

KIC 008179286

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})
008179286-01	OBS	7869.01	11.413230	140.120971	71.9	2.463	8.7	9.6	1.16	6188	1.18	173.36
008179286-02	OBS	No	11.412697	135.118623	50.0	3.623	7.6	7.9	1.16	6188	0.94	173.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008179286-01	OBS	FP	0.00	0	1	1	0	HAS_SEC_TCE—CENT_RESOLVED_OFFSET
008179286-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

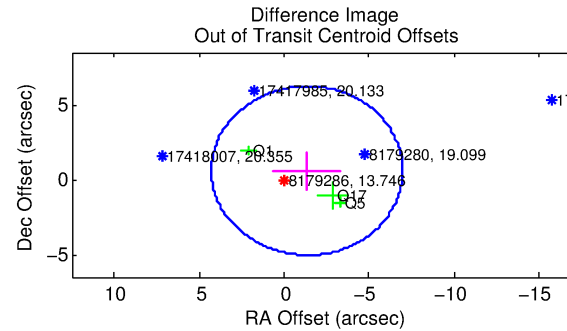
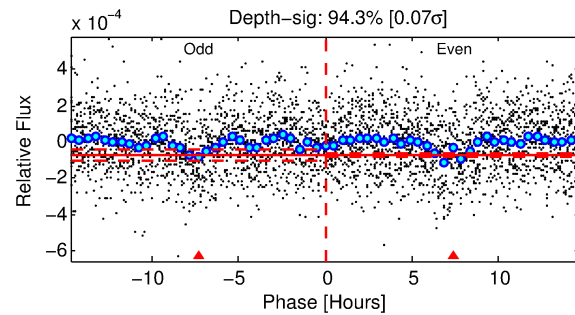
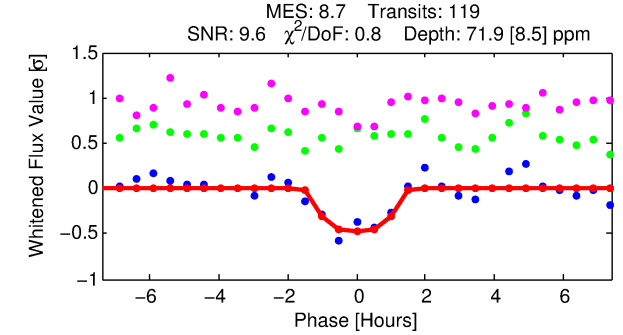
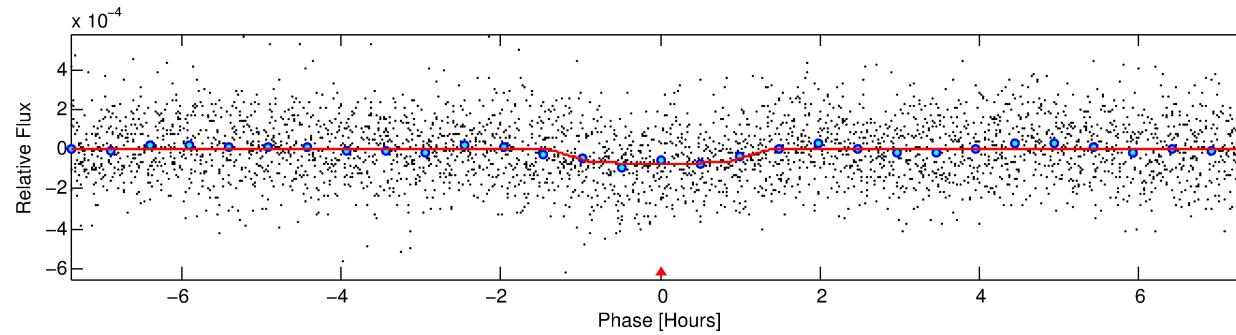
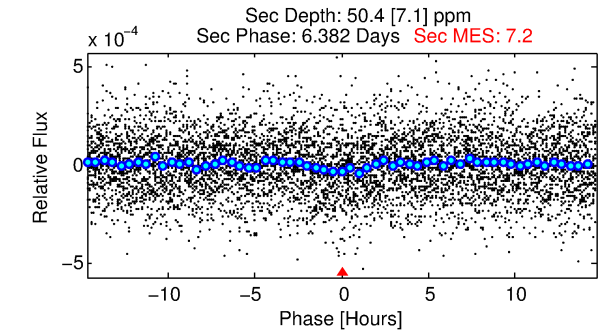
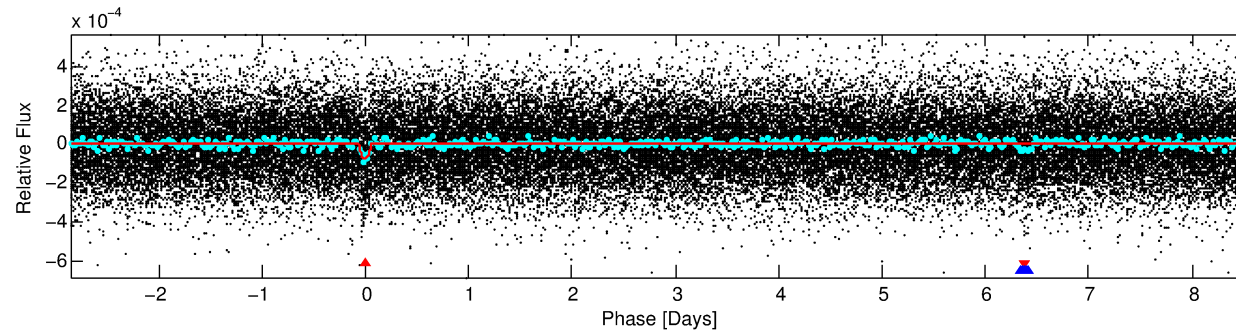
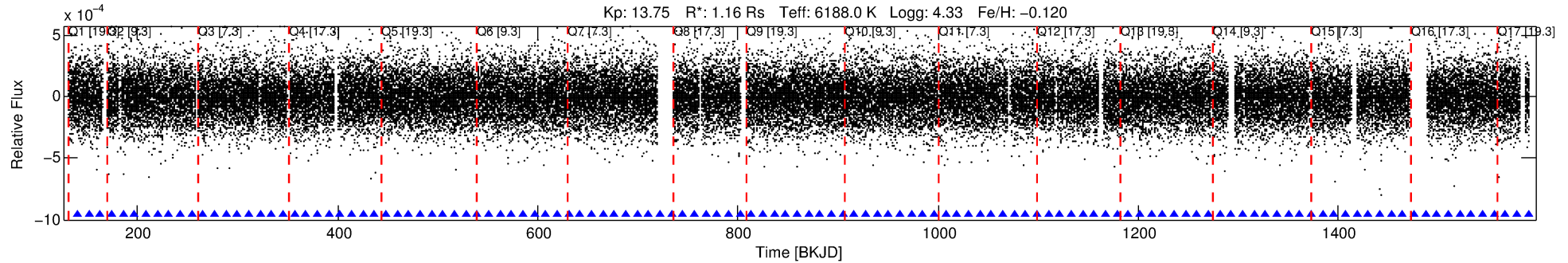
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008179286-01

No Significant Match Found

DV One-Page Summary

KIC: 8179286 Candidate: 1 of 2 Period: 11.413 d



DV Fit Results:

Period = 11.41323 [0.00009] d
Epoch = 140.1210 [0.0063] BKJD
Rp/R* = 0.0094 [0.0059]
a/R* = 14.31 [49.48]
b = 0.93 [0.55]
Seff = 173.36 [66.69]
Teq = 925 [89] K
Rp = 1.18 [0.83] Re
a = 0.1005 [0.0258] AU
Ag = 200.87 [263.73] [0.76σ]
Teff = 5386 [1709] K [2.61σ]

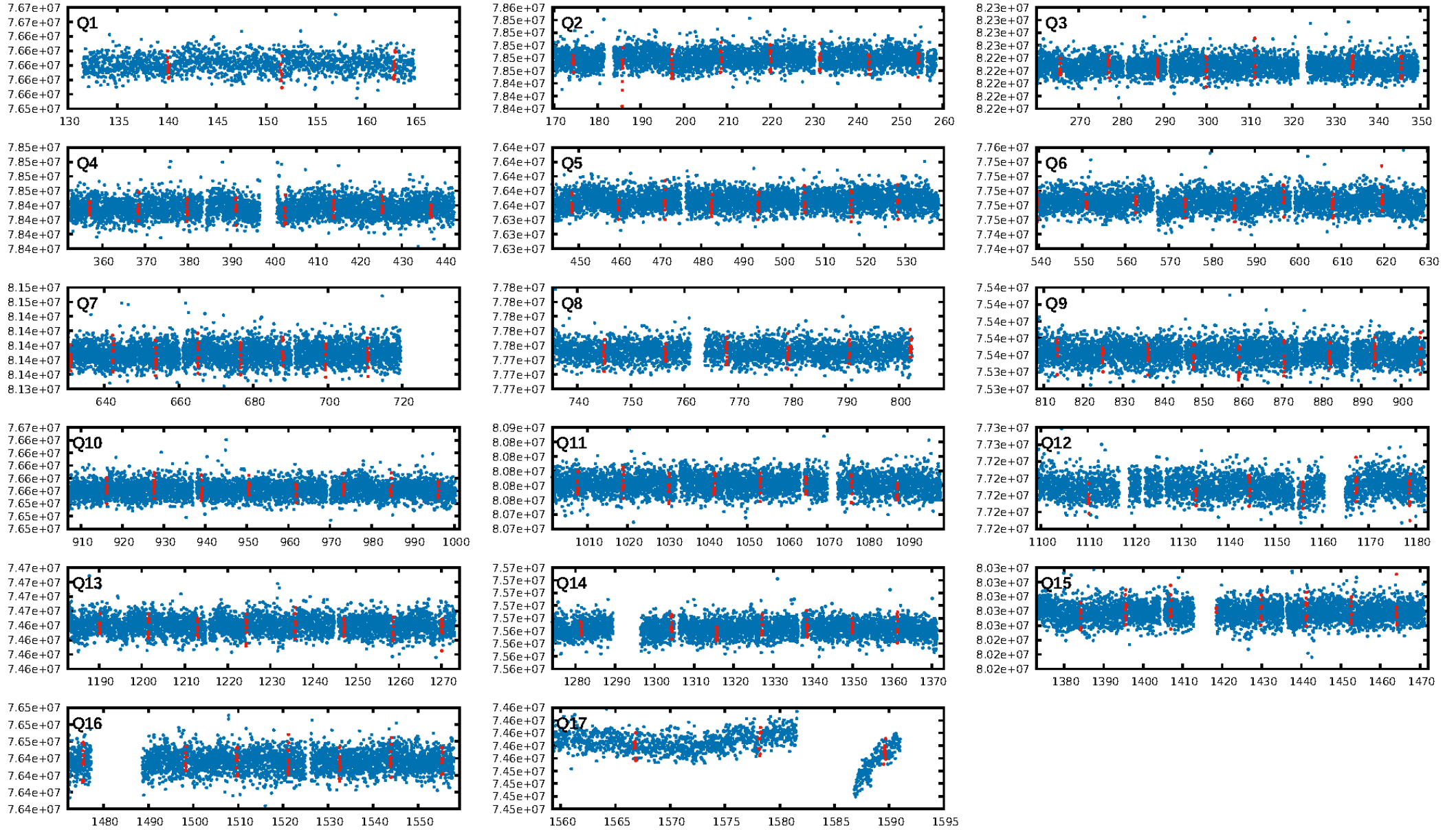
DV Diagnostic Results:

ShortPeriod-sig: 0.2% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.33e-18
RollingBand-fgt: 1.00 [113/113]
GhostDiagnostic-chr: -0.5424
Centroid-sig: 0.0%
Centroid-so: 62.134 arcsec [46.41σ]
OotOffset-rm: 1.485 arcsec [0.79σ]
KicOffset-rm: 1.651 arcsec [0.88σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [17/17]

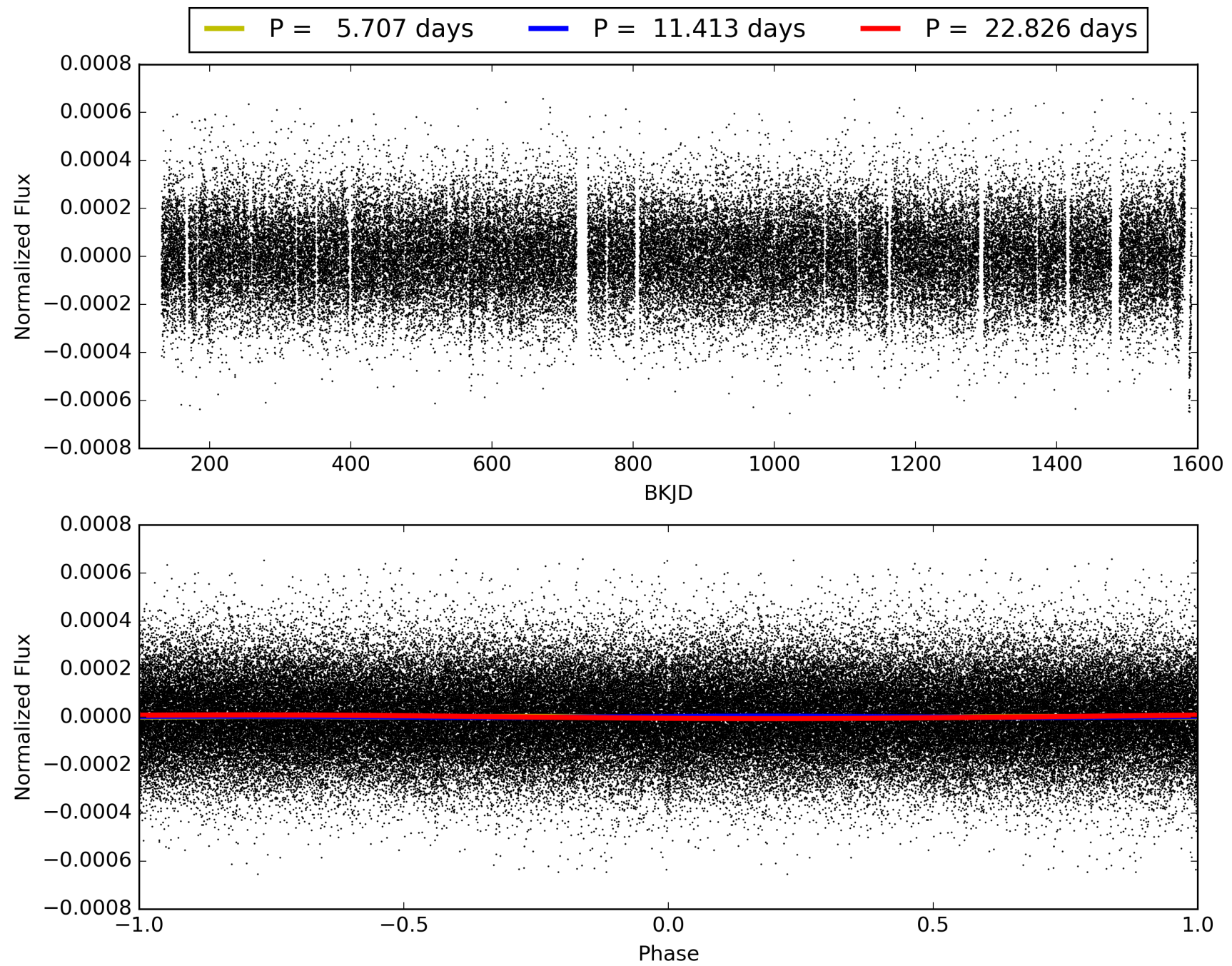
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:42:31 Z

