

KIC 006466583

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})
006466583-01	OBS	No	4.284538	132.605466	14.1	16.172	8.5	4.1	1.27	6399	0.52	852.42
006466583-02	OBS	No	4.284695	134.692514	0.0	31.062	10.3	0.0	1.27	6399	0.01	852.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006466583-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006466583-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

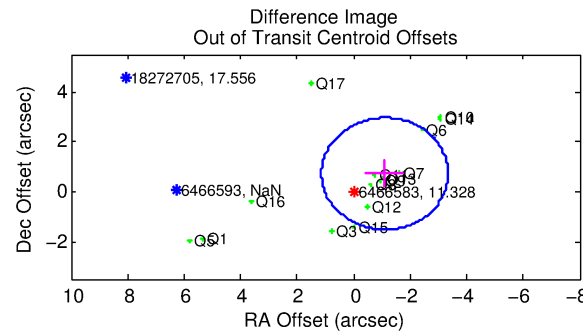
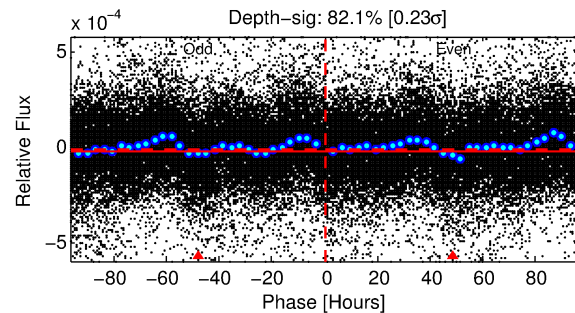
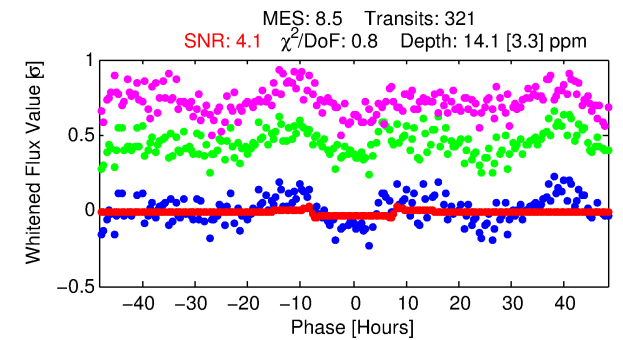
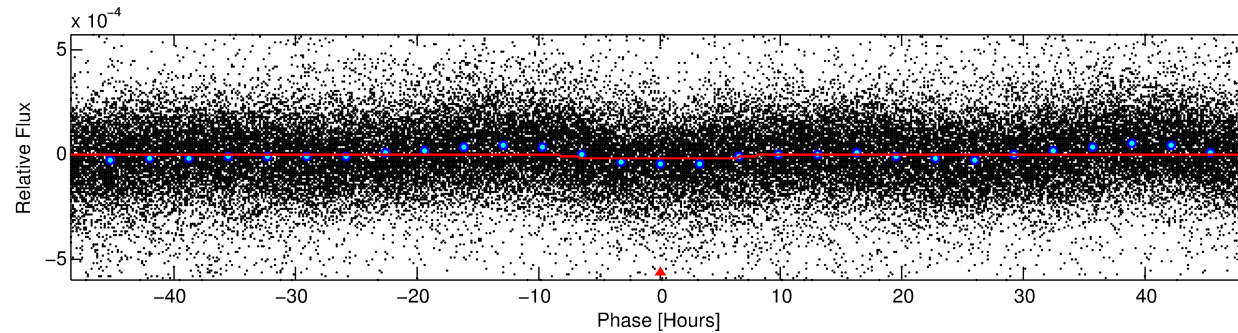
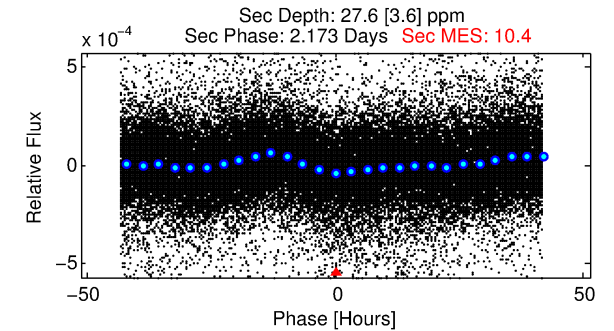
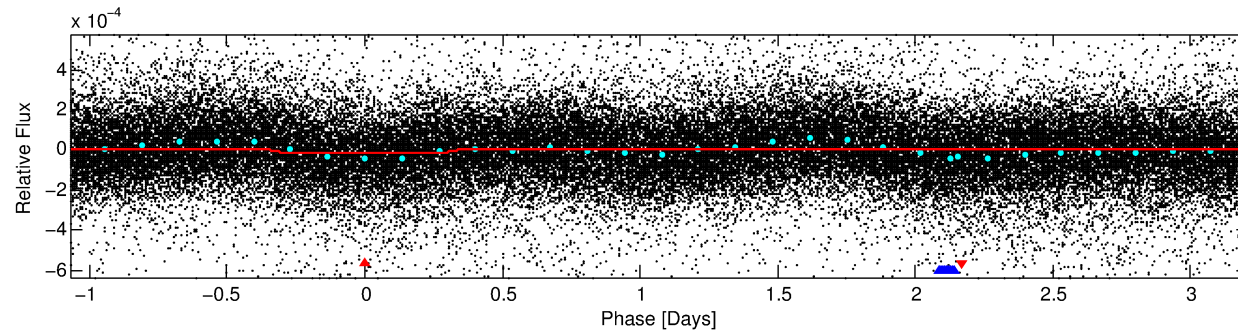
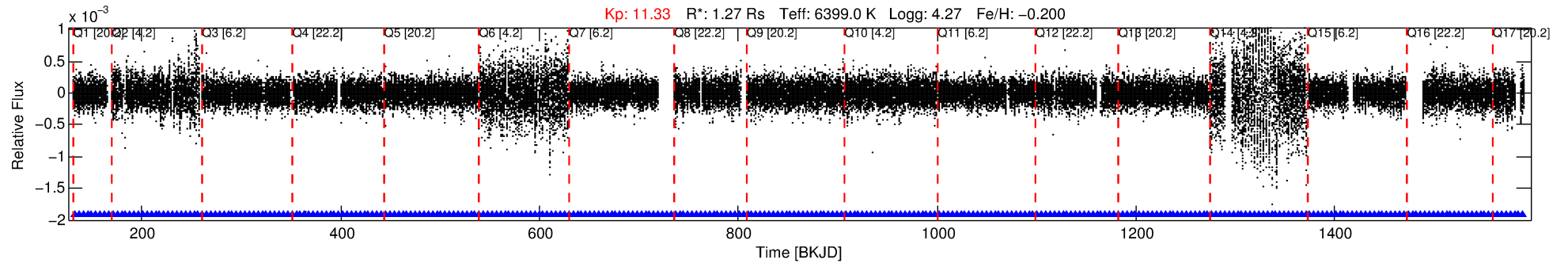
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006466583-01

No Significant Match Found

DV One-Page Summary

KIC: 6466583 Candidate: 1 of 2 Period: 4.285 d



DV Fit Results:

Period = 4.28454 [0.00009] d
Epoch = 132.6055 [0.0127] BKJD
Rp/R* = 0.0038 [0.0009]
a/R* = 1.52 [0.99]
b = 0.79 [0.54]
Seff = 852.42 [338.51]
Teff = 1378 [137] K
Rp = 0.52 [0.21] Re
a = 0.0532 [0.0139] AU
Ag = 156.12 [97.12] [1.60σ]
Teffp = 7530 [977] K [6.23σ]

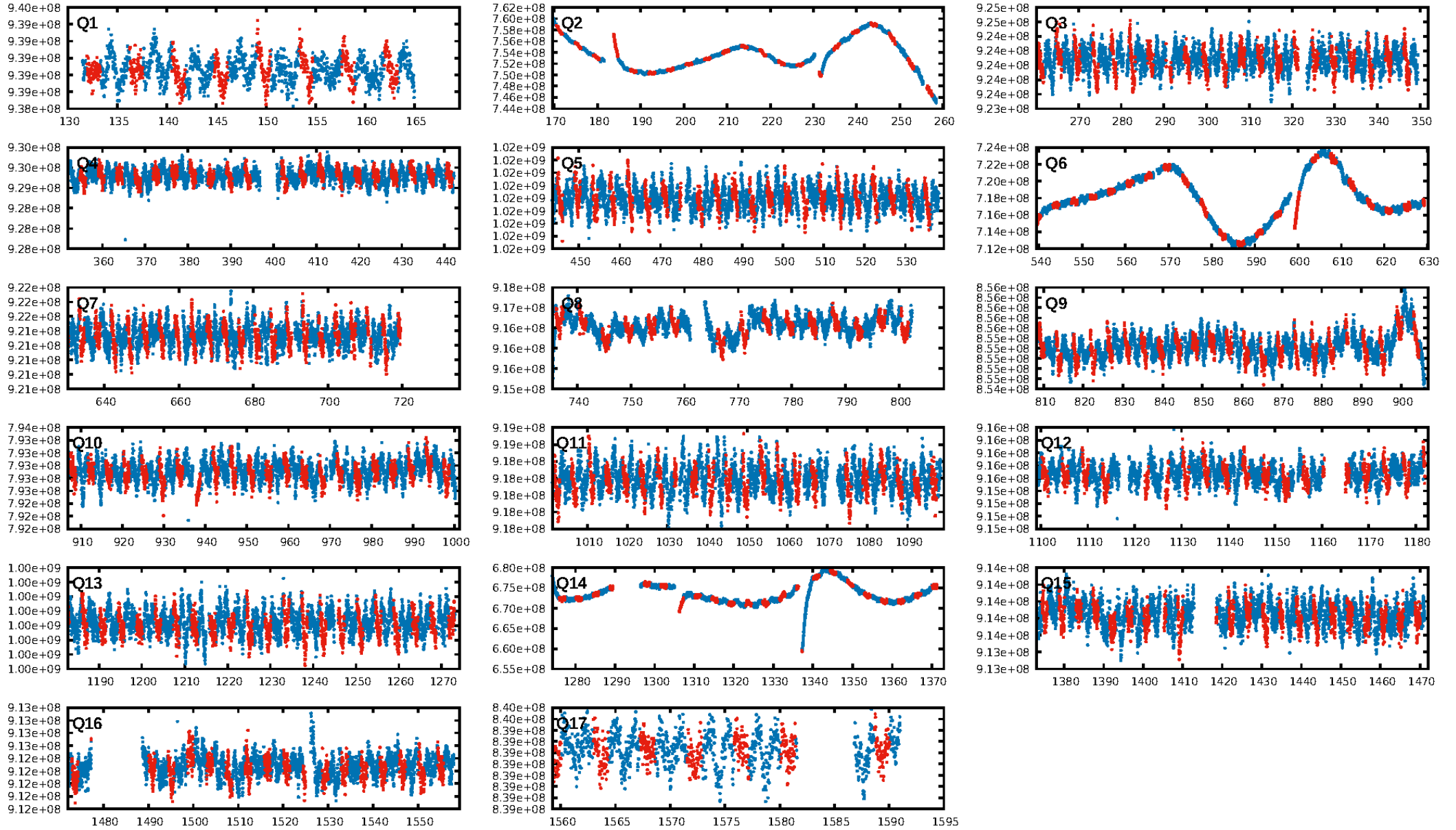
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [306/306]
GhostDiagnostic-chr: 1.617
Centroid-sig: 0.0%
Centroid-so: 4.316 arcsec [2.30σ]
OotOffset-rm: 1.311 arcsec [1.76σ]
KicOffset-rm: 1.192 arcsec [1.67σ]
OotOffset-st: 3/4/3/5 [15]
KicOffset-st: 3/4/3/5 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

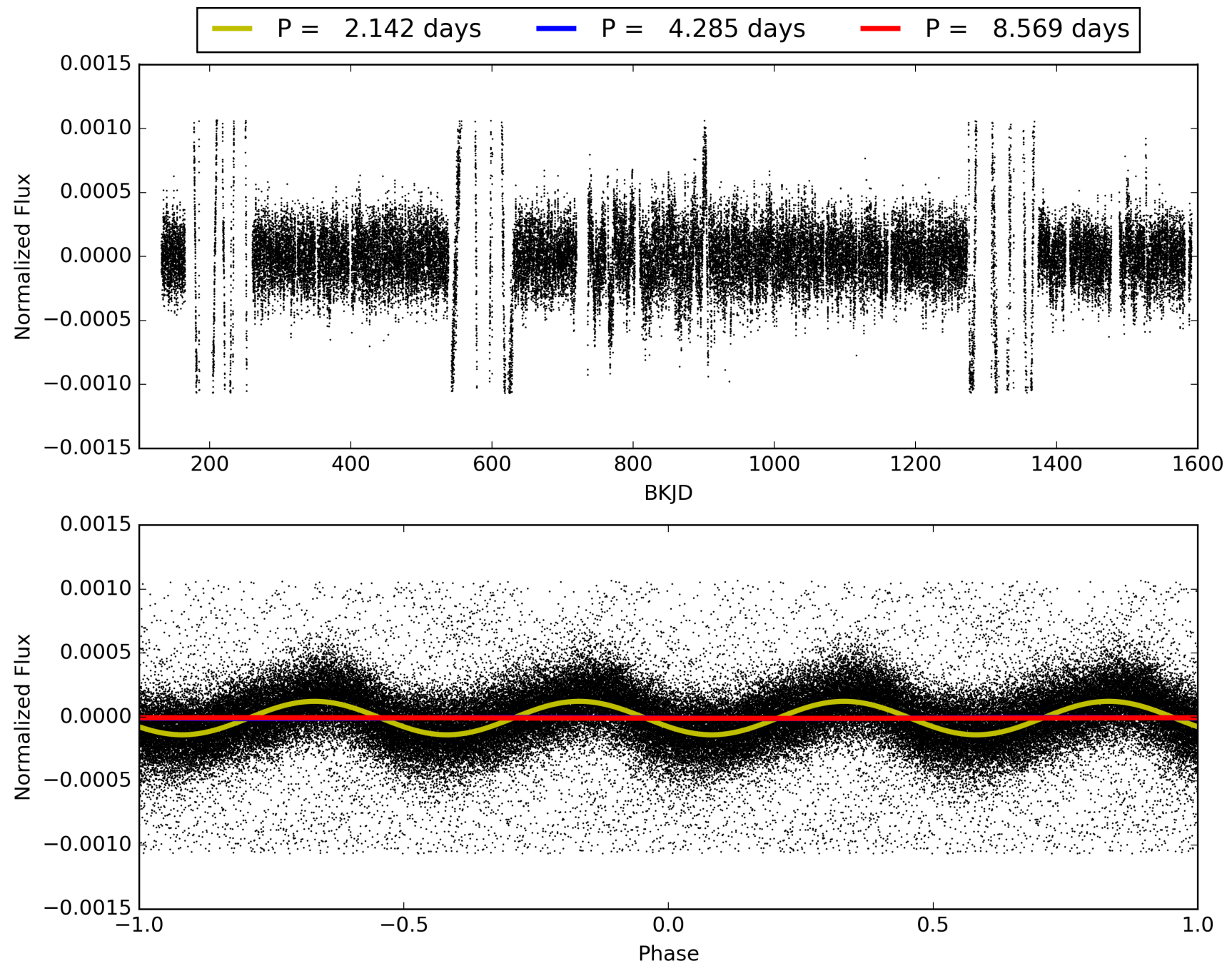
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:34:56 Z

