

KIC 010258558

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})
010258558-01	OBS	7299.01	20.867855	136.403855	82564.9	5.721	4422.4	3942.7	1.02	6095	43.65	62.24
010258558-02	OBS	No	20.867854	147.113739	74952.1	5.708	3864.9	3654.7	1.02	6095	41.98	62.24
010258558-03	OBS	No	270.400565	282.627130	598.6	5.229	10.1	7.6	1.02	6095	2.78	2.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010258558-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010258558-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010258558-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

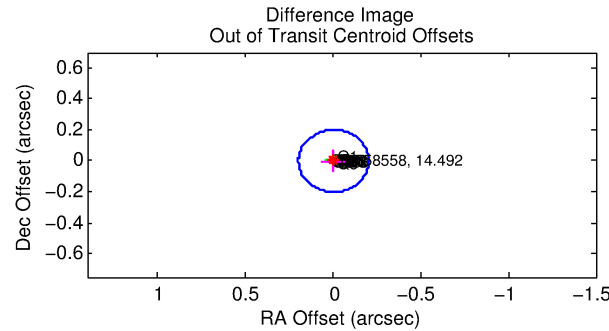
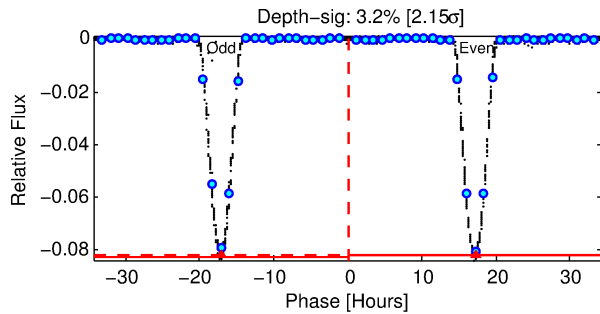
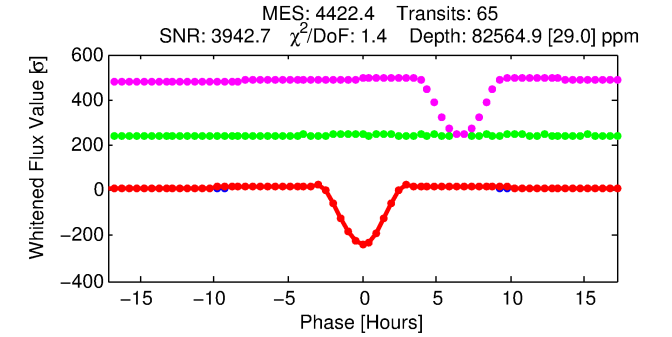
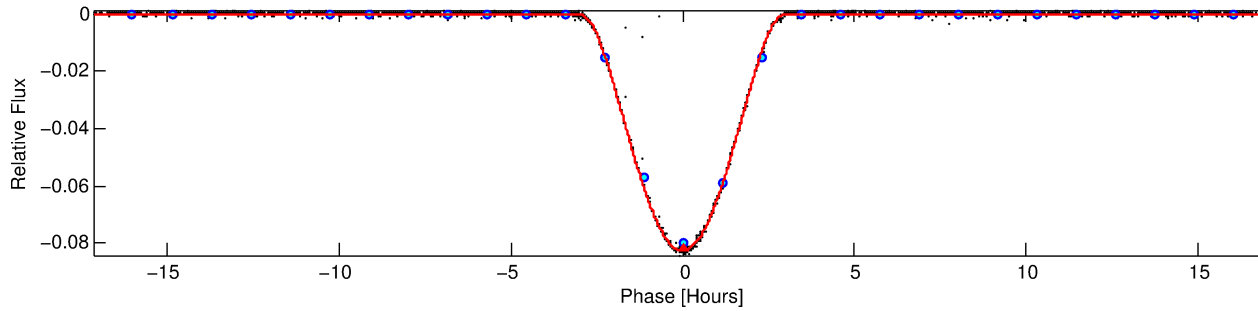
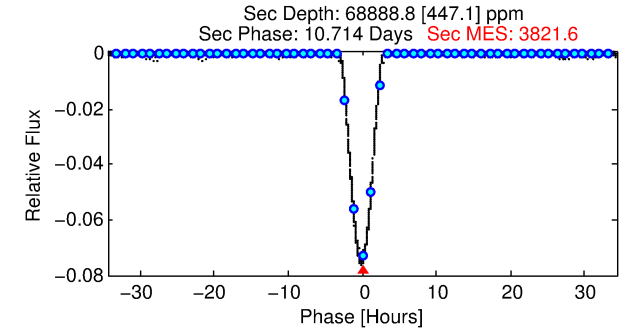
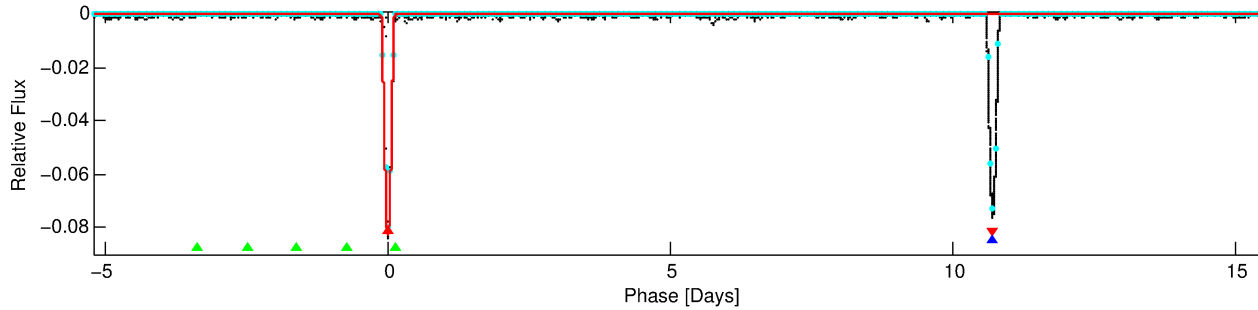
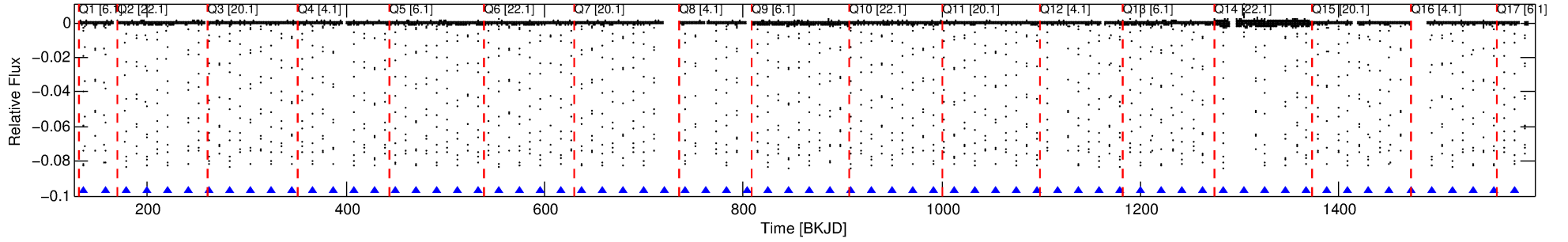
Ephemeris Match Information For 010258558-01

No Significant Match Found

DV One-Page Summary

KIC: 10258558 Candidate: 1 of 3 Period: 20.868 d
KOI: K07299.01 Corr: 0.999

Kp: 14.49 R*: 1.02 Rs Teff: 6095.0 K Logg: 4.38 Fe/H: -0.480



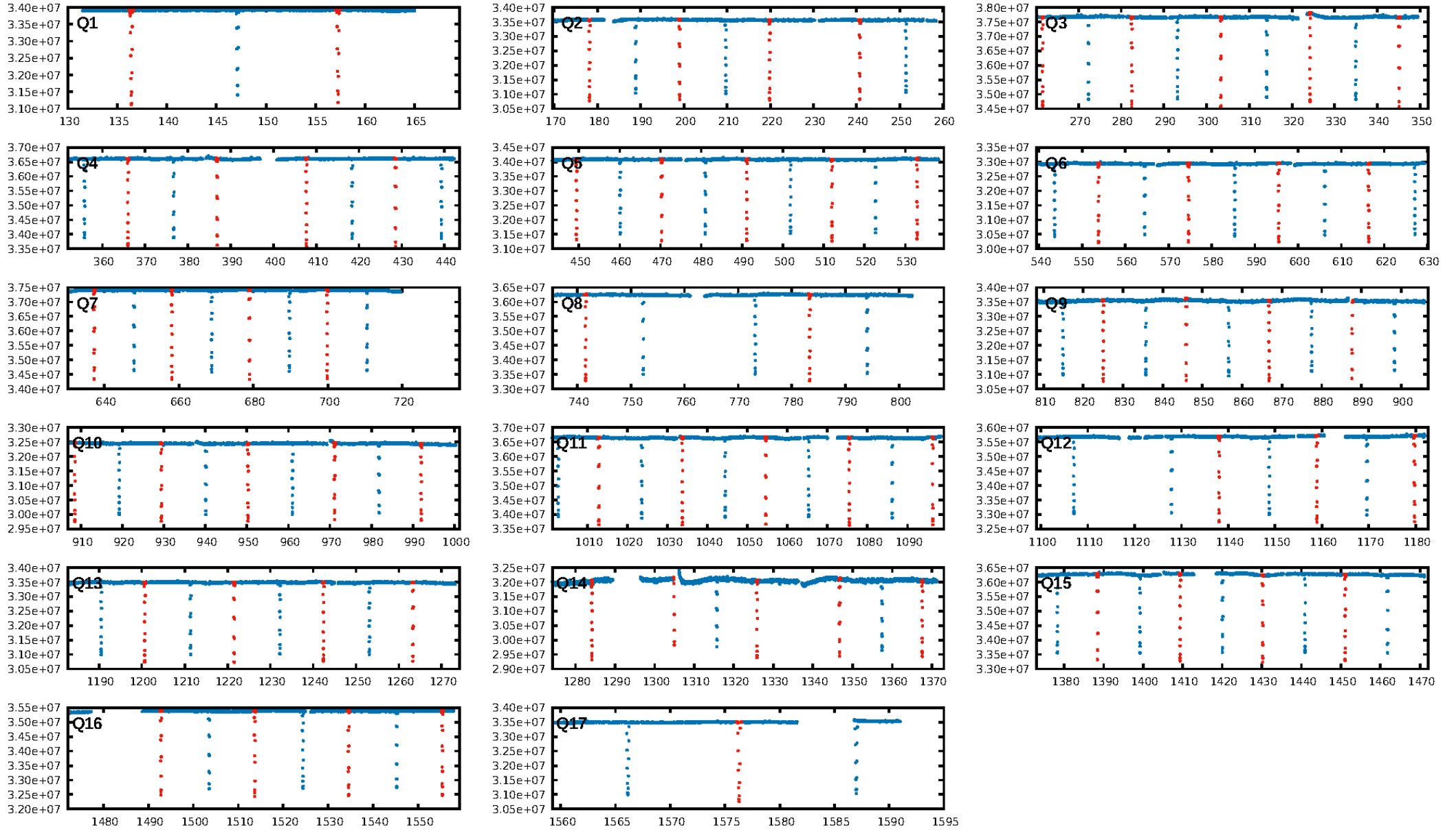
DV Fit Results:

Period = 20.86786 [0.00000] d
Epoch = 136.4039 [0.0000] BKJD
Rp/R* = 0.3937 [0.0093]
a/R* = 29.05 [0.01]
b = 0.93 [0.01]
Seff = 62.24 [22.91]
Teq = 716 [66] K
Rp = 43.65 [12.12] Re
a = 0.1432 [0.0338] AU
Ag = 407.90 [143.15] [2.84σ]
Teffp = 4977 [162] K [24.41σ]

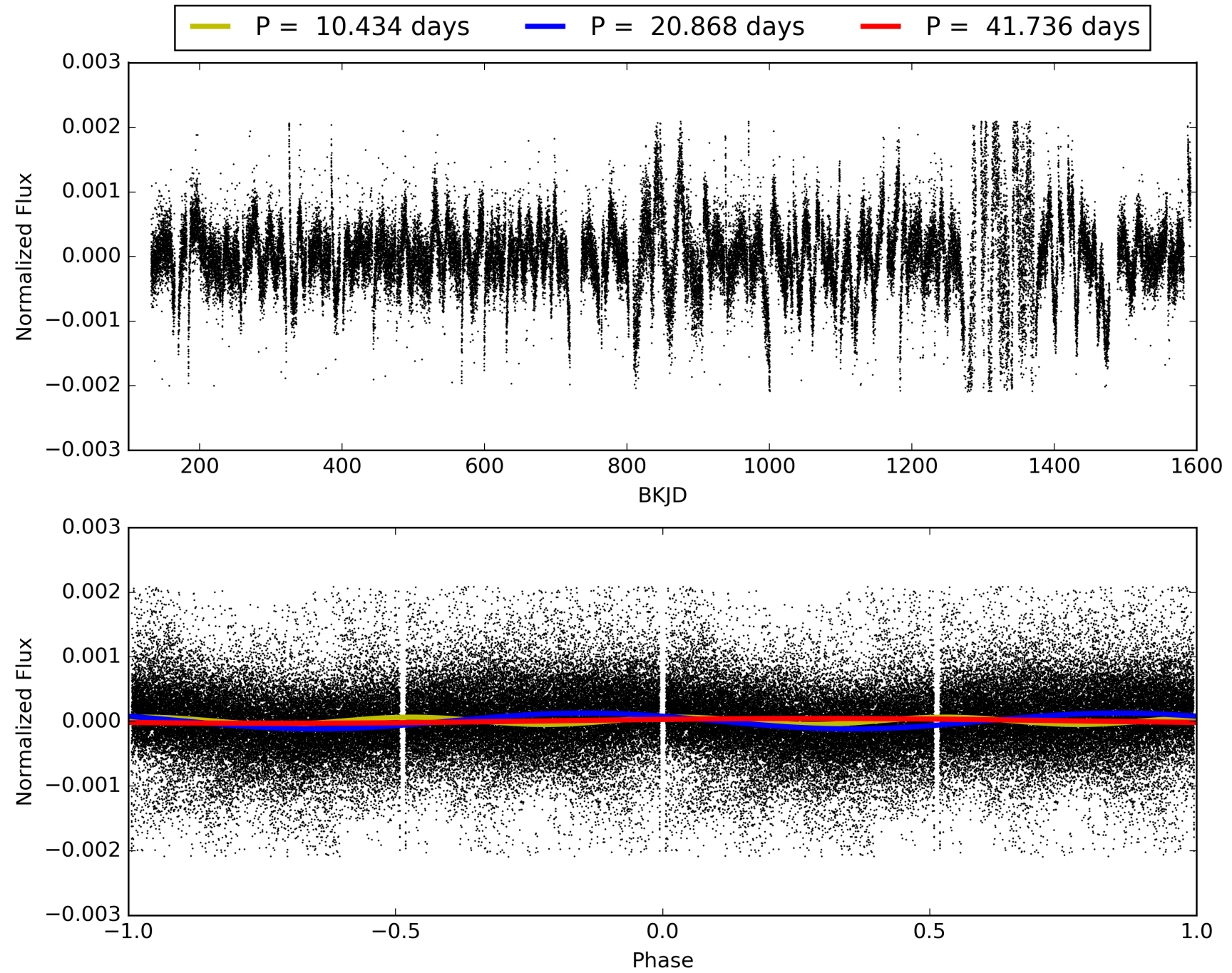
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [772.74σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [62/62]
GhostDiagnostic-chr: 5.694
Centroid-sig: 0.0%
Centroid-so: 0.149 arcsec [61.96σ]
OotOffset-rm: 0.004 arcsec [0.07σ]
KicOffset-rm: 0.194 arcsec [2.83σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010258558-01, PDC Light Curves

