

KIC 012208887

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})
012208887-01	OBS	3333.01	53.501242	132.219357	456190.8	3.500	4289.3	-1.0	0.75	5436	40.81	6.64
012208887-02	OBS	No	53.501833	159.447980	68361.8	11.775	942.0	839.7	0.75	5436	29.65	6.64
012208887-03	OBS	No	8.916509	132.505427	32892.1	15.000	199.8	-1.0	0.75	5436	13.40	72.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208887-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
012208887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
012208887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS

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.

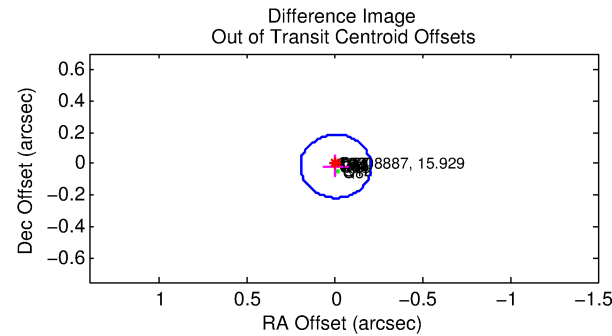
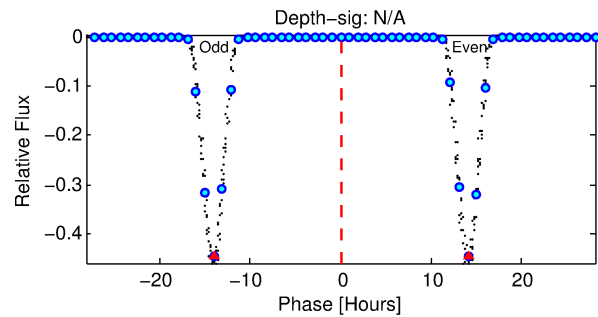
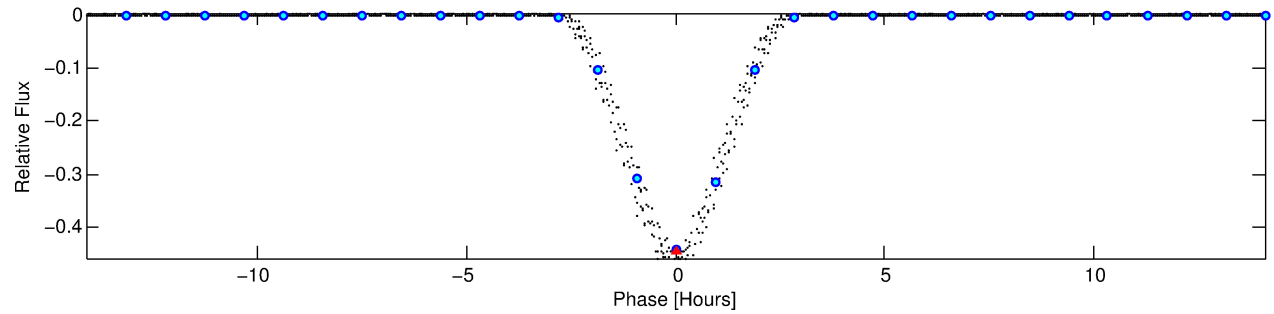
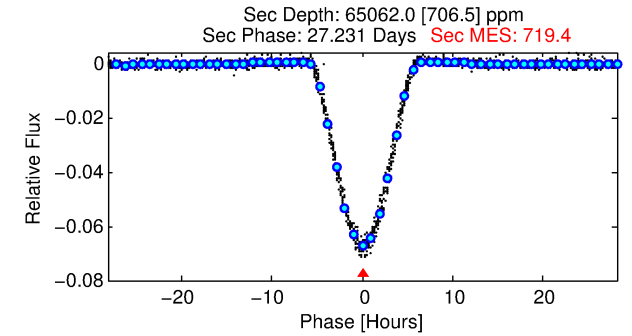
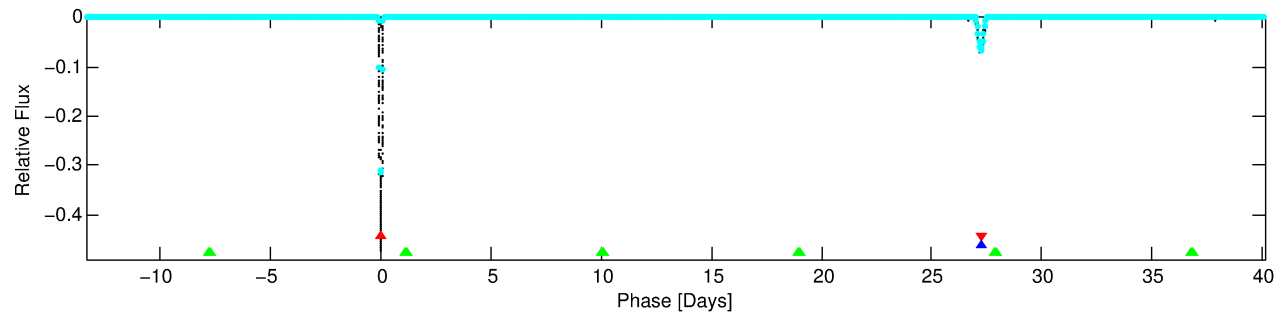
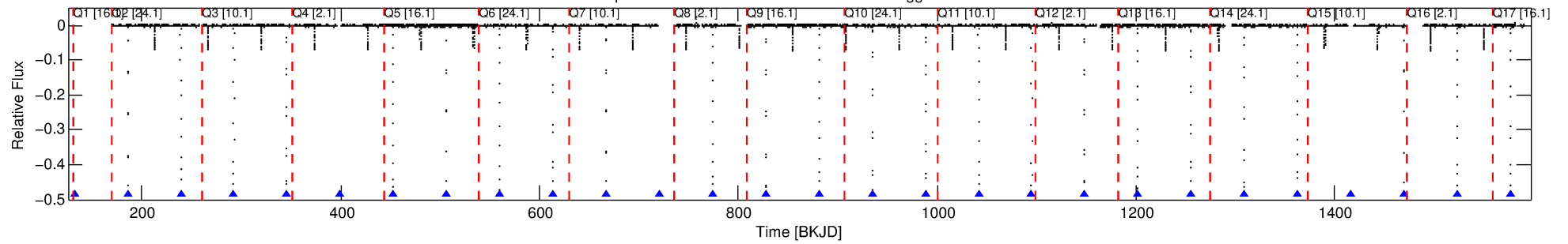
Ephemeris Match Information For 012208887-01

No Significant Match Found

DV One-Page Summary

KIC: 12208887 Candidate: 1 of 3 Period: 53.501 d
KOI: K03333.01 Corr: 0.814

Kp: 15.93 R*: 0.75 Rs T_{eff}: 5436.0 K Logg: 4.59 Fe/H: -0.380



TPS TCE Results:

Period = 53.50124 d
Epoch = 132.2194 BKJD

DV fit results are unavailable

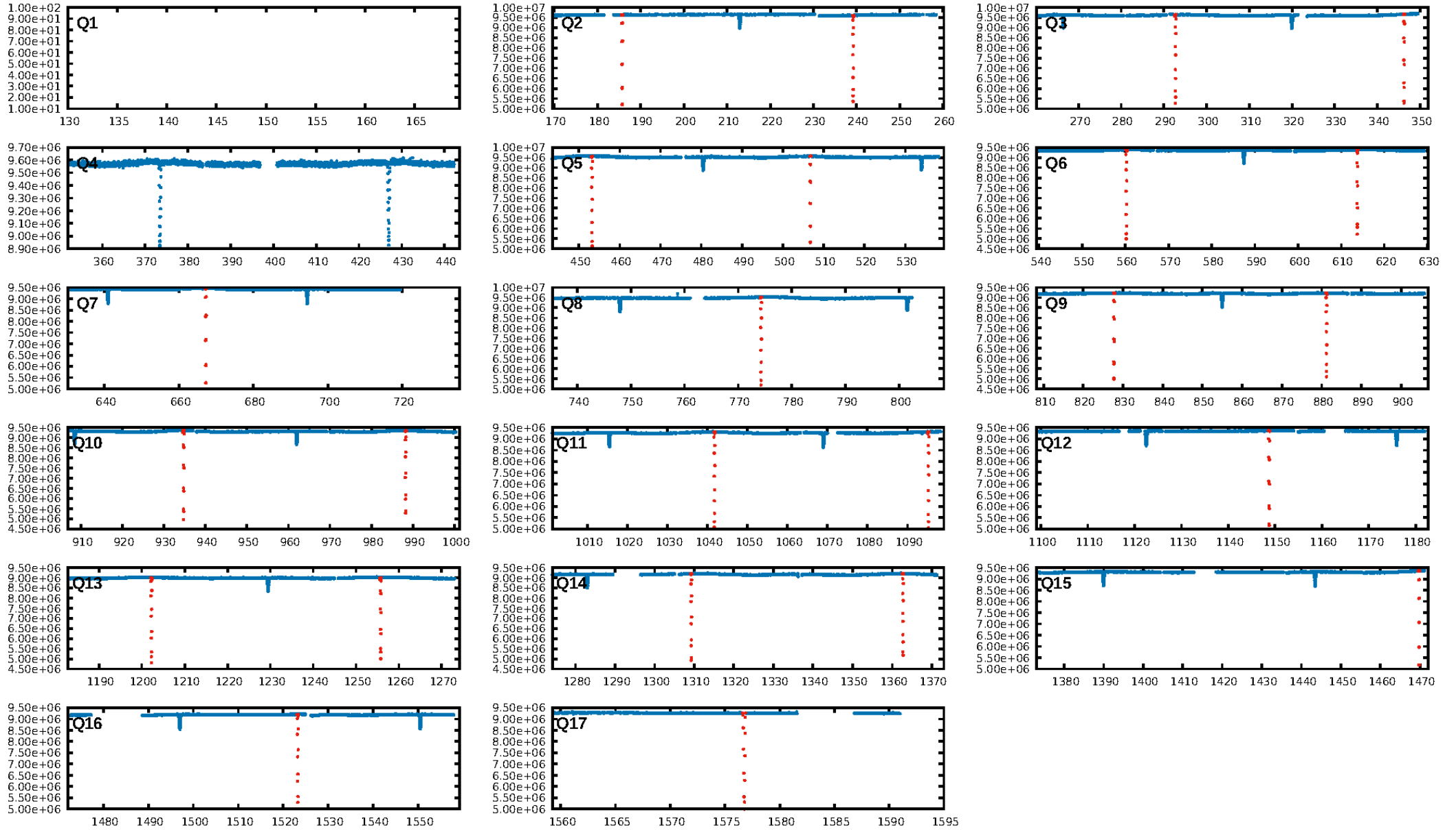
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [69.47 σ]
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [23/23]
GhostDiagnostic-chr: 2.313
Centroid-sig: 0.0%
Centroid-so: 0.200 arcsec [81.17 σ]
OotOffset-rm: 0.017 arcsec [0.25 σ]
KicOffset-rm: 0.130 arcsec [1.84 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
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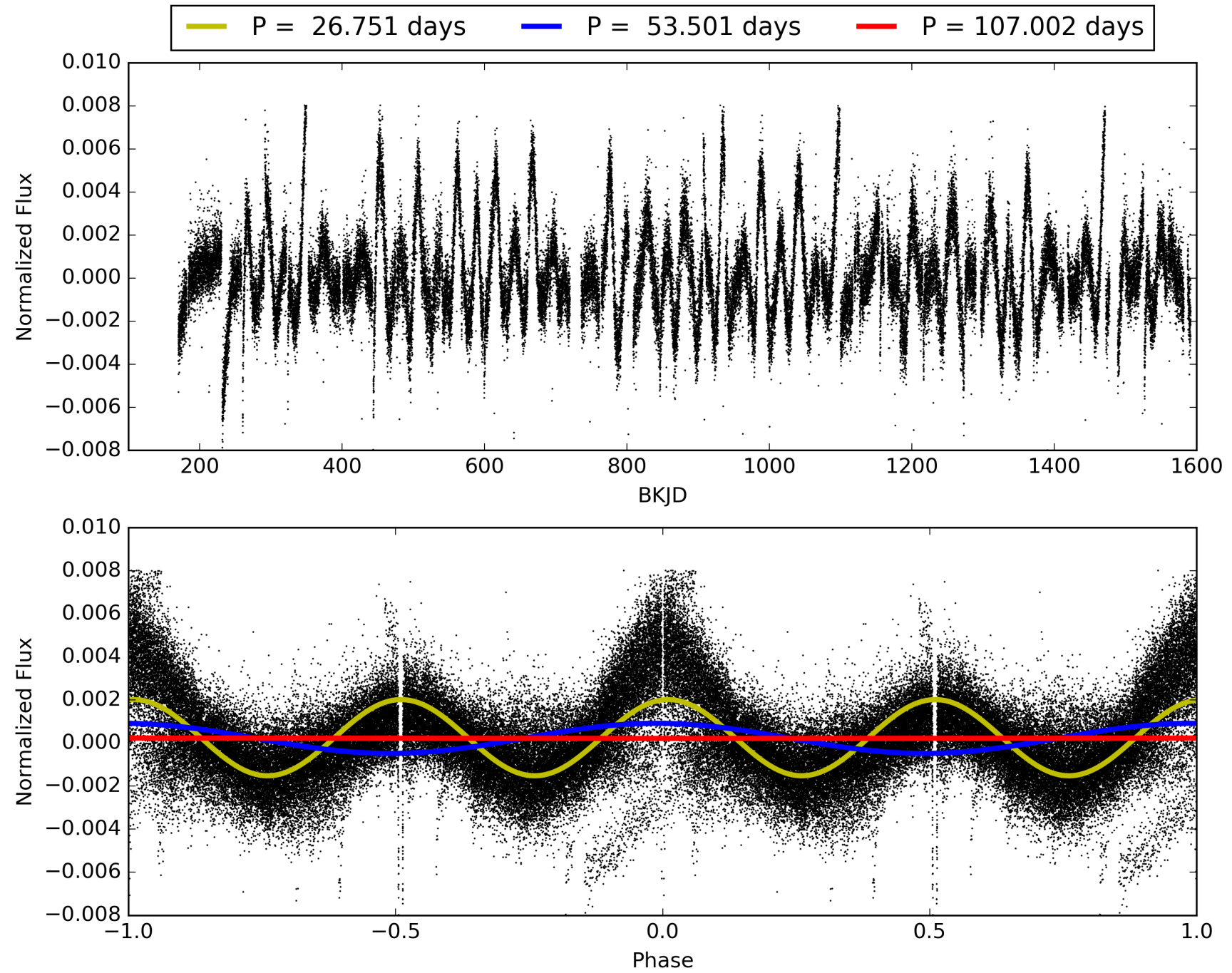
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:18:03 Z

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

TCE 012208887-01, PDC Light Curves

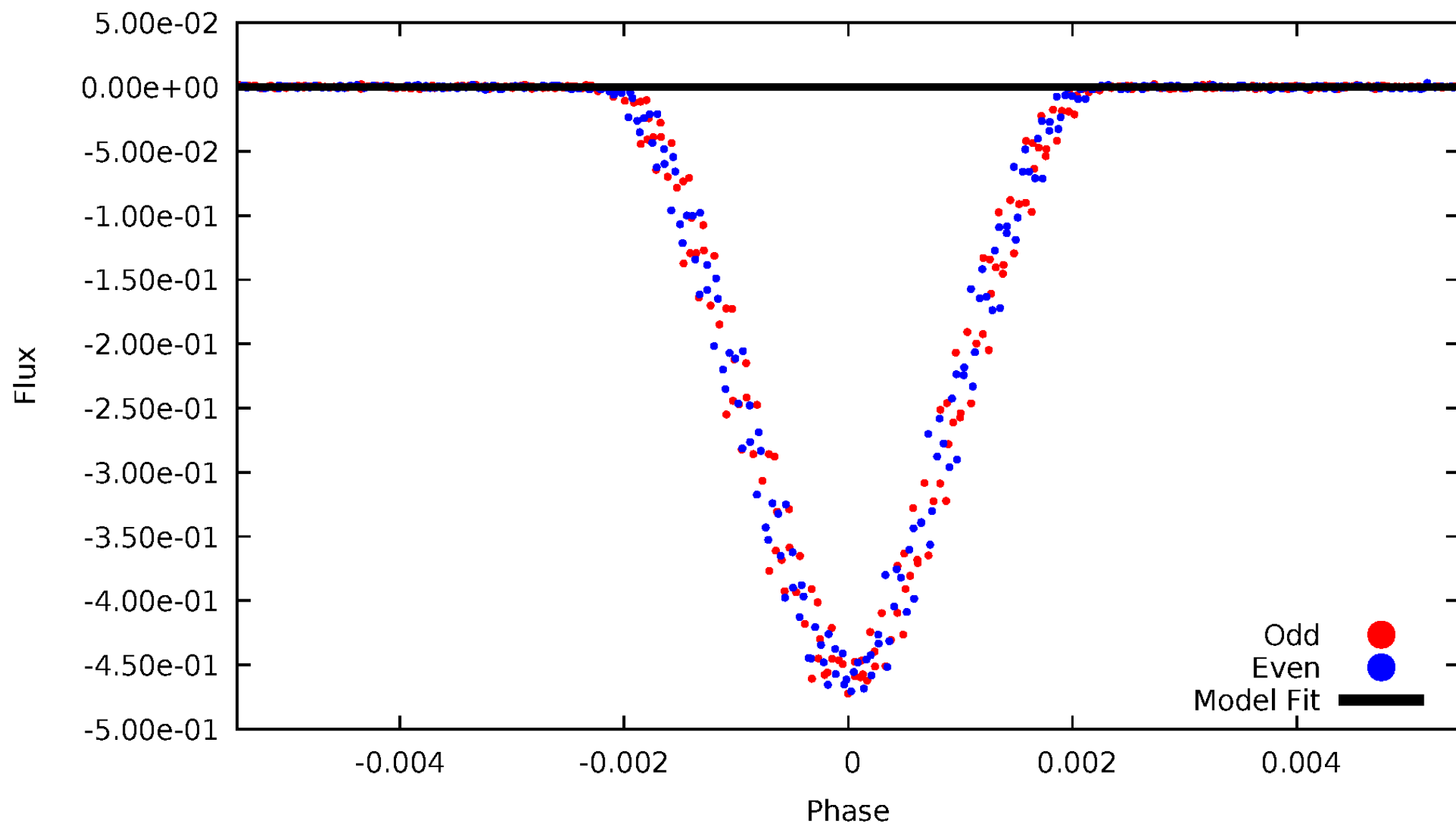


TCE 012208887-01



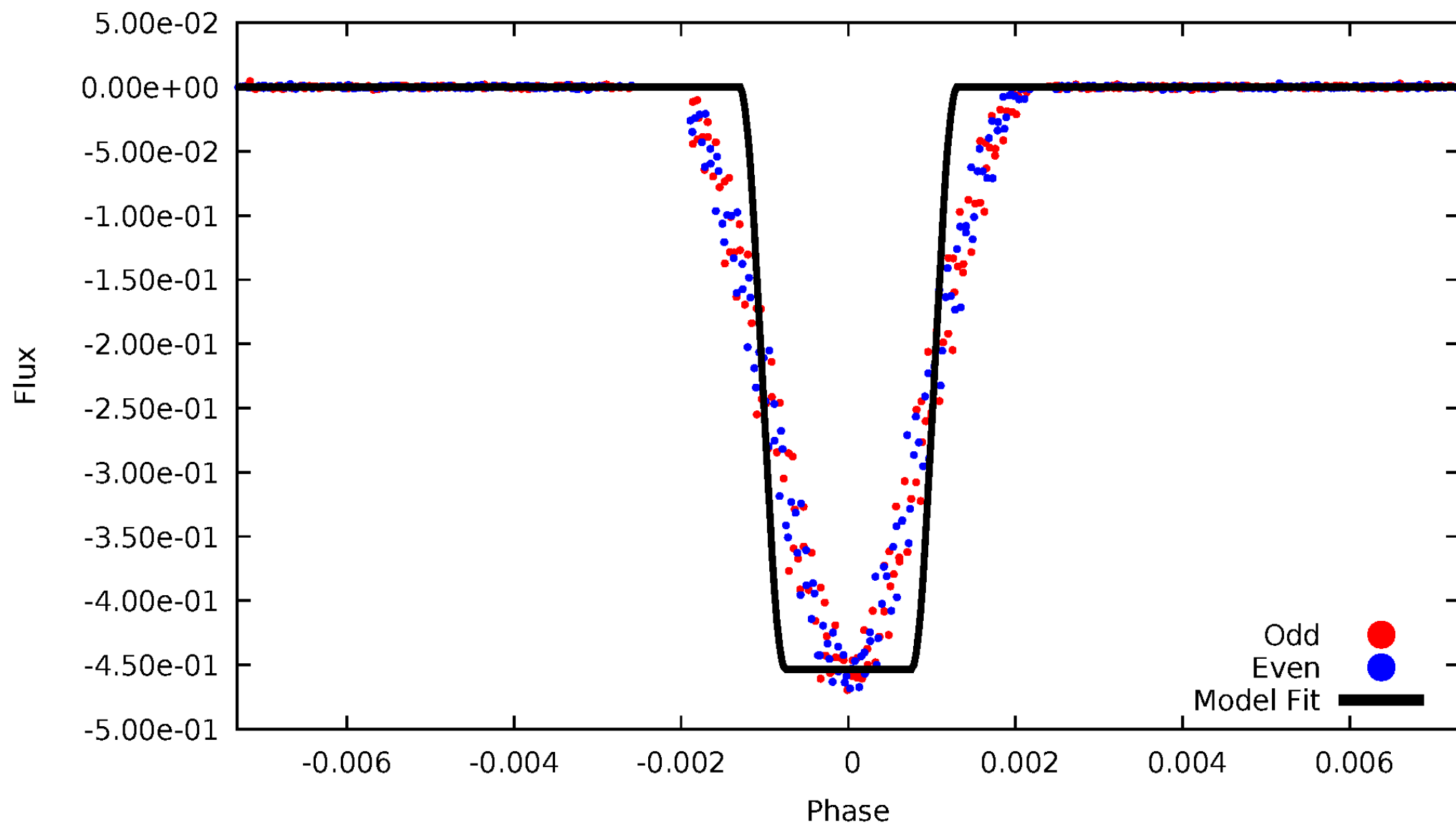
DV Odd/Even

TCE 012208887-01



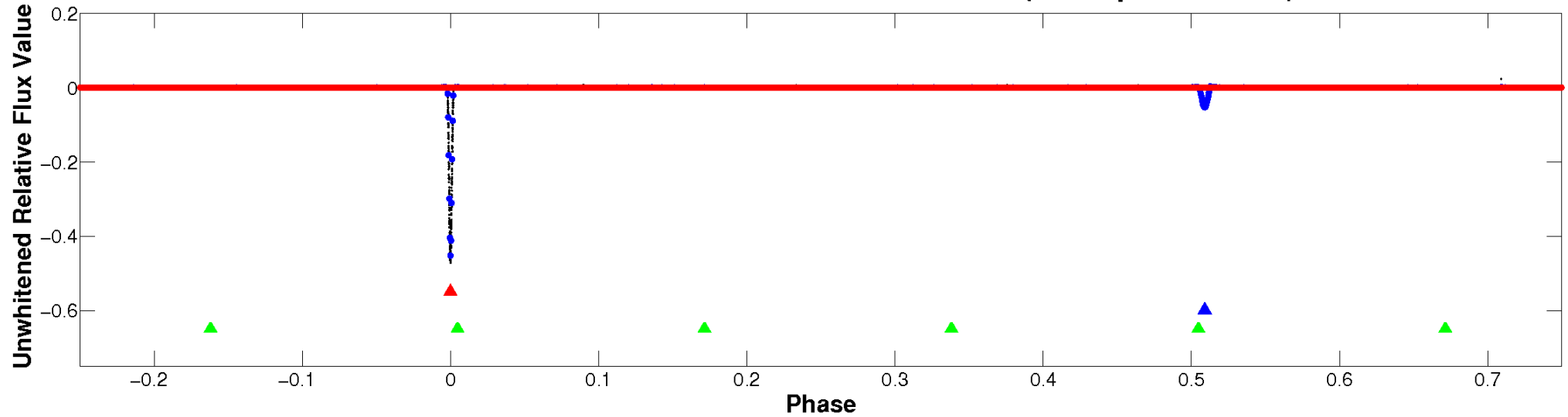
ALT Odd/Even

TCE 012208887-01

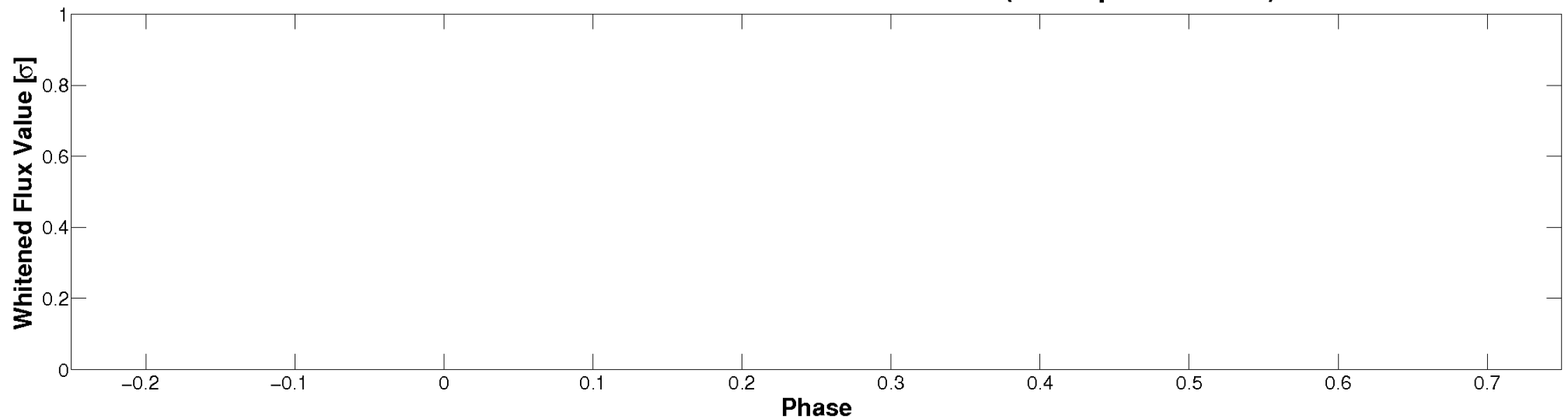


Non-Whitened Vs. Whitened Light Curve

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

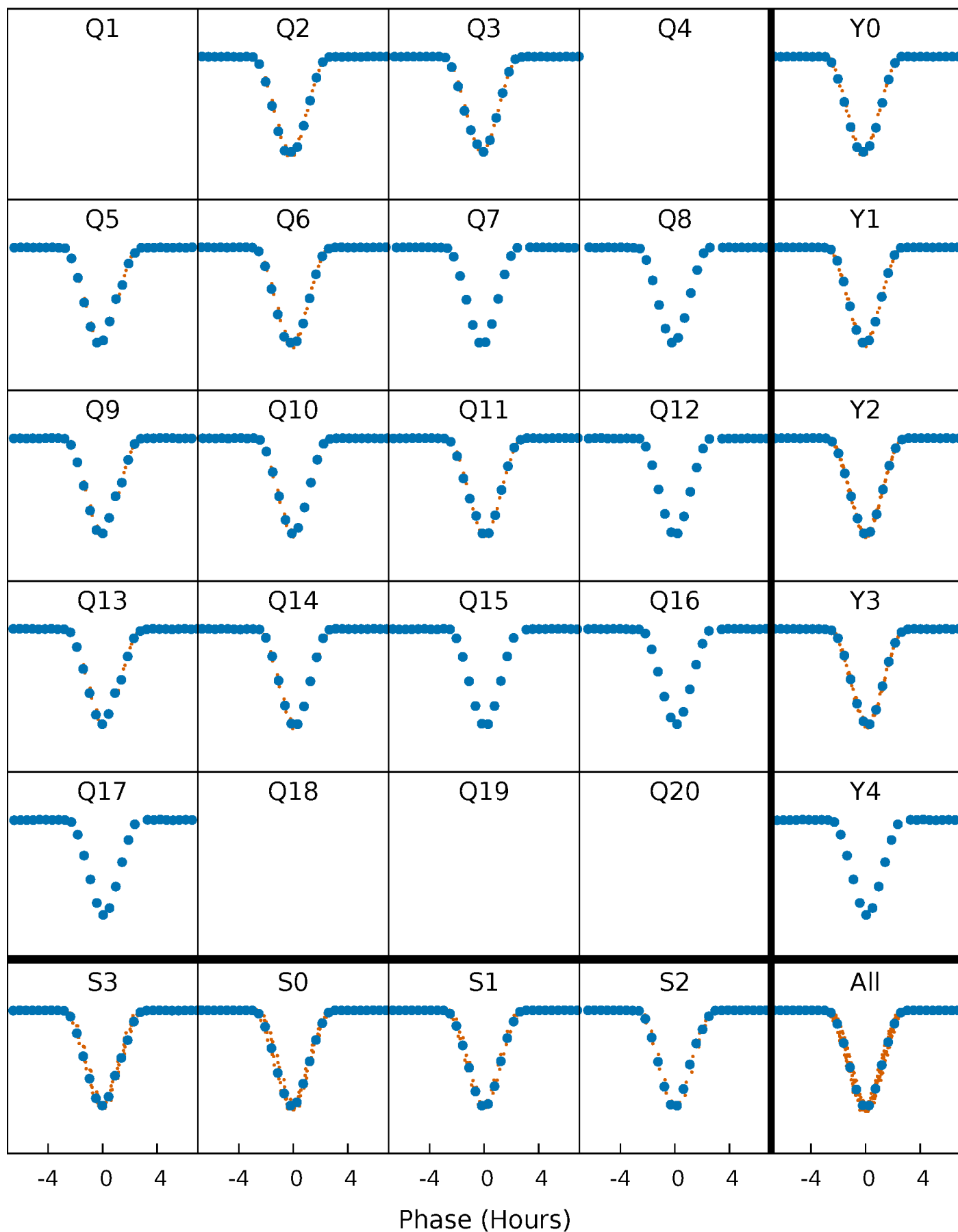


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



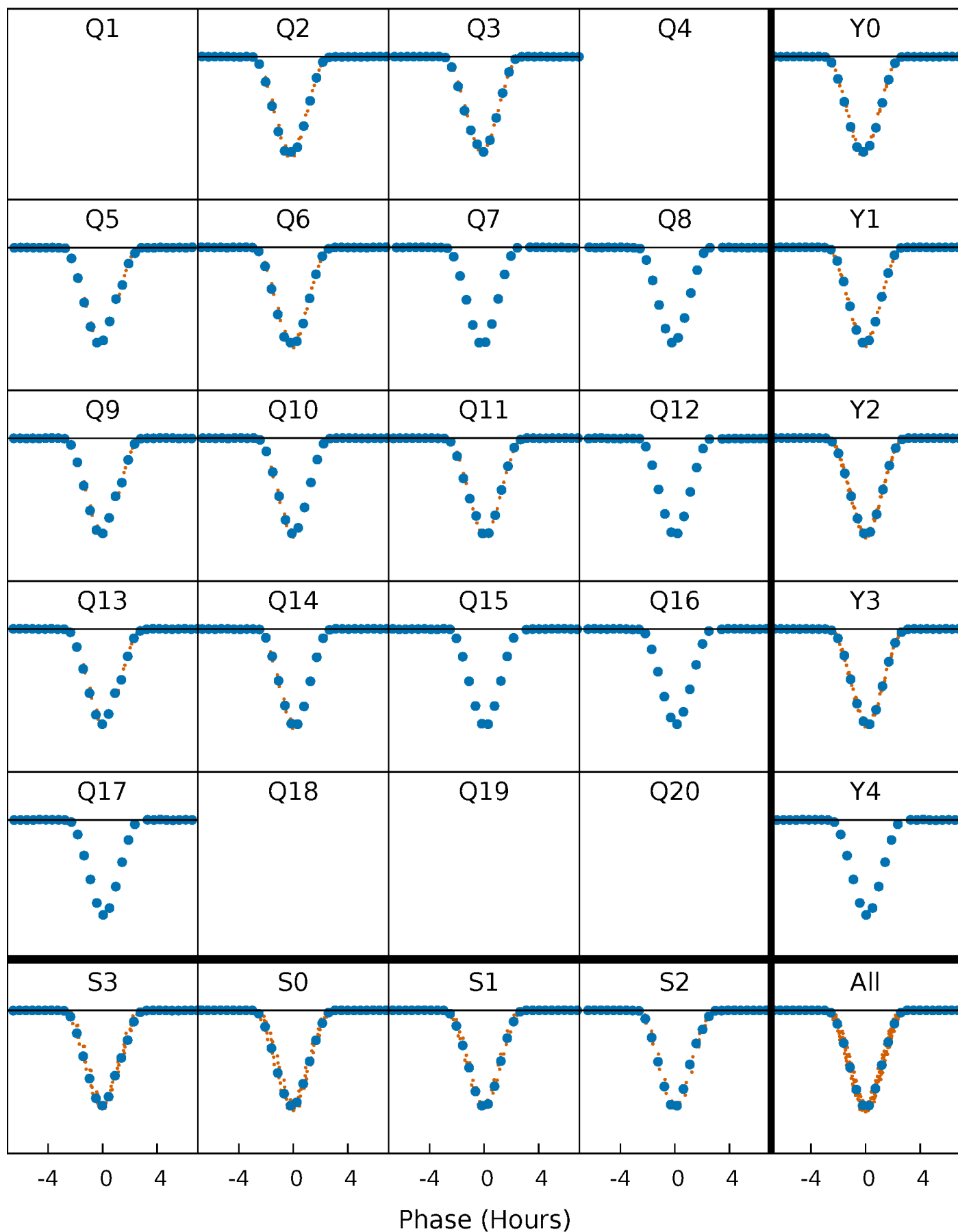
PDC Quarter-Phased Transit Curves

TCE 012208887-01 P= 53.501242 Days $T_0=132.219357$ (BKJD)