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

TCE 006466583-01, PDC Light Curves

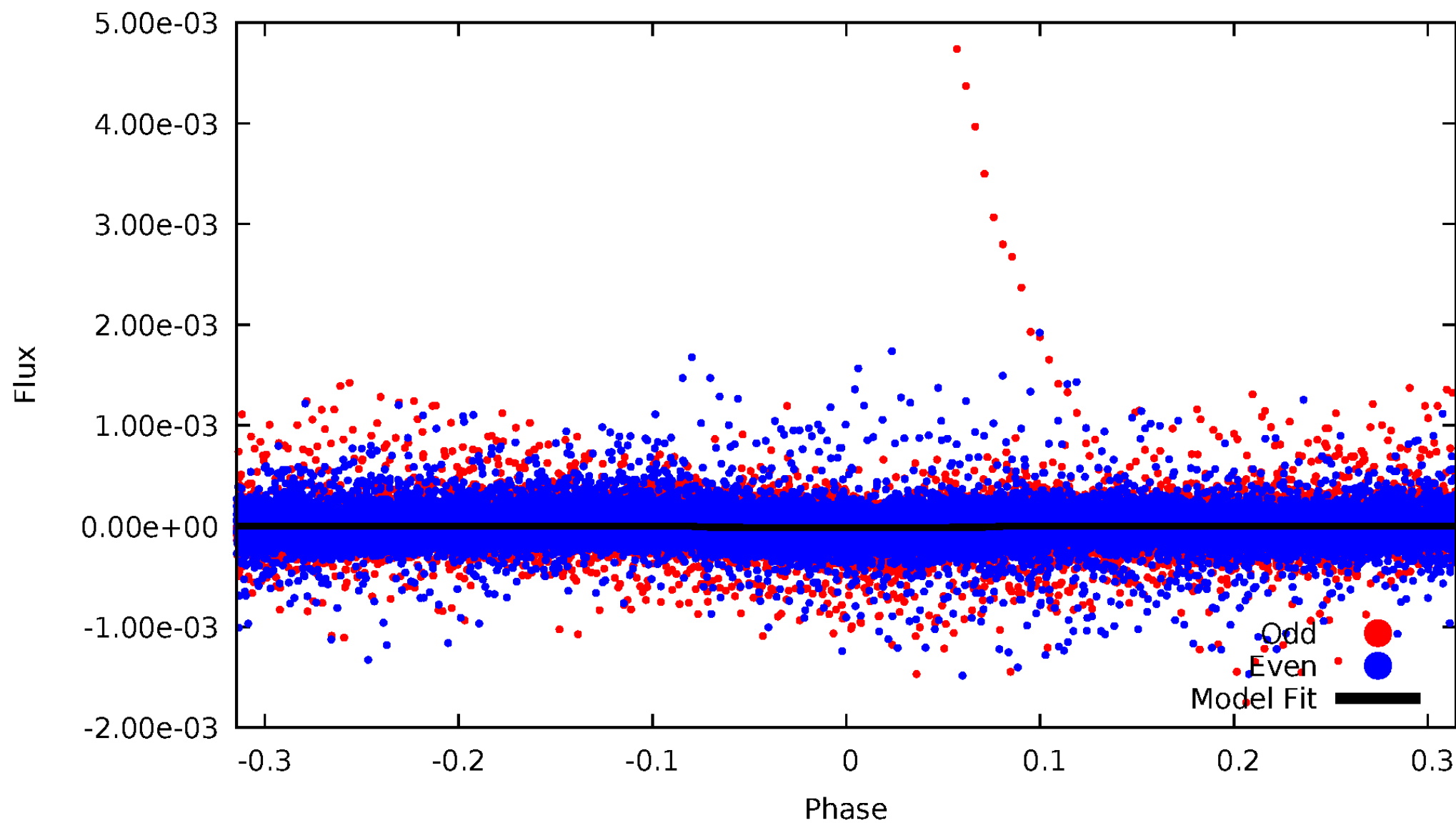


TCE 006466583-01



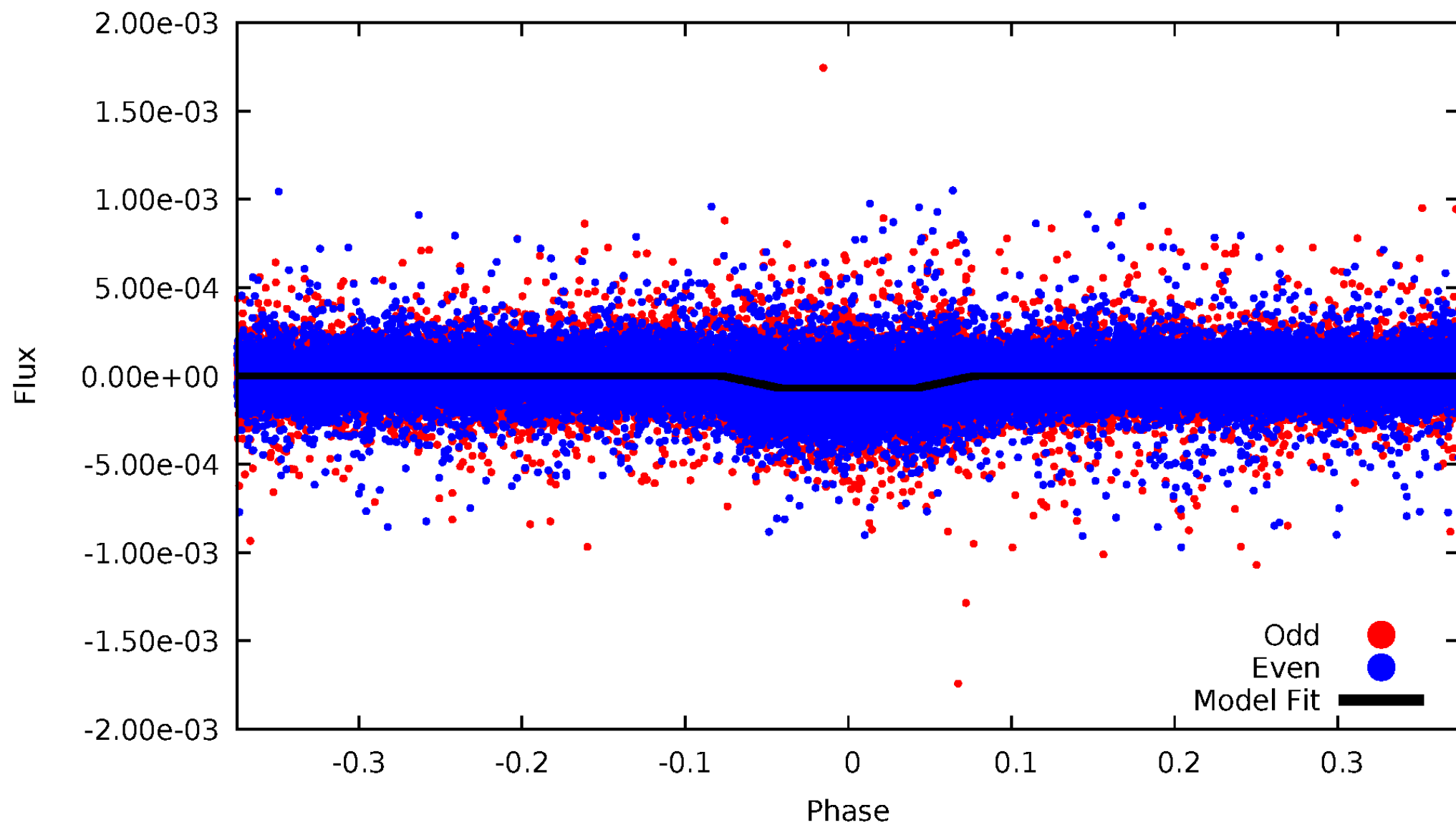
DV Odd/Even

TCE 006466583-01



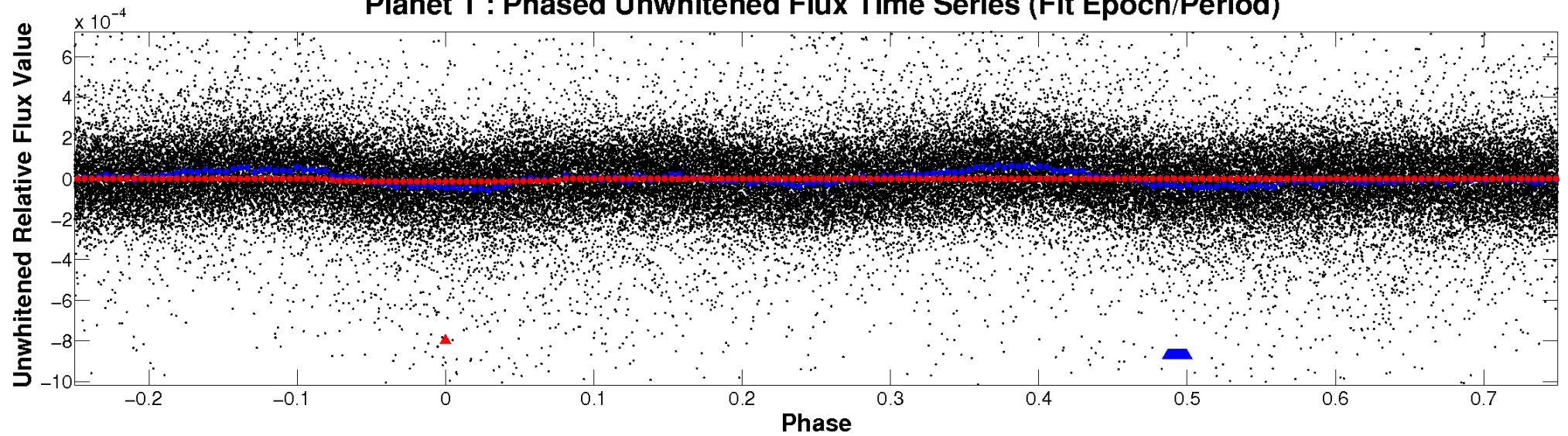
ALT Odd/Even

TCE 006466583-01

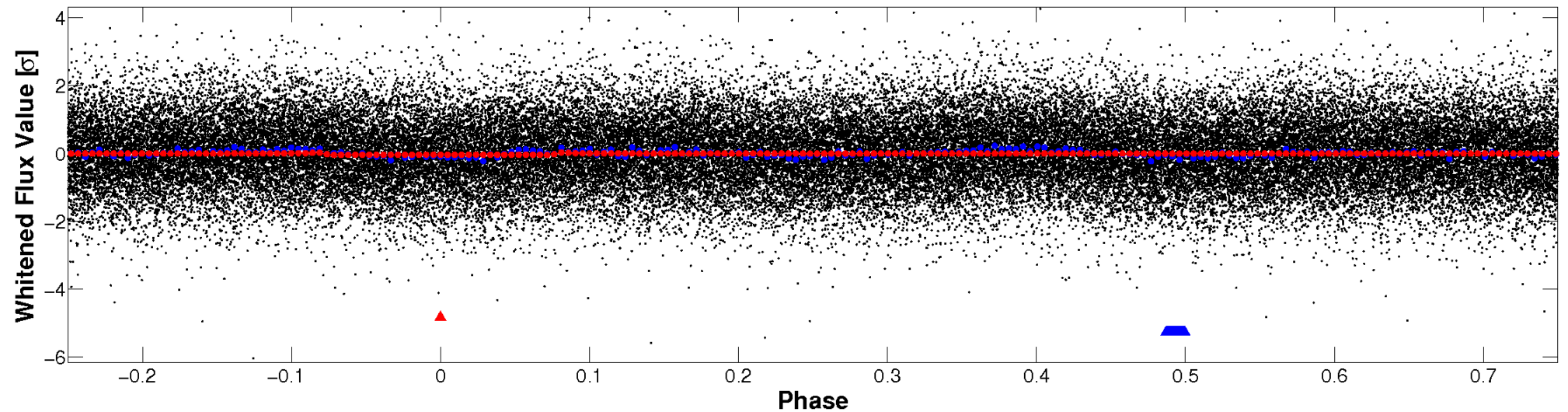


Non-Whitened Vs. Whitened Light Curve

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

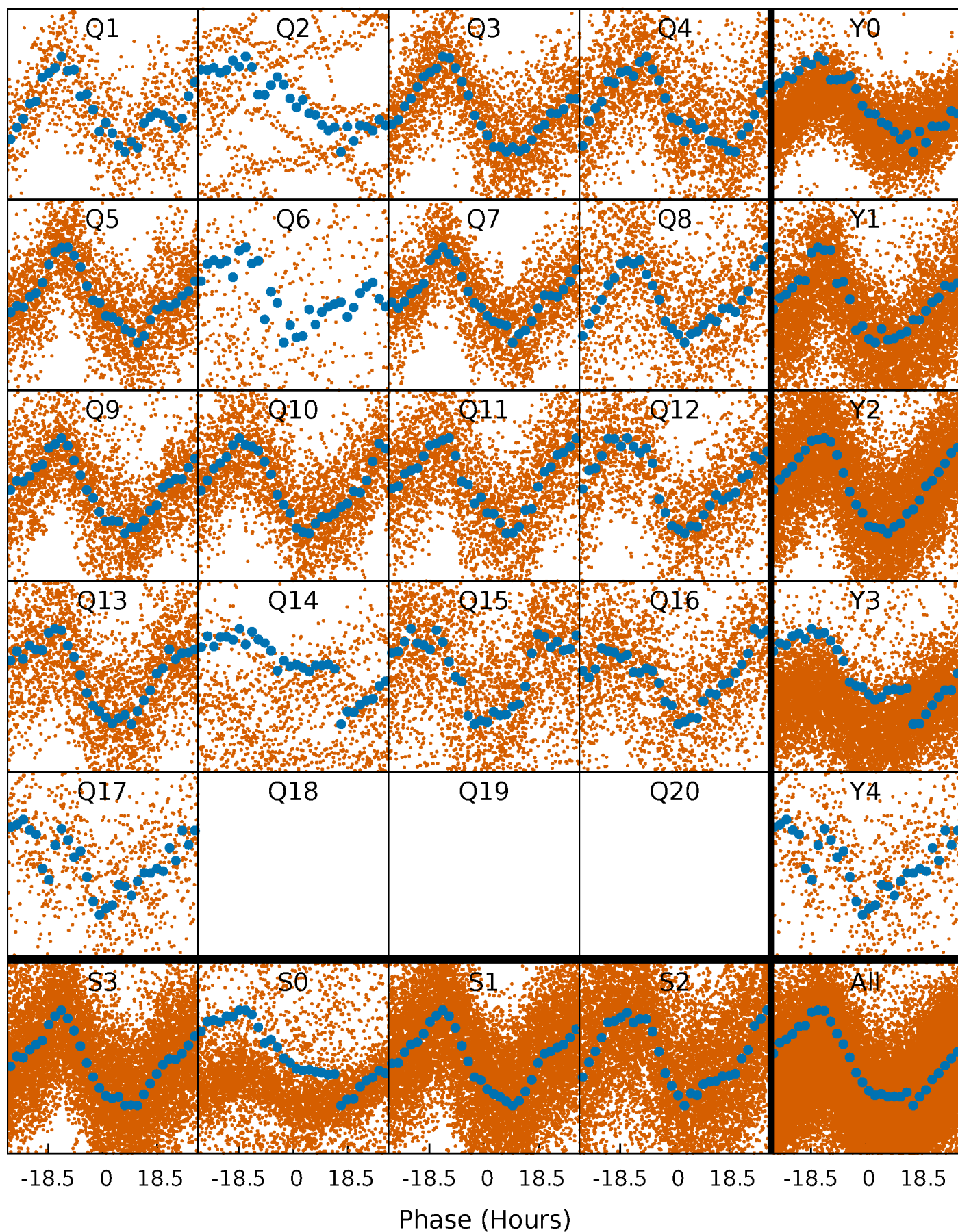


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



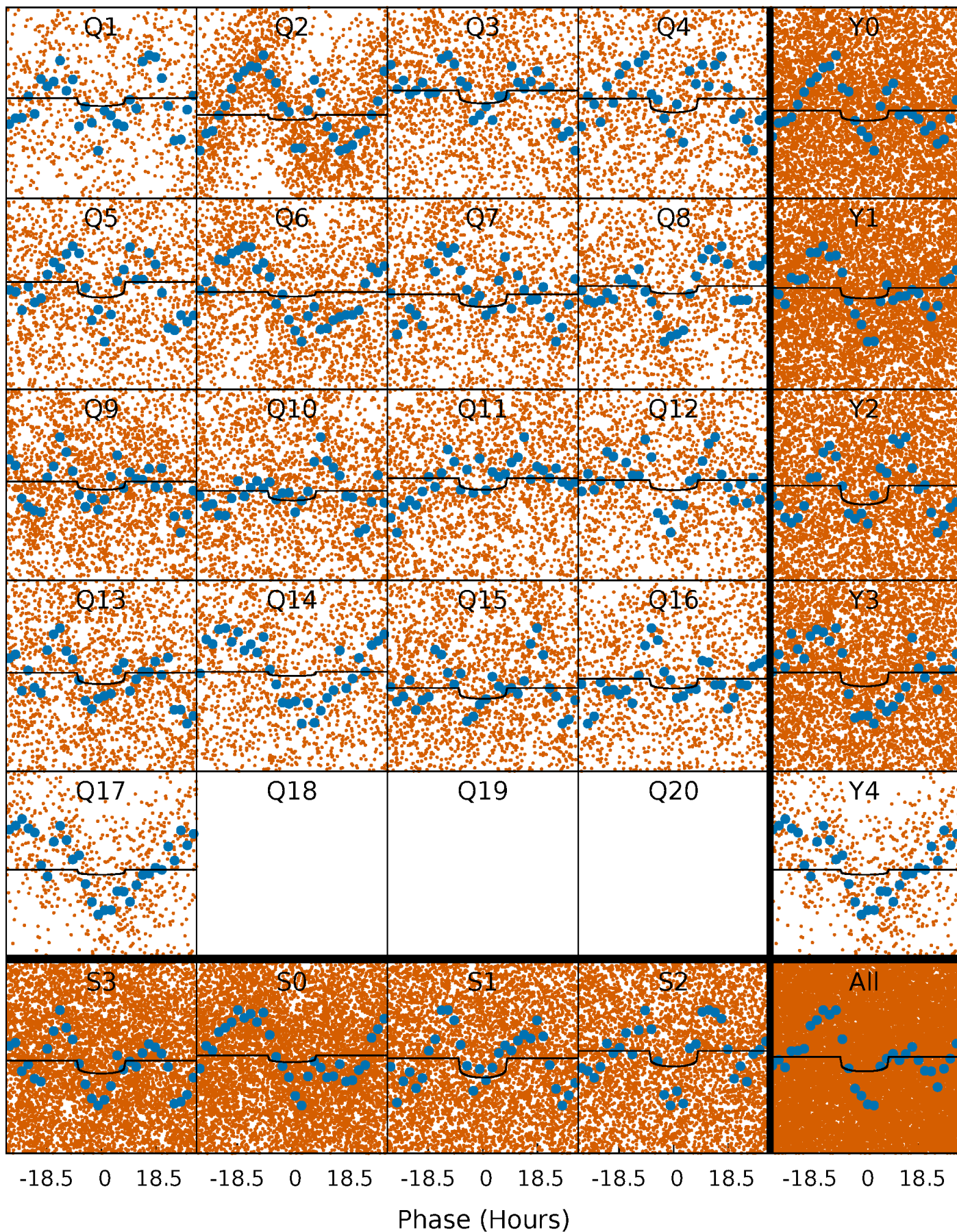
PDC Quarter-Phased Transit Curves

TCE 006466583-01 P= 4.284538 Days $T_0=132.605466$ (BKJD)



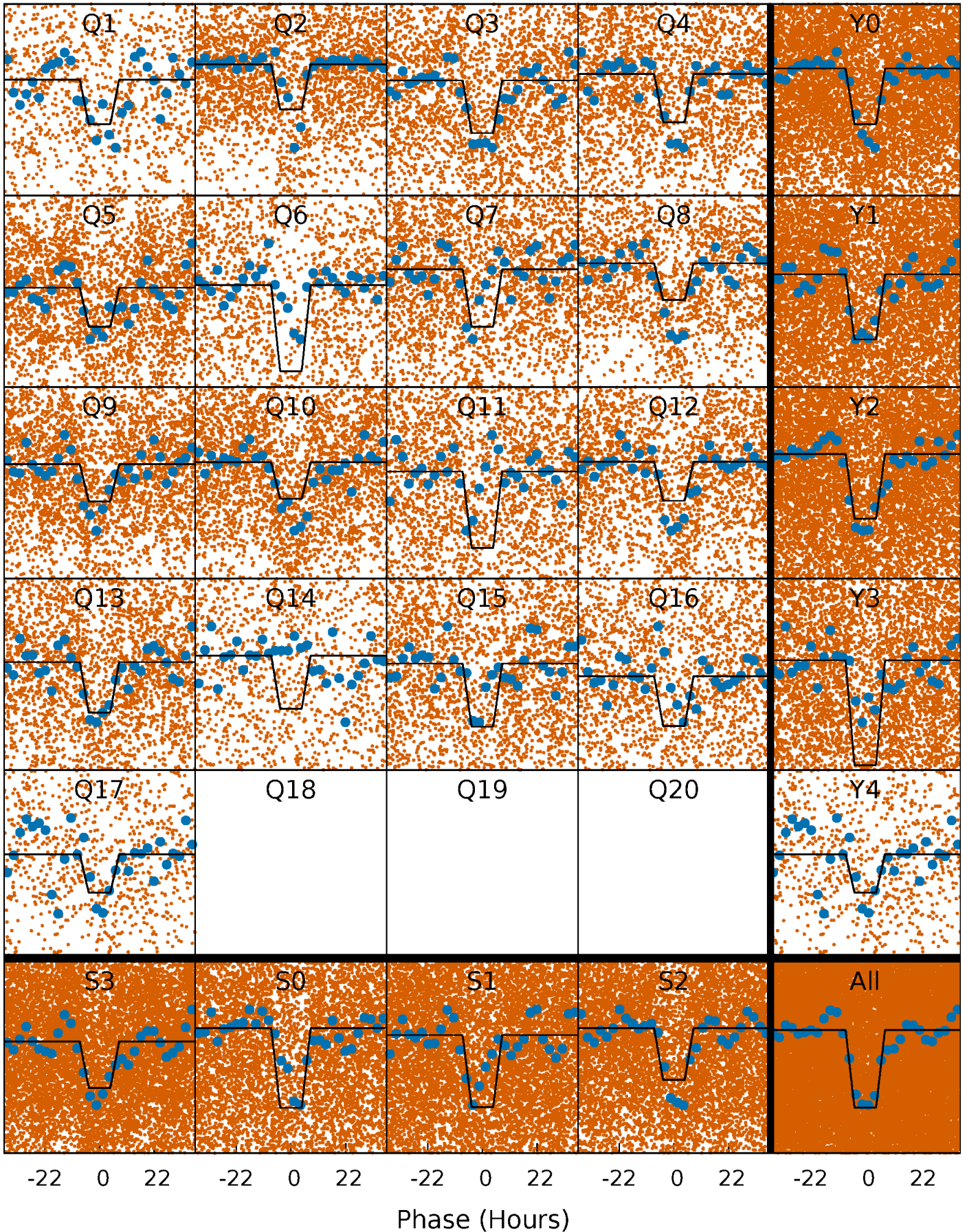
DV Quarter-Phased Transit Curves

TCE 006466583-01 P= 4.284538 Days $T_0=132.605466$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

