

KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
002583748-03	OBS	No	40.977339	133.476021	380.4	5.000	9.7	-1.0	1.82	6975	3.58	110.81
002583748-05	OBS	No	99.753293	171.638886	1736.8	3.102	9.1	8.5	1.82	6975	13.98	33.84
002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

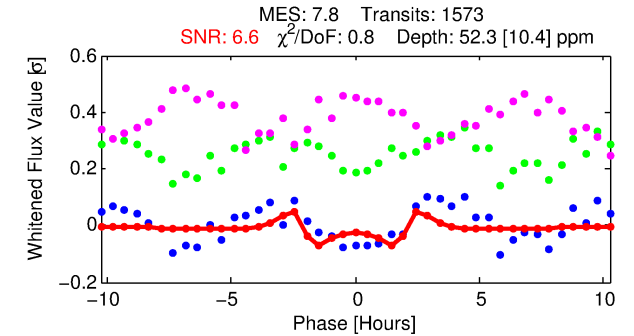
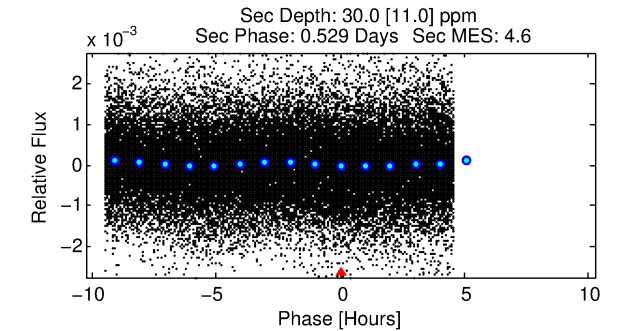
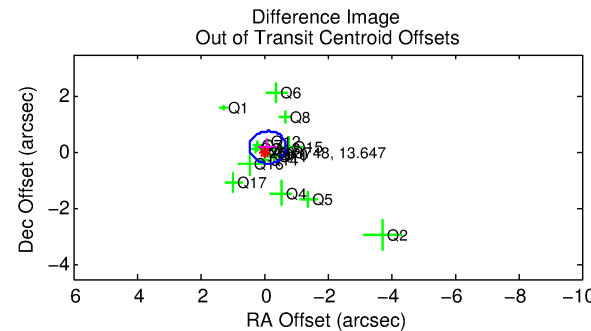
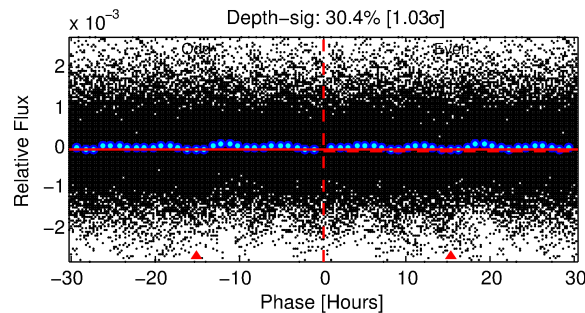
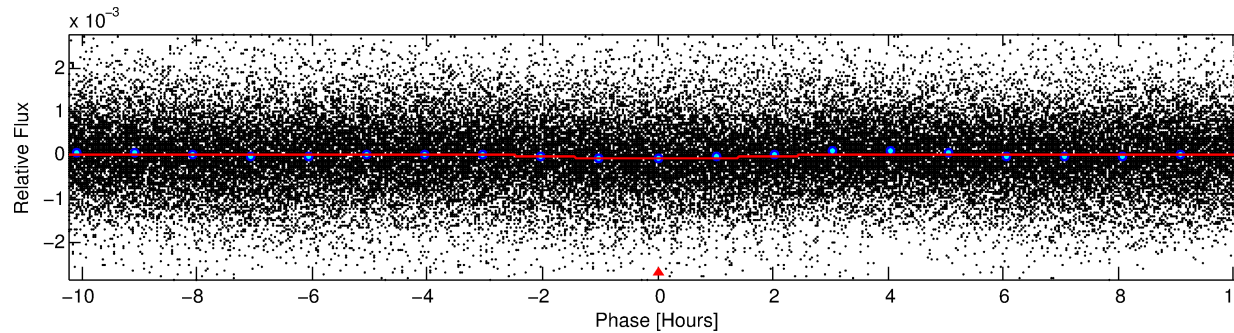
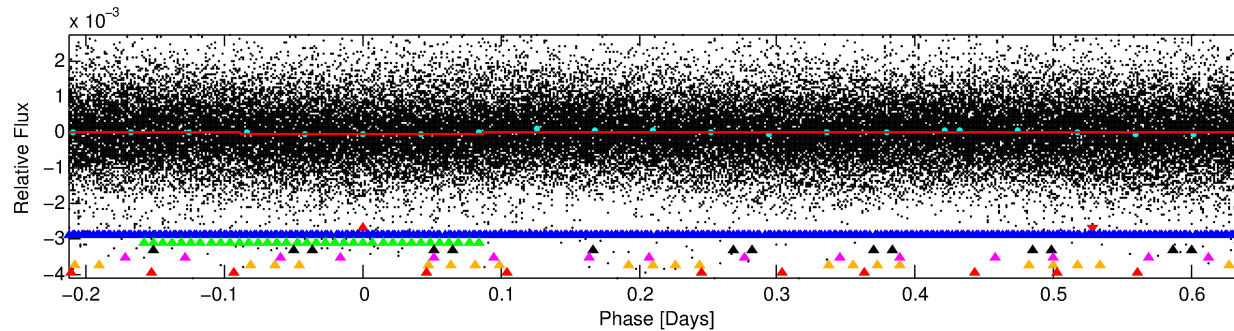
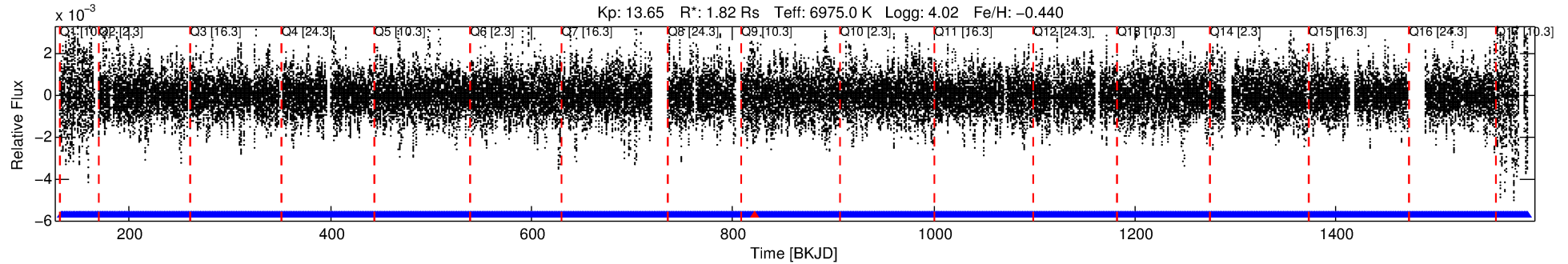
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-01

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 1 of 7 Period: 0.854 d



DV Fit Results:

Period = 0.85355 [0.00001] d
Epoch = 132.1681 [0.0030] BKJD
Rp/R* = 0.0085 [0.0009]
a/R* = 1.05 [0.02]
b = 0.97 [0.01]
Seff = 19334.62 [10588.72]
Teq = 3007 [412] K
Rp = 1.68 [0.59] Re
a = 0.0190 [0.0062] AU
Ag = 2.13 [1.44] [0.78 σ]
Teffp = 5617 [647] K [3.40 σ]

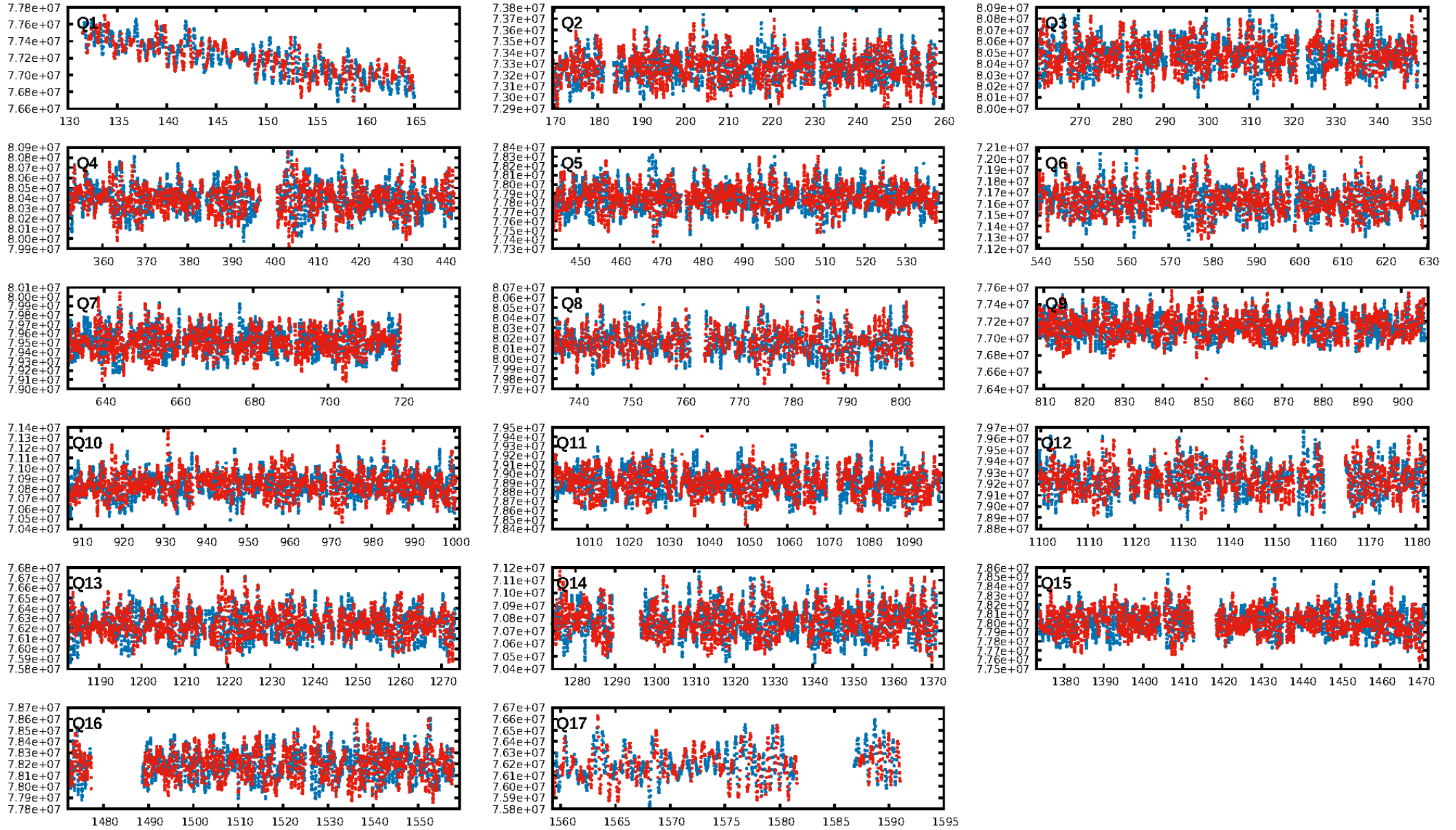
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [10.02 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1501/1502]
GhostDiagnostic-chr: 1.641
Centroid-sig: 0.0%
Centroid-so: 1.746 arcsec [3.32 σ]
OotOffset-rm: 0.221 arcsec [1.15 σ]
KicOffset-rm: 0.194 arcsec [1.01 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

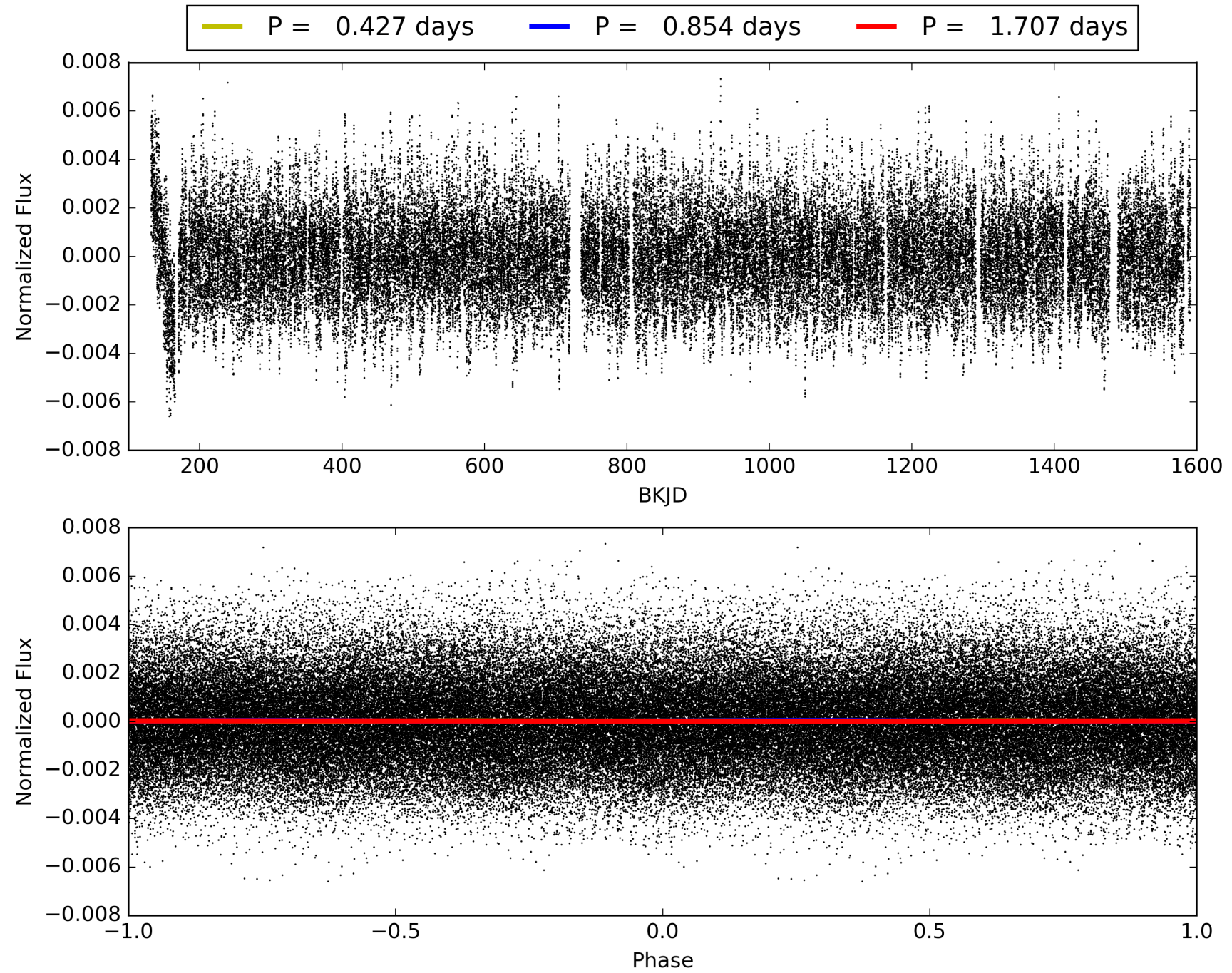
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:29 Z

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

TCE 002583748-01, PDC Light Curves

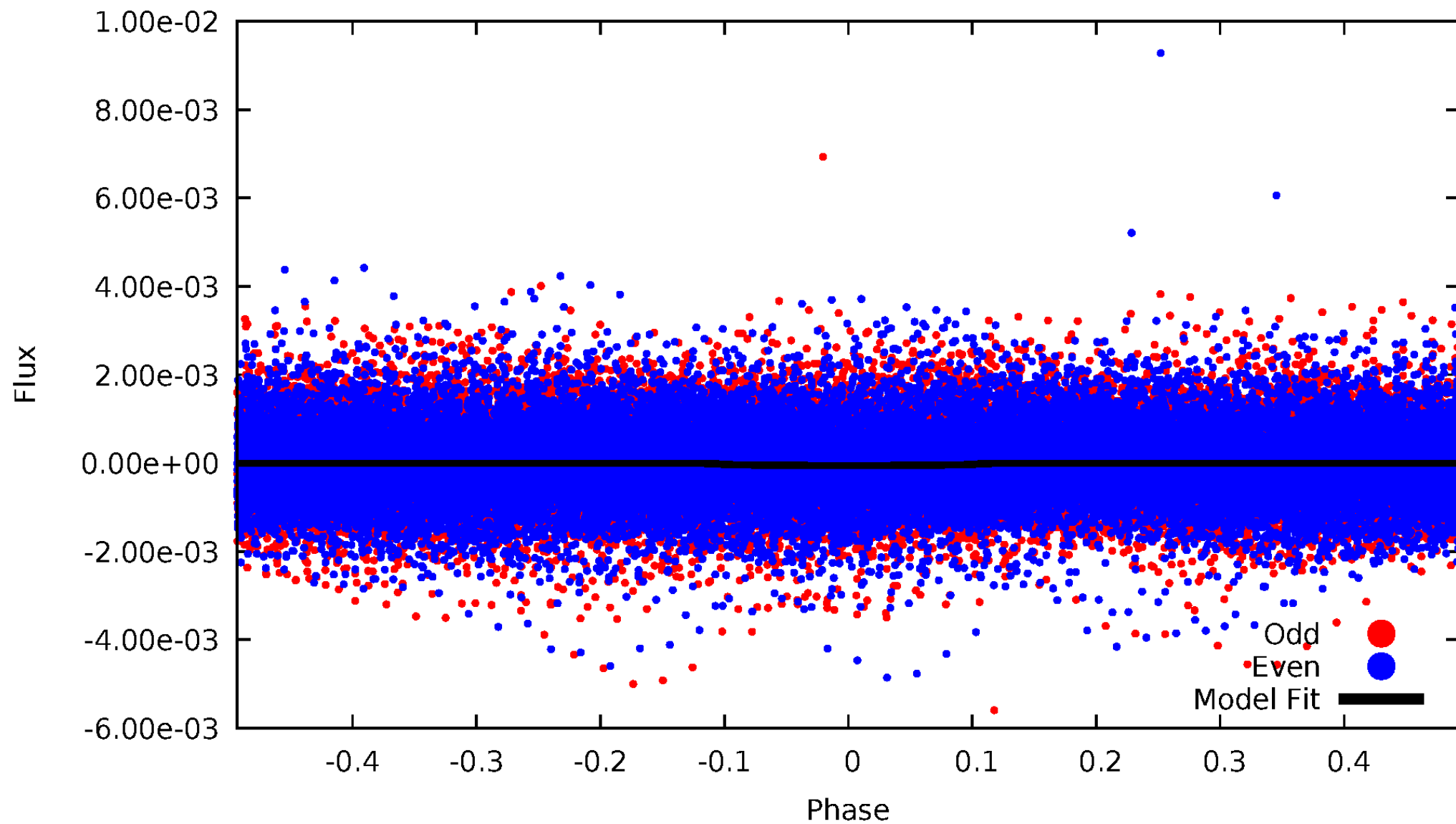


TCE 002583748-01



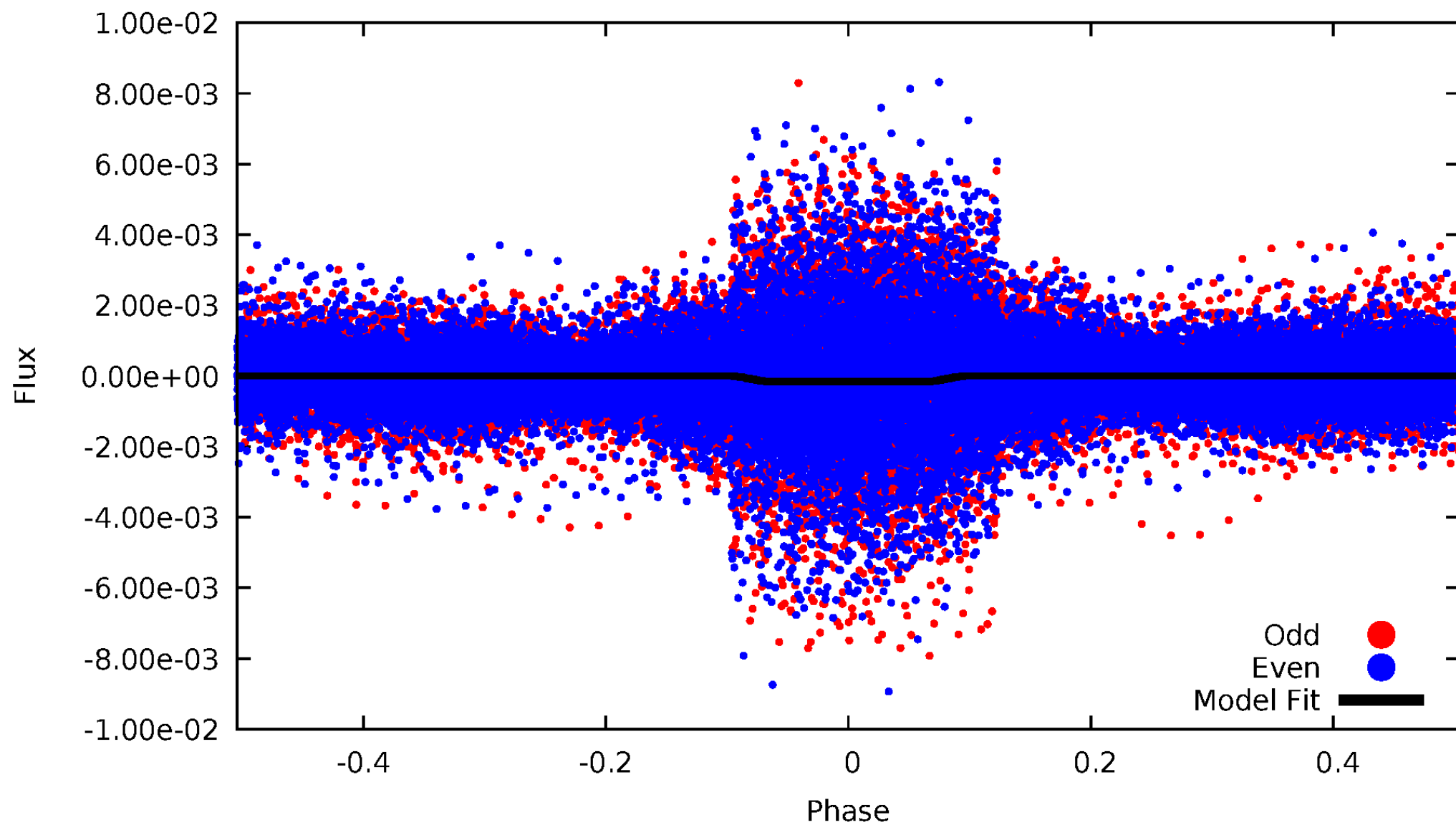
DV Odd/Even

TCE 002583748-01

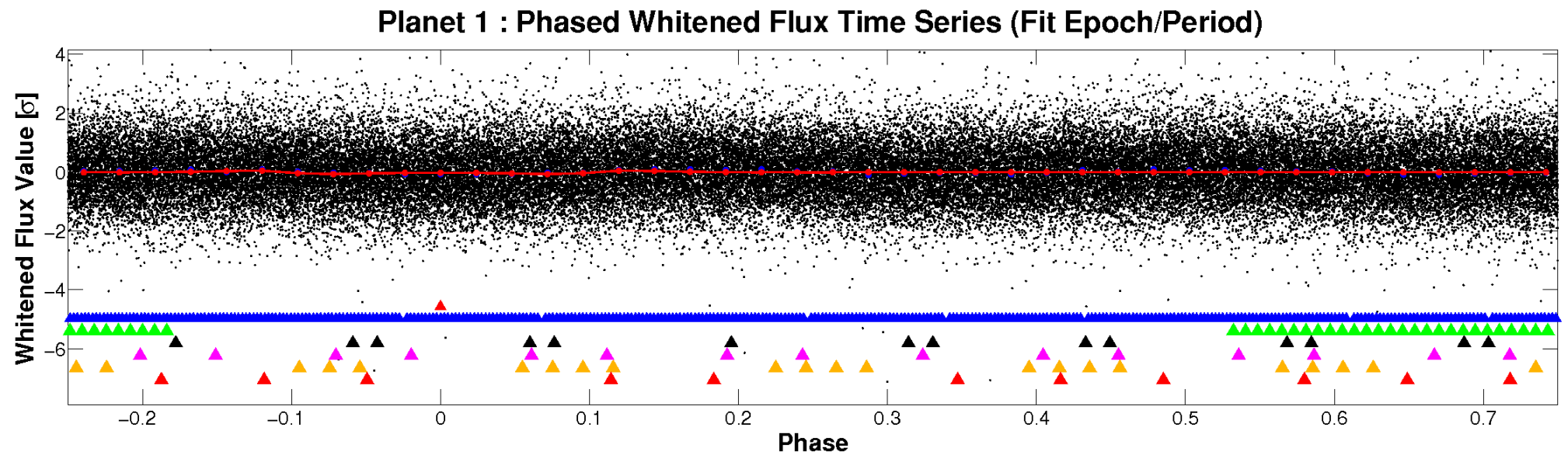
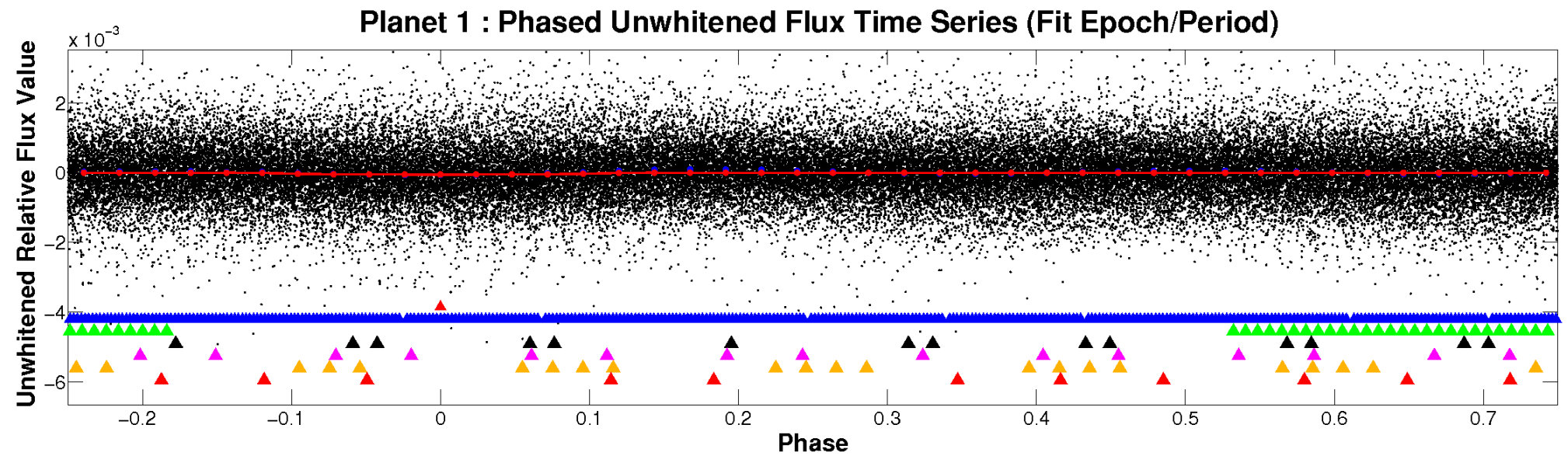


ALT Odd/Even

TCE 002583748-01

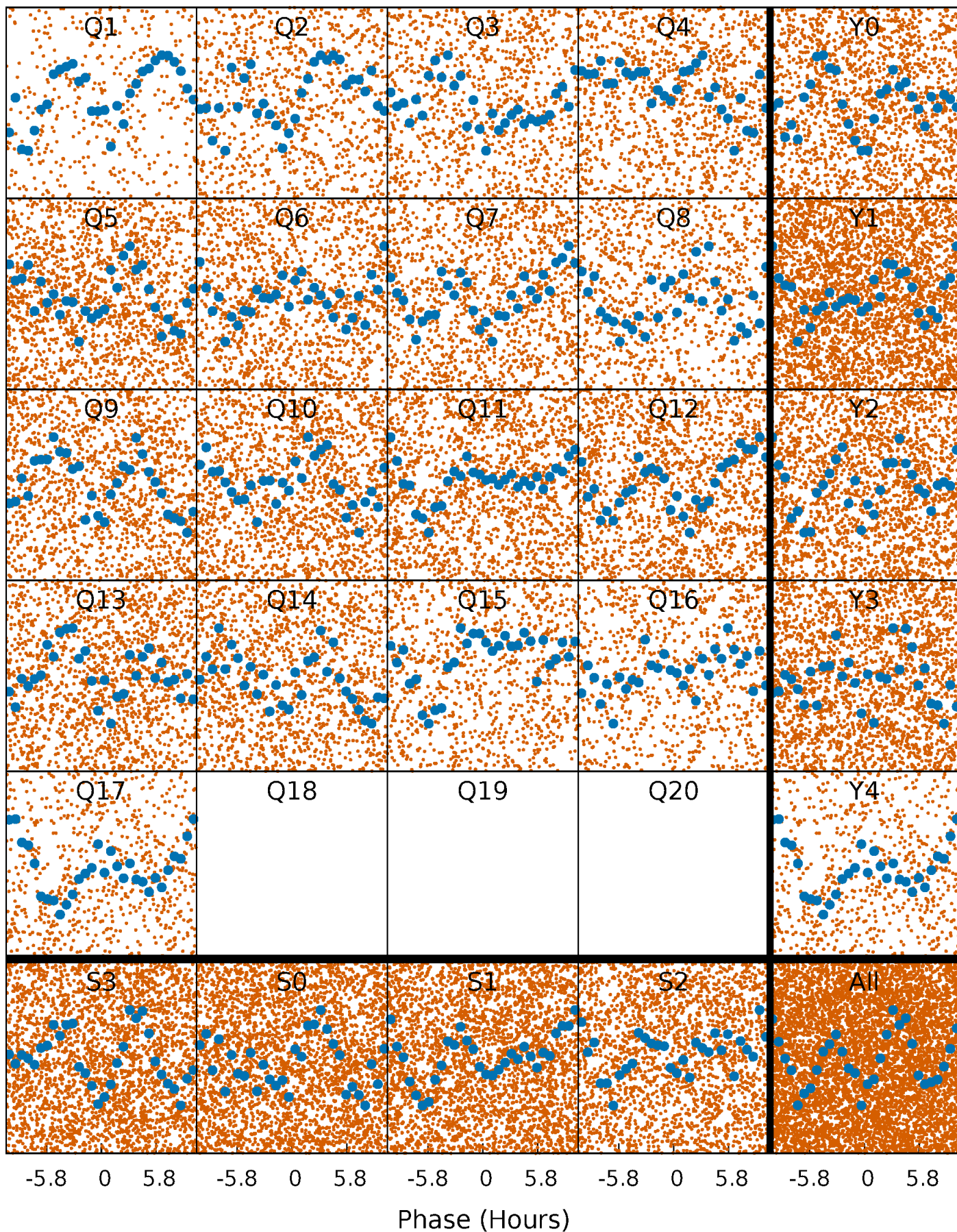


Non-Whitened Vs. Whitened Light Curve



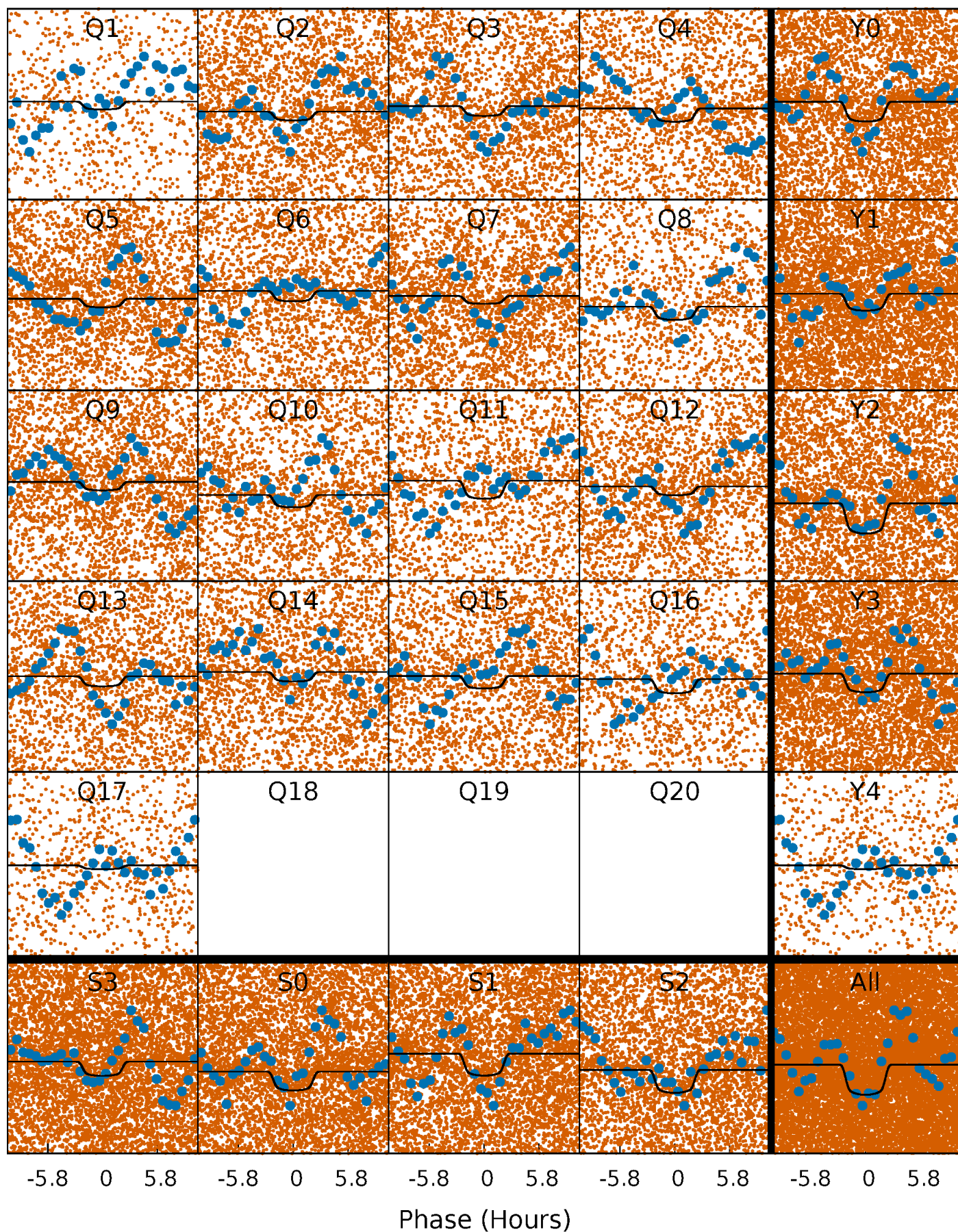
PDC Quarter-Phased Transit Curves

TCE 002583748-01 P= 0.853550 Days $T_0=132.168147$ (BKJD)



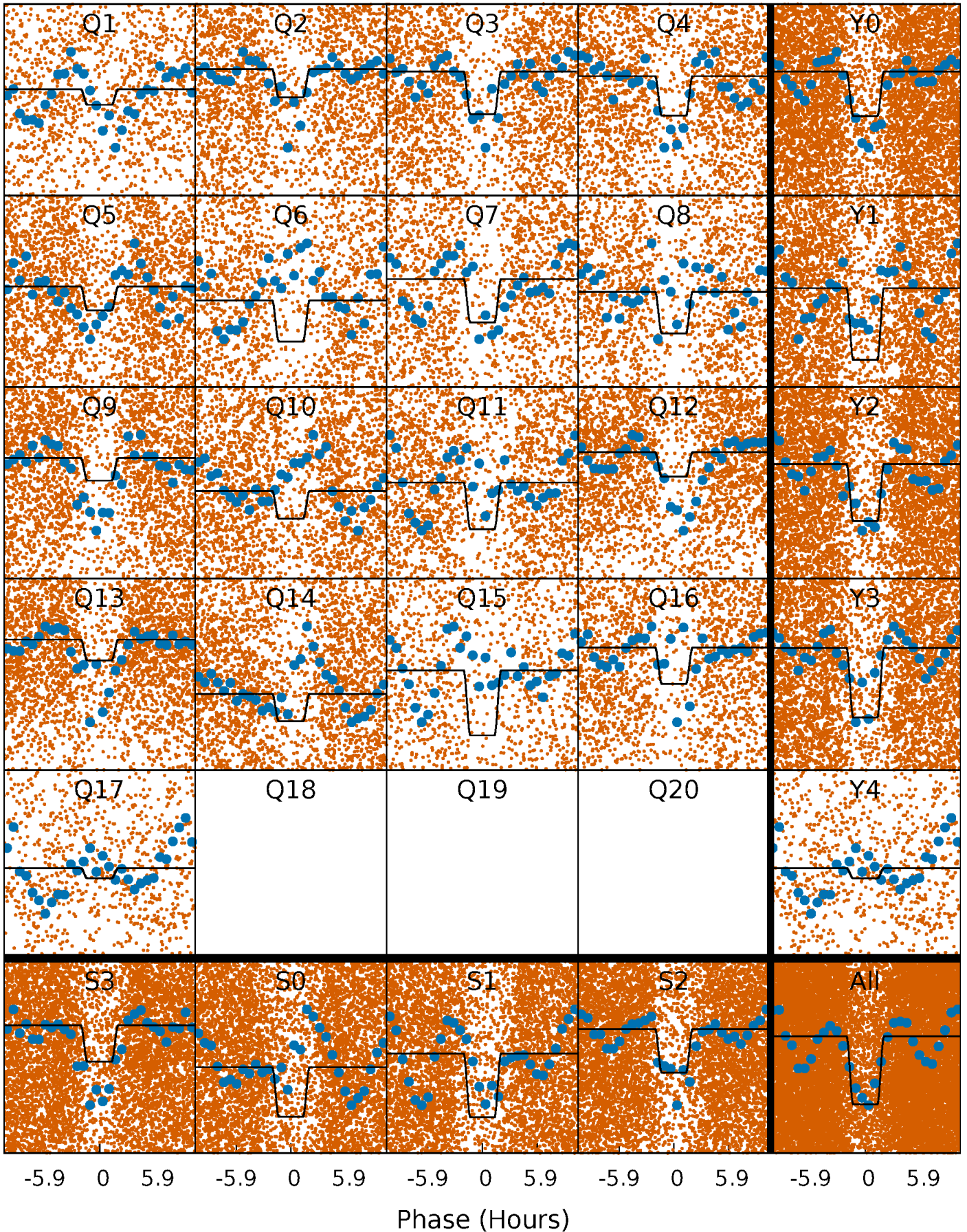
DV Quarter-Phased Transit Curves

TCE 002583748-01 P= 0.853550 Days $T_0=132.168147$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

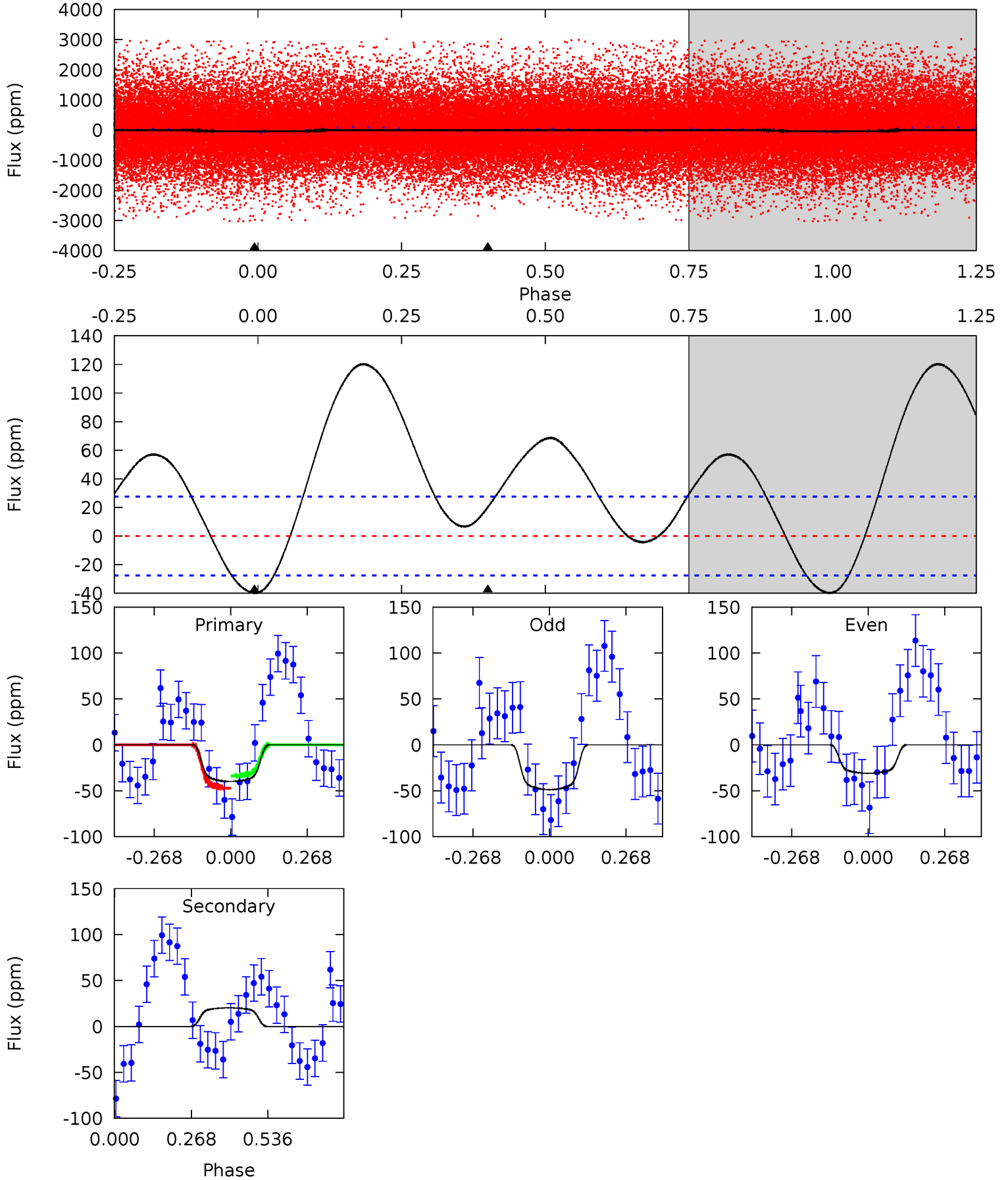
TCE 002583748-01 P= 0.853599 Days $T_0=132.134323$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-01, P = 0.853550 Days, E = 131.314597 Days

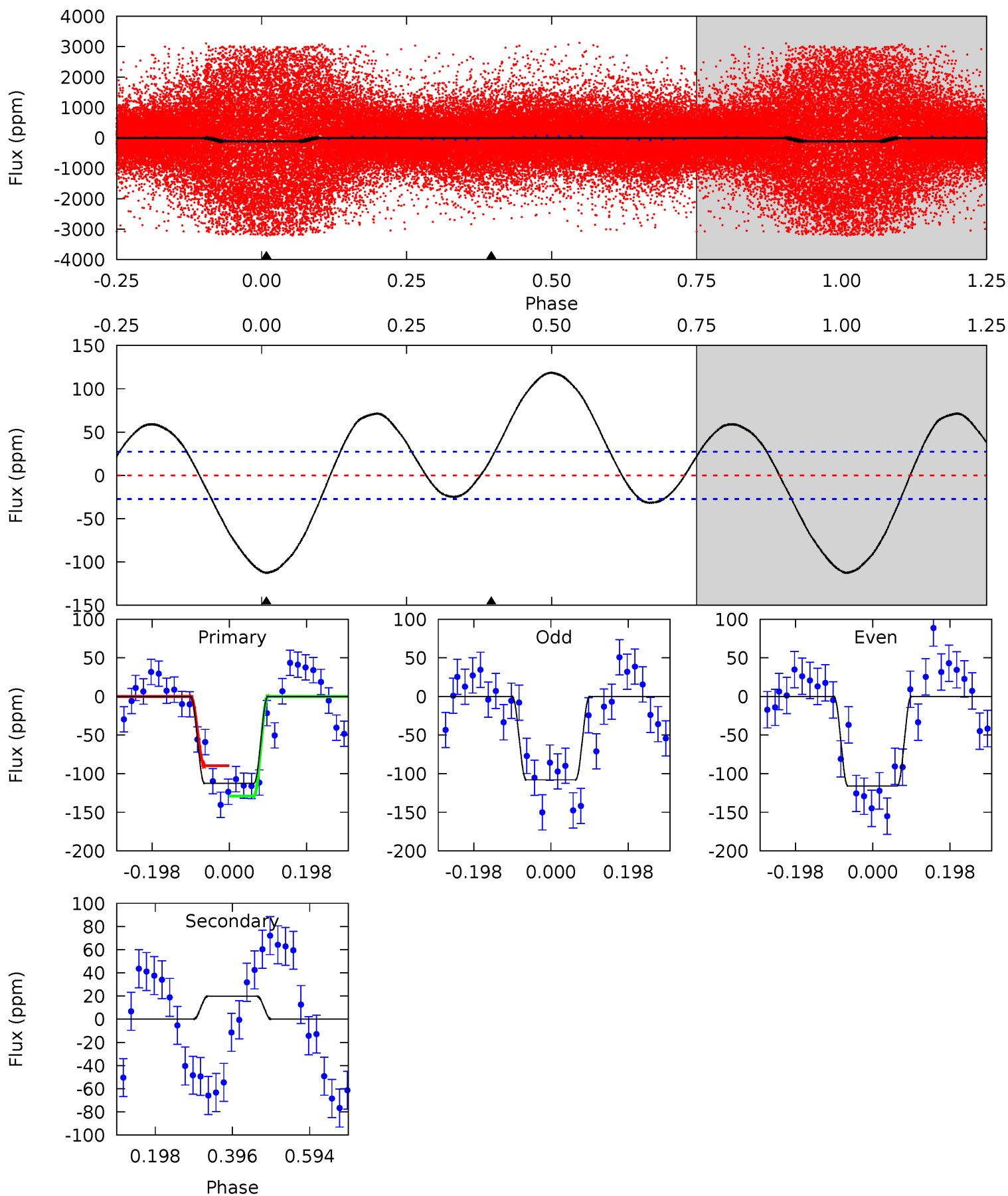
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.30	-3.19	0	0	4.35	1.11	1.52	6.30	6.30	-3.19	-3.19	1.49	0.70	0.75	1.10



Alt Model-Shift Uniqueness Test

002583748-01, P = 0.853599 Days, E = 131.280724 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	-3.19	0	0	4.42	1.29	4.94	18.2	18.2	-3.19	-3.19	0.66	1.66	0.51	3.44



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	20 ± 6	$1.66^{+0.32}_{-0.35}$	4155^{+319}_{-396}	-5299^{+413}_{-455}	$-1.442^{+0.565}_{-1.004}$
Alt.	20 ± 6	$2.43^{+0.44}_{-0.45}$	4144^{+320}_{-403}	-4668^{+269}_{-262}	$-0.661^{+0.250}_{-0.419}$

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

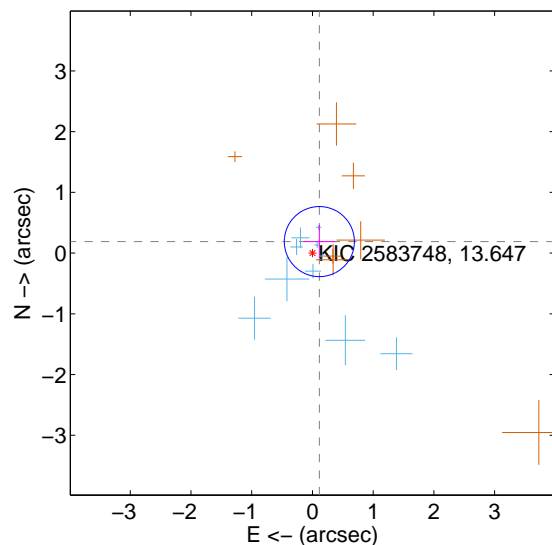
Supplemental centroid analysis for 002583748-01. Kepler magnitude: 13.65. Transit SNR 6.59

There are 10 quarters with good PRF difference image offsets

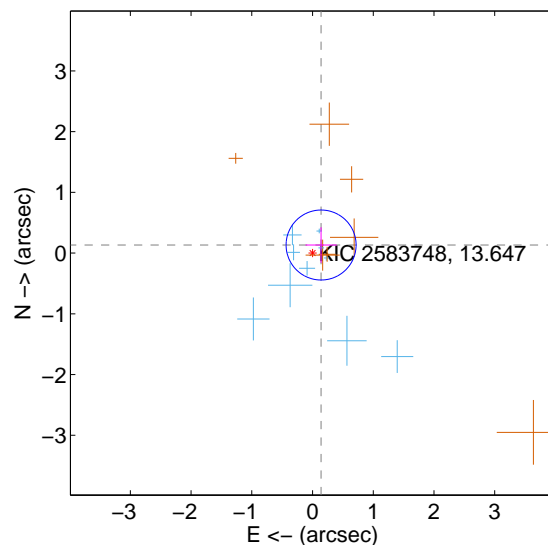
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.221 ± 0.192	1.15	-0.114 ± 0.260	0.190 ± 0.271
PRF-fit source offset from KIC position	0.194 ± 0.192	1.01	-0.141 ± 0.257	0.133 ± 0.293
photometric centroid source offset	1.75 ± 0.53	3.32	-0.42 ± 0.49	-1.69 ± 0.53

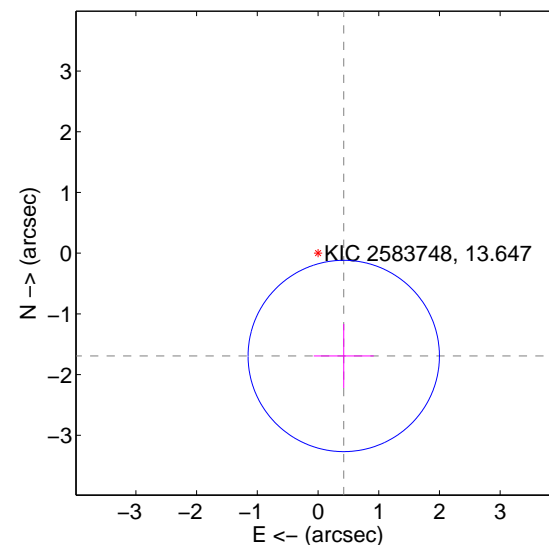
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

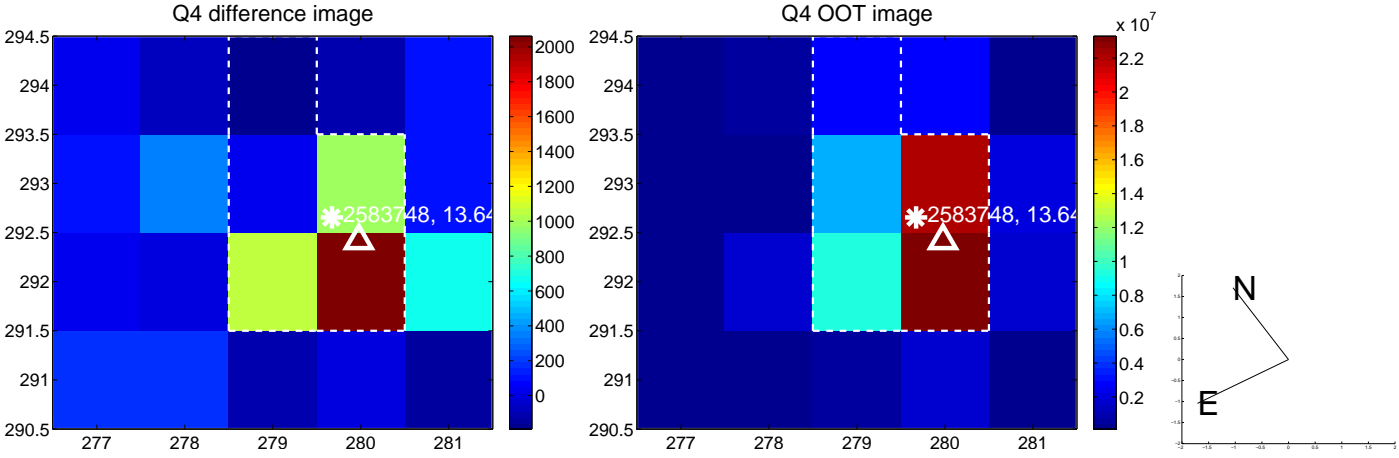
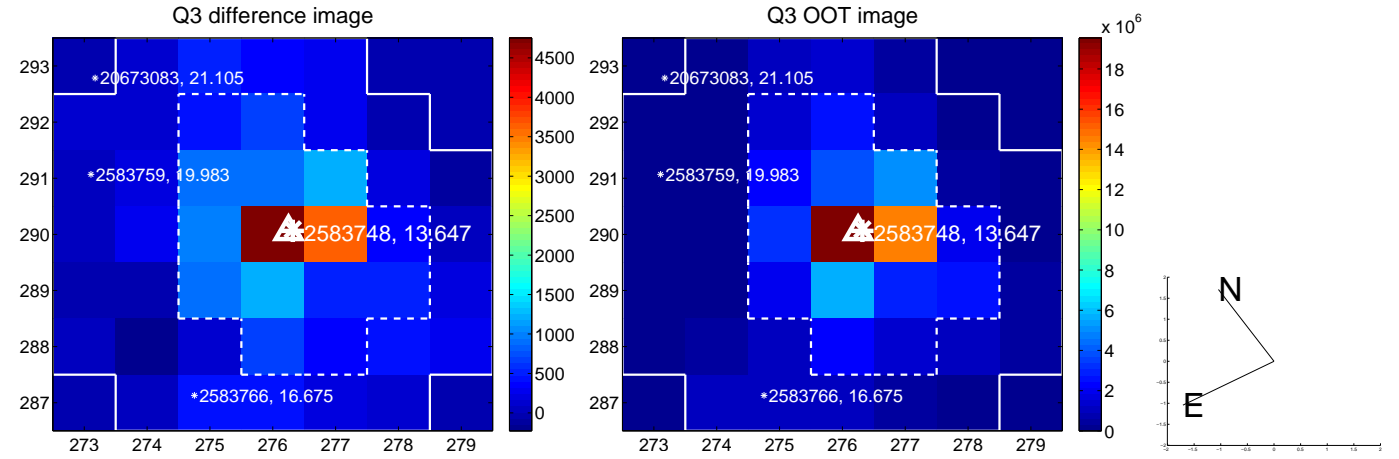
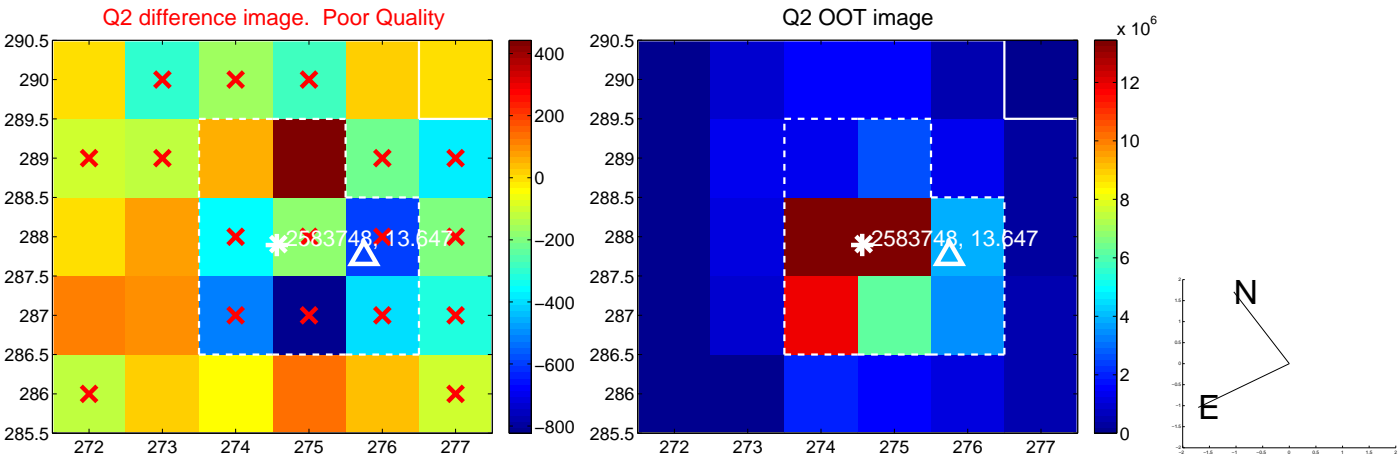
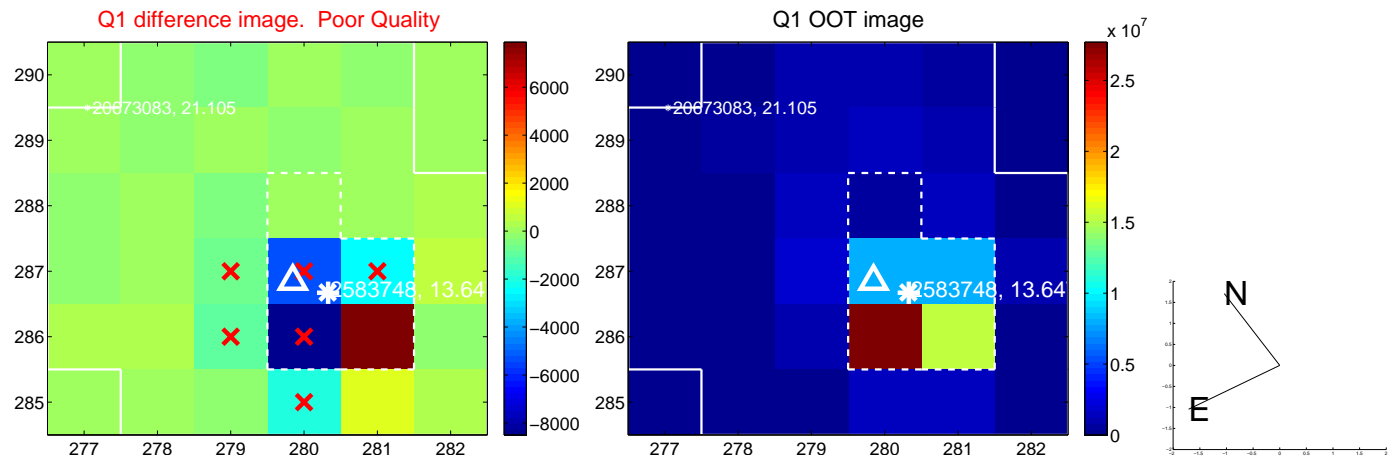


offset from photometric centroids

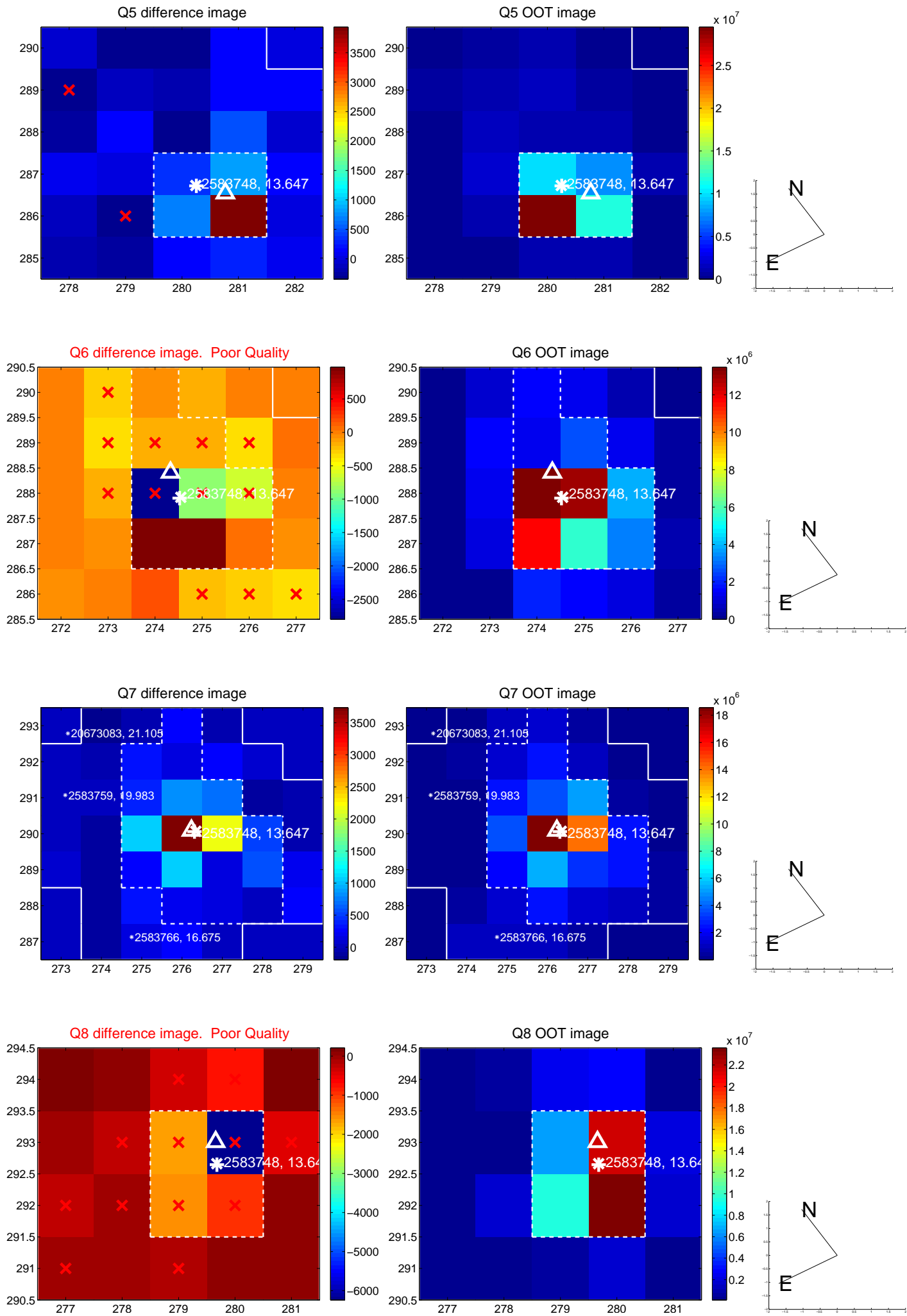


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

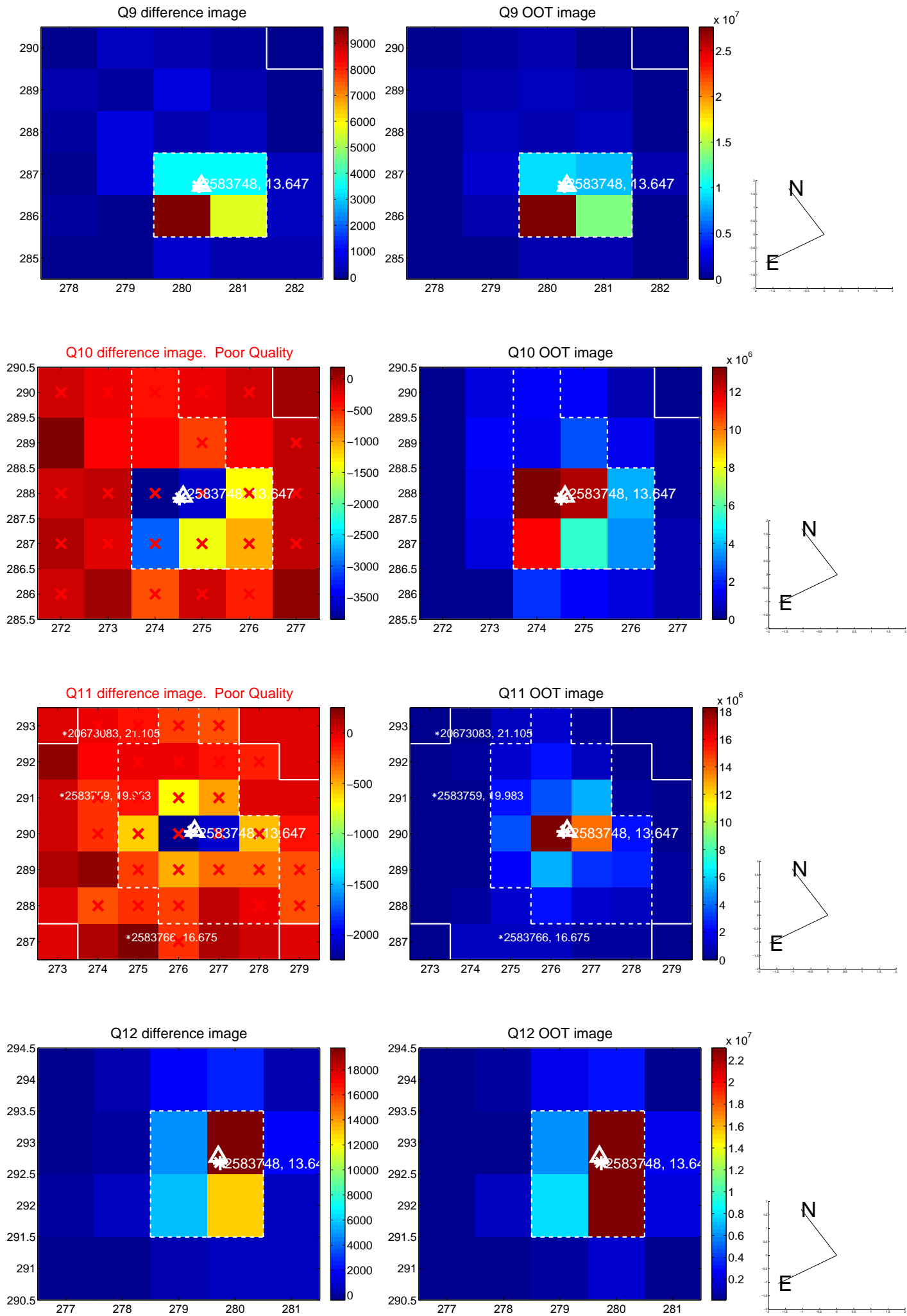
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



