

KIC 005786376

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})
005786376-01	OBS	No	1.862250	133.131002	35.3	12.788	8.1	6.8	2.03	8600	1.39	15725.24
005786376-02	OBS	No	69.432339	132.905520	0.0	0.704	17.8	0.0	2.03	8600	0.05	126.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005786376-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005786376-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

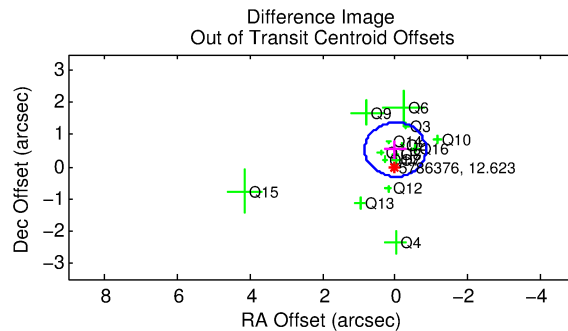
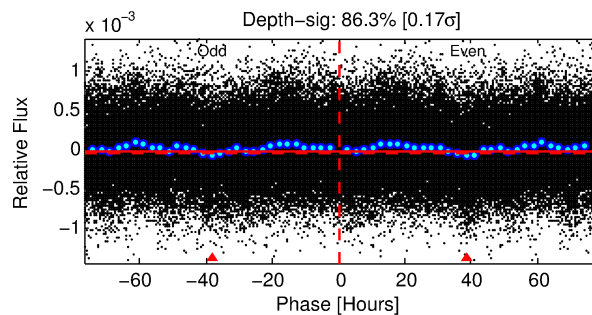
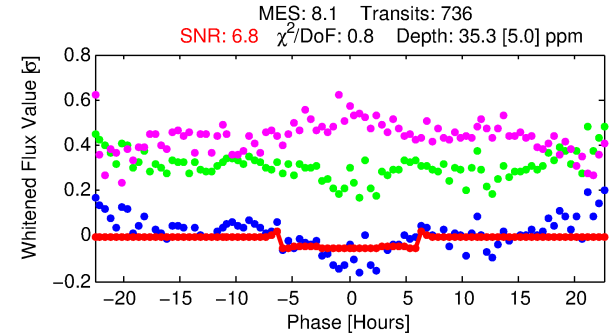
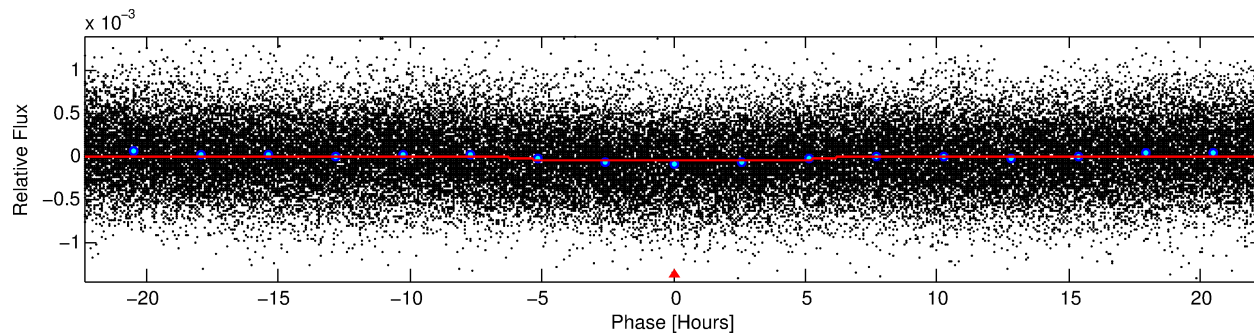
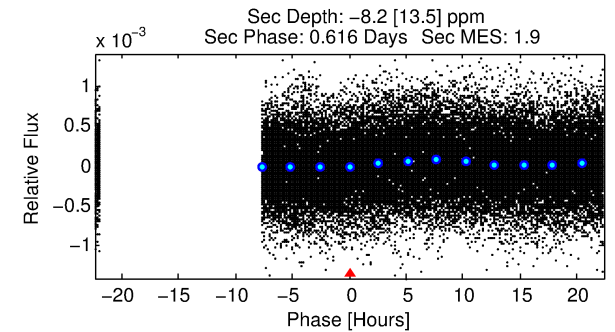
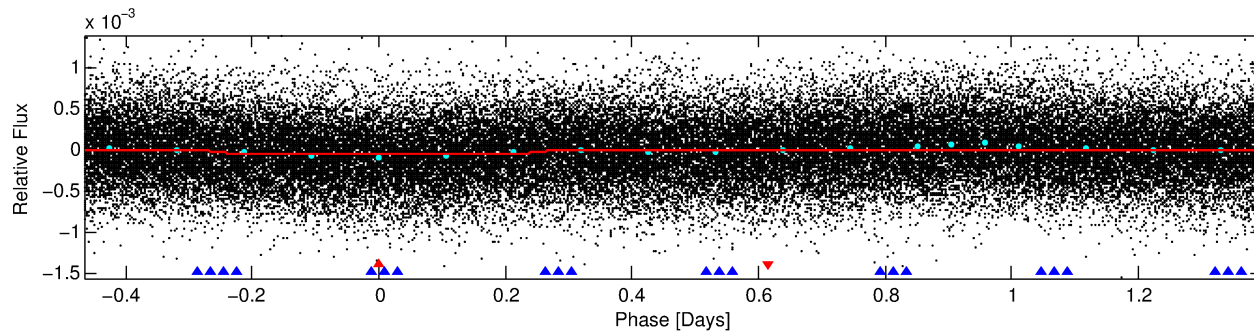
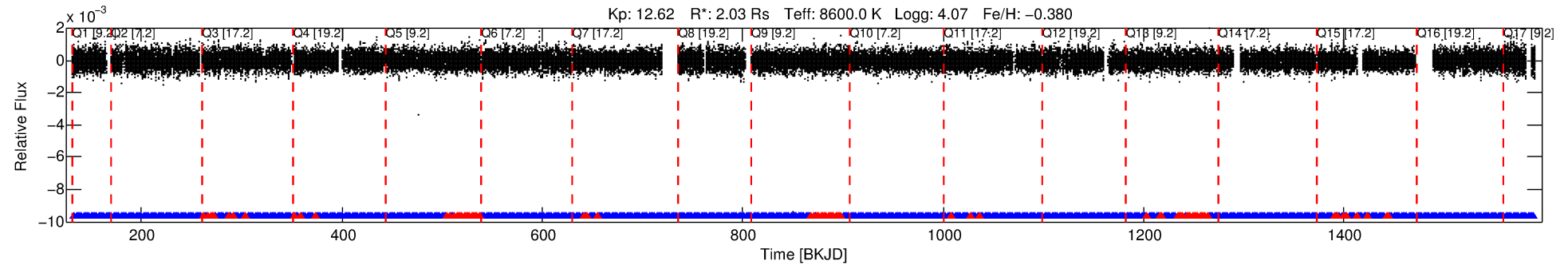
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005786376-01

No Significant Match Found

DV One-Page Summary

KIC: 5786376 Candidate: 1 of 2 Period: 1.862 d



DV Fit Results:

Period = 1.86225 [0.00003] d
Epoch = 133.1310 [0.0061] BKJD
Rp/R* = 0.0063 [0.0007]
a/R* = 1.07 [0.08]
b = 0.90 [0.13]
Seff = 15725.24 [2981.31]
Teq = 2855 [135] K
Rp = 1.39 [0.25] Re
a = 0.0358 [0.0044] AU
Ag = N/A
Teffp = N/A

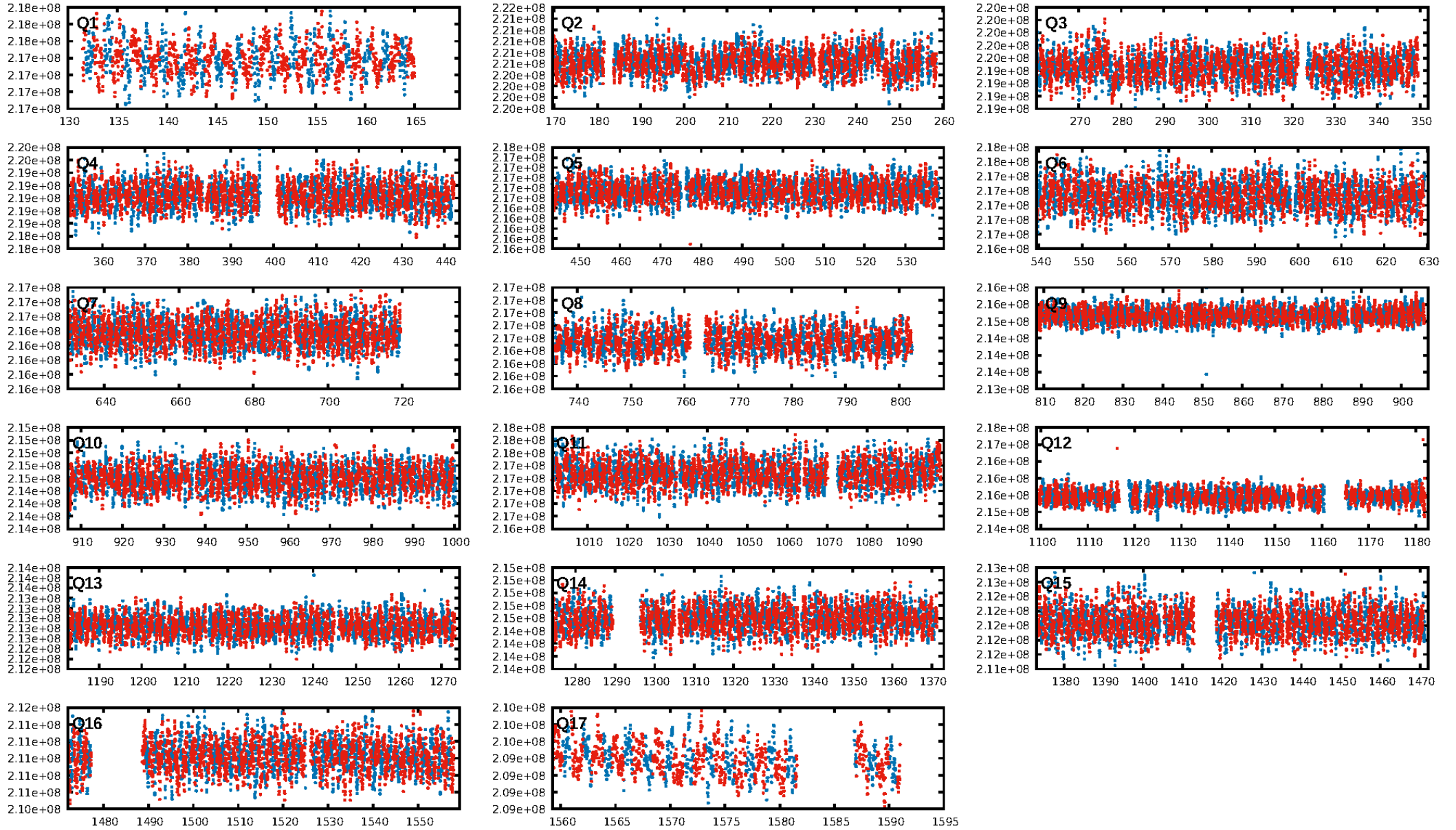
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [126.62σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [626/702]
GhostDiagnostic-chr: 1.399
Centroid-sig: 0.5%
Centroid-so: 0.827 arcsec [2.73σ]
OotOffset-rm: 0.536 arcsec [1.91σ]
KicOffset-rm: 0.745 arcsec [2.51σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 1.00 [17/17]

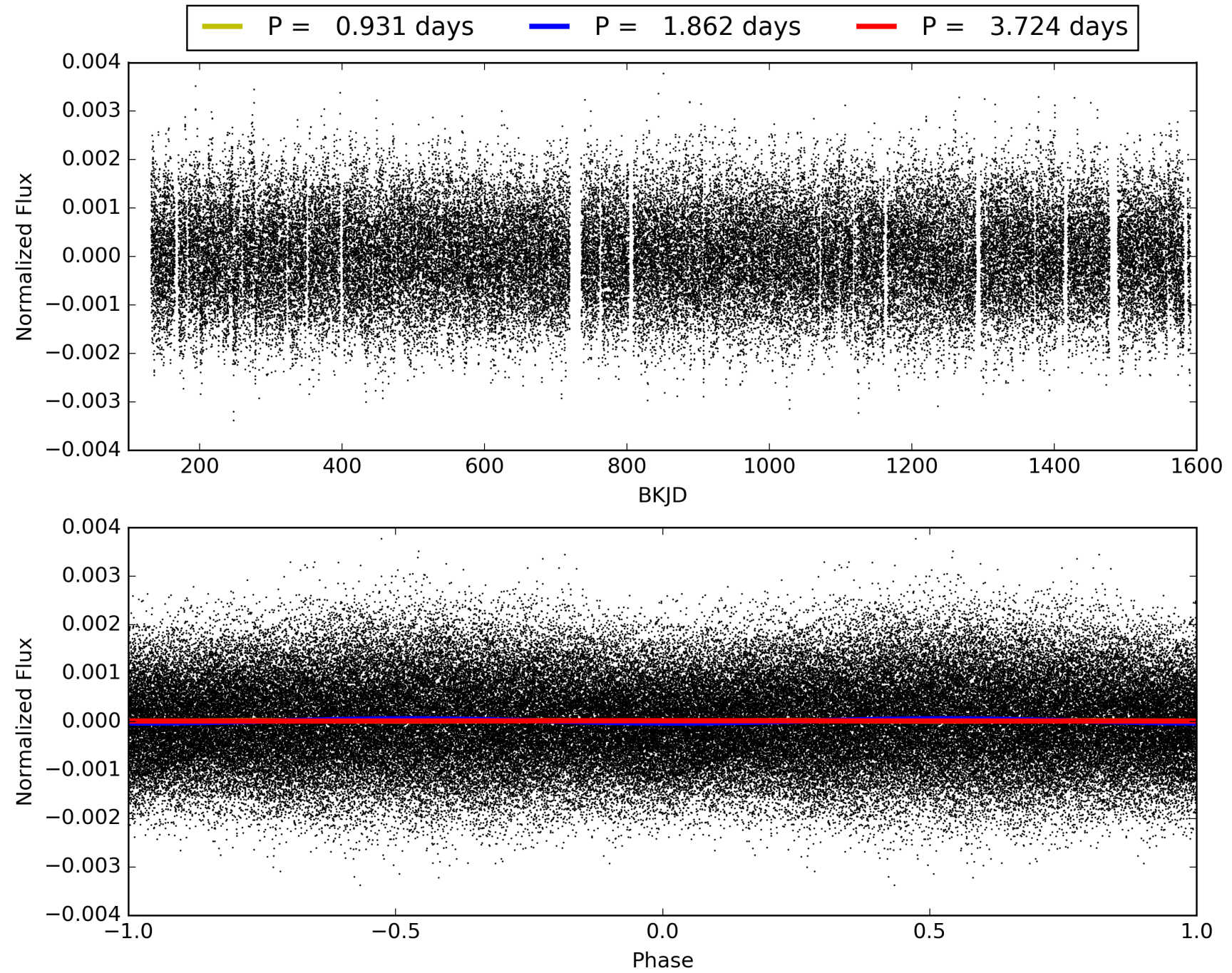
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005786376-01, PDC Light Curves