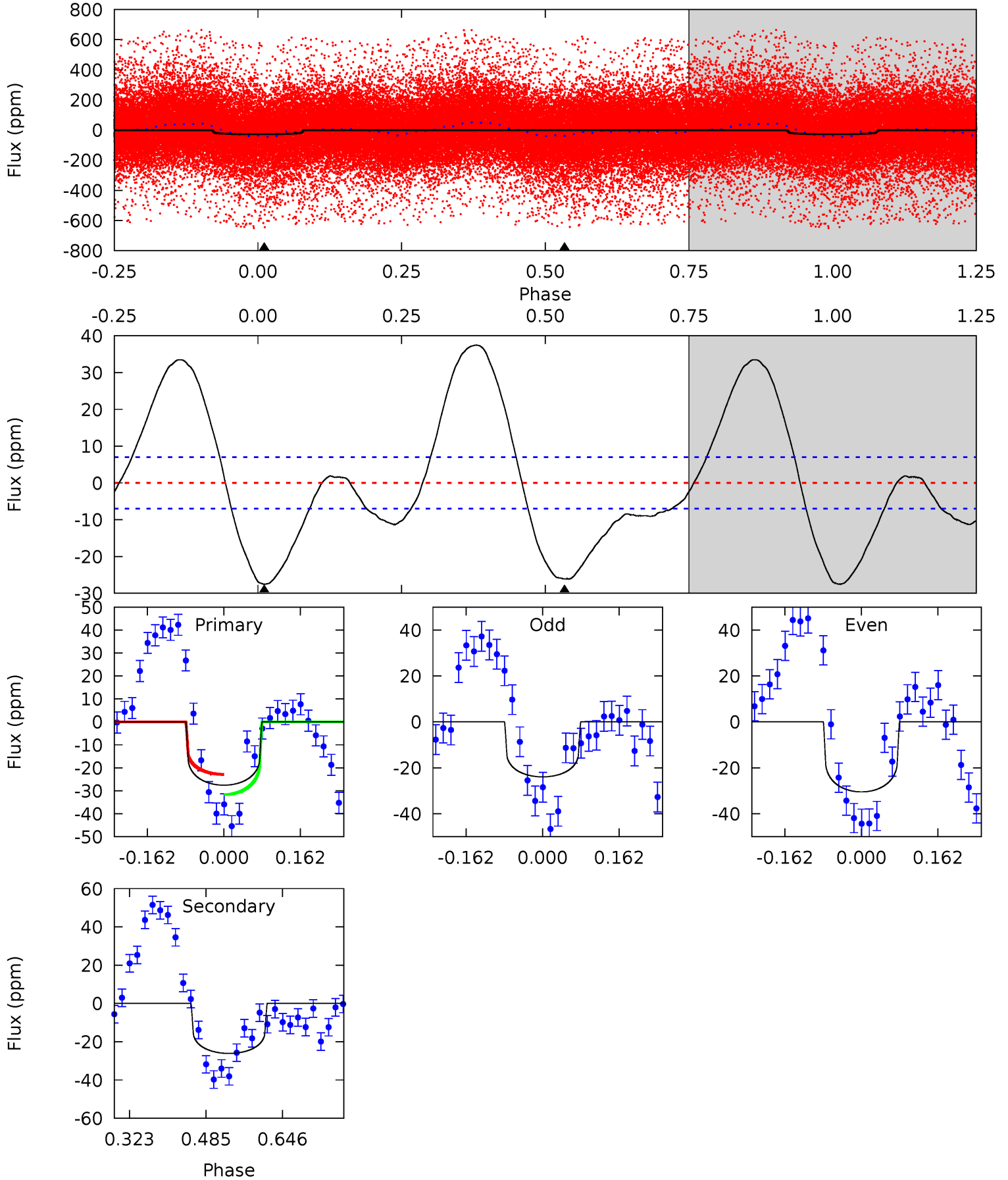
TCE 006466583-01 P= 4.284212 Days $T_0=132.631596$ (BKJD)



DV Model-Shift Uniqueness Test

006466583-01, P = 4.284538 Days, E = 128.320928 Days

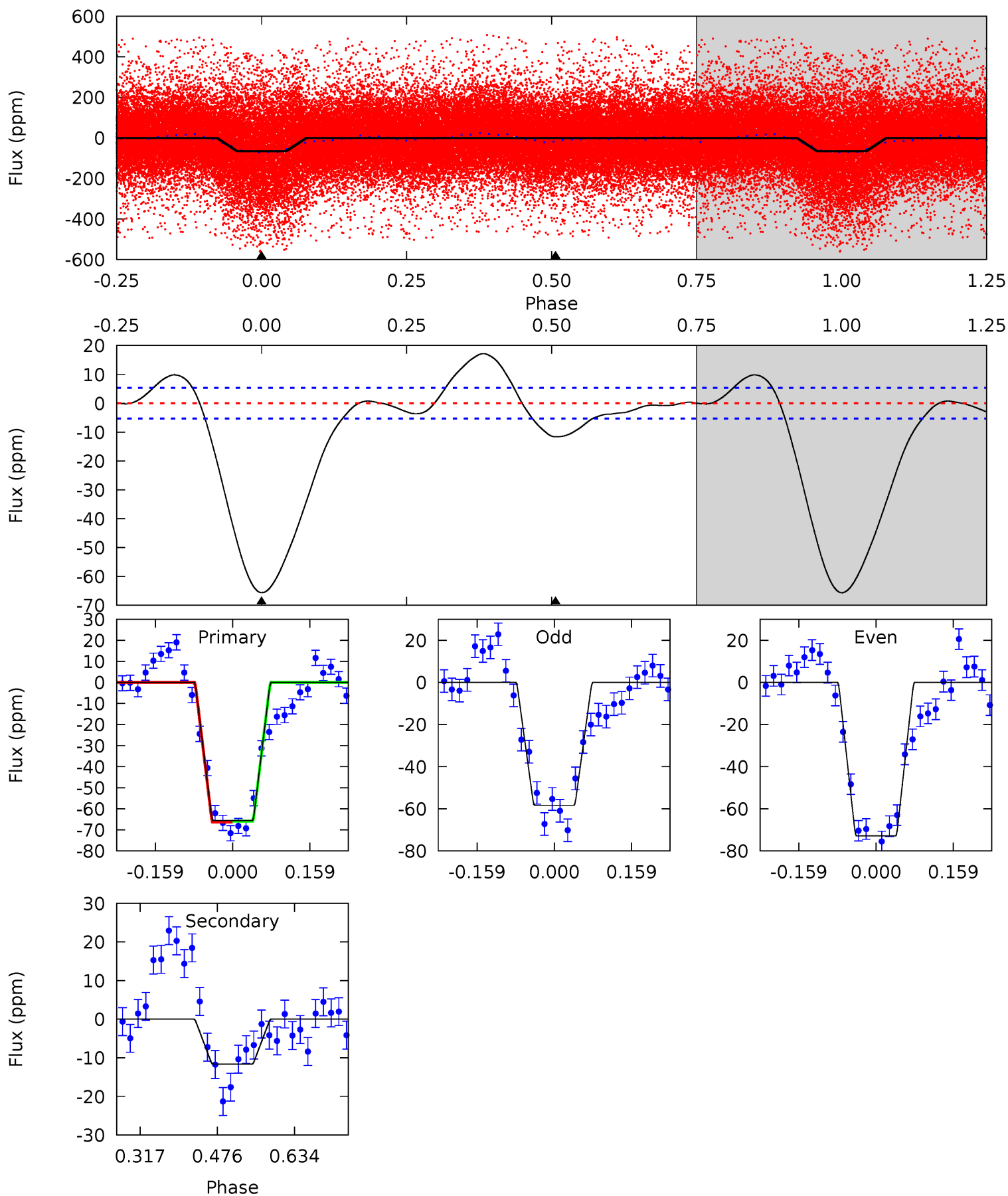
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	16.6	0	0	4.46	1.40	9.92	17.6	17.6	16.6	16.6	2.10	0.58	0.58	2.85



Alt Model-Shift Uniqueness Test

006466583-01, P = 4.284212 Days, E = 128.347384 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.1	9.75	0	0	4.47	1.41	3.15	55.1	55.1	9.75	9.75	6.13	1.27	0.21	0.22



Stellar Parameters For KIC 006466583

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6399^{+181}_{-227}	$4.271^{+0.132}_{-0.198}$	$-0.200^{+0.250}_{-0.300}$	$1.267^{+0.404}_{-0.249}$	$1.090^{+0.193}_{-0.129}$	$0.754^{+0.539}_{-0.360}$
	+3%/-4%	+3%/-5%	+125%/-150%	+32%/-20%	+18%/-12%	+71%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006466583-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 2	$0.53^{+0.17}_{-0.14}$	1941^{+148}_{-122}	7494^{+1576}_{-877}	142^{+111}_{-57}
Alt.	-12 ± 1	$1.17^{+0.24}_{-0.18}$	1938^{+150}_{-121}	4307^{+240}_{-219}	13^{+6}_{-4}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

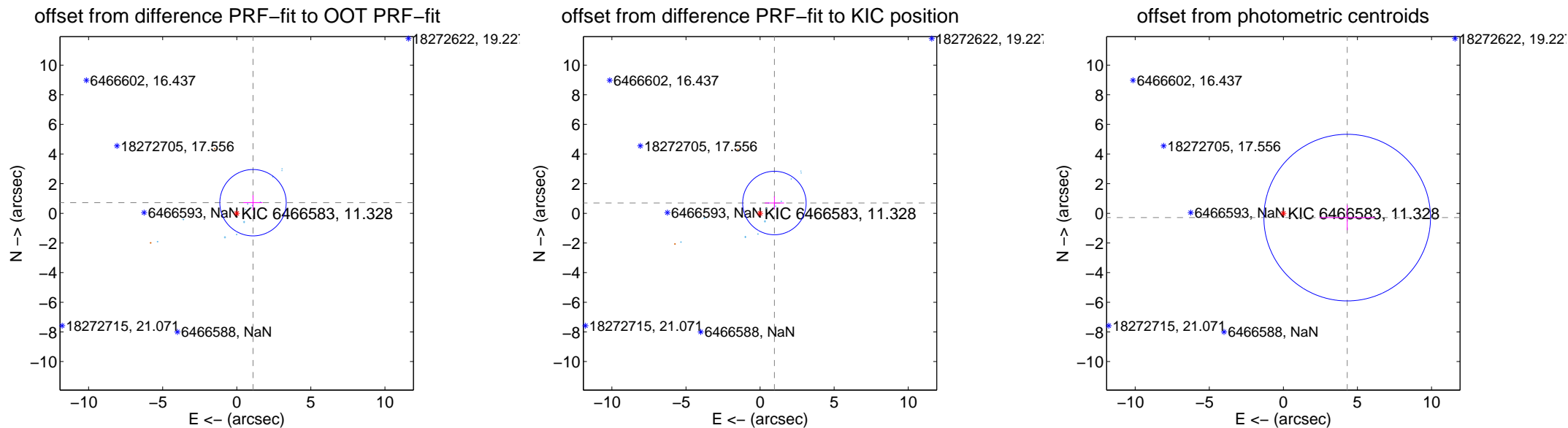
DV Centroid Data

Supplemental centroid analysis for 006466583-01. **Kepler magnitude: 11.33.** Transit SNR 4.15

There are 13 quarters with good PRF difference image offsets

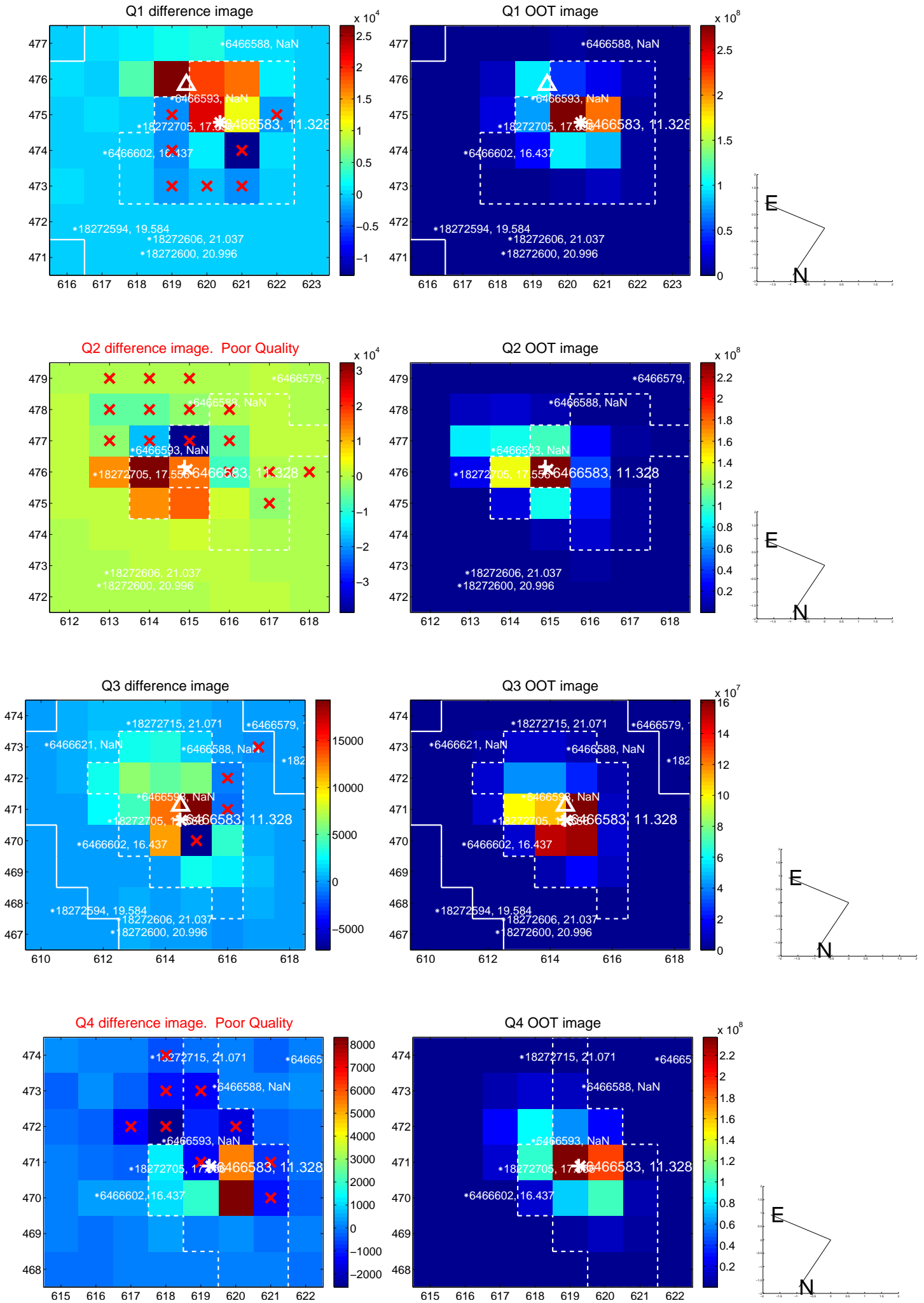
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.311 ± 0.746	1.76	-1.097 ± 0.646	0.718 ± 0.511
PRF-fit source offset from KIC position	1.192 ± 0.714	1.67	-0.967 ± 0.649	0.696 ± 0.452
photometric centroid source offset	4.32 ± 1.87	2.30	-4.31 ± 1.88	-0.29 ± 0.85