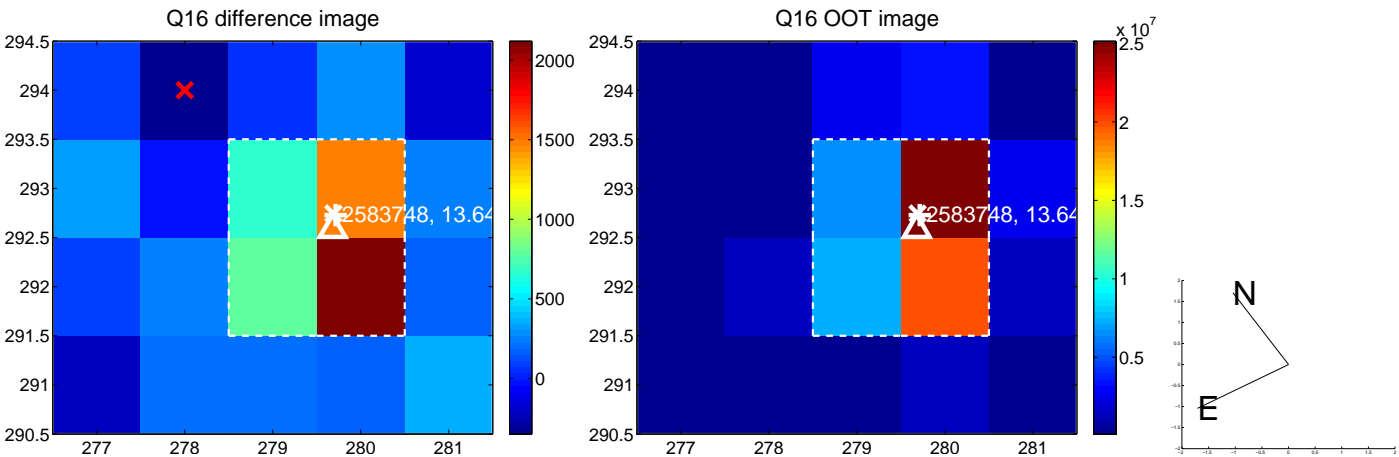
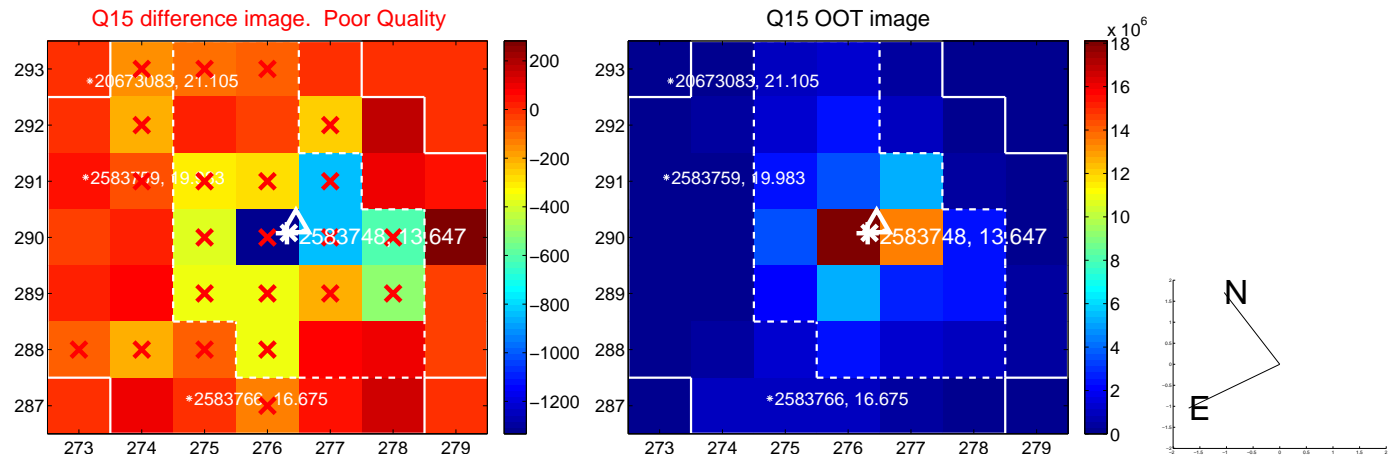
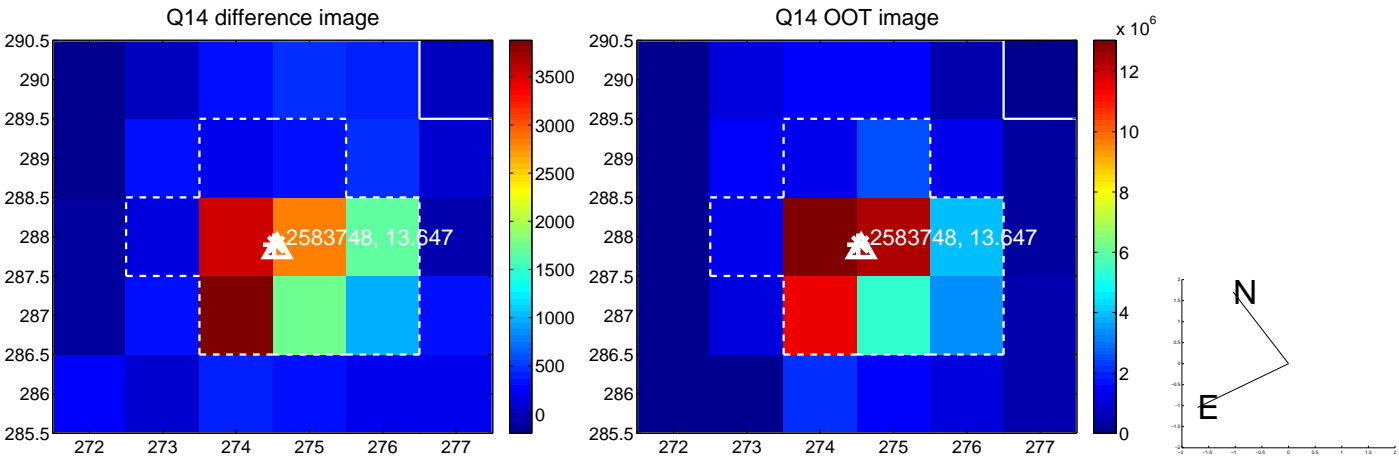
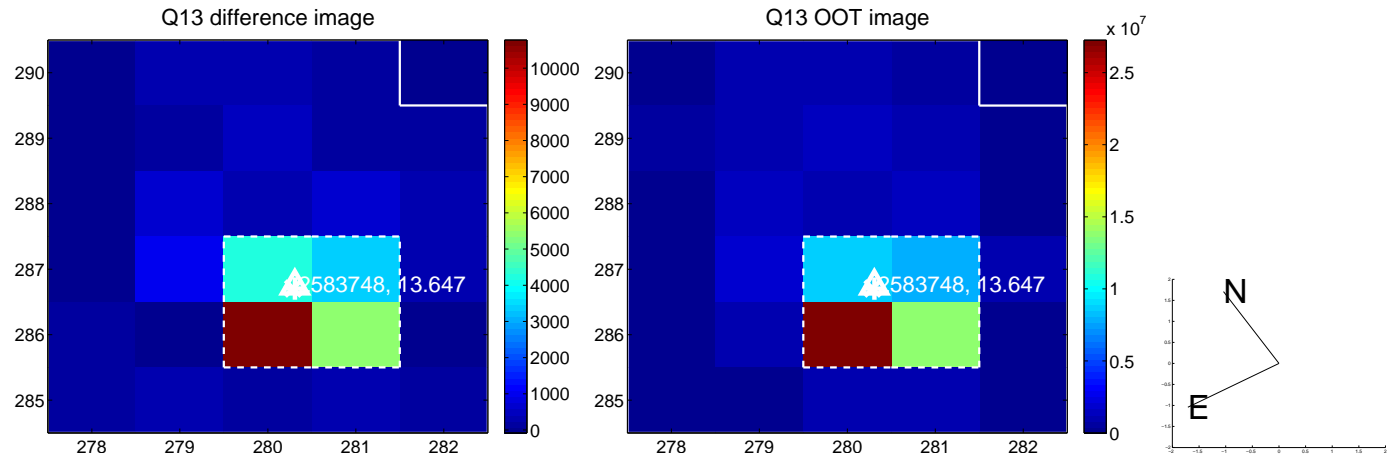
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



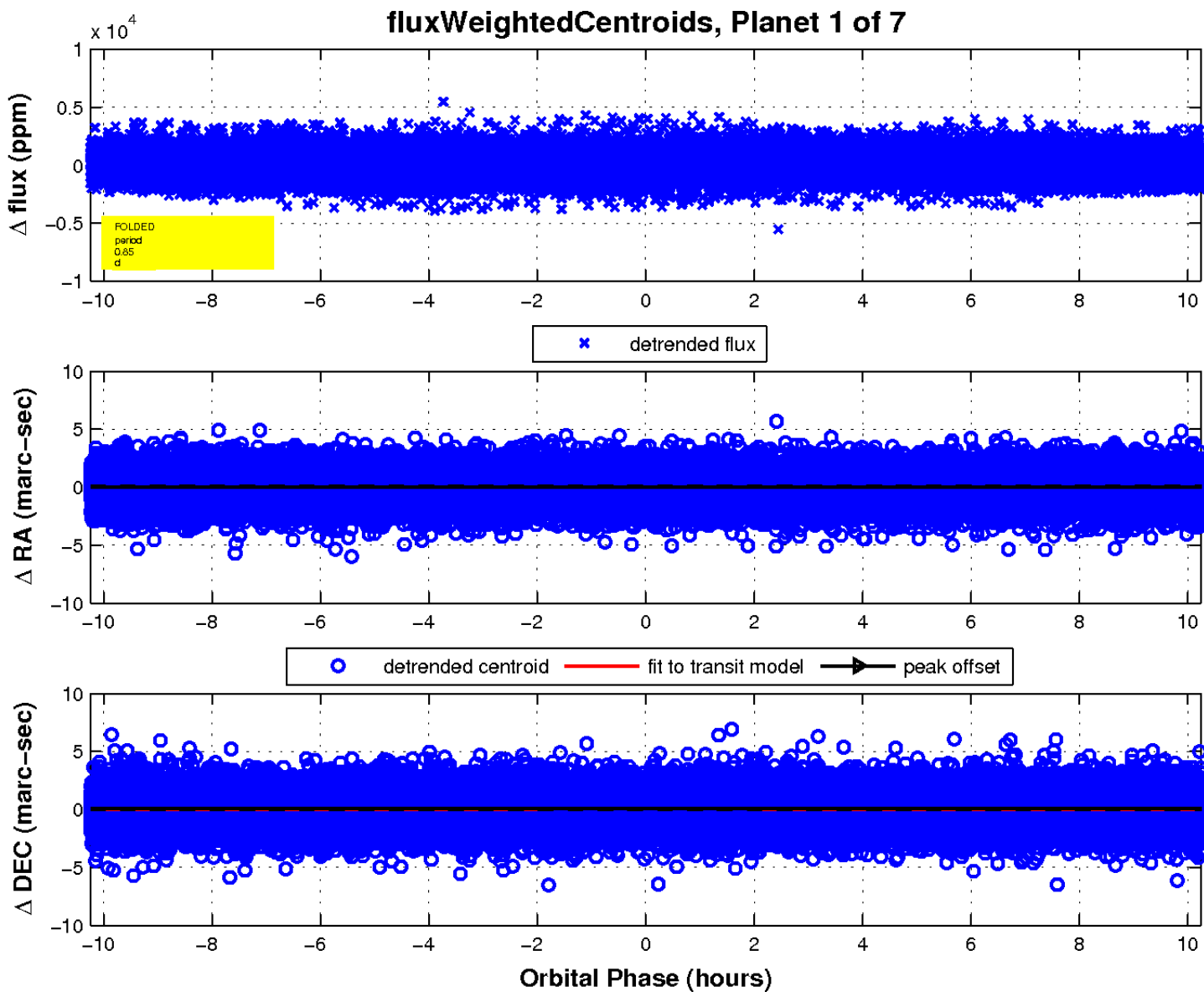
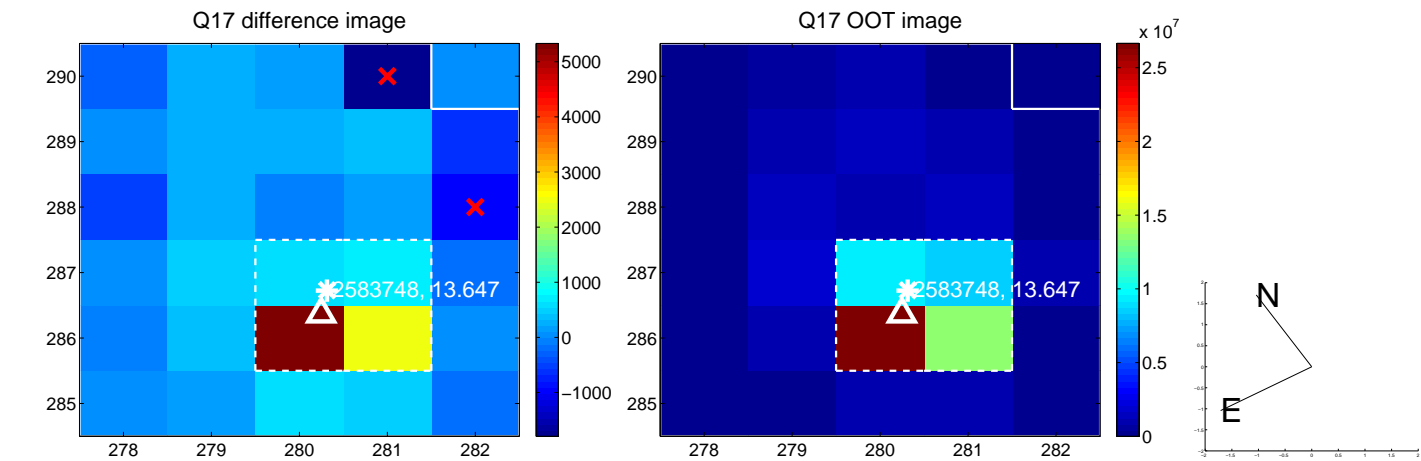
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

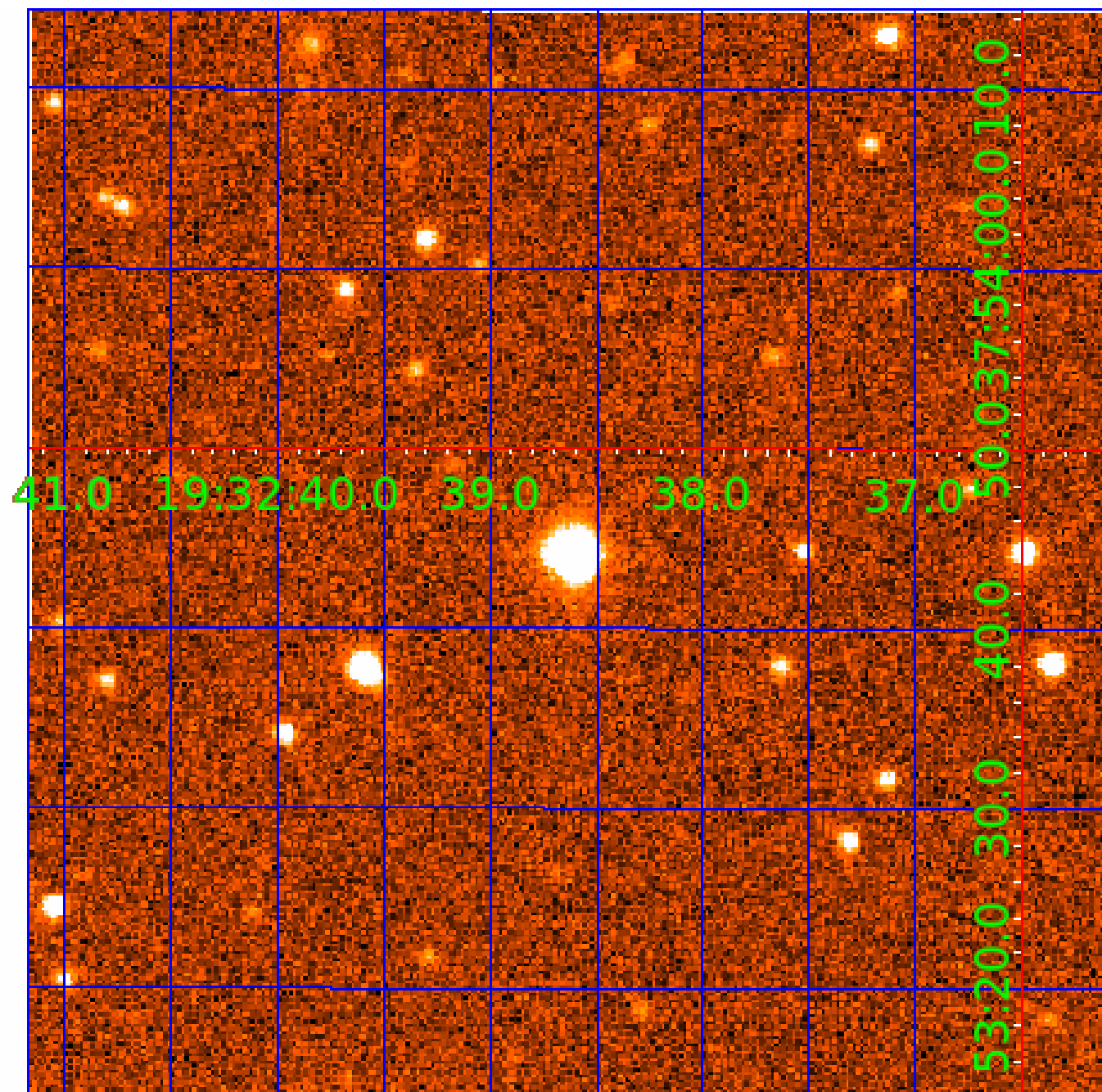


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
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002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

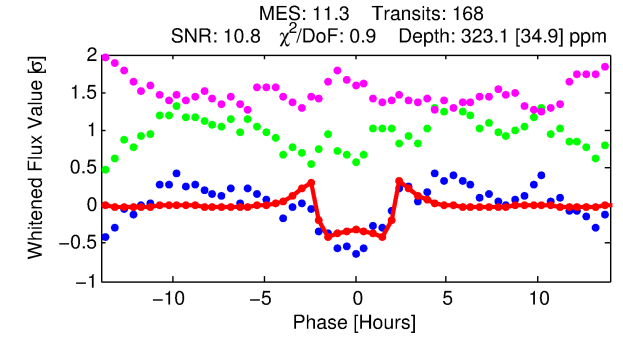
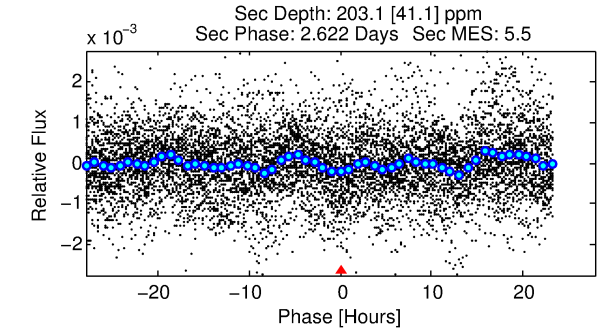
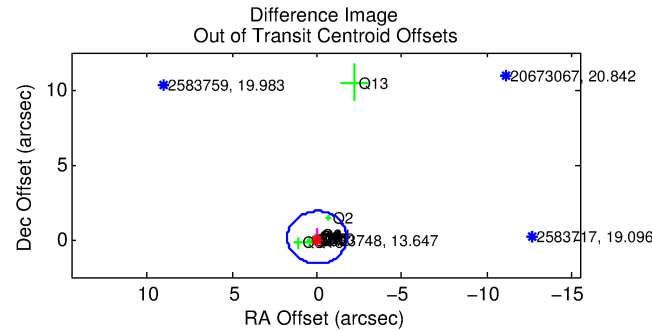
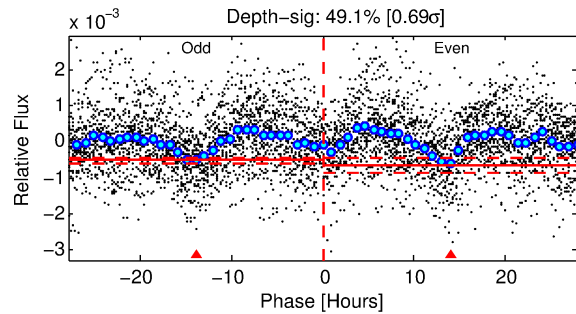
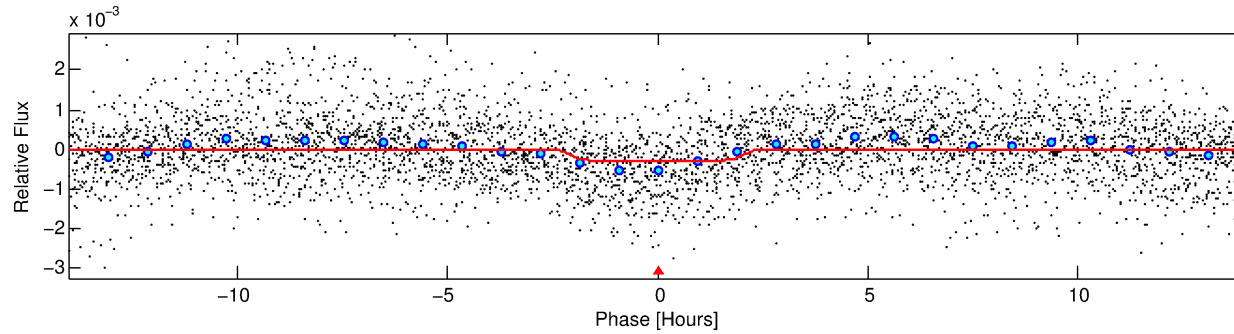
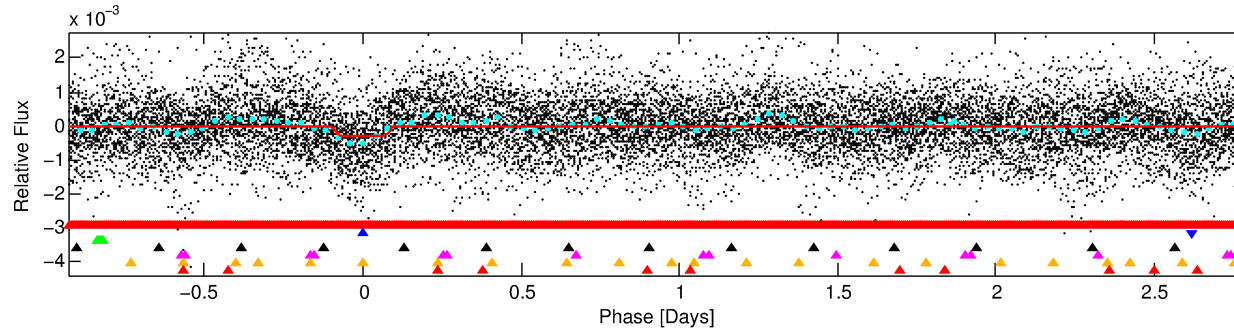
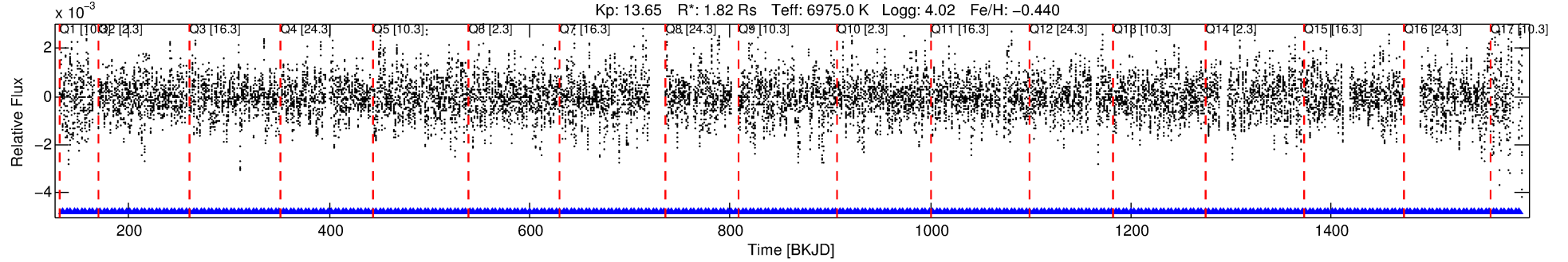
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-02

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 2 of 7 Period: 3.725 d



DV Fit Results:

Period = 3.72517 [0.00002] d
Epoch = 134.5550 [0.0030] BKJD
Rp/R* = 0.0191 [0.0021]
a/R* = 3.07 [1.47]
b = 0.90 [0.11]
Seff = 2710.90 [1484.64]
Teq = 1840 [252] K
Rp = 3.79 [1.33] Re
a = 0.0508 [0.0165] AU
Ag = 20.06 [12.07] [1.58 σ]
Teff = 6020 [515] K [7.30 σ]

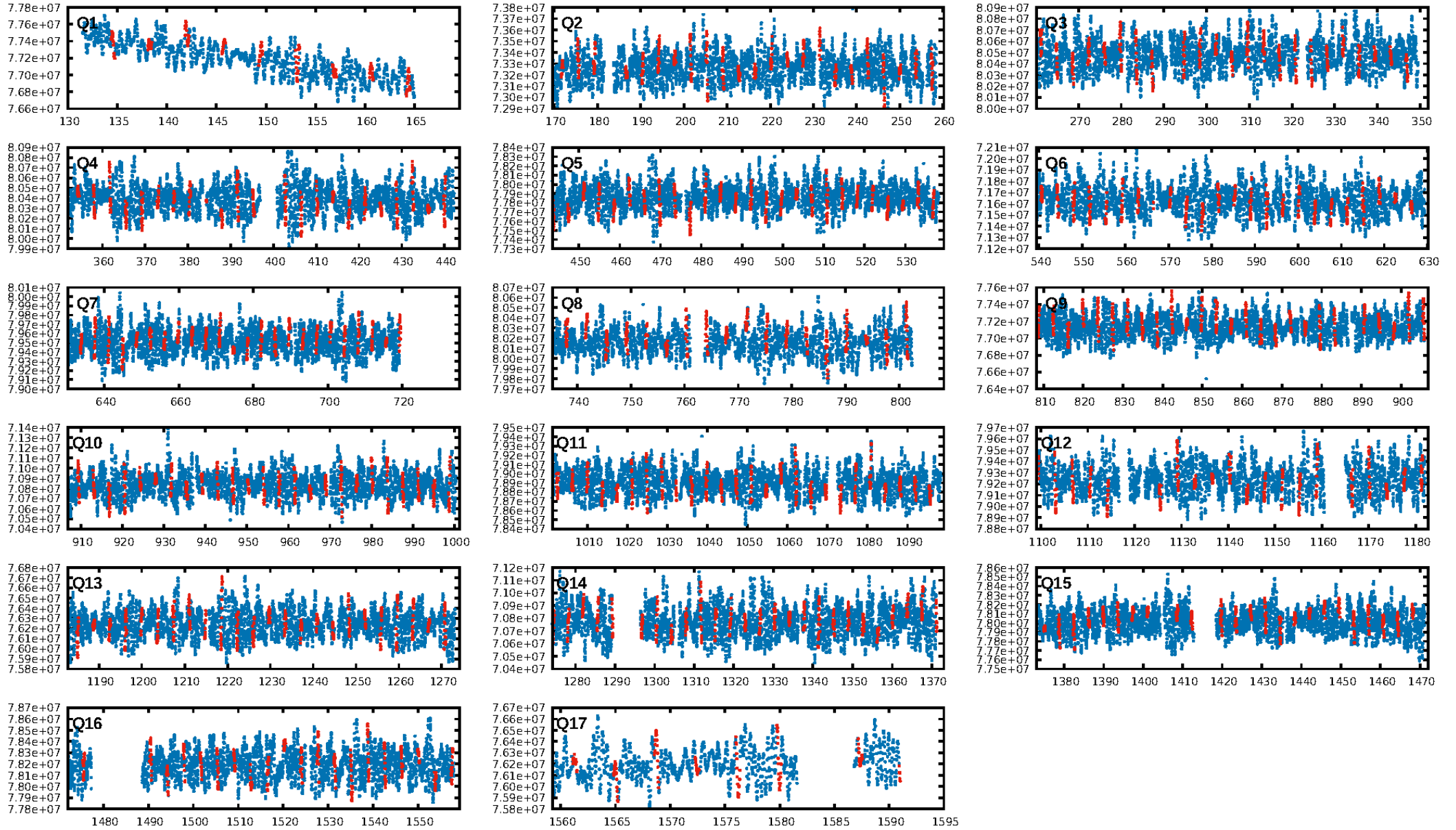
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.02 σ]
LongPeriod-sig: 100.0% [130.66 σ]
ModelChiSquare2-sig: 25.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [161/161]
GhostDiagnostic-chr: 1.092
Centroid-sig: 5.1%
Centroid-so: 0.990 arcsec [5.59 σ]
OotOffset-rm: 0.137 arcsec [0.23 σ]
KicOffset-rm: 0.124 arcsec [0.26 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 0.00 [0/17]

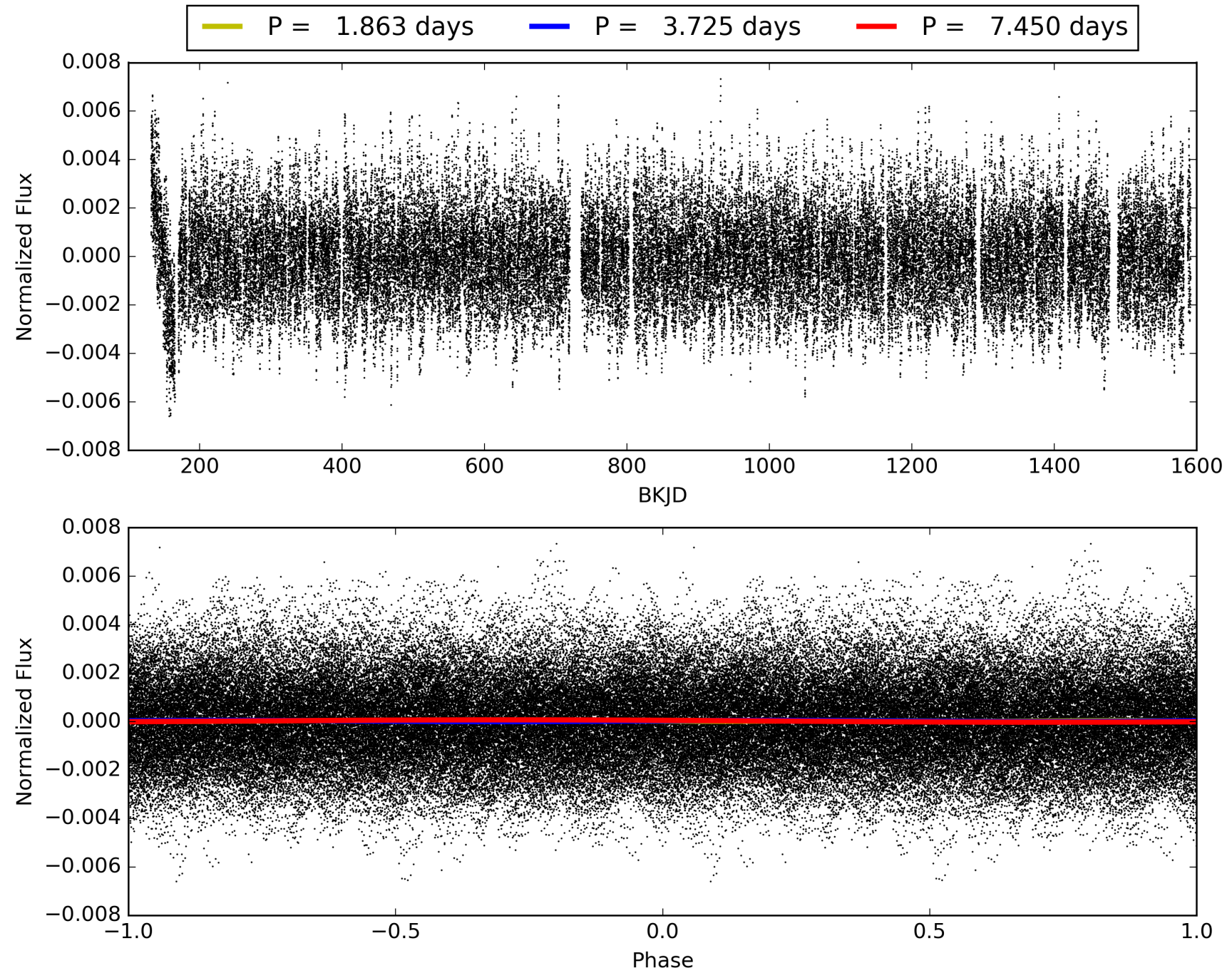
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:40 Z

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

TCE 002583748-02, PDC Light Curves

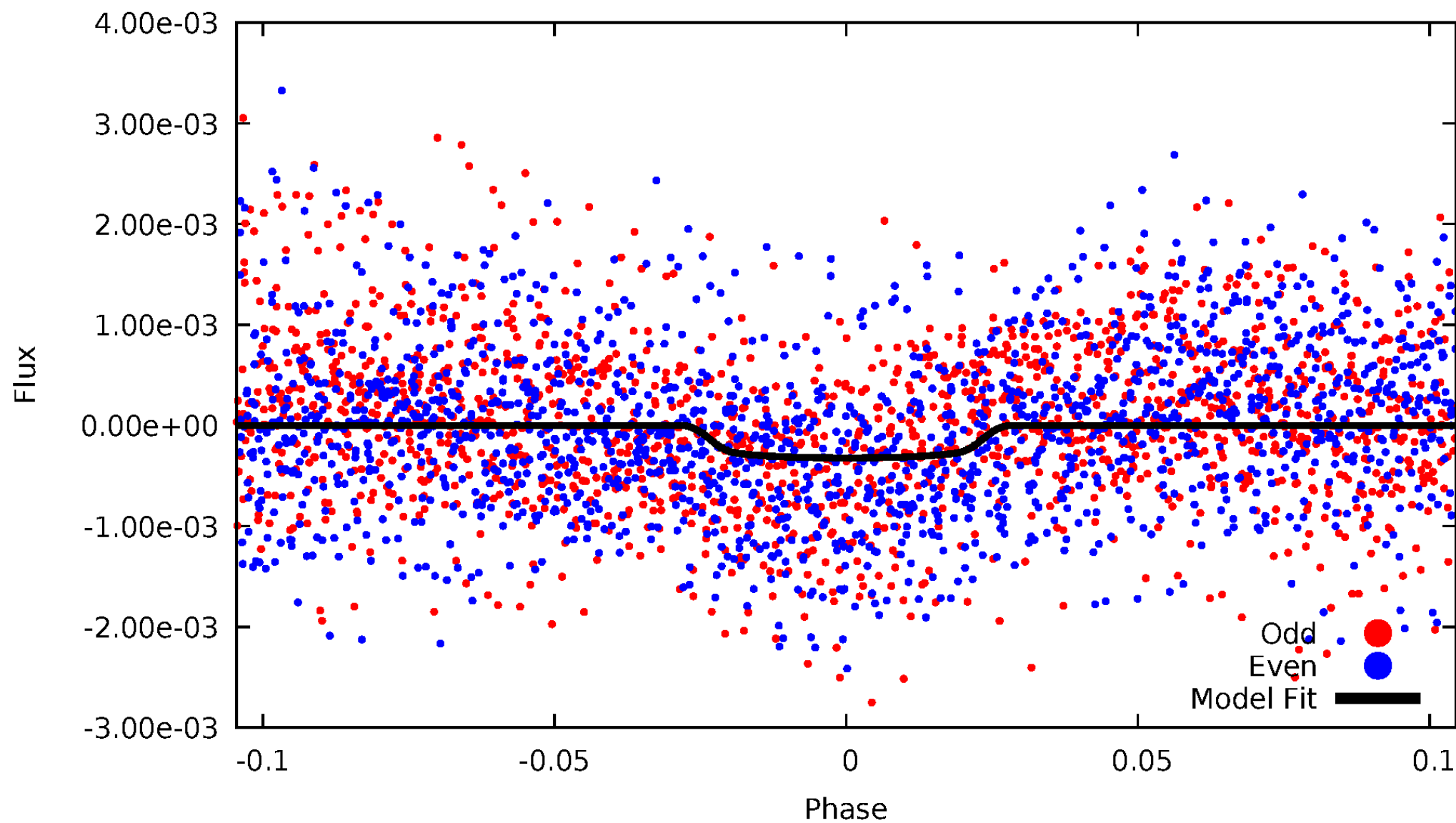


TCE 002583748-02



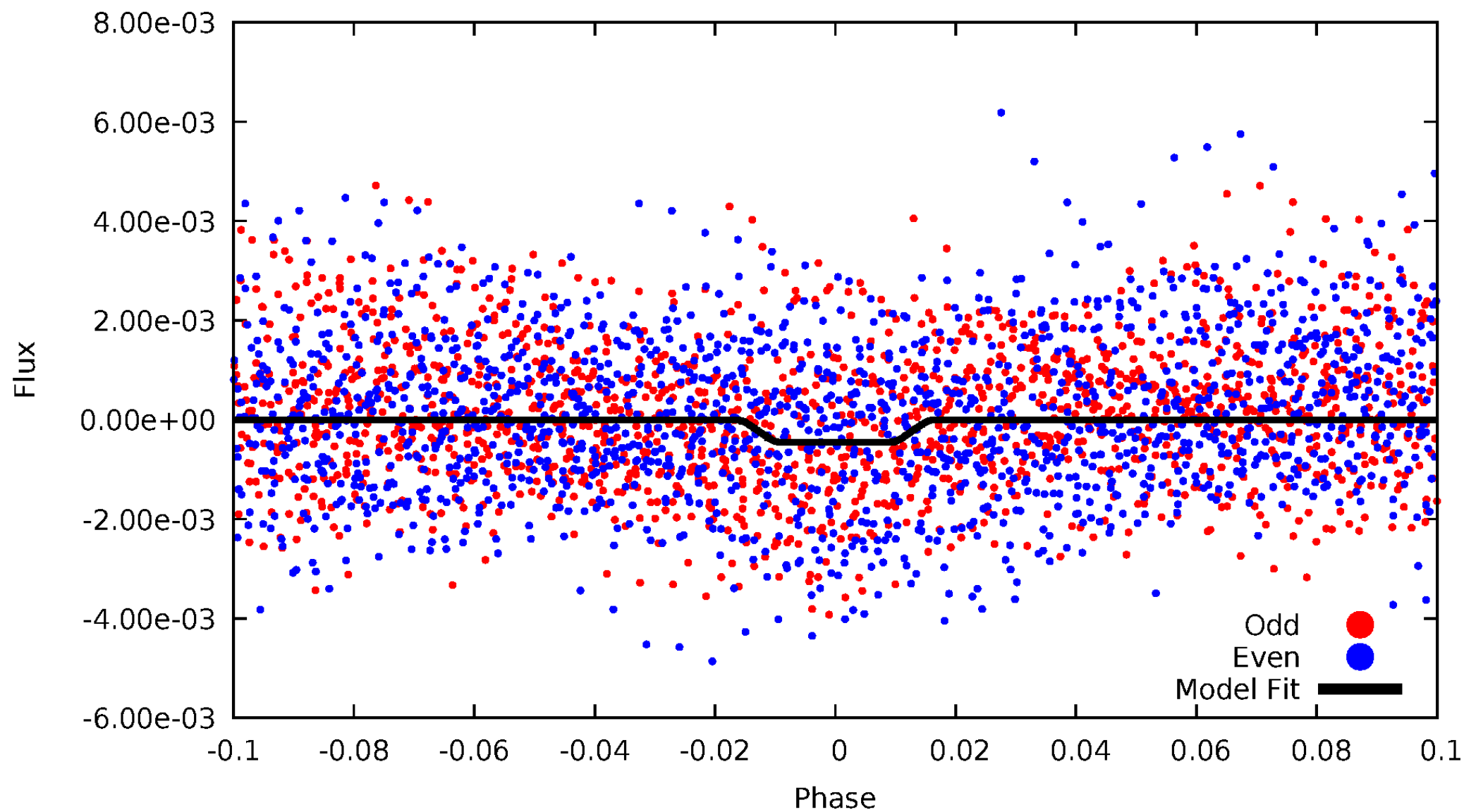
DV Odd/Even

TCE 002583748-02



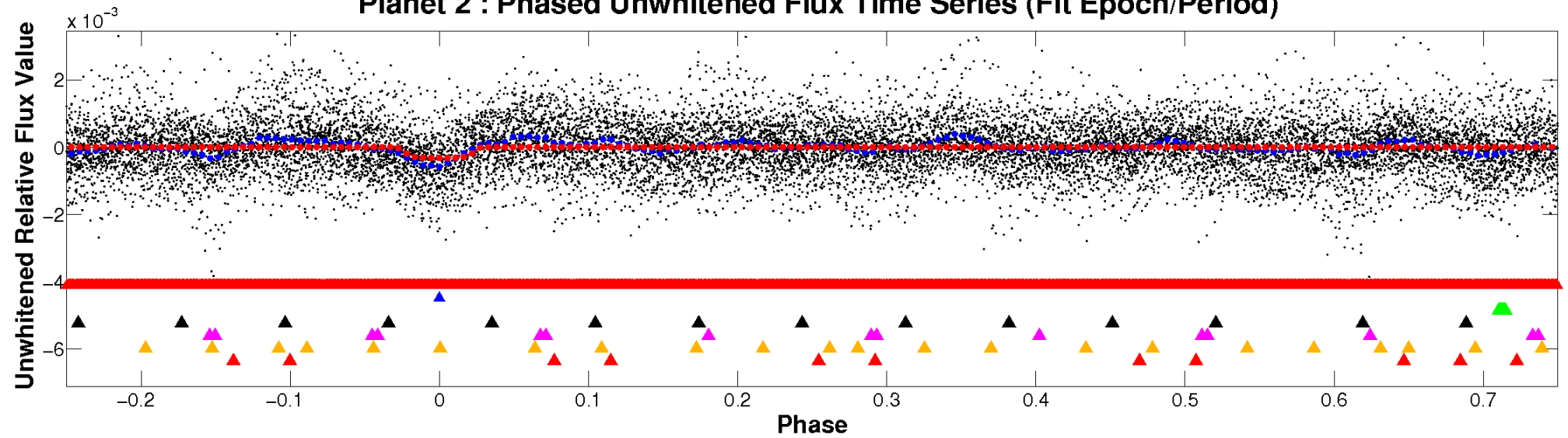
ALT Odd/Even

TCE 002583748-02

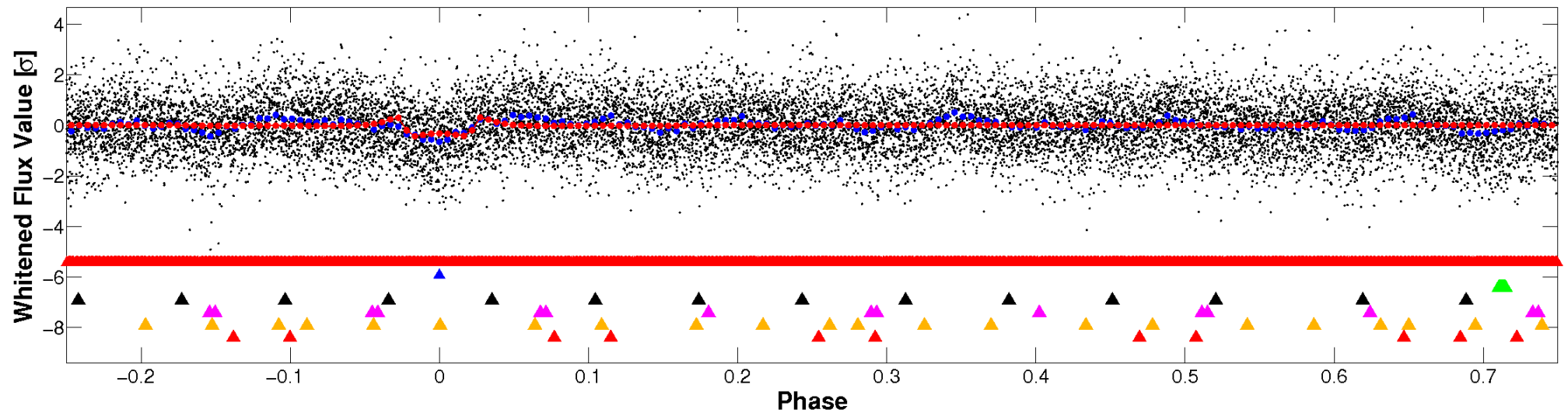


Non-Whitened Vs. Whitened Light Curve

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

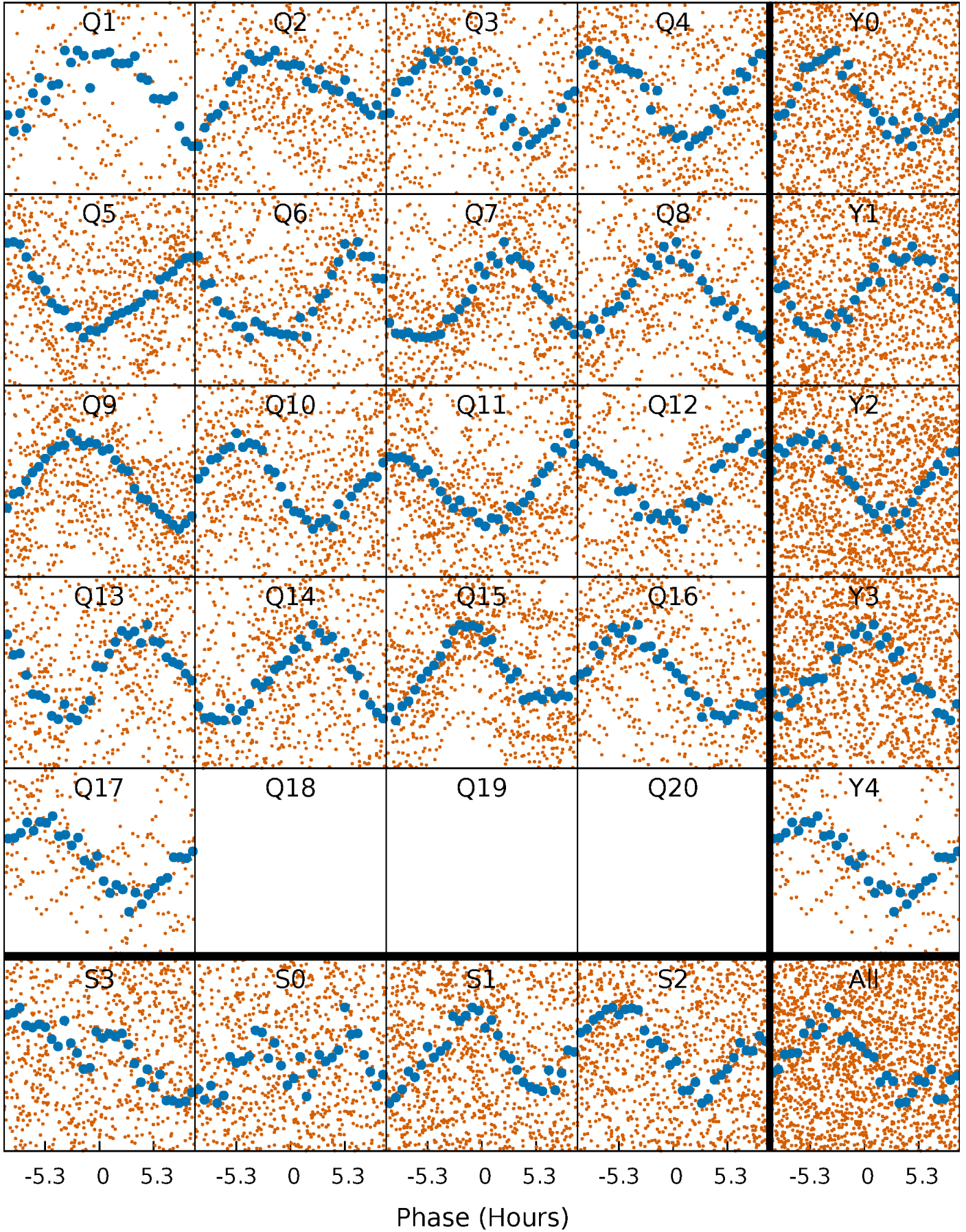


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



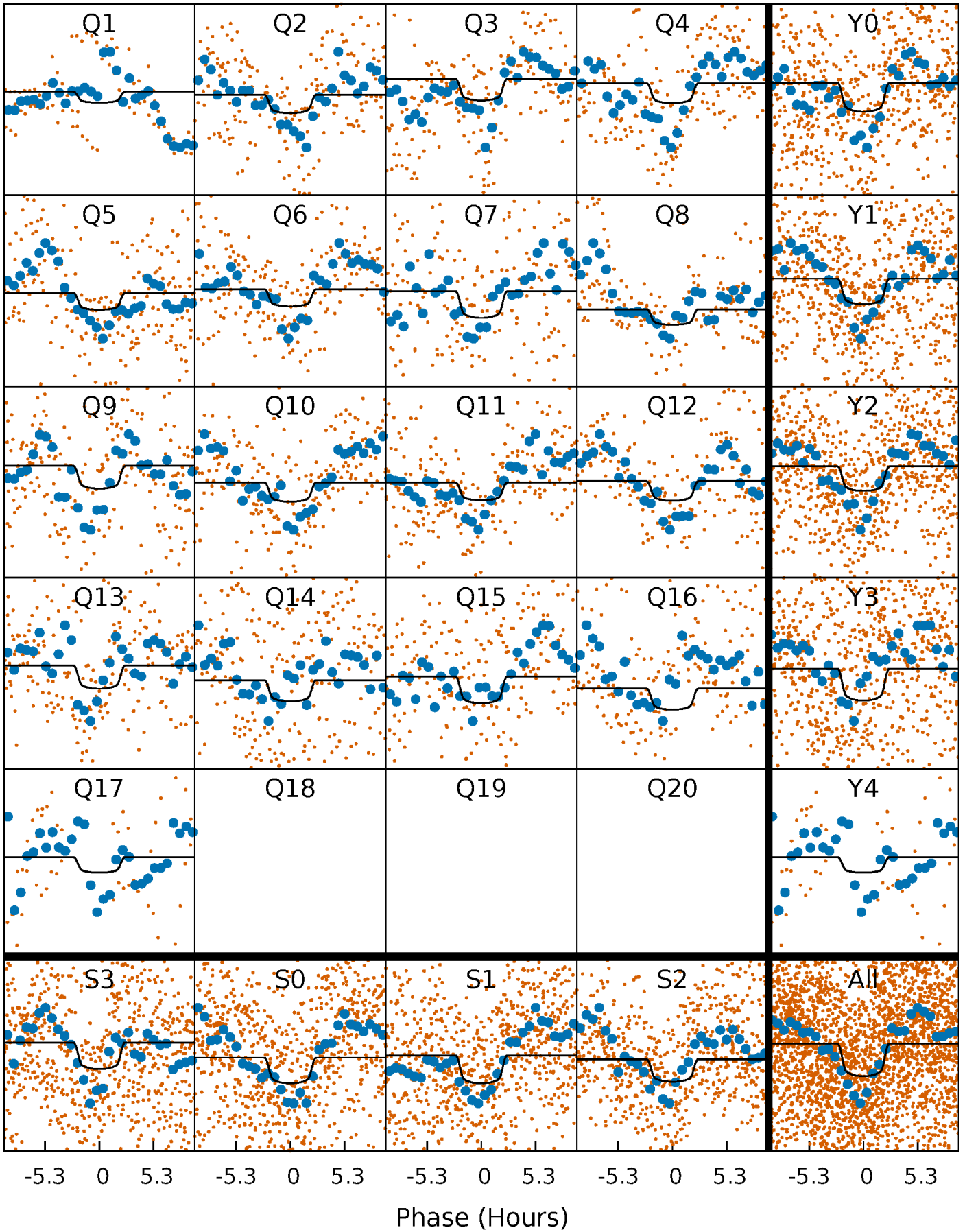
PDC Quarter-Phased Transit Curves

TCE 002583748-02 P= 3.725169 Days $T_0=134.554997$ (BKJD)