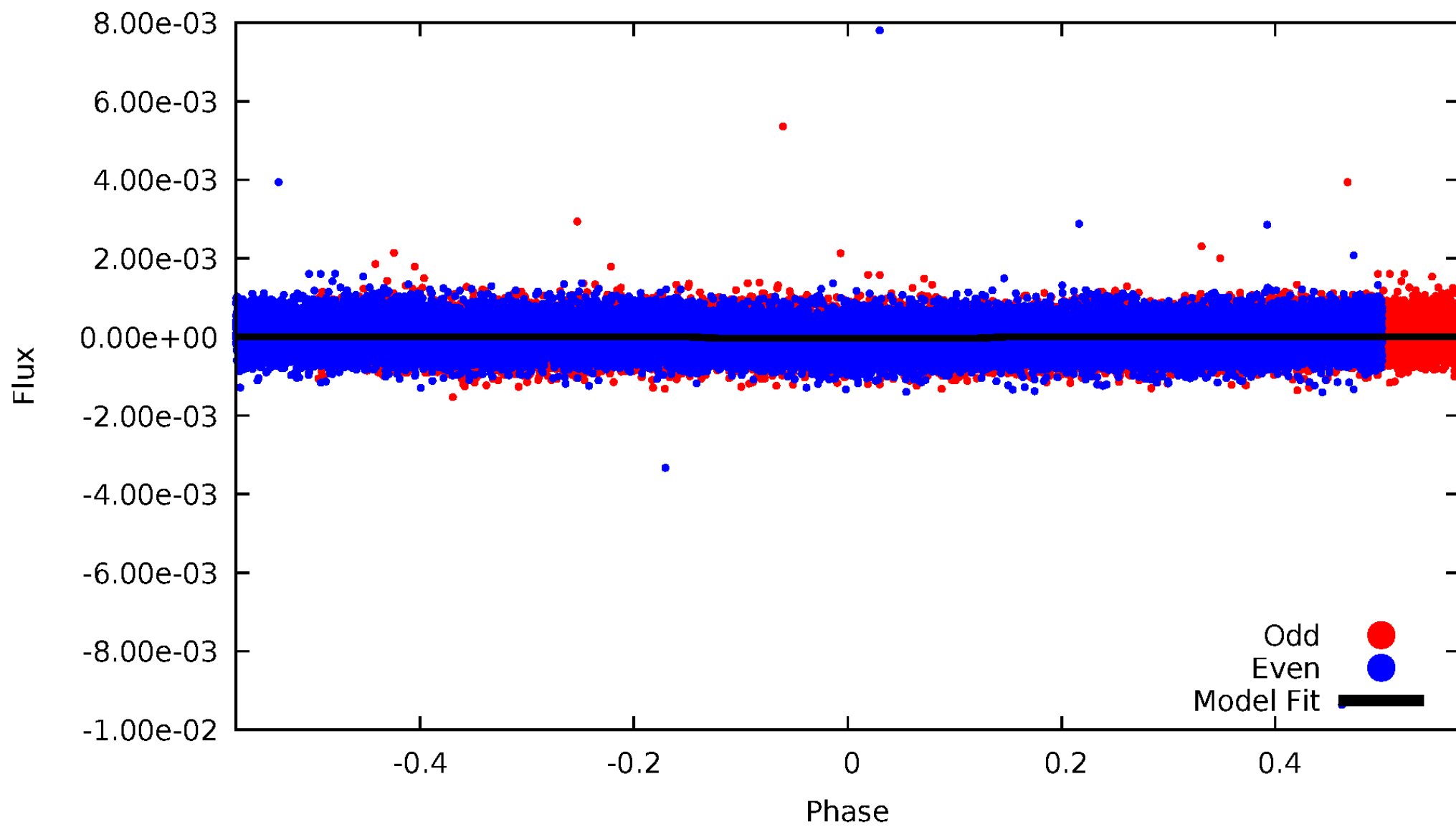


TCE 005786376-01



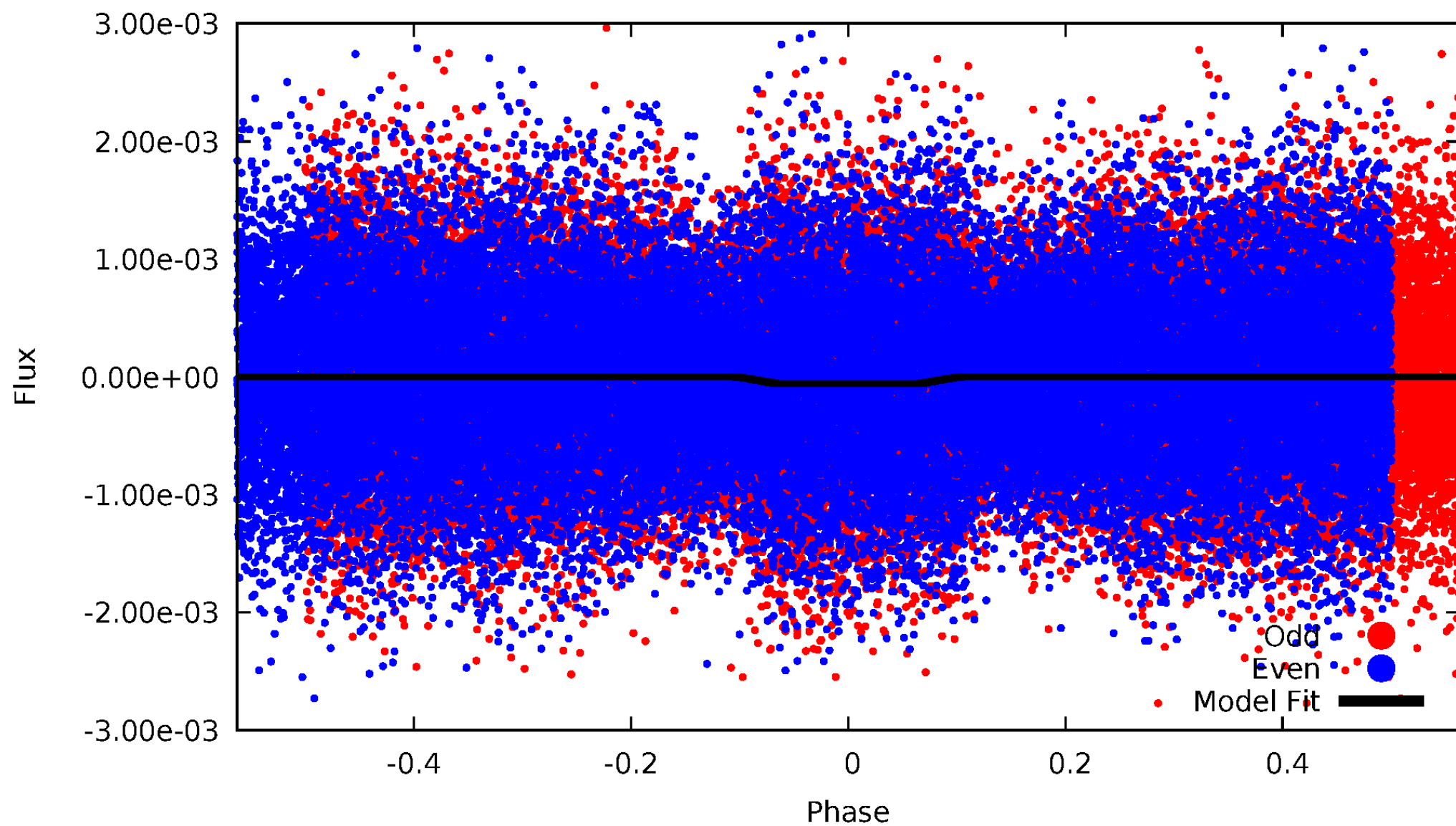
DV Odd/Even

TCE 005786376-01

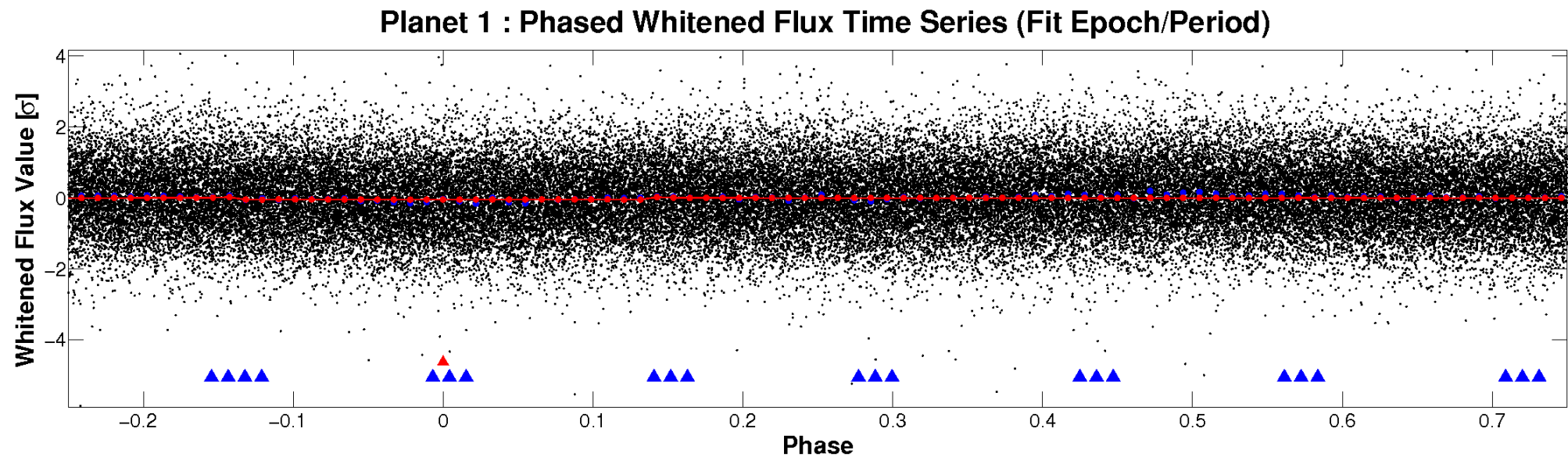
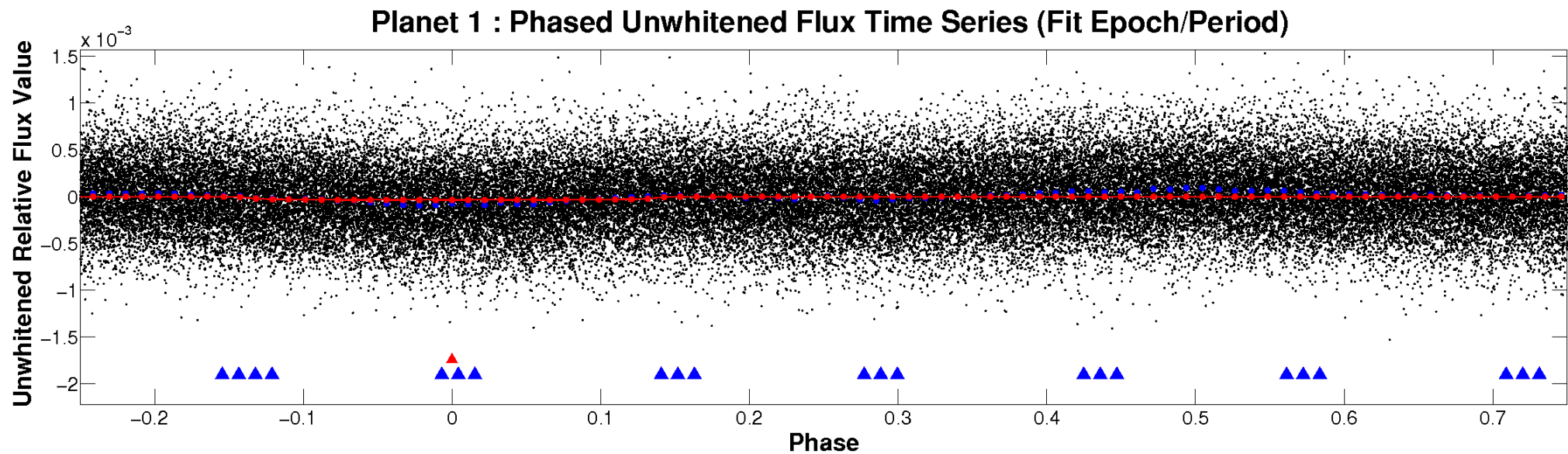


ALT Odd/Even

TCE 005786376-01

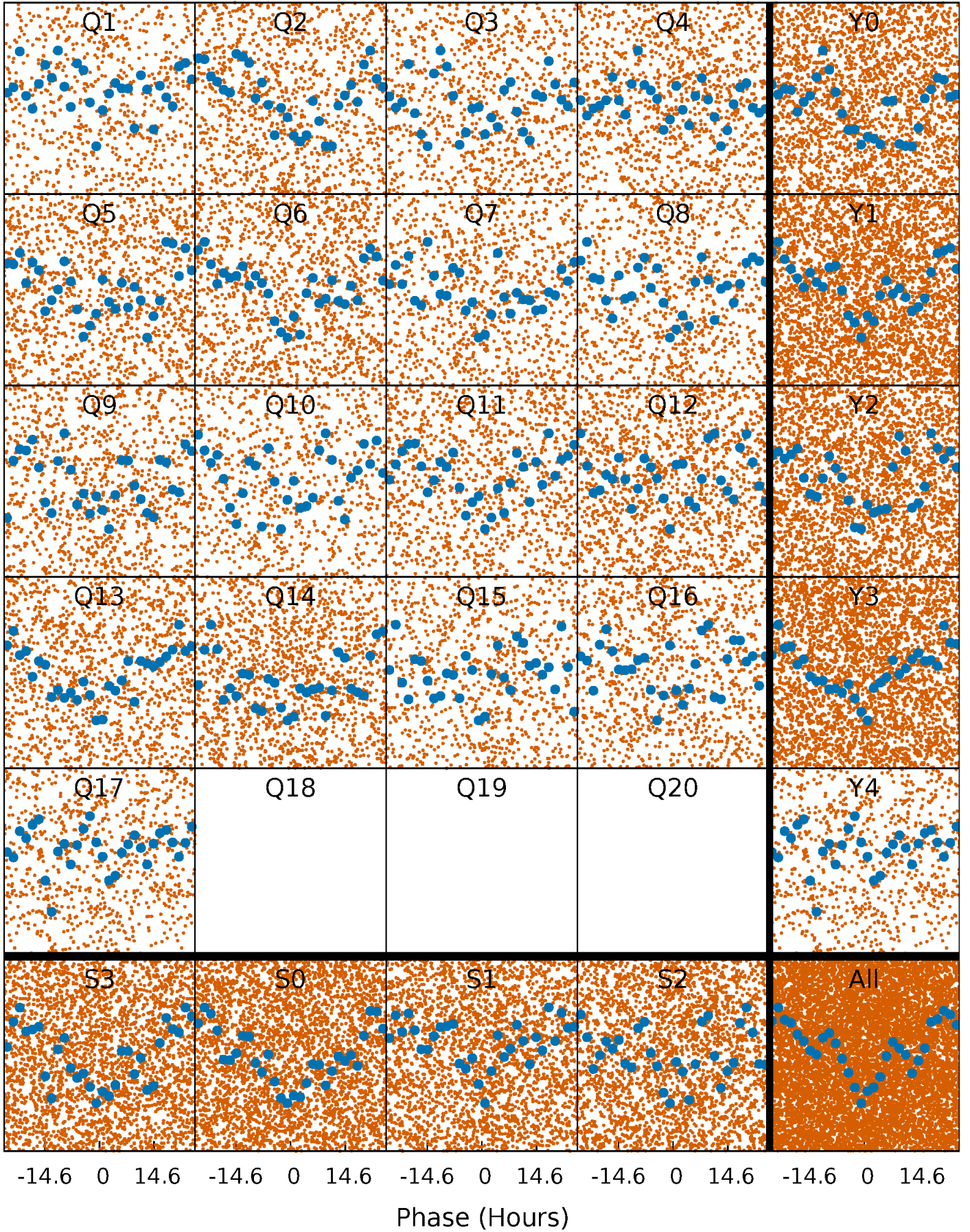


Non-Whitened Vs. Whitened Light Curve



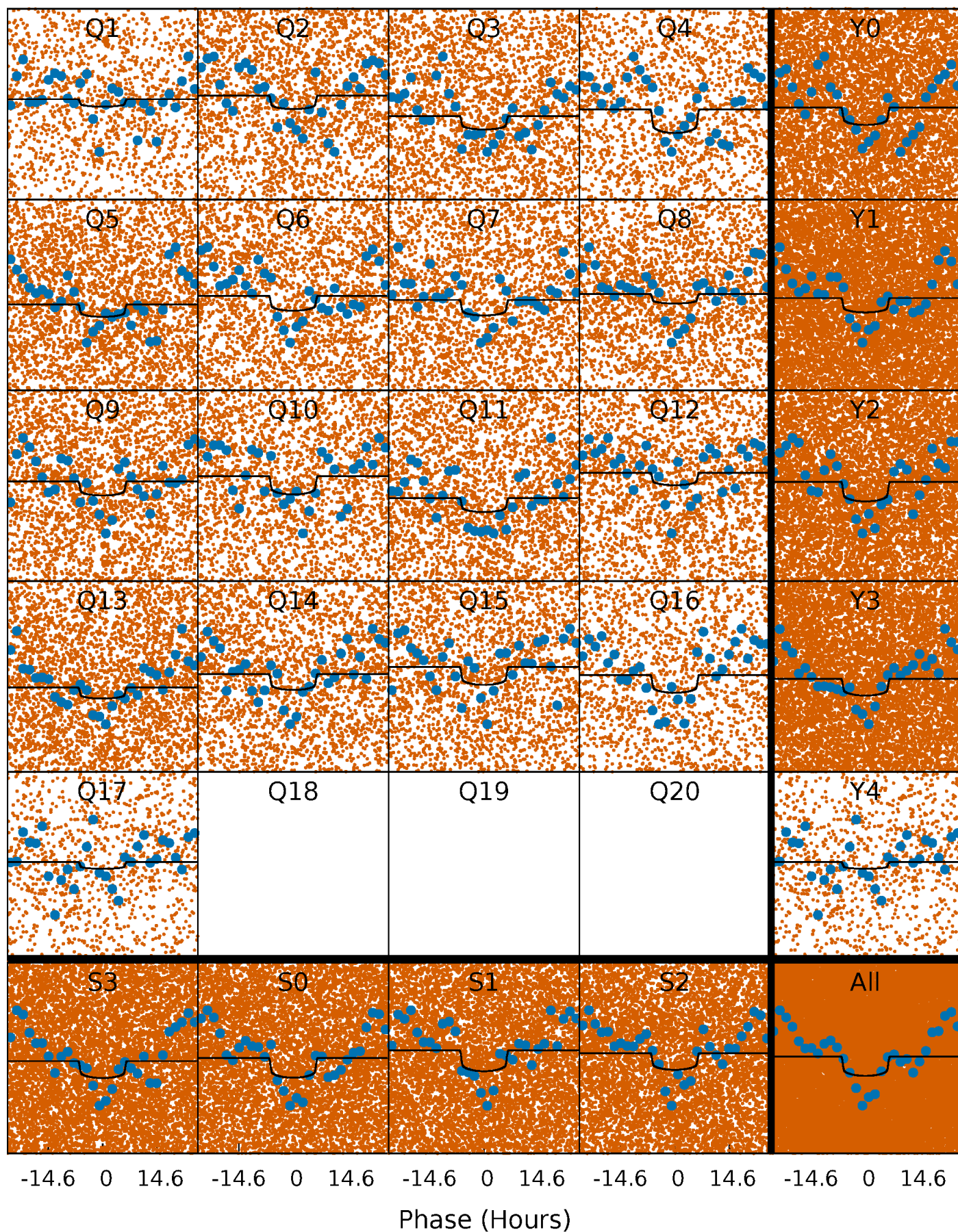
PDC Quarter-Phased Transit Curves

TCE 005786376-01 P= 1.862250 Days $T_0=133.131002$ (BKJD)



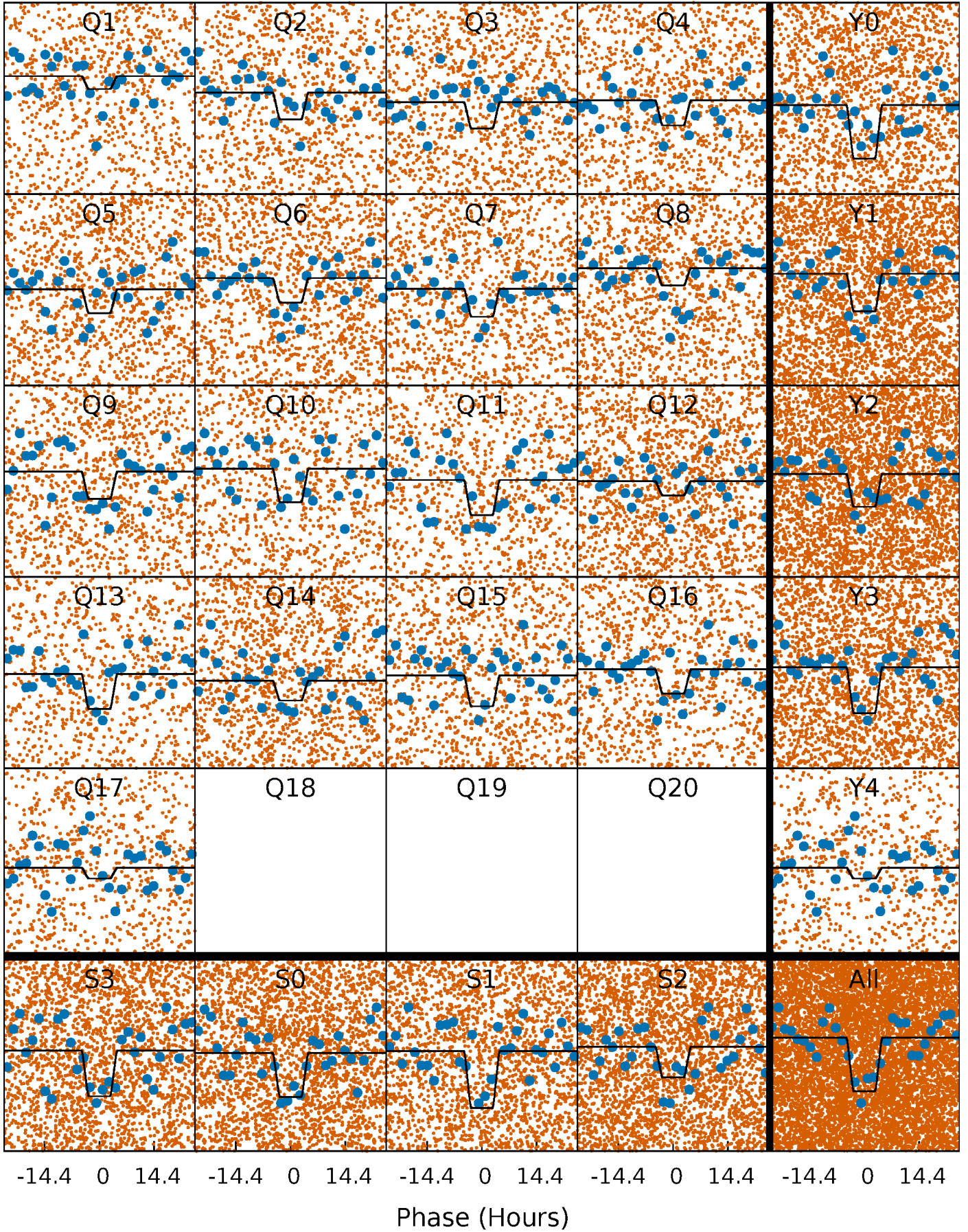
DV Quarter-Phased Transit Curves

TCE 005786376-01 P= 1.862250 Days $T_0=133.131002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

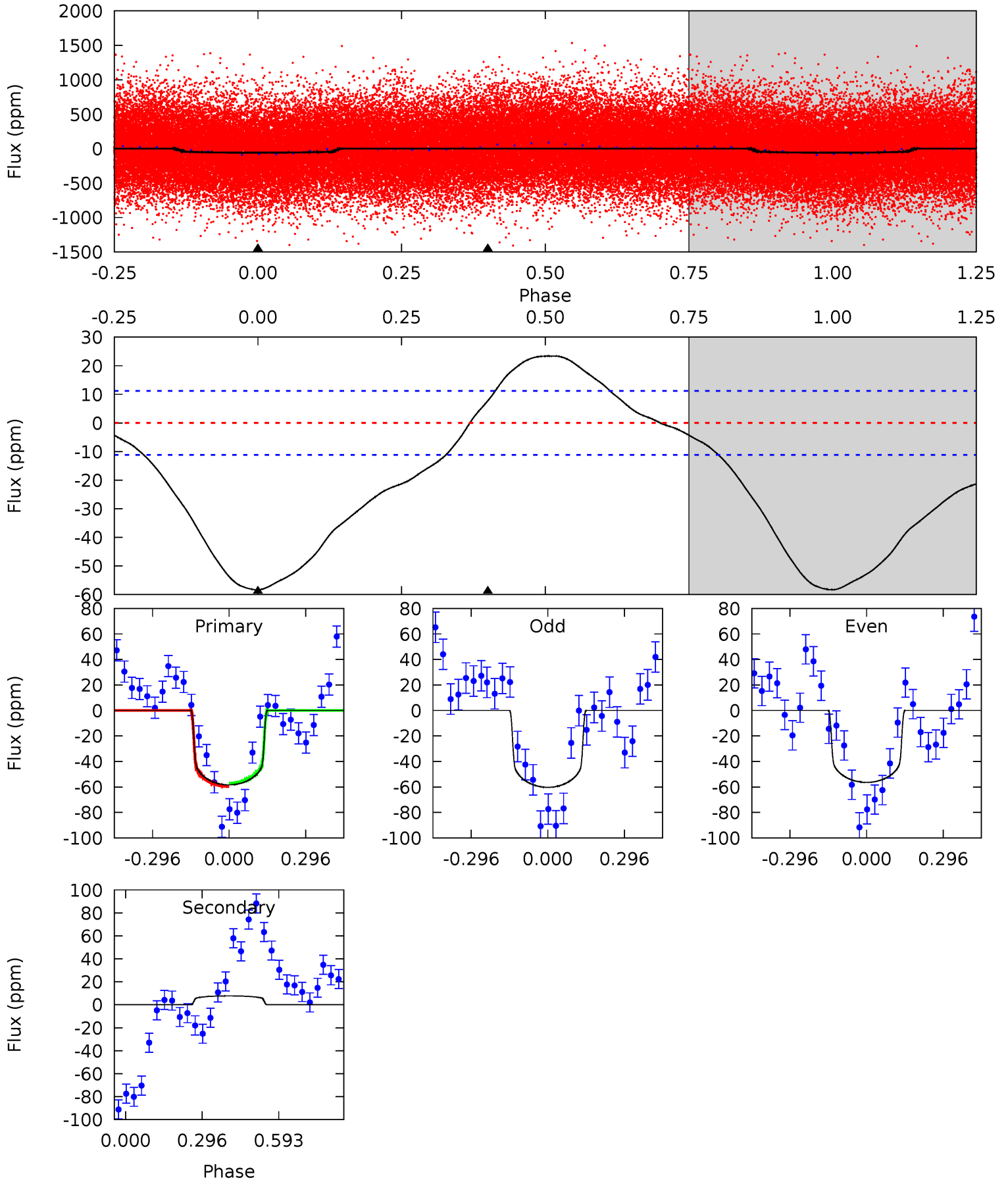
TCE 005786376-01 P= 1.862256 Days $T_0=133.125189$ (BKJD)