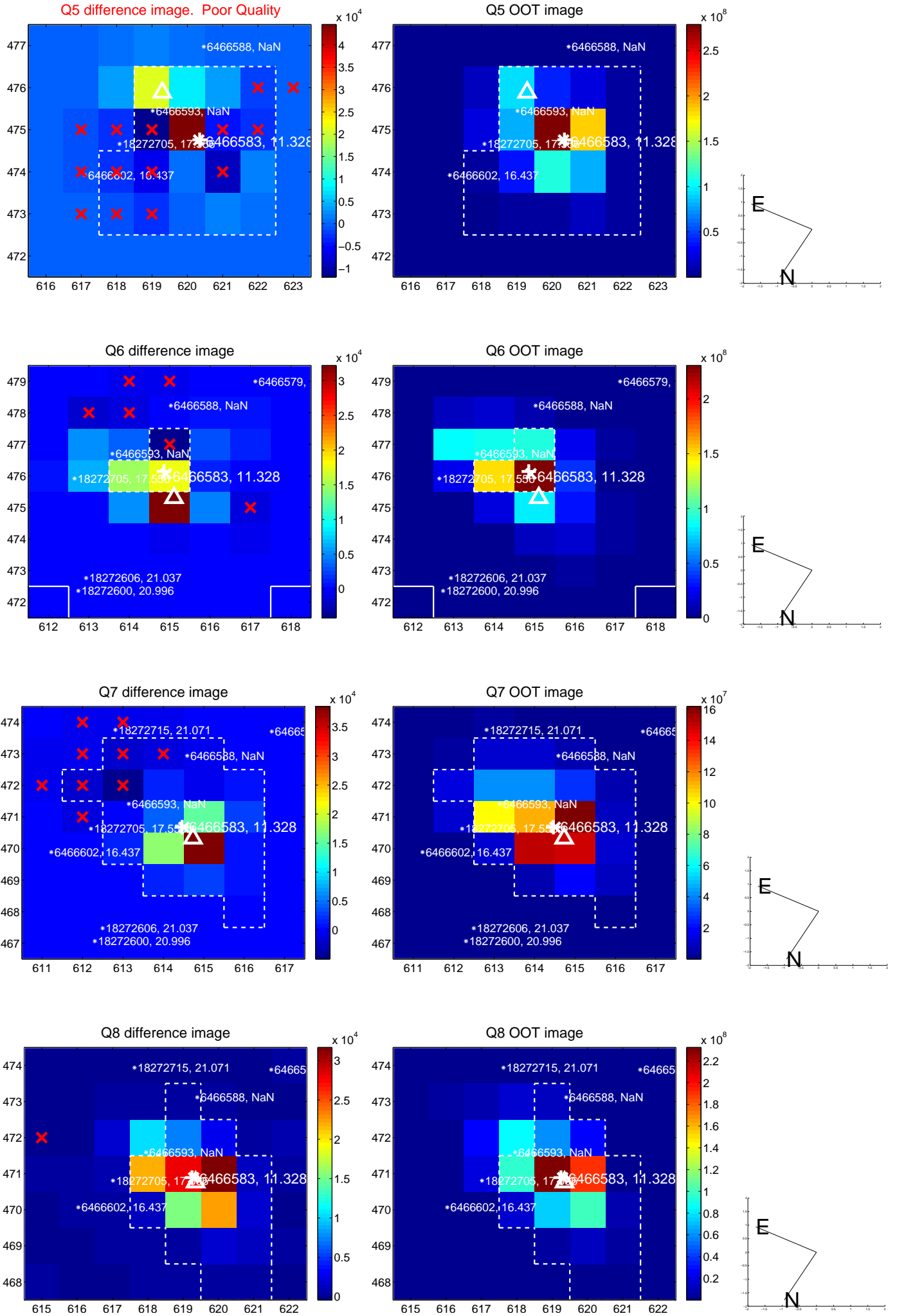


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

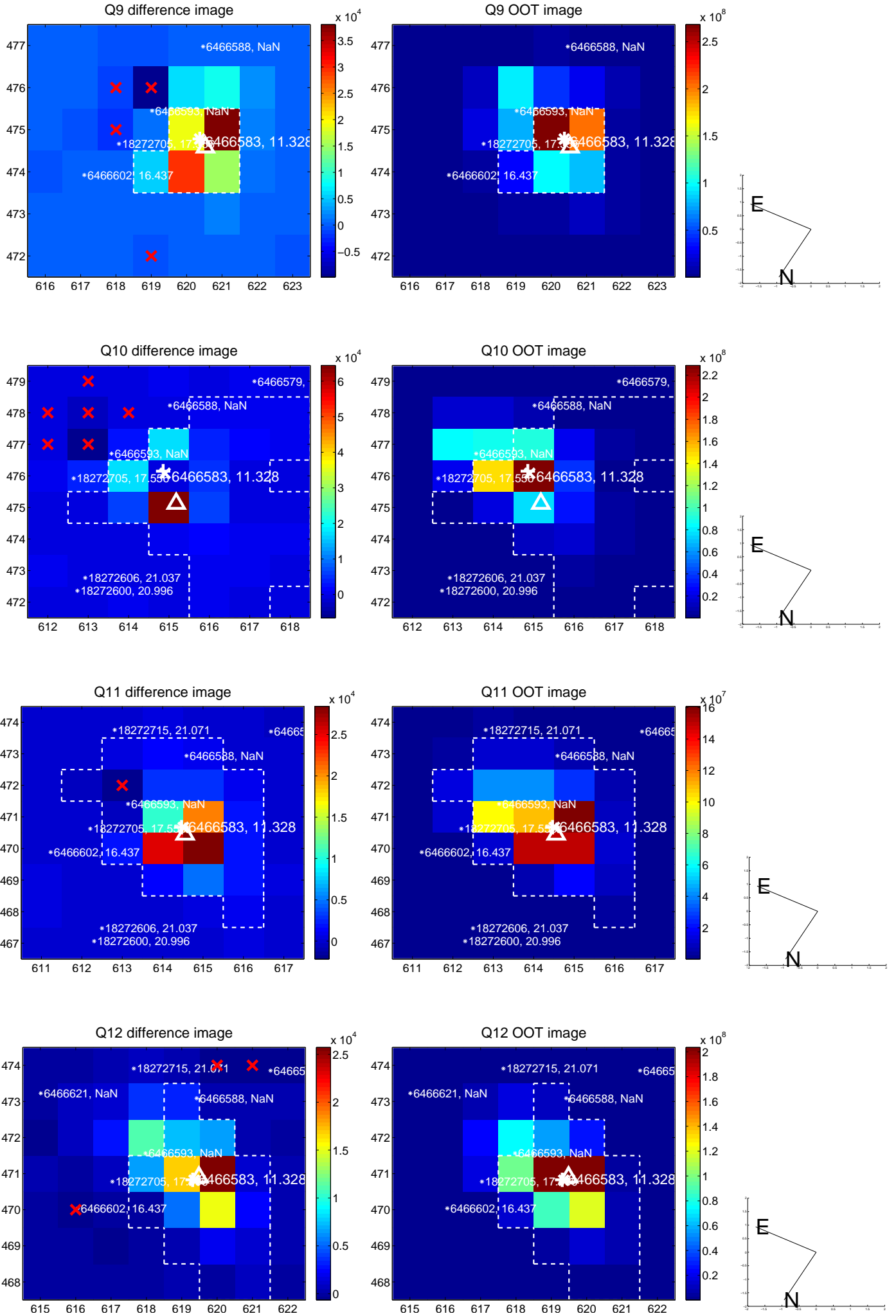
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



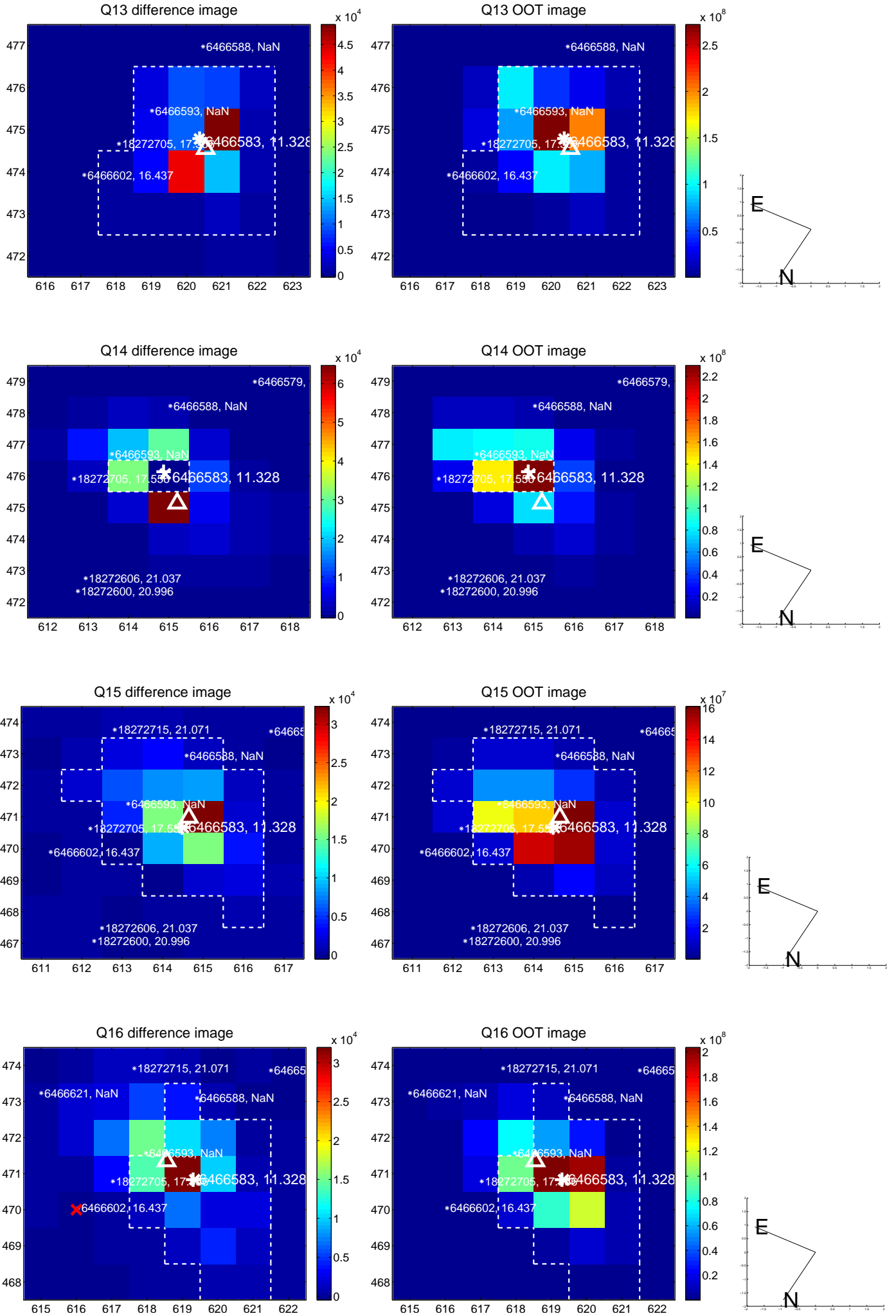
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



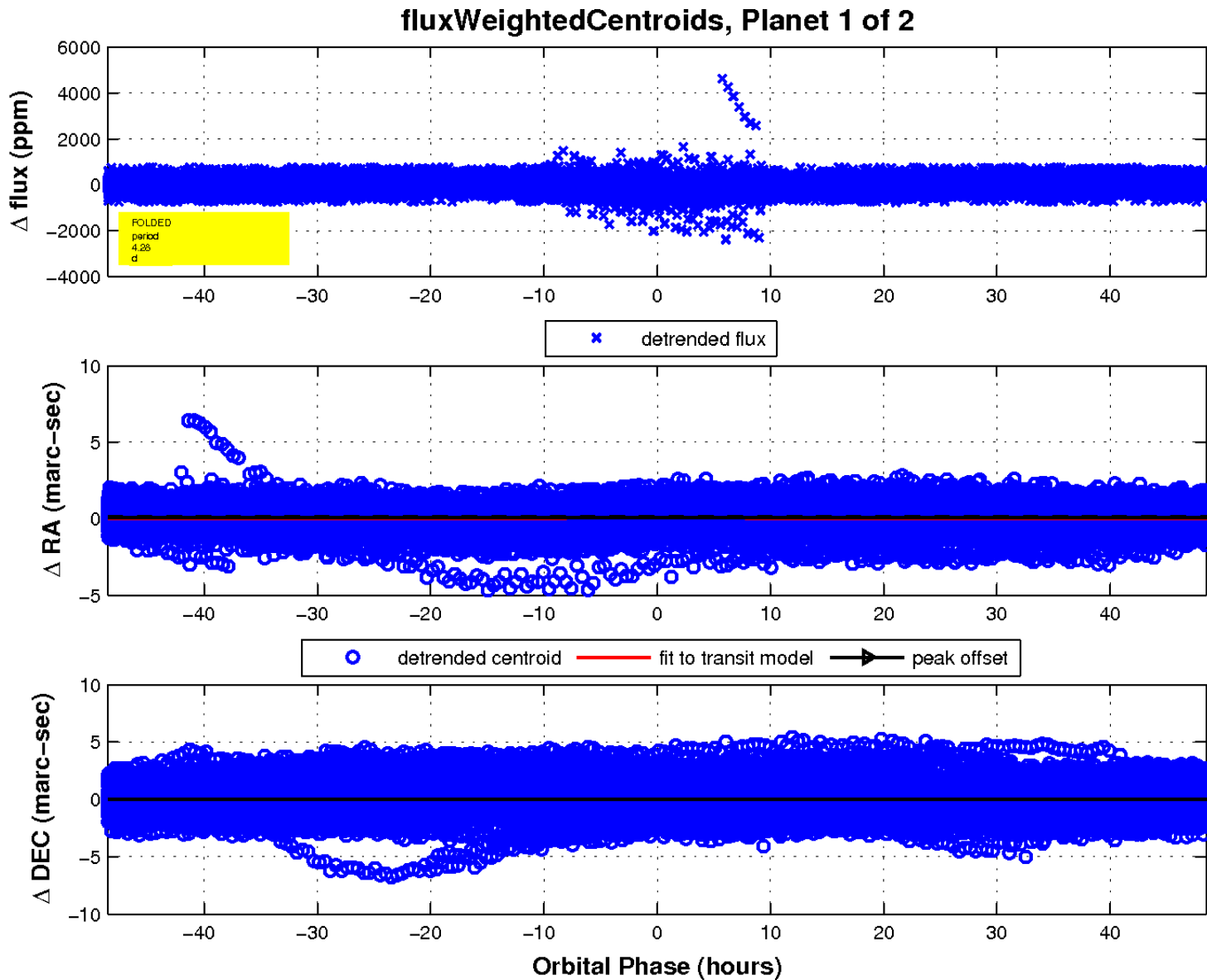
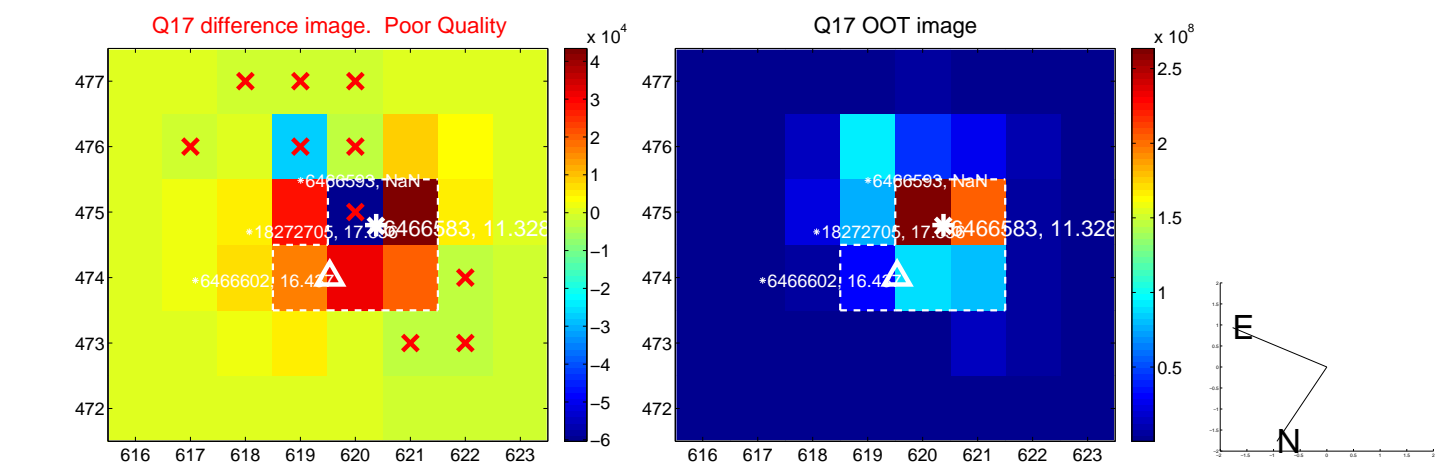
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

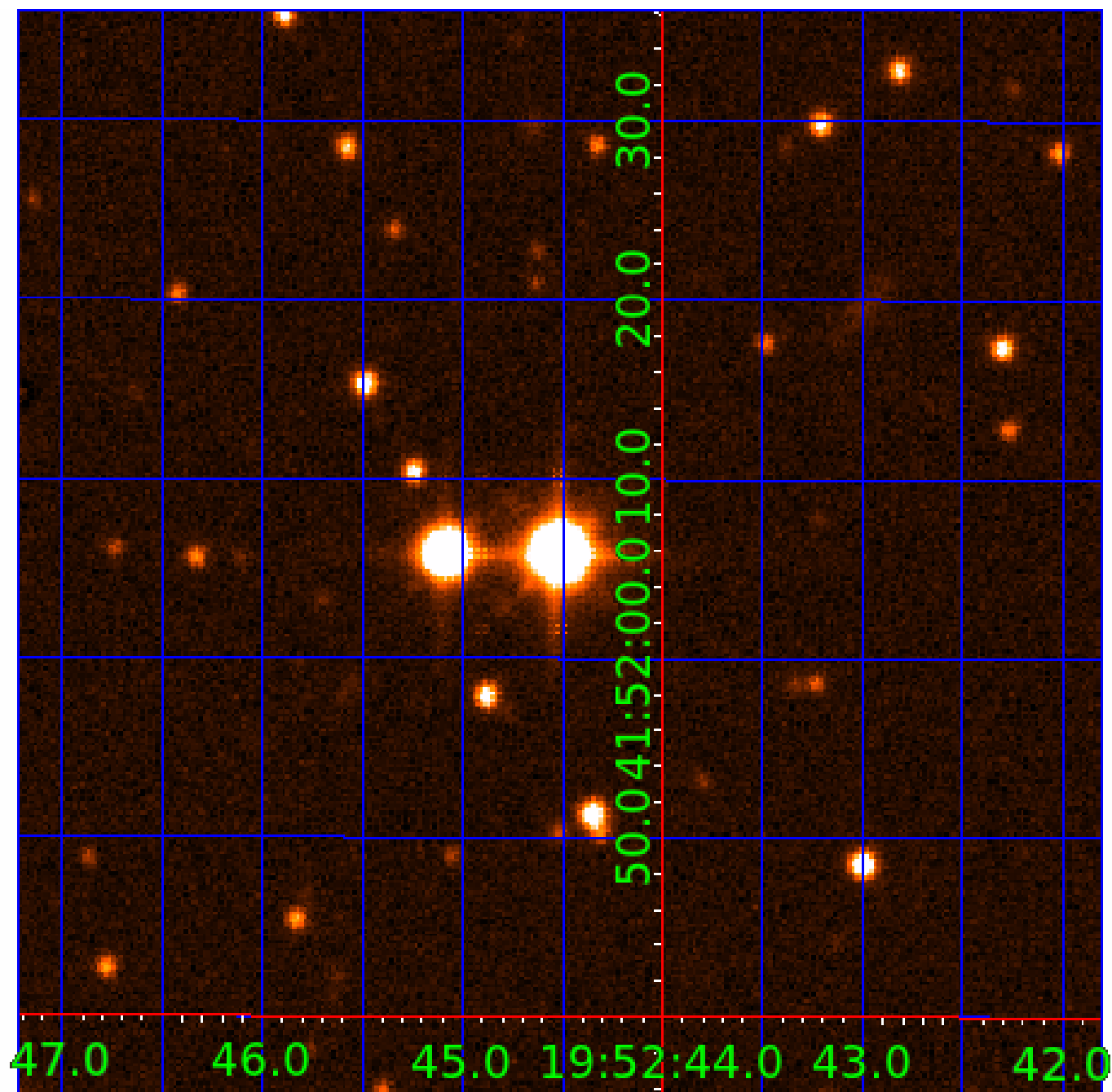


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006466583

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})
006466583-01	OBS	No	4.284538	132.605466	14.1	16.172	8.5	4.1	1.27	6399	0.52	852.42
006466583-02	OBS	No	4.284695	134.692514	0.0	31.062	10.3	0.0	1.27	6399	0.01	852.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006466583-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
006466583-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_SATURATED

