

KIC 007256125

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})
007256125-01	OBS	No	71.376644	167.304988	3252.9	2.072	10.0	7.7	0.76	4539	4.13	2.34
007256125-02	OBS	No	158.875377	250.803097	3369.9	5.012	10.2	6.8	0.76	4539	4.47	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007256125-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
007256125-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

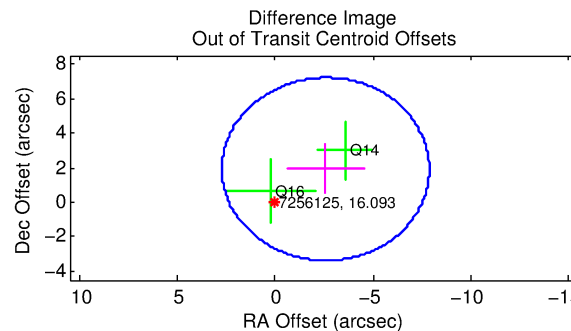
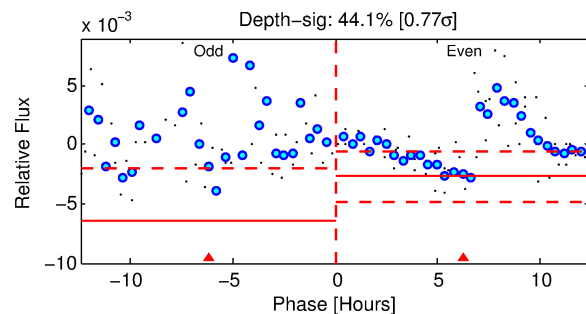
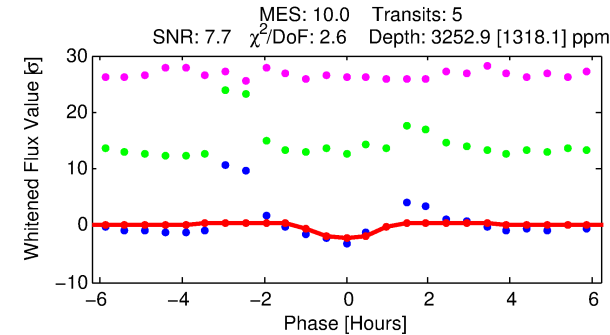
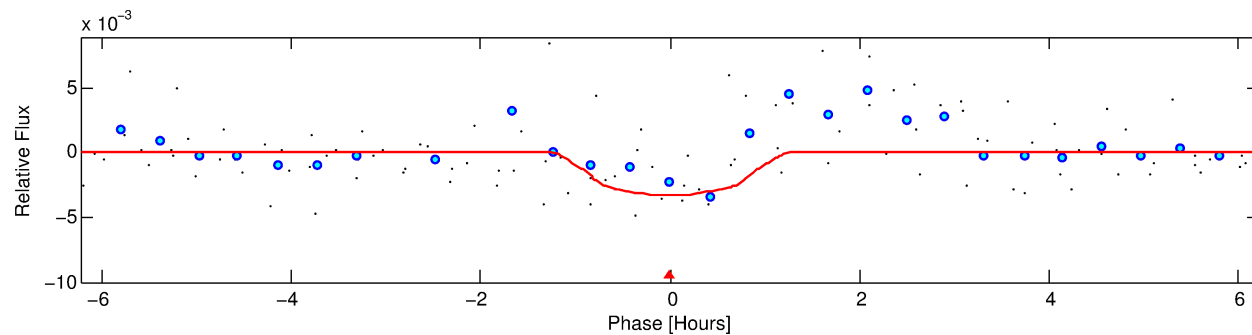
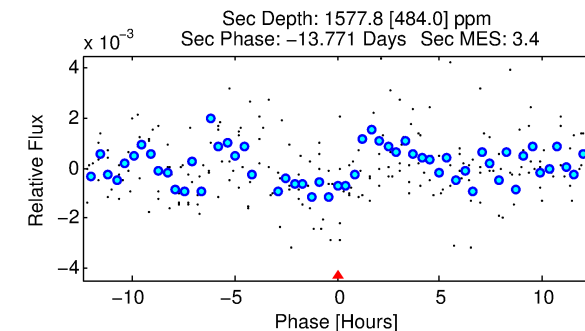
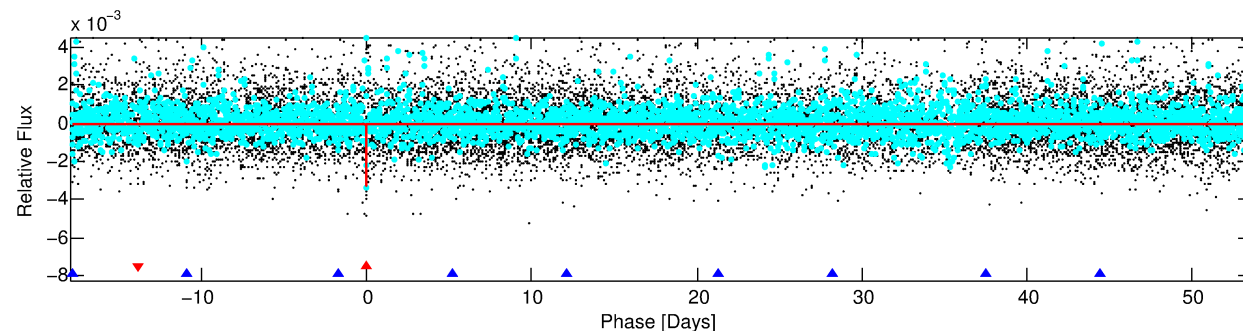
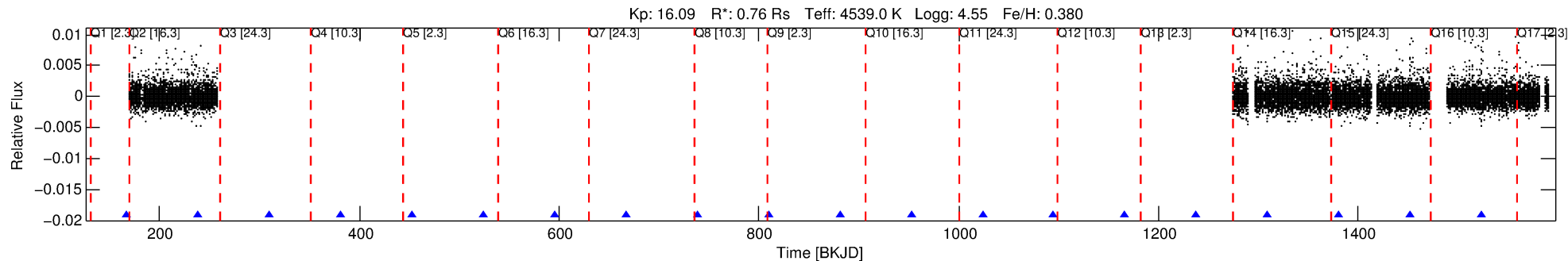
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007256125-01

No Significant Match Found

DV One-Page Summary

KIC: 7256125 Candidate: 1 of 2 Period: 71.377 d



DV Fit Results:

Period = 71.37664 [0.00126] d
Epoch = 167.3050 [0.0201] BKJD
Rp/R* = 0.0499 [0.3541]
a/R* = 276.17 [5375.23]
b = 0.02 [912.56]
Seff = 2.34 [0.39]
Teq = 315 [13] K
Rp = 4.13 [29.33] Re
a = 0.3059 [0.0231] AU
Ag = 4763.69 [67682.59] [0.07σ]
Teff = 4052 [14391] K [0.2σ]

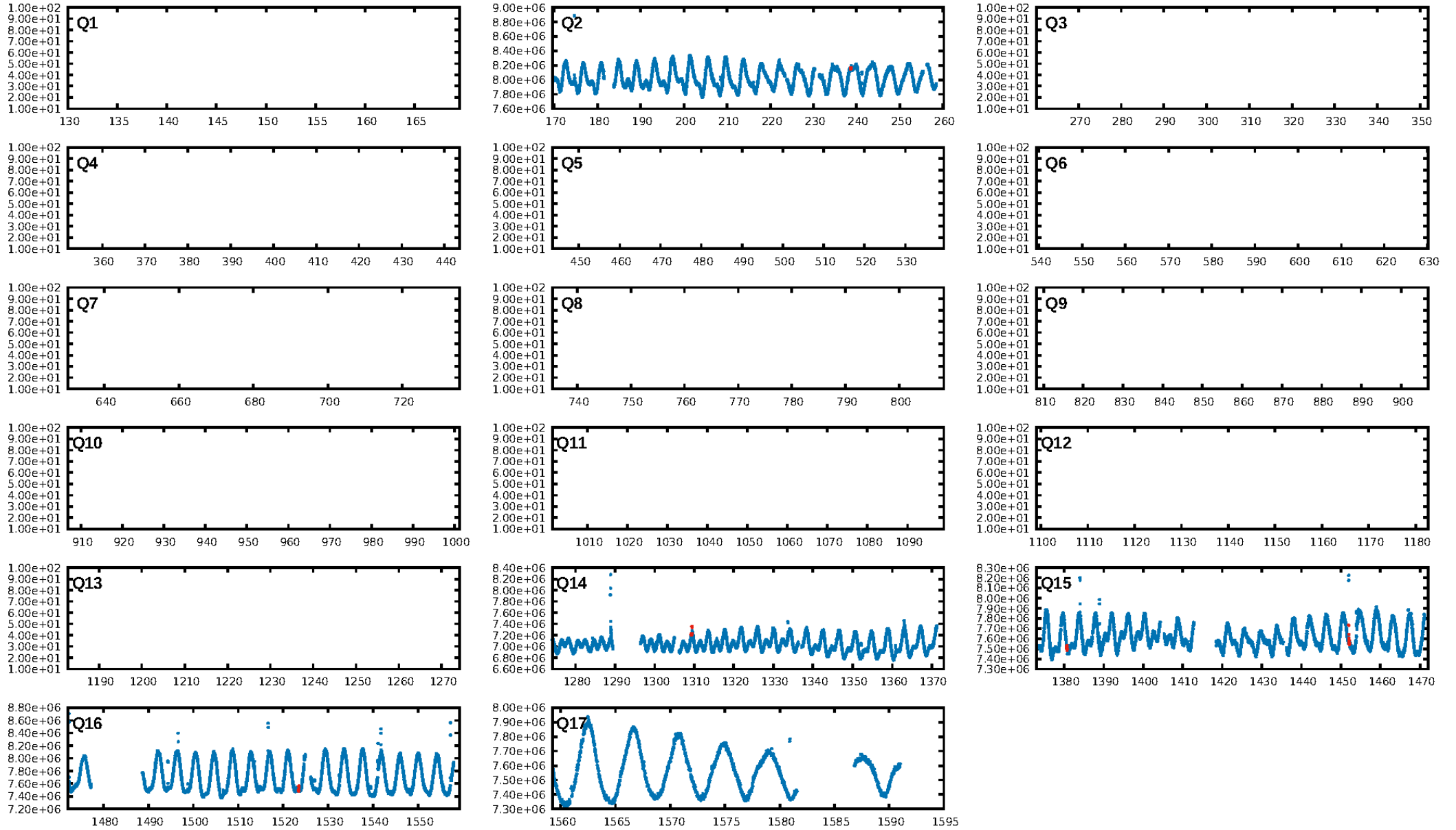
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [387.17σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 5.4%
Bootstrap-pfa: 3.89e-19
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.135
Centroid-sig: 27.8%
Centroid-so: 2.002 arcsec [1.20σ]
OotOffset-rm: 3.210 arcsec [1.82σ]
KicOffset-rm: 3.251 arcsec [1.44σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [4/4]

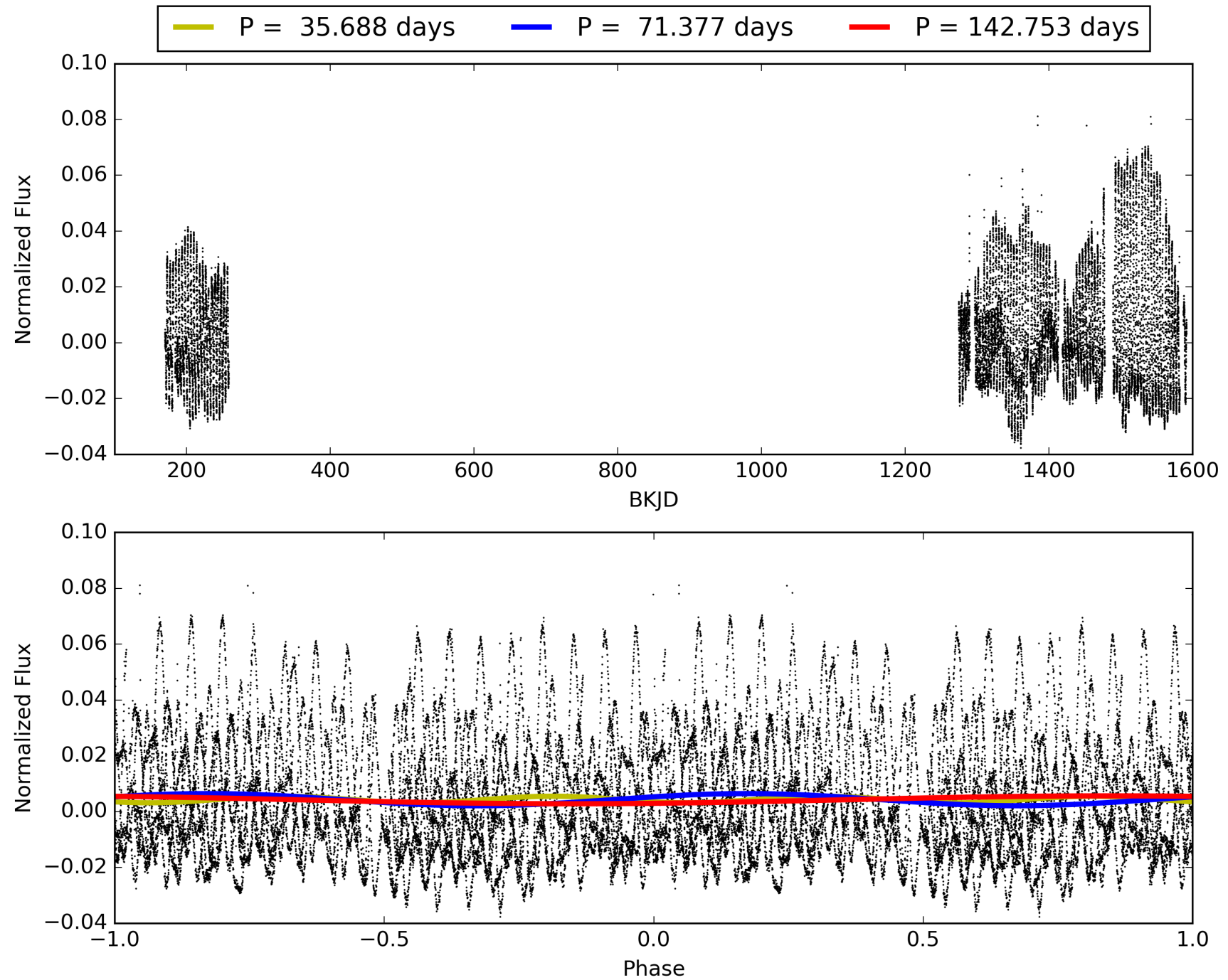
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:56:34 Z

