

KIC 008285970

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})
008285970-01	OBS	7009.01	0.562329	131.783294	0.2	1.664	16.3	0.0	0.93	5638	0.05	4867.75
008285970-02	OBS	No	0.562559	131.871769	25.8	1.452	12.4	4.9	0.93	5638	0.55	4865.10
008285970-03	OBS	No	0.562500	131.748494	669.9	1.500	13.7	-1.0	0.93	5638	2.40	4865.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008285970-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008285970-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
008285970-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—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.

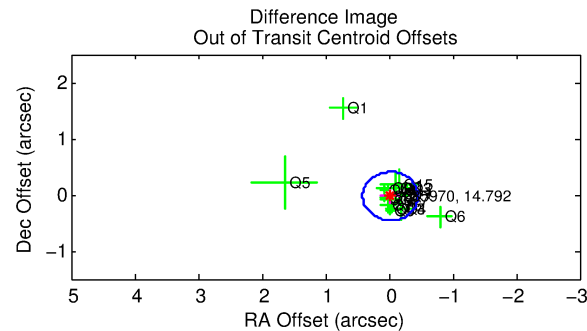
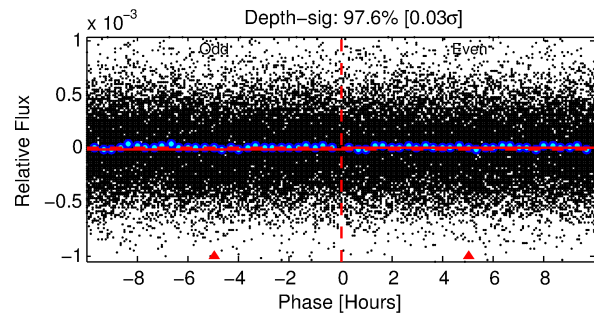
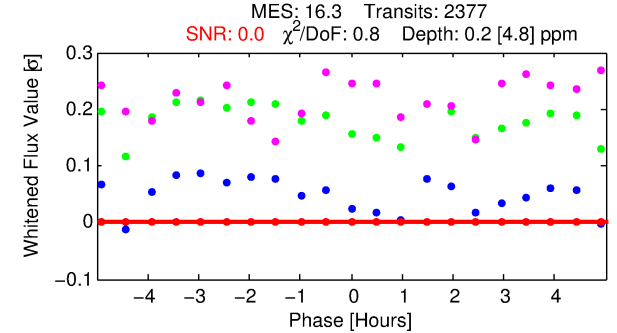
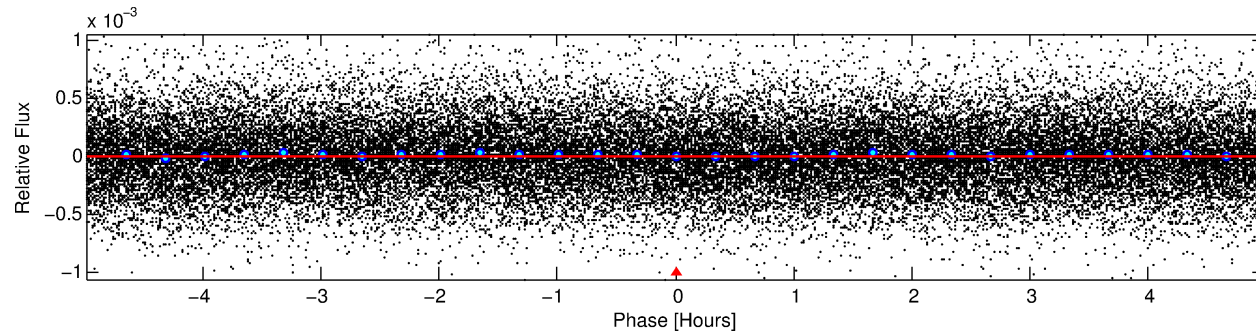
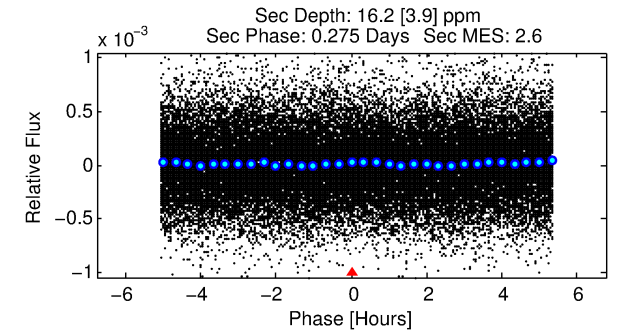
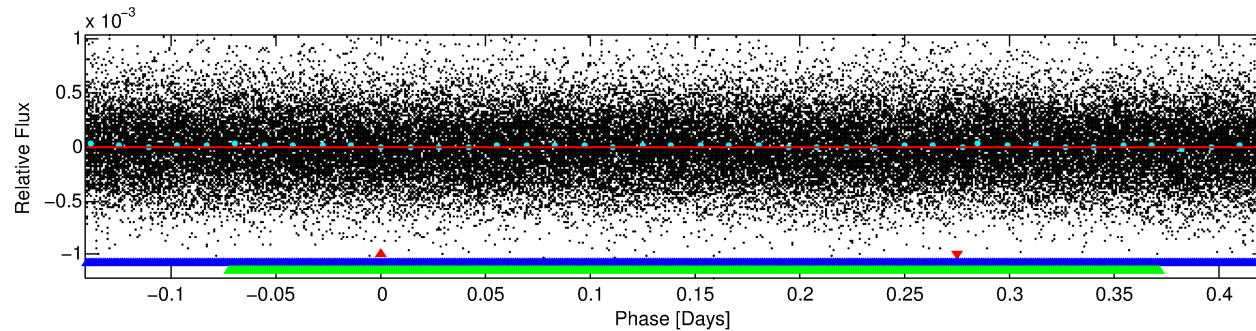
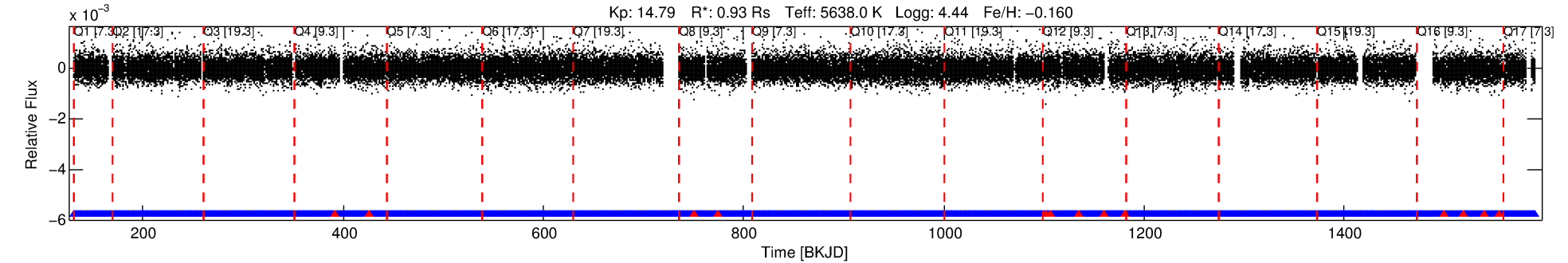
Ephemeris Match Information For 008285970-01

No Significant Match Found

DV One-Page Summary

KIC: 8285970 Candidate: 1 of 3 Period: 0.562 d

KOI: K07009 Corr: No Ephemeris Match



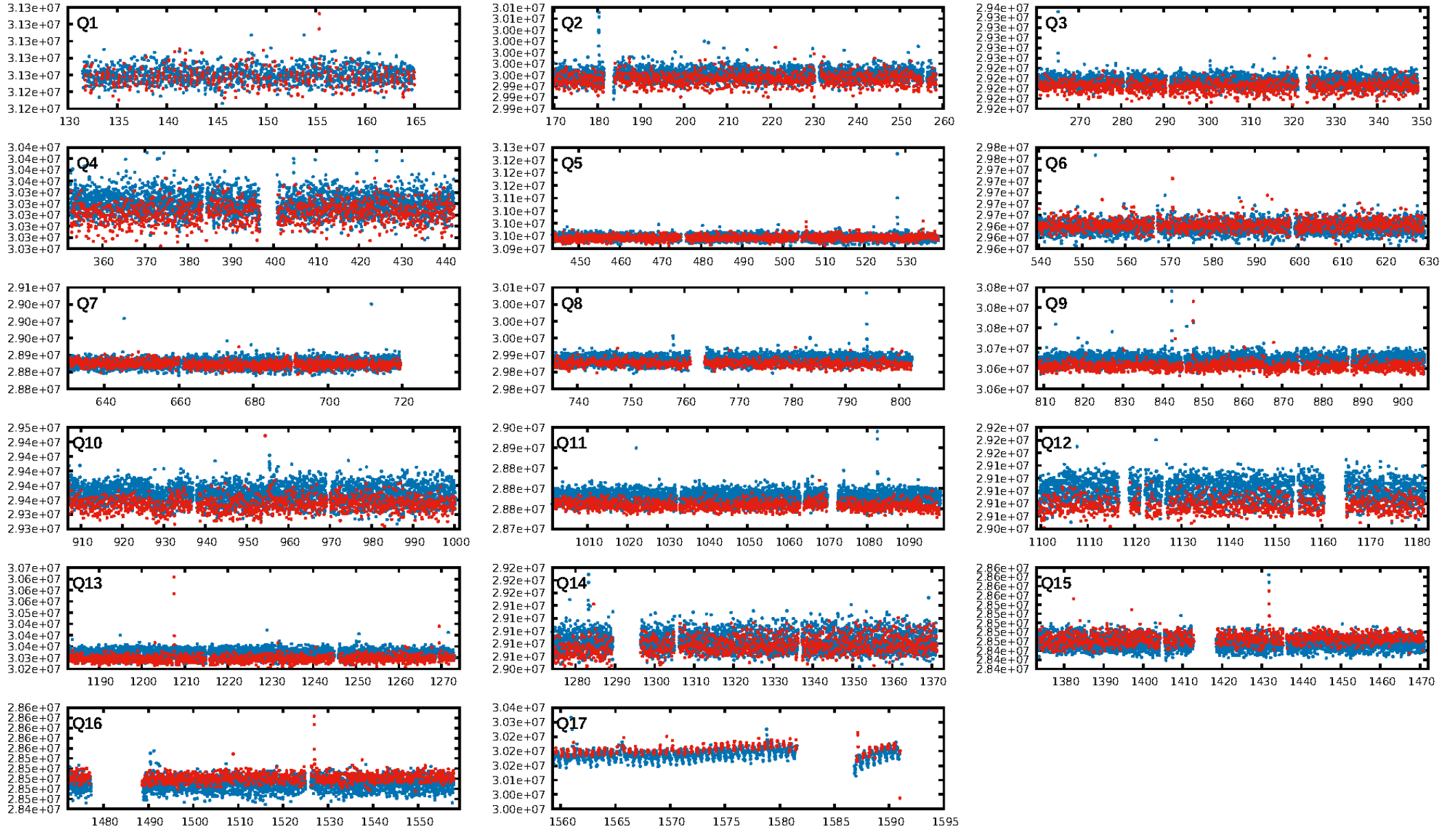
DV Fit Results:

Period = 0.56233 [0.00204] d
Epoch = 131.7833 [0.5139] BKJD
Rp/R* = 0.0005 [0.0078]
a/R* = 1.18 [12.33]
b = 0.97 [2.54]
Seff = 4867.75 [1644.58]
Teq = 2130 [180] K
Rp = 0.05 [0.79] Re
a = 0.0127 [0.0028] AU
Ag = 525.98 [15936.98] [0.03σ]
Teffp = 15770 [119464] K [0.11σ]

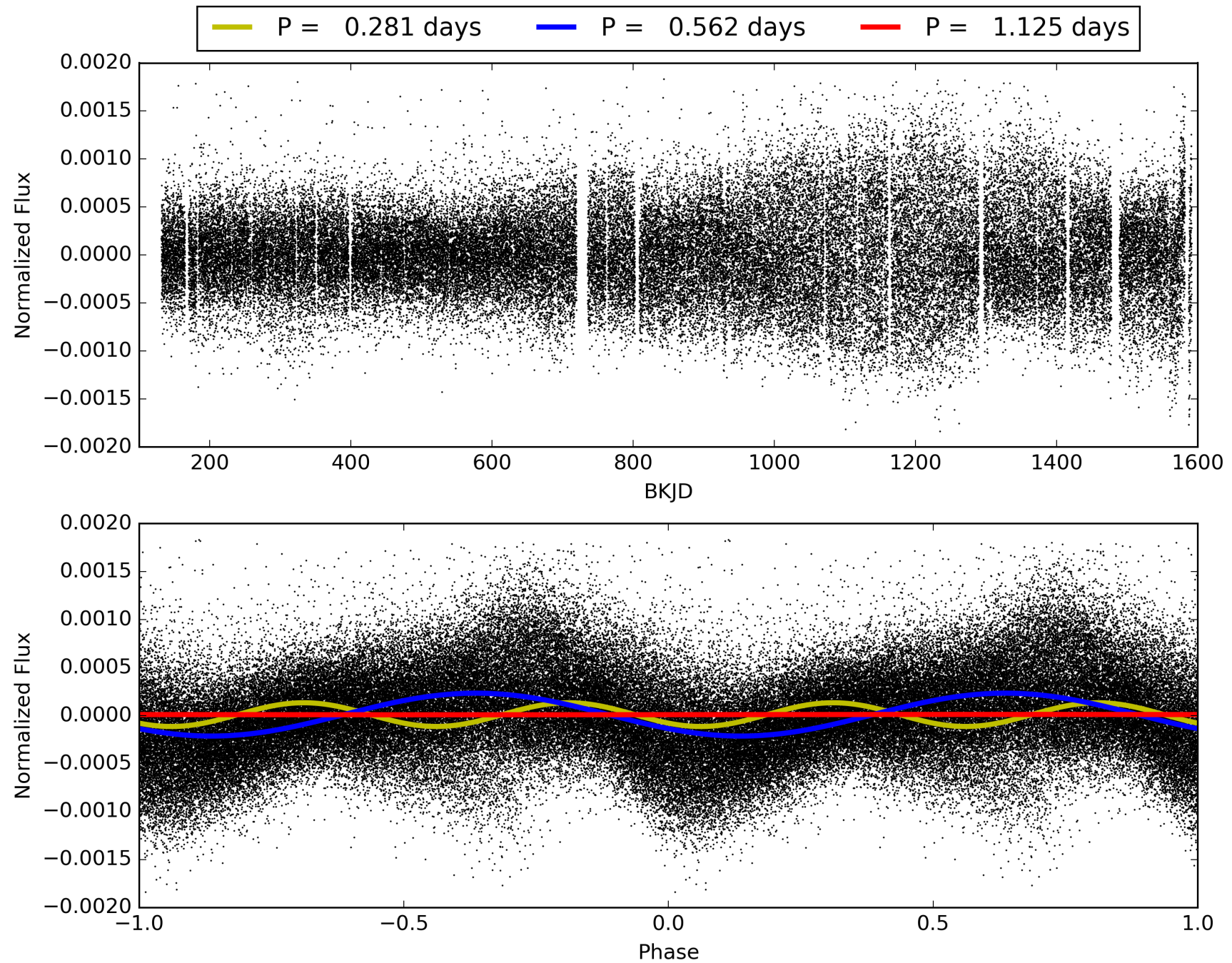
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.87e-47
RollingBand-fgt: 0.99 [2256/2269]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.032 arcsec [0.22σ]
KicOffset-rm: 0.208 arcsec [1.49σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008285970-01, PDC Light Curves

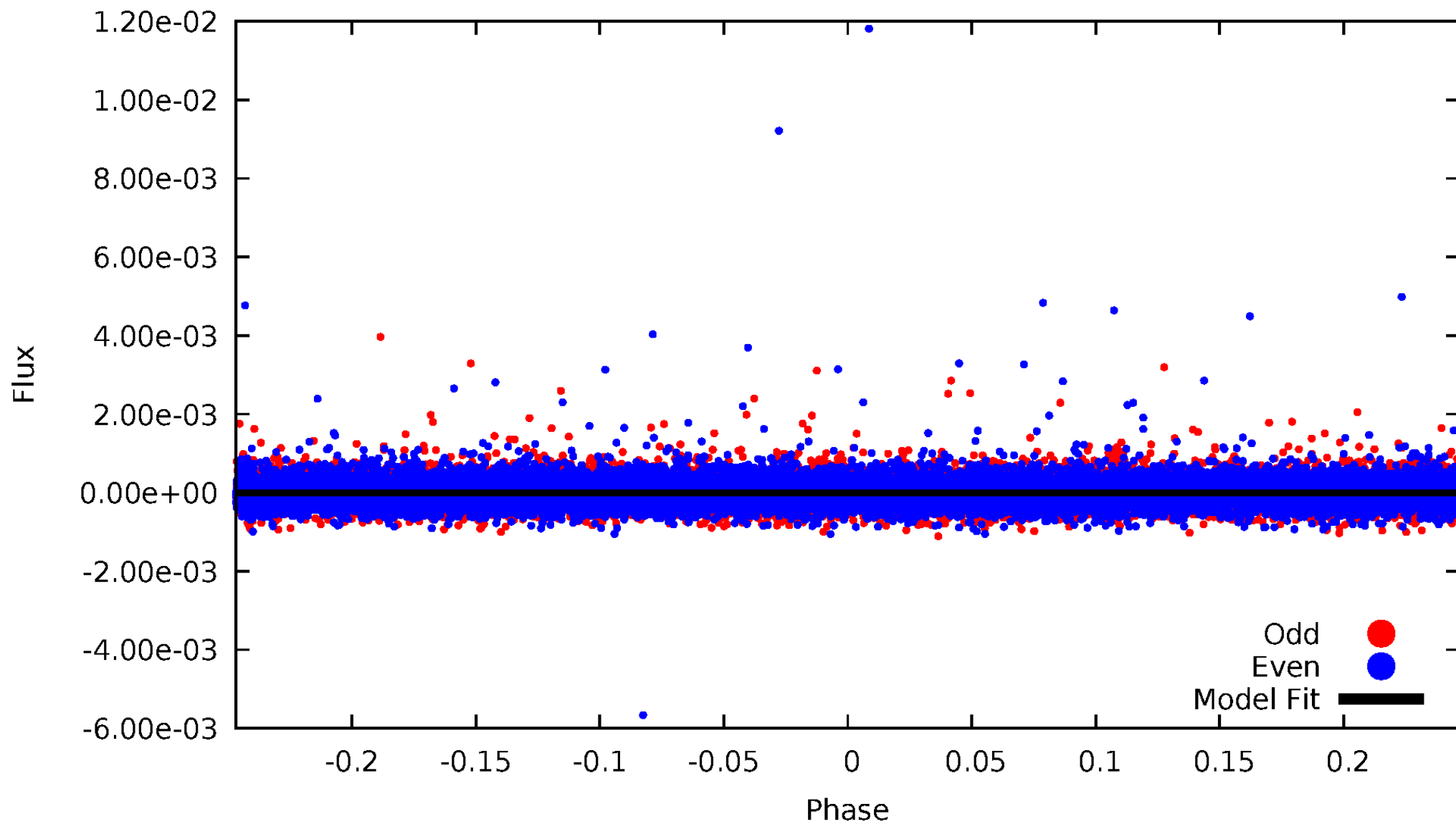


TCE 008285970-01



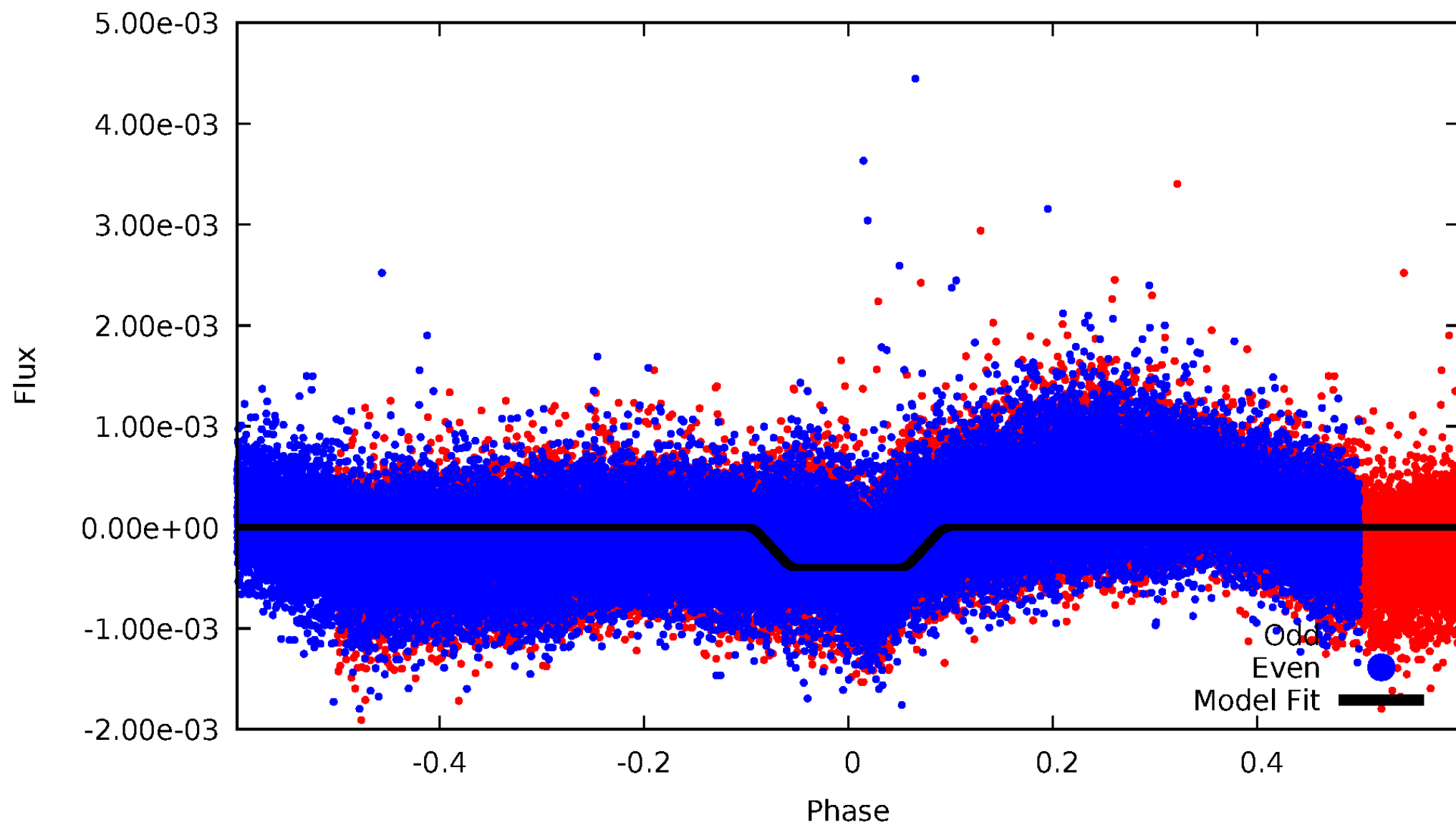
DV Odd/Even

TCE 008285970-01

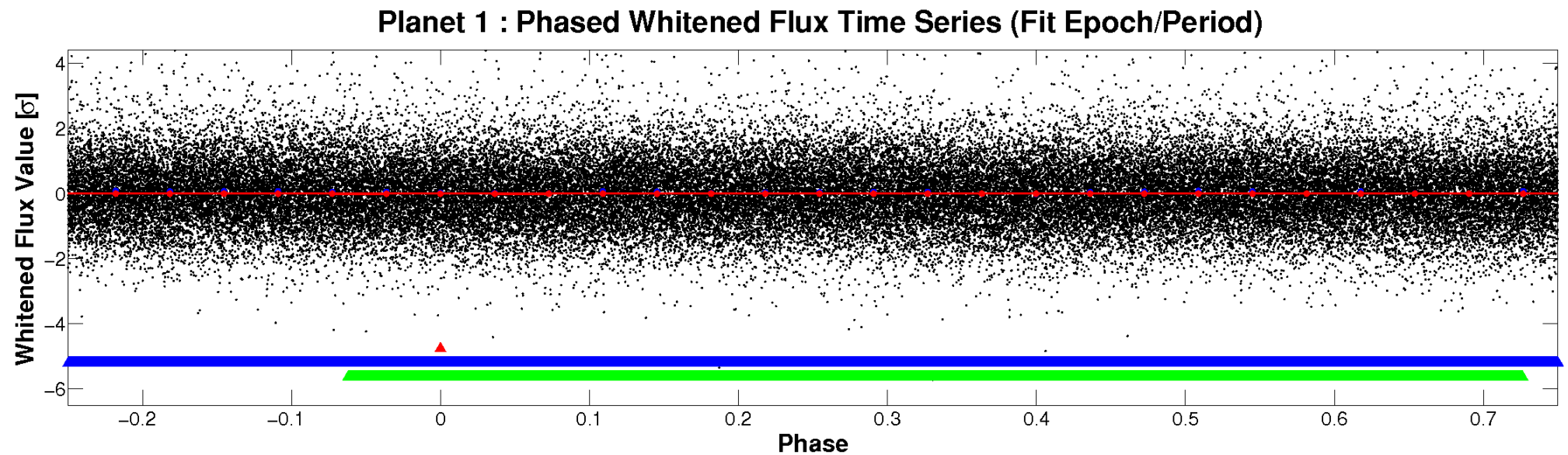
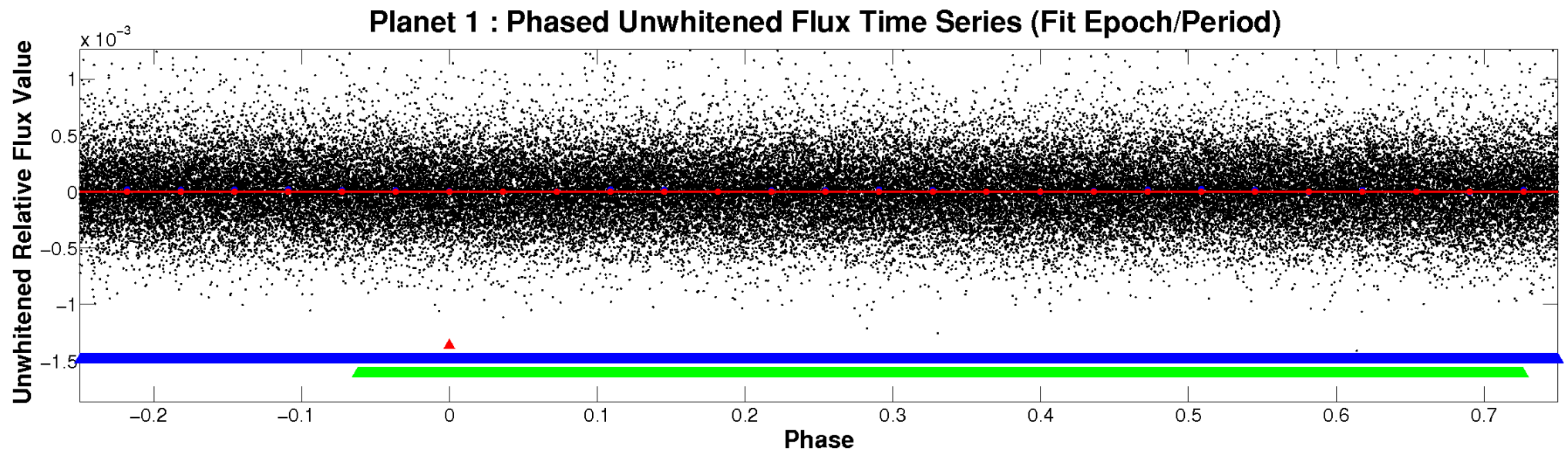


