

KIC 005036761

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})
005036761-01	OBS	No	0.630406	131.601714	39.7	1.744	11.0	9.9	1.26	6658	0.85	11752.99
005036761-02	OBS	No	0.738593	131.968020	30.8	3.453	11.0	7.3	1.26	6658	0.72	9515.58
005036761-03	OBS	No	87.676469	140.401496	714.3	2.231	9.3	9.4	1.26	6658	3.59	16.31
005036761-04	OBS	No	110.473550	135.848811	576.6	3.586	8.7	8.4	1.26	6658	3.34	11.98
005036761-05	OBS	No	123.035676	147.186643	567.1	2.634	9.1	8.1	1.26	6658	3.35	10.38
005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036761-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

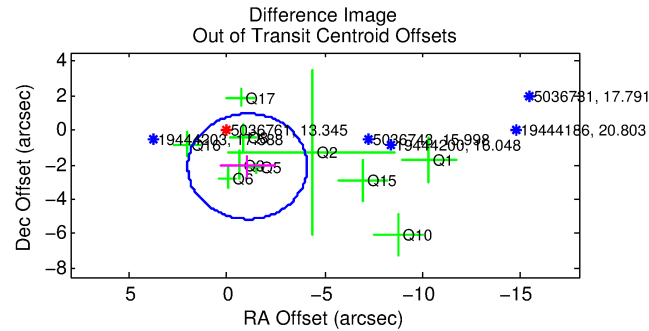
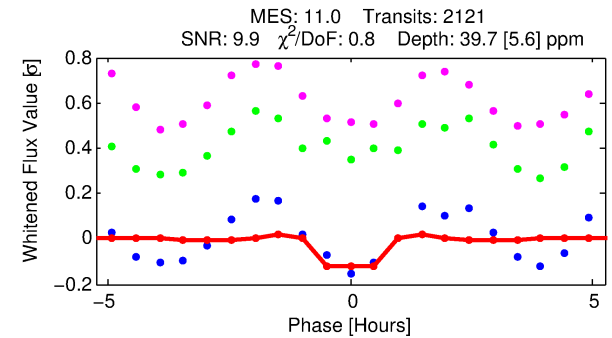
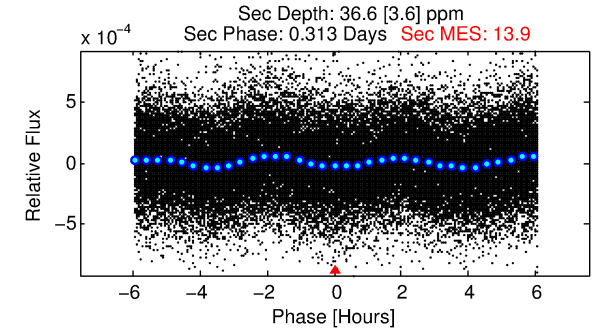
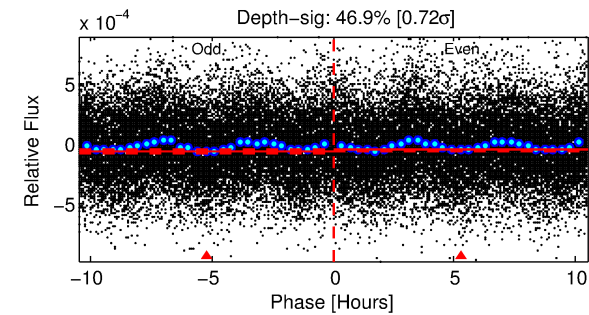
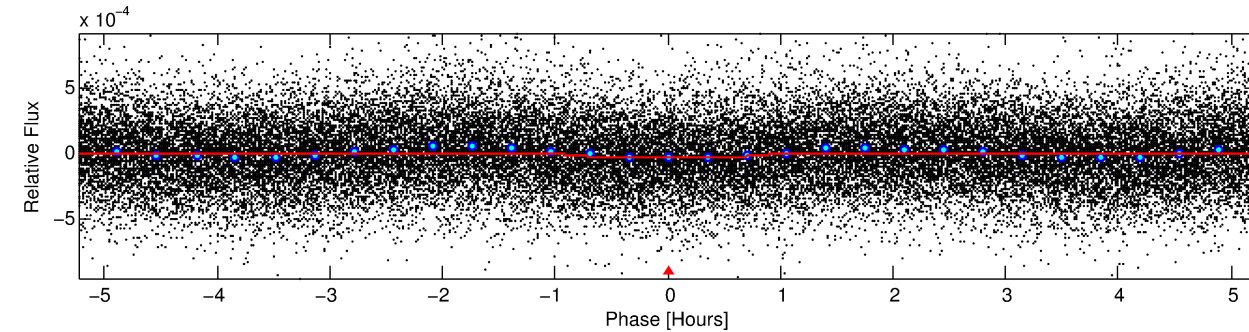
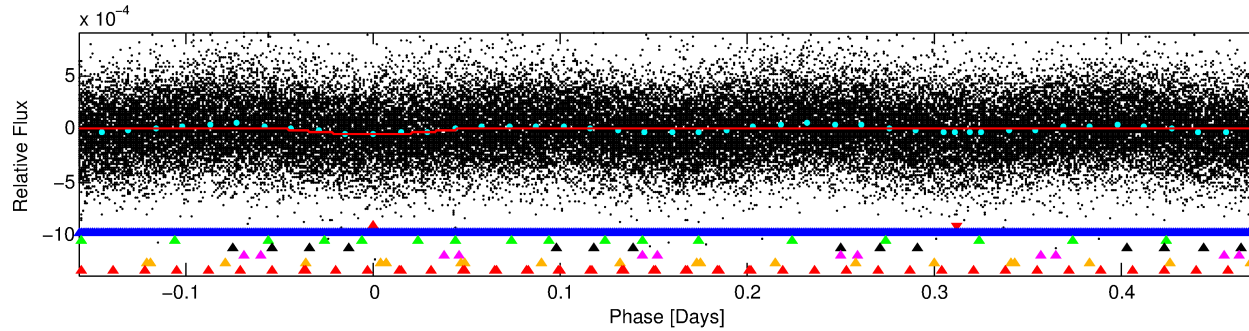
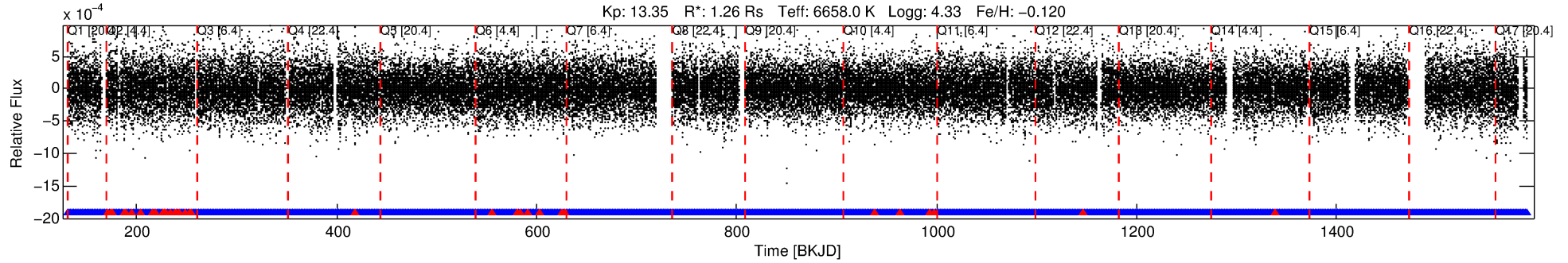
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-01

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 1 of 7 Period: 0.630 d



DV Fit Results:

Period = 0.63041 [0.00001] d
Epoch = 131.6017 [0.0018] BKJD
Rp/R* = 0.0061 [0.0013]
a/R* = 2.23 [1.92]
b = 0.67 [0.90]
Seff = 11752.99 [4860.82]
Teq = 2655 [275] K
Rp = 0.85 [0.33] Re
a = 0.0154 [0.0042] AU
Ag = 6.69 [3.84] [1.48 σ]
Teffp = 6602 [733] K [5.04 σ]

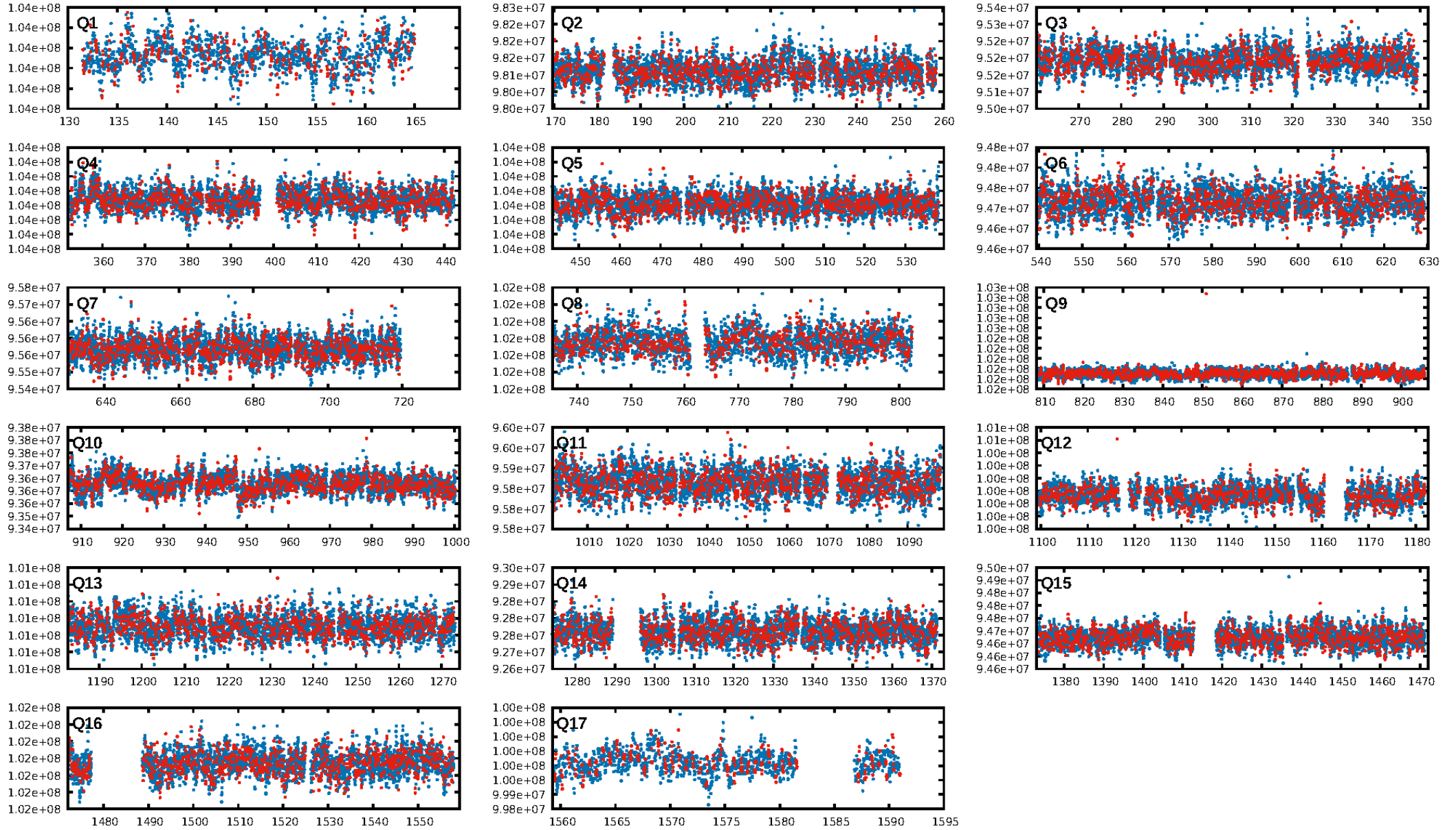
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 49.8% [0.67 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.74e-19
RollingBand-fgt: 0.98 [1984/2024]
GhostDiagnostic-chr: 2.007
Centroid-sig: 0.2%
Centroid-so: 1.540 arcsec [2.03 σ]
OotOffset-rm: 2.352 arcsec [2.31 σ]
KicOffset-rm: 2.429 arcsec [2.32 σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.10 [1/10]
DiffImageOverlap-fno: 1.00 [17/17]

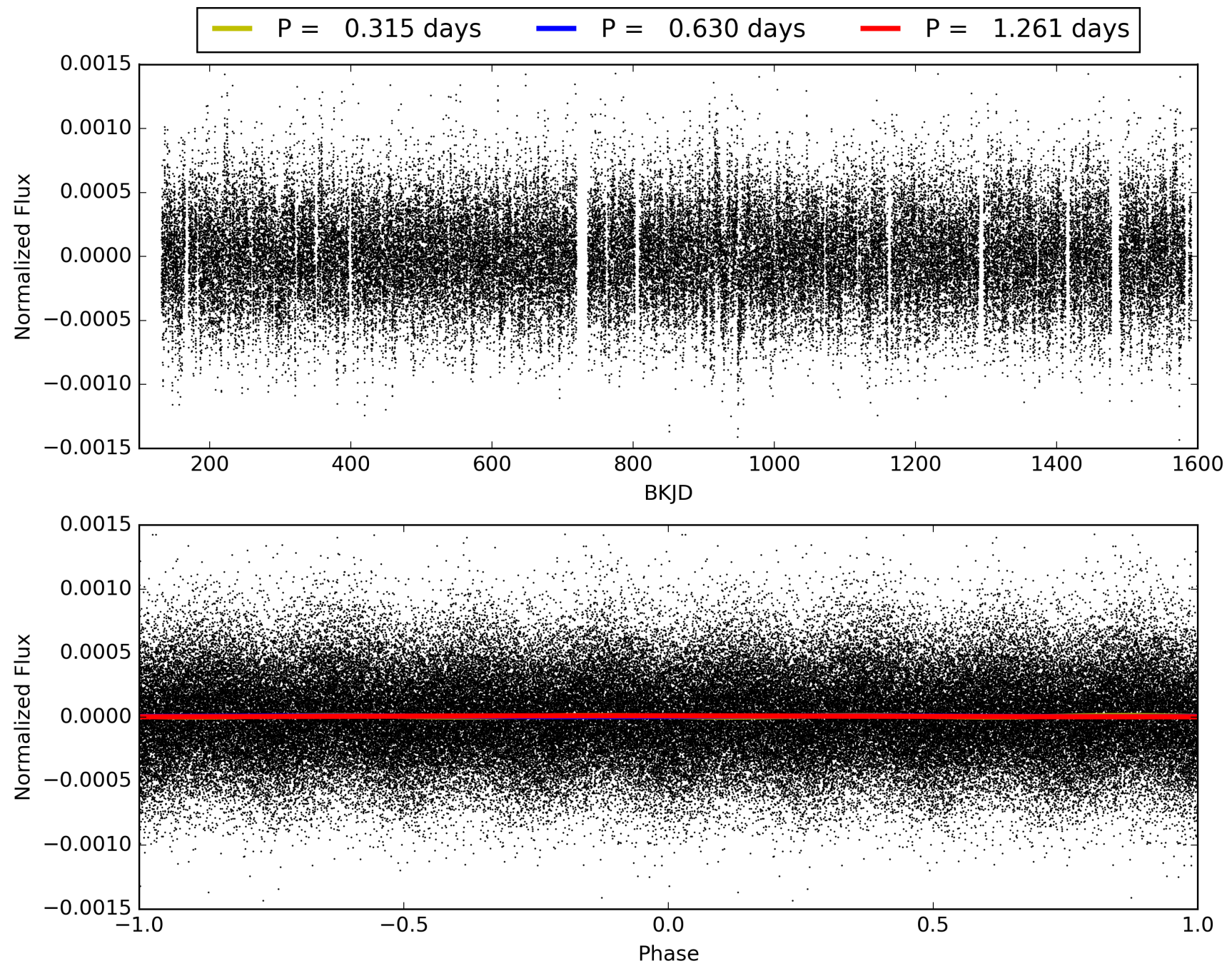
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:19 Z

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

TCE 005036761-01, PDC Light Curves

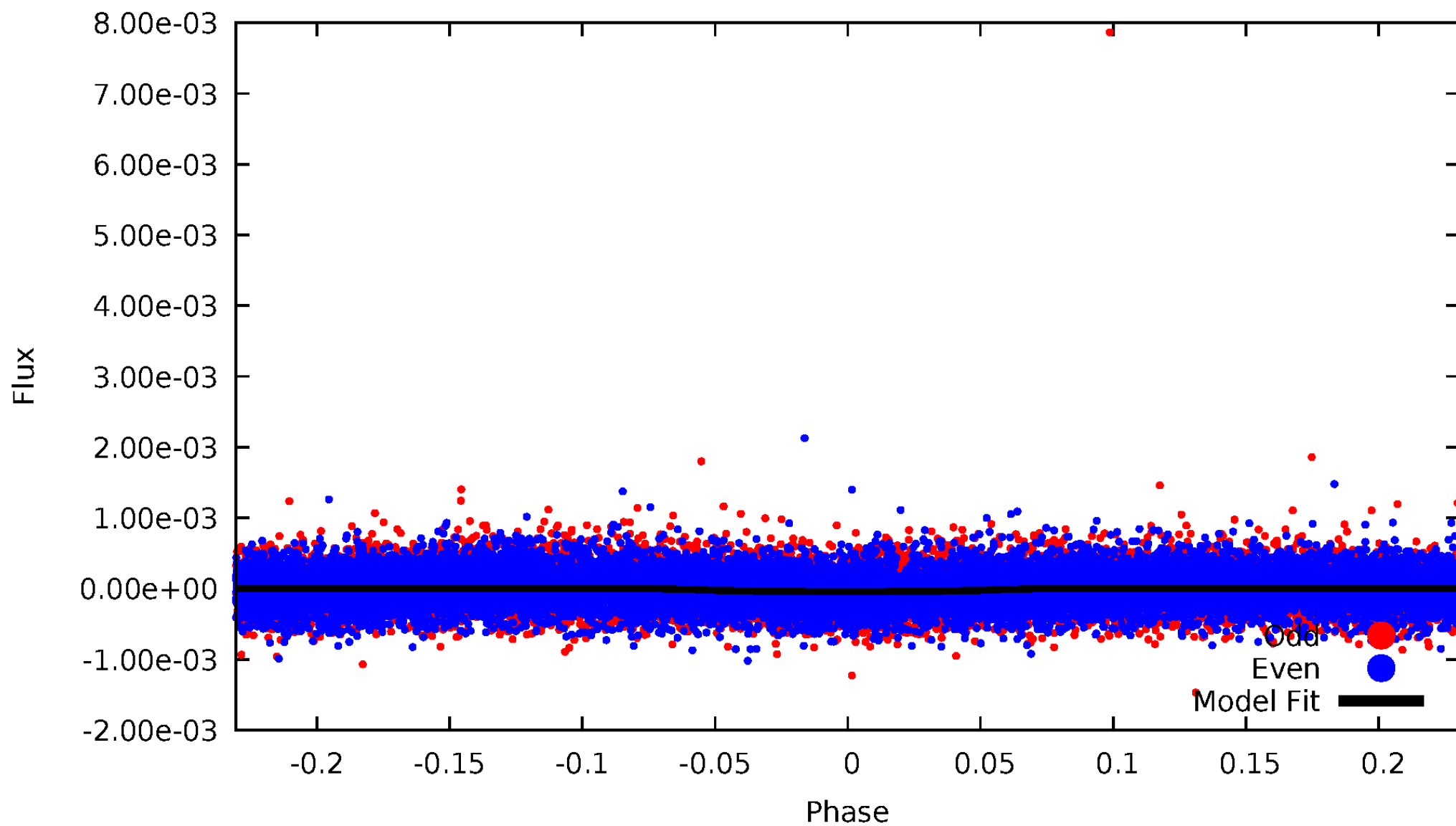


TCE 005036761-01



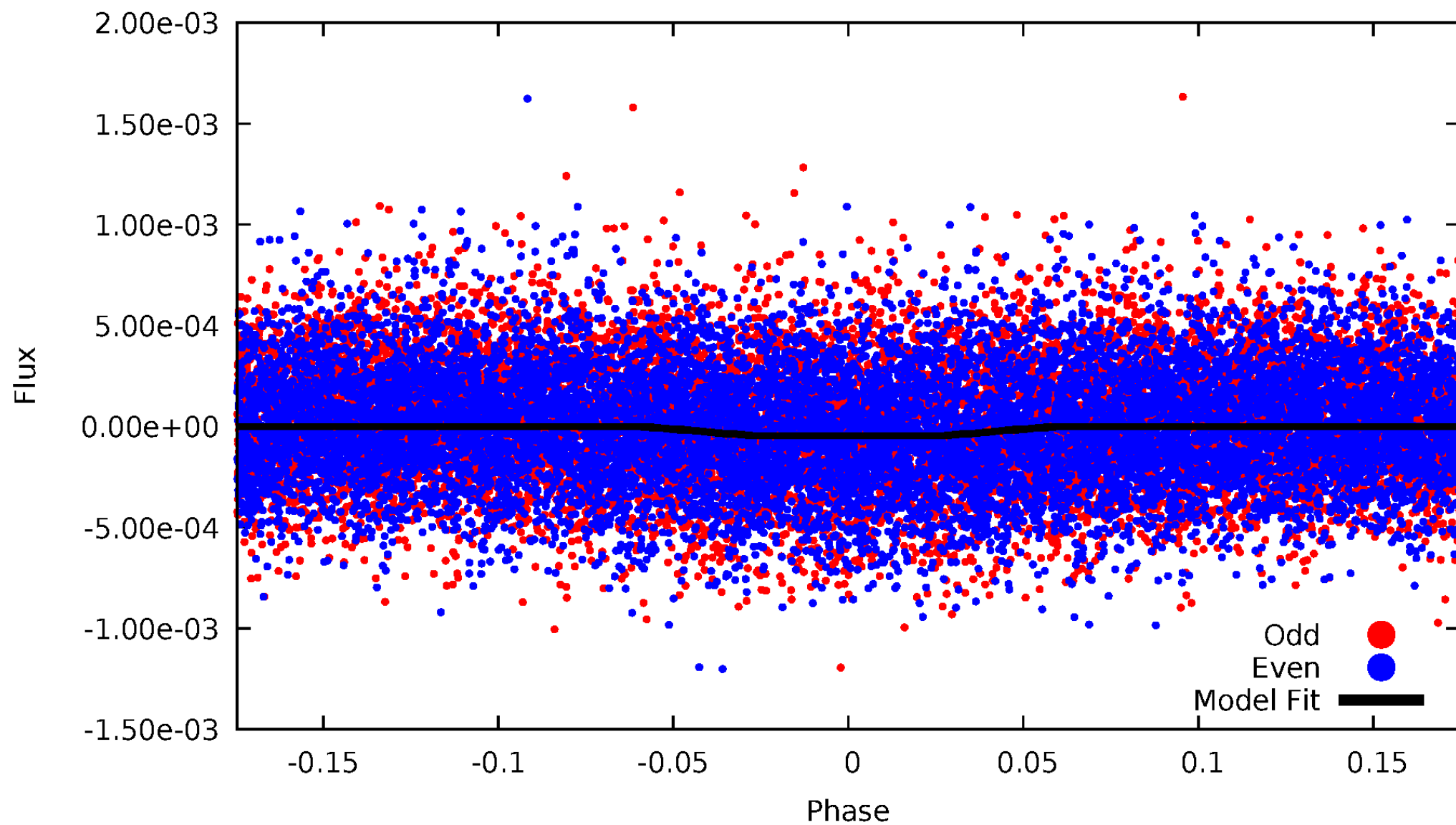
DV Odd/Even

TCE 005036761-01



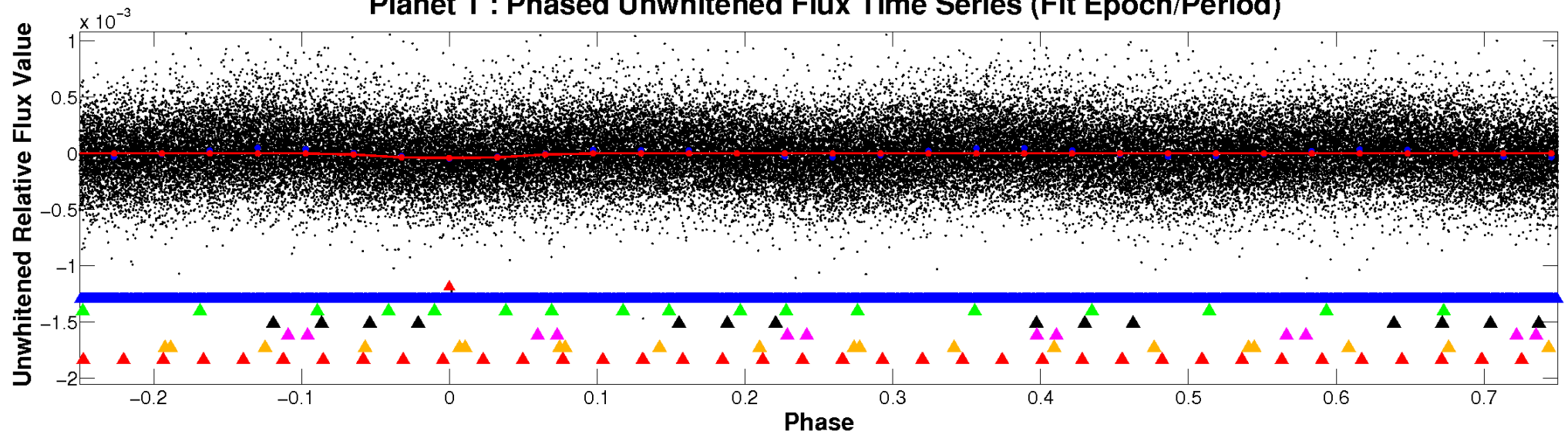
ALT Odd/Even

TCE 005036761-01

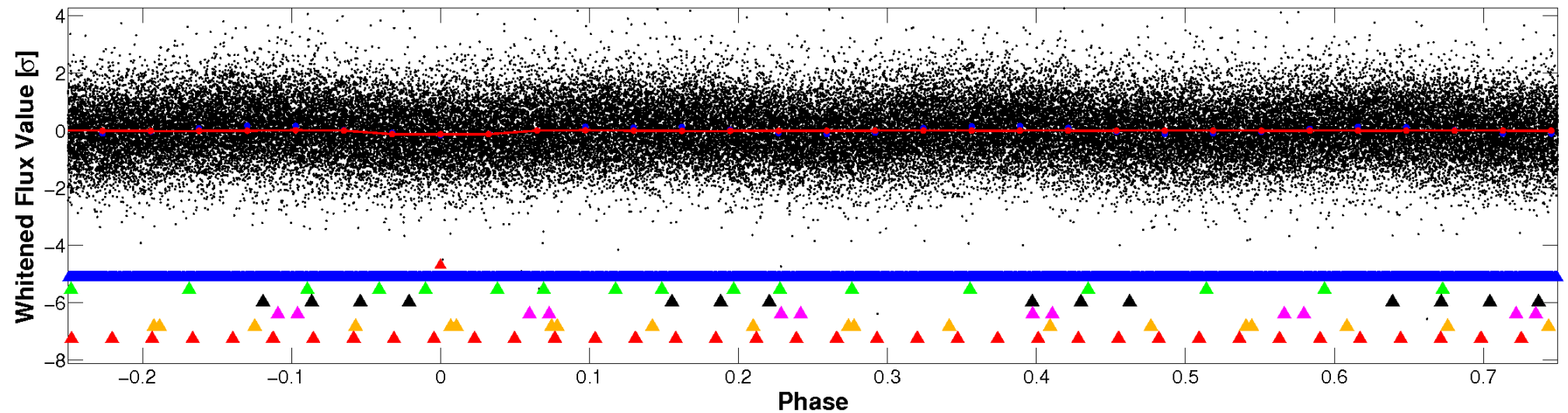


Non-Whitened Vs. Whitened Light Curve

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

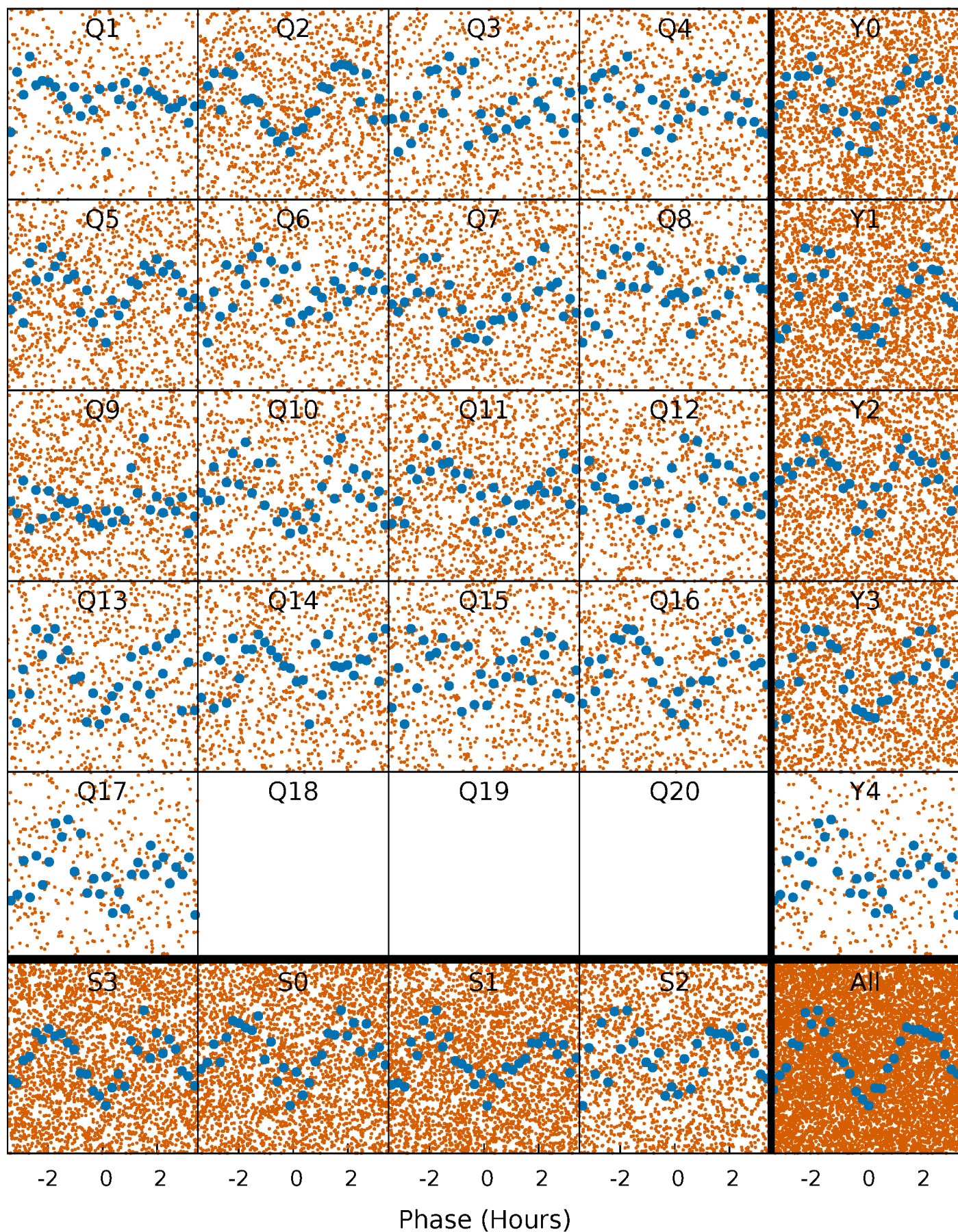


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



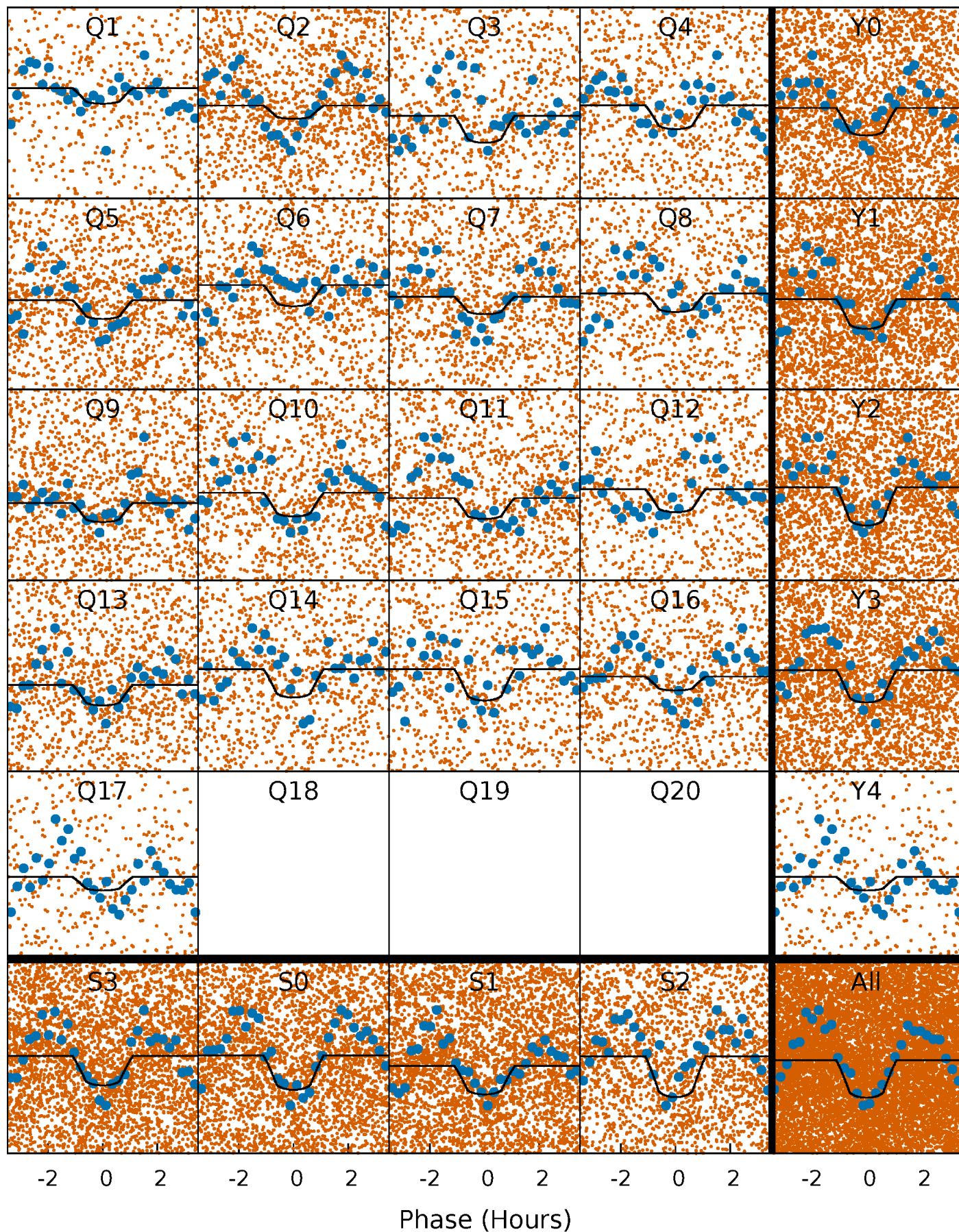
PDC Quarter-Phased Transit Curves

TCE 005036761-01 P= 0.630406 Days $T_0=131.601713$ (BKJD)



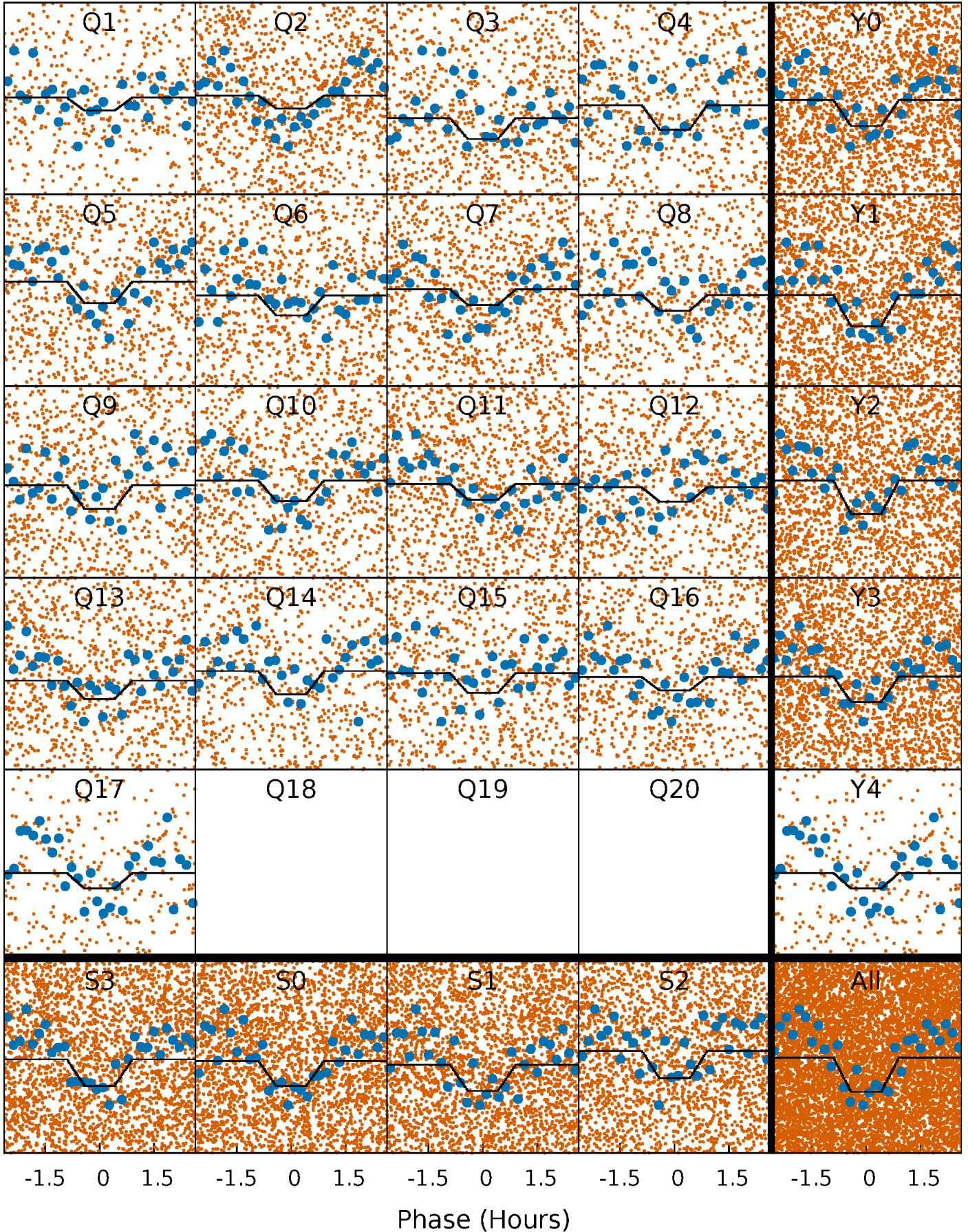
DV Quarter-Phased Transit Curves

TCE 005036761-01 P= 0.630406 Days $T_0=131.601713$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

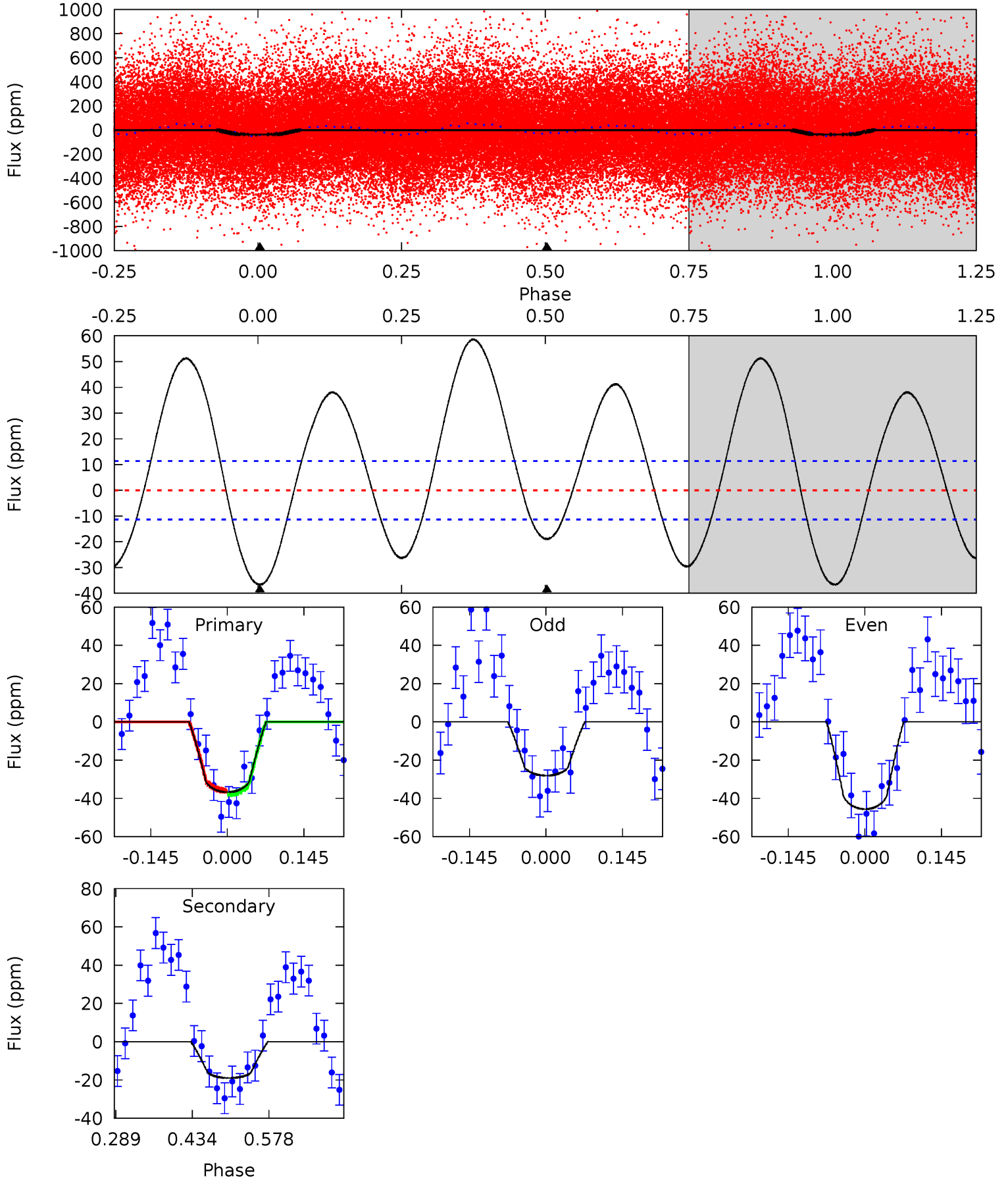
TCE 005036761-01 P= 0.630416 Days $T_0=131.592478$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-01, P = 0.630406 Days, E = 130.971307 Days

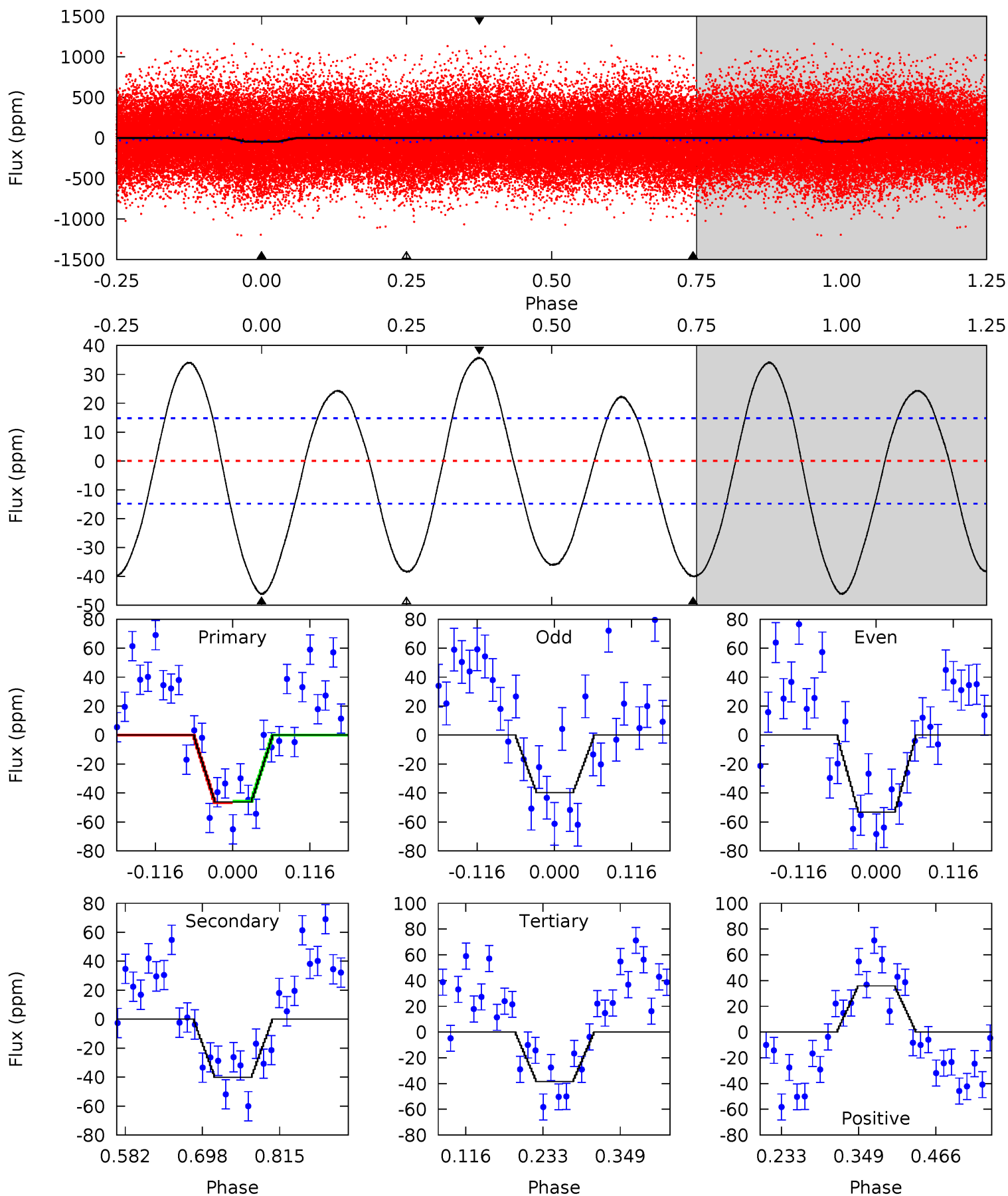
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	7.50	0	0	4.49	1.46	9.45	14.5	14.5	7.50	7.50	3.44	0.98	0.61	0.34



Alt Model-Shift Uniqueness Test

005036761-01, P = 0.630416 Days, E = 130.962062 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	12.3	11.8	11.0	4.53	1.57	7.55	2.37	3.19	0.51	1.33	2.07	0.97	0.44	0.14



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 3	$0.90^{+0.24}_{-0.22}$	3788^{+273}_{-223}	5448^{+722}_{-566}	$3.074^{+2.419}_{-1.213}$
Alt.	-40 ± 3	$0.97^{+0.23}_{-0.20}$	3758^{+321}_{-192}	6322^{+796}_{-595}	$5.523^{+3.176}_{-1.894}$

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

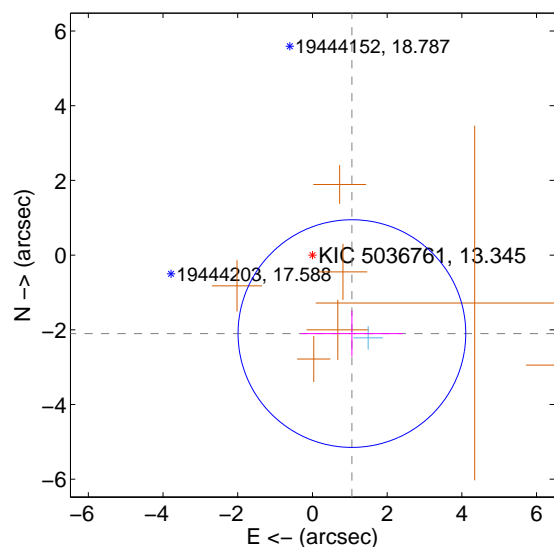
Supplemental centroid analysis for 005036761-01. Kepler magnitude: 13.35. Transit SNR 9.86

There are 1 quarters with good PRF difference image offsets

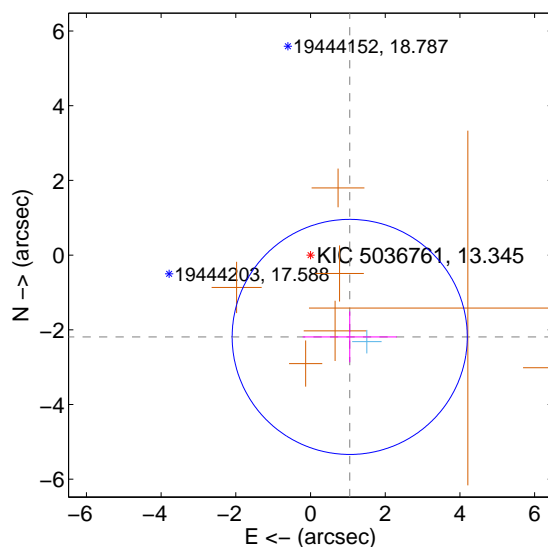
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.352 ± 1.016	2.31	-1.057 ± 1.366	-2.101 ± 0.613
PRF-fit source offset from KIC position	2.429 ± 1.049	2.32	-1.049 ± 1.261	-2.191 ± 0.679
photometric centroid source offset	1.54 ± 0.76	2.03	1.50 ± 0.76	0.35 ± 0.65

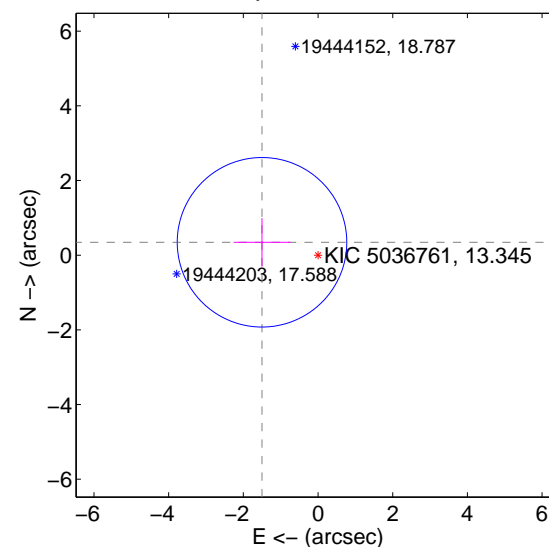
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

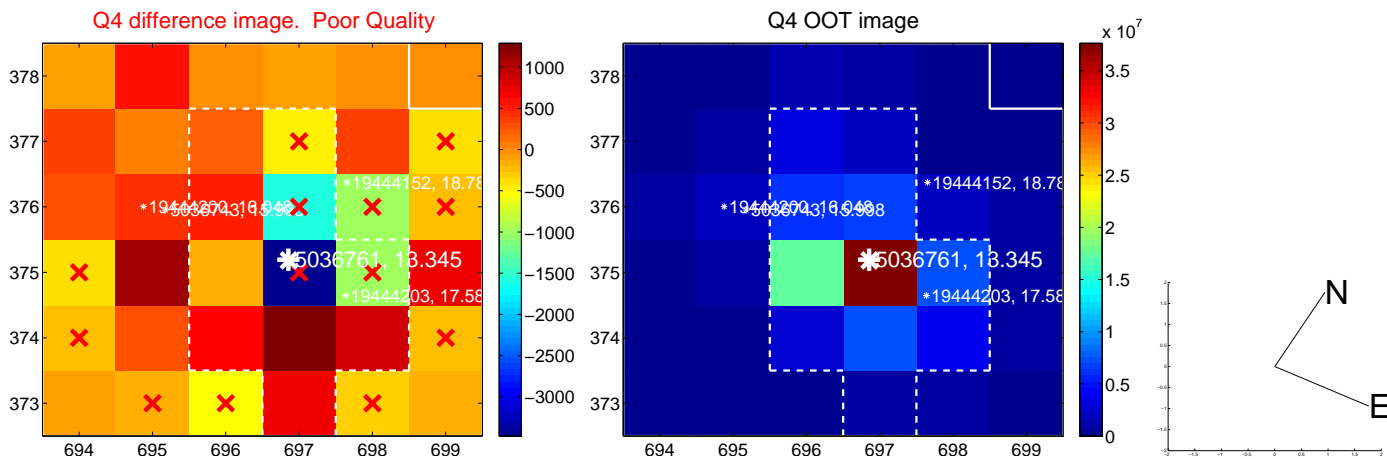
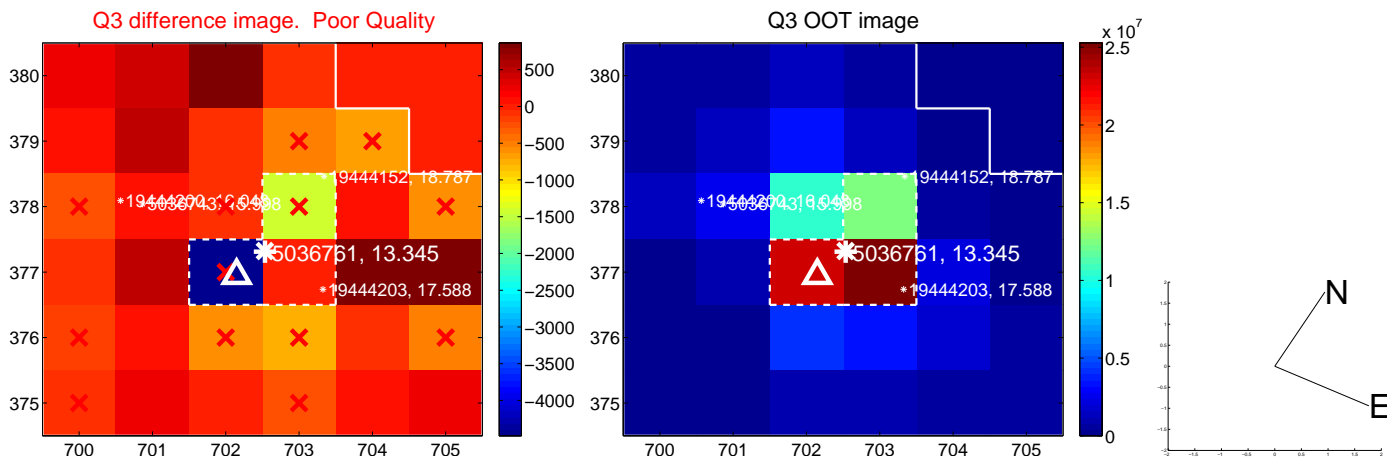
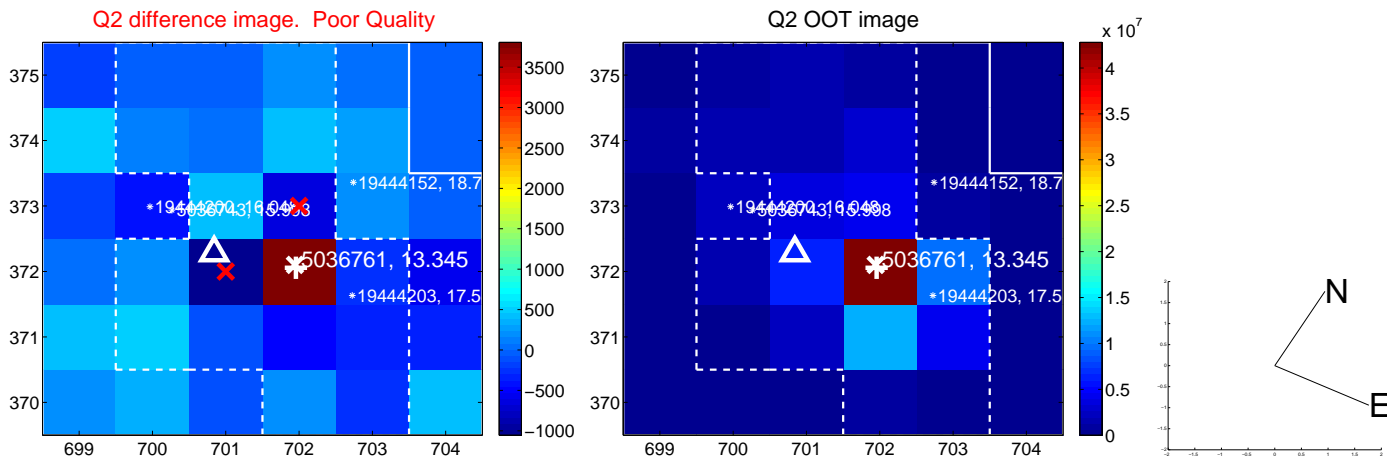
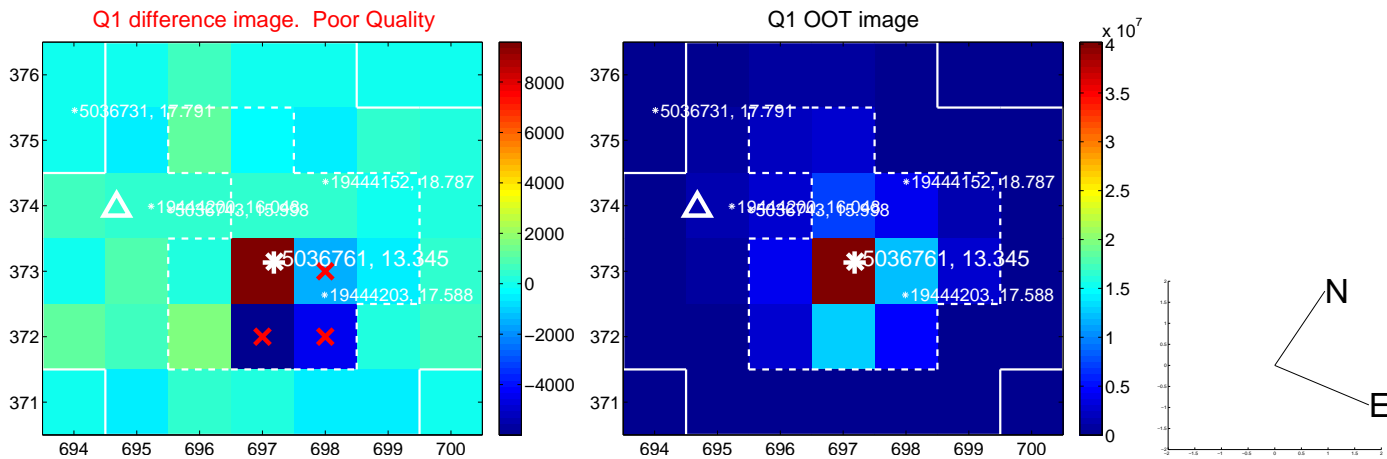


offset from photometric centroids

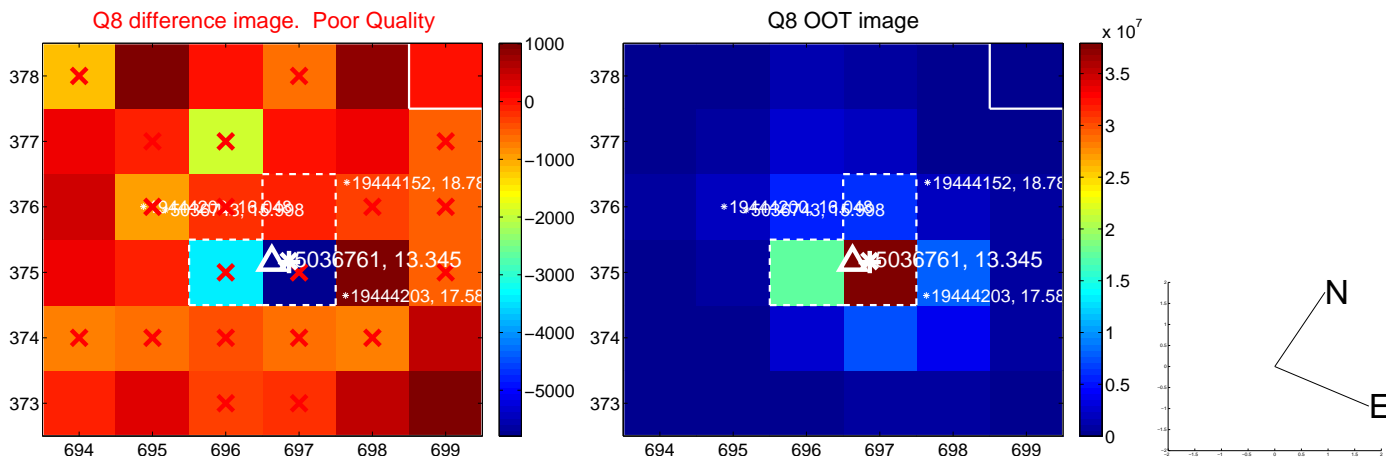
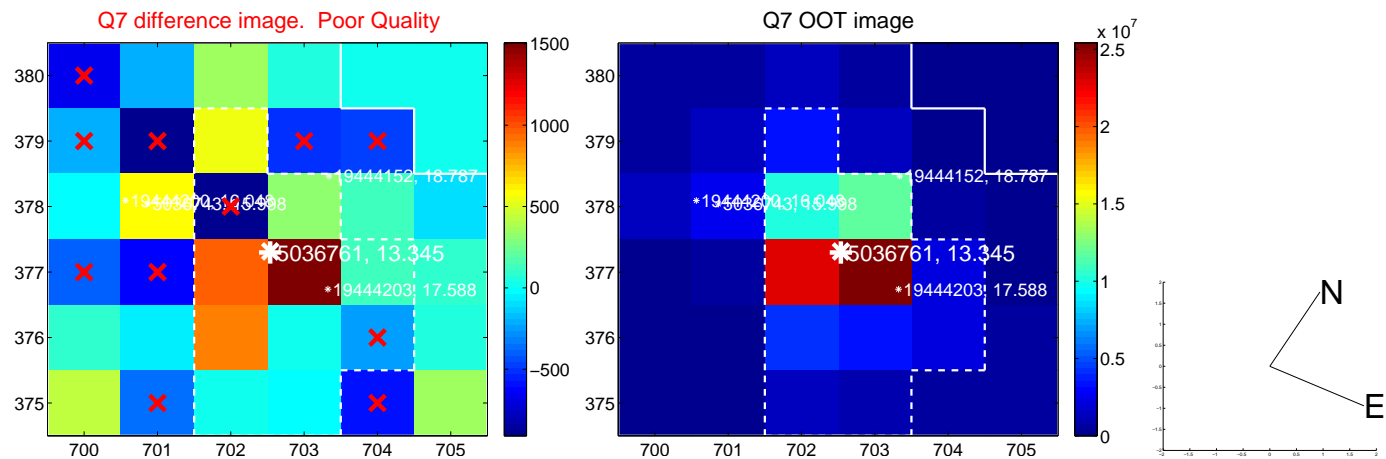
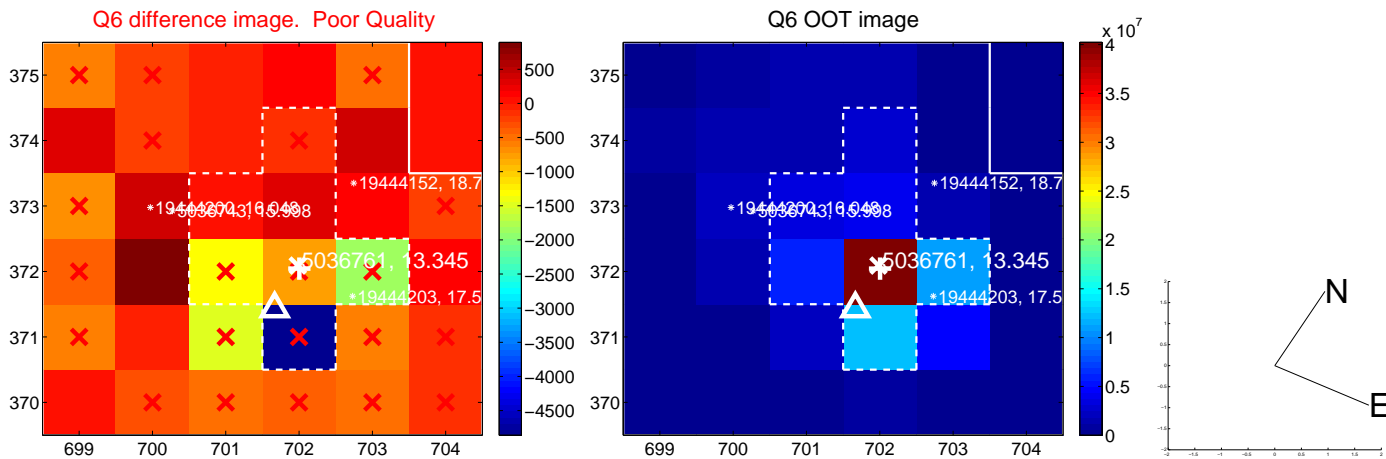
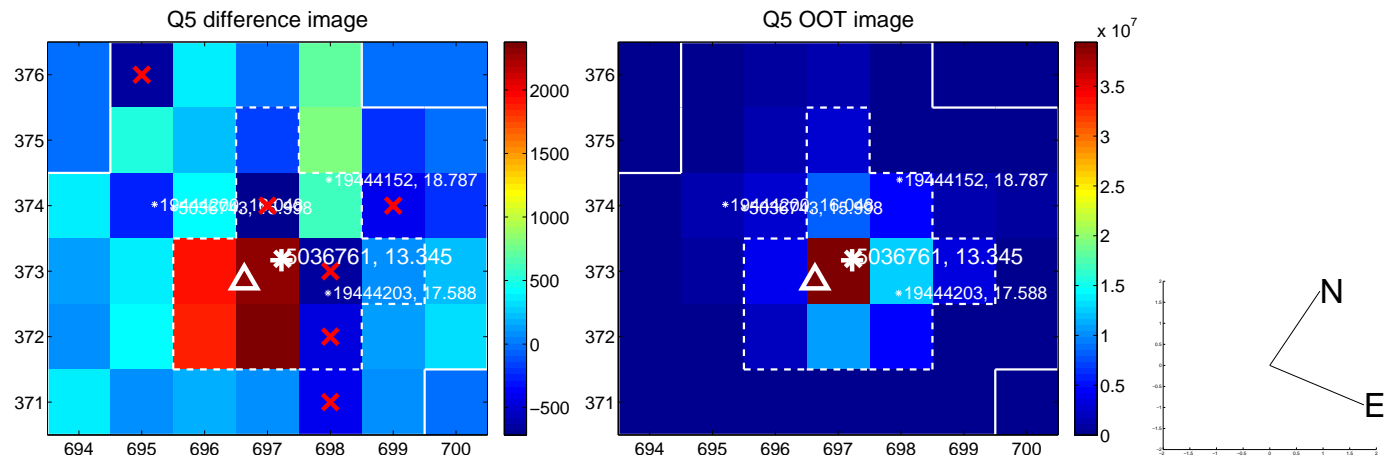