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

TCE 007256125-01, PDC Light Curves

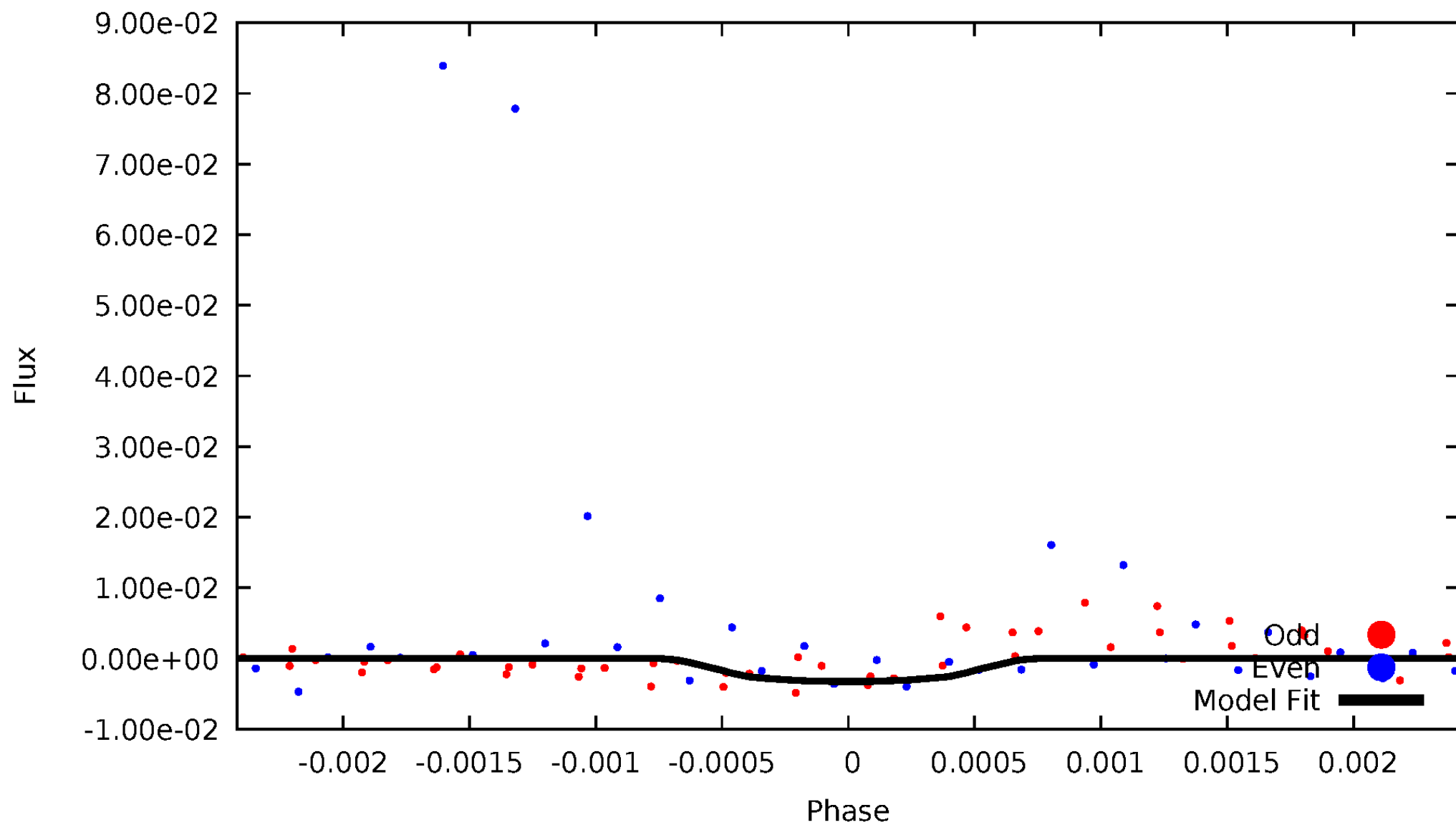


TCE 007256125-01



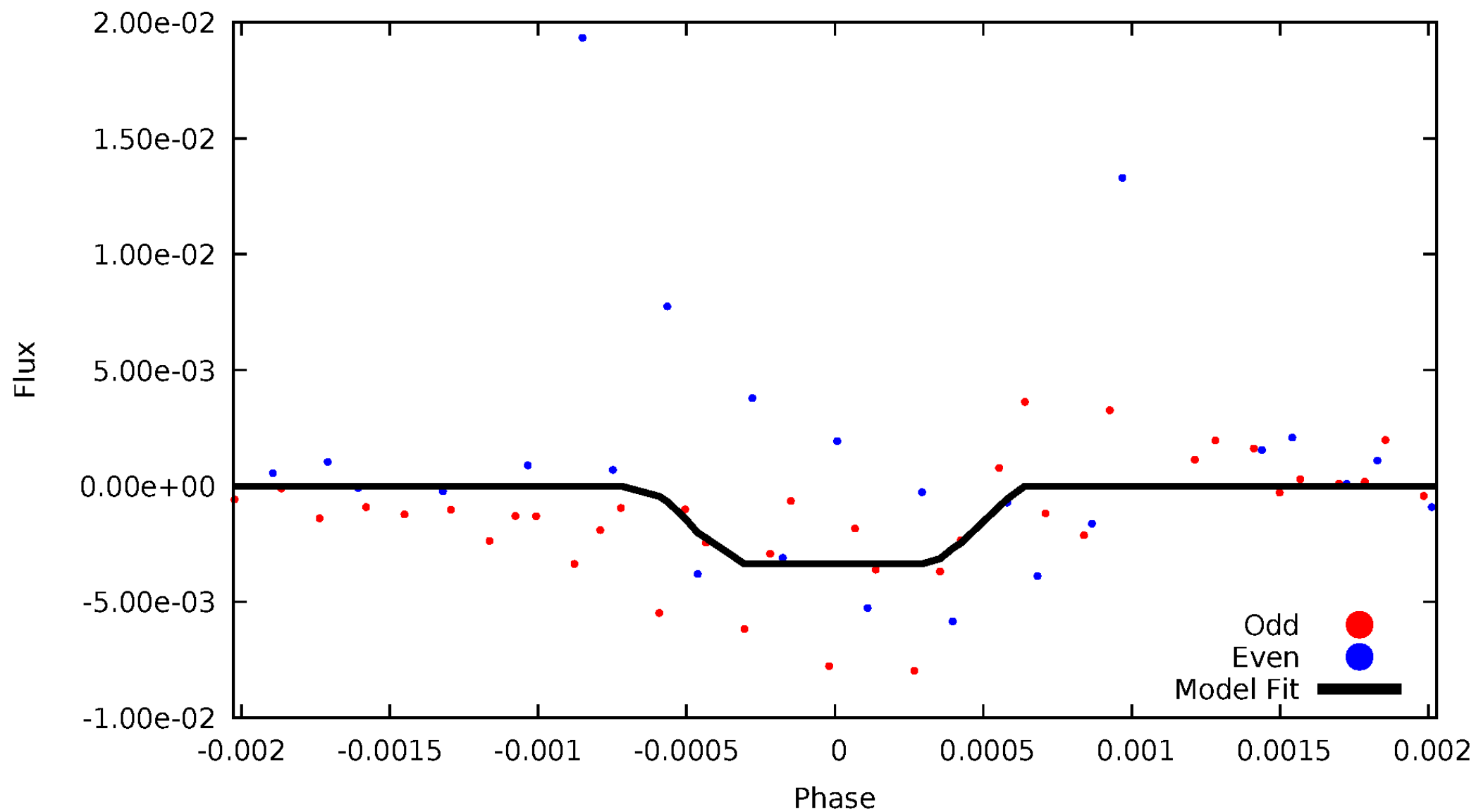
DV Odd/Even

TCE 007256125-01

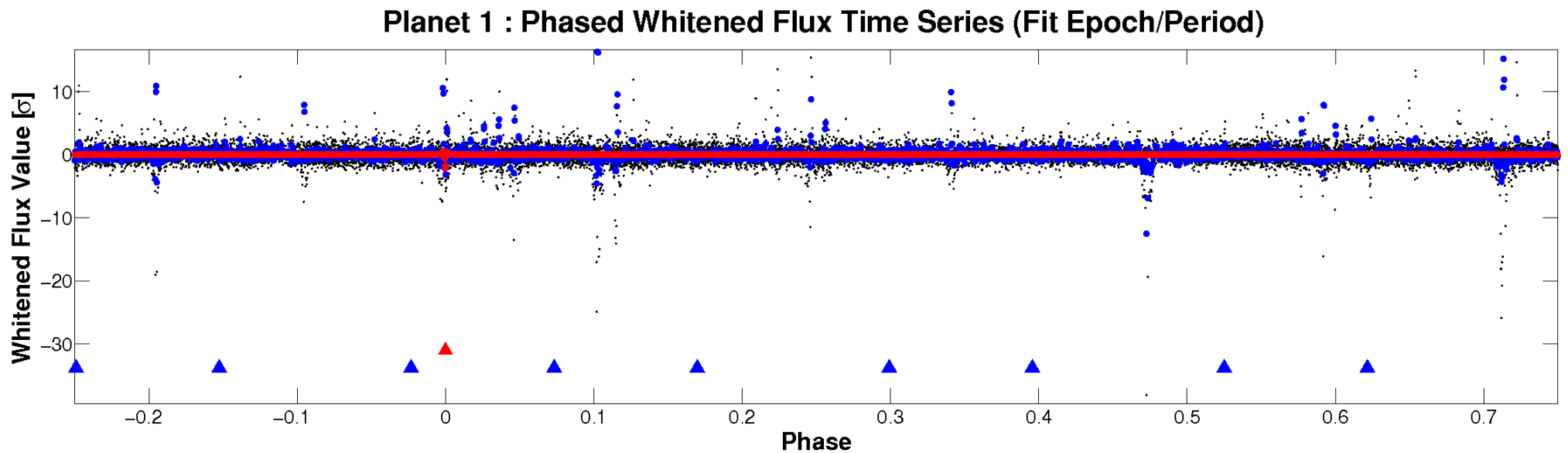
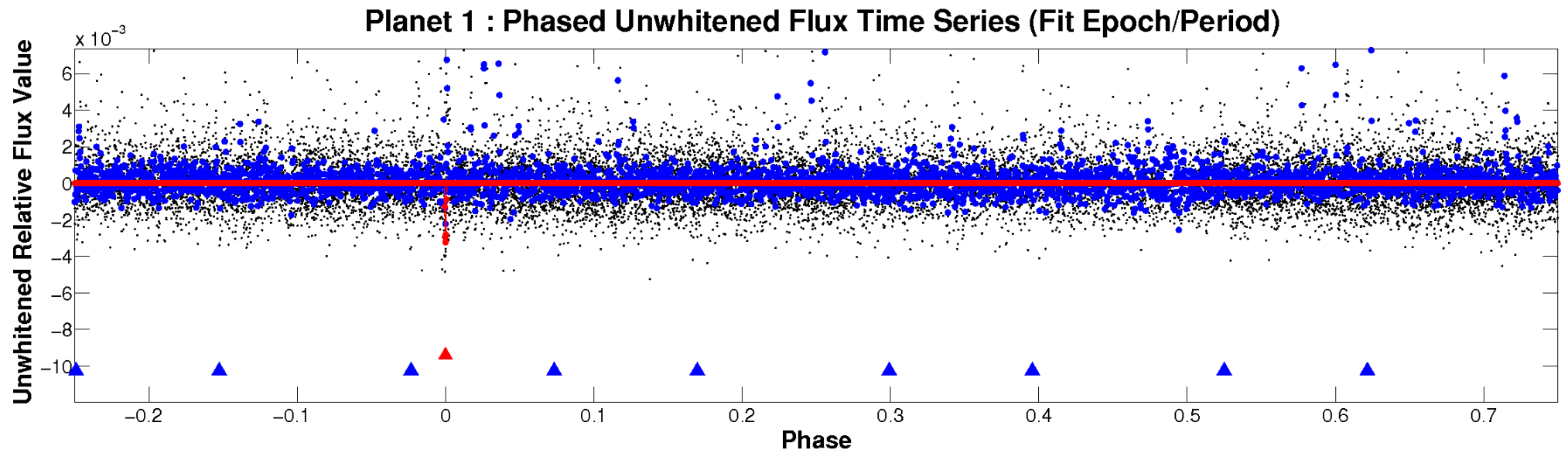


ALT Odd/Even

TCE 007256125-01

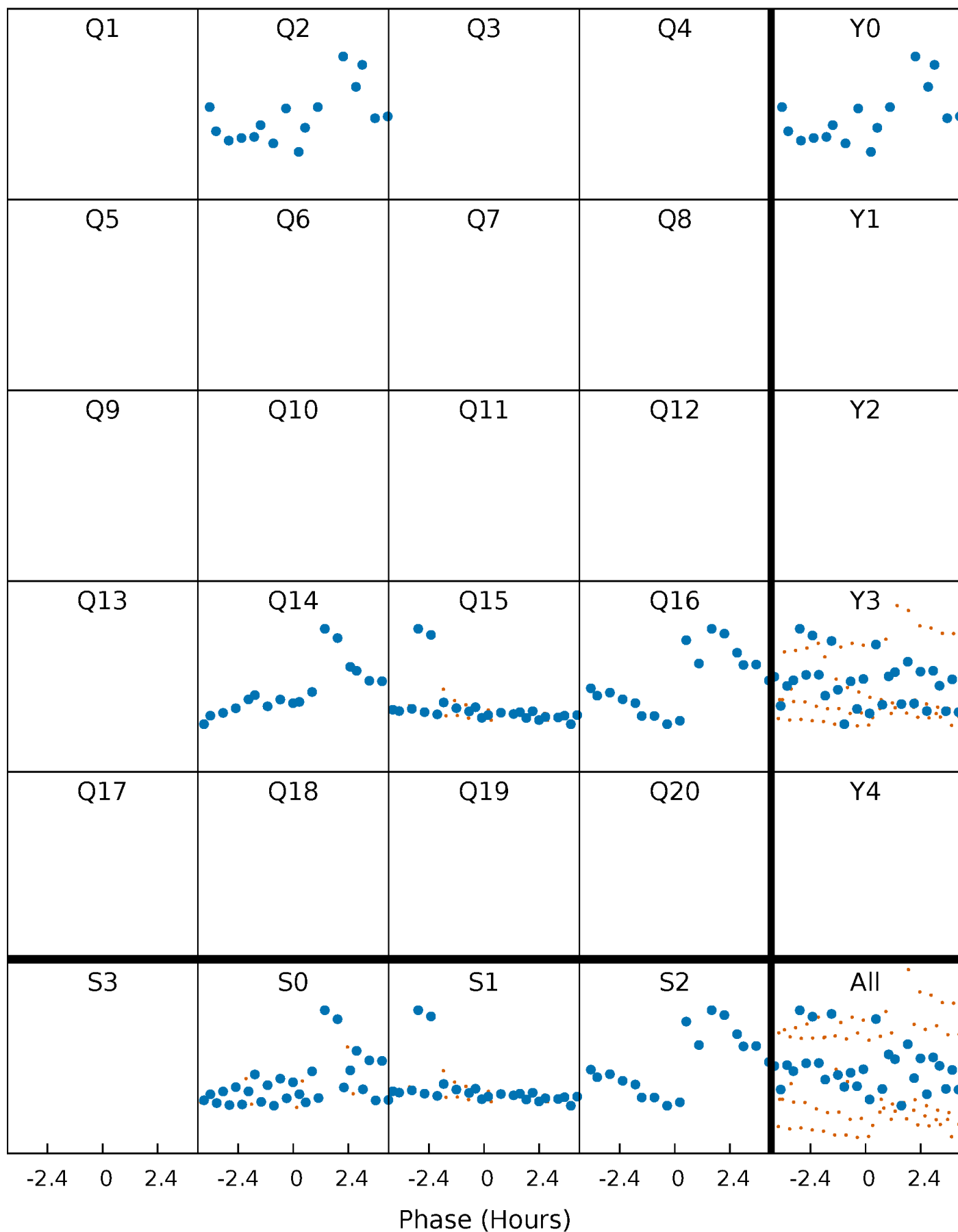


Non-Whitened Vs. Whitened Light Curve



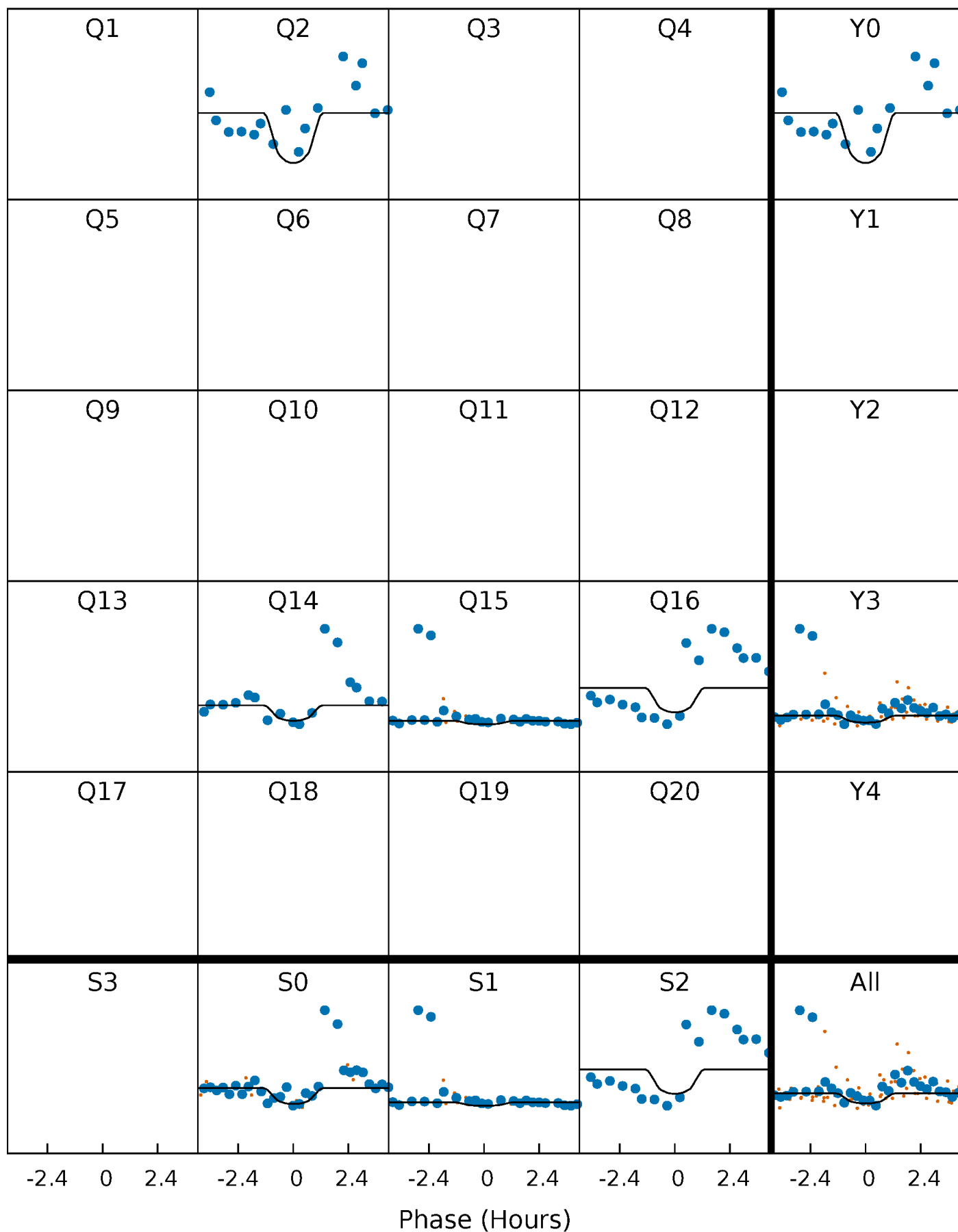
PDC Quarter-Phased Transit Curves

TCE 007256125-01 P= 71.376644 Days $T_0=167.304989$ (BKJD)