ALT Odd/Even

TCE 008285970-01

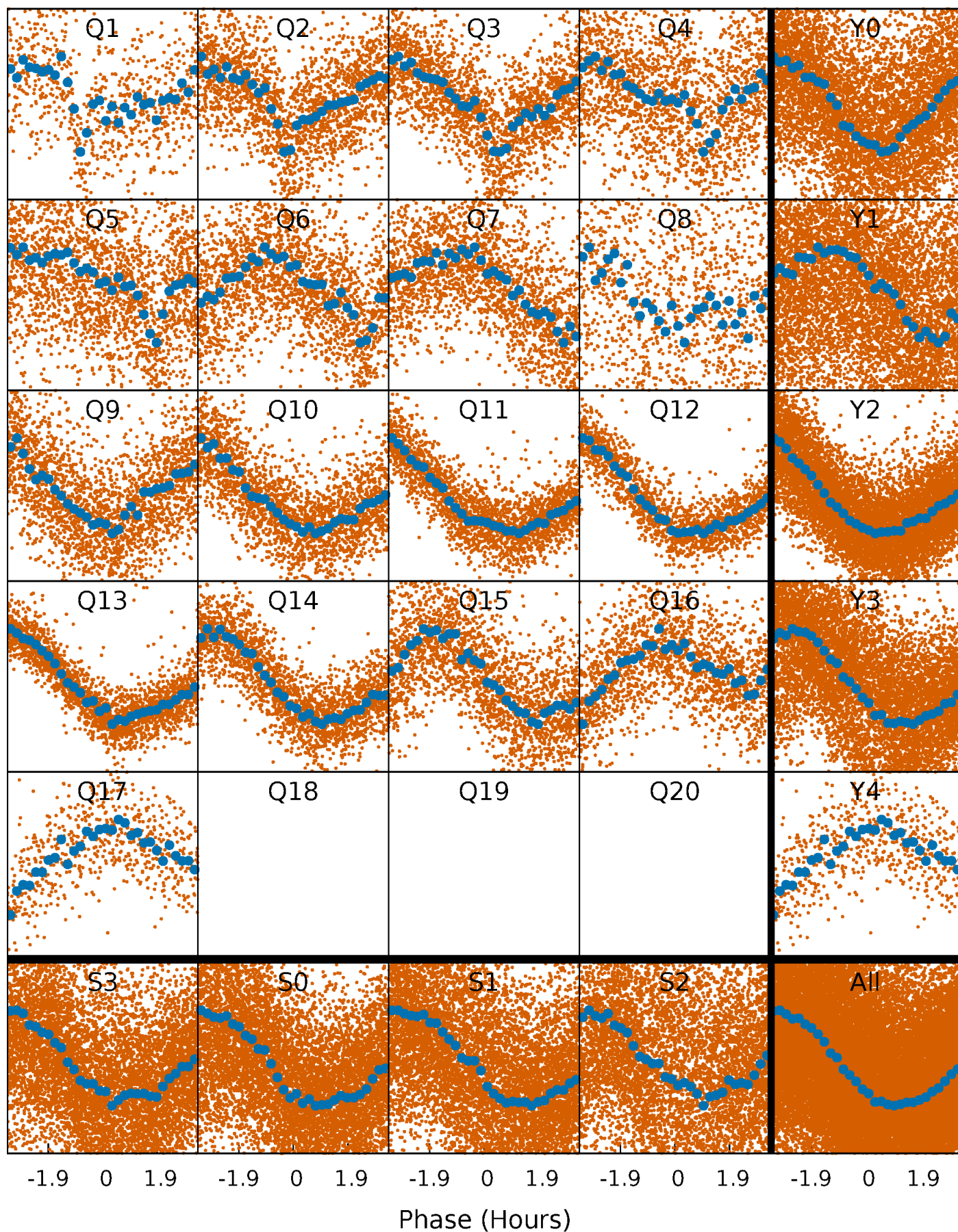


Non-Whitened Vs. Whitened Light Curve



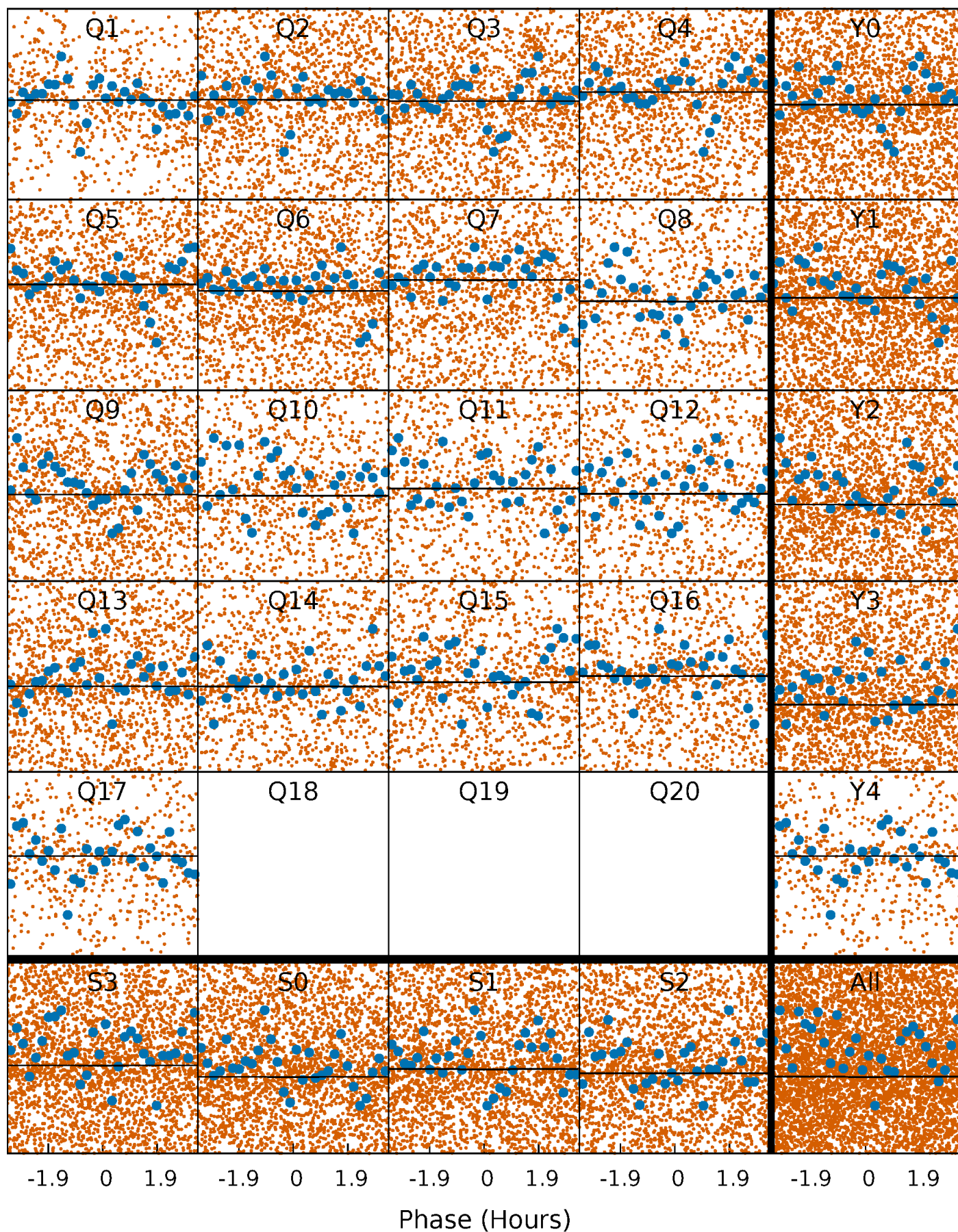
PDC Quarter-Phased Transit Curves

TCE 008285970-01 P= 0.562329 Days $T_0=131.783294$ (BKJD)



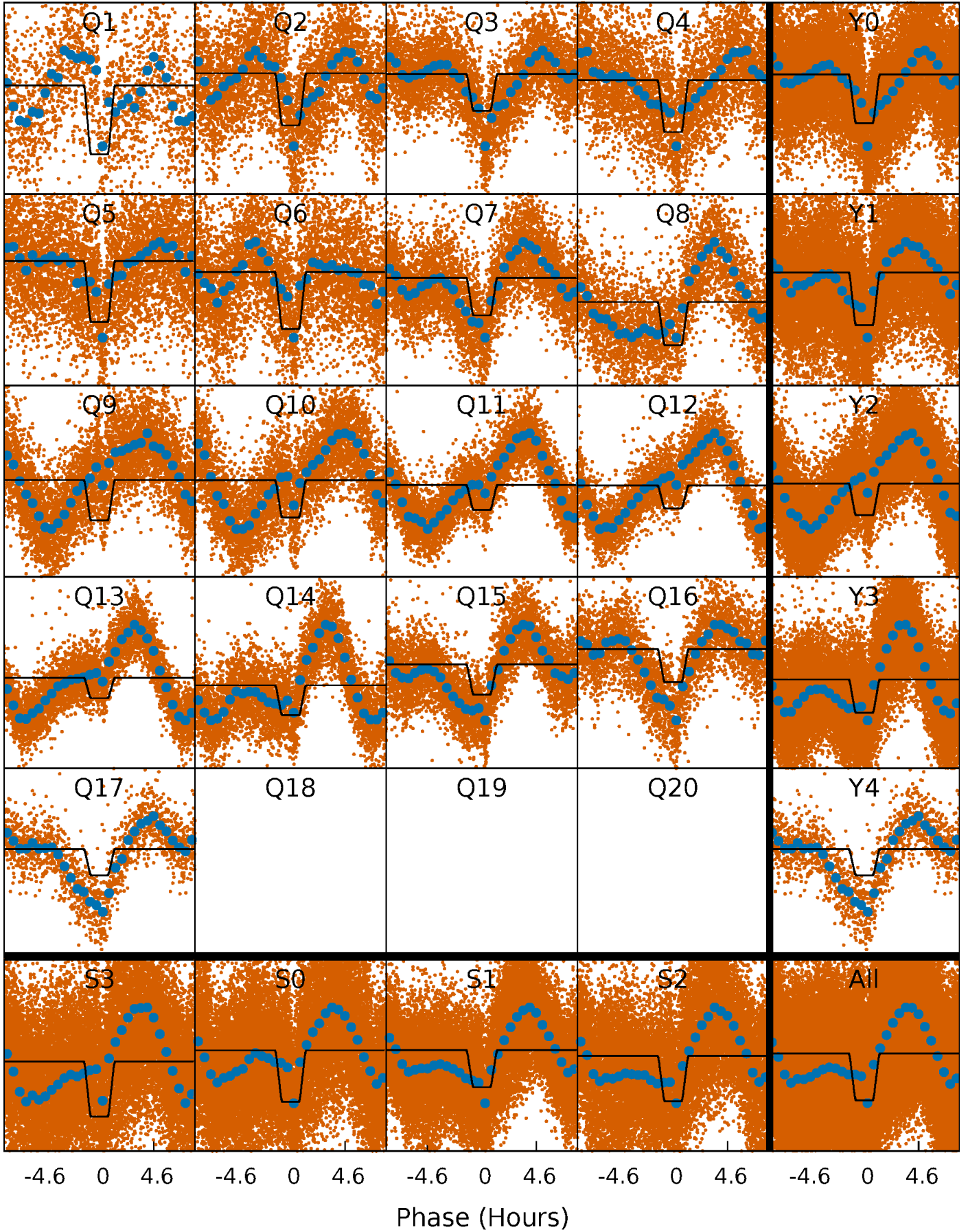
DV Quarter-Phased Transit Curves

TCE 008285970-01 P= 0.562329 Days $T_0=131.783294$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

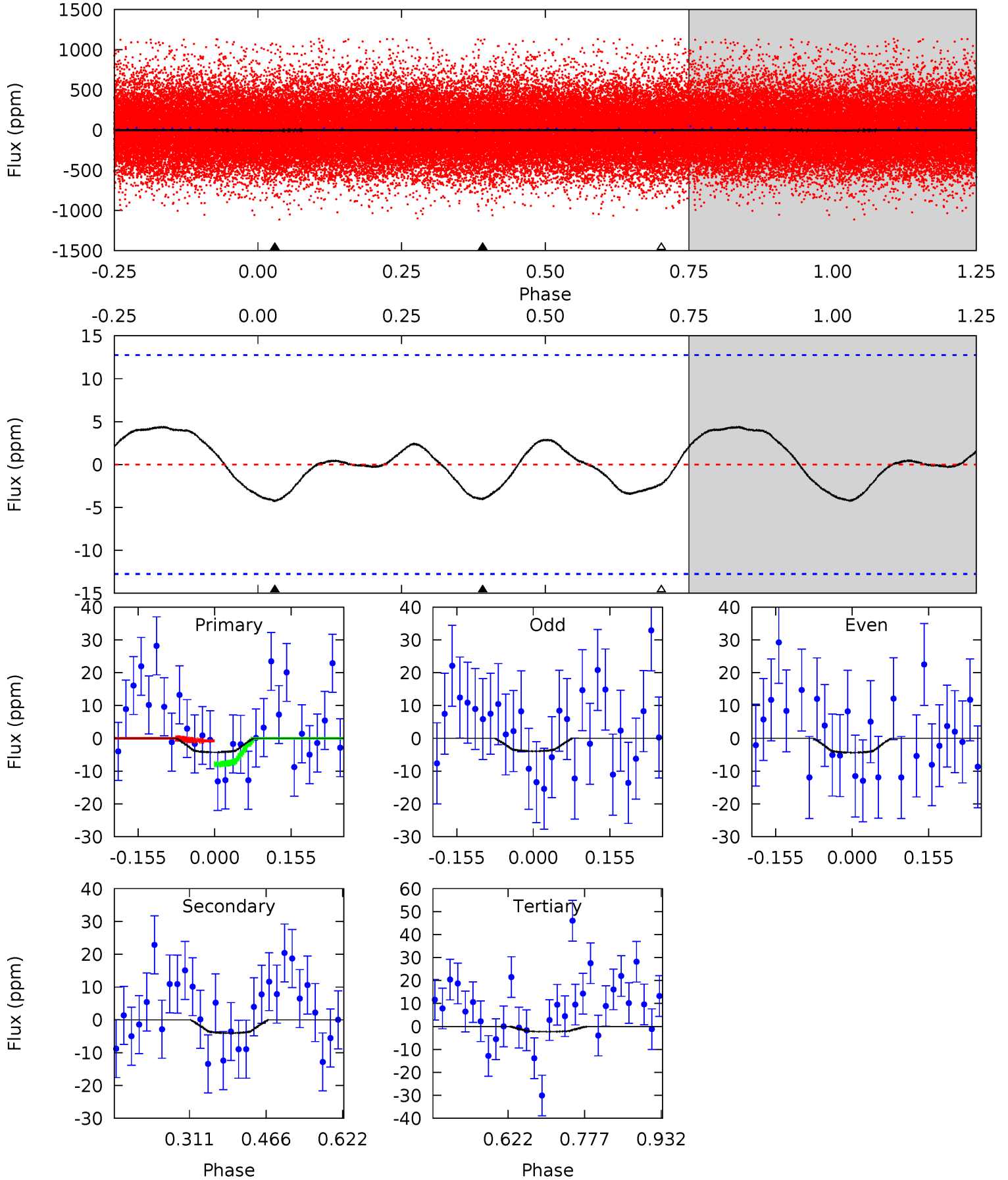
TCE 008285970-01 P= 0.562500 Days $T_0=131.738457$ (BKJD)



DV Model-Shift Uniqueness Test

008285970-01, P = 0.562329 Days, E = 131.220965 Days

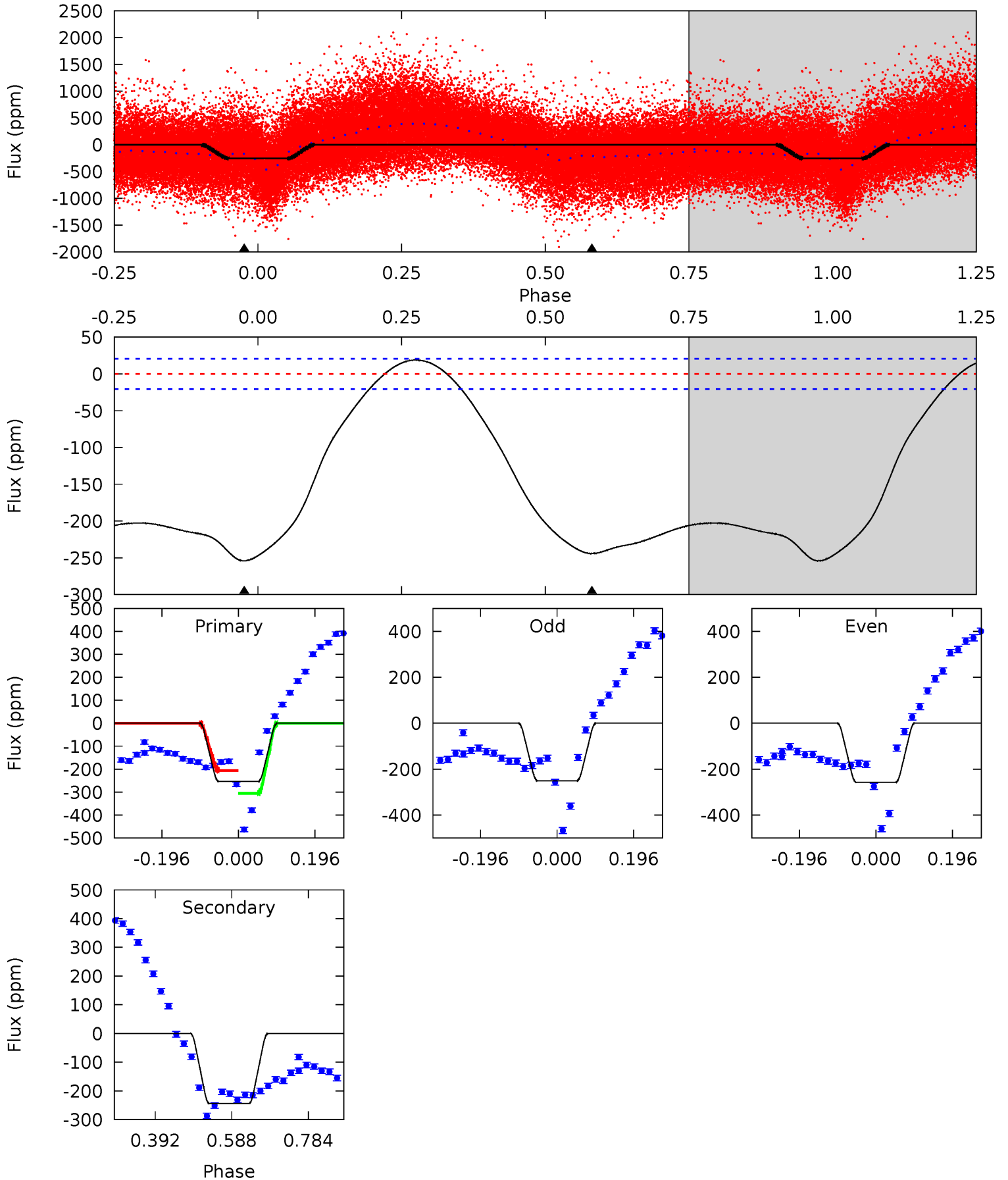
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.50	1.42	0.80	0	4.47	1.42	0.93	0.69	1.50	0.61	1.42	0.08	-0.96	0.51	1.27



Alt Model-Shift Uniqueness Test

008285970-01, P = 0.562500 Days, E = 131.175957 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.3	52.2	0	0	4.42	1.29	6.69	54.3	54.3	52.2	52.2	0.68	1.01	0.07	11.5



Stellar Parameters For KIC 008285970

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5638^{+152}_{-152}	$4.437^{+0.116}_{-0.174}$	$-0.160^{+0.300}_{-0.300}$	$0.933^{+0.247}_{-0.133}$	$0.868^{+0.114}_{-0.076}$	$1.507^{+0.773}_{-0.697}$
	+3%/-3%	+3%/-4%	+188%/-188%	+26%/-14%	+13%/-9%	+51%/-46%
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 008285970-01 / KOI 7009.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 3	$0.59^{+0.63}_{-0.41}$	2995^{+194}_{-165}	3390^{+2301}_{-6245}	$0.885^{+8.603}_{-0.756}$
Alt.	-244 ± 5	$2.07^{+0.81}_{-0.83}$	2993^{+201}_{-154}	5005^{+1336}_{-667}	$5.229^{+9.029}_{-2.624}$

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 $A_{obs} \gg 1.0$

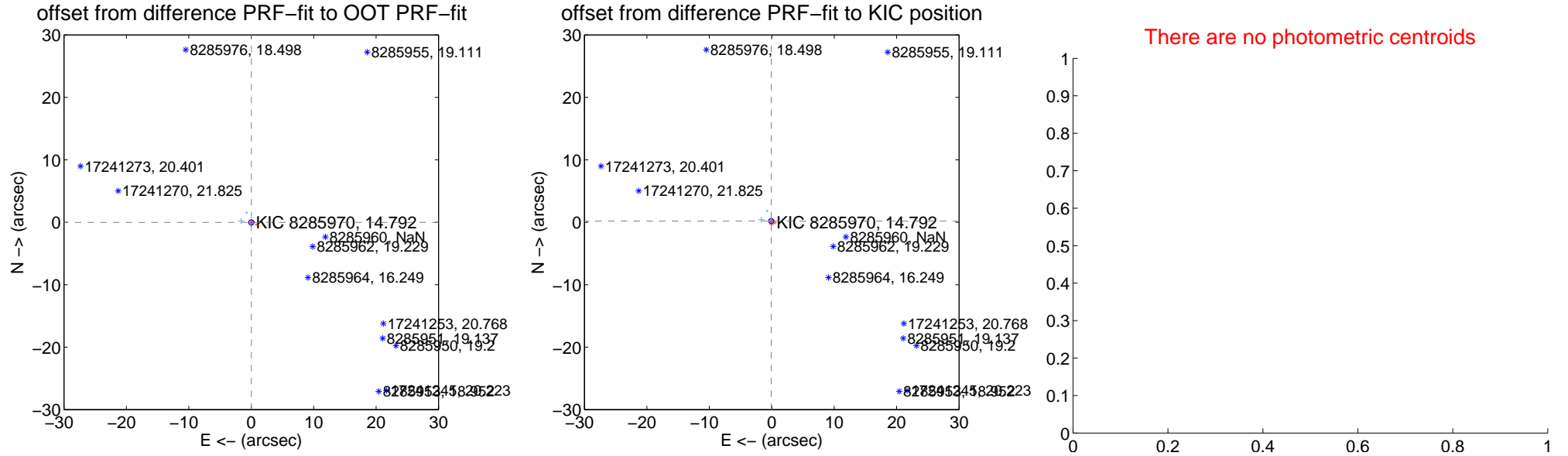
DV Centroid Data

Supplemental centroid analysis for 008285970-01. Kepler magnitude: 14.79. Transit SNR 0.05

There are 12 quarters with good PRF difference image offsets

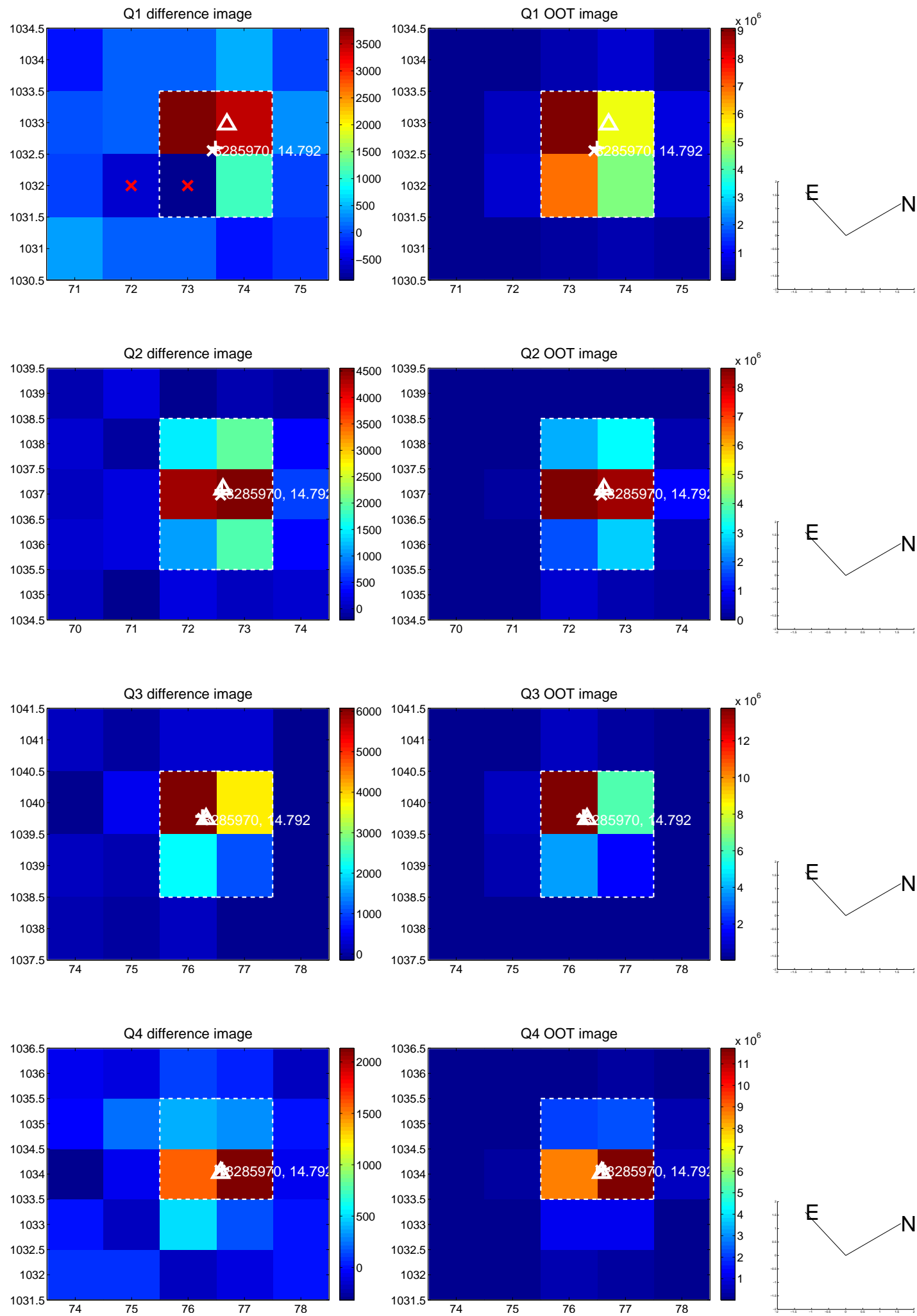
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.032 ± 0.144	0.22	-0.017 ± 0.138	-0.027 ± 0.116
PRF-fit source offset from KIC position	0.208 ± 0.140	1.49	0.082 ± 0.137	0.191 ± 0.122
photometric centroid source offset	—	—	—	—

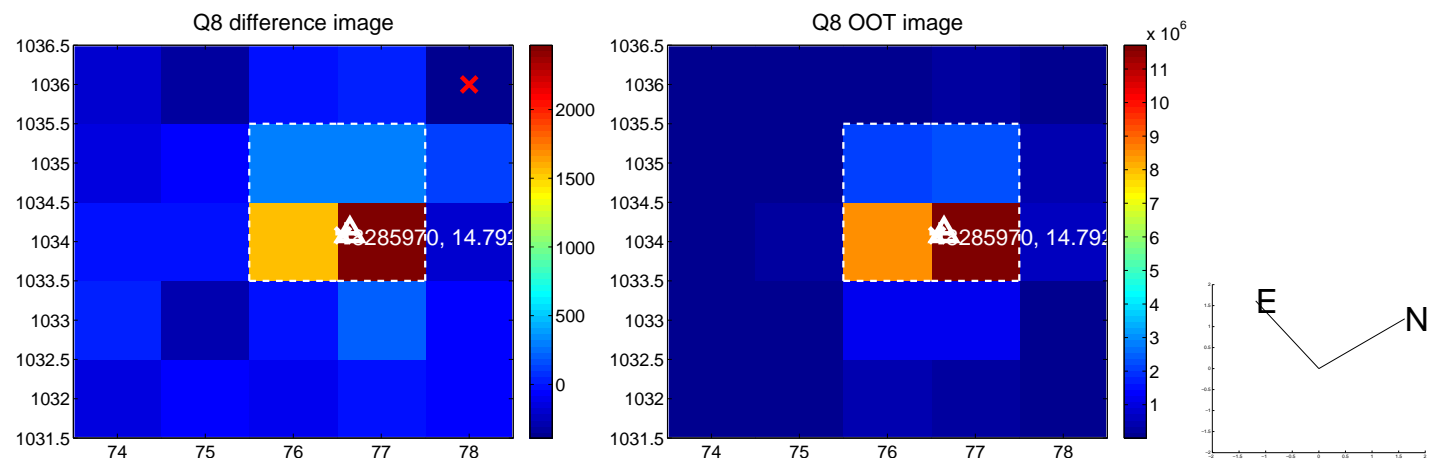
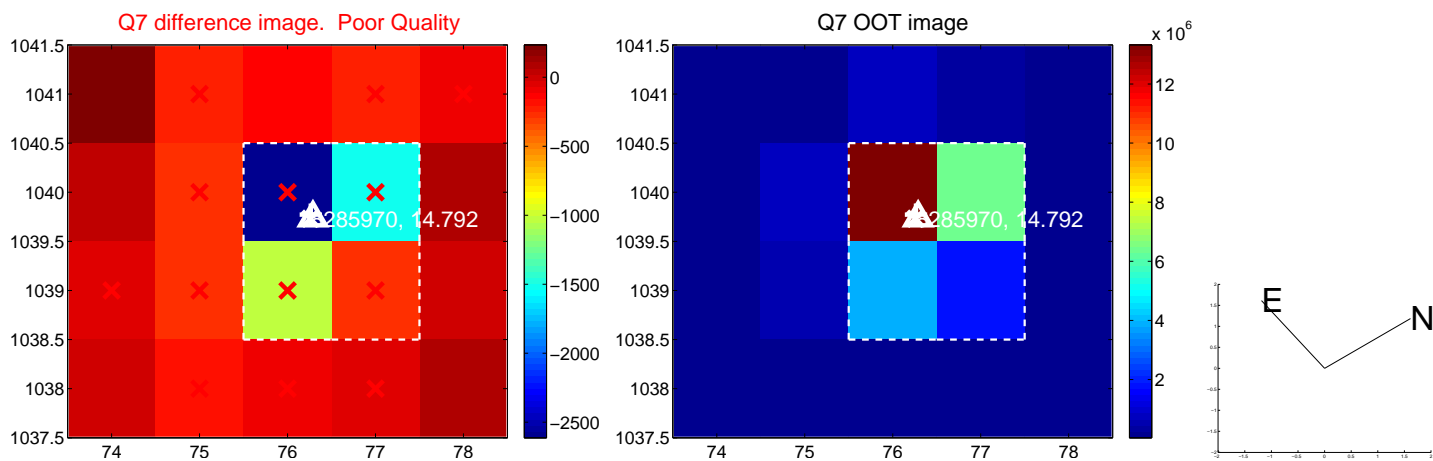
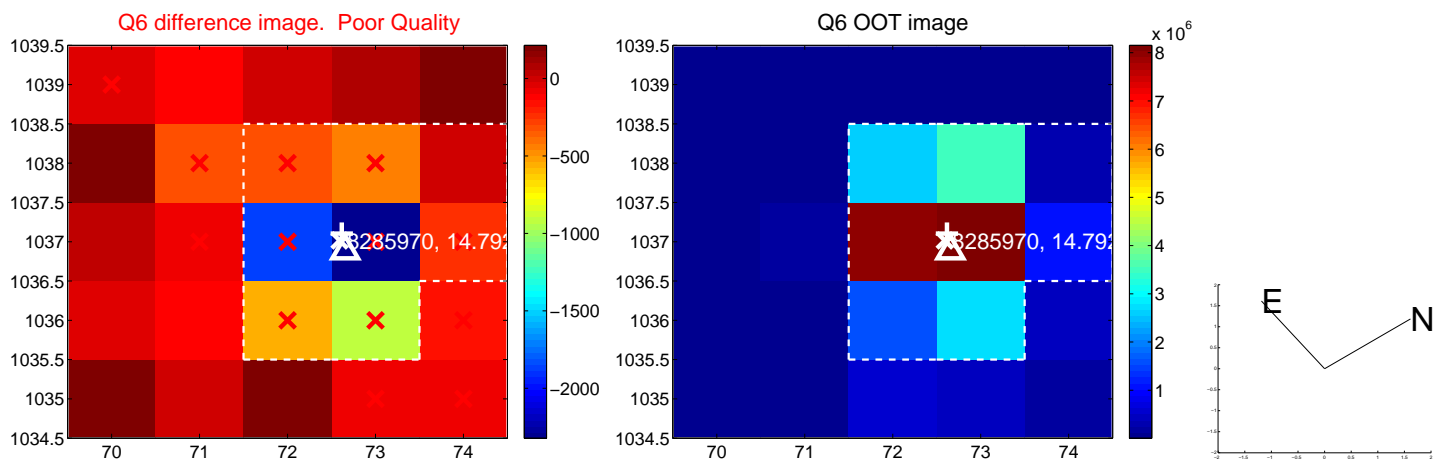
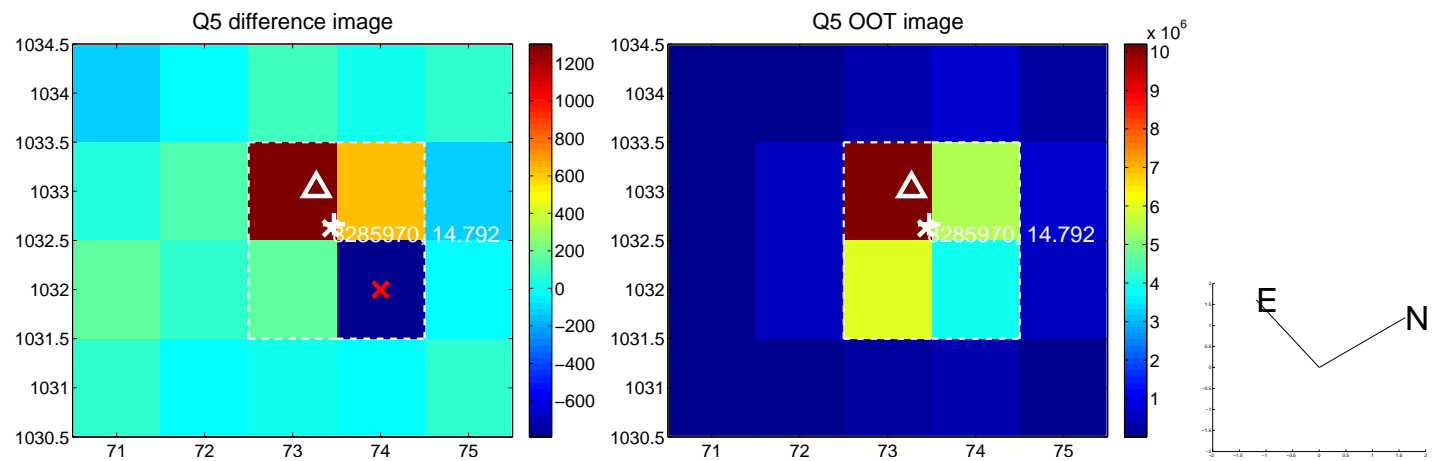