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

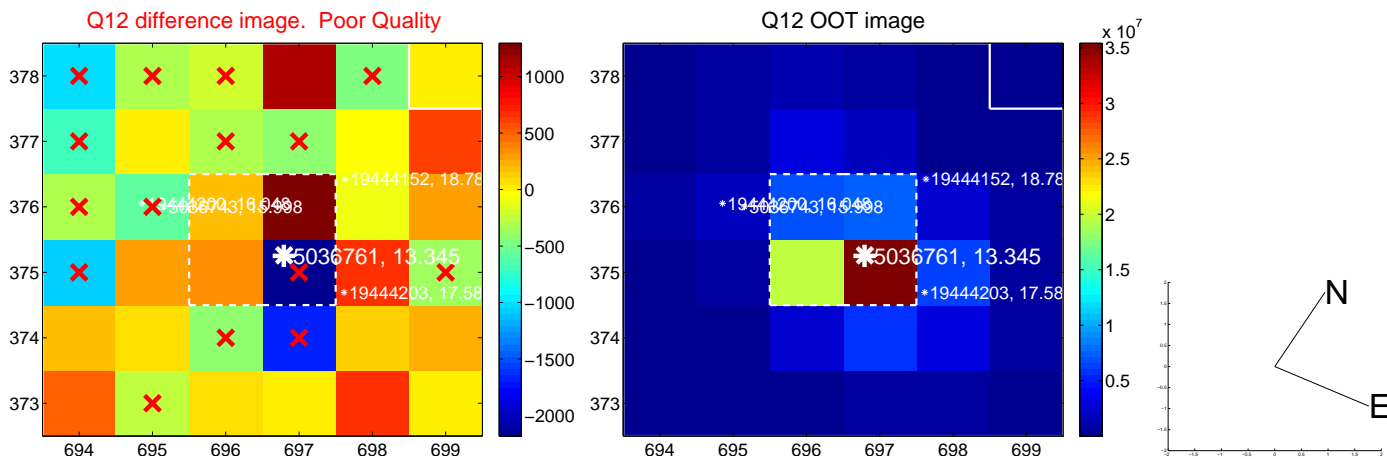
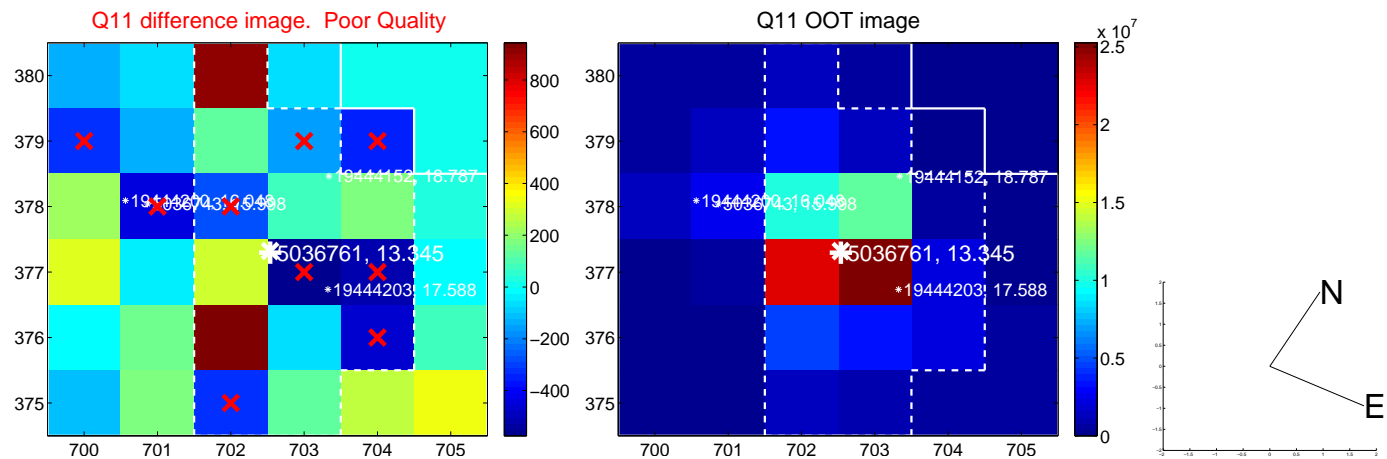
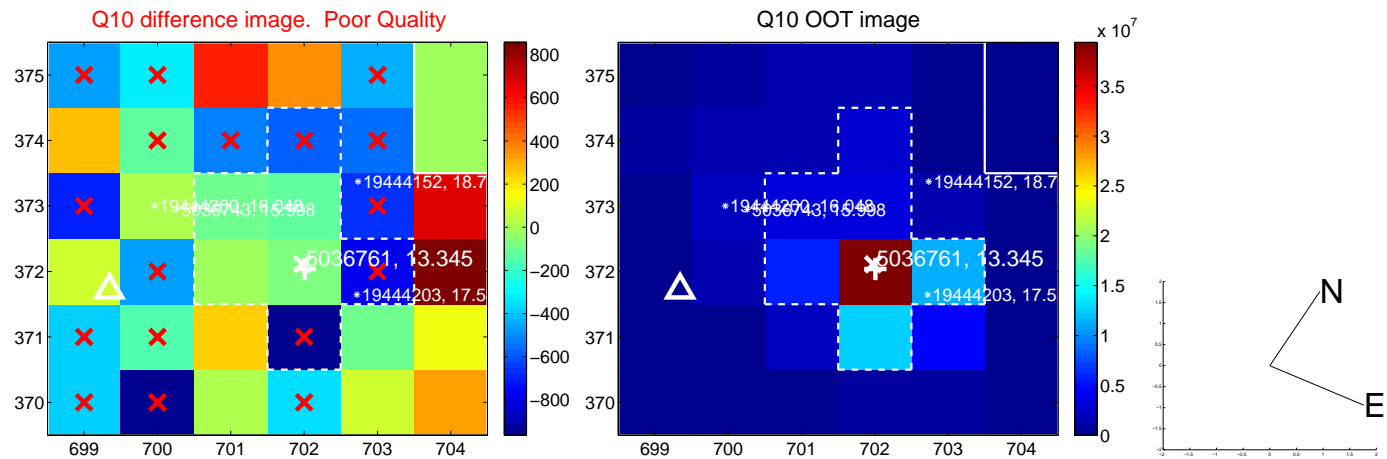
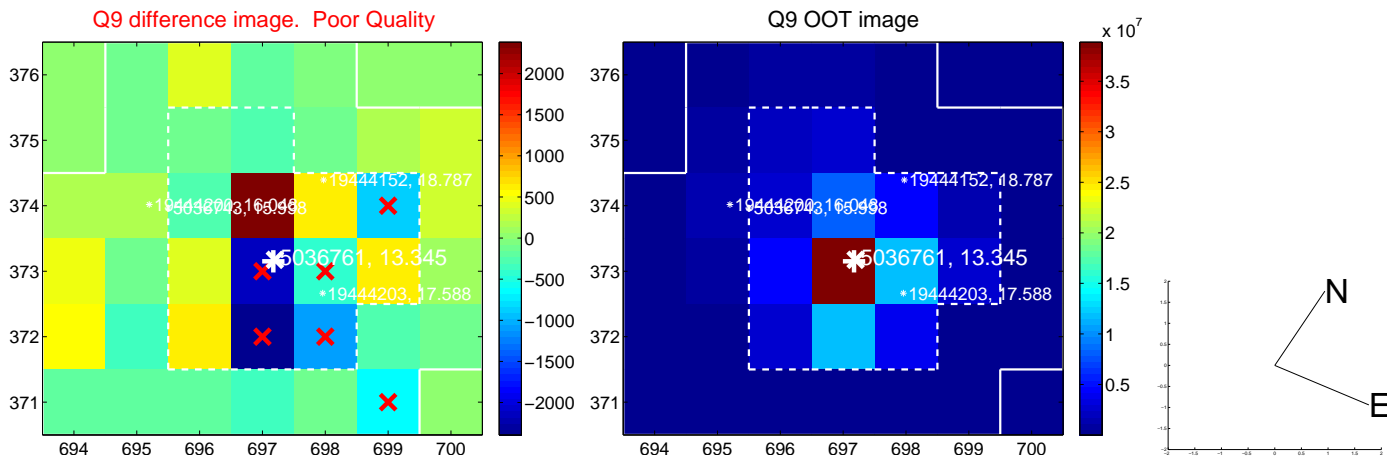
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



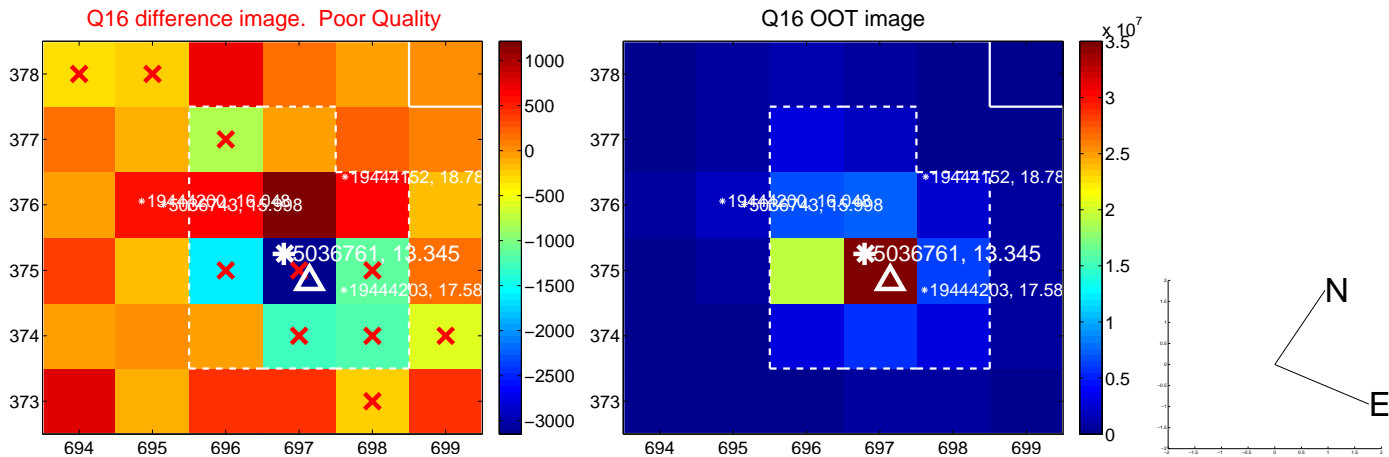
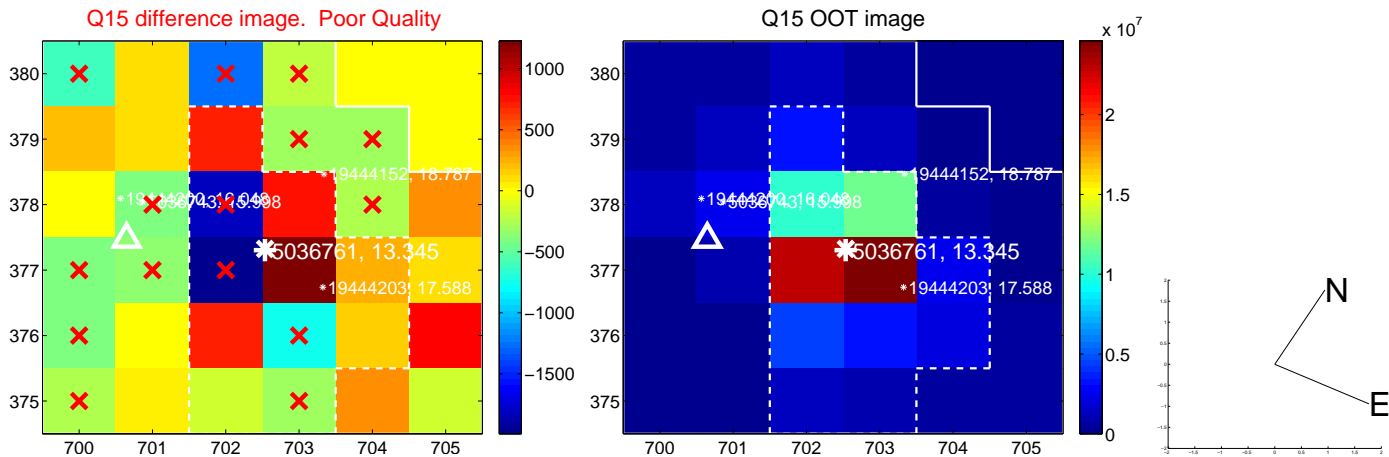
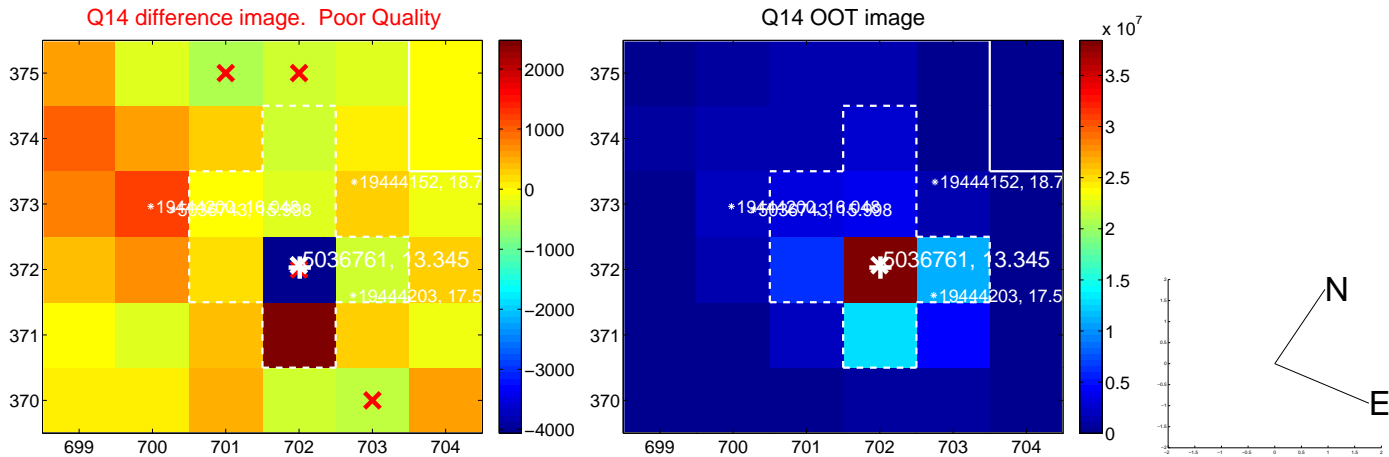
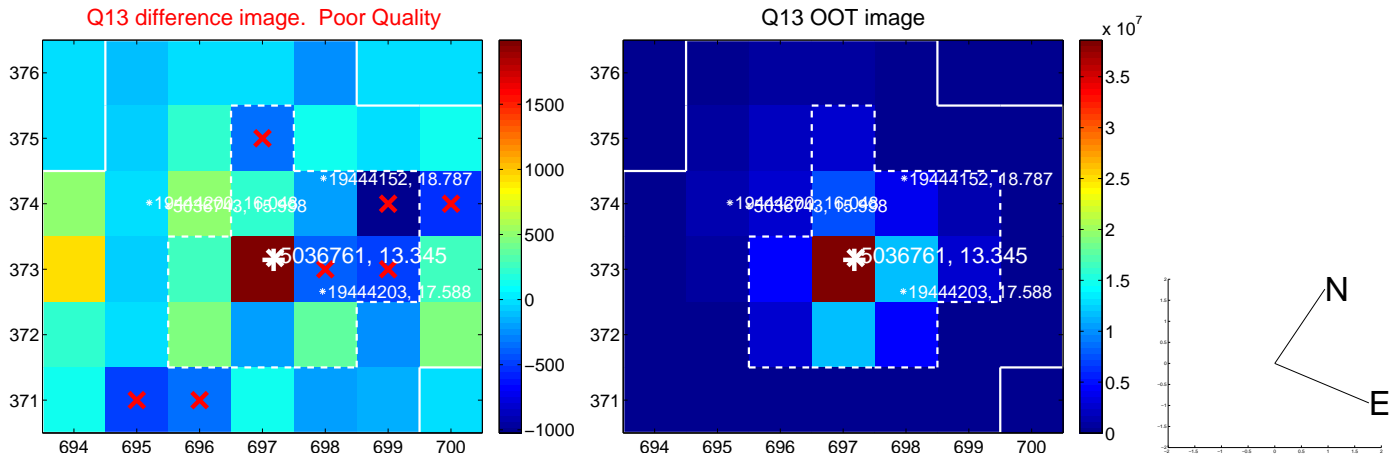
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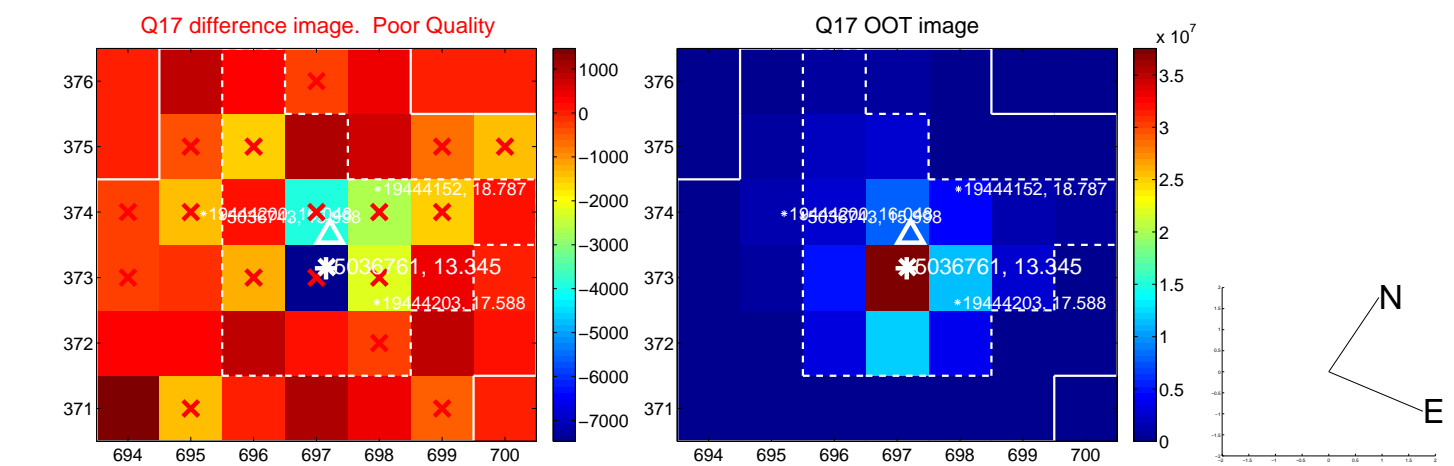
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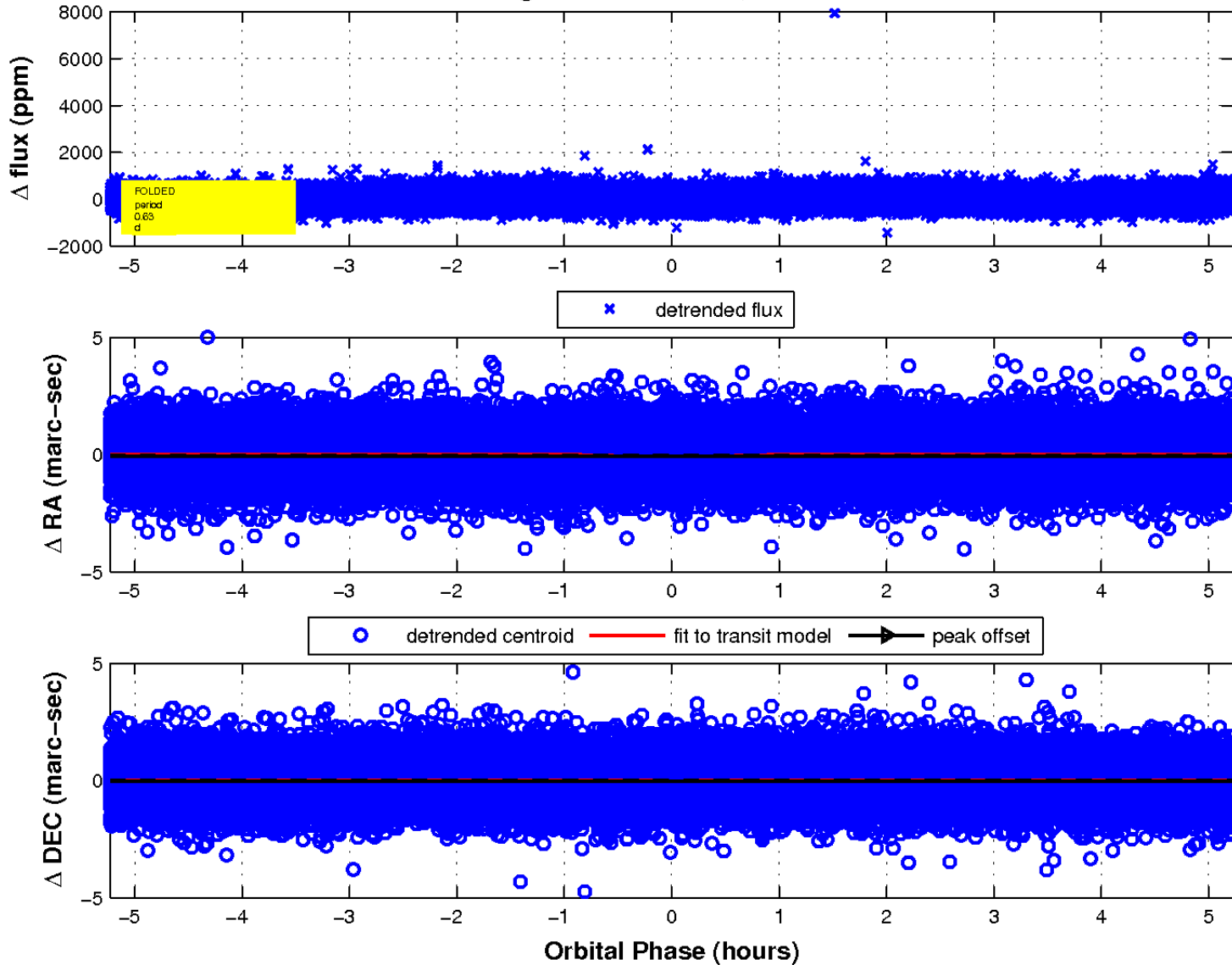
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

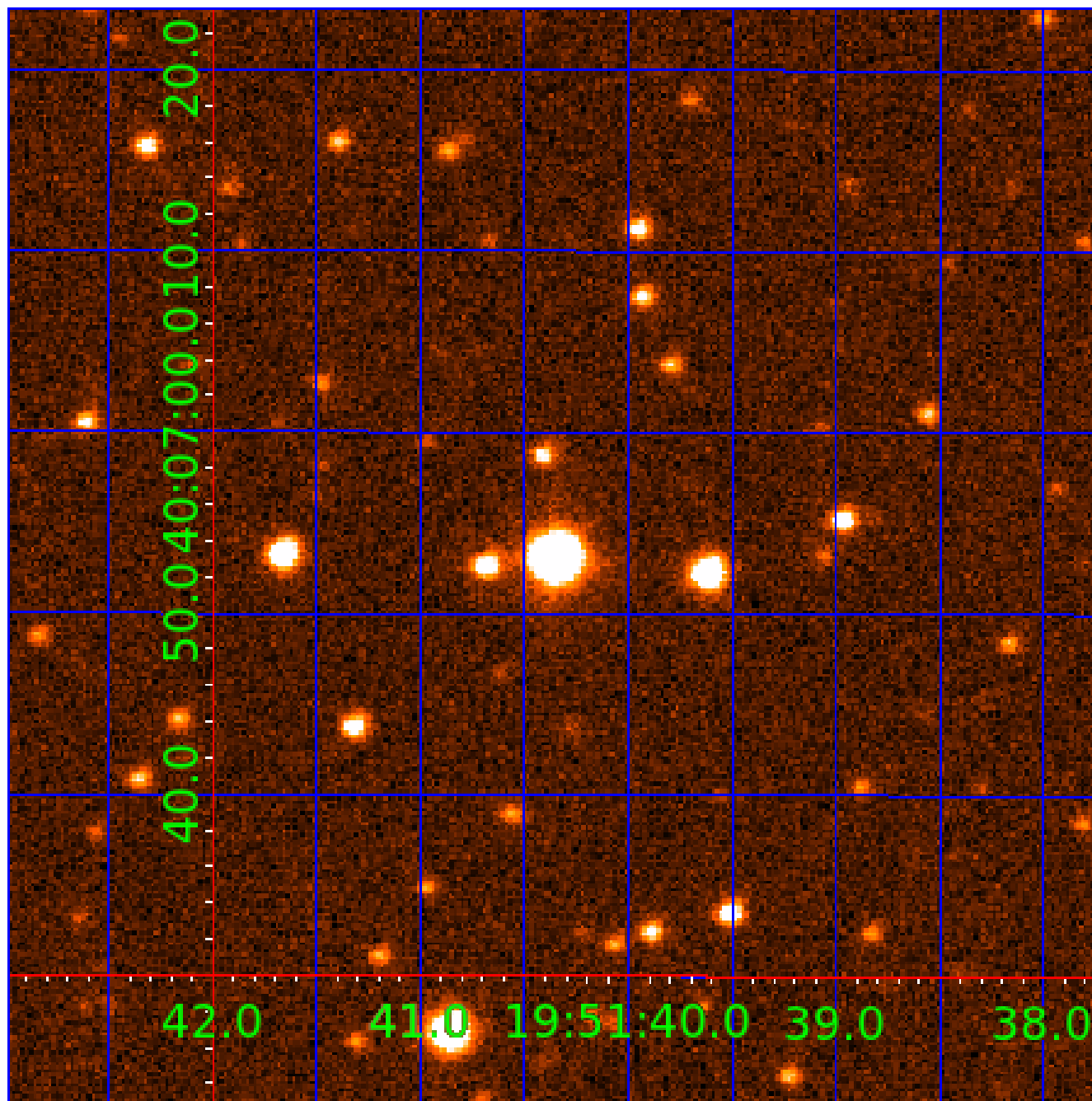


fluxWeightedCentroids, Planet 1 of 7



UKIRT Image

Declination



KIC 005036761

Q1-17 DR25 TCE Parameters

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Robovetter Results

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005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

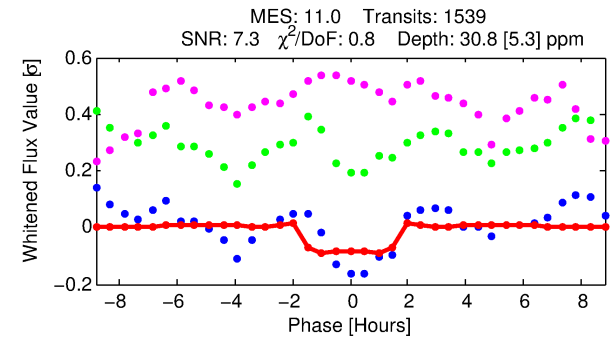
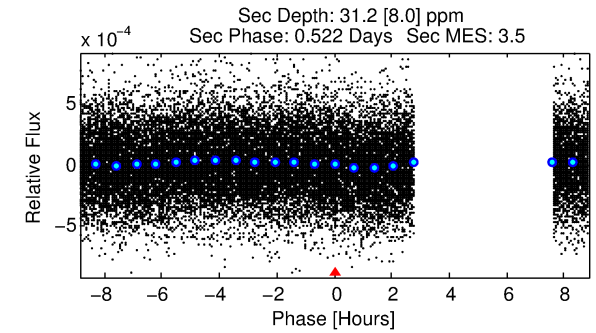
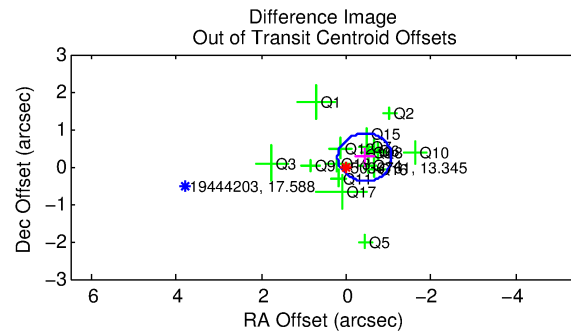
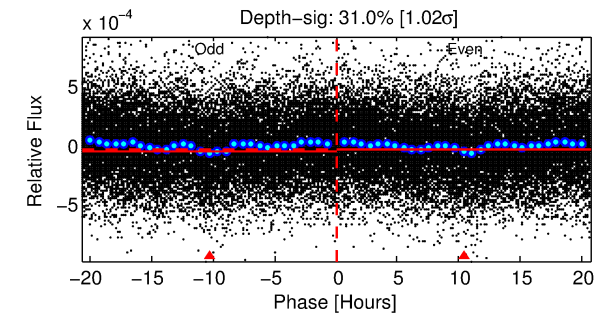
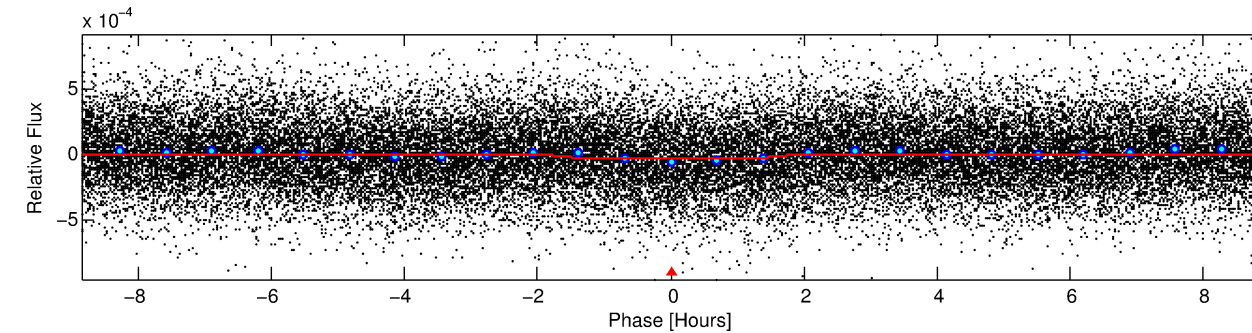
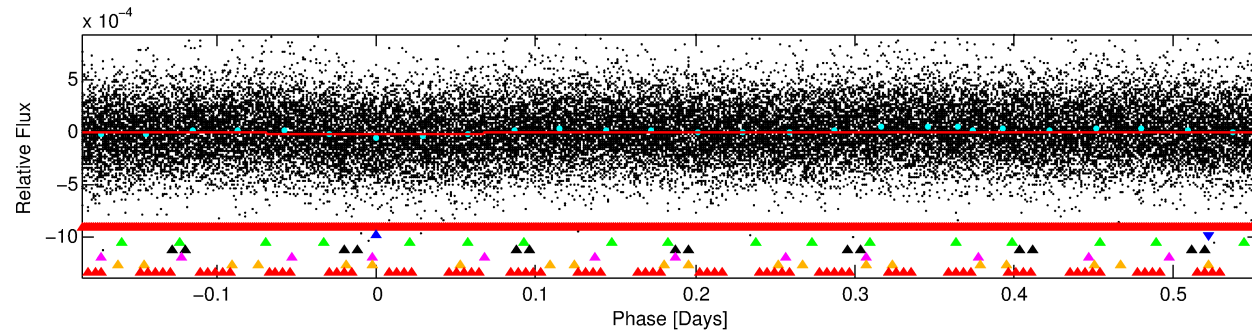
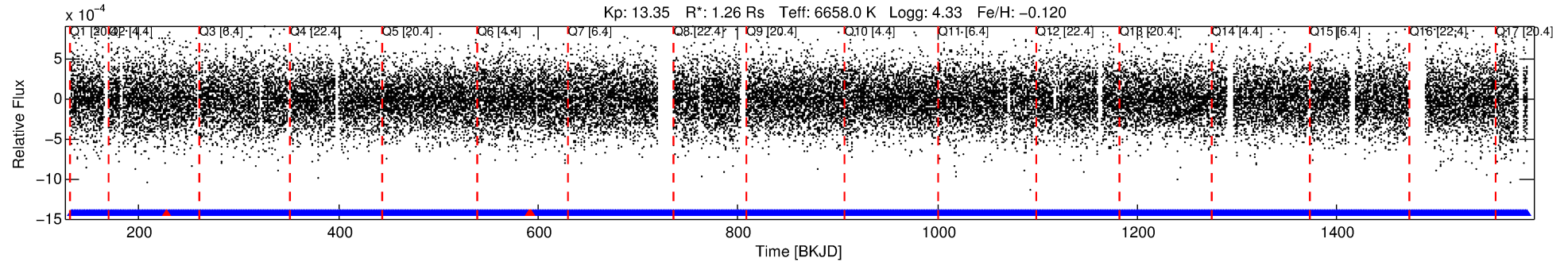
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-02

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 2 of 7 Period: 0.739 d



DV Fit Results:

Period = 0.73859 [0.00001] d
Epoch = 131.9680 [0.0038] BKJD
Rp/R* = 0.0052 [0.0027]
a/R* = 1.65 [2.92]
b = 0.41 [5.64]
Seff = 9515.58 [3935.47]
Teq = 2518 [260] K
Rp = 0.72 [0.44] Re
a = 0.0172 [0.0046] AU
Ag = 9.82 [11.12] [0.79 σ]
Teffp = 6892 [1849] K [2.34 σ]

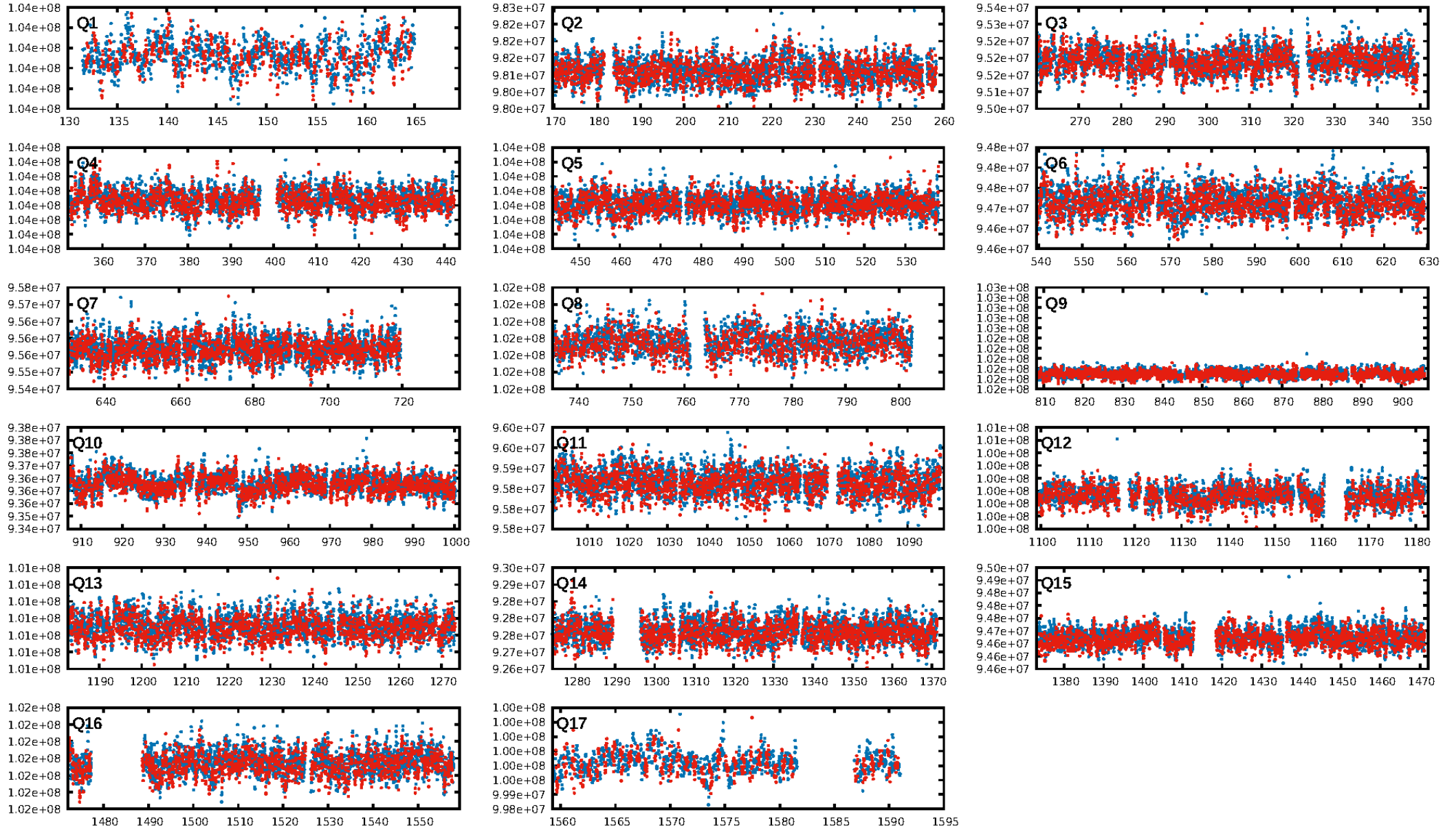
DV Diagnostic Results:

ShortPeriod-sig: 49.8% [0.67 σ]
LongPeriod-sig: 100.0% [98.56 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.29e-19
RollingBand-fgt: 1.00 [1468/1471]
GhostDiagnostic-chr: 0.9544
Centroid-sig: 27.0%
Centroid-so: 0.786 arcsec [1.16 σ]
OotOffset-rm: 0.512 arcsec [2.41 σ]
KicOffset-rm: 0.436 arcsec [2.38 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

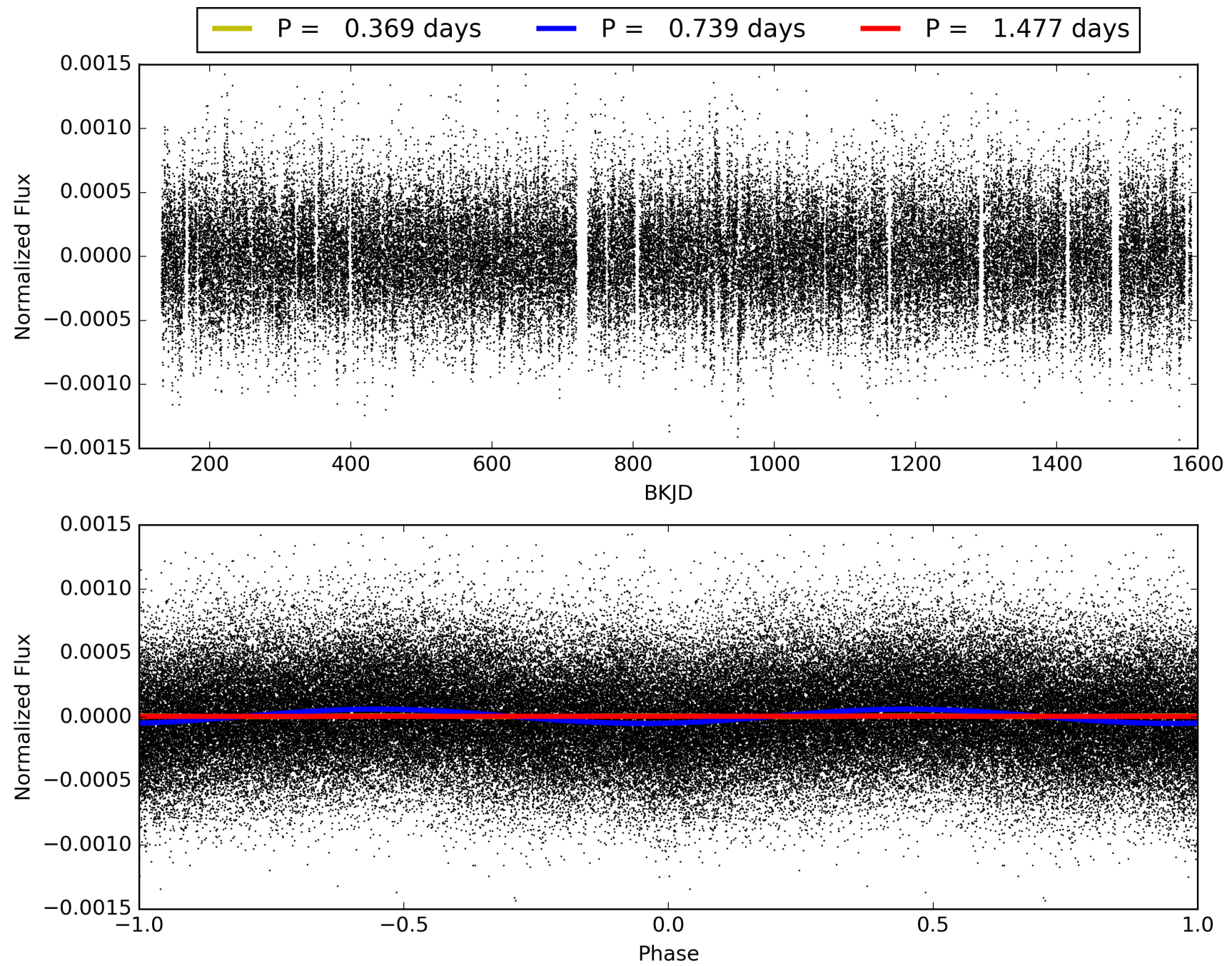
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:32 Z

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

TCE 005036761-02, PDC Light Curves

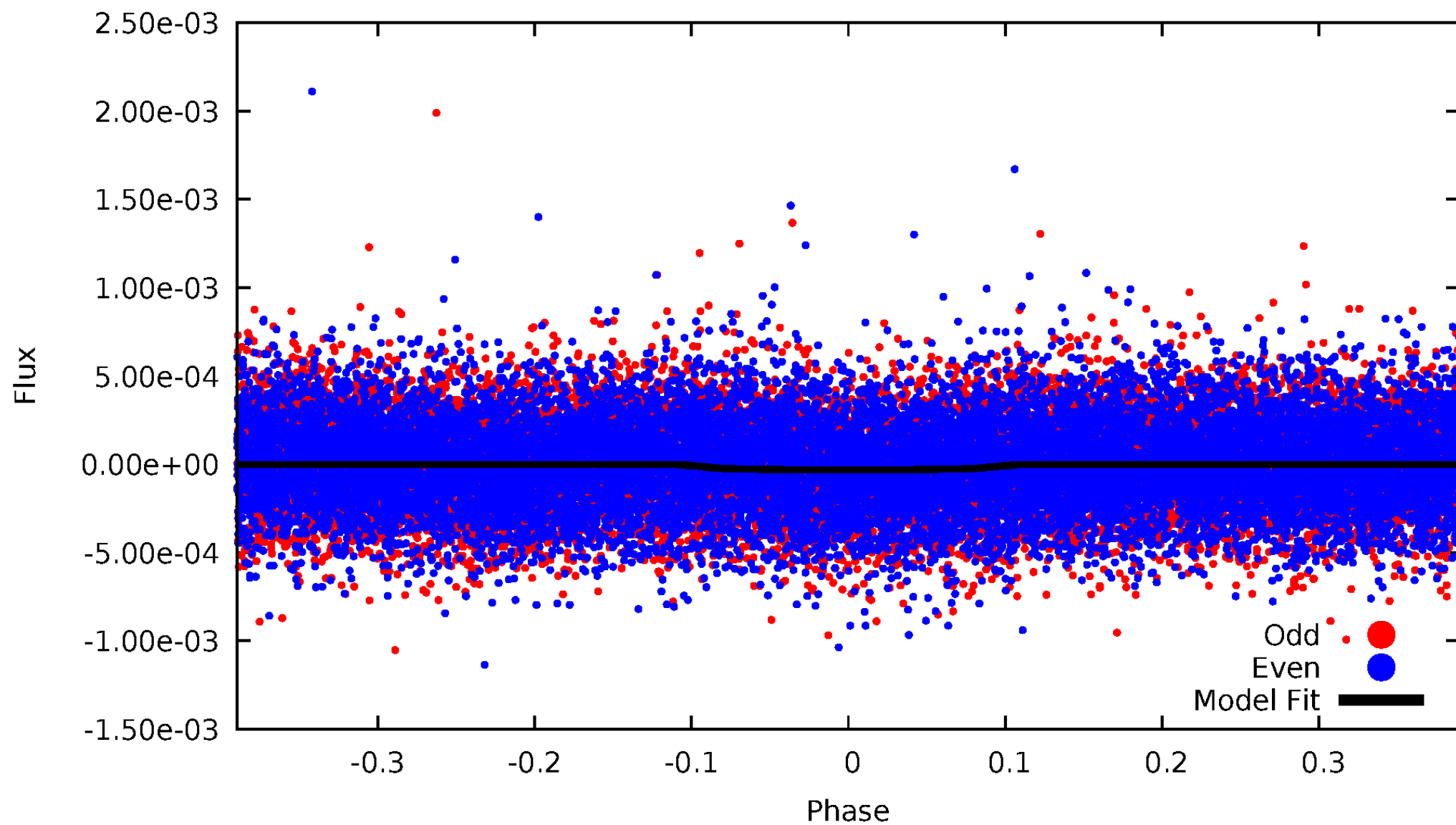


TCE 005036761-02



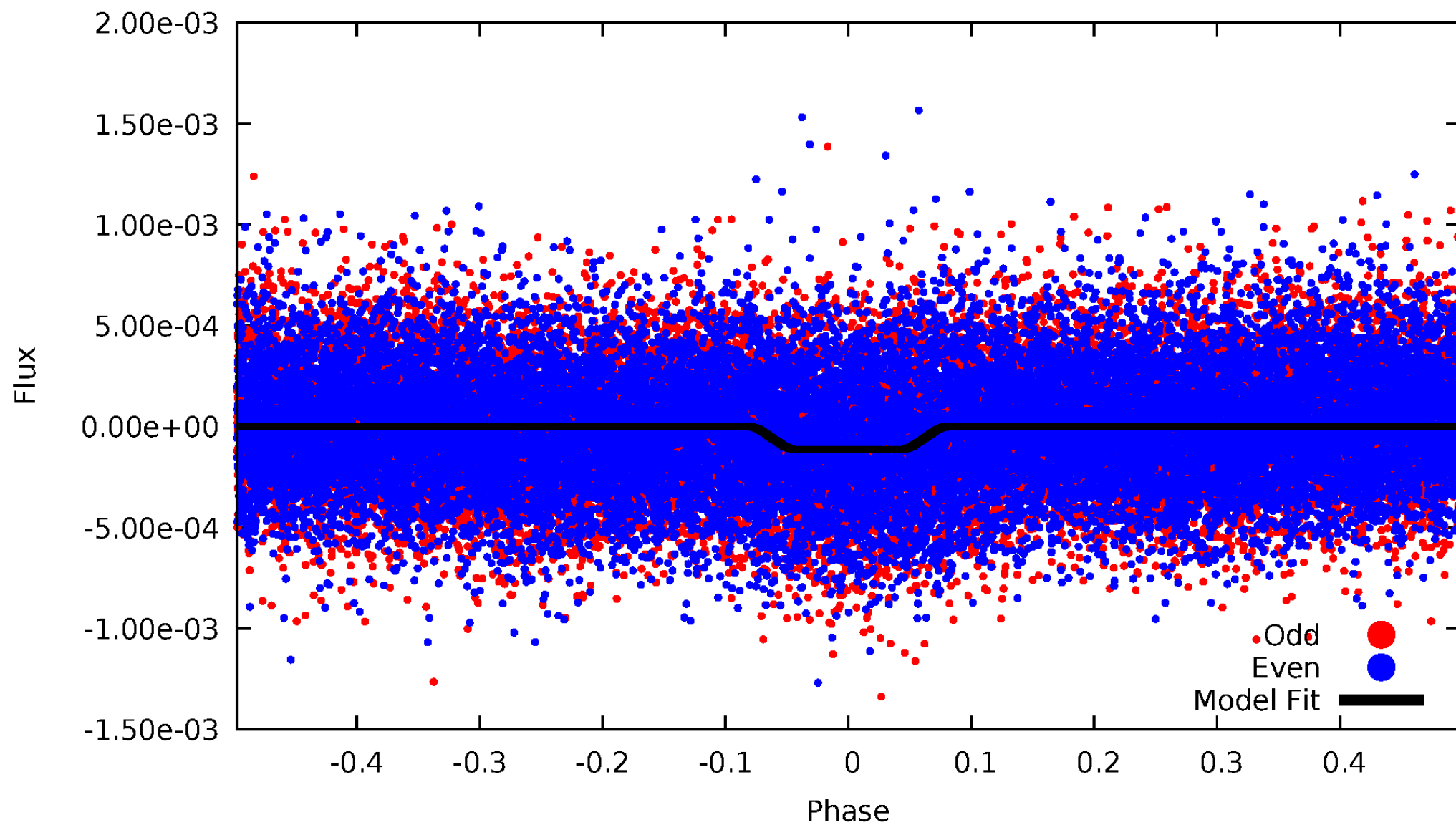
DV Odd/Even

TCE 005036761-02



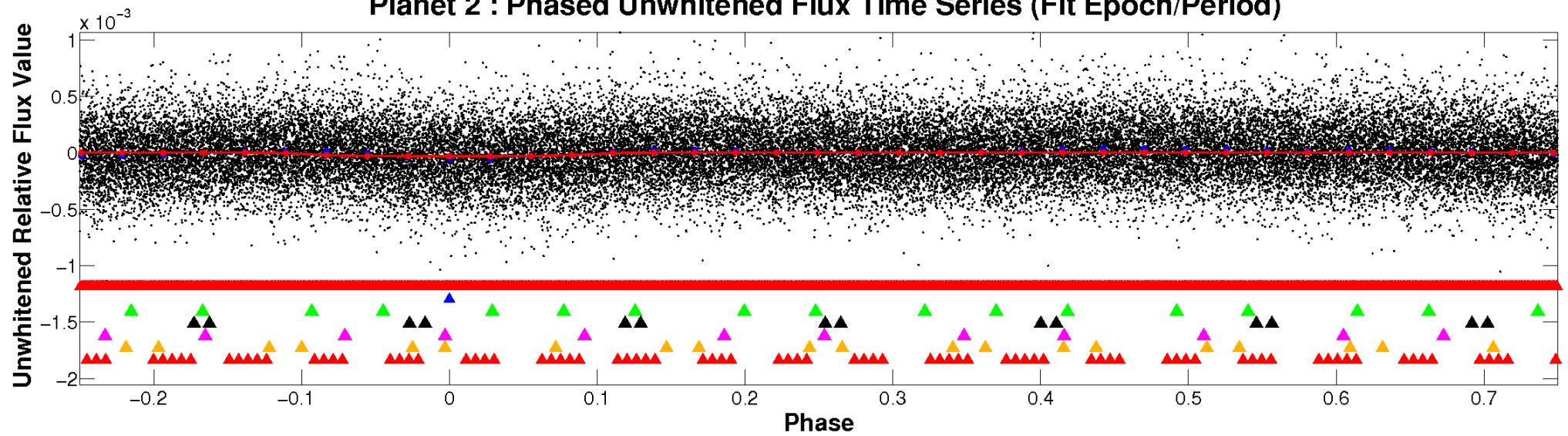
ALT Odd/Even

TCE 005036761-02

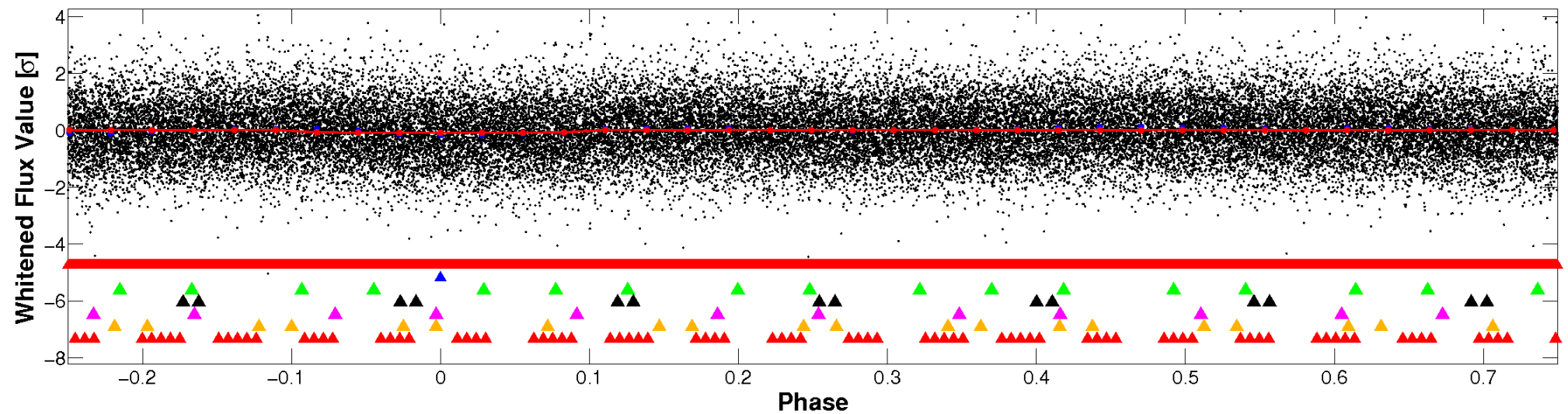


Non-Whitened Vs. Whitened Light Curve

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

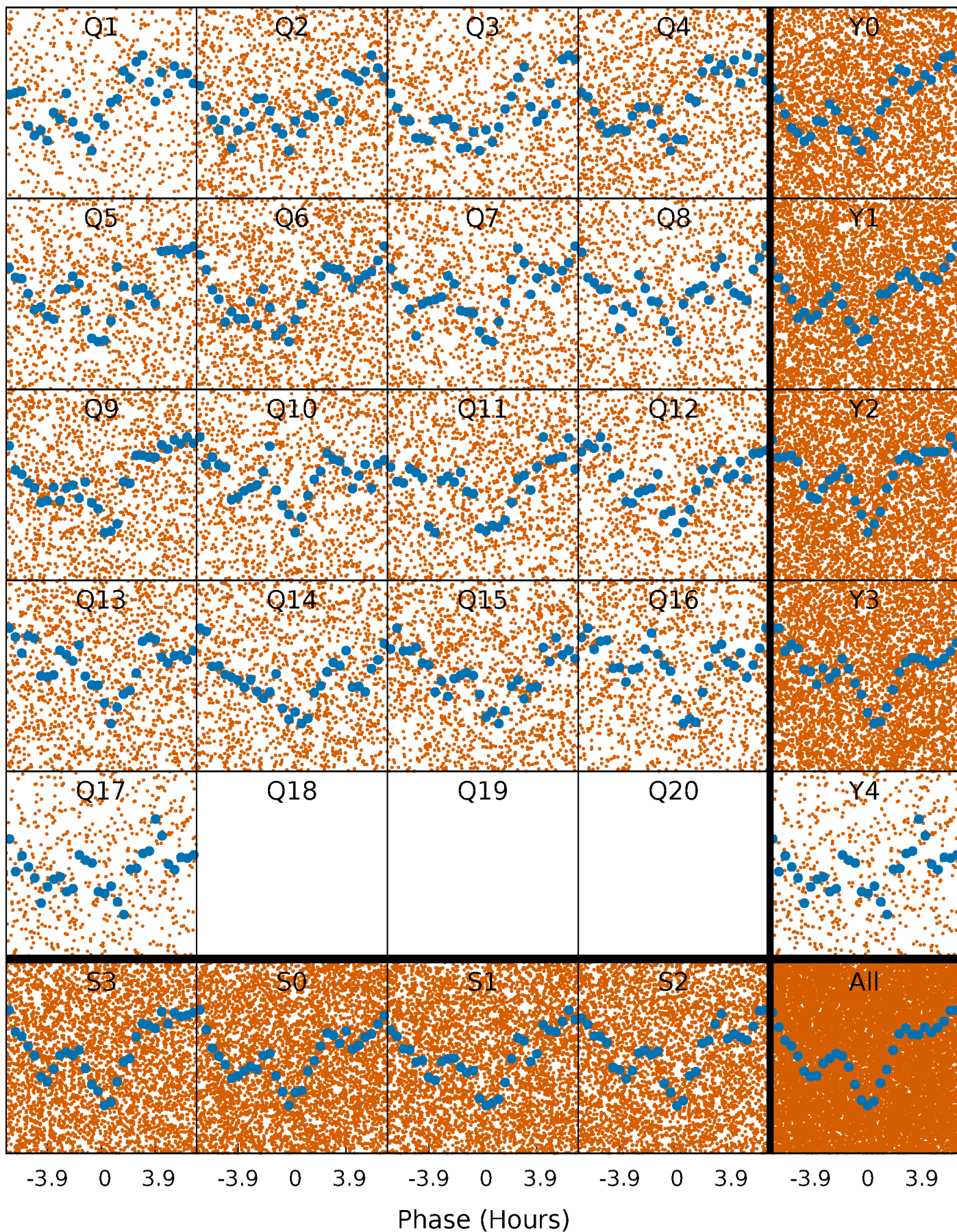


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



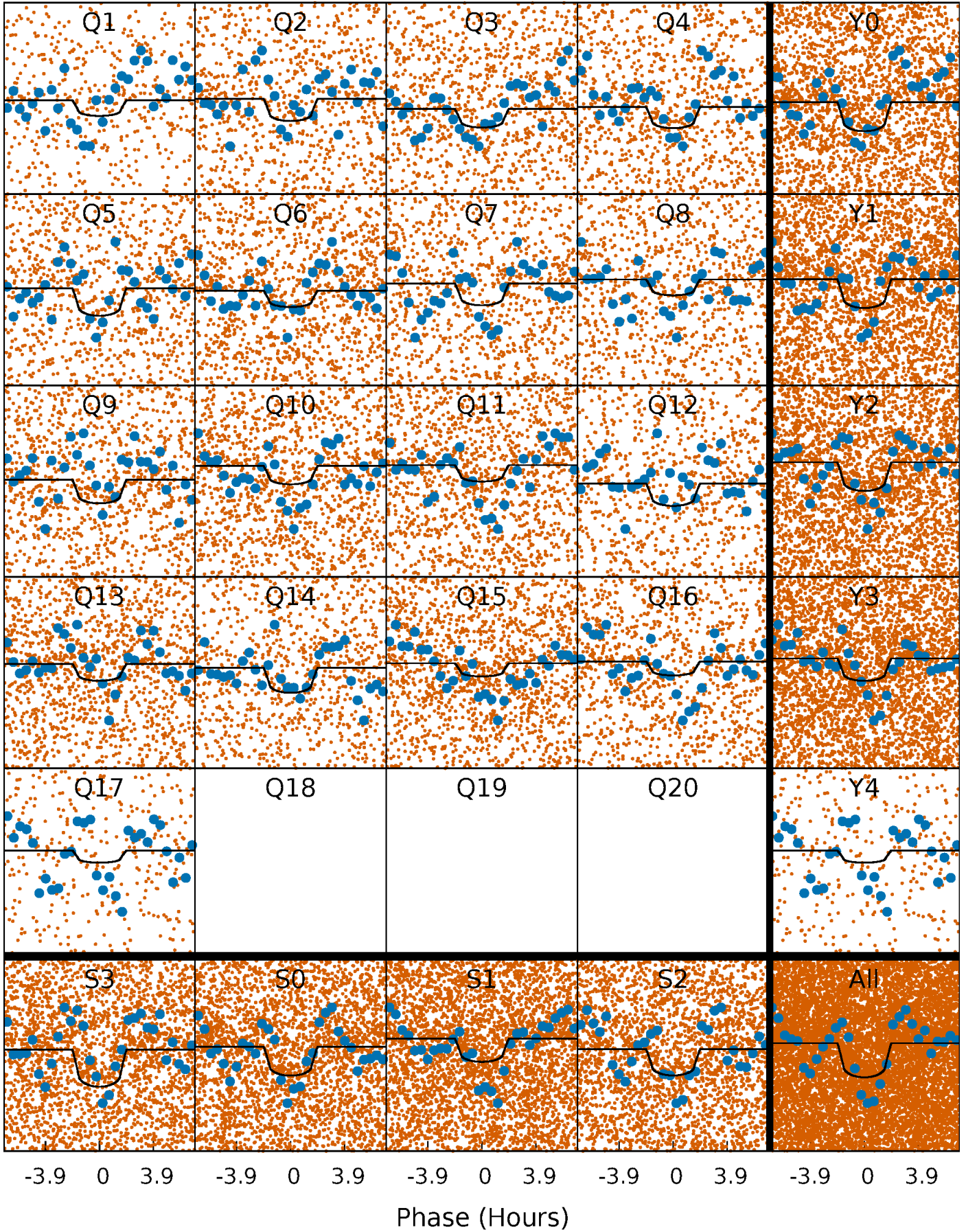
PDC Quarter-Phased Transit Curves

TCE 005036761-02 P= 0.738593 Days $T_0=131.968020$ (BKJD)



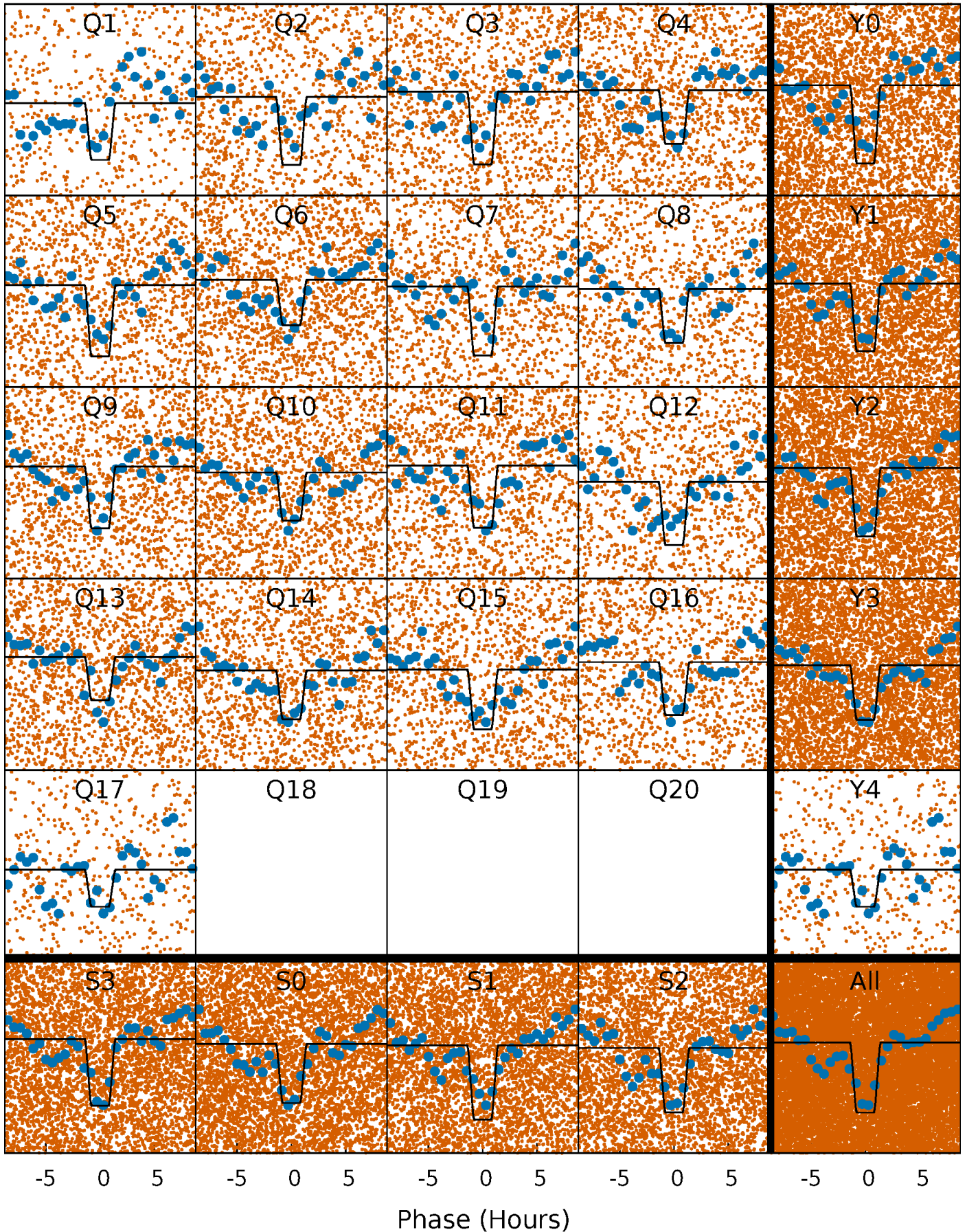
DV Quarter-Phased Transit Curves

TCE 005036761-02 P= 0.738593 Days $T_0=131.968020$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

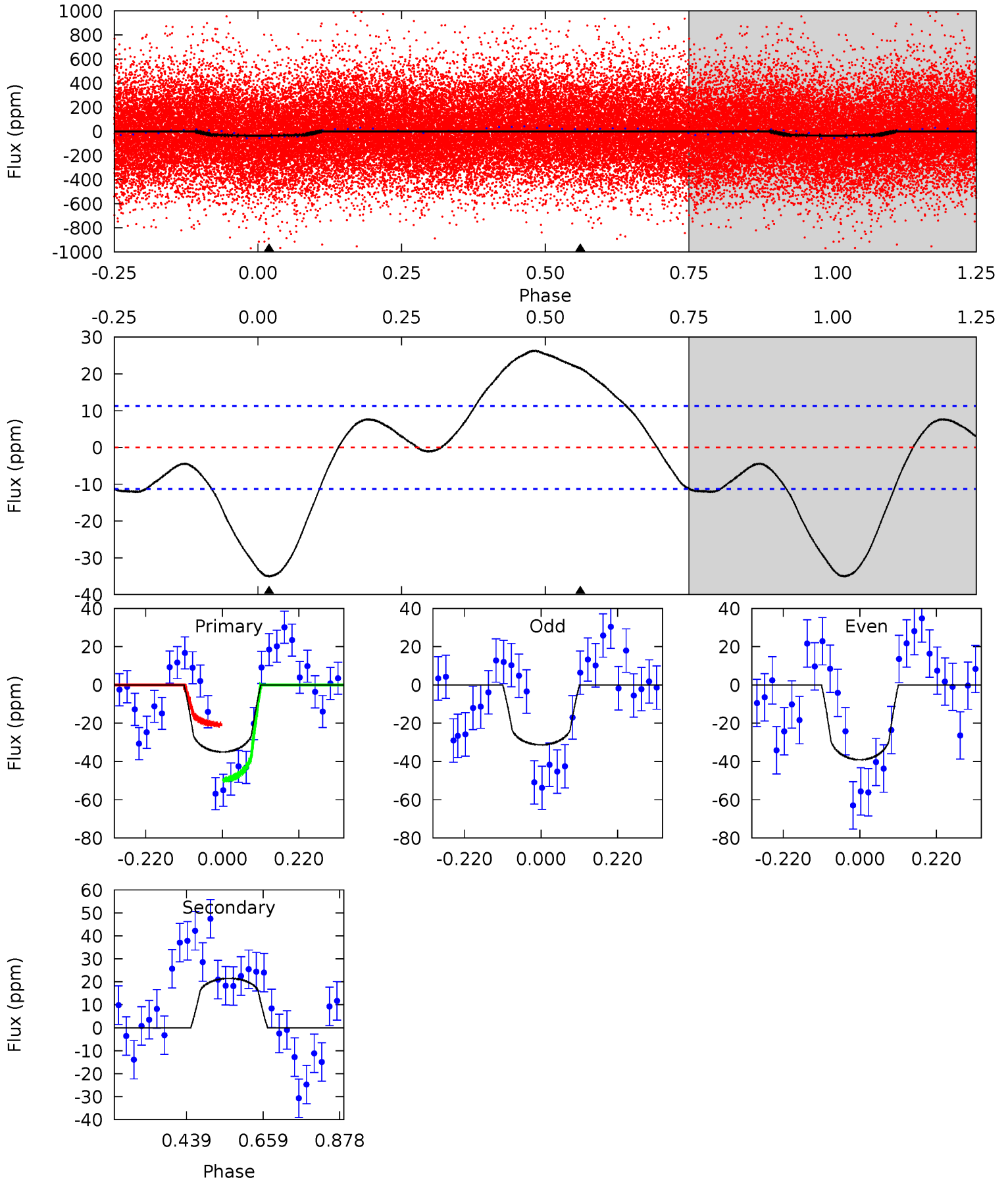
TCE 005036761-02 P= 0.738622 Days $T_0=131.947497$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-02, P = 0.738593 Days, E = 131.229427 Days

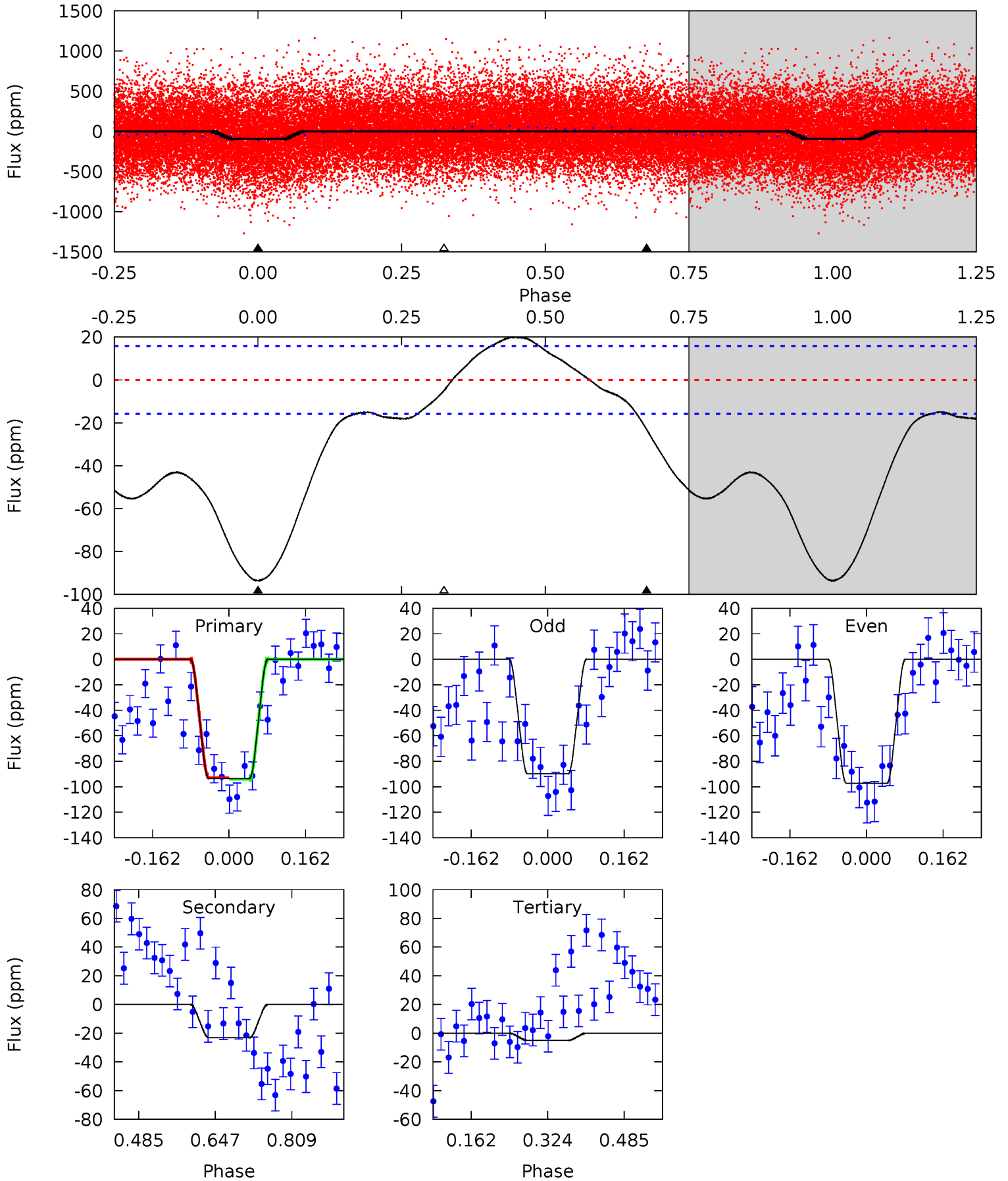
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	-8.37	0	0	4.40	1.23	1.92	13.6	13.6	-8.37	-8.37	1.50	0.99	0.43	5.58



Alt Model-Shift Uniqueness Test

005036761-02, P = 0.738622 Days, E = 131.208875 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	6.51	1.41	0	4.46	1.40	4.20	25.0	26.4	5.10	6.51	1.03	0.99	0.18	0.18



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	22 ± 3	$0.73^{+0.42}_{-0.37}$	3572^{+278}_{-180}	-6374^{+1087}_{-3311}	$-6.248^{+3.704}_{-20.657}$
Alt.	-23 ± 4	$1.51^{+0.43}_{-0.40}$	3583^{+257}_{-189}	4428^{+728}_{-494}	$1.599^{+1.392}_{-0.647}$

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

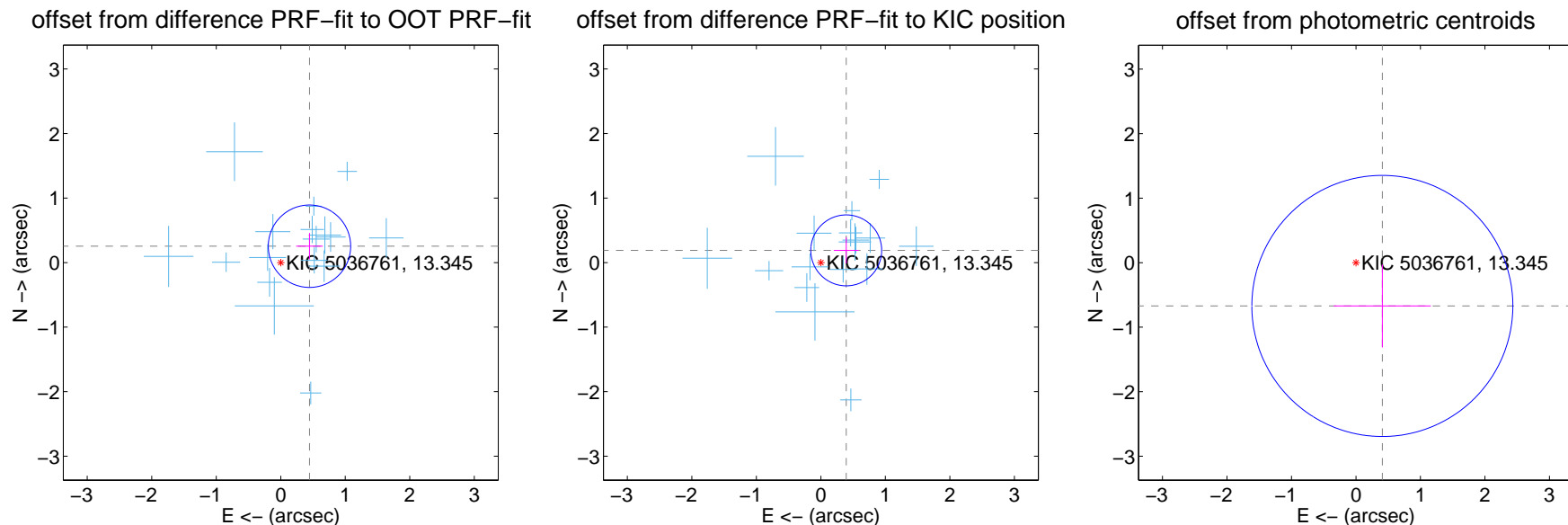
DV Centroid Data

Supplemental centroid analysis for 005036761-02. Kepler magnitude: 13.35. Transit SNR 7.27

