

KIC 007282085

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})
007282085-01	OBS	No	0.566712	131.918604	0.5	3.723	10.0	0.1	0.99	6250	0.08	7153.46
007282085-02	OBS	No	87.295497	159.273635	641.6	3.179	7.9	8.3	0.99	6250	2.94	8.66
007282085-03	OBS	No	75.406371	175.667972	574.6	5.438	7.4	7.7	0.99	6250	2.57	10.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007282085-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—CENT_KIC_POS—EPHEM_MATCH
007282085-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007282085-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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.

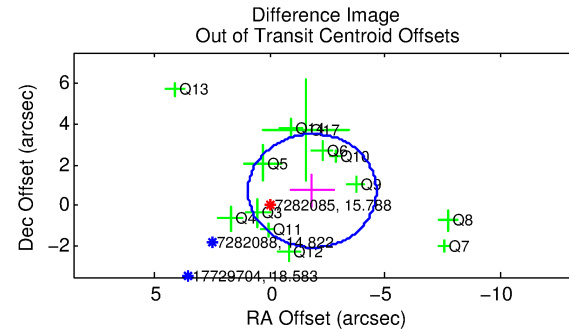
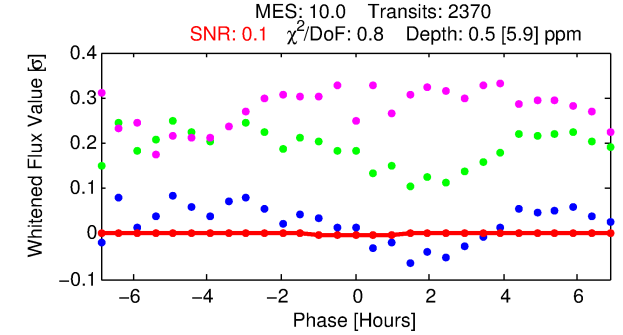
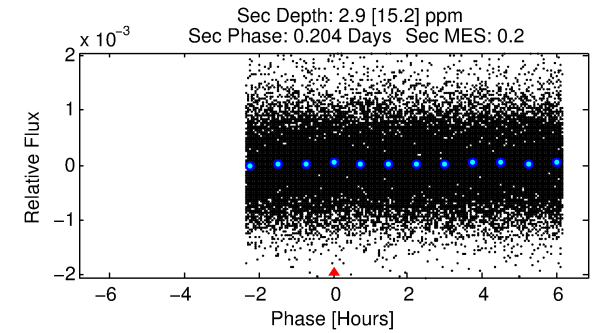
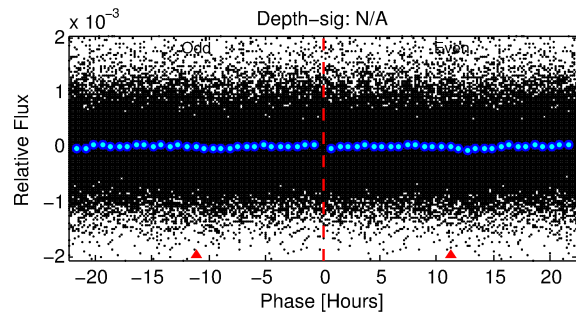
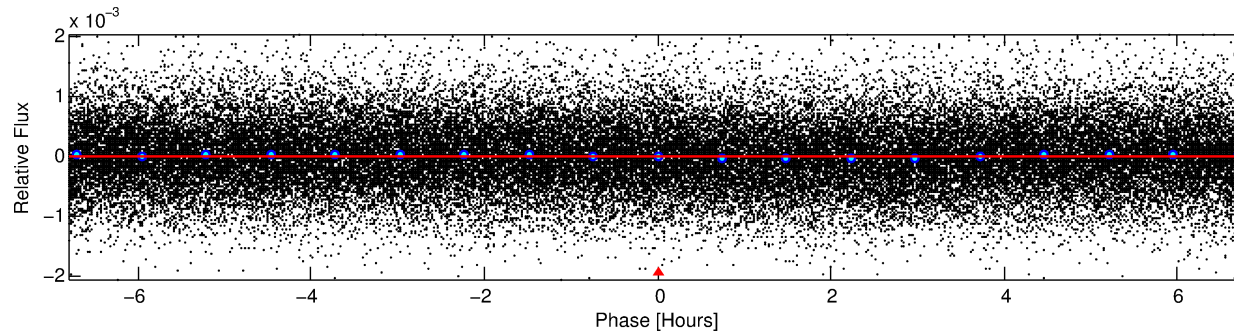
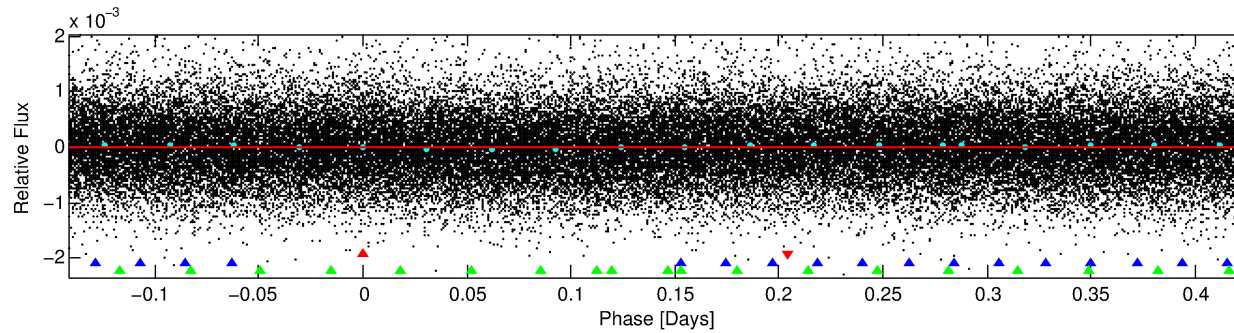
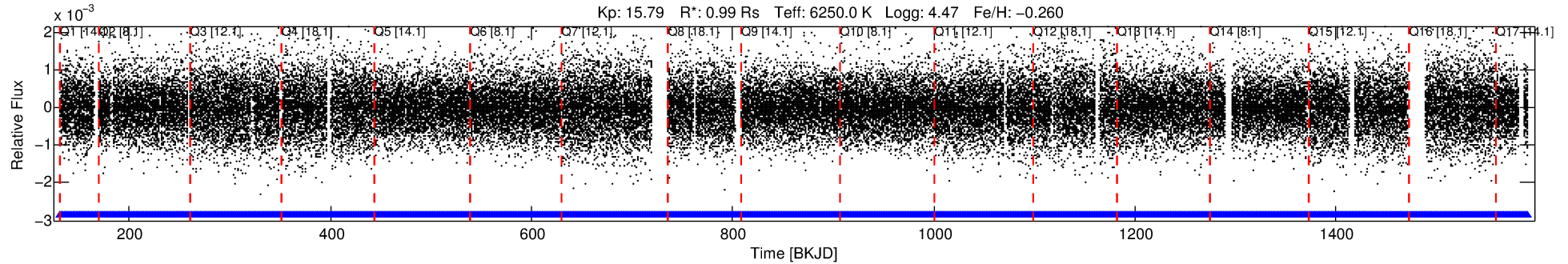
Ephemeris Match Information For 007282085-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007282085-01	7282085	RR-Lyr-pri	7198959	1:1	1203.4	79	292	7.86	15.79	623300.00	Direct-PRF	0	1.25	10.73

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7282085 Candidate: 1 of 3 Period: 0.567 d



DV Fit Results:

Period = 0.56671 [0.00095] d
Epoch = 131.9186 [0.4078] BKJD
Rp/R* = 0.0007 [0.0061]
a/R* = 1.14 [9.05]
b = 0.77 [18.34]
Seff = 7153.46 [2585.78]
Teq = 2345 [212] K
Rp = 0.08 [0.66] Re
a = 0.0136 [0.0031] AU
Ag = 50.03 [895.12] [0.05σ]
Teffp = 9643 [43129] K [0.17σ]

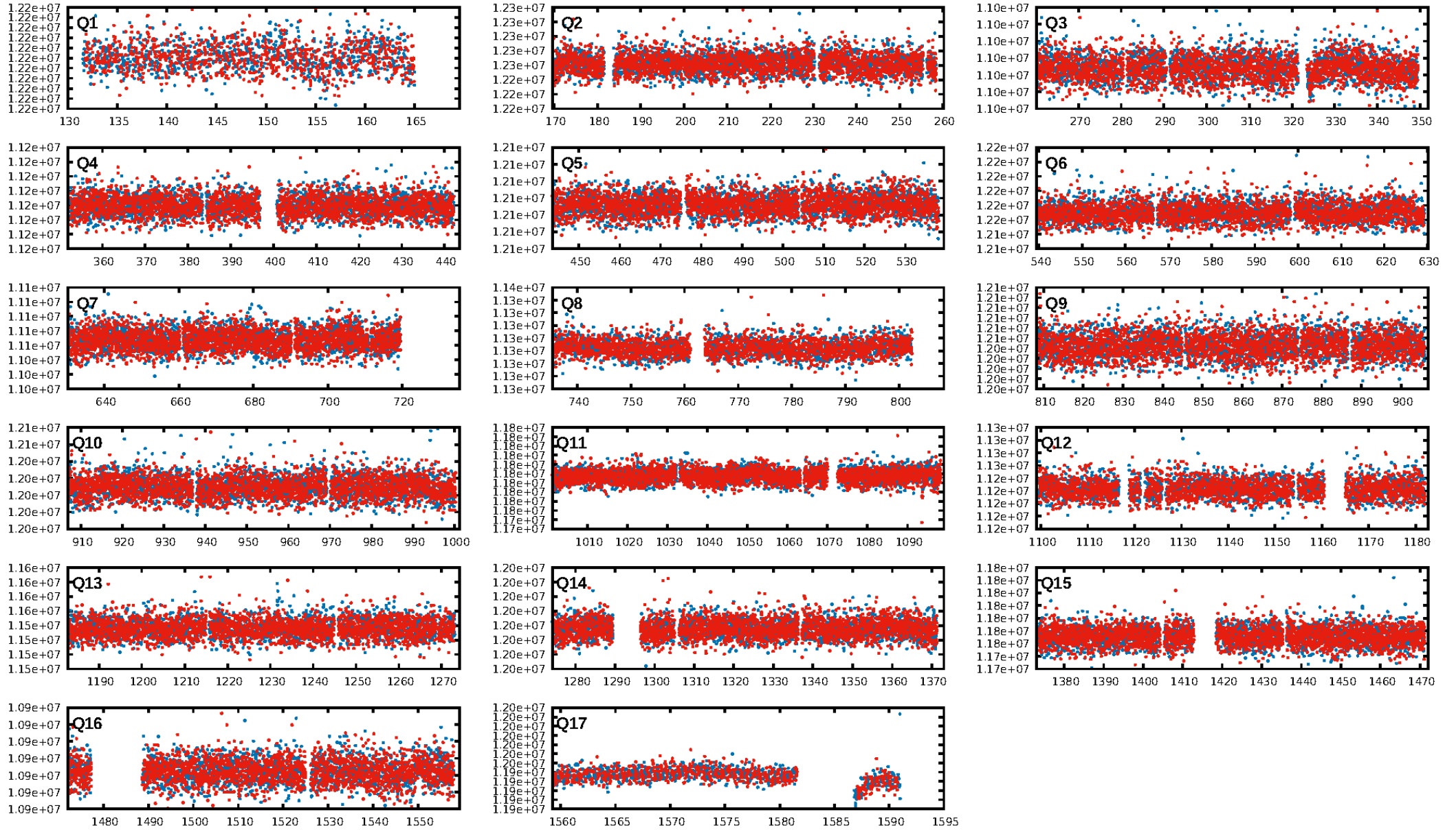
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [272.54σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.23e-17
RollingBand-fgt: 1.00 [2264/2264]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.974 arcsec [2.13σ]
KicOffset-rm: 1.811 arcsec [1.83σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.15 [2/13]
DiffImageOverlap-fno: 1.00 [17/17]

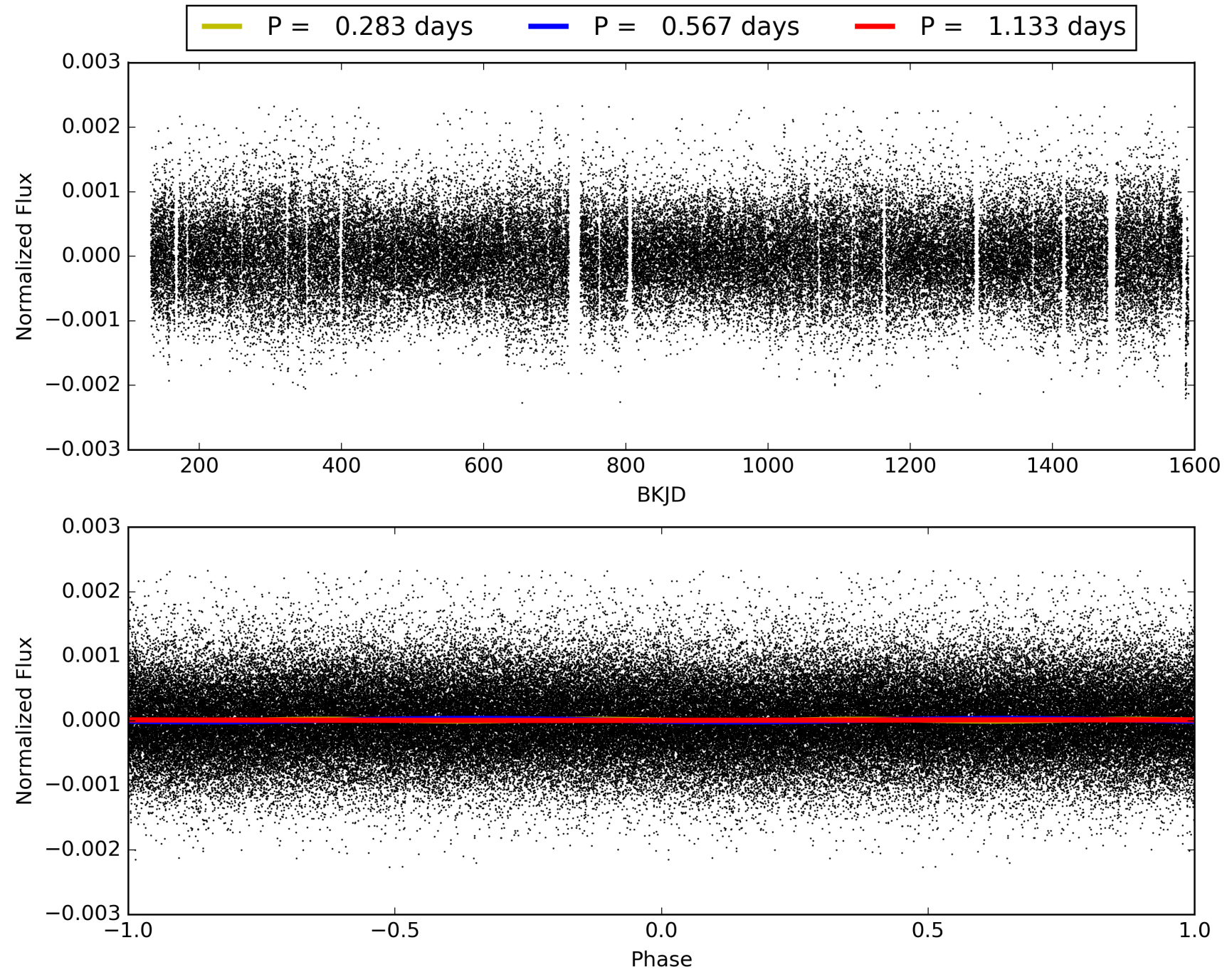
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:07:52 Z