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

TCE 008179286-01, PDC Light Curves

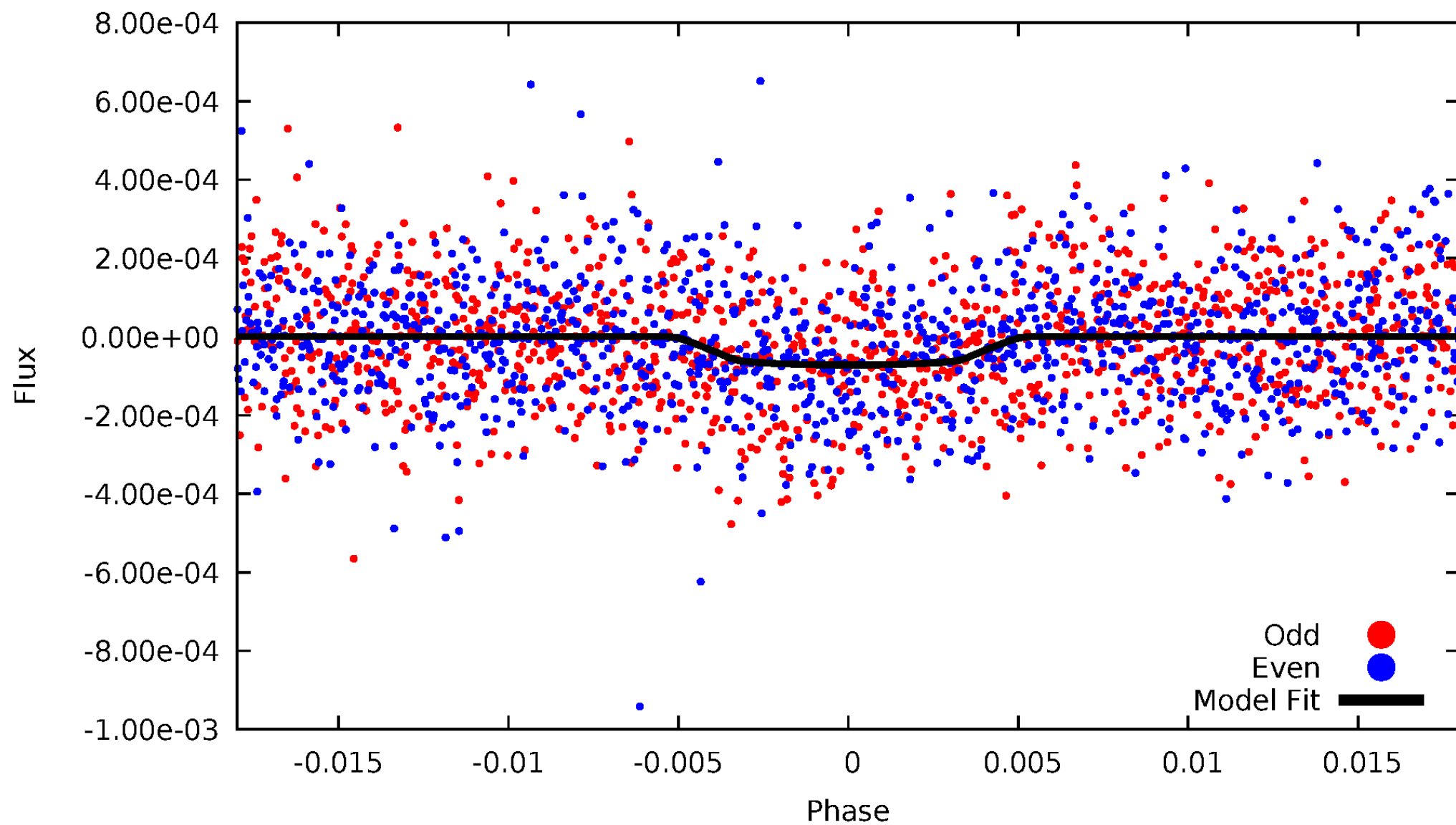


TCE 008179286-01



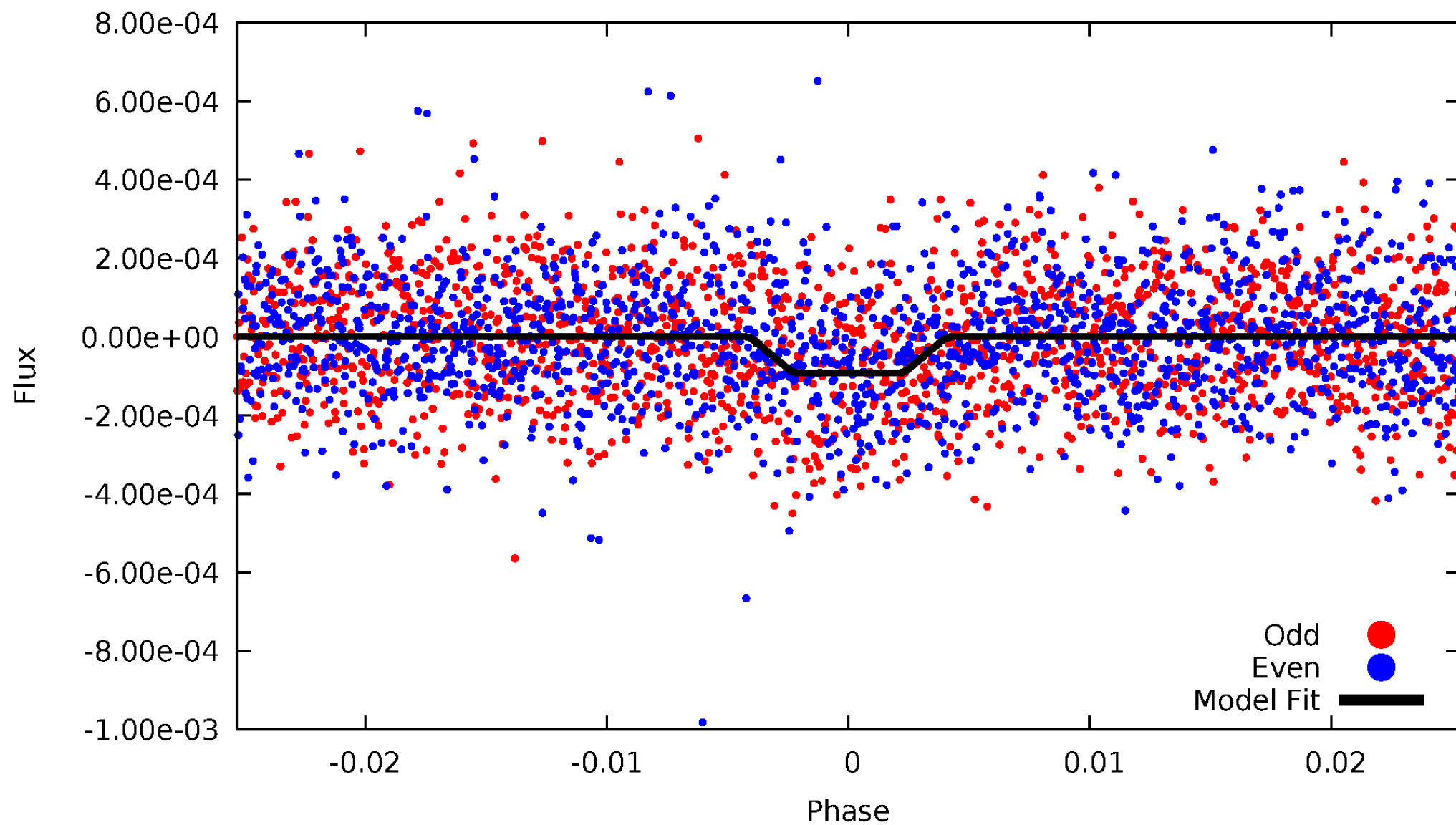
DV Odd/Even

TCE 008179286-01



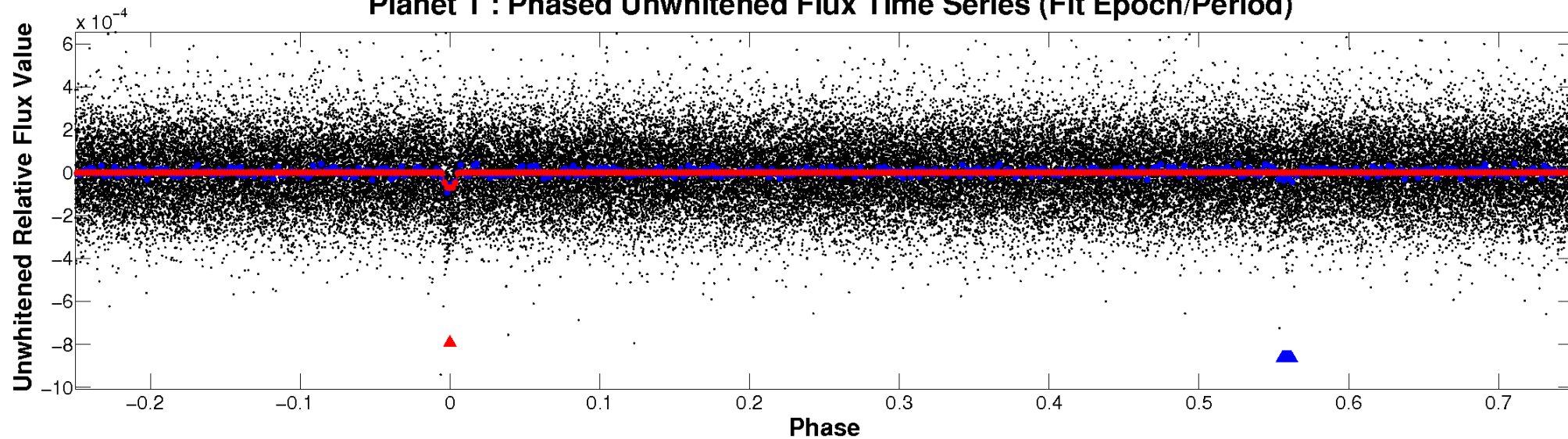
ALT Odd/Even

TCE 008179286-01

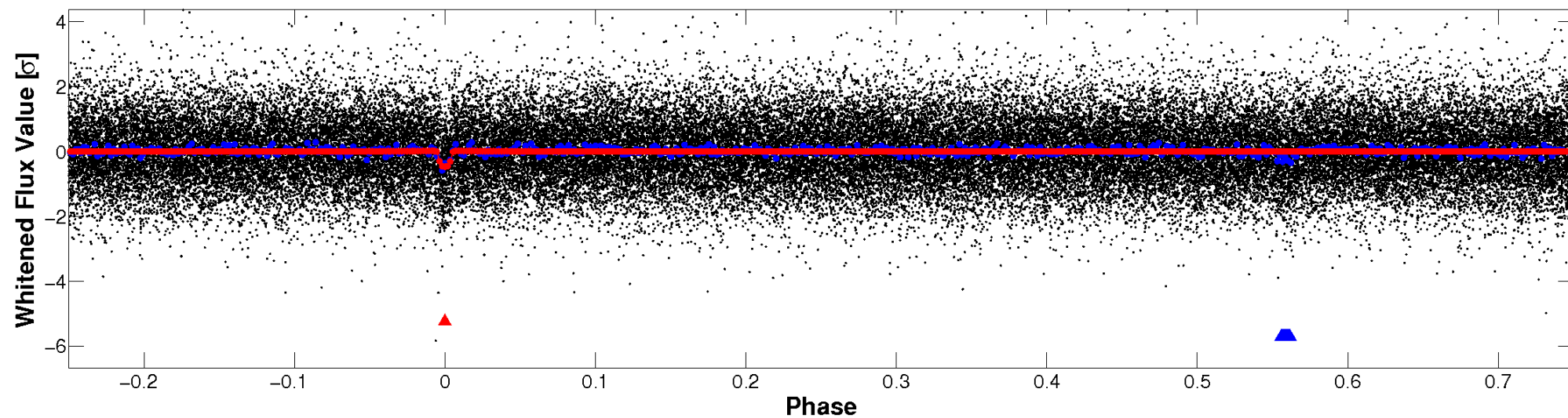


Non-Whitened Vs. Whitened Light Curve

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

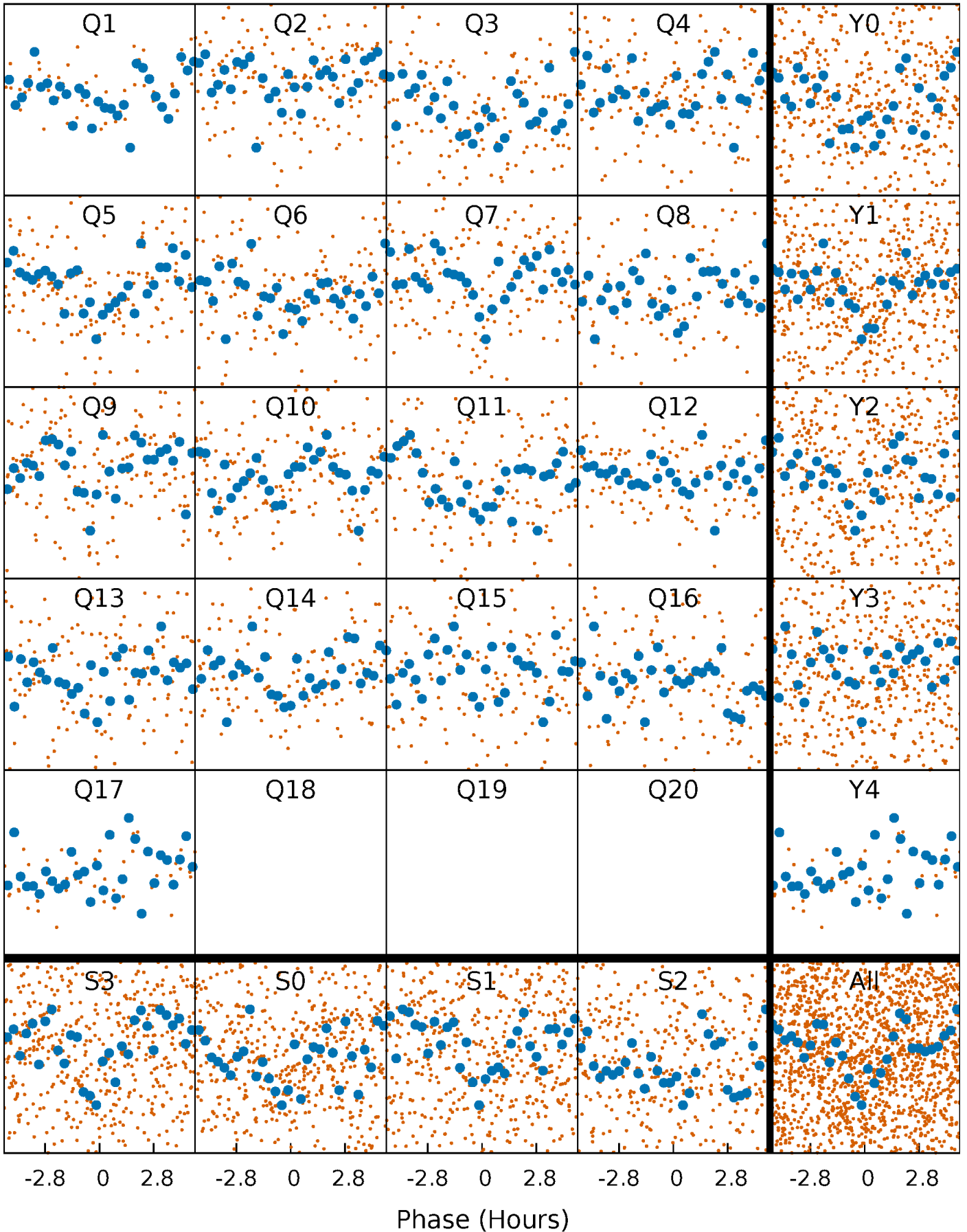


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



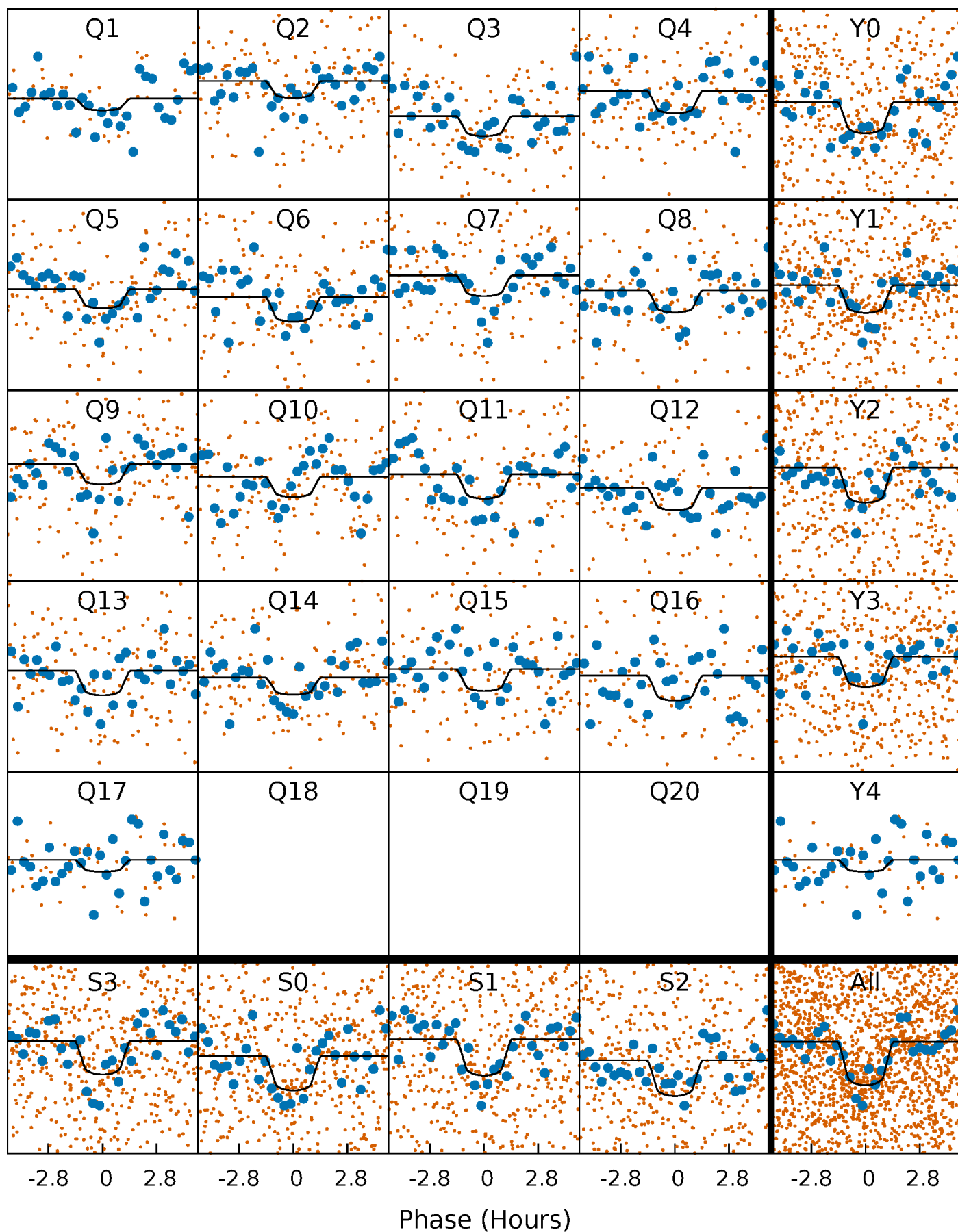
PDC Quarter-Phased Transit Curves

TCE 008179286-01 P= 11.413230 Days $T_0=140.120971$ (BKJD)



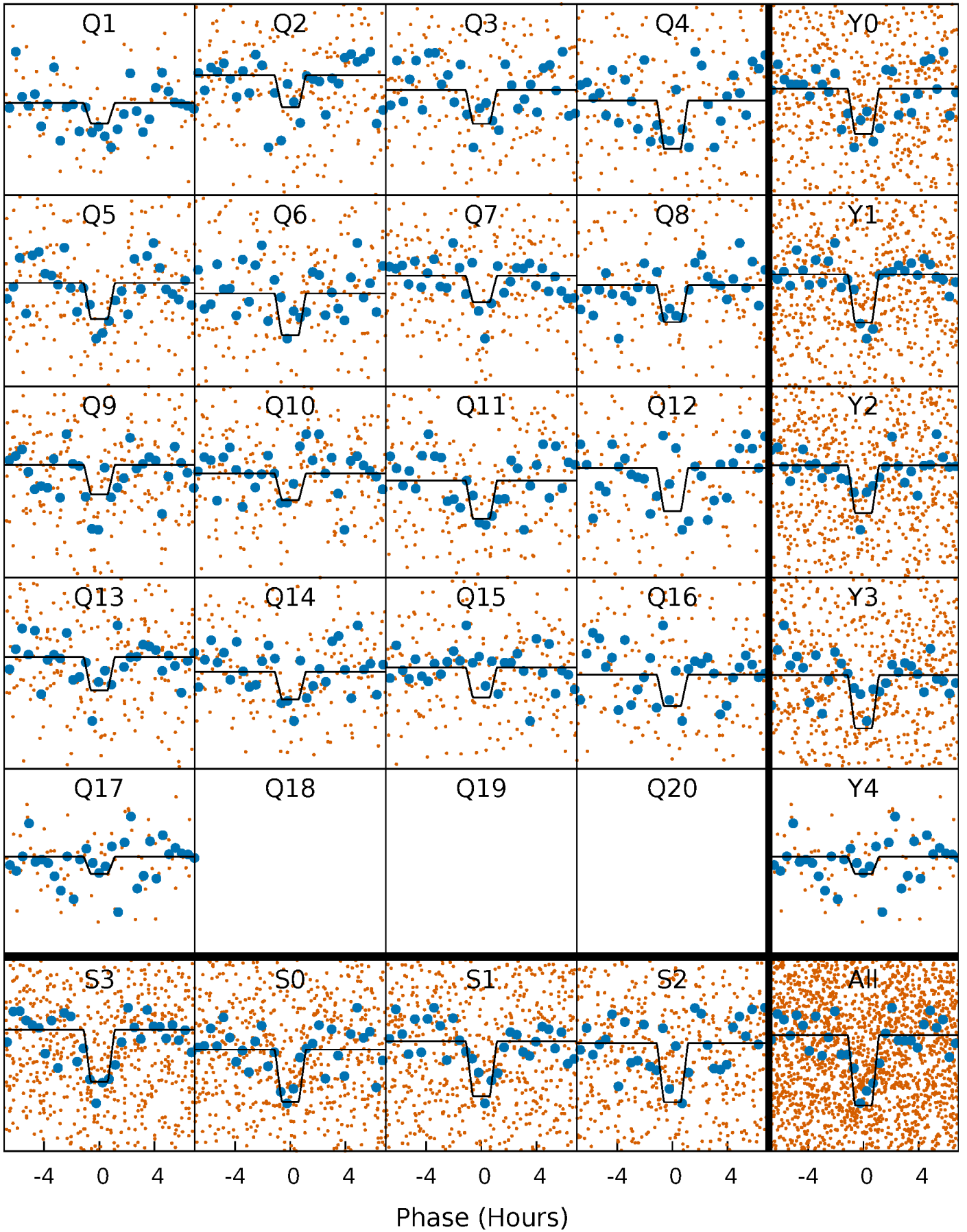
DV Quarter-Phased Transit Curves

TCE 008179286-01 P= 11.413230 Days $T_0=140.120971$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

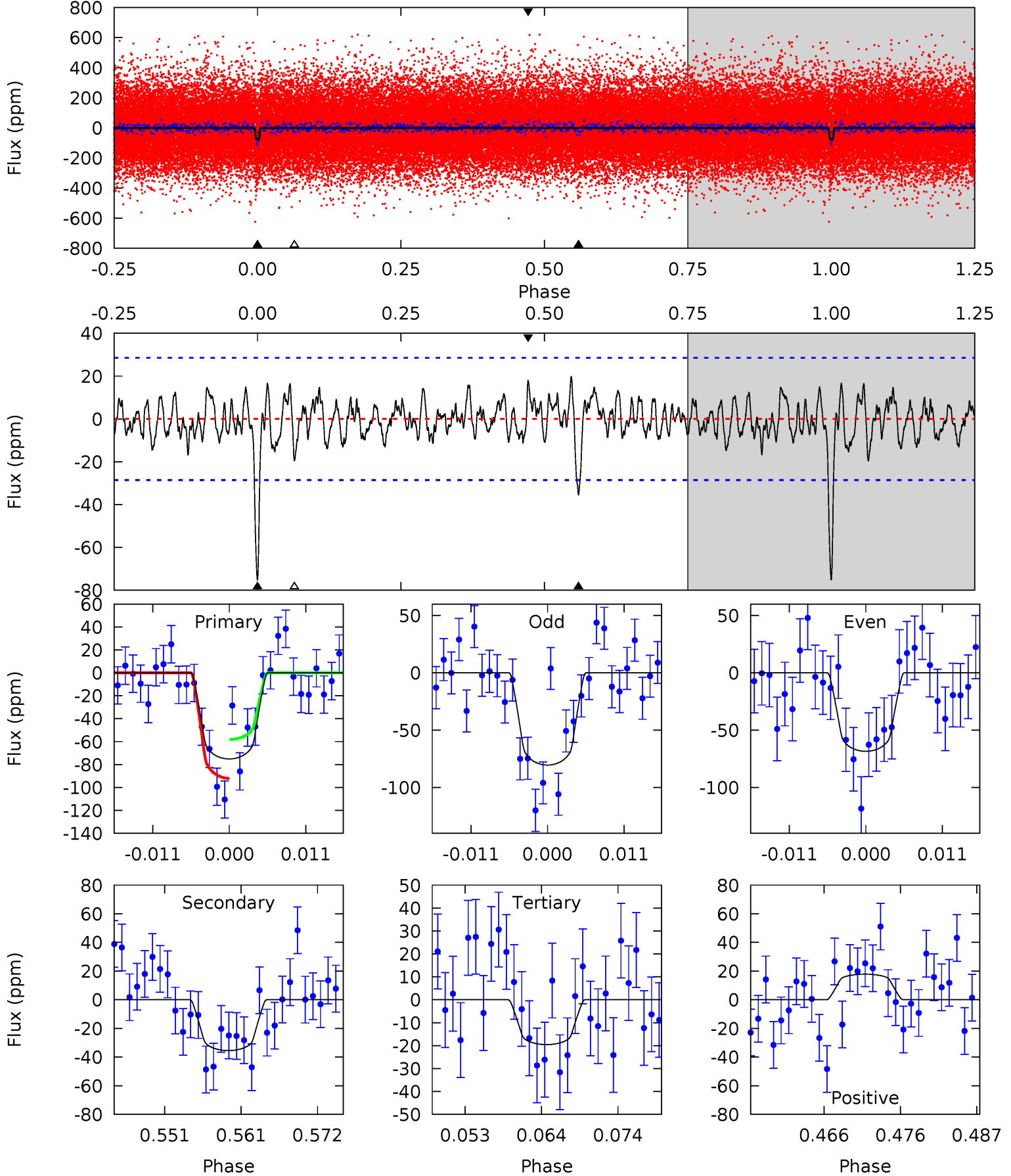
TCE 008179286-01 P= 11.413107 Days $T_0=140.120209$ (BKJD)



DV Model-Shift Uniqueness Test

008179286-01, P = 11.413230 Days, E = 128.707741 Days

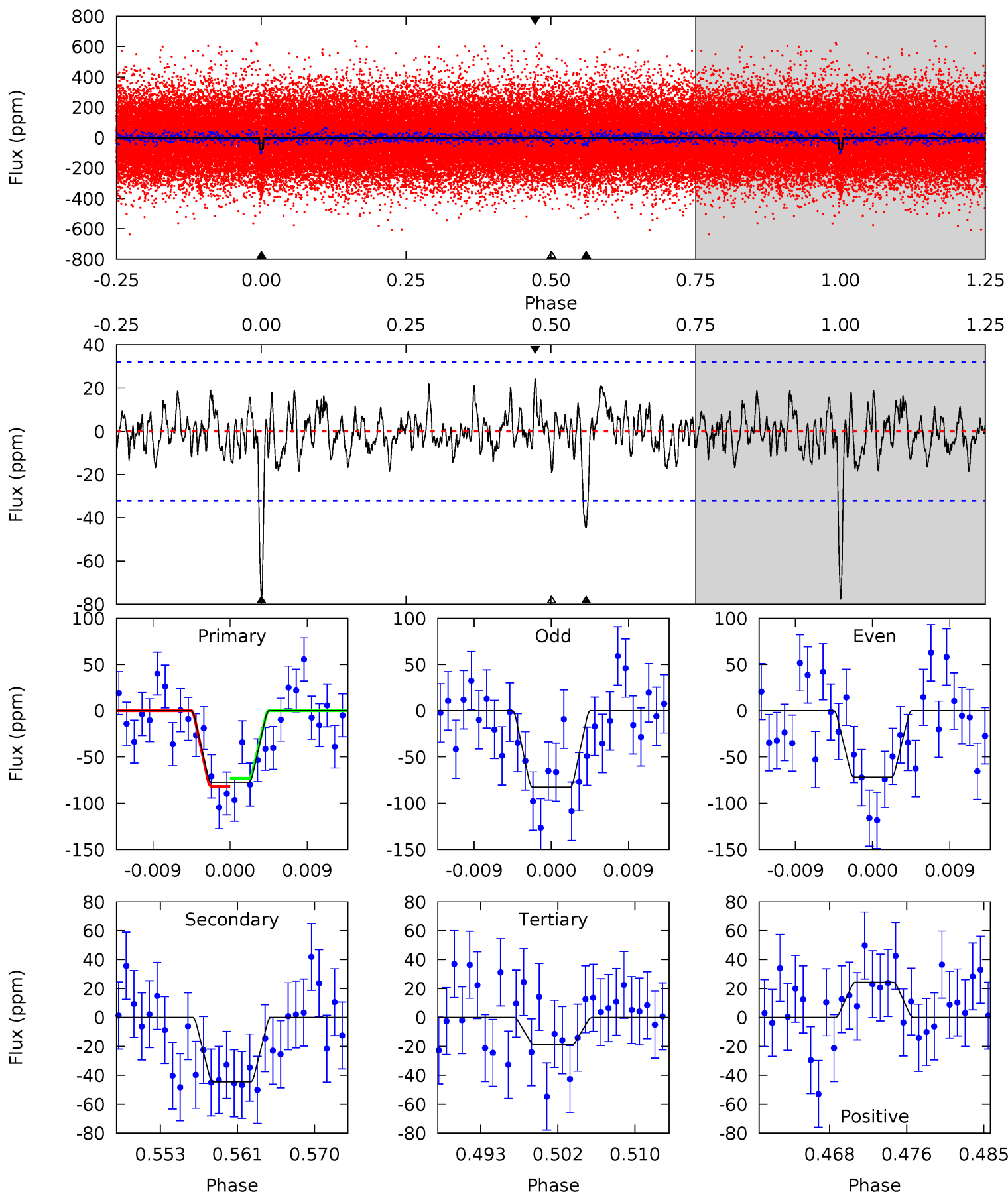
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	6.23	3.44	3.13	5.02	2.56	1.21	9.76	10.1	2.79	3.09	1.06	1.02	0.21	2.99