There are 17 quarters with good PRF difference image offsets

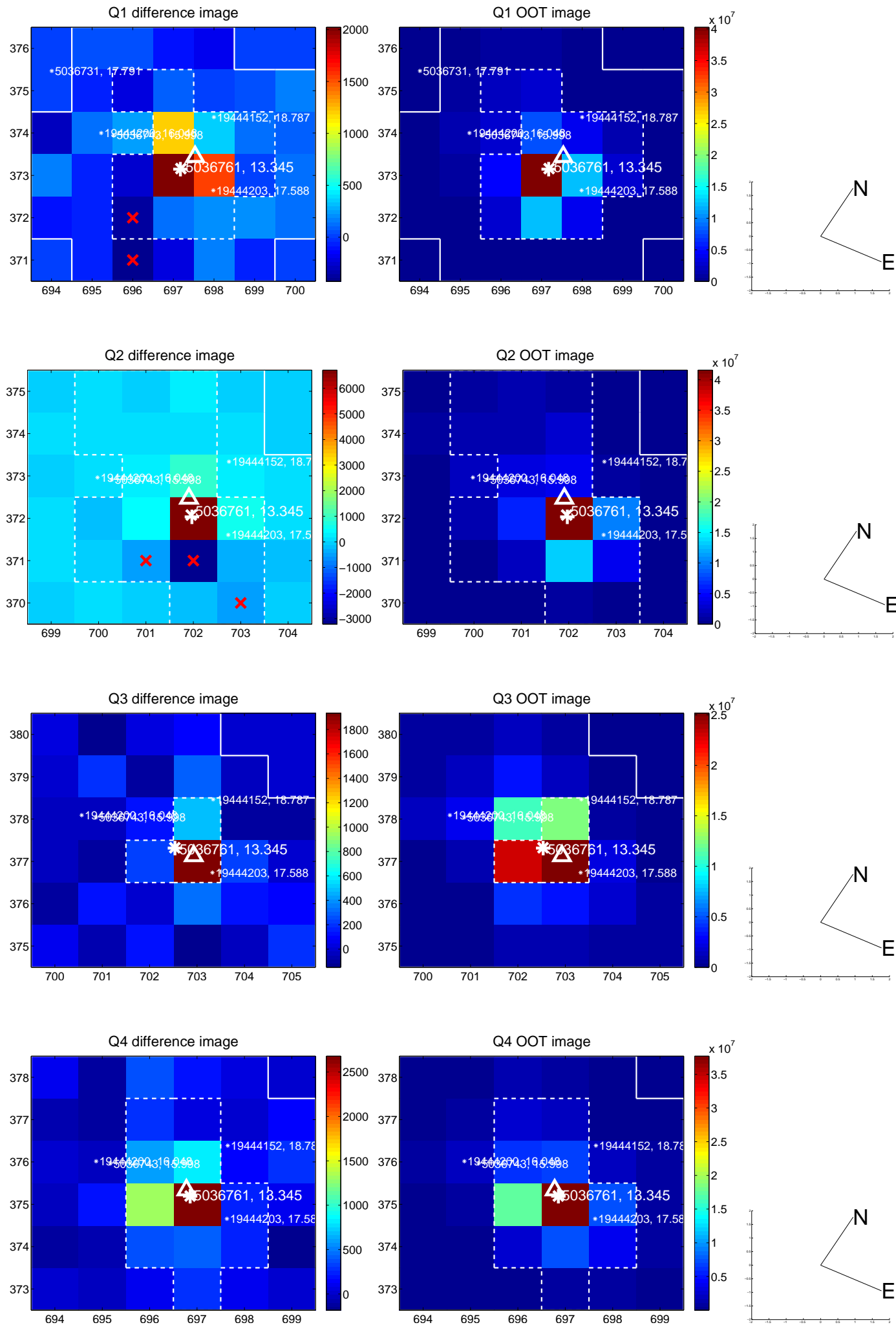
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.512 ± 0.213	2.41	-0.445 ± 0.206	0.254 ± 0.204
PRF-fit source offset from KIC position	0.436 ± 0.183	2.38	-0.393 ± 0.192	0.189 ± 0.201
photometric centroid source offset	0.79 ± 0.67	1.16	-0.41 ± 0.75	-0.67 ± 0.64

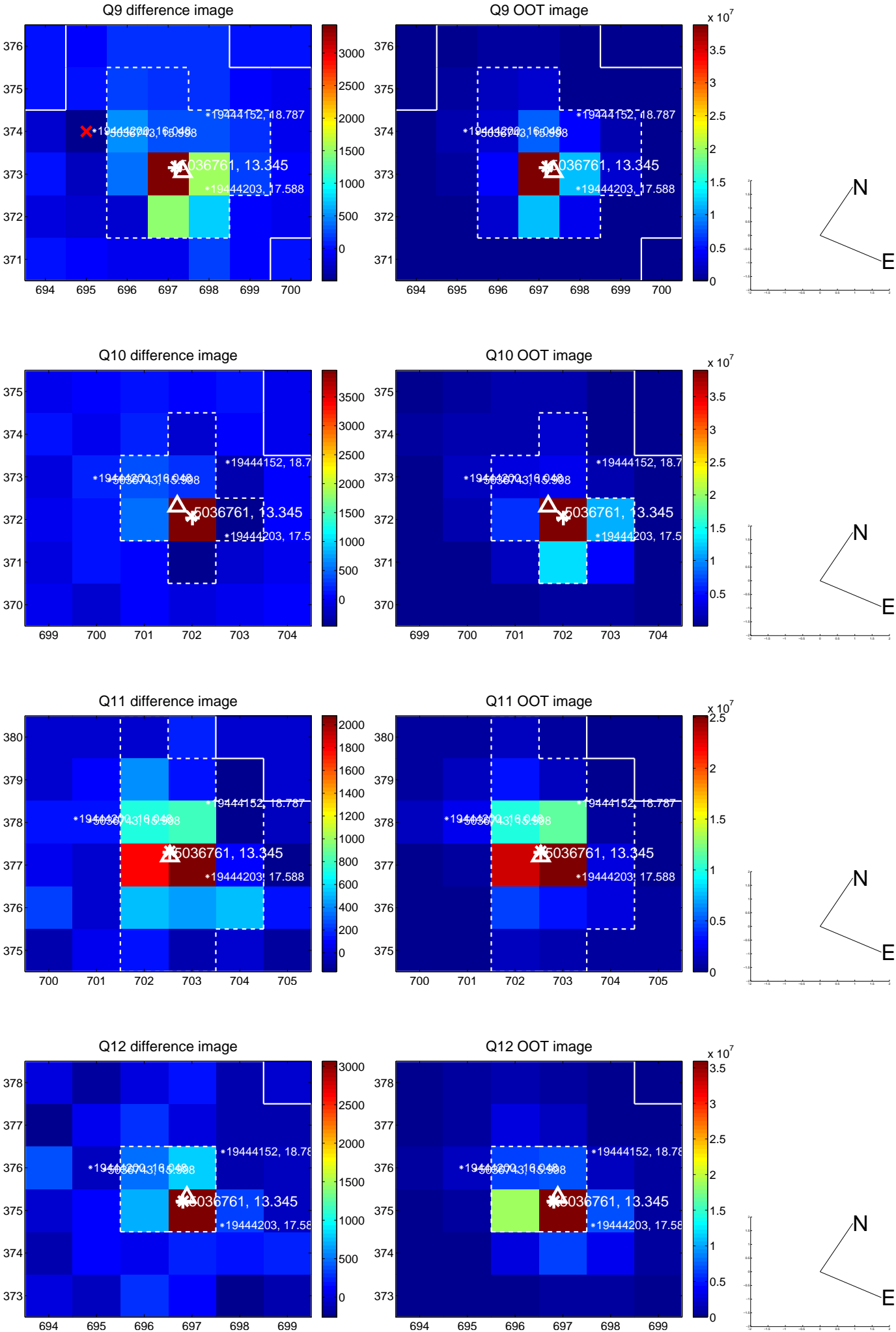


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

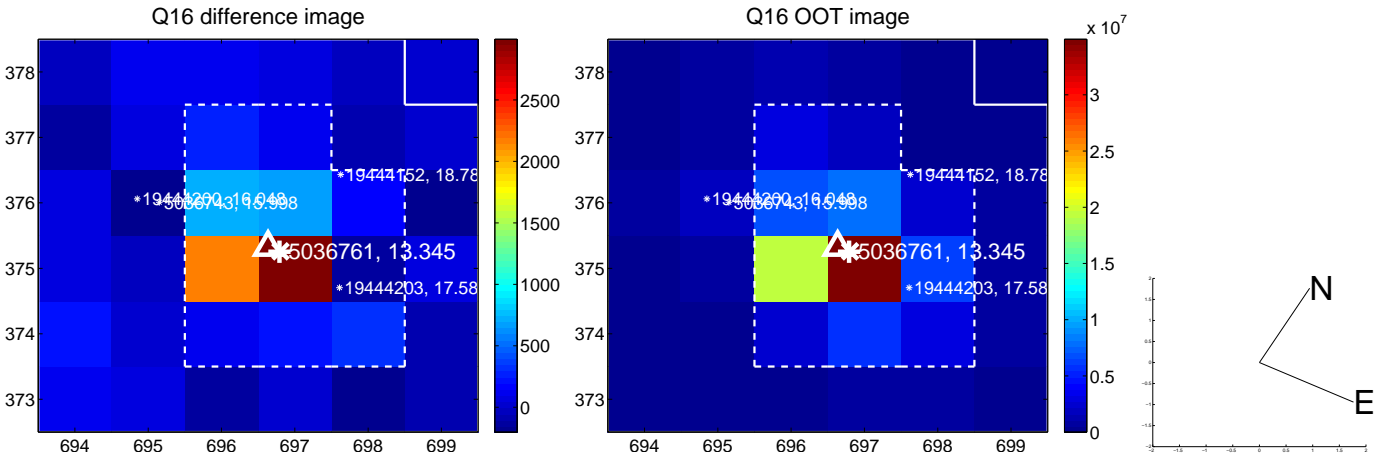
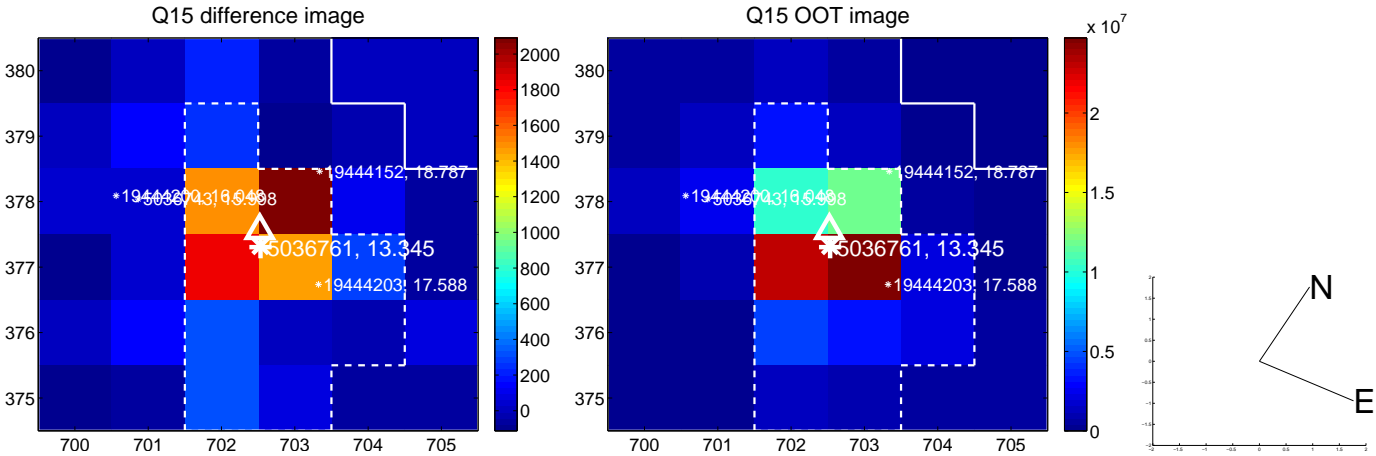
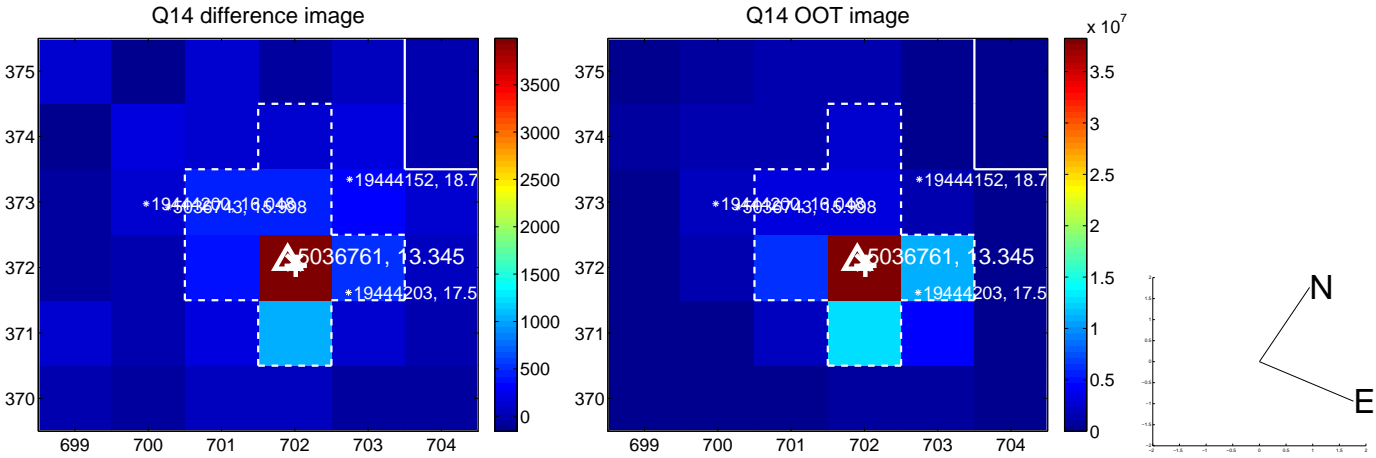
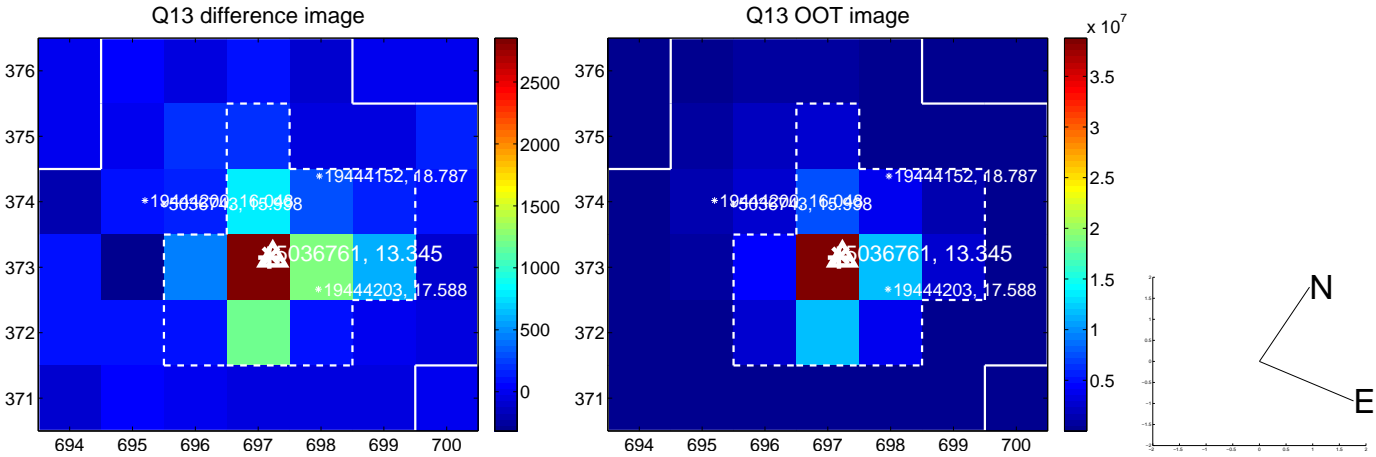
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



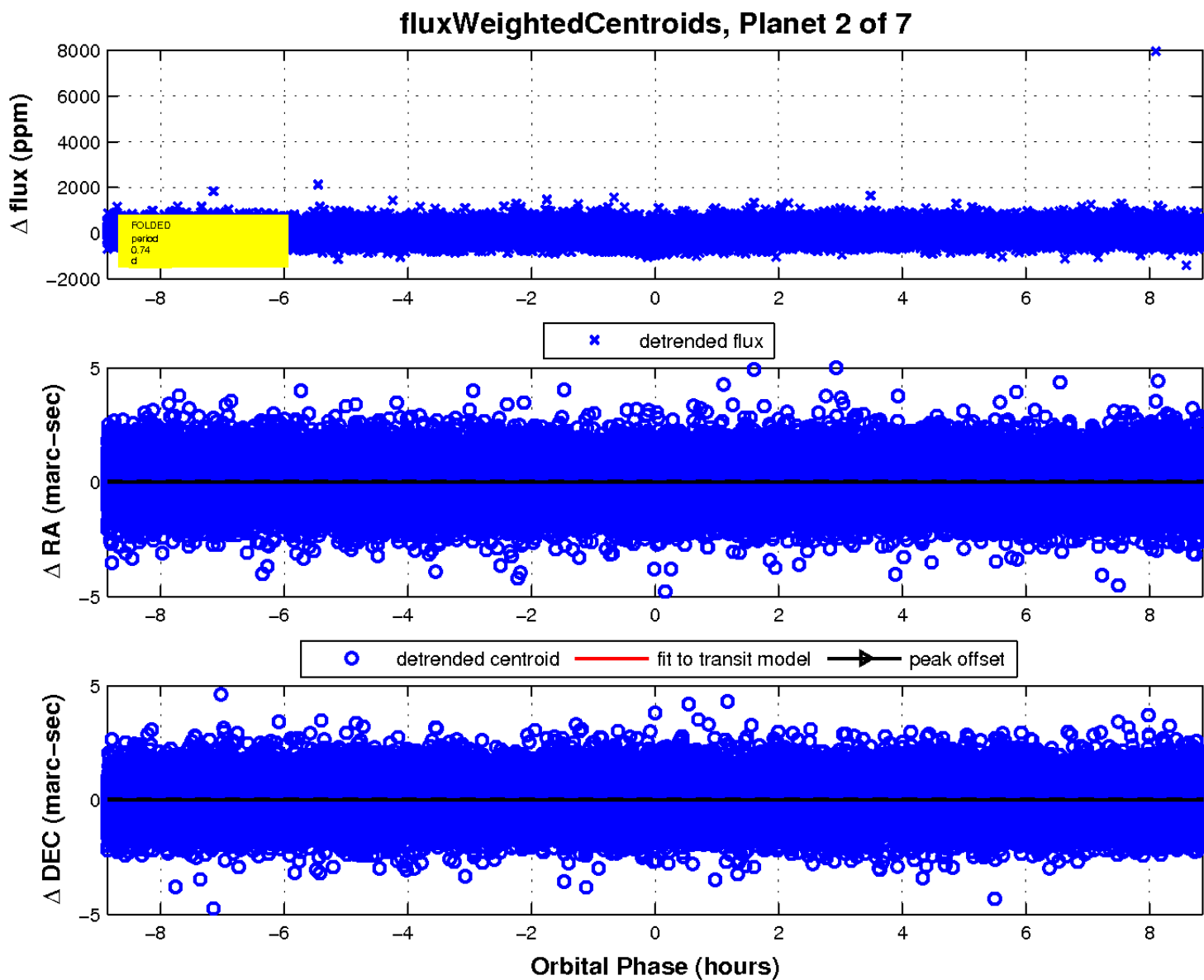
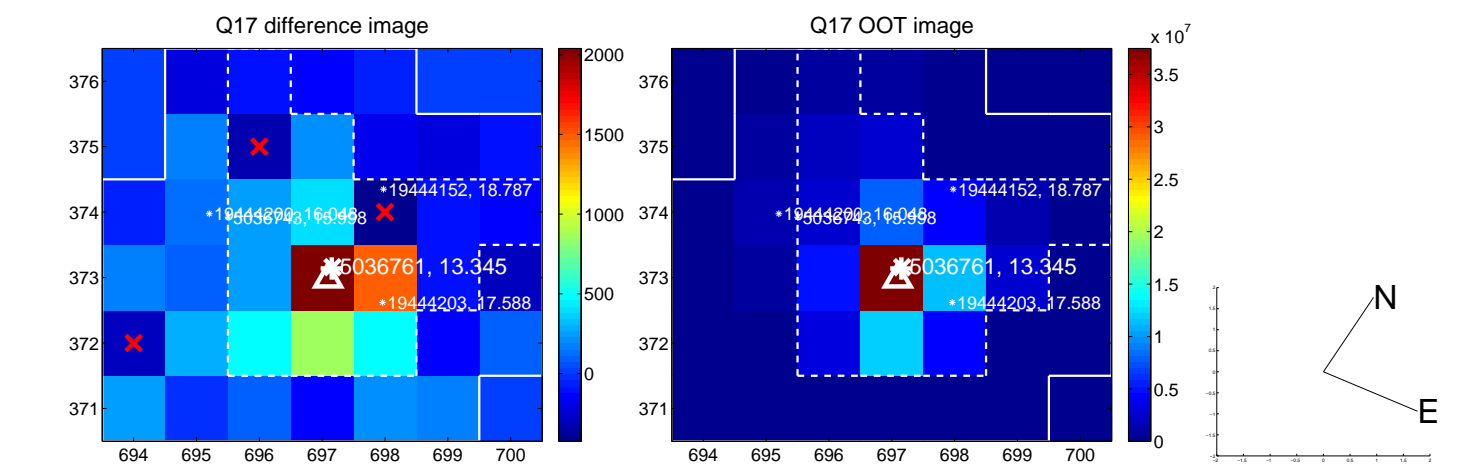
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

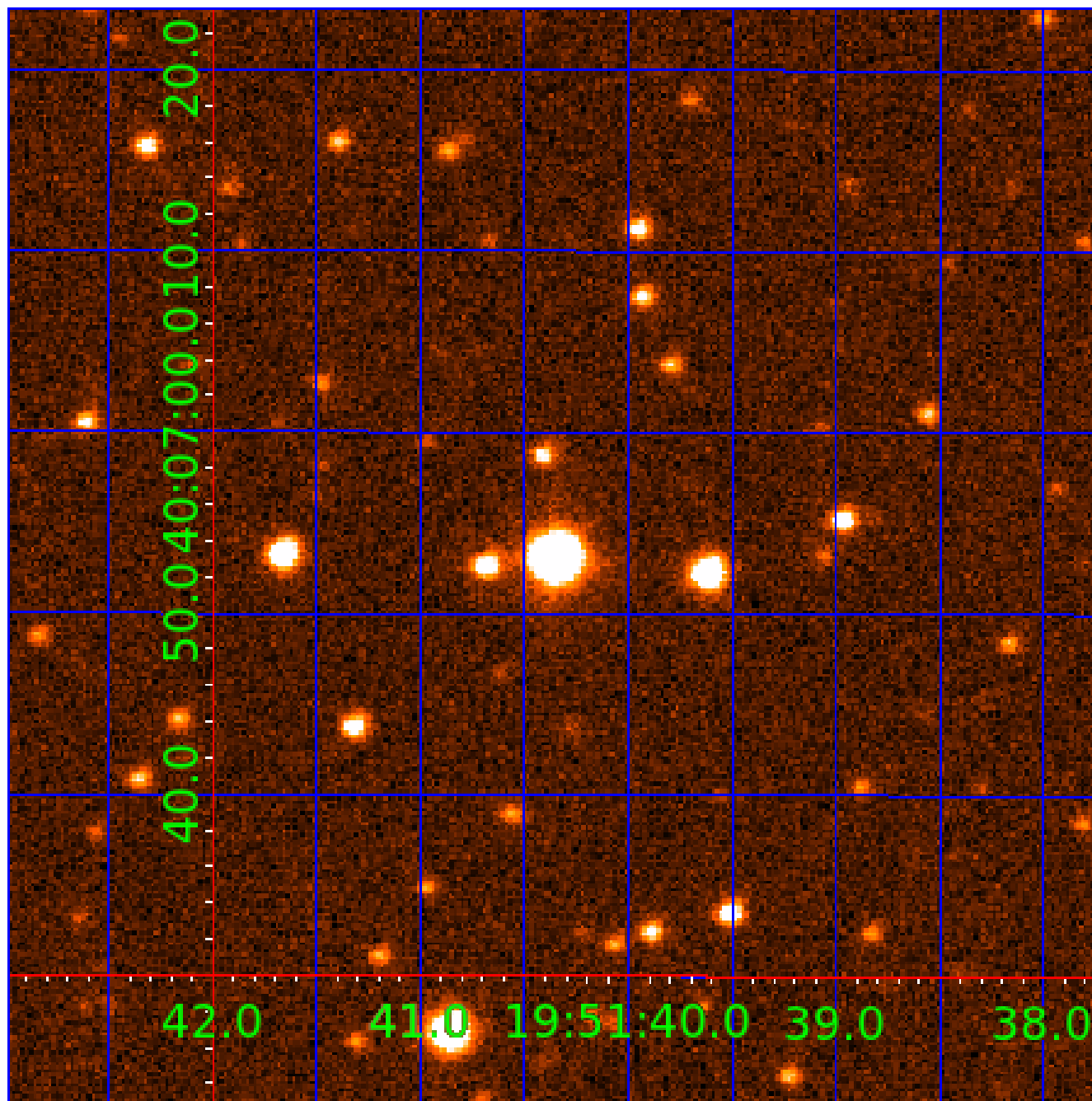


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005036761

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})
005036761-01	OBS	No	0.630406	131.601714	39.7	1.744	11.0	9.9	1.26	6658	0.85	11752.99
005036761-02	OBS	No	0.738593	131.968020	30.8	3.453	11.0	7.3	1.26	6658	0.72	9515.58
005036761-03	OBS	No	87.676469	140.401496	714.3	2.231	9.3	9.4	1.26	6658	3.59	16.31
005036761-04	OBS	No	110.473550	135.848811	576.6	3.586	8.7	8.4	1.26	6658	3.34	11.98
005036761-05	OBS	No	123.035676	147.186643	567.1	2.634	9.1	8.1	1.26	6658	3.35	10.38
005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036761-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

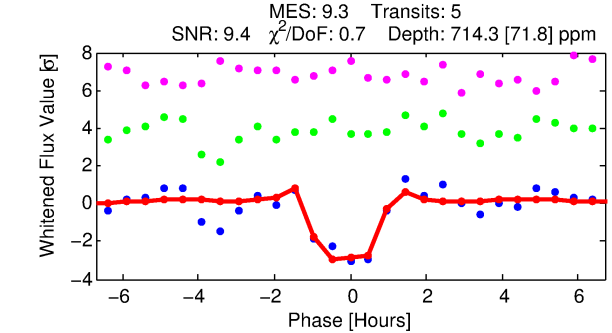
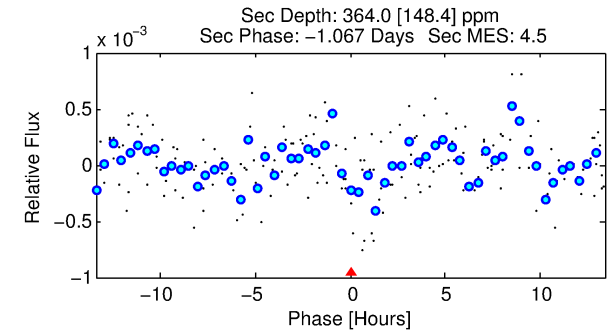
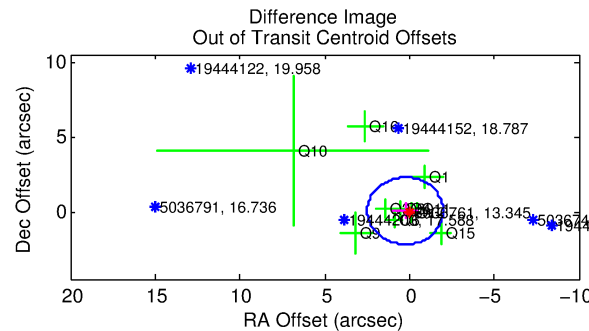
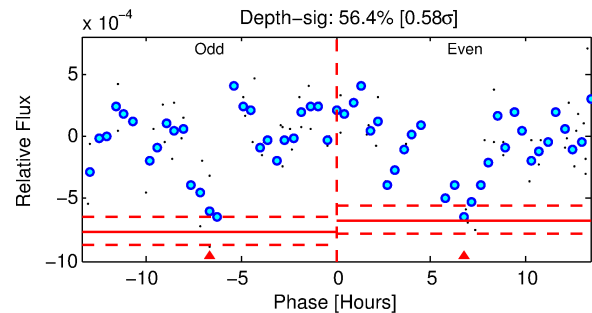
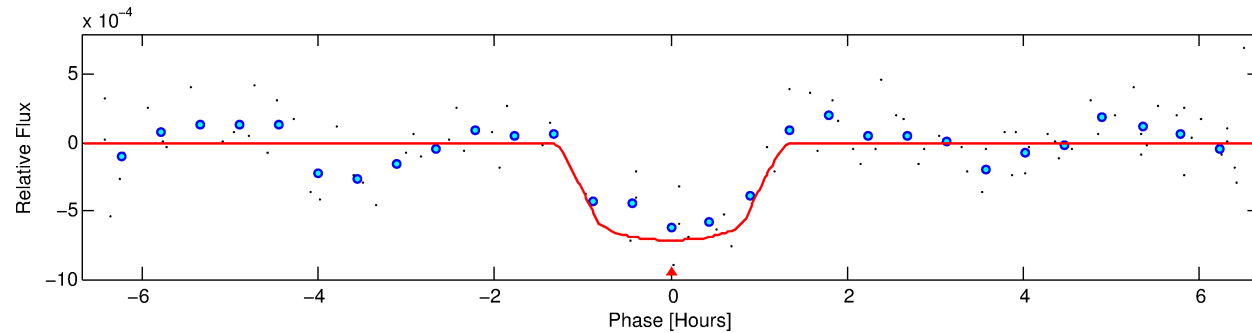
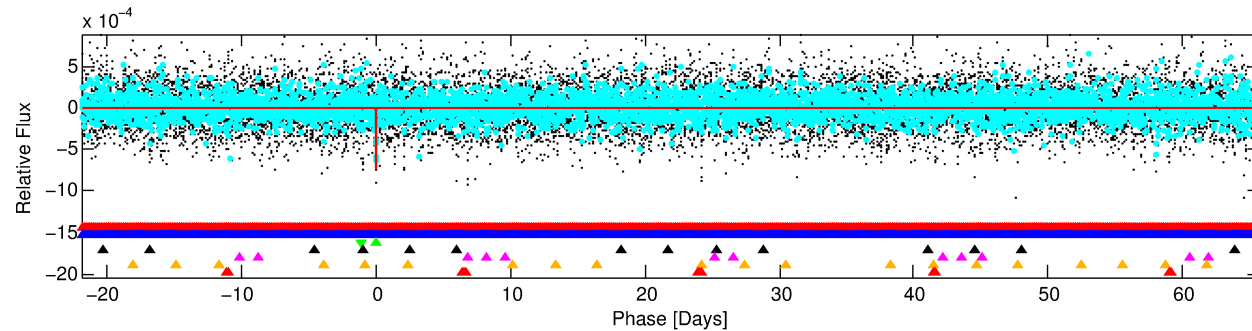
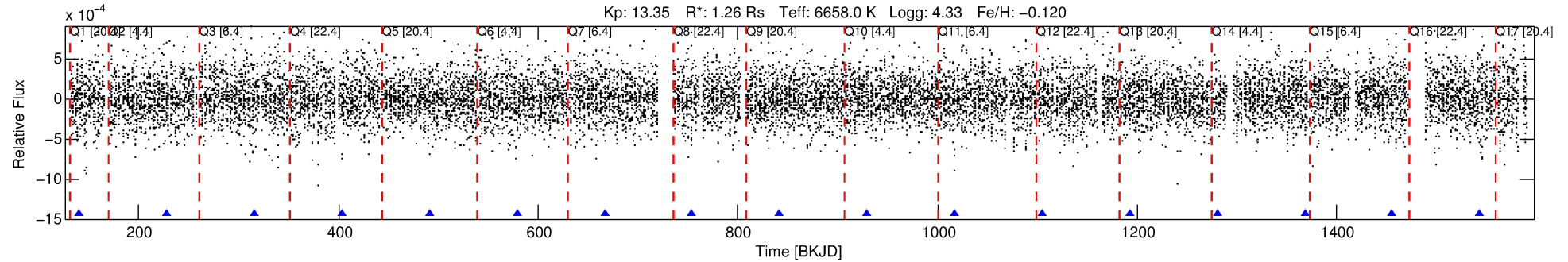
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-03

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 3 of 7 Period: 87.676 d



DV Fit Results:

Period = 87.67647 [0.00113] d
Epoch = 140.4015 [0.0081] BKJD
Rp/R* = 0.0260 [0.0707]
a/R* = 235.11 [3515.66]
b = 0.66 [12.79]
Seff = 16.31 [6.75]
Teq = 512 [53] K
Rp = 3.59 [9.81] Re
a = 0.4146 [0.1123] AU
Ag = 2678.13 [14629.23] [0.18 σ]
Teffp = 5700 [7766] K [0.67 σ]

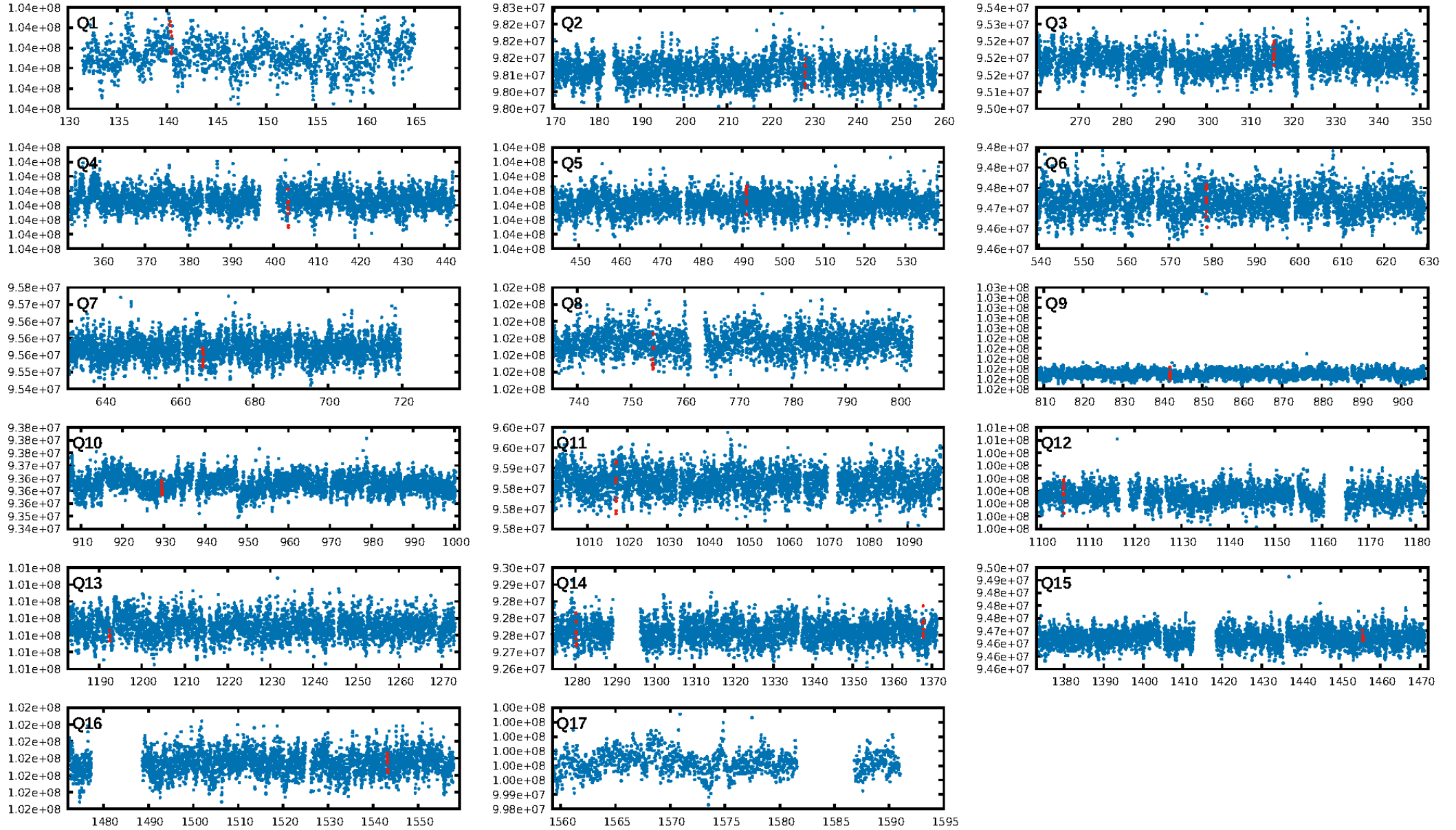
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.56 σ]
LongPeriod-sig: 100.0% [129.55 σ]
ModelChiSquare2-sig: 53.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.29e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.1287
Centroid-sig: 37.1%
Centroid-so: 0.337 arcsec [0.90 σ]
OotOffset-rm: 0.257 arcsec [0.35 σ]
KicOffset-rm: 0.279 arcsec [0.37 σ]
OotOffset-st: 2/3/4/2 [11]
KicOffset-st: 2/3/4/2 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.00 [0/15]

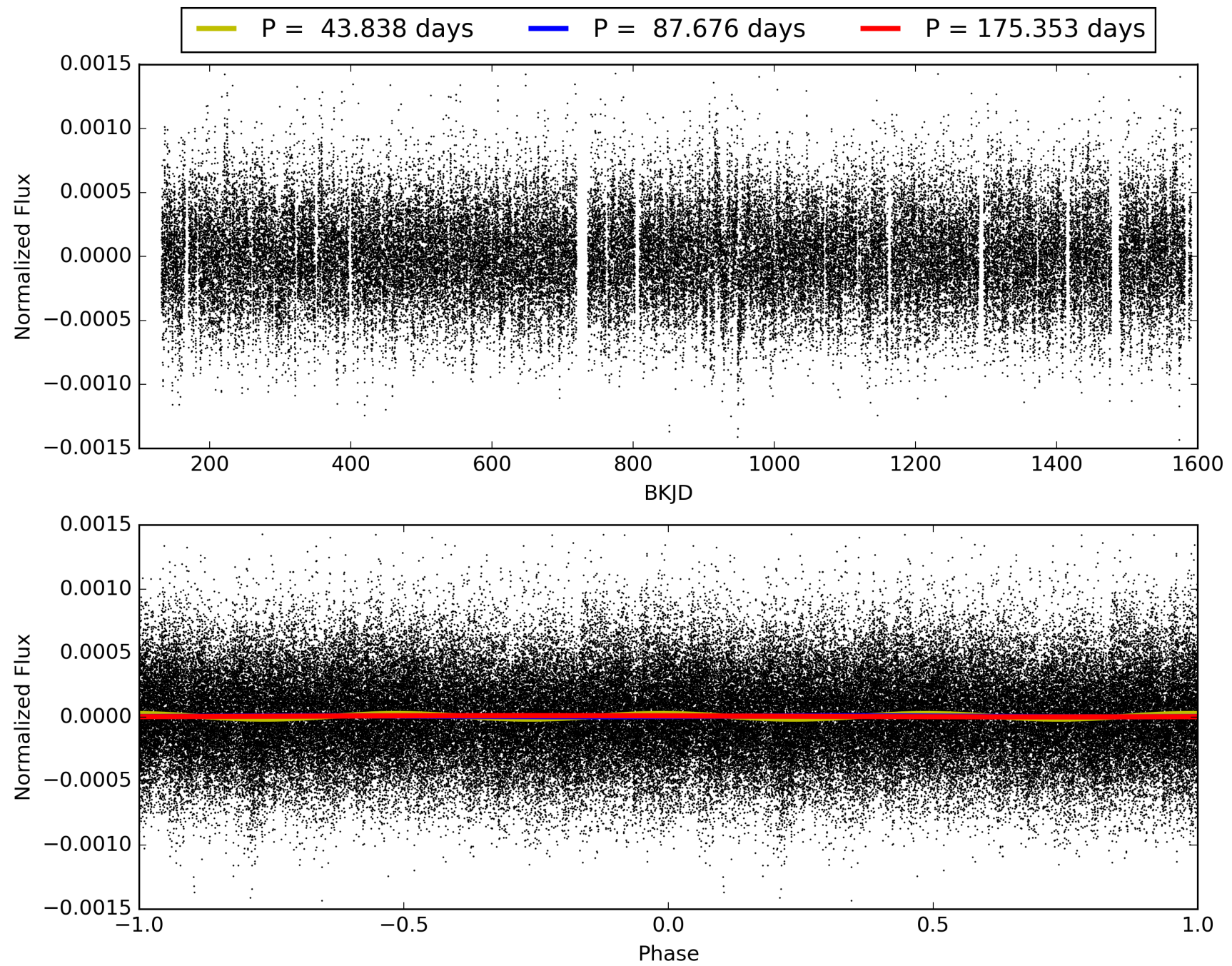
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:41 Z

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

TCE 005036761-03, PDC Light Curves

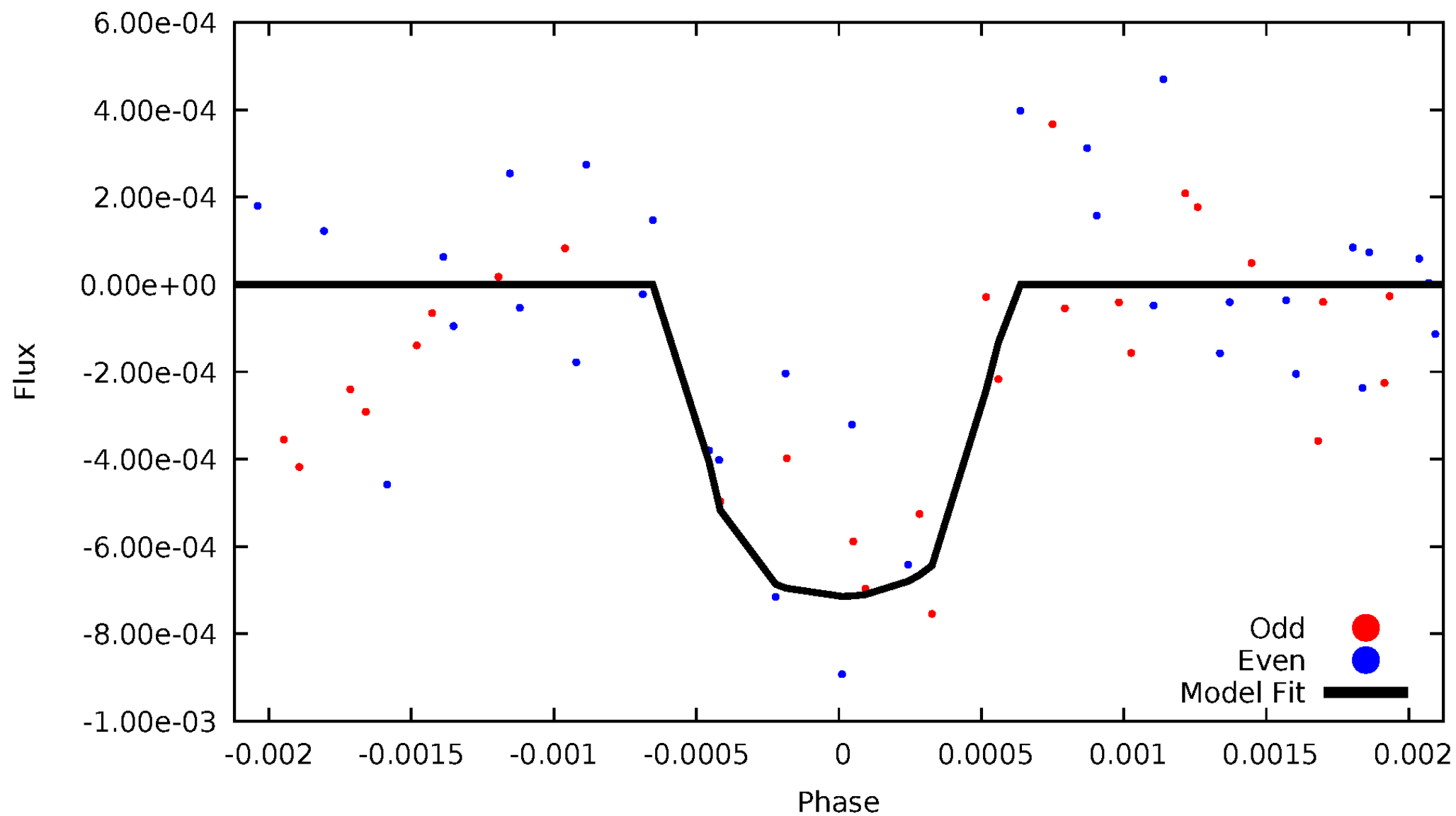


TCE 005036761-03



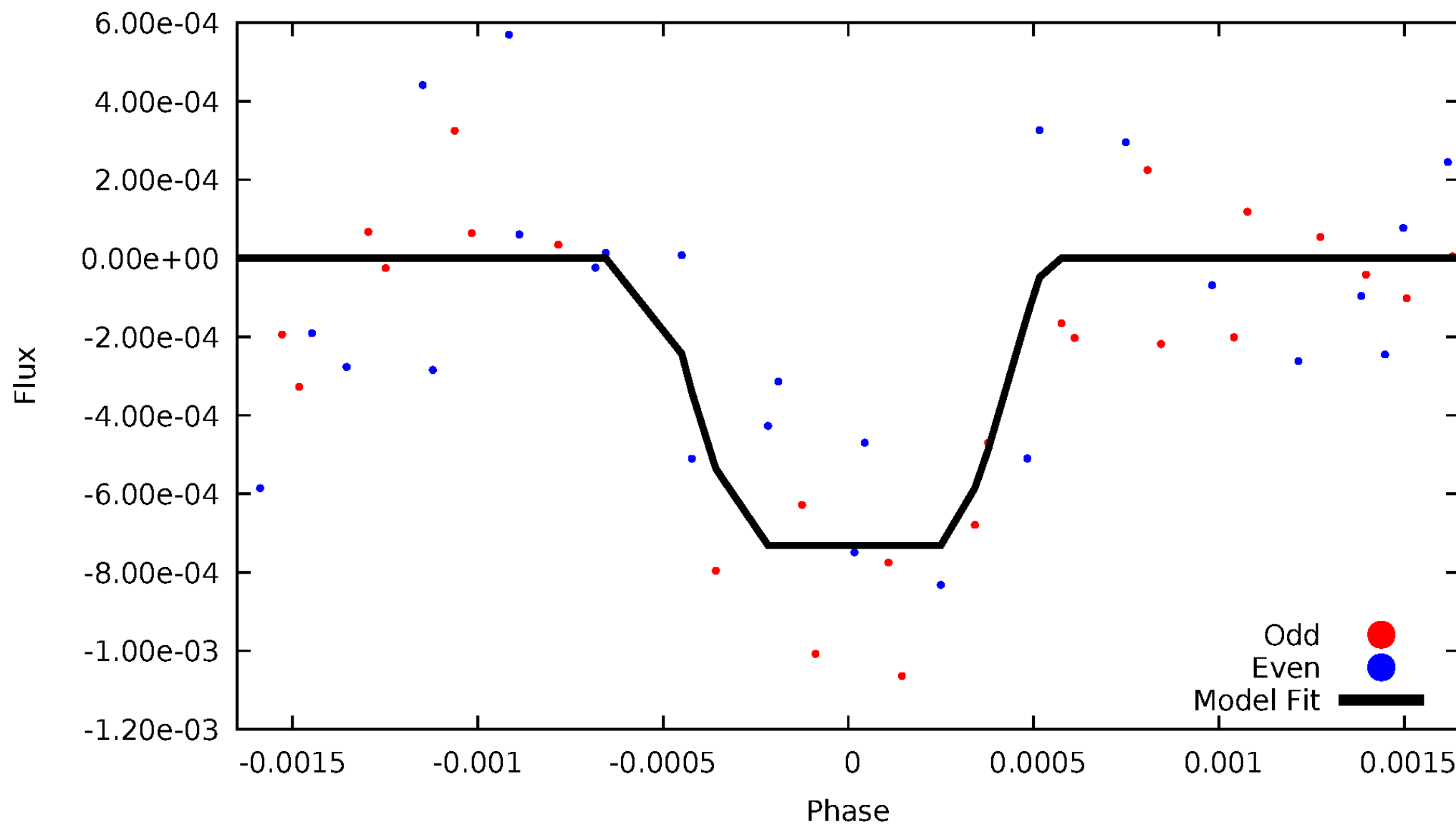
DV Odd/Even

TCE 005036761-03

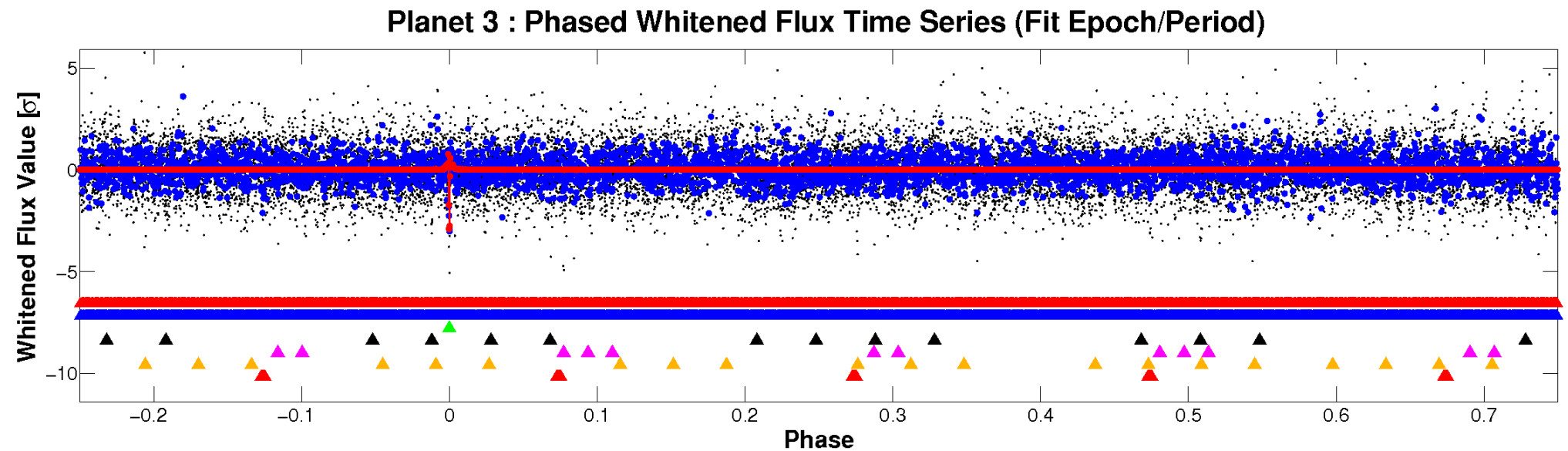
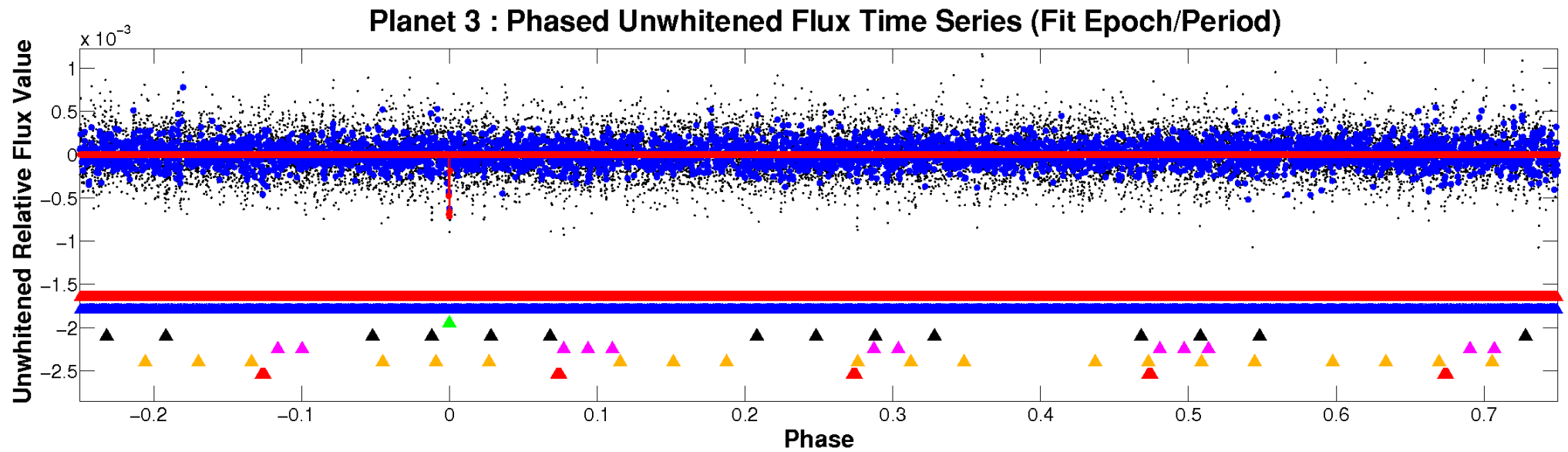


ALT Odd/Even

TCE 005036761-03

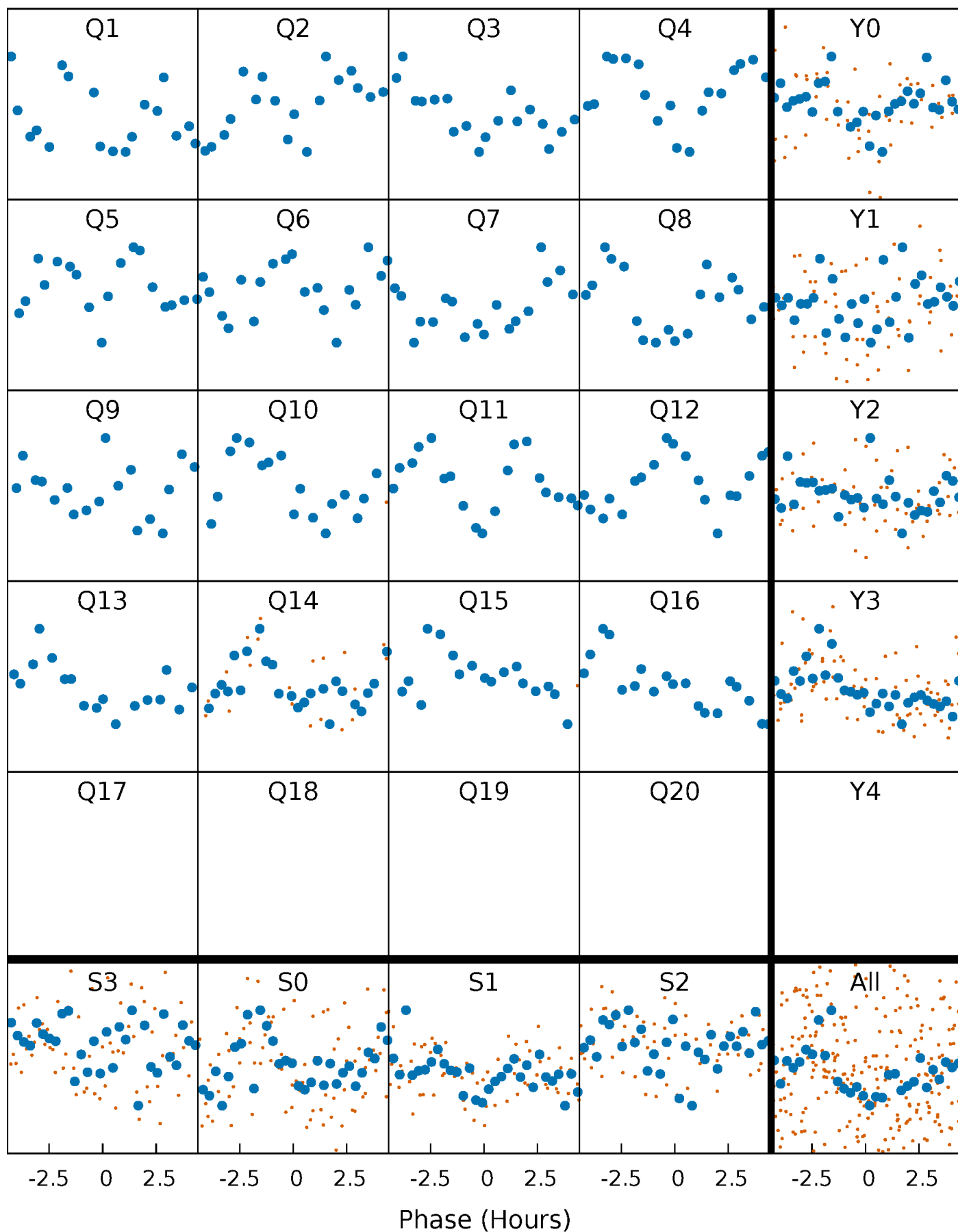


Non-Whitened Vs. Whitened Light Curve



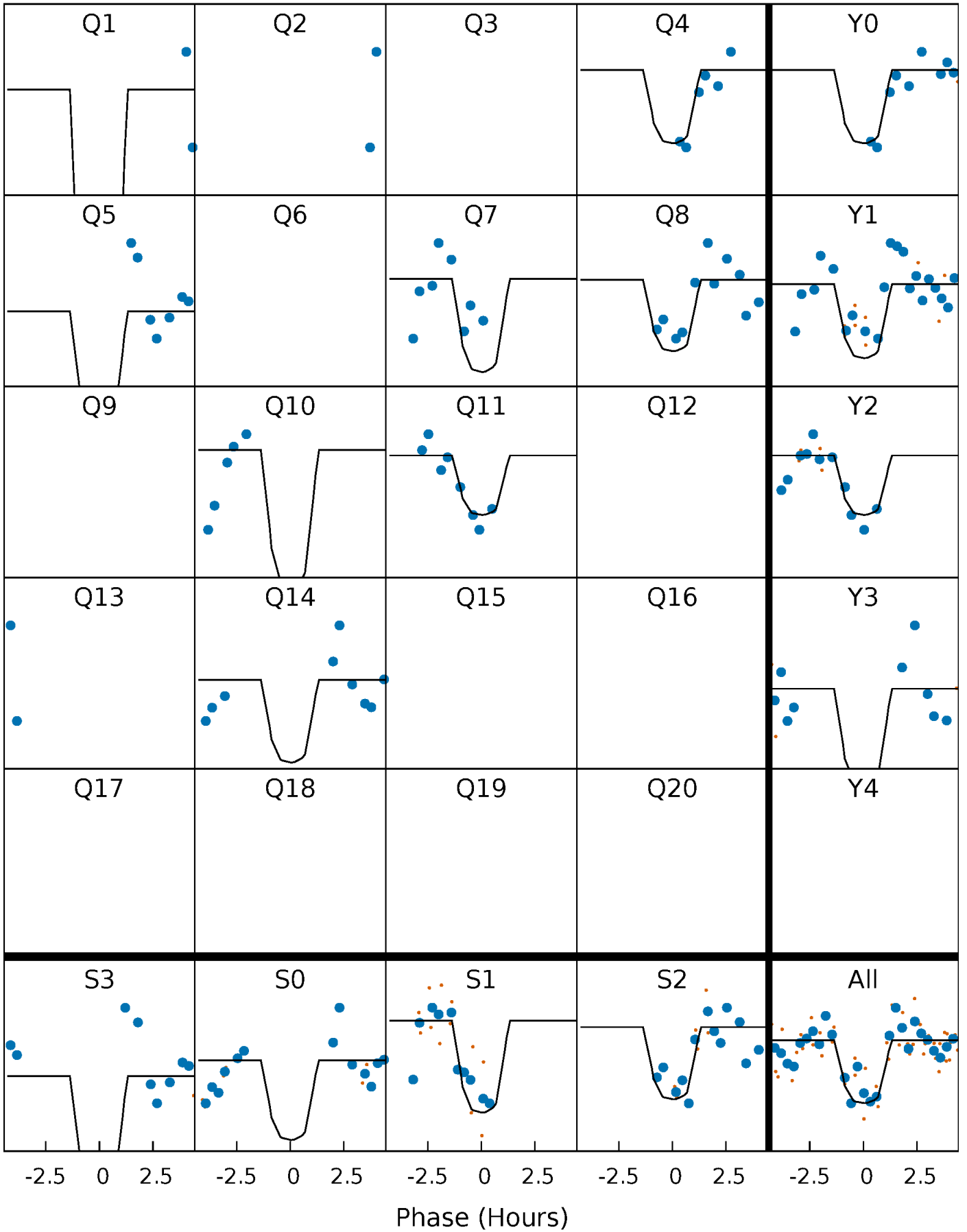
PDC Quarter-Phased Transit Curves

TCE 005036761-03 P= 87.676469 Days $T_0=140.401496$ (BKJD)



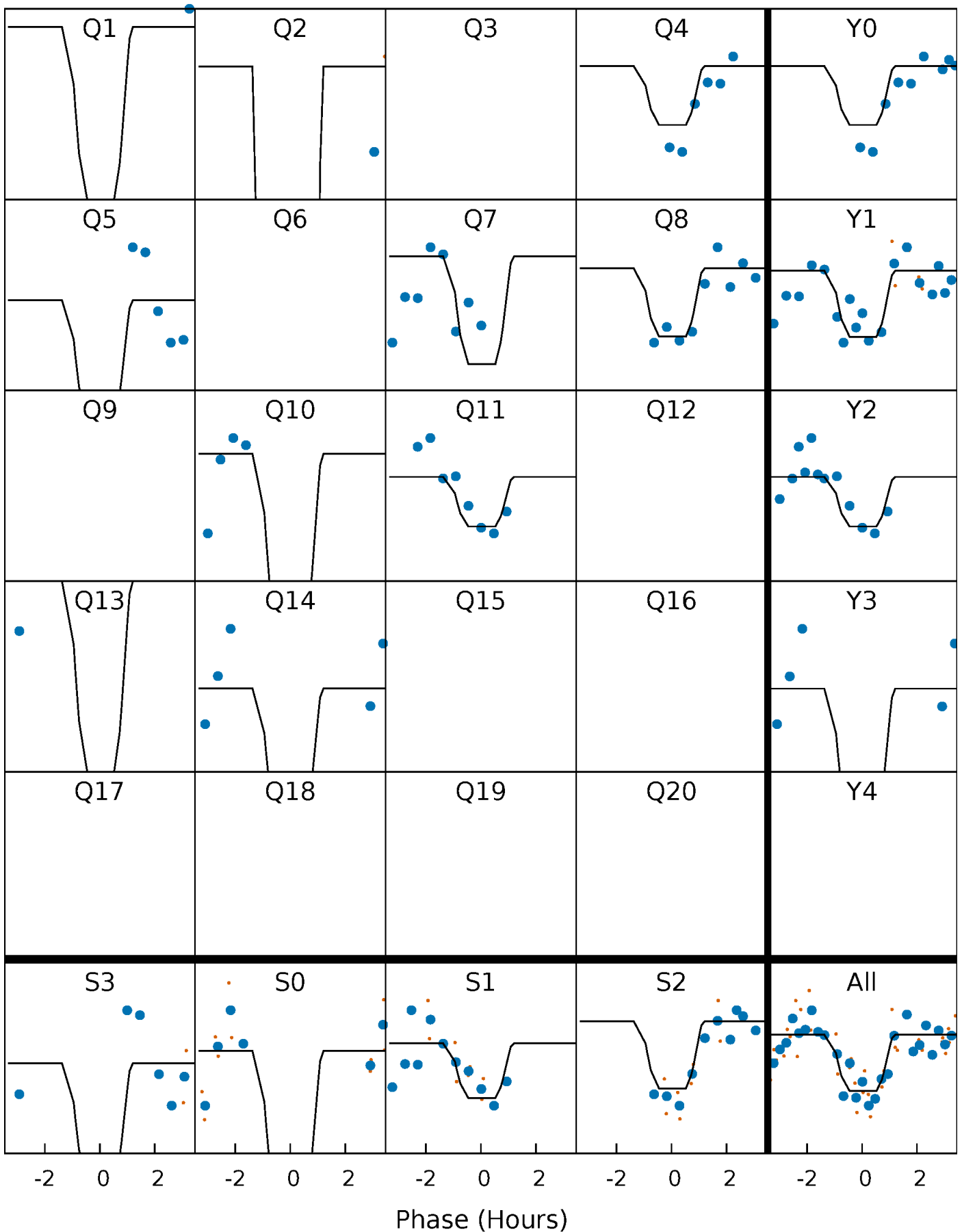
DV Quarter-Phased Transit Curves

TCE 005036761-03 $P = 87.676469$ Days $T_0 = 140.401496$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

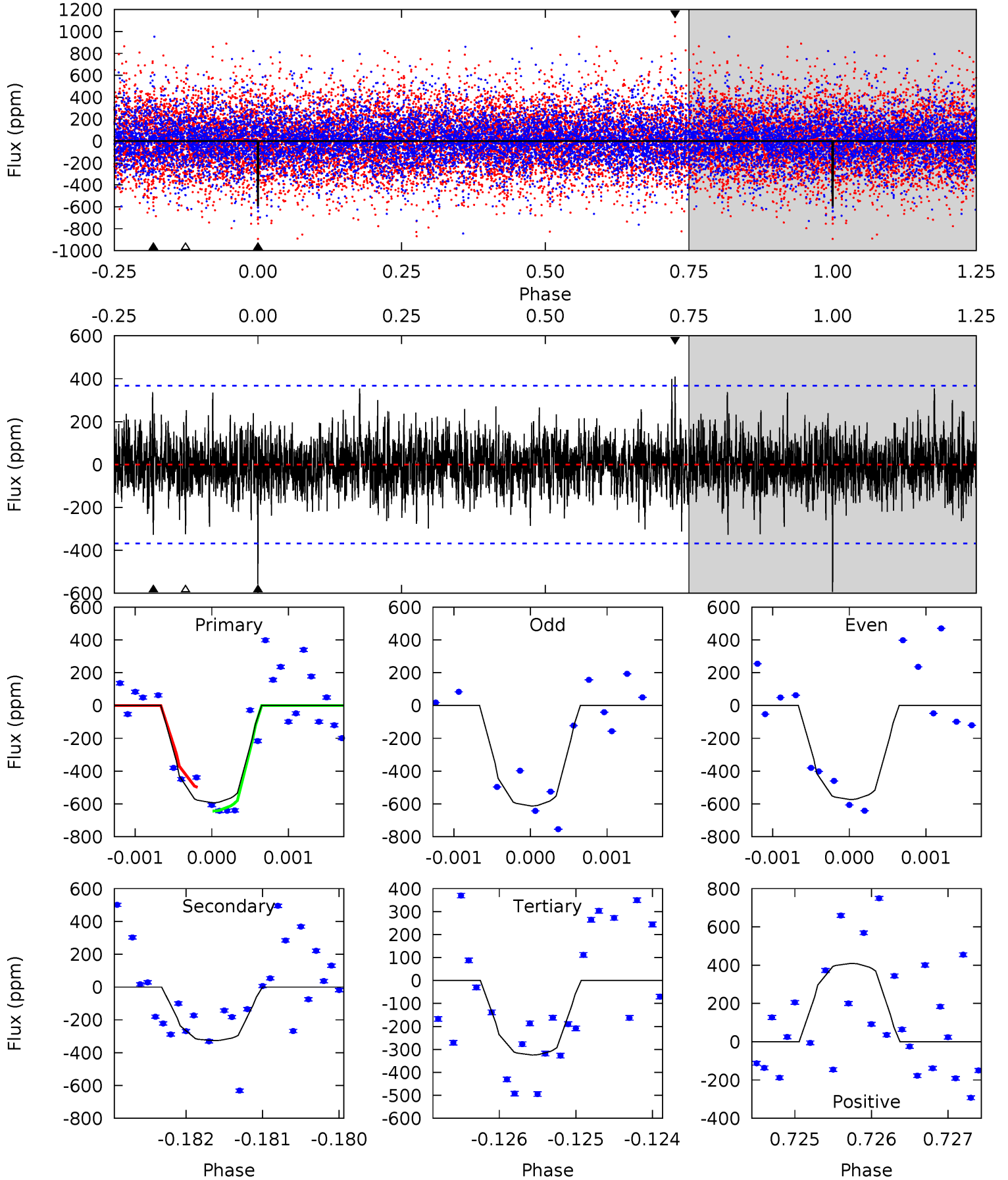
TCE 005036761-03 P= 87.671198 Days $T_0=140.433289$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-03, P = 87.676469 Days, E = 52.725027 Days