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

TCE 007282085-01, PDC Light Curves

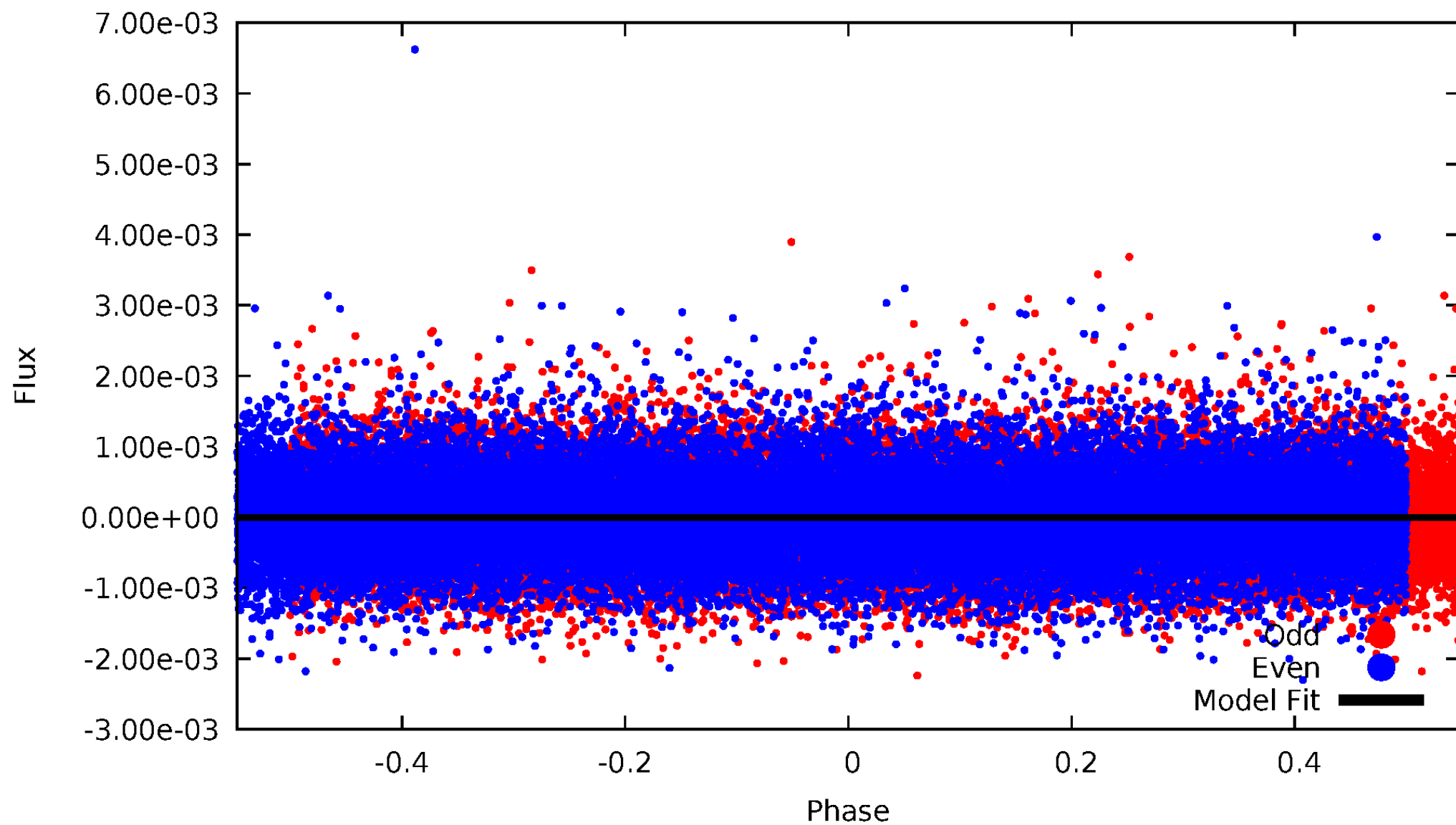


TCE 007282085-01



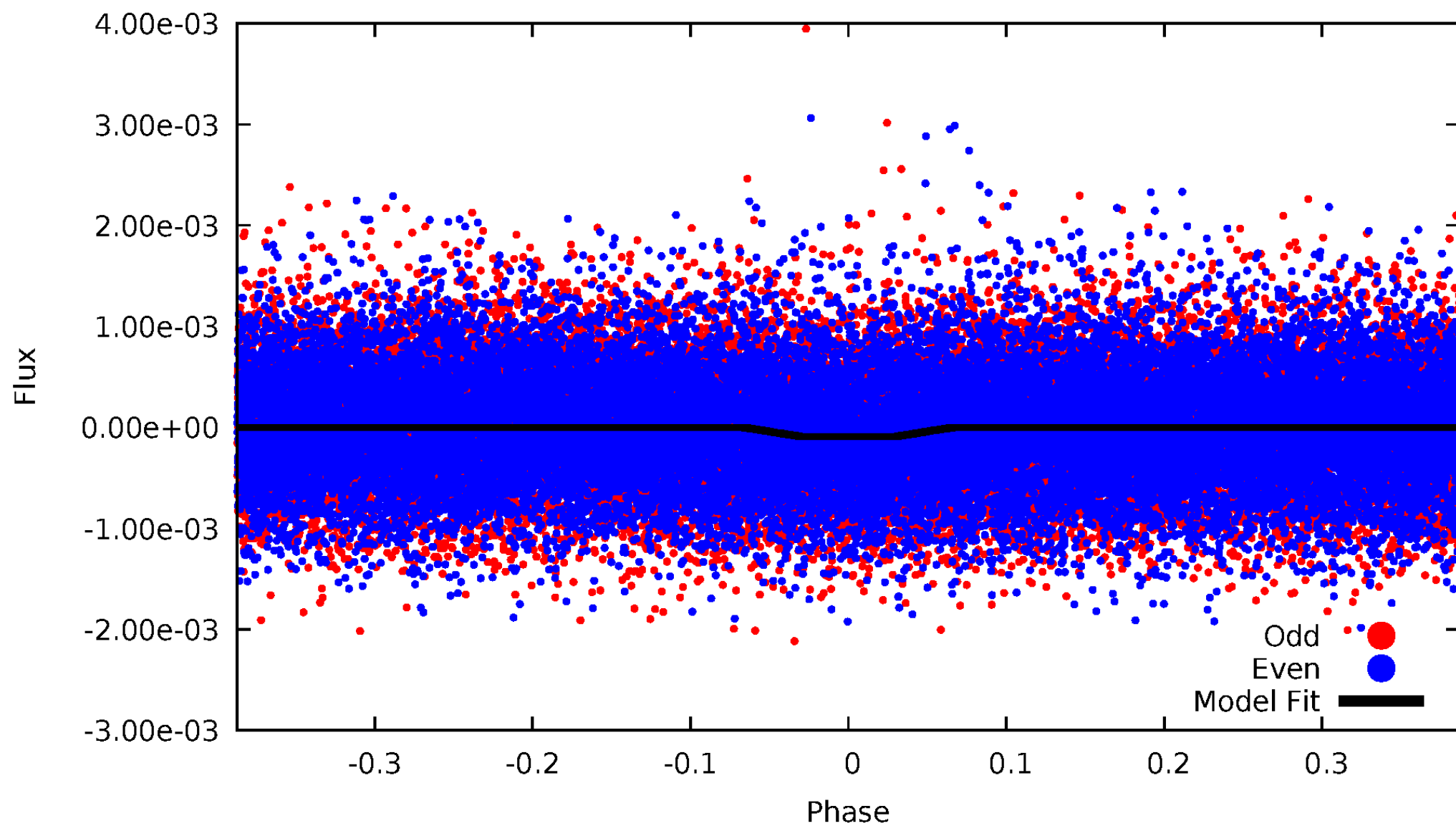
DV Odd/Even

TCE 007282085-01



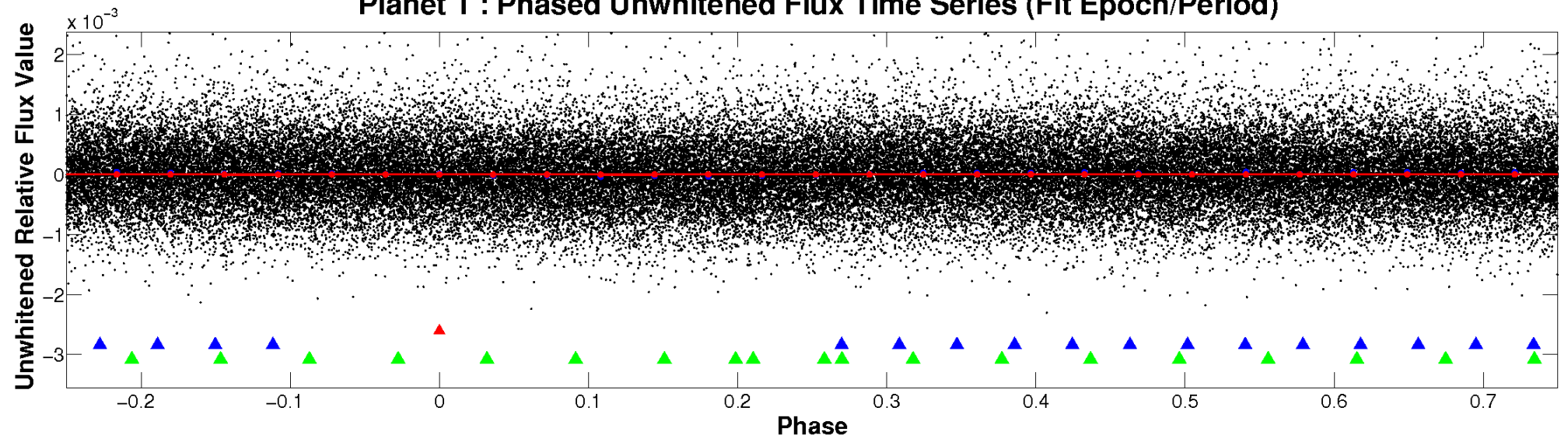
ALT Odd/Even

TCE 007282085-01

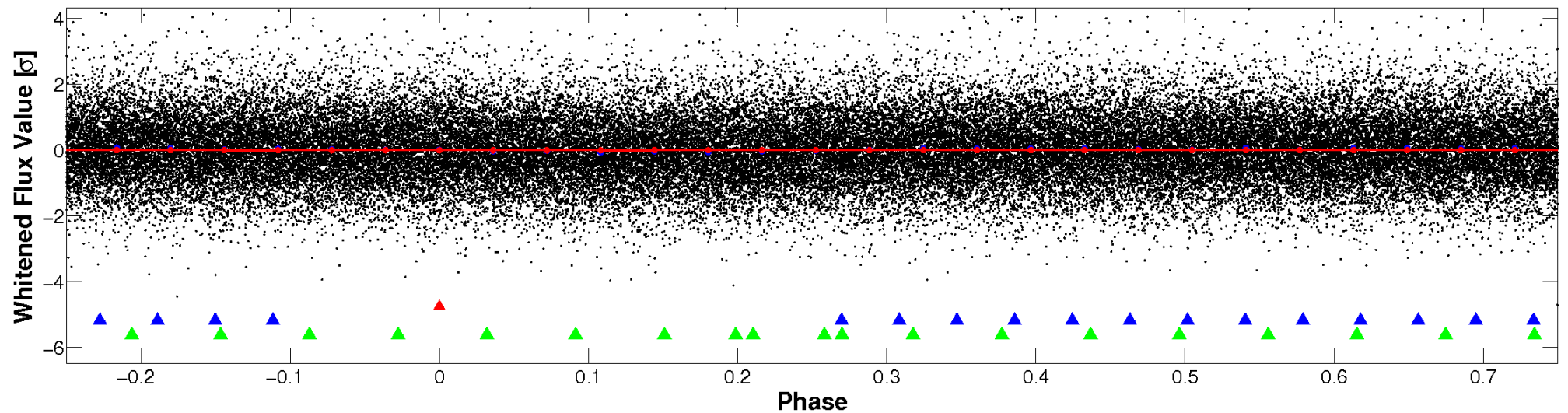


Non-Whitened Vs. Whitened Light Curve

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

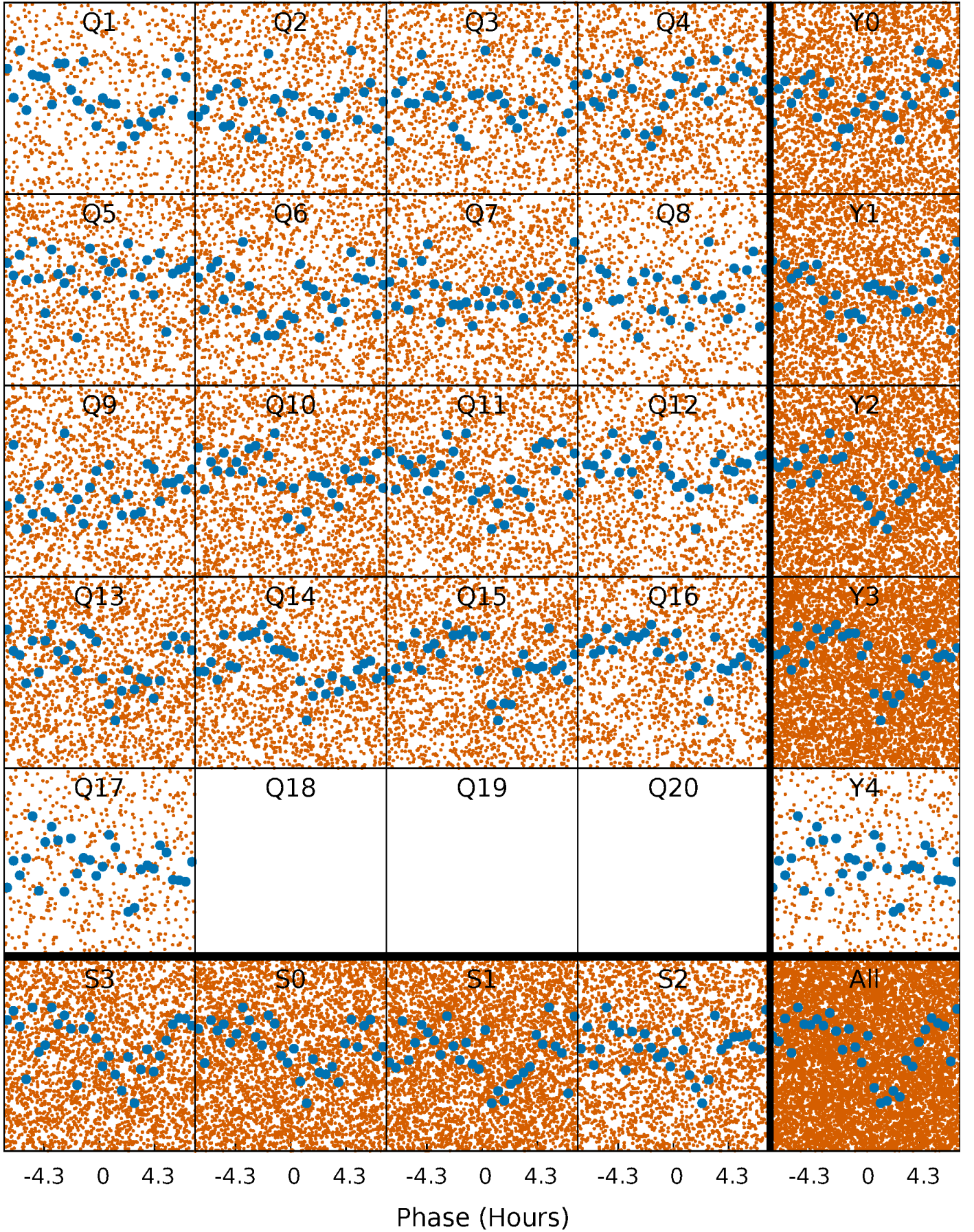


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



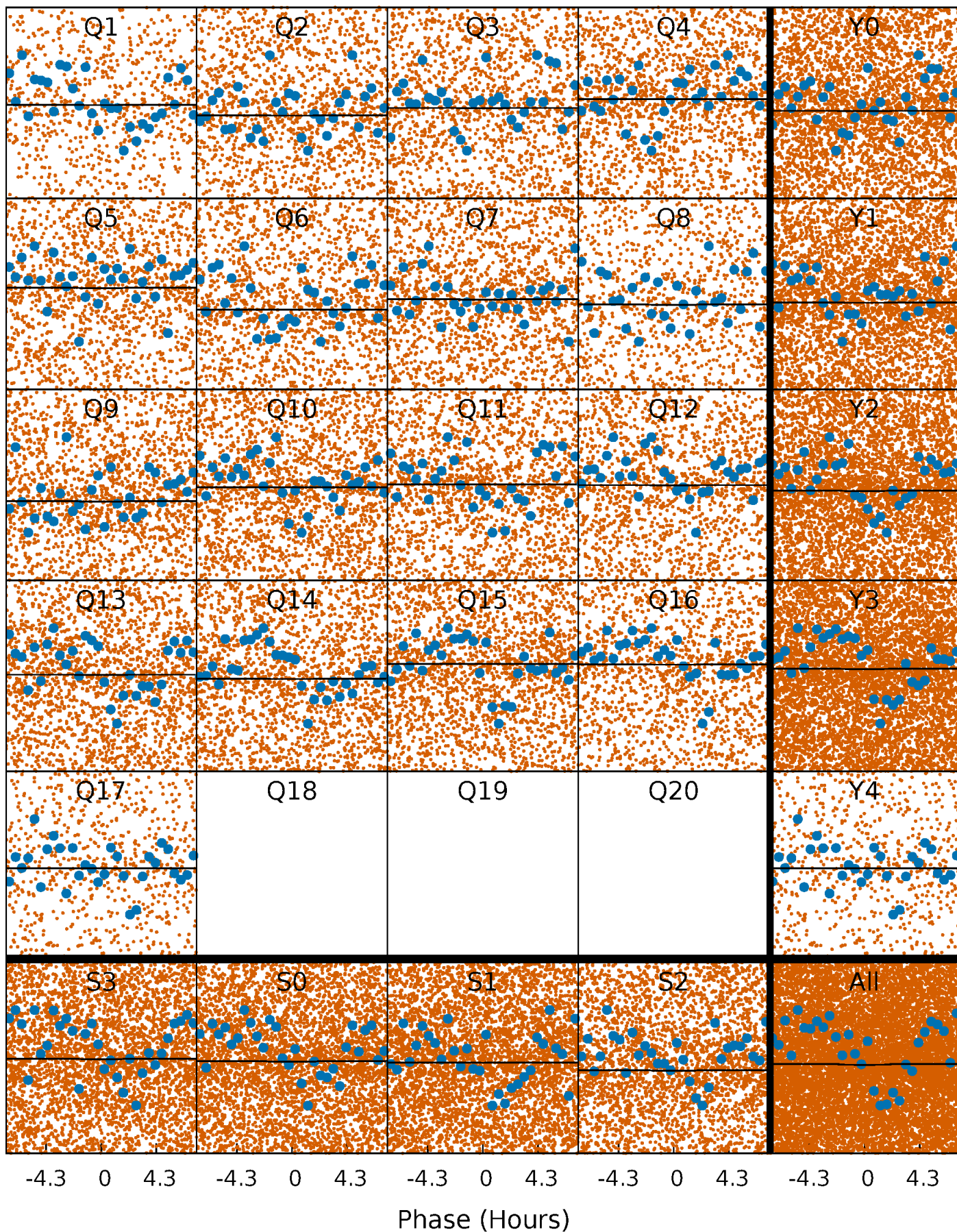
PDC Quarter-Phased Transit Curves

TCE 007282085-01 P= 0.566712 Days $T_0=131.918604$ (BKJD)



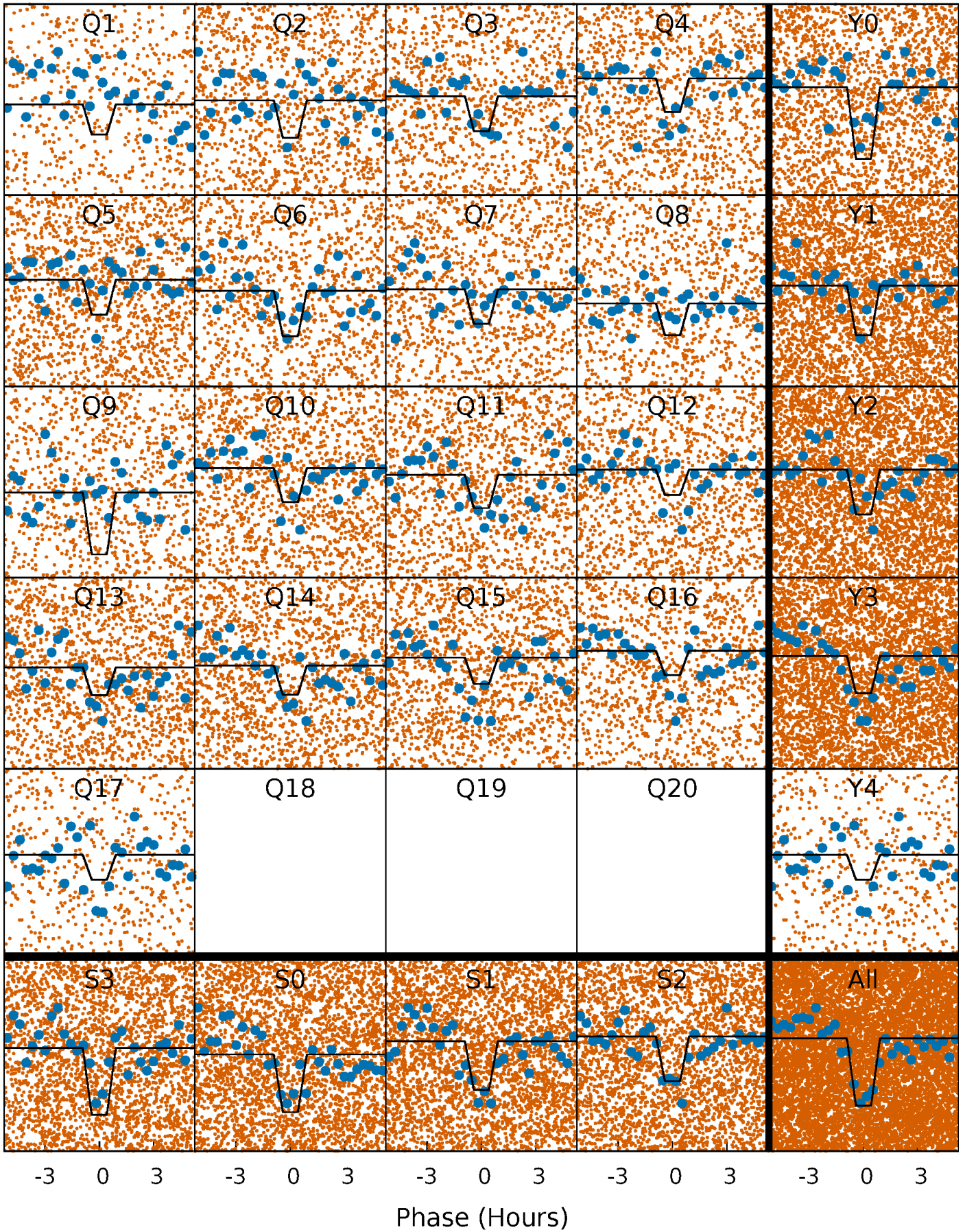
DV Quarter-Phased Transit Curves

TCE 007282085-01 P= 0.566712 Days $T_0=131.918604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

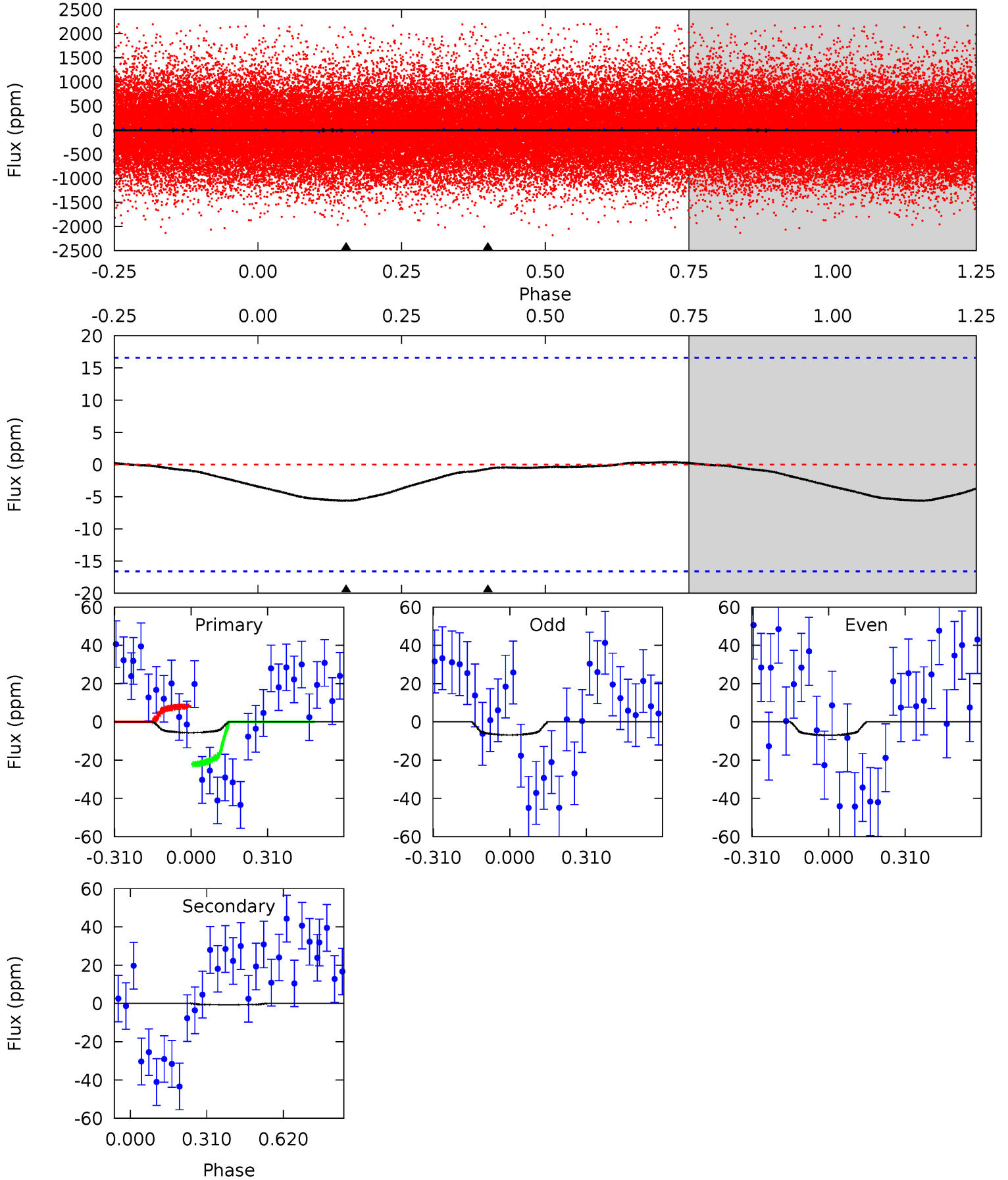
TCE 007282085-01 P= 0.566795 Days $T_0=131.808916$ (BKJD)



DV Model-Shift Uniqueness Test

007282085-01, P = 0.566712 Days, E = 131.351892 Days

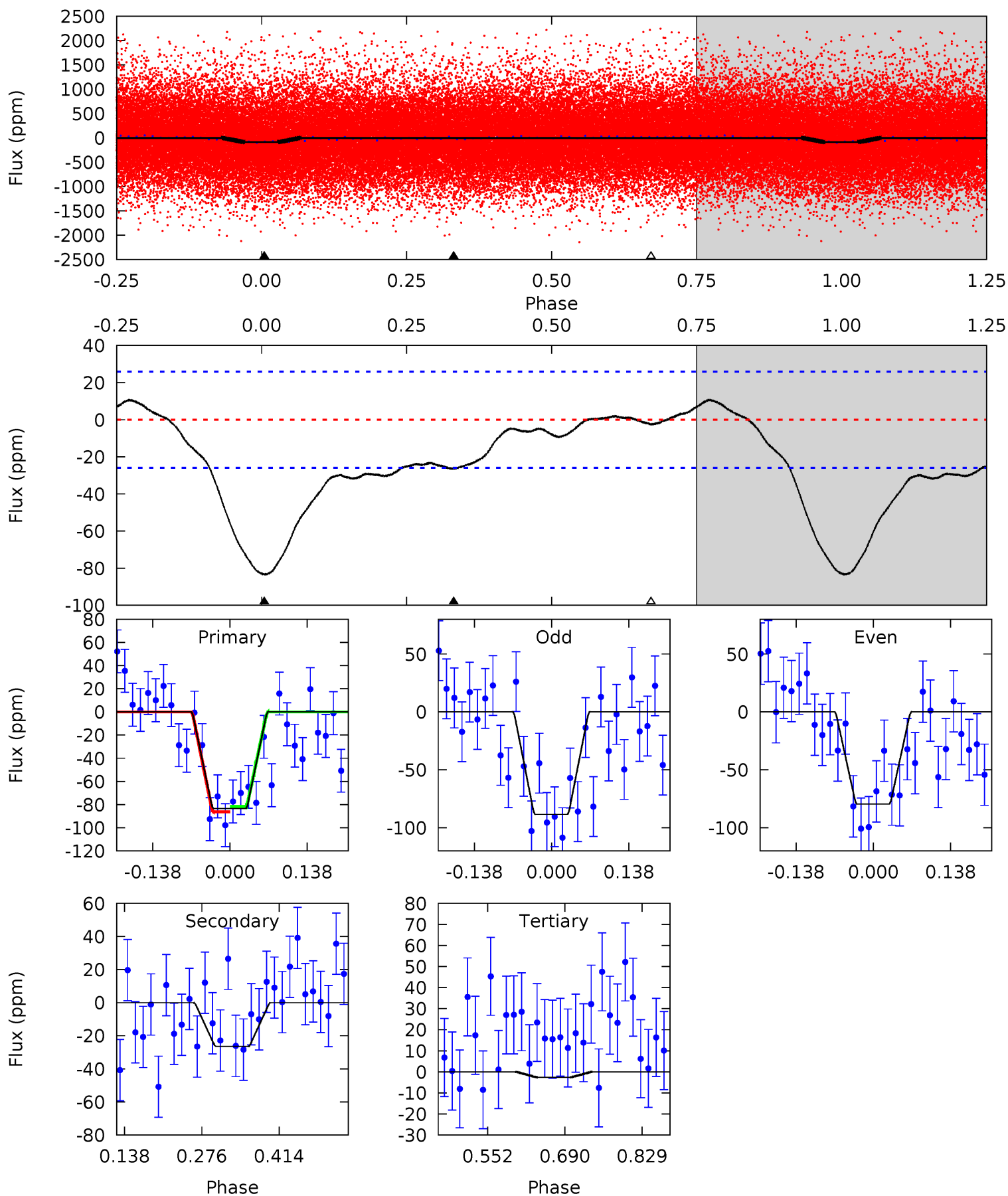
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.46	0.18	0	0	4.32	1.02	0.07	1.46	1.46	0.18	0.18	0.01	0.39	0.06	1.82



Alt Model-Shift Uniqueness Test

007282085-01, P = 0.566795 Days, E = 131.242121 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	4.60	0.45	0	4.50	1.48	1.87	14.0	14.5	4.15	4.60	0.77	0.91	0.11	0.41



Stellar Parameters For KIC 007282085

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6250^{+169}_{-225}	$4.472^{+0.060}_{-0.180}$	$-0.260^{+0.250}_{-0.350}$	$0.986^{+0.271}_{-0.116}$	$1.052^{+0.134}_{-0.147}$	$1.544^{+0.397}_{-0.772}$
	+3%/-4%	+1%/-4%	+96%/-135%	+27%/-12%	+13%/-14%	+26%/-50%
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 007282085-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 4	$0.51^{+0.54}_{-0.38}$	3334^{+235}_{-162}	-3109^{+8321}_{-1640}	$0.105^{+3.948}_{-2.063}$
Alt.	-26 ± 6	$1.18^{+0.70}_{-0.66}$	3323^{+194}_{-161}	4385^{+2209}_{-912}	$1.889^{+7.997}_{-1.170}$

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

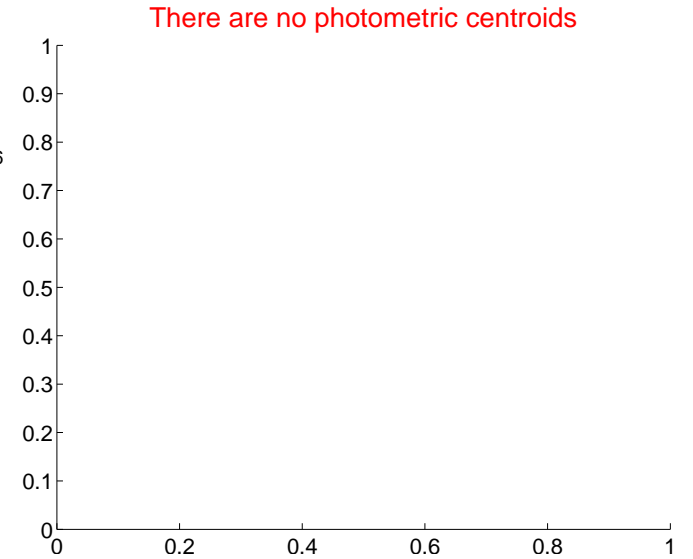
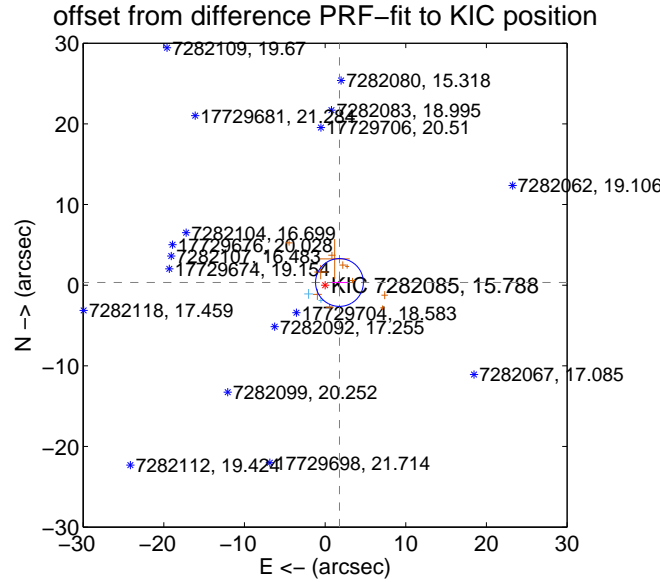
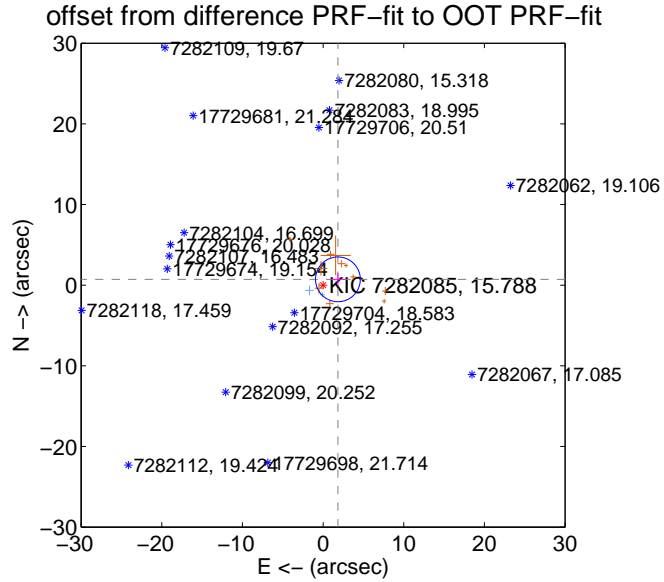
DV Centroid Data

Supplemental centroid analysis for 007282085-01. Kepler magnitude: 15.79. Transit SNR 0.11

There are 2 quarters with good PRF difference image offsets

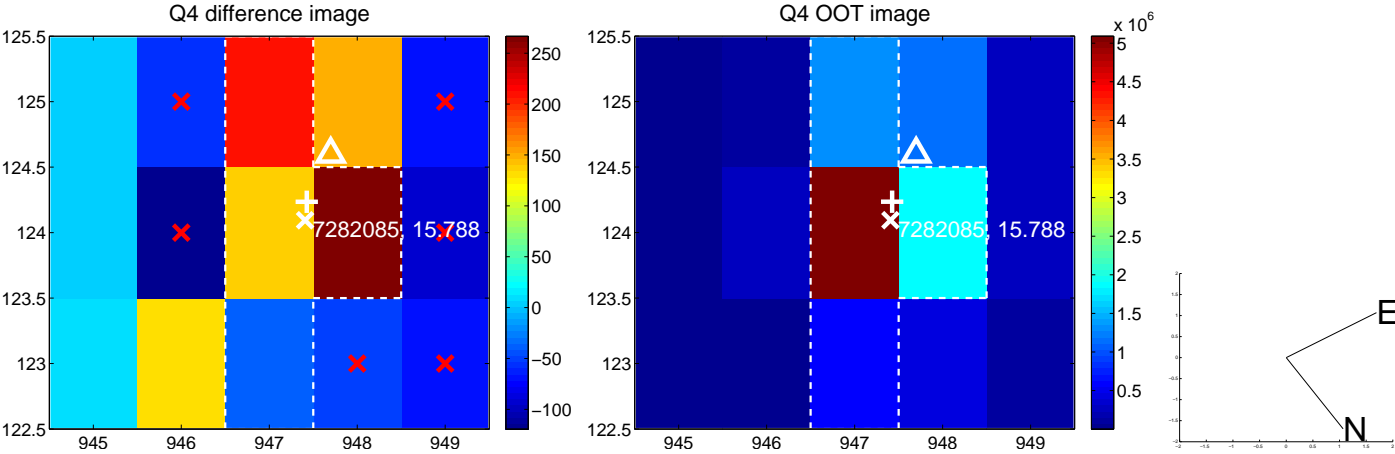
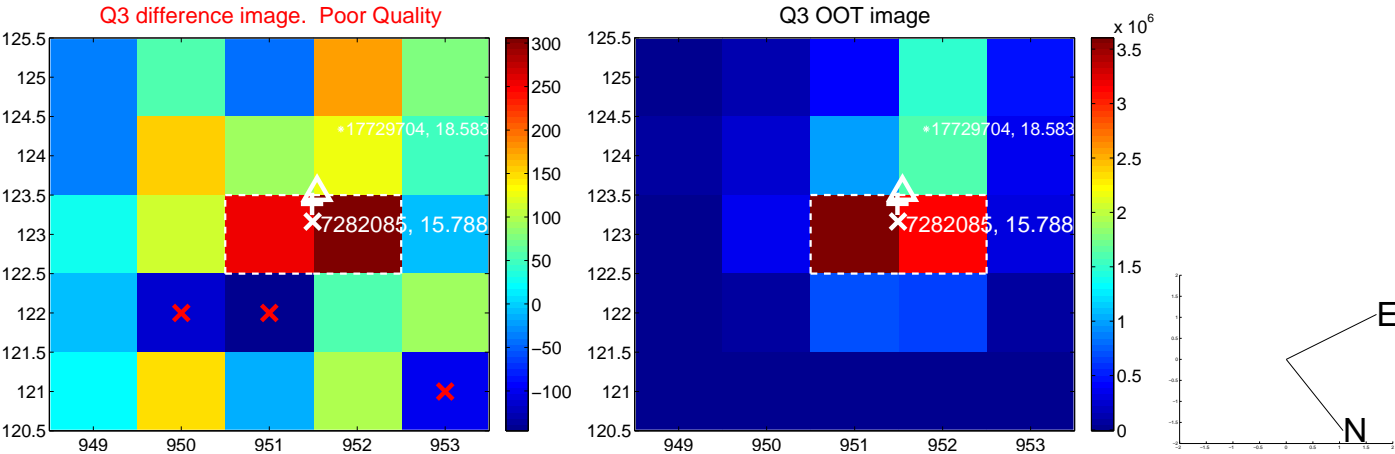
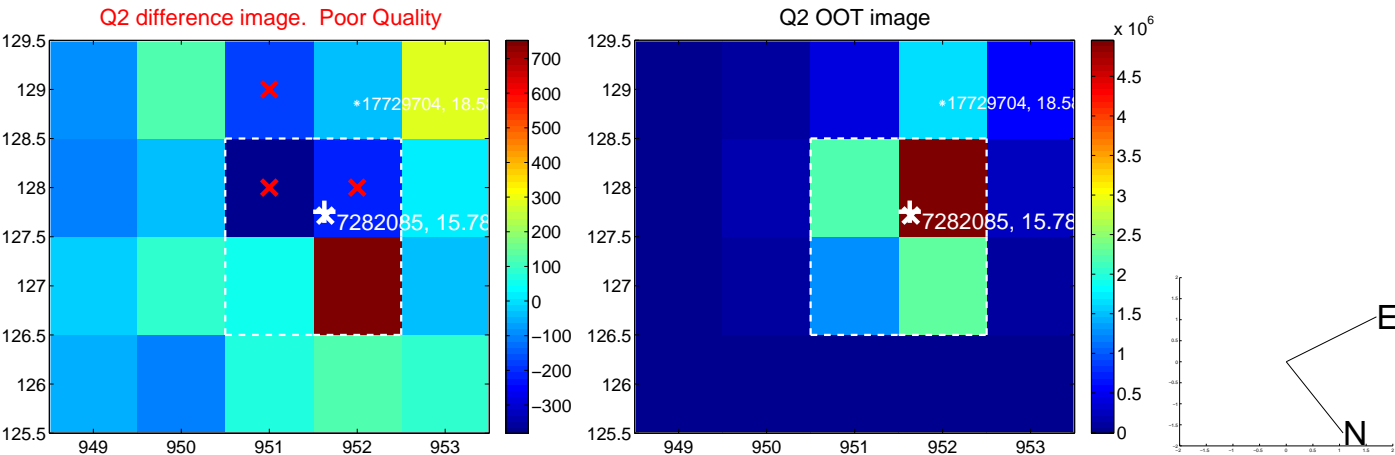
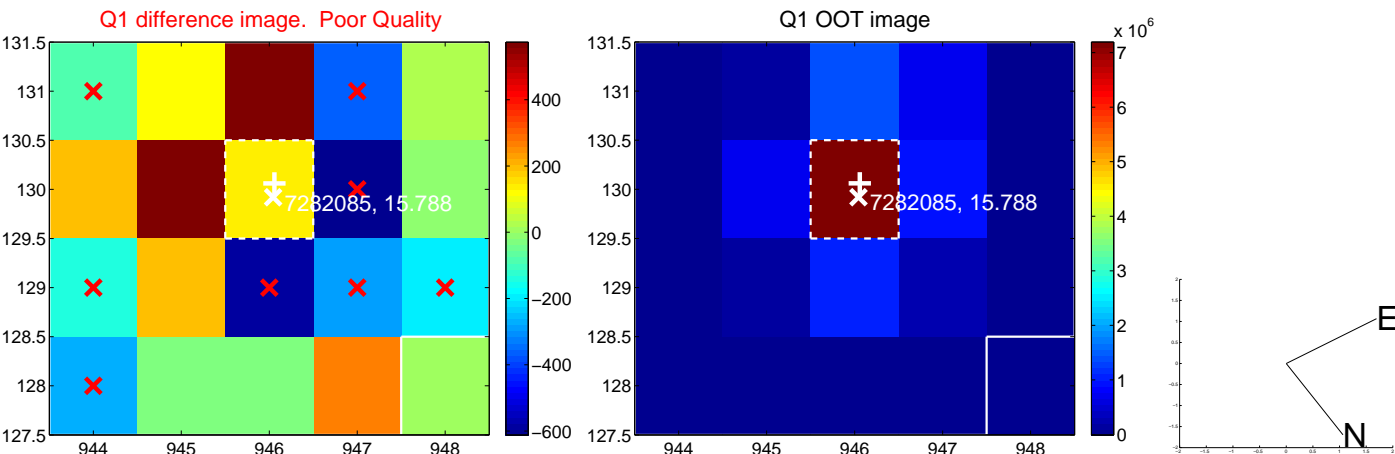
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.974 ± 0.925	2.13	-1.837 ± 0.945	0.722 ± 0.784
PRF-fit source offset from KIC position	1.811 ± 0.988	1.83	-1.781 ± 0.992	0.333 ± 0.855
photometric centroid source offset	—	—	—	—