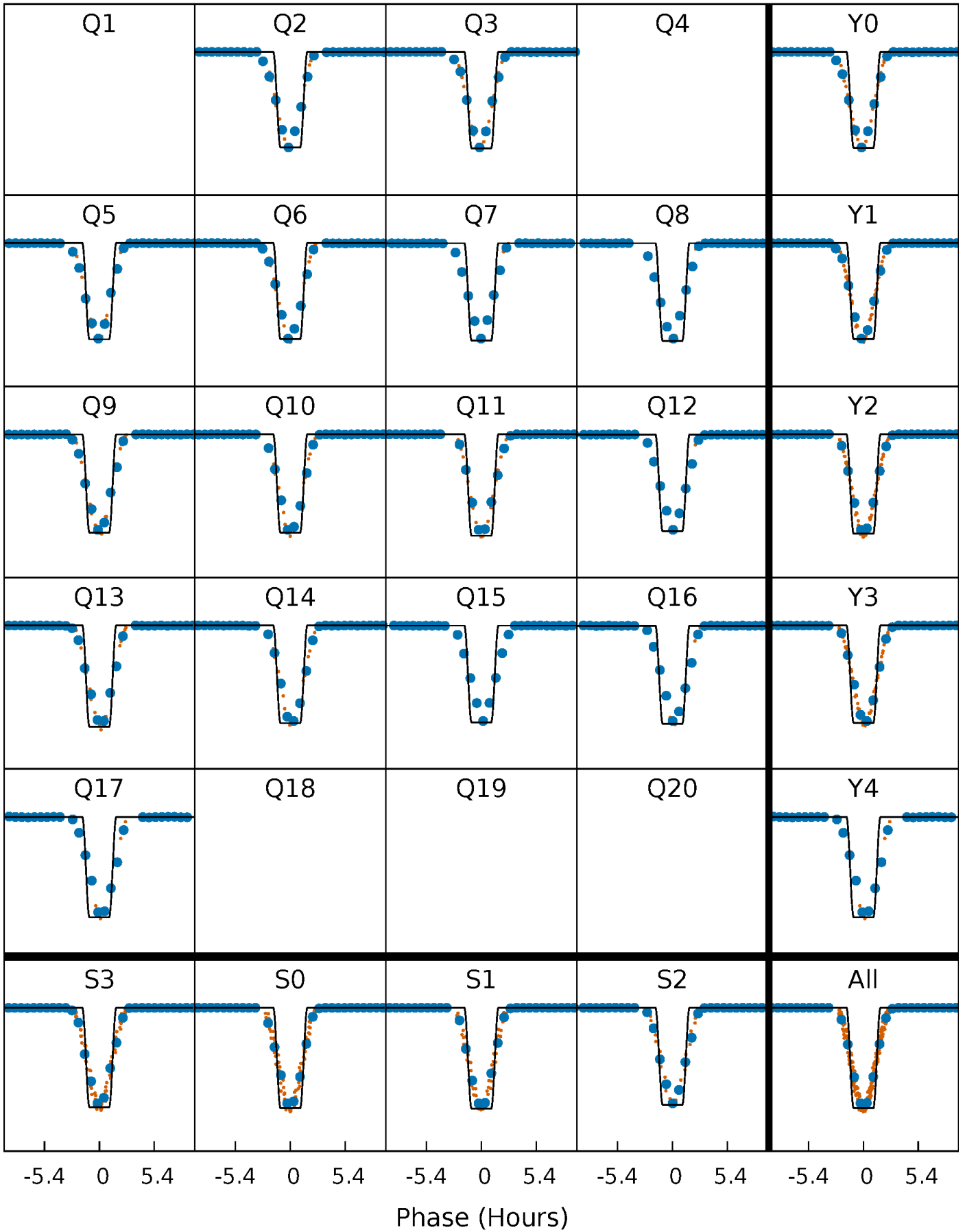
DV Quarter-Phased Transit Curves

TCE 012208887-01 P= 53.501242 Days $T_0=132.219357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

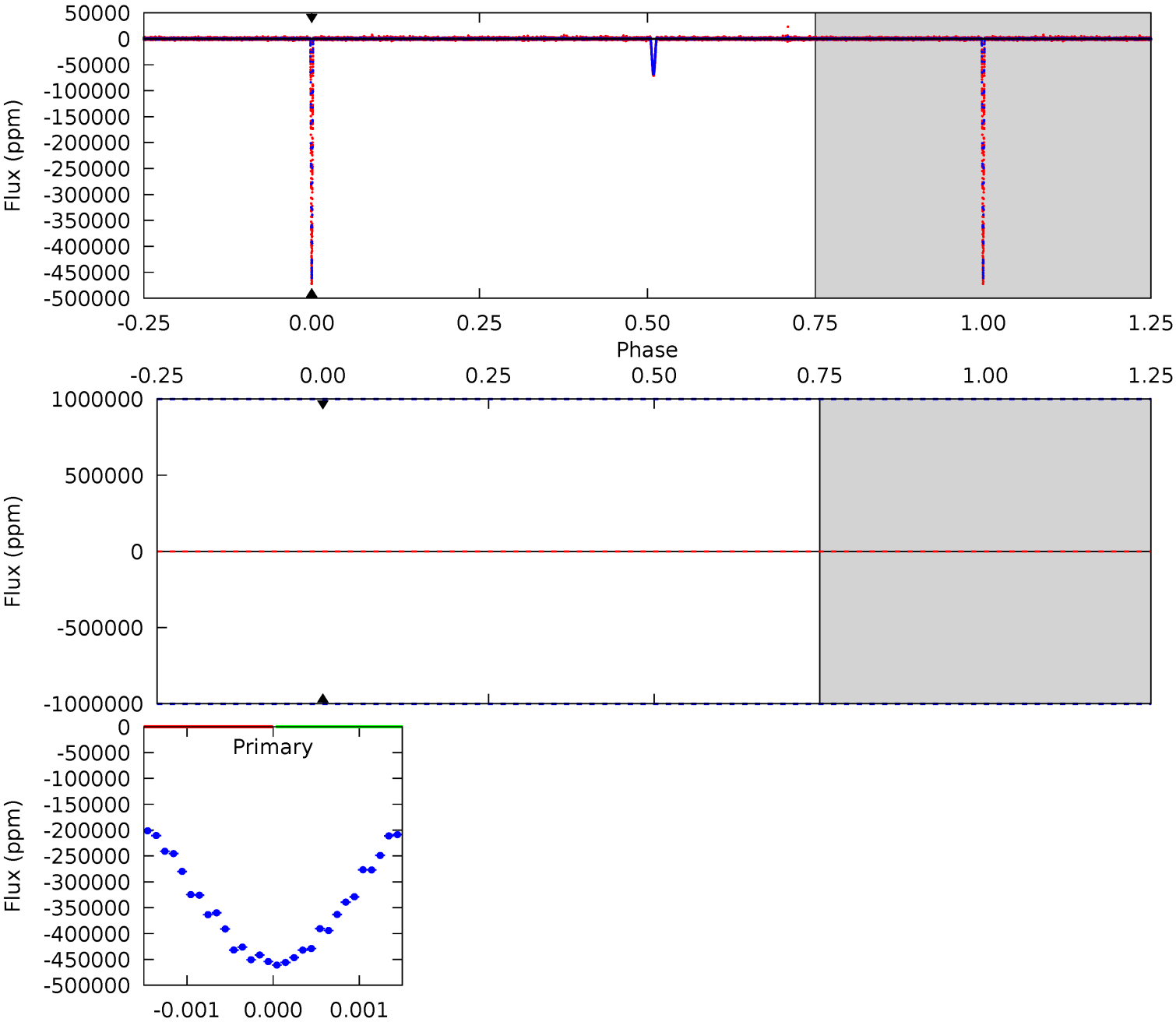
TCE 012208887-01 P= 53.501242 Days $T_0=132.219727$ (BKJD)



DV Model-Shift Uniqueness Test

012208887-01, P = 53.501242 Days, E = 132.219357 Days

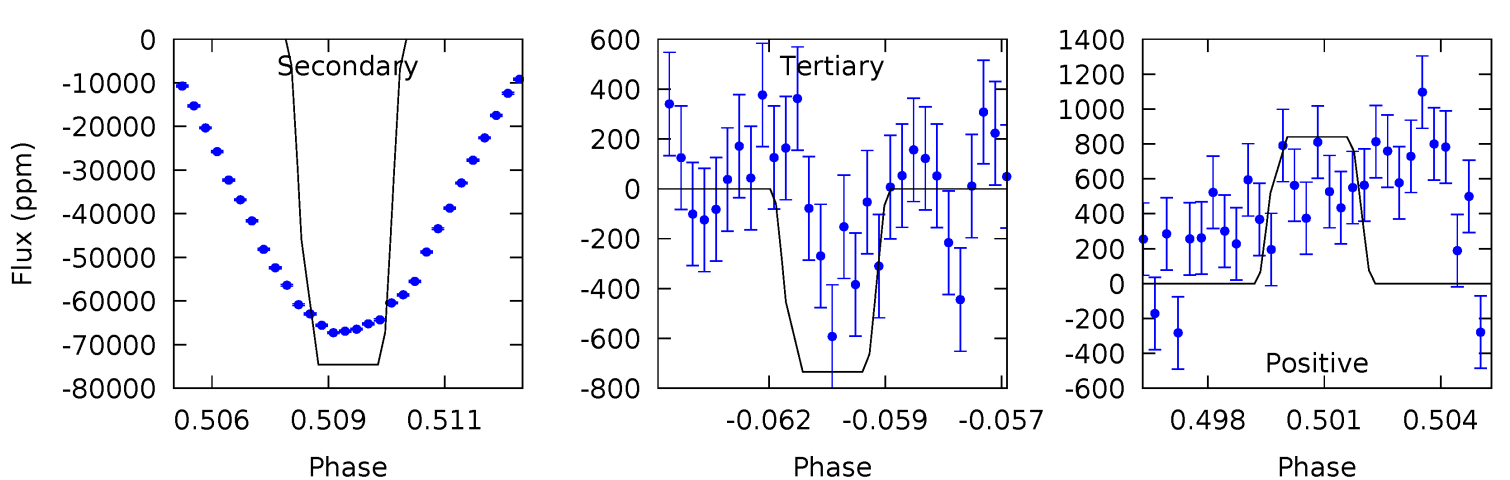
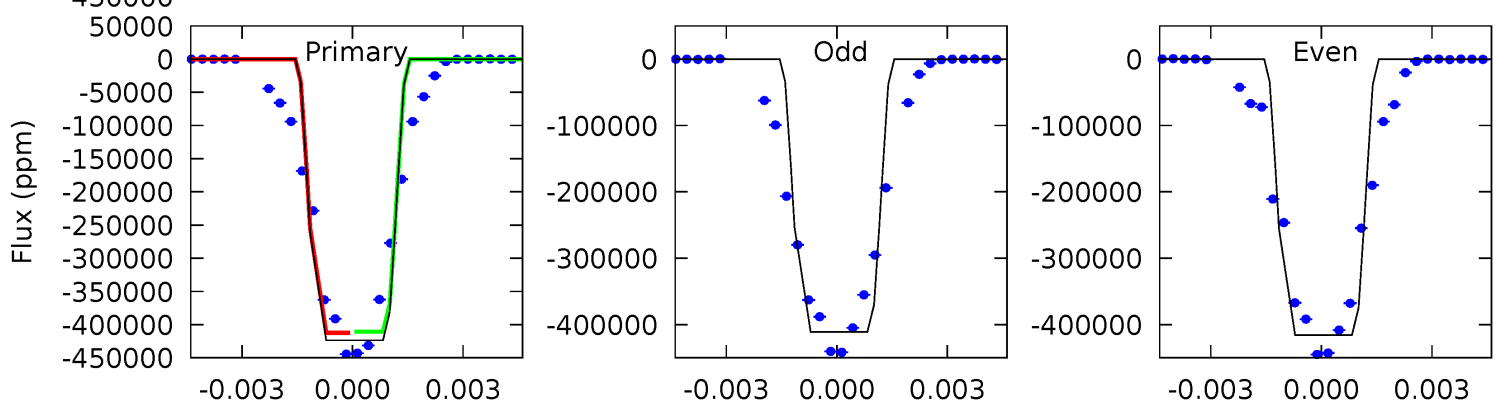
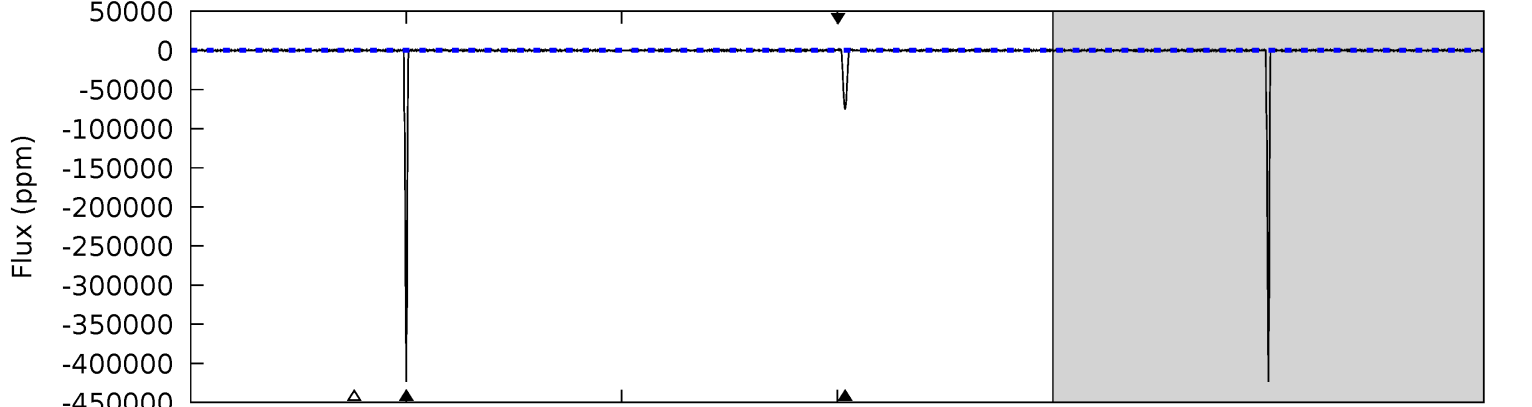
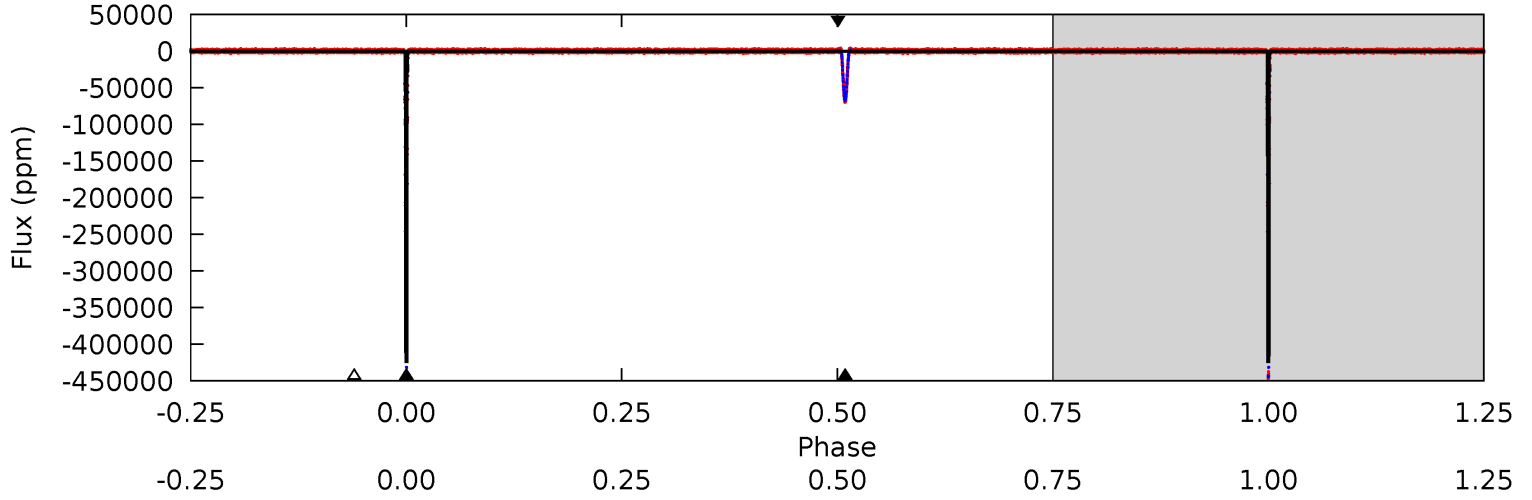
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012208887-01, P = 53.501242 Days, E = 132.219727 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1835	323.2	3.19	3.64	5.28	3.02	5.03	1832	1832	320.0	319.6	11.7	1.00	0.00	0



Stellar Parameters For KIC 012208887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5436^{+177}_{-160}	$4.587^{+0.045}_{-0.105}$	$-0.380^{+0.350}_{-0.300}$	$0.748^{+0.132}_{-0.061}$	$0.790^{+0.093}_{-0.067}$	$2.656^{+0.598}_{-0.889}$
	+3%/-3%	+1%/-2%	+92%/-79%	+18%/-8%	+12%/-8%	+23%/-33%
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 012208887-01 / KOI 3333.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$41.99^{+8.31}_{-8.65}$	578^{+26}_{-23}	2348^{+2213}_{-6762}	22^{+2292}_{-1967}
Alt.	-74603 ± 231	$55.71^{+10.01}_{-8.53}$	579^{+28}_{-23}	3879^{+262}_{-199}	934^{+364}_{-258}

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 $A_{obs} \gg 1.0$

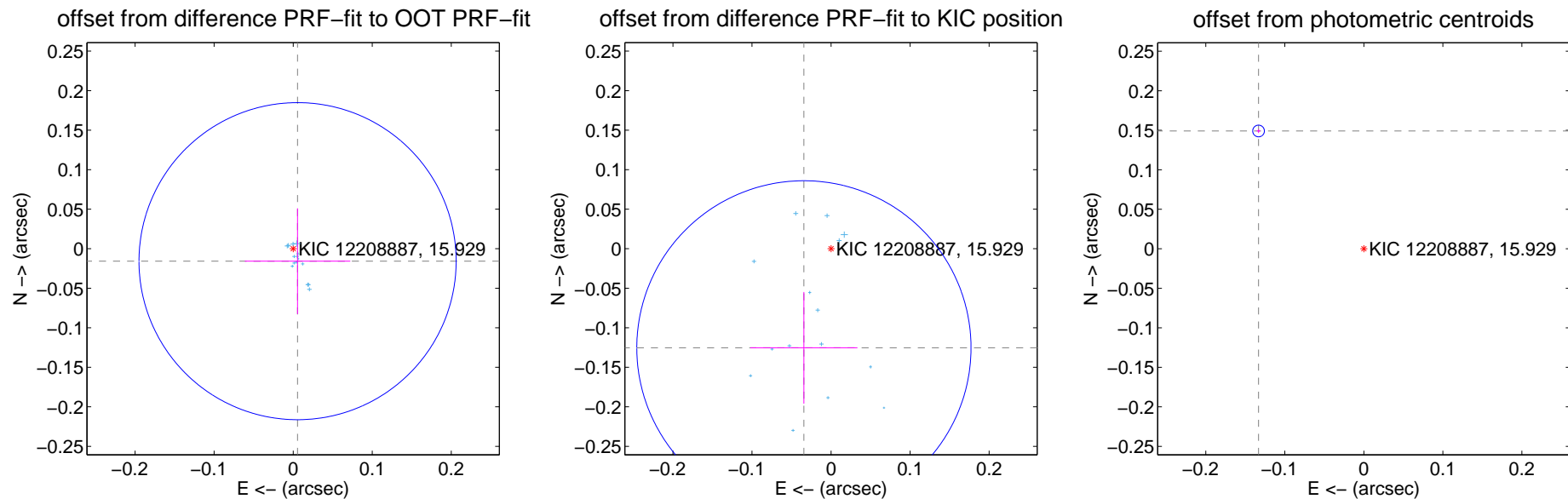
DV Centroid Data

Supplemental centroid analysis for 012208887-01. Kepler magnitude: 15.93. Transit SNR -1.00

There are 15 quarters with good PRF difference image offsets

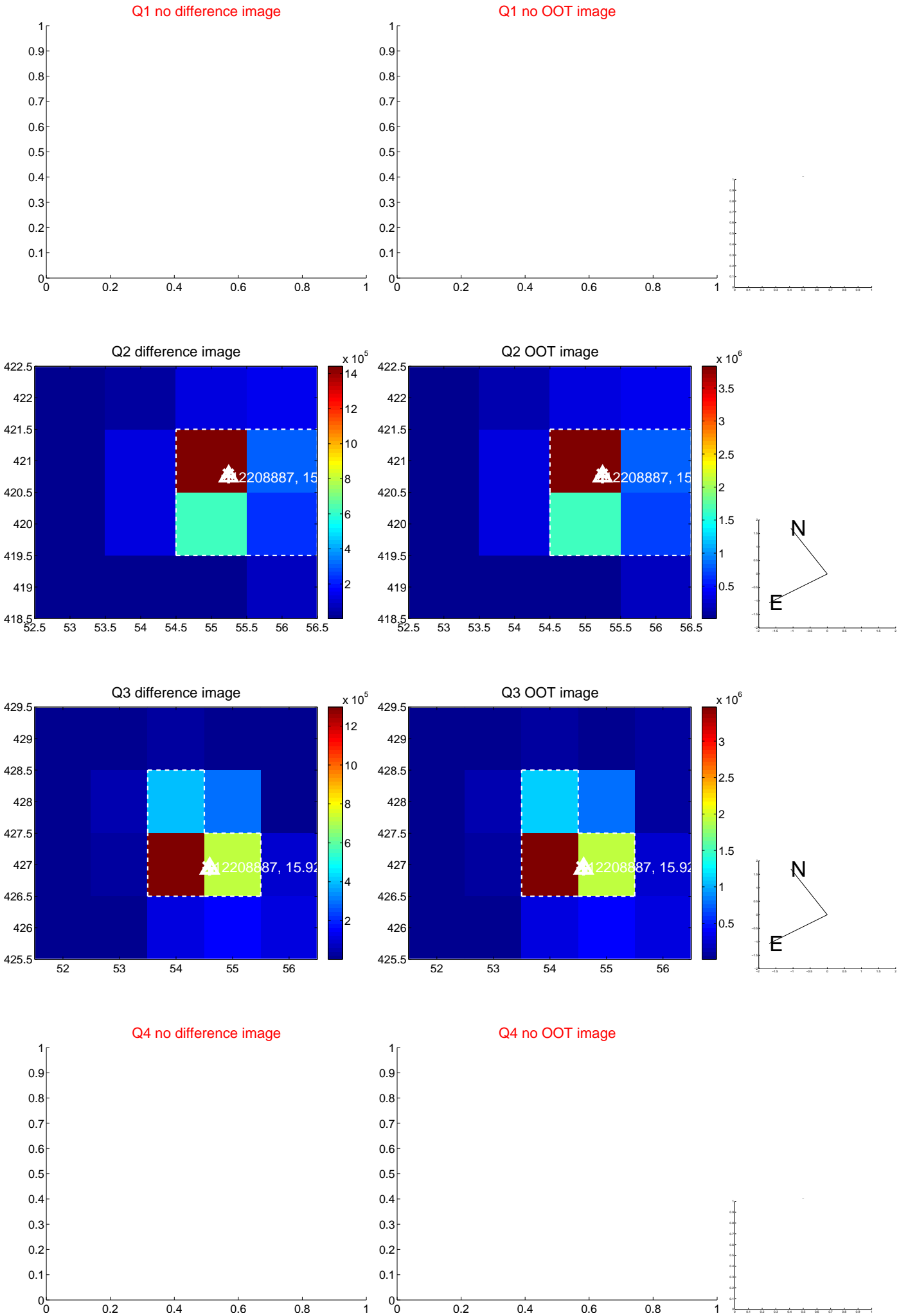
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.017 ± 0.067	0.25	-0.006 ± 0.067	-0.016 ± 0.067
PRF-fit source offset from KIC position	0.130 ± 0.070	1.84	0.034 ± 0.068	-0.125 ± 0.071
photometric centroid source offset	0.20 ± 0.00	81.17	0.13 ± 0.00	0.15 ± 0.00

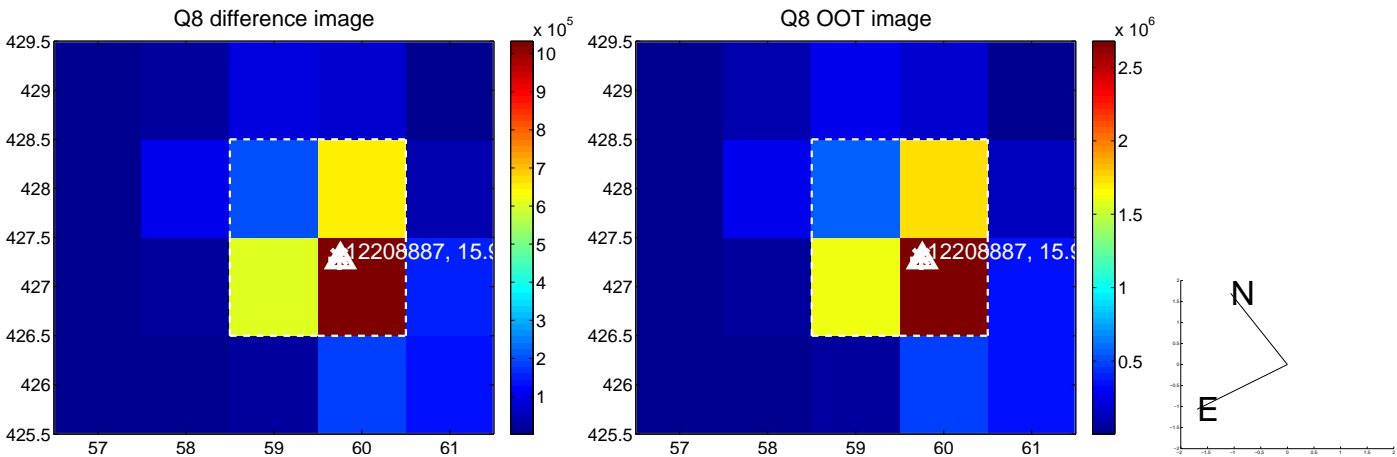
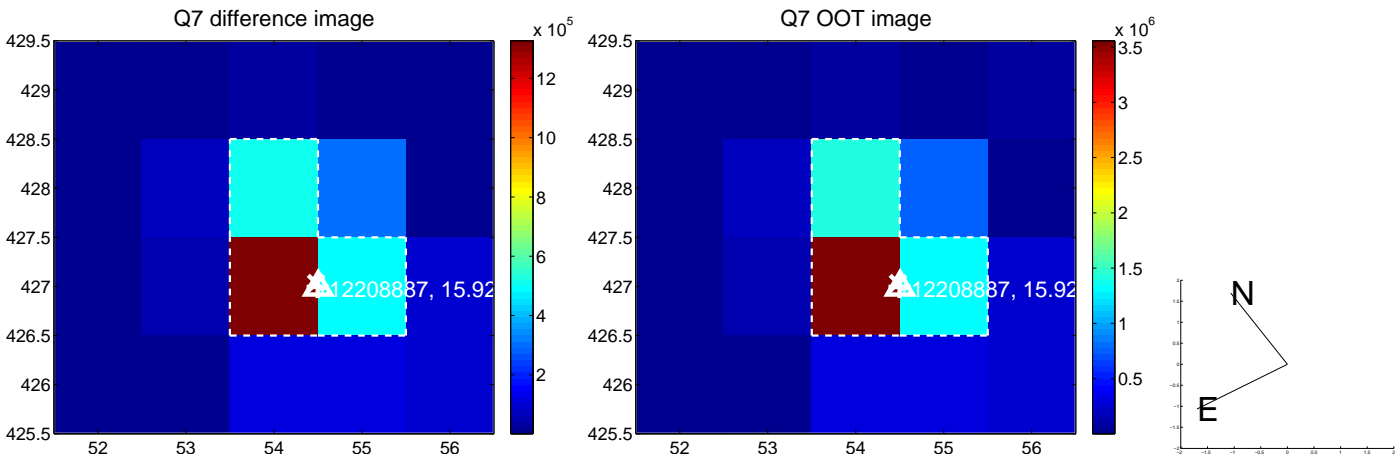
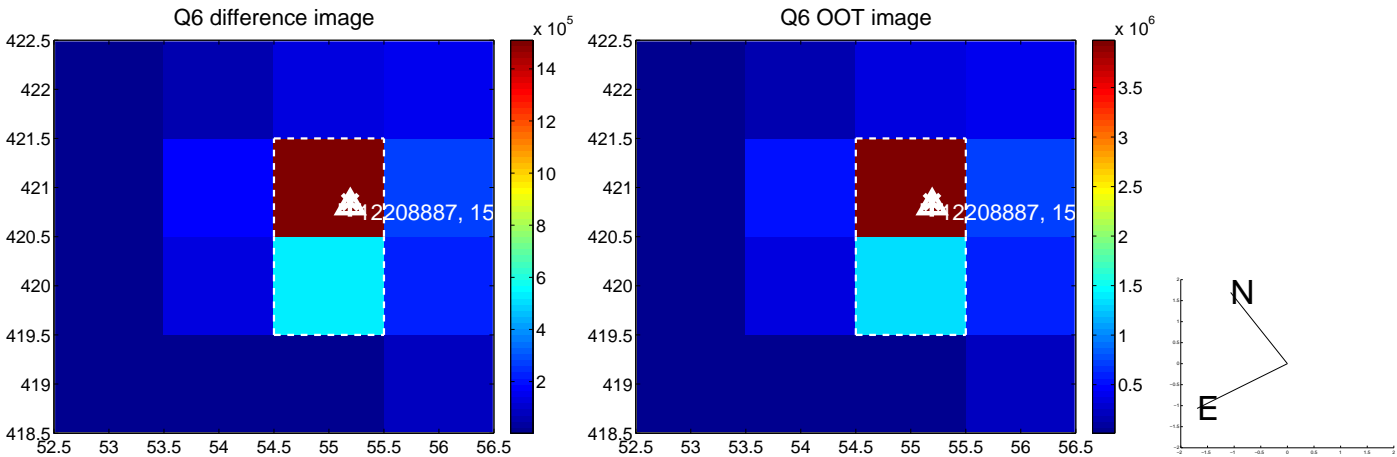
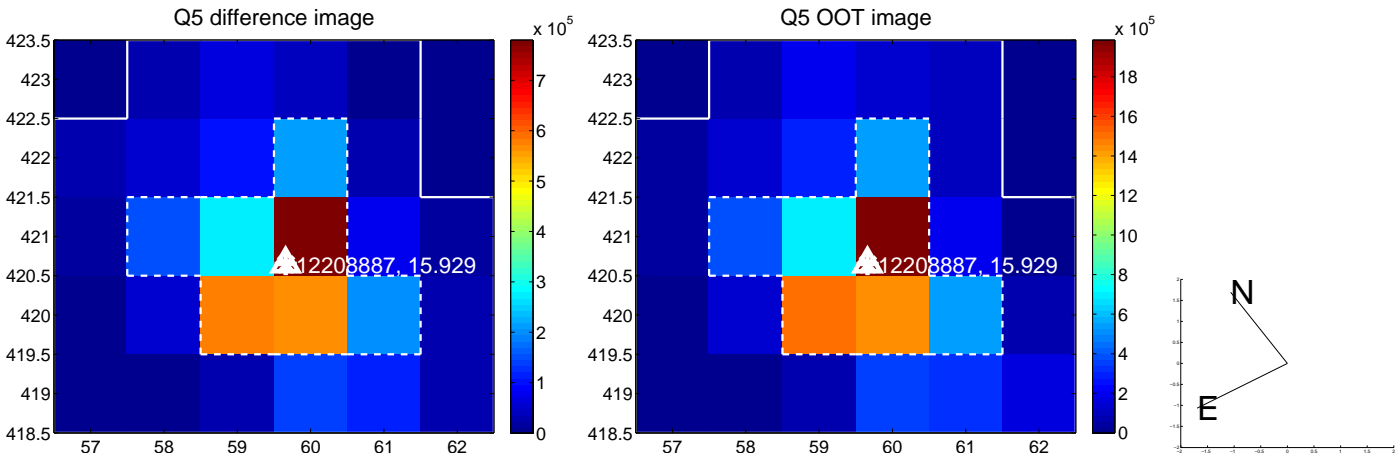


