

KIC 005902653

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})
005902653-01	OBS	No	0.677551	132.038672	0.0	1.841	10.3	0.0	4.08	6749	0.09	81714.36
005902653-02	OBS	No	333.541619	188.647965	195.7	12.360	7.3	7.3	4.08	6749	6.27	21.02
005902653-03	OBS	No	1.353280	132.289834	3.5	11.188	8.8	1.8	4.08	6749	0.82	32486.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005902653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005902653-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
005902653-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

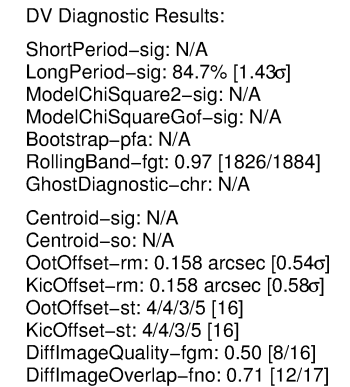
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 005902653-01

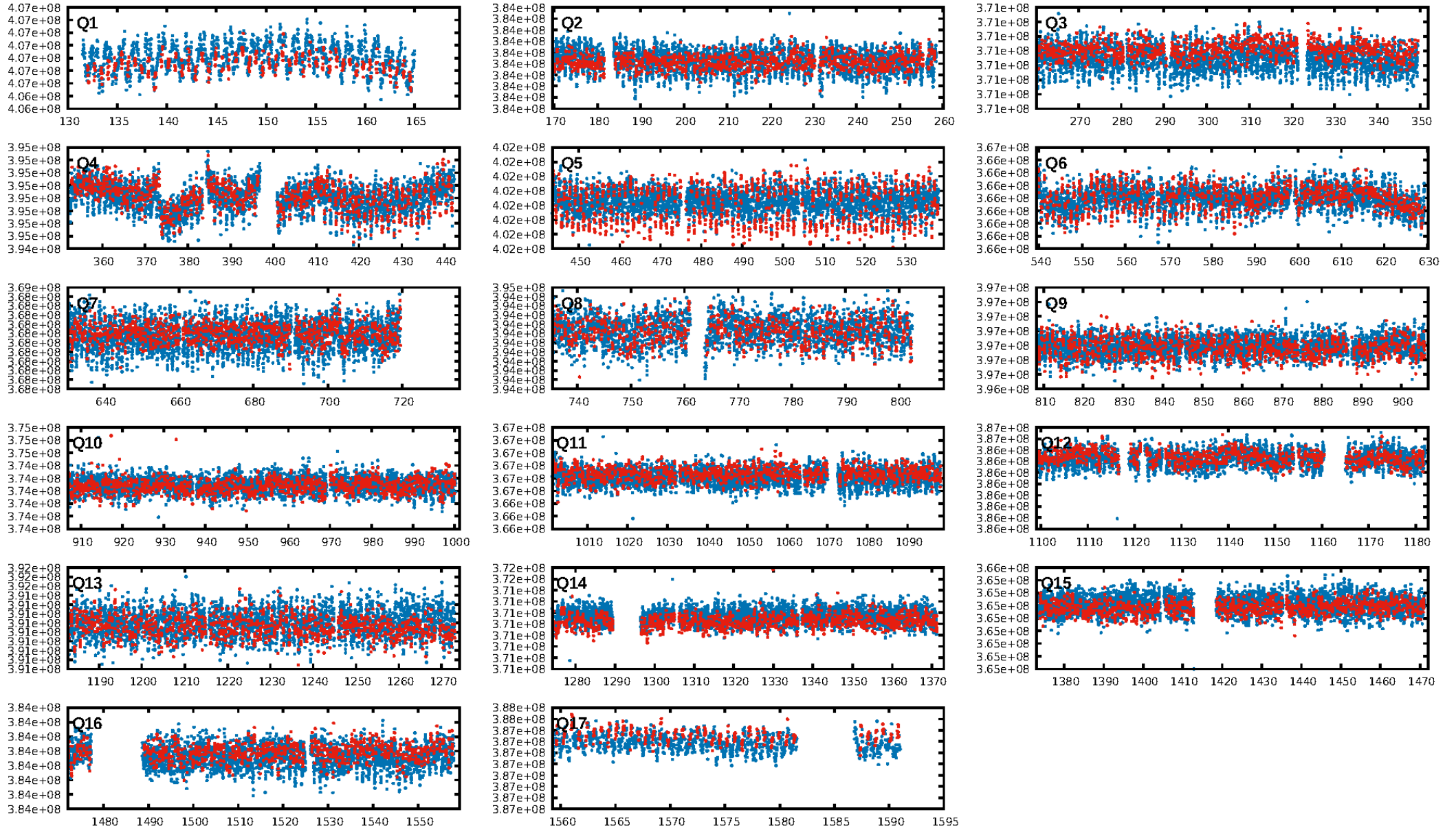
No Significant Match Found

KIC: 5902653 Candidate: 1 of 3 Period: 0.678 d

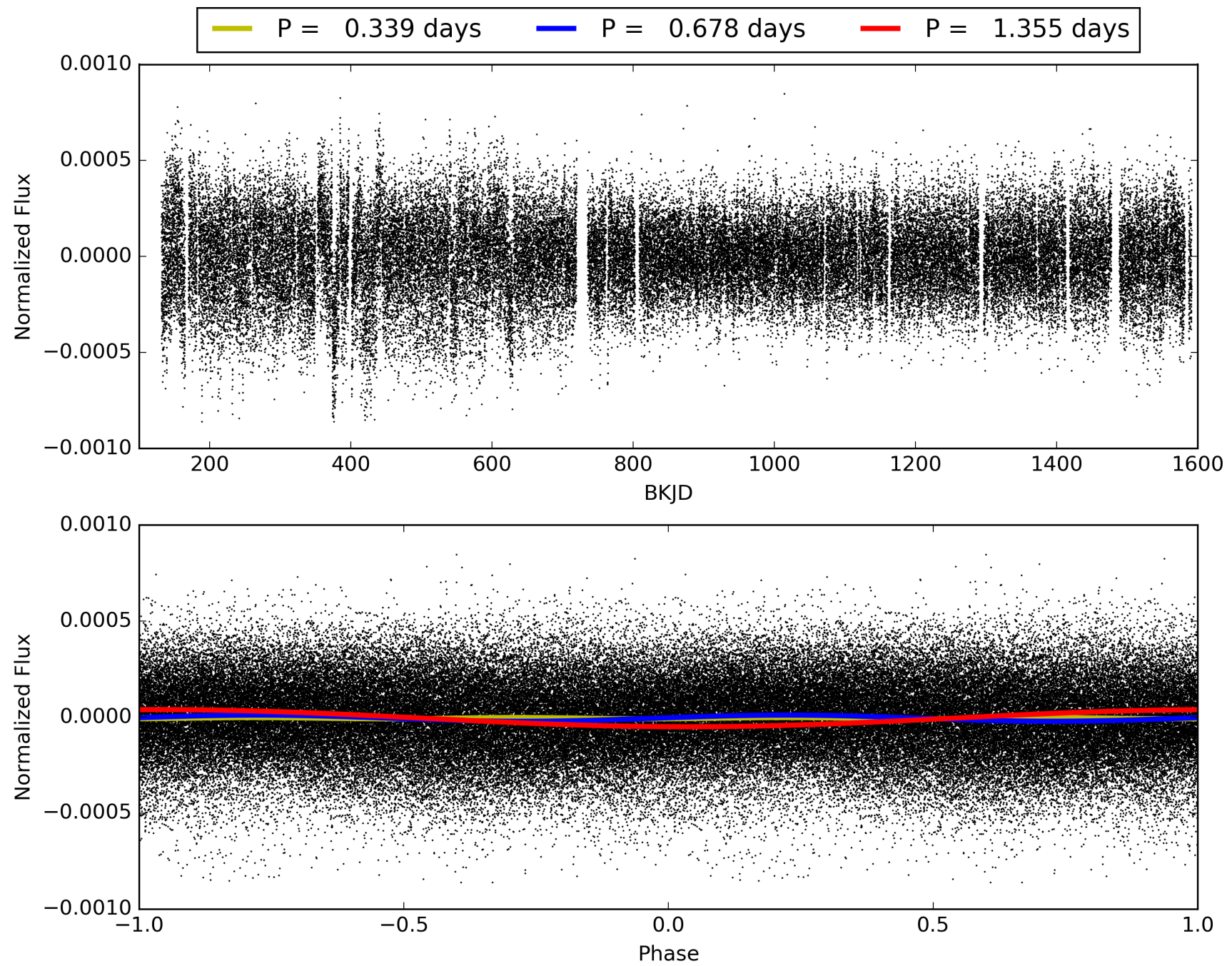


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005902653-01, PDC Light Curves

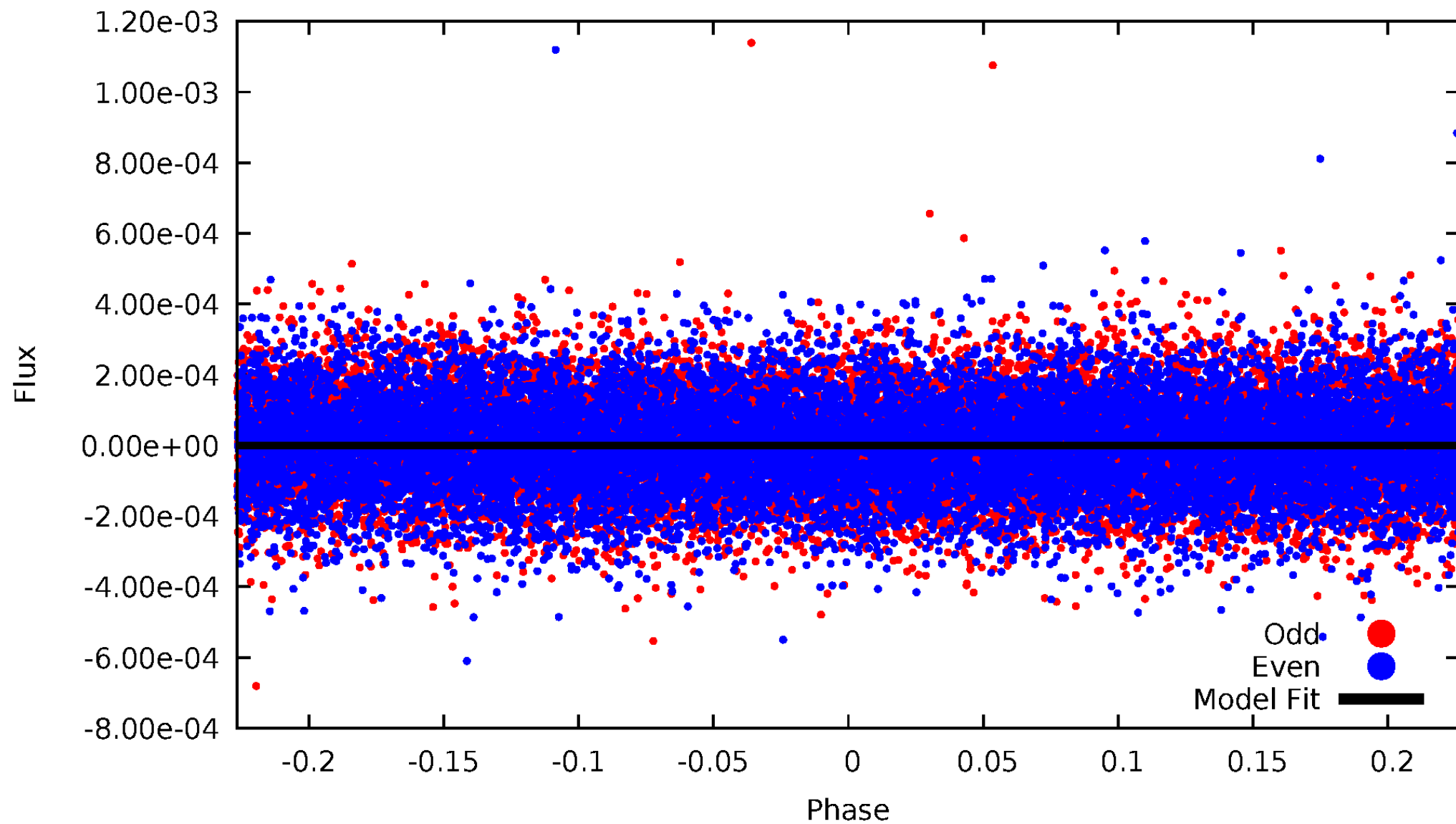


TCE 005902653-01



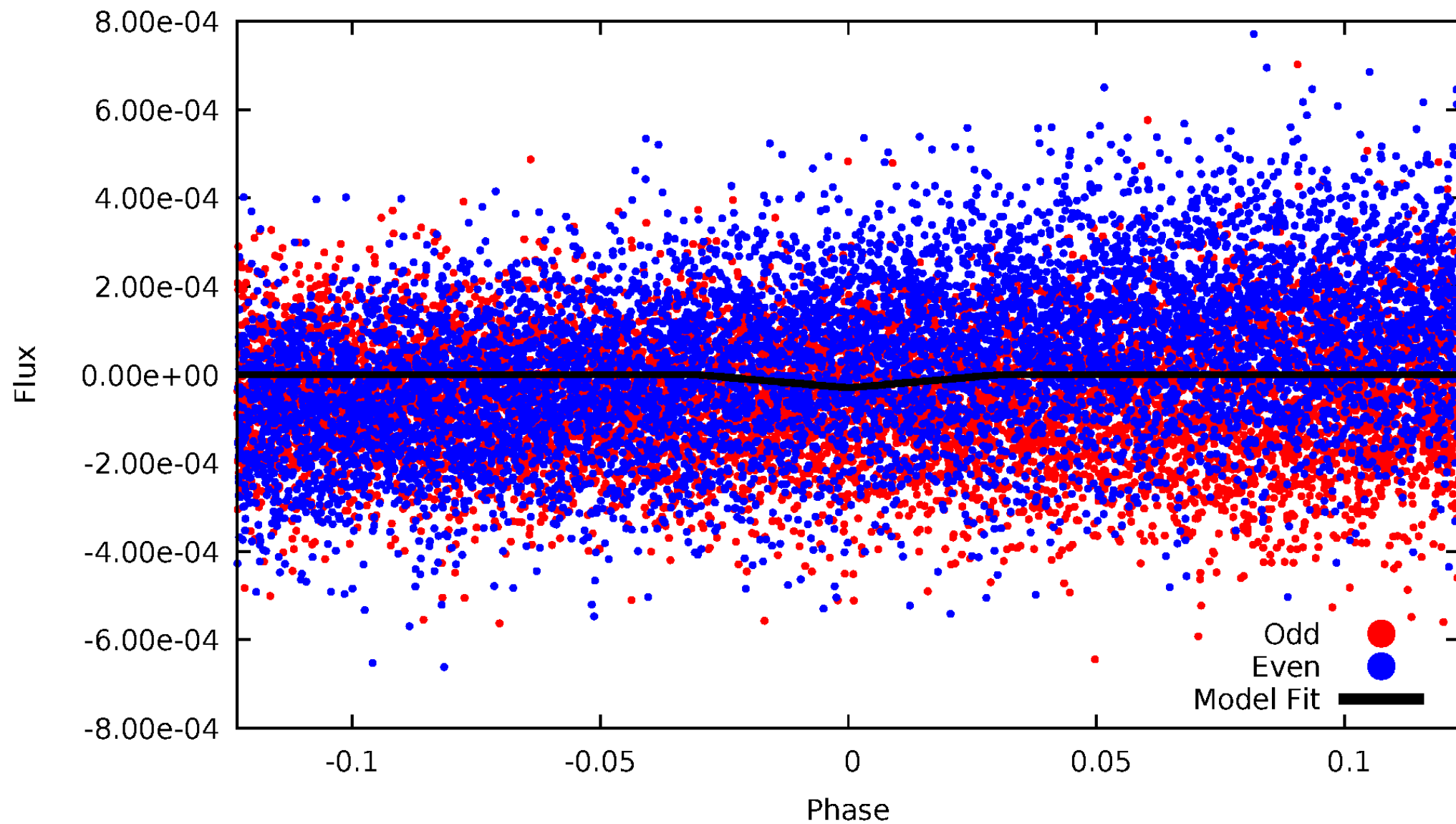
DV Odd/Even

TCE 005902653-01

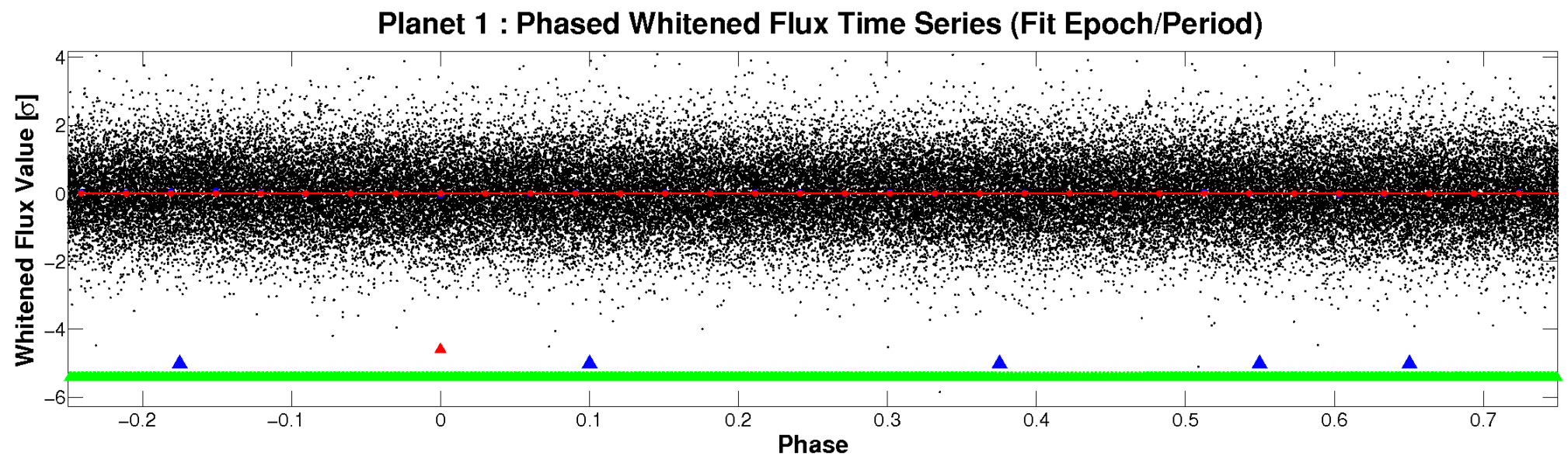
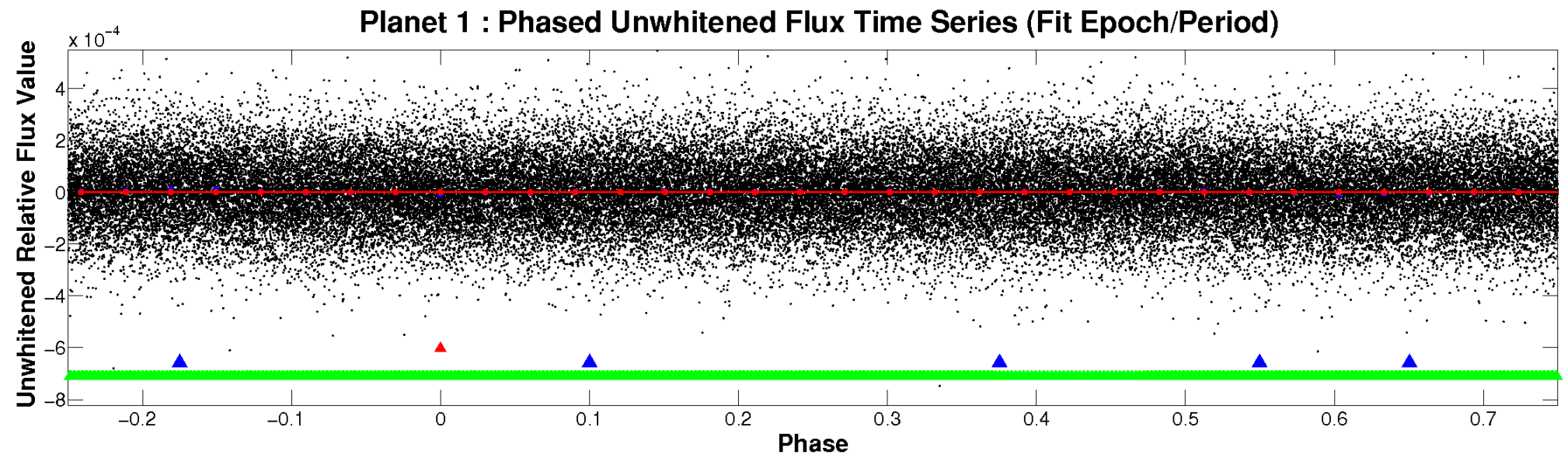


ALT Odd/Even

TCE 005902653-01

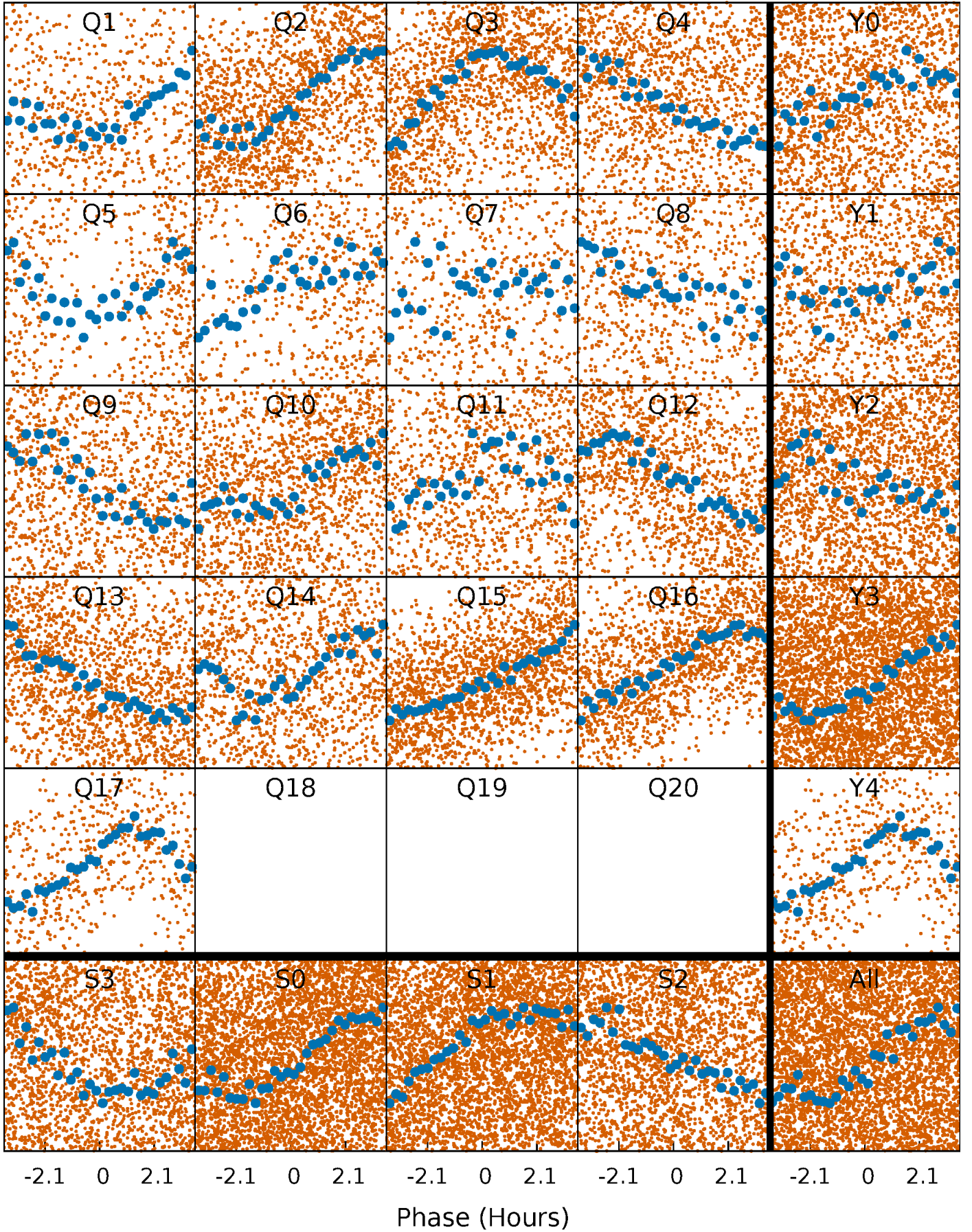


Non-Whitened Vs. Whitened Light Curve



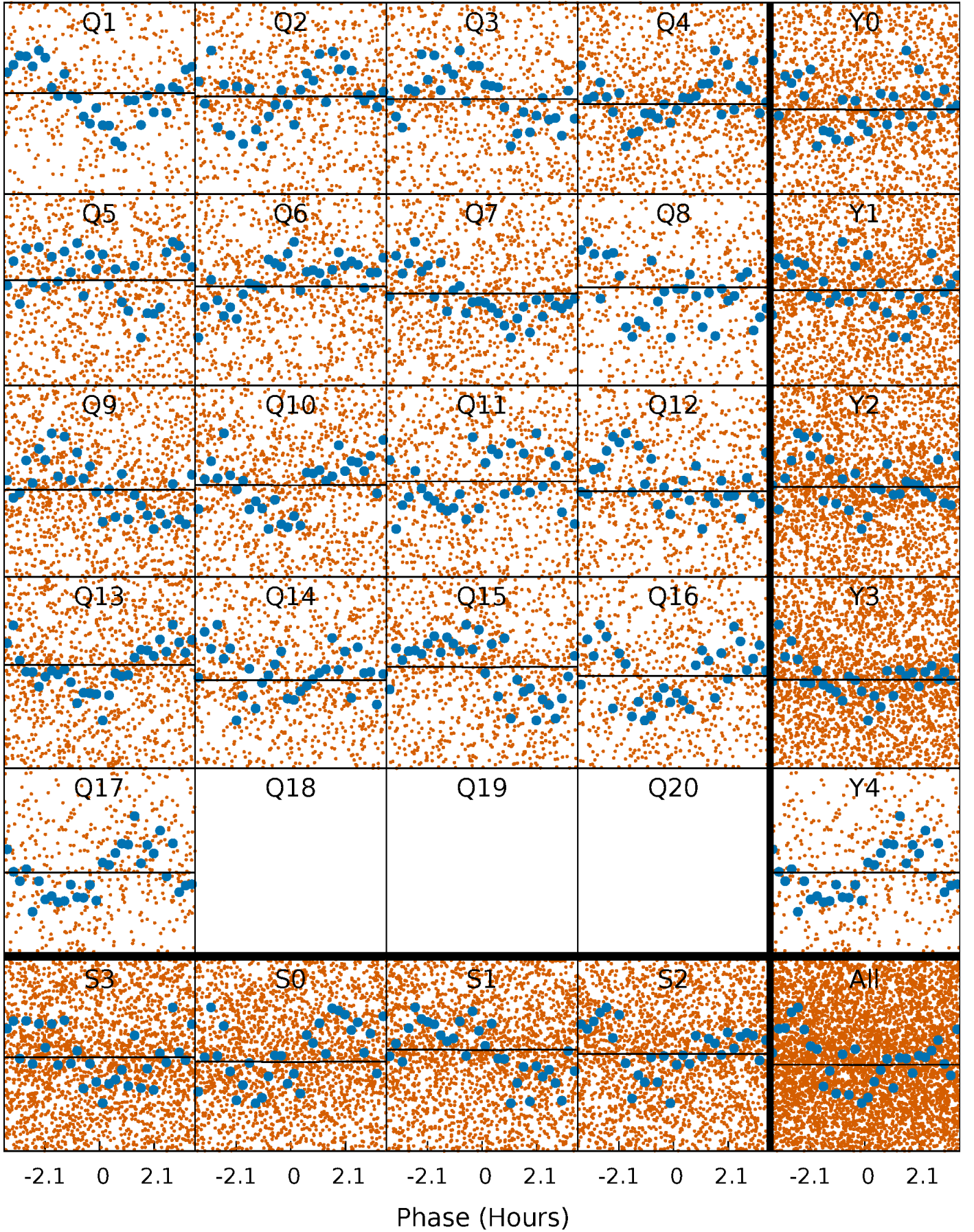
PDC Quarter-Phased Transit Curves

TCE 005902653-01 P= 0.677551 Days $T_0=132.038672$ (BKJD)