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

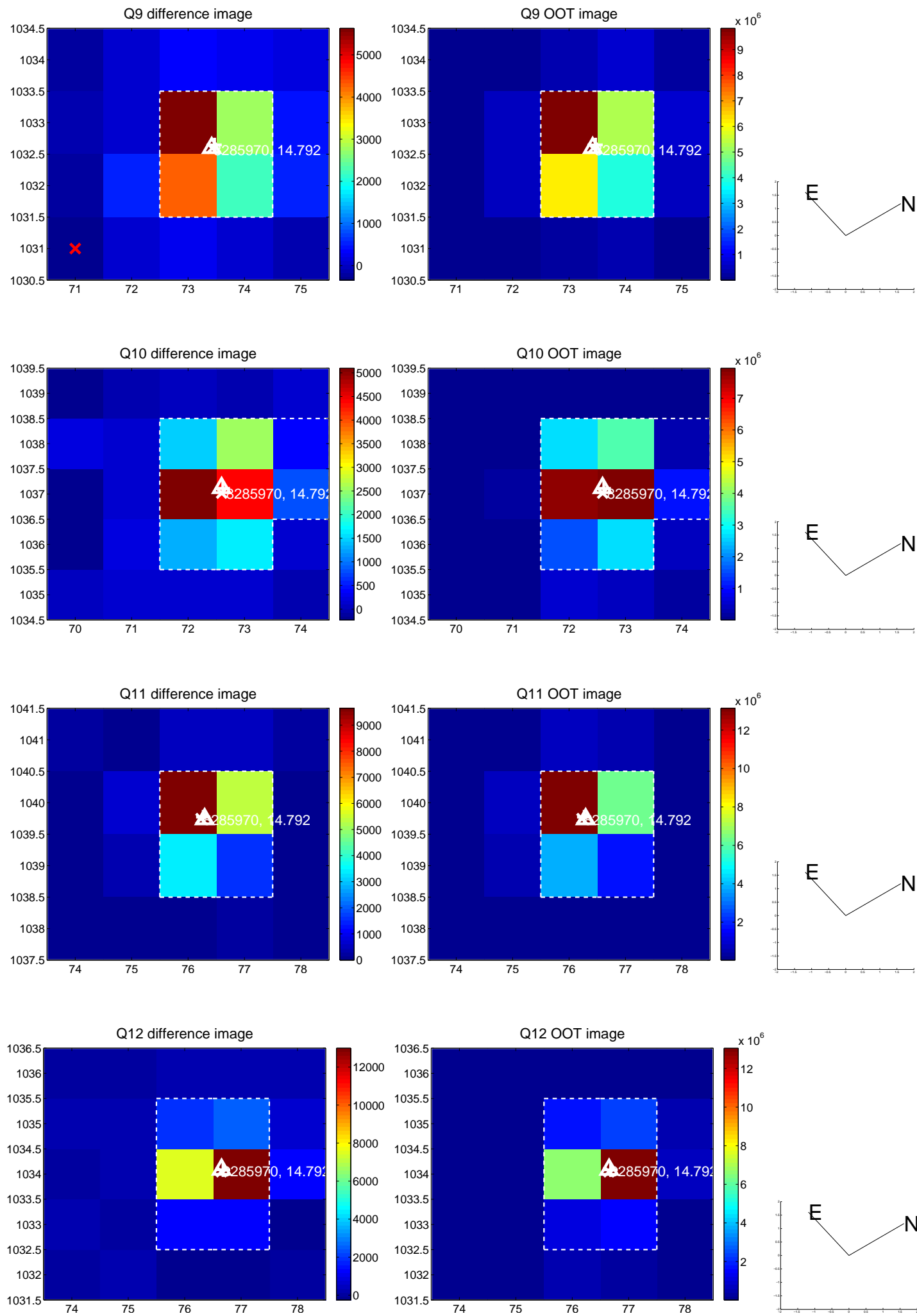
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



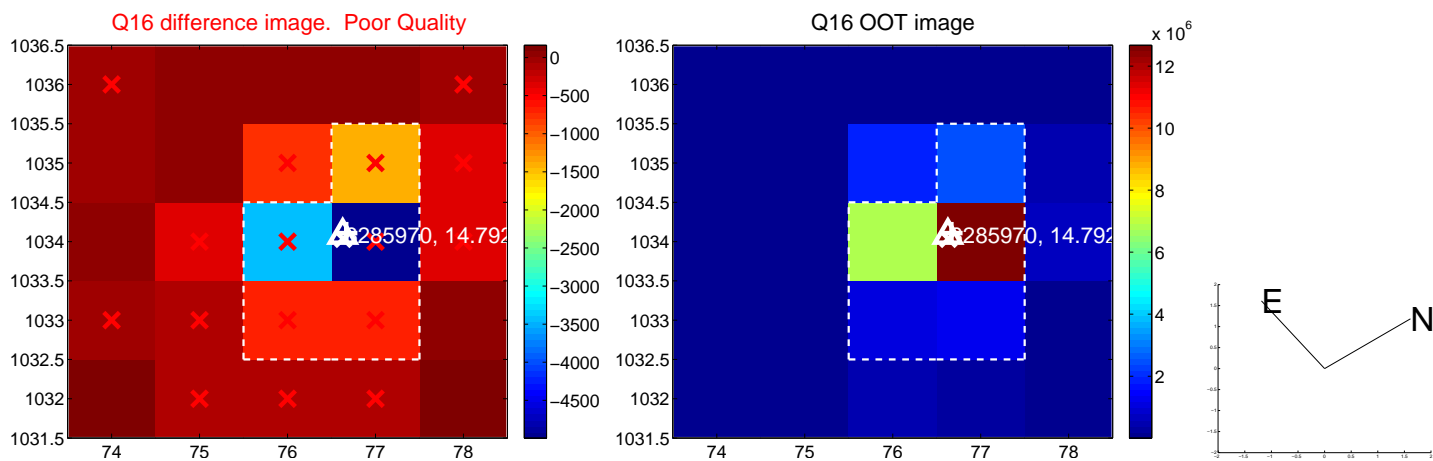
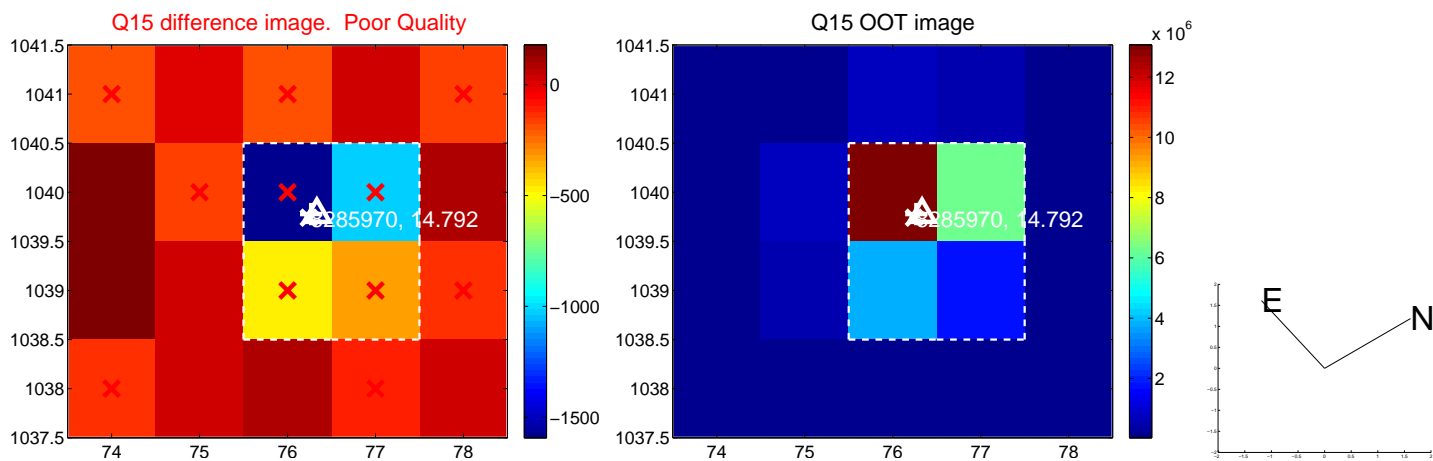
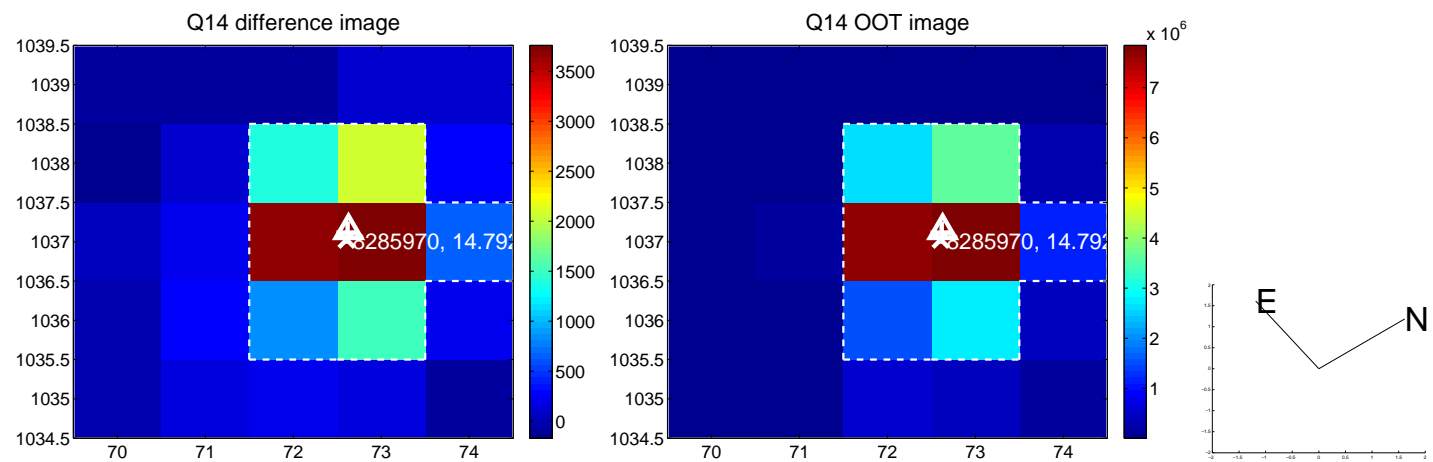
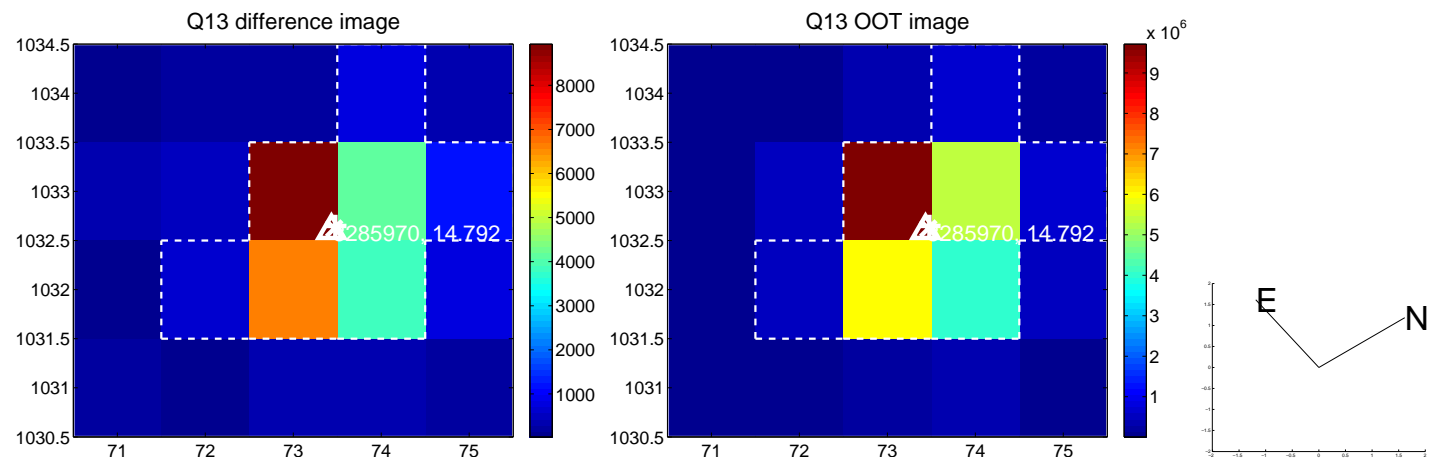
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



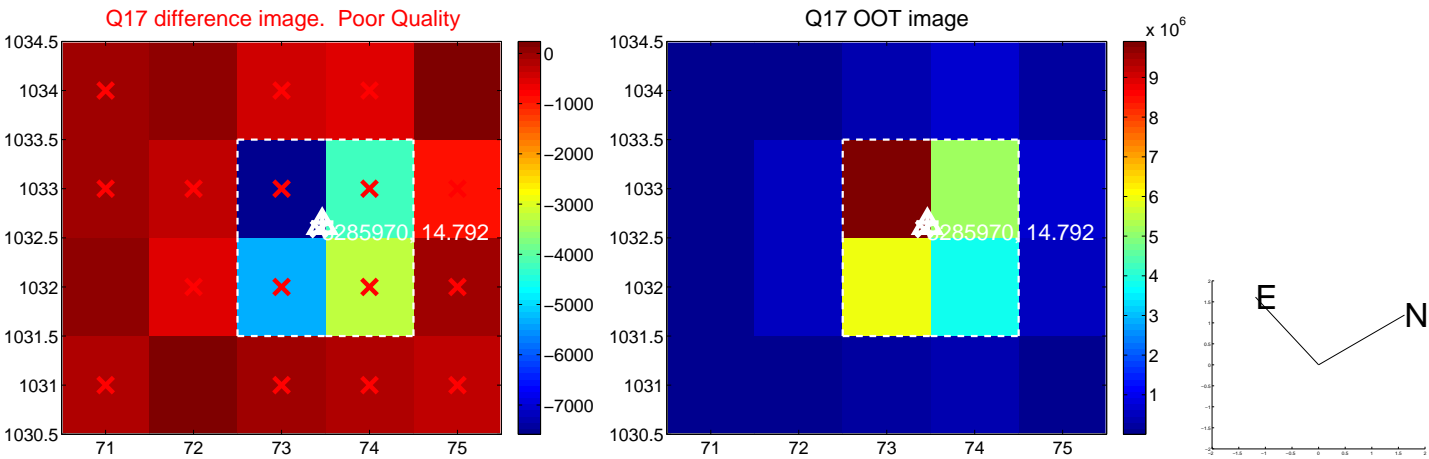
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



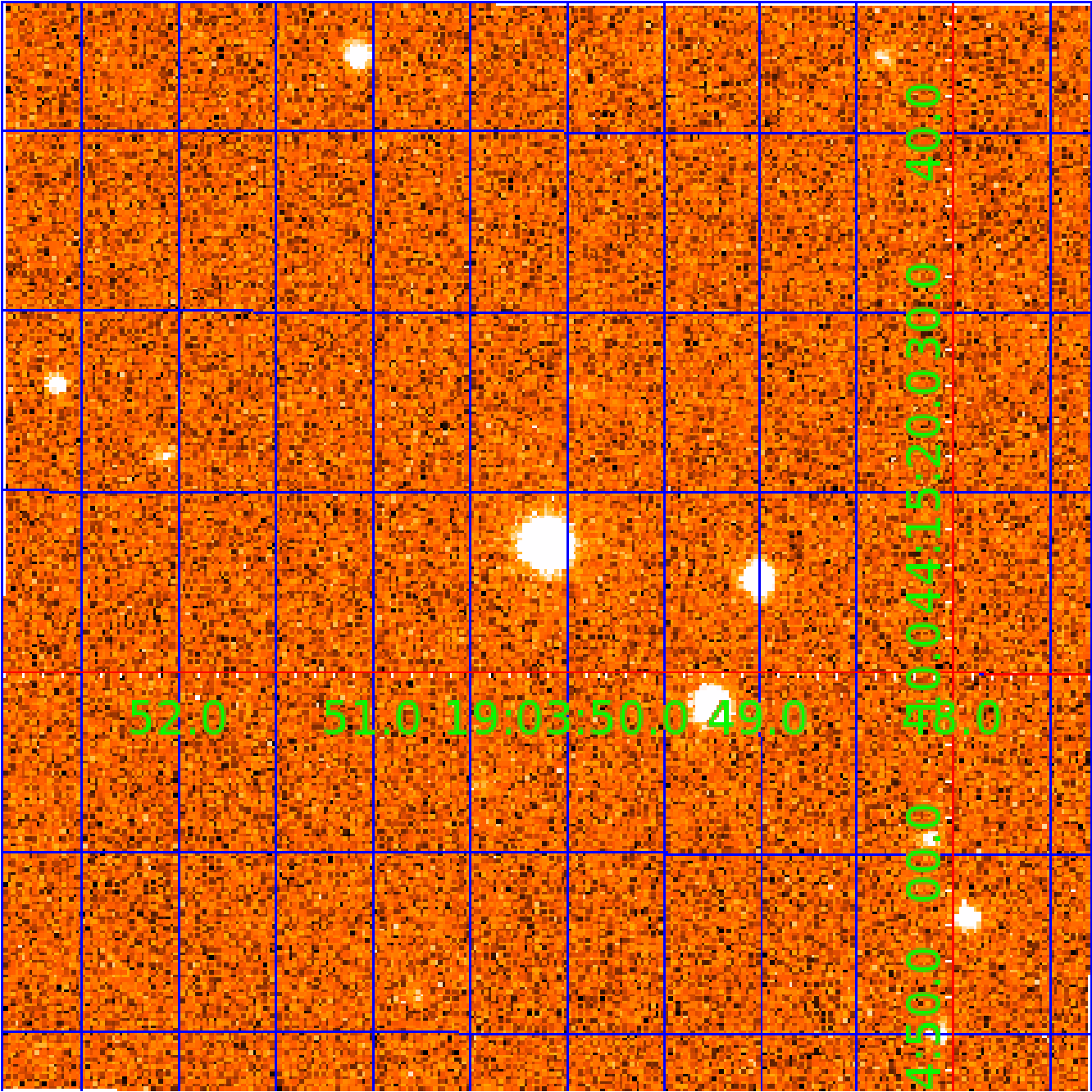
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008285970

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})
008285970-01	OBS	7009.01	0.562329	131.783294	0.2	1.664	16.3	0.0	0.93	5638	0.05	4867.75
008285970-02	OBS	No	0.562559	131.871769	25.8	1.452	12.4	4.9	0.93	5638	0.55	4865.10
008285970-03	OBS	No	0.562500	131.748494	669.9	1.500	13.7	-1.0	0.93	5638	2.40	4865.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008285970-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008285970-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
008285970-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—HALO_GHOST

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

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

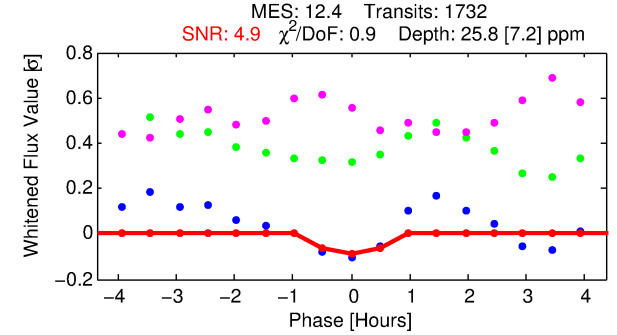
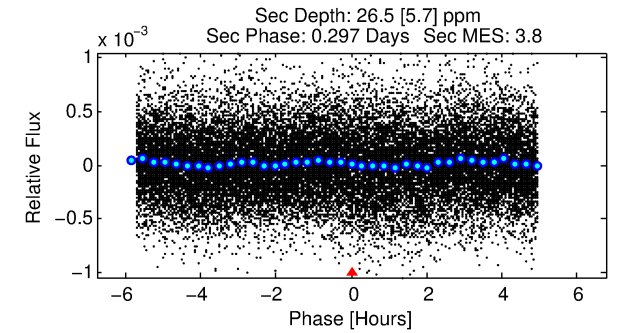
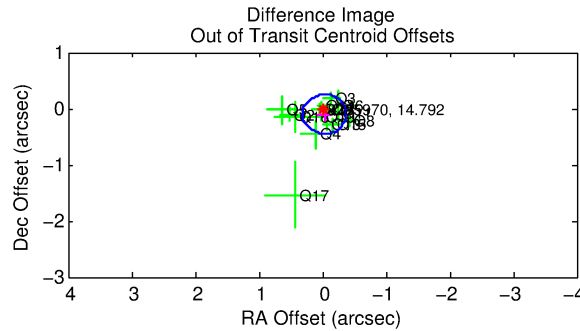
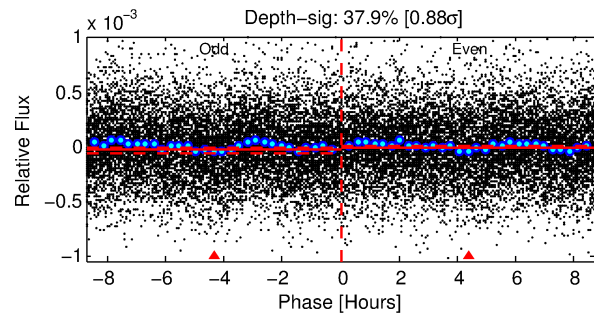
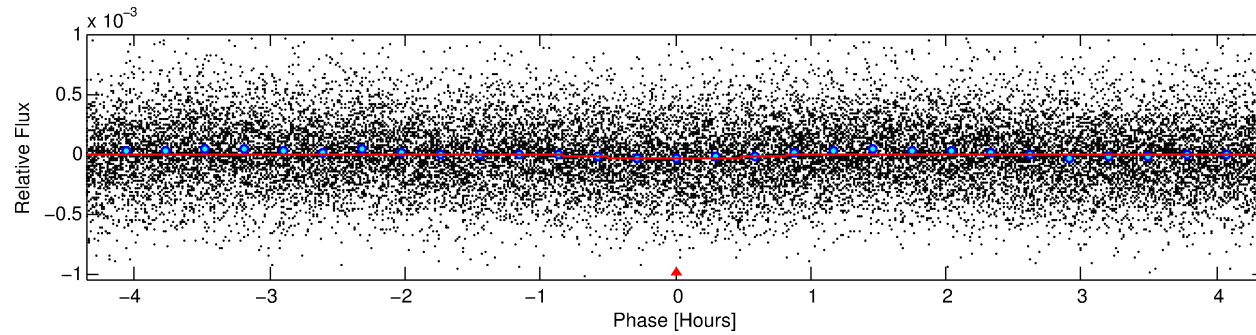
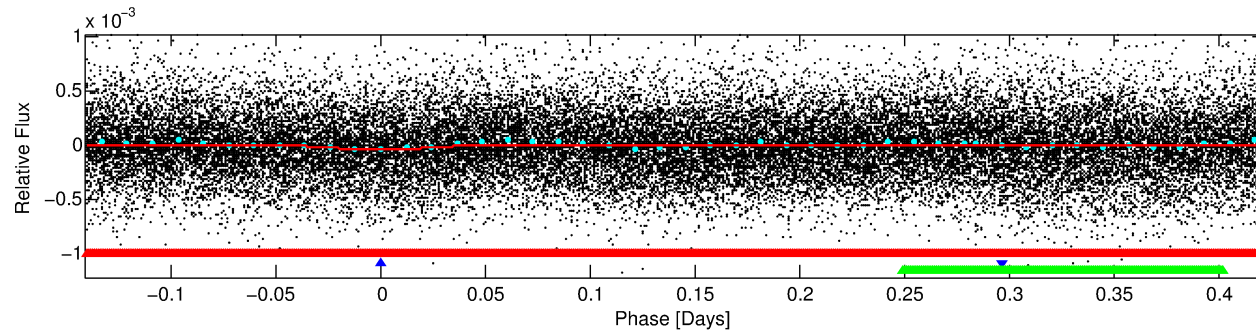
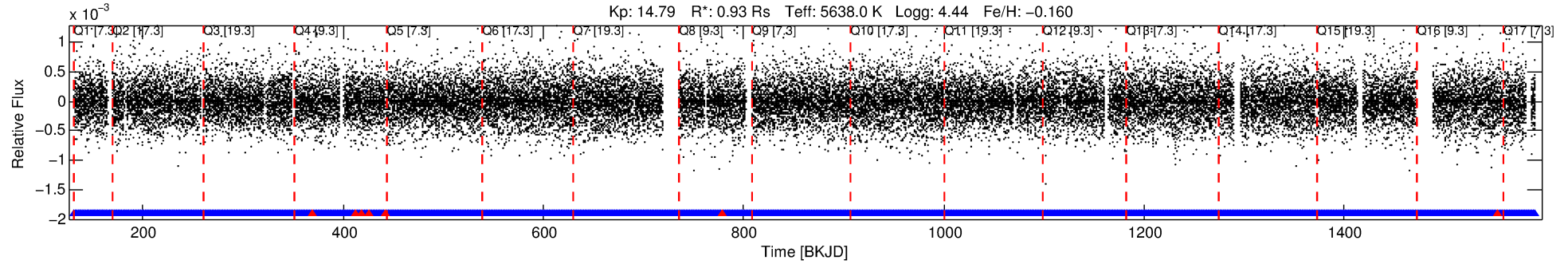
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008285970-02

No Significant Match Found

DV One-Page Summary

KIC: 8285970 Candidate: 2 of 3 Period: 0.563 d
KOI: K07009 Corr: No Ephemeris Match



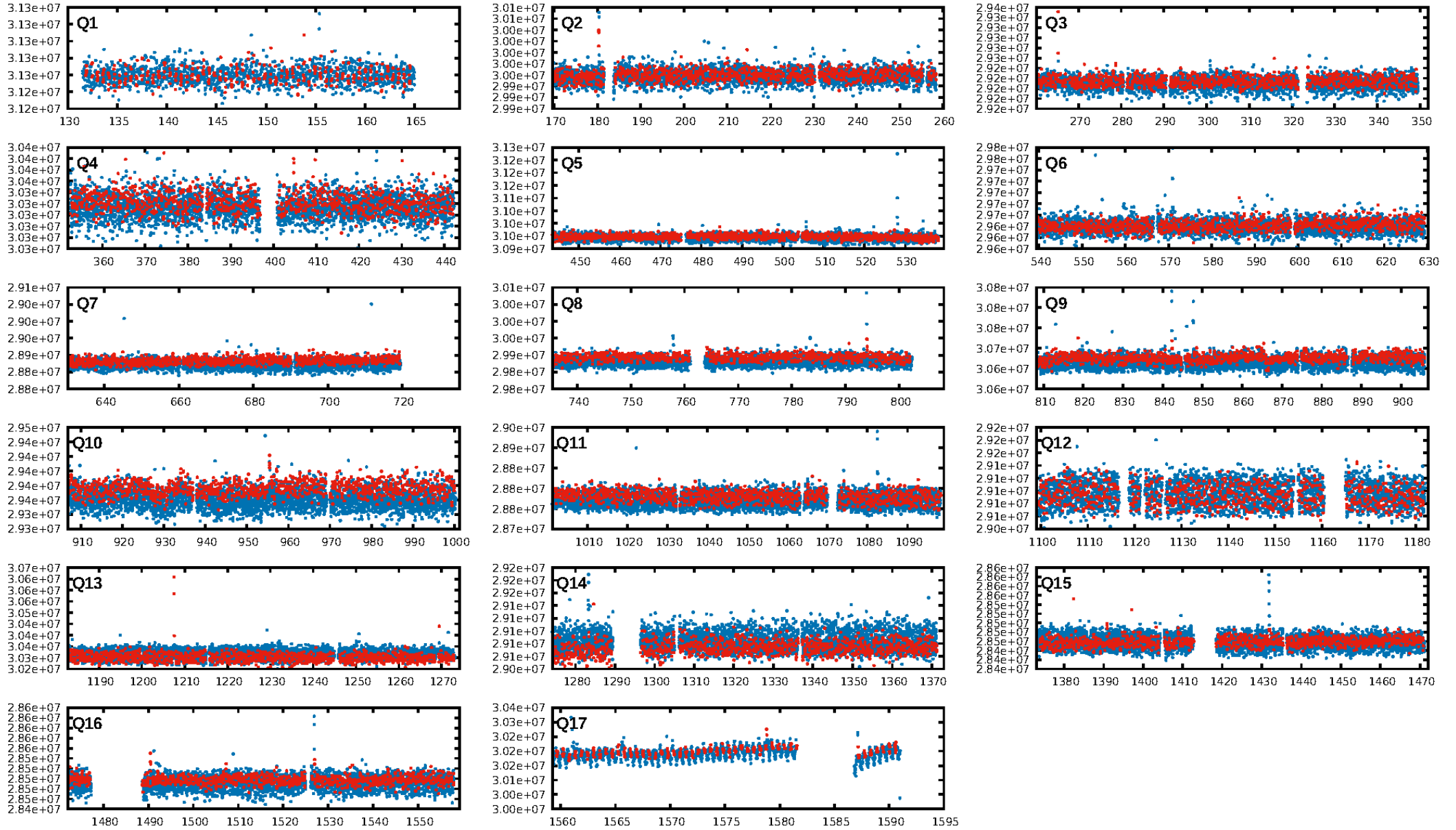
DV Fit Results:

Period = 0.56256 [0.00002] d
Epoch = 131.8718 [0.0046] BKJD
Rp/R* = 0.0054 [0.0035]
a/R* = 1.73 [3.34]
b = 0.88 [0.79]
Seff = 4865.10 [1643.52]
Teff = 2130 [180] K
Rp = 0.55 [0.38] Re
a = 0.0127 [0.0028] AU
Ag = 7.68 [10.25] [0.65 σ]
Teffp = 5481 [1781] K [1.87 σ]