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

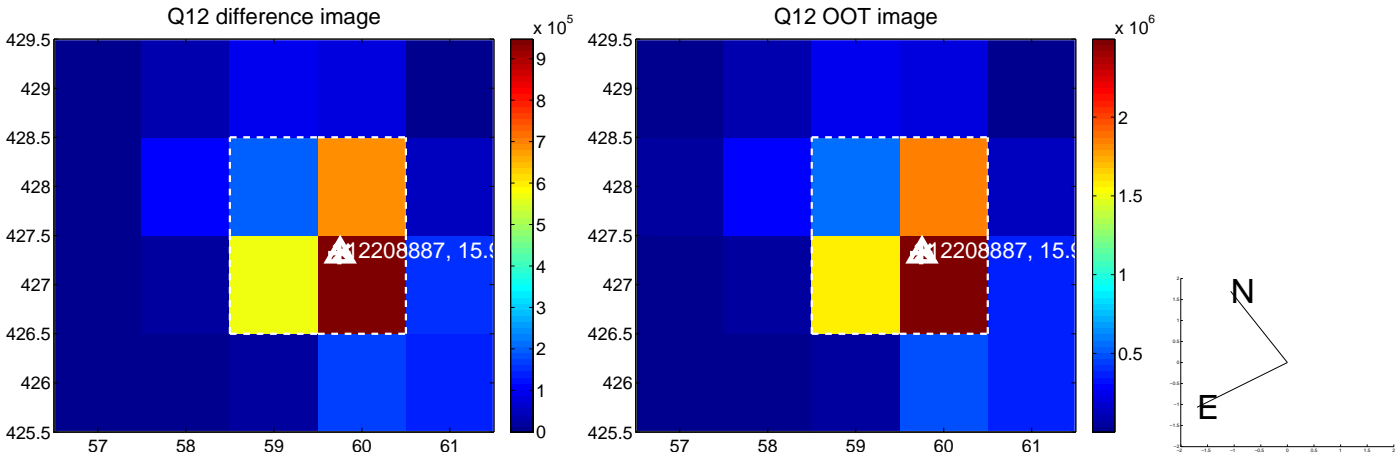
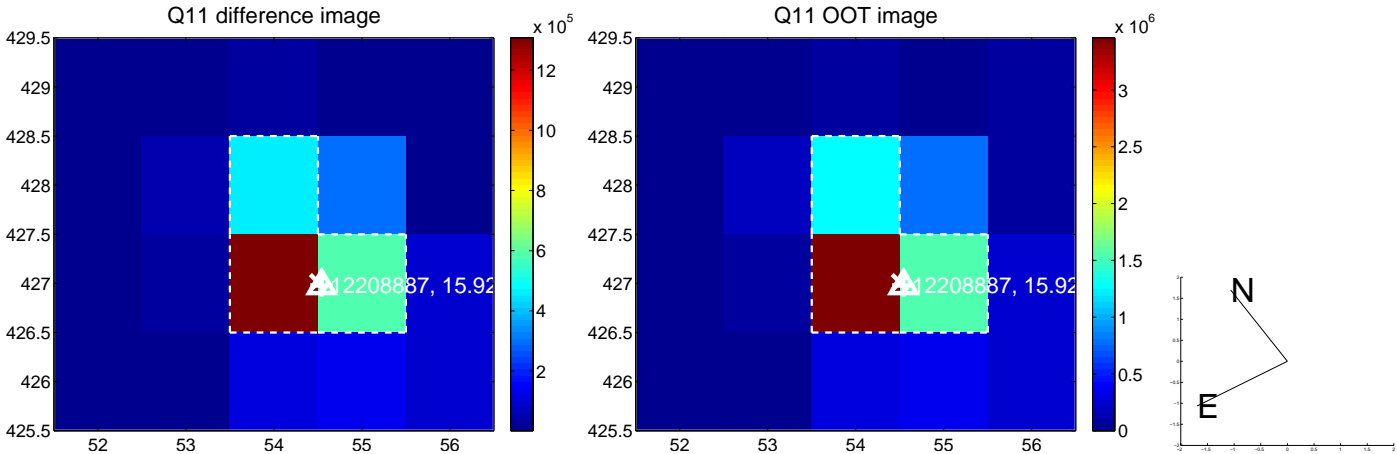
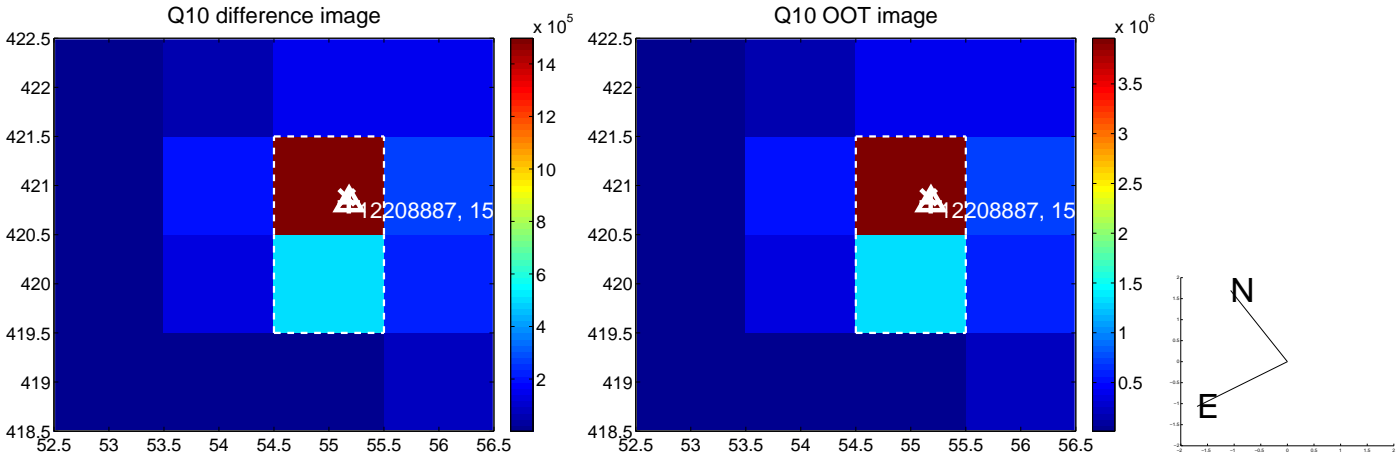
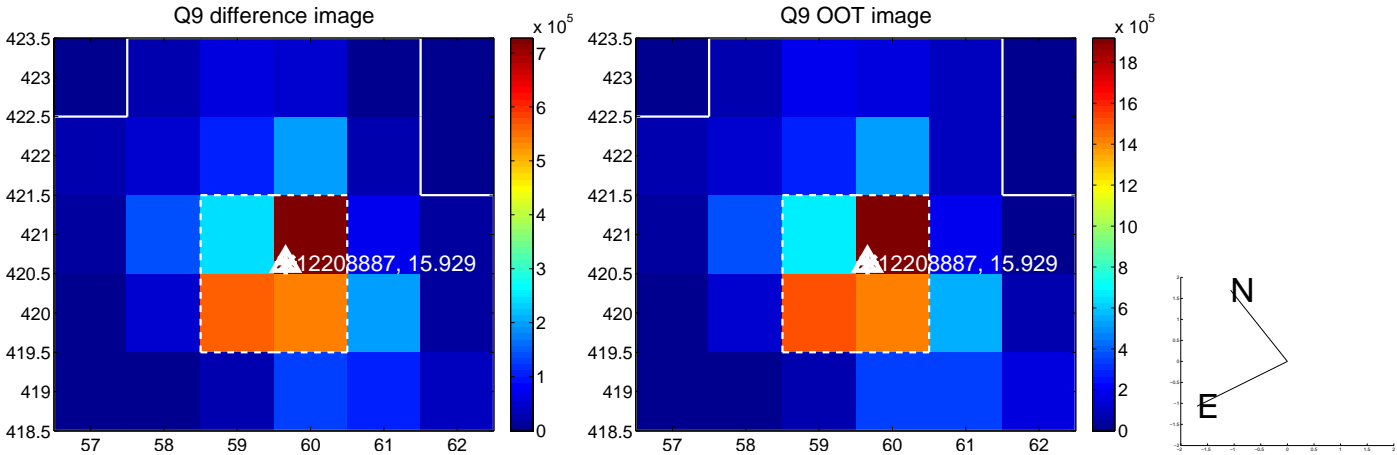
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



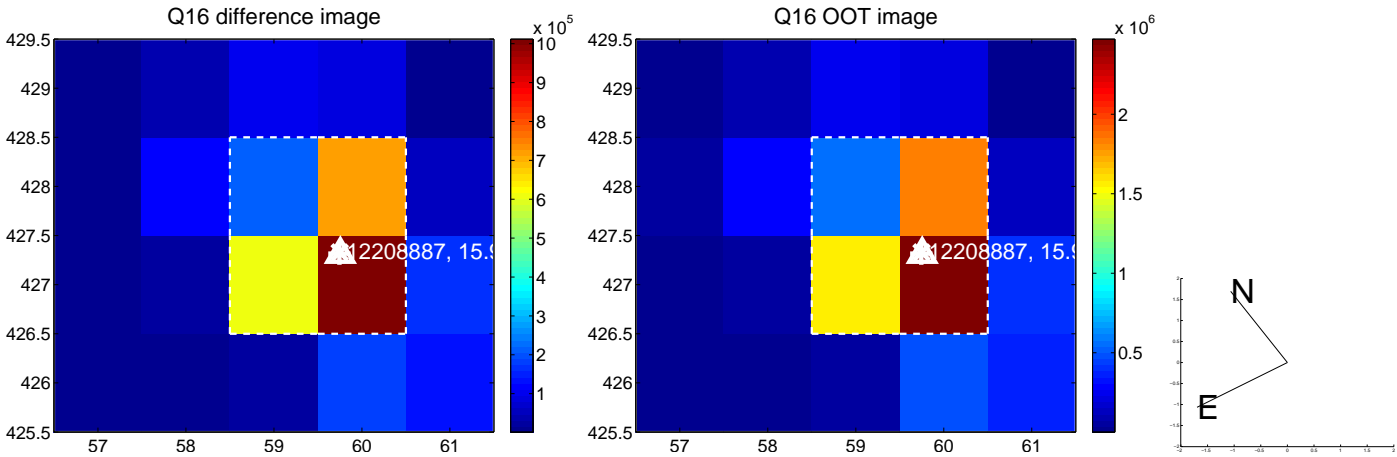
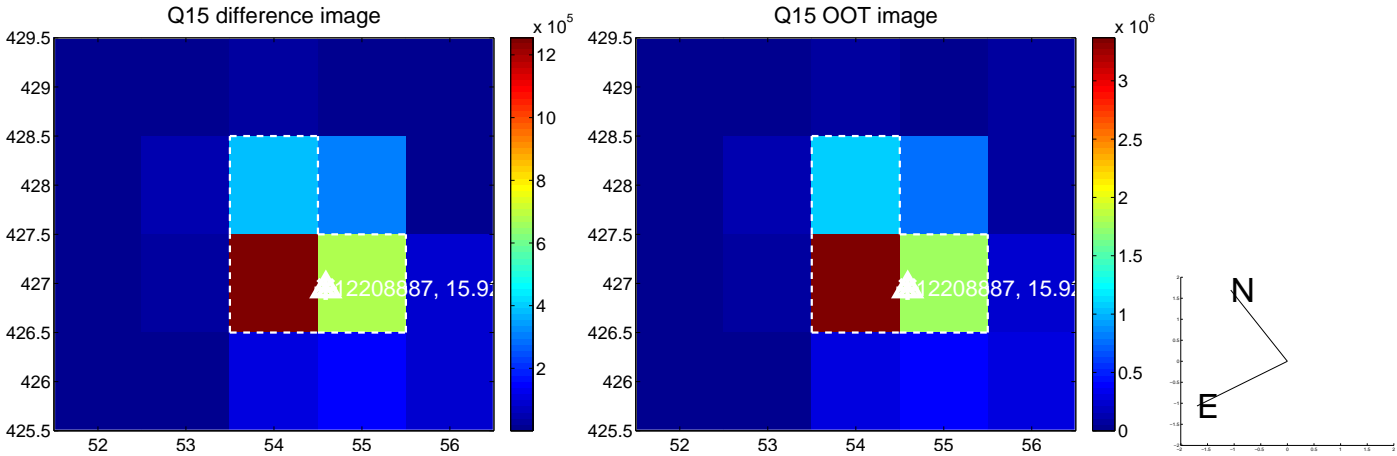
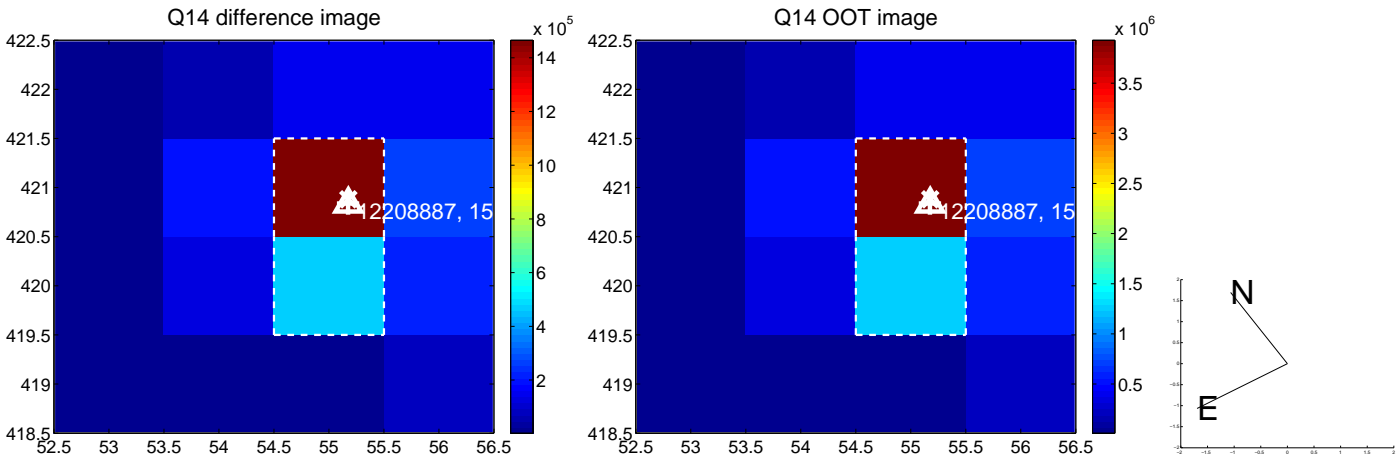
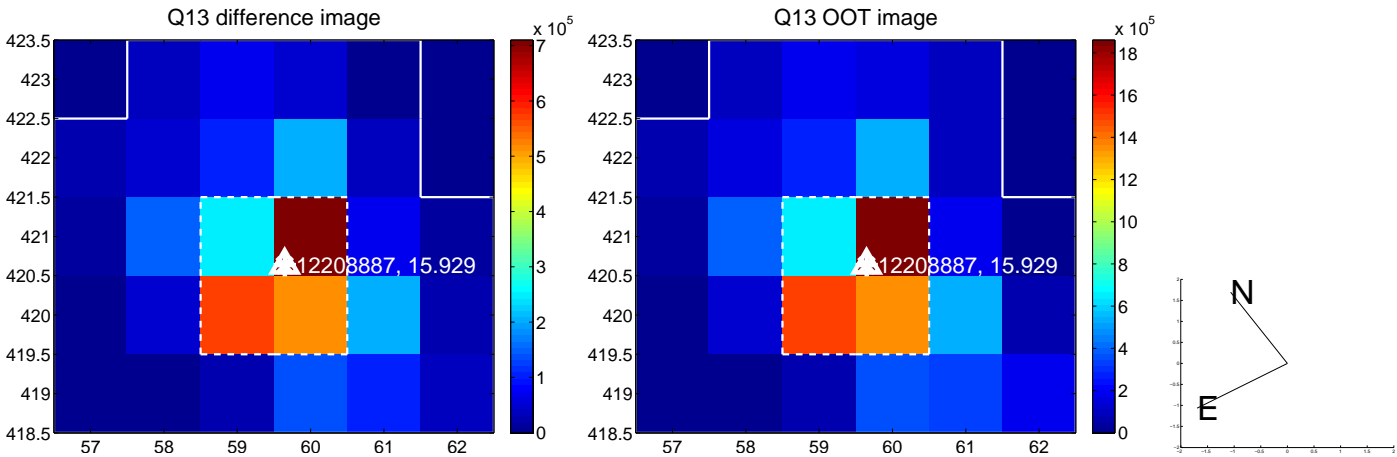
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



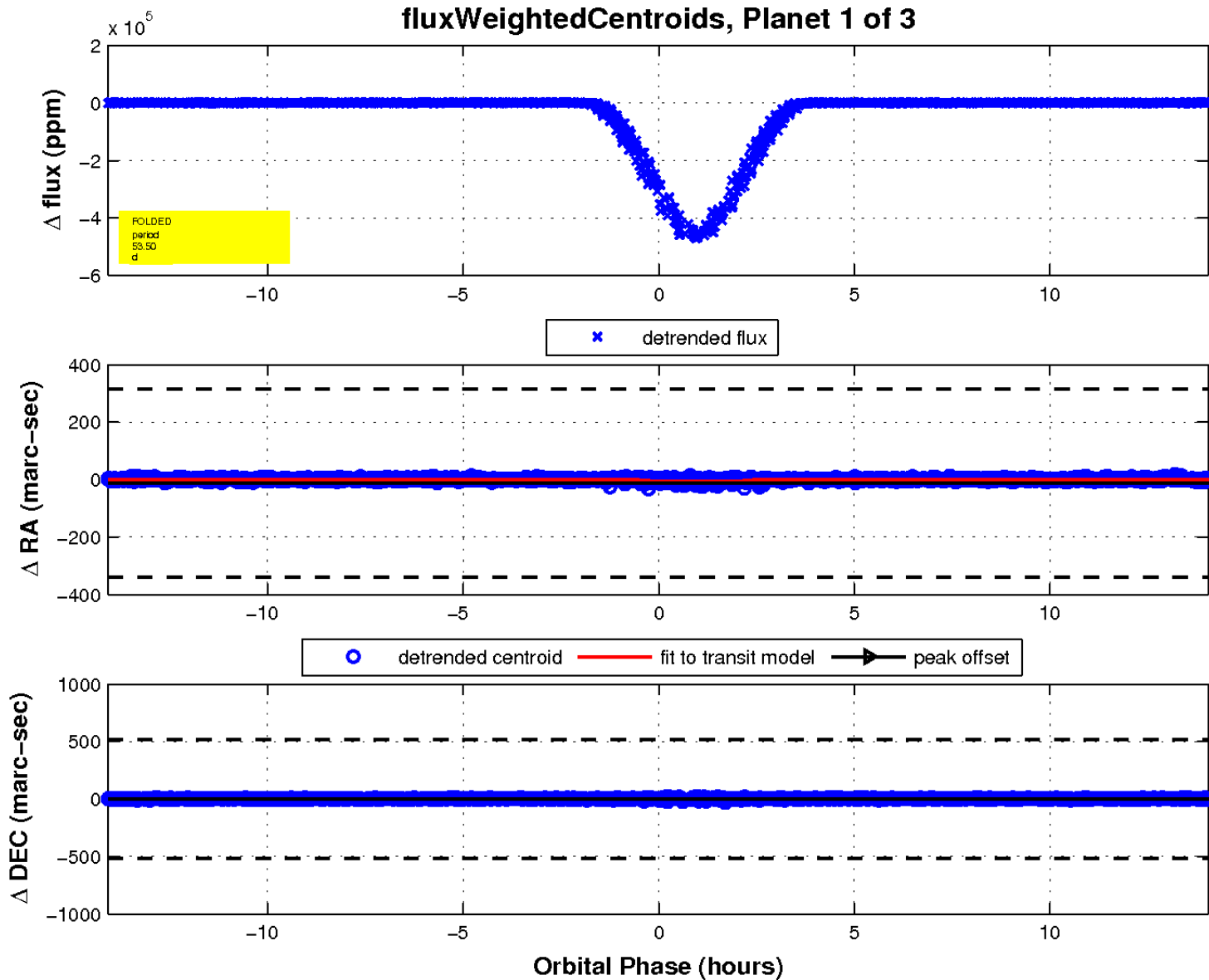
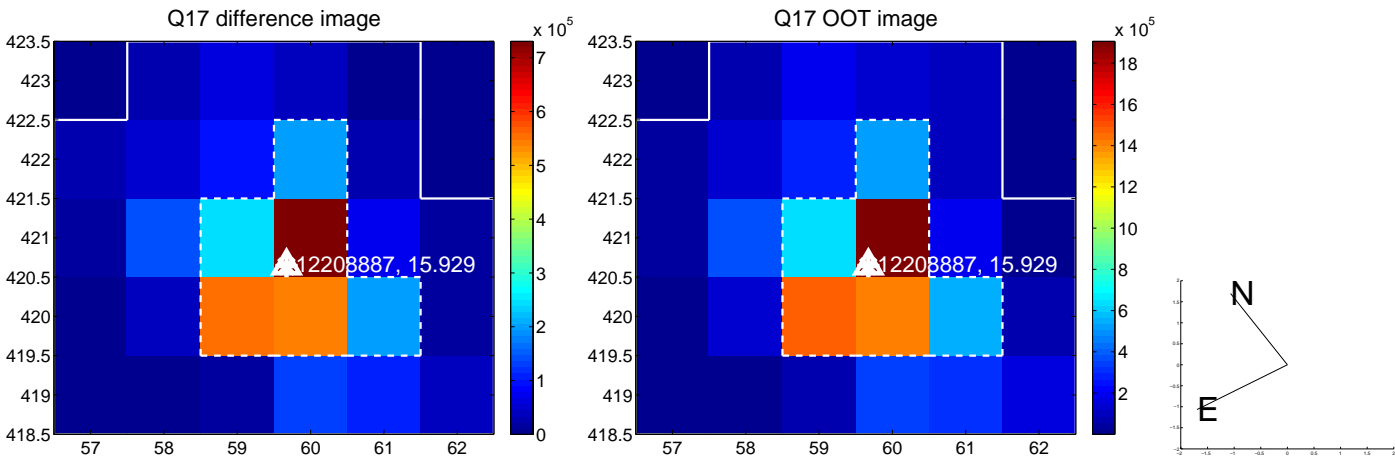
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



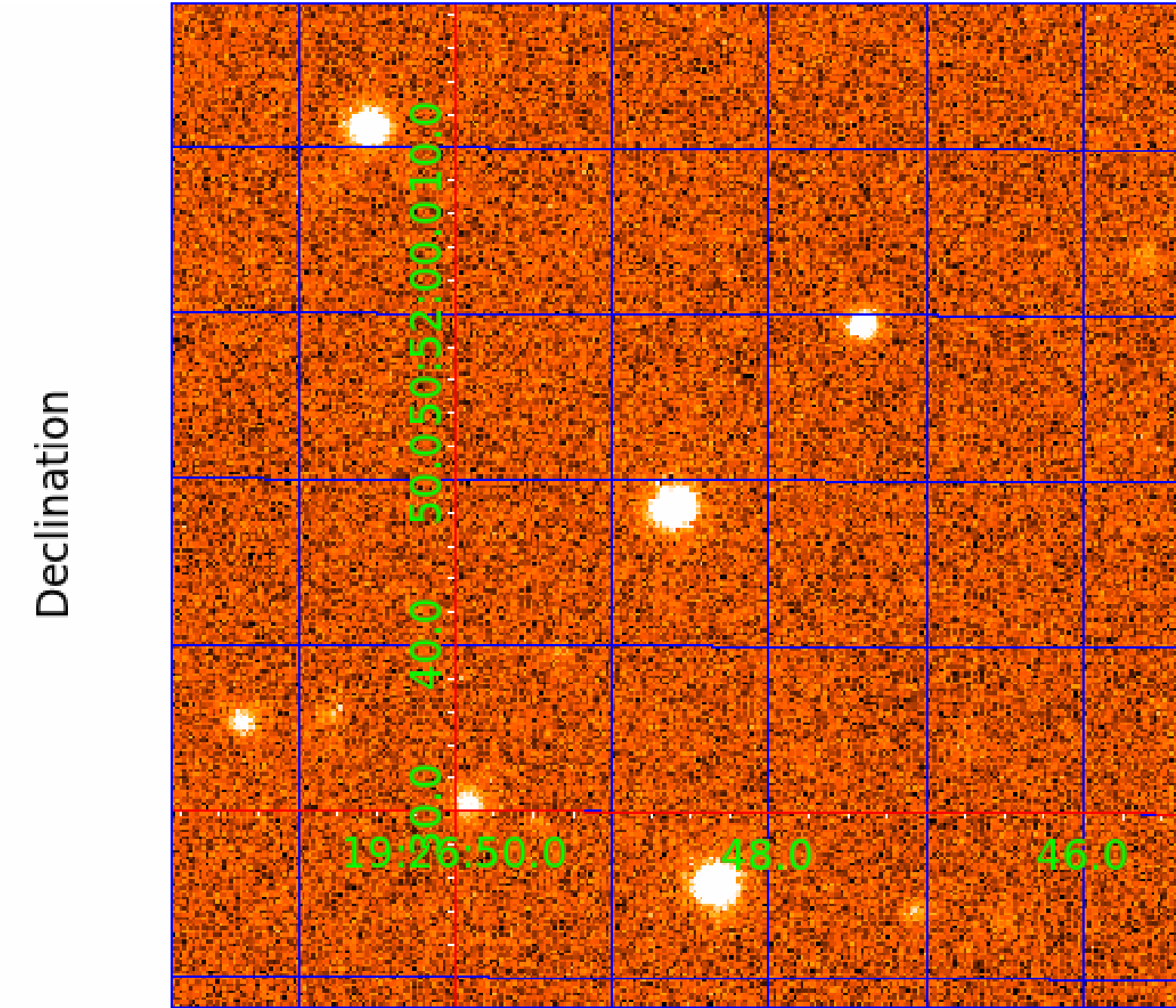
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 012208887

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})
012208887-01	OBS	3333.01	53.501242	132.219357	456190.8	3.500	4289.3	-1.0	0.75	5436	40.81	6.64
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208887-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
012208887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
012208887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS

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.

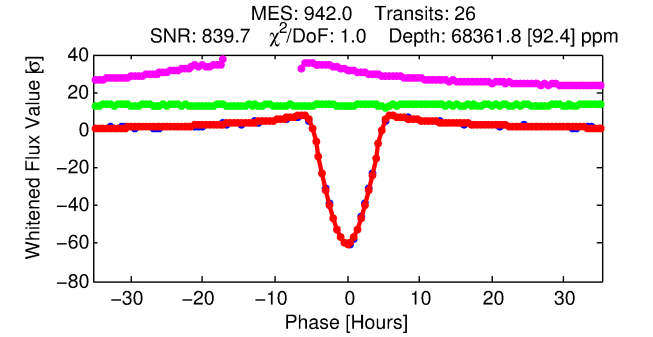
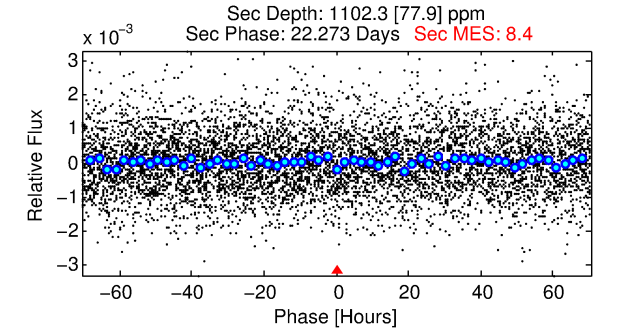
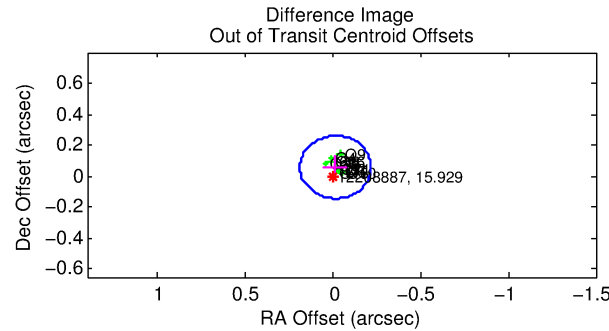
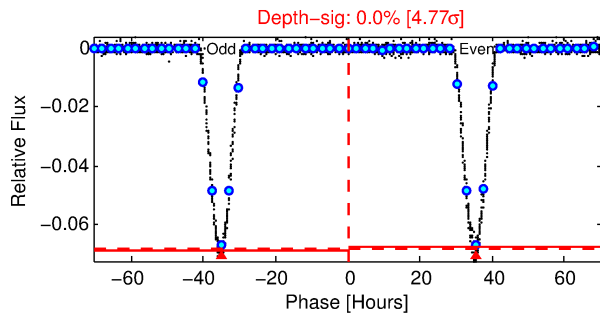
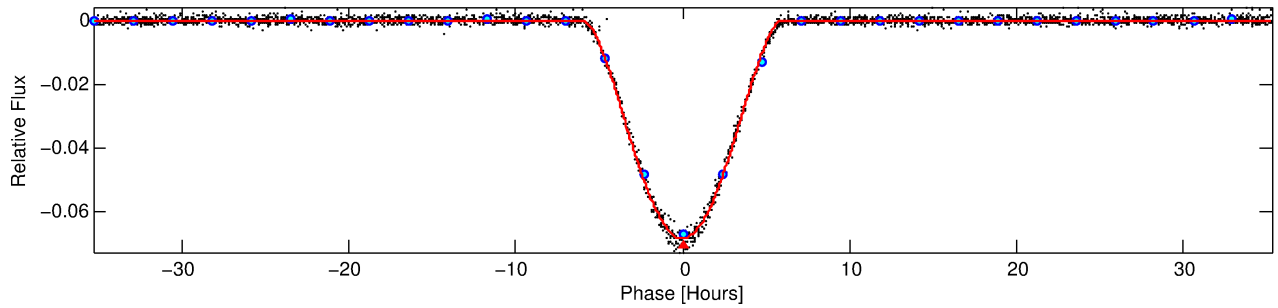
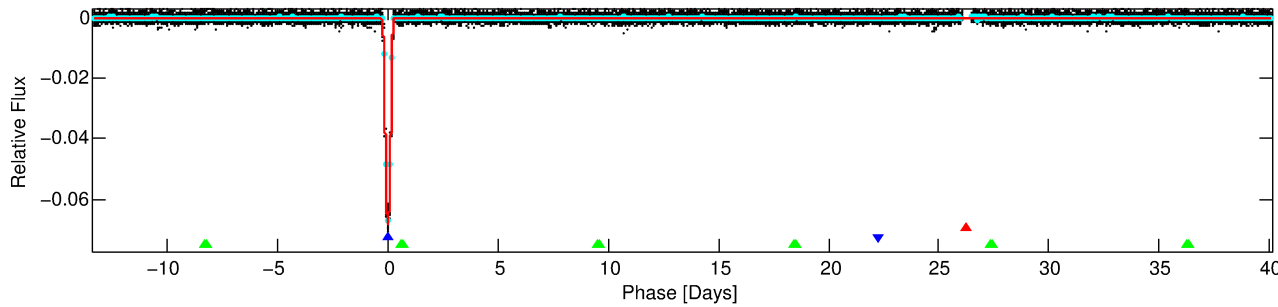
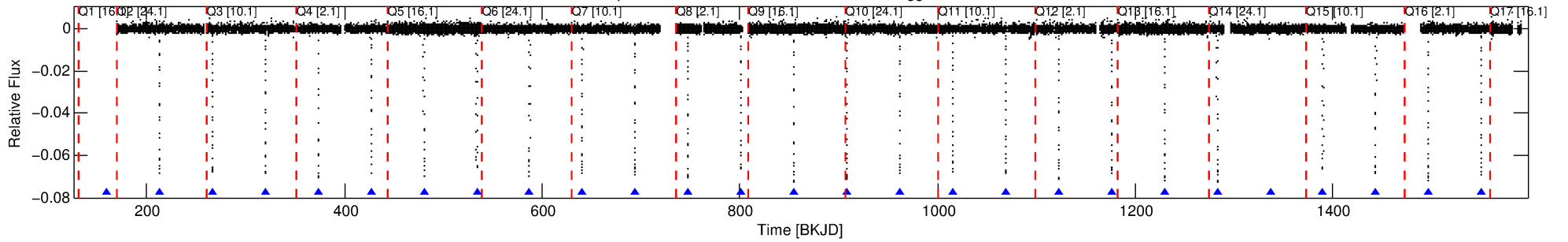
Ephemeris Match Information For 012208887-02

No Significant Match Found

DV One-Page Summary

KIC: 12208887 Candidate: 2 of 3 Period: 53.502 d
KOI: K03333 Corr: No Ephemeris Match

Kp: 15.93 R*: 0.75 Rs Teff: 5436.0 K Logg: 4.59 Fe/H: -0.380



DV Fit Results:

Period = 53.50183 [0.00002] d
Epoch = 159.4480 [0.0003] BKJD
Rp/R* = 0.3633 [0.0293]
a/R* = 34.51 [0.06]
b = 0.93 [0.04]
Seff = 6.64 [1.58]
Teq = 409 [24] K
Rp = 29.65 [5.75] Re
a = 0.2568 [0.0366] AU
Ag = 45.48 [12.10] [3.67σ]
Teffp = 1643 [90] K [13.23σ]

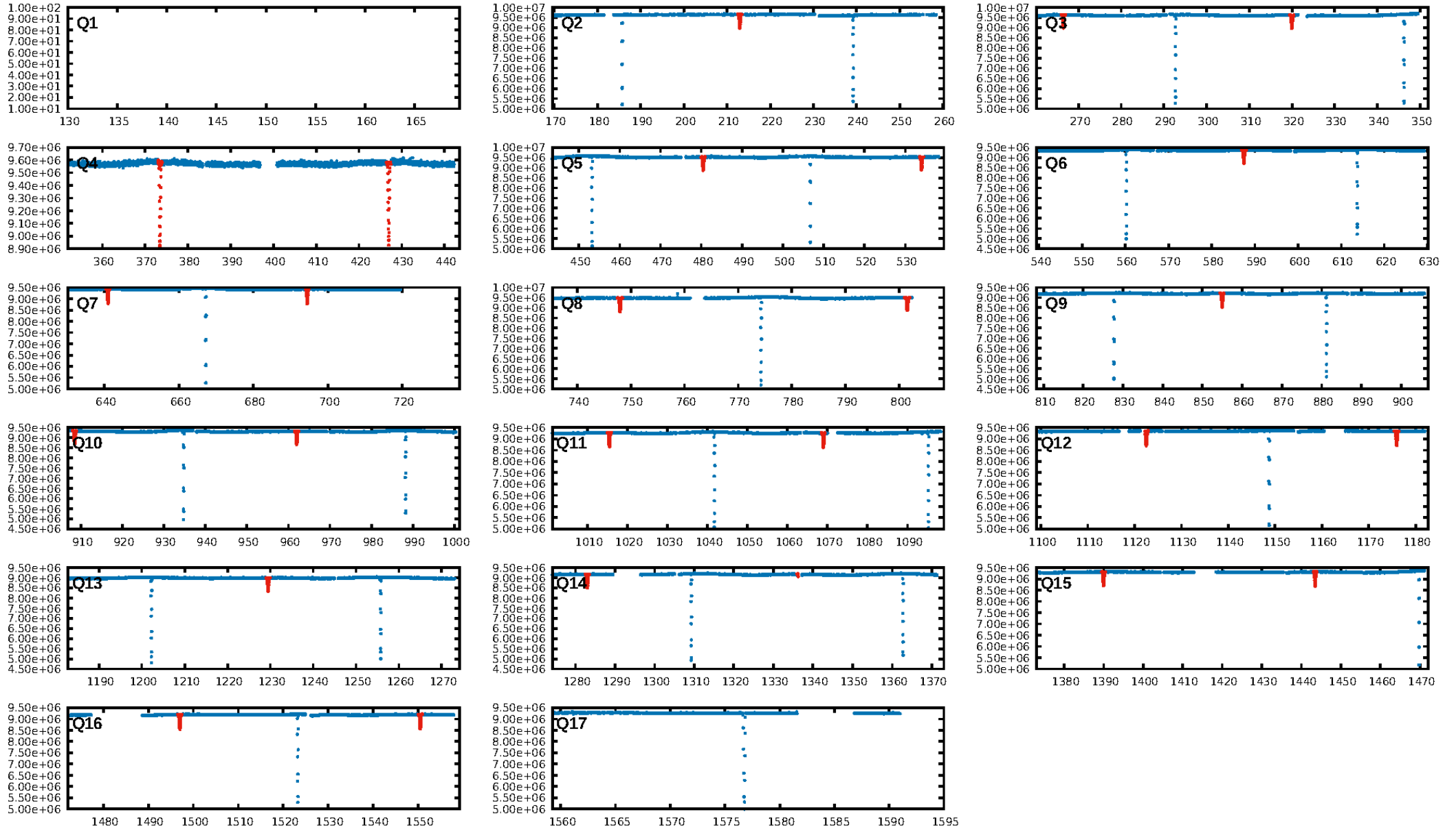
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.3%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [26/26]
GhostDiagnostic-chr: 2.367
Centroid-sig: 0.7%
Centroid-so: 0.214 arcsec [19.03σ]
OotOffset-rm: 0.061 arcsec [0.90σ]
KicOffset-rm: 0.047 arcsec [0.63σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-st: 3/4/4/2 [13]
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DiffImageOverlap-fno: 0.00 [0/13]

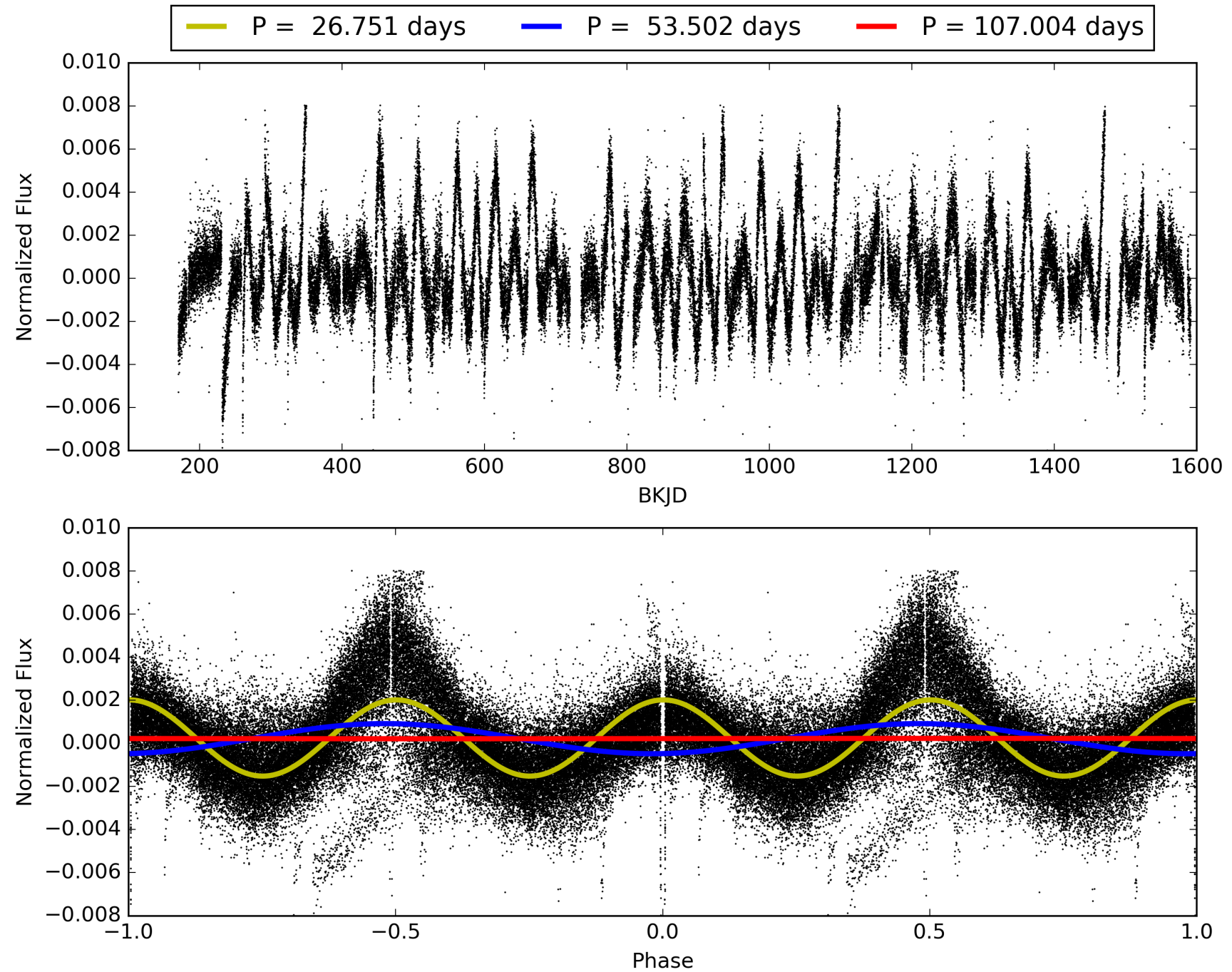
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:18:14 Z

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

TCE 012208887-02, PDC Light Curves

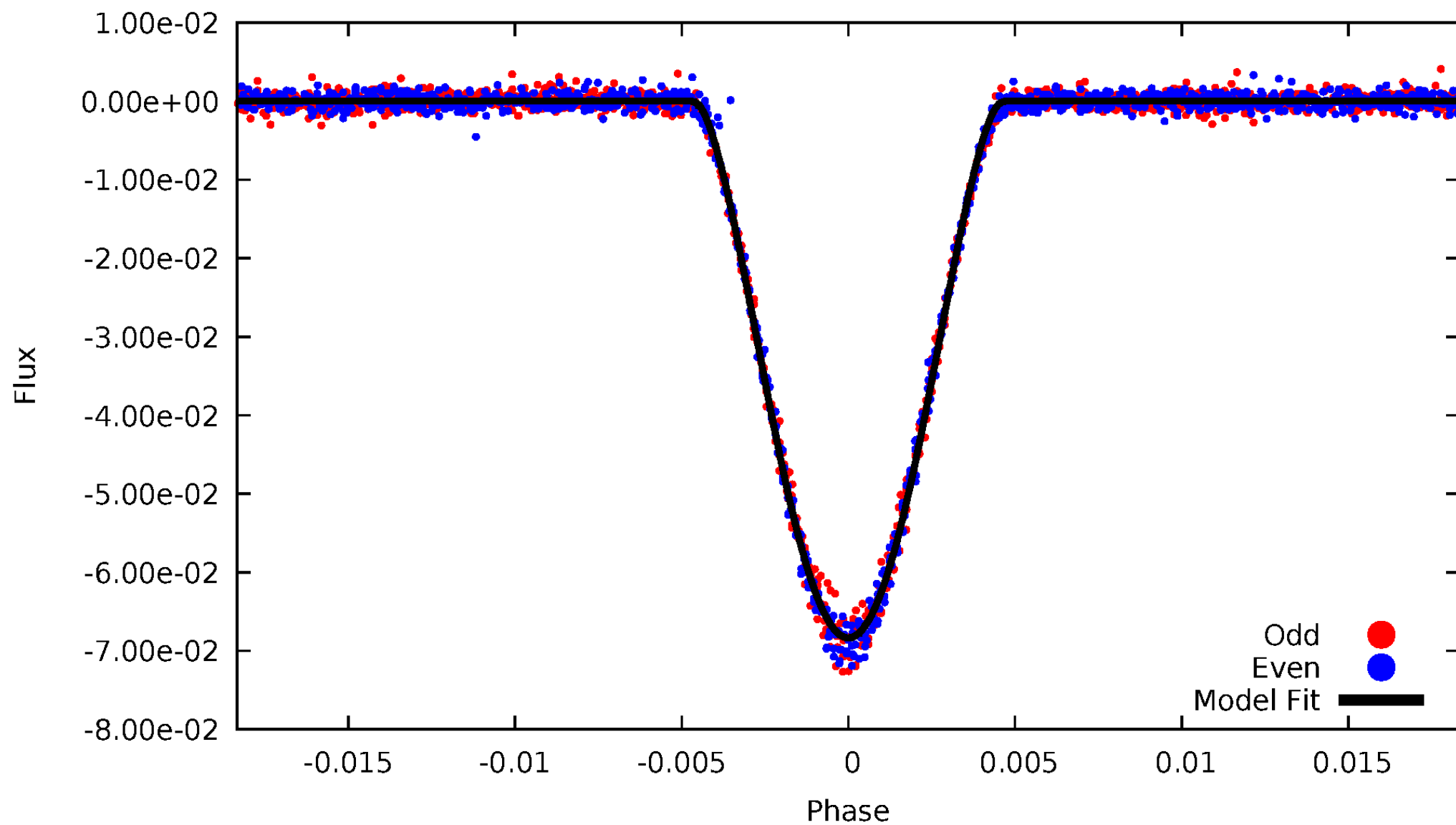


TCE 012208887-02



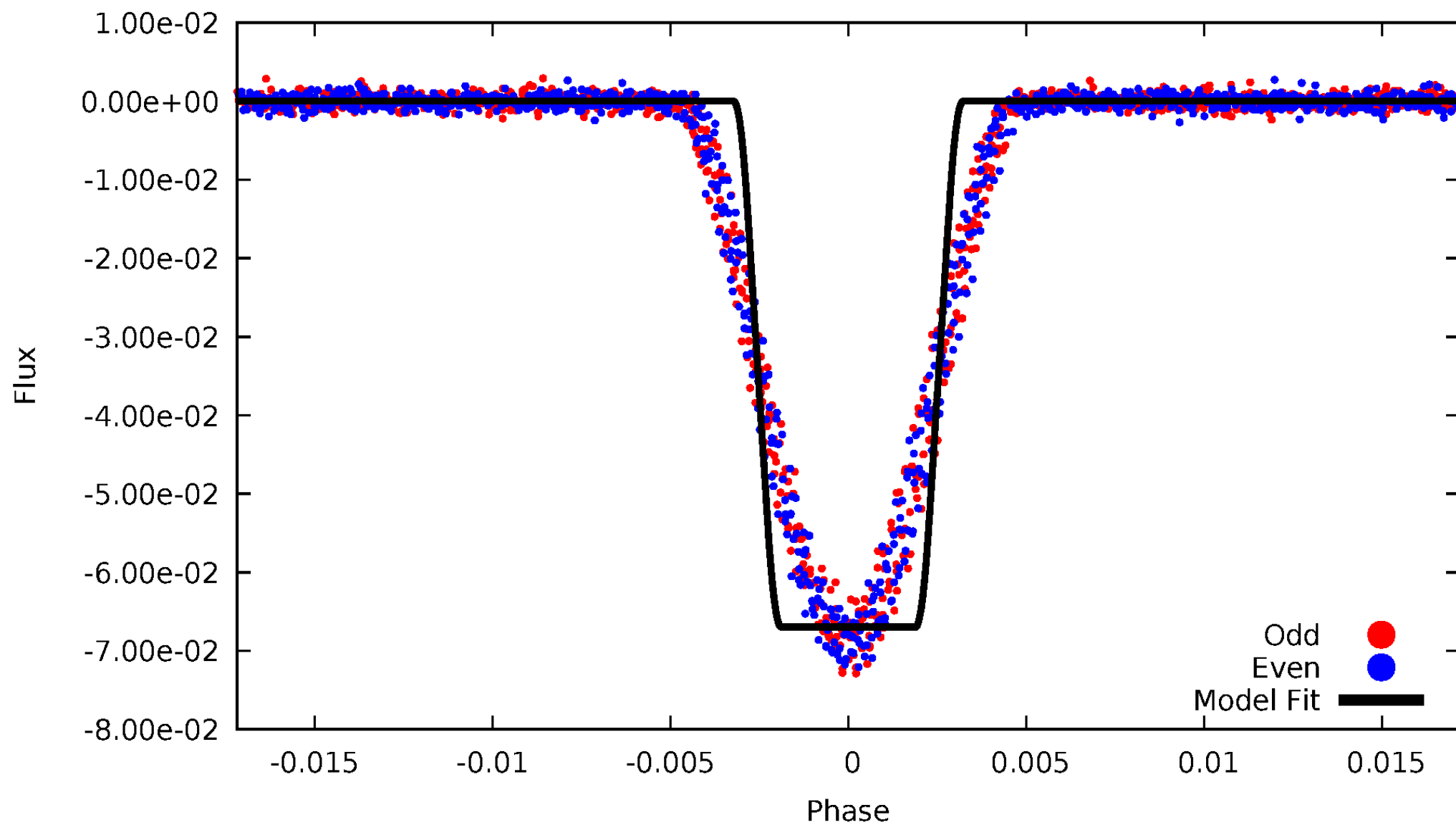
DV Odd/Even

TCE 012208887-02



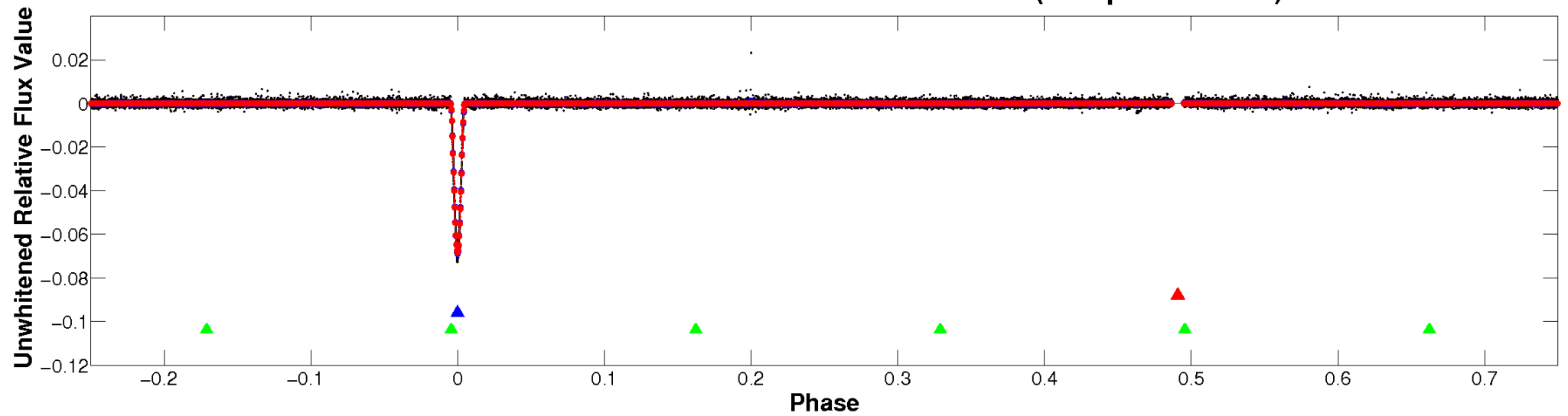
ALT Odd/Even

TCE 012208887-02

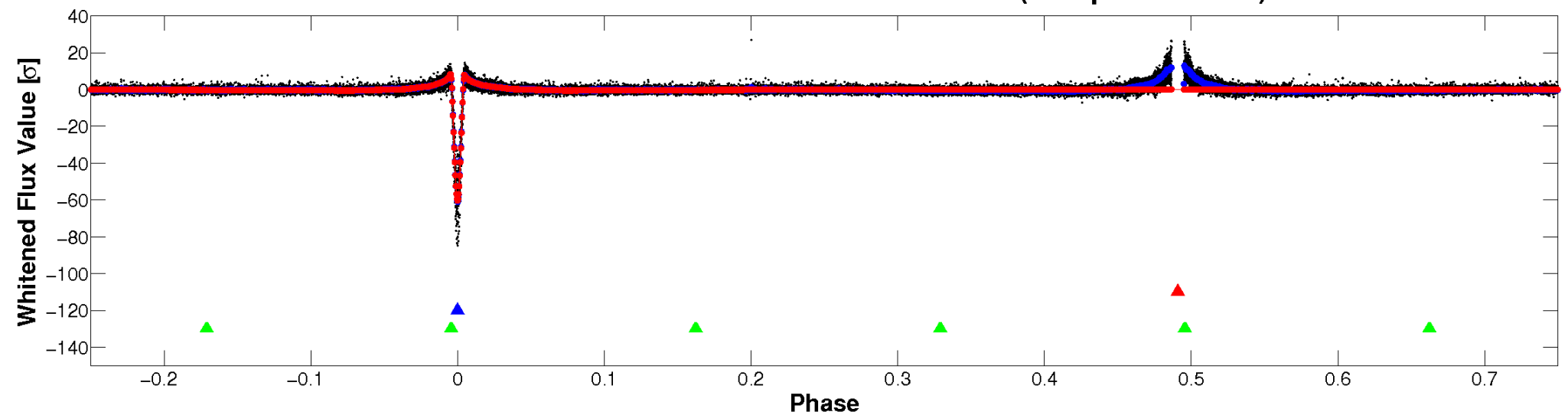


Non-Whitened Vs. Whitened Light Curve

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

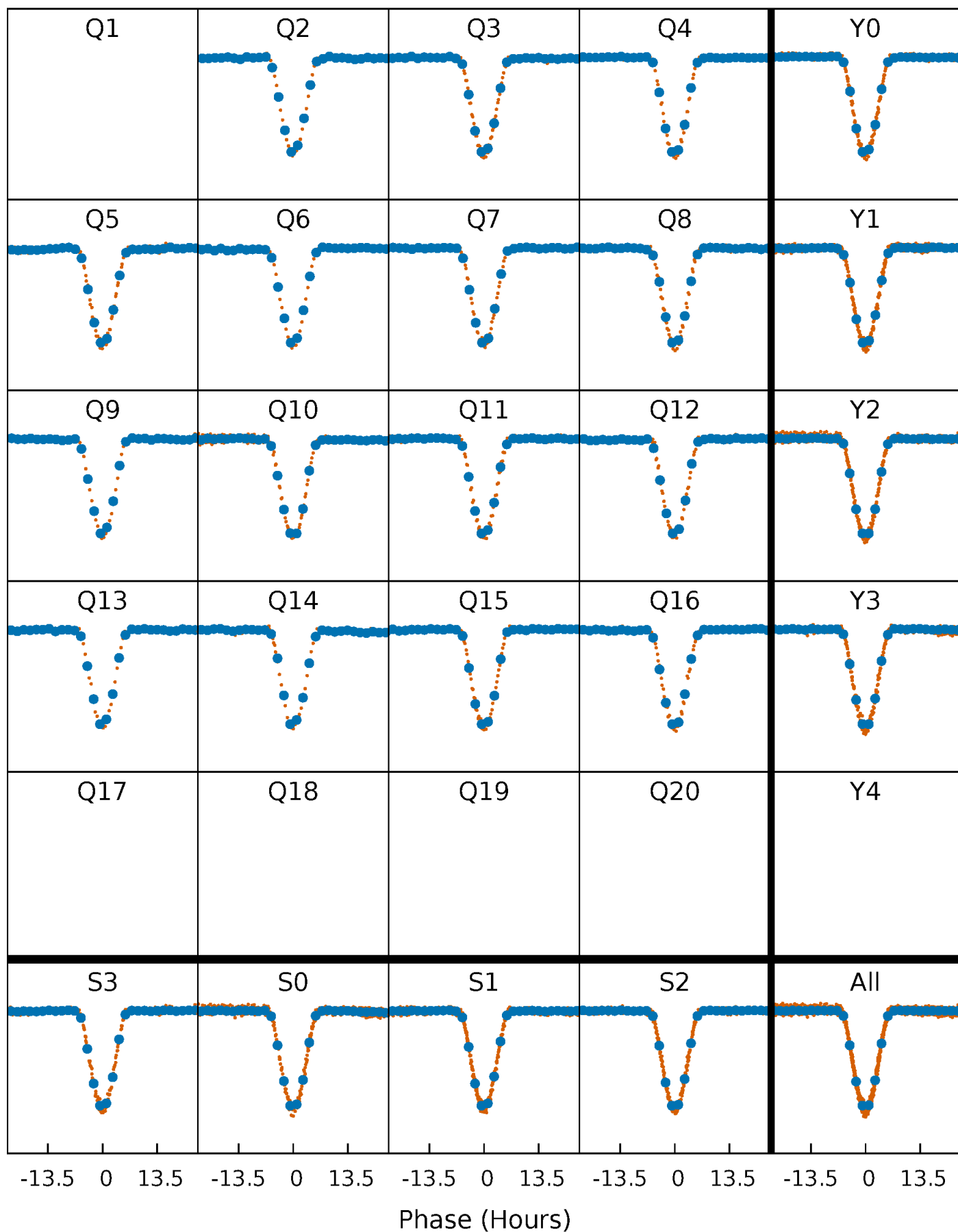


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



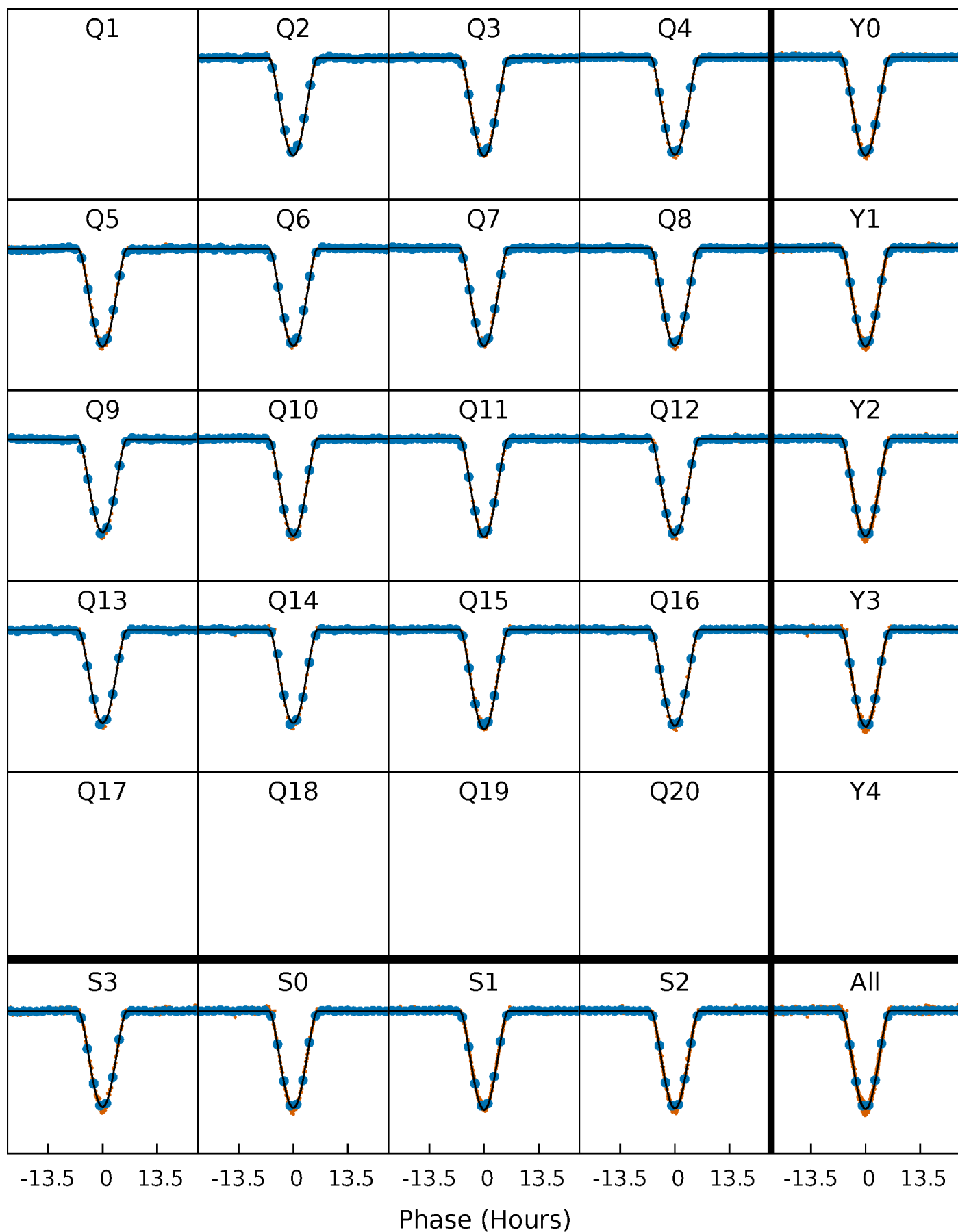
PDC Quarter-Phased Transit Curves

TCE 012208887-02 P= 53.501833 Days $T_0=159.447980$ (BKJD)



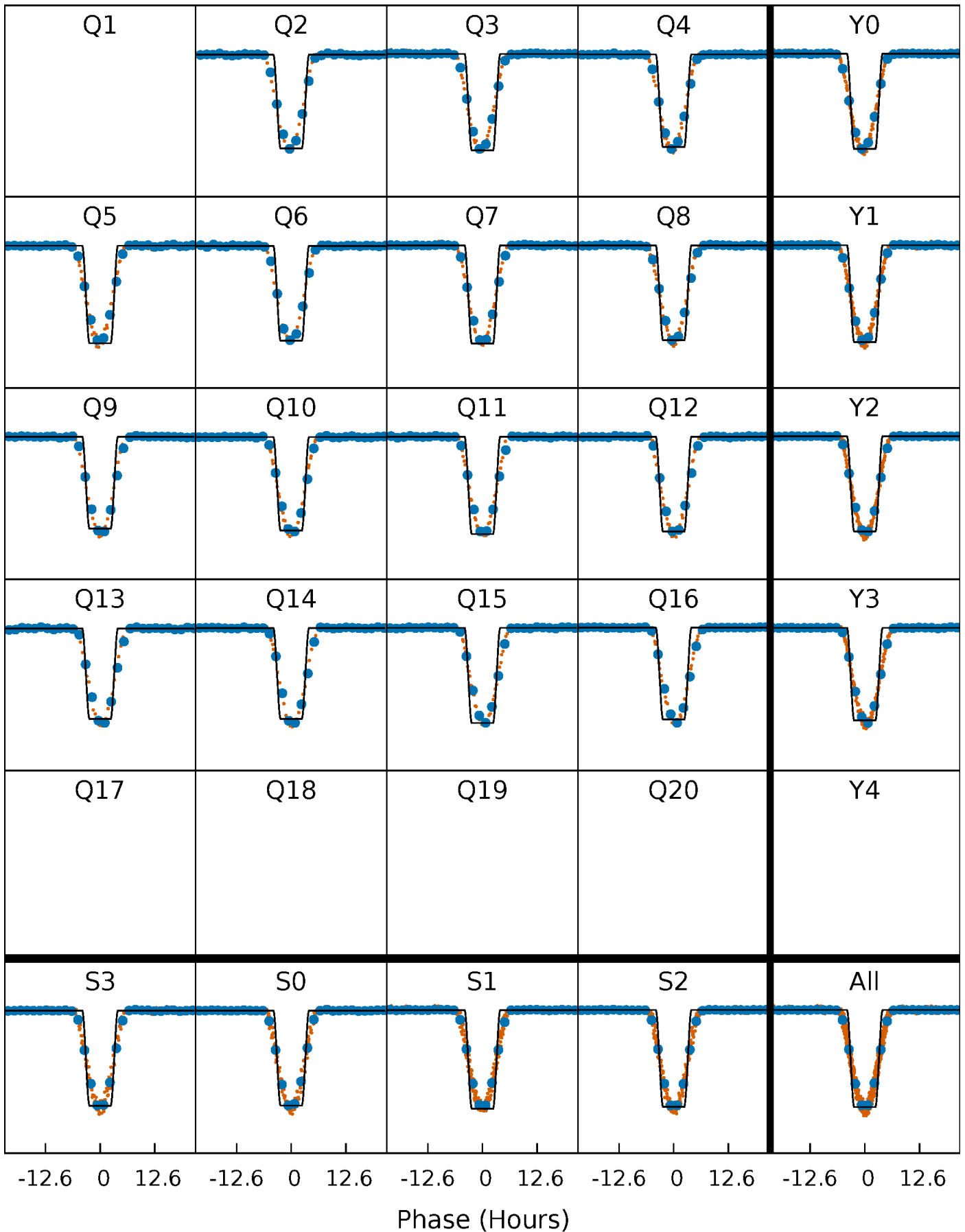
DV Quarter-Phased Transit Curves

TCE 012208887-02 P= 53.501833 Days $T_0=159.447980$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