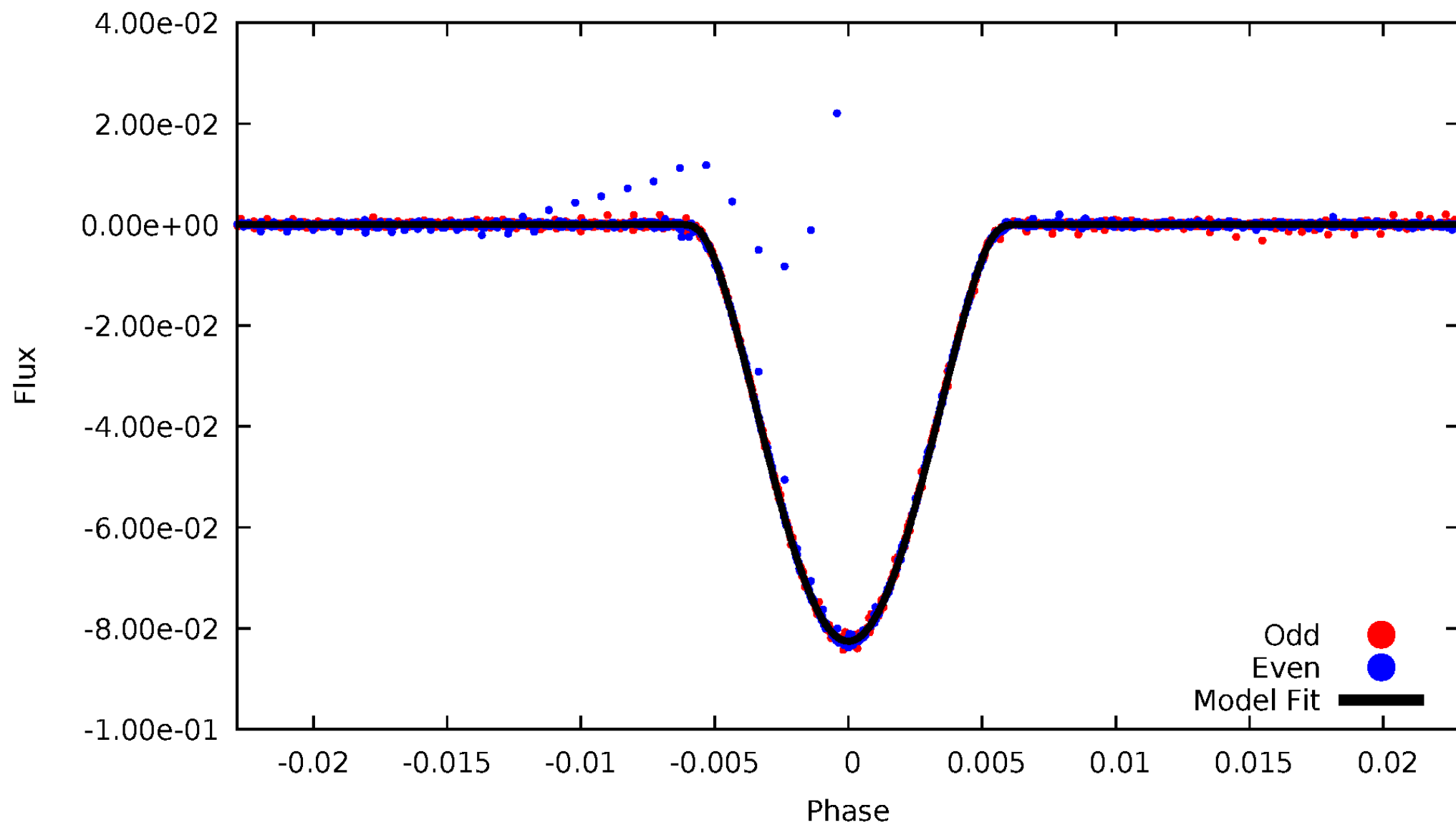


TCE 010258558-01



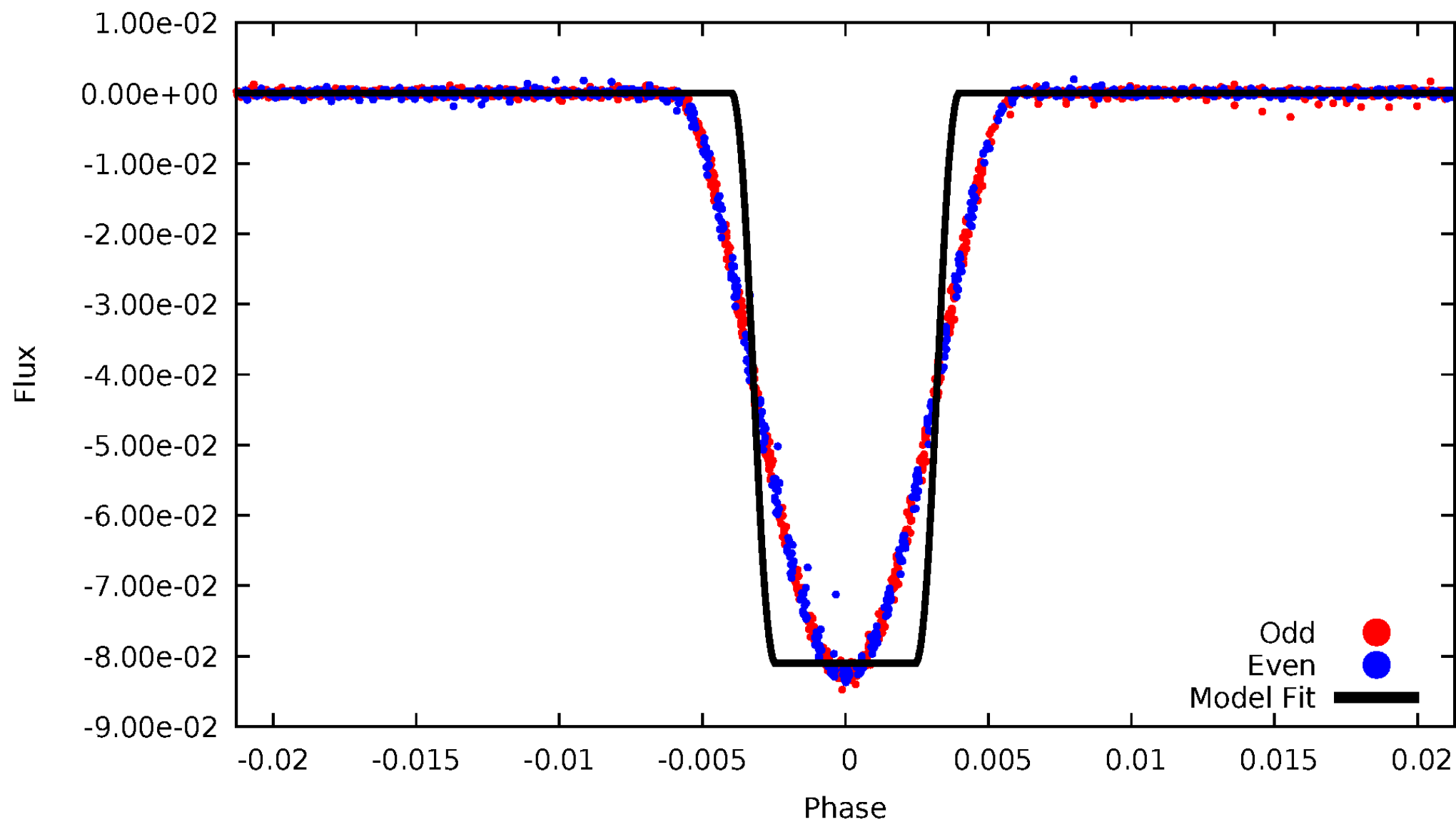
DV Odd/Even

TCE 010258558-01



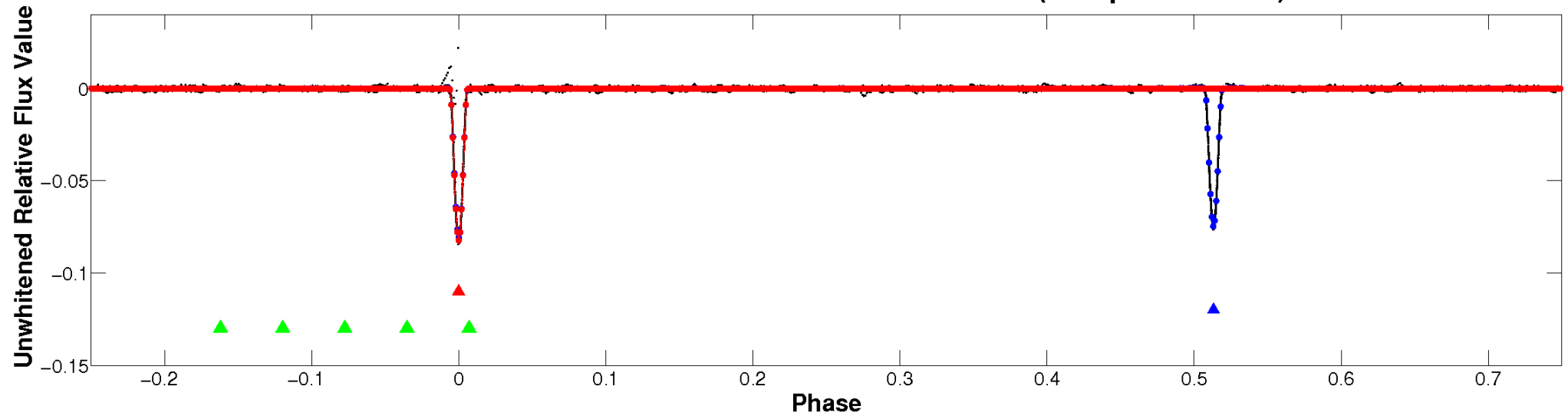
ALT Odd/Even

TCE 010258558-01

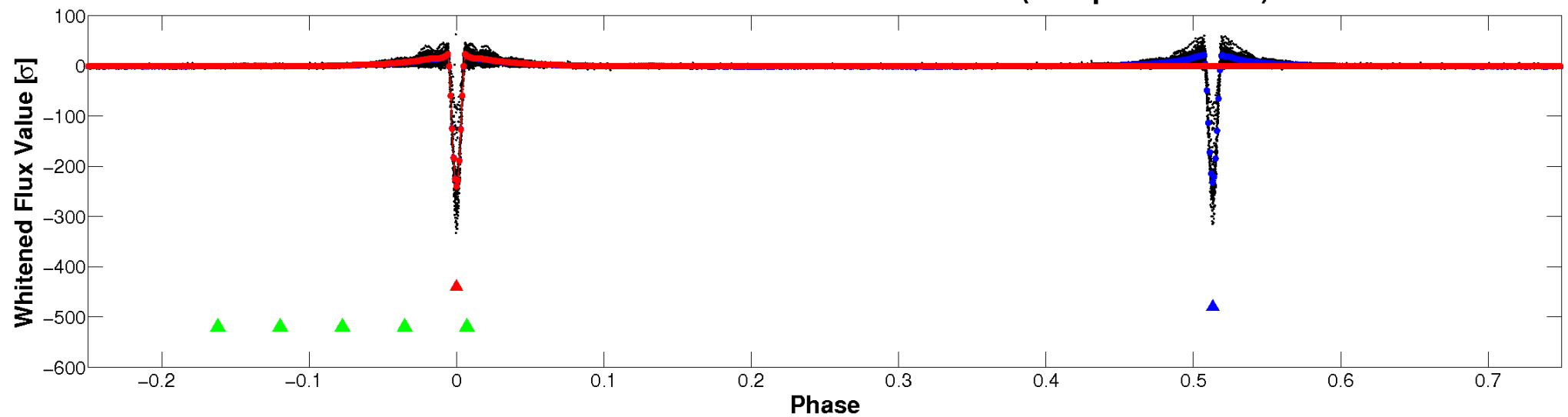


Non-Whitened Vs. Whitened Light Curve

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

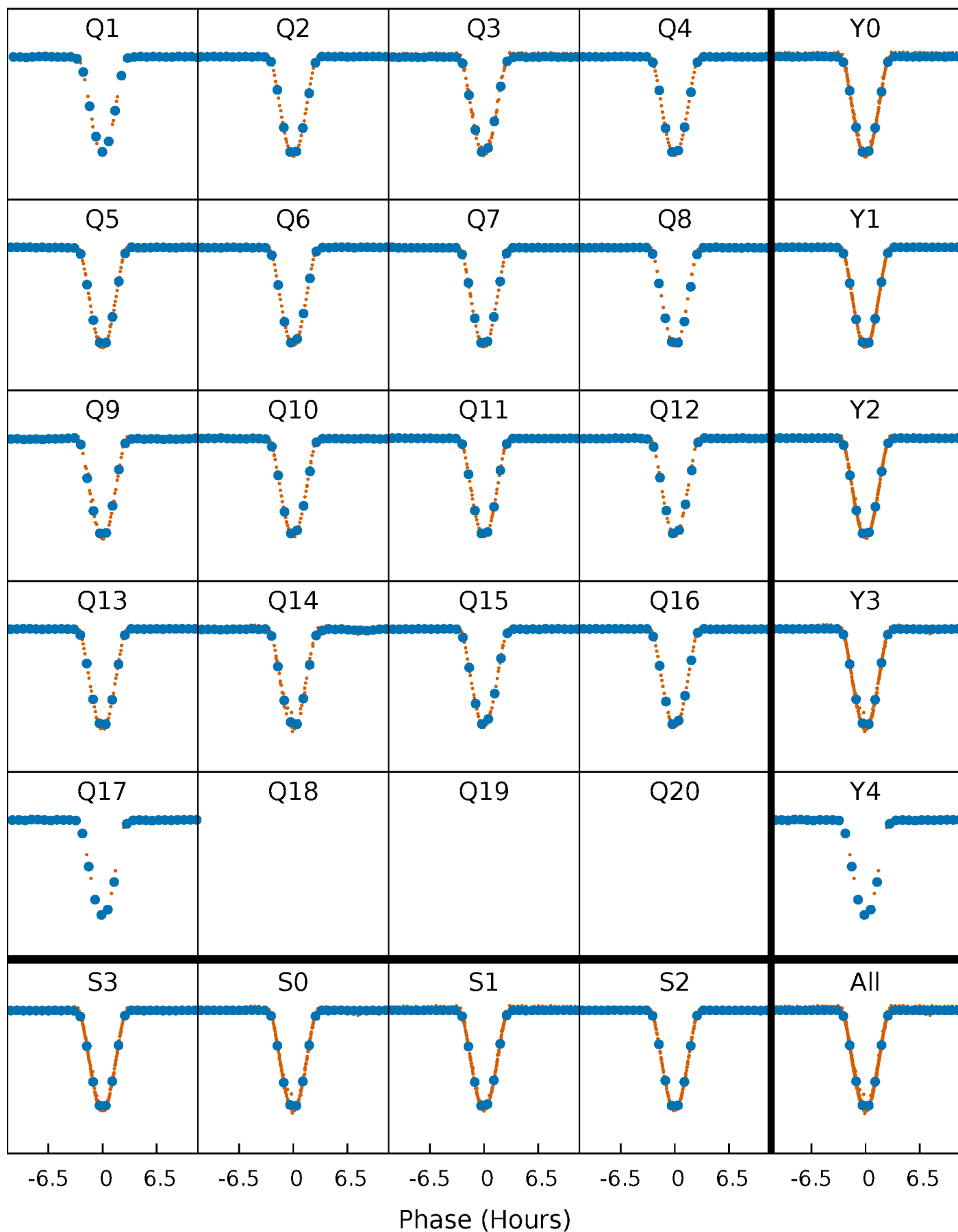


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



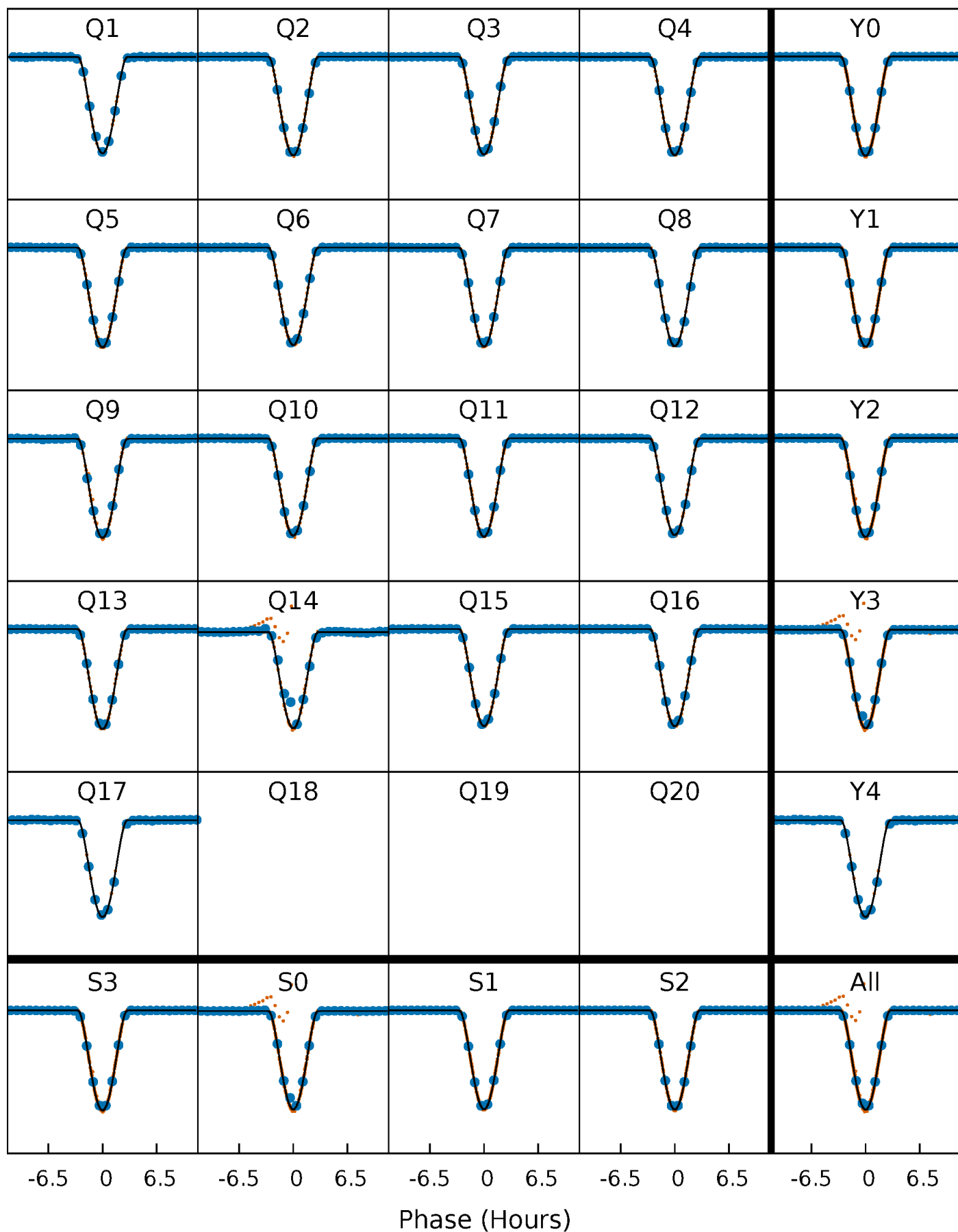
PDC Quarter-Phased Transit Curves

TCE 010258558-01 P= 20.867855 Days $T_0=136.403855$ (BKJD)



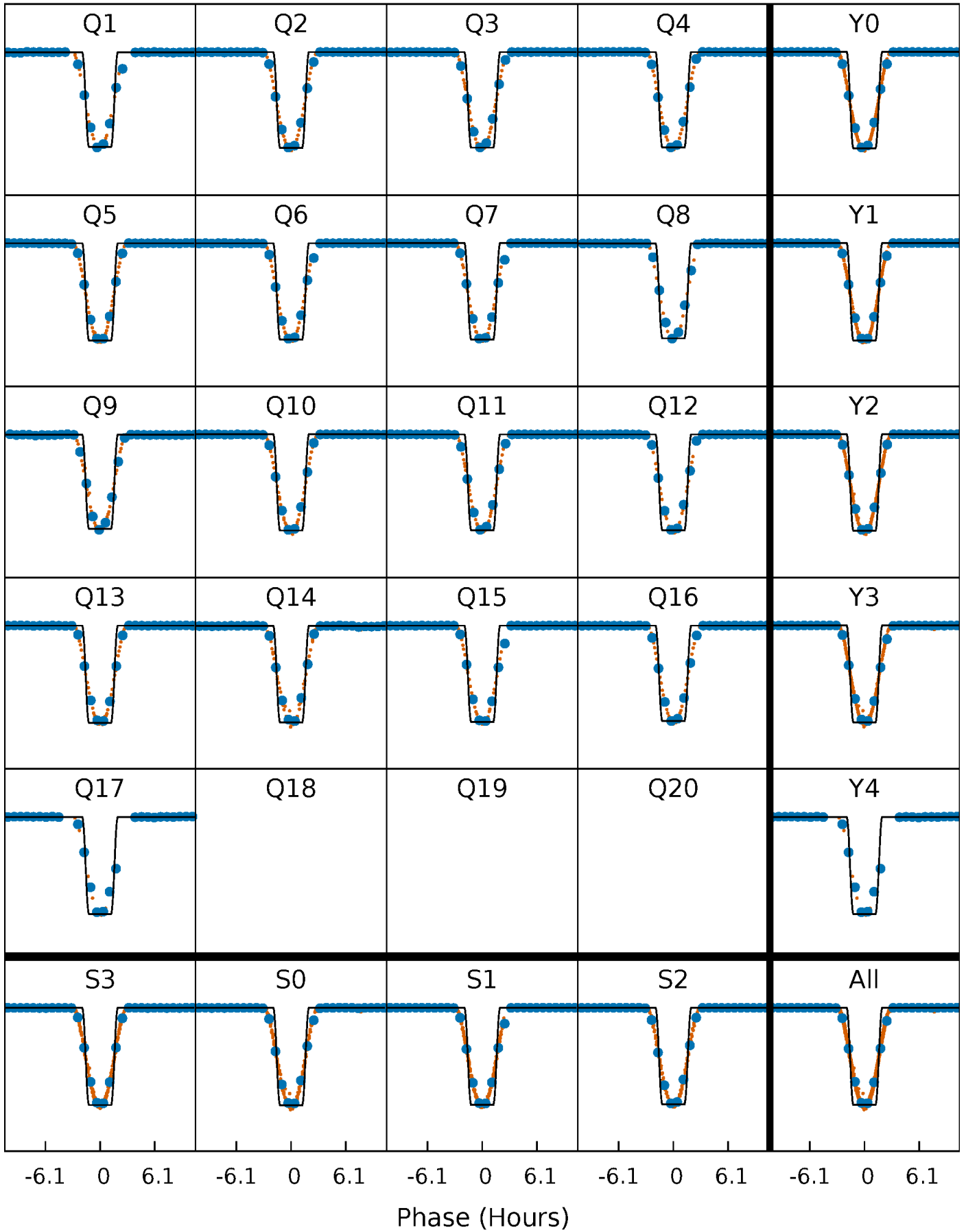
DV Quarter-Phased Transit Curves

TCE 010258558-01 P= 20.867855 Days $T_0=136.403855$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

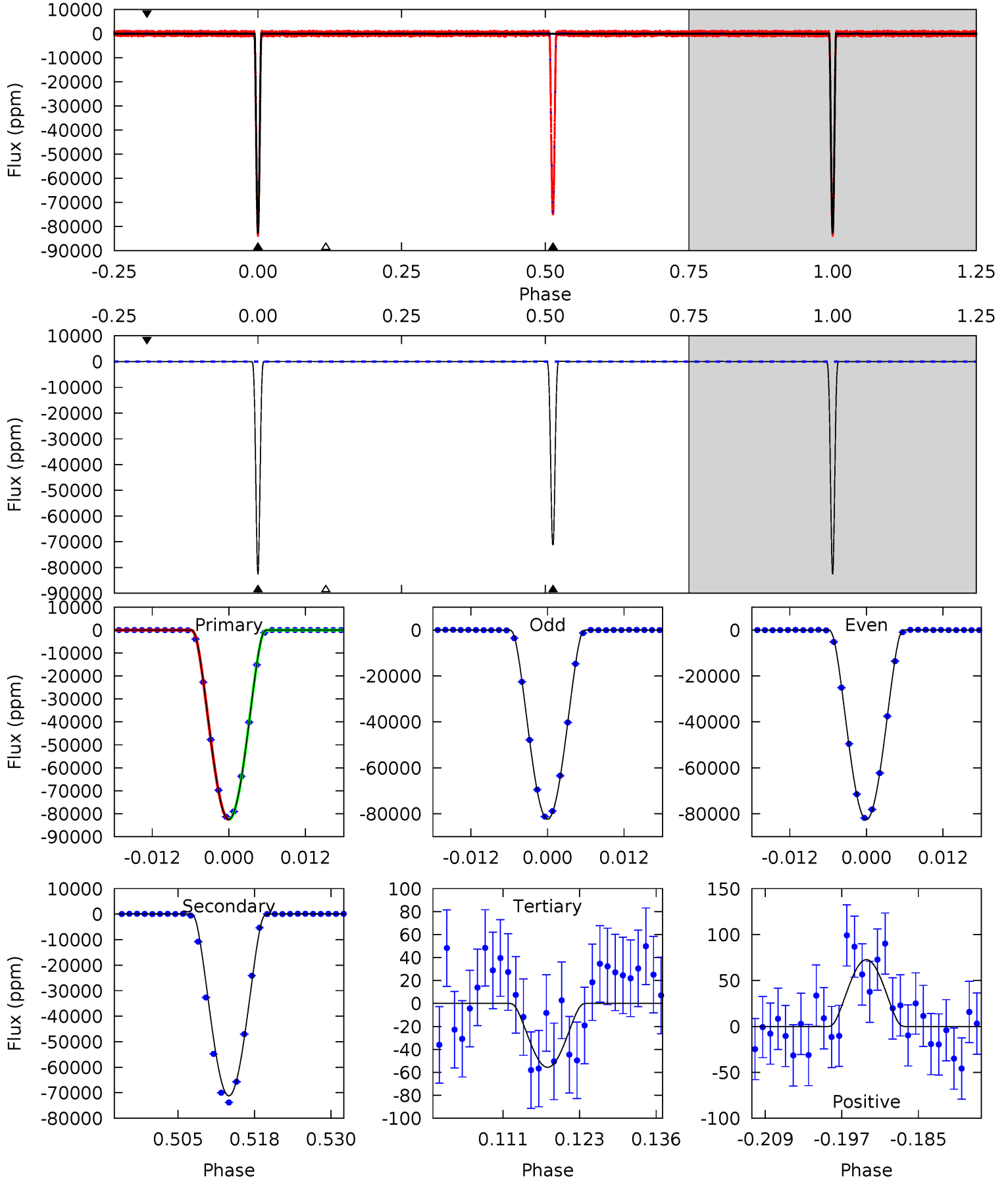
TCE 010258558-01 P= 20.867784 Days $T_0=136.406120$ (BKJD)



DV Model-Shift Uniqueness Test

010258558-01, P = 20.867855 Days, E = 115.536000 Days

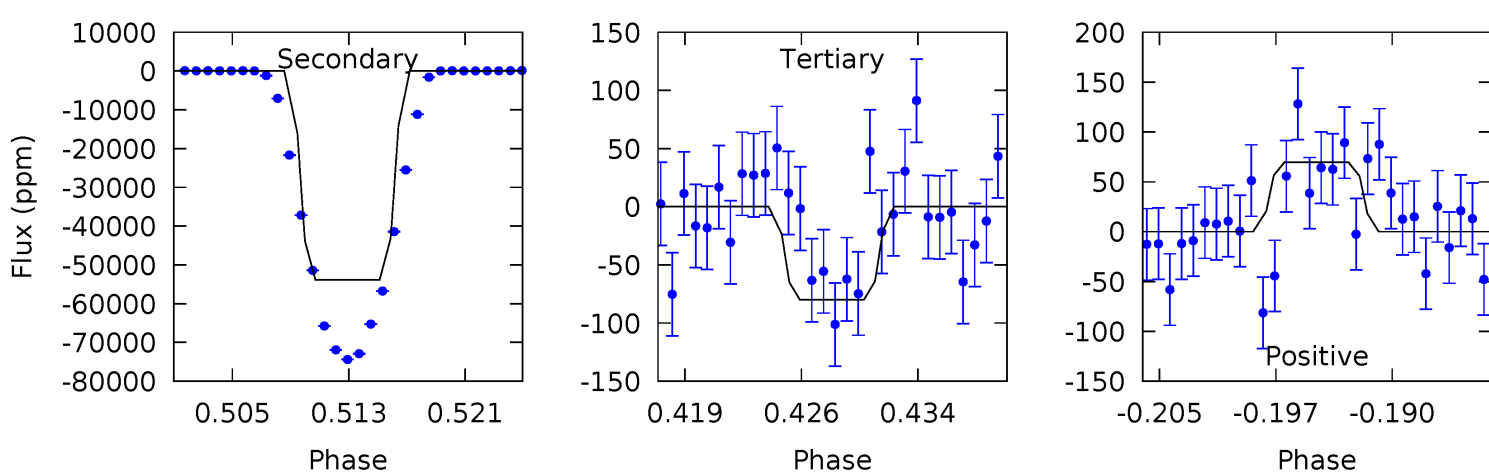
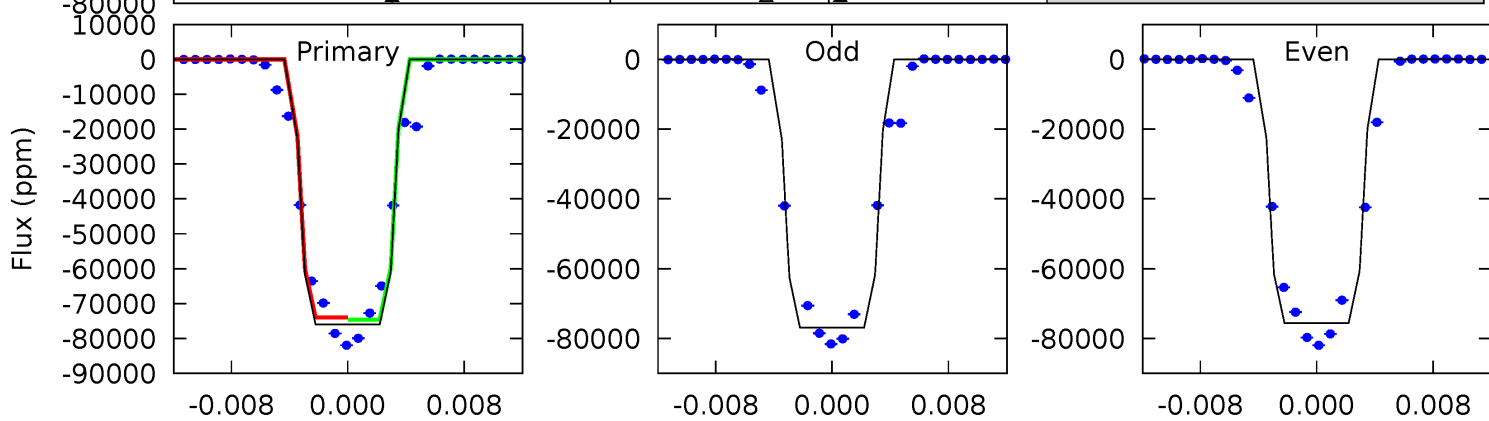
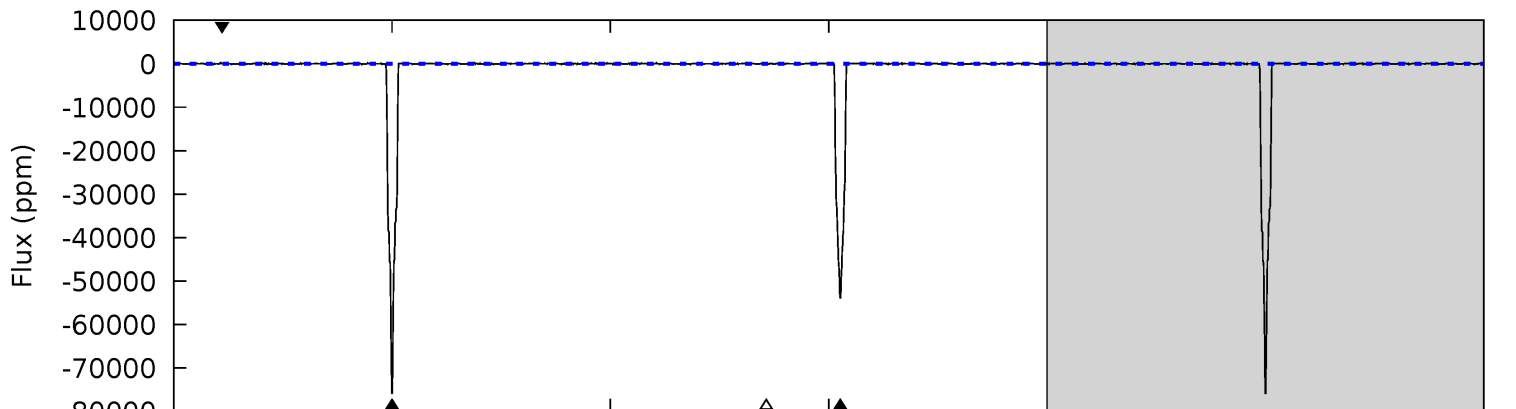
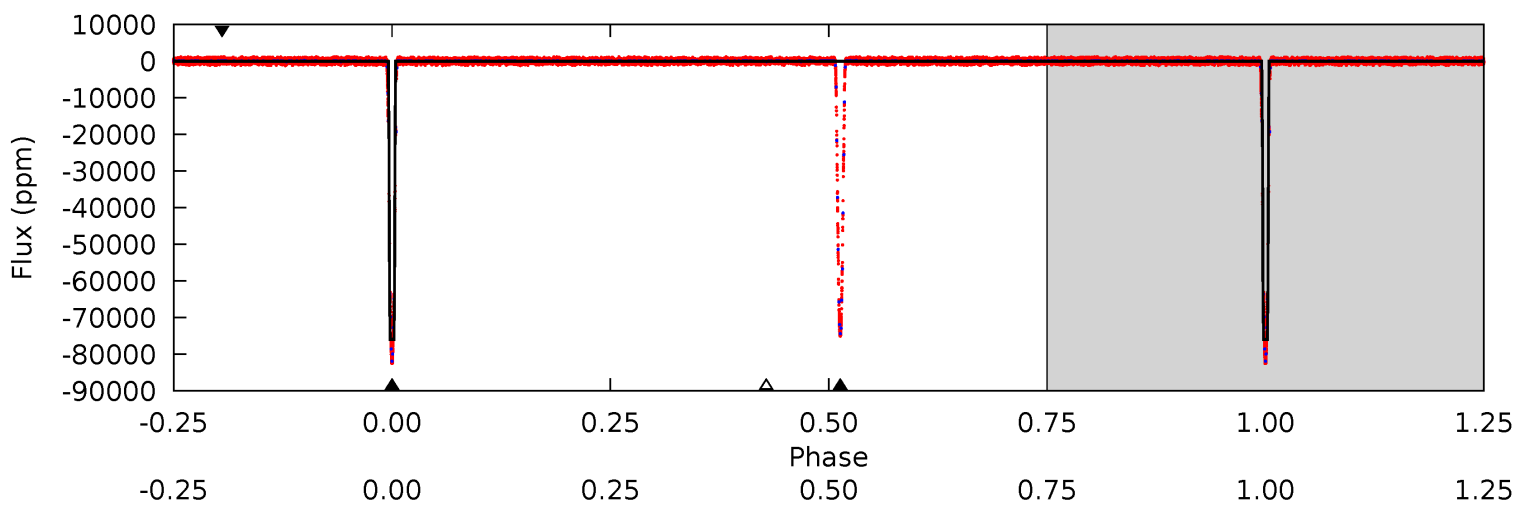
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7564	6527	5.10	6.66	4.99	2.50	2.66	7559	7557	6522	6521	7.95	0.98	0.00	0.33



Alt Model-Shift Uniqueness Test

010258558-01, P = 20.867784 Days, E = 115.538336 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3958	2806	4.16	3.62	5.07	2.66	1.30	3954	3954	2802	2803	32.0	1.00	0.00	13.4



Stellar Parameters For KIC 010258558

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6095^{+165}_{-184}	$4.378^{+0.144}_{-0.192}$	$-0.480^{+0.300}_{-0.300}$	$1.016^{+0.281}_{-0.173}$	$0.900^{+0.117}_{-0.087}$	$1.207^{+0.711}_{-0.606}$
	+3%/-3%	+3%/-4%	+62%/-62%	+28%/-17%	+13%/-10%	+59%/-50%
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 010258558-01 / KOI 7299.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-71193 ± 11	$43.95^{+6.76}_{-4.67}$	1006^{+74}_{-59}	5178^{+128}_{-149}	445^{+114}_{-104}
Alt.	-53852 ± 19	$32.16^{+5.09}_{-3.46}$	1006^{+76}_{-59}	5586^{+173}_{-173}	624^{+151}_{-149}

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

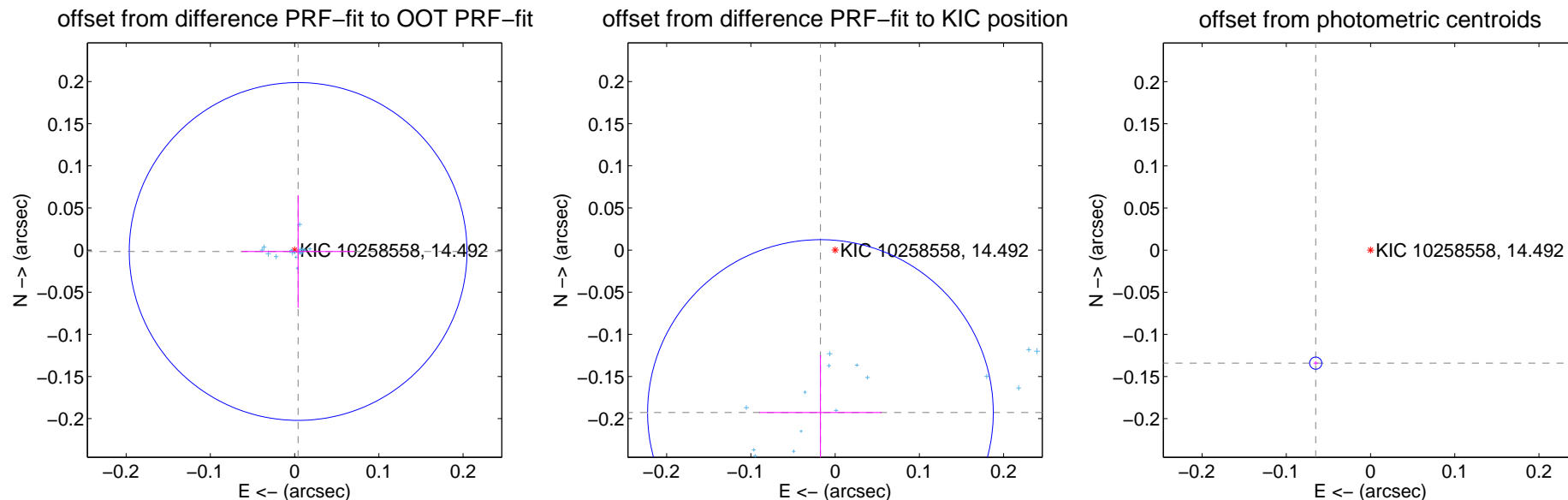
DV Centroid Data

Supplemental centroid analysis for 010258558-01. Kepler magnitude: 14.49. Transit SNR 3942.68