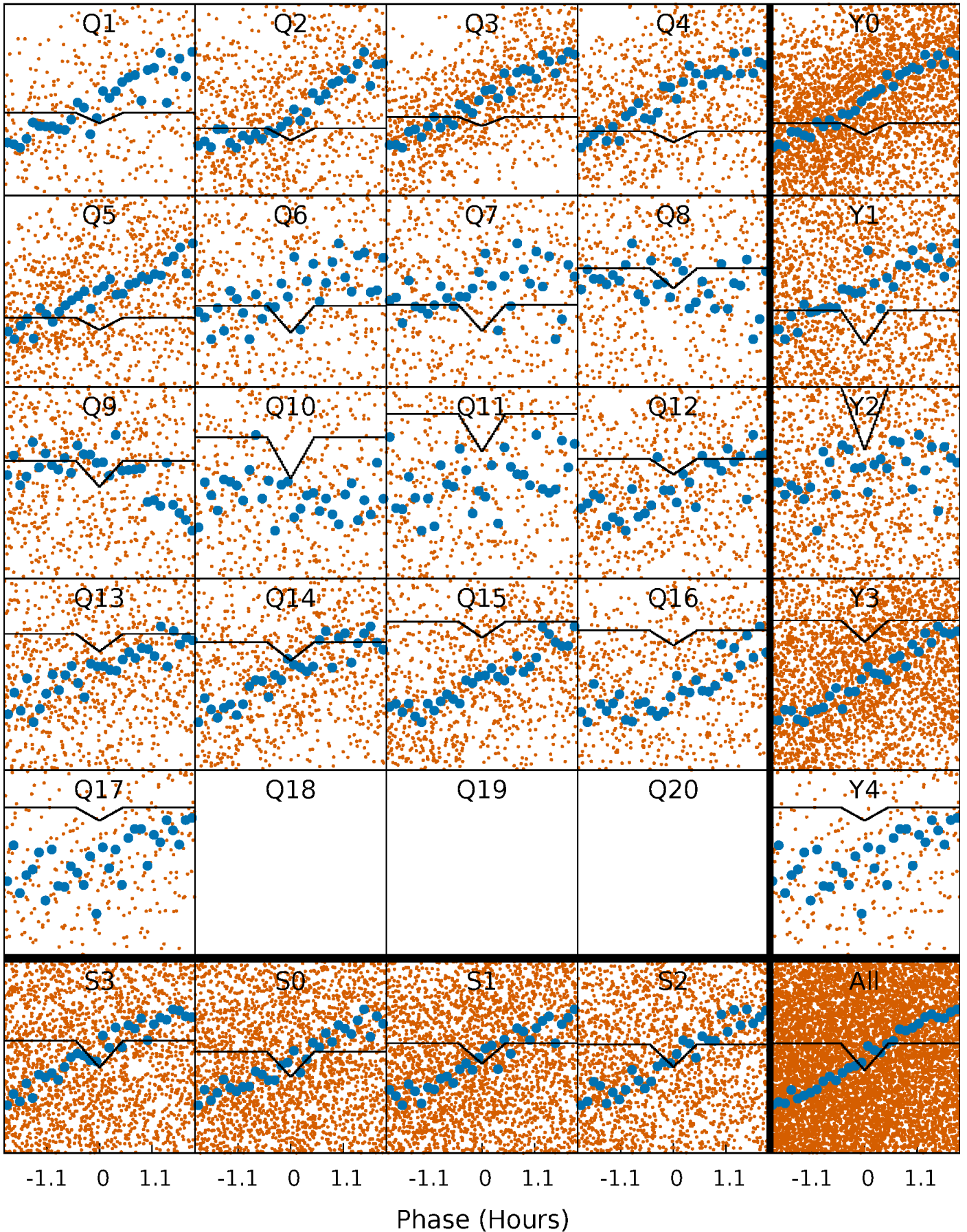
DV Quarter-Phased Transit Curves

TCE 005902653-01 P= 0.677551 Days $T_0=132.038672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

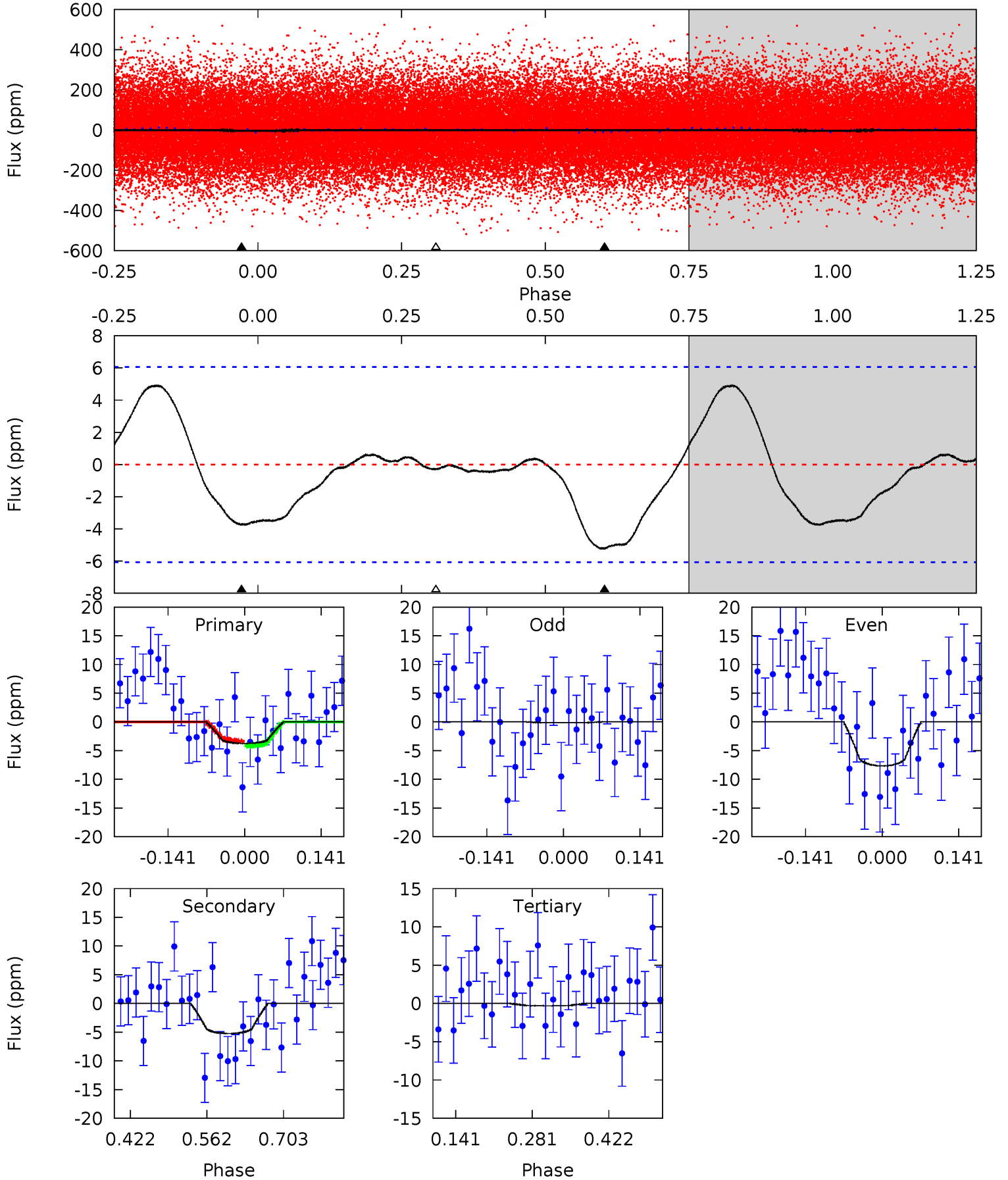
TCE 005902653-01 P= 0.676742 Days $T_0=132.155081$ (BKJD)



DV Model-Shift Uniqueness Test

005902653-01, P = 0.677551 Days, E = 131.361121 Days

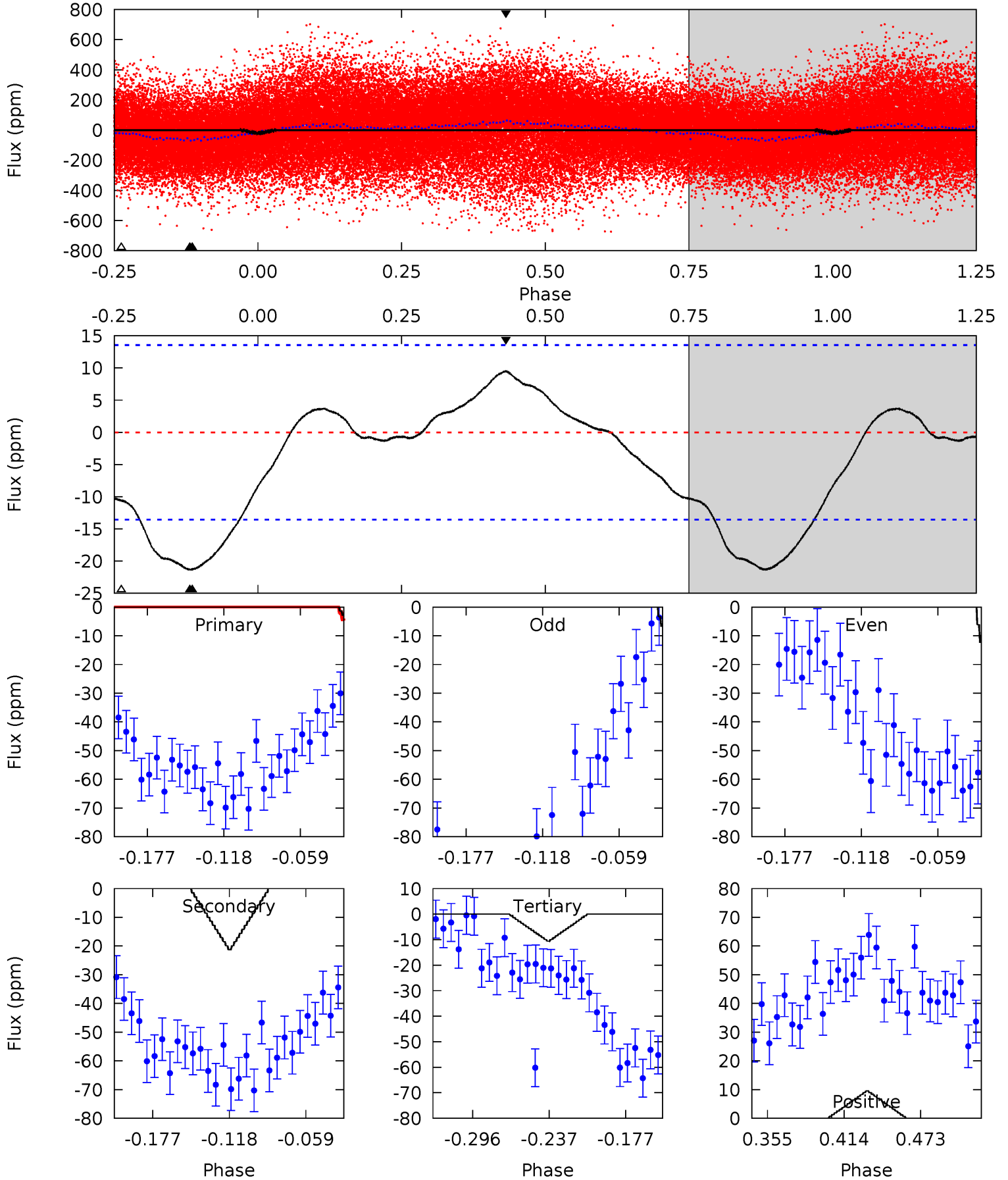
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.78	3.88	0.23	0	4.49	1.47	1.14	2.55	2.78	3.65	3.88	2.80	0.81	0.48	0.29



Alt Model-Shift Uniqueness Test

005902653-01, P = 0.676742 Days, E = 131.478339 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.36	7.35	3.66	3.29	4.67	1.89	2.28	3.69	4.07	3.69	4.06	7.53	0.87	0.31	4.02



Stellar Parameters For KIC 005902653

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6749^{+160}_{-220}	$3.547^{+0.281}_{-0.033}$	$0.220^{+0.200}_{-0.250}$	$4.079^{+0.165}_{-1.406}$	$2.139^{+0.046}_{-0.414}$	$0.044^{+0.085}_{-0.005}$
	+2%/-3%	+8%/-1%	+91%/-114%	+4%/-34%	+2%/-19%	+191%/-11%
Source	PHO1	FLK73	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 005902653-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 1	$2.41^{+2.82}_{-1.67}$	5887^{+282}_{-481}	-3973^{+11047}_{-847}	$0.185^{+1.652}_{-0.149}$
Alt.	-21 ± 3	$3.44^{+3.06}_{-2.45}$	5873^{+276}_{-441}	3647^{+5943}_{-8142}	$0.374^{+4.033}_{-0.272}$

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

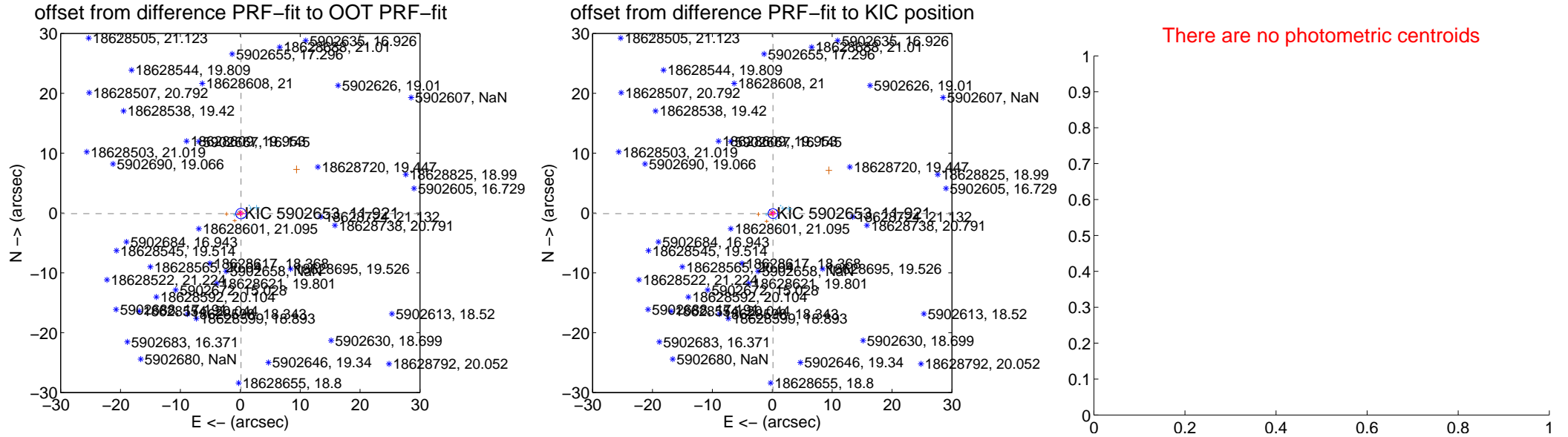
DV Centroid Data

Supplemental centroid analysis for 005902653-01. **Kepler magnitude: 11.92**. Transit SNR 0.02

There are 8 quarters with good PRF difference image offsets

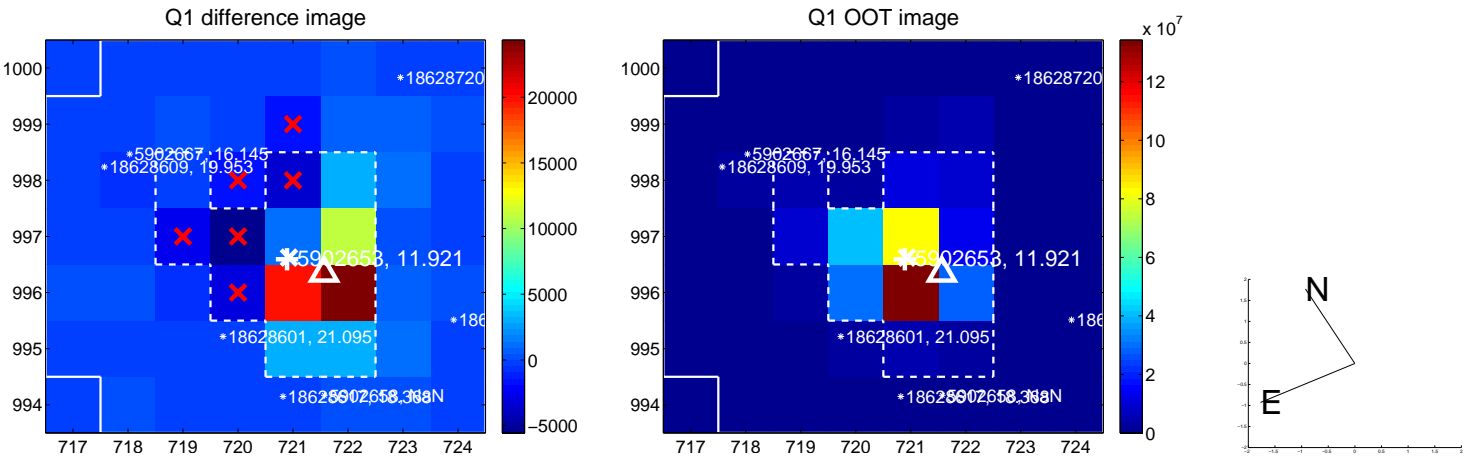
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.158 ± 0.292	0.54	-0.122 ± 0.692	-0.100 ± 0.529
PRF-fit source offset from KIC position	0.158 ± 0.271	0.58	-0.118 ± 0.613	-0.105 ± 0.475
photometric centroid source offset	—	—	—	—

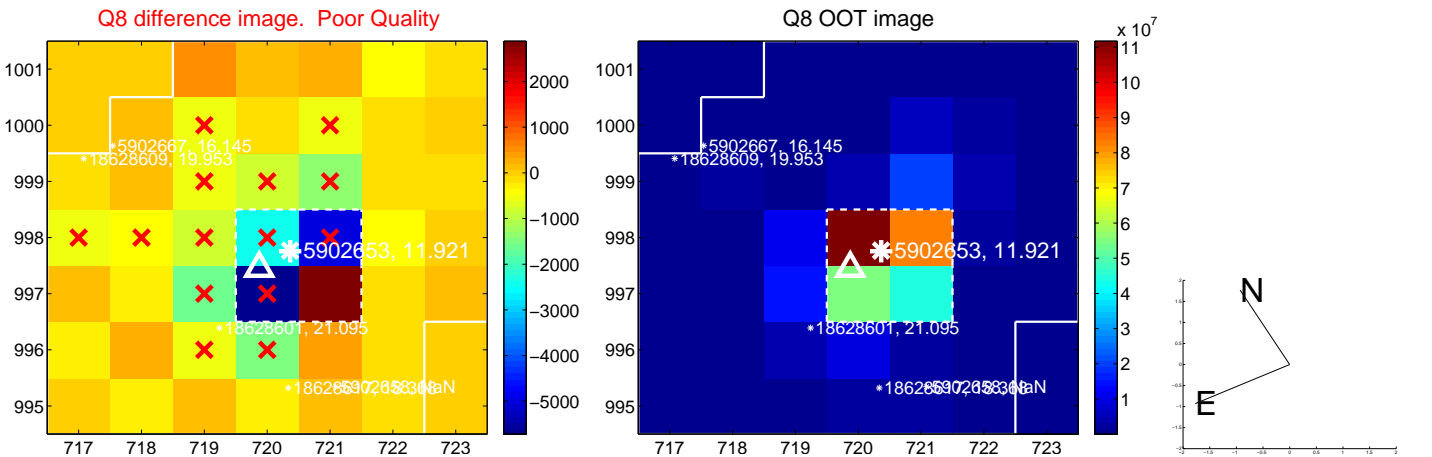
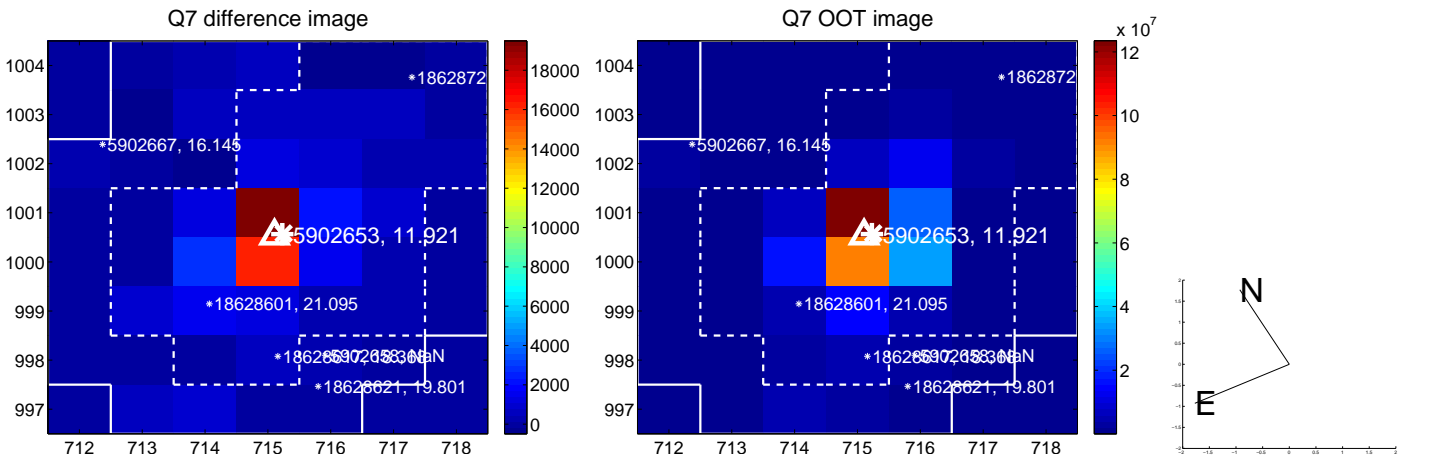
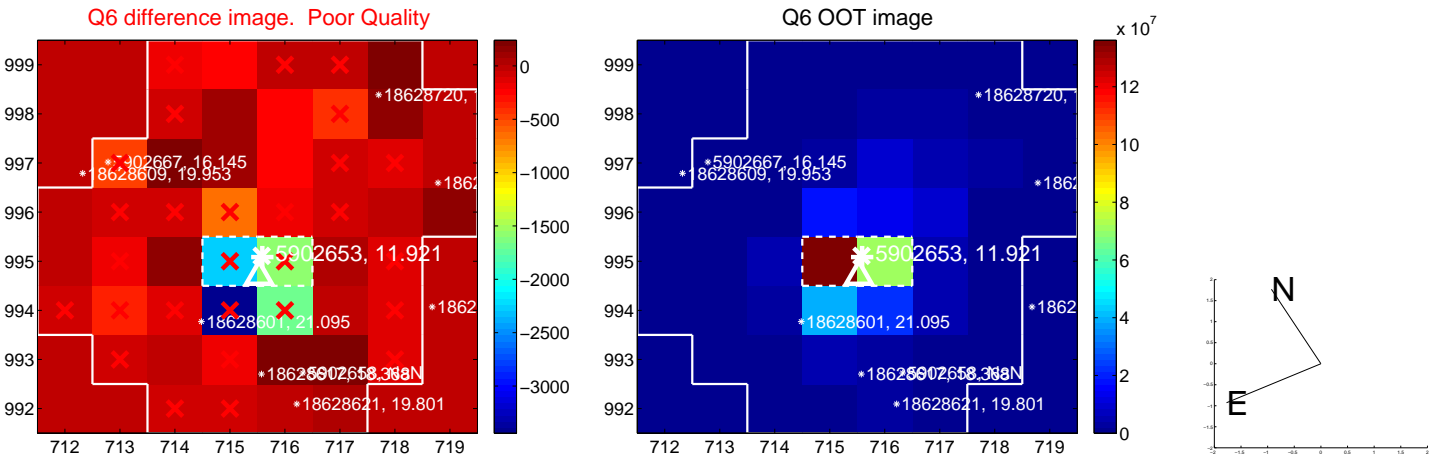
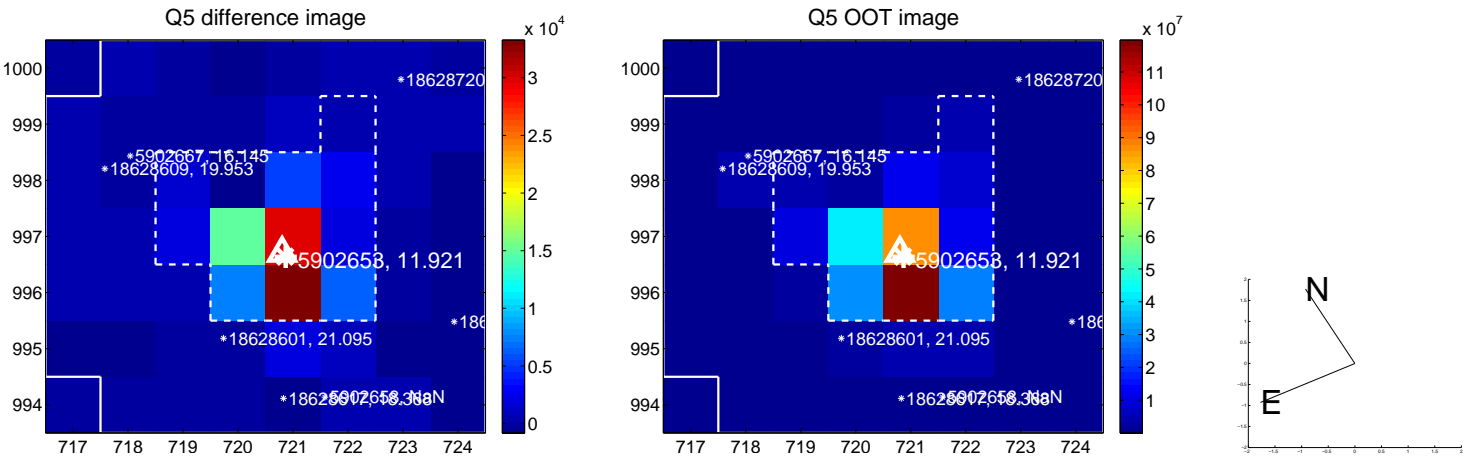