Alt Model-Shift Uniqueness Test

008179286-01, $P = 11.413107$ Days, $E = 128.707102$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.02	2.96	3.84	5.06	2.63	1.23	9.23	8.35	4.06	3.18	0.86	0.97	0.24	0.68



Stellar Parameters For KIC 008179286

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6188^{+166}_{-203}	$4.330^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.300}$	$1.155^{+0.363}_{-0.195}$	$1.038^{+0.183}_{-0.122}$	$0.949^{+0.495}_{-0.492}$
	+3%/-3%	+3%/-4%	+208%/-250%	+31%/-17%	+18%/-12%	+52%/-52%
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 008179286-01 / KOI 7869.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-35 ± 6	$1.27^{+0.79}_{-0.68}$	1300^{+101}_{-79}	4900^{+2202}_{-827}	123^{+439}_{-77}
Alt.	-45 ± 6	$1.27^{+0.78}_{-0.64}$	1302^{+104}_{-72}	5149^{+2195}_{-895}	154^{+470}_{-96}

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

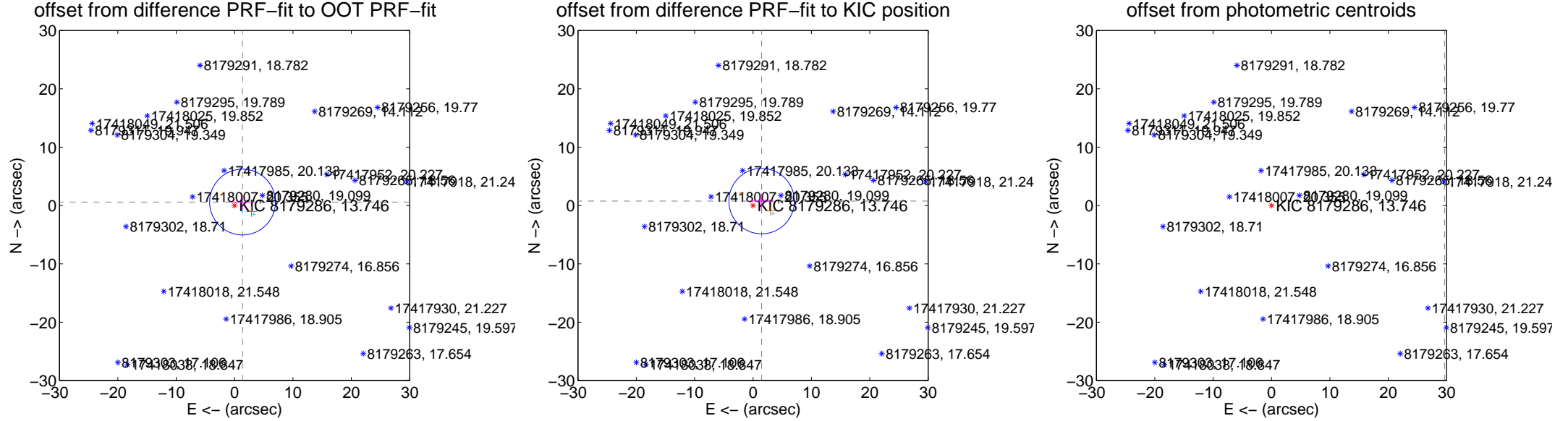
DV Centroid Data

Supplemental centroid analysis for 008179286-01. Kepler magnitude: 13.75. Transit SNR 9.56

There are 1 quarters with good PRF difference image offsets

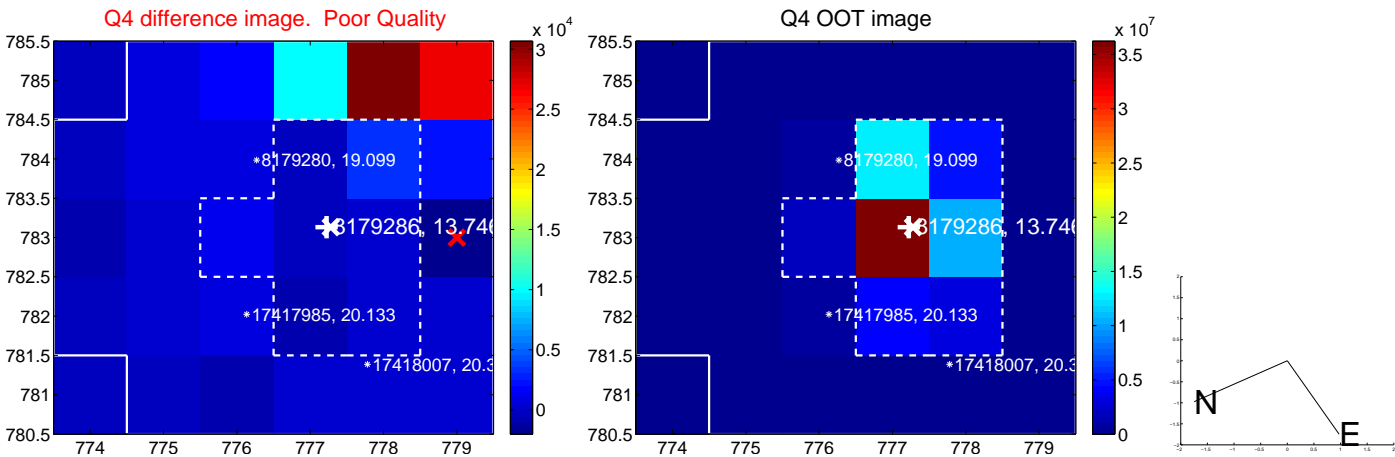
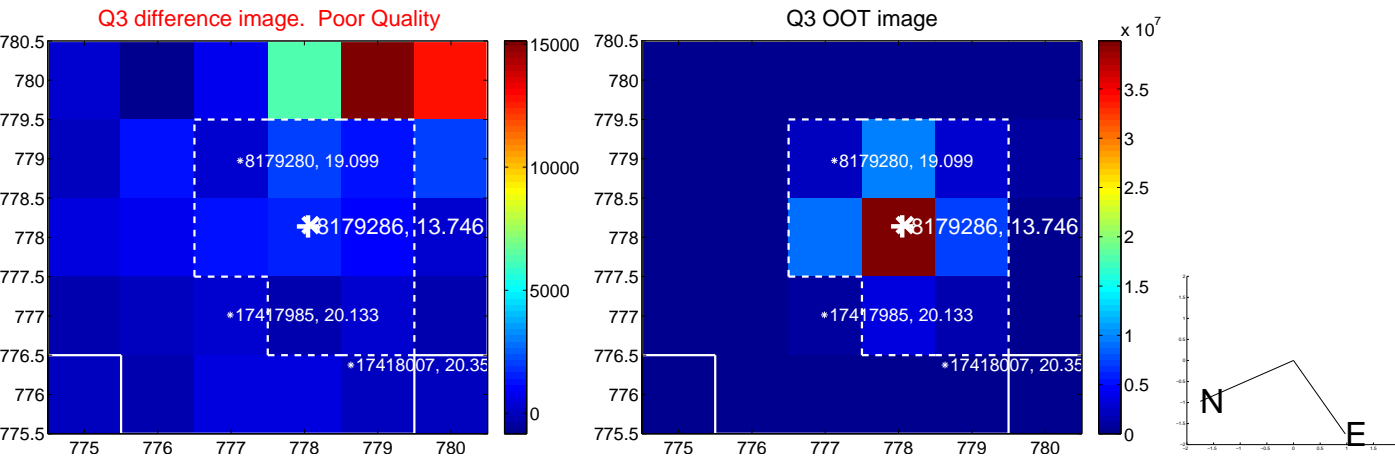
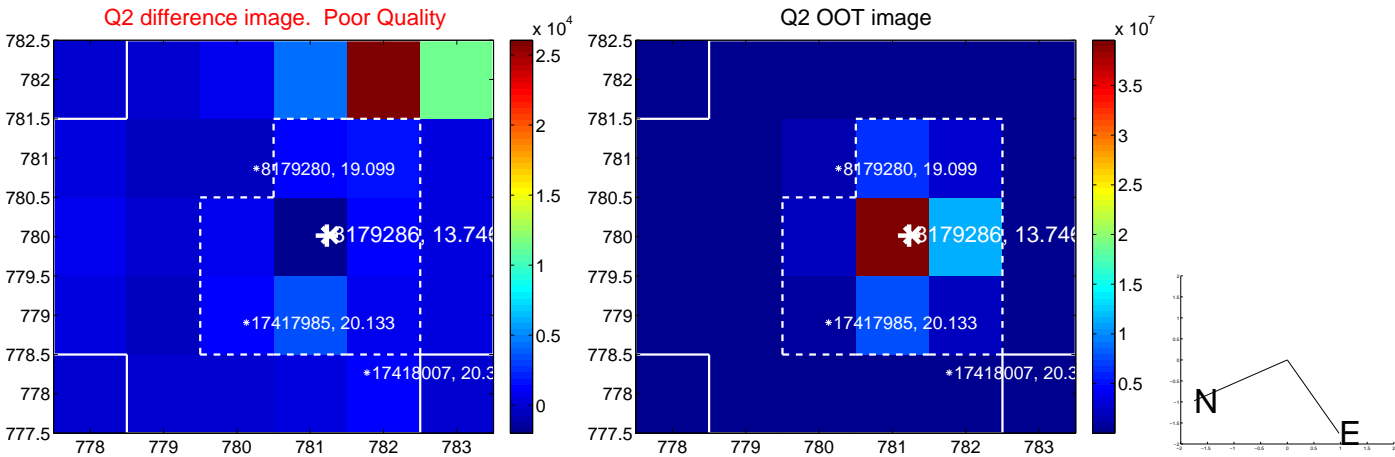
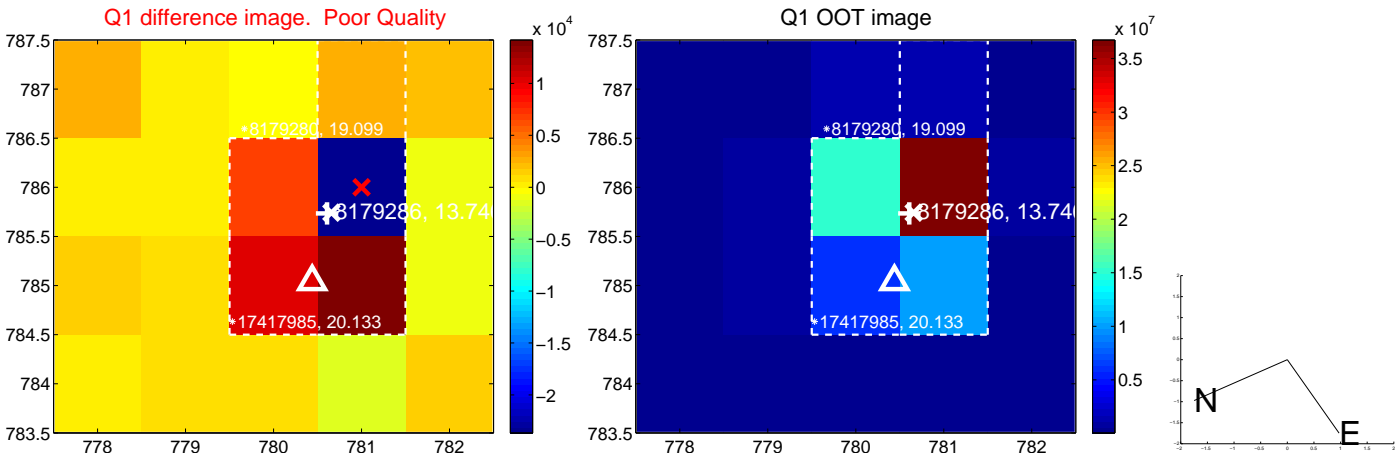
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.485 ± 1.879	0.79	-1.363 ± 1.972	0.592 ± 1.275
PRF-fit source offset from KIC position	1.651 ± 1.869	0.88	-1.468 ± 1.993	0.754 ± 1.294
photometric centroid source offset	62.14 ± 1.34	46.41	-29.64 ± 1.35	-54.61 ± 1.34

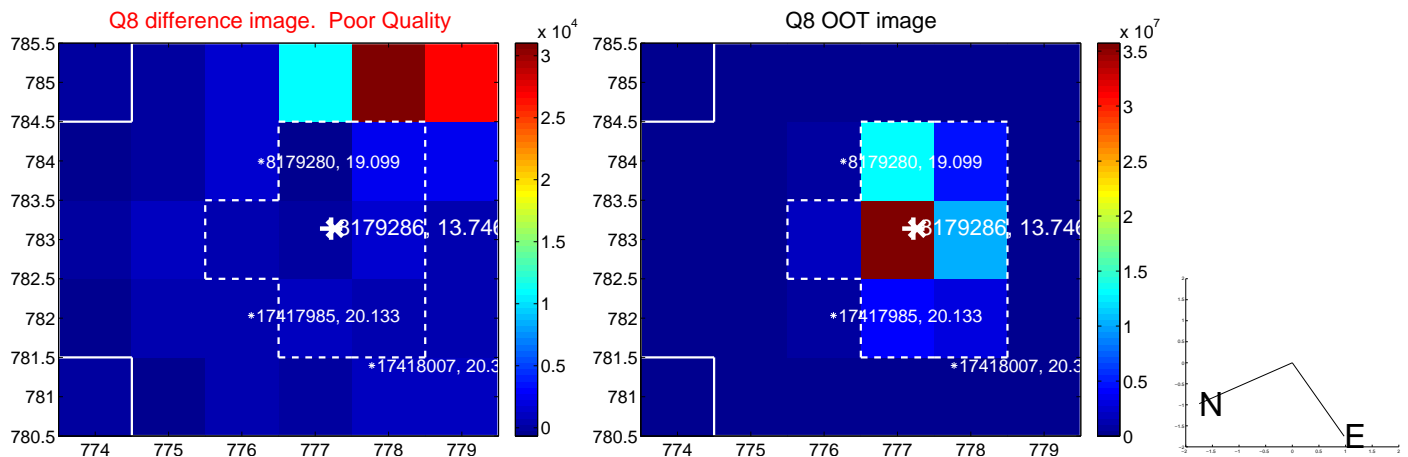
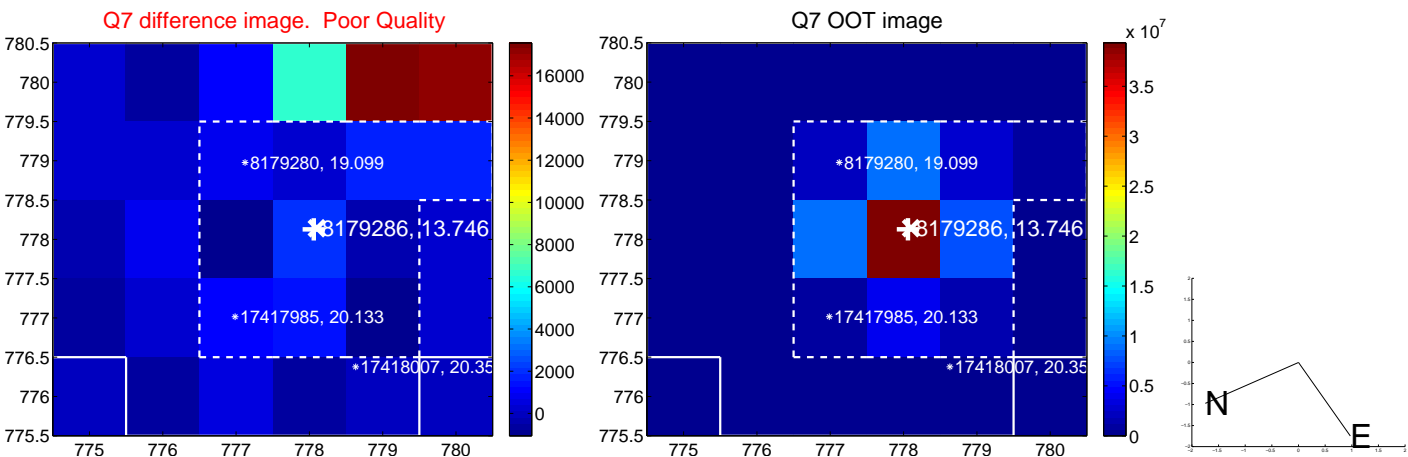
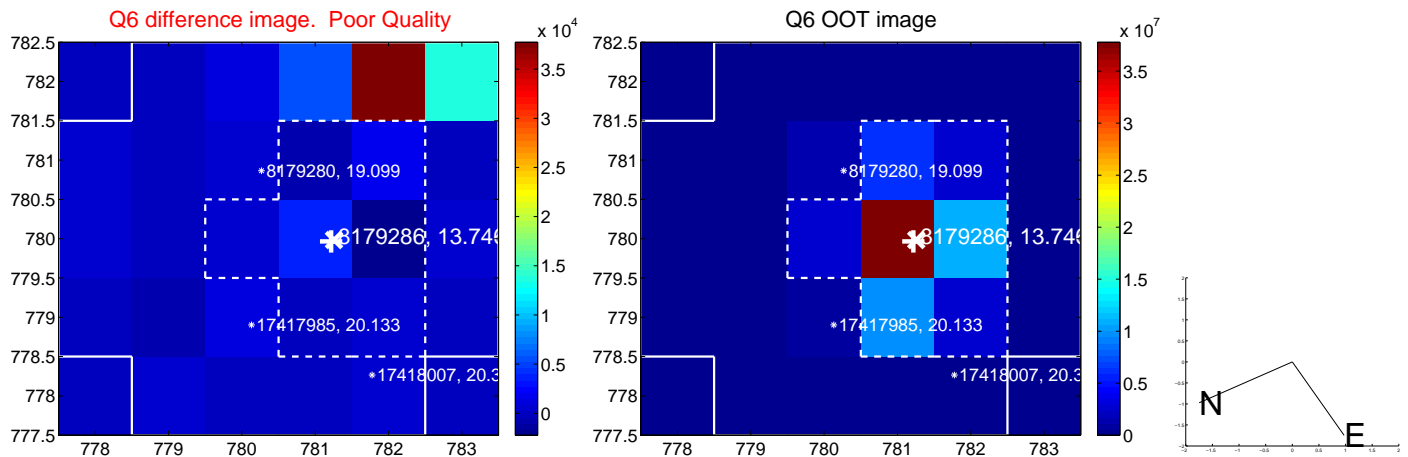
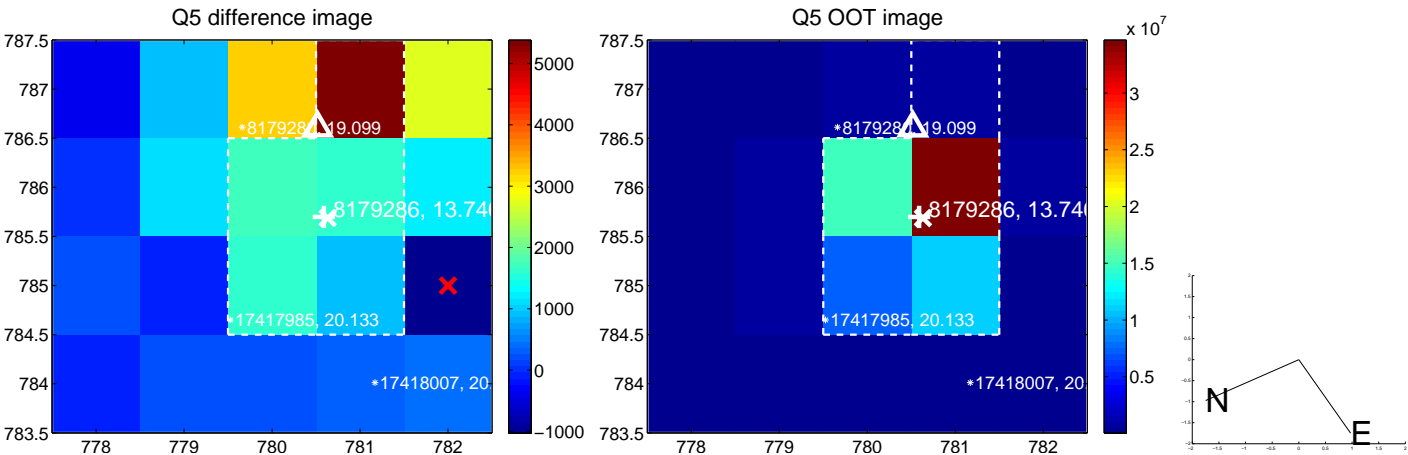


