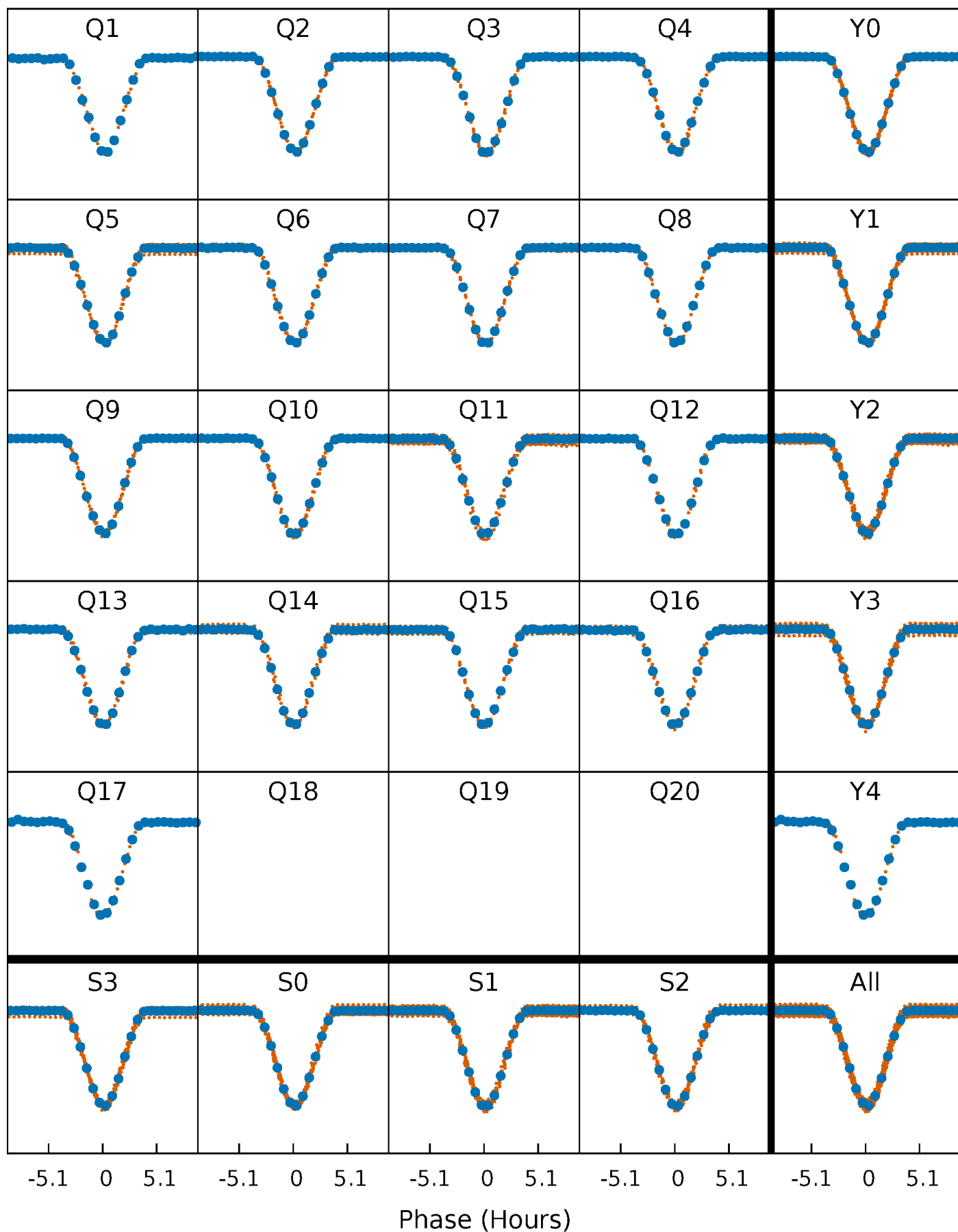


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



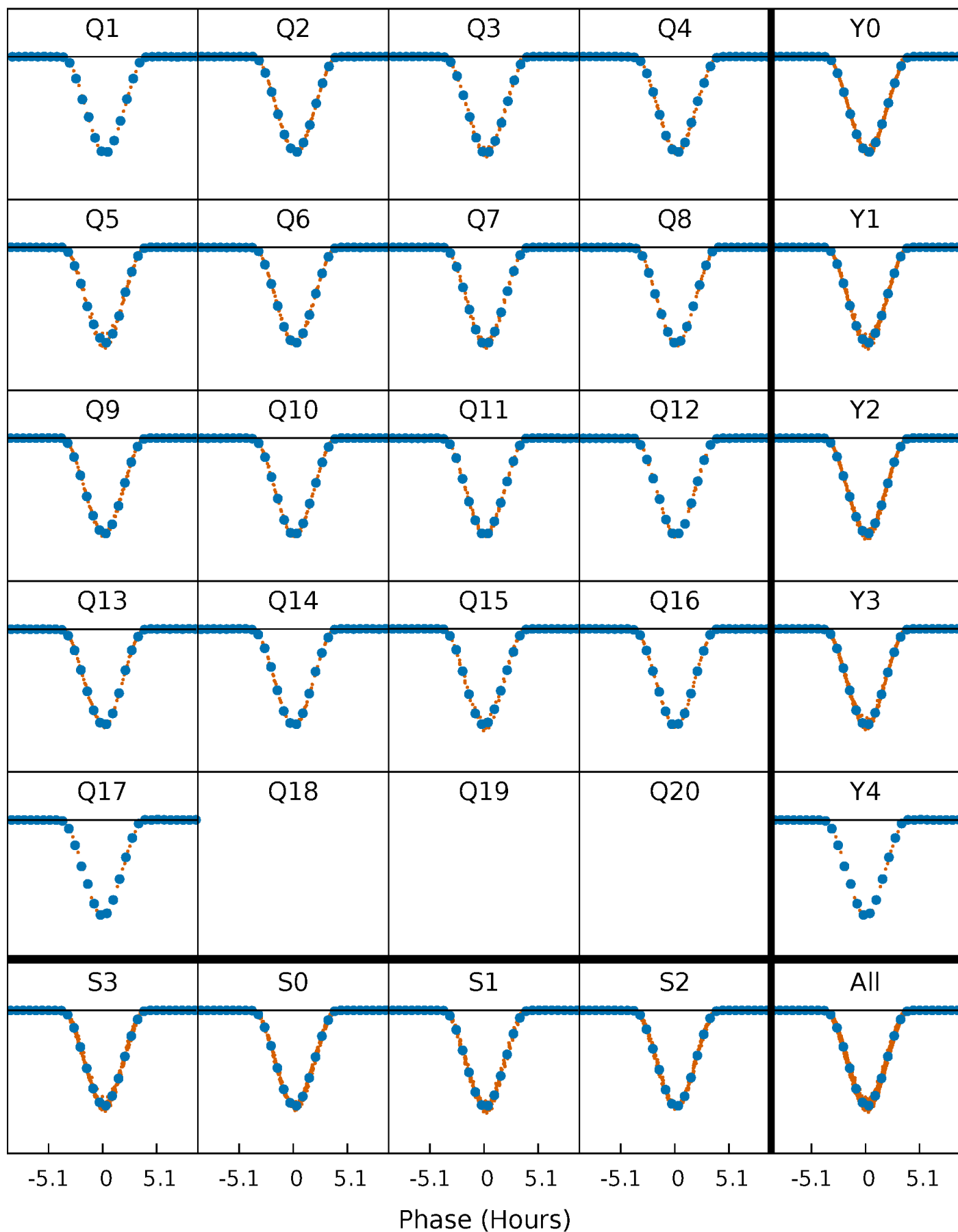
PDC Quarter-Phased Transit Curves

TCE 002580872-01 P= 15.926728 Days $T_0=145.542038$ (BKJD)



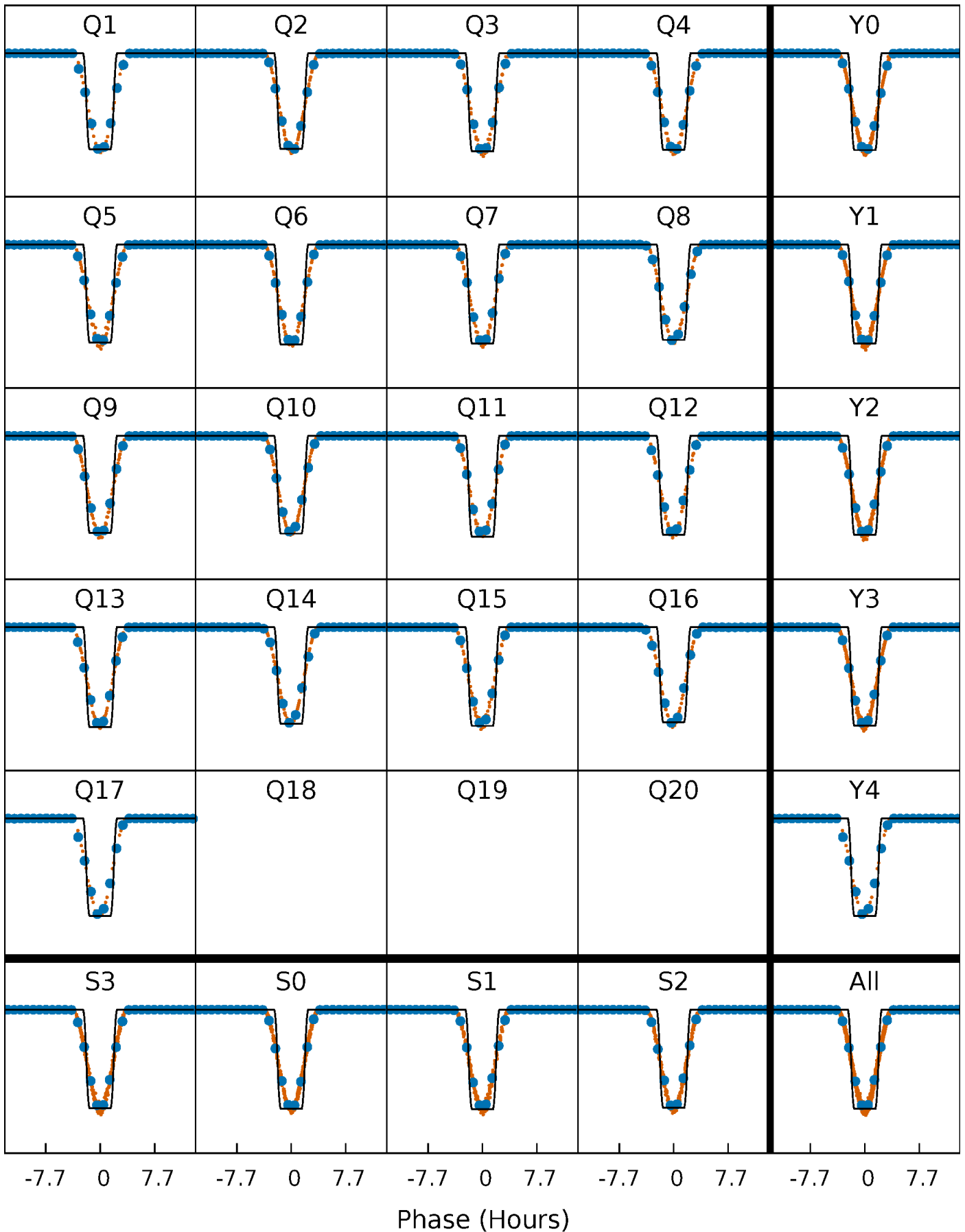
DV Quarter-Phased Transit Curves

TCE 002580872-01 P= 15.926728 Days $T_0=145.542038$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

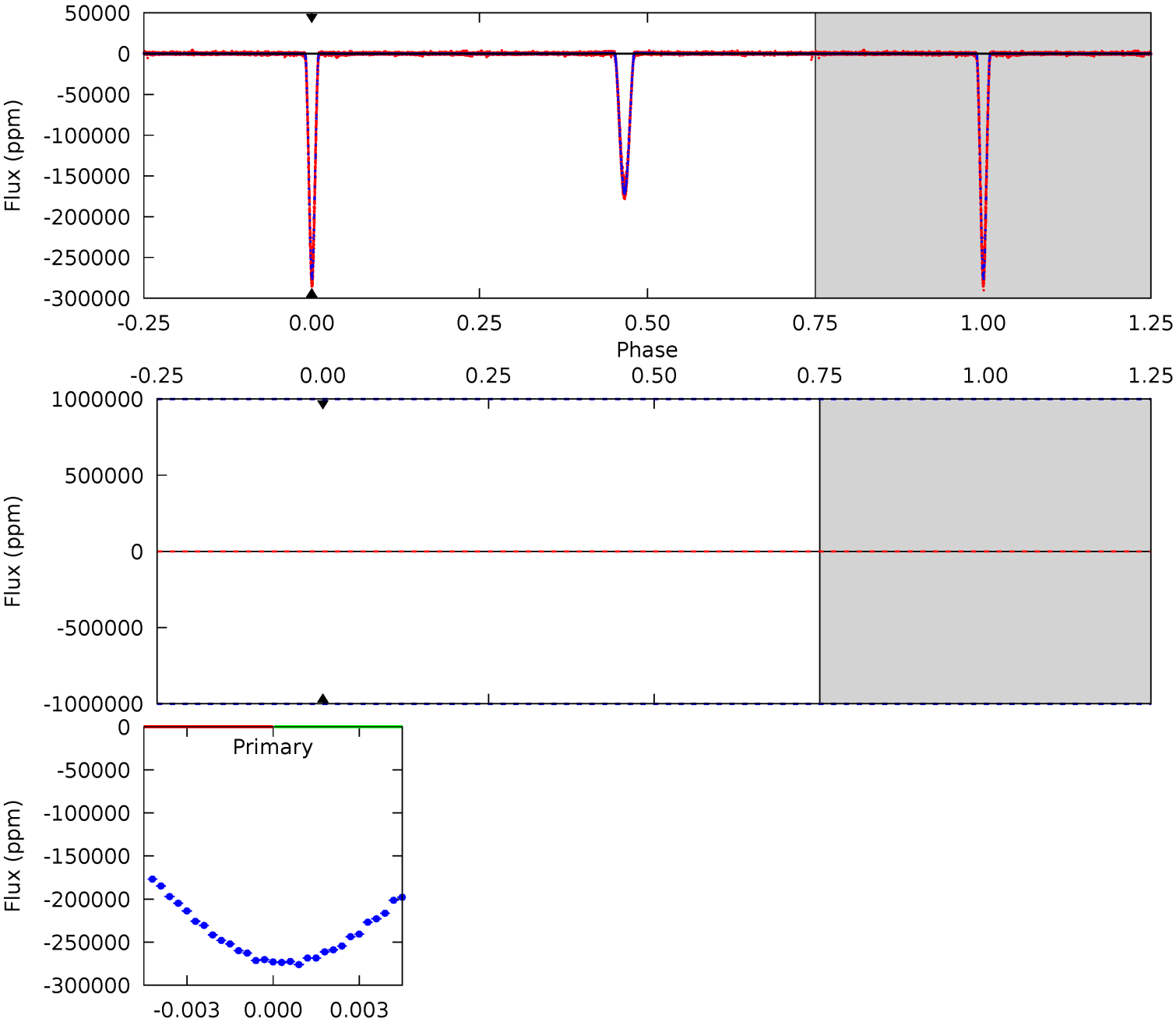
TCE 002580872-01 P= 15.926728 Days $T_0=145.547795$ (BKJD)



DV Model-Shift Uniqueness Test

002580872-01, P = 15.926728 Days, E = 129.615310 Days

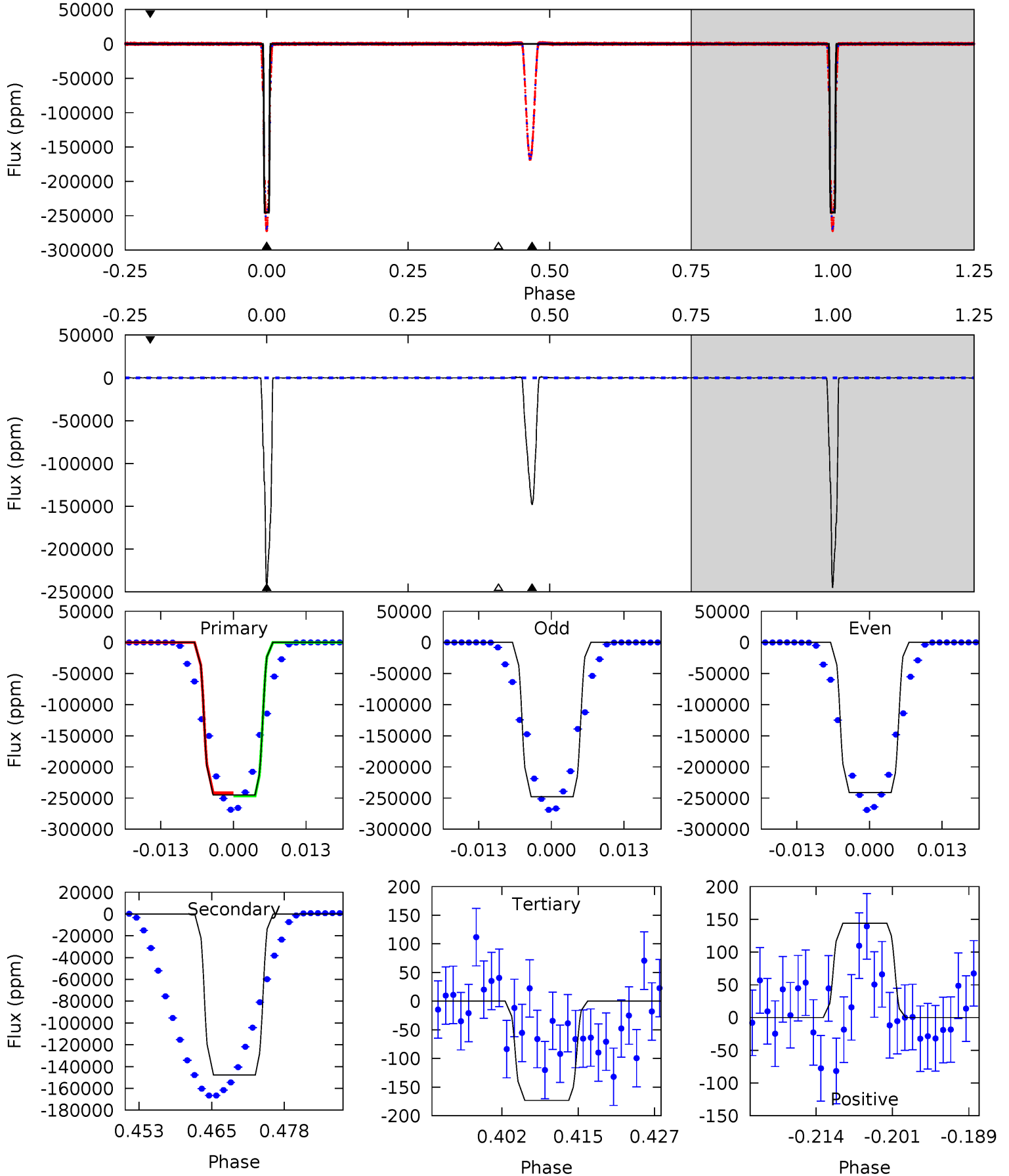
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002580872-01, P = 15.926728 Days, E = 129.621067 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3148	1898	2.22	1.85	4.98	2.50	11.5	3146	3146	1896	1896	39.0	1.00	0.00	0



Stellar Parameters For KIC 002580872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$4.471^{+0.075}_{-0.163}$	$0.060^{+0.250}_{-0.300}$	$0.917^{+0.222}_{-0.111}$	$0.907^{+0.091}_{-0.082}$	$1.657^{+0.606}_{-0.725}$
	+3%/-3%	+2%/-4%	+417%/-500%	+24%/-12%	+10%/-9%	+37%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002580872-01 / KOI 6283.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$44.94^{+11.63}_{-11.95}$	949^{+60}_{-46}	2746^{+2250}_{-7439}	16^{+442}_{-374}
Alt.	-147768 ± 78	$53.10^{+12.63}_{-10.55}$	947^{+58}_{-42}	4974^{+541}_{-359}	479^{+291}_{-156}

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

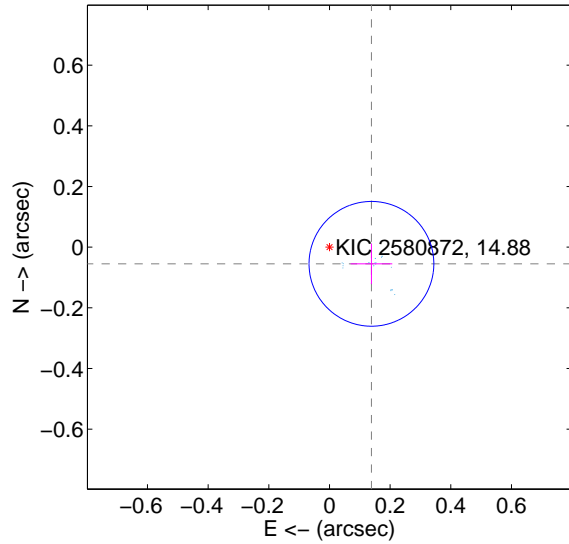
Supplemental centroid analysis for 002580872-01. Kepler magnitude: 14.88. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

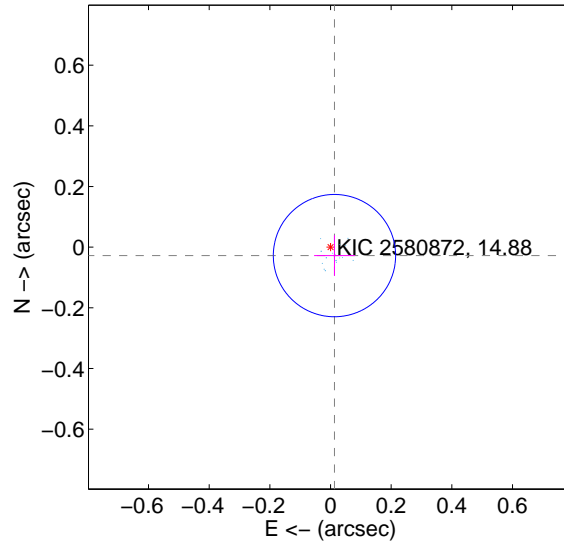
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.149 ± 0.069	2.17	-0.138 ± 0.069	-0.055 ± 0.067
PRF-fit source offset from KIC position	0.031 ± 0.067	0.46	-0.013 ± 0.067	-0.028 ± 0.067
photometric centroid source offset	0.66 ± 0.00	606.72	0.16 ± 0.00	-0.64 ± 0.00

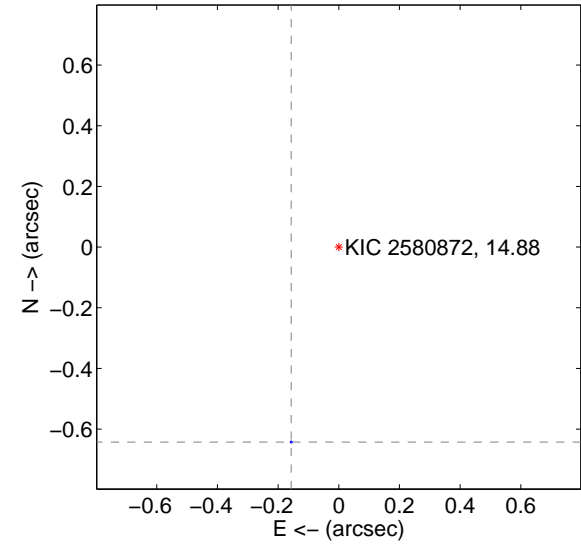
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

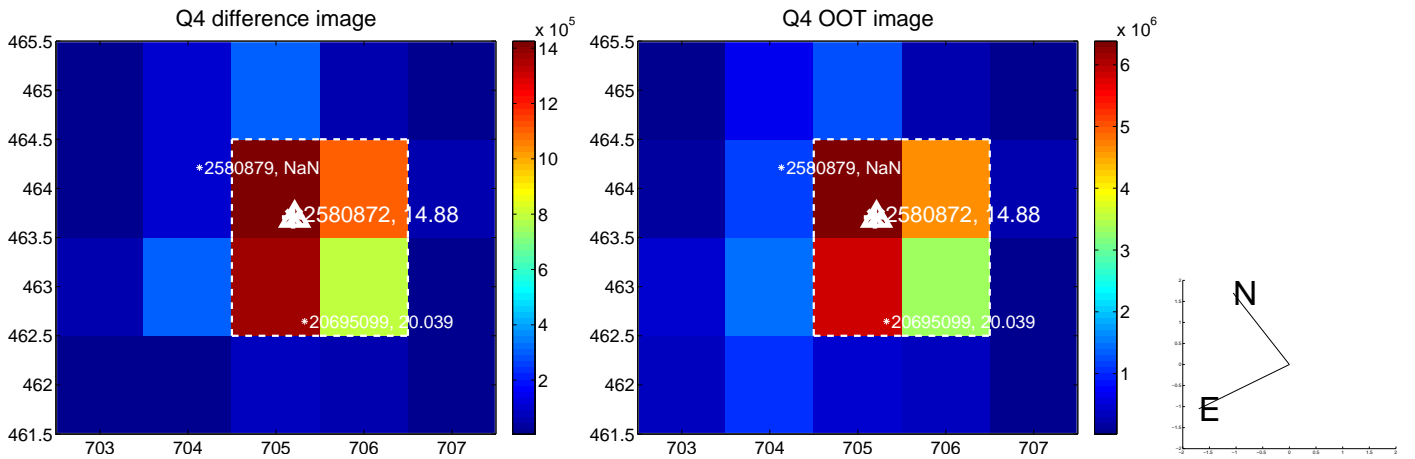
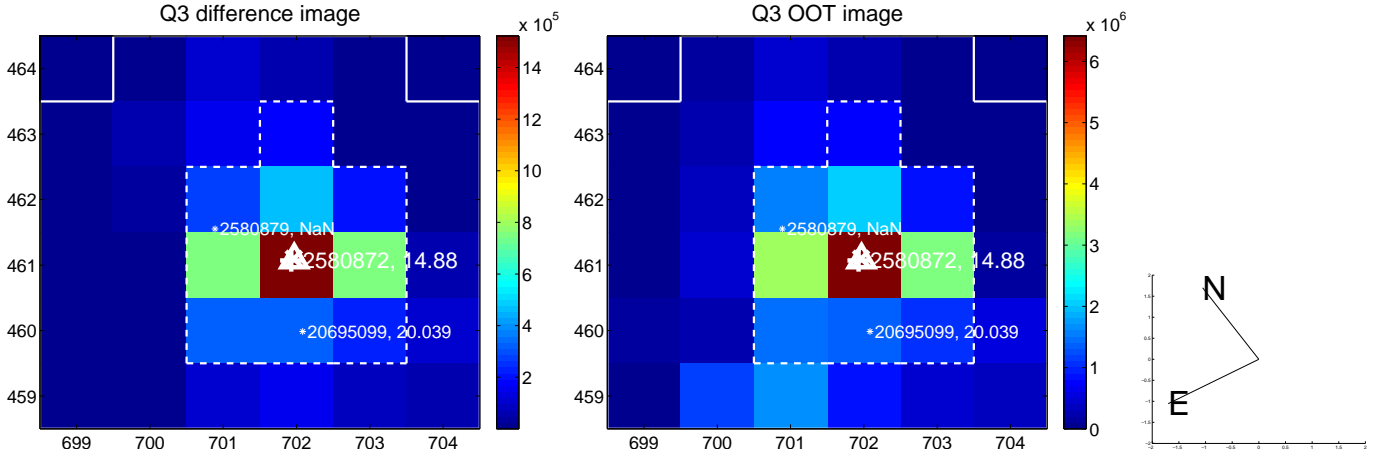
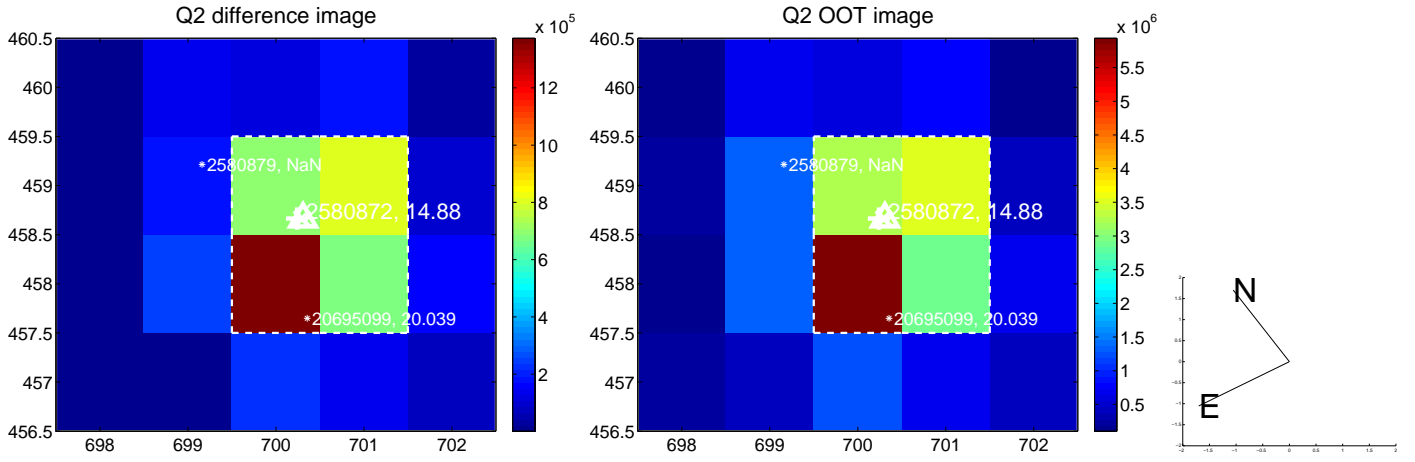
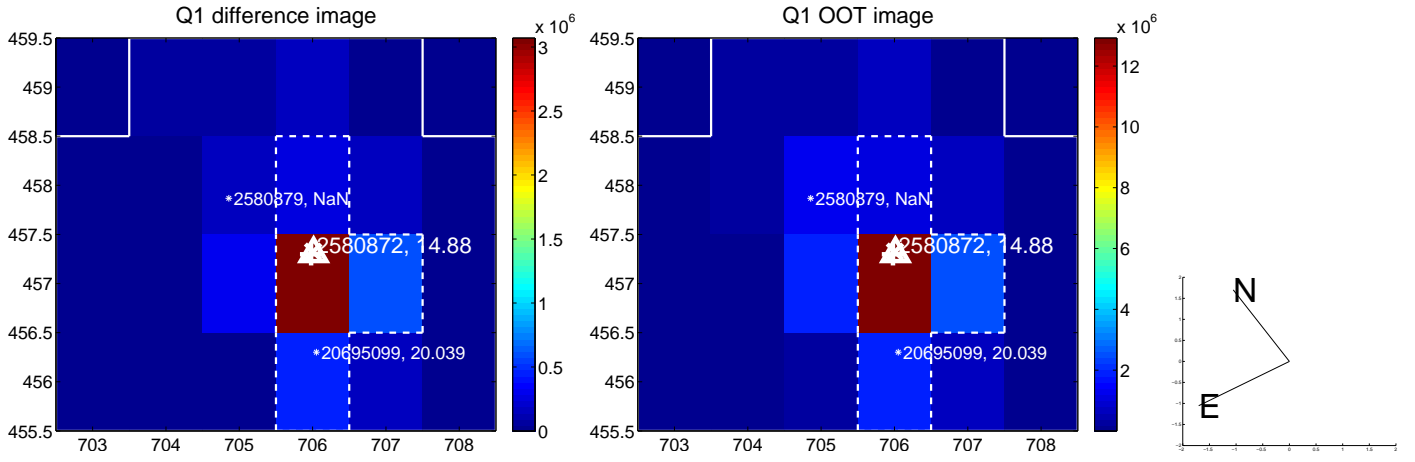


offset from photometric centroids

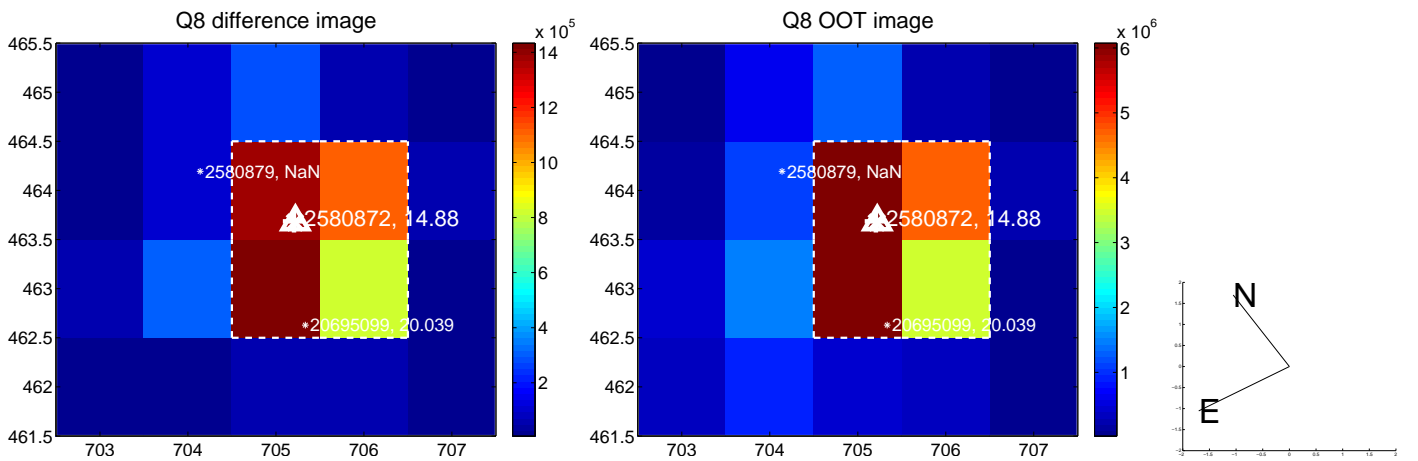
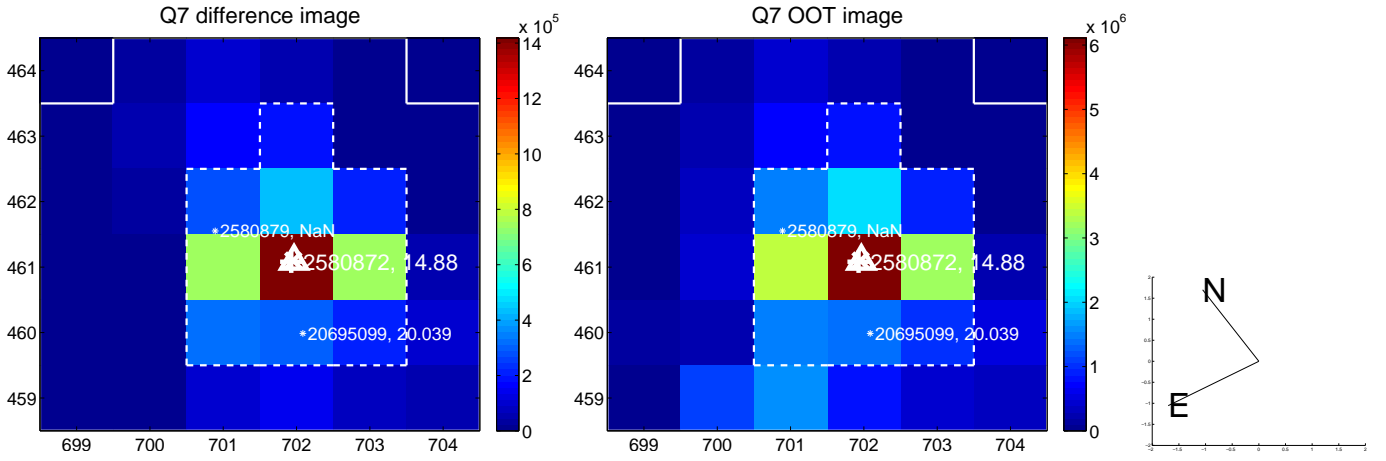
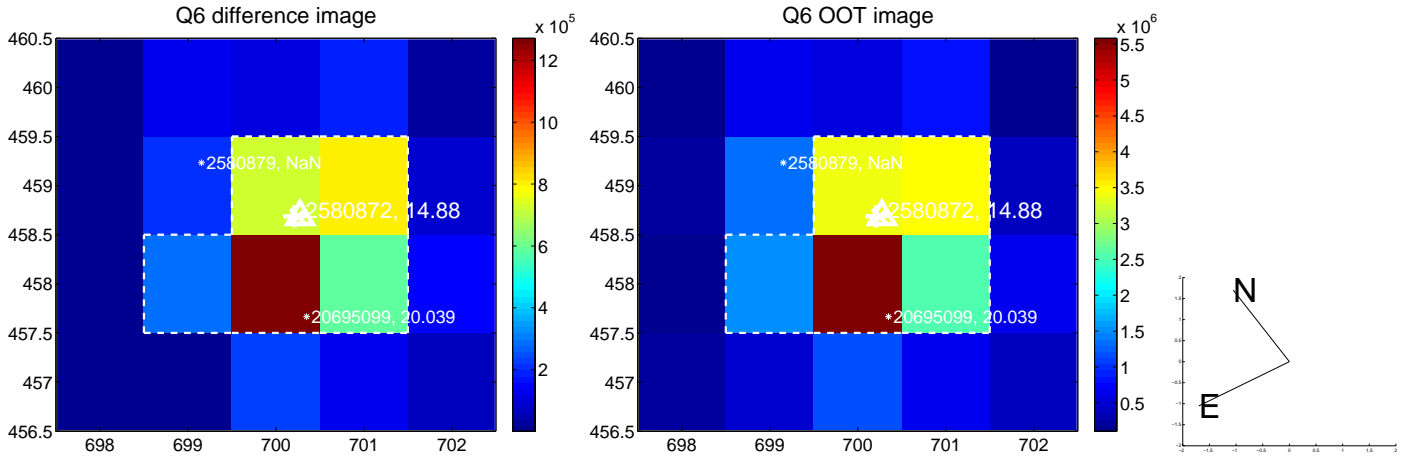
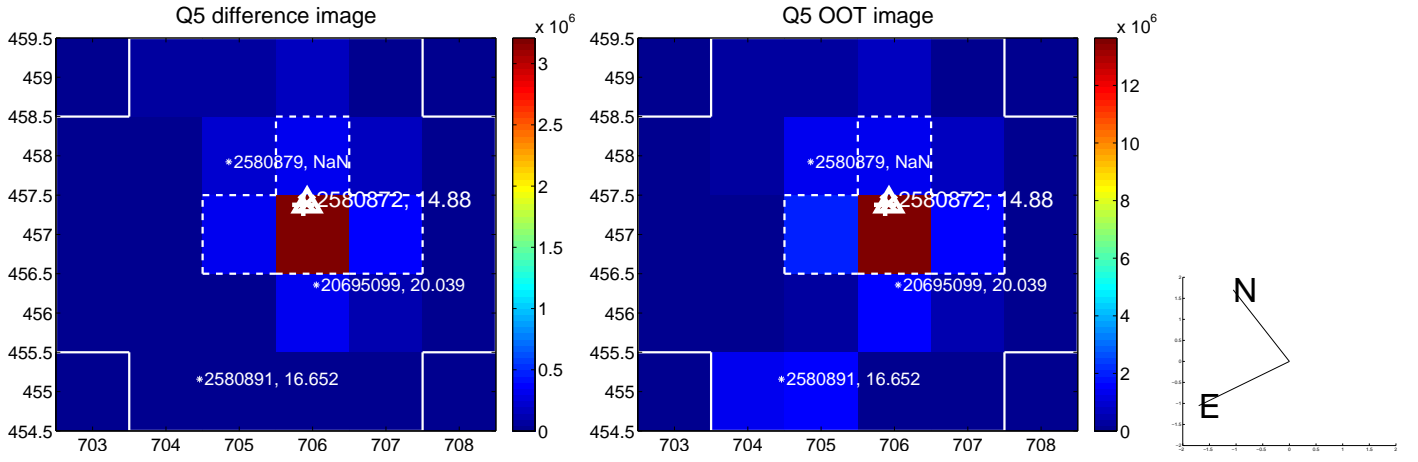


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

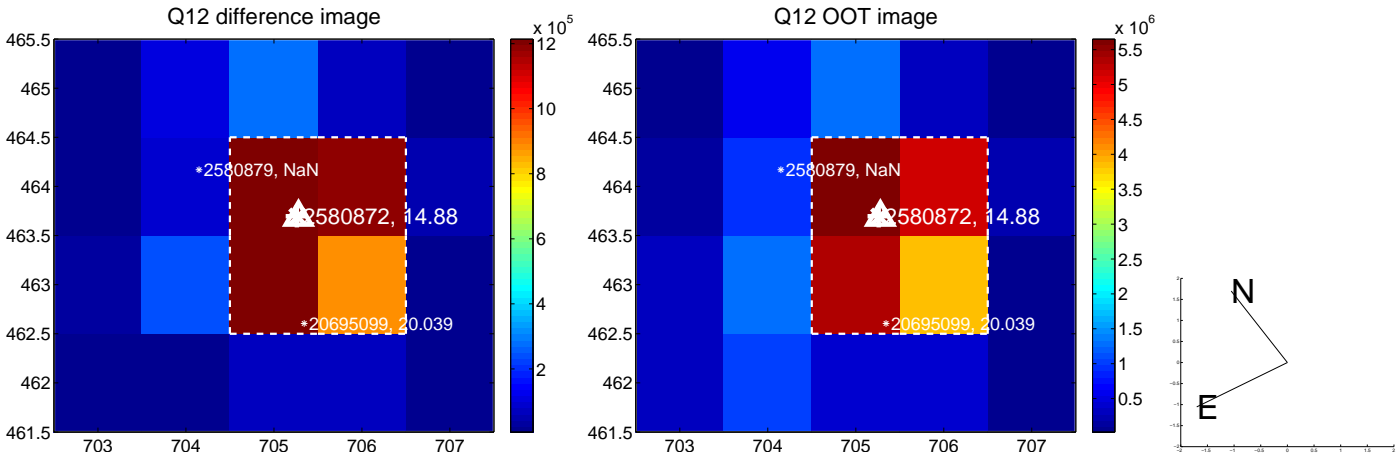
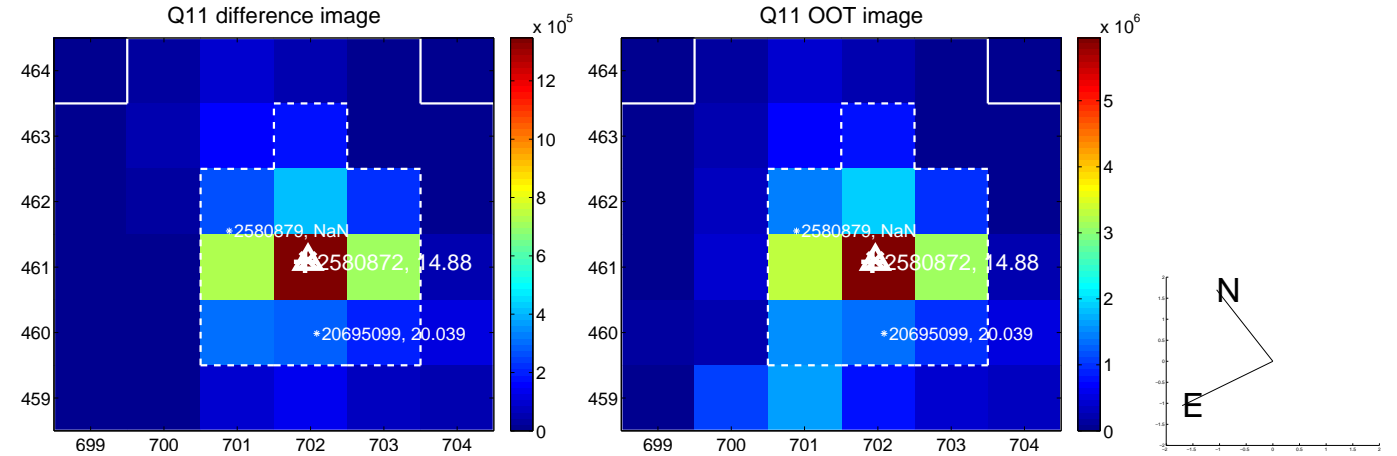
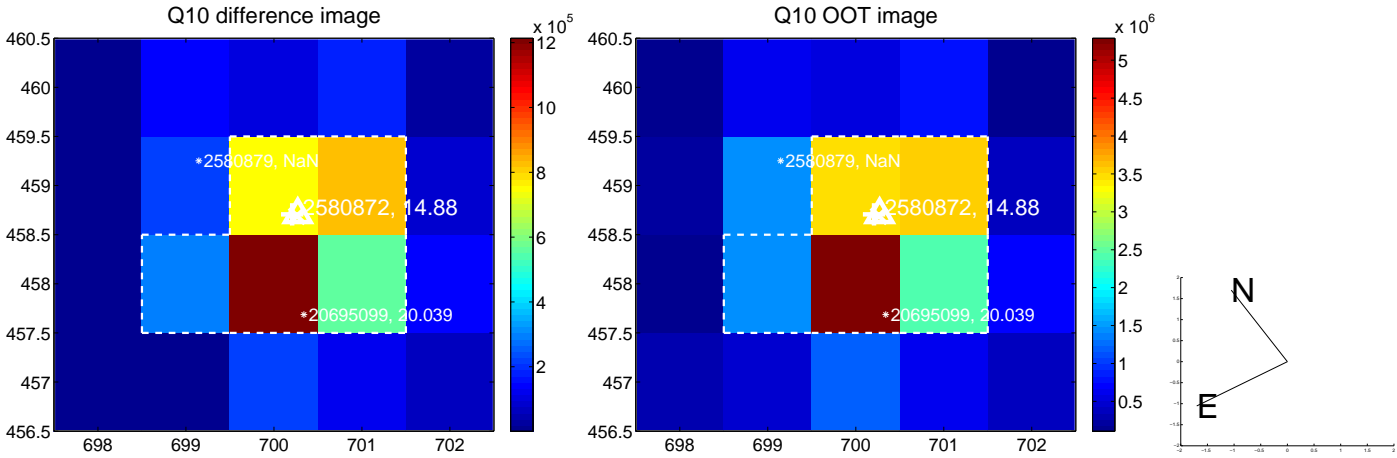
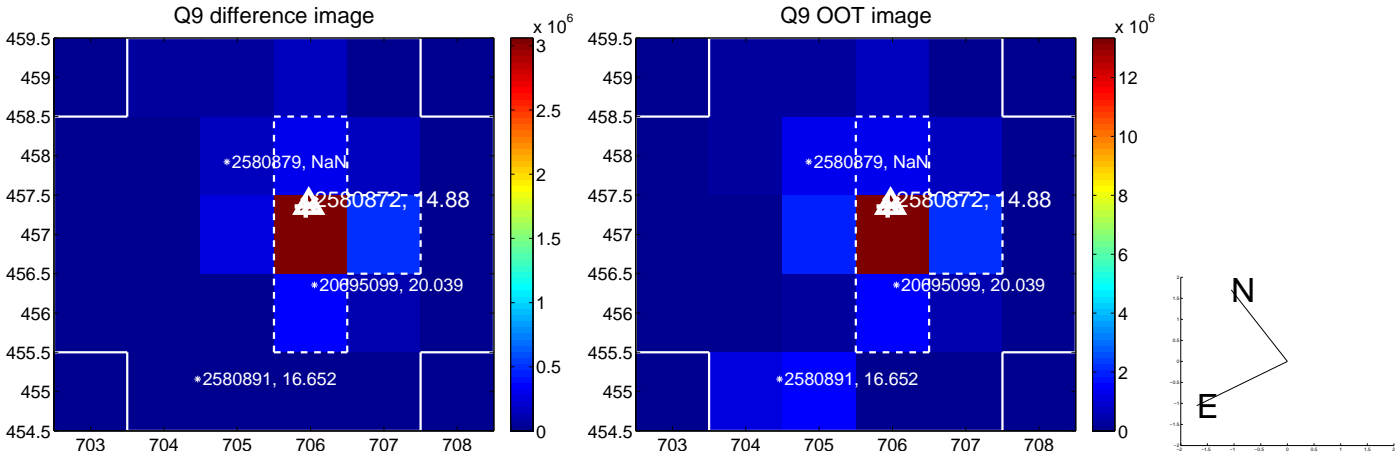
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



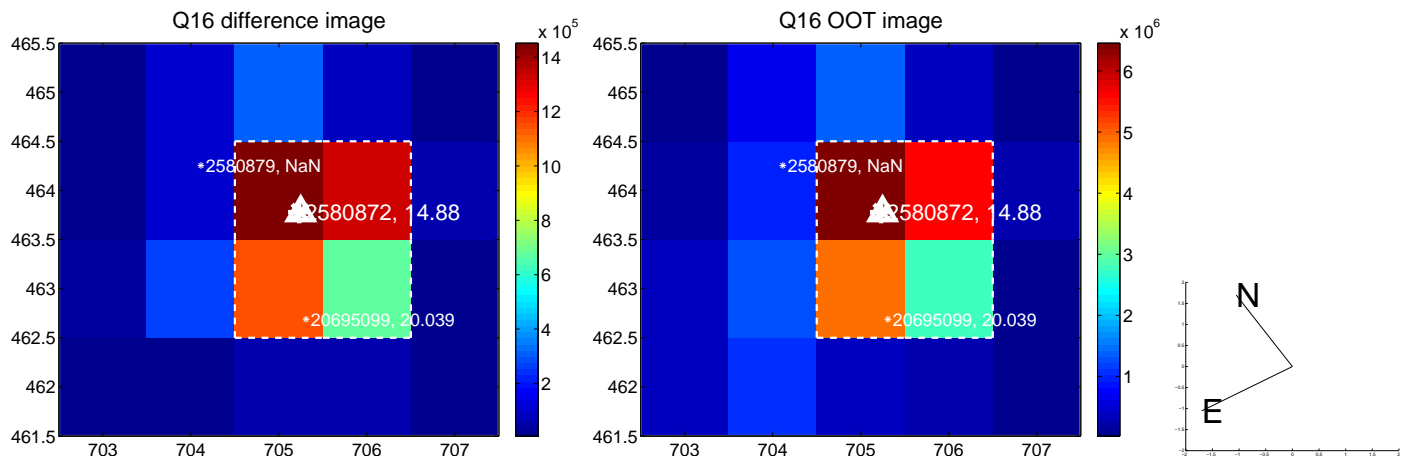
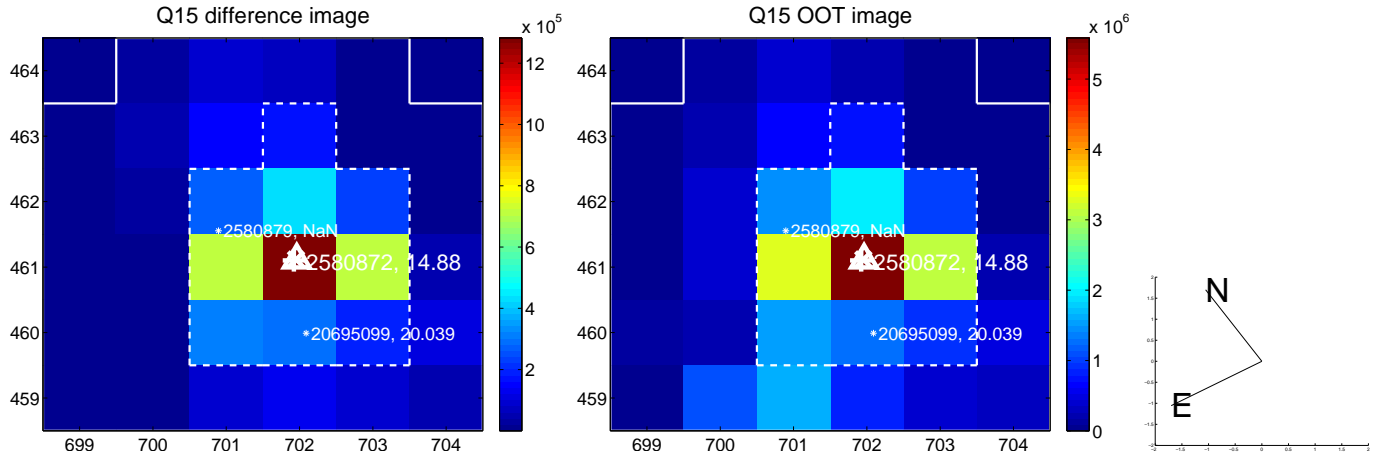
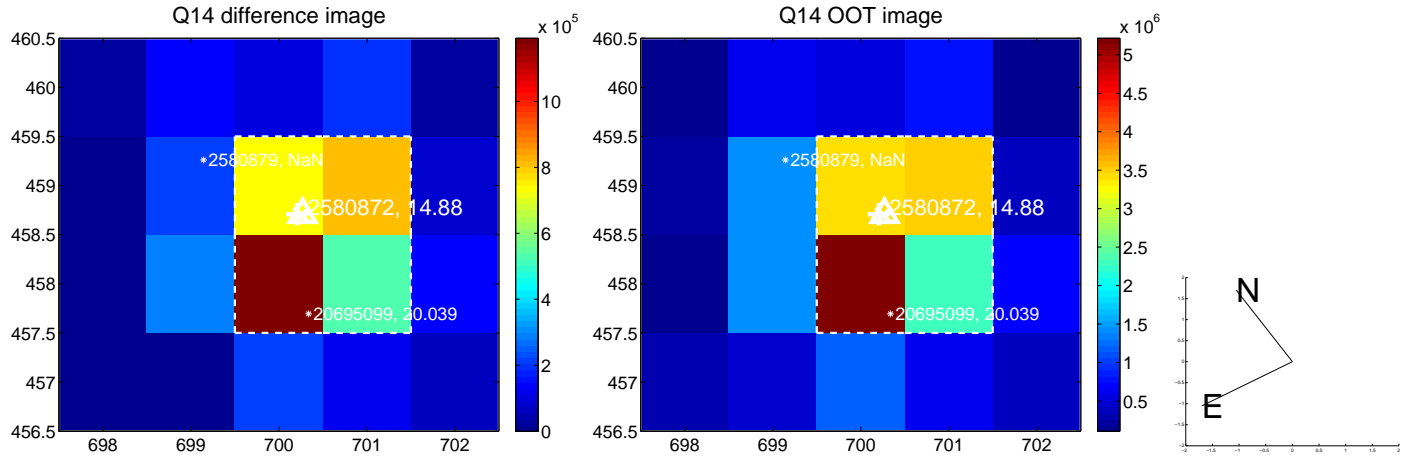
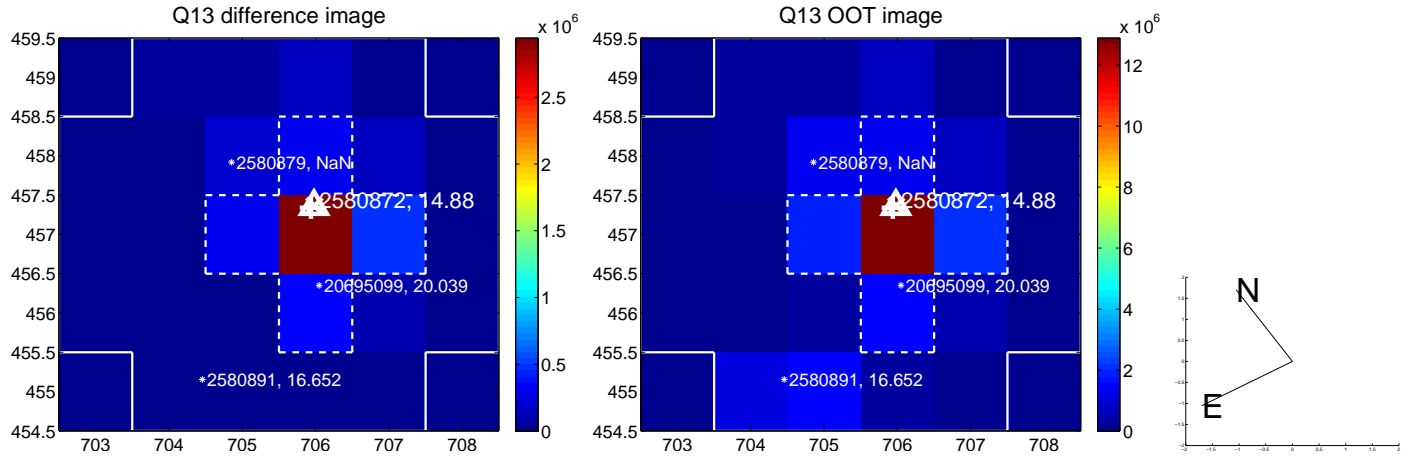
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