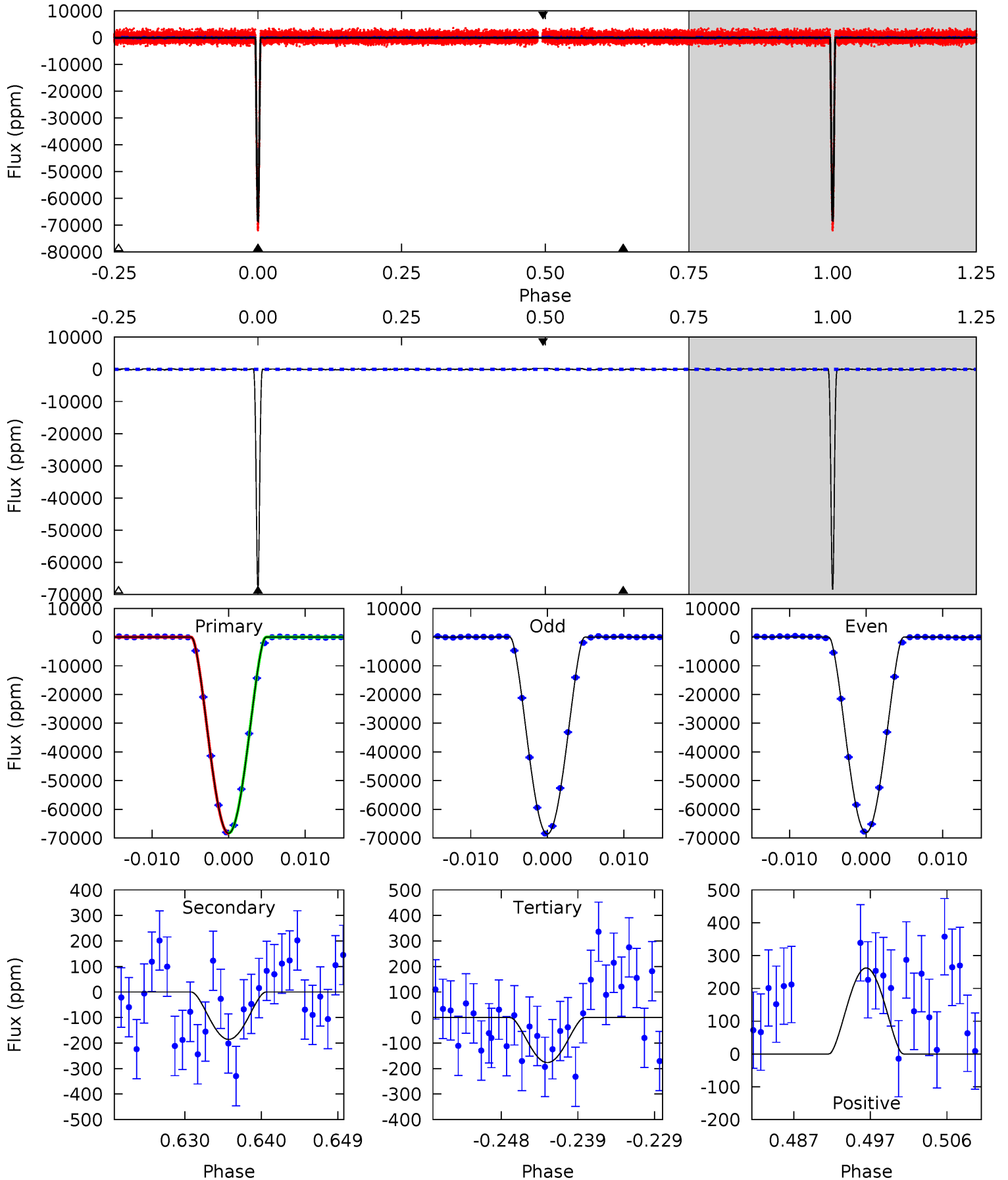
TCE 012208887-02 $P = 53.500444$ Days $T_0 = 159.466156$ (BKJD)



DV Model-Shift Uniqueness Test

012208887-02, P = 53.501833 Days, E = 159.447980 Days

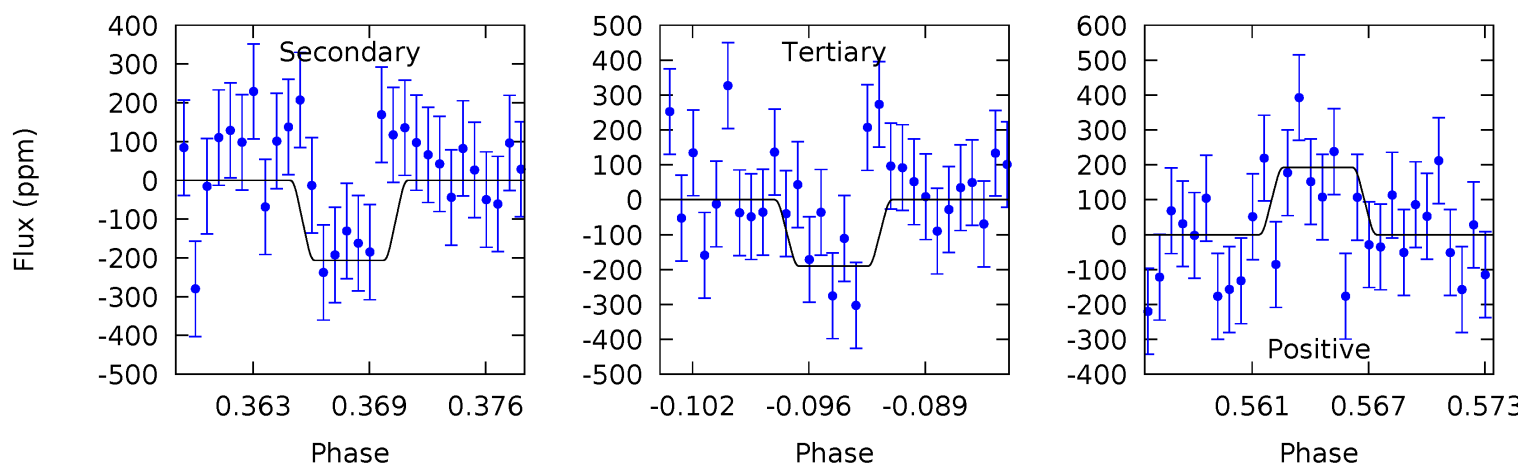
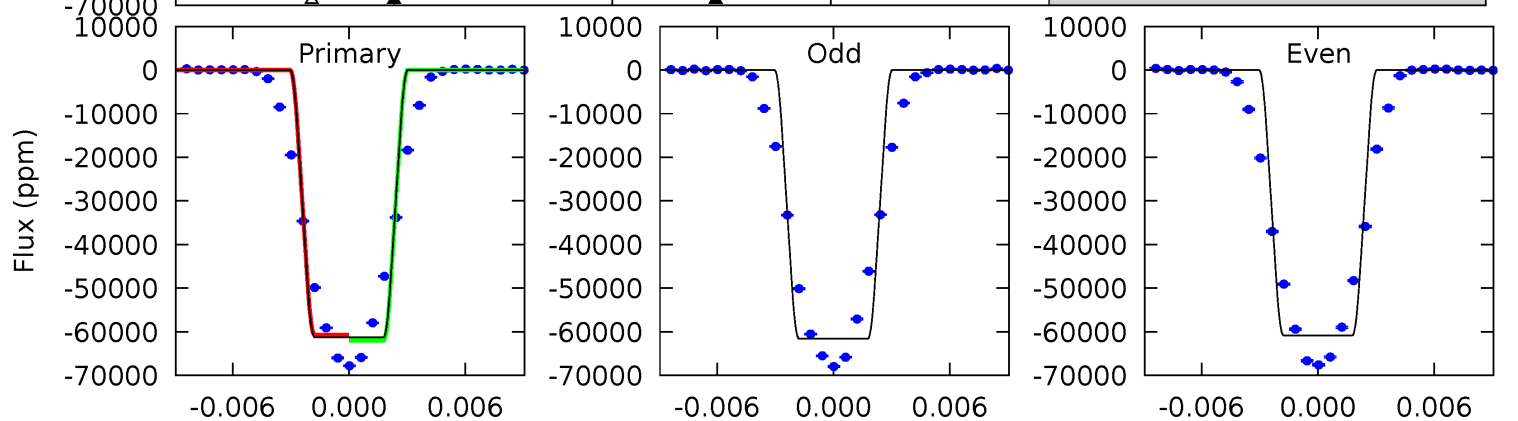
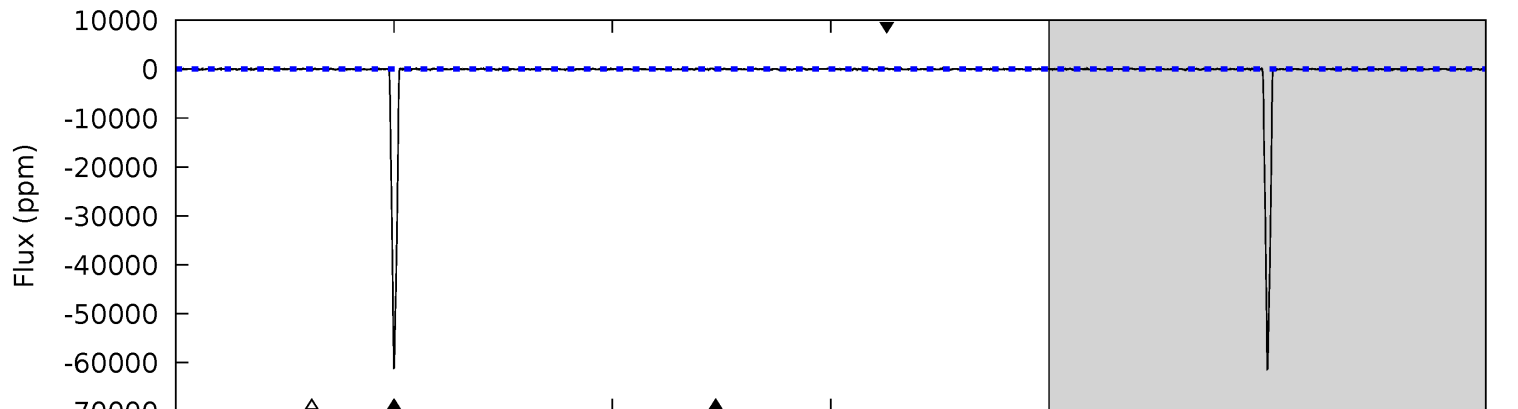
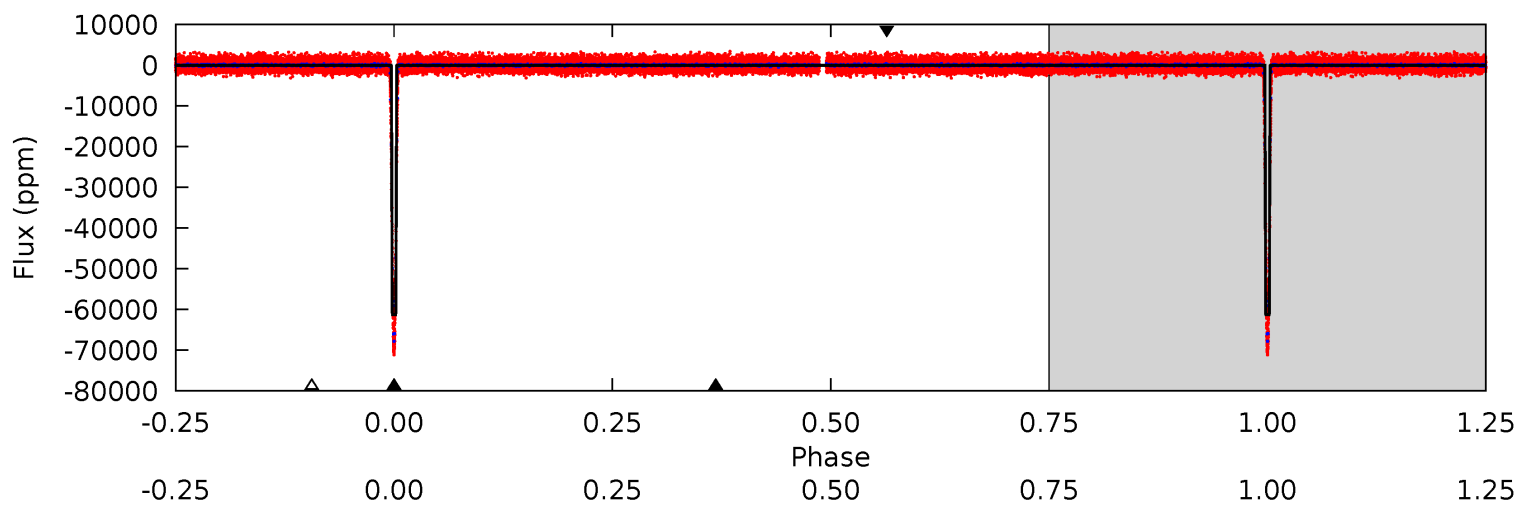
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1967	5.34	5.08	7.54	5.04	2.59	2.14	1962	1959	0.26	-2.20	7.42	0.97	0.00	2.28



Alt Model-Shift Uniqueness Test

012208887-02, P = 53.500444 Days, E = 159.466156 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1198	4.04	3.72	3.77	5.11	2.73	0.99	1194	1194	0.31	0.27	7.43	1.01	0.00	11.9



Stellar Parameters For KIC 012208887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5436^{+177}_{-160}	$4.587^{+0.045}_{-0.105}$	$-0.380^{+0.350}_{-0.300}$	$0.748^{+0.132}_{-0.061}$	$0.790^{+0.093}_{-0.067}$	$2.656^{+0.598}_{-0.889}$
	+3%/-3%	+1%/-2%	+92%/-79%	+18%/-8%	+12%/-8%	+23%/-33%
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 012208887-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-186 ± 35	$30.25^{+3.70}_{-3.10}$	579^{+30}_{-24}	2033^{+62}_{-65}	$7.281^{+2.121}_{-1.852}$
Alt.	-206 ± 51	$21.44^{+2.96}_{-2.71}$	578^{+27}_{-24}	2216^{+96}_{-99}	16^{+7}_{-5}

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 $A_{obs} \gg 1.0$

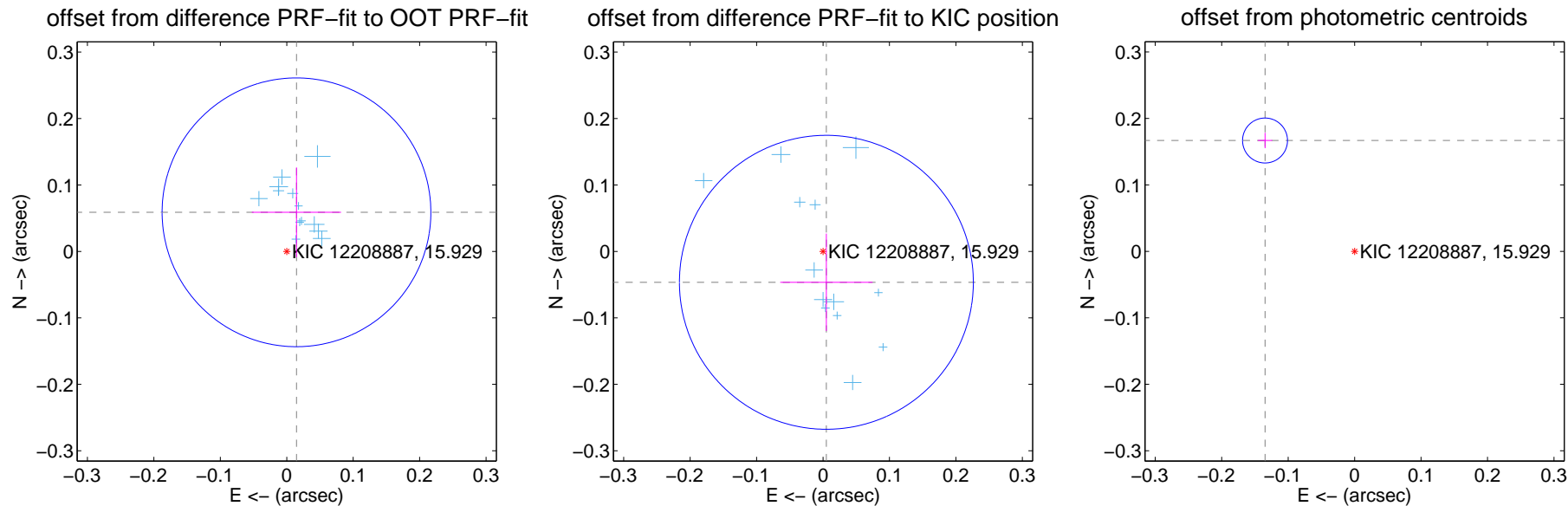
DV Centroid Data

Supplemental centroid analysis for 012208887-02. Kepler magnitude: 15.93. Transit SNR 839.73

There are 13 quarters with good PRF difference image offsets

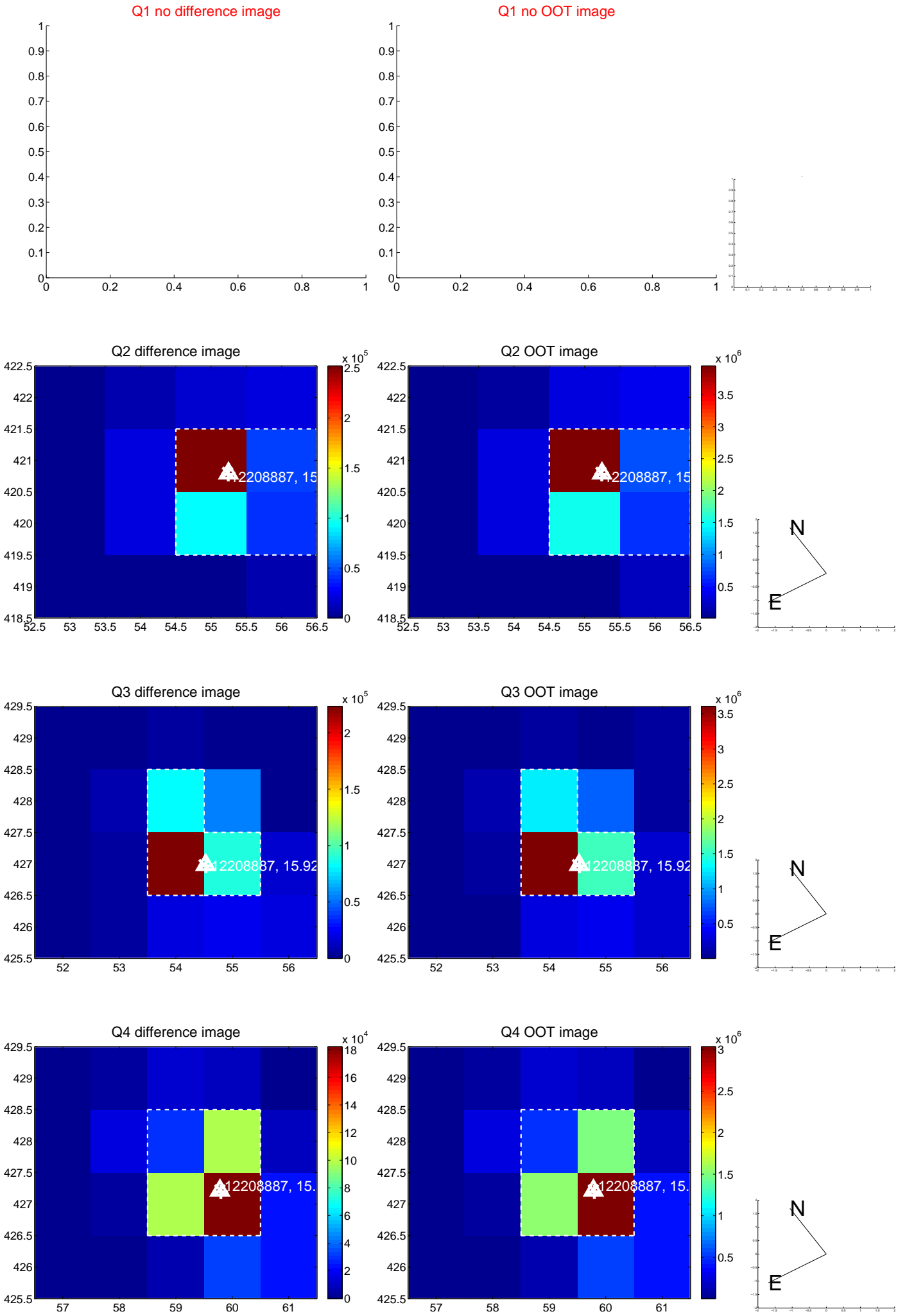
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.061 ± 0.067	0.90	-0.015 ± 0.067	0.059 ± 0.068
PRF-fit source offset from KIC position	0.047 ± 0.074	0.63	-0.005 ± 0.070	-0.046 ± 0.073
photometric centroid source offset	0.21 ± 0.01	19.03	0.13 ± 0.01	0.17 ± 0.01

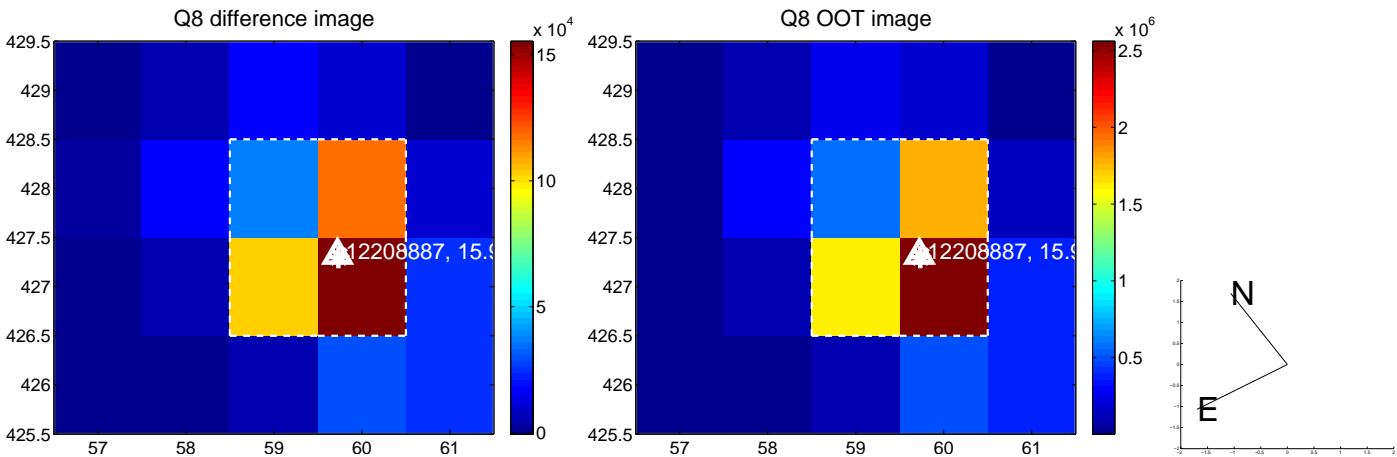
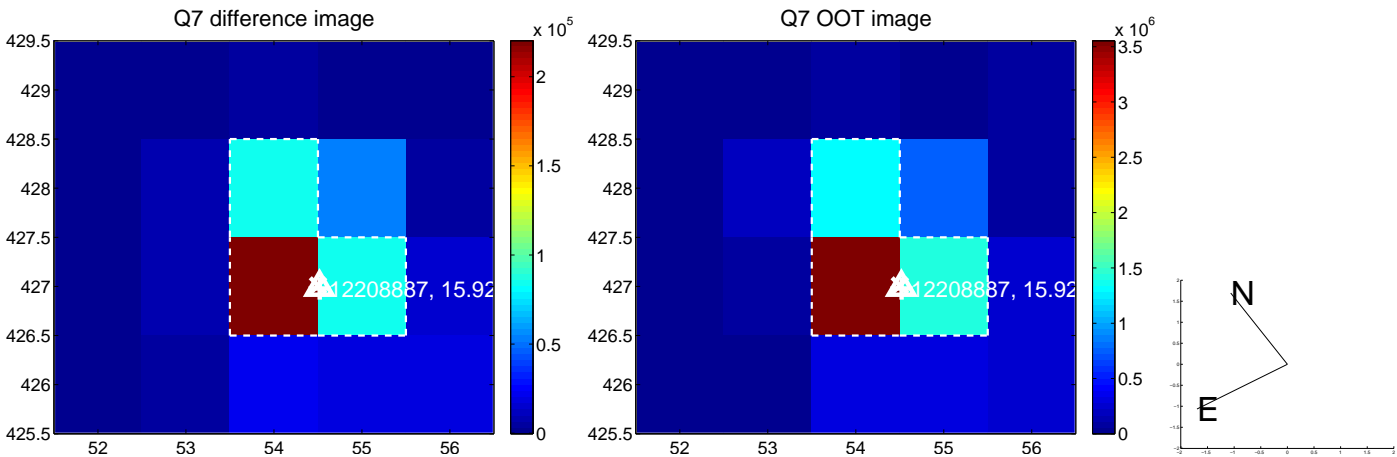
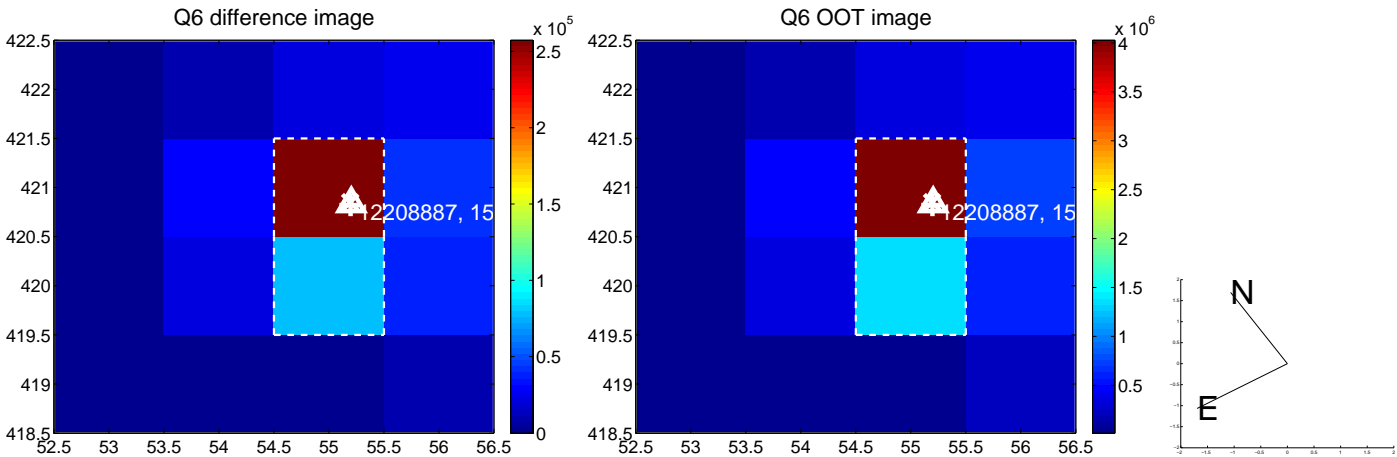
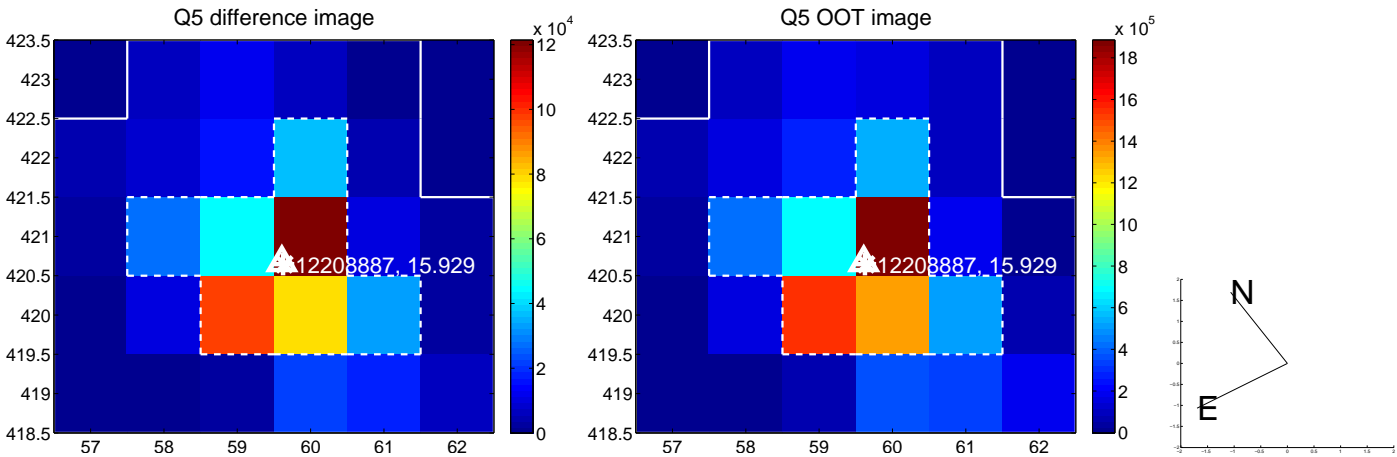


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

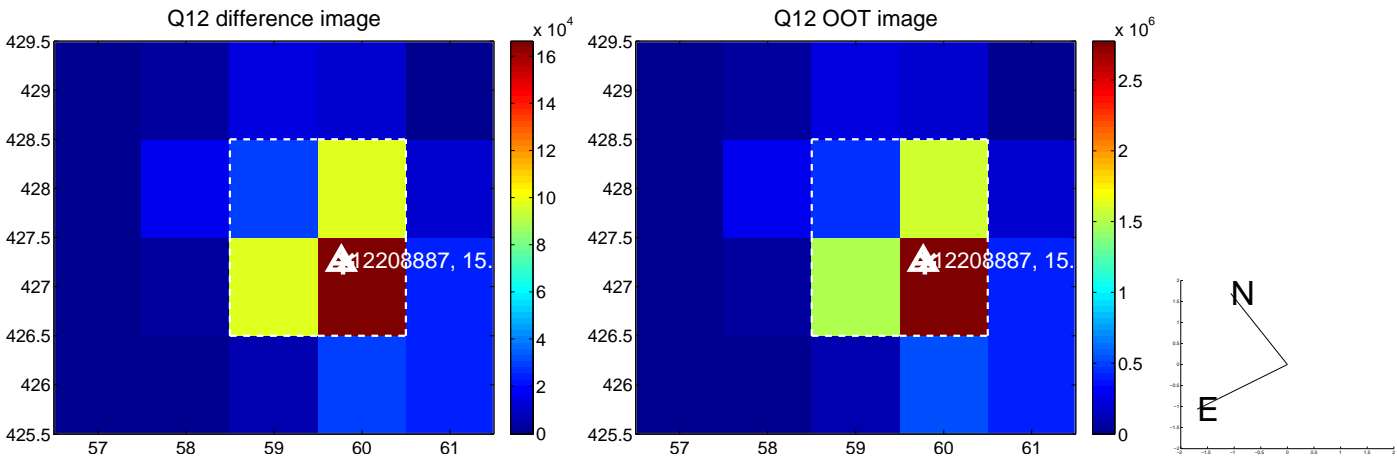
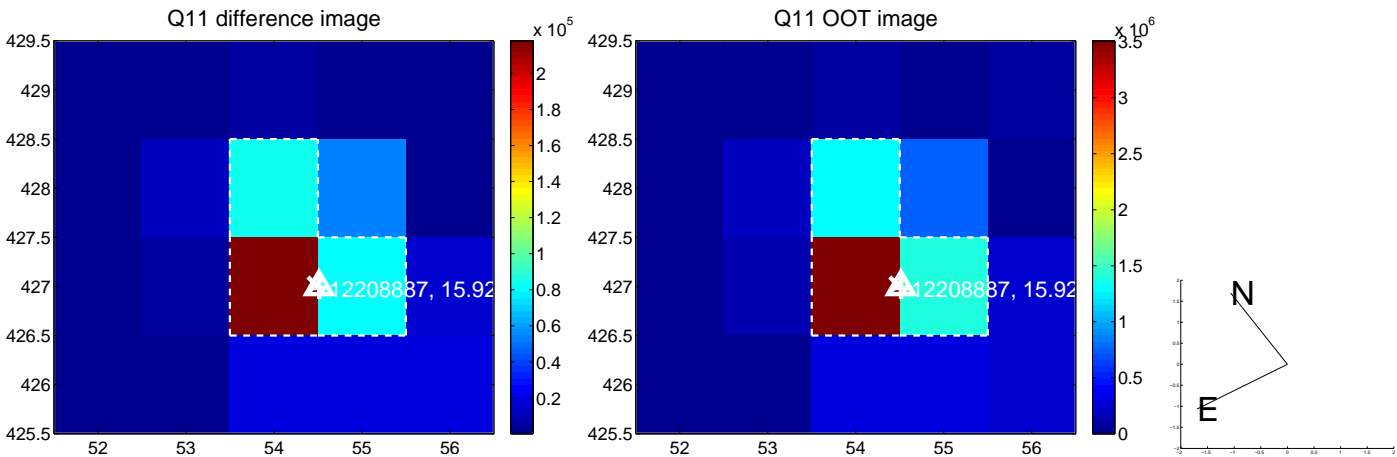
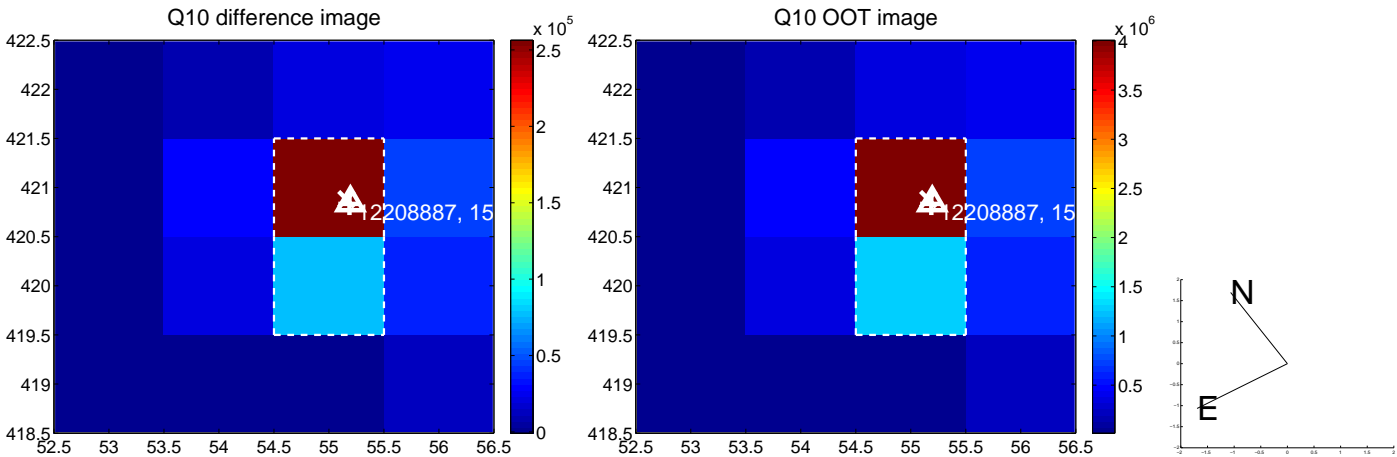
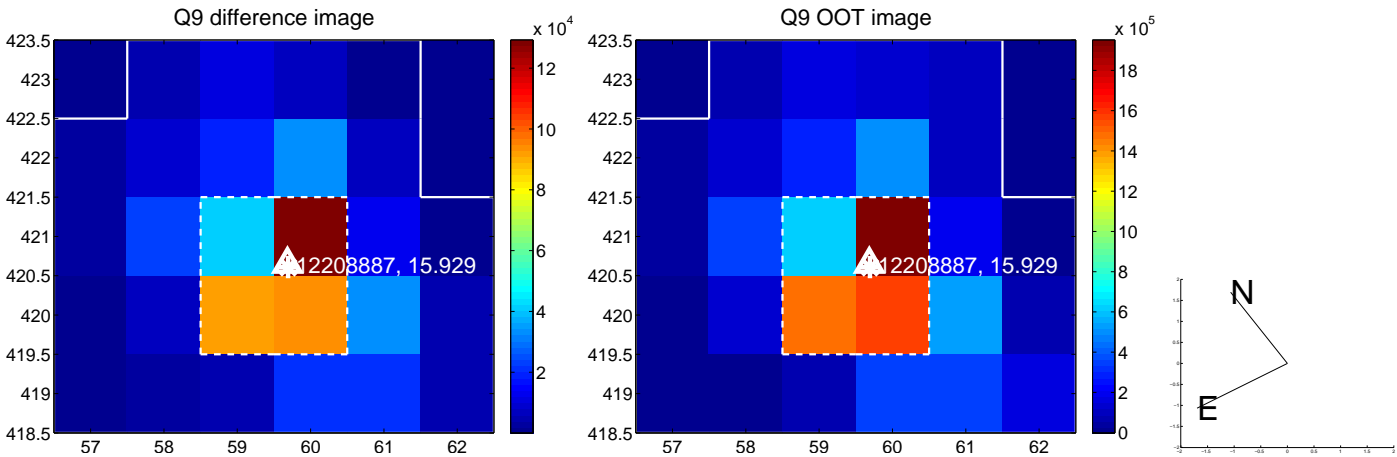
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