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

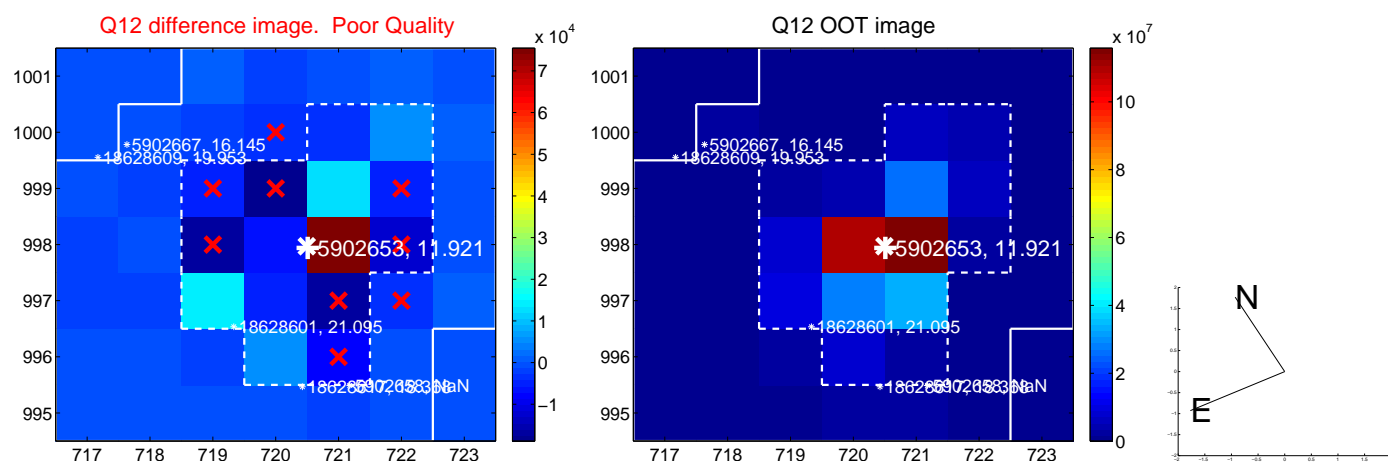
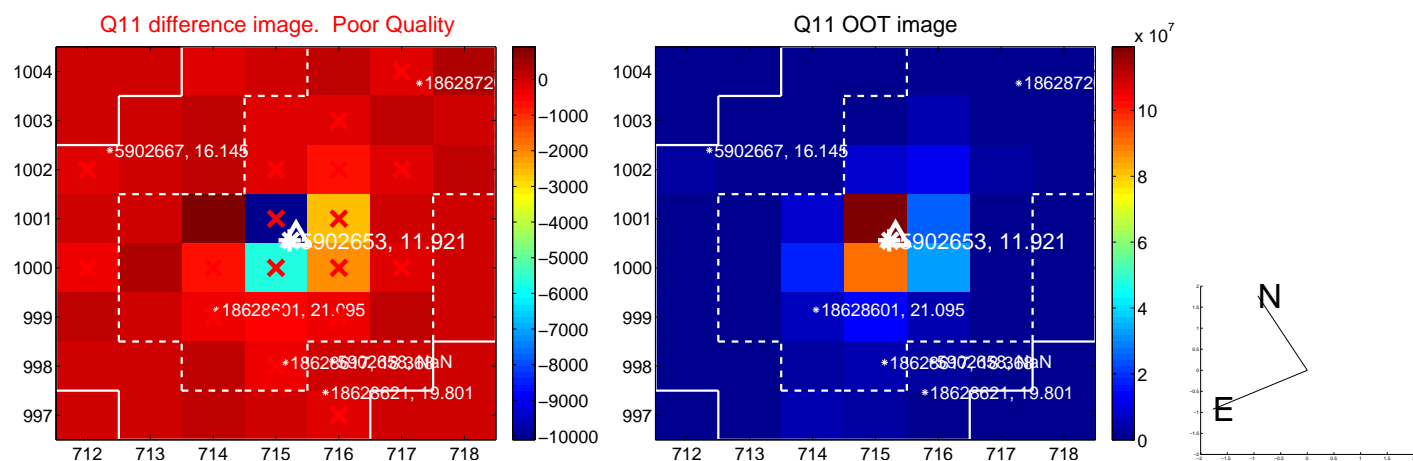
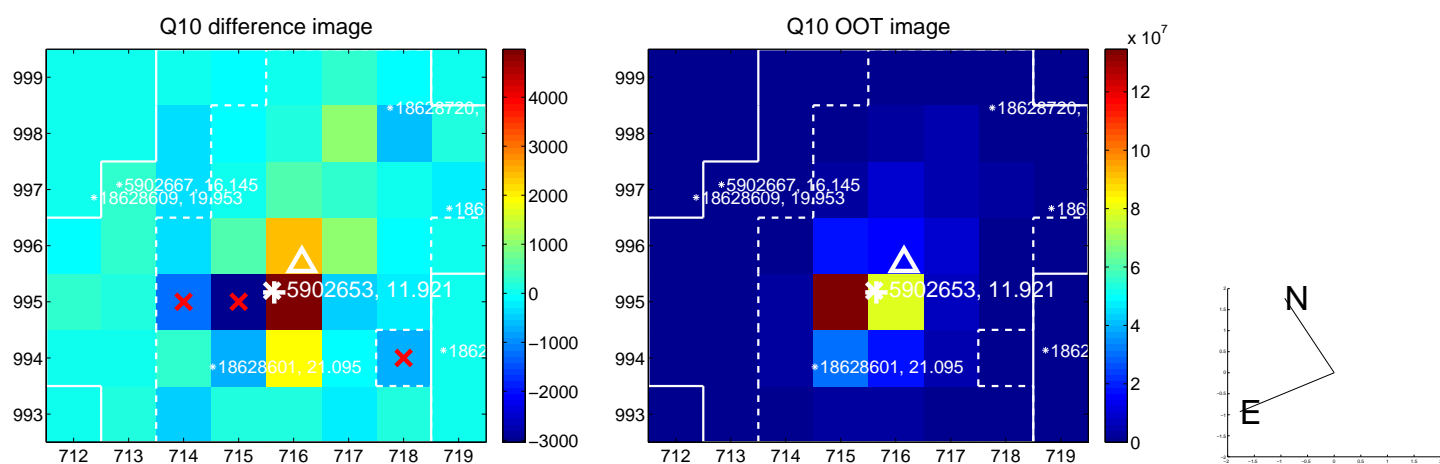
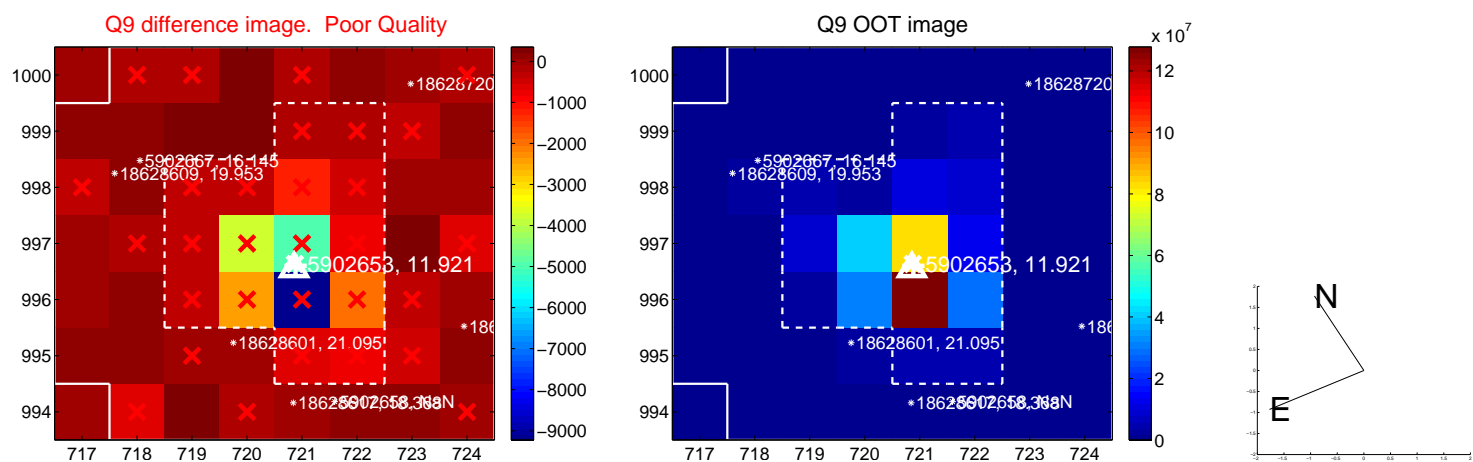
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



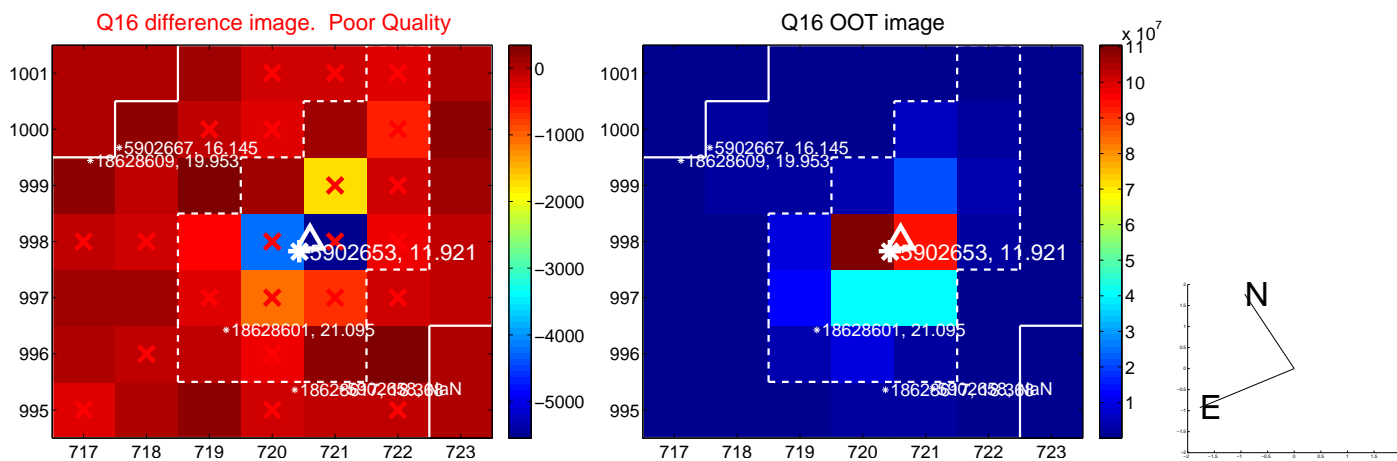
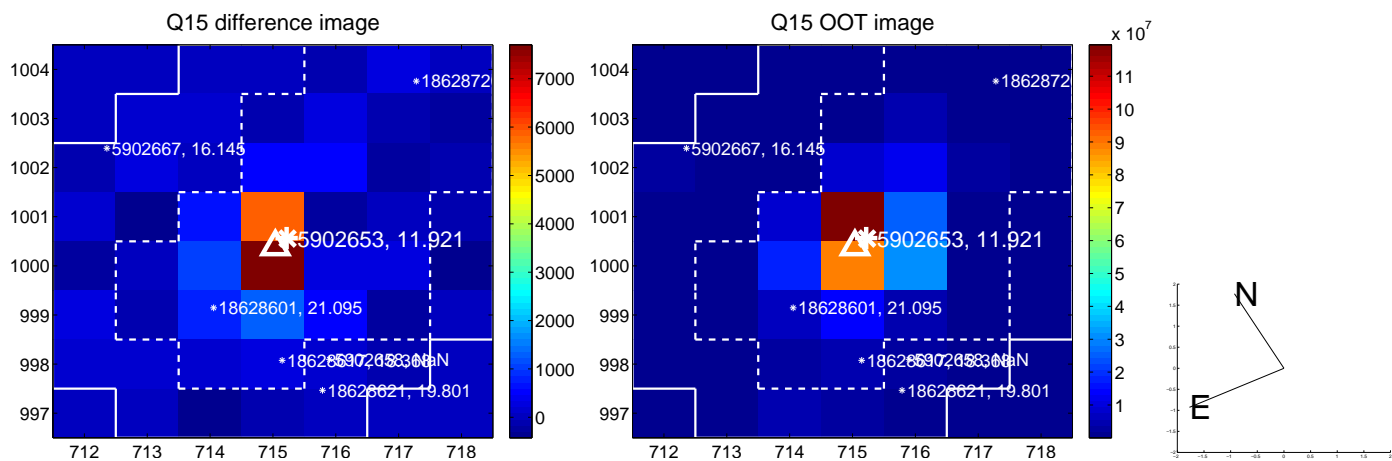
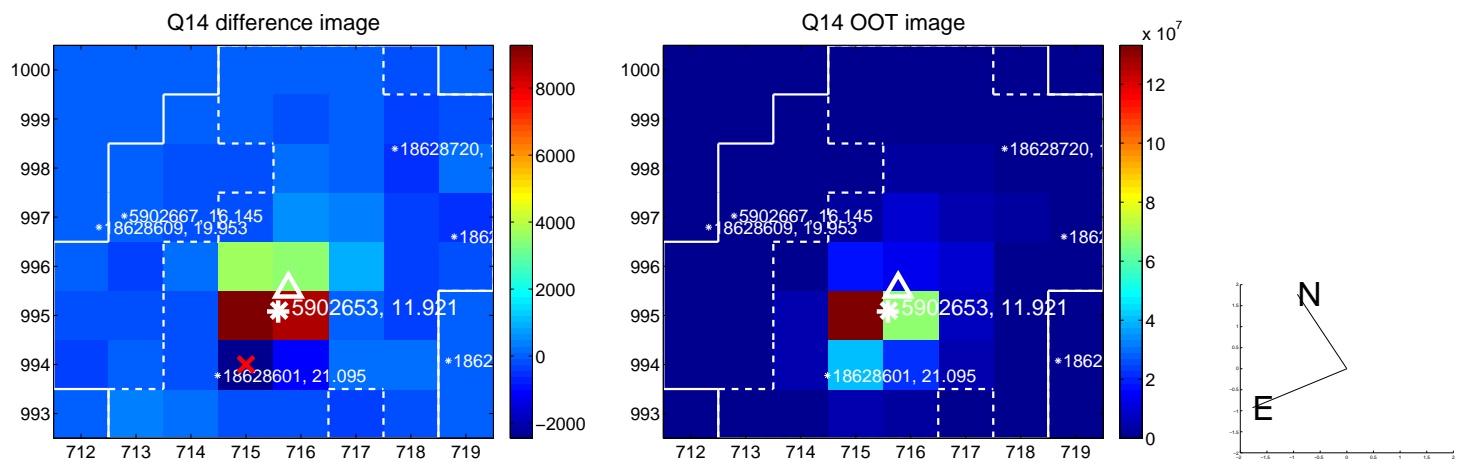
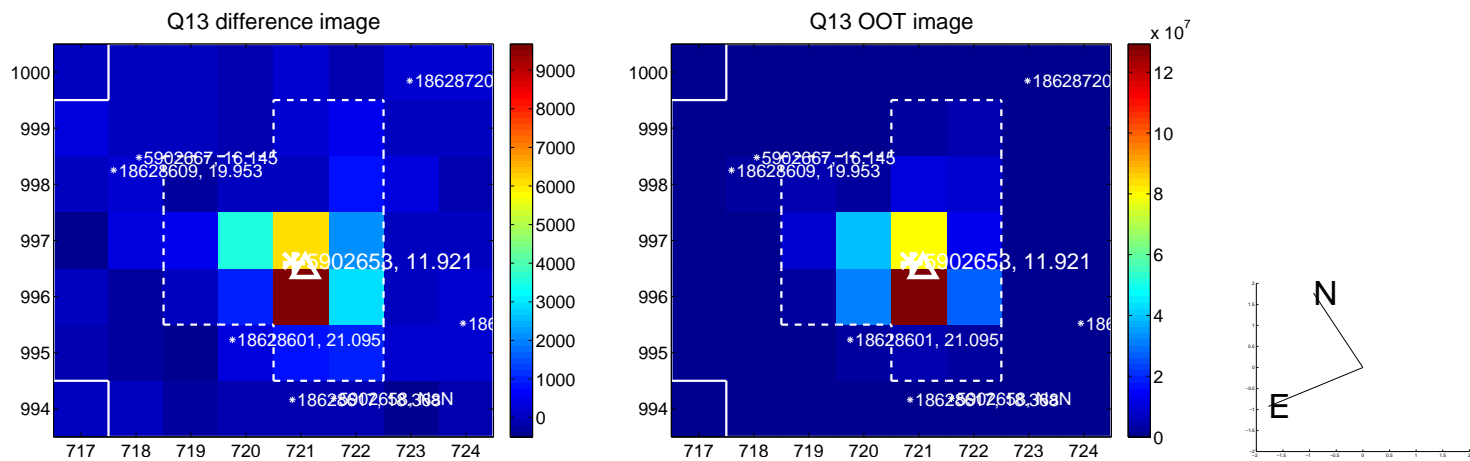
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



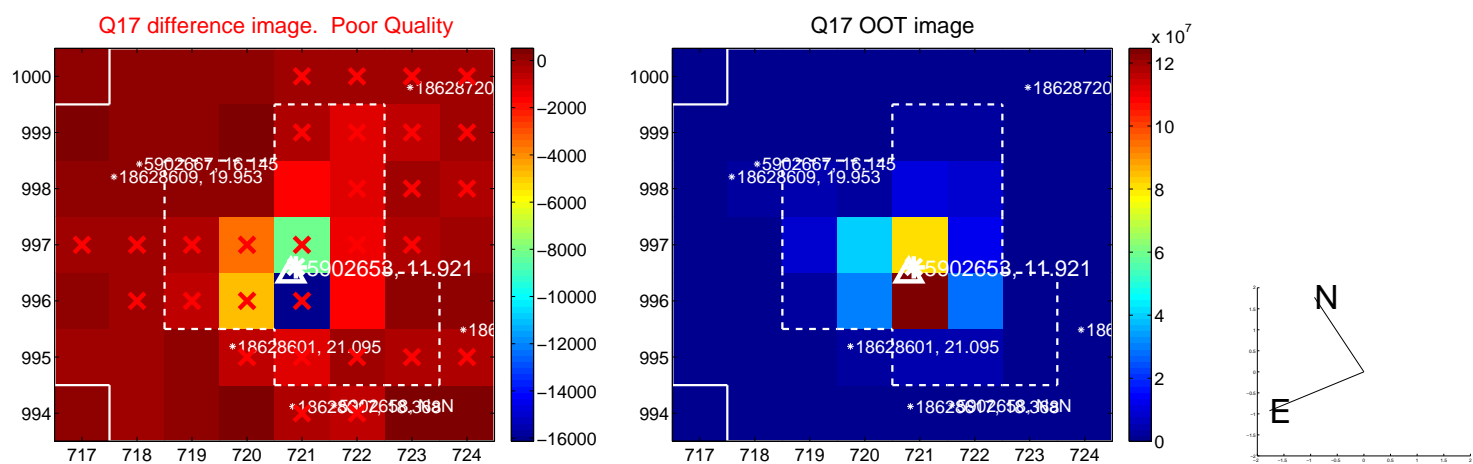
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



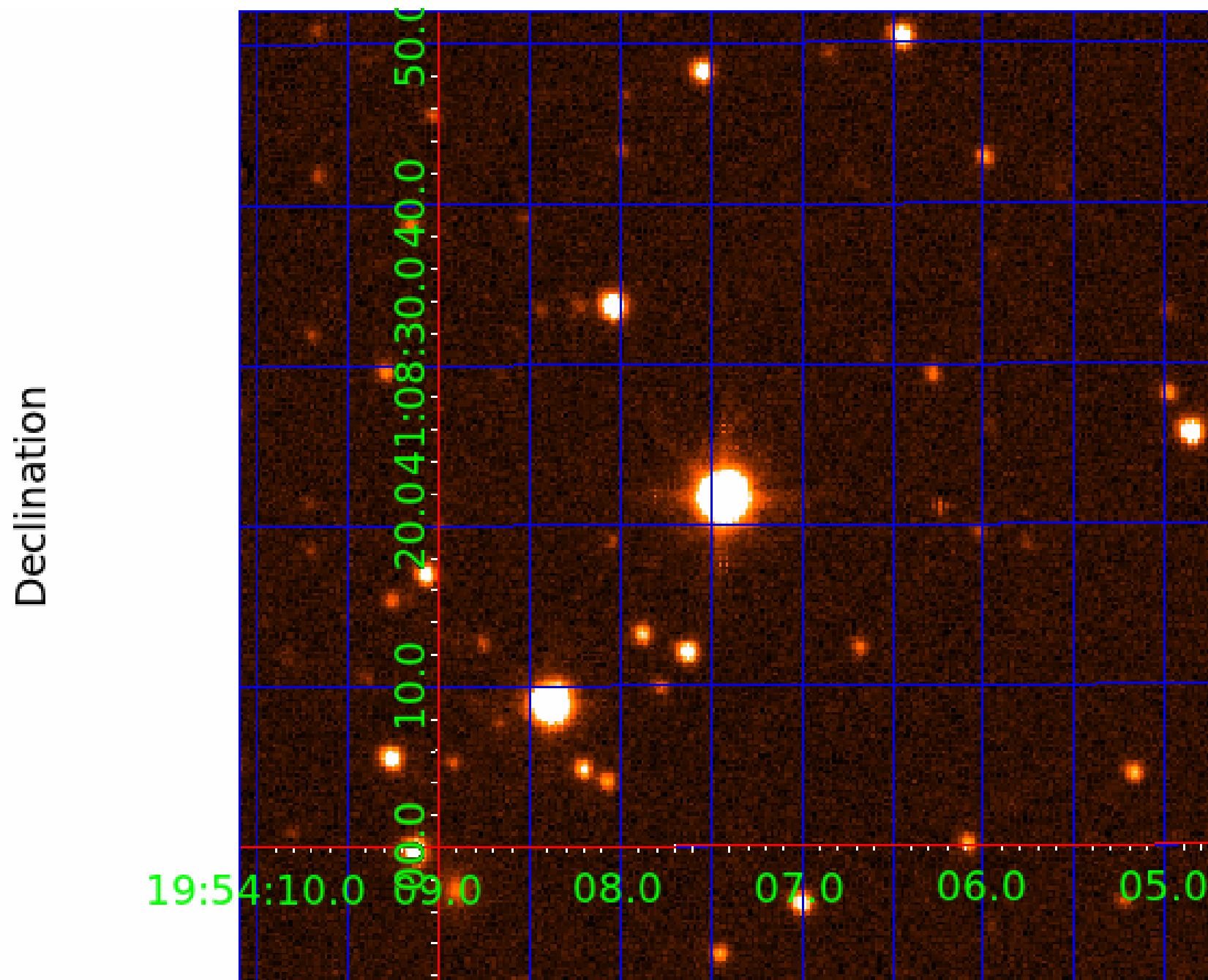
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.



UKIRT Image



KIC 005902653

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})
005902653-01	OBS	No	0.677551	132.038672	0.0	1.841	10.3	0.0	4.08	6749	0.09	81714.36
005902653-02	OBS	No	333.541619	188.647965	195.7	12.360	7.3	7.3	4.08	6749	6.27	21.02
005902653-03	OBS	No	1.353280	132.289834	3.5	11.188	8.8	1.8	4.08	6749	0.82	32486.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005902653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005902653-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
005902653-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

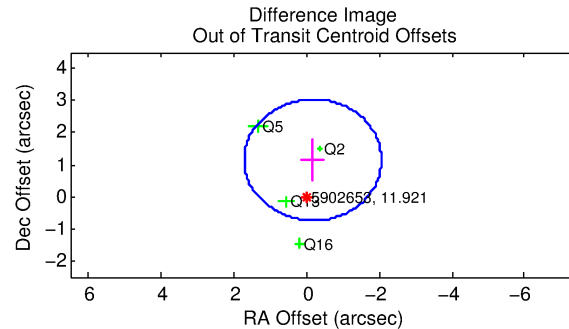
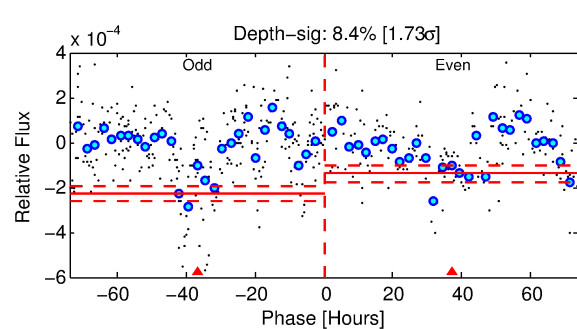
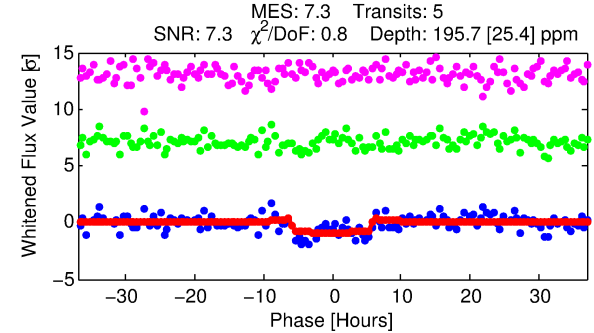
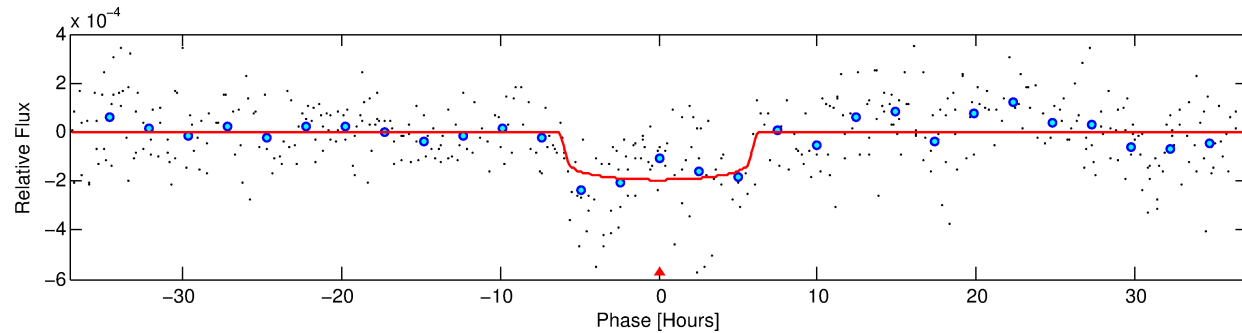
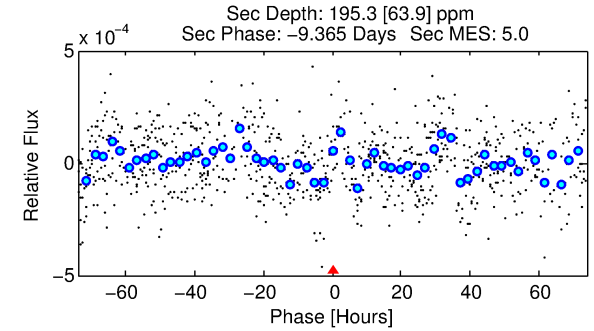
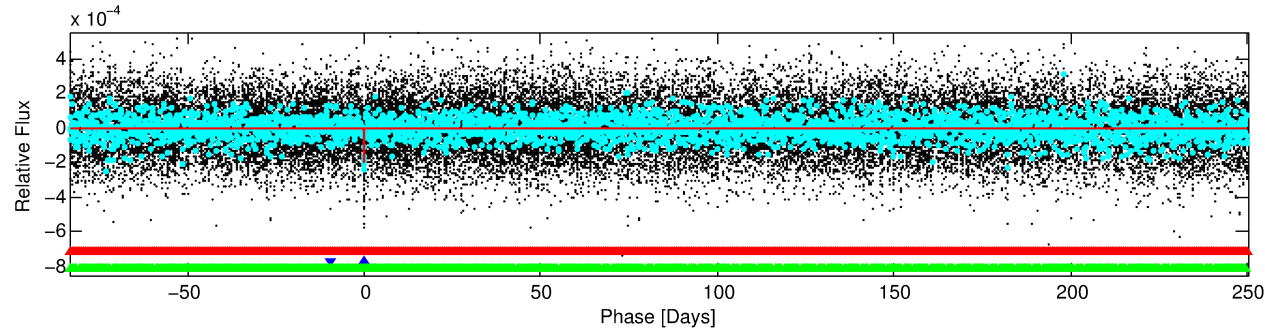
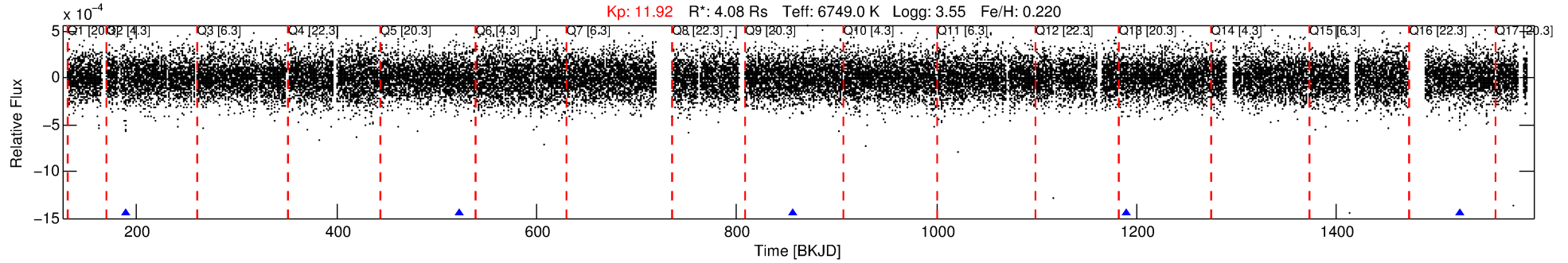
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005902653-02

No Significant Match Found

DV One-Page Summary

KIC: 5902653 Candidate: 2 of 3 Period: 333.542 d



DV Fit Results:

Period = 333.54162 [0.00681] d
Epoch = 188.6480 [0.0178] BKJD
Rp/R* = 0.0141 [0.0032]
a/R* = 131.24 [159.94]
b = 0.79 [0.59]
Seff = 21.02 [10.63]
Teq = 546 [69] K
Rp = 6.27 [2.59] Re
a = 1.2129 [0.3823] AU
Ag = 4019.64 [2987.51] [1.35 σ]
Teffp = 6722 [966] K [6.38 σ]

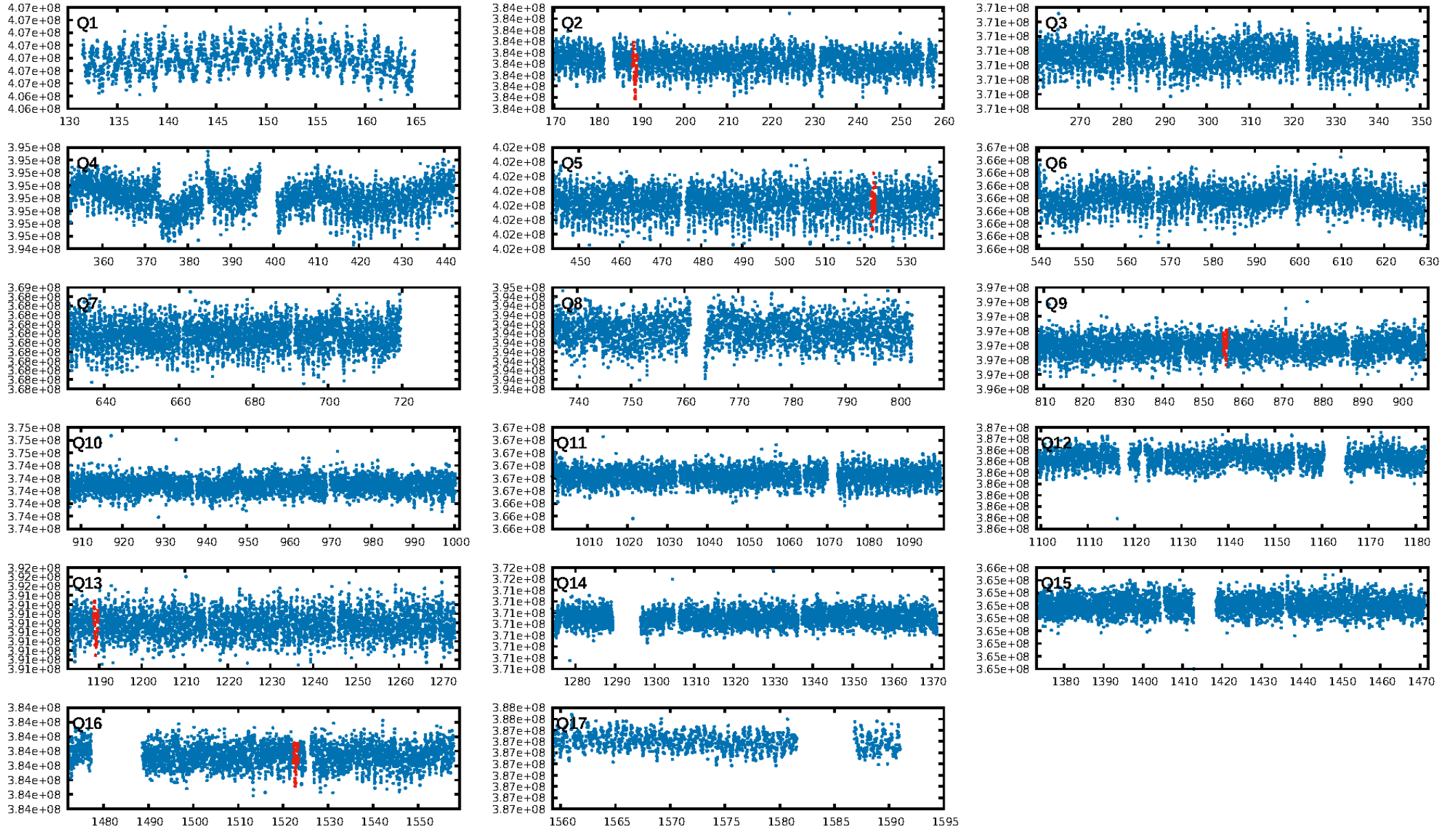
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [478.21 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 44.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.01782
Centroid-sig: 34.9%
Centroid-so: 1.159 arcsec [1.22 σ]
OotOffset-rm: 1.159 arcsec [1.84 σ]
KicOffset-rm: 1.044 arcsec [1.54 σ]
OotOffset-st: 1/0/1/2 [4]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/5]