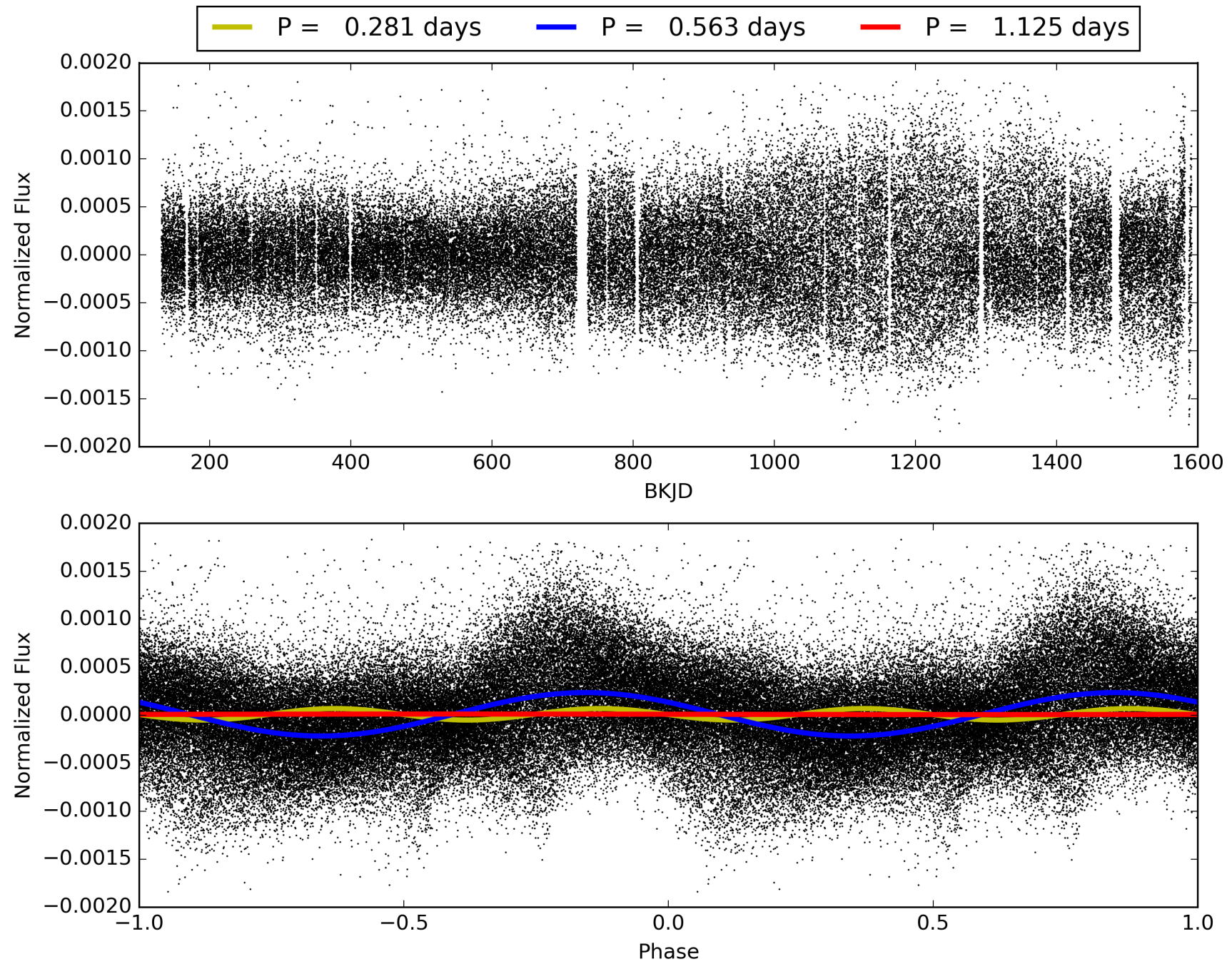
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.52e-28
RollingBand-fgt: 1.00 [1622/1629]
GhostDiagnostic-chr: 1.676
Centroid-sig: 18.4%
Centroid-so: 2.019 arcsec [0.99 σ]
OotOffset-rm: 0.106 arcsec [0.92 σ]
KicOffset-rm: 0.166 arcsec [1.62 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.33 [5/15]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008285970-02, PDC Light Curves

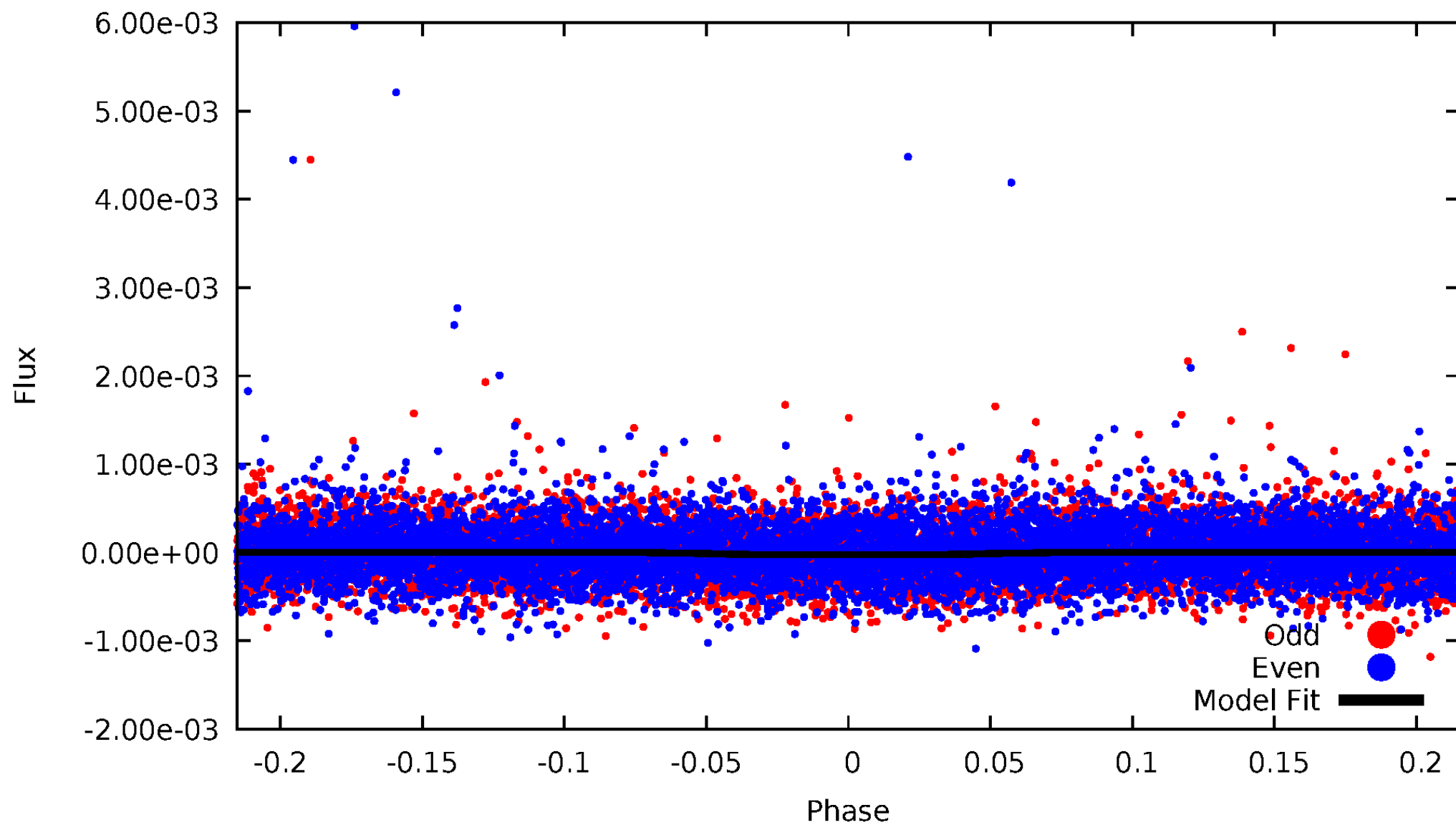


TCE 008285970-02



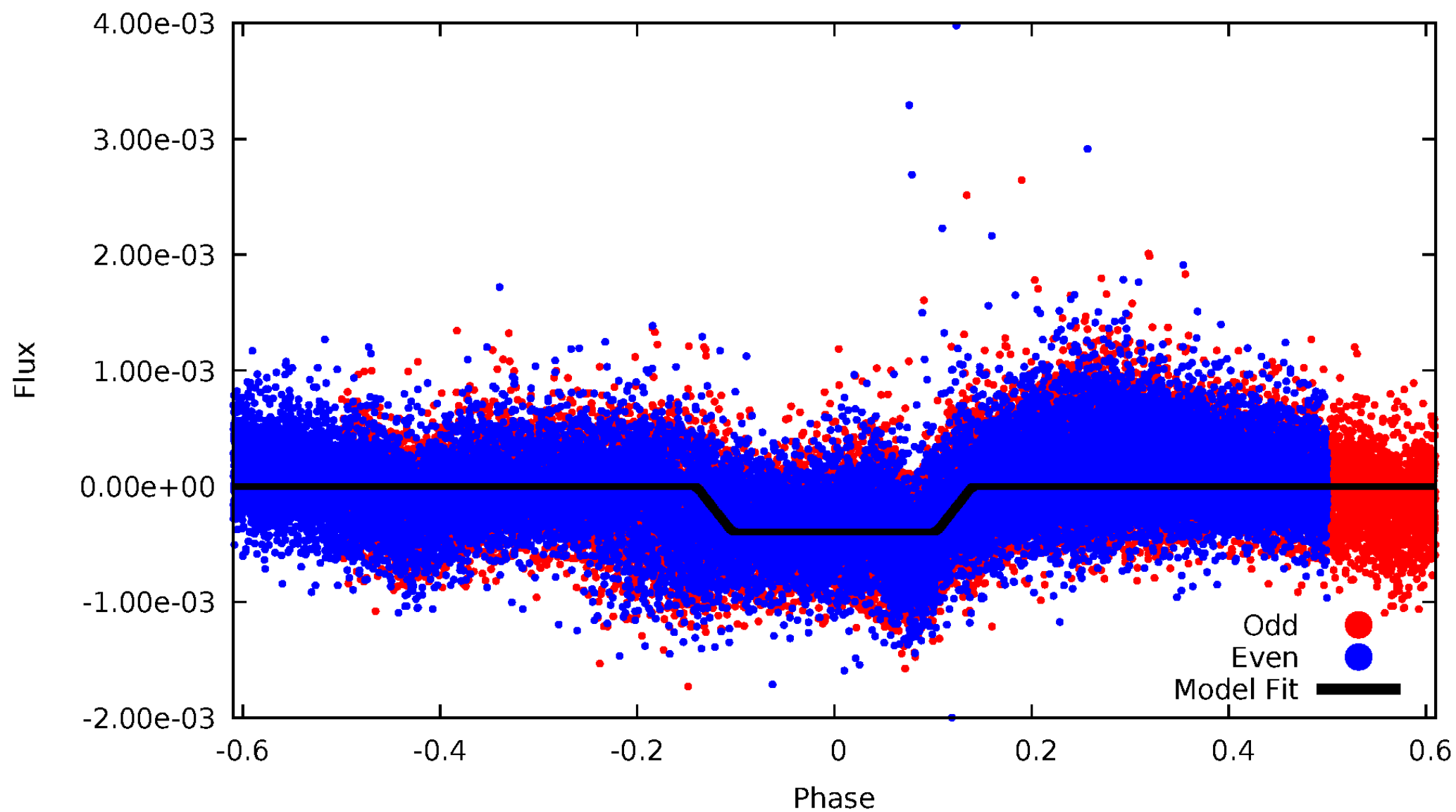
DV Odd/Even

TCE 008285970-02



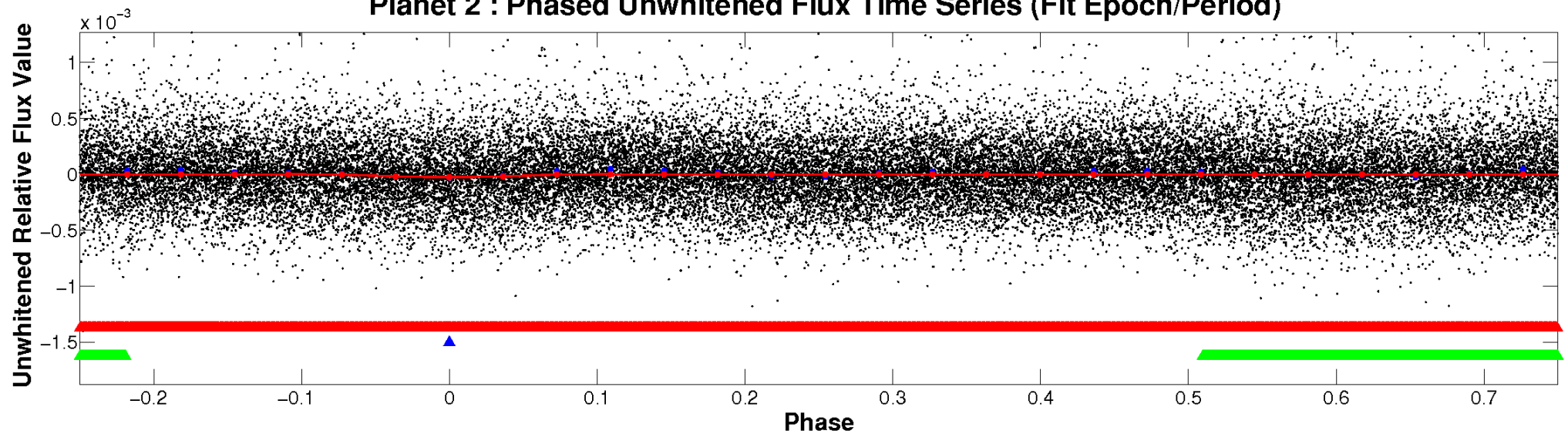
ALT Odd/Even

TCE 008285970-02

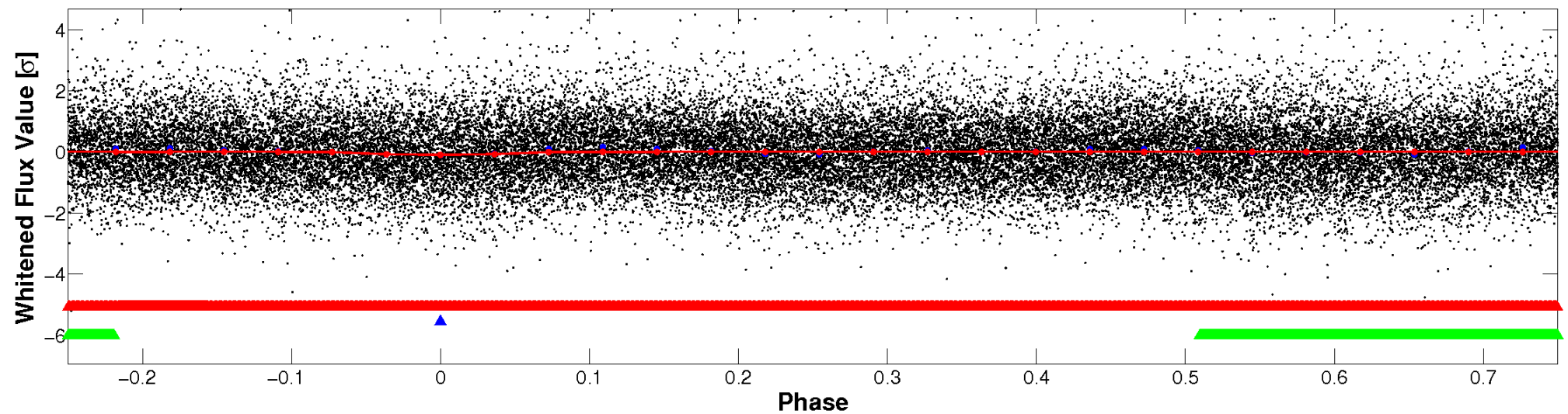


Non-Whitened Vs. Whitened Light Curve

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

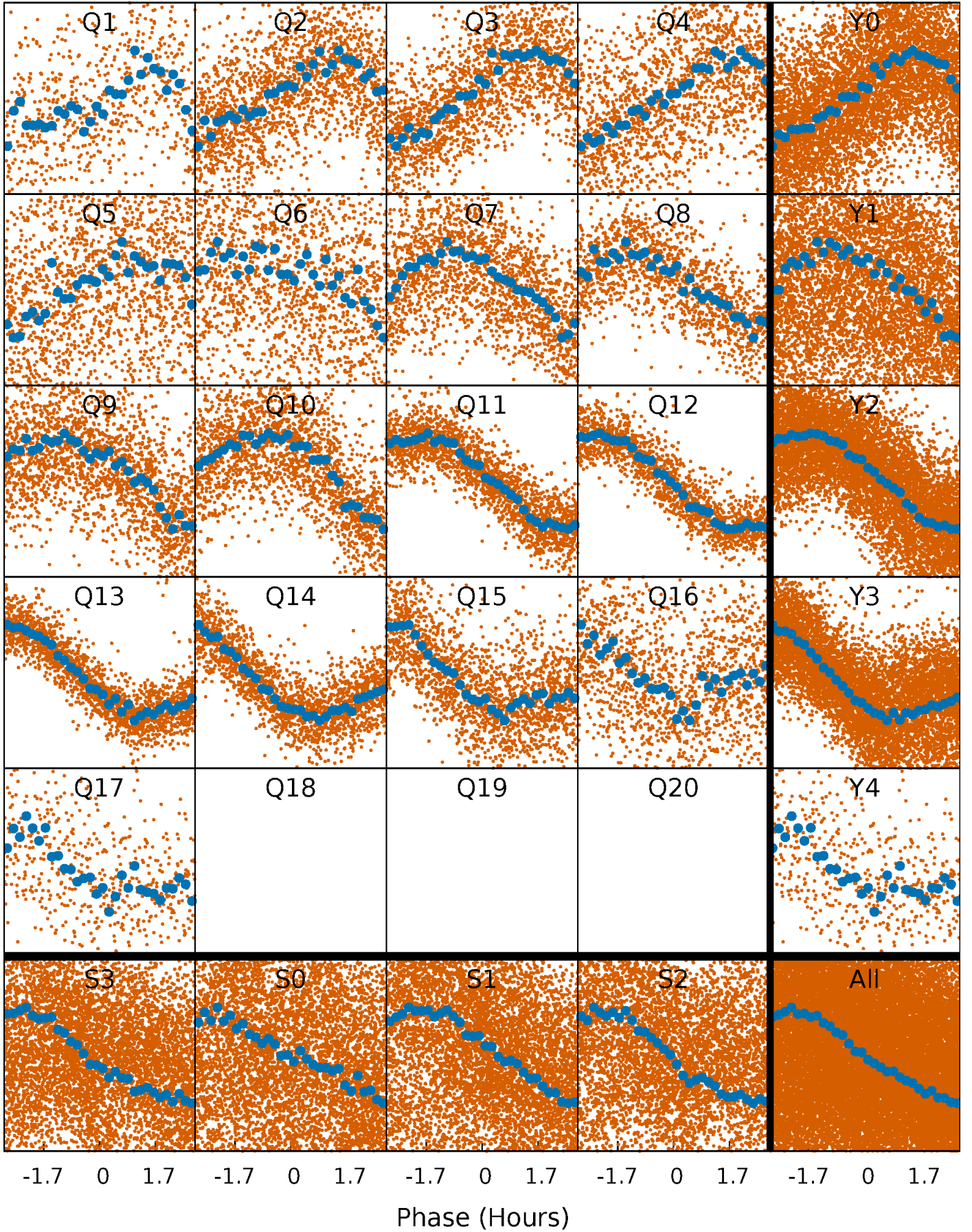


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



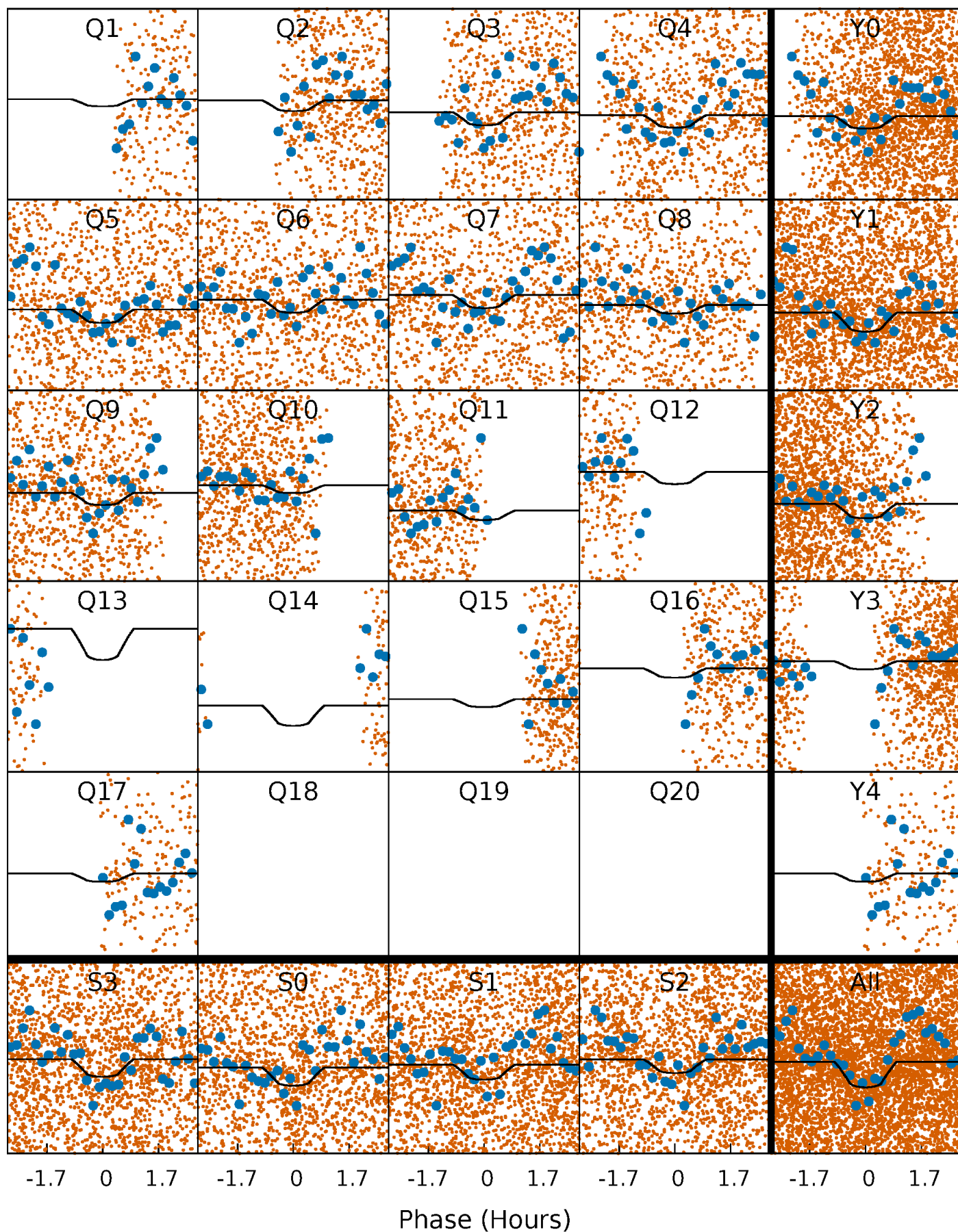
PDC Quarter-Phased Transit Curves

TCE 008285970-02 P= 0.562559 Days $T_0=131.871769$ (BKJD)



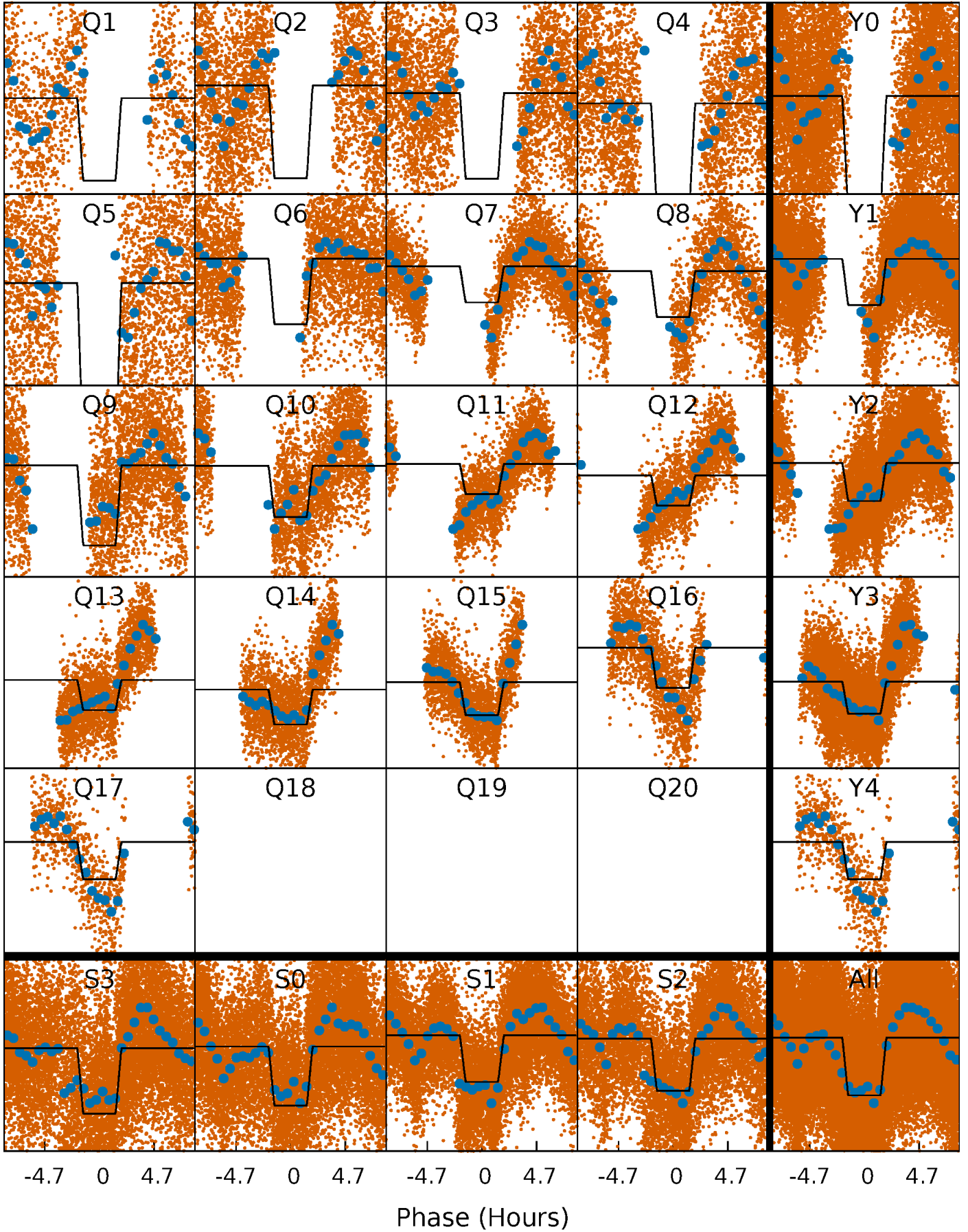
DV Quarter-Phased Transit Curves

TCE 008285970-02 P= 0.562559 Days $T_0=131.871769$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

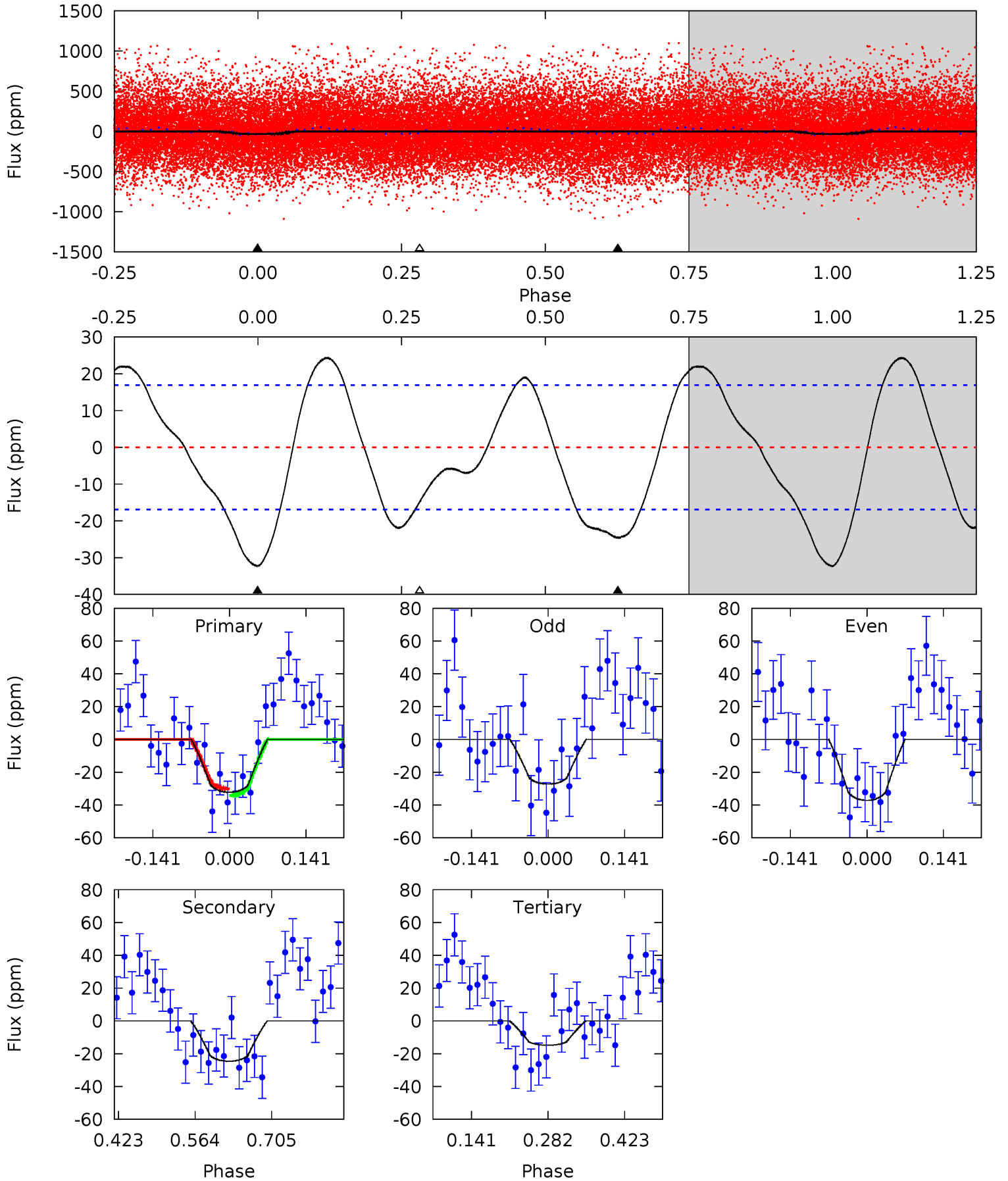
TCE 008285970-02 P= 0.562495 Days $T_0=131.713468$ (BKJD)