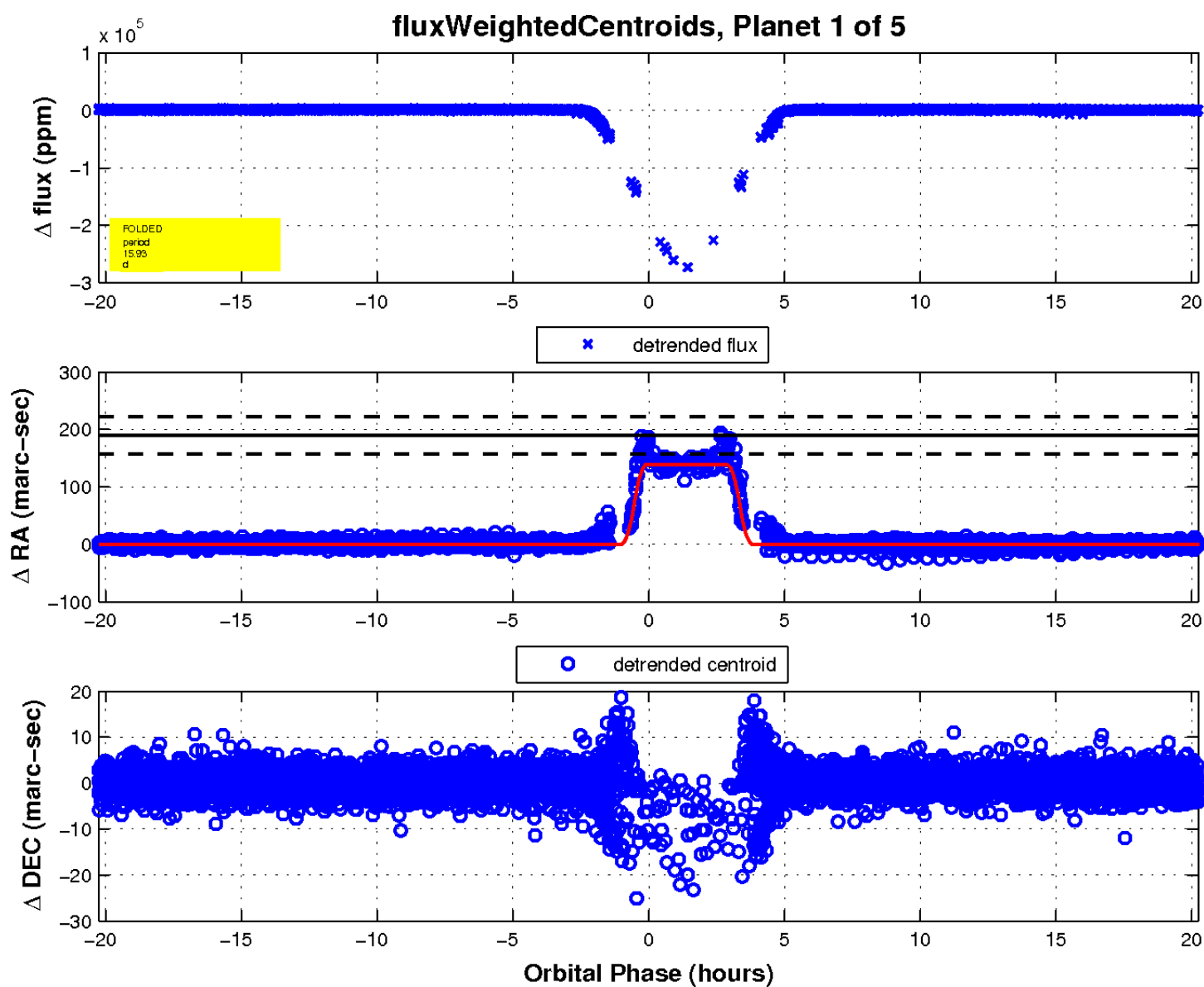
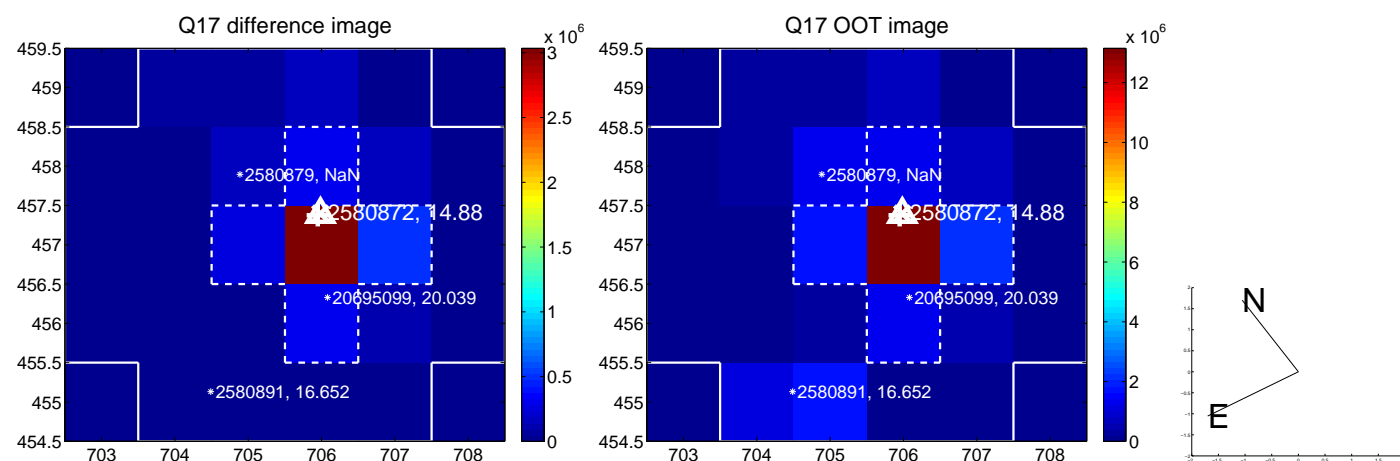
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

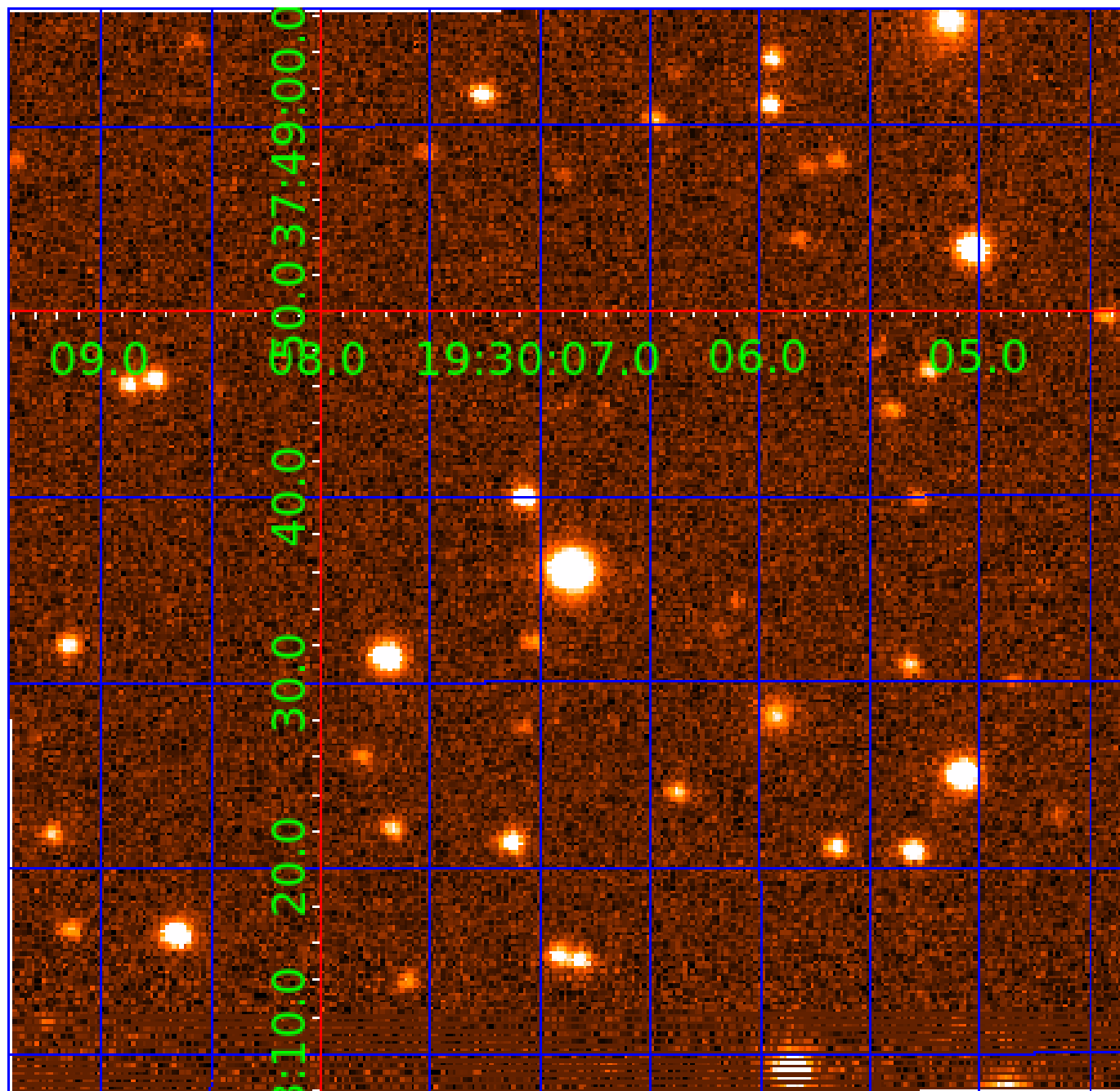


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



UKIRT Image

Declination



KIC 002580872

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})
002580872-01	OBS	6283.01	15.926728	145.542038	274695.9	4.500	8439.2	-1.0	0.92	5496	43.33	47.77
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002580872-03	OBS	No	7.963280	136.551272	3886.2	15.000	194.1	-1.0	0.92	5496	5.61	120.38
002580872-04	OBS	No	15.925751	146.645451	3463.4	12.500	128.6	-1.0	0.92	5496	5.30	47.77
002580872-05	OBS	No	15.948718	143.399920	1134.5	12.000	20.3	-1.0	0.92	5496	3.03	47.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
002580872-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
002580872-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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.

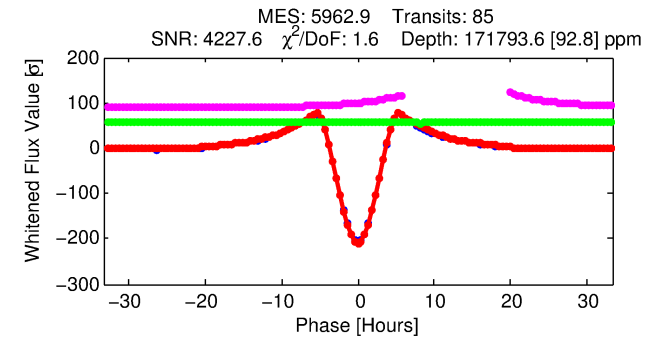
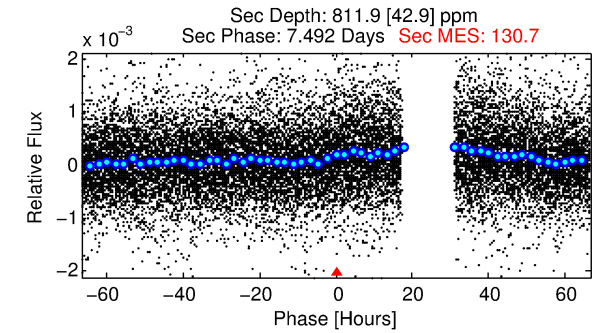
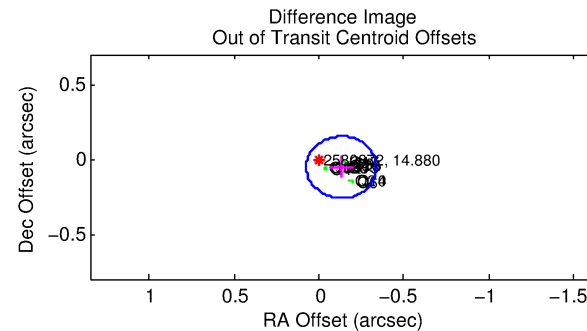
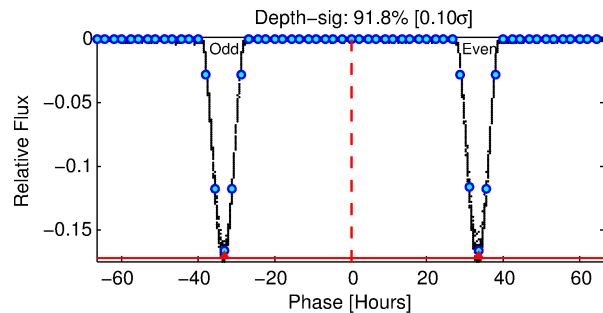
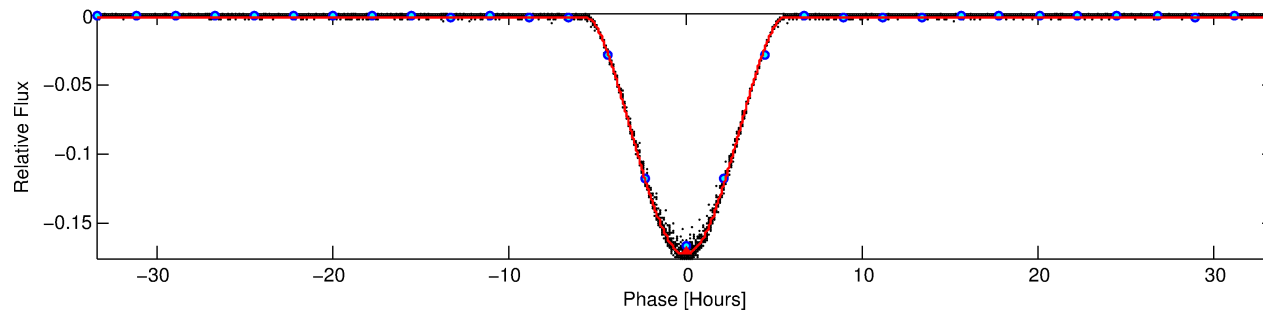
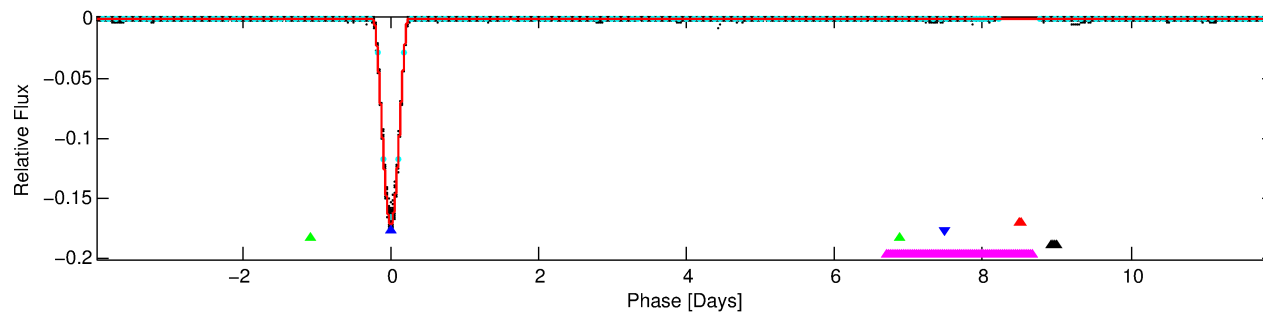
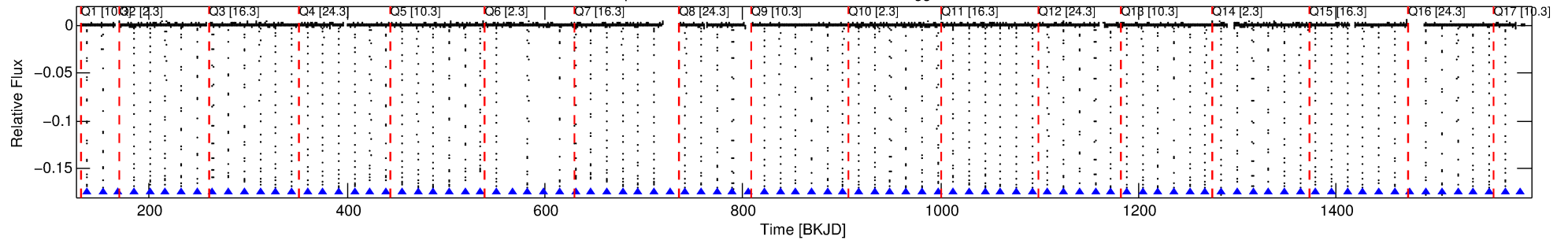
Ephemeris Match Information For 002580872-02

No Significant Match Found

DV One-Page Summary

KIC: 2580872 Candidate: 2 of 5 Period: 15.927 d
KOI: K06283 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.92 Rs Teff: 5496.0 K Logg: 4.47 Fe/H: 0.060



DV Fit Results:

Period = 15.92662 [0.00000] d
Epoch = 137.0414 [0.0000] BKJD
Rp/R* = 0.5706 [0.0149]
a/R* = 14.09 [0.05]
b = 0.90 [0.02]
Seff = 47.77 [15.32]
Teff = 670 [54] K
Rp = 57.09 [13.90] Re
a = 0.1200 [0.0245] AU
Ag = 1.97 [0.61] [1.61σ]
Teffp = 1228 [43] K [8.09σ]

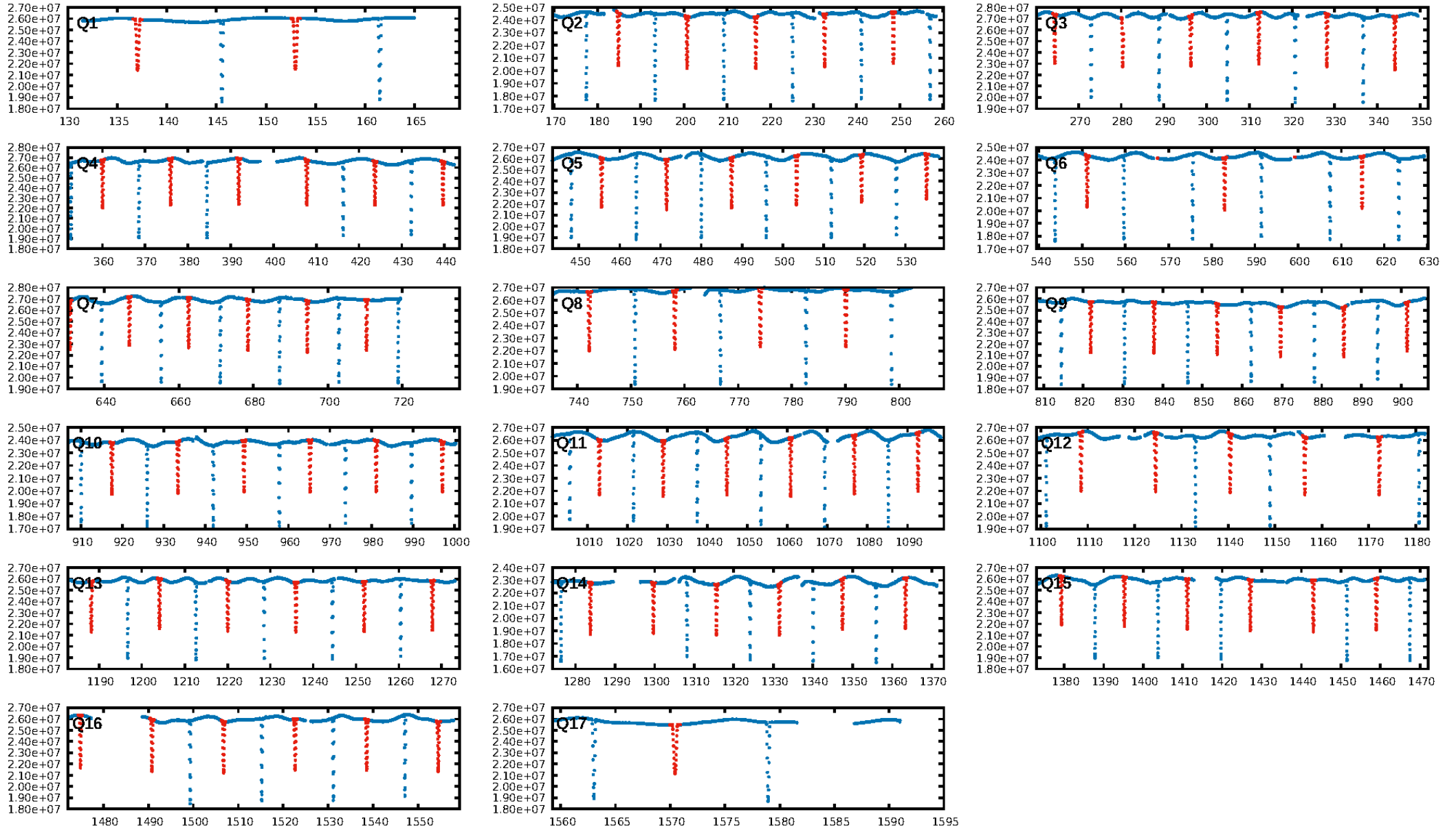
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 37.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [82/82]
GhostDiagnostic-chr: 3.539
Centroid-sig: N/A
Centroid-so: 0.669 arcsec [424.24σ]
OotOffset-rm: 0.142 arcsec [2.06σ]
KicOffset-rm: 0.031 arcsec [0.46σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
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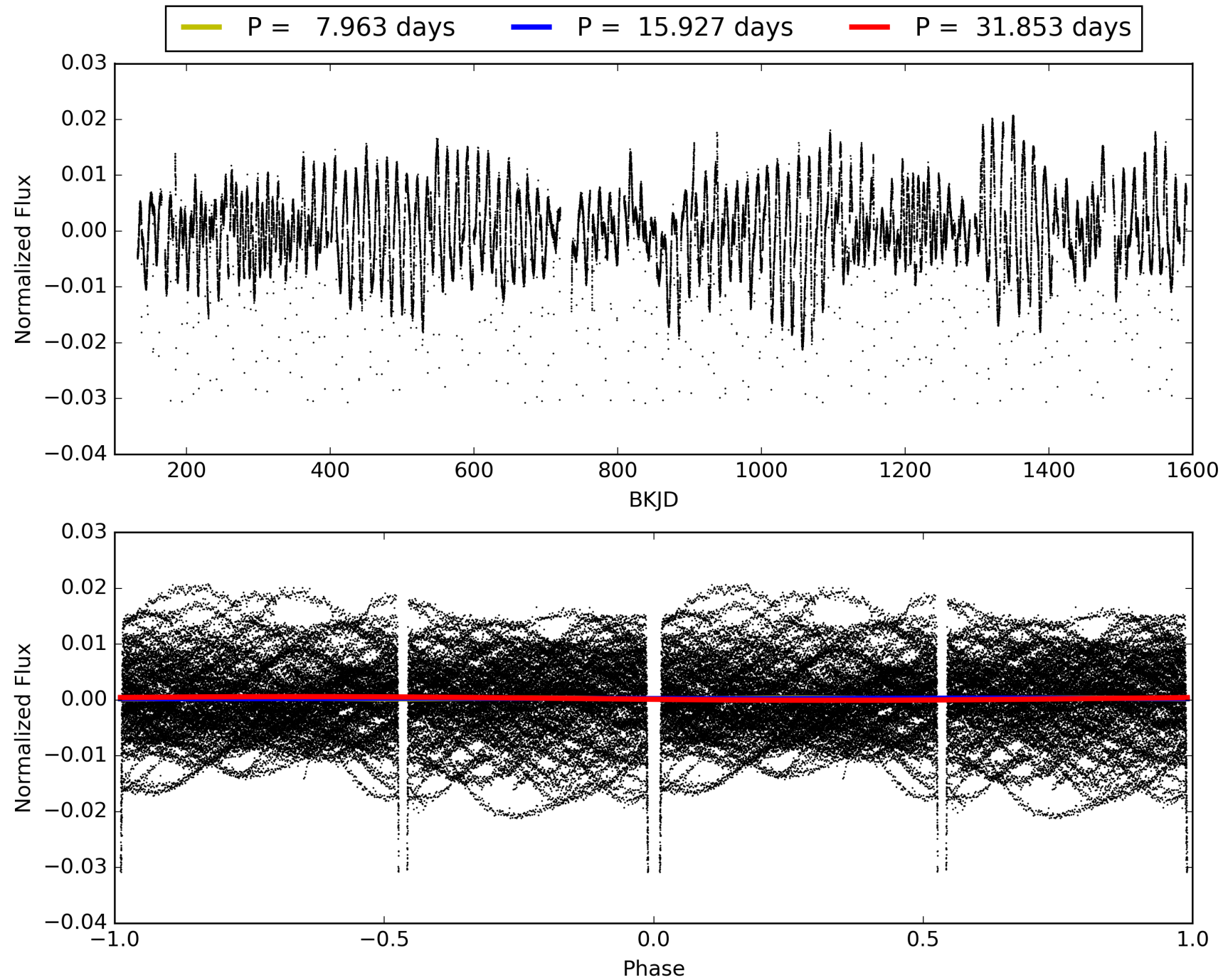
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 002580872-02, PDC Light Curves

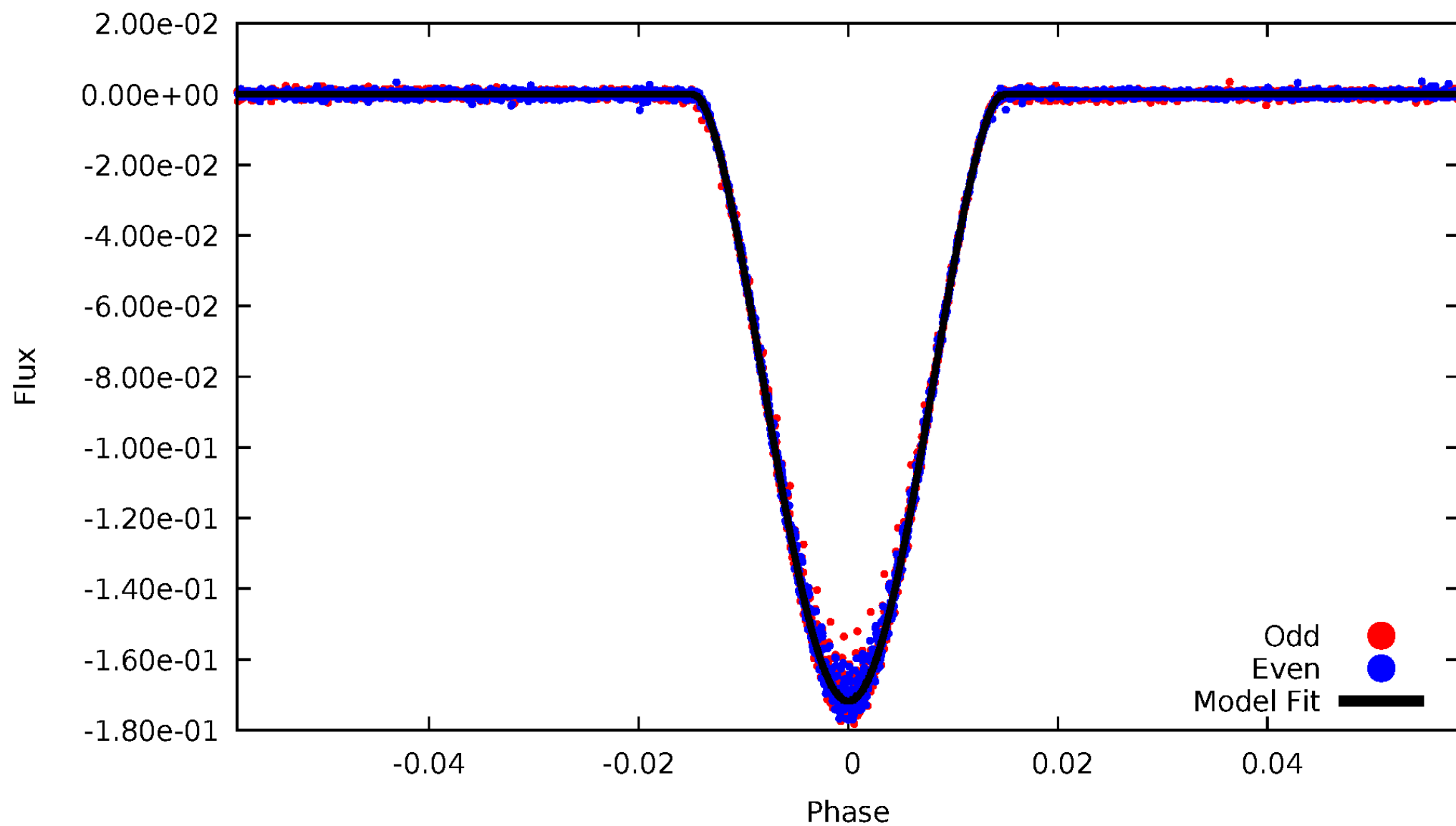


TCE 002580872-02



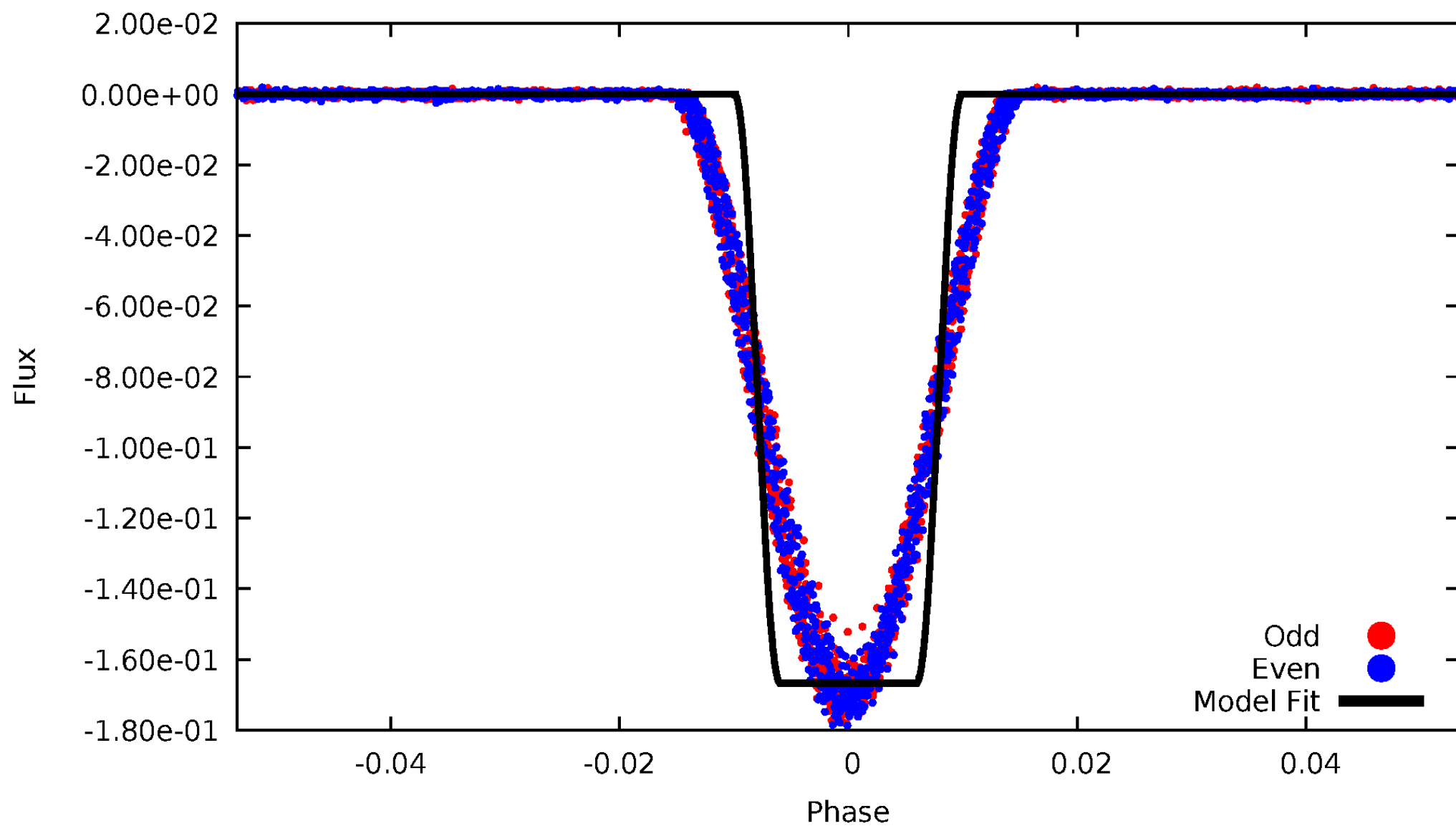
DV Odd/Even

TCE 002580872-02



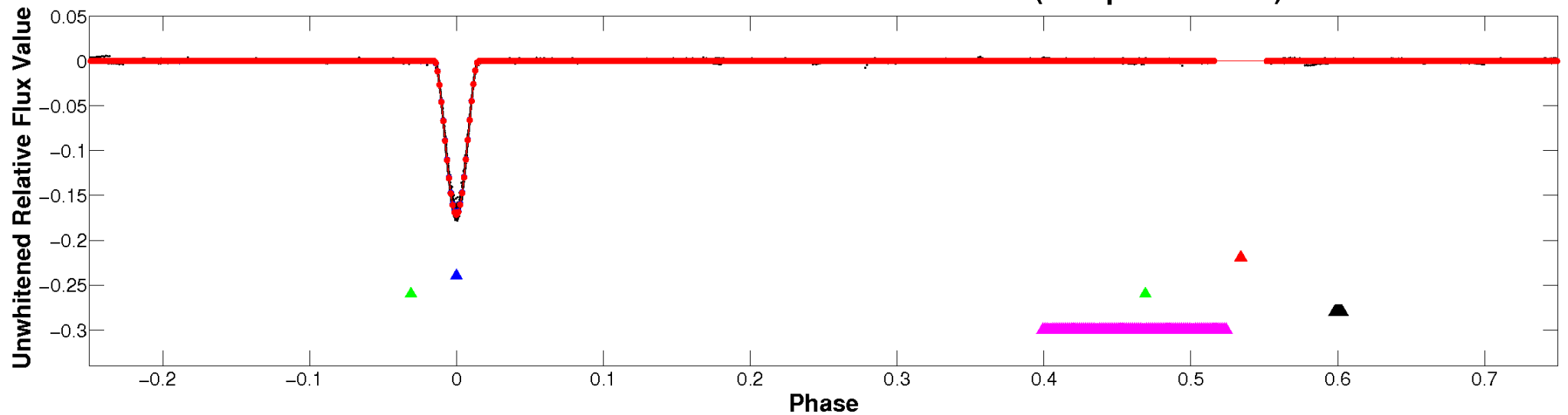
ALT Odd/Even

TCE 002580872-02

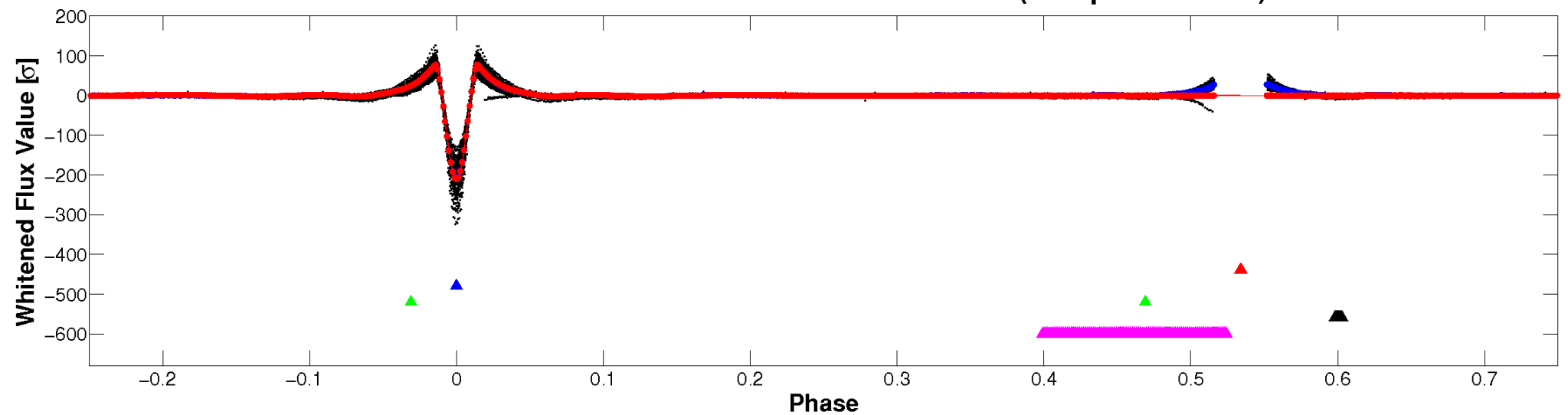


Non-Whitened Vs. Whitened Light Curve

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

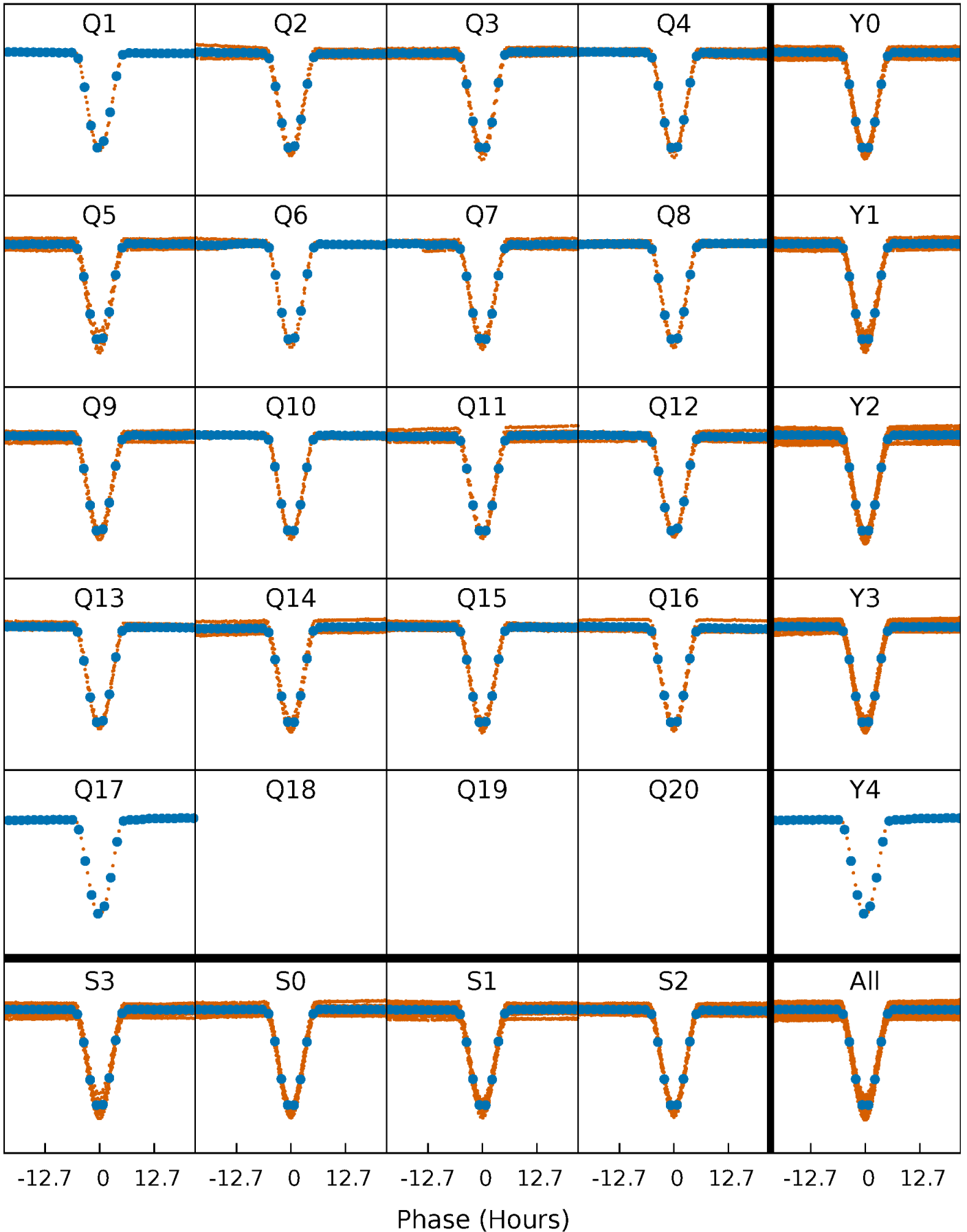


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



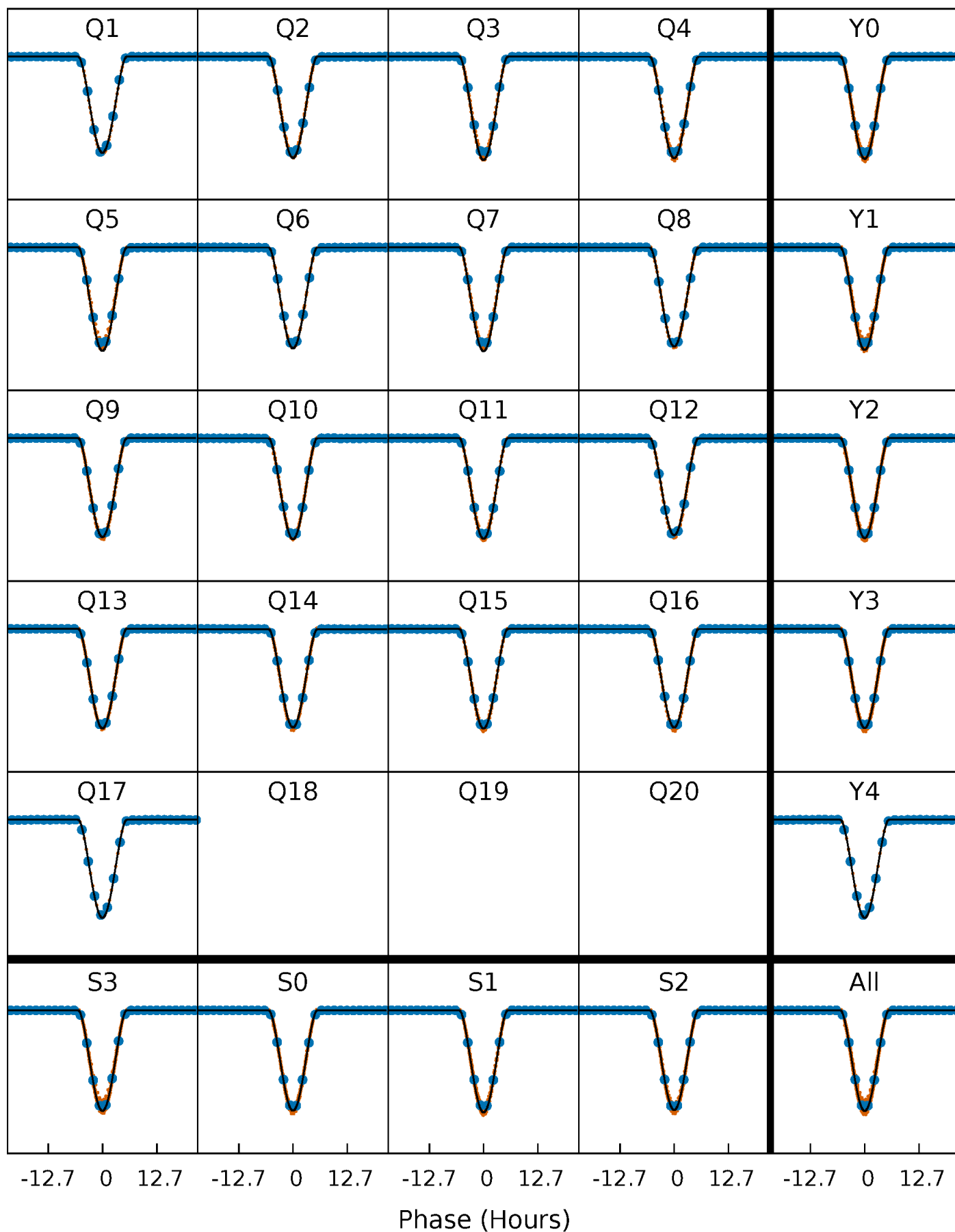
PDC Quarter-Phased Transit Curves

TCE 002580872-02 P= 15.926621 Days $T_0=137.041425$ (BKJD)



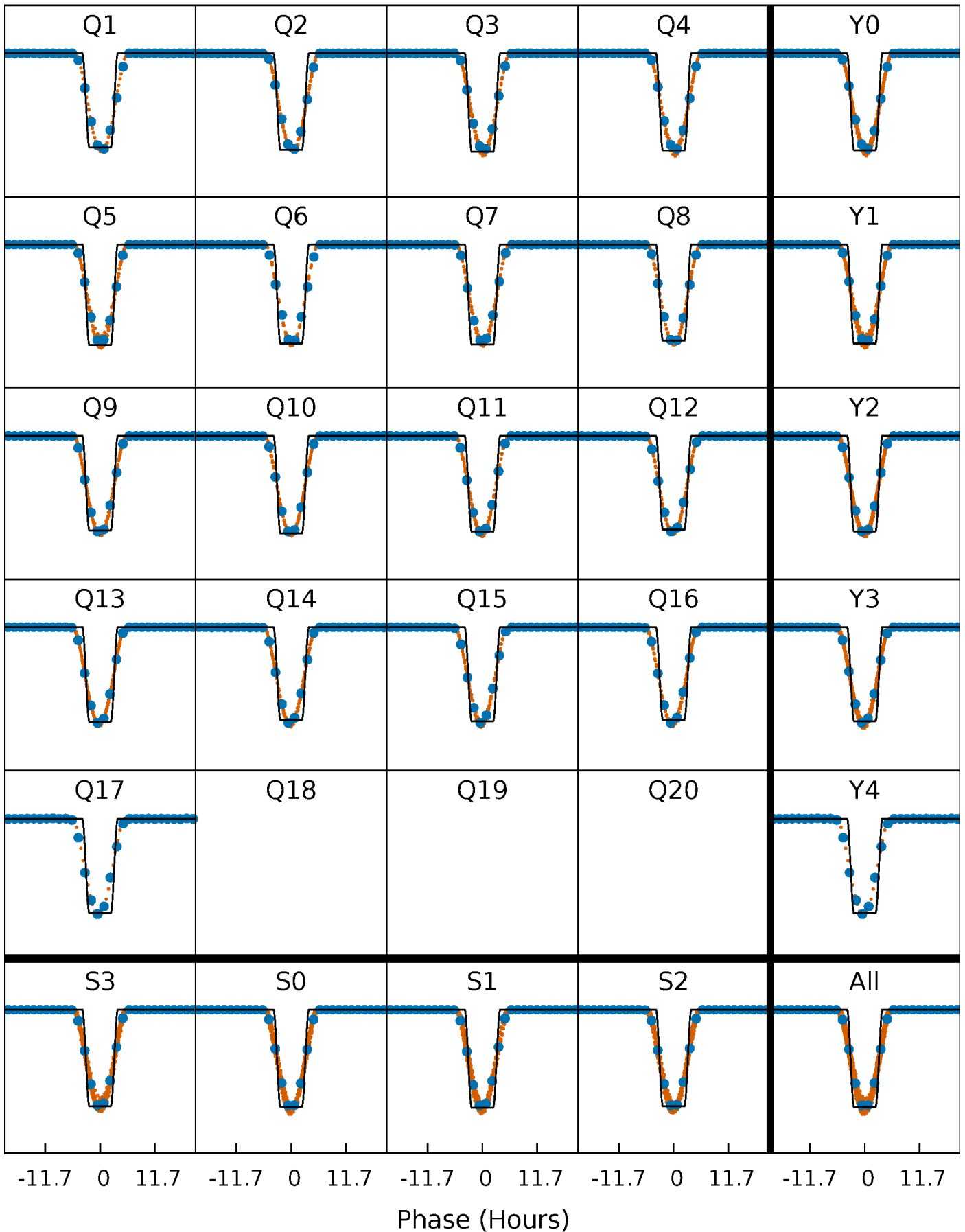
DV Quarter-Phased Transit Curves

TCE 002580872-02 P= 15.926621 Days $T_0=137.041425$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