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

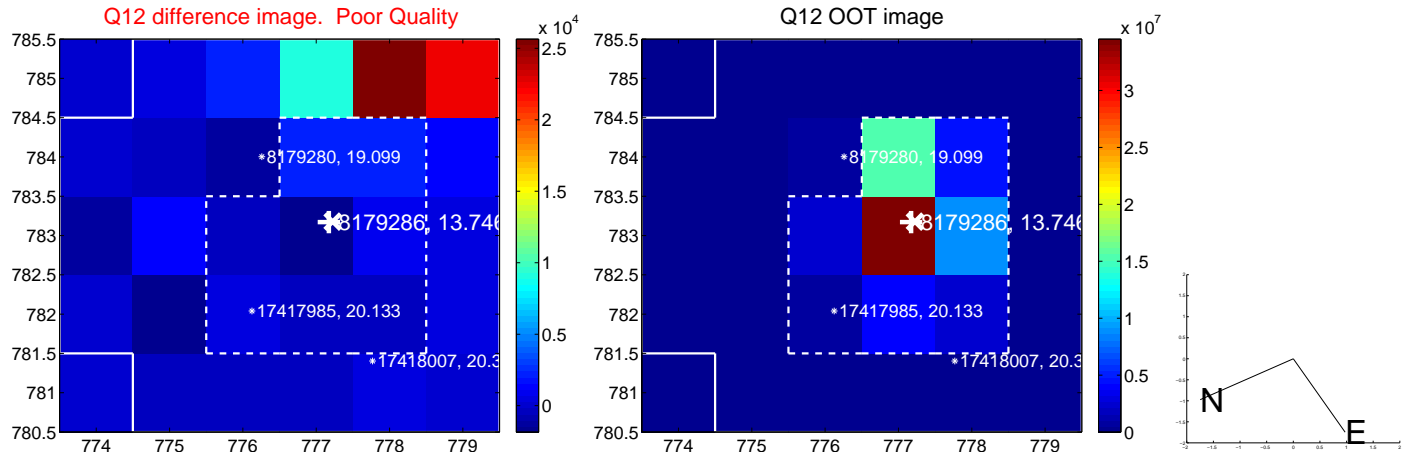
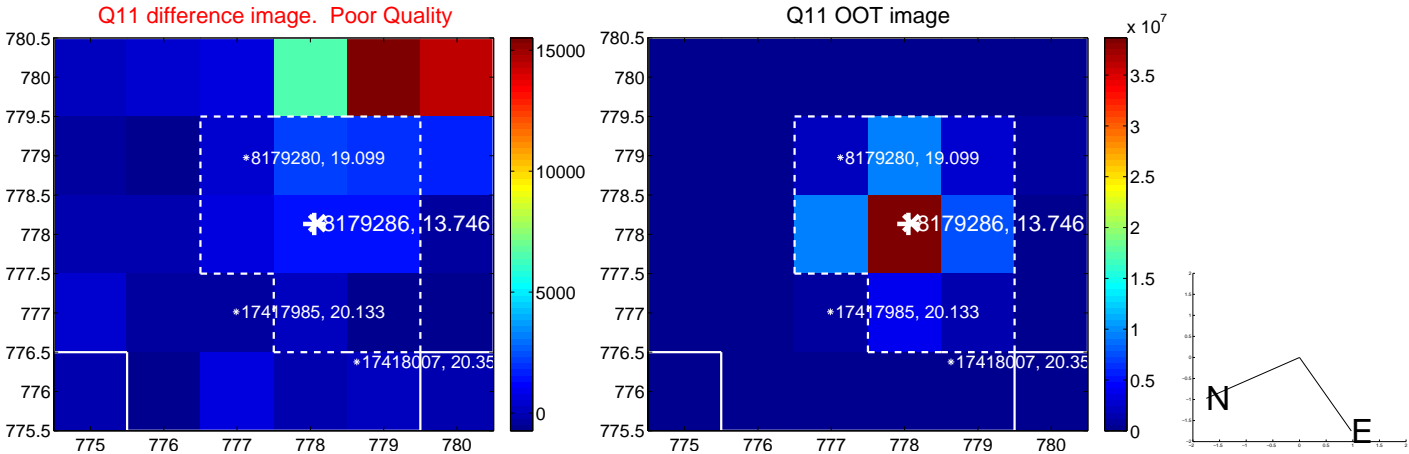
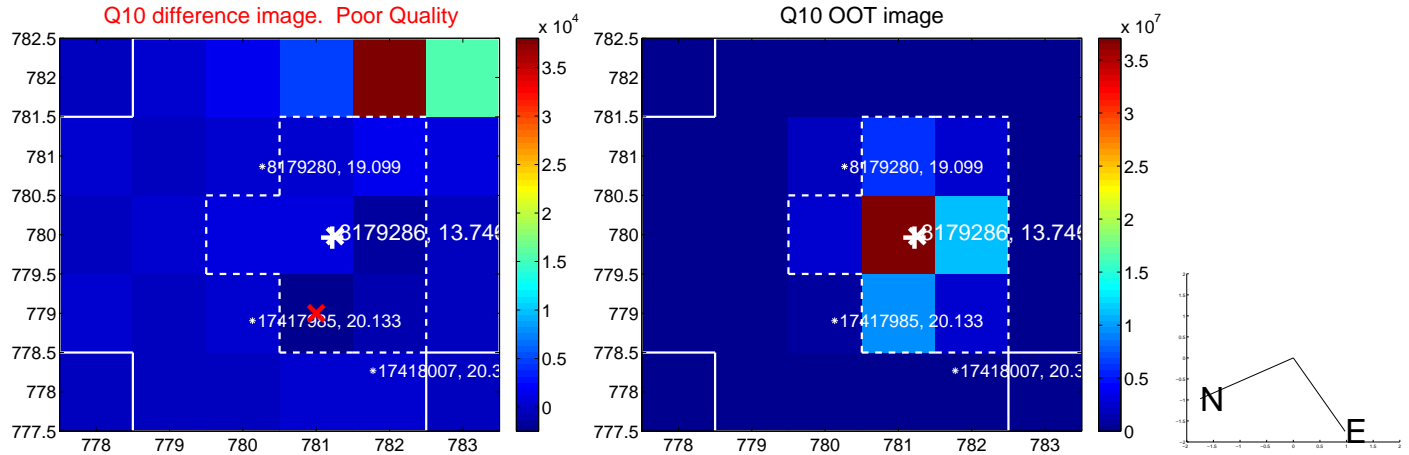
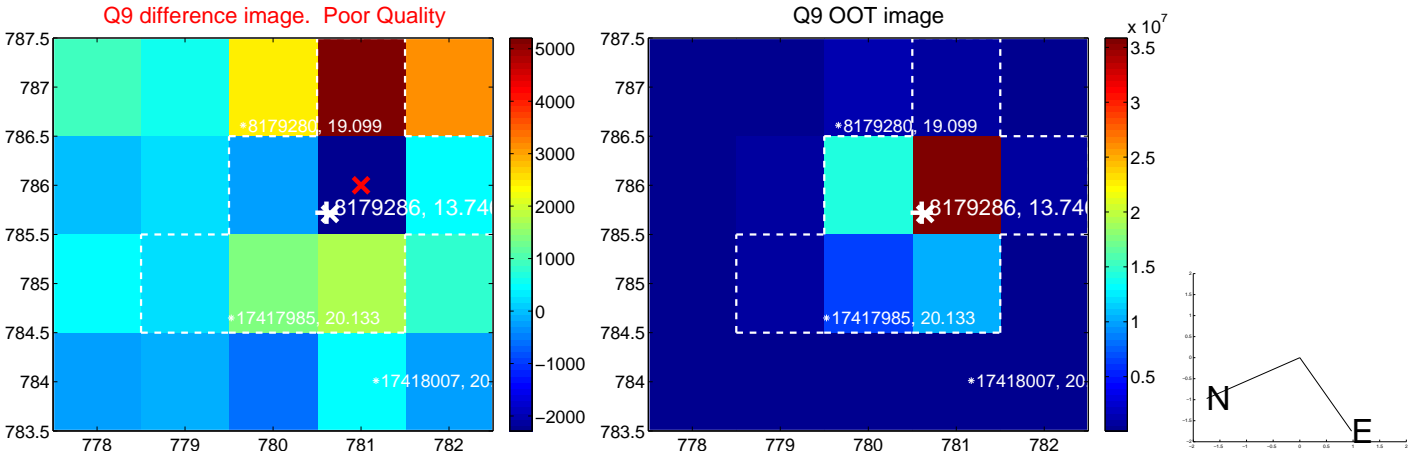
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



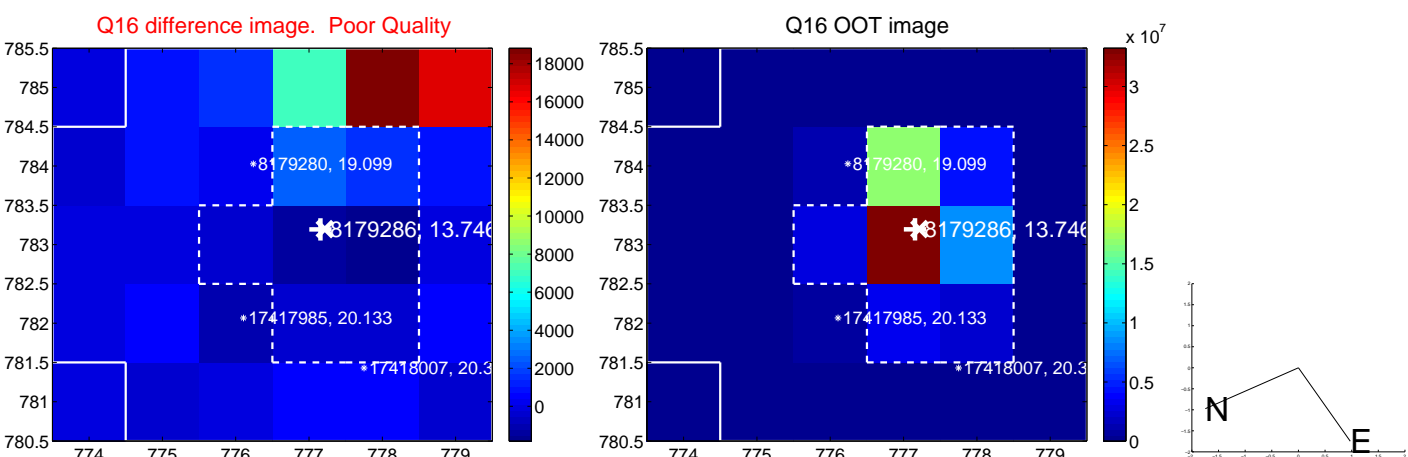
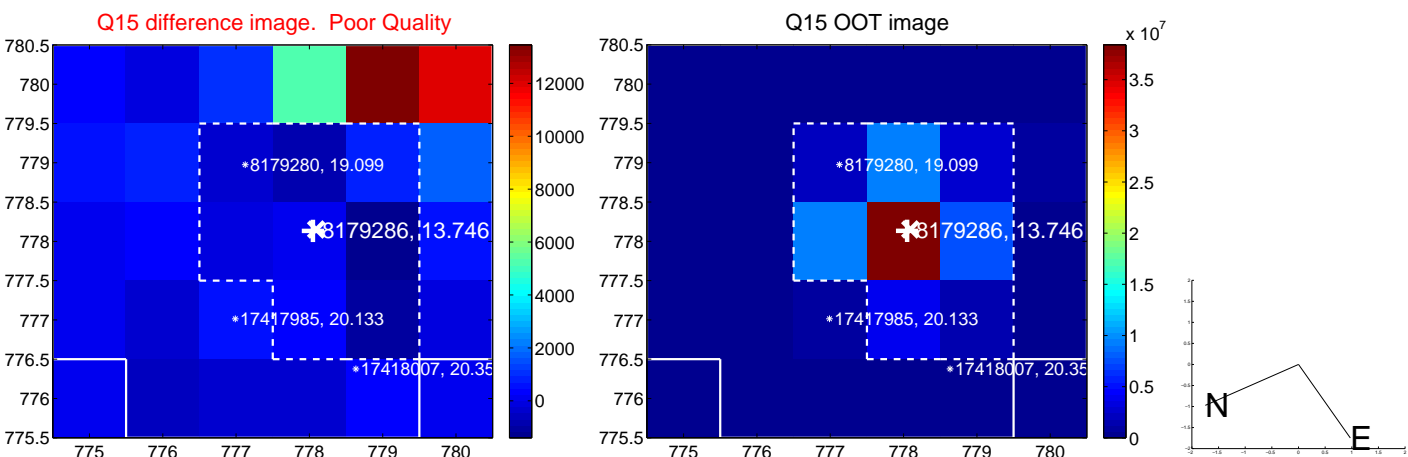
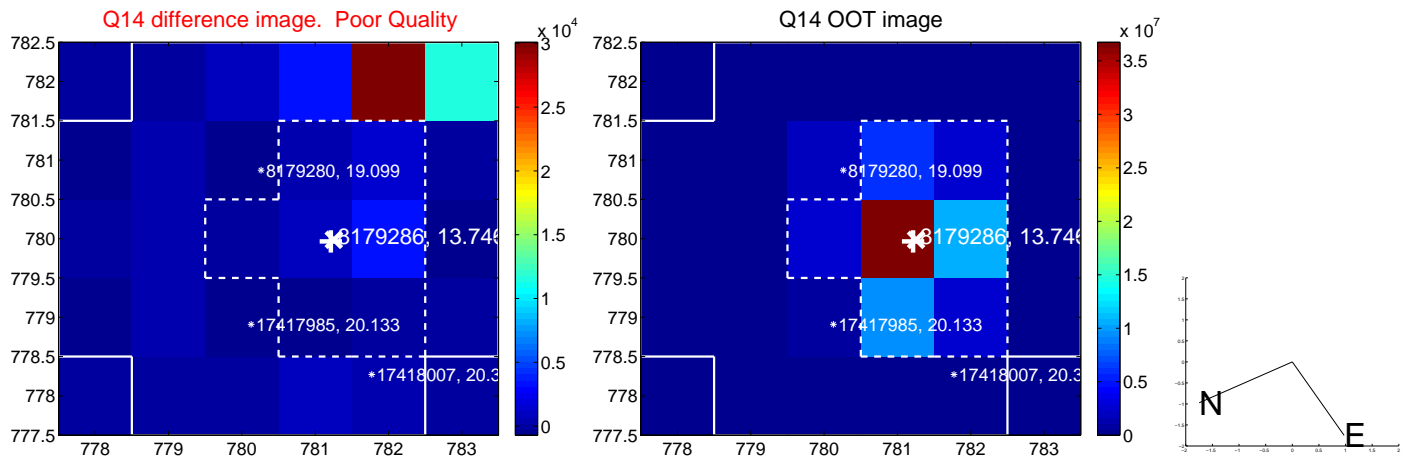
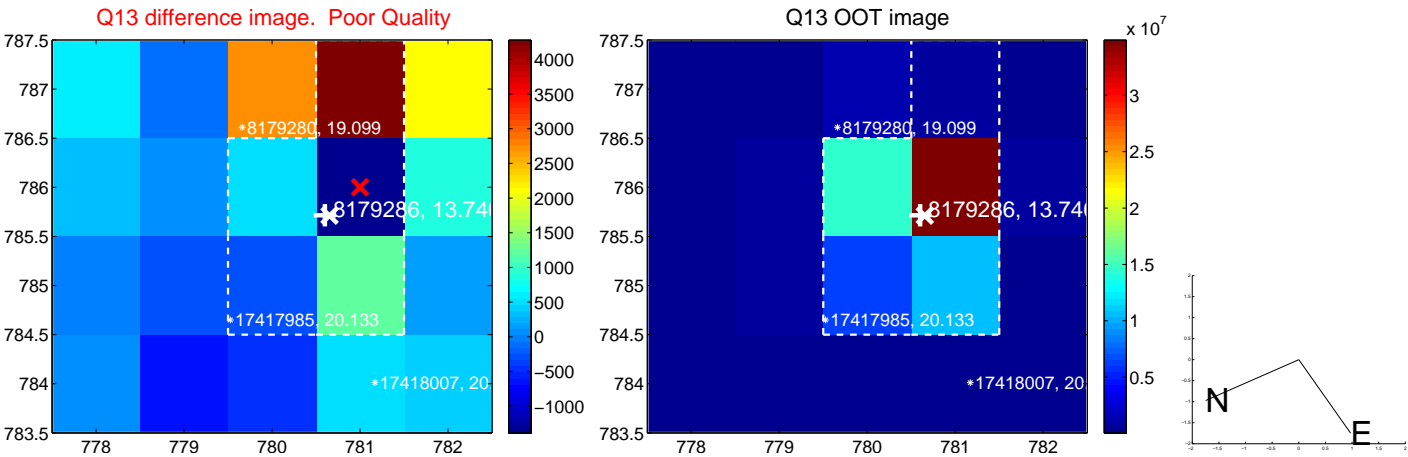
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



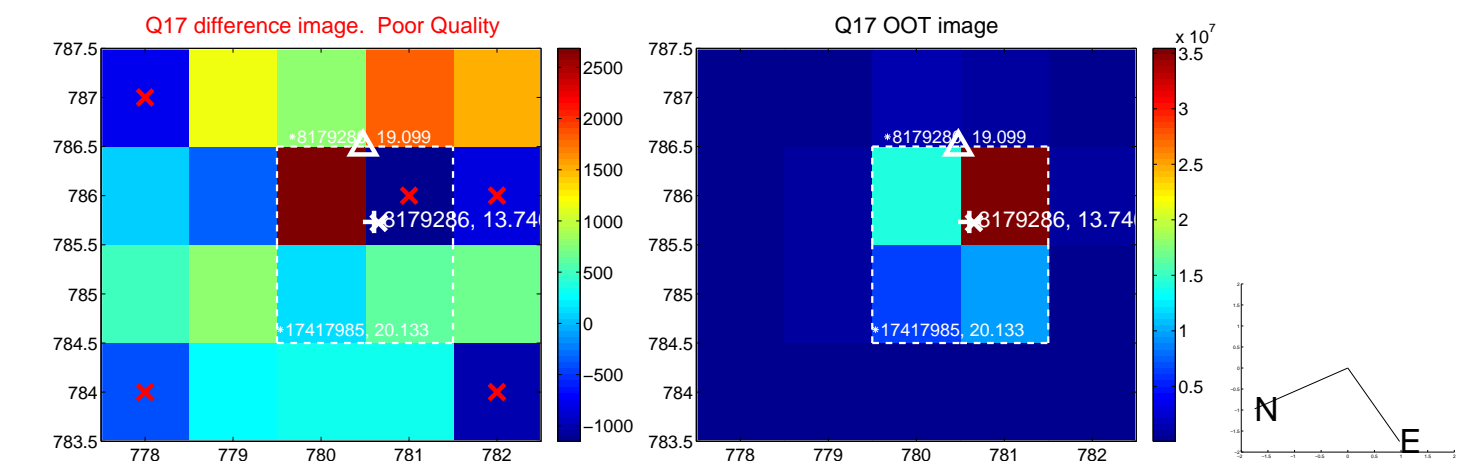
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



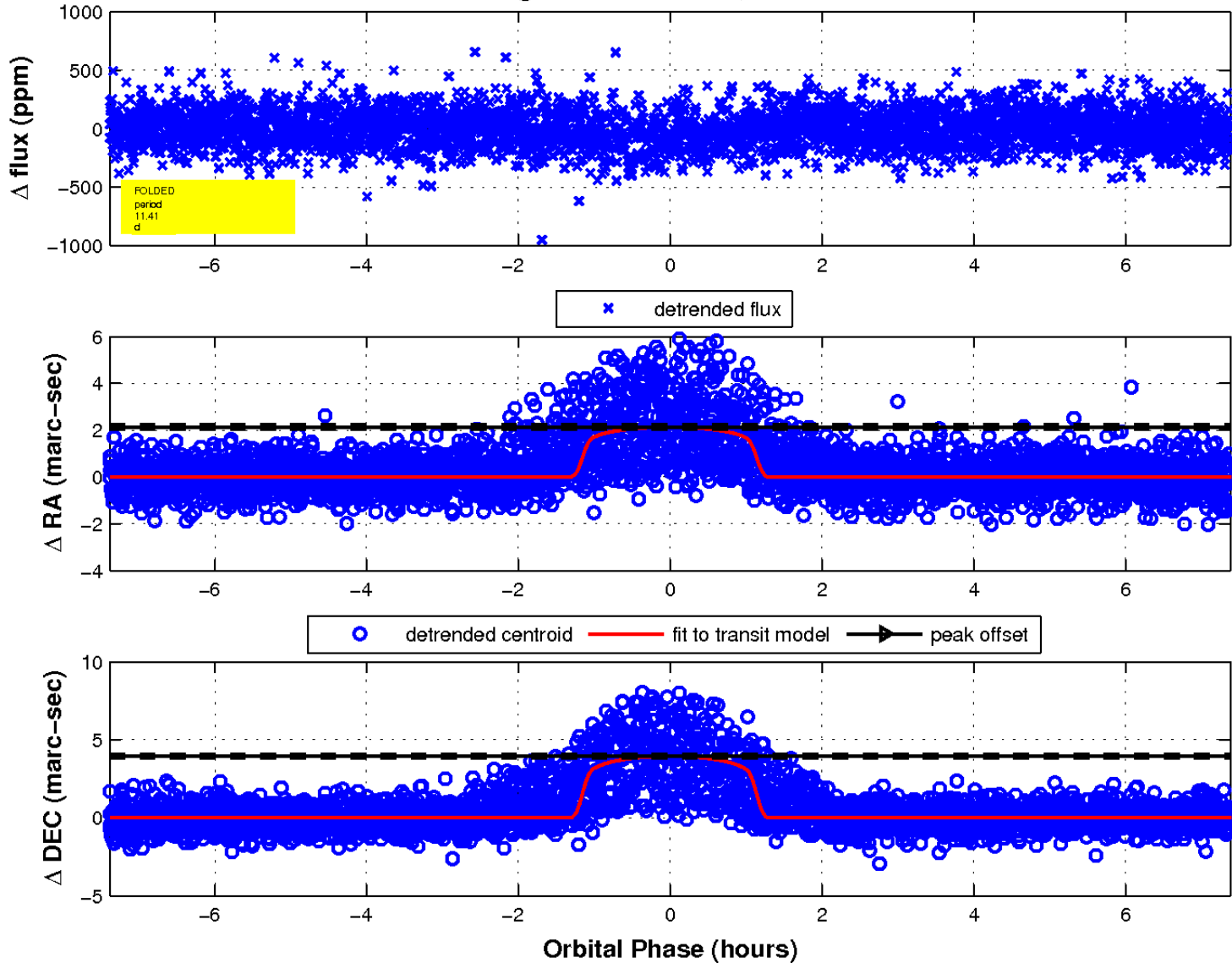
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