DV Model-Shift Uniqueness Test

008285970-02, P = 0.562559 Days, E = 131.309210 Days

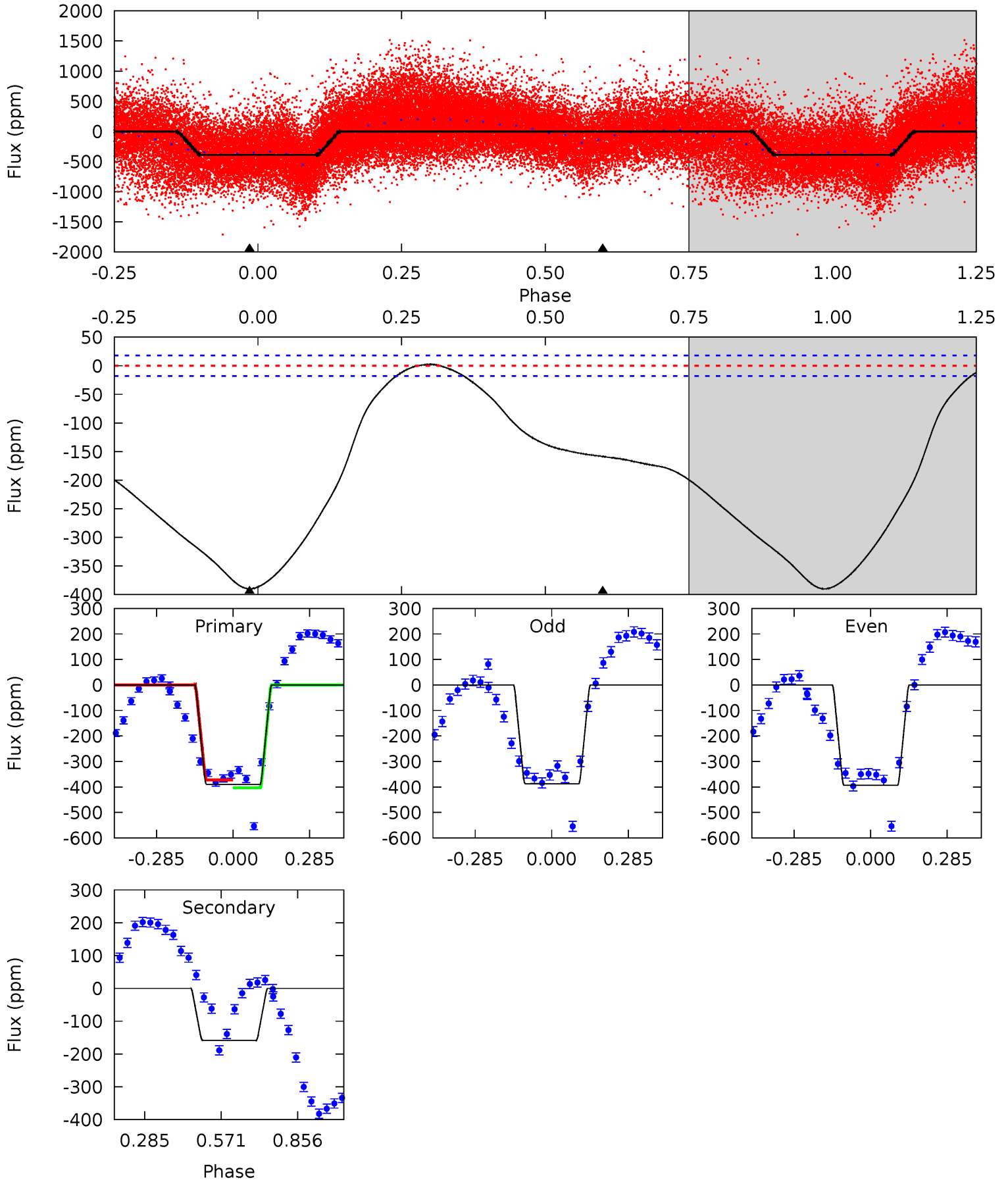
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.57	6.53	3.94	0	4.49	1.47	3.53	4.62	8.57	2.59	6.53	1.33	0.85	0.43	0.52



Alt Model-Shift Uniqueness Test

008285970-02, P = 0.562495 Days, E = 131.150973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
94.6	38.5	0	0	4.34	1.07	0.70	94.6	94.6	38.5	38.5	0.70	1.00	0.01	4.16



Stellar Parameters For KIC 008285970

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5638^{+152}_{-152}	$4.437^{+0.116}_{-0.174}$	$-0.160^{+0.300}_{-0.300}$	$0.933^{+0.247}_{-0.133}$	$0.868^{+0.114}_{-0.076}$	$1.507^{+0.773}_{-0.697}$
	+3%/-3%	+3%/-4%	+188%/-188%	+26%/-14%	+13%/-9%	+51%/-46%
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 008285970-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 4	$0.60^{+0.38}_{-0.34}$	2988^{+220}_{-159}	5201^{+2910}_{-1009}	$6.381^{+26.835}_{-4.113}$
Alt.	-159 ± 4	$2.06^{+0.47}_{-0.40}$	2990^{+195}_{-141}	4535^{+407}_{-327}	$3.335^{+1.796}_{-1.105}$

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

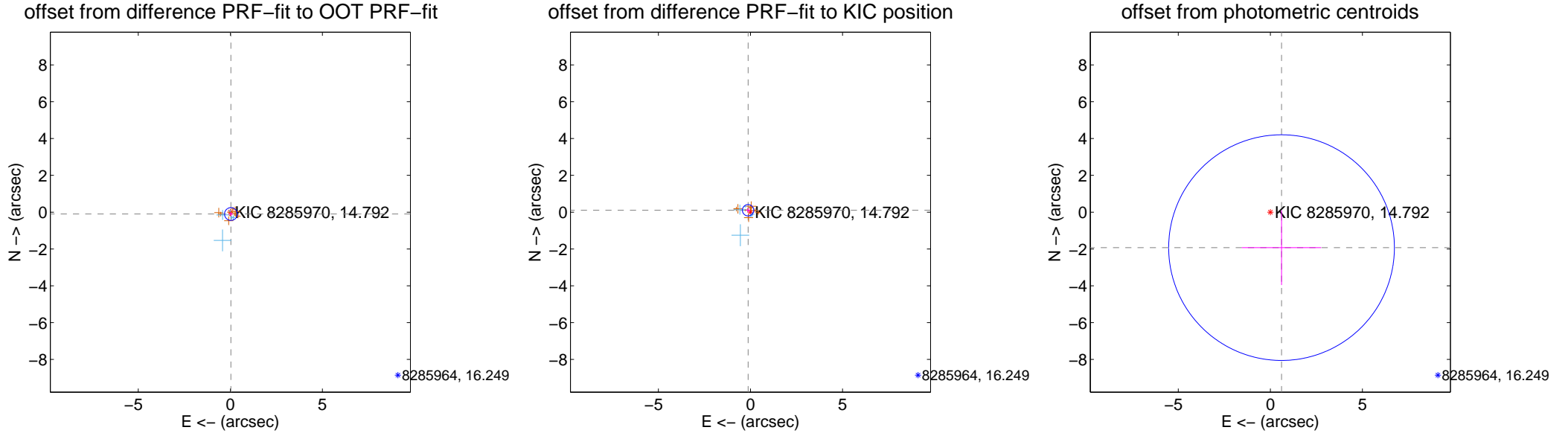
DV Centroid Data

Supplemental centroid analysis for 008285970-02. Kepler magnitude: 14.79. Transit SNR 4.93

There are 5 quarters with good PRF difference image offsets

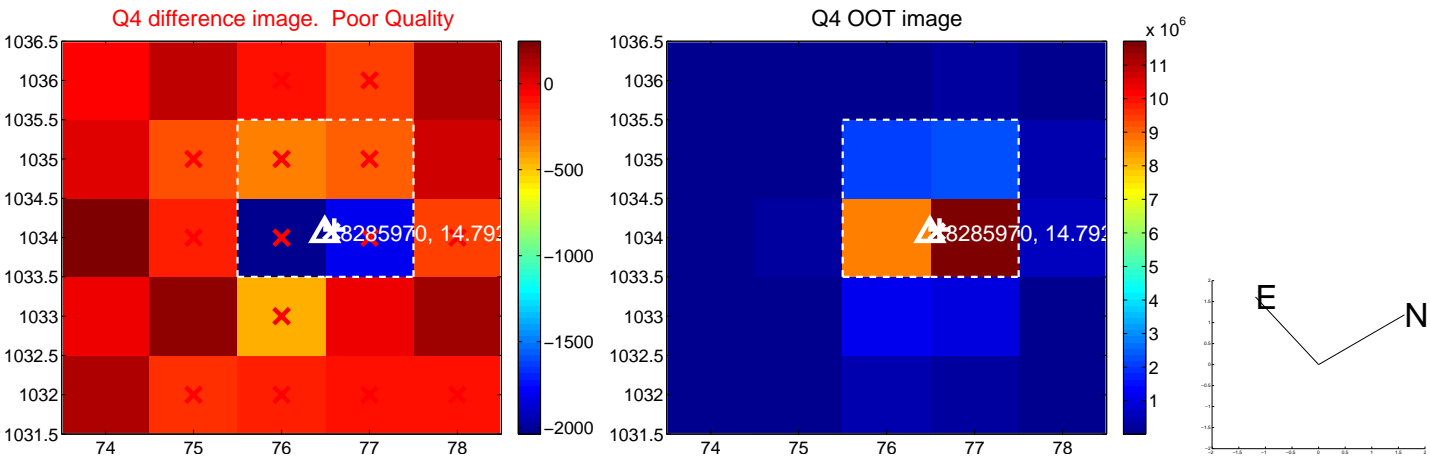
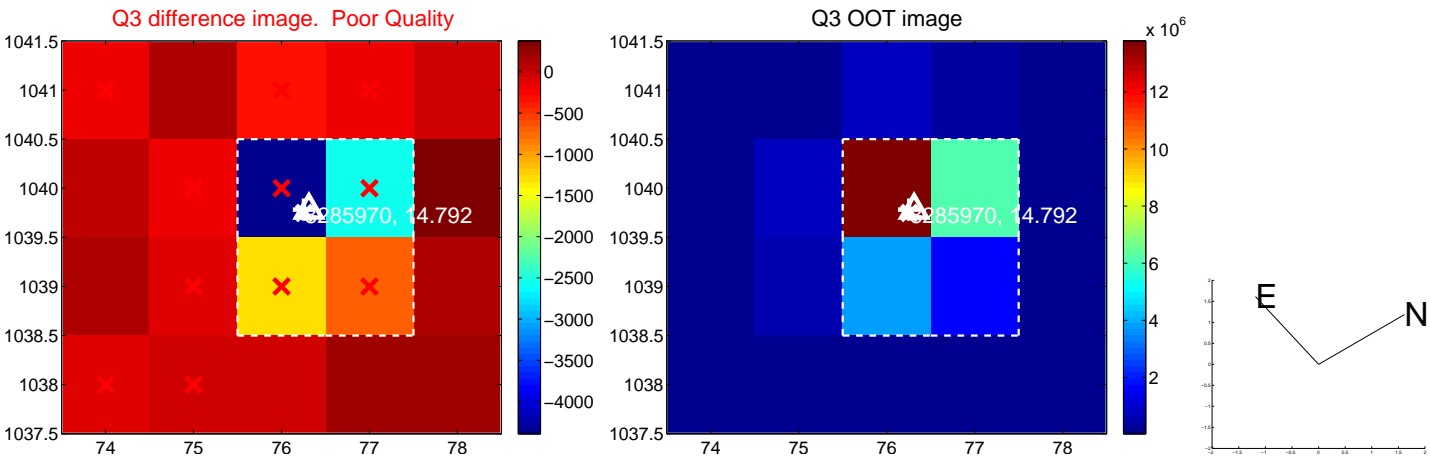
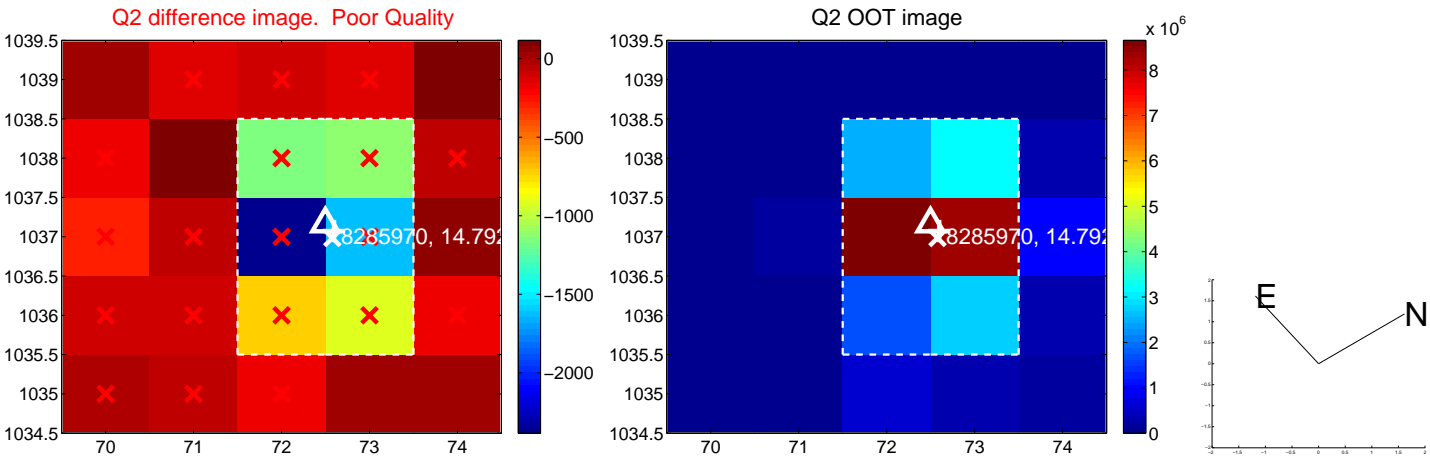
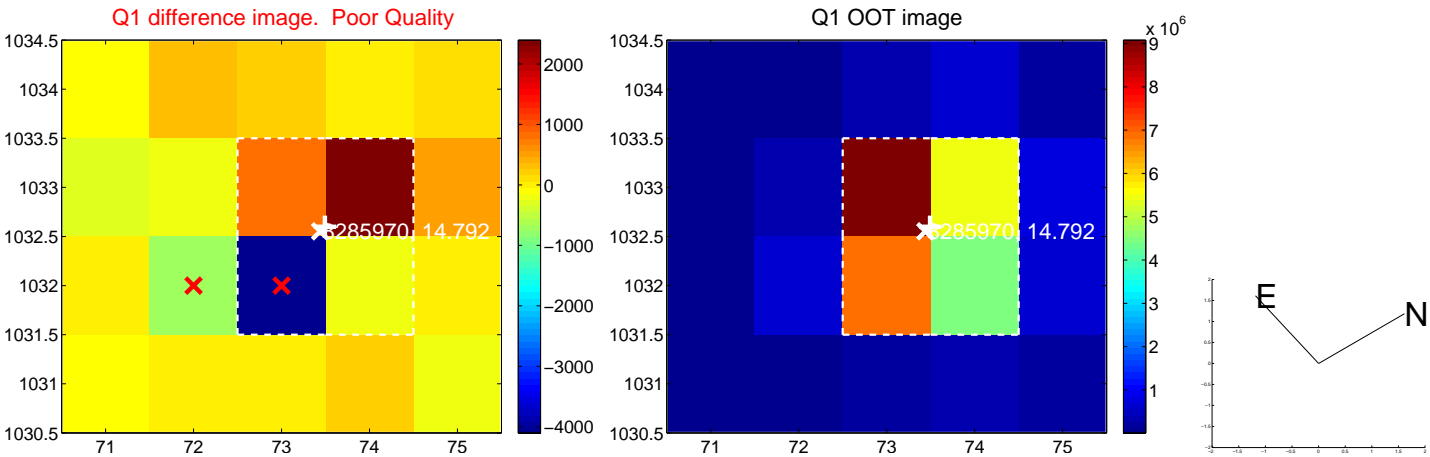
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.116	0.92	-0.031 ± 0.106	-0.101 ± 0.123
PRF-fit source offset from KIC position	0.166 ± 0.103	1.62	0.130 ± 0.109	0.104 ± 0.119
photometric centroid source offset	2.02 ± 2.04	0.99	-0.61 ± 2.15	-1.93 ± 2.03

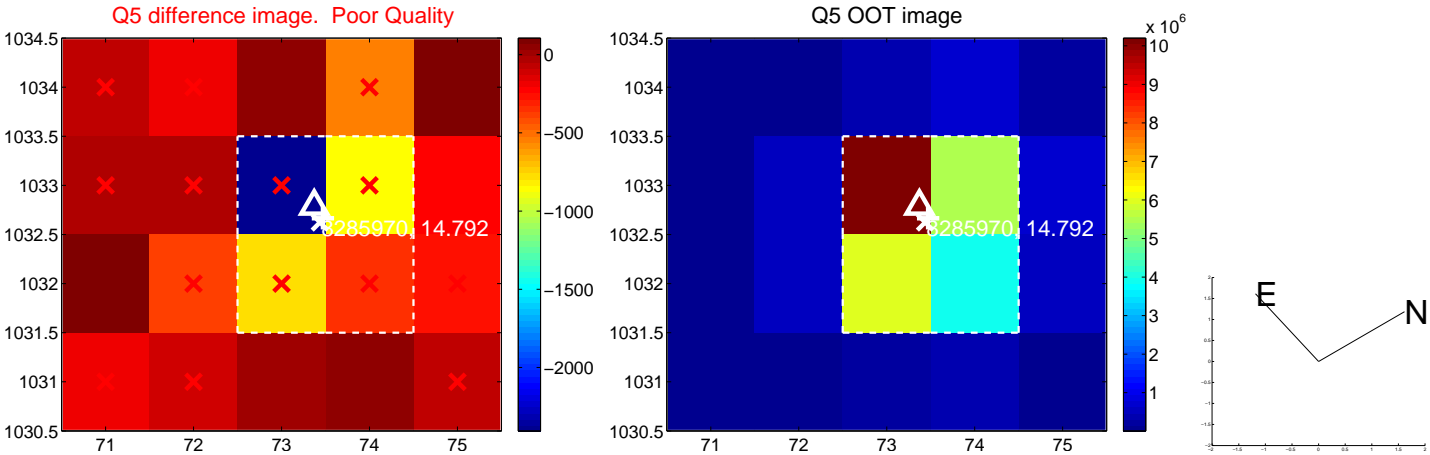


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

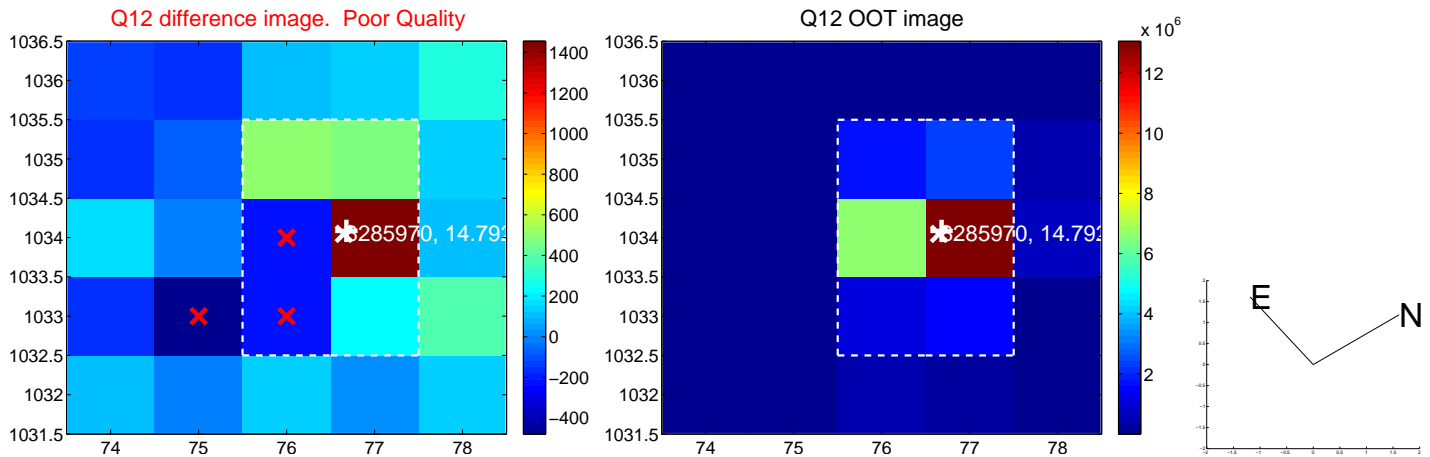
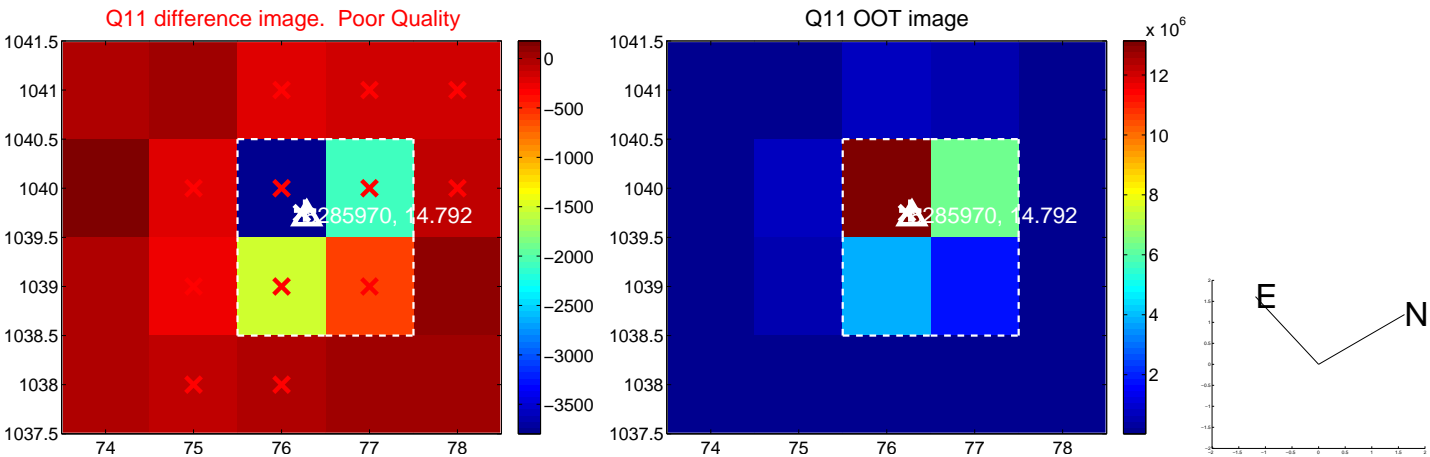
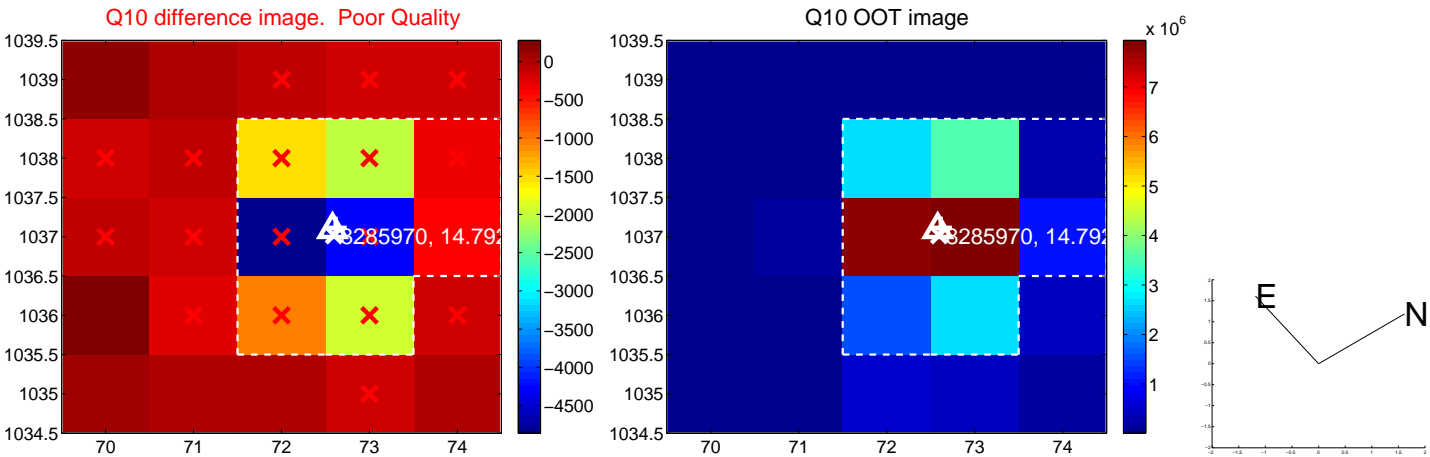
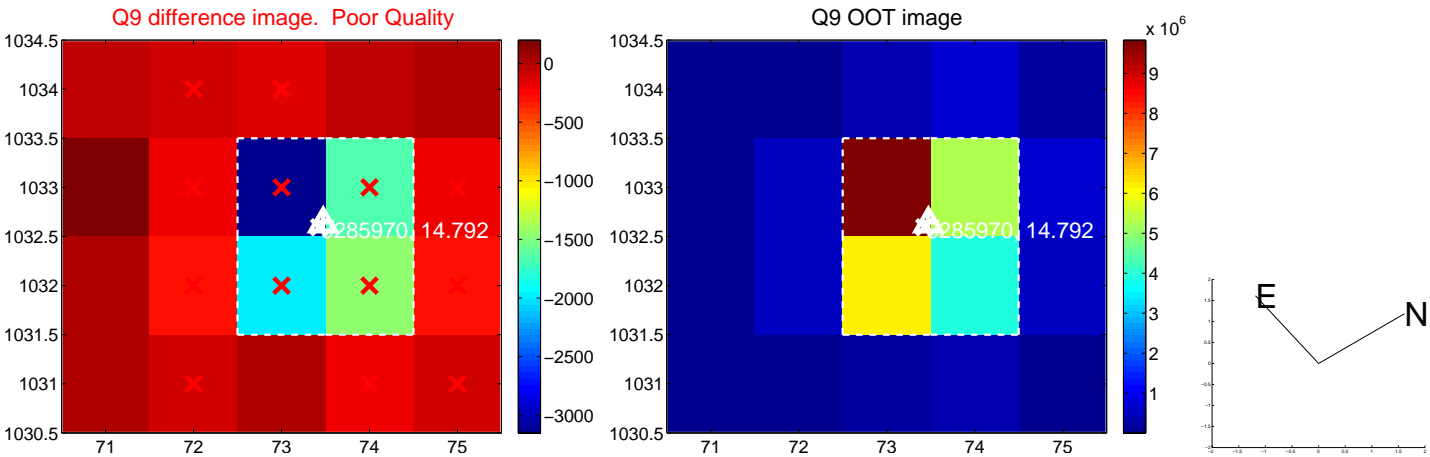
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



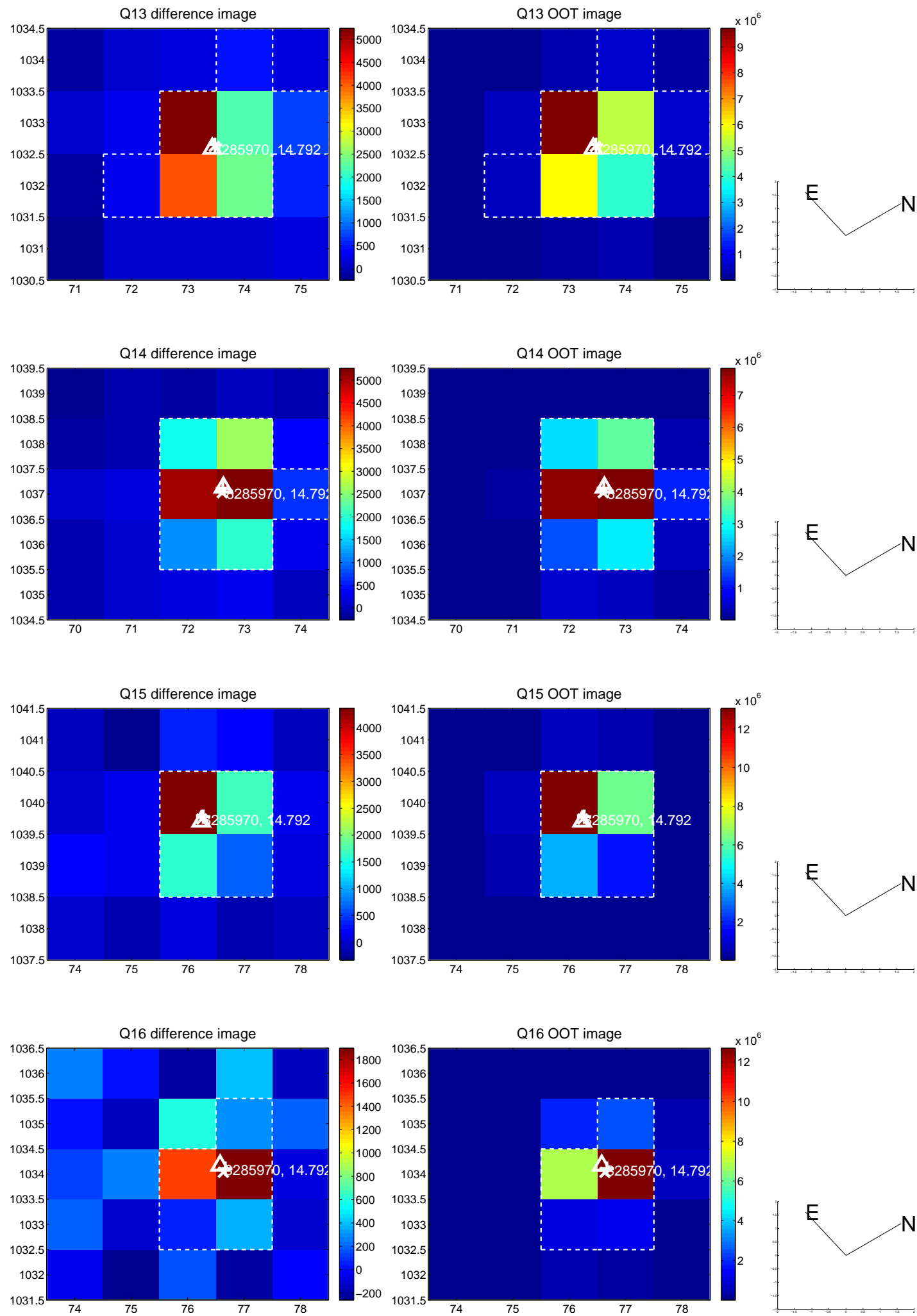
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



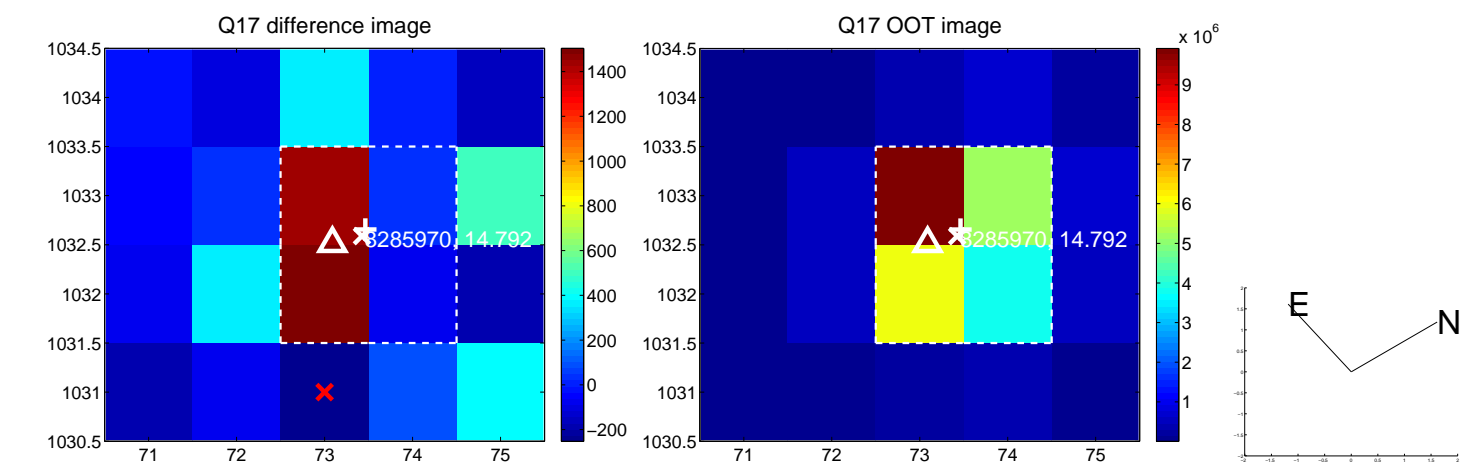
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