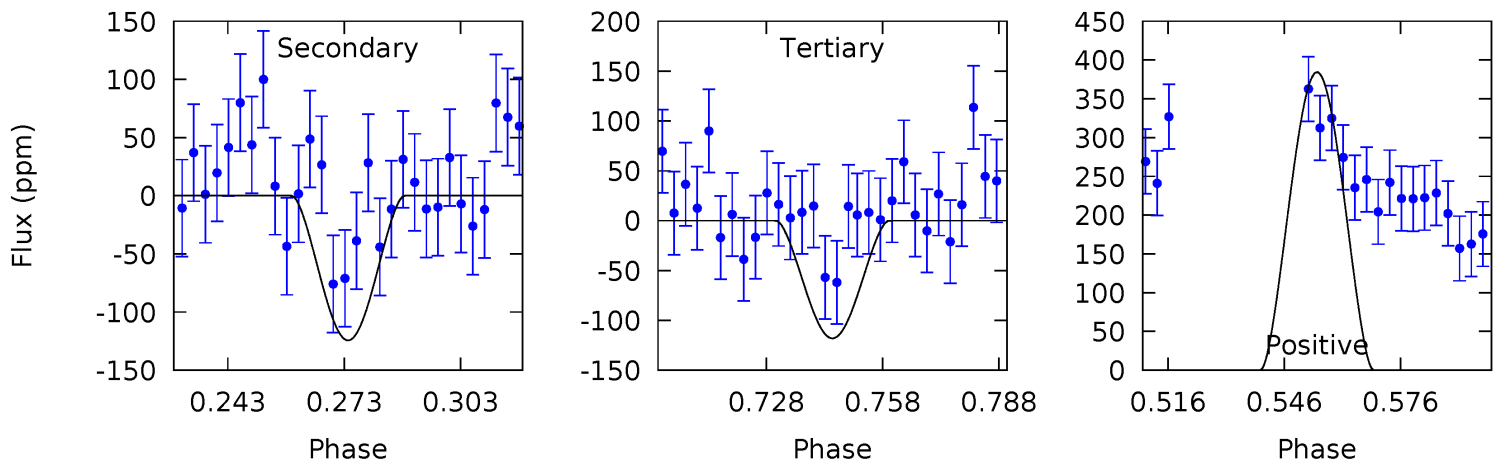
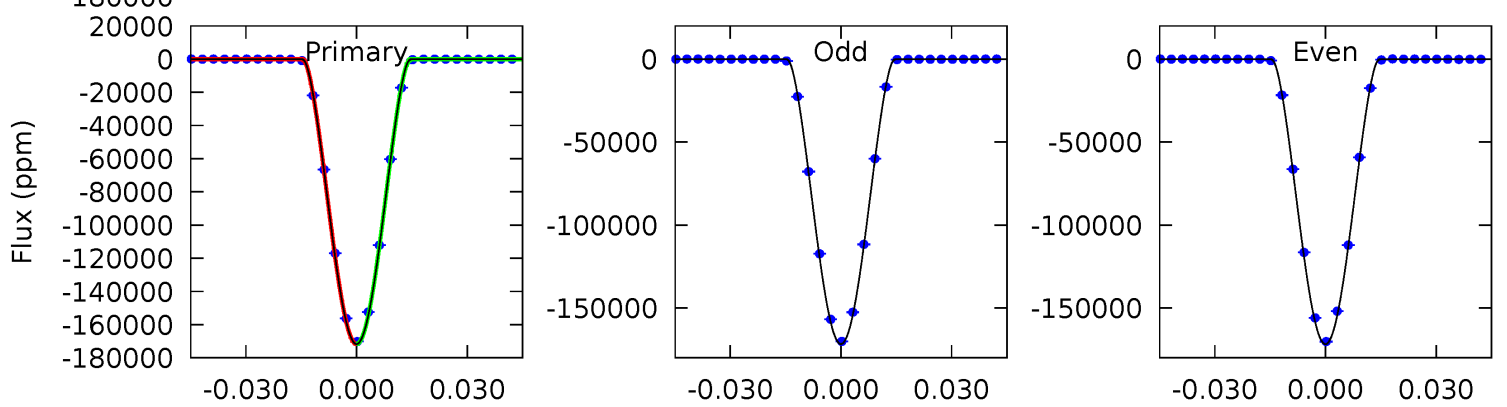
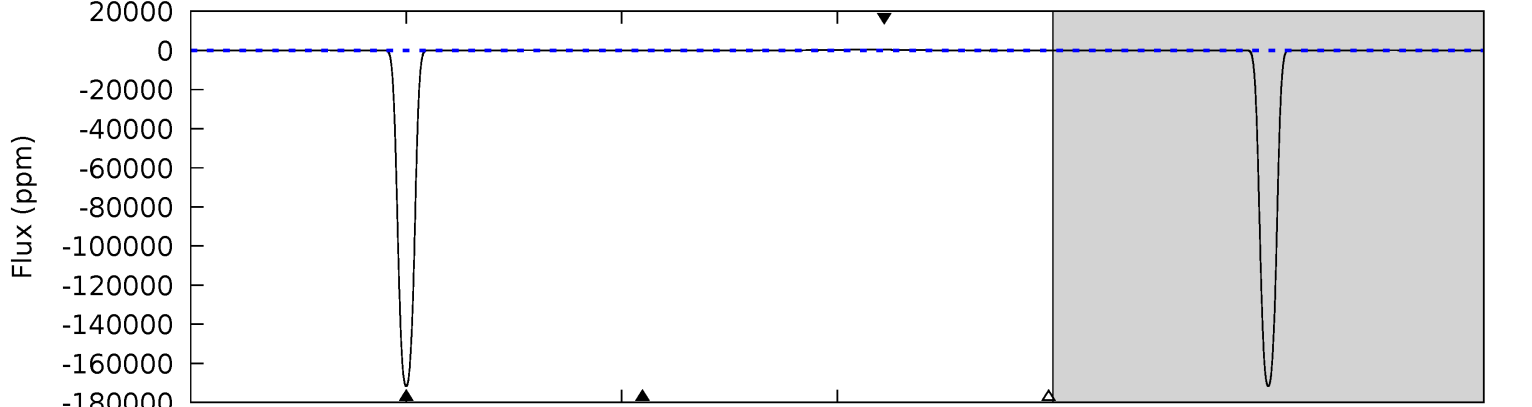
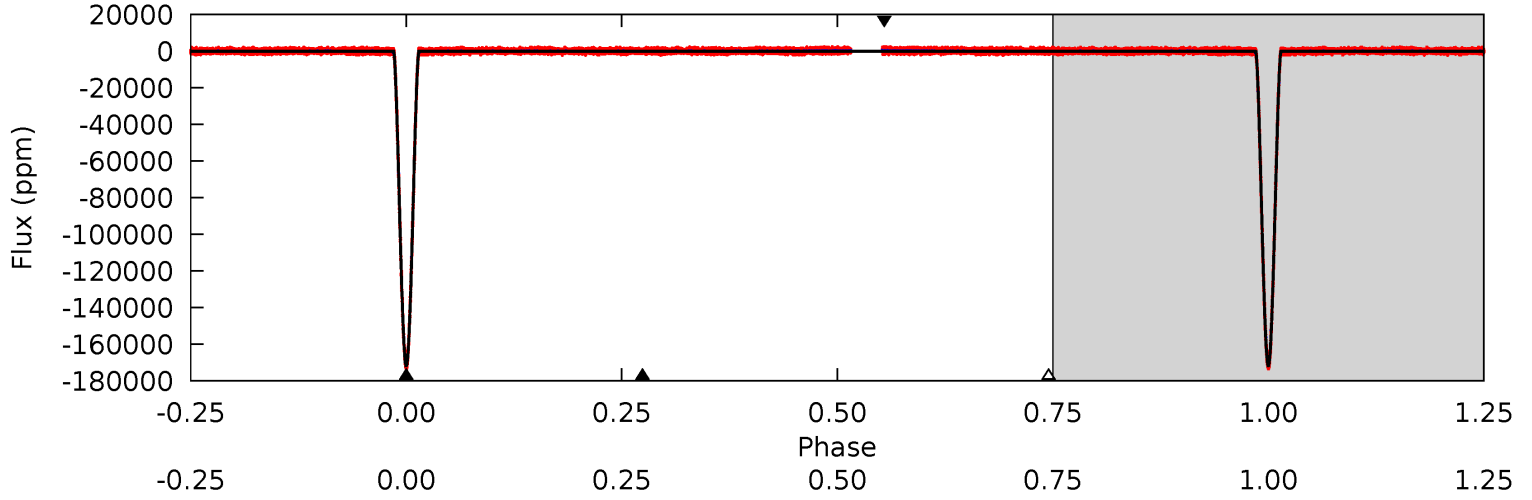
TCE 002580872-02 P= 15.926916 Days $T_0=137.028025$ (BKJD)



DV Model-Shift Uniqueness Test

002580872-02, P = 15.926621 Days, E = 121.114804 Days

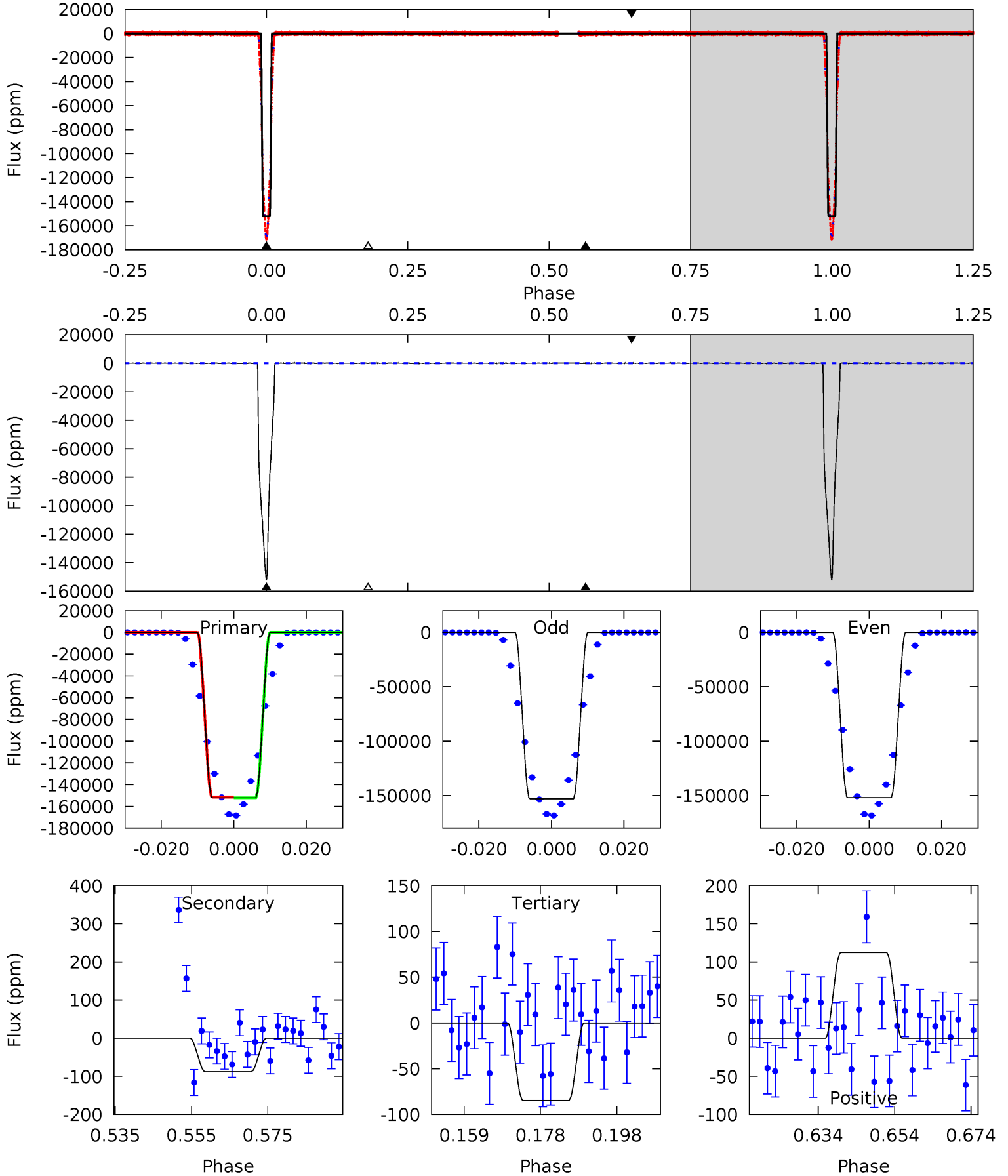
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11640	8.43	8.00	26.1	4.81	2.17	6.85	11632	11614	0.42	-17.6	2.55	0.99	0.00	0



Alt Model-Shift Uniqueness Test

002580872-02, P = 15.926916 Days, E = 121.101109 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5752	3.32	3.20	4.25	4.89	2.33	1.07	5748	5747	0.12	-0.93	19.8	1.00	0.00	12.4



Stellar Parameters For KIC 002580872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$4.471^{+0.075}_{-0.163}$	$0.060^{+0.250}_{-0.300}$	$0.917^{+0.222}_{-0.111}$	$0.907^{+0.091}_{-0.082}$	$1.657^{+0.606}_{-0.725}$
	+3%/-3%	+2%/-4%	+417%/-500%	+24%/-12%	+10%/-9%	+37%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002580872-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-124 ± 15	$58.15^{+7.50}_{-4.49}$	945^{+63}_{-44}	-1395^{+2927}_{-228}	$0.287^{+0.064}_{-0.061}$
Alt.	-88 ± 26	$41.69^{+5.36}_{-3.54}$	950^{+58}_{-46}	1624^{+135}_{-3154}	$0.389^{+0.143}_{-0.130}$

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 $A_{obs} \gg 1.0$

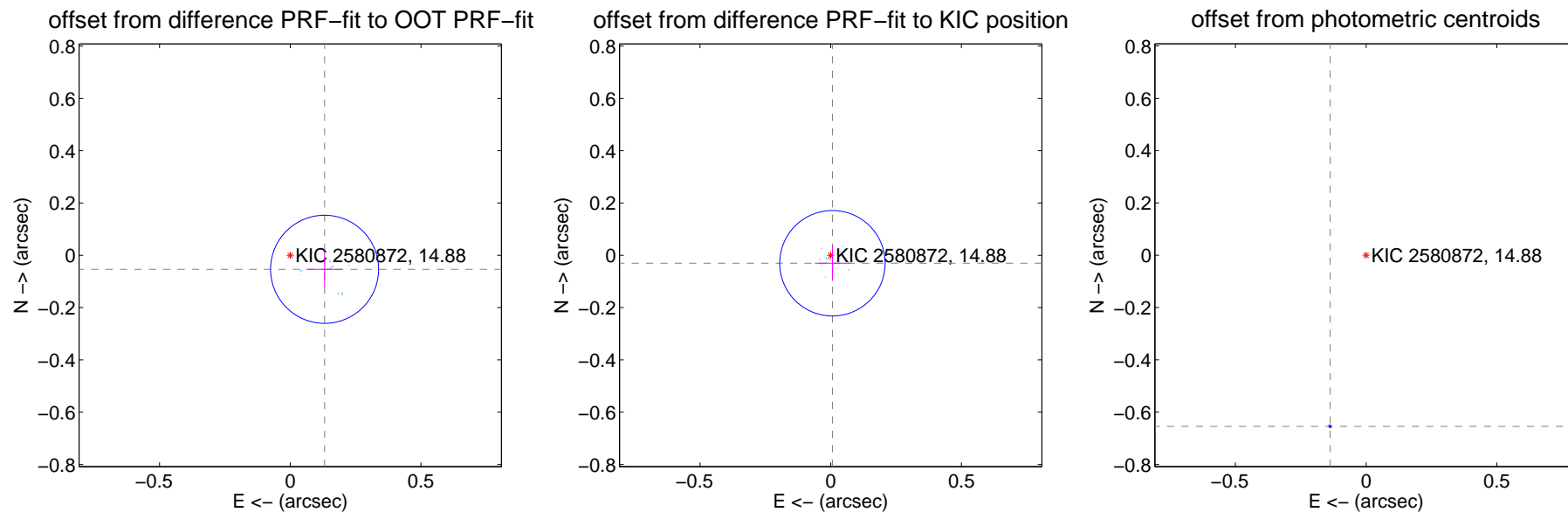
DV Centroid Data

Supplemental centroid analysis for 002580872-02. Kepler magnitude: 14.88. Transit SNR 4227.64

There are 17 quarters with good PRF difference image offsets

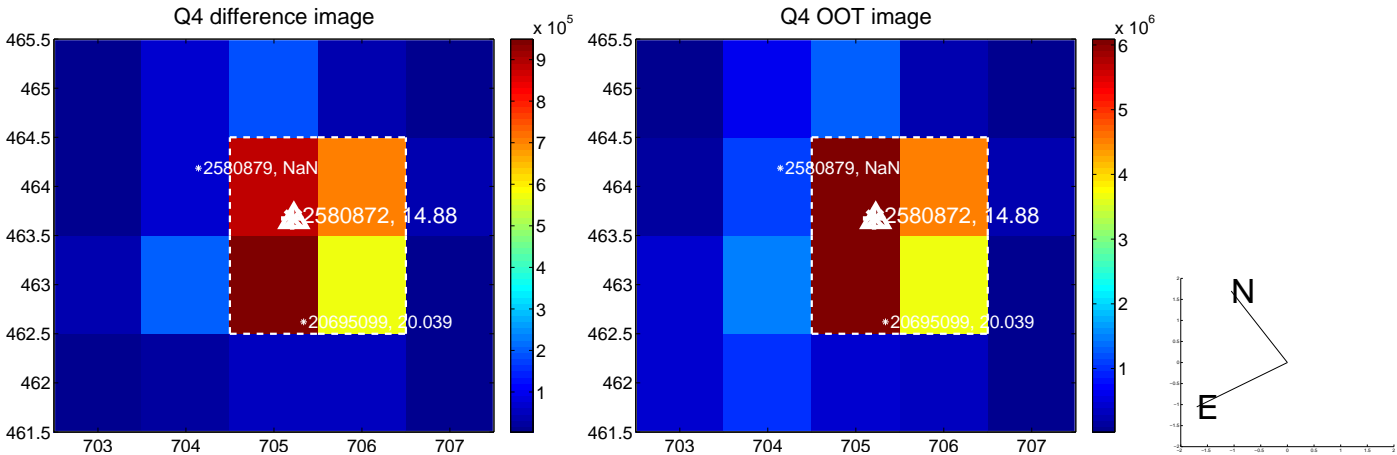
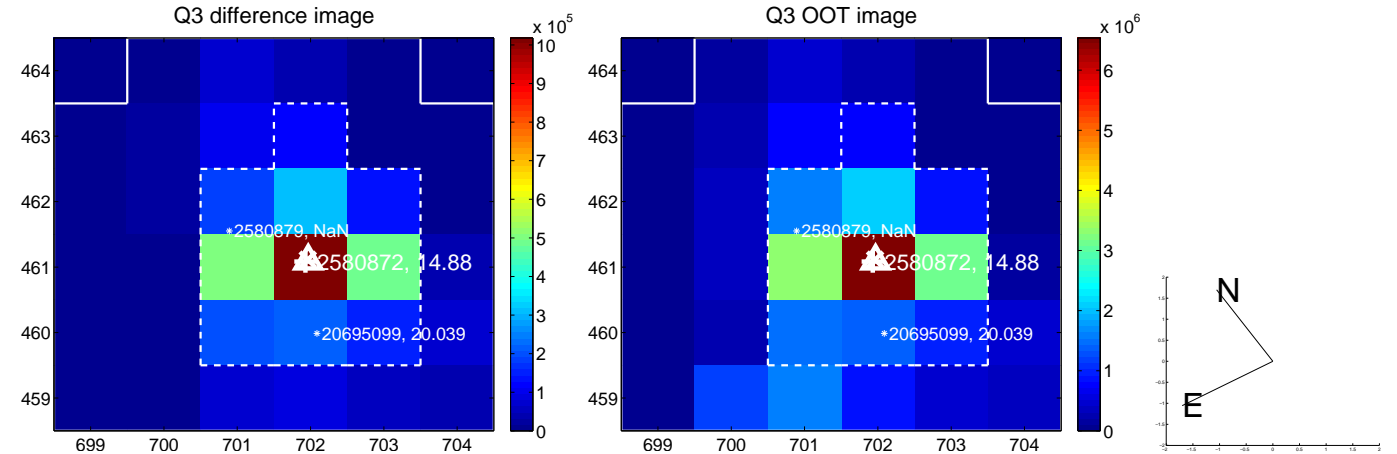
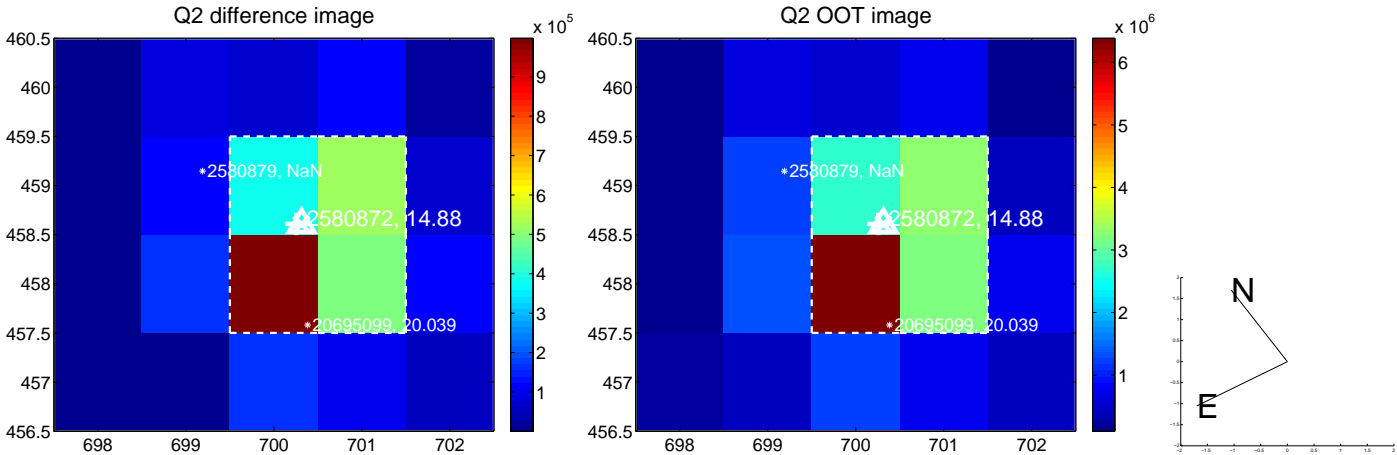
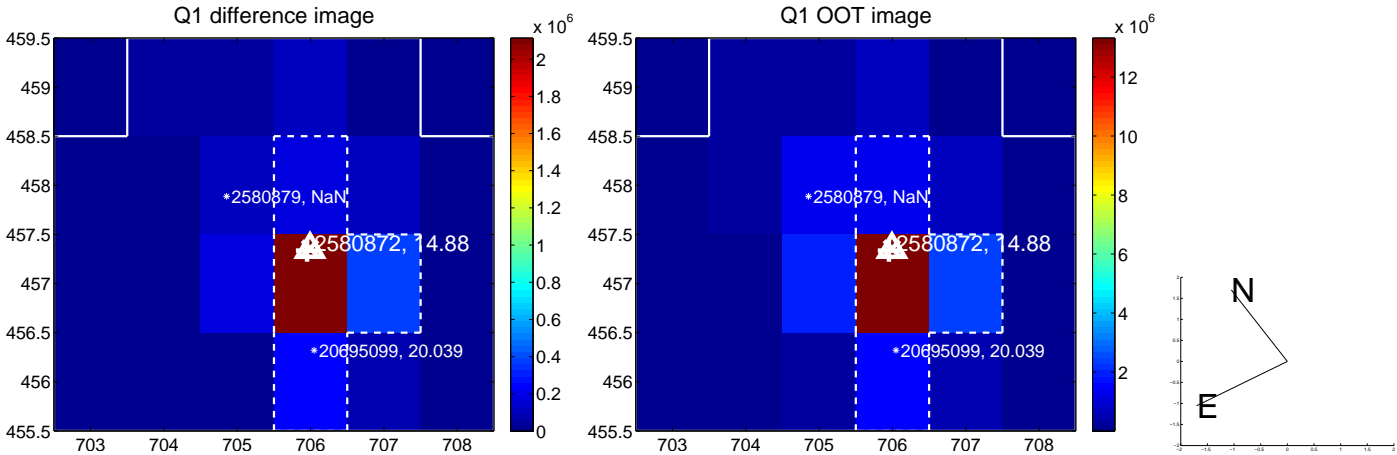
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.142 ± 0.069	2.06	-0.131 ± 0.069	-0.054 ± 0.067
PRF-fit source offset from KIC position	0.031 ± 0.067	0.46	-0.007 ± 0.067	-0.030 ± 0.067
photometric centroid source offset	0.67 ± 0.00	424.24	0.14 ± 0.00	-0.65 ± 0.00

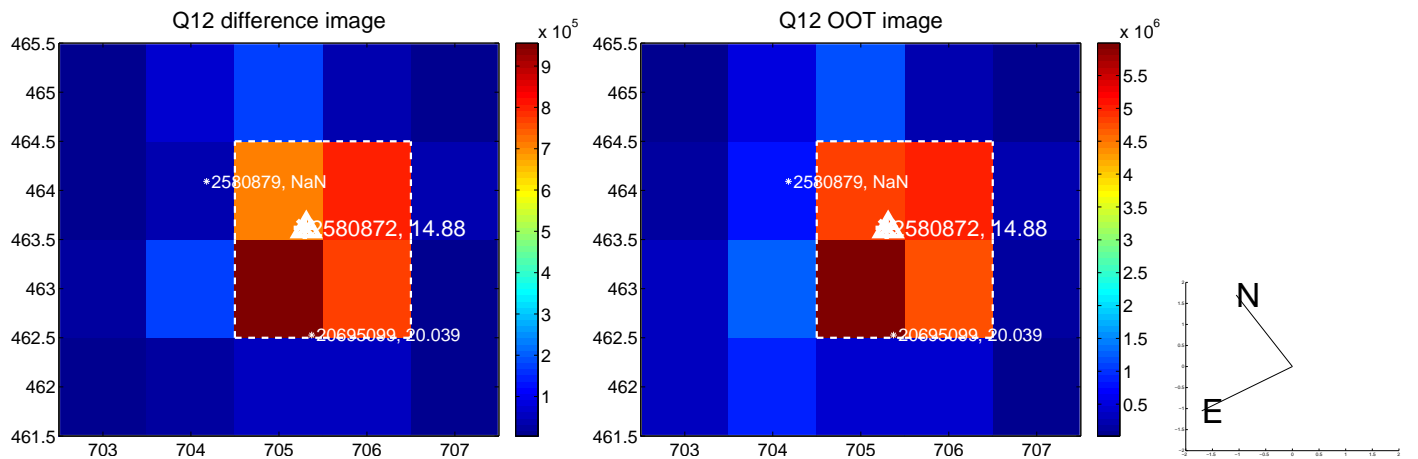
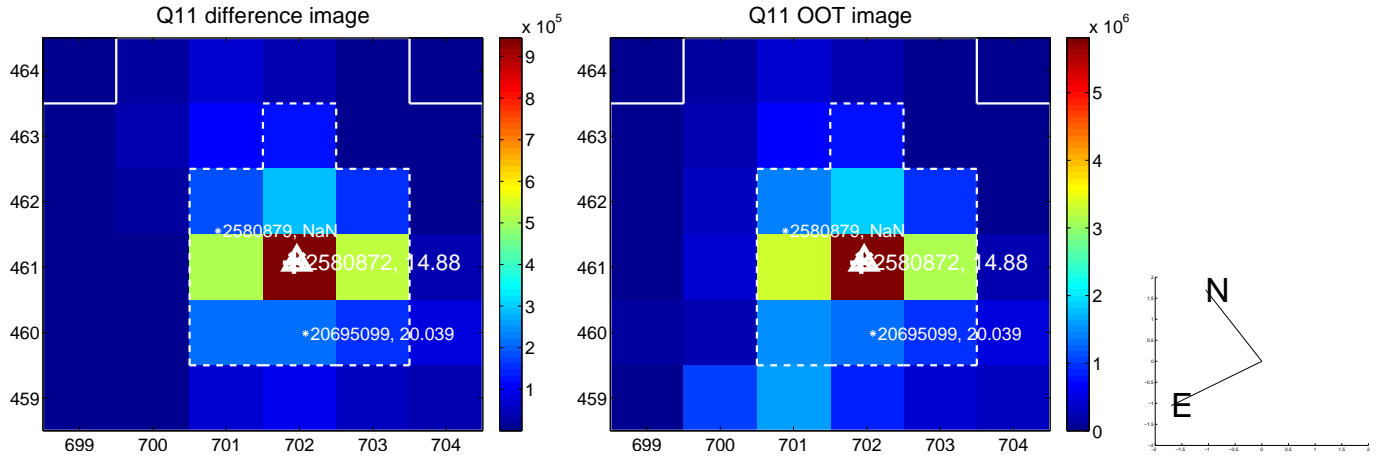
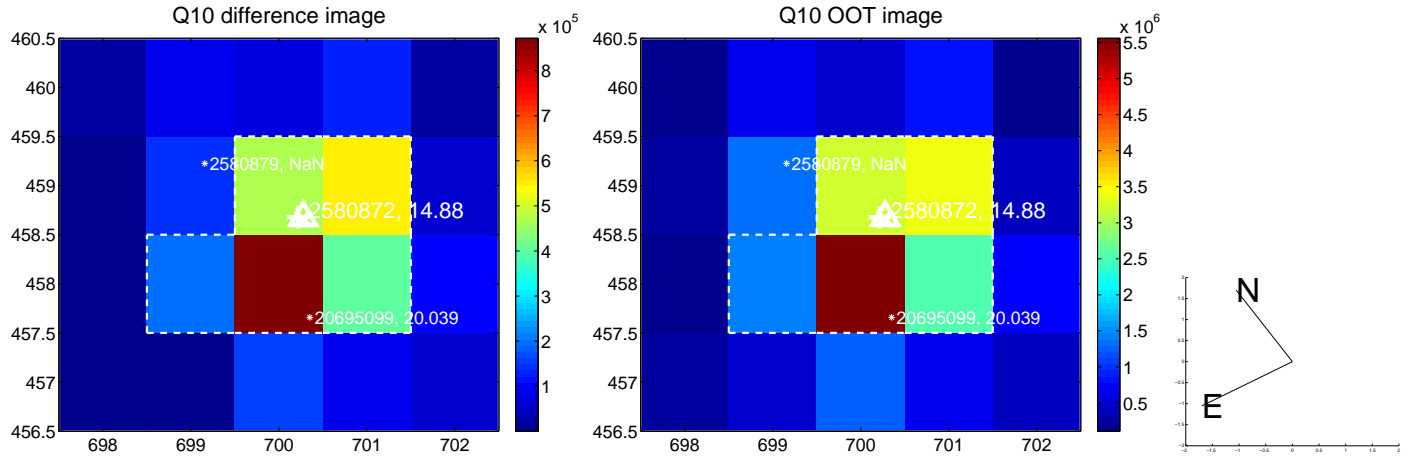
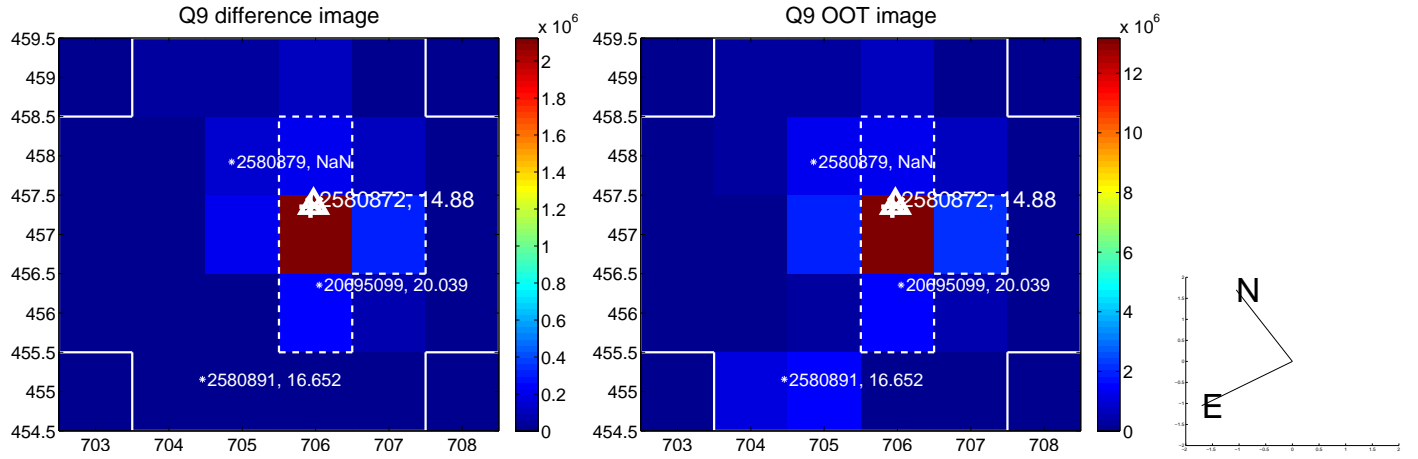


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

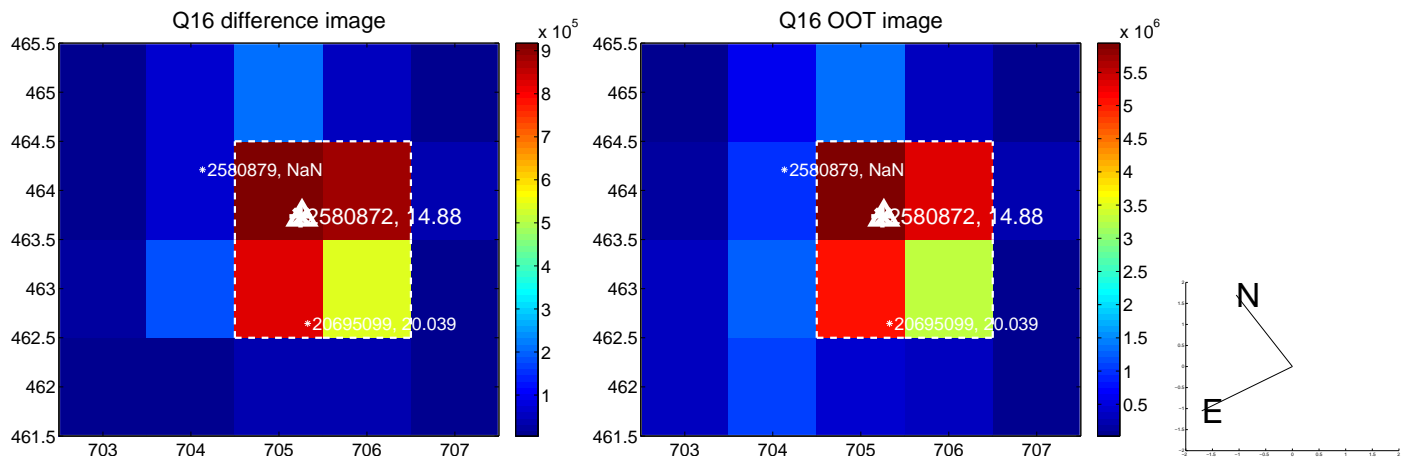
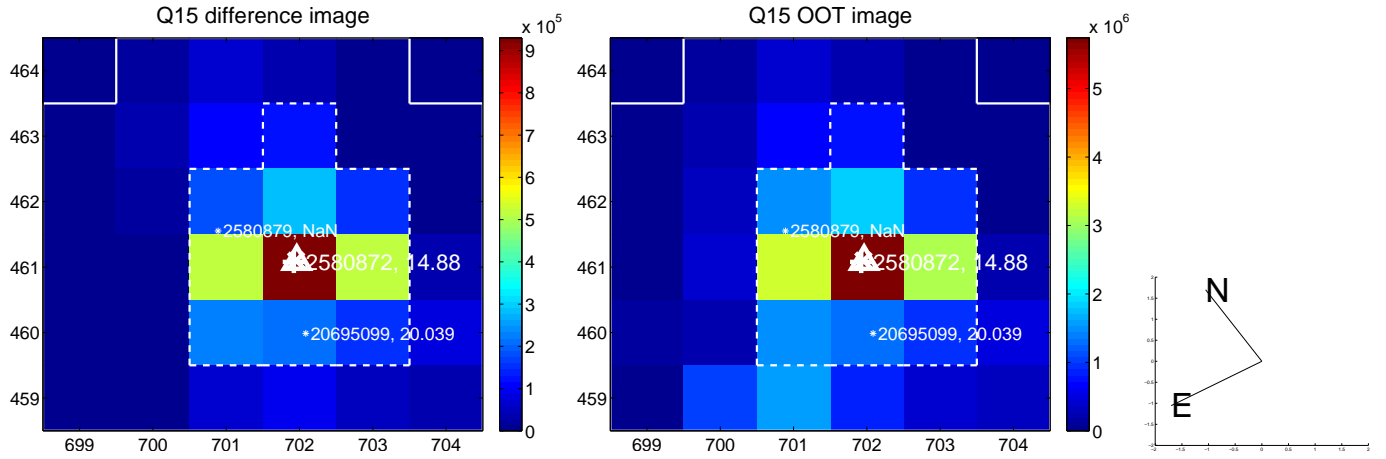
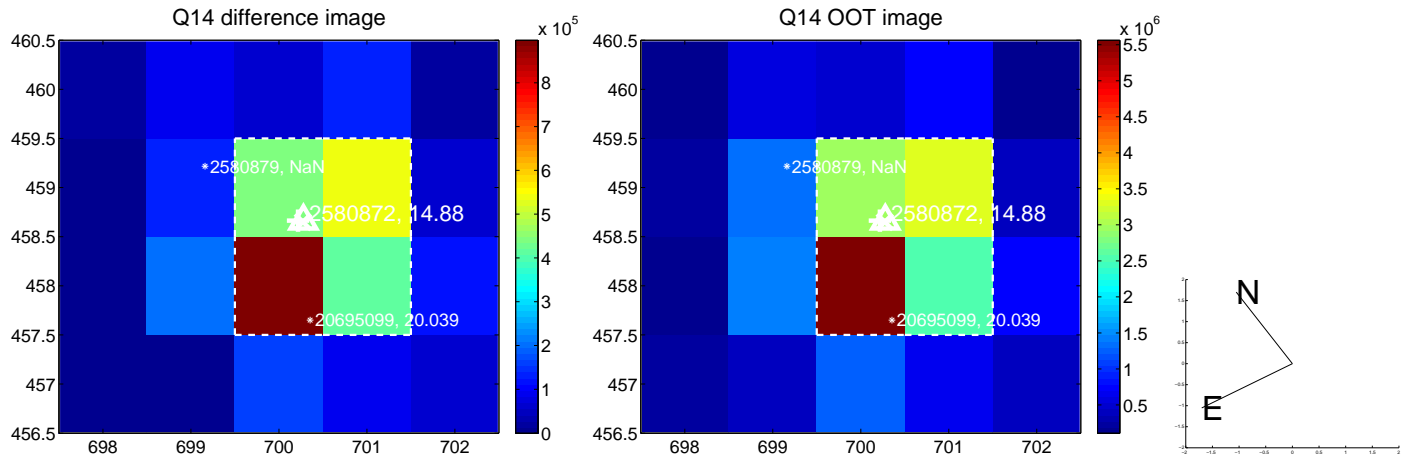
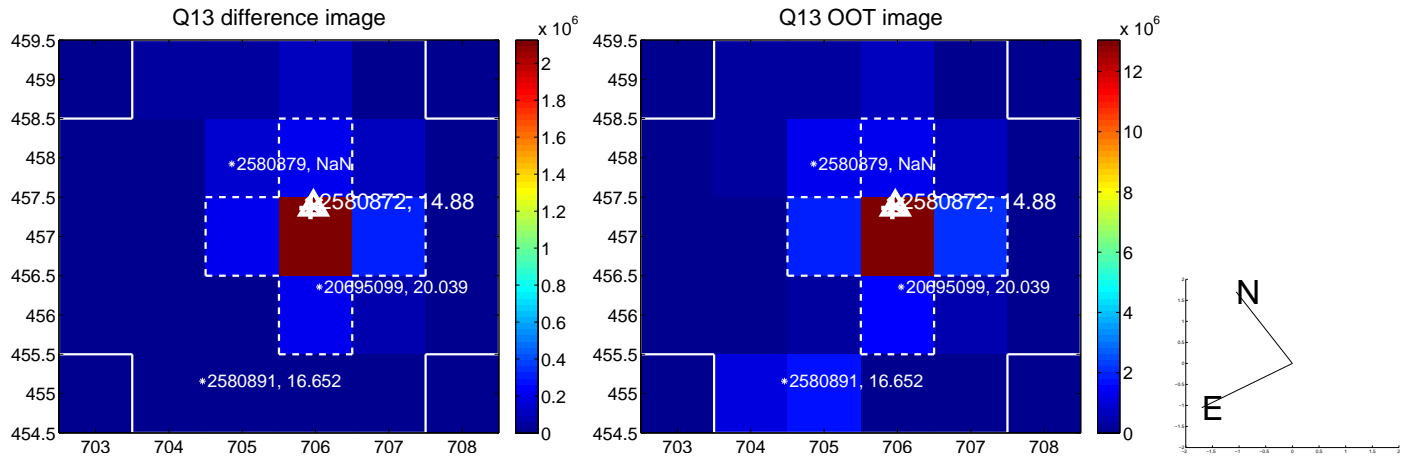
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



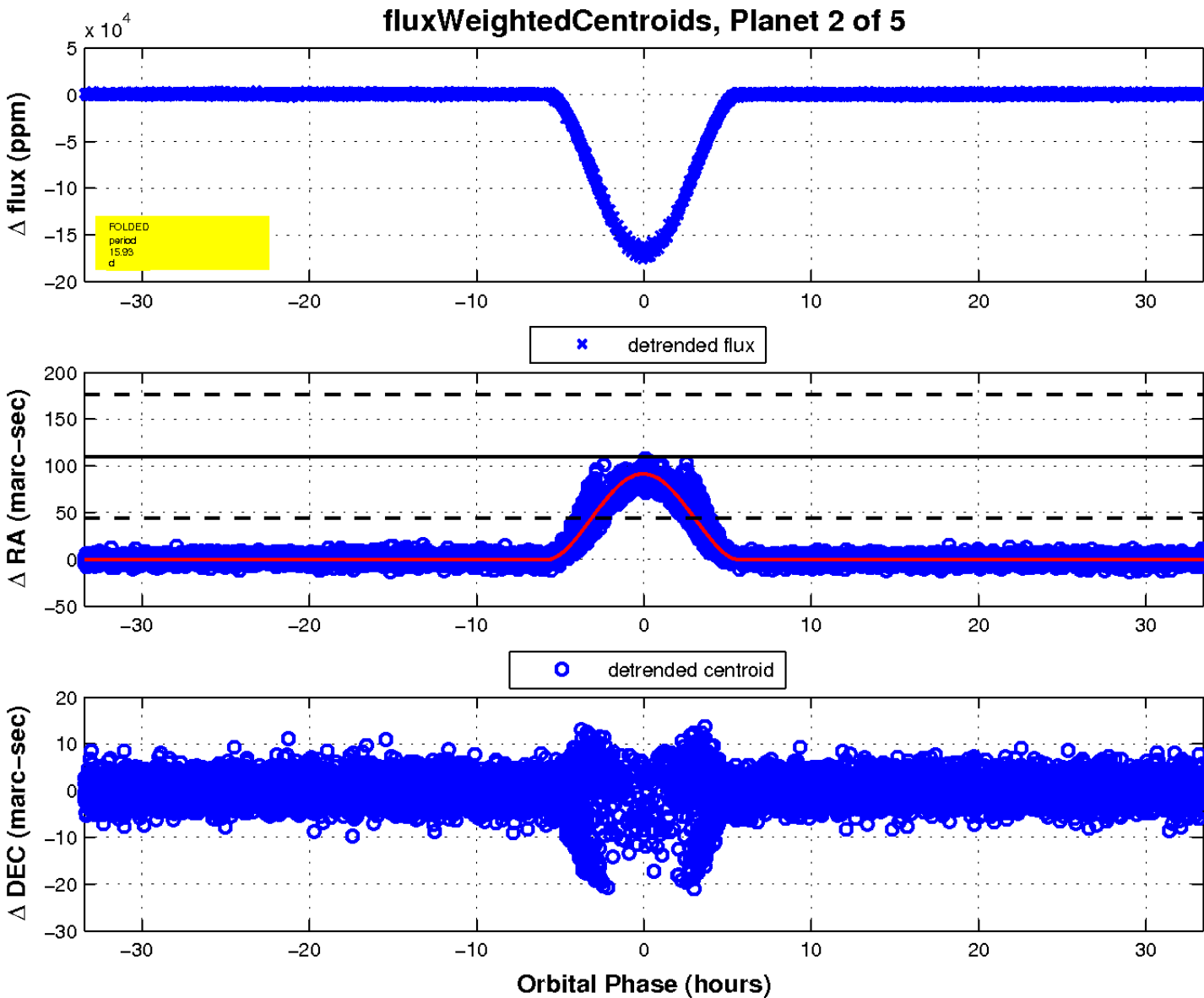
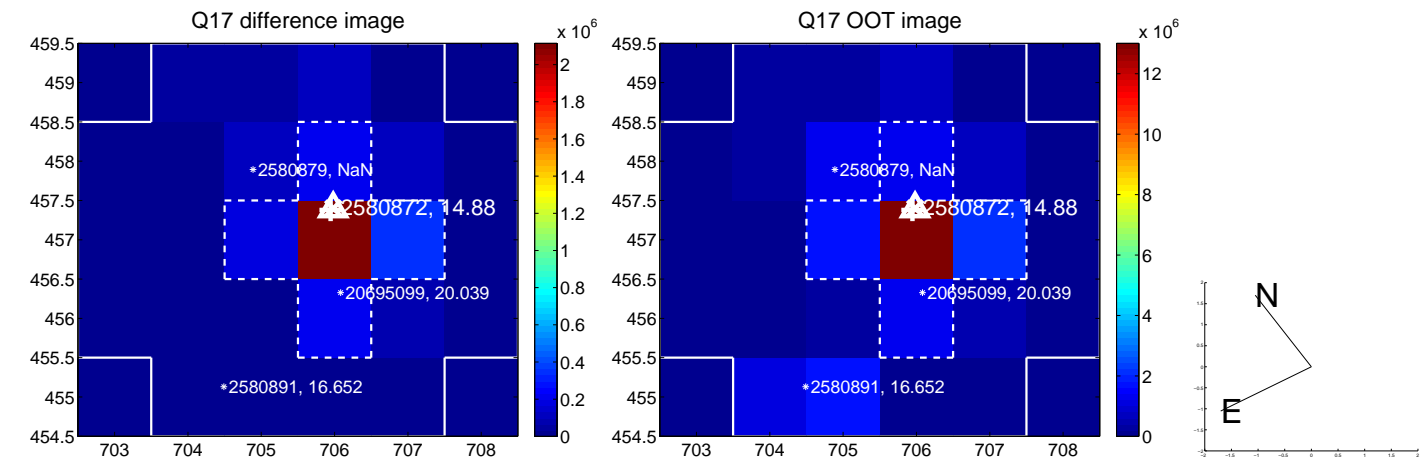
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

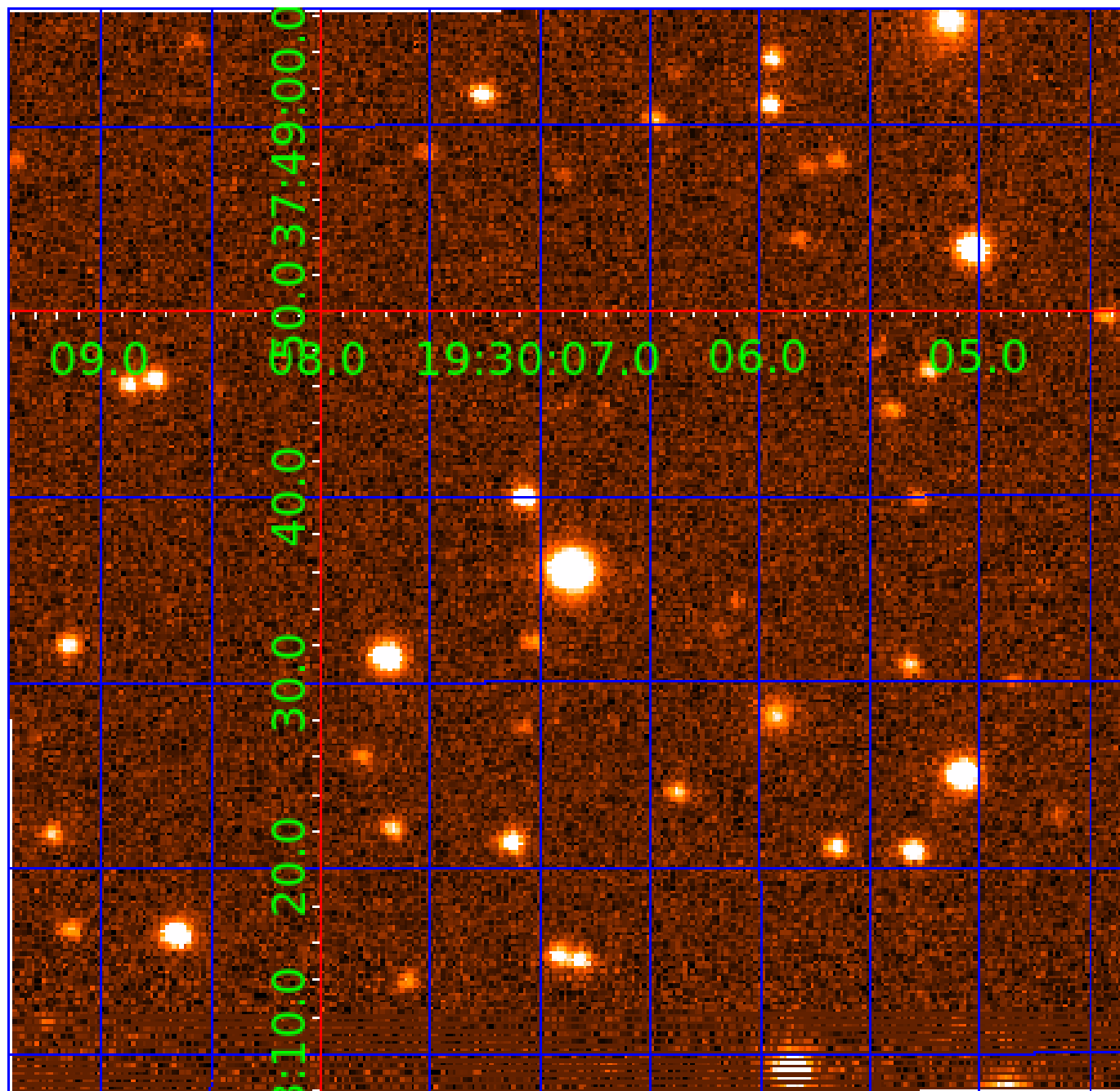


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002580872

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})
002580872-01	OBS	6283.01	15.926728	145.542038	274695.9	4.500	8439.2	-1.0	0.92	5496	43.33	47.77
002580872-02	OBS	No	15.926621	137.041425	171793.6	11.142	5962.9	4227.6	0.92	5496	57.09	47.77
002580872-03	OBS	No	7.963280	136.551272	3886.2	15.000	194.1	-1.0	0.92	5496	5.61	120.38
002580872-04	OBS	No	15.925751	146.645451	3463.4	12.500	128.6	-1.0	0.92	5496	5.30	47.77
002580872-05	OBS	No	15.948718	143.399920	1134.5	12.000	20.3	-1.0	0.92	5496	3.03	47.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
002580872-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
002580872-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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.