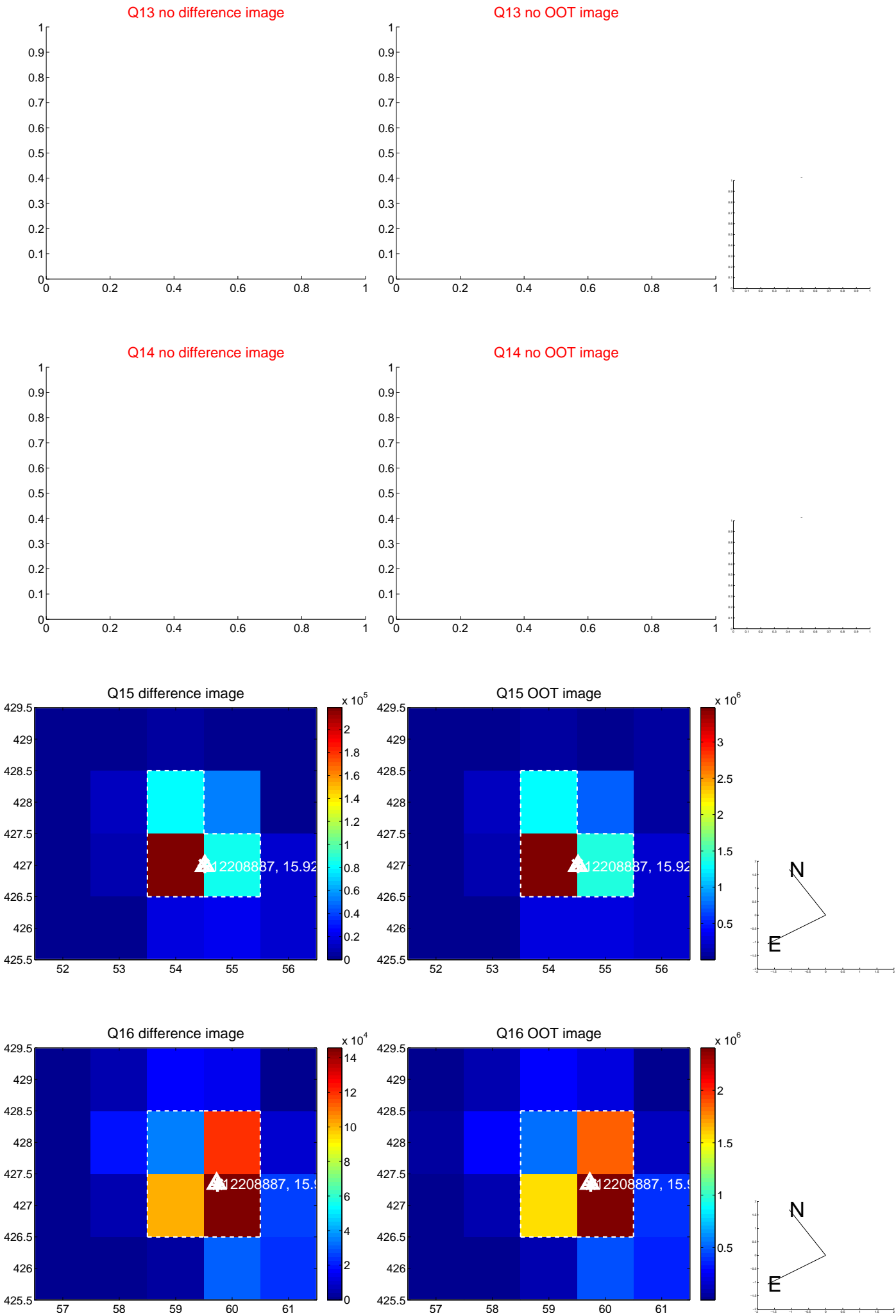
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



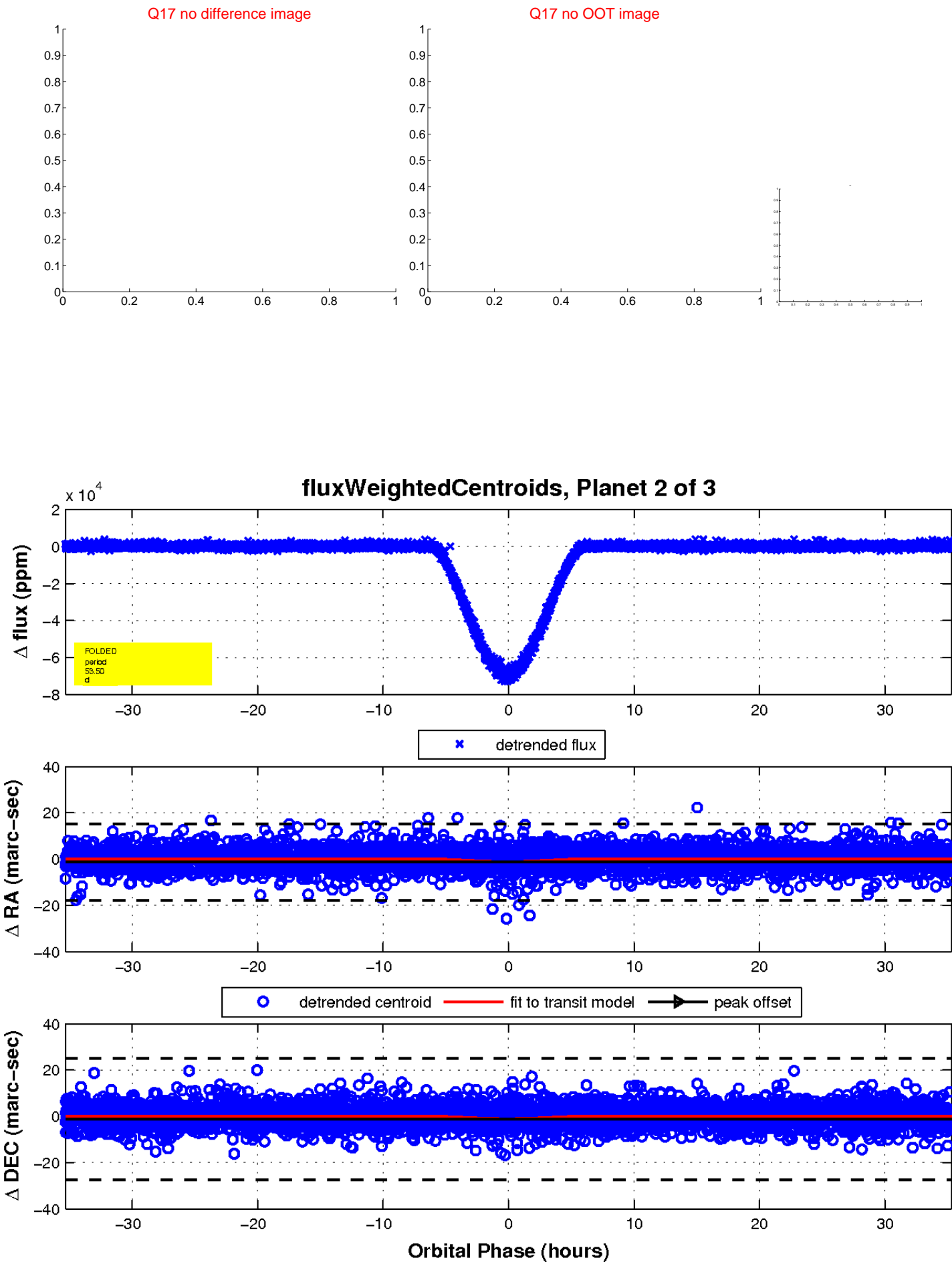
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

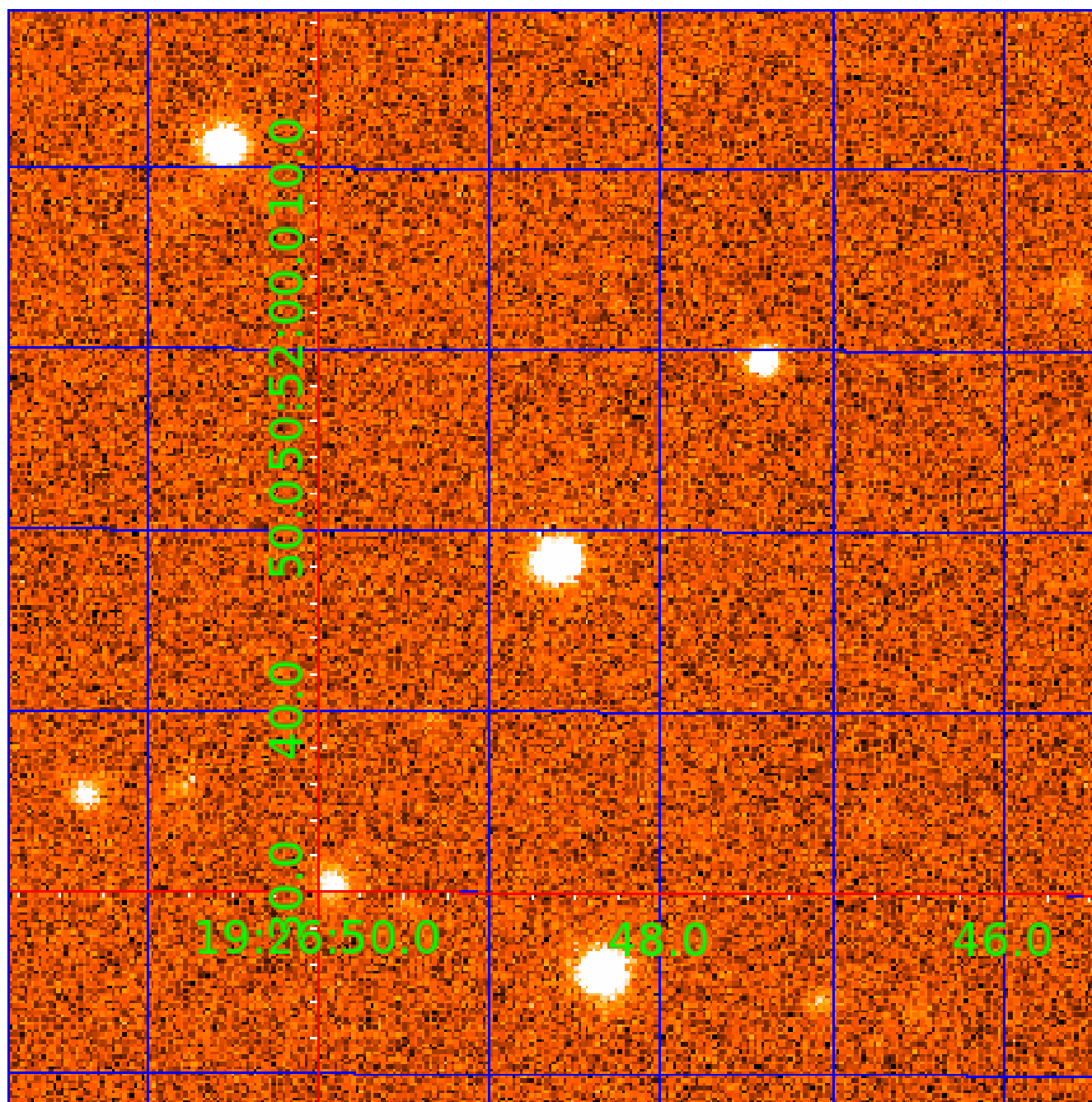


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012208887

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})
012208887-01	OBS	3333.01	53.501242	132.219357	456190.8	3.500	4289.3	-1.0	0.75	5436	40.81	6.64
012208887-02	OBS	No	53.501833	159.447980	68361.8	11.775	942.0	839.7	0.75	5436	29.65	6.64
012208887-03	OBS	No	8.916509	132.505427	32892.1	15.000	199.8	-1.0	0.75	5436	13.40	72.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012208887-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
012208887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
012208887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS

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.

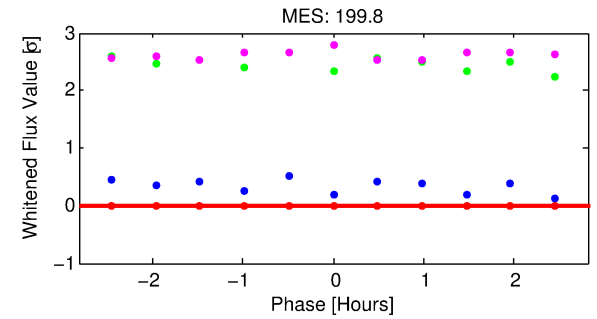
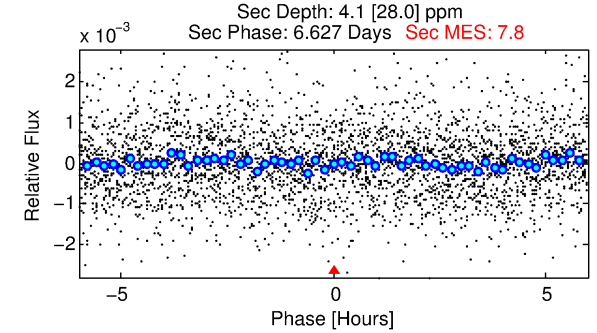
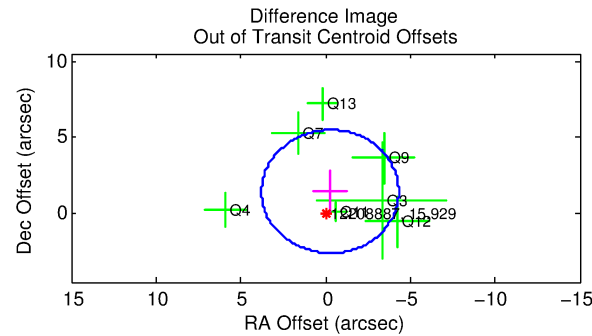
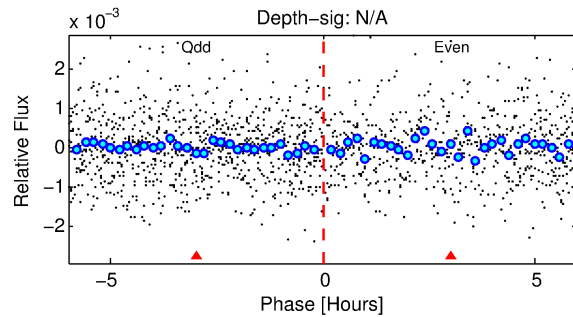
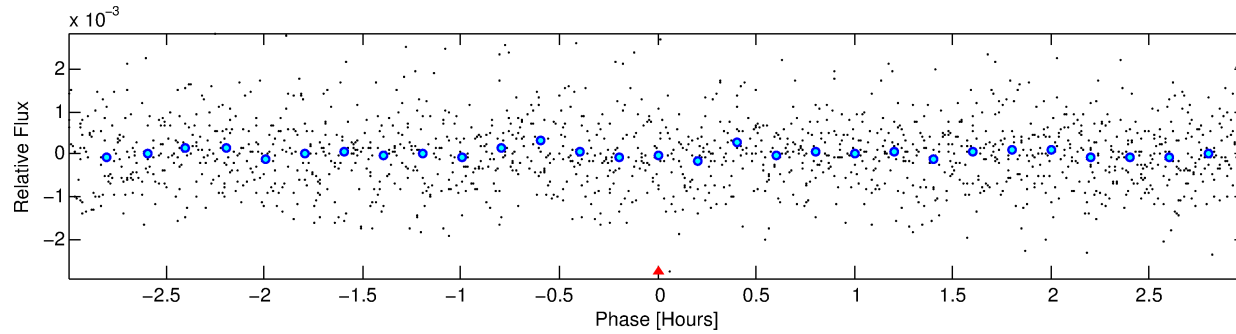
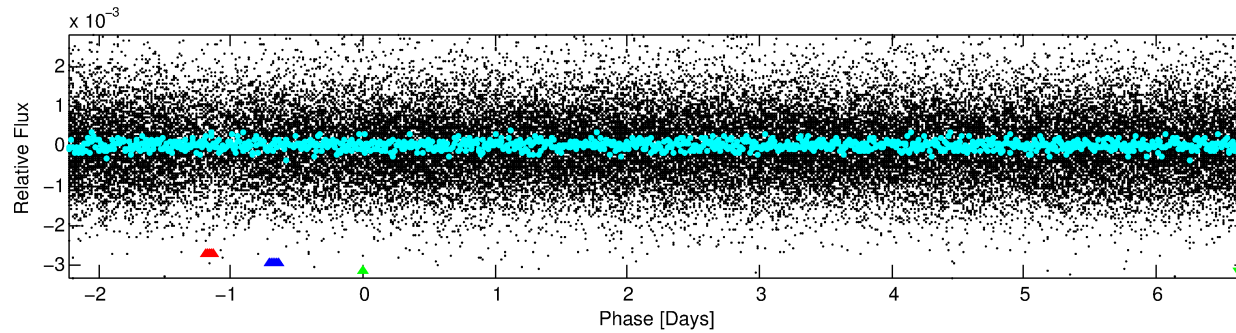
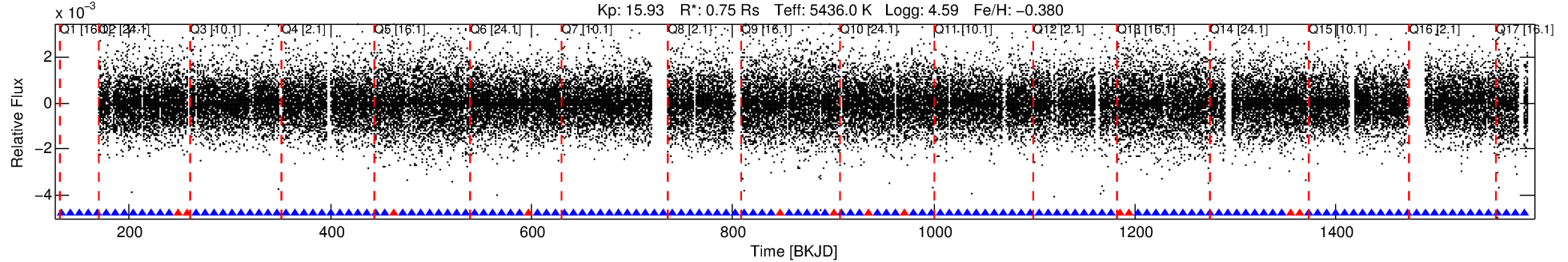
Ephemeris Match Information For 012208887-03

No Significant Match Found

DV One-Page Summary

KIC: 12208887 Candidate: 3 of 3 Period: 8.917 d
KOI: K03333 Corr: No Ephemeris Match

Kp: 15.93 R*: 0.75 Rs Teff: 5436.0 K Logg: 4.59 Fe/H: -0.380



TPS TCE Results:

Period = 8.91651 d
Epoch = 132.5054 BKJD

DV fit results are unavailable

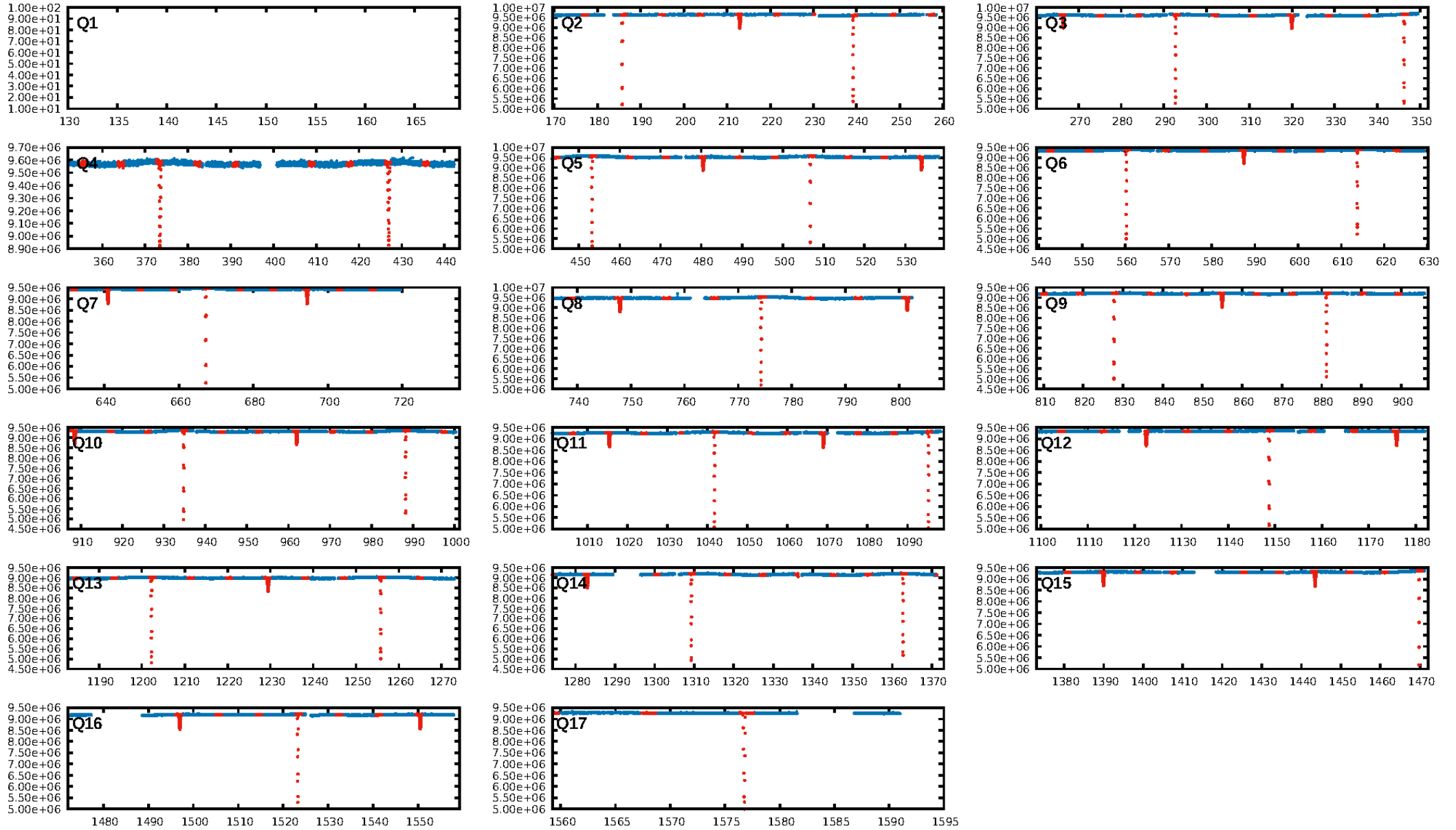
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [69.47 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.90 [111/123]
GhostDiagnostic-chr: -2.062
Centroid-sig: 2.0%
Centroid-so: 41.148 arcsec [1.96 σ]
OotOffset-rm: 1.464 arcsec [1.09 σ]
KicOffset-rm: 1.417 arcsec [1.04 σ]
OotOffset-st: 0/3/2/2 [7]
KicOffset-st: 0/3/2/2 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 1.00 [16/16]

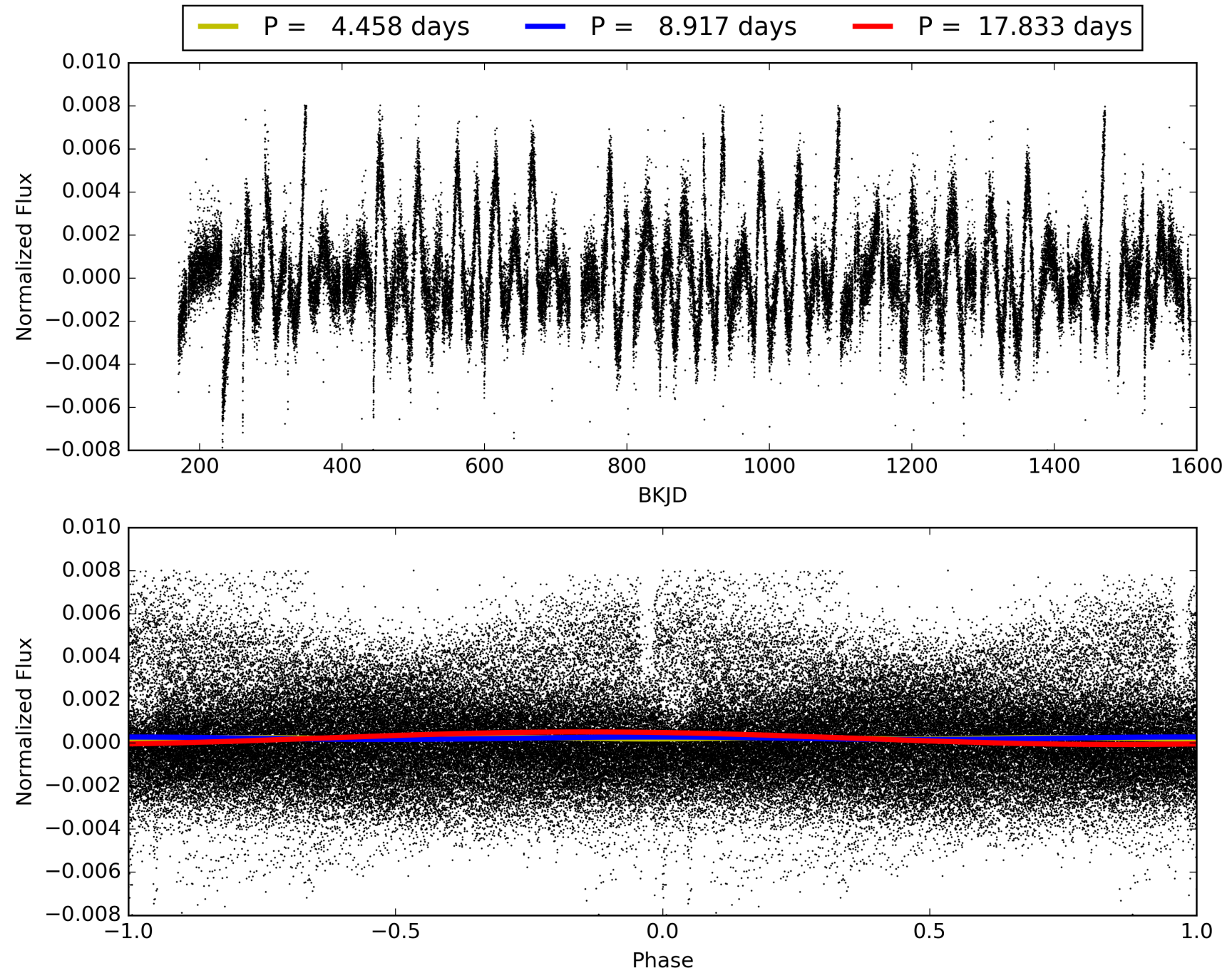
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:18:29 Z