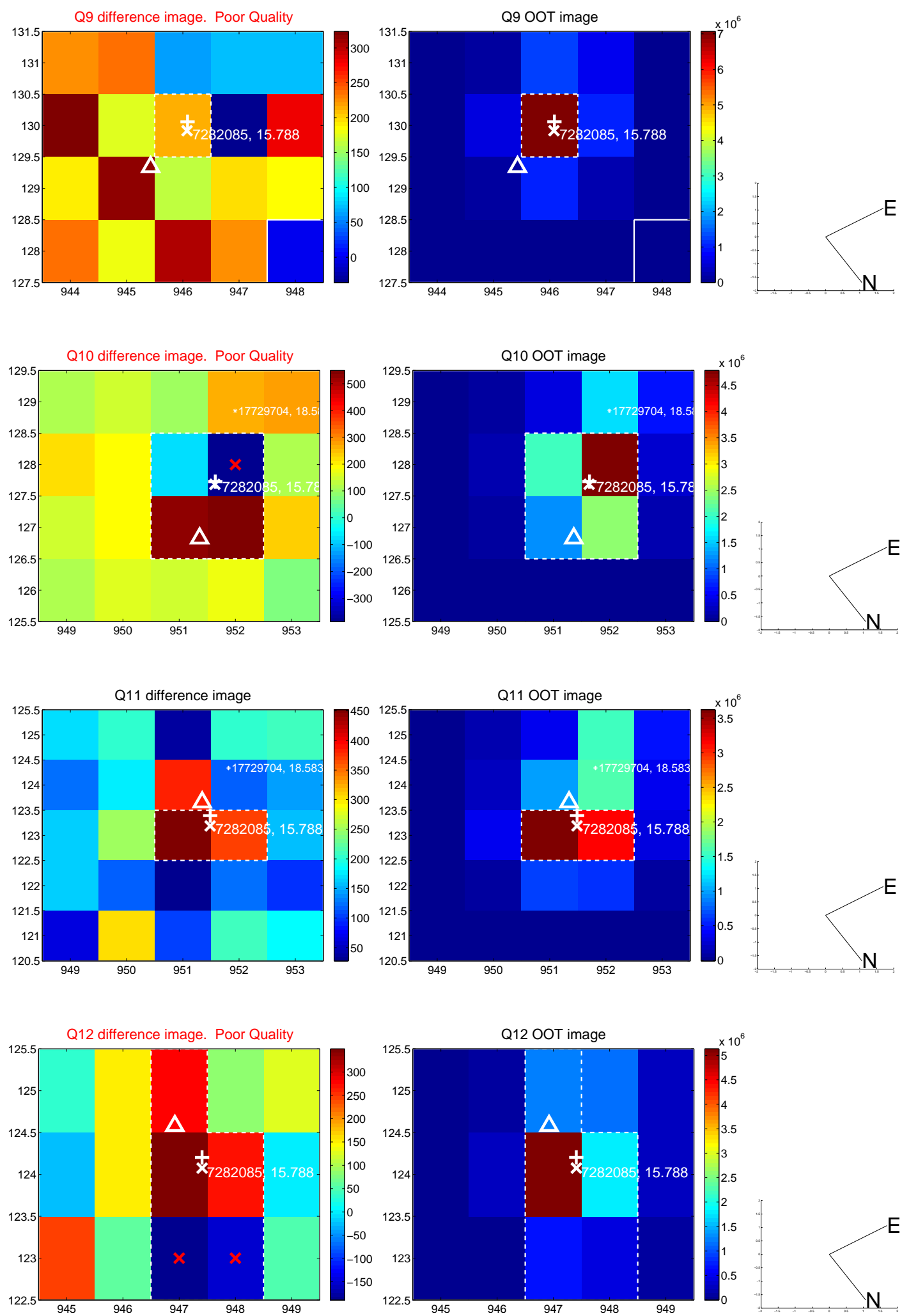


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

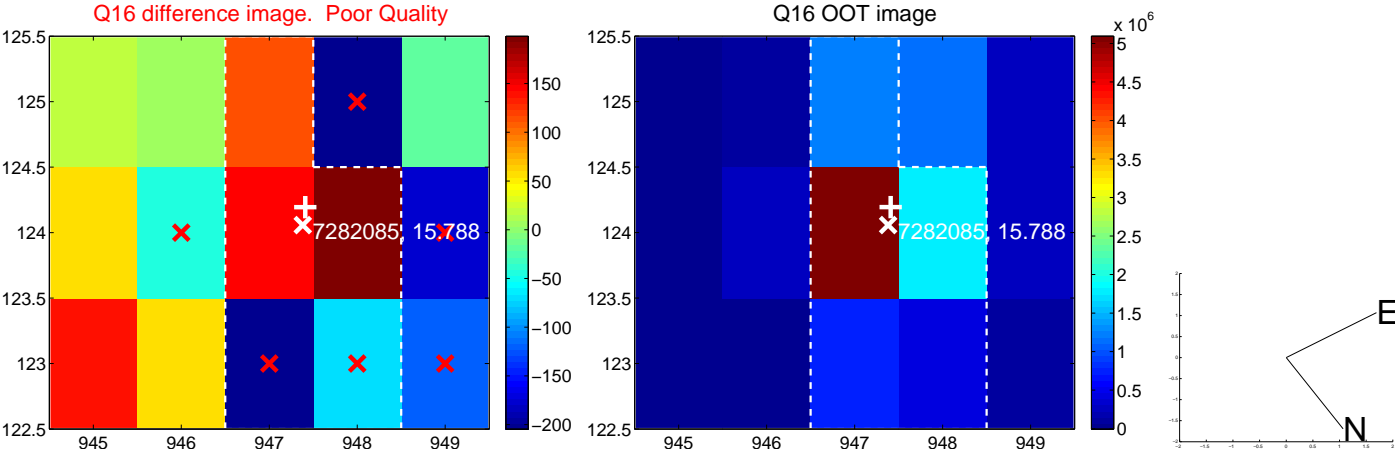
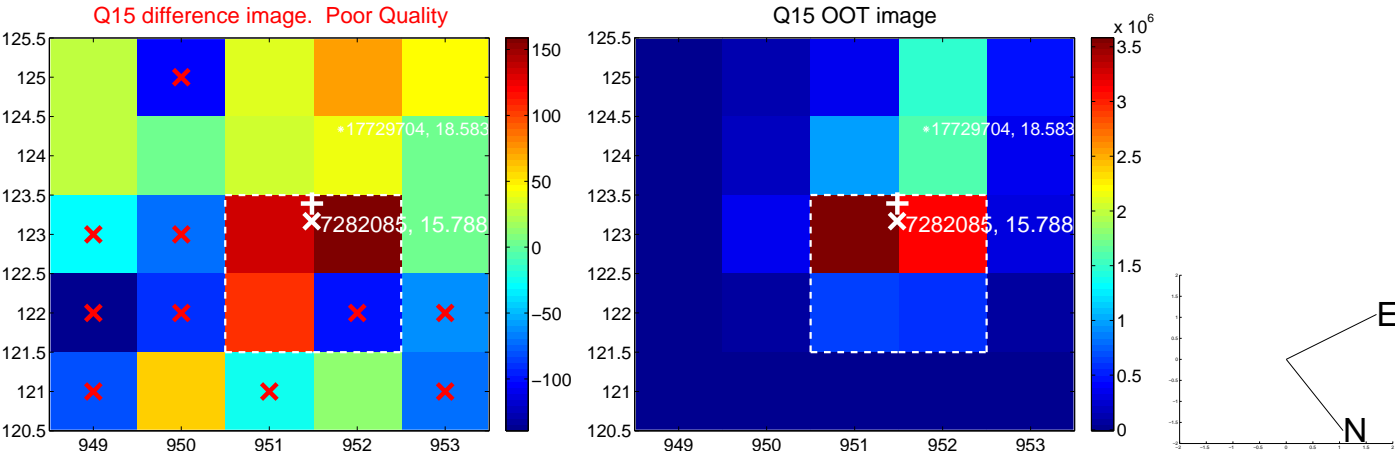
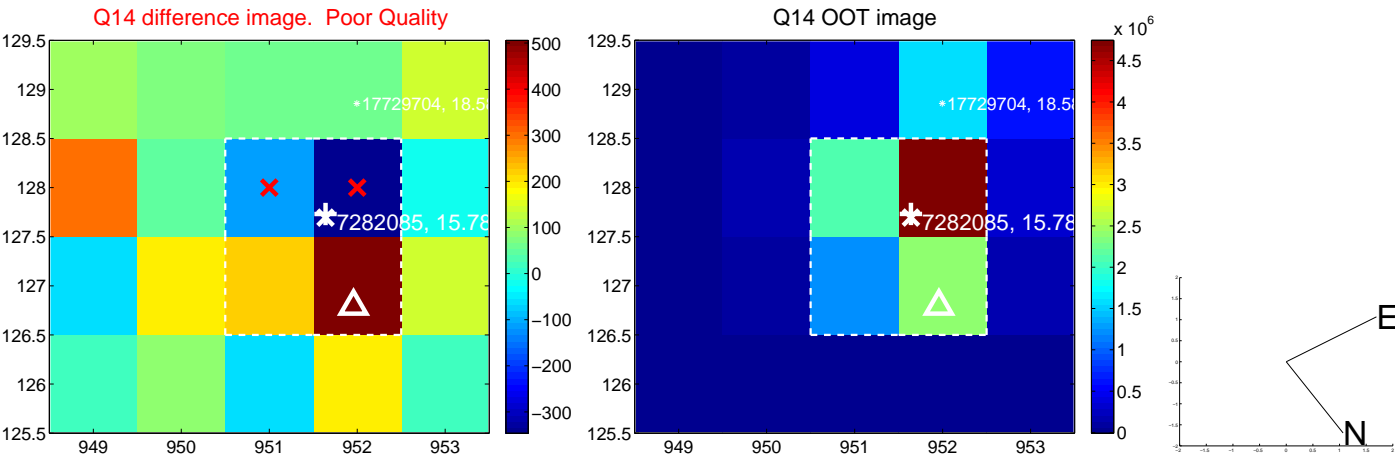
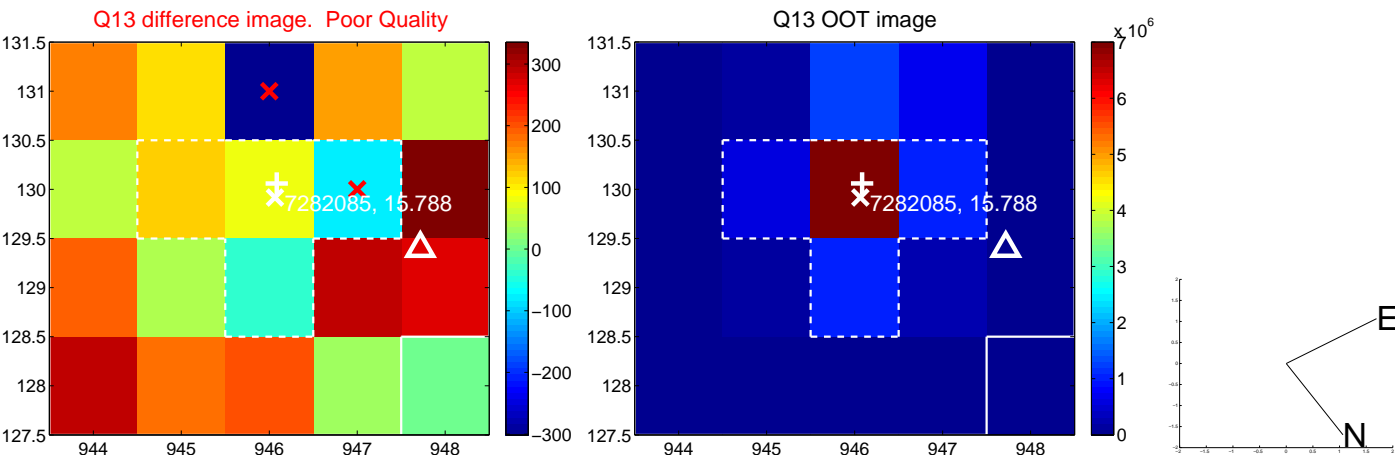
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



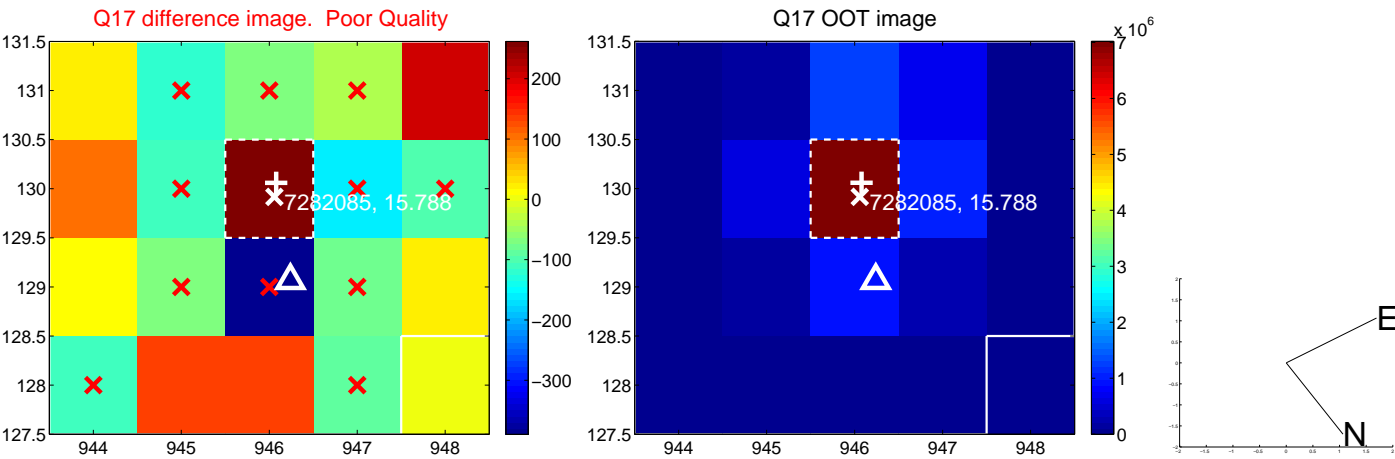
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



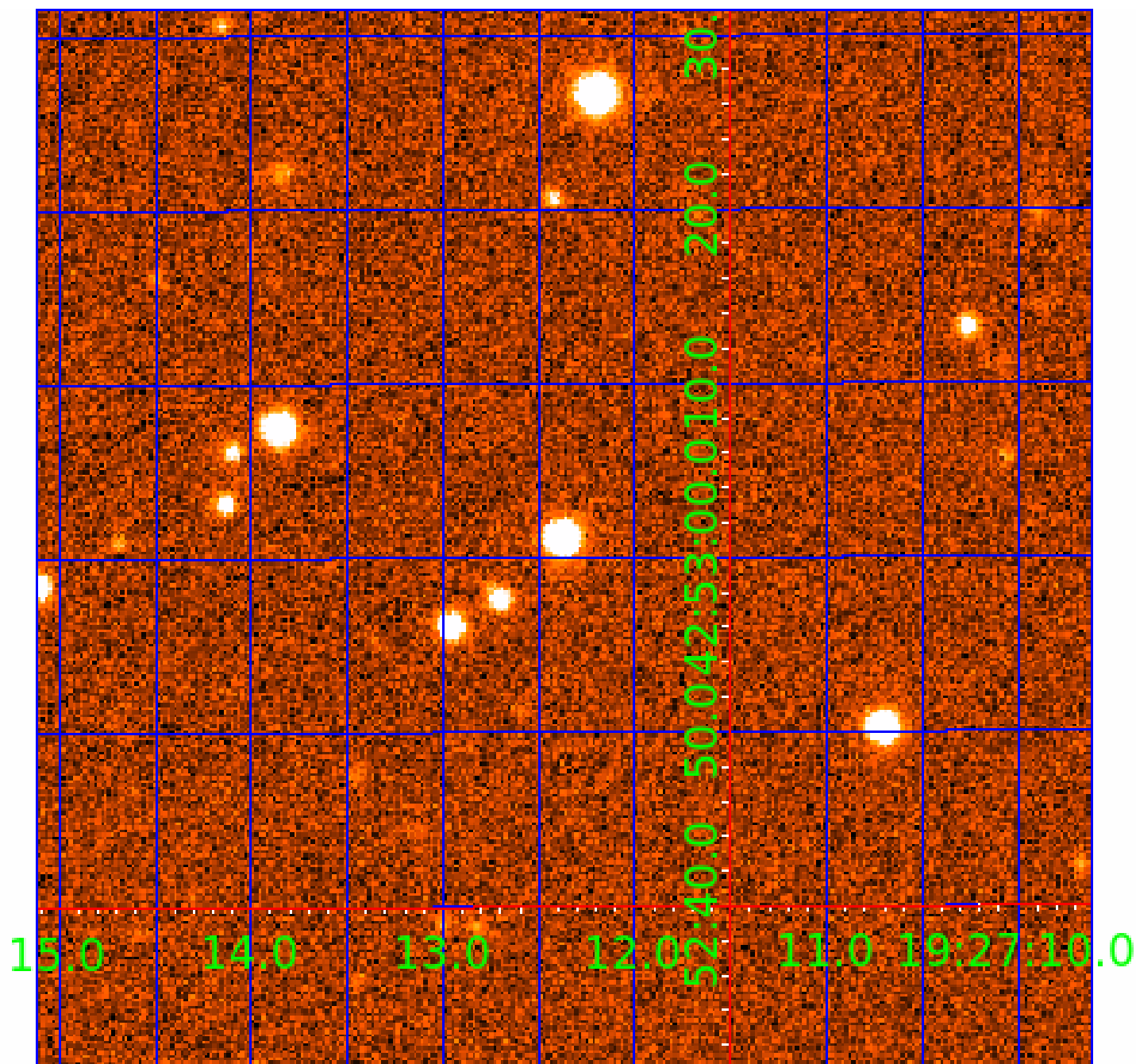
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007282085

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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007282085-02	OBS	No	87.295497	159.273635	641.6	3.179	7.9	8.3	0.99	6250	2.94	8.66
007282085-03	OBS	No	75.406371	175.667972	574.6	5.438	7.4	7.7	0.99	6250	2.57	10.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007282085-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—CENT_KIC_POS—EPHEM_MATCH
007282085-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007282085-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

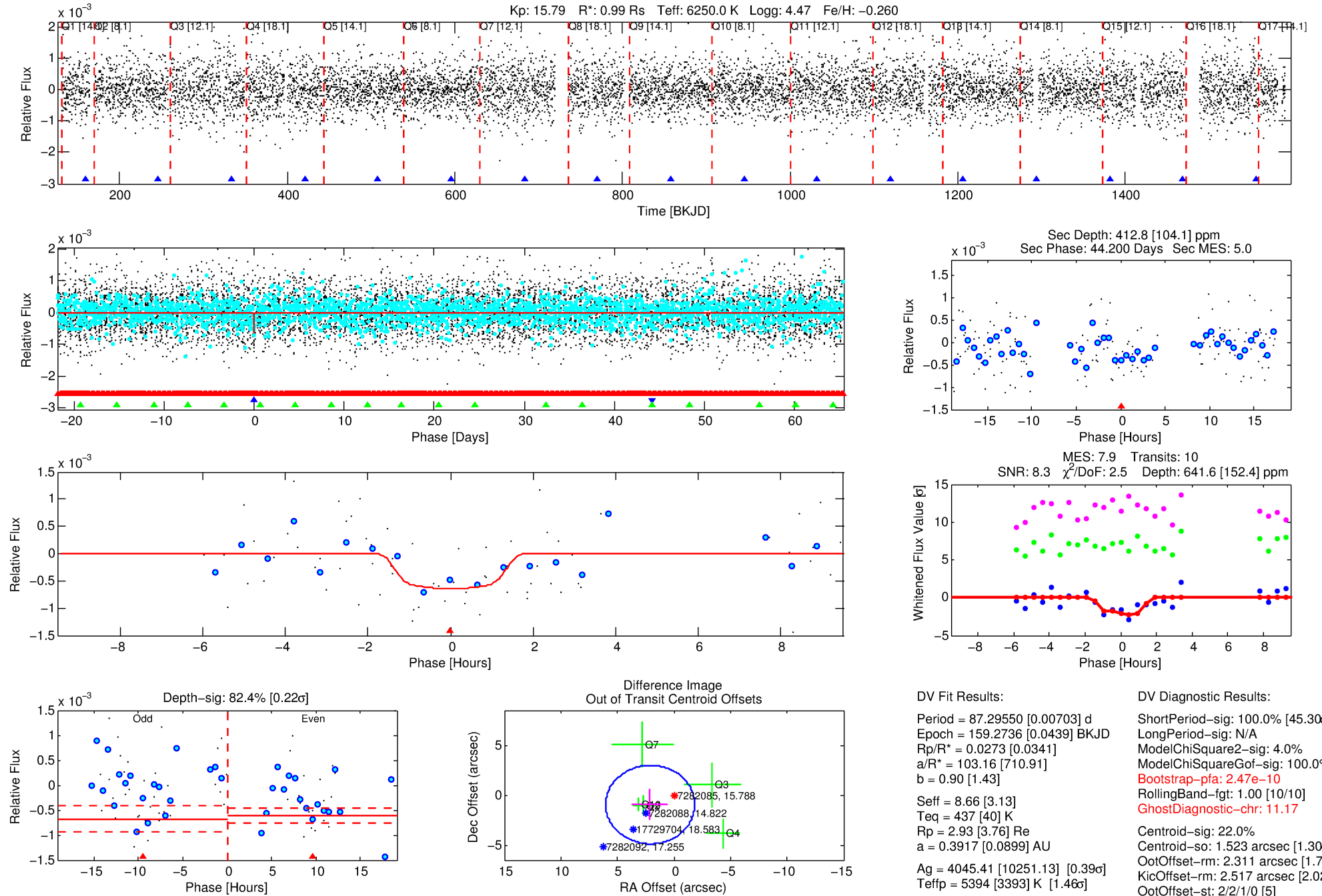
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007282085-02

No Significant Match Found

DV One-Page Summary

KIC: 7282085 Candidate: 2 of 3 Period: 87.295 d



DV Fit Results:

Period = 87.29550 [0.00703] d
Epoch = 159.2736 [0.0439] BKJD
Rp/R* = 0.0273 [0.0341]
a/R* = 103.16 [710.91]
b = 0.90 [1.43]
Seff = 8.66 [3.13]
Teq = 437 [40] K
Rp = 2.93 [3.76] Re
a = 0.3917 [0.0899] AU
Ag = 4045.41 [10251.13] [0.39 σ]
Teffp = 5394 [3393] K [1.46 σ]