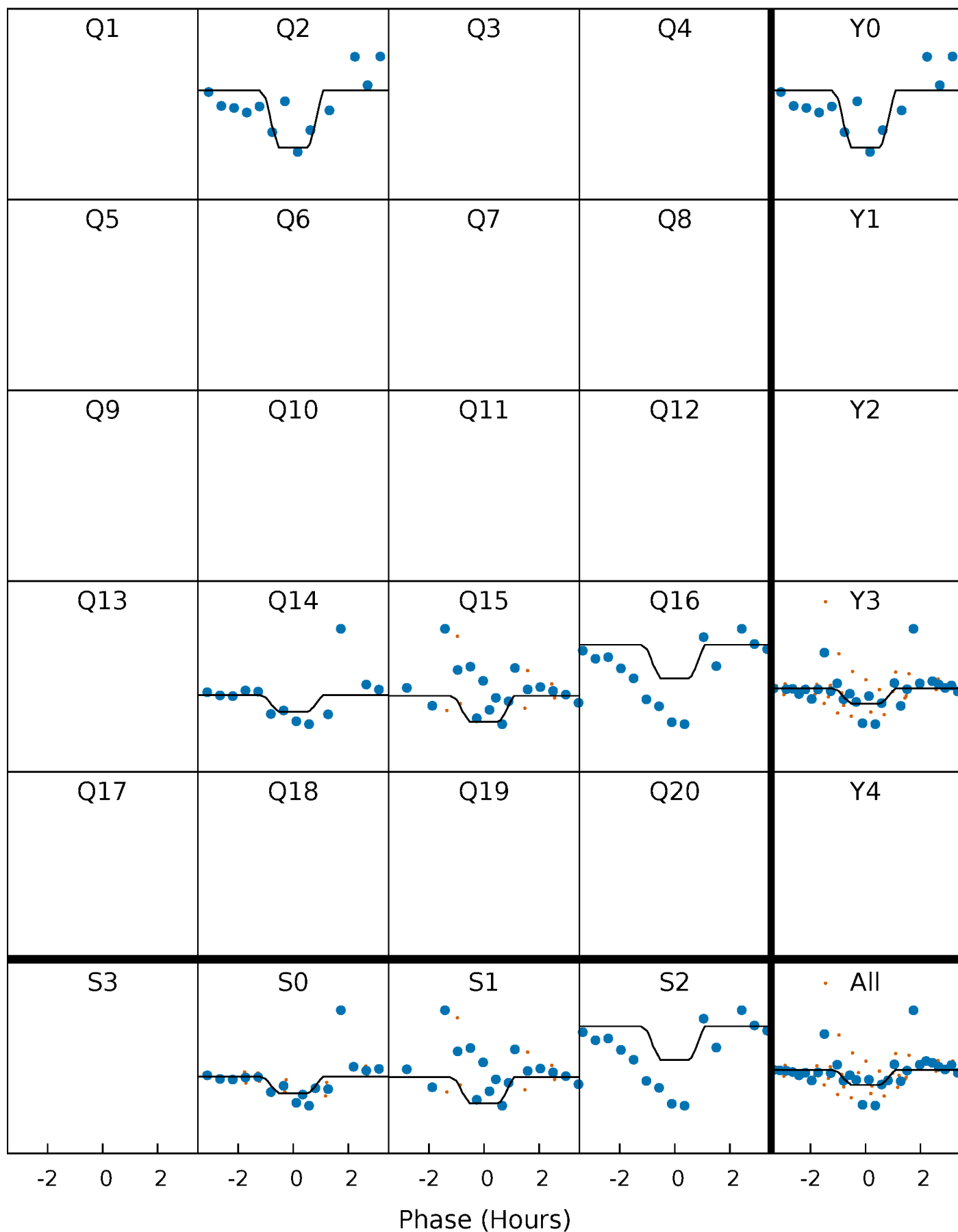
DV Quarter-Phased Transit Curves

TCE 007256125-01 P= 71.376644 Days $T_0=167.304989$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

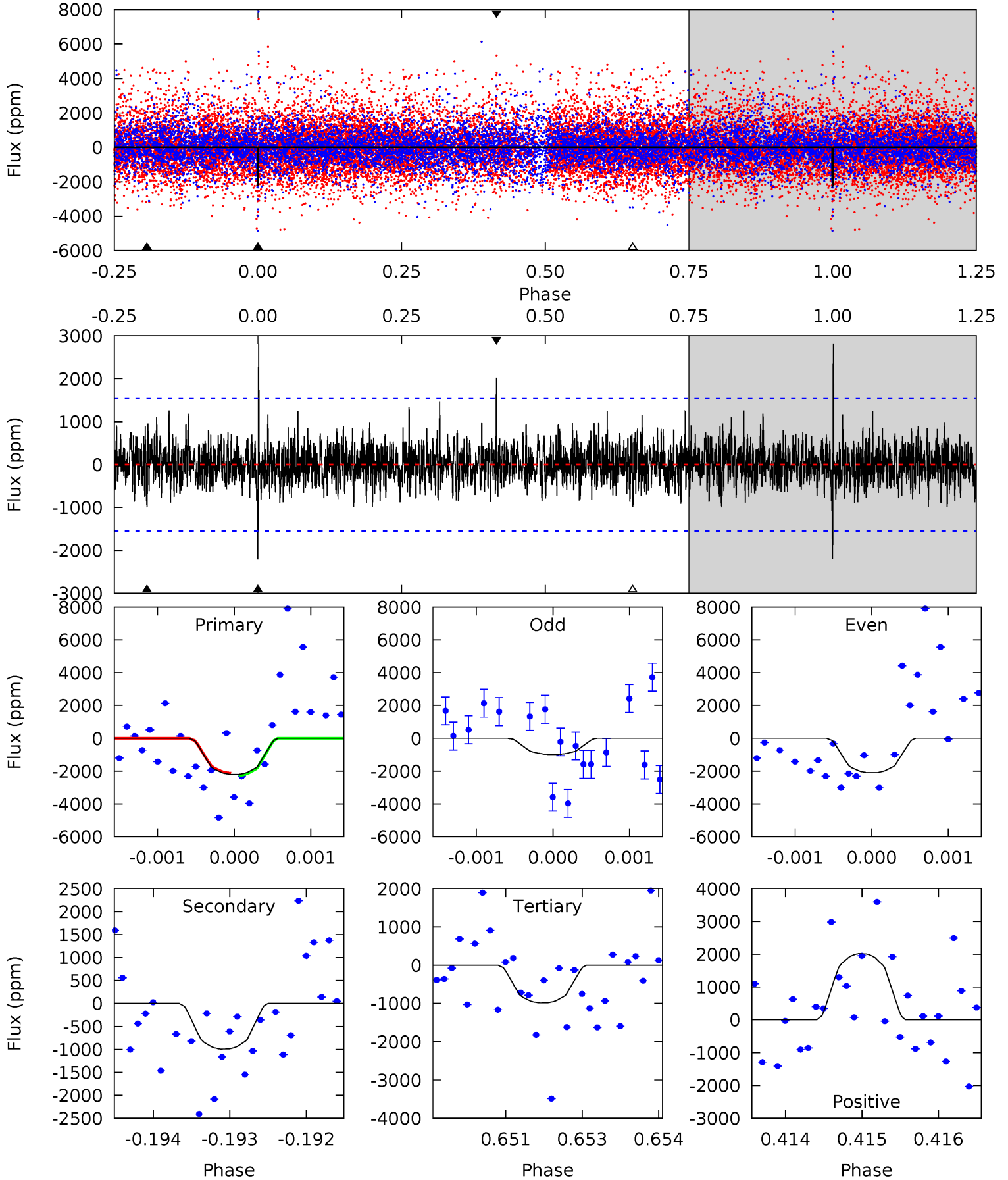
TCE 007256125-01 P= 71.376093 Days $T_0=167.301969$ (BKJD)



DV Model-Shift Uniqueness Test

007256125-01, P = 71.376644 Days, E = 167.304989 Days

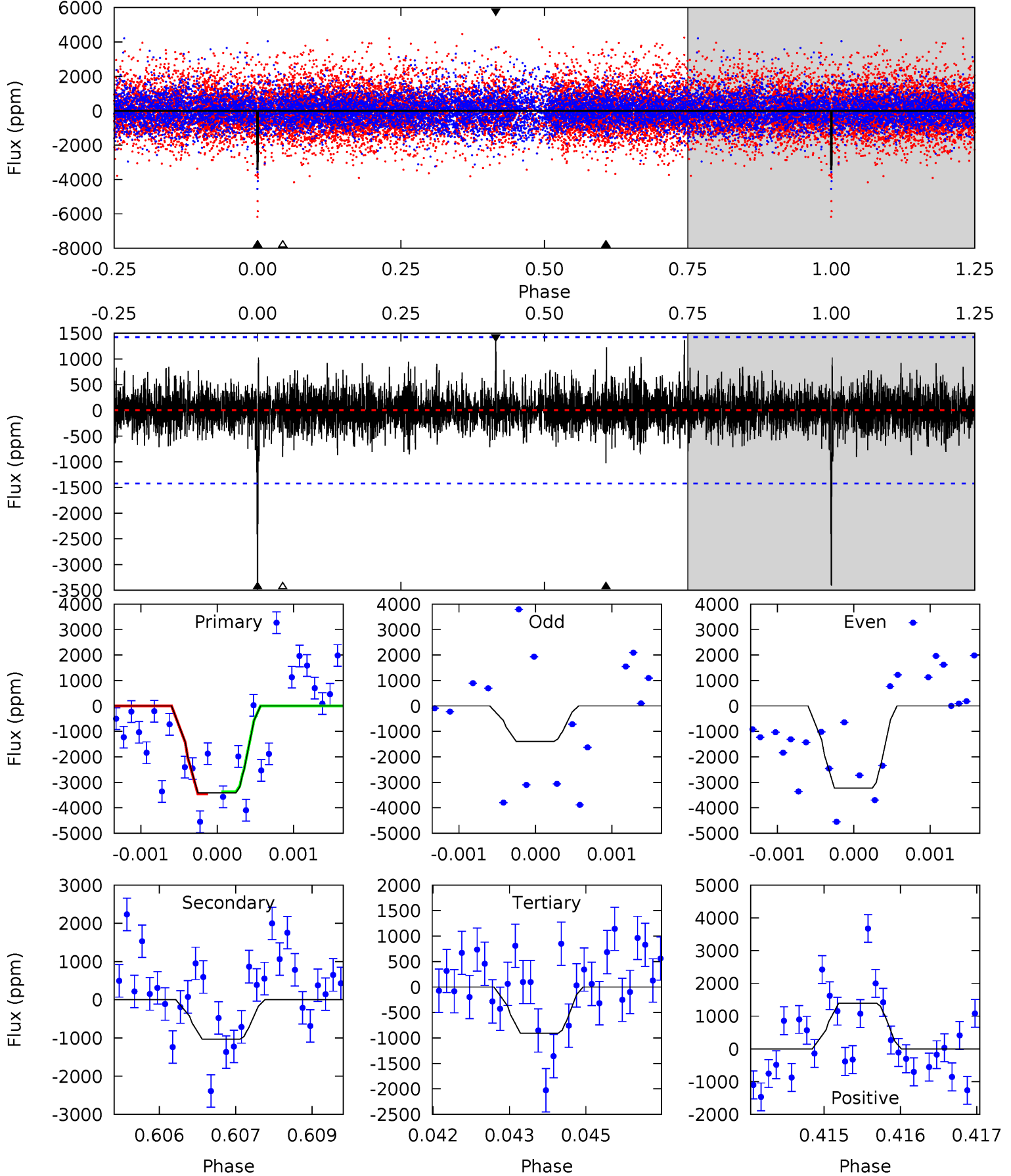
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.72	3.48	3.45	7.06	5.40	3.21	1.24	4.27	0.66	0.03	-3.58	1.73	0.87	0.56	0.26



Alt Model-Shift Uniqueness Test

007256125-01, P = 71.376093 Days, E = 167.301969 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	3.91	3.45	5.30	5.42	3.24	1.05	9.51	7.66	0.47	-1.39	3.65	1.10	0.29	0



Stellar Parameters For KIC 007256125

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4539^{+137}_{-137}	$4.552^{+0.068}_{-0.018}$	$0.380^{+0.100}_{-0.300}$	$0.759^{+0.026}_{-0.062}$	$0.748^{+0.038}_{-0.048}$	$2.412^{+0.660}_{-0.187}$
	+3%/-3%	+1%/-0%	+26%/-79%	+3%/-8%	+5%/-6%	+27%/-8%
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 007256125-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-993 ± 286	$21.60^{+21.28}_{-14.67}$	437^{+14}_{-15}	2391^{+847}_{-346}	106^{+977}_{-80}
Alt.	-1029 ± 263	$21.80^{+20.61}_{-15.28}$	437^{+15}_{-16}	2395^{+967}_{-348}	109^{+1213}_{-81}

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

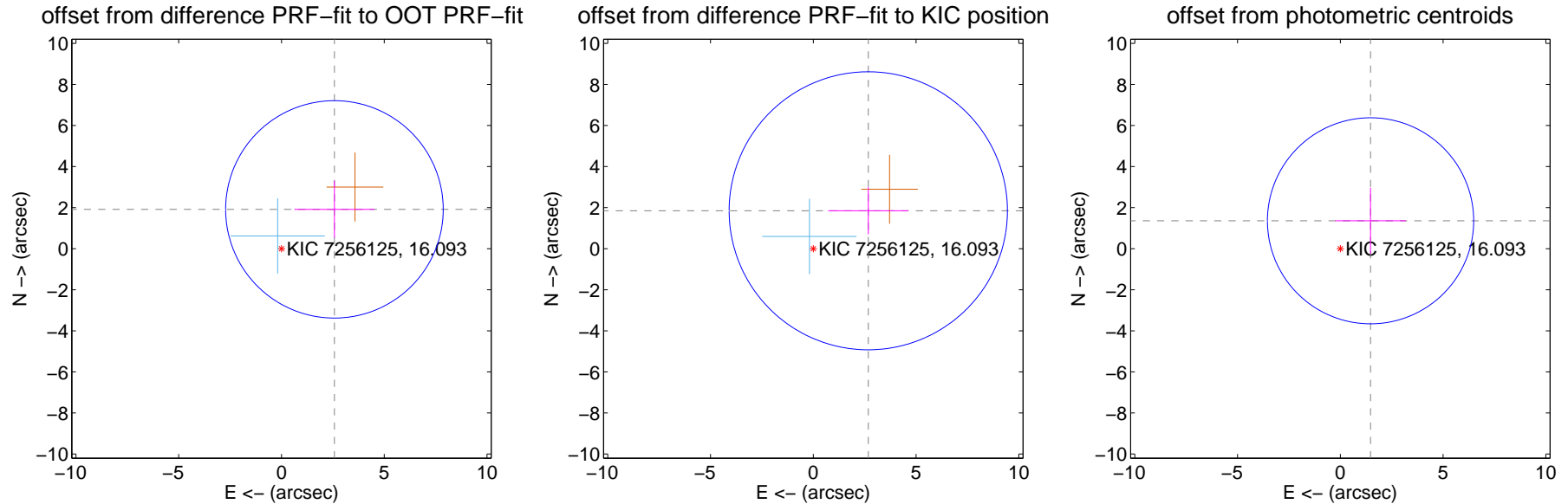
DV Centroid Data

Supplemental centroid analysis for 007256125-01. Kepler magnitude: 16.09. Transit SNR 7.72