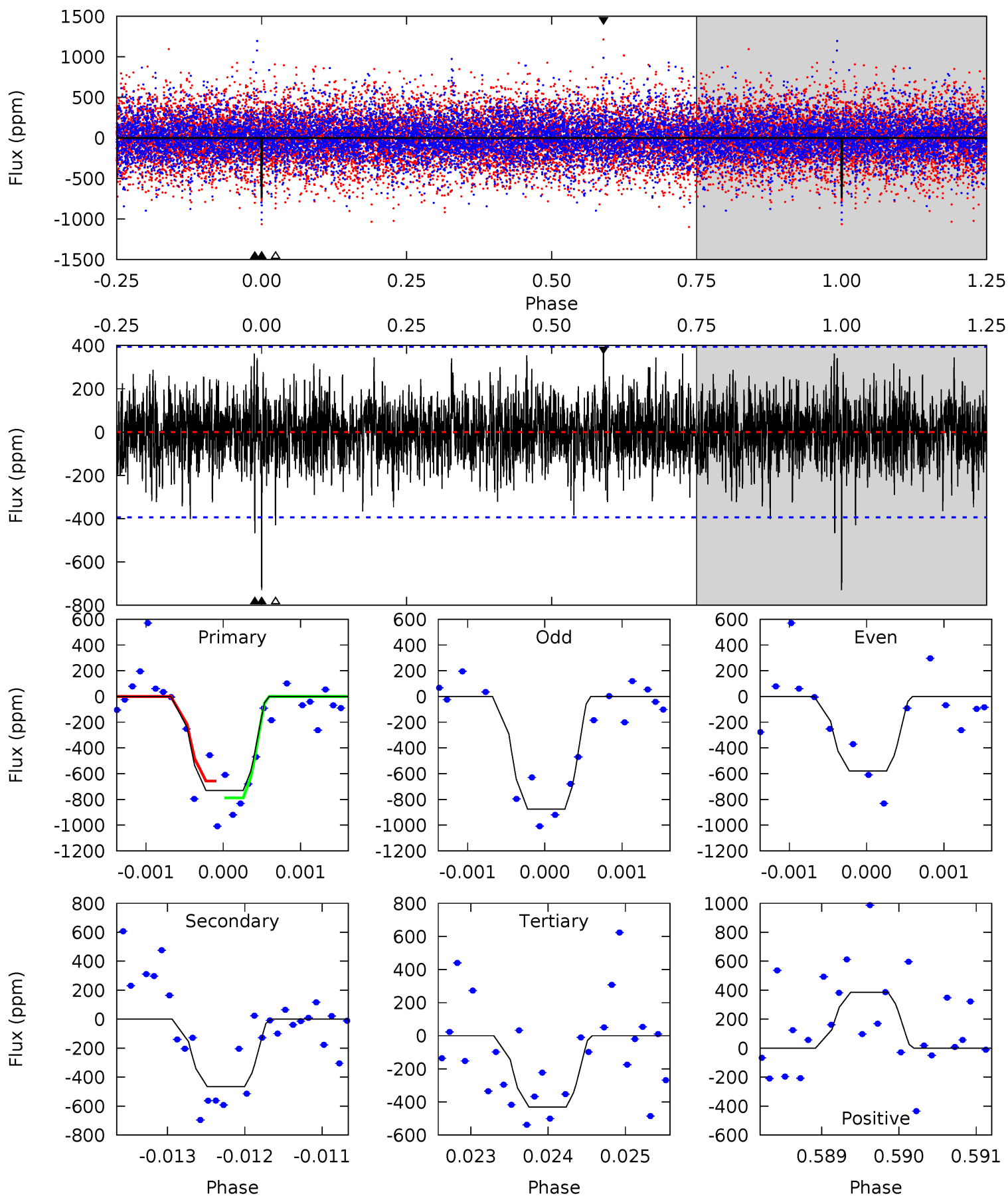
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.80	4.85	4.81	6.07	5.45	3.30	1.34	3.99	2.72	0.04	-1.22	0.29	0.92	0.41	1.01



Alt Model-Shift Uniqueness Test

005036761-03, P = 87.671198 Days, E = 52.762091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	6.46	5.97	5.35	5.46	3.30	1.53	4.16	4.78	0.50	1.12	2.05	0.99	0.35	0.90



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-327 ± 67	$8.31^{+8.26}_{-5.53}$	726^{+54}_{-36}	4034^{+2402}_{-837}	435^{+3506}_{-330}
Alt.	-466 ± 72	$8.54^{+9.09}_{-5.77}$	728^{+57}_{-37}	4252^{+3194}_{-908}	592^{+5436}_{-457}

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 $A_{obs} \gg 1.0$

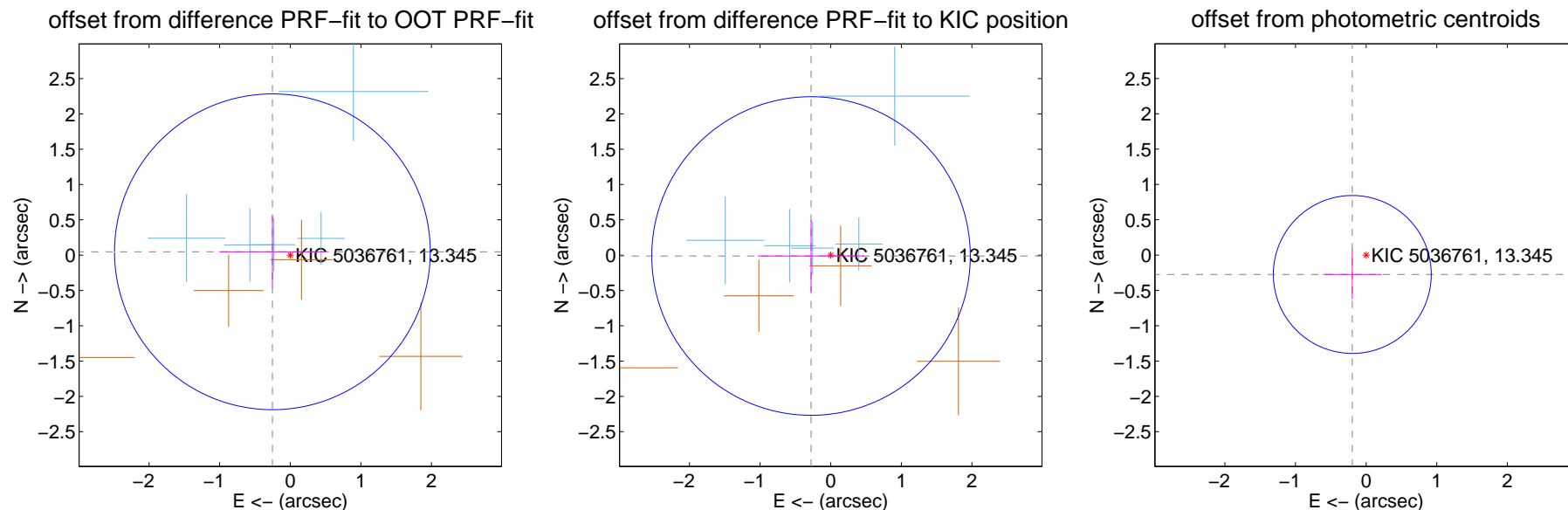
DV Centroid Data

Supplemental centroid analysis for 005036761-03. Kepler magnitude: 13.35. Transit SNR 9.41

There are 5 quarters with good PRF difference image offsets

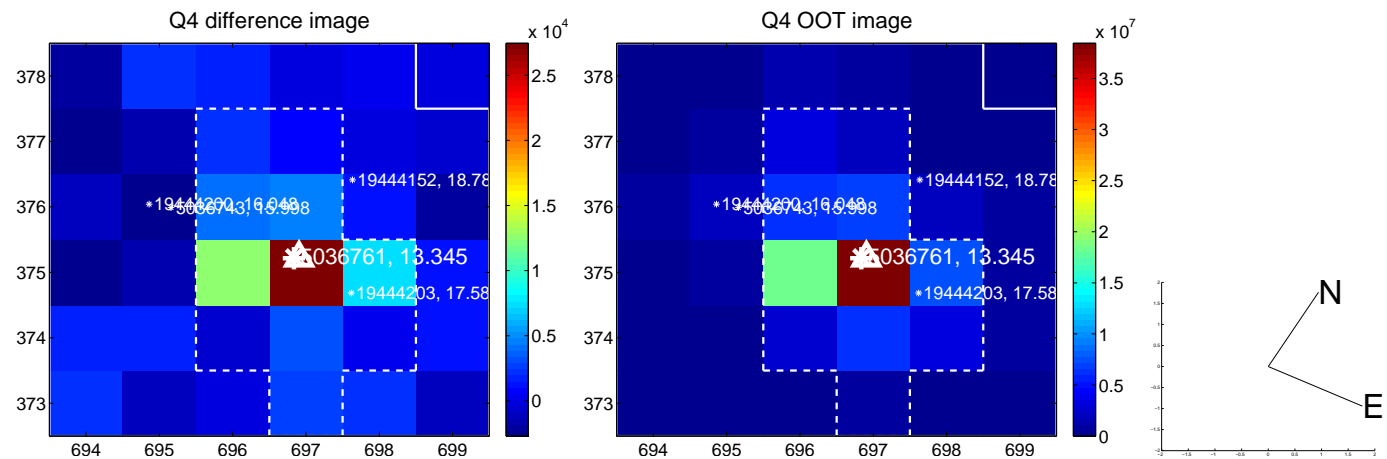
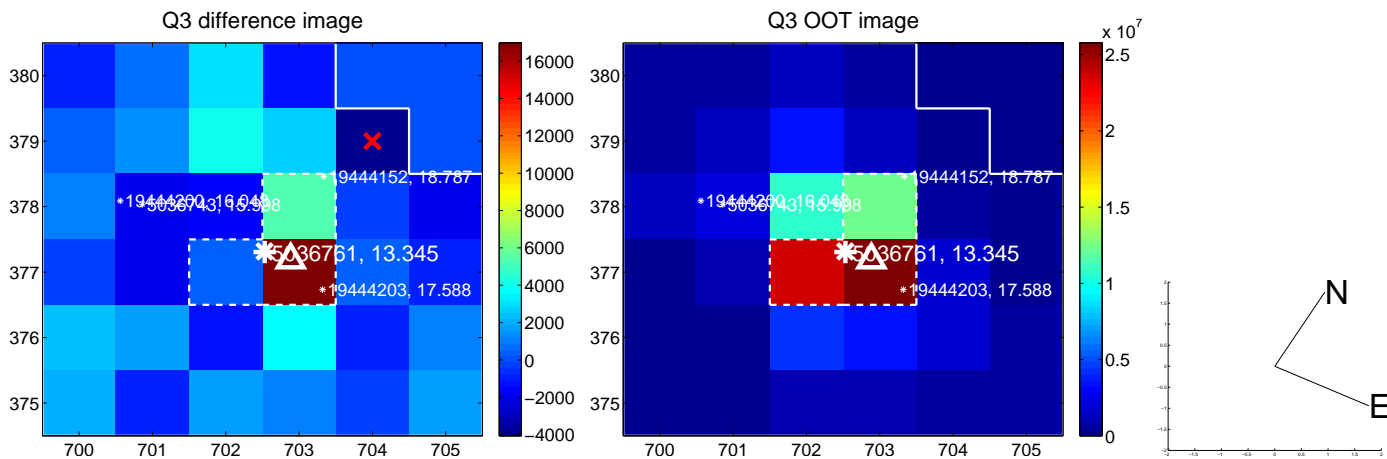
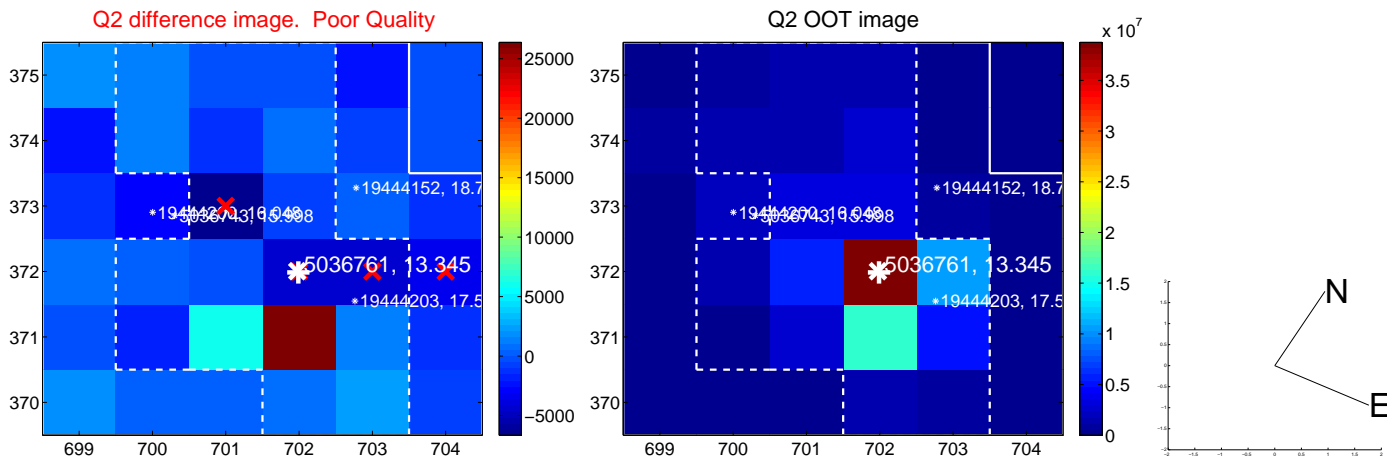
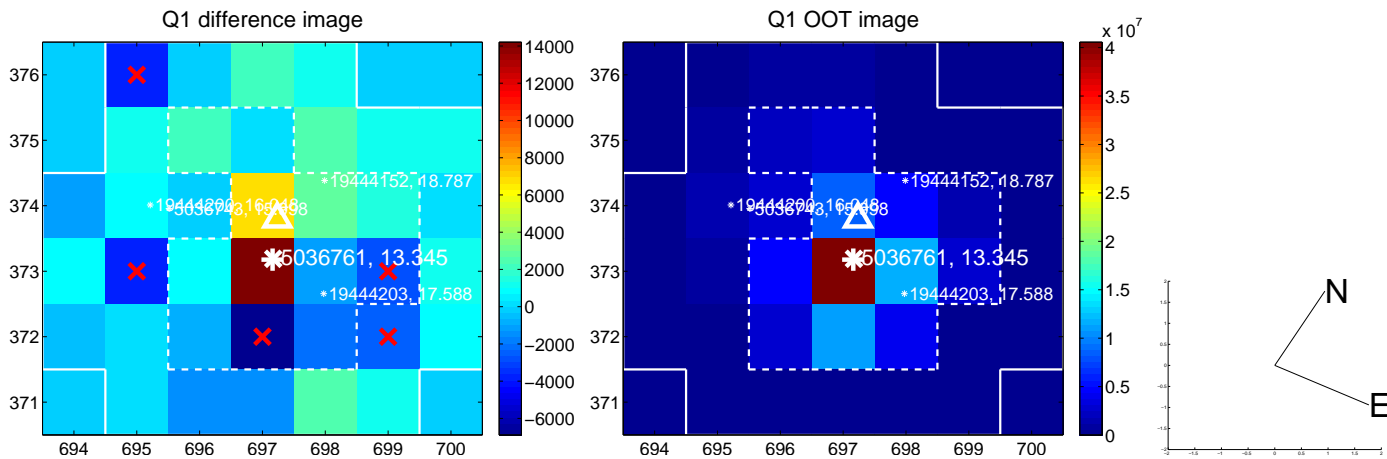
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.257 ± 0.745	0.35	0.253 ± 0.752	0.047 ± 0.505
PRF-fit source offset from KIC position	0.279 ± 0.752	0.37	0.279 ± 0.752	-0.012 ± 0.505
photometric centroid source offset	0.34 ± 0.37	0.90	0.20 ± 0.41	-0.27 ± 0.35

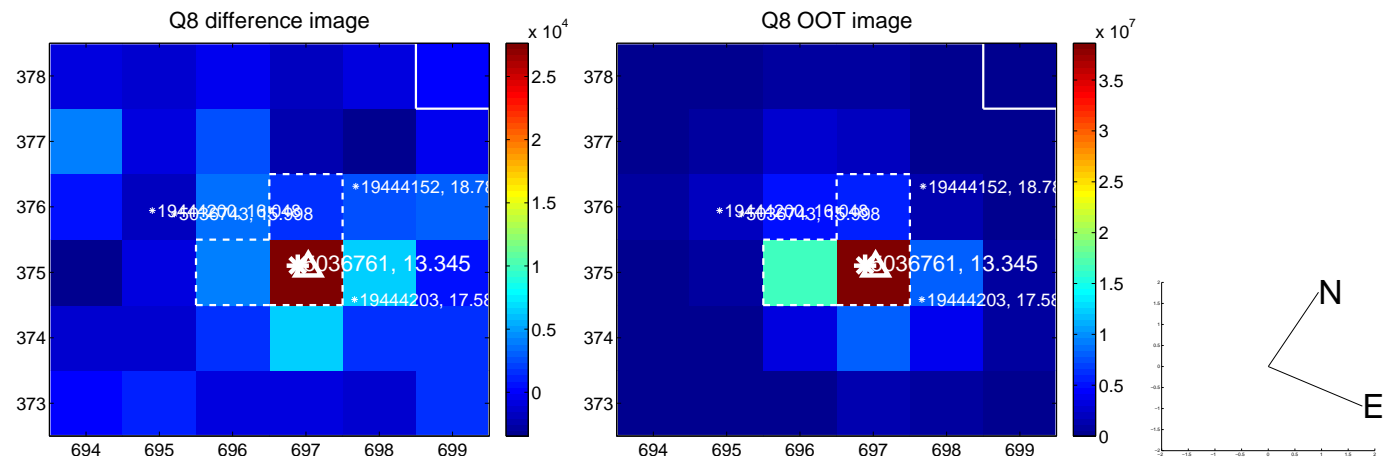
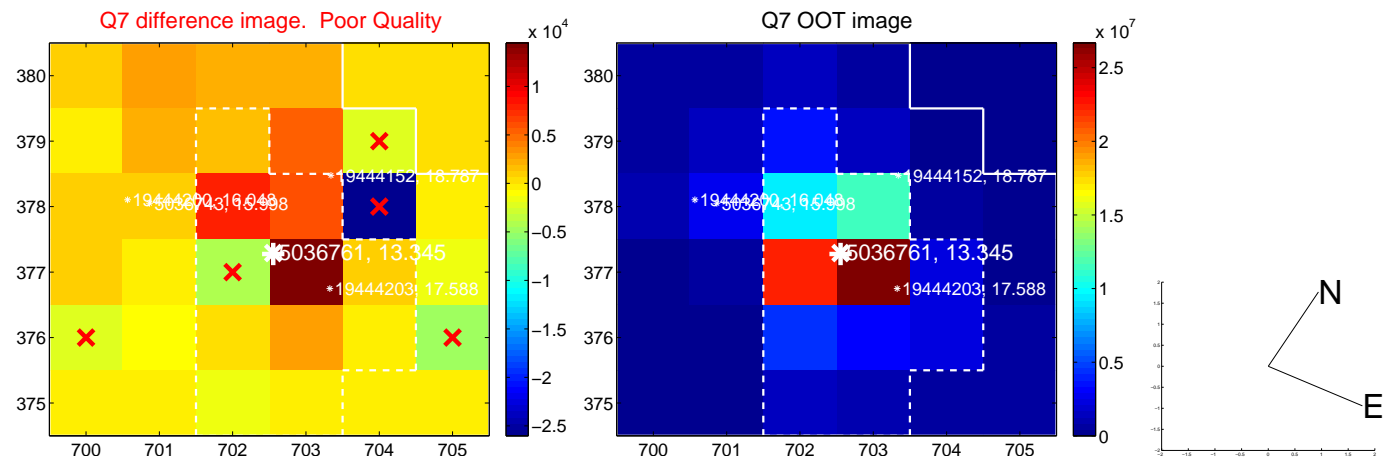
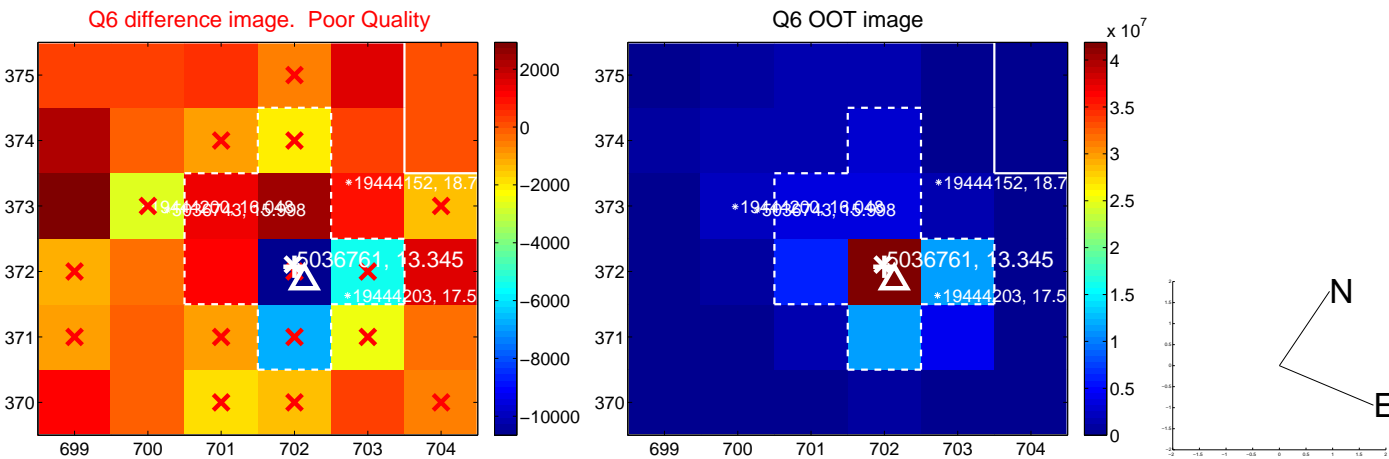
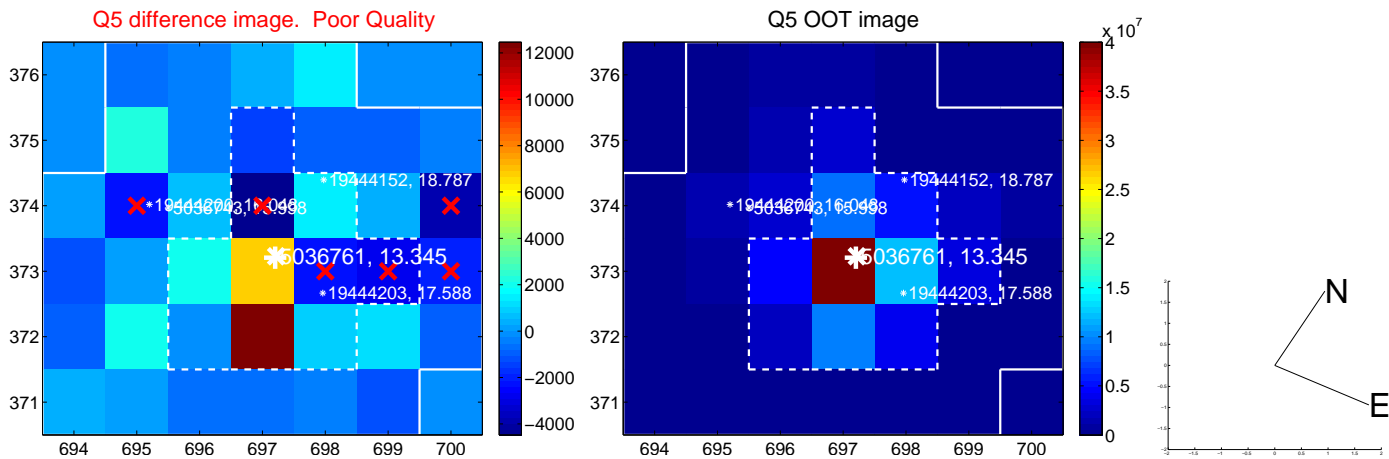


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

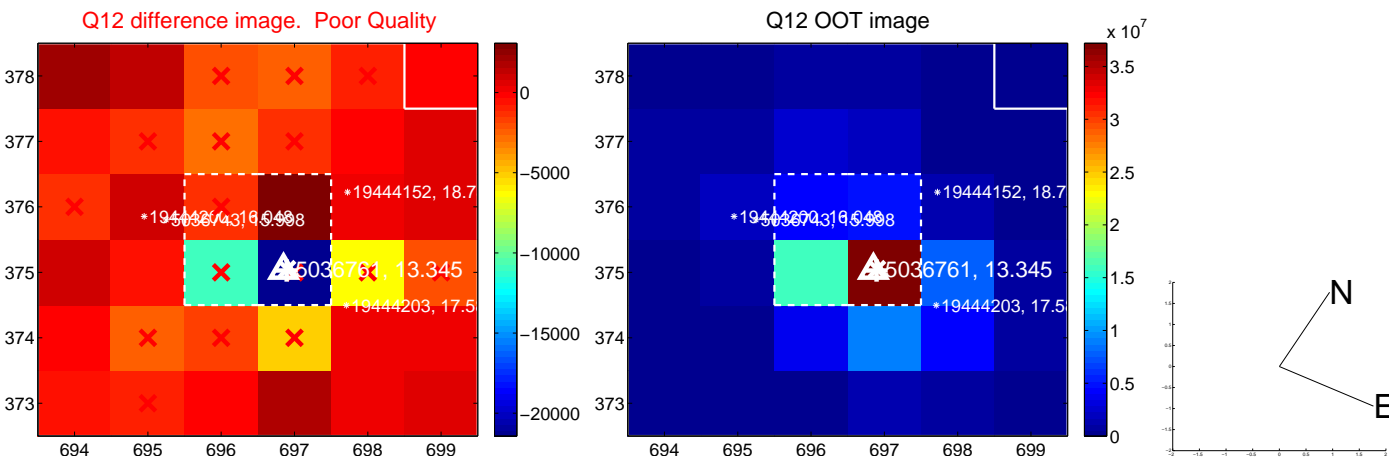
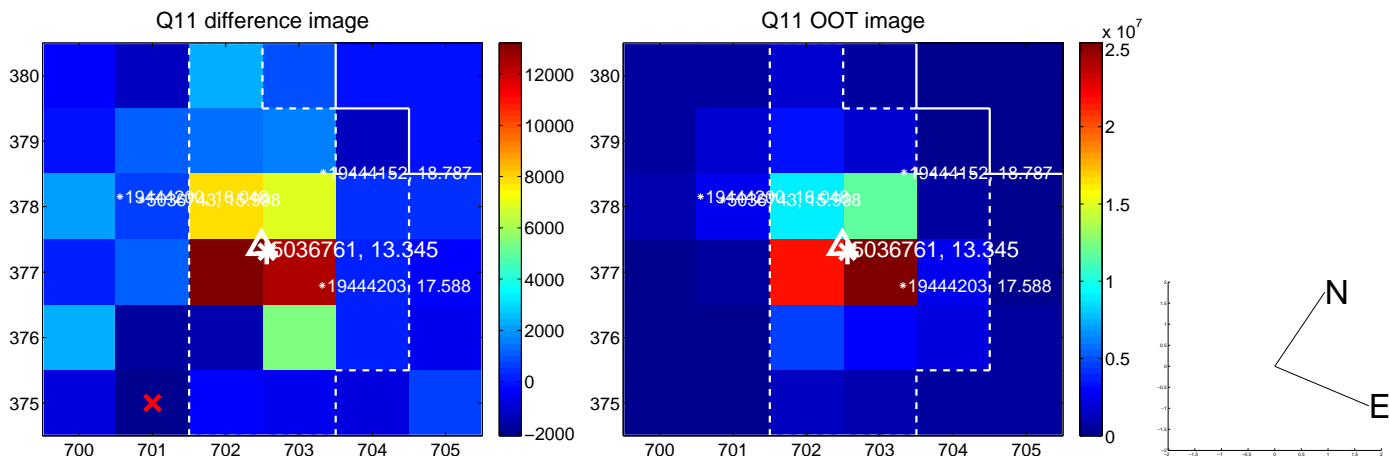
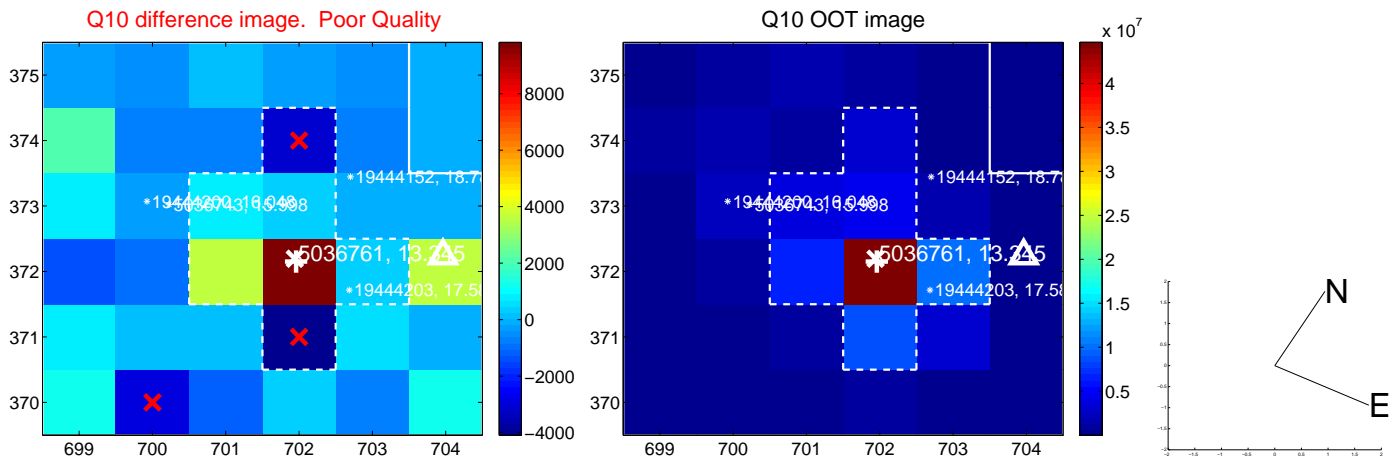
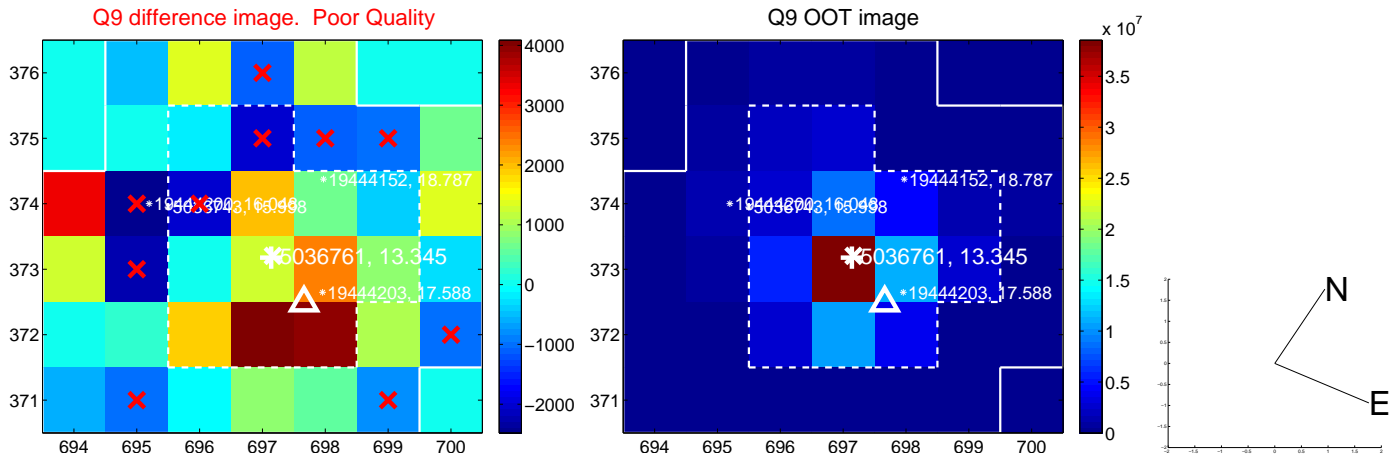
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



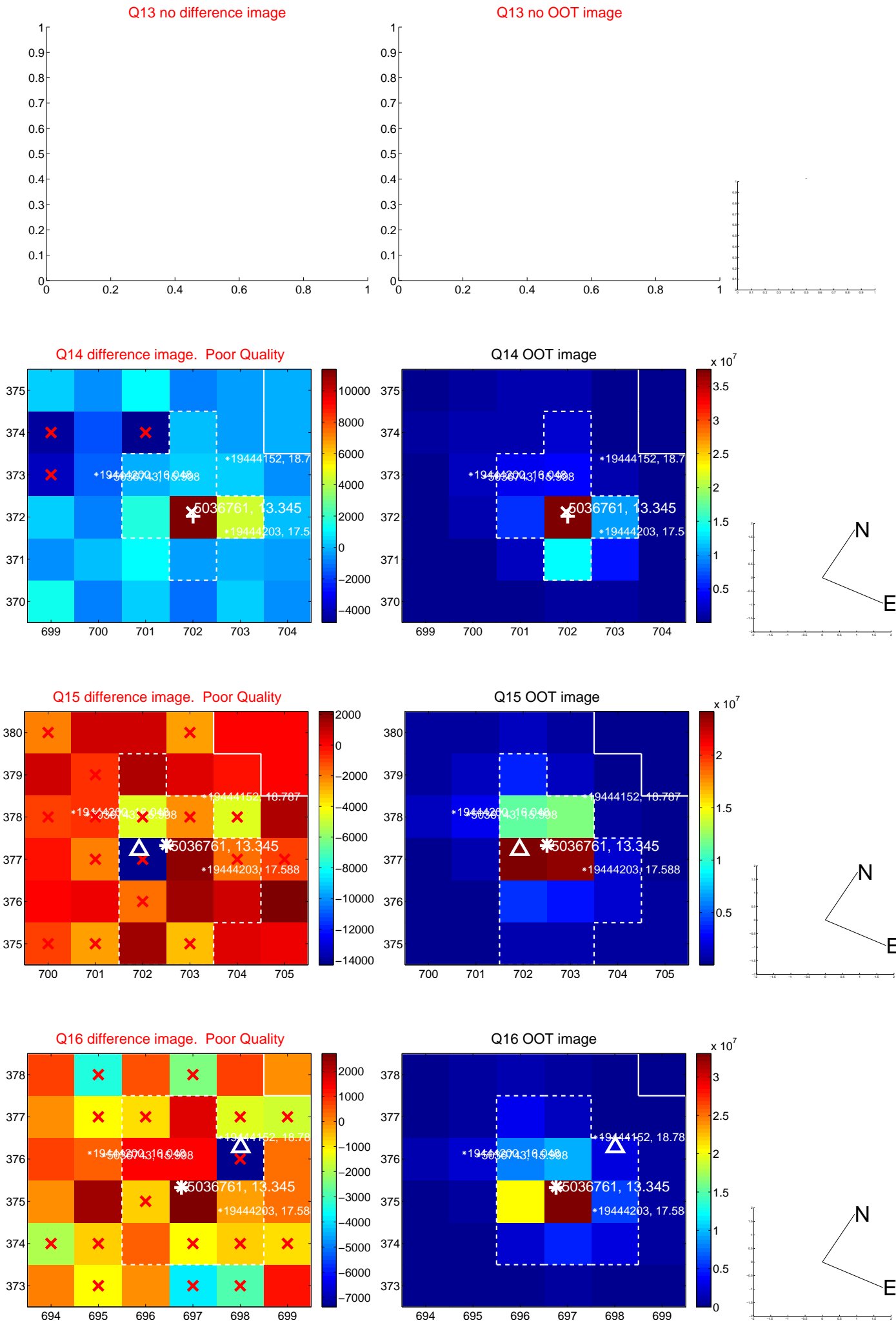
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



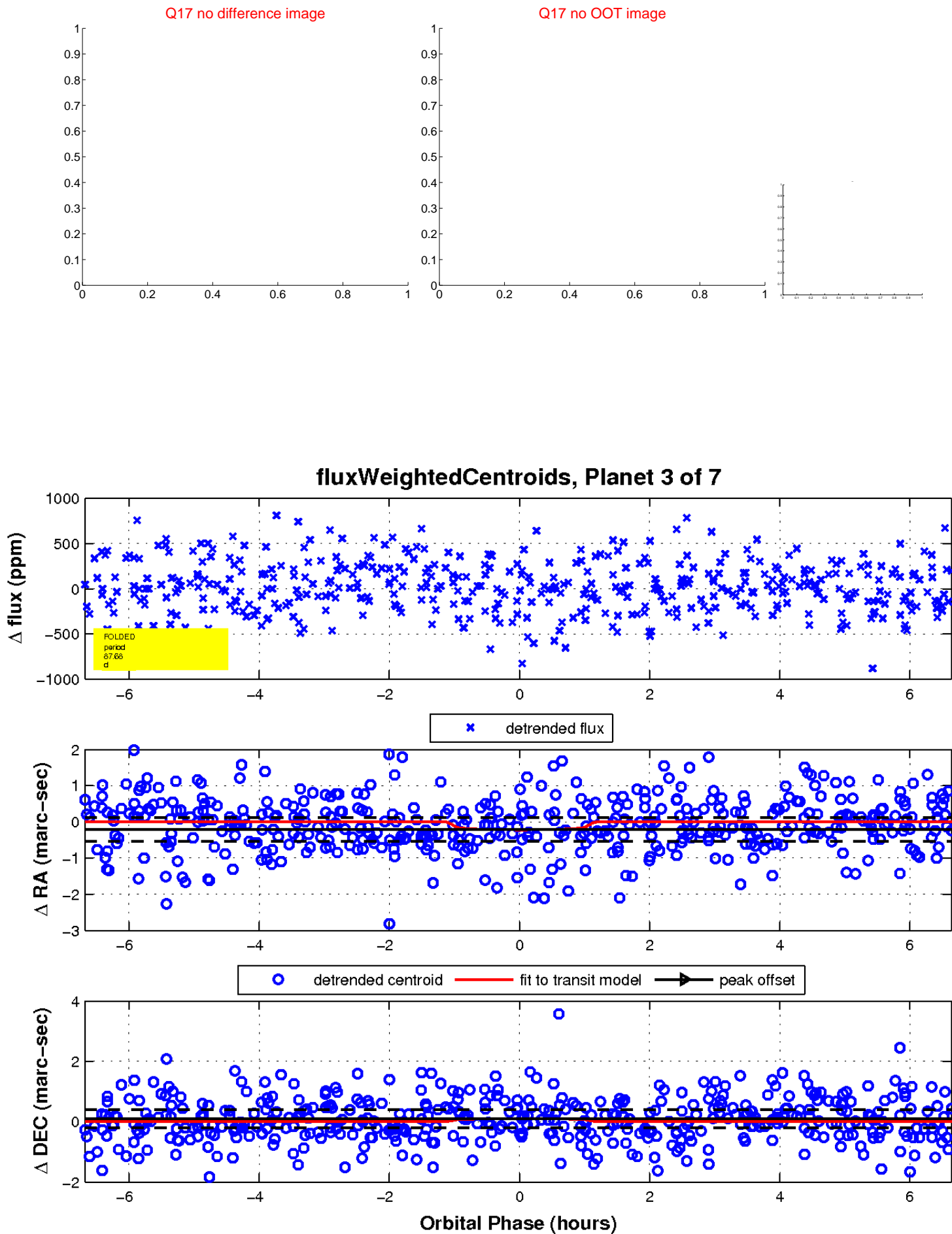
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

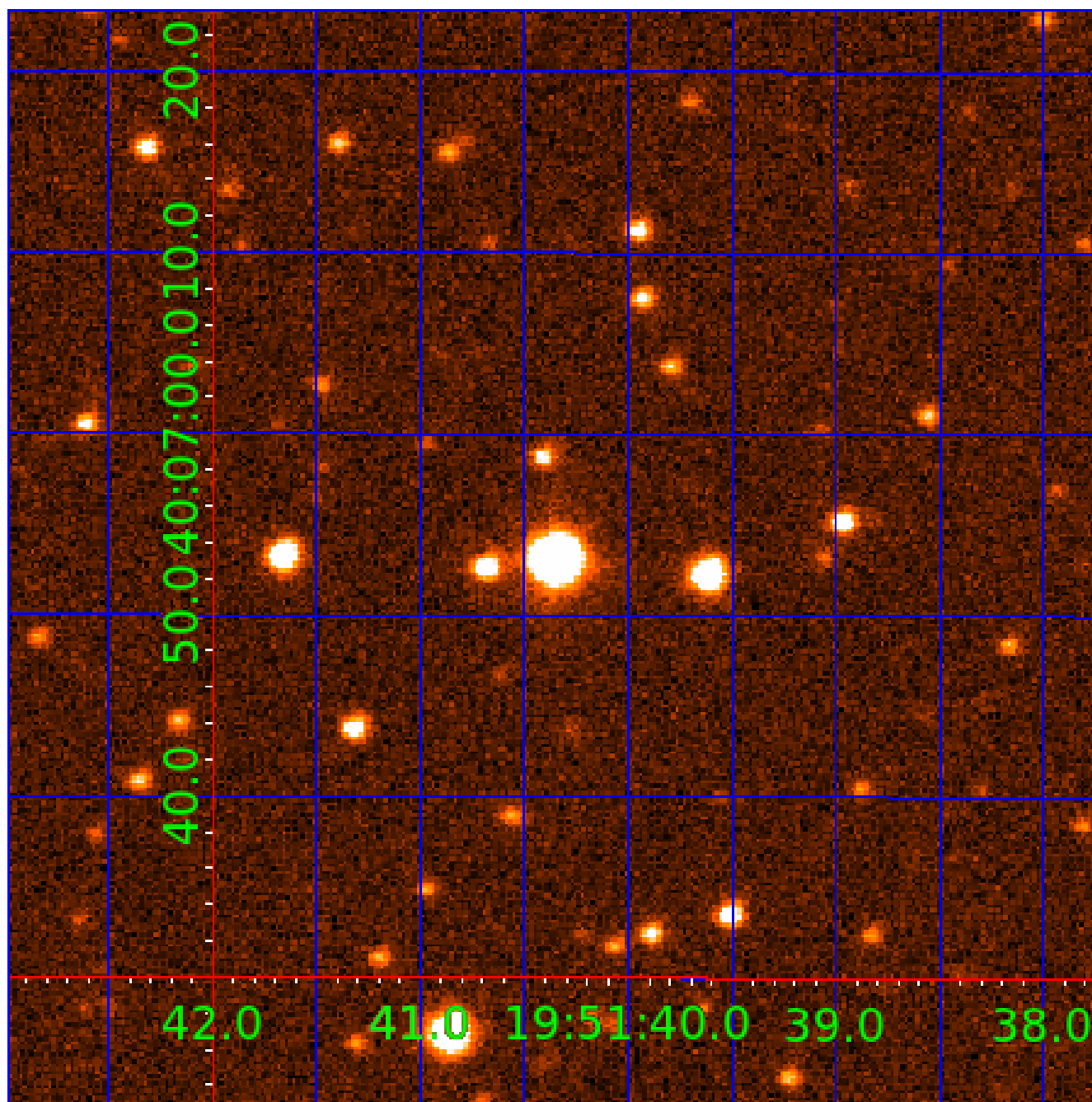


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005036761

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})
005036761-01	OBS	No	0.630406	131.601714	39.7	1.744	11.0	9.9	1.26	6658	0.85	11752.99
005036761-02	OBS	No	0.738593	131.968020	30.8	3.453	11.0	7.3	1.26	6658	0.72	9515.58
005036761-03	OBS	No	87.676469	140.401496	714.3	2.231	9.3	9.4	1.26	6658	3.59	16.31
005036761-04	OBS	No	110.473550	135.848811	576.6	3.586	8.7	8.4	1.26	6658	3.34	11.98
005036761-05	OBS	No	123.035676	147.186643	567.1	2.634	9.1	8.1	1.26	6658	3.35	10.38
005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036761-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

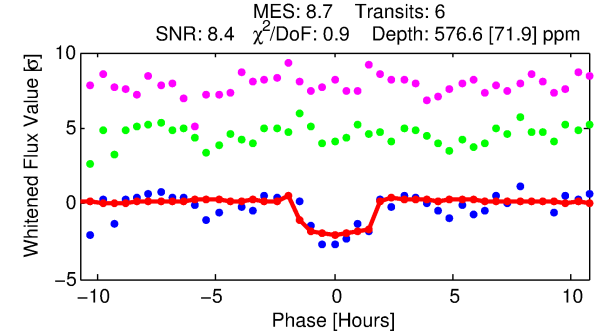
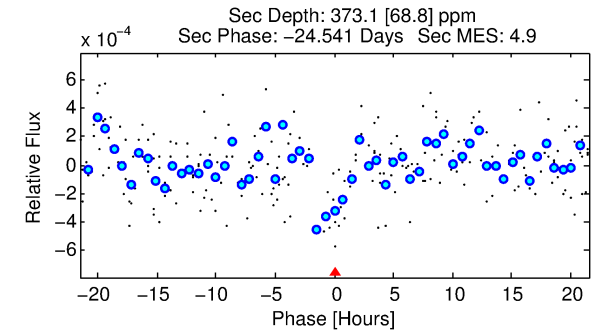
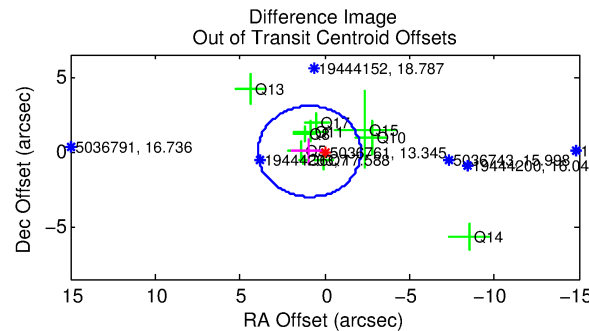
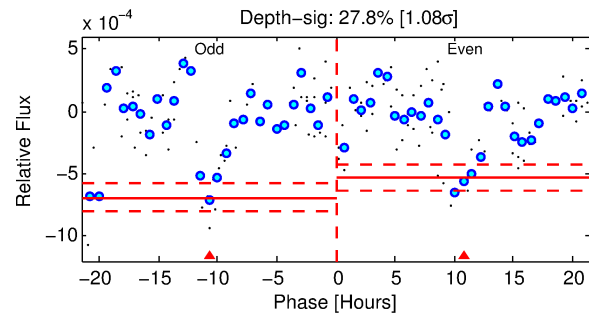
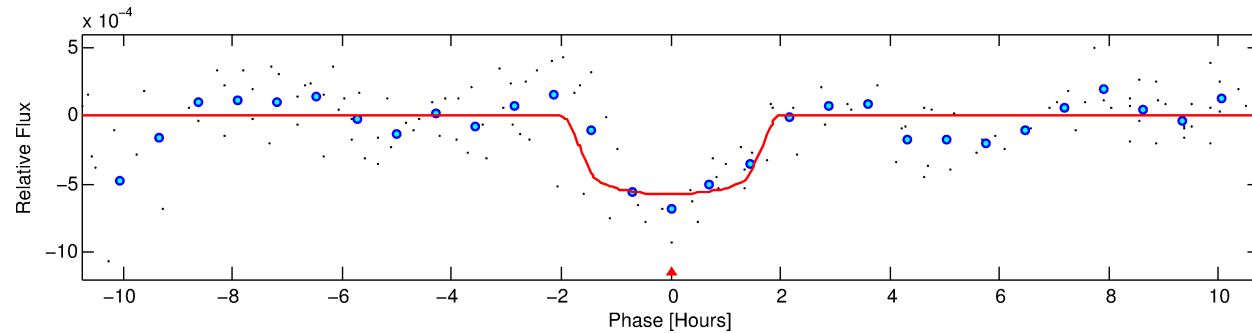
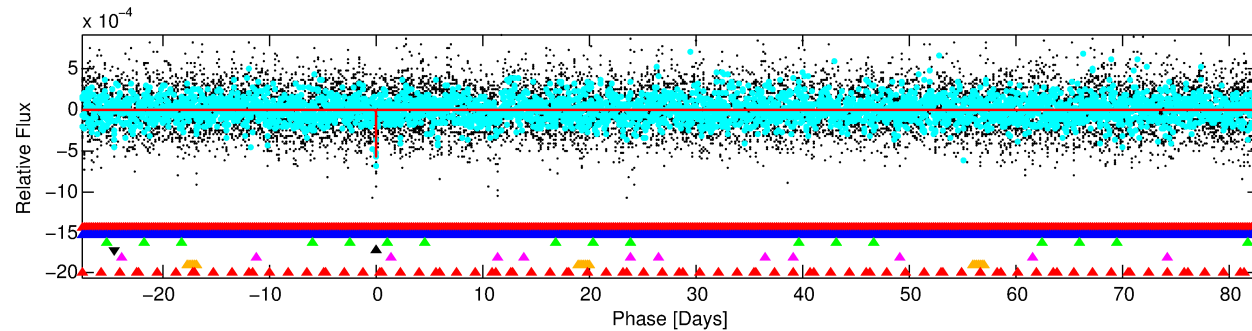
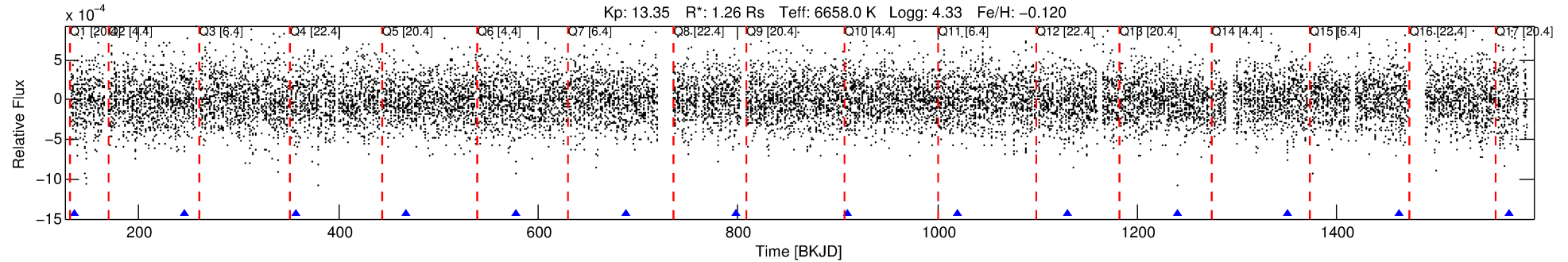
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-04

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 4 of 7 Period: 110.474 d



DV Fit Results:

Period = 110.47355 [0.00095] d
Epoch = 135.8488 [0.0086] BKJD
Rp/R* = 0.0242 [0.0097]
a/R* = 152.65 [341.15]
b = 0.79 [1.04]
Seff = 11.98 [4.96]
Teq = 474 [49] K
Rp = 3.34 [1.73] Re
a = 0.4837 [0.1310] AU
Ag = 4310.50 [3932.08] [1.10 σ]
Teffp = 5944 [1244] K [4.39 σ]

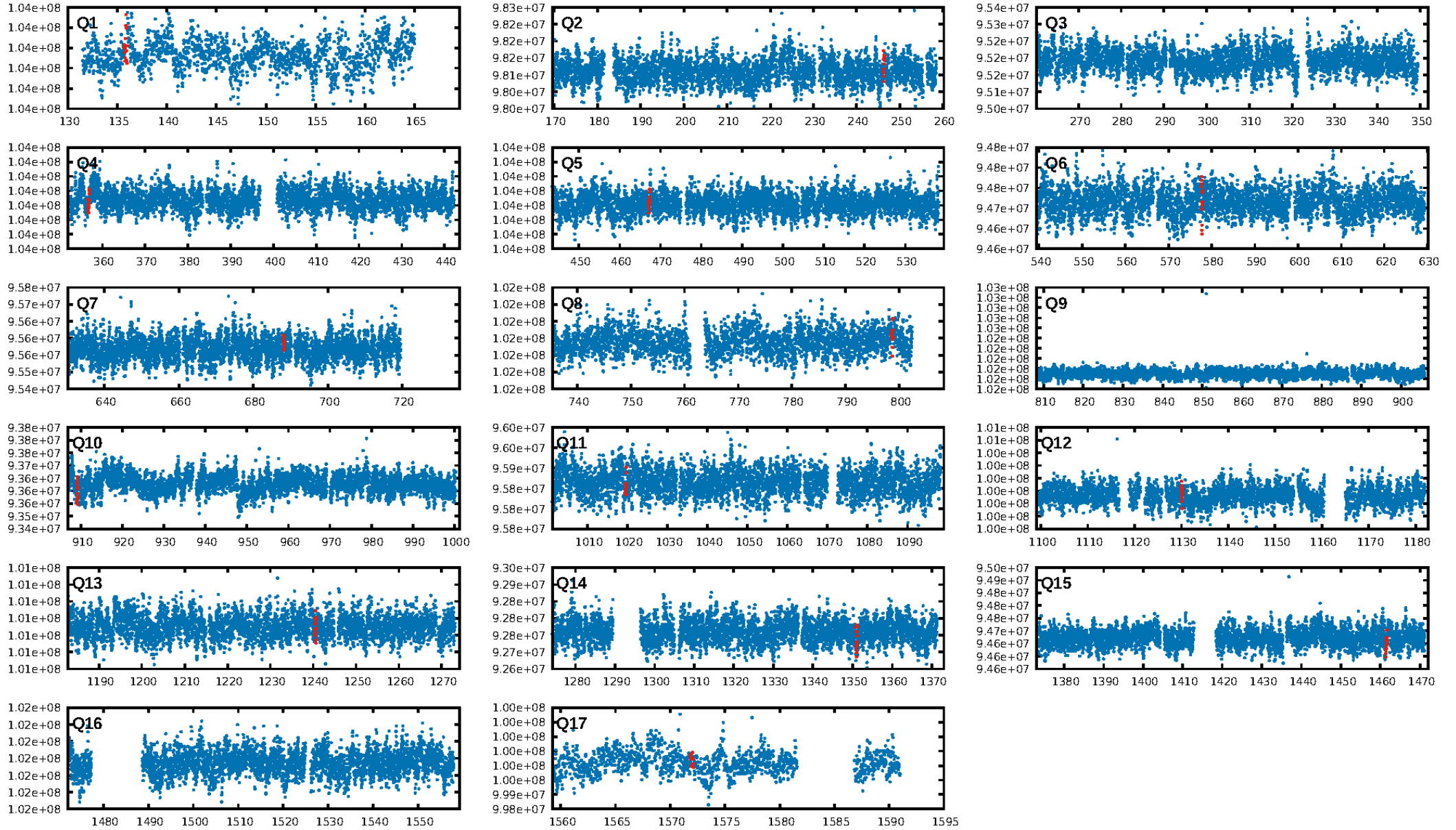
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [129.55 σ]
LongPeriod-sig: 100.0% [67.76 σ]
ModelChiSquare2-sig: 53.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.84e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 7.096
Centroid-sig: 47.0%
Centroid-so: 0.384 arcsec [0.95 σ]
OotOffset-rm: 0.907 arcsec [0.90 σ]
KicOffset-rm: 0.992 arcsec [1.15 σ]
OotOffset-st: 3/3/1/3 [10]
KicOffset-st: 3/3/1/3 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 0.00 [0/12]

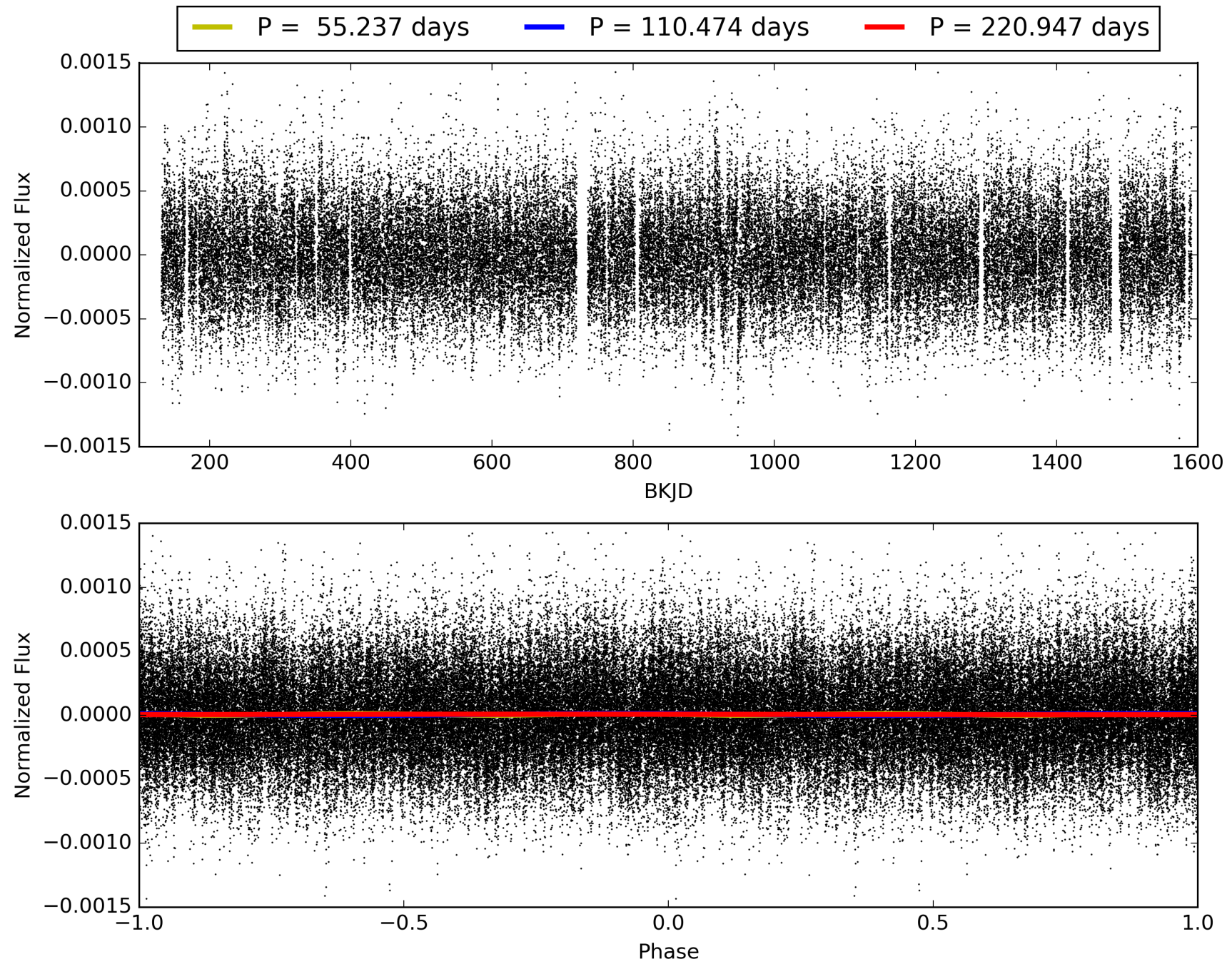
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:45 Z

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

TCE 005036761-04, PDC Light Curves

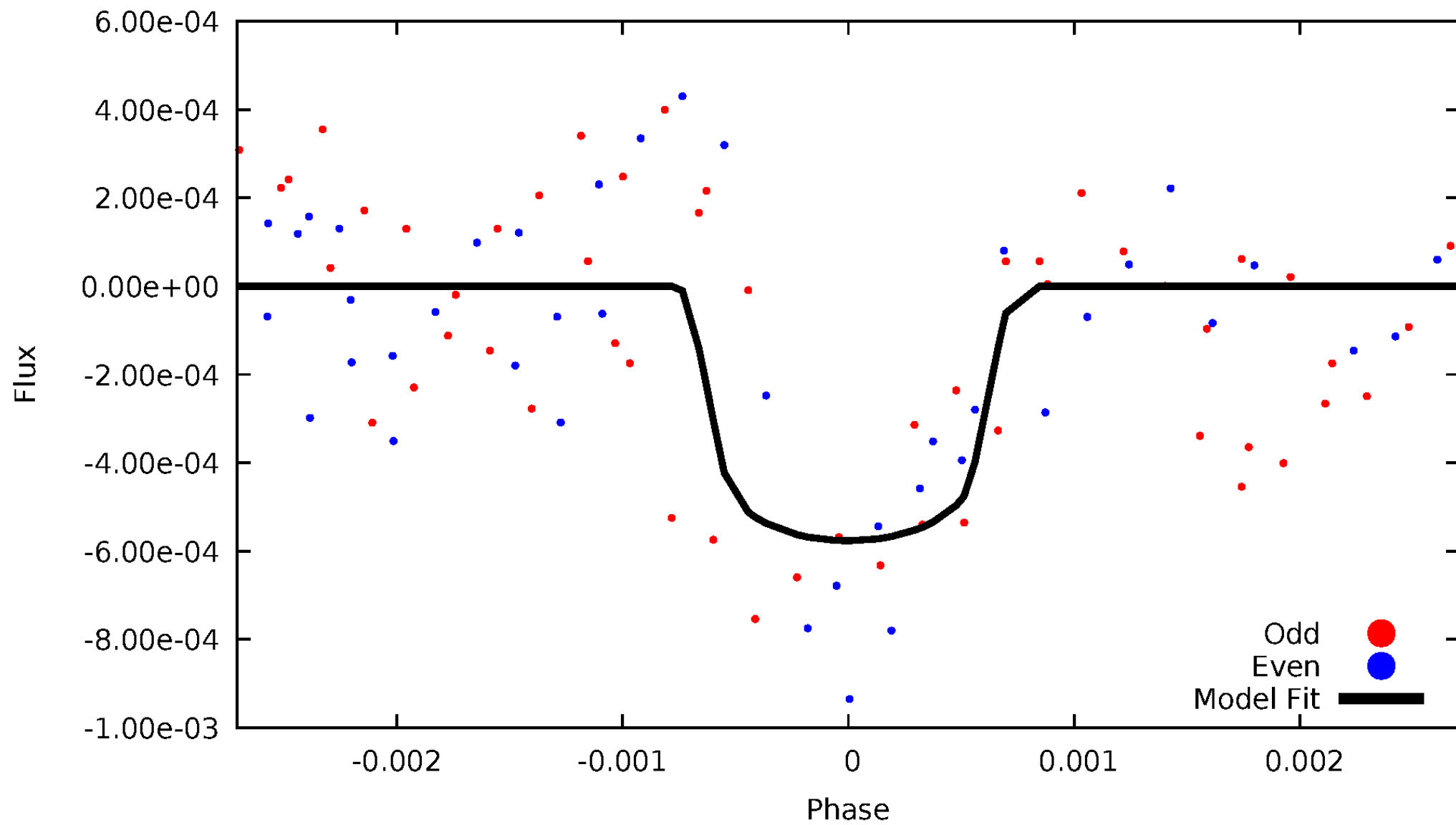


TCE 005036761-04



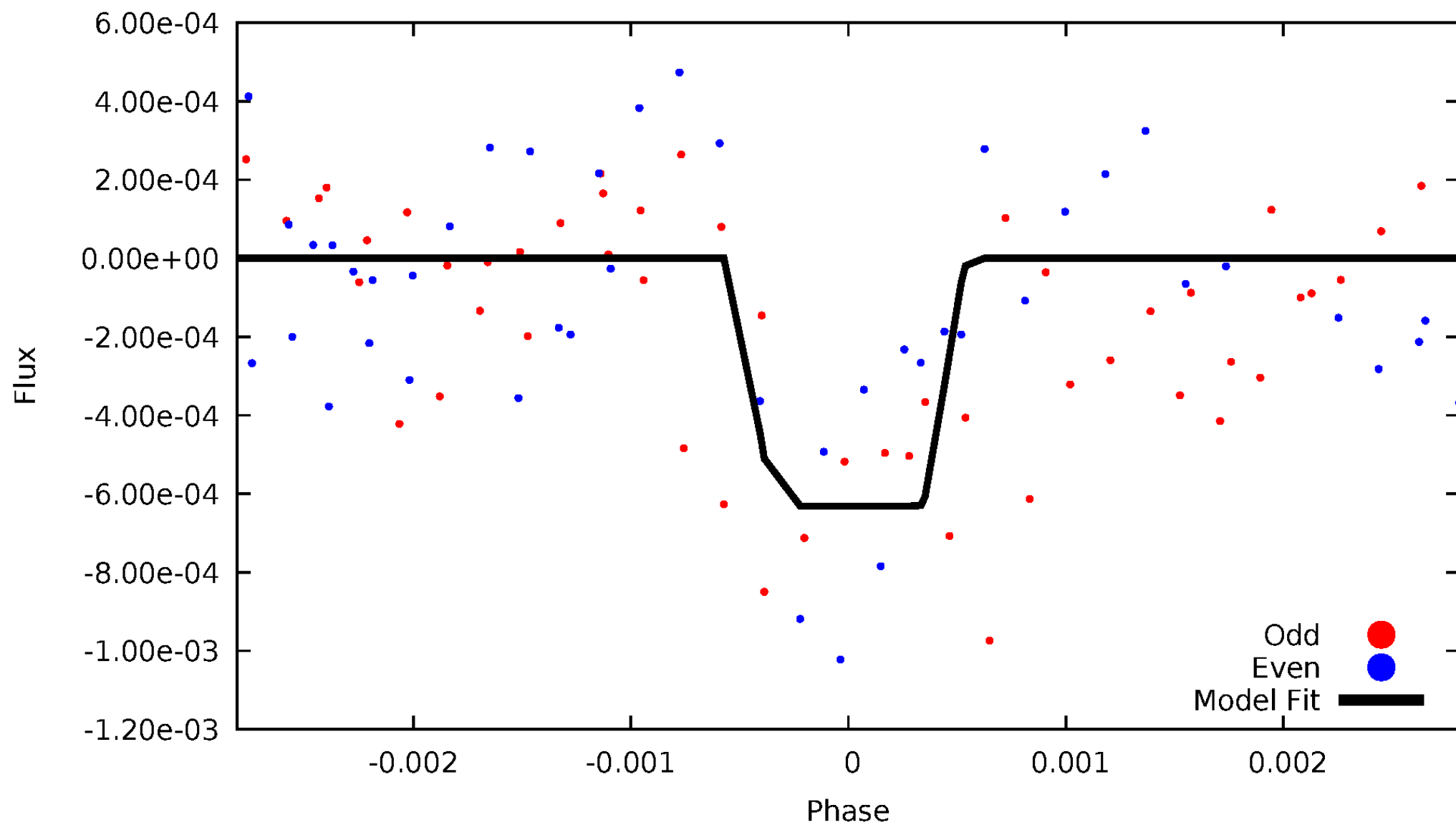
DV Odd/Even

TCE 005036761-04



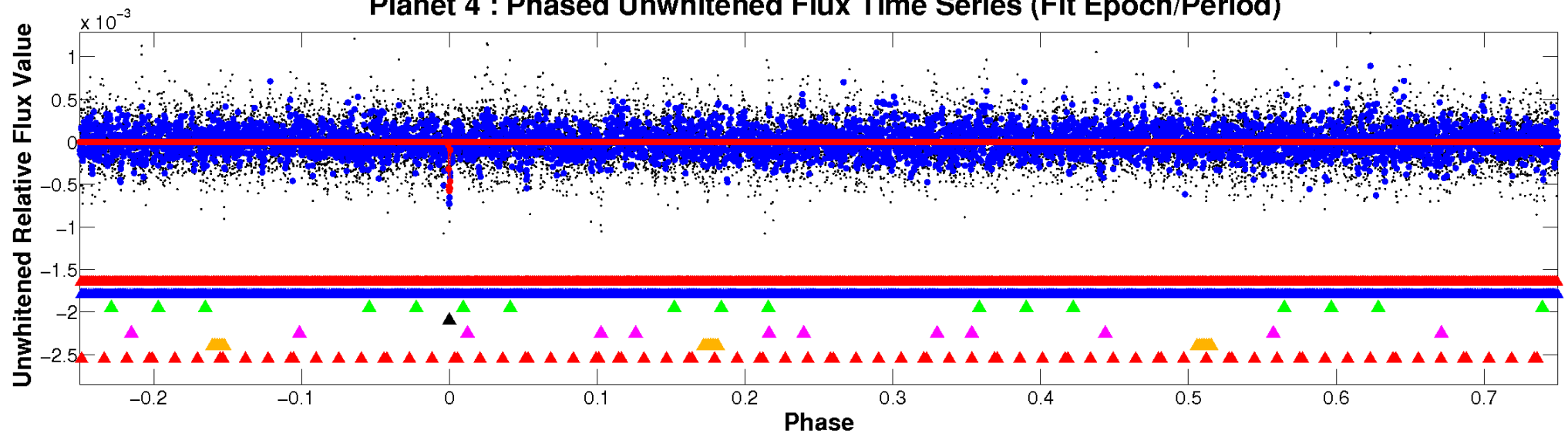
ALT Odd/Even

TCE 005036761-04

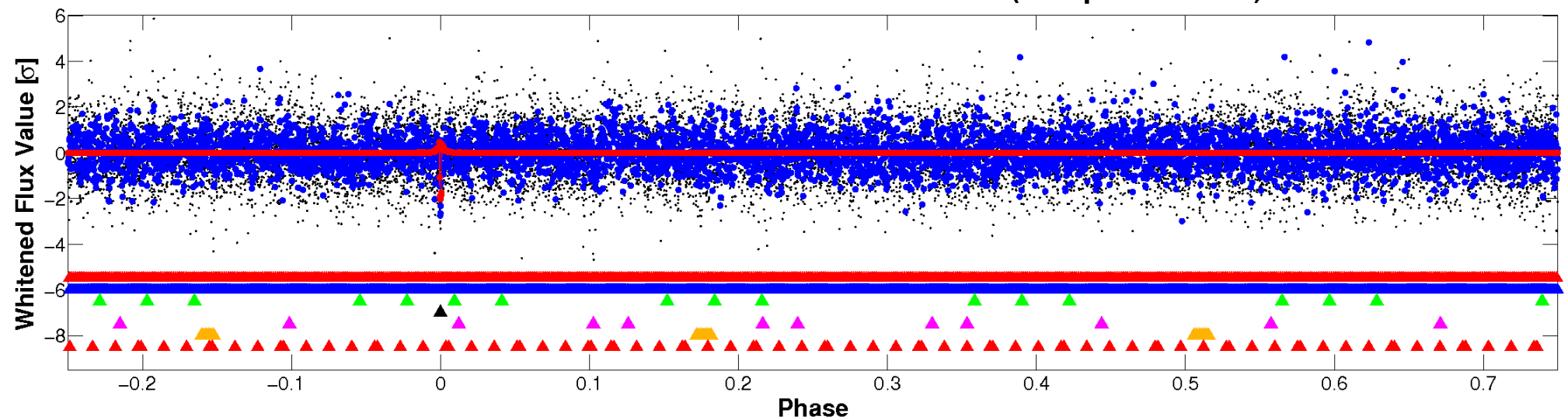


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

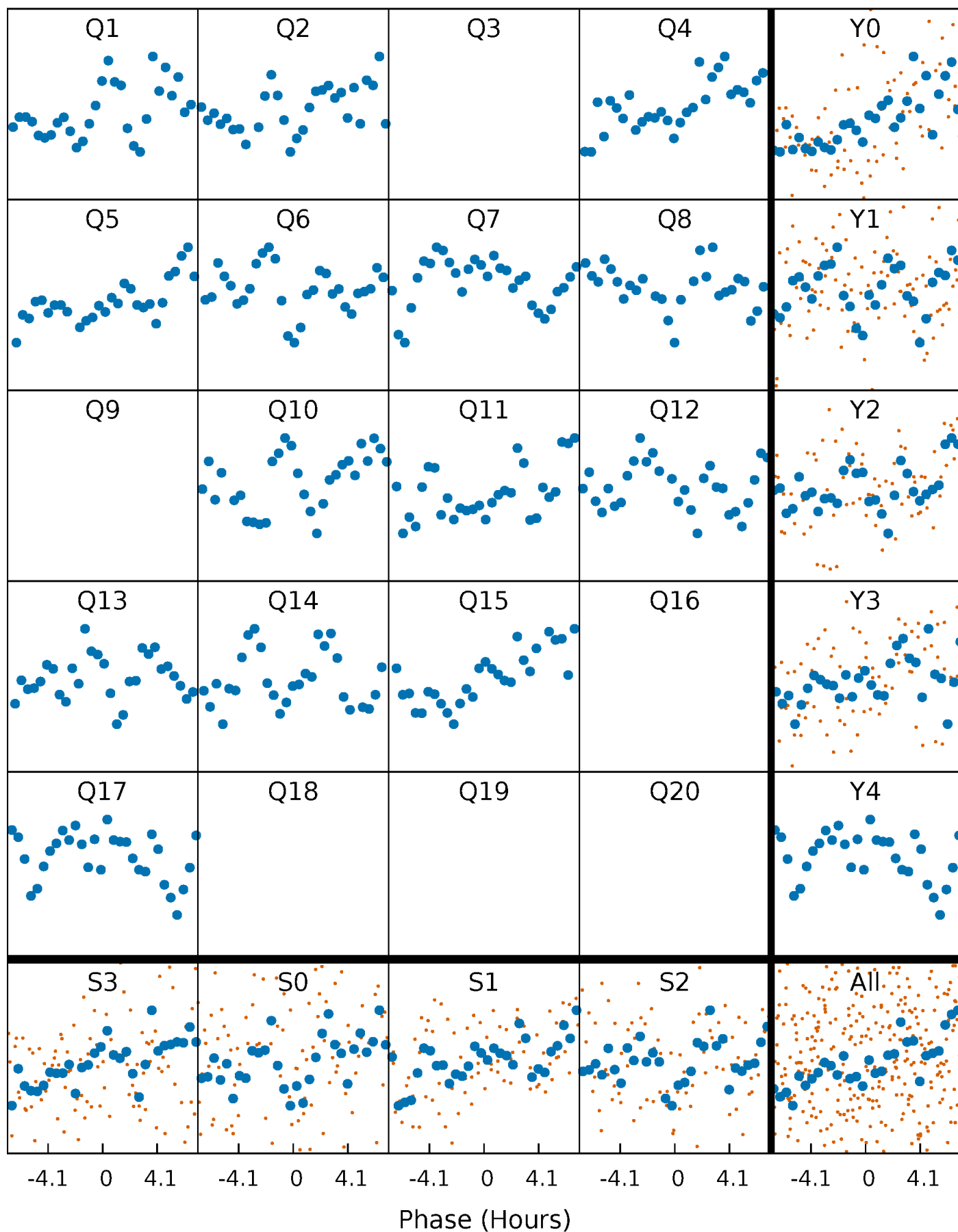


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



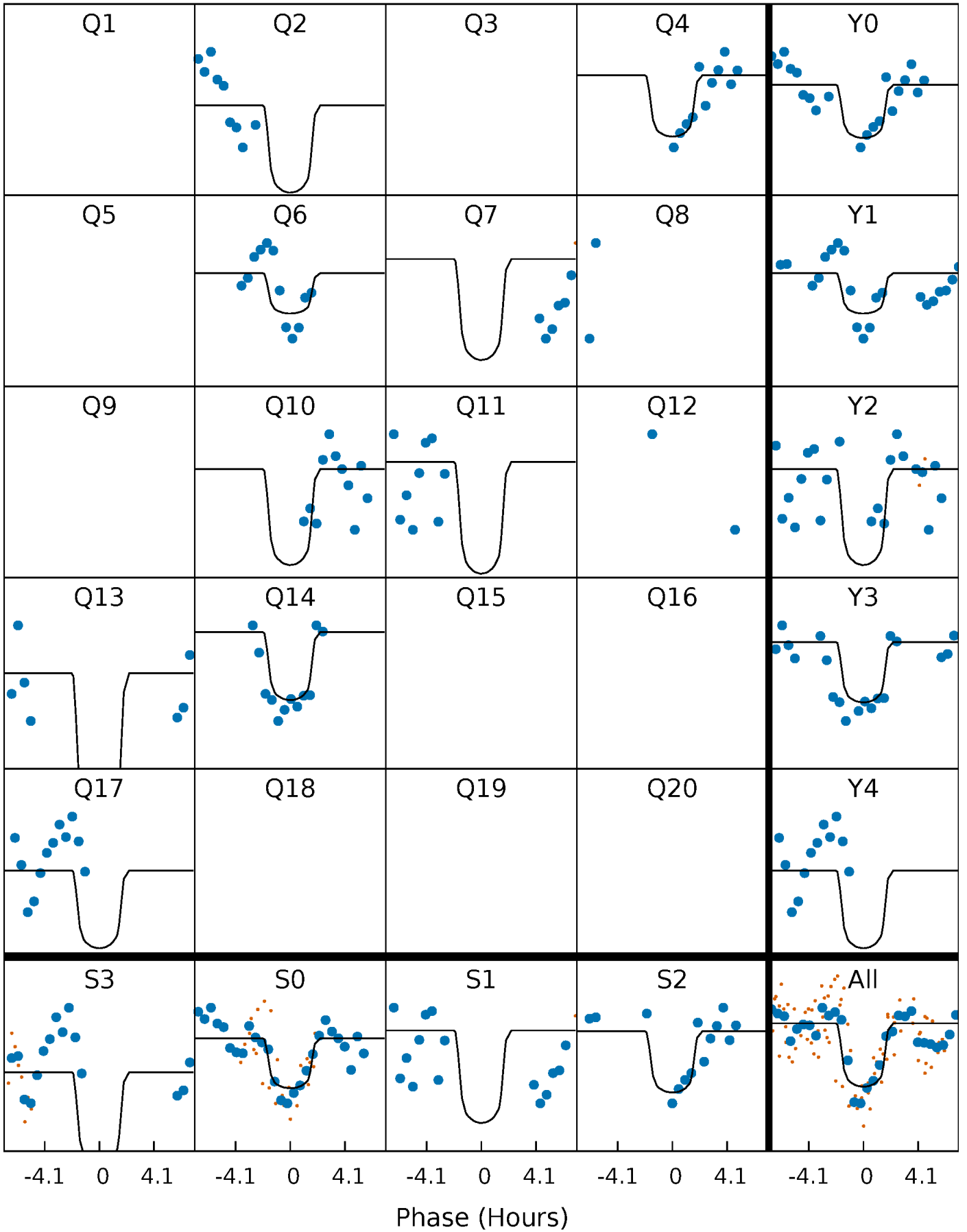
PDC Quarter-Phased Transit Curves

TCE 005036761-04 P=110.473550 Days $T_0=135.848811$ (BKJD)