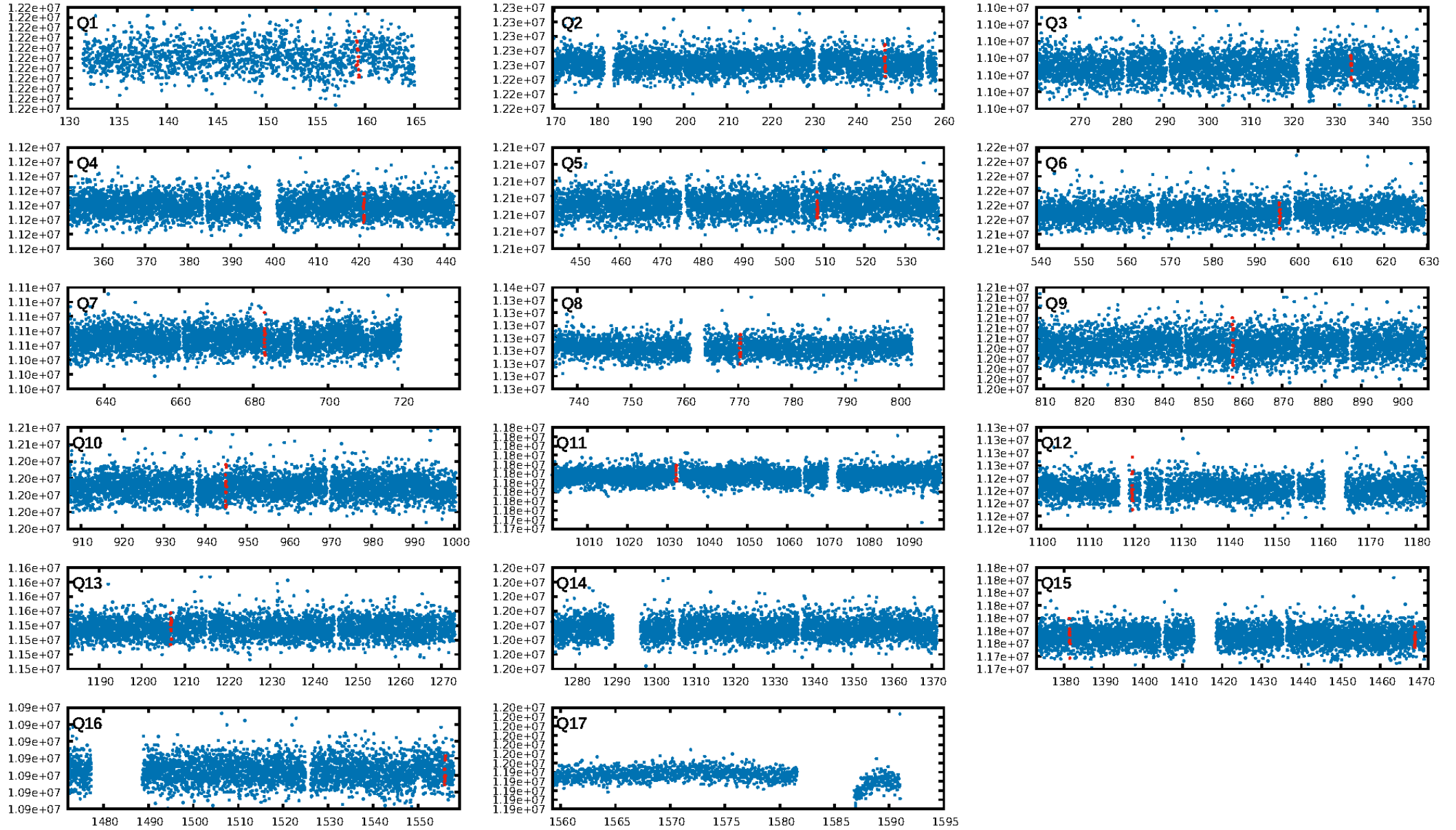
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [45.30 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.47e-10
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 11.17
Centroid-sig: 22.0%
Centroid-so: 1.523 arcsec [1.30 σ]
OotOffset-rm: 2.311 arcsec [1.76 σ]
KicOffset-rm: 2.517 arcsec [2.02 σ]
OotOffset-st: 2/2/1/0 [5]
KicOffset-st: 2/2/1/0 [5]
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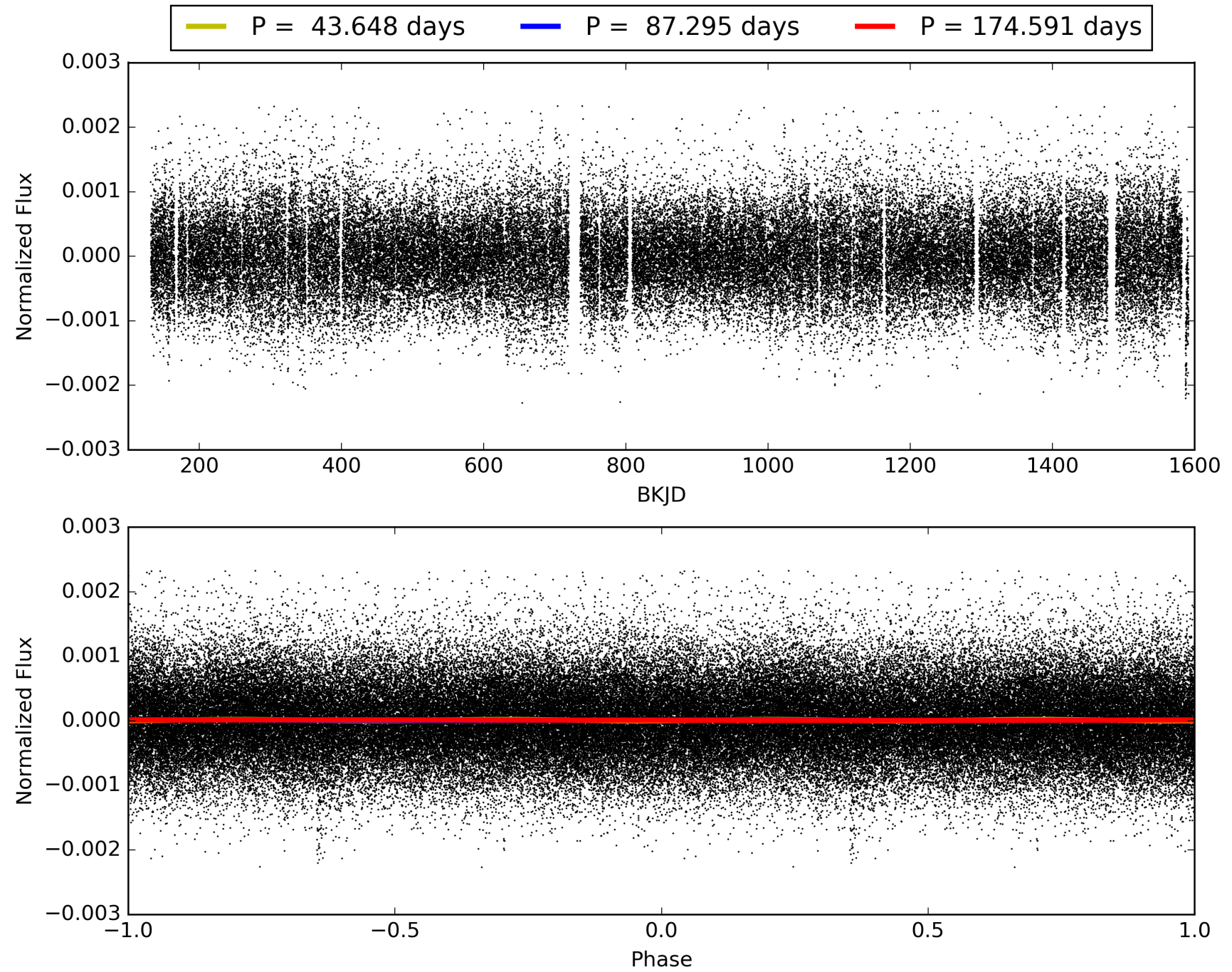
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:08:03 Z

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

TCE 007282085-02, PDC Light Curves

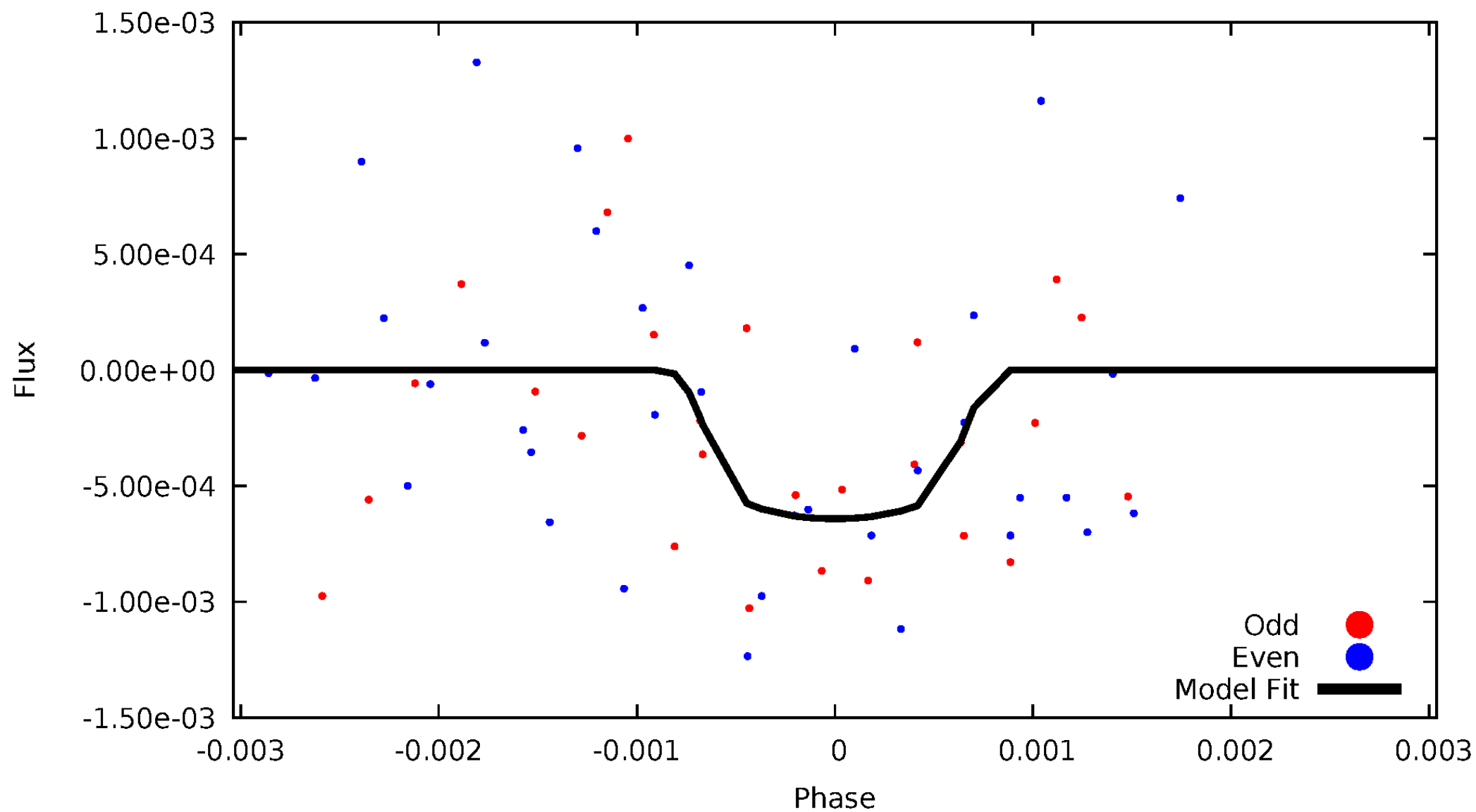


TCE 007282085-02



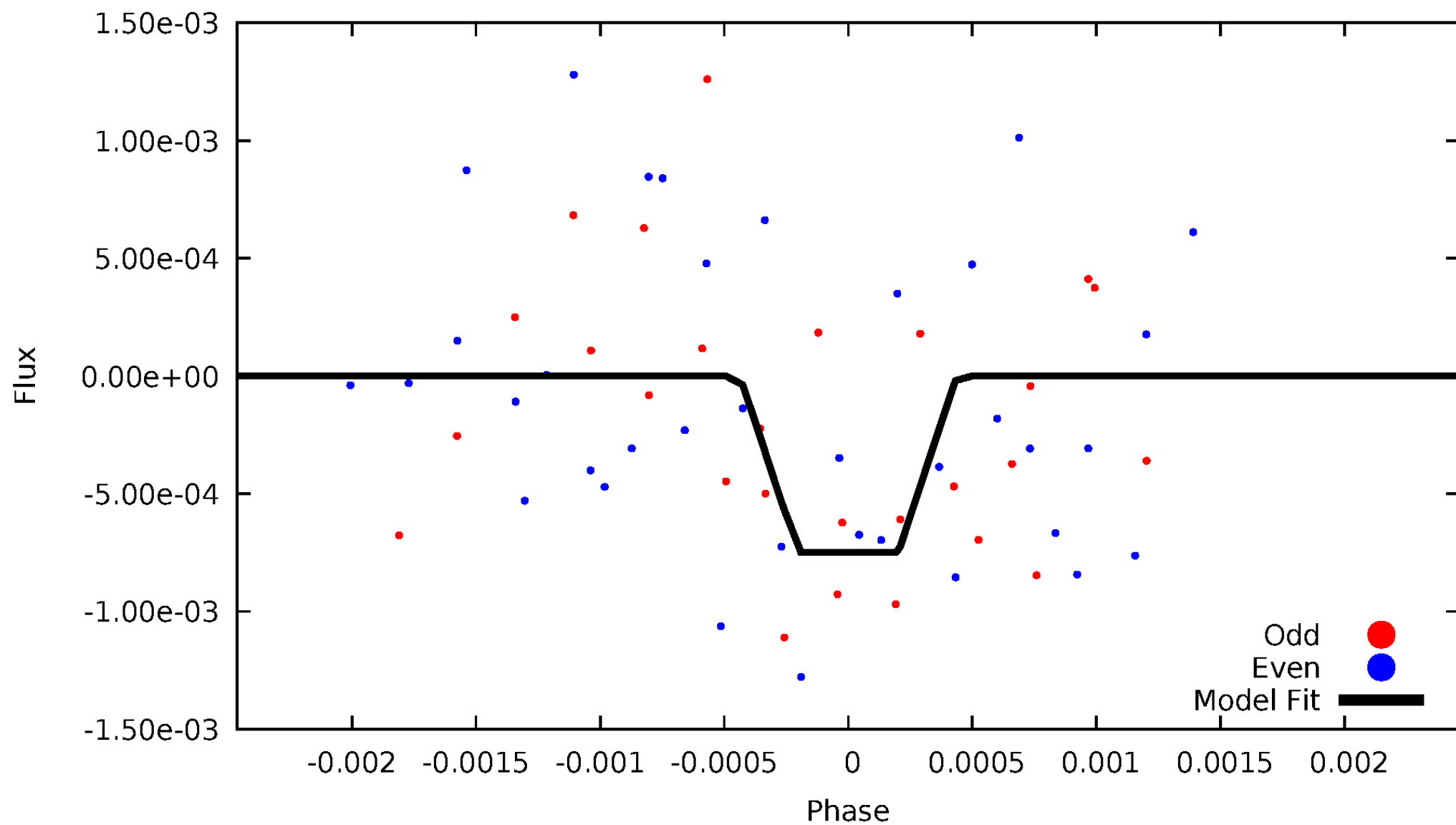
DV Odd/Even

TCE 007282085-02



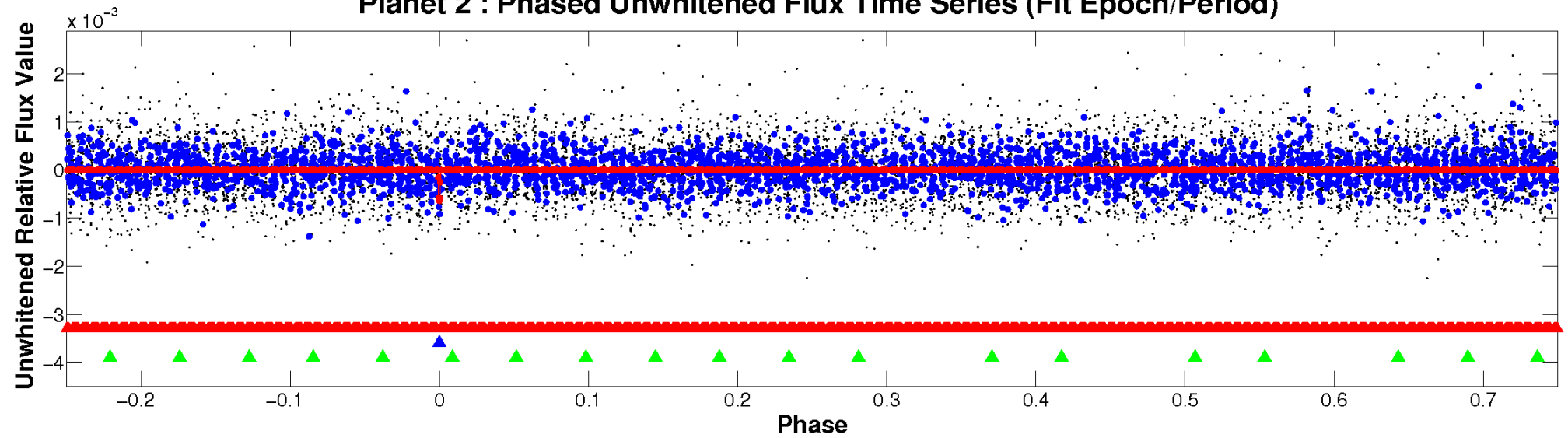
ALT Odd/Even

TCE 007282085-02

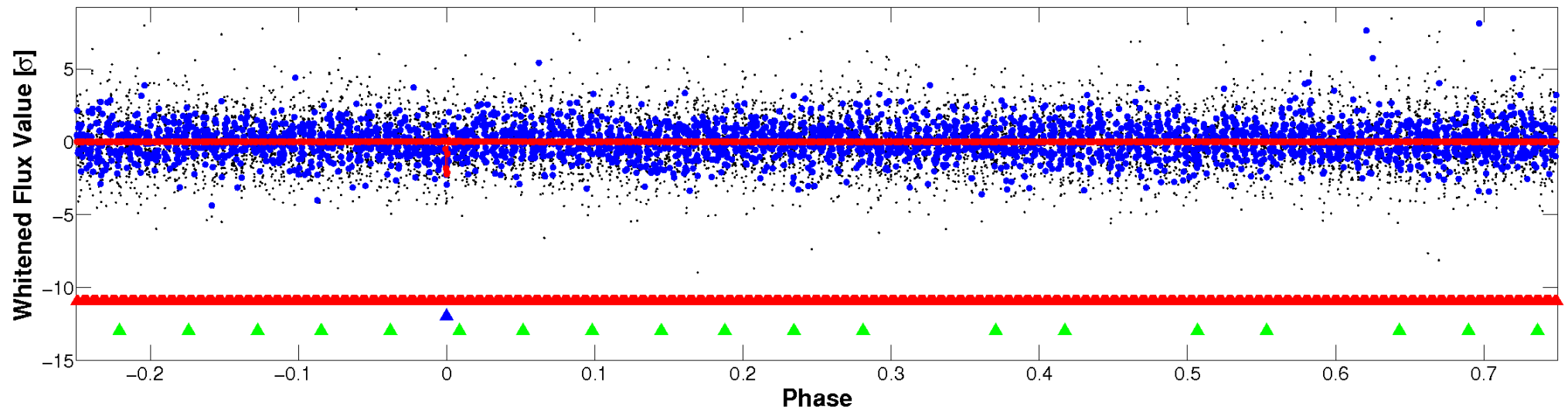


Non-Whitened Vs. Whitened Light Curve

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

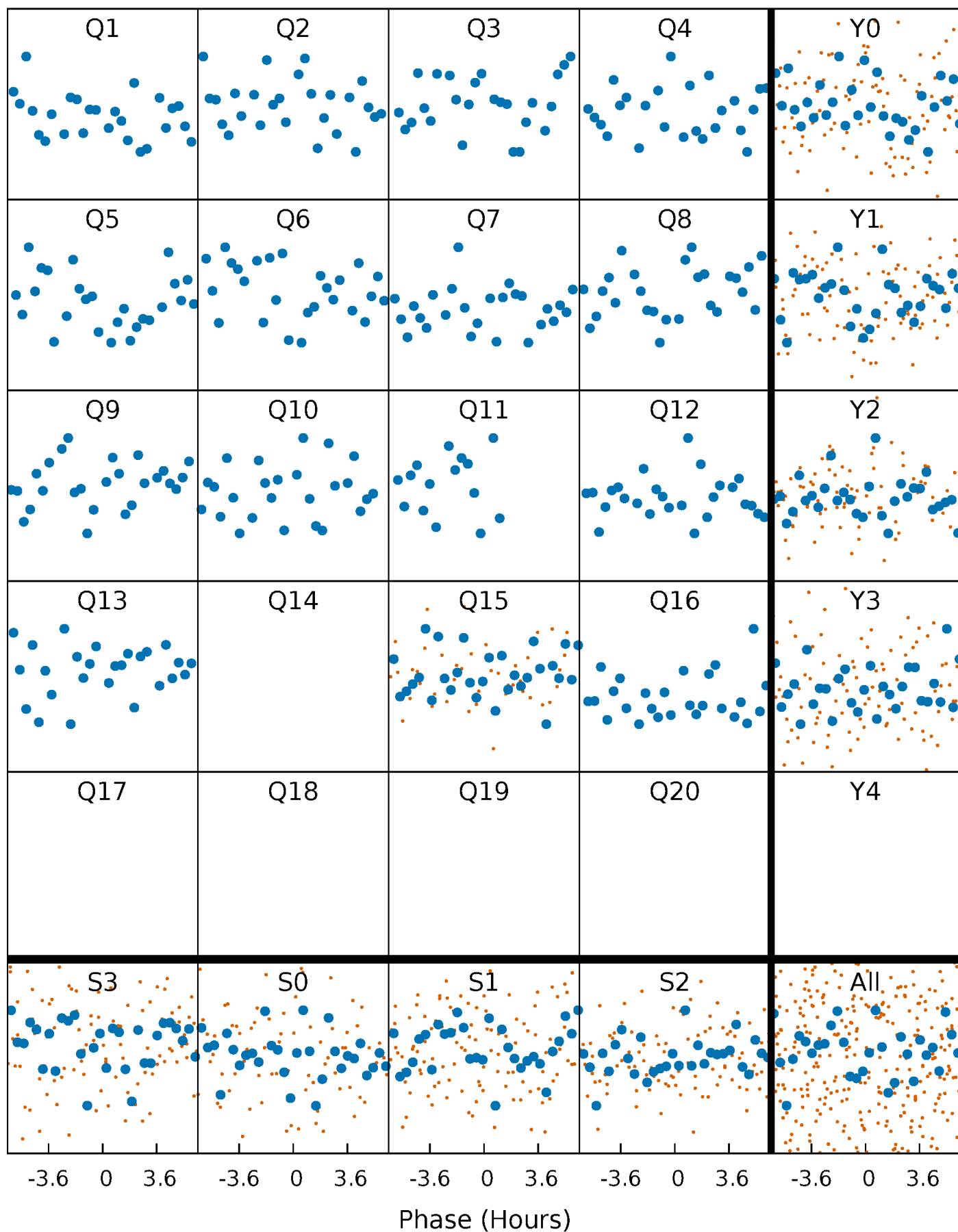


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



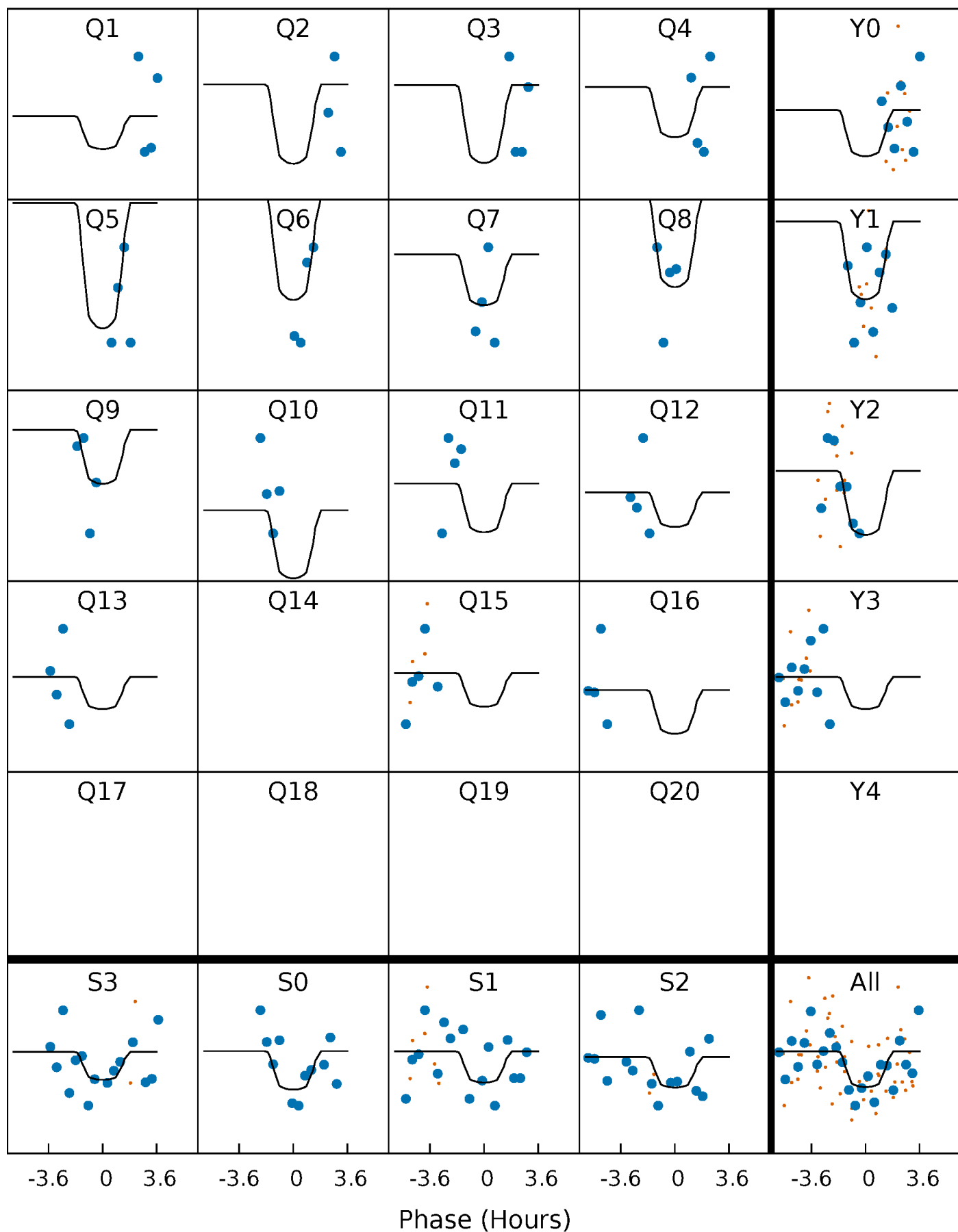
PDC Quarter-Phased Transit Curves

TCE 007282085-02 P= 87.295497 Days $T_0=159.273635$ (BKJD)



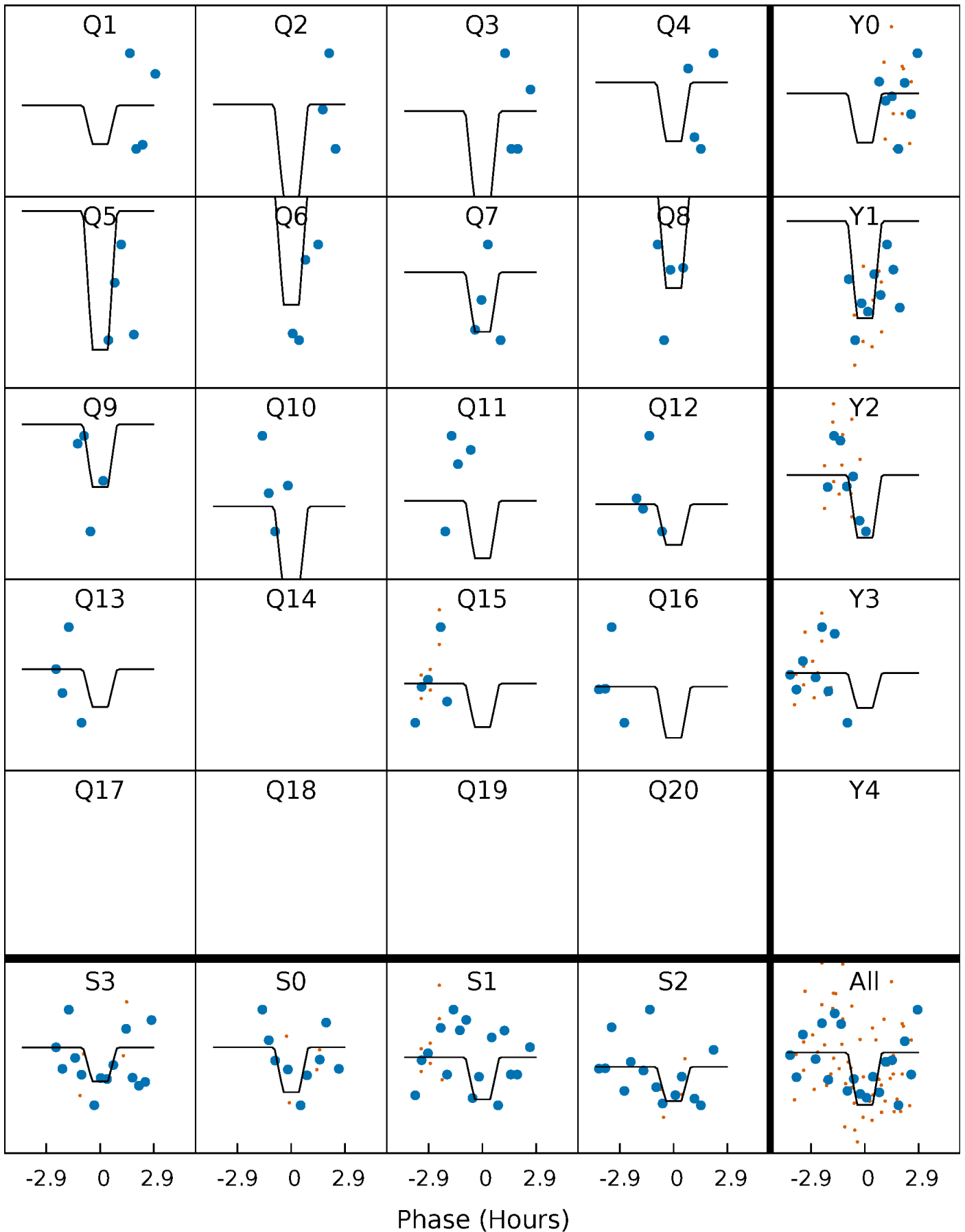
DV Quarter-Phased Transit Curves

TCE 007282085-02 P= 87.295497 Days $T_0=159.273635$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