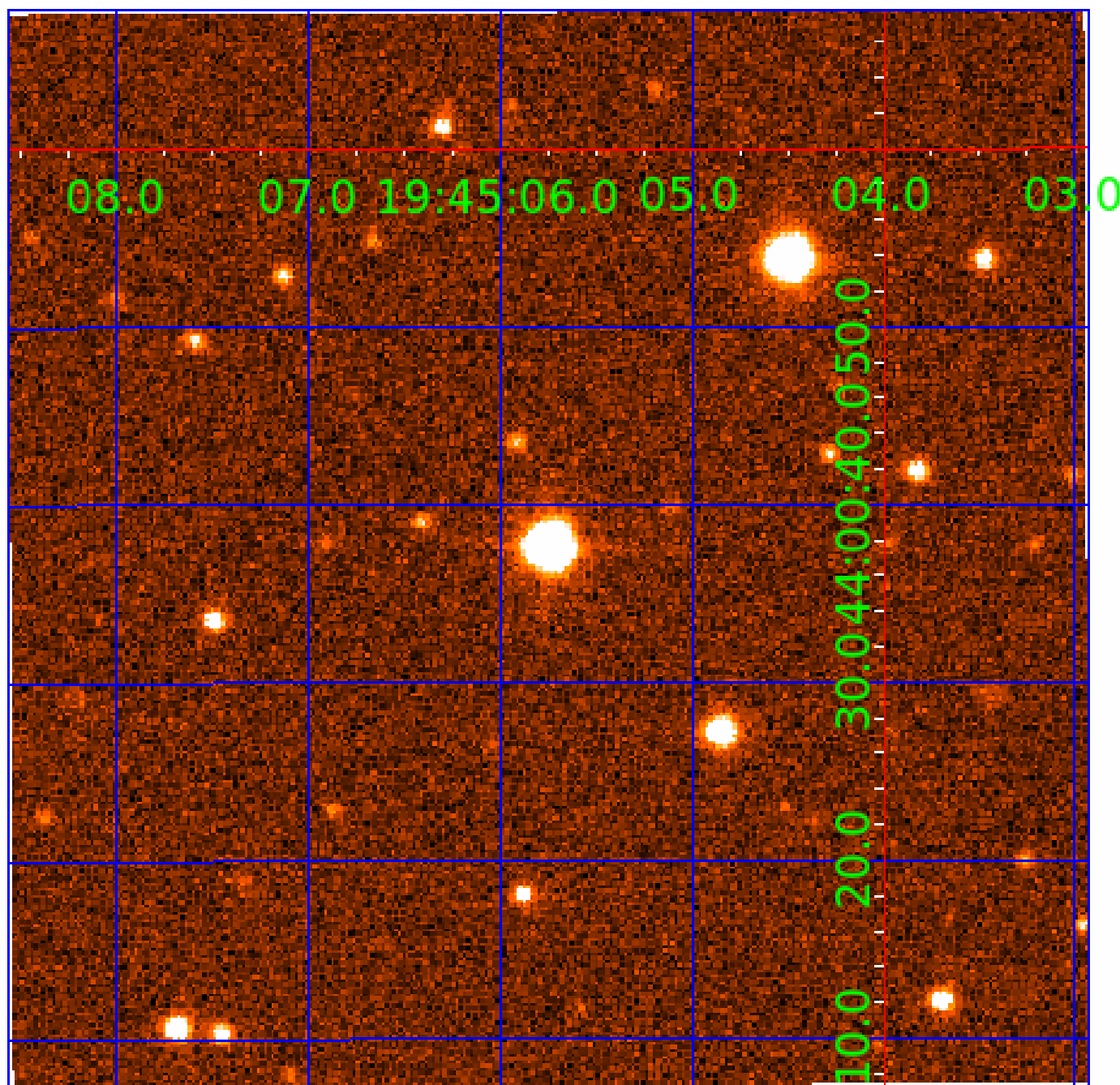


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 008179286

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})
008179286-01	OBS	7869.01	11.413230	140.120971	71.9	2.463	8.7	9.6	1.16	6188	1.18	173.36
008179286-02	OBS	No	11.412697	135.118623	50.0	3.623	7.6	7.9	1.16	6188	0.94	173.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008179286-01	OBS	FP	0.00	0	1	1	0	HAS_SEC_TCE—CENT_RESOLVED_OFFSET
008179286-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

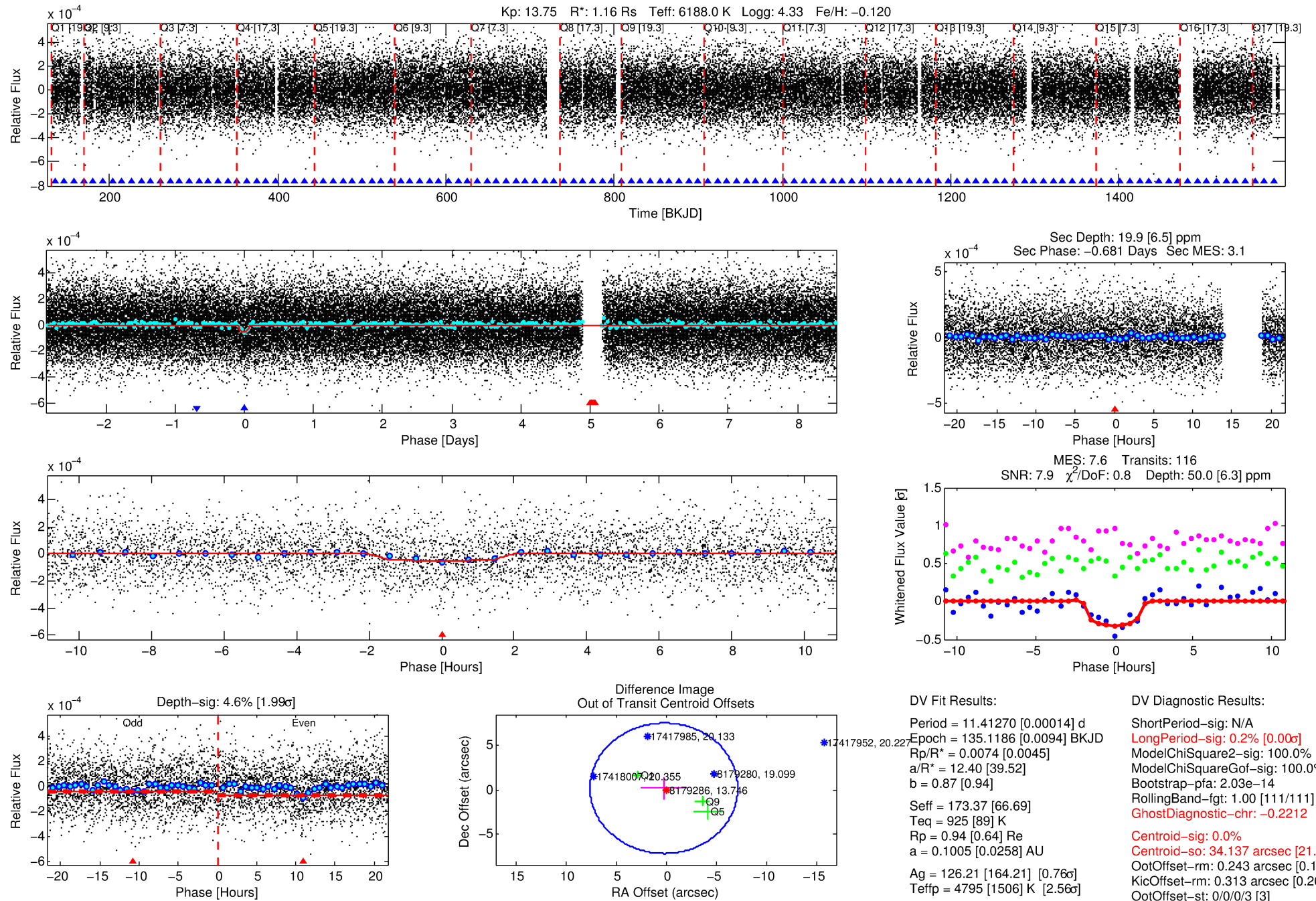
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008179286-02

No Significant Match Found

DV One-Page Summary

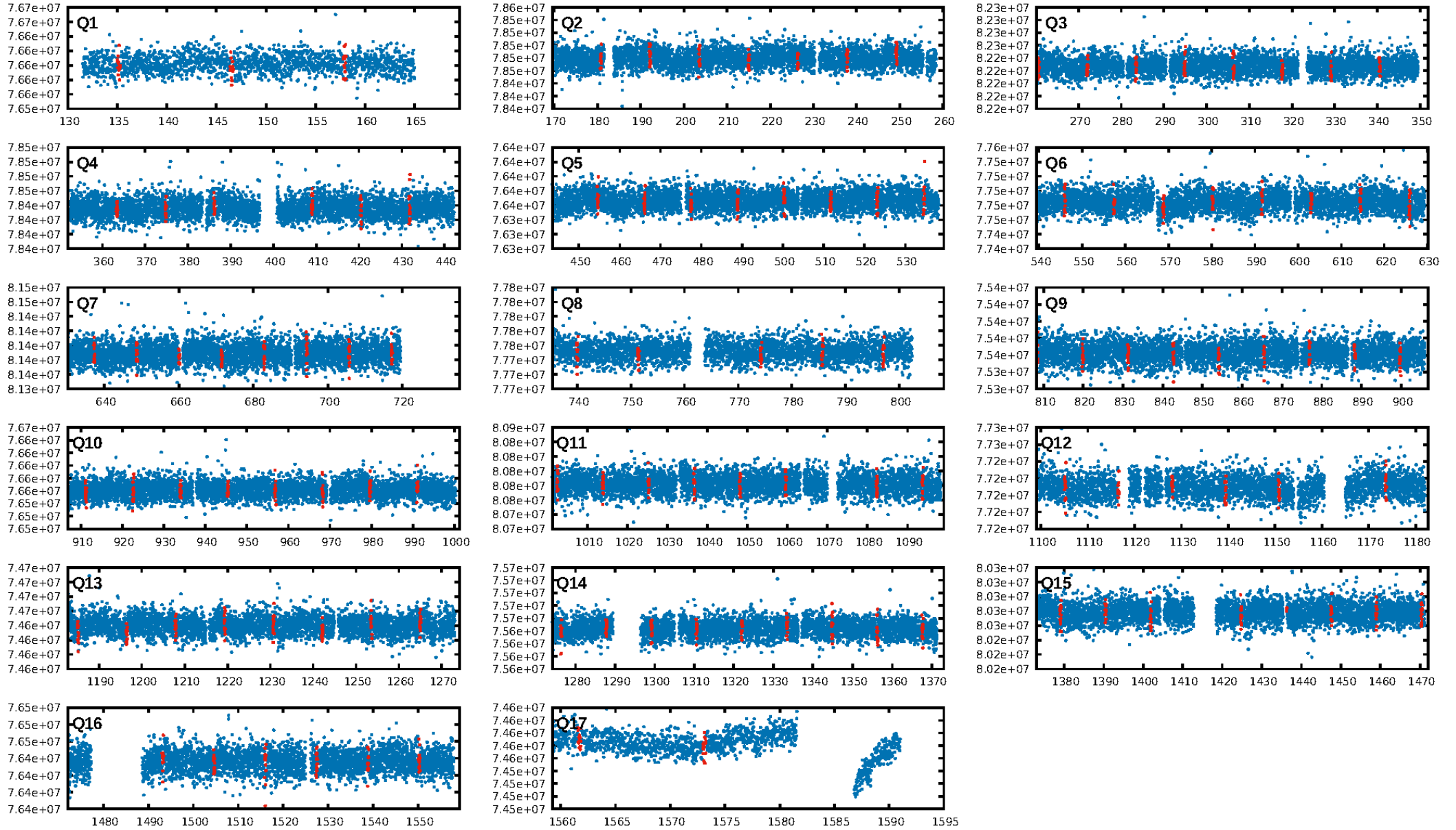
KIC: 8179286 Candidate: 2 of 2 Period: 11.413 d



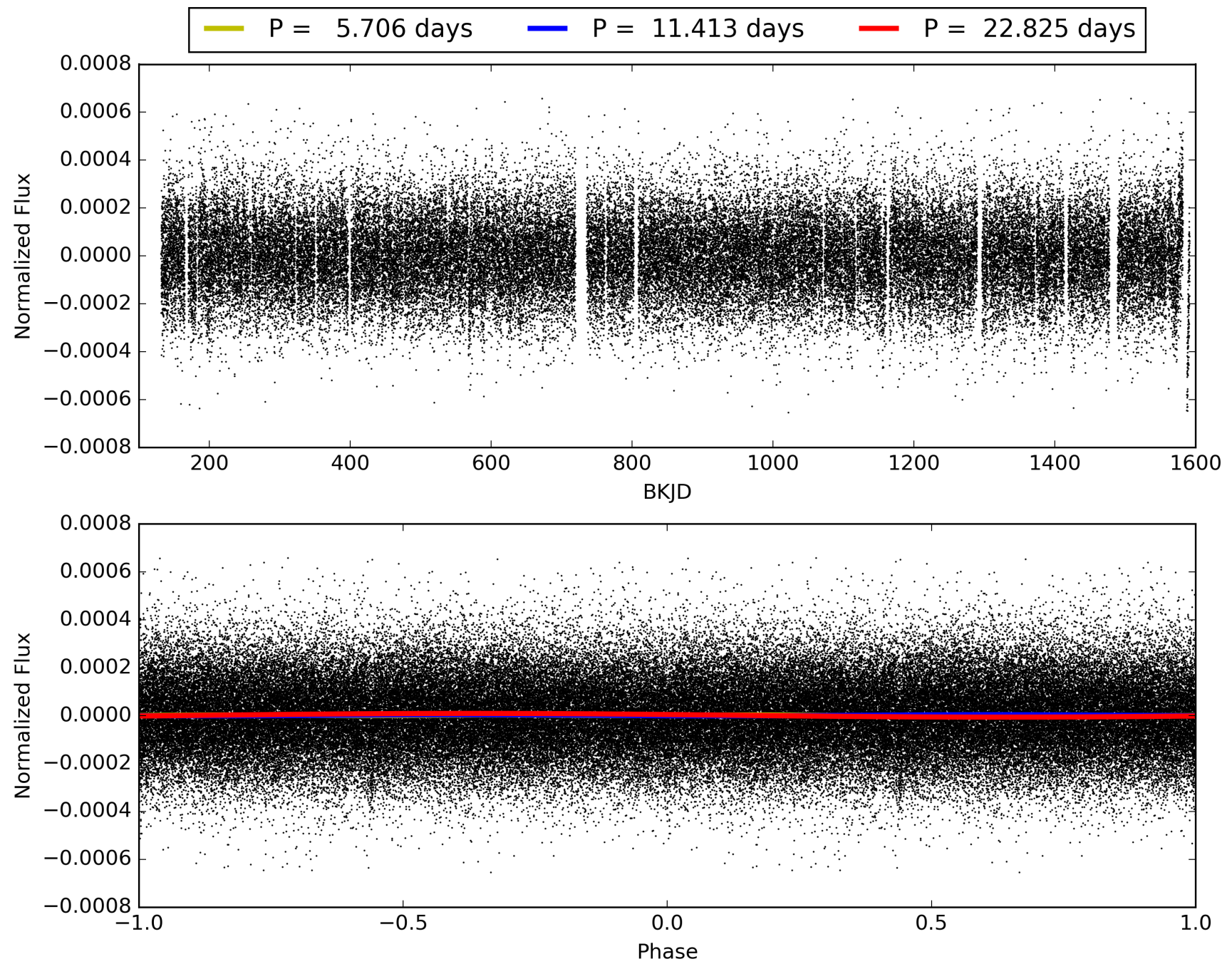
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:42:37 Z