DV Model-Shift Uniqueness Test

005786376-01, P = 1.862250 Days, E = 131.268752 Days

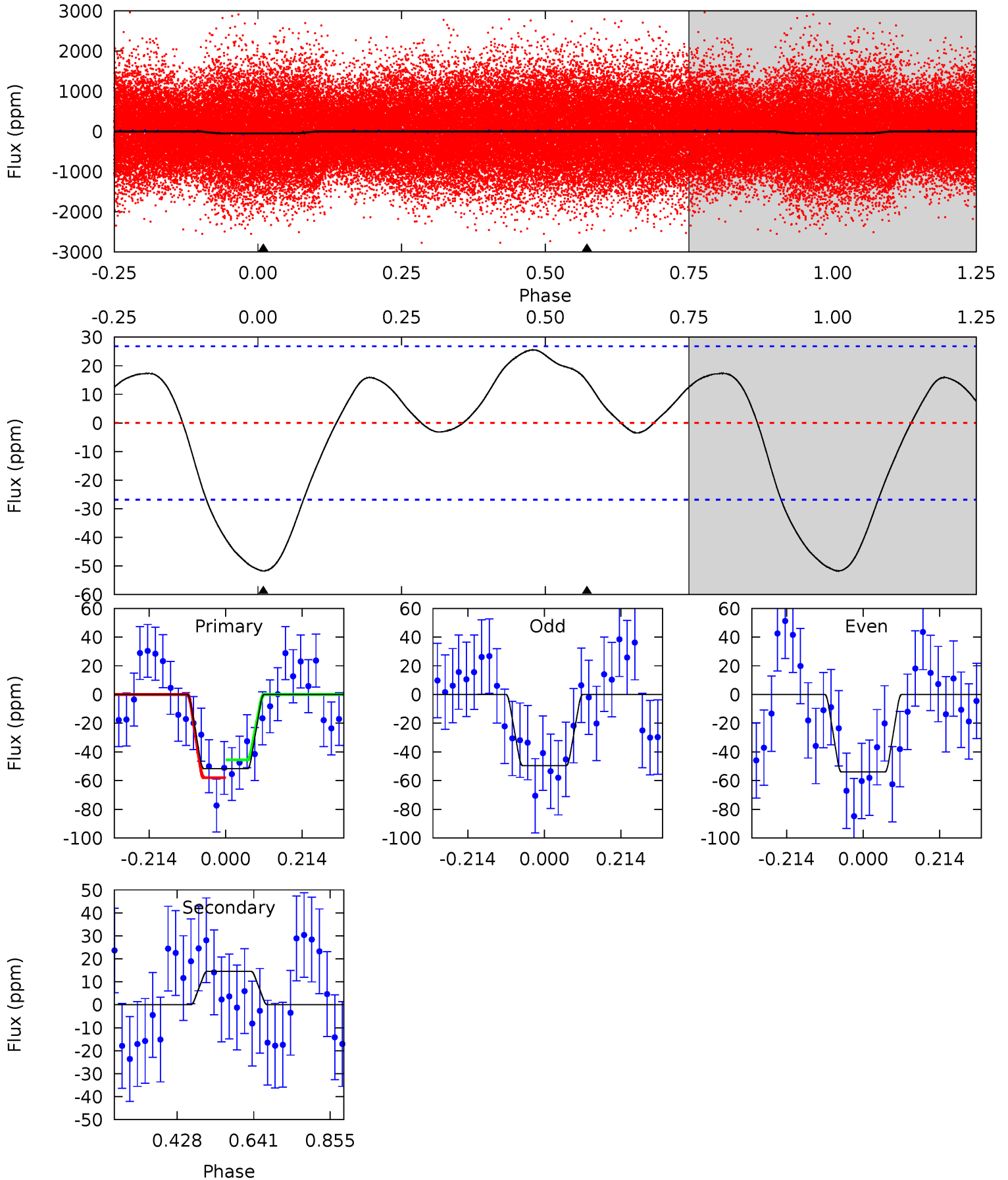
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	-3.00	0	0	4.33	1.04	0.98	22.6	22.6	-3.00	-3.00	0.76	1.09	0.29	0.48



Alt Model-Shift Uniqueness Test

005786376-01, P = 1.862256 Days, E = 131.262933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.49	-2.39	0	0	4.40	1.24	1.02	8.49	8.49	-2.39	-2.39	0.36	1.01	0.33	1.03



Stellar Parameters For KIC 005786376

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8600^{+68}_{-86}	$4.070^{+0.104}_{-0.076}$	$-0.380^{+0.050}_{-0.050}$	$2.026^{+0.234}_{-0.286}$	$1.760^{+0.053}_{-0.105}$	$0.298^{+0.134}_{-0.079}$
	+1%/-1%	+3%/-2%	+13%/-13%	+12%/-14%	+3%/-6%	+45%/-26%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005786376-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	8 ± 3	$1.38^{+0.19}_{-0.18}$	3974^{+122}_{-146}	-5606^{+504}_{-492}	$-2.785^{+1.087}_{-1.476}$
Alt.	15 ± 6	$1.64^{+0.22}_{-0.18}$	3978^{+129}_{-156}	-6001^{+710}_{-574}	$-3.713^{+1.686}_{-1.880}$

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

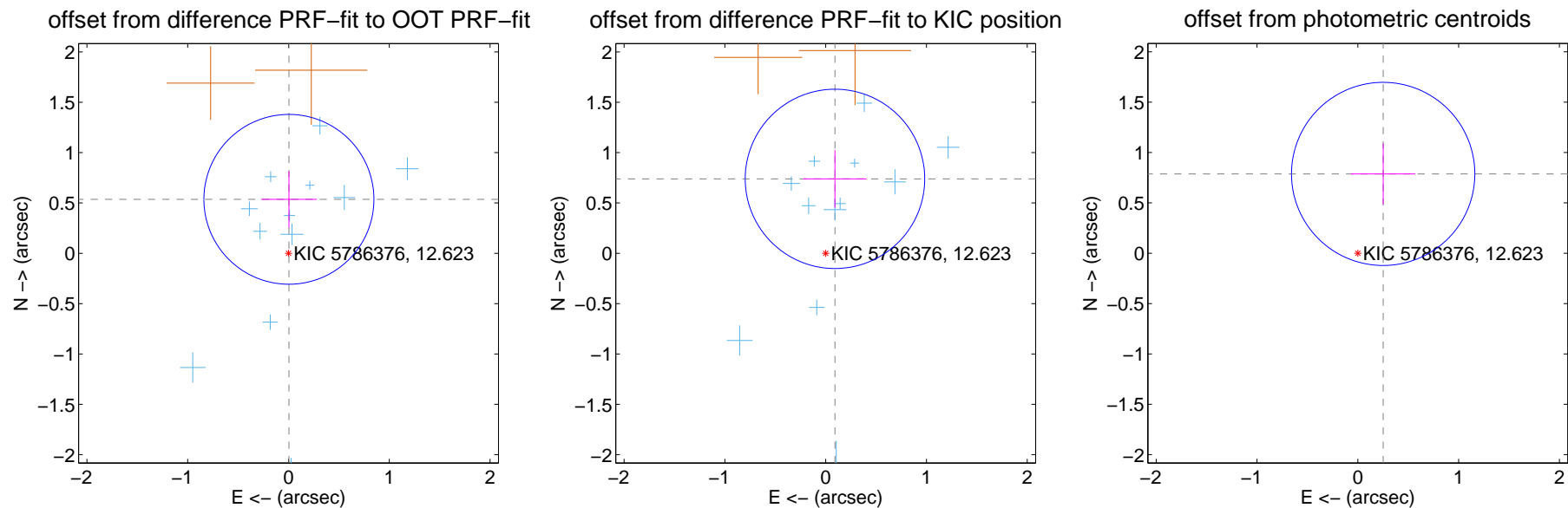
DV Centroid Data

Supplemental centroid analysis for 005786376-01. Kepler magnitude: 12.62. Transit SNR 6.85

There are 12 quarters with good PRF difference image offsets

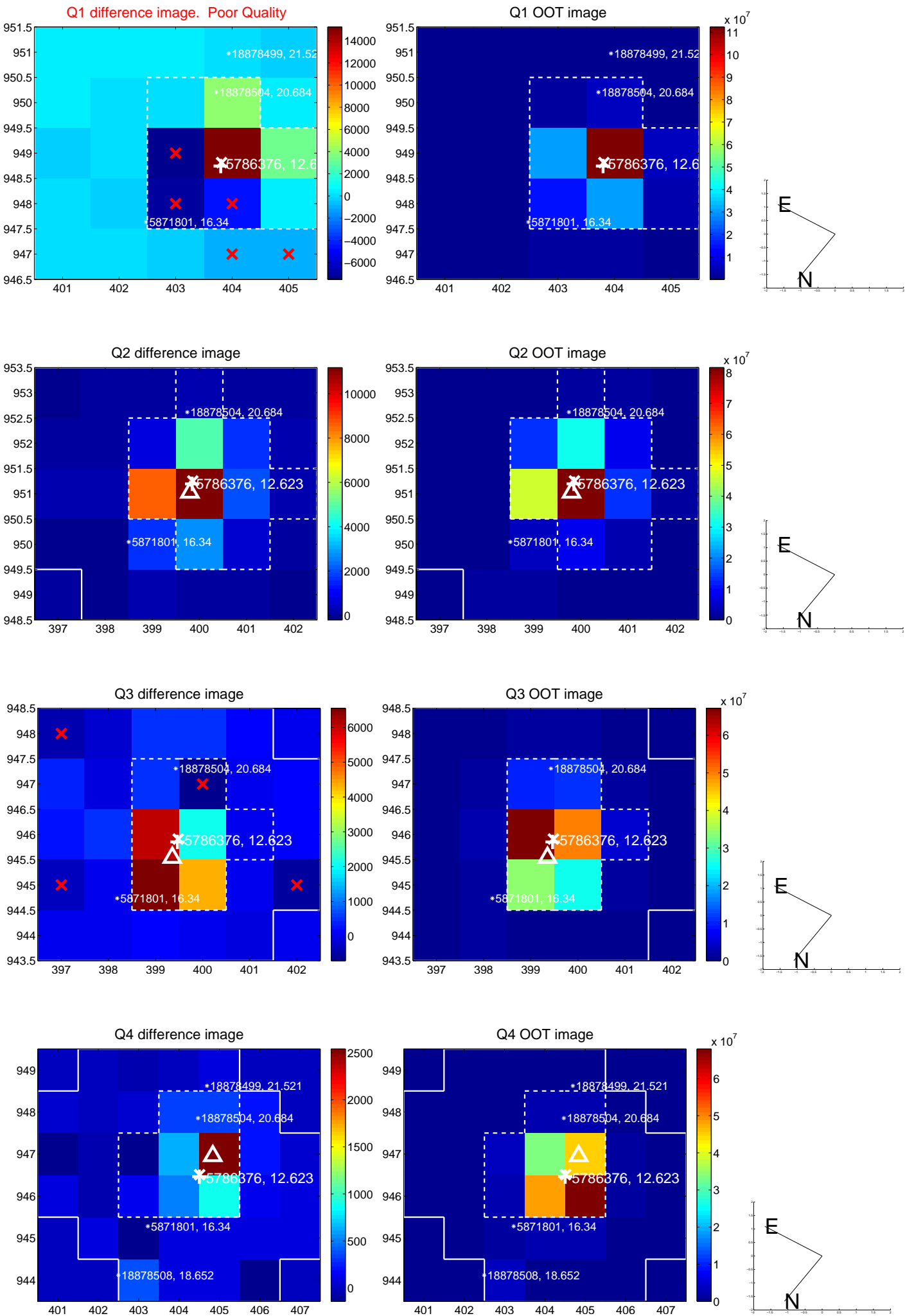
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.536 ± 0.281	1.91	-0.004 ± 0.276	0.536 ± 0.280
PRF-fit source offset from KIC position	0.745 ± 0.297	2.51	-0.092 ± 0.315	0.739 ± 0.286
photometric centroid source offset	0.83 ± 0.30	2.73	-0.25 ± 0.32	0.79 ± 0.30

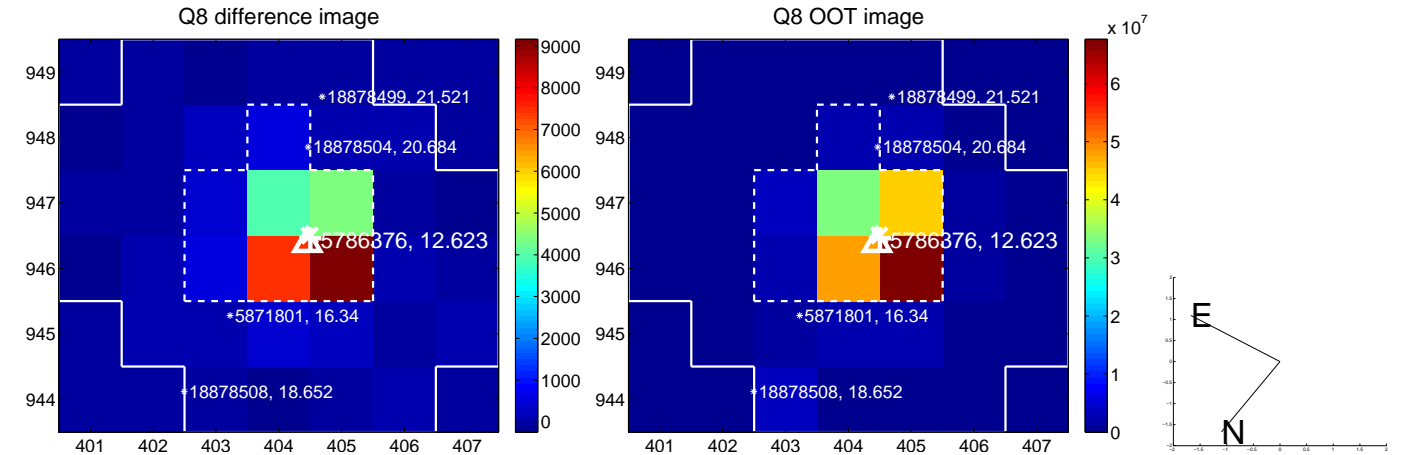
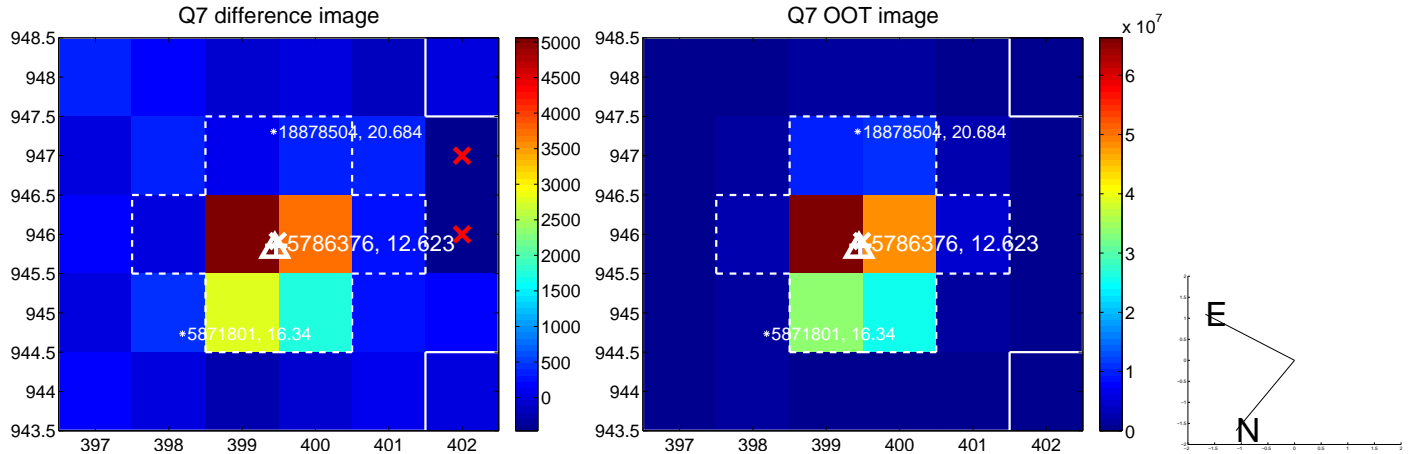
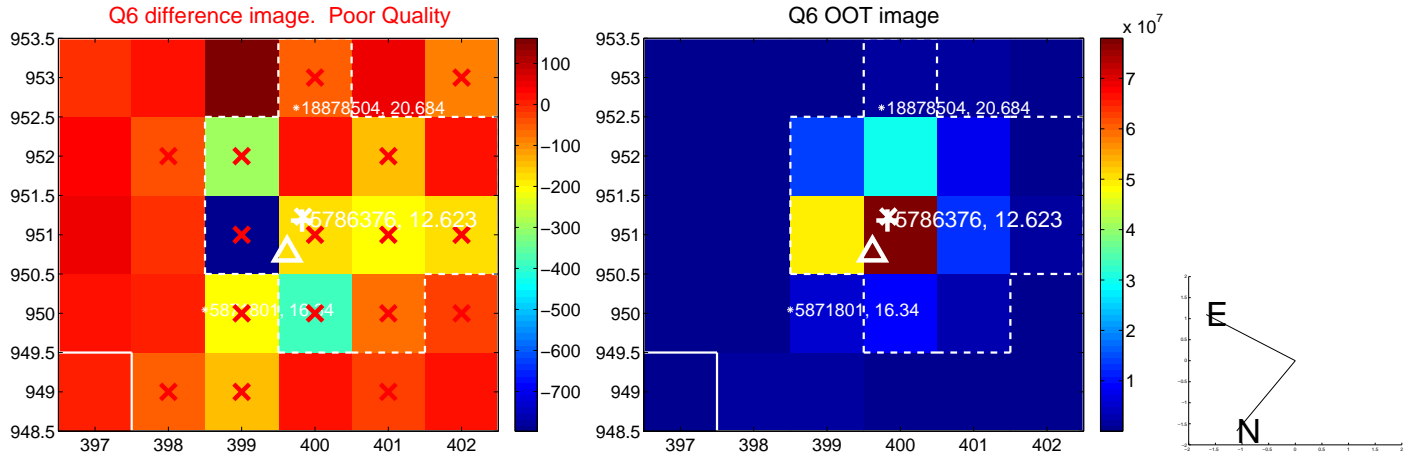
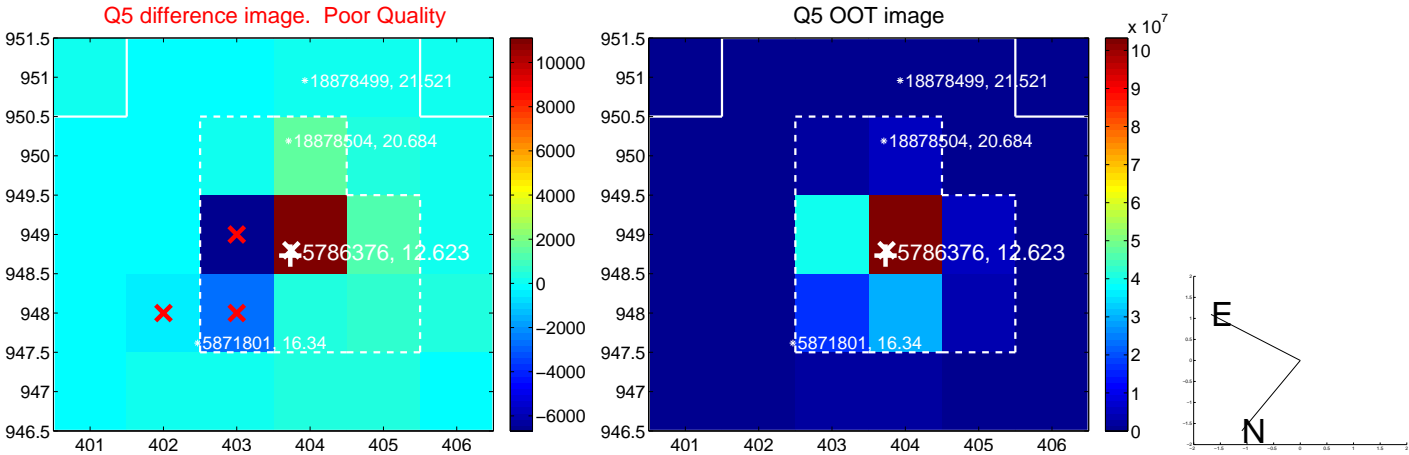