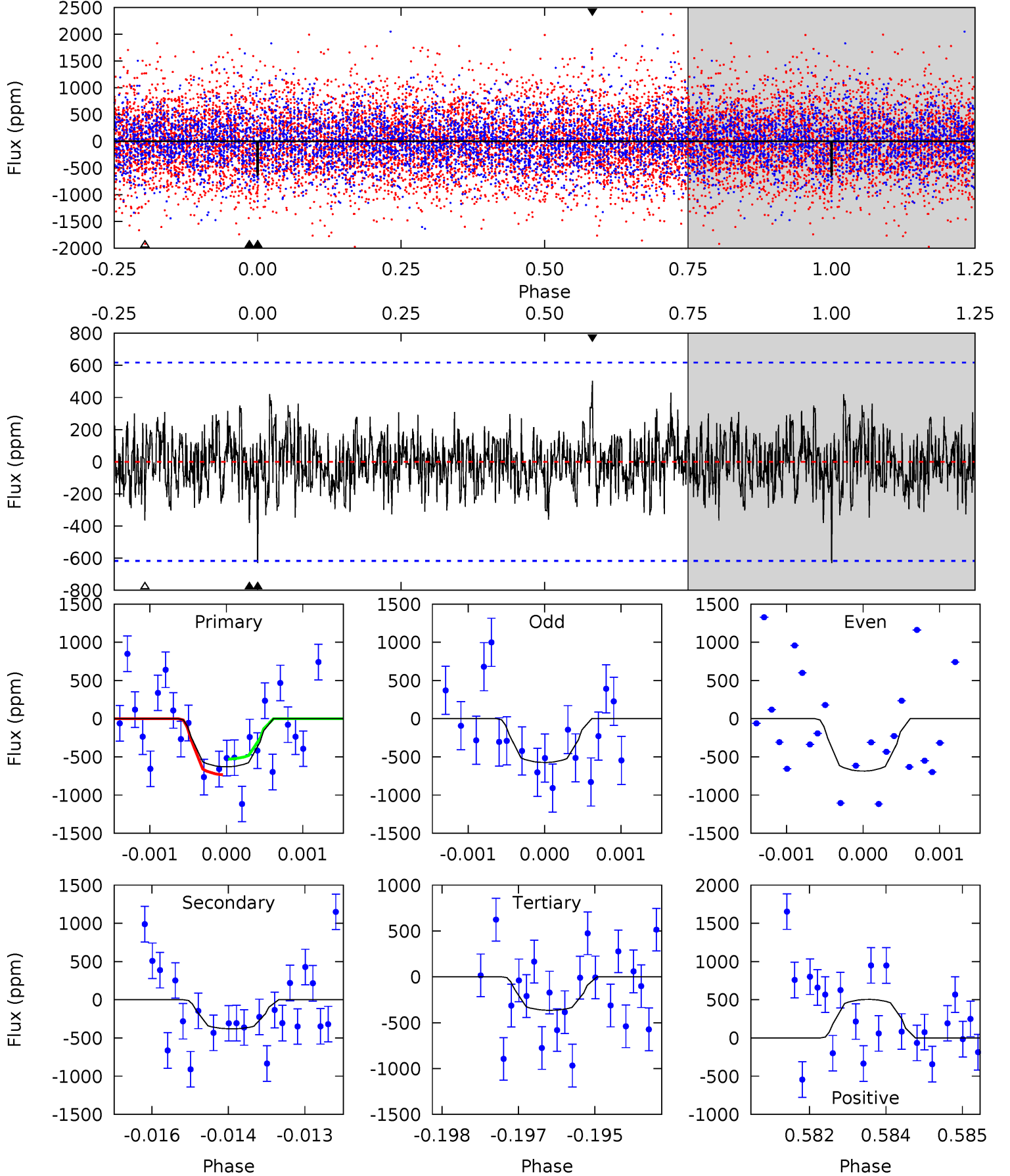
TCE 007282085-02 P= 87.288922 Days $T_0=159.304455$ (BKJD)



DV Model-Shift Uniqueness Test

007282085-02, P = 87.295497 Days, E = 71.978138 Days

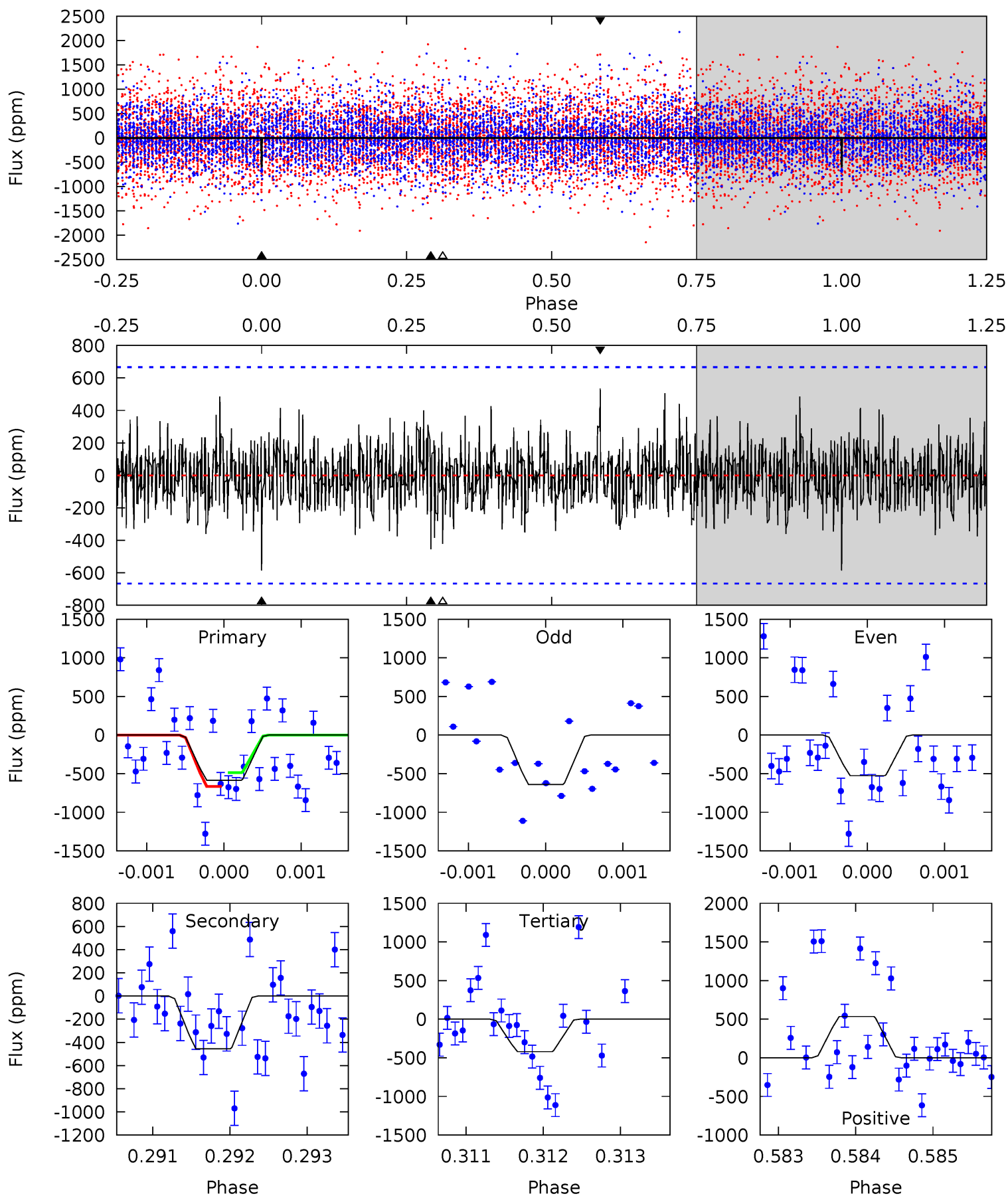
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.49	3.31	3.18	4.39	5.39	3.19	1.10	2.31	1.10	0.13	-1.08	0.49	0.81	0.44	0.90



Alt Model-Shift Uniqueness Test

007282085-02, P = 87.288922 Days, E = 72.015533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.81	3.74	3.45	4.39	5.48	3.33	1.07	1.35	0.41	0.29	-0.65	0.47	0.77	0.48	0.73



Stellar Parameters For KIC 007282085

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6250^{+169}_{-225}	$4.472^{+0.060}_{-0.180}$	$-0.260^{+0.250}_{-0.350}$	$0.986^{+0.271}_{-0.116}$	$1.052^{+0.134}_{-0.147}$	$1.544^{+0.397}_{-0.772}$
	+3%/-4%	+1%/-4%	+96%/-135%	+27%/-12%	+13%/-14%	+26%/-50%
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 007282085-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-380 ± 115	$4.09^{+3.40}_{-2.63}$	621^{+39}_{-31}	4697^{+3018}_{-1030}	1947^{+12111}_{-1459}
Alt.	-455 ± 122	$4.06^{+3.36}_{-2.51}$	622^{+37}_{-29}	4851^{+3094}_{-1027}	2245^{+12570}_{-1632}

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

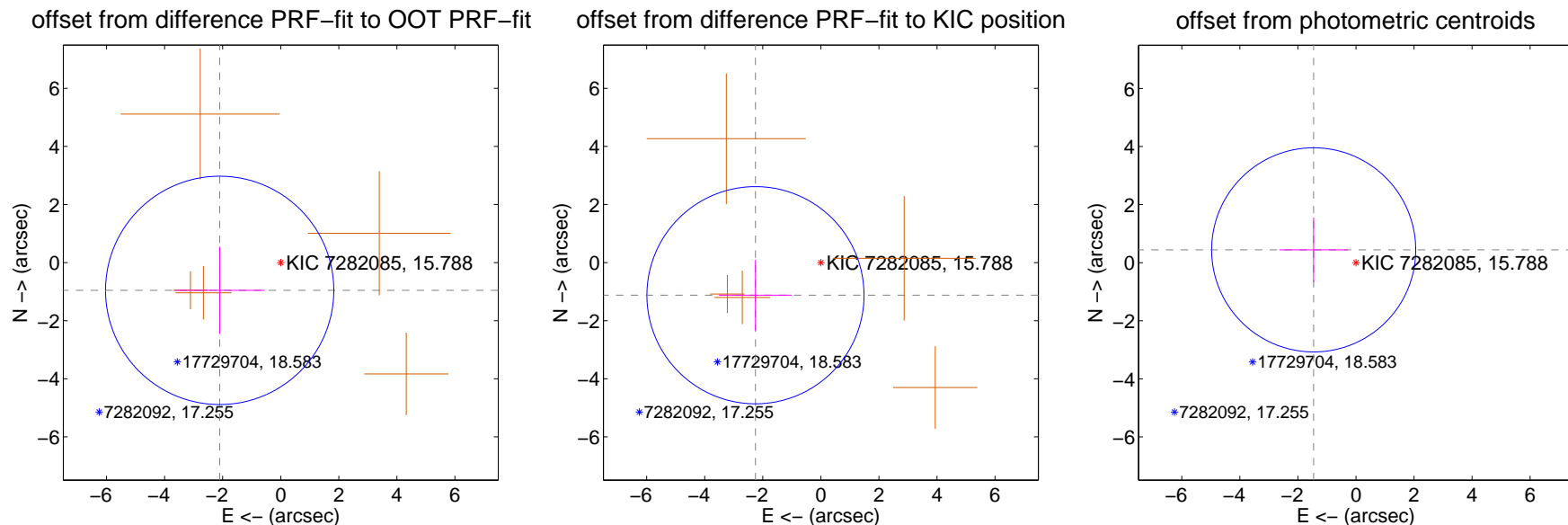
DV Centroid Data

Supplemental centroid analysis for 007282085-02. Kepler magnitude: 15.79. Transit SNR 8.28

There are 0 quarters with good PRF difference image offsets

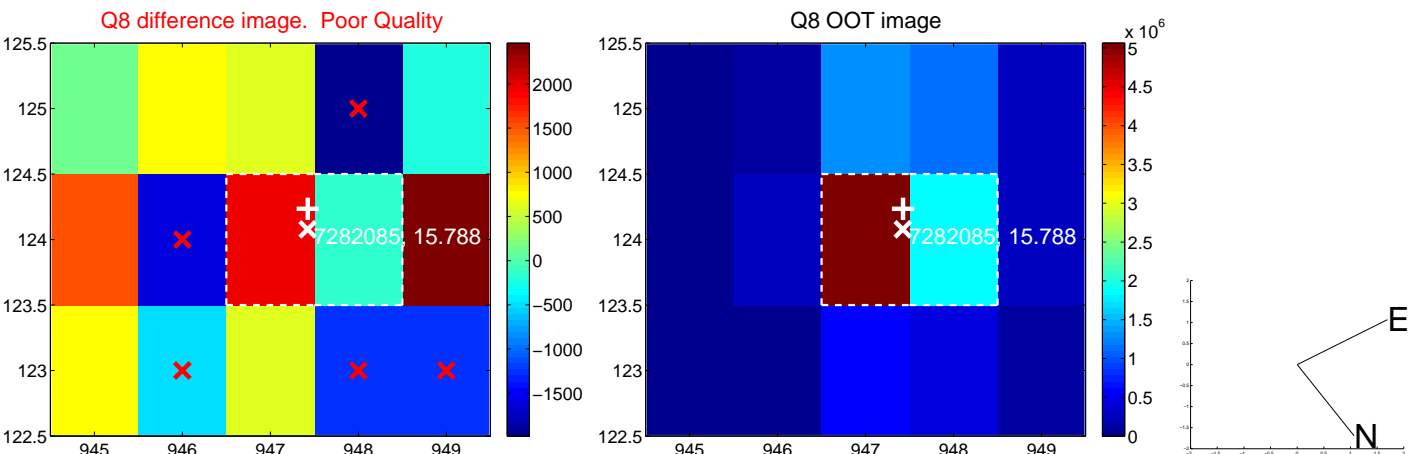
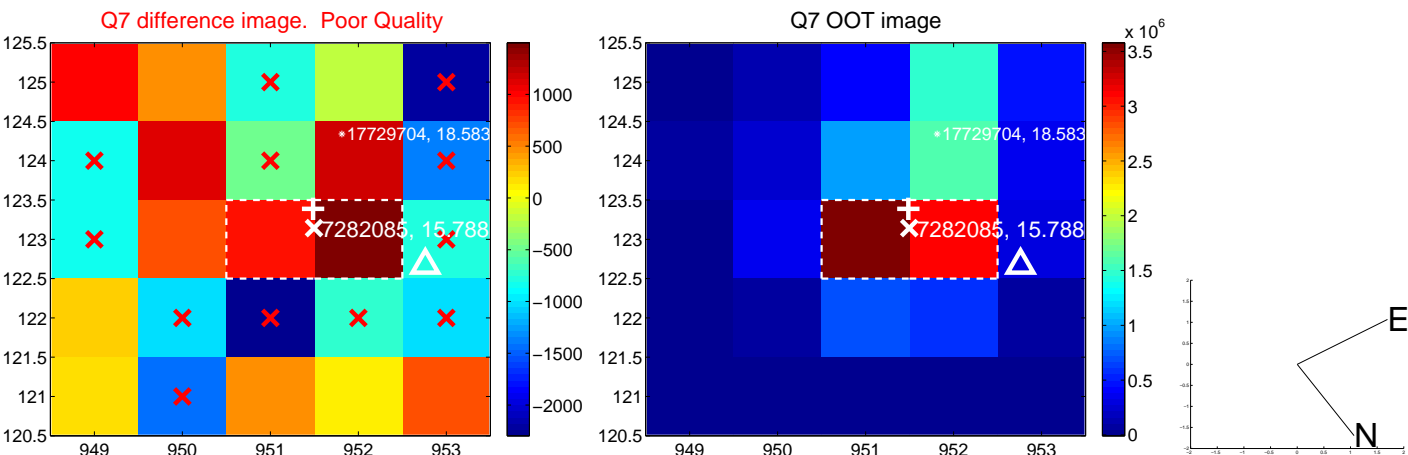
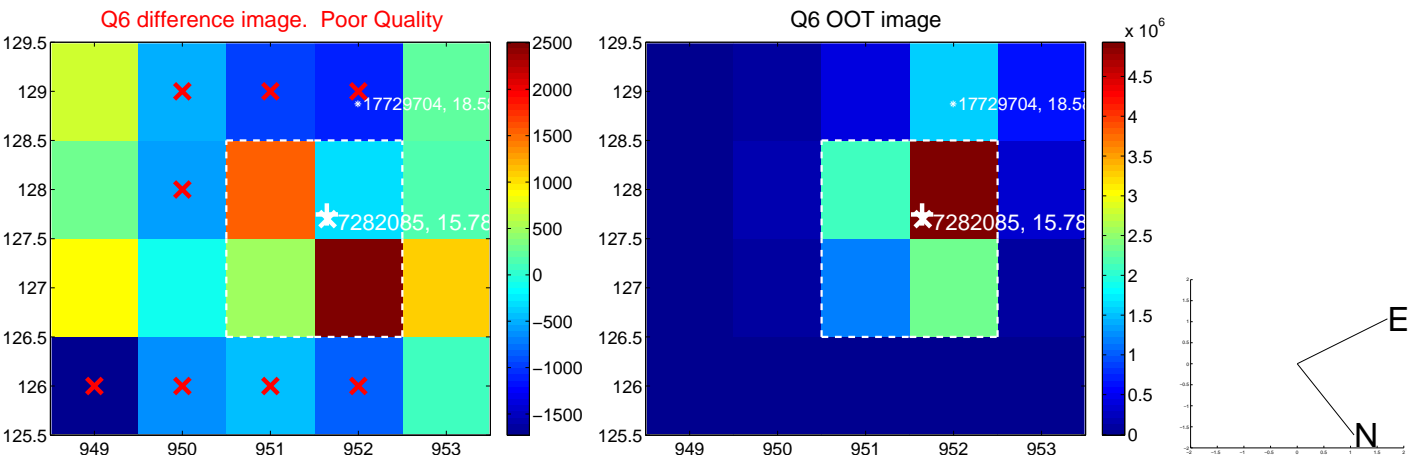
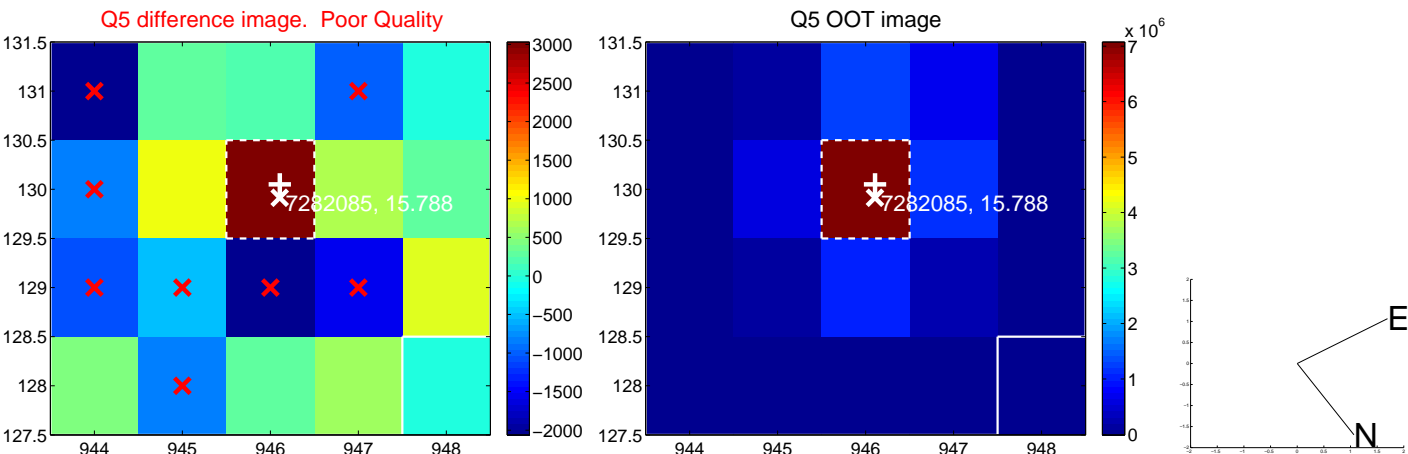
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.311 ± 1.311	1.76	2.104 ± 1.549	-0.957 ± 1.501
PRF-fit source offset from KIC position	2.517 ± 1.247	2.02	2.253 ± 1.255	-1.123 ± 1.212
photometric centroid source offset	1.52 ± 1.17	1.30	1.46 ± 1.18	0.44 ± 1.11

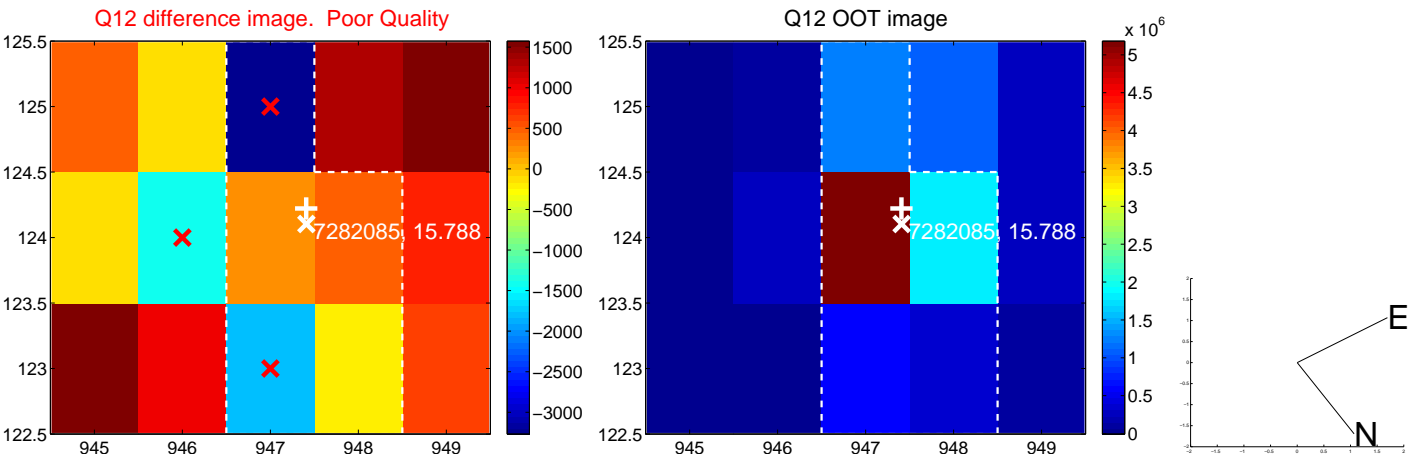
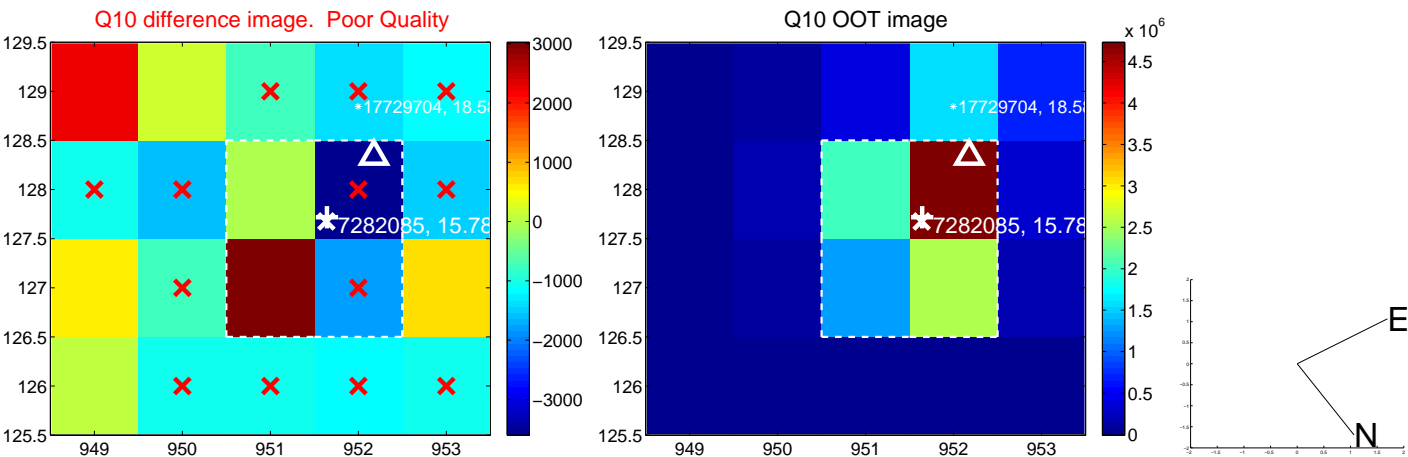
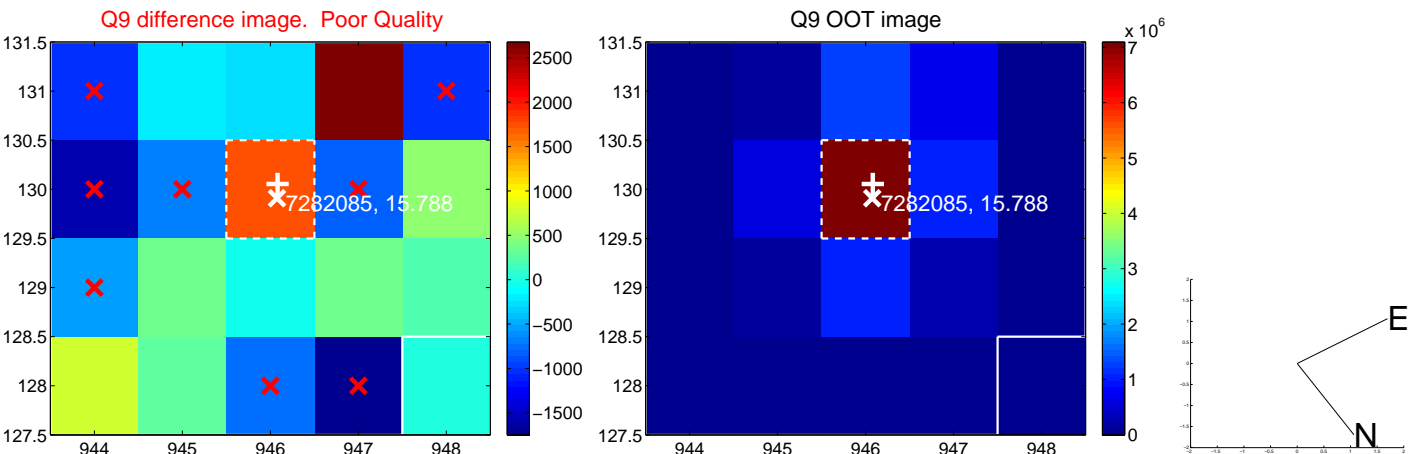


