

KIC 007618003

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})
007618003-01	OBS	No	0.653220	132.085531	34.5	4.611	8.8	6.7	0.88	5496	0.51	3316.39
007618003-02	OBS	No	25.747926	142.411599	878.1	1.359	8.3	10.1	0.88	5496	2.80	24.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007618003-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007618003-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

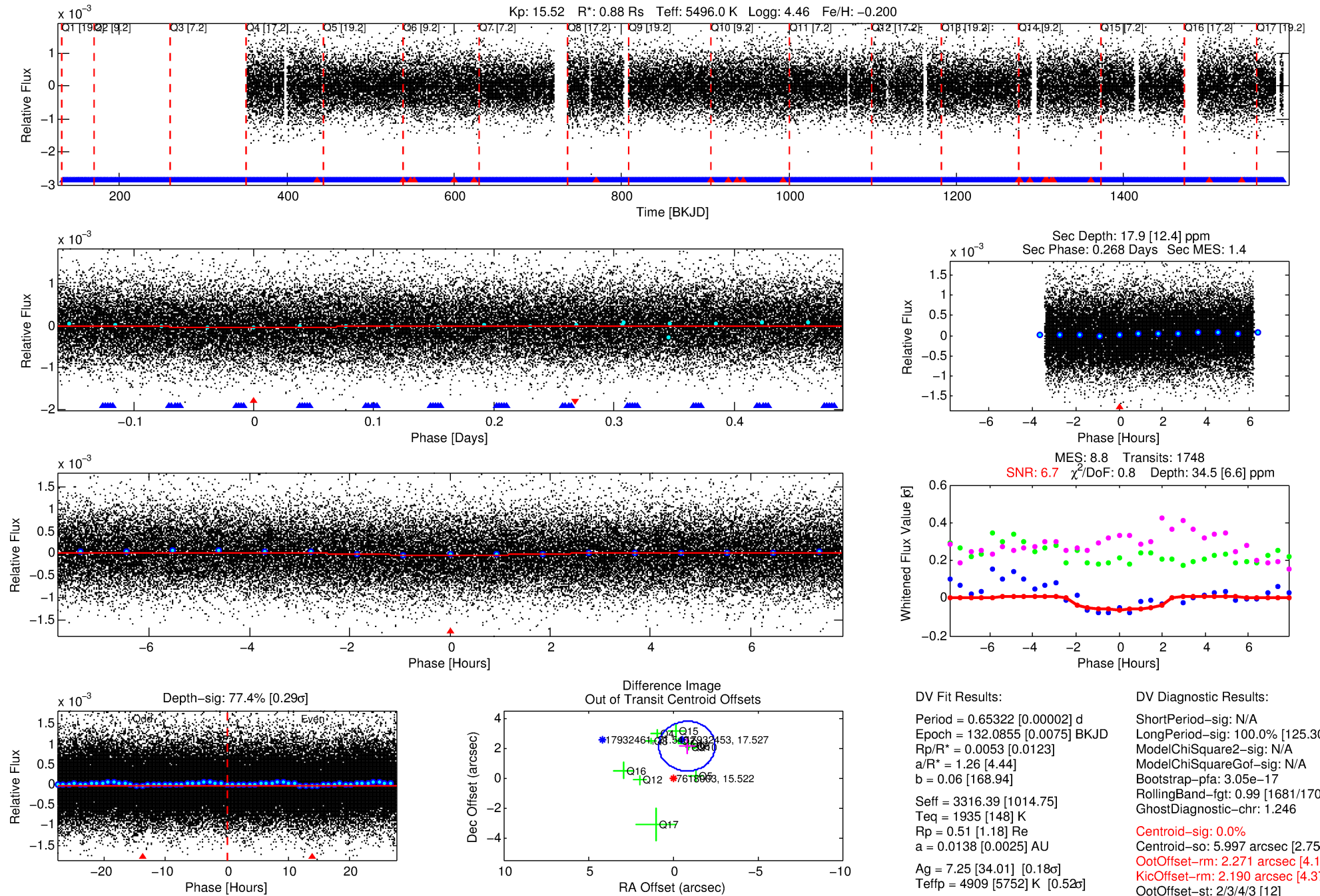
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007618003-01

No Significant Match Found

DV One-Page Summary

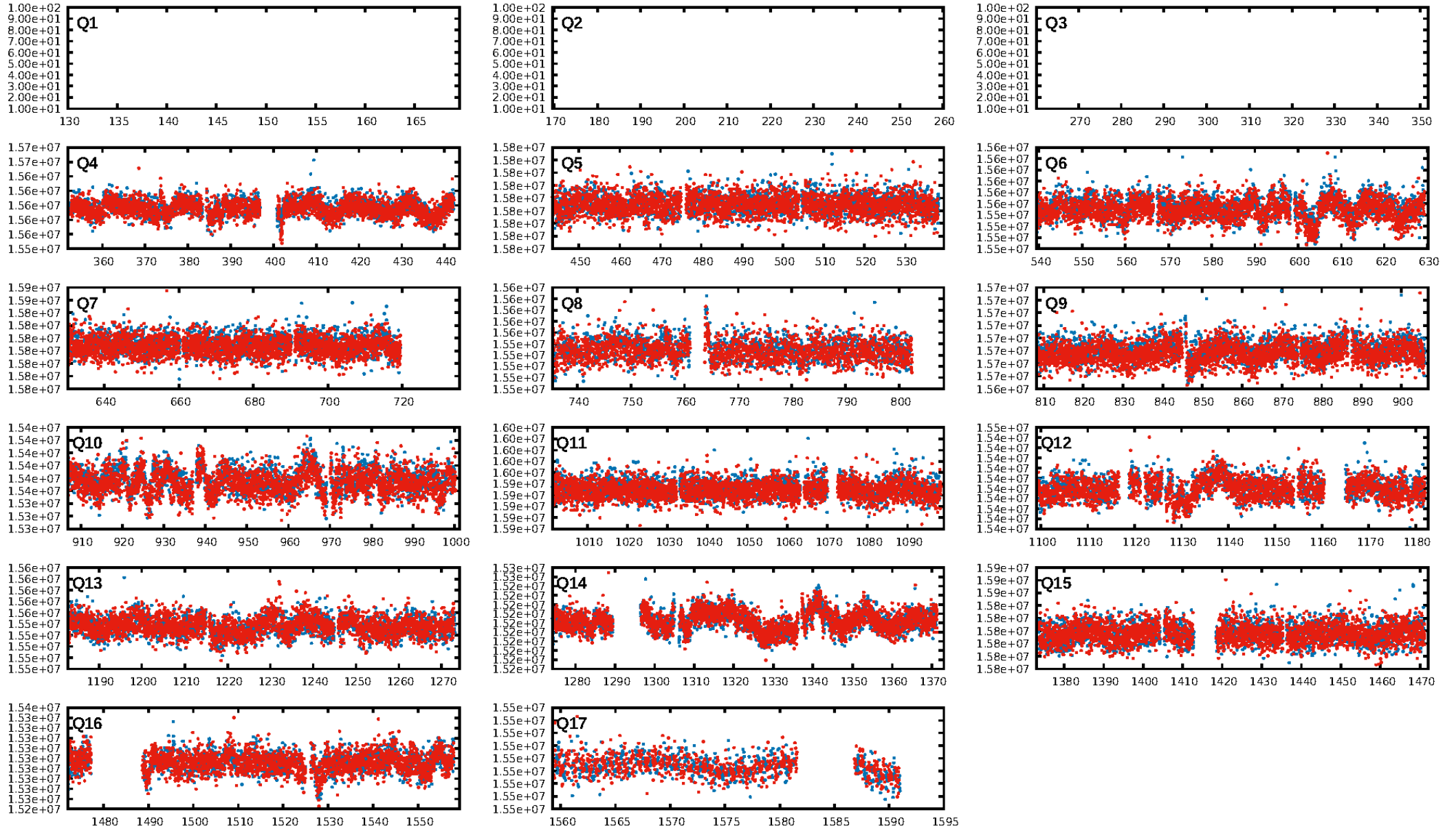
KIC: 7618003 Candidate: 1 of 2 Period: 0.653 d



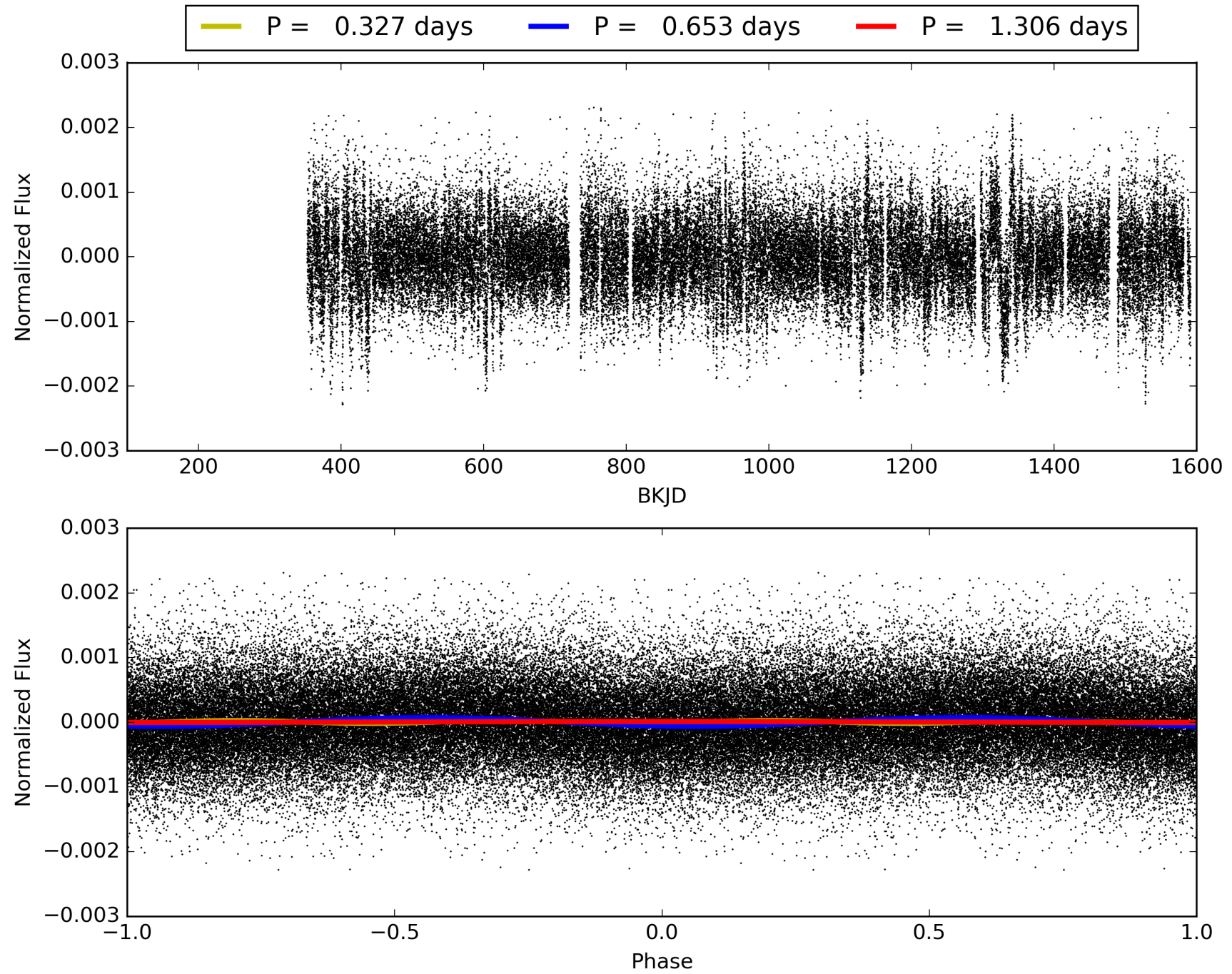
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:48:33 Z