There are 17 quarters with good PRF difference image offsets

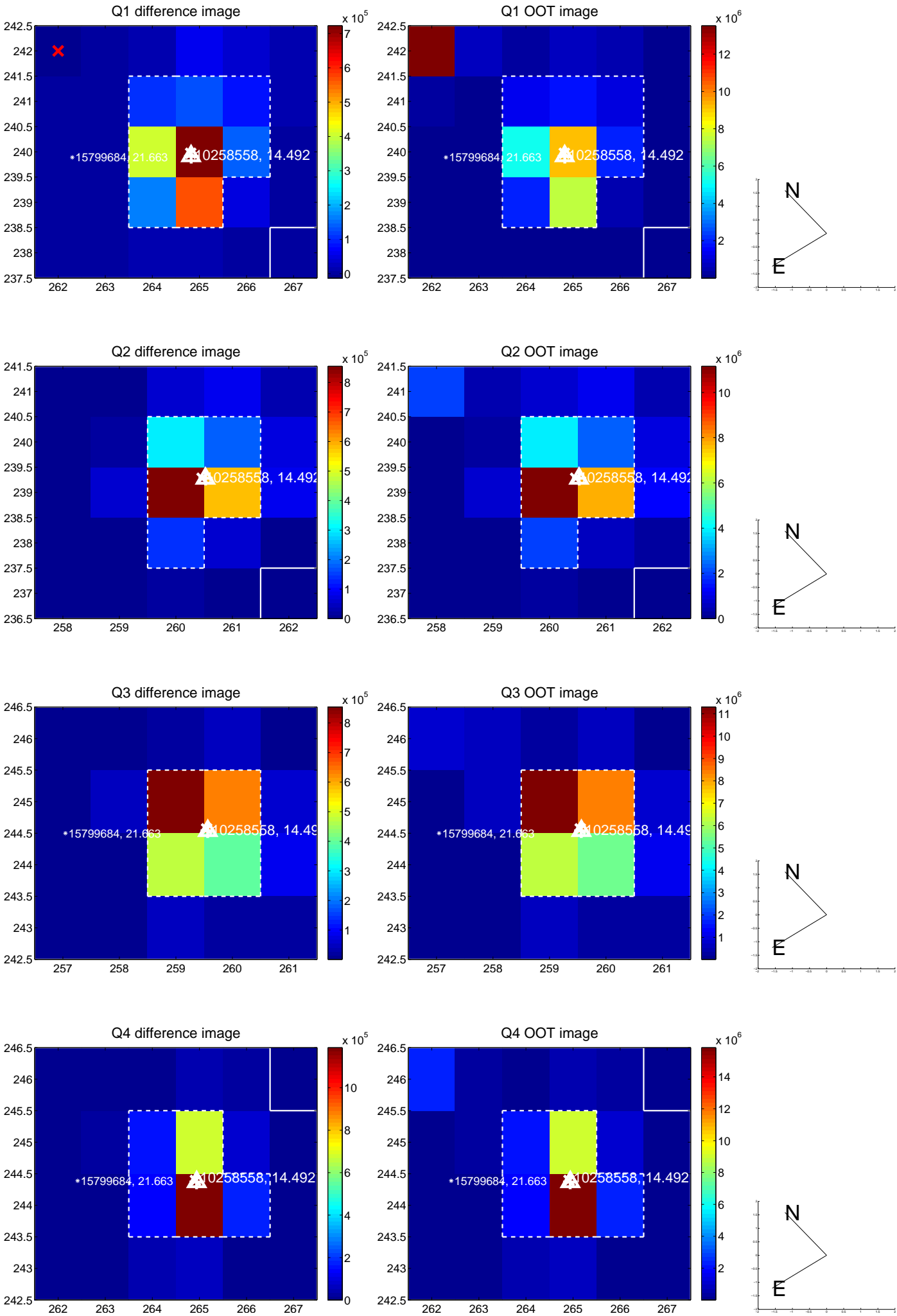
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.067	0.07	-0.004 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.194 ± 0.068	2.83	0.017 ± 0.073	-0.193 ± 0.068
photometric centroid source offset	0.15 ± 0.00	61.96	0.07 ± 0.00	-0.13 ± 0.00

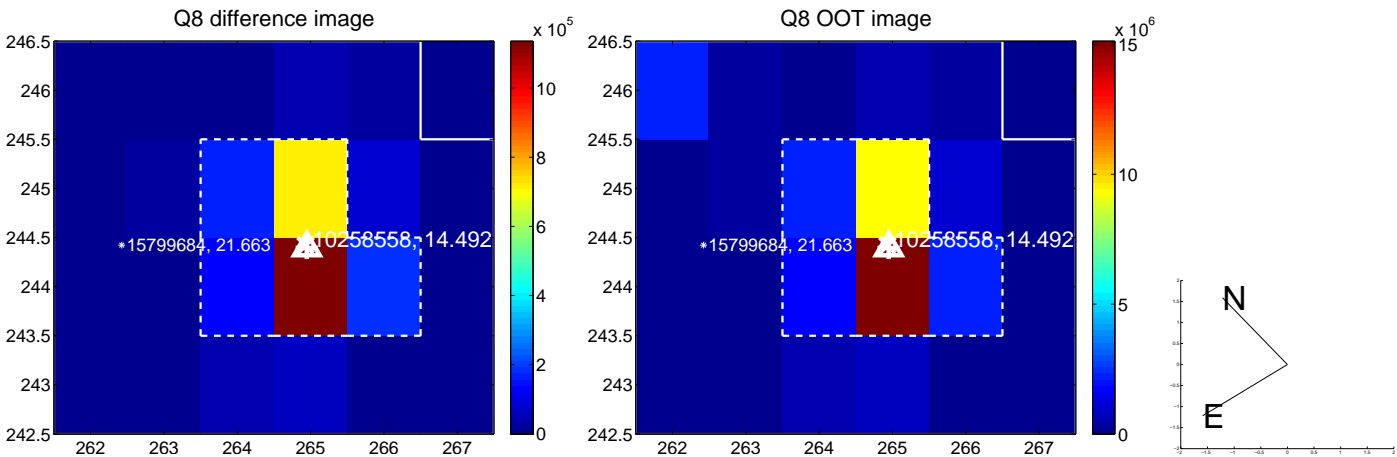
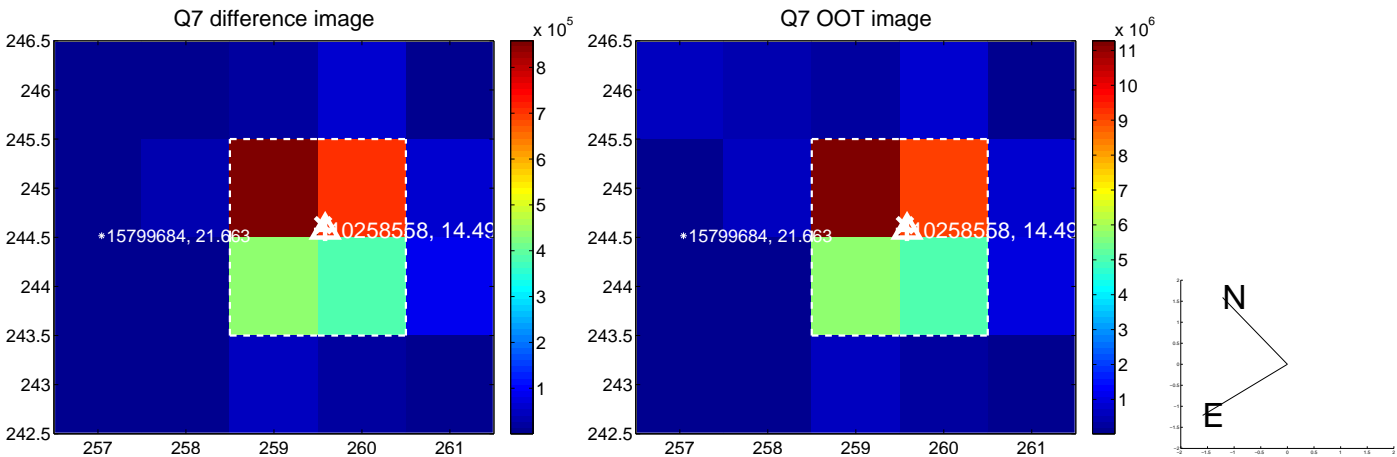
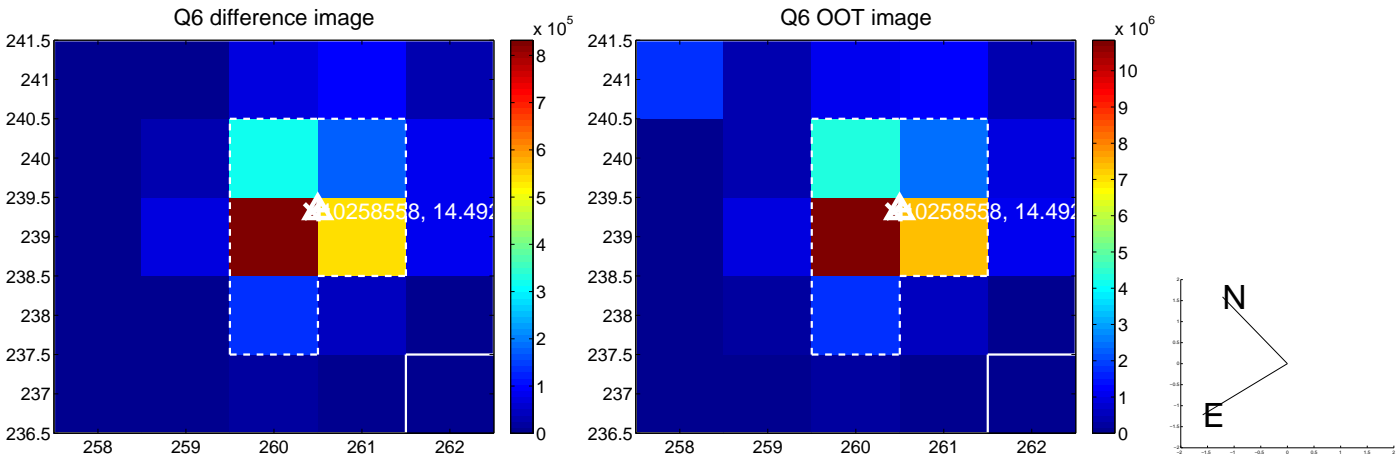
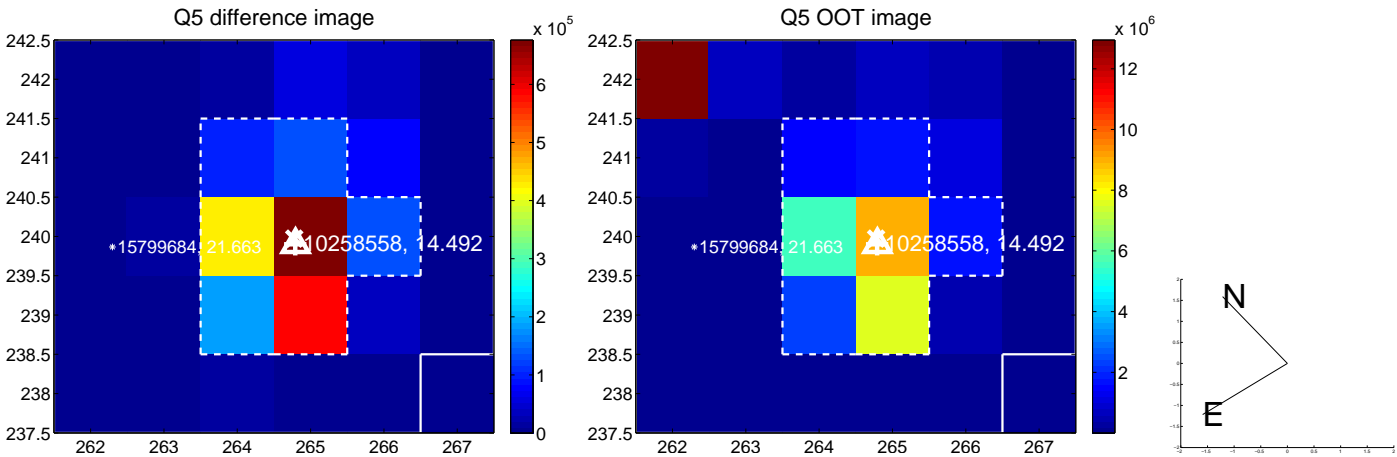


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

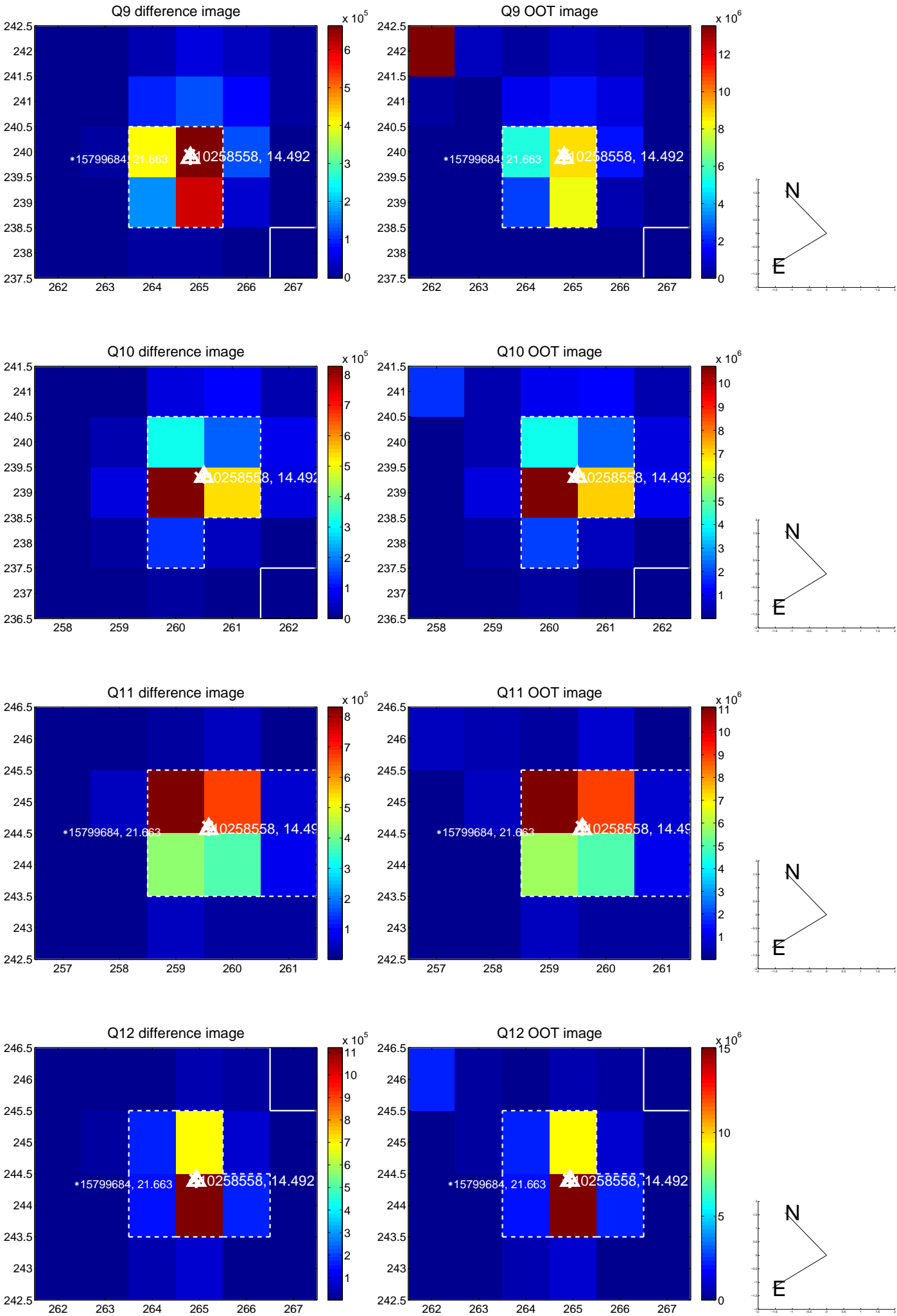
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



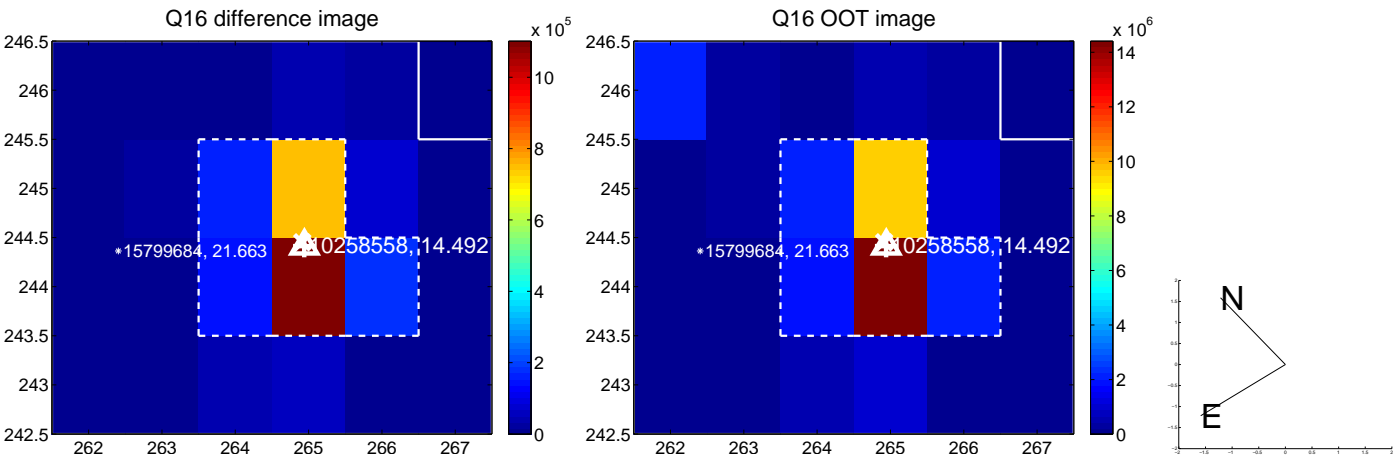
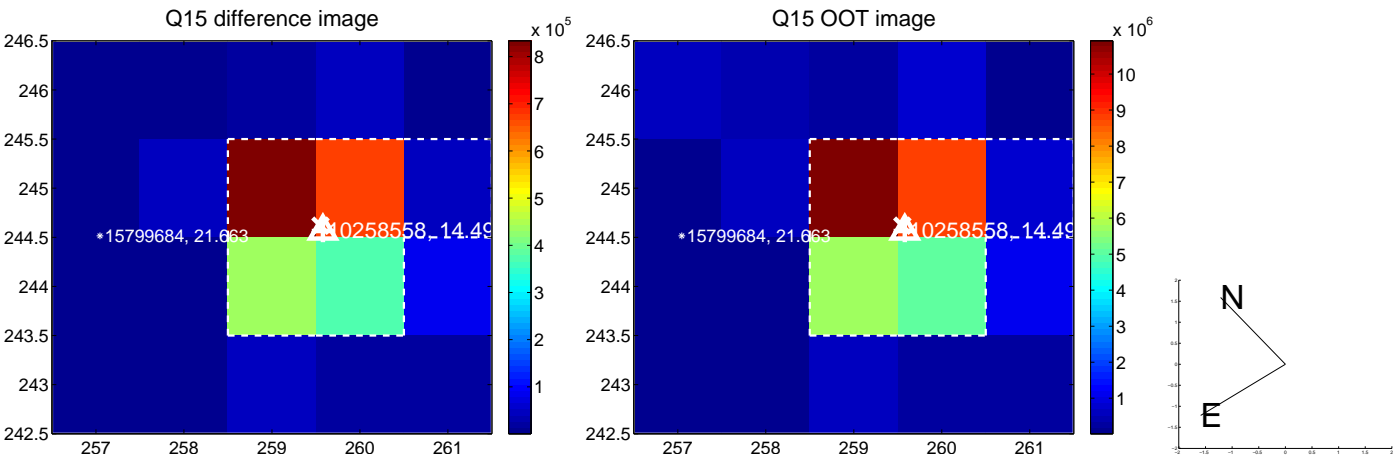
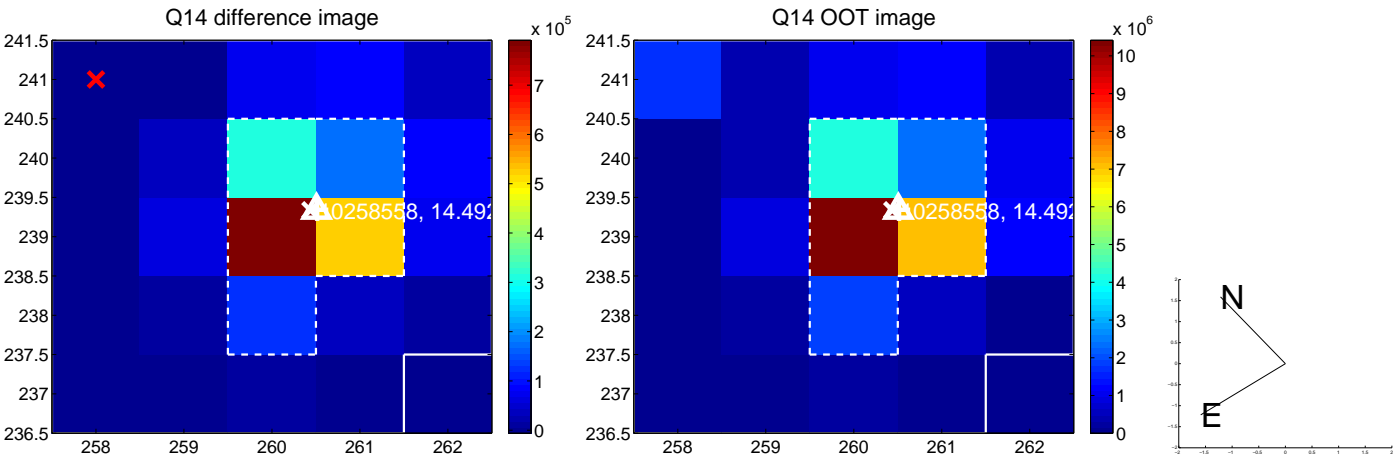
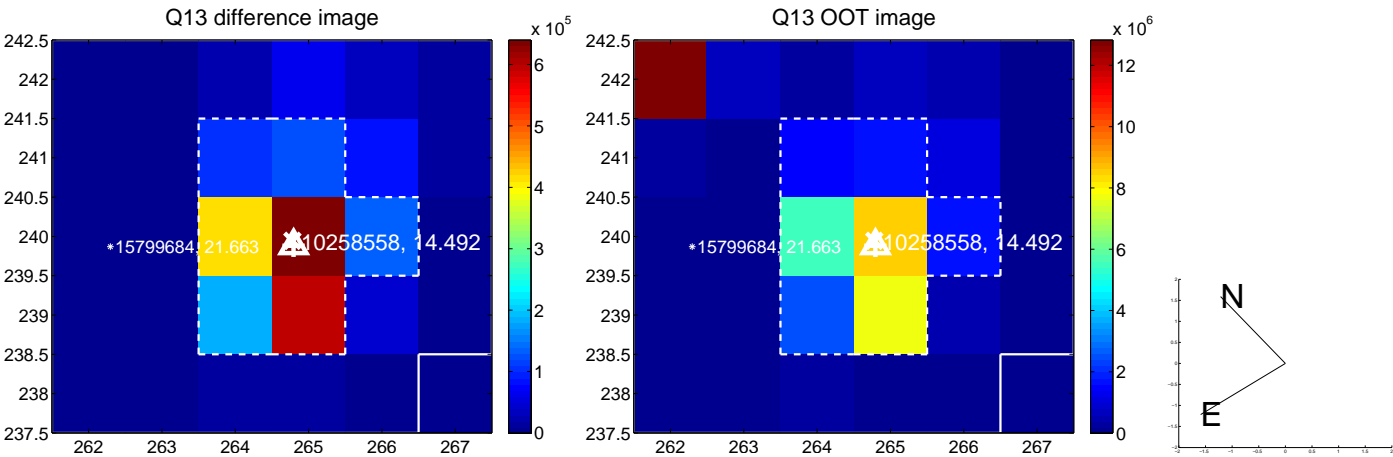
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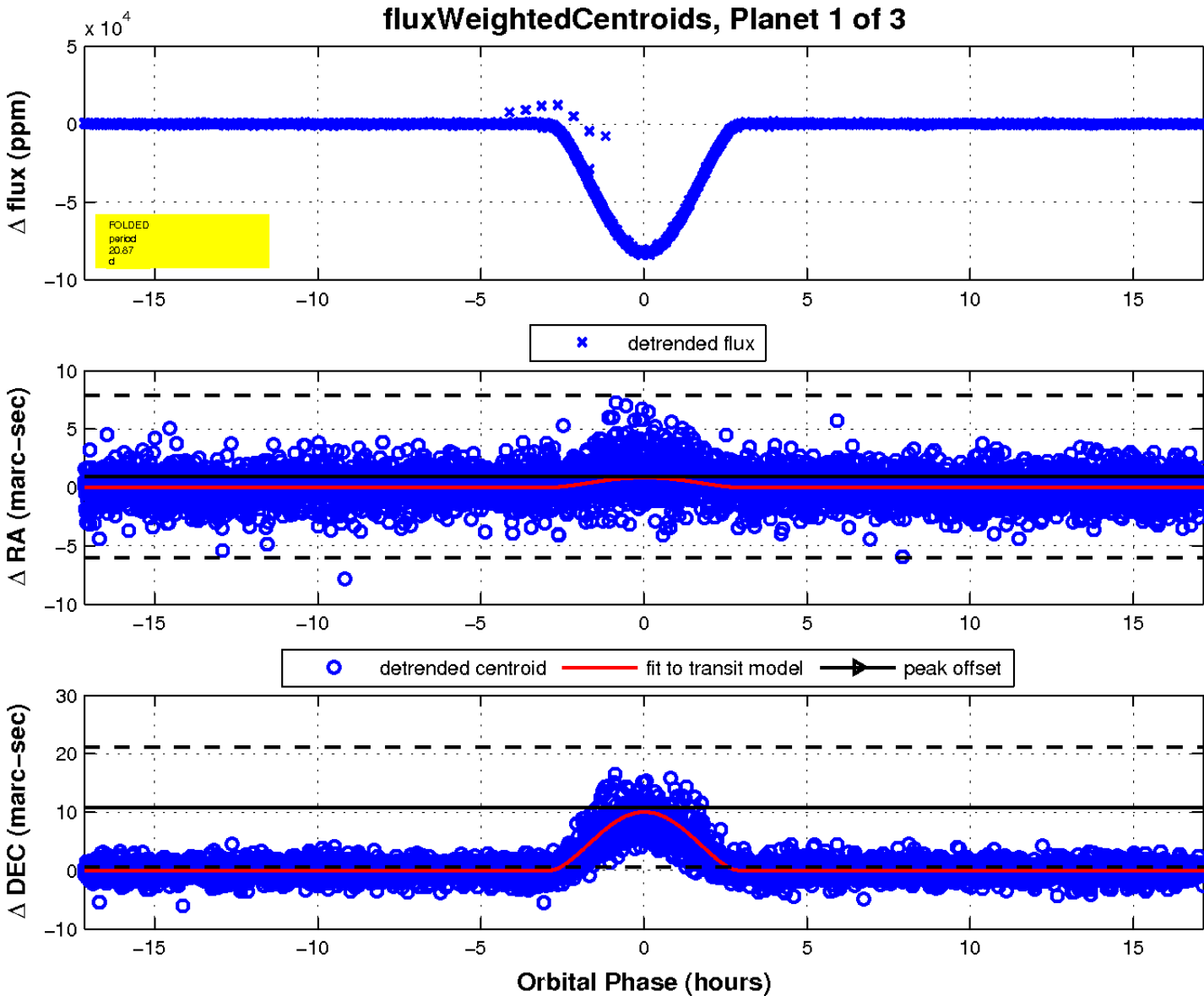
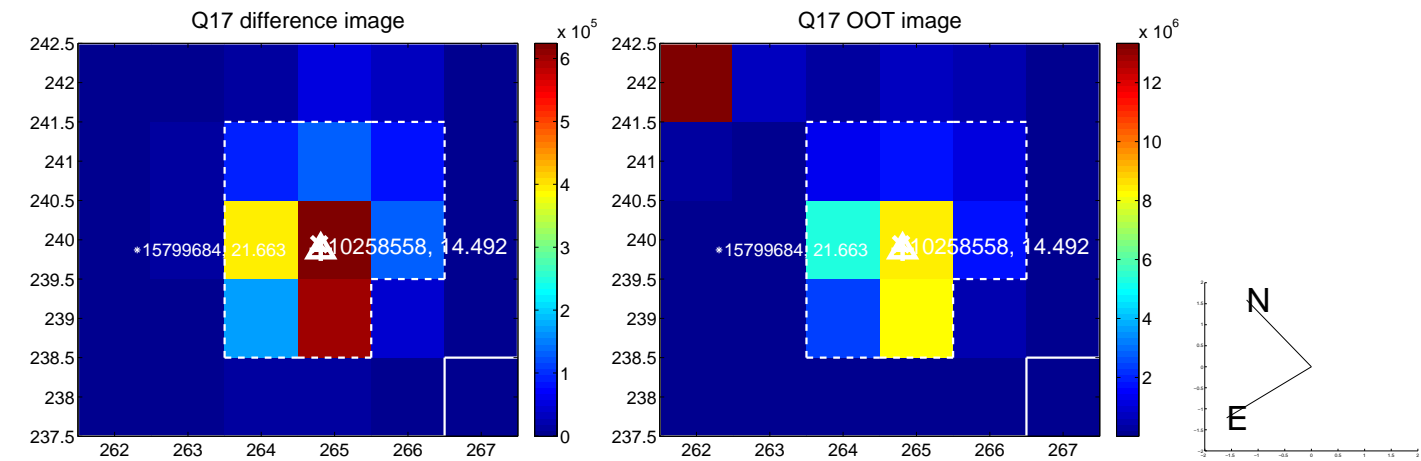
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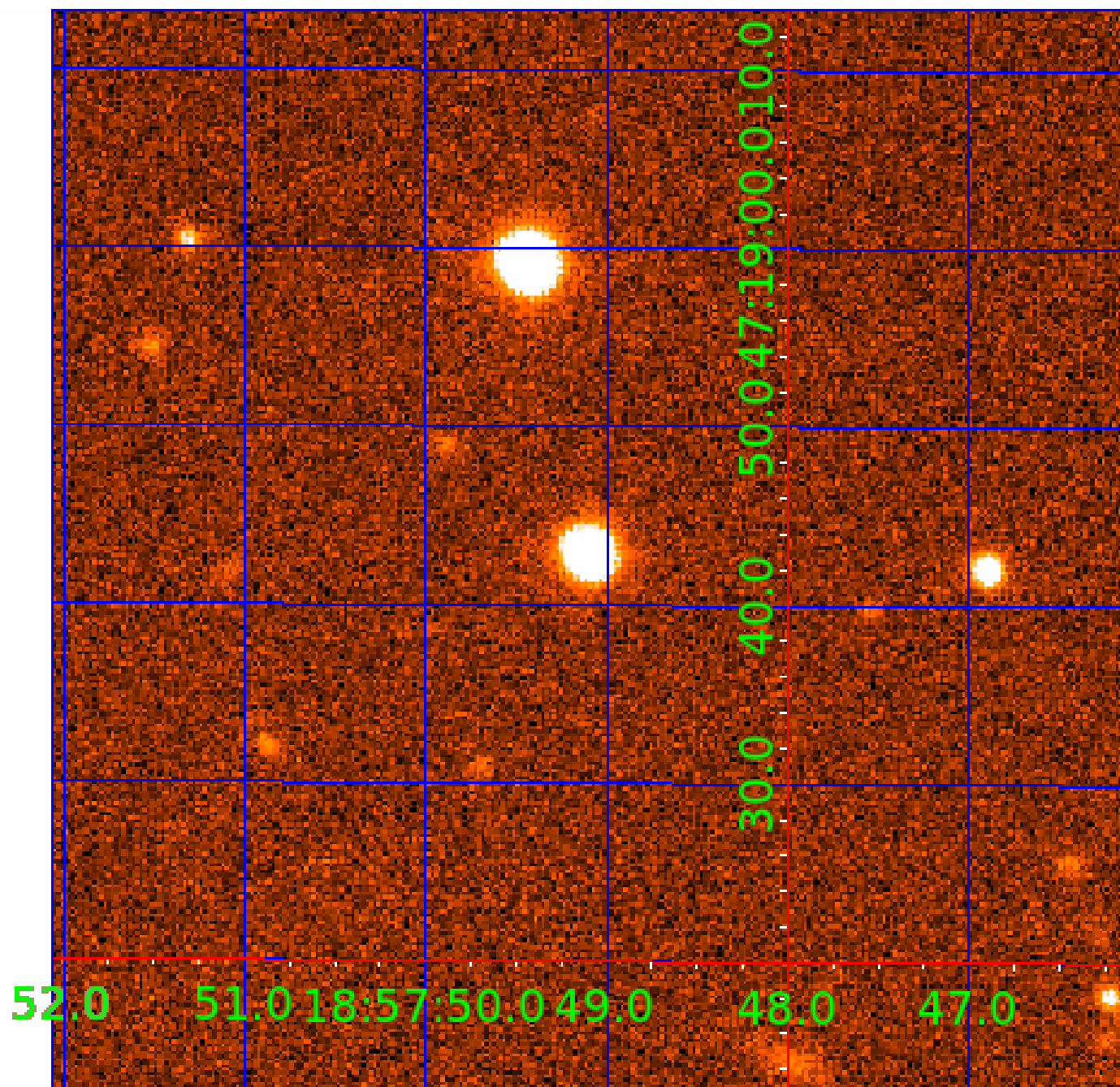