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

TCE 008179286-02, PDC Light Curves

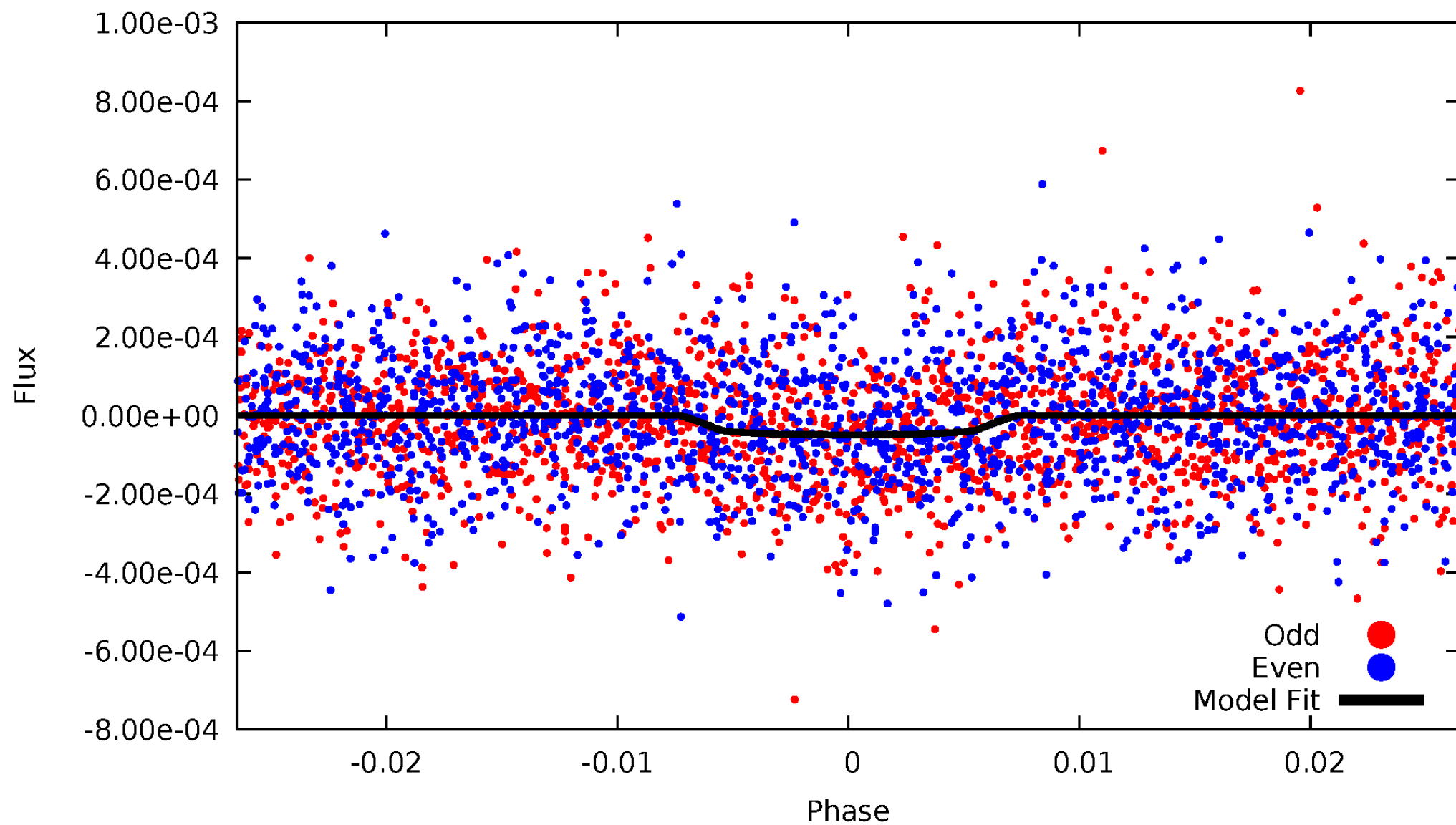


TCE 008179286-02



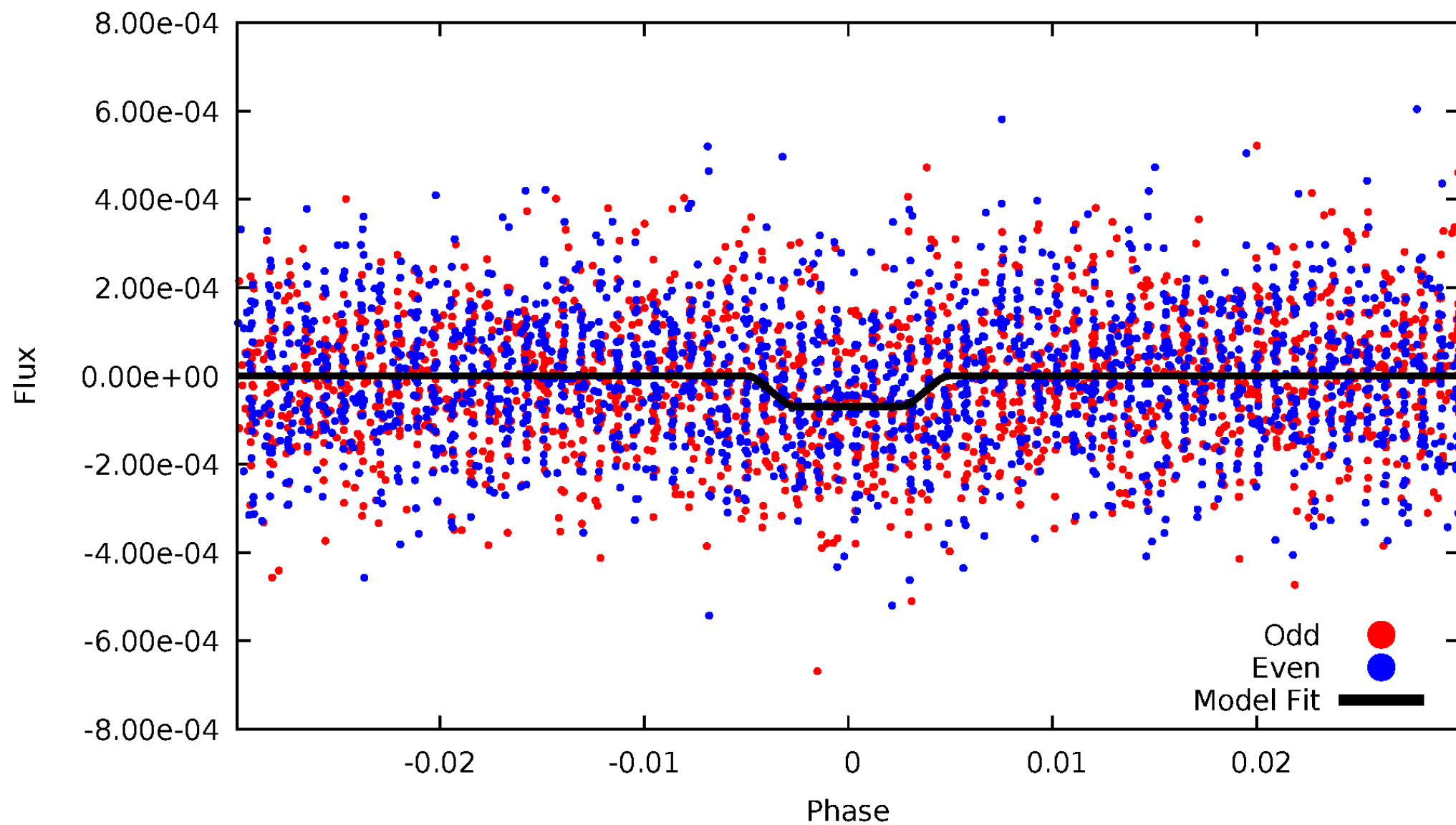
DV Odd/Even

TCE 008179286-02



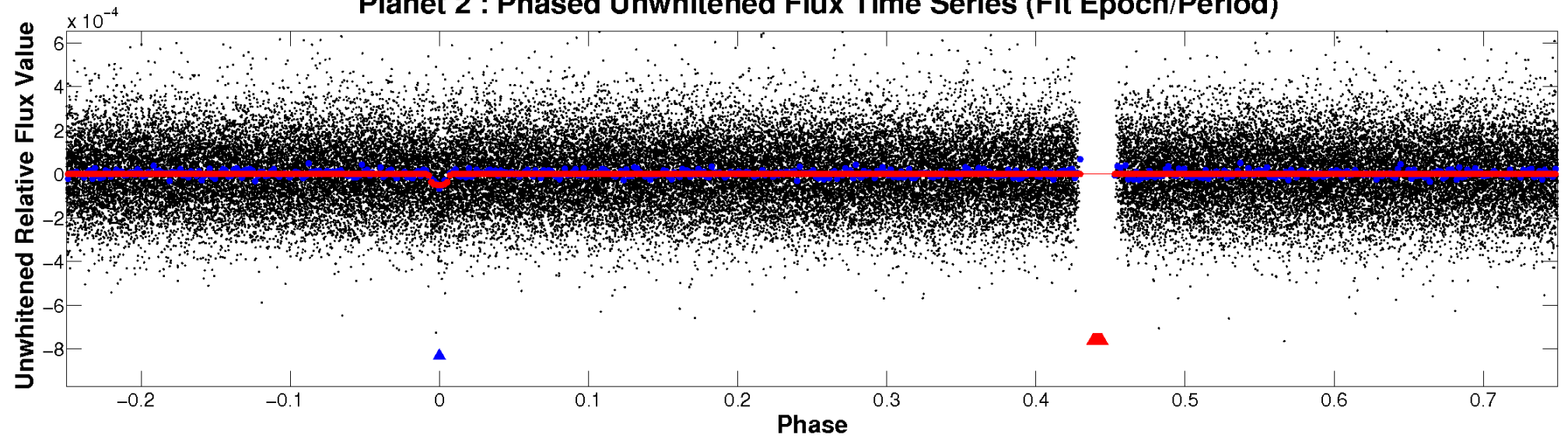
ALT Odd/Even

TCE 008179286-02

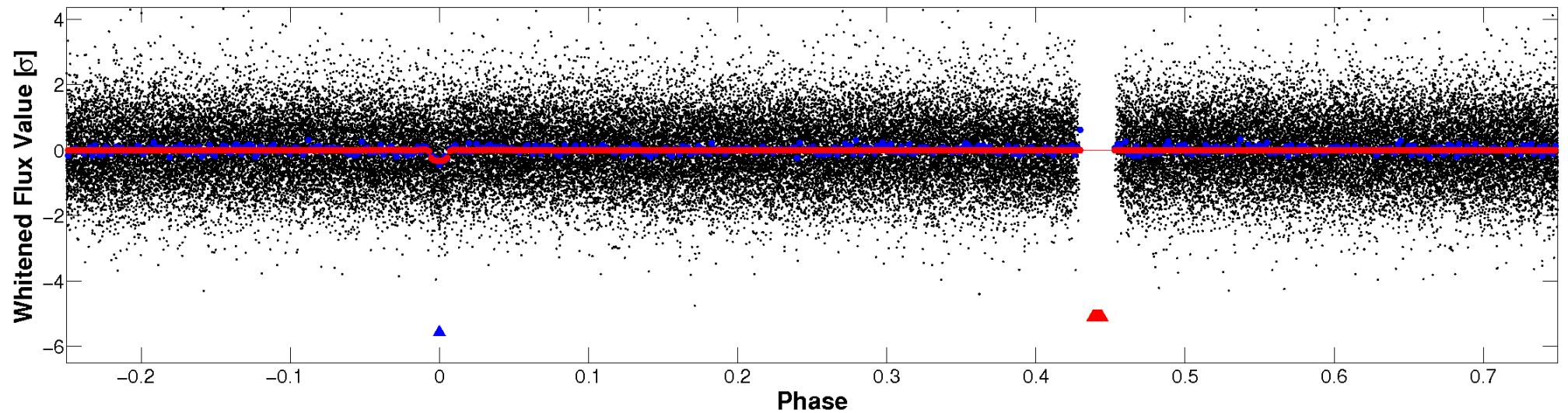


Non-Whitened Vs. Whitened Light Curve

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

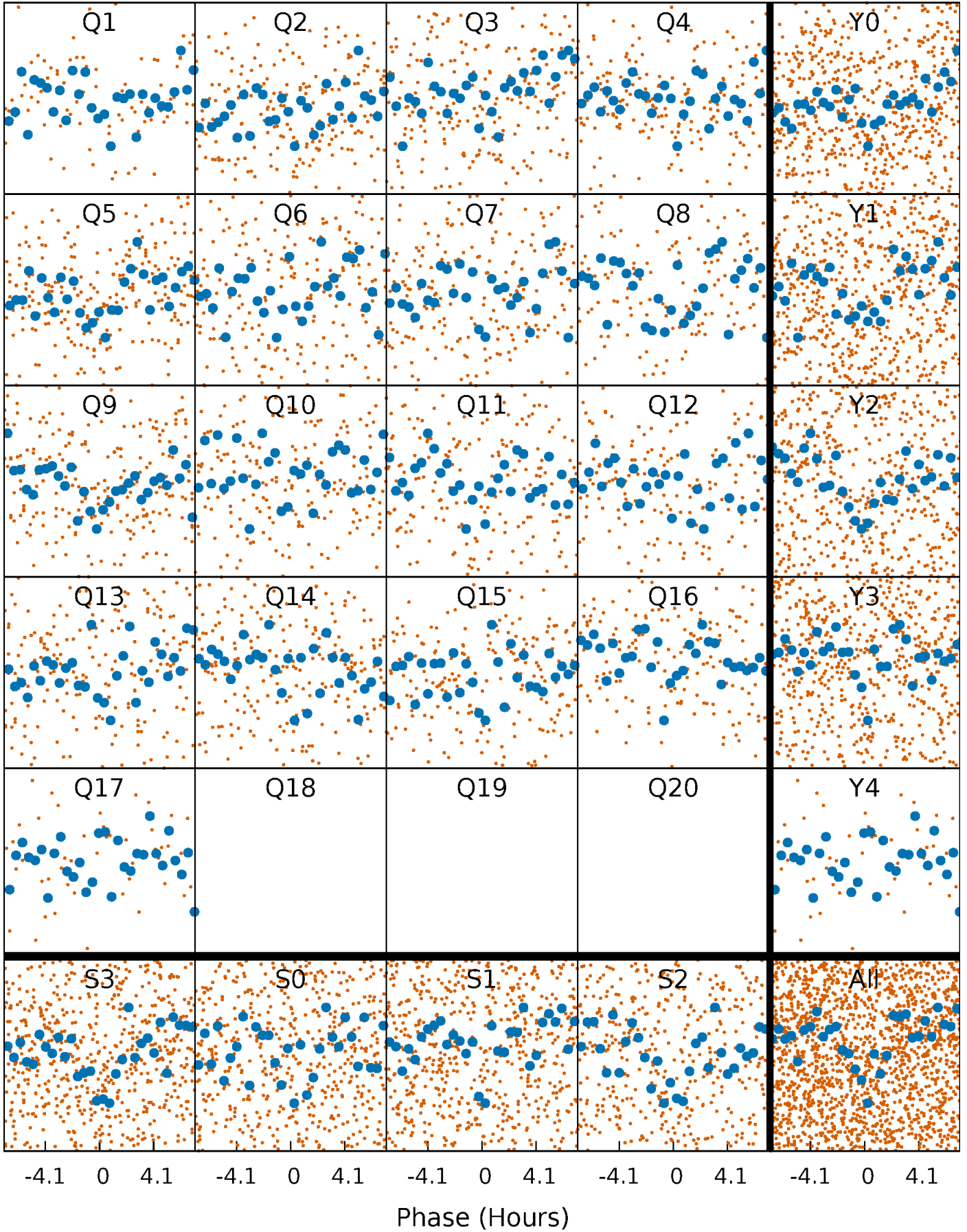


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



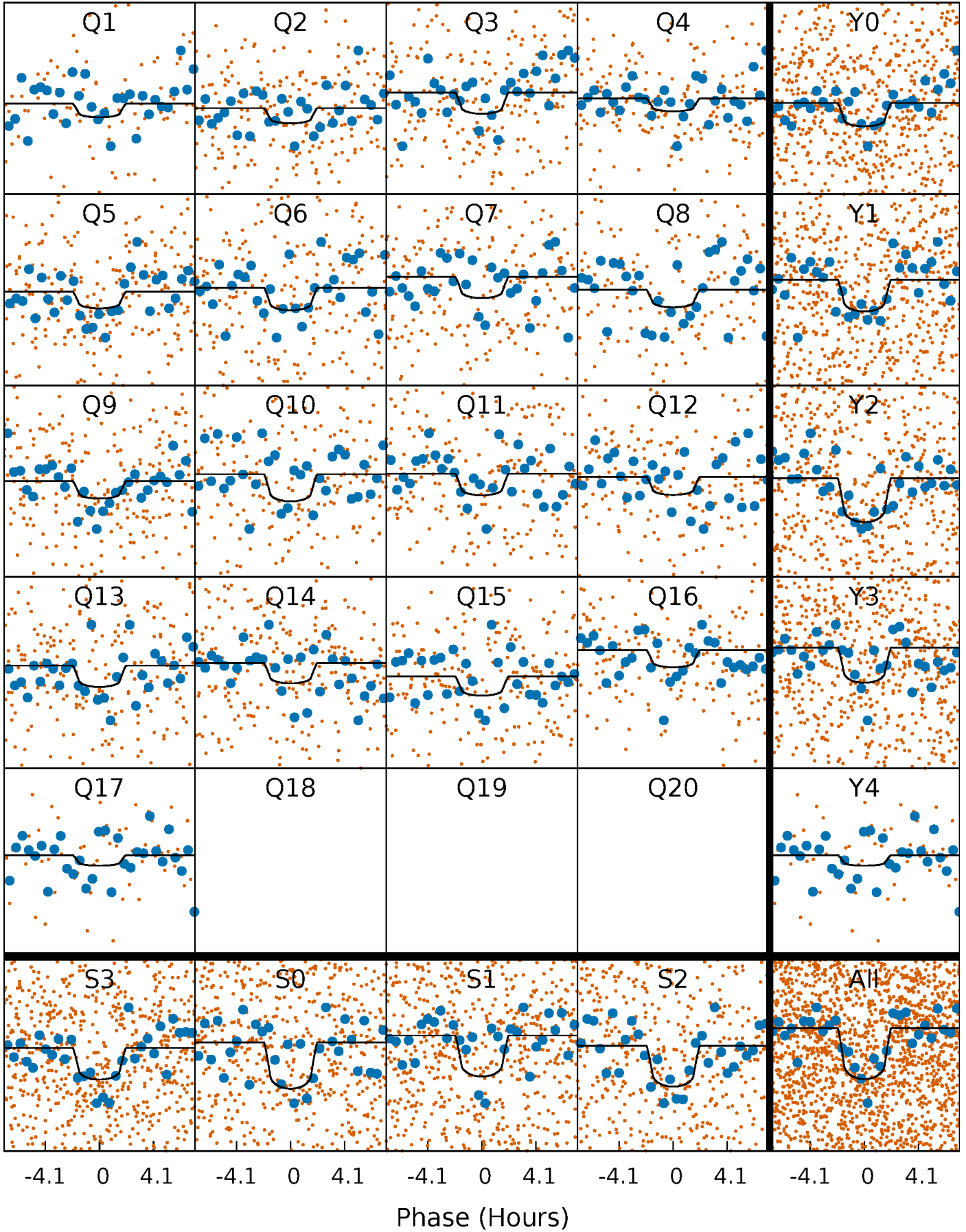
PDC Quarter-Phased Transit Curves

TCE 008179286-02 P= 11.412697 Days $T_0=135.118623$ (BKJD)



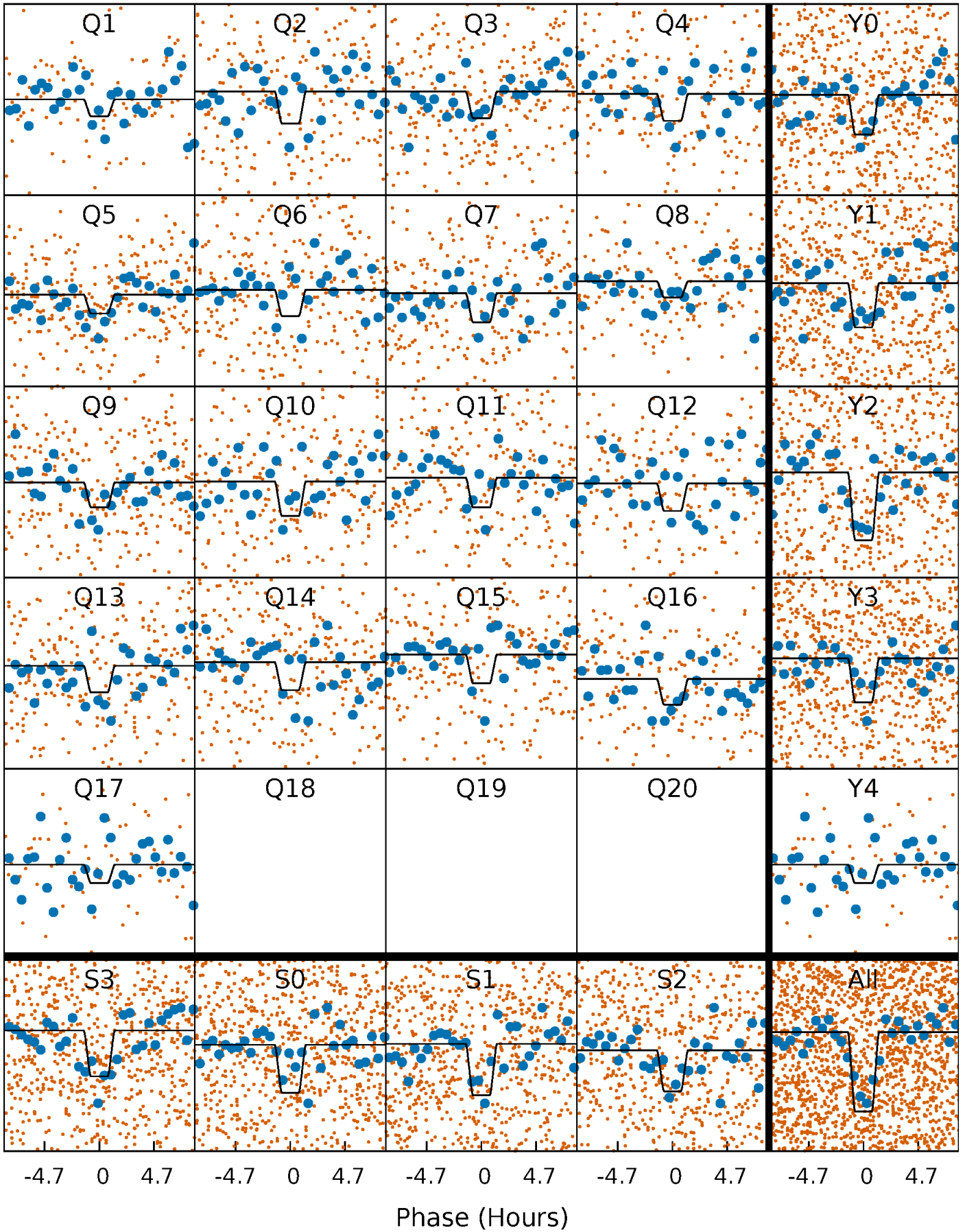
DV Quarter-Phased Transit Curves

TCE 008179286-02 P= 11.412697 Days $T_0=135.118623$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

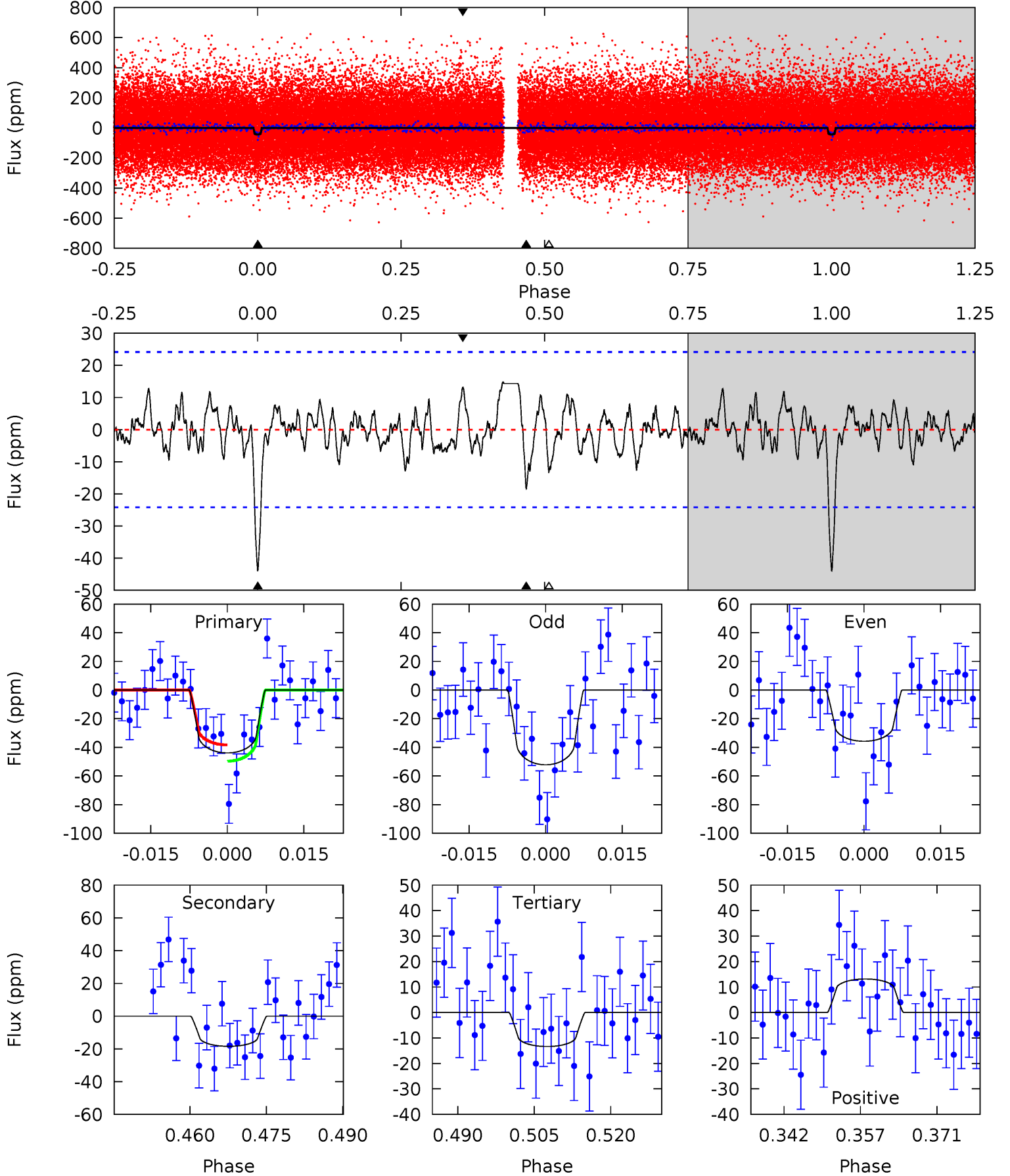
TCE 008179286-02 P= 11.412494 Days $T_0=135.134009$ (BKJD)



DV Model-Shift Uniqueness Test

008179286-02, $P = 11.412697$ Days, $E = 123.705926$ Days

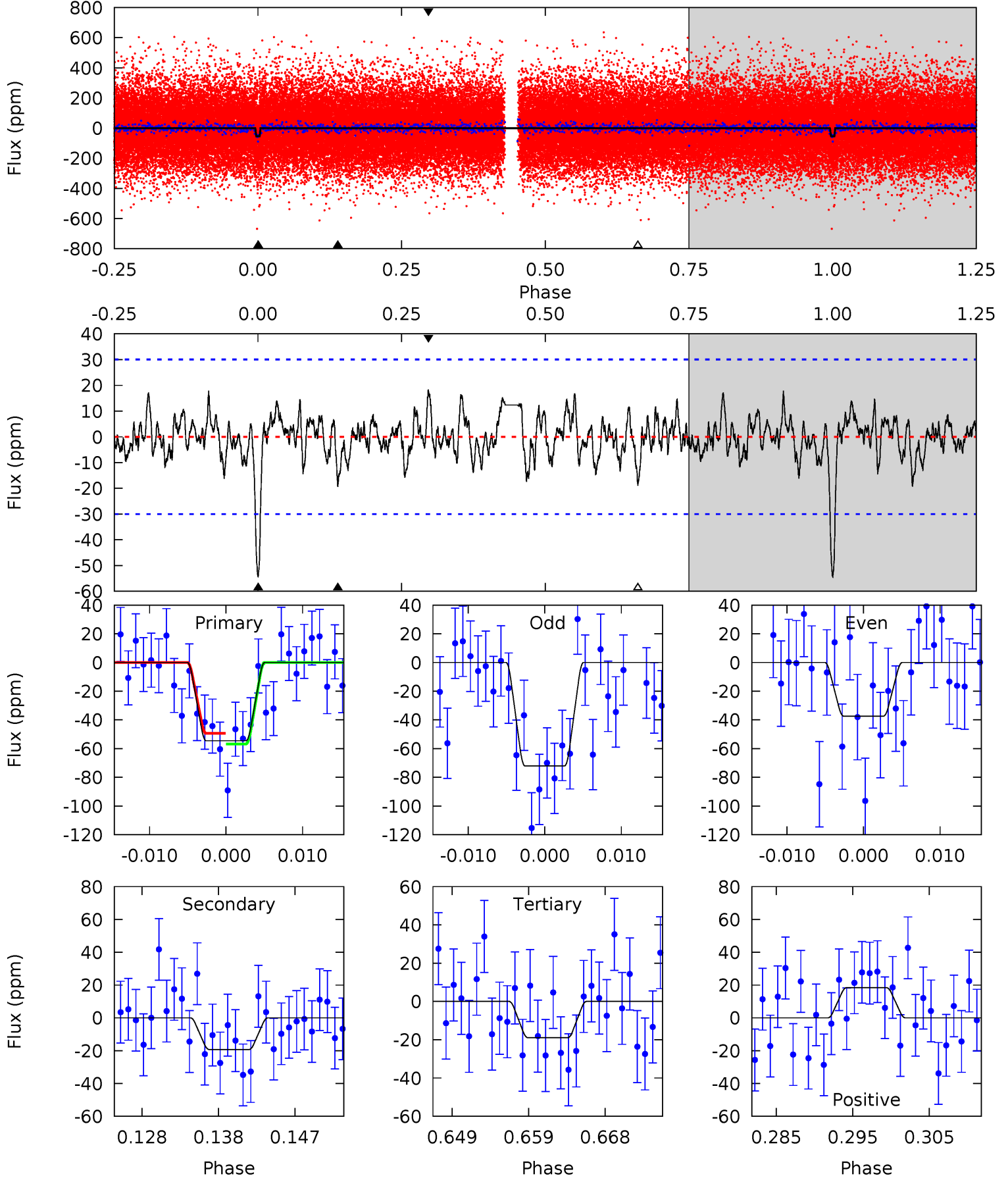
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.00	3.78	2.74	2.70	4.95	2.44	1.04	6.26	6.30	1.04	1.08	1.69	1.03	0.25	1.17