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

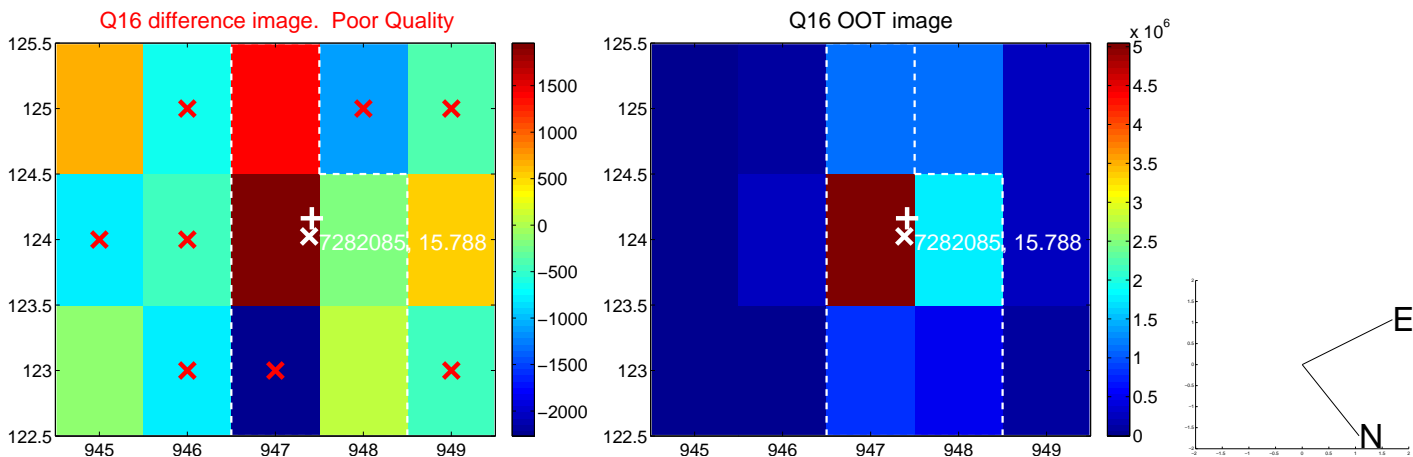
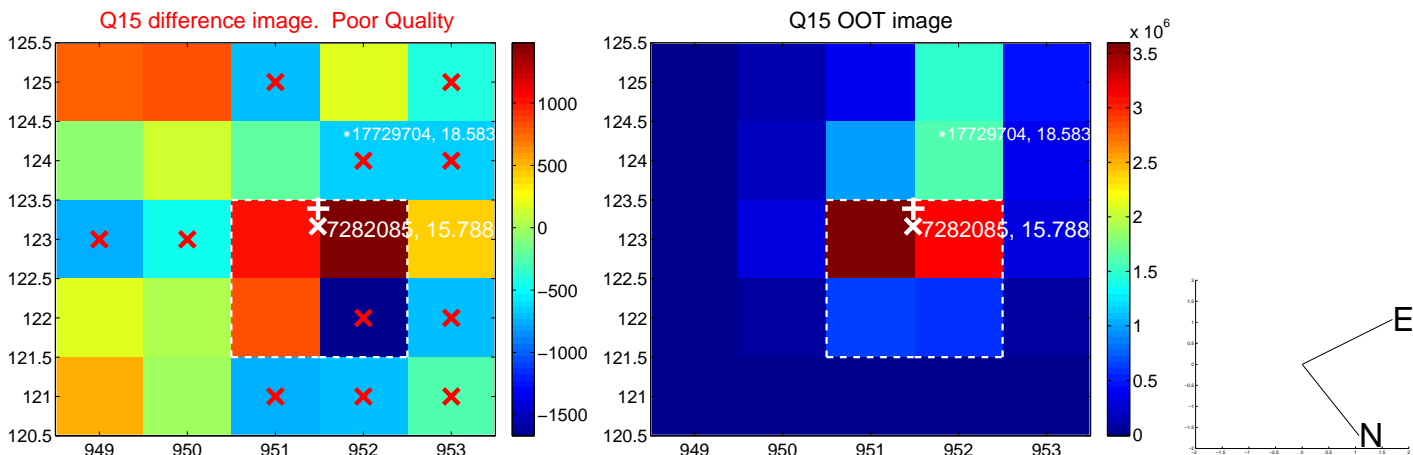
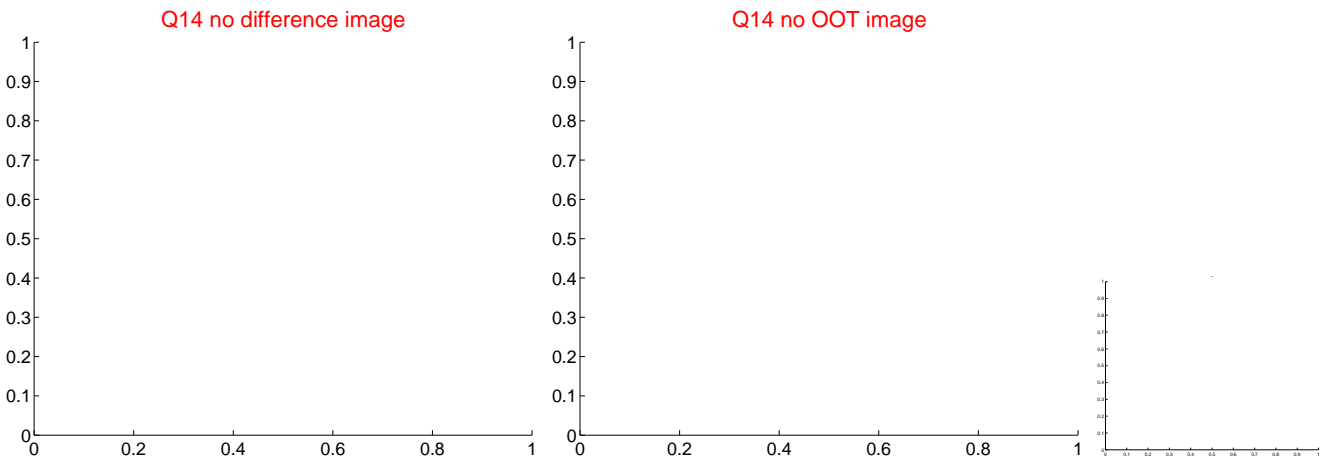
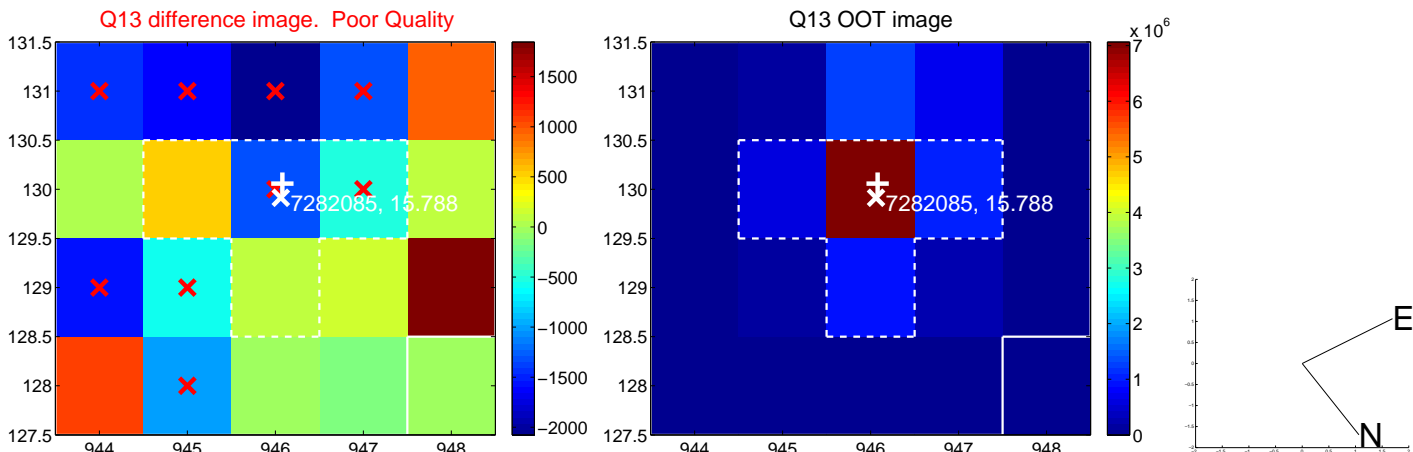
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



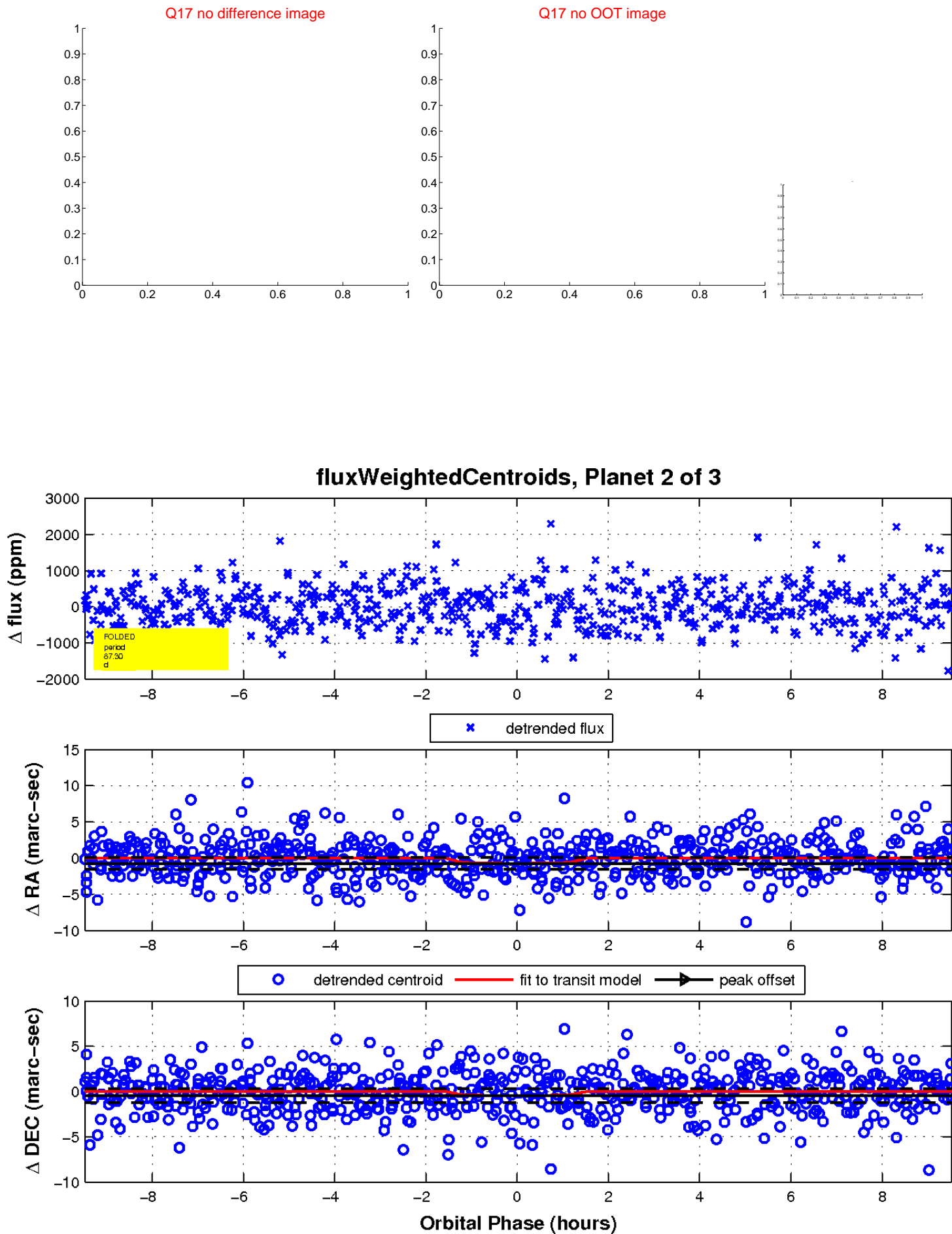
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

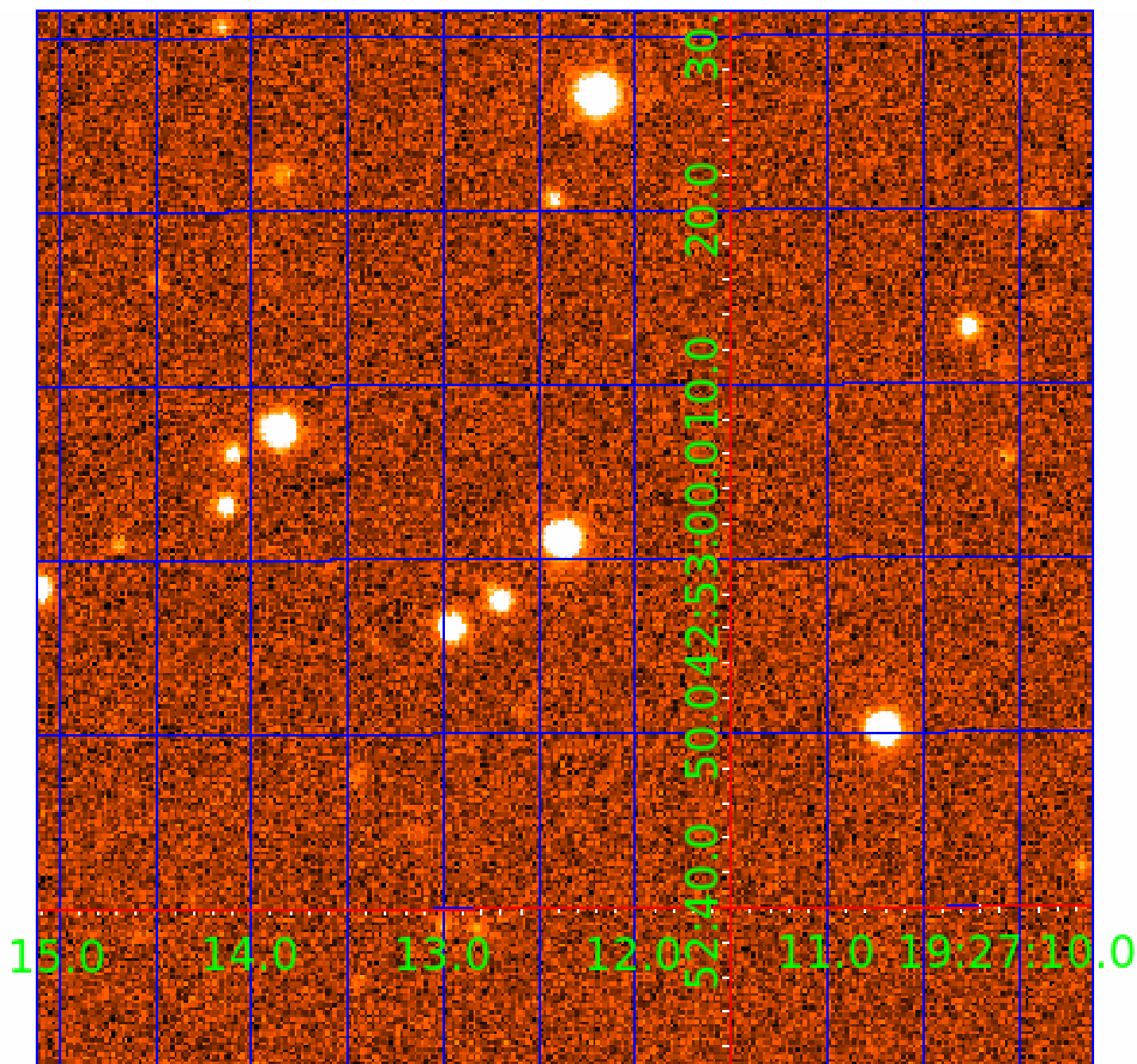


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007282085

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})
007282085-01	OBS	No	0.566712	131.918604	0.5	3.723	10.0	0.1	0.99	6250	0.08	7153.46
007282085-02	OBS	No	87.295497	159.273635	641.6	3.179	7.9	8.3	0.99	6250	2.94	8.66
007282085-03	OBS	No	75.406371	175.667972	574.6	5.438	7.4	7.7	0.99	6250	2.57	10.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007282085-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—CENT_KIC_POS—EPHEM_MATCH
007282085-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
007282085-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

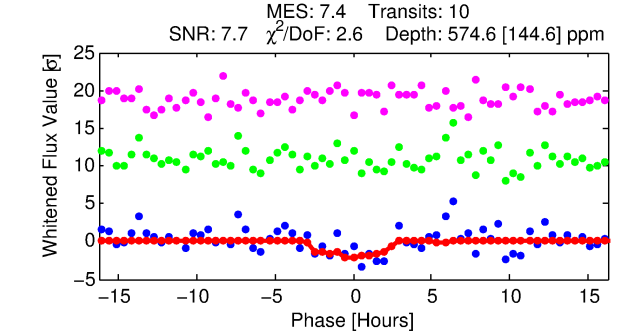
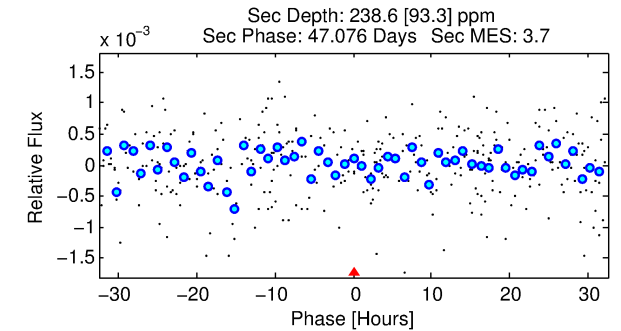
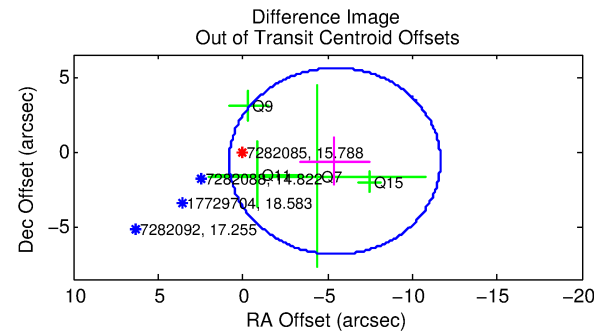
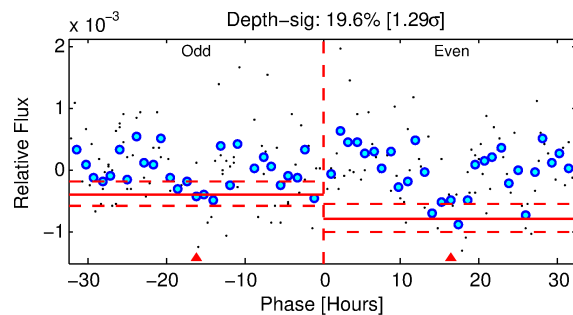
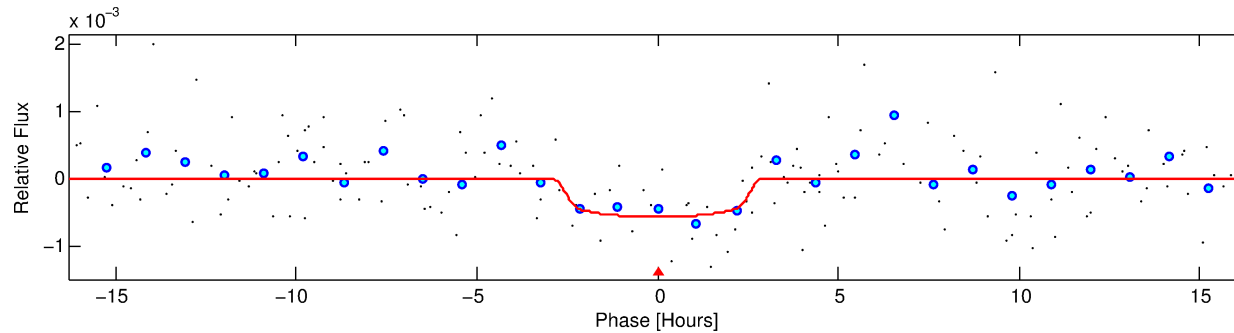
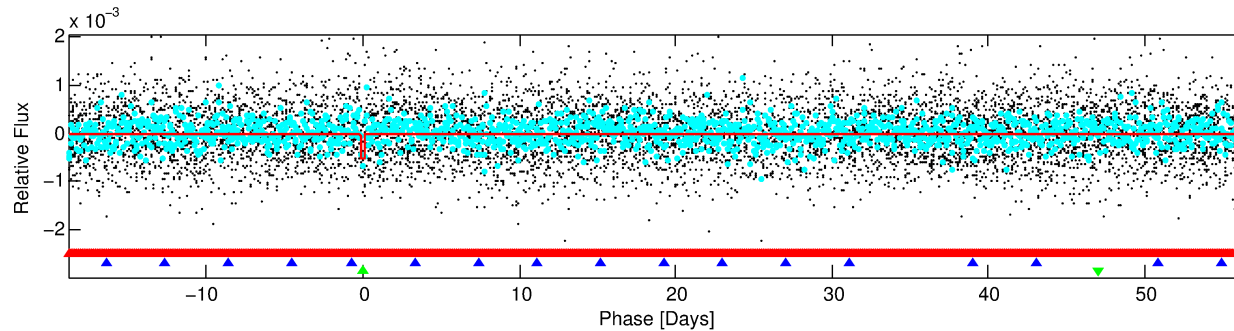
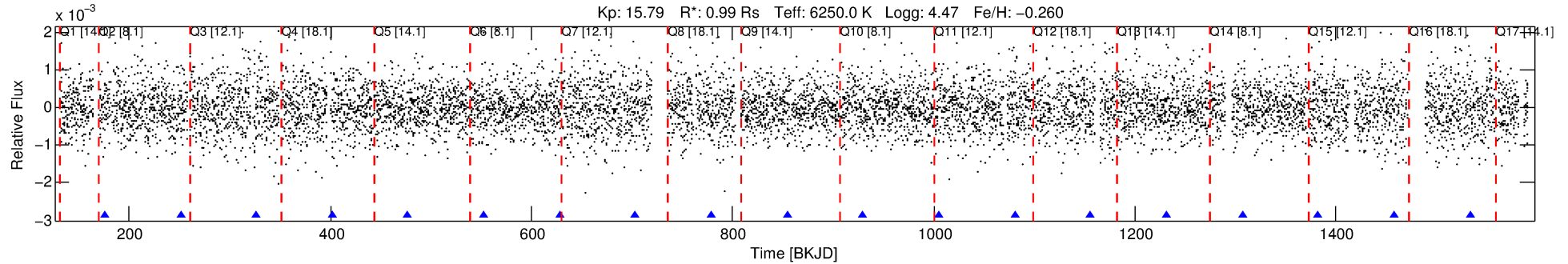
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007282085-03

No Significant Match Found

DV One-Page Summary

KIC: 7282085 Candidate: 3 of 3 Period: 75.406 d



DV Fit Results:

Period = 75.40637 [0.00208] d
Epoch = 175.6680 [0.0222] BKJD
Rp/R* = 0.0239 [0.0247]
a/R* = 72.96 [392.58]
b = 0.76 [3.03]
Seff = 10.53 [3.81]
Teq = 459 [42] K
Rp = 2.57 [2.75] Re
a = 0.3553 [0.0815] AU
Ag = 2504.34 [5327.43] [0.47 σ]
Teffp = 5024 [2645] K [1.73 σ]

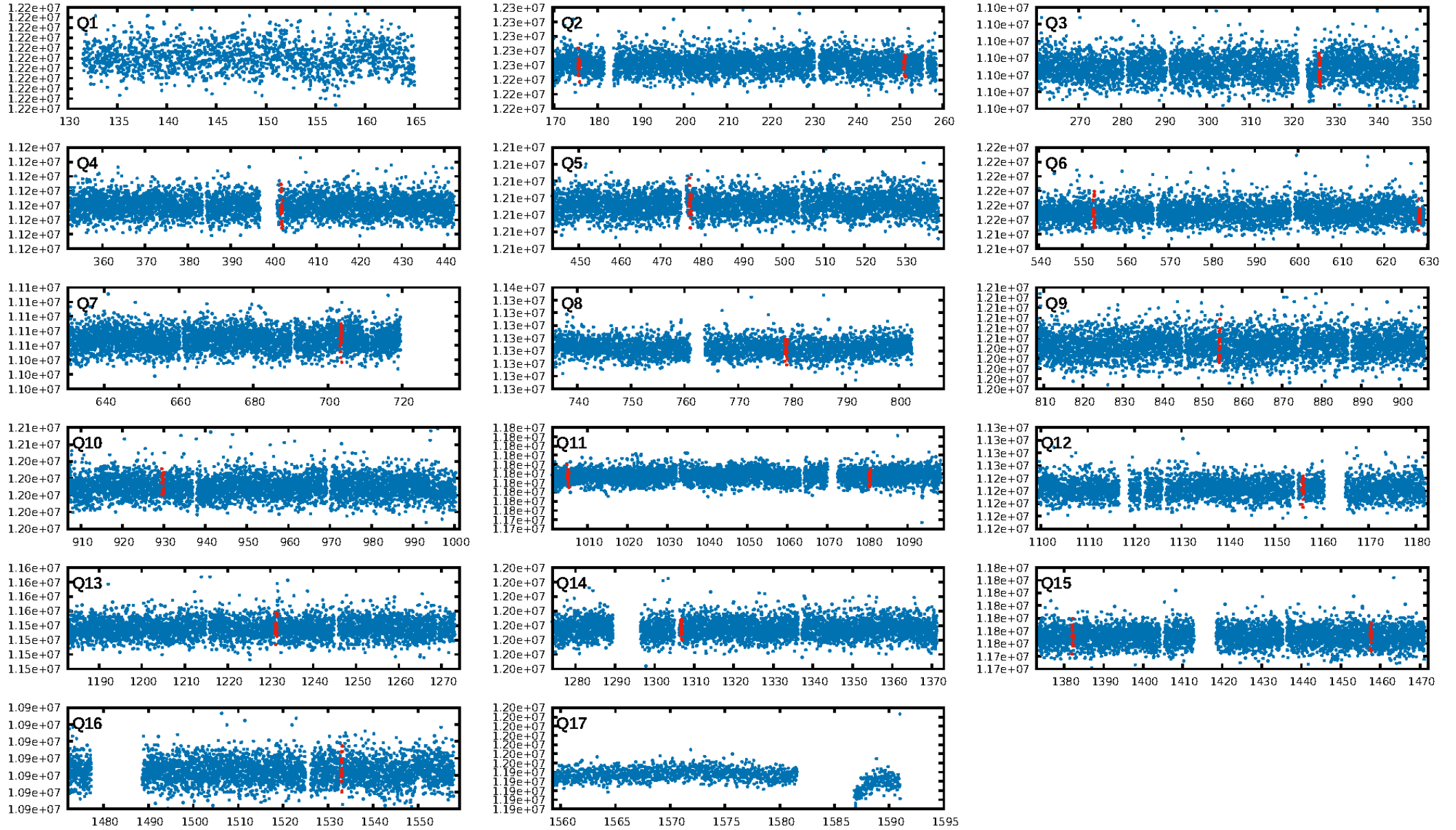
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [272.54 σ]
LongPeriod-sig: 100.0% [45.30 σ]
ModelChiSquare2-sig: 1.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.24e-13
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 13.63
Centroid-sig: 78.1%
Centroid-so: 0.510 arcsec [0.59 σ]
OotOffset-rm: 5.472 arcsec [2.64 σ]
KicOffset-rm: 5.160 arcsec [2.56 σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 0.00 [0/9]

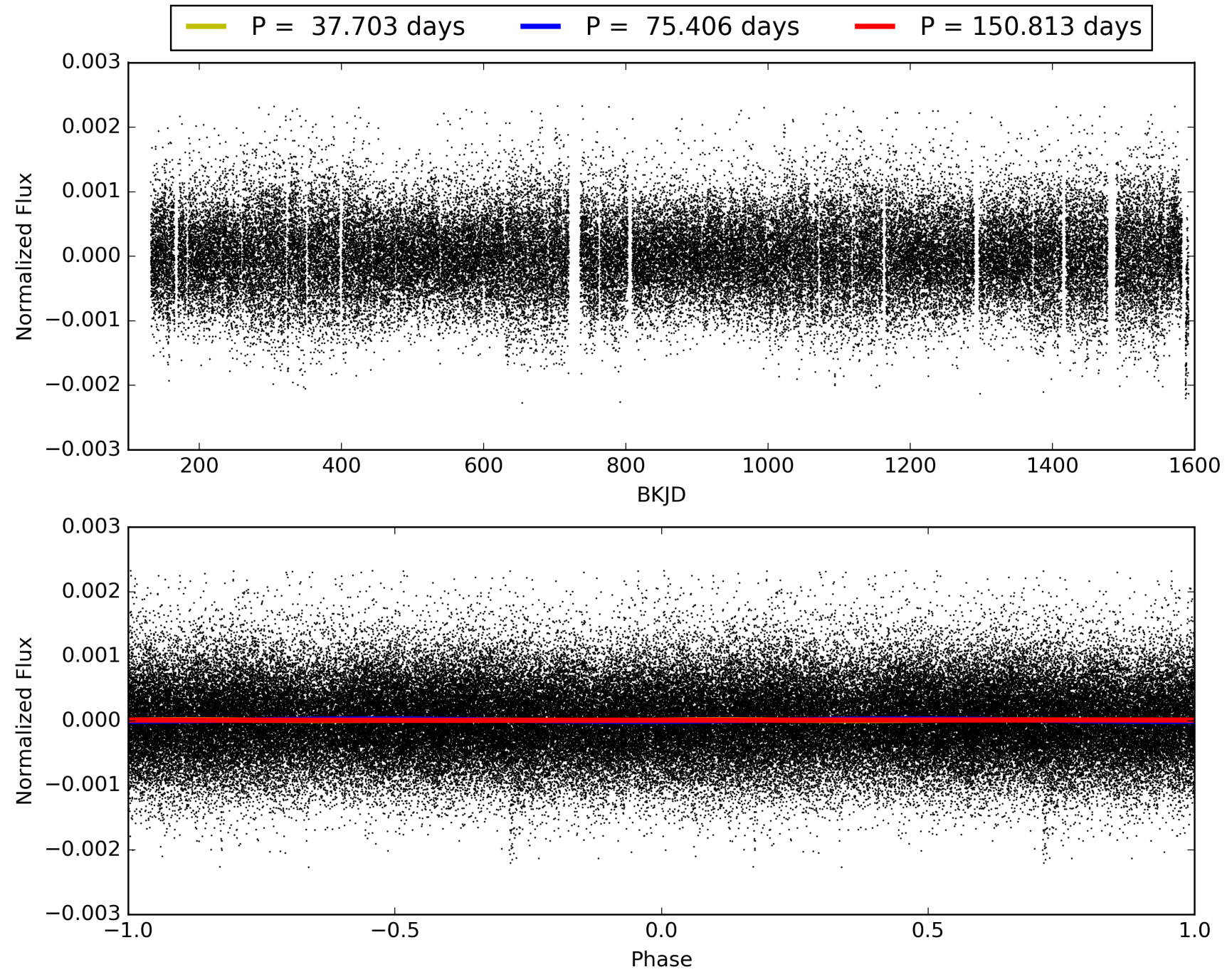
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:08:06 Z