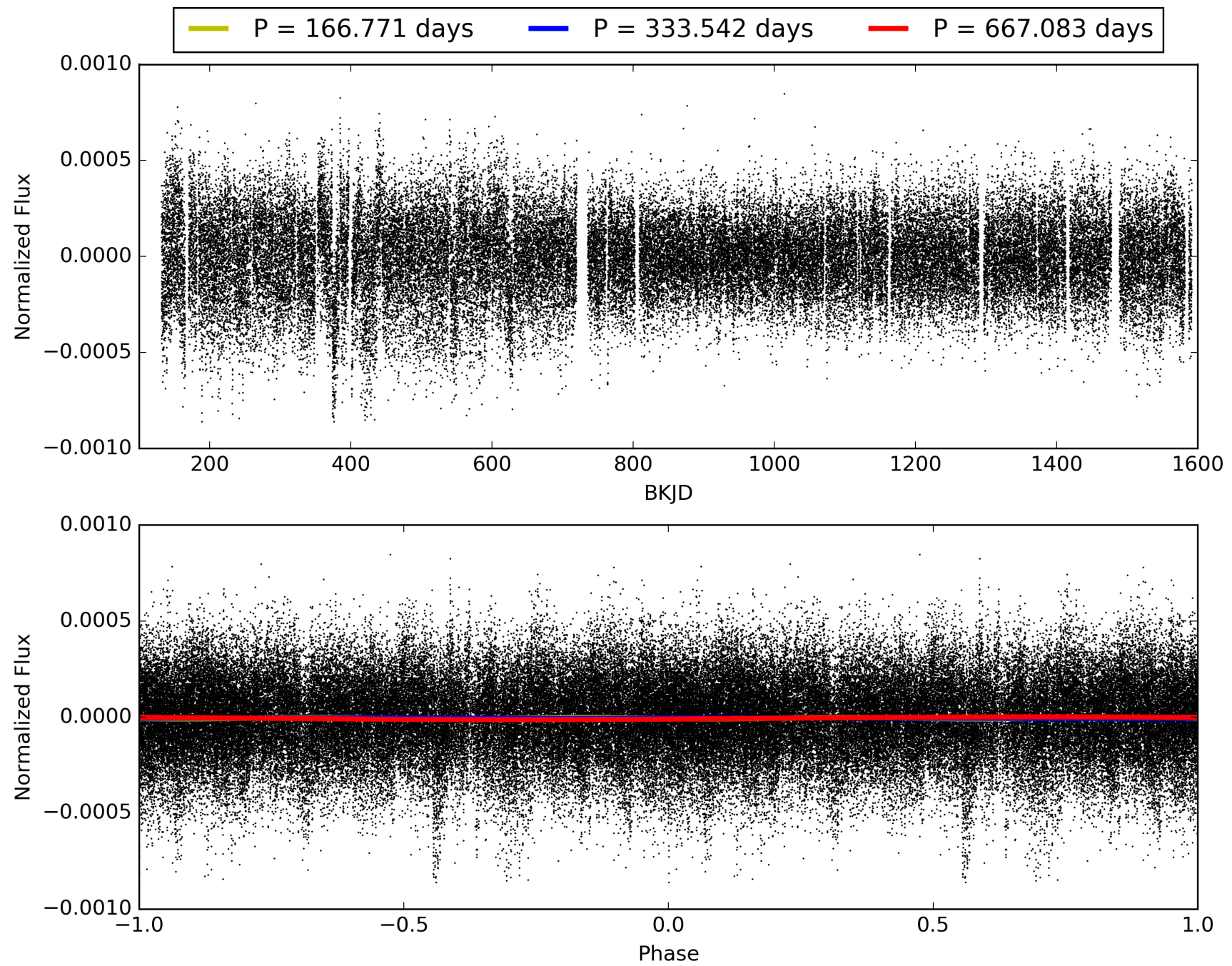
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:00:10 Z

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

TCE 005902653-02, PDC Light Curves

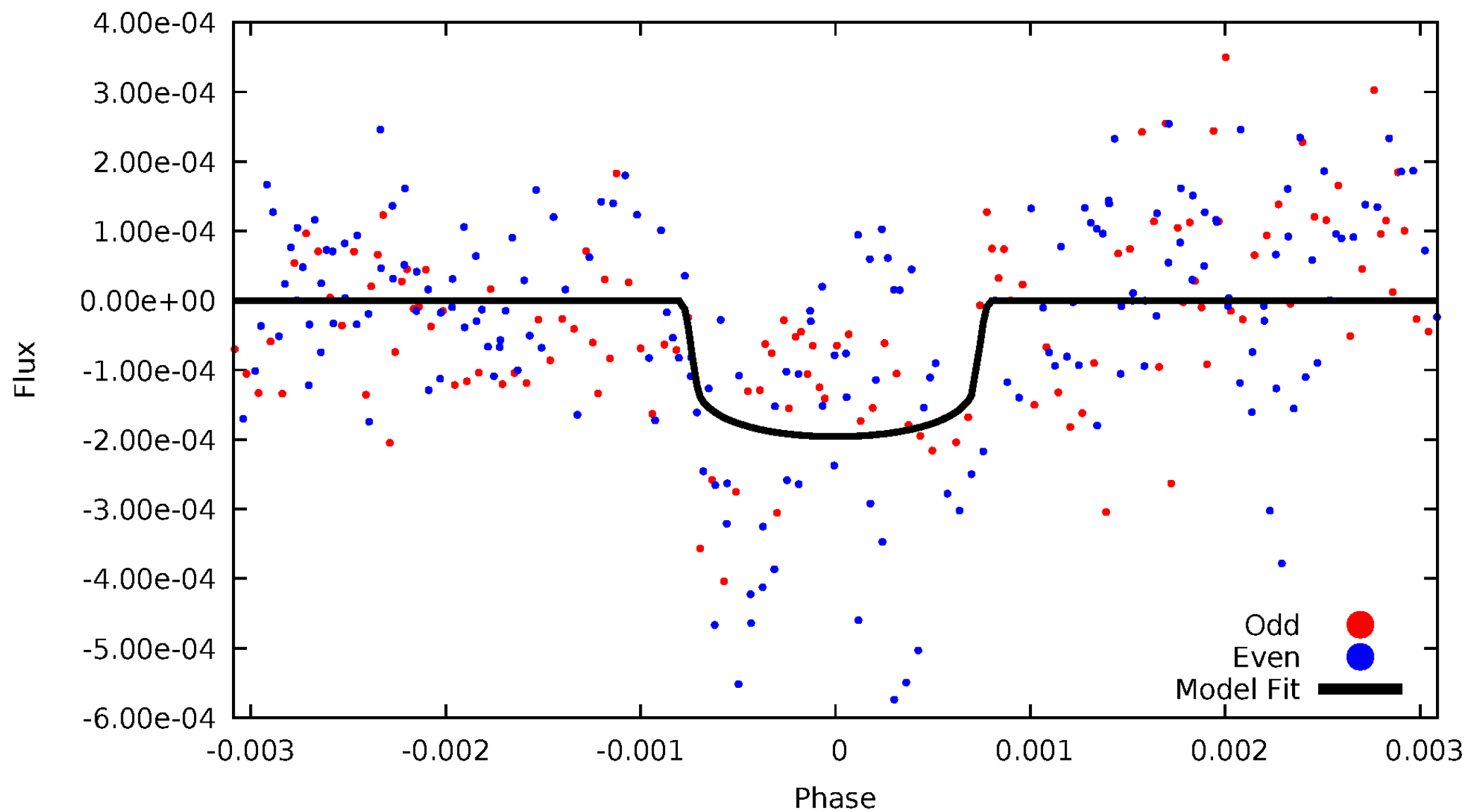


TCE 005902653-02



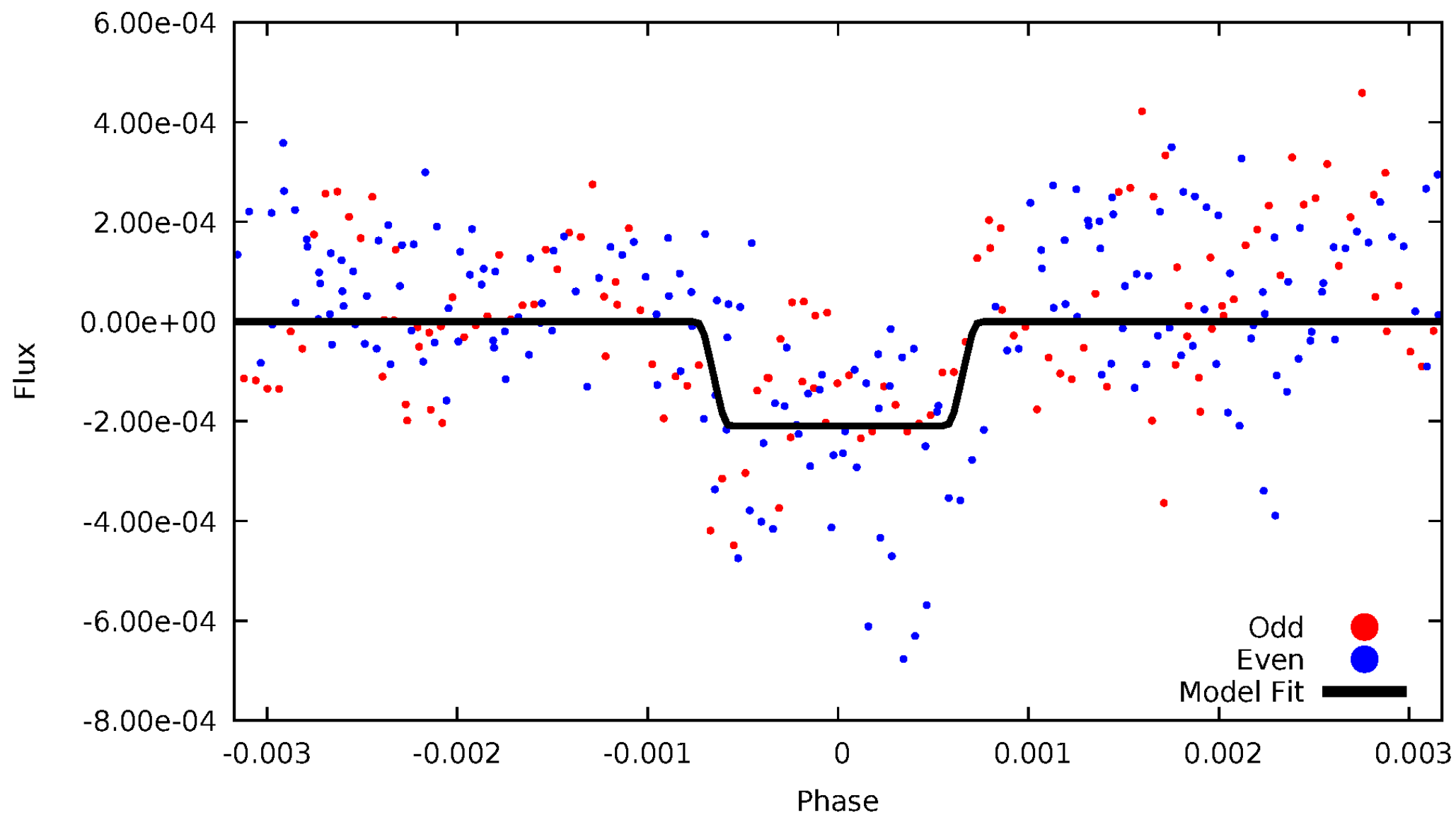
DV Odd/Even

TCE 005902653-02



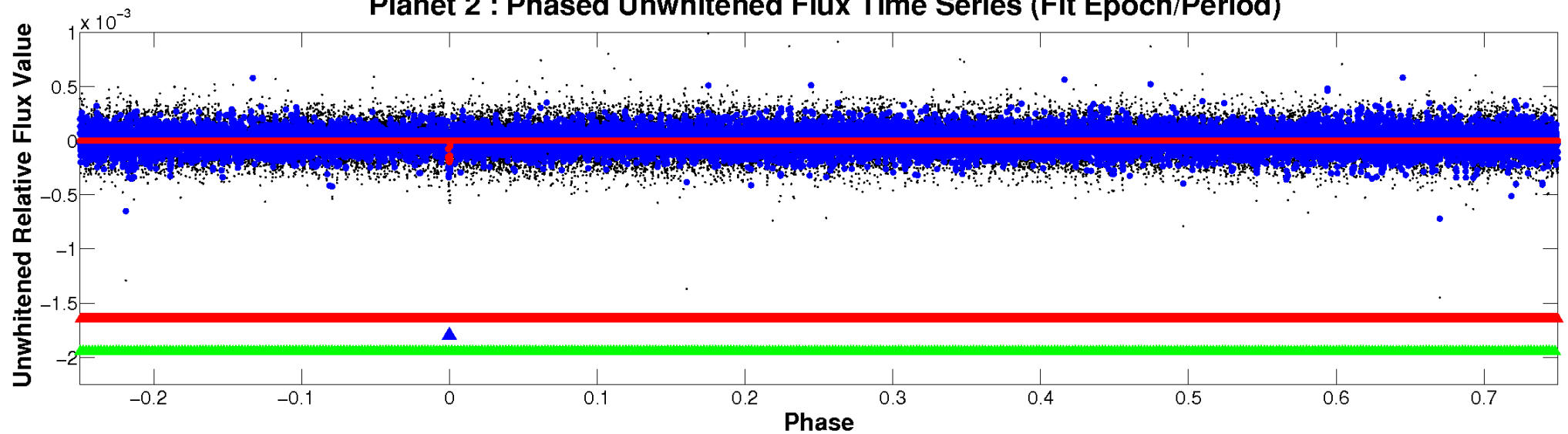
ALT Odd/Even

TCE 005902653-02

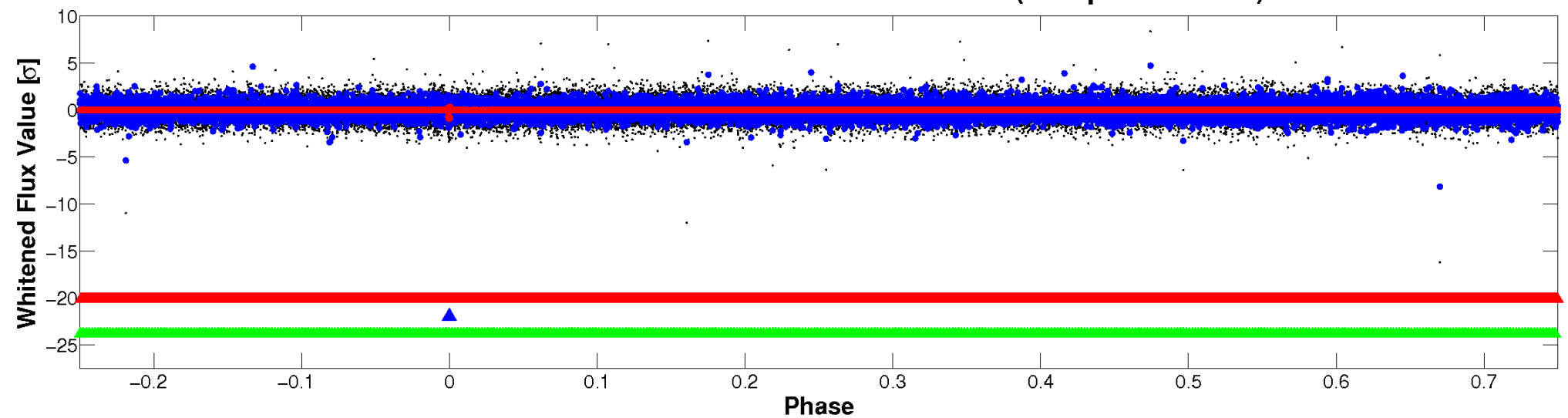


Non-Whitened Vs. Whitened Light Curve

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

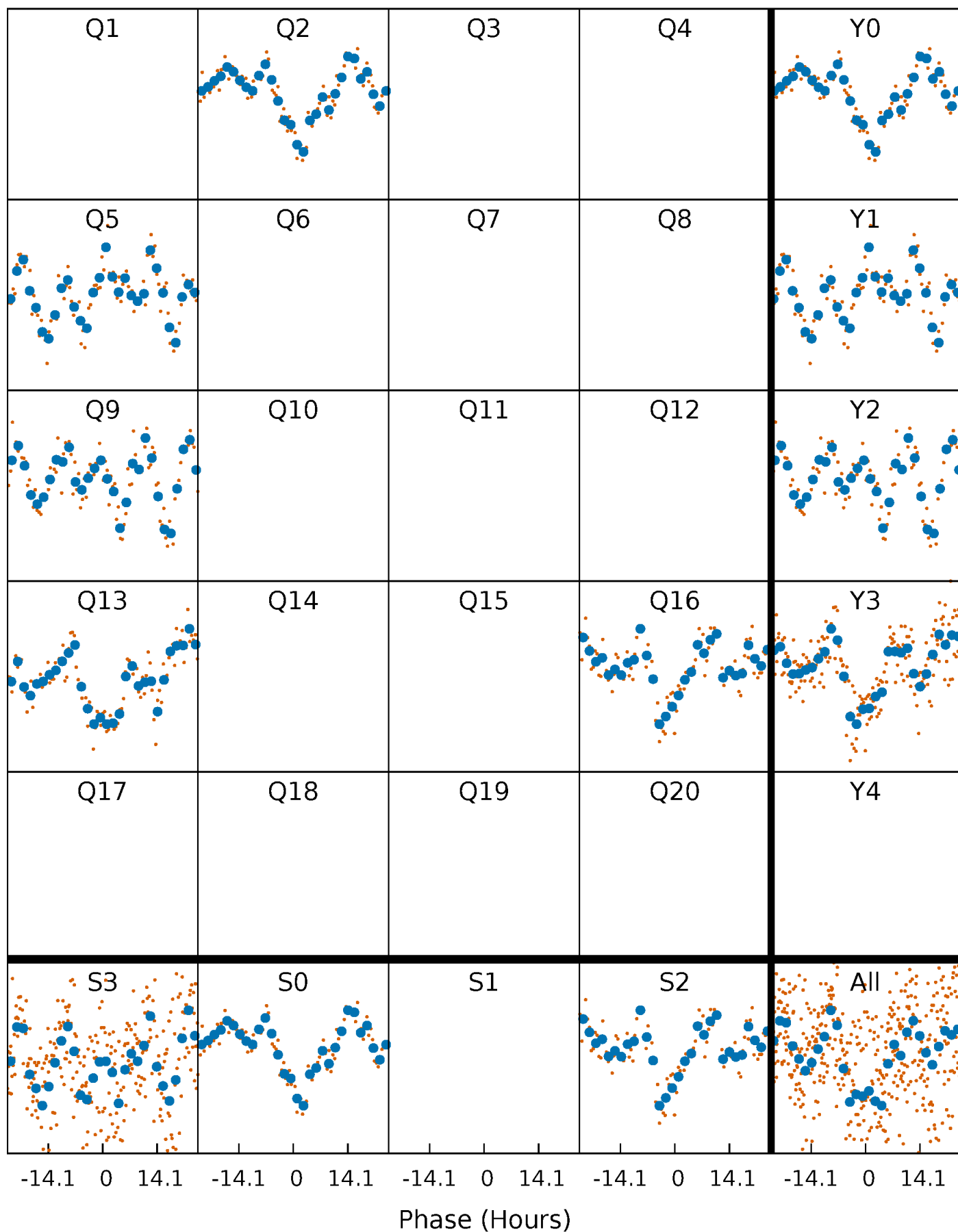


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



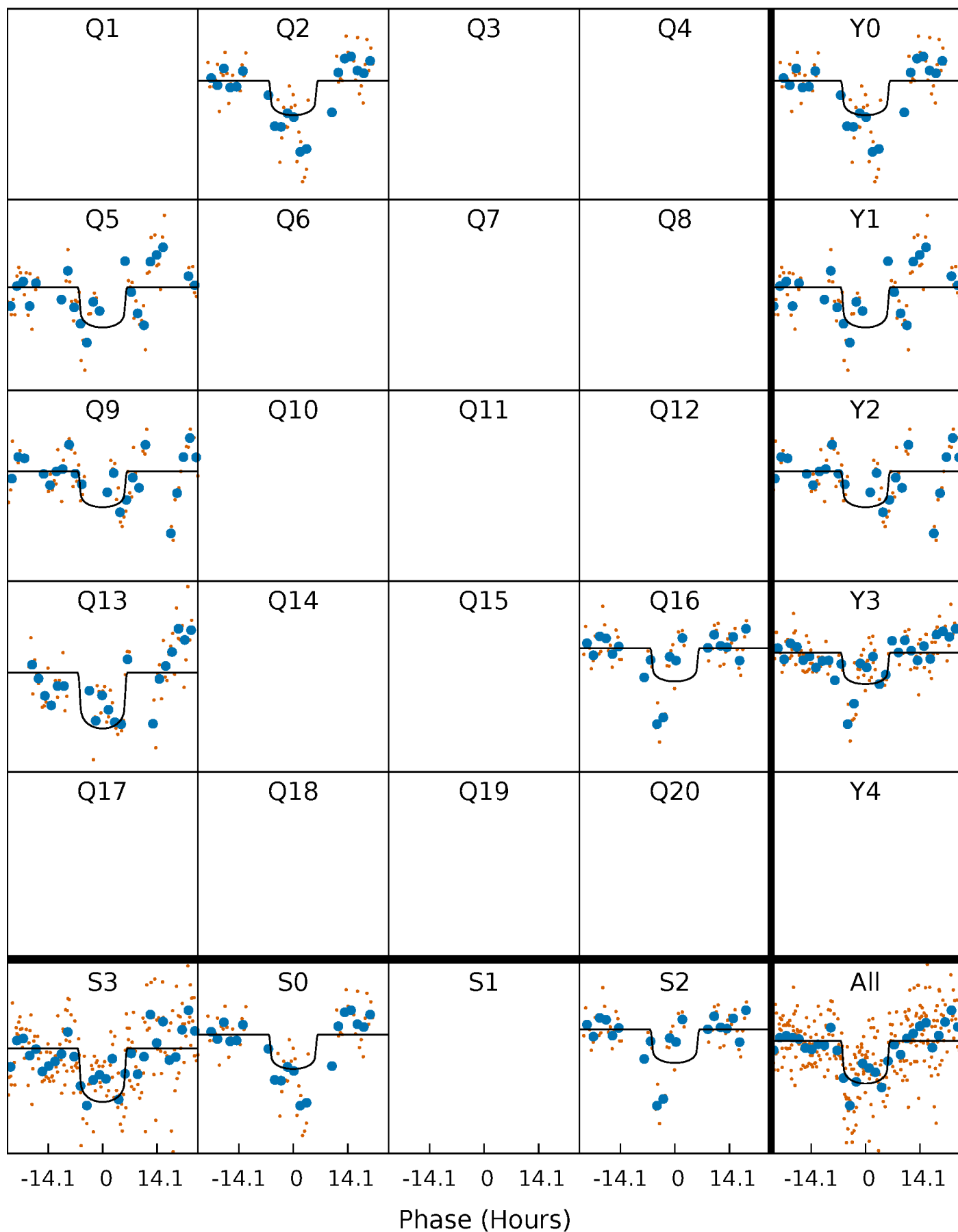
PDC Quarter-Phased Transit Curves

TCE 005902653-02 P=333.541619 Days $T_0=188.647965$ (BKJD)



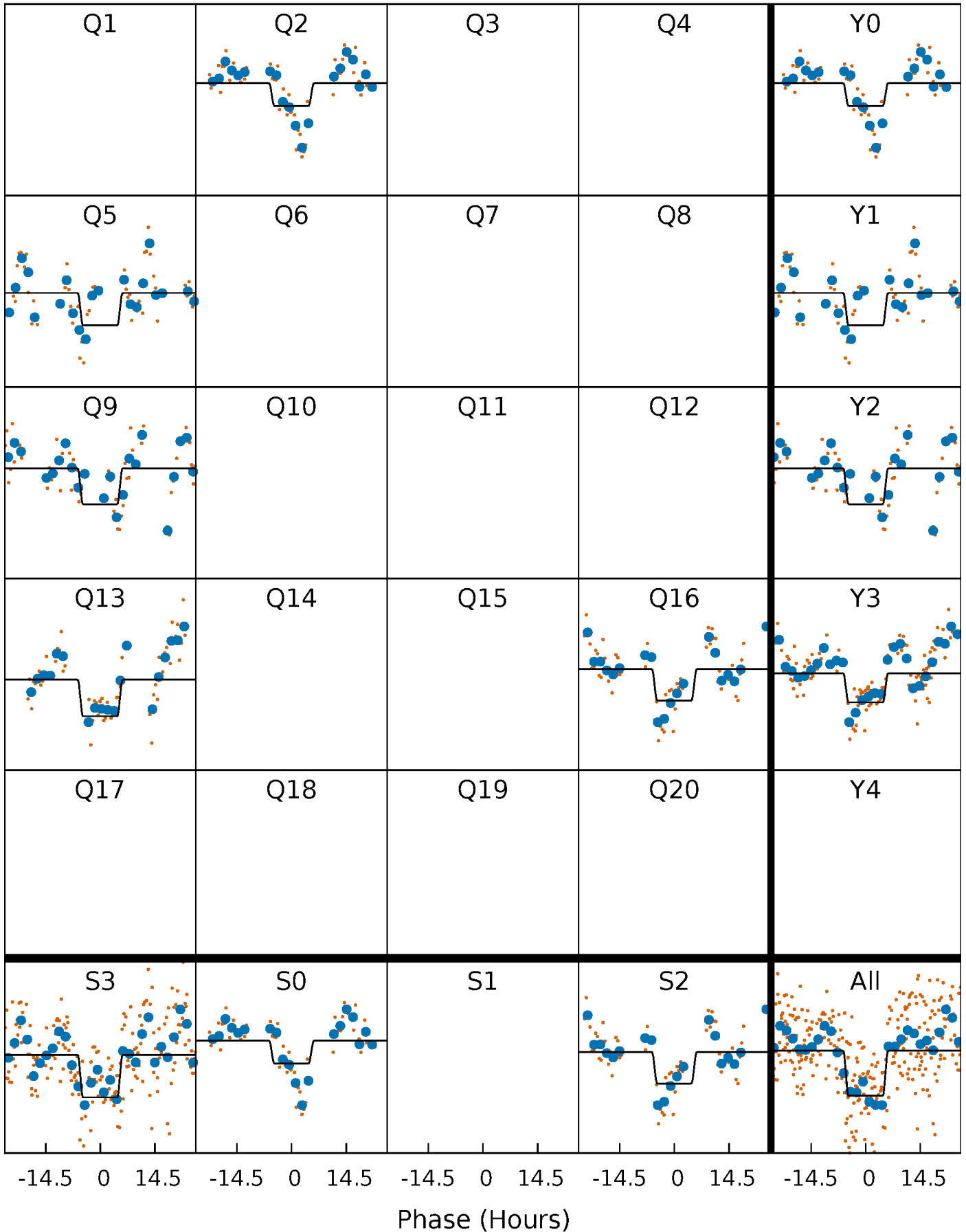
DV Quarter-Phased Transit Curves

TCE 005902653-02 P=333.541619 Days $T_0=188.647965$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