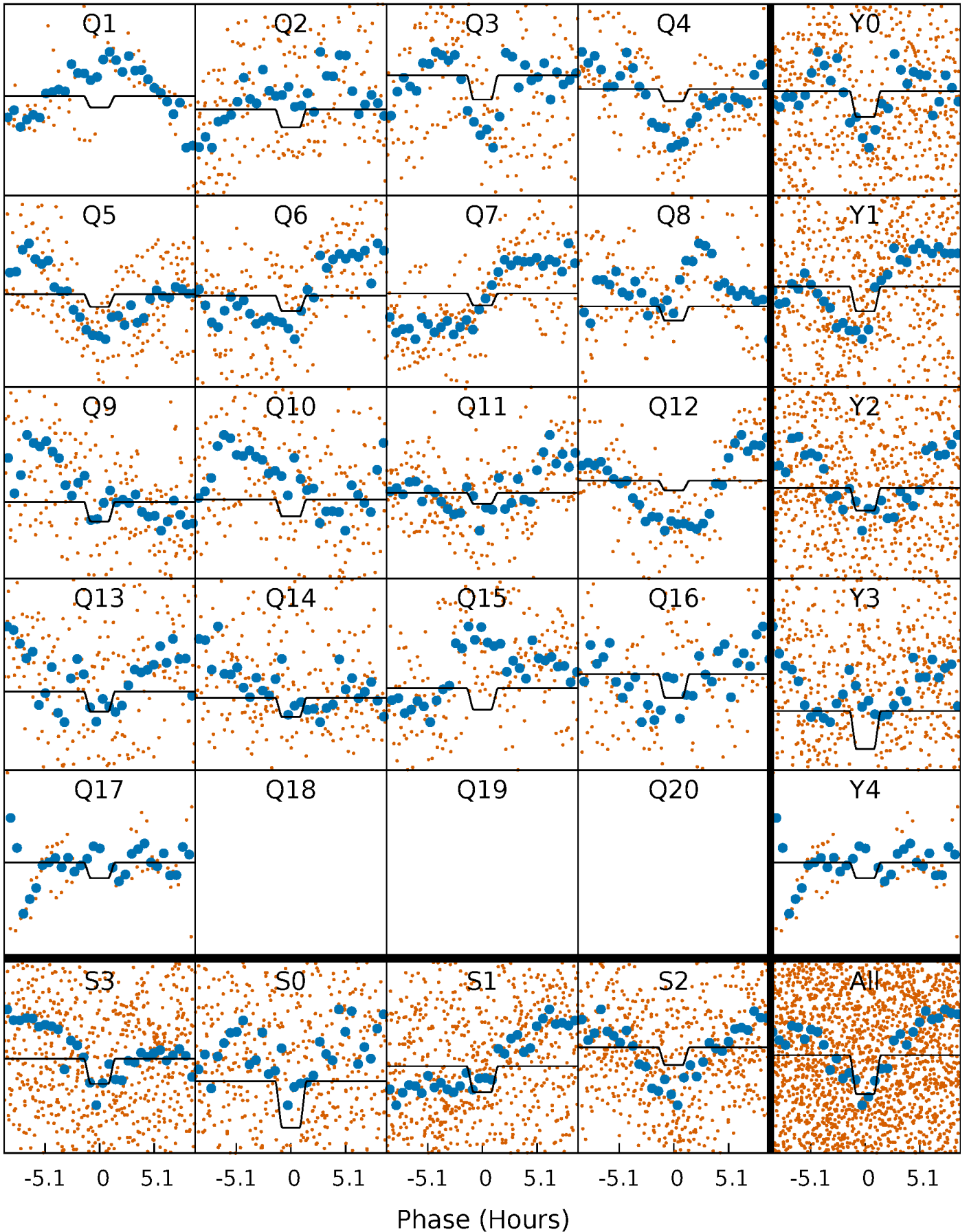
DV Quarter-Phased Transit Curves

TCE 002583748-02 P= 3.725169 Days $T_0=134.554997$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

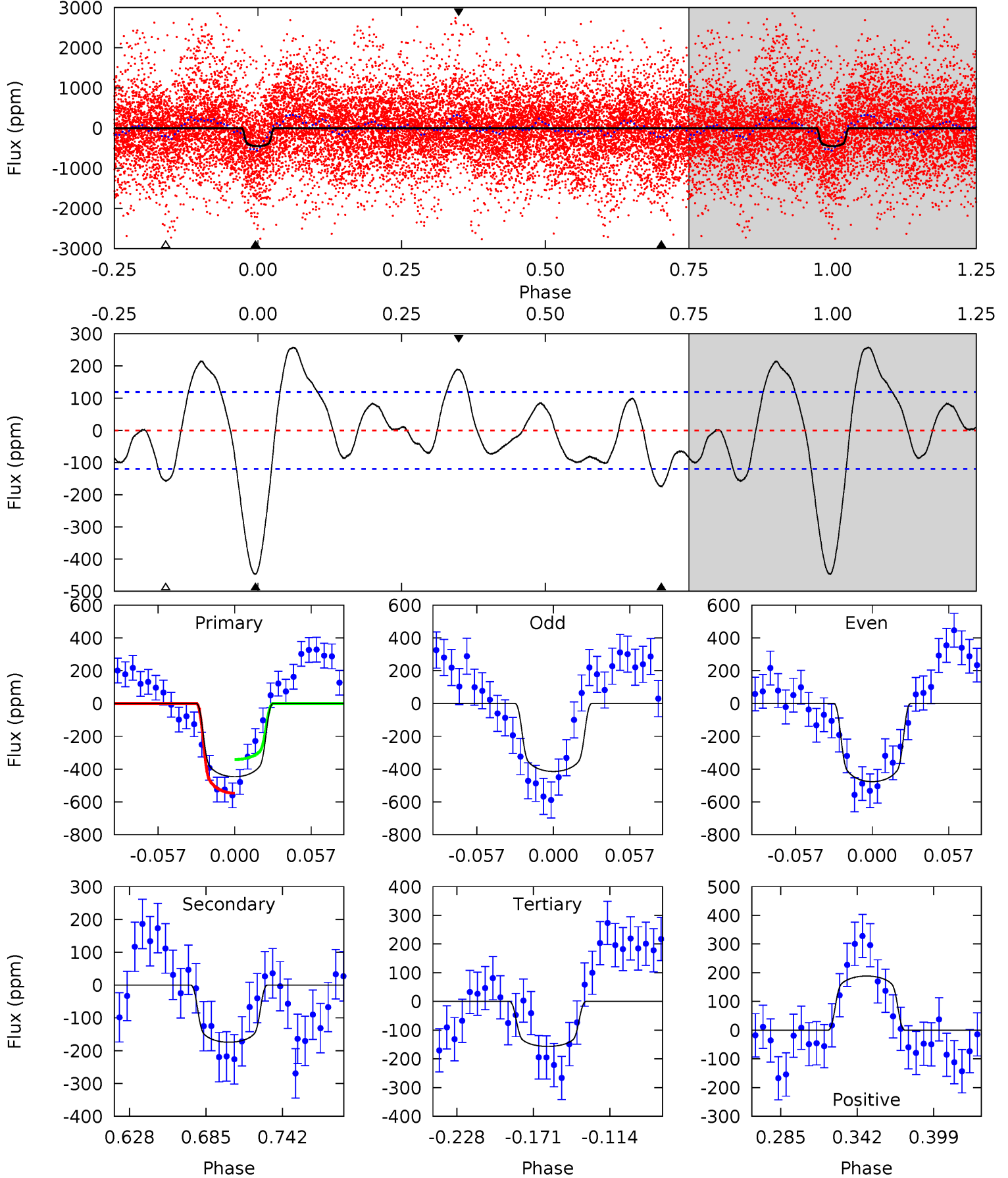
TCE 002583748-02 P= 3.724968 Days $T_0=134.564870$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-02, P = 3.725169 Days, E = 130.829828 Days

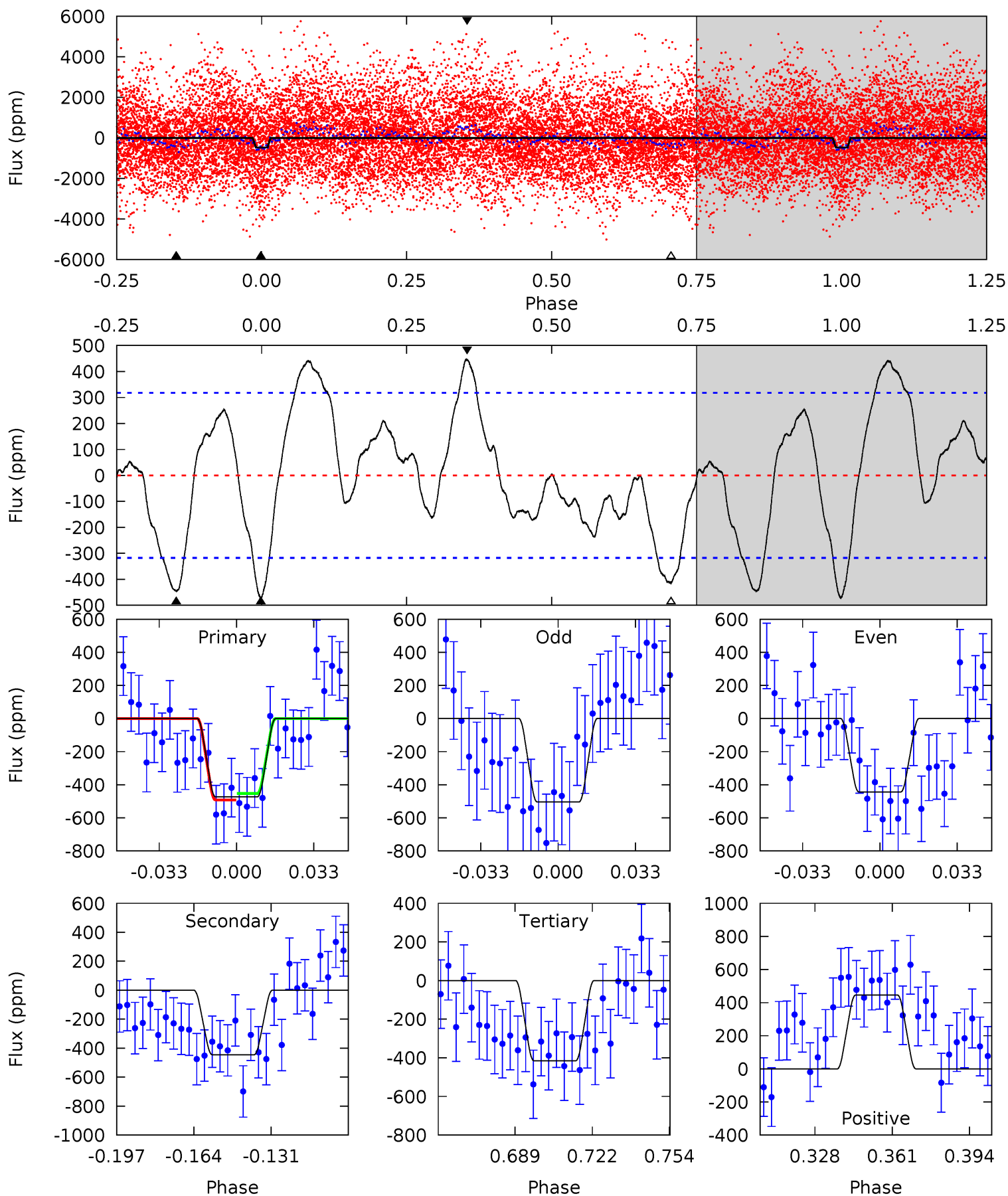
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	6.82	6.13	7.38	4.68	1.90	3.90	11.3	10.1	0.69	-0.56	1.23	1.04	0.37	3.99



Alt Model-Shift Uniqueness Test

002583748-02, P = 3.724968 Days, E = 130.839902 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.14	6.73	6.27	6.74	4.79	2.13	2.97	0.87	0.41	0.46	-0.00	0.46	1.18	0.49	0.29



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-174 ± 26	$3.65^{+0.84}_{-0.76}$	2528^{+195}_{-262}	5712^{+454}_{-377}	19^{+11}_{-6}
Alt.	-446 ± 66	$4.11^{+0.82}_{-0.76}$	2535^{+193}_{-256}	6865^{+566}_{-485}	38^{+19}_{-12}

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

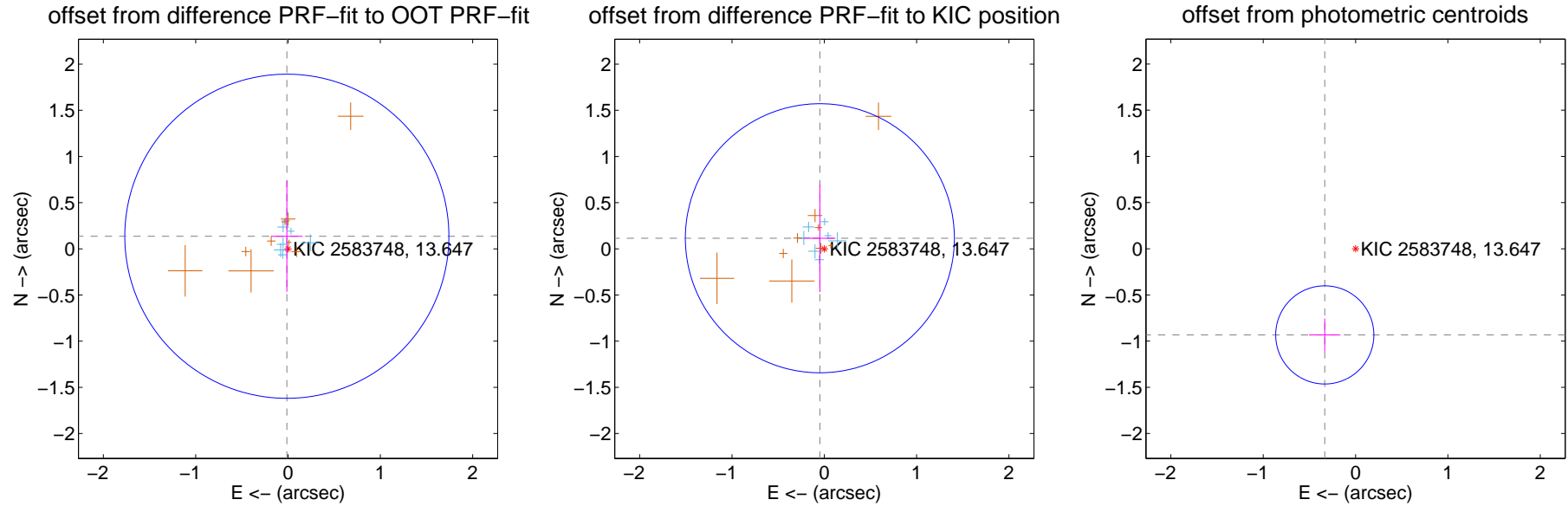
DV Centroid Data

Supplemental centroid analysis for 002583748-02. Kepler magnitude: 13.65. Transit SNR 10.78

There are 7 quarters with good PRF difference image offsets

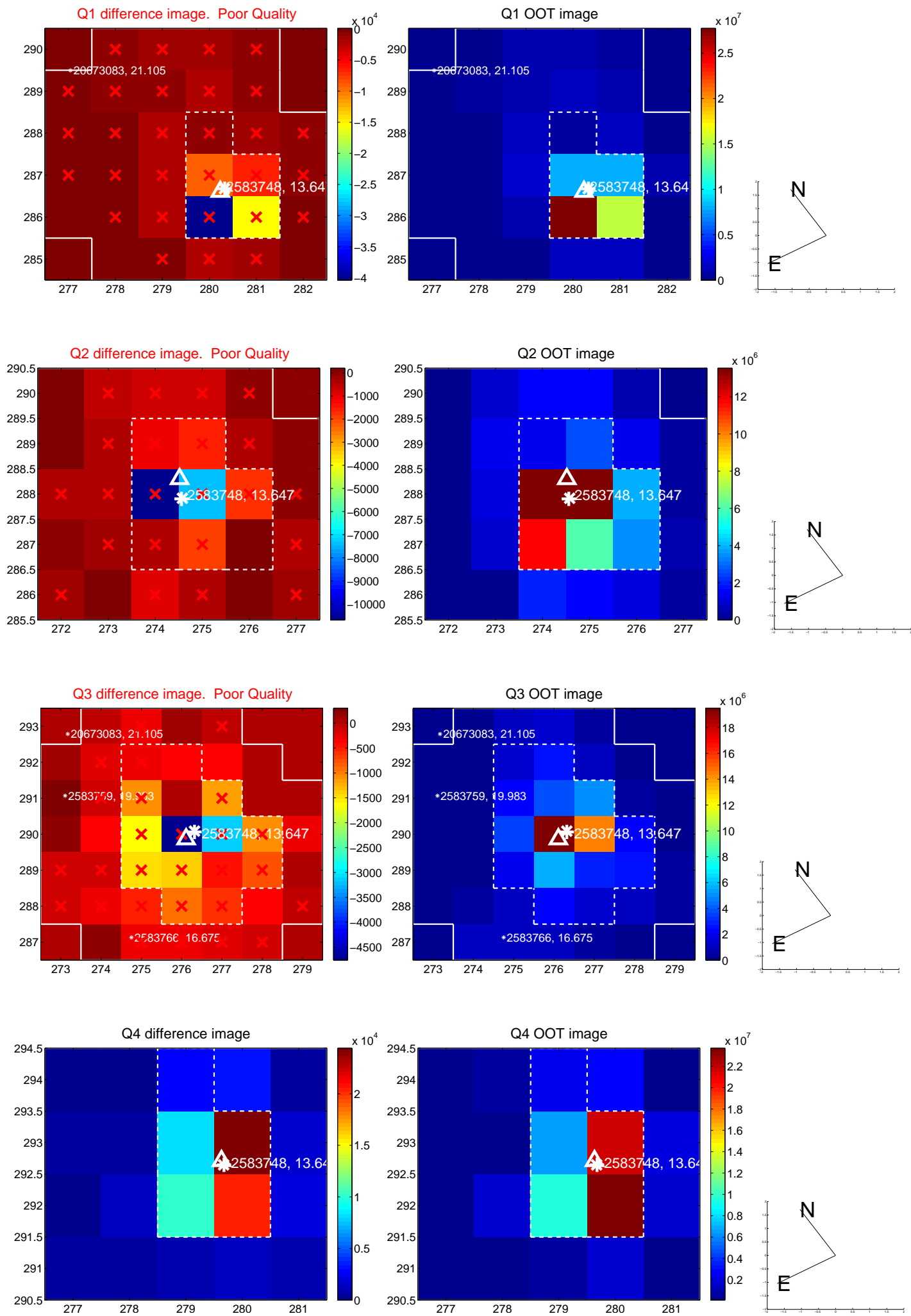
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.137 ± 0.585	0.23	0.013 ± 0.170	0.136 ± 0.600
PRF-fit source offset from KIC position	0.124 ± 0.486	0.26	0.048 ± 0.169	0.114 ± 0.583
photometric centroid source offset	0.99 ± 0.18	5.59	0.33 ± 0.17	-0.93 ± 0.18

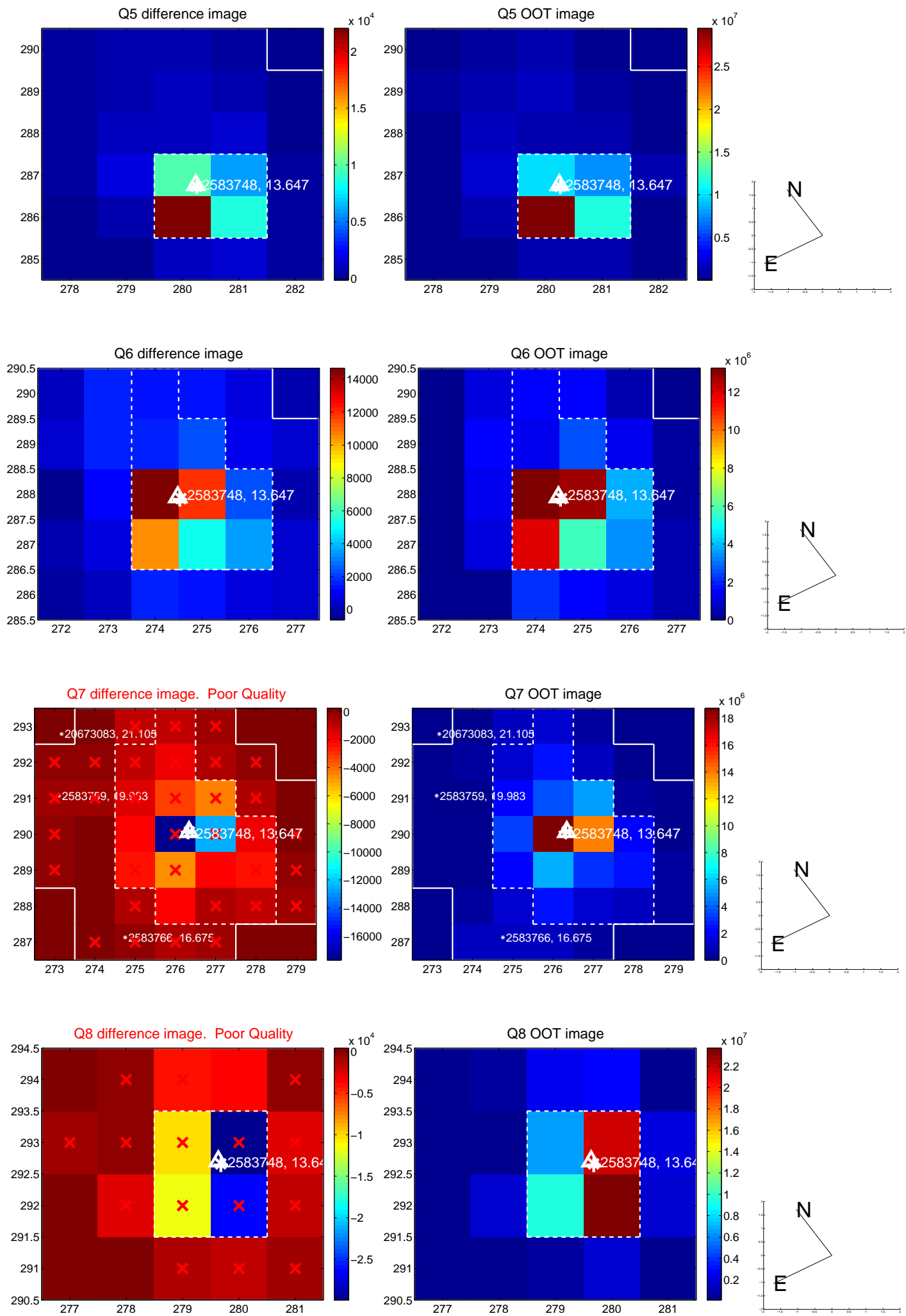


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

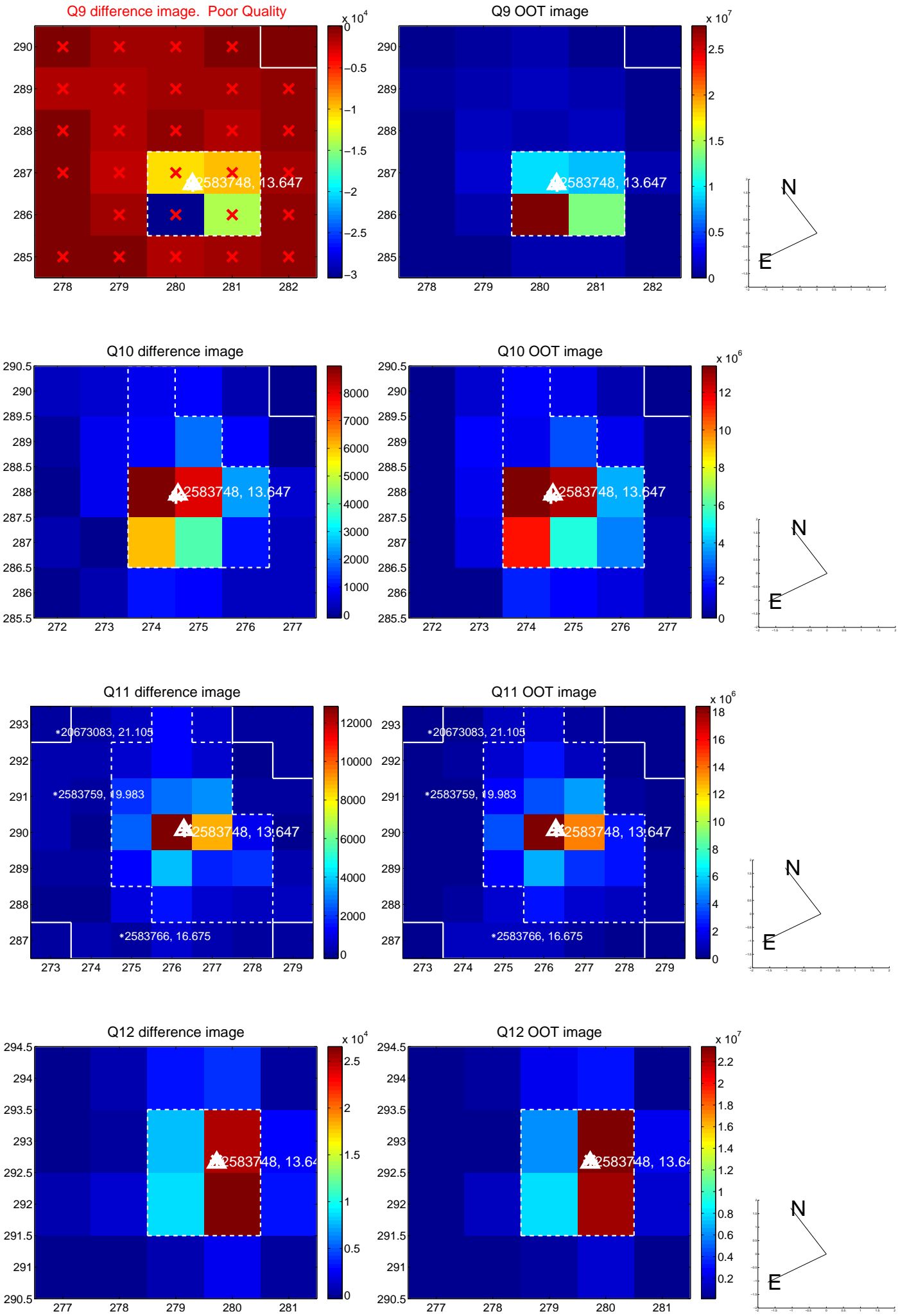
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



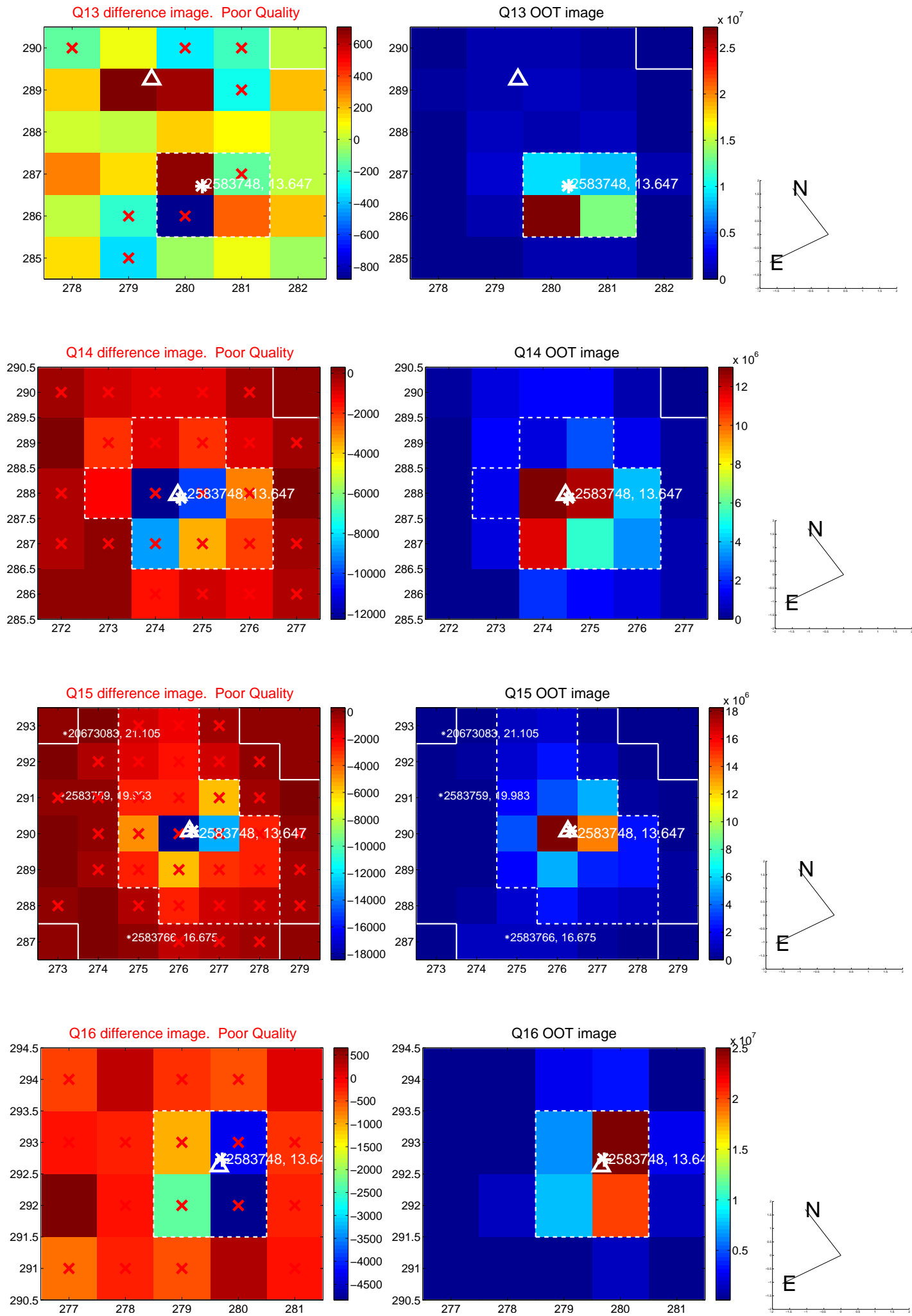
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



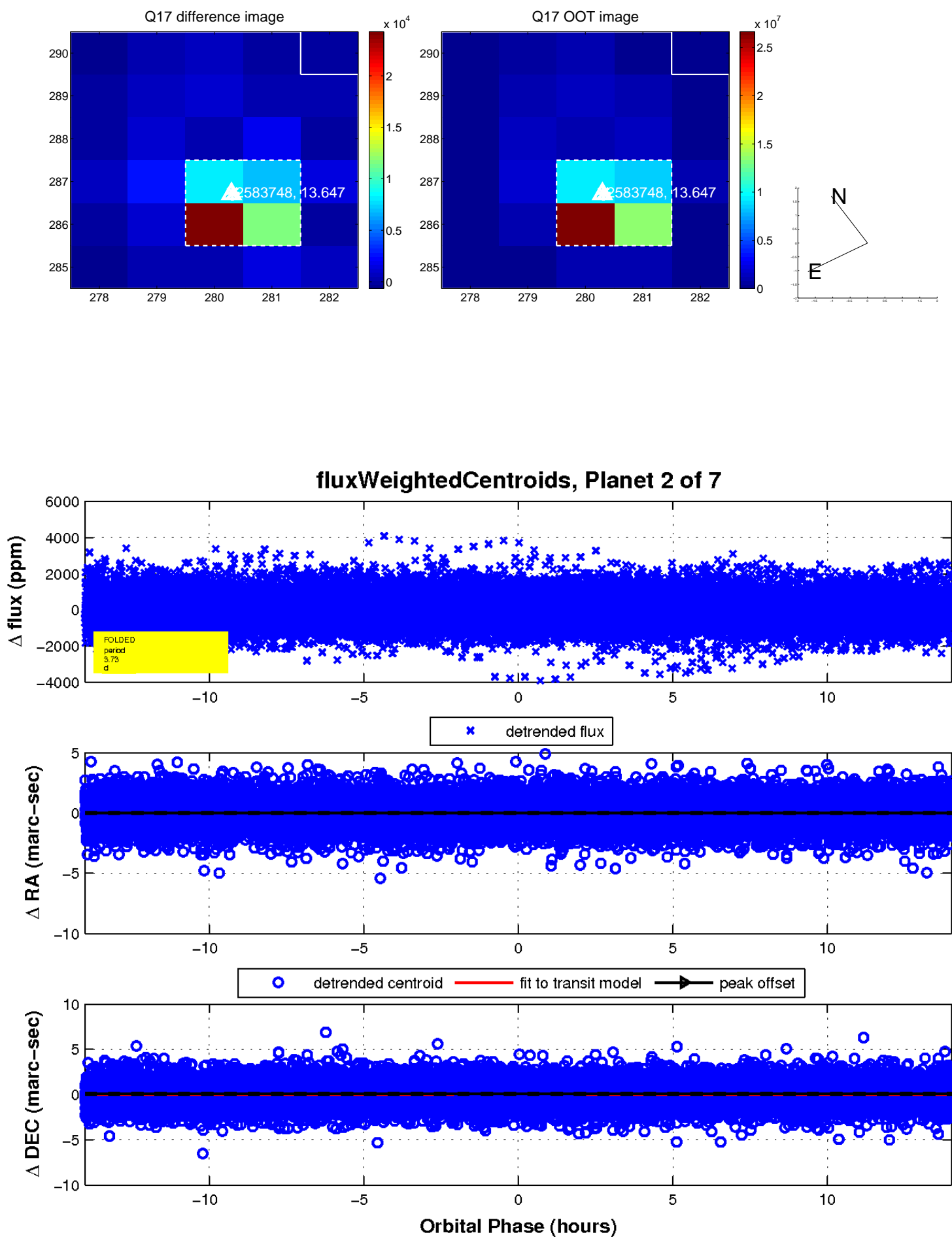
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

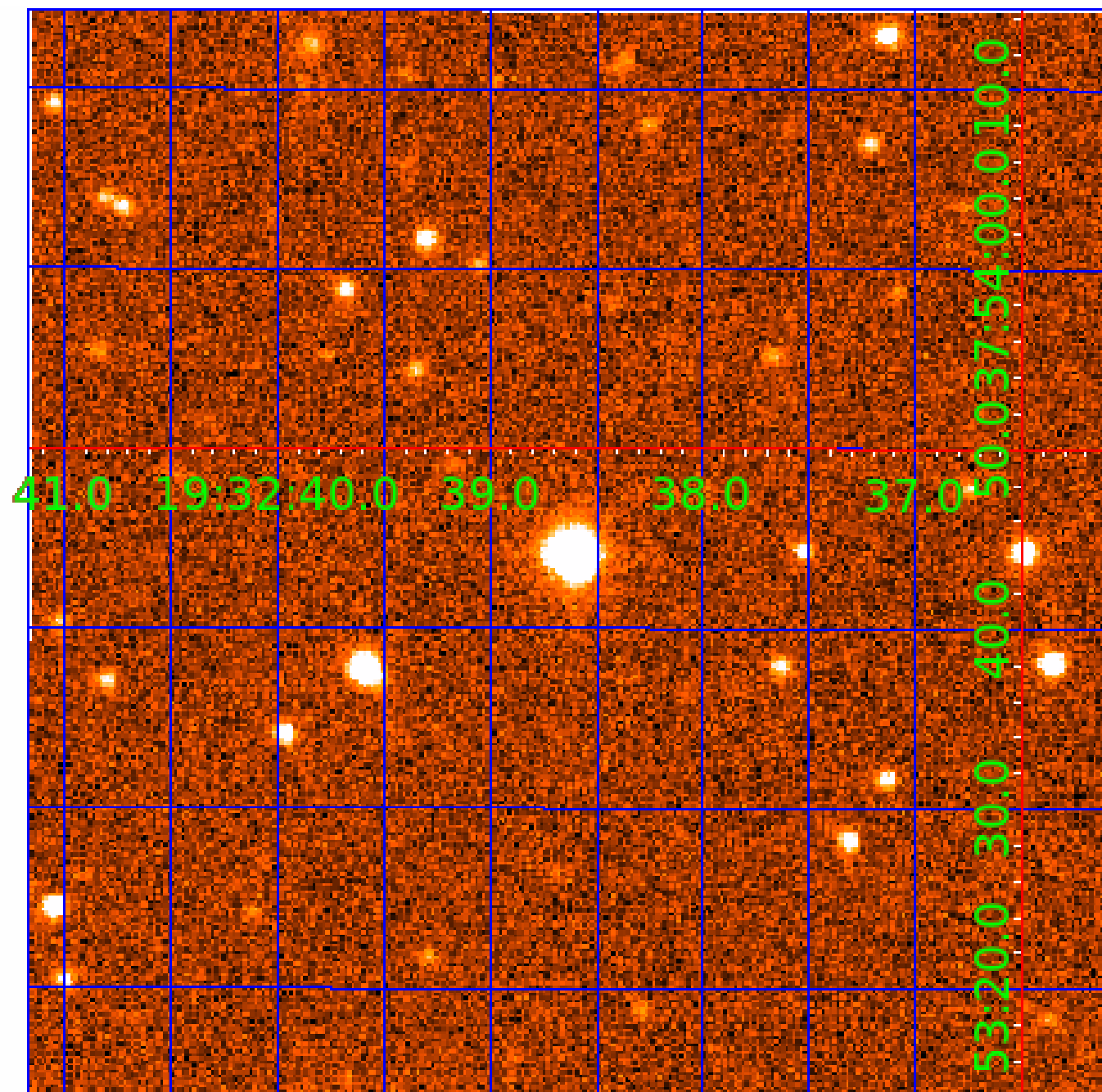


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
002583748-03	OBS	No	40.977339	133.476021	380.4	5.000	9.7	-1.0	1.82	6975	3.58	110.81
002583748-05	OBS	No	99.753293	171.638886	1736.8	3.102	9.1	8.5	1.82	6975	13.98	33.84
002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

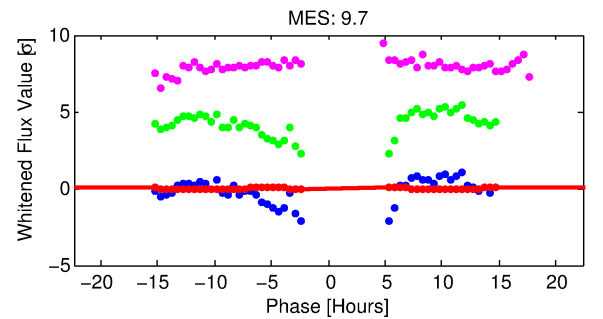
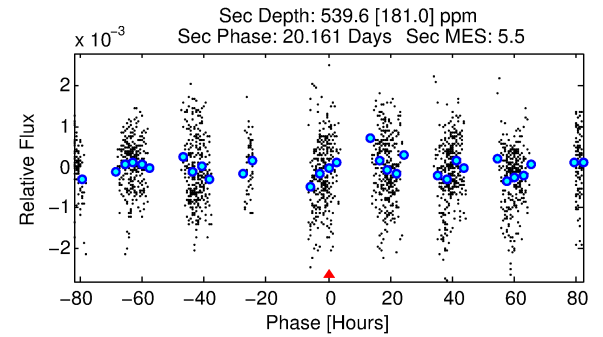
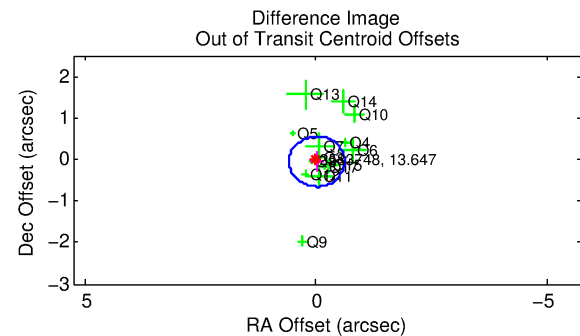
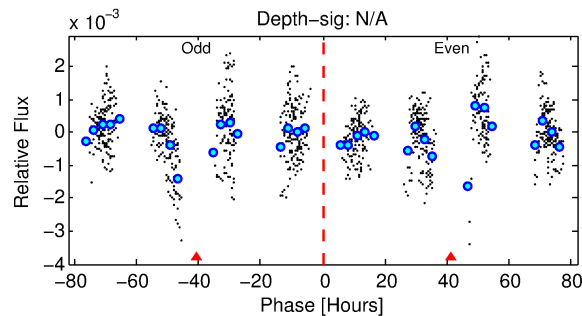
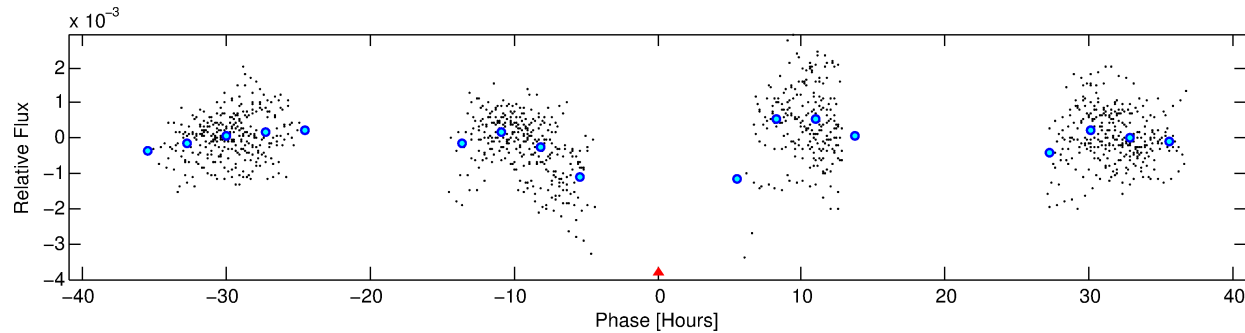
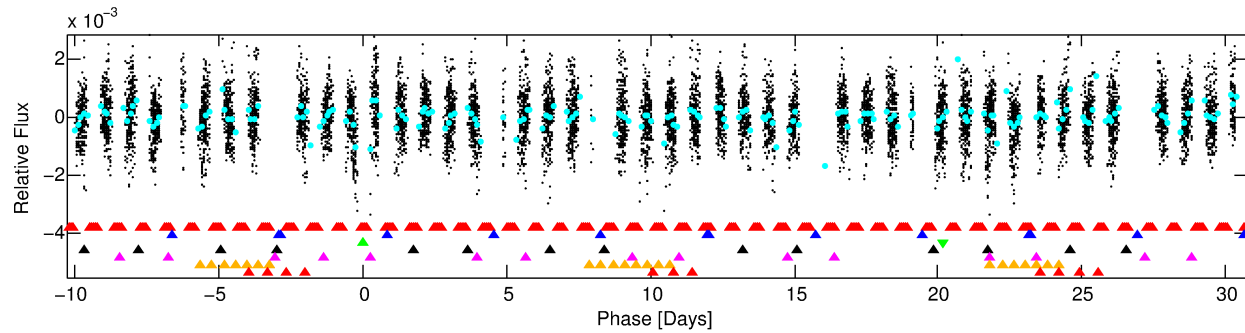
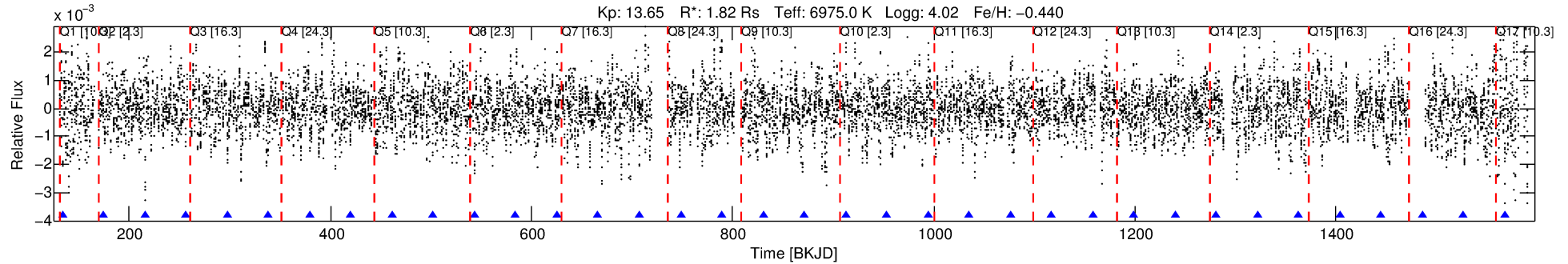
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-03

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 3 of 7 Period: 40.977 d



TPS TCE Results:

Period = 40.97734 d
Epoch = 133.4760 BKJD

DV fit results are unavailable

DV Diagnostic Results:

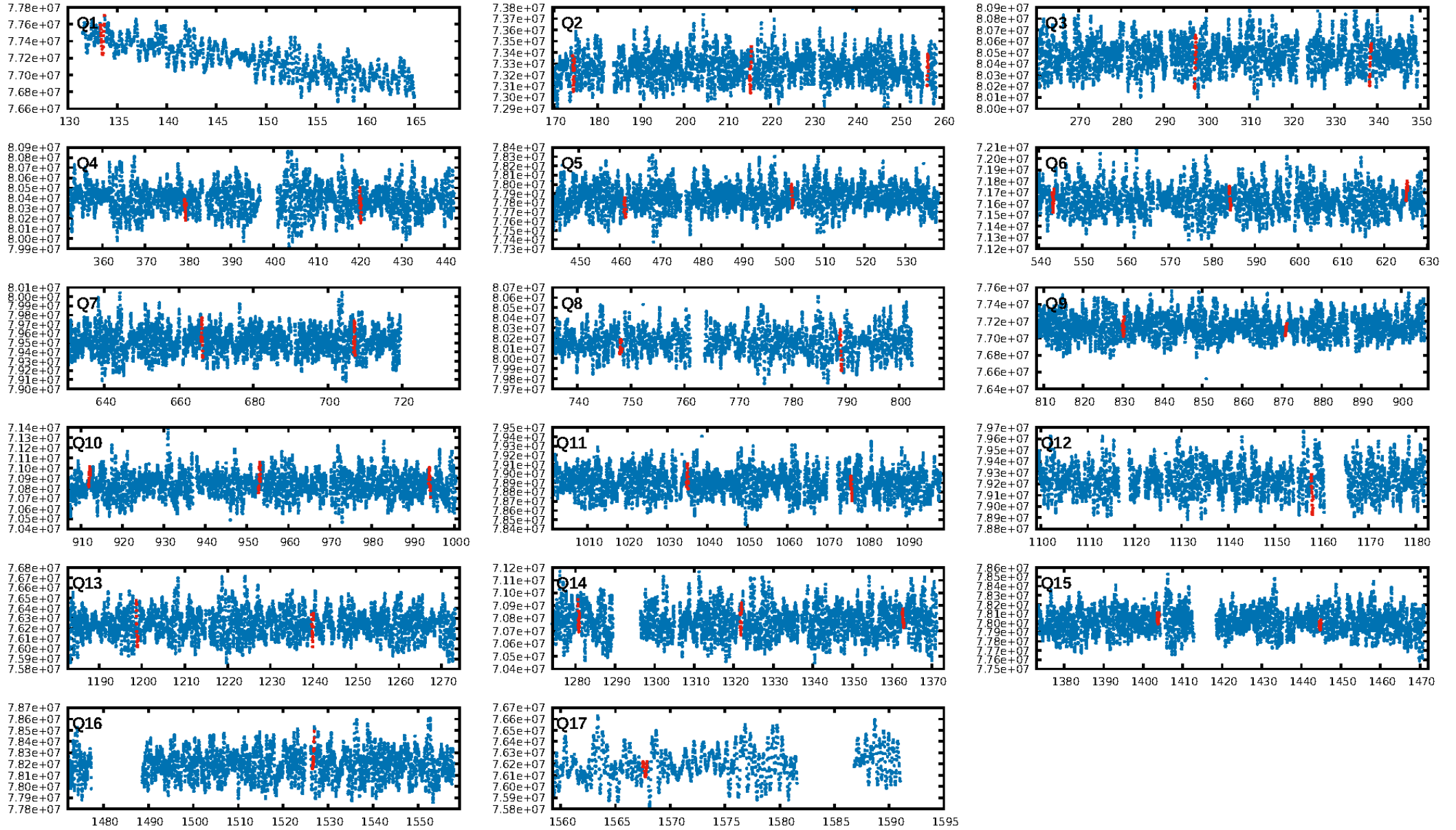
ShortPeriod-sig: 100.0% [130.66σ]
LongPeriod-sig: 100.0% [91.03σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: -11.56

Centroid-sig: 80.7%
Centroid-so: 0.736 arcsec [8.44σ]
OotOffset-rm: 0.055 arcsec [0.27σ]
KicOffset-rm: 0.095 arcsec [0.42σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.00 [0/16]

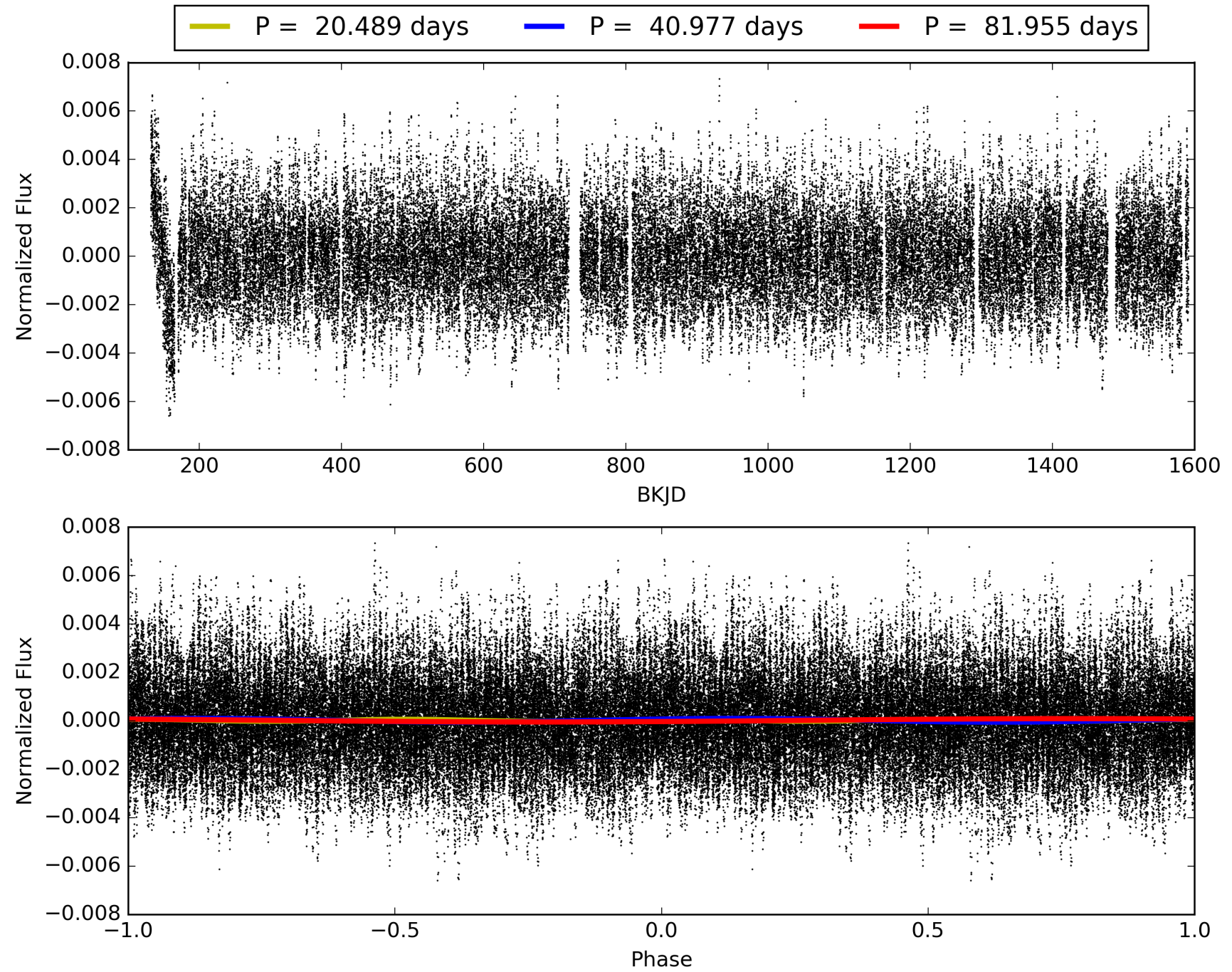
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:45 Z