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

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

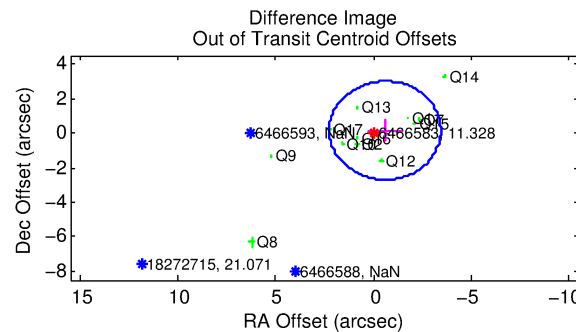
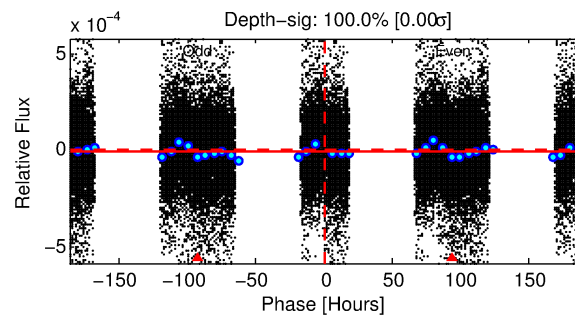
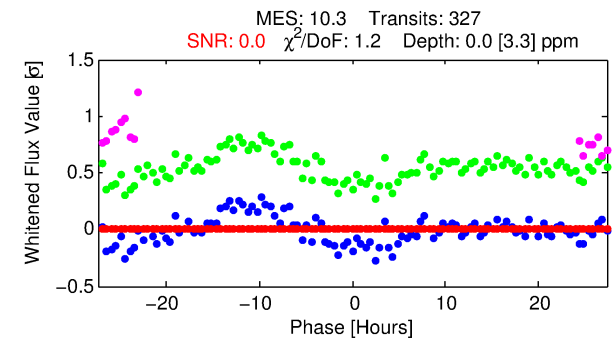
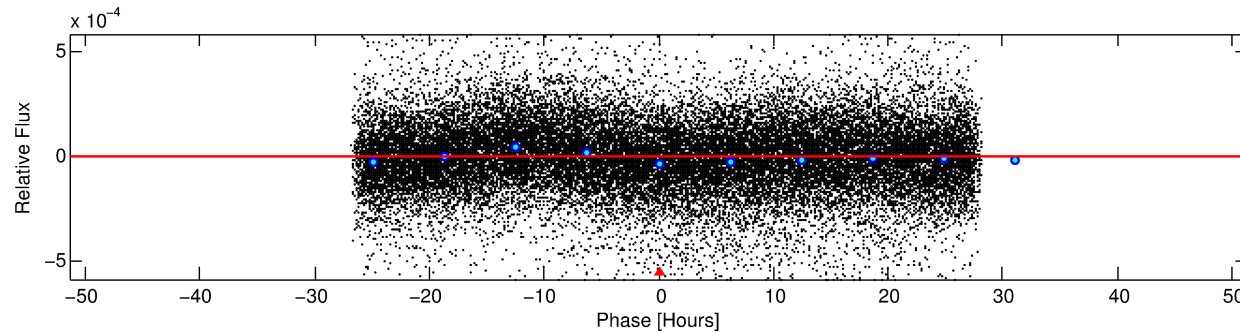
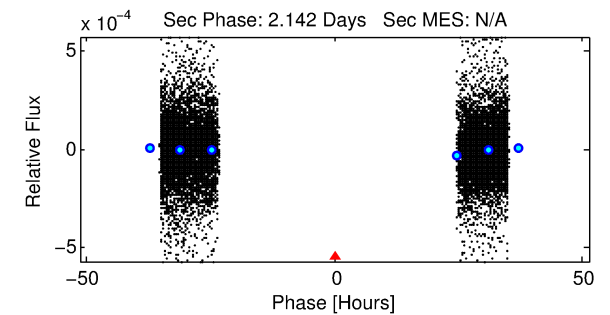
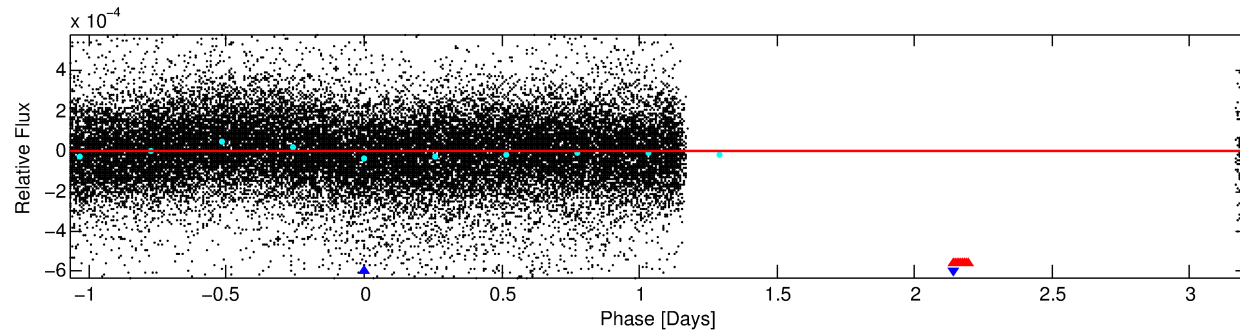
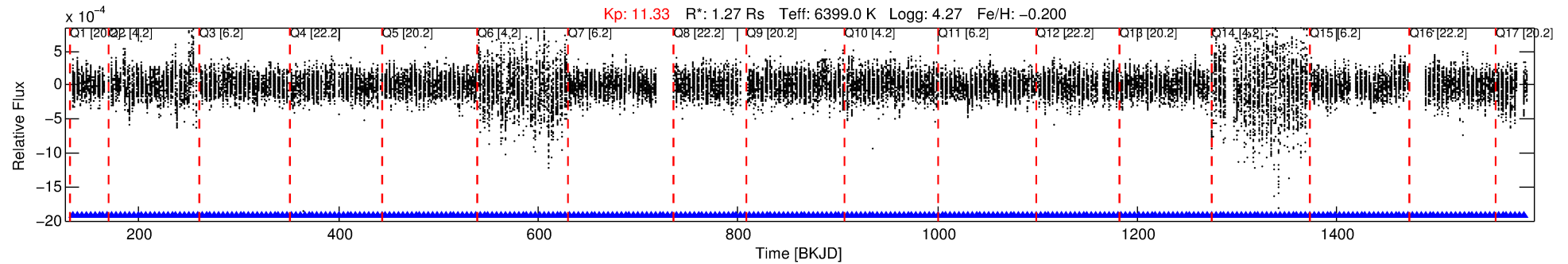
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006466583-02

No Significant Match Found

DV One-Page Summary

KIC: 6466583 Candidate: 2 of 2 Period: 4.285 d



DV Fit Results:

Period = 4.28470 [0.17210] d
Epoch = 134.6925 [25.4768] BKJD
Rp/R* = 0.0001 [0.0167]
a/R* = 1.20 [37.55]
b = 0.35 [257.33]
Seff = 852.38 [341.56]
Teq = 1378 [138] K
Rp = 0.01 [2.31] Re
a = 0.0532 [0.0140] AU

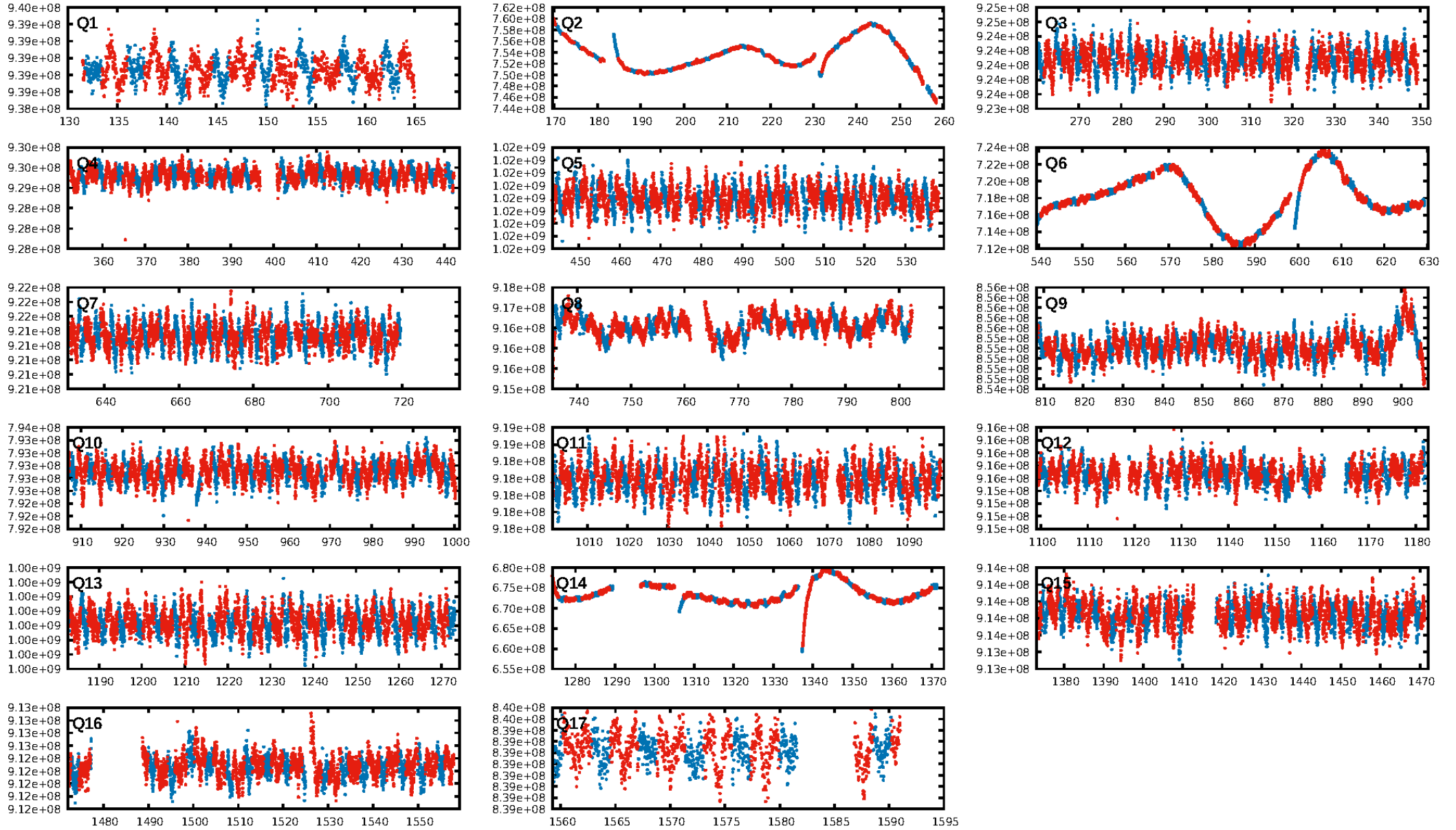
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [312/312]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.605 arcsec [0.64σ]
KicOffset-rm: 0.453 arcsec [0.52σ]
OotOffset-st: 3/3/3 [12]
KicOffset-st: 3/3/3 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 0.00 [0/17]

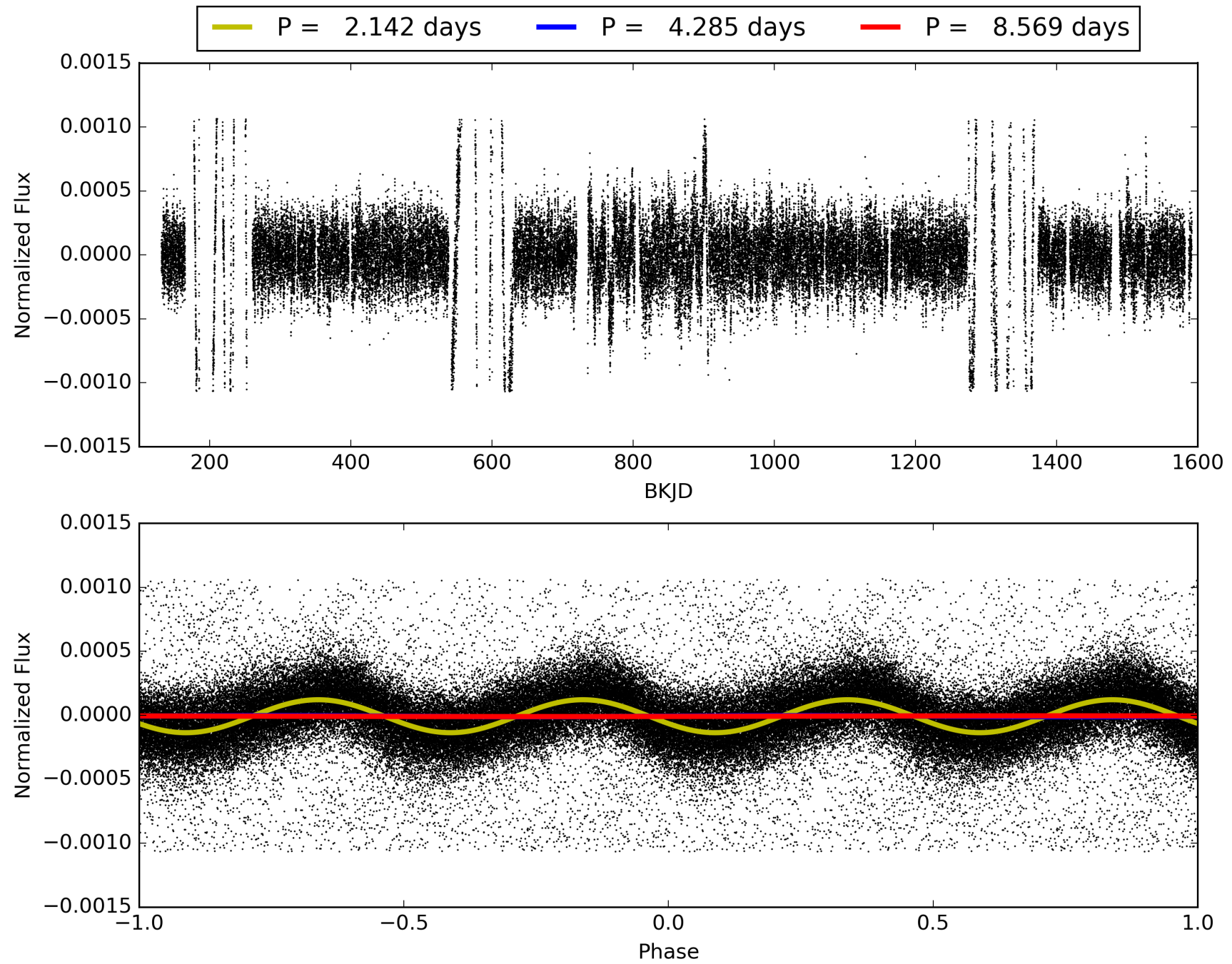
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:35:11 Z