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

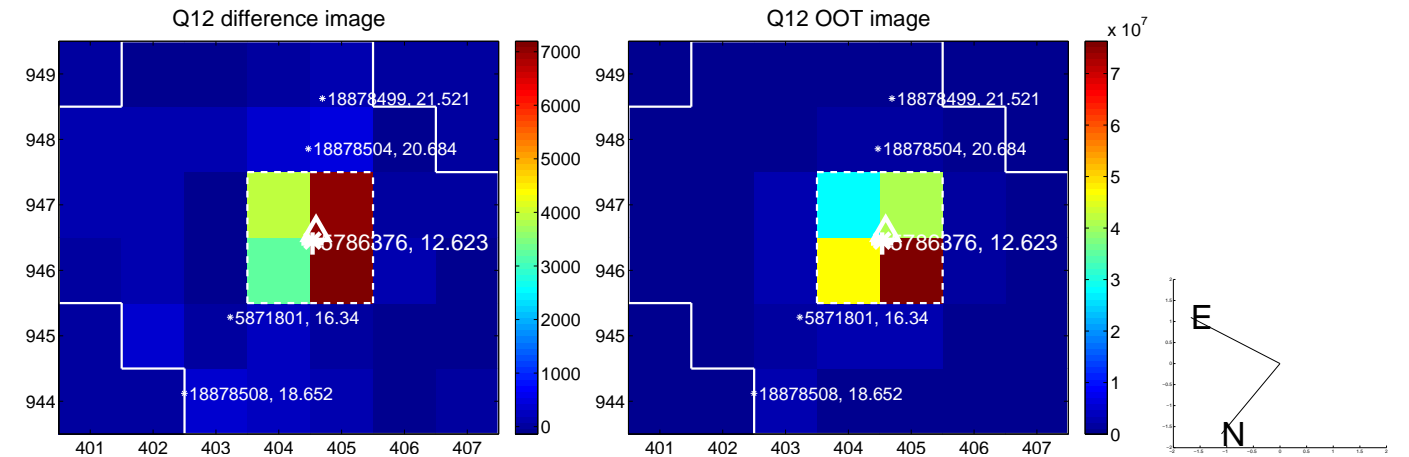
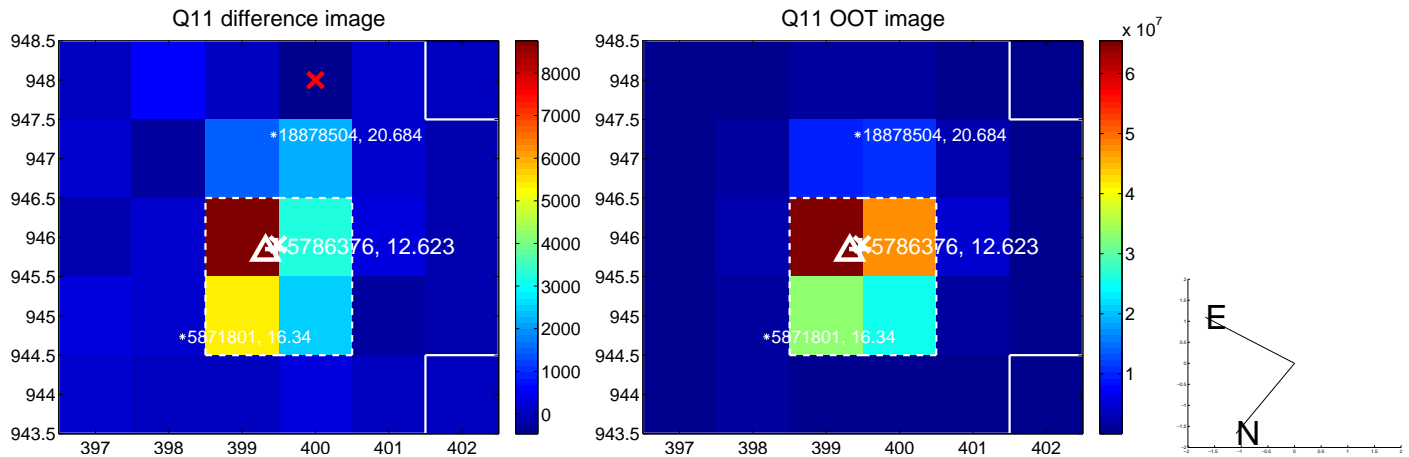
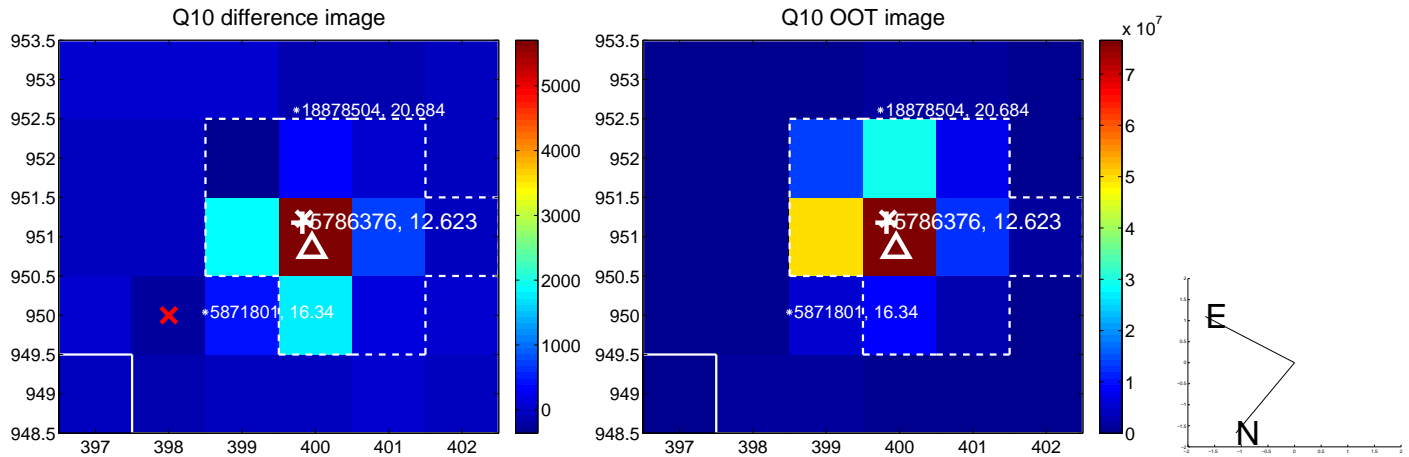
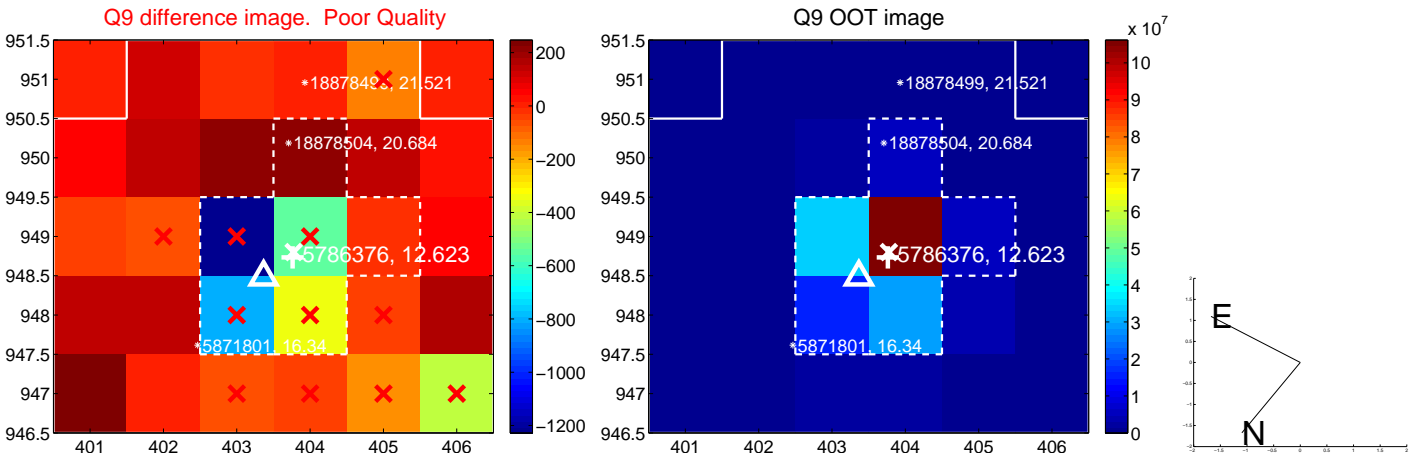
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



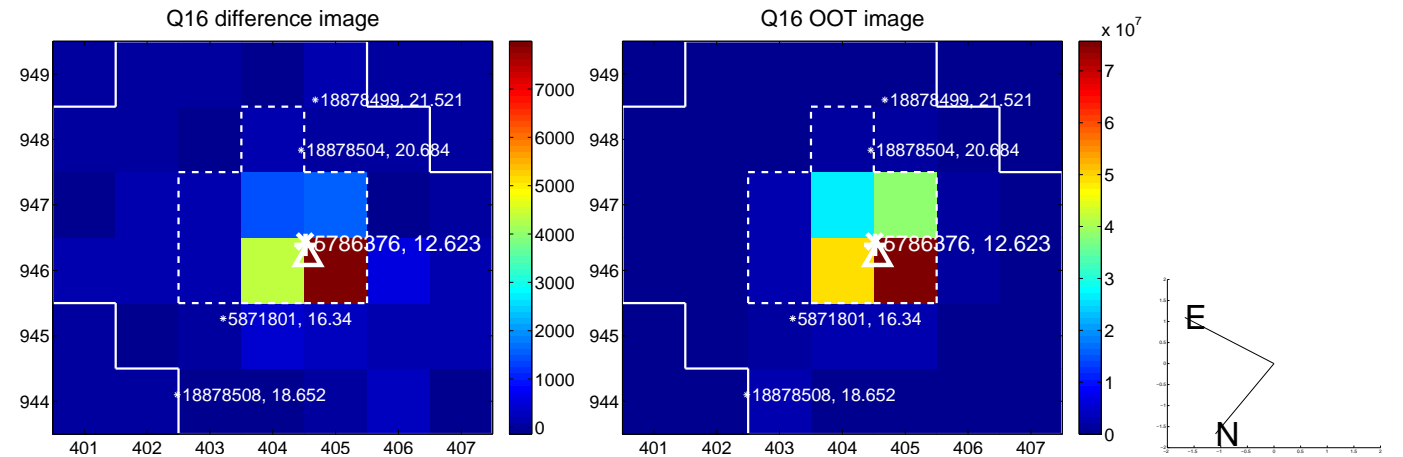
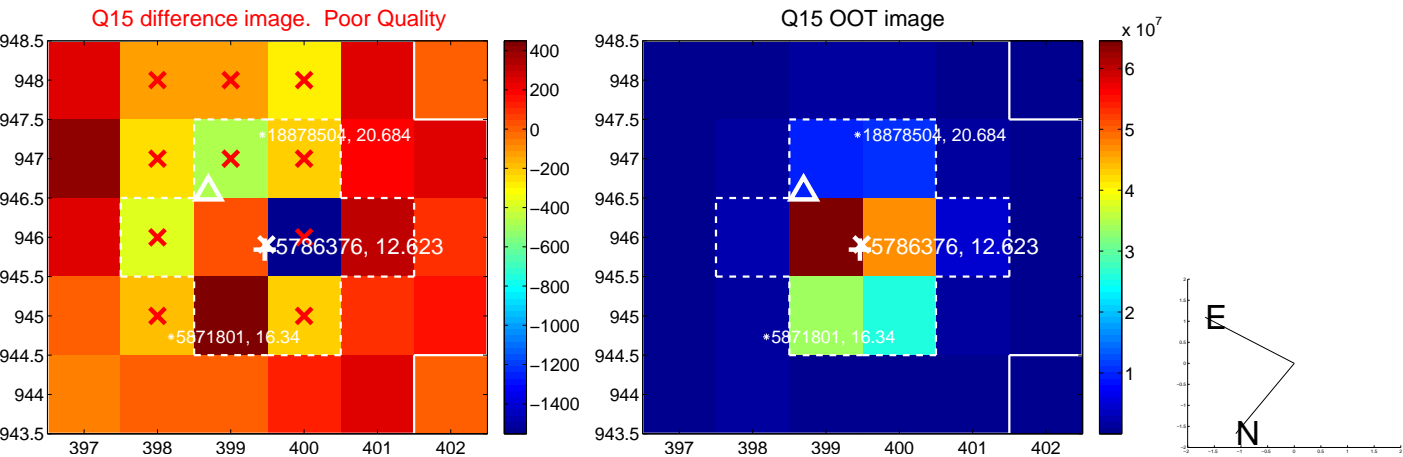
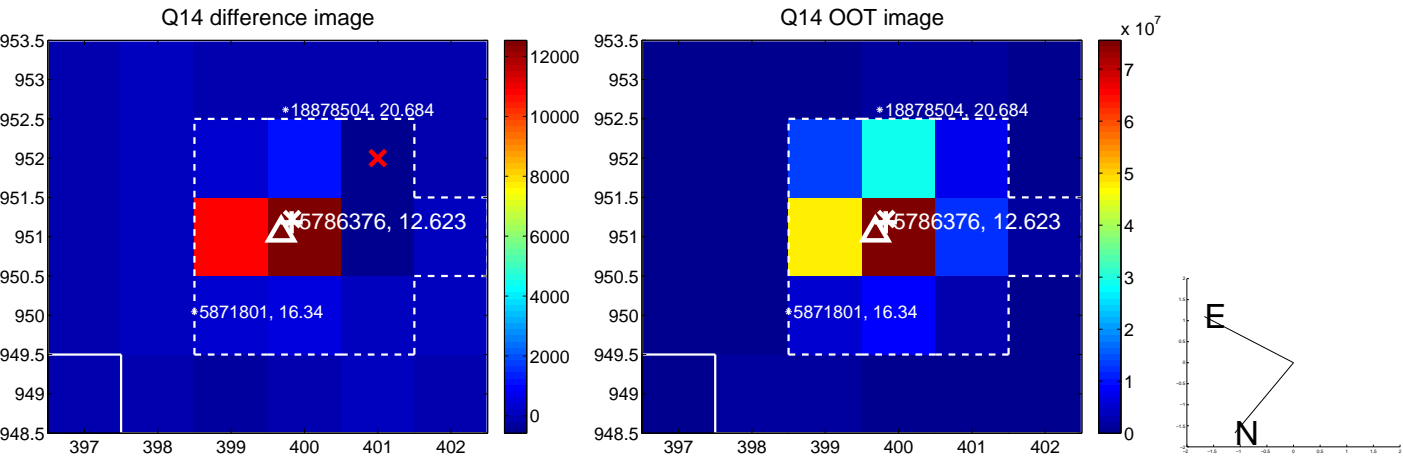
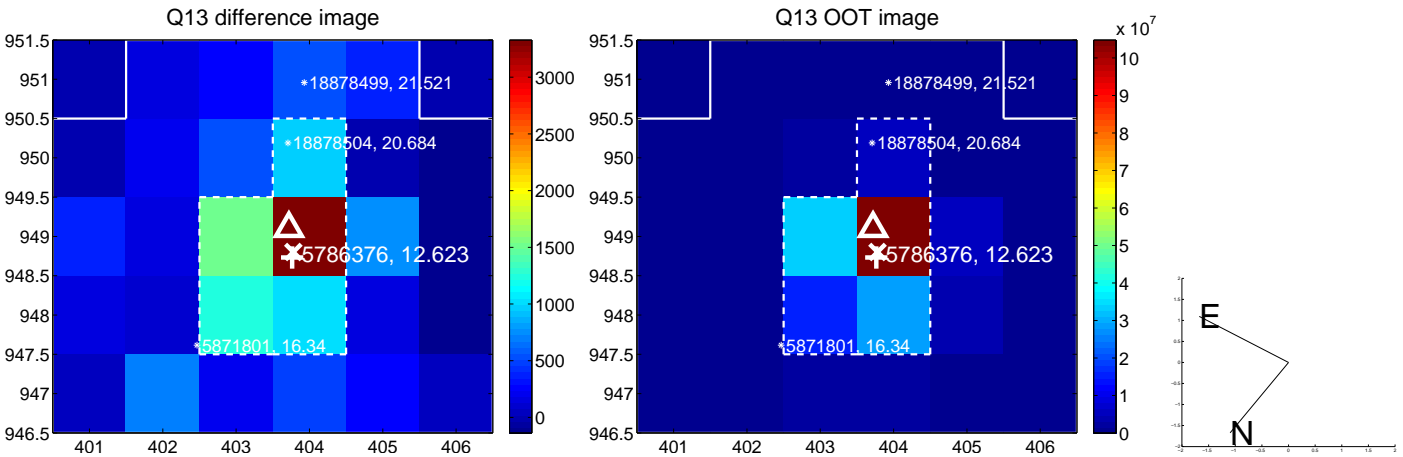
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



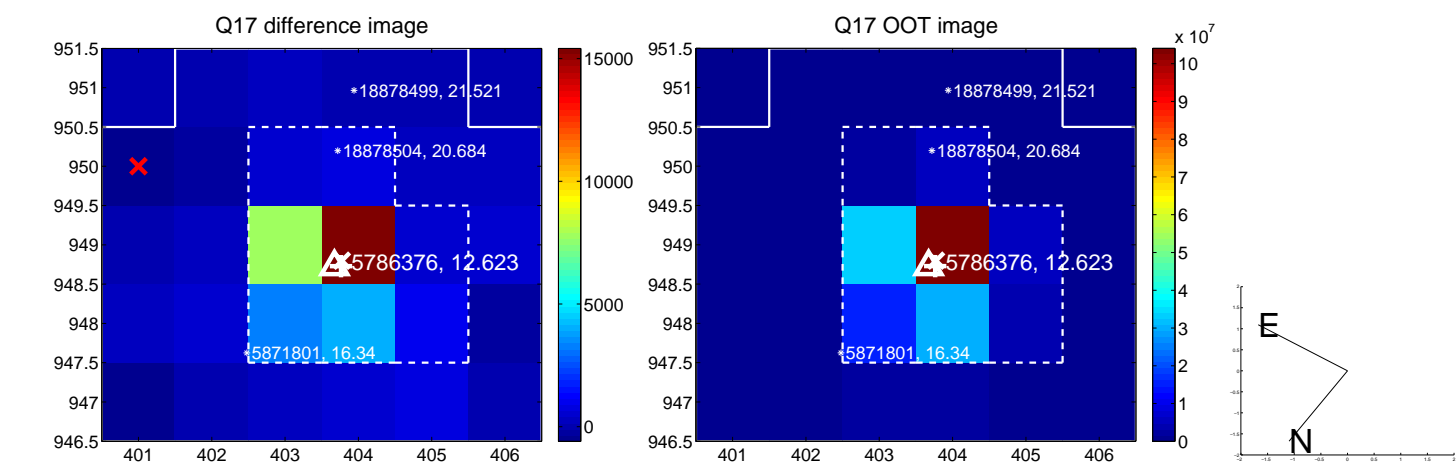
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



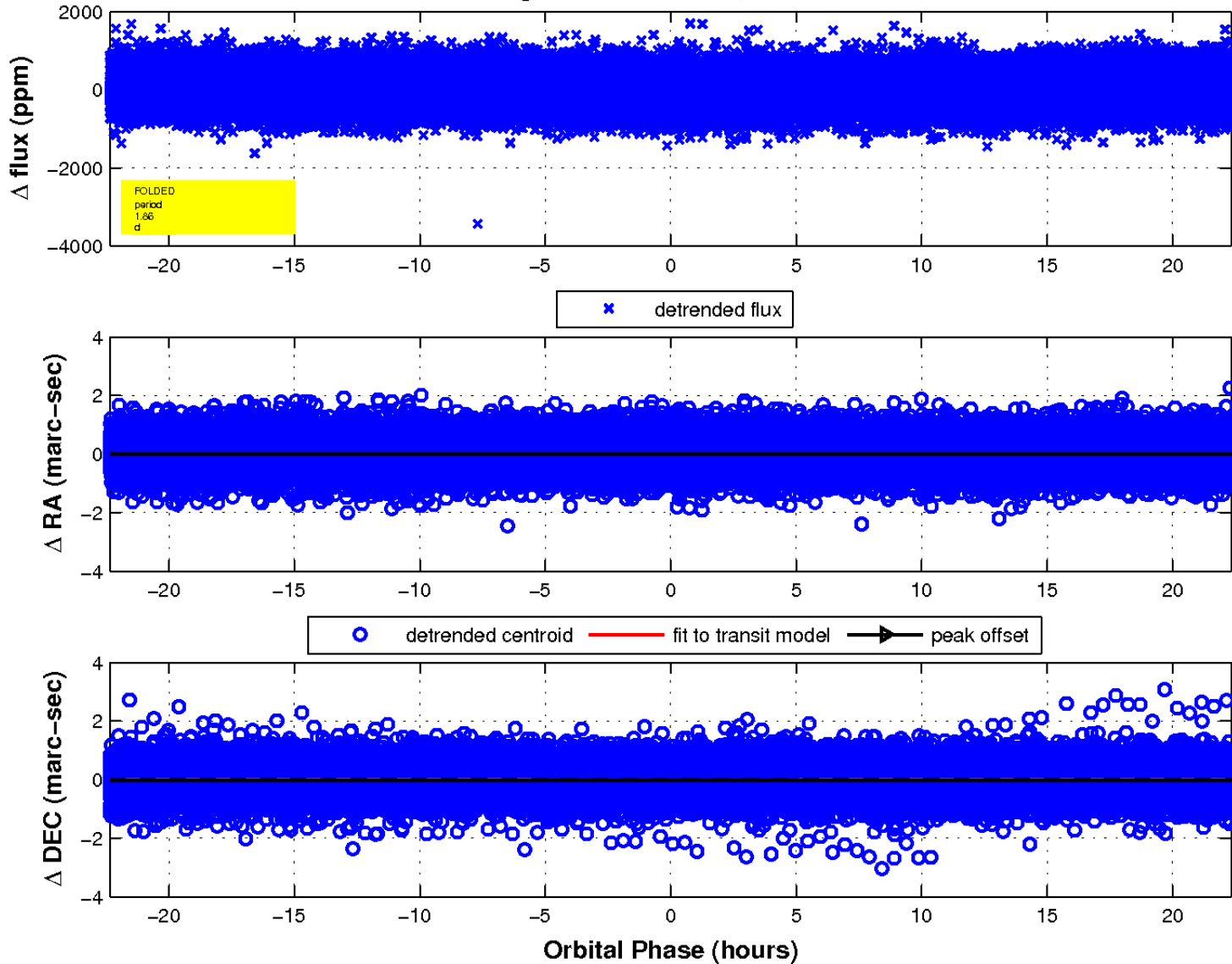
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