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

TCE 007618003-01, PDC Light Curves

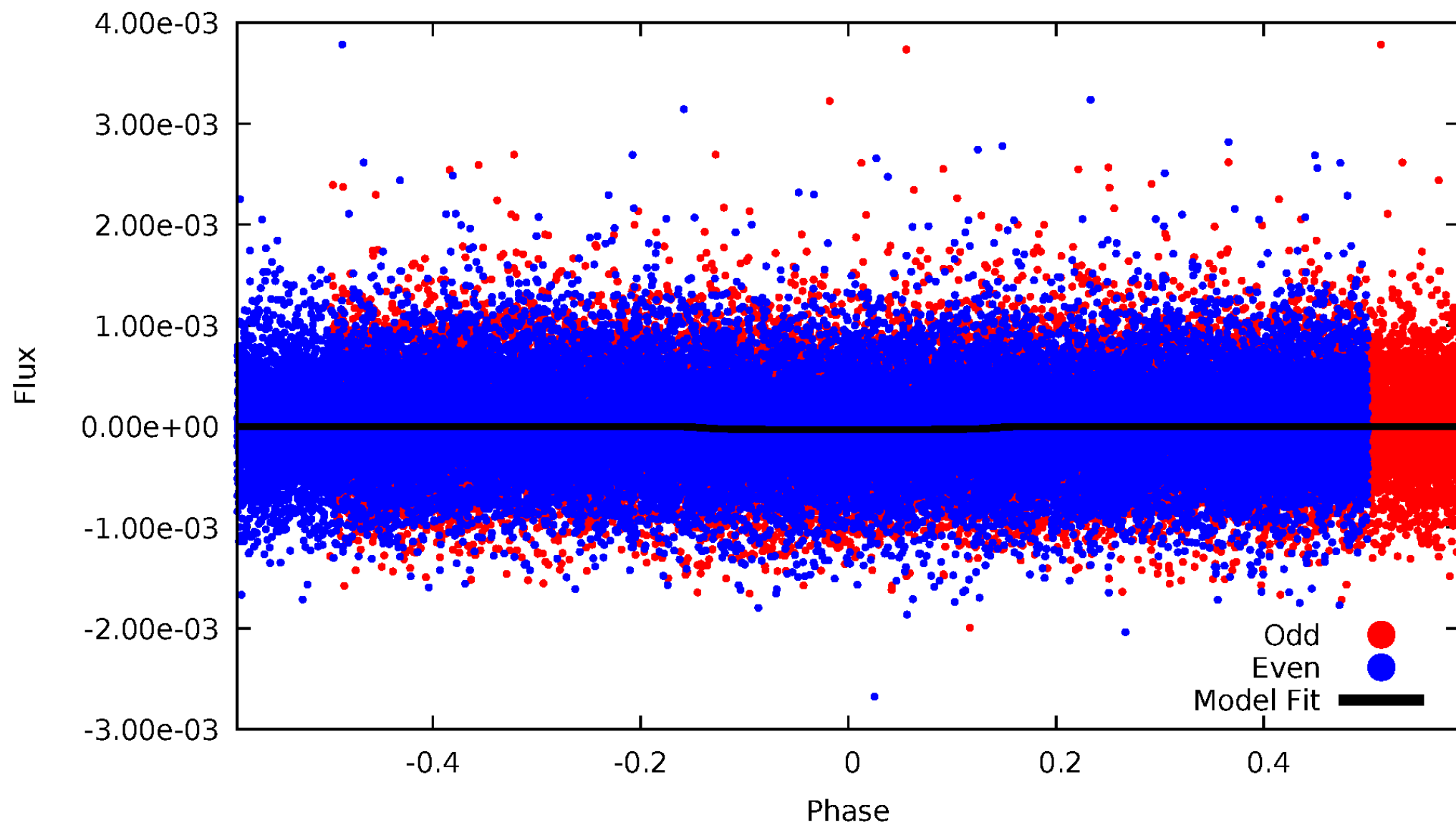


TCE 007618003-01



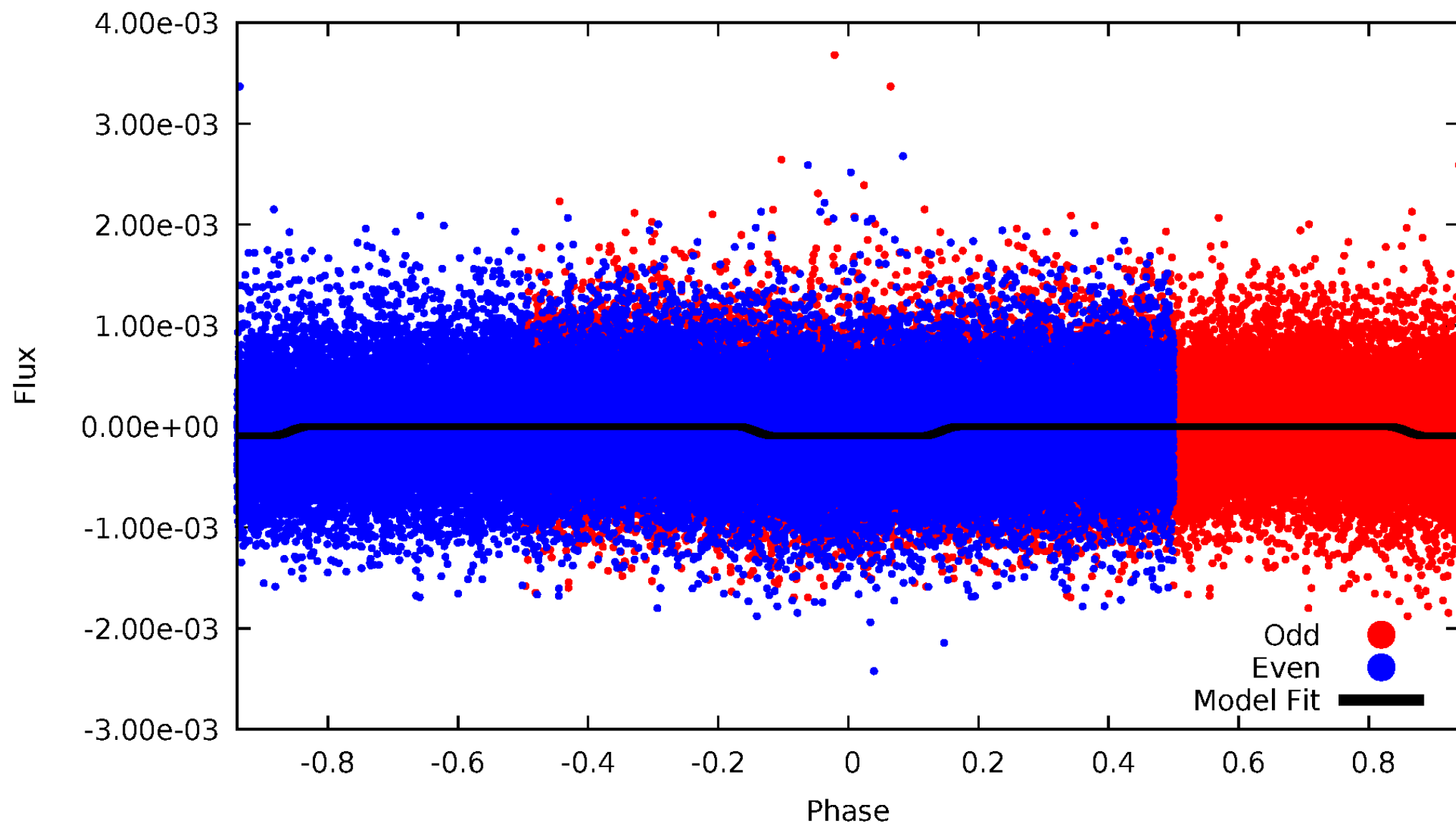
DV Odd/Even

TCE 007618003-01



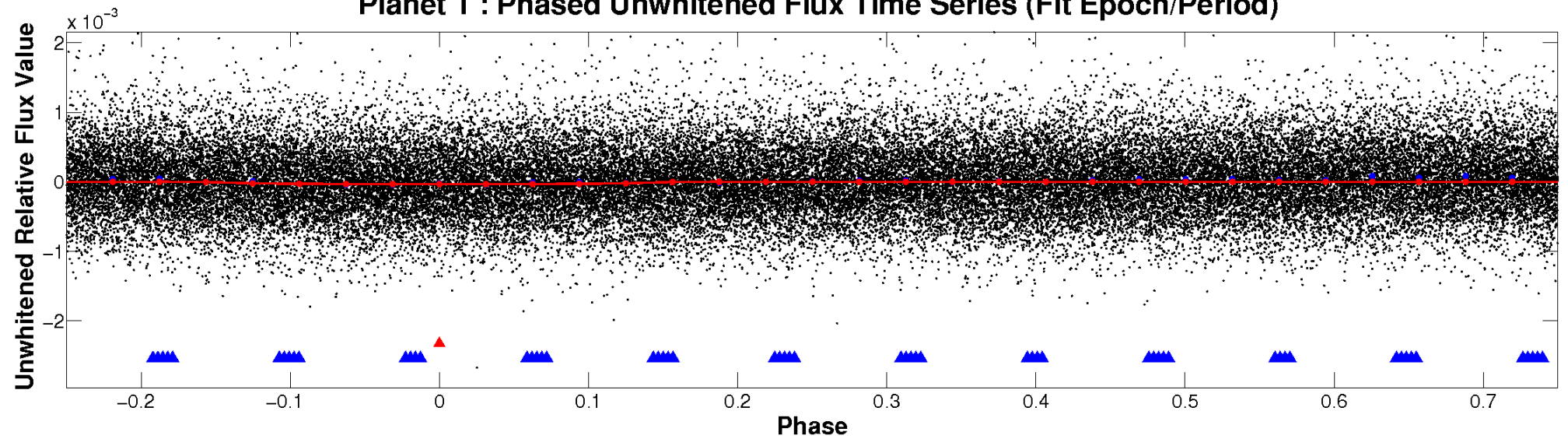
ALT Odd/Even

TCE 007618003-01

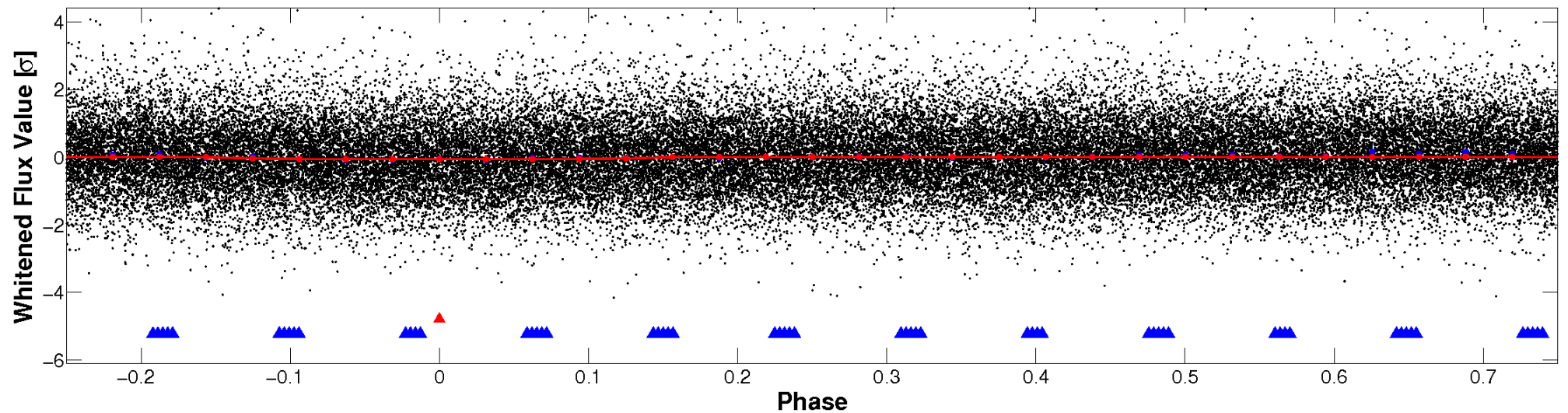


Non-Whitened Vs. Whitened Light Curve

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

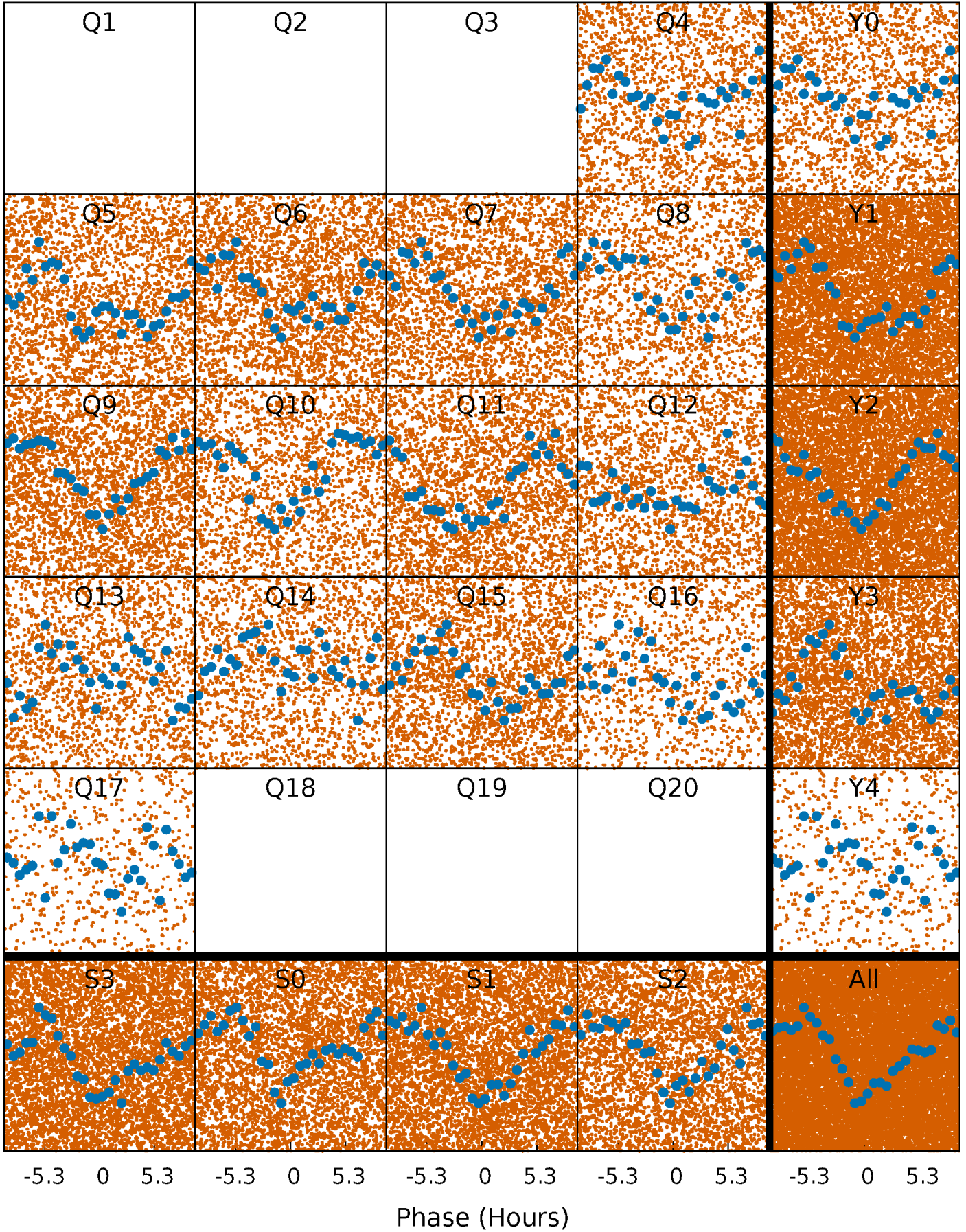


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



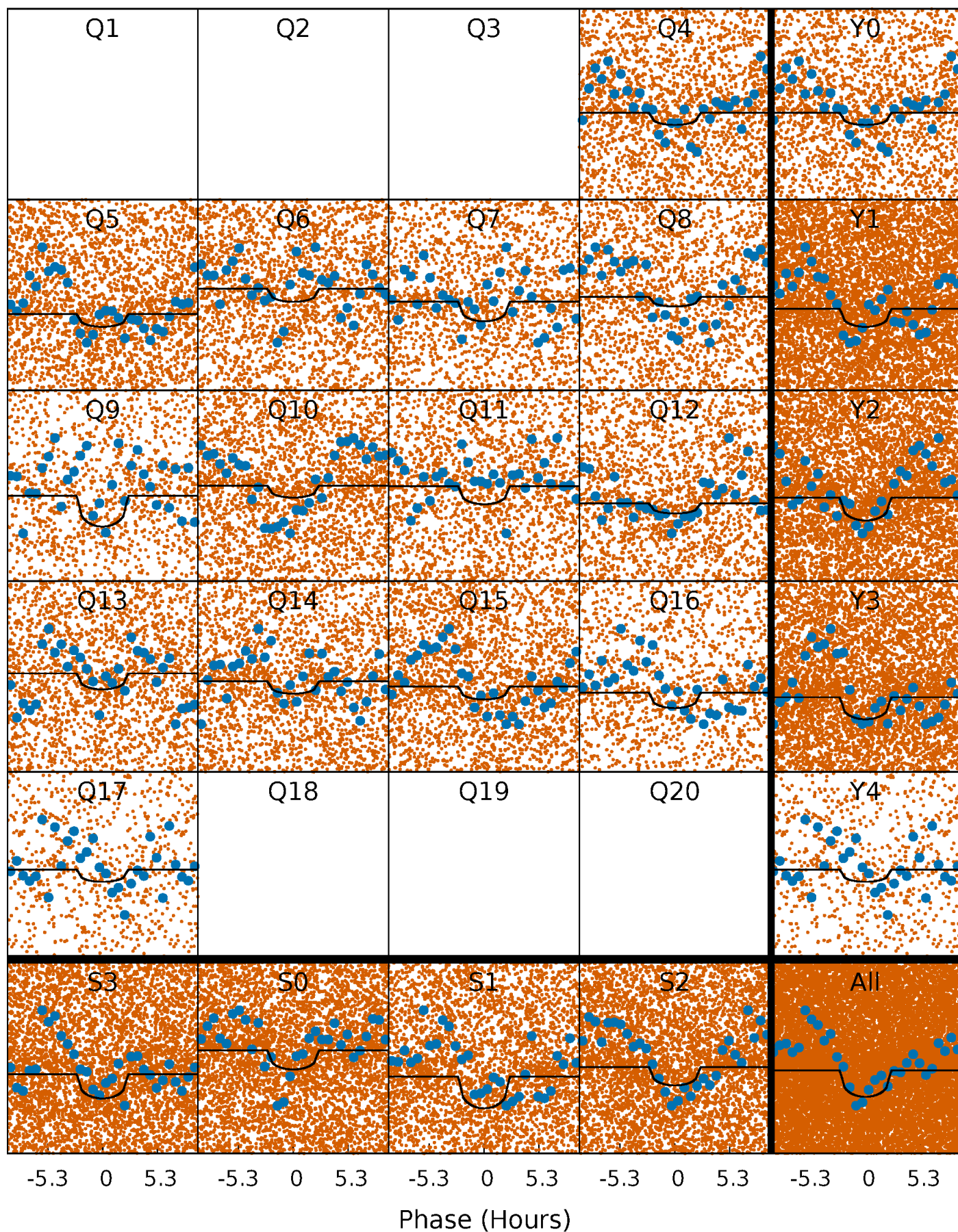
PDC Quarter-Phased Transit Curves

TCE 007618003-01 P= 0.653220 Days $T_0=132.085531$ (BKJD)



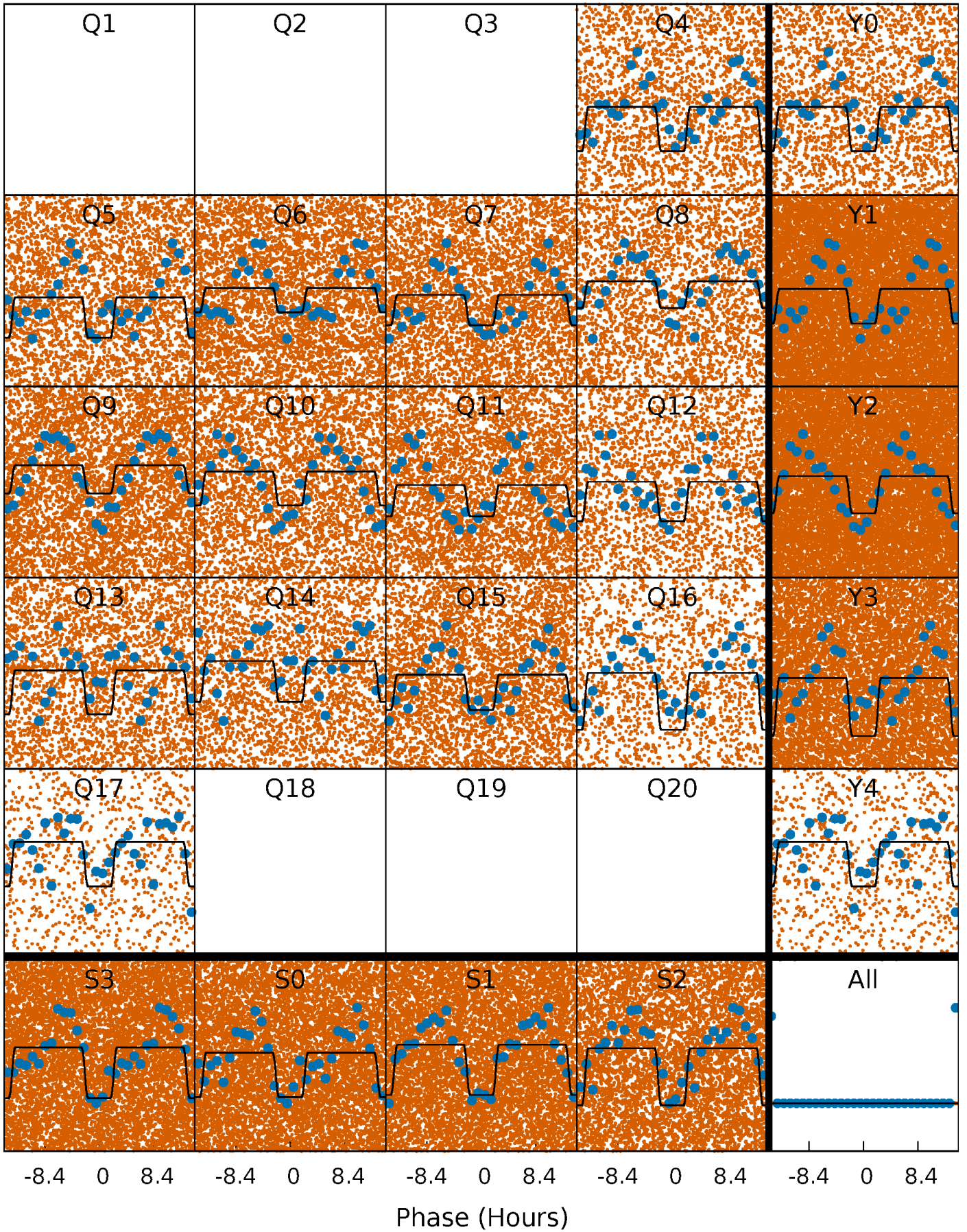
DV Quarter-Phased Transit Curves

TCE 007618003-01 P= 0.653220 Days $T_0=132.085531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

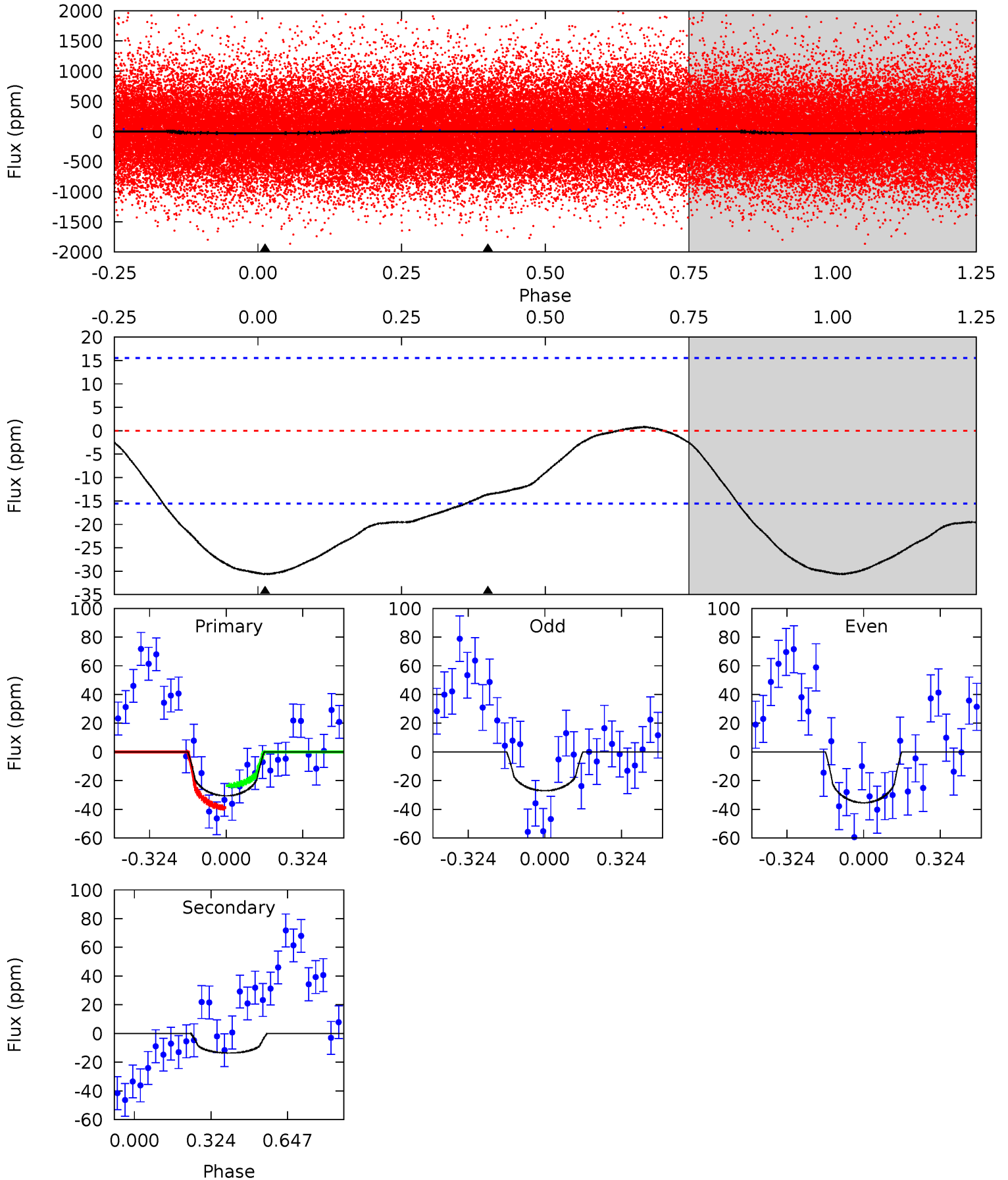
TCE 007618003-01 P= 0.653294 Days $T_0=132.004444$ (BKJD)