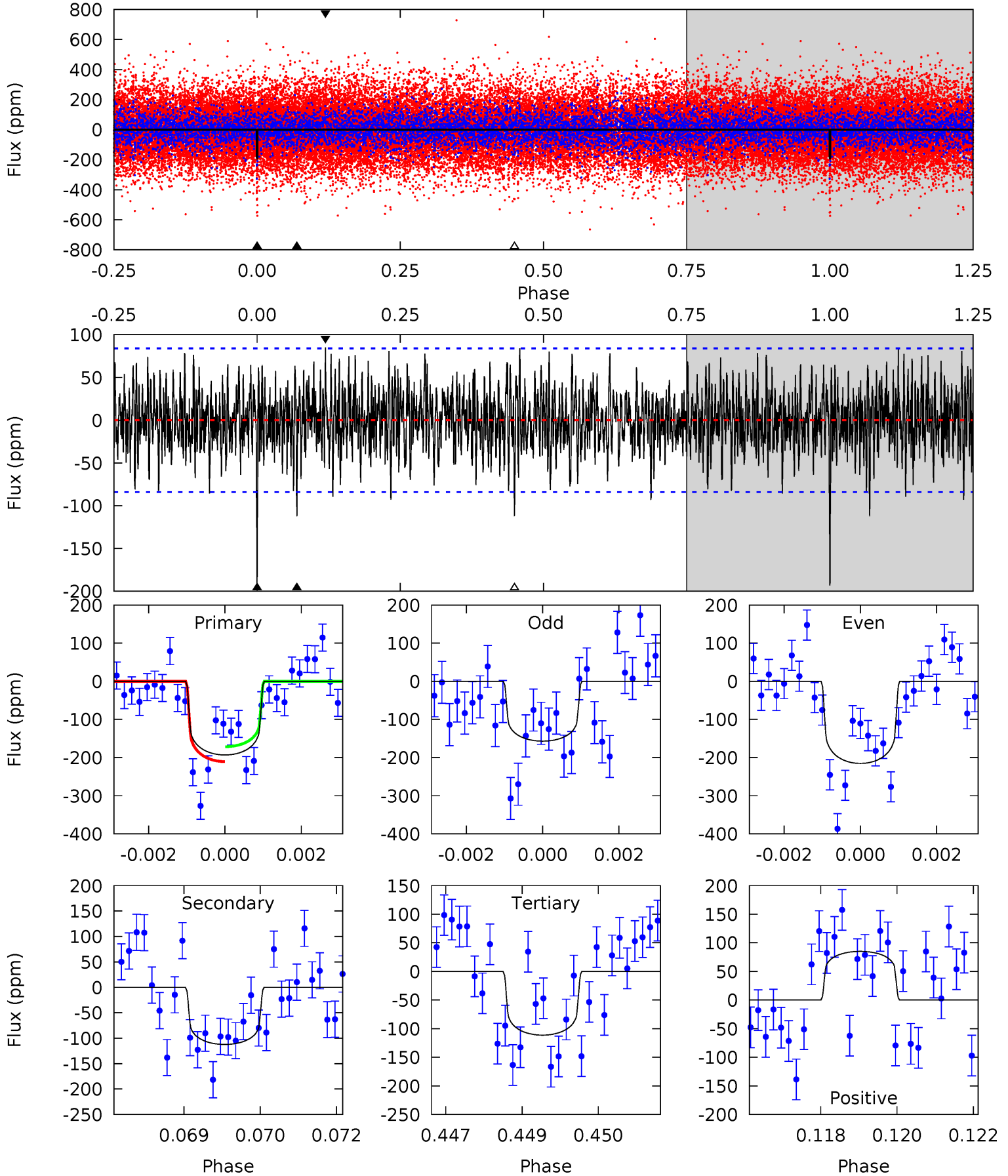
TCE 005902653-02 P=333.547406 Days $T_0=188.634176$ (BKJD)



DV Model-Shift Uniqueness Test

005902653-02, P = 333.541619 Days, E = 188.647965 Days

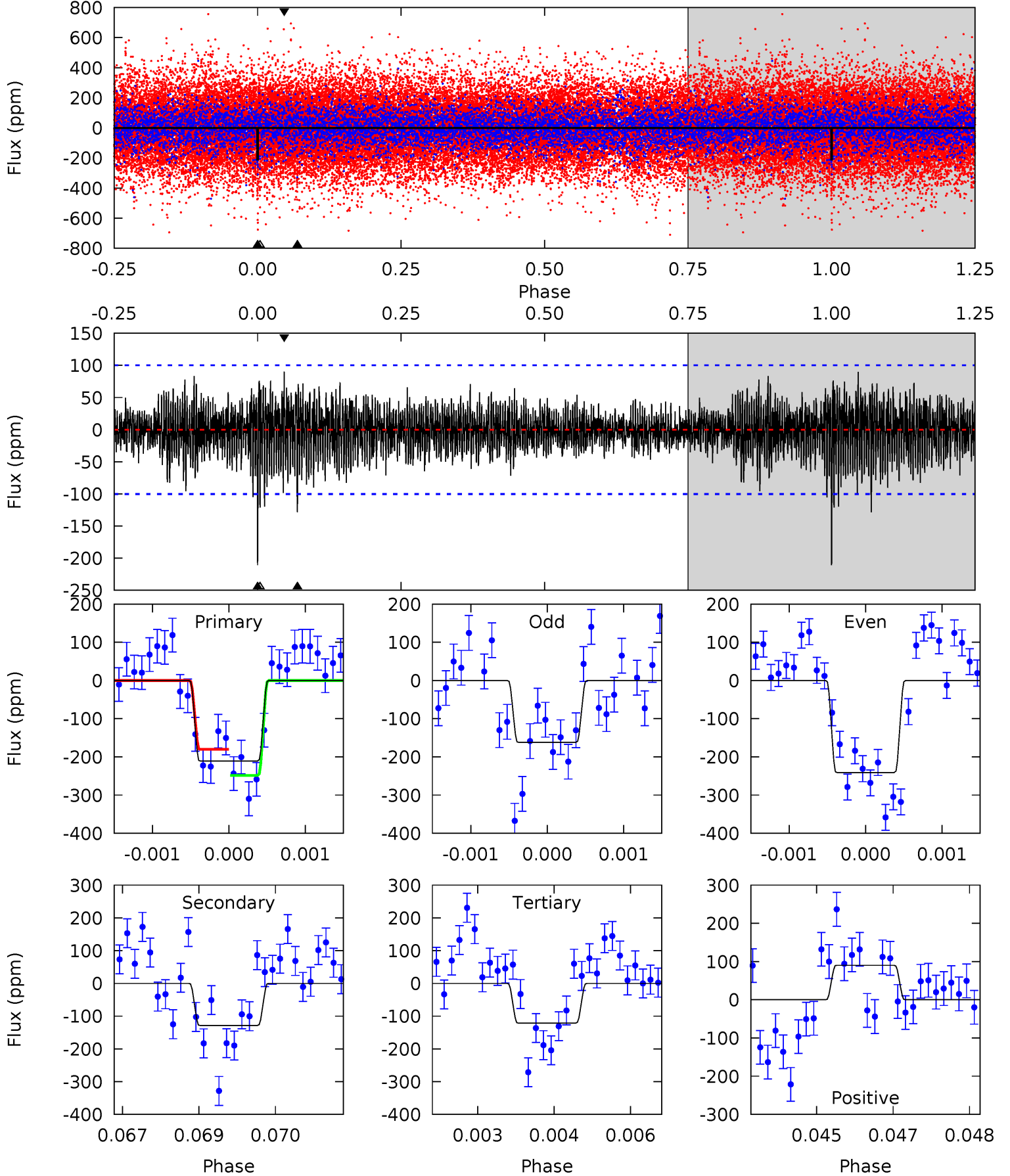
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	7.18	7.12	5.44	5.37	3.16	1.86	5.24	6.91	0.06	1.74	1.80	1.05	0.31	1.24



Alt Model-Shift Uniqueness Test

005902653-02, P = 333.547406 Days, E = 188.634176 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.90	6.51	4.84	5.38	3.18	1.54	4.81	6.49	0.39	2.06	2.05	1.14	0.30	1.82



Stellar Parameters For KIC 005902653

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6749^{+160}_{-220}	$3.547^{+0.281}_{-0.033}$	$0.220^{+0.200}_{-0.250}$	$4.079^{+0.165}_{-1.406}$	$2.139^{+0.046}_{-0.414}$	$0.044^{+0.085}_{-0.005}$
	+2%/-3%	+8%/-1%	+91%/-114%	+4%/-34%	+2%/-19%	+191%/-11%
Source	PHO1	FLK73	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 005902653-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-112 ± 16	$5.82^{+1.60}_{-1.63}$	745^{+33}_{-62}	5801^{+844}_{-566}	2615^{+2343}_{-1028}
Alt.	-128 ± 19	$5.94^{+1.62}_{-1.41}$	747^{+33}_{-61}	5918^{+789}_{-586}	2836^{+1969}_{-1111}

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

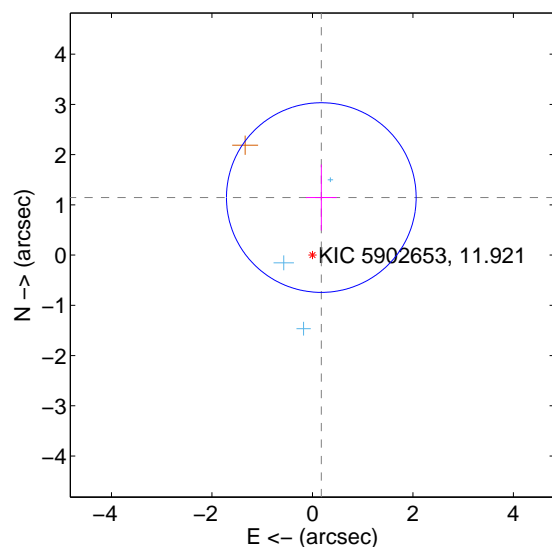
Supplemental centroid analysis for 005902653-02. **Kepler magnitude: 11.92.** Transit SNR 7.28

There are 3 quarters with good PRF difference image offsets

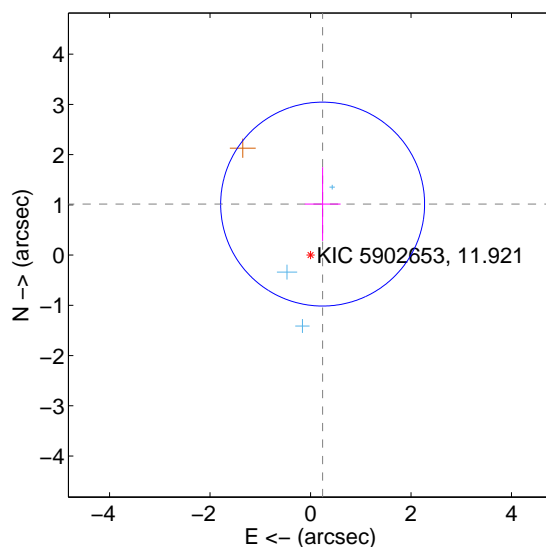
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.159 ± 0.629	1.84	-0.177 ± 0.307	1.146 ± 0.656
PRF-fit source offset from KIC position	1.044 ± 0.677	1.54	-0.241 ± 0.357	1.016 ± 0.734
photometric centroid source offset	1.16 ± 0.95	1.22	1.15 ± 0.95	-0.11 ± 0.77

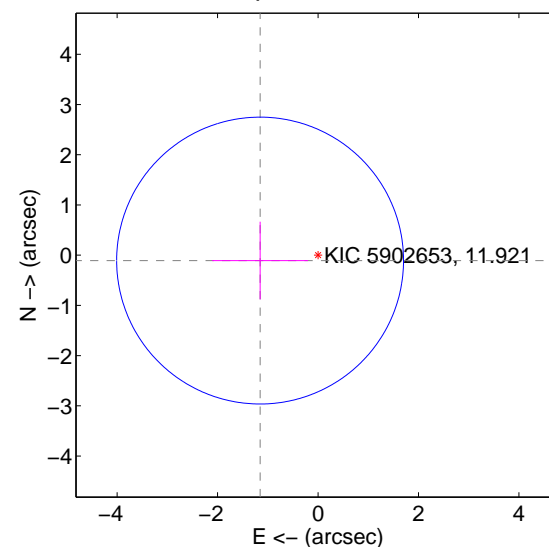
offset from difference PRF-fit to OOT PRF-fit



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.

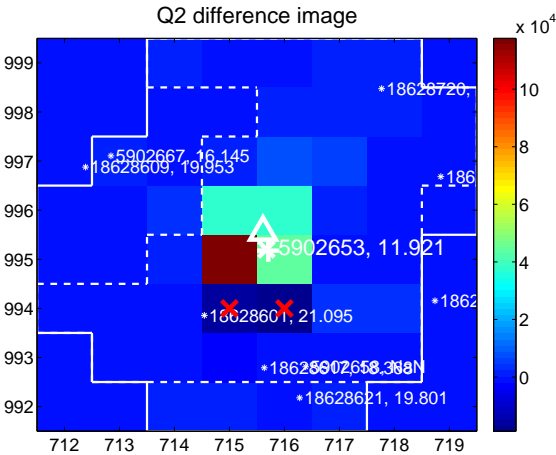
Q1 no difference image



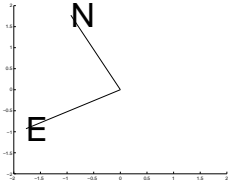
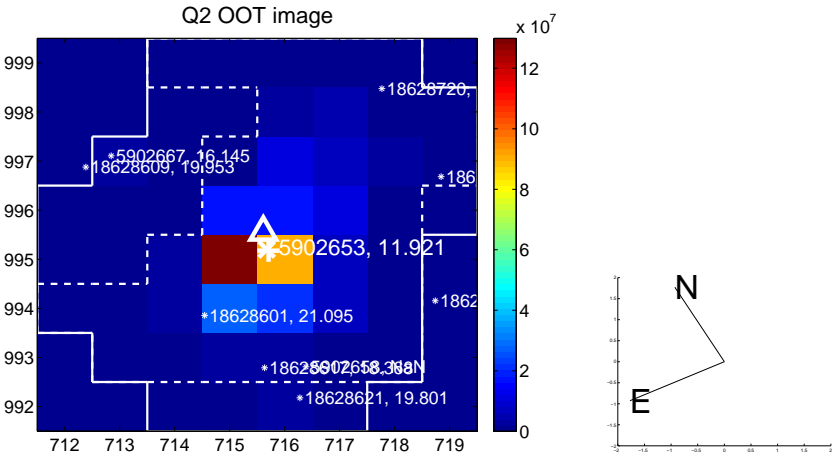
Q1 no OOT image



Q2 difference image



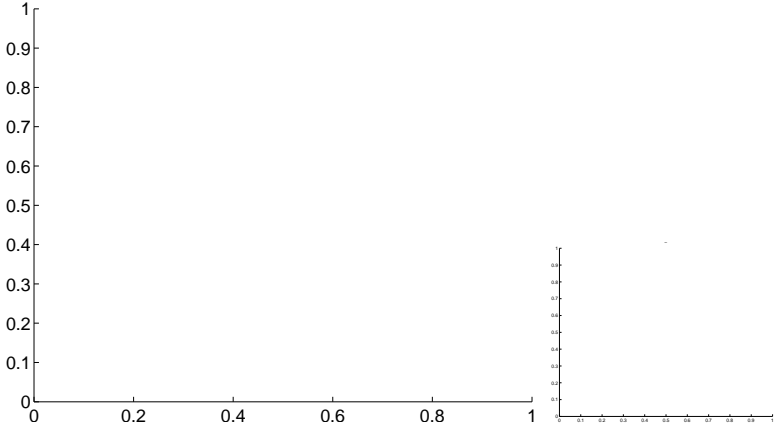
Q2 OOT image



Q3 no difference image



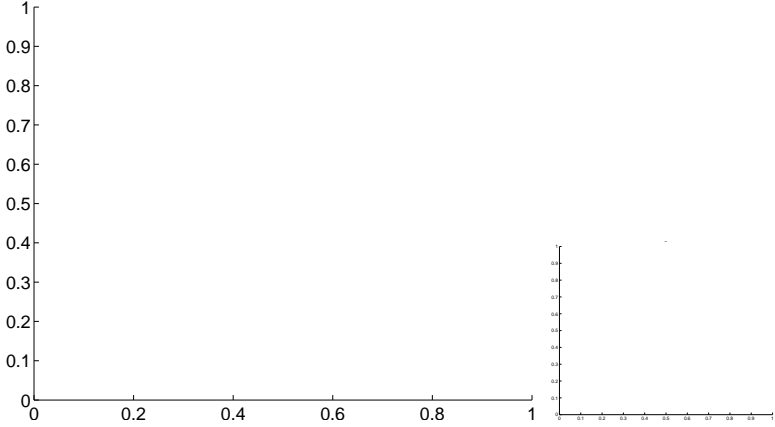
Q3 no OOT image



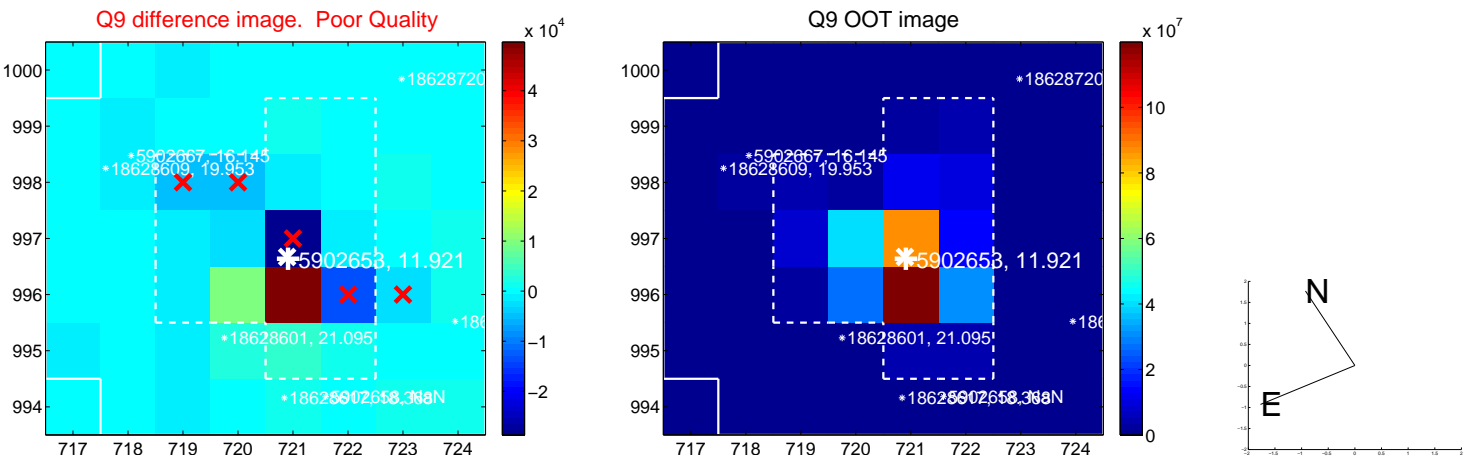
Q4 no difference image



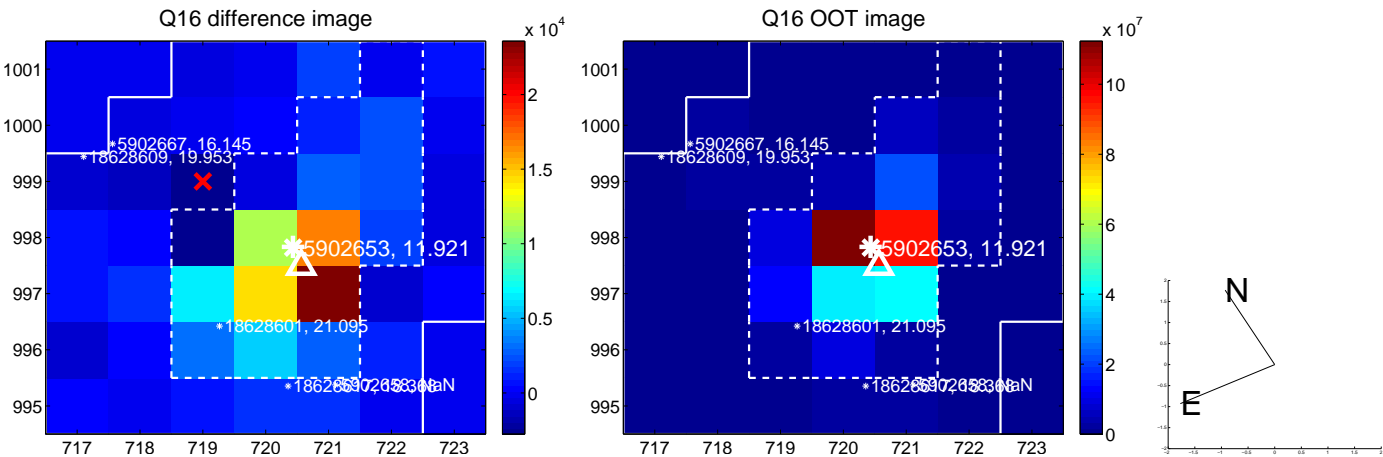
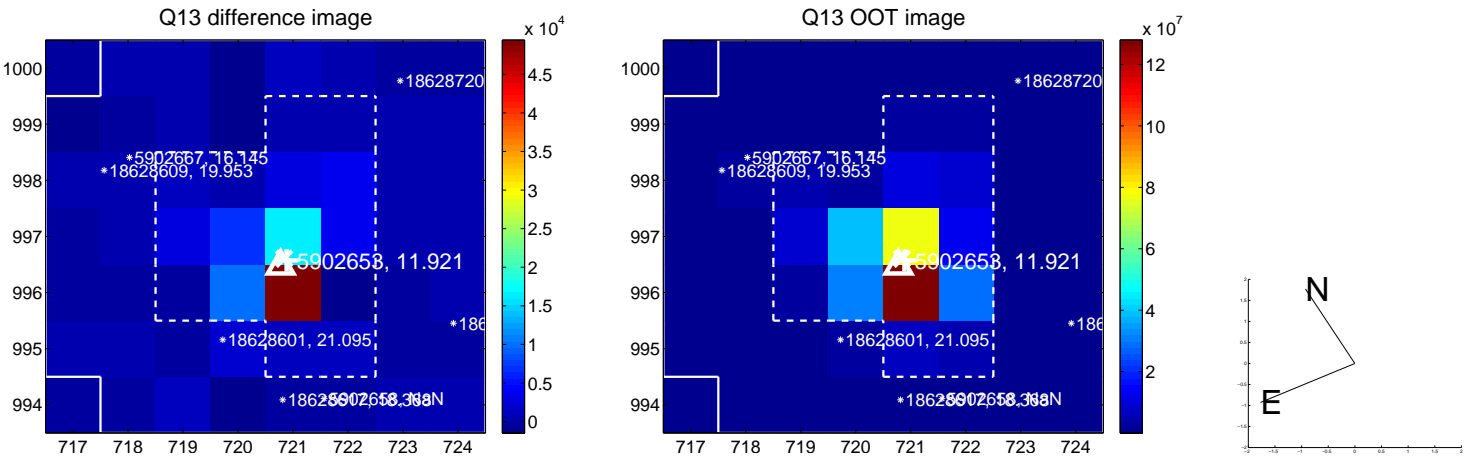
Q4 no OOT image



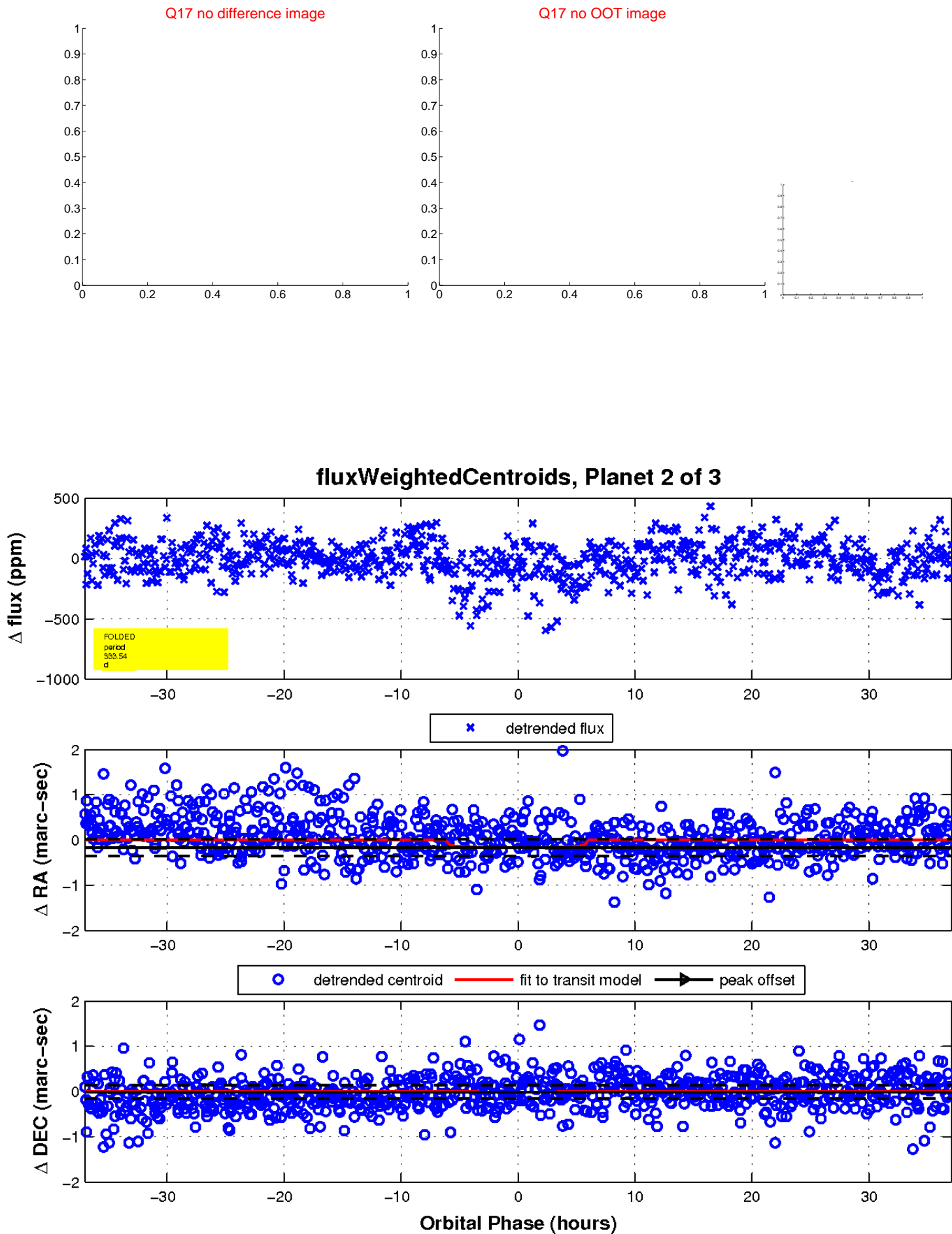
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



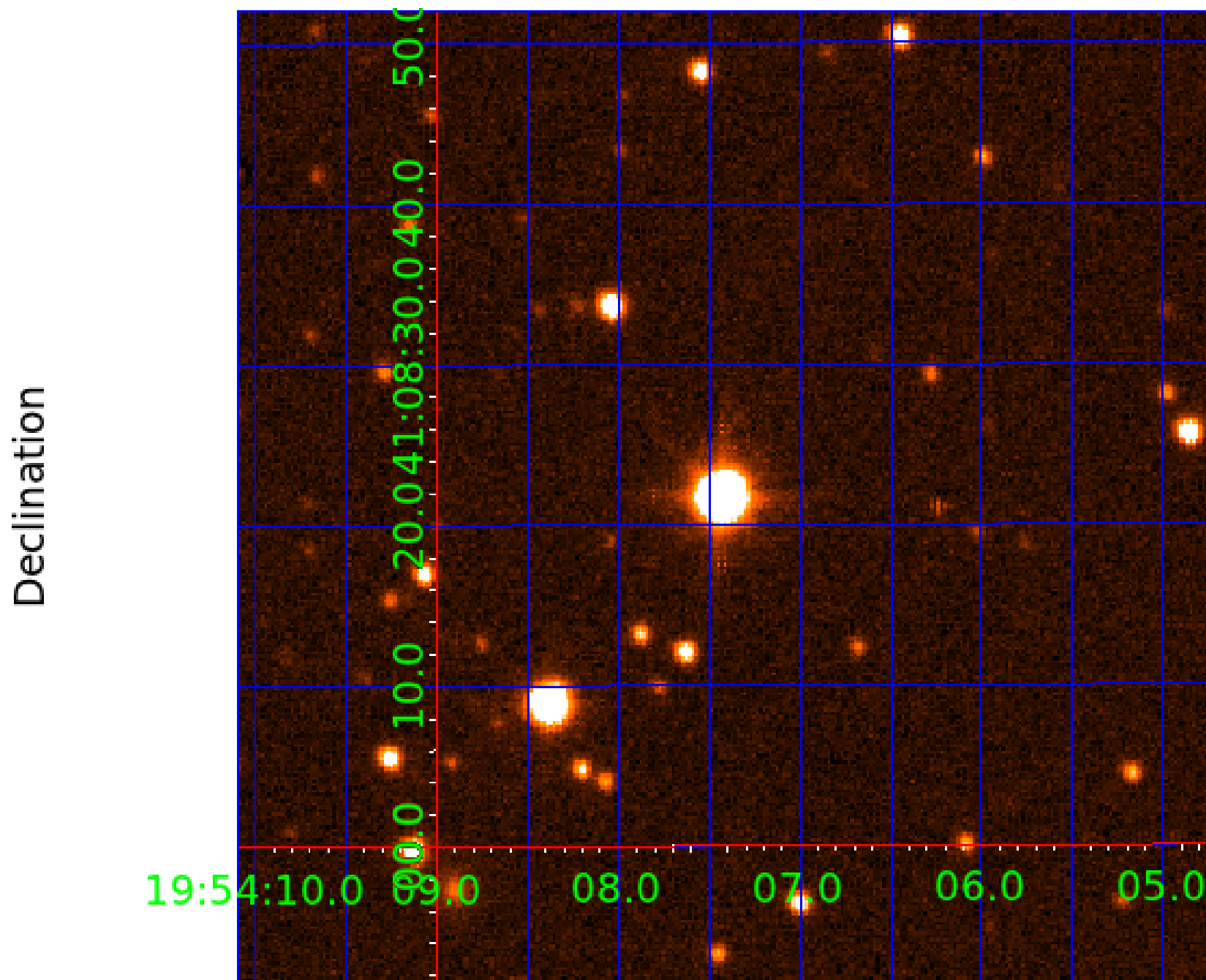
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image