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UKIRT Image

Declination



KIC 010258558

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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010258558-02	OBS	No	20.867854	147.113739	74952.1	5.708	3864.9	3654.7	1.02	6095	41.98	62.24
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010258558-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010258558-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010258558-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

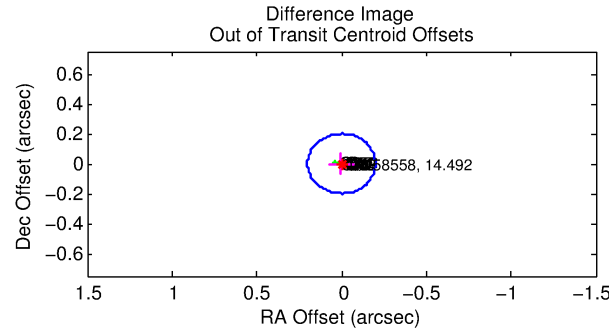
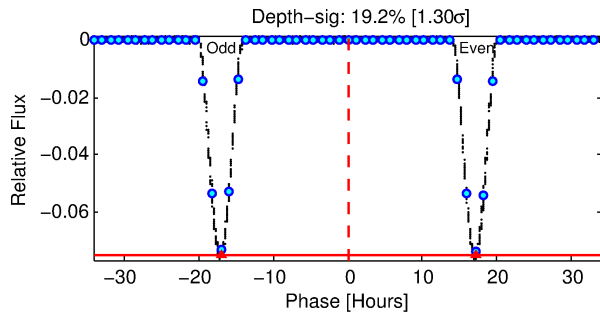
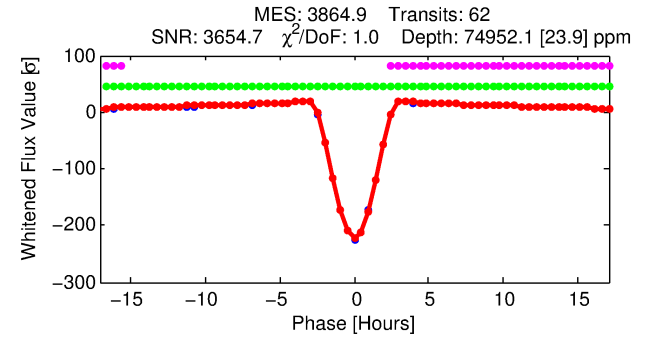
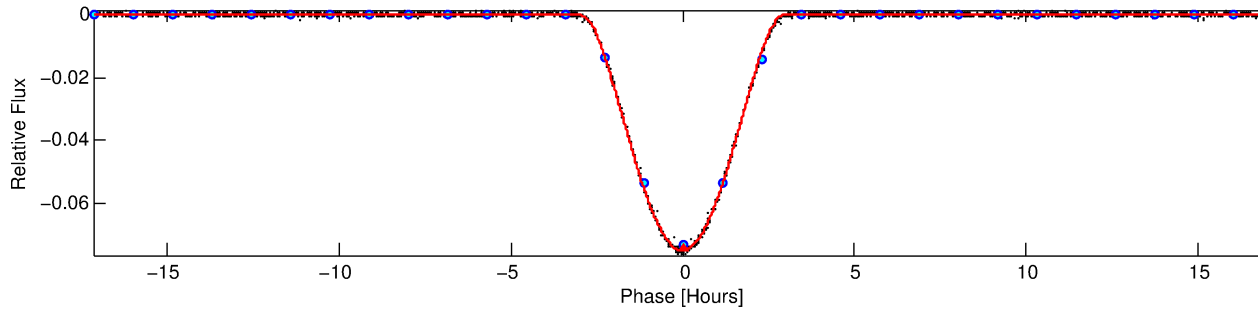
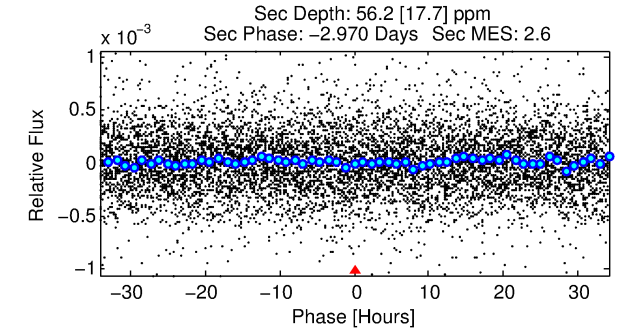
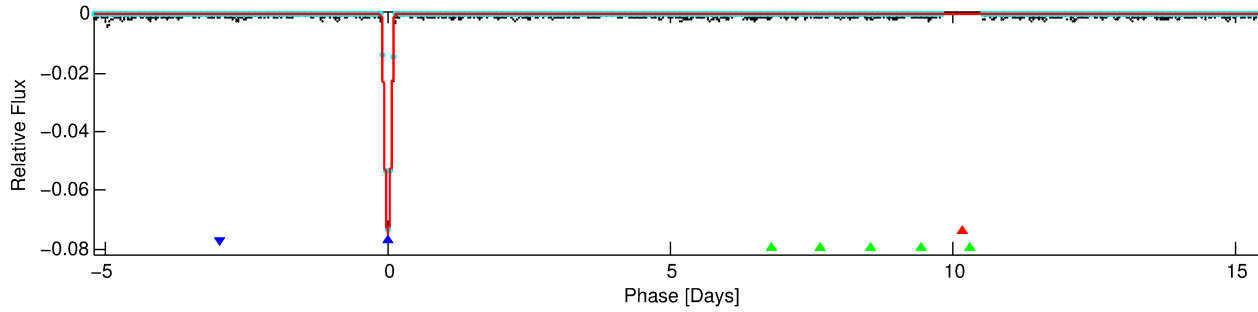
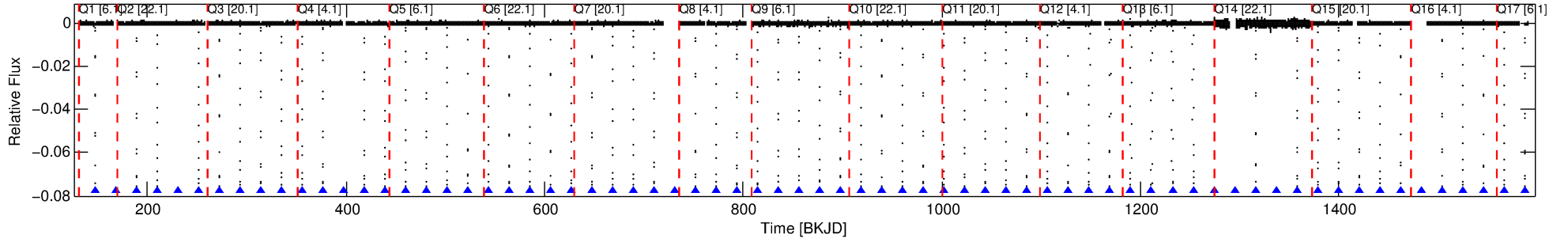
Ephemeris Match Information For 010258558-02

No Significant Match Found

DV One-Page Summary

KIC: 10258558 Candidate: 2 of 3 Period: 20.868 d
KOI: K07299 Corr: No Ephemeris Match

Kp: 14.49 R*: 1.02 Rs Teff: 6095.0 K Logg: 4.38 Fe/H: -0.480



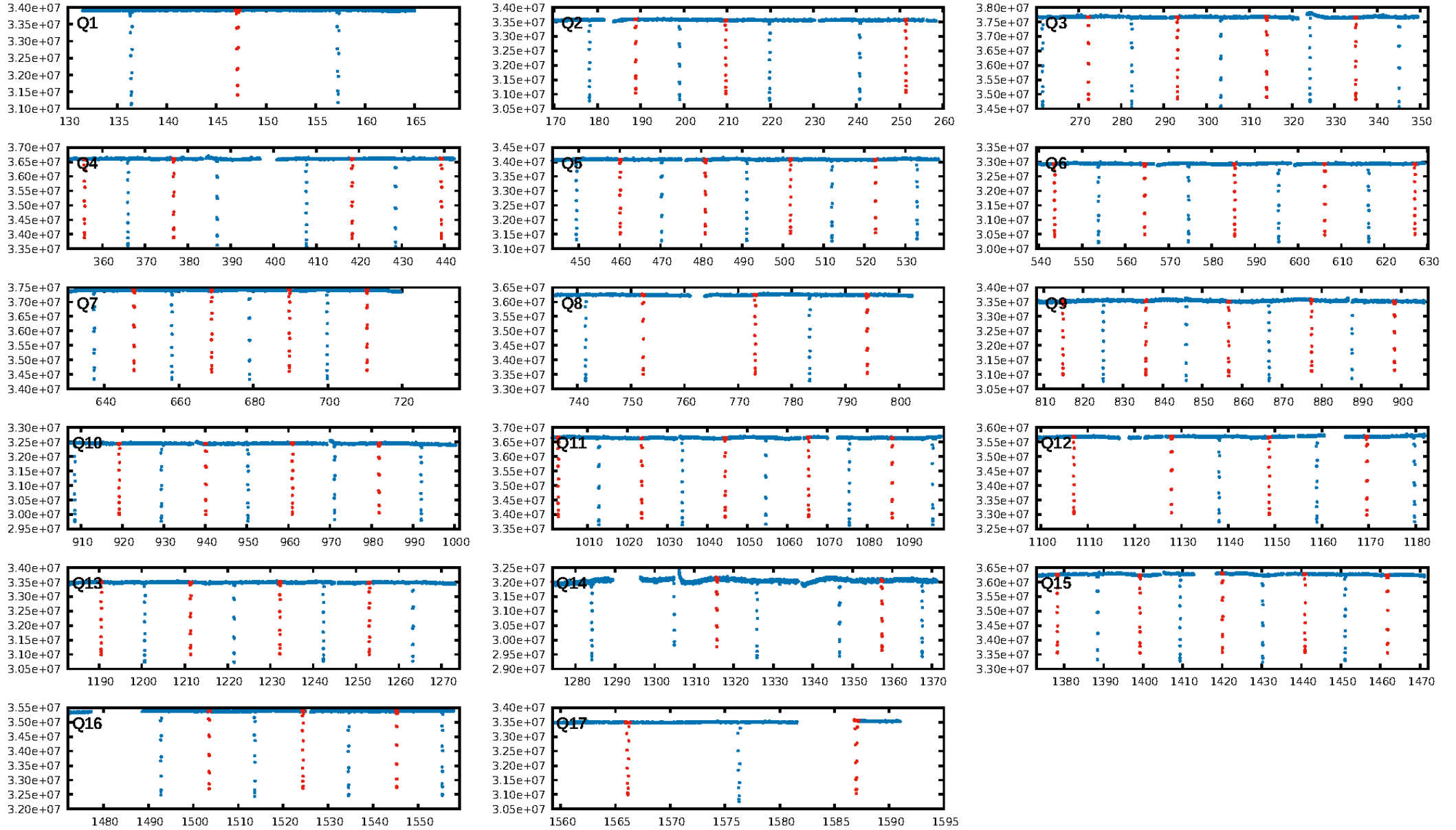
DV Fit Results:

Period = 20.86785 [0.00000] d
Epoch = 147.1137 [0.0000] BKJD
Rp/R* = 0.3787 [0.0077]
a/R* = 28.36 [0.01]
b = 0.93 [0.01]
Seff = 62.24 [22.91]
Teq = 716 [66] K
Rp = 41.98 [11.64] Re
a = 0.1432 [0.0338] AU
Ag = 0.36 [0.17] [-3.79σ]
Teffp = 858 [73] K [1.44σ]

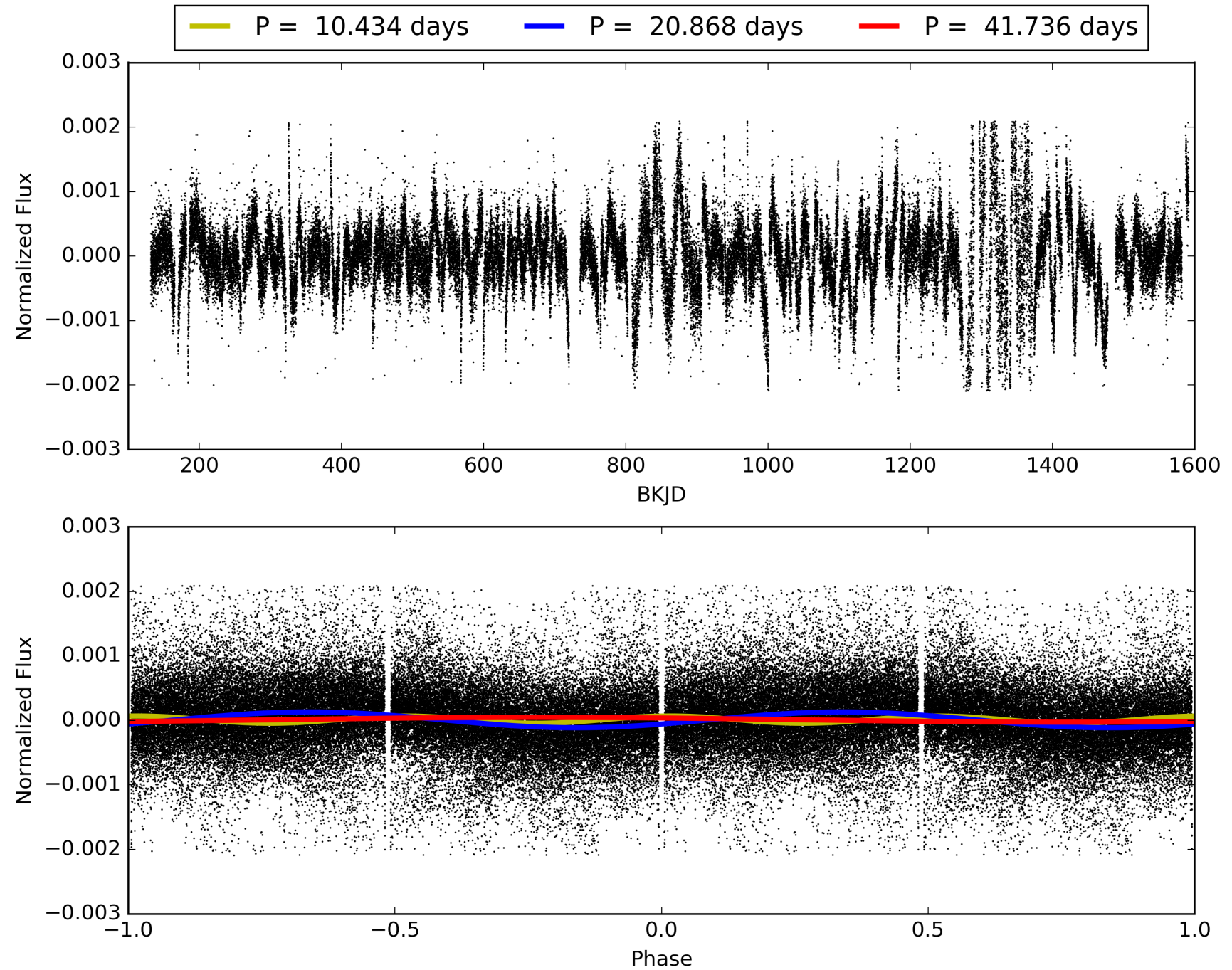
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [59/59]
GhostDiagnostic-chr: 5.597
Centroid-sig: 0.0%
Centroid-so: 0.136 arcsec [50.53σ]
OotOffset-rm: 0.000 arcsec [0.00σ]
KicOffset-rm: 0.194 arcsec [2.81σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010258558-02, PDC Light Curves