There are 1 quarters with good PRF difference image offsets

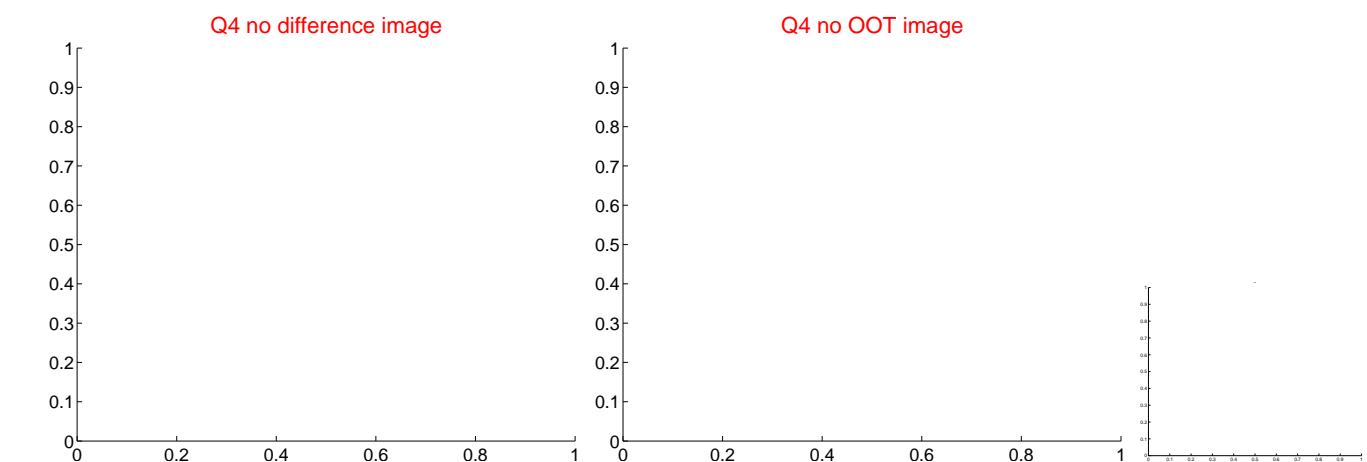
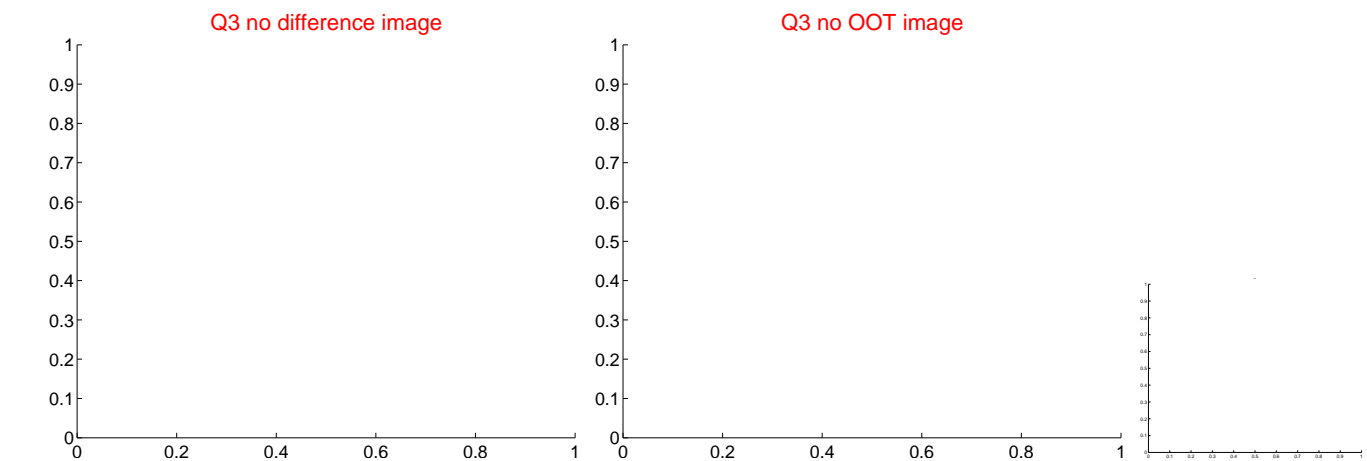
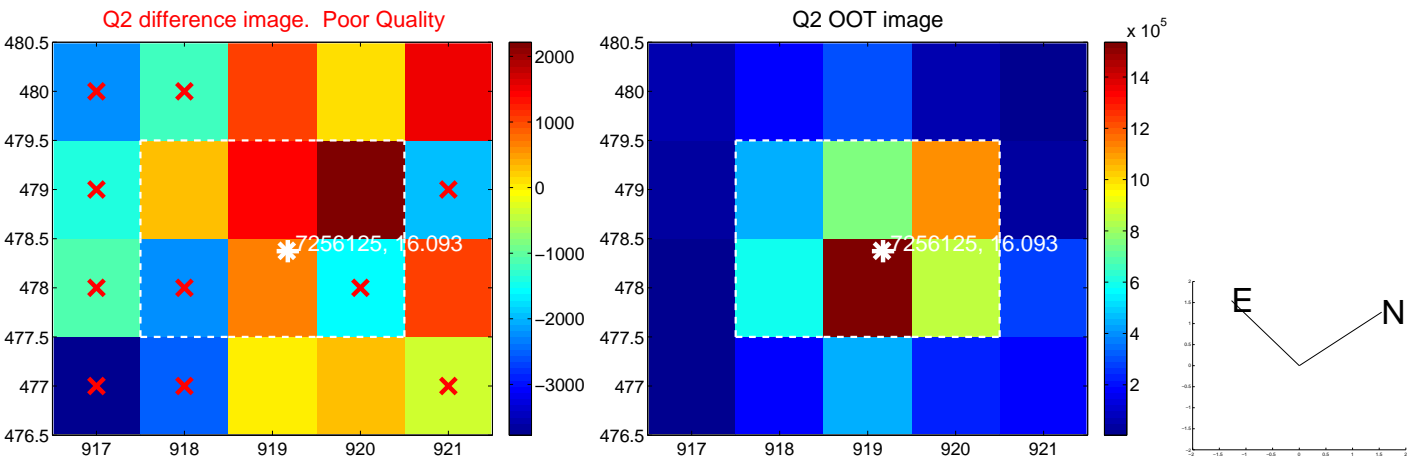
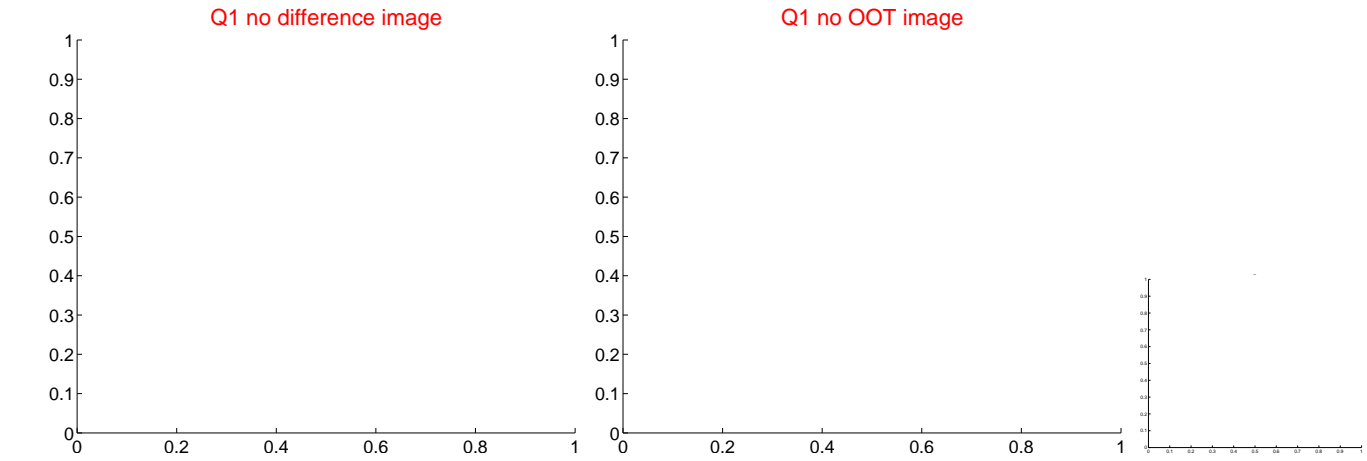
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.210 ± 1.764	1.82	-2.576 ± 1.941	1.914 ± 1.389
PRF-fit source offset from KIC position	3.251 ± 2.257	1.44	-2.676 ± 1.950	1.846 ± 1.150
photometric centroid source offset	2.00 ± 1.67	1.20	-1.47 ± 1.72	1.36 ± 1.61



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.



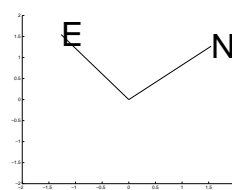
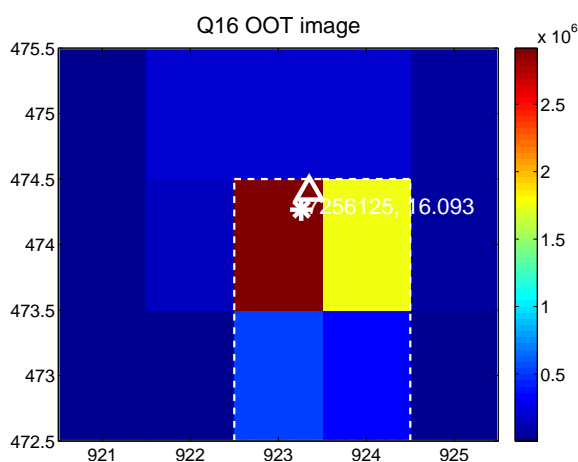
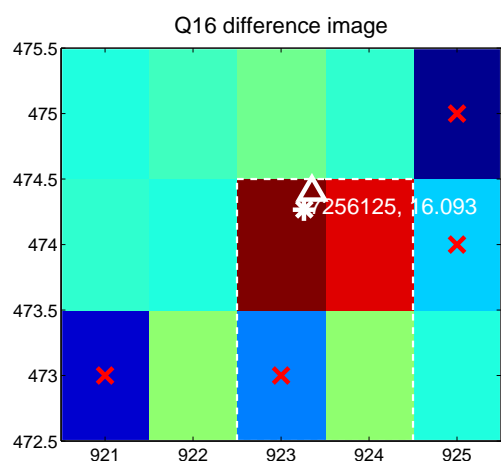
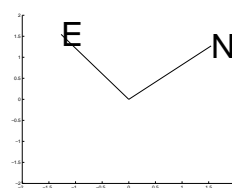
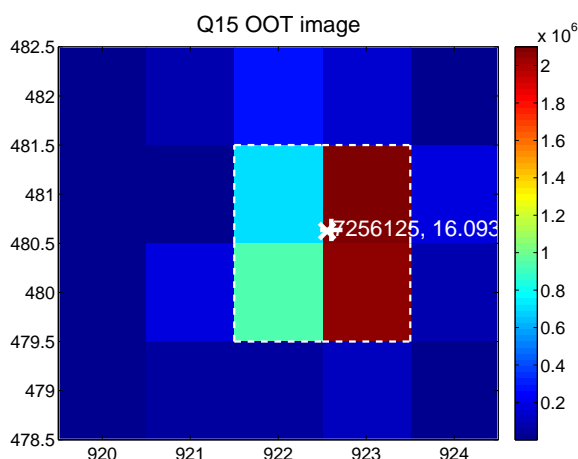
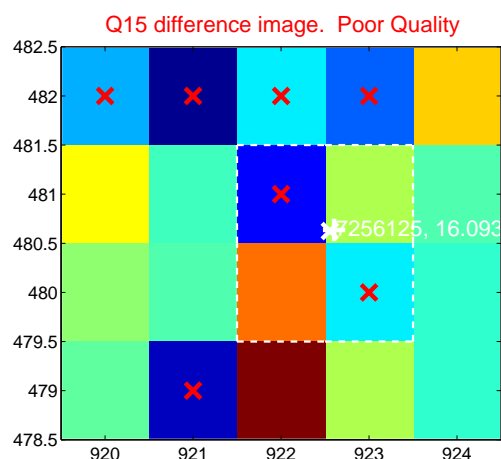
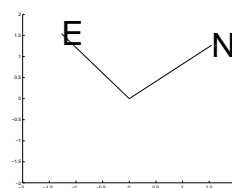
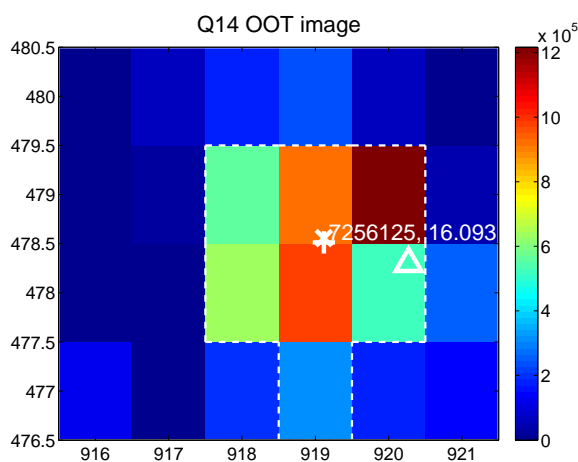
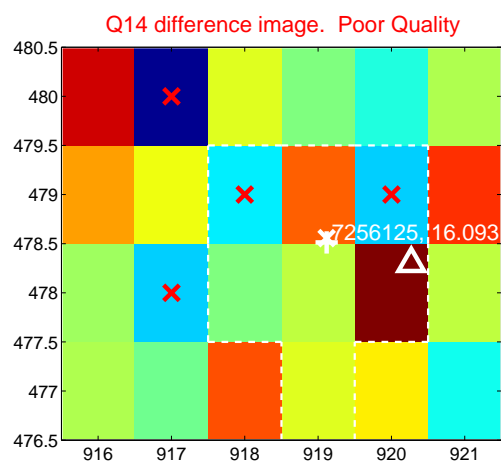
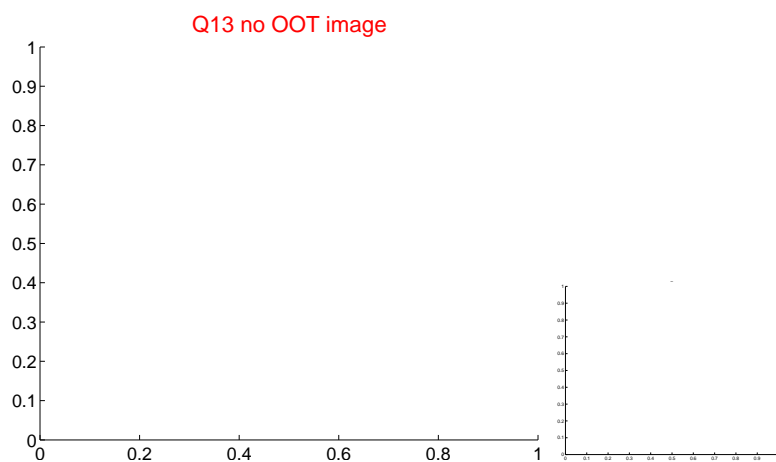
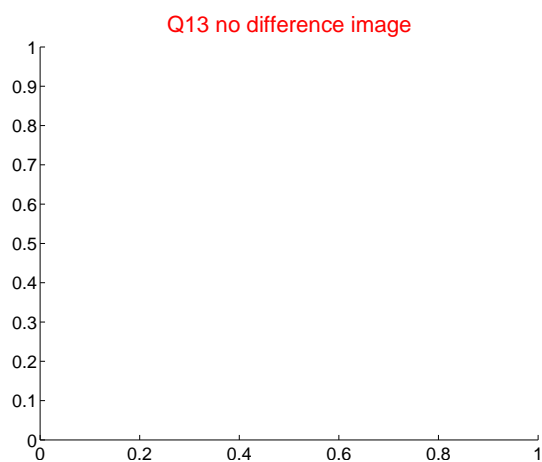
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



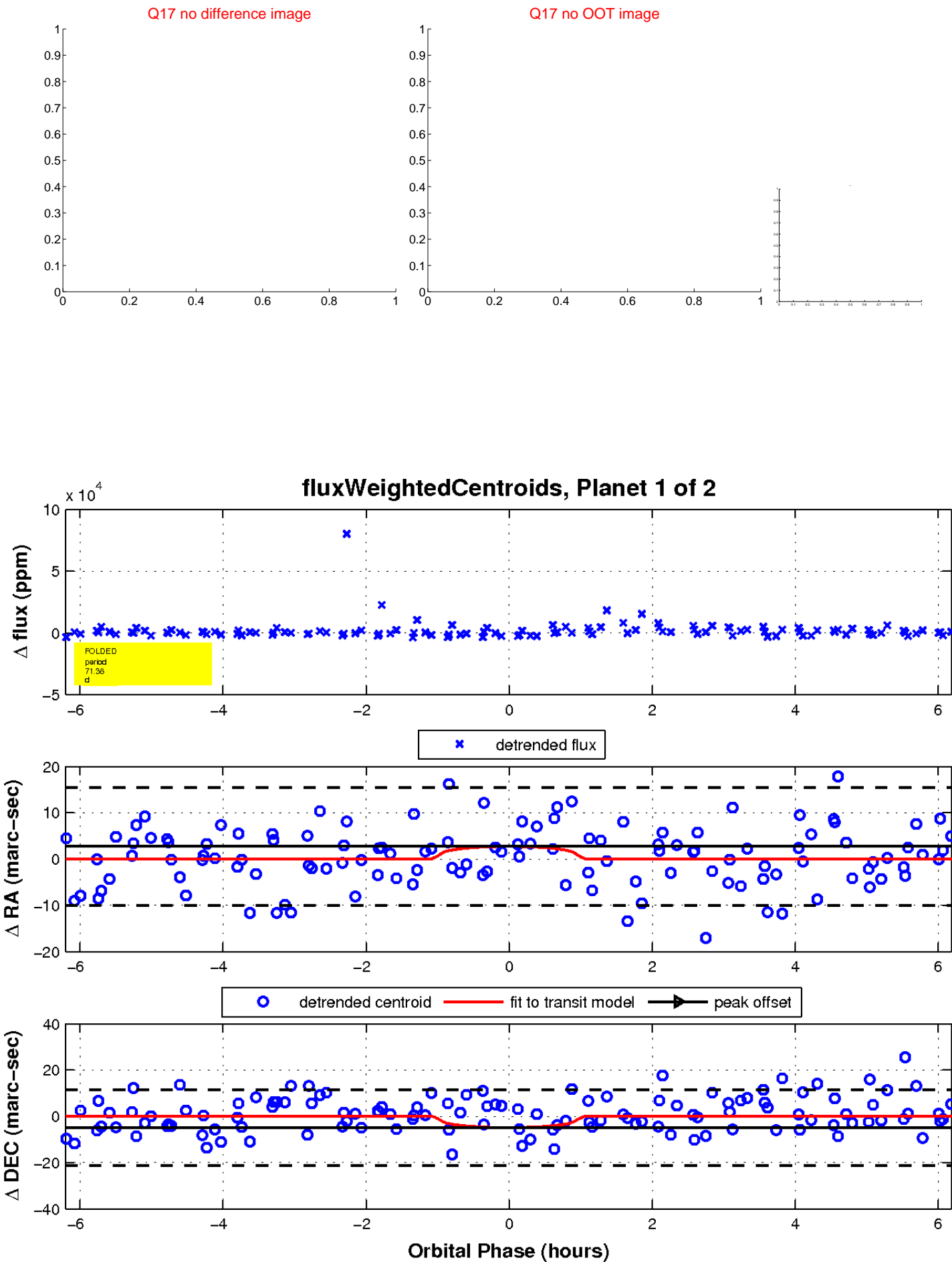
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

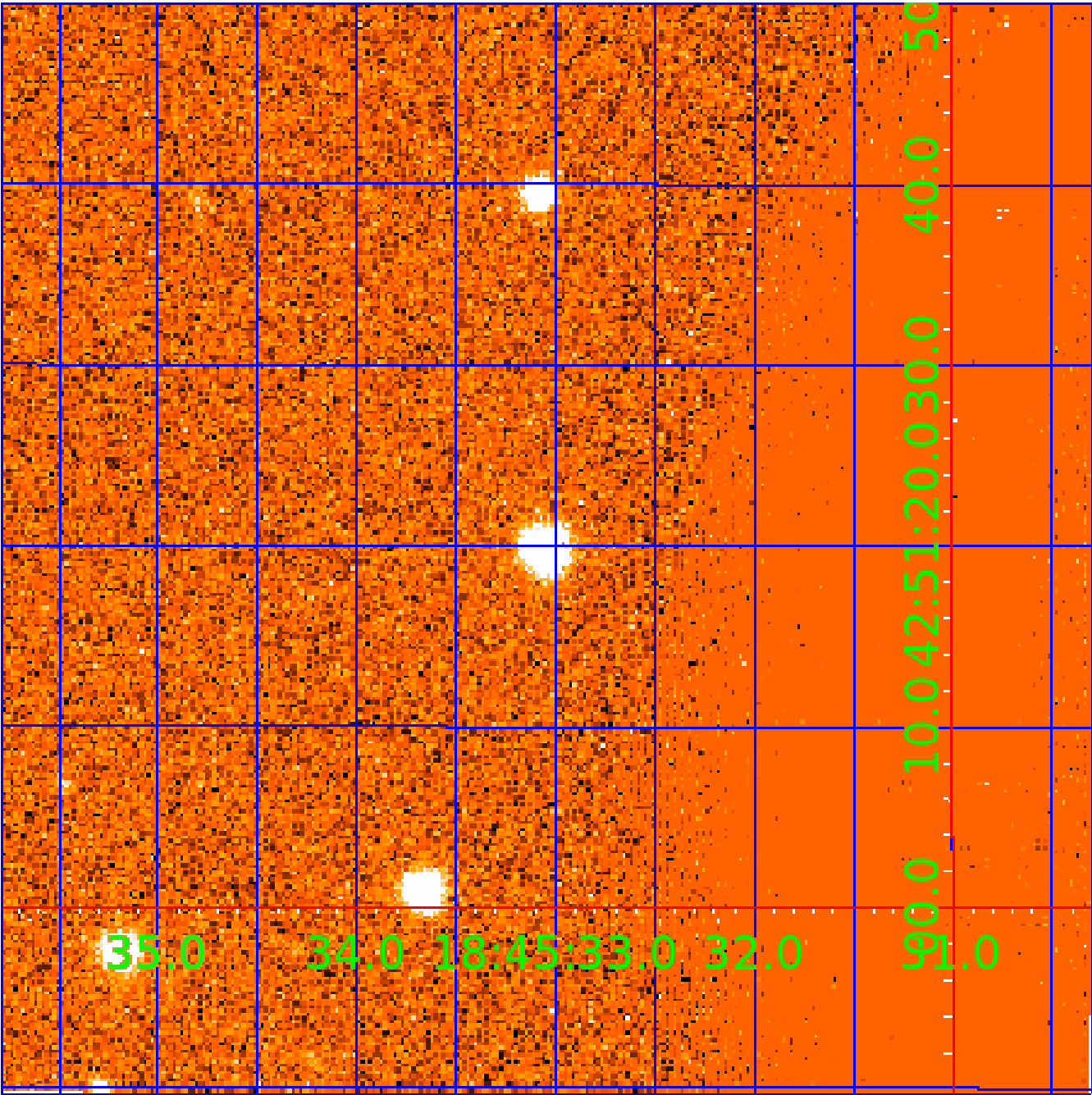


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007256125

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})
007256125-01	OBS	No	71.376644	167.304988	3252.9	2.072	10.0	7.7	0.76	4539	4.13	2.34
007256125-02	OBS	No	158.875377	250.803097	3369.9	5.012	10.2	6.8	0.76	4539	4.47	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007256125-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
007256125-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