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

TCE 007282085-03, PDC Light Curves

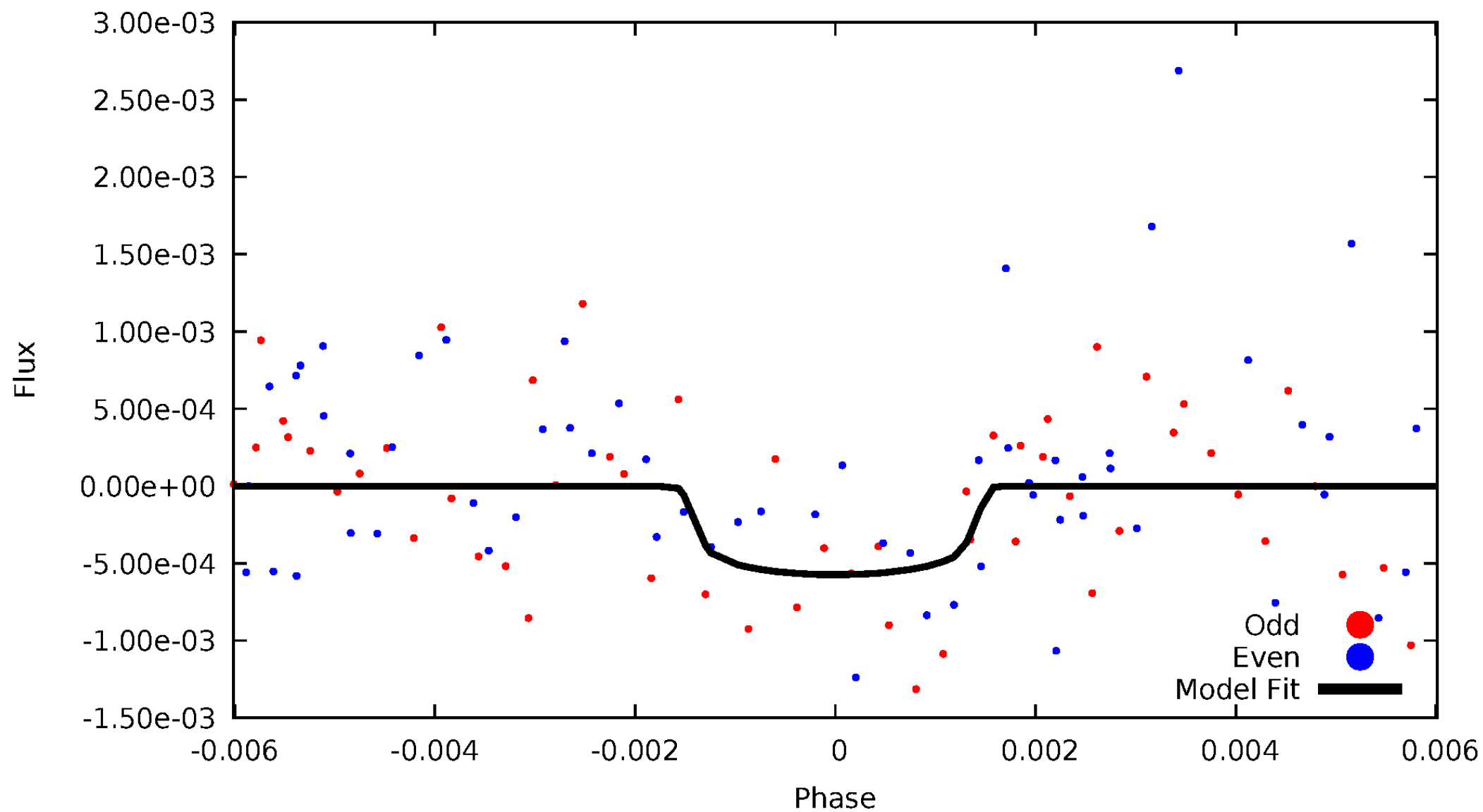


TCE 007282085-03



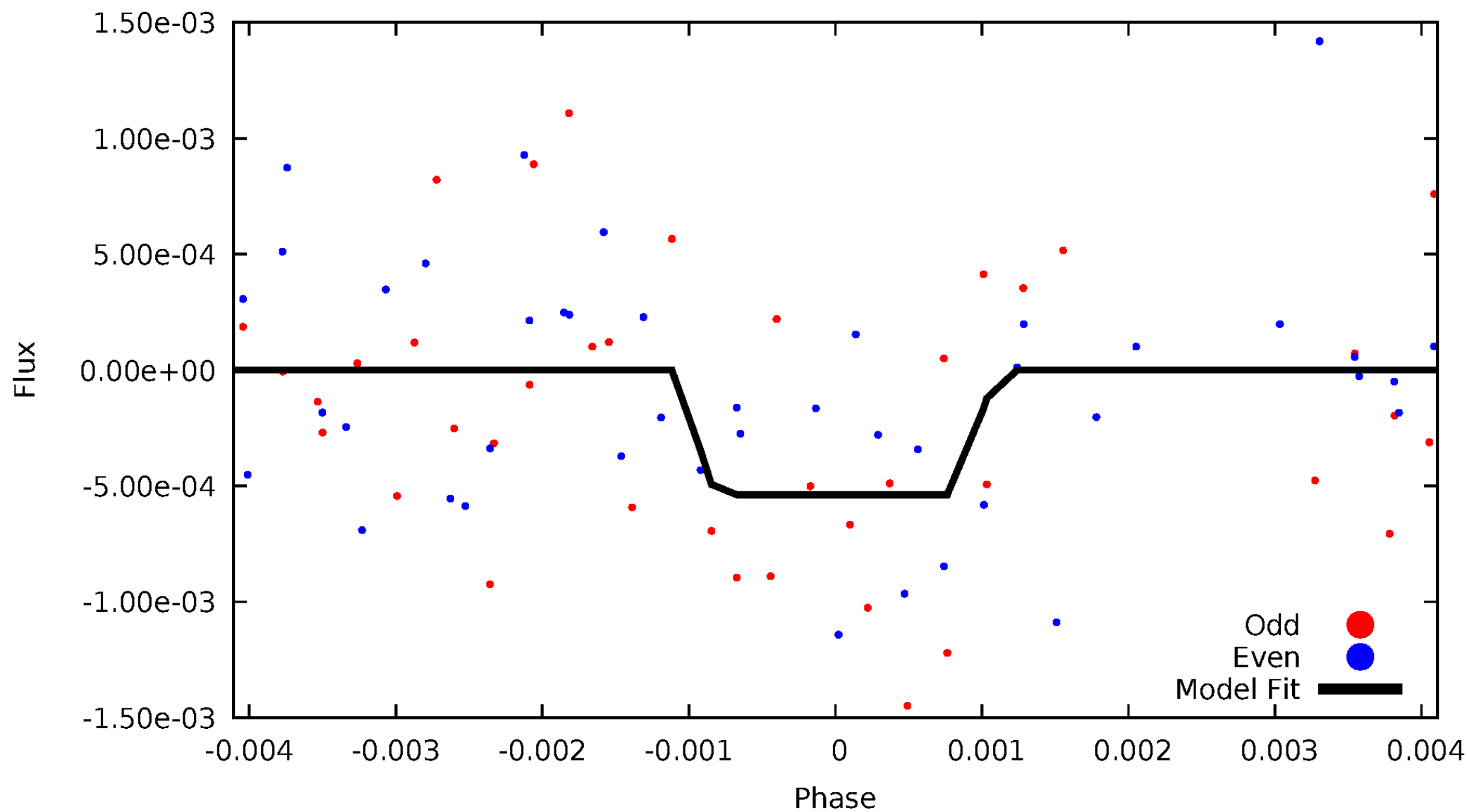
DV Odd/Even

TCE 007282085-03



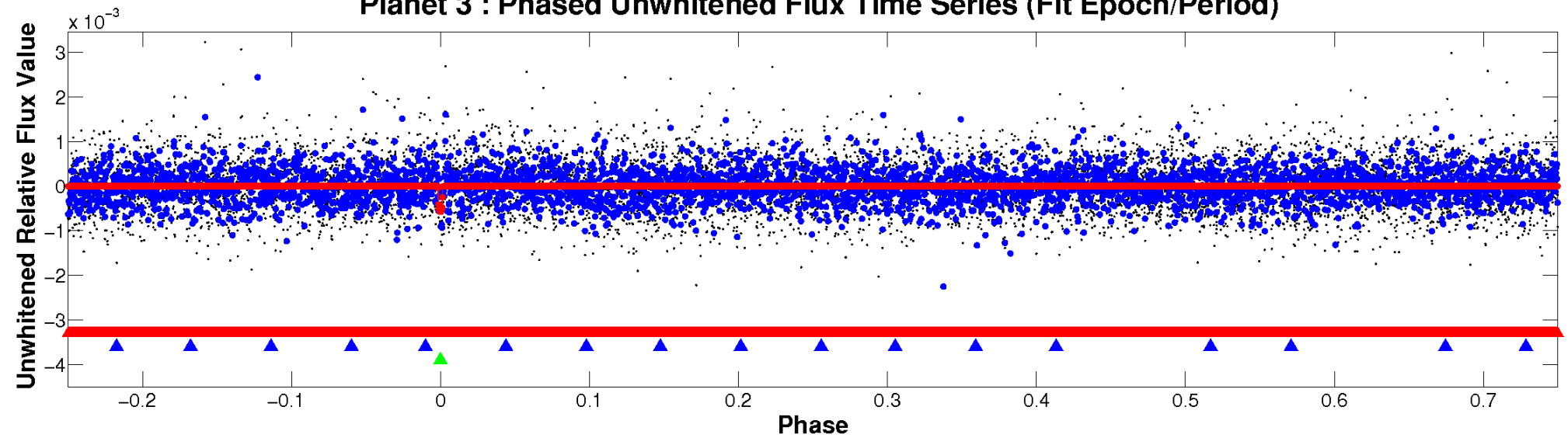
ALT Odd/Even

TCE 007282085-03

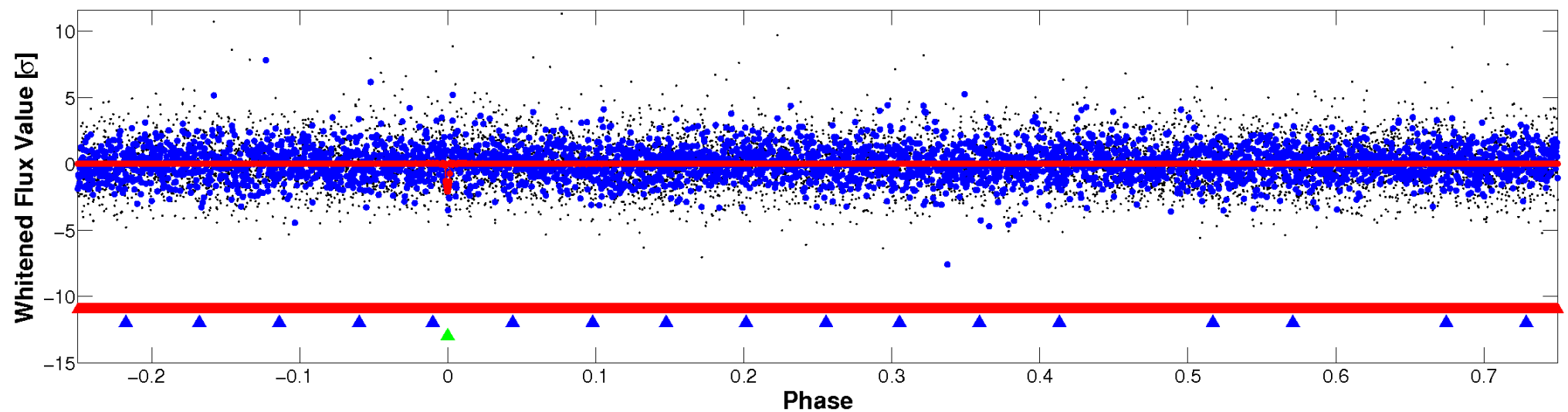


Non-Whitened Vs. Whitened Light Curve

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

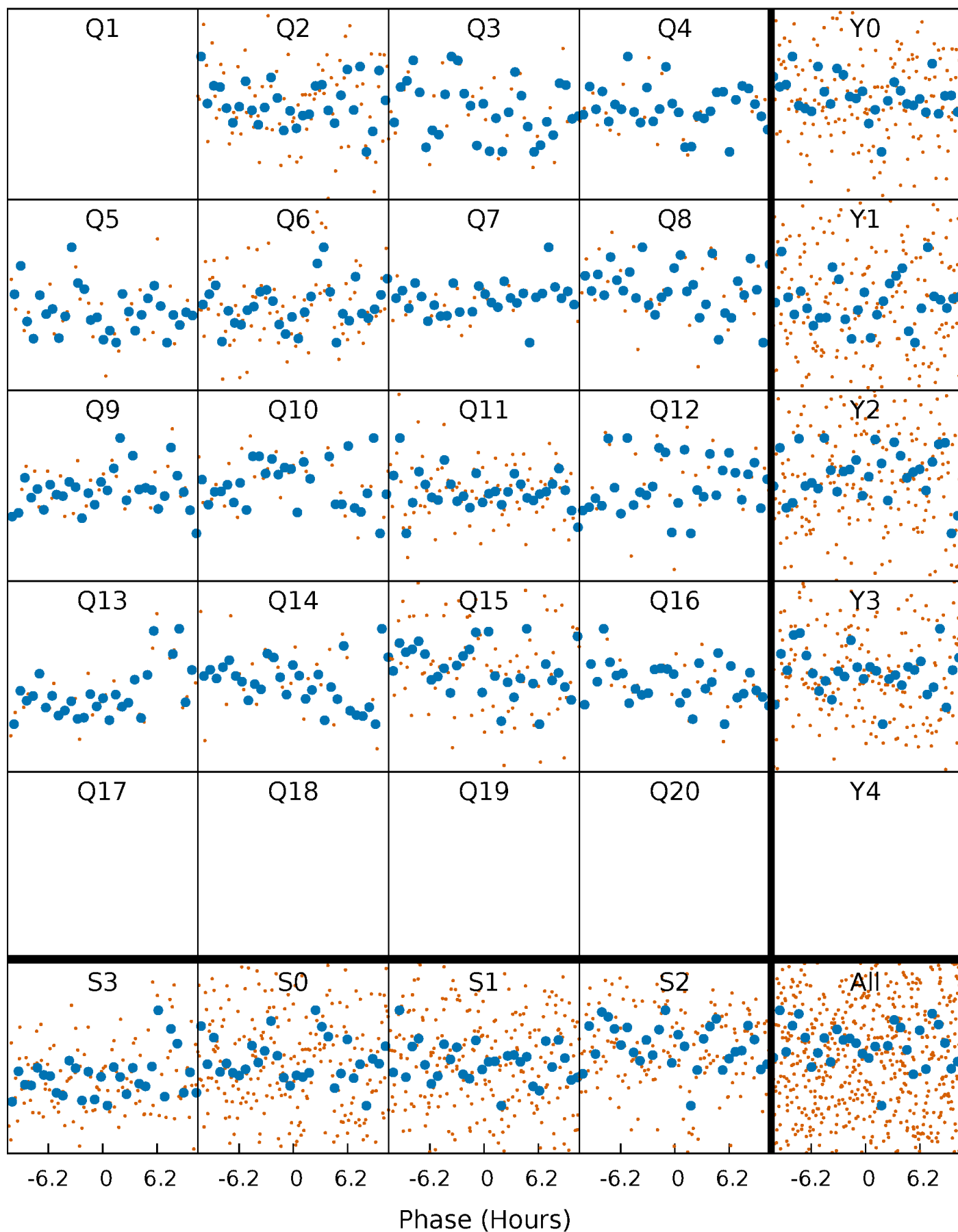


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



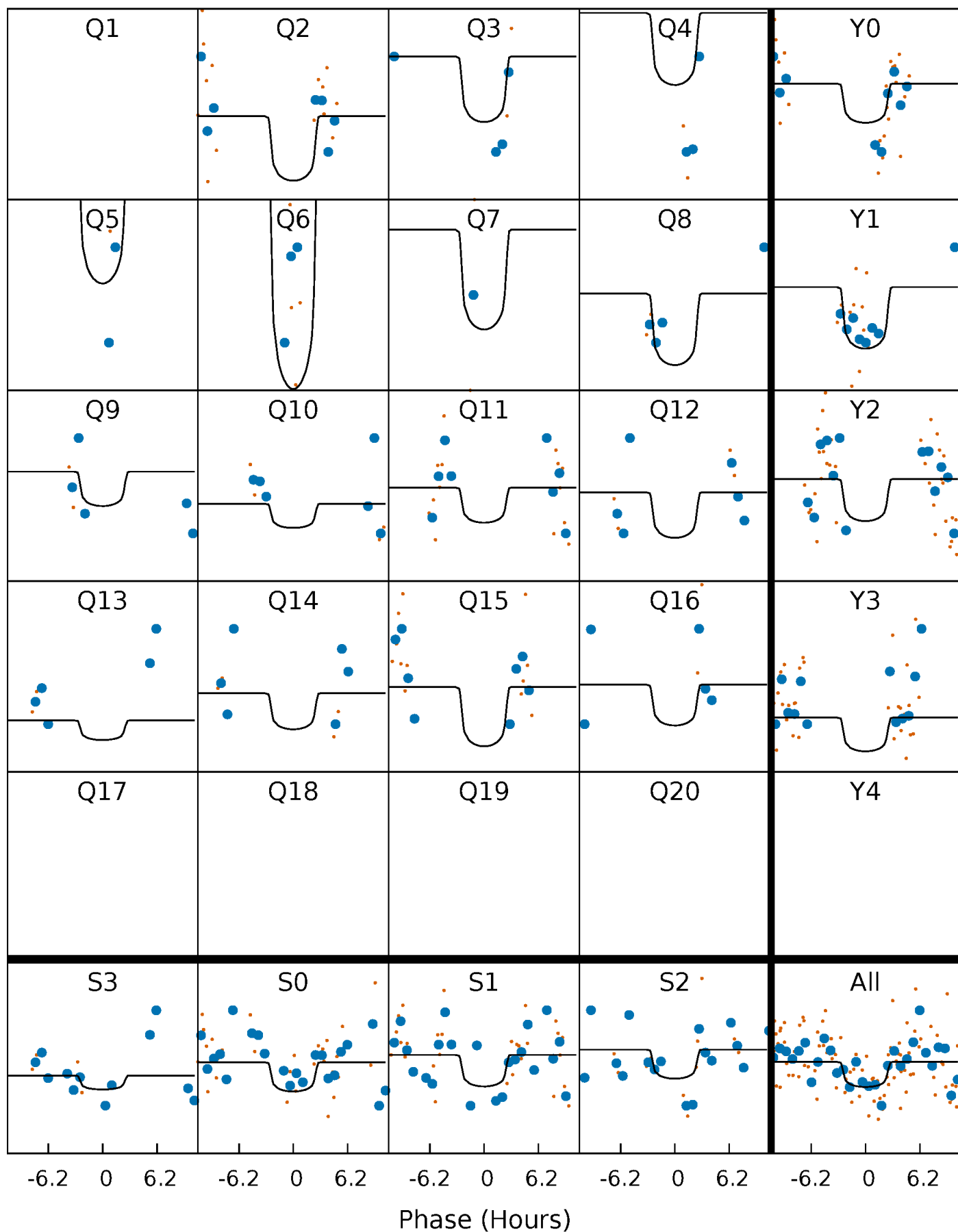
PDC Quarter-Phased Transit Curves

TCE 007282085-03 P= 75.406371 Days $T_0=175.667972$ (BKJD)



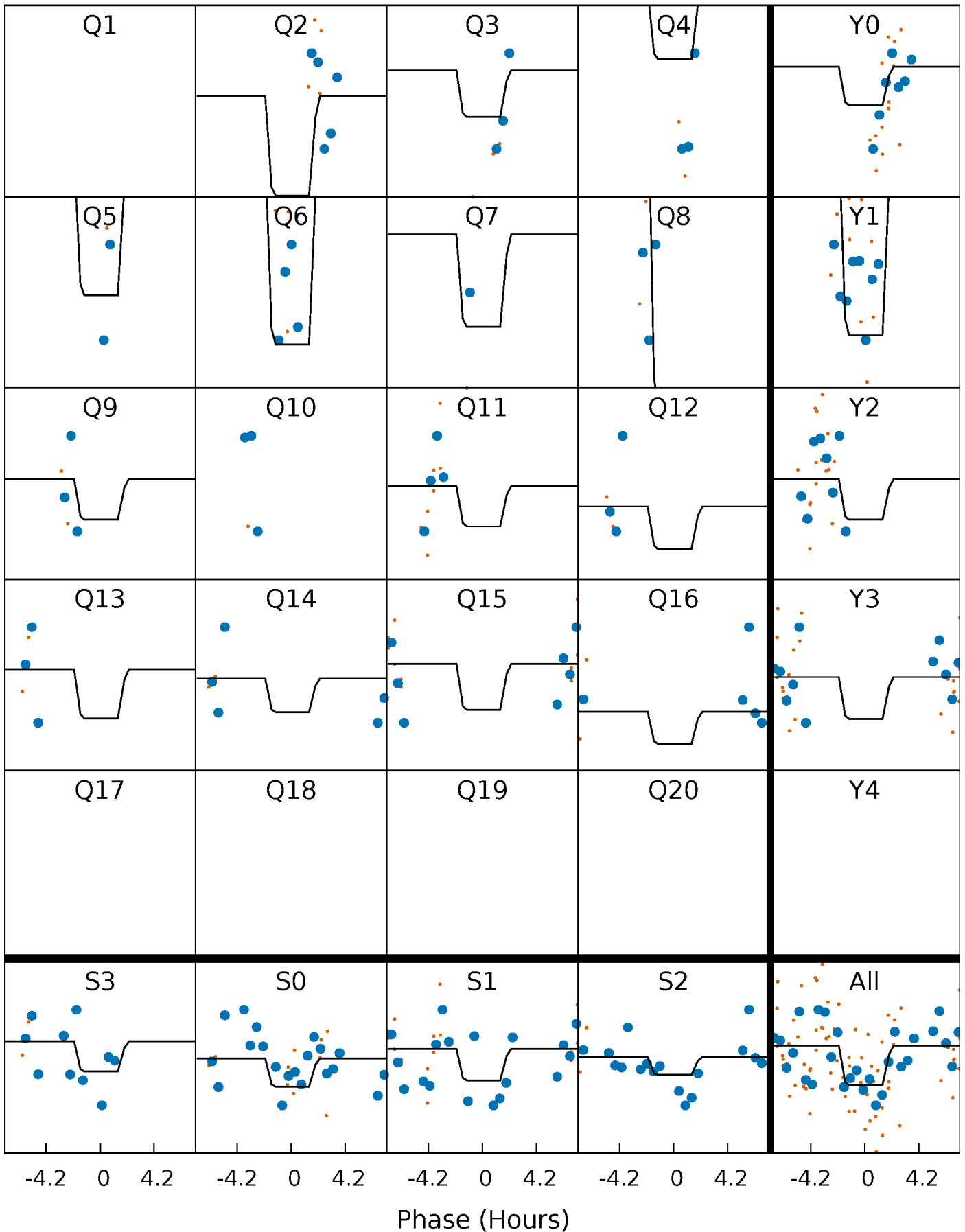
DV Quarter-Phased Transit Curves

TCE 007282085-03 P= 75.406371 Days $T_0=175.667972$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

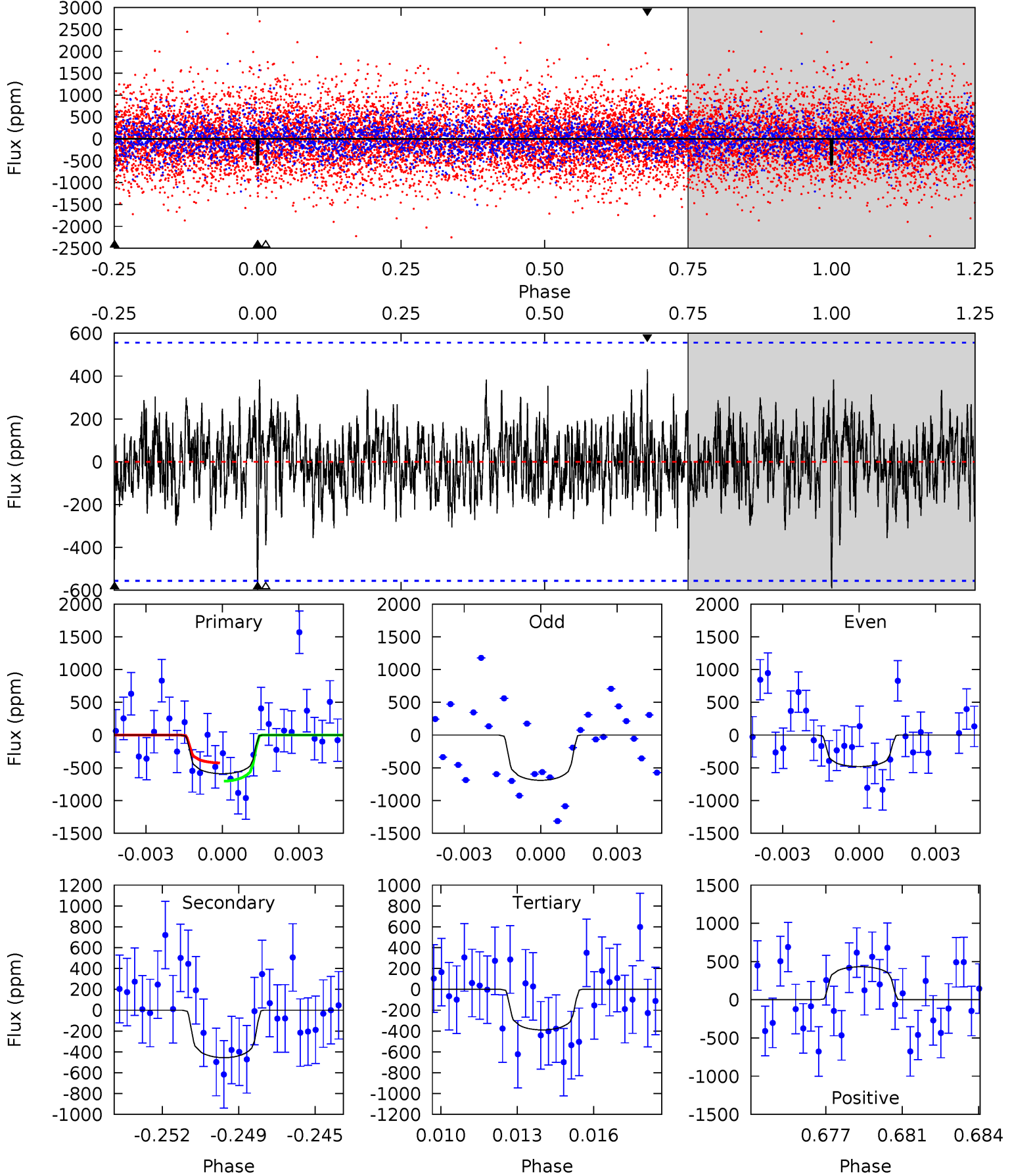
TCE 007282085-03 P= 75.396751 Days $T_0=175.720525$ (BKJD)



DV Model-Shift Uniqueness Test

007282085-03, P = 75.406371 Days, E = 100.261601 Days

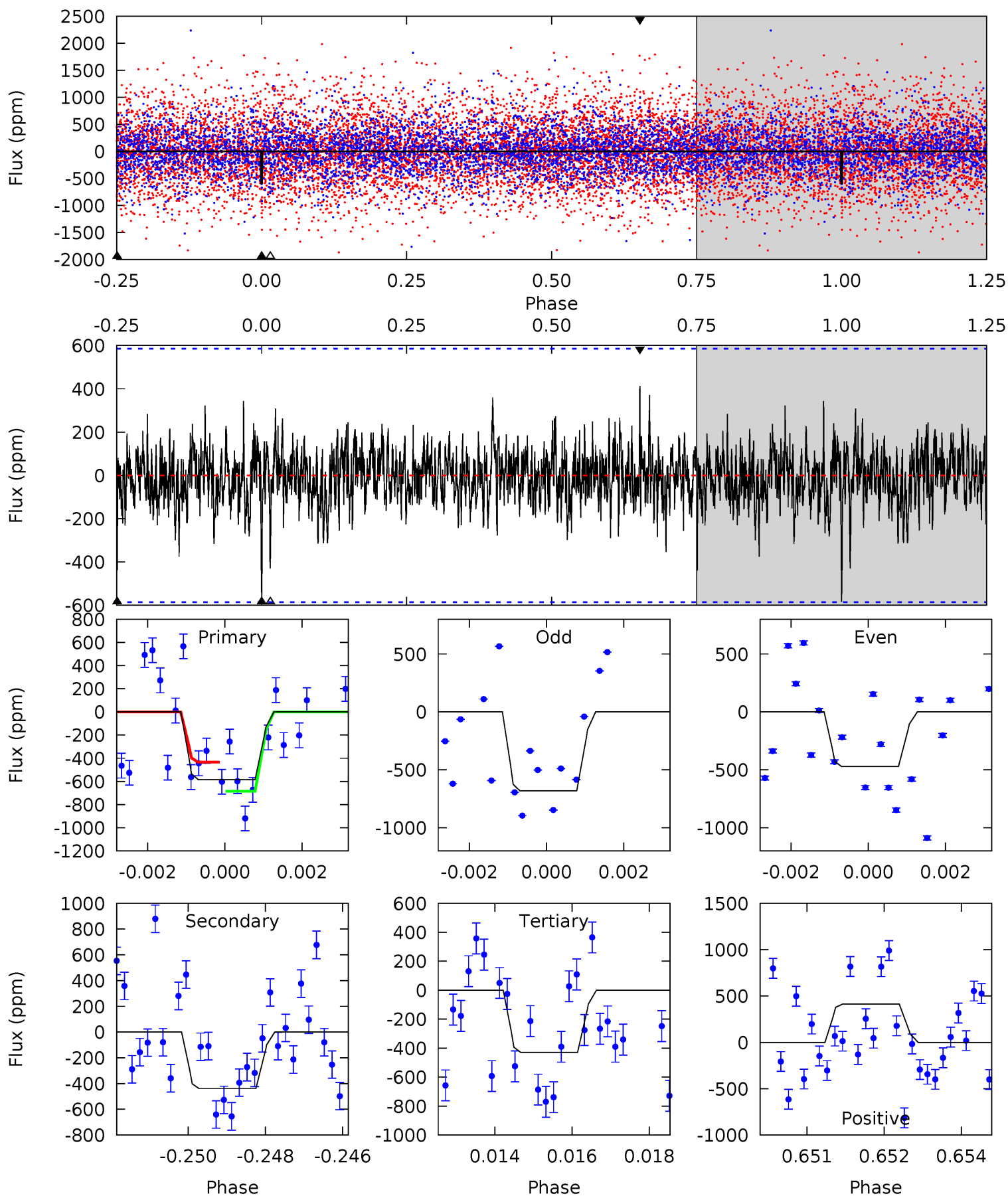
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.56	4.29	3.67	4.06	5.24	2.94	1.15	1.89	1.49	0.62	0.23	0.99	1.08	0.42	1.28