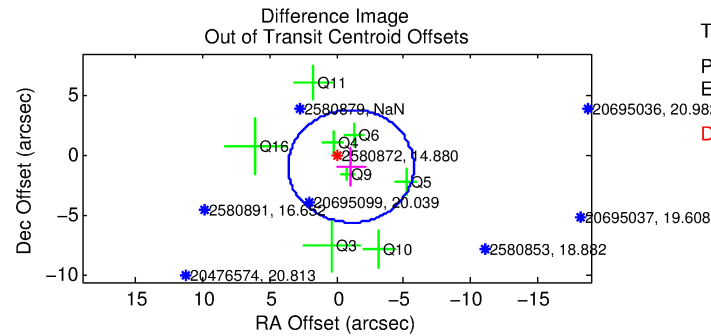
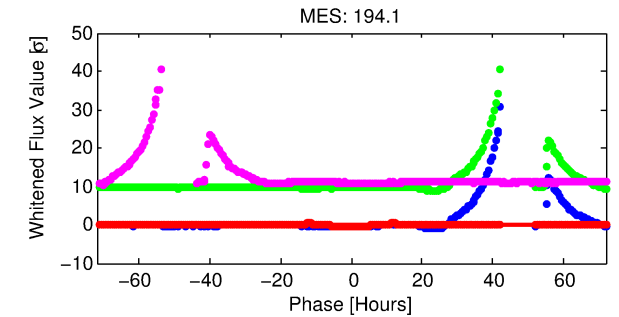
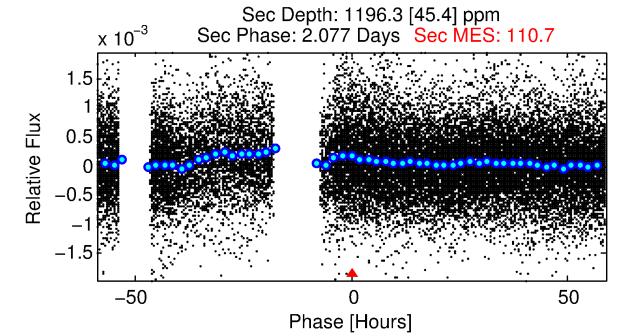
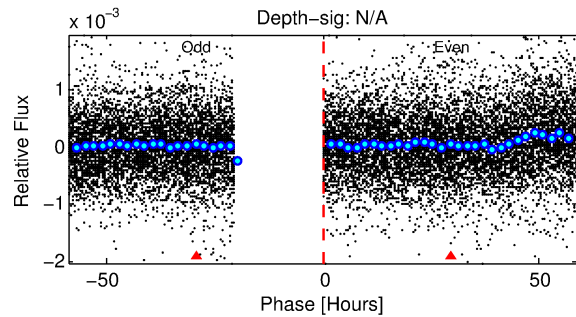
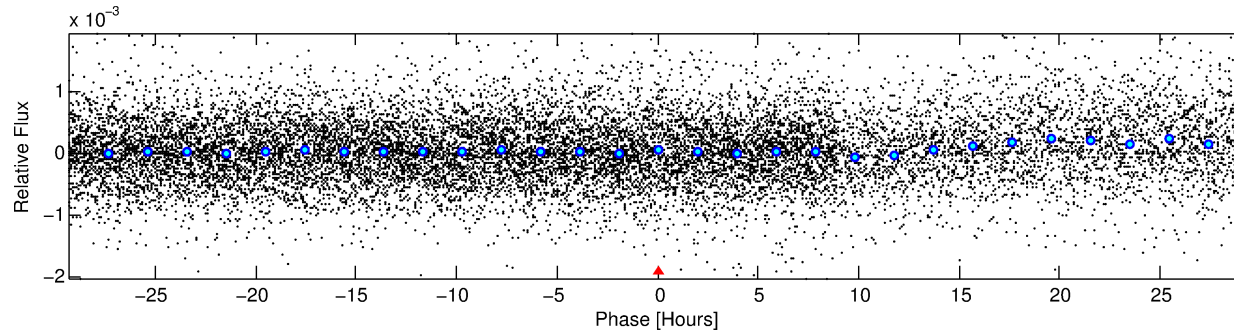
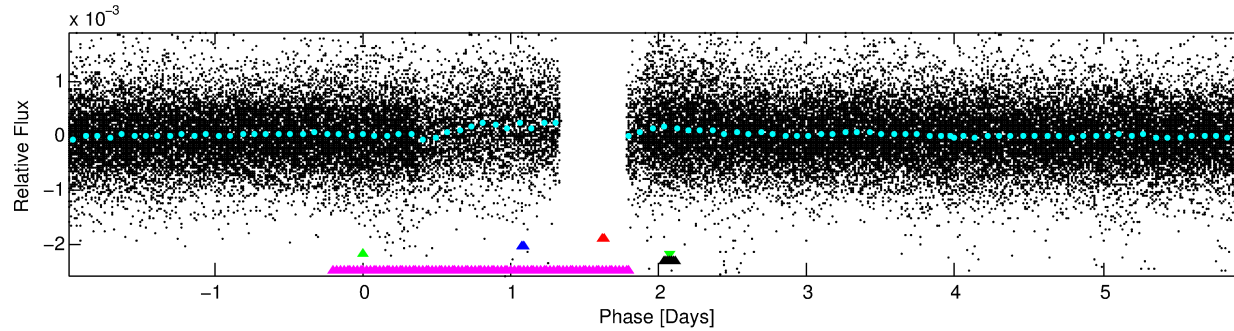
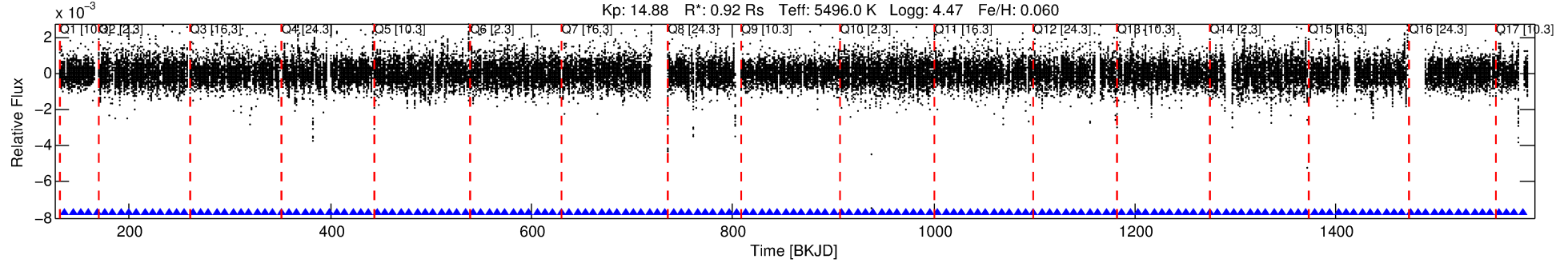
Ephemeris Match Information For 002580872-03

No Significant Match Found

DV One-Page Summary

KIC: 2580872 Candidate: 3 of 5 Period: 7.963 d
KOI: K06283 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.92 Rs Teff: 5496.0 K Logg: 4.47 Fe/H: 0.060



TPS TCE Results:

Period = 7.96328 d
Epoch = 136.5513 BKJD

DV fit results are unavailable

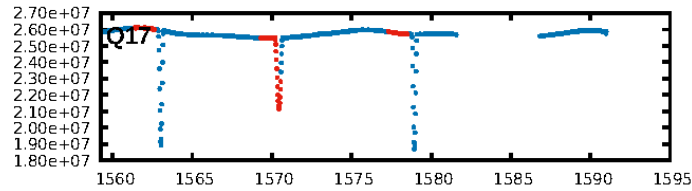
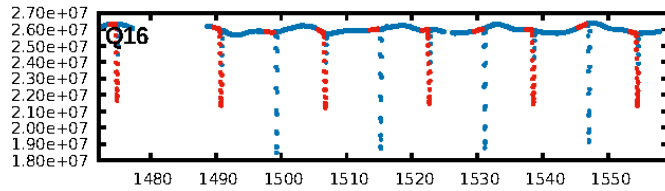
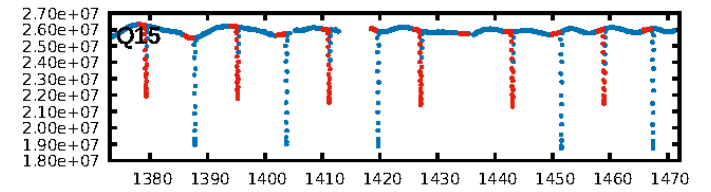
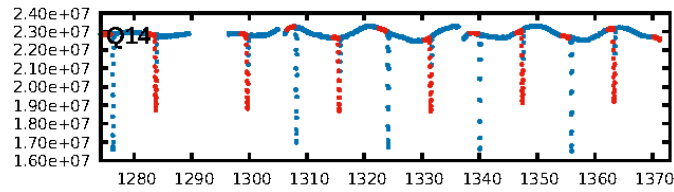
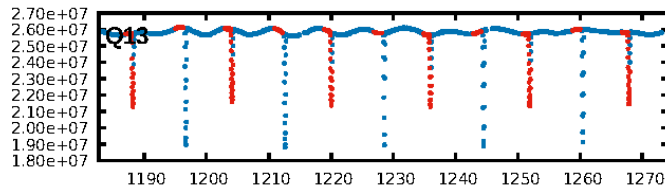
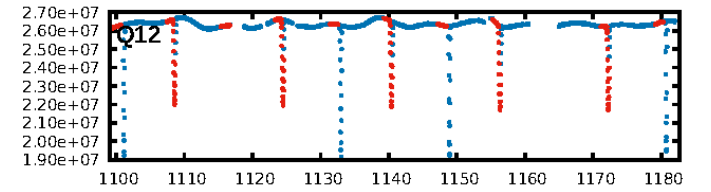
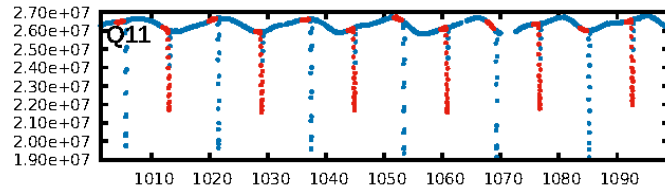
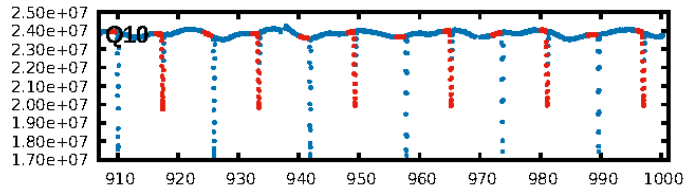
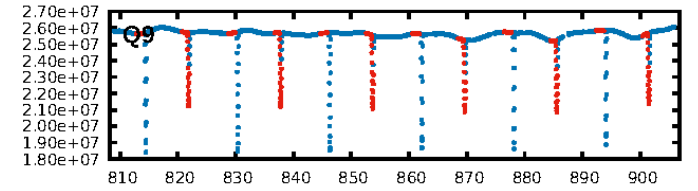
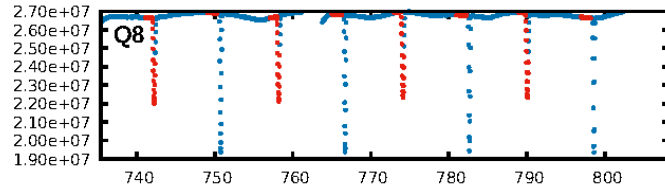
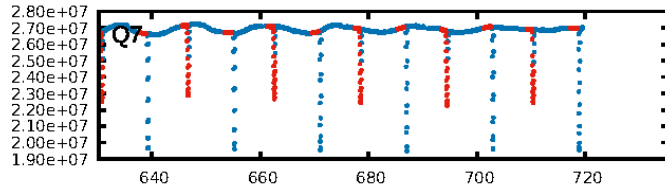
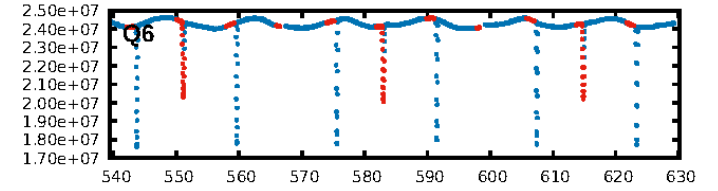
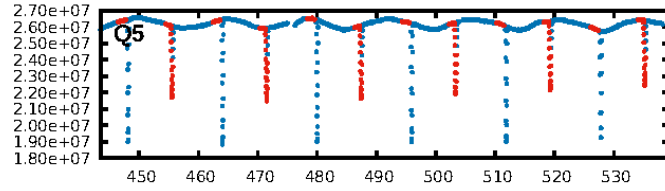
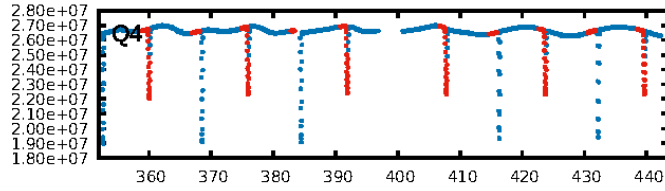
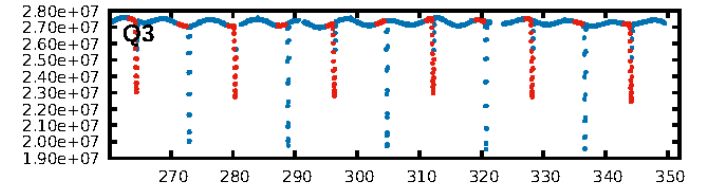
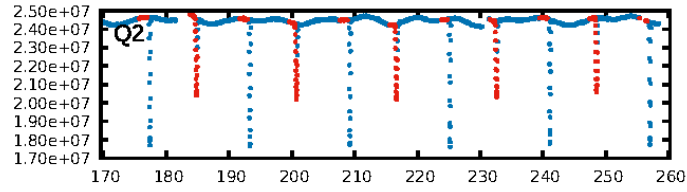
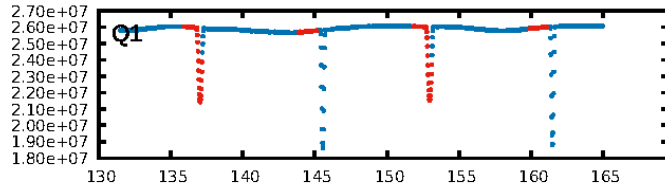
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [9.79σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [163/163]
GhostDiagnostic-chr: -29.45
Centroid-sig: N/A
Centroid-so: 9.879 arcsec [2.78σ]
OotOffset-rm: 1.385 arcsec [0.89σ]
KicOffset-rm: 1.215 arcsec [0.71σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 1.00 [17/17]

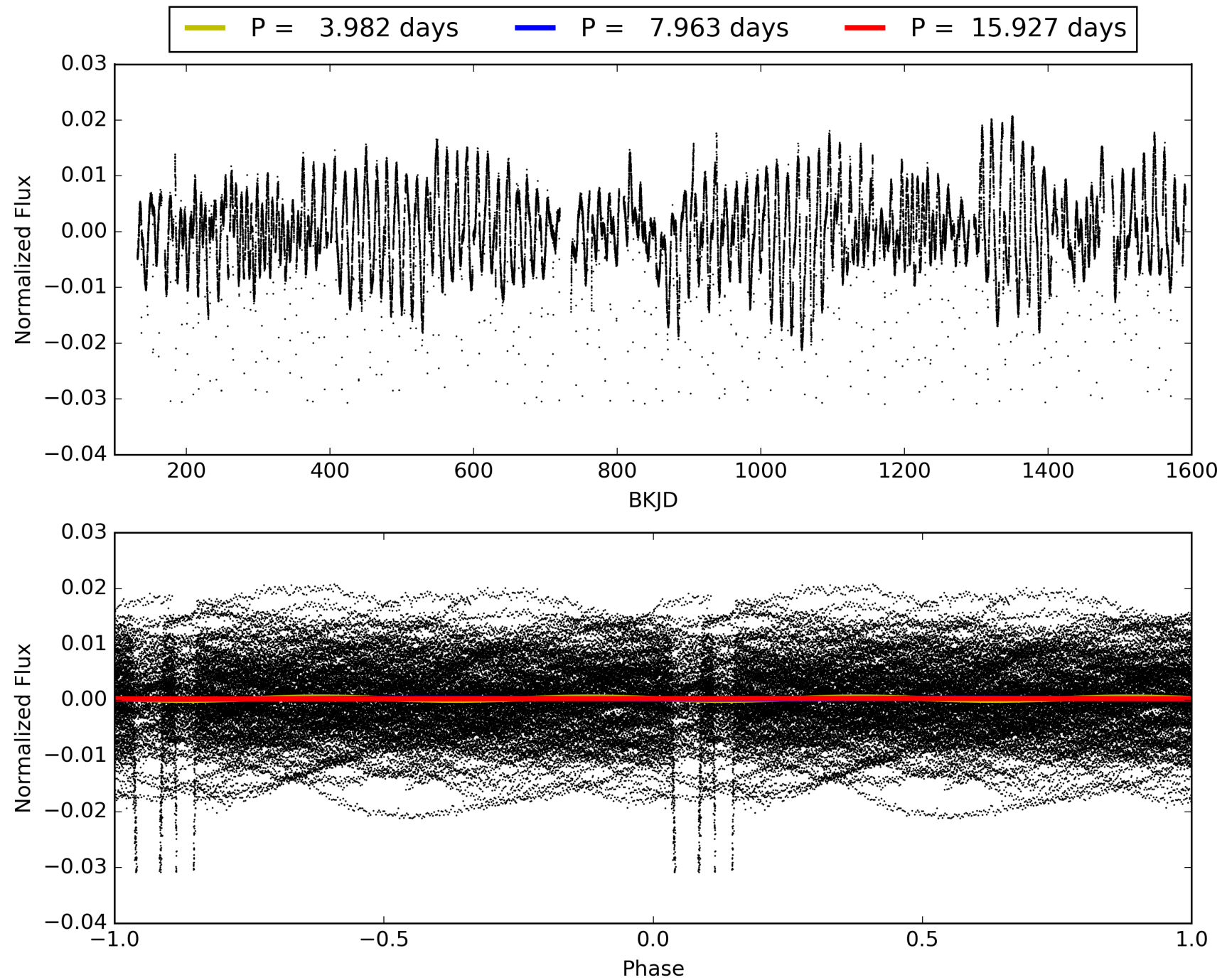
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:15:14 Z

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

TCE 002580872-03, PDC Light Curves

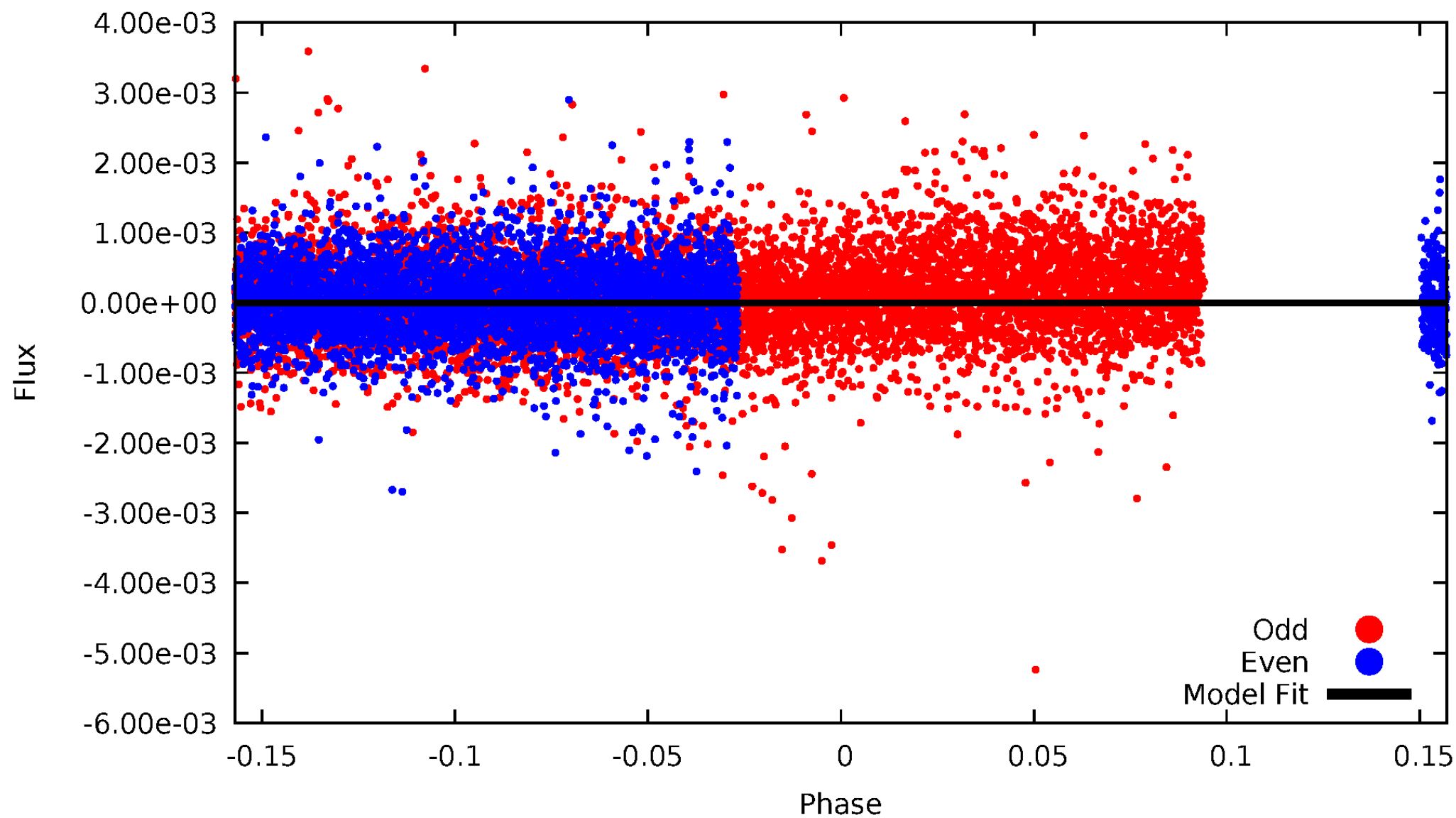


TCE 002580872-03



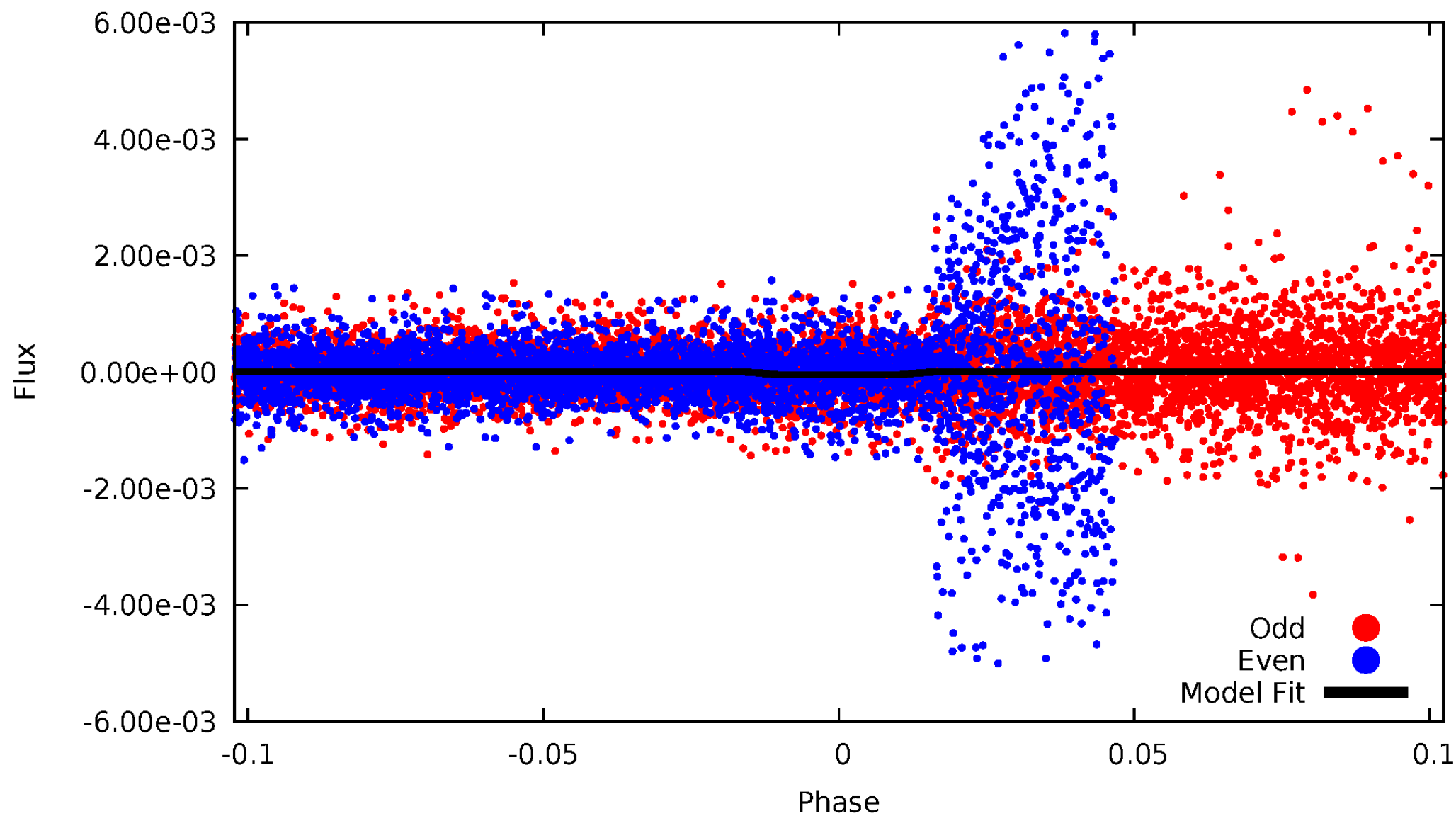
DV Odd/Even

TCE 002580872-03



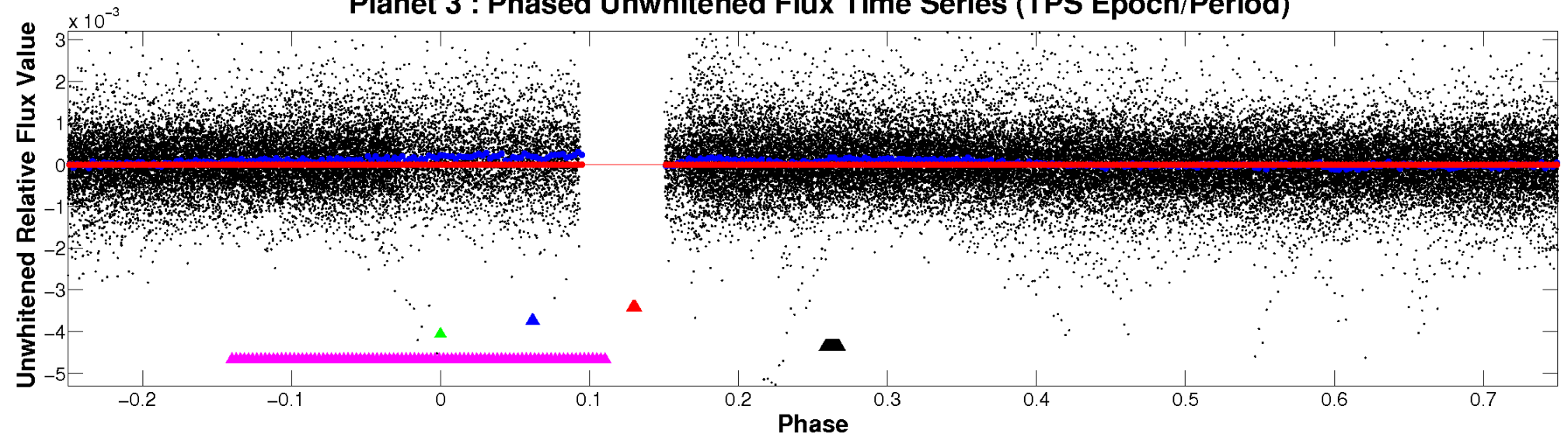
ALT Odd/Even

TCE 002580872-03



Non-Whitened Vs. Whitened Light Curve

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

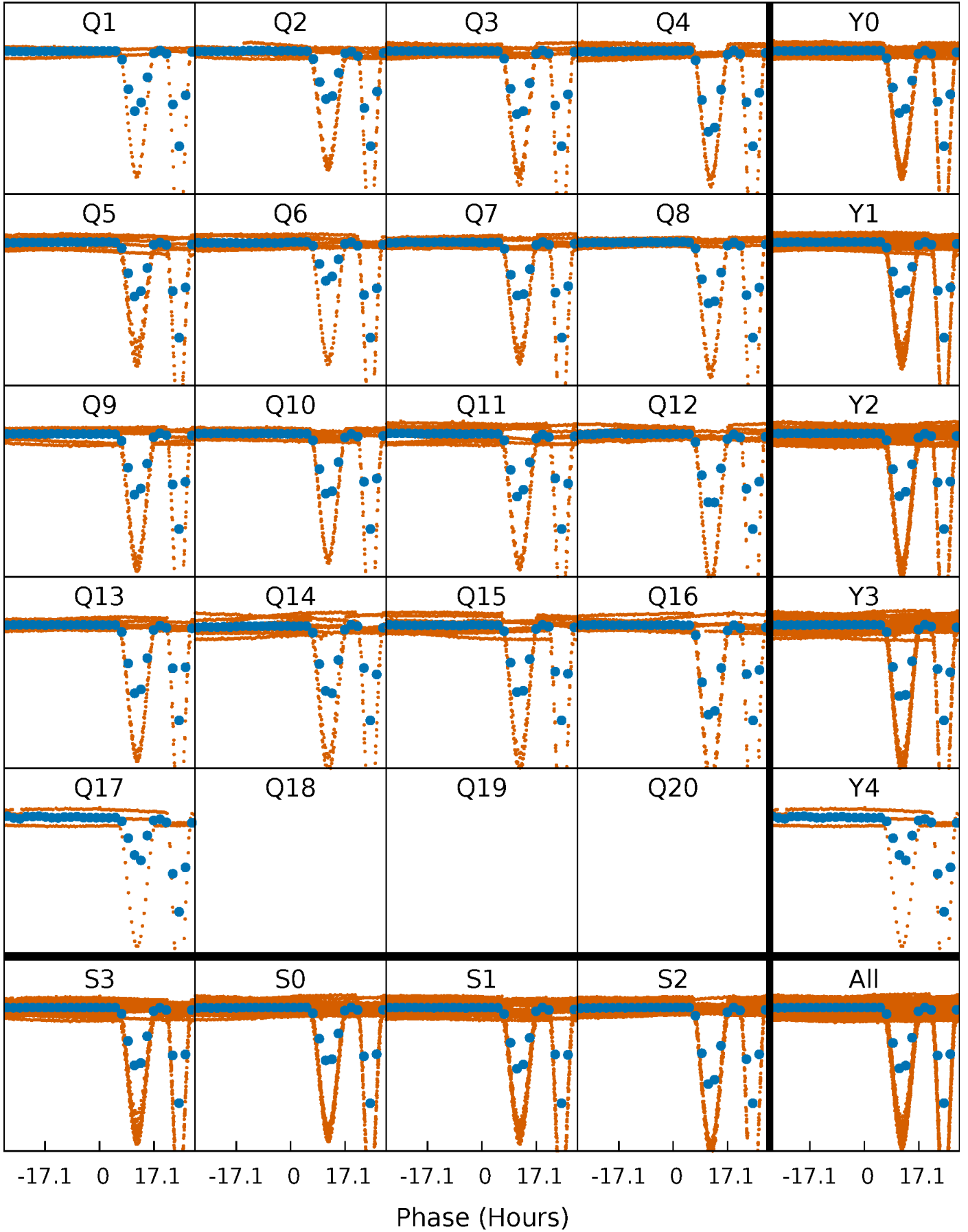


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



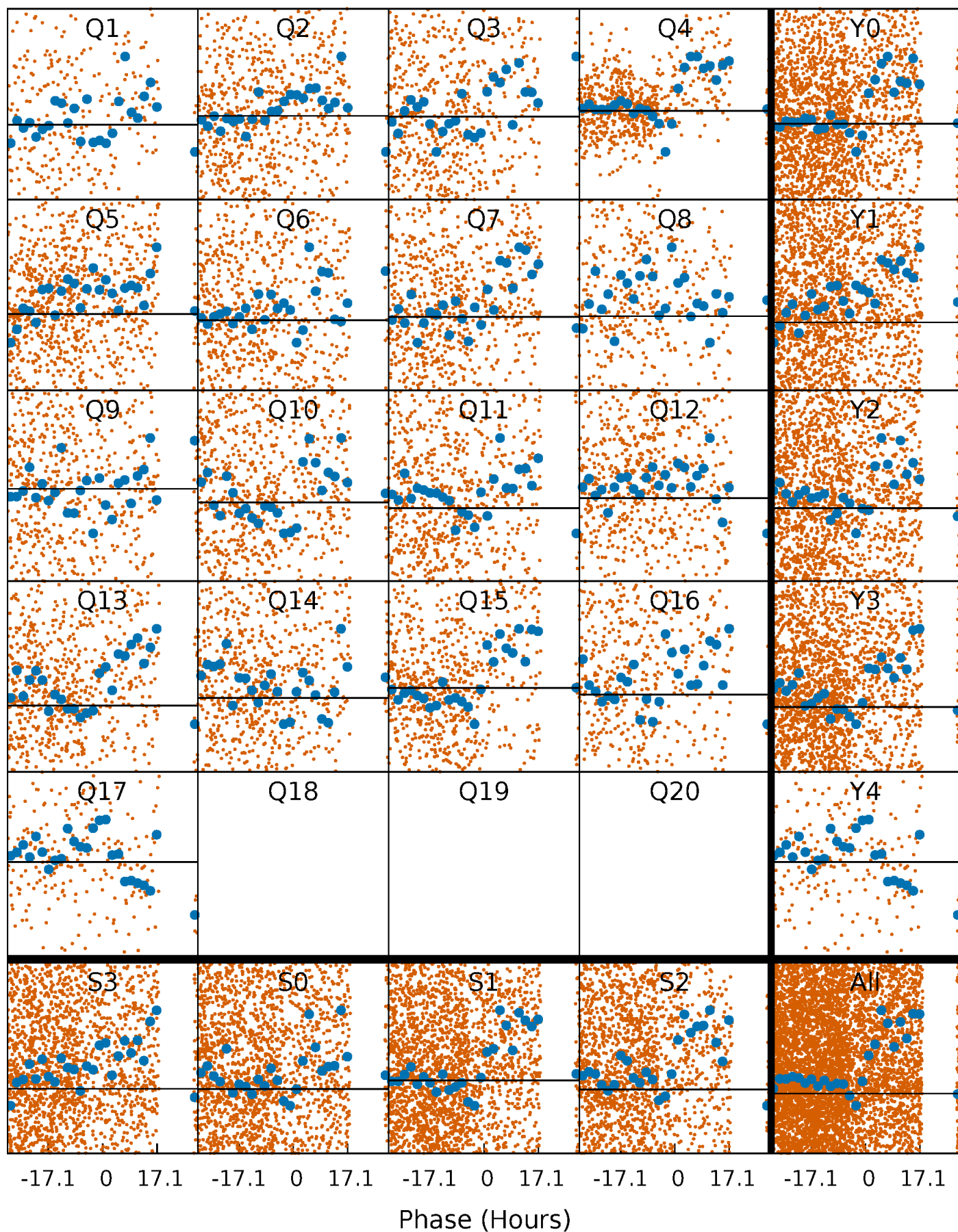
PDC Quarter-Phased Transit Curves

TCE 002580872-03 P= 7.963280 Days $T_0=136.551272$ (BKJD)



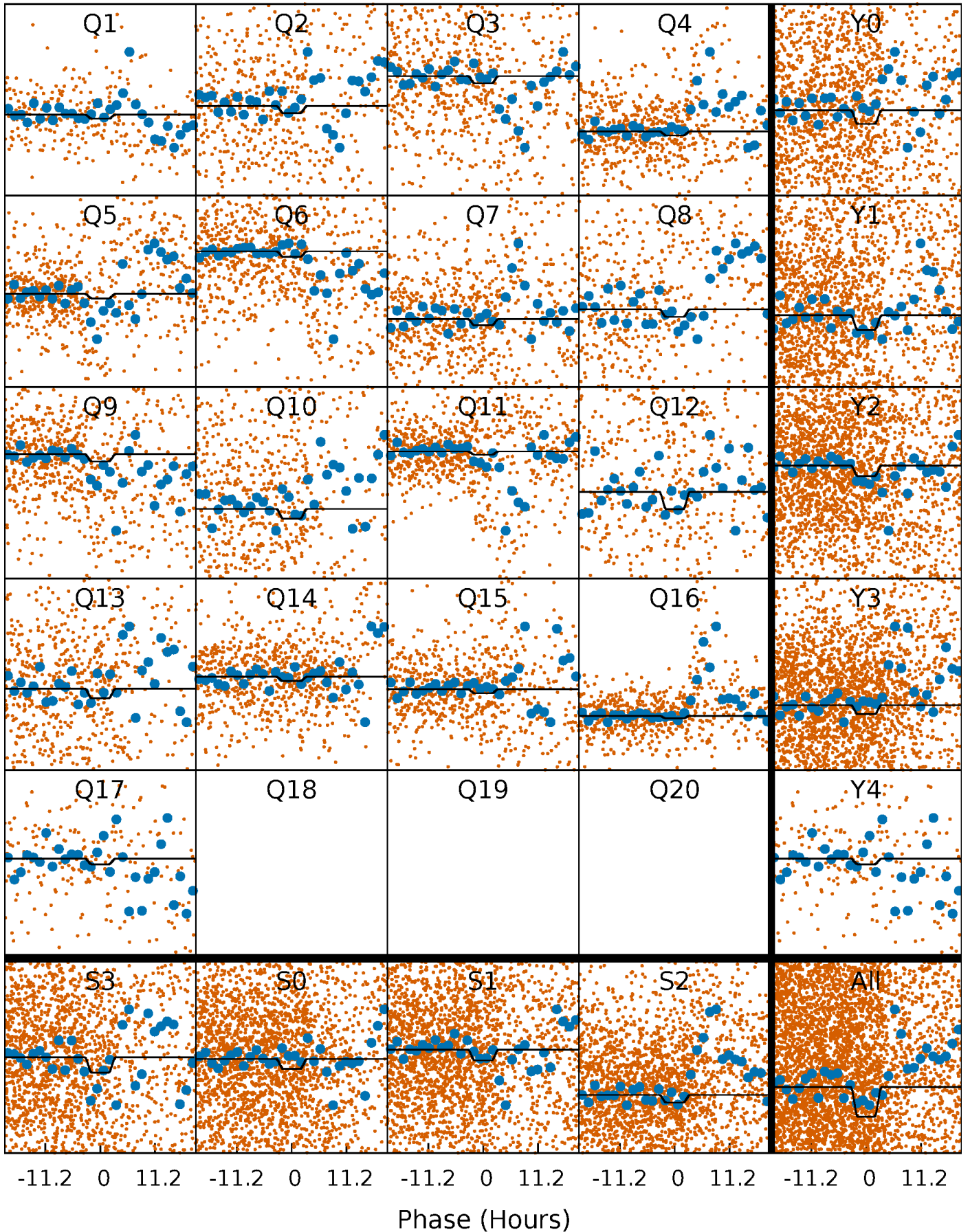
DV Quarter-Phased Transit Curves

TCE 002580872-03 $P = 7.963280$ Days $T_0 = 136.551272$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

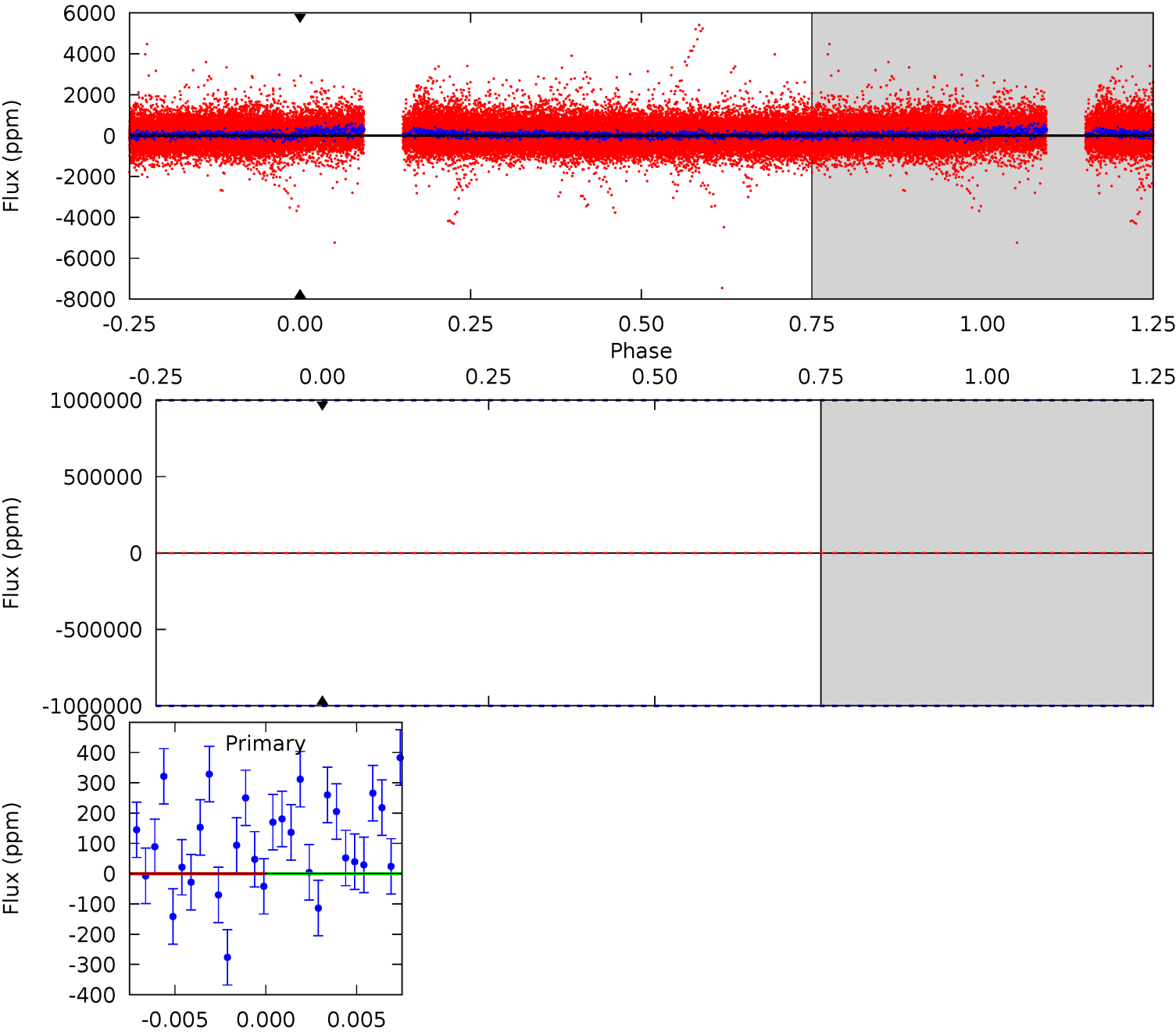
TCE 002580872-03 P= 7.963280 Days $T_0=135.966191$ (BKJD)



DV Model-Shift Uniqueness Test

002580872-03, P = 7.963280 Days, E = 128.587992 Days

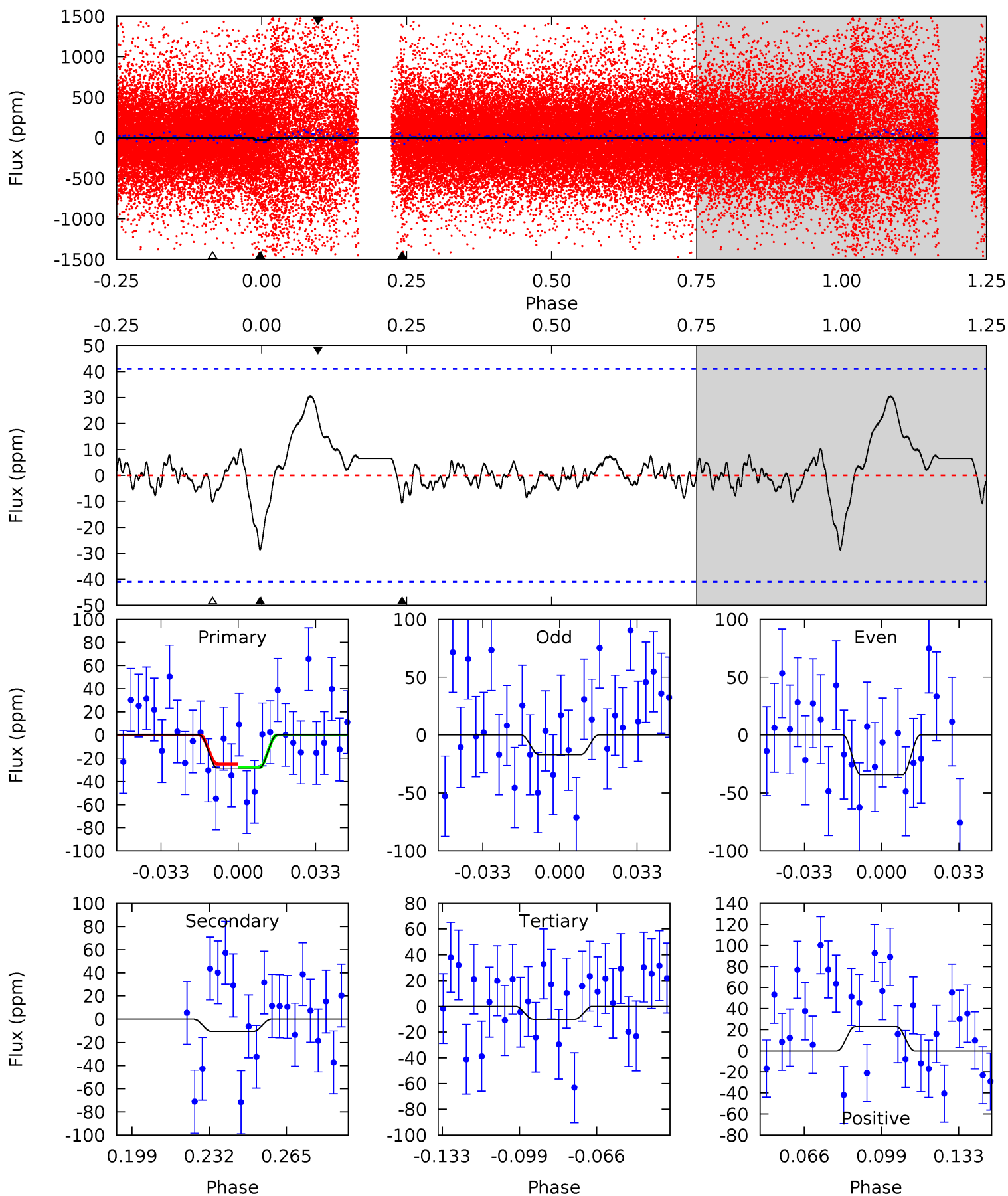
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002580872-03, P = 7.963280 Days, E = 128.002911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.34	1.24	1.18	2.67	4.79	2.13	0.69	2.16	0.67	0.07	-1.43	1.02	36.2	0.52	0.18



Stellar Parameters For KIC 002580872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$4.471^{+0.075}_{-0.163}$	$0.060^{+0.250}_{-0.300}$	$0.917^{+0.222}_{-0.111}$	$0.907^{+0.091}_{-0.082}$	$1.657^{+0.606}_{-0.725}$
	+3%/-3%	+2%/-4%	+417%/-500%	+24%/-12%	+10%/-9%	+37%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002580872-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$9.68^{+9.00}_{-6.44}$	1194^{+71}_{-57}	4335^{+11915}_{-16691}	89^{+7519}_{-4117}
Alt.	-11 ± 9	$7.49^{+8.67}_{-4.95}$	1193^{+72}_{-59}	1860^{+831}_{-3817}	$0.456^{+4.496}_{-0.408}$

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 $A_{obs} \gg 1.0$

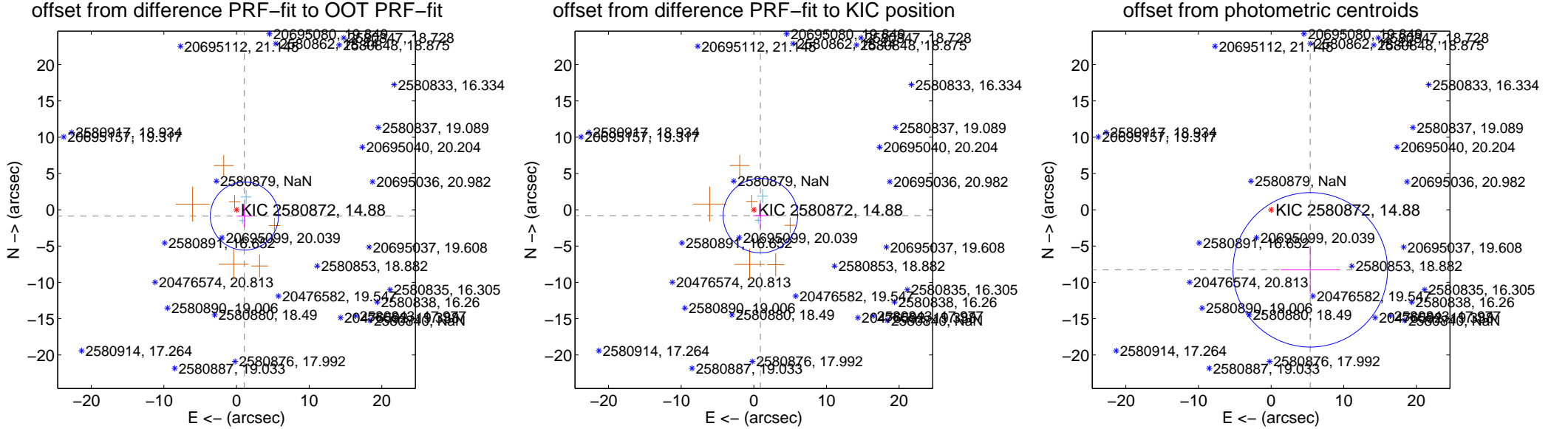
DV Centroid Data

Supplemental centroid analysis for 002580872-03. Kepler magnitude: 14.88. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

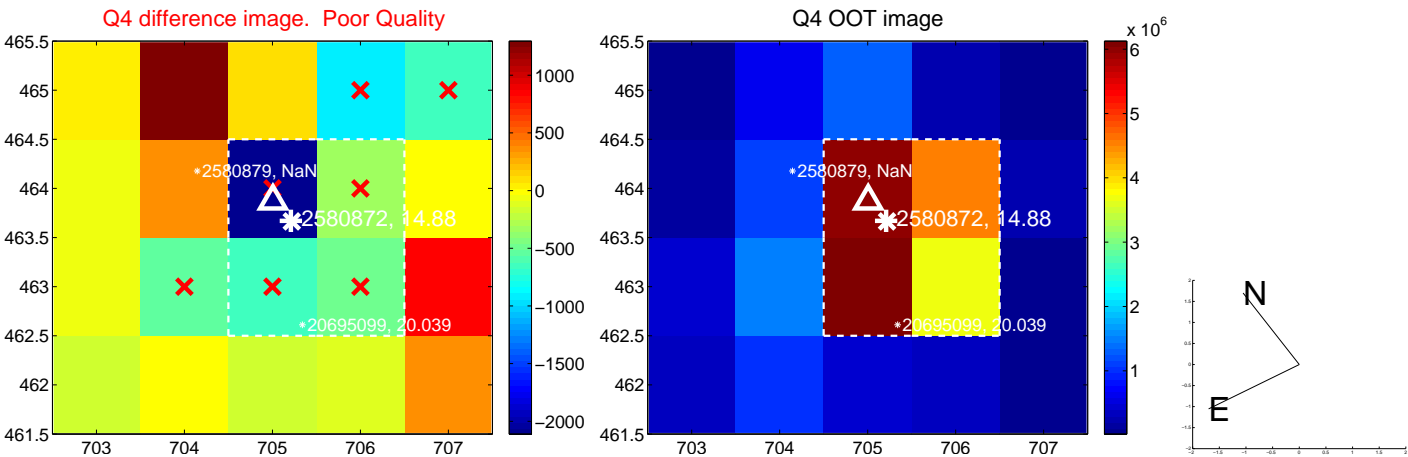
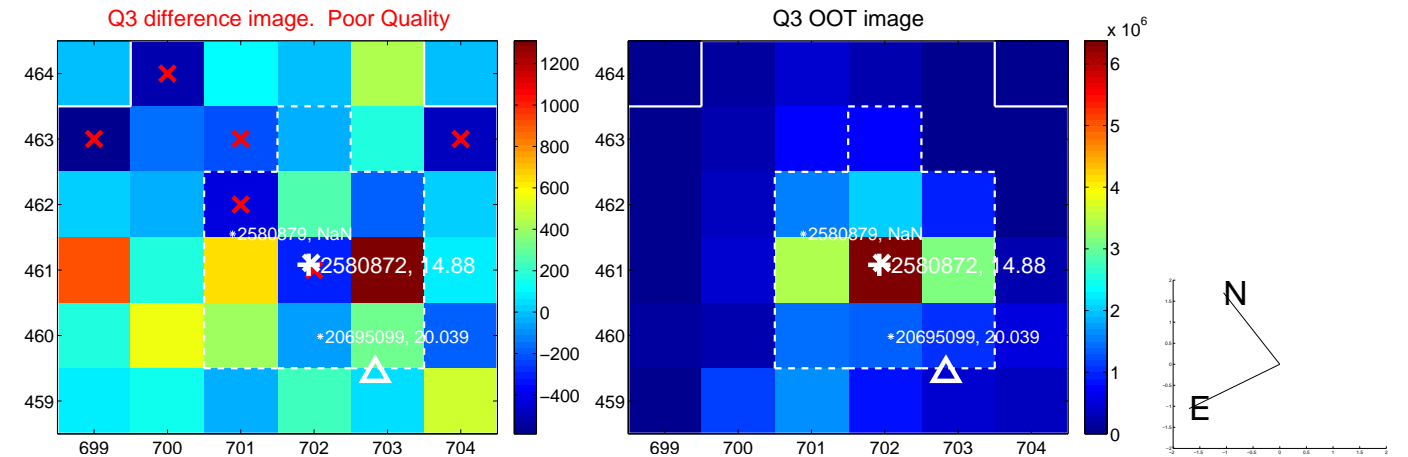
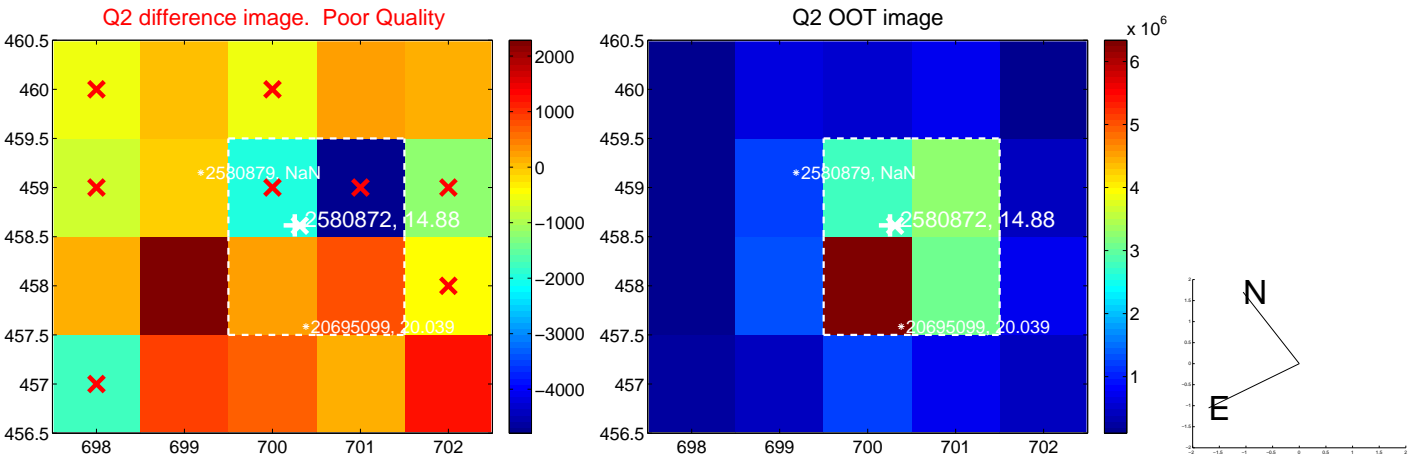
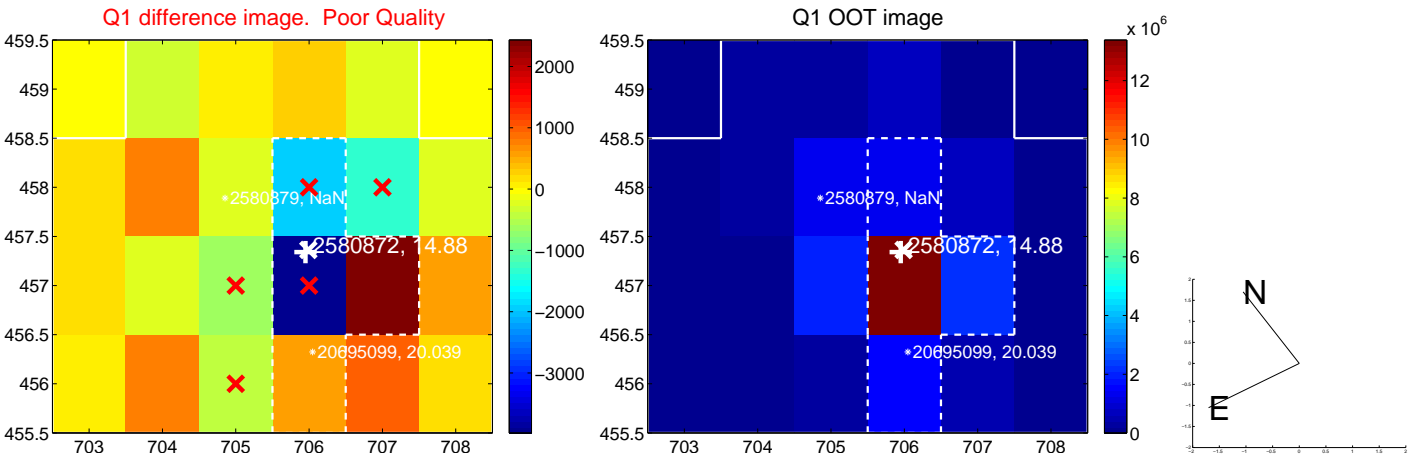
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.385 ± 1.564	0.89	-1.081 ± 1.046	-0.865 ± 1.552
PRF-fit source offset from KIC position	1.215 ± 1.711	0.71	-0.903 ± 1.007	-0.812 ± 1.759
photometric centroid source offset	9.88 ± 3.55	2.78	-5.39 ± 4.06	-8.28 ± 3.31