Alt Model-Shift Uniqueness Test

008179286-02, $P = 11.412494$ Days, $E = 123.721515$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.14	3.23	3.17	3.08	5.03	2.58	1.09	5.96	6.05	0.06	0.15	2.90	0.84	0.25	0.62



Stellar Parameters For KIC 008179286

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6188^{+166}_{-203}	$4.330^{+0.128}_{-0.192}$	$-0.120^{+0.250}_{-0.300}$	$1.155^{+0.363}_{-0.195}$	$1.038^{+0.183}_{-0.122}$	$0.949^{+0.495}_{-0.492}$
	+3%/-3%	+3%/-4%	+208%/-250%	+31%/-17%	+18%/-12%	+52%/-52%
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 008179286-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-18 ± 5	$1.01^{+0.55}_{-0.54}$	1299^{+98}_{-78}	4646^{+2221}_{-719}	96^{+375}_{-59}
Alt.	-19 ± 6	$1.12^{+0.59}_{-0.53}$	1302^{+91}_{-78}	4540^{+1607}_{-720}	85^{+247}_{-52}

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

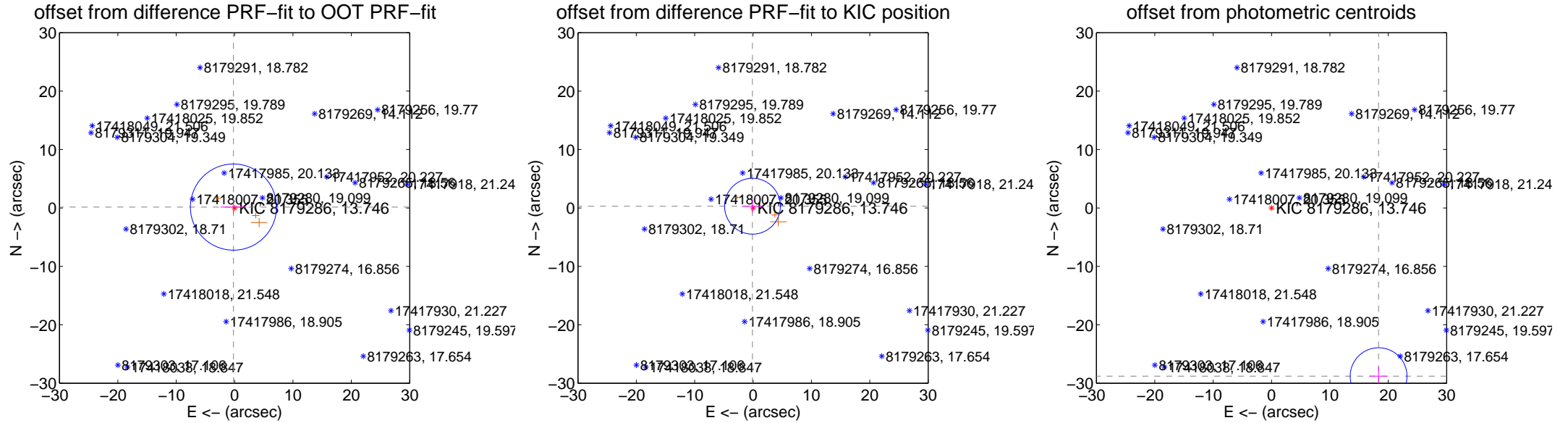
DV Centroid Data

Supplemental centroid analysis for 008179286-02. Kepler magnitude: 13.75. Transit SNR 7.93

There are 0 quarters with good PRF difference image offsets

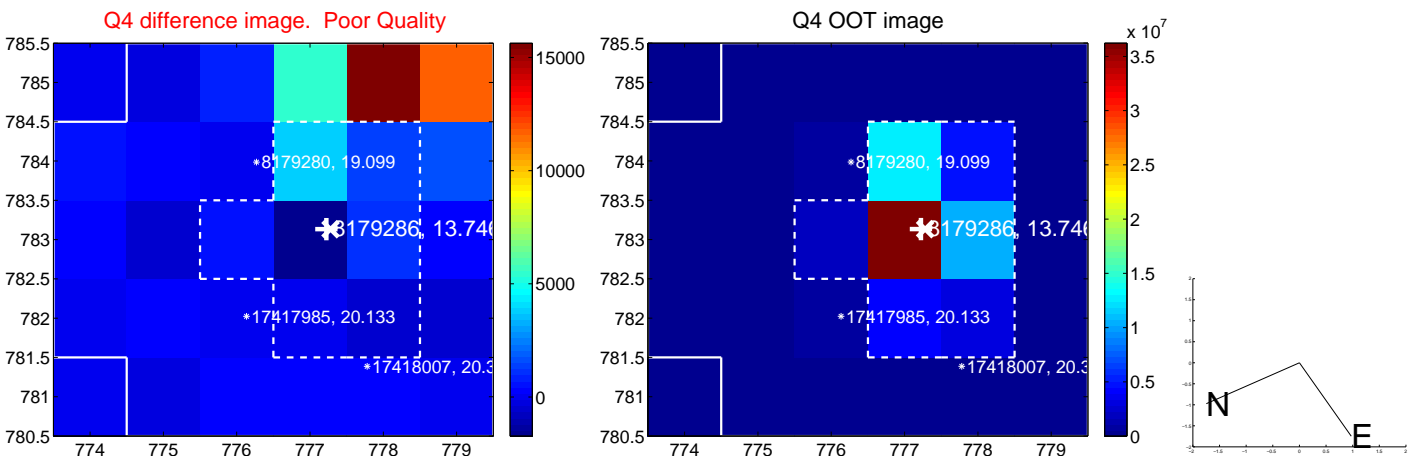
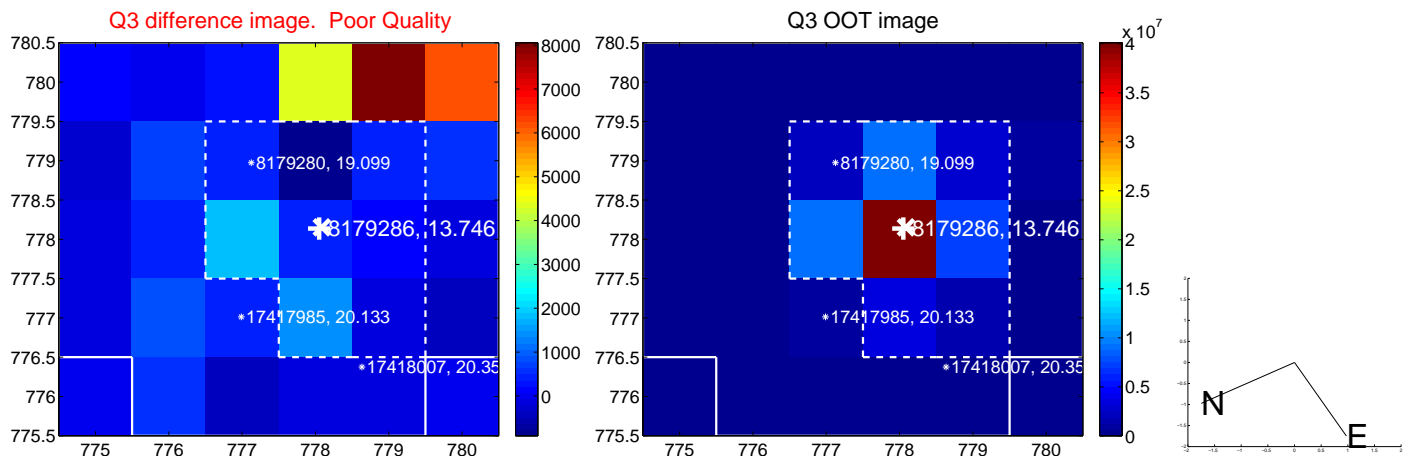
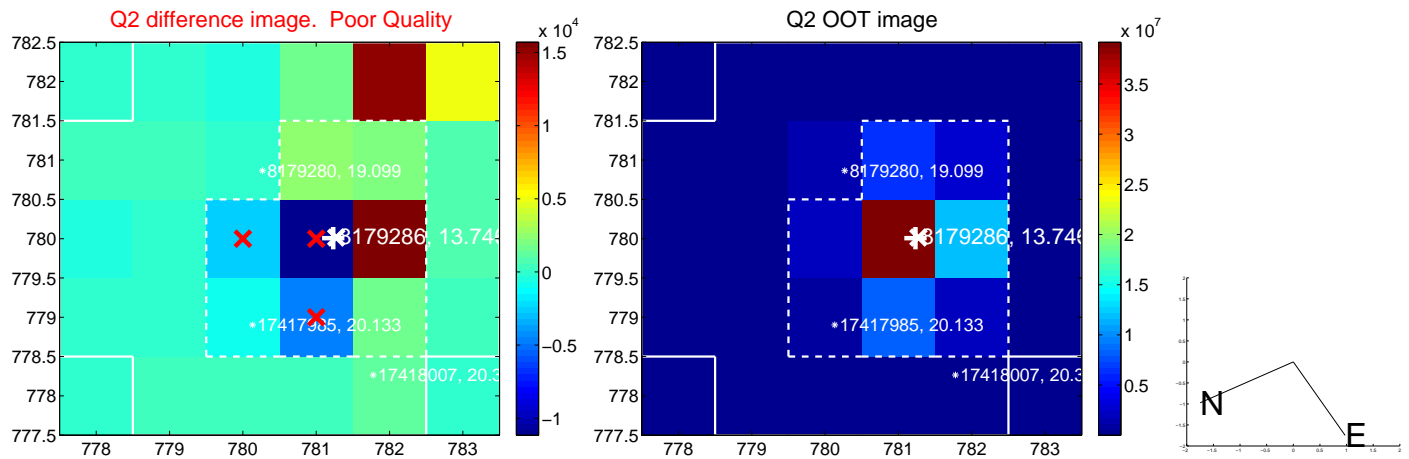
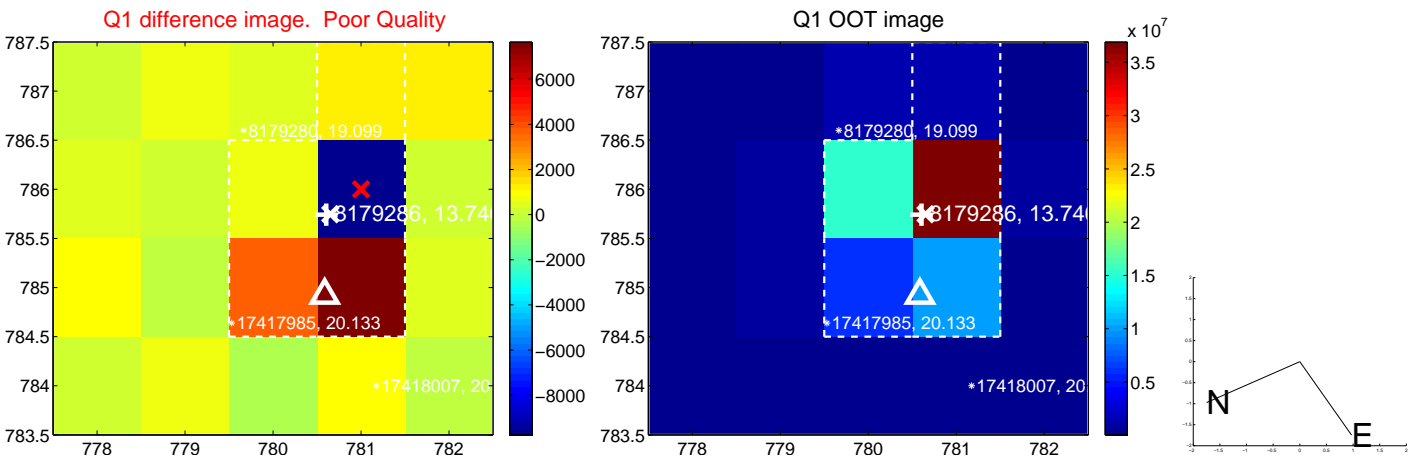
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.243 ± 2.458	0.10	0.192 ± 2.223	0.148 ± 1.151
PRF-fit source offset from KIC position	0.313 ± 1.593	0.20	0.100 ± 1.823	0.297 ± 1.077
photometric centroid source offset	34.14 ± 1.62	21.06	-18.34 ± 1.60	-28.79 ± 1.63

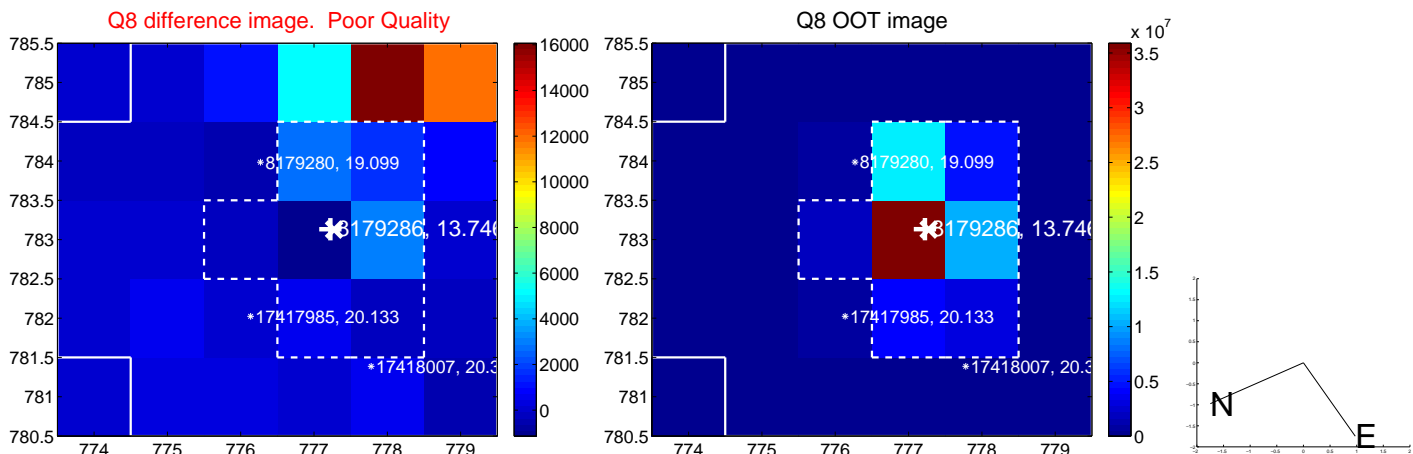
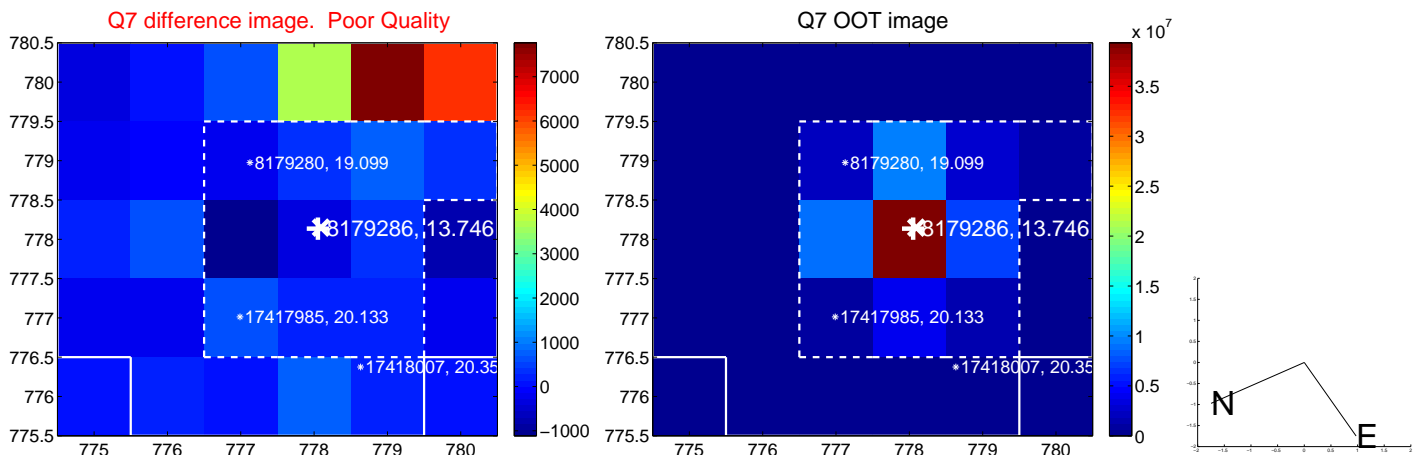
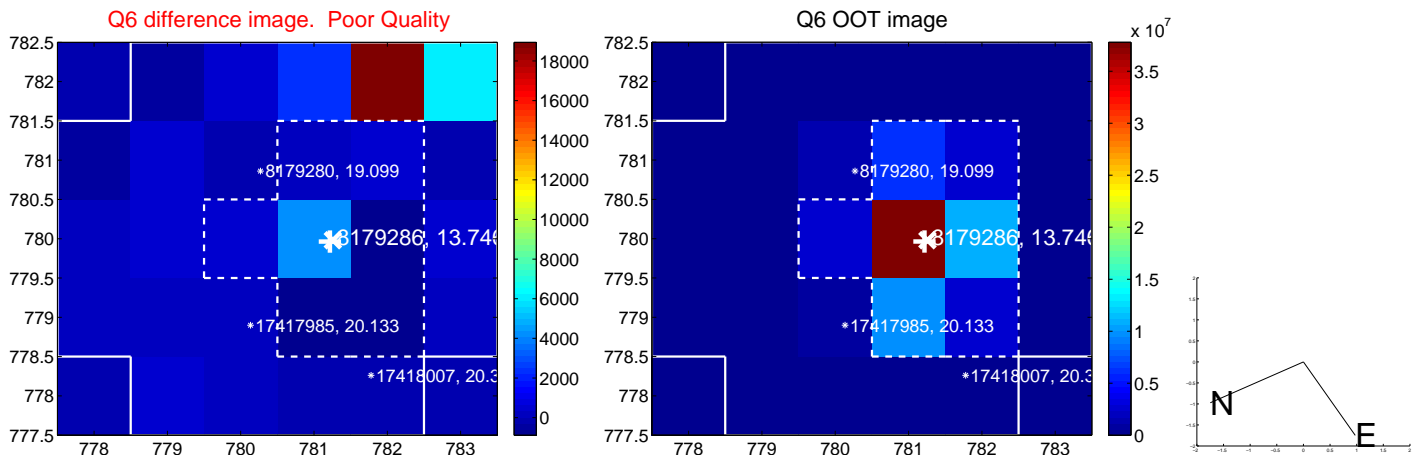
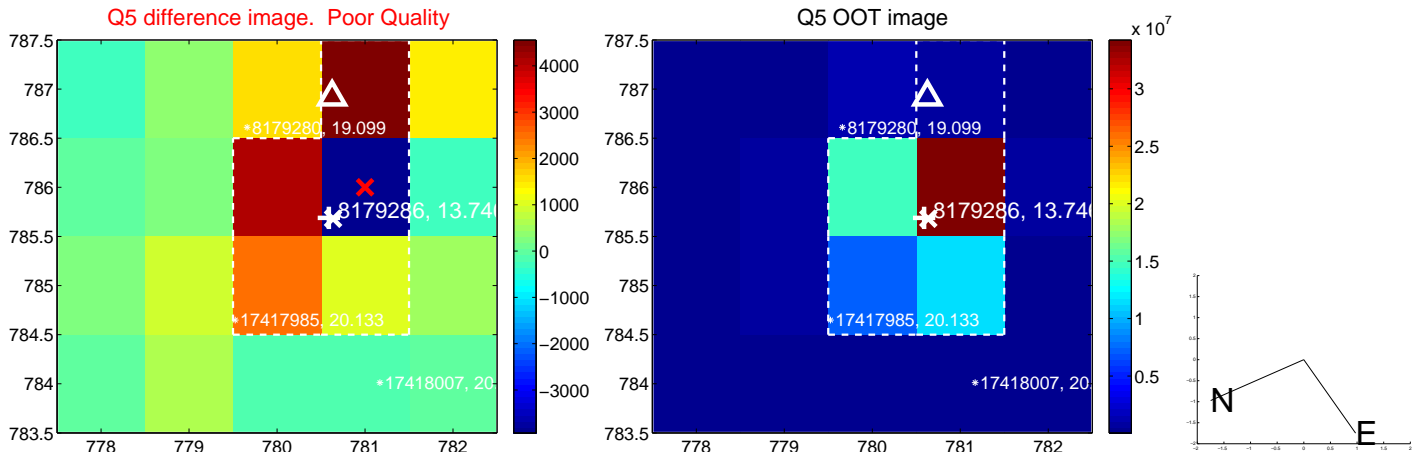