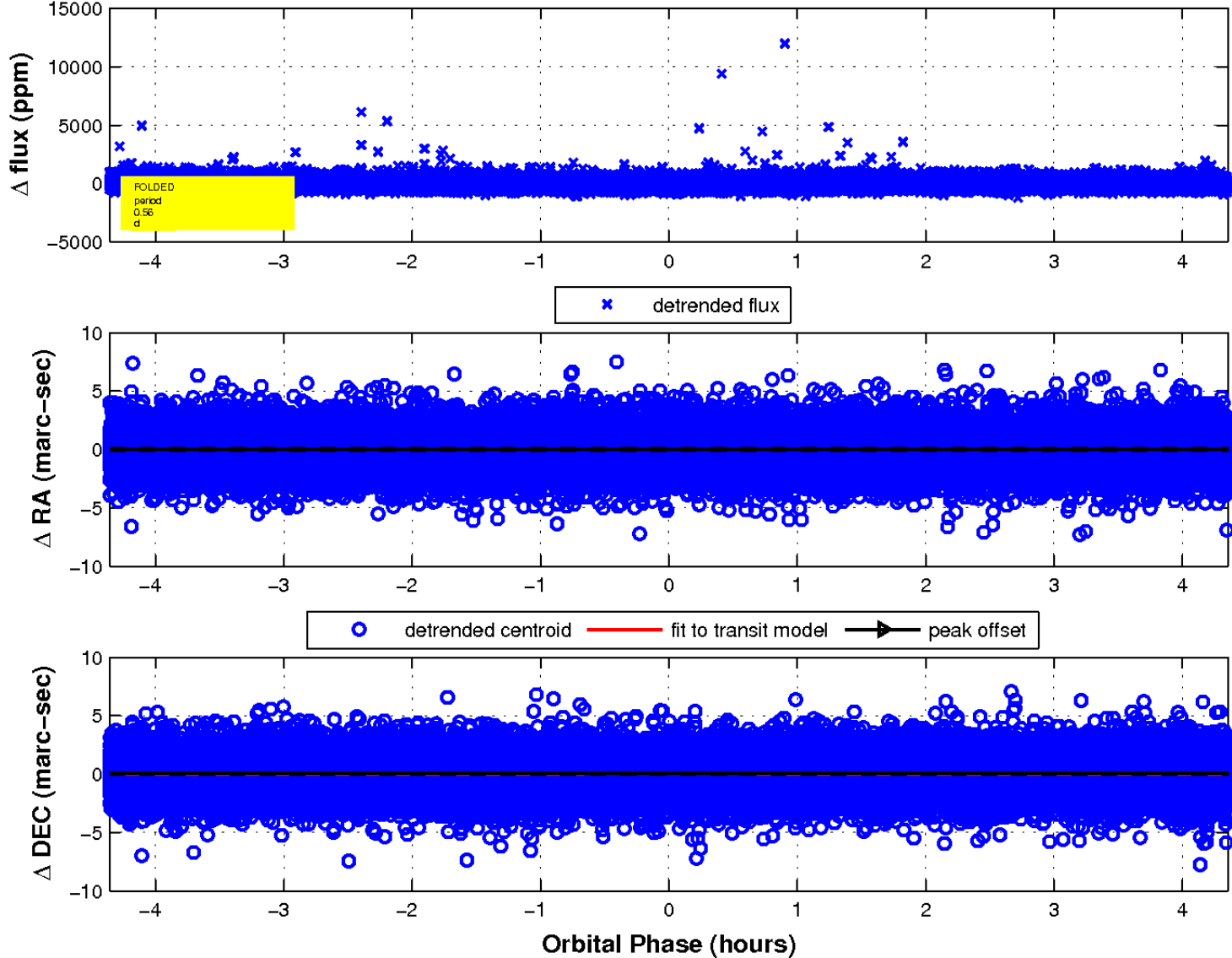
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

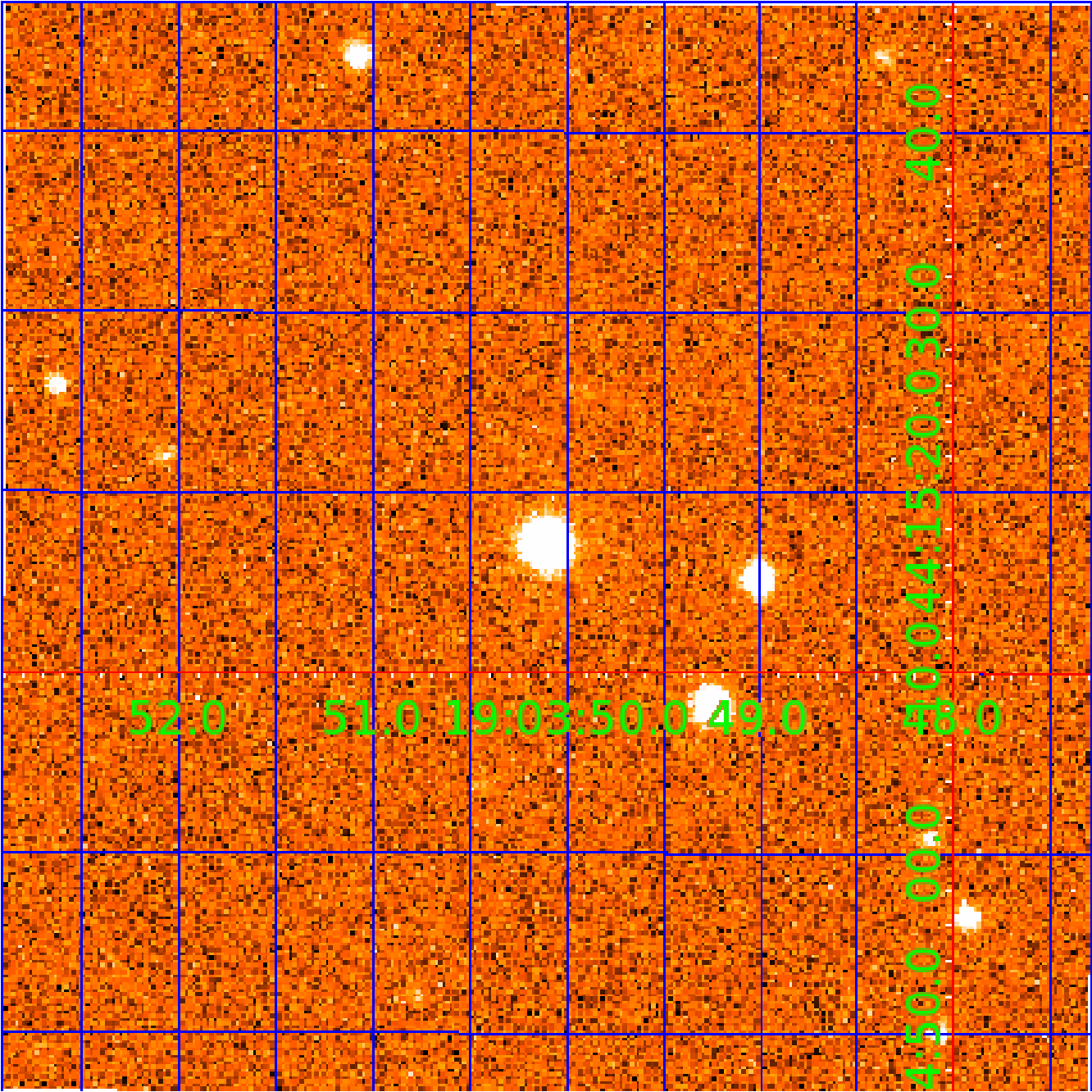


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008285970

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})
008285970-01	OBS	7009.01	0.562329	131.783294	0.2	1.664	16.3	0.0	0.93	5638	0.05	4867.75
008285970-02	OBS	No	0.562559	131.871769	25.8	1.452	12.4	4.9	0.93	5638	0.55	4865.10
008285970-03	OBS	No	0.562500	131.748494	669.9	1.500	13.7	-1.0	0.93	5638	2.40	4865.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008285970-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
008285970-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD
008285970-03	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS—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.

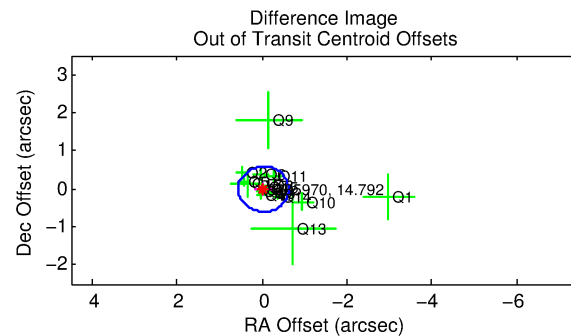
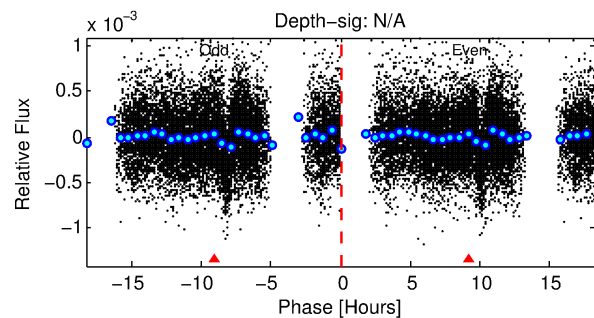
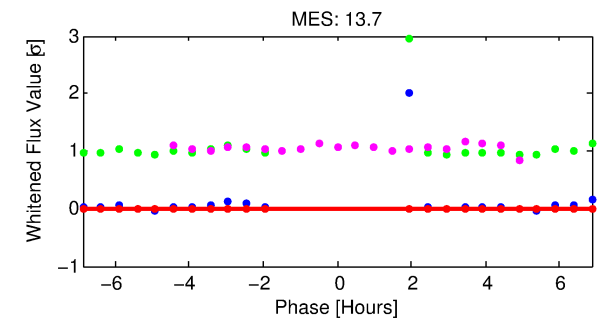
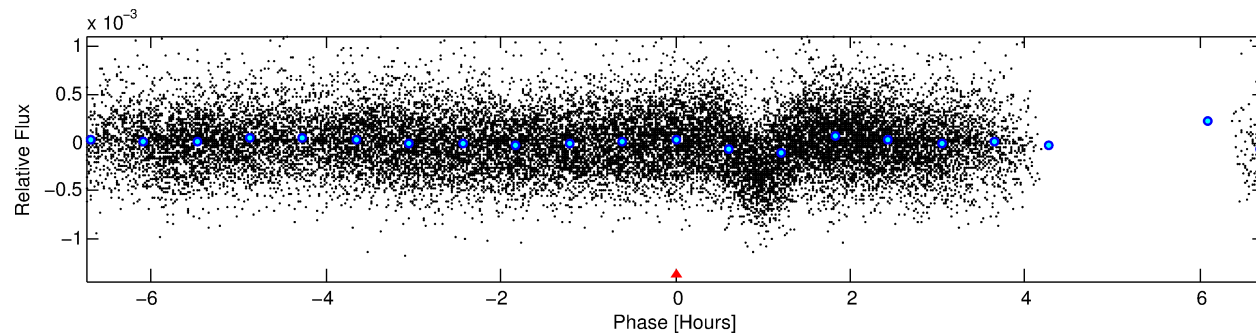
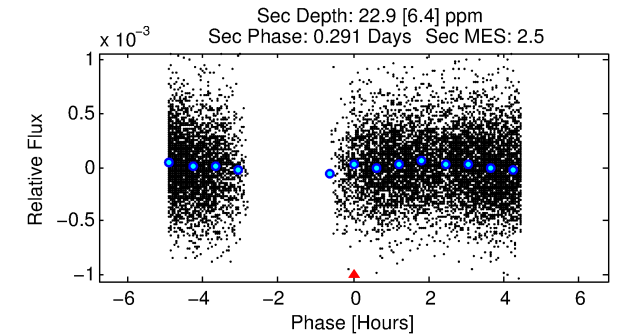
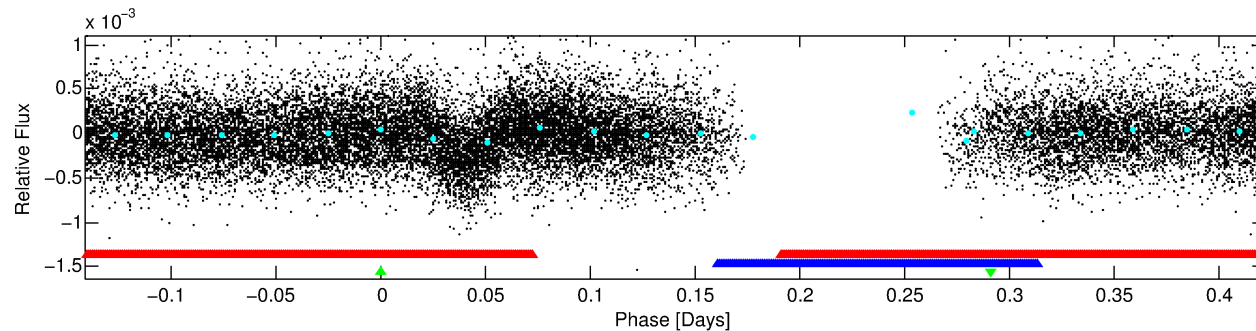
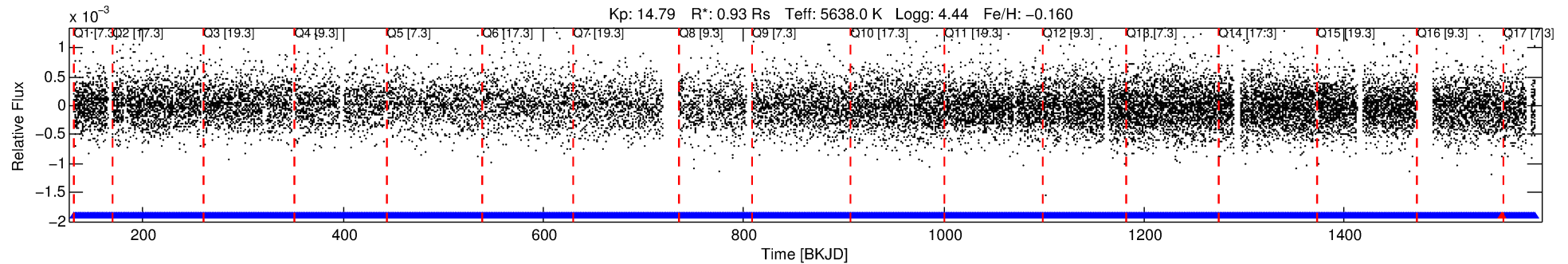
Ephemeris Match Information For 008285970-03

No Significant Match Found

DV One-Page Summary

KIC: 8285970 Candidate: 3 of 3 Period: 0.563 d
KOI: K07009 Corr: No Ephemeris Match

Kp: 14.79 R*: 0.93 Rs Teff: 5638.0 K Logg: 4.44 Fe/H: -0.160



TPS TCE Results:

Period = 0.56250 d
Epoch = 131.7485 BKJD

DV fit results are unavailable

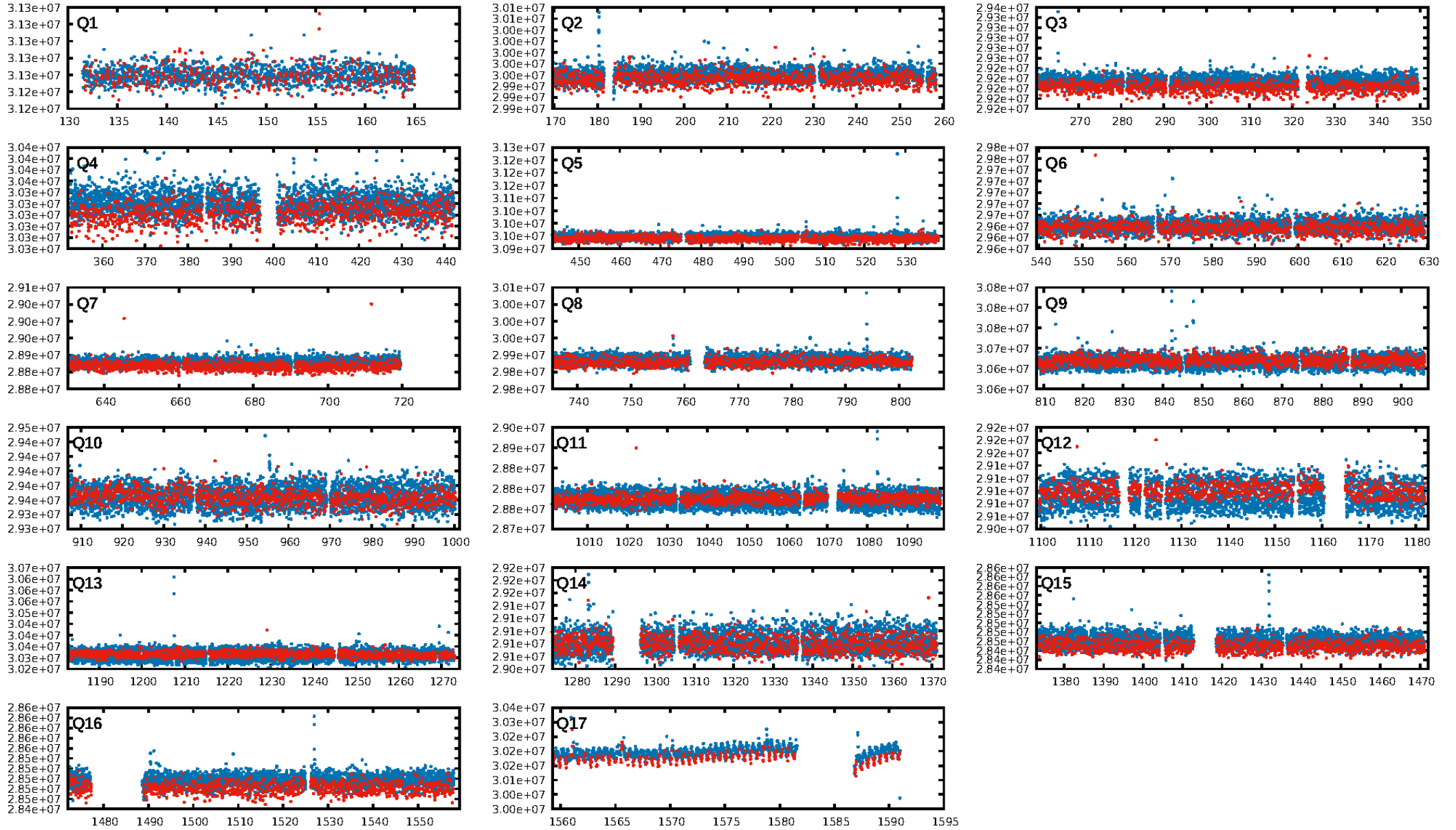
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.15e-34
RollingBand-fgt: 1.00 [1714/1715]
GhostDiagnostic-chr: -0.01561
Centroid-sig: 89.9%
Centroid-so: 0.109 arcsec [1.02σ]
OotOffset-rm: 0.036 arcsec [0.18σ]
KicOffset-rm: 0.193 arcsec [1.12σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 0.00 [0/17]

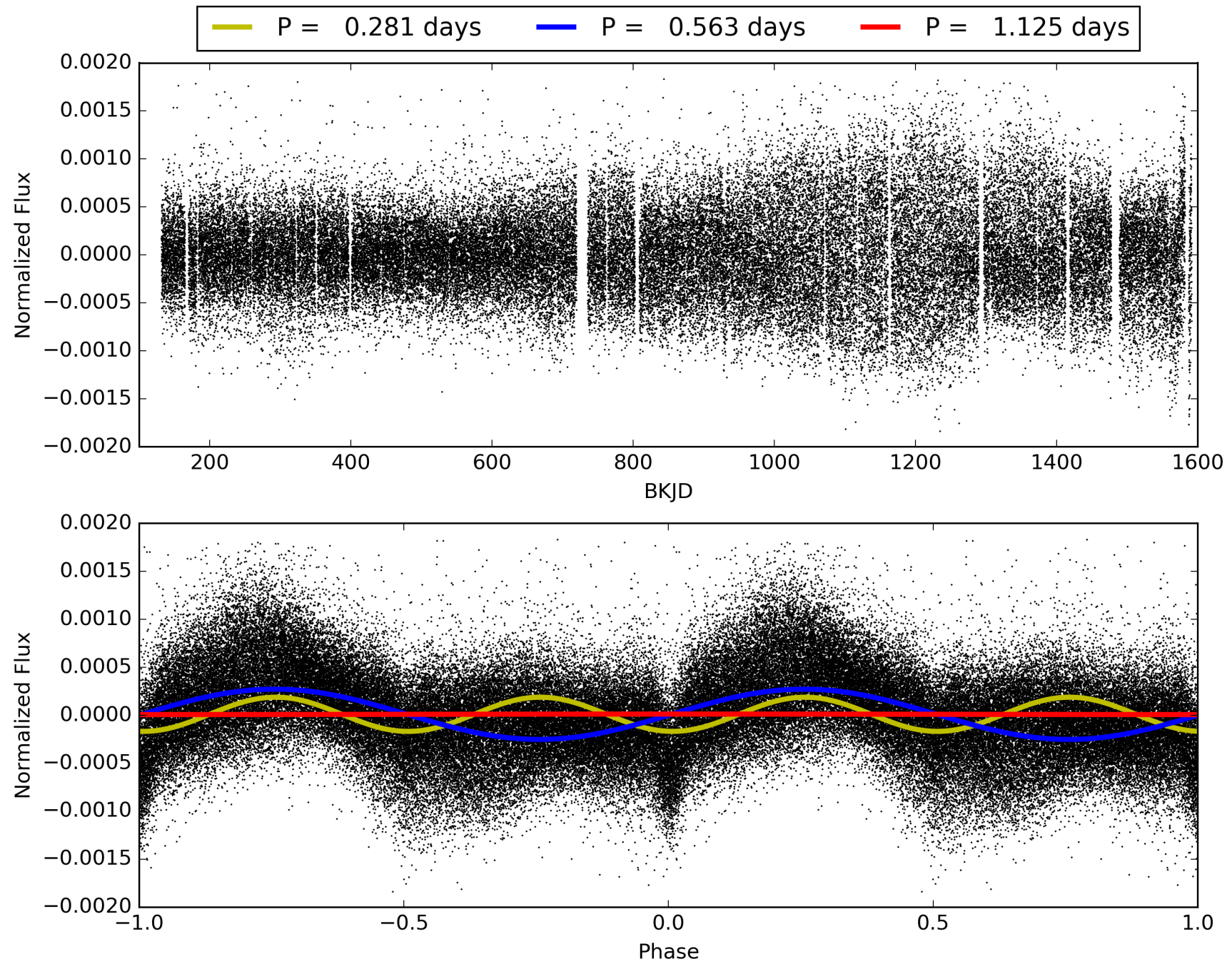
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:01:35 Z

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

TCE 008285970-03, PDC Light Curves

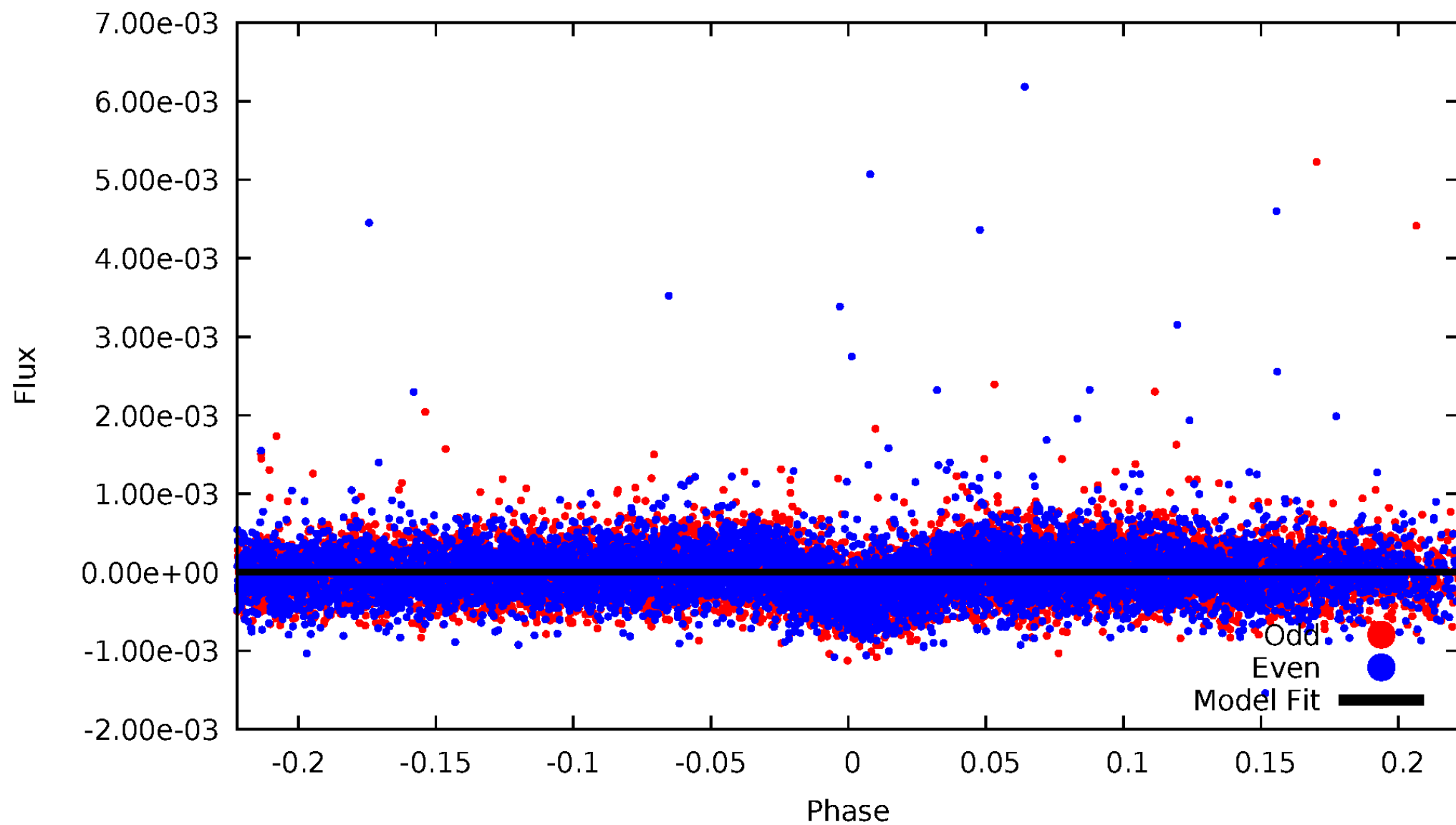


TCE 008285970-03



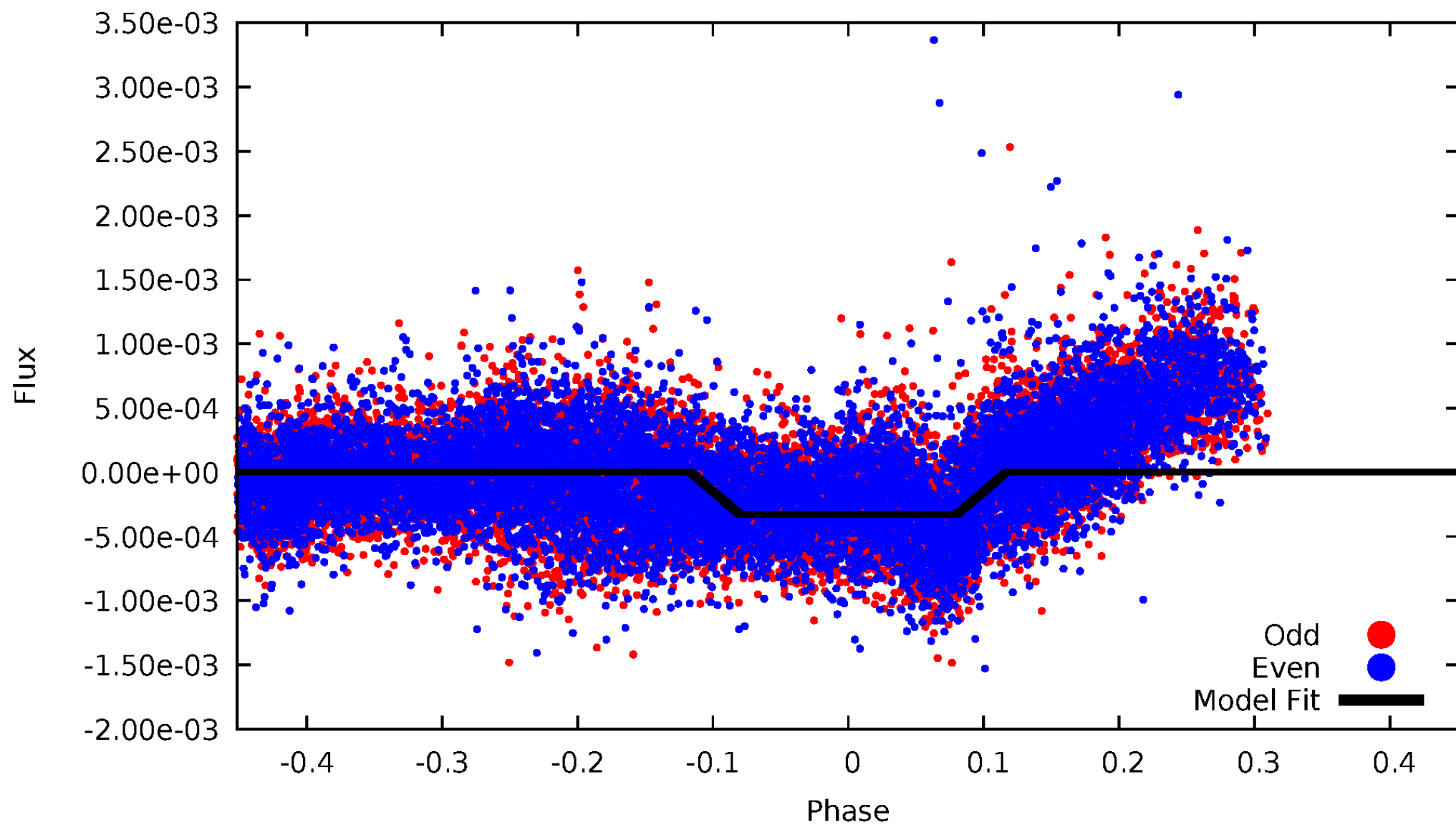
DV Odd/Even

TCE 008285970-03

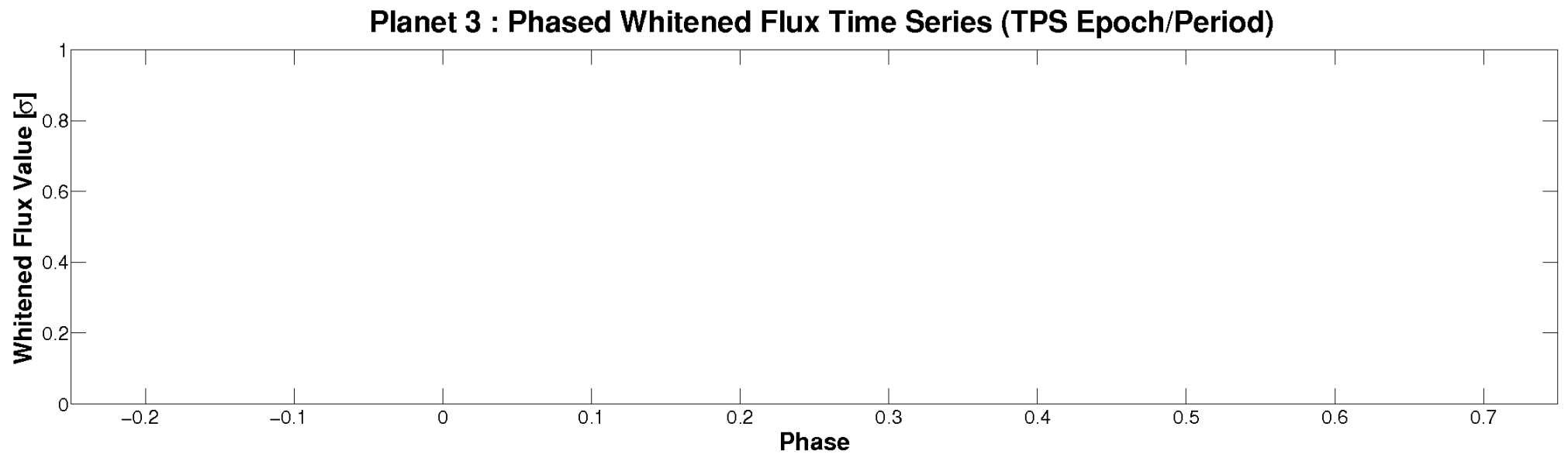
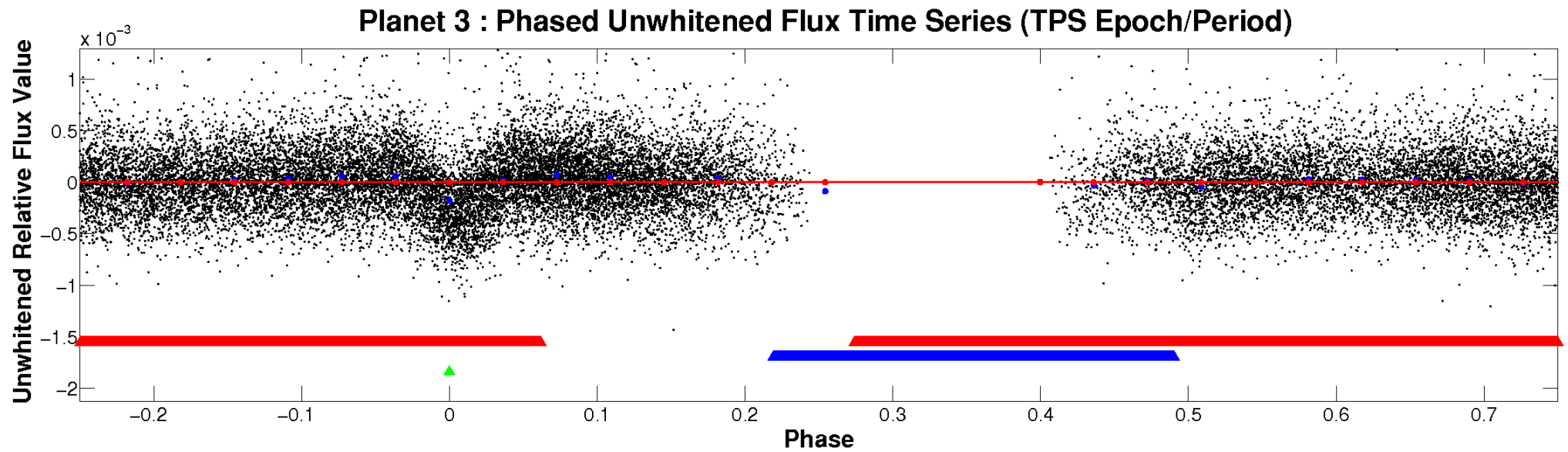