DV Model-Shift Uniqueness Test

007618003-01, P = 0.653220 Days, E = 132.085531 Days

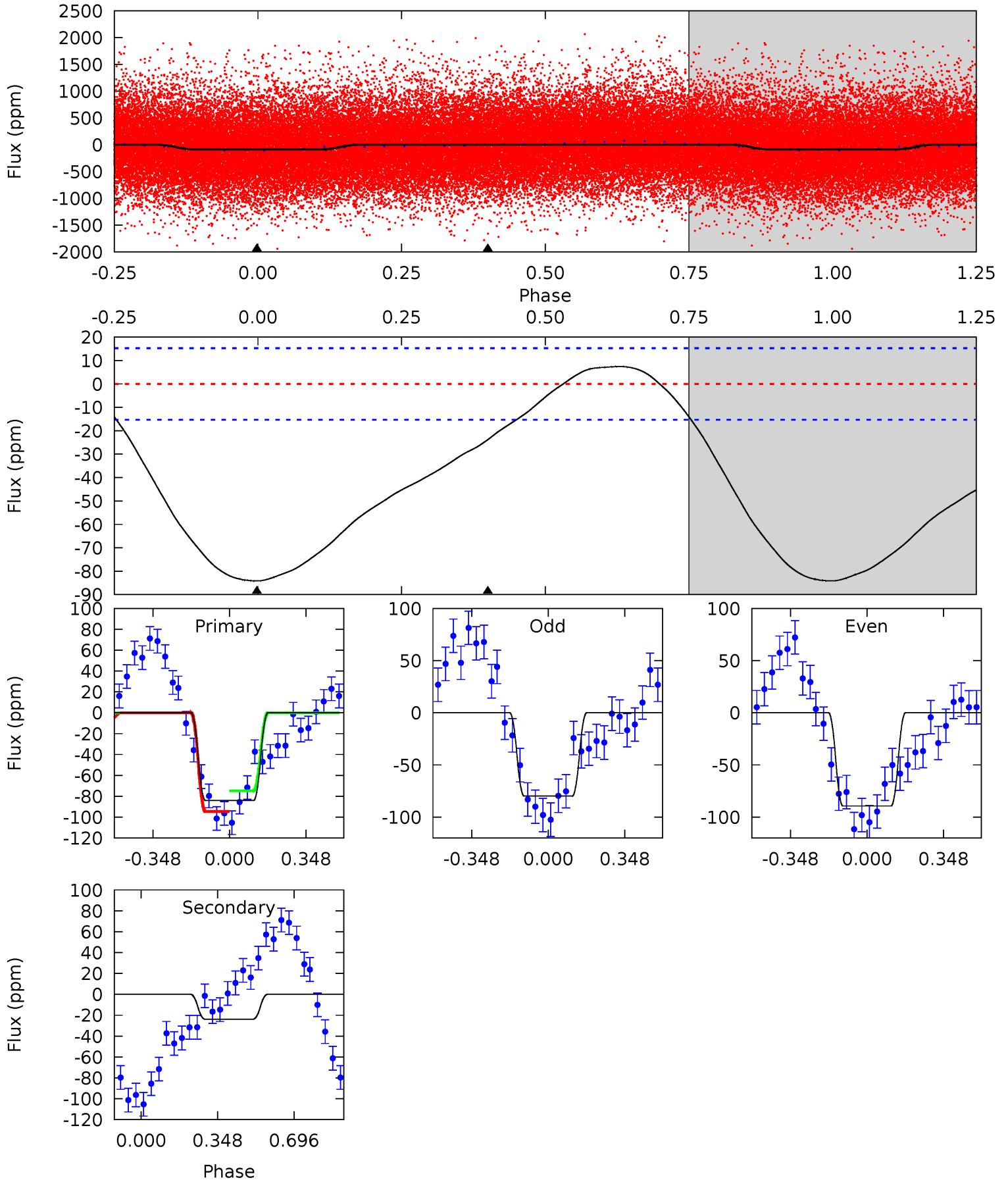
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.50	3.78	0	0	4.31	0.99	0.32	8.50	8.50	3.78	3.78	1.16	0.90	0.03	2.11



Alt Model-Shift Uniqueness Test

007618003-01, P = 0.653294 Days, E = 132.004444 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	6.67	0	0	4.30	0.94	1.74	23.6	23.6	6.67	6.67	1.34	0.92	0.08	2.79



Stellar Parameters For KIC 007618003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+199}_{-182}	$4.464^{+0.108}_{-0.148}$	$-0.200^{+0.300}_{-0.300}$	$0.878^{+0.191}_{-0.111}$	$0.818^{+0.120}_{-0.065}$	$1.704^{+0.761}_{-0.725}$
	+4%/-3%	+2%/-3%	+150%/-150%	+22%/-13%	+15%/-8%	+45%/-43%
Source	KIC0	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 007618003-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 4	$1.04^{+0.98}_{-0.68}$	2724^{+159}_{-147}	3462^{+2285}_{-1175}	$1.262^{+10.231}_{-0.919}$
Alt.	-24 ± 4	$1.22^{+1.16}_{-0.79}$	2713^{+176}_{-136}	3645^{+2061}_{-1016}	$1.645^{+11.688}_{-1.215}$

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 $A_{obs} \gg 1.0$

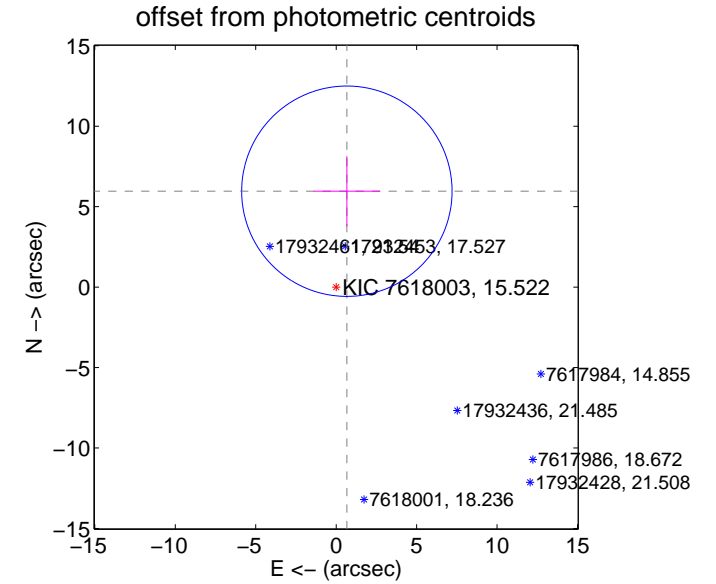
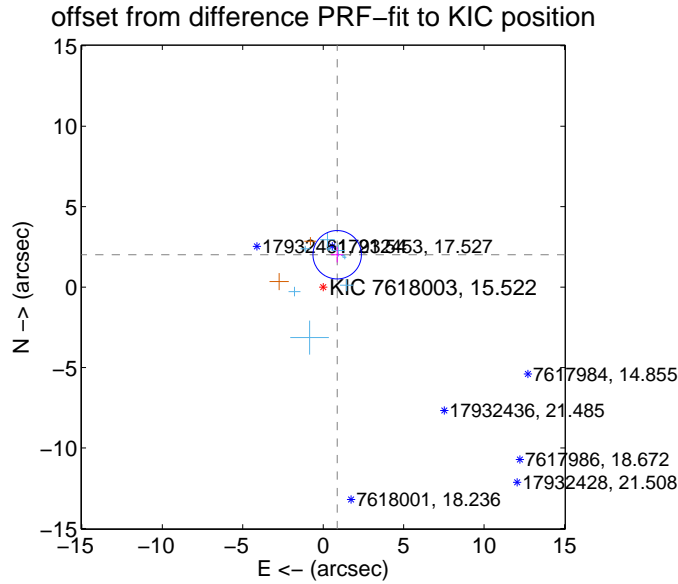
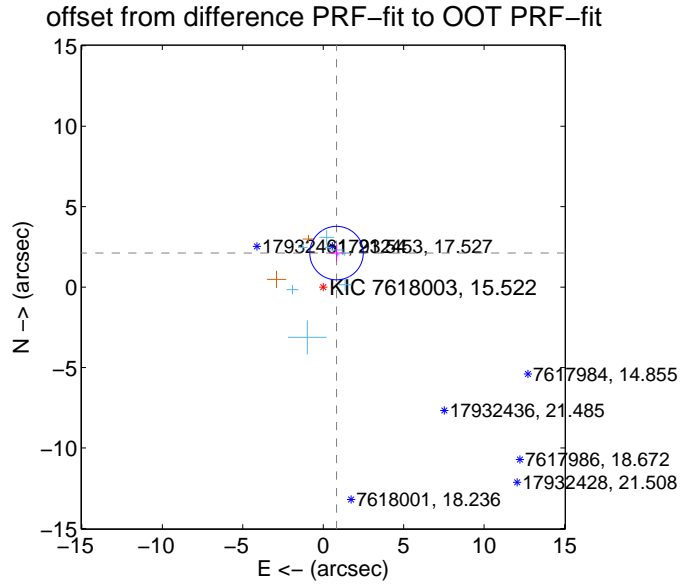
DV Centroid Data

Supplemental centroid analysis for 007618003-01. Kepler magnitude: 15.52. Transit SNR 6.71

There are 10 quarters with good PRF difference image offsets

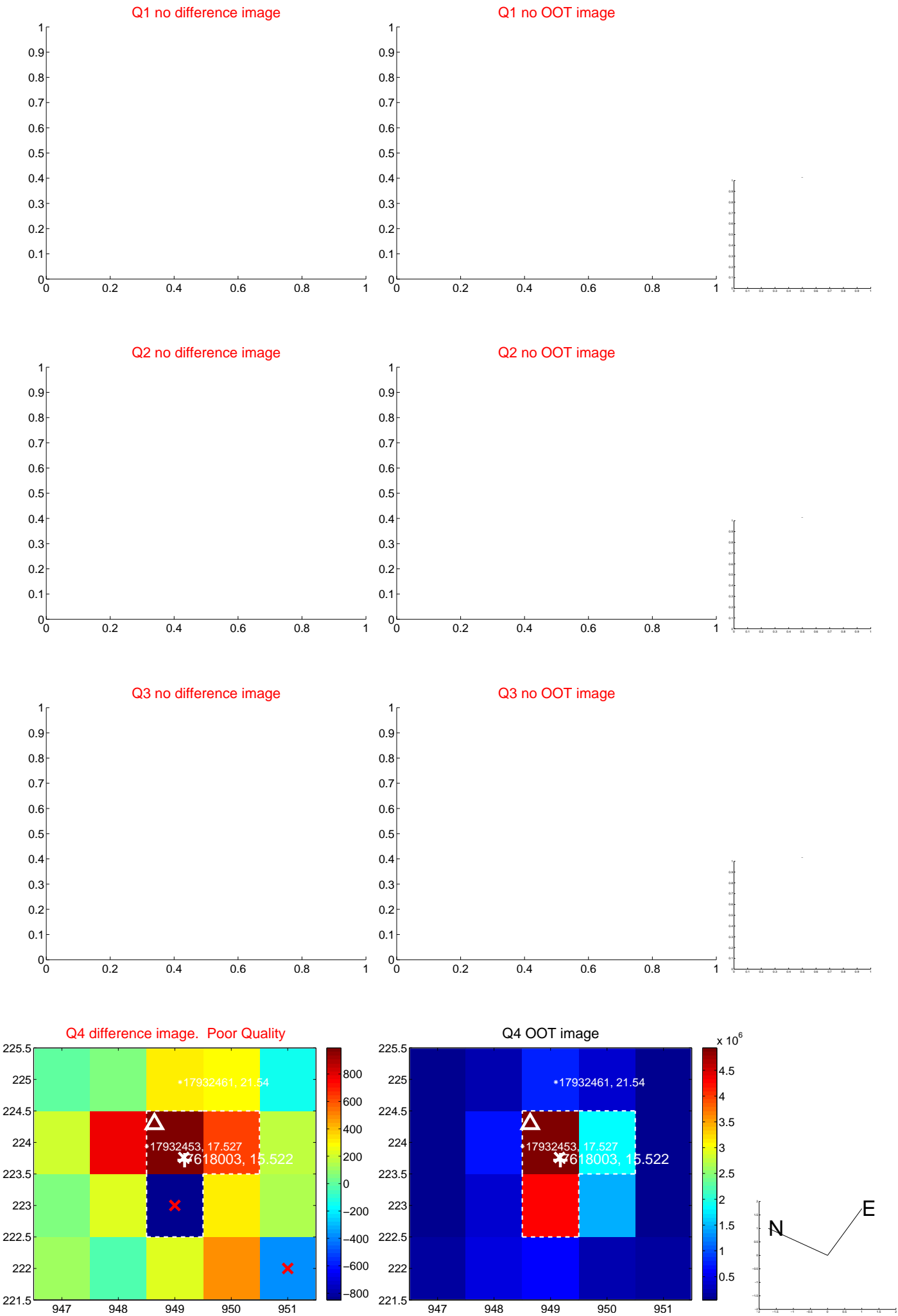
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.271 ± 0.554	4.10	-0.827 ± 0.438	2.114 ± 0.511
PRF-fit source offset from KIC position	2.190 ± 0.501	4.37	-0.869 ± 0.382	2.011 ± 0.479
photometric centroid source offset	6.00 ± 2.18	2.75	-0.66 ± 2.06	5.96 ± 2.18

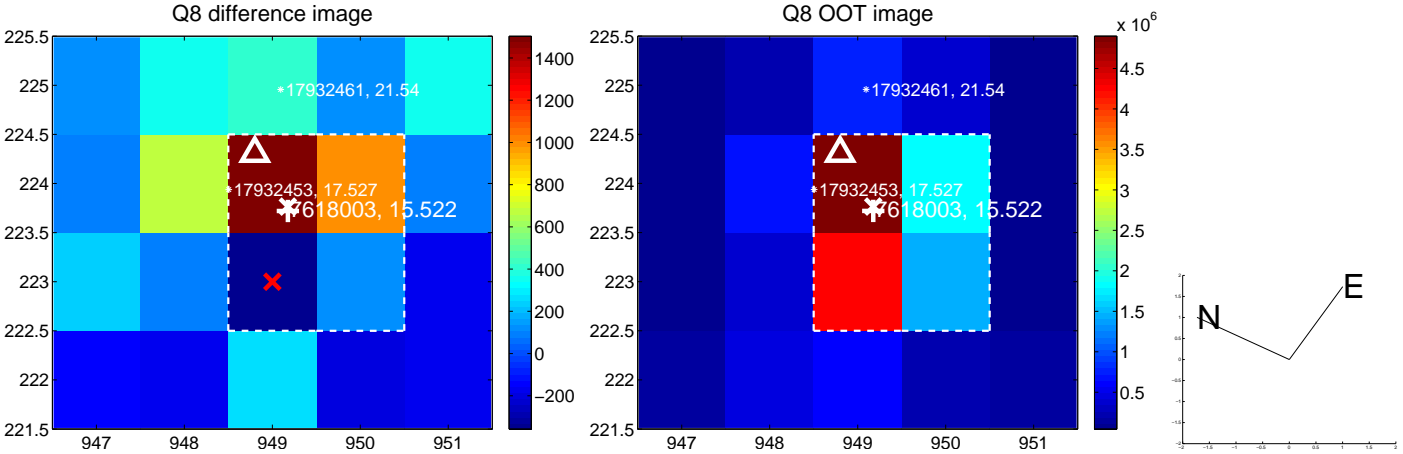
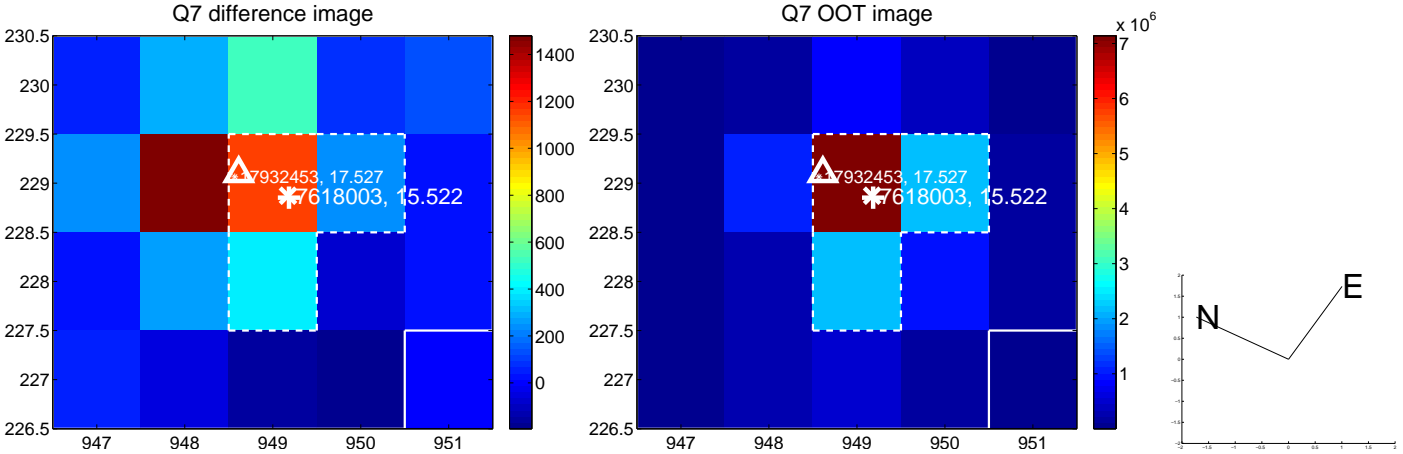
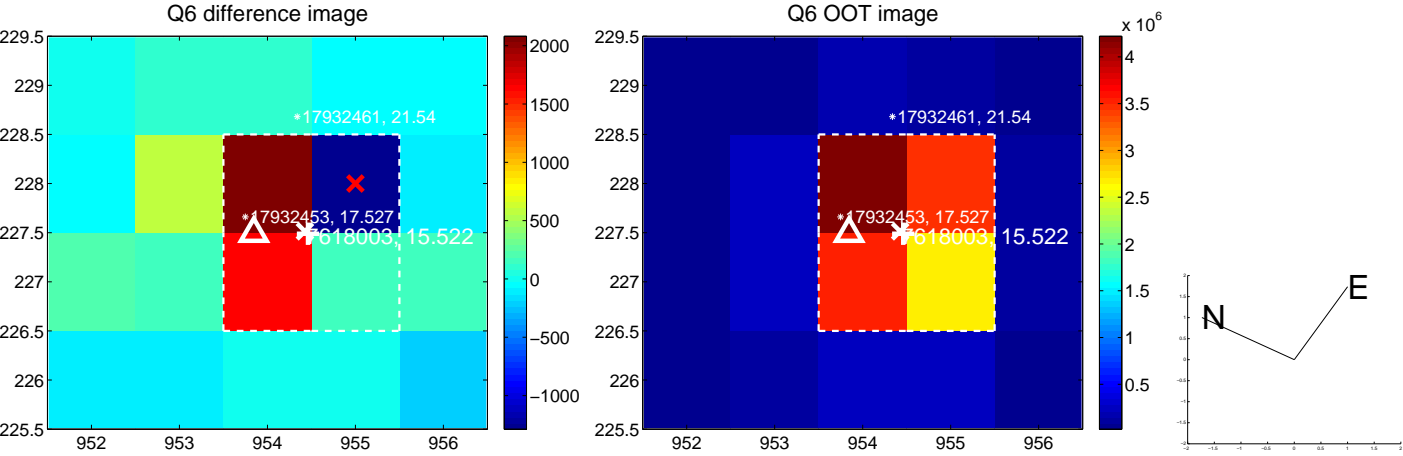
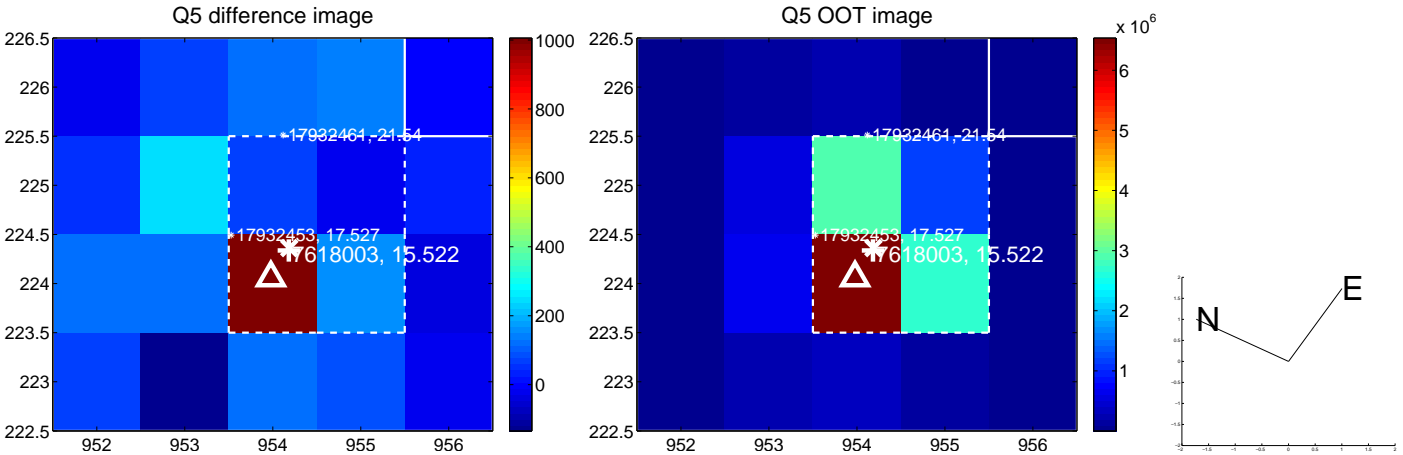