KIC 005902653

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})
005902653-01	OBS	No	0.677551	132.038672	0.0	1.841	10.3	0.0	4.08	6749	0.09	81714.36
005902653-02	OBS	No	333.541619	188.647965	195.7	12.360	7.3	7.3	4.08	6749	6.27	21.02
005902653-03	OBS	No	1.353280	132.289834	3.5	11.188	8.8	1.8	4.08	6749	0.82	32486.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005902653-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005902653-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—HALO_GHOST
005902653-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

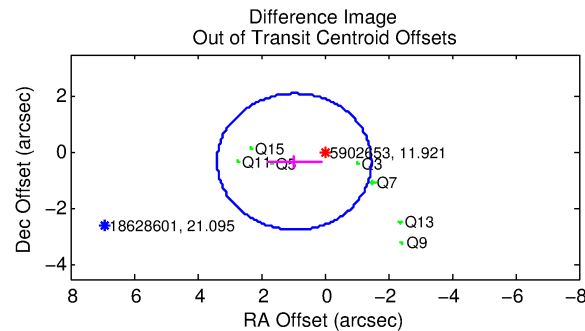
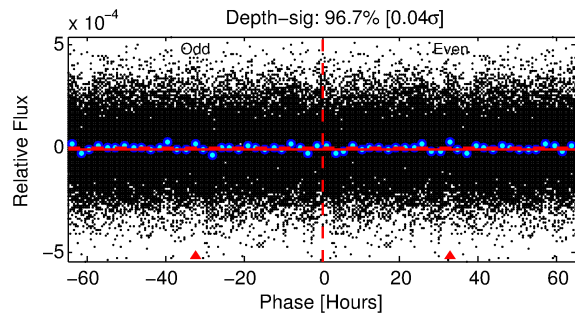
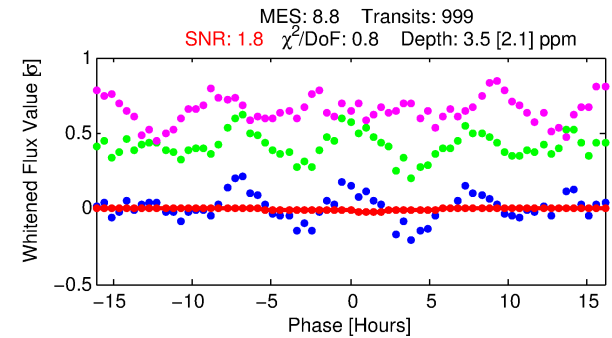
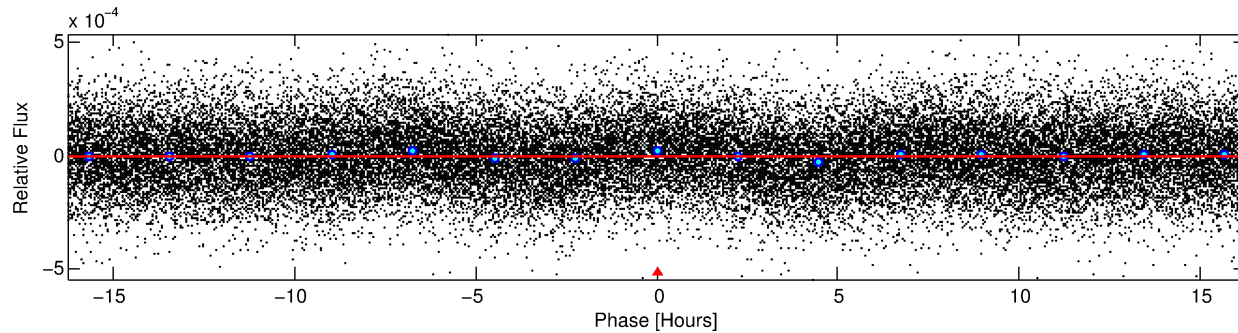
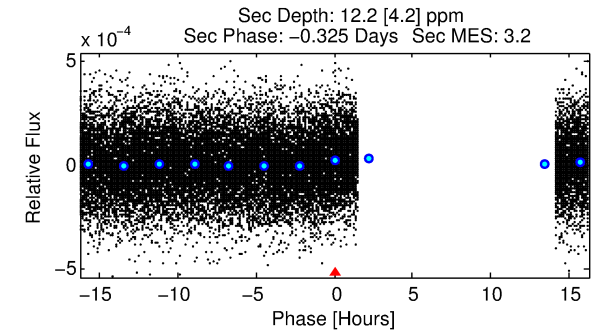
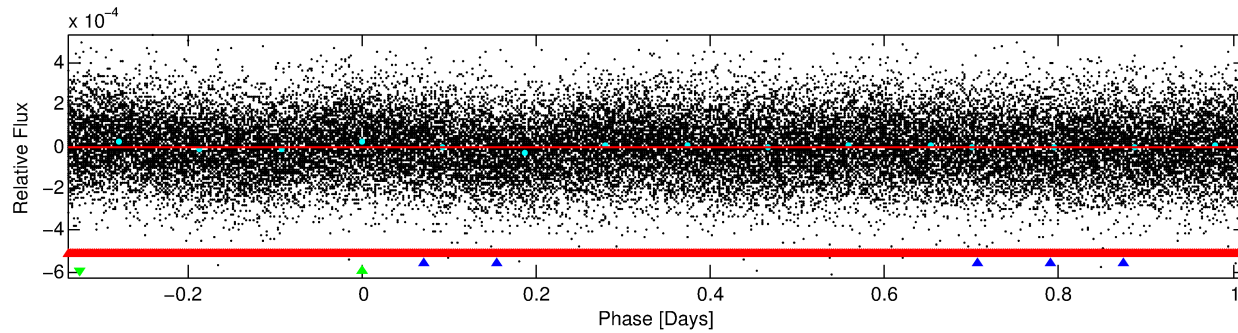
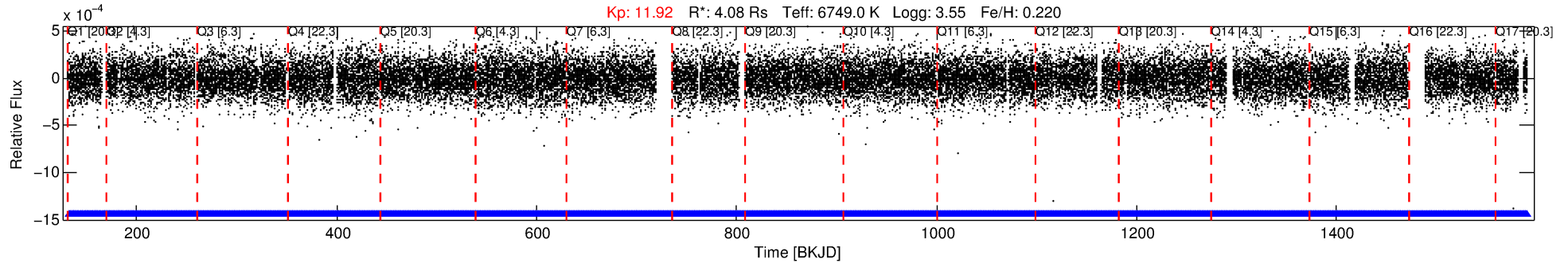
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005902653-03

No Significant Match Found

DV One-Page Summary

KIC: 5902653 Candidate: 3 of 3 Period: 1.353 d



DV Fit Results:

Period = 1.35328 [0.00013] d
Epoch = 132.2898 [0.0350] BKJD
Rp/R* = 0.0018 [0.0055]
a/R* = 1.07 [2.40]
b = 0.70 [12.74]
Seff = 32486.60 [16432.92]
Teq = 3423 [433] K
Rp = 0.82 [2.47] Re
a = 0.0309 [0.0097] AU
Ag = 9.63 [58.18] [0.15σ]
Teffp = 9323 [14043] K [0.42σ]

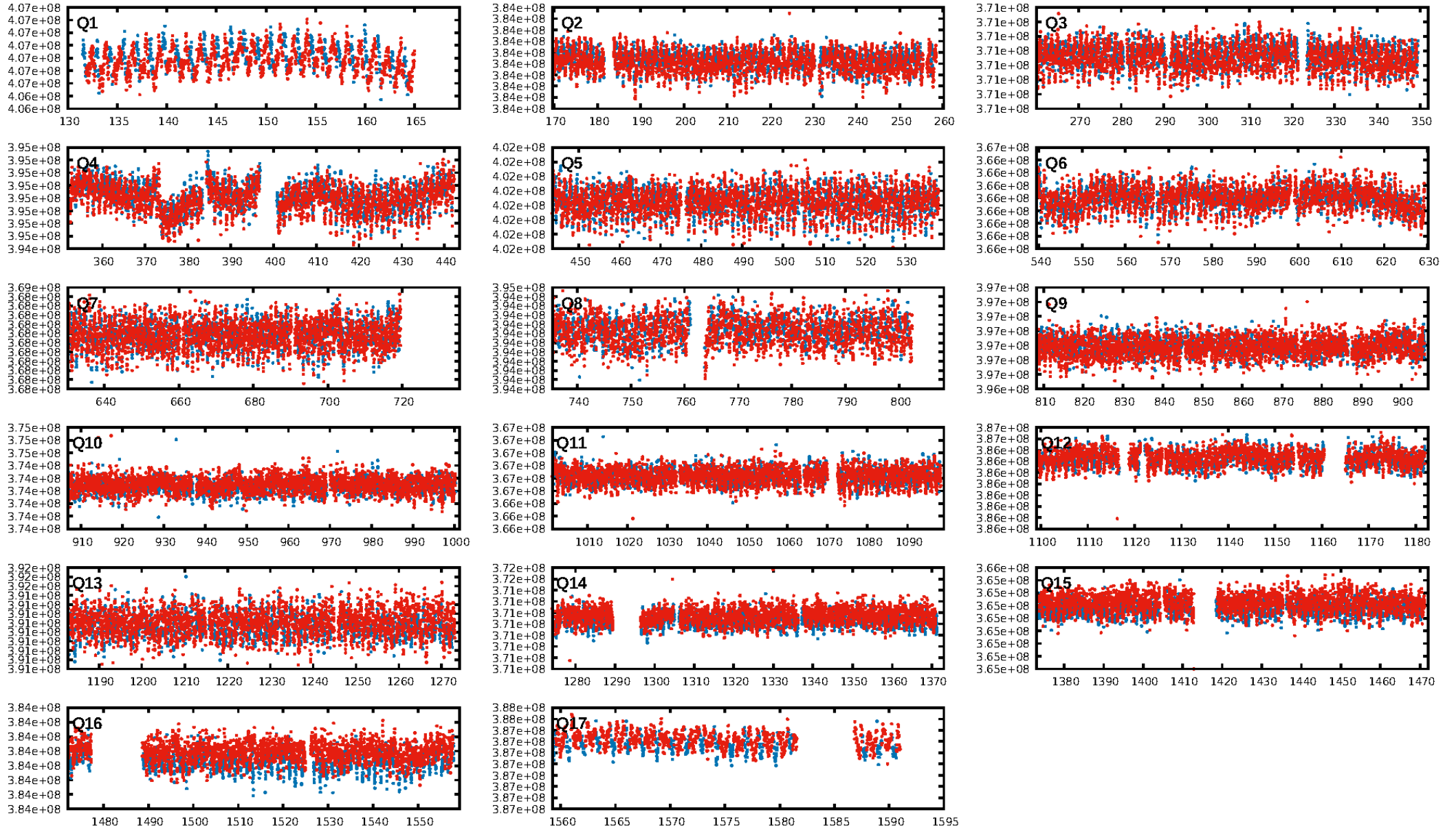
DV Diagnostic Results:

ShortPeriod-sig: 84.7% [1.43σ]
LongPeriod-sig: 100.0% [478.21σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [953/953]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.006 arcsec [1.24σ]
KicOffset-rm: 1.024 arcsec [1.25σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 0.00 [0/17]

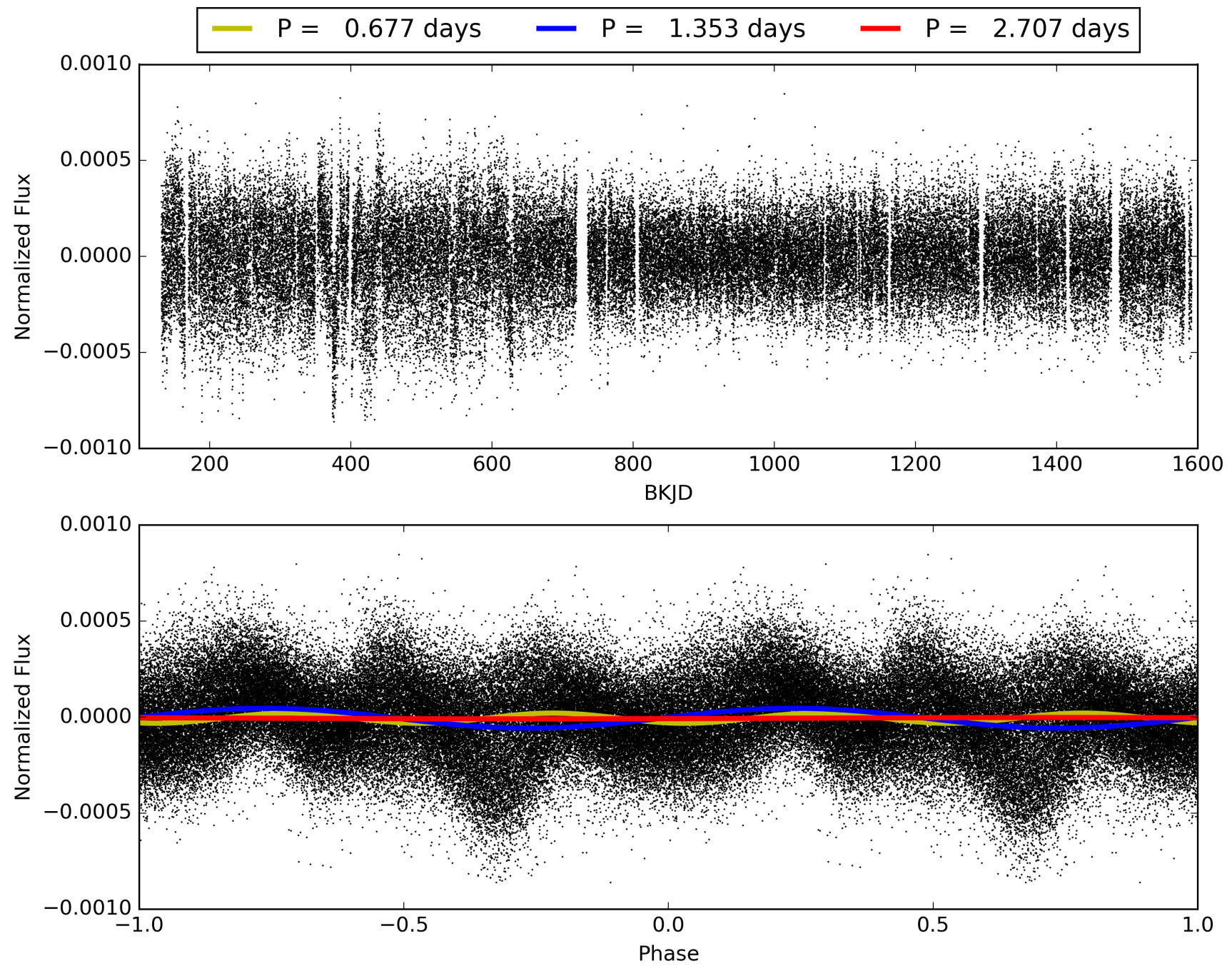
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:00:20 Z