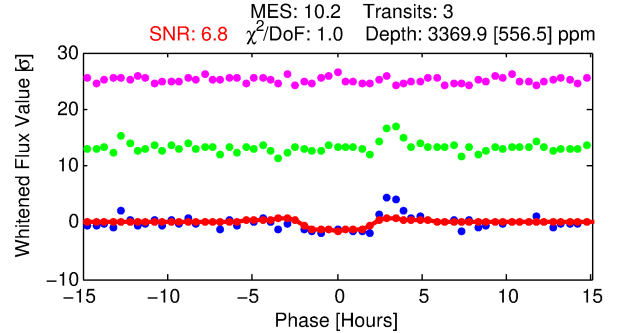
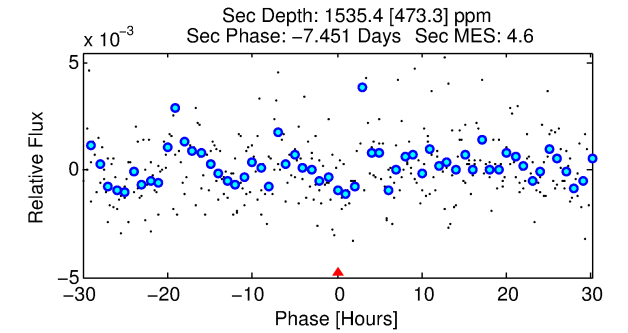
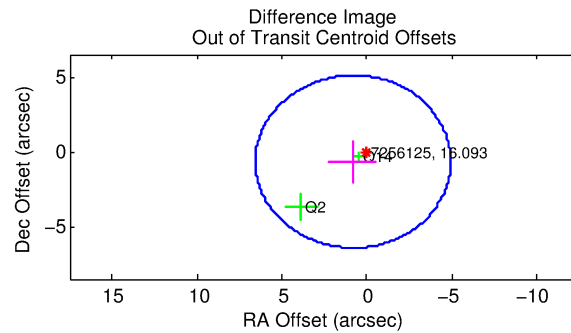
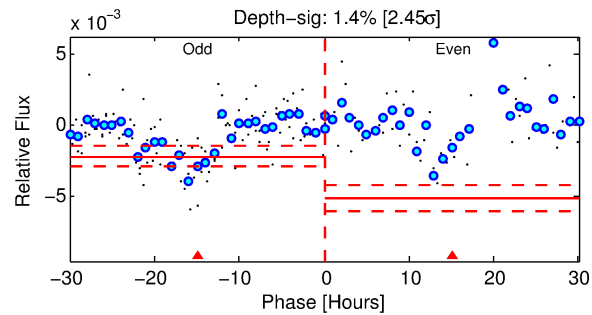
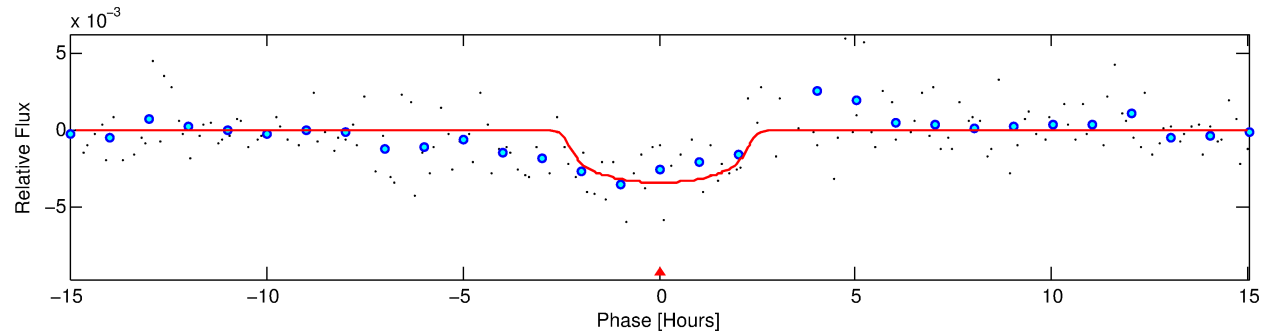
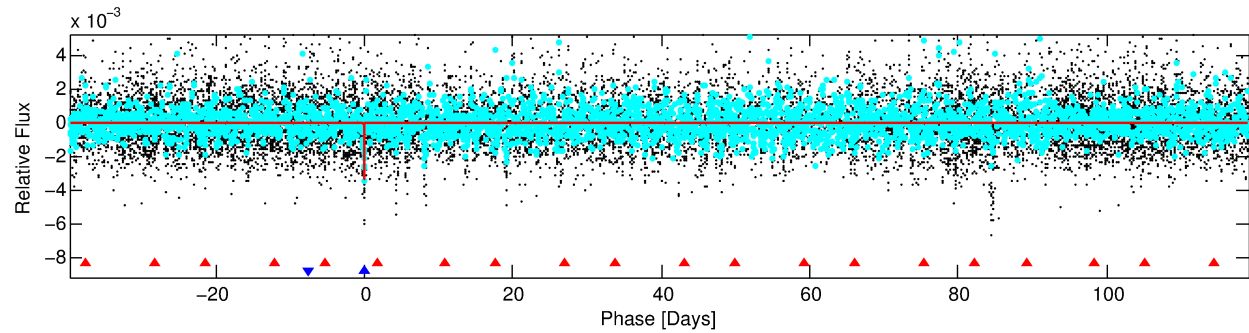
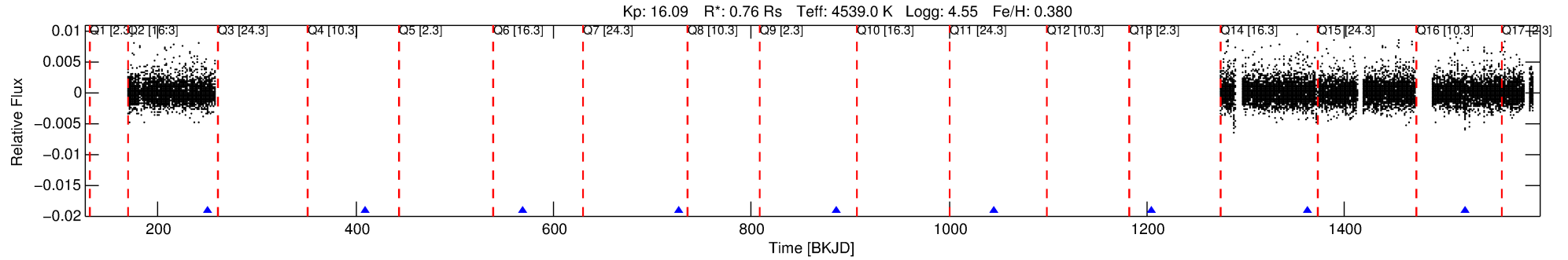
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007256125-02

No Significant Match Found

DV One-Page Summary

KIC: 7256125 Candidate: 2 of 2 Period: 158.875 d



DV Fit Results:

Period = 158.87538 [0.00187] d
Epoch = 250.8031 [0.0116] BKJD
Rp/R* = 0.0540 [0.0553]
a/R* = 216.96 [628.31]
b = 0.55 [3.72]
Seff = 0.81 [0.14]
Teq = 242 [10] K
Rp = 4.47 [4.60] Re
a = 0.5215 [0.0393] AU
Ag = 11504.58 [23896.20] [0.48 σ]
Teff = 3868 [2009] K [1.81 σ]

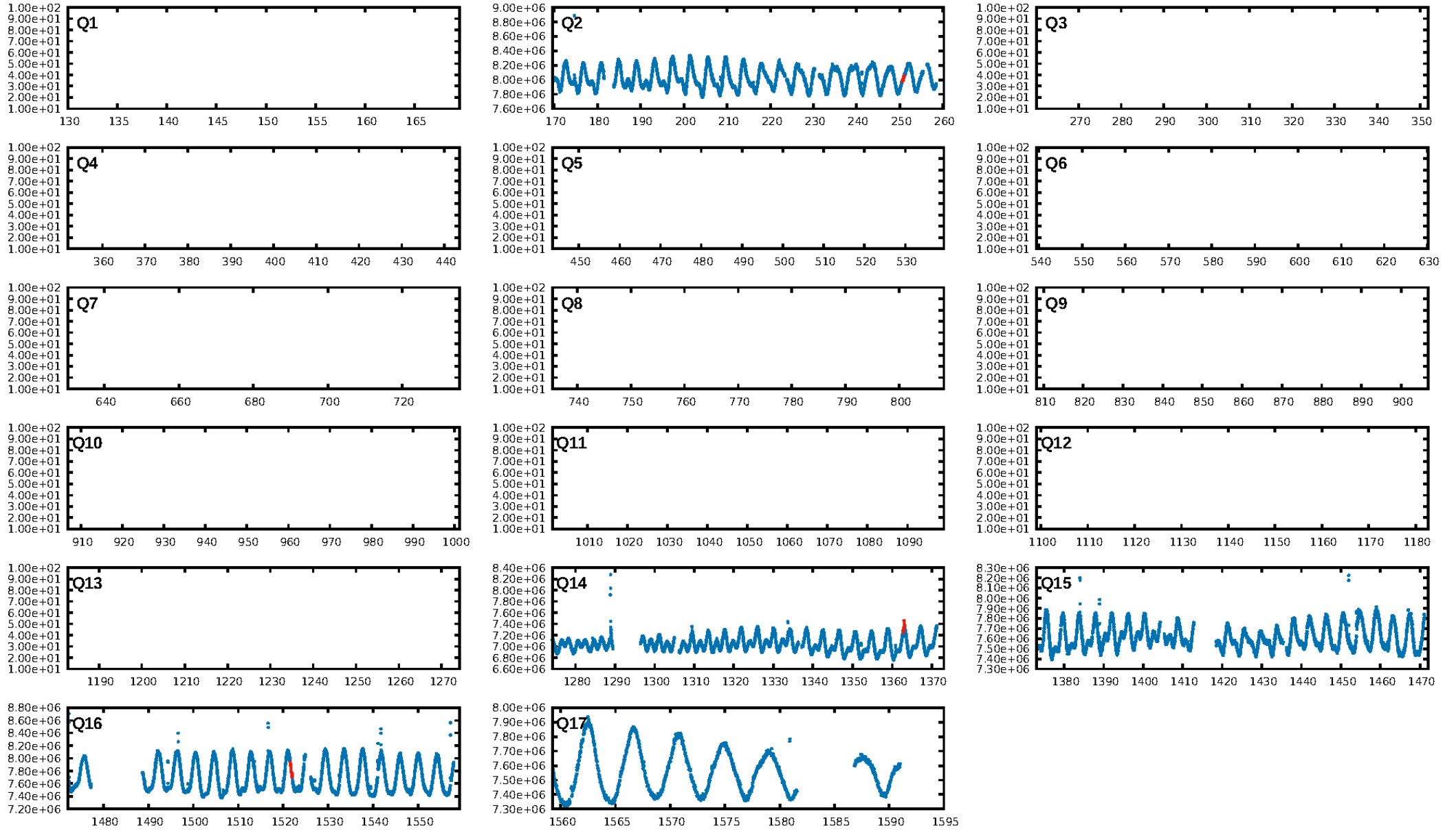
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [387.17 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 97.0%
Bootstrap-pfa: 1.23e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 97.78
Centroid-sig: 85.3%
Centroid-so: 0.752 arcsec [0.60 σ]
OotOffset-rm: 1.040 arcsec [0.54 σ]
KicOffset-rm: 0.884 arcsec [0.77 σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
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DiffImageOverlap-fno: 1.00 [3/3]

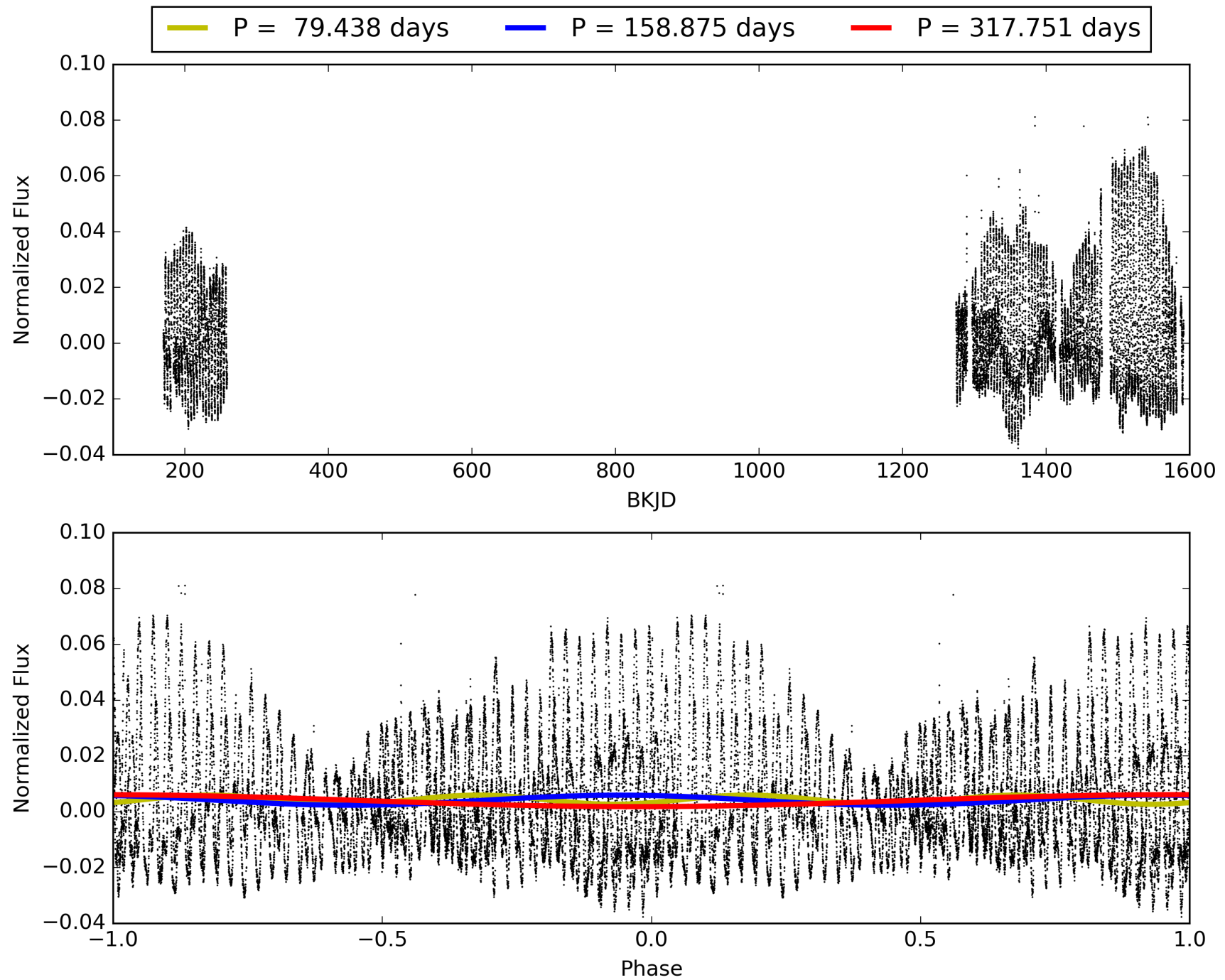
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 01:56:38 Z