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

TCE 002583748-03, PDC Light Curves

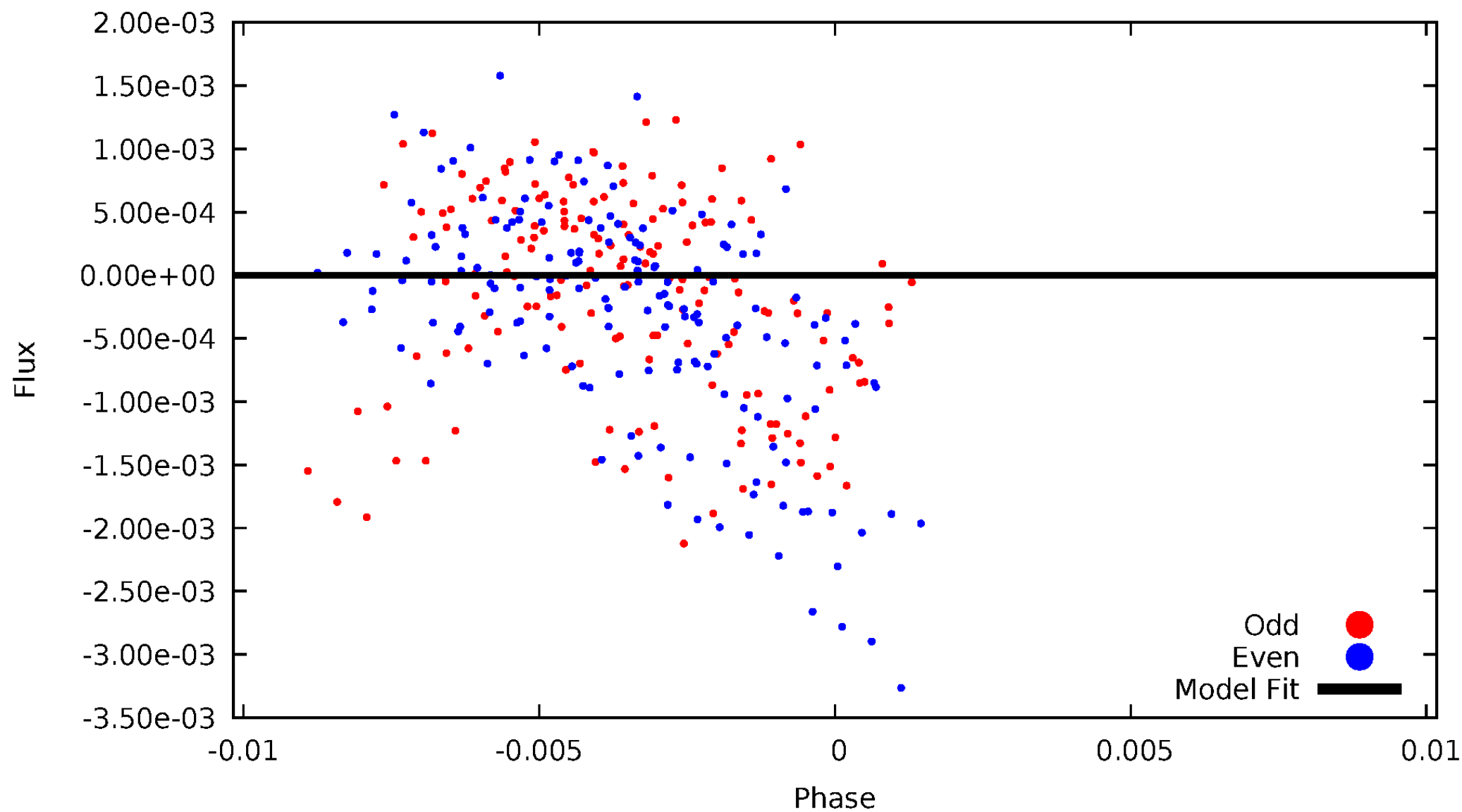


TCE 002583748-03



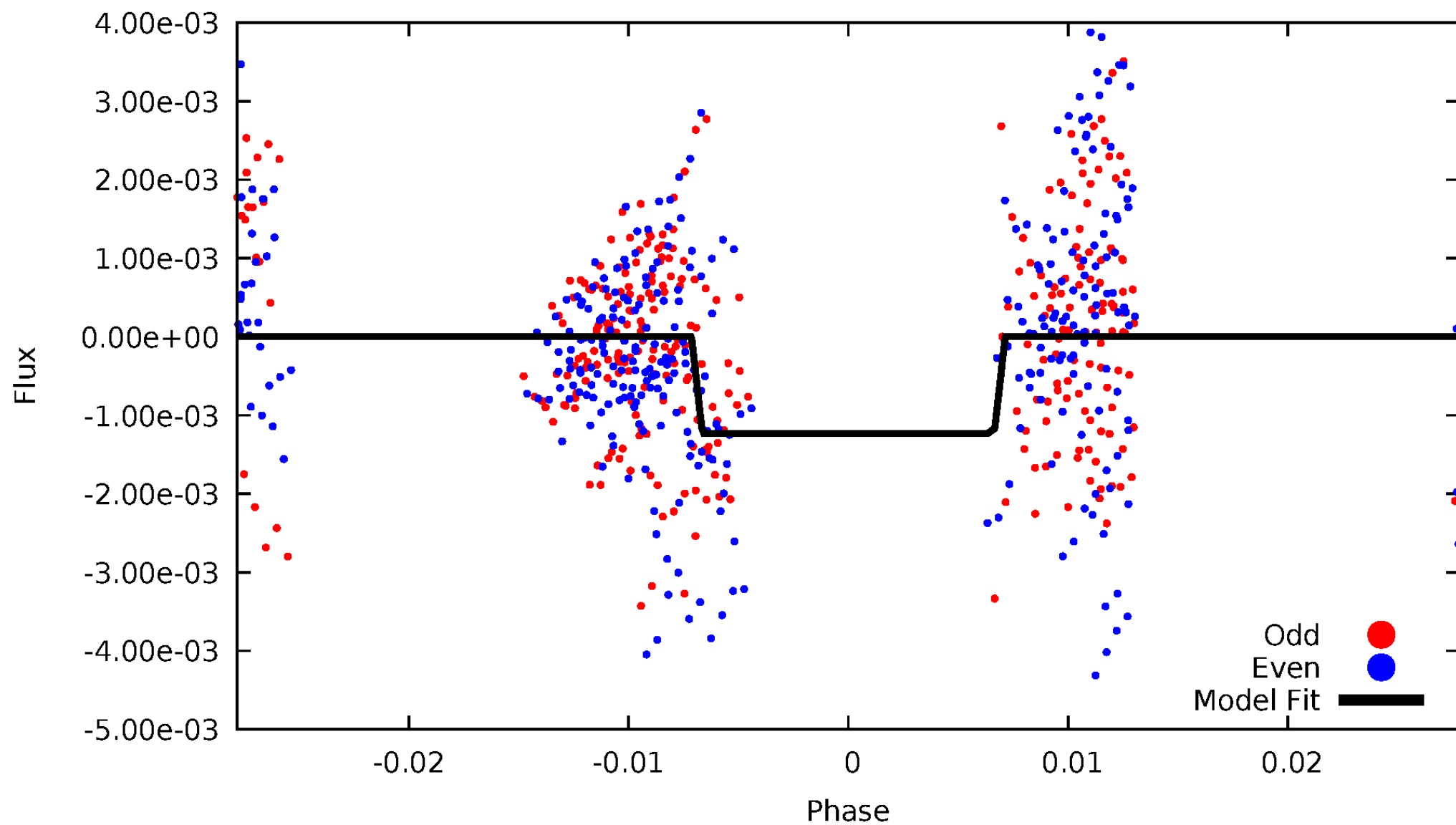
DV Odd/Even

TCE 002583748-03



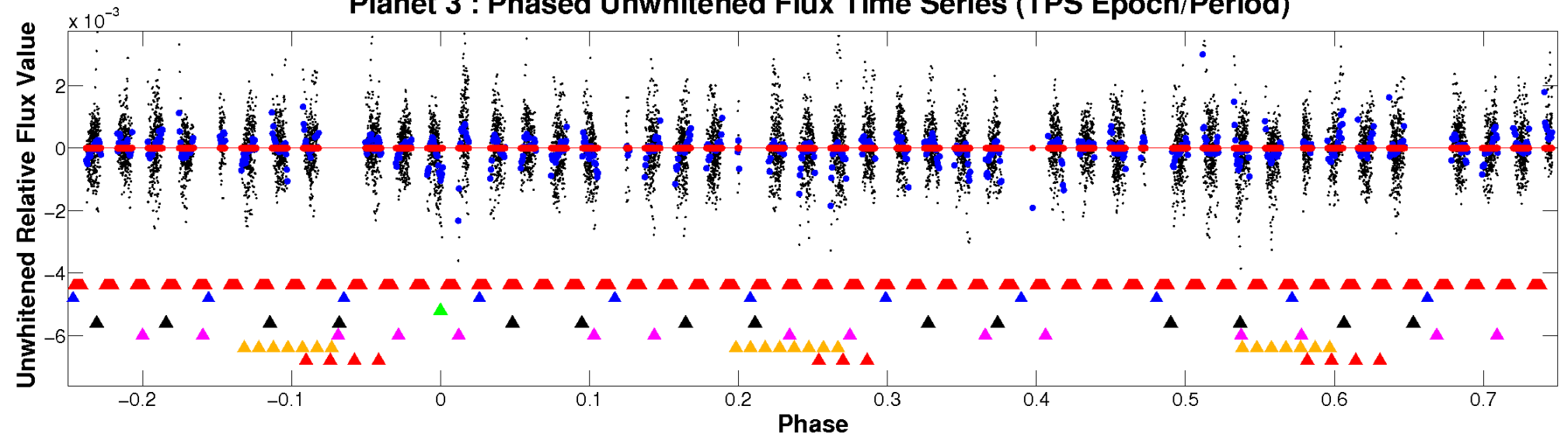
ALT Odd/Even

TCE 002583748-03

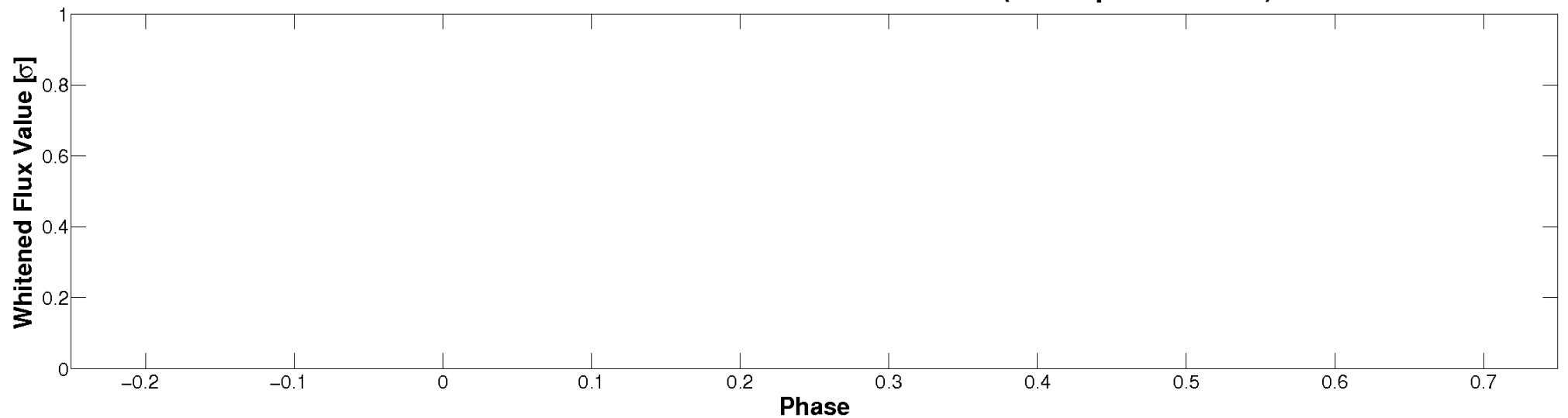


Non-Whitened Vs. Whitened Light Curve

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

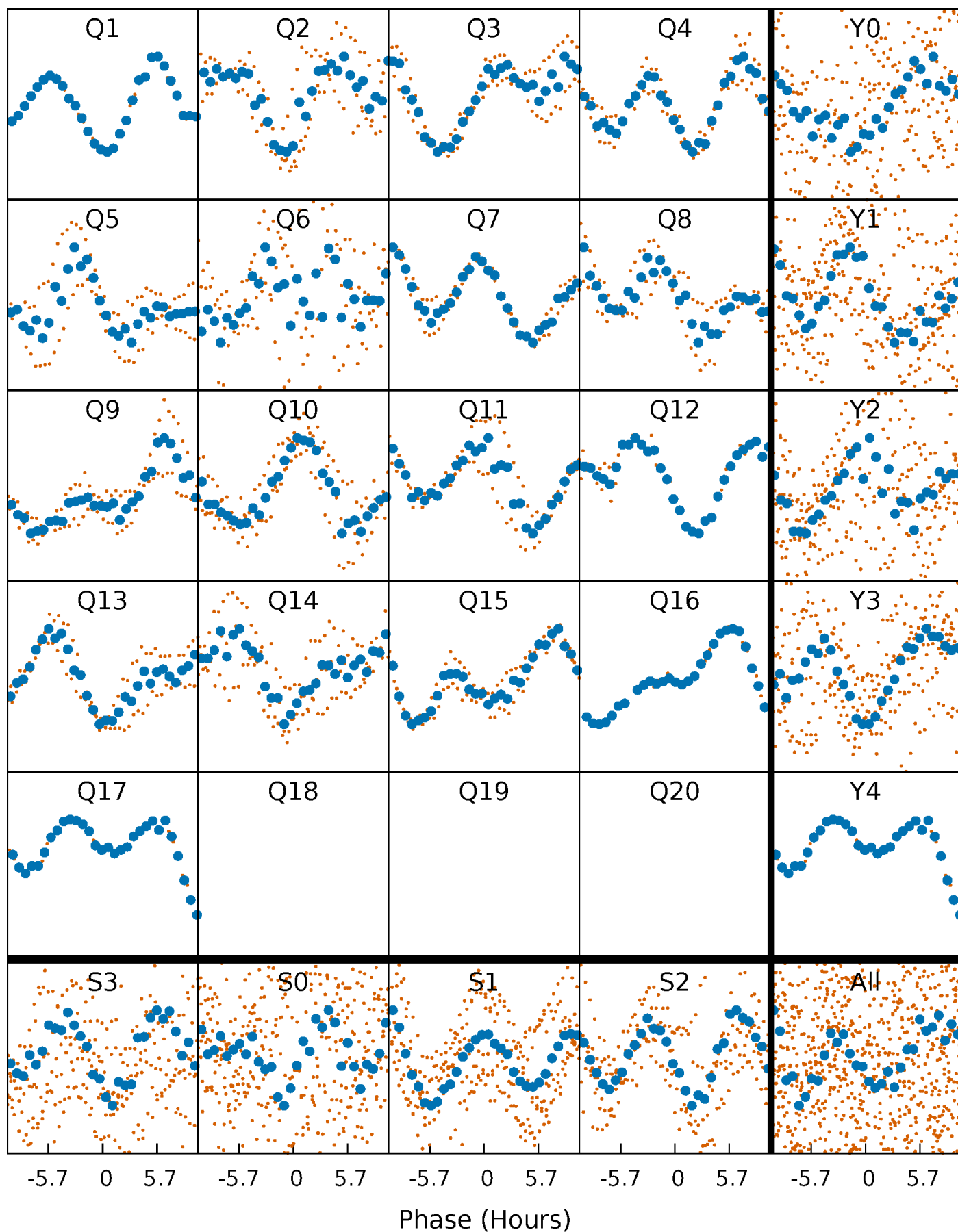


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



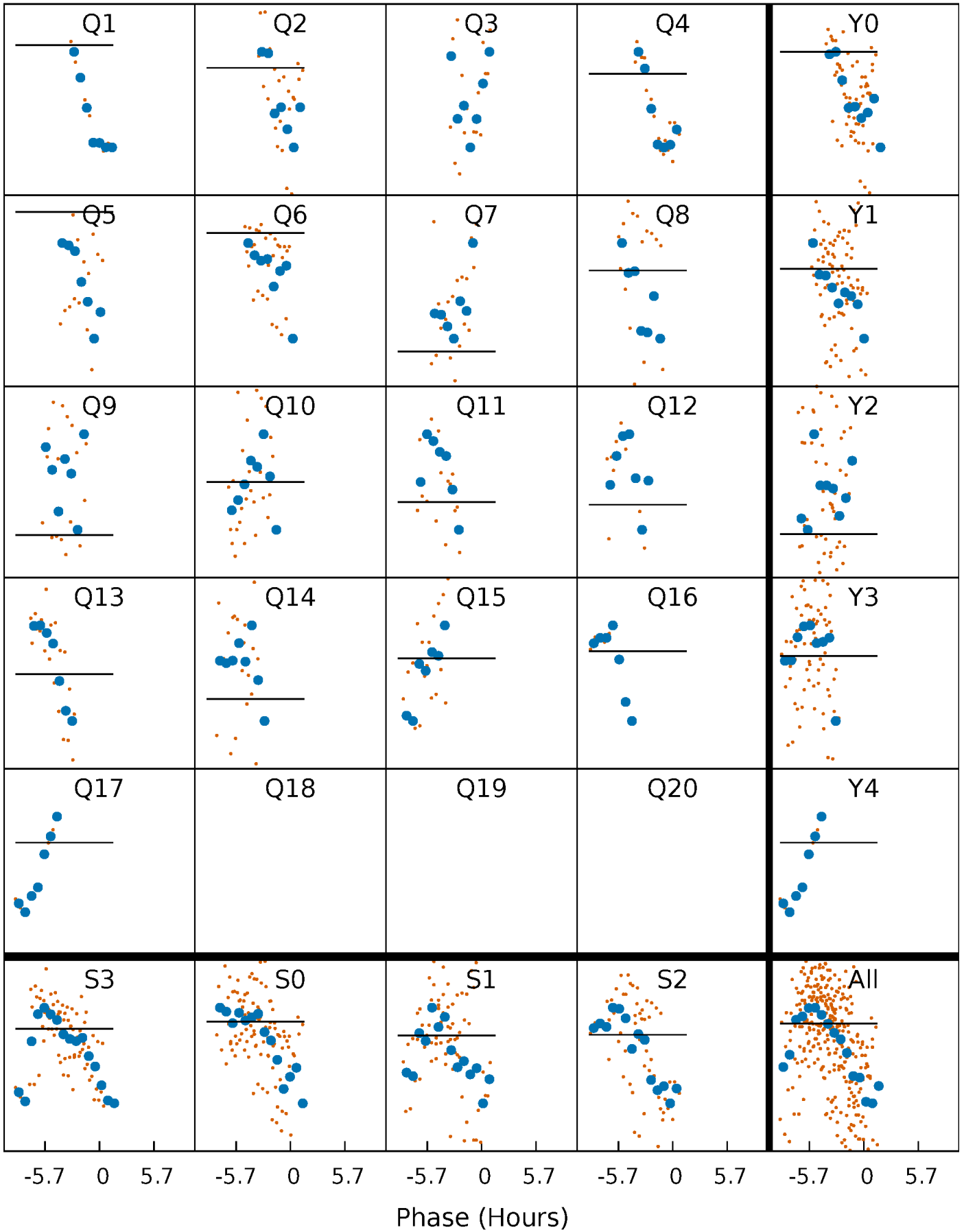
PDC Quarter-Phased Transit Curves

TCE 002583748-03 $P = 40.977339$ Days $T_0 = 133.476021$ (BKJD)



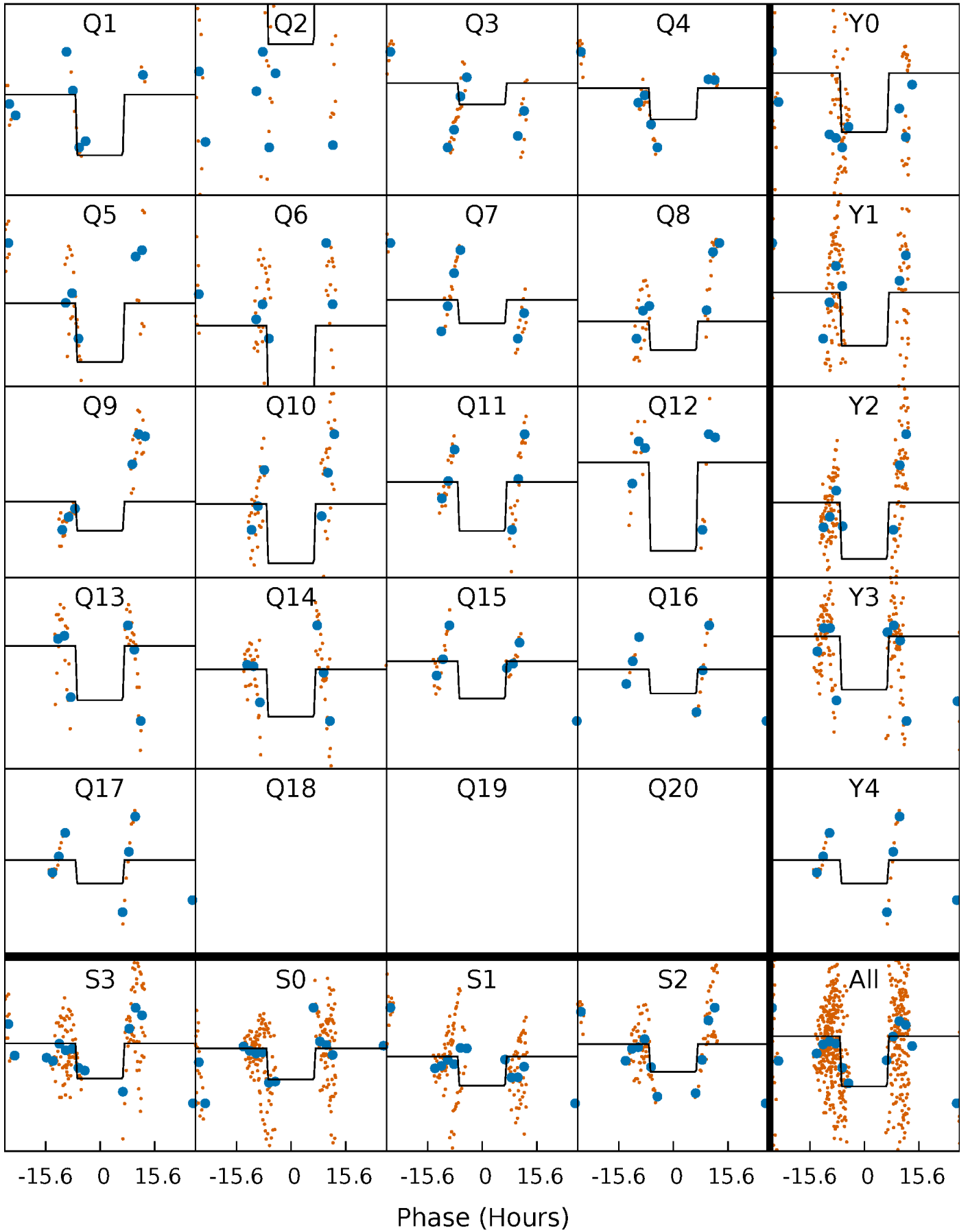
DV Quarter-Phased Transit Curves

TCE 002583748-03 $P = 40.977339$ Days $T_0 = 133.476021$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

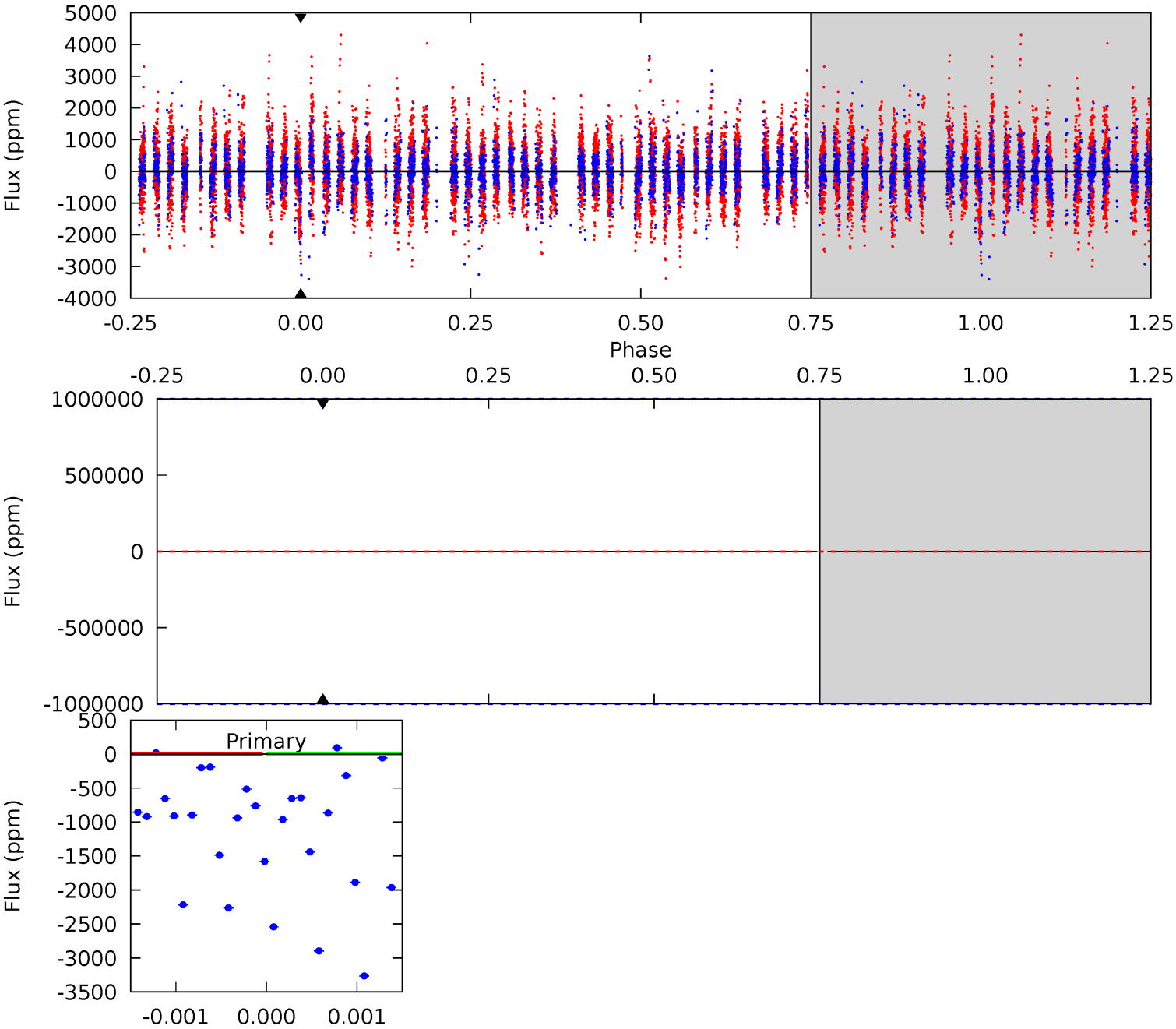
TCE 002583748-03 P= 40.977339 Days $T_0=133.716415$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-03, P = 40.977339 Days, E = 92.498682 Days

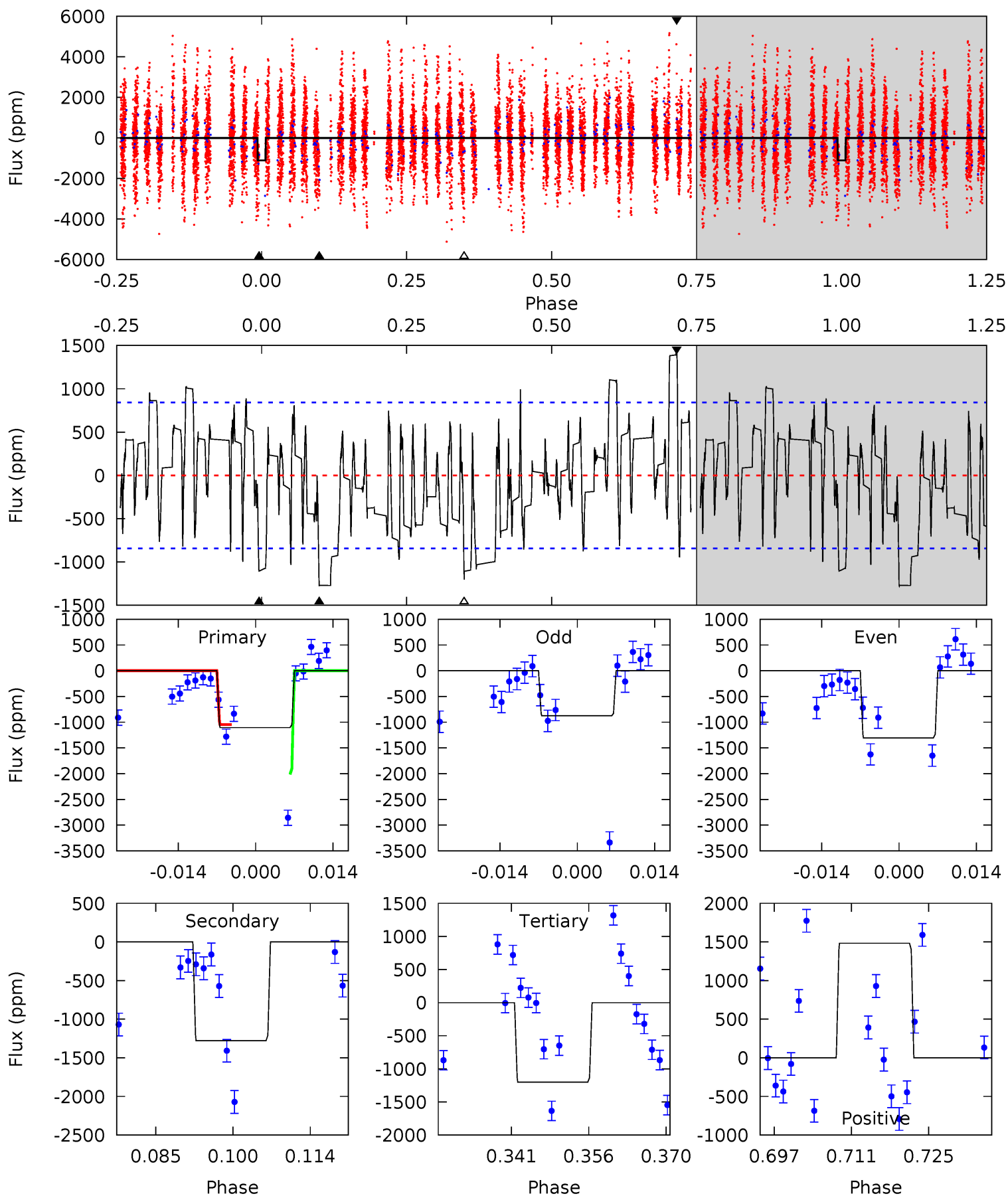
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002583748-03, P = 40.977339 Days, E = 92.739076 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.50	7.51	7.06	8.72	4.96	2.45	2.48	-0.57	-2.22	0.45	-1.21	1.26	0.79	0.54	1.74



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$13.81^{+14.89}_{-9.10}$	1136^{+95}_{-107}	5810^{+34217}_{-32081}	504^{+44427}_{-25700}
Alt.	-1277 ± 170	$15.16^{+17.20}_{-9.68}$	1136^{+88}_{-105}	4723^{+3057}_{-1085}	191^{+1350}_{-149}

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

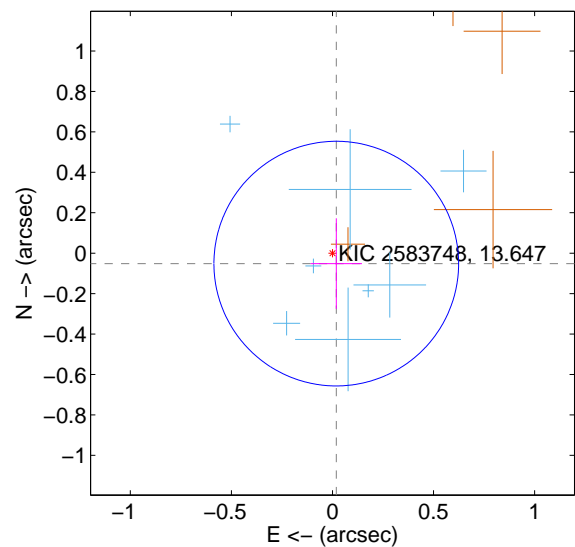
Supplemental centroid analysis for 002583748-03. Kepler magnitude: 13.65. Transit SNR -1.00

There are 9 quarters with good PRF difference image offsets

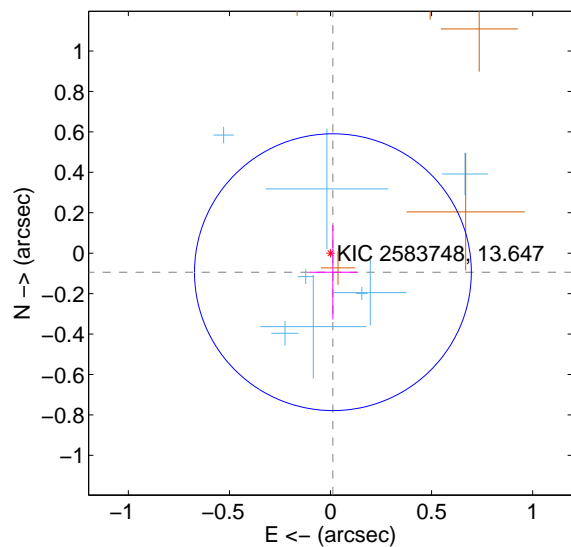
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.202	0.27	-0.019 ± 0.127	-0.052 ± 0.224
PRF-fit source offset from KIC position	0.095 ± 0.228	0.42	-0.012 ± 0.120	-0.094 ± 0.233
photometric centroid source offset	0.74 ± 0.09	8.44	0.27 ± 0.08	-0.68 ± 0.09

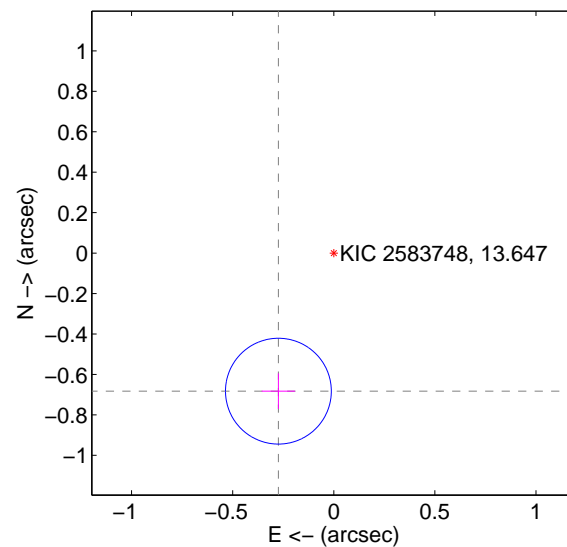
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

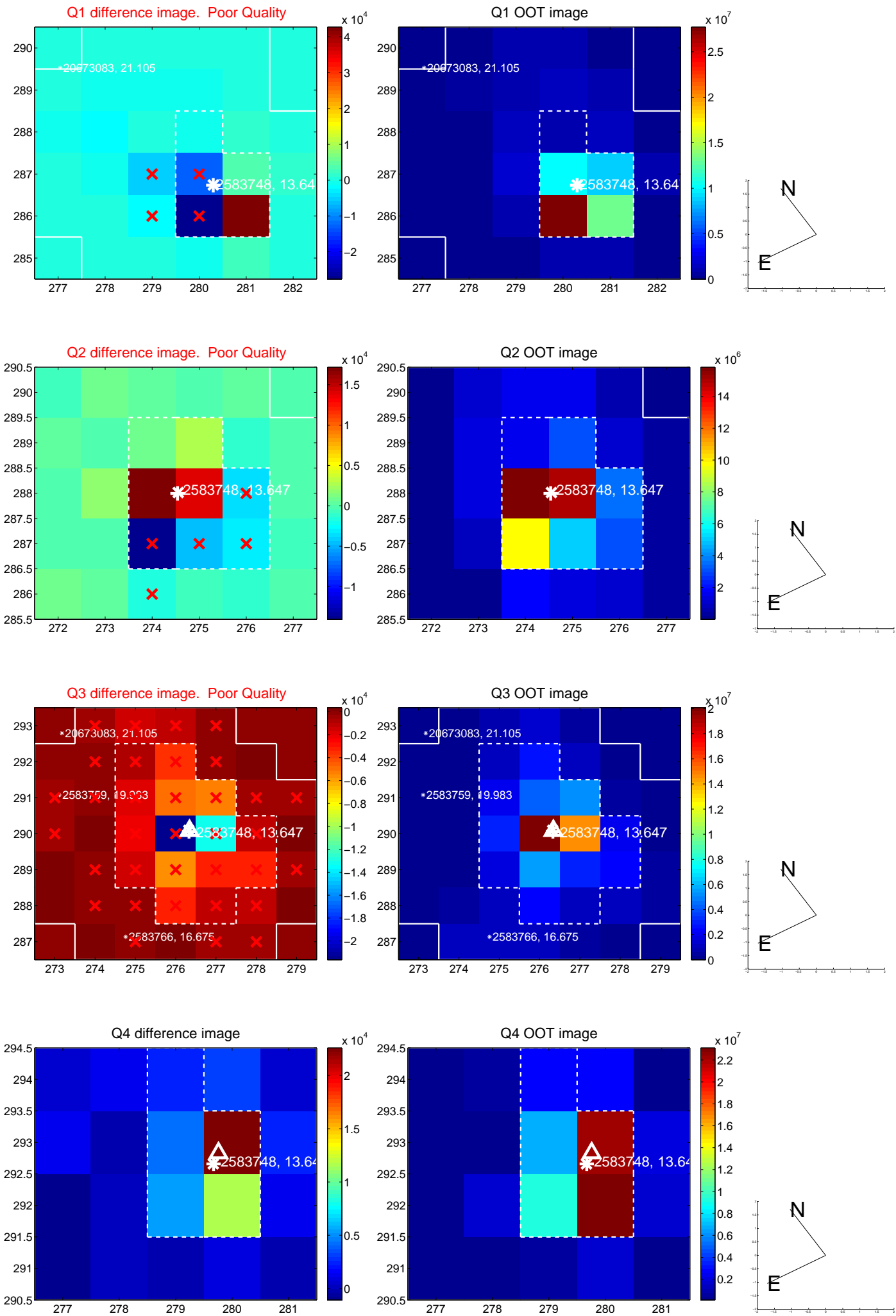


offset from photometric centroids

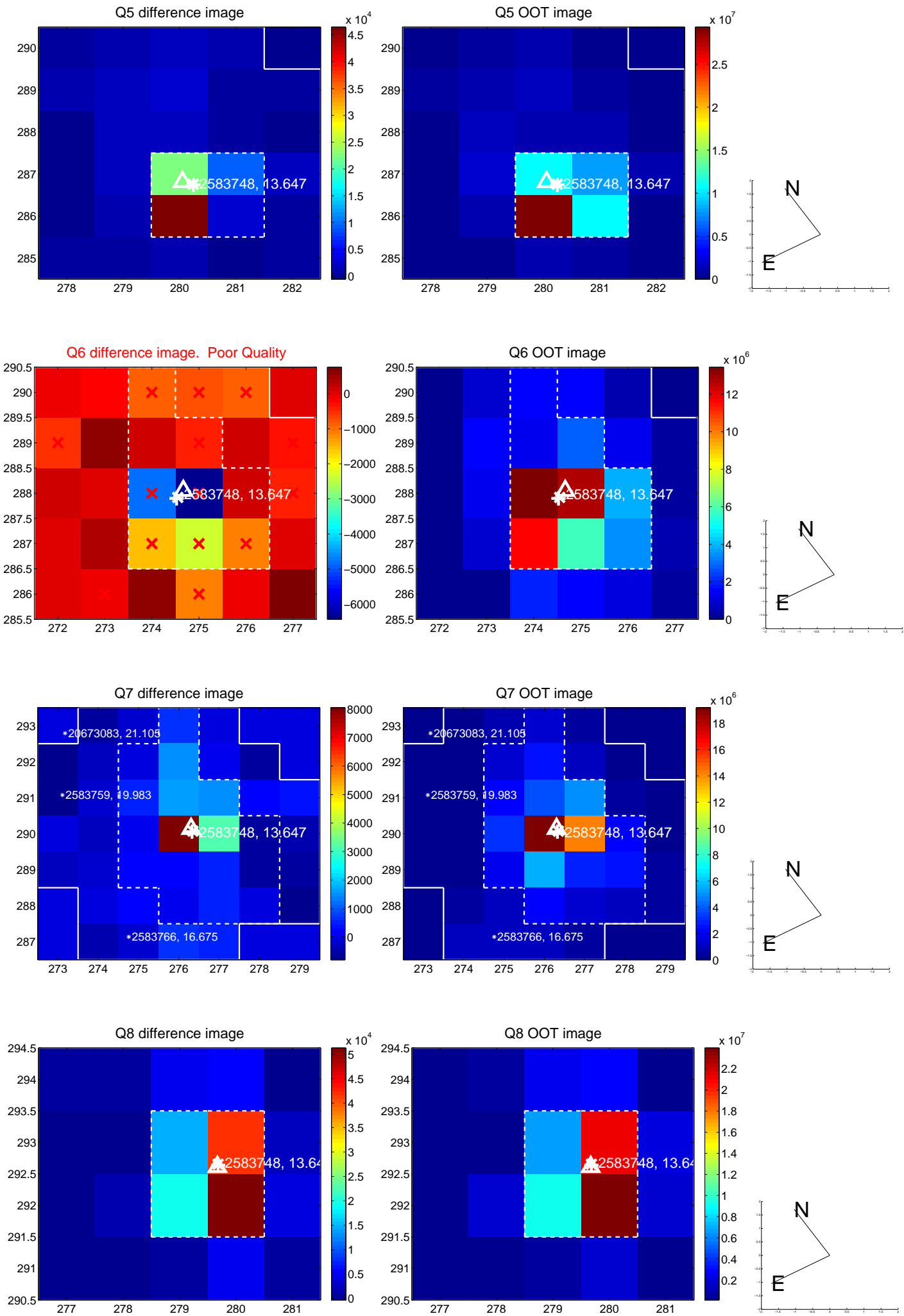


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

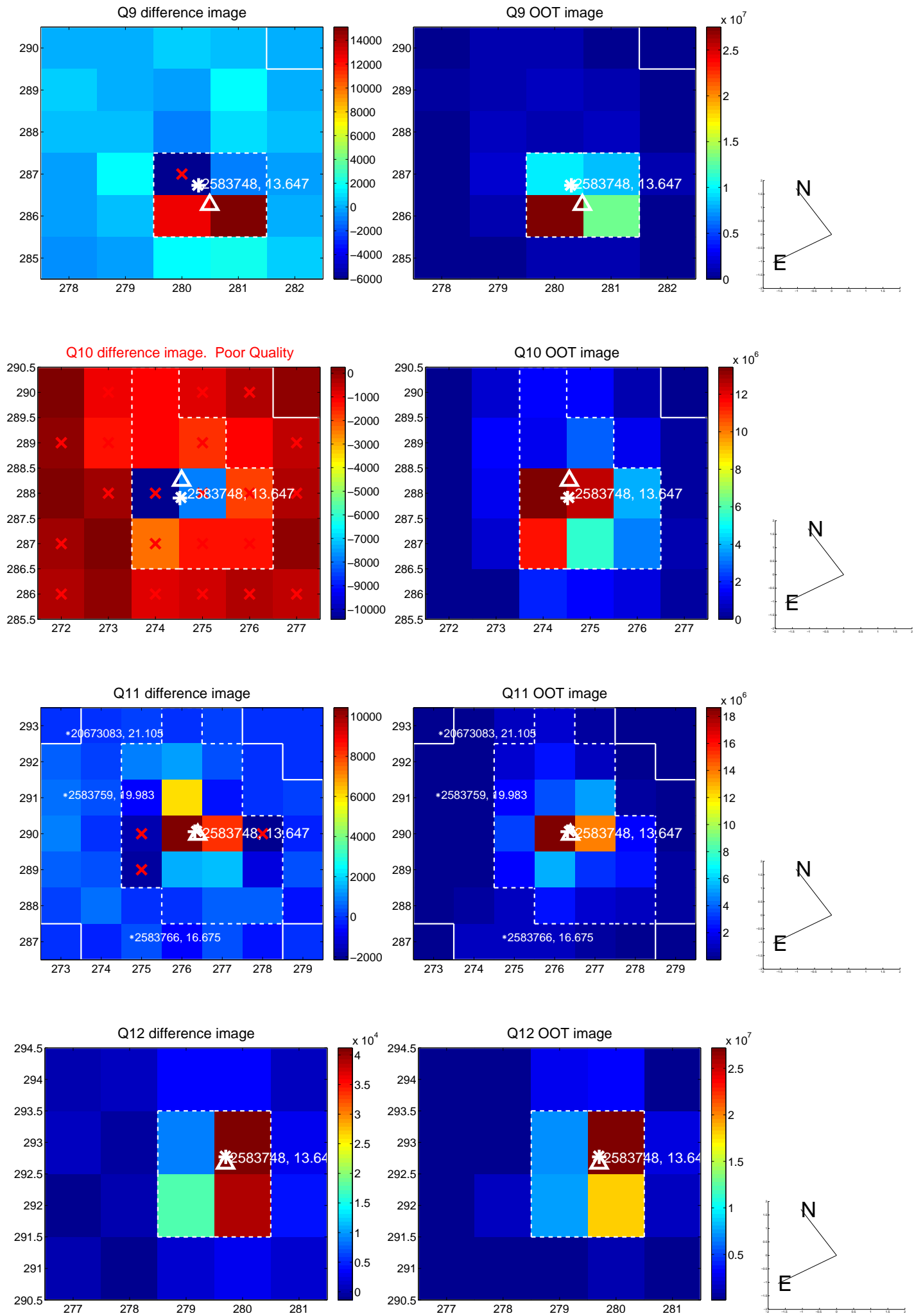
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



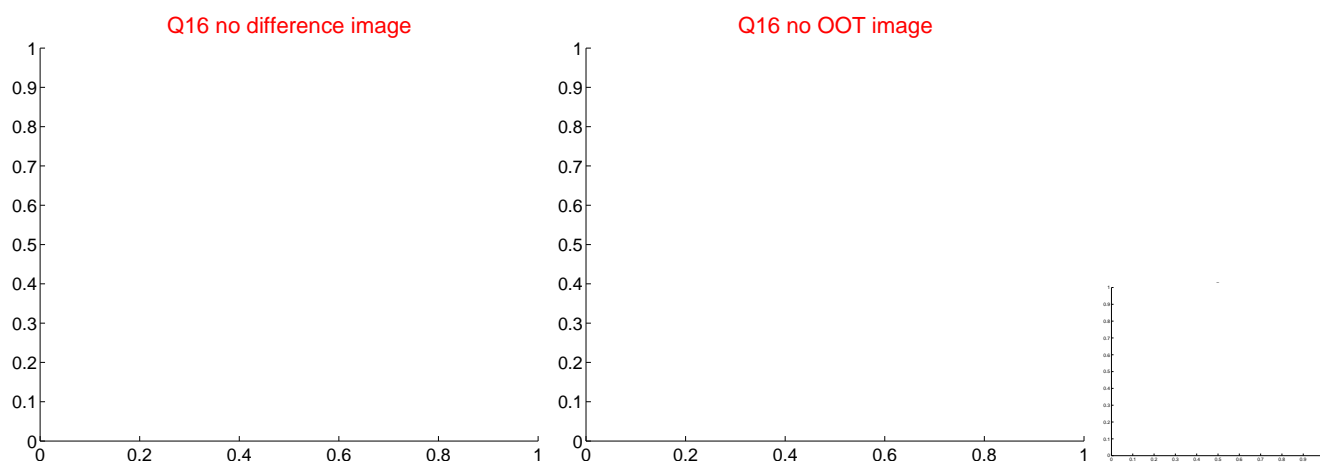
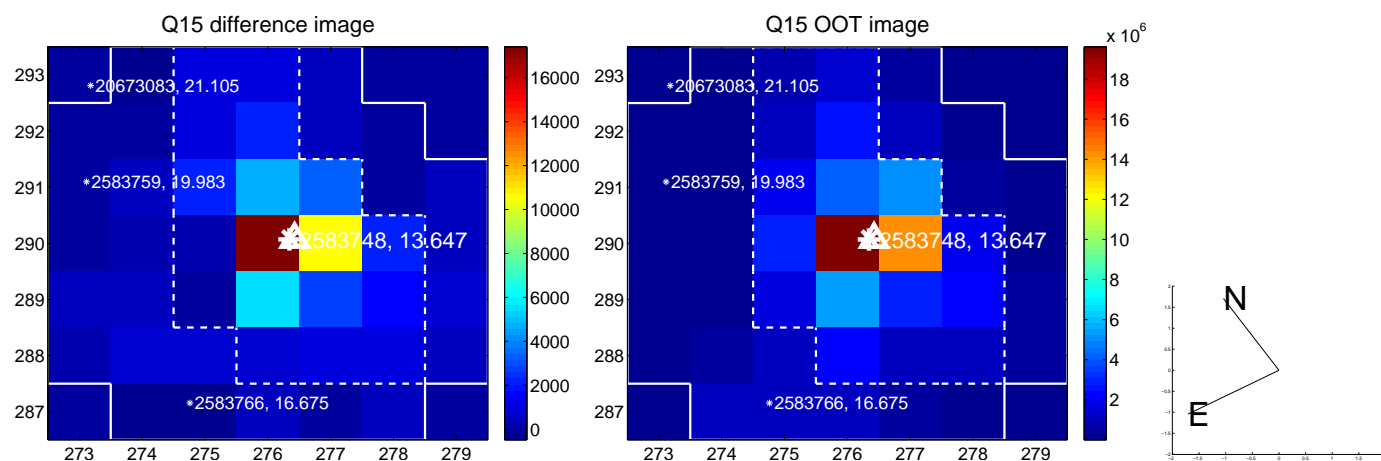
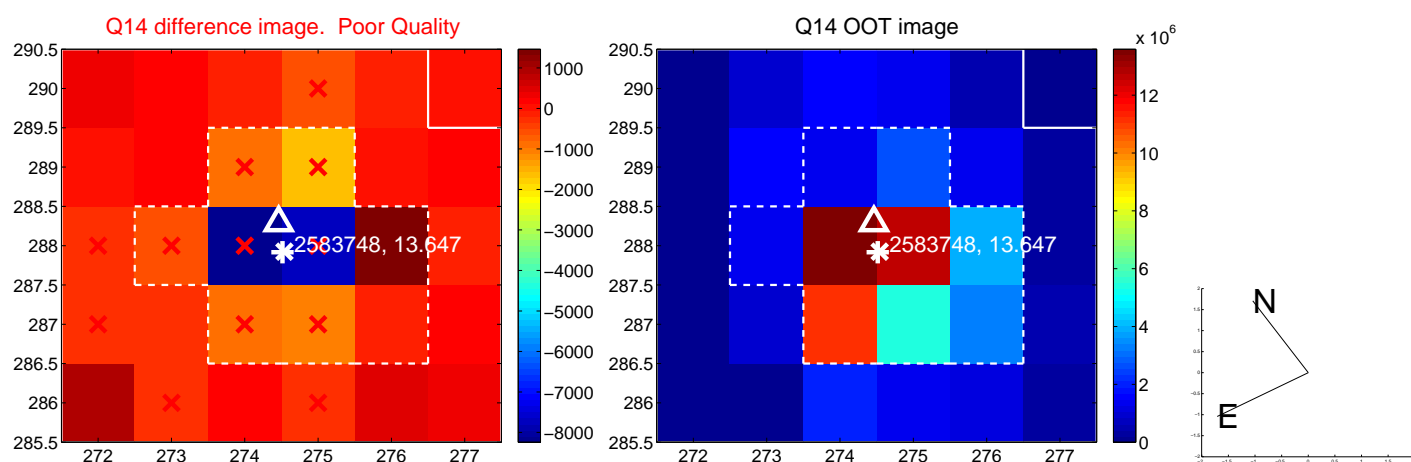
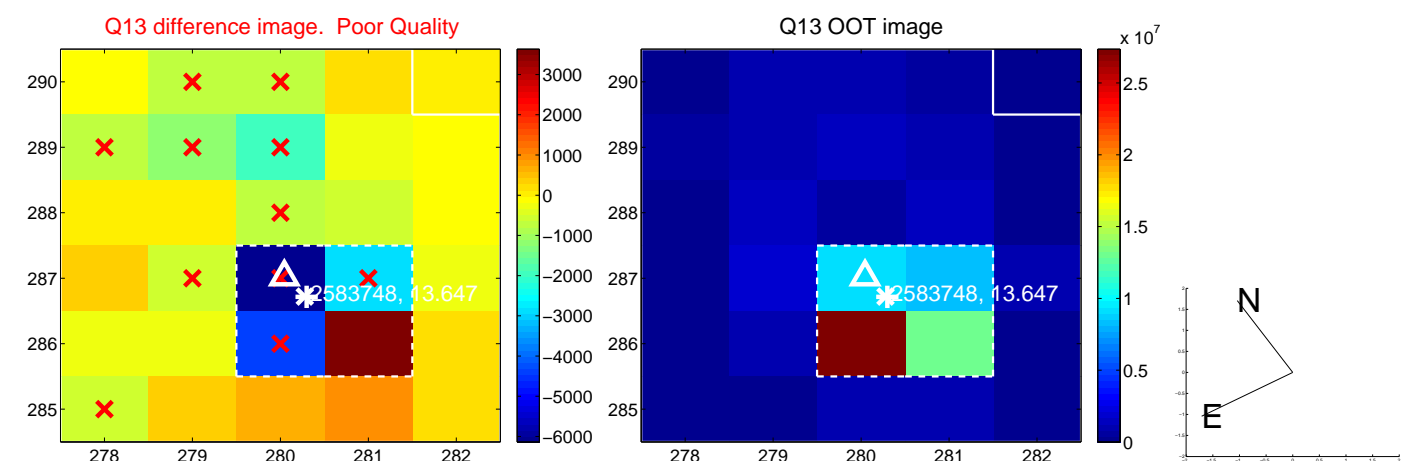
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



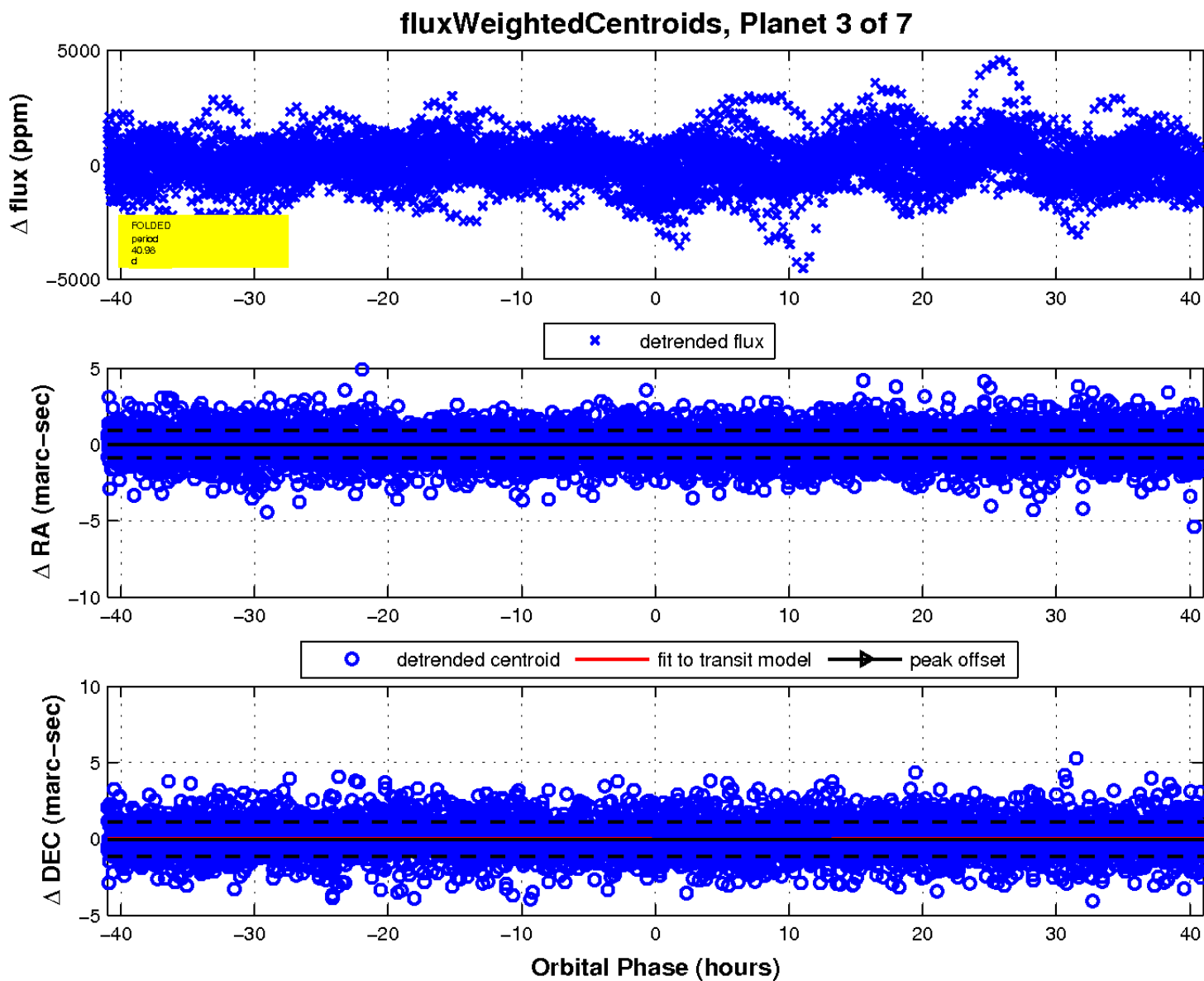
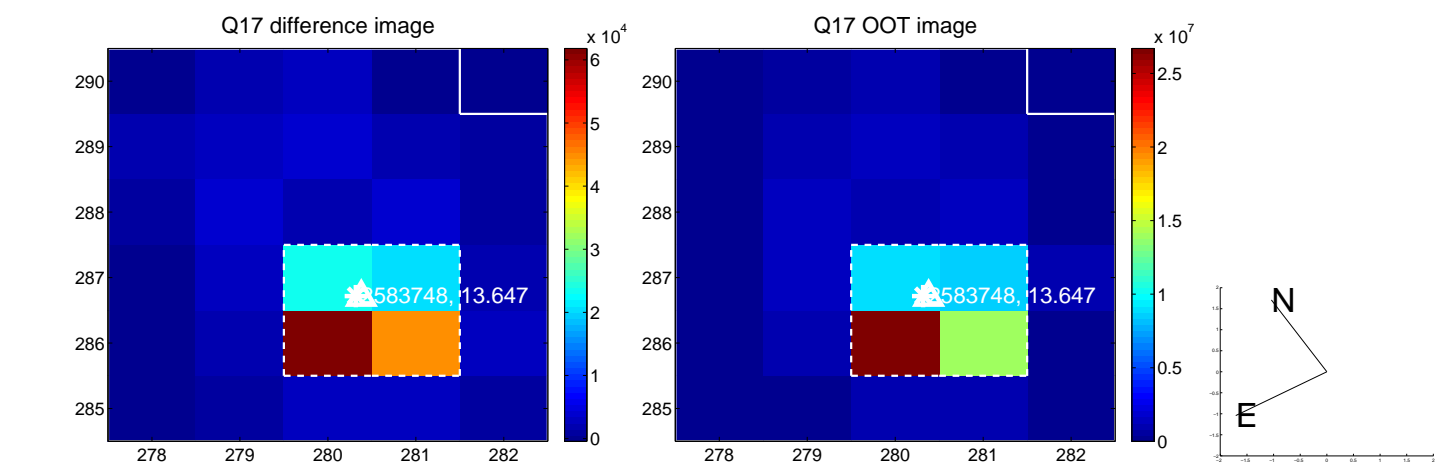
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

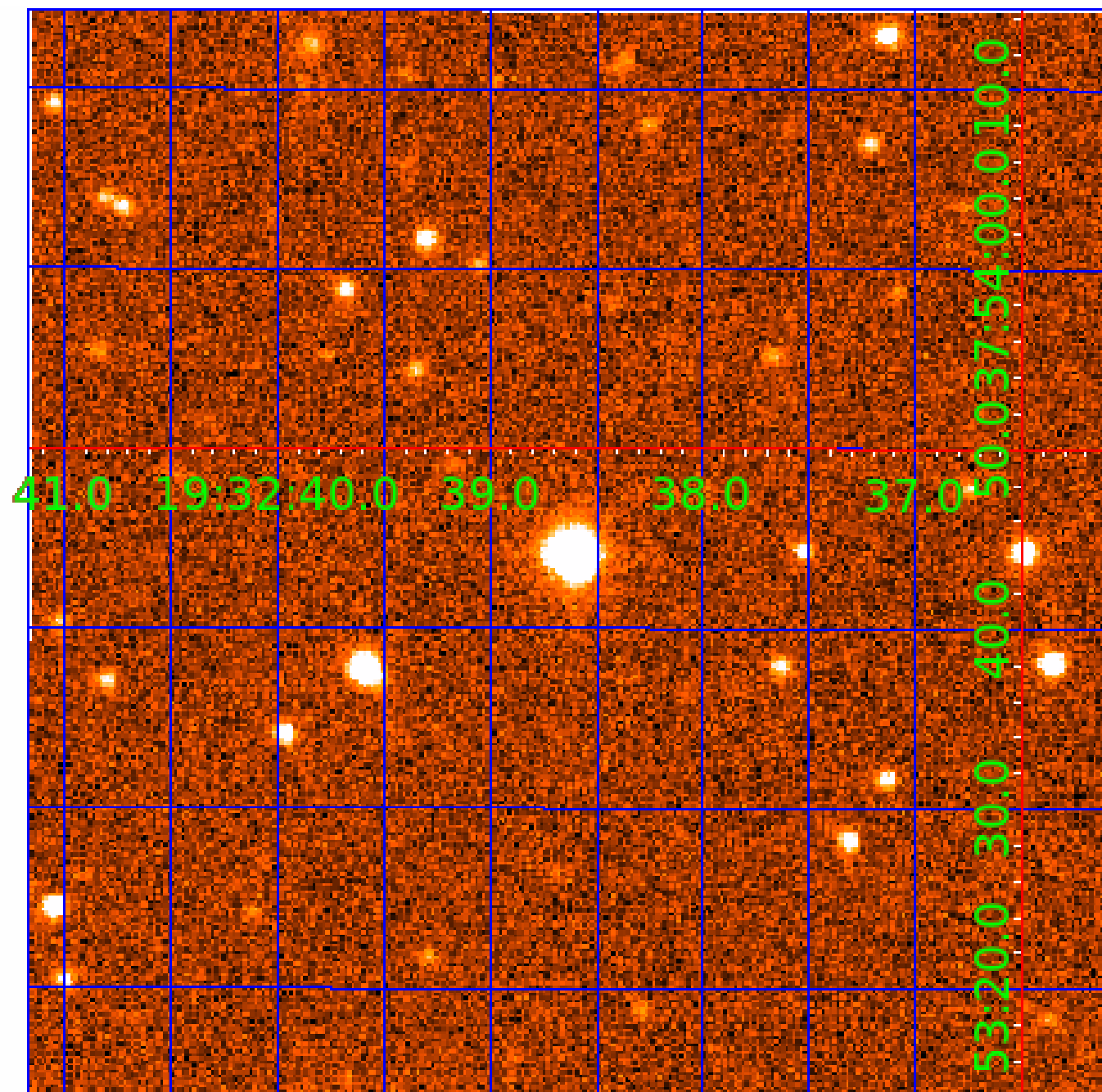


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
002583748-03	OBS	No	40.977339	133.476021	380.4	5.000	9.7	-1.0	1.82	6975	3.58	110.81
002583748-05	OBS	No	99.753293	171.638886	1736.8	3.102	9.1	8.5	1.82	6975	13.98	33.84
002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