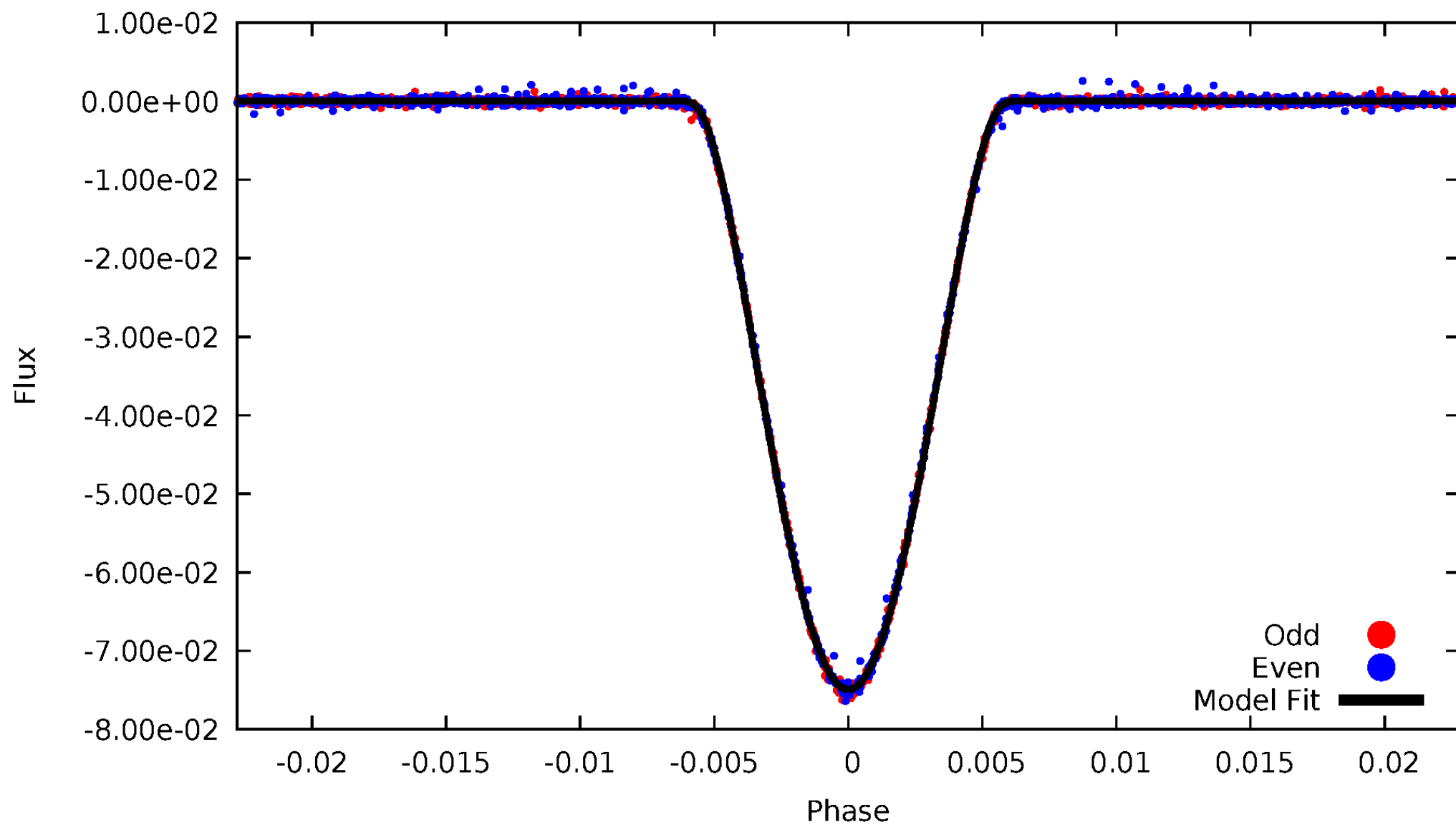


TCE 010258558-02



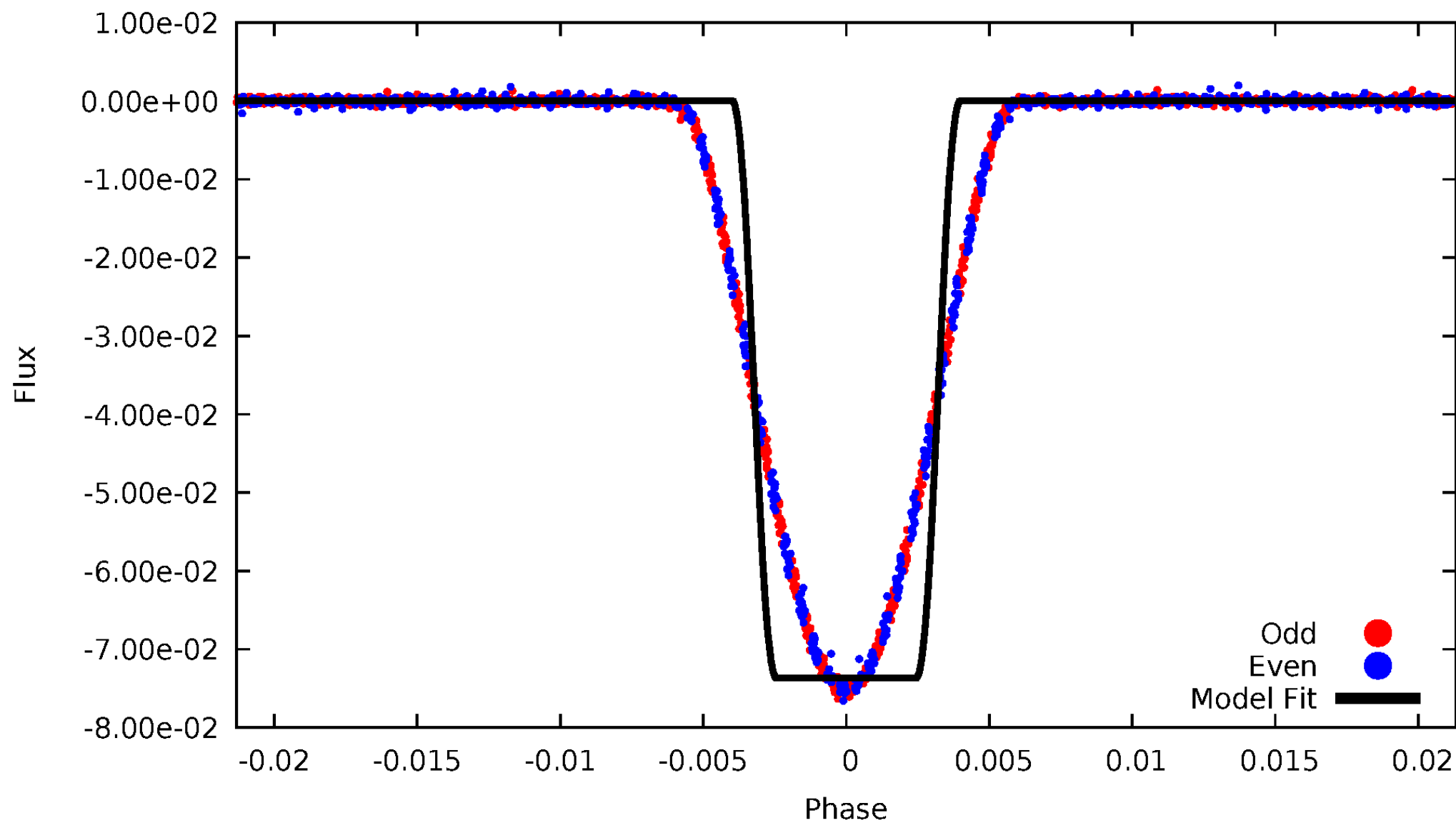
DV Odd/Even

TCE 010258558-02



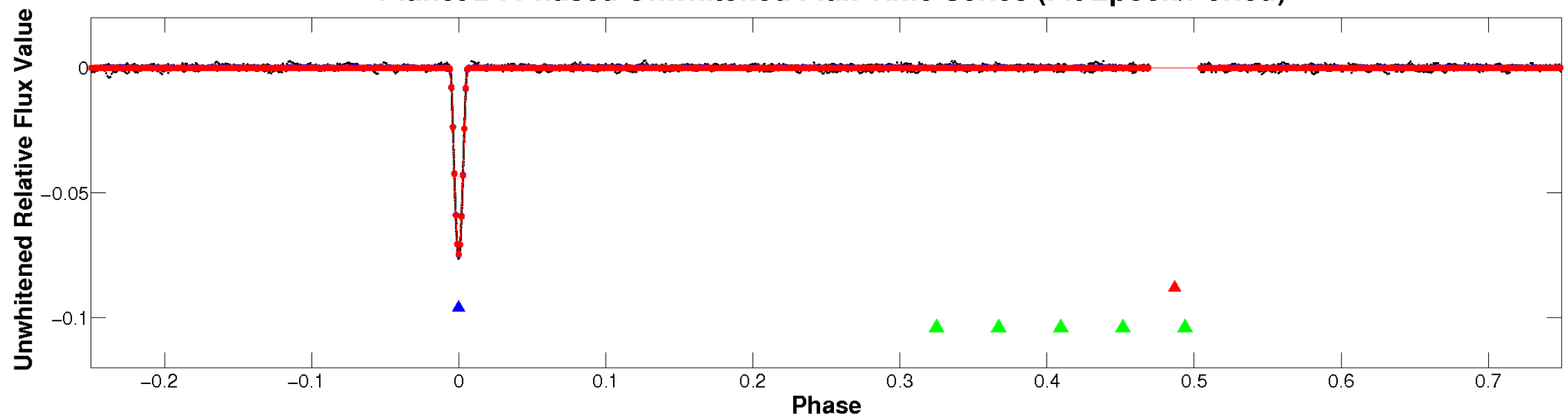
ALT Odd/Even

TCE 010258558-02

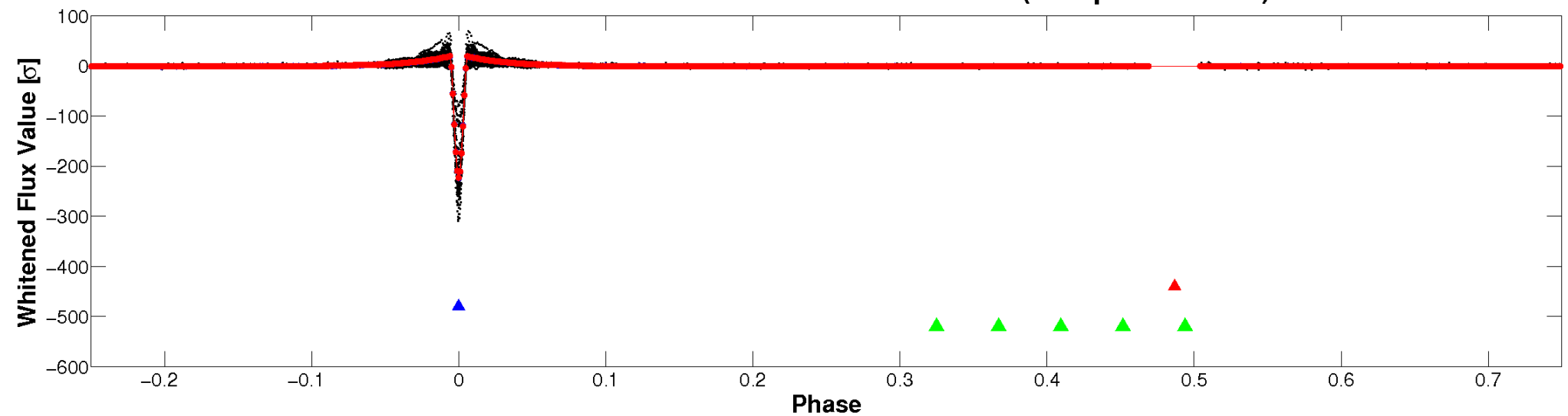


Non-Whitened Vs. Whitened Light Curve

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

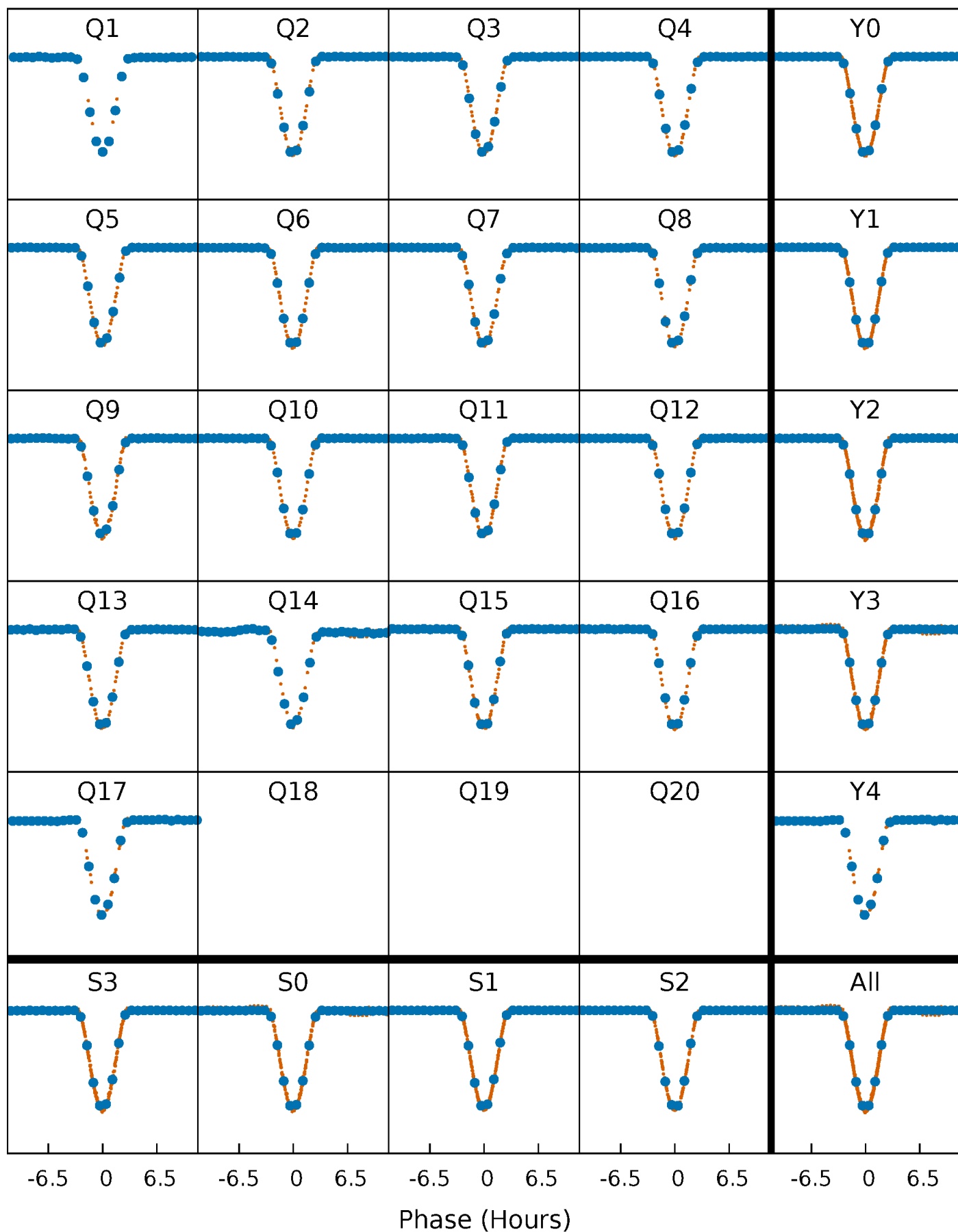


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



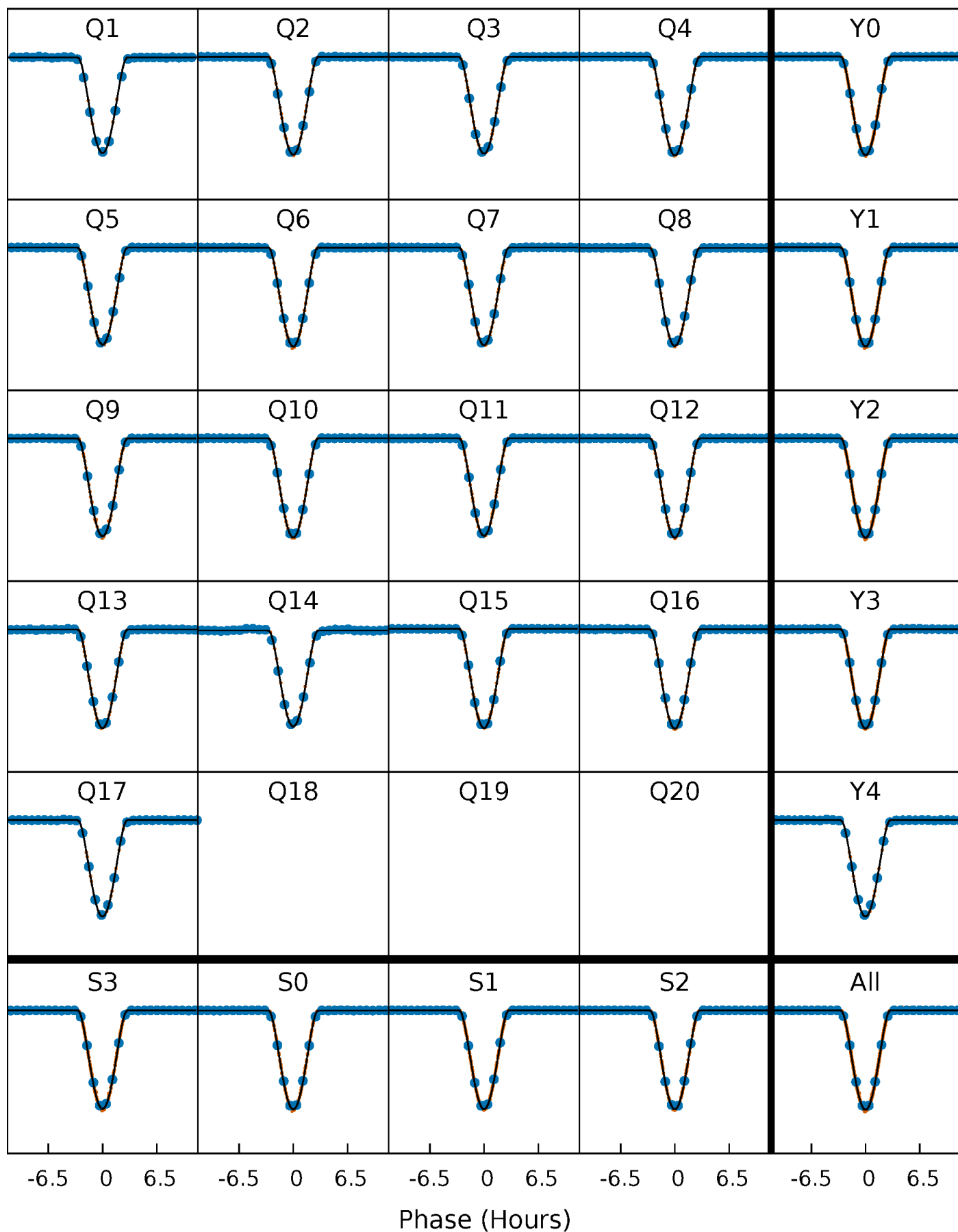
PDC Quarter-Phased Transit Curves

TCE 010258558-02 P= 20.867854 Days $T_0=147.113739$ (BKJD)



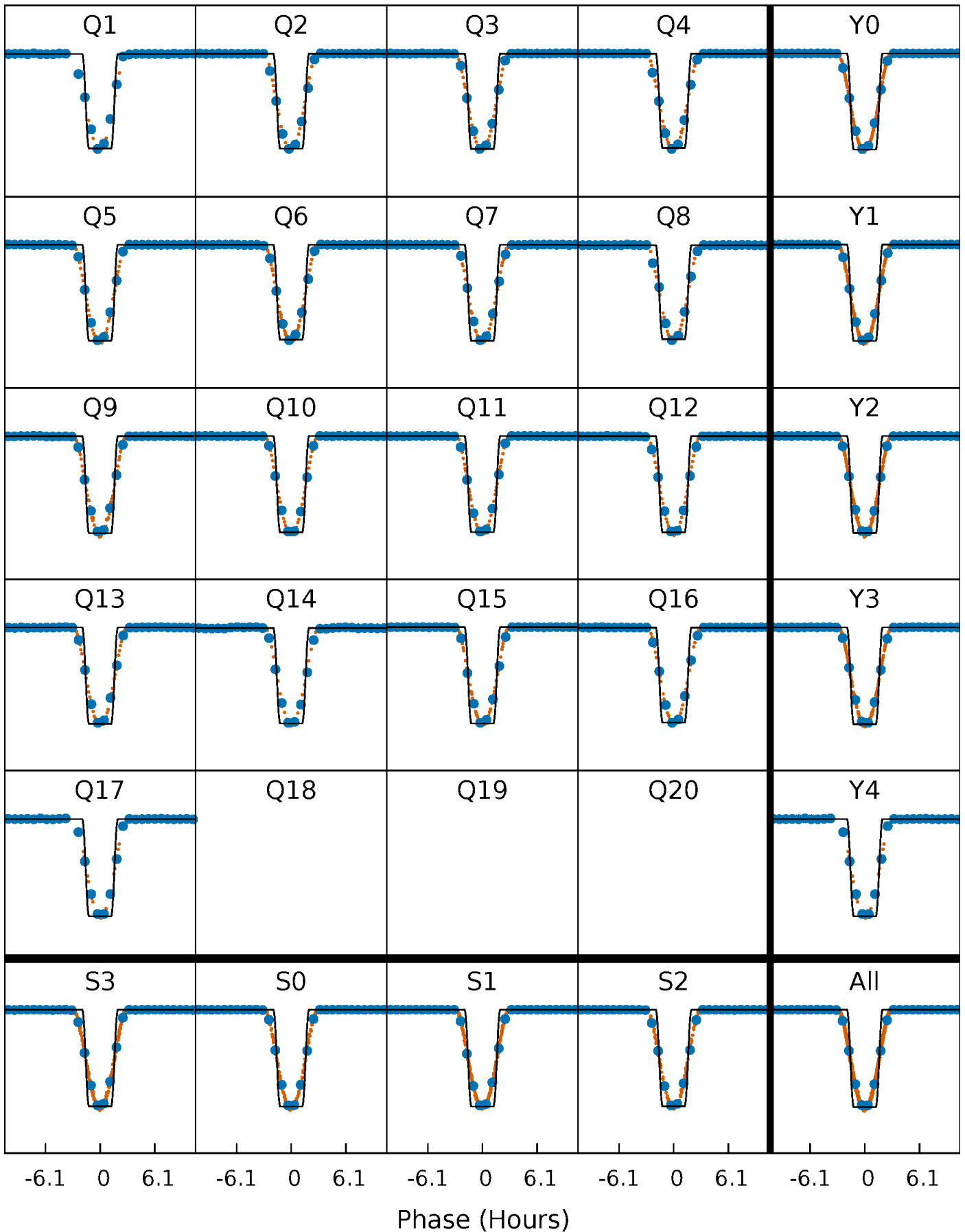
DV Quarter-Phased Transit Curves

TCE 010258558-02 P= 20.867854 Days $T_0=147.113739$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

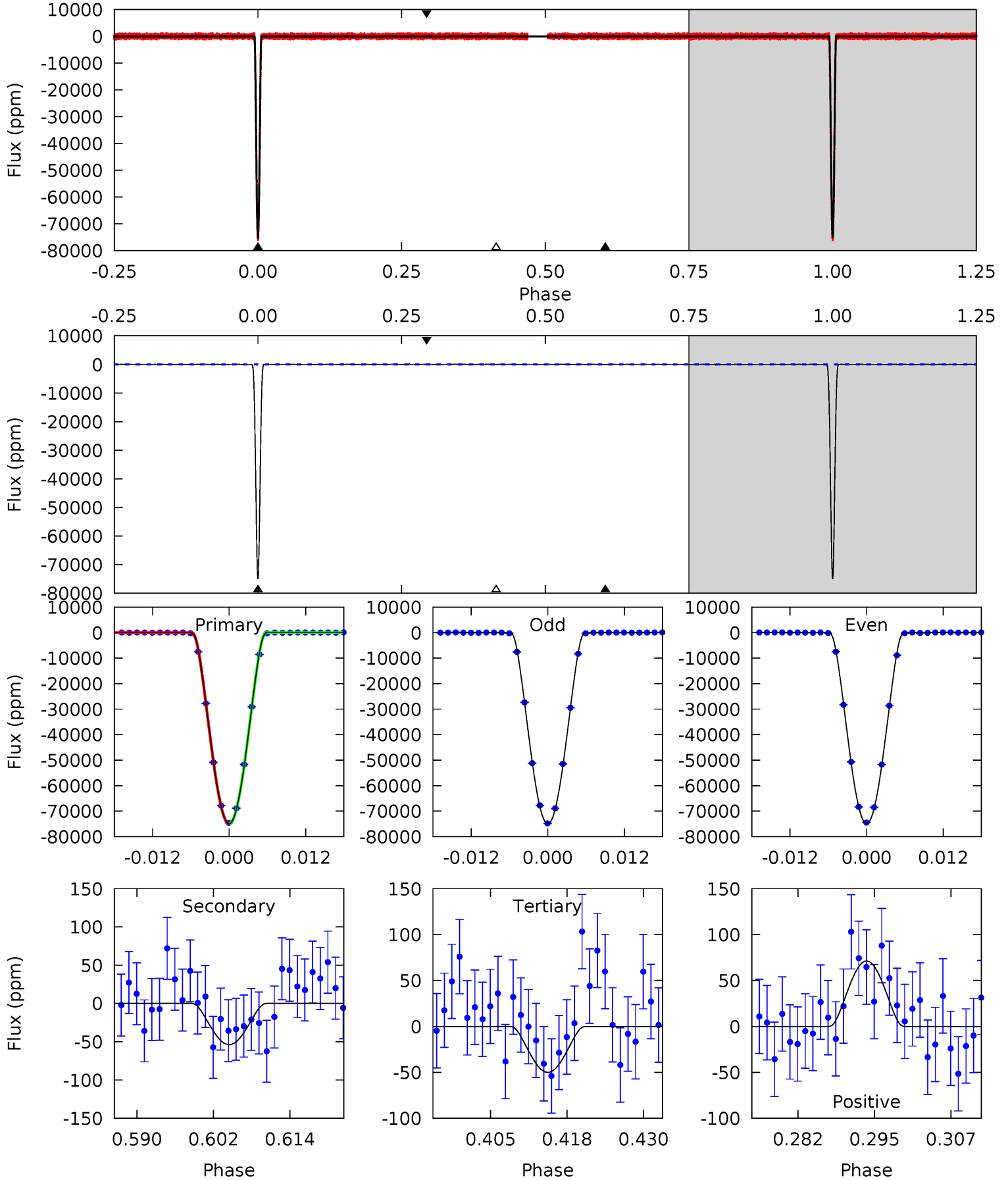
TCE 010258558-02 $P = 20.867784$ Days $T_0 = 147.116112$ (BKJD)



DV Model-Shift Uniqueness Test

010258558-02, P = 20.867854 Days, E = 126.245885 Days

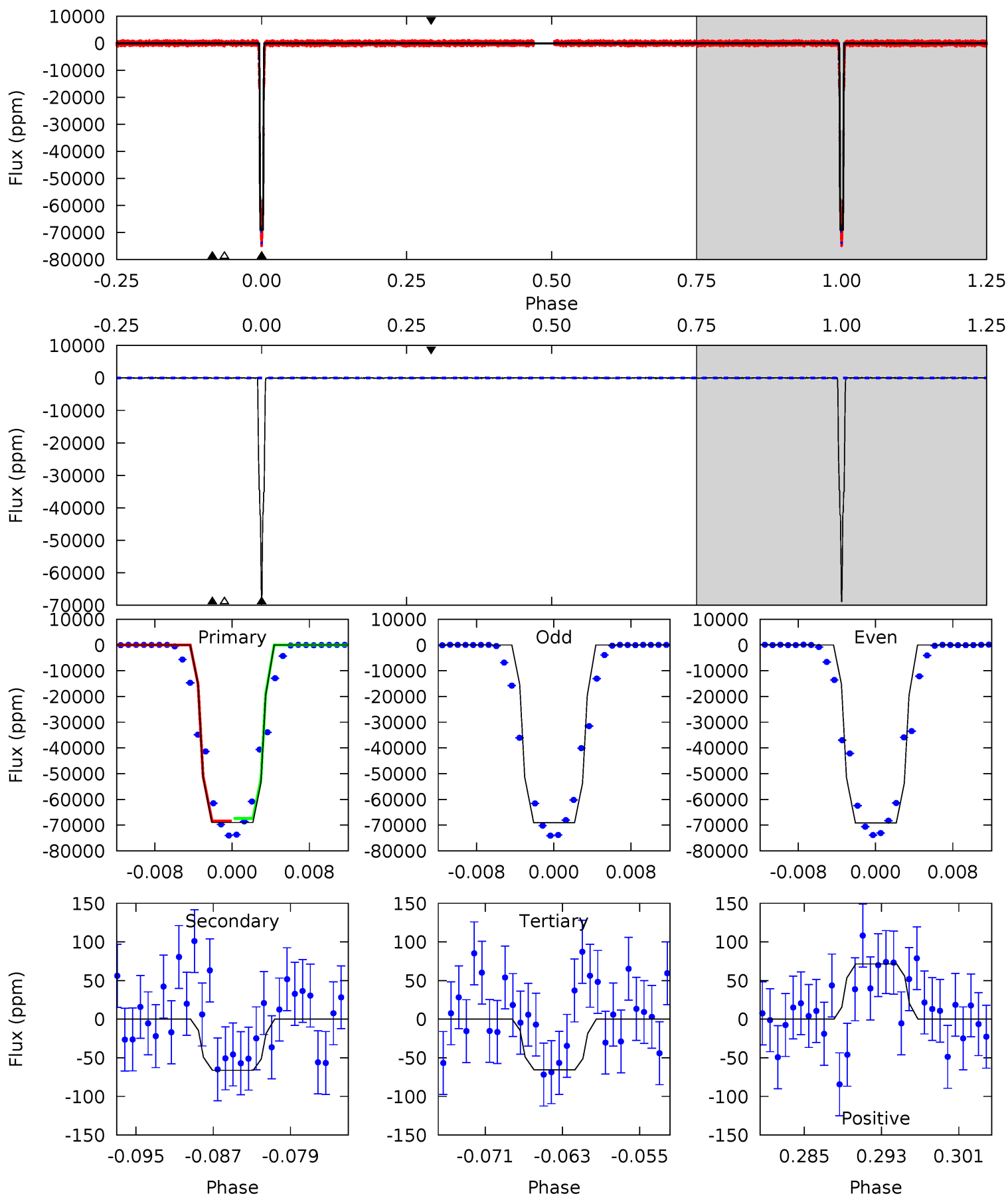
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6879	4.93	4.59	6.54	4.99	2.50	1.95	6874	6872	0.35	-1.61	2.78	1.00	0.00	0.39



Alt Model-Shift Uniqueness Test

010258558-02, P = 20.867784 Days, E = 126.248328 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3539	3.39	3.37	3.67	5.07	2.66	1.18	3536	3536	0.03	-0.28	3.35	1.00	0.00	0



Stellar Parameters For KIC 010258558

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6095^{+165}_{-184}	$4.378^{+0.144}_{-0.192}$	$-0.480^{+0.300}_{-0.300}$	$1.016^{+0.281}_{-0.173}$	$0.900^{+0.117}_{-0.087}$	$1.207^{+0.711}_{-0.606}$
	+3%/-3%	+3%/-4%	+62%/-62%	+28%/-17%	+13%/-10%	+59%/-50%
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 010258558-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-54 ± 11	$42.29^{+6.28}_{-4.29}$	1003^{+75}_{-58}	1532^{+181}_{-3189}	$0.335^{+0.112}_{-0.108}$
Alt.	-66 ± 19	$30.39^{+4.85}_{-3.07}$	1007^{+69}_{-62}	1944^{+90}_{-121}	$0.779^{+0.348}_{-0.264}$

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

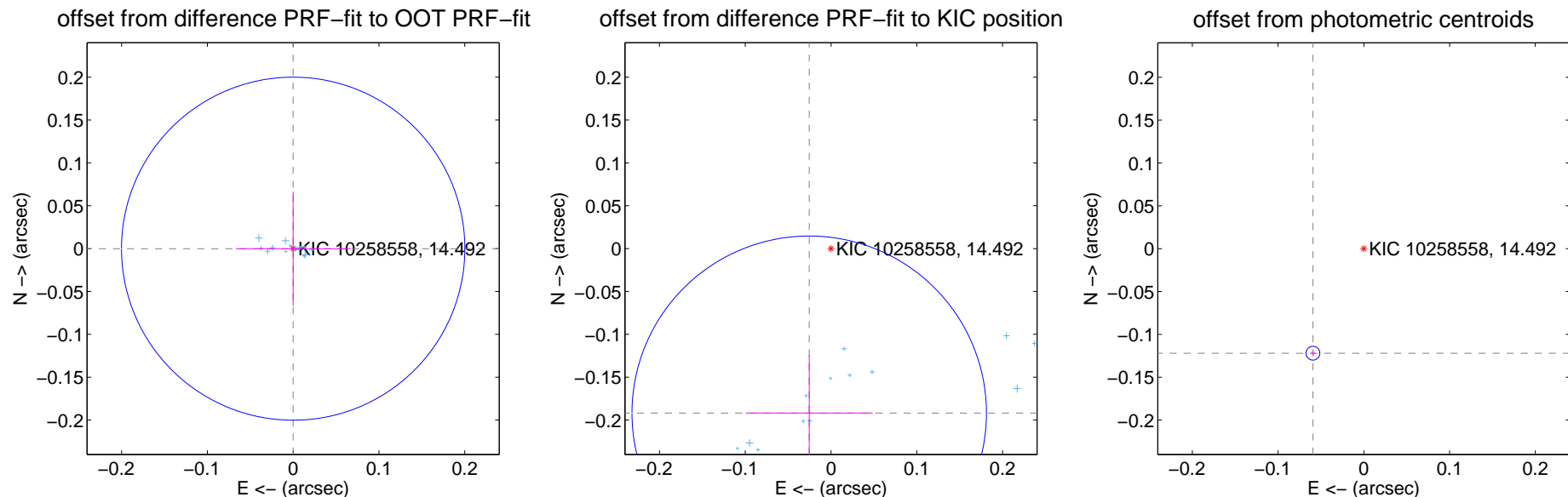
DV Centroid Data

Supplemental centroid analysis for 010258558-02. Kepler magnitude: 14.49. Transit SNR 3654.74