ALT Odd/Even

TCE 008285970-03

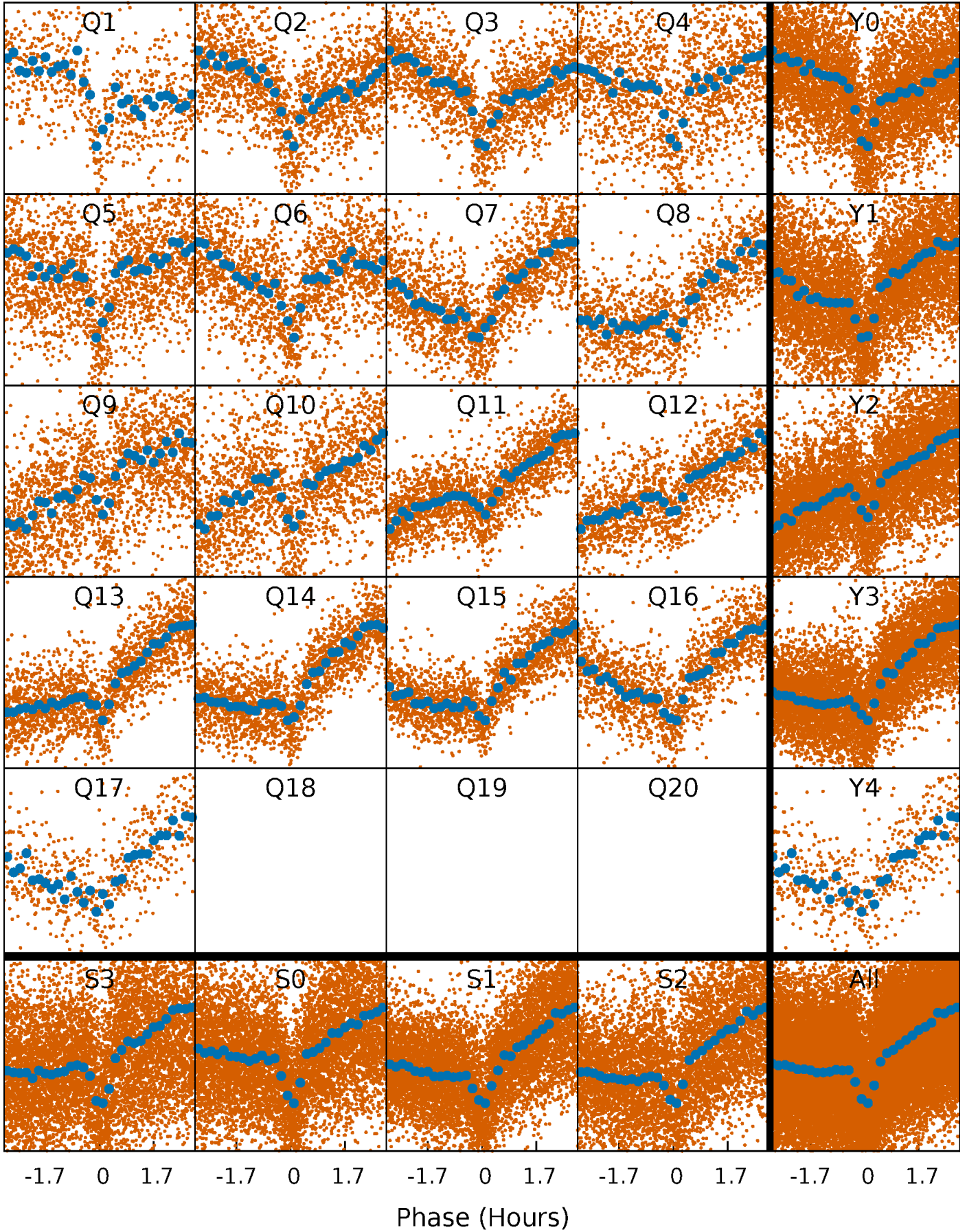


Non-Whitened Vs. Whitened Light Curve



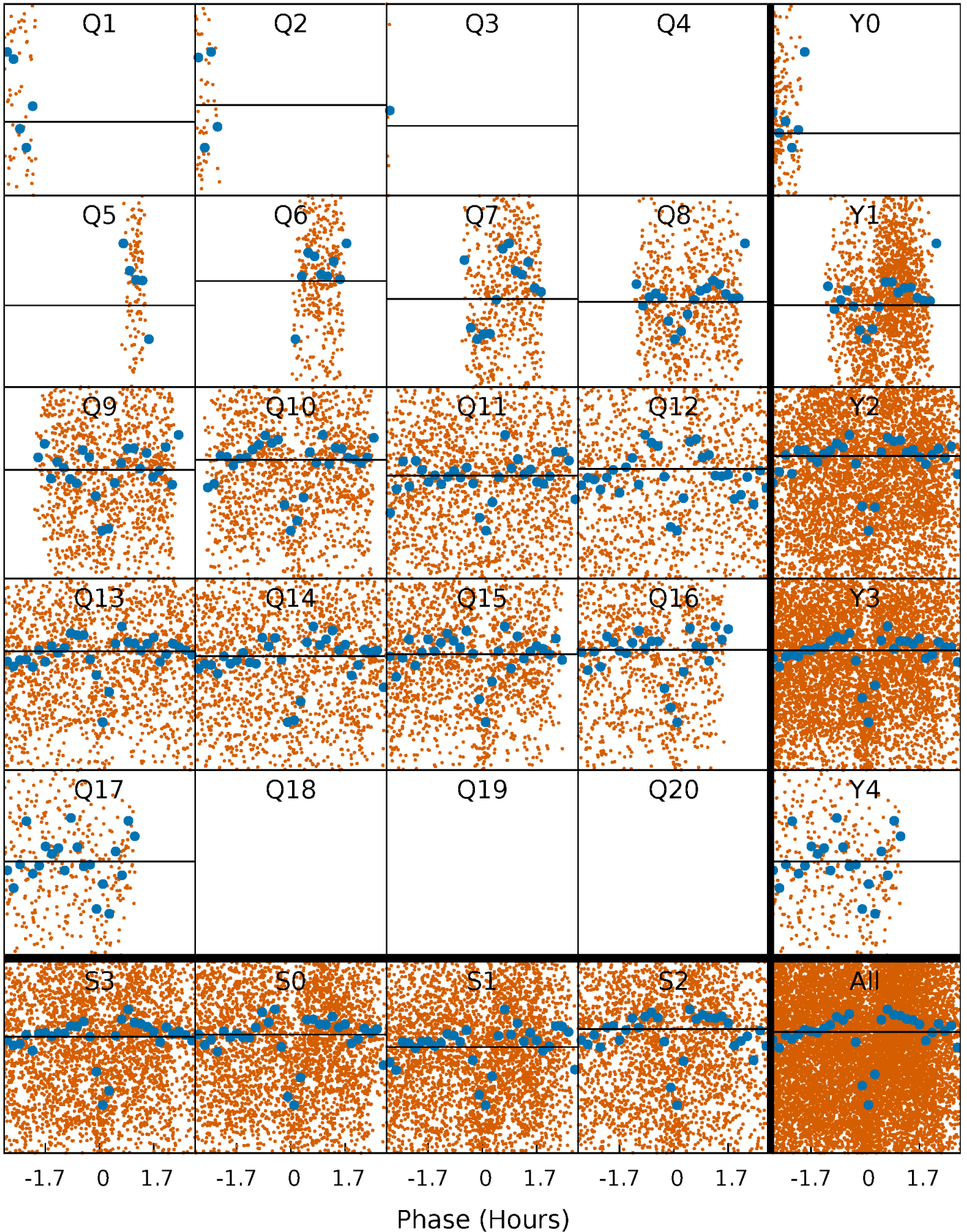
PDC Quarter-Phased Transit Curves

TCE 008285970-03 P= 0.562500 Days $T_0=131.748494$ (BKJD)



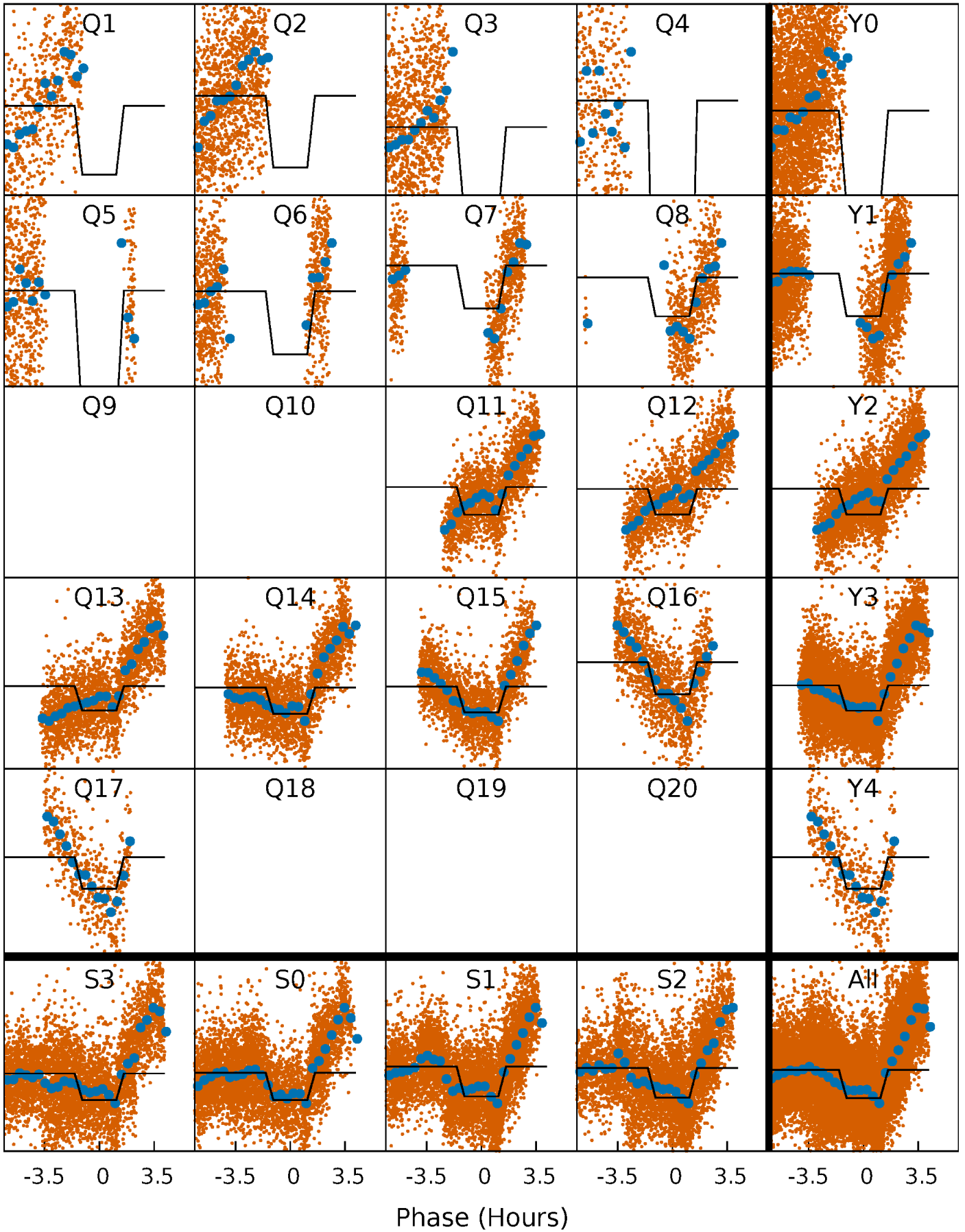
DV Quarter-Phased Transit Curves

TCE 008285970-03 $P = 0.562500$ Days $T_0 = 131.748494$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

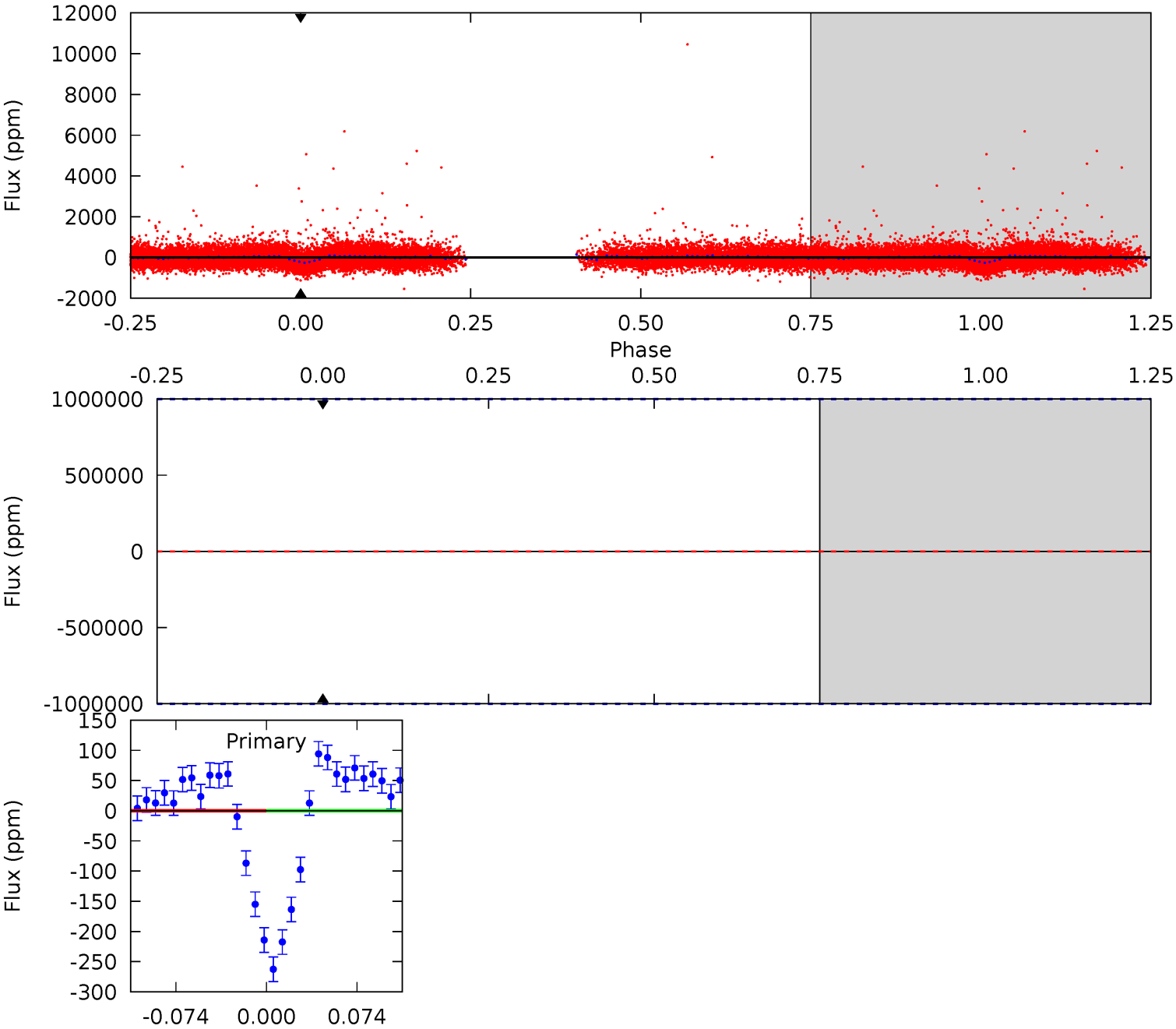
TCE 008285970-03 P= 0.562500 Days $T_0=131.711206$ (BKJD)



DV Model-Shift Uniqueness Test

008285970-03, P = 0.562500 Days, E = 131.185994 Days

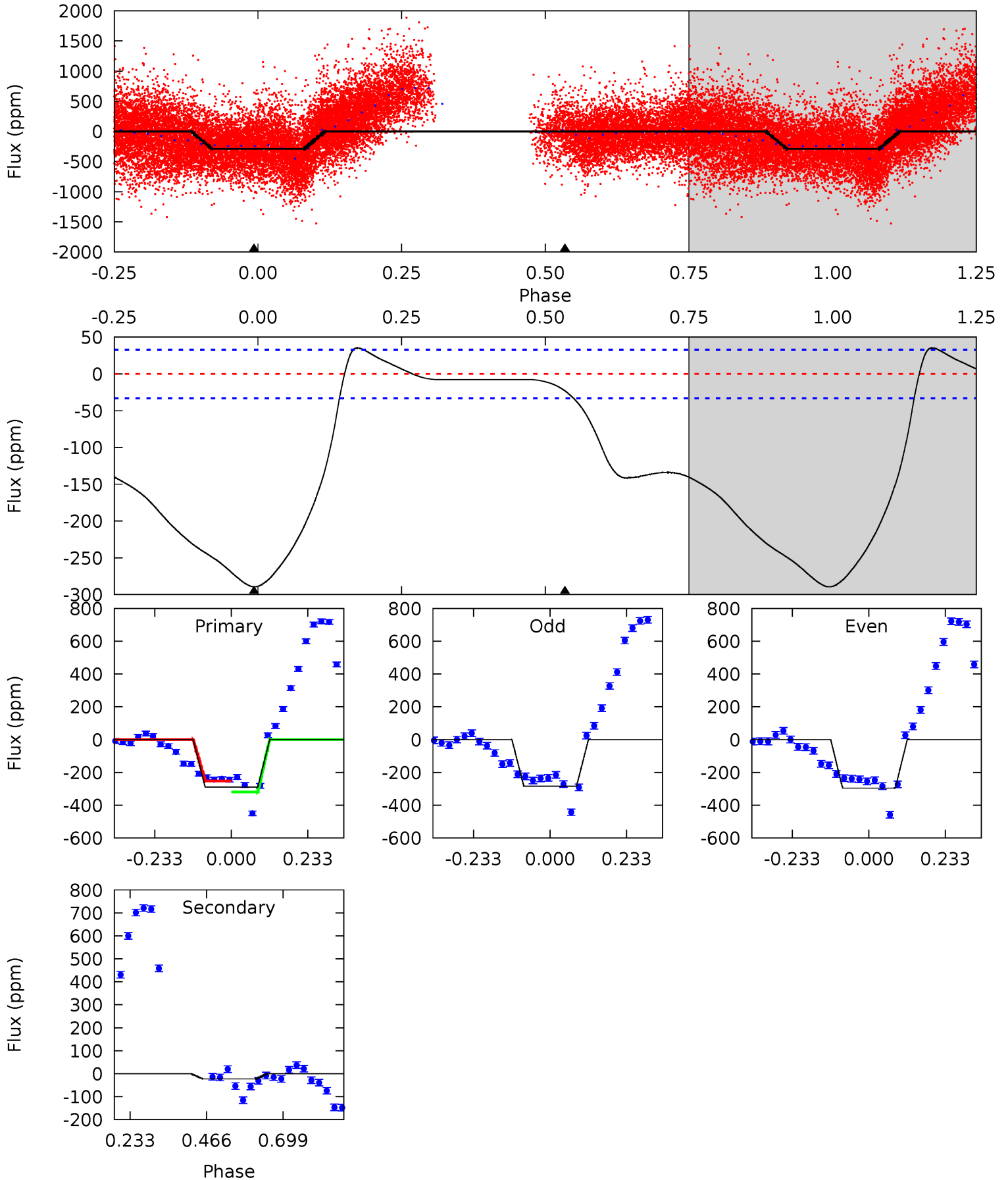
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008285970-03, P = 0.562500 Days, E = 131.148706 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.5	3.05	0	0	4.38	1.19	9.91	38.5	38.5	3.05	3.05	0.79	1.05	0.11	4.89



Stellar Parameters For KIC 008285970

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5638^{+152}_{-152}	$4.437^{+0.116}_{-0.174}$	$-0.160^{+0.300}_{-0.300}$	$0.933^{+0.247}_{-0.133}$	$0.868^{+0.114}_{-0.076}$	$1.507^{+0.773}_{-0.697}$
	+3%/-3%	+3%/-4%	+188%/-188%	+26%/-14%	+13%/-9%	+51%/-46%
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 008285970-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$8.42^{+8.61}_{-5.86}$	2979^{+214}_{-153}	3292^{+14602}_{-20464}	$0.748^{+233.832}_{-226.881}$
Alt.	-23 ± 8	$8.20^{+7.96}_{-5.76}$	3009^{+182}_{-165}	-3000^{+5348}_{-150}	$0.030^{+0.303}_{-0.023}$

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

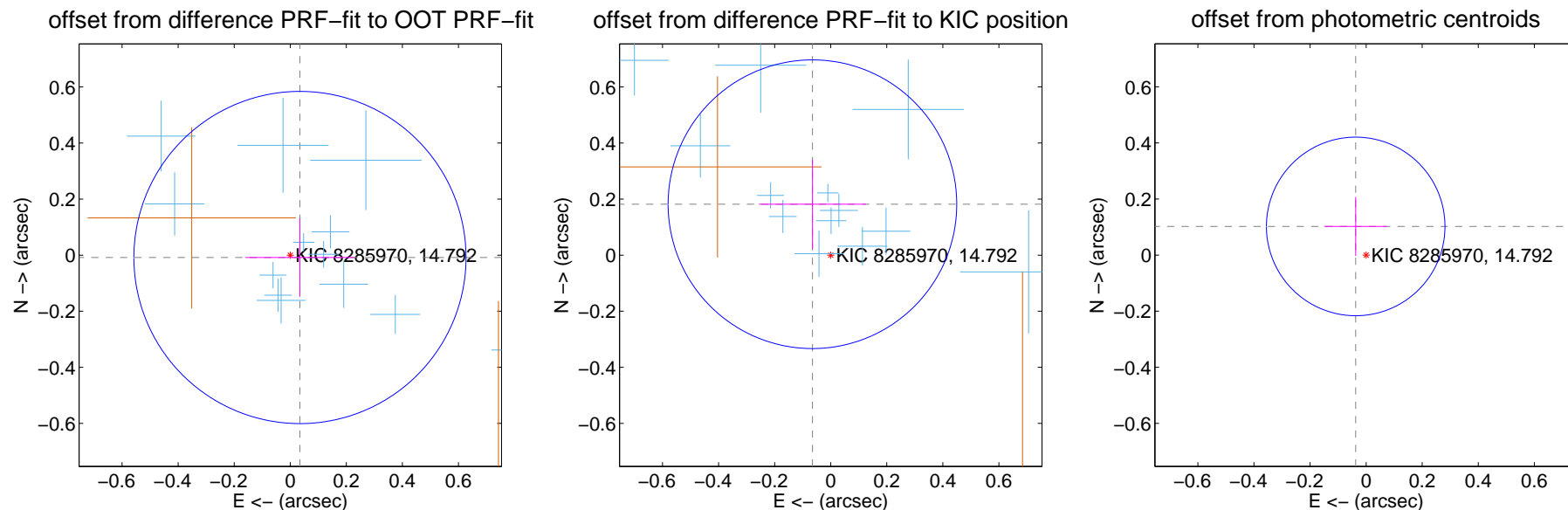
DV Centroid Data

Supplemental centroid analysis for 008285970-03. Kepler magnitude: 14.79. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