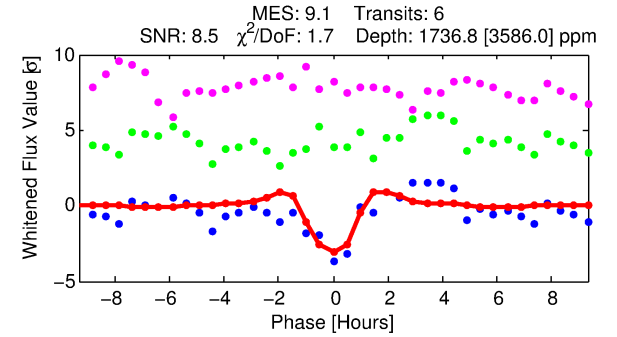
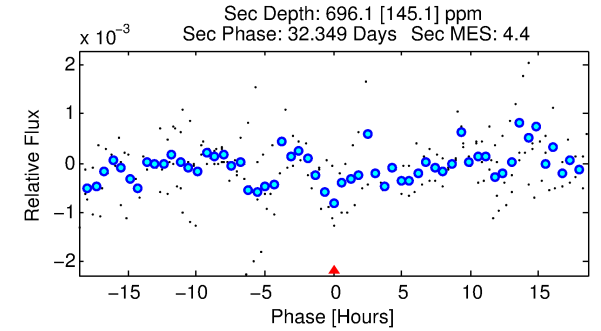
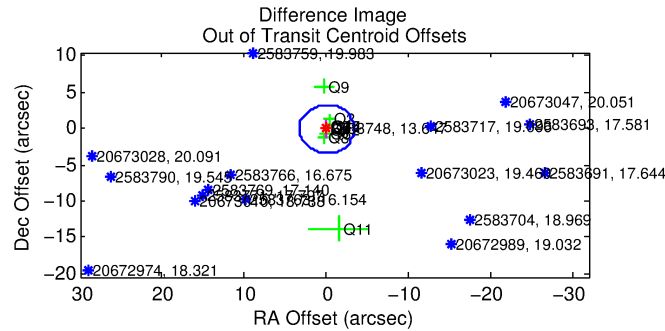
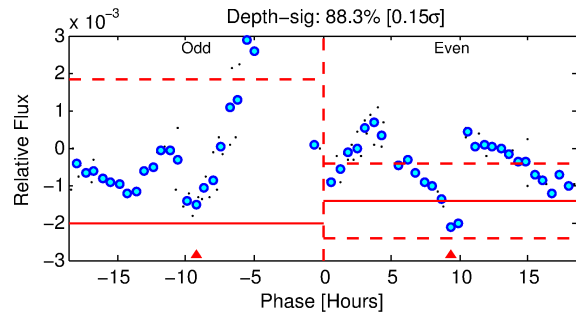
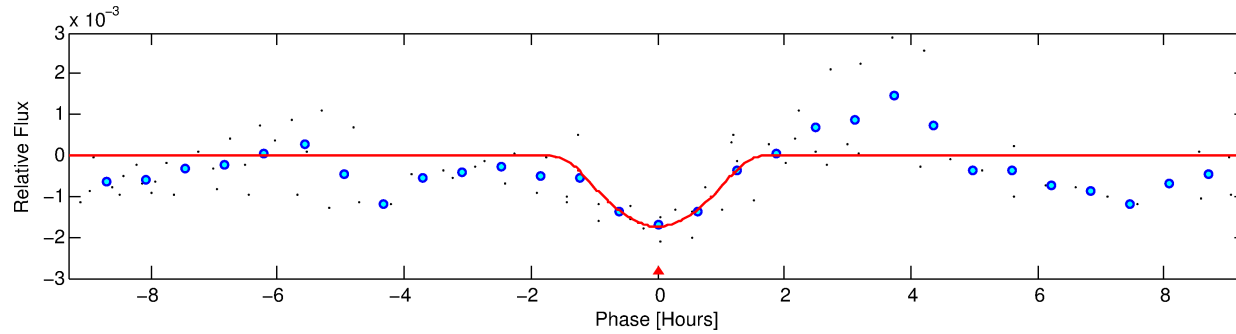
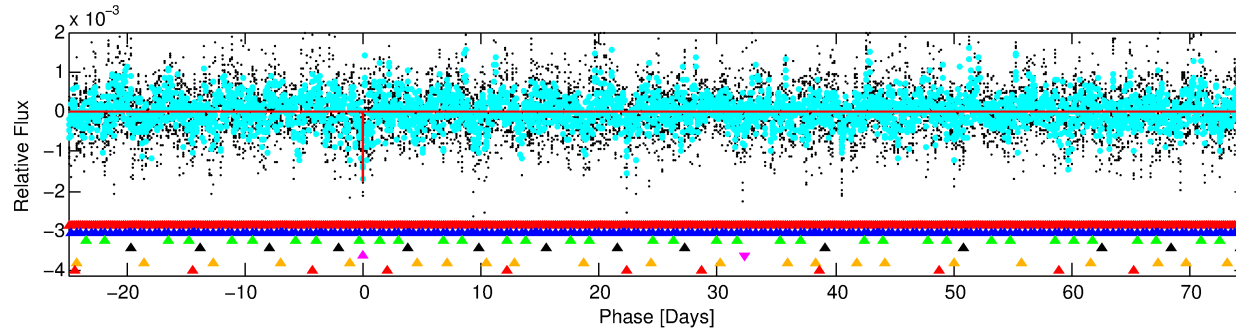
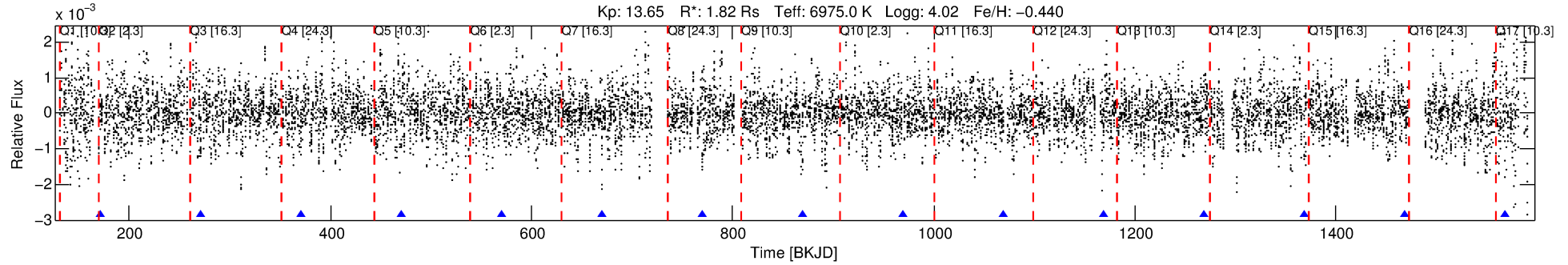
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-05

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 5 of 7 Period: 99.753 d



DV Fit Results:

Period = 99.75329 [0.00135] d
Epoch = 171.6389 [0.0126] BKJD
Rp/R* = 0.0705 [0.4113]
a/R* = 93.89 [125.15]
b = 1.00 [0.69]
Seff = 33.84 [18.53]
Teq = 615 [84] K
Rp = 13.98 [81.69] Re
a = 0.4549 [0.1474] AU
Ag = 405.20 [4731.81] [0.09 σ]
Teffp = 4266 [12444] K [0.29 σ]

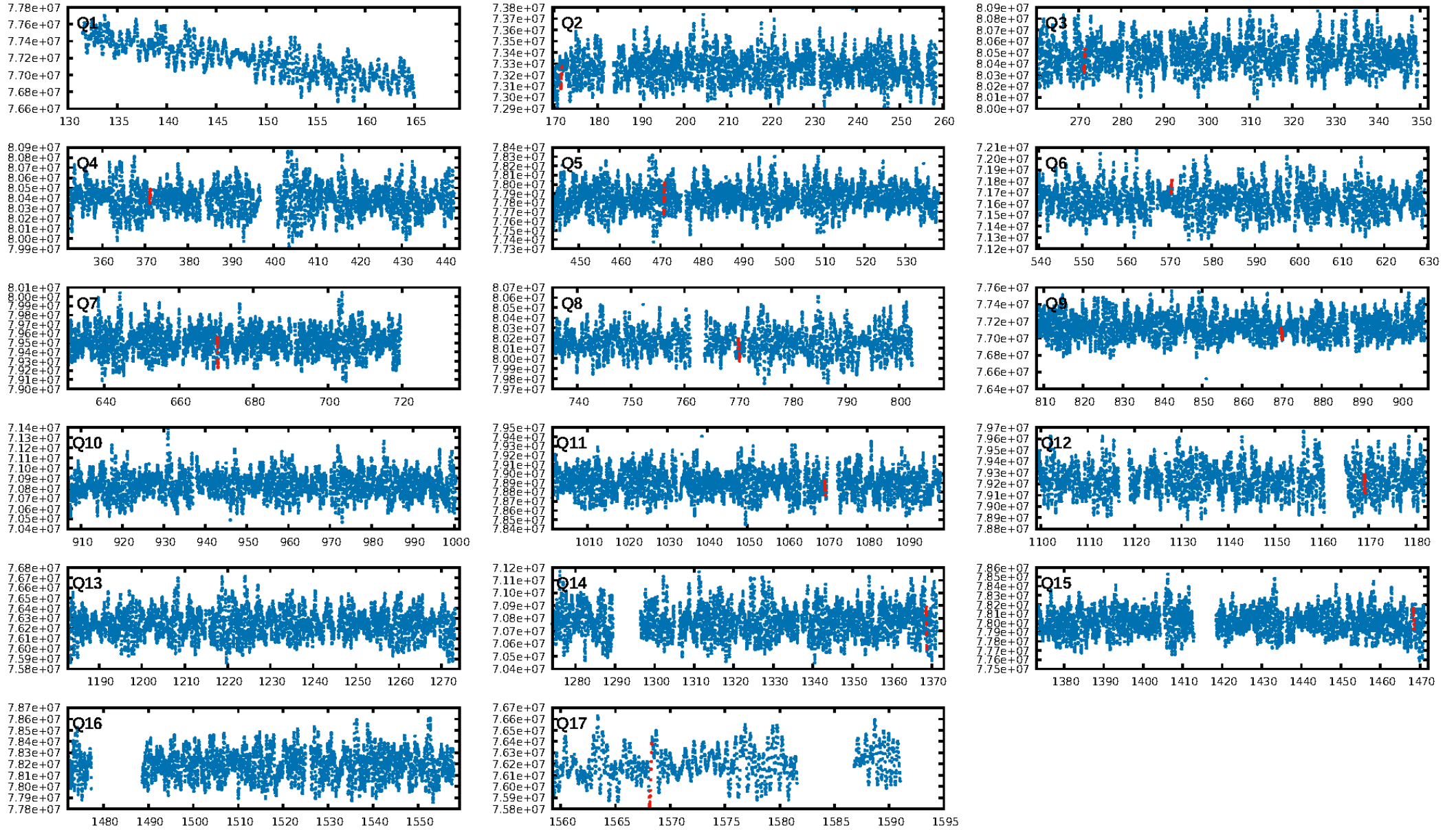
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [123.58 σ]
LongPeriod-sig: 100.0% [61.45 σ]
ModelChiSquare2-sig: 6.1%
ModelChiSquareGof-sig: 96.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.5453
Centroid-sig: 2.0%
Centroid-so: 1.013 arcsec [3.83 σ]
OotOffset-rm: 0.099 arcsec [0.09 σ]
KicOffset-rm: 0.107 arcsec [0.09 σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 0.00 [0/12]

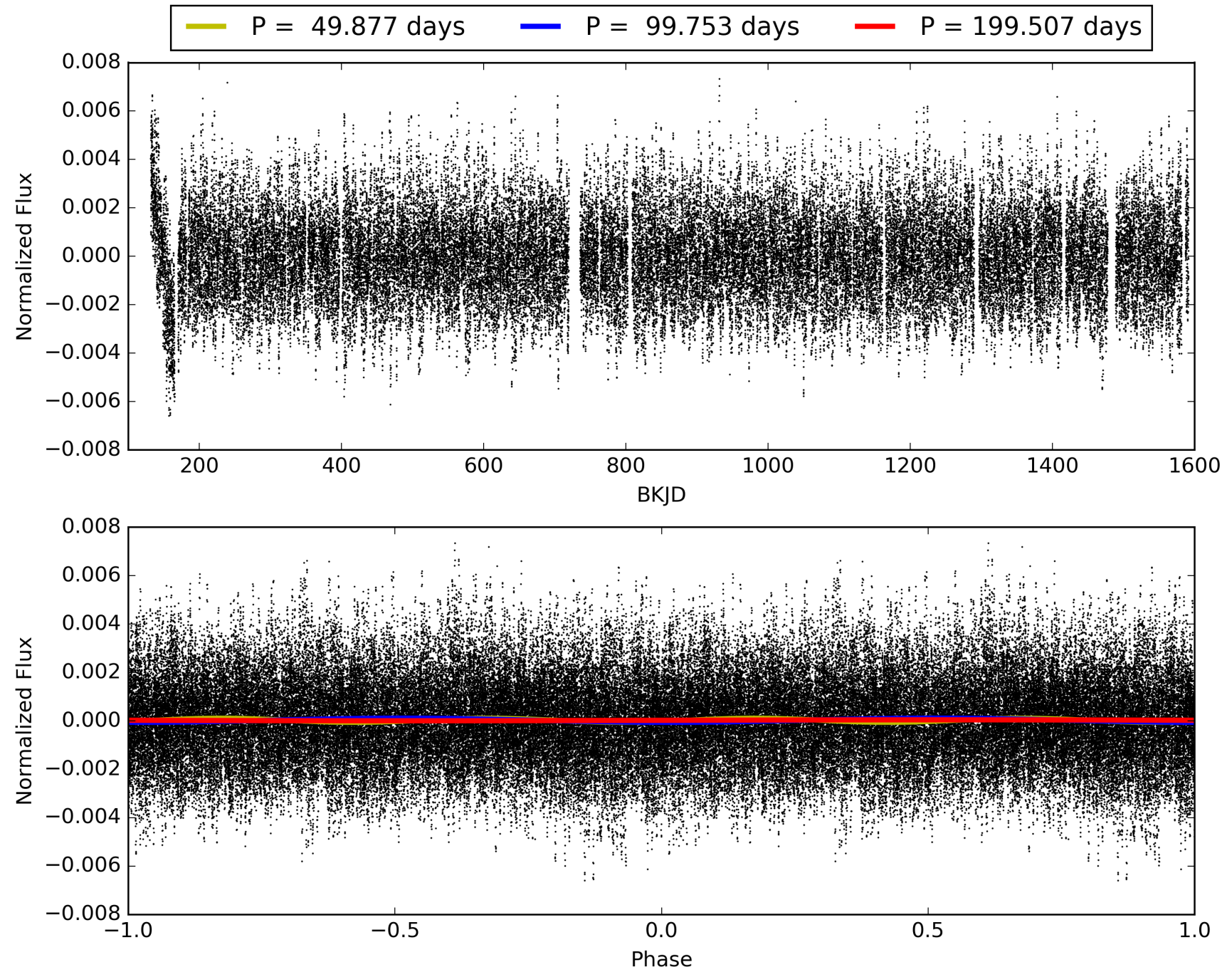
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:53 Z

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

TCE 002583748-05, PDC Light Curves

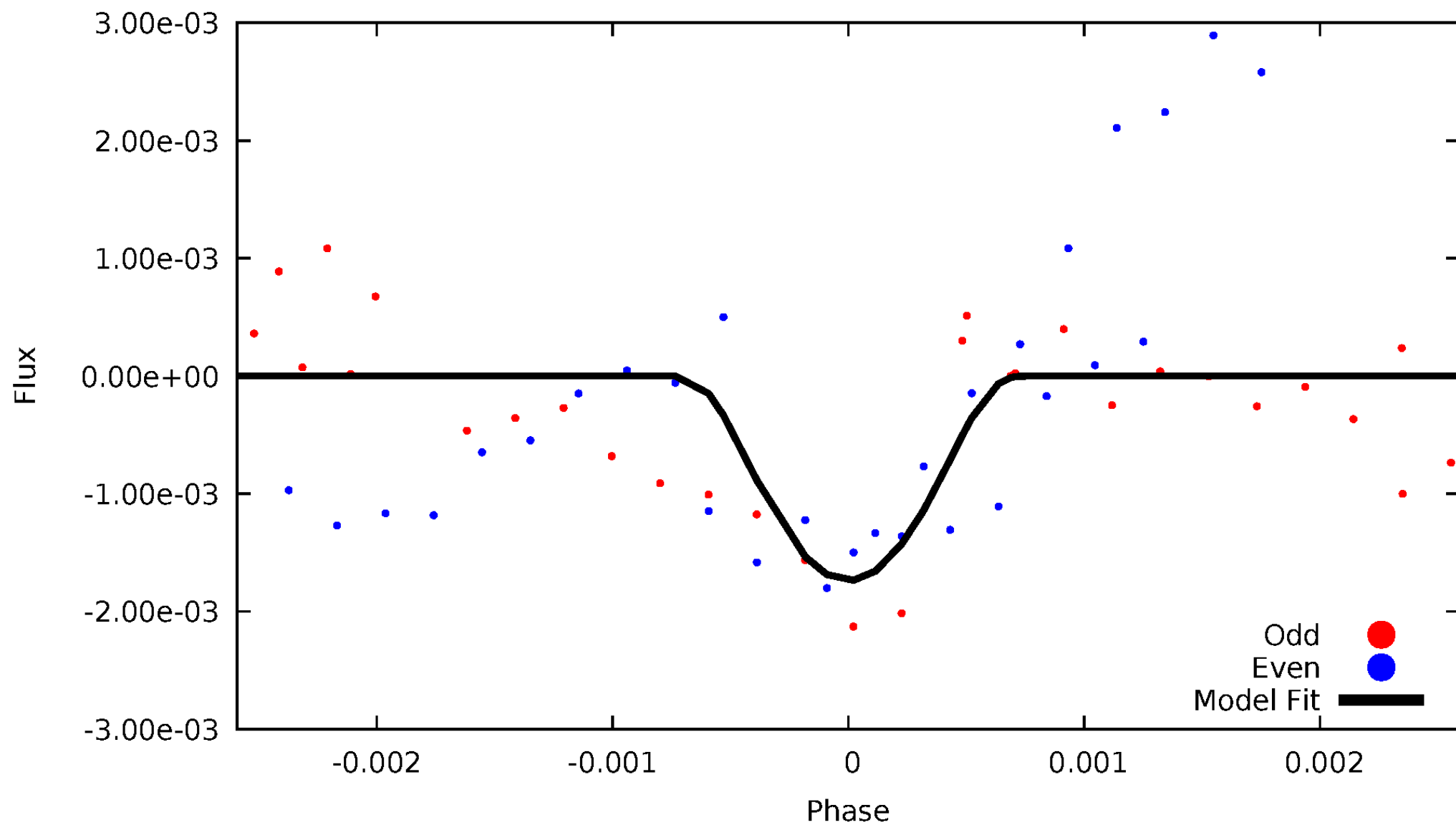


TCE 002583748-05



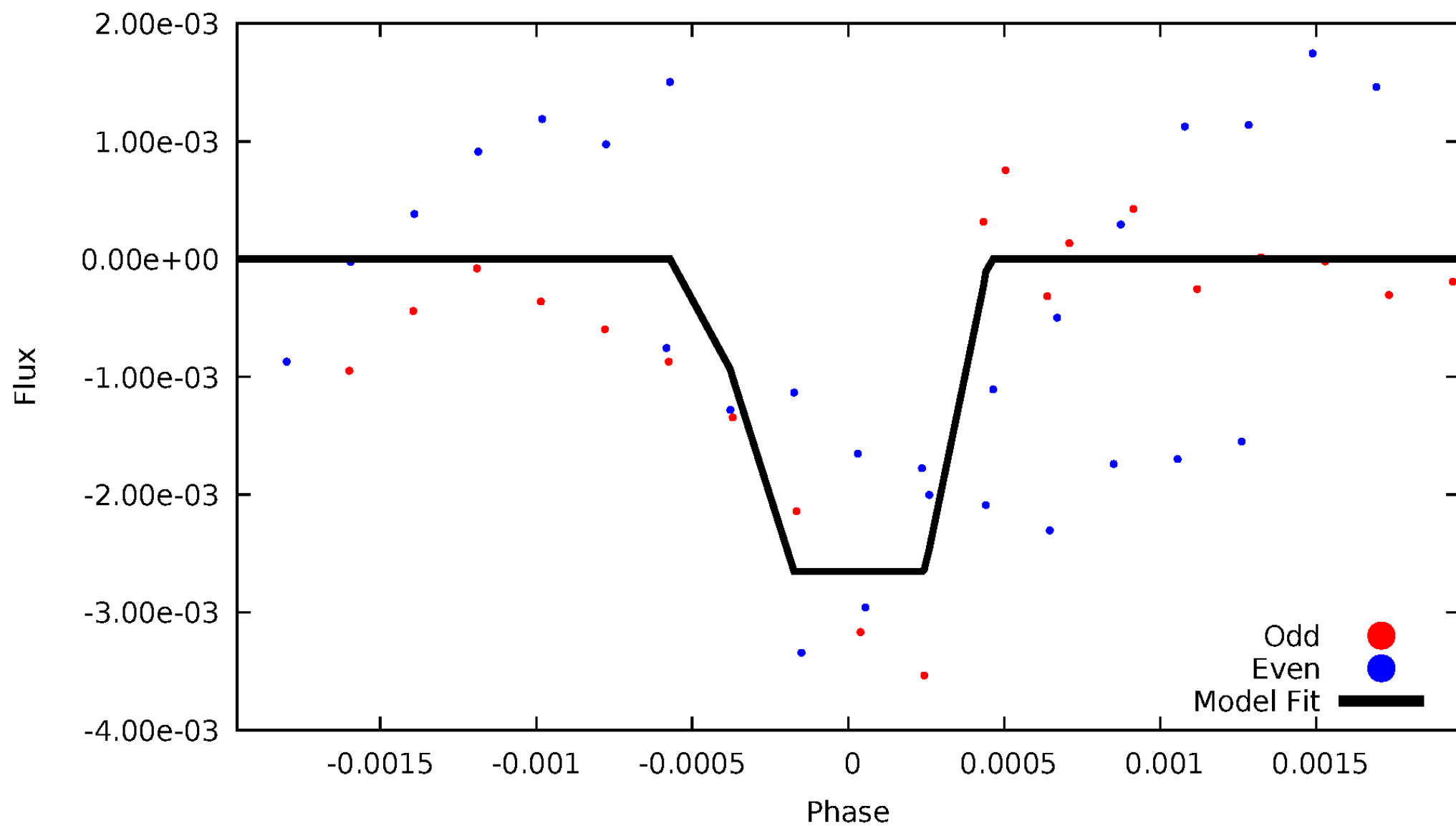
DV Odd/Even

TCE 002583748-05



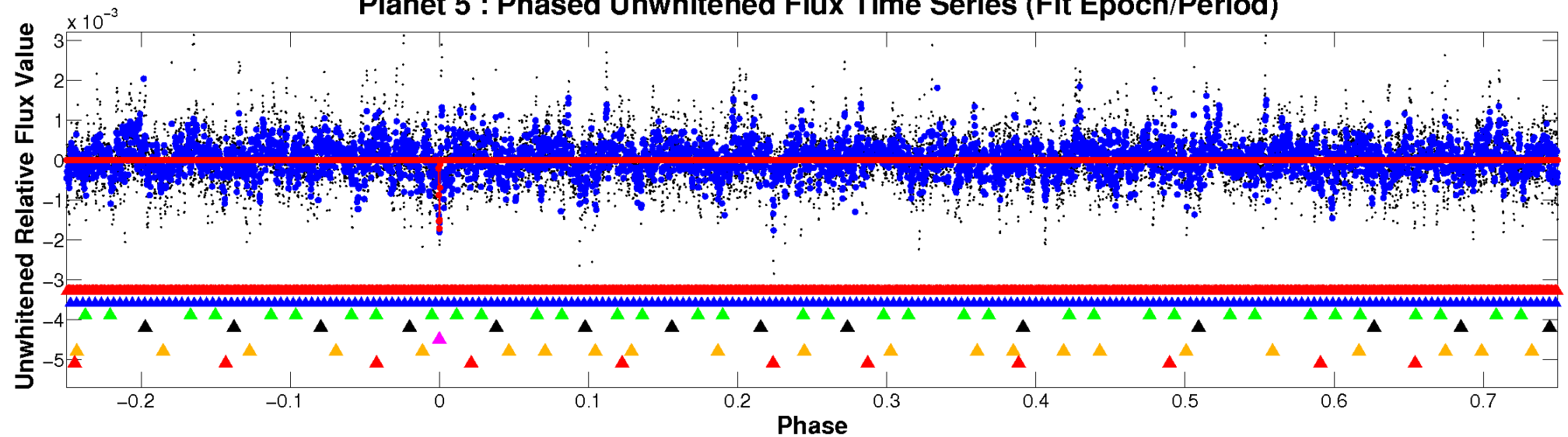
ALT Odd/Even

TCE 002583748-05

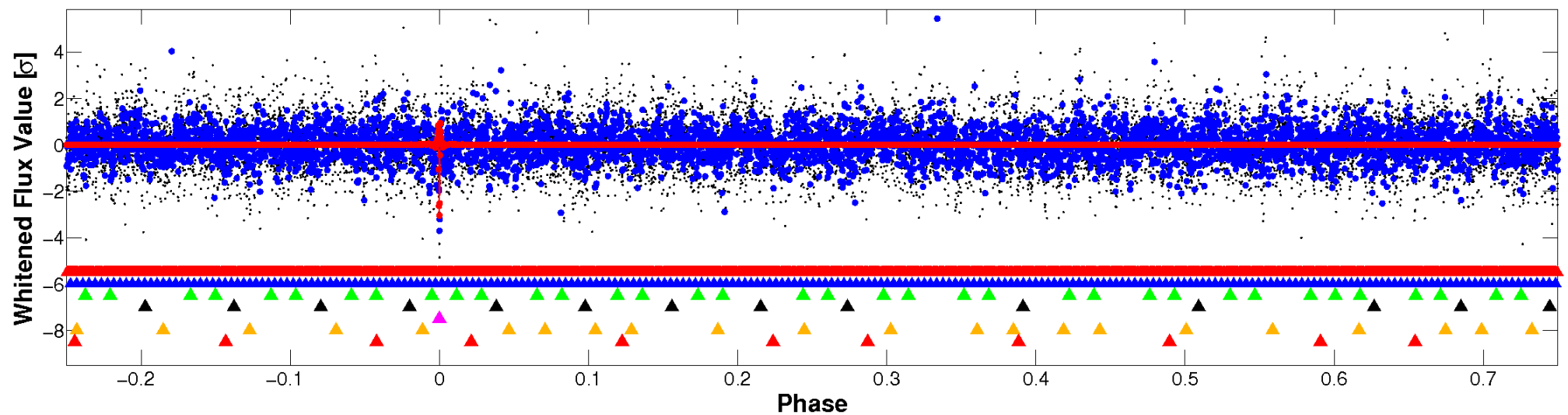


Non-Whitened Vs. Whitened Light Curve

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

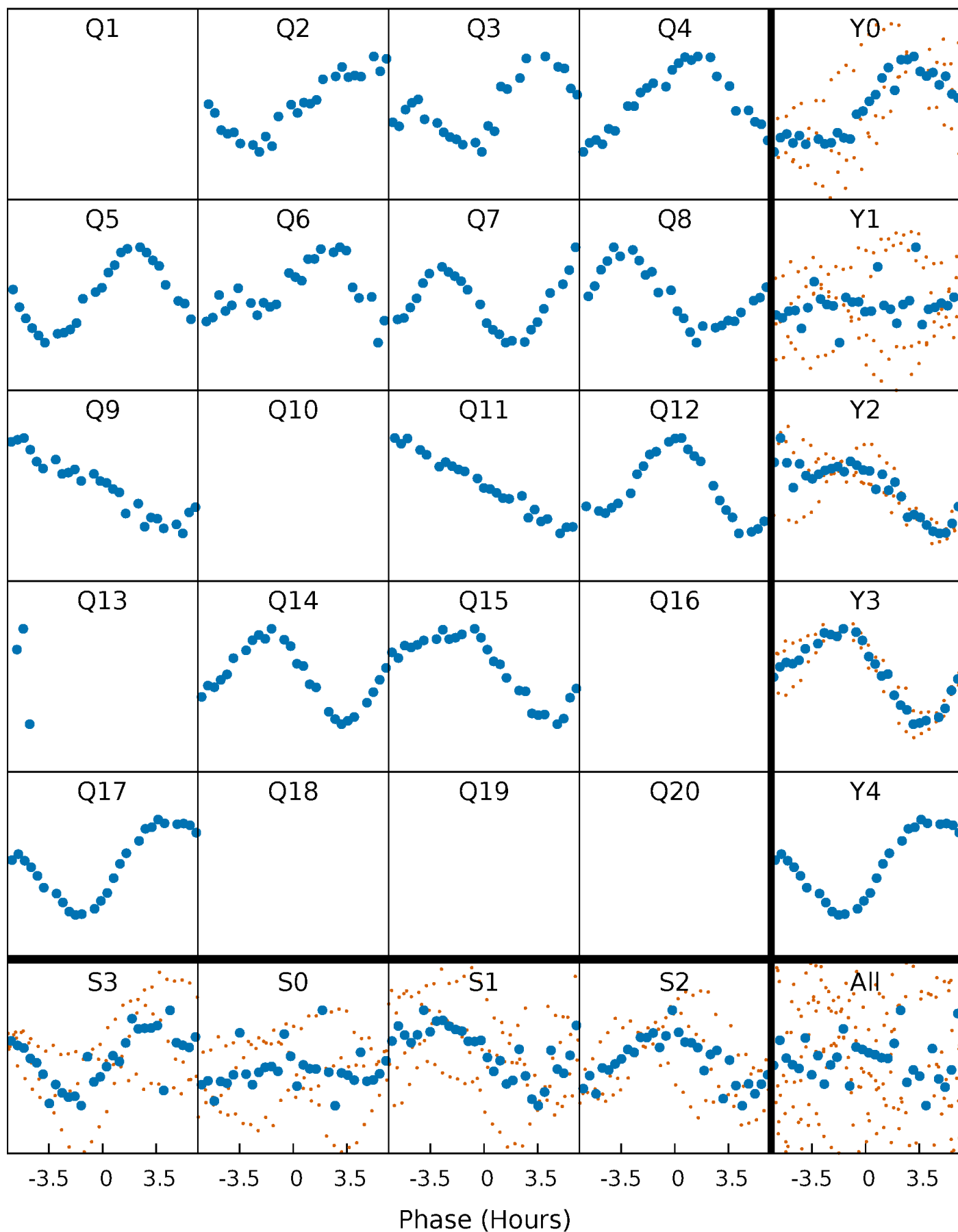


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



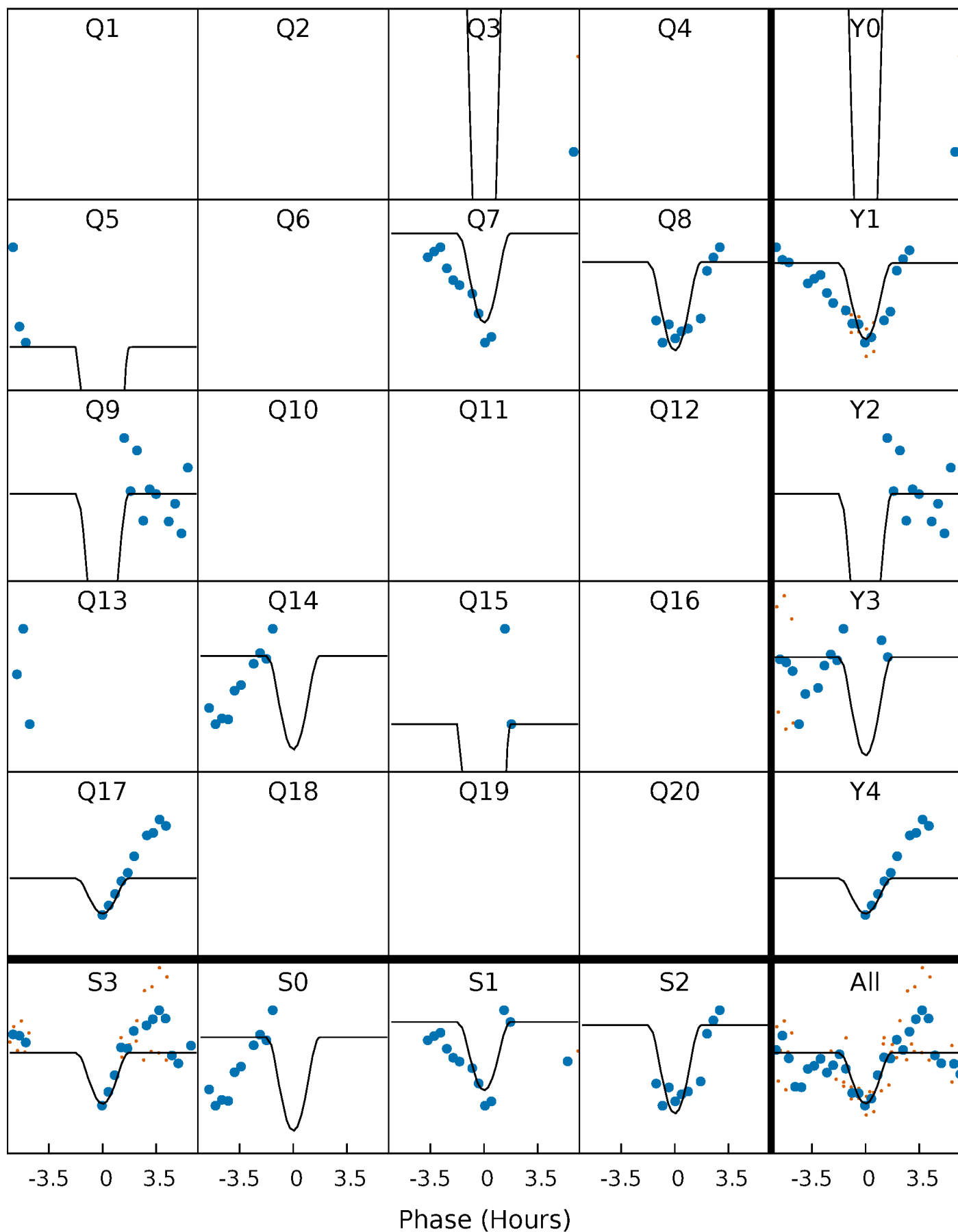
PDC Quarter-Phased Transit Curves

TCE 002583748-05 P= 99.753293 Days $T_0=171.638886$ (BKJD)



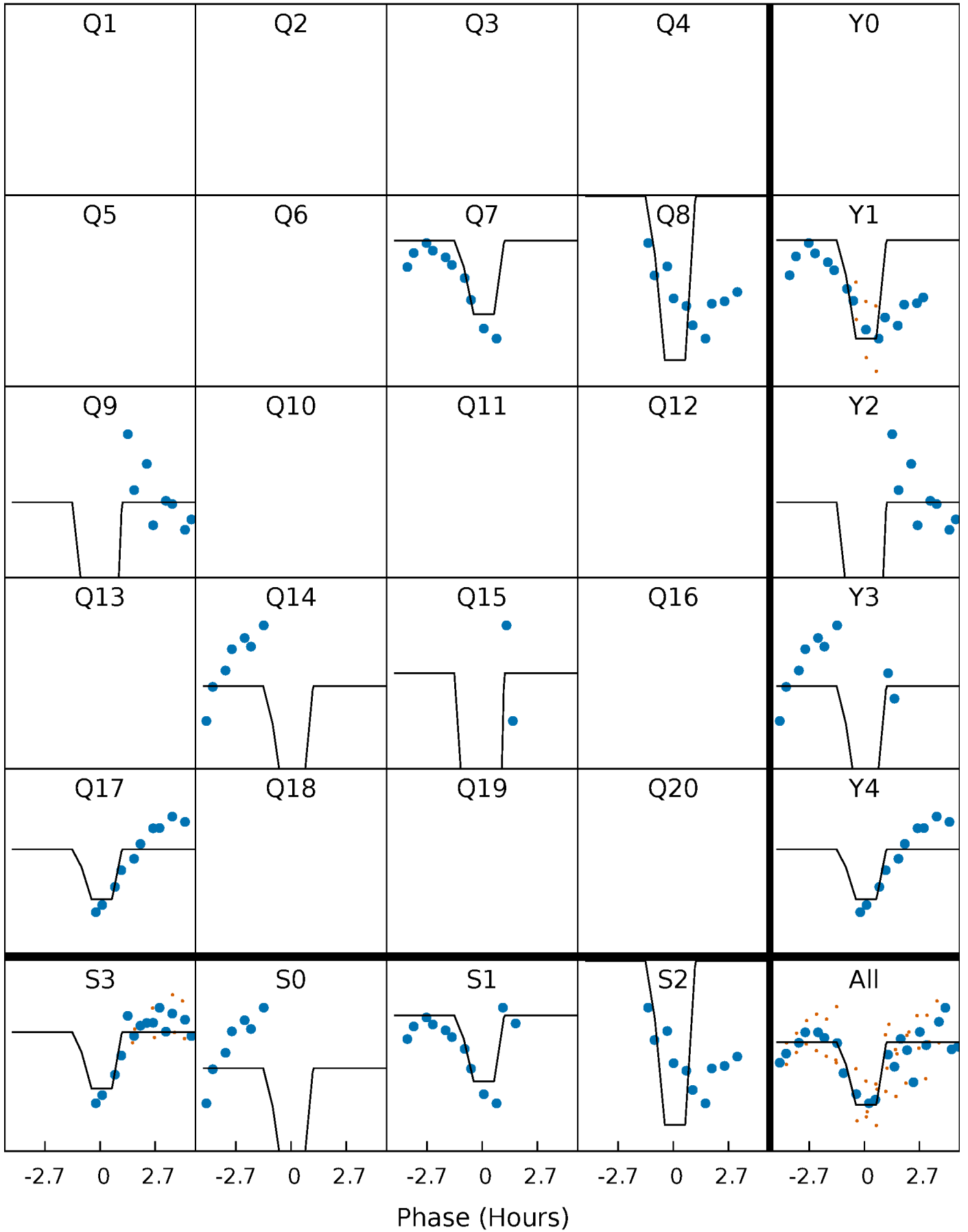
DV Quarter-Phased Transit Curves

TCE 002583748-05 $P = 99.753293$ Days $T_0 = 171.638886$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

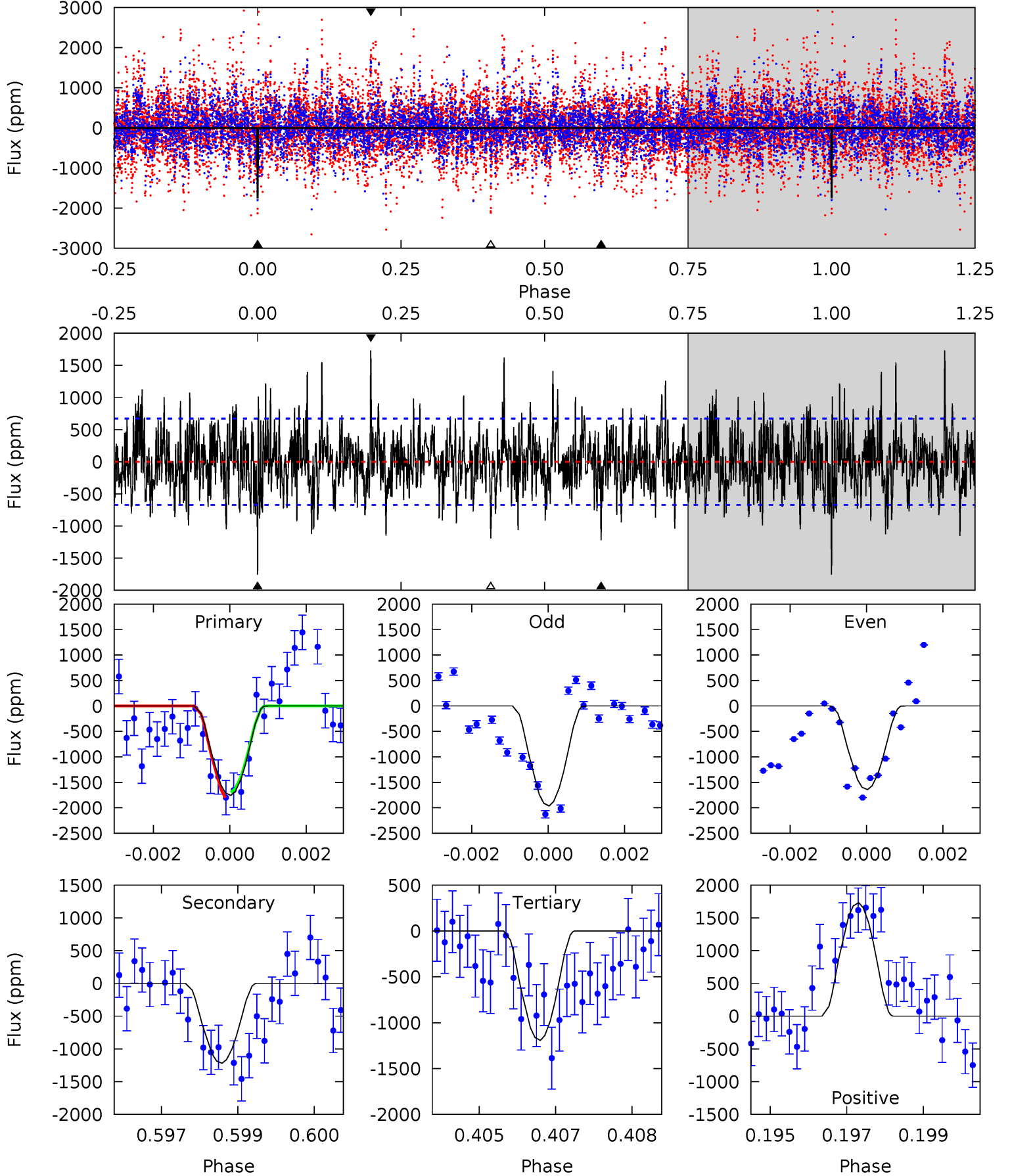
TCE 002583748-05 $P = 99.754148$ Days $T_0 = 171.632845$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-05, P = 99.753293 Days, E = 71.885593 Days

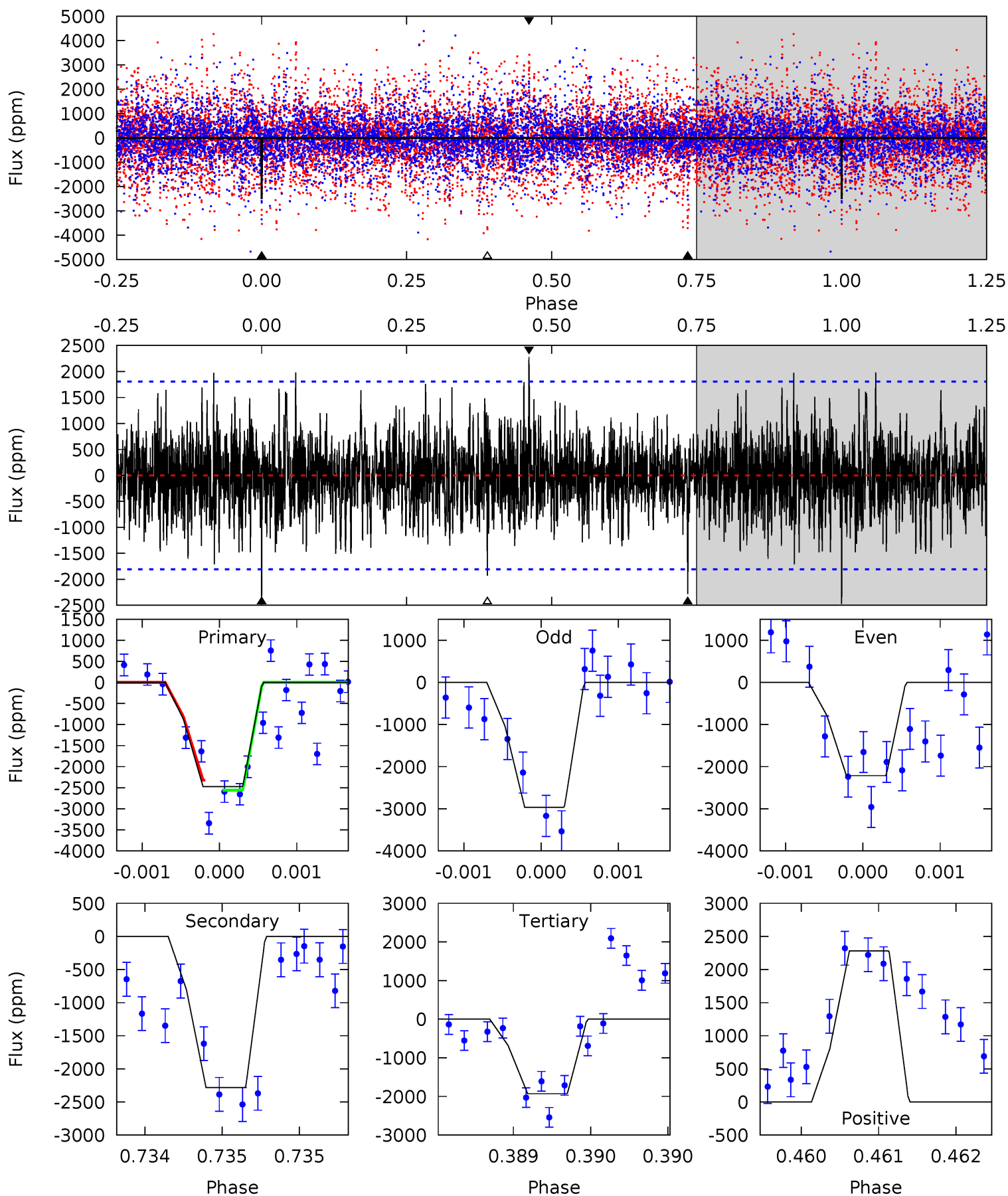
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	9.75	9.55	13.9	5.37	3.16	3.02	4.51	0.19	0.20	-4.11	1.26	-0.14	0.50	0.41



Alt Model-Shift Uniqueness Test

002583748-05, P = 99.754148 Days, E = 71.878697 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.51	6.93	5.86	6.93	5.49	3.35	1.63	1.65	0.58	1.07	0.00	1.10	0.87	0.48	0.34



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1219 ± 125	$57.87^{+68.82}_{-38.88}$	843^{+68}_{-87}	2968^{+1348}_{-498}	41^{+340}_{-32}
Alt.	-2281 ± 329	$54.95^{+59.97}_{-37.82}$	844^{+71}_{-84}	3337^{+1692}_{-641}	87^{+788}_{-68}

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 $A_{obs} \gg 1.0$

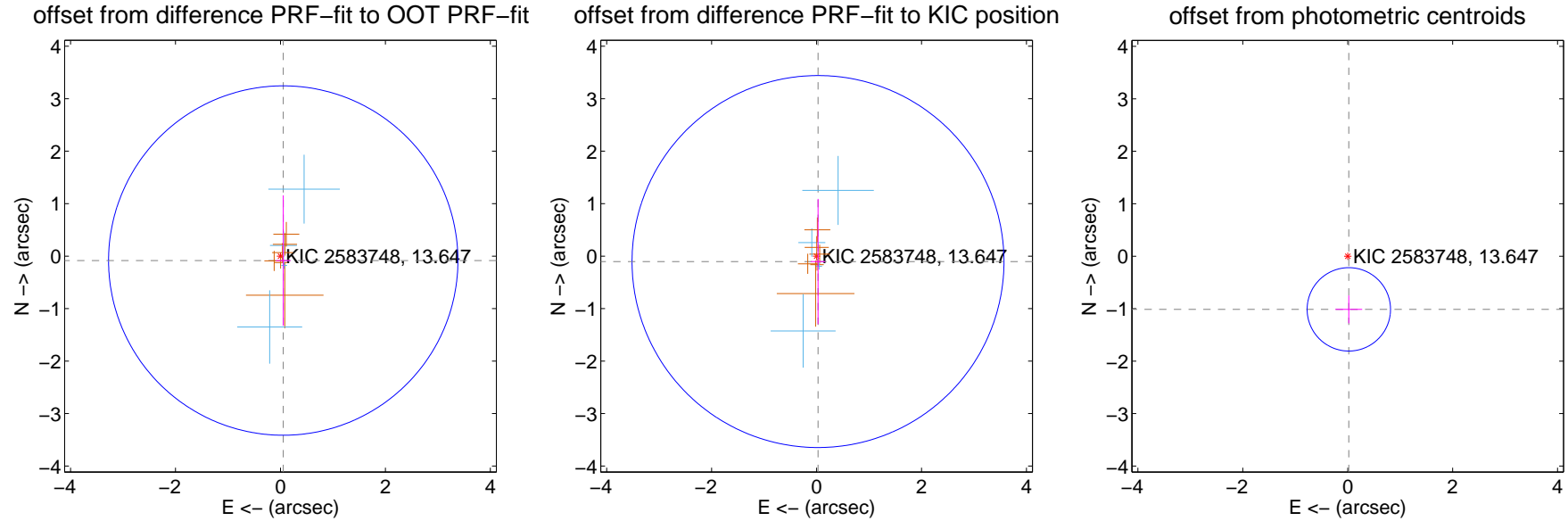
DV Centroid Data

Supplemental centroid analysis for 002583748-05. Kepler magnitude: 13.65. Transit SNR 8.50

There are 4 quarters with good PRF difference image offsets

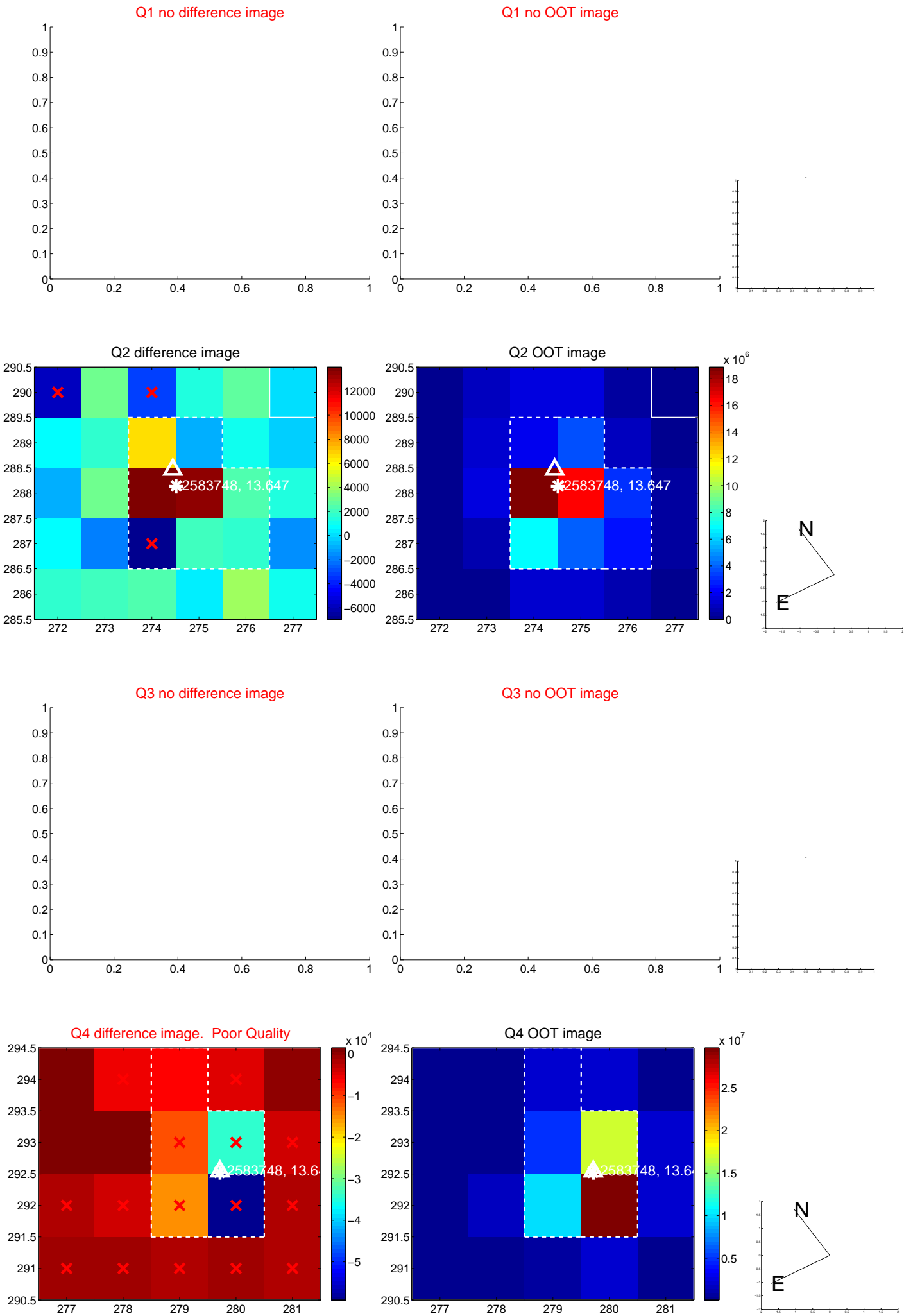
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 1.110	0.09	-0.053 ± 0.139	-0.084 ± 1.242
PRF-fit source offset from KIC position	0.107 ± 1.181	0.09	-0.027 ± 0.137	-0.103 ± 1.194
photometric centroid source offset	1.01 ± 0.26	3.83	-0.02 ± 0.25	-1.01 ± 0.26