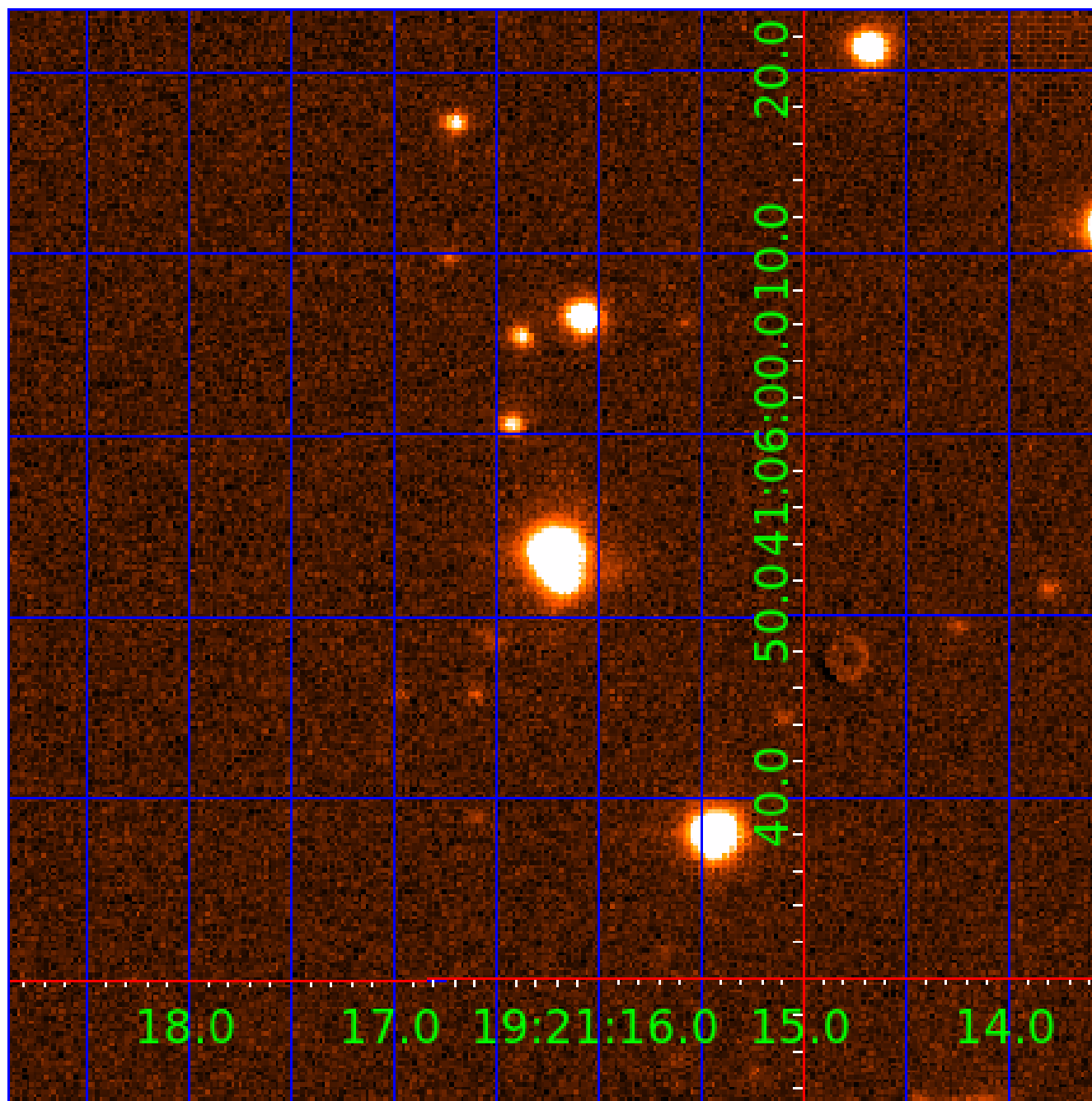


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 005786376

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})
005786376-01	OBS	No	1.862250	133.131002	35.3	12.788	8.1	6.8	2.03	8600	1.39	15725.24
005786376-02	OBS	No	69.432339	132.905520	0.0	0.704	17.8	0.0	2.03	8600	0.05	126.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005786376-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005786376-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

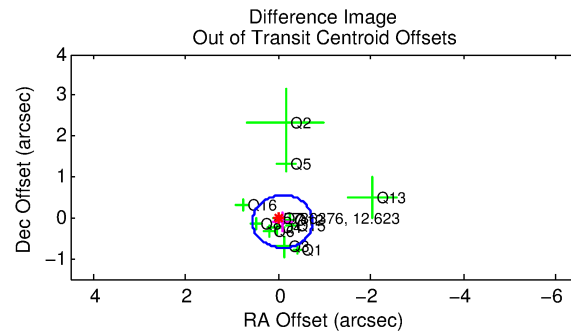
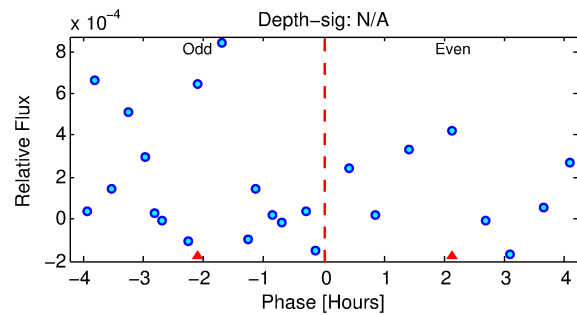
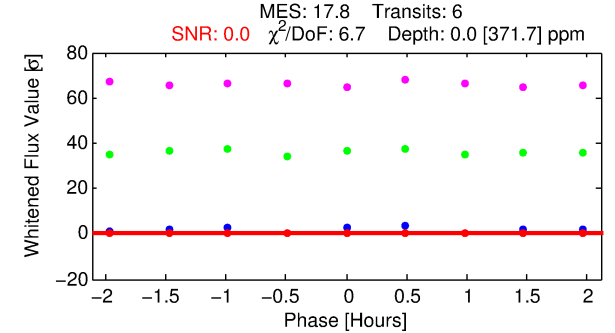
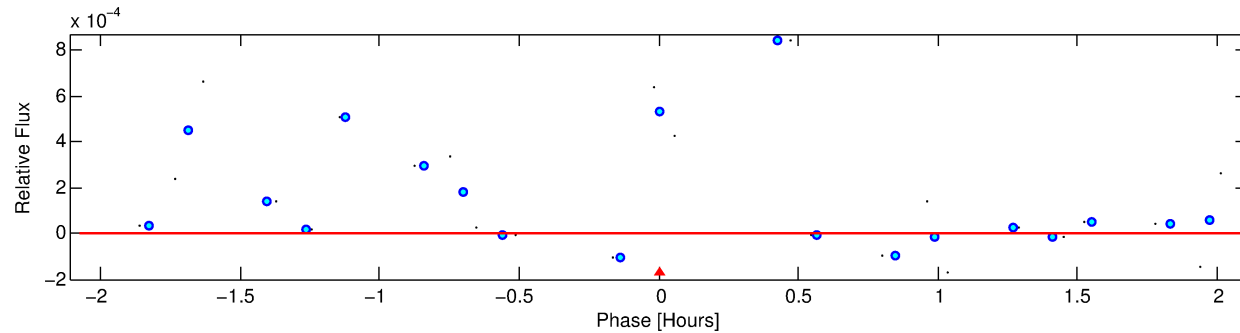
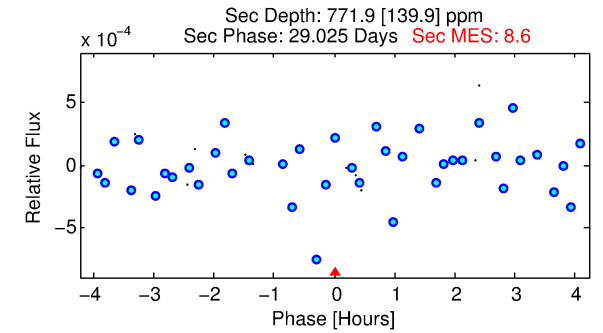
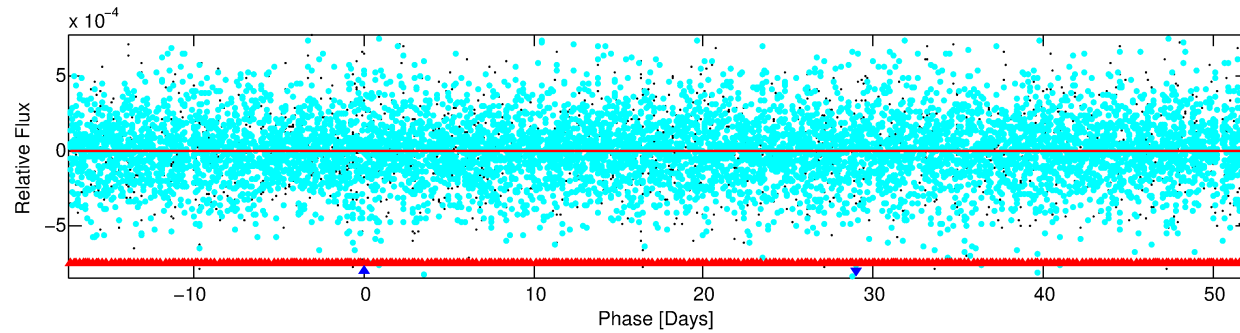
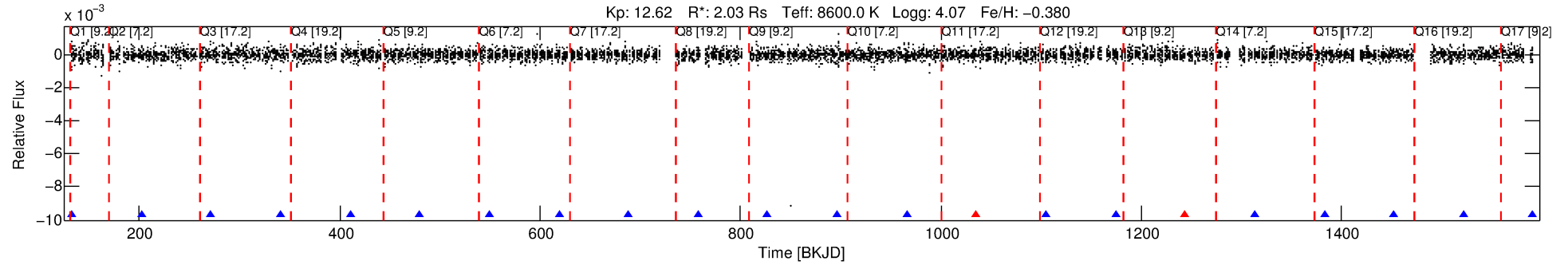
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005786376-02

No Significant Match Found

DV One-Page Summary

KIC: 5786376 Candidate: 2 of 2 Period: 69.432 d



DV Fit Results:

Period = 69.43234 [34.84461] d
Epoch = 132.9055 [309.1653] BKJD
Rp/R* = 0.0002 [1.5039]
a/R* = 63.15 [3858928.29]
b = 1.00 [364.37]
Seff = 126.25 [87.80]
Teq = 855 [149] K
Rp = 0.05 [332.49] Re
a = 0.3992 [0.1423] AU
Ag = 24975959.84 [319090175915.84] [0.006]
Teffp = 93423 [298398346] K [0.005]

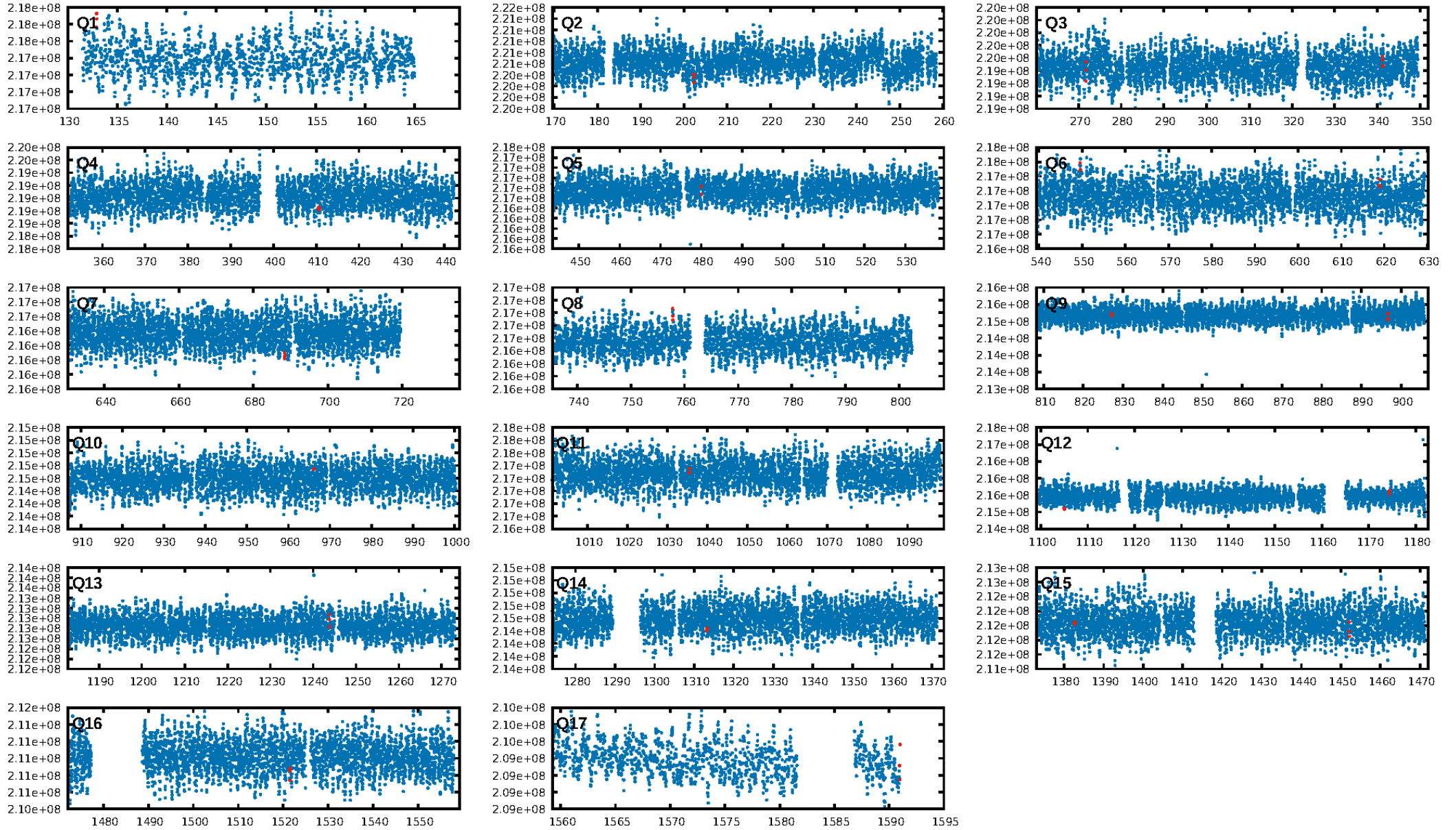
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [126.62]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 12.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.67 [4/6]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.128 arcsec [0.59]
KicOffset-rm: 0.179 arcsec [0.84]
OotOffset-st: 2/3/4/3 [12]
KicOffset-st: 2/3/4/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 0.64 [9/14]

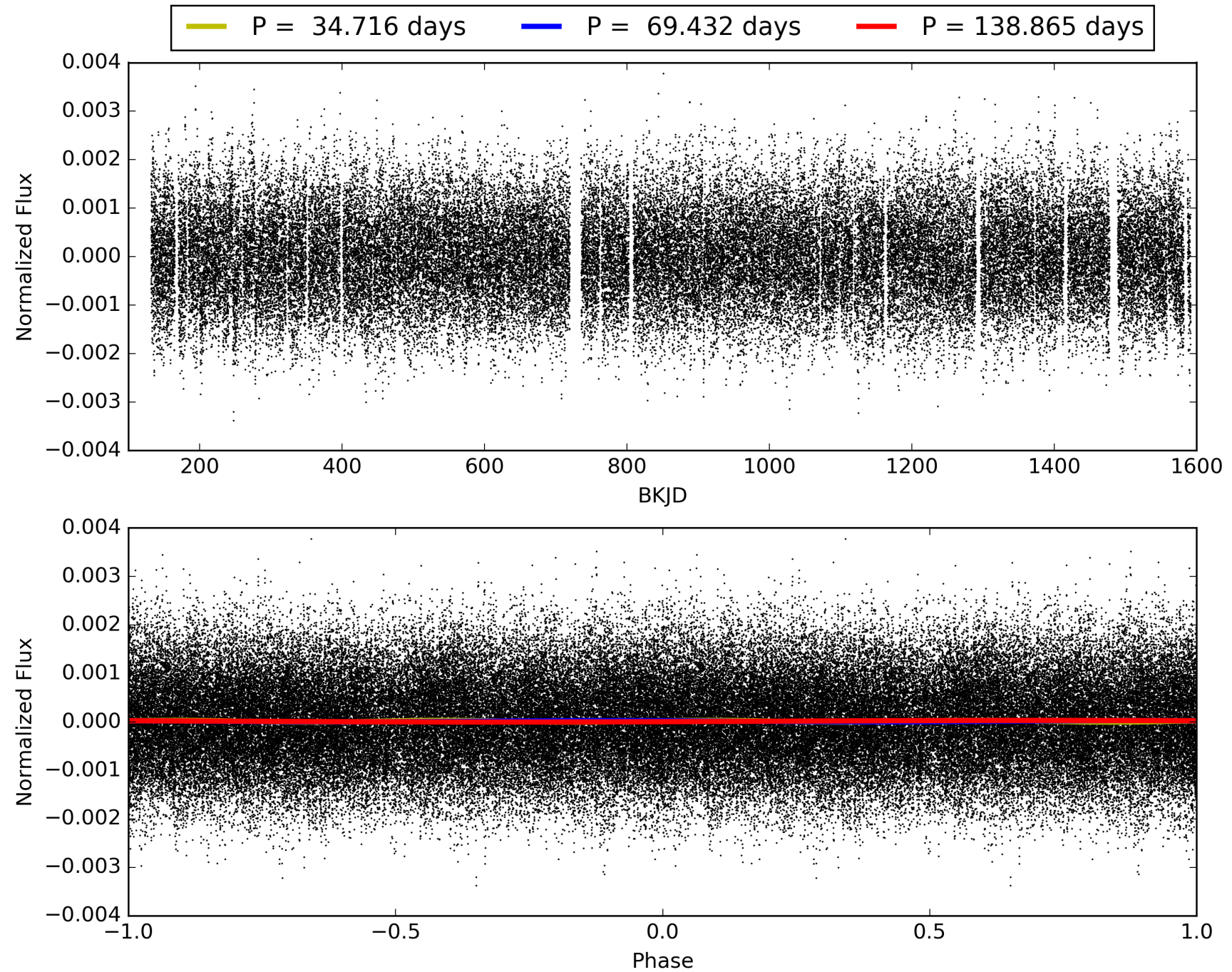
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005786376-02, PDC Light Curves