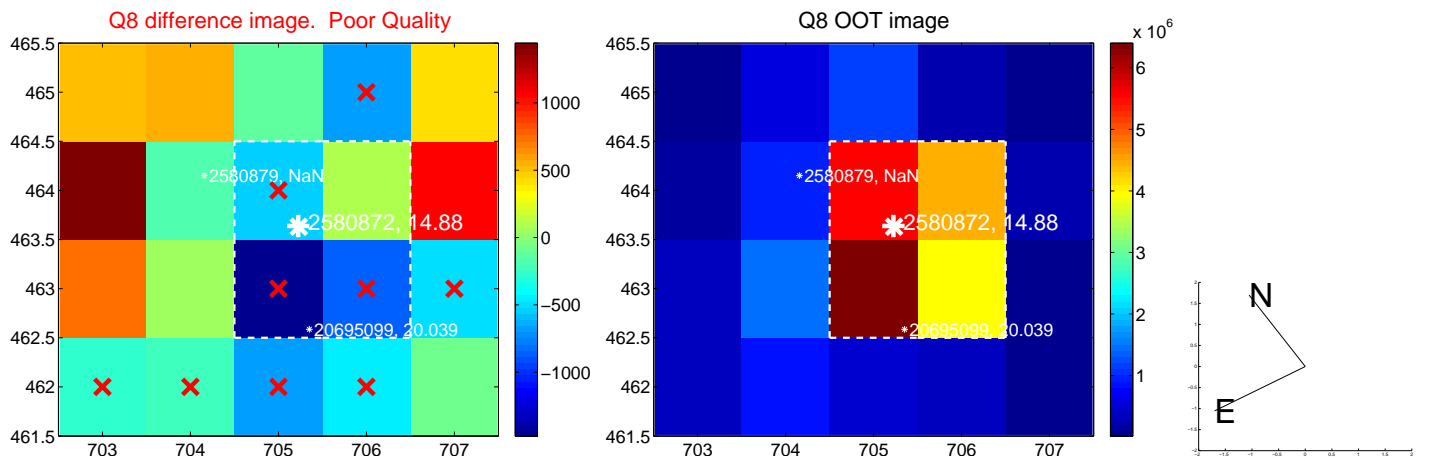
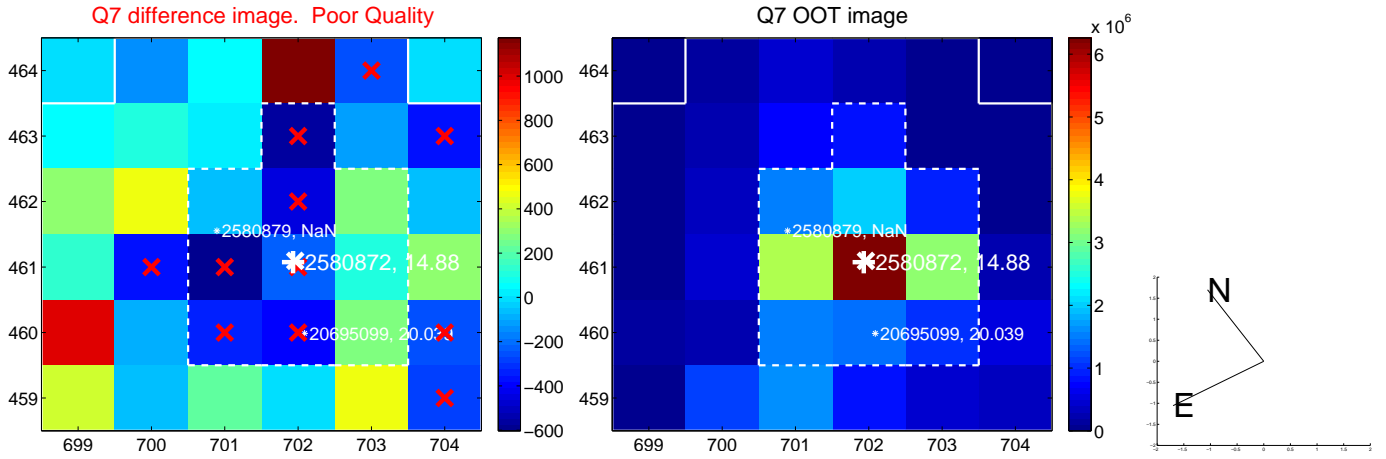
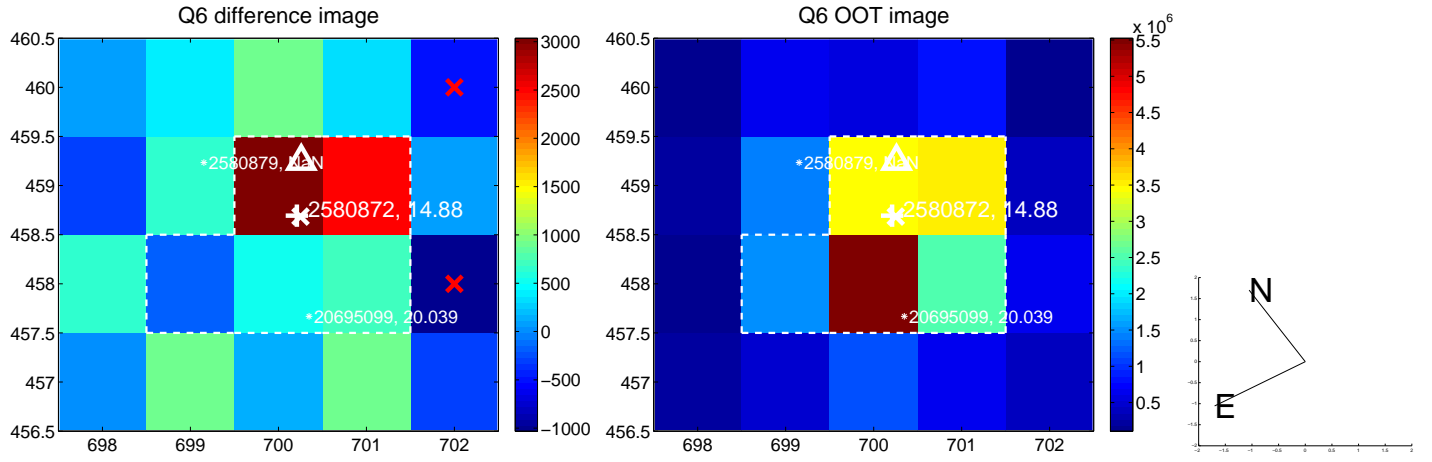
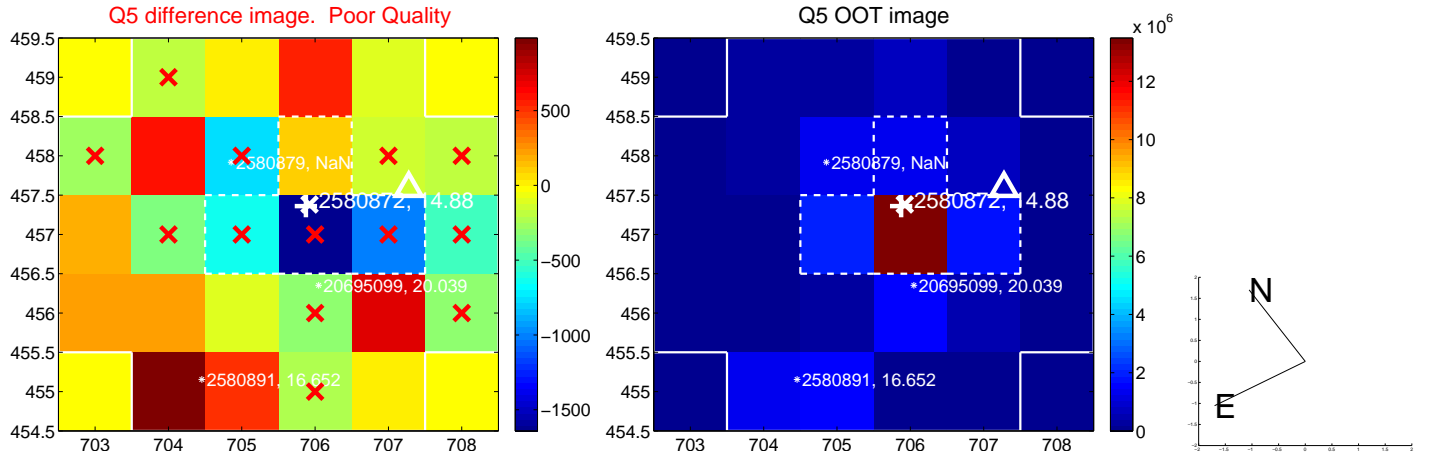


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

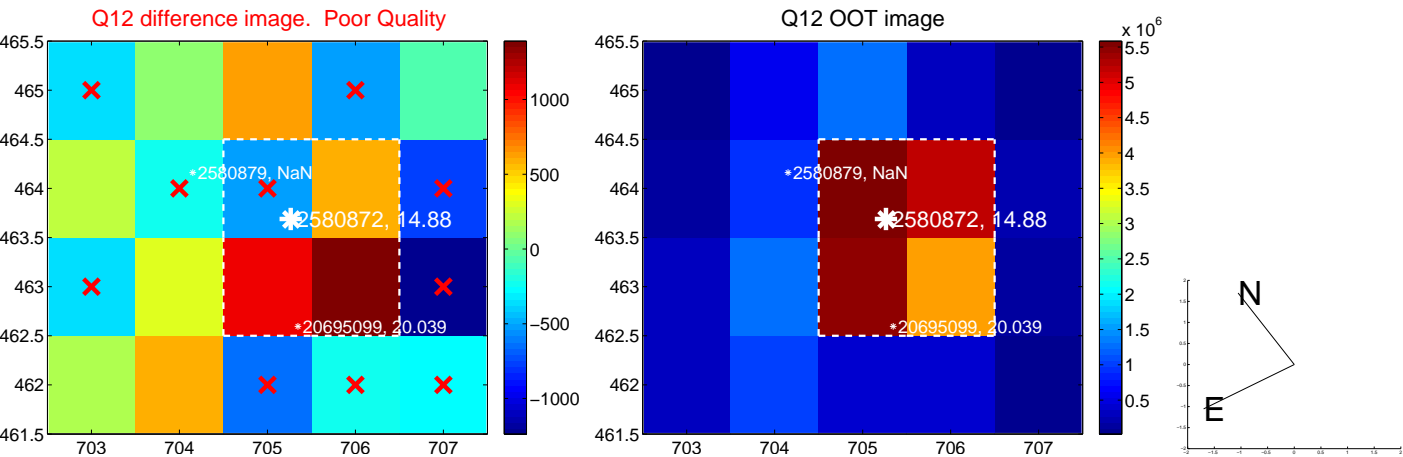
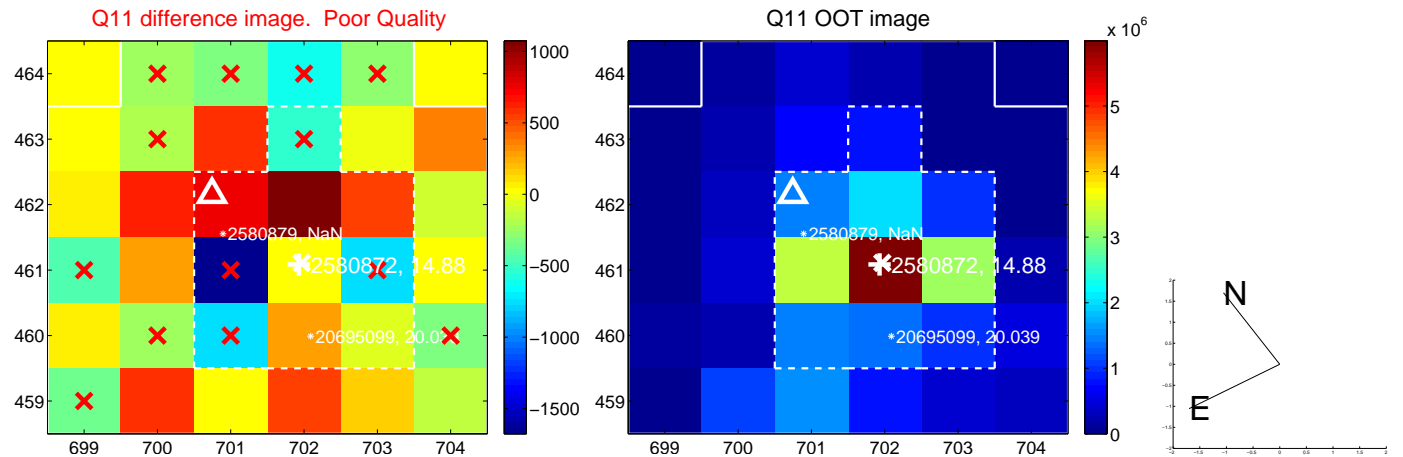
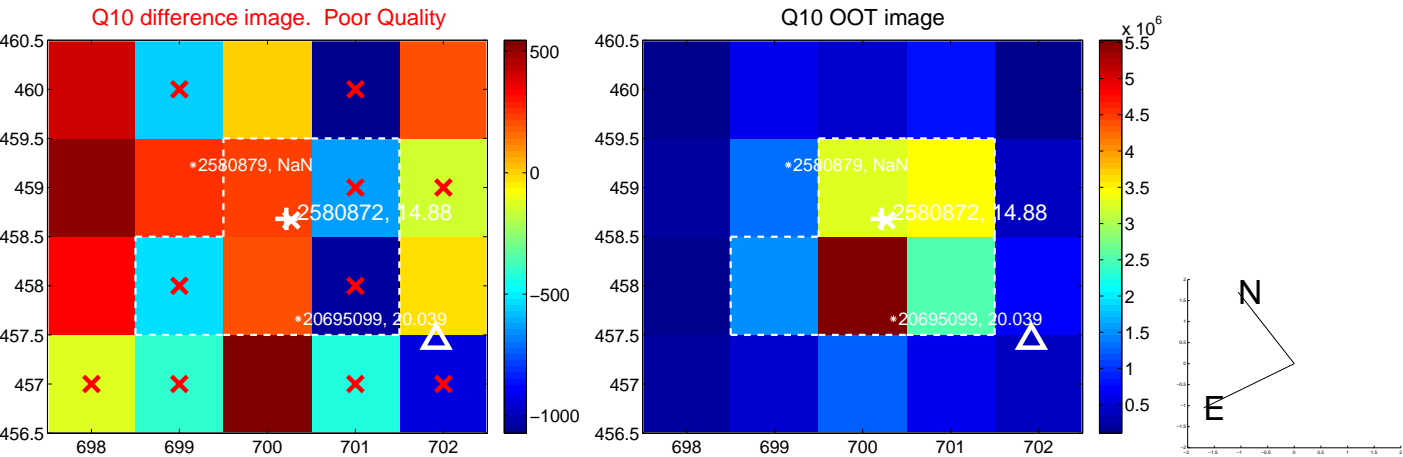
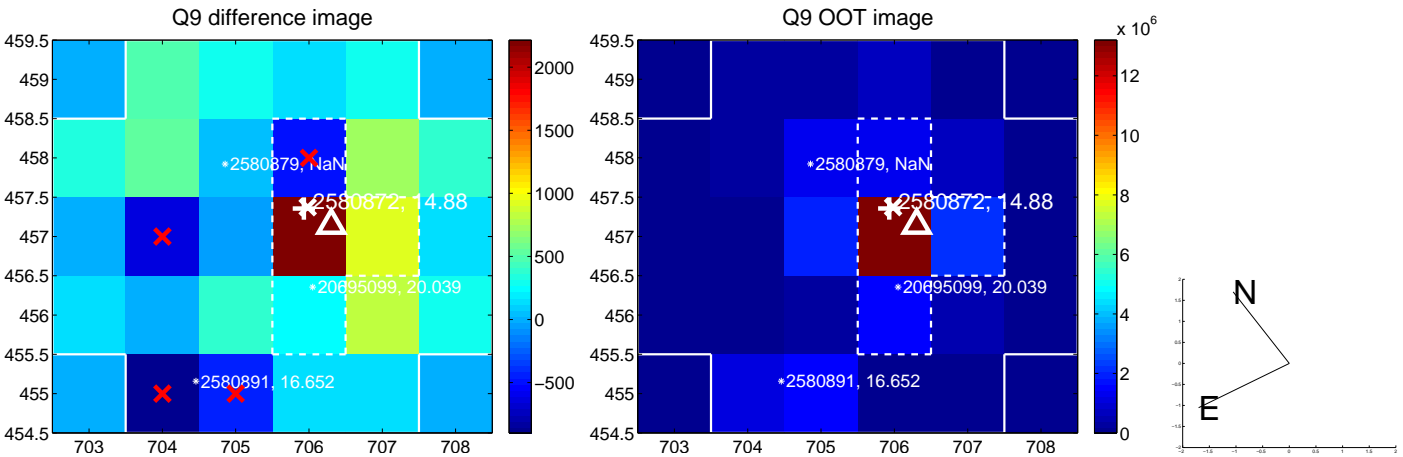
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



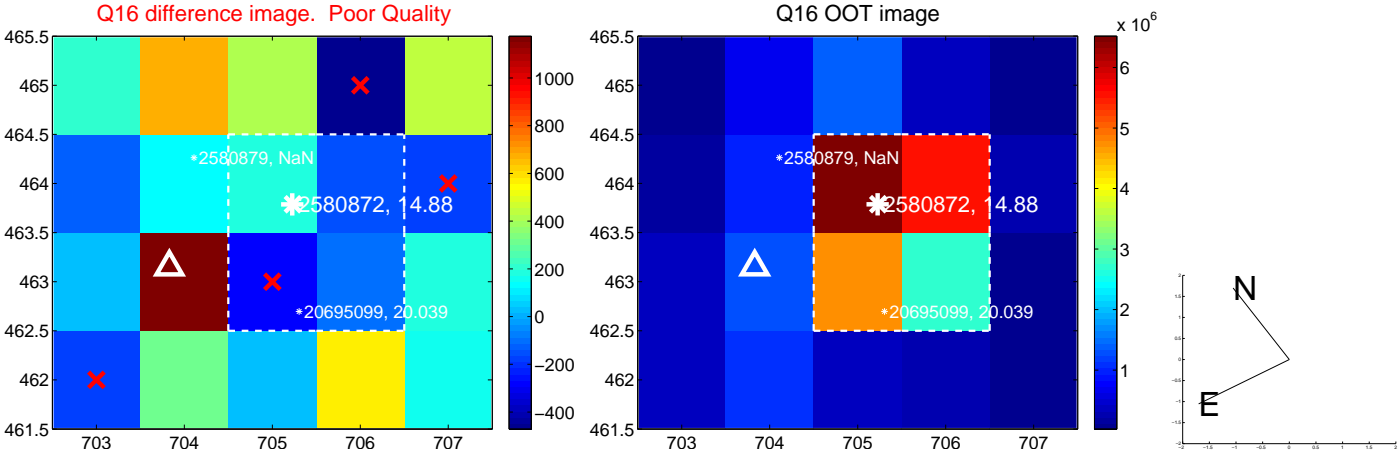
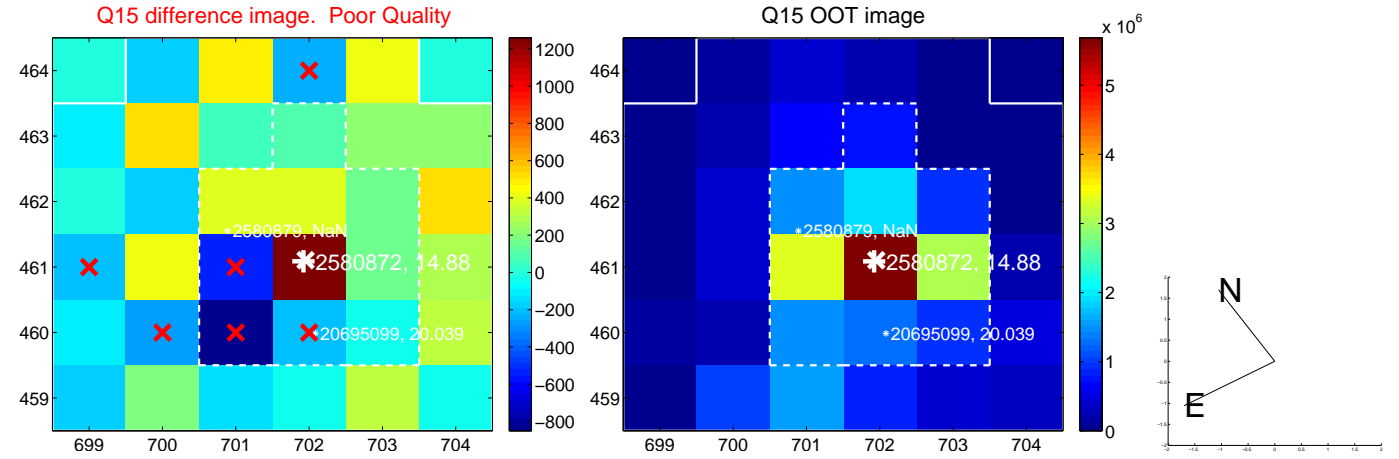
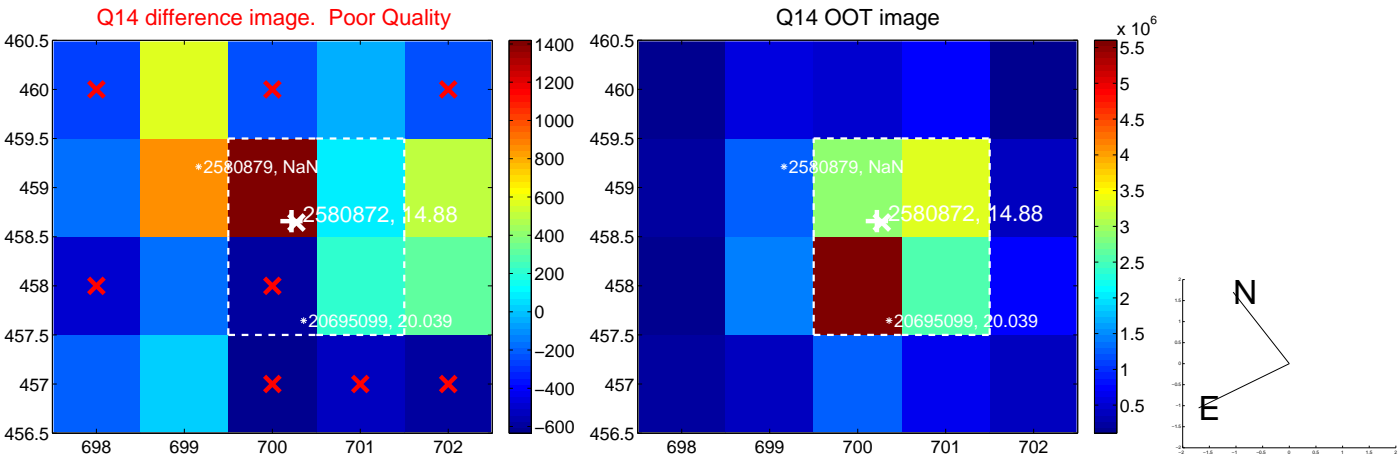
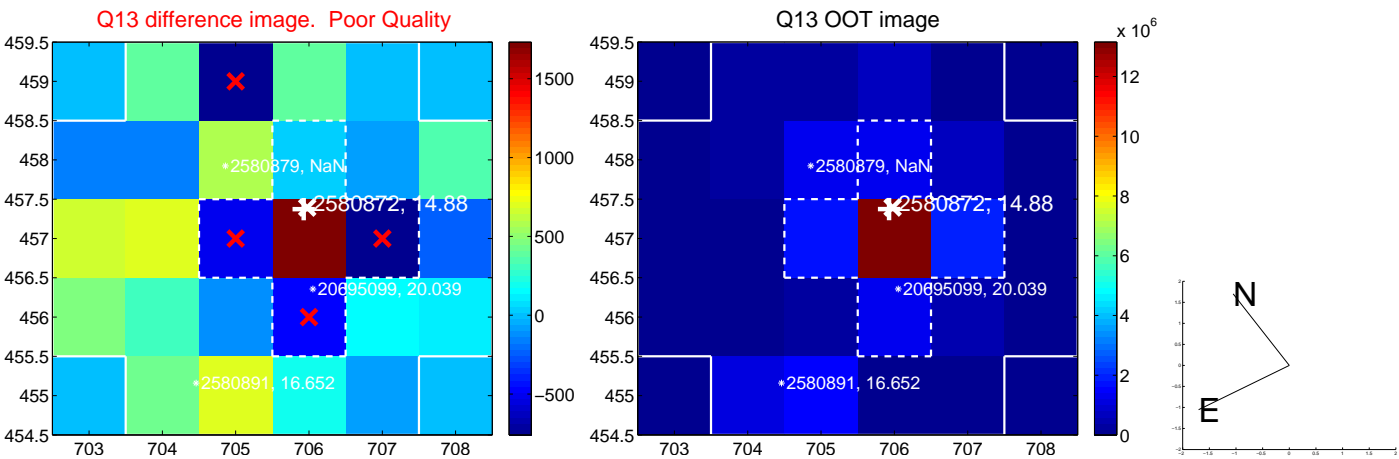
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



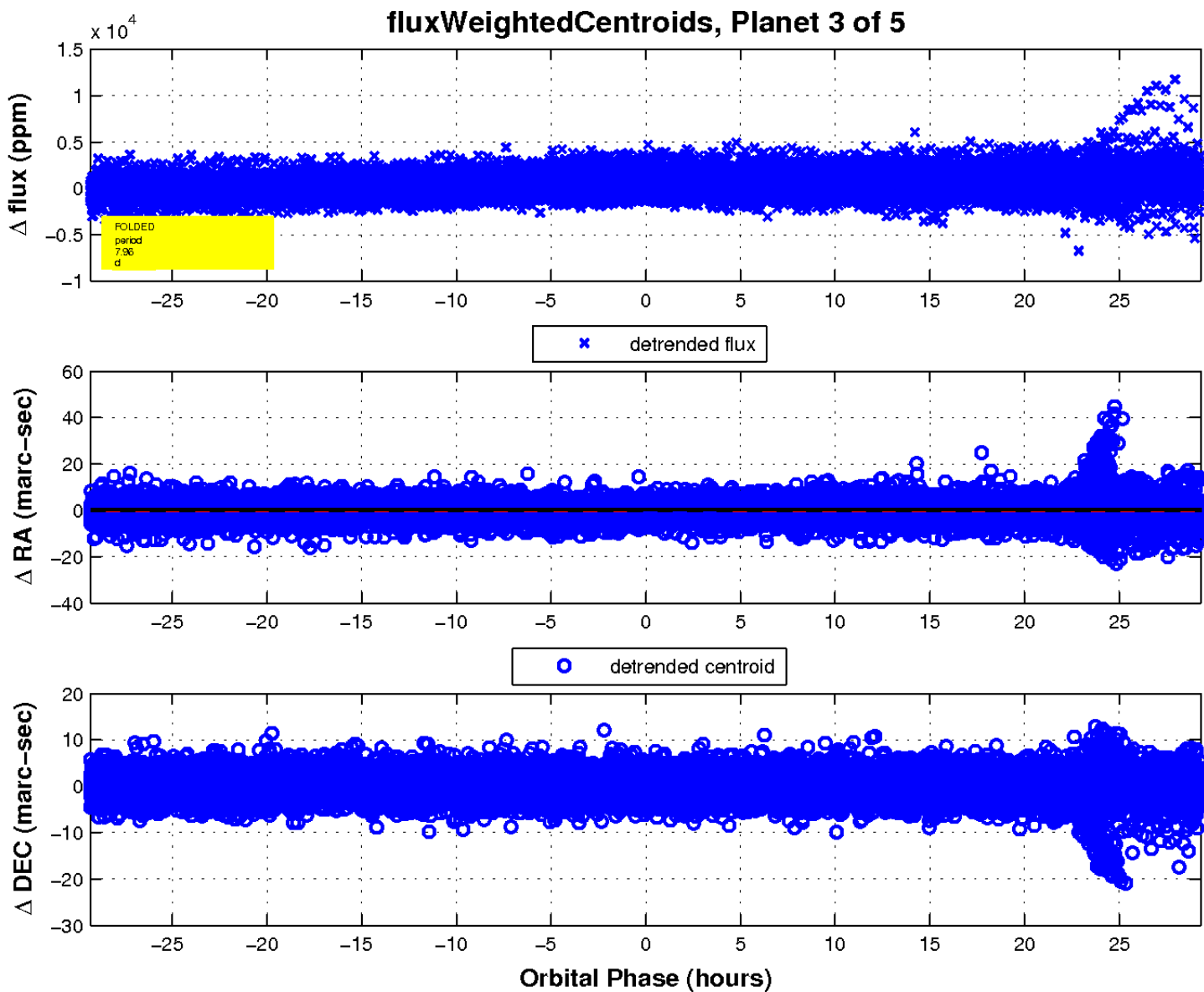
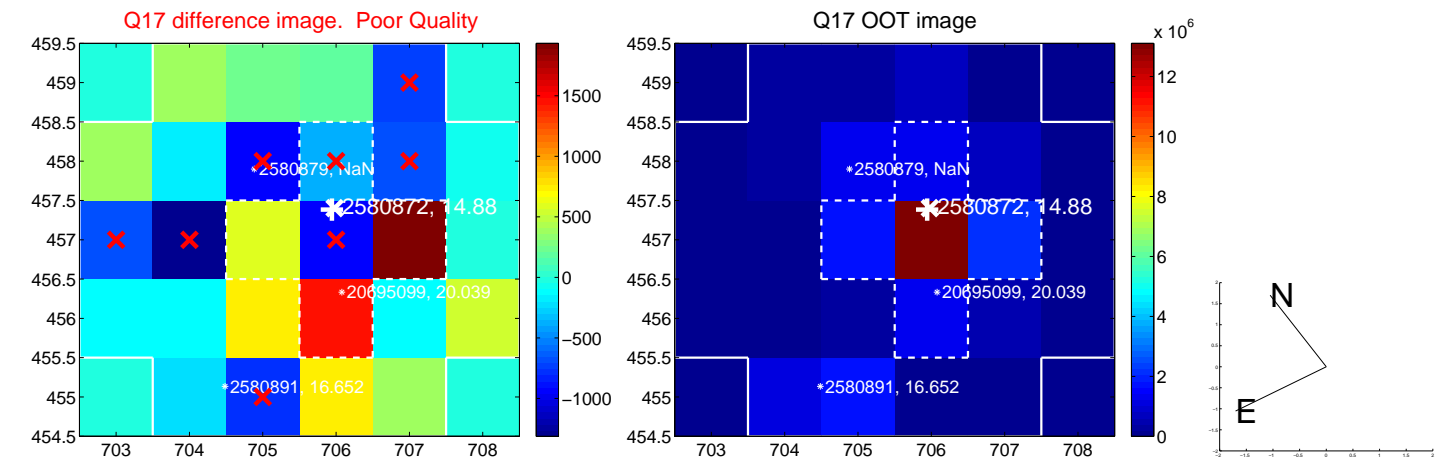
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

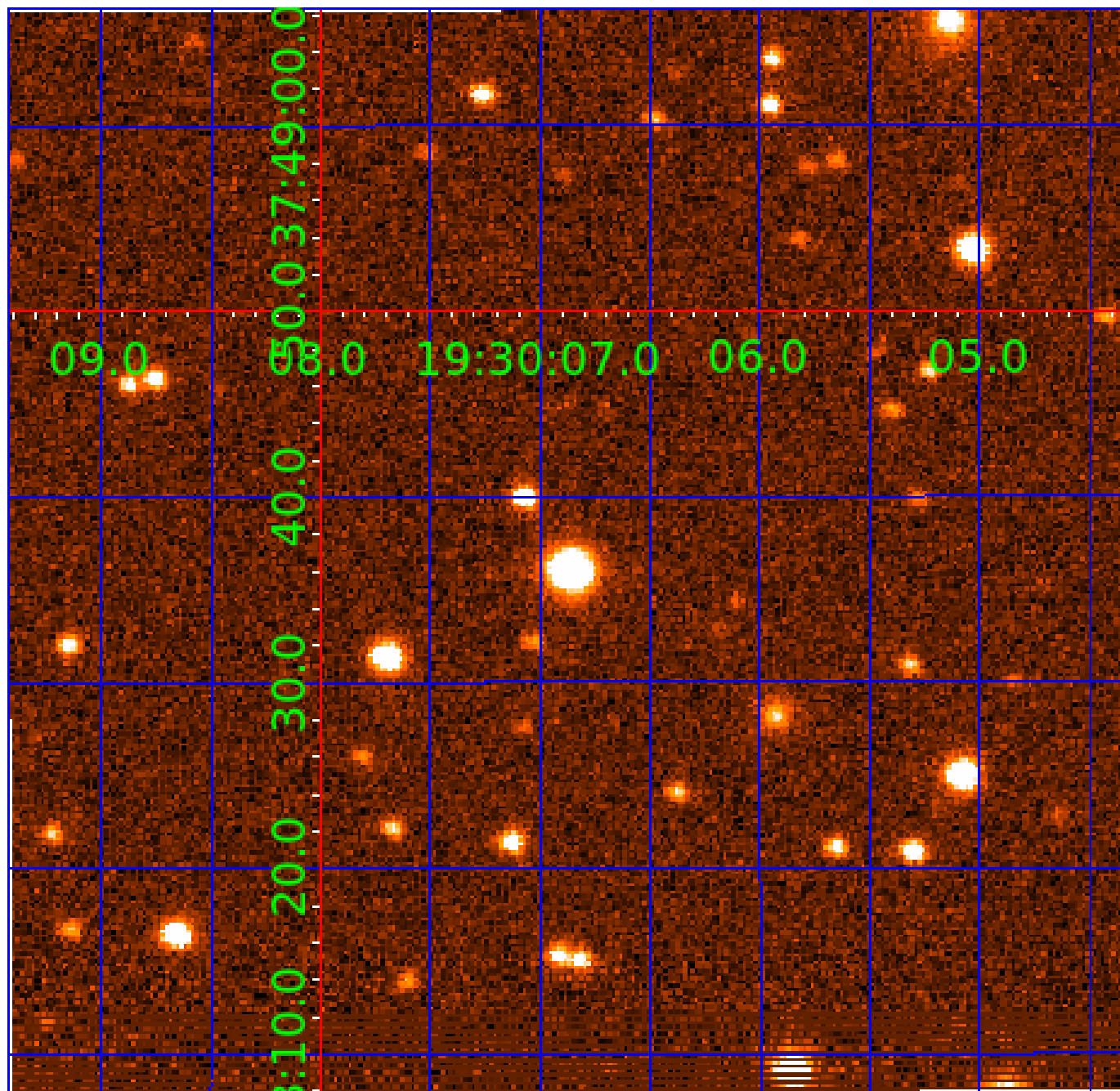


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002580872

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})
002580872-01	OBS	6283.01	15.926728	145.542038	274695.9	4.500	8439.2	-1.0	0.92	5496	43.33	47.77
002580872-02	OBS	No	15.926621	137.041425	171793.6	11.142	5962.9	4227.6	0.92	5496	57.09	47.77
002580872-03	OBS	No	7.963280	136.551272	3886.2	15.000	194.1	-1.0	0.92	5496	5.61	120.38
002580872-04	OBS	No	15.925751	146.645451	3463.4	12.500	128.6	-1.0	0.92	5496	5.30	47.77
002580872-05	OBS	No	15.948718	143.399920	1134.5	12.000	20.3	-1.0	0.92	5496	3.03	47.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
002580872-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
002580872-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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 002580872-04

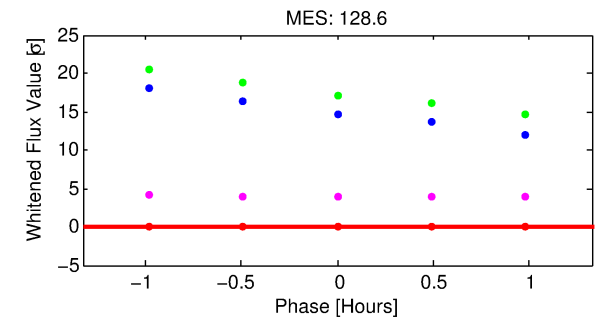
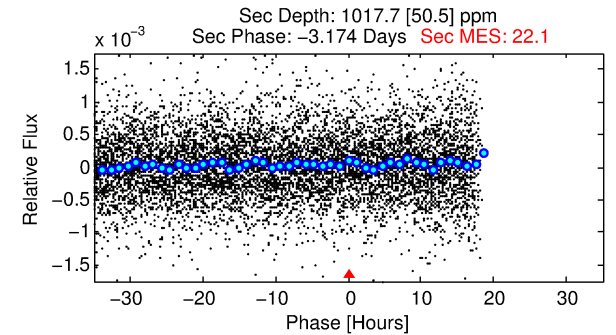
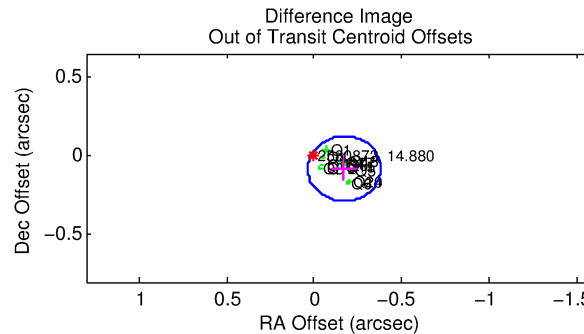
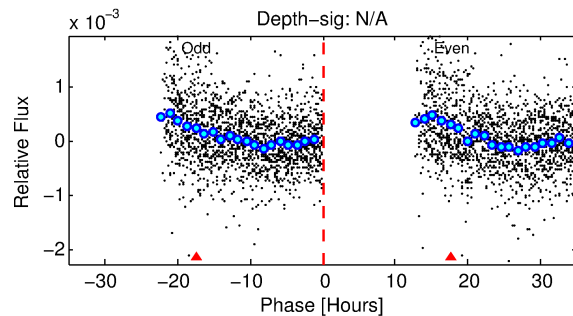
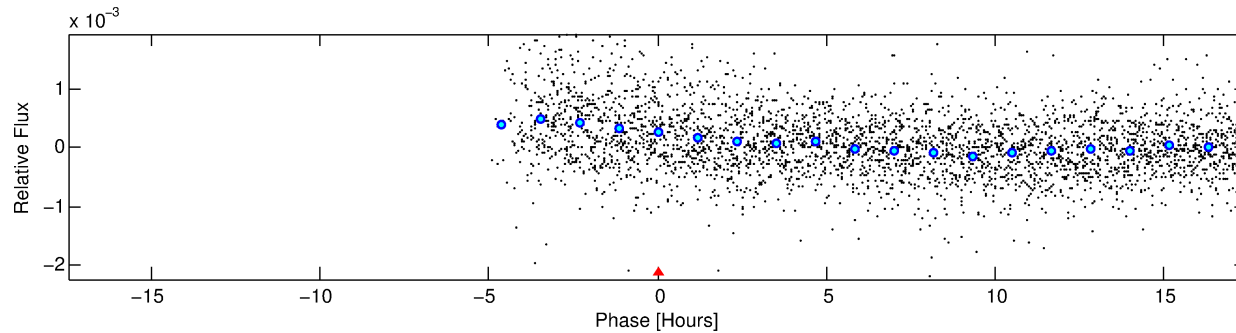
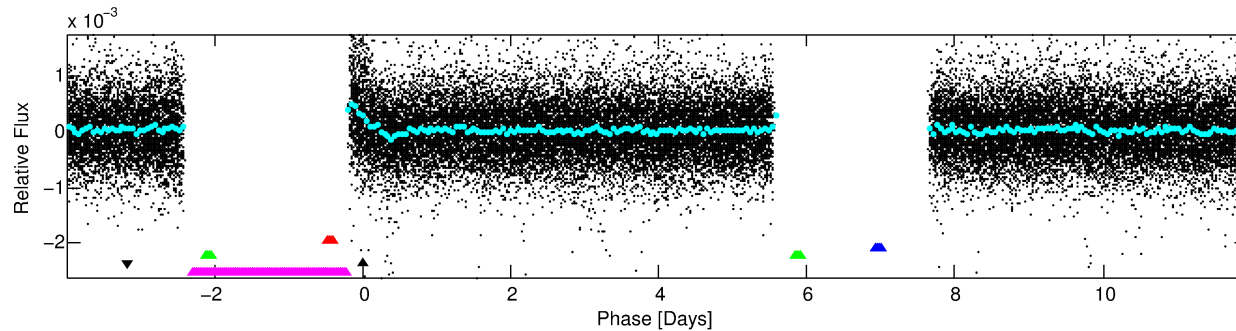
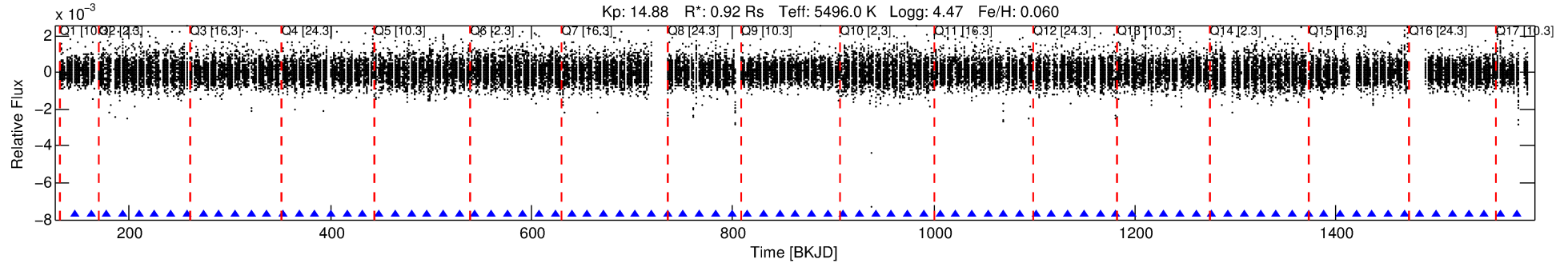
No Significant Match Found

DV One-Page Summary

KIC: 2580872 Candidate: 4 of 5 Period: 15.926 d

KOI: K06283 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.92 Rs Teff: 5496.0 K Logg: 4.47 Fe/H: 0.060



TPS TCE Results:

Period = 15.92575 d

Epoch = 146.6455 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.79σ]

LongPeriod-sig: 0.1% [0.00σ]

ModelChiSquare2-sig: N/A

ModelChiSquareGof-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 1.00 [81/81]

GhostDiagnostic-chr: 0.9071

Centroid-sig: N/A

Centroid-so: 1.576 arcsec [2.05σ]

OotOffset-rm: 0.188 arcsec [2.73σ]

OotOffset-st: 4/4/4/5 [17]

KicOffset-st: 4/4/4/5 [17]

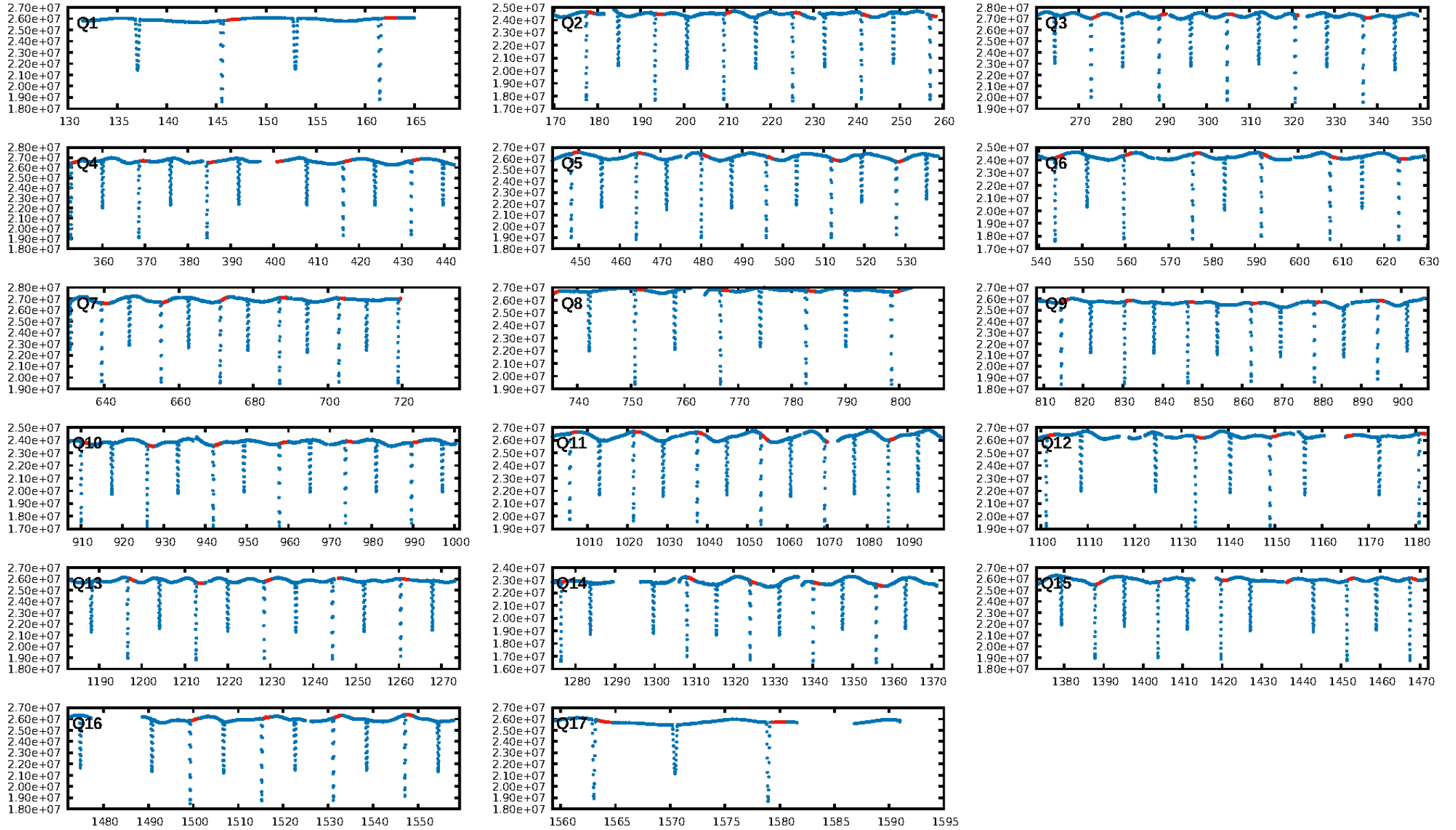
DiffImageQuality-fgm: 0.00 [0/17]

DiffImageOverlap-fno: 0.00 [0/17]

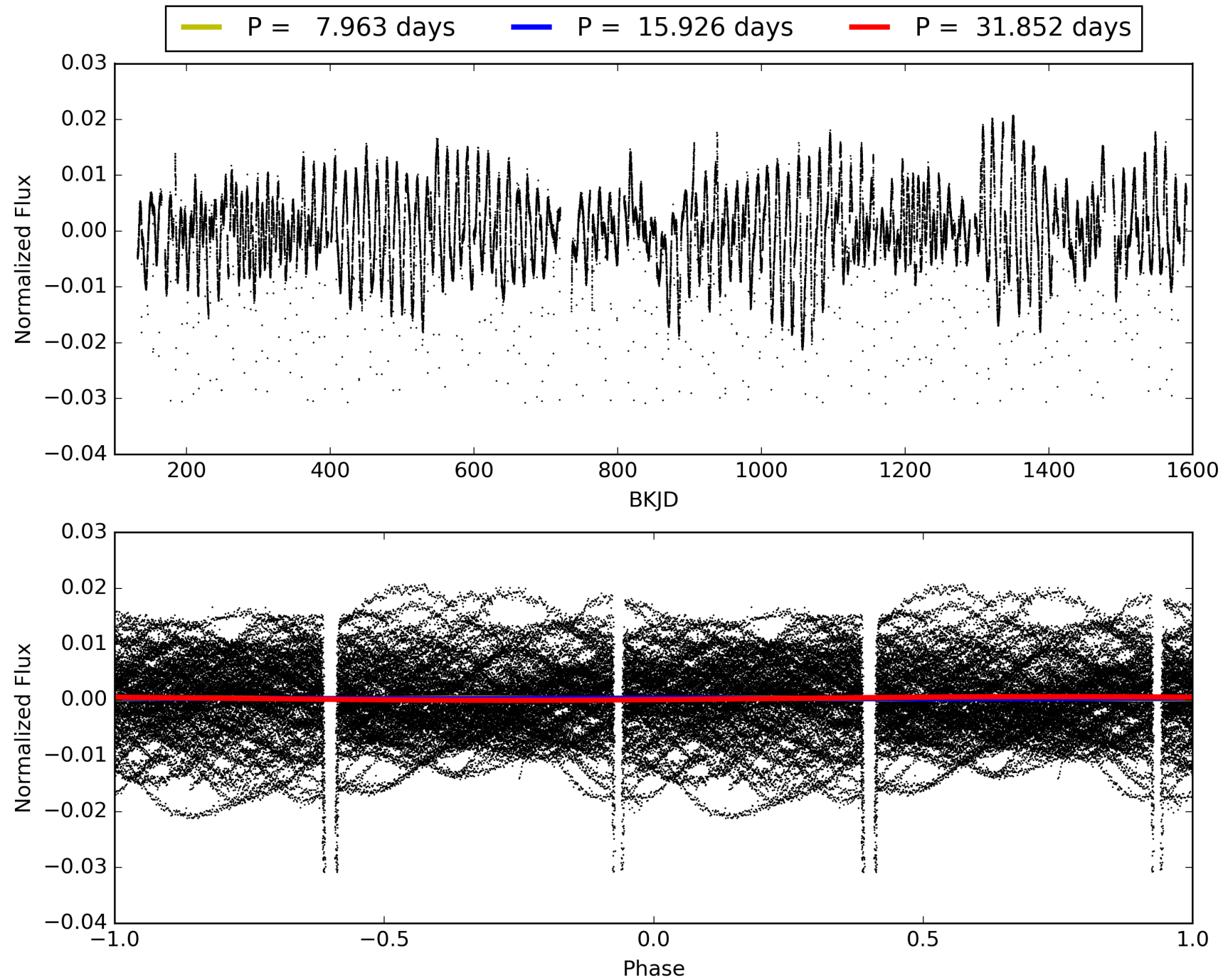
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:15:21 Z