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

TCE 012208887-03, PDC Light Curves

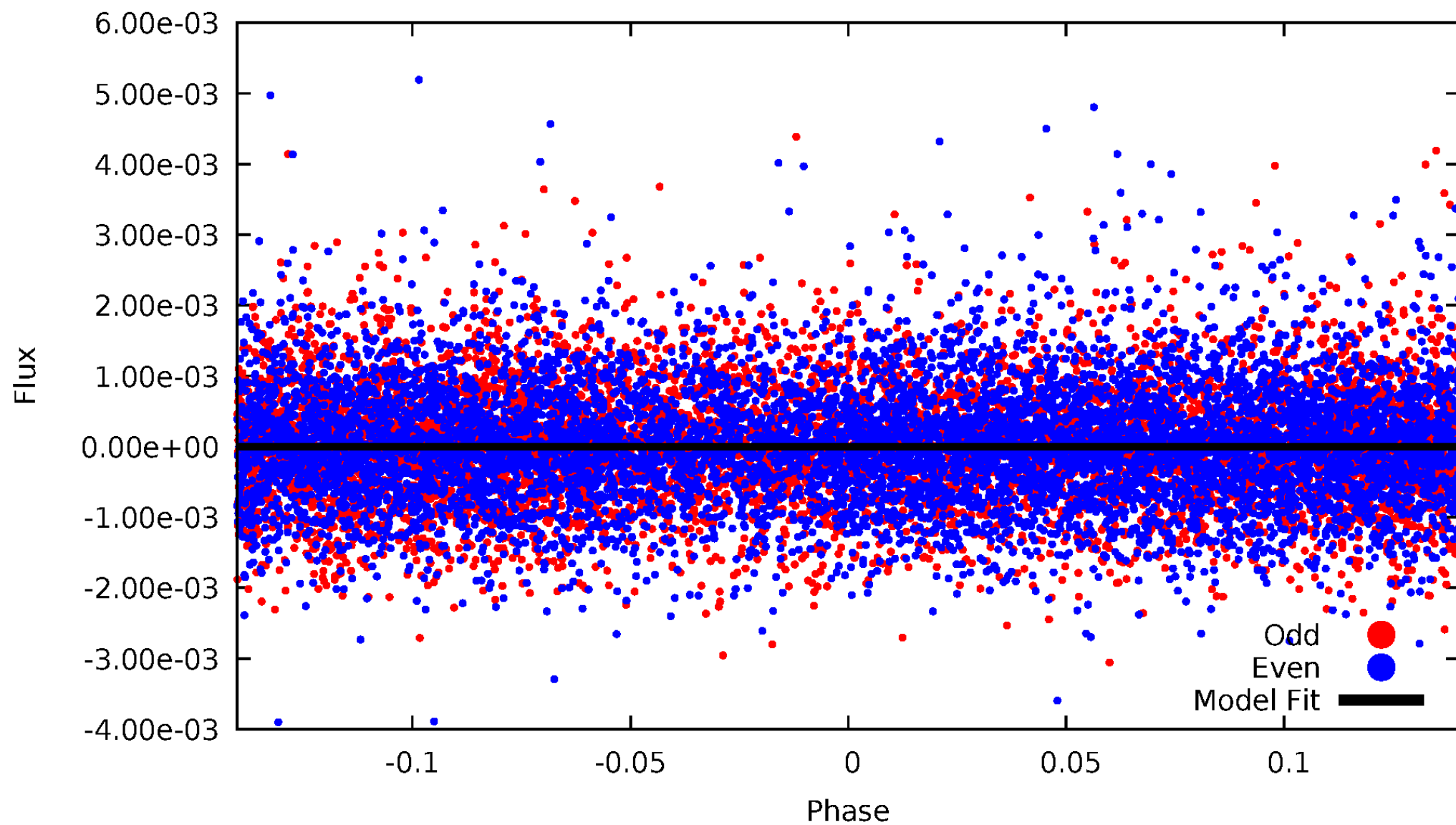


TCE 012208887-03



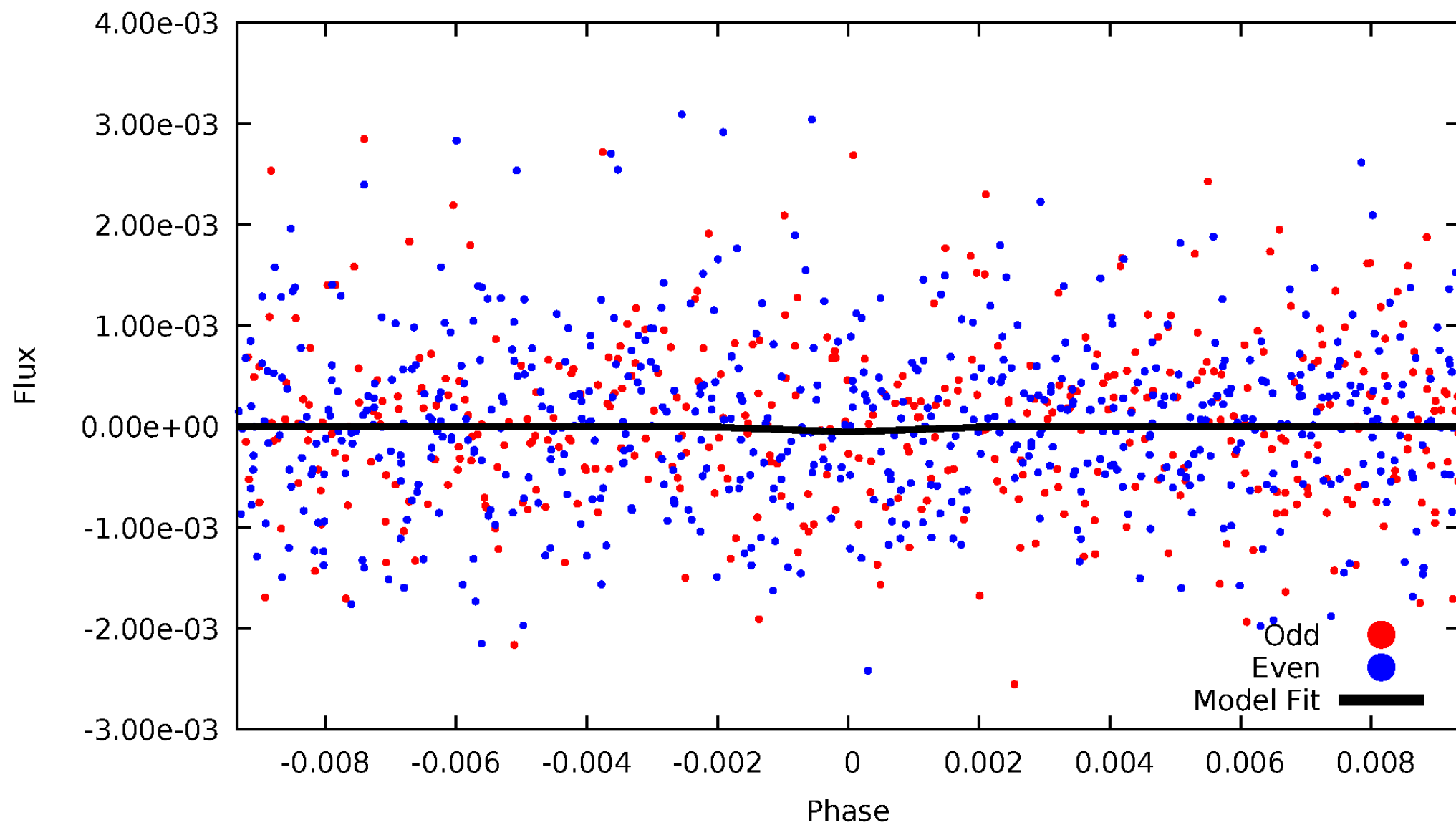
DV Odd/Even

TCE 012208887-03

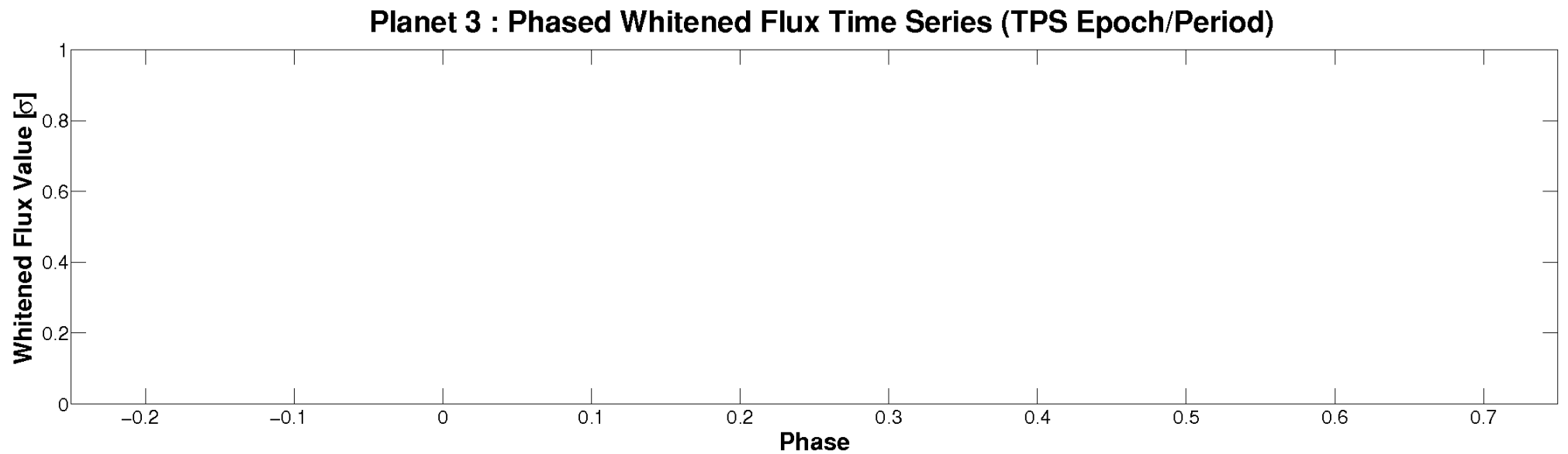
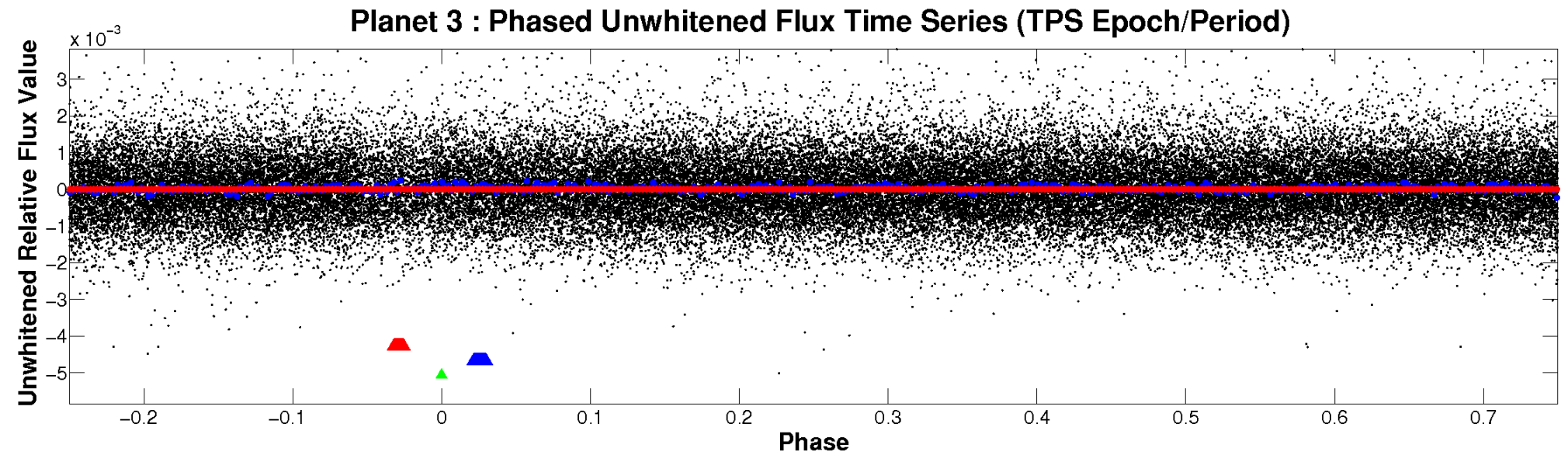


ALT Odd/Even

TCE 012208887-03

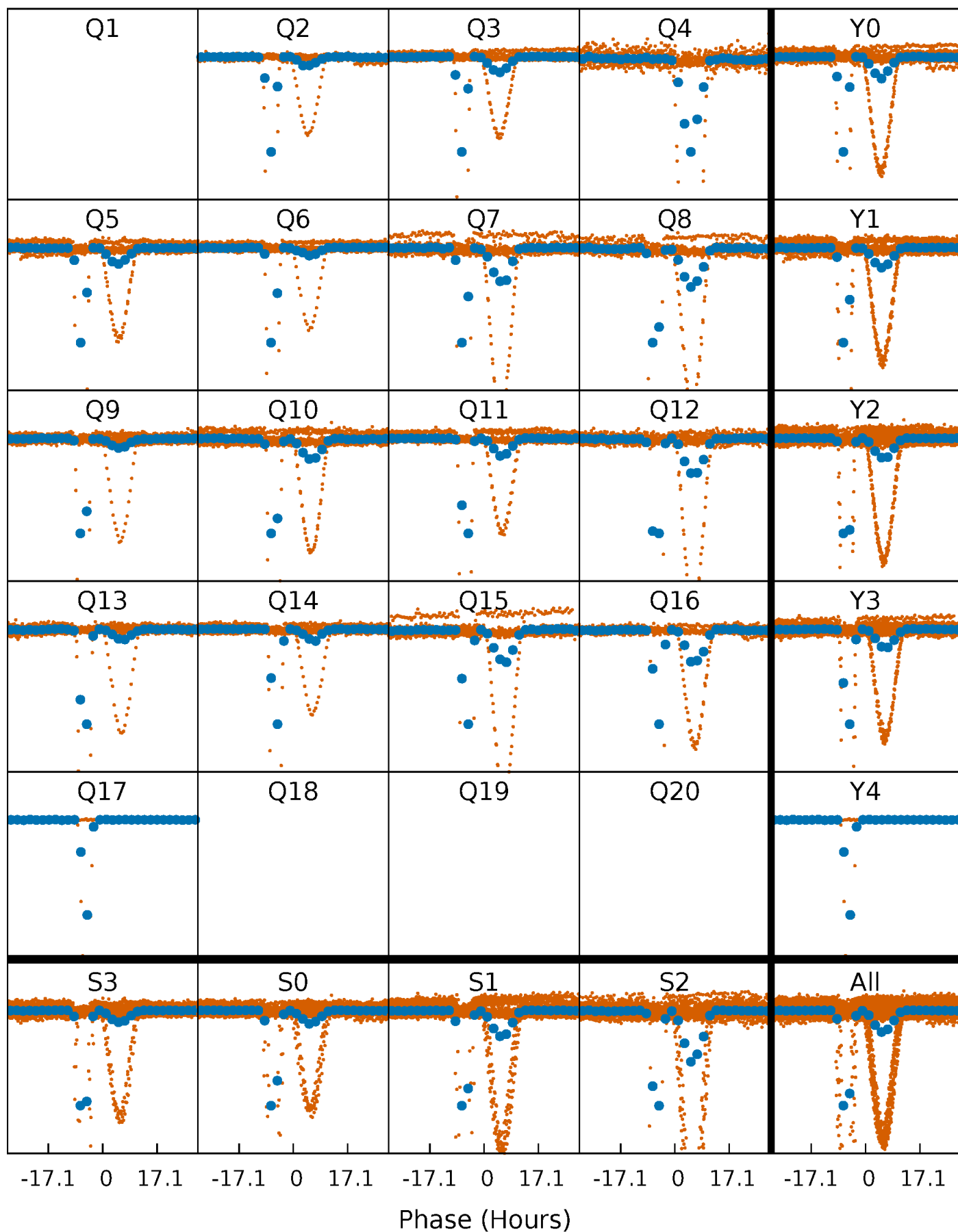


Non-Whitened Vs. Whitened Light Curve



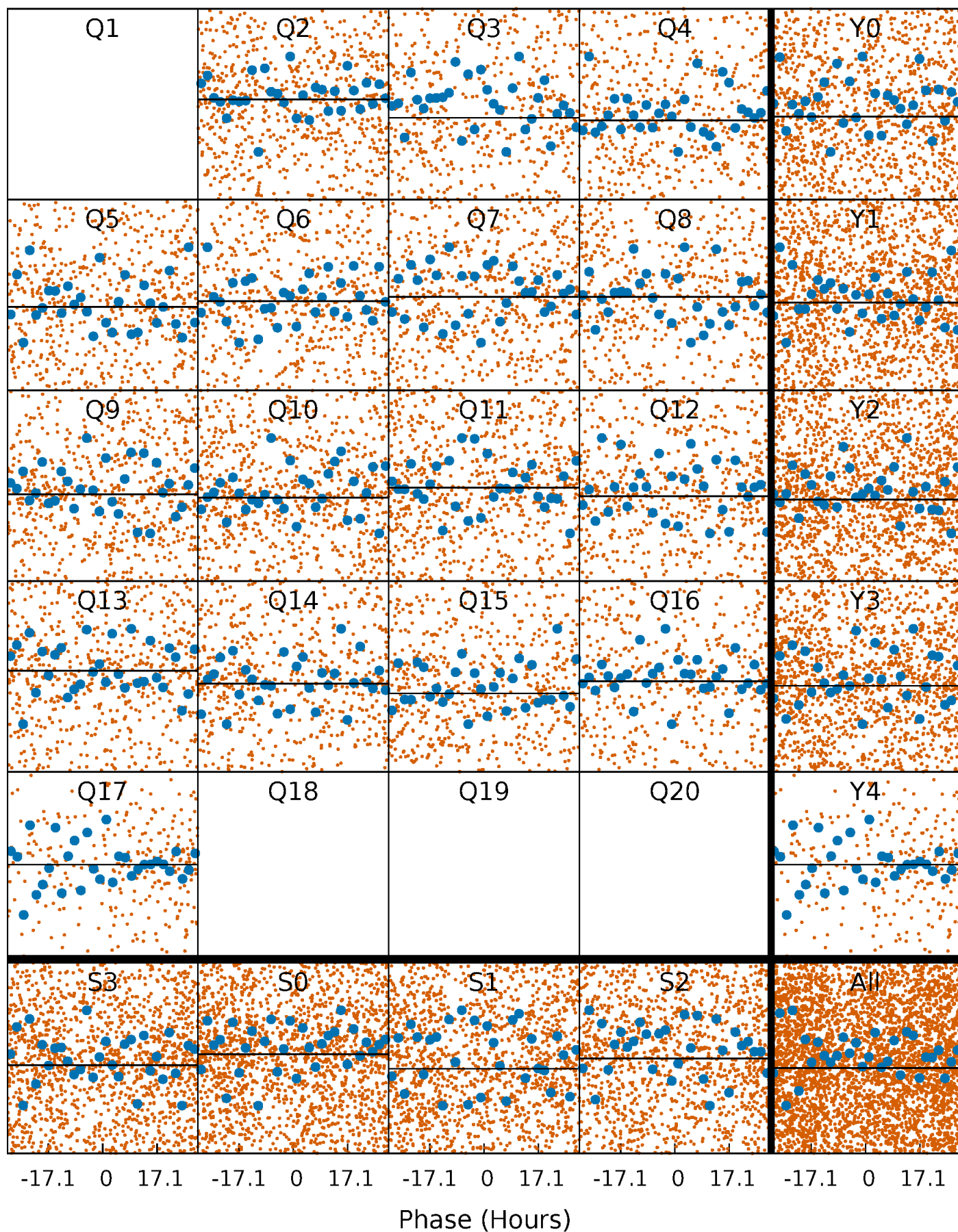
PDC Quarter-Phased Transit Curves

TCE 012208887-03 P= 8.916509 Days $T_0=132.505427$ (BKJD)



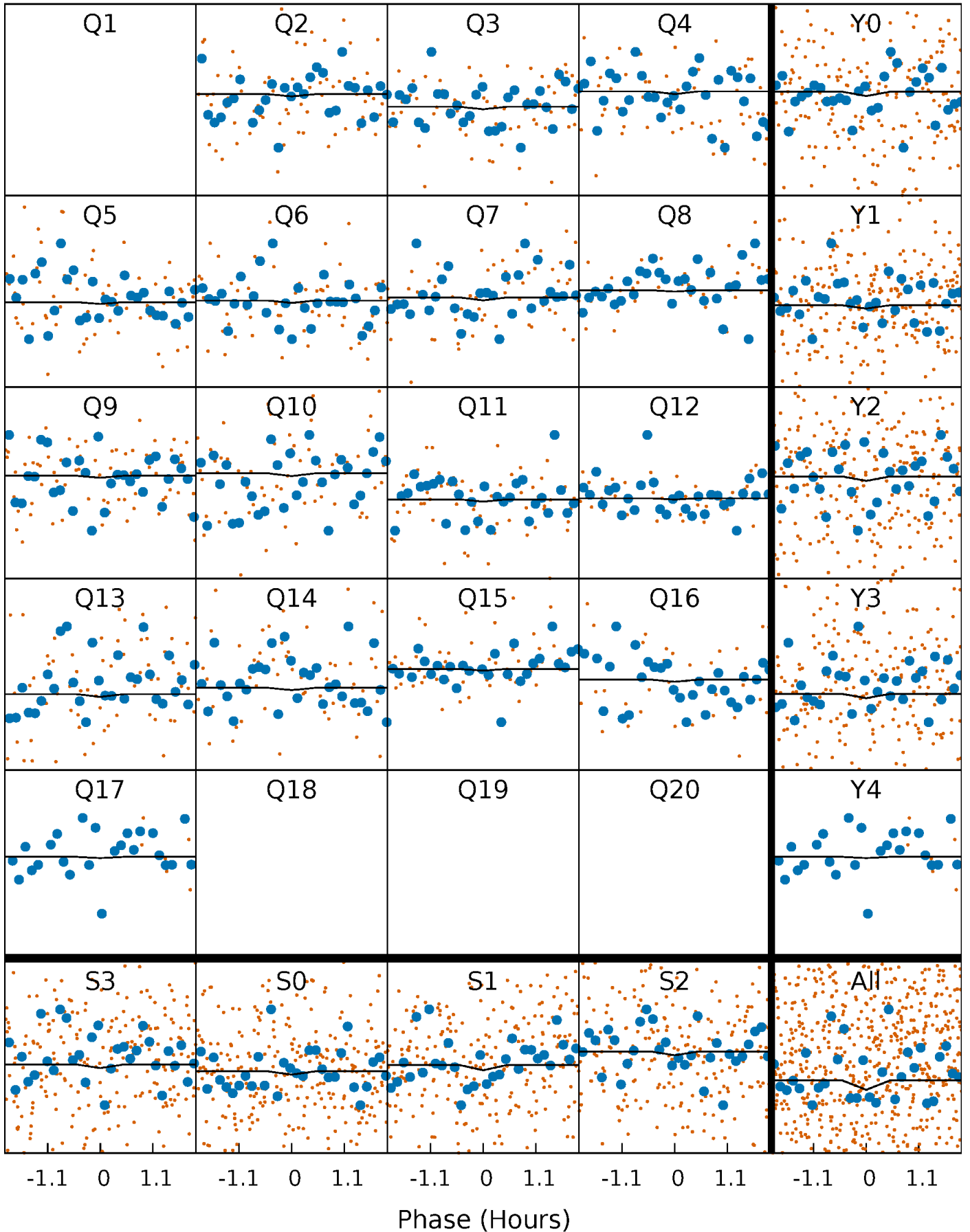
DV Quarter-Phased Transit Curves

TCE 012208887-03 P= 8.916509 Days $T_0=132.505427$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

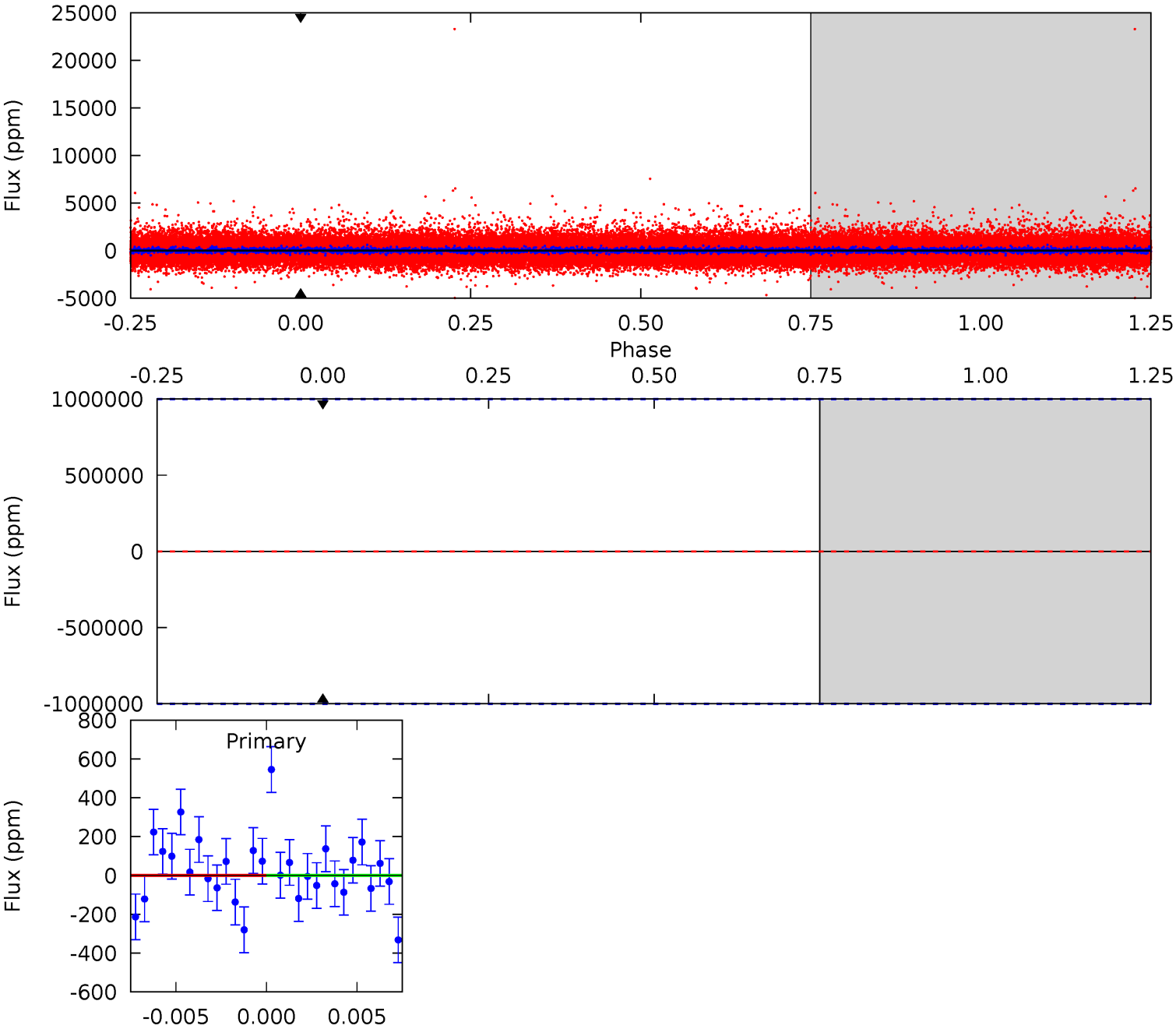
TCE 012208887-03 P= 8.916509 Days $T_0=133.405397$ (BKJD)



DV Model-Shift Uniqueness Test

012208887-03, P = 8.916509 Days, E = 132.505427 Days

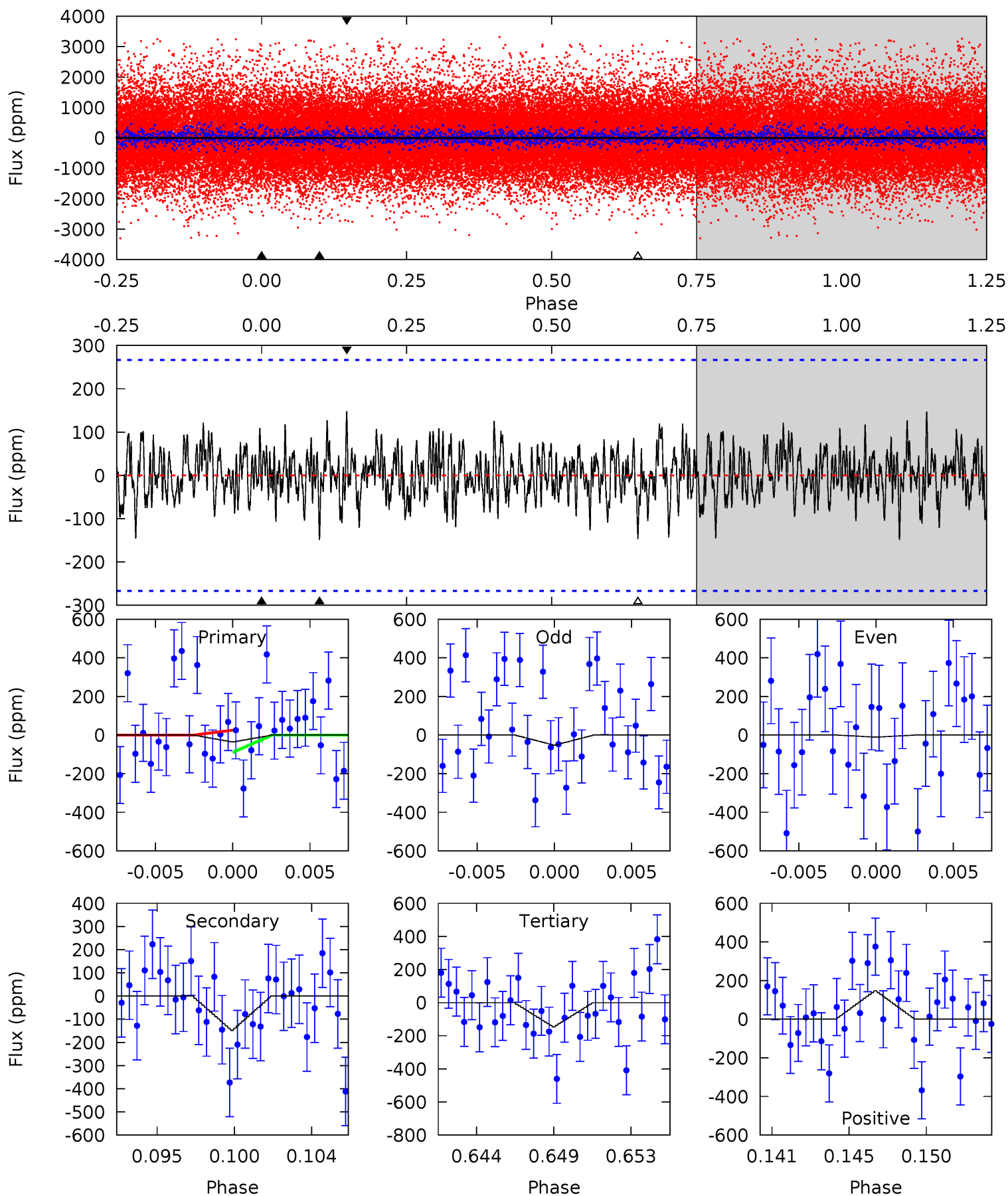
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012208887-03, P = 8.916509 Days, E = 133.405397 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.69	2.88	2.85	2.86	5.18	2.84	0.93	-2.16	-2.17	0.04	0.02	0.39	0.57	0.50	0.62



Stellar Parameters For KIC 012208887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5436^{+177}_{-160}	$4.587^{+0.045}_{-0.105}$	$-0.380^{+0.350}_{-0.300}$	$0.748^{+0.132}_{-0.061}$	$0.790^{+0.093}_{-0.067}$	$2.656^{+0.598}_{-0.889}$
	+3%/-3%	+1%/-2%	+92%/-79%	+18%/-8%	+12%/-8%	+23%/-33%
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 012208887-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$14.04^{+8.65}_{-7.85}$	1051^{+52}_{-46}	-2636^{+10958}_{-5692}	$-8.193^{+2443.472}_{-2252.433}$
Alt.	-149 ± 52	$5.96^{+6.52}_{-4.08}$	1050^{+49}_{-42}	2909^{+1312}_{-541}	14^{+114}_{-11}

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 $A_{obs} \gg 1.0$

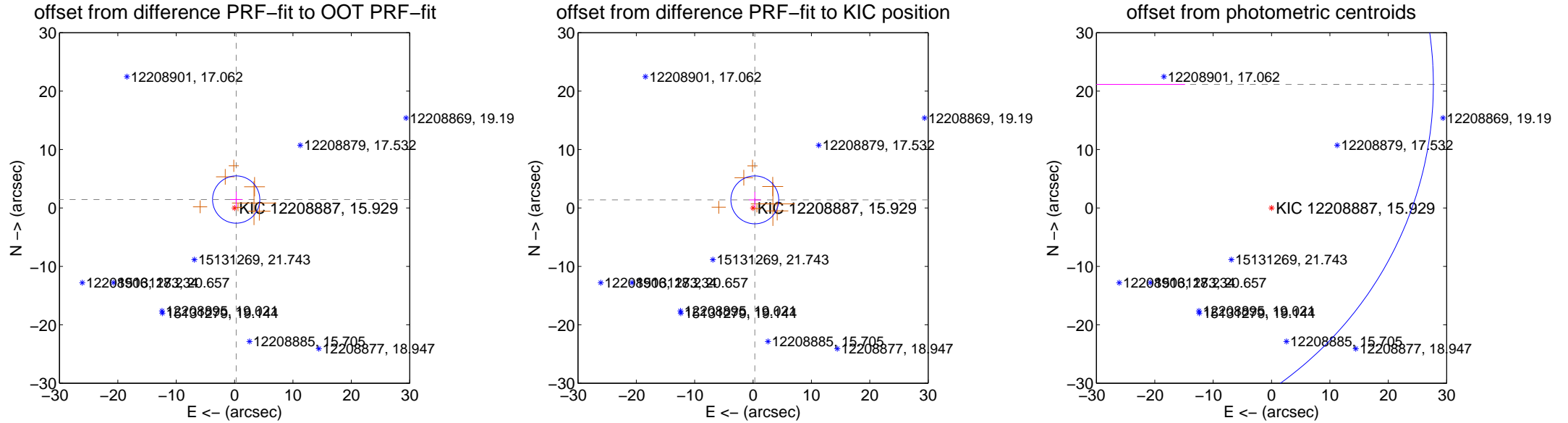
DV Centroid Data

Supplemental centroid analysis for 012208887-03. Kepler magnitude: 15.93. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

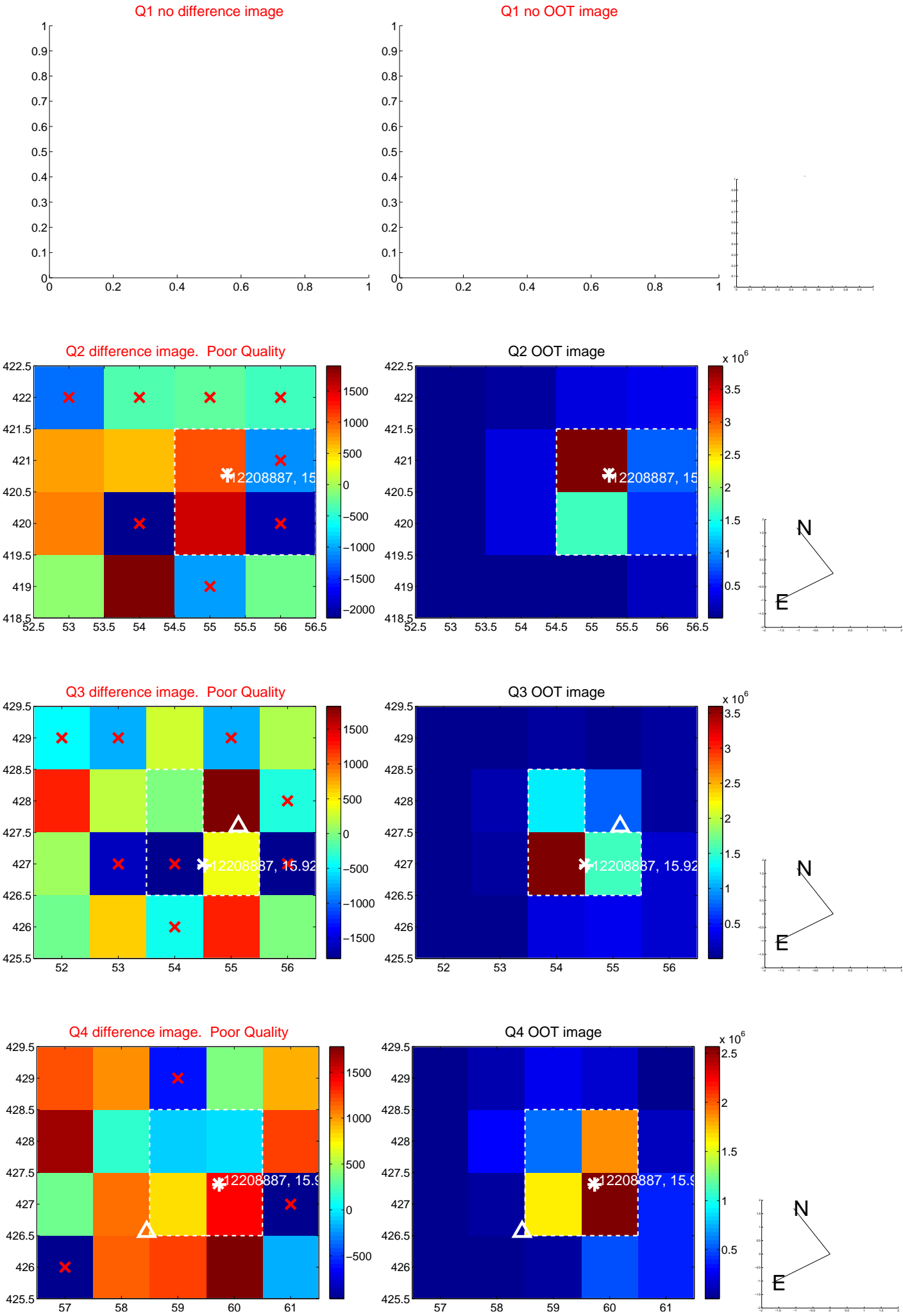
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.464 ± 1.349	1.09	-0.274 ± 1.023	1.438 ± 1.359
PRF-fit source offset from KIC position	1.417 ± 1.366	1.04	-0.301 ± 1.011	1.385 ± 1.381
photometric centroid source offset	41.14 ± 21.01	1.96	35.29 ± 20.47	21.15 ± 22.42