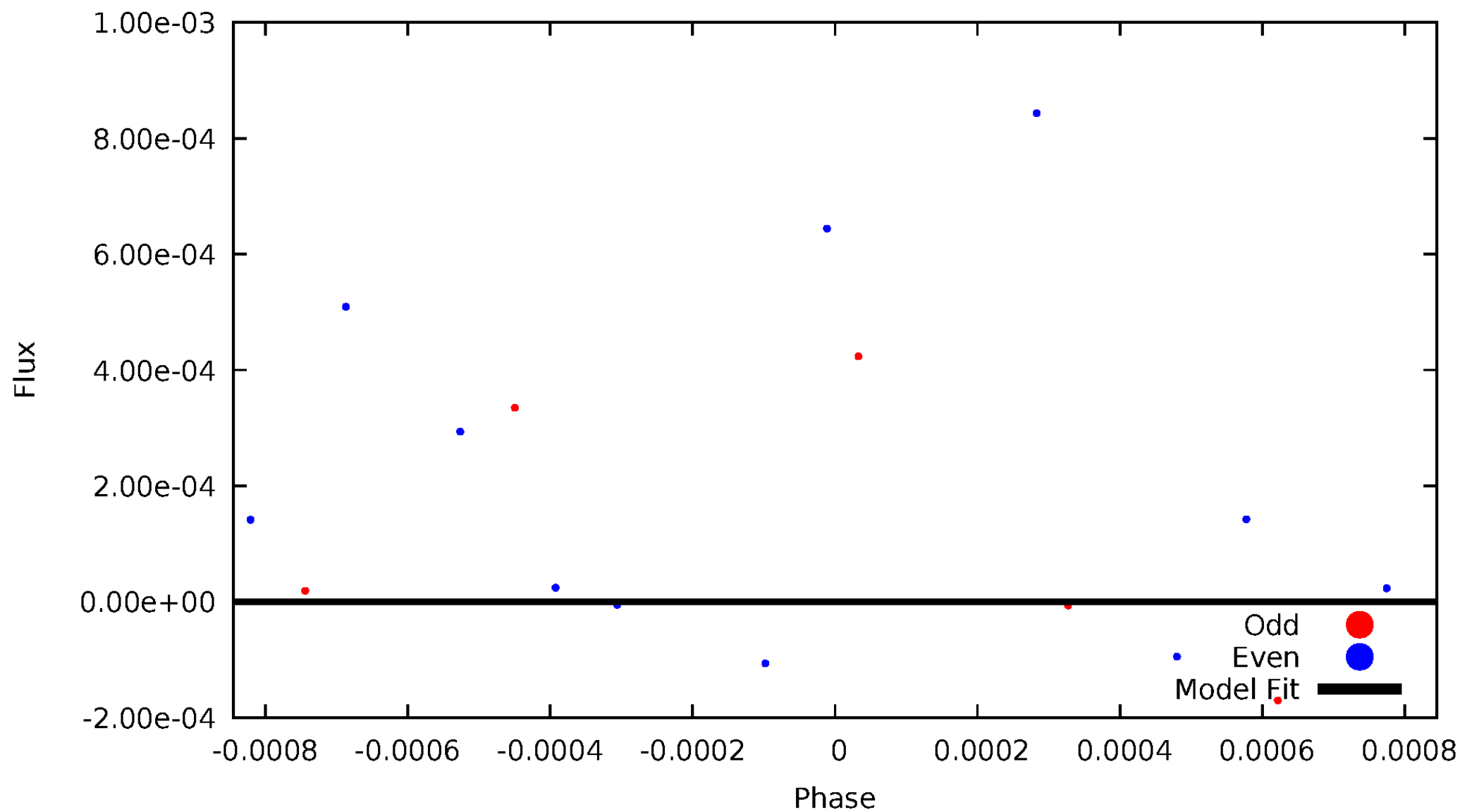


TCE 005786376-02



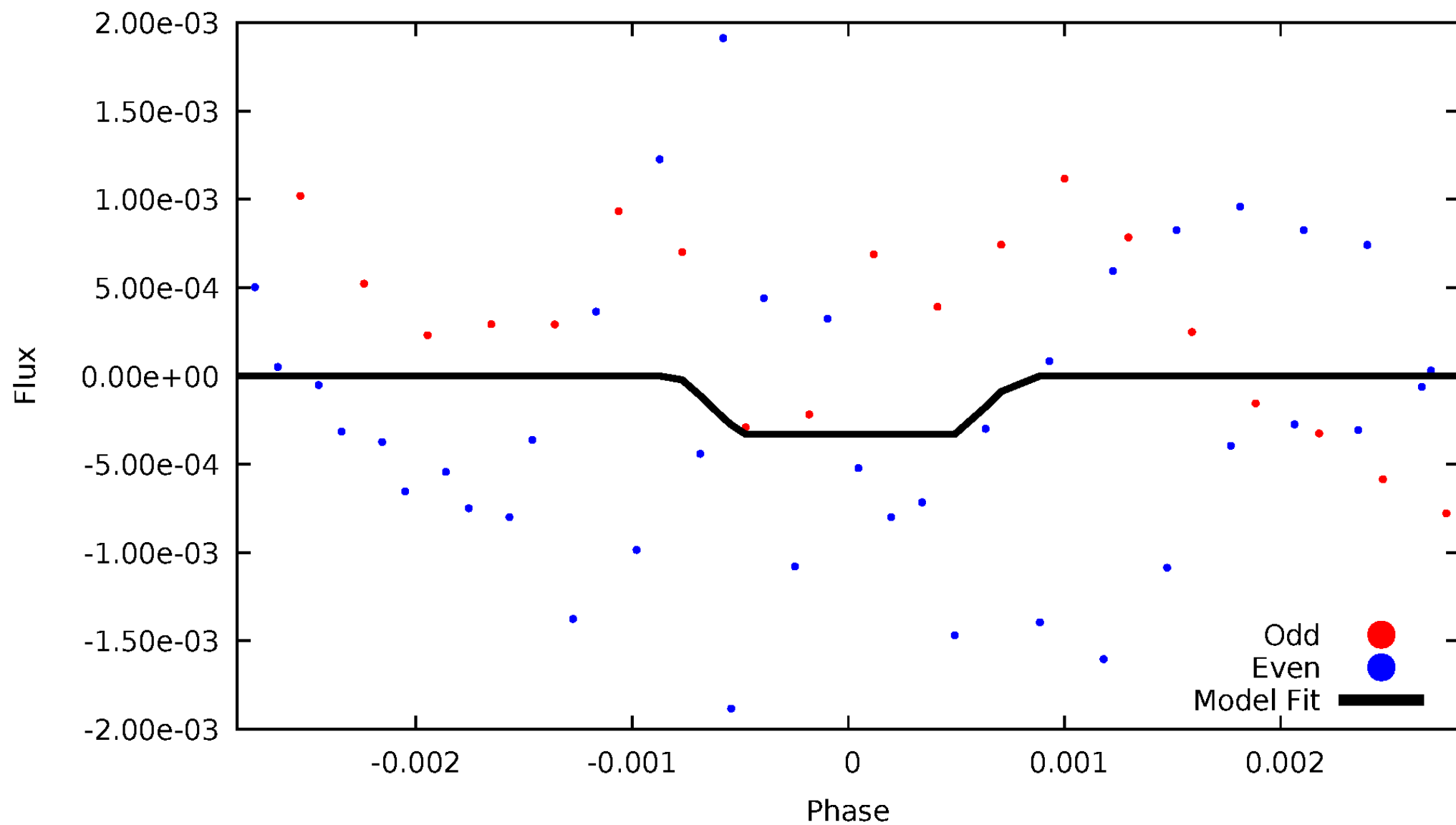
DV Odd/Even

TCE 005786376-02



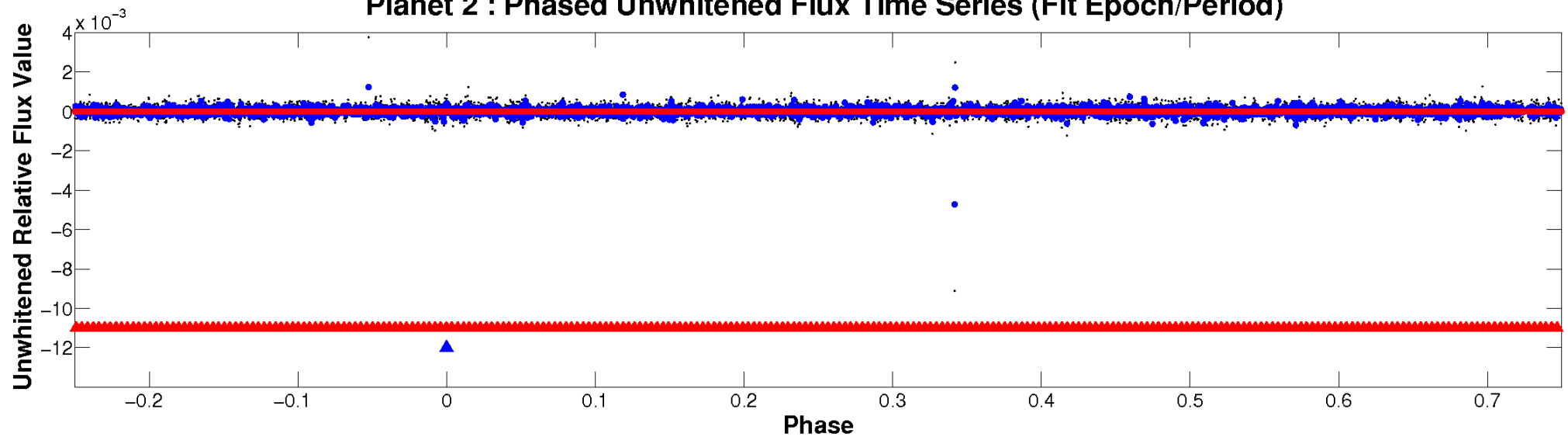
ALT Odd/Even

TCE 005786376-02

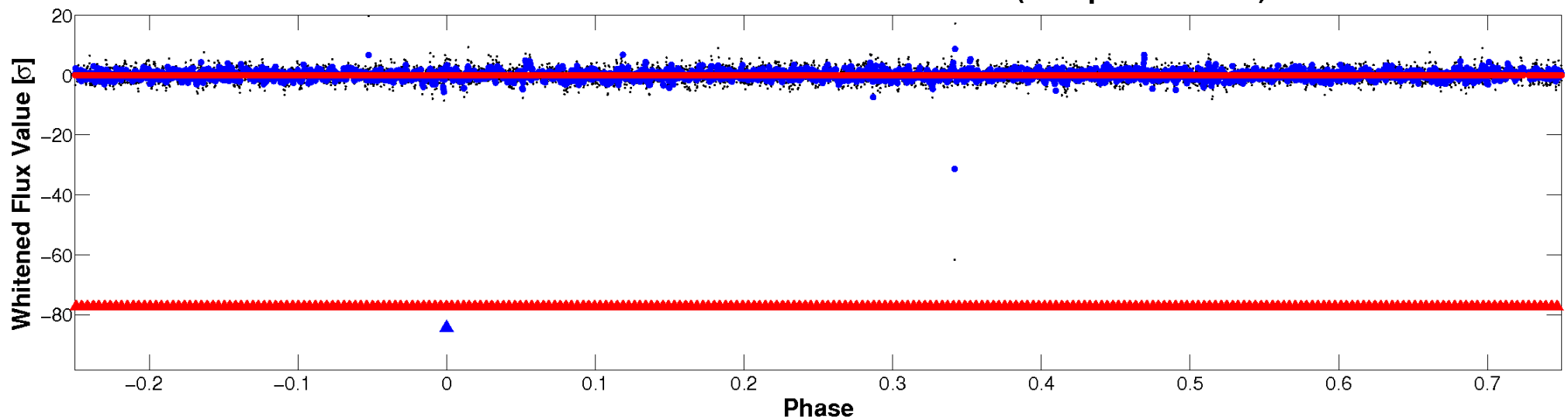


Non-Whitened Vs. Whitened Light Curve

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

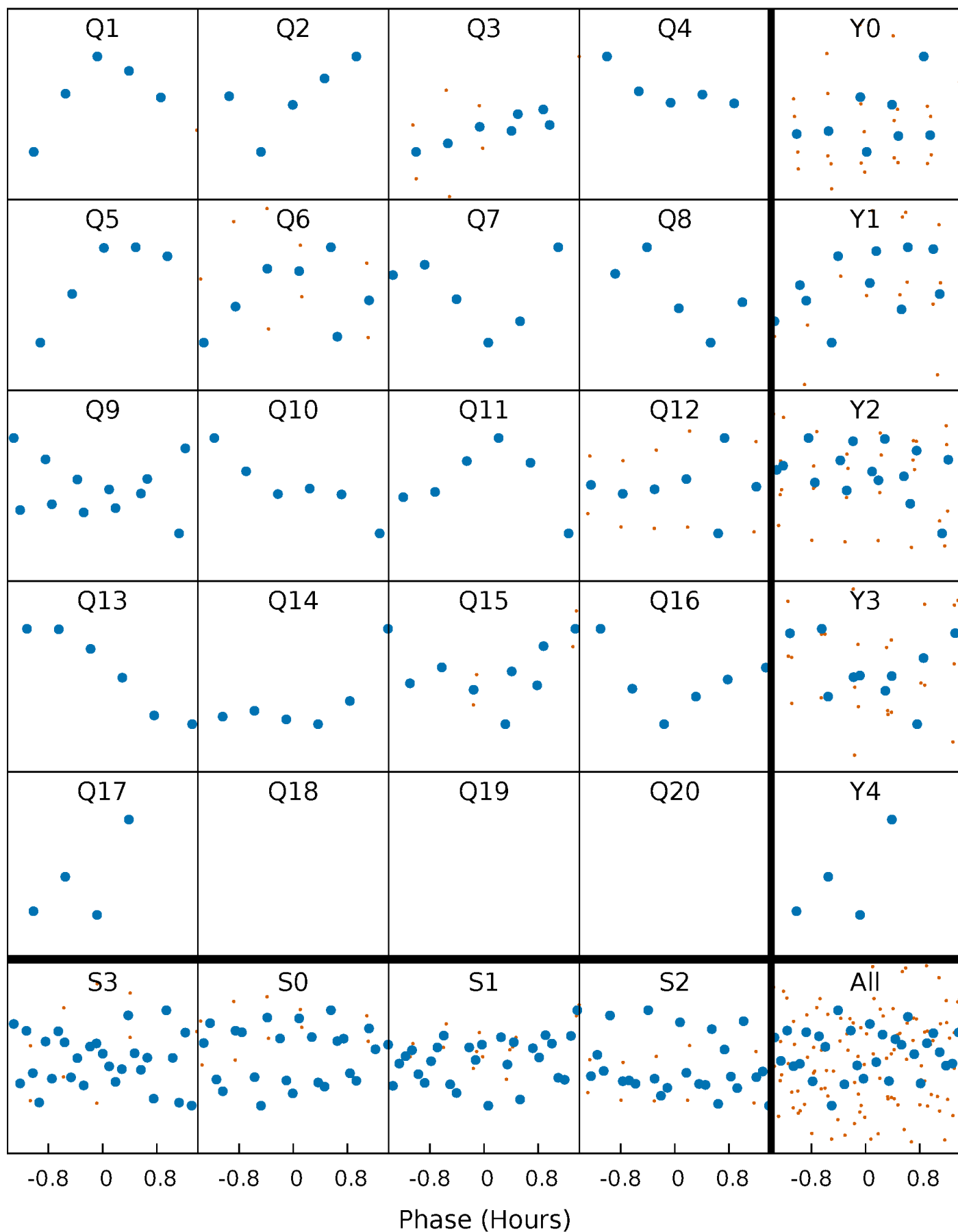


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



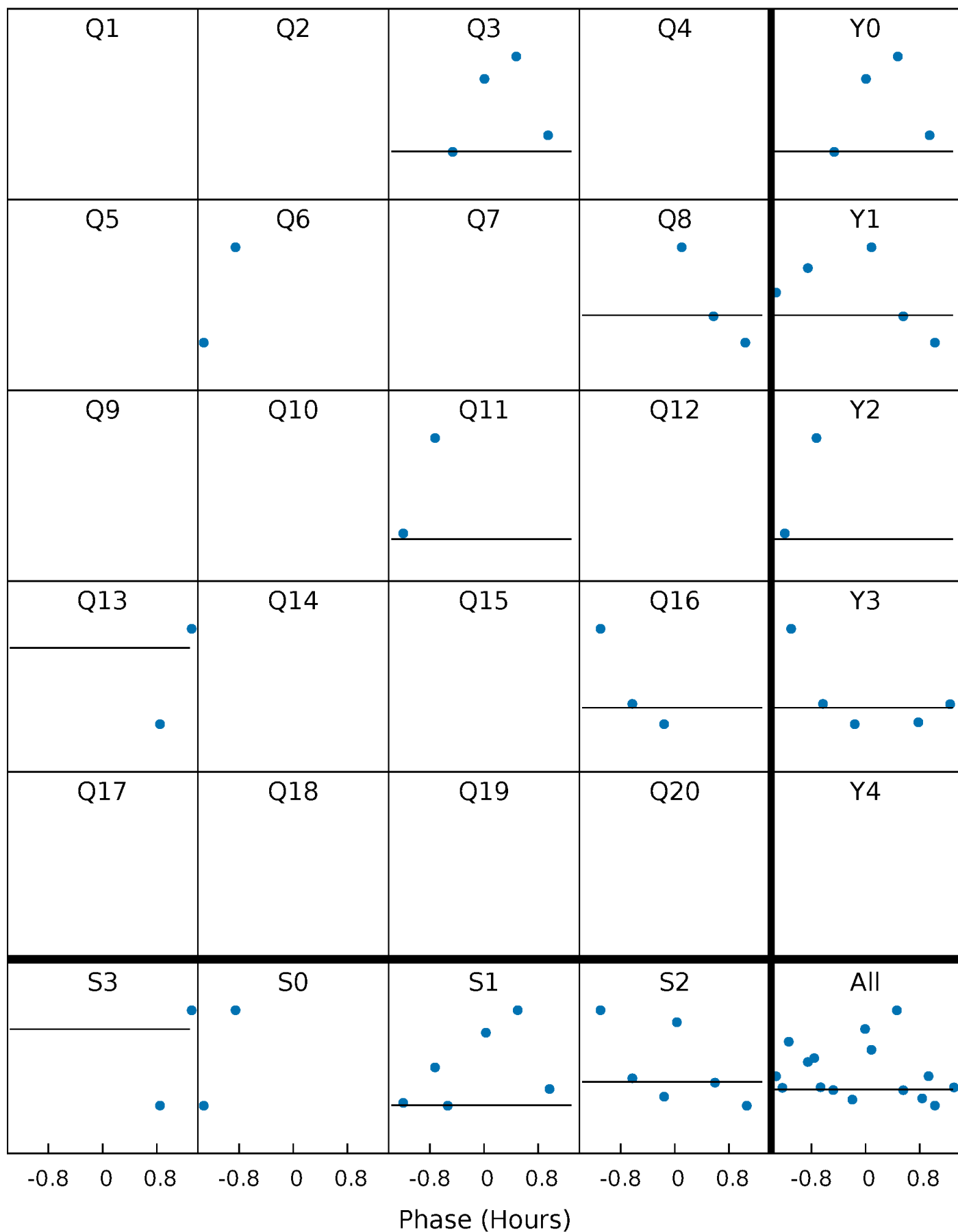
PDC Quarter-Phased Transit Curves

TCE 005786376-02 P= 69.432339 Days $T_0=132.905520$ (BKJD)



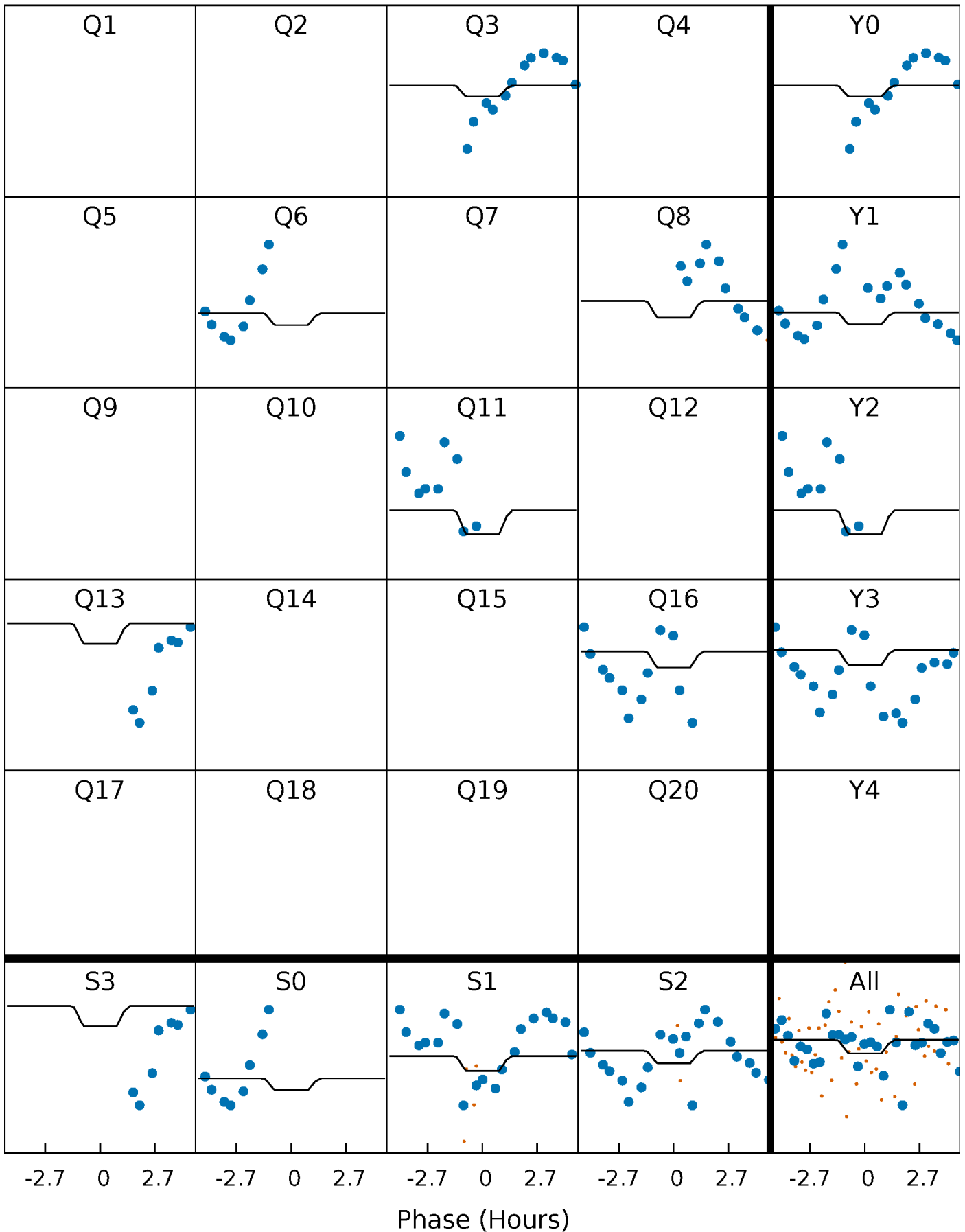
DV Quarter-Phased Transit Curves

TCE 005786376-02 P= 69.432339 Days $T_0=132.905520$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