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

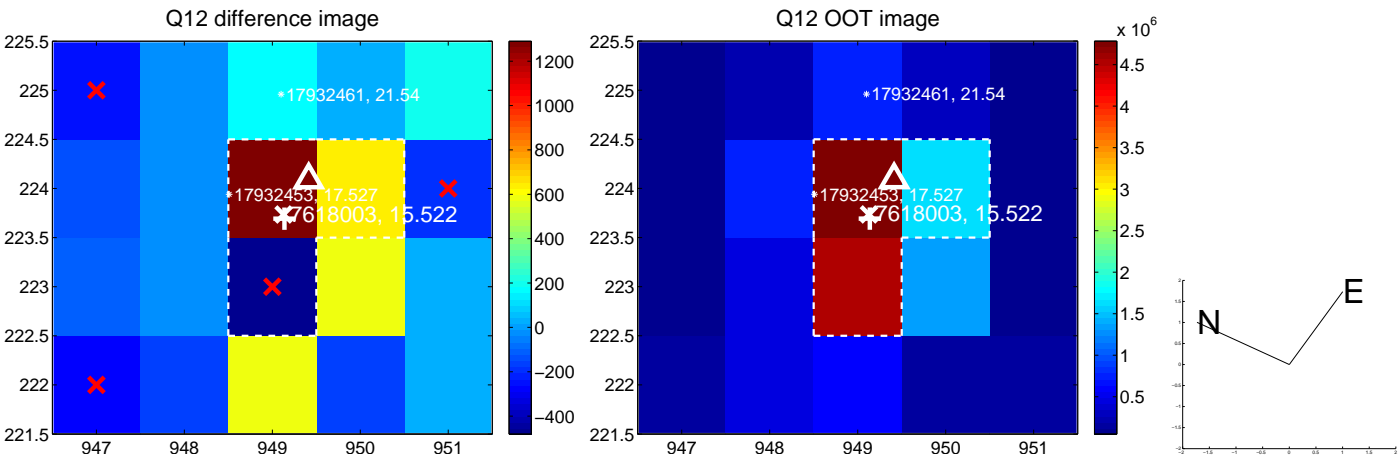
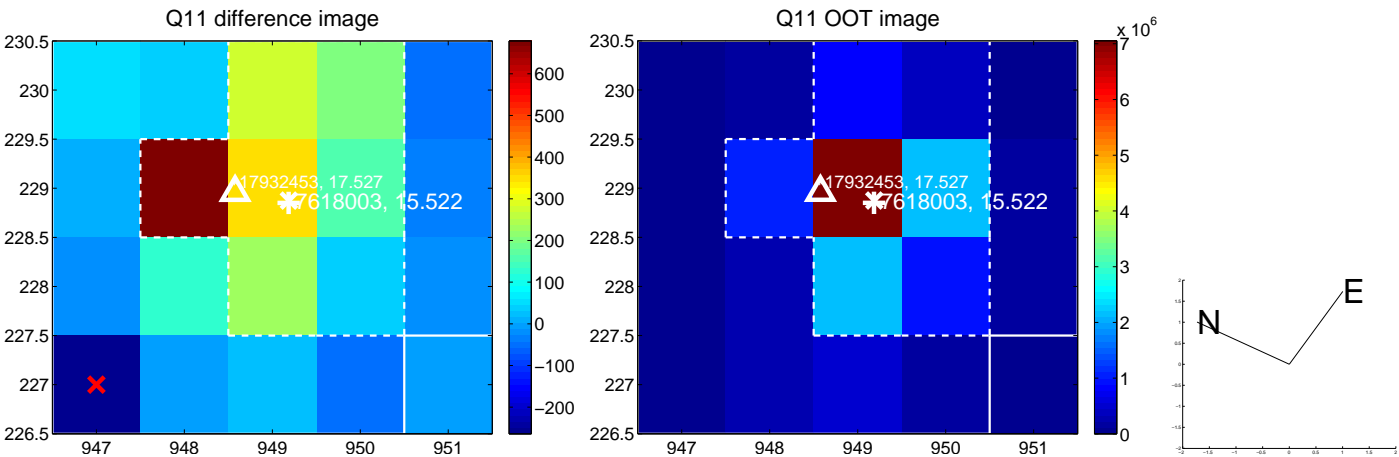
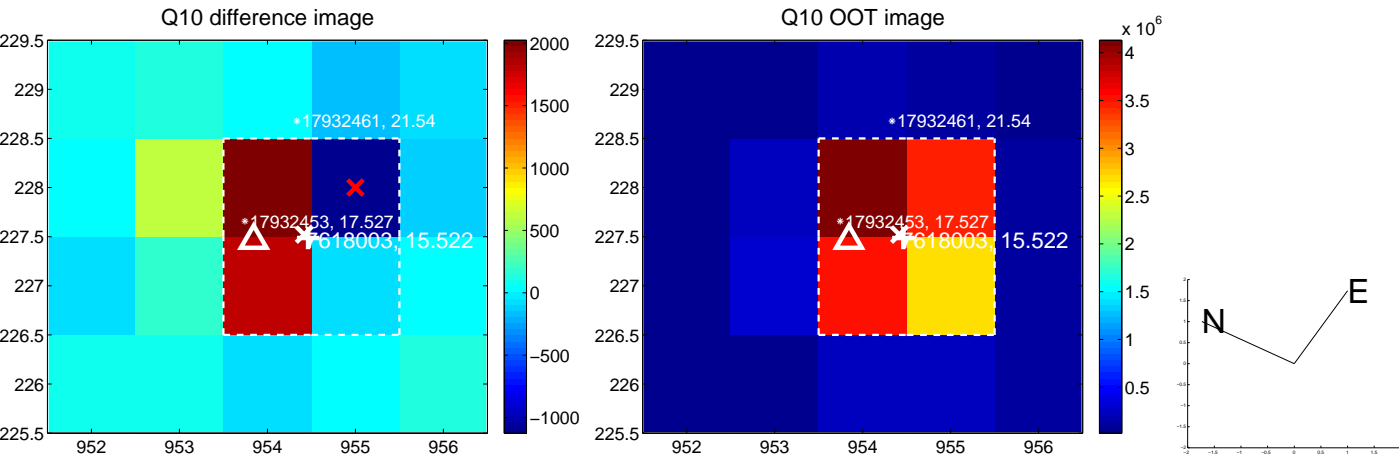
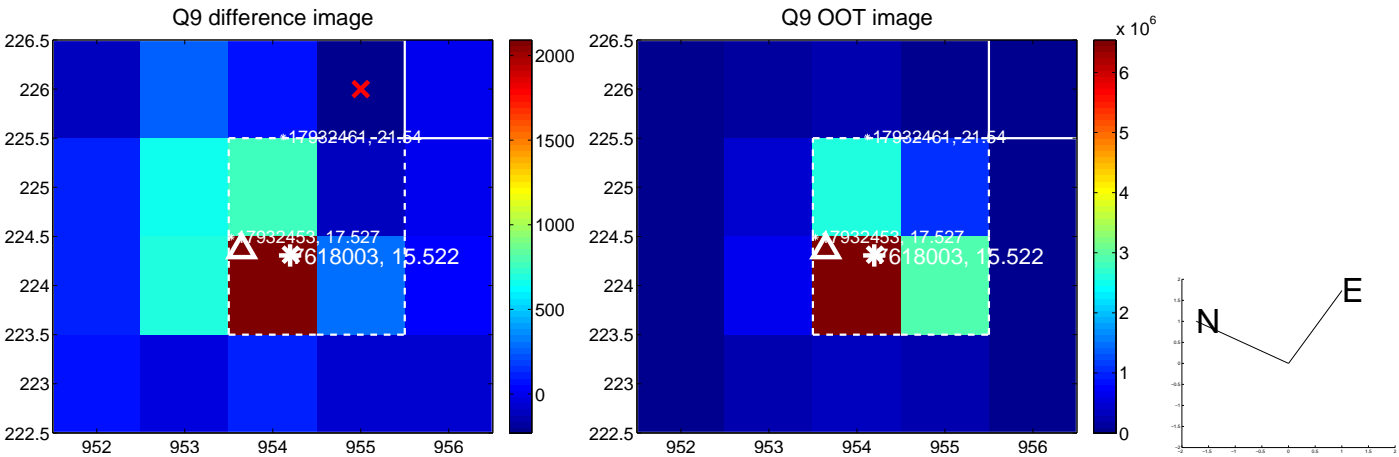
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



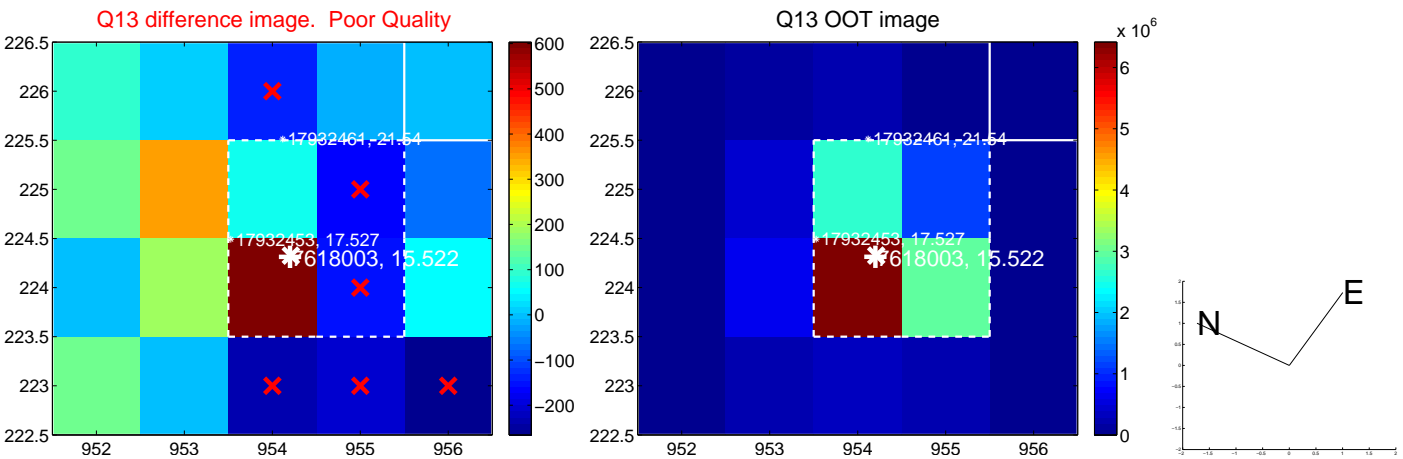
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



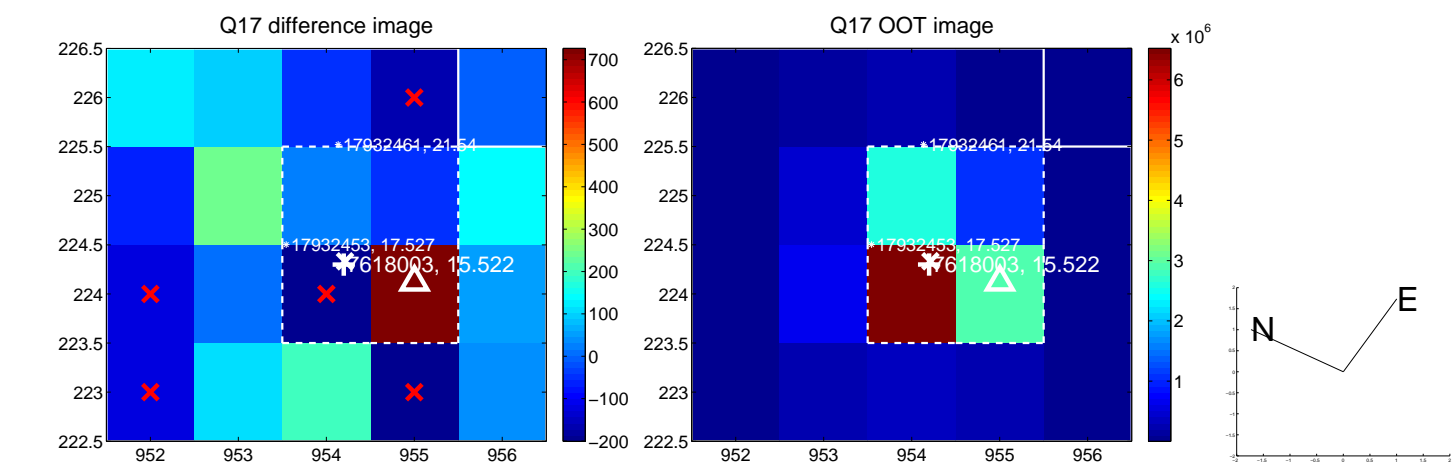
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



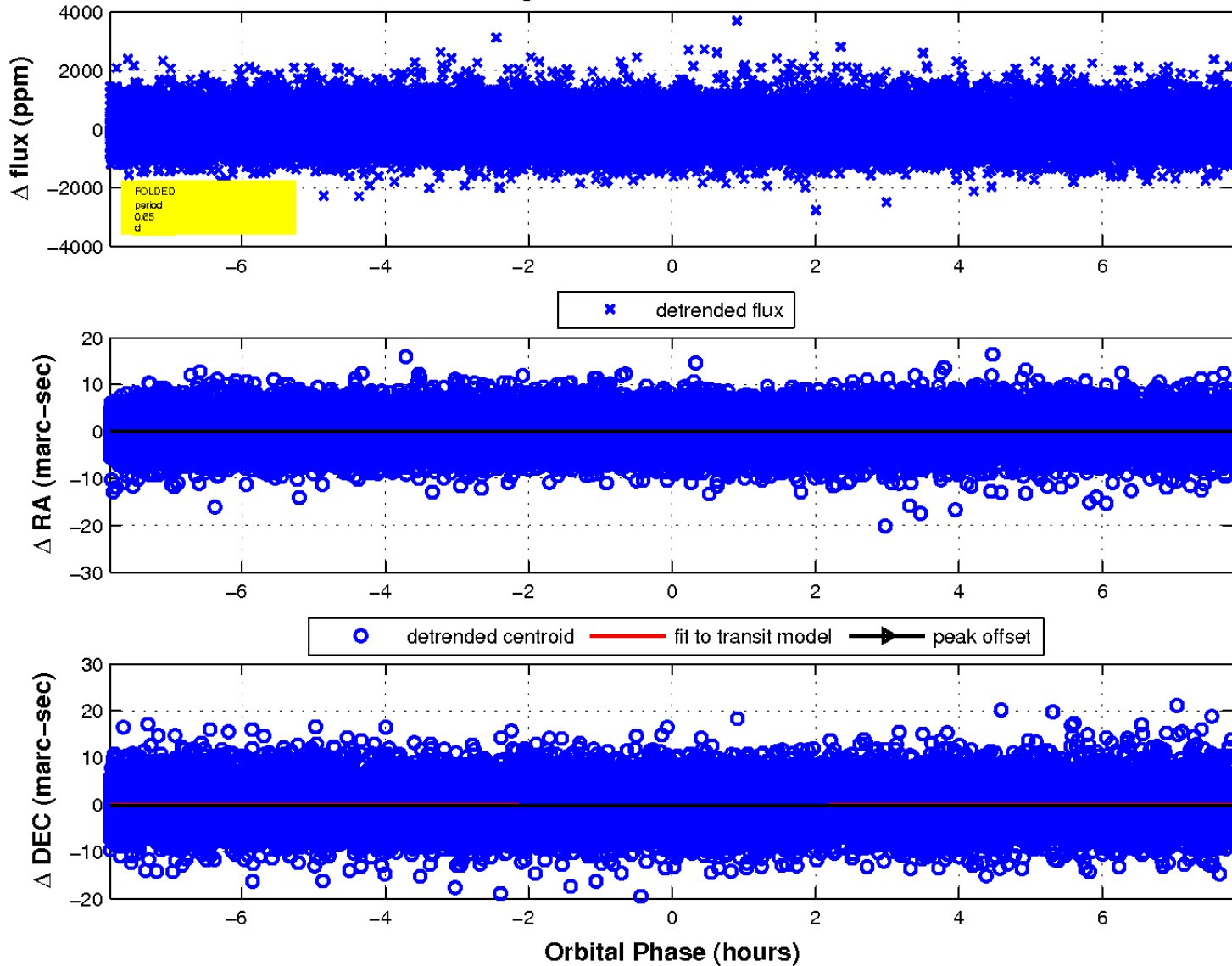
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

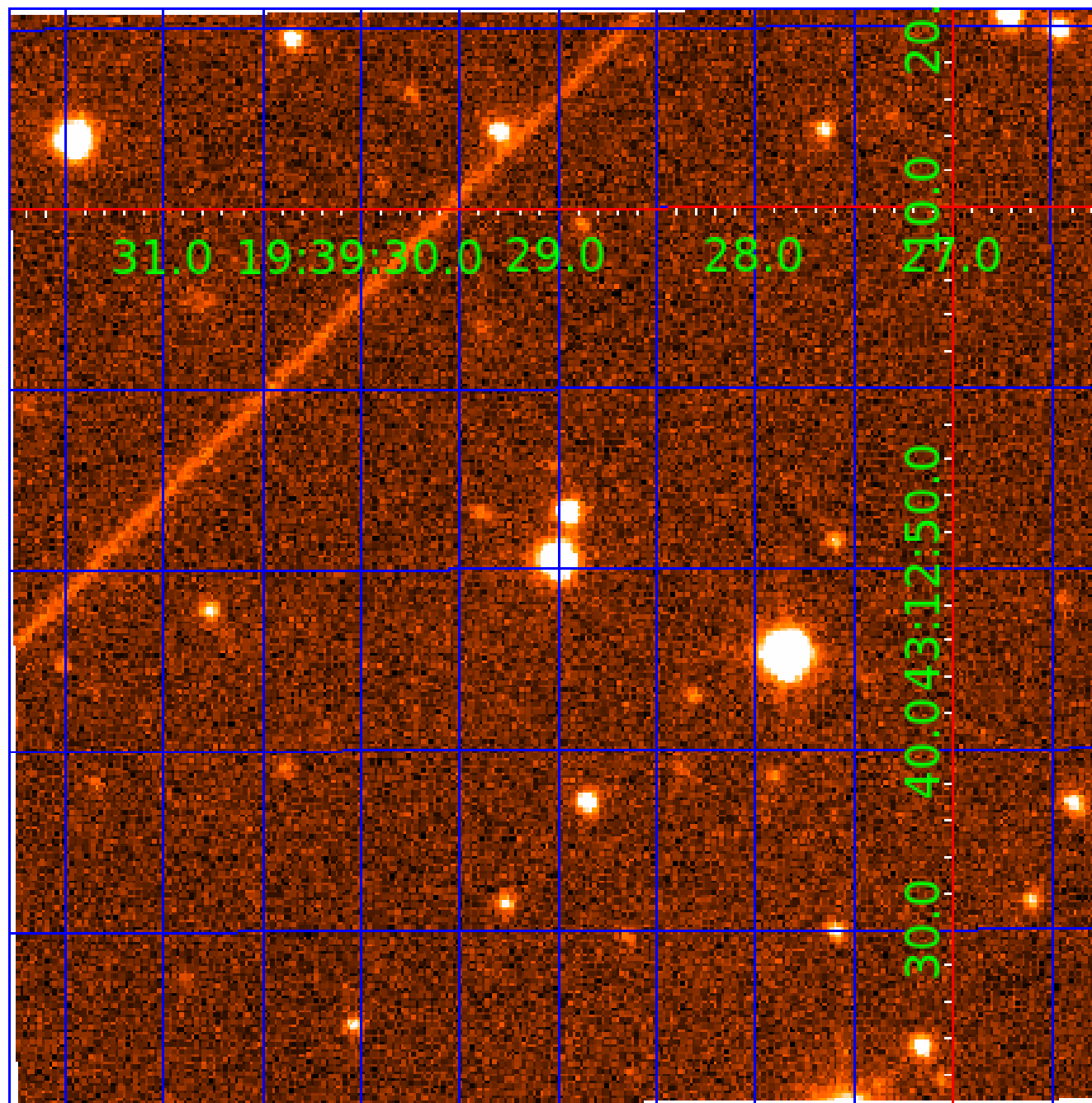


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 007618003

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})
007618003-01	OBS	No	0.653220	132.085531	34.5	4.611	8.8	6.7	0.88	5496	0.51	3316.39
007618003-02	OBS	No	25.747926	142.411599	878.1	1.359	8.3	10.1	0.88	5496	2.80	24.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007618003-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007618003-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS—HALO_GHOST