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

TCE 007256125-02, PDC Light Curves

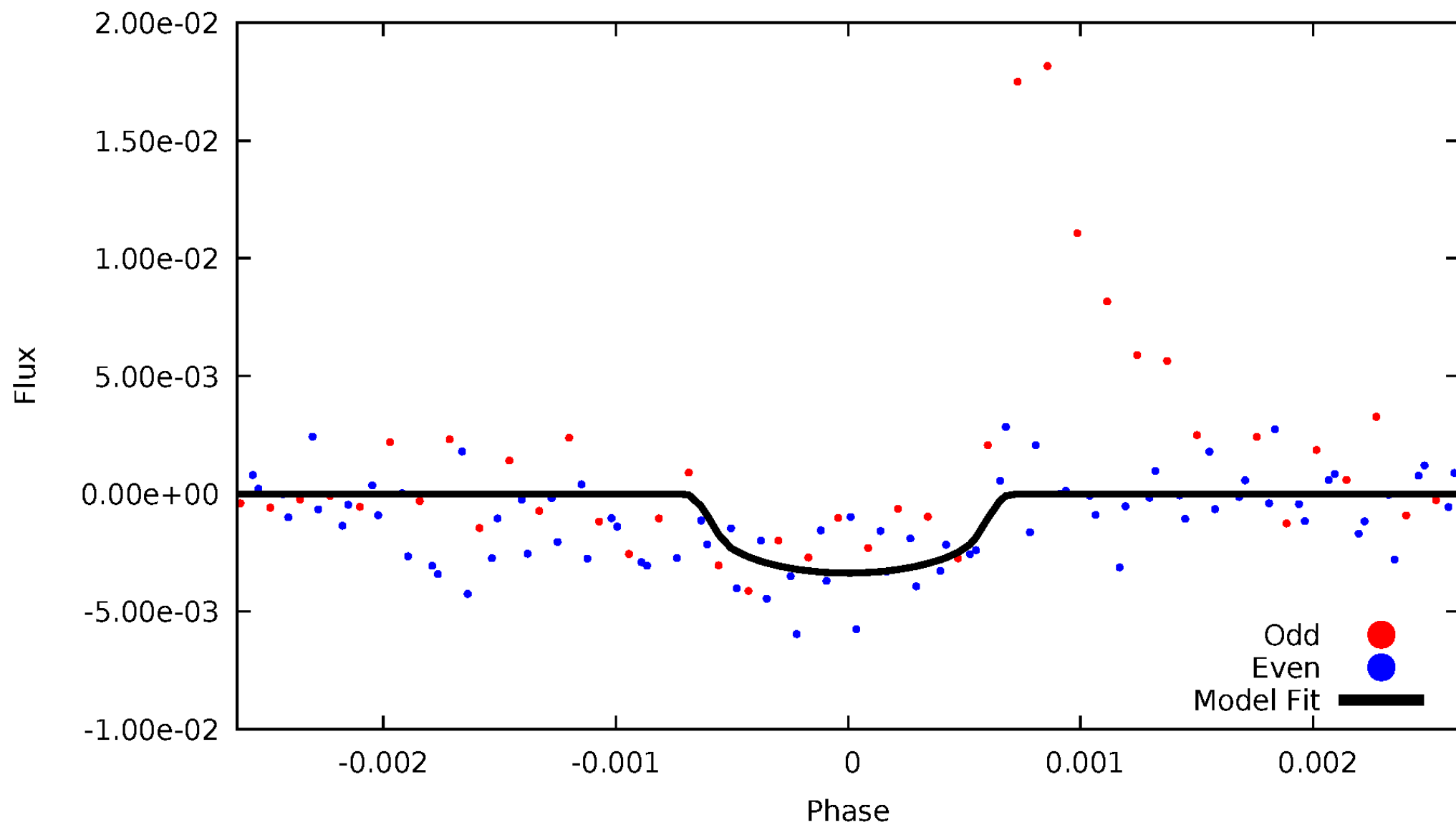


TCE 007256125-02



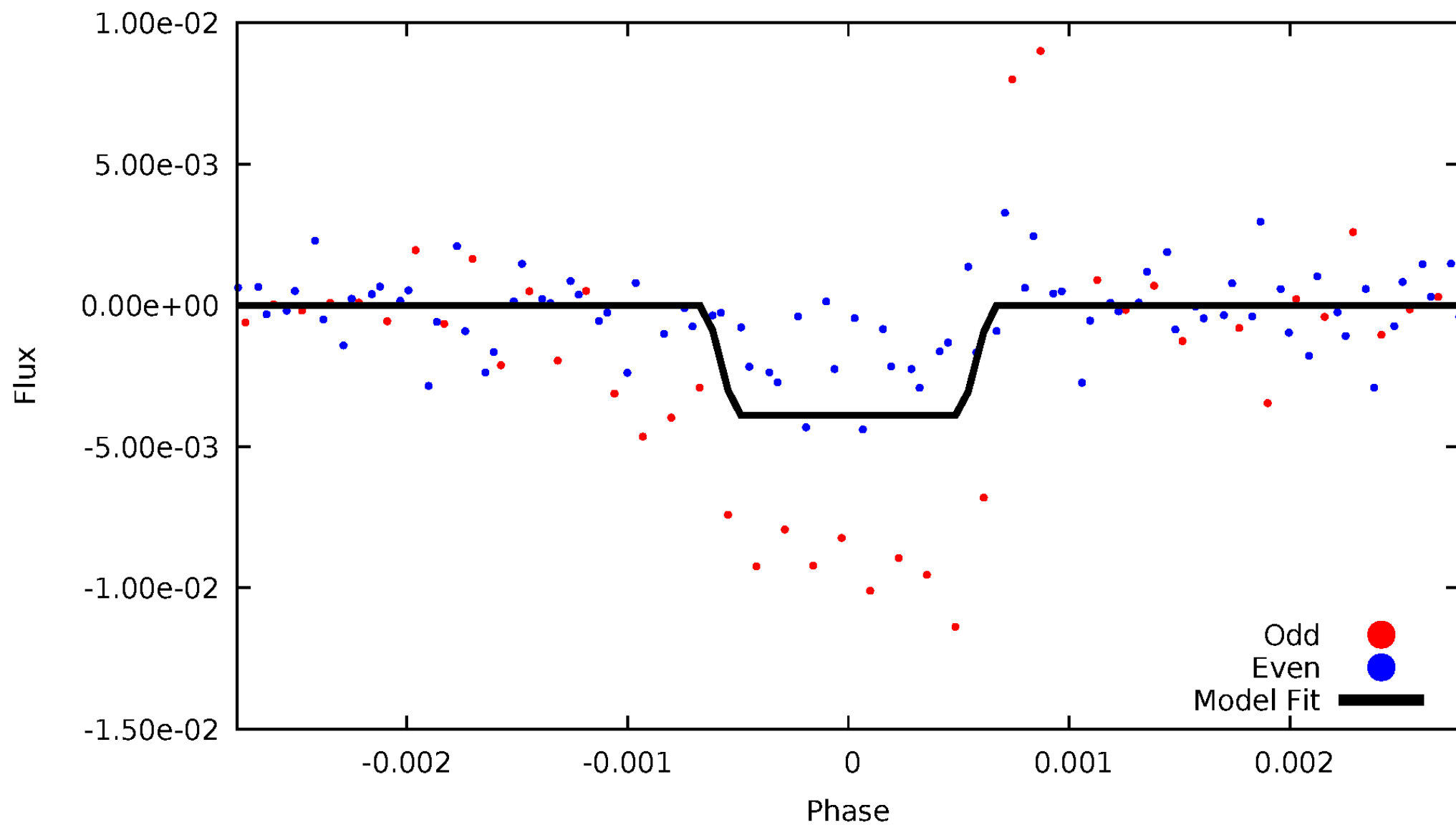
DV Odd/Even

TCE 007256125-02



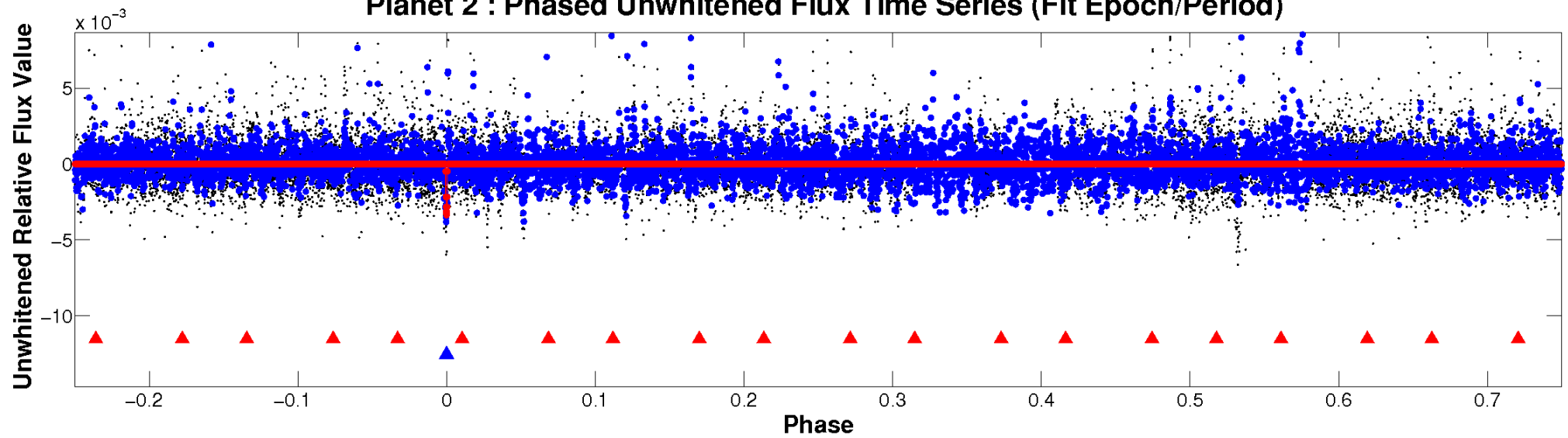
ALT Odd/Even

TCE 007256125-02

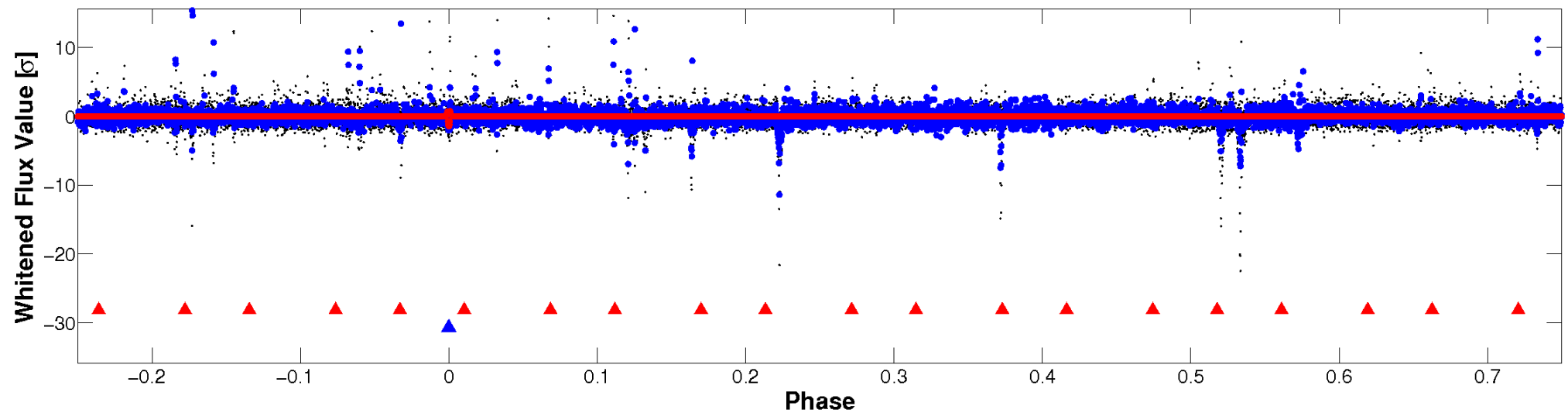


Non-Whitened Vs. Whitened Light Curve

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

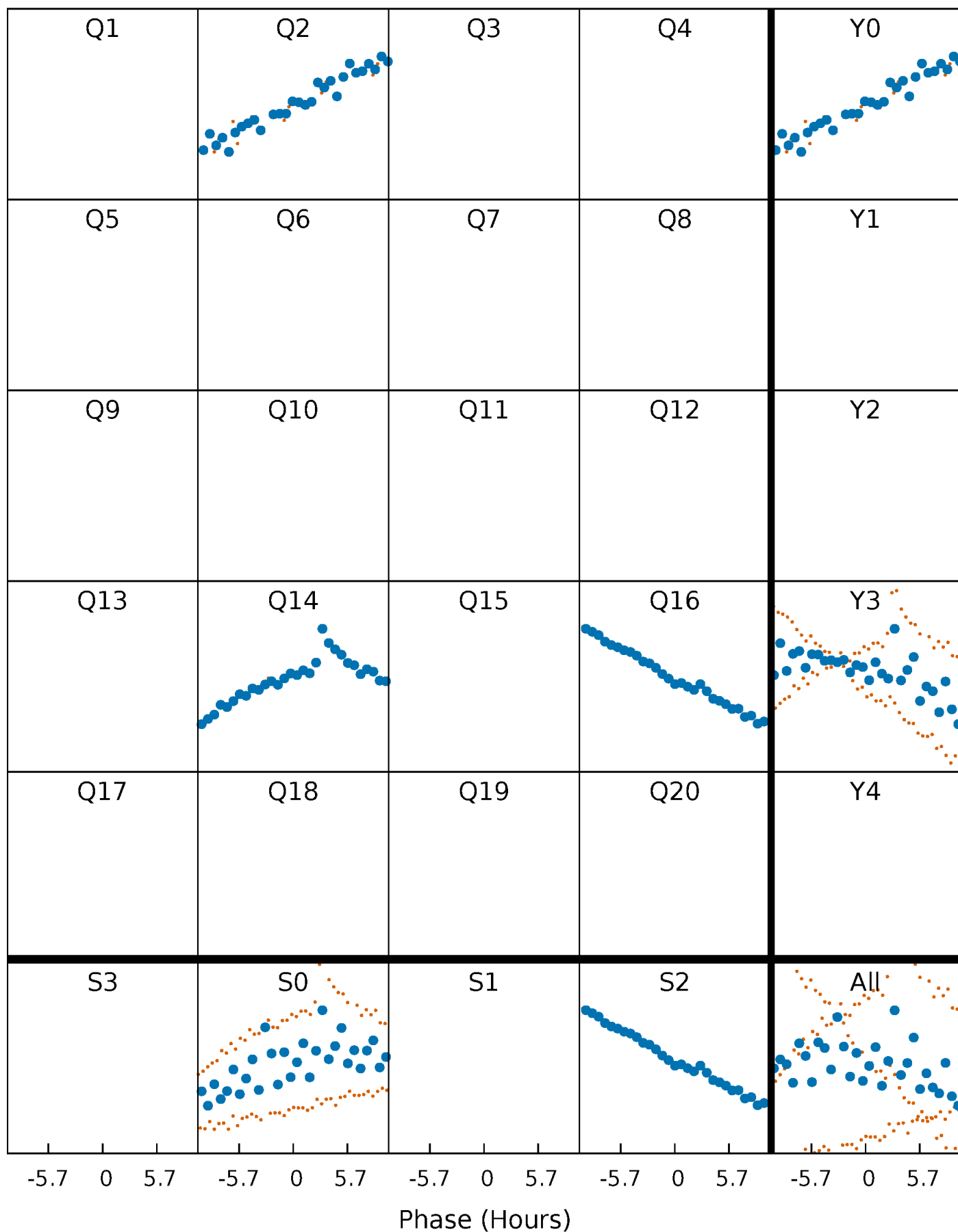


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



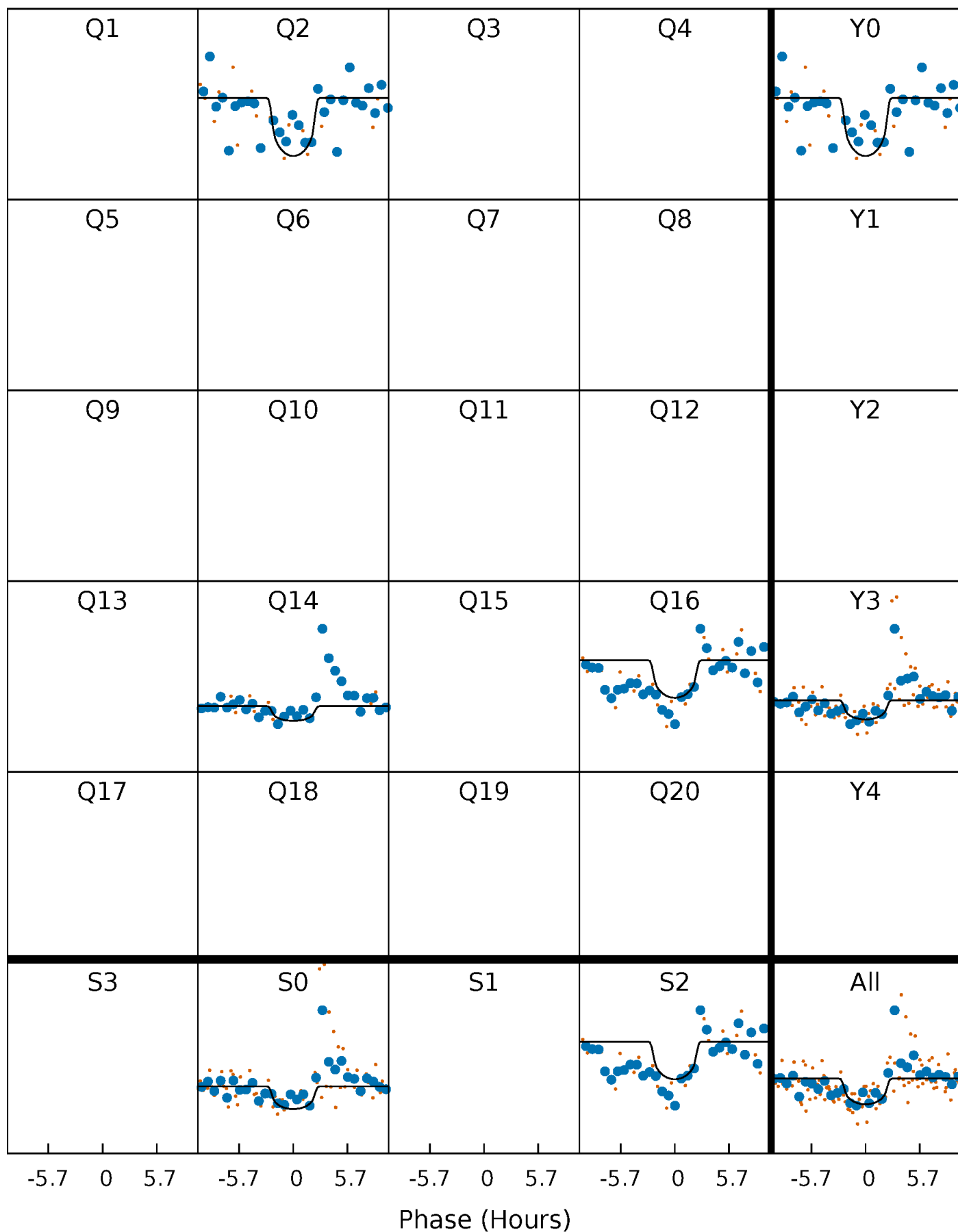
PDC Quarter-Phased Transit Curves

TCE 007256125-02 P=158.875377 Days $T_0=250.803097$ (BKJD)