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

TCE 002580872-04, PDC Light Curves

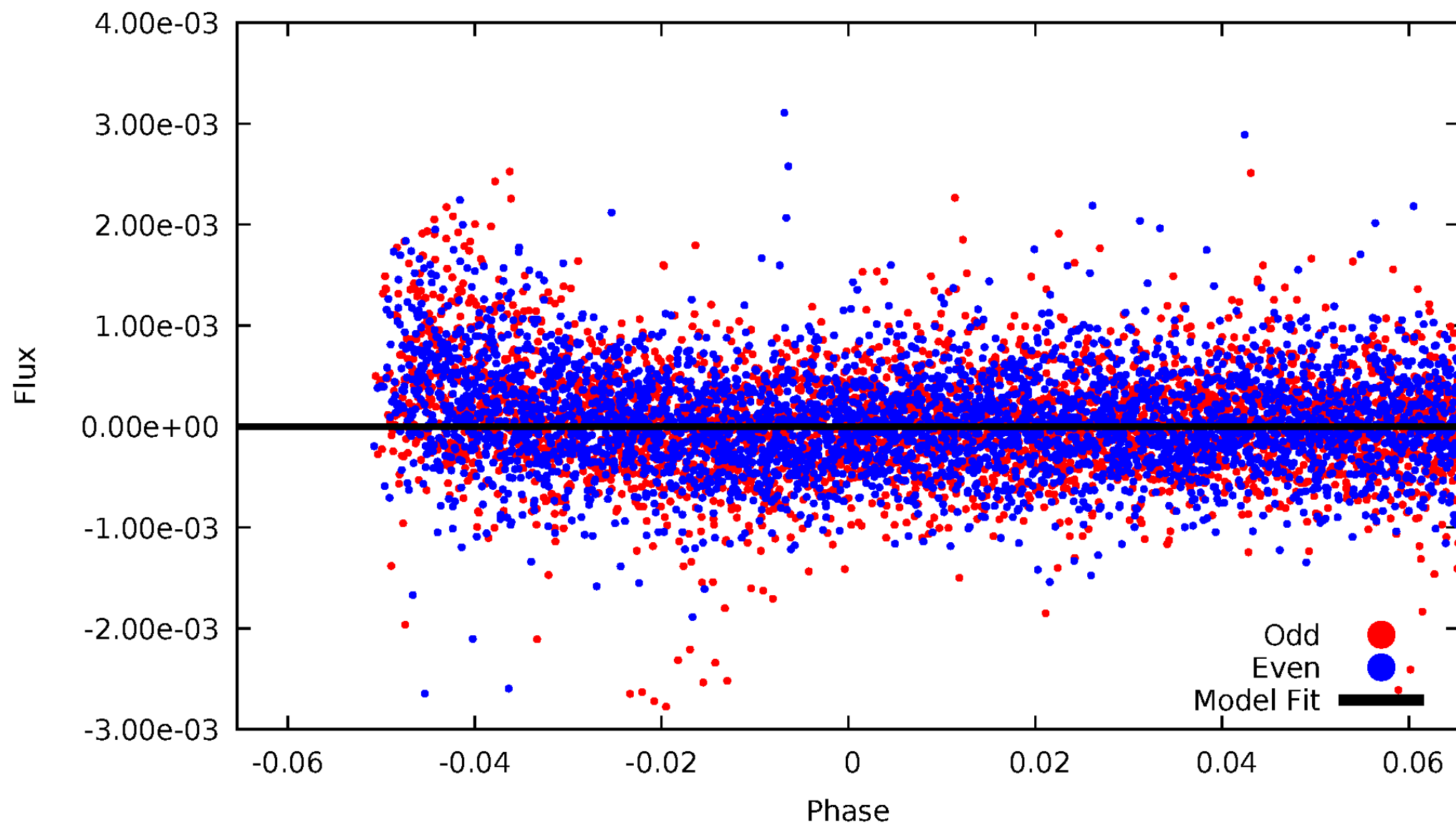


TCE 002580872-04



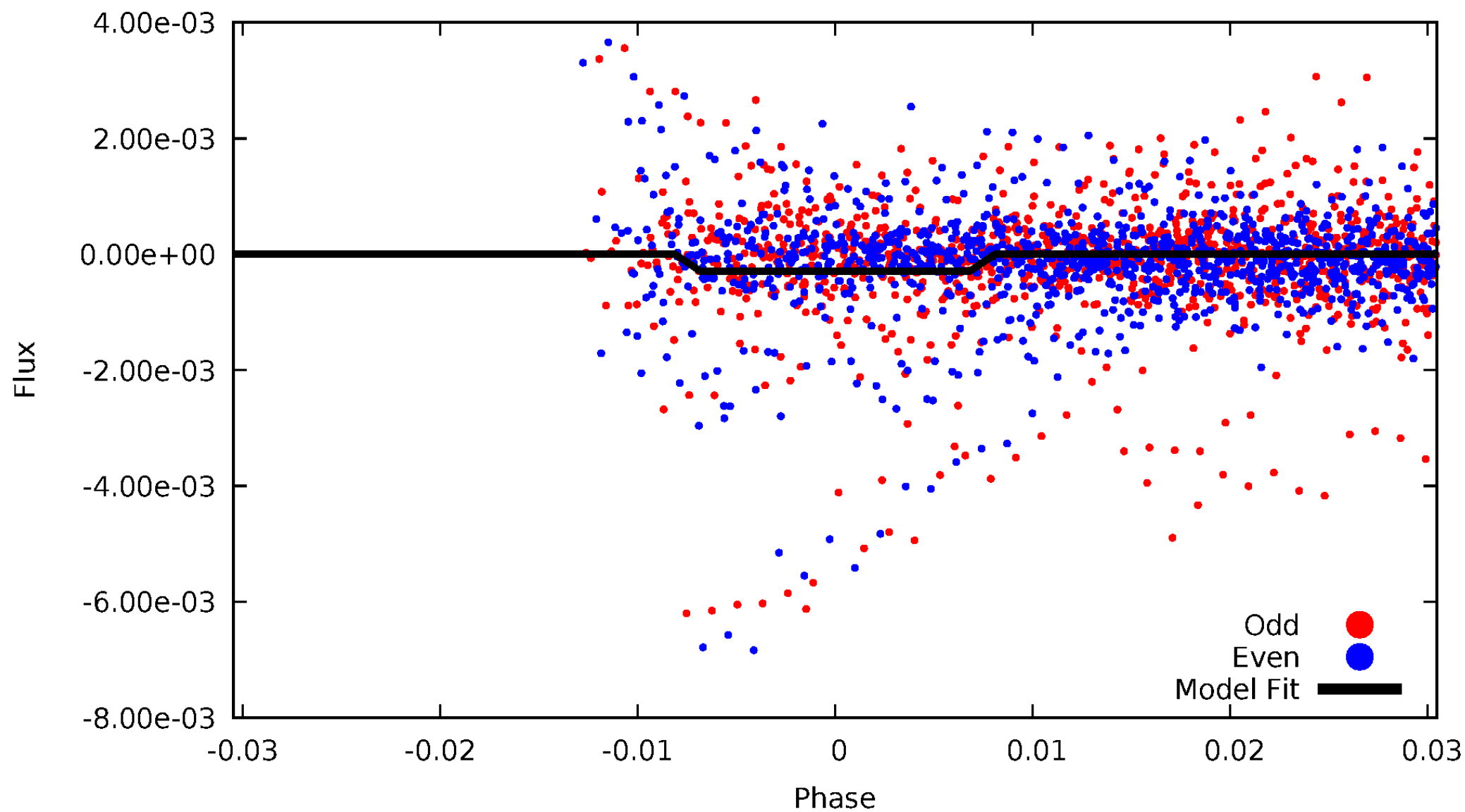
DV Odd/Even

TCE 002580872-04



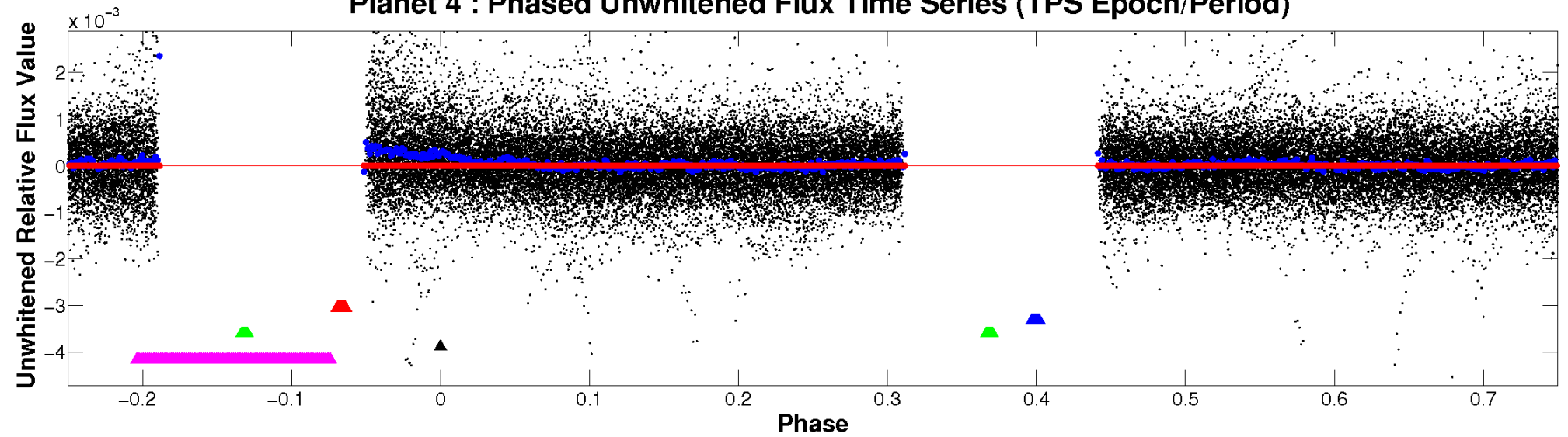
ALT Odd/Even

TCE 002580872-04

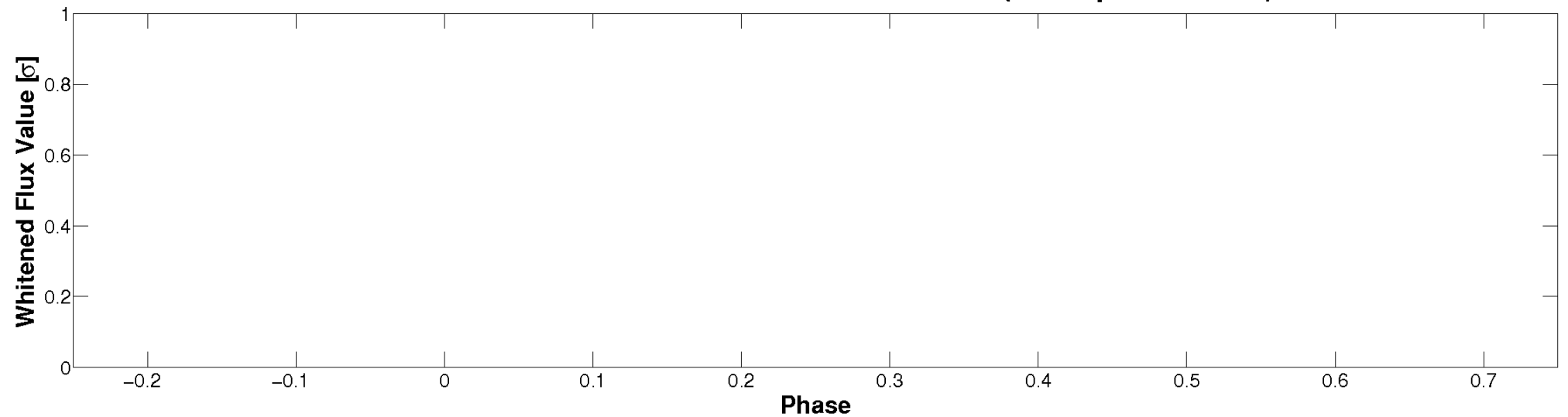


Non-Whitened Vs. Whitened Light Curve

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

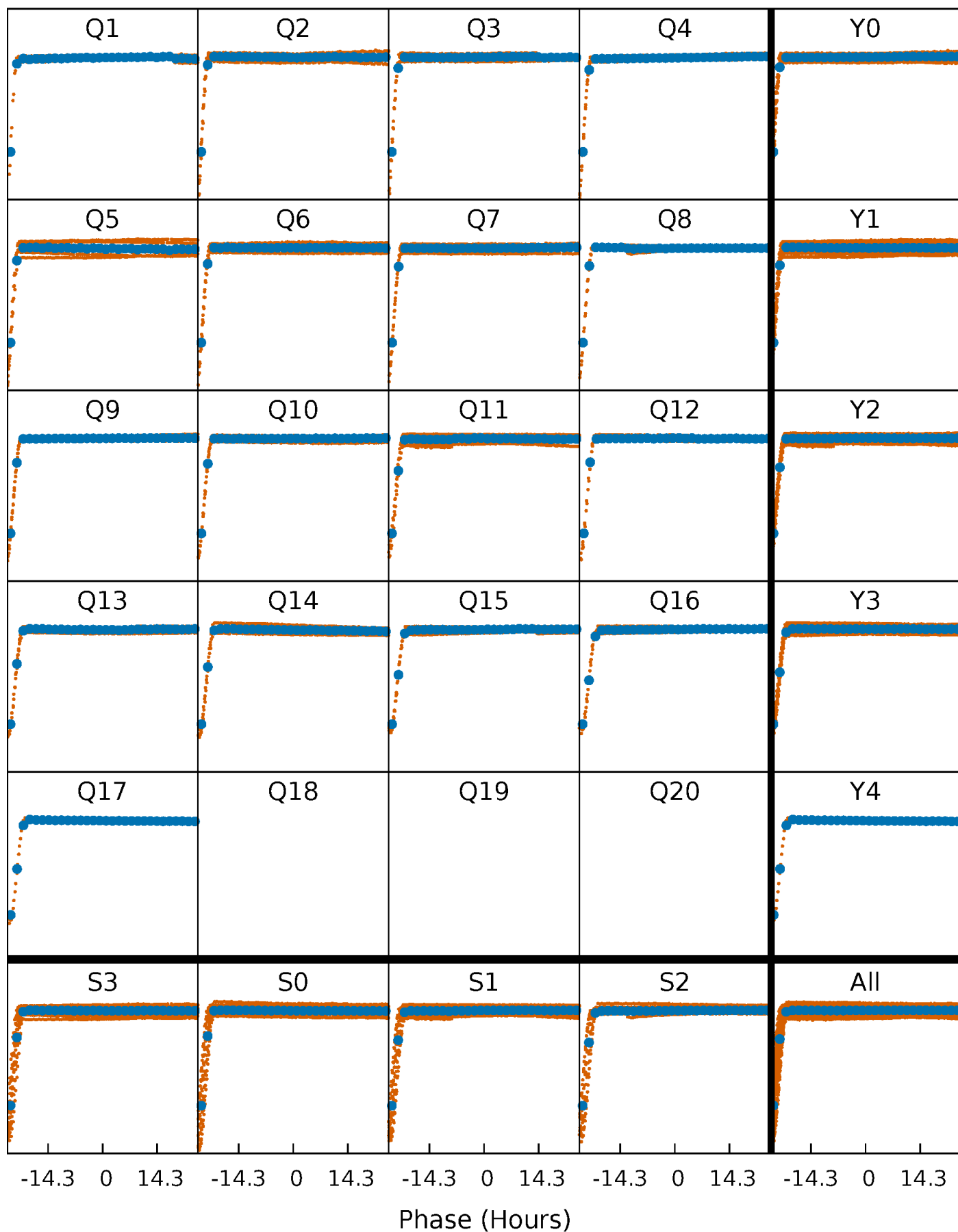


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



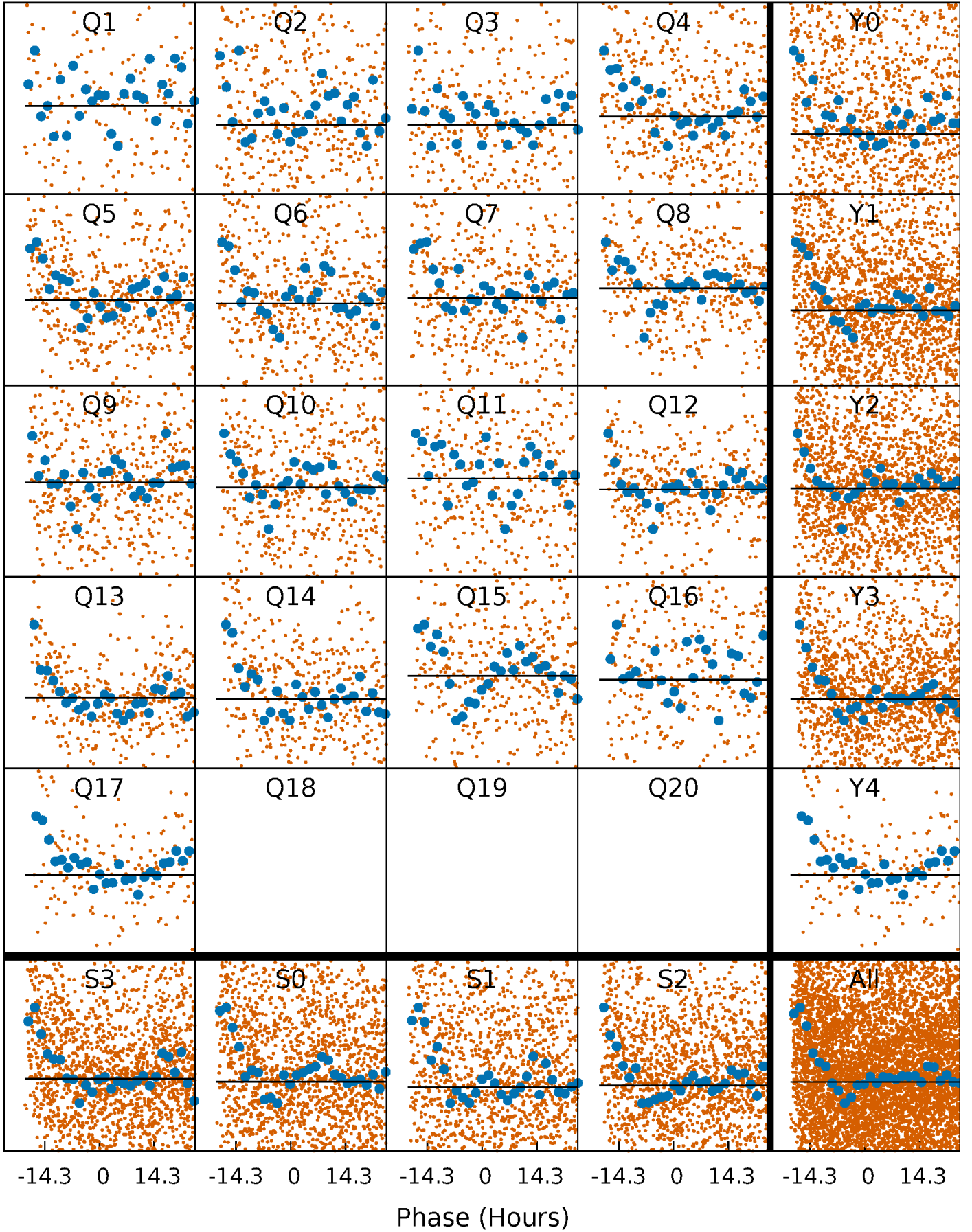
PDC Quarter-Phased Transit Curves

TCE 002580872-04 P= 15.925751 Days $T_0=146.645451$ (BKJD)



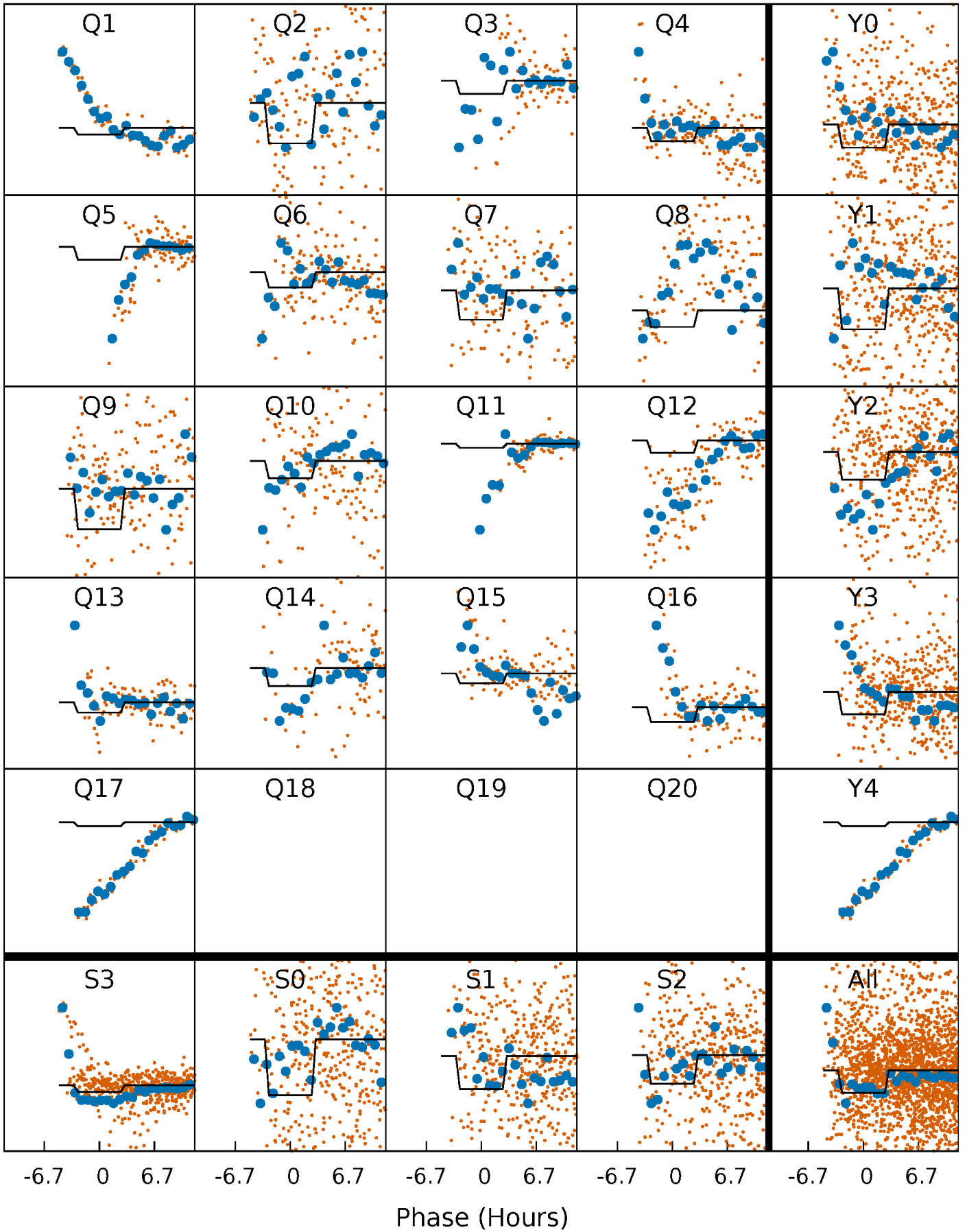
DV Quarter-Phased Transit Curves

TCE 002580872-04 P= 15.925751 Days $T_0=146.645451$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

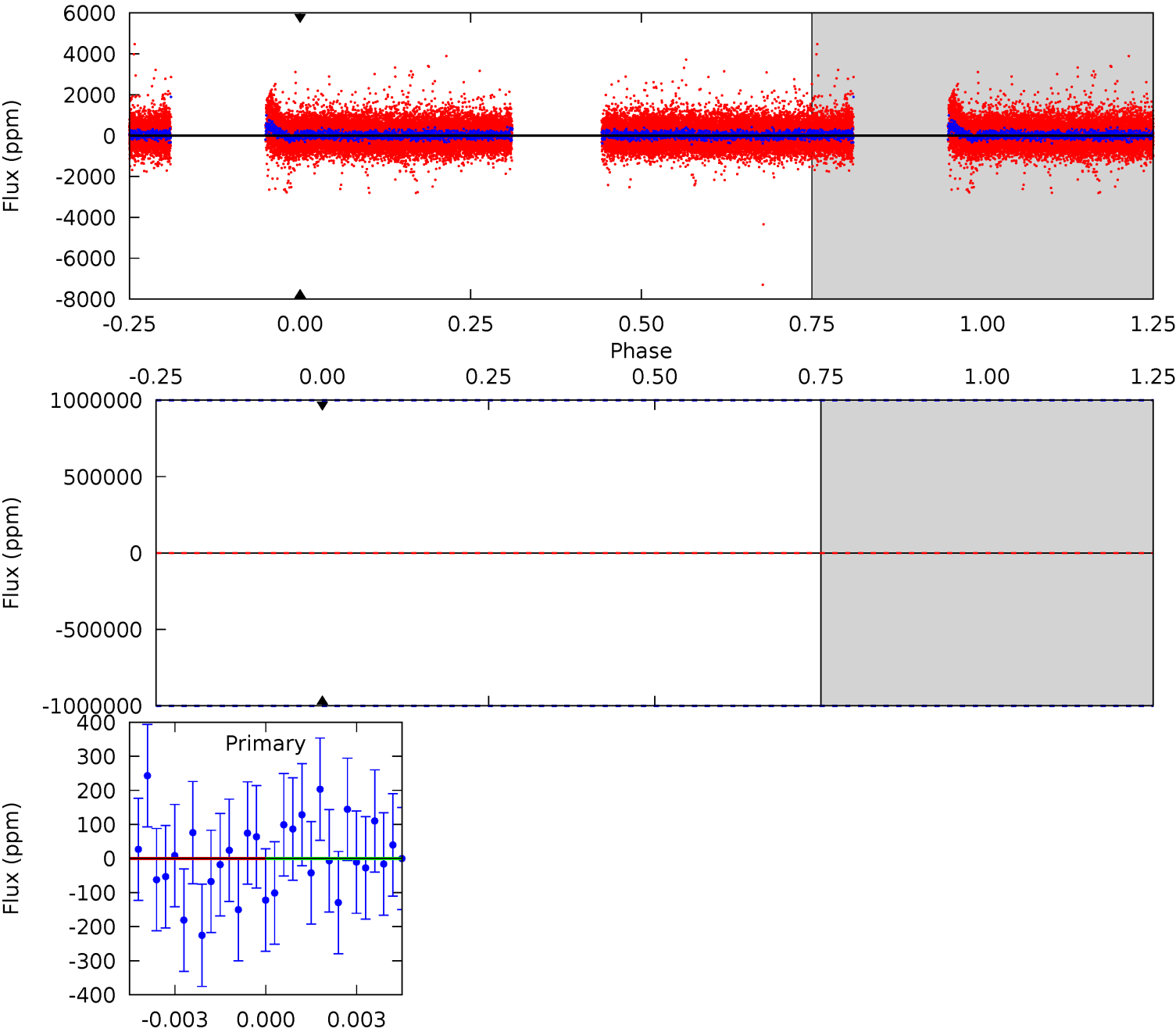
TCE 002580872-04 P= 15.925751 Days $T_0=146.040474$ (BKJD)



DV Model-Shift Uniqueness Test

002580872-04, P = 15.925751 Days, E = 130.719700 Days

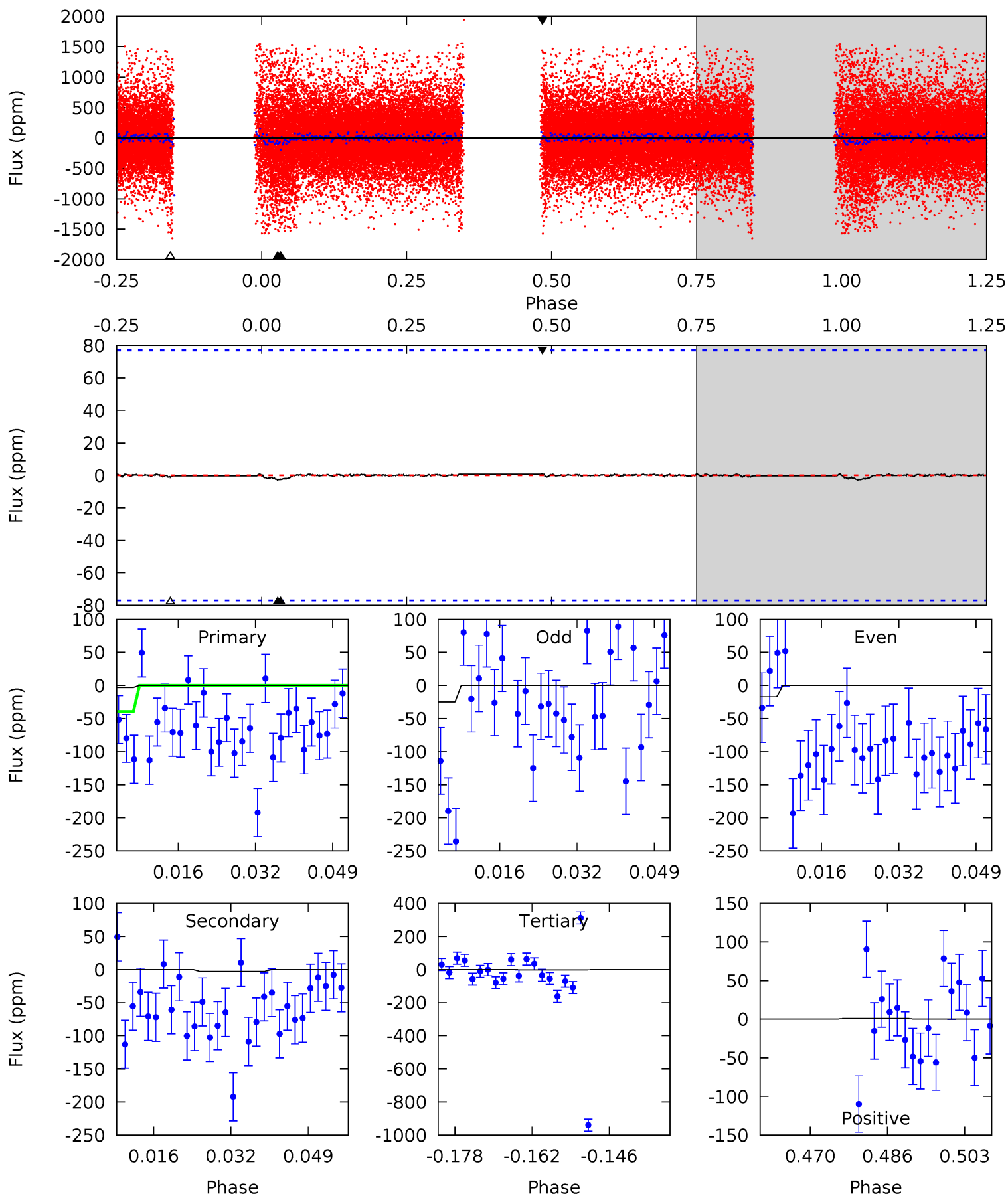
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002580872-04, P = 15.925751 Days, E = 130.114723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.19	0.17	0.08	0.06	4.93	2.40	0.02	0.11	0.13	0.09	0.11	0.25	-61.3	0.23	0.94



Stellar Parameters For KIC 002580872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$4.471^{+0.075}_{-0.163}$	$0.060^{+0.250}_{-0.300}$	$0.917^{+0.222}_{-0.111}$	$0.907^{+0.091}_{-0.082}$	$1.657^{+0.606}_{-0.725}$
	+3%/-3%	+2%/-4%	+417%/-500%	+24%/-12%	+10%/-9%	+37%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002580872-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$9.21^{+9.05}_{-6.20}$	944^{+57}_{-43}	-3637^{+19580}_{-11366}	$-84.304^{+15724.849}_{-15661.518}$
Alt.	-3 ± 16	$7.44^{+6.74}_{-5.05}$	950^{+57}_{-47}	-1718^{+4144}_{-578}	$0.127^{+4.915}_{-2.839}$

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

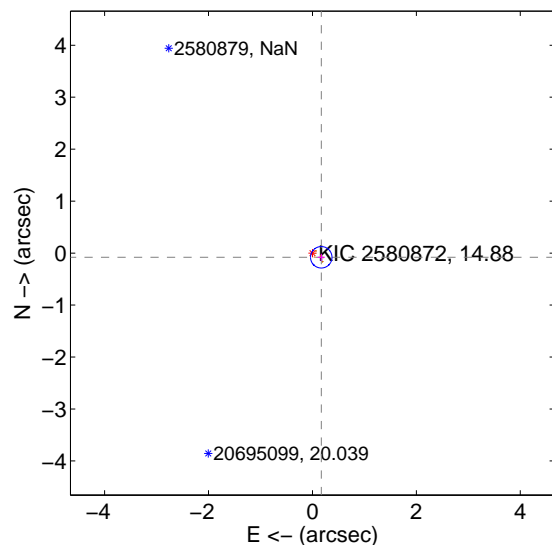
Supplemental centroid analysis for 002580872-04. Kepler magnitude: 14.88. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

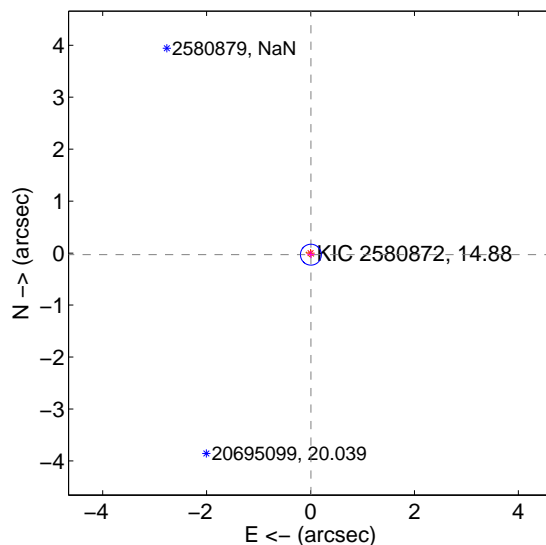
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.188 ± 0.069	2.73	-0.170 ± 0.068	-0.081 ± 0.068
PRF-fit source offset from KIC position	0.031 ± 0.067	0.47	-0.007 ± 0.067	-0.031 ± 0.067
photometric centroid source offset	1.58 ± 0.77	2.05	-0.23 ± 0.95	-1.56 ± 0.76

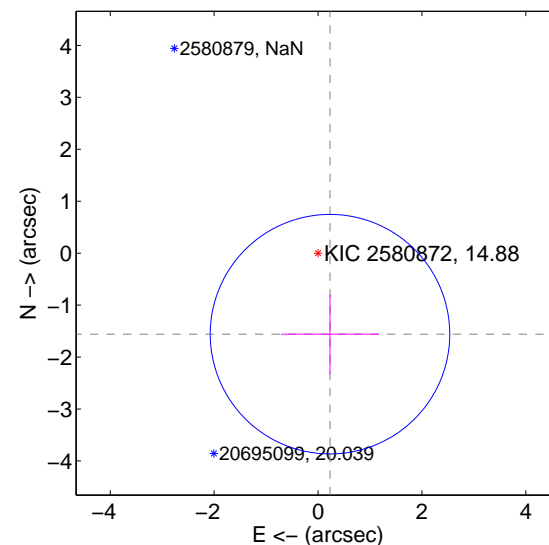
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

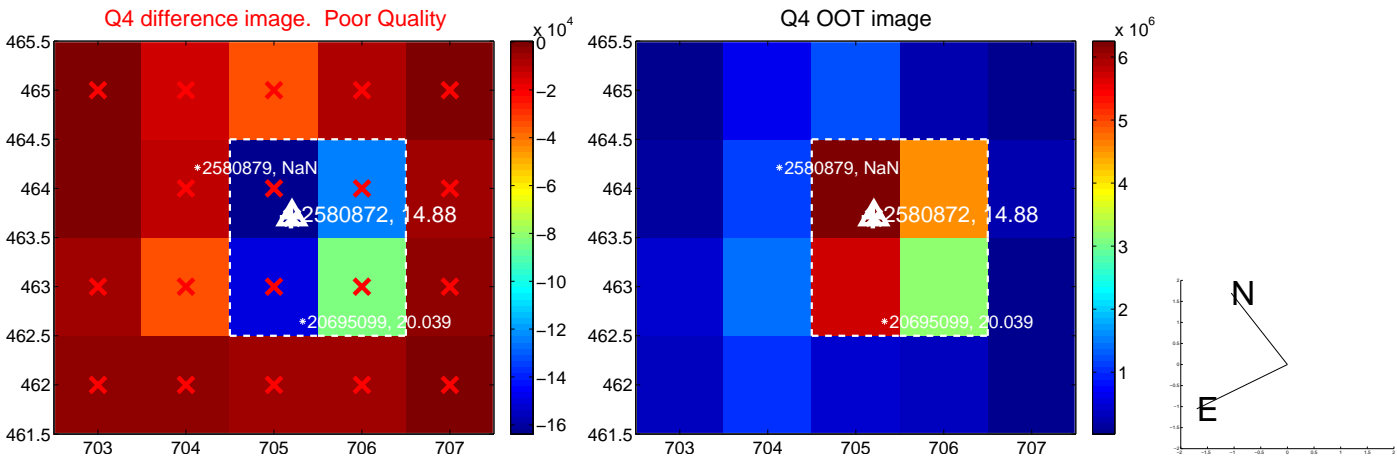
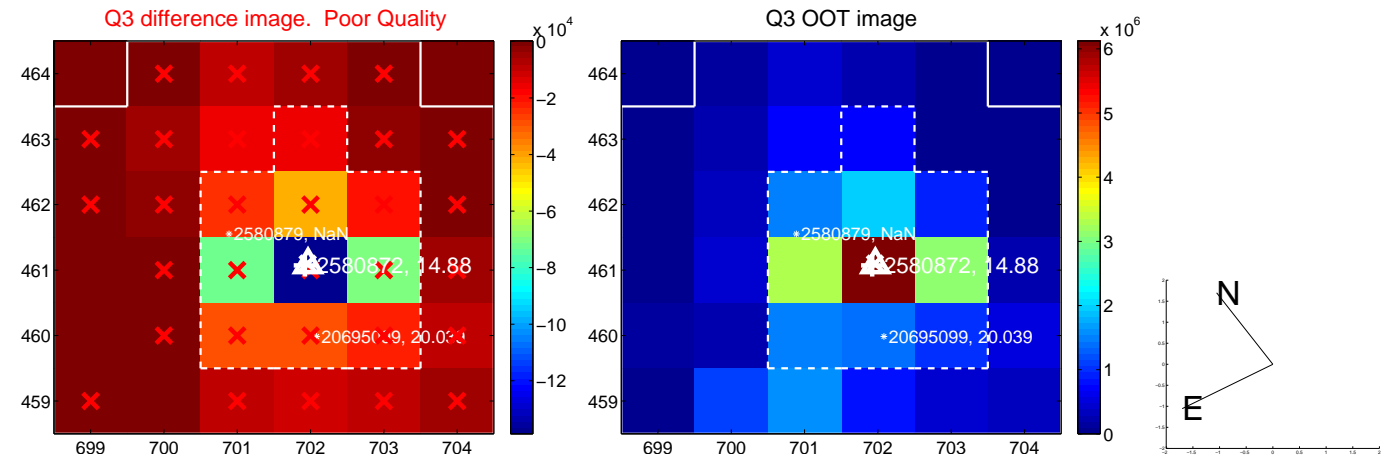
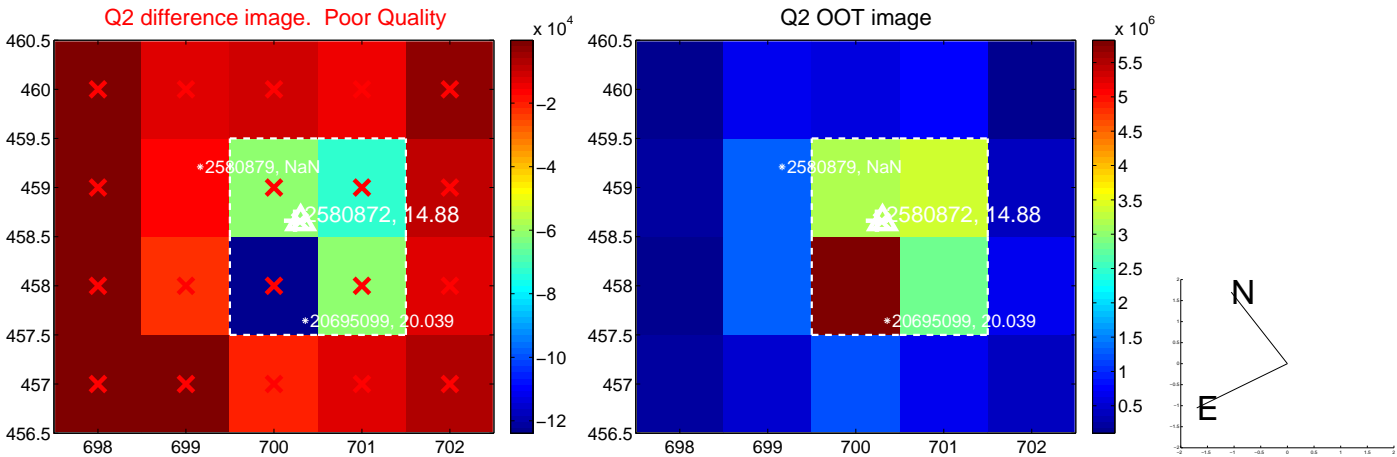
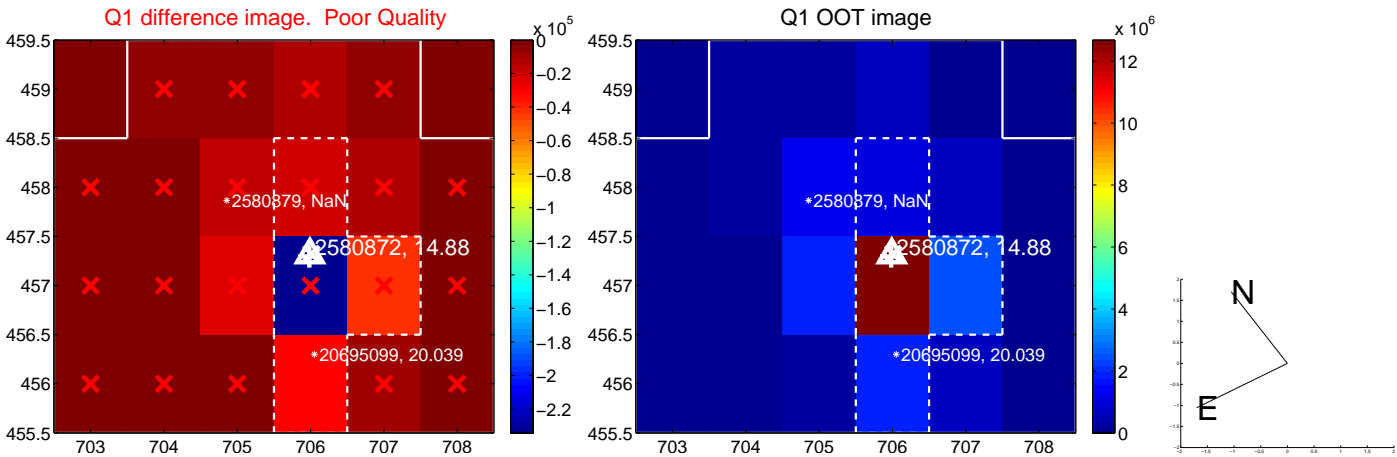


offset from photometric centroids

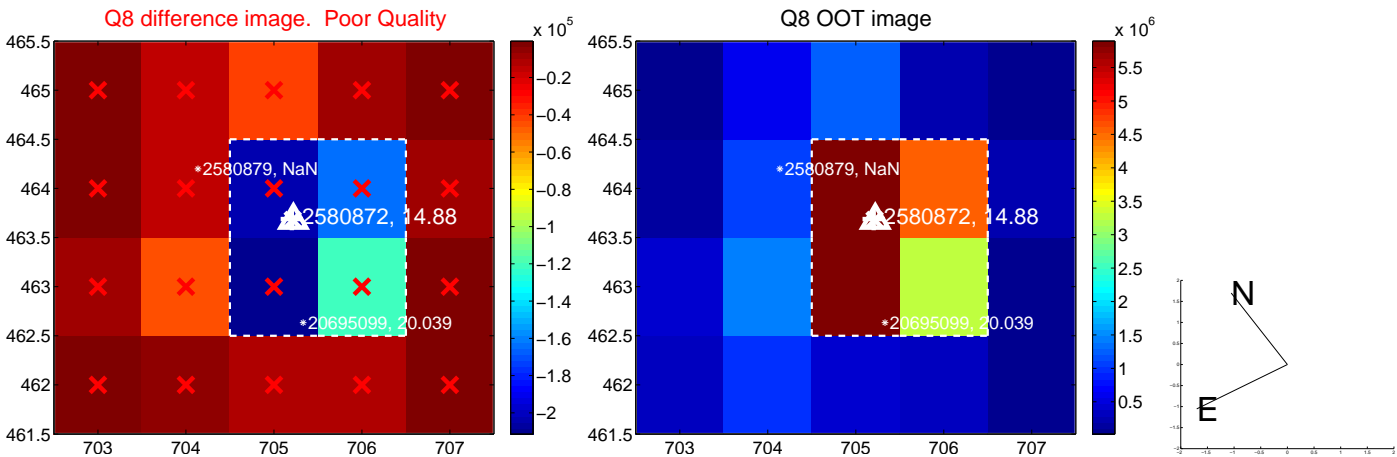
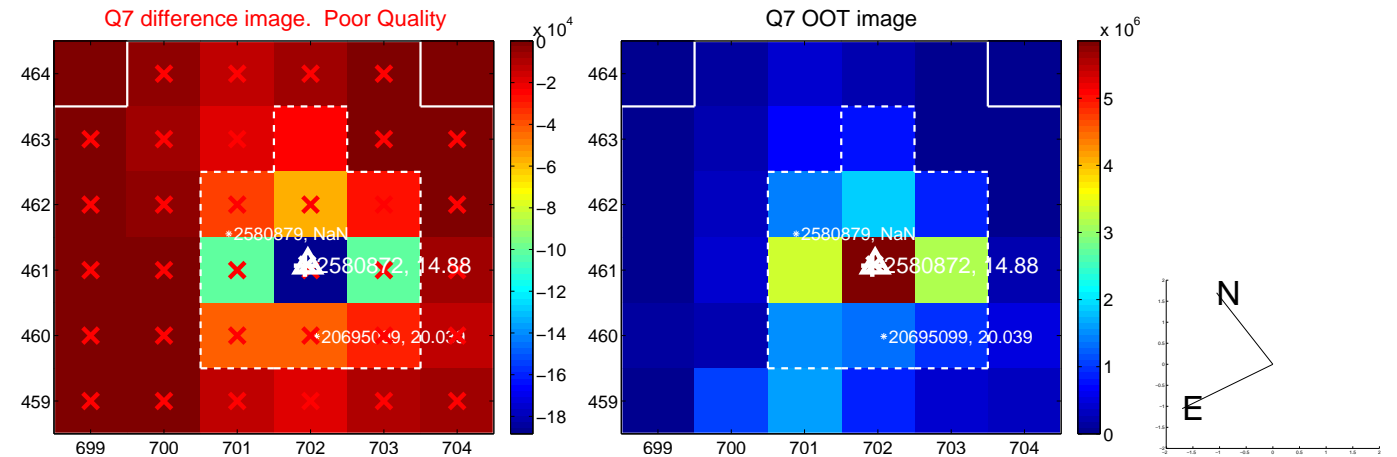
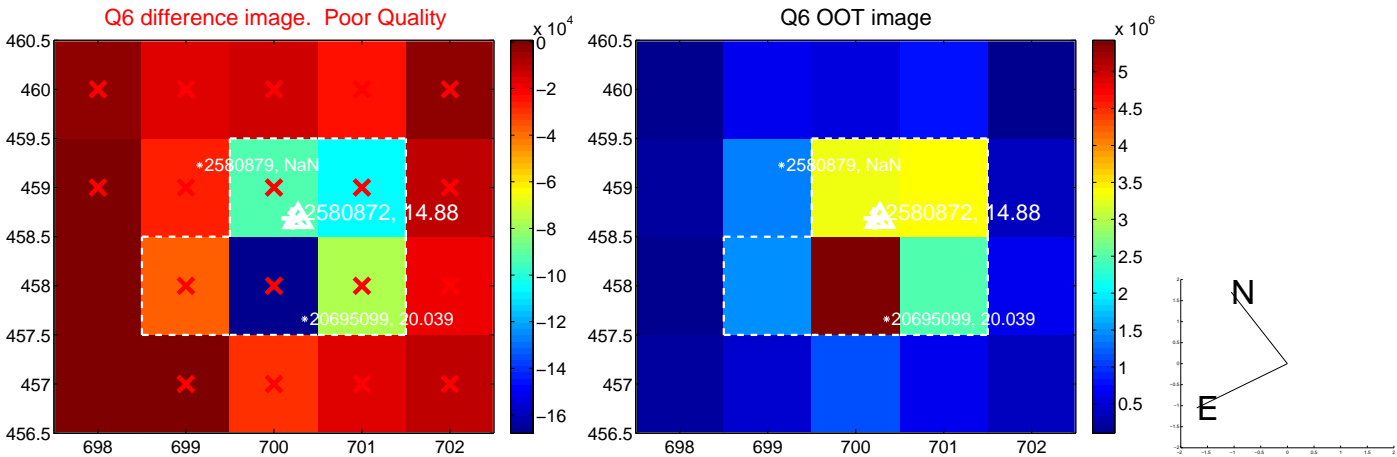
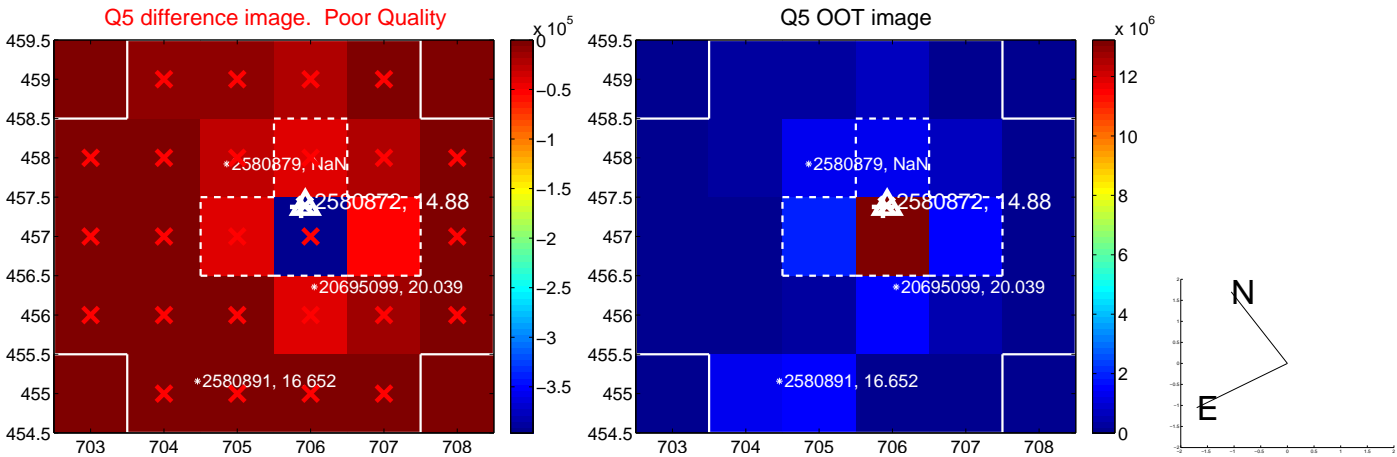