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

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

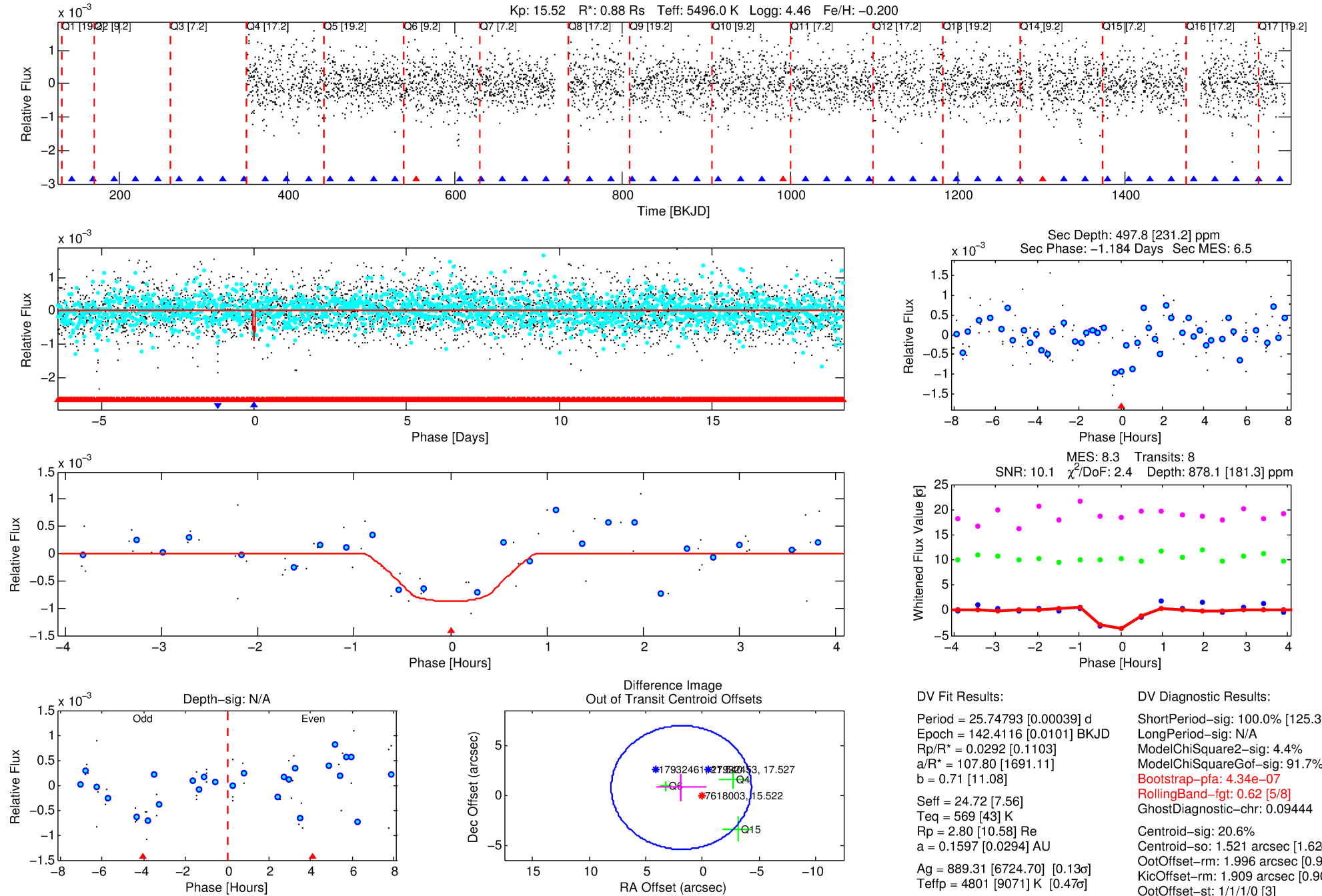
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007618003-02

No Significant Match Found

DV One-Page Summary

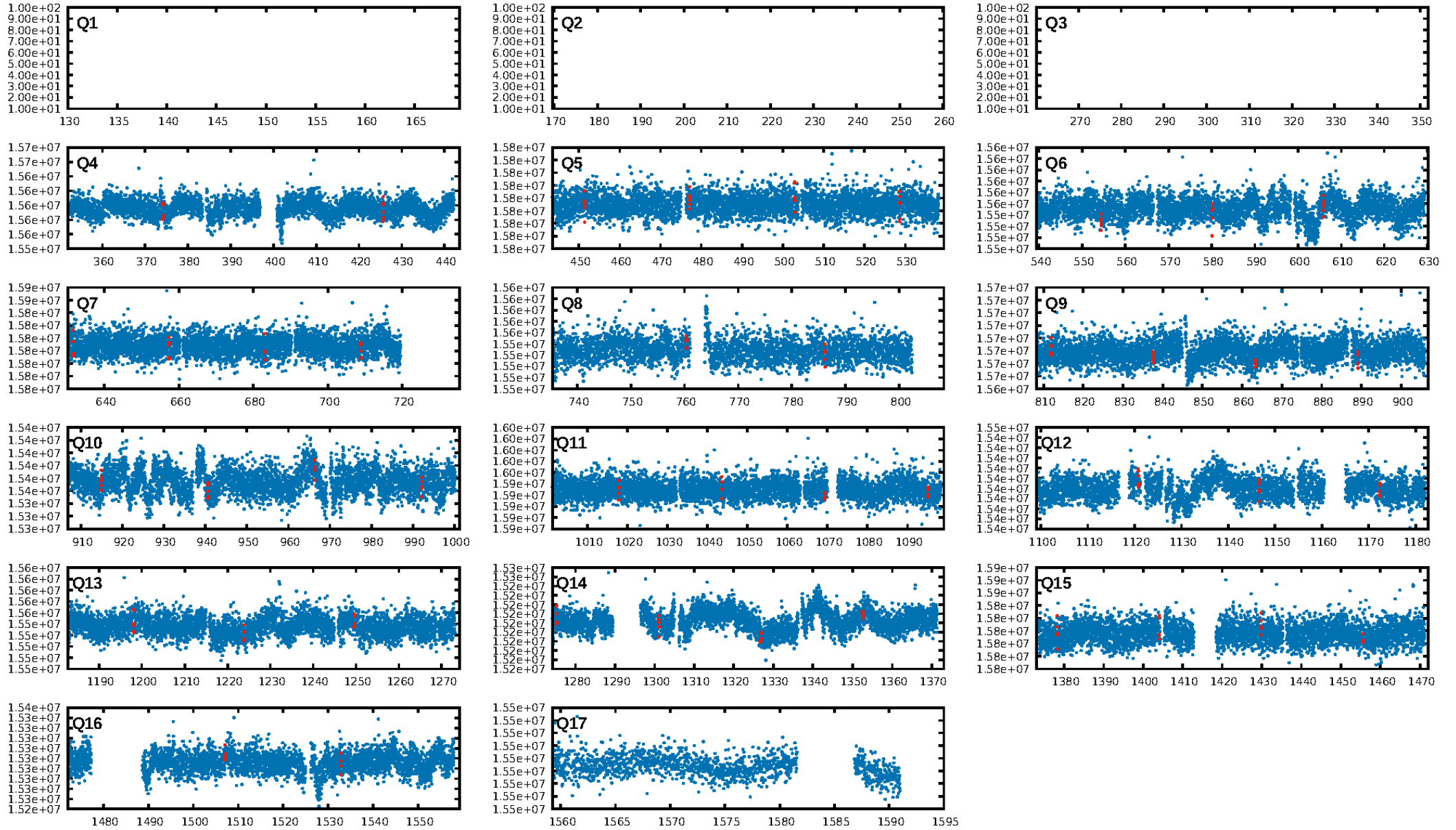
KIC: 7618003 Candidate: 2 of 2 Period: 25.748 d



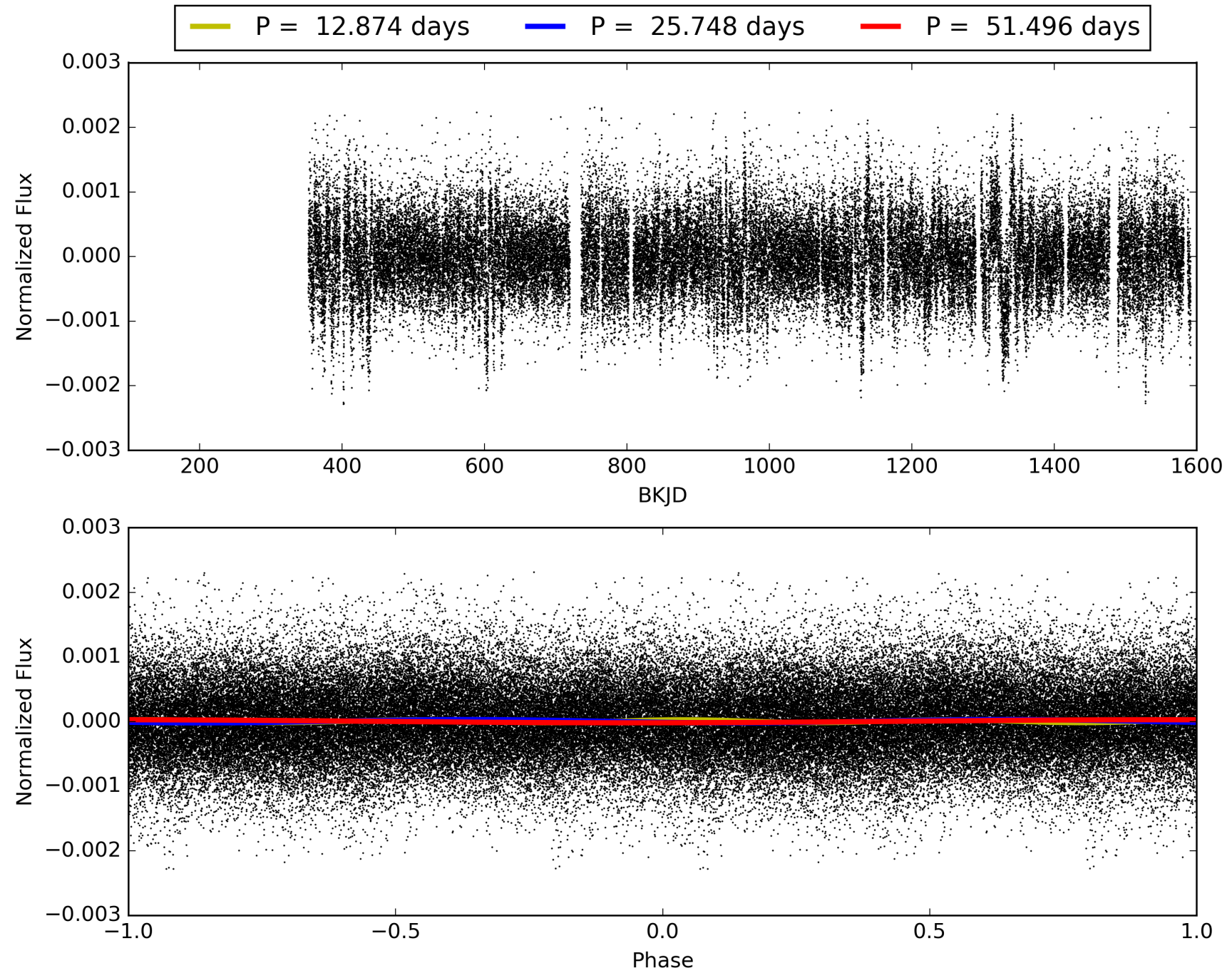
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:48:44 Z