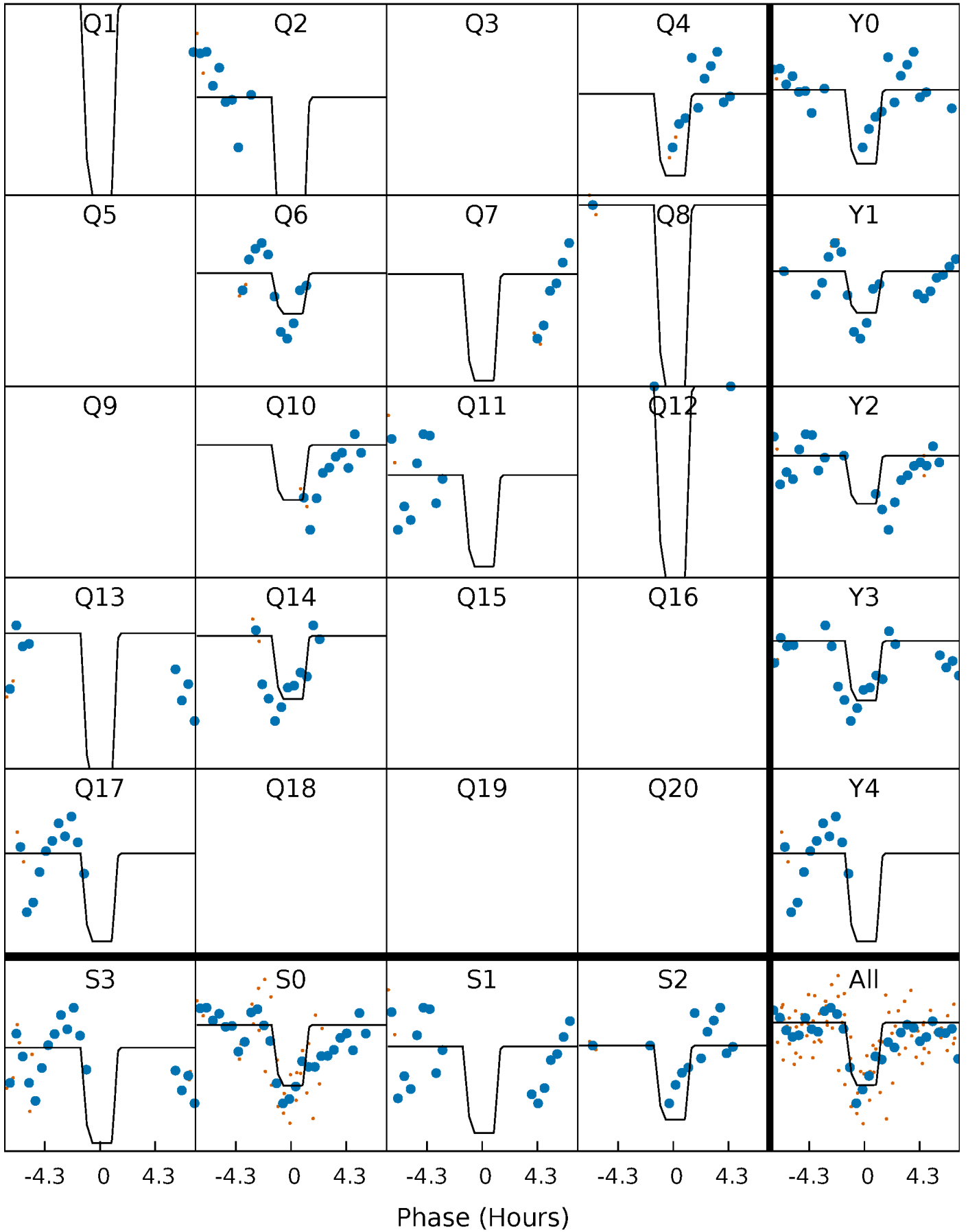
DV Quarter-Phased Transit Curves

TCE 005036761-04 P=110.473550 Days $T_0=135.848811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

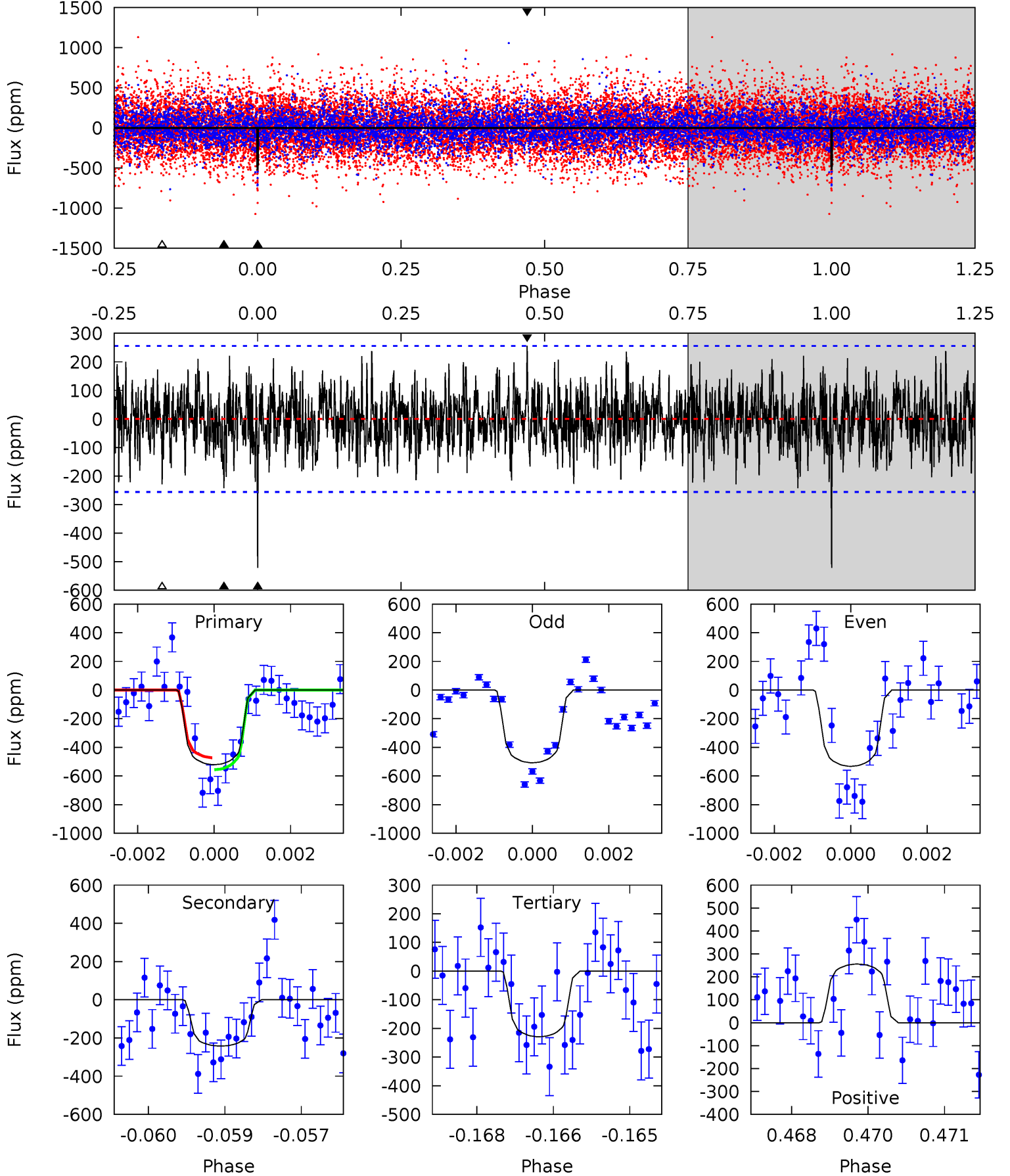
TCE 005036761-04 P=110.472489 Days $T_0=135.857681$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-04, P = 110.473550 Days, E = 25.375261 Days

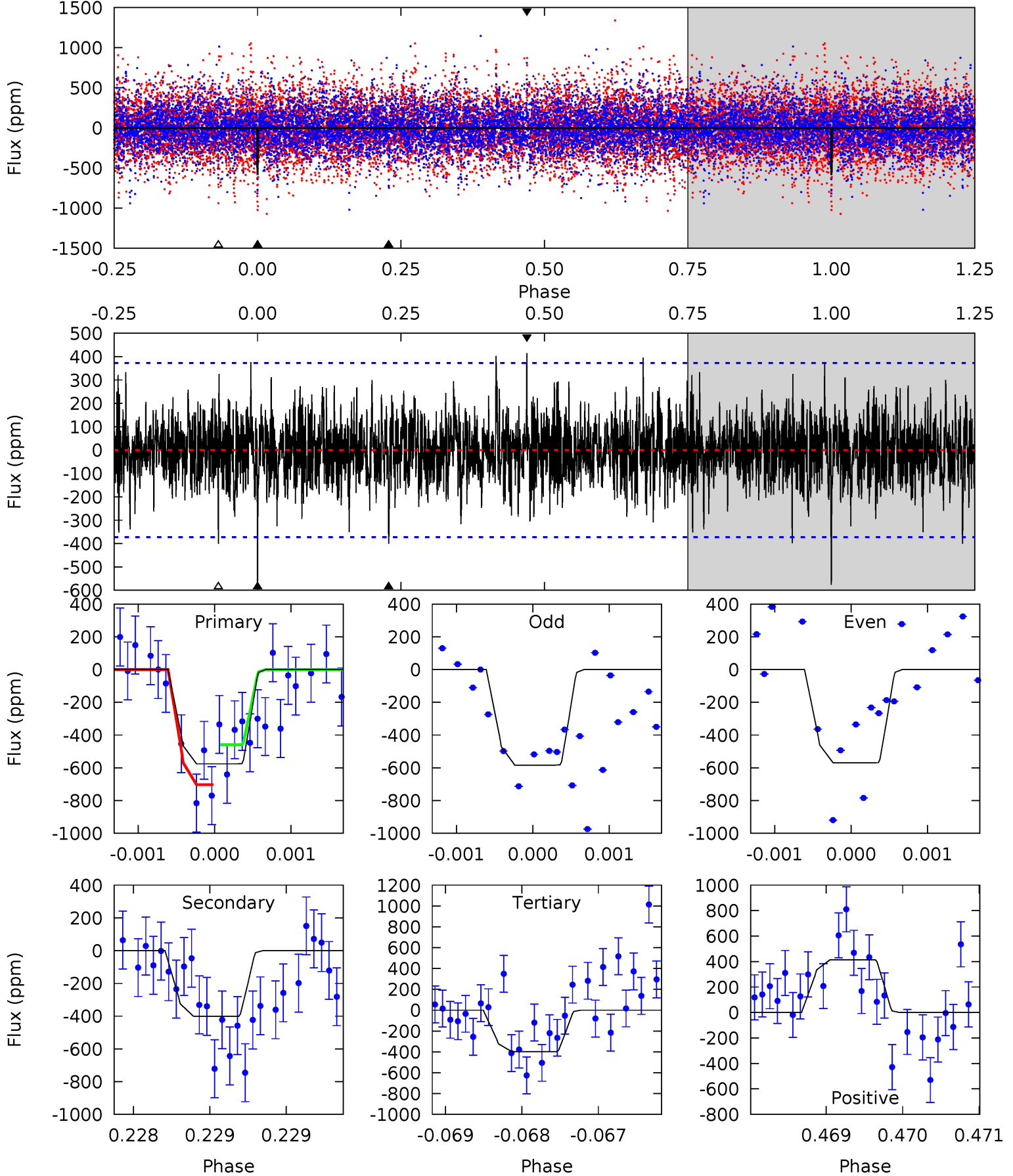
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	5.09	4.82	5.37	5.37	3.16	1.61	6.14	5.58	0.28	-0.28	0.26	0.76	0.33	0.87



Alt Model-Shift Uniqueness Test

005036761-04, P = 110.472489 Days, E = 25.385192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.44	5.88	5.84	6.07	5.46	3.31	1.56	2.60	2.36	0.04	-0.19	0.10	0.92	0.42	1.73



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-242 ± 48	$3.51^{+1.57}_{-1.40}$	675^{+52}_{-33}	5292^{+1633}_{-700}	2477^{+4257}_{-1334}
Alt.	-401 ± 68	$3.67^{+1.44}_{-1.46}$	676^{+54}_{-39}	5925^{+1794}_{-882}	3757^{+6733}_{-1880}

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

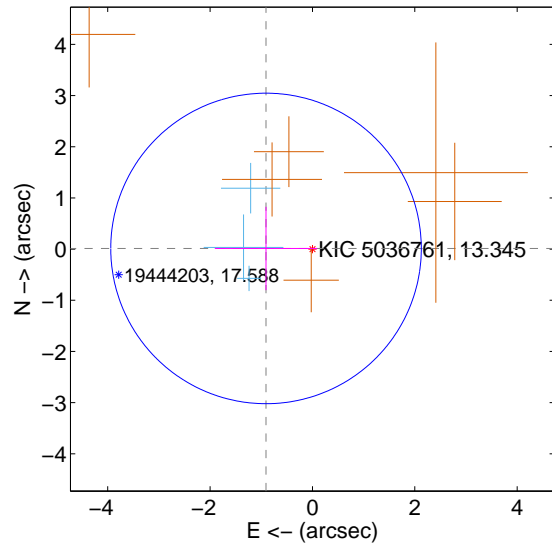
Supplemental centroid analysis for 005036761-04. Kepler magnitude: 13.35. Transit SNR 8.40

There are 3 quarters with good PRF difference image offsets

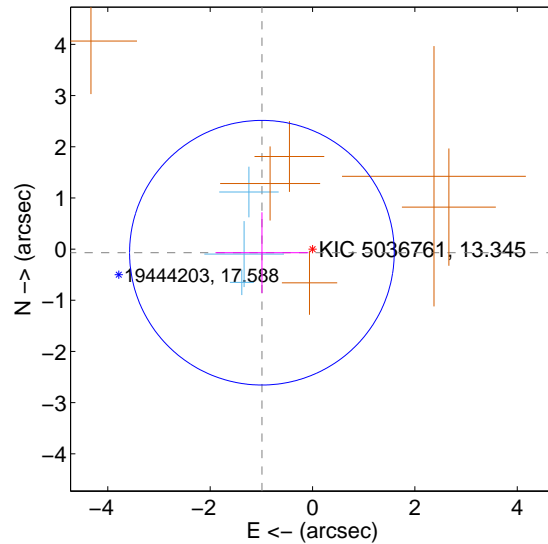
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.907 ± 1.011	0.90	0.907 ± 1.002	0.013 ± 0.814
PRF-fit source offset from KIC position	0.992 ± 0.862	1.15	0.989 ± 0.908	-0.070 ± 0.791
photometric centroid source offset	0.38 ± 0.40	0.95	0.12 ± 0.47	-0.36 ± 0.40

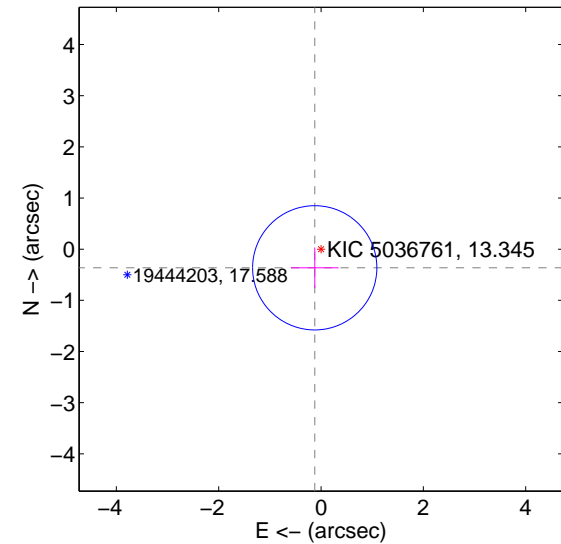
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

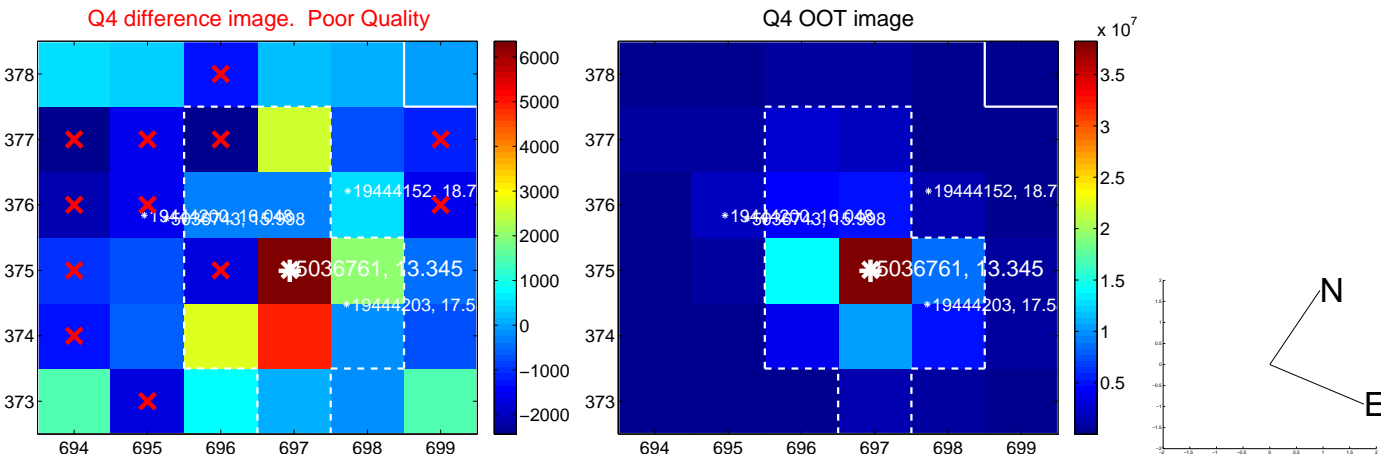
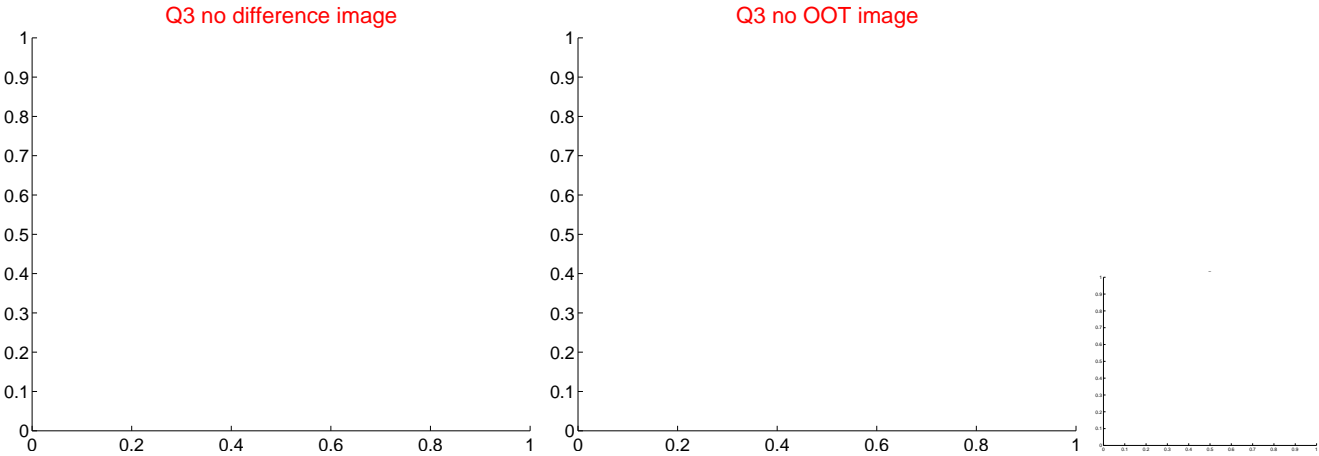
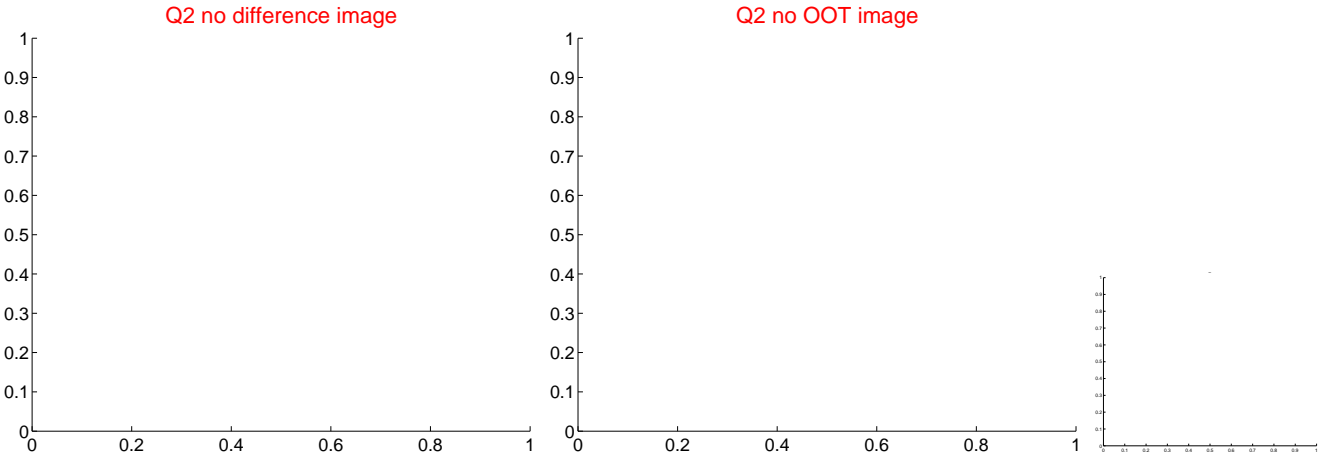
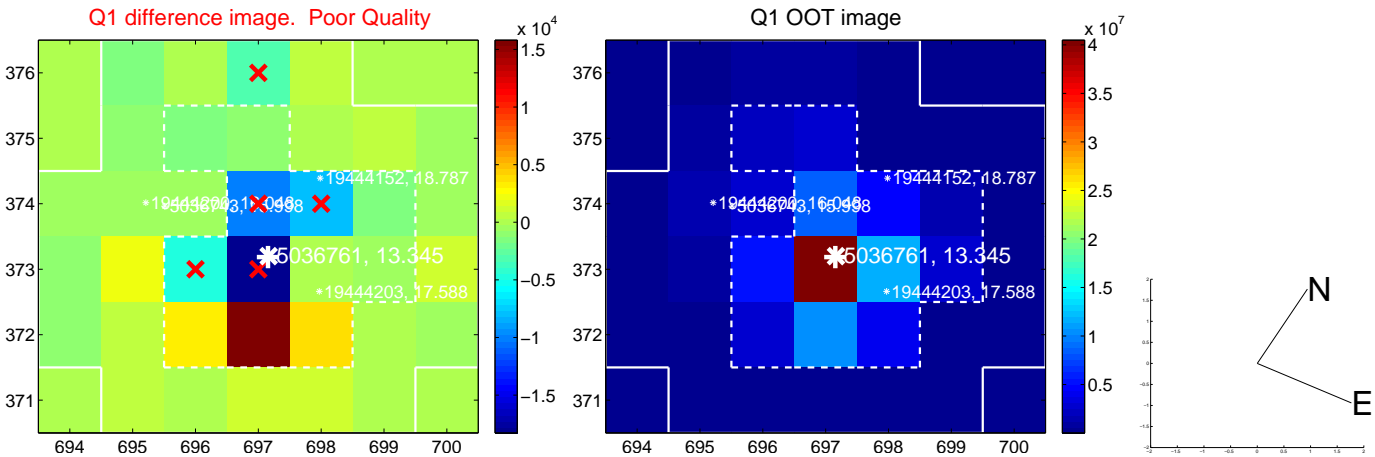


offset from photometric centroids

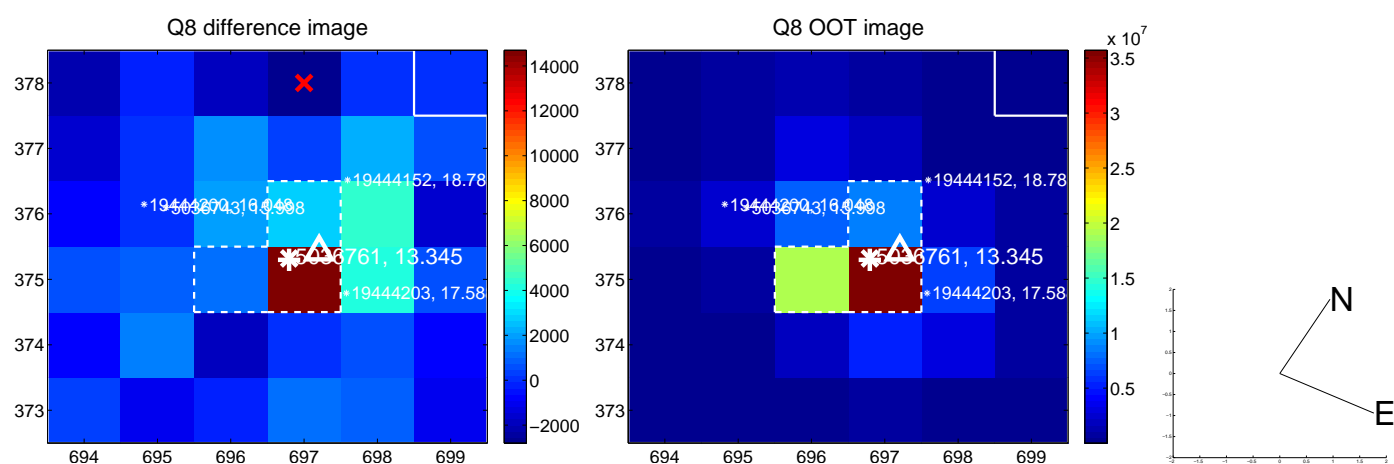
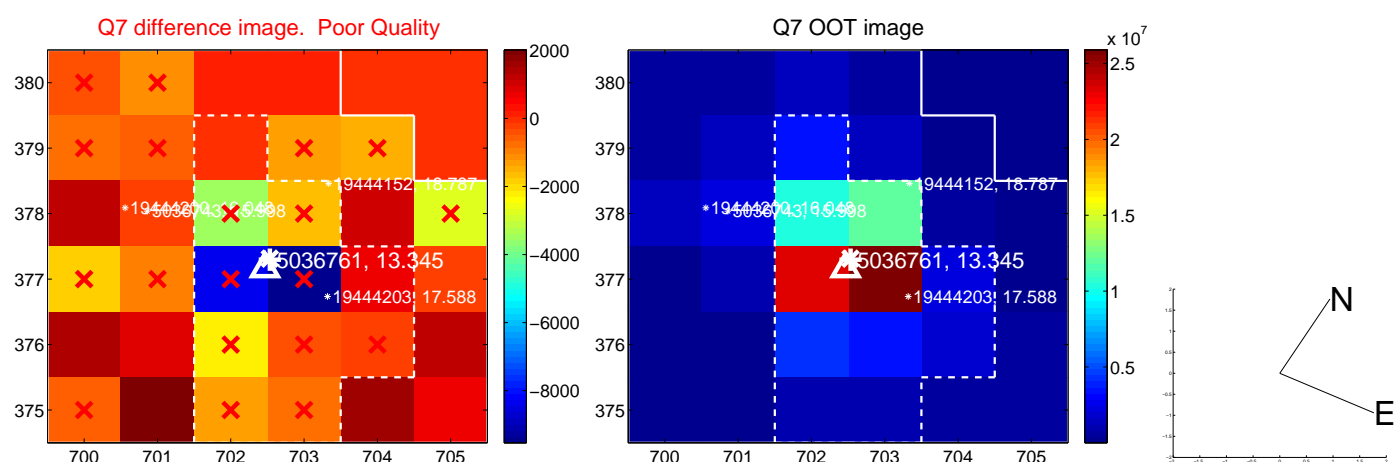
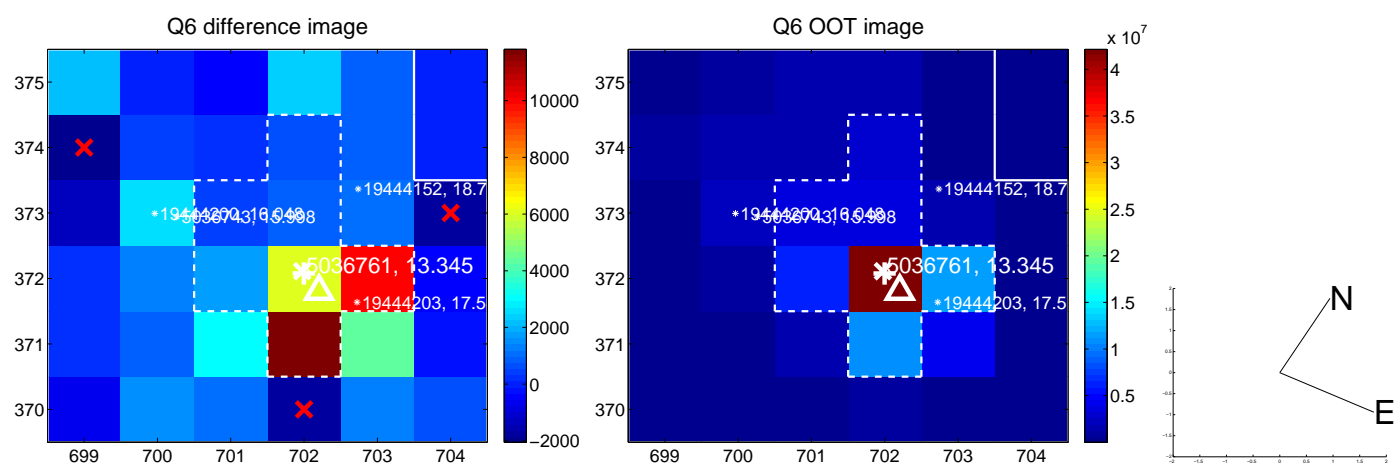
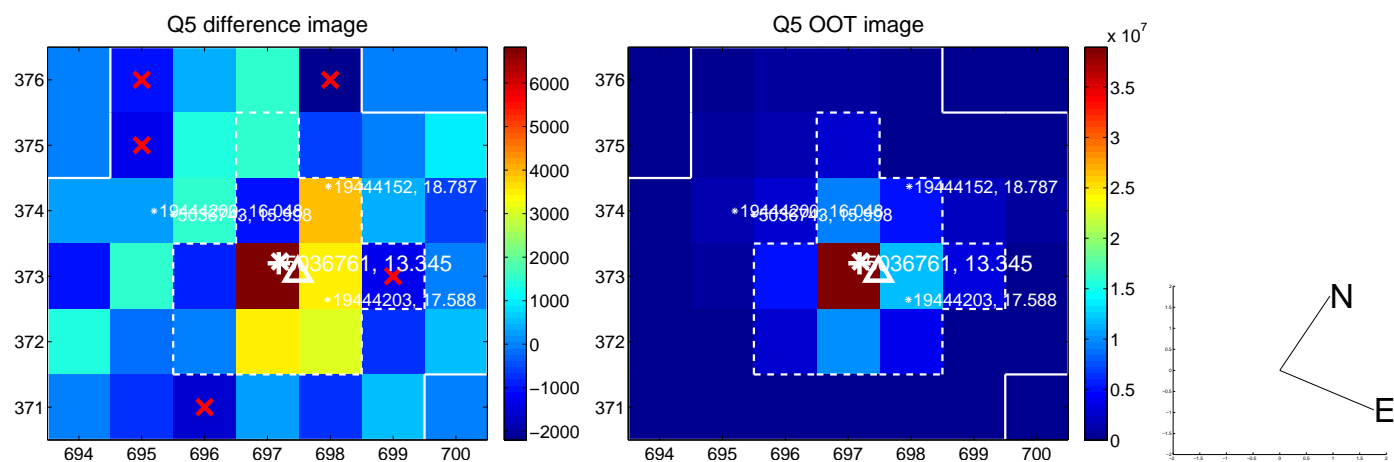


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

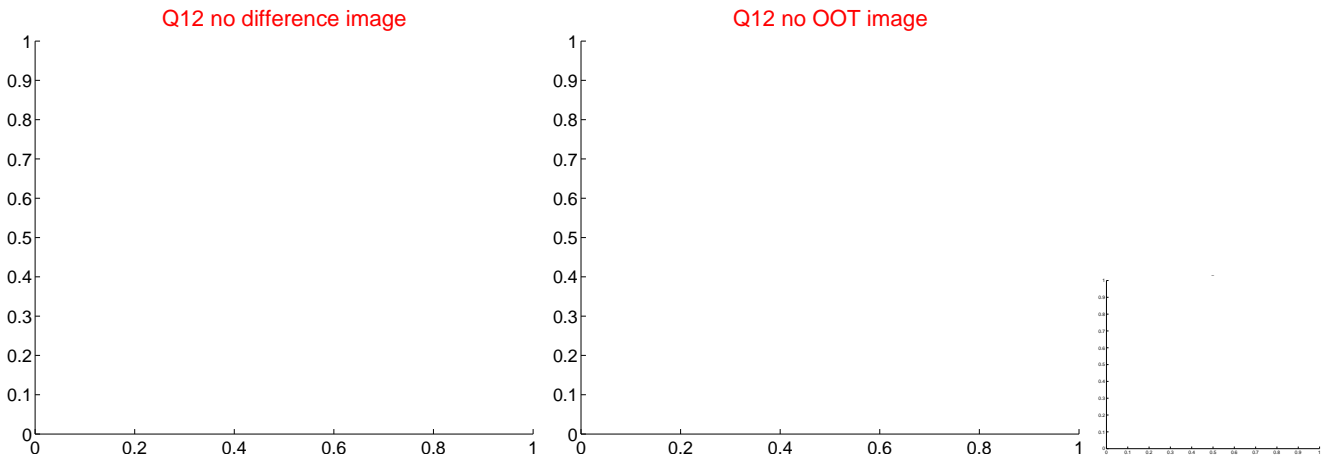
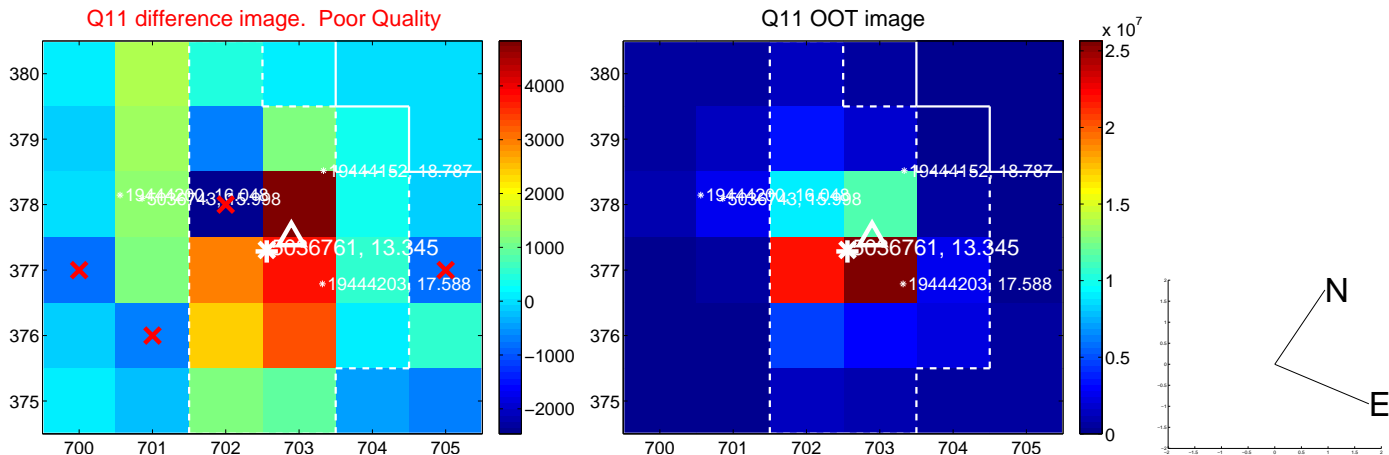
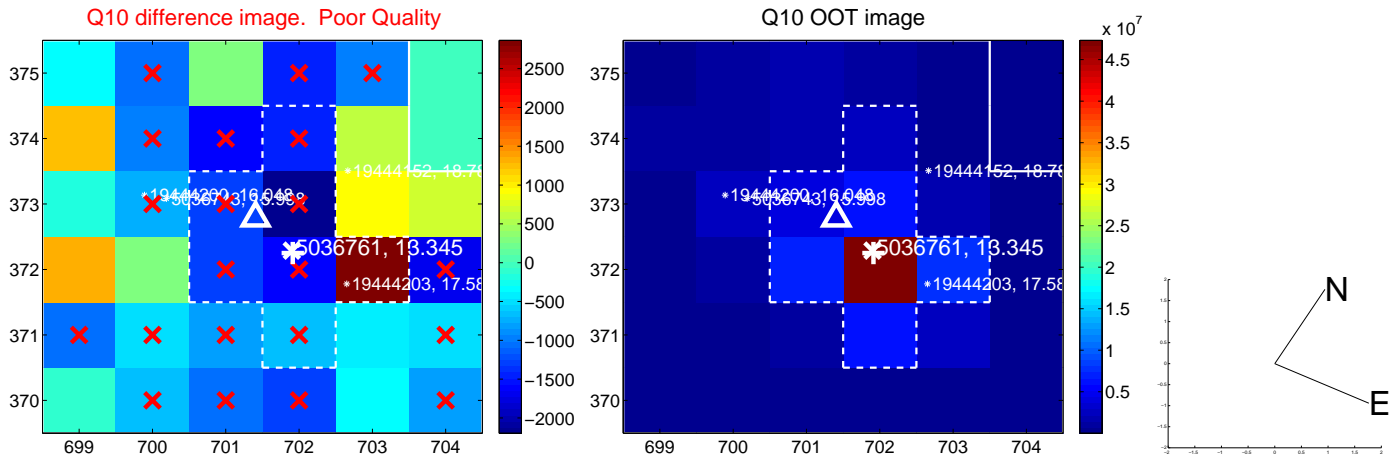
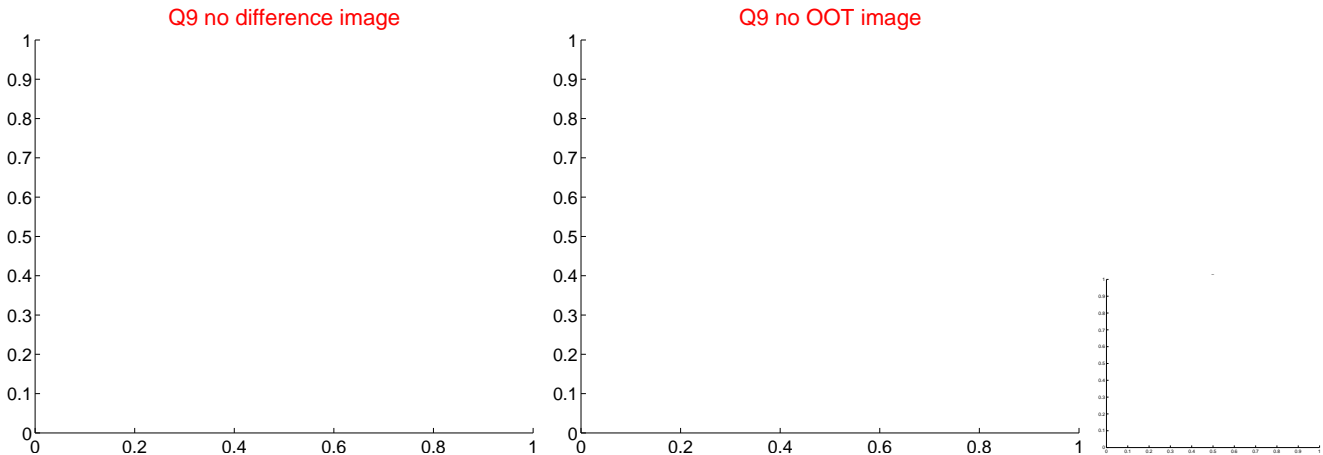
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



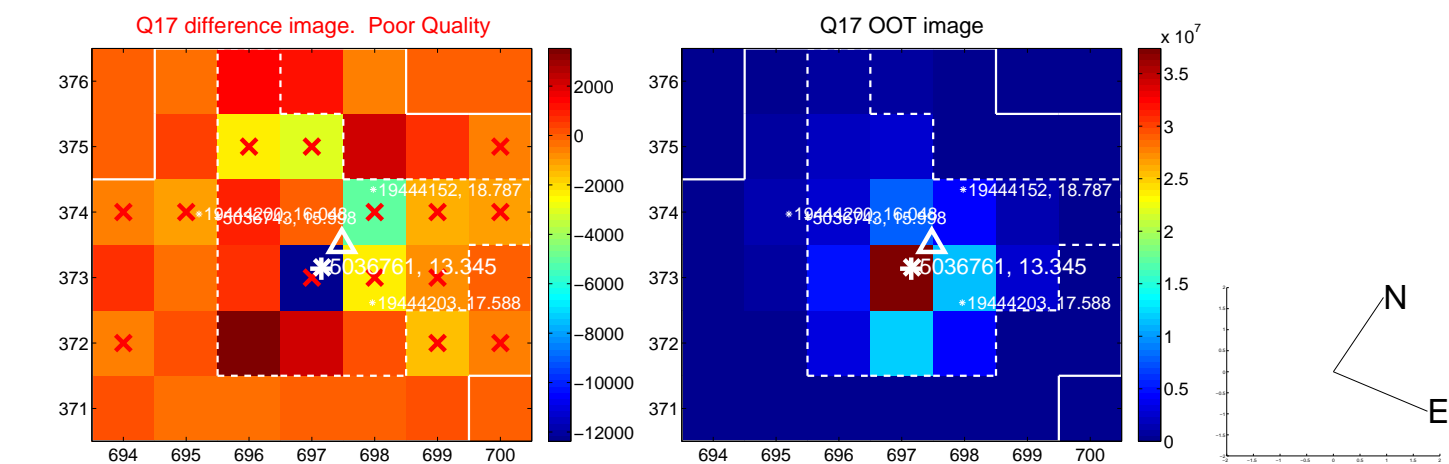
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



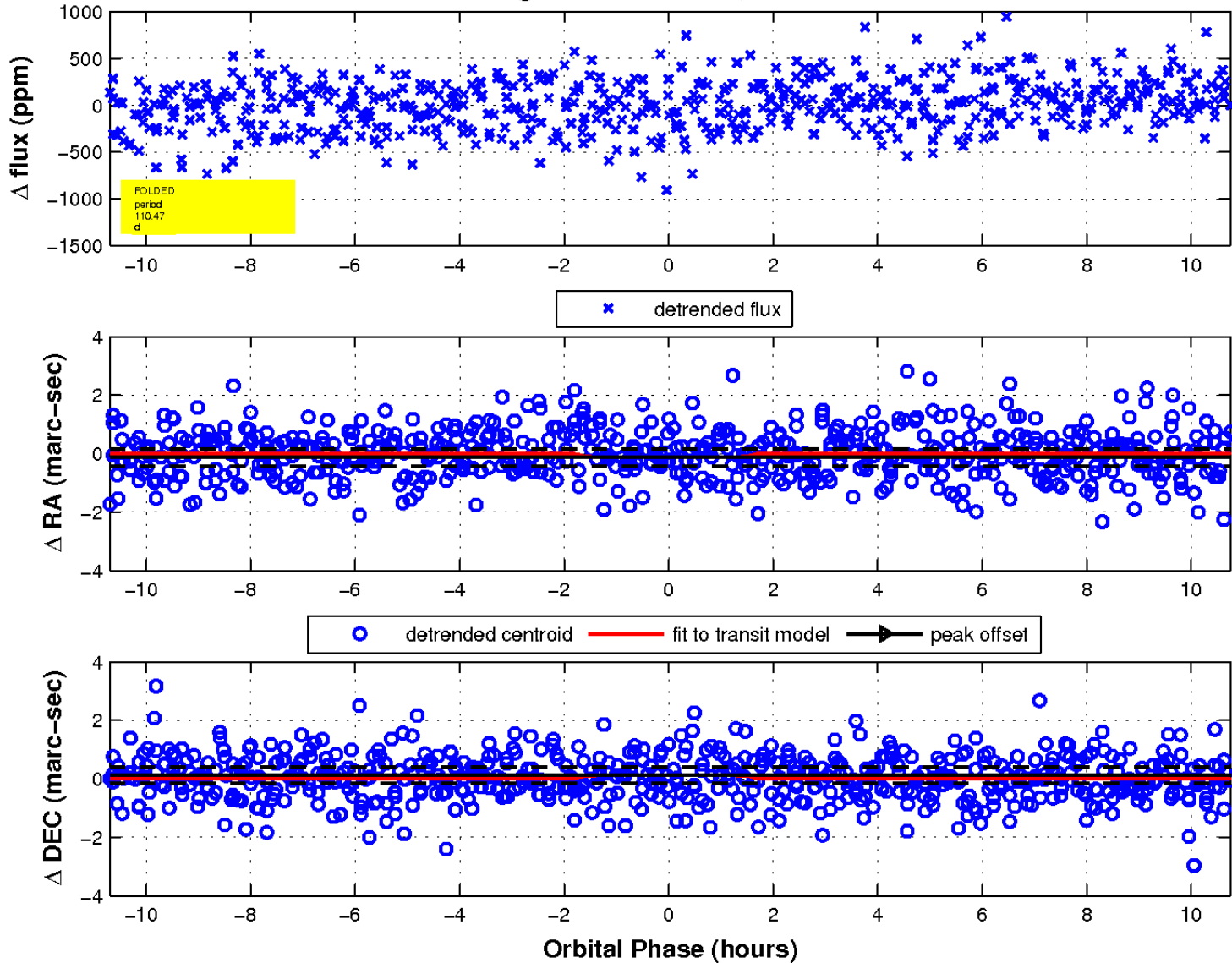
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

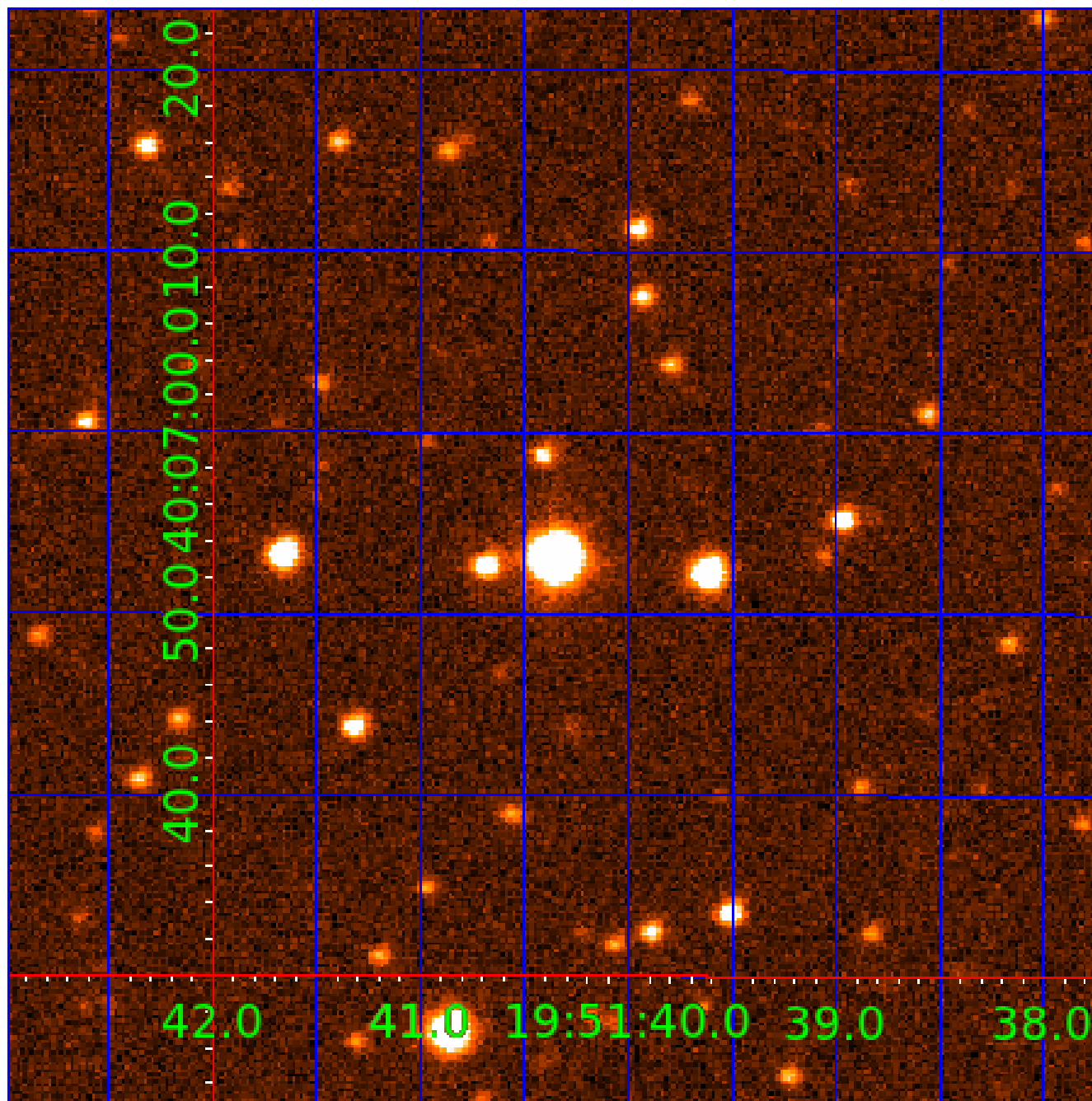


fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



KIC 005036761

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})
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005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

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005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

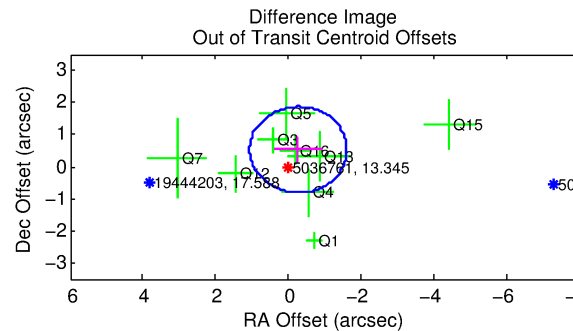
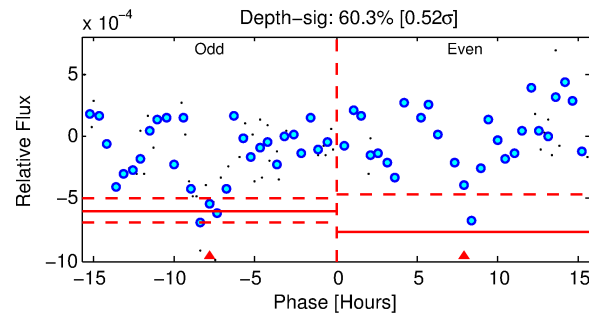
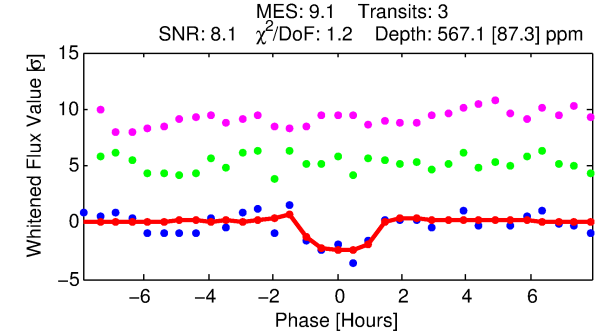
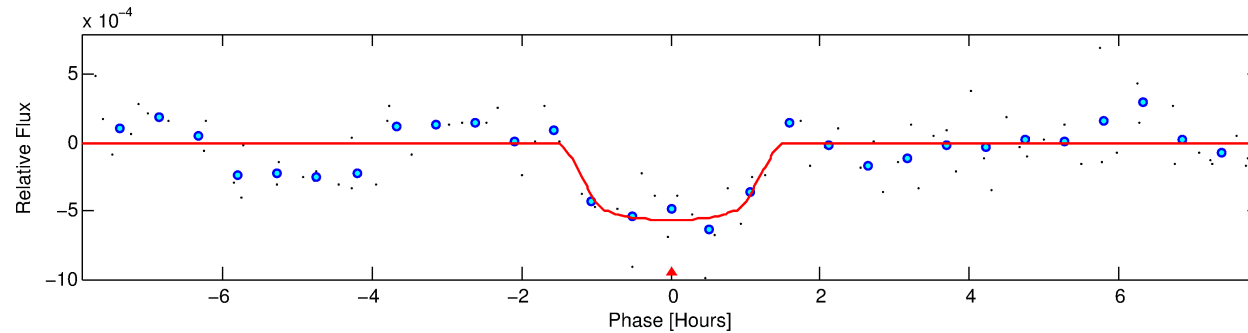
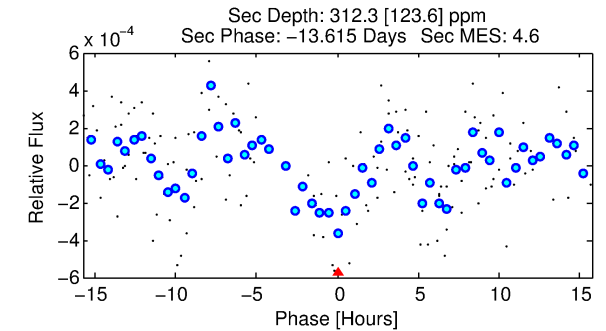
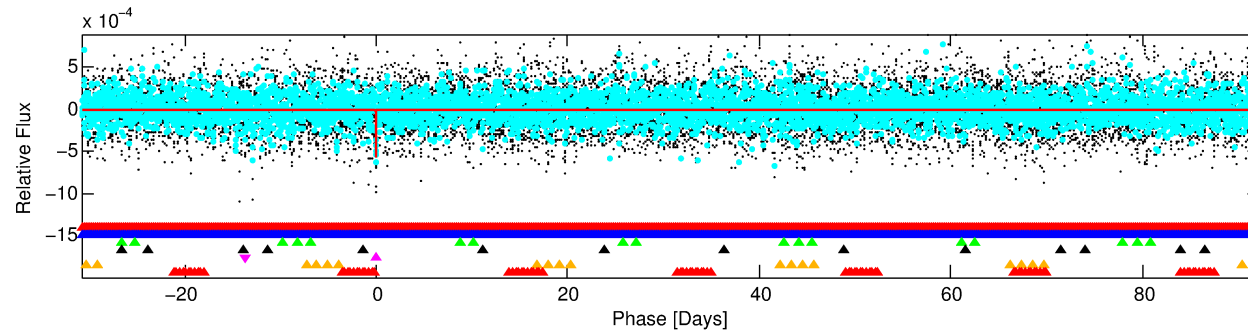
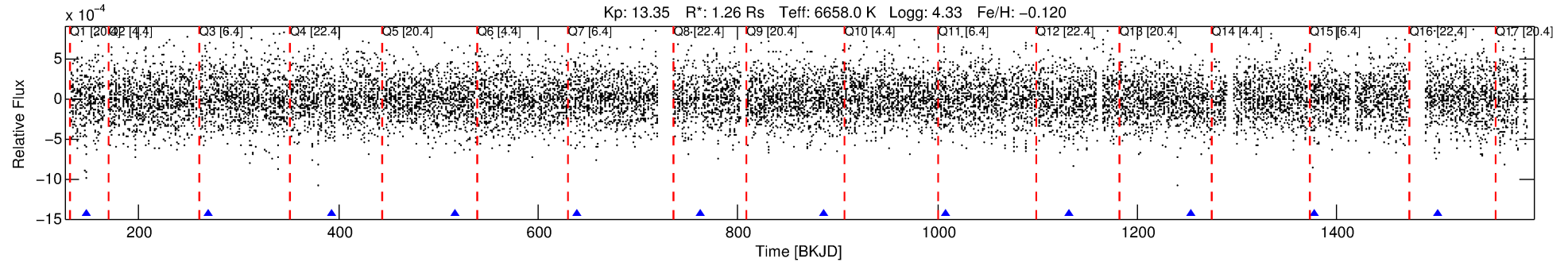
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-05

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 5 of 7 Period: 123.036 d



DV Fit Results:

Period = 123.03568 [0.00104] d
Epoch = 147.1866 [0.0084] BKJD
Rp/R* = 0.0243 [0.0208]
a/R* = 220.01 [1055.55]
b = 0.82 [1.95]
Seff = 10.38 [4.29]
Teff = 458 [47] K
Rp = 3.35 [3.07] Re
a = 0.5197 [0.1408] AU
Ag = 4145.28 [7463.19] [0.56σ]
Teffp = 5678 [2503] K [2.09σ]

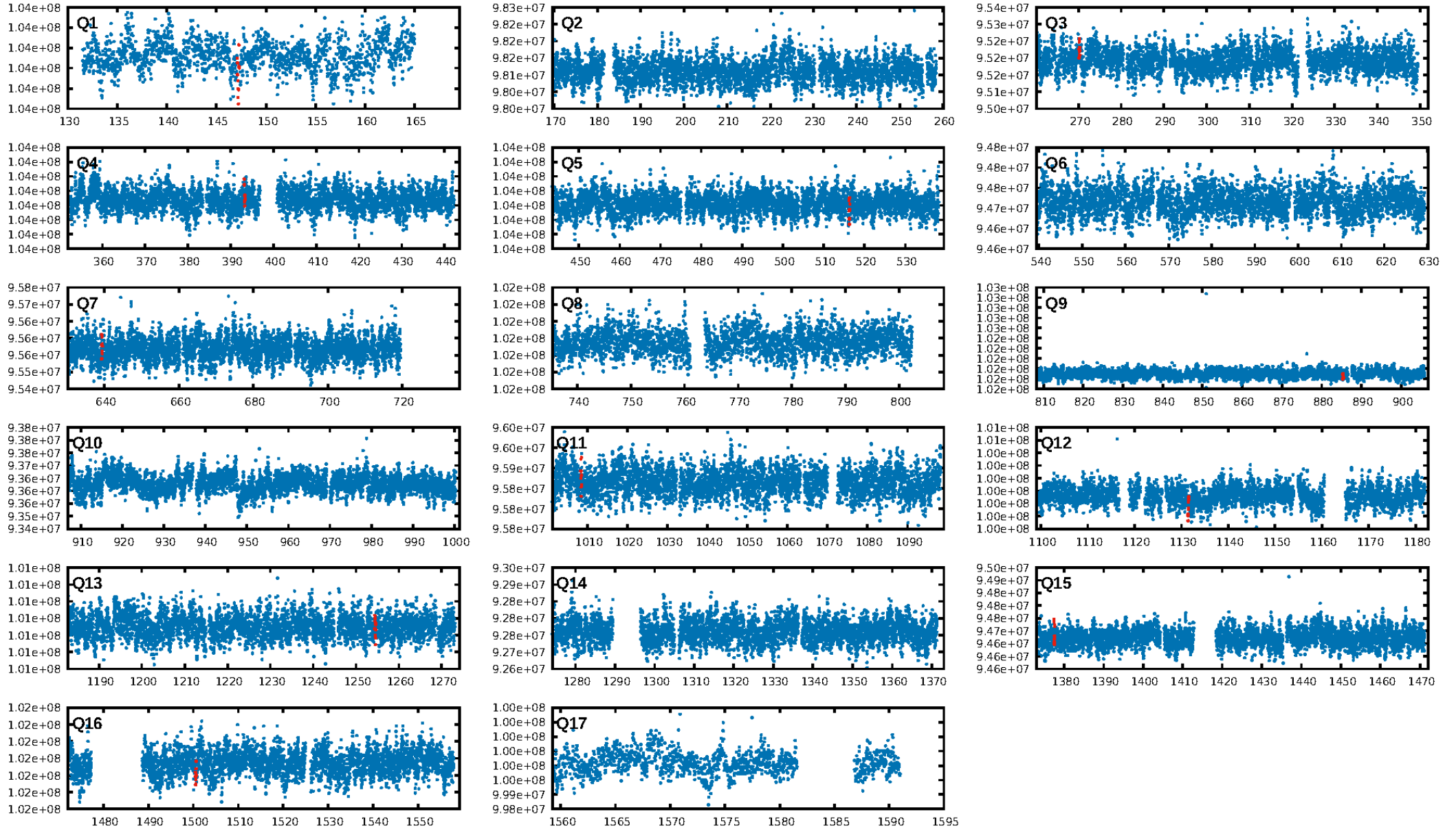
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [67.76σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.7%
ModelChiSquareGof-sig: 83.6%
Bootstrap-pfa: 5.69e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -14.38
Centroid-sig: 7.7%
Centroid-so: 0.870 arcsec [1.60σ]
OotOffset-rm: 0.596 arcsec [1.33σ]
KicOffset-rm: 0.558 arcsec [1.14σ]
OotOffset-st: 0/3/3 [9]
KicOffset-st: 0/3/3 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 0.00 [0/10]

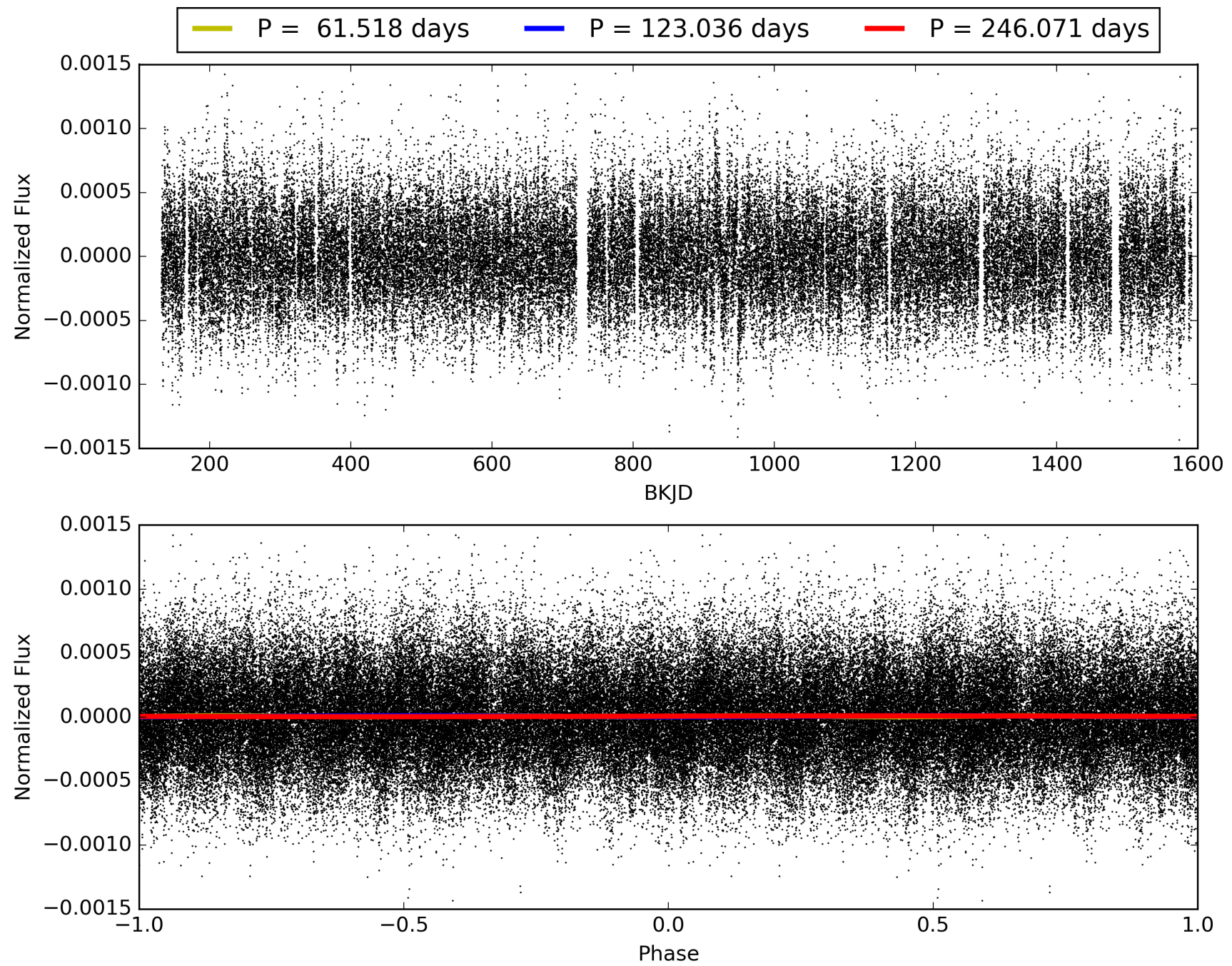
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:50 Z