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

TCE 006466583-02, PDC Light Curves

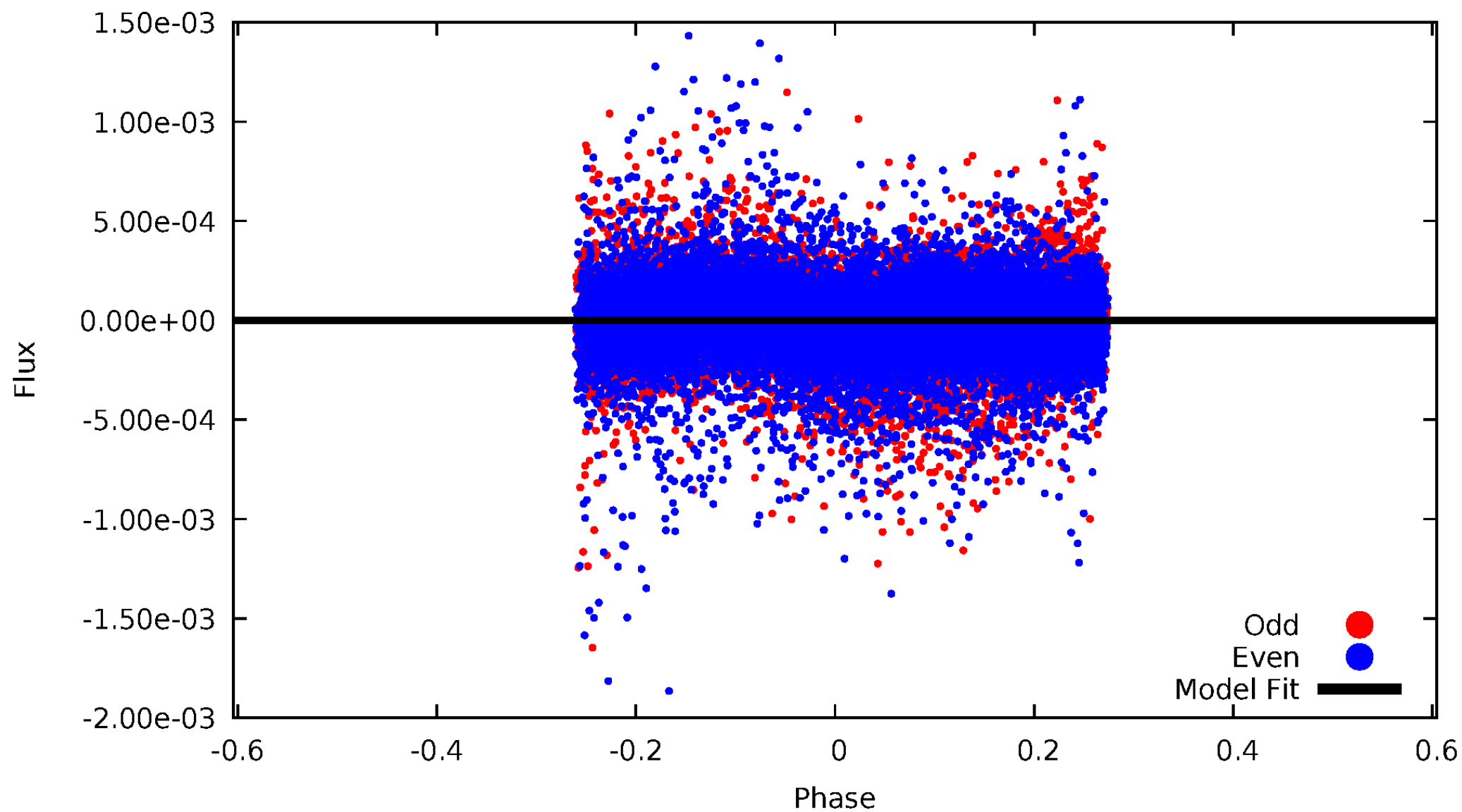


TCE 006466583-02



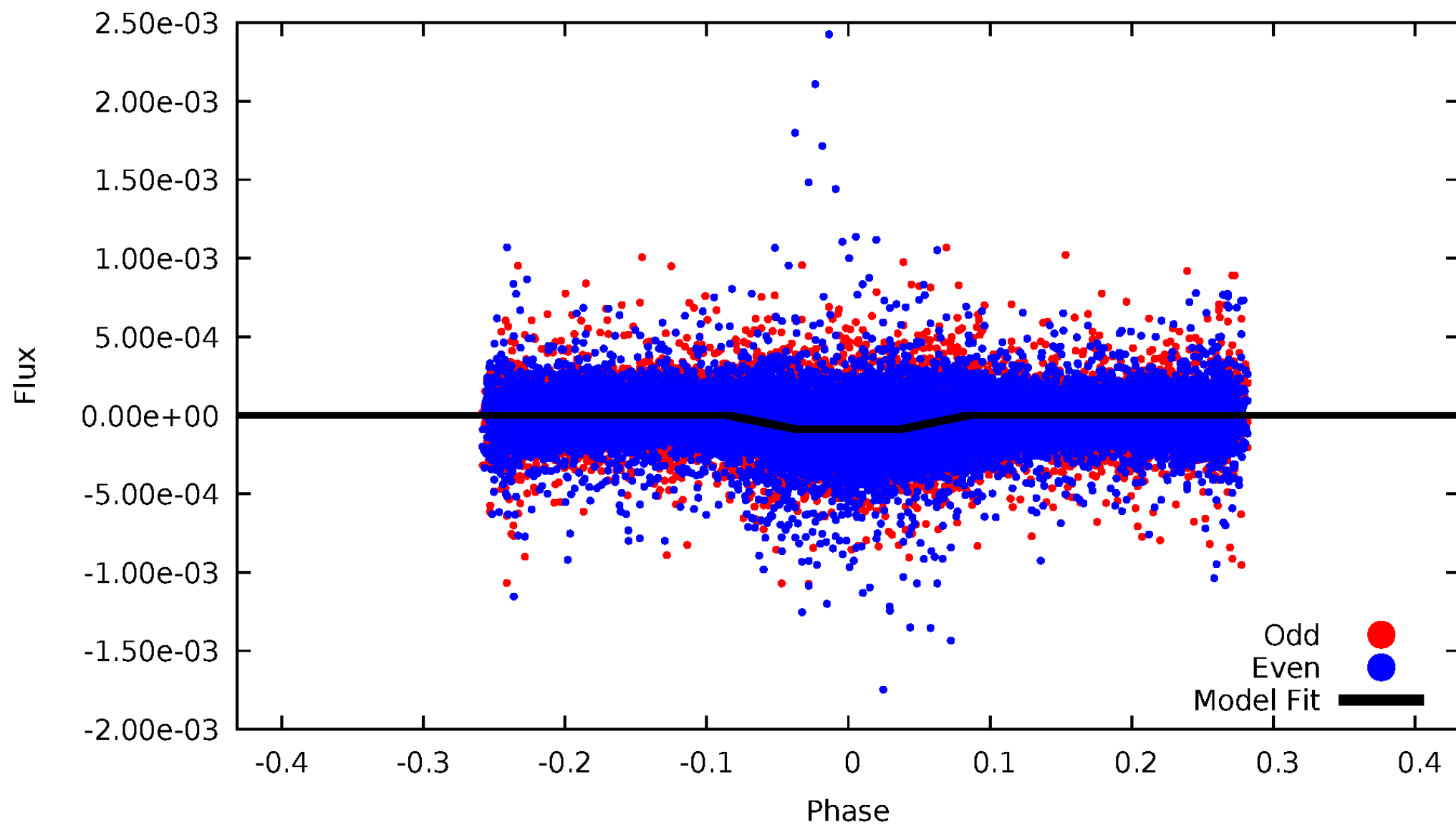
DV Odd/Even

TCE 006466583-02



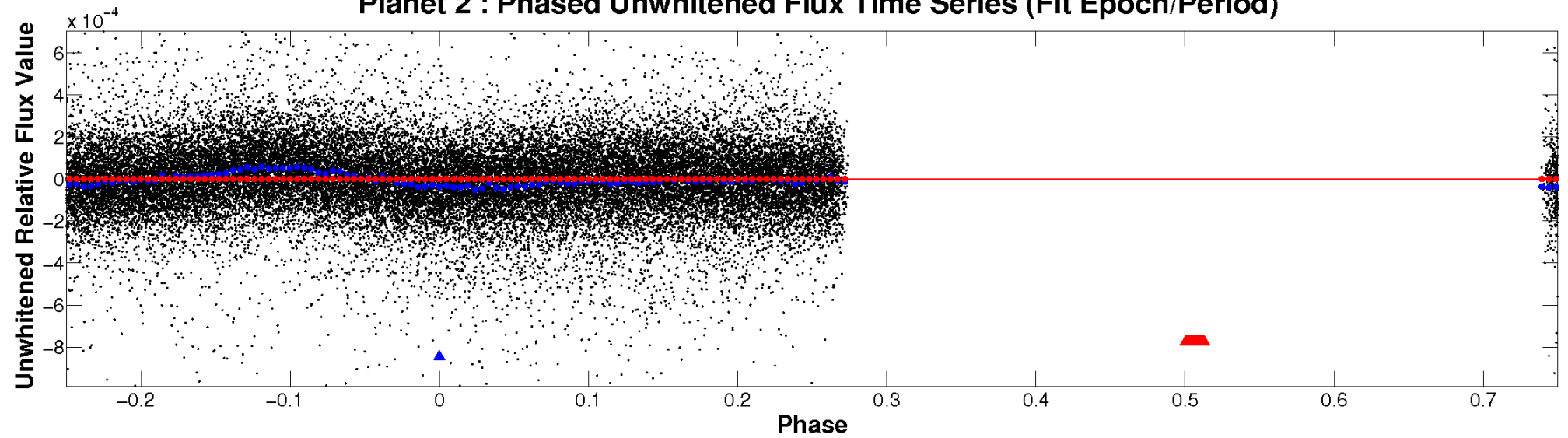
ALT Odd/Even

TCE 006466583-02

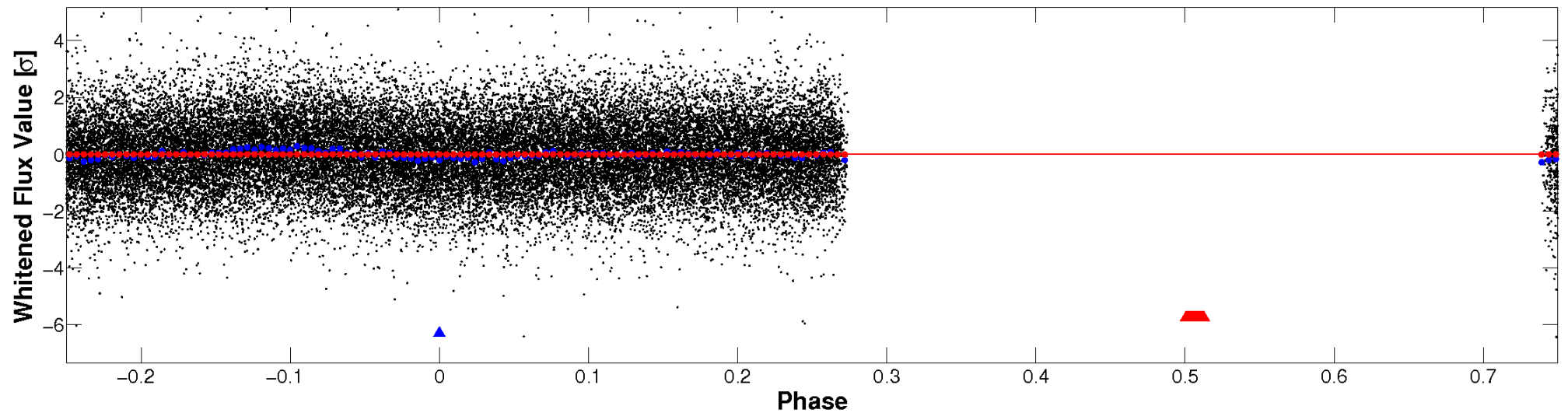


Non-Whitened Vs. Whitened Light Curve

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

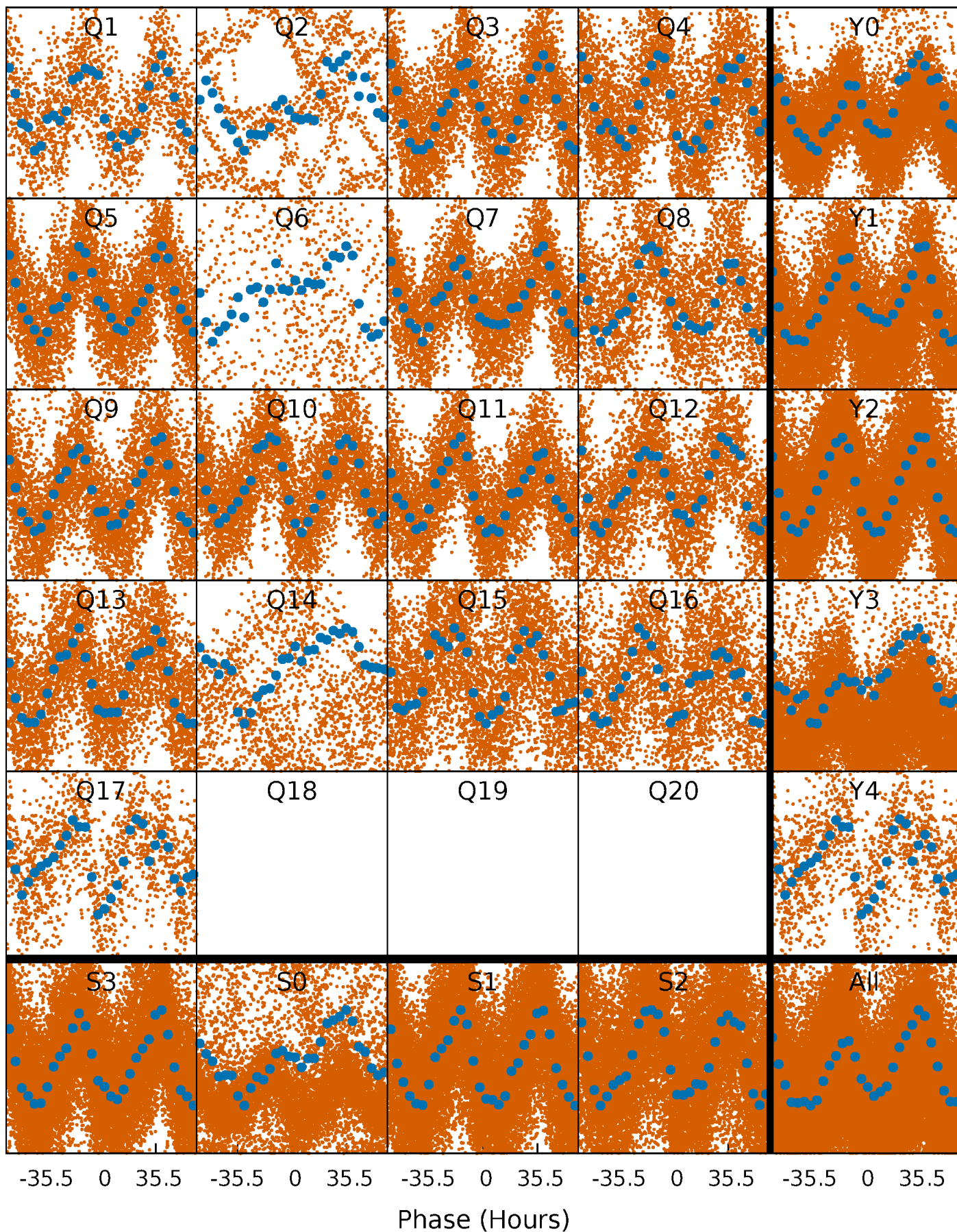


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



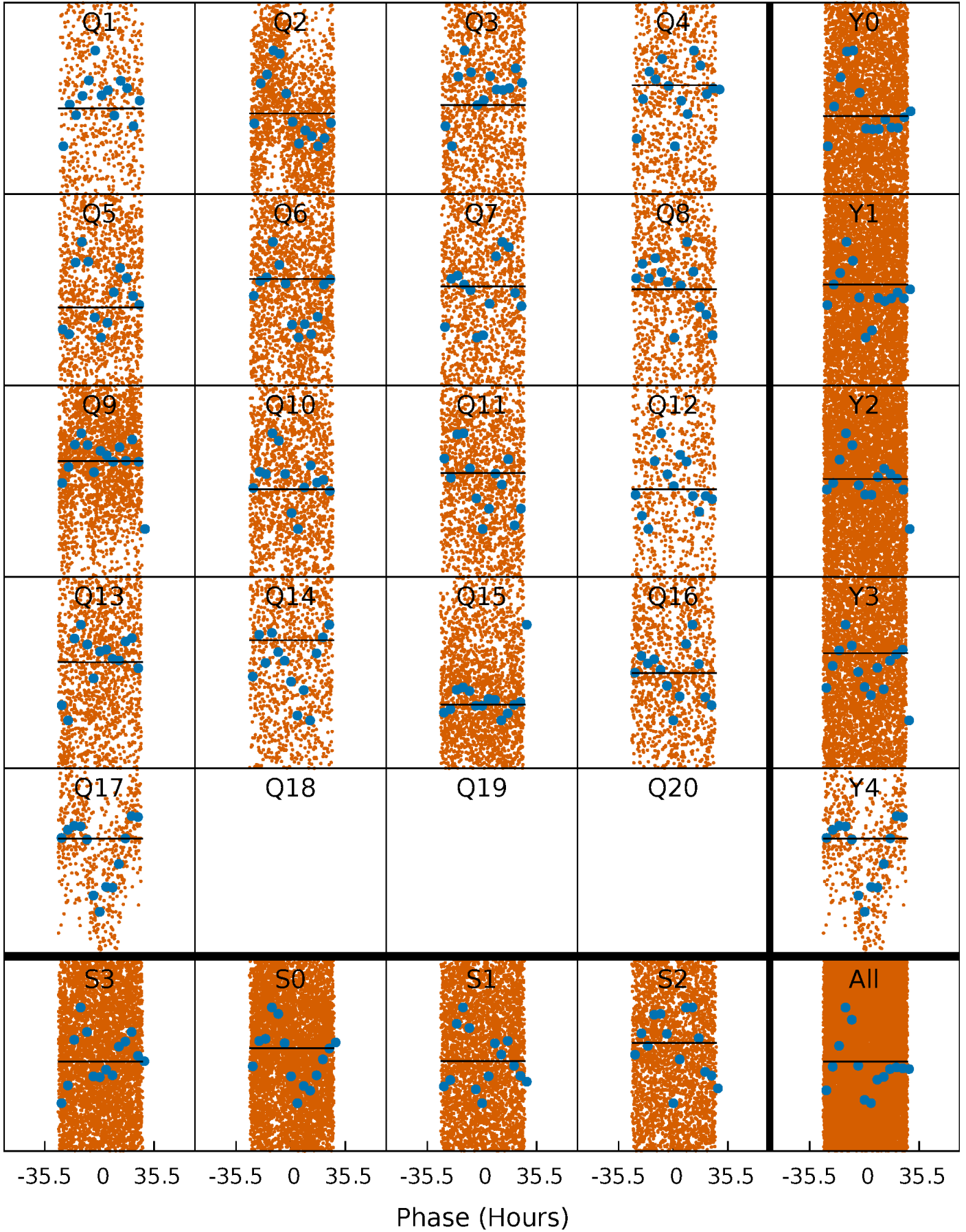
PDC Quarter-Phased Transit Curves

TCE 006466583-02 P= 4.284695 Days $T_0=134.692514$ (BKJD)



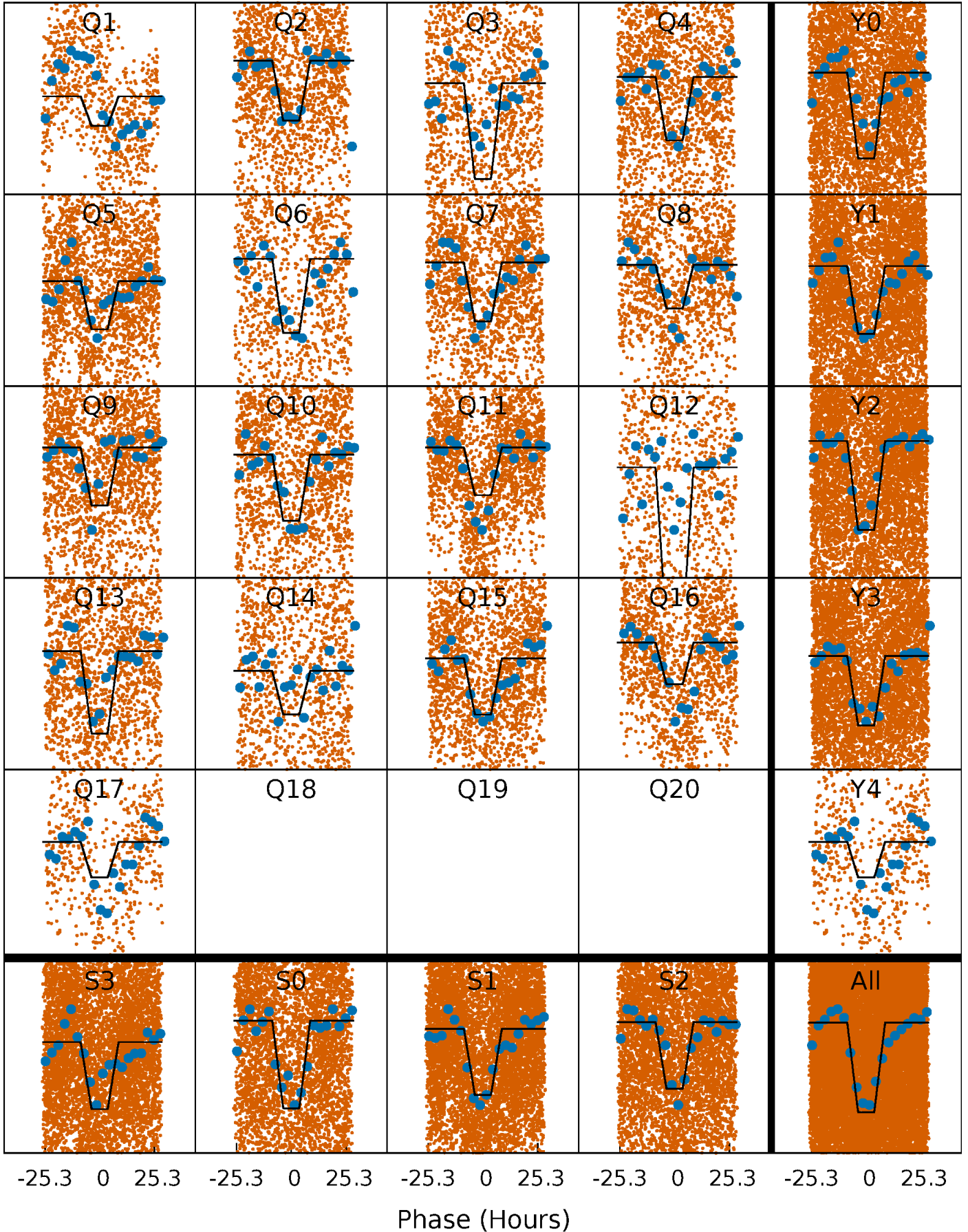
DV Quarter-Phased Transit Curves

TCE 006466583-02 P= 4.284695 Days $T_0=134.692514$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