Alt Model-Shift Uniqueness Test

007282085-03, $P = 75.396751$ Days, $E = 100.323774$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.32	4.00	3.91	3.76	5.33	3.10	0.93	1.41	1.56	0.09	0.24	0.96	1.03	0.41	1.11



Stellar Parameters For KIC 007282085

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6250^{+169}_{-225}	$4.472^{+0.060}_{-0.180}$	$-0.260^{+0.250}_{-0.350}$	$0.986^{+0.271}_{-0.116}$	$1.052^{+0.134}_{-0.147}$	$1.544^{+0.397}_{-0.772}$
	+3%/-4%	+1%/-4%	+96%/-135%	+27%/-12%	+13%/-14%	+26%/-50%
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 007282085-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-456 ± 106	$3.26^{+2.54}_{-2.05}$	649^{+40}_{-30}	5335^{+3631}_{-1144}	3002^{+16954}_{-2117}
Alt.	-439 ± 110	$3.24^{+2.54}_{-1.94}$	654^{+41}_{-32}	5325^{+3422}_{-1161}	2864^{+15995}_{-2009}

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 $A_{obs} \gg 1.0$

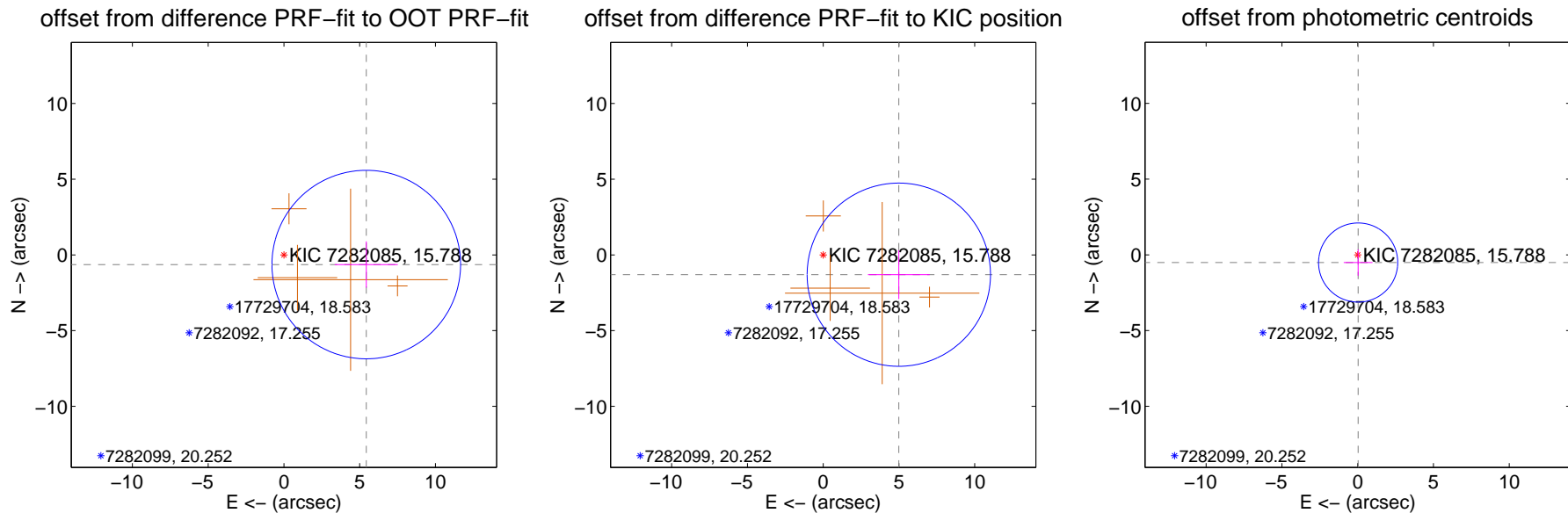
DV Centroid Data

Supplemental centroid analysis for 007282085-03. Kepler magnitude: 15.79. Transit SNR 7.66

There are 0 quarters with good PRF difference image offsets

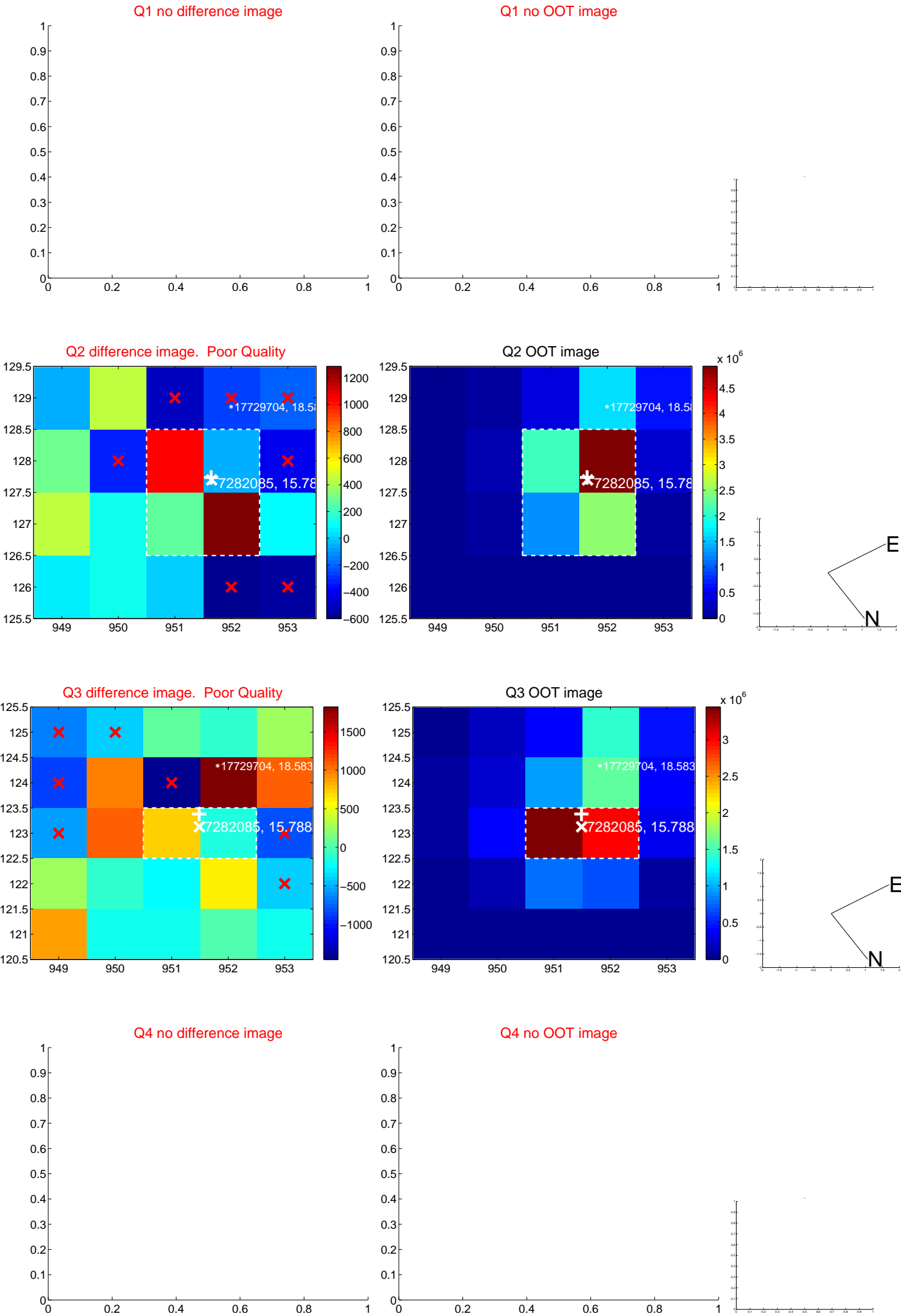
The direct PRF centroid is offset from the target star catalog position by about 0.88 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.472 ± 2.075	2.64	-5.435 ± 2.081	-0.638 ± 1.533
PRF-fit source offset from KIC position	5.160 ± 2.017	2.56	-4.992 ± 2.042	-1.307 ± 1.615
photometric centroid source offset	0.51 ± 0.87	0.59	-0.03 ± 0.95	-0.51 ± 0.87

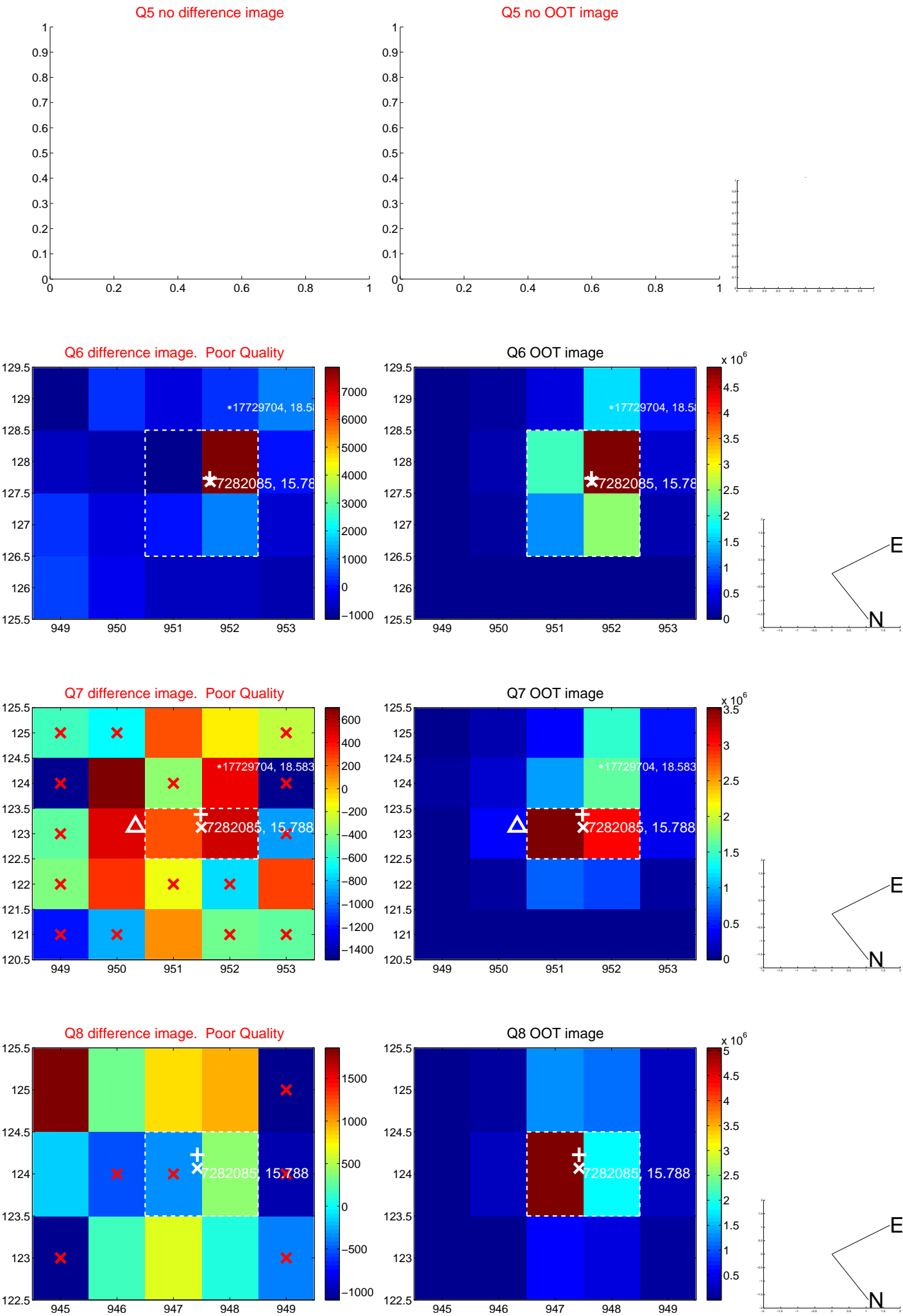


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

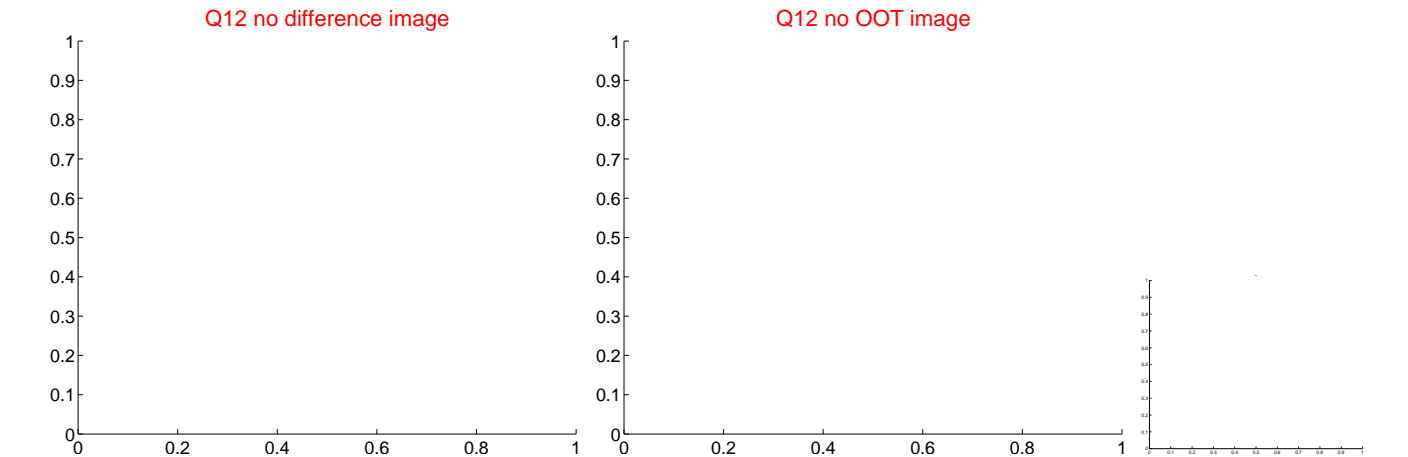
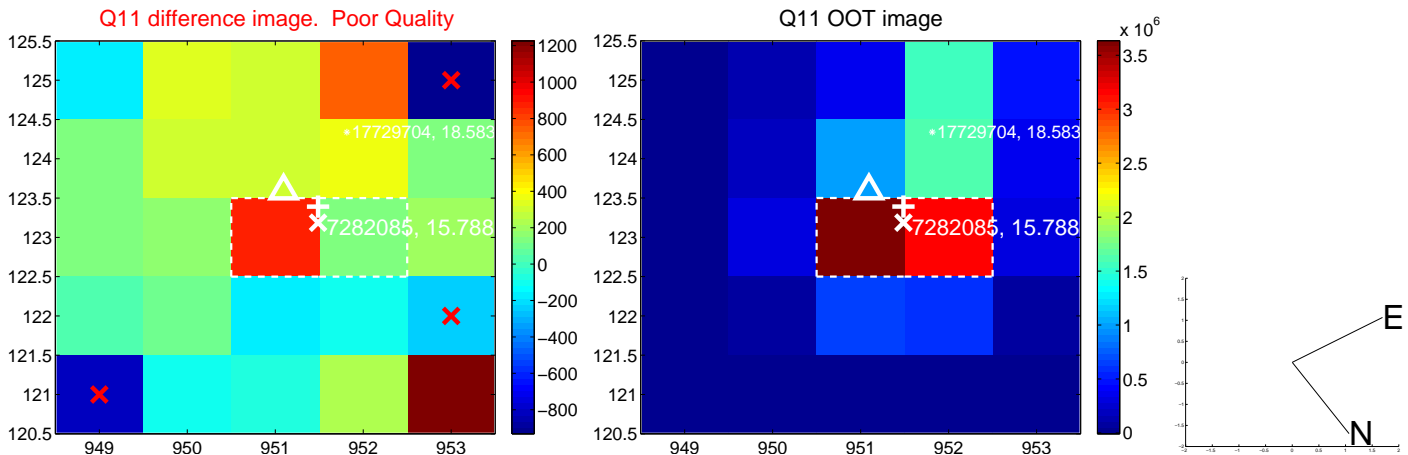
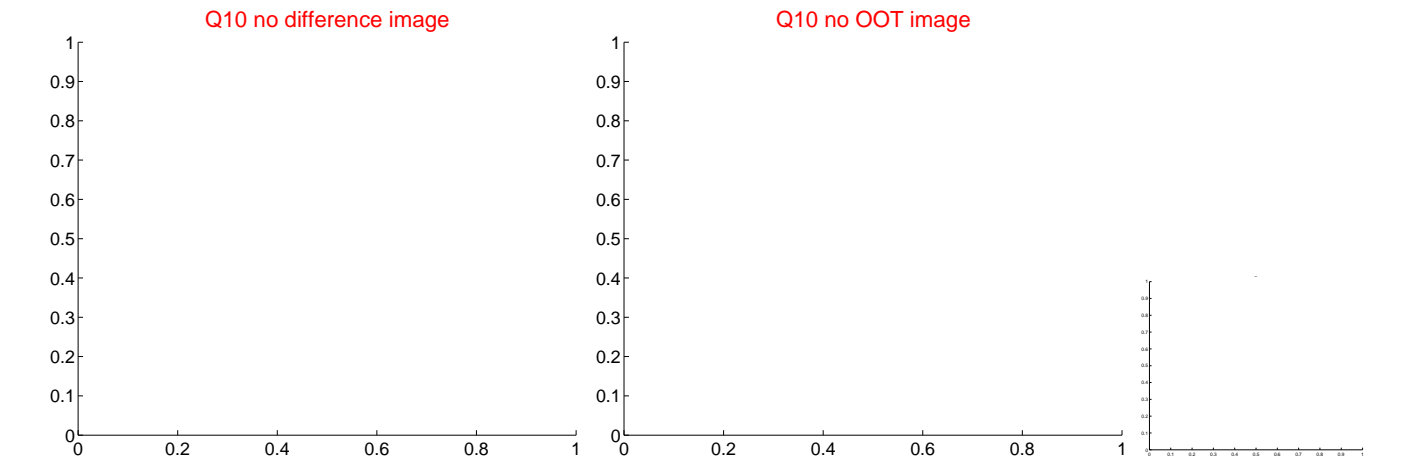
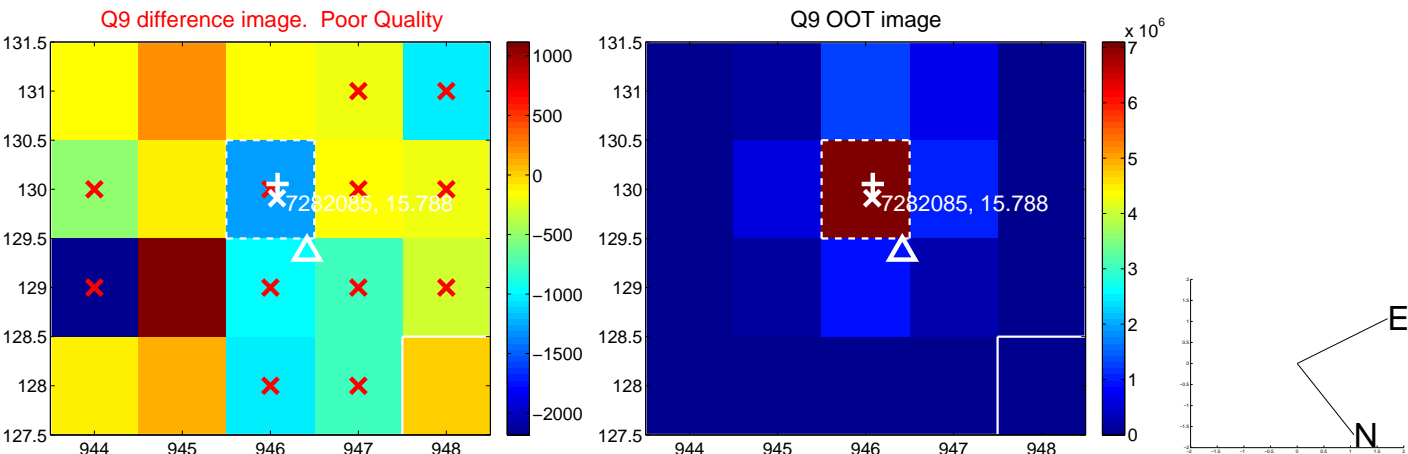
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



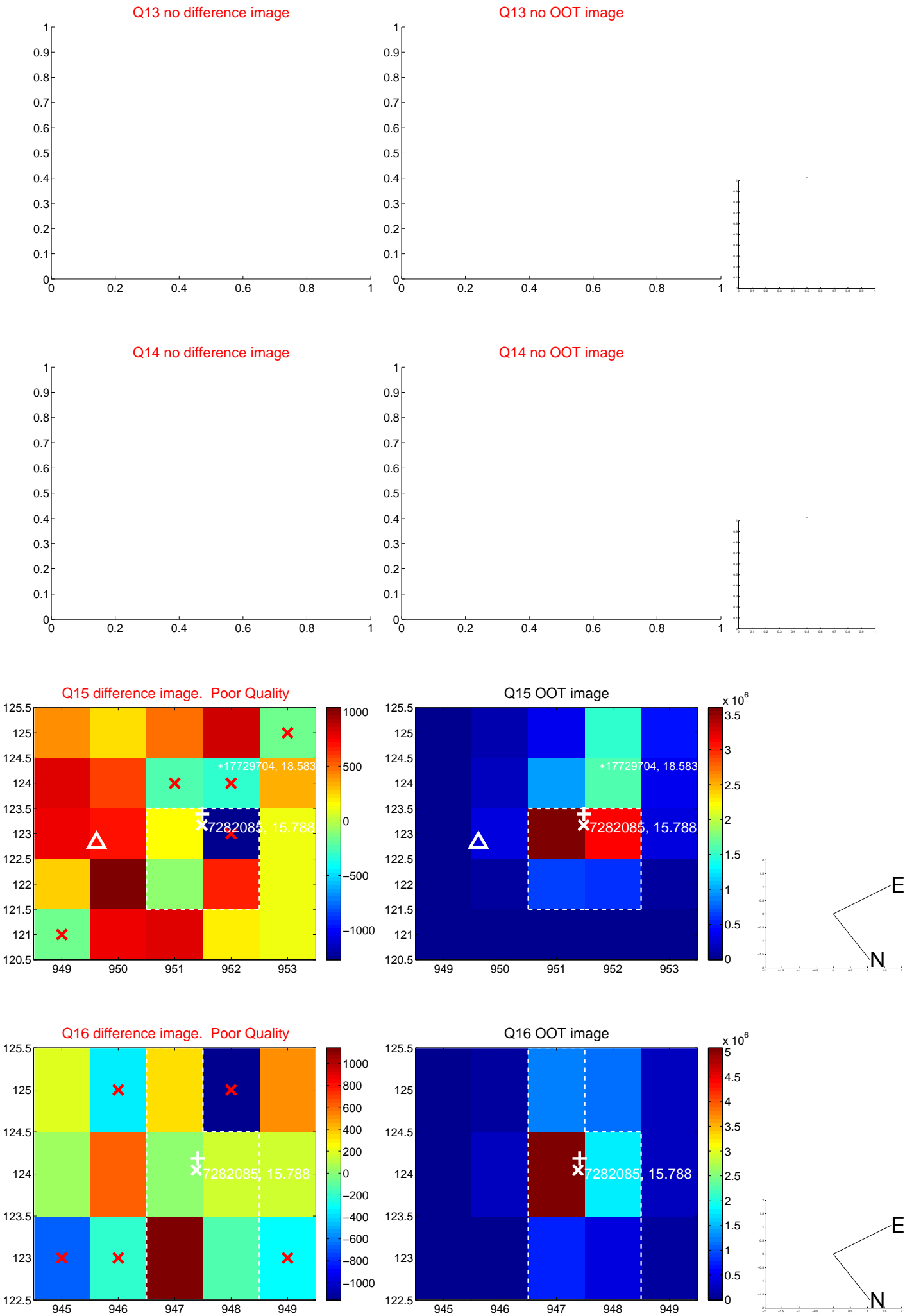
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



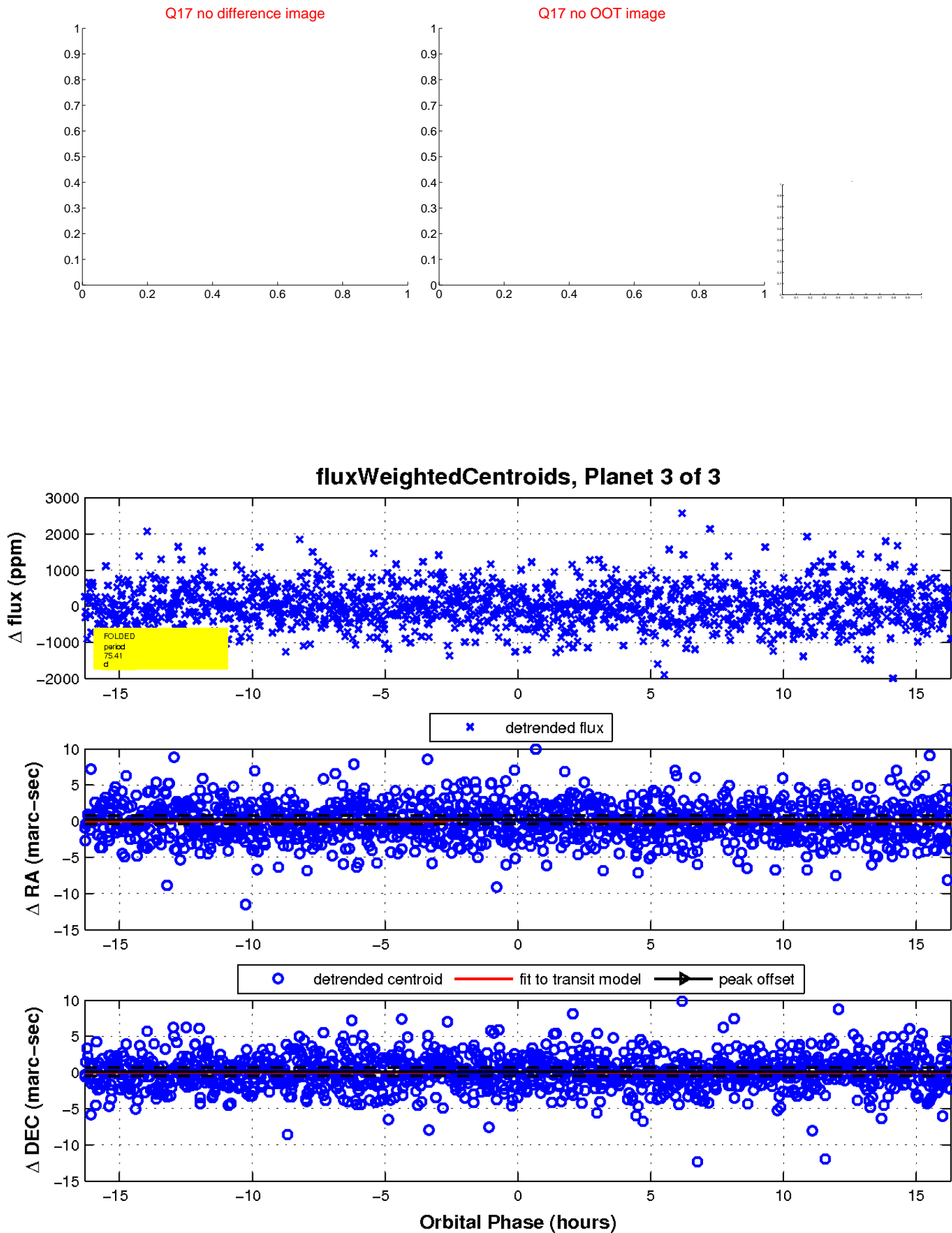
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