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

TCE 005036761-05, PDC Light Curves

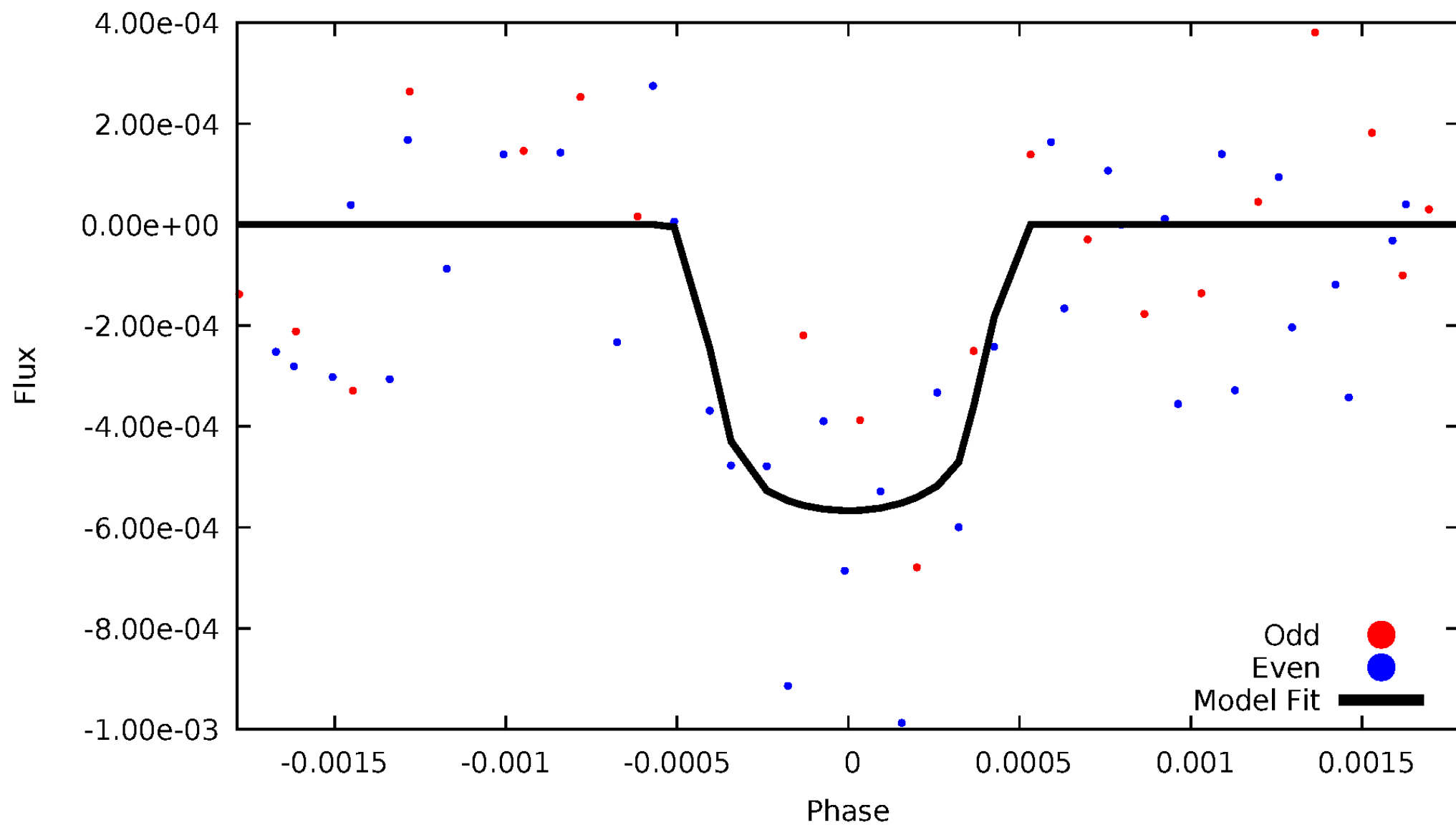


TCE 005036761-05



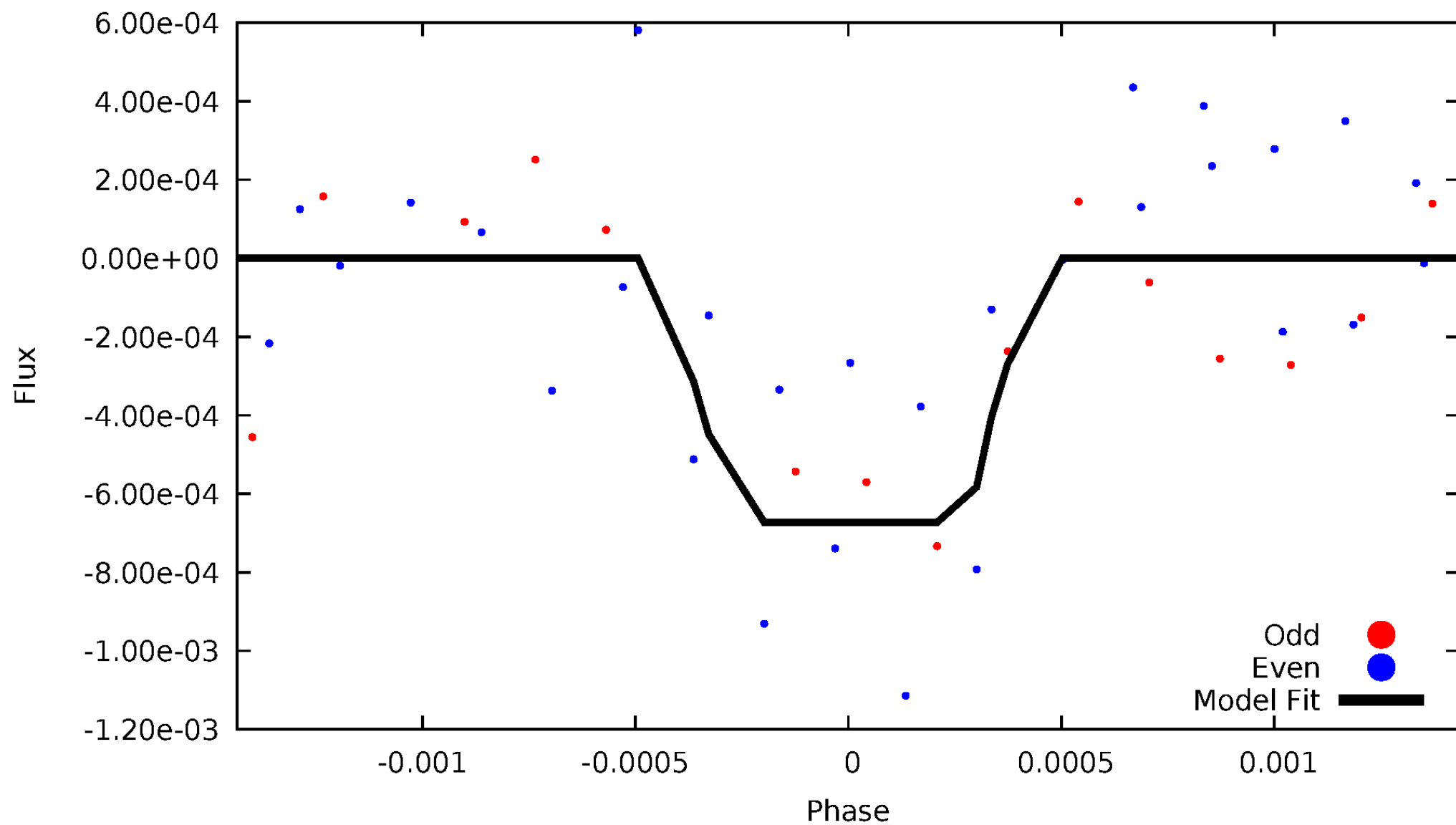
DV Odd/Even

TCE 005036761-05



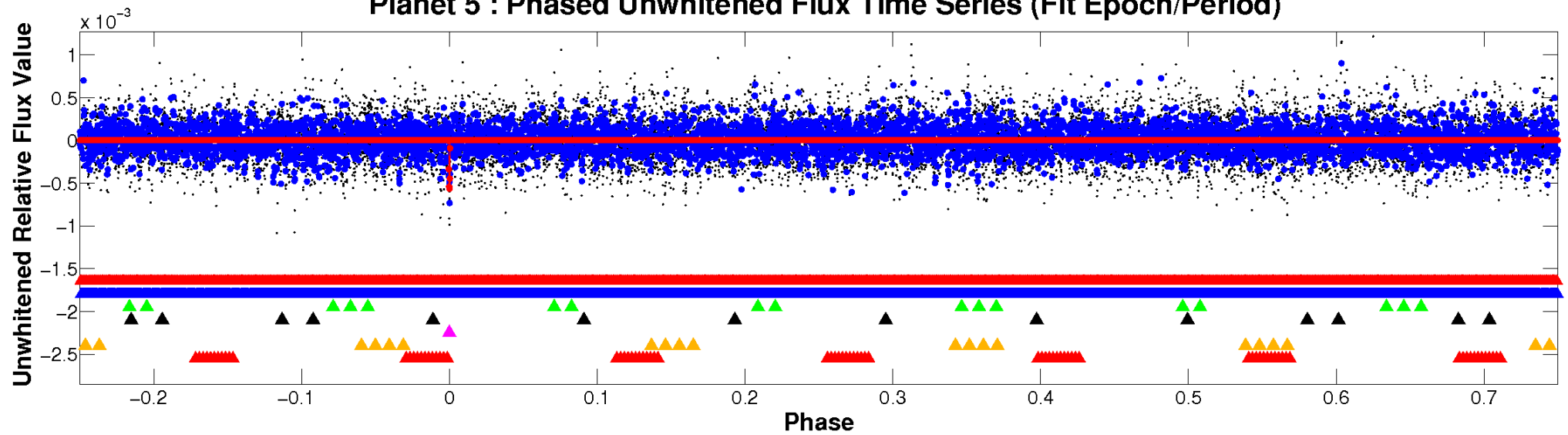
ALT Odd/Even

TCE 005036761-05

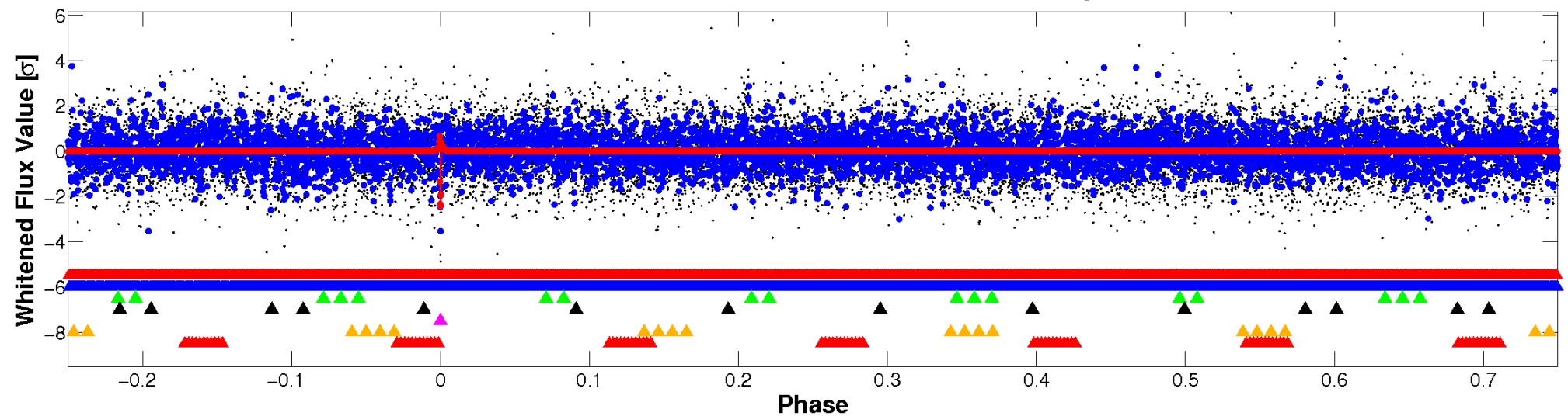


Non-Whitened Vs. Whitened Light Curve

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

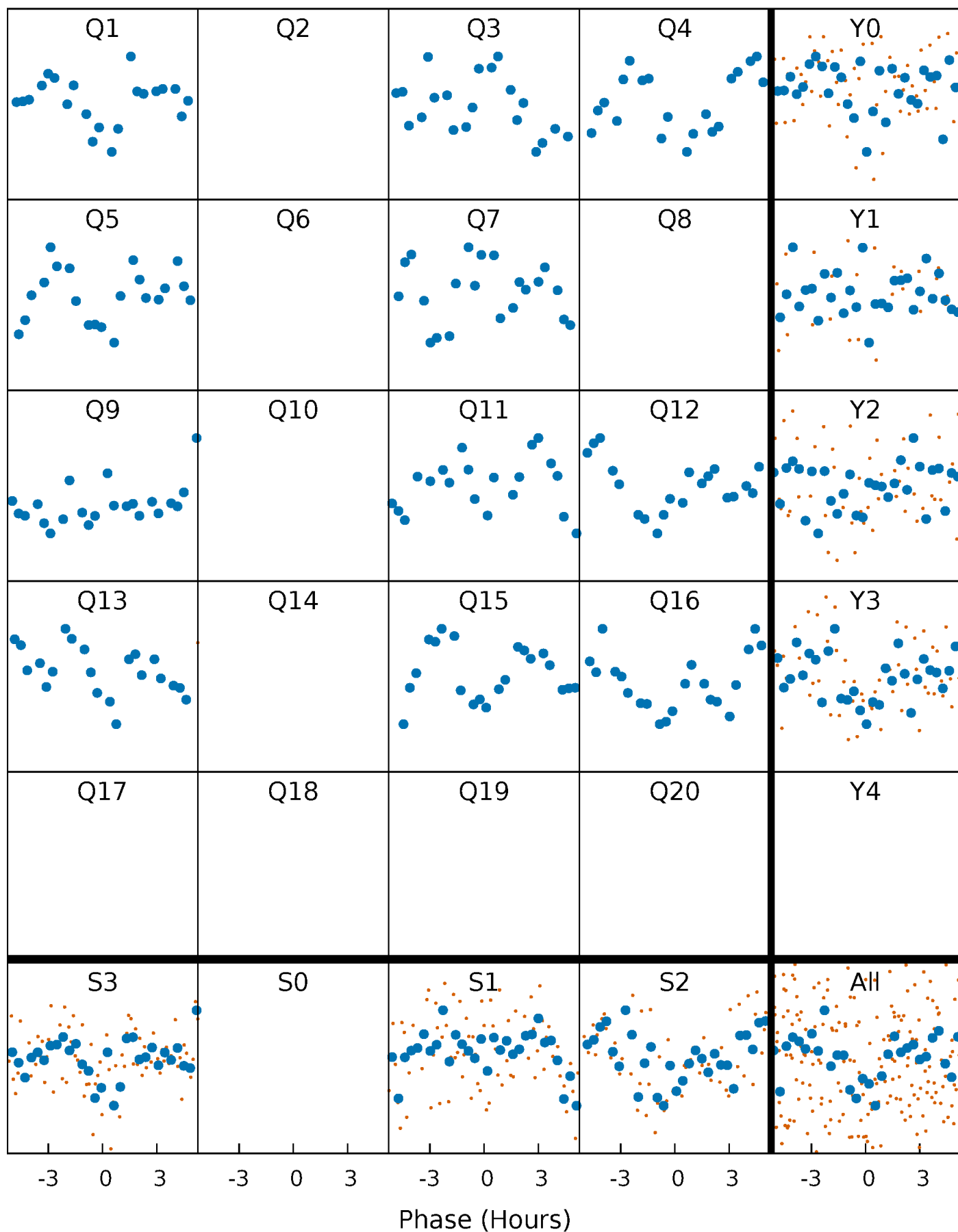


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



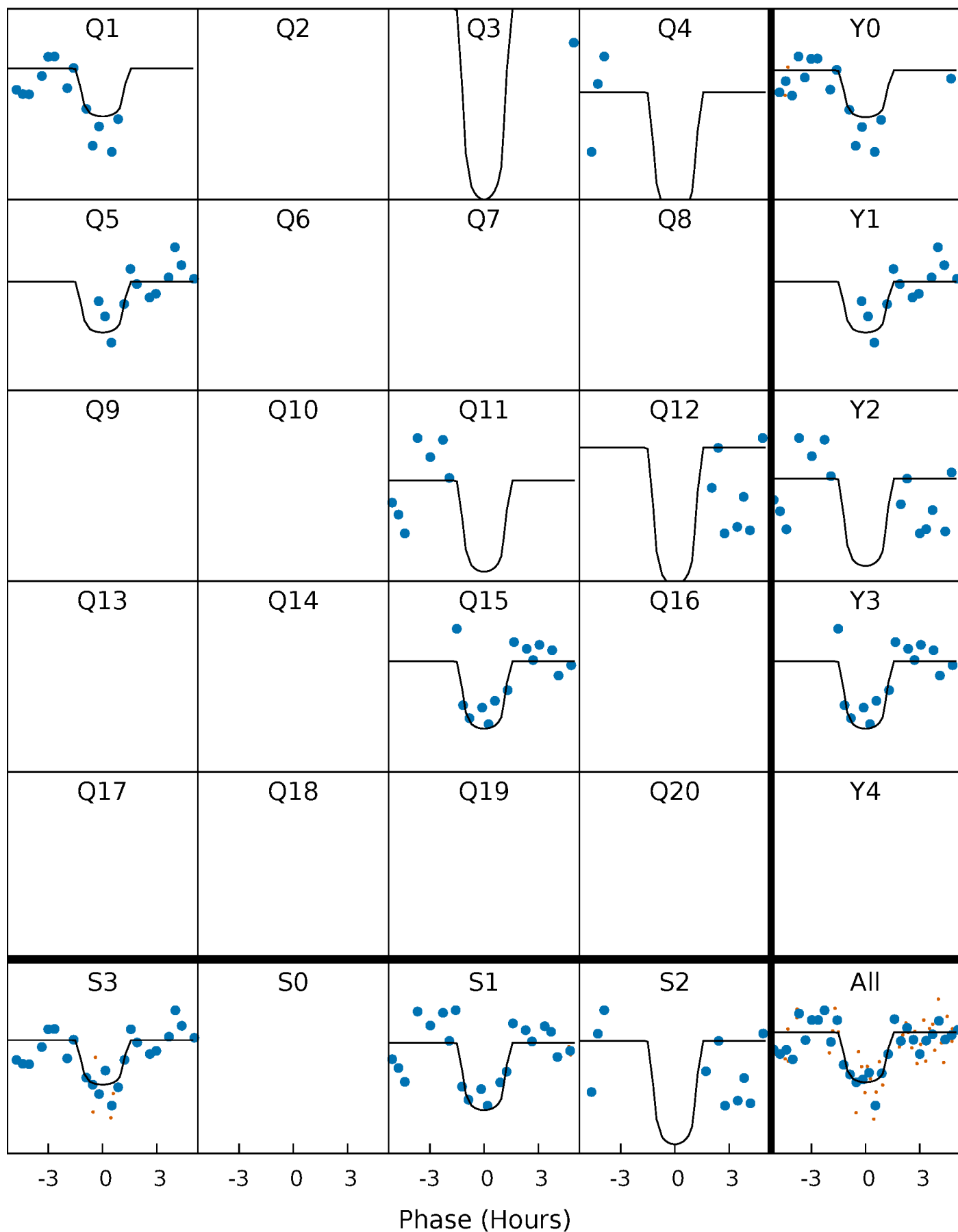
PDC Quarter-Phased Transit Curves

TCE 005036761-05 P=123.035676 Days $T_0=147.186643$ (BKJD)



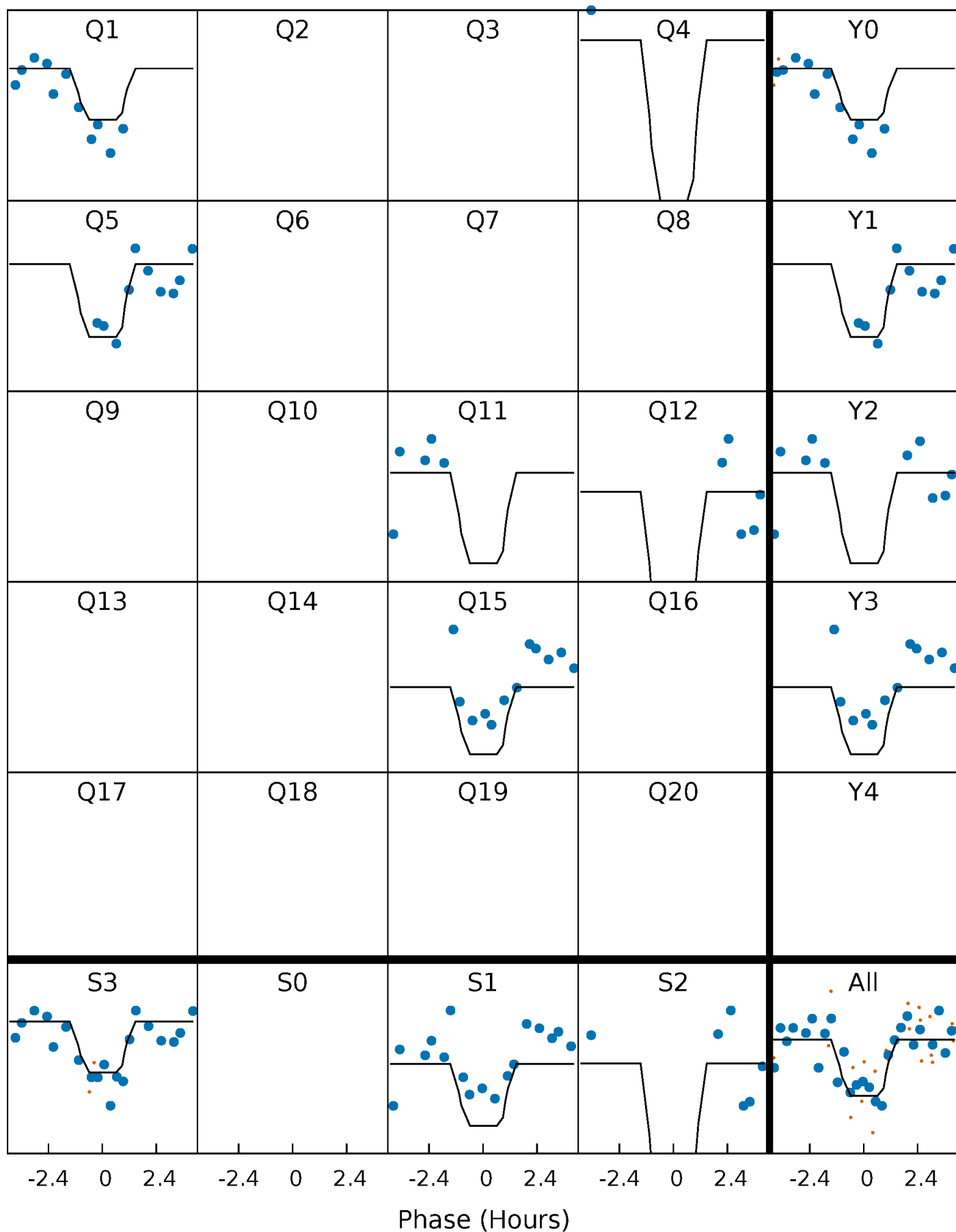
DV Quarter-Phased Transit Curves

TCE 005036761-05 $P=123.035676$ Days $T_0=147.186643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

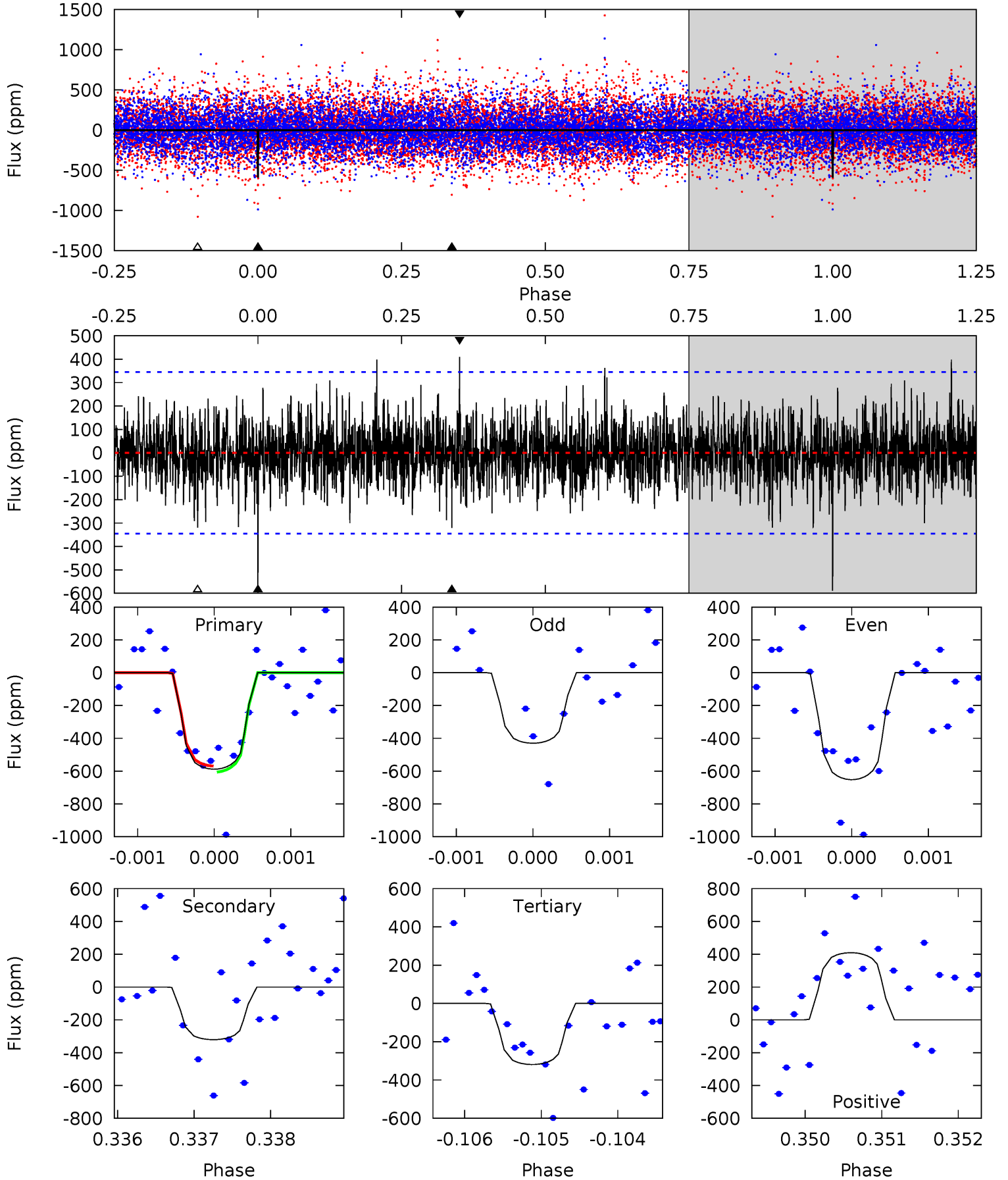
TCE 005036761-05 P=123.034476 Days $T_0=147.189226$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-05, P = 123.035676 Days, E = 24.150967 Days

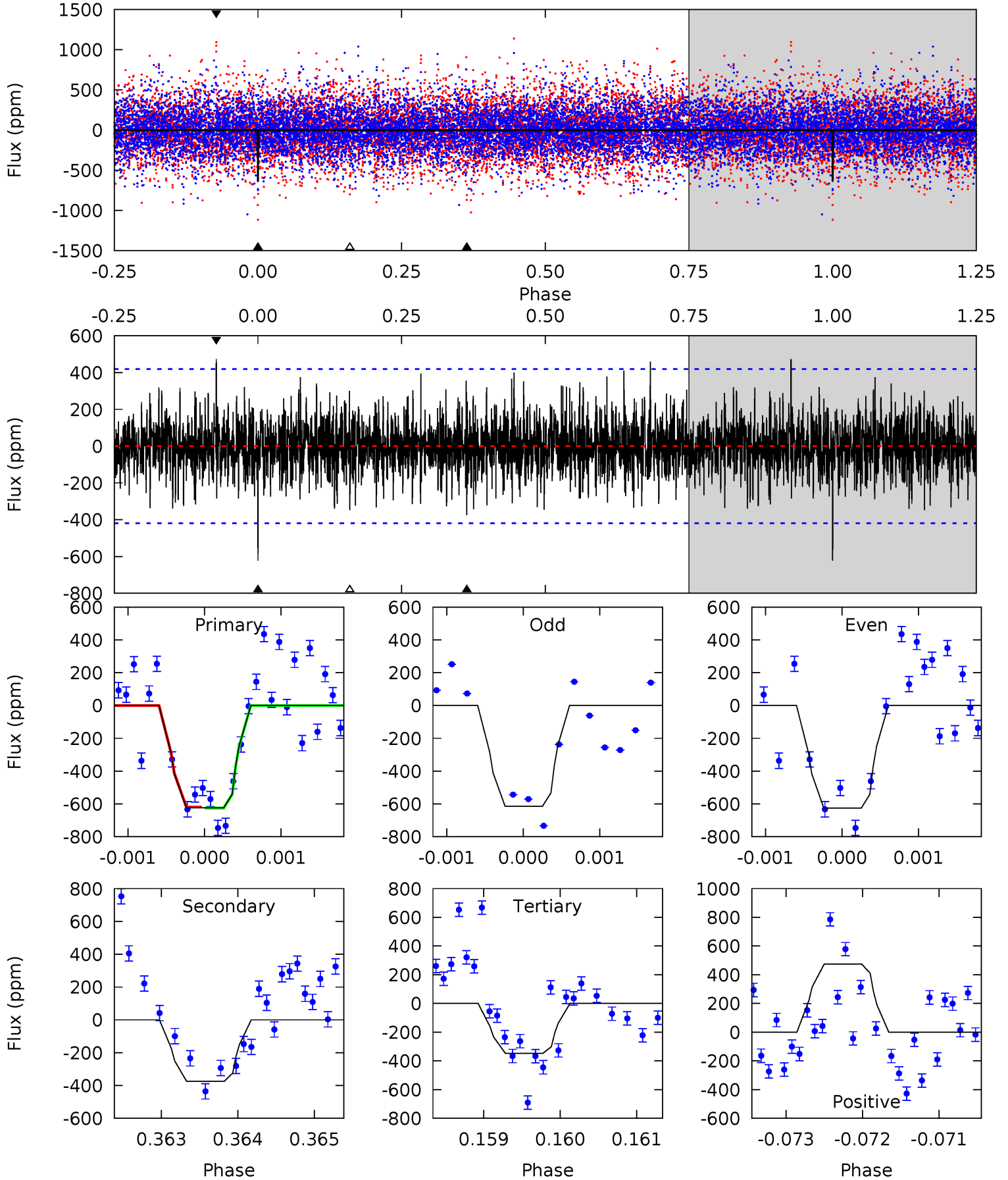
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.32	5.08	5.05	6.48	5.46	3.31	1.49	4.27	2.84	0.03	-1.40	1.59	1.20	0.41	0.29



Alt Model-Shift Uniqueness Test

005036761-05, P = 123.034476 Days, E = 24.154750 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.15	4.91	4.55	6.20	5.48	3.34	1.49	3.60	1.95	0.36	-1.29	0.07	1.01	0.43	0.04



Stellar Parameters For KIC 005036761

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-321 ± 63	$4.00^{+2.69}_{-2.36}$	653^{+47}_{-40}	5340^{+3264}_{-1012}	2954^{+13939}_{-1916}
Alt.	-375 ± 76	$4.25^{+3.05}_{-2.53}$	650^{+47}_{-33}	5411^{+3423}_{-1073}	3016^{+15758}_{-1996}

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 $A_{obs} \gg 1.0$

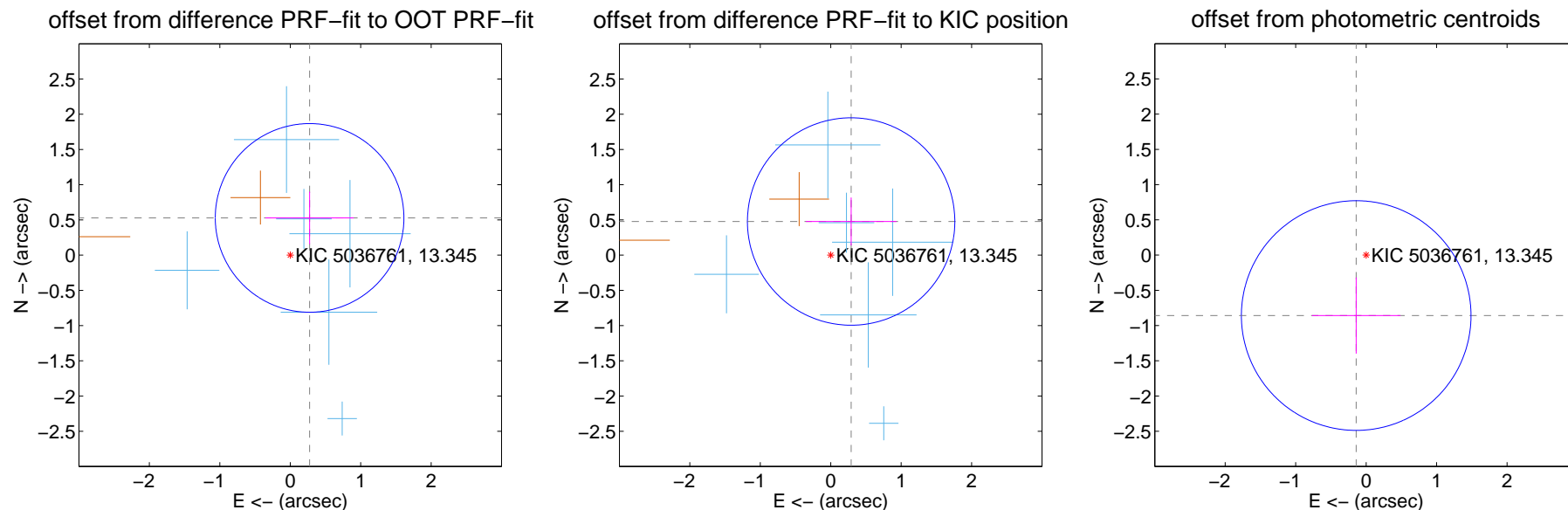
DV Centroid Data

Supplemental centroid analysis for 005036761-05. Kepler magnitude: 13.35. Transit SNR 8.06

There are 6 quarters with good PRF difference image offsets

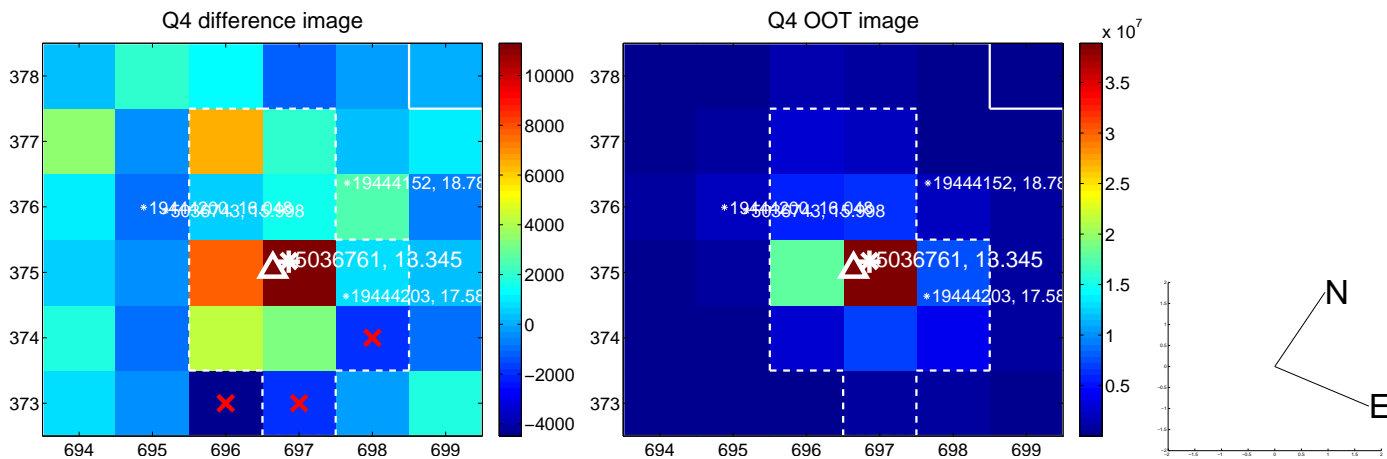
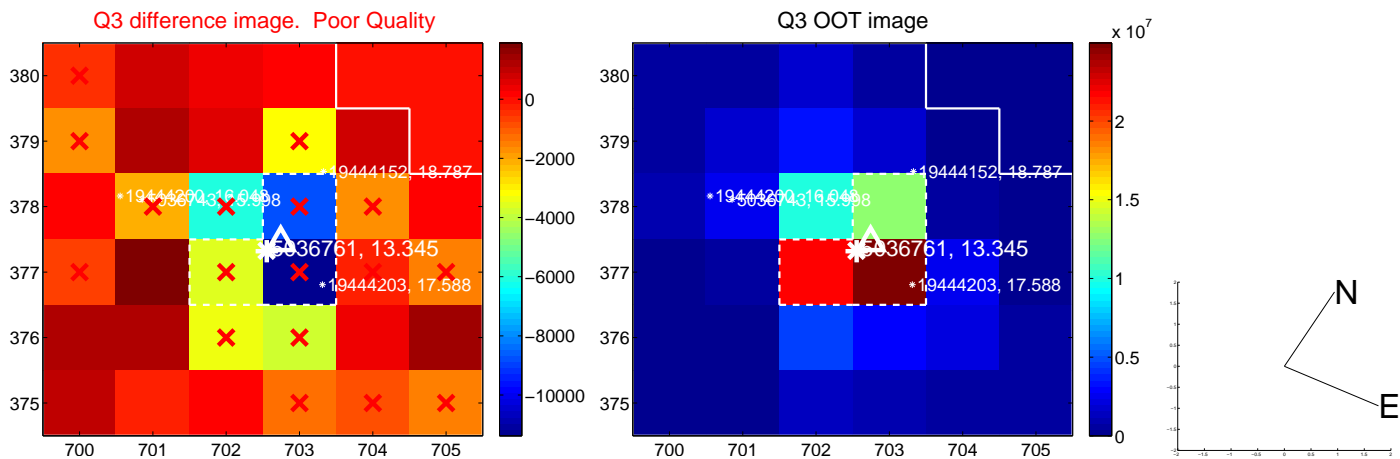
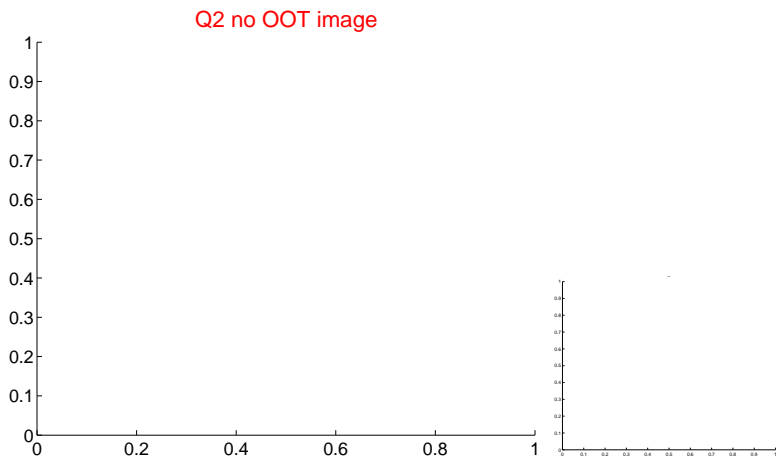
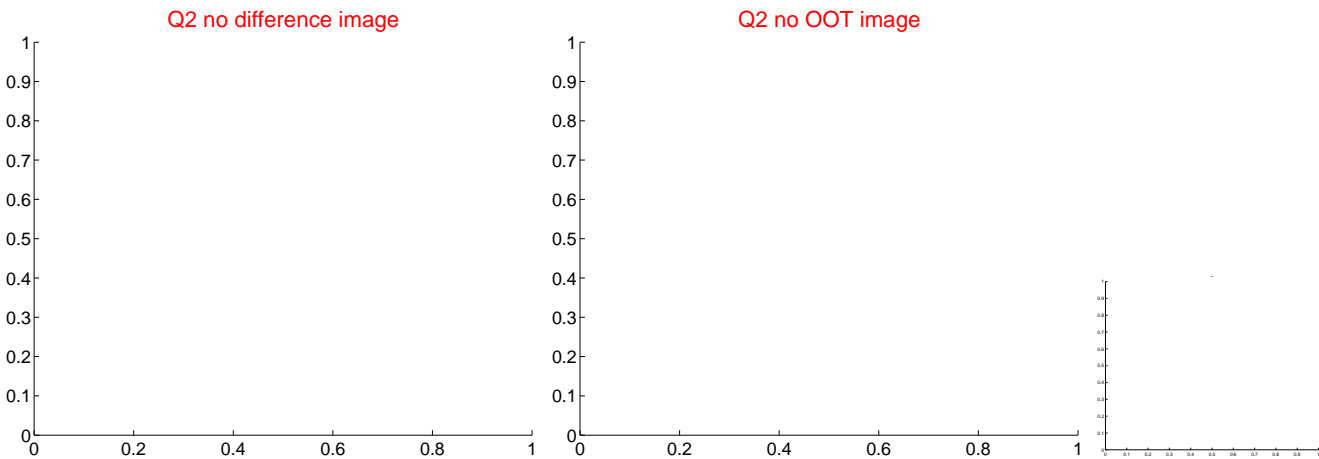
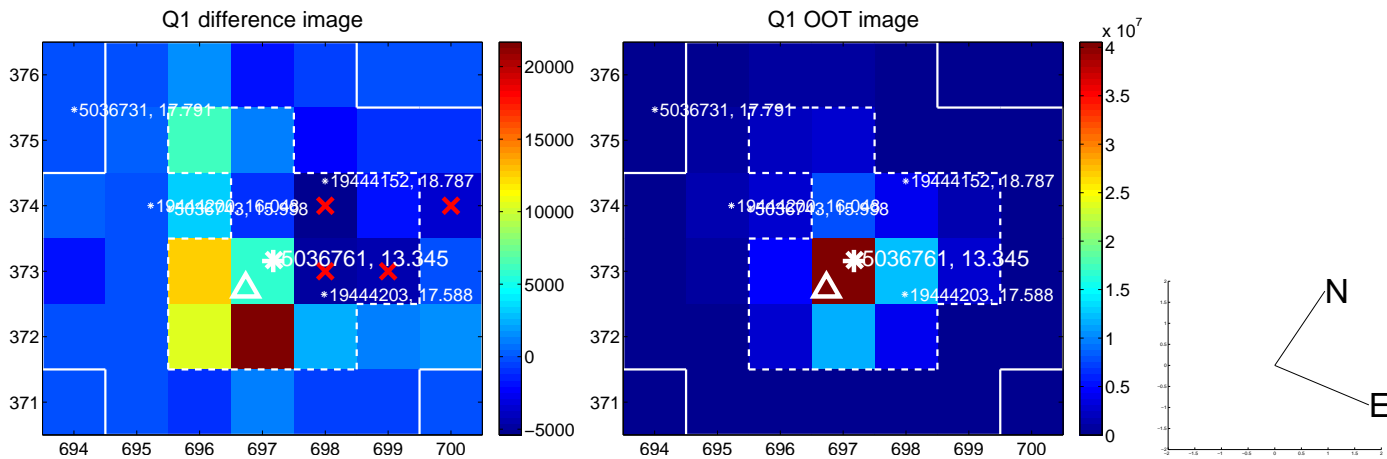
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.596 ± 0.446	1.33	-0.274 ± 0.626	0.529 ± 0.372
PRF-fit source offset from KIC position	0.558 ± 0.491	1.14	-0.290 ± 0.644	0.477 ± 0.341
photometric centroid source offset	0.87 ± 0.54	1.60	0.14 ± 0.63	-0.86 ± 0.54

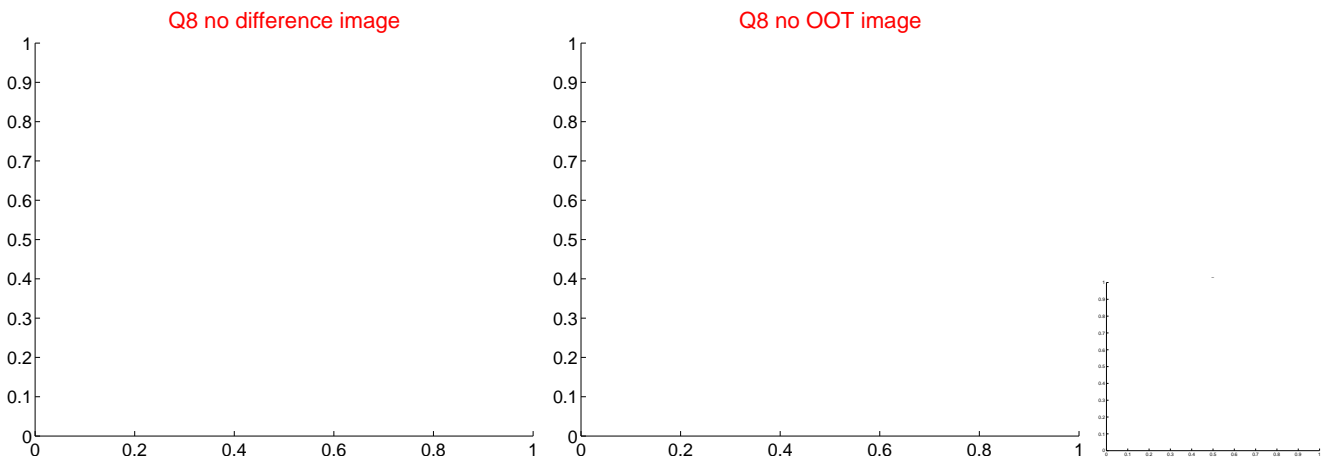
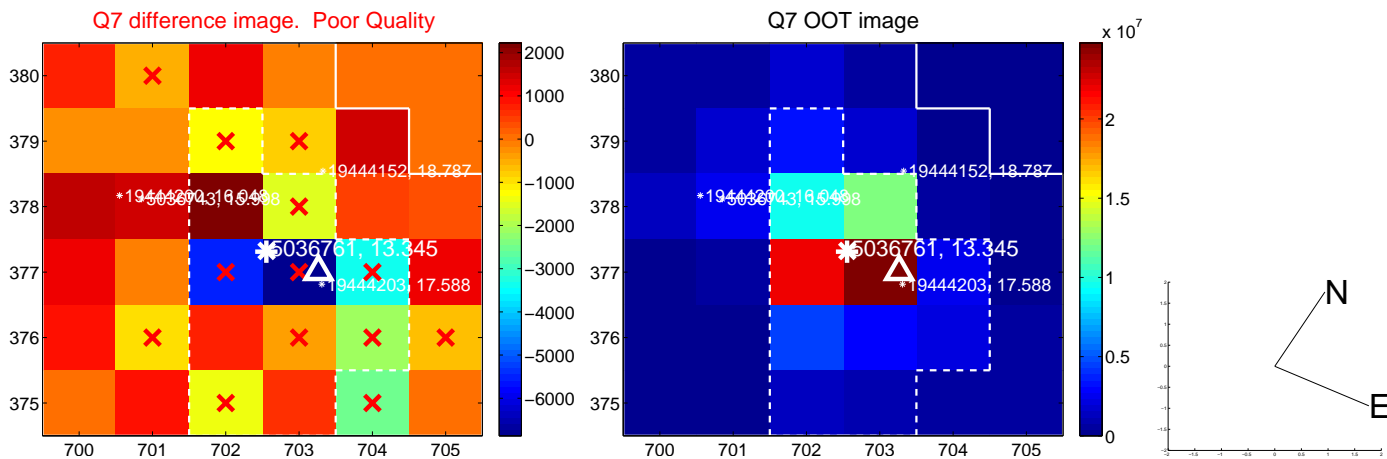
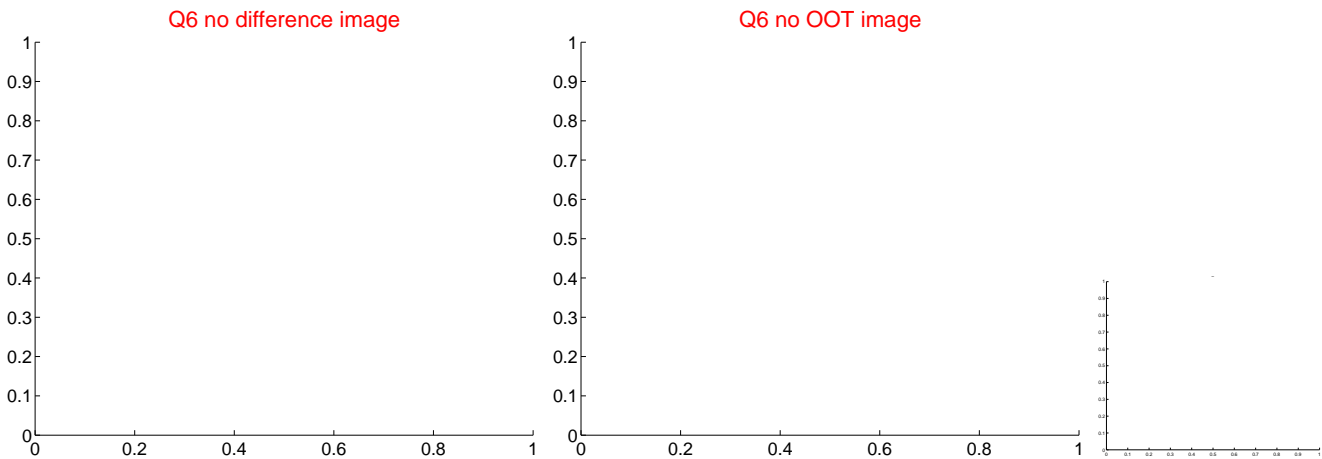
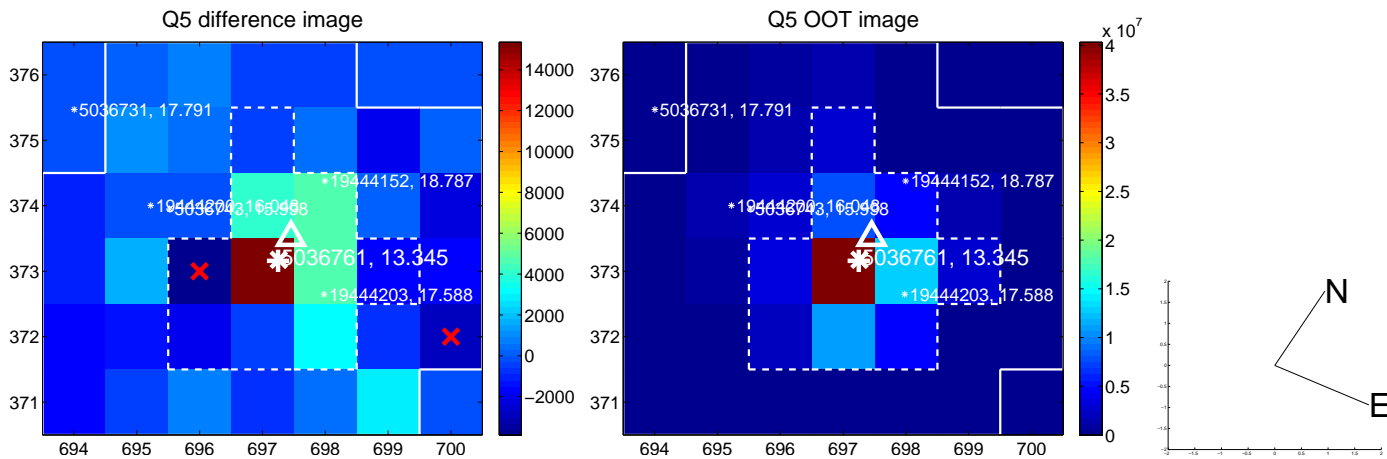


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

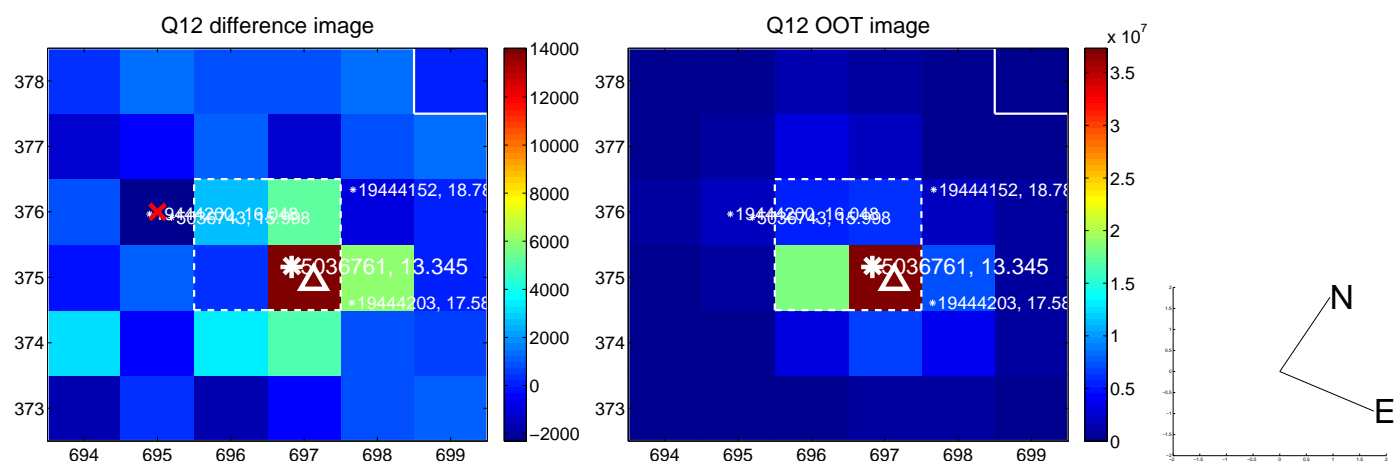
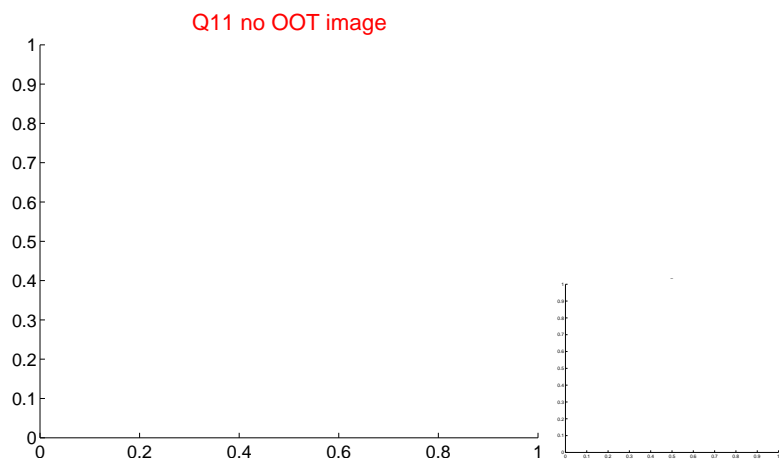
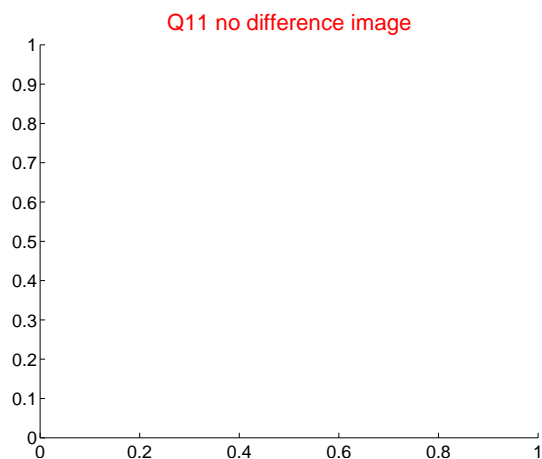
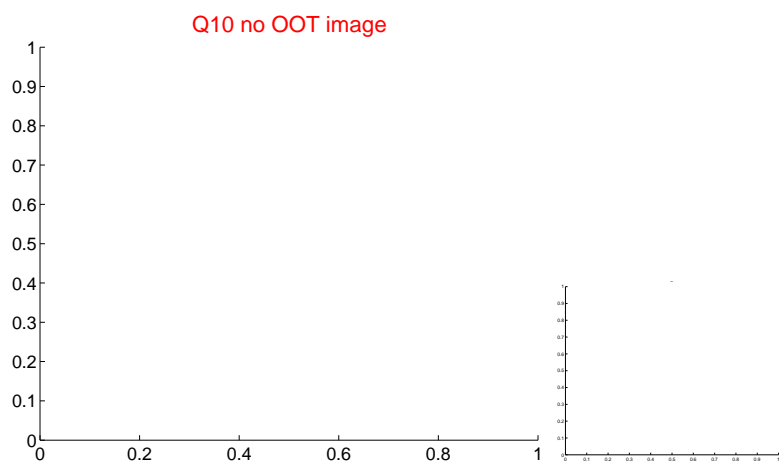
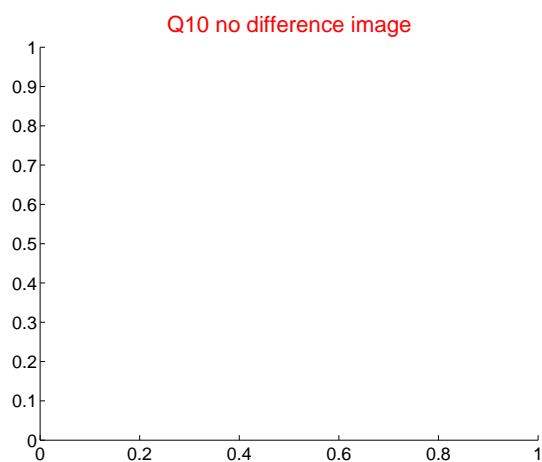
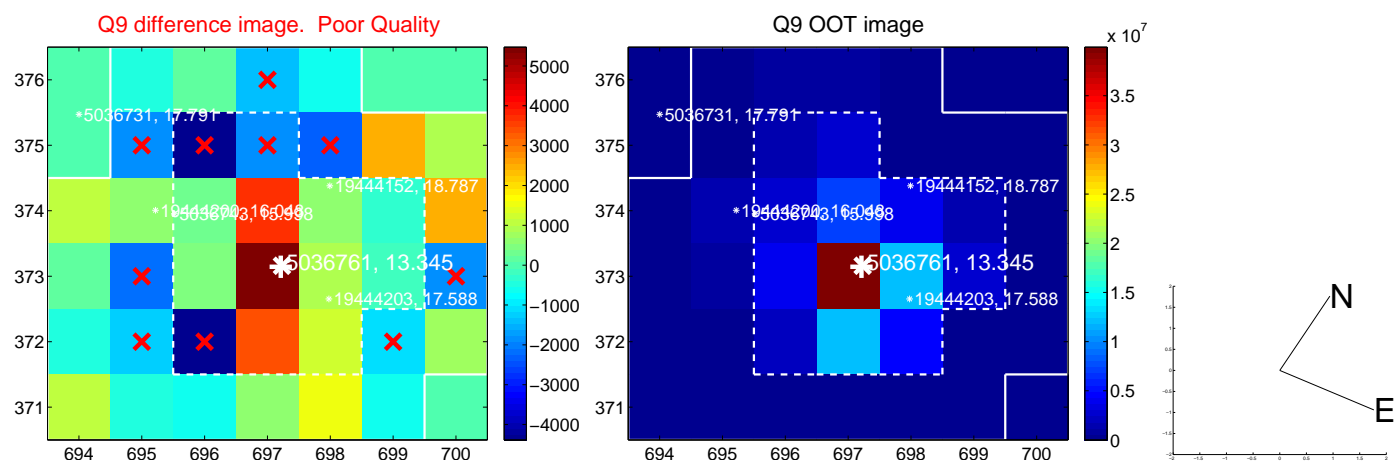
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



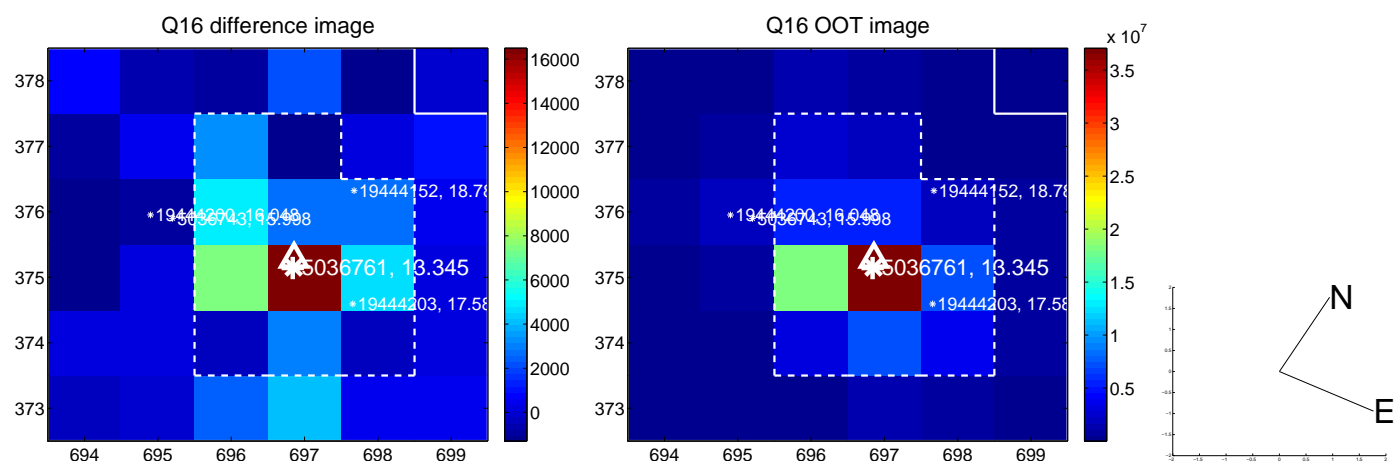
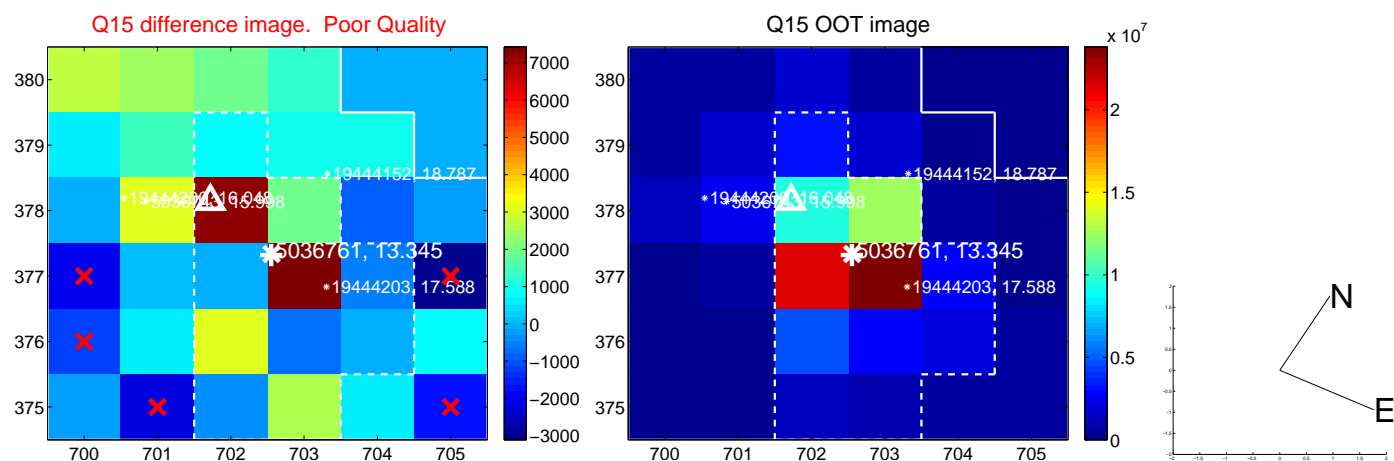
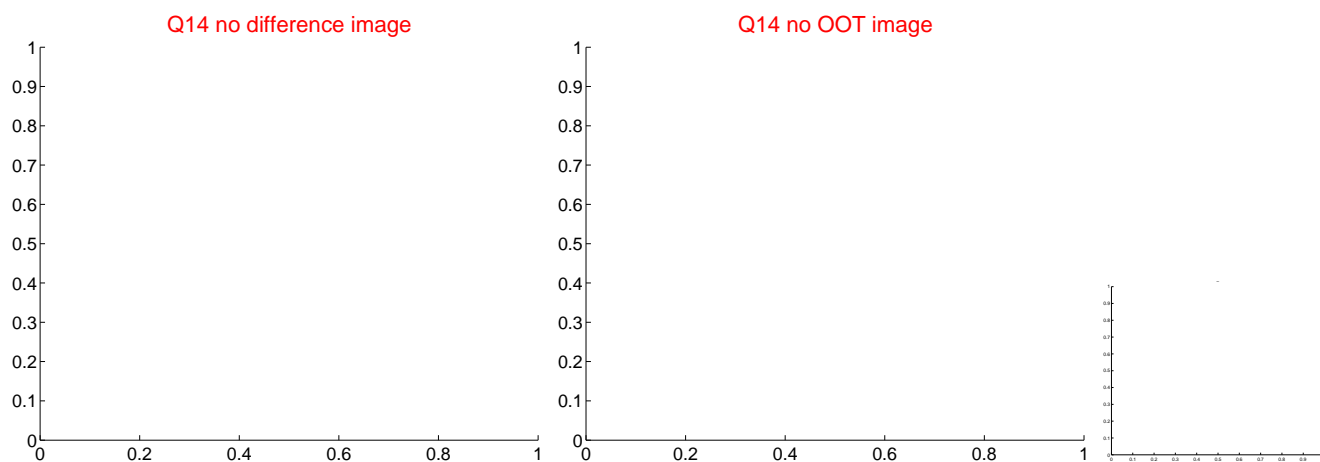
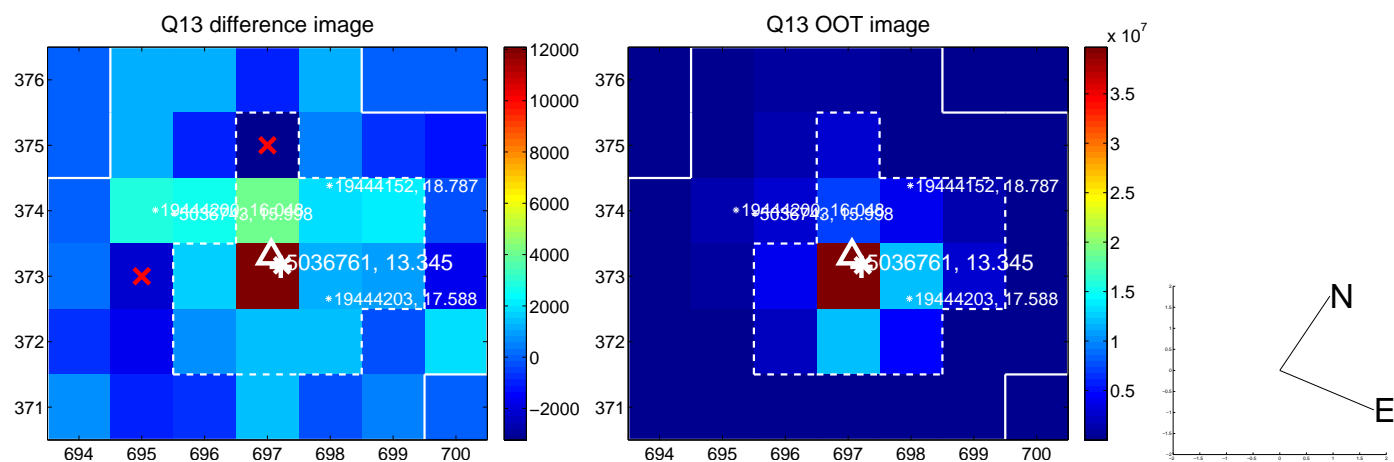
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



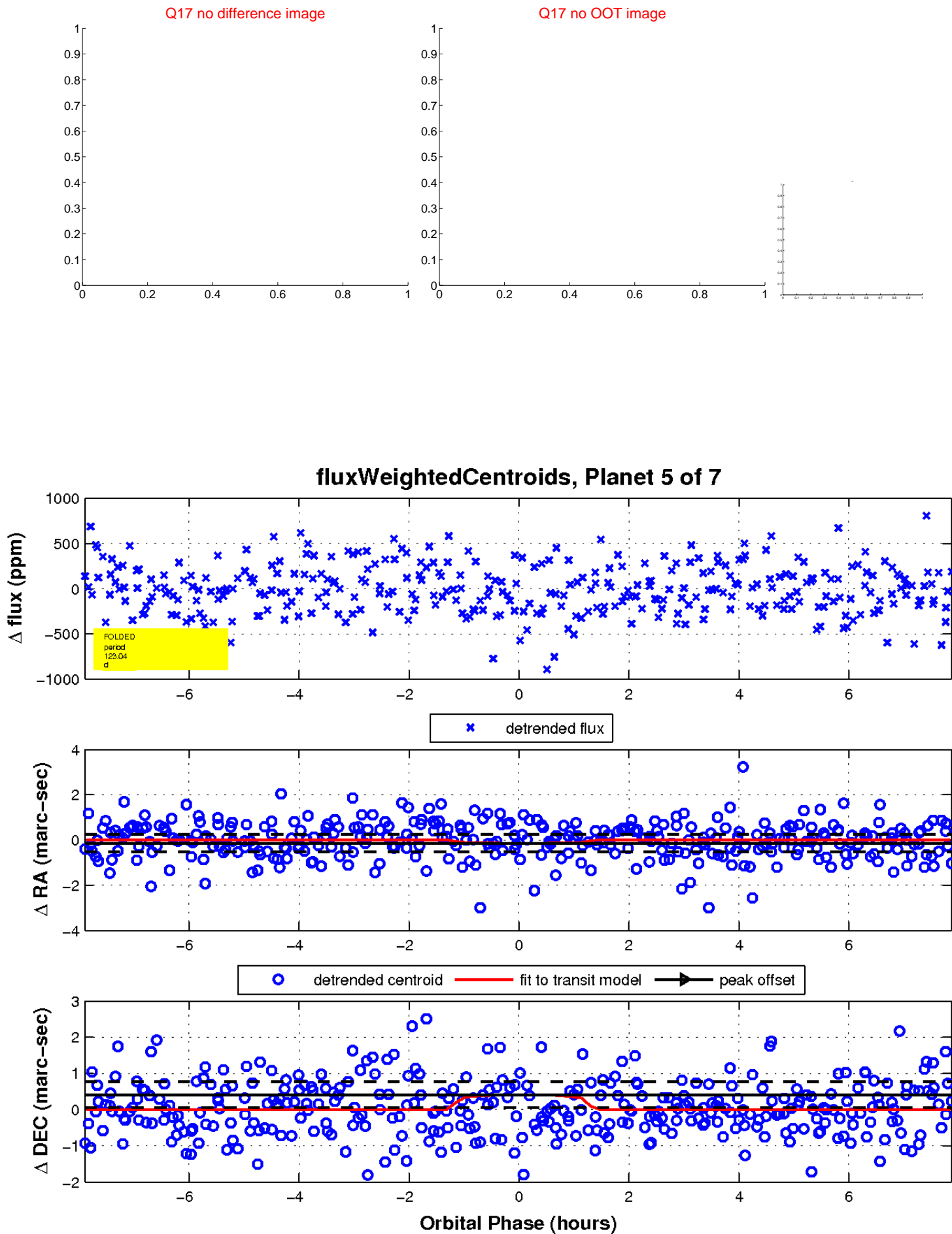
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