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

TCE 007618003-02, PDC Light Curves

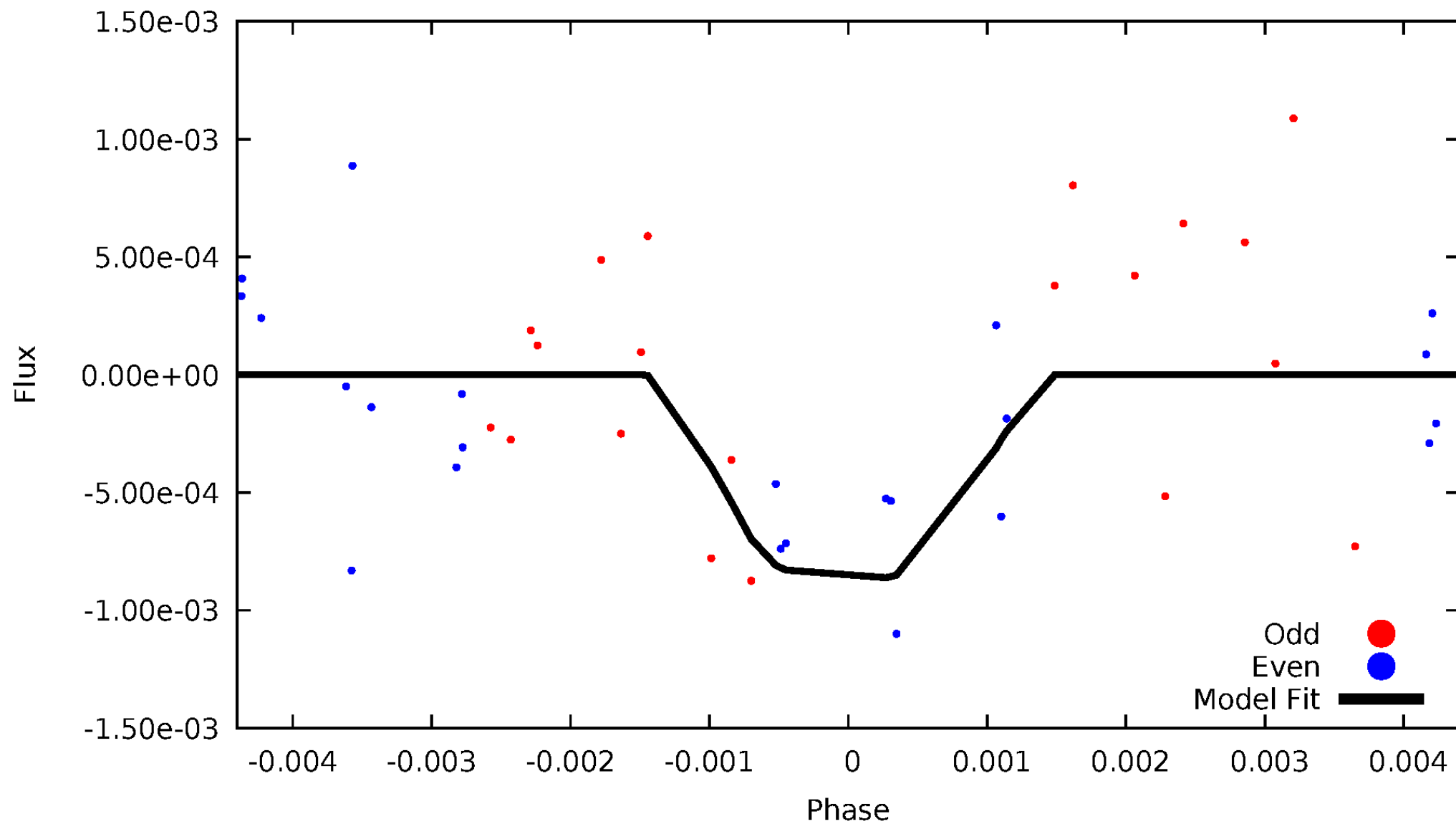


TCE 007618003-02



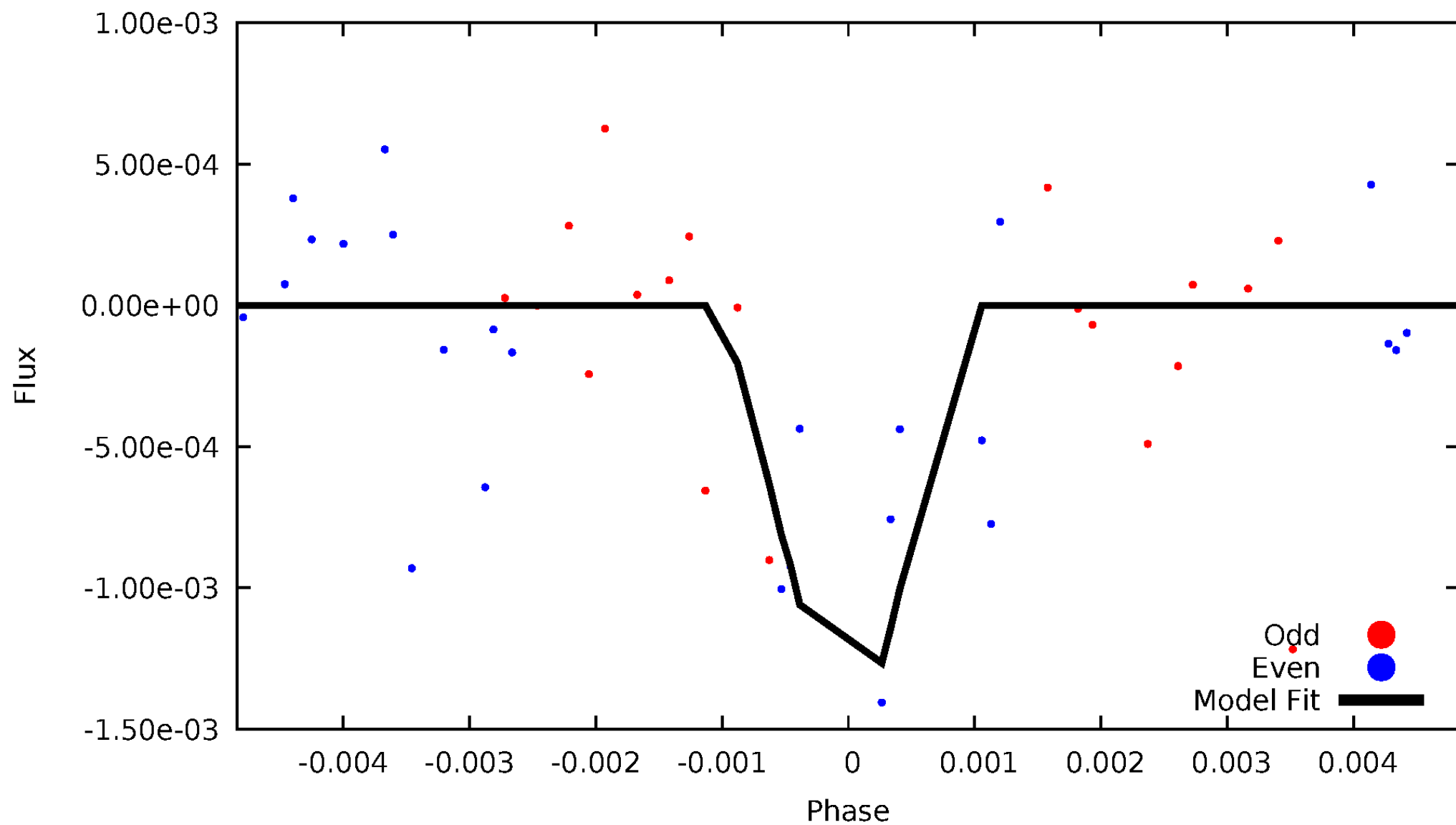
DV Odd/Even

TCE 007618003-02



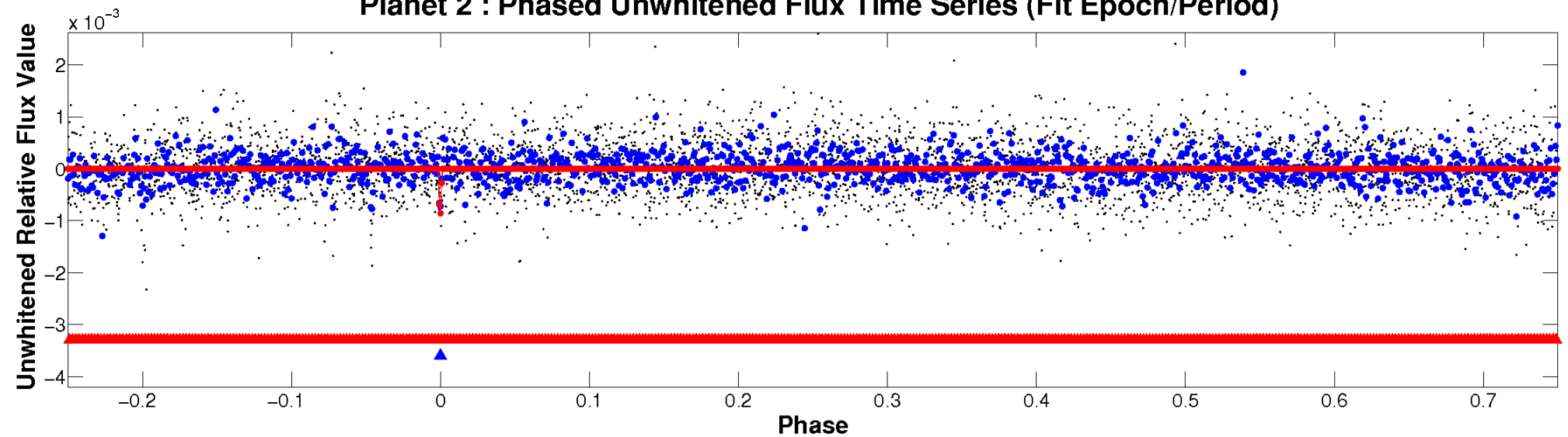
ALT Odd/Even

TCE 007618003-02

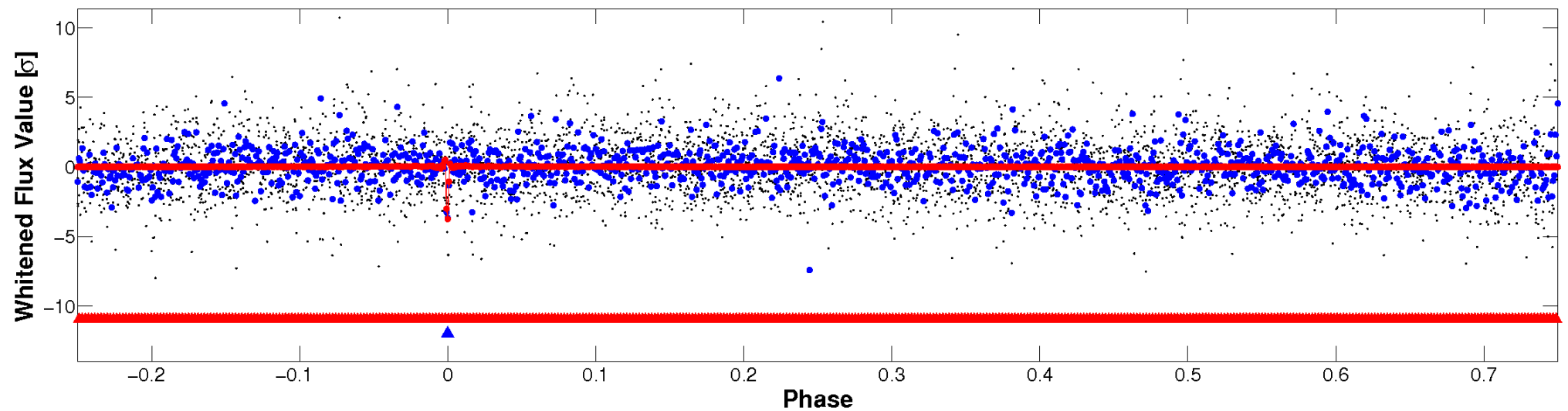


Non-Whitened Vs. Whitened Light Curve

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

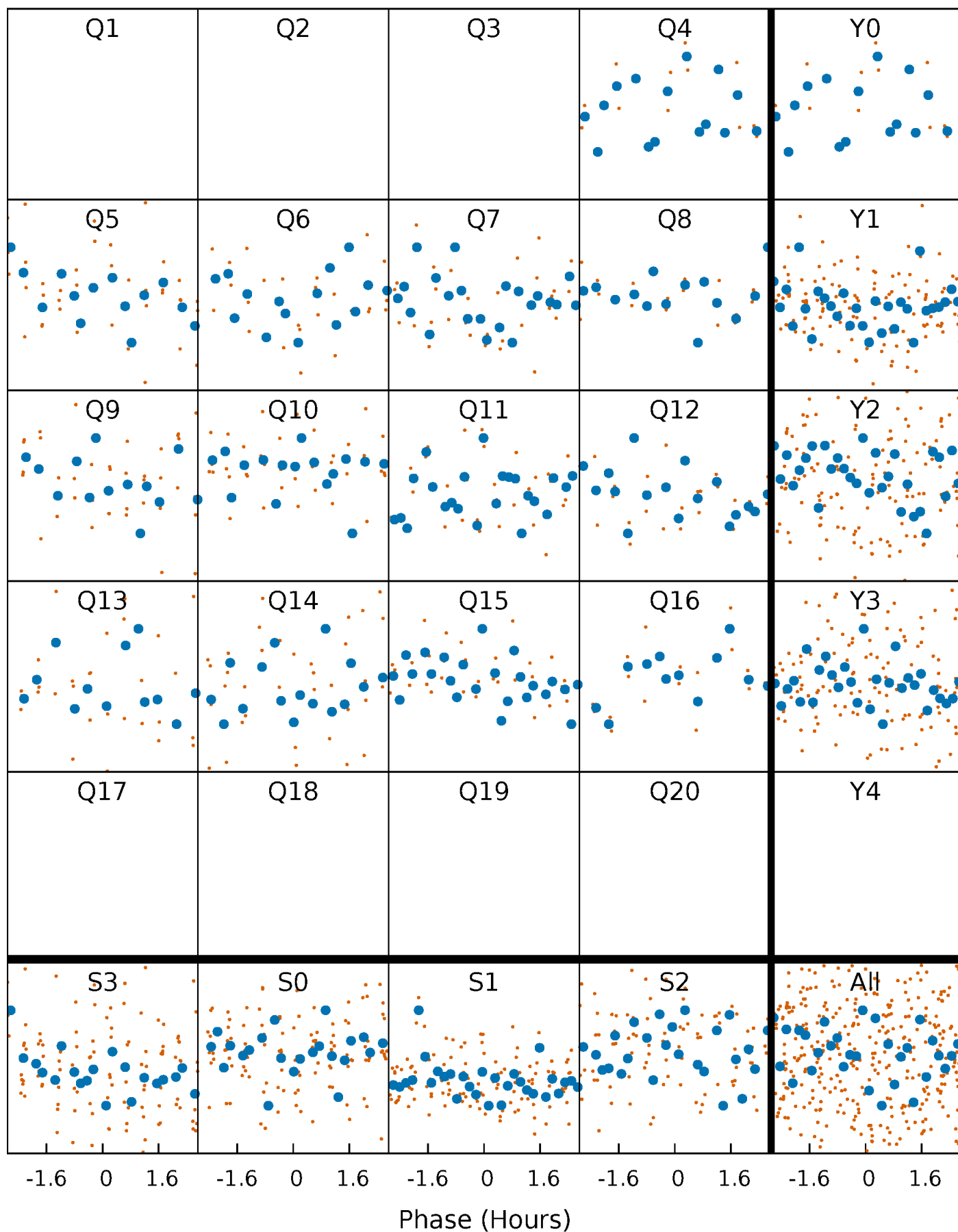


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



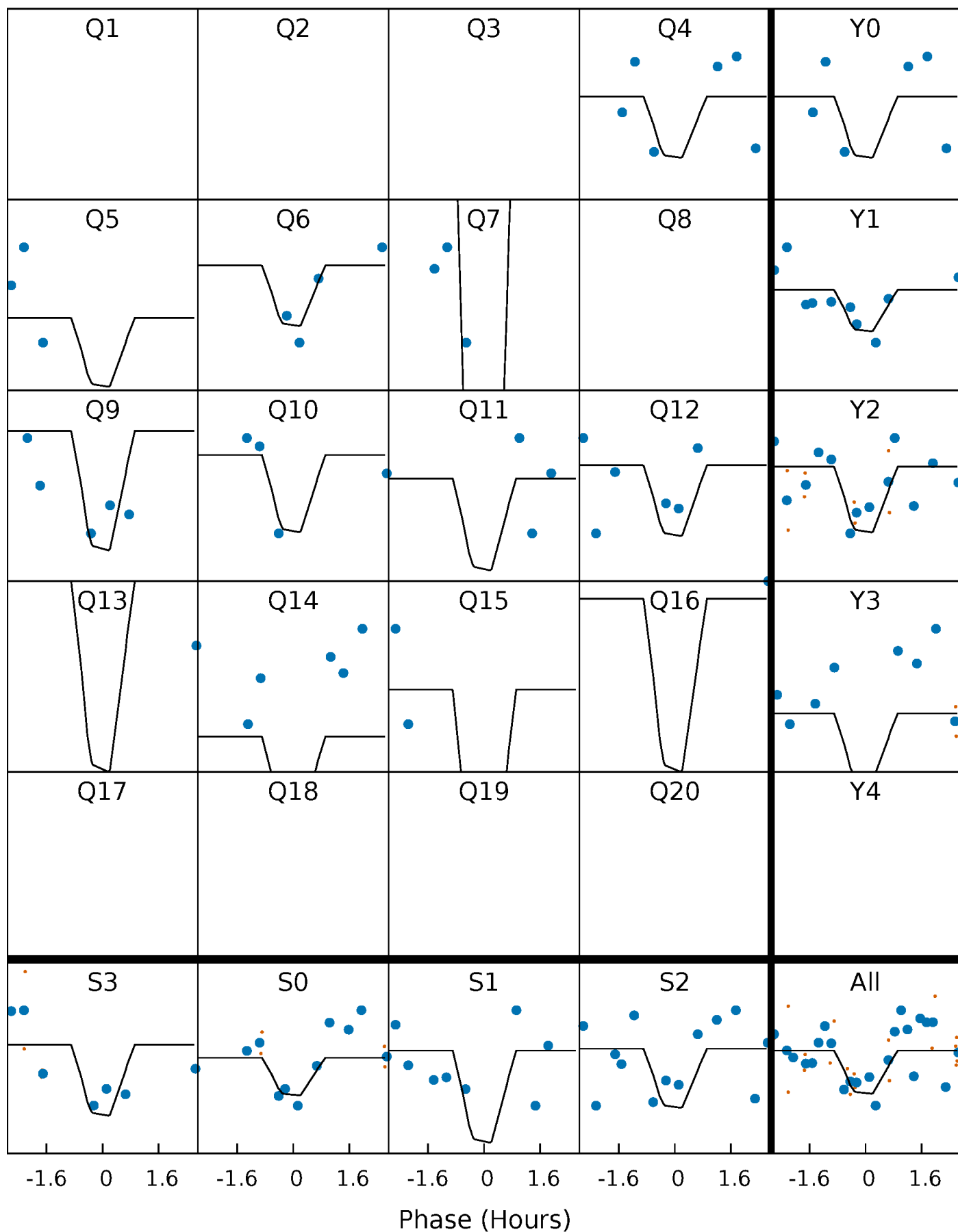
PDC Quarter-Phased Transit Curves

TCE 007618003-02 P= 25.747926 Days $T_0=142.411599$ (BKJD)



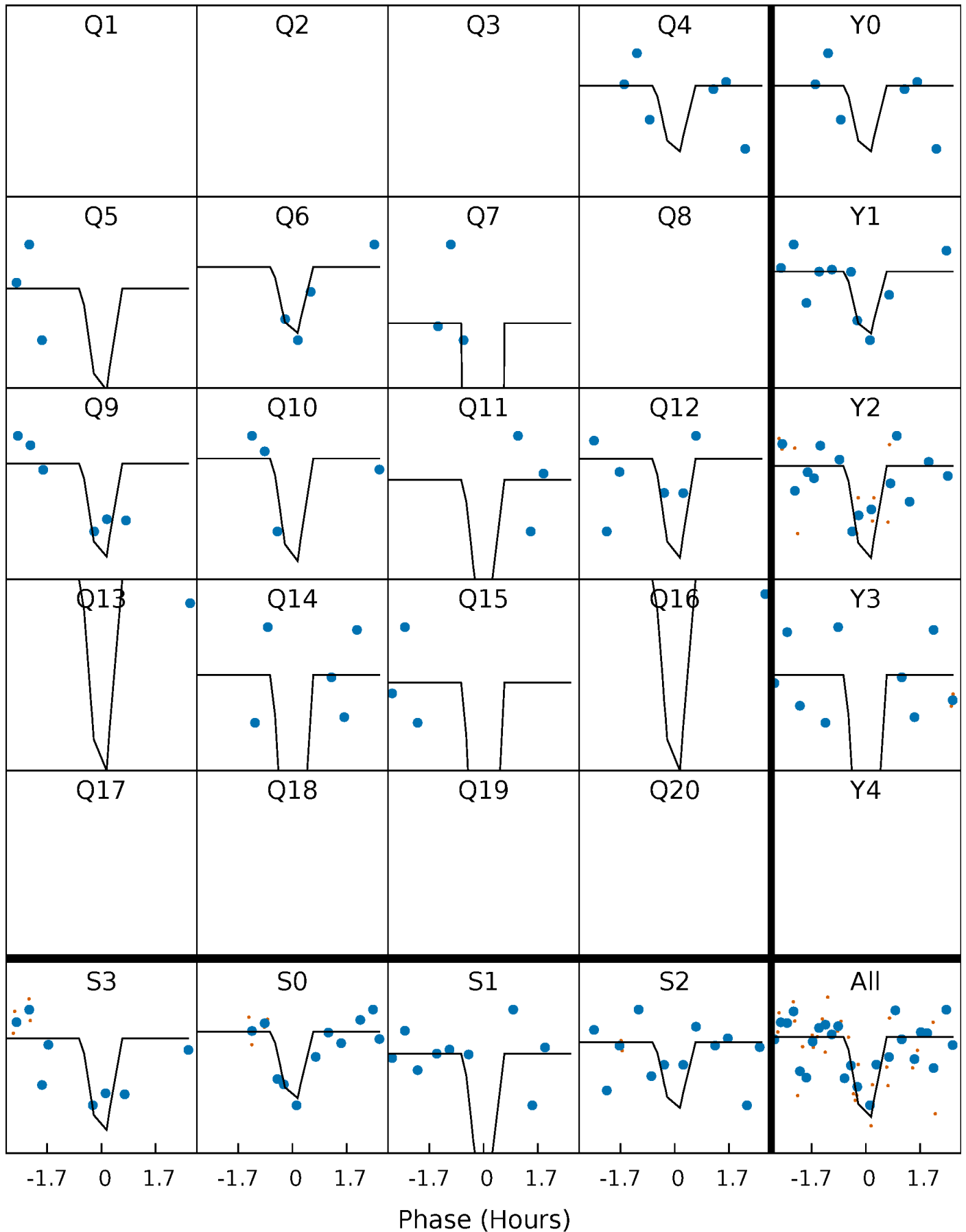
DV Quarter-Phased Transit Curves

TCE 007618003-02 P= 25.747926 Days $T_0=142.411599$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

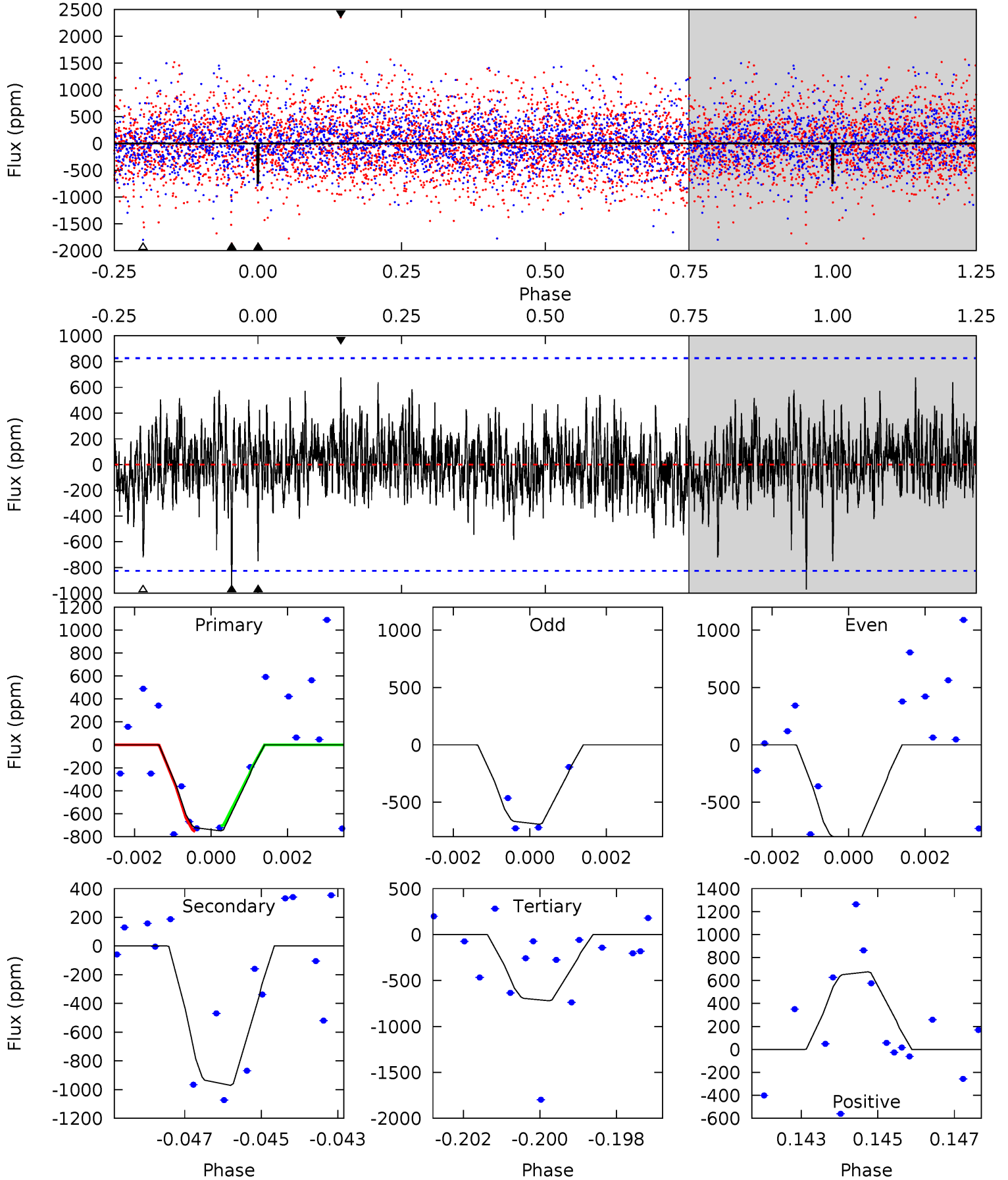
TCE 007618003-02 P= 25.747691 Days $T_0=142.417458$ (BKJD)