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

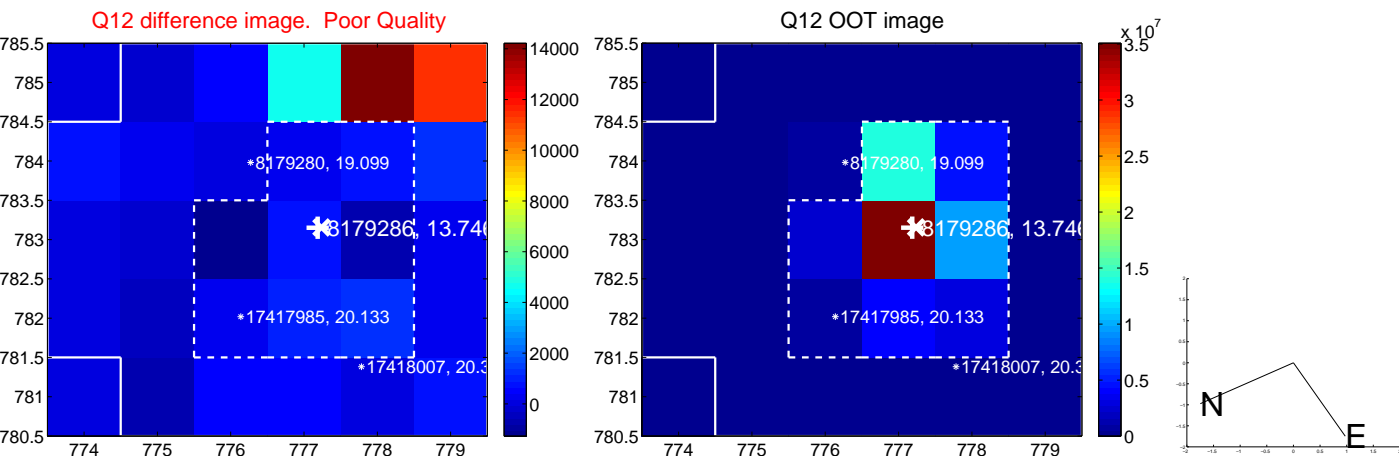
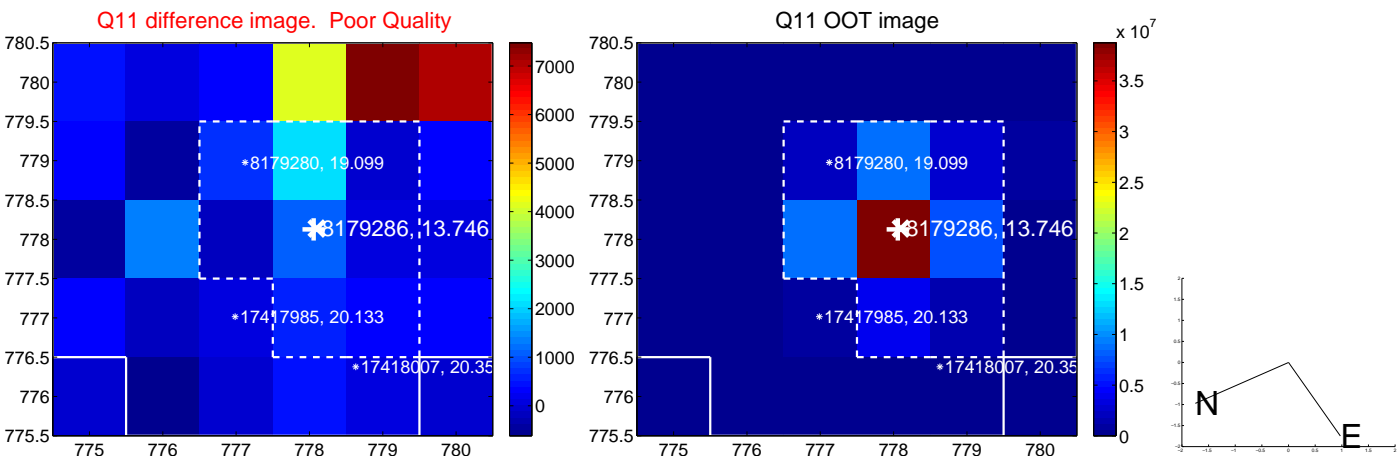
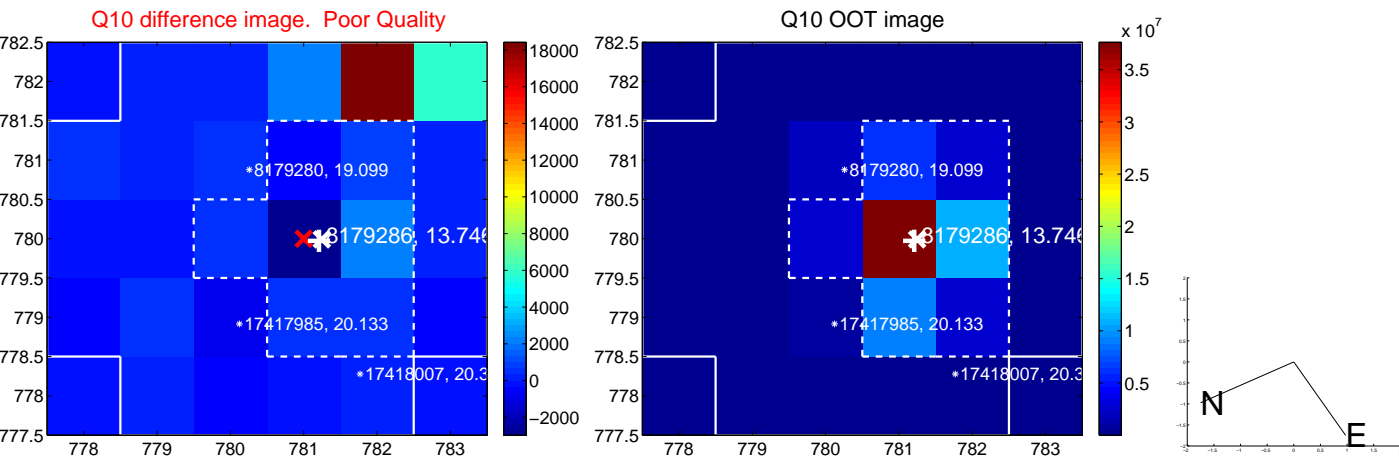
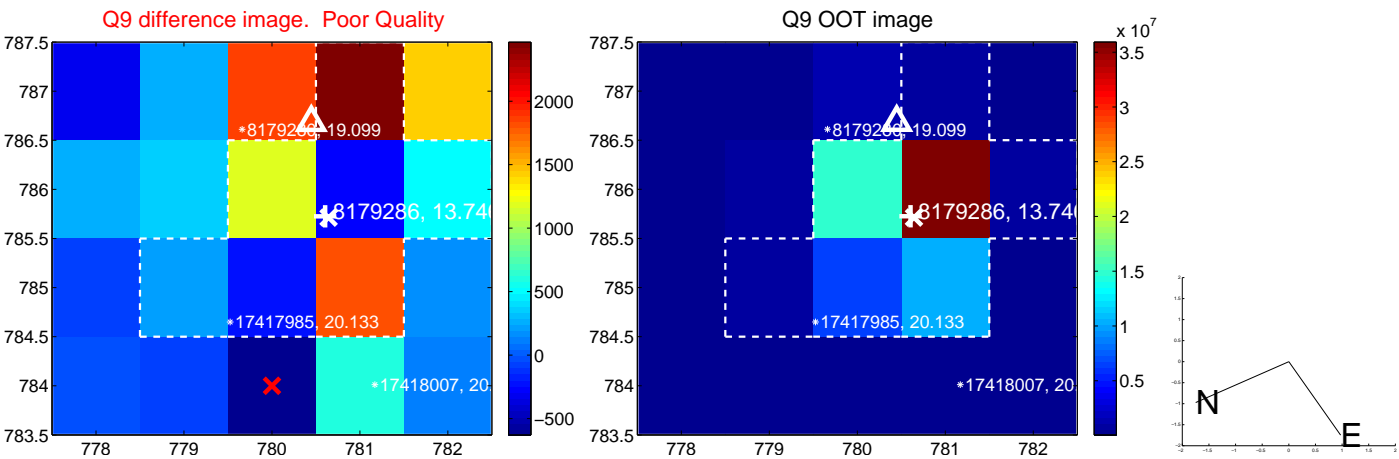
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



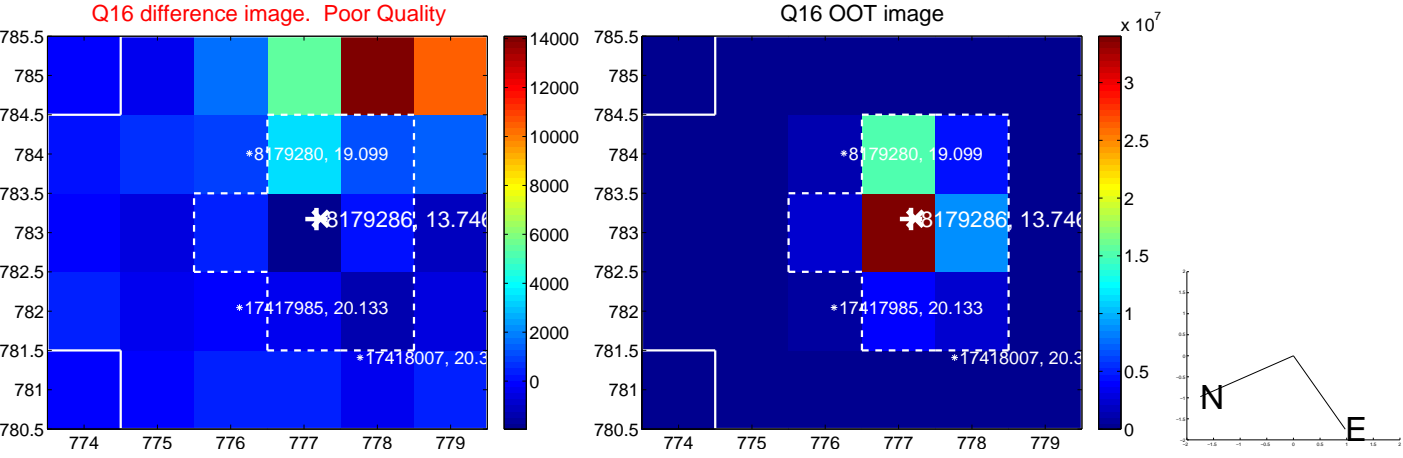
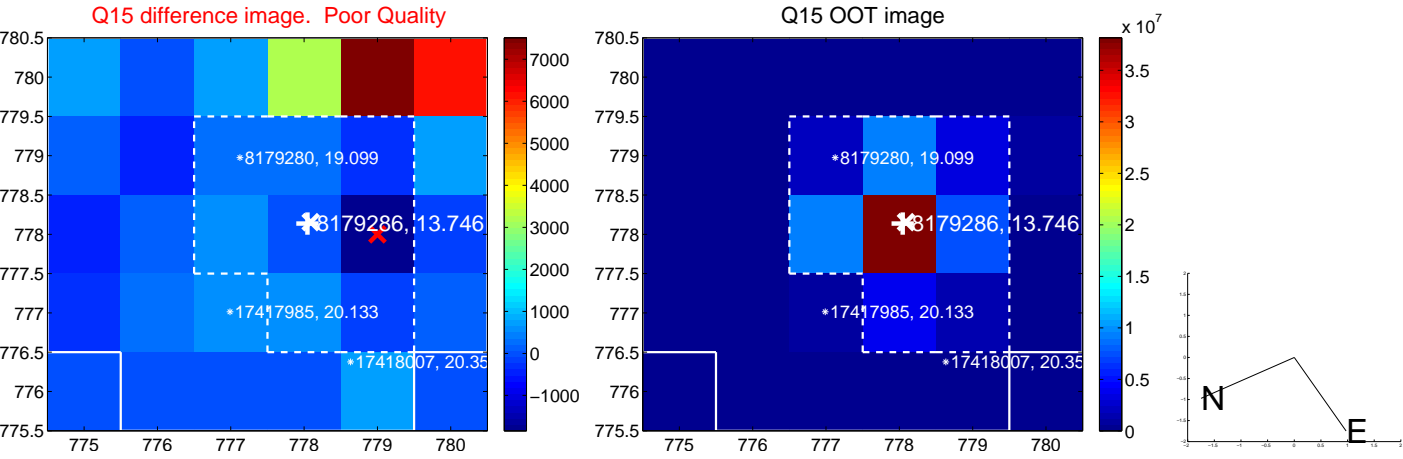
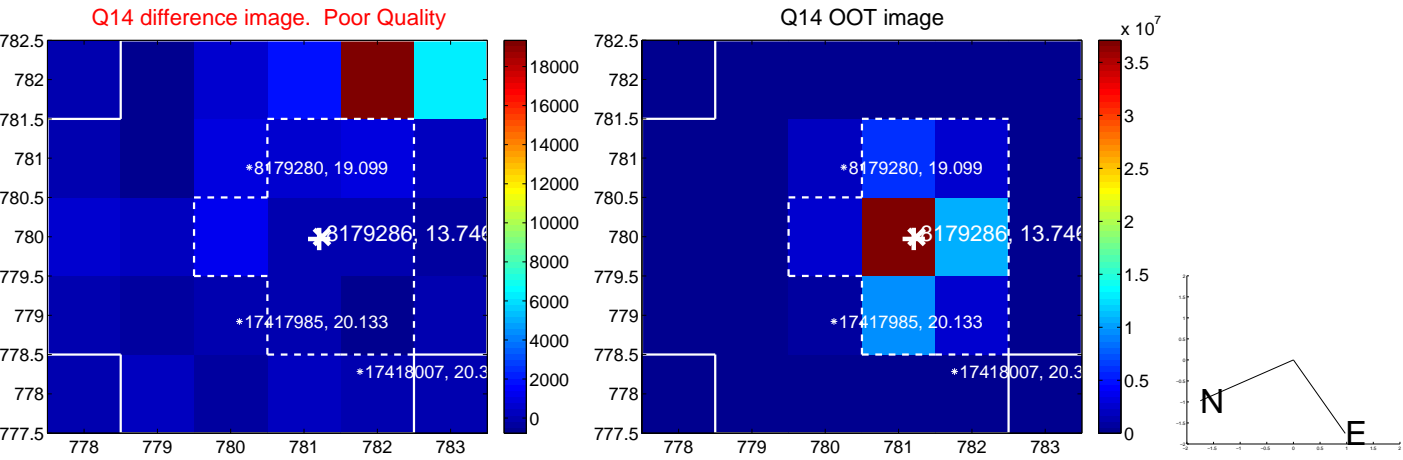
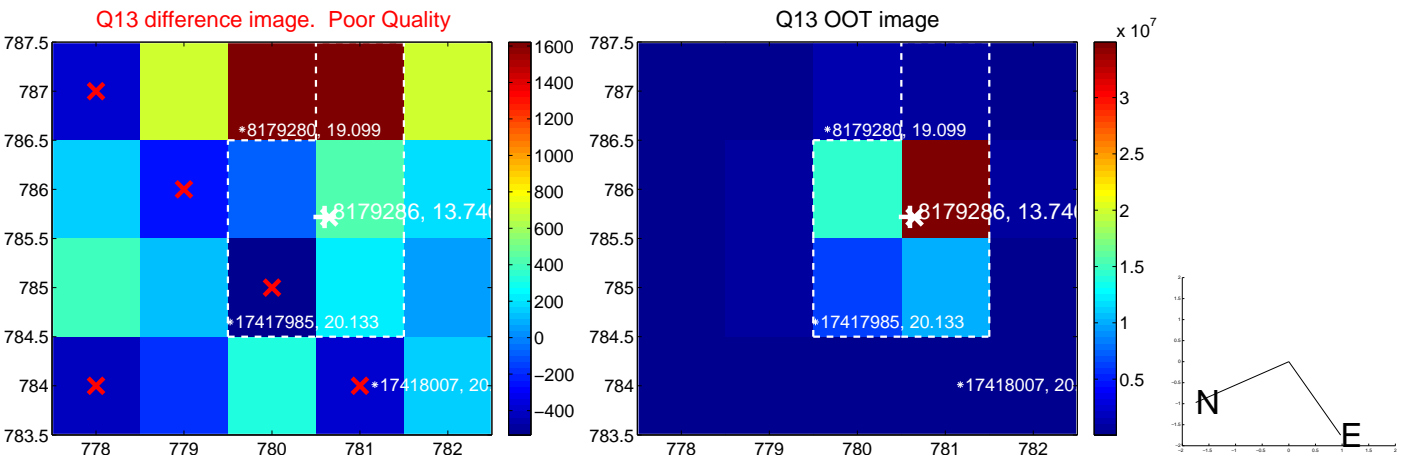
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



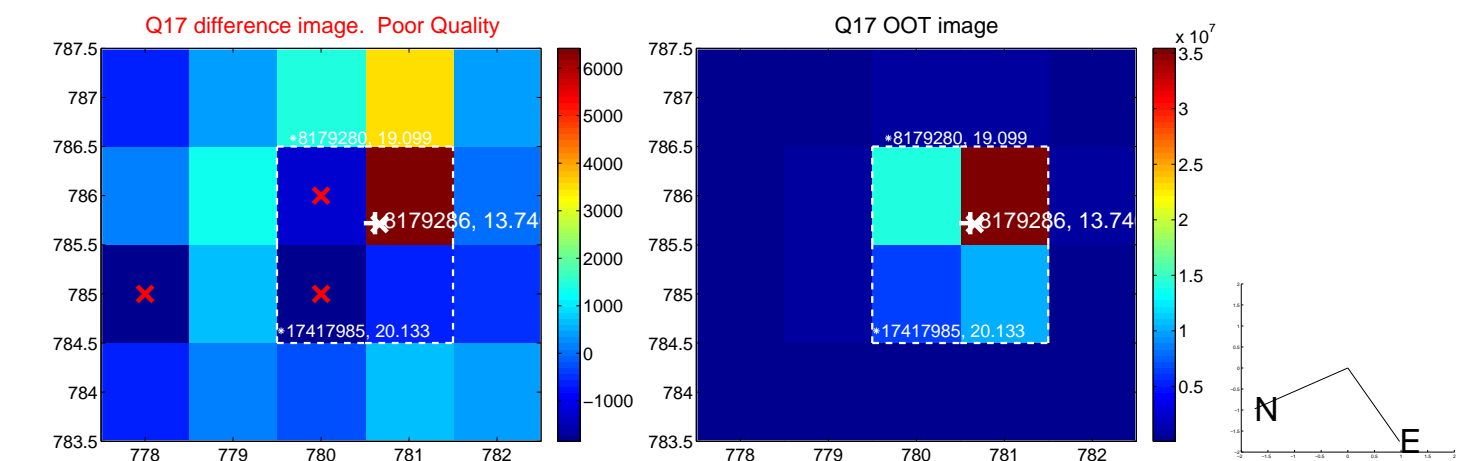
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



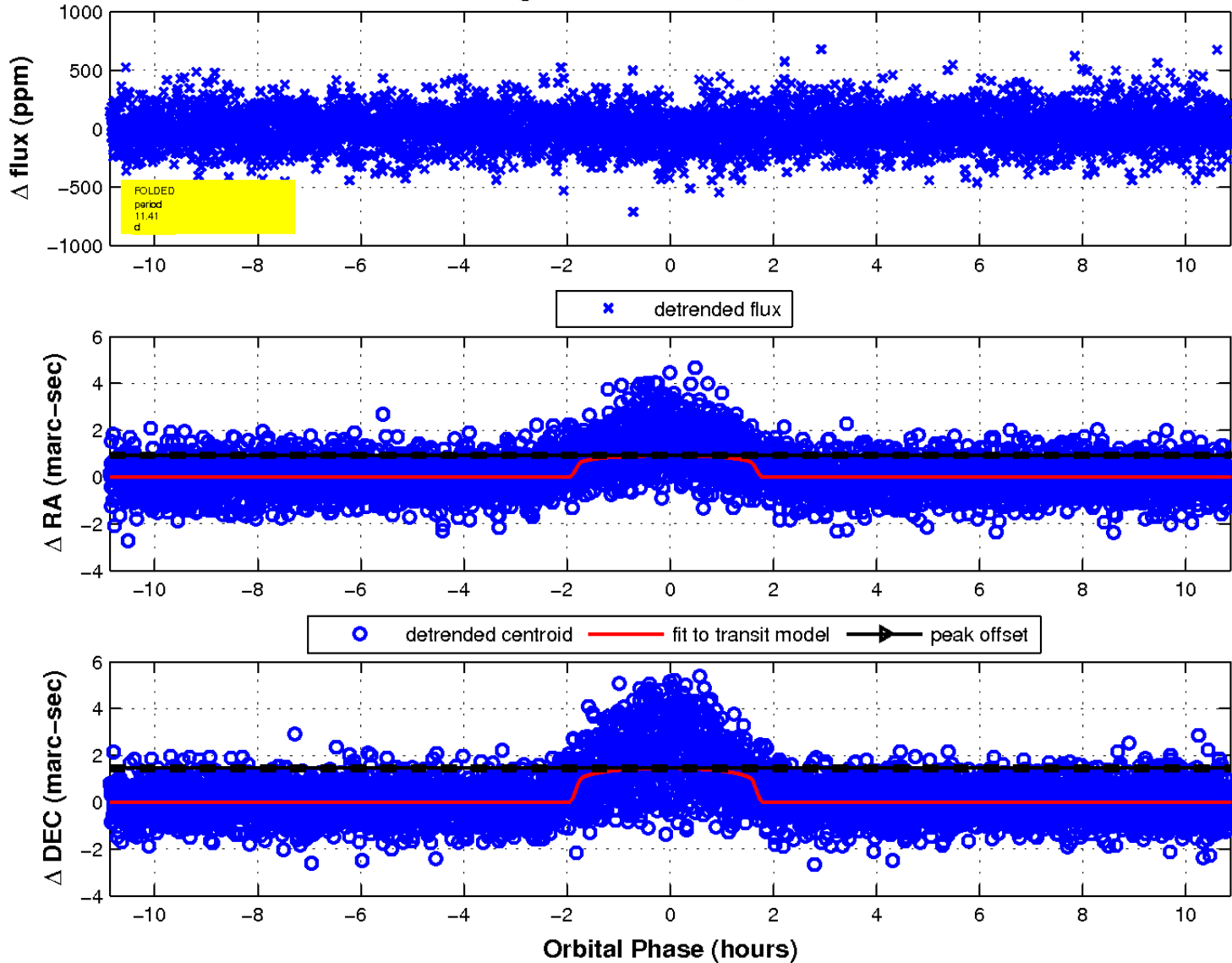
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