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

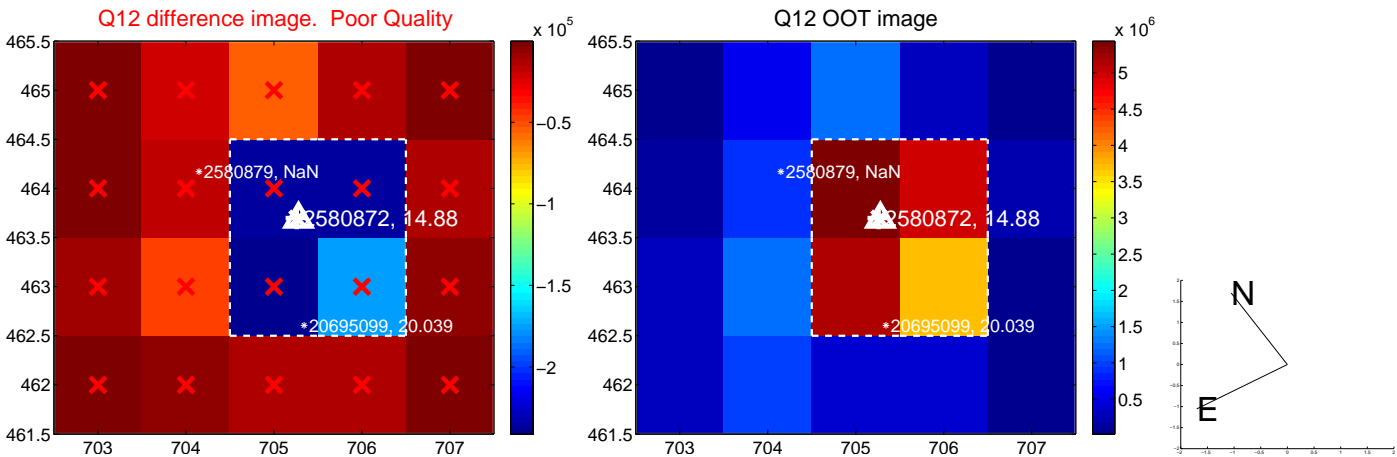
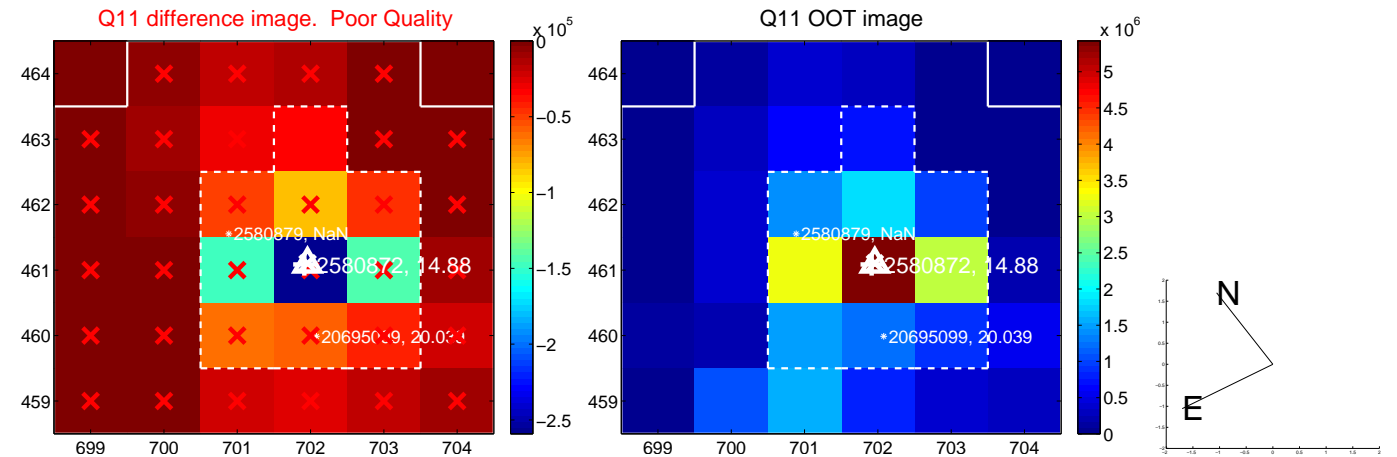
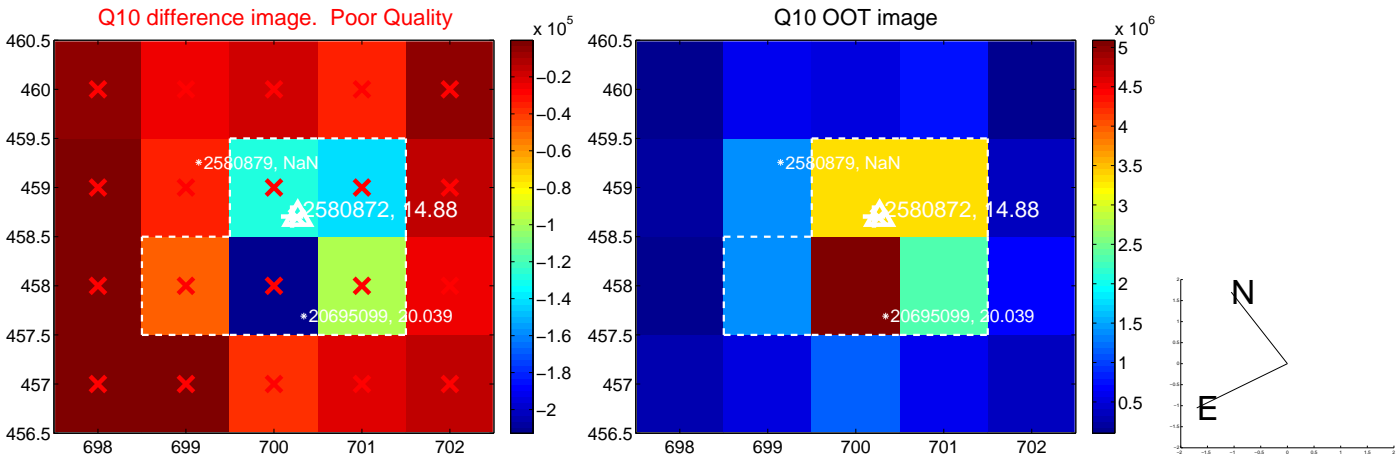
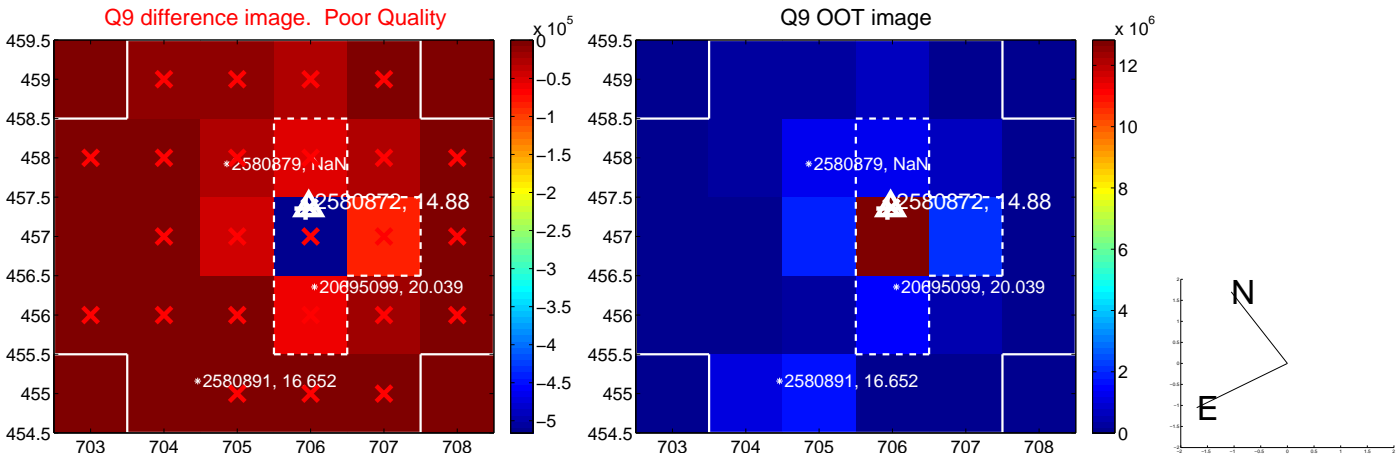
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



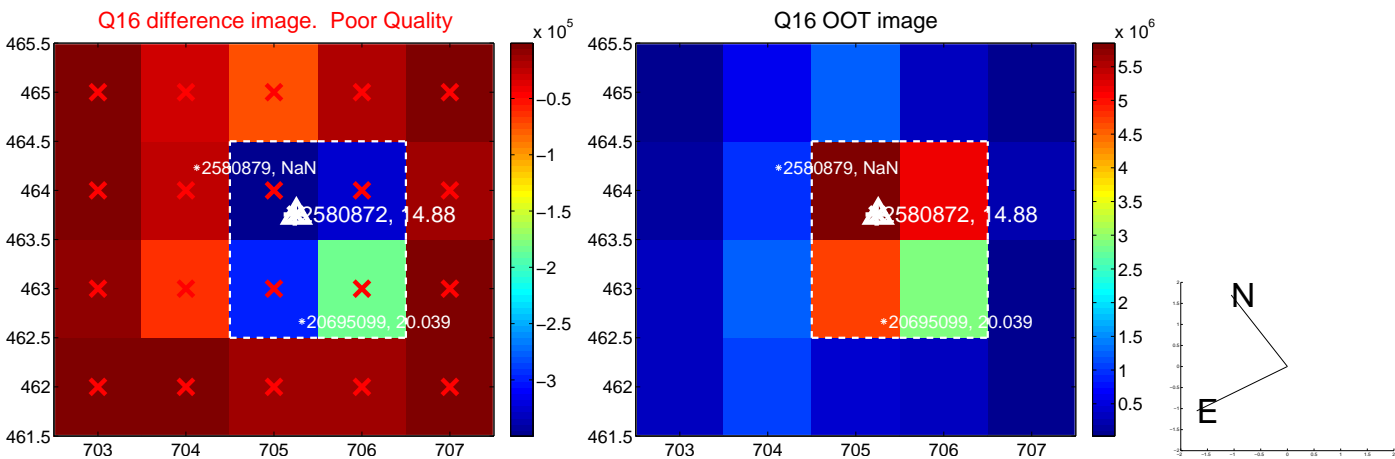
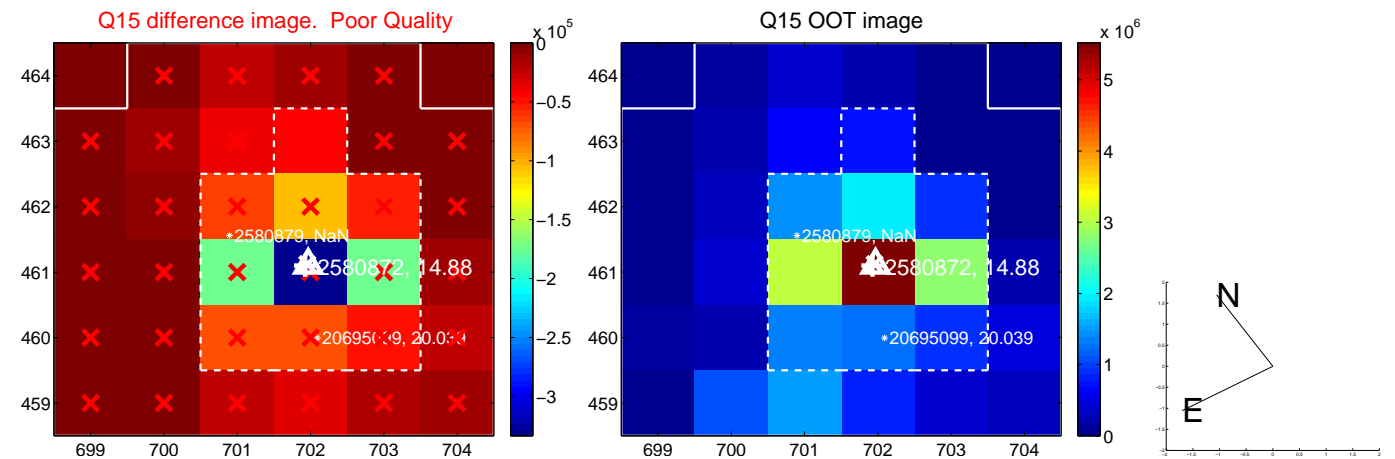
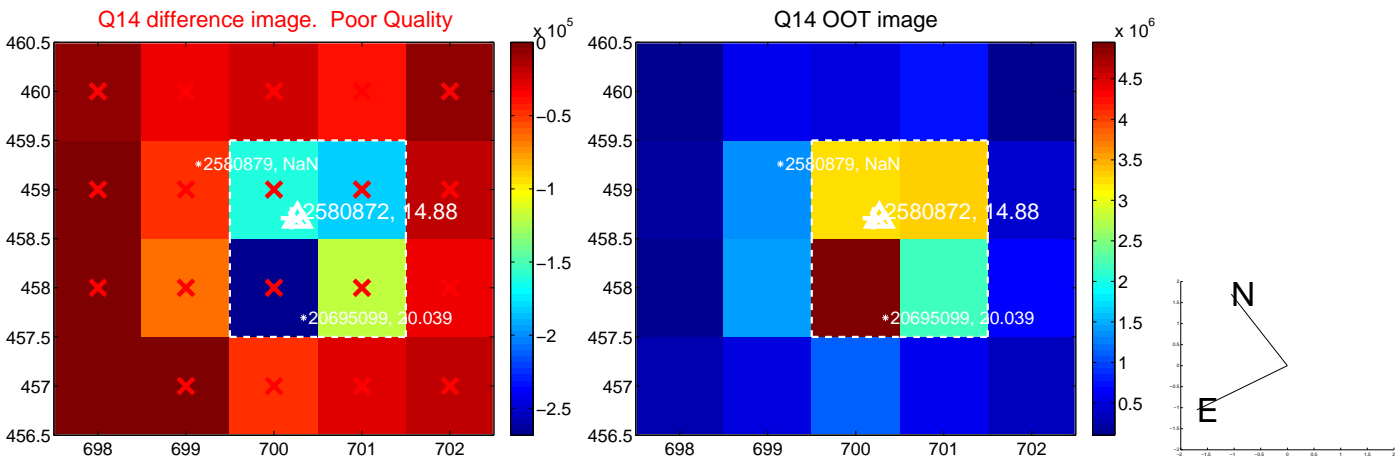
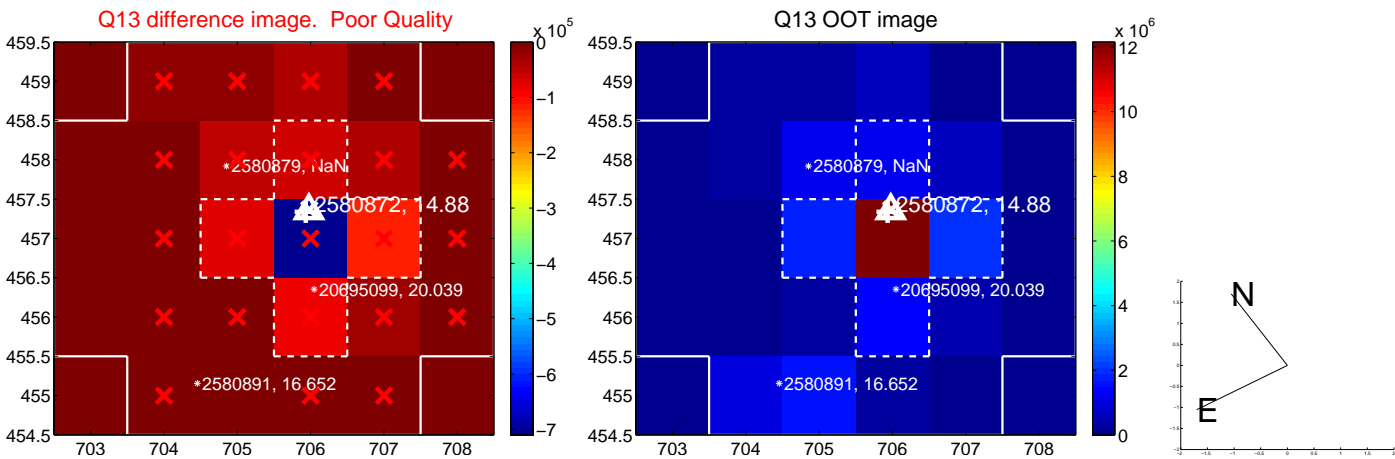
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



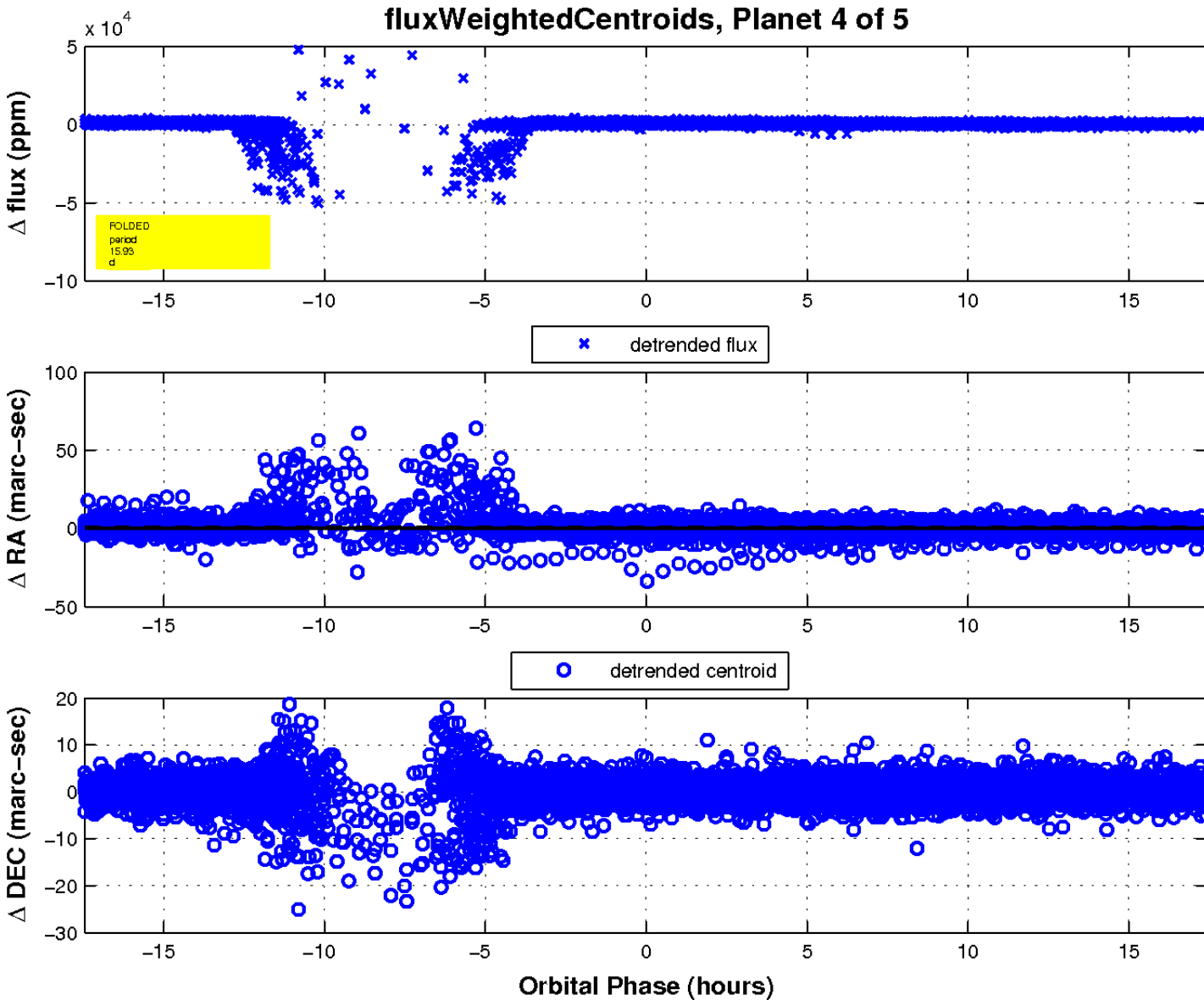
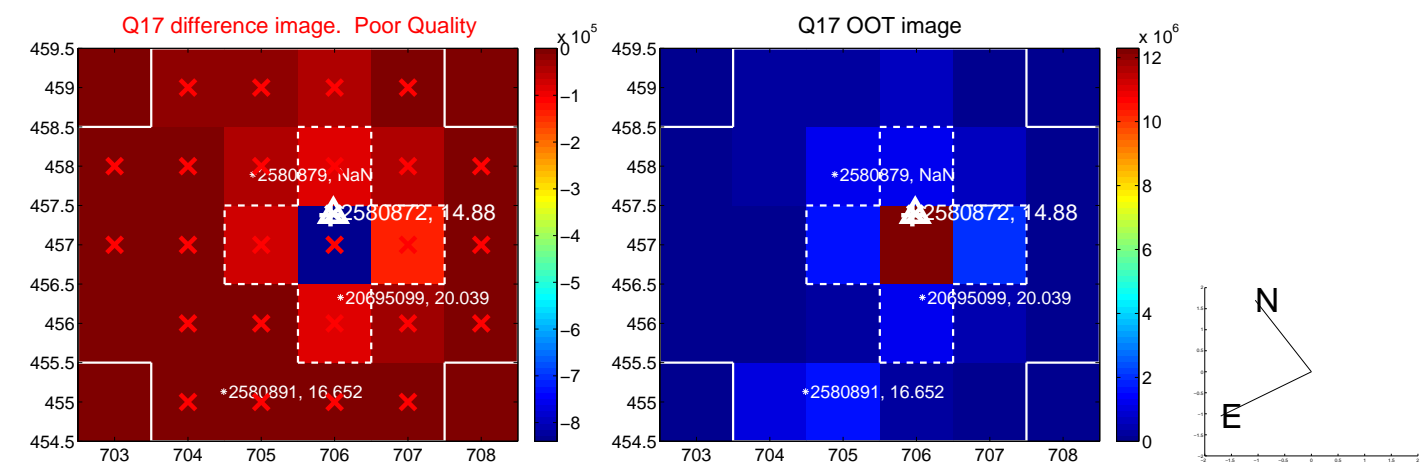
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

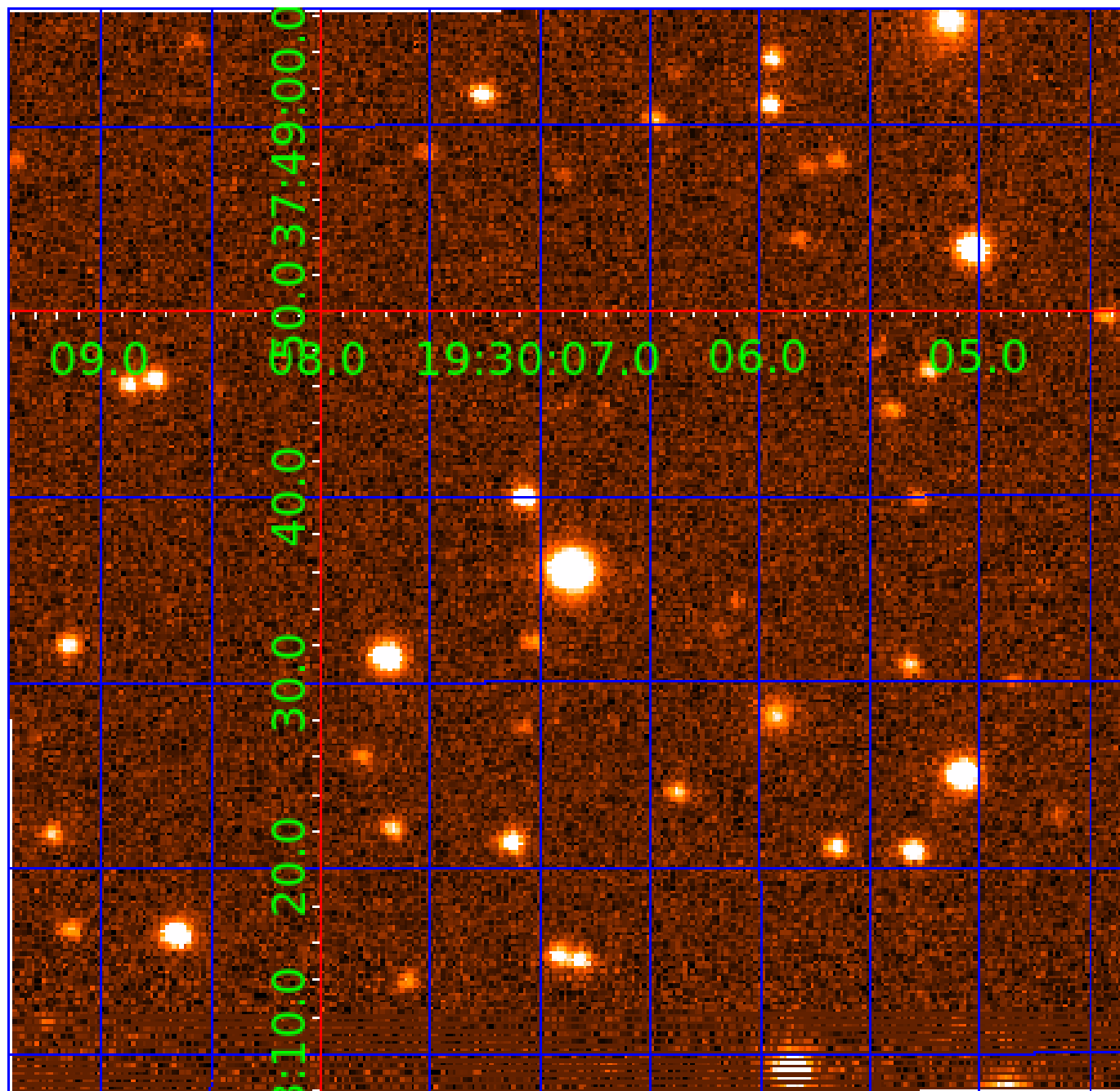


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002580872

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})
002580872-01	OBS	6283.01	15.926728	145.542038	274695.9	4.500	8439.2	-1.0	0.92	5496	43.33	47.77
002580872-02	OBS	No	15.926621	137.041425	171793.6	11.142	5962.9	4227.6	0.92	5496	57.09	47.77
002580872-03	OBS	No	7.963280	136.551272	3886.2	15.000	194.1	-1.0	0.92	5496	5.61	120.38
002580872-04	OBS	No	15.925751	146.645451	3463.4	12.500	128.6	-1.0	0.92	5496	5.30	47.77
002580872-05	OBS	No	15.948718	143.399920	1134.5	12.000	20.3	-1.0	0.92	5496	3.03	47.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580872-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS
002580872-02	OBS	FP	0.00	1	0	0	0	SAME_NTL_PERIOD
002580872-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002580872-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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 002580872-05

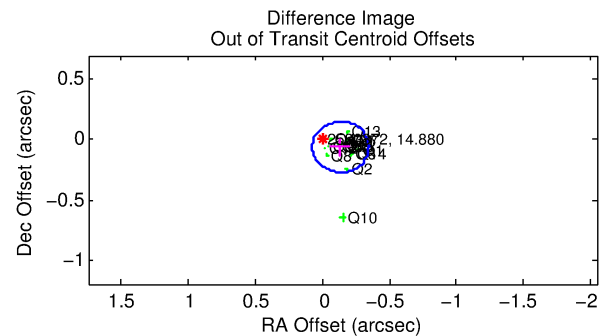
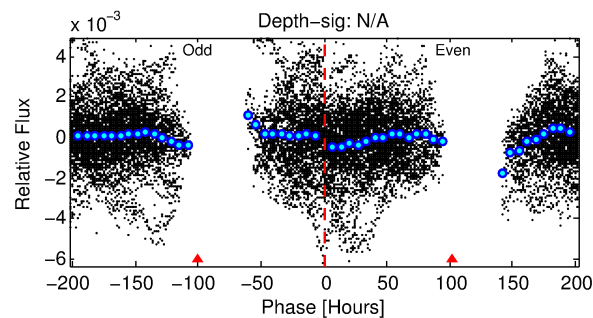
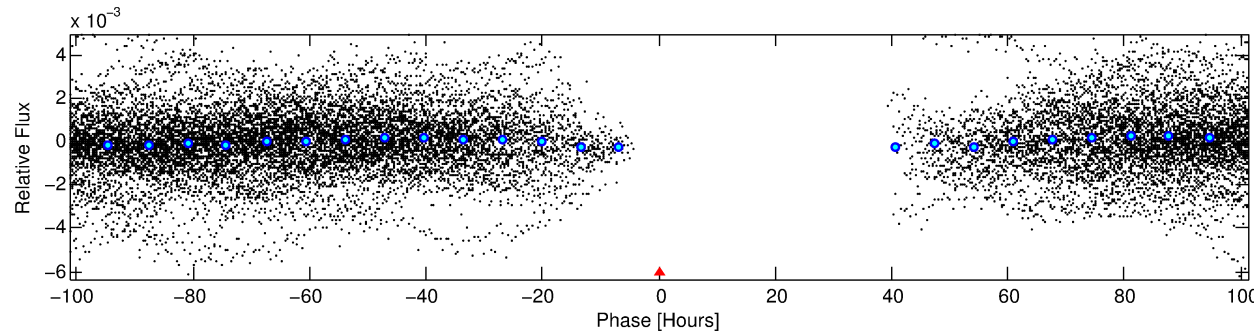
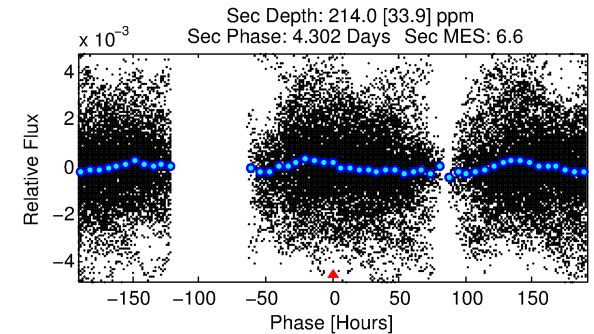
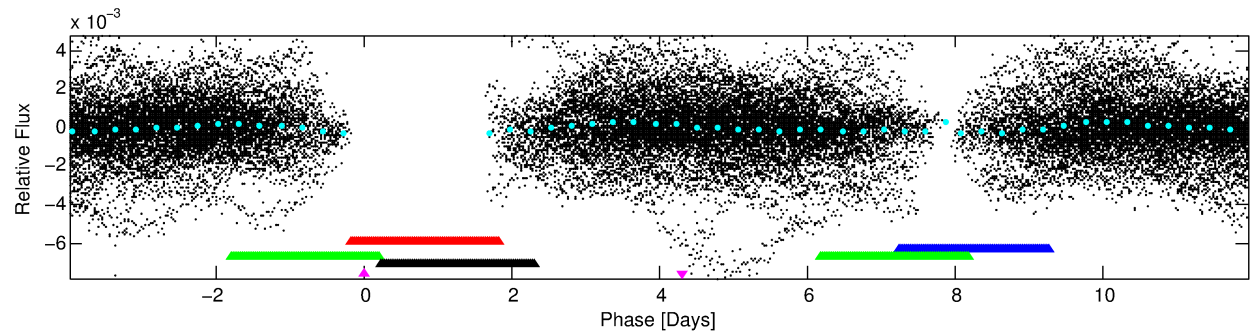
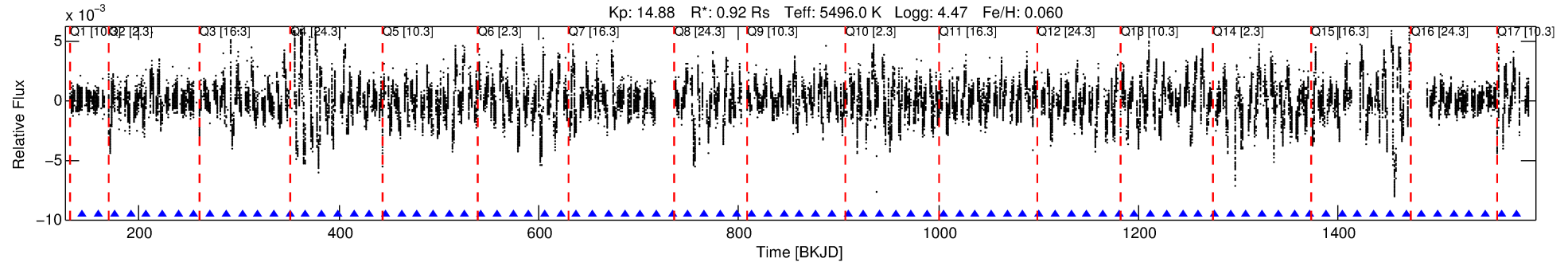
No Significant Match Found

DV One-Page Summary

KIC: 2580872 Candidate: 5 of 5 Period: 15.949 d

KOI: K06283 Corr: No Ephemeris Match

Kp: 14.88 R*: 0.92 Rs Teff: 5496.0 K Logg: 4.47 Fe/H: 0.060



TPS TCE Results:

Period = 15.94872 d
Epoch = 143.3999 BKJD

DV fit results are unavailable

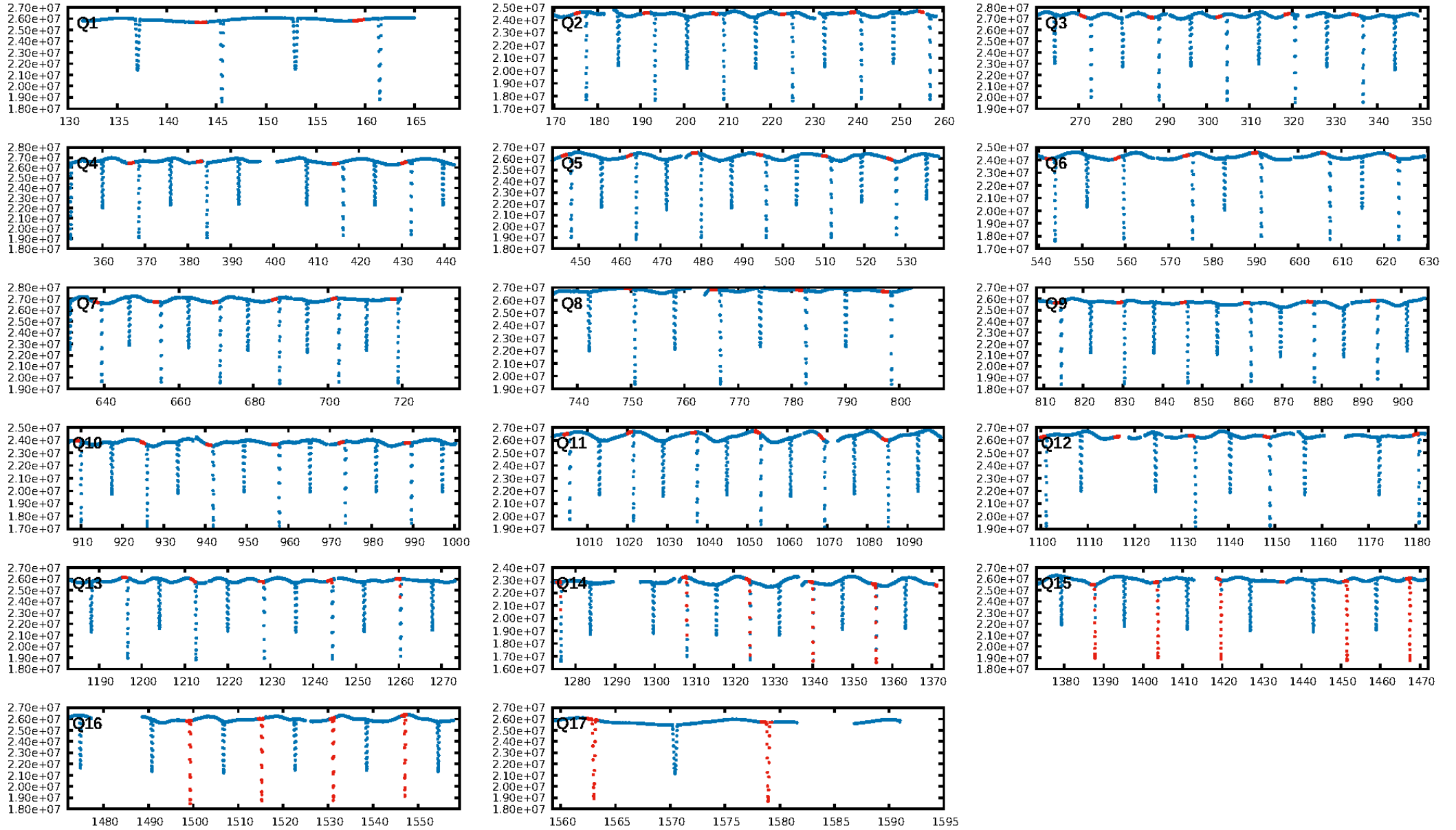
DV Diagnostic Results:

ShortPeriod-sig: 3.3% [0.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 2.294
Centroid-sig: N/A
Centroid-so: 0.974 arcsec [8.19σ]
OotOffset-rm: 0.148 arcsec [2.11σ]
KicOffset-rm: 0.018 arcsec [0.25σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

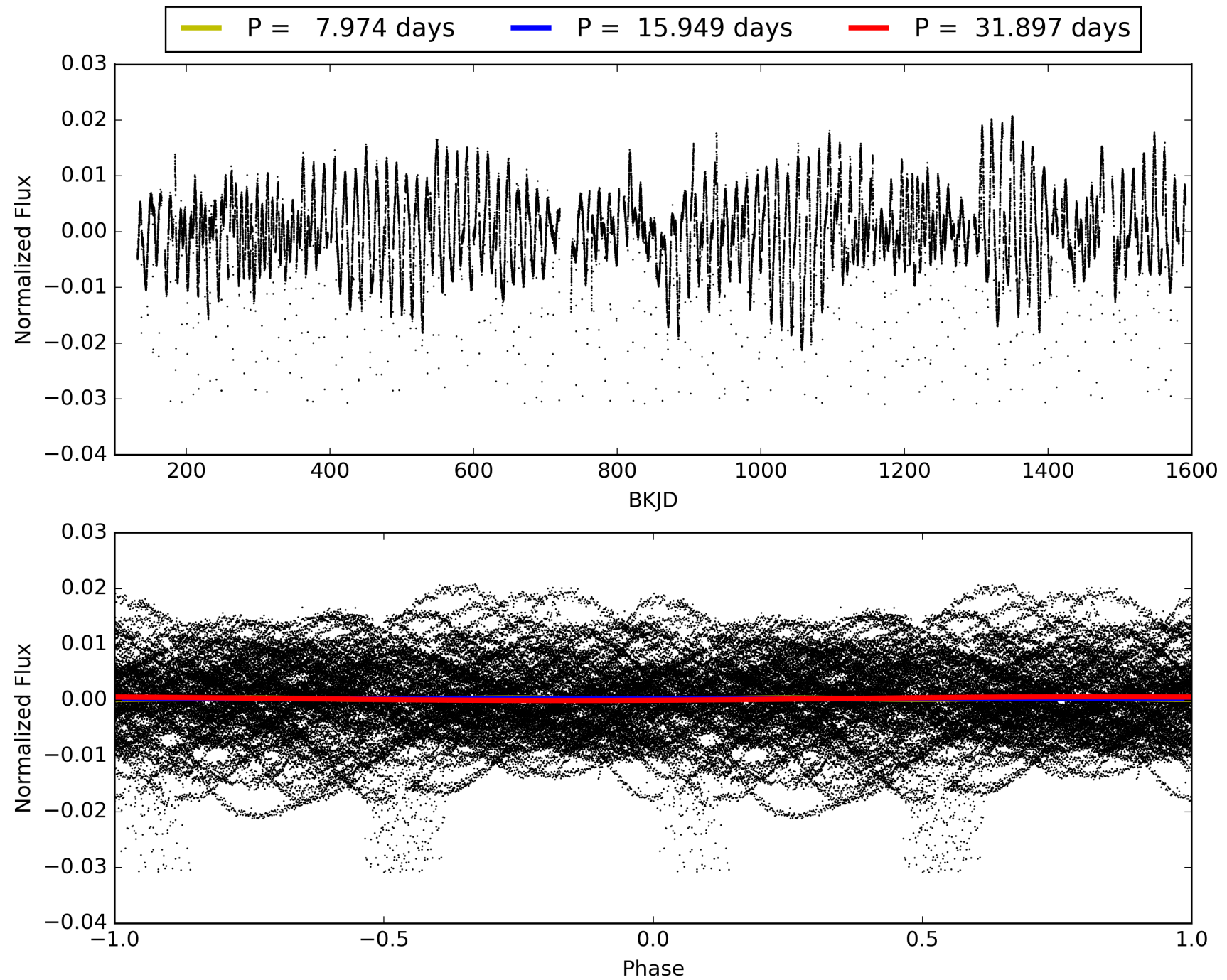
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:15:28 Z

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

TCE 002580872-05, PDC Light Curves

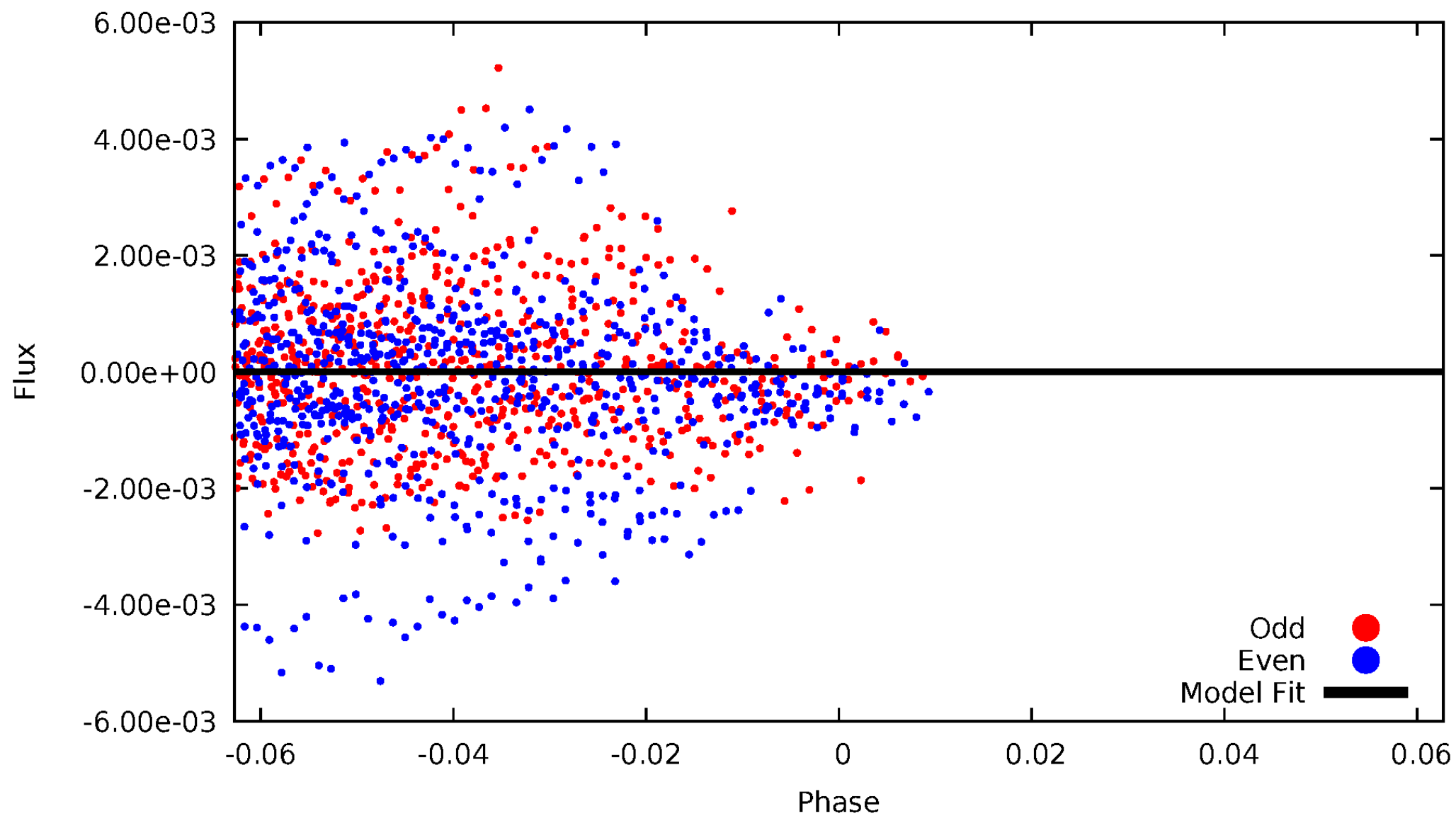


TCE 002580872-05



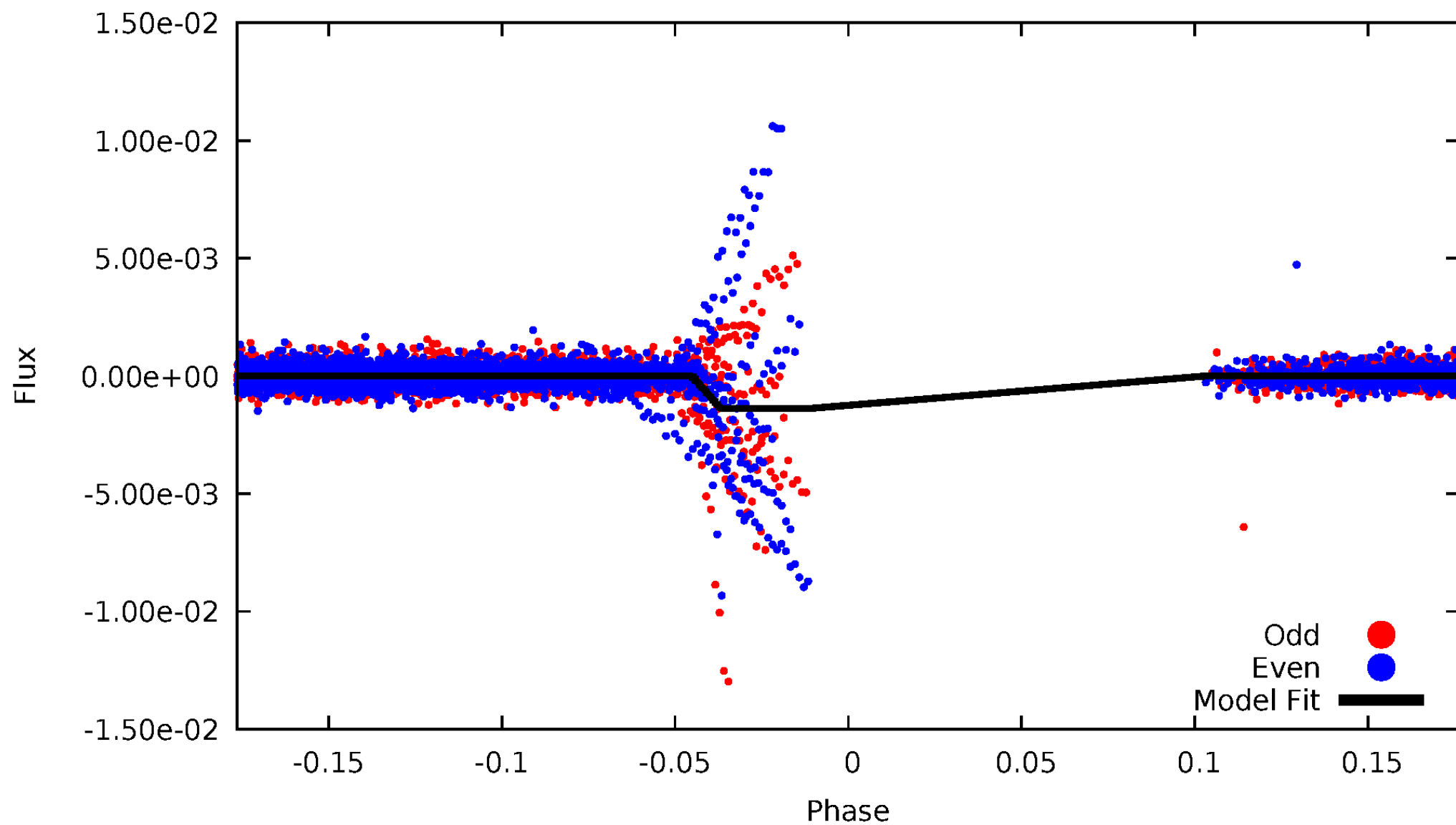
DV Odd/Even

TCE 002580872-05



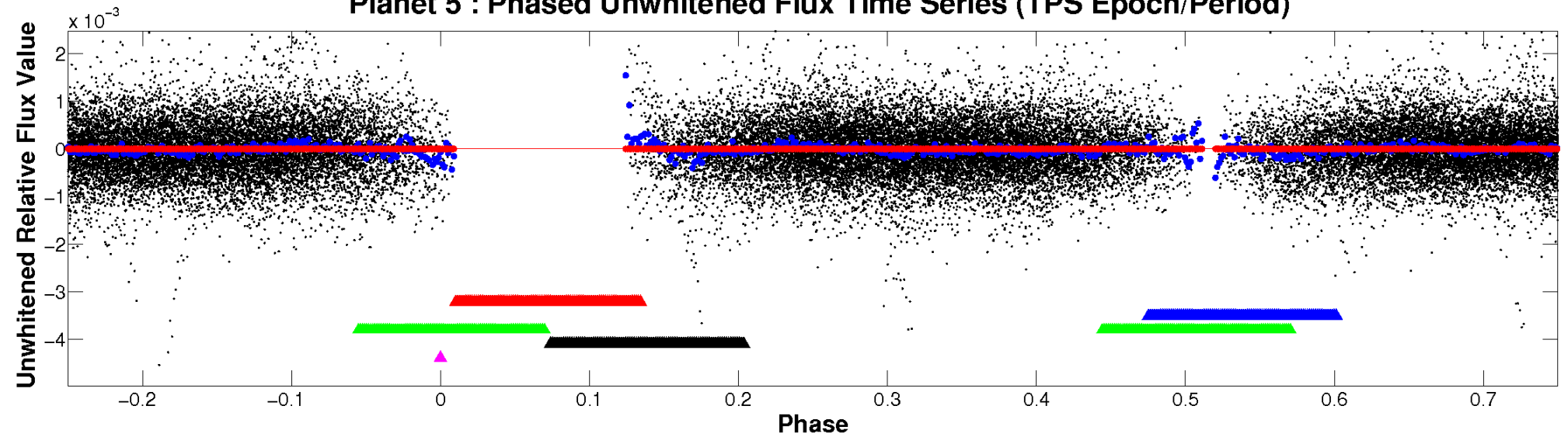
ALT Odd/Even

TCE 002580872-05



Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

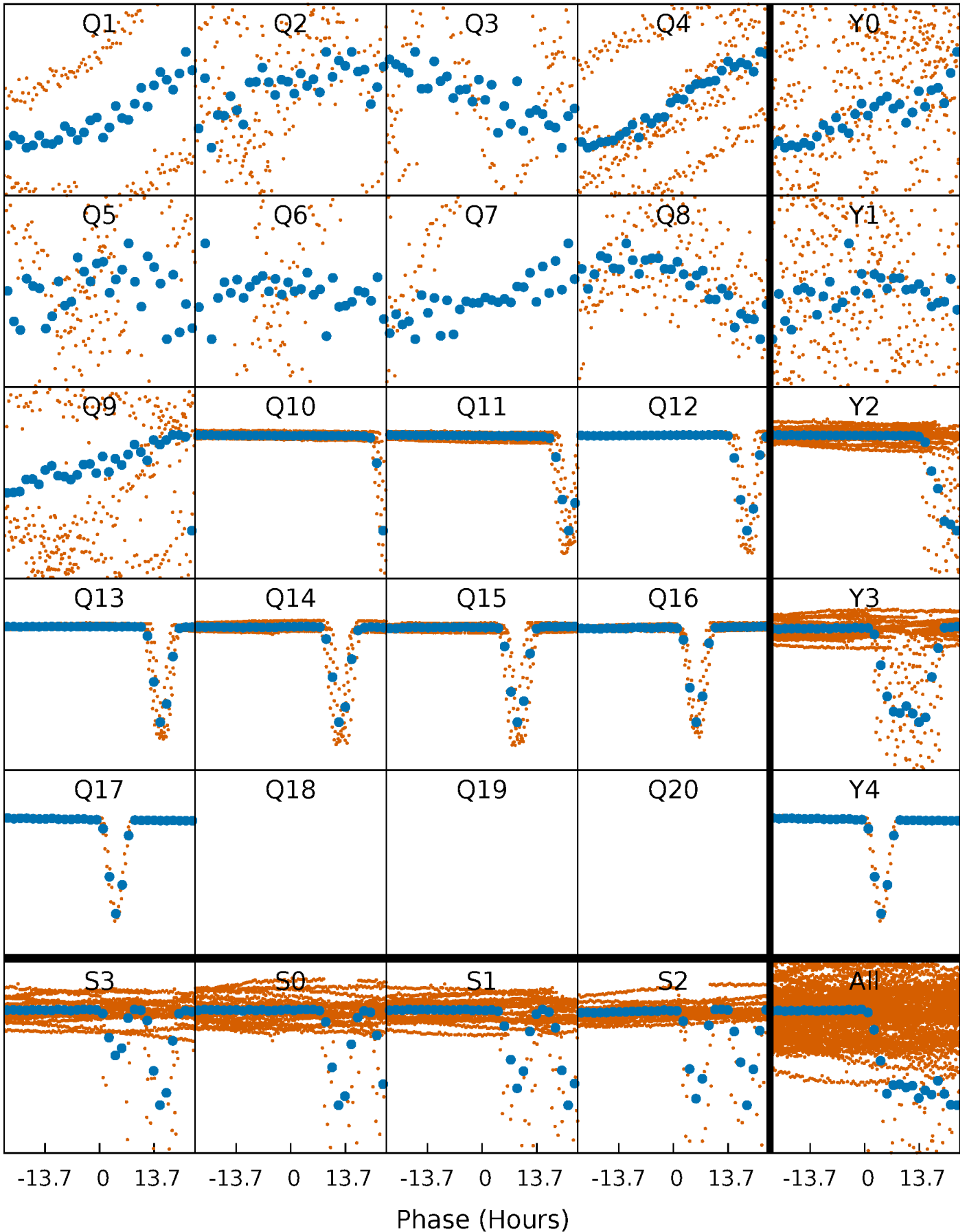


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 002580872-05 $P = 15.948718$ Days $T_0 = 143.399920$ (BKJD)