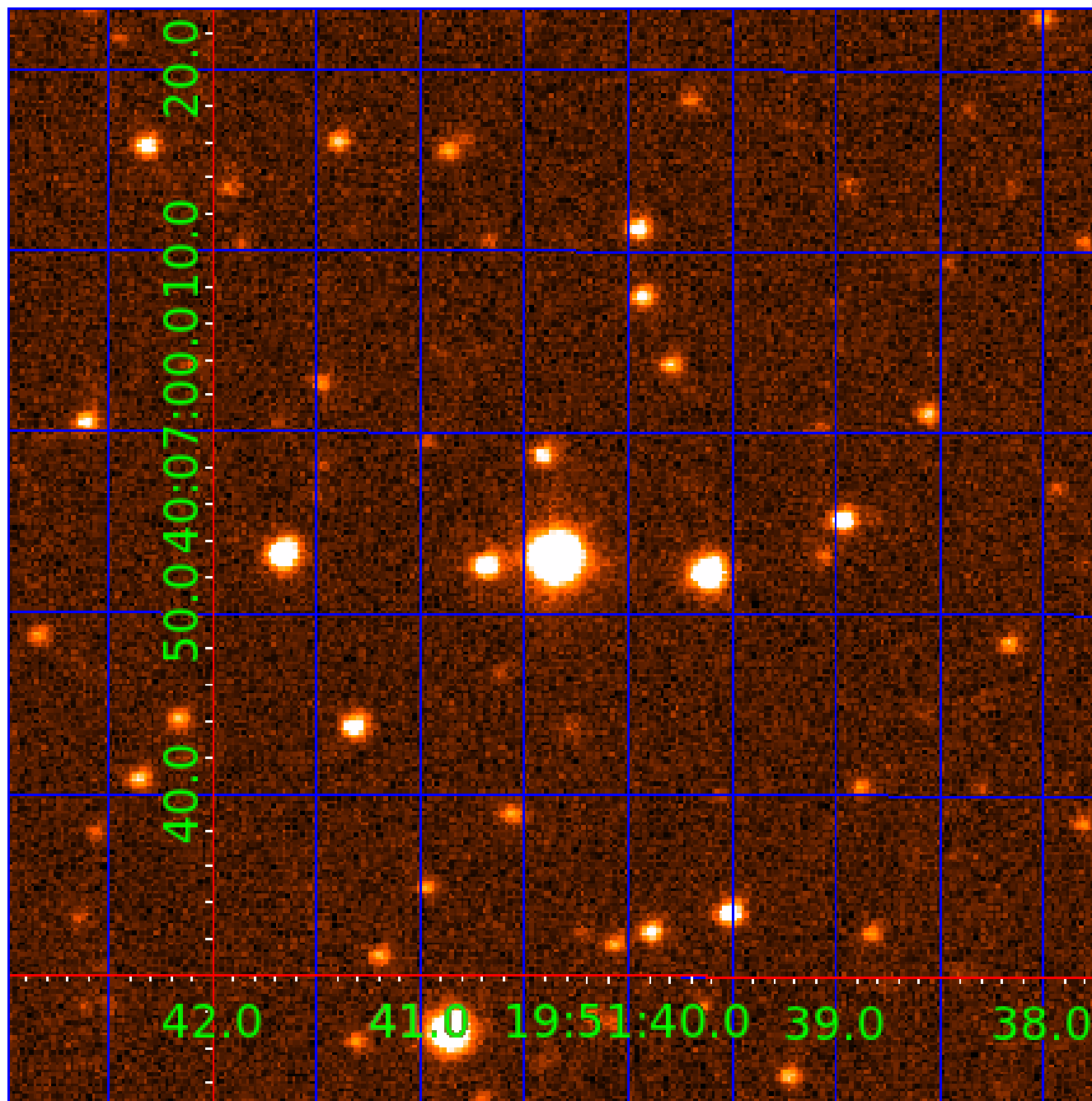


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005036761

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})
005036761-01	OBS	No	0.630406	131.601714	39.7	1.744	11.0	9.9	1.26	6658	0.85	11752.99
005036761-02	OBS	No	0.738593	131.968020	30.8	3.453	11.0	7.3	1.26	6658	0.72	9515.58
005036761-03	OBS	No	87.676469	140.401496	714.3	2.231	9.3	9.4	1.26	6658	3.59	16.31
005036761-04	OBS	No	110.473550	135.848811	576.6	3.586	8.7	8.4	1.26	6658	3.34	11.98
005036761-05	OBS	No	123.035676	147.186643	567.1	2.634	9.1	8.1	1.26	6658	3.35	10.38
005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036761-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

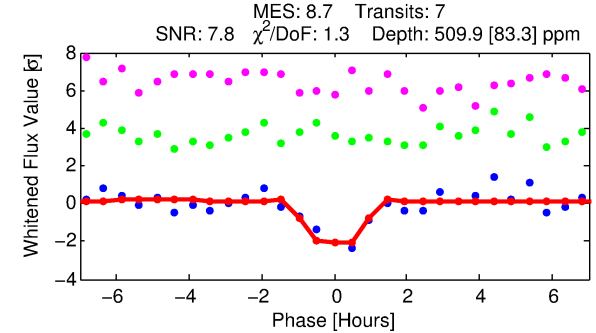
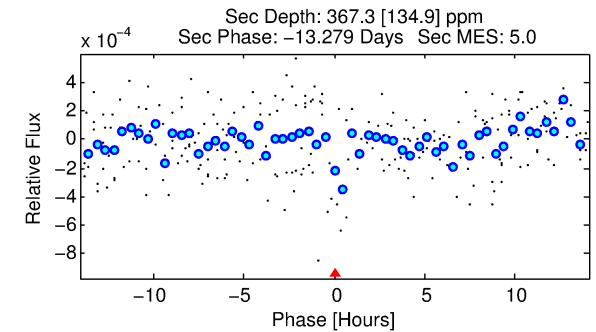
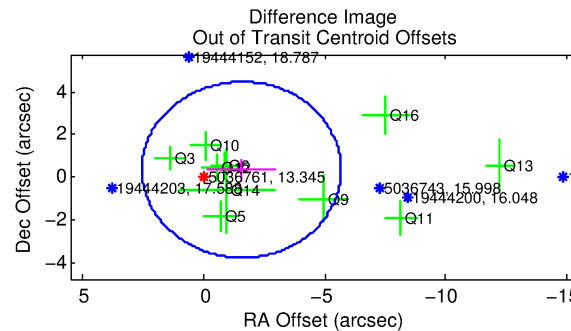
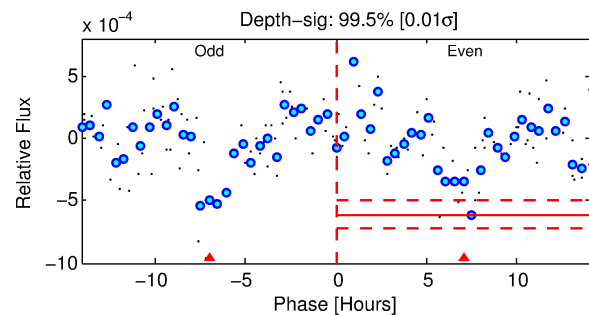
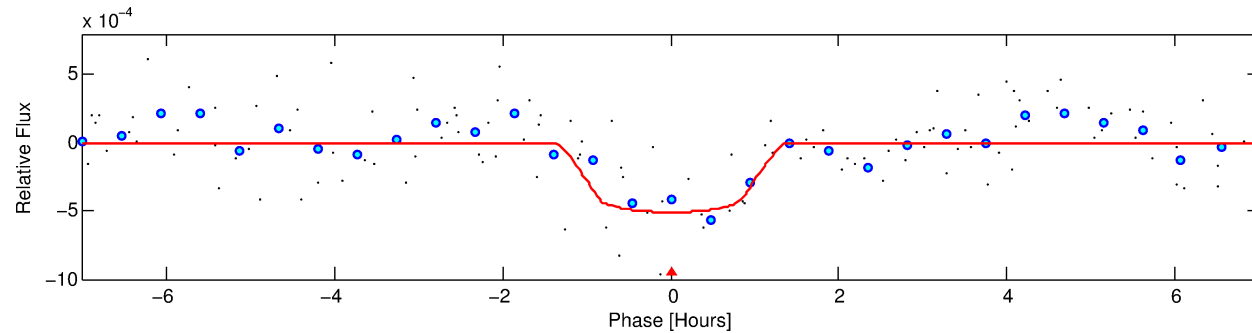
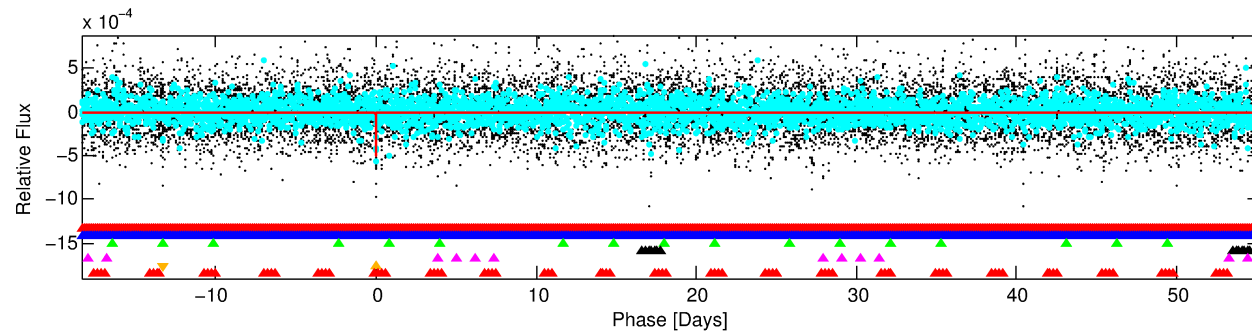
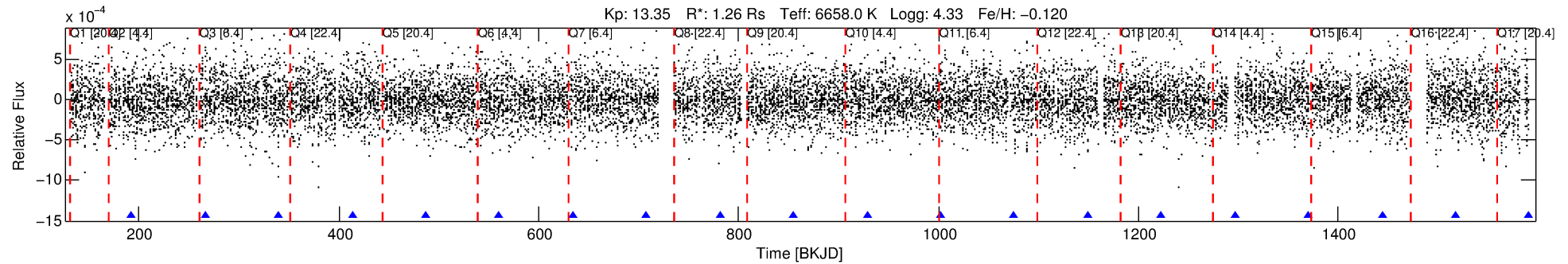
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-06

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 6 of 7 Period: 73.589 d



DV Fit Results:

Period = 73.58927 [0.00087] d
Epoch = 192.8005 [0.0084] BKJD
Rp/R* = 0.0231 [0.0366]
a/R* = 145.86 [1317.45]
b = 0.82 [3.56]
Seff = 20.60 [8.52]
Teq = 543 [56] K
Rp = 3.18 [5.15] Re
a = 0.3689 [0.0999] AU
Ag = 2718.36 [8746.88] [0.31 σ]
Teffp = 6065 [4848] K [1.14 σ]

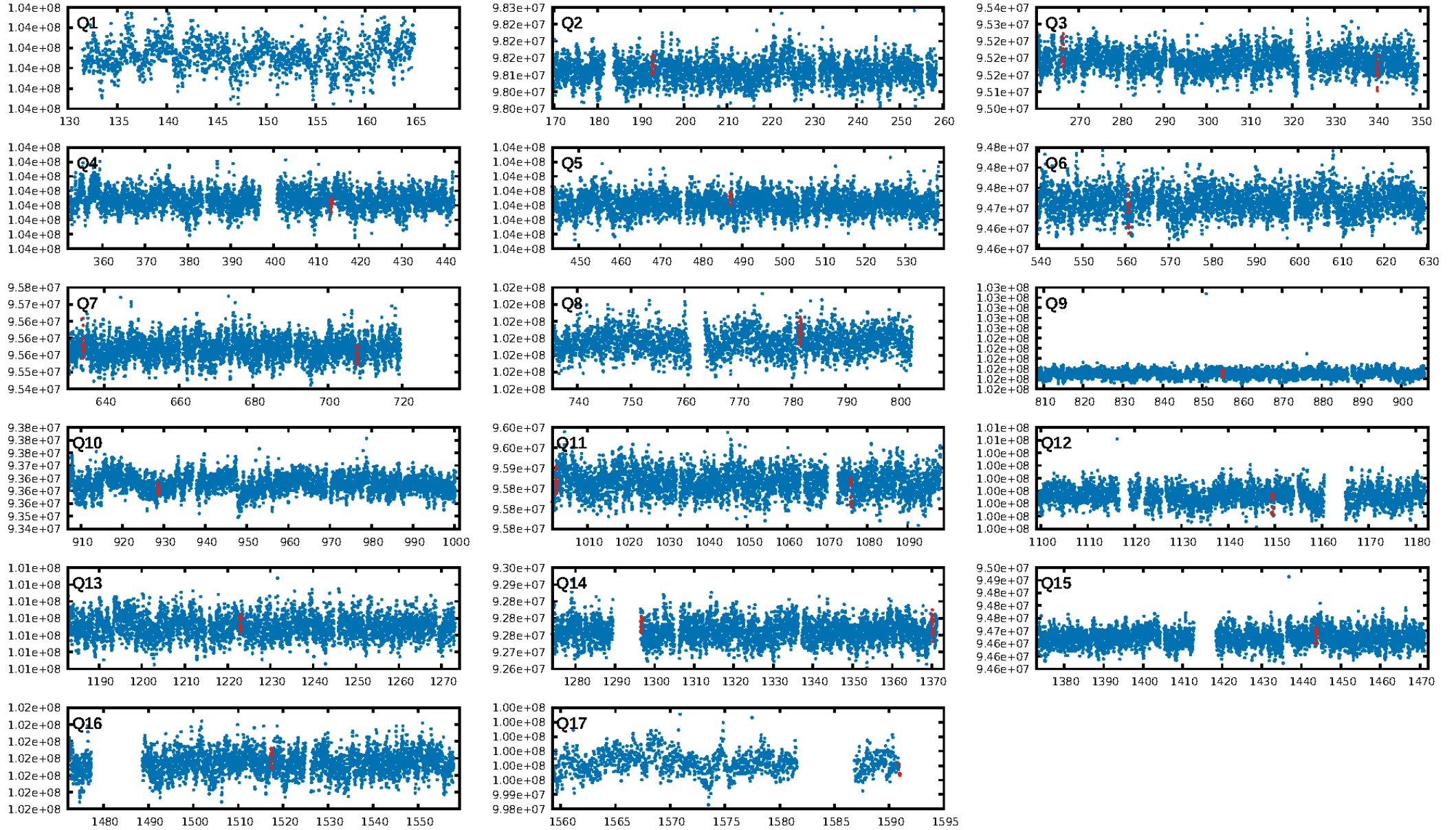
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [419.58 σ]
LongPeriod-sig: 100.0% [104.56 σ]
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 97.5%
Bootstrap-pfa: 9.82e-11
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 1.012
Centroid-sig: 0.6%
Centroid-so: 0.686 arcsec [1.54 σ]
OotOffset-rm: 1.613 arcsec [1.18 σ]
OotOffset-st: 3/2/2/3 [10]
KicOffset-rm: 1.599 arcsec [1.21 σ]
KicOffset-st: 3/2/2/3 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.00 [0/15]

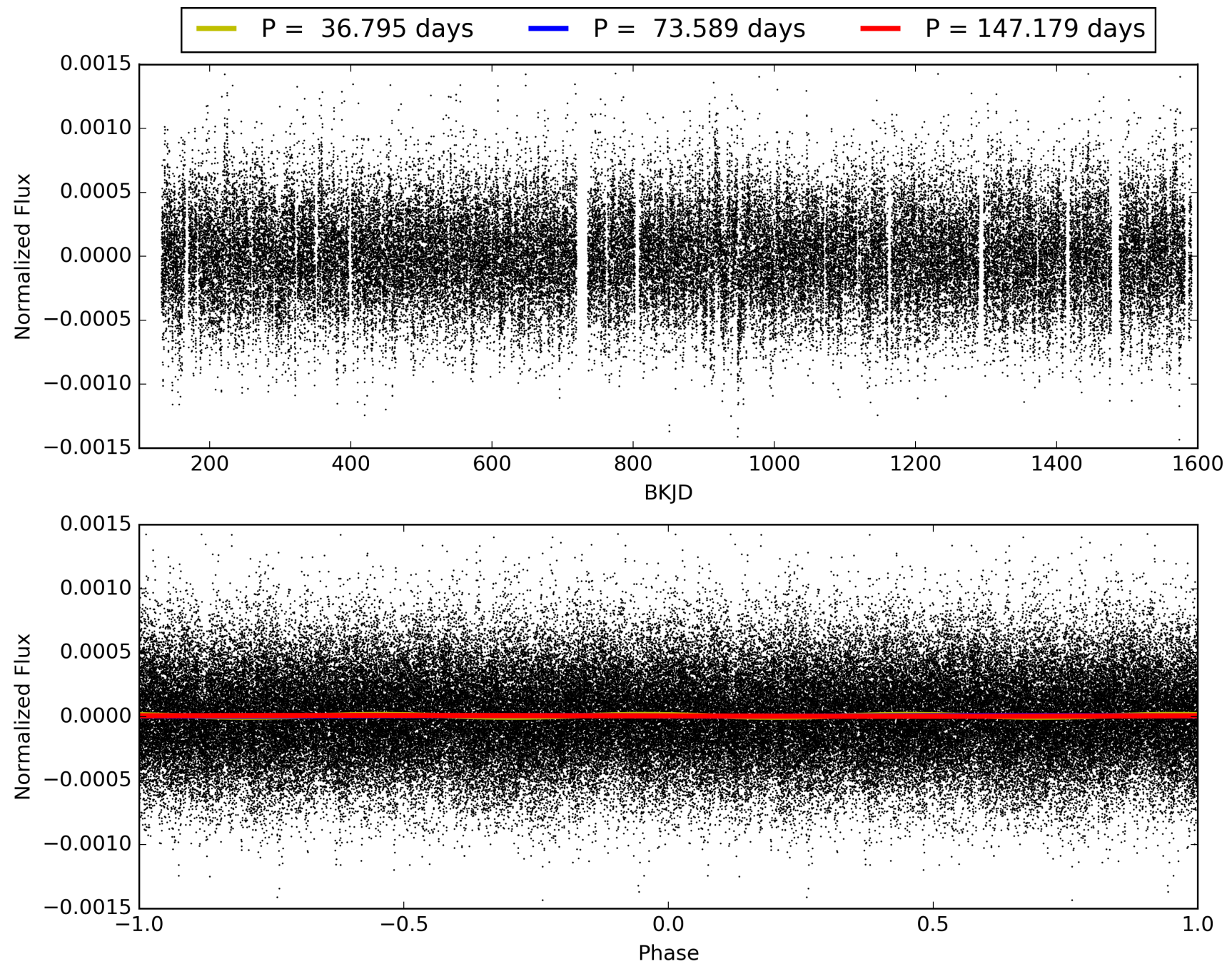
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:55 Z

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

TCE 005036761-06, PDC Light Curves

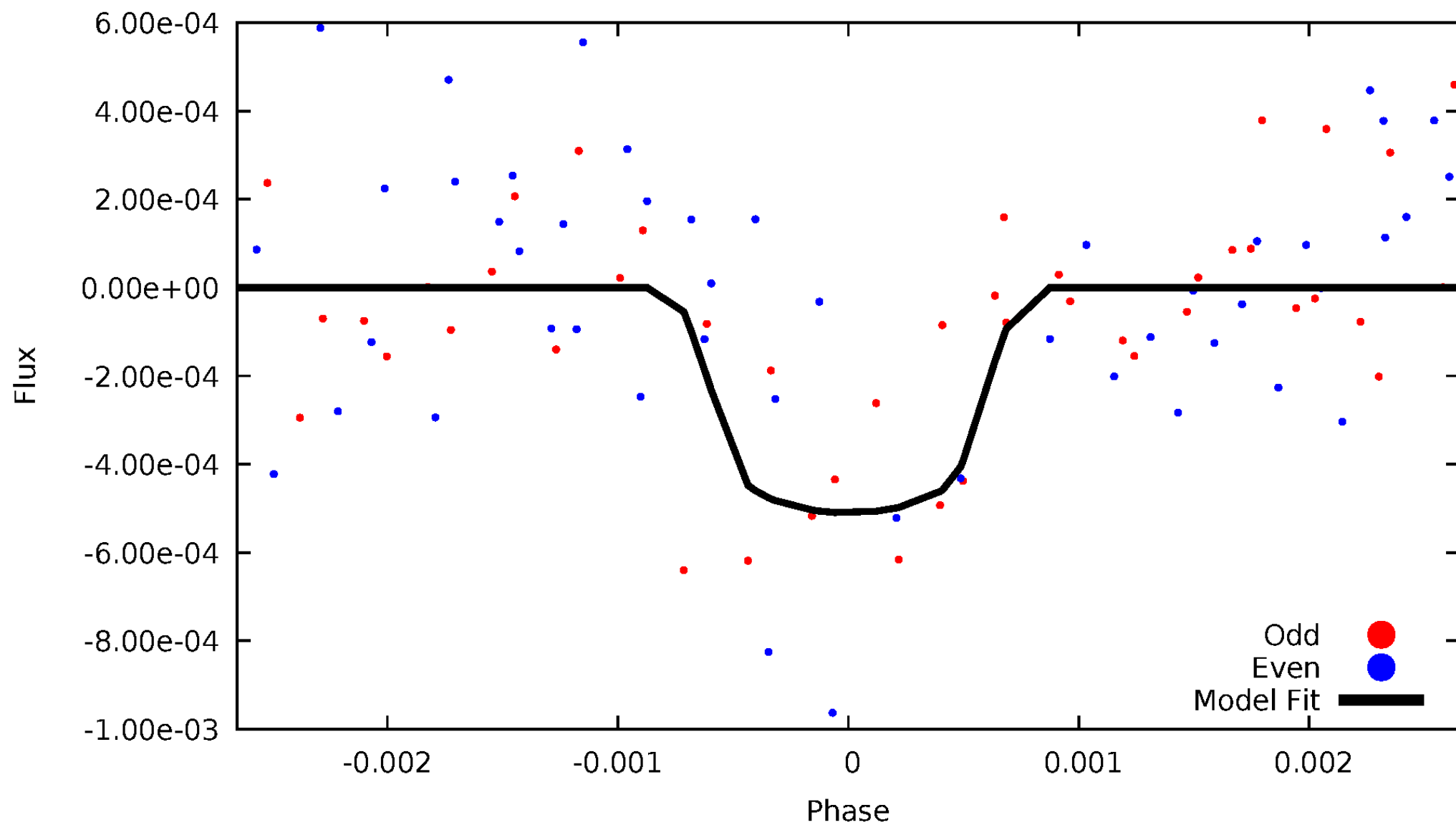


TCE 005036761-06



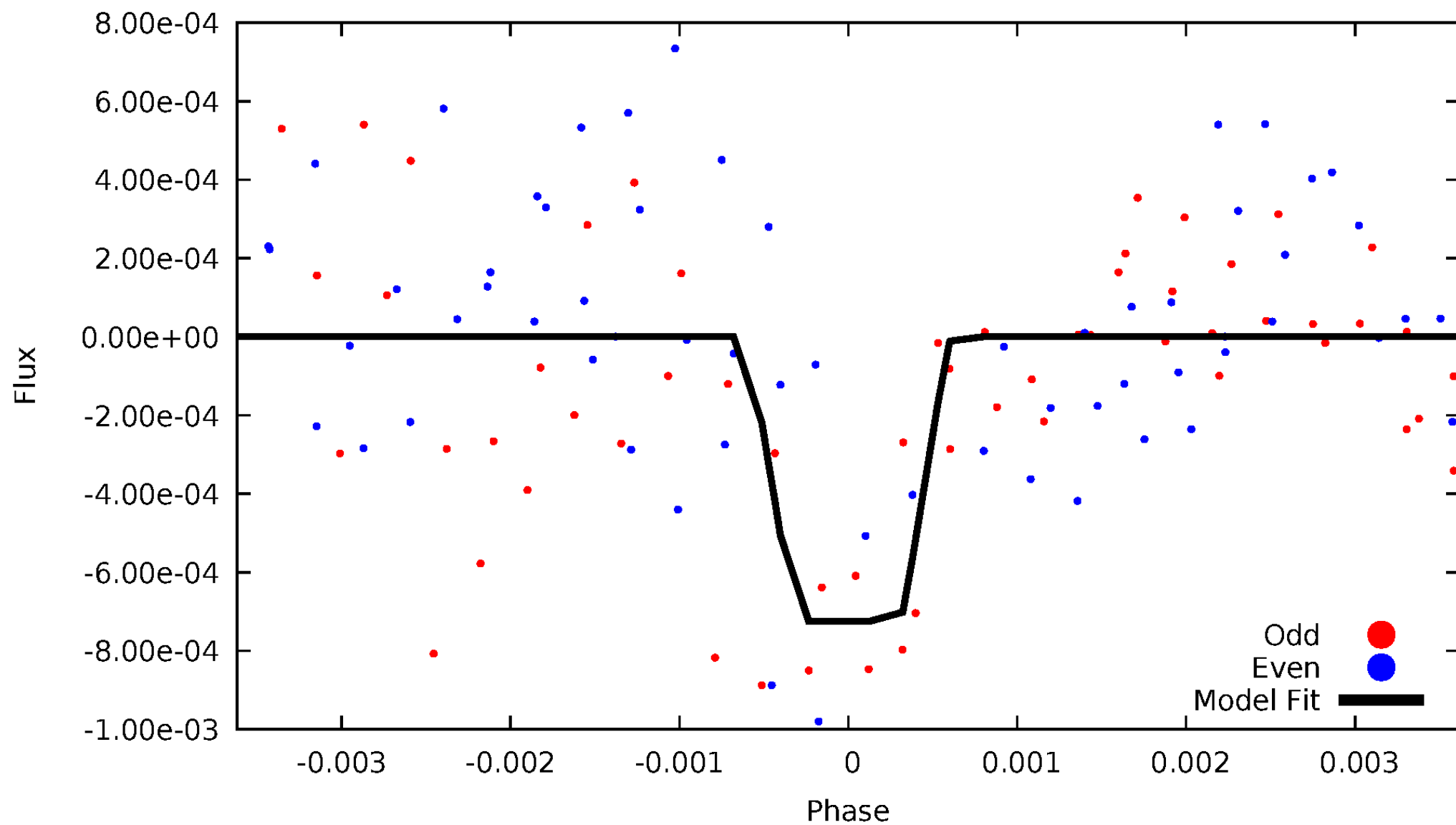
DV Odd/Even

TCE 005036761-06



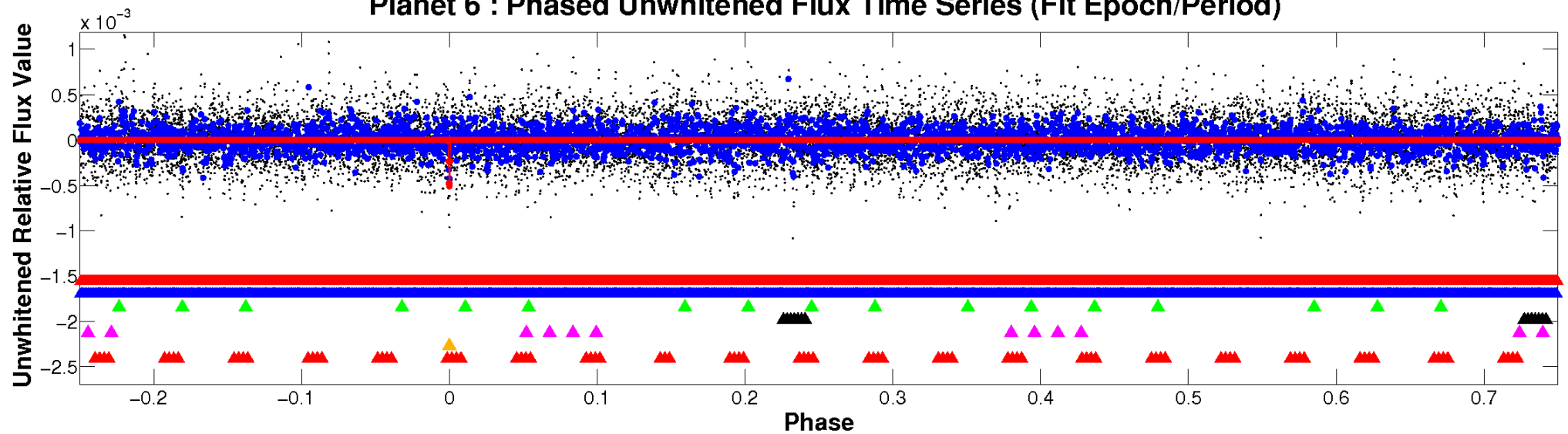
ALT Odd/Even

TCE 005036761-06

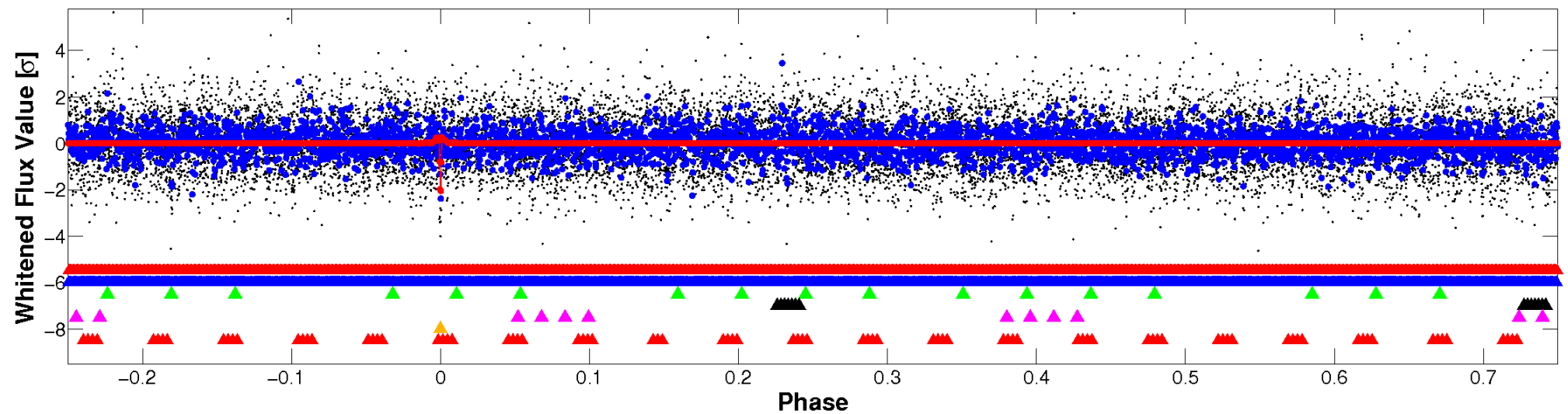


Non-Whitened Vs. Whitened Light Curve

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

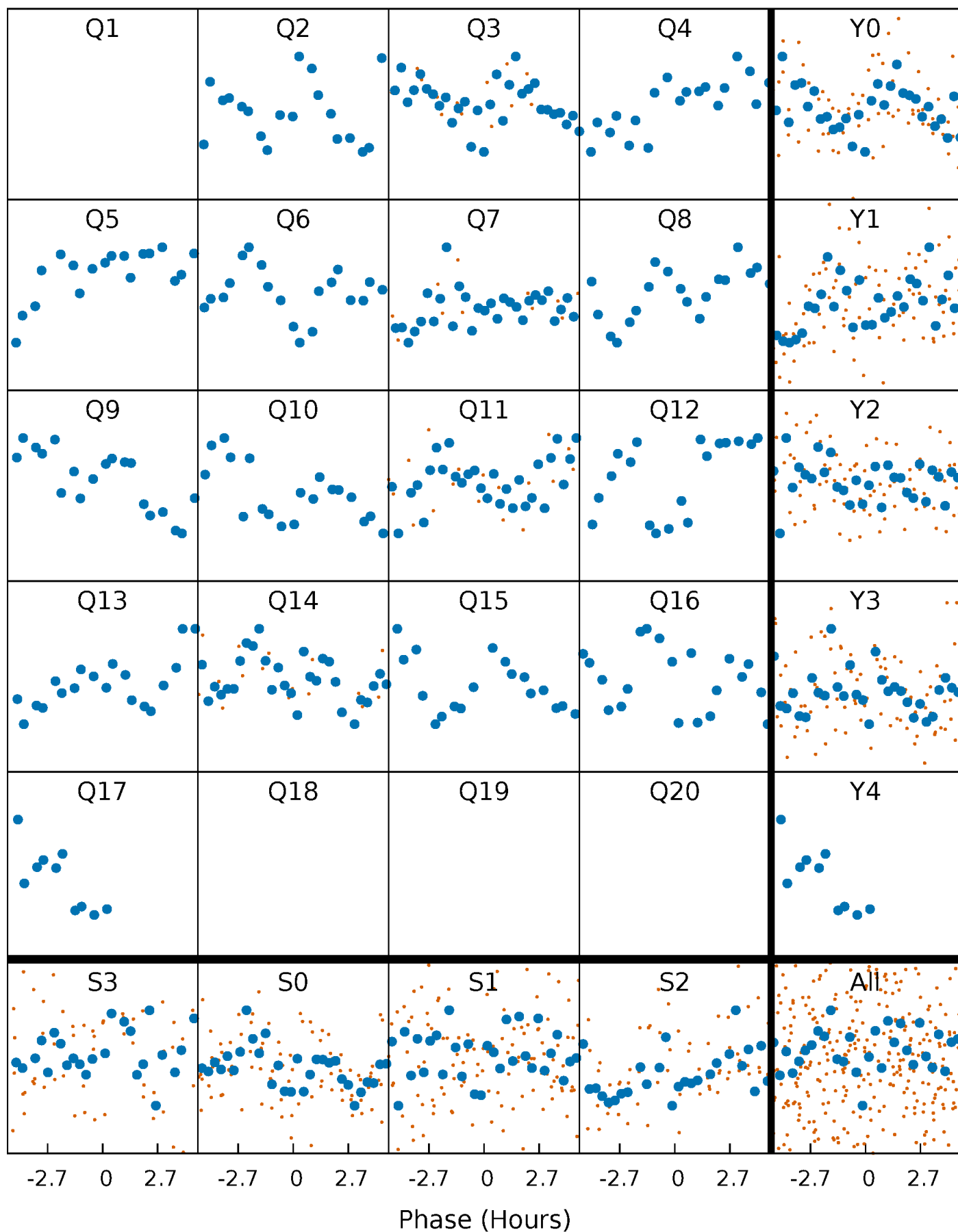


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



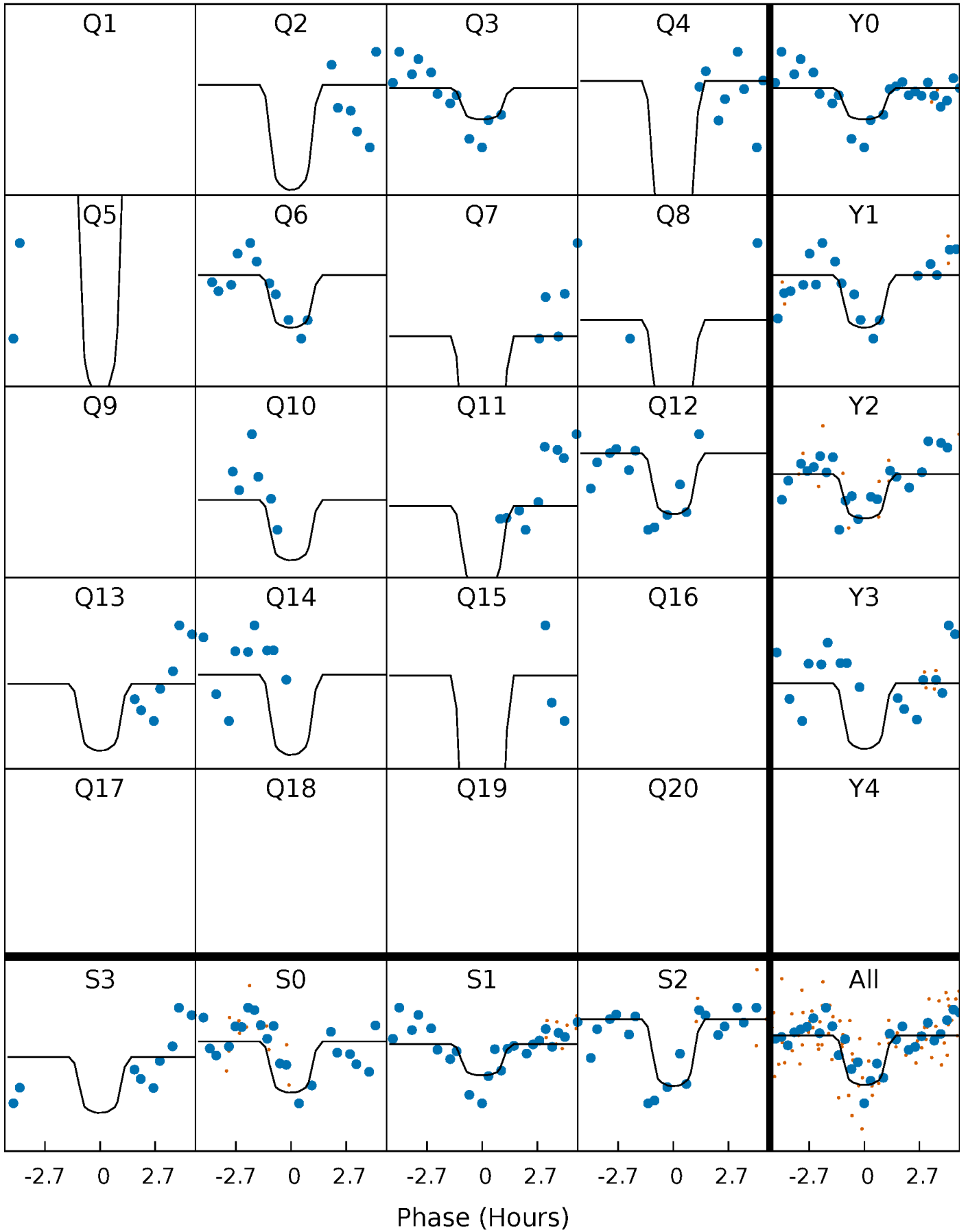
PDC Quarter-Phased Transit Curves

TCE 005036761-06 P= 73.589267 Days $T_0=192.800523$ (BKJD)



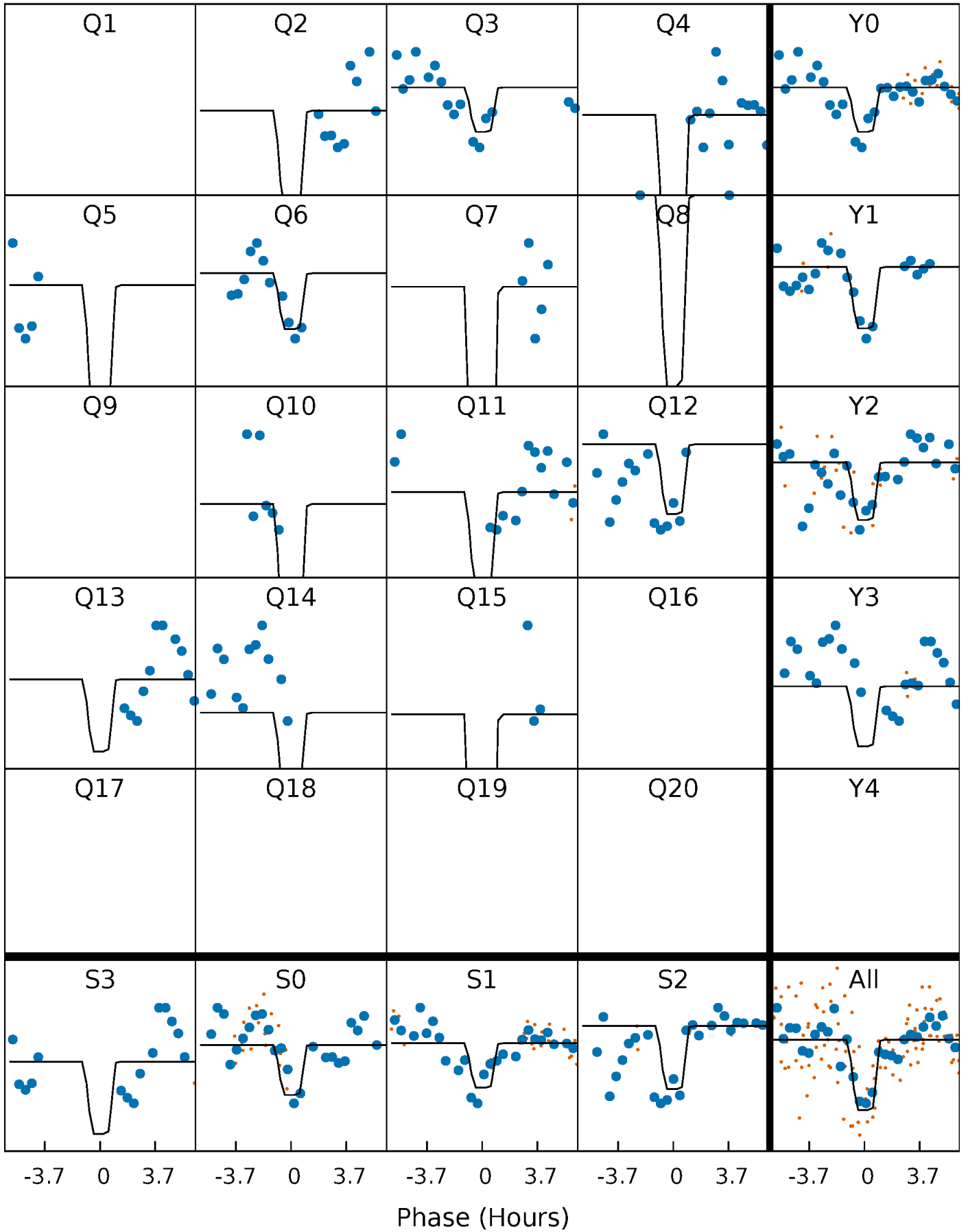
DV Quarter-Phased Transit Curves

TCE 005036761-06 P= 73.589267 Days $T_0=192.800523$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

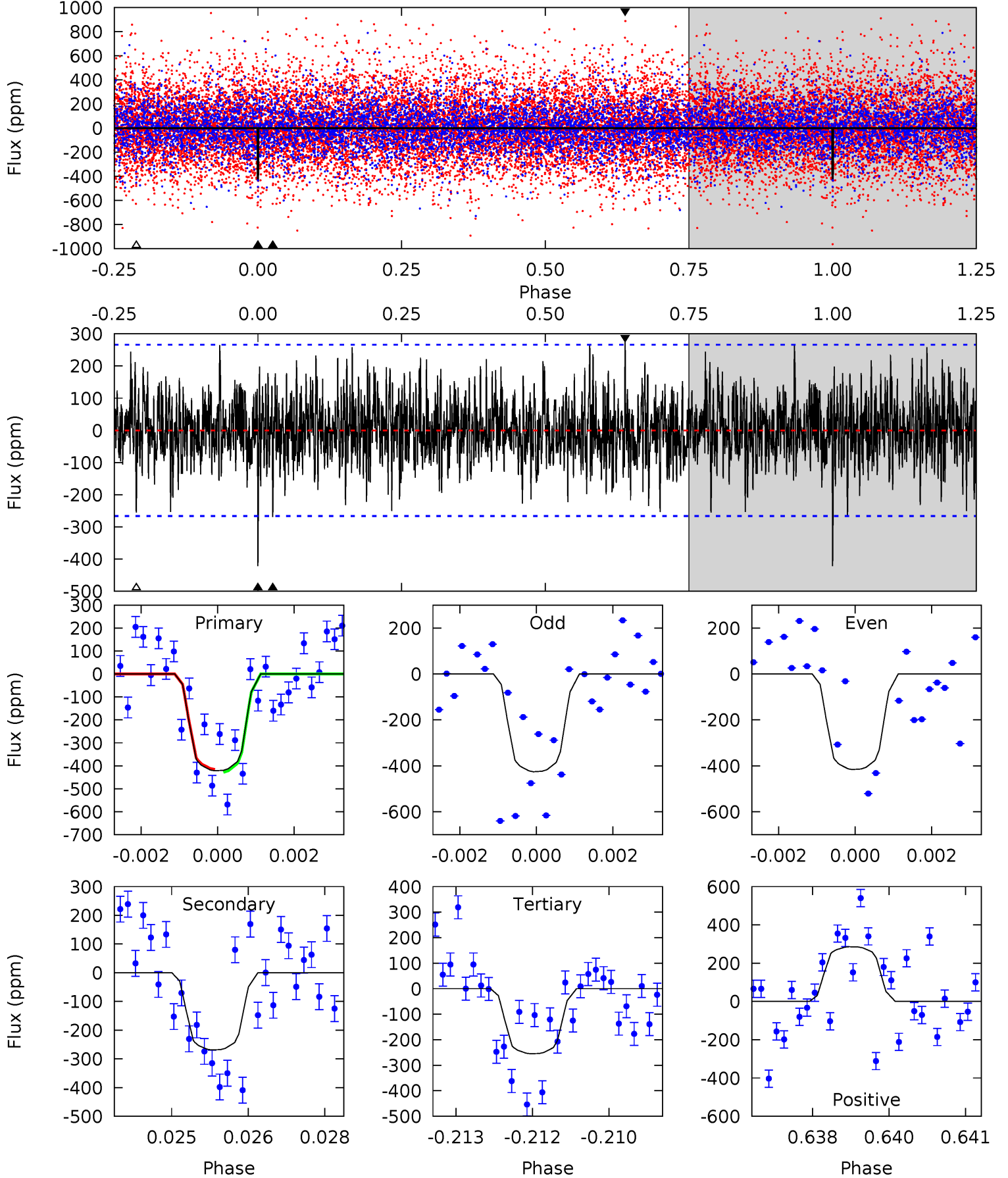
TCE 005036761-06 P= 73.589059 Days $T_0=192.808839$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-06, P = 73.589267 Days, E = 119.211256 Days

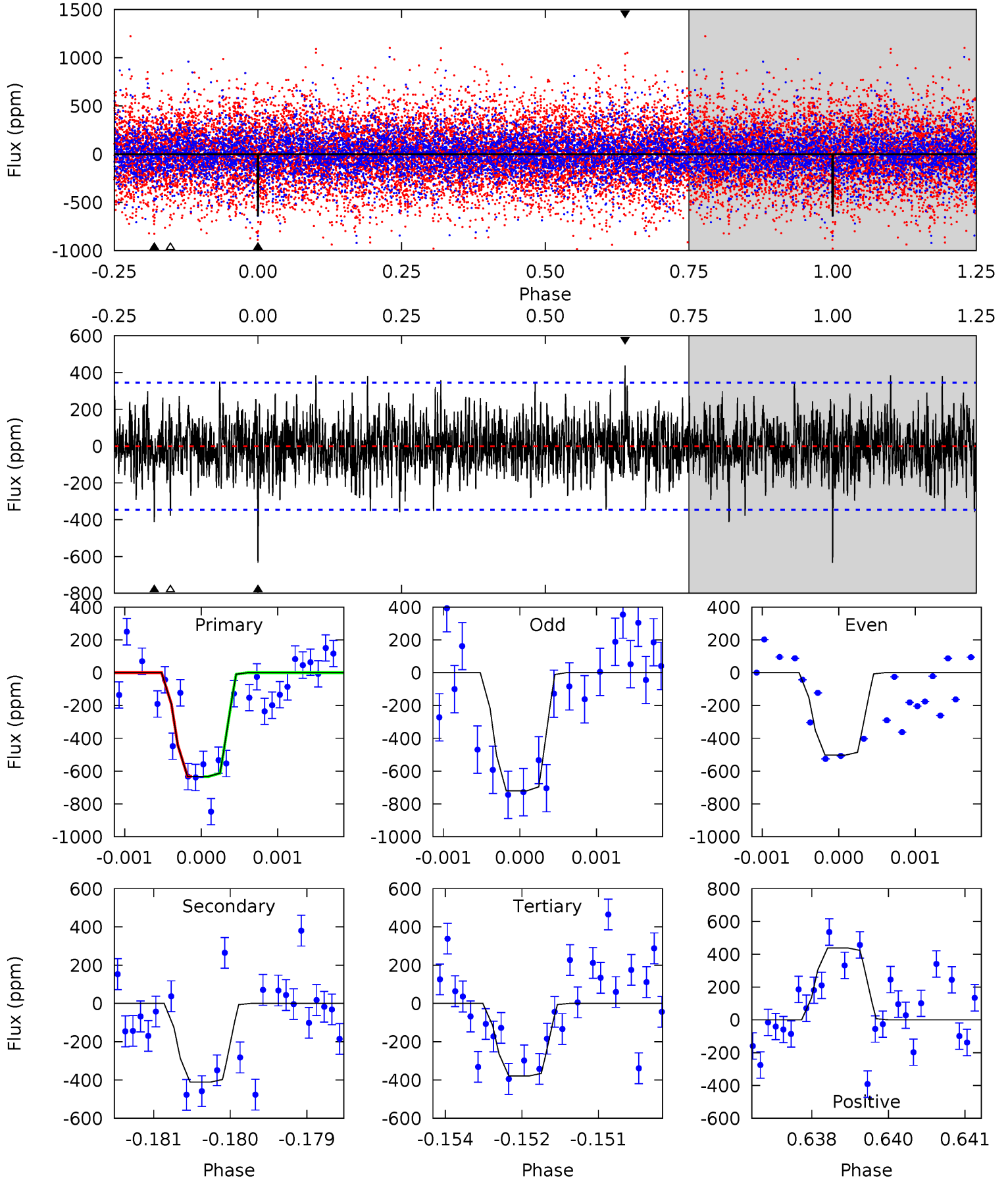
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.51	5.43	5.15	5.78	5.37	3.16	1.63	3.36	2.74	0.28	-0.35	0.10	0.98	0.40	0.13



Alt Model-Shift Uniqueness Test

005036761-06, P = 73.589059 Days, E = 119.219780 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	6.42	5.91	6.84	5.40	3.21	1.66	3.98	3.05	0.51	-0.42	1.73	0.69	0.41	0.02



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-269 ± 50	$5.25^{+4.82}_{-3.46}$	770^{+58}_{-38}	4584^{+3117}_{-956}	748^{+5700}_{-562}
Alt.	-411 ± 64	$4.96^{+4.90}_{-2.92}$	771^{+63}_{-39}	5132^{+3033}_{-1187}	1240^{+6363}_{-938}

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 $A_{obs} \gg 1.0$

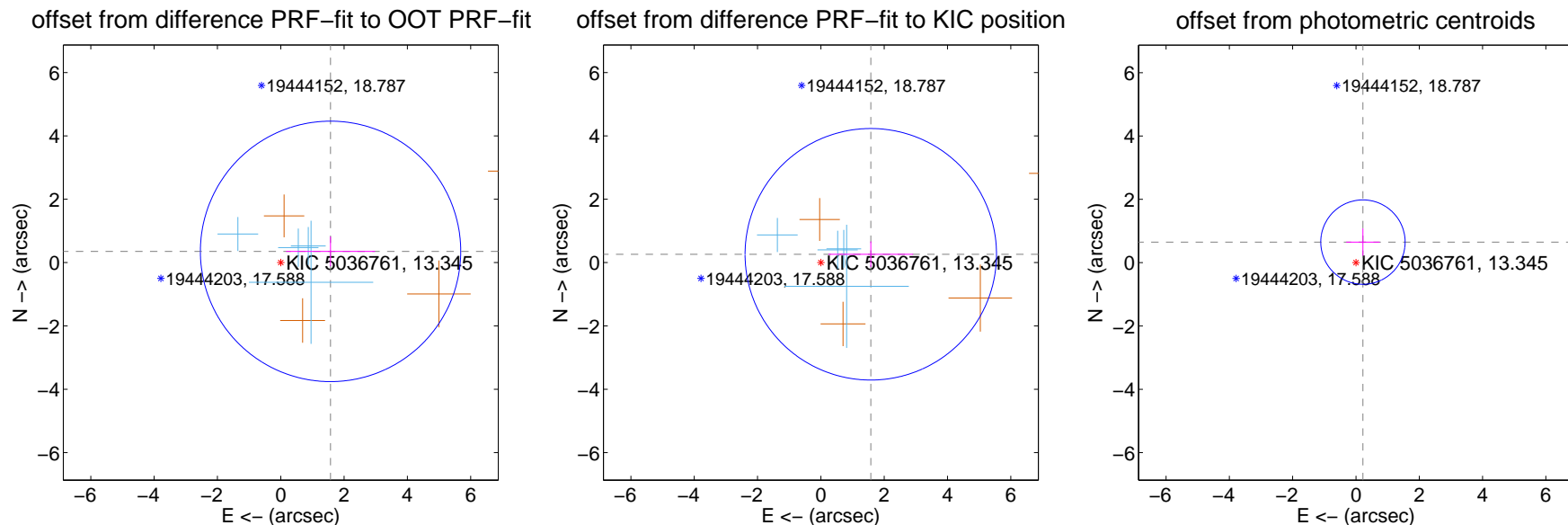
DV Centroid Data

Supplemental centroid analysis for 005036761-06. Kepler magnitude: 13.35. Transit SNR 7.79

There are 4 quarters with good PRF difference image offsets

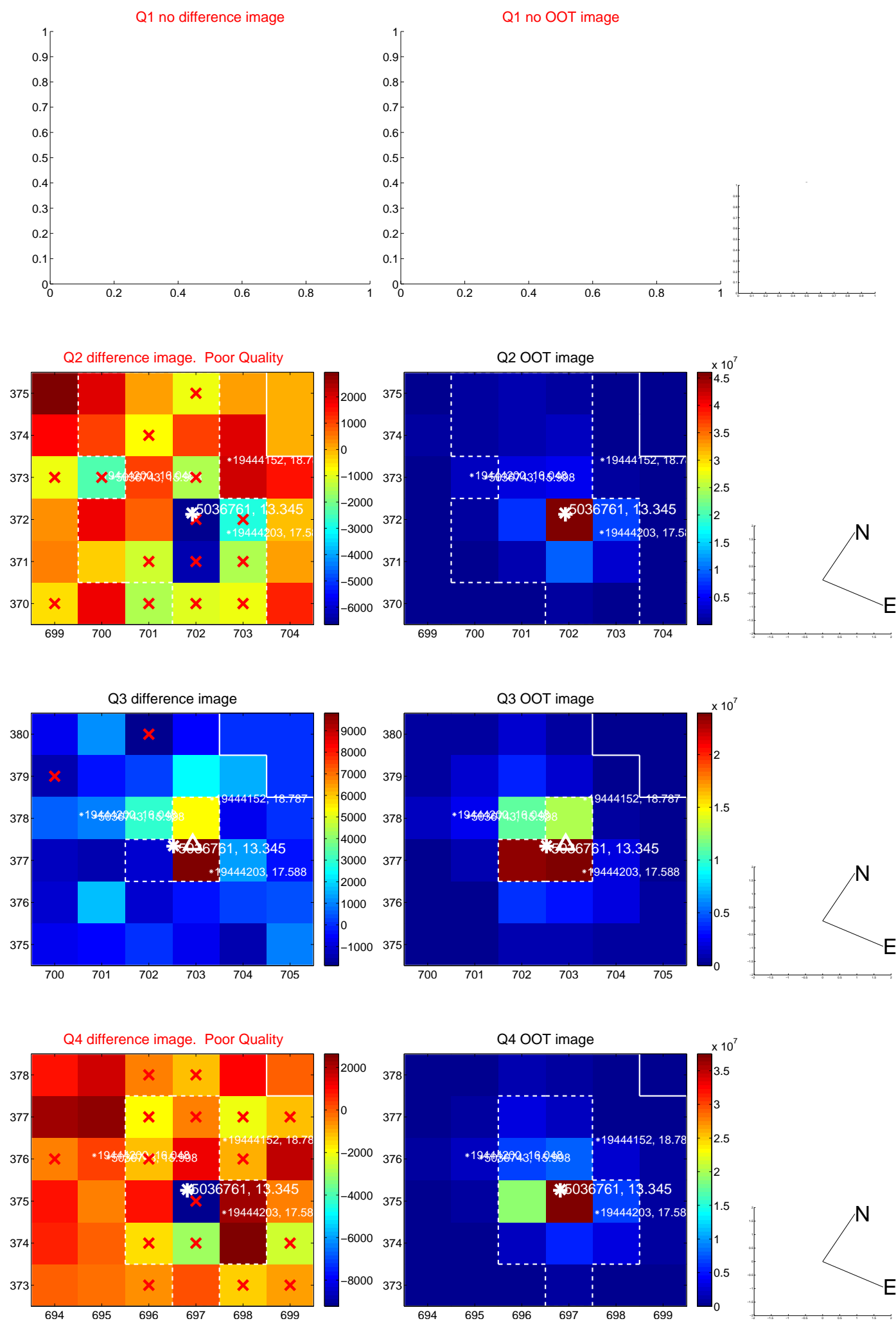
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.613 ± 1.371	1.18	-1.573 ± 1.407	0.354 ± 0.467
PRF-fit source offset from KIC position	1.599 ± 1.324	1.21	-1.577 ± 1.338	0.262 ± 0.405
photometric centroid source offset	0.69 ± 0.44	1.54	-0.22 ± 0.53	0.65 ± 0.43

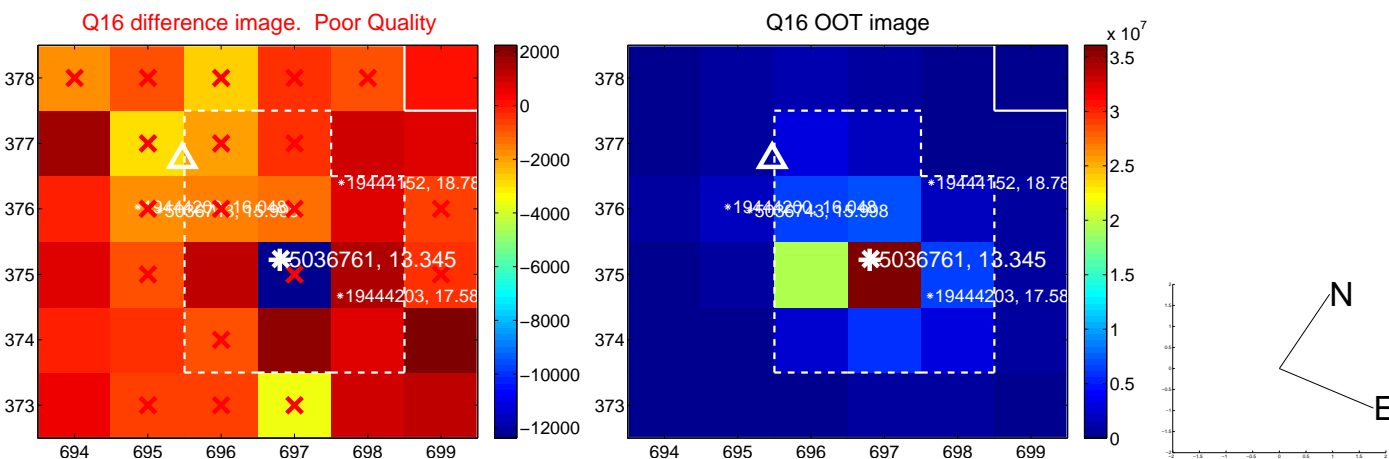
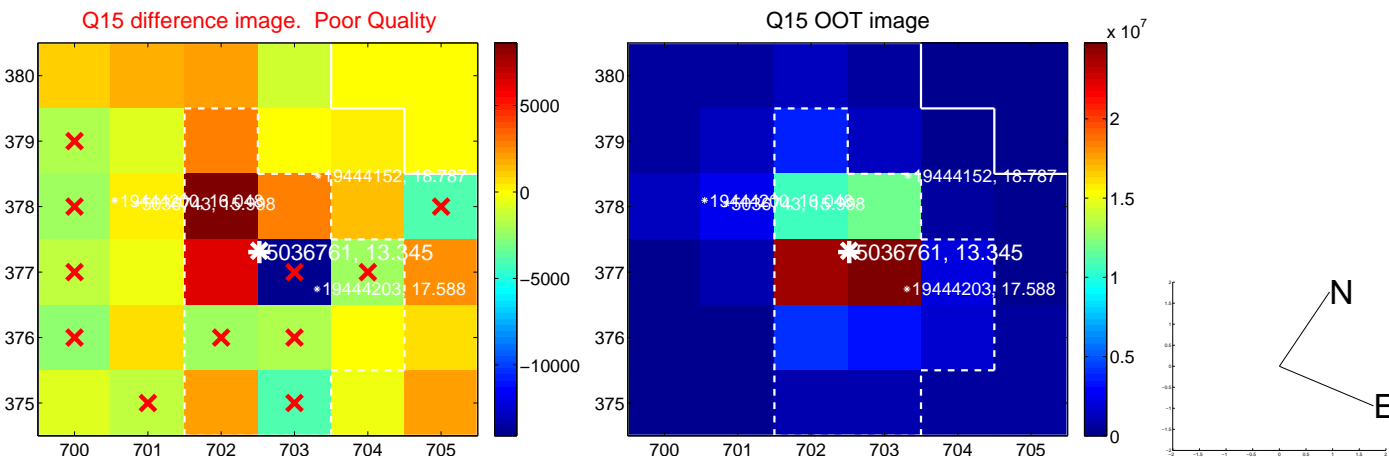
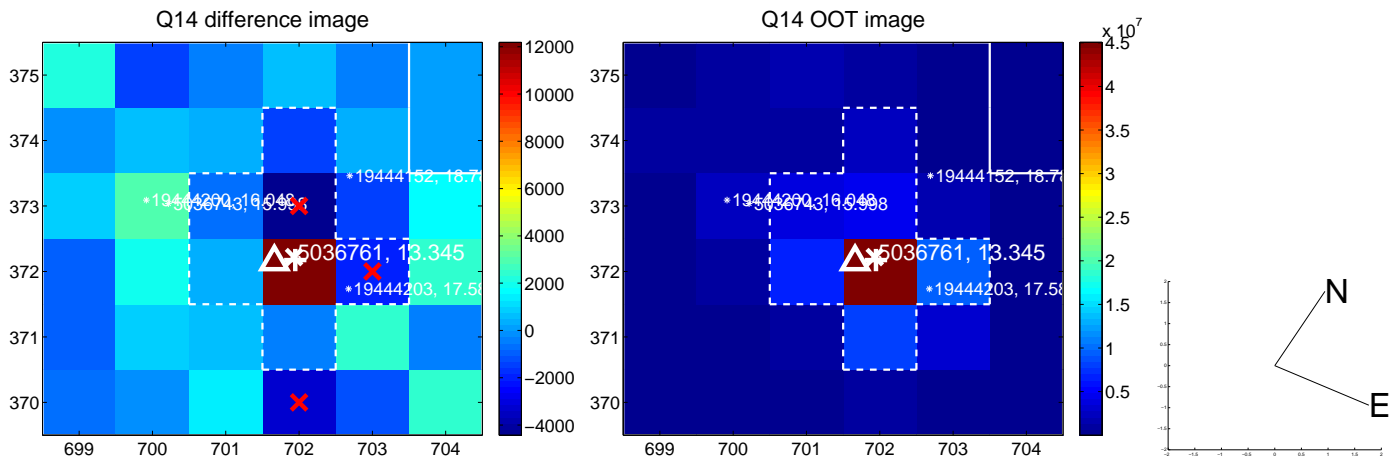
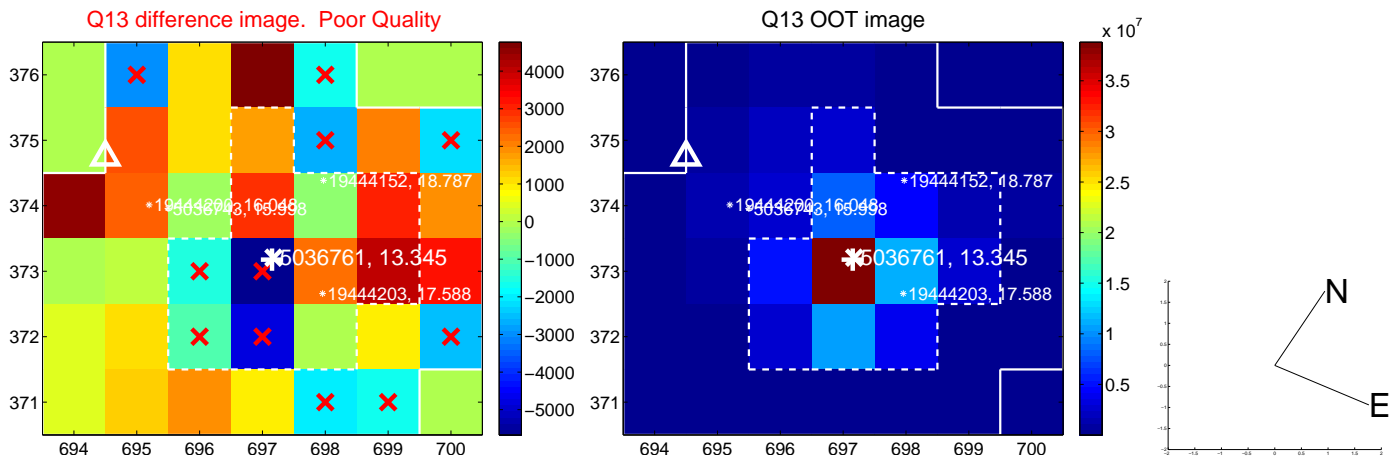


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

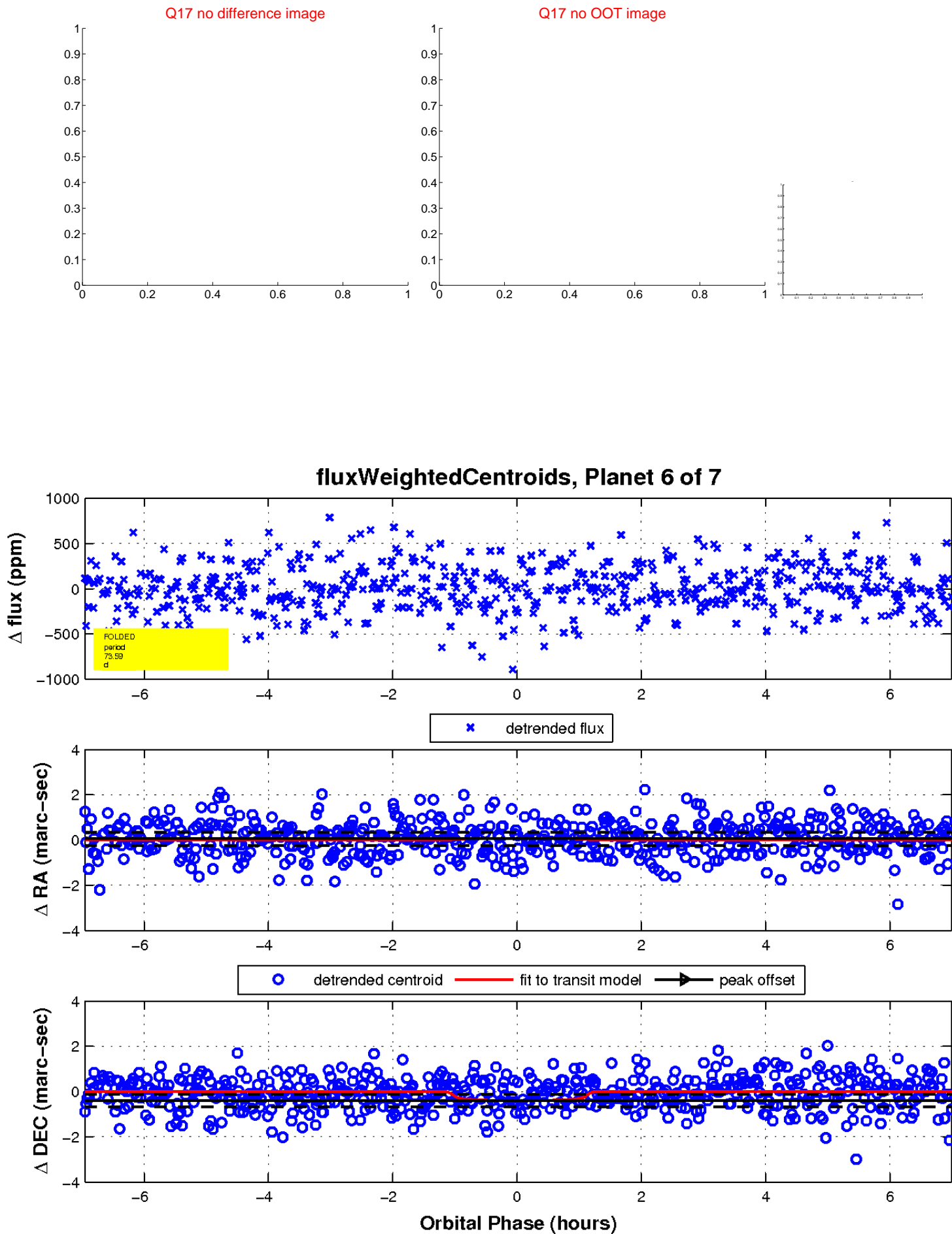
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

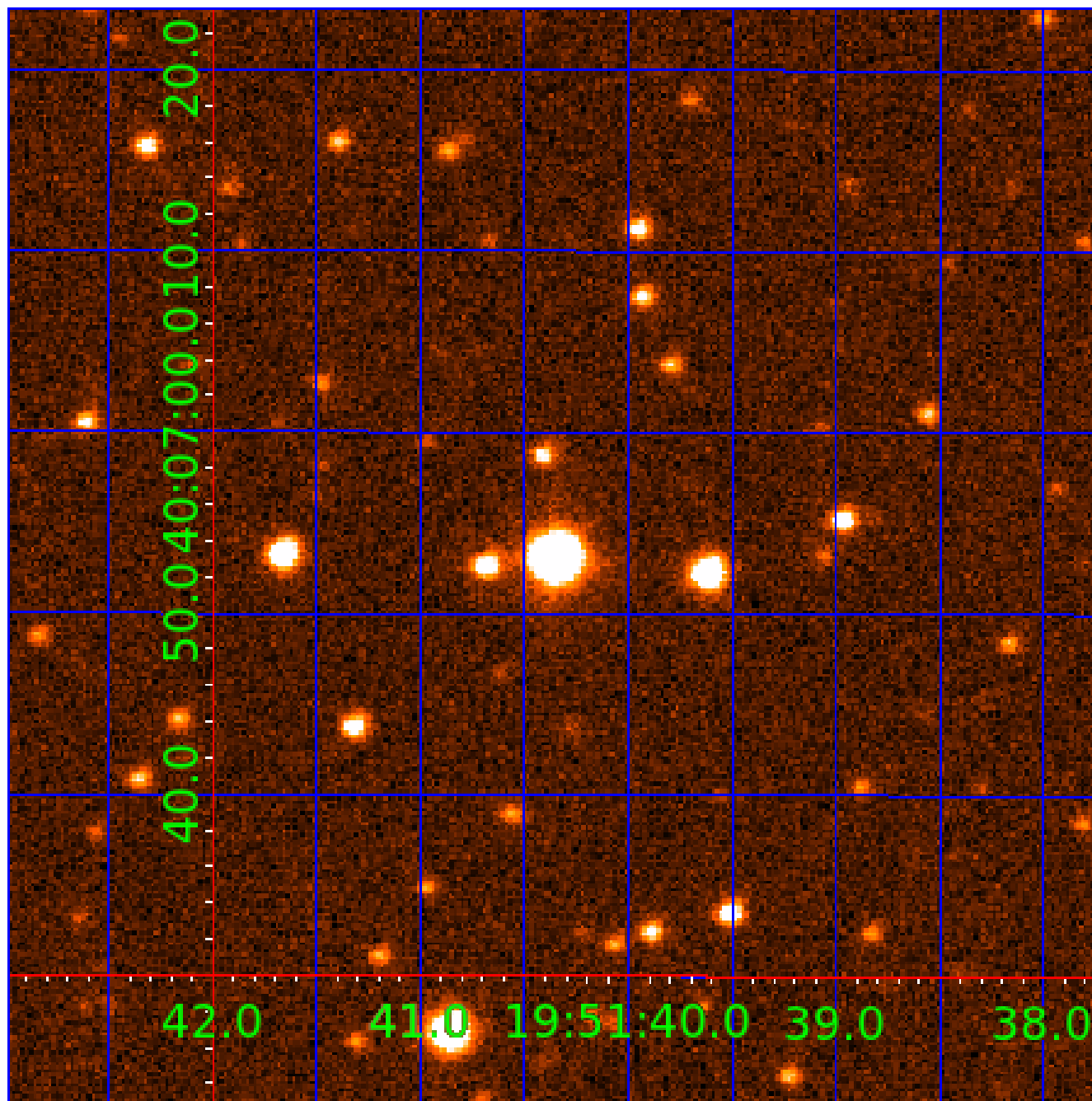


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005036761

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})
005036761-01	OBS	No	0.630406	131.601714	39.7	1.744	11.0	9.9	1.26	6658	0.85	11752.99
005036761-02	OBS	No	0.738593	131.968020	30.8	3.453	11.0	7.3	1.26	6658	0.72	9515.58
005036761-03	OBS	No	87.676469	140.401496	714.3	2.231	9.3	9.4	1.26	6658	3.59	16.31
005036761-04	OBS	No	110.473550	135.848811	576.6	3.586	8.7	8.4	1.26	6658	3.34	11.98
005036761-05	OBS	No	123.035676	147.186643	567.1	2.634	9.1	8.1	1.26	6658	3.35	10.38
005036761-06	OBS	No	73.589267	192.800523	509.9	2.341	8.7	7.8	1.26	6658	3.18	20.60
005036761-07	OBS	No	17.532115	147.018180	269.7	2.191	8.1	8.0	1.26	6658	2.42	139.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005036761-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
005036761-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT
005036761-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—HALO_GHOST
005036761-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
005036761-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
005036761-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005036761-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_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.