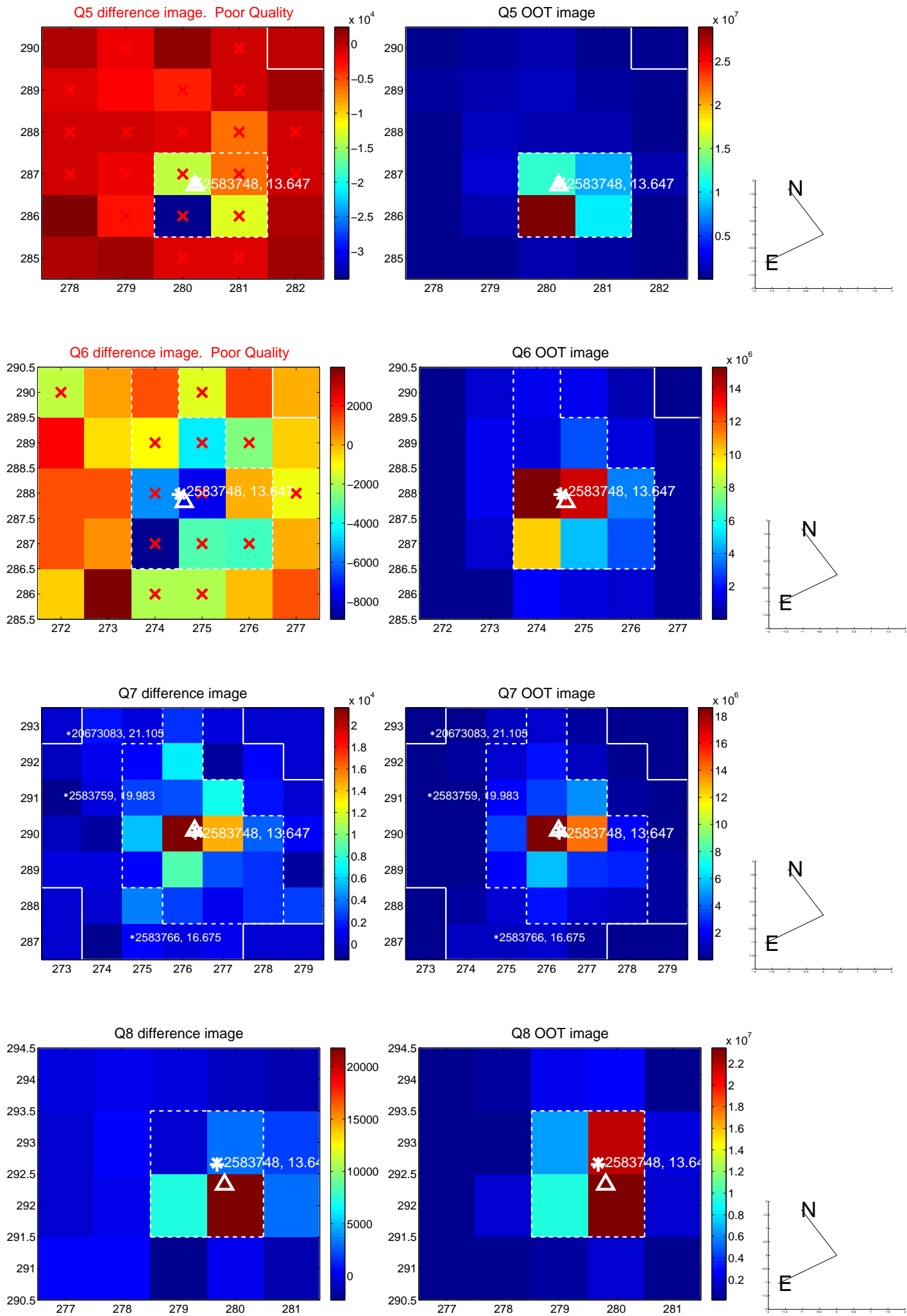


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

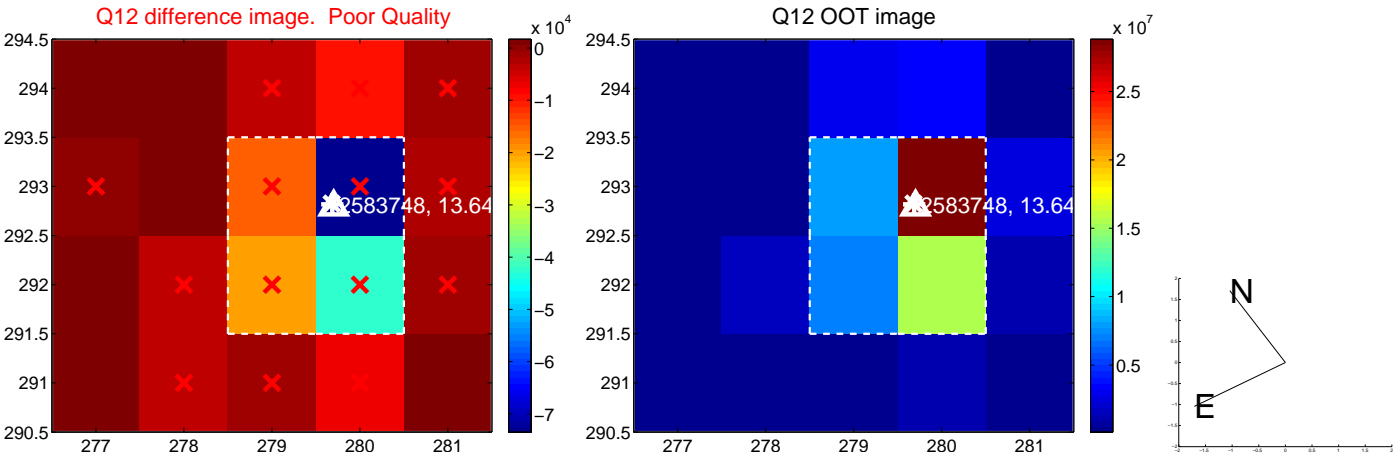
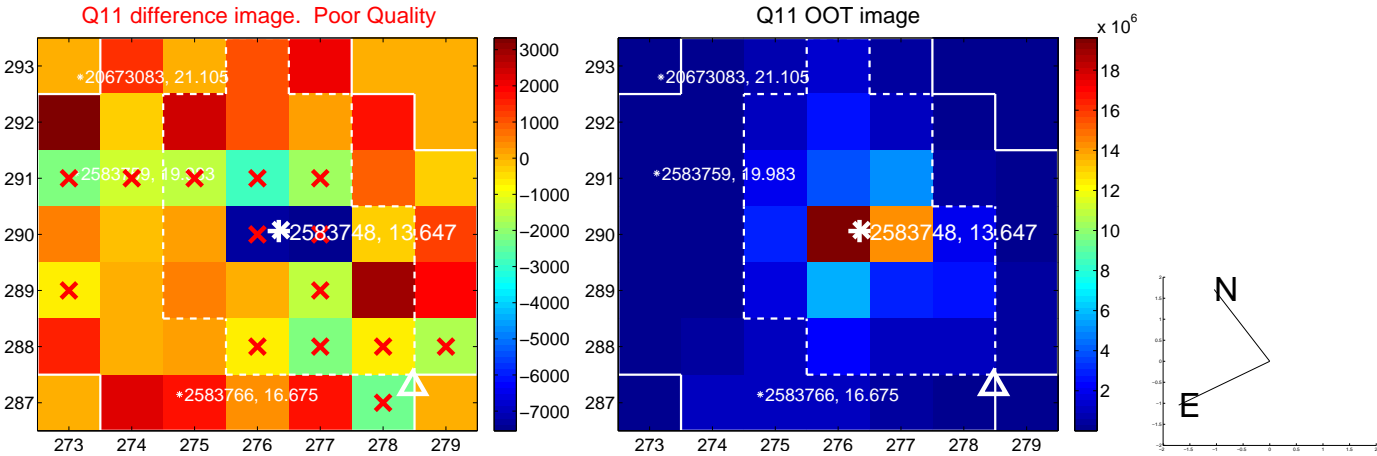
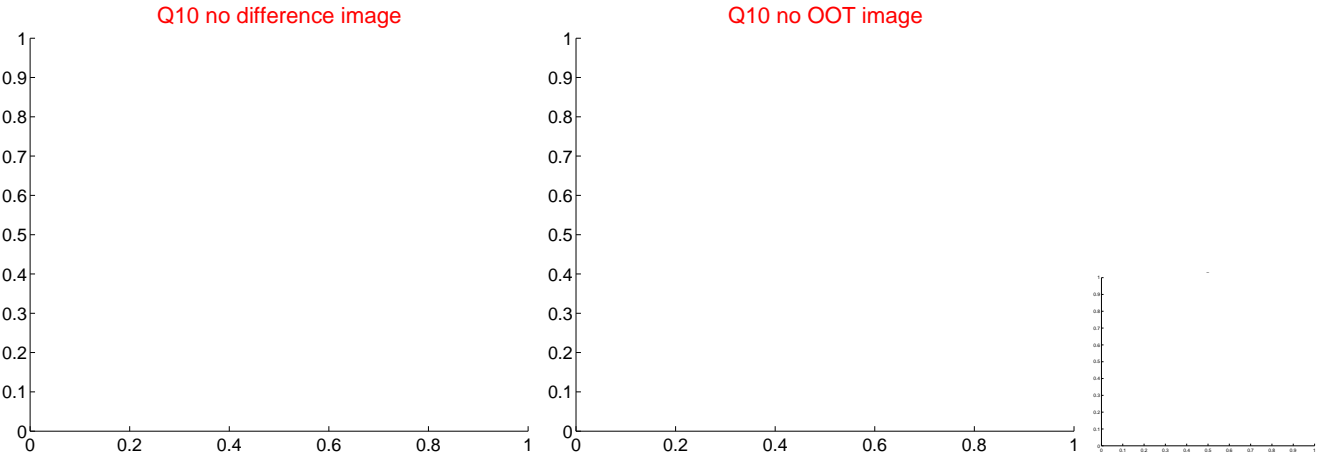
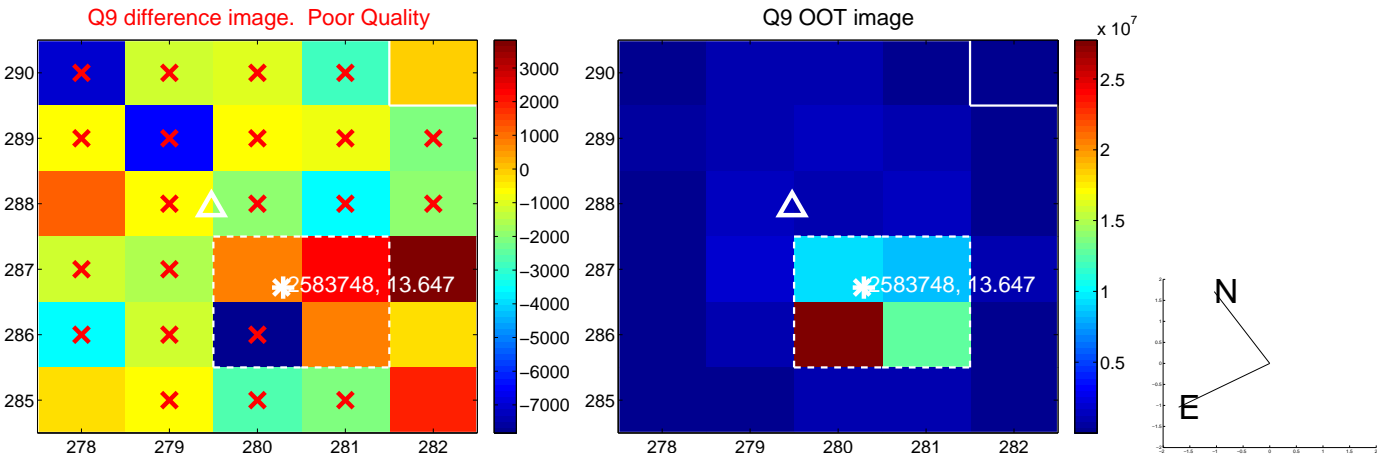
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



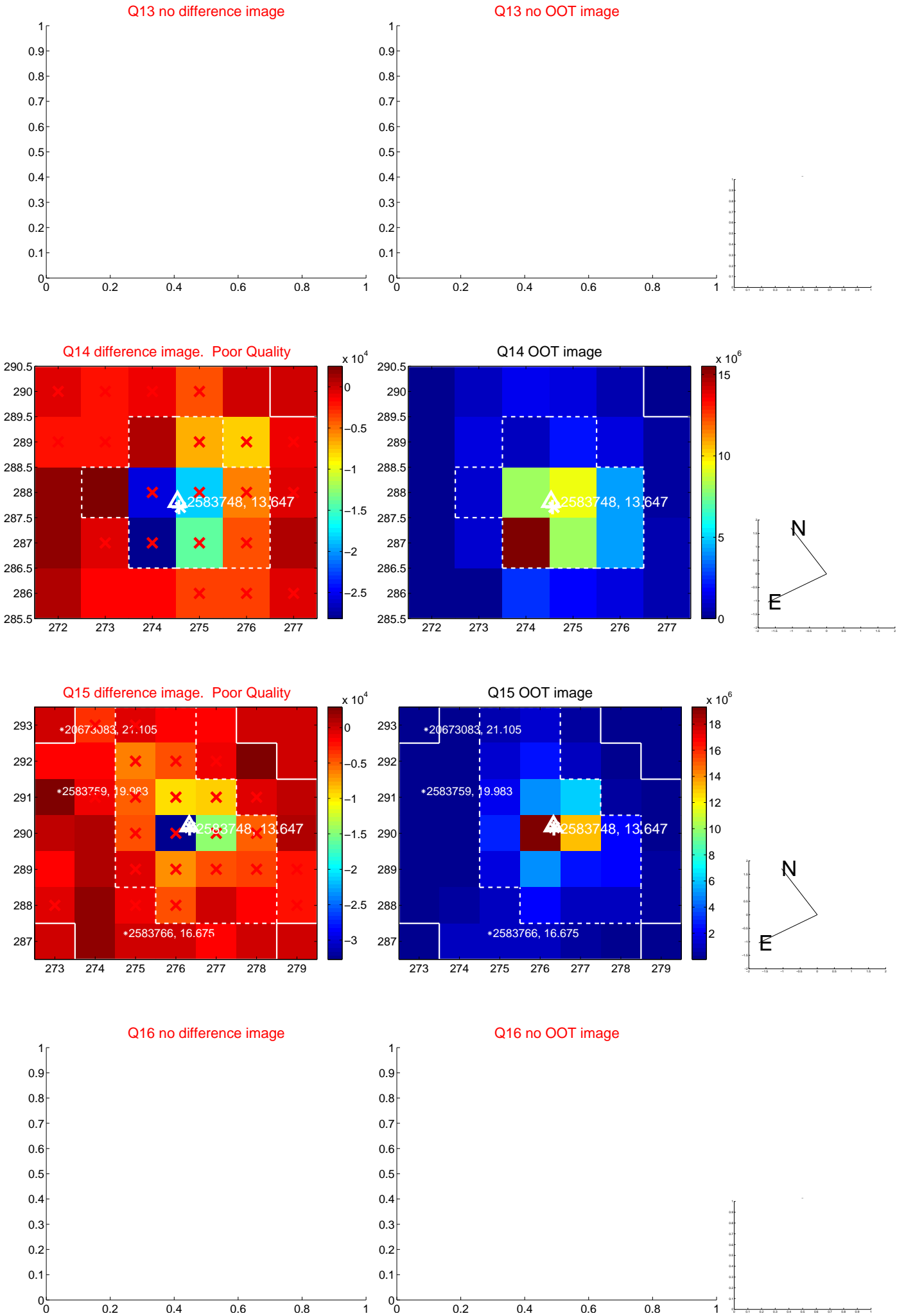
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



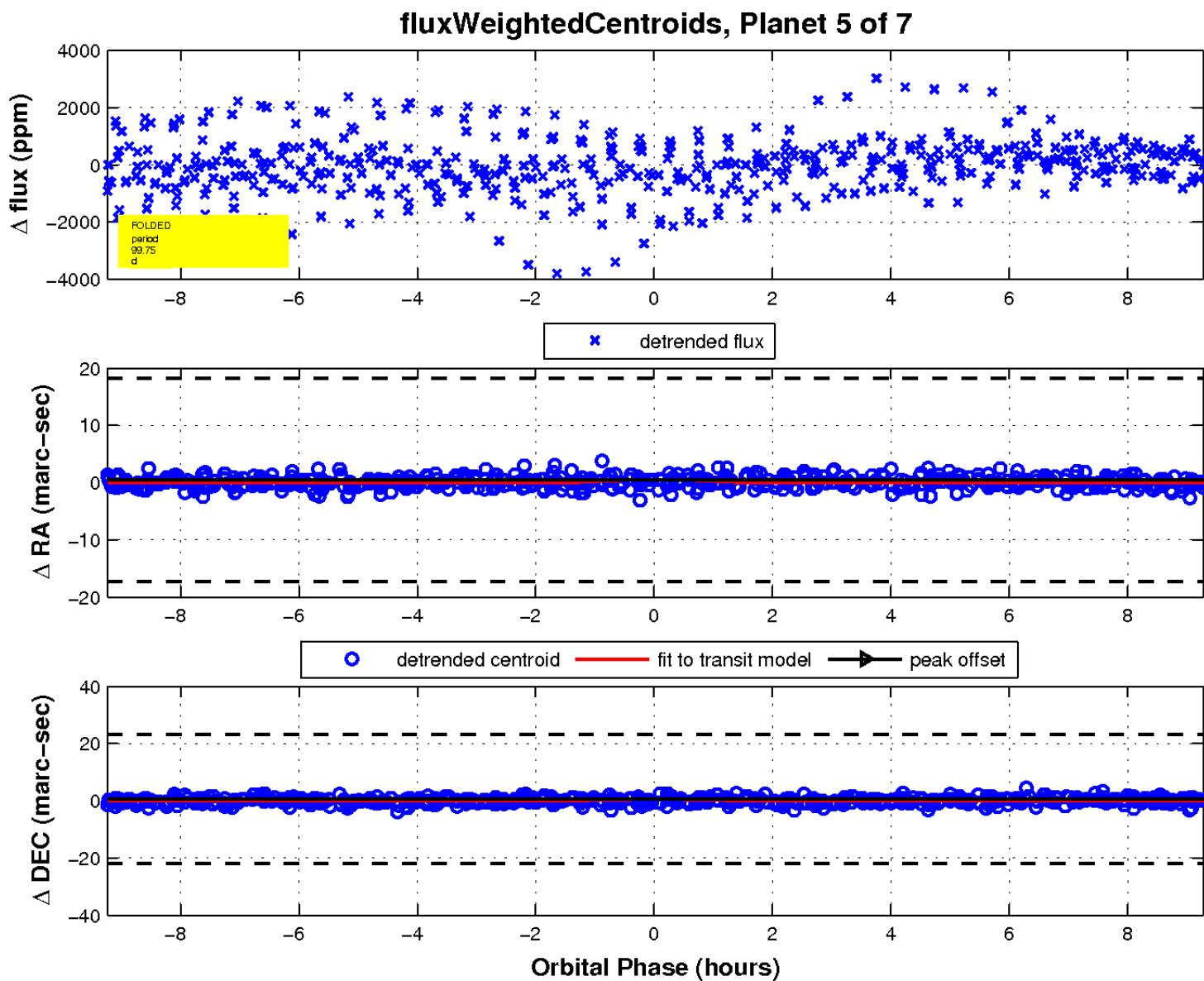
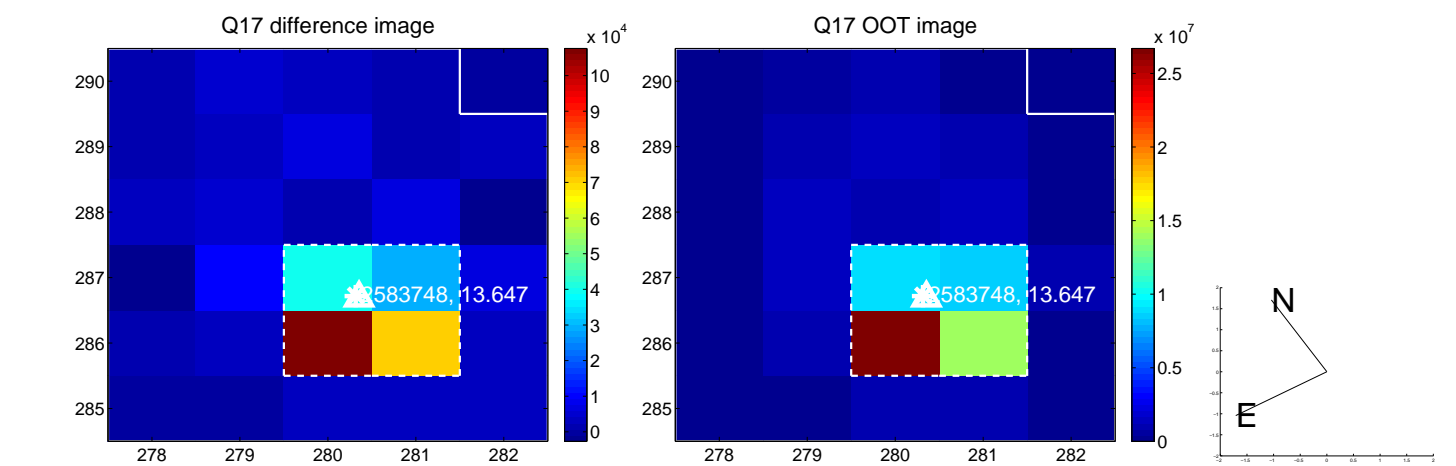
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

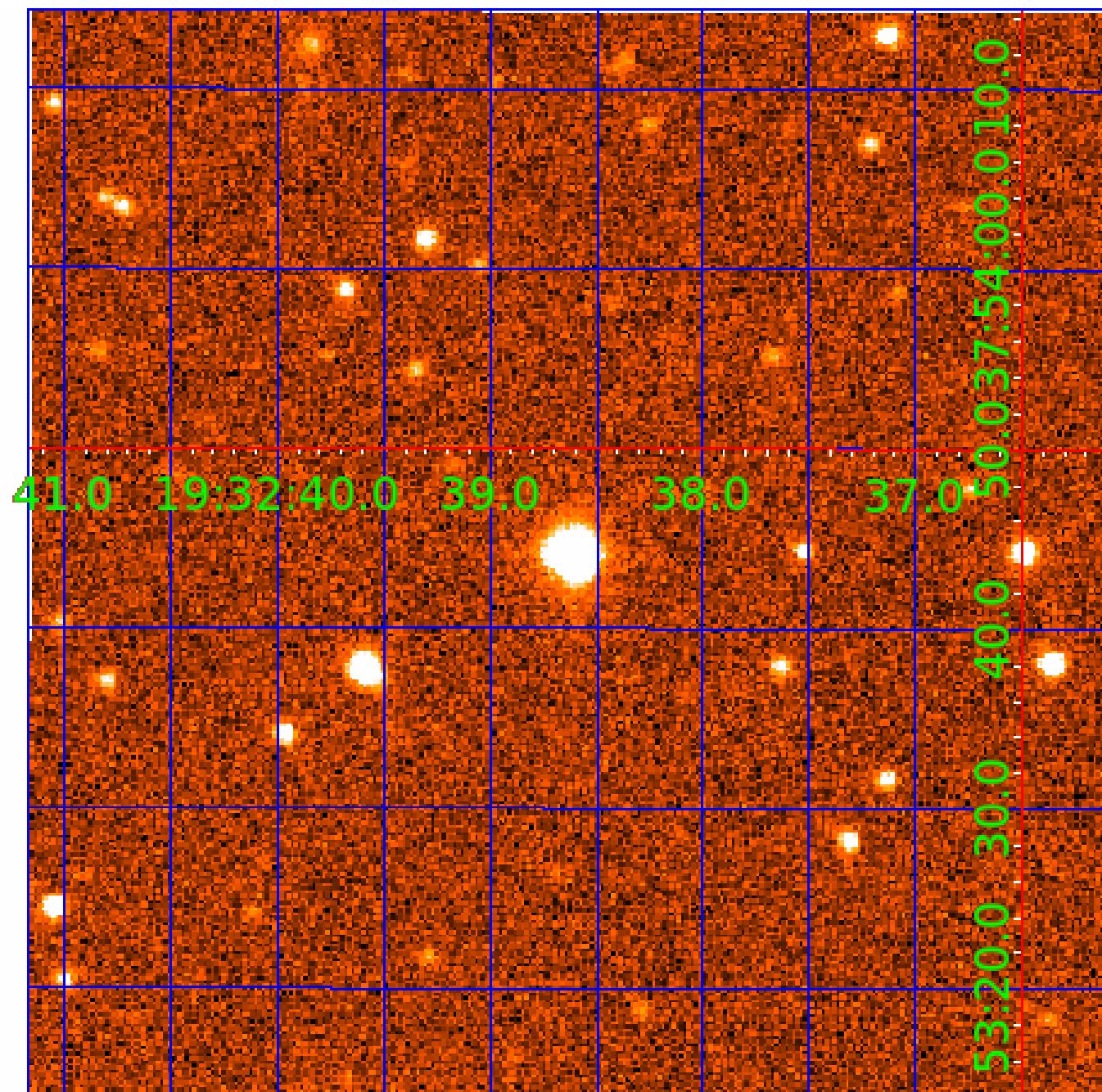


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
002583748-03	OBS	No	40.977339	133.476021	380.4	5.000	9.7	-1.0	1.82	6975	3.58	110.81
002583748-05	OBS	No	99.753293	171.638886	1736.8	3.102	9.1	8.5	1.82	6975	13.98	33.84
002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

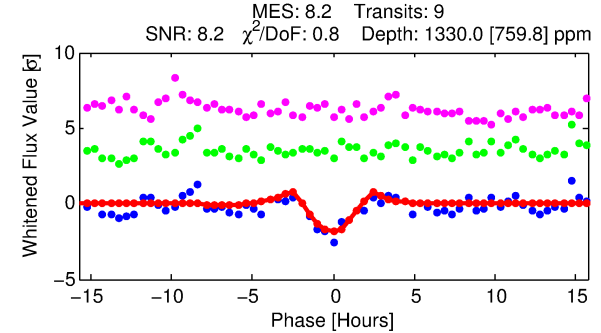
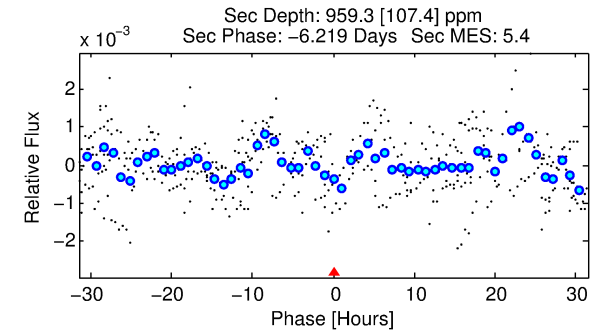
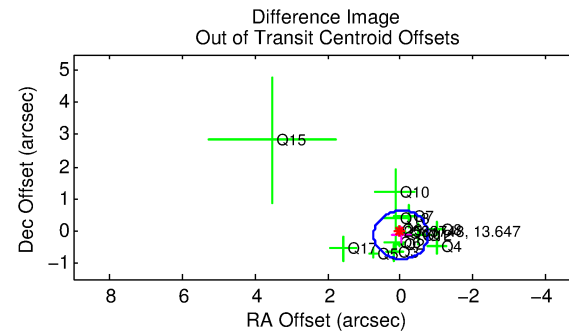
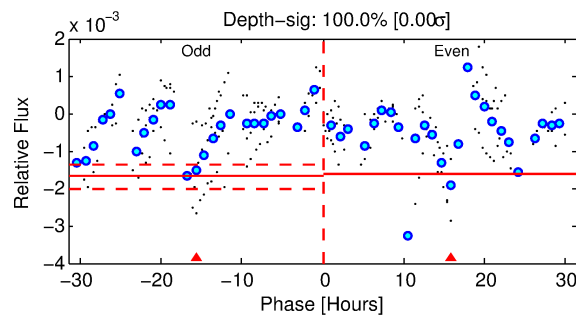
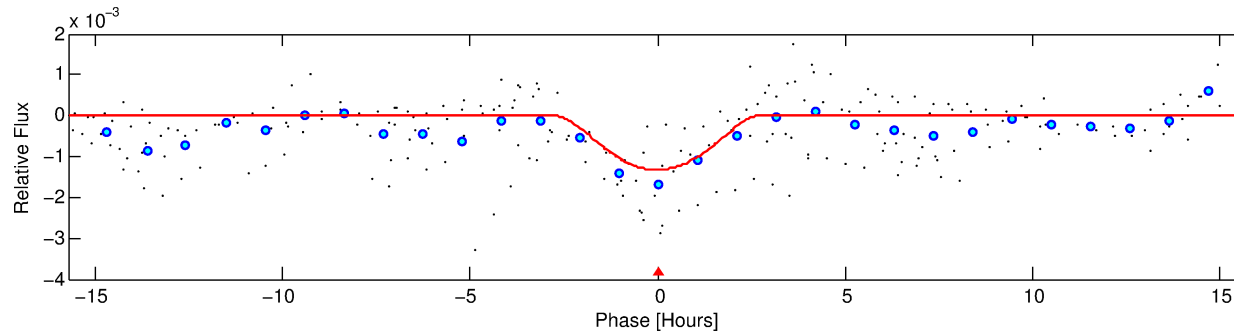
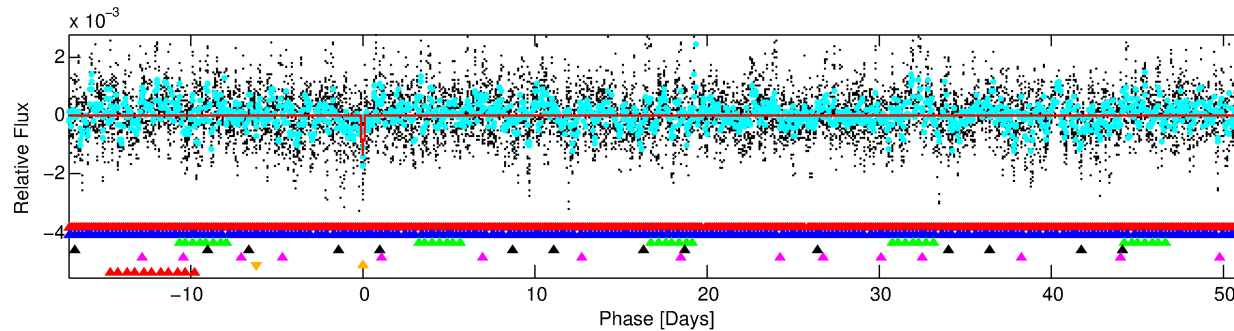
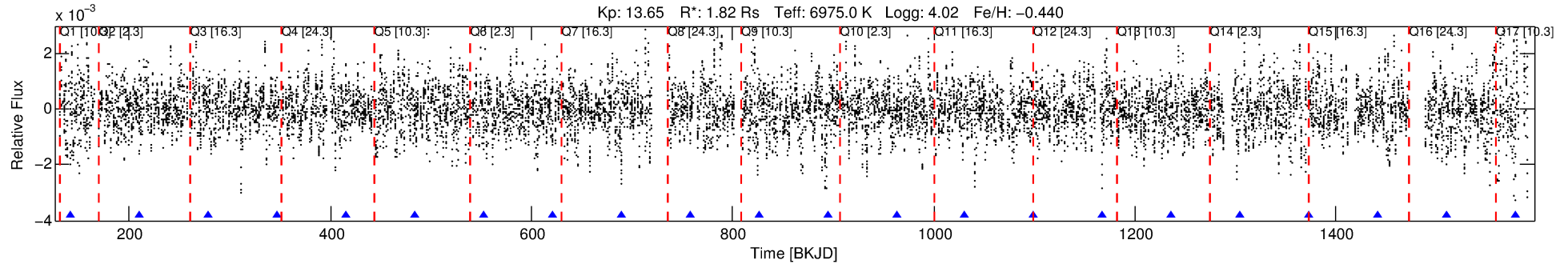
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-06

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 6 of 7 Period: 68.429 d



DV Fit Results:

Period = 68.42917 [0.00098] d
Epoch = 141.6041 [0.0138] BKJD
Rp/R* = 0.0619 [0.1546]
a/R* = 35.72 [21.25]
b = 1.00 [0.25]
Seff = 55.93 [30.63]
Teq = 697 [95] K
Rp = 12.28 [30.93] Re
a = 0.3538 [0.1146] AU
Ag = 438.44 [2202.38] [0.20σ]
Teffp = 4934 [6165] K [0.69σ]

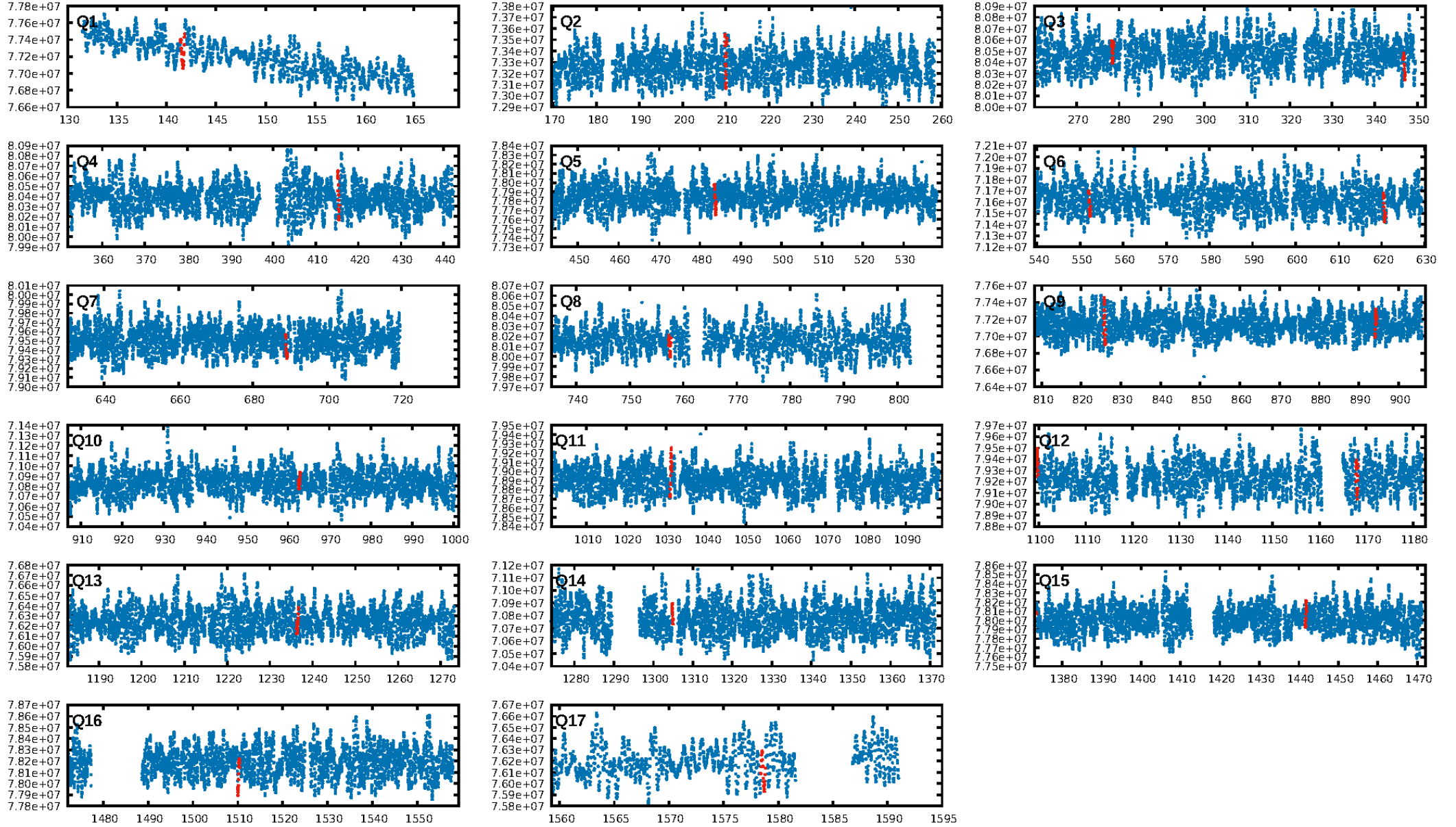
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [91.03σ]
LongPeriod-sig: 100.0% [123.58σ]
ModelChiSquare2-sig: 6.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 8.216
Centroid-sig: 65.3%
Centroid-so: 0.845 arcsec [3.99σ]
OotOffset-rm: 0.126 arcsec [0.50σ]
KicOffset-rm: 0.133 arcsec [0.67σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 0.00 [0/15]

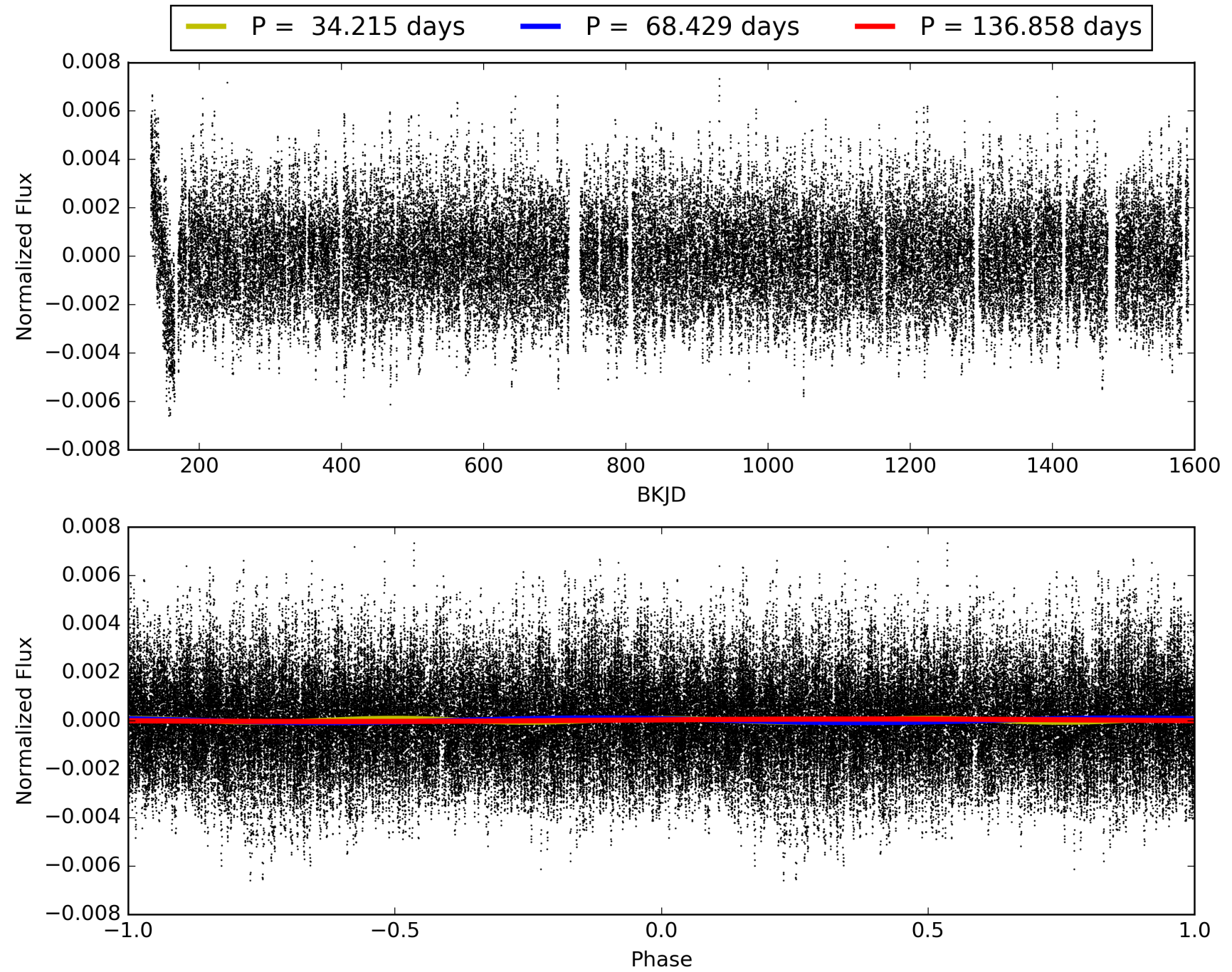
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:37:57 Z

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

TCE 002583748-06, PDC Light Curves

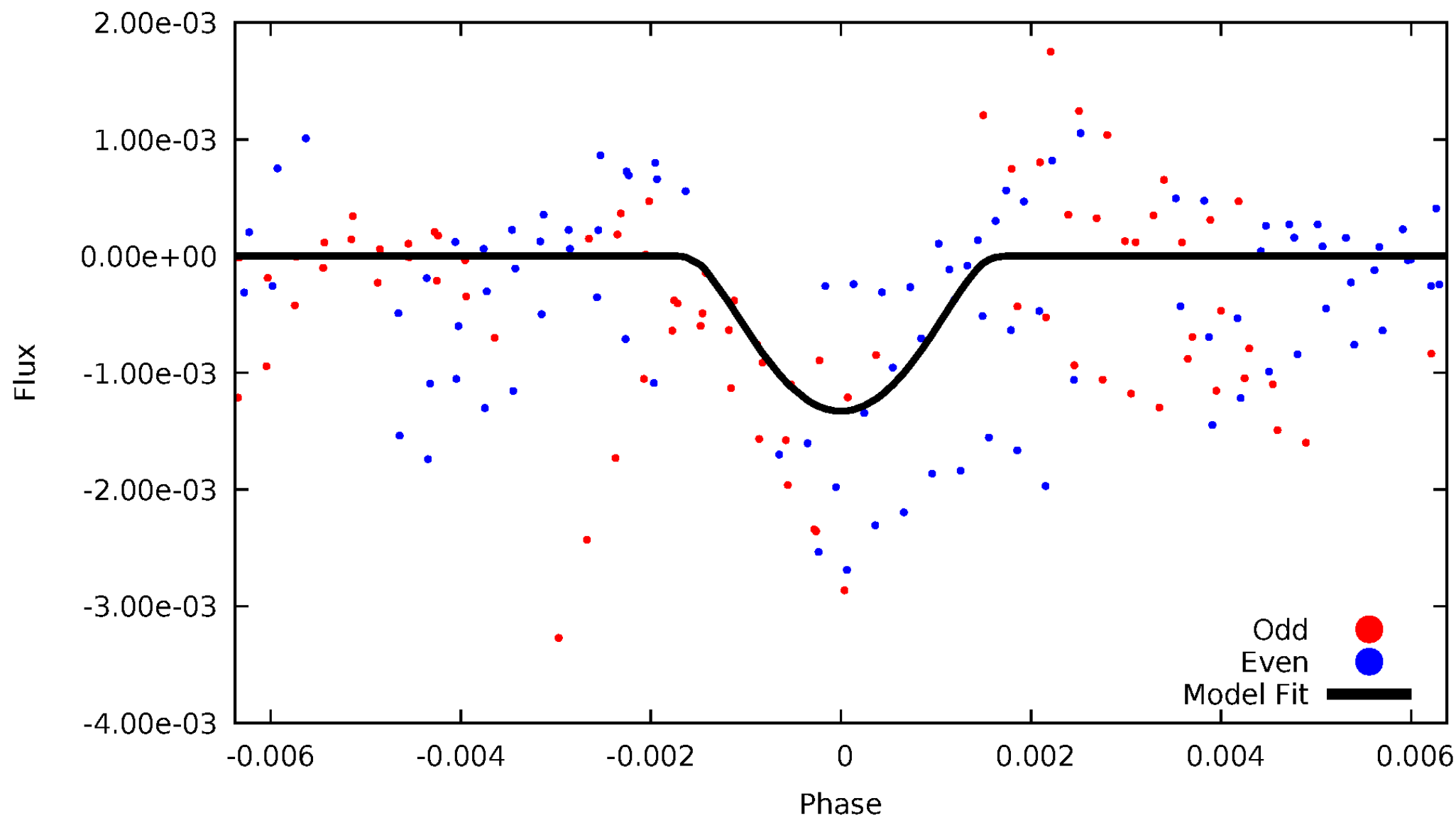


TCE 002583748-06



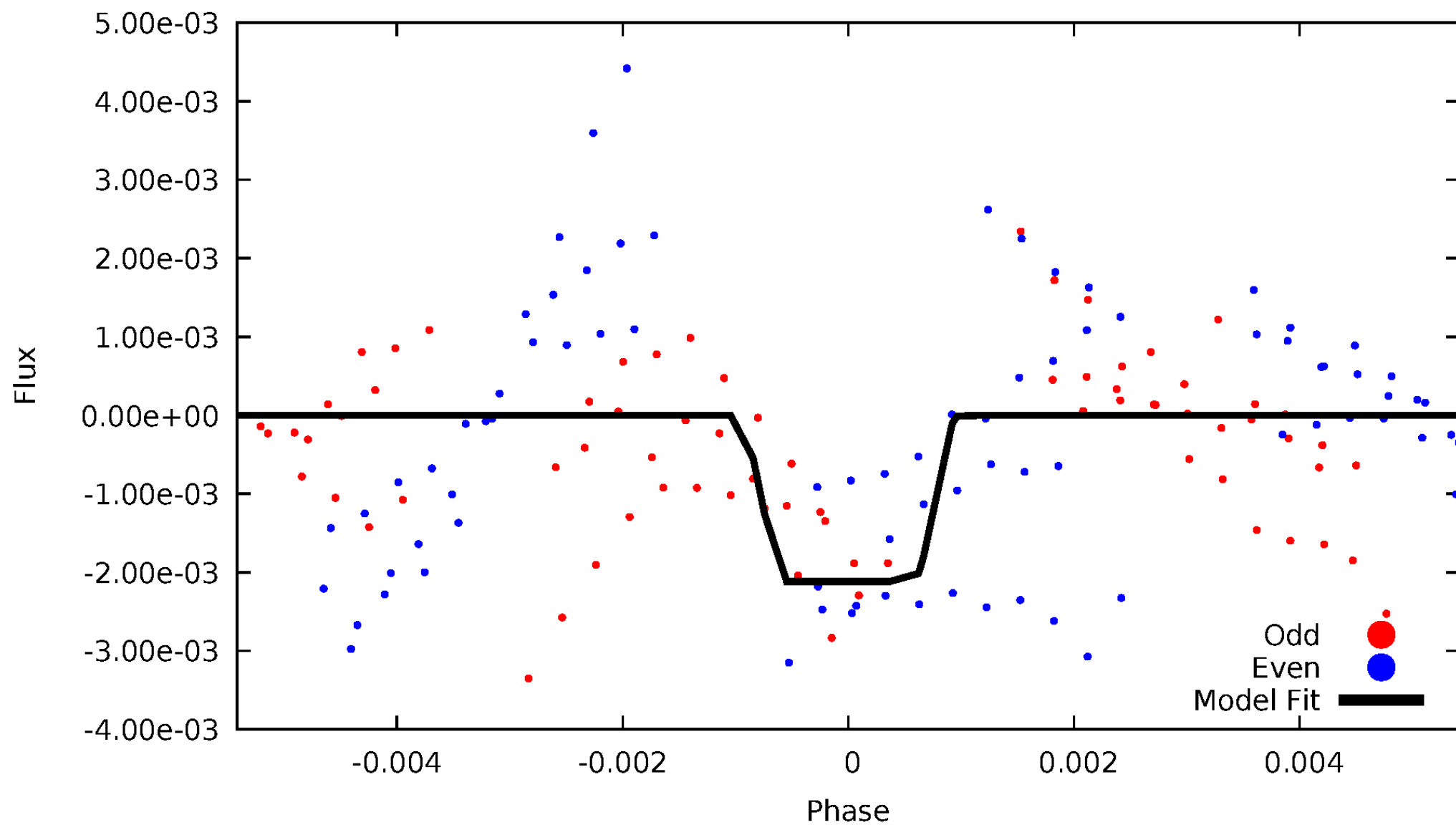
DV Odd/Even

TCE 002583748-06



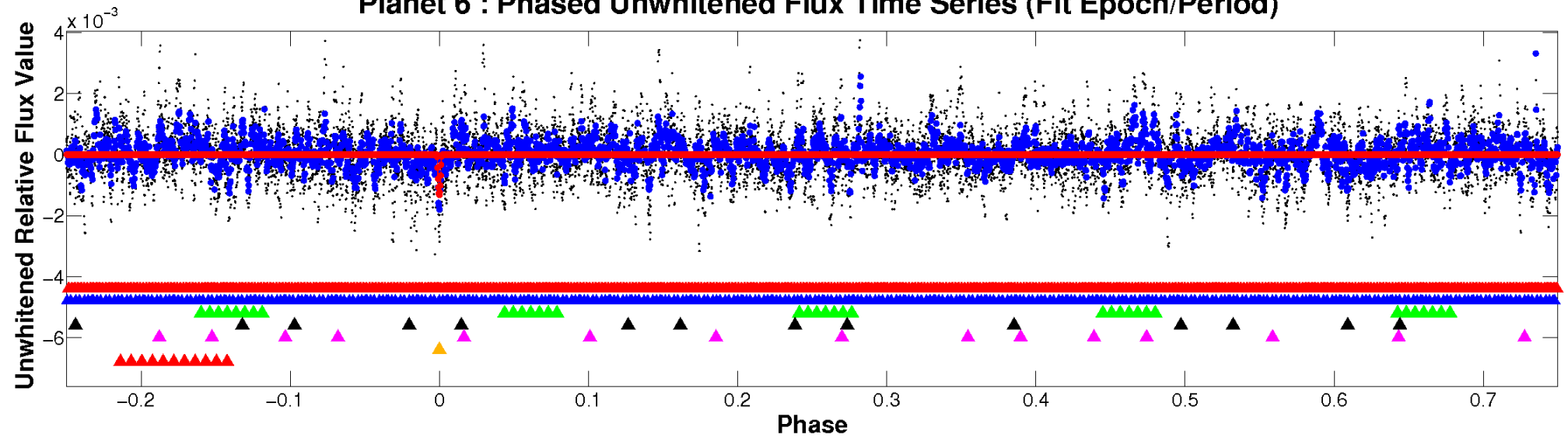
ALT Odd/Even

TCE 002583748-06

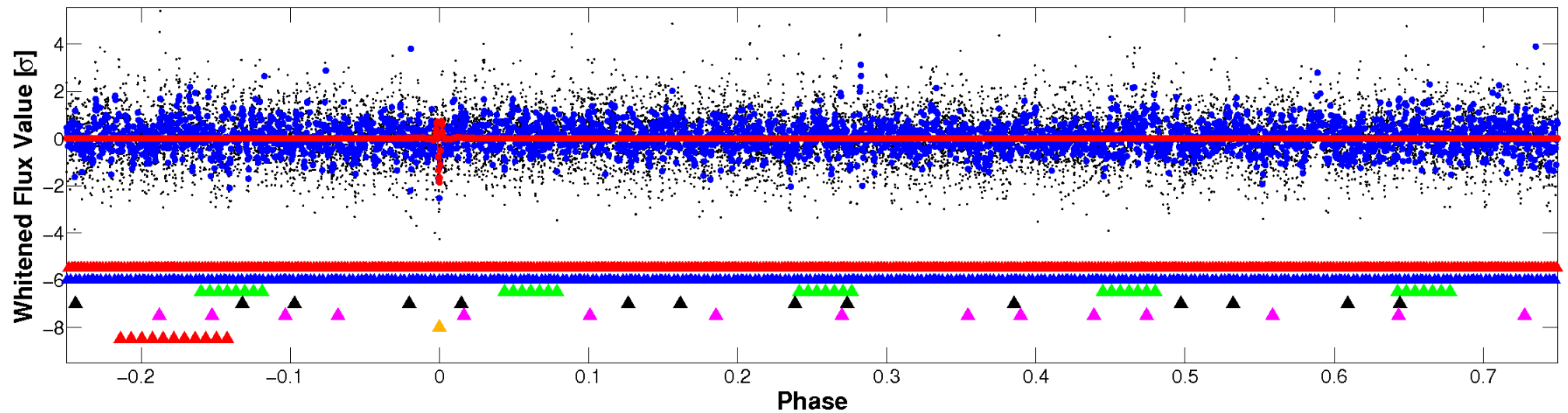


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

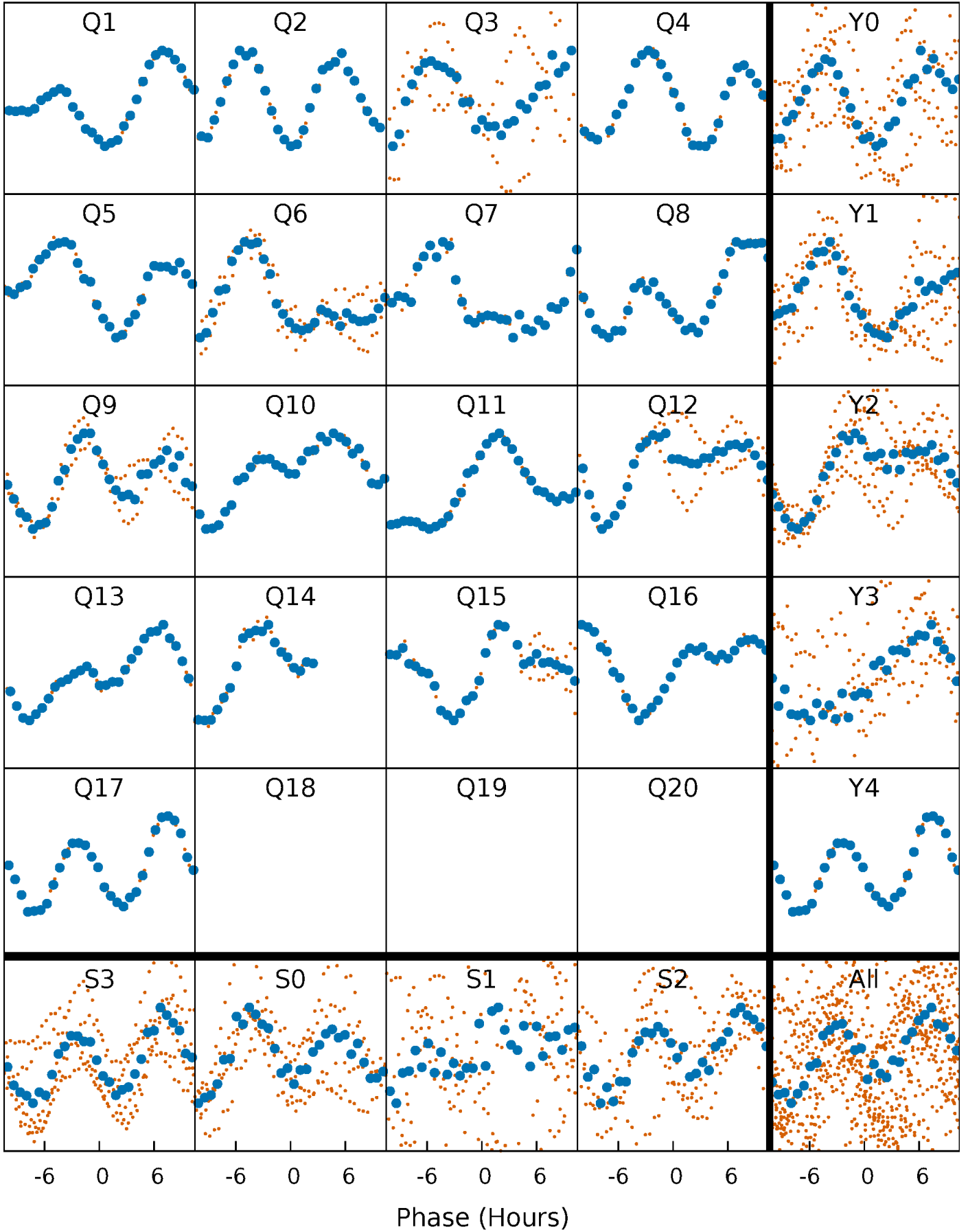


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



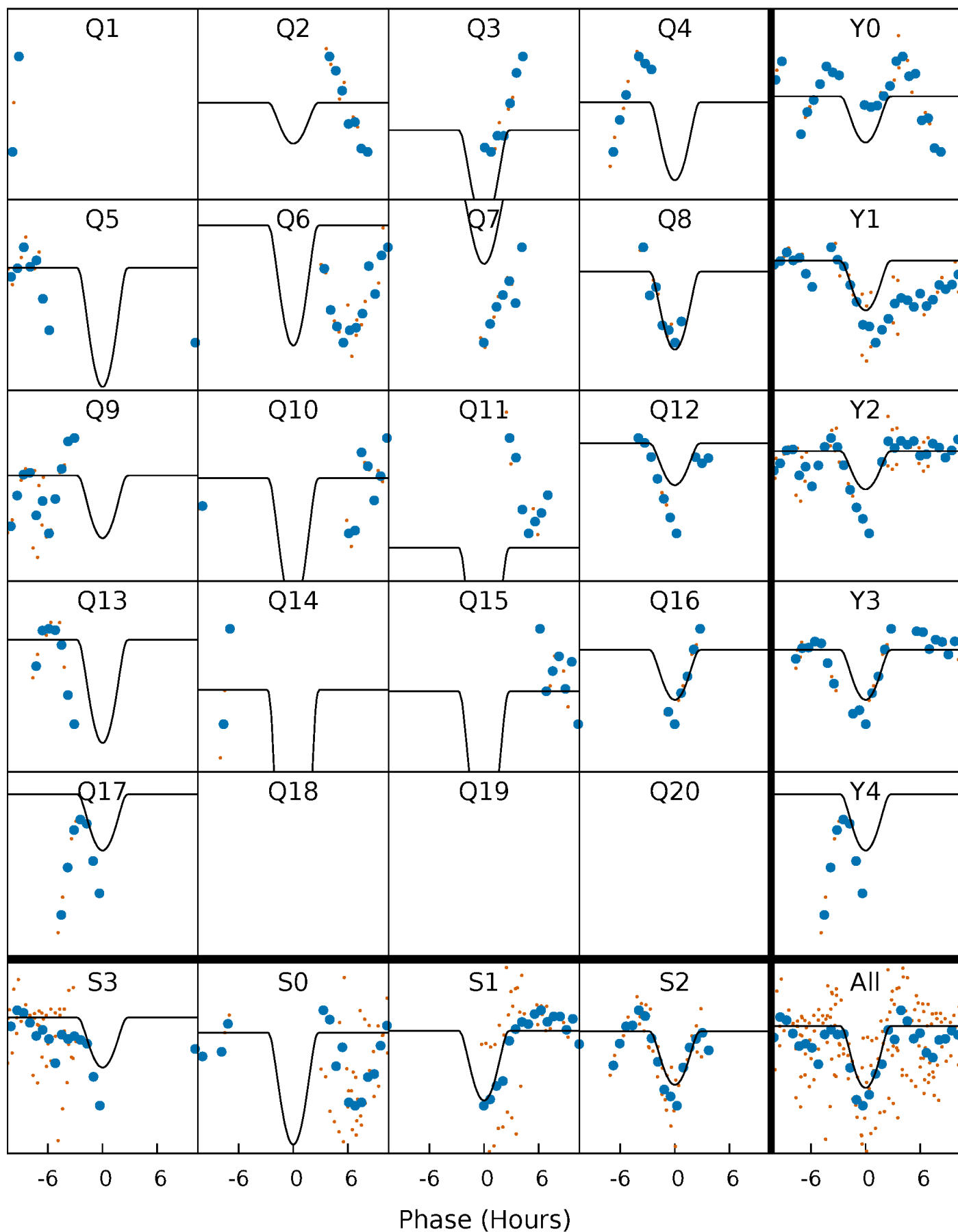
PDC Quarter-Phased Transit Curves

TCE 002583748-06 P= 68.429172 Days $T_0=141.604148$ (BKJD)



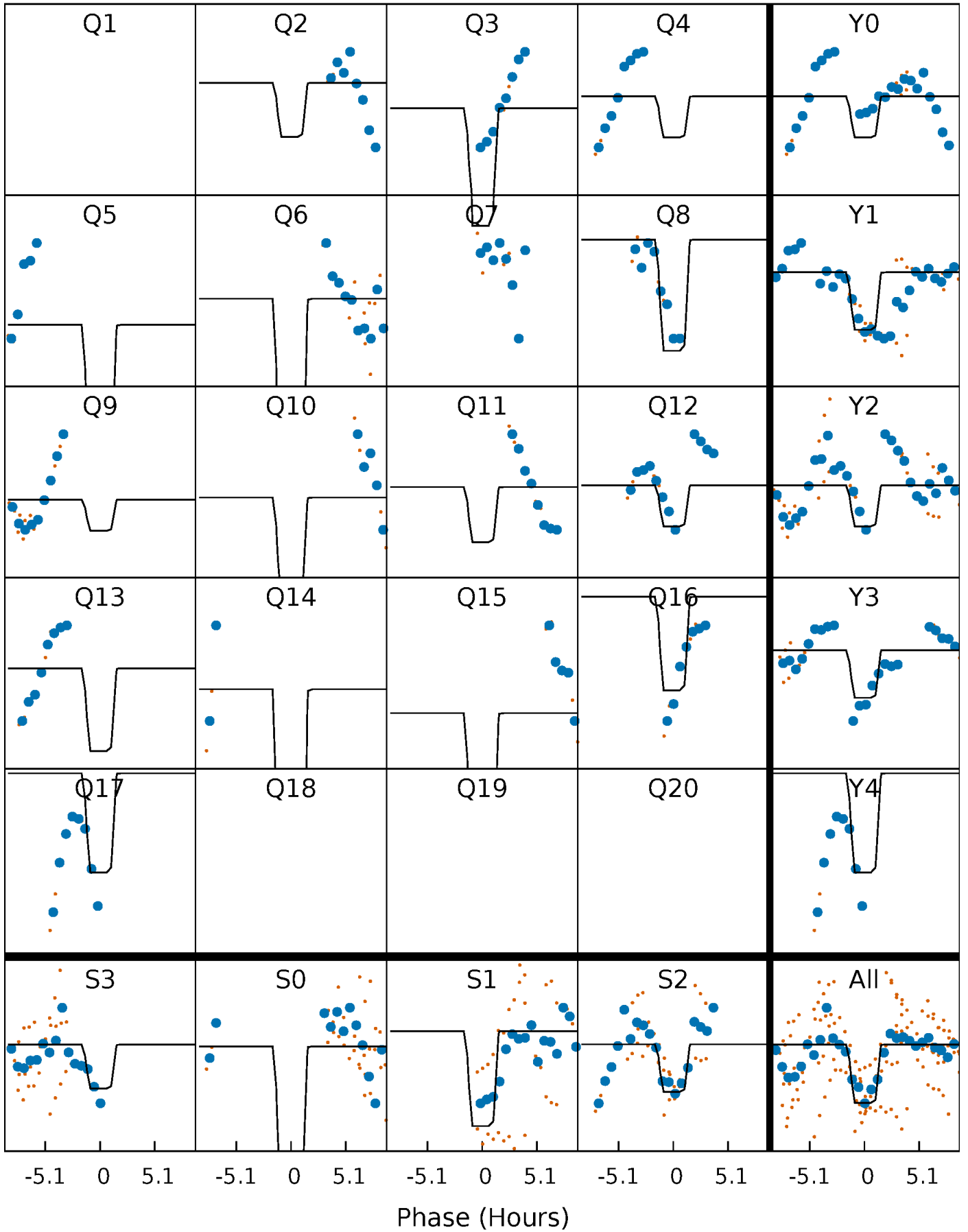
DV Quarter-Phased Transit Curves

TCE 002583748-06 P= 68.429172 Days $T_0=141.604148$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