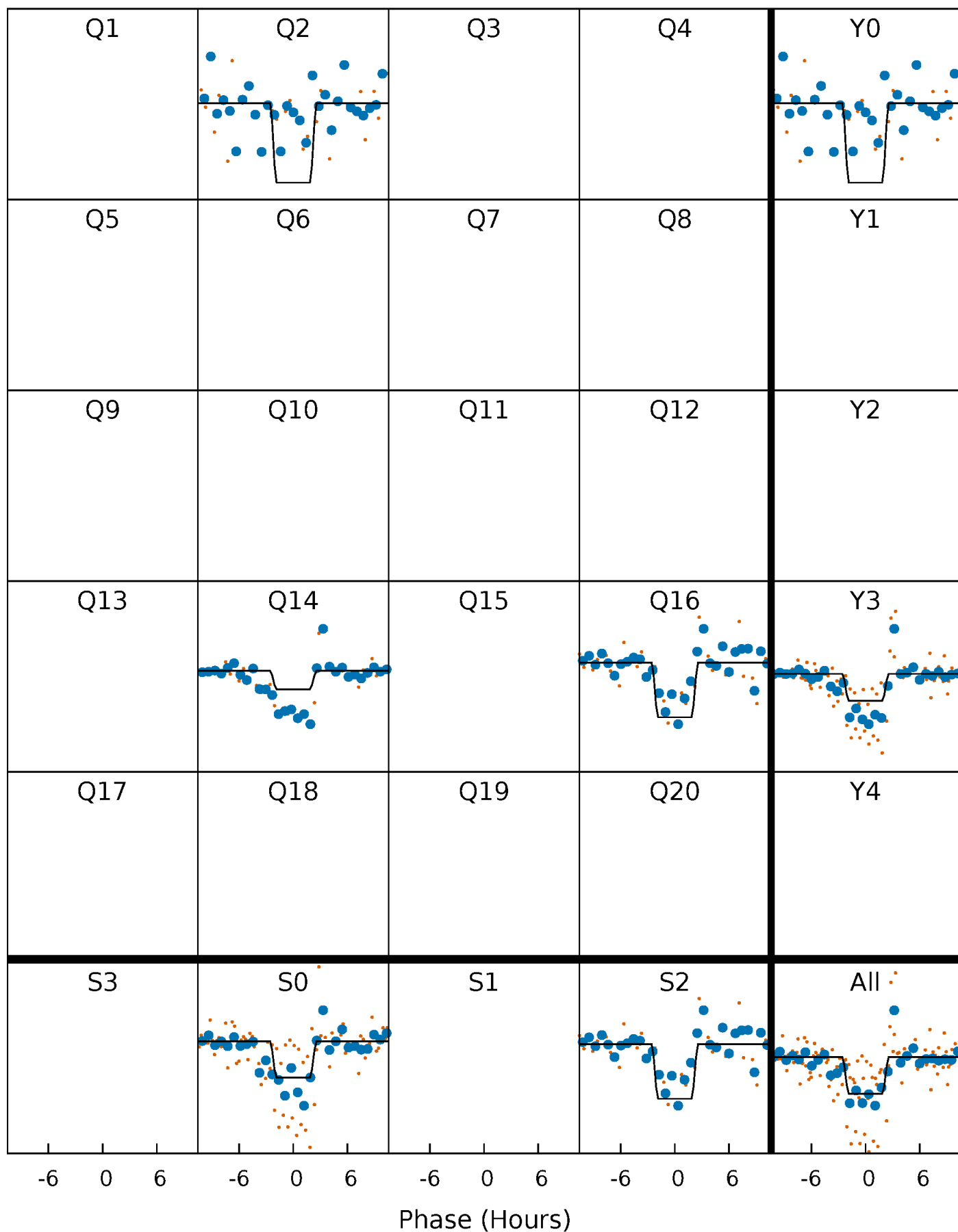
DV Quarter-Phased Transit Curves

TCE 007256125-02 P=158.875377 Days $T_0=250.803097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

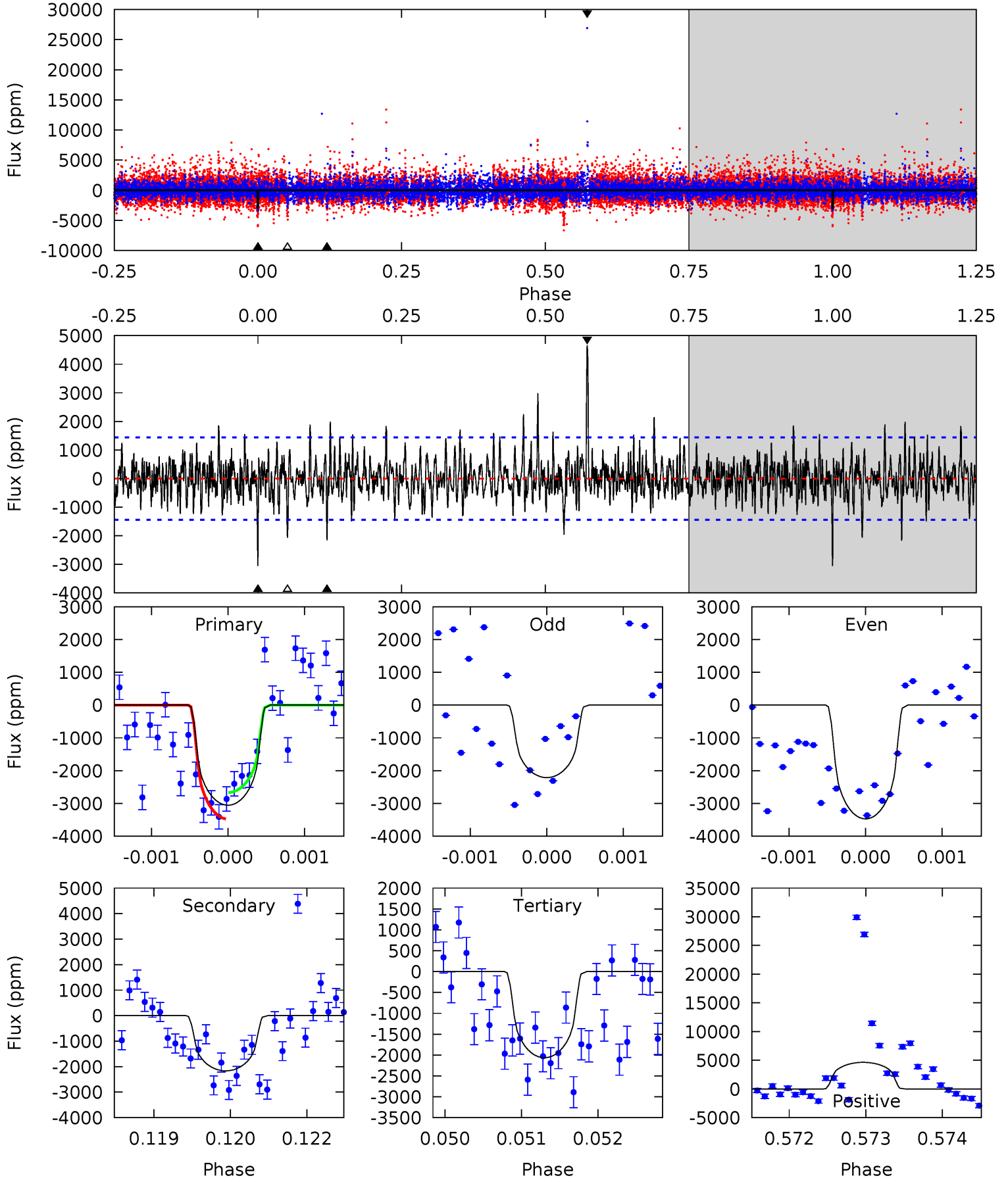
TCE 007256125-02 P=158.872578 Days $T_0=250.820543$ (BKJD)



DV Model-Shift Uniqueness Test

007256125-02, $P = 158.875377$ Days, $E = 91.927720$ Days

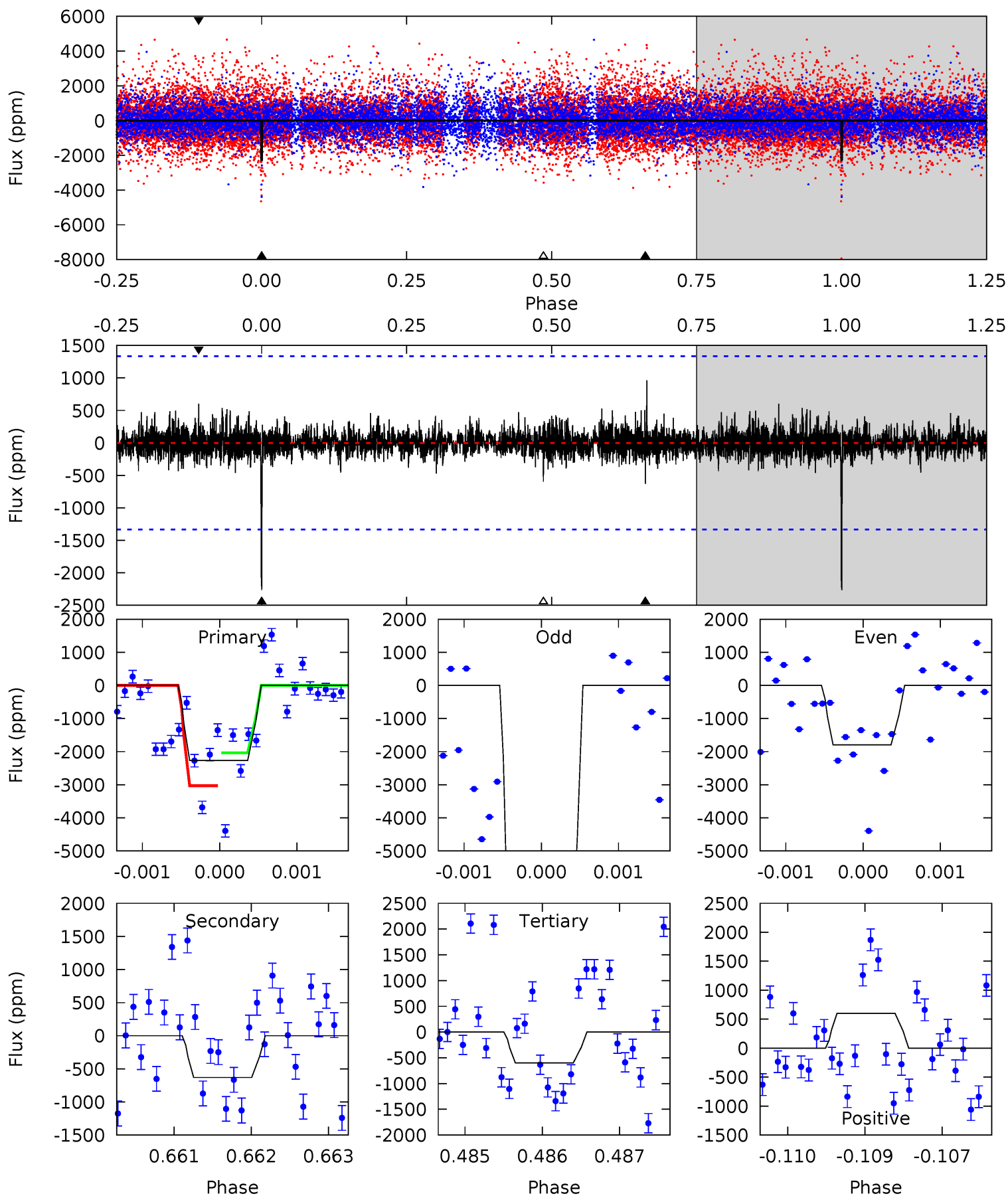
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	8.12	7.73	17.4	5.39	3.19	2.12	3.71	-5.92	0.38	-9.25	1.51	1.31	0.60	1.51



Alt Model-Shift Uniqueness Test

007256125-02, P = 158.872578 Days, E = 91.947965 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.20	2.56	2.42	2.44	5.41	3.23	0.57	6.78	6.76	0.14	0.12	17.2	1.60	0.30	2.09



Stellar Parameters For KIC 007256125

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4539^{+137}_{-137}	$4.552^{+0.068}_{-0.018}$	$0.380^{+0.100}_{-0.300}$	$0.759^{+0.026}_{-0.062}$	$0.748^{+0.038}_{-0.048}$	$2.412^{+0.660}_{-0.187}$
	+3%/-3%	+1%/-0%	+26%/-79%	+3%/-8%	+5%/-6%	+27%/-8%
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 007256125-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2166 ± 267	$5.69^{+4.16}_{-3.54}$	335^{+11}_{-11}	3932^{+1809}_{-673}	10226^{+60130}_{-6865}
Alt.	-630 ± 246	$5.72^{+4.12}_{-3.63}$	335^{+12}_{-12}	3173^{+1268}_{-484}	2706^{+17766}_{-1874}

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

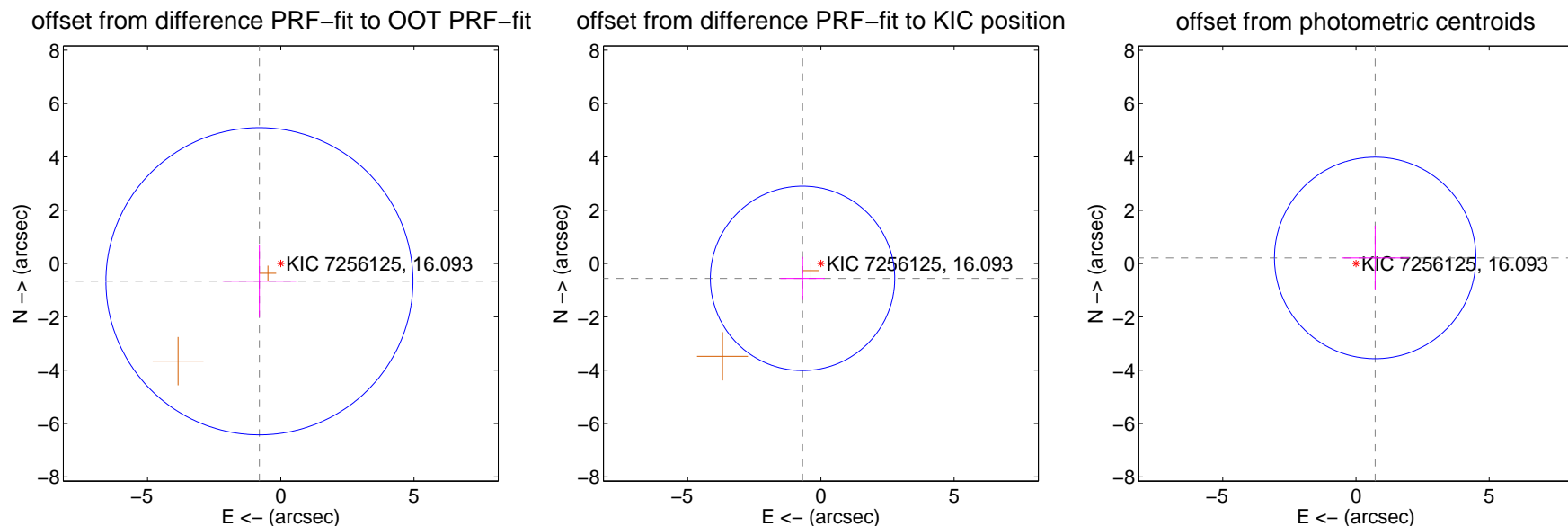
DV Centroid Data

Supplemental centroid analysis for 007256125-02. Kepler magnitude: 16.09. Transit SNR 6.75