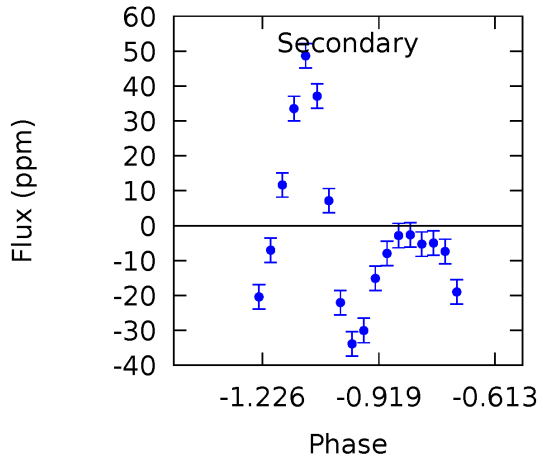
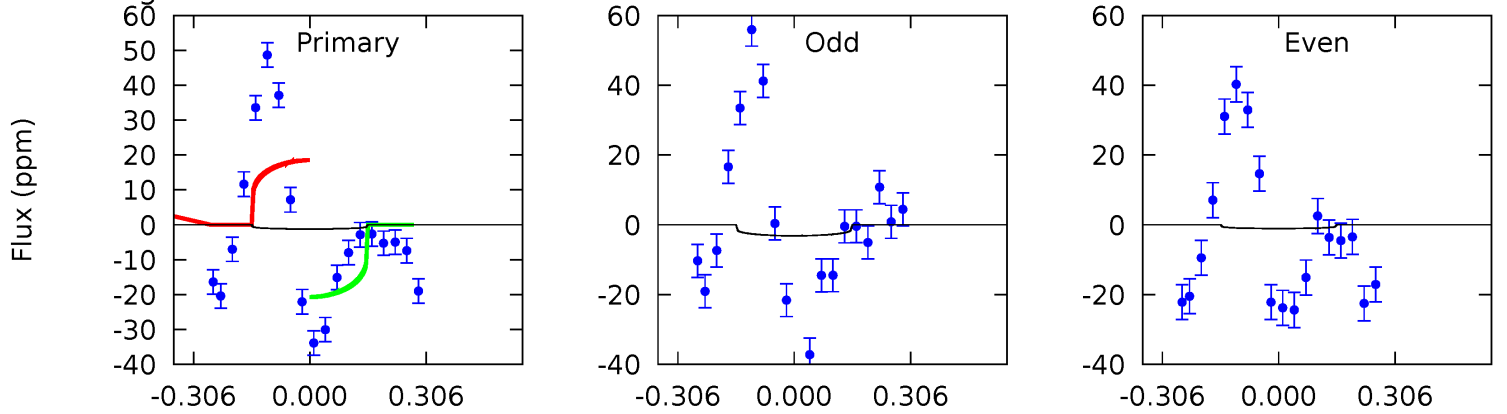
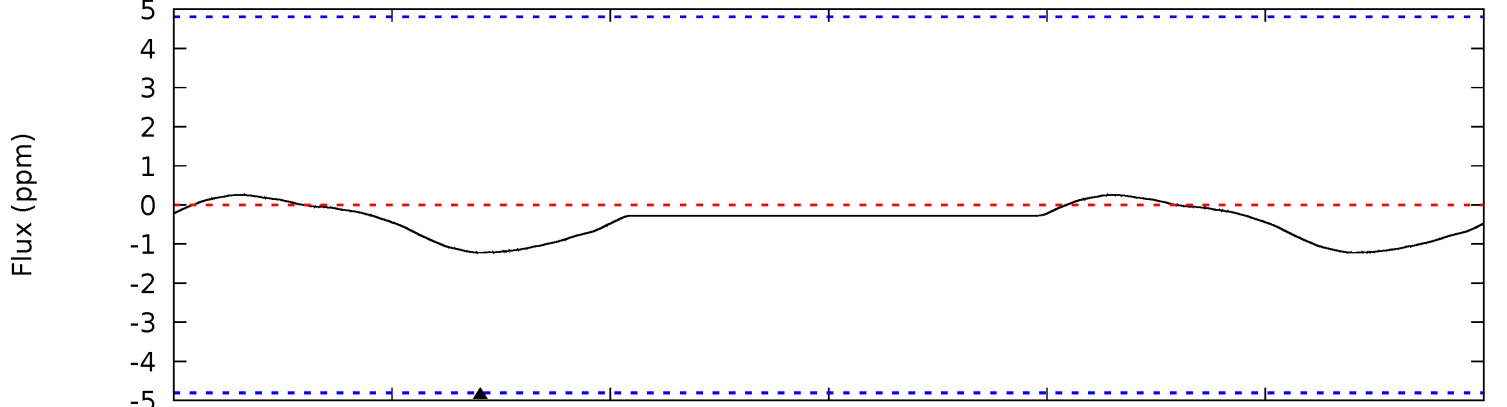
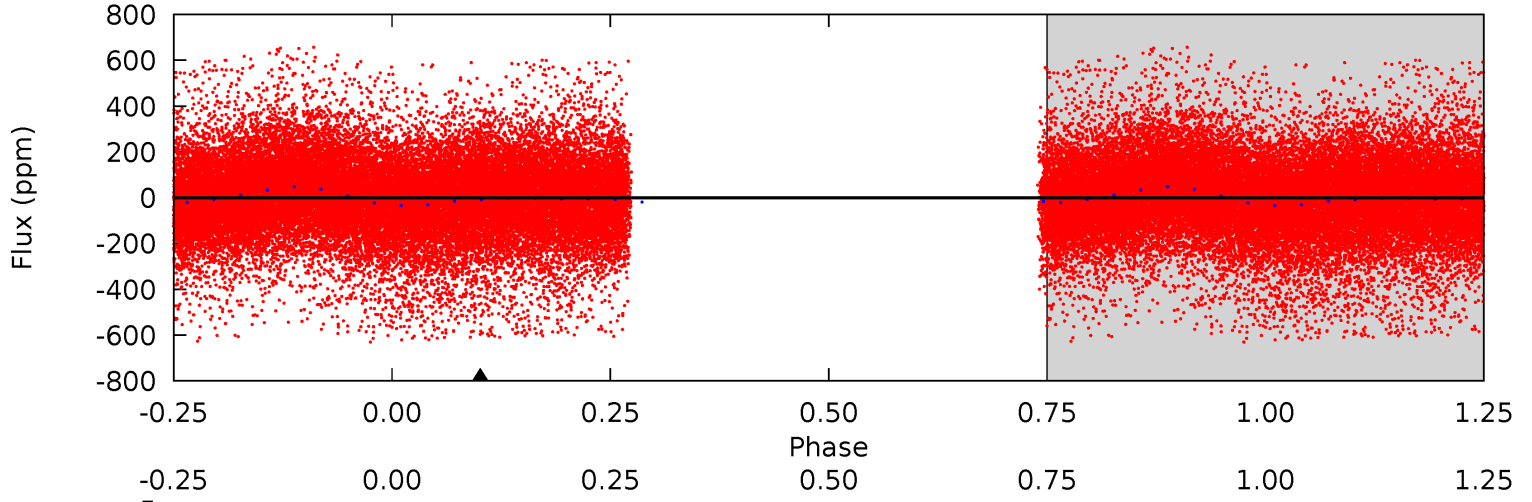
TCE 006466583-02 P= 4.284304 Days $T_0=134.736820$ (BKJD)



DV Model-Shift Uniqueness Test

006466583-02, P = 4.284695 Days, E = 130.407819 Days

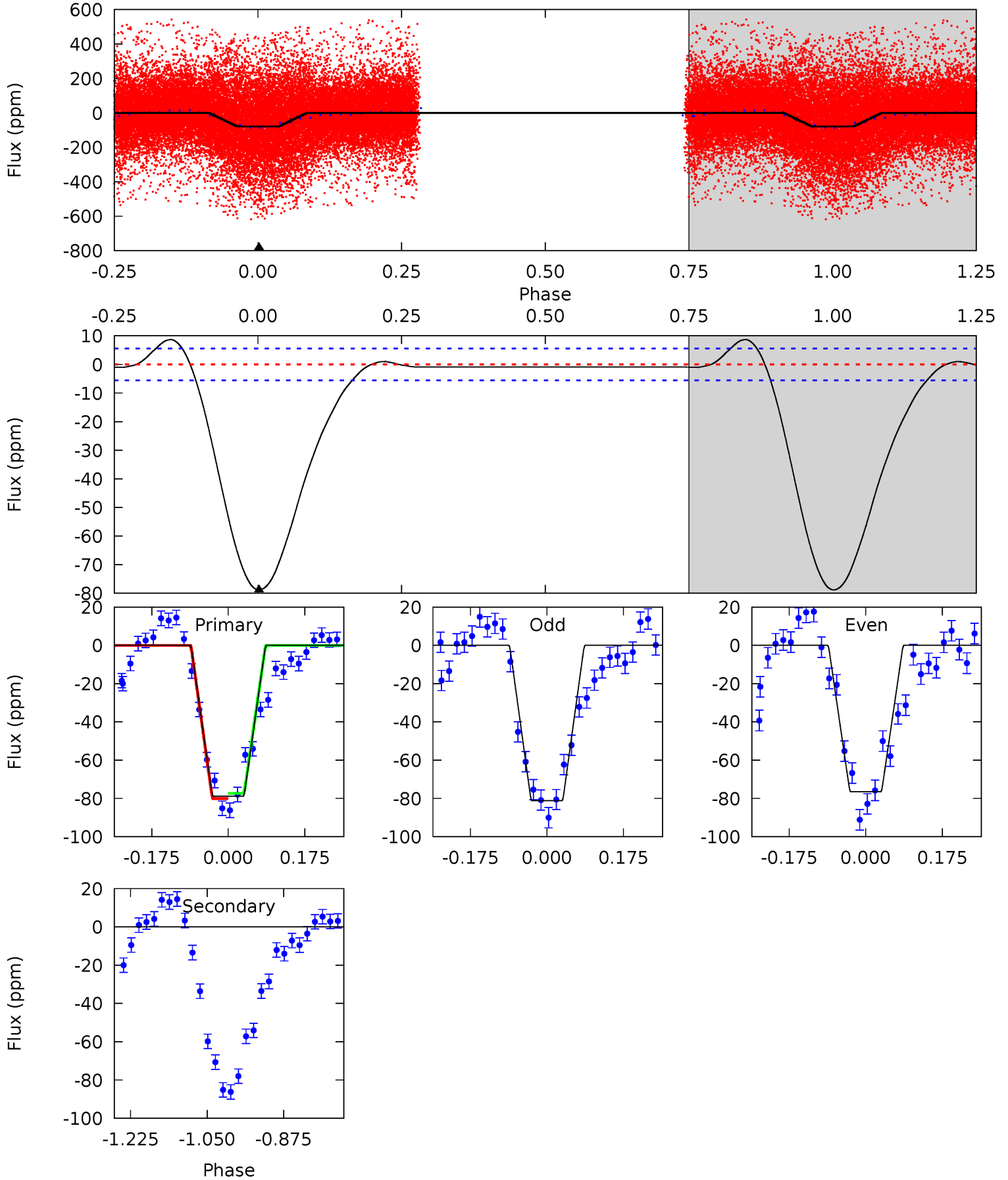
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.10	0	0	0	4.32	1.02	0.12	1.10	1.10	0	0	0.93	-1.32	0.17	0.96



Alt Model-Shift Uniqueness Test

006466583-02, P = 4.284304 Days, E = 130.452516 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.2	0	0	0	4.45	1.36	1.41	63.2	63.2	0	0	1.85	1.10	0.10	0.94



Stellar Parameters For KIC 006466583

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6399^{+181}_{-227}	$4.271^{+0.132}_{-0.198}$	$-0.200^{+0.250}_{-0.300}$	$1.267^{+0.404}_{-0.249}$	$1.090^{+0.193}_{-0.129}$	$0.754^{+0.539}_{-0.360}$
	+3%/-4%	+3%/-5%	+125%/-150%	+32%/-20%	+18%/-12%	+71%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006466583-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$1.62^{+1.90}_{-1.12}$	1936^{+158}_{-133}	-2479^{+5217}_{-593}	$-0.006^{+1.036}_{-1.325}$
Alt.	0 ± 1	$2.18^{+2.03}_{-1.37}$	1938^{+158}_{-116}	-2473^{+4890}_{-360}	$0.000^{+0.577}_{-0.553}$

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 $A_{obs} \gg 1.0$

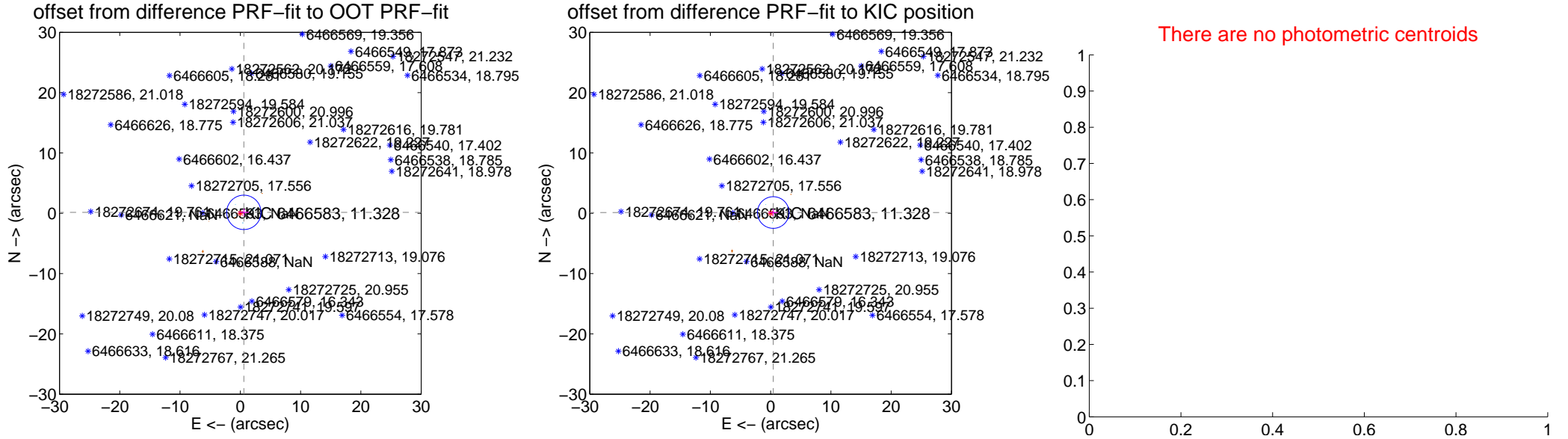
DV Centroid Data

Supplemental centroid analysis for 006466583-02. **Kepler magnitude: 11.33.** Transit SNR 0.00

There are 8 quarters with good PRF difference image offsets

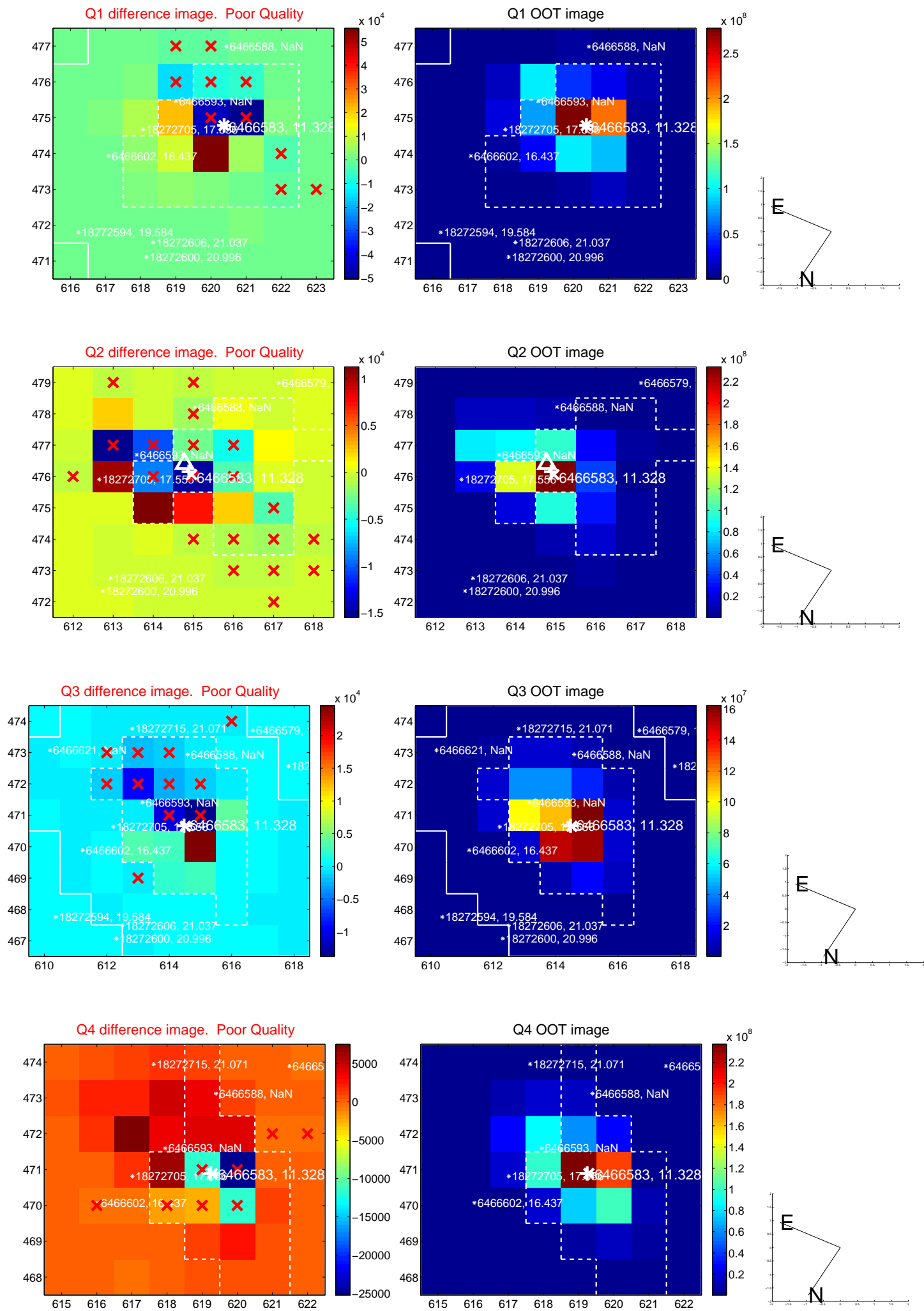
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.605 ± 0.950	0.64	-0.585 ± 0.848	0.152 ± 0.624
PRF-fit source offset from KIC position	0.453 ± 0.875	0.52	-0.436 ± 0.770	0.123 ± 0.587
photometric centroid source offset	—	—	—	—