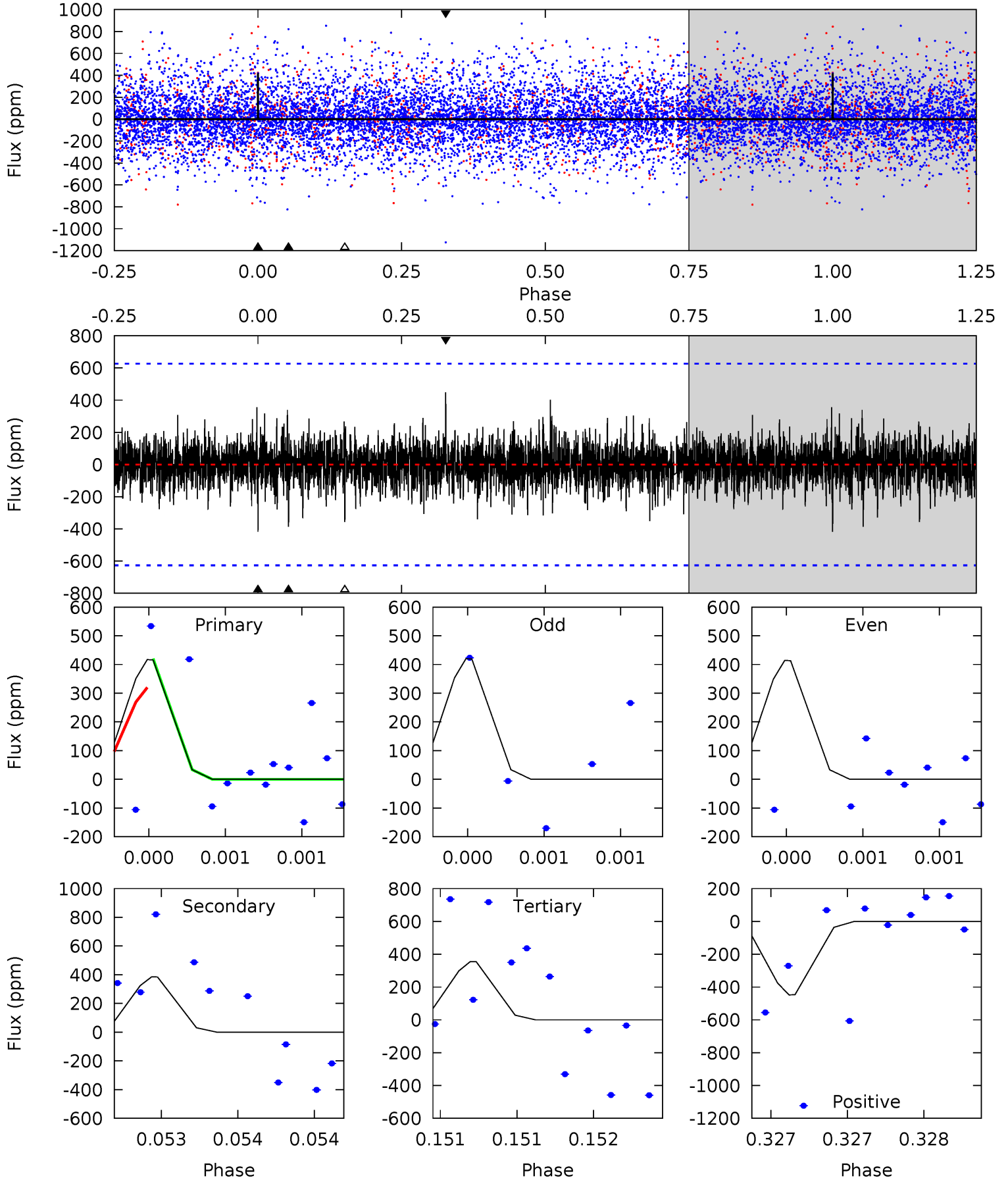
TCE 005786376-02 P= 69.429152 Days $T_0=132.928286$ (BKJD)



DV Model-Shift Uniqueness Test

005786376-02, P = 69.432339 Days, E = 63.473181 Days

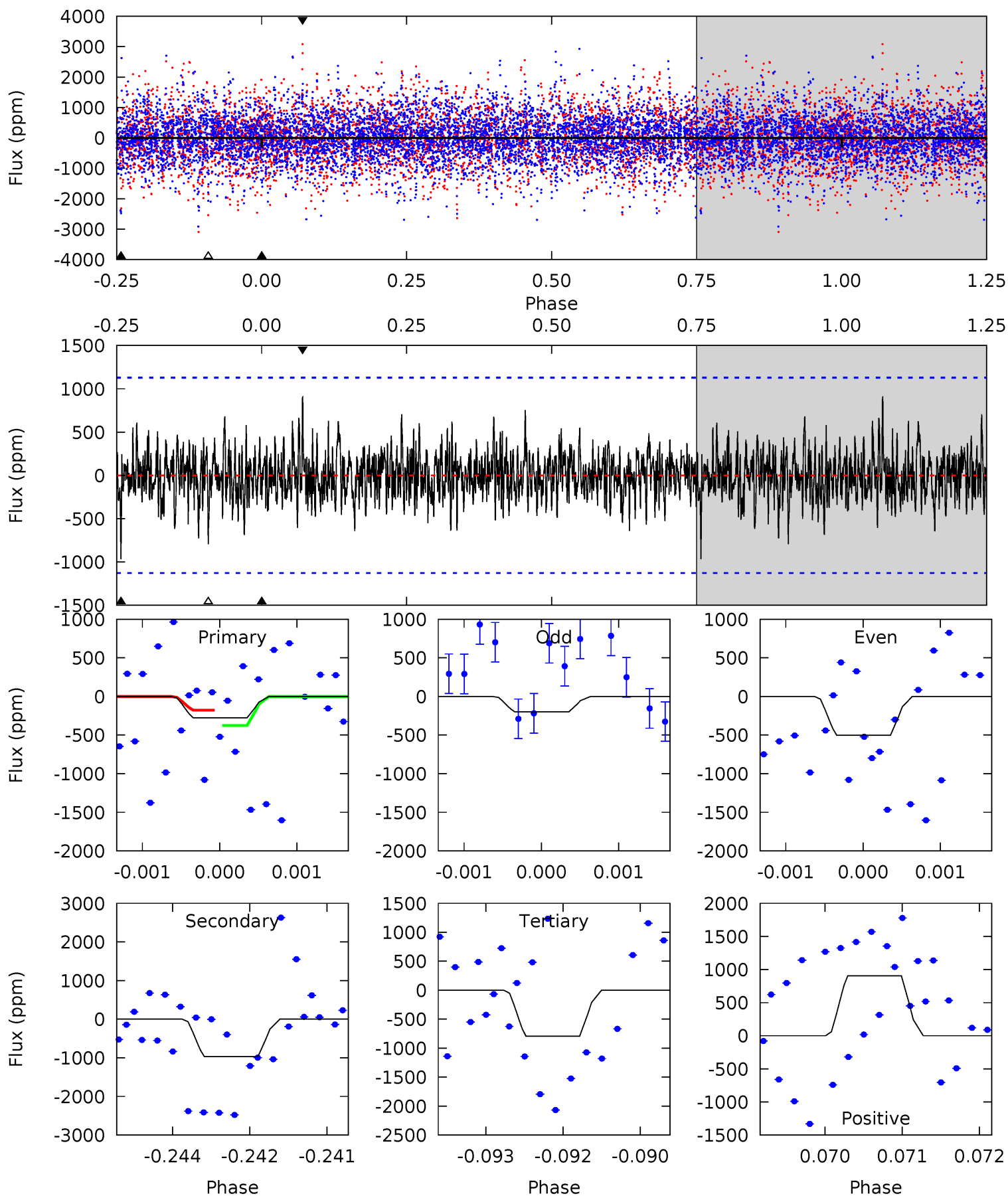
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.69	3.41	3.15	3.96	5.55	3.44	0.83	0.54	-0.27	0.27	-0.55	0.03	1.00	0.52	0.37



Alt Model-Shift Uniqueness Test

005786376-02, P = 69.429152 Days, E = 63.499134 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.32	4.62	3.80	4.33	5.39	3.20	1.08	-2.47	-3.01	0.83	0.29	0.65	0.82	0.48	0.47



Stellar Parameters For KIC 005786376

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8600^{+68}_{-86}	$4.070^{+0.104}_{-0.076}$	$-0.380^{+0.050}_{-0.050}$	$2.026^{+0.234}_{-0.286}$	$1.760^{+0.053}_{-0.105}$	$0.298^{+0.134}_{-0.079}$
	+1%/-1%	+3%/-2%	+13%/-13%	+12%/-14%	+3%/-6%	+45%/-26%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005786376-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-386 ± 113	$230.01^{+236.23}_{-150.71}$	1190^{+258}_{-154}	1914^{+747}_{-3839}	$0.545^{+5.478}_{-0.434}$
Alt.	-967 ± 209	$230.22^{+240.83}_{-162.37}$	1173^{+269}_{-140}	2240^{+917}_{-1018}	$1.595^{+14.999}_{-1.295}$

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 $A_{obs} \gg 1.0$

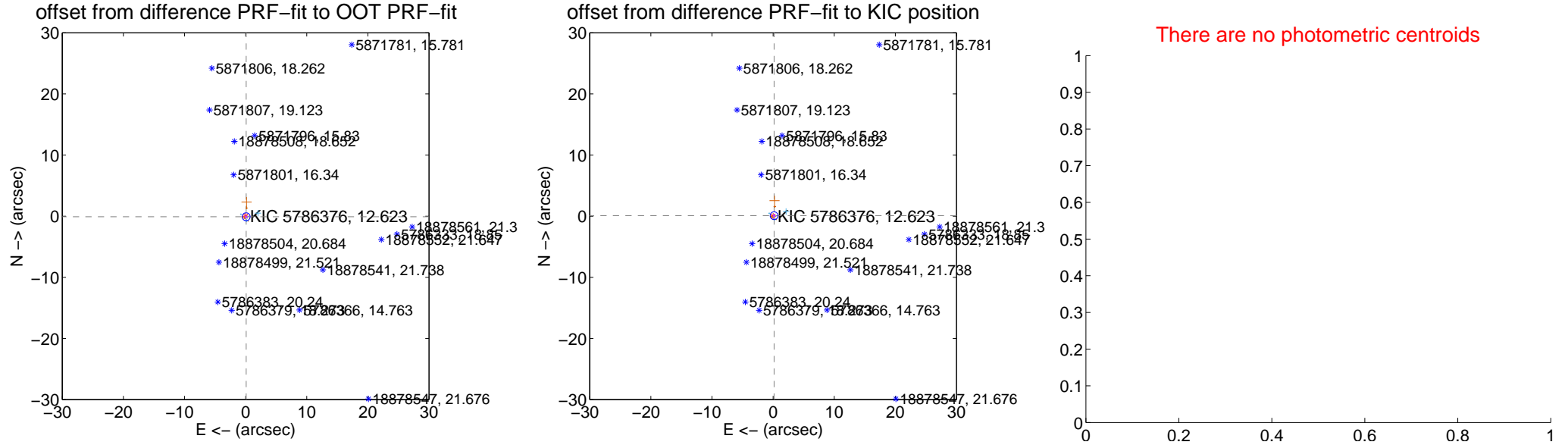
DV Centroid Data

Supplemental centroid analysis for 005786376-02. Kepler magnitude: 12.62. Transit SNR 0.00

There are 7 quarters with good PRF difference image offsets

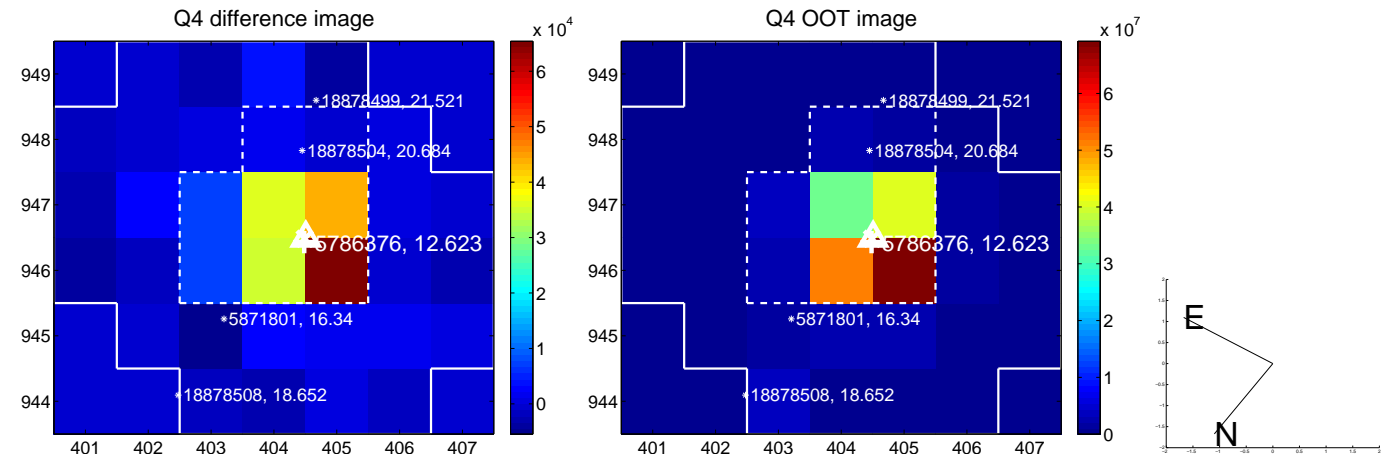
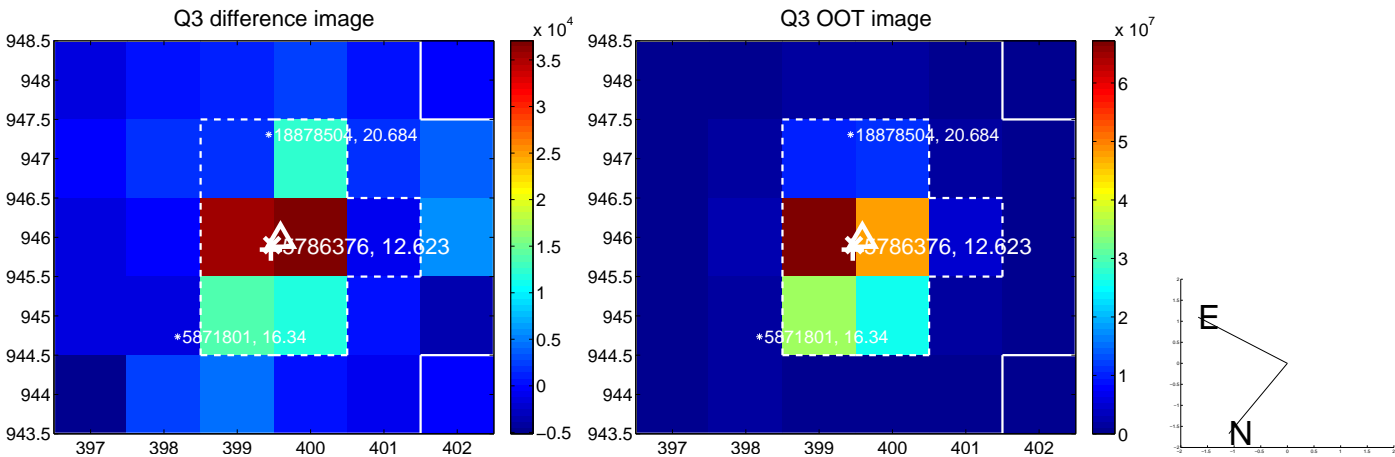
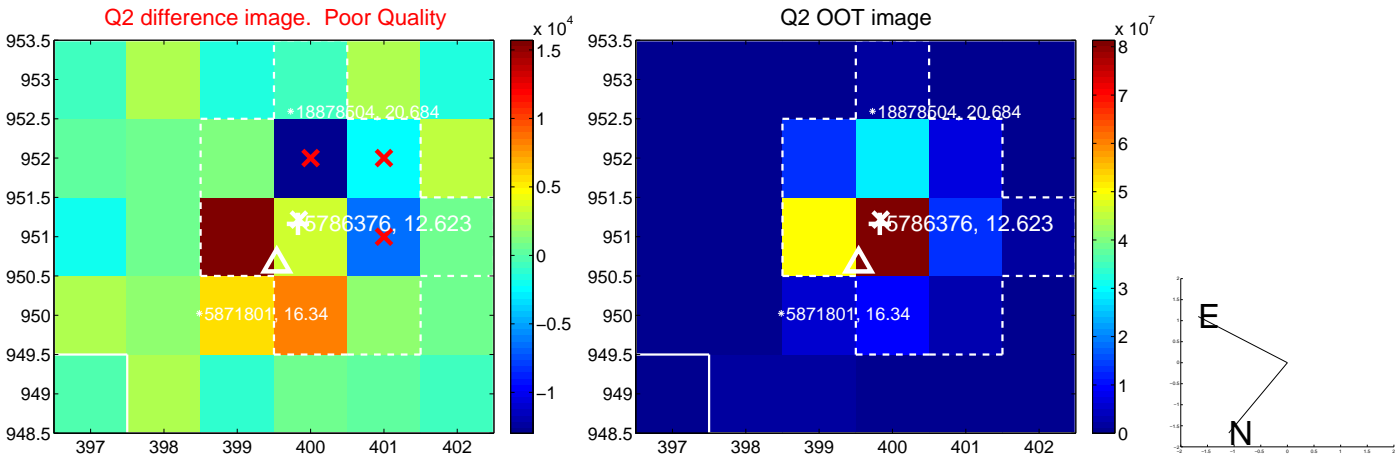
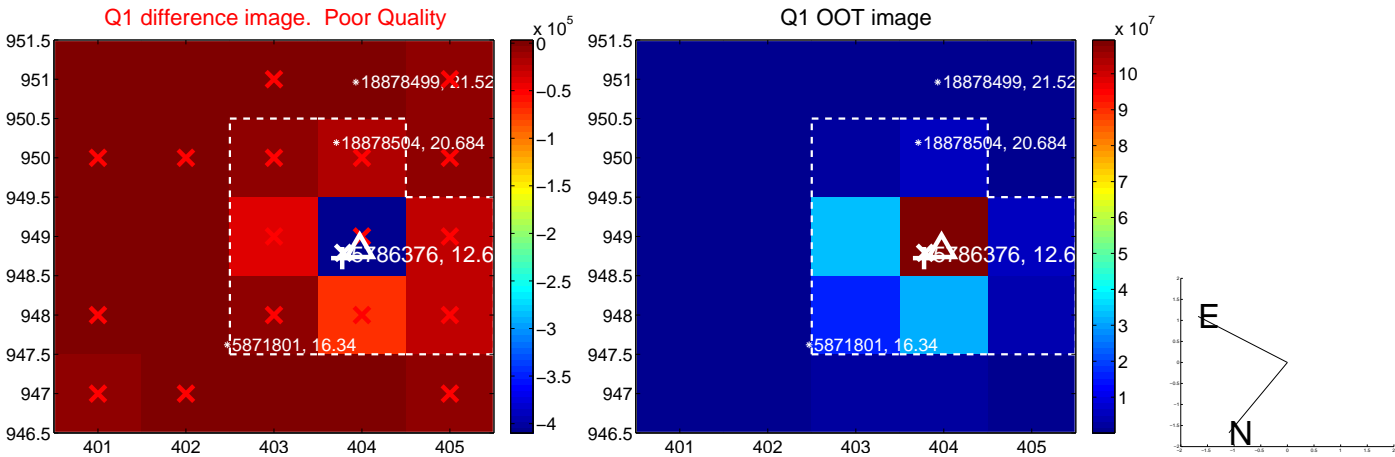
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.128 ± 0.216	0.59	-0.086 ± 0.197	-0.094 ± 0.234
PRF-fit source offset from KIC position	0.179 ± 0.213	0.84	-0.160 ± 0.175	0.079 ± 0.283
photometric centroid source offset	—	—	—	—