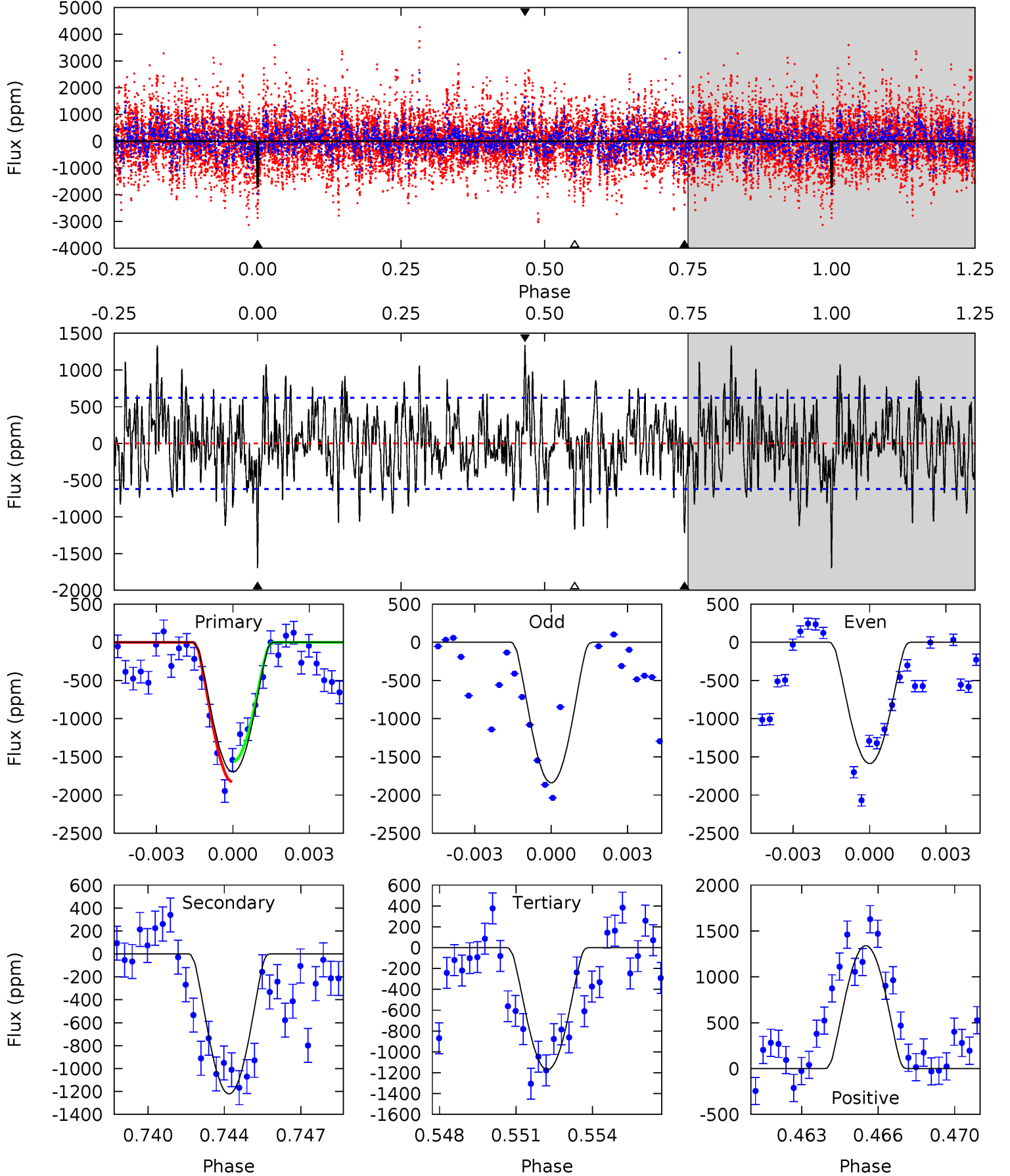
TCE 002583748-06 P= 68.428291 Days $T_0=141.613482$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-06, P = 68.429172 Days, E = 73.174976 Days

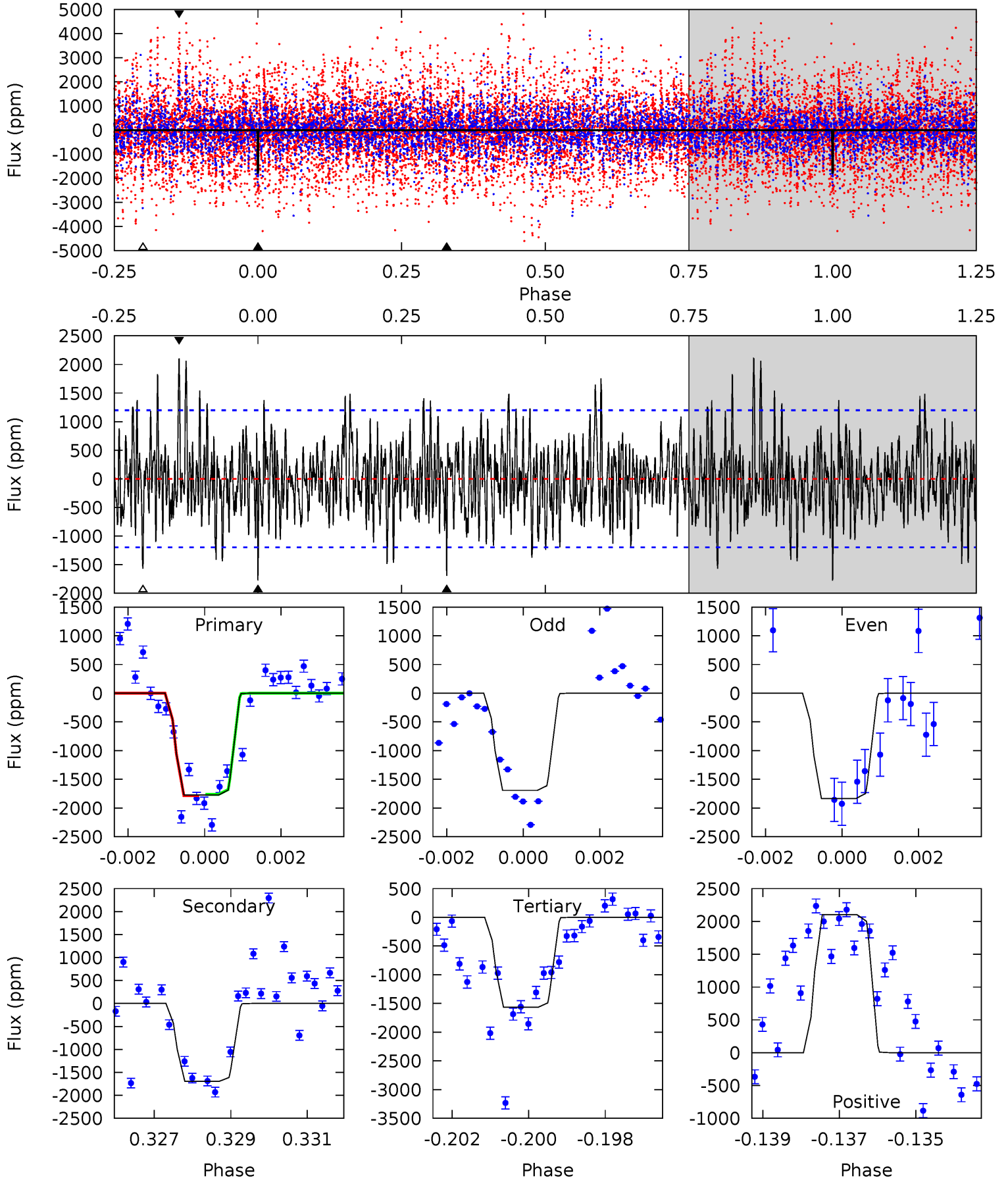
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	10.3	9.88	11.3	5.24	2.94	3.24	4.43	3.02	0.41	-1.00	1.06	1.08	0.44	1.13



Alt Model-Shift Uniqueness Test

002583748-06, P = 68.428291 Days, E = 73.185191 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.89	7.53	6.96	9.35	5.32	3.09	2.37	0.92	-1.46	0.57	-1.82	0.30	0.94	0.54	0.05



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1220 ± 119	$24.39^{+25.64}_{-16.62}$	954^{+77}_{-89}	3949^{+2322}_{-824}	144^{+1255}_{-112}
Alt.	-1694 ± 225	$23.68^{+23.14}_{-17.09}$	958^{+73}_{-89}	4207^{+3501}_{-875}	199^{+2331}_{-144}

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 $A_{obs} \gg 1.0$

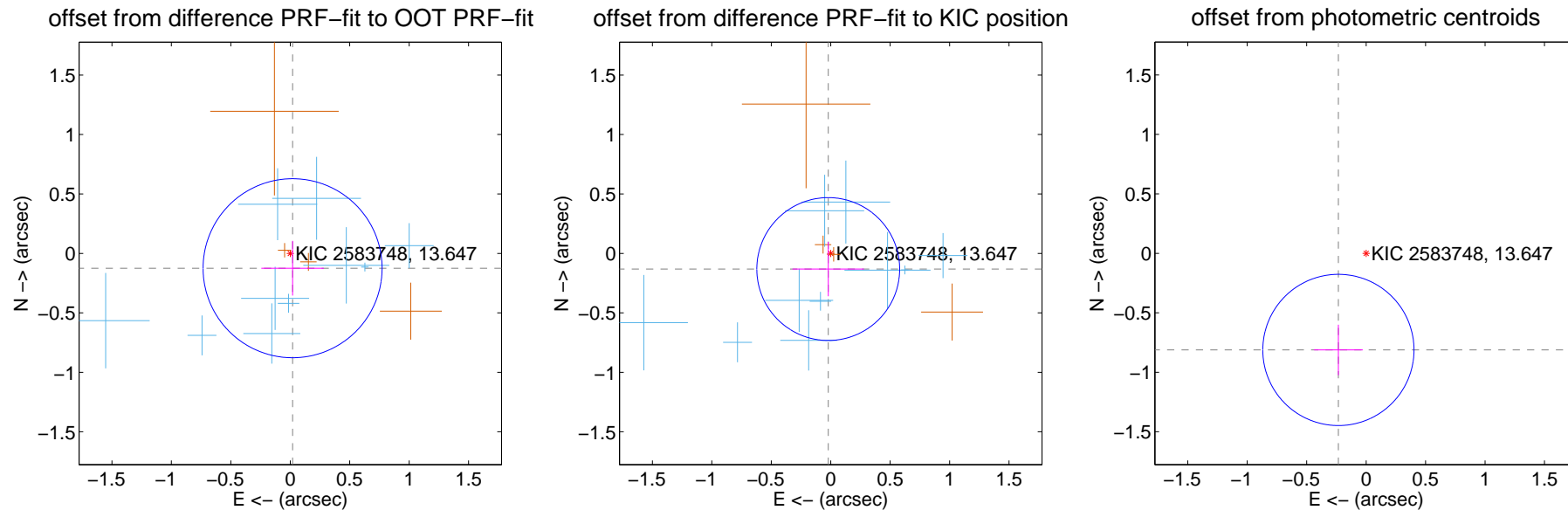
DV Centroid Data

Supplemental centroid analysis for 002583748-06. Kepler magnitude: 13.65. Transit SNR 8.15

There are 10 quarters with good PRF difference image offsets

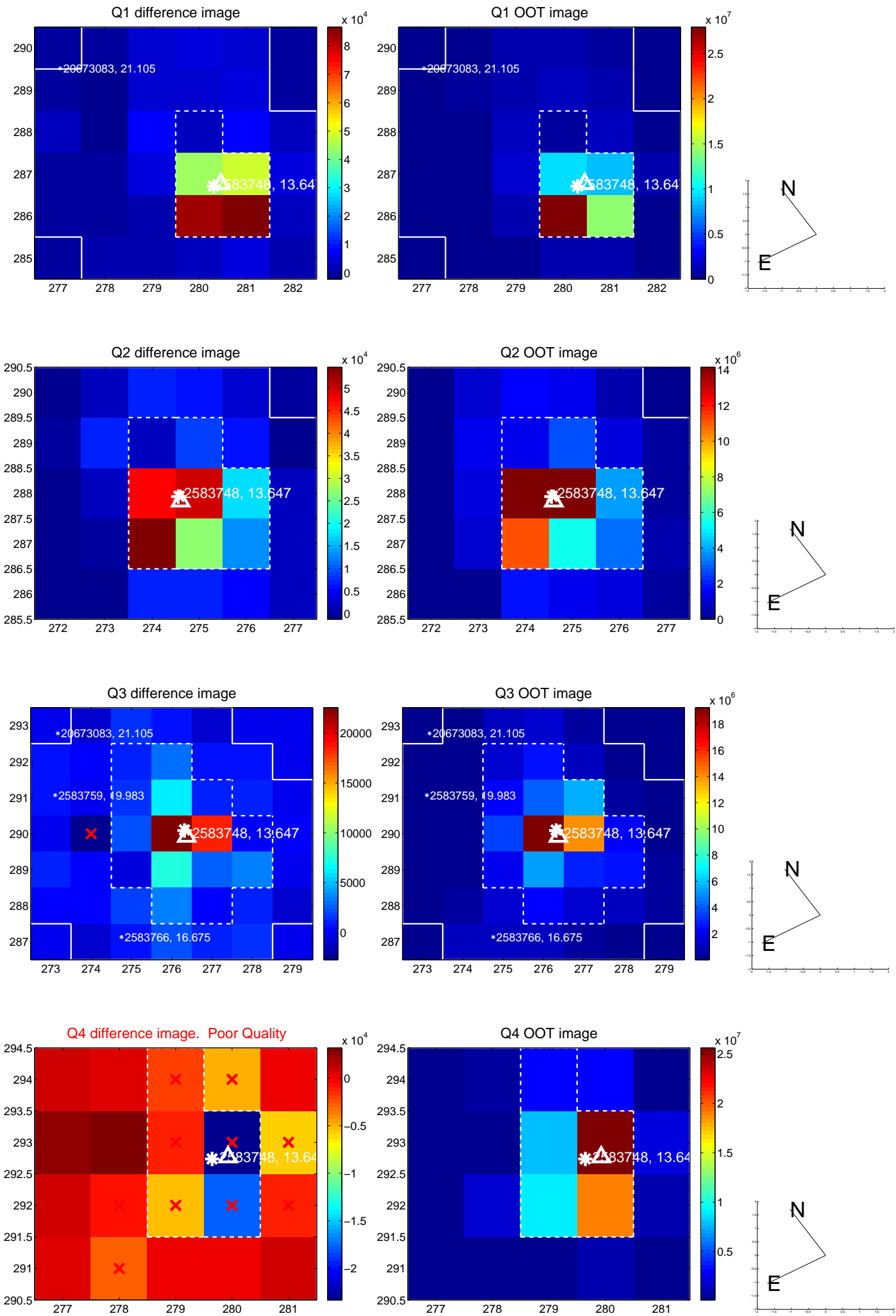
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.126 ± 0.251	0.50	-0.019 ± 0.263	-0.125 ± 0.230
PRF-fit source offset from KIC position	0.133 ± 0.200	0.67	0.021 ± 0.301	-0.132 ± 0.229
photometric centroid source offset	0.84 ± 0.21	3.99	0.23 ± 0.20	-0.81 ± 0.21

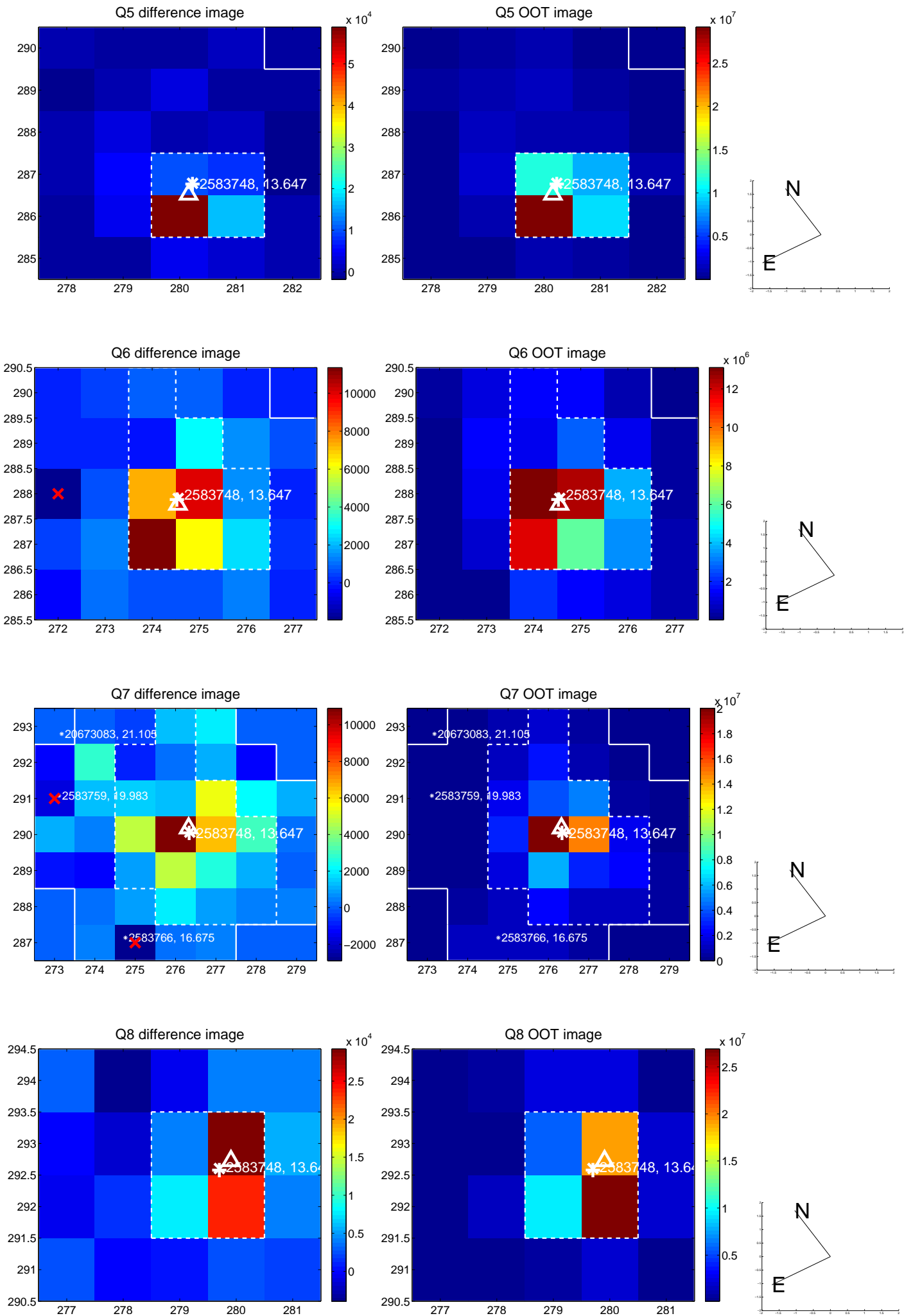


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

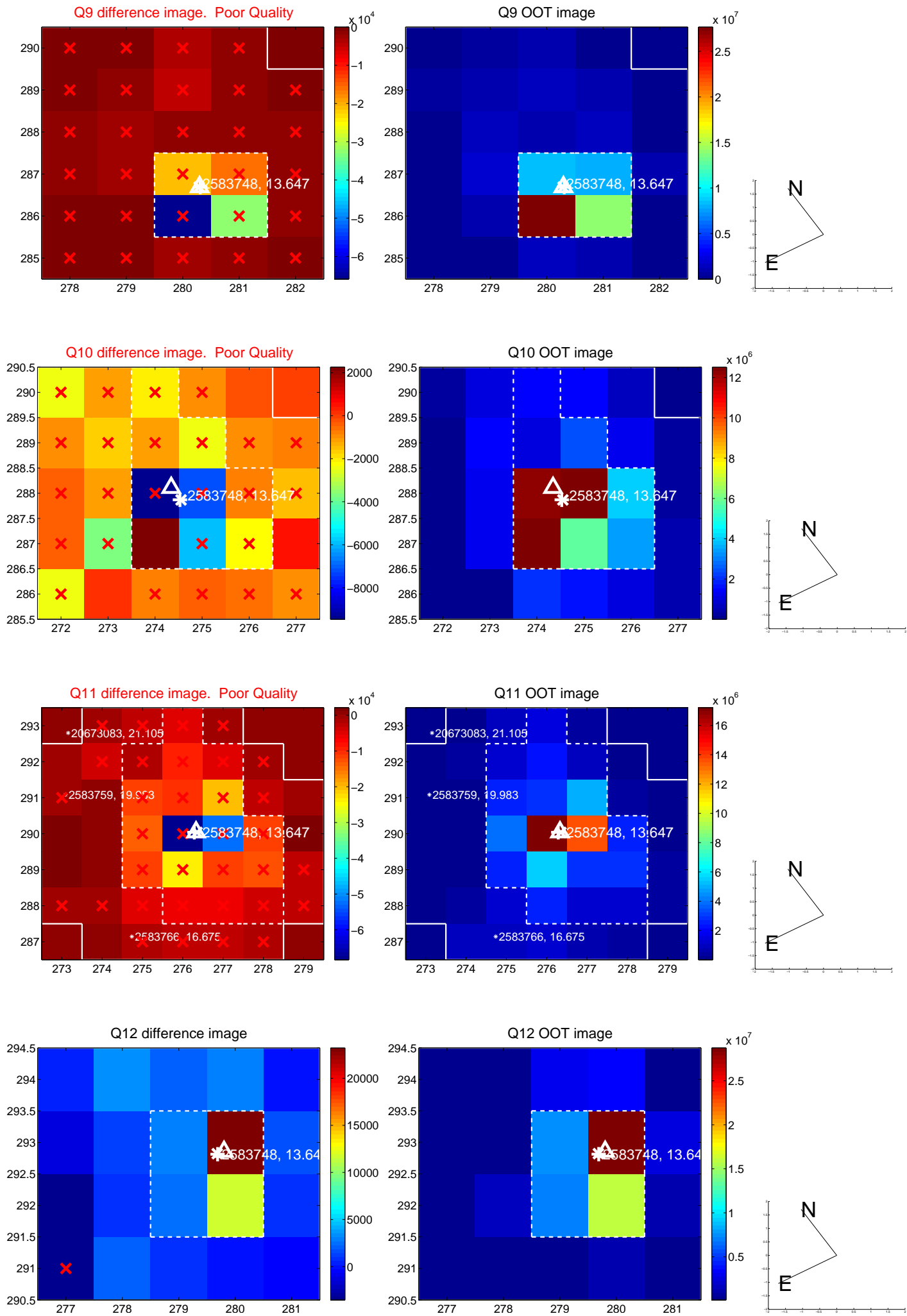
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



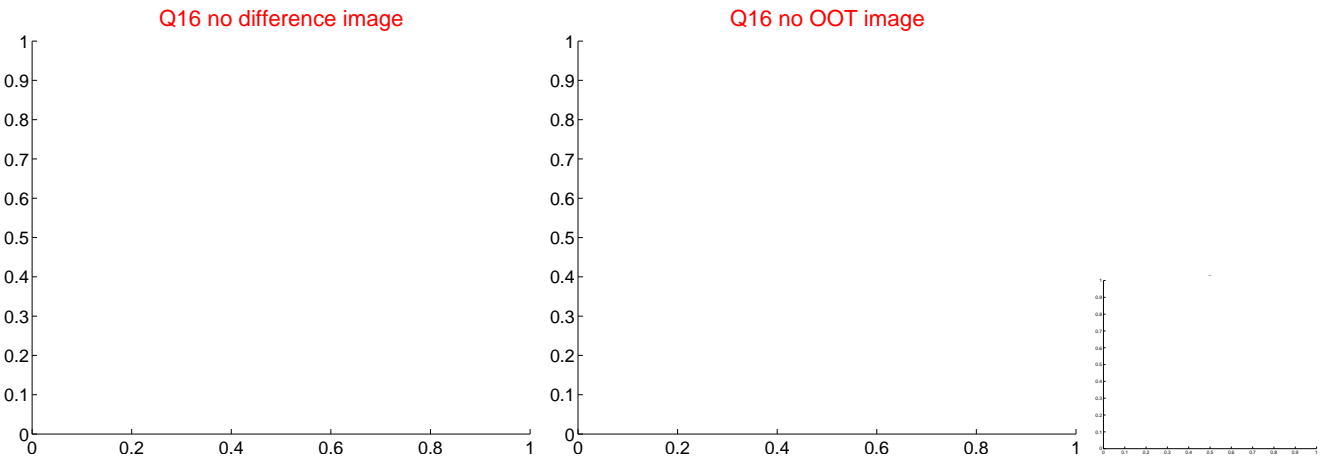
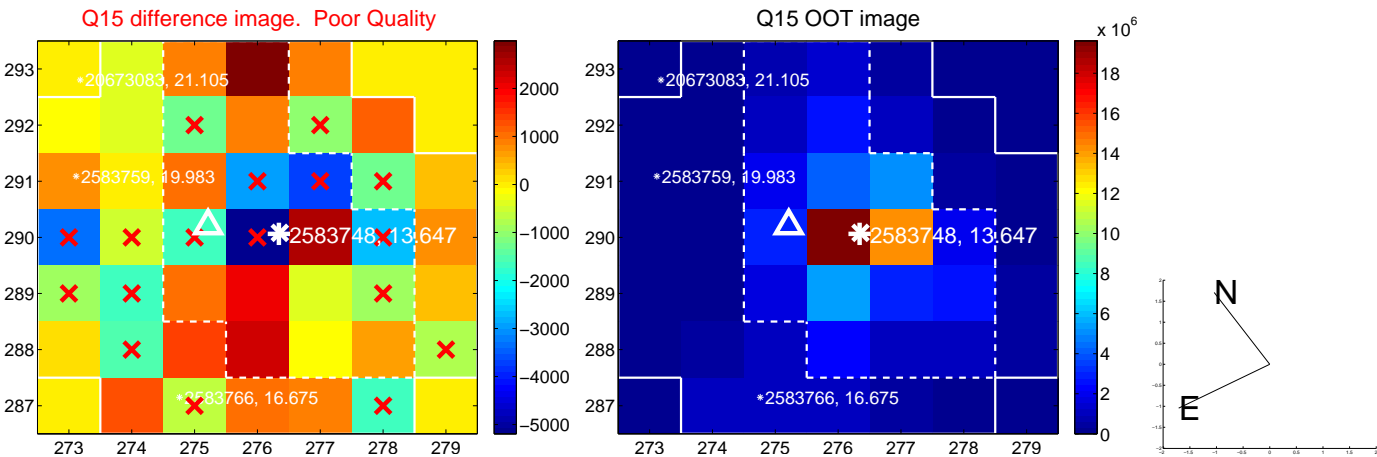
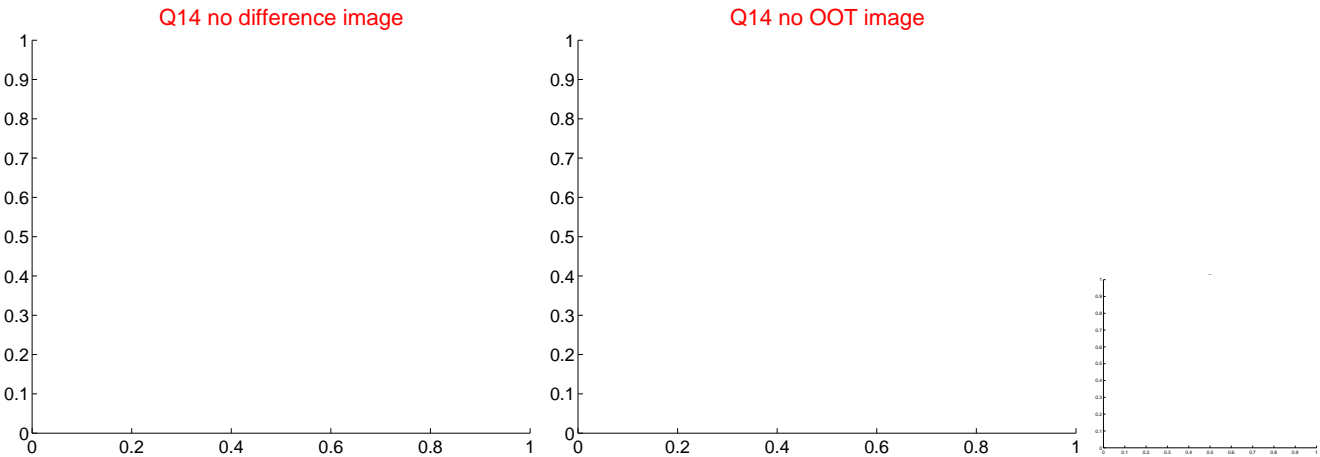
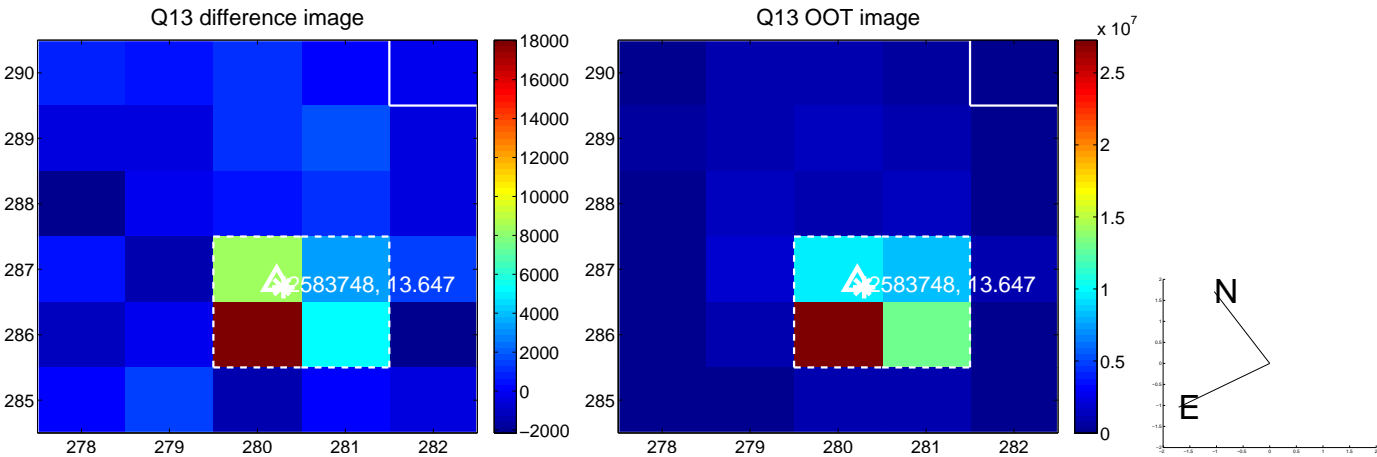
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



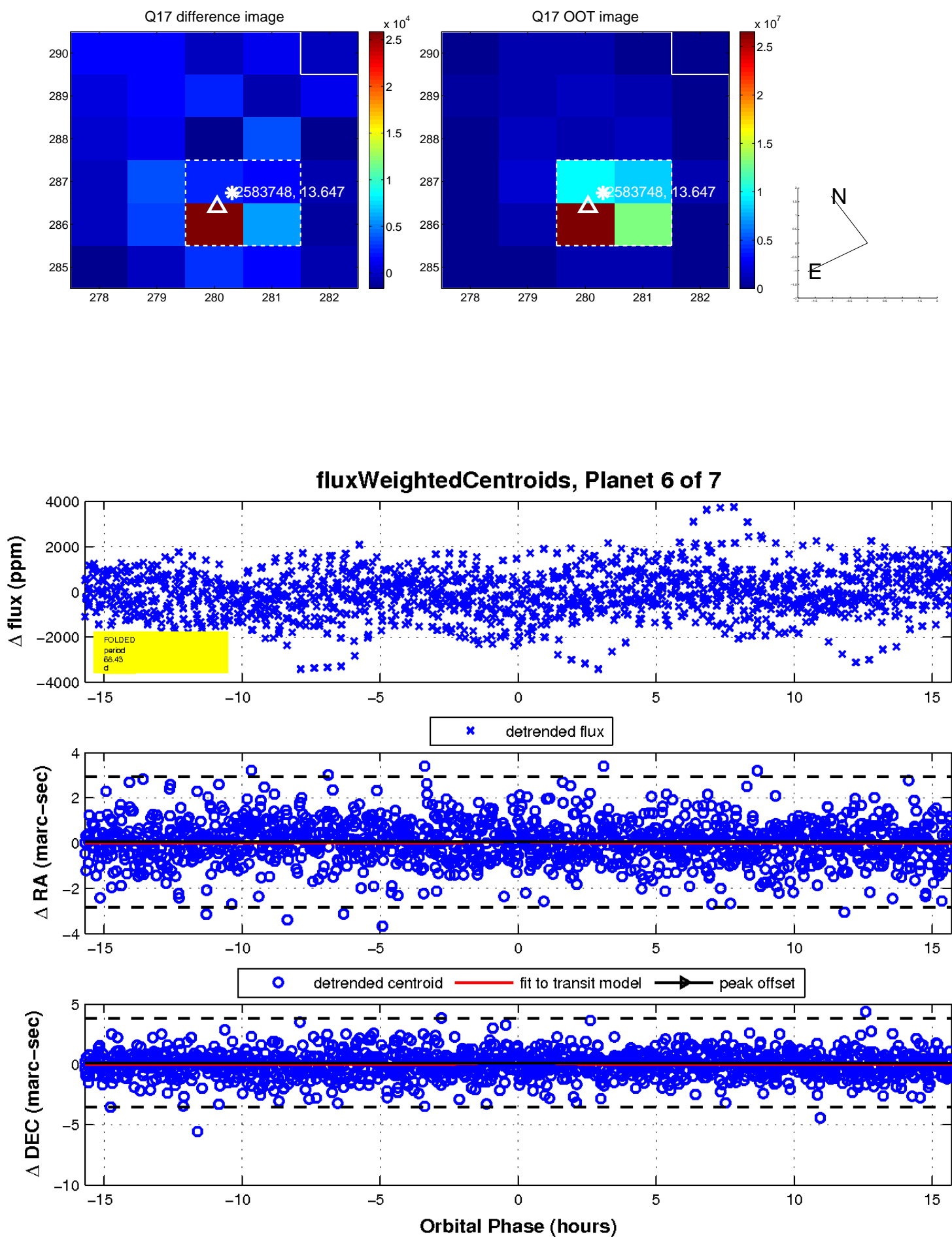
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

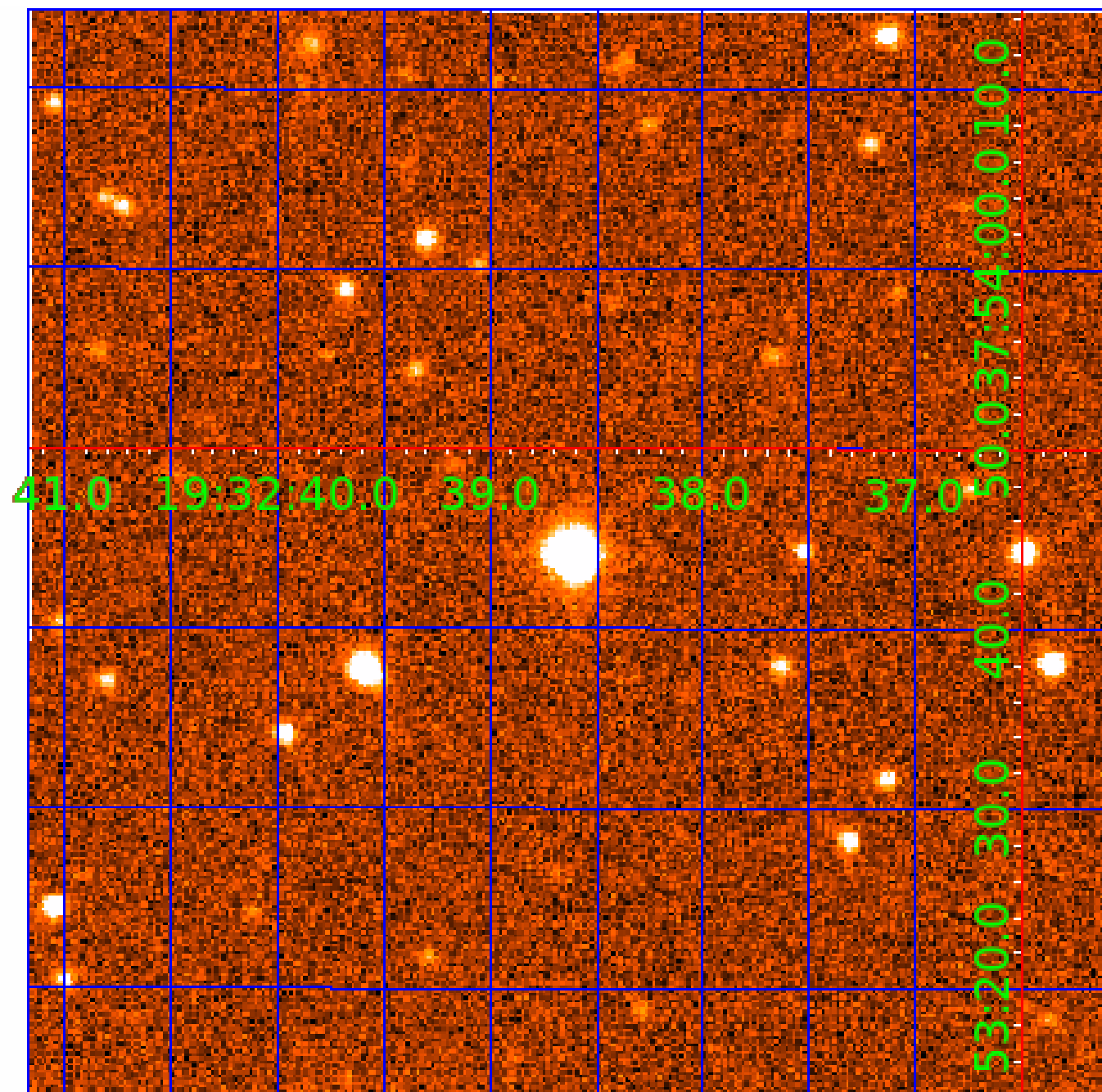


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002583748

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})
002583748-01	OBS	No	0.853550	132.168147	52.3	5.049	7.8	6.6	1.82	6975	1.68	19334.62
002583748-02	OBS	No	3.725169	134.554997	323.1	4.671	11.3	10.8	1.82	6975	3.79	2710.90
002583748-03	OBS	No	40.977339	133.476021	380.4	5.000	9.7	-1.0	1.82	6975	3.58	110.81
002583748-05	OBS	No	99.753293	171.638886	1736.8	3.102	9.1	8.5	1.82	6975	13.98	33.84
002583748-06	OBS	No	68.429172	141.604148	1330.0	5.233	8.2	8.2	1.82	6975	12.28	55.93
002583748-07	OBS	No	136.369391	200.292260	444.2	2.500	8.1	-1.0	1.82	6975	3.88	22.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002583748-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
002583748-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
002583748-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
002583748-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

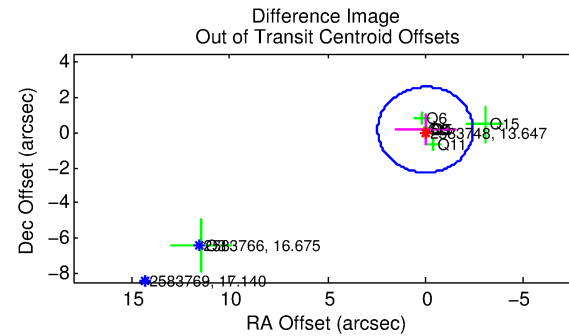
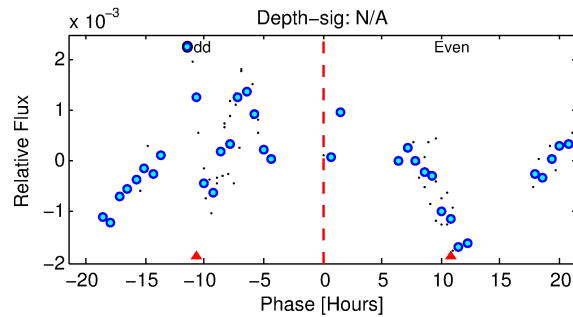
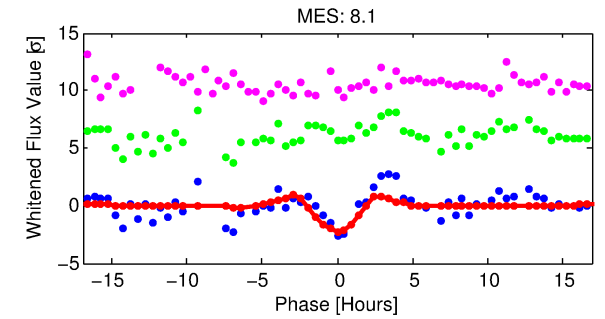
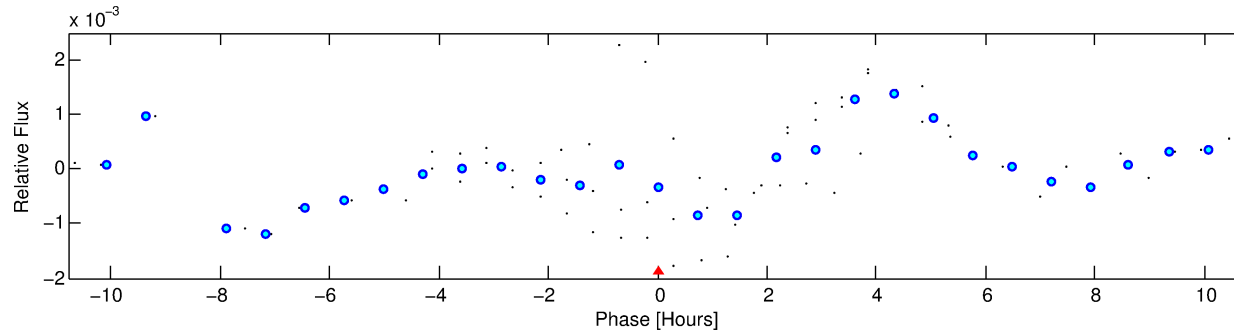
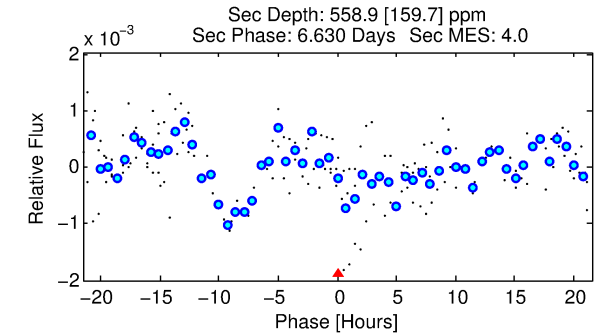
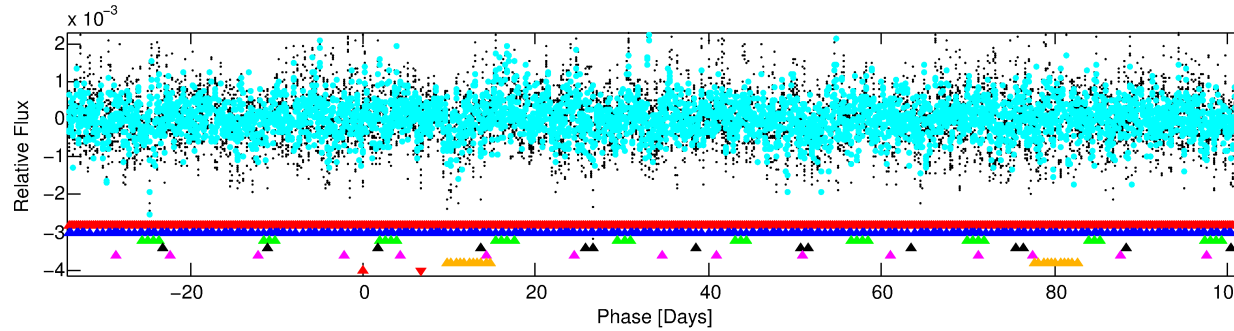
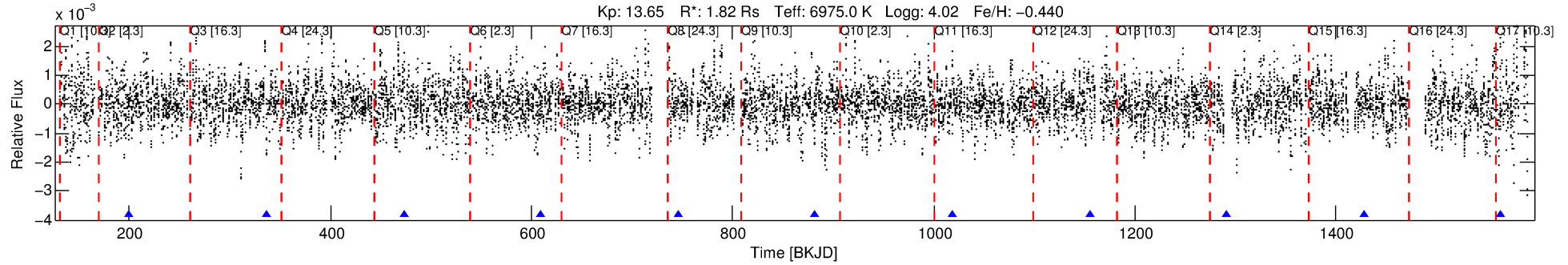
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002583748-07

No Significant Match Found

DV One-Page Summary

KIC: 2583748 Candidate: 7 of 7 Period: 136.369 d



TPS TCE Results:

Period = 136.36939 d
Epoch = 200.2923 BKJD

DV fit results are unavailable

DV Diagnostic Results:

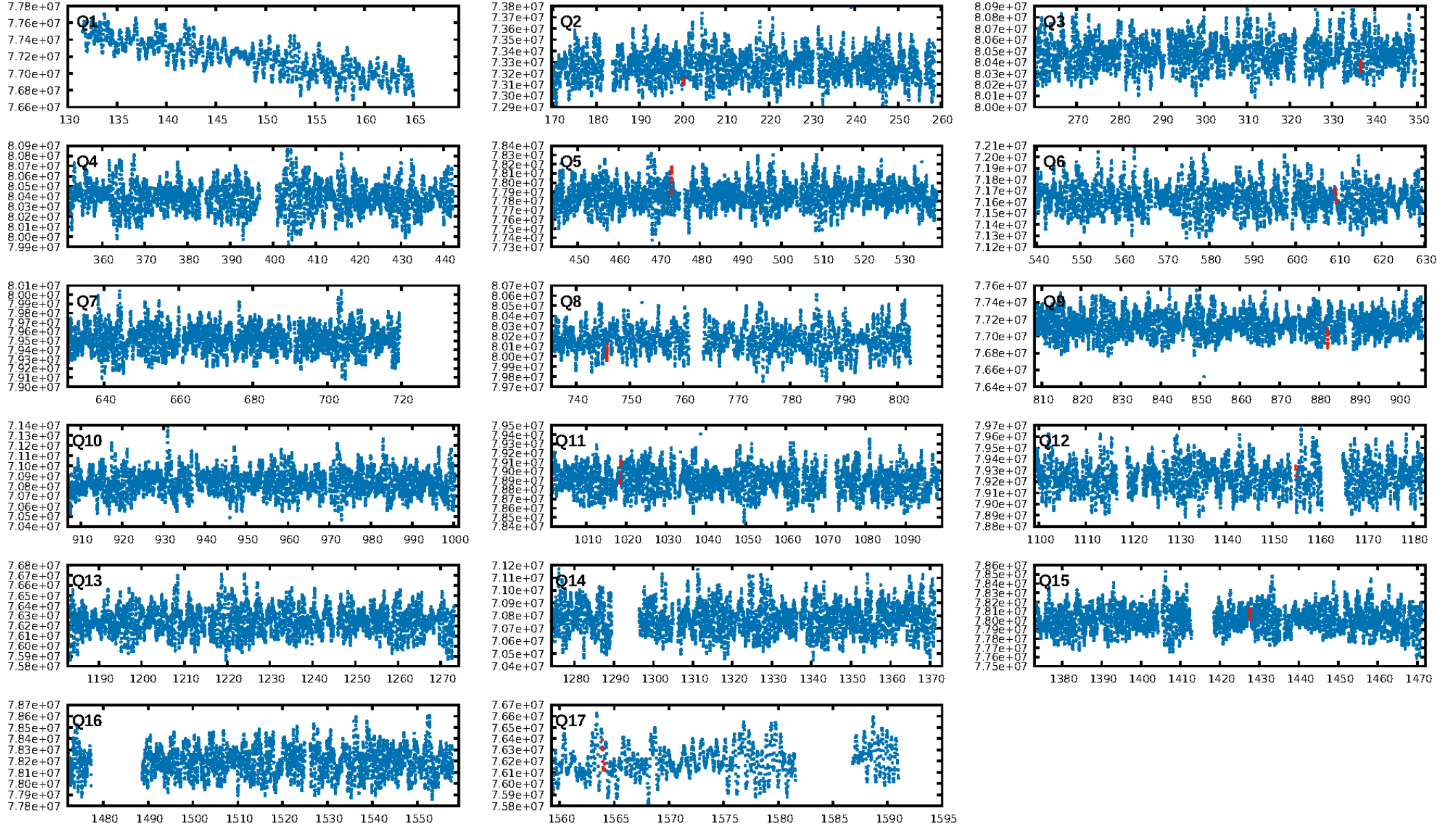
ShortPeriod-sig: 100.0% [142.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -13.22

Centroid-sig: 22.9%
Centroid-so: 1.281 arcsec [2.31σ]
OotOffset-rm: 0.163 arcsec [0.20σ]
OotOffset-st: 1/3/1/2 [7]
KicOffset-st: 1/3/1/2 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/8]

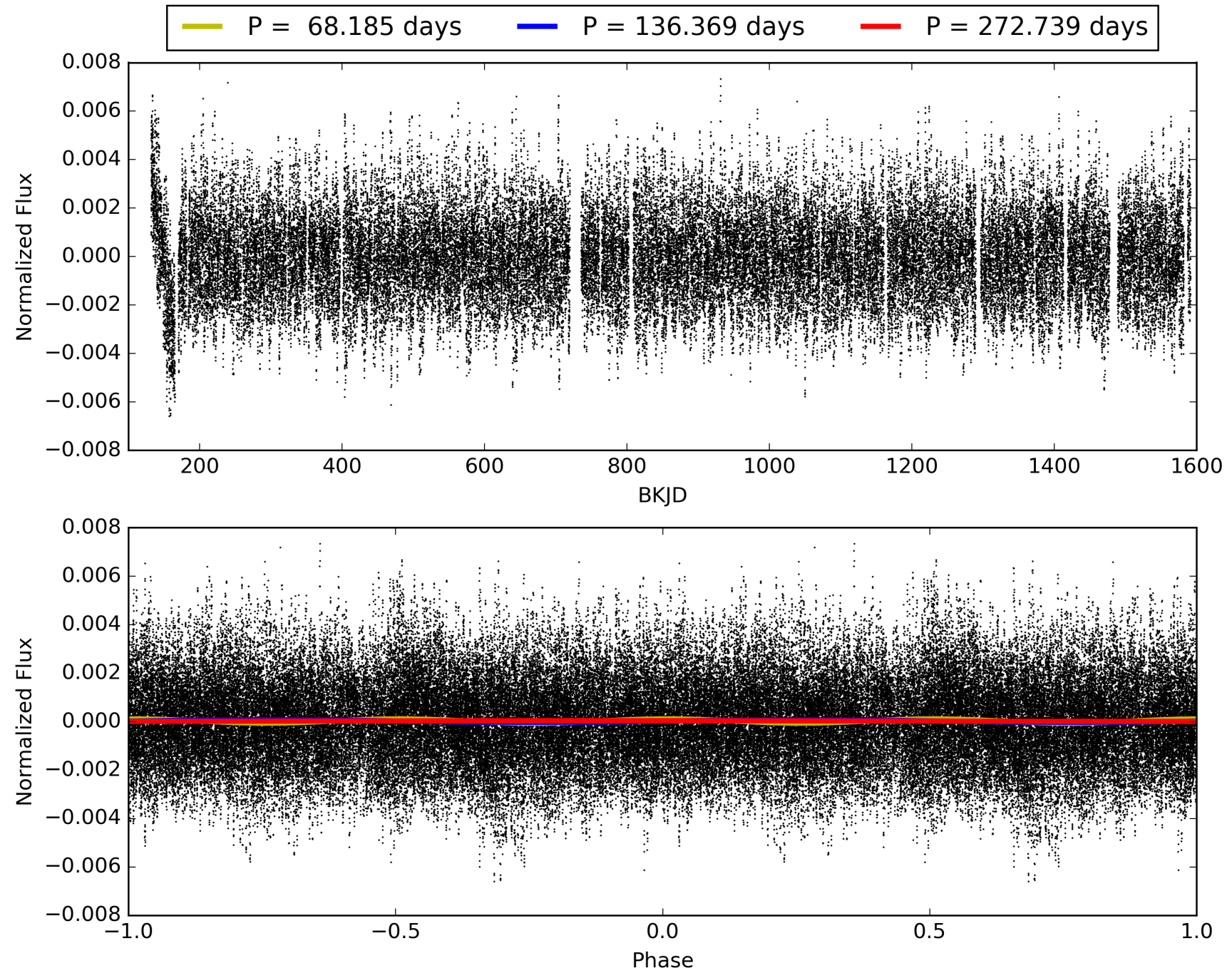
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:38:01 Z