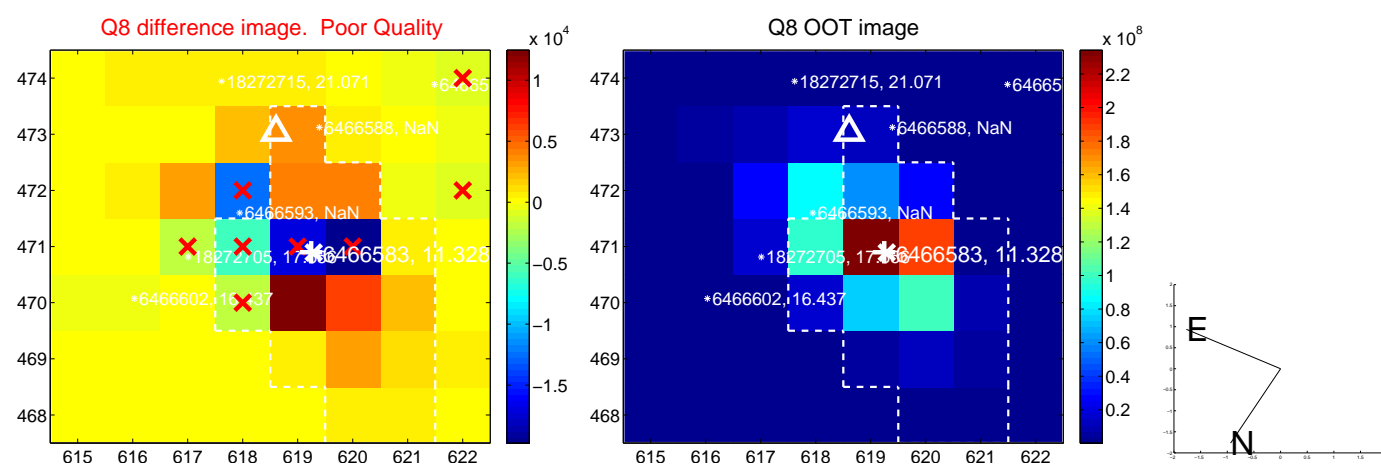
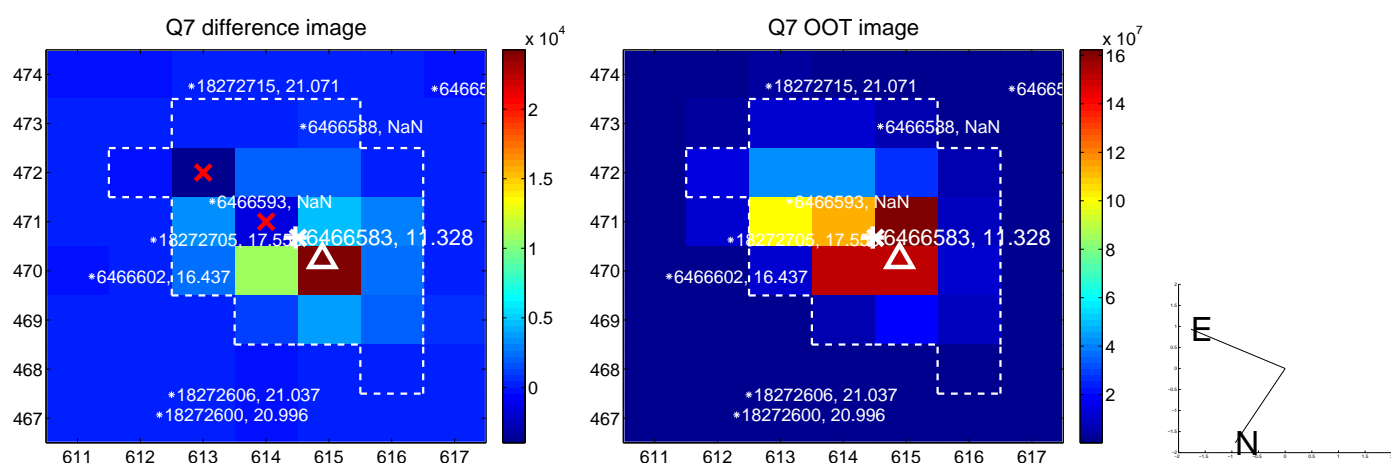
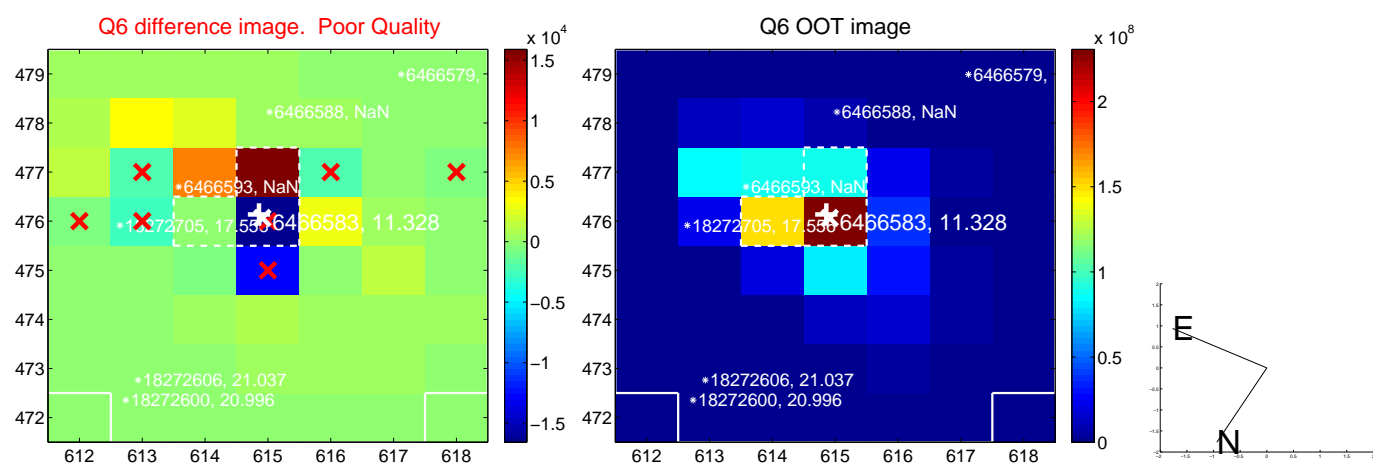
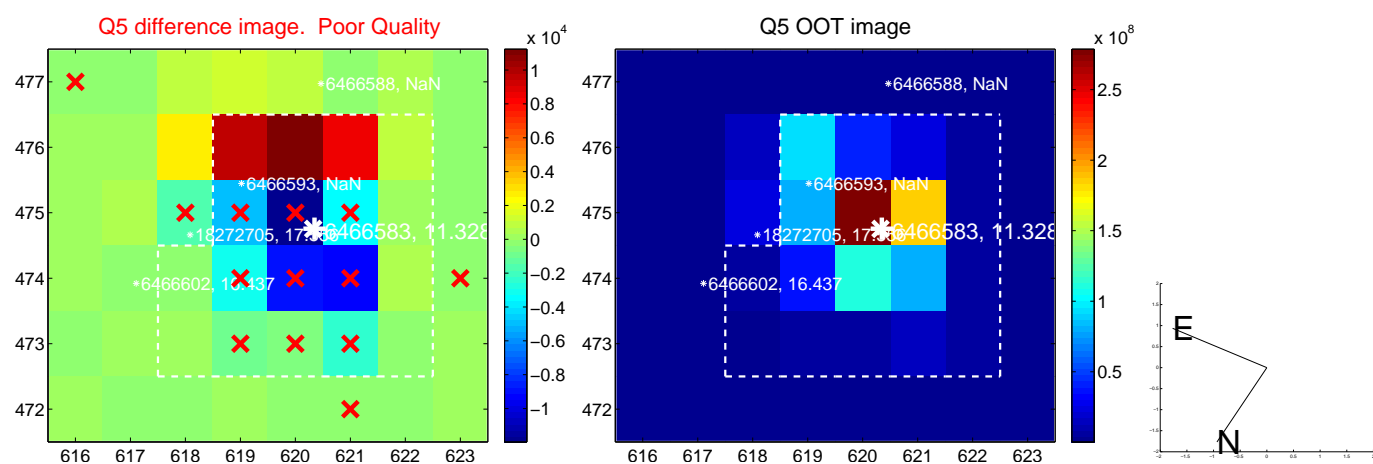


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

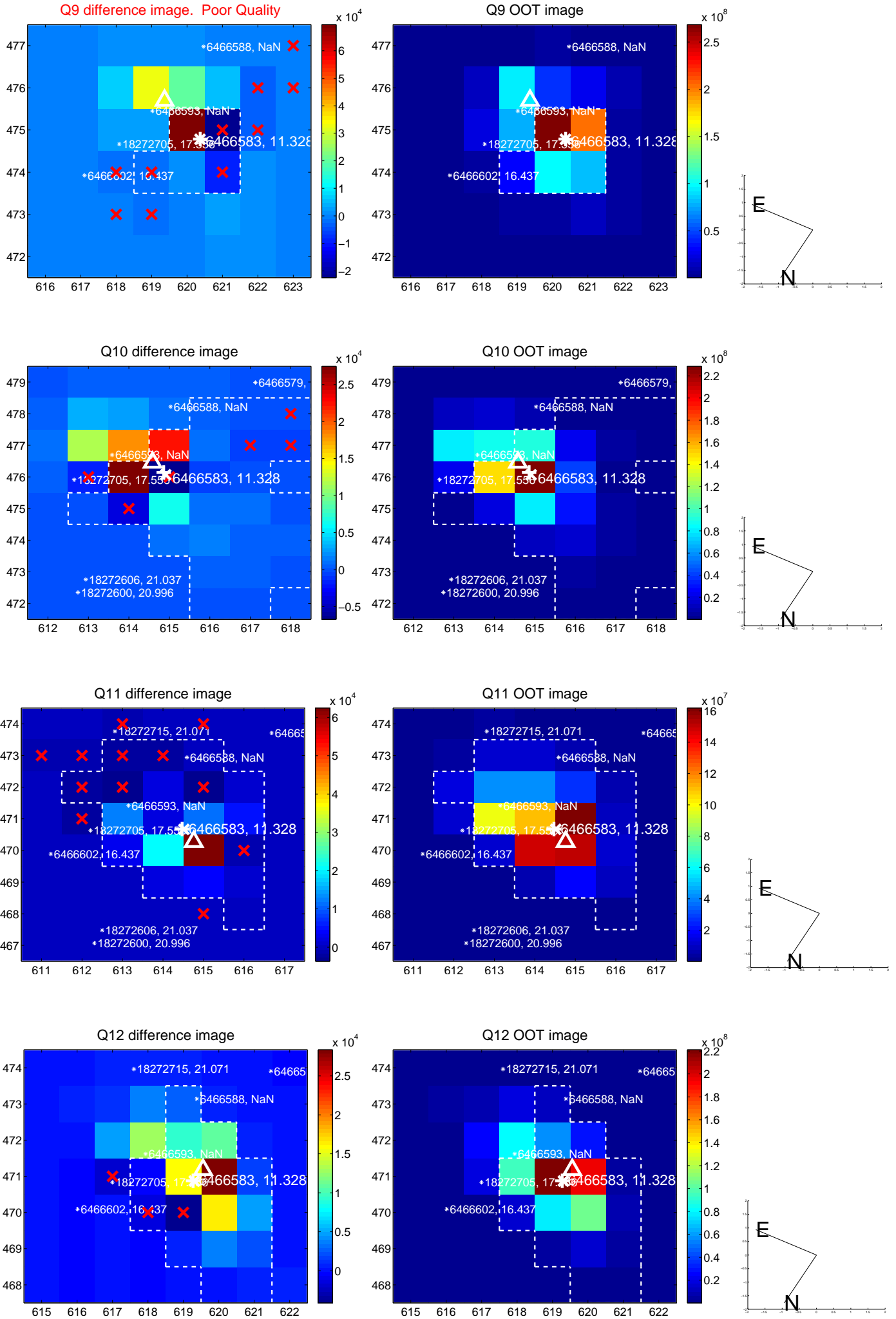
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



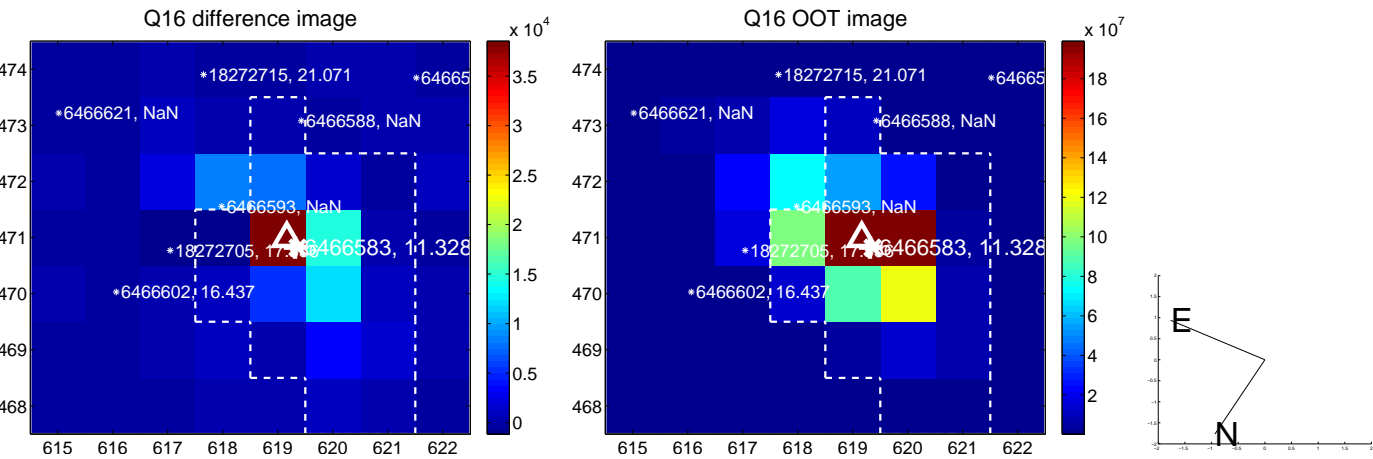
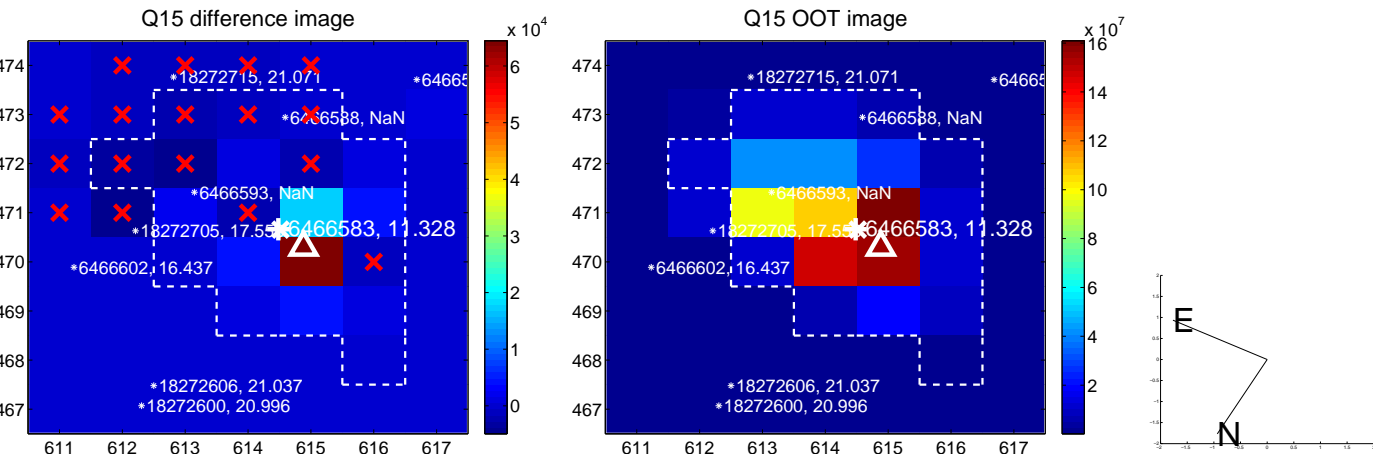
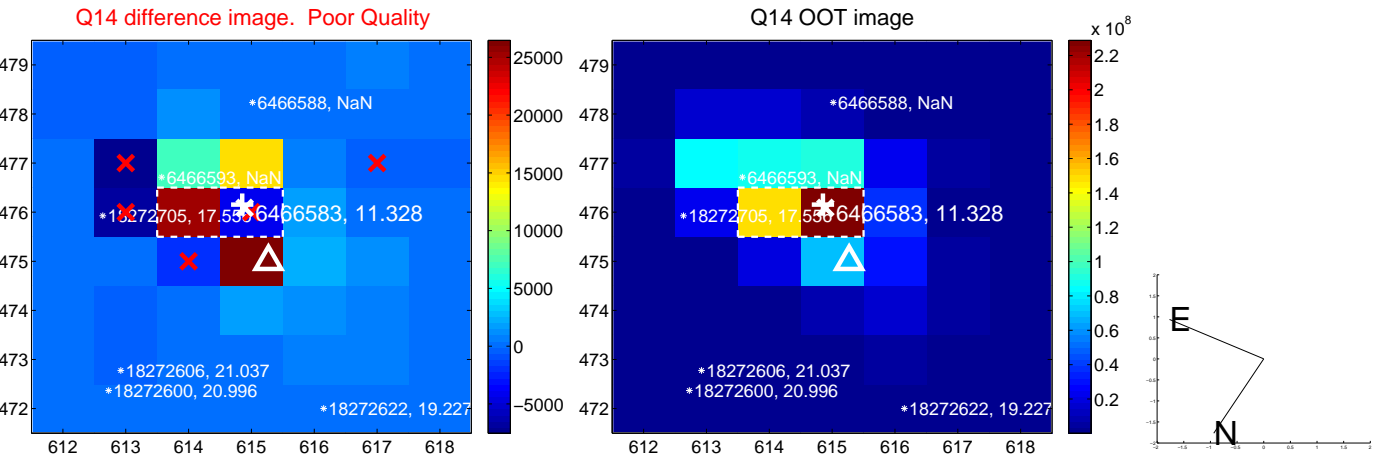
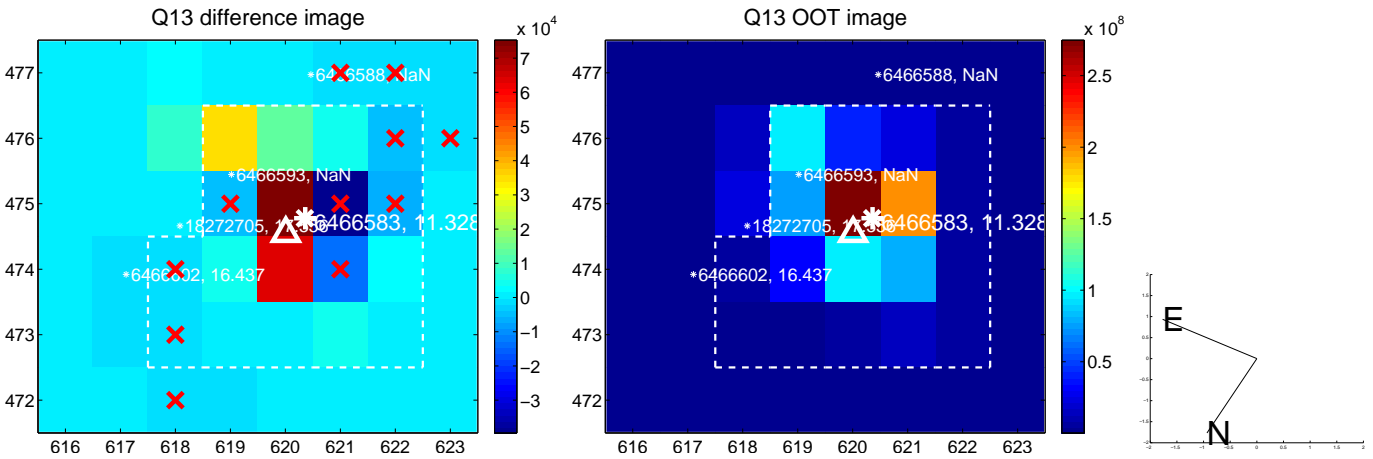
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



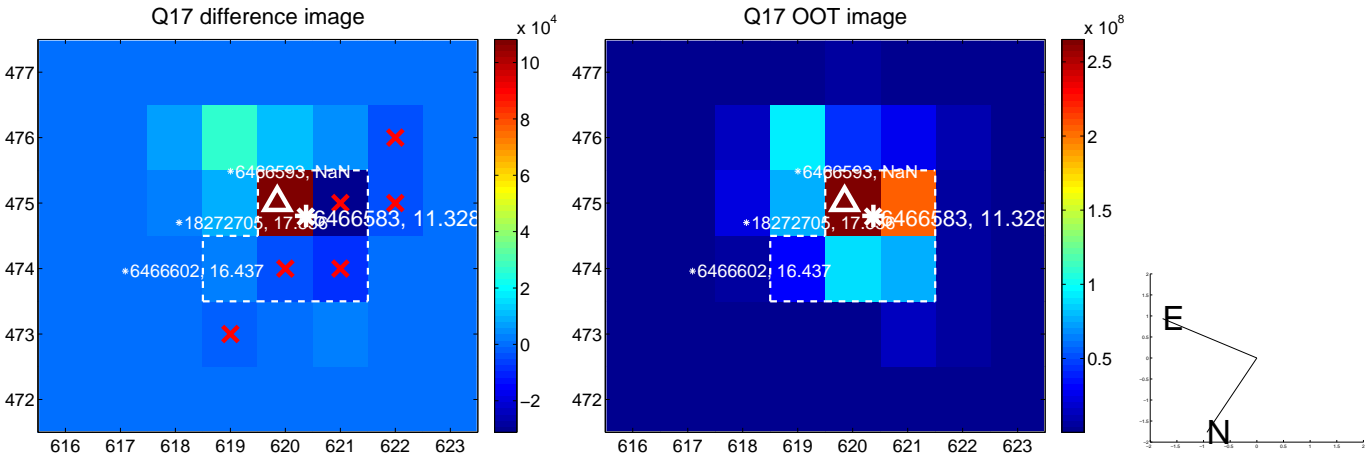
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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.



folded centroid time series figure for this object.

UKIRT Image

Declination