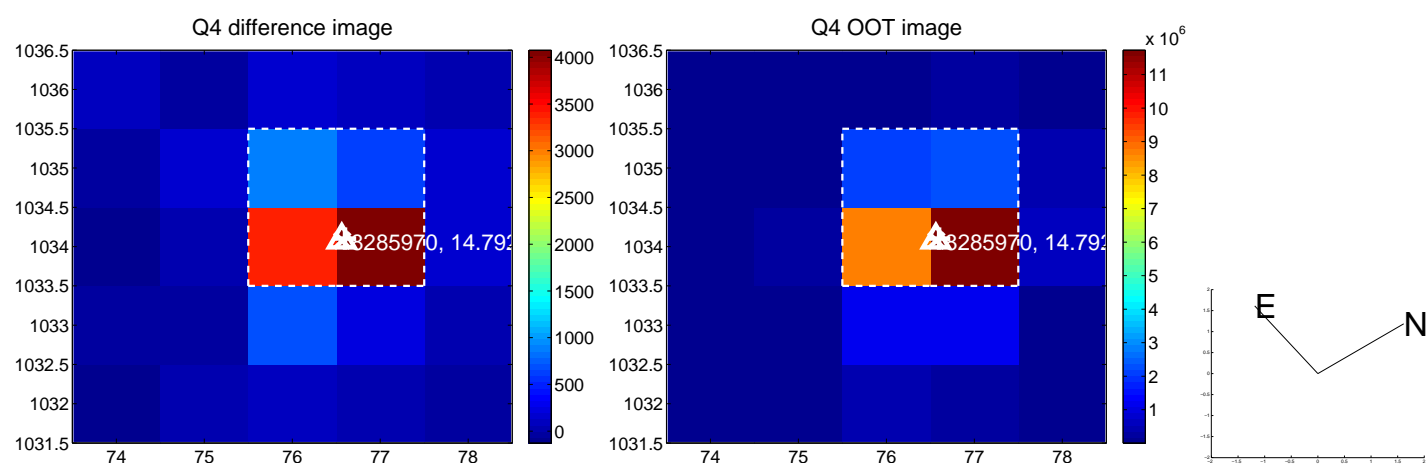
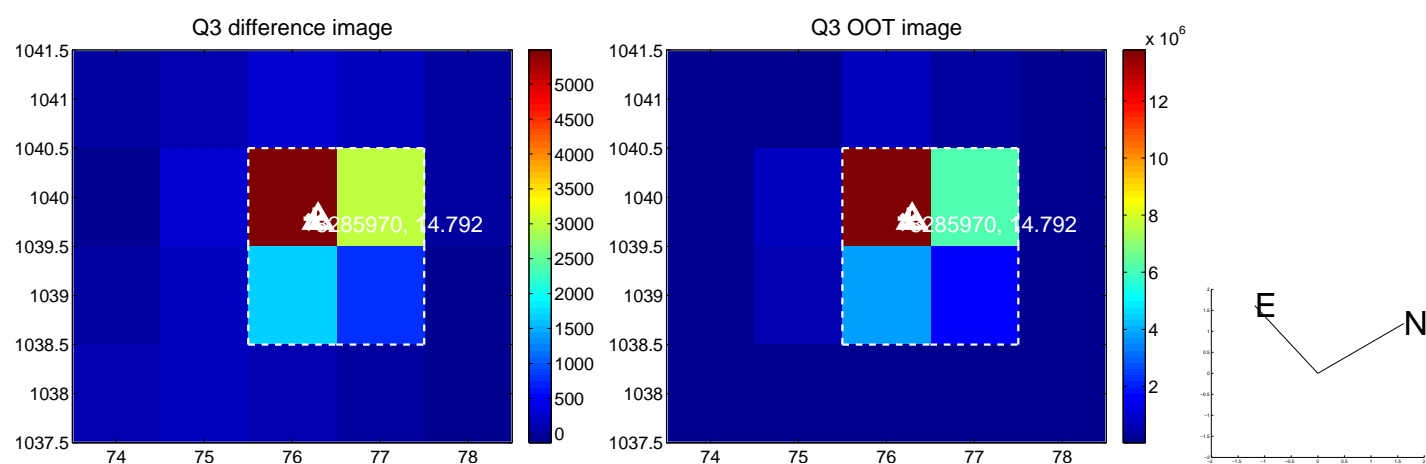
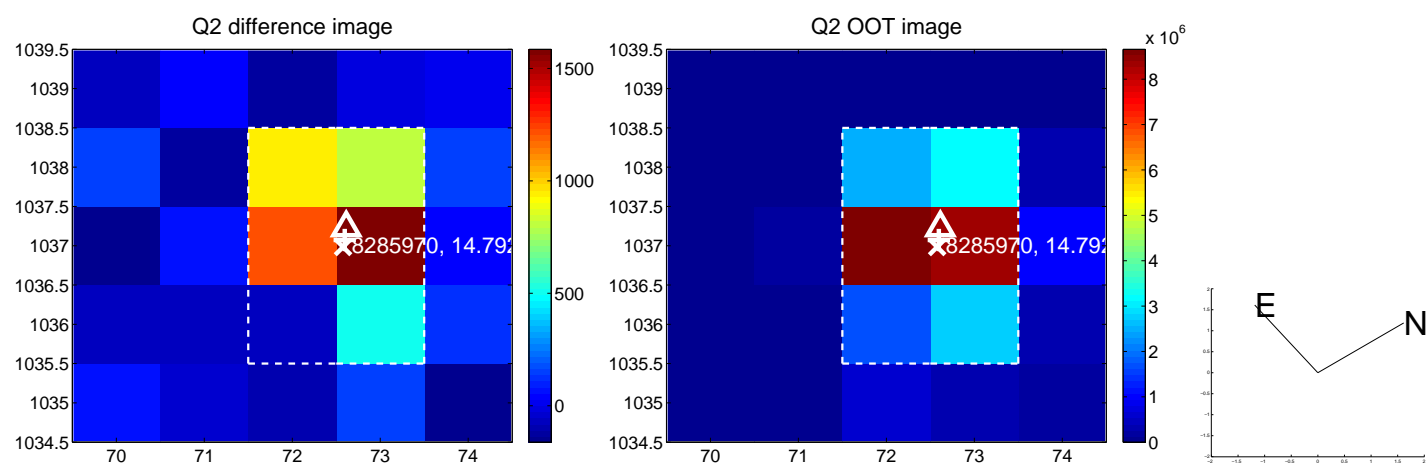
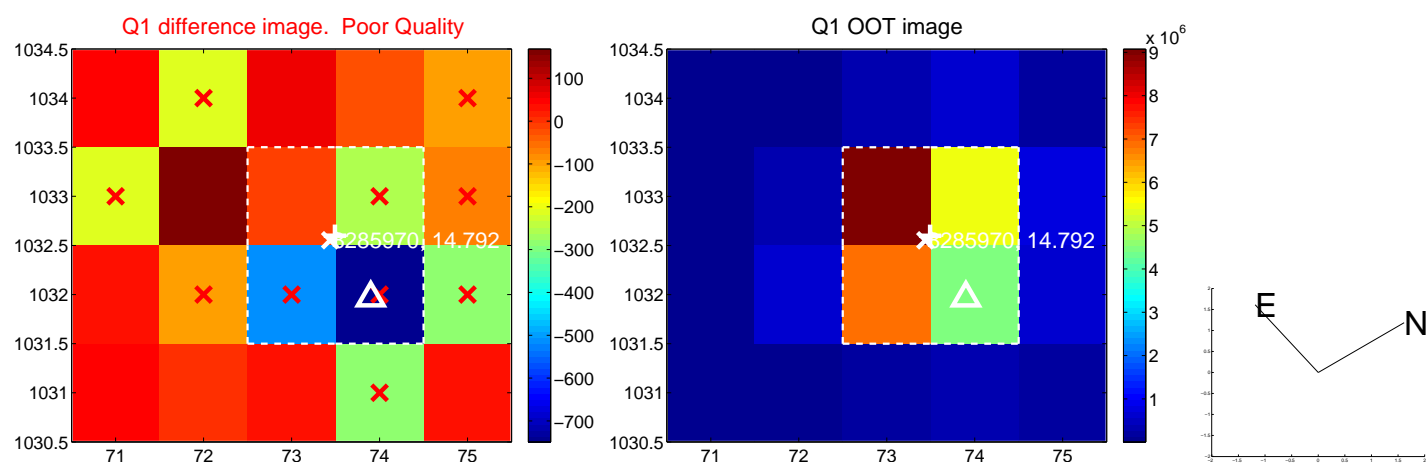
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.036 ± 0.197	0.18	-0.035 ± 0.195	-0.008 ± 0.140
PRF-fit source offset from KIC position	0.193 ± 0.172	1.12	0.065 ± 0.191	0.182 ± 0.158
photometric centroid source offset	0.11 ± 0.11	1.02	0.04 ± 0.11	0.10 ± 0.11

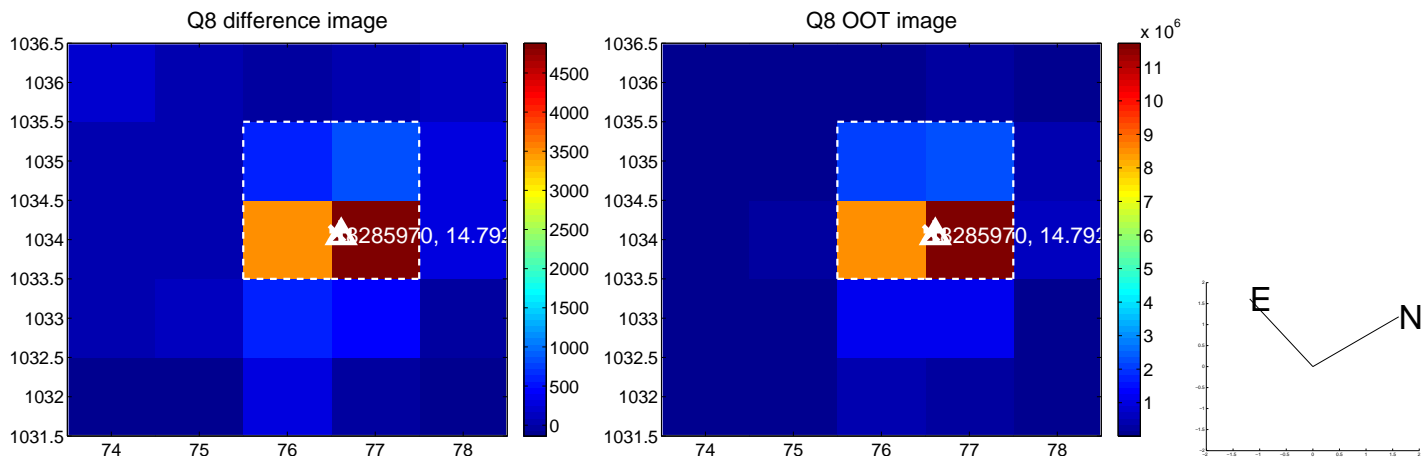
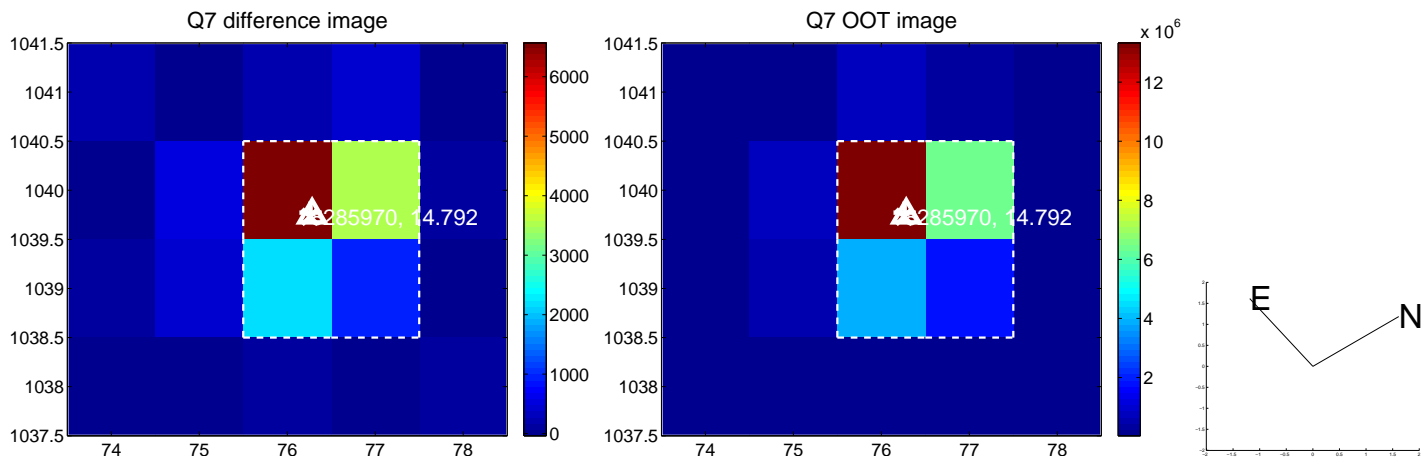
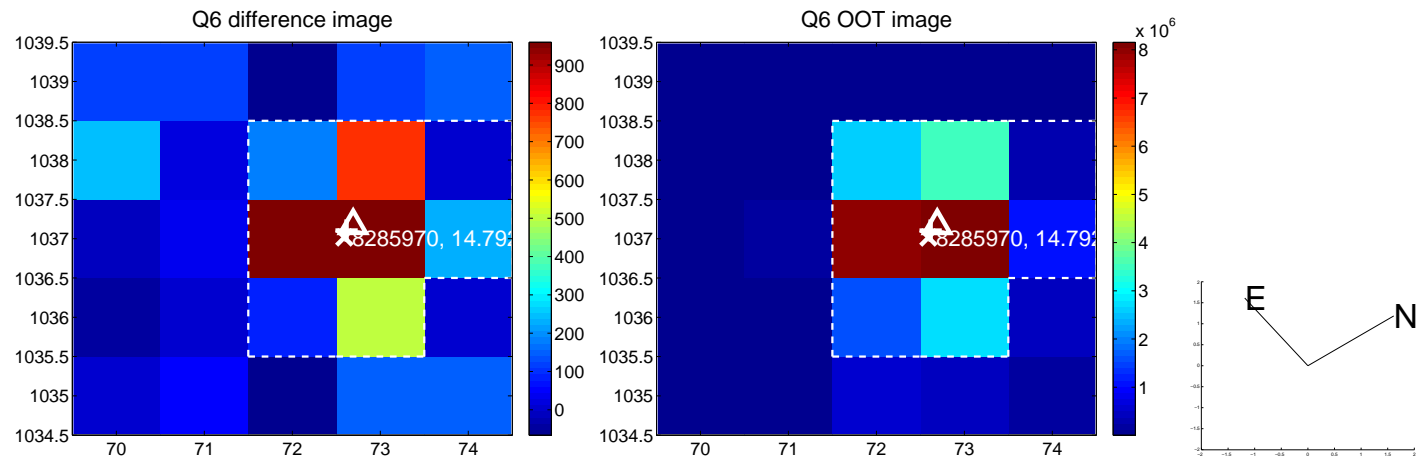
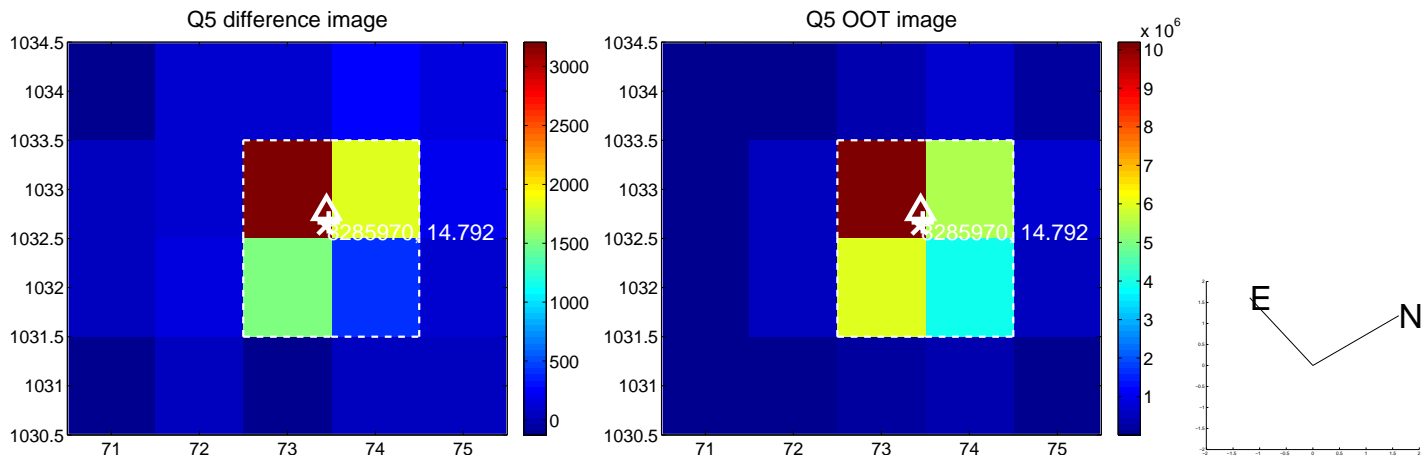


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

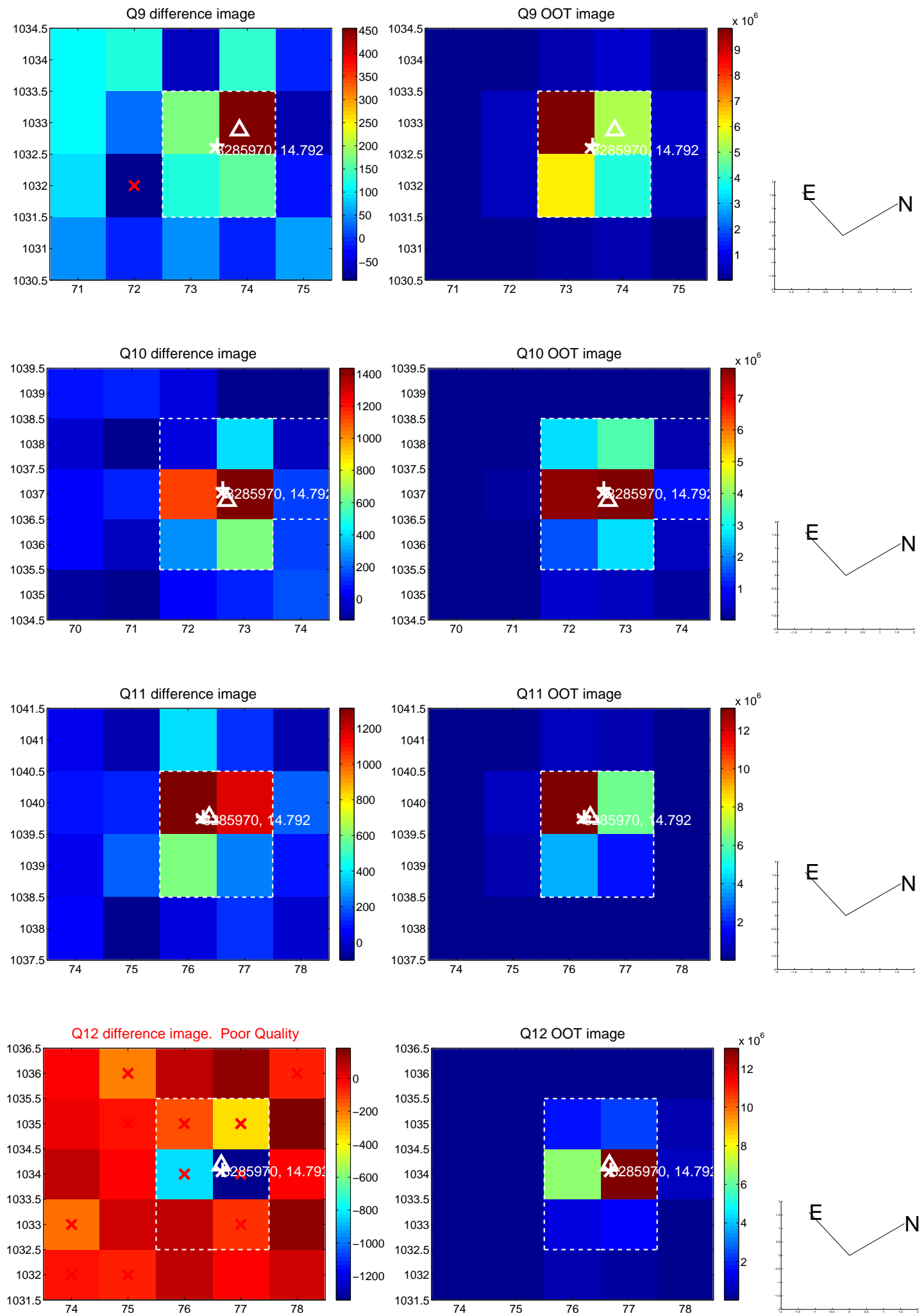
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



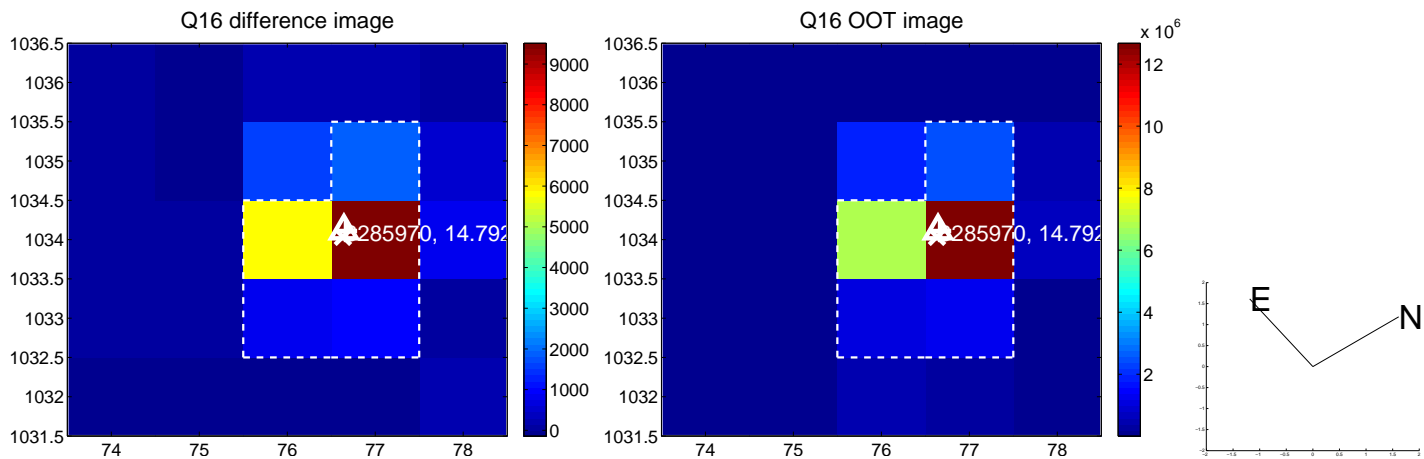
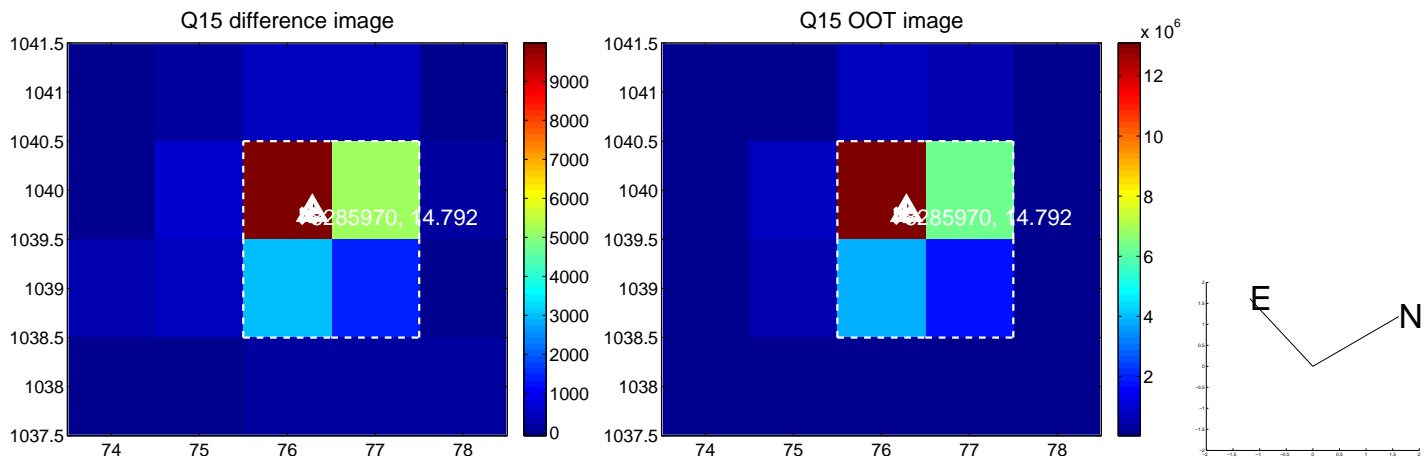
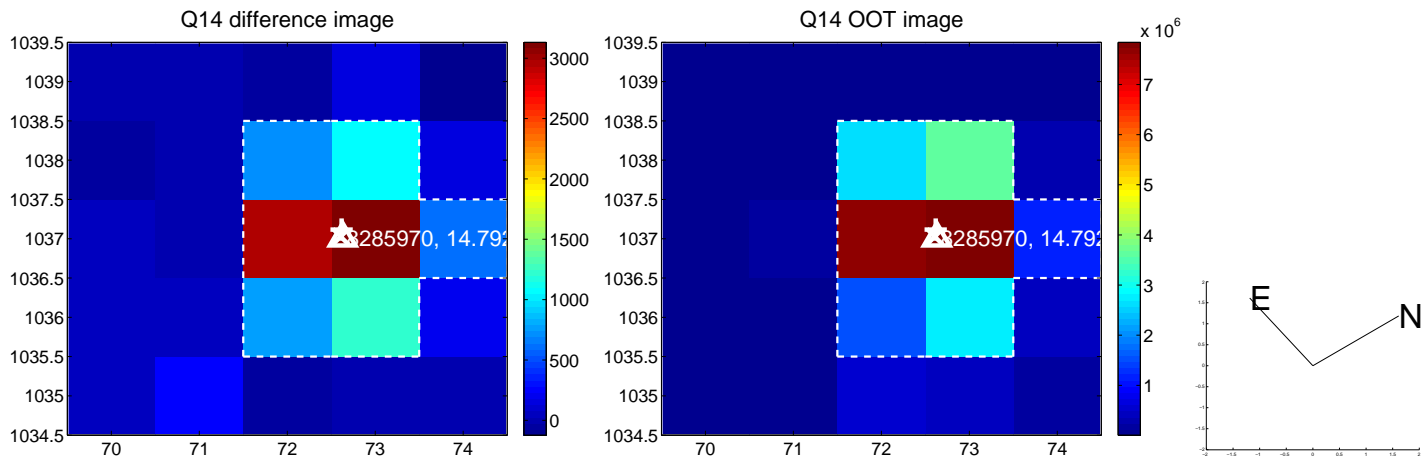
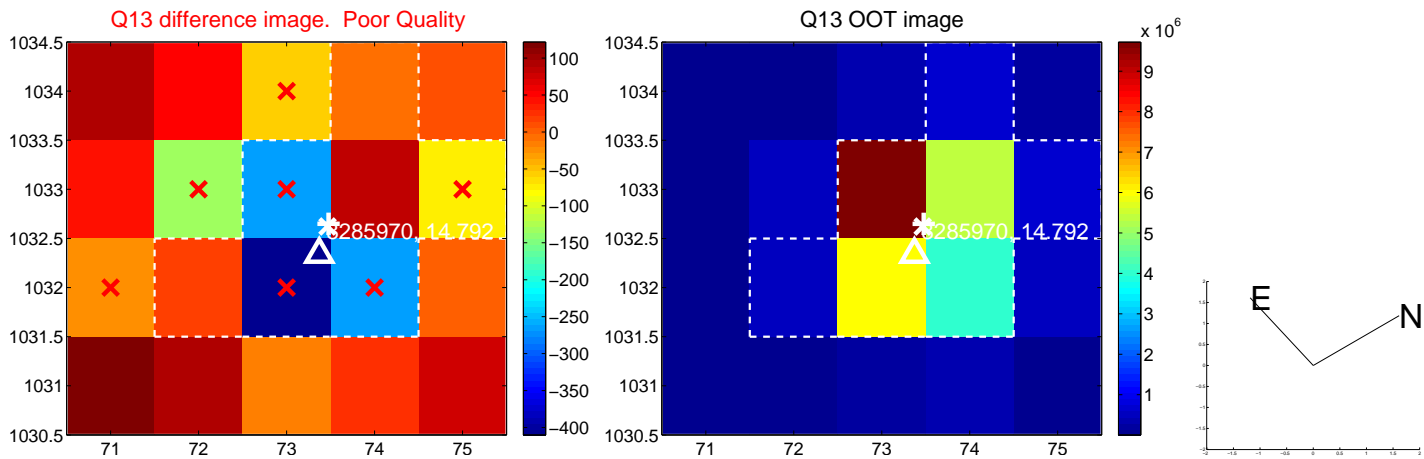
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



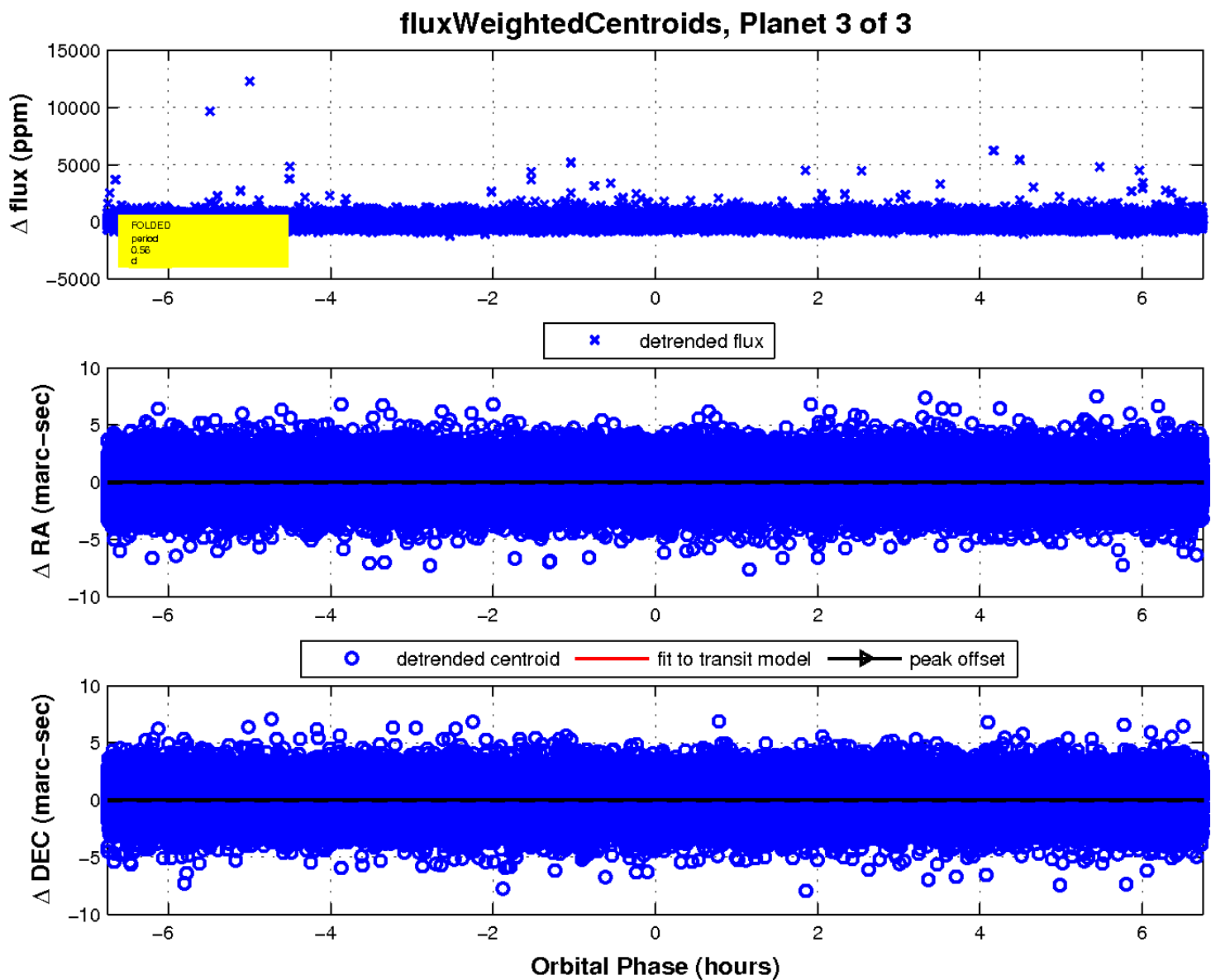
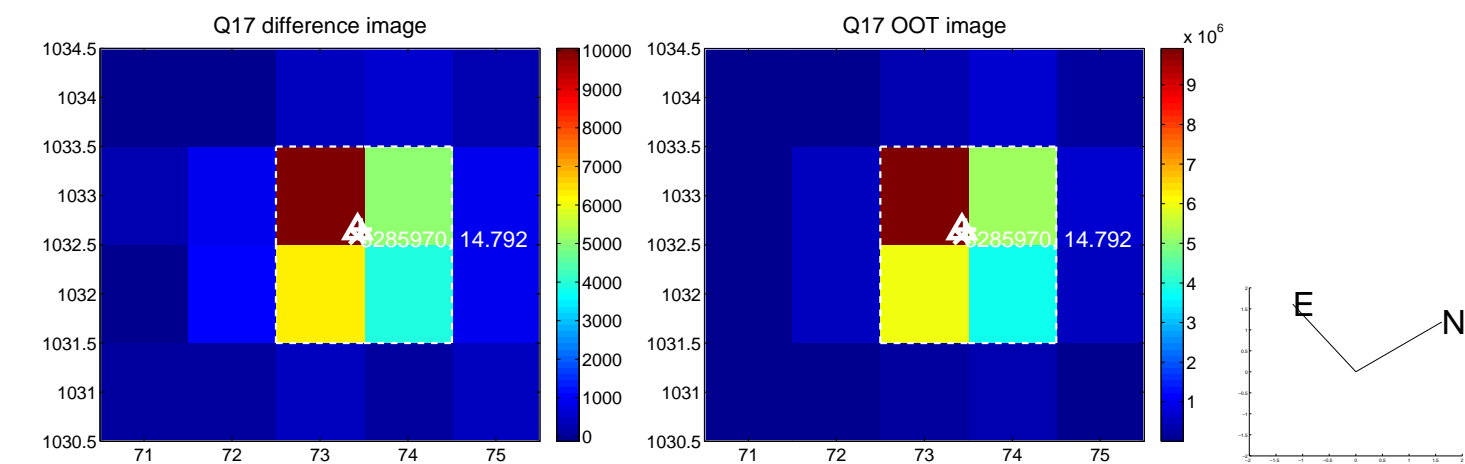
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