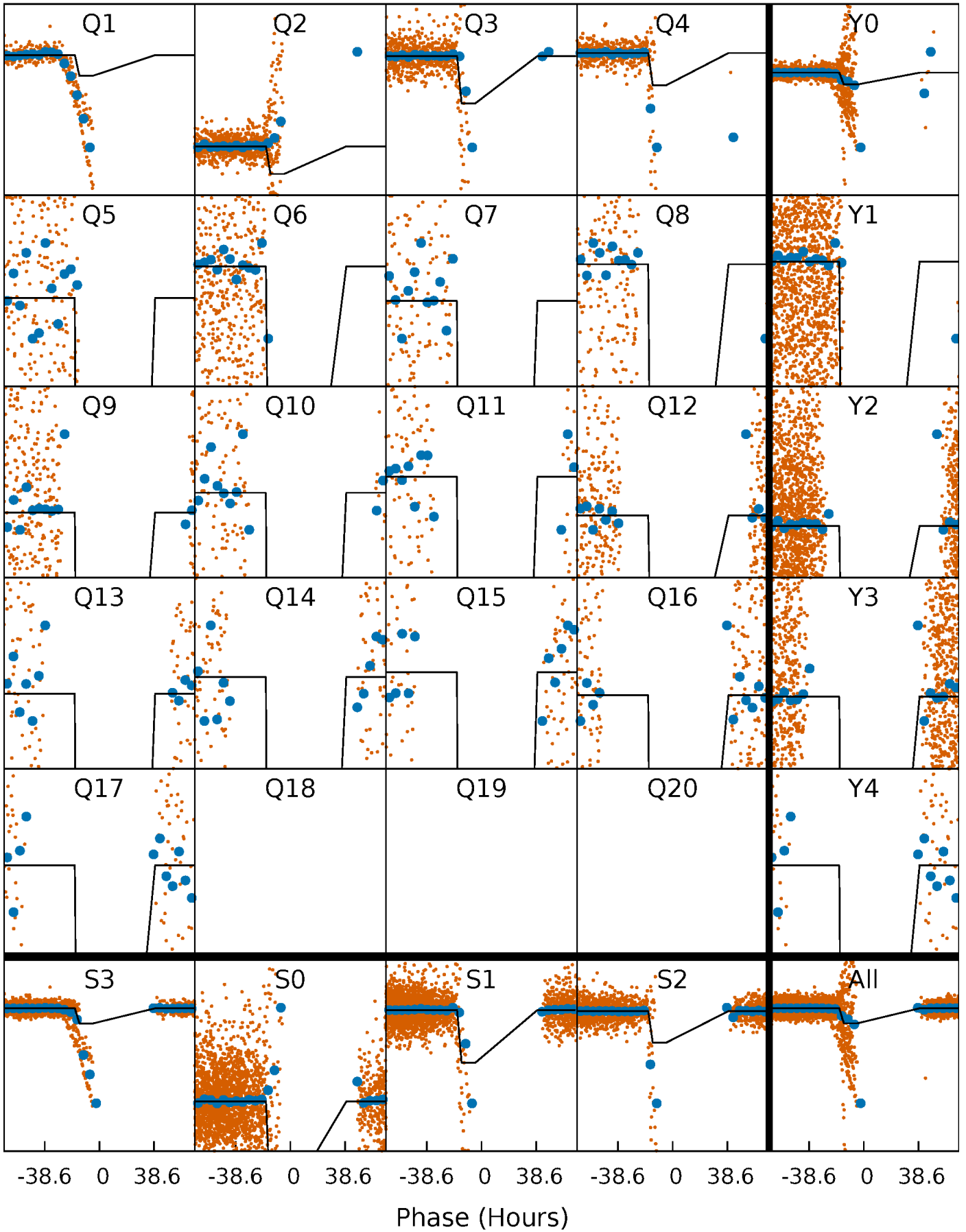
DV Quarter-Phased Transit Curves

TCE 002580872-05 $P = 15.948718$ Days $T_0 = 143.399920$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

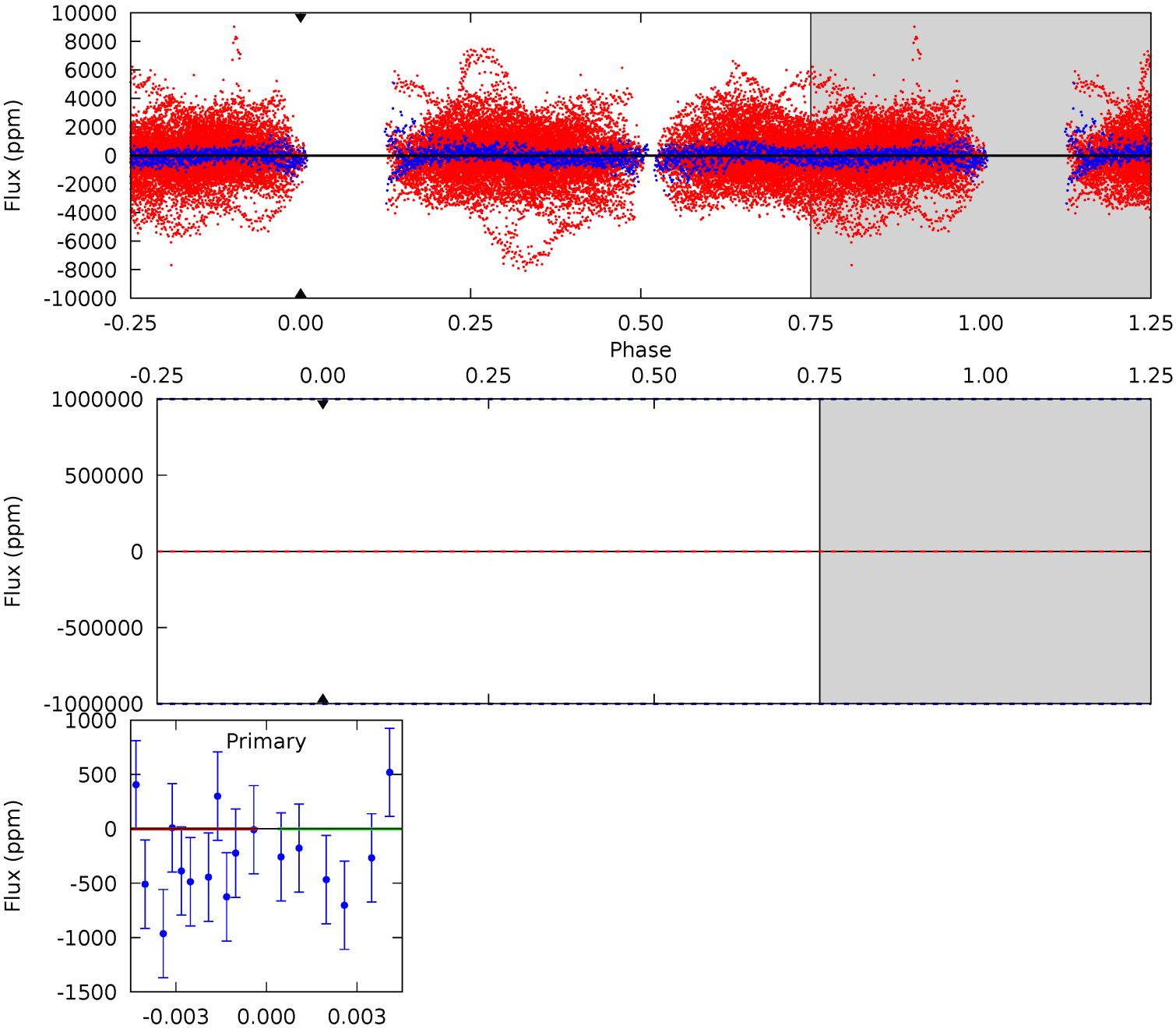
TCE 002580872-05 $P = 15.948718$ Days $T_0 = 143.733501$ (BKJD)



DV Model-Shift Uniqueness Test

002580872-05, P = 15.948718 Days, E = 127.451202 Days

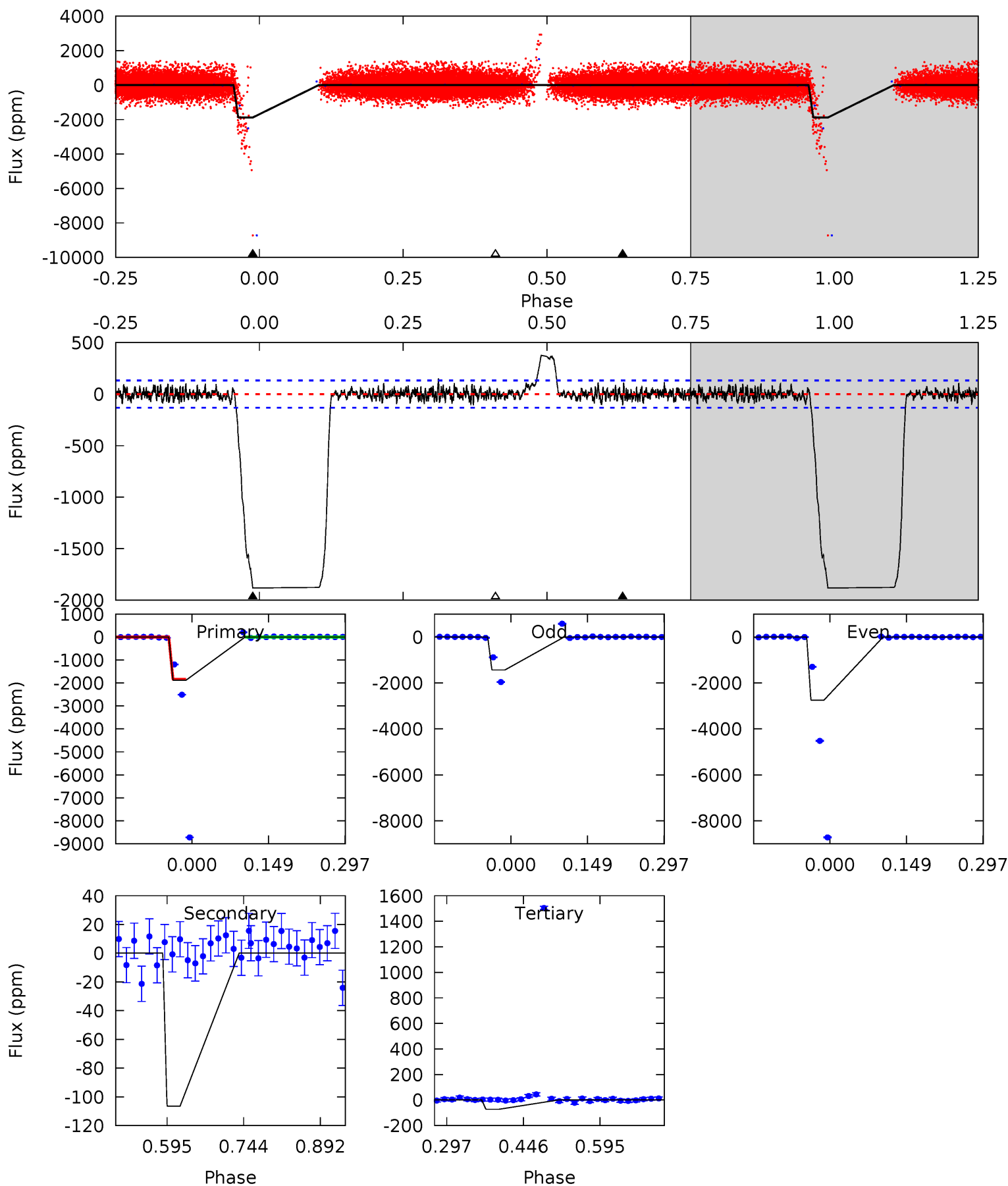
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002580872-05, P = 15.948718 Days, E = 127.784783 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.8	3.61	2.44	0	4.48	1.44	1.50	61.3	63.8	1.17	3.61	23.7	0	0.17	0



Stellar Parameters For KIC 002580872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+164}_{-164}	$4.471^{+0.075}_{-0.163}$	$0.060^{+0.250}_{-0.300}$	$0.917^{+0.222}_{-0.111}$	$0.907^{+0.091}_{-0.082}$	$1.657^{+0.606}_{-0.725}$
	+3%/-3%	+2%/-4%	+417%/-500%	+24%/-12%	+10%/-9%	+37%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002580872-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$7.90^{+8.76}_{-5.41}$	947^{+59}_{-45}	3194^{+17463}_{-18025}	40^{+30273}_{-16906}
Alt.	-107 ± 29	$8.83^{+7.80}_{-6.03}$	944^{+60}_{-45}	2666^{+1124}_{-423}	11^{+96}_{-8}

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 $A_{obs} \gg 1.0$

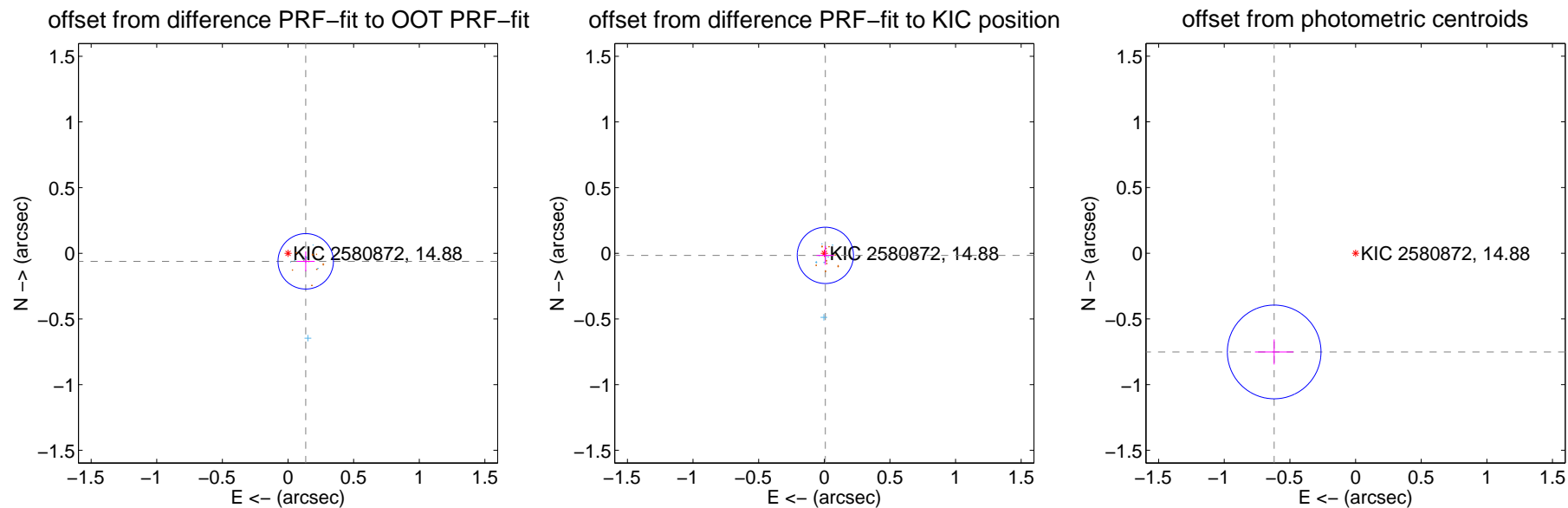
DV Centroid Data

Supplemental centroid analysis for 002580872-05. Kepler magnitude: 14.88. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

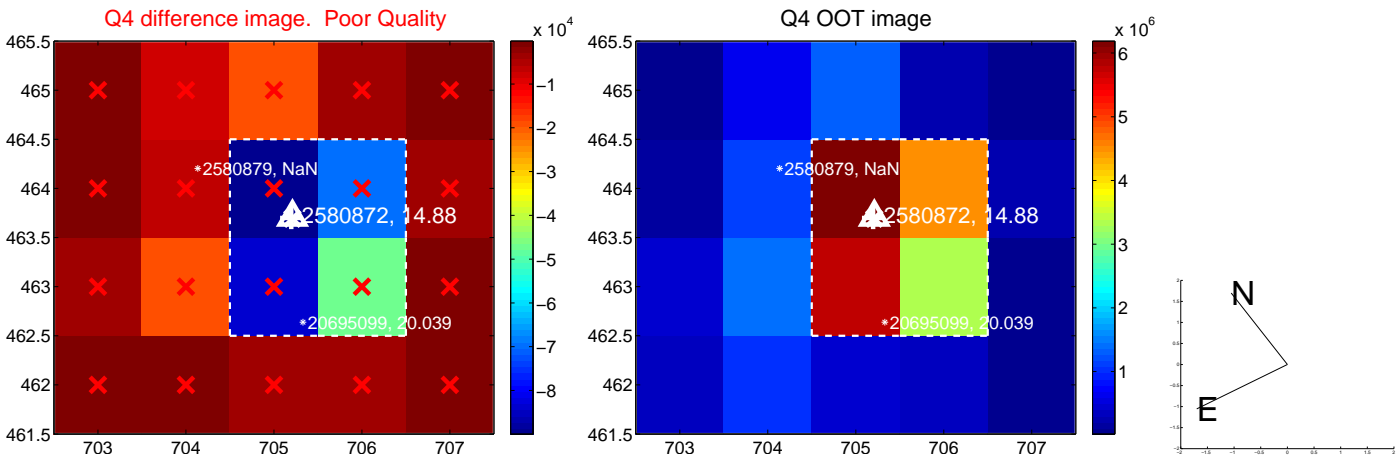
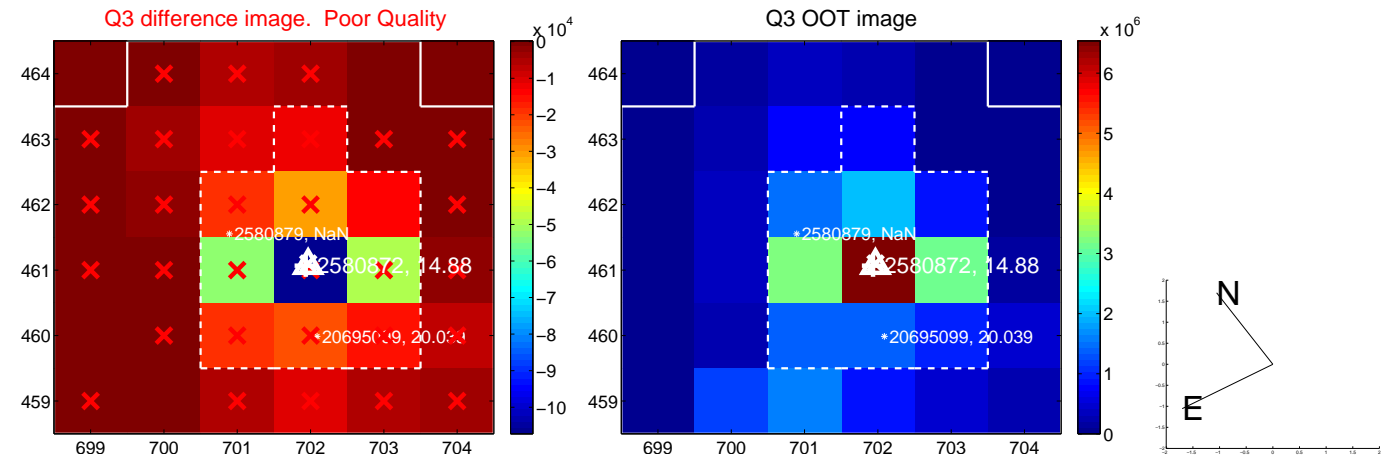
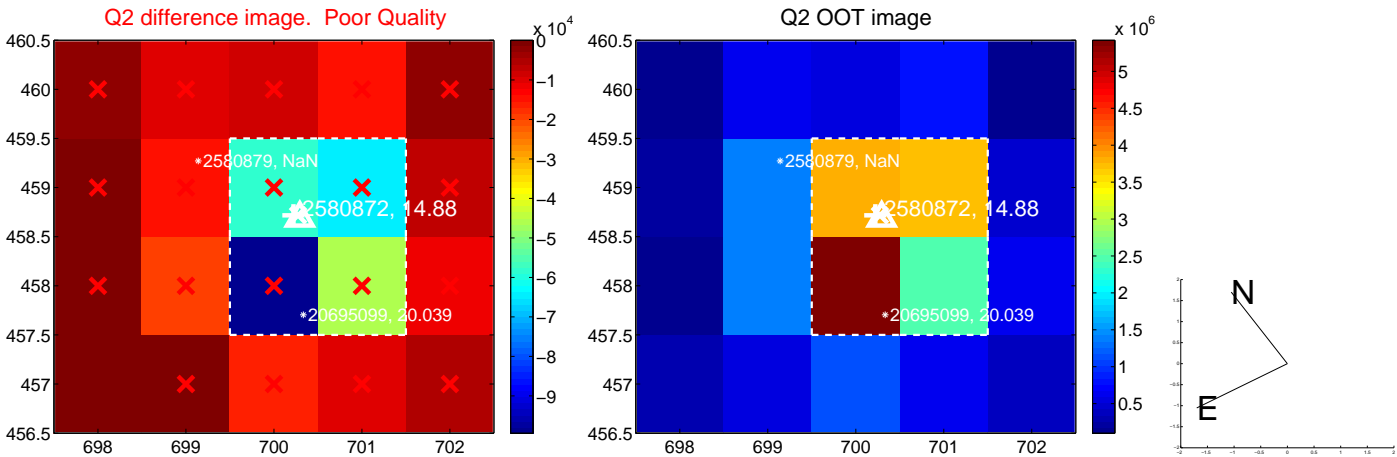
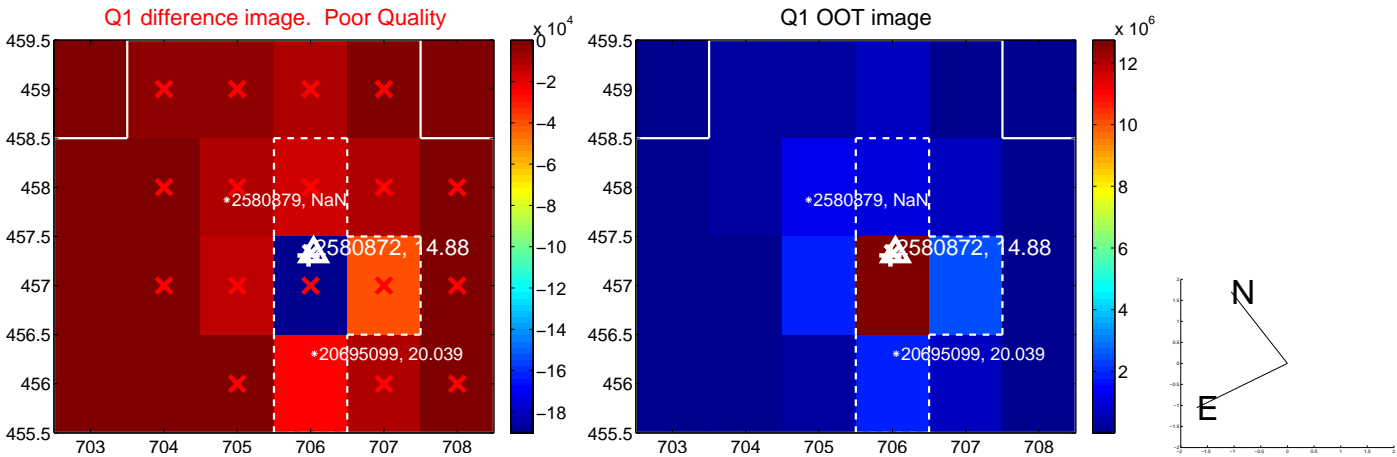
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.070	2.11	-0.135 ± 0.069	-0.061 ± 0.076
PRF-fit source offset from KIC position	0.018 ± 0.071	0.25	-0.008 ± 0.068	-0.016 ± 0.073
photometric centroid source offset	0.97 ± 0.12	8.19	0.62 ± 0.15	-0.75 ± 0.10

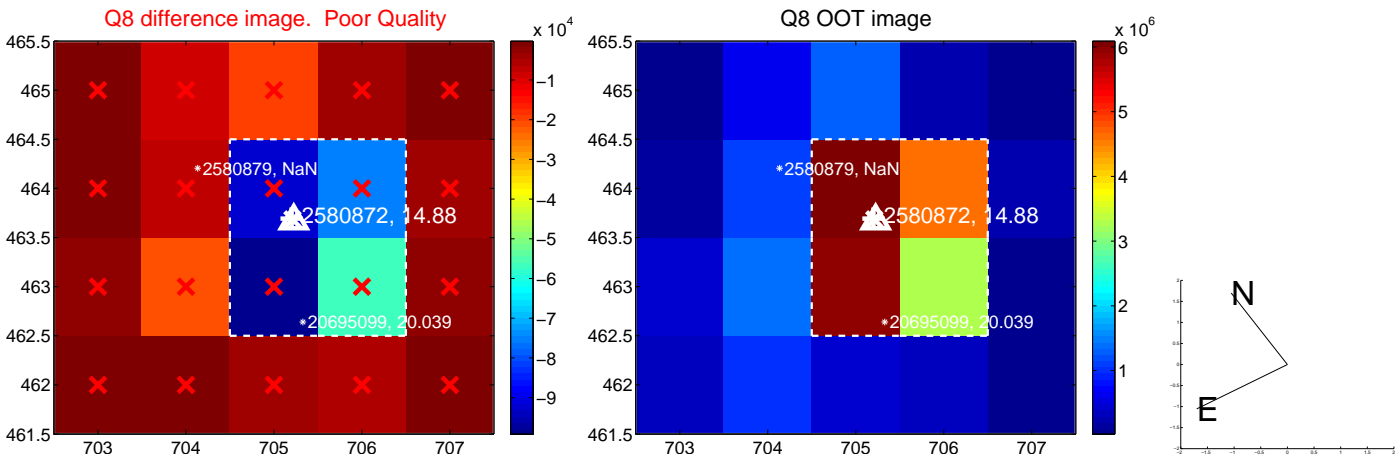
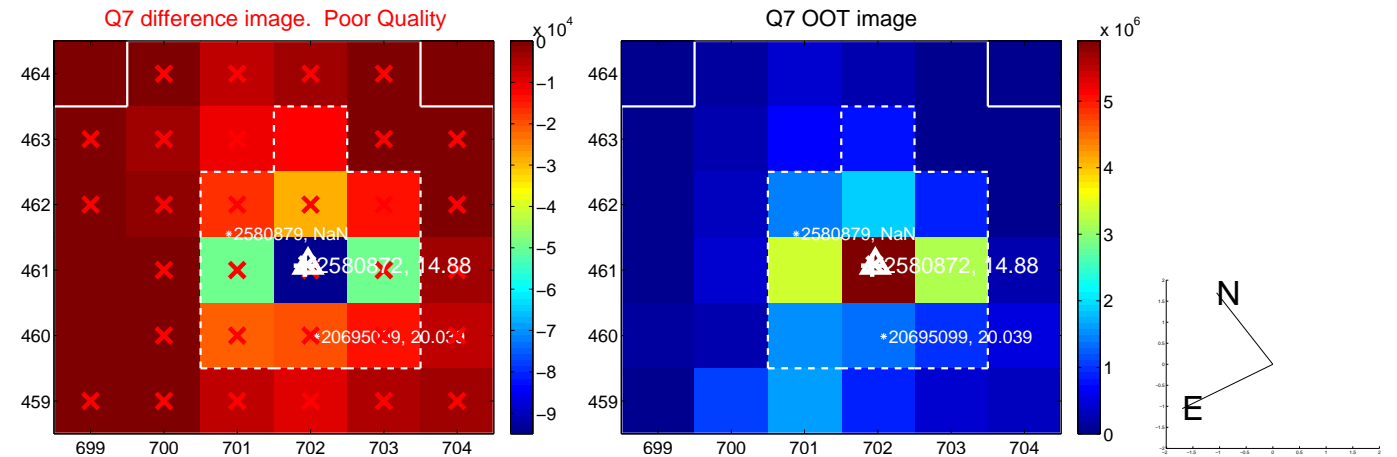
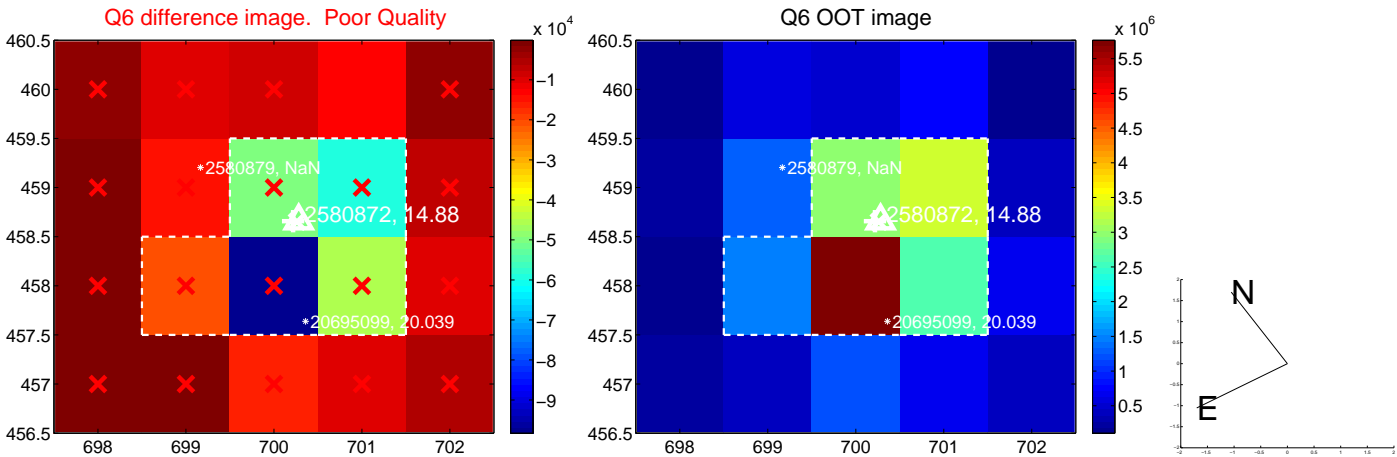
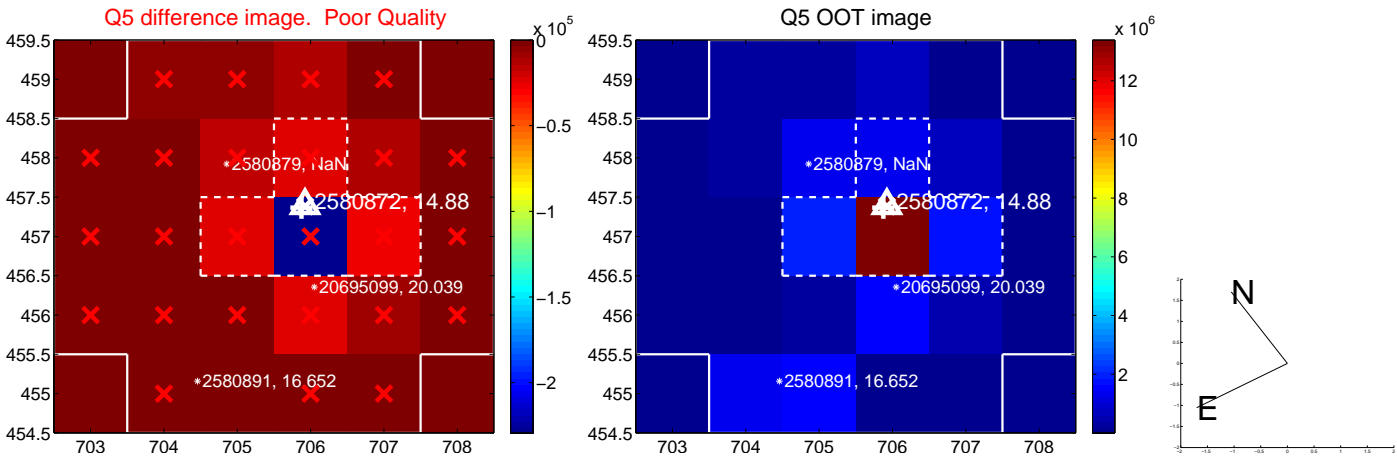


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

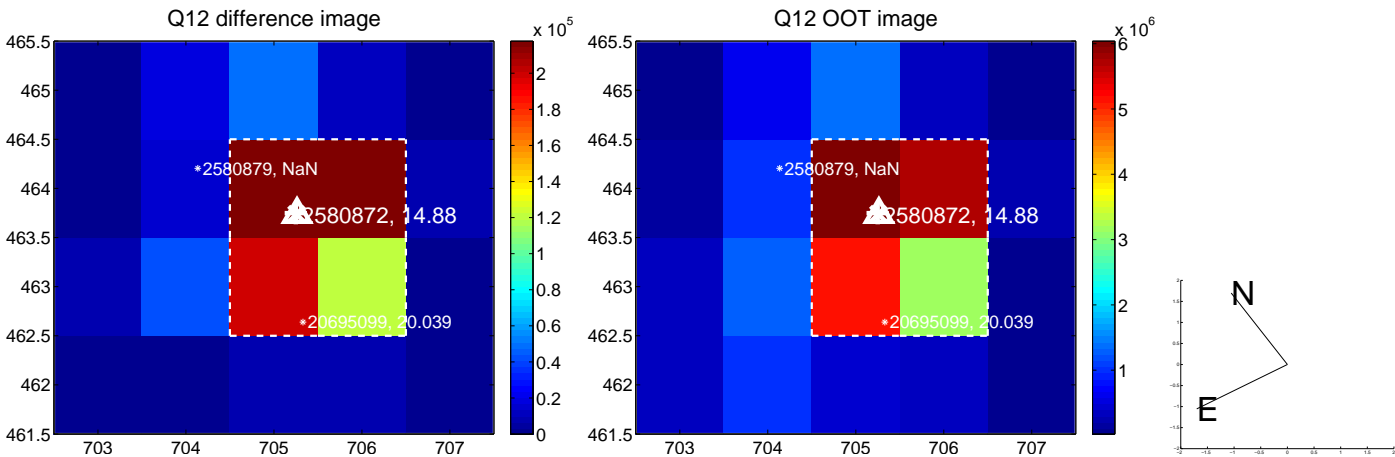
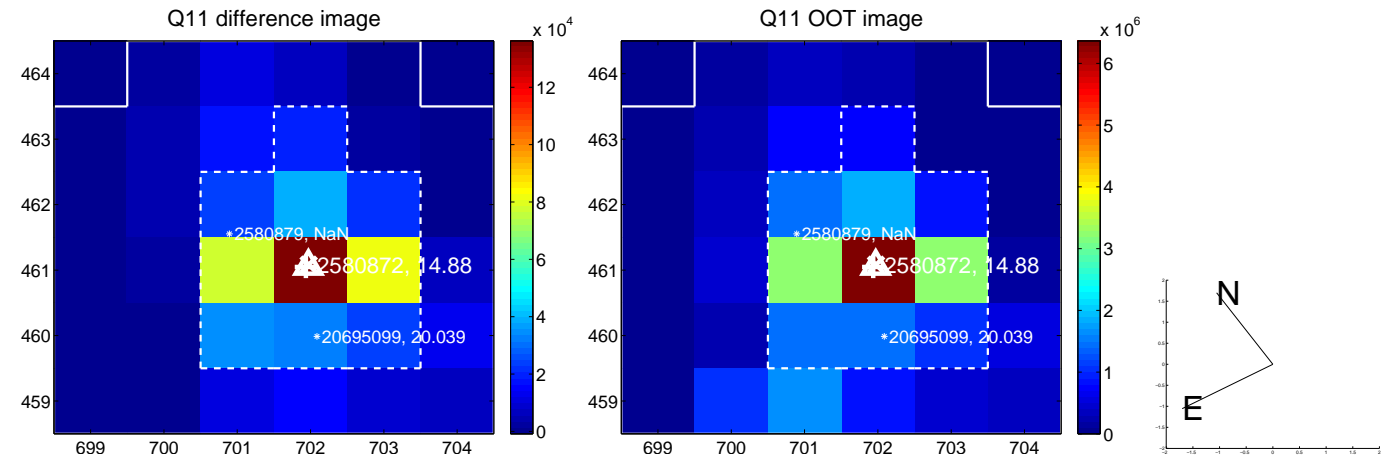
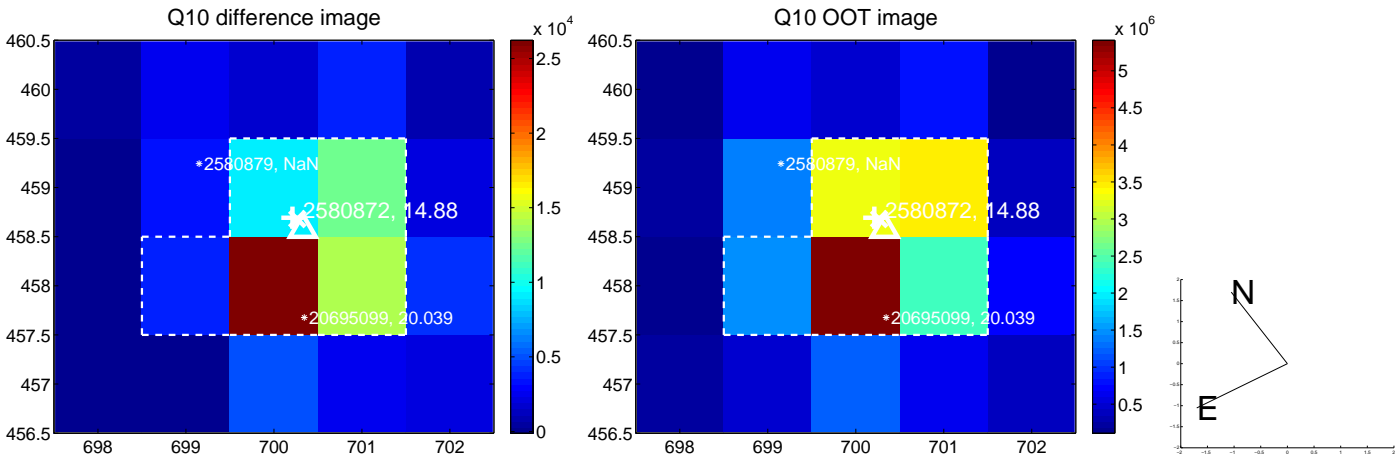
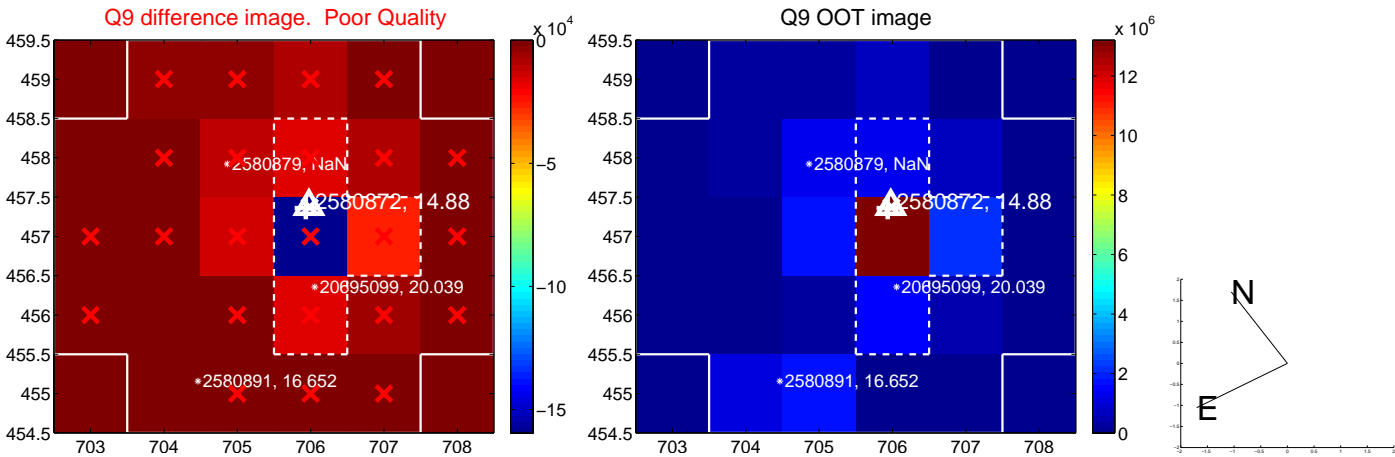
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



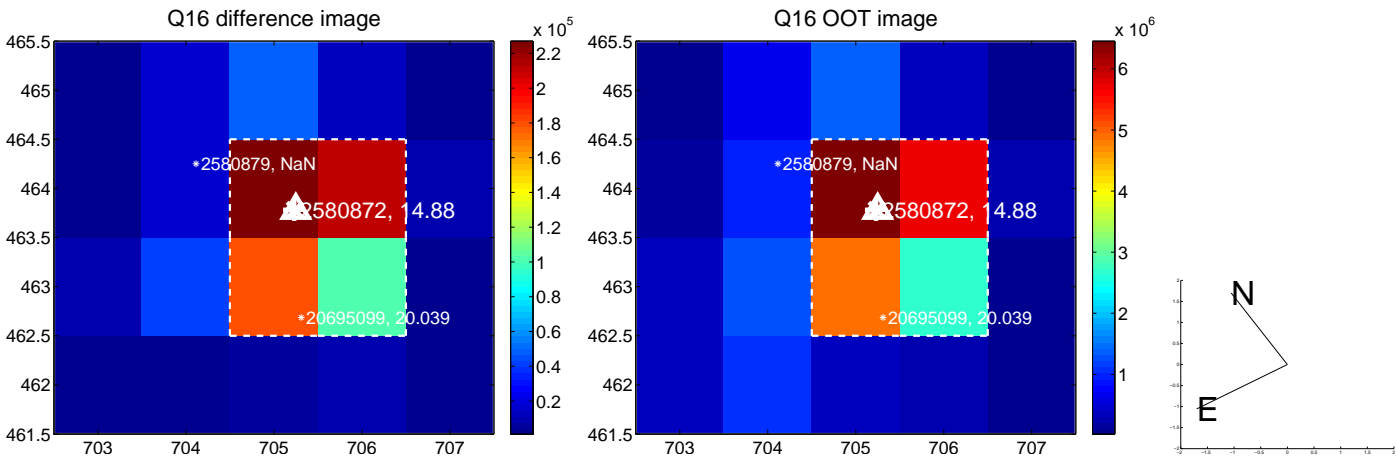
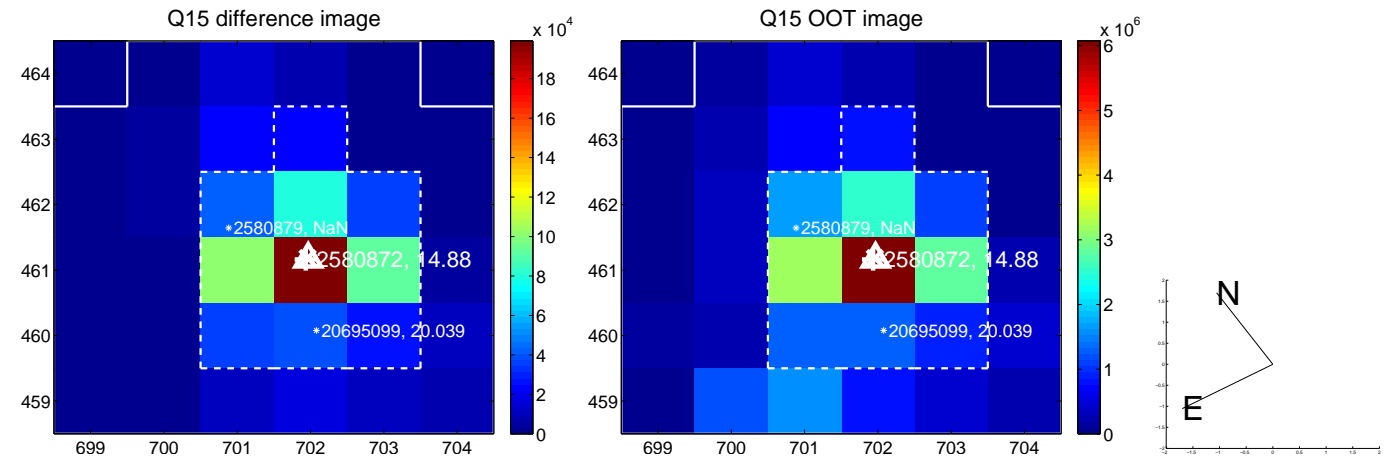
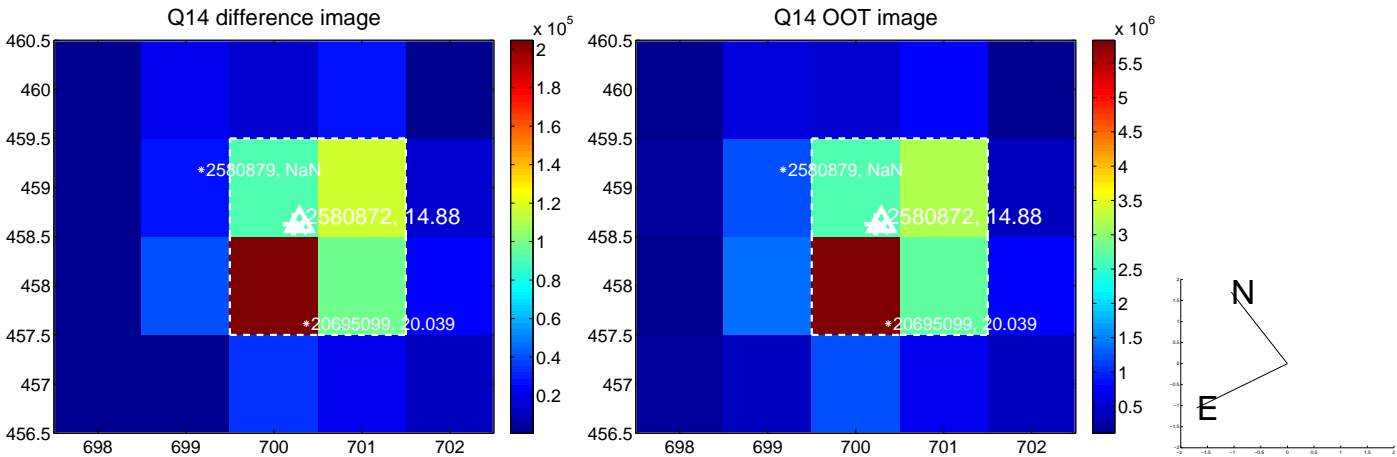
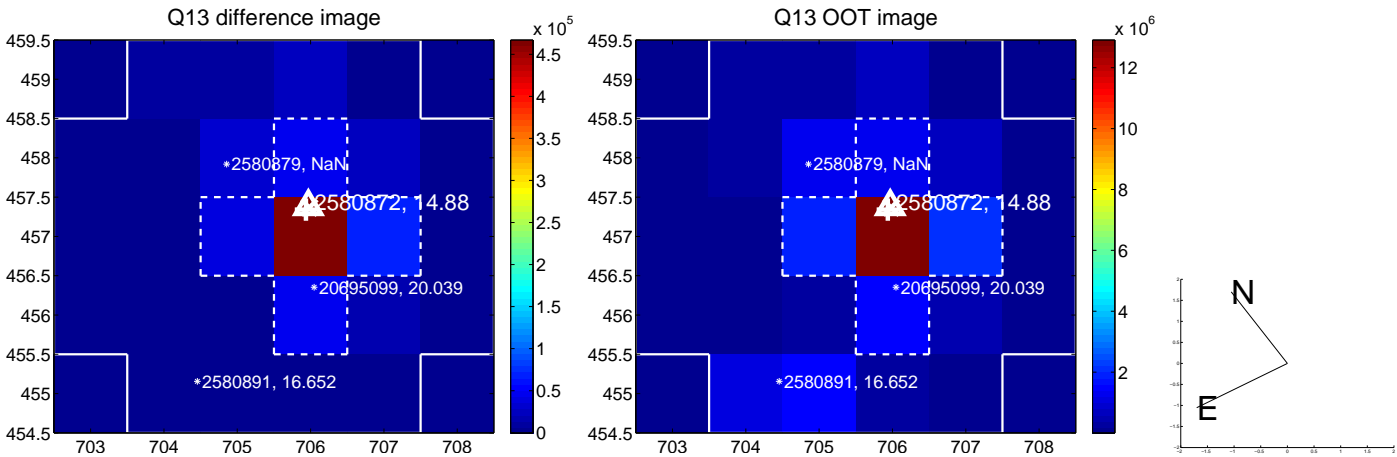
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



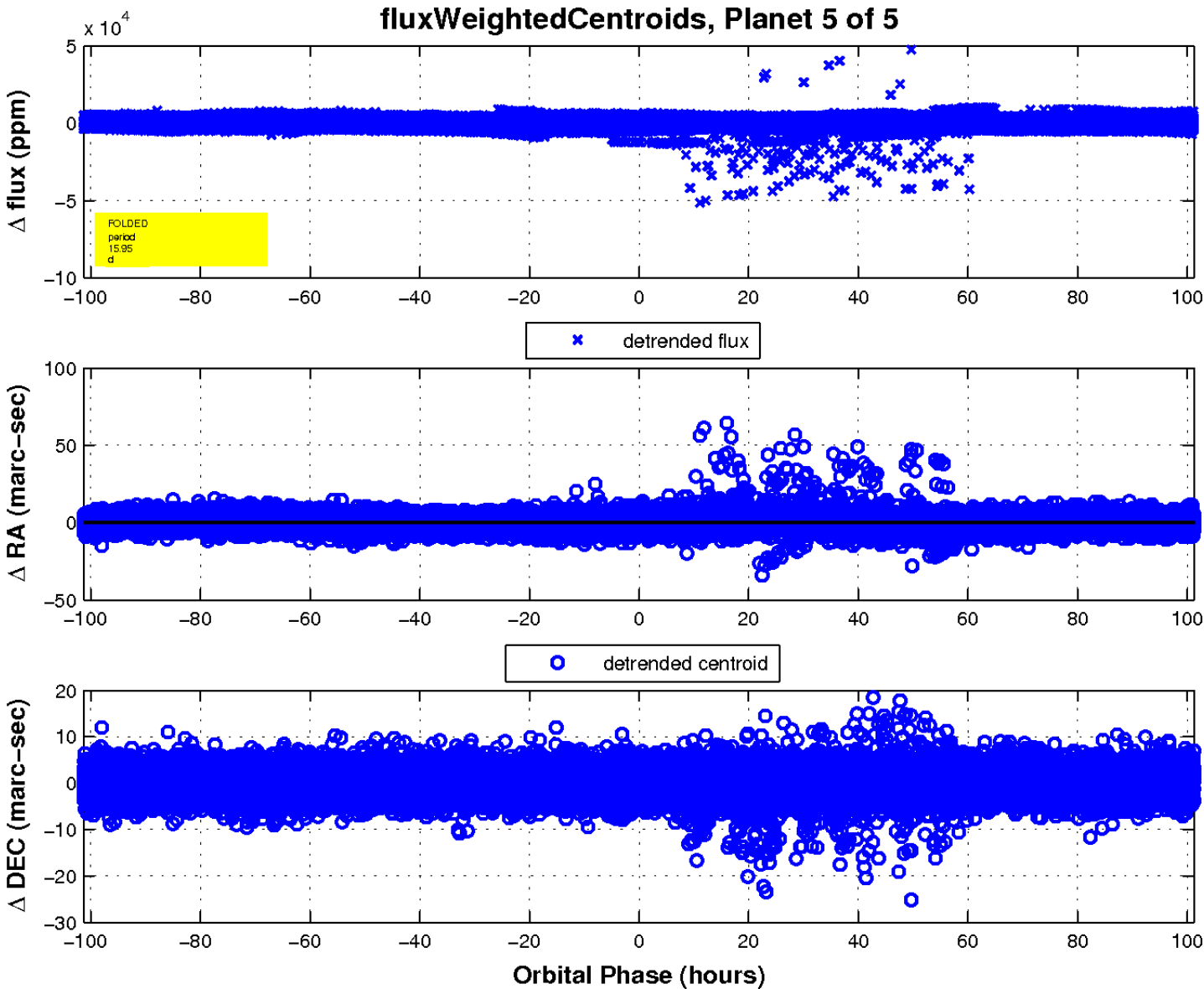
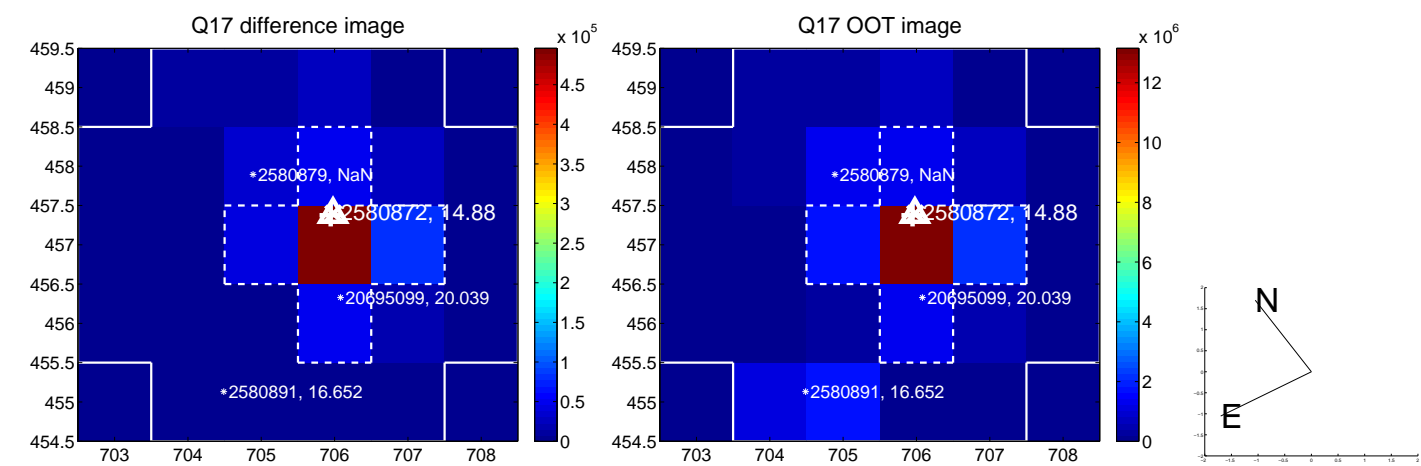
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