DV Model-Shift Uniqueness Test

007618003-02, P = 25.747926 Days, E = 142.411599 Days

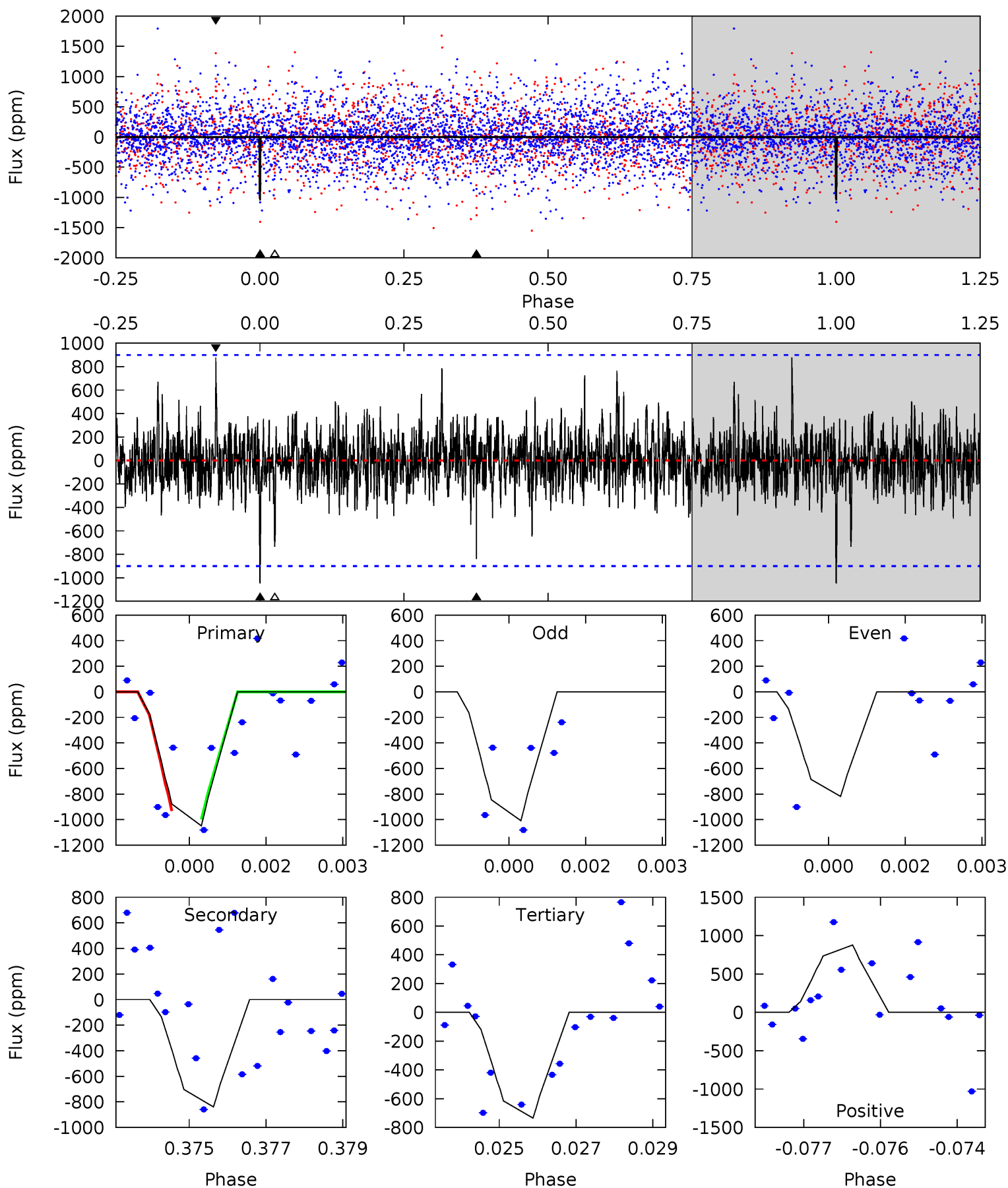
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.82	6.25	4.64	4.35	5.32	3.07	1.21	0.18	0.47	1.61	1.90	0.41	0.97	0.41	0.16



Alt Model-Shift Uniqueness Test

007618003-02, P = 25.747691 Days, E = 142.417458 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	5.00	4.37	5.22	5.36	3.14	1.10	1.87	1.02	0.62	-0.23	0.80	0.99	0.46	0.20



Stellar Parameters For KIC 007618003

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5496^{+199}_{-182}	$4.464^{+0.108}_{-0.148}$	$-0.200^{+0.300}_{-0.300}$	$0.878^{+0.191}_{-0.111}$	$0.818^{+0.120}_{-0.065}$	$1.704^{+0.761}_{-0.725}$
	+4%/-3%	+2%/-3%	+150%/-150%	+22%/-13%	+15%/-8%	+45%/-43%
Source	KIC0	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 007618003-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-971 ± 155	$8.22^{+8.59}_{-5.48}$	800^{+48}_{-43}	3716^{+2112}_{-712}	197^{+1737}_{-148}
Alt.	-839 ± 168	$9.07^{+8.58}_{-6.25}$	799^{+50}_{-44}	3526^{+2078}_{-637}	142^{+1451}_{-106}

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 $A_{obs} \gg 1.0$

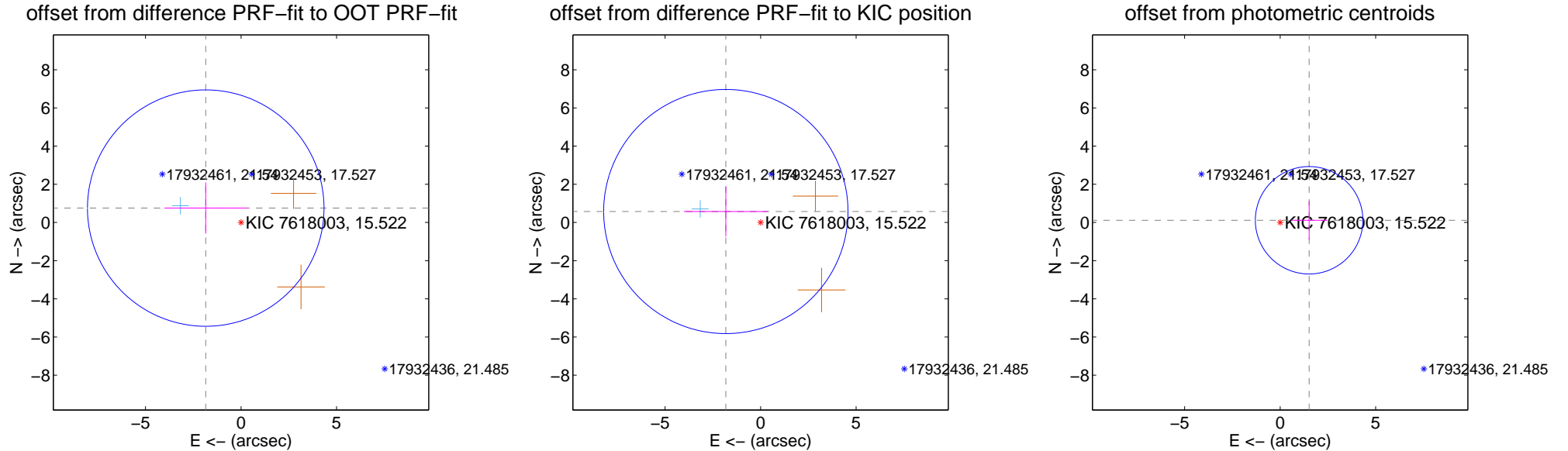
DV Centroid Data

Supplemental centroid analysis for 007618003-02. Kepler magnitude: 15.52. Transit SNR 10.11

There are 1 quarters with good PRF difference image offsets

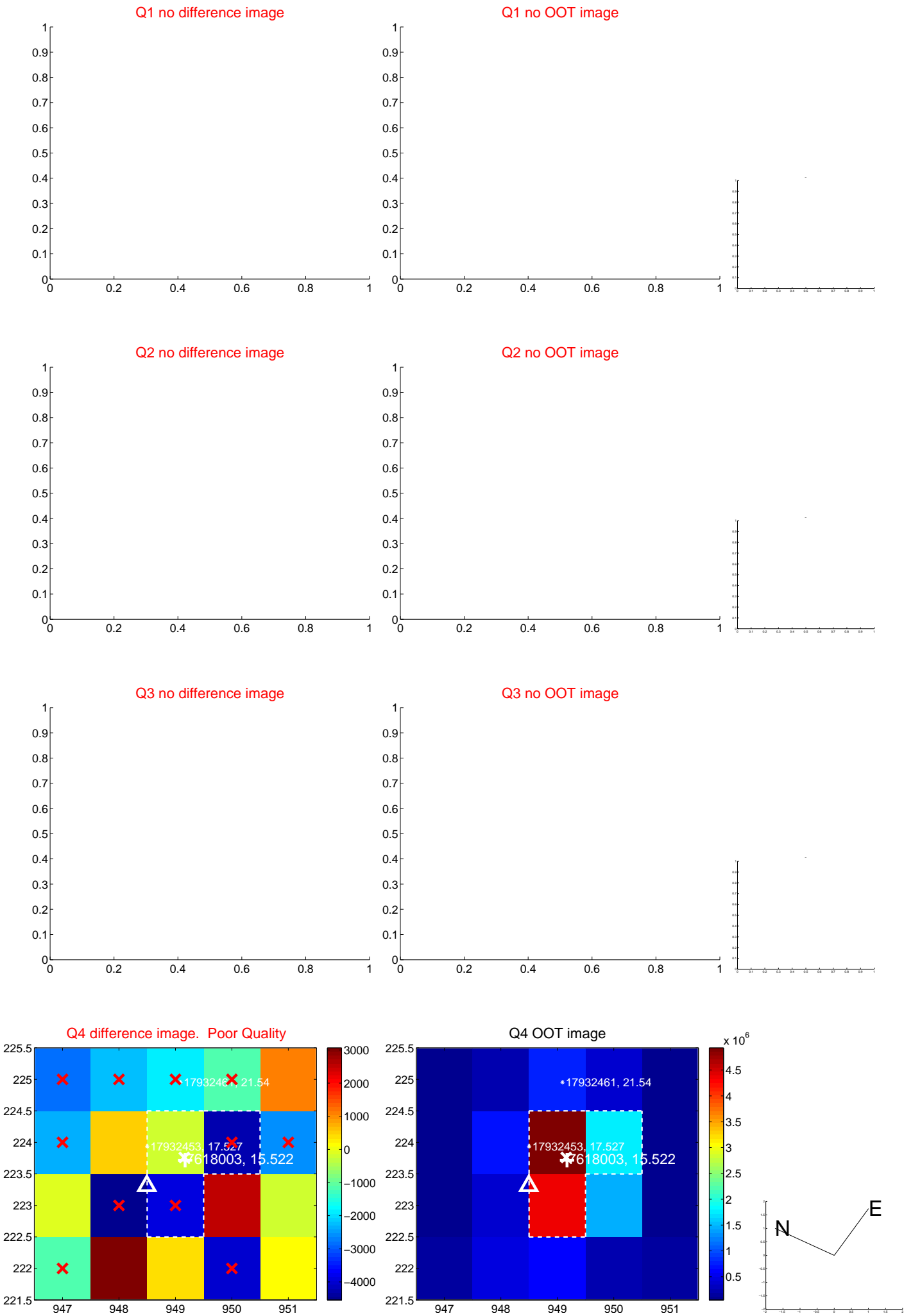
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.996 ± 2.064	0.97	1.848 ± 2.161	0.754 ± 1.339
PRF-fit source offset from KIC position	1.909 ± 2.132	0.90	1.820 ± 2.197	0.575 ± 1.314
photometric centroid source offset	1.52 ± 0.94	1.62	-1.52 ± 0.94	0.12 ± 1.01

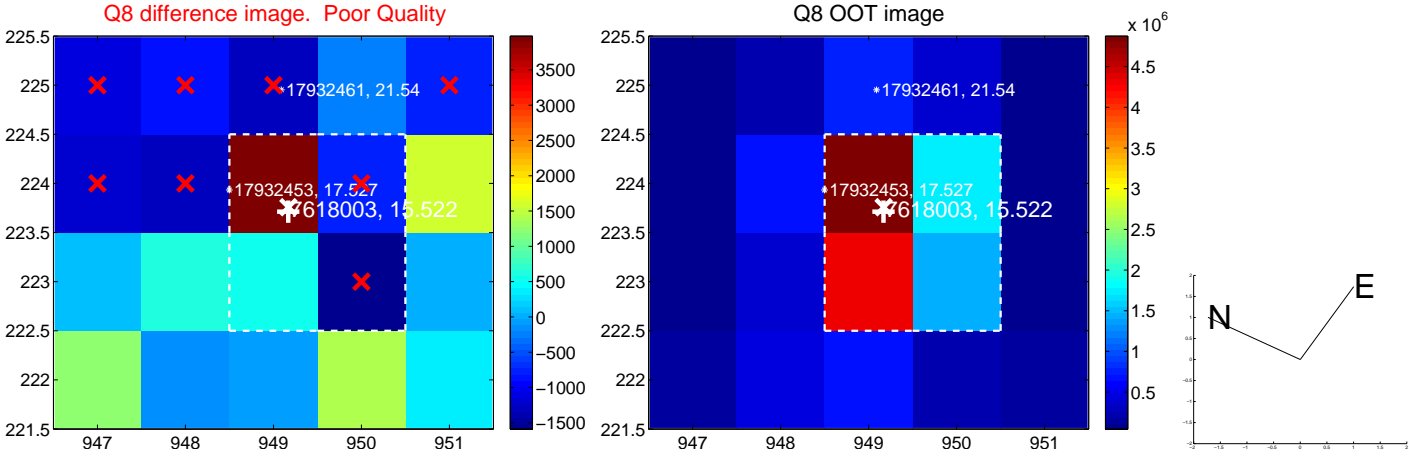
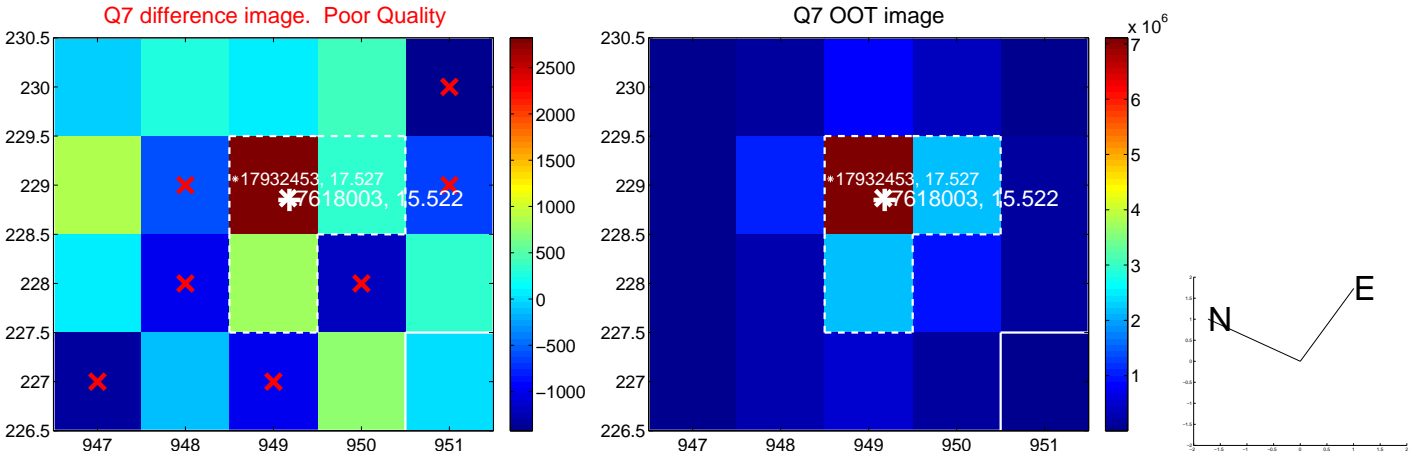
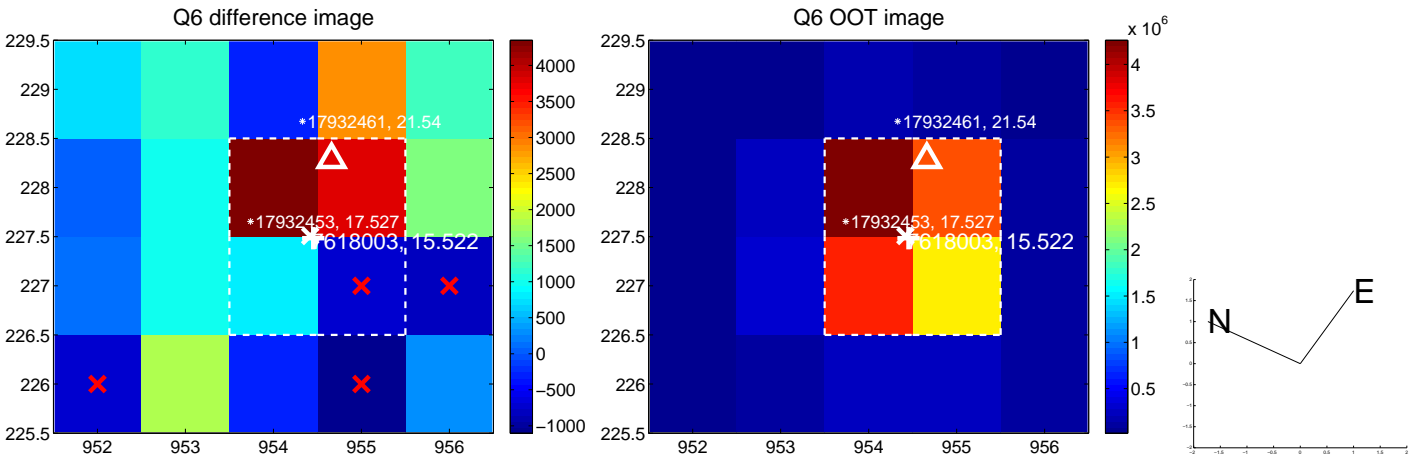
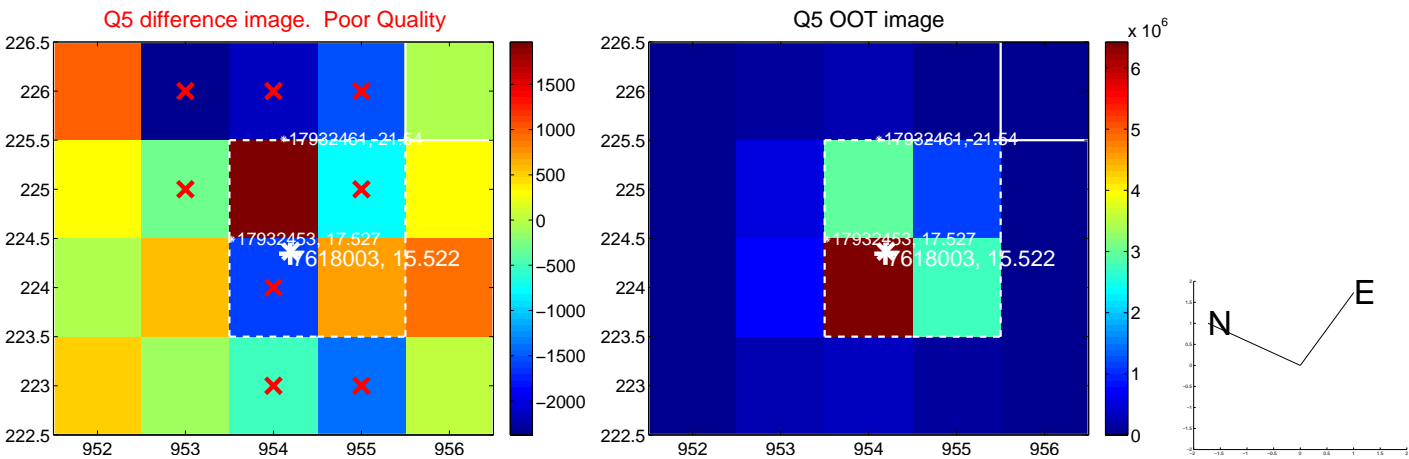