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

TCE 005902653-03, PDC Light Curves

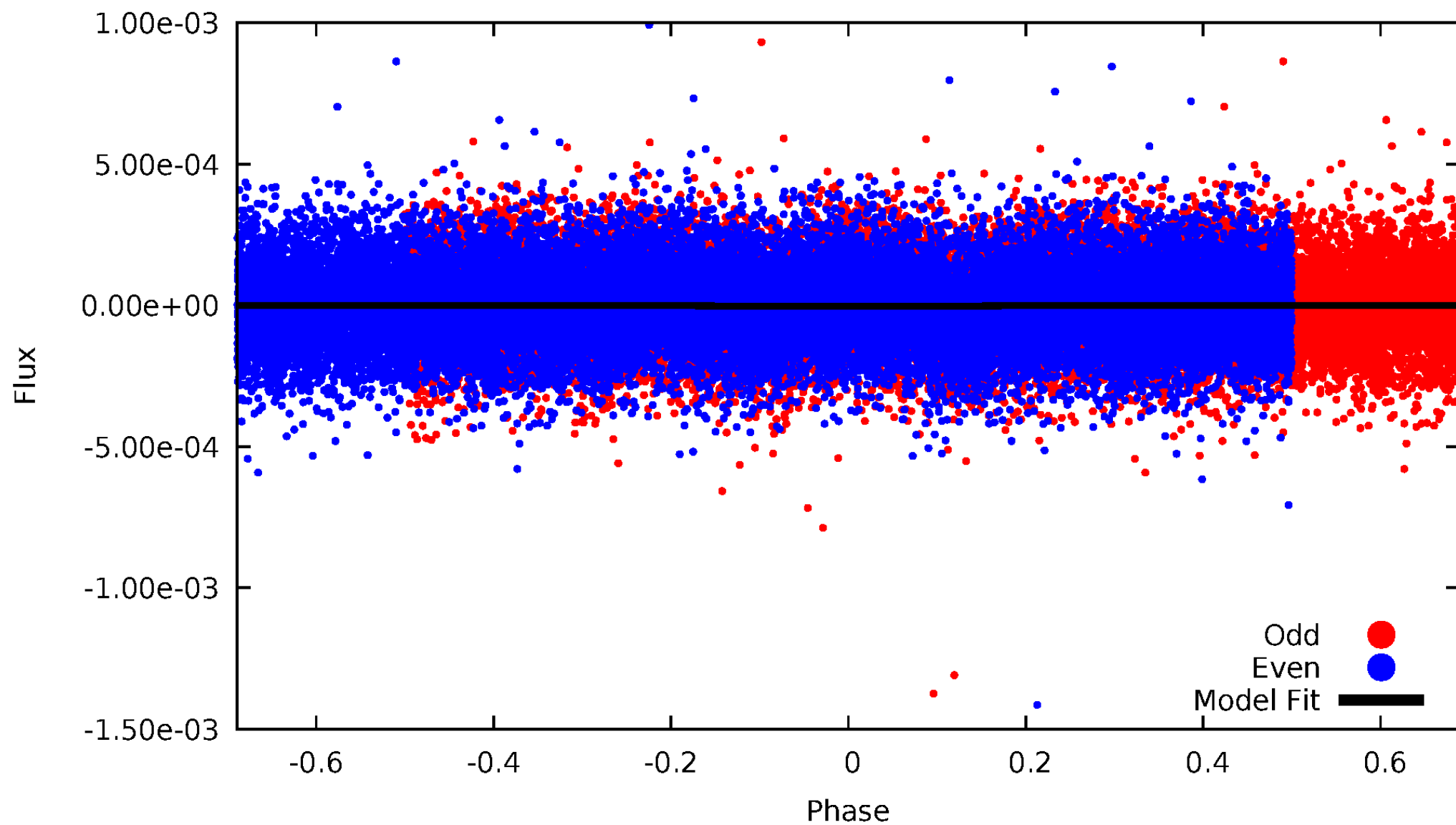


TCE 005902653-03



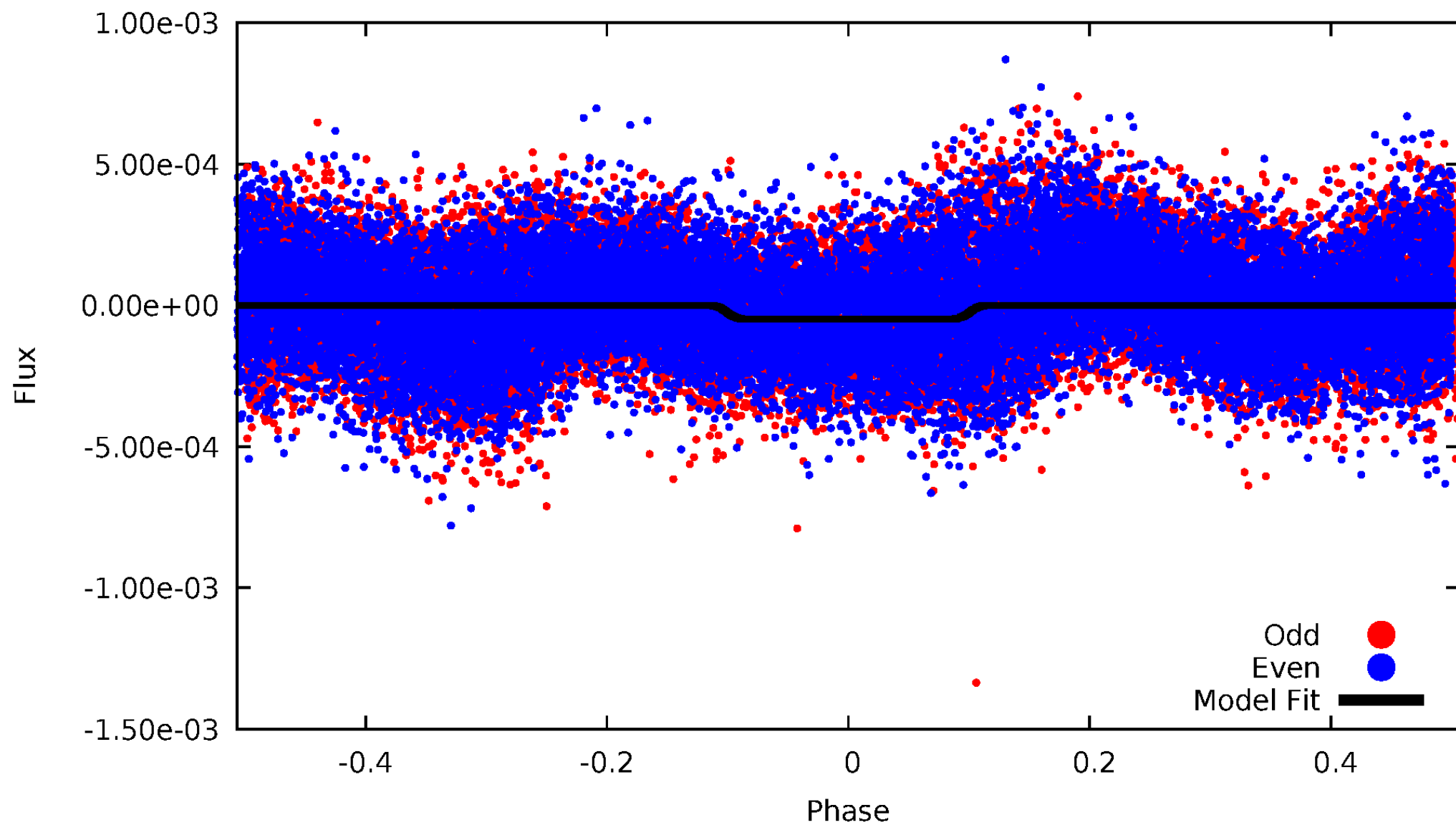
DV Odd/Even

TCE 005902653-03



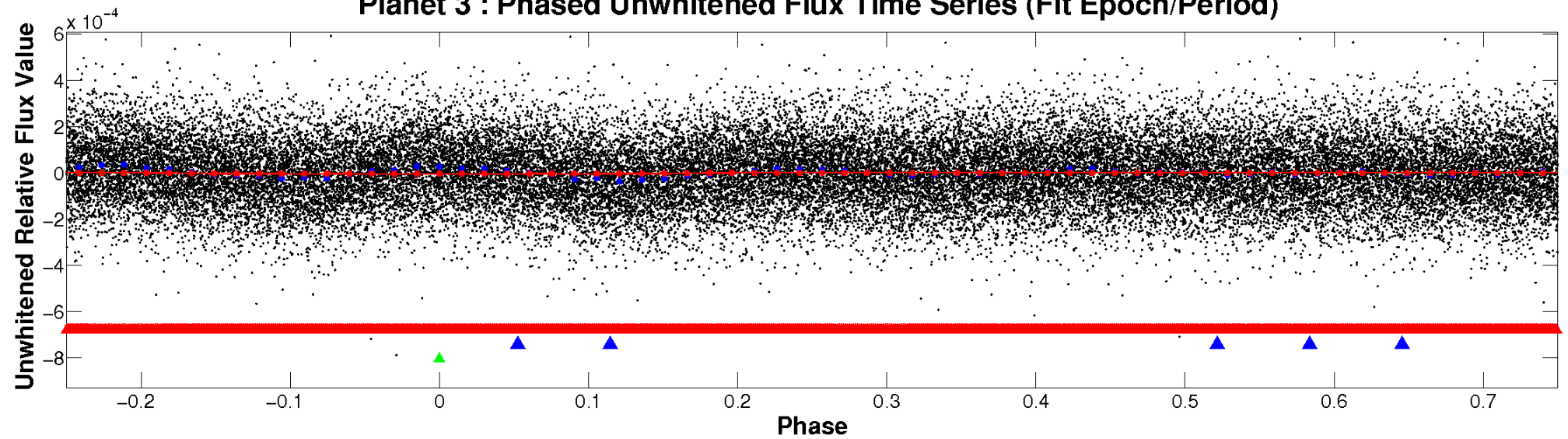
ALT Odd/Even

TCE 005902653-03

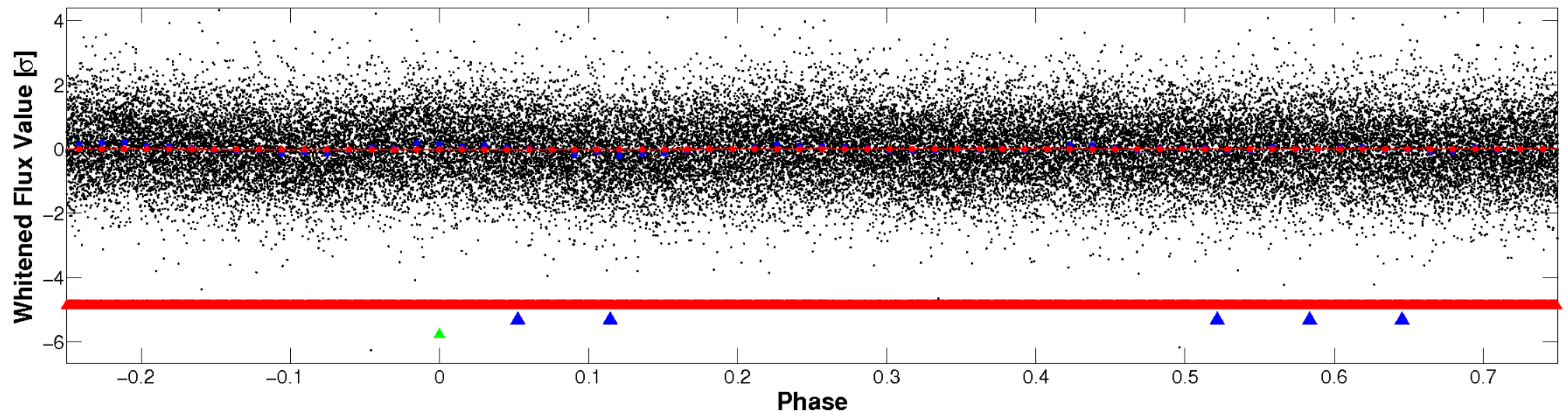


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

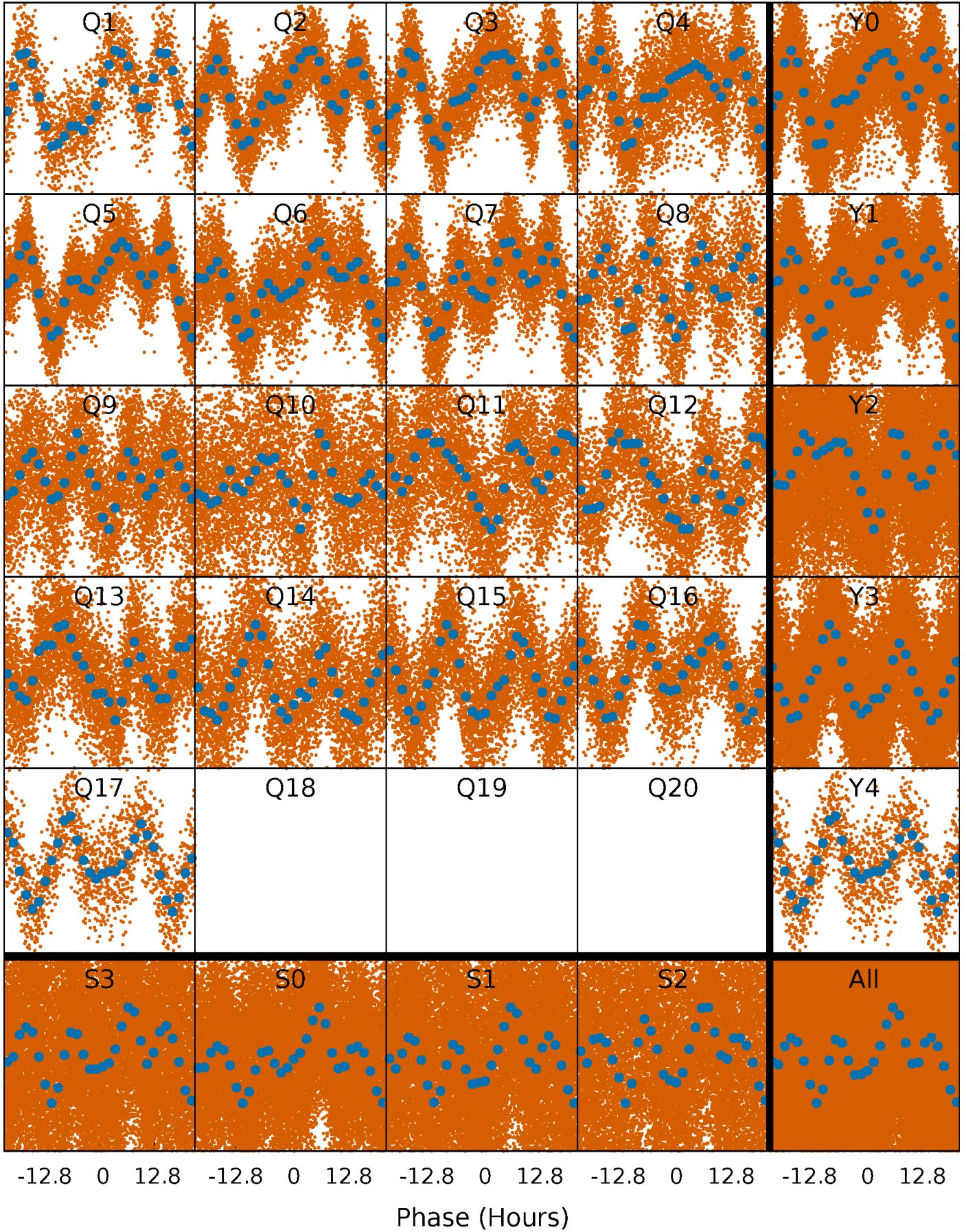


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



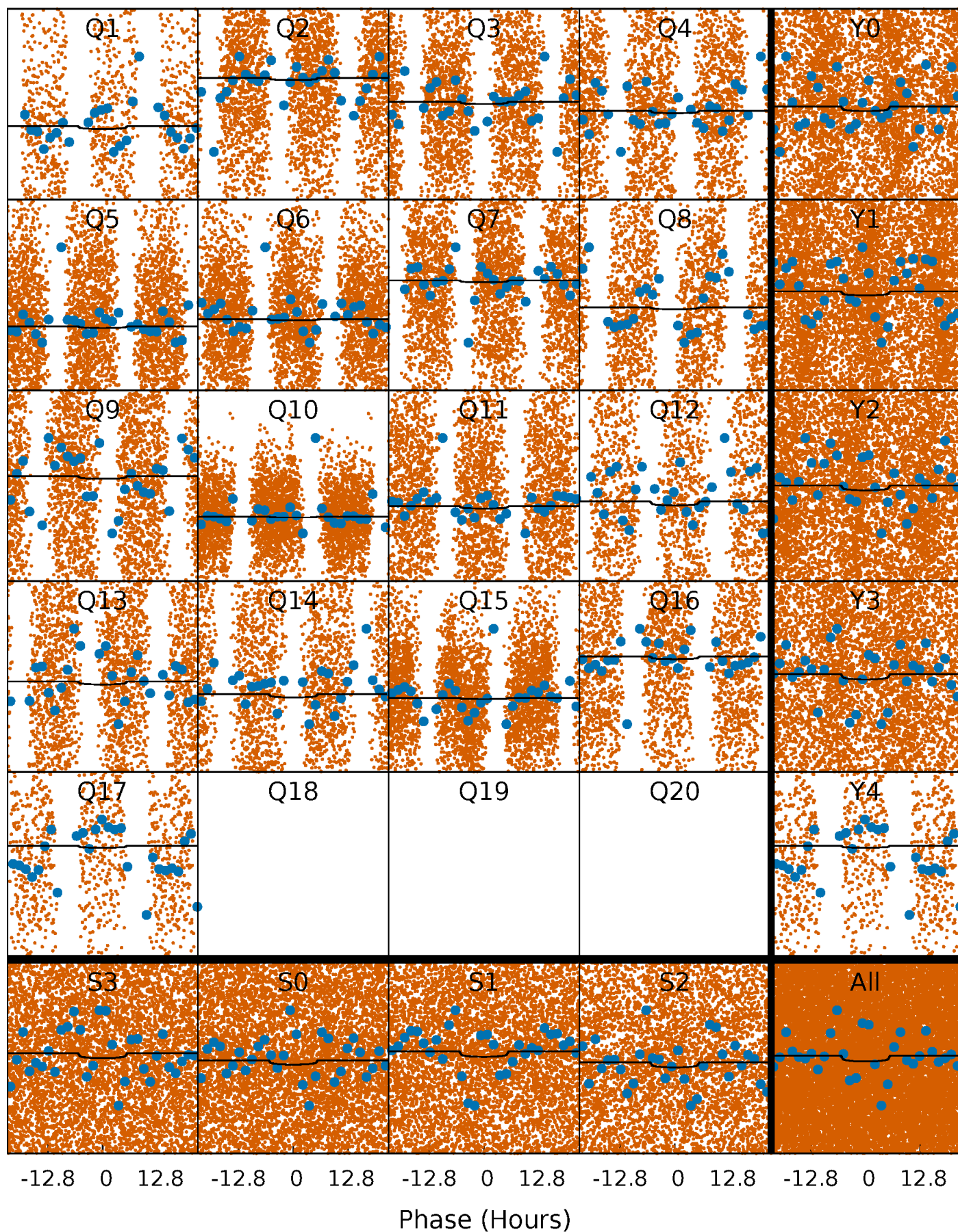
PDC Quarter-Phased Transit Curves

TCE 005902653-03 P= 1.353280 Days $T_0=132.289835$ (BKJD)



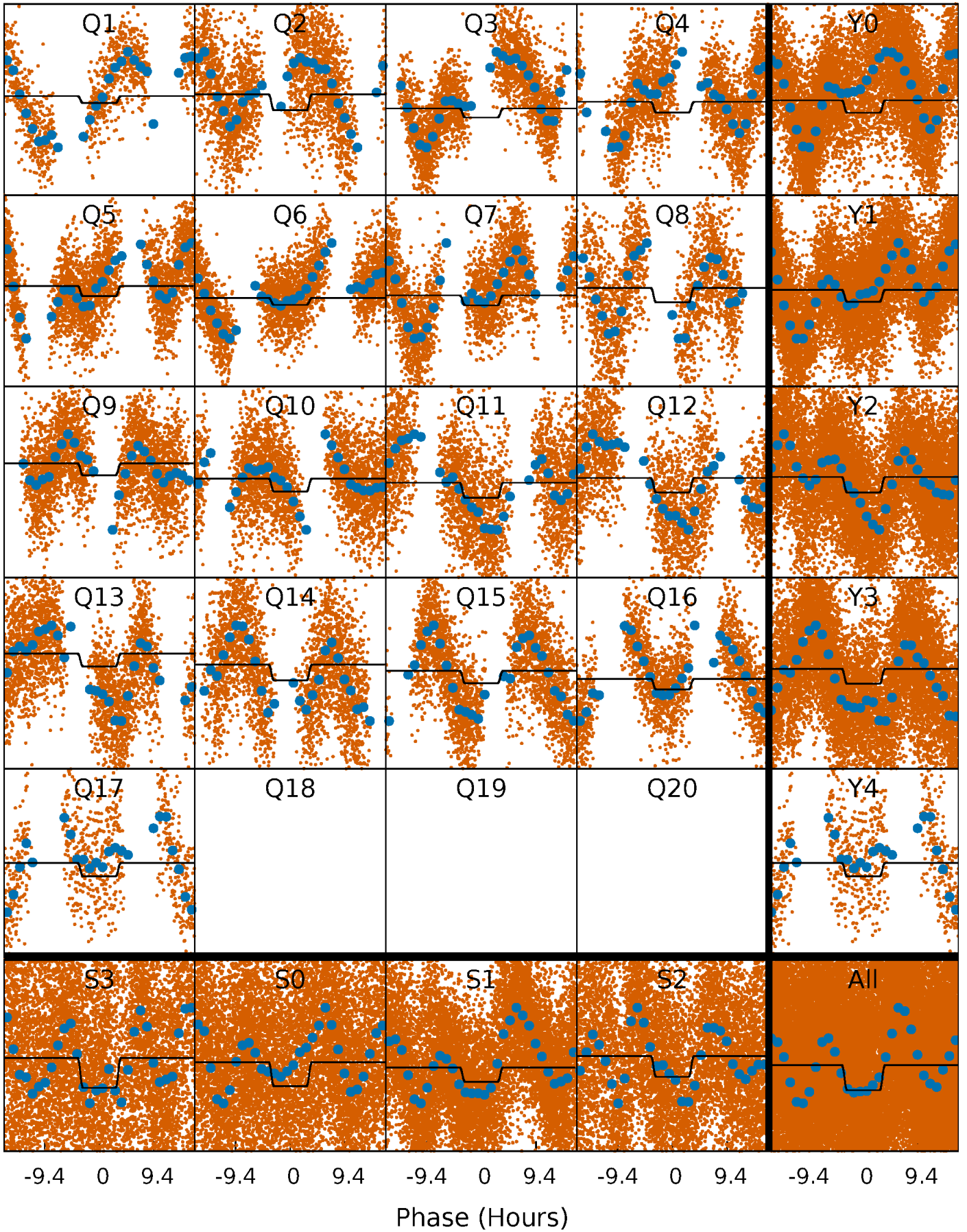
DV Quarter-Phased Transit Curves

TCE 005902653-03 $P = 1.353280$ Days $T_0 = 132.289835$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

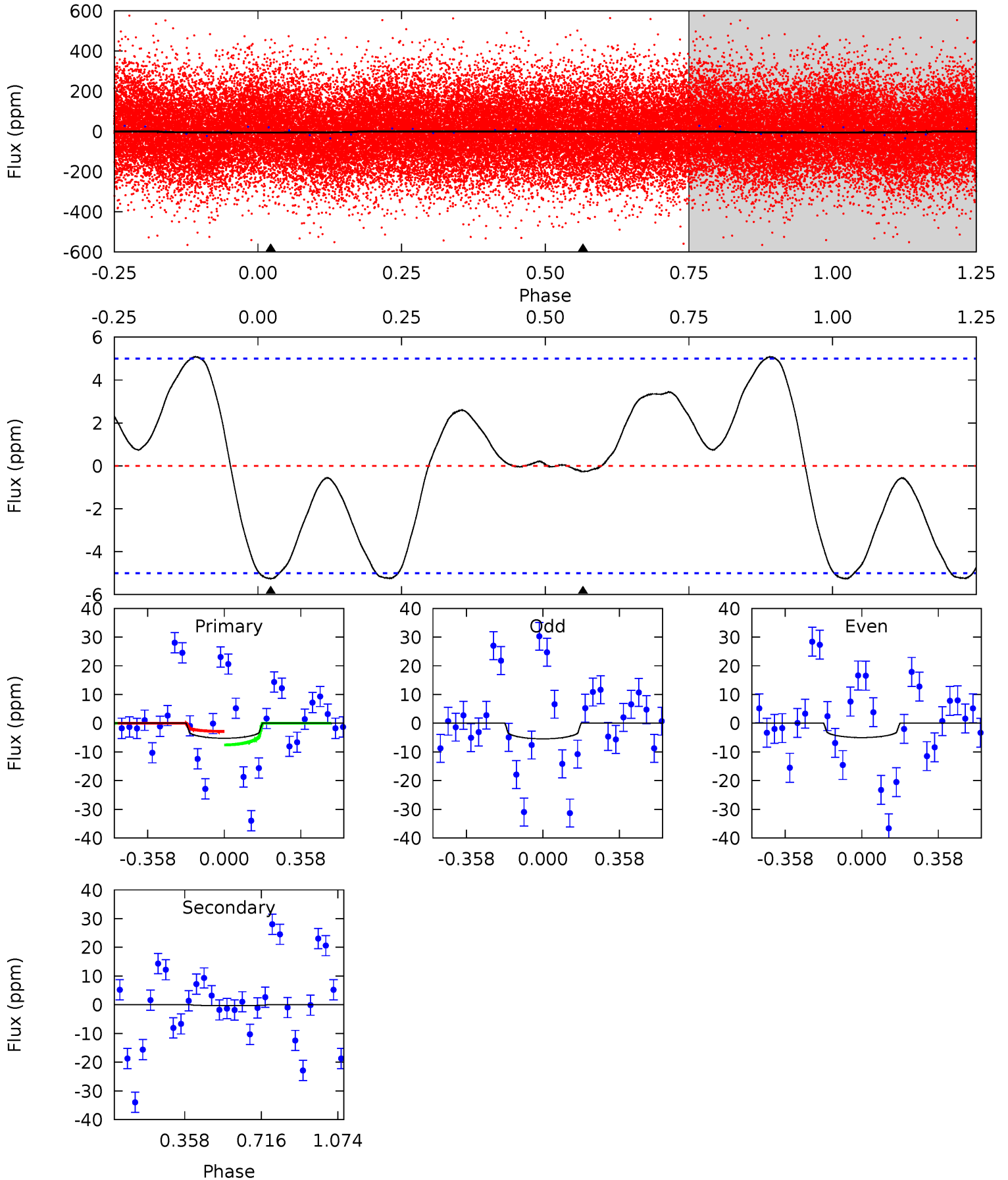
TCE 005902653-03 P= 1.353341 Days $T_0=132.263627$ (BKJD)



DV Model-Shift Uniqueness Test

005902653-03, P = 1.353280 Days, E = 130.936555 Days

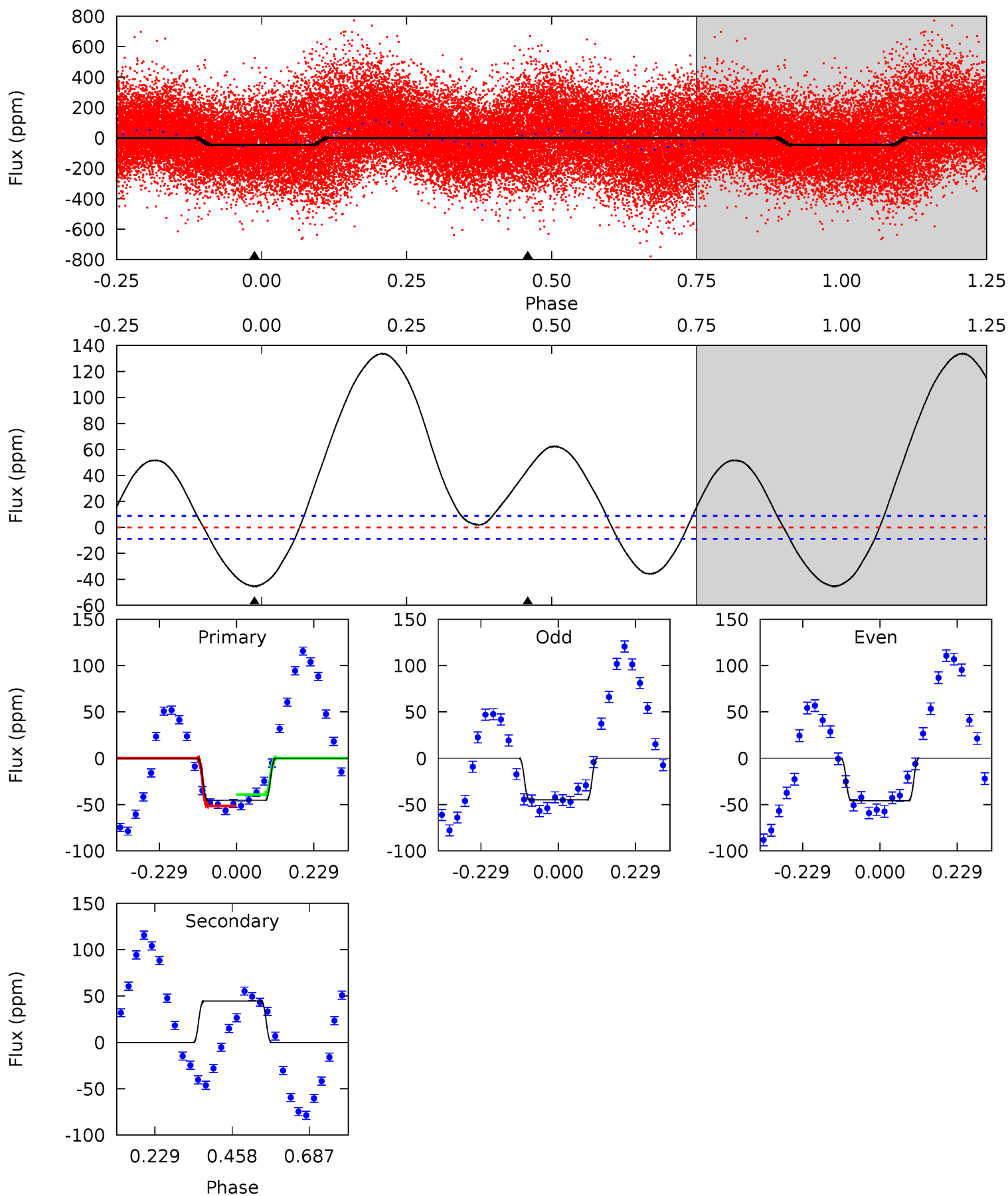
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.50	0.23	0	0	4.29	0.92	1.93	4.50	4.50	0.23	0.23	0.19	1.00	0.49	1.99



Alt Model-Shift Uniqueness Test

005902653-03, P = 1.353341 Days, E = 130.910286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	-22.1	0	0	4.39	1.20	28.7	22.6	22.6	-22.1	-22.1	0.22	0.88	0.75	3.70



Stellar Parameters For KIC 005902653

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6749^{+160}_{-220}	$3.547^{+0.281}_{-0.033}$	$0.220^{+0.200}_{-0.250}$	$4.079^{+0.165}_{-1.406}$	$2.139^{+0.046}_{-0.414}$	$0.044^{+0.085}_{-0.005}$
	+2%/-3%	+8%/-1%	+91%/-114%	+4%/-34%	+2%/-19%	+191%/-11%
Source	PHO1	FLK73	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 005902653-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0 ± 1	$1.80^{+1.76}_{-1.20}$	4662^{+218}_{-382}	-4034^{+7201}_{-437}	$0.016^{+0.353}_{-0.236}$
Alt.	44 ± 2	$3.15^{+2.11}_{-1.91}$	4665^{+202}_{-393}	-6384^{+1117}_{-4596}	$-2.294^{+1.471}_{-12.460}$

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

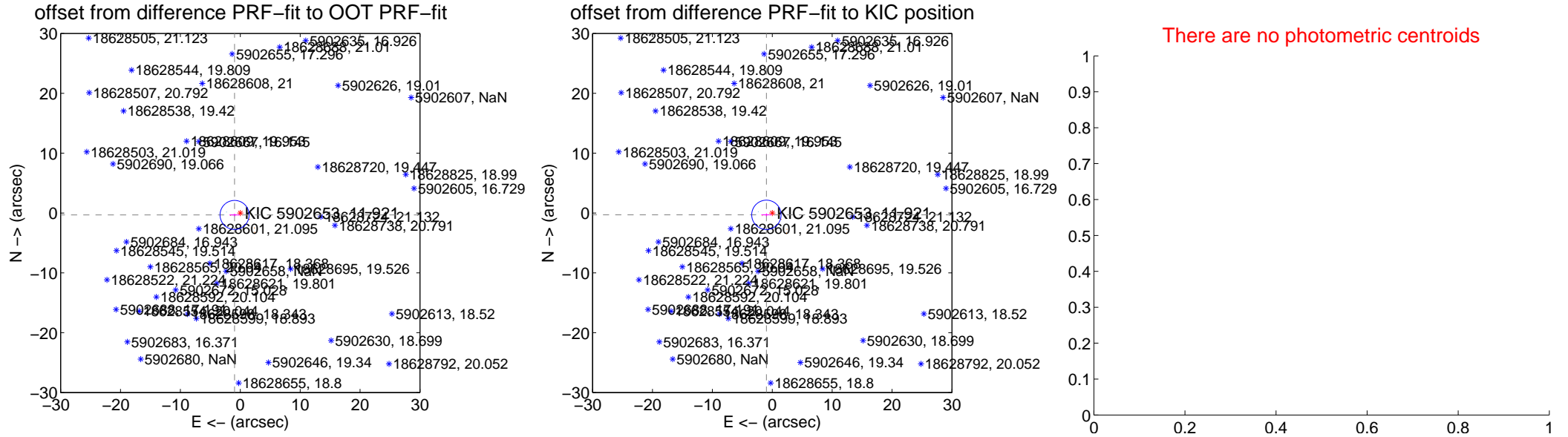
DV Centroid Data

Supplemental centroid analysis for 005902653-03. **Kepler magnitude: 11.92**. Transit SNR 1.76

There are 2 quarters with good PRF difference image offsets

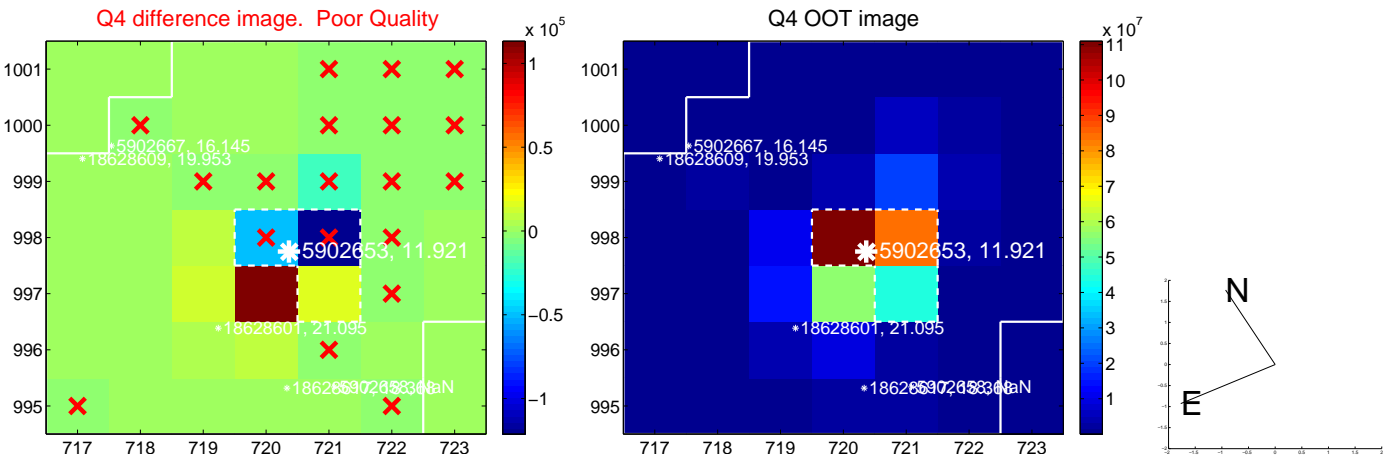
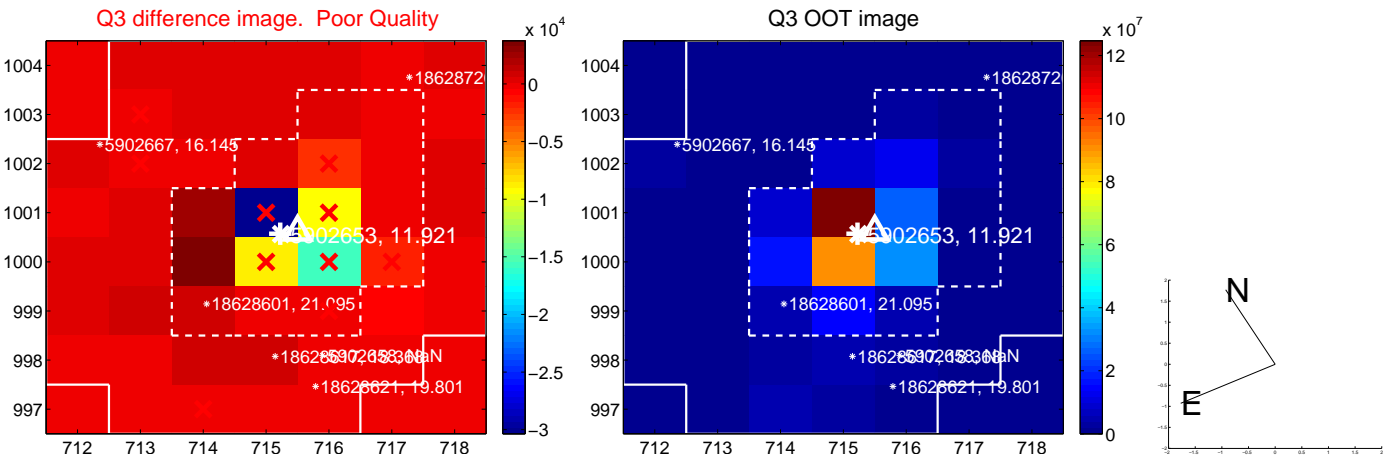
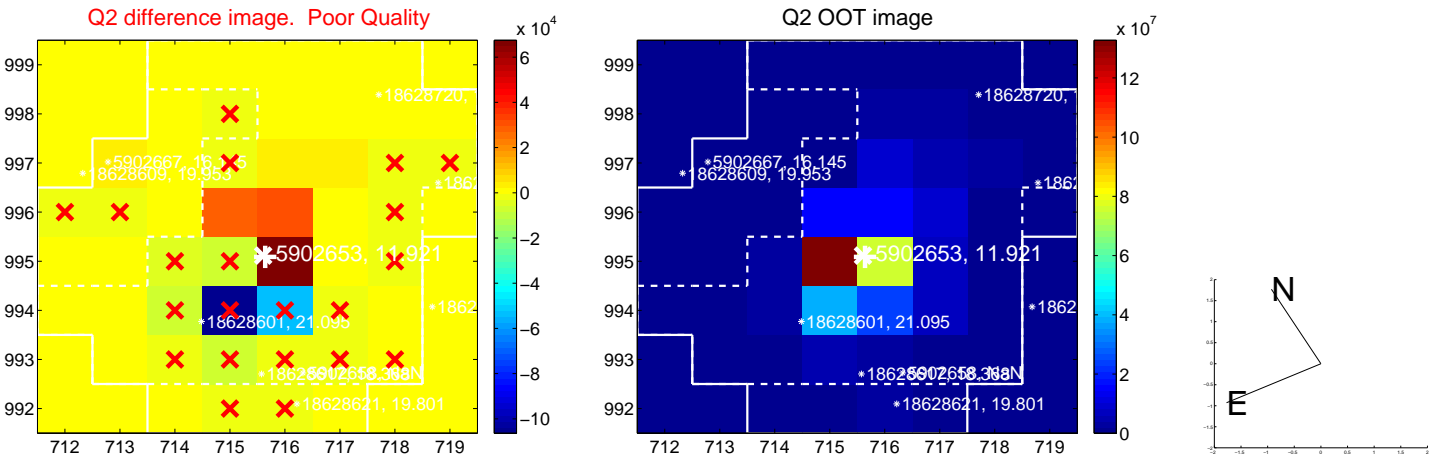
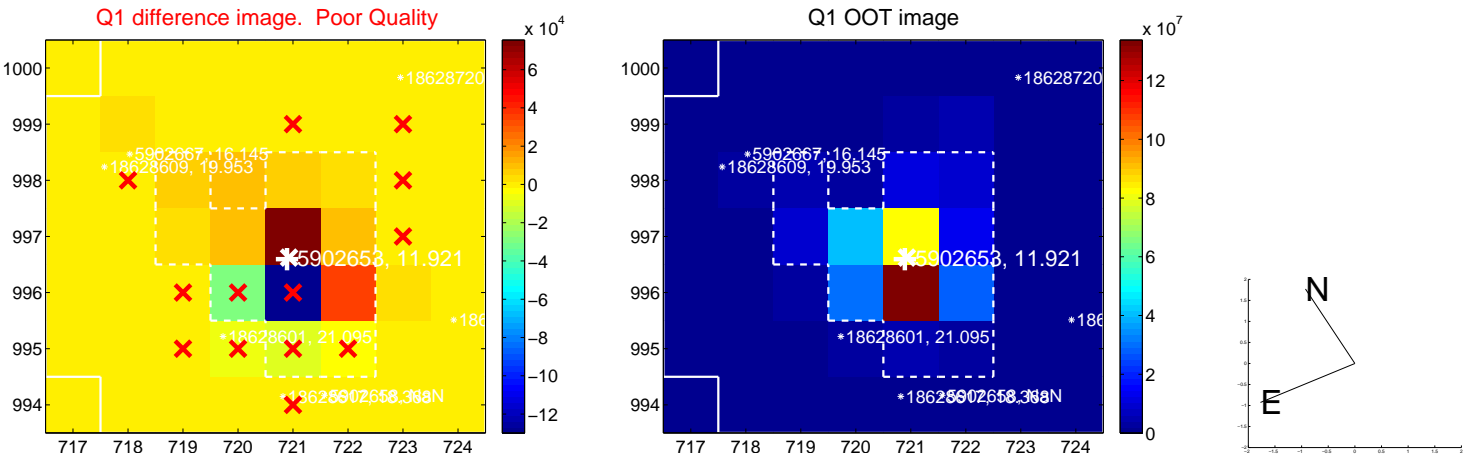
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.006 ± 0.809	1.24	0.953 ± 0.851	-0.324 ± 0.223
PRF-fit source offset from KIC position	1.024 ± 0.817	1.25	0.978 ± 0.853	-0.304 ± 0.239
photometric centroid source offset	—	—	—	—