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

TCE 002583748-07, PDC Light Curves

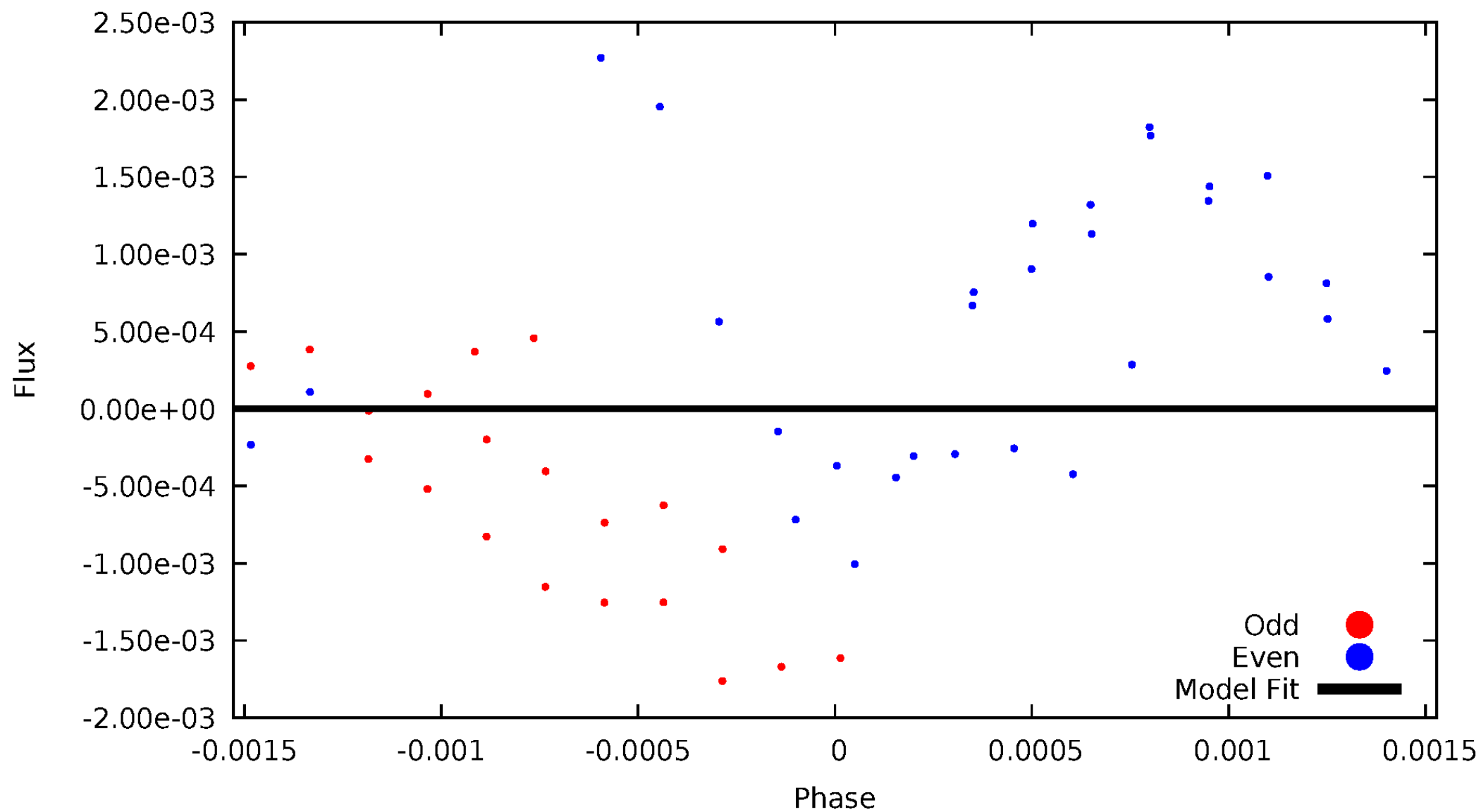


TCE 002583748-07



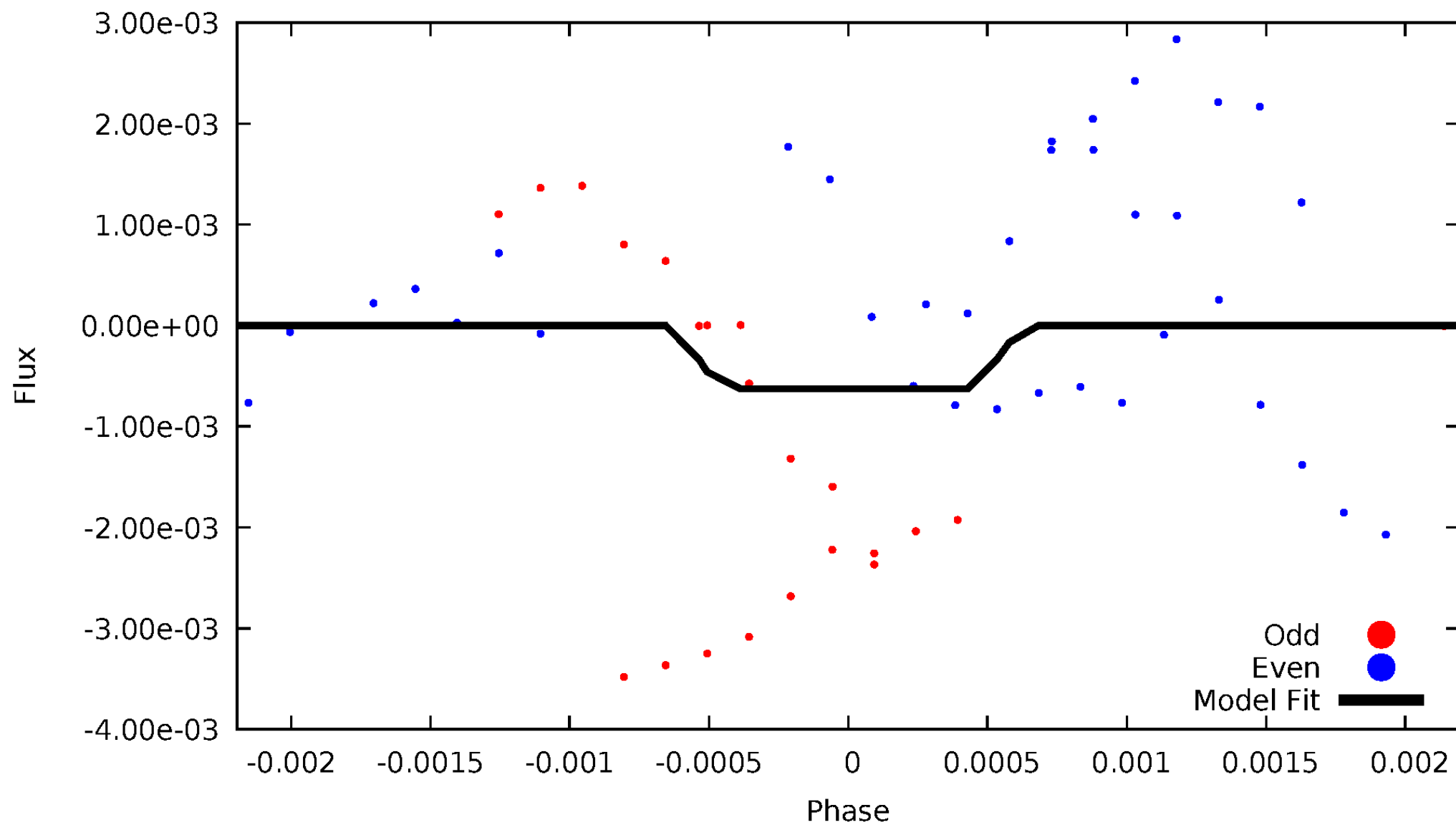
DV Odd/Even

TCE 002583748-07



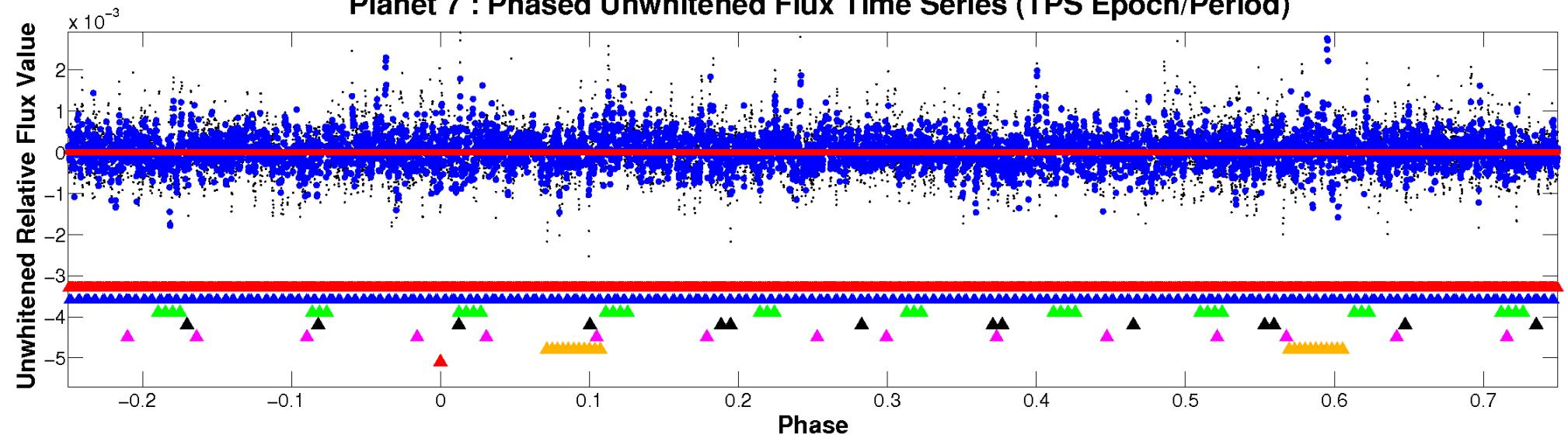
ALT Odd/Even

TCE 002583748-07



Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

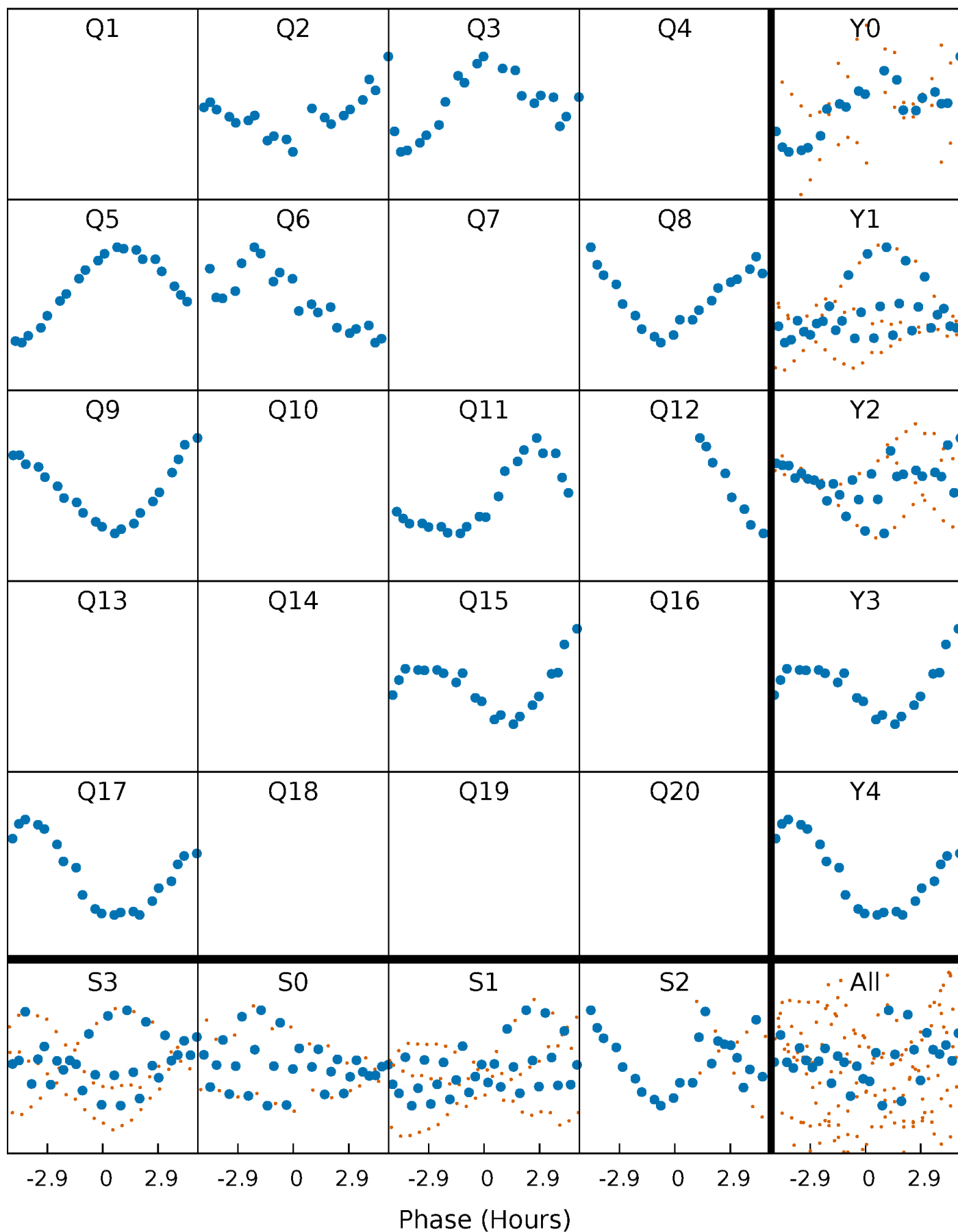


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



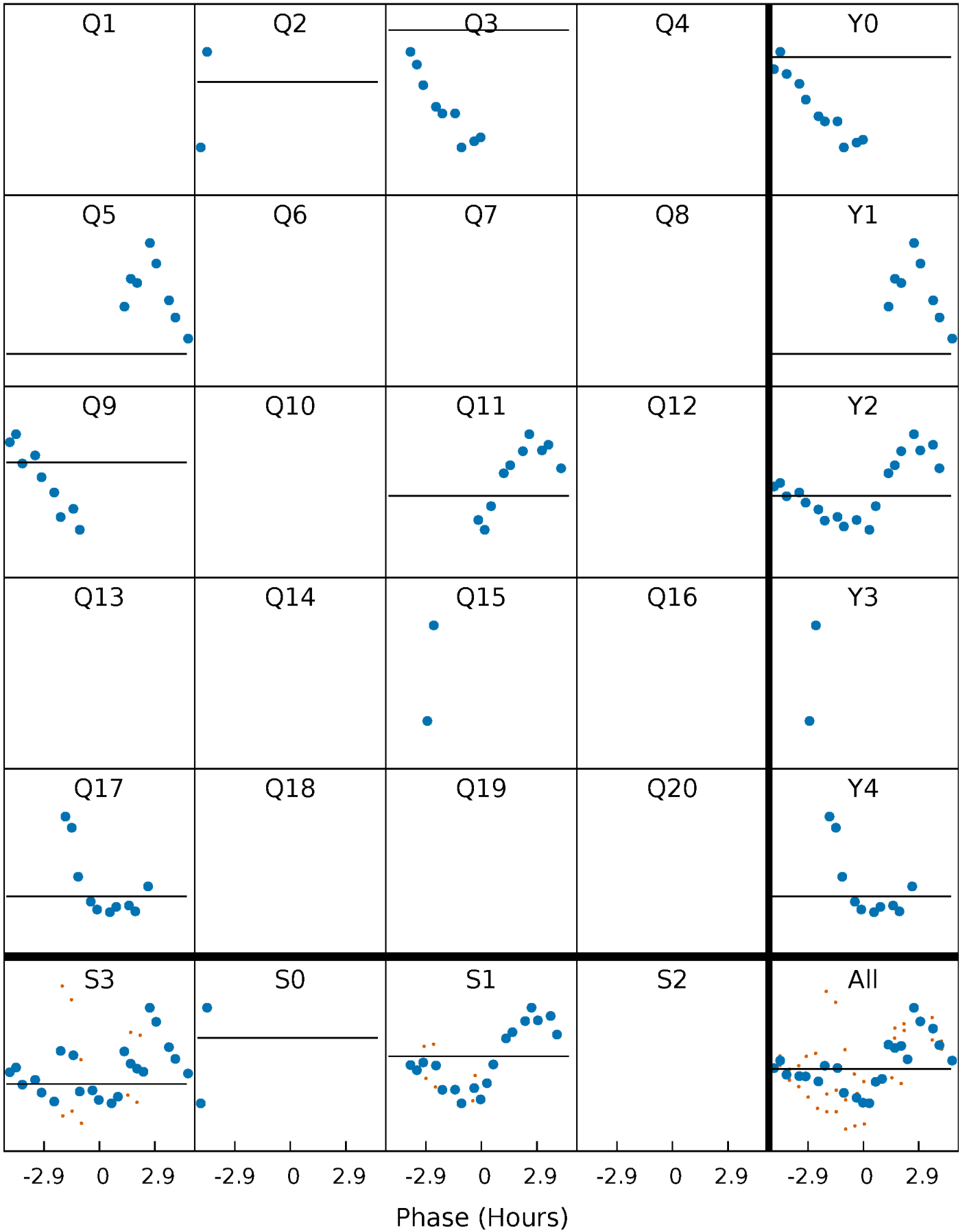
PDC Quarter-Phased Transit Curves

TCE 002583748-07 P=136.369391 Days $T_0=200.292260$ (BKJD)



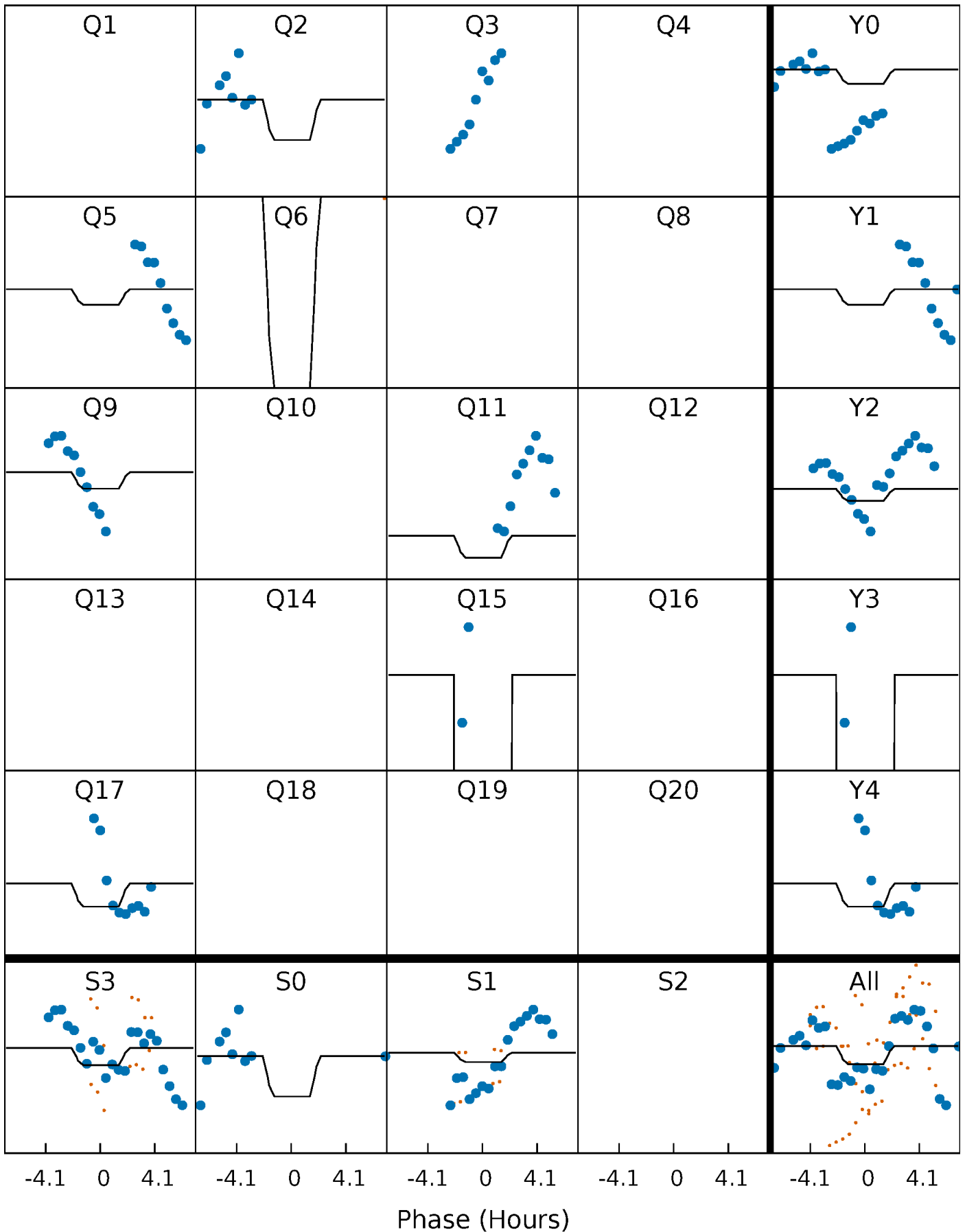
DV Quarter-Phased Transit Curves

TCE 002583748-07 P=136.369391 Days $T_0=200.292260$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

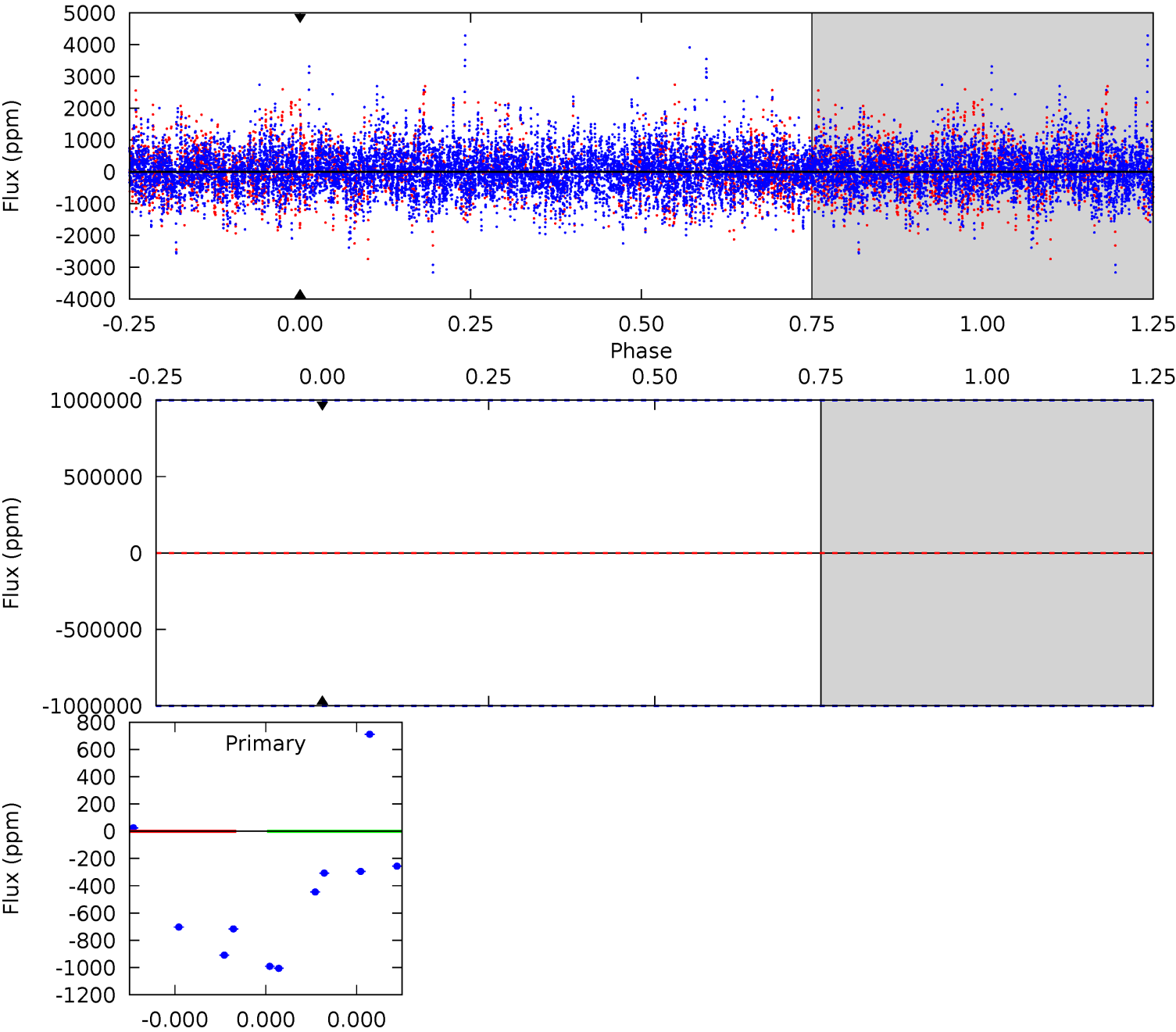
TCE 002583748-07 P=136.369391 Days $T_0=200.240638$ (BKJD)



DV Model-Shift Uniqueness Test

002583748-07, P = 136.369391 Days, E = 63.922869 Days

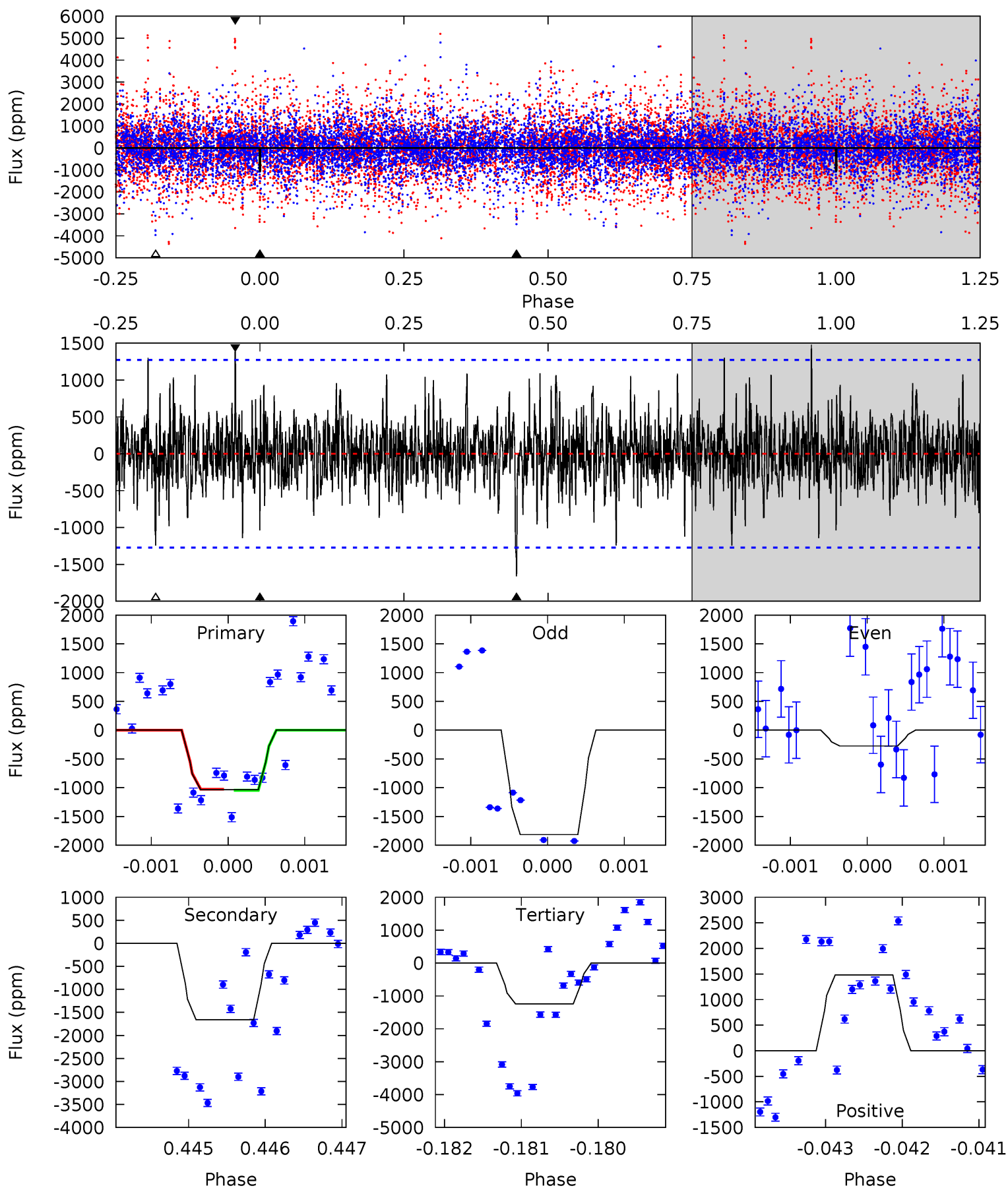
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002583748-07, P = 136.369391 Days, E = 63.871247 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.43	7.09	5.32	6.33	5.44	3.27	1.43	-0.90	-1.91	1.77	0.76	3.23	-379.1	0.47	0.04



Stellar Parameters For KIC 002583748

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6975^{+216}_{-288}	$4.020^{+0.308}_{-0.154}$	$-0.440^{+0.300}_{-0.300}$	$1.817^{+0.494}_{-0.604}$	$1.261^{+0.190}_{-0.190}$	$0.296^{+0.569}_{-0.131}$
	+3%/-4%	+8%/-4%	+68%/-68%	+27%/-33%	+15%/-15%	+192%/-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 002583748-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$14.16^{+16.04}_{-10.11}$	765^{+61}_{-69}	4578^{+32339}_{-35379}	$624^{+184919}_{-143901}$
Alt.	-1660 ± 234	$15.74^{+15.32}_{-10.75}$	765^{+61}_{-70}	4996^{+3956}_{-1174}	1155^{+10256}_{-866}

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

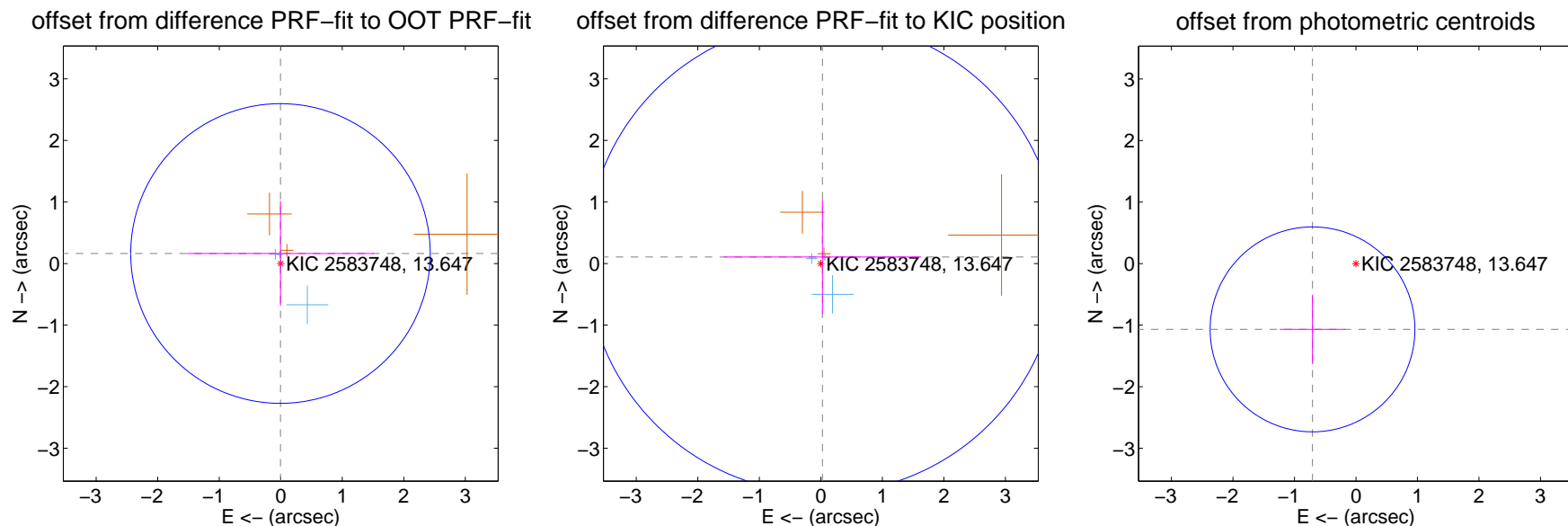
DV Centroid Data

Supplemental centroid analysis for 002583748-07. Kepler magnitude: 13.65. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

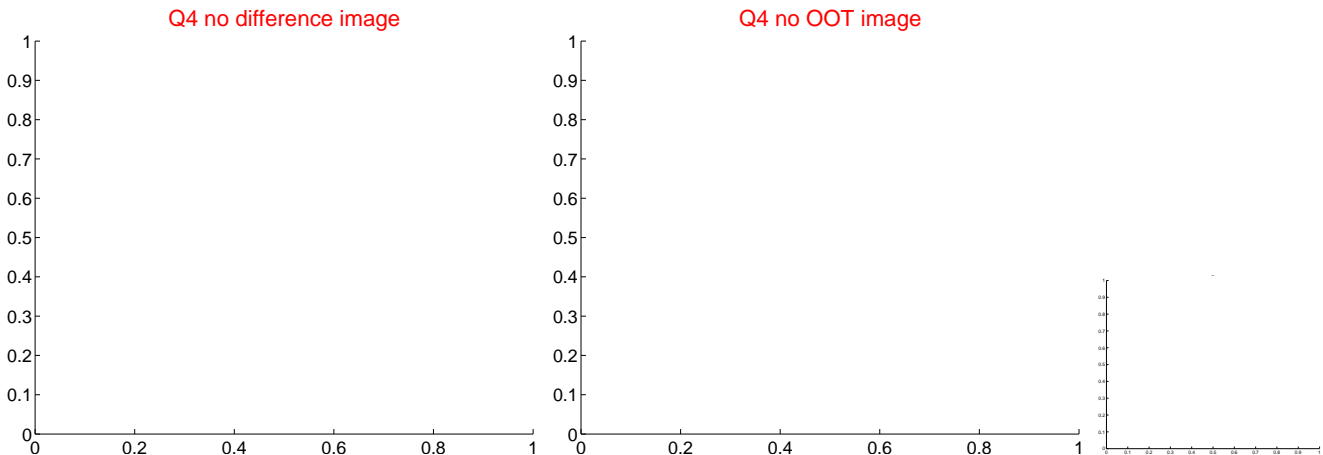
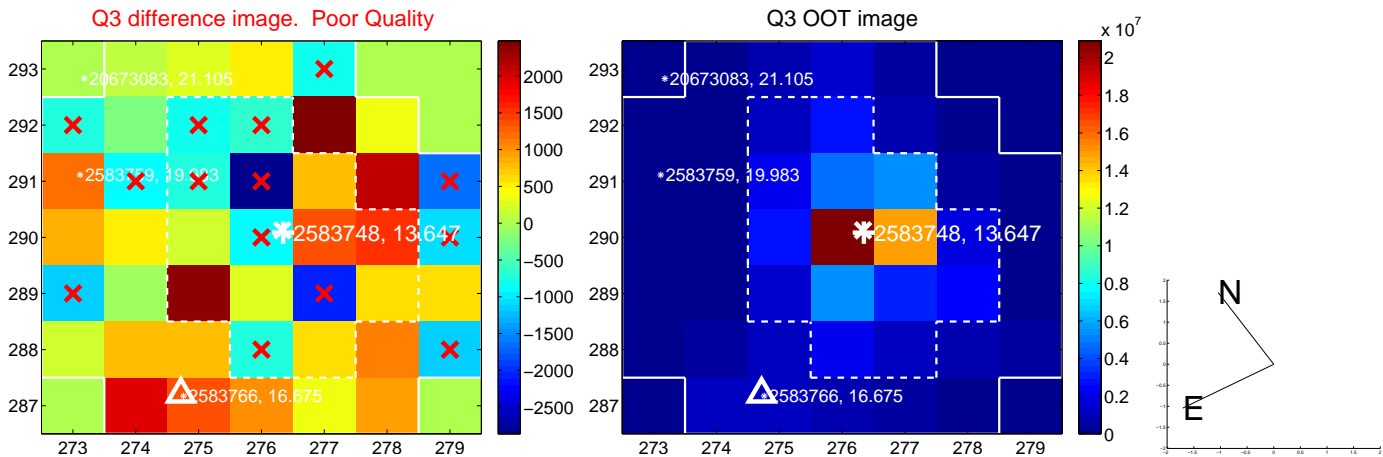
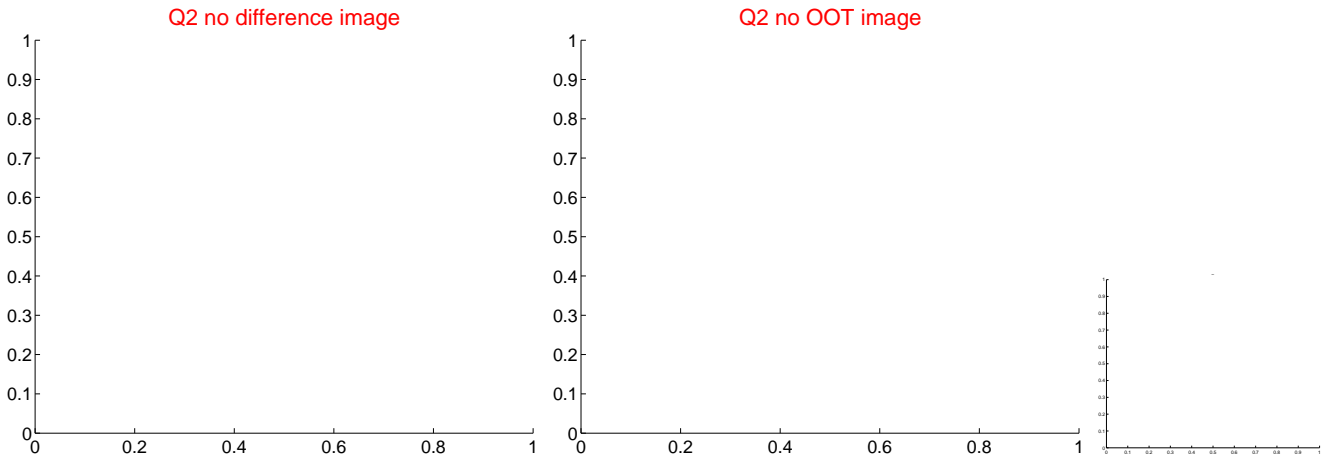
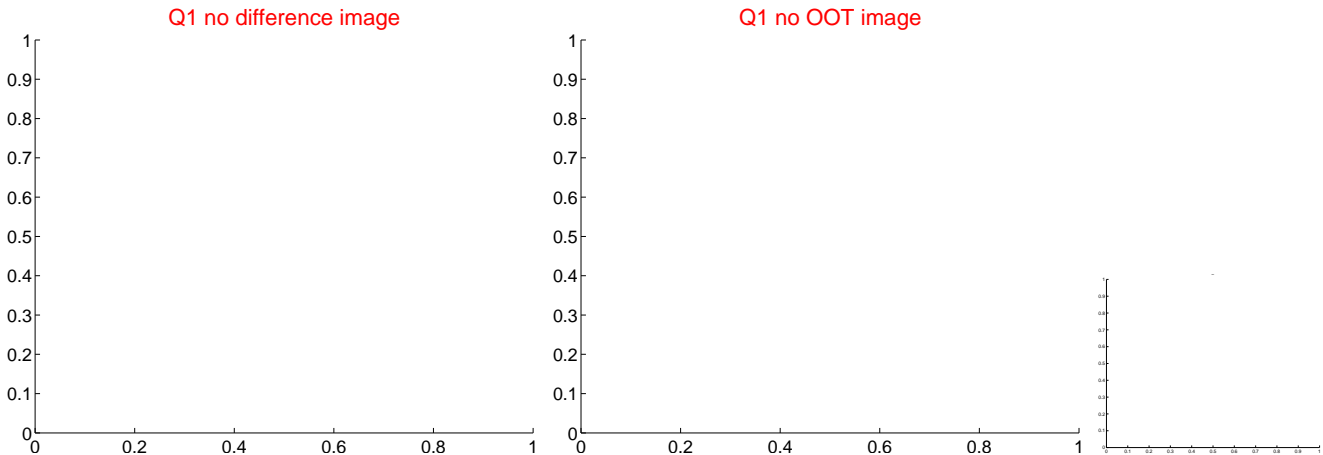
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.163 ± 0.812	0.20	0.004 ± 1.516	0.163 ± 0.852
PRF-fit source offset from KIC position	0.109 ± 1.280	0.09	-0.026 ± 1.603	0.106 ± 0.930
photometric centroid source offset	1.28 ± 0.55	2.31	0.71 ± 0.53	-1.07 ± 0.56

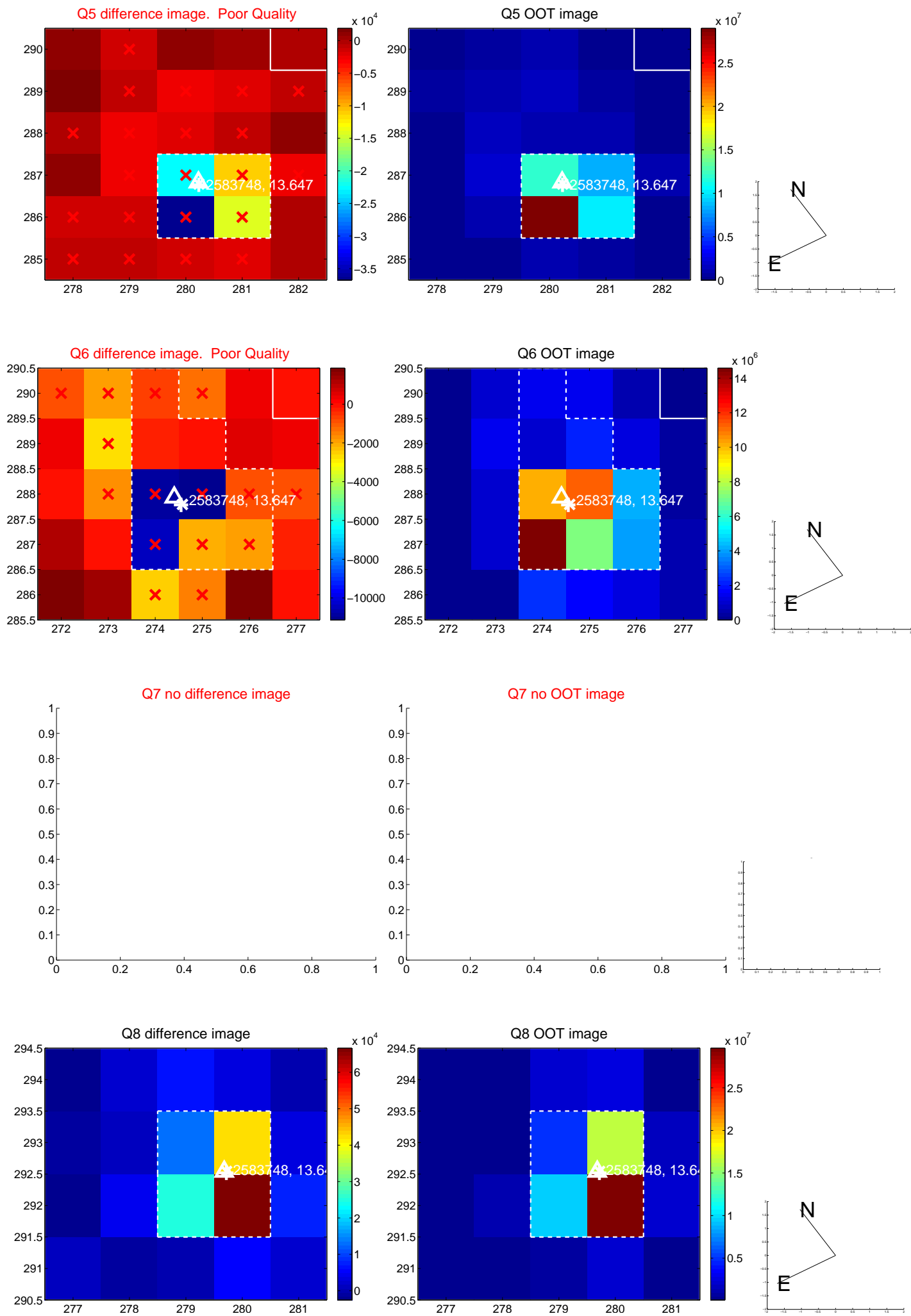


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

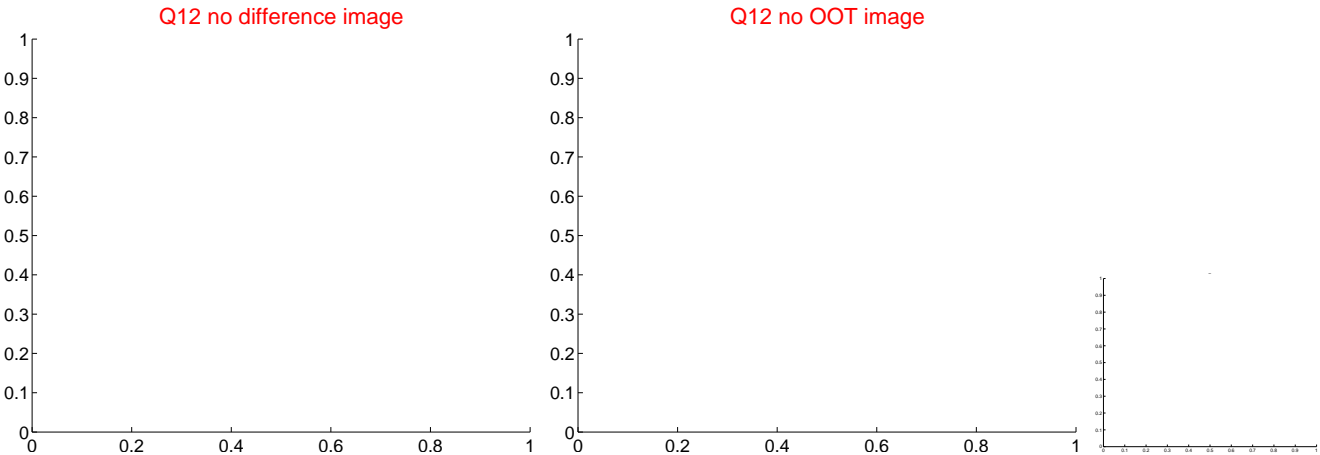
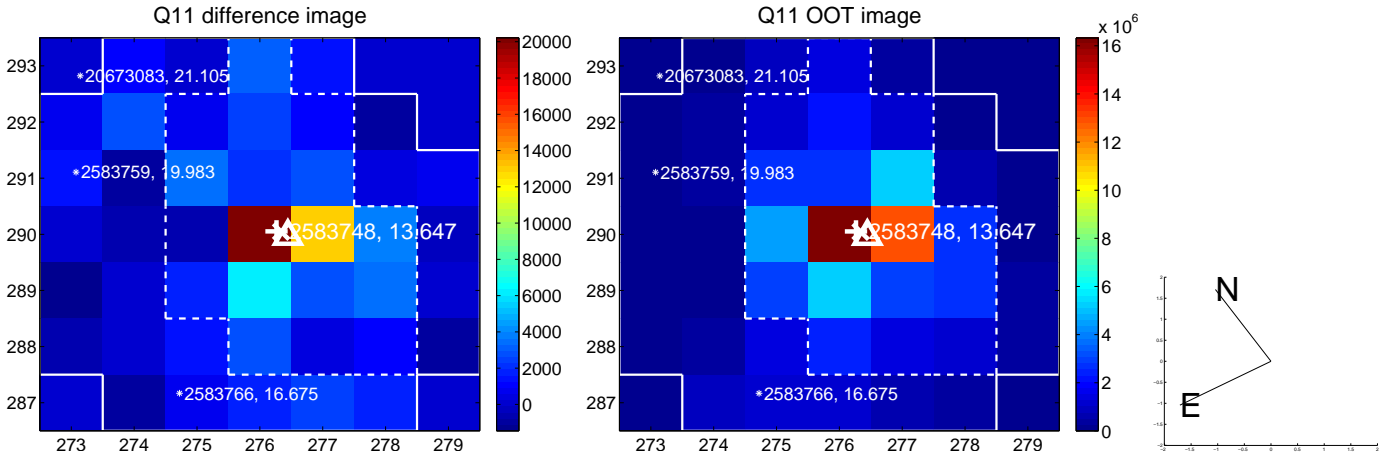
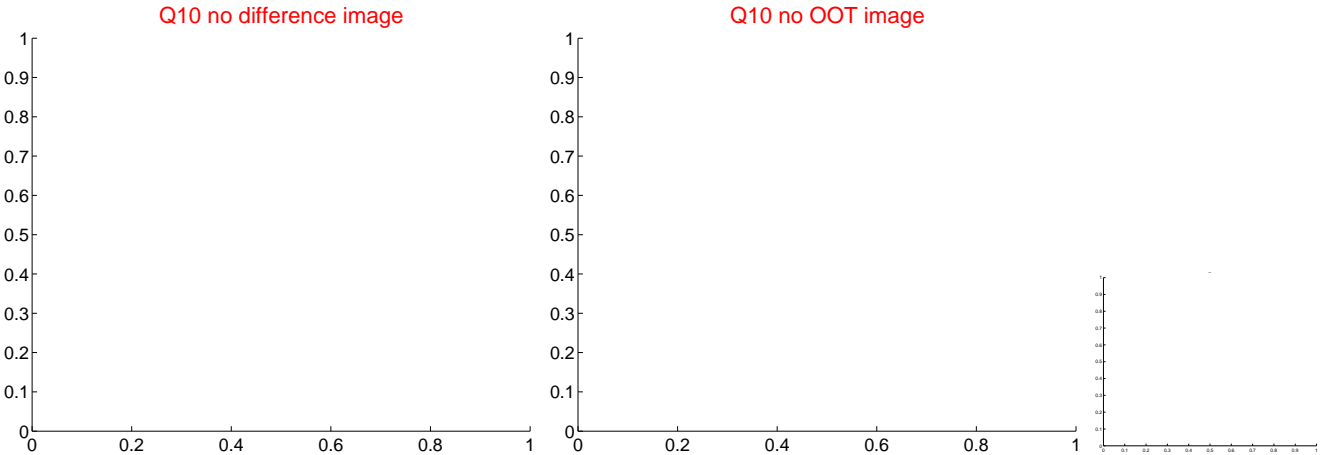
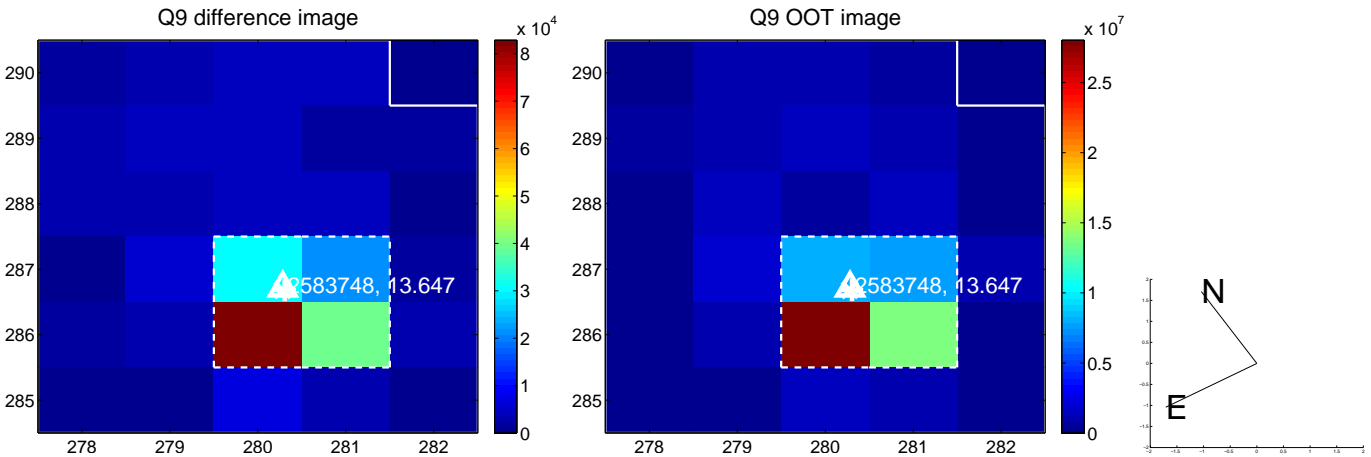
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



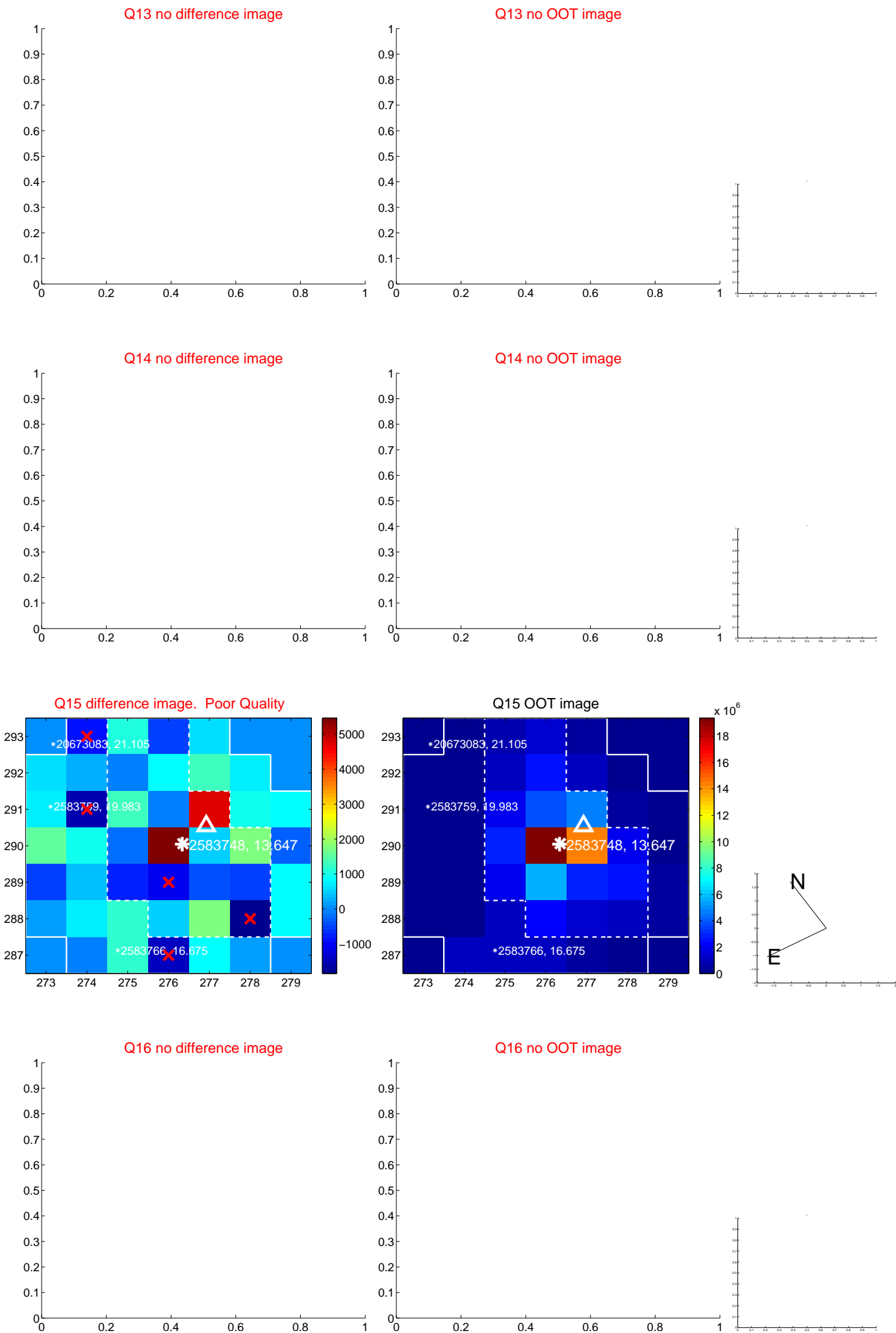
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



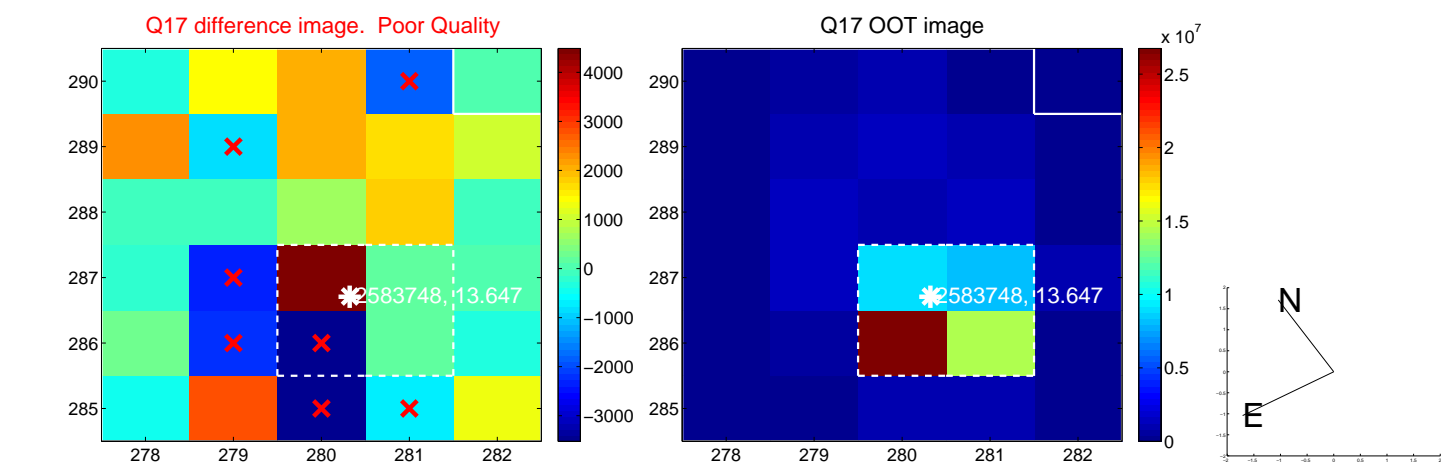
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



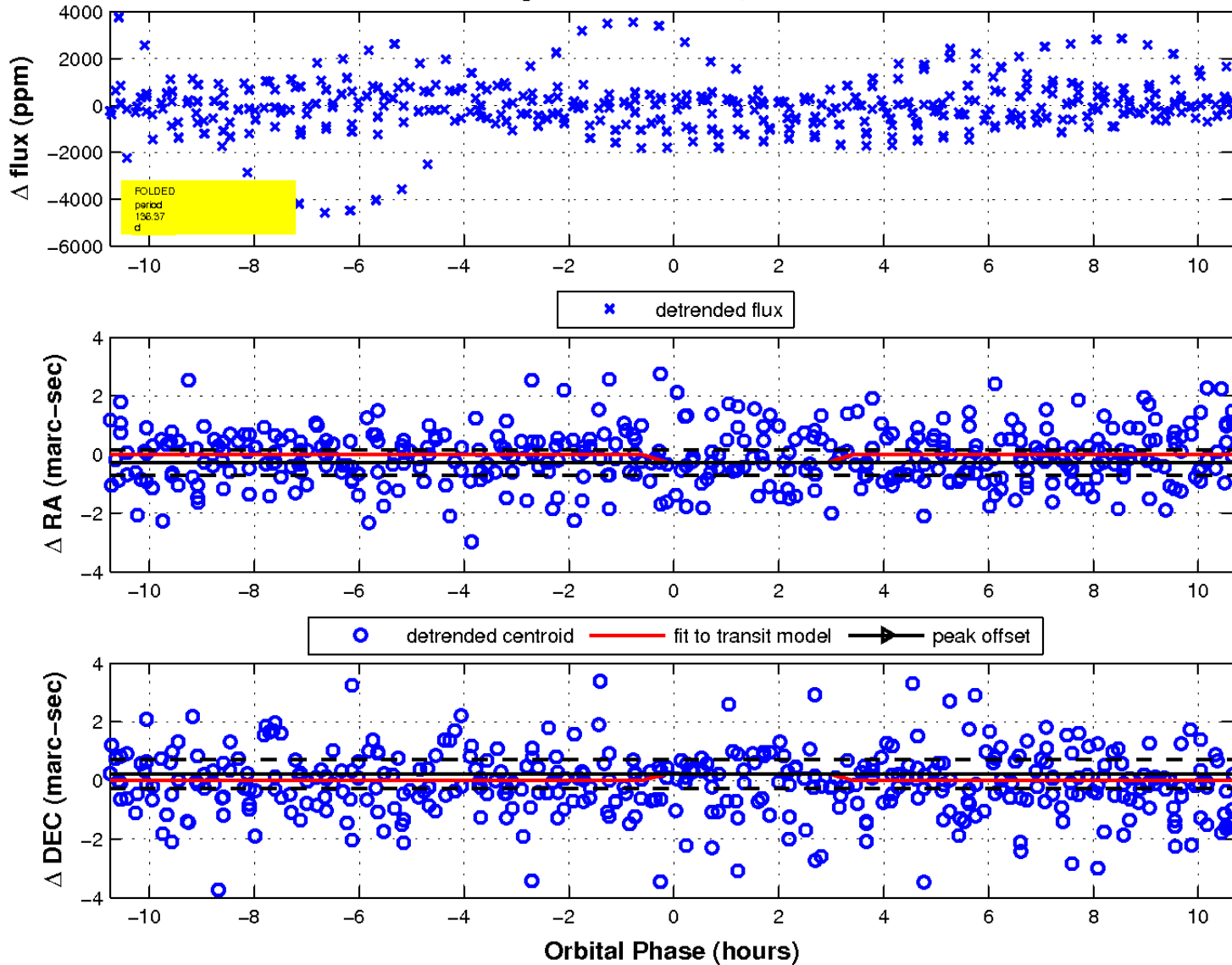
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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UKIRT Image

Declination