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

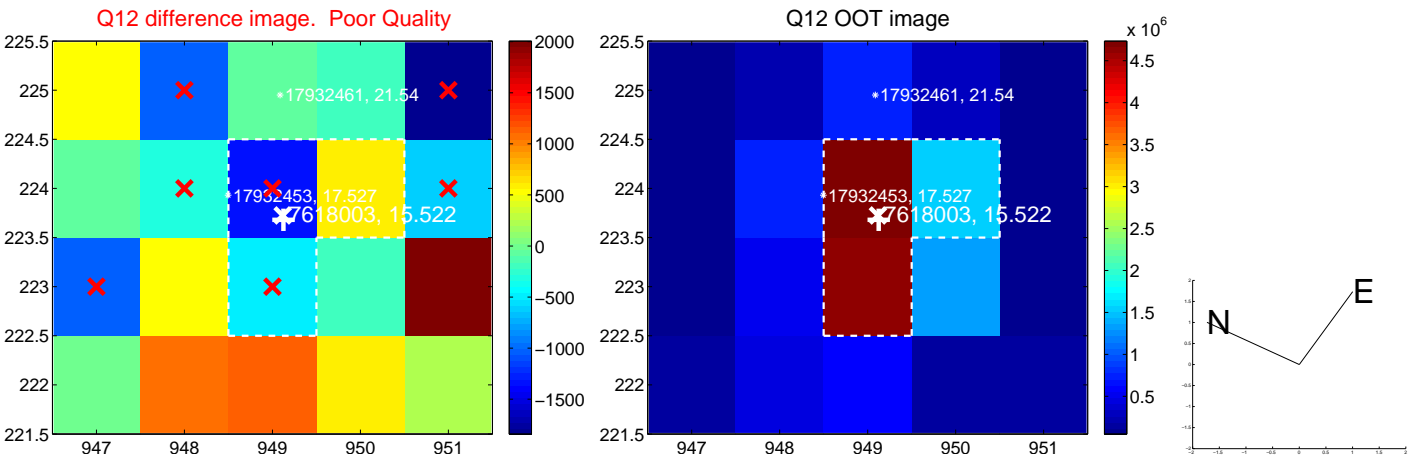
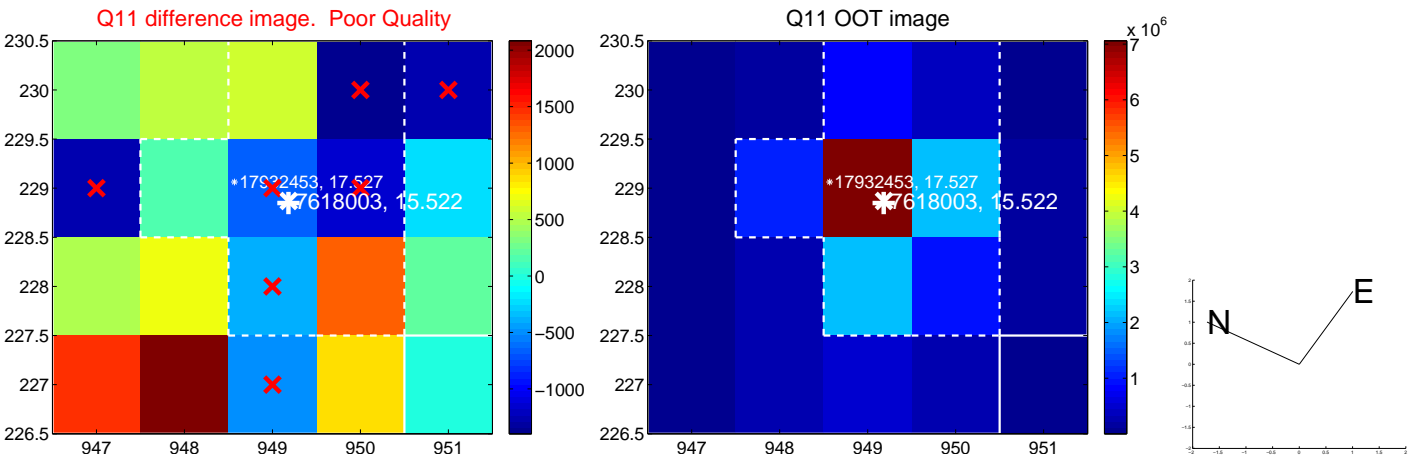
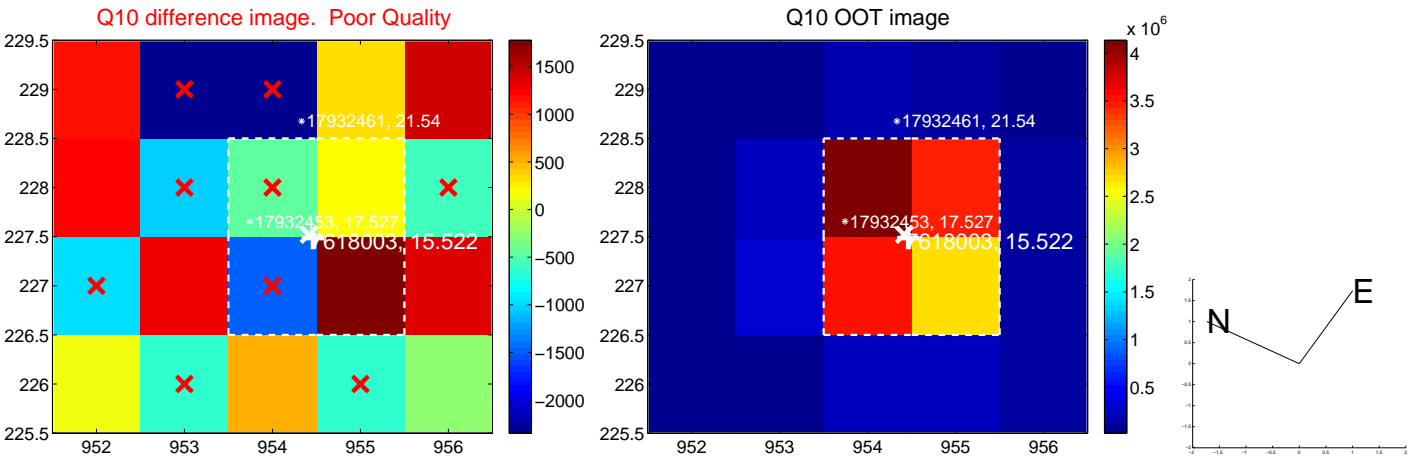
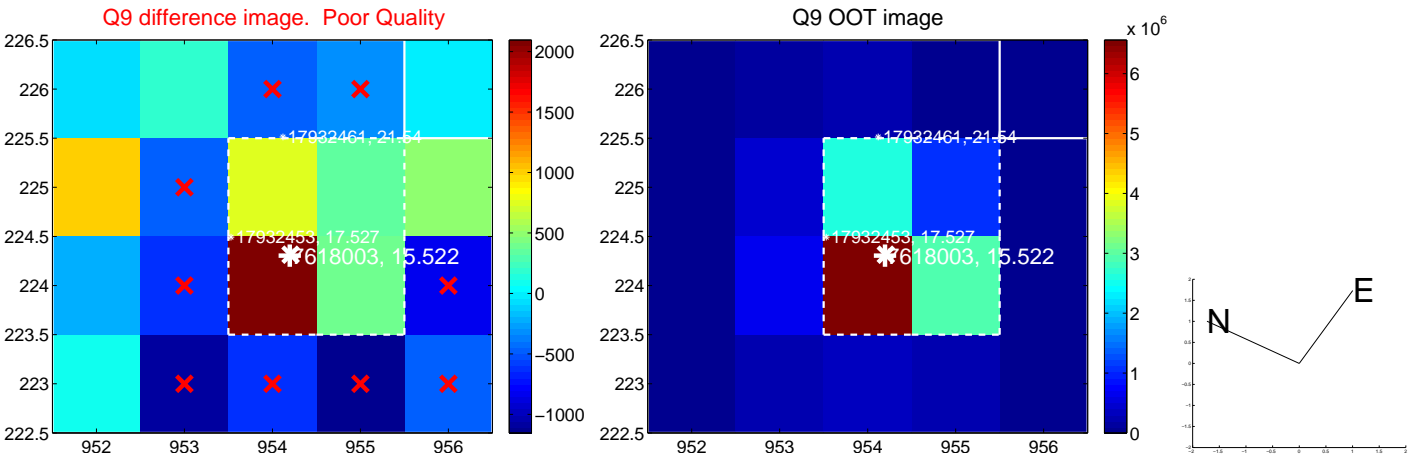
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



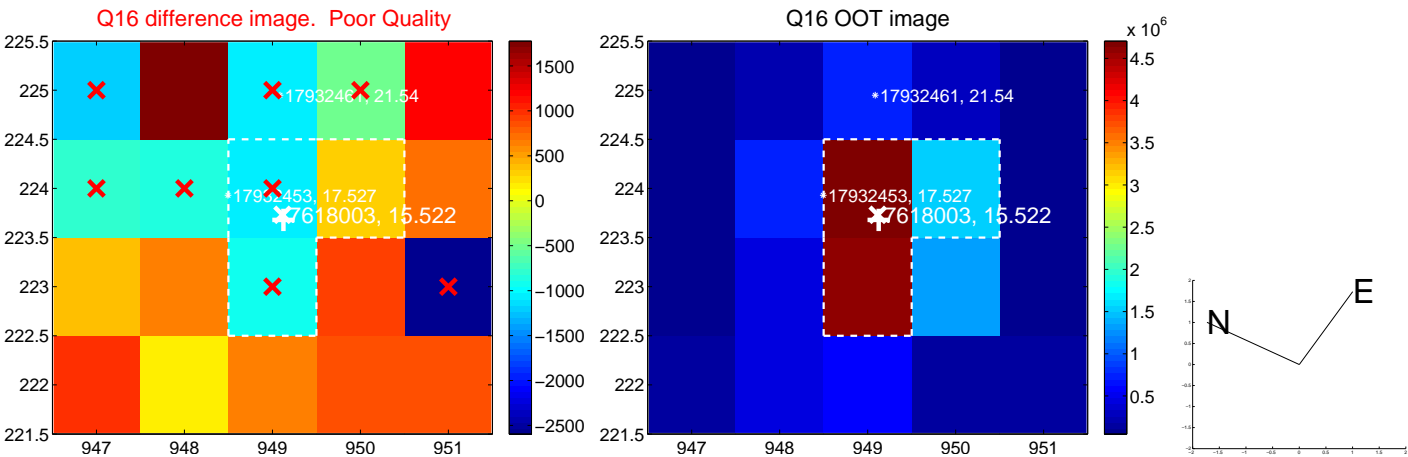
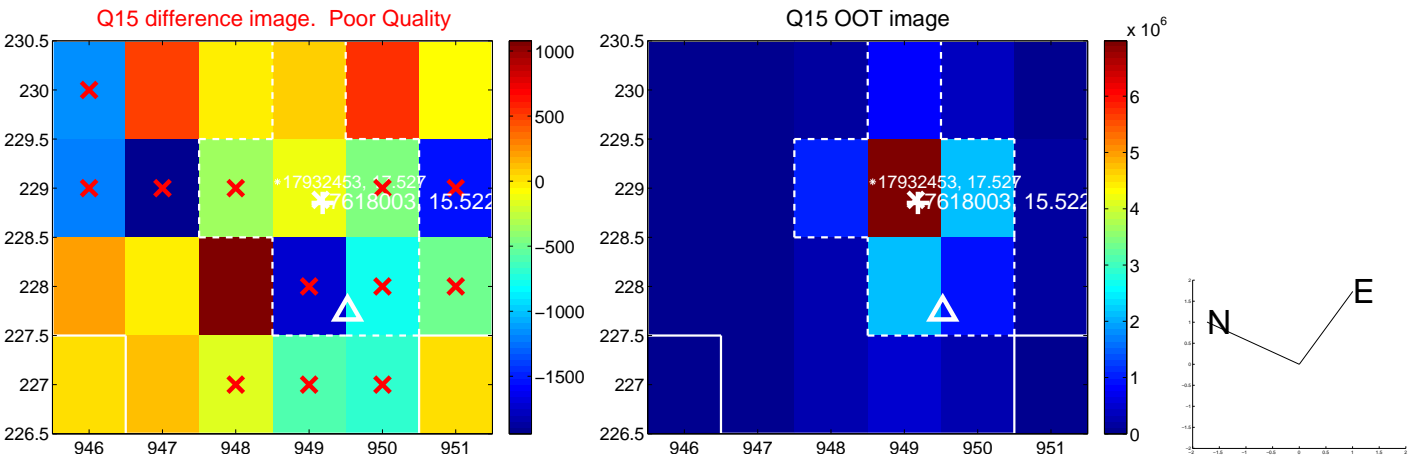
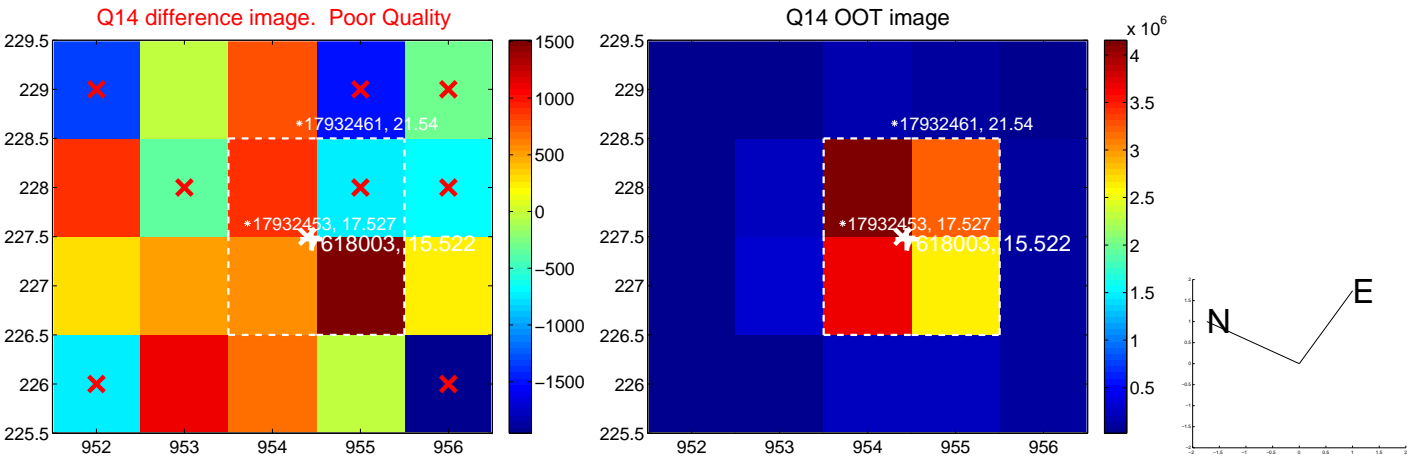
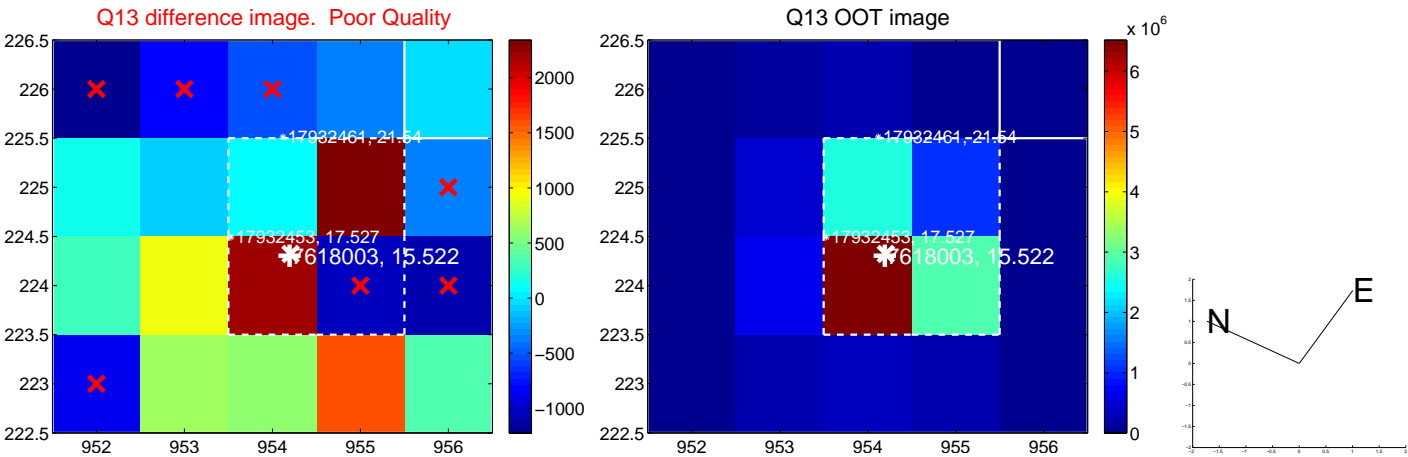
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



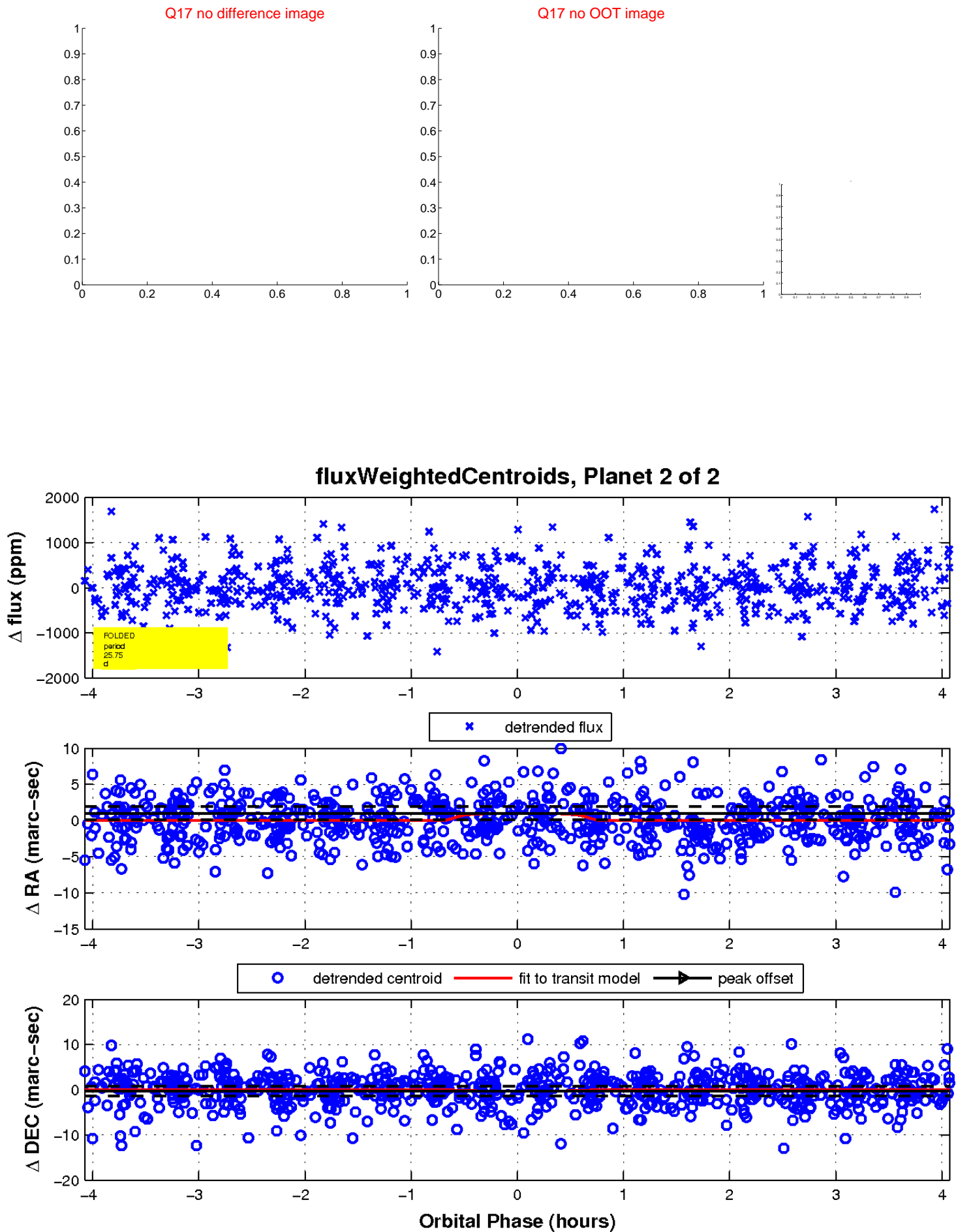
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