There are 17 quarters with good PRF difference image offsets

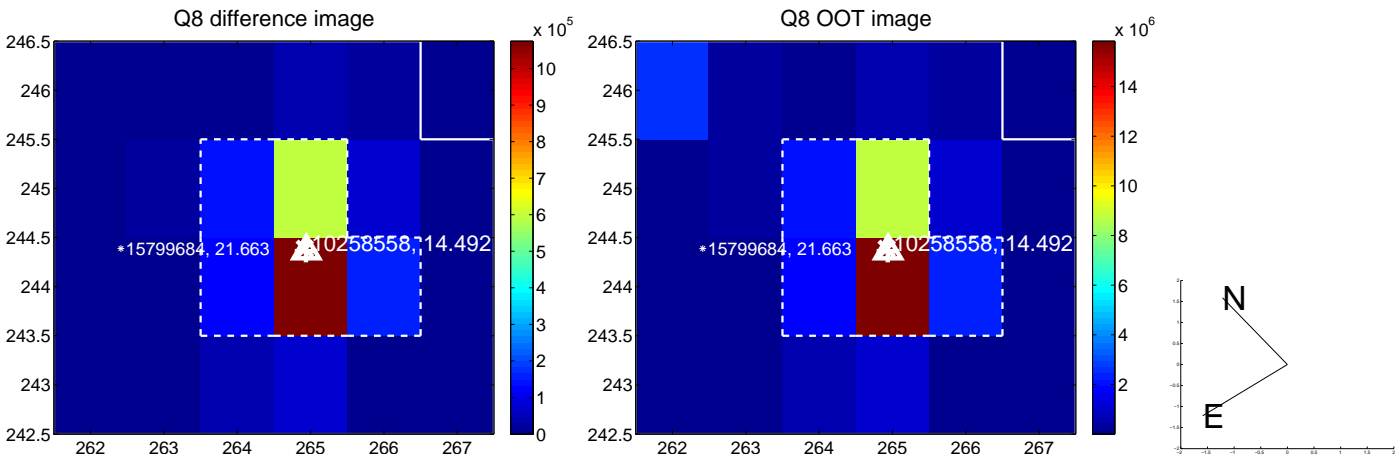
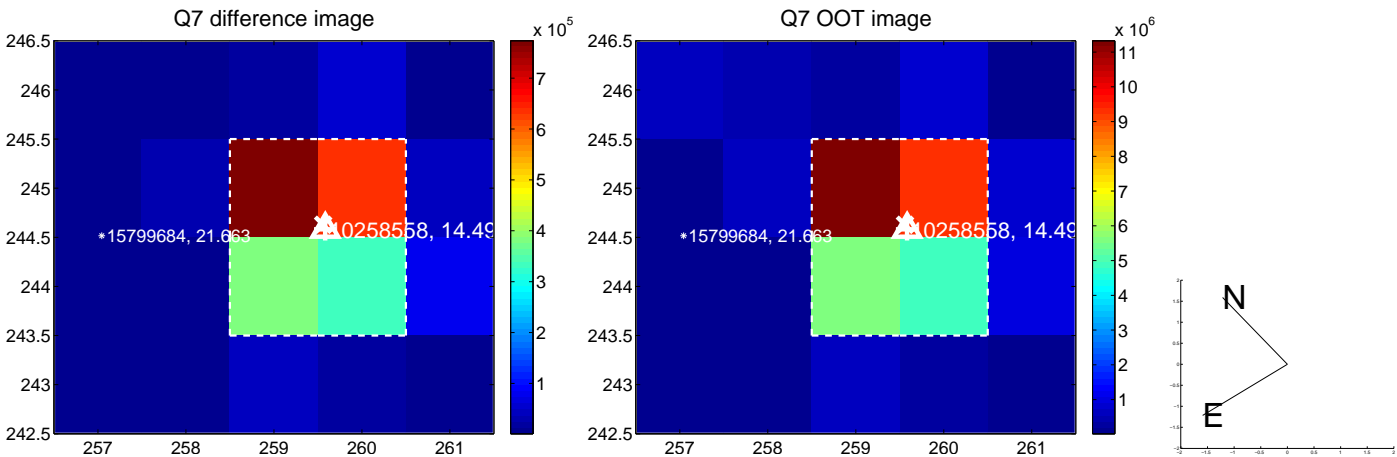
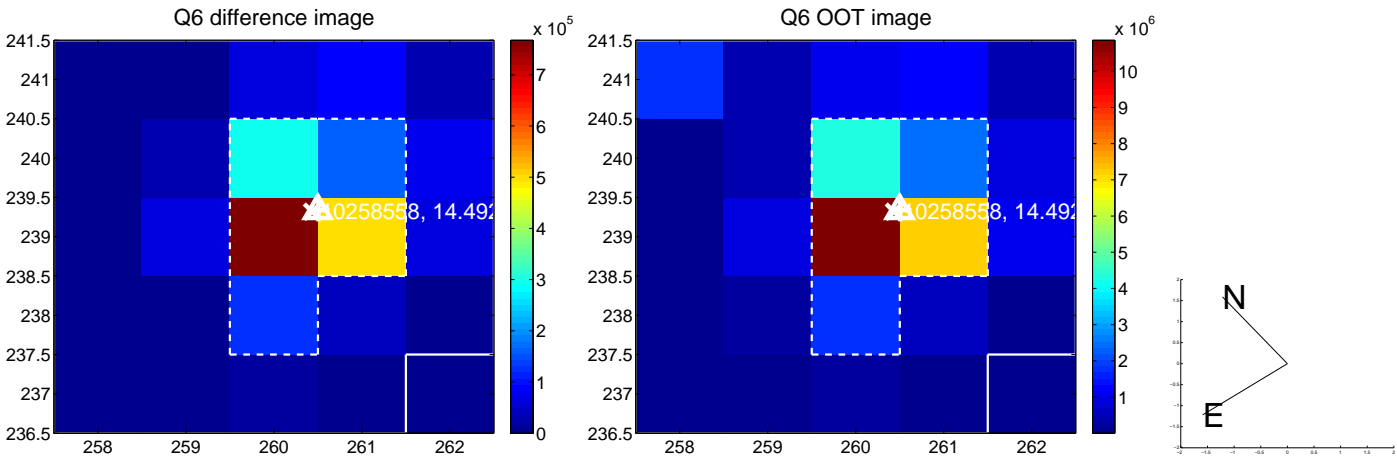
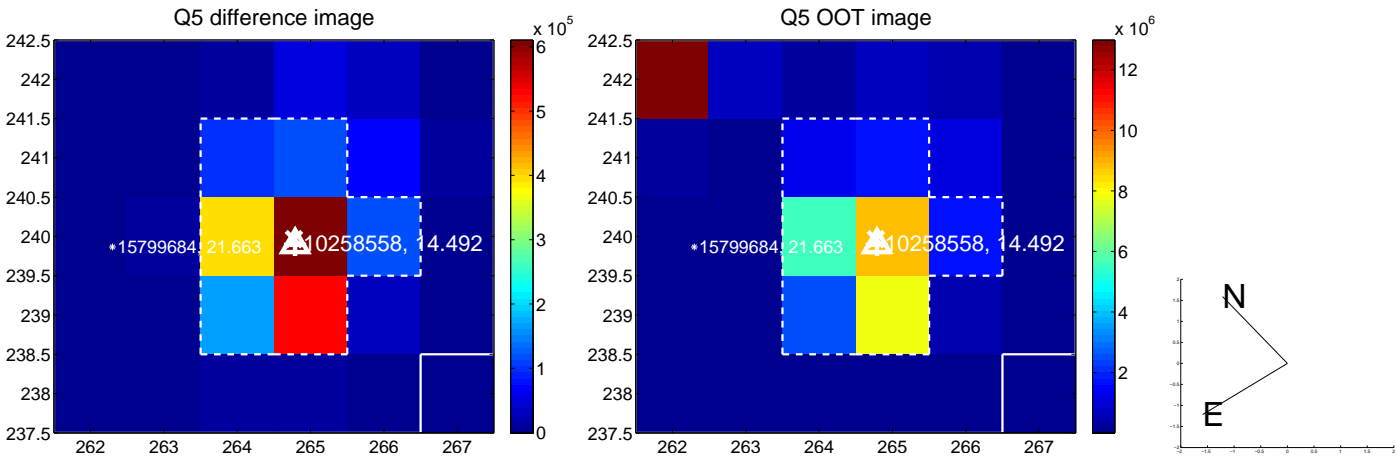
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.000 ± 0.067	0.00	0.000 ± 0.067	-0.000 ± 0.067
PRF-fit source offset from KIC position	0.194 ± 0.069	2.81	0.025 ± 0.074	-0.192 ± 0.068
photometric centroid source offset	0.14 ± 0.00	50.53	0.06 ± 0.00	-0.12 ± 0.00

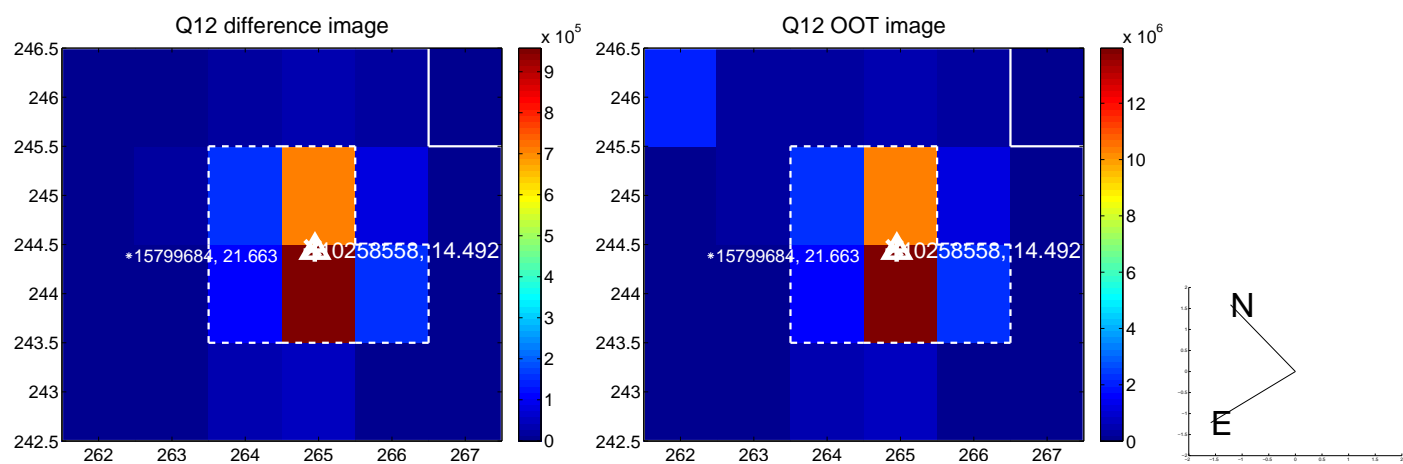
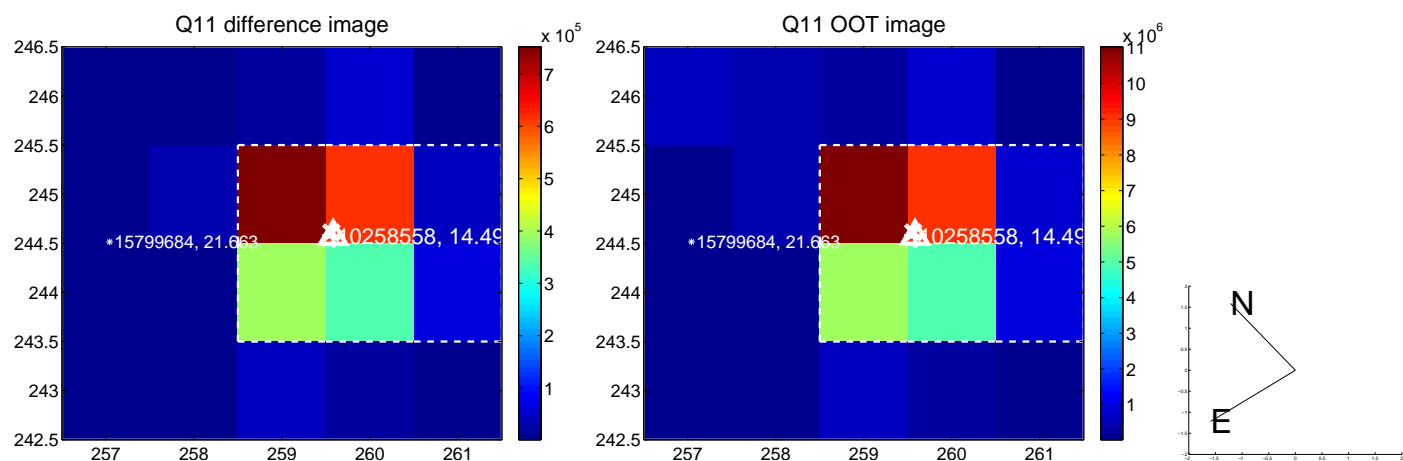
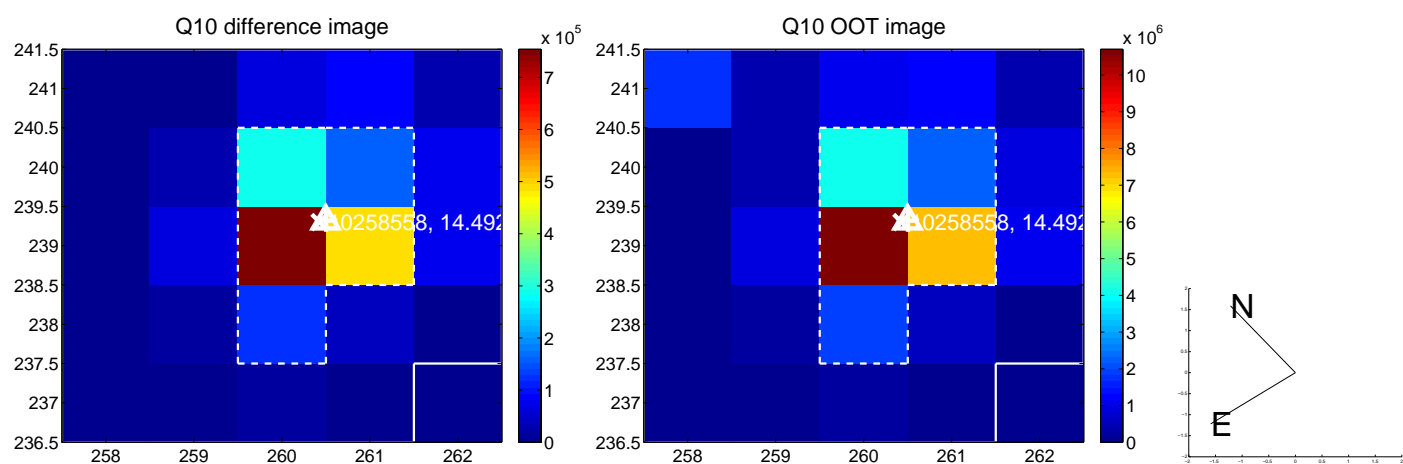
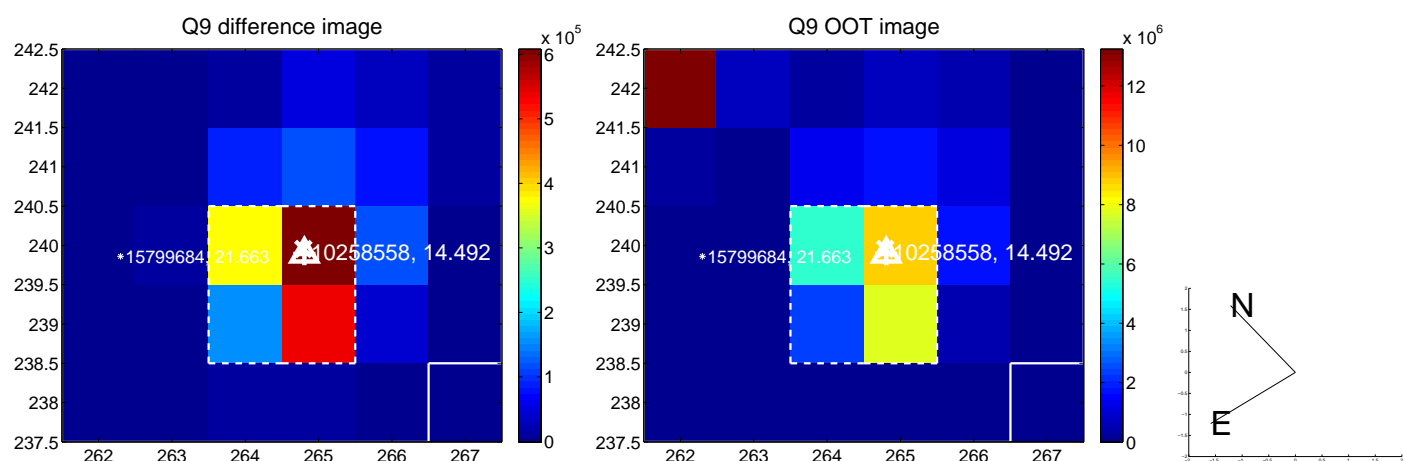


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

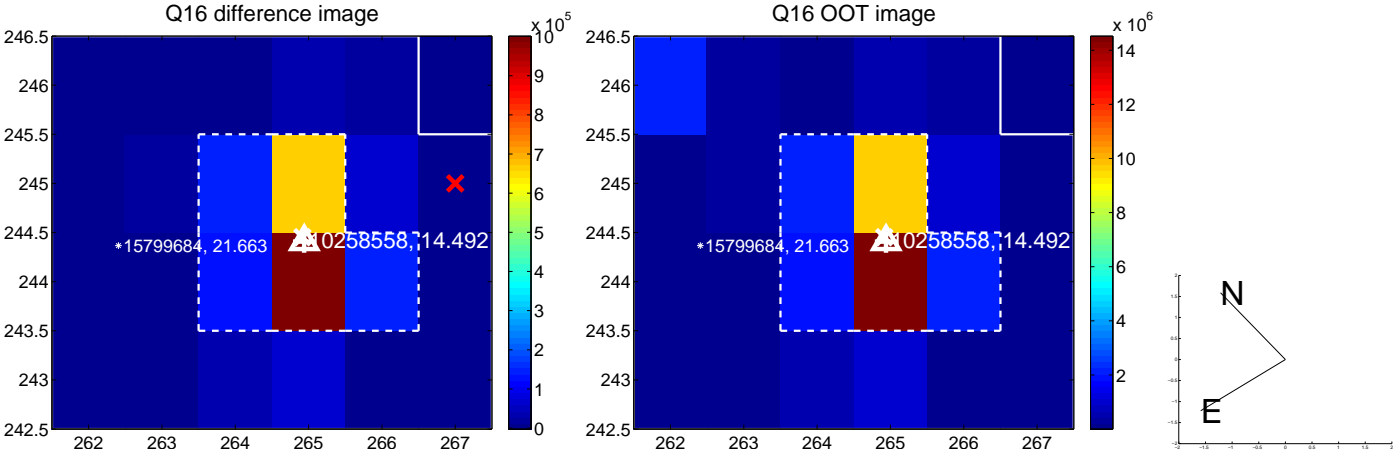
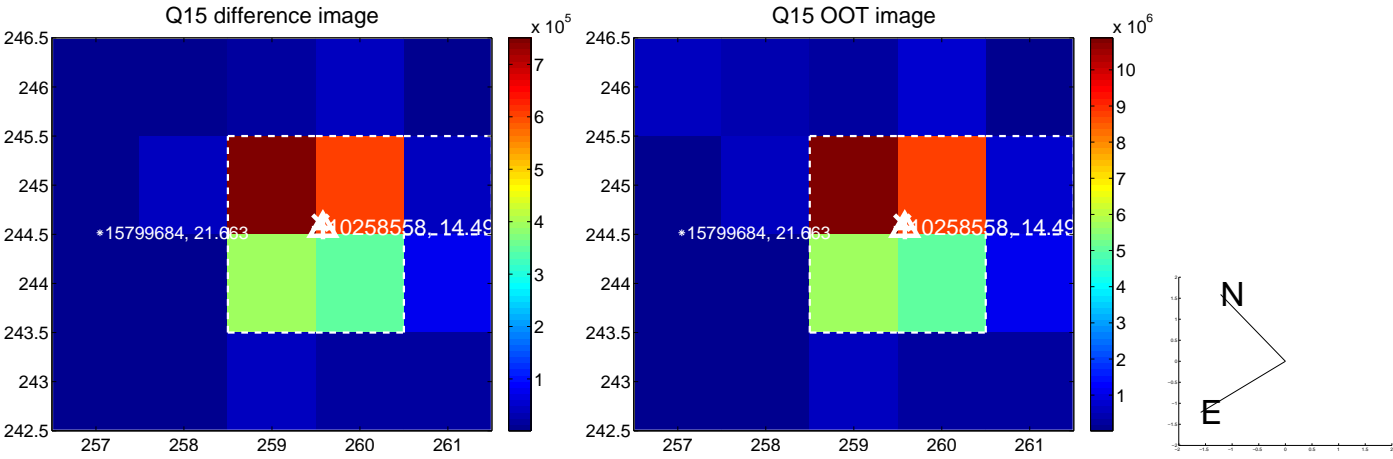
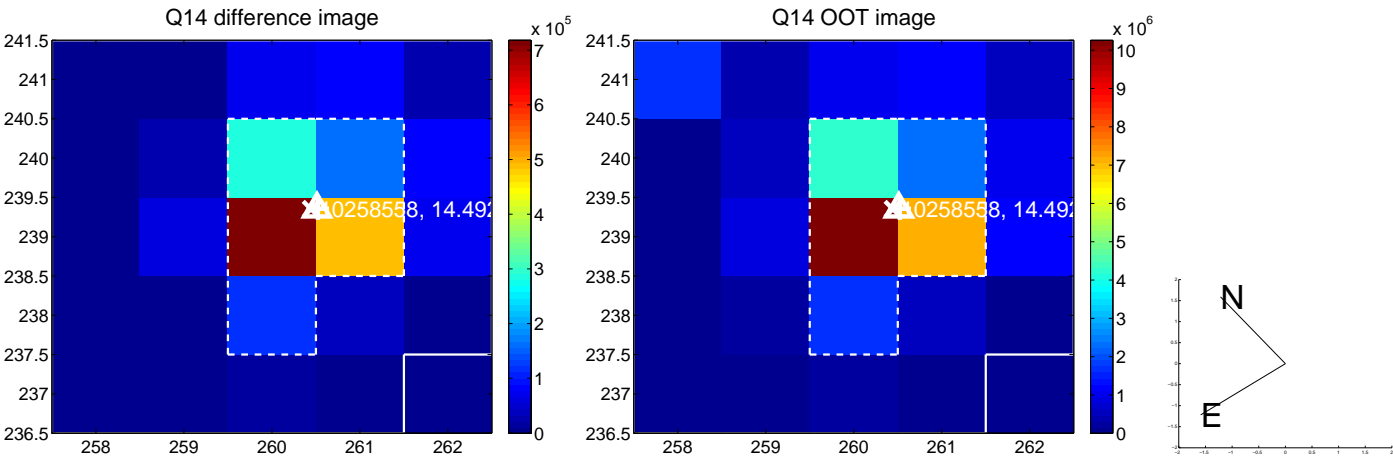
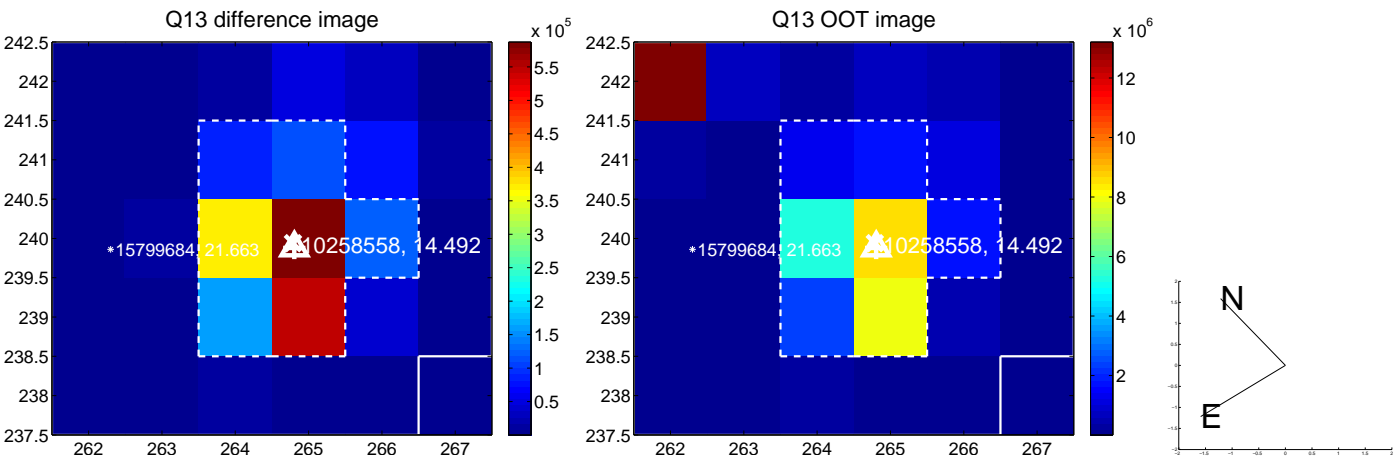
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



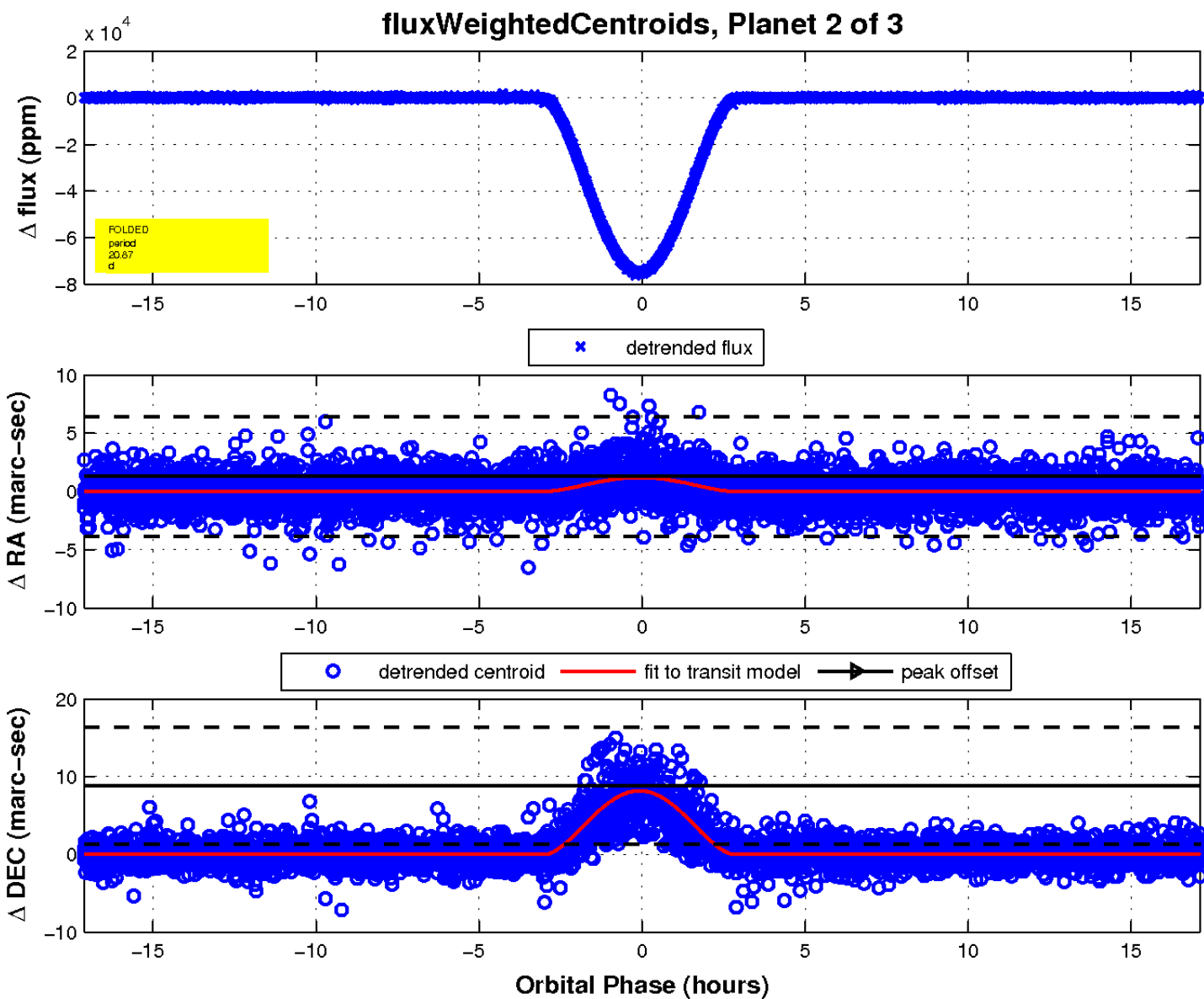
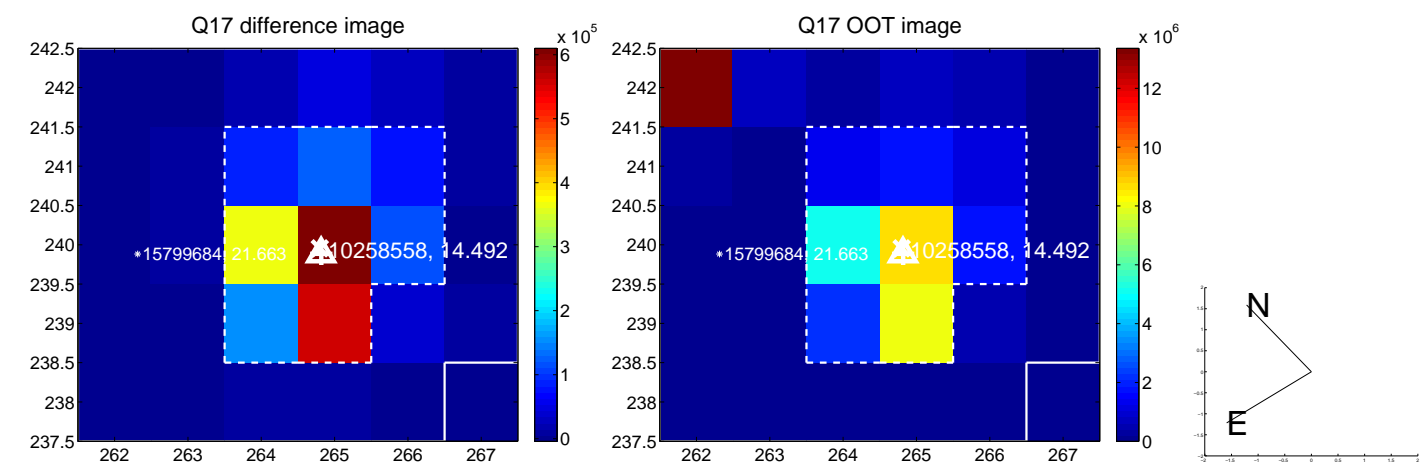
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