There are 0 quarters with good PRF difference image offsets

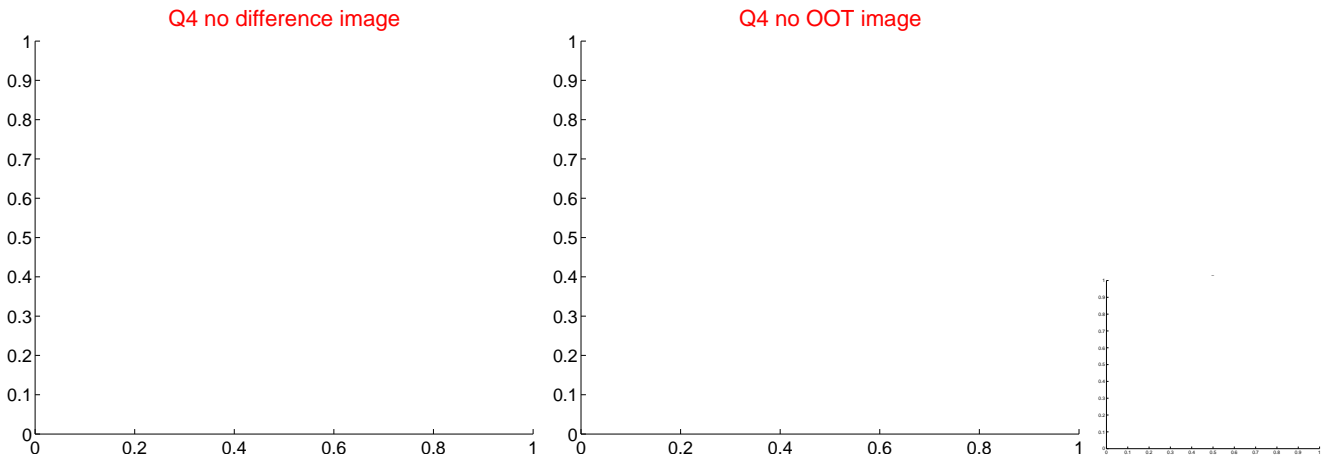
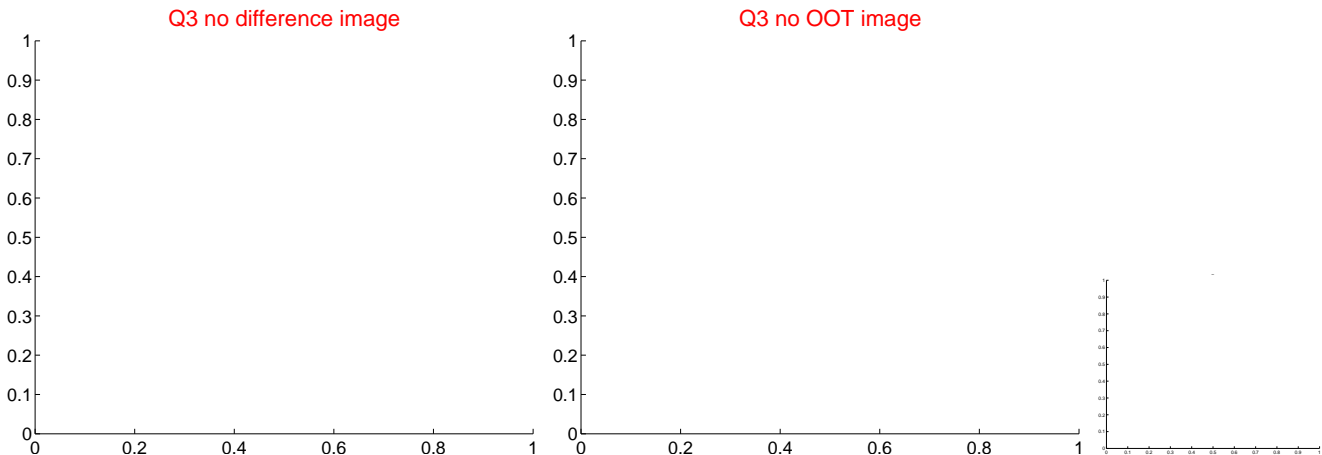
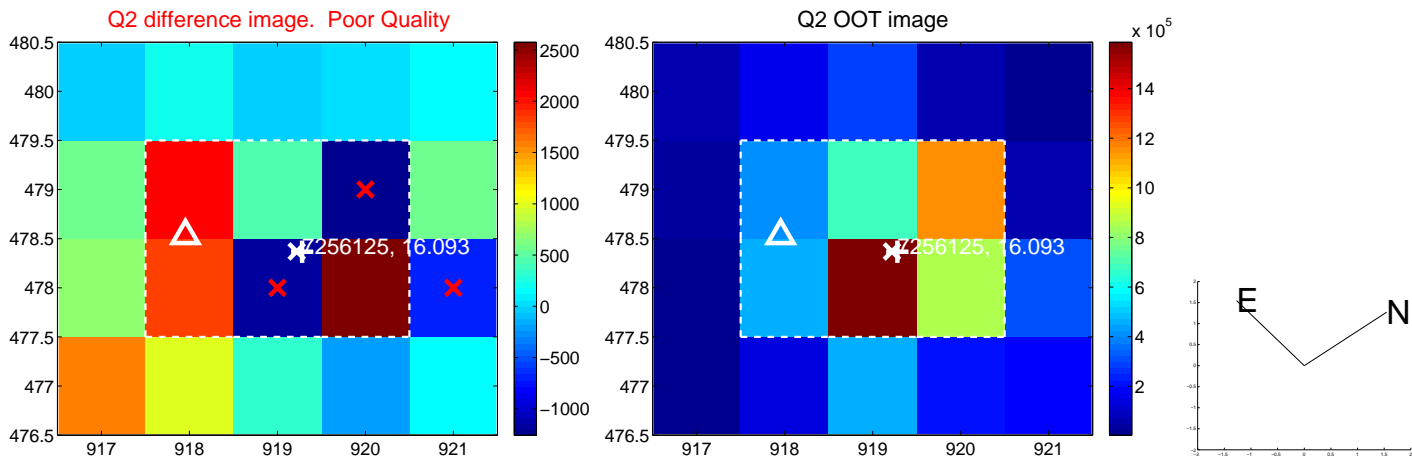
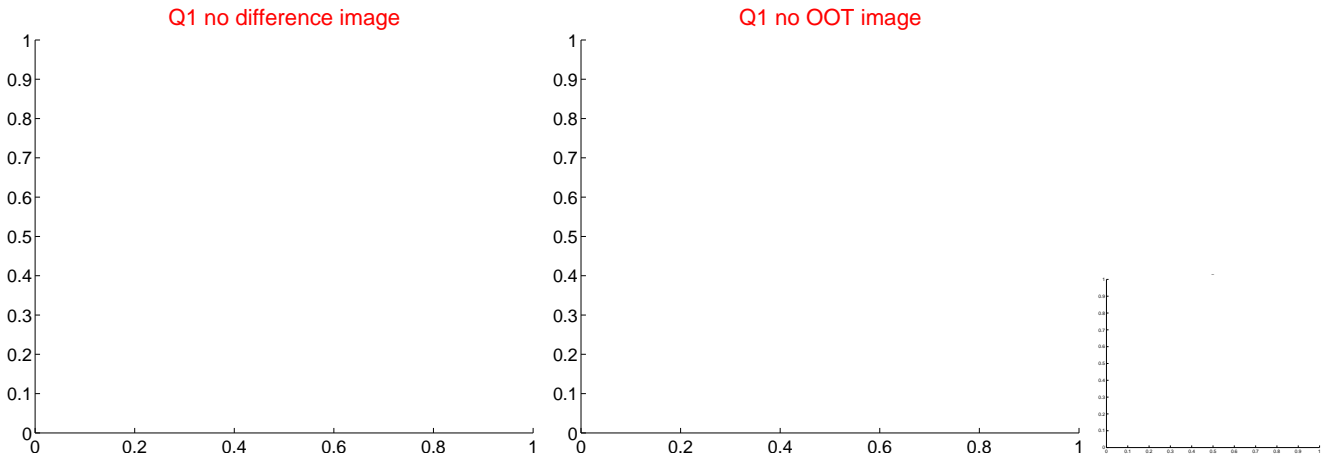
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.040 ± 1.920	0.54	0.800 ± 1.379	-0.664 ± 1.347
PRF-fit source offset from KIC position	0.884 ± 1.153	0.77	0.687 ± 0.833	-0.556 ± 0.807
photometric centroid source offset	0.75 ± 1.26	0.60	-0.72 ± 1.26	0.21 ± 1.21



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



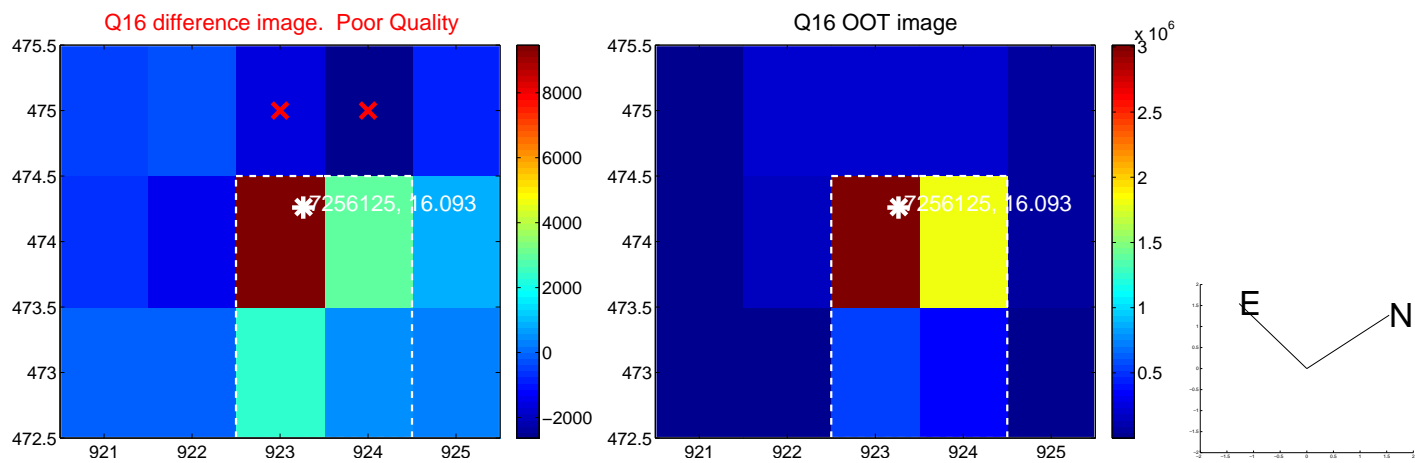
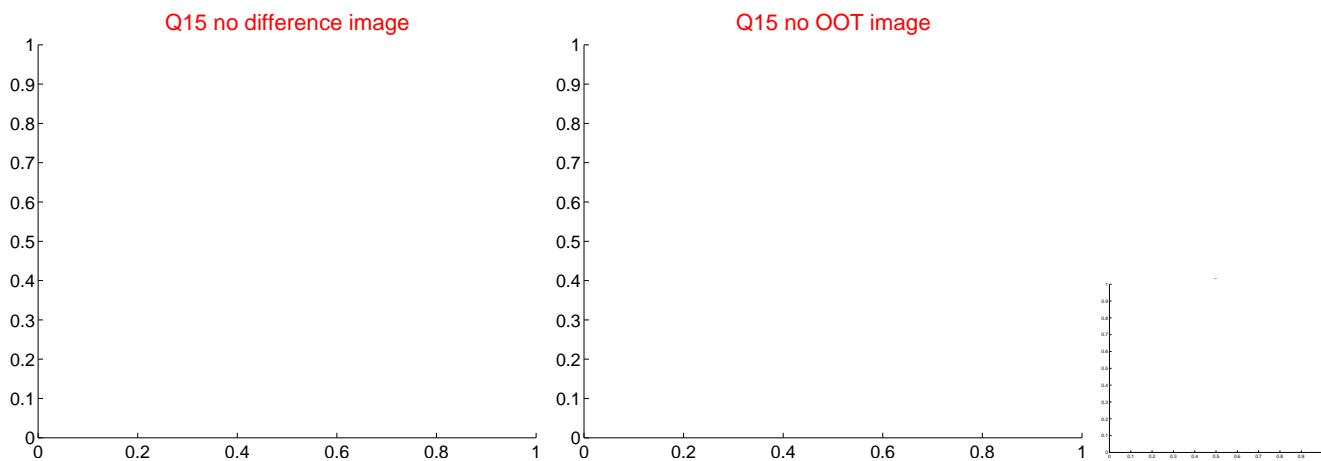
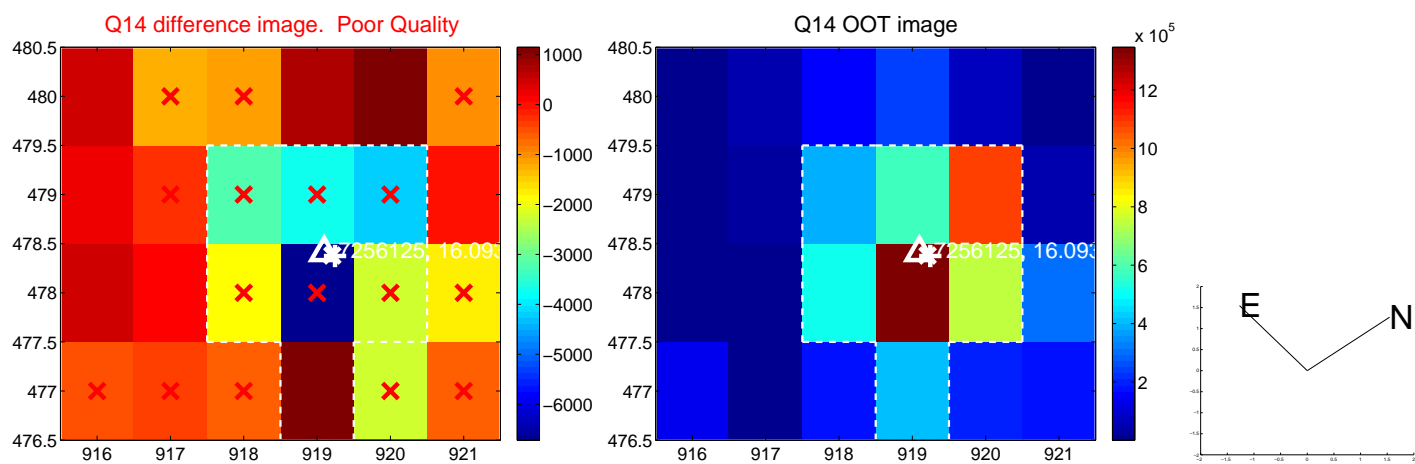
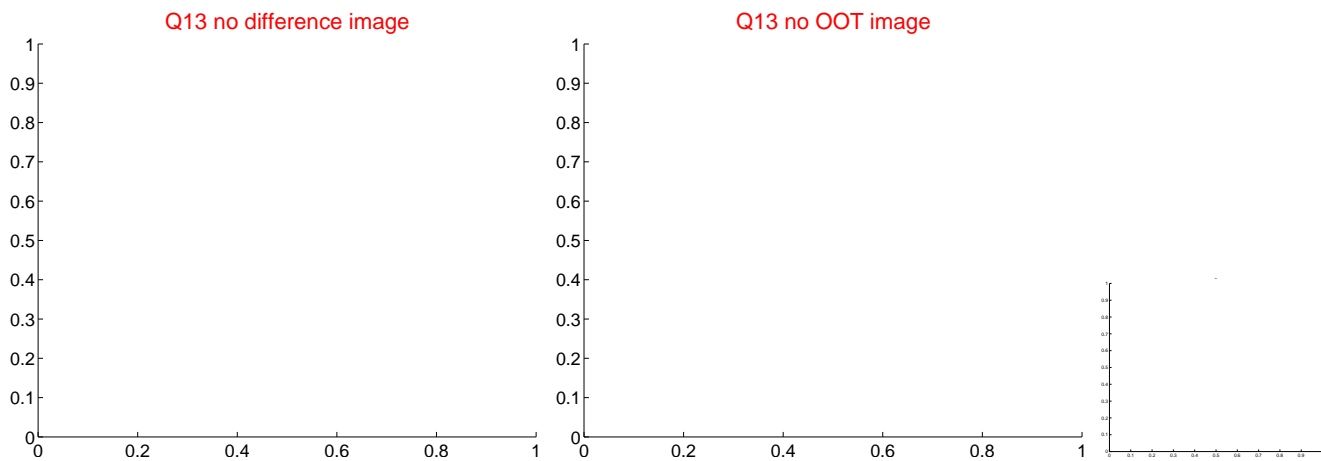
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



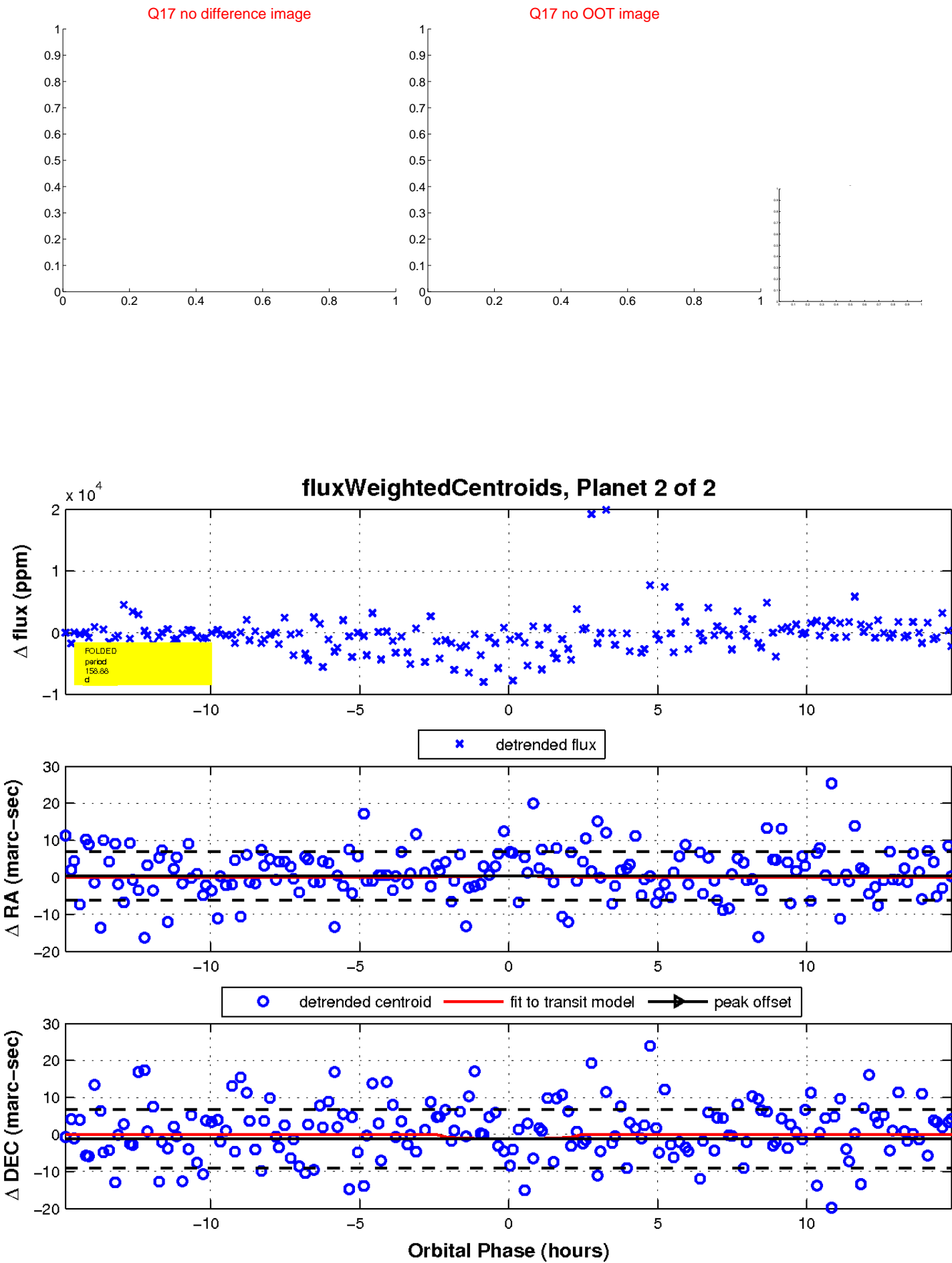
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