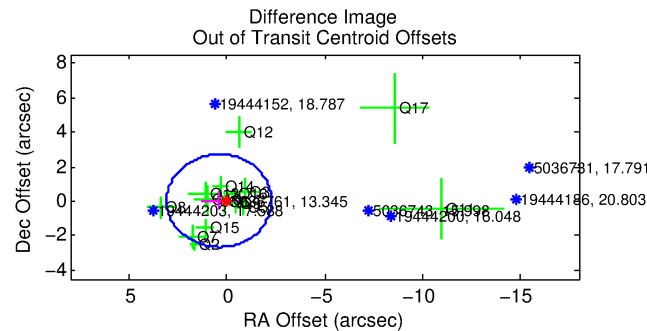
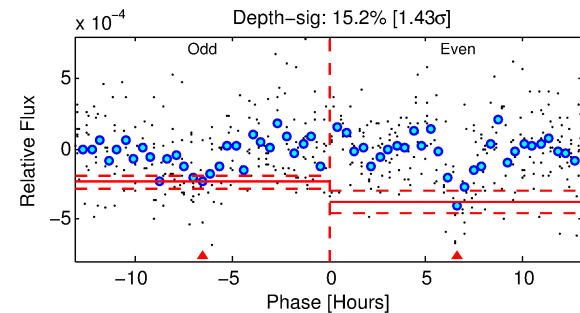
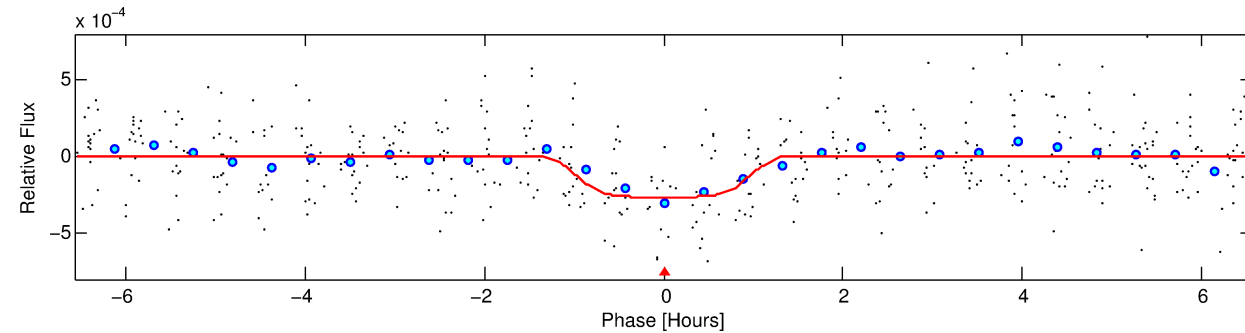
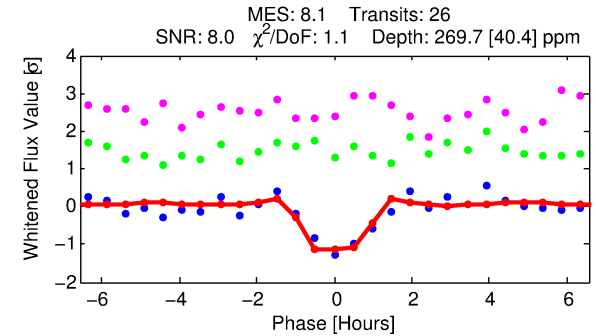
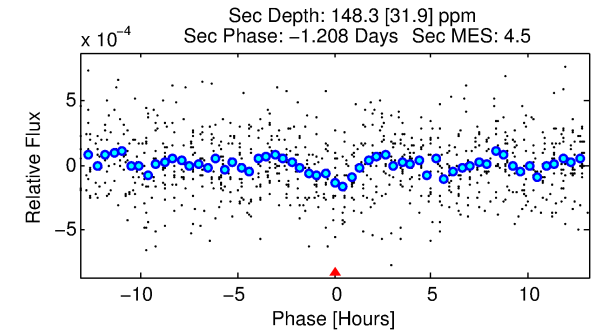
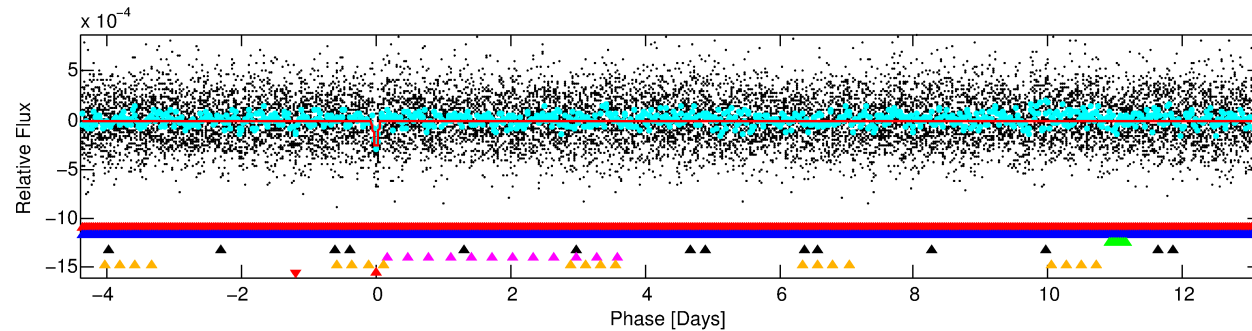
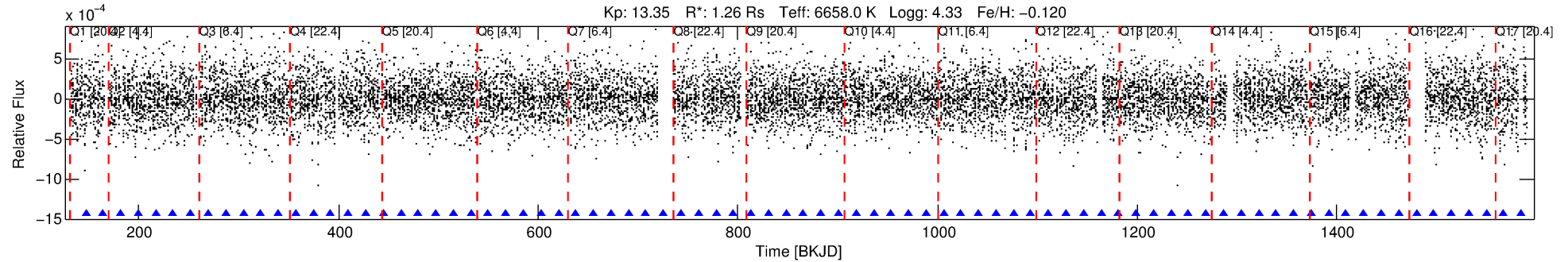
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005036761-07

No Significant Match Found

DV One-Page Summary

KIC: 5036761 Candidate: 7 of 7 Period: 17.532 d



DV Fit Results:

Period = 17.53212 [0.00013] d
Epoch = 147.0182 [0.0061] BKJD
Rp/R* = 0.0175 [0.0179]
a/R* = 29.35 [176.35]
b = 0.90 [1.32]
Seff = 139.49 [57.69]
Teq = 876 [91] K
Rp = 2.42 [2.58] Re
a = 0.1418 [0.0384] AU
Ag = 281.13 [586.43] [0.48σ]
Teffp = 5548 [2849] K [1.64σ]

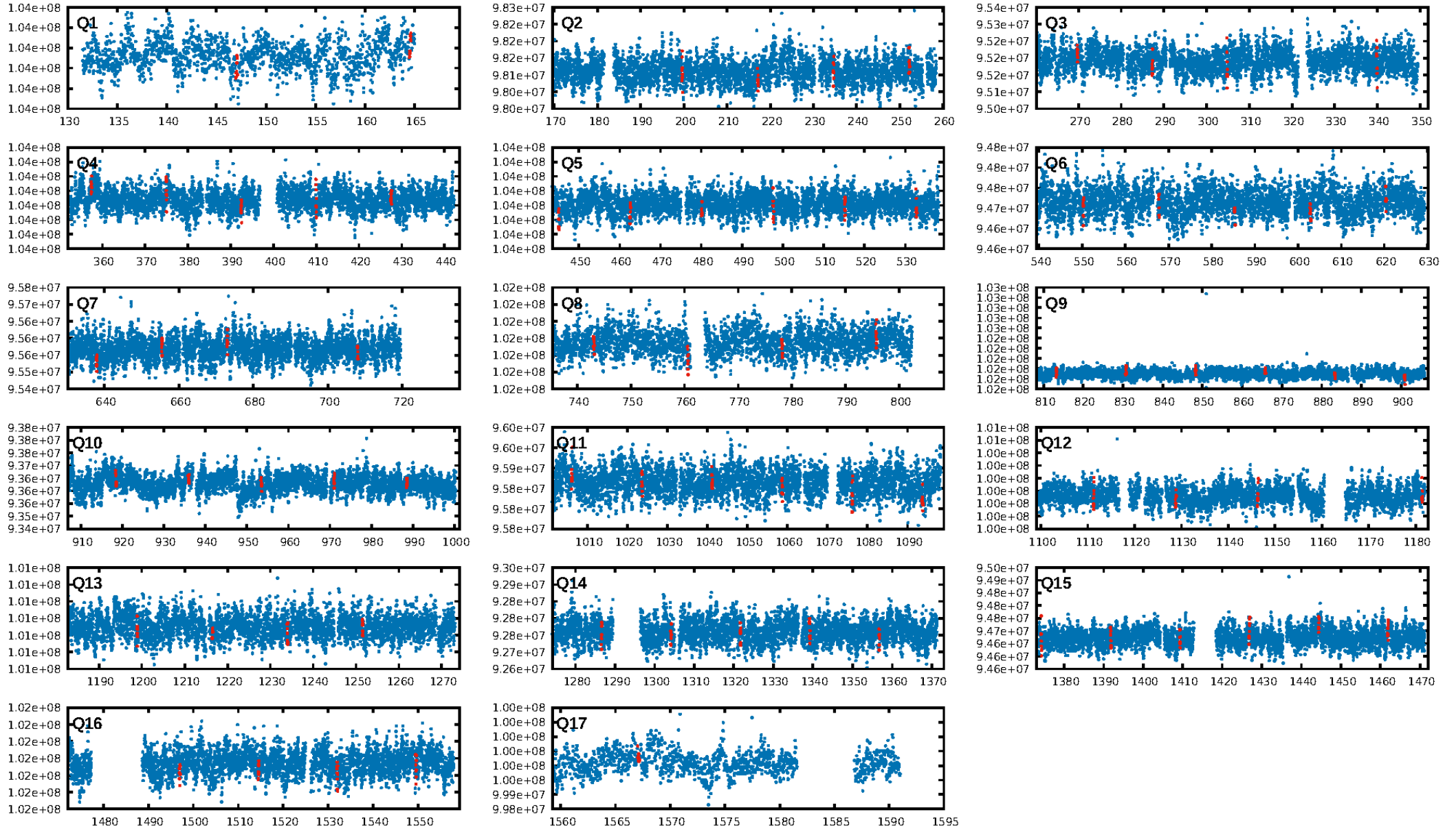
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [98.56σ]
LongPeriod-sig: 100.0% [419.58σ]
ModelChiSquare2-sig: 2.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.65e-10
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 0.2742
Centroid-sig: 34.4%
Centroid-so: 0.668 arcsec [1.27σ]
OotOffset-rm: 0.395 arcsec [0.44σ]
KicOffset-rm: 0.398 arcsec [0.42σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

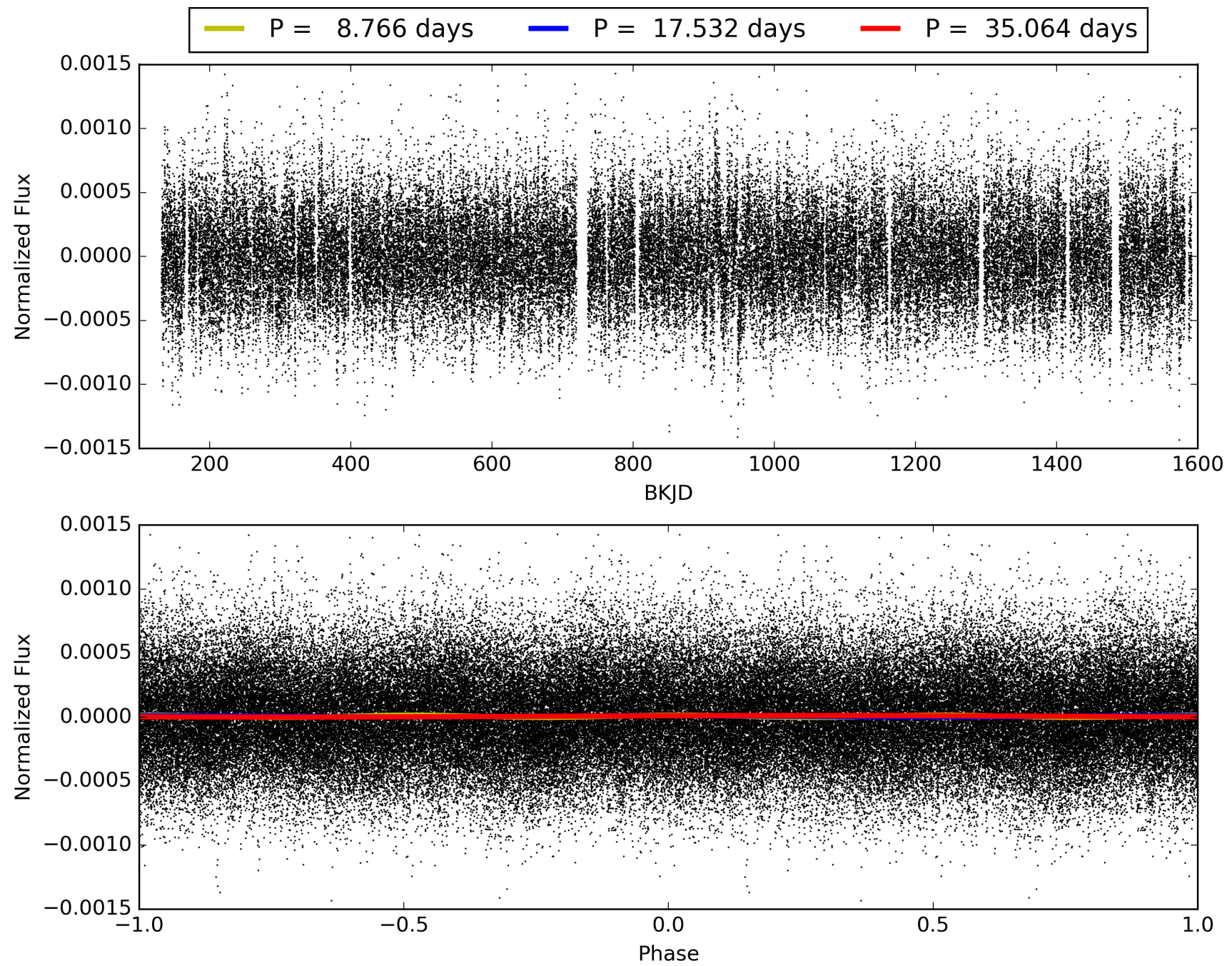
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:59 Z

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

TCE 005036761-07, PDC Light Curves

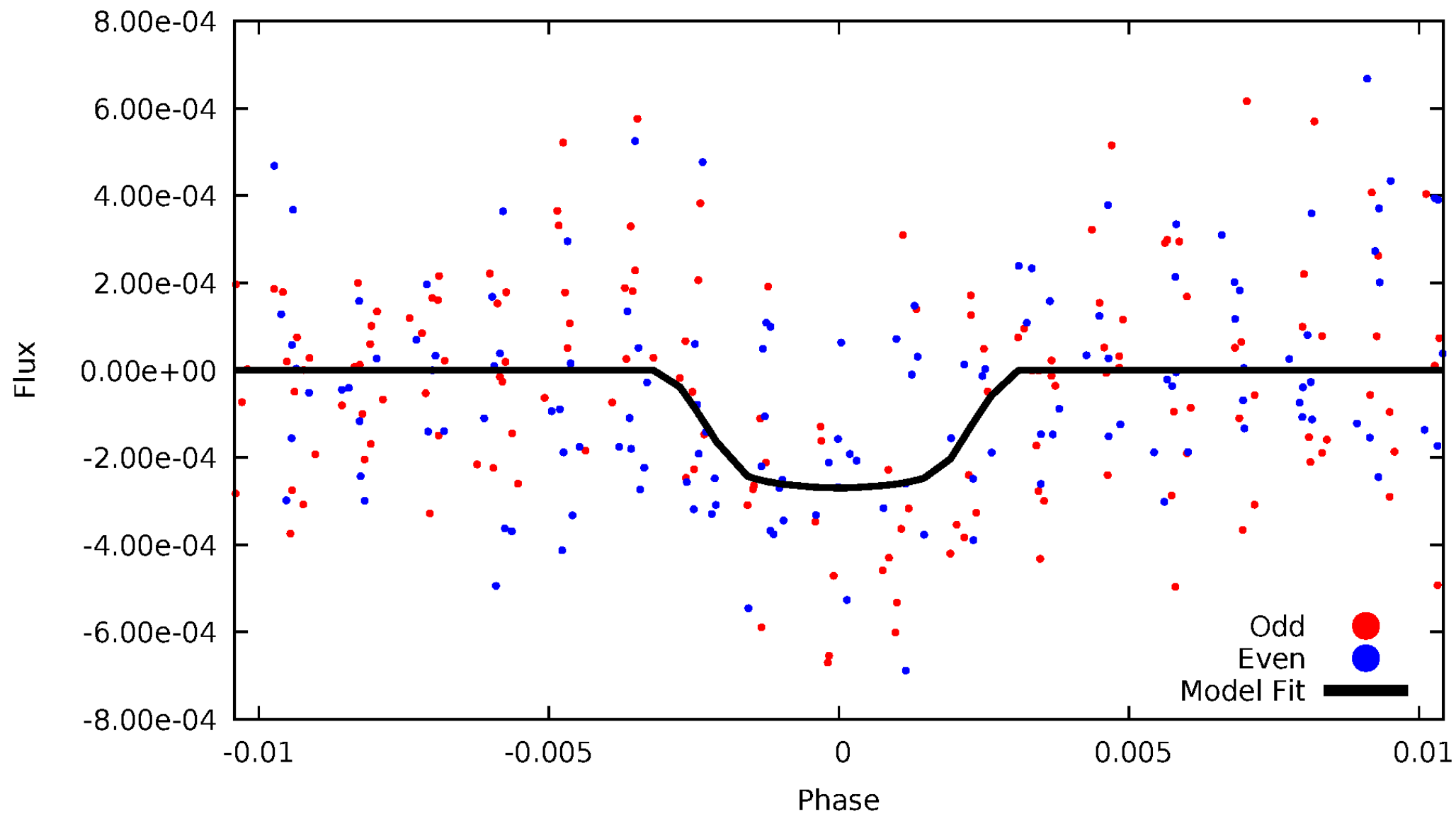


TCE 005036761-07



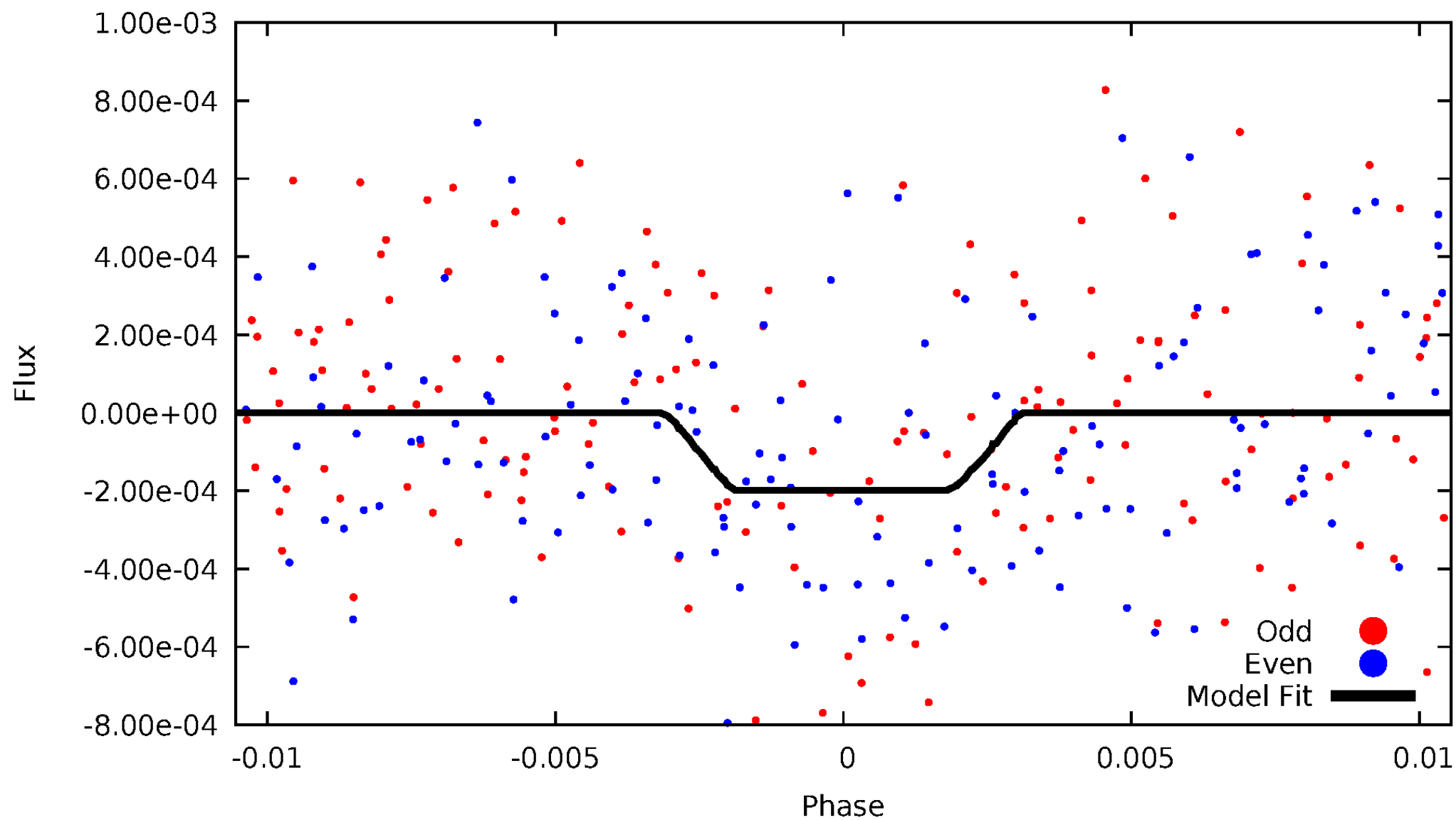
DV Odd/Even

TCE 005036761-07



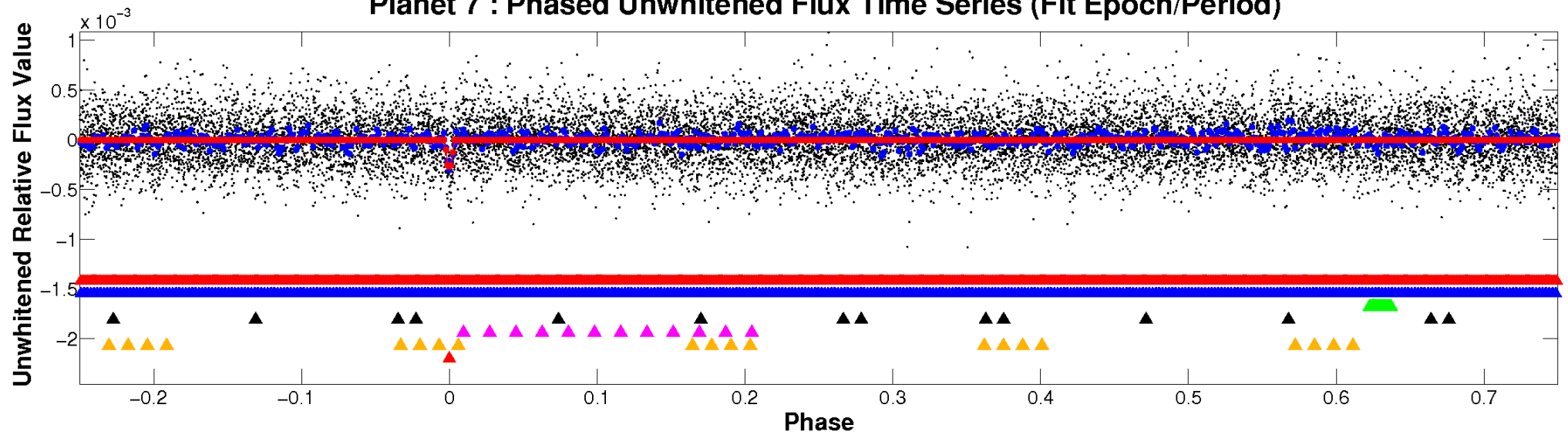
ALT Odd/Even

TCE 005036761-07

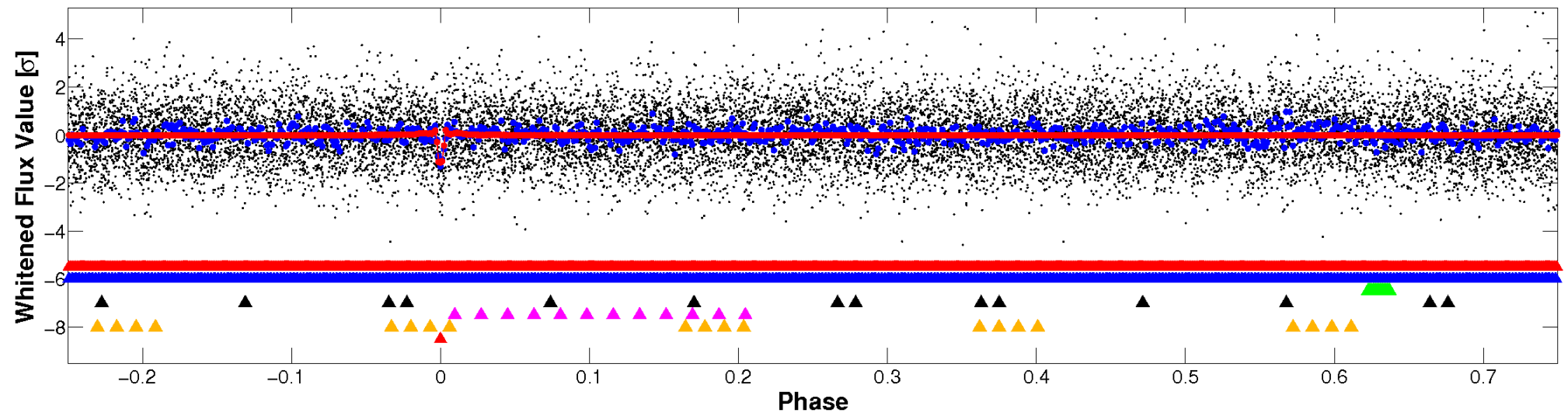


Non-Whitened Vs. Whitened Light Curve

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

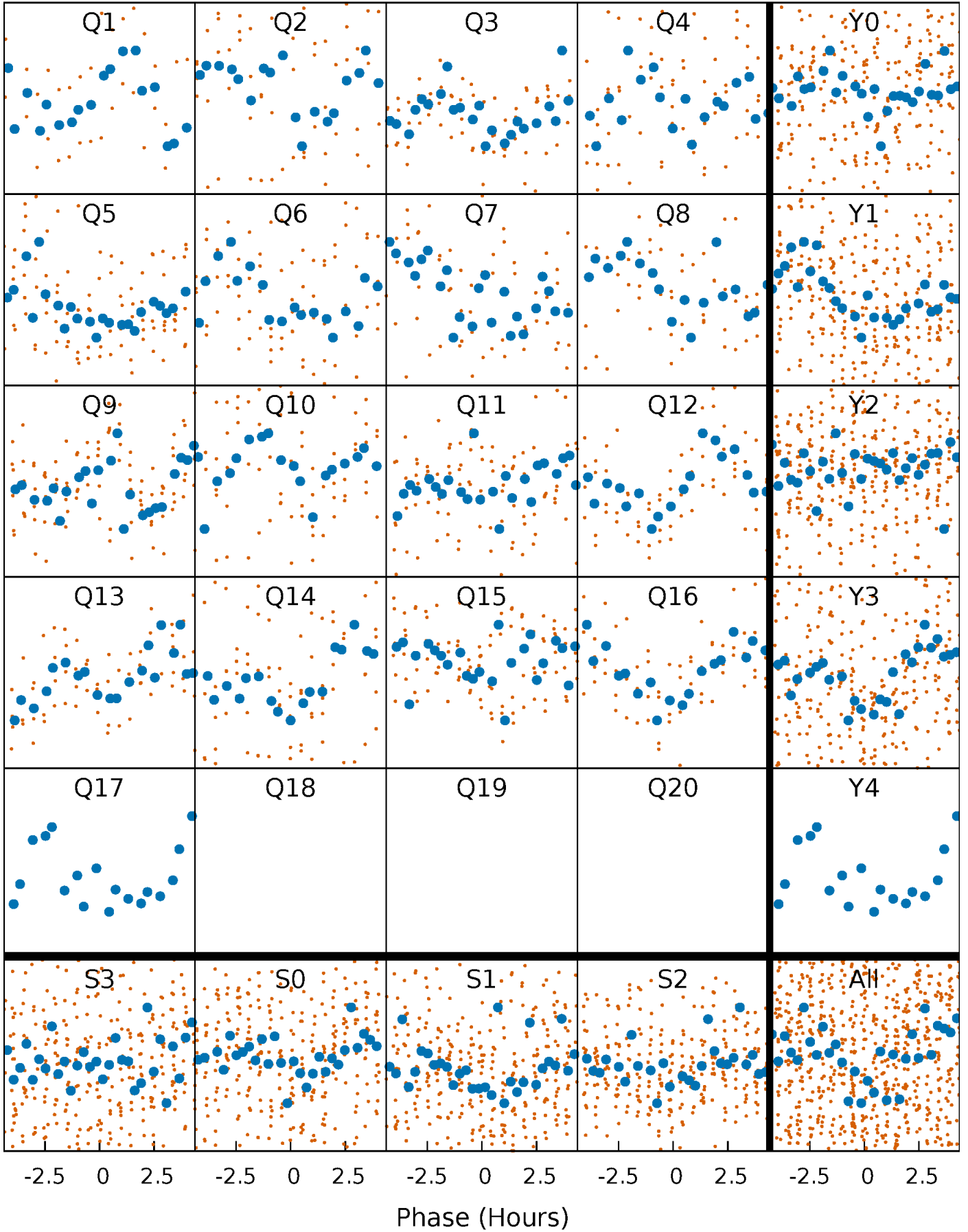


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



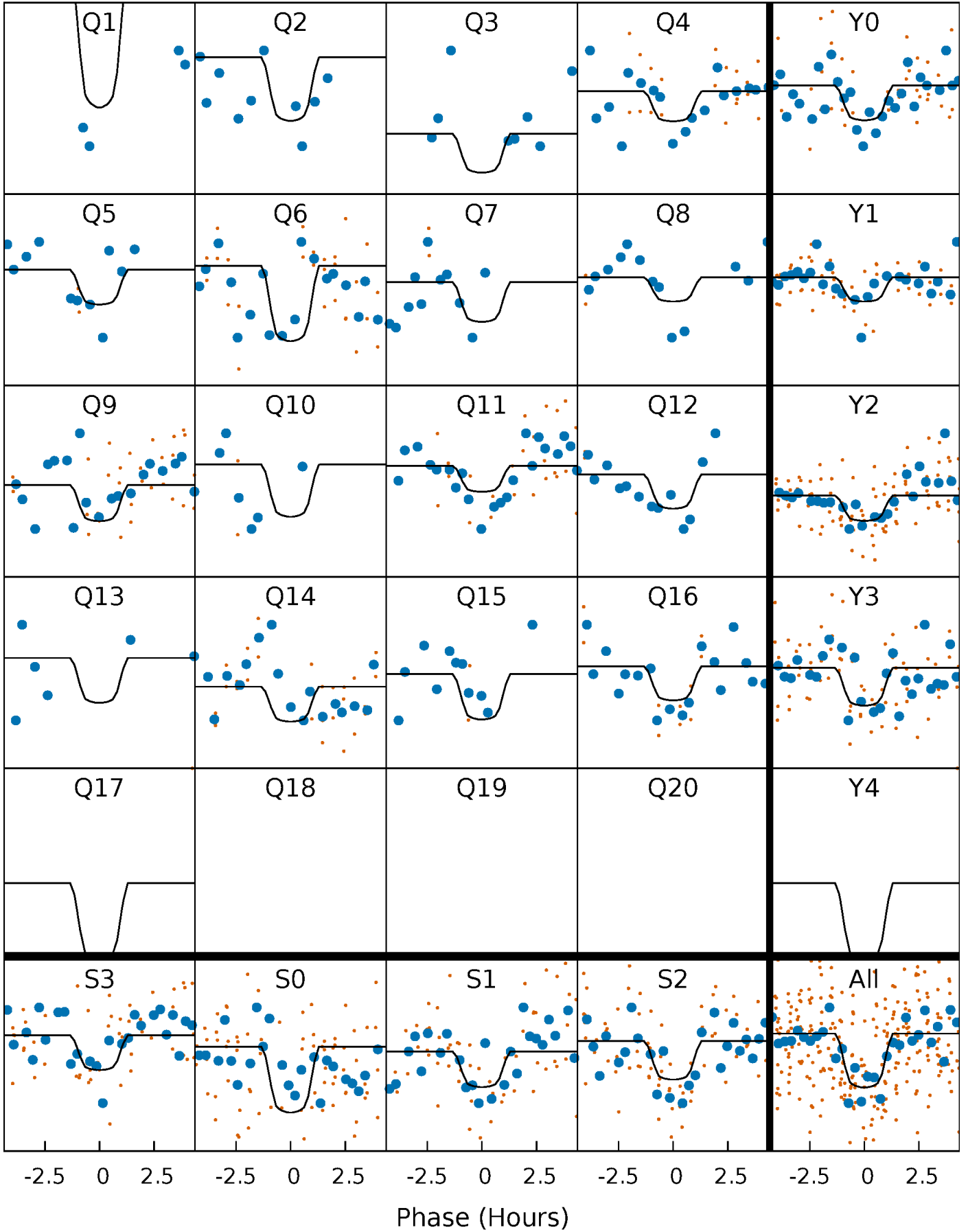
PDC Quarter-Phased Transit Curves

TCE 005036761-07 P= 17.532115 Days $T_0=147.018180$ (BKJD)



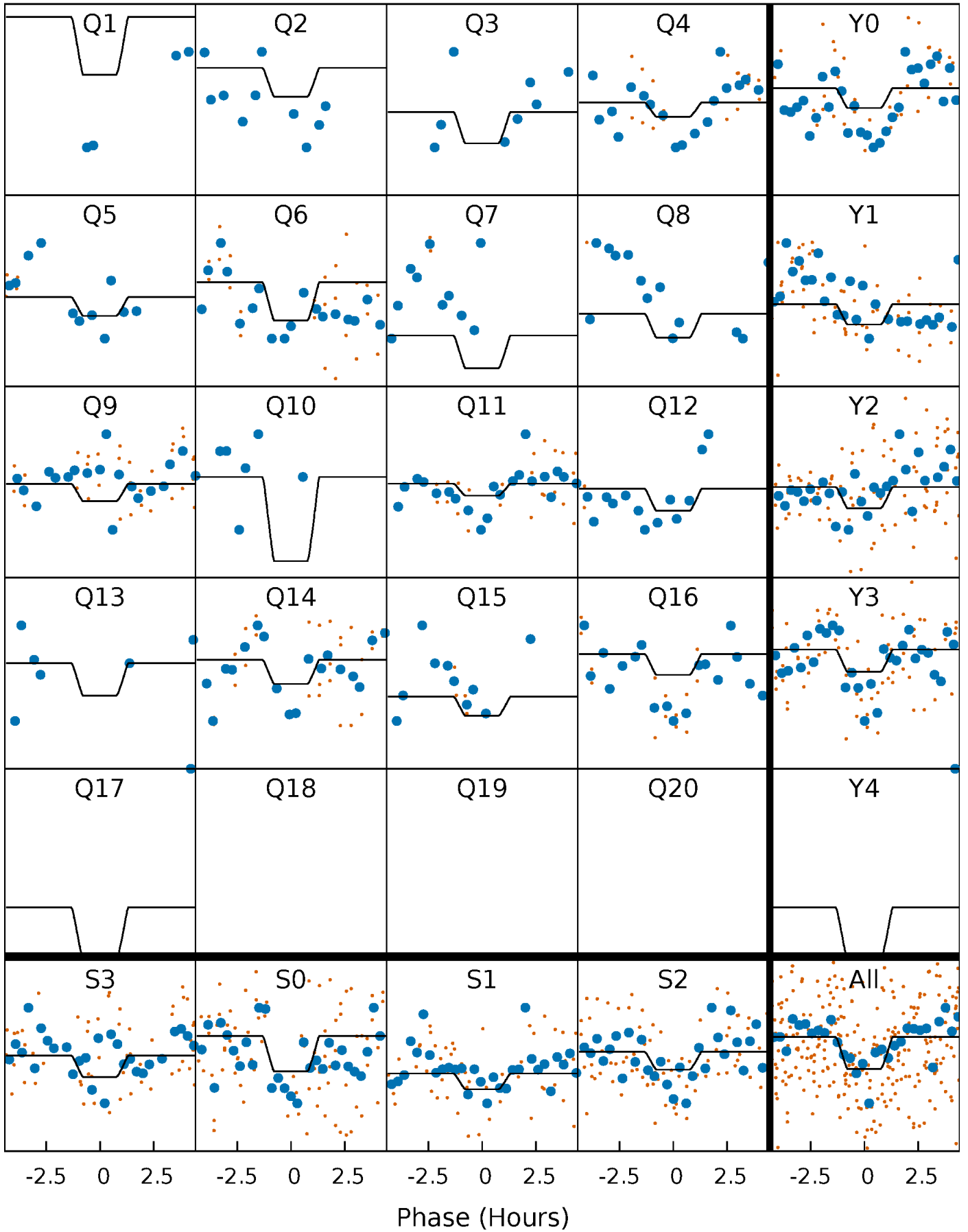
DV Quarter-Phased Transit Curves

TCE 005036761-07 P= 17.532115 Days $T_0=147.018180$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

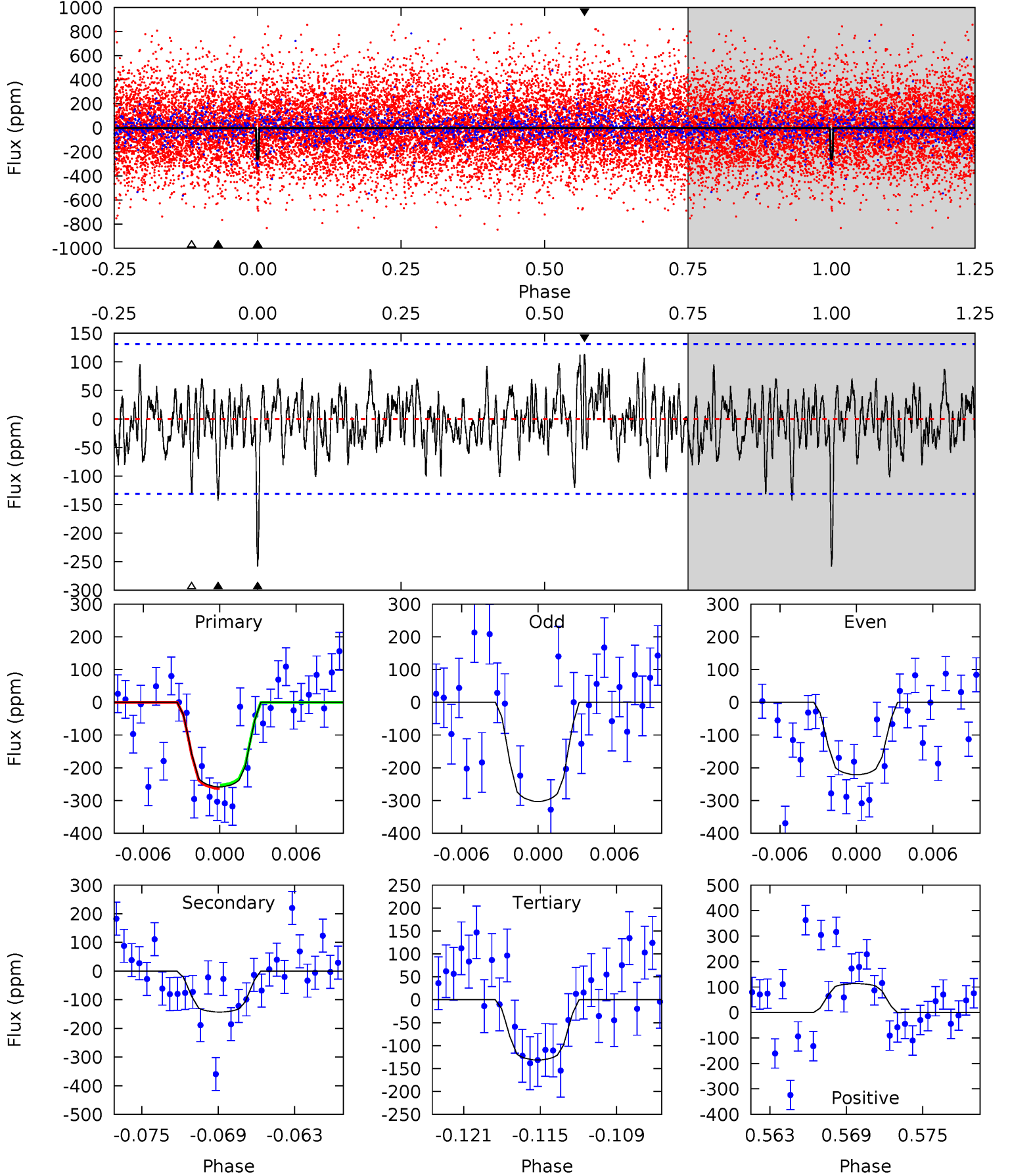
TCE 005036761-07 P= 17.532285 Days $T_0=147.012516$ (BKJD)



DV Model-Shift Uniqueness Test

005036761-07, P = 17.532115 Days, E = 129.486065 Days

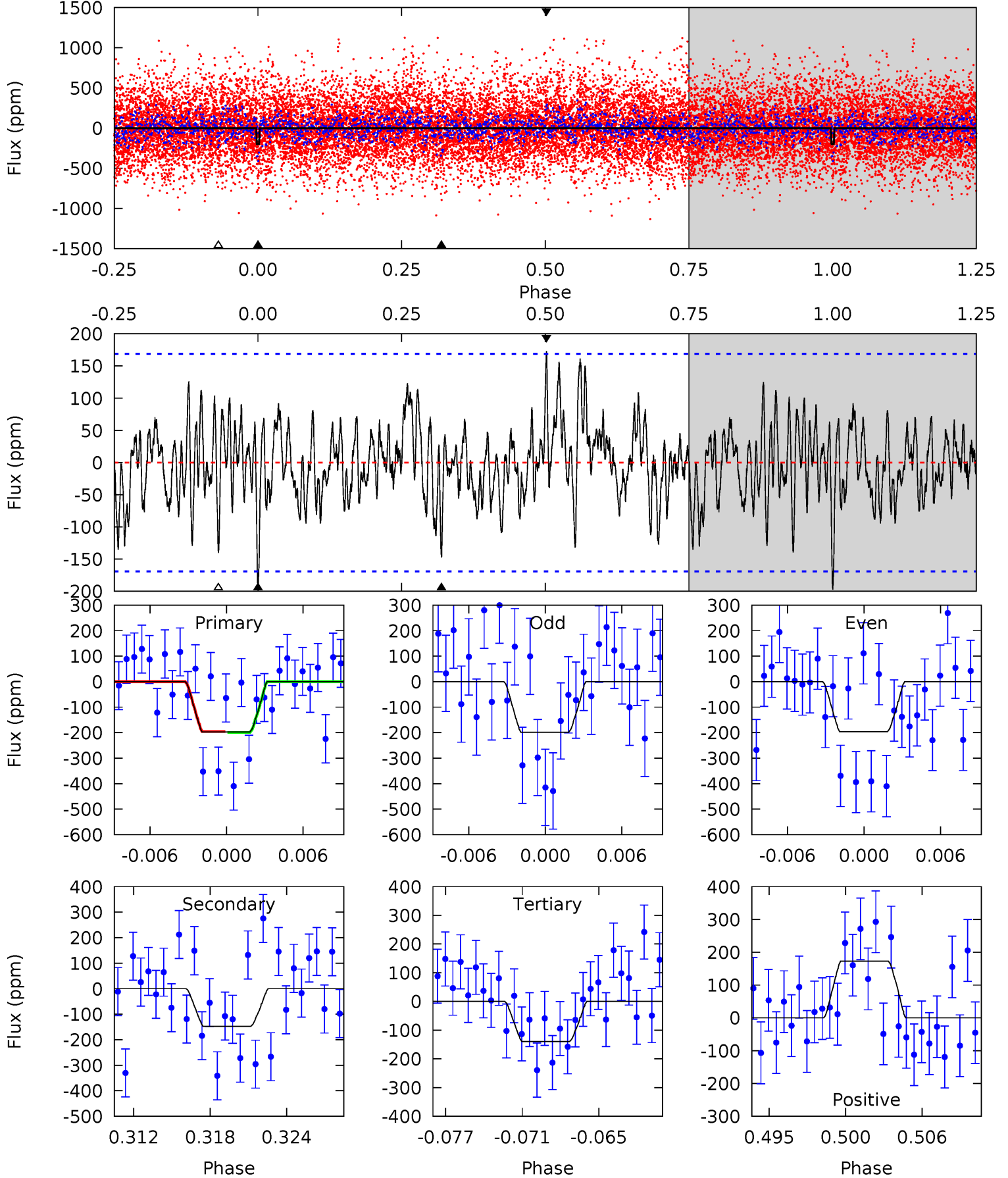
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.59	5.14	4.43	5.13	2.76	1.51	4.96	5.68	0.45	1.16	1.60	0.87	0.30	0.21



Alt Model-Shift Uniqueness Test

005036761-07, P = 17.532285 Days, E = 129.480231 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.98	4.46	4.23	5.25	5.13	2.75	1.57	1.76	0.74	0.24	-0.78	0.04	0.91	0.47	0.06



Stellar Parameters For KIC 005036761

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6658^{+167}_{-234}	$4.328^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.262^{+0.412}_{-0.176}$	$1.245^{+0.187}_{-0.168}$	$0.871^{+0.322}_{-0.451}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-14%	+15%/-13%	+37%/-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 005036761-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-143 ± 26	$3.24^{+2.38}_{-2.14}$	1244^{+95}_{-67}	4899^{+3817}_{-935}	145^{+1056}_{-96}
Alt.	-147 ± 33	$2.82^{+2.33}_{-1.82}$	1253^{+87}_{-69}	5299^{+4014}_{-1188}	196^{+1469}_{-139}

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 $A_{obs} \gg 1.0$

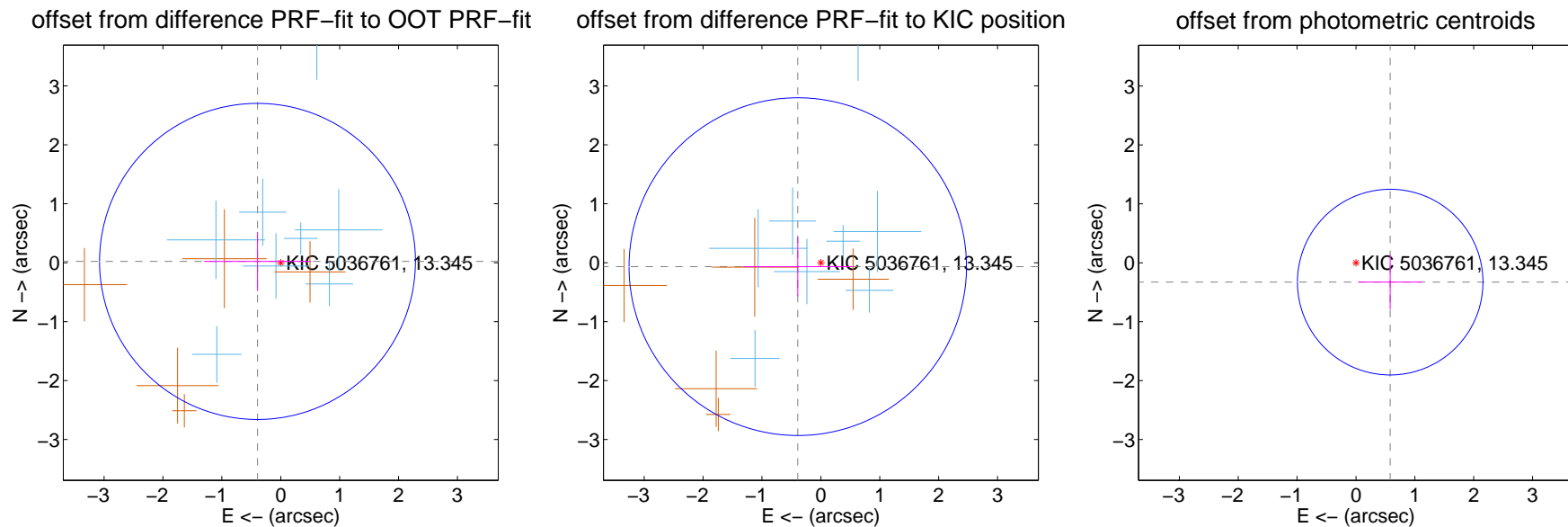
DV Centroid Data

Supplemental centroid analysis for 005036761-07. Kepler magnitude: 13.35. Transit SNR 8.04

There are 8 quarters with good PRF difference image offsets

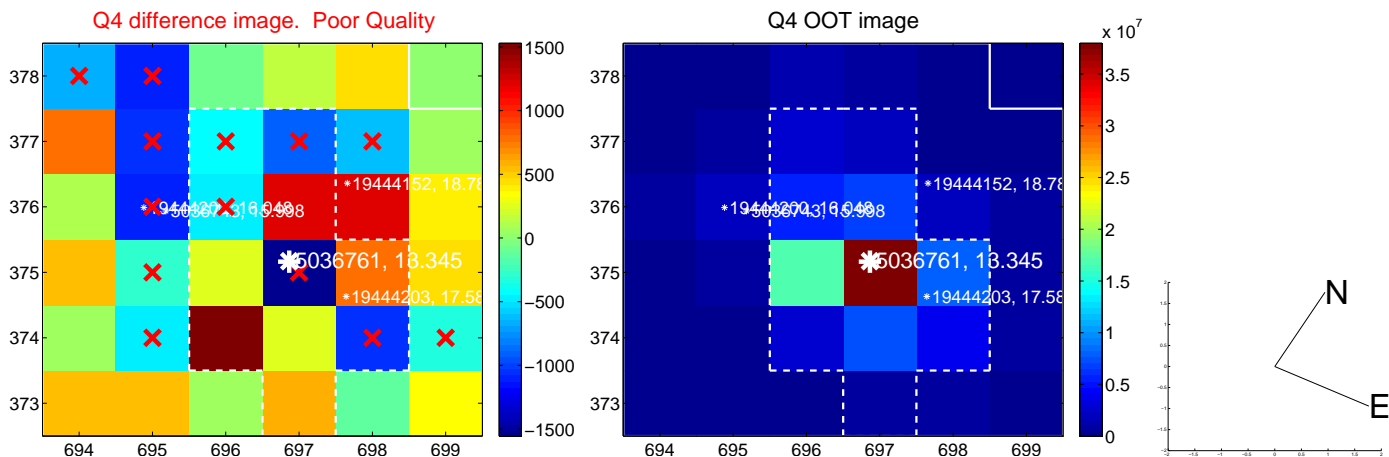
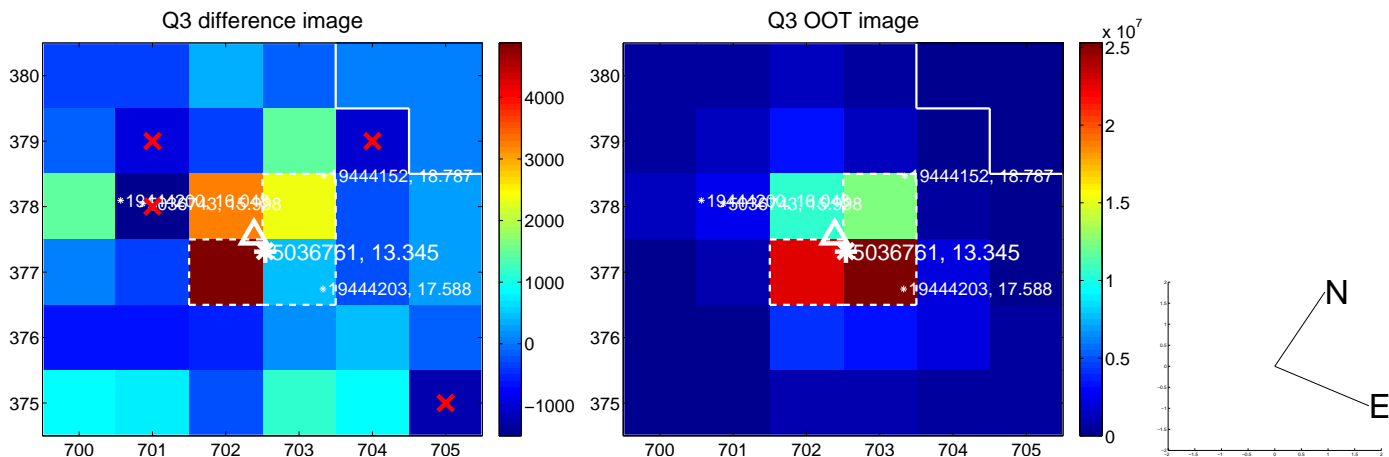
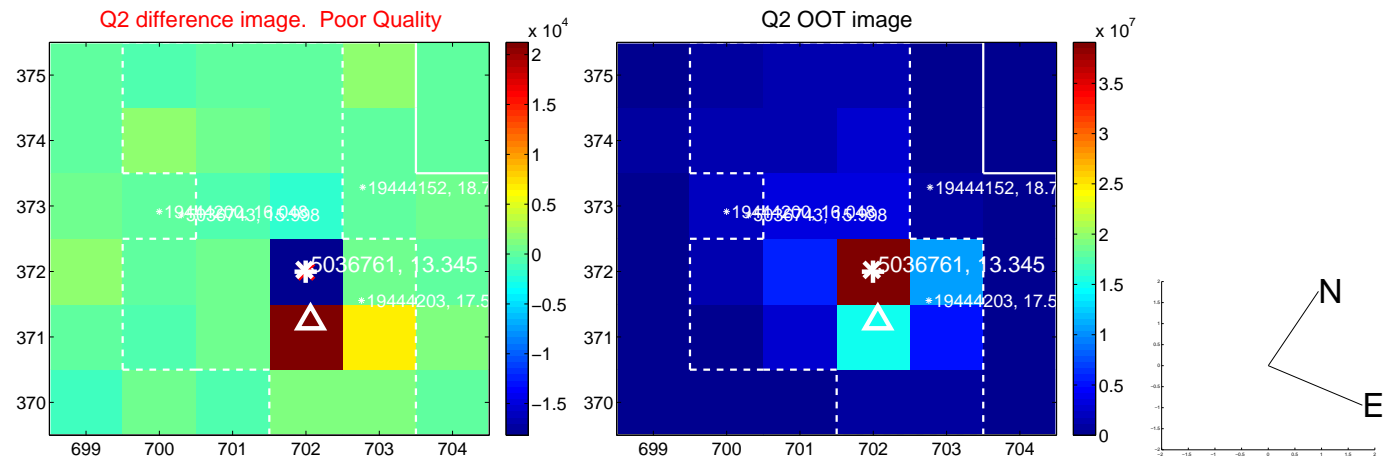
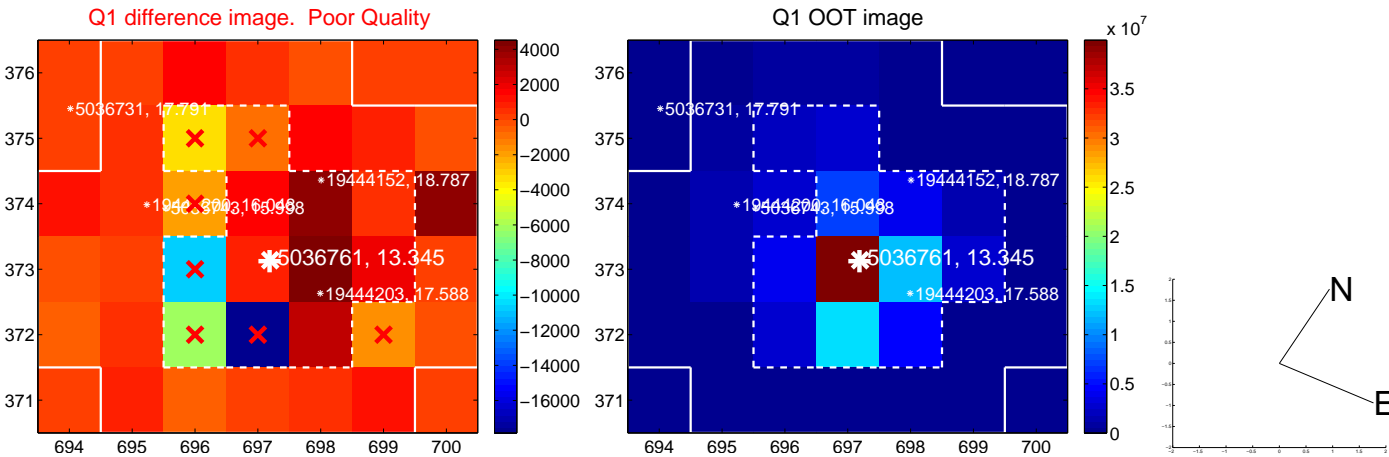
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.395 ± 0.894	0.44	0.395 ± 0.907	0.021 ± 0.500
PRF-fit source offset from KIC position	0.398 ± 0.955	0.42	0.392 ± 0.931	-0.067 ± 0.504
photometric centroid source offset	0.67 ± 0.53	1.27	-0.58 ± 0.54	-0.33 ± 0.46

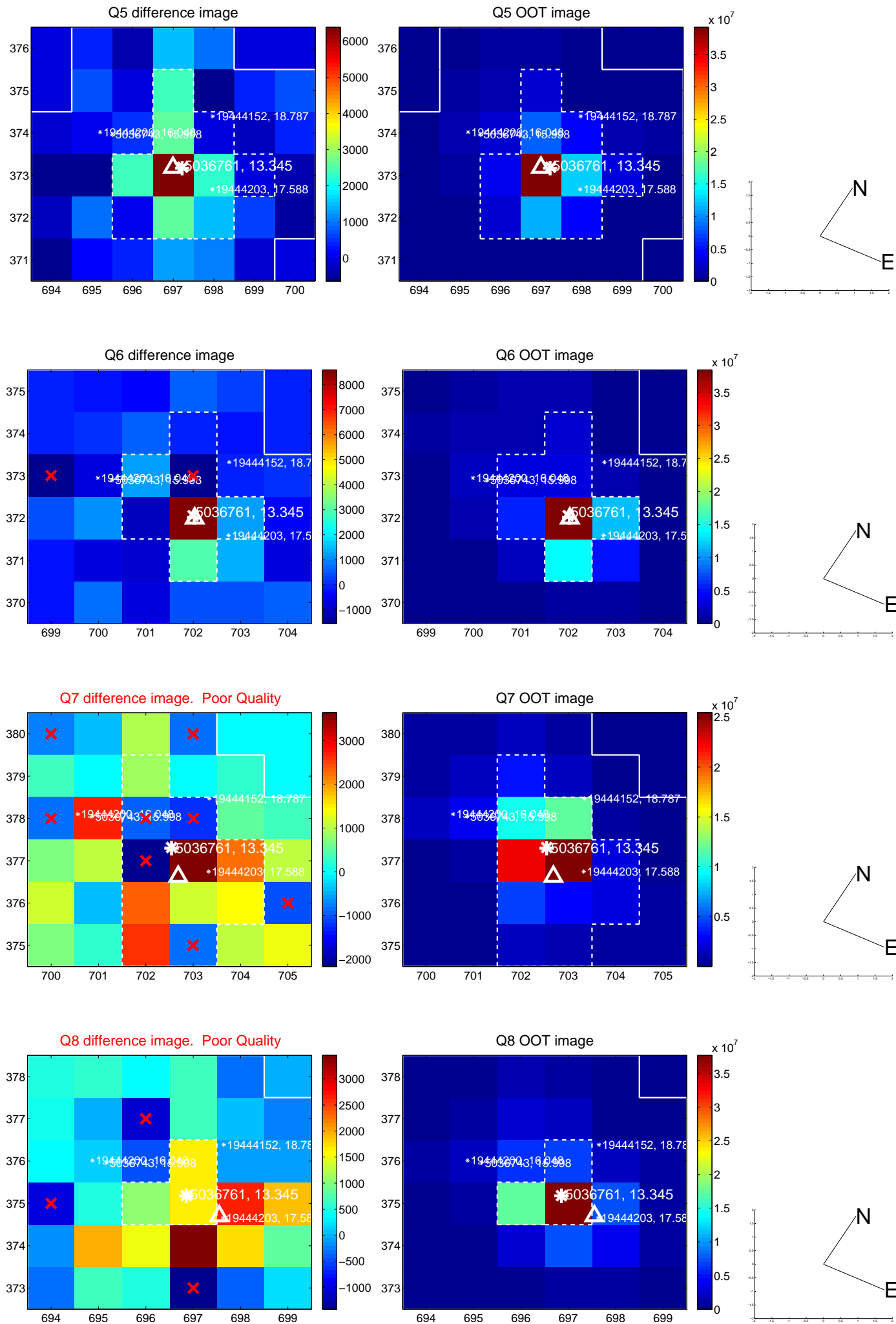


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

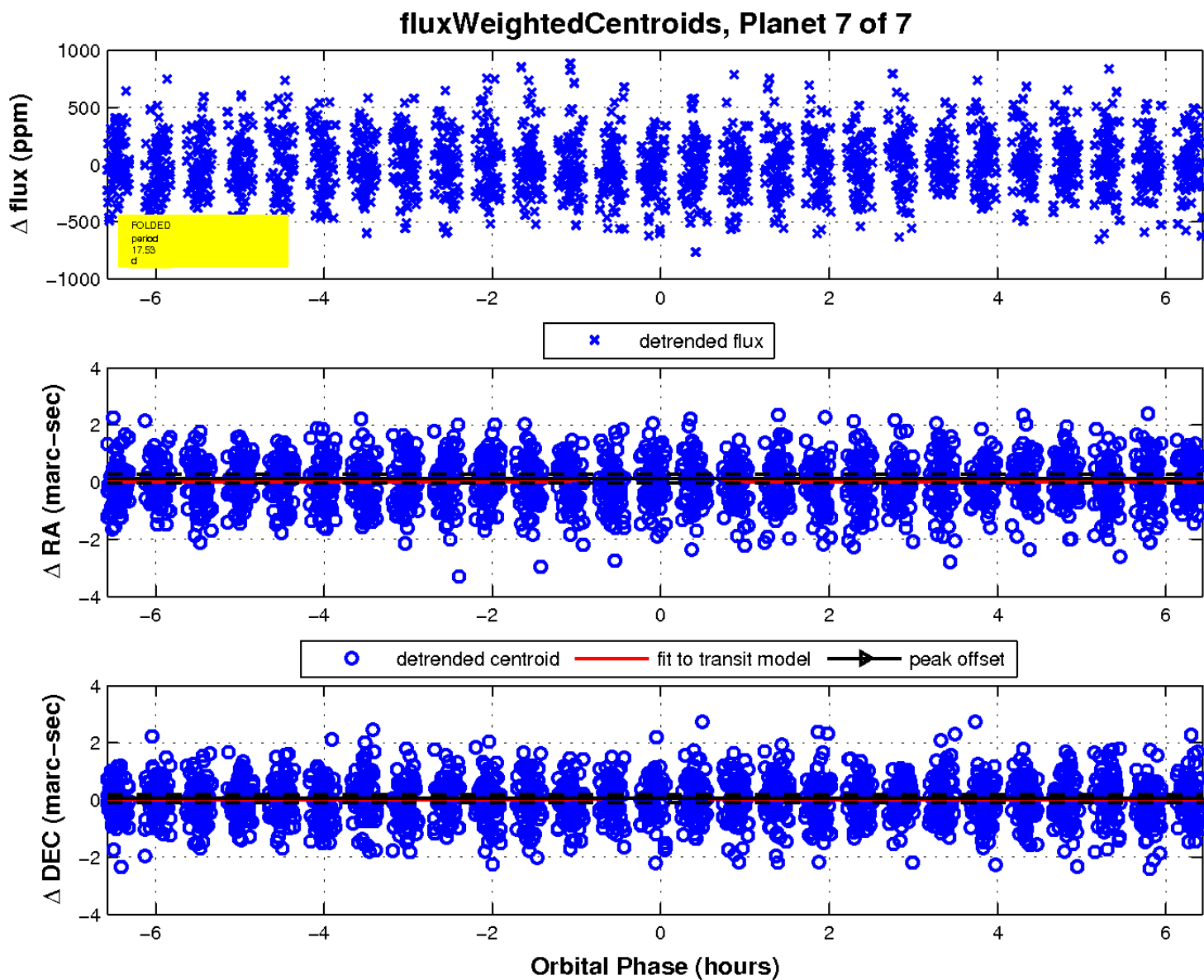
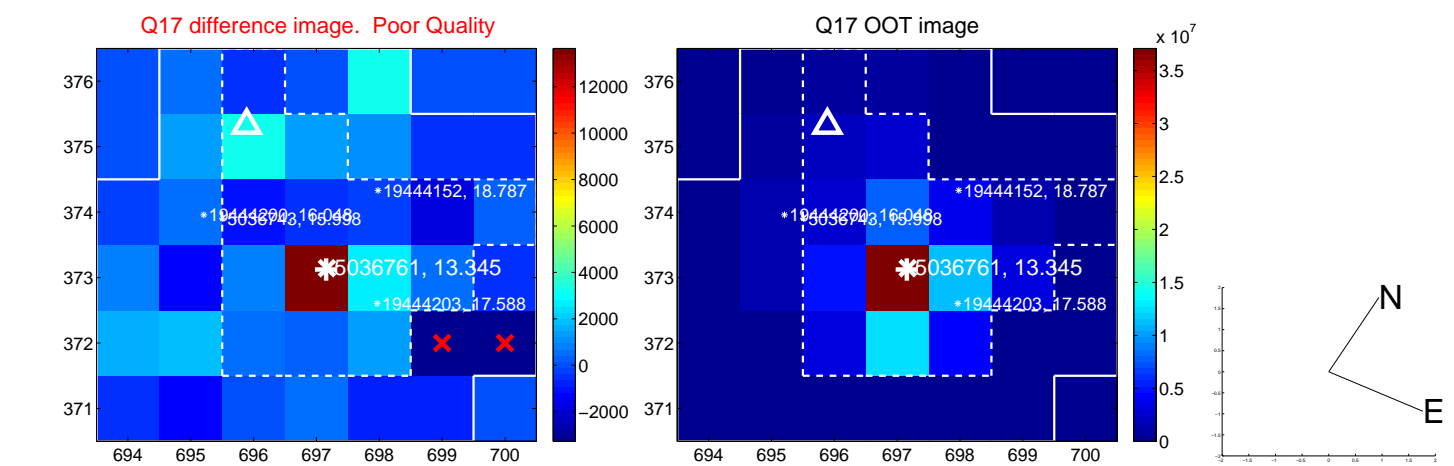
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