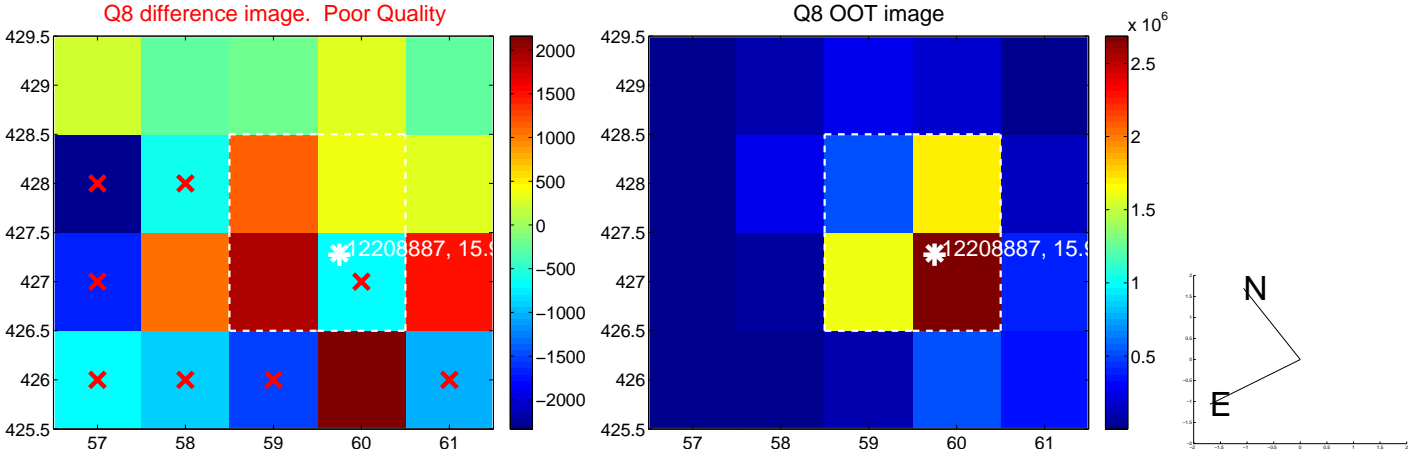
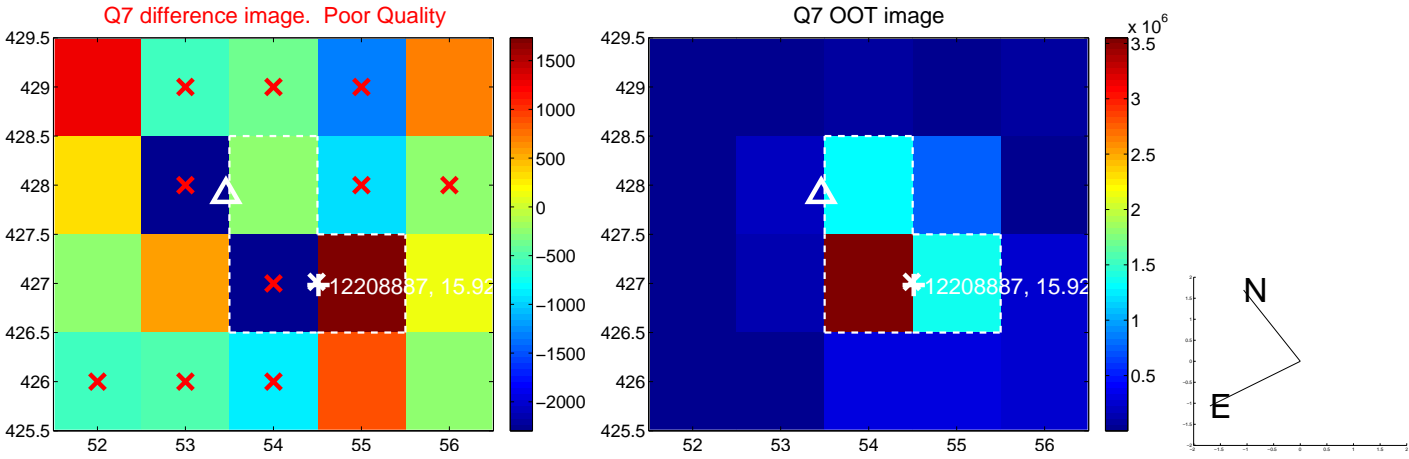
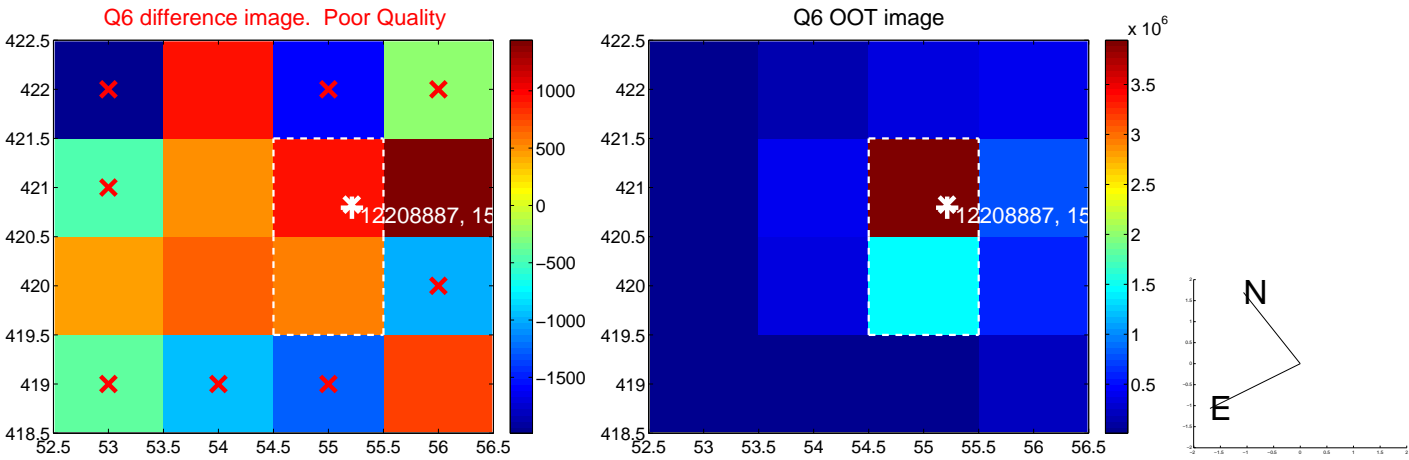
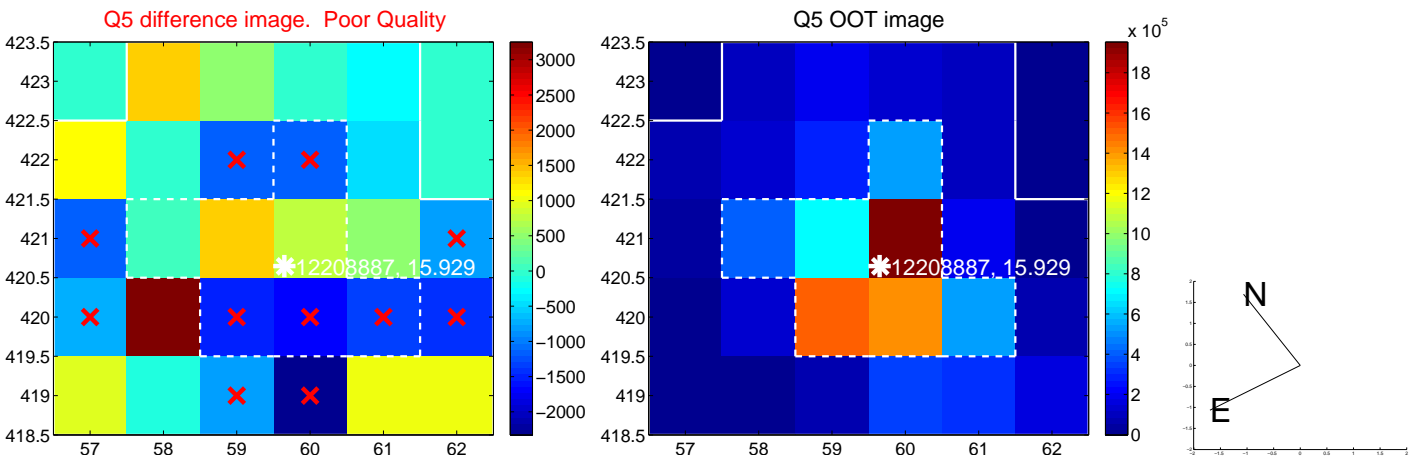


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

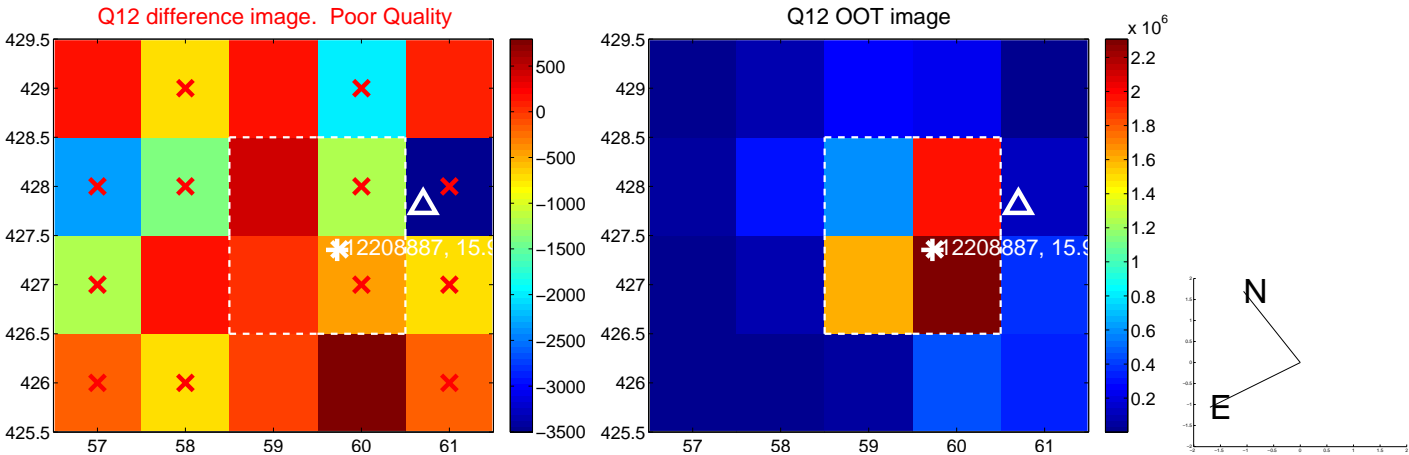
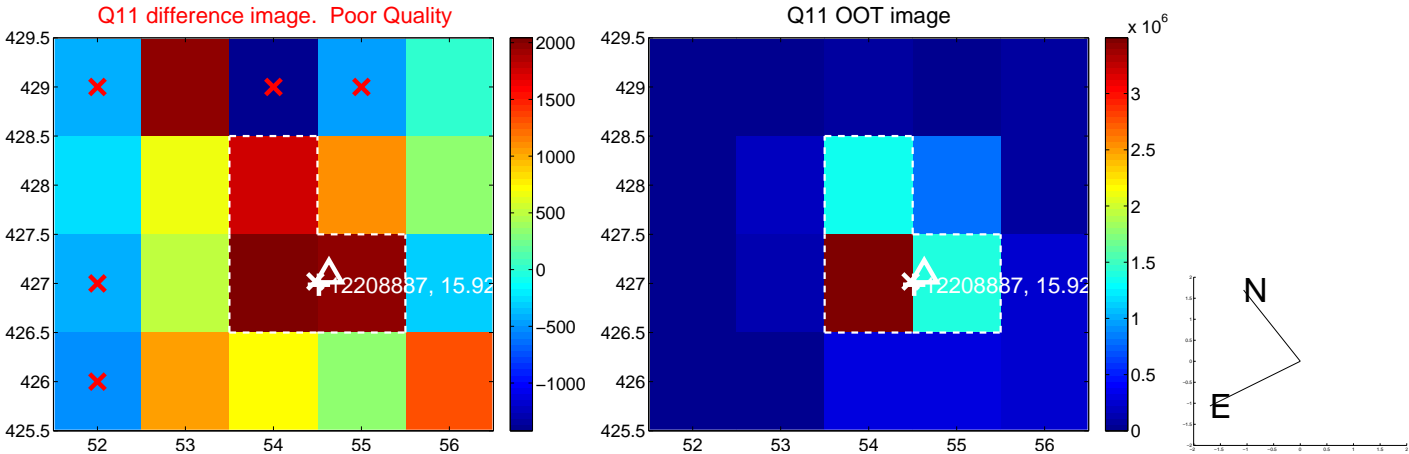
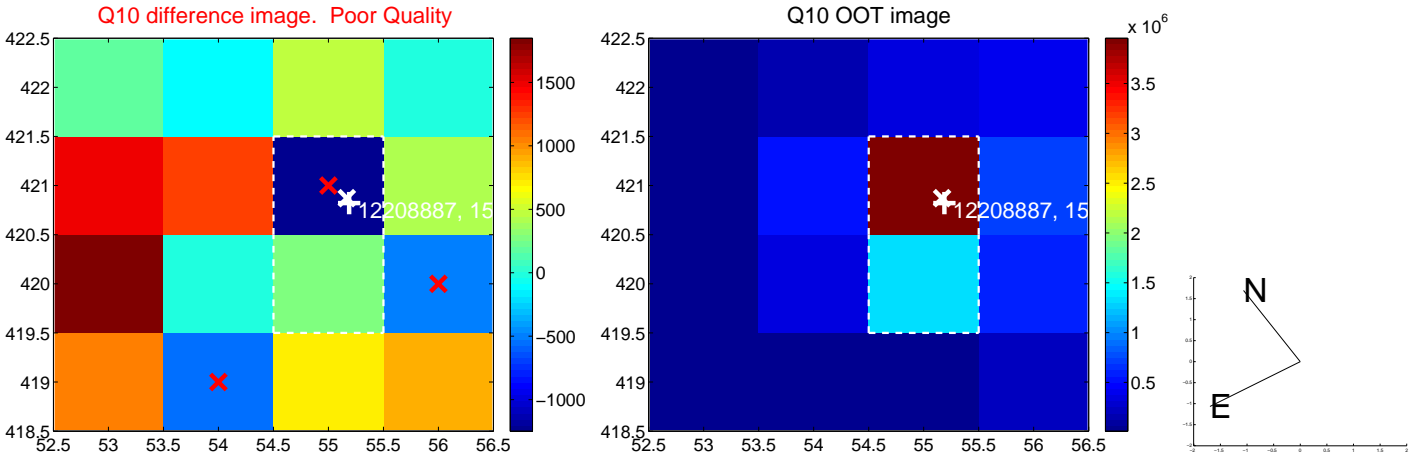
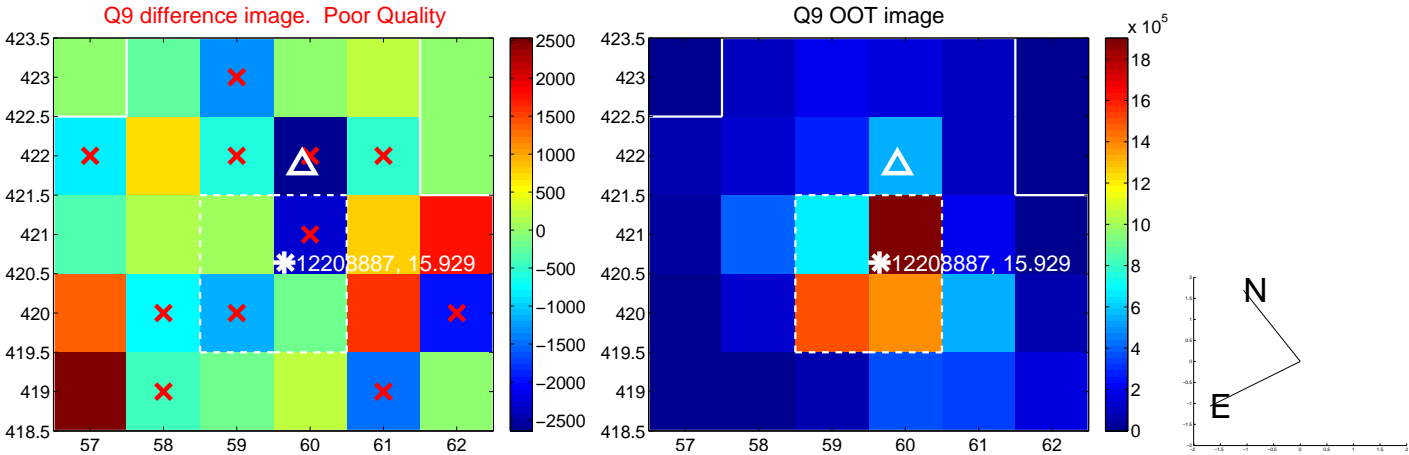
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



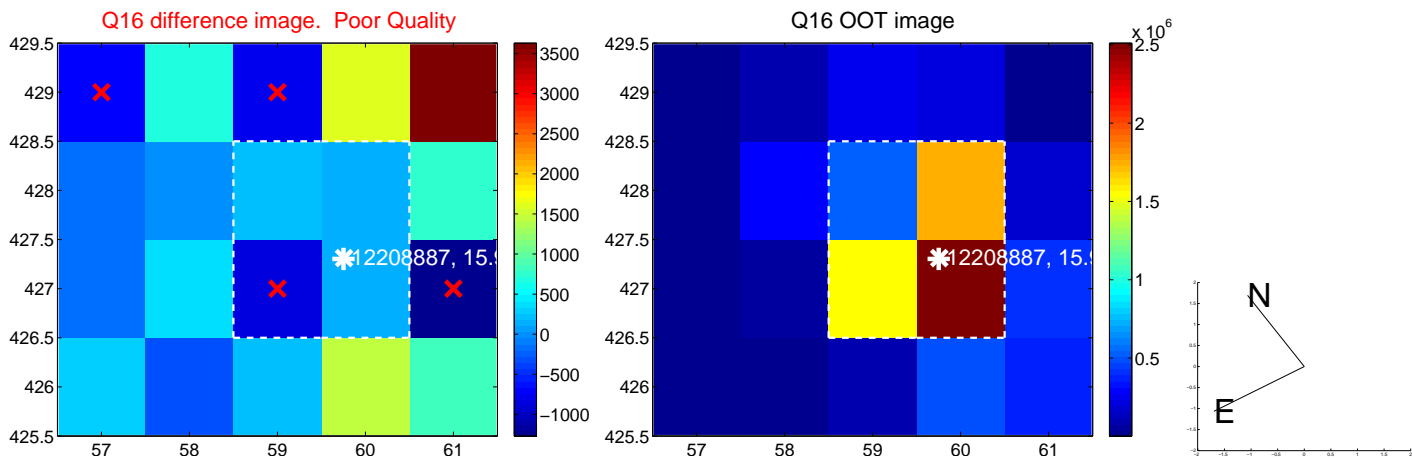
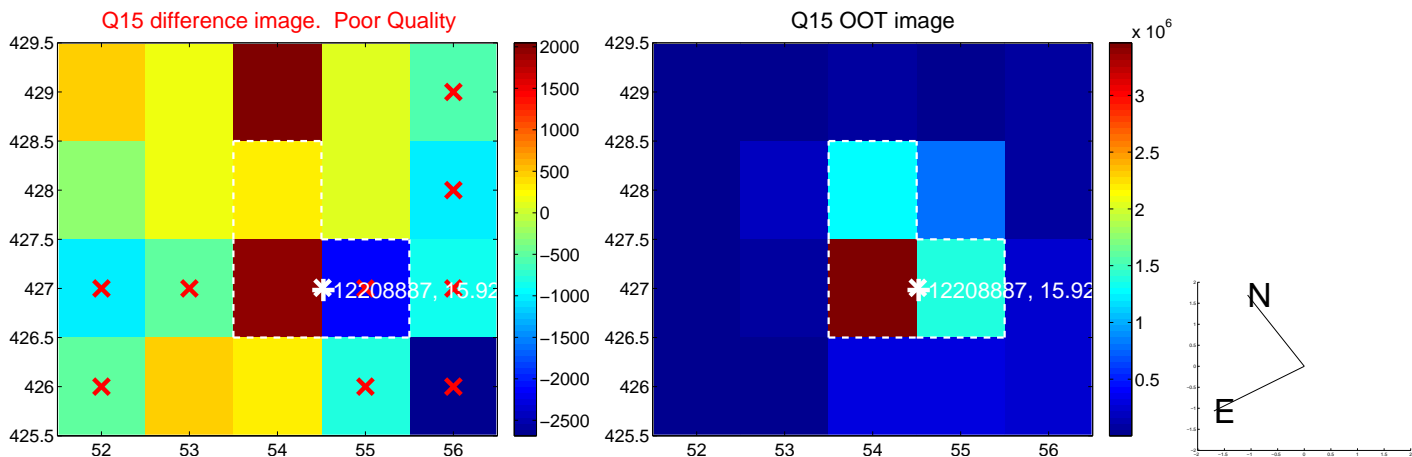
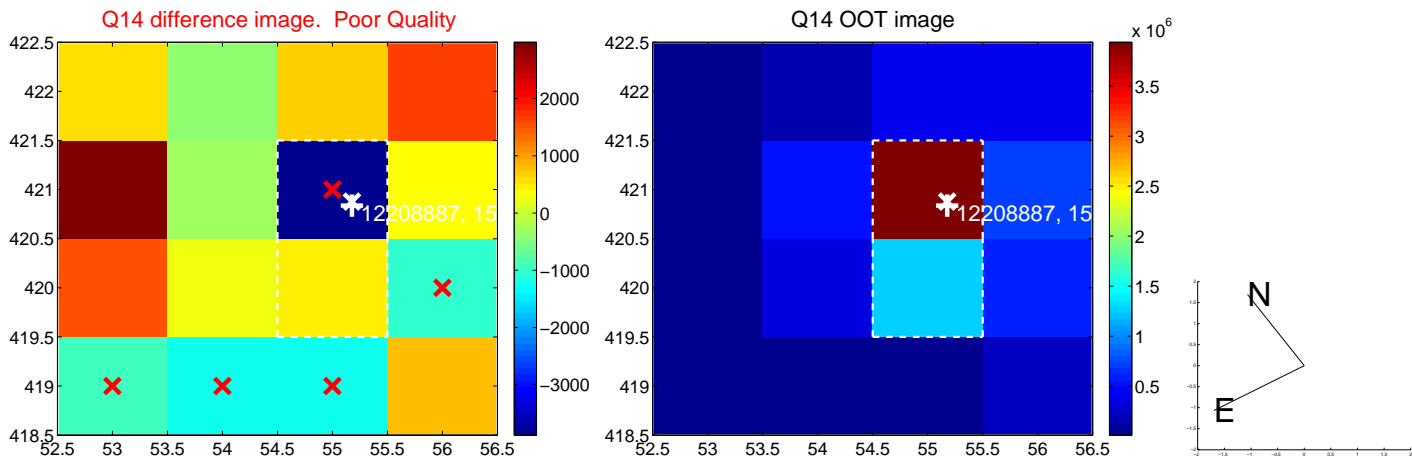
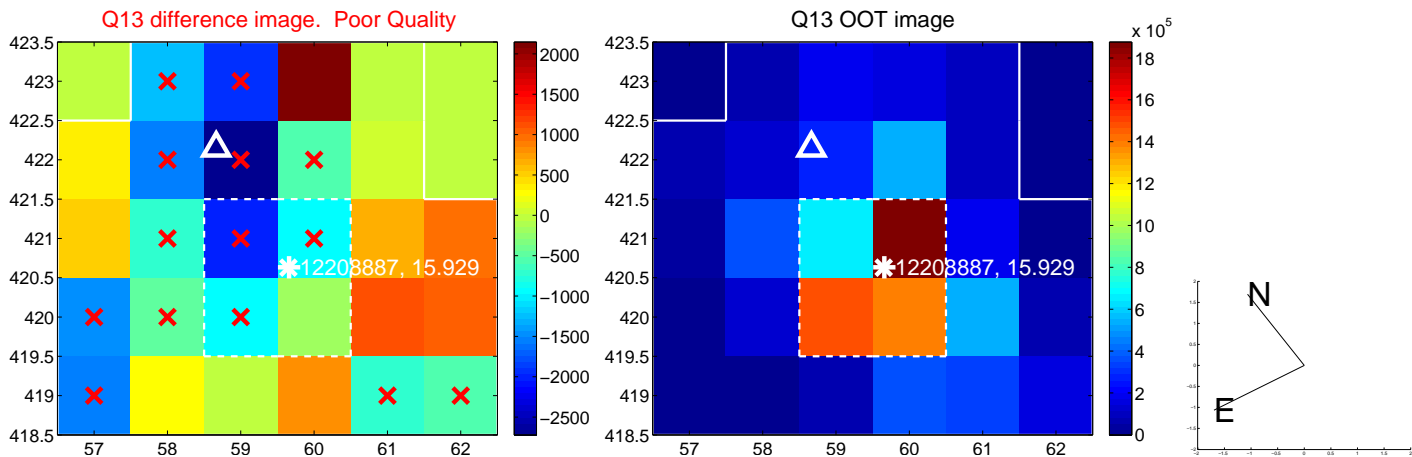
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



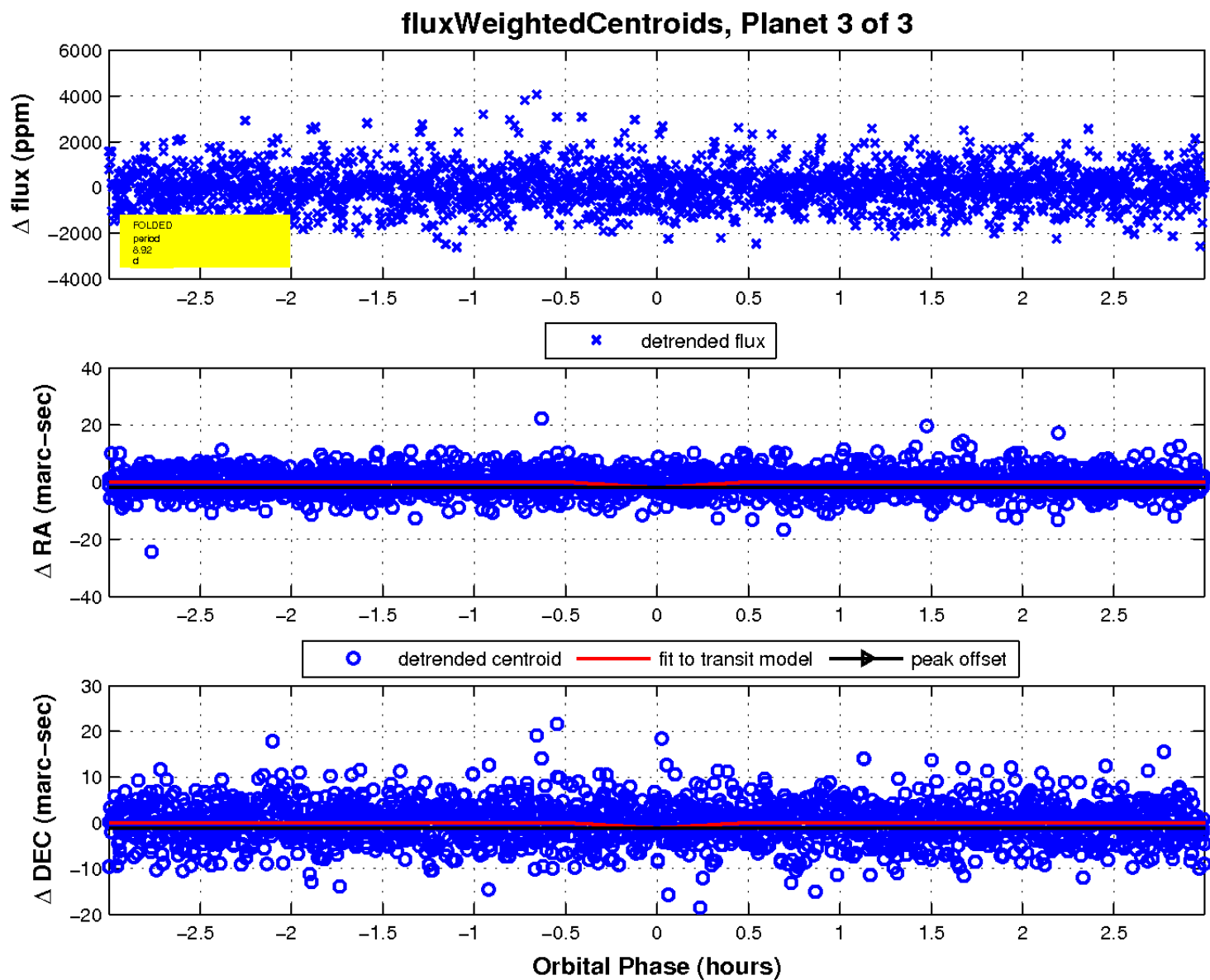
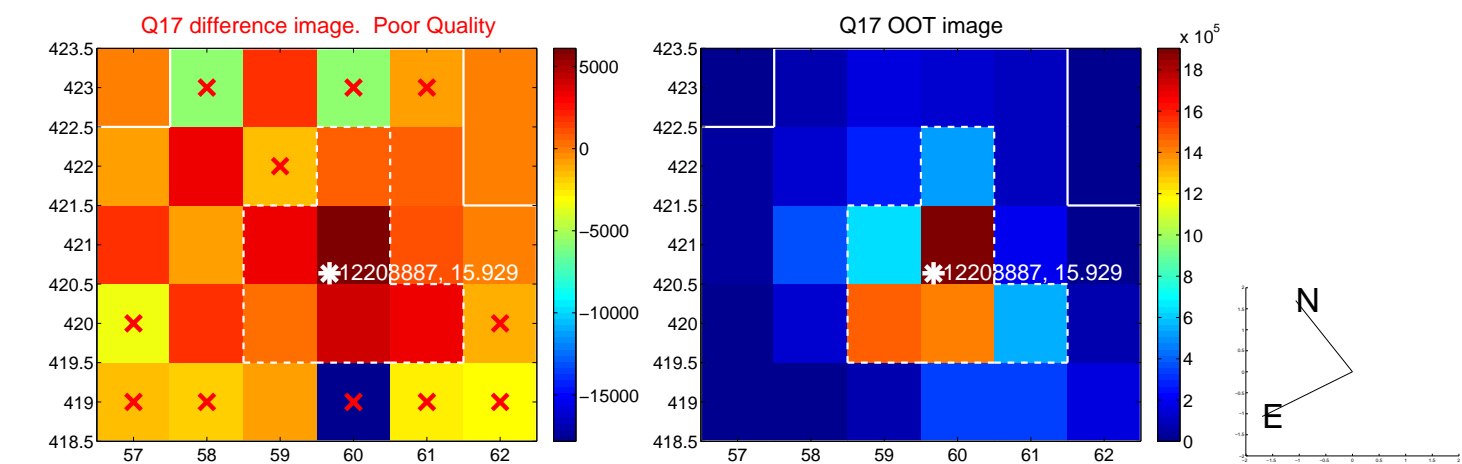
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