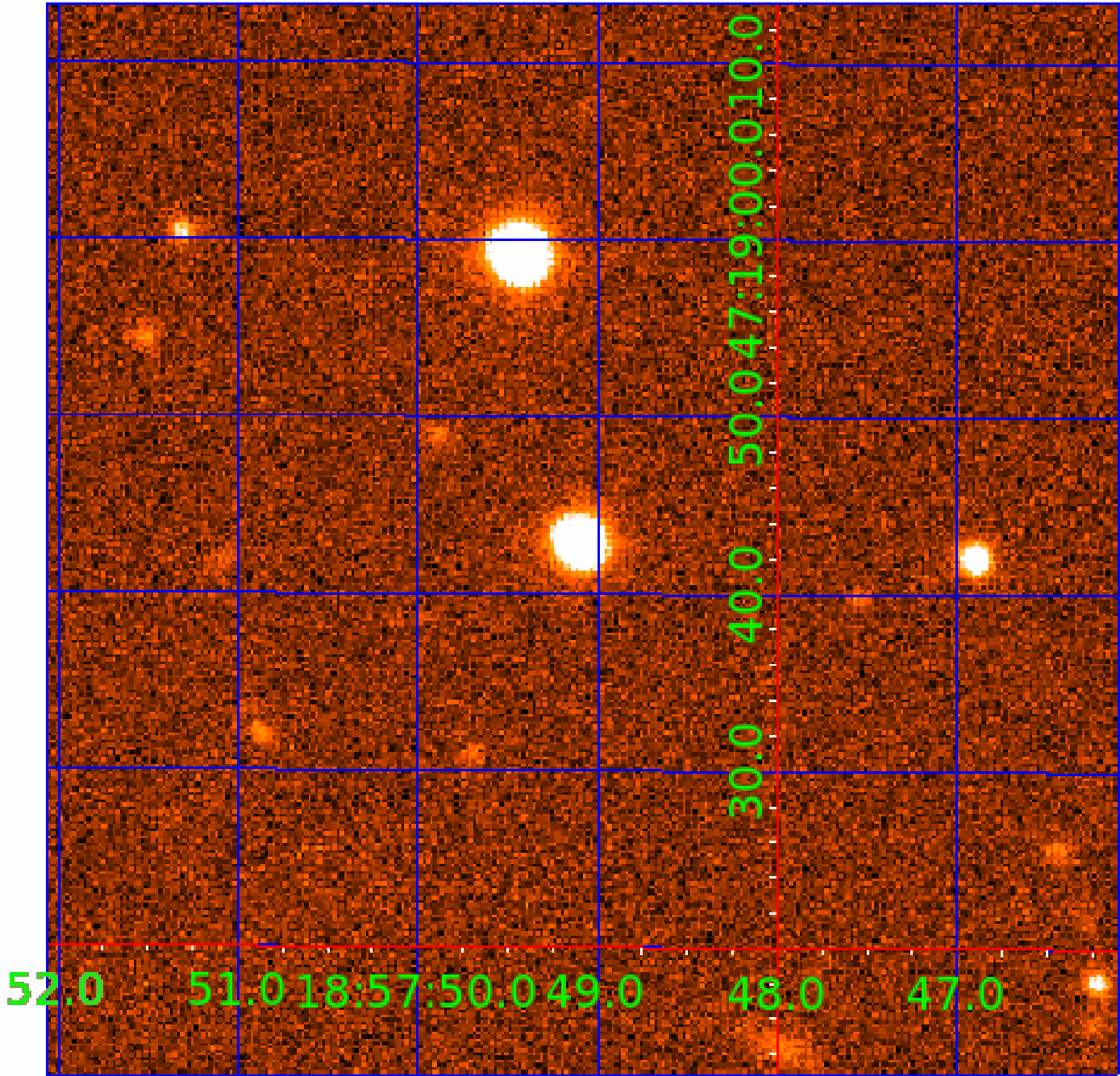


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010258558

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})
010258558-01	OBS	7299.01	20.867855	136.403855	82564.9	5.721	4422.4	3942.7	1.02	6095	43.65	62.24
010258558-02	OBS	No	20.867854	147.113739	74952.1	5.708	3864.9	3654.7	1.02	6095	41.98	62.24
010258558-03	OBS	No	270.400565	282.627130	598.6	5.229	10.1	7.6	1.02	6095	2.78	2.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010258558-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
010258558-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010258558-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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 010258558-03

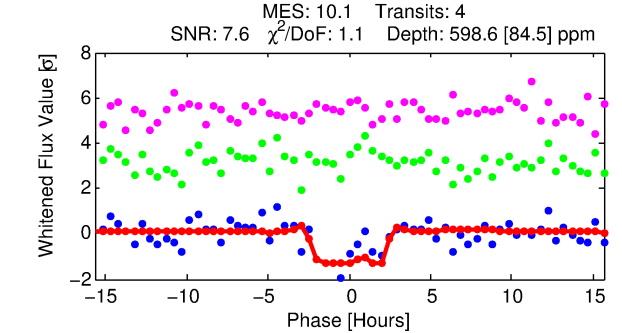
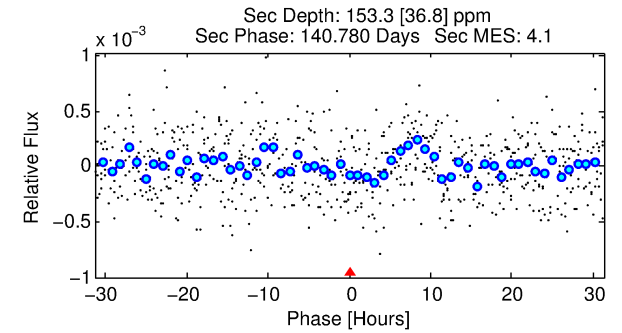
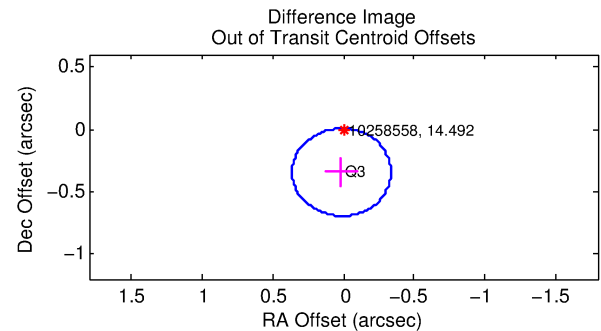
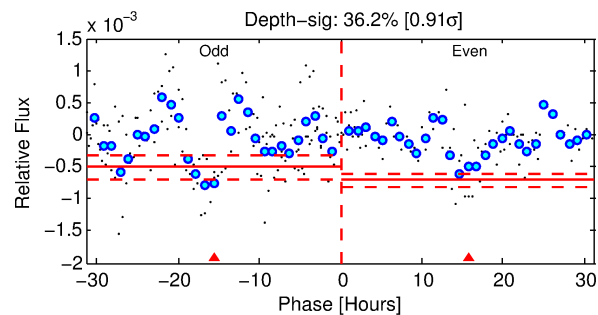
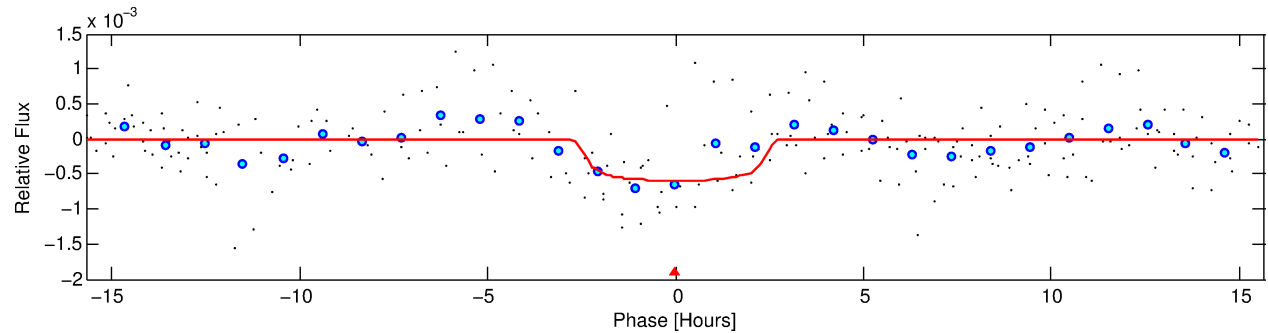
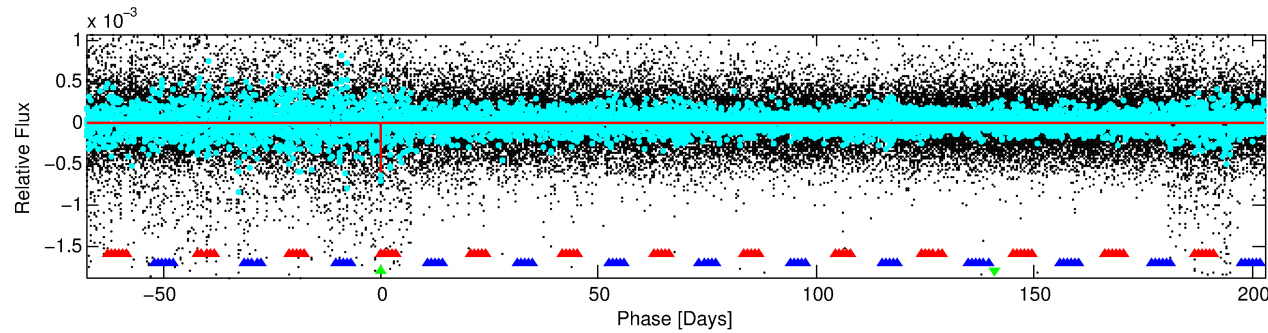
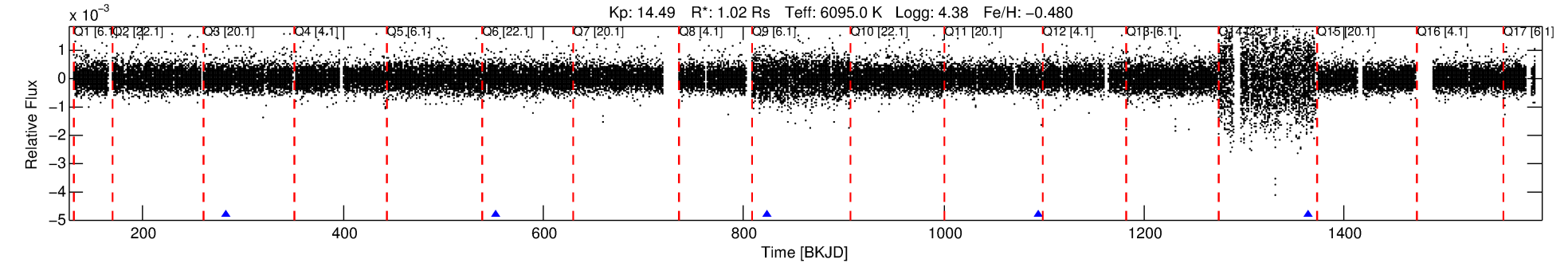
No Significant Match Found

DV One-Page Summary

KIC: 10258558 Candidate: 3 of 3 Period: 270.401 d

KOI: K07299 Corr: No Ephemeris Match

Kp: 14.49 R*: 1.02 Rs Teff: 6095.0 K Logg: 4.38 Fe/H: -0.480



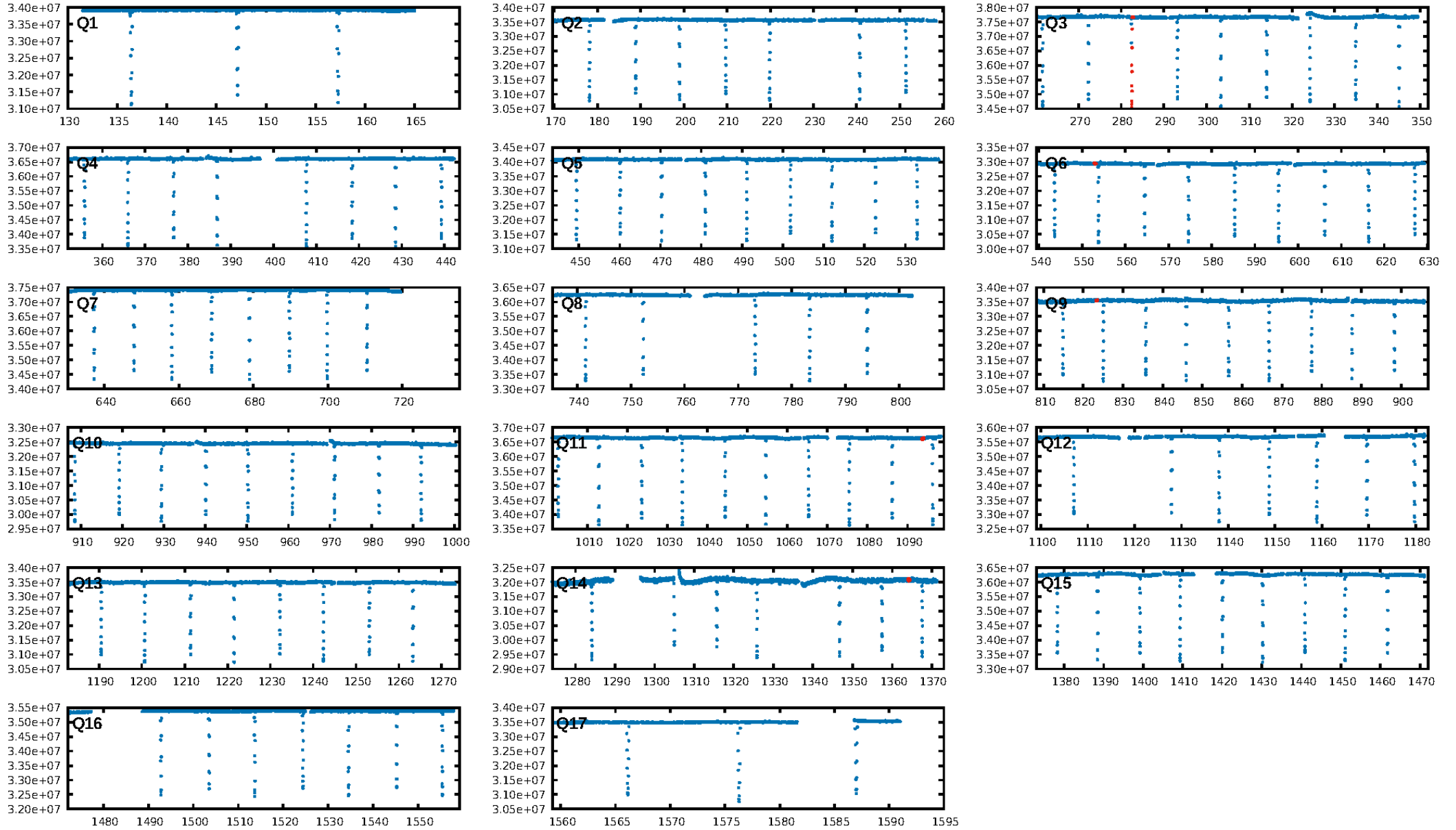
DV Fit Results:

Period = 270.40057 [0.00547] d
Epoch = 282.6271 [0.0145] BKJD
Rp/R* = 0.0251 [0.0090]
a/R* = 239.23 [437.57]
b = 0.83 [0.70]
Seff = 2.05 [0.75]
Teq = 305 [28] K
Rp = 2.78 [1.26] Re
a = 0.7900 [0.1865] AU
Ag = 6796.92 [5671.40] [1.20σ]
Teffp = 4281 [822] K [4.83σ]

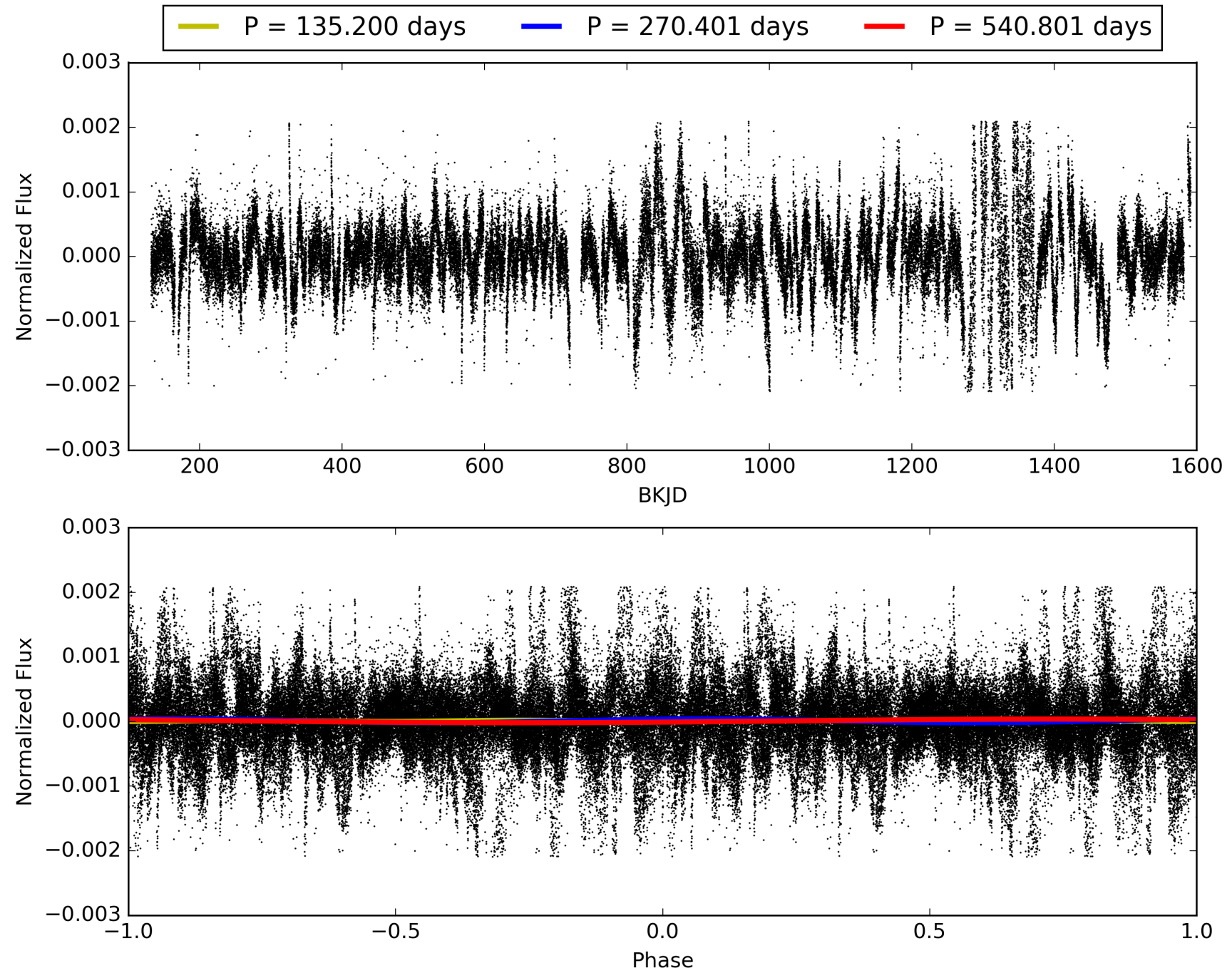
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [772.74σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 84.6%
Bootstrap-pfa: 5.68e-16
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.03873
Centroid-sig: 98.1%
Centroid-so: 0.144 arcsec [0.16σ]
OotOffset-rm: 0.345 arcsec [2.95σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-rm: 0.513 arcsec [4.39σ]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.75 [3/4]