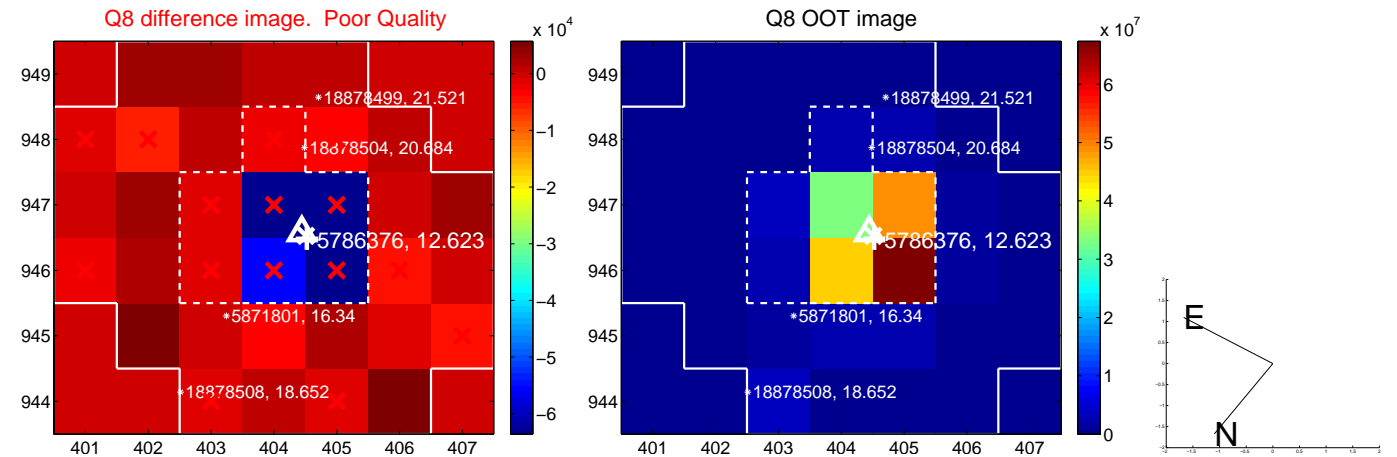
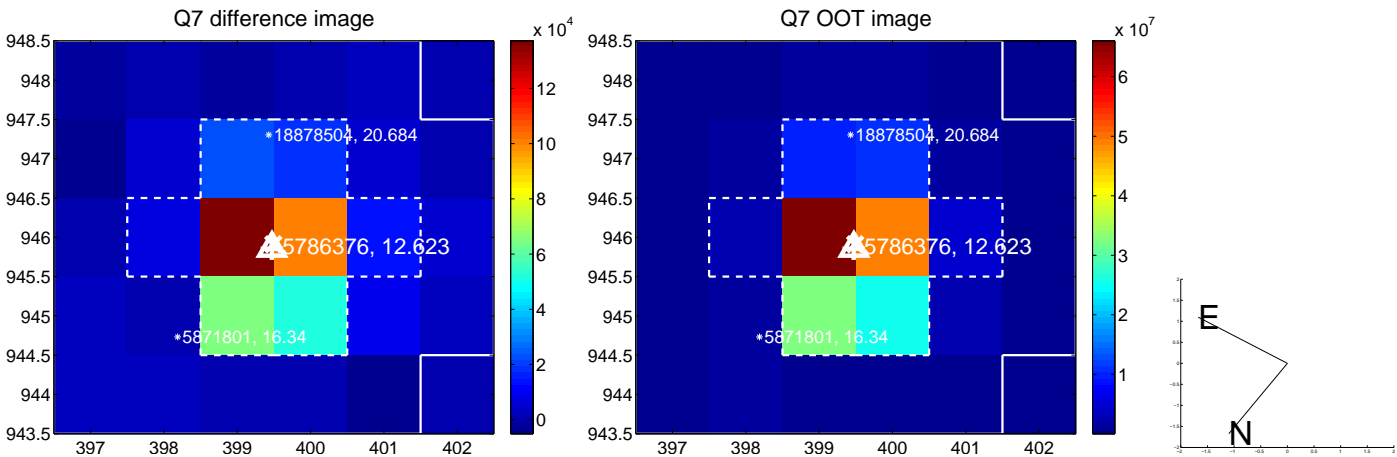
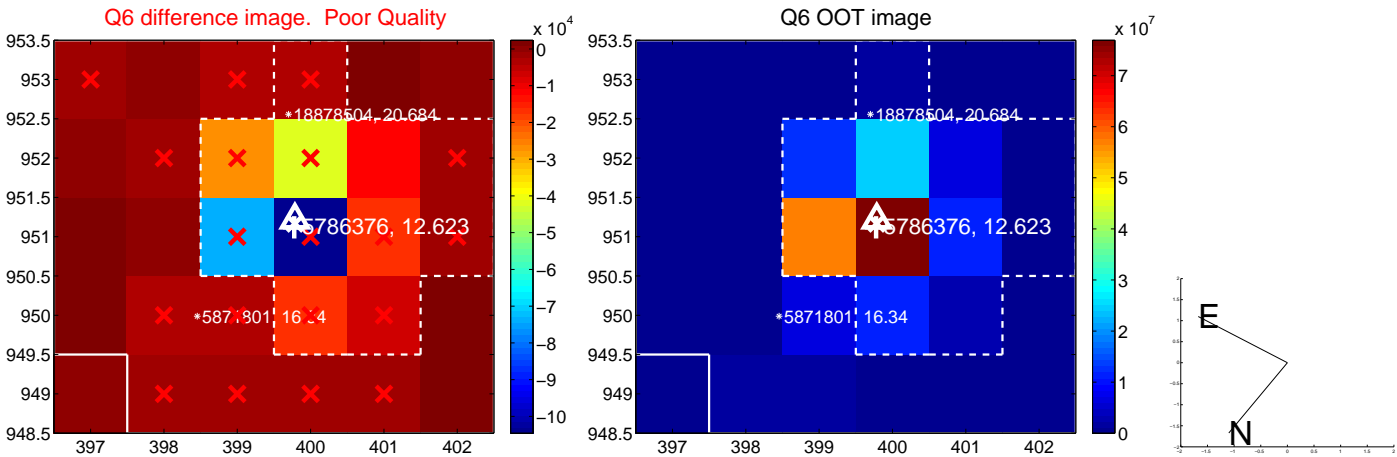
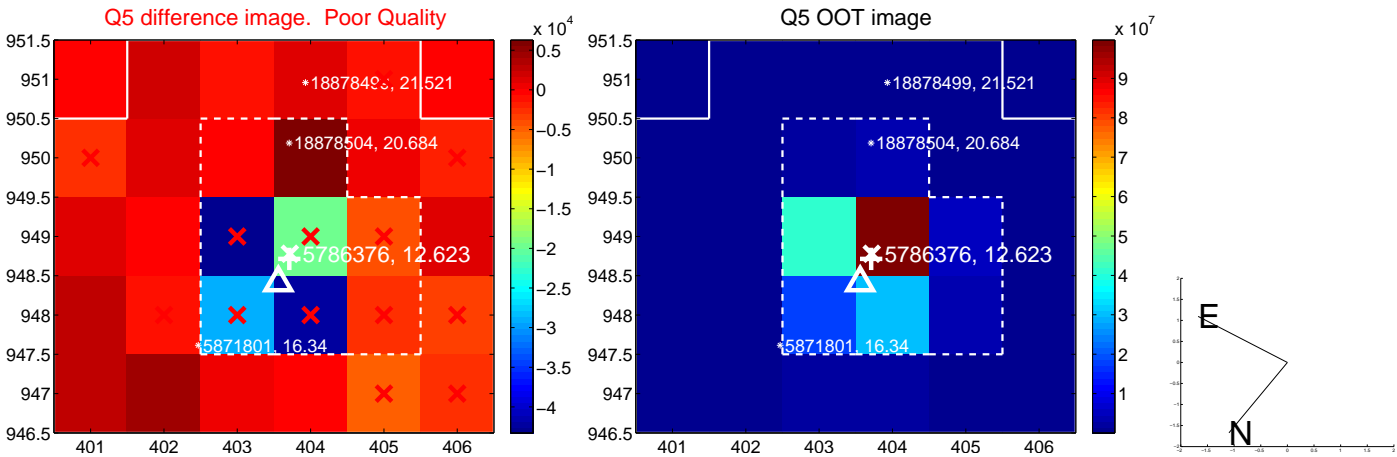


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

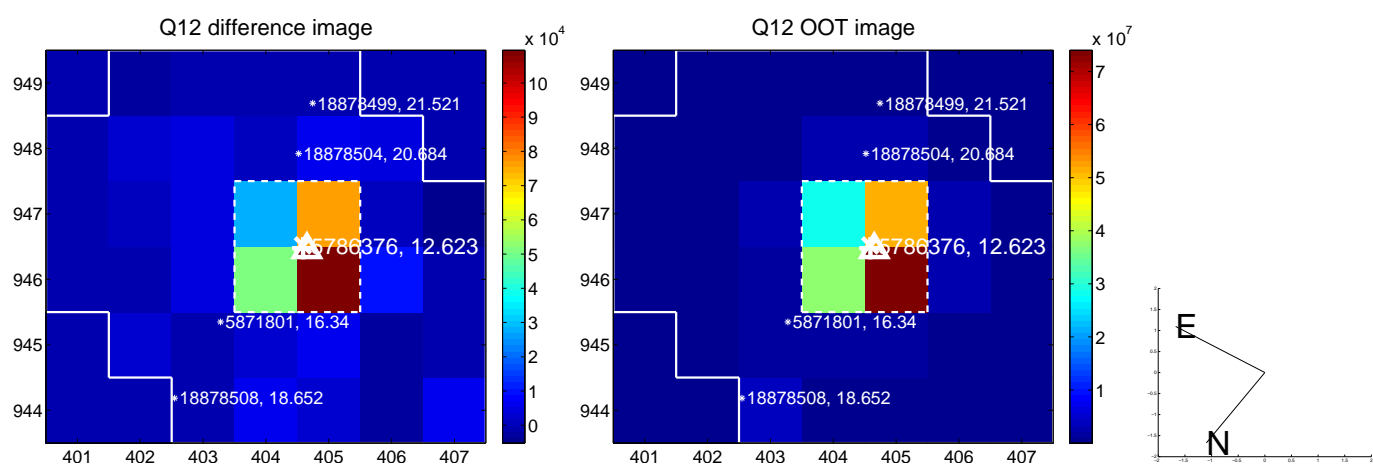
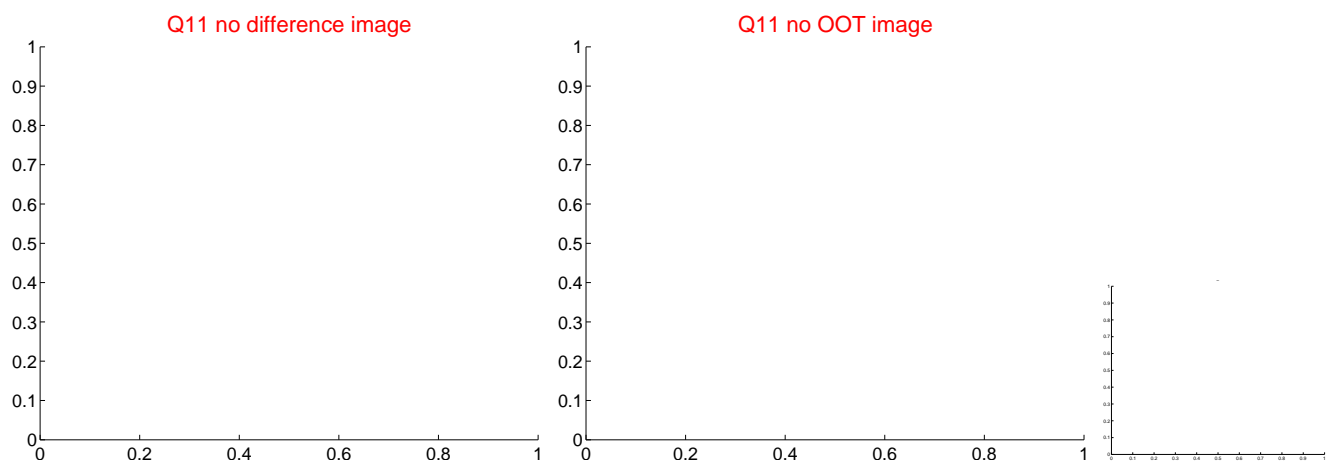
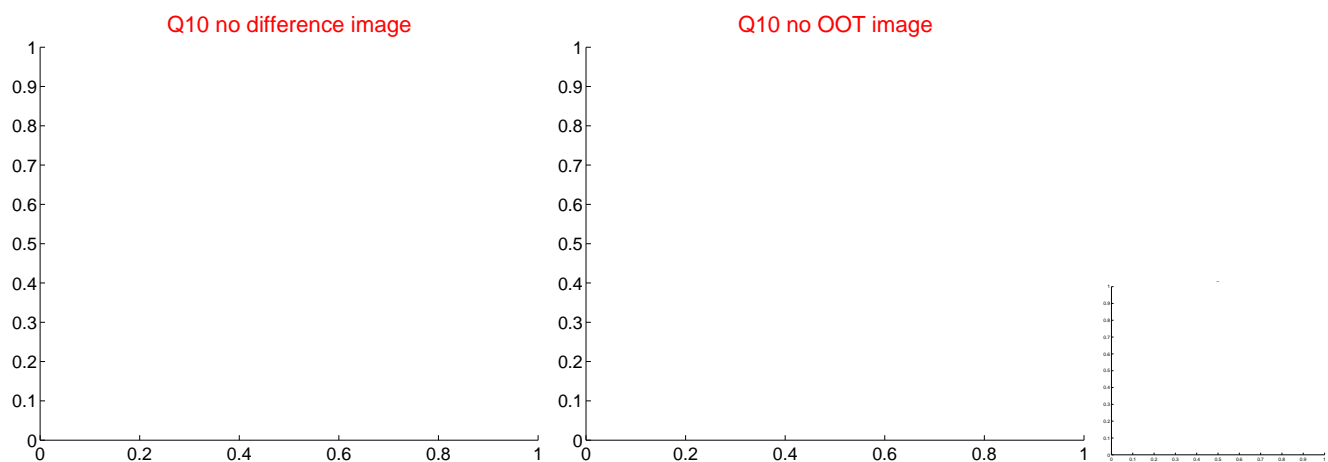
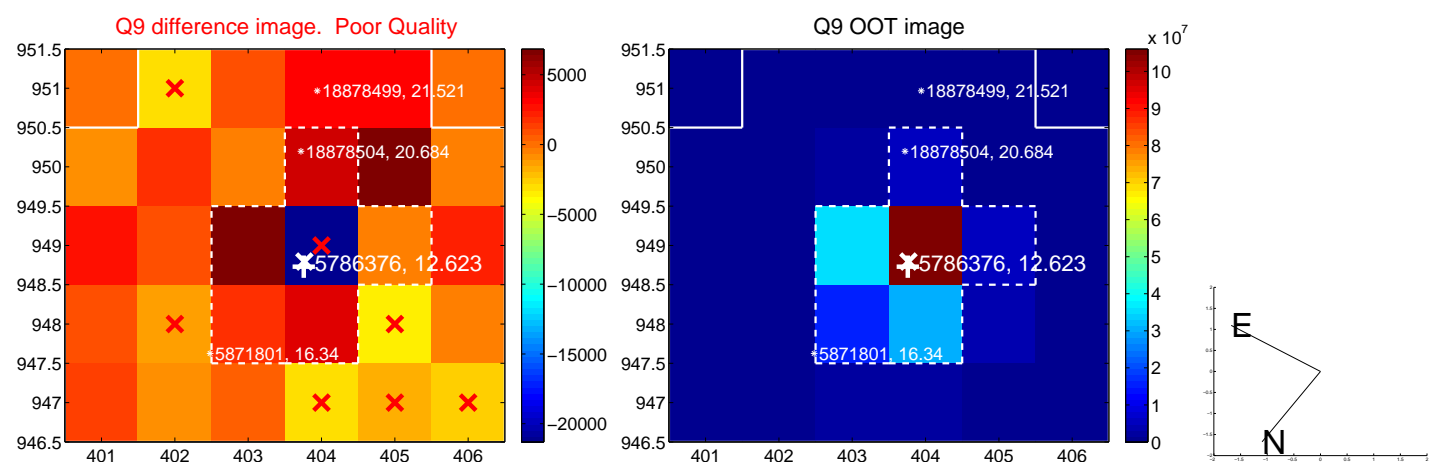
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



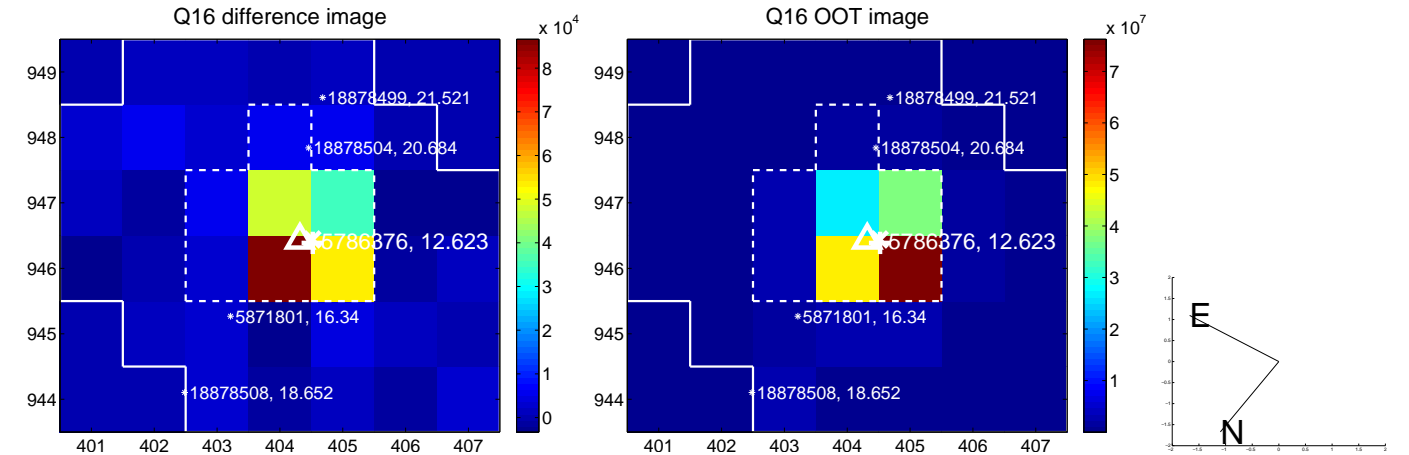
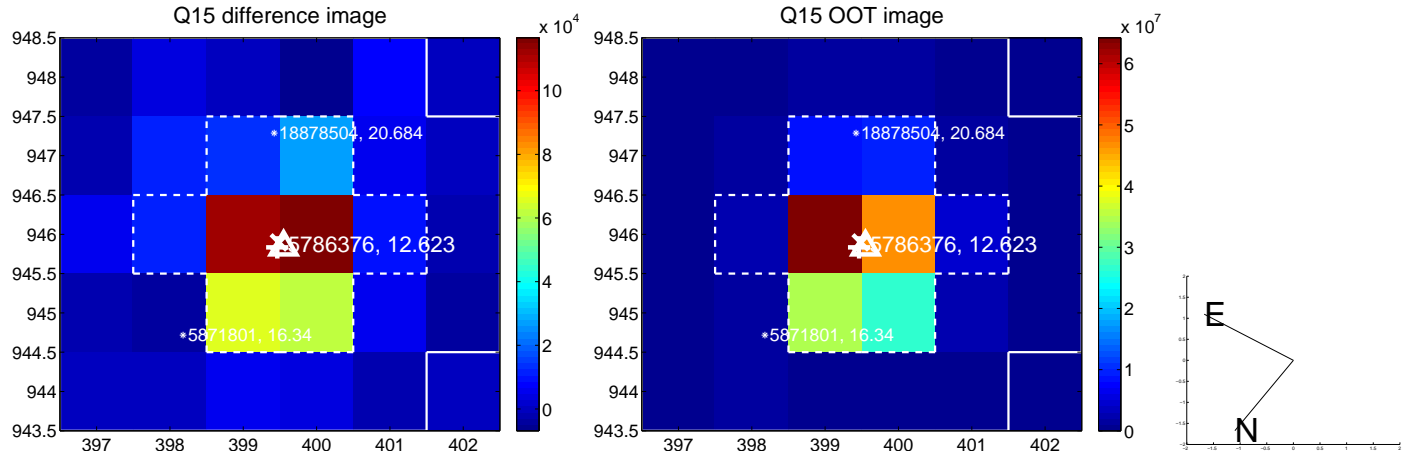
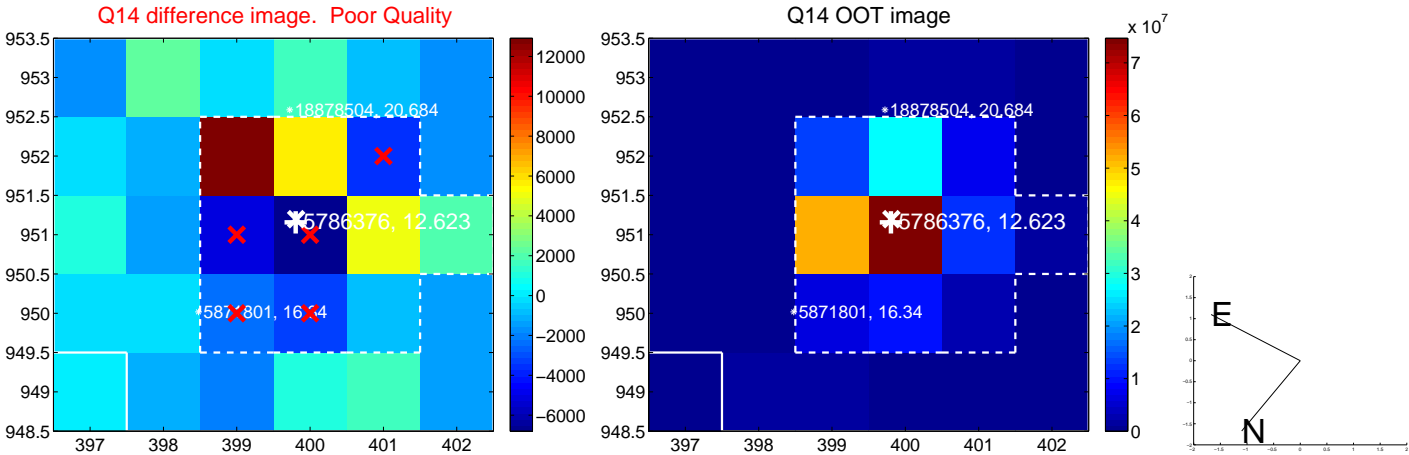
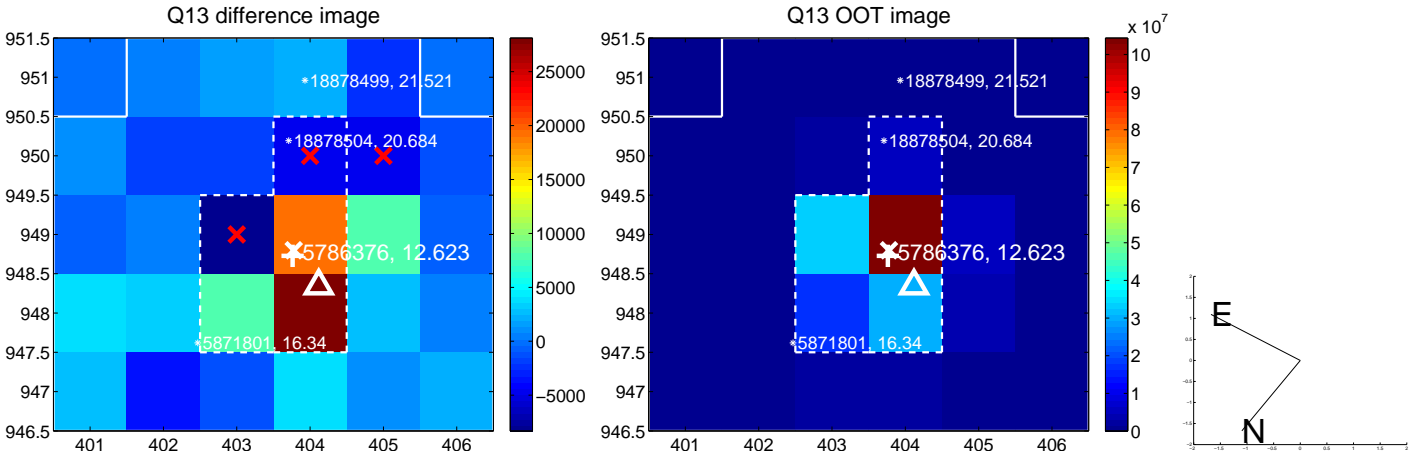
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



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