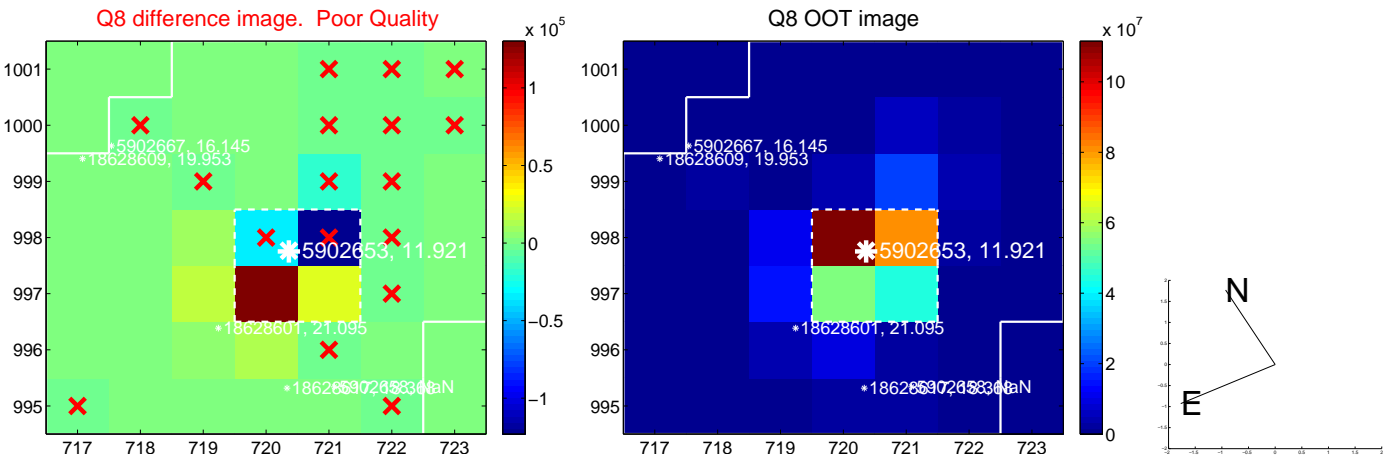
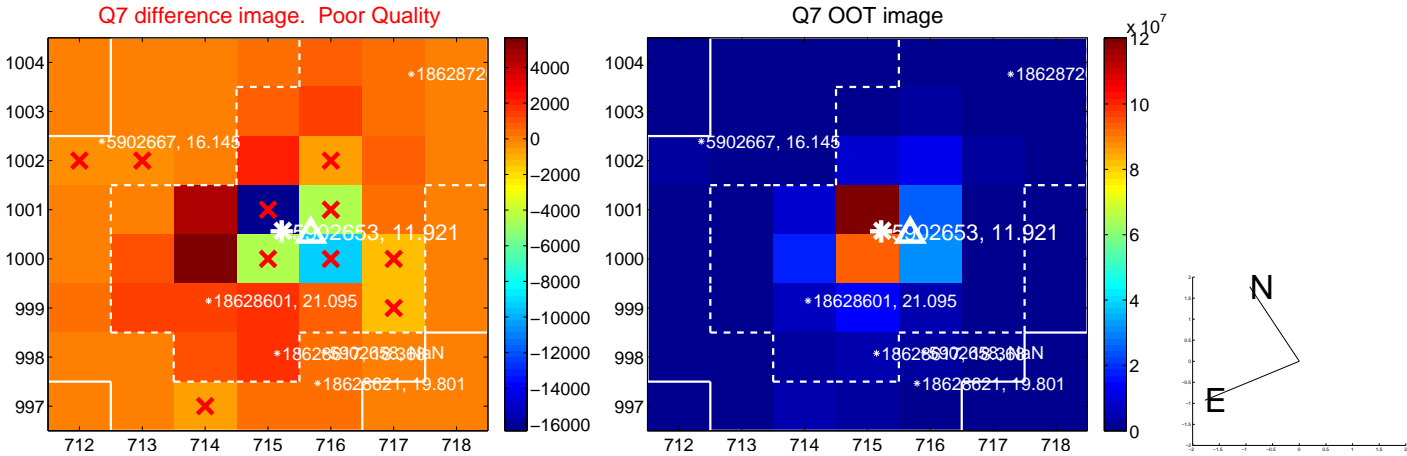
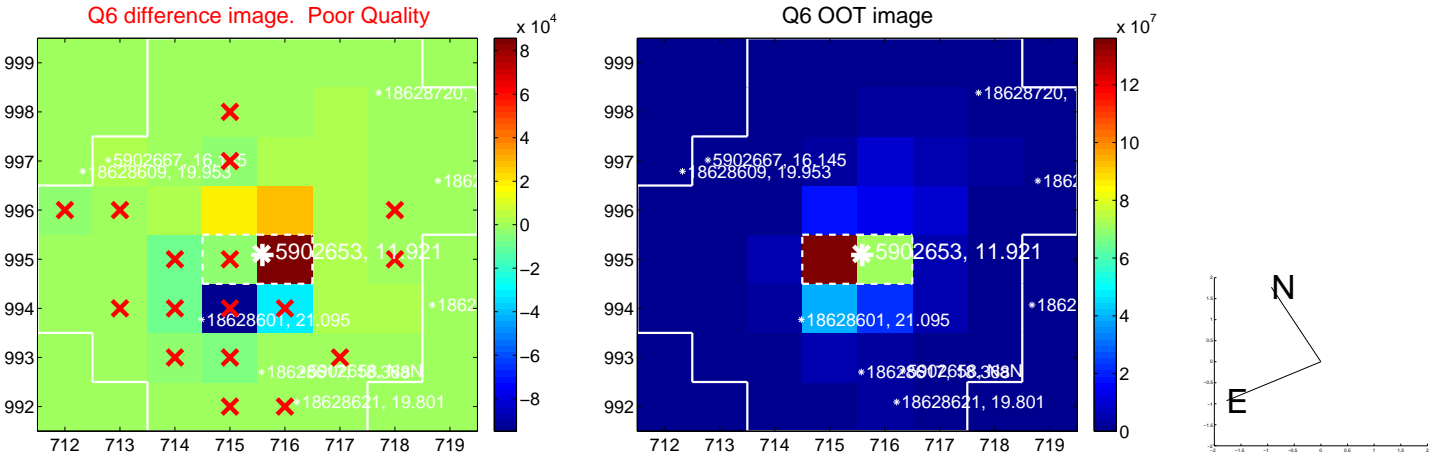
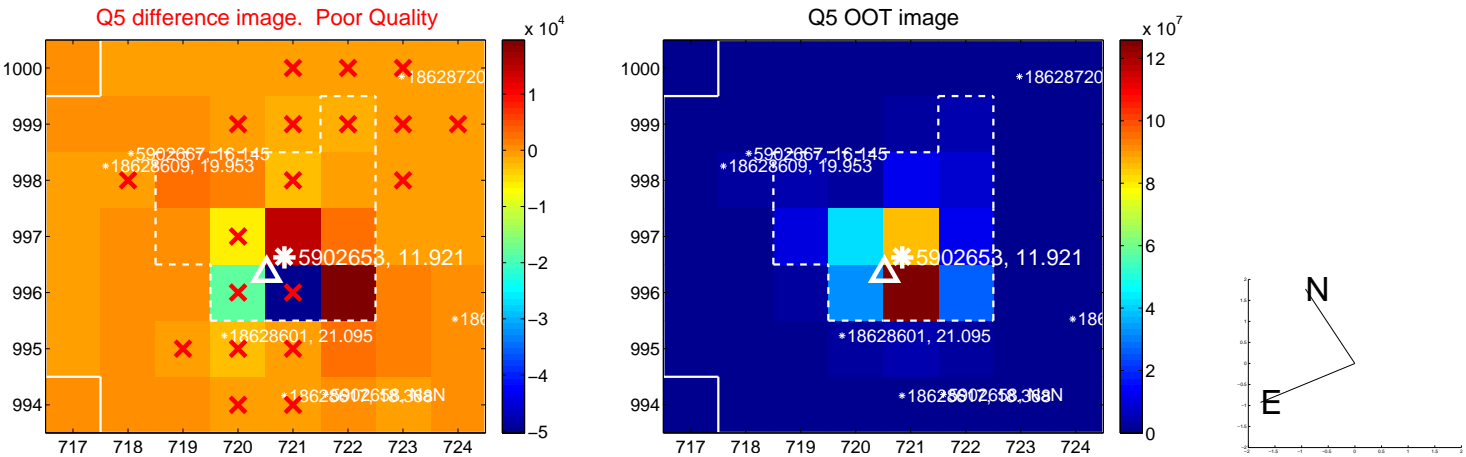


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

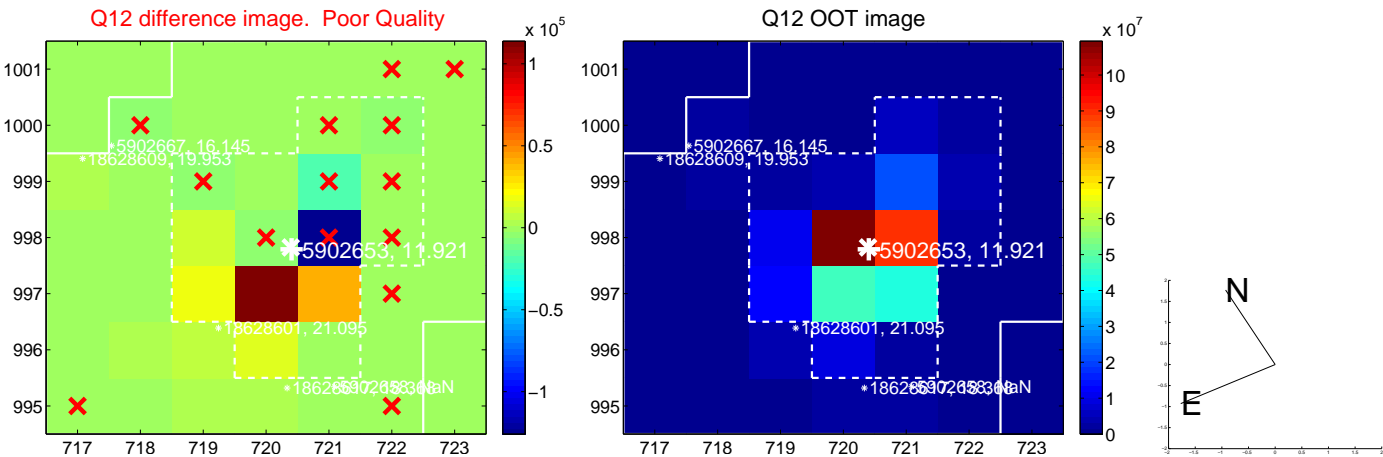
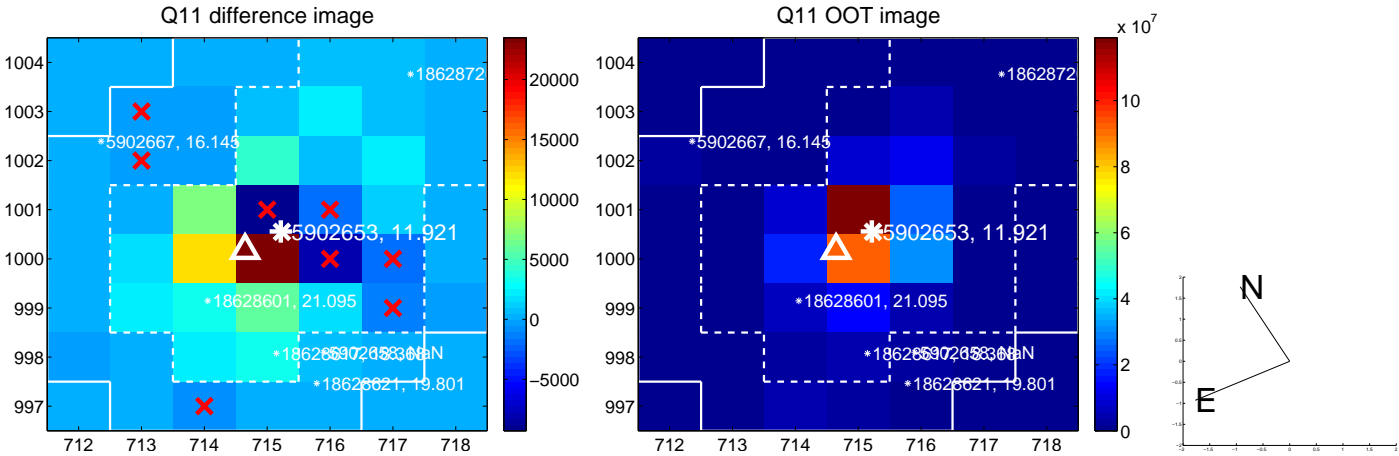
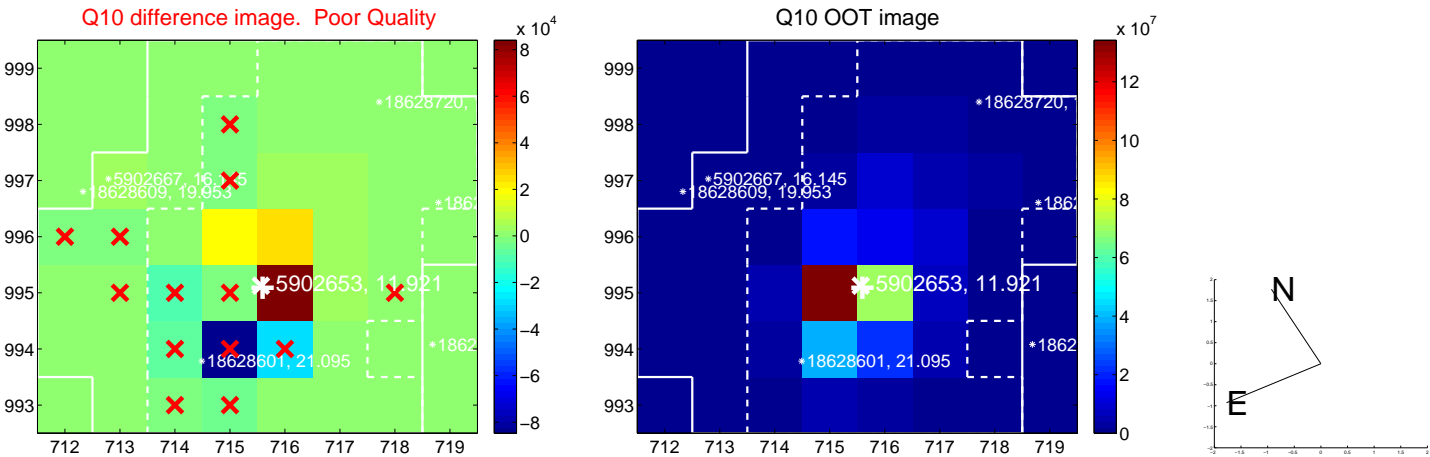
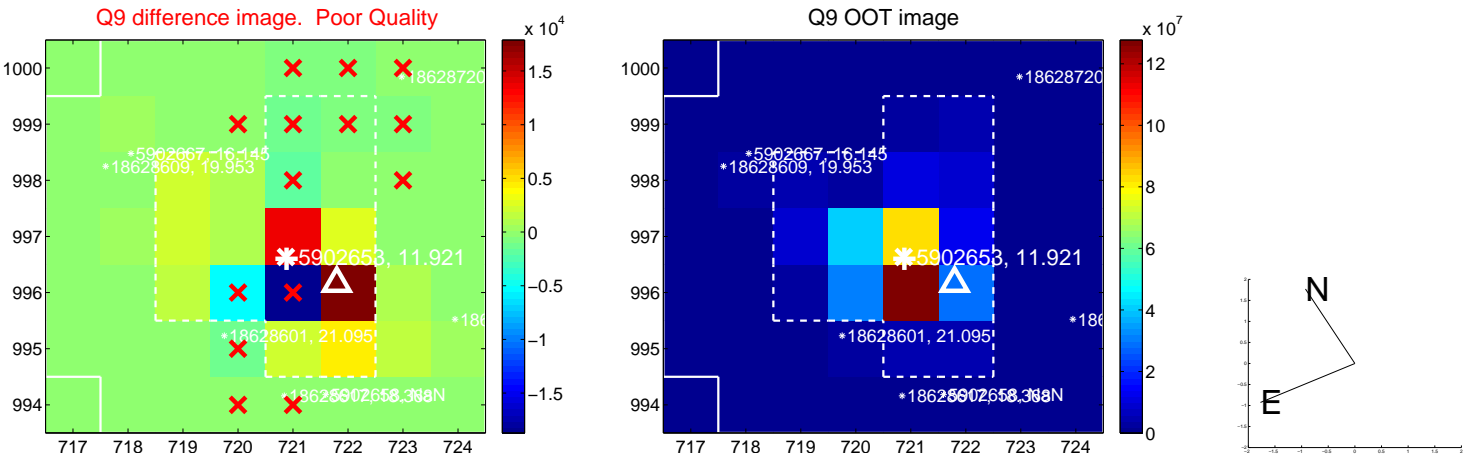
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



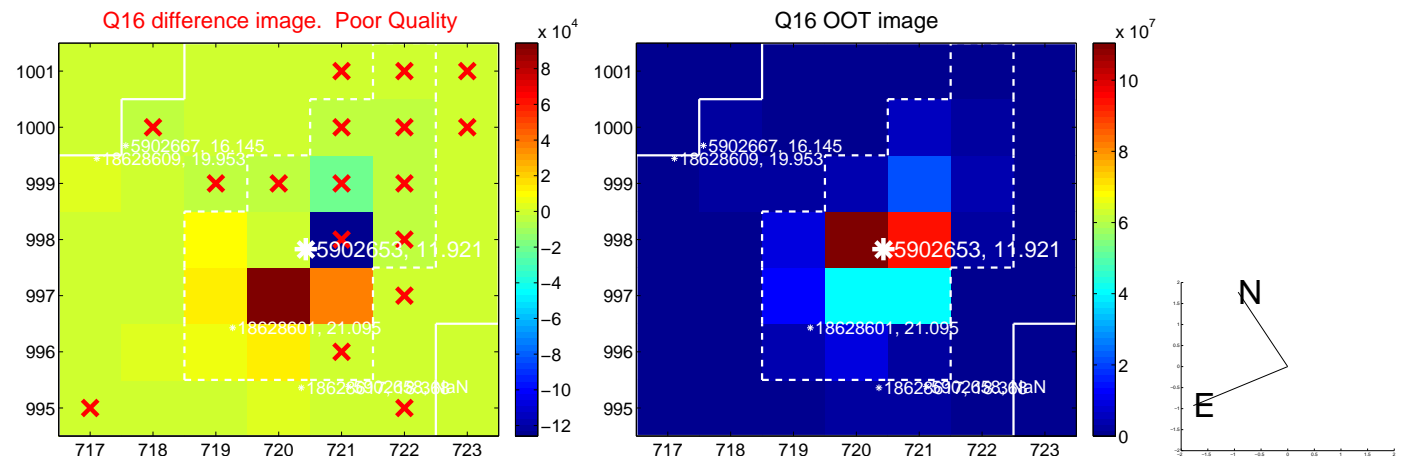
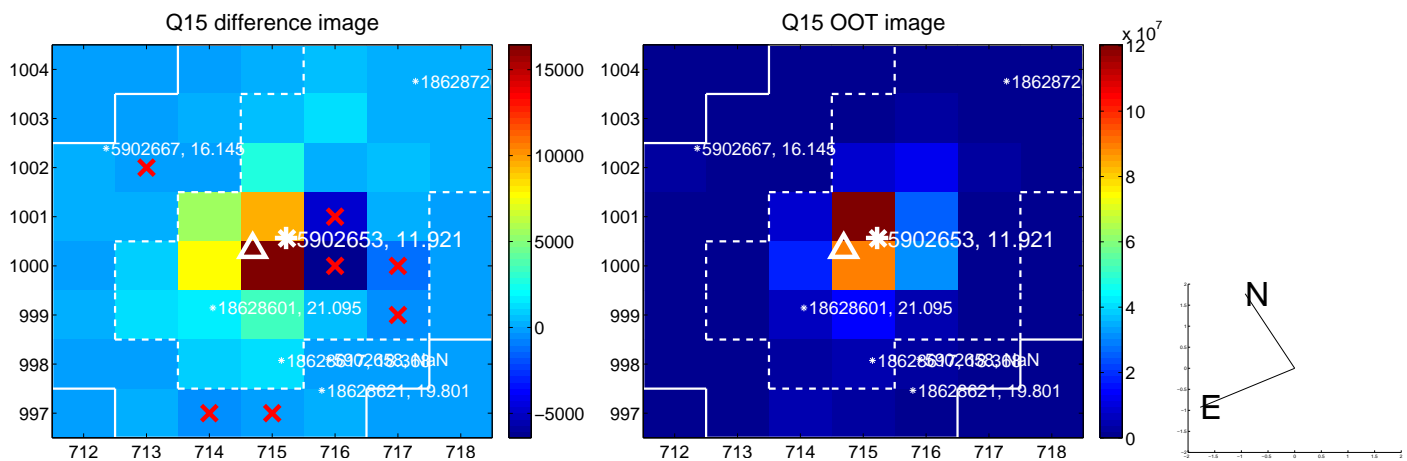
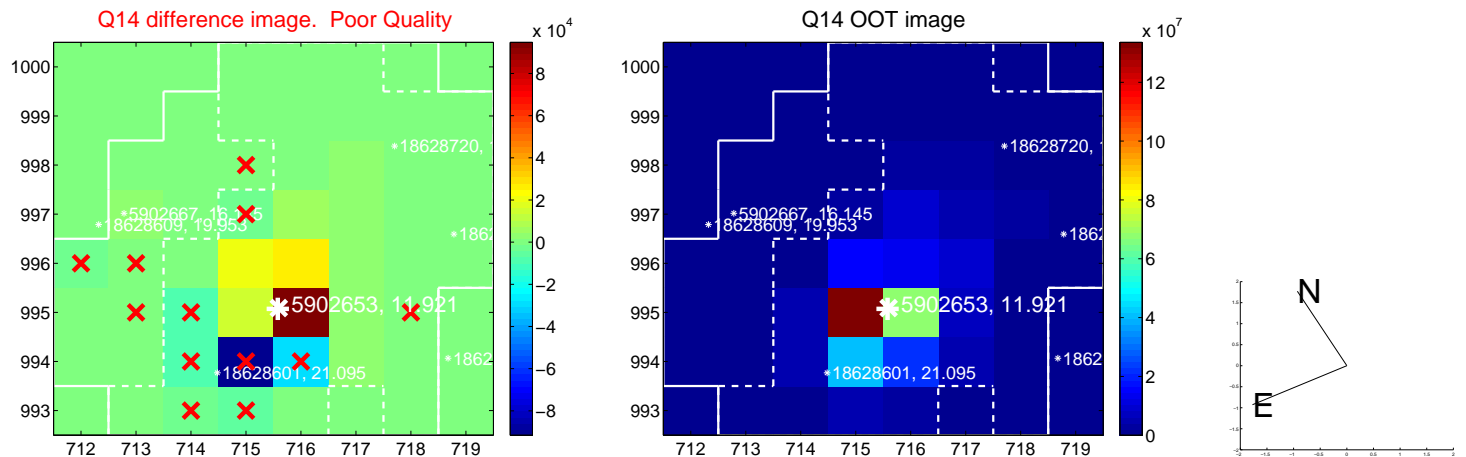
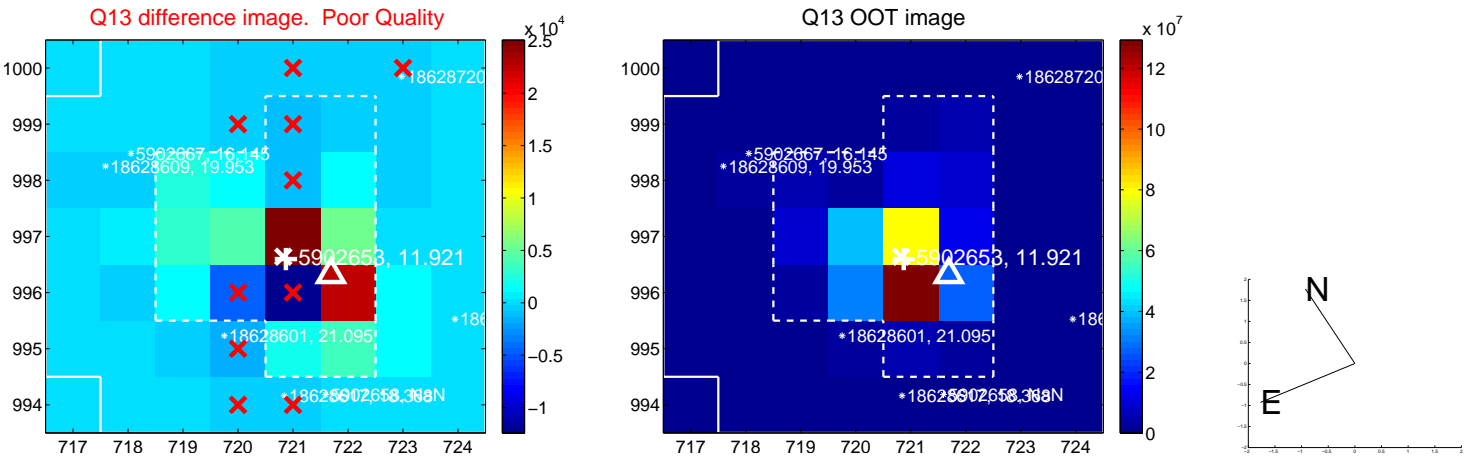
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



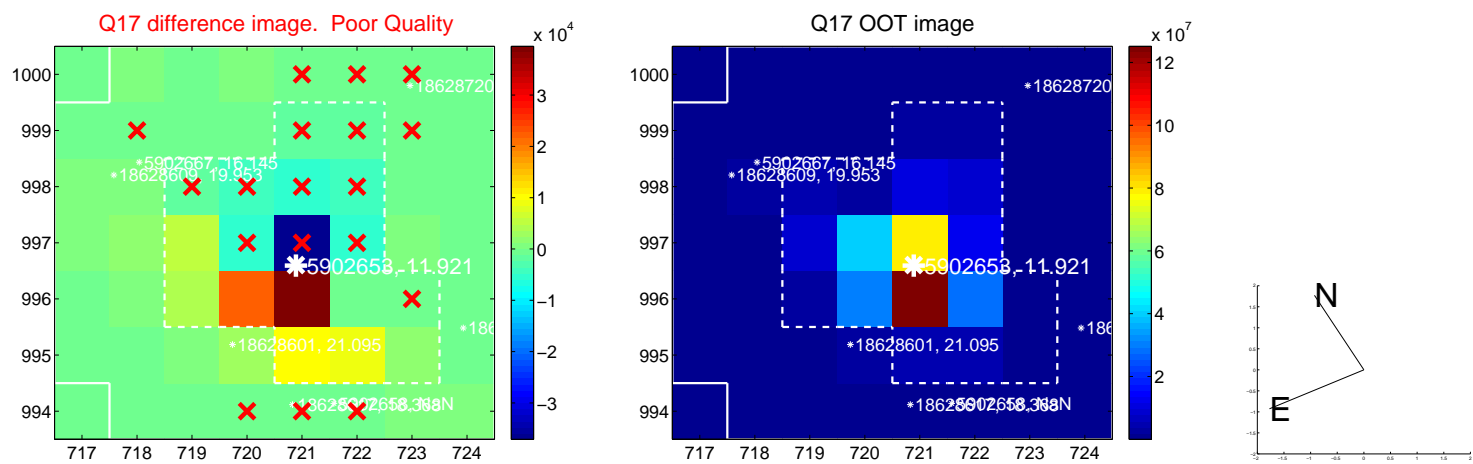
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.



UKIRT Image