TCE 010258558-03, PDC Light Curves

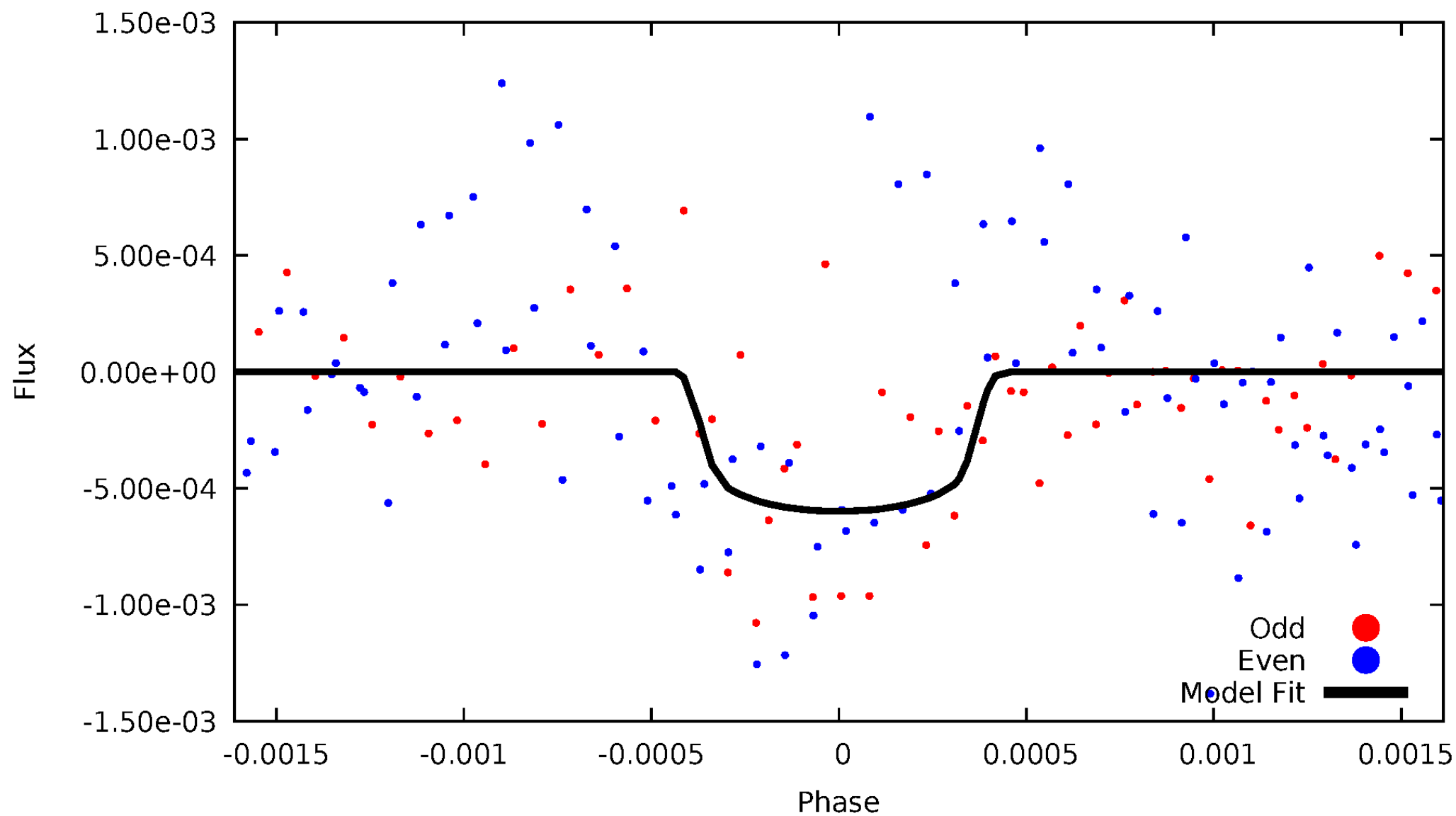


TCE 010258558-03



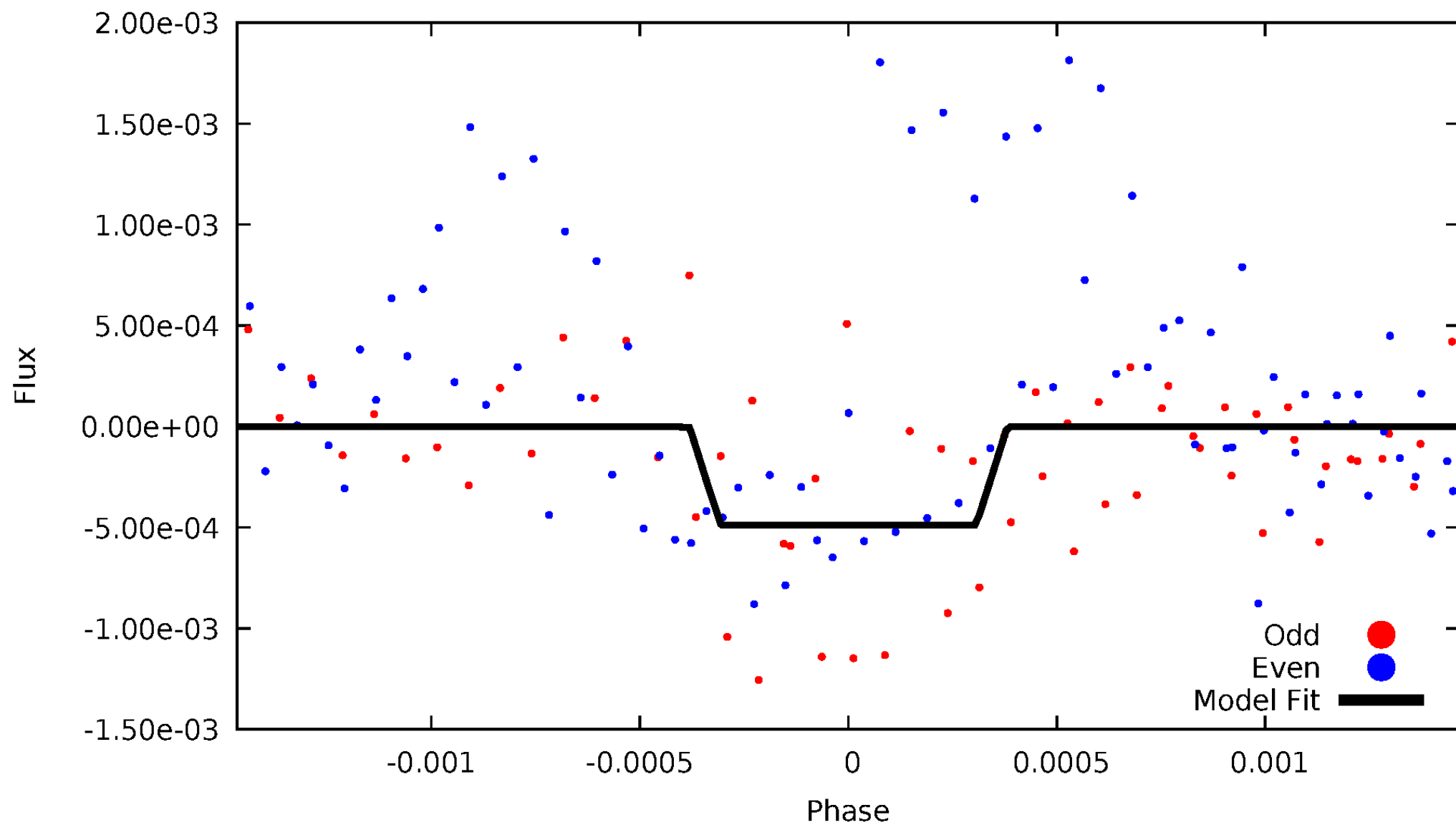
DV Odd/Even

TCE 010258558-03



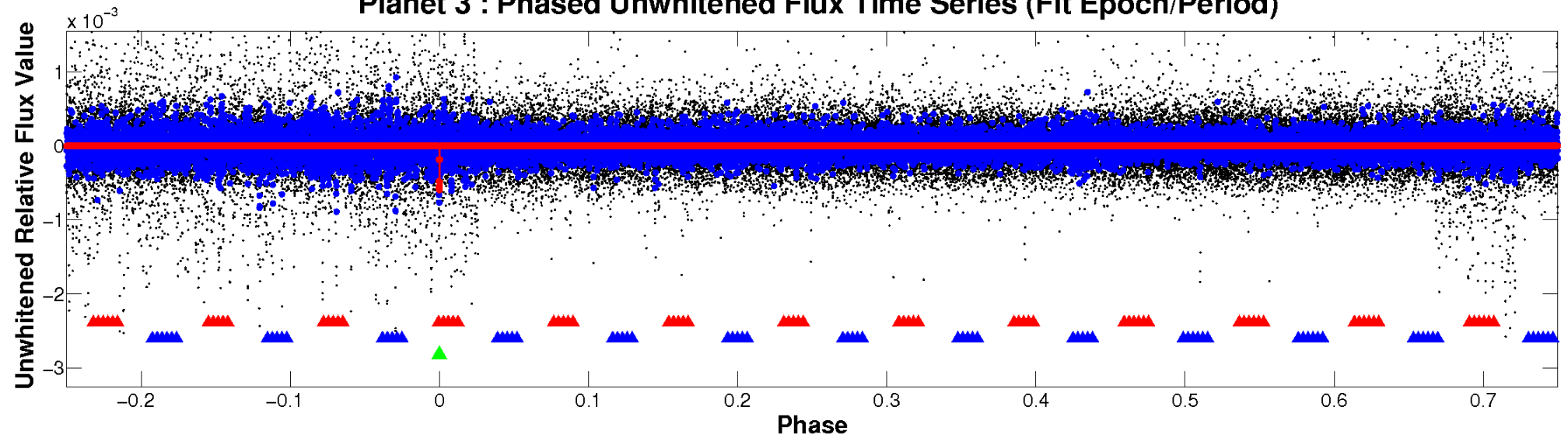
ALT Odd/Even

TCE 010258558-03

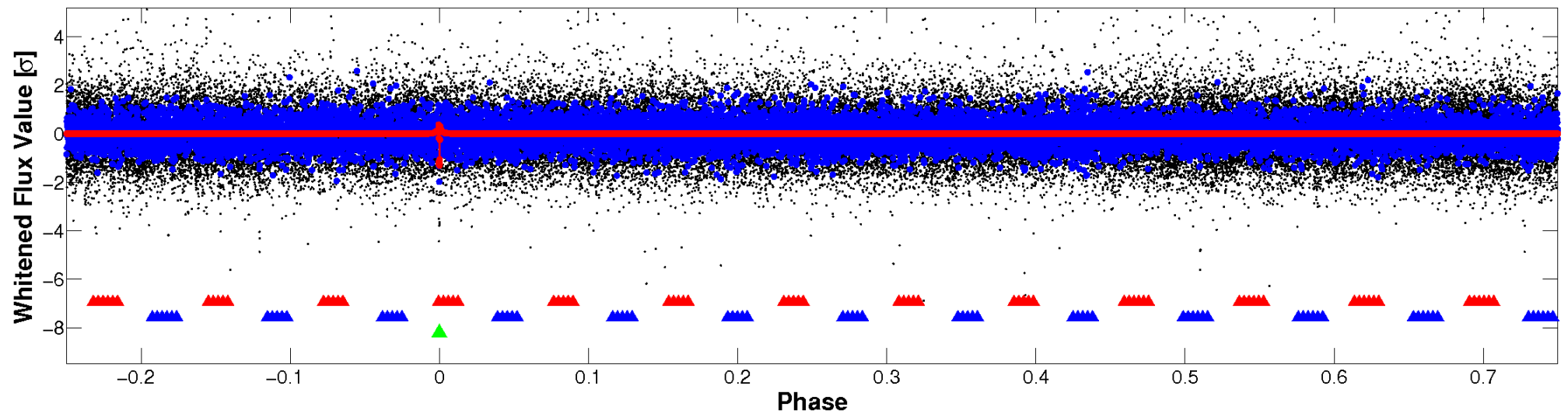


Non-Whitened Vs. Whitened Light Curve

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

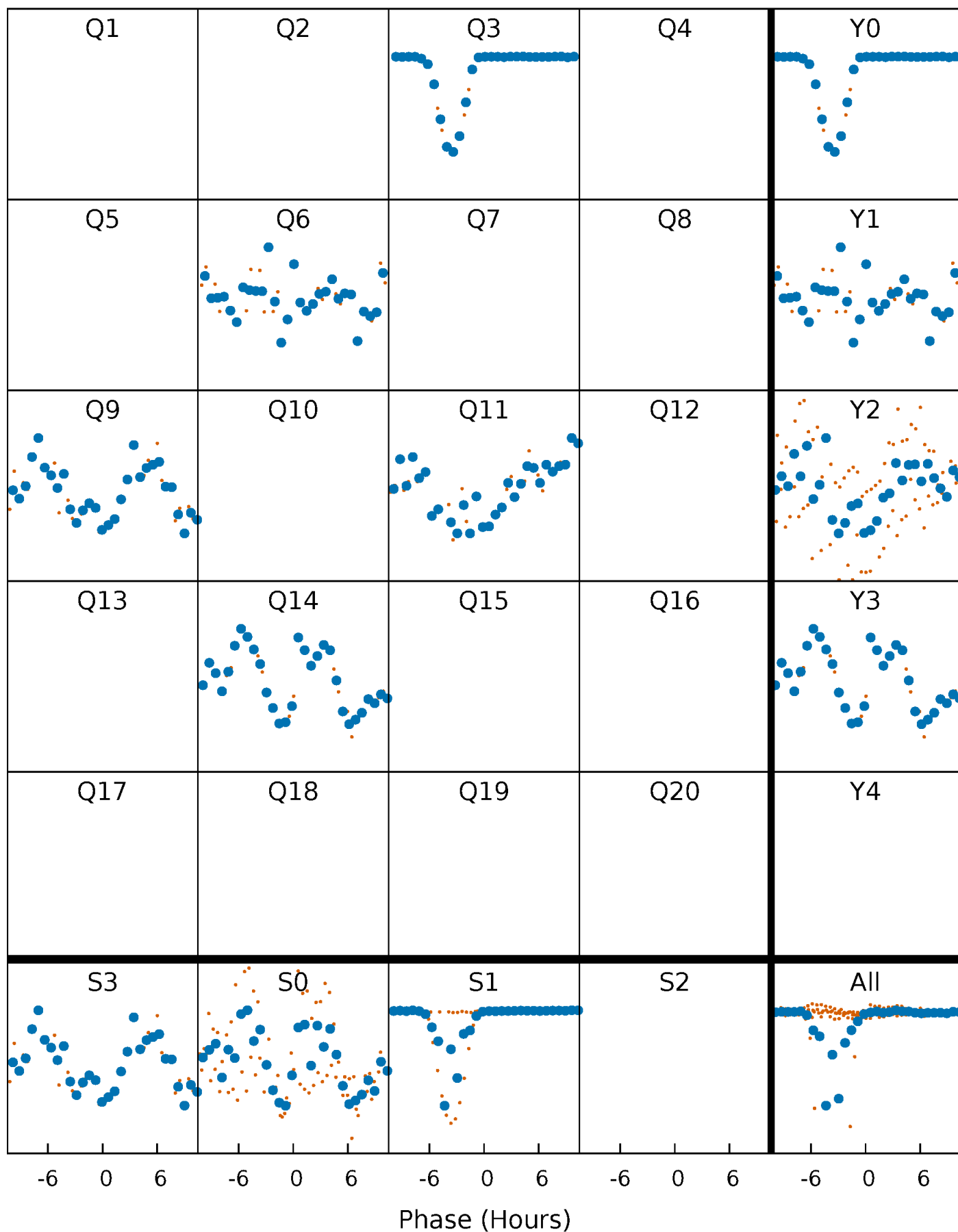


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



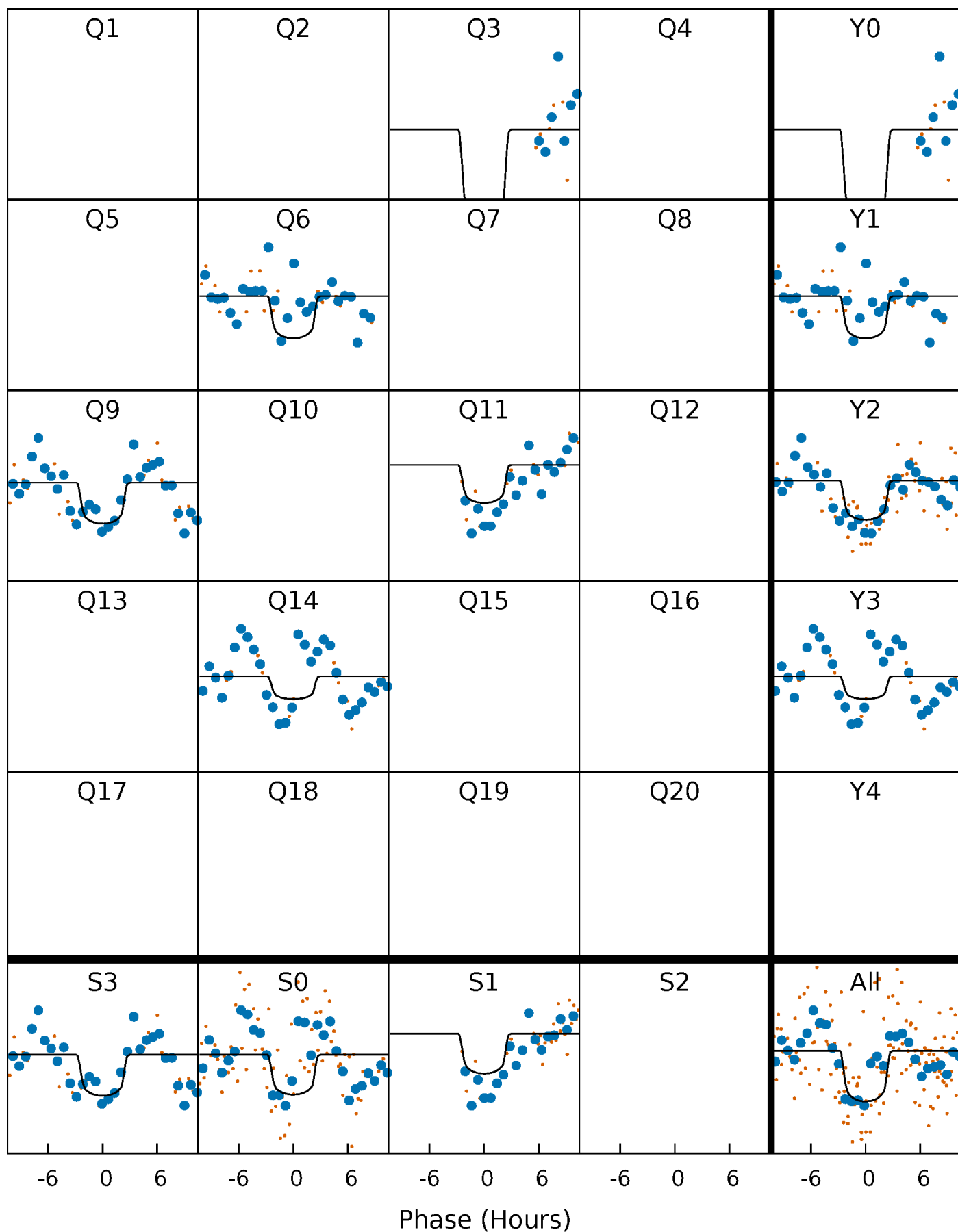
PDC Quarter-Phased Transit Curves

TCE 010258558-03 $P=270.400565$ Days $T_0=282.627130$ (BKJD)



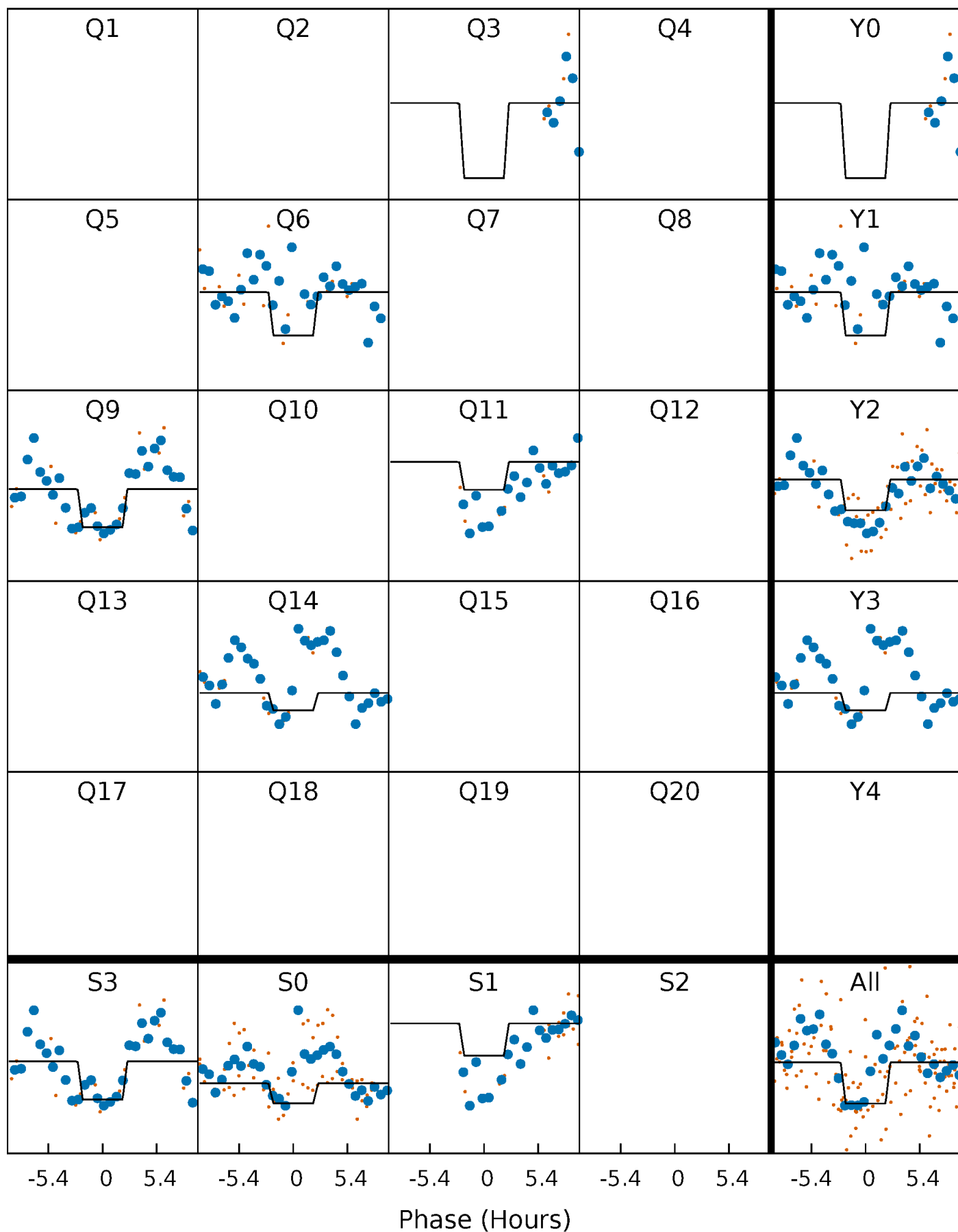
DV Quarter-Phased Transit Curves

TCE 010258558-03 $P=270.400565$ Days $T_0=282.627130$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

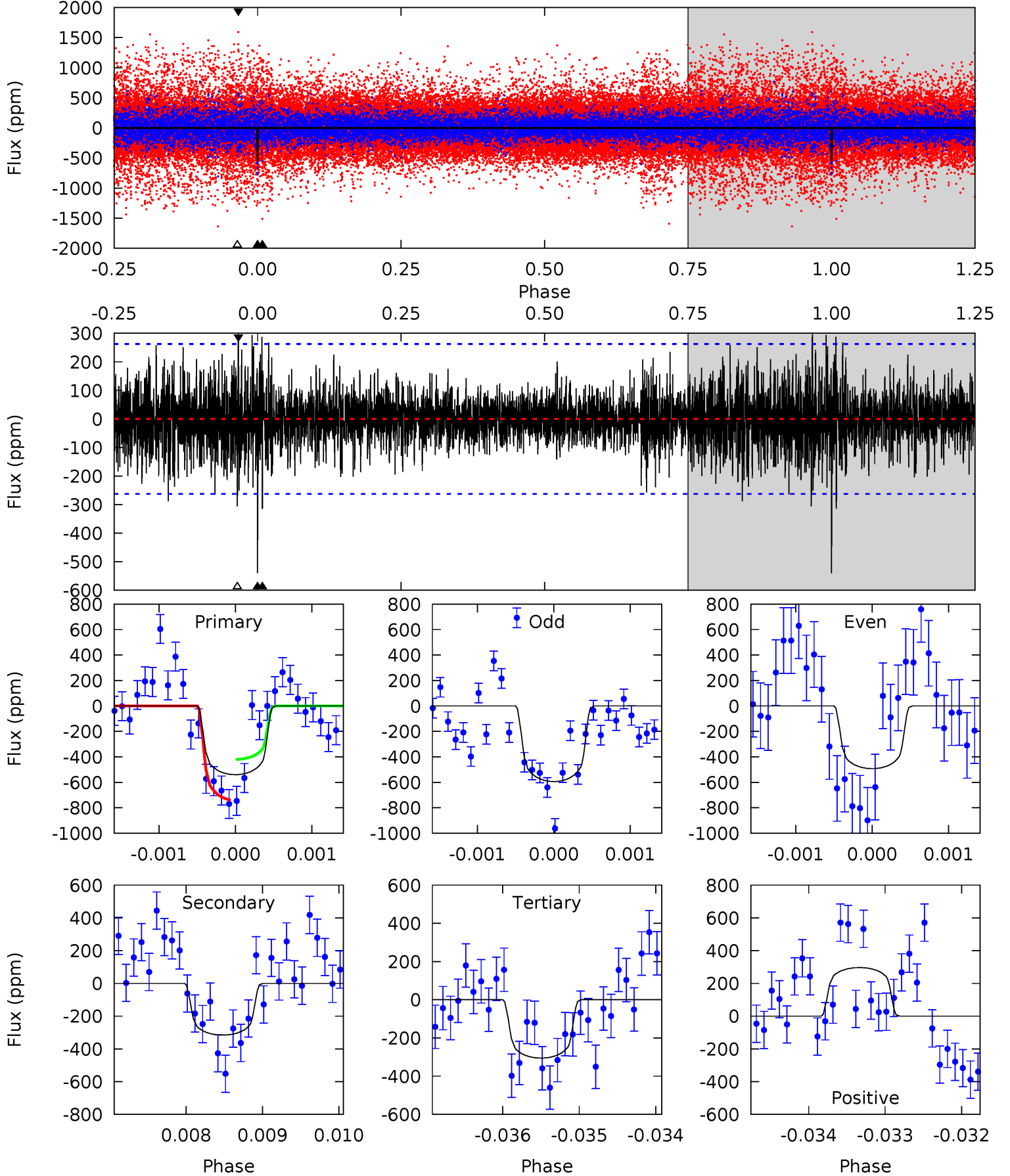
TCE 010258558-03 P=270.404111 Days $T_0=282.614881$ (BKJD)



DV Model-Shift Uniqueness Test

010258558-03, $P = 270.400565$ Days, $E = 12.226565$ Days

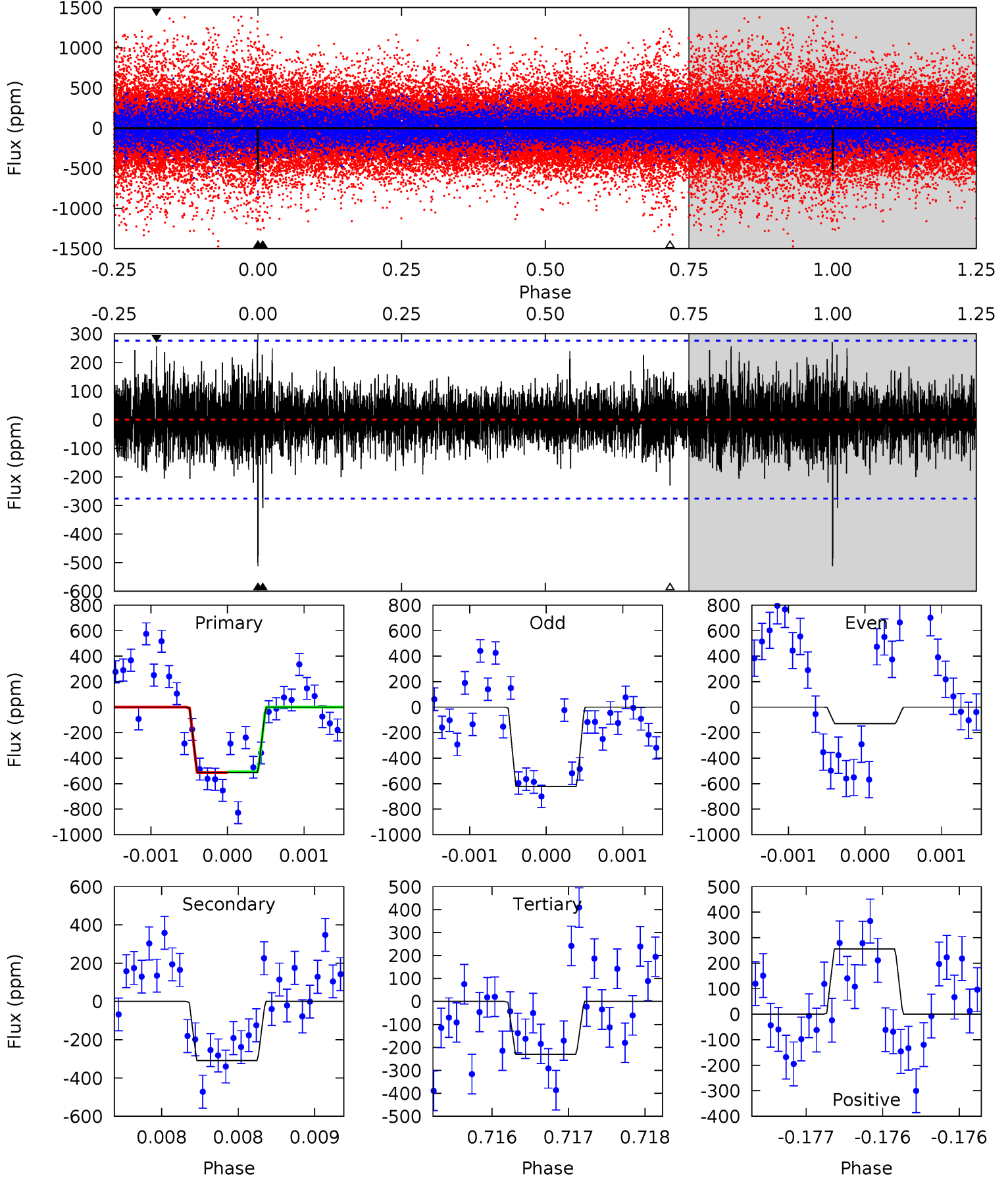
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.58	6.37	6.19	5.48	3.33	1.43	4.89	5.07	0.21	0.40	1.04	1.16	0.35	0



Alt Model-Shift Uniqueness Test

010258558-03, P = 270.404111 Days, E = 12.210770 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.16	4.58	5.10	5.50	3.36	1.19	5.60	5.09	1.58	1.06	5.12	1.14	0.35	0.06



Stellar Parameters For KIC 010258558

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6095^{+165}_{-184}	$4.378^{+0.144}_{-0.192}$	$-0.480^{+0.300}_{-0.300}$	$1.016^{+0.281}_{-0.173}$	$0.900^{+0.117}_{-0.087}$	$1.207^{+0.711}_{-0.606}$
	+3%/-3%	+3%/-4%	+62%/-62%	+28%/-17%	+13%/-10%	+59%/-50%
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 010258558-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-316 ± 48	$2.86^{+1.06}_{-1.03}$	428^{+33}_{-25}	5144^{+1227}_{-633}	13194^{+20141}_{-6255}
Alt.	-309 ± 50	$2.48^{+1.02}_{-1.03}$	428^{+32}_{-27}	5482^{+1821}_{-812}	17334^{+36799}_{-9380}

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 $A_{obs} \gg 1.0$

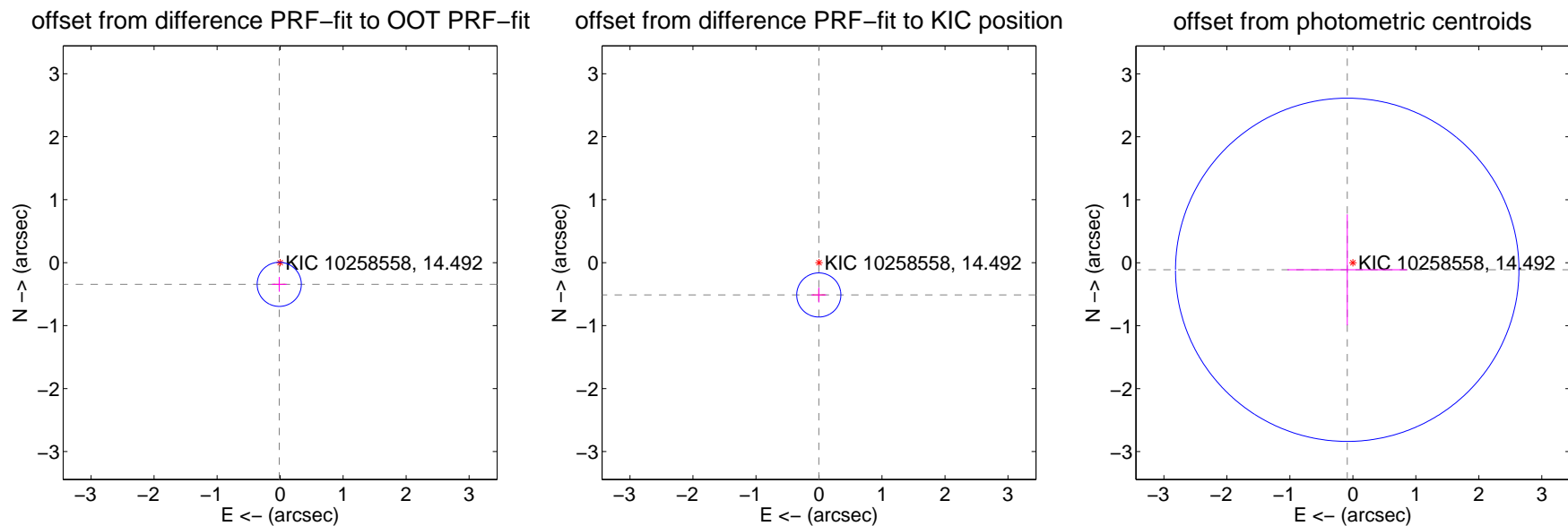
DV Centroid Data

Supplemental centroid analysis for 010258558-03. Kepler magnitude: 14.49. Transit SNR 7.65

There are 0 quarters with good PRF difference image offsets

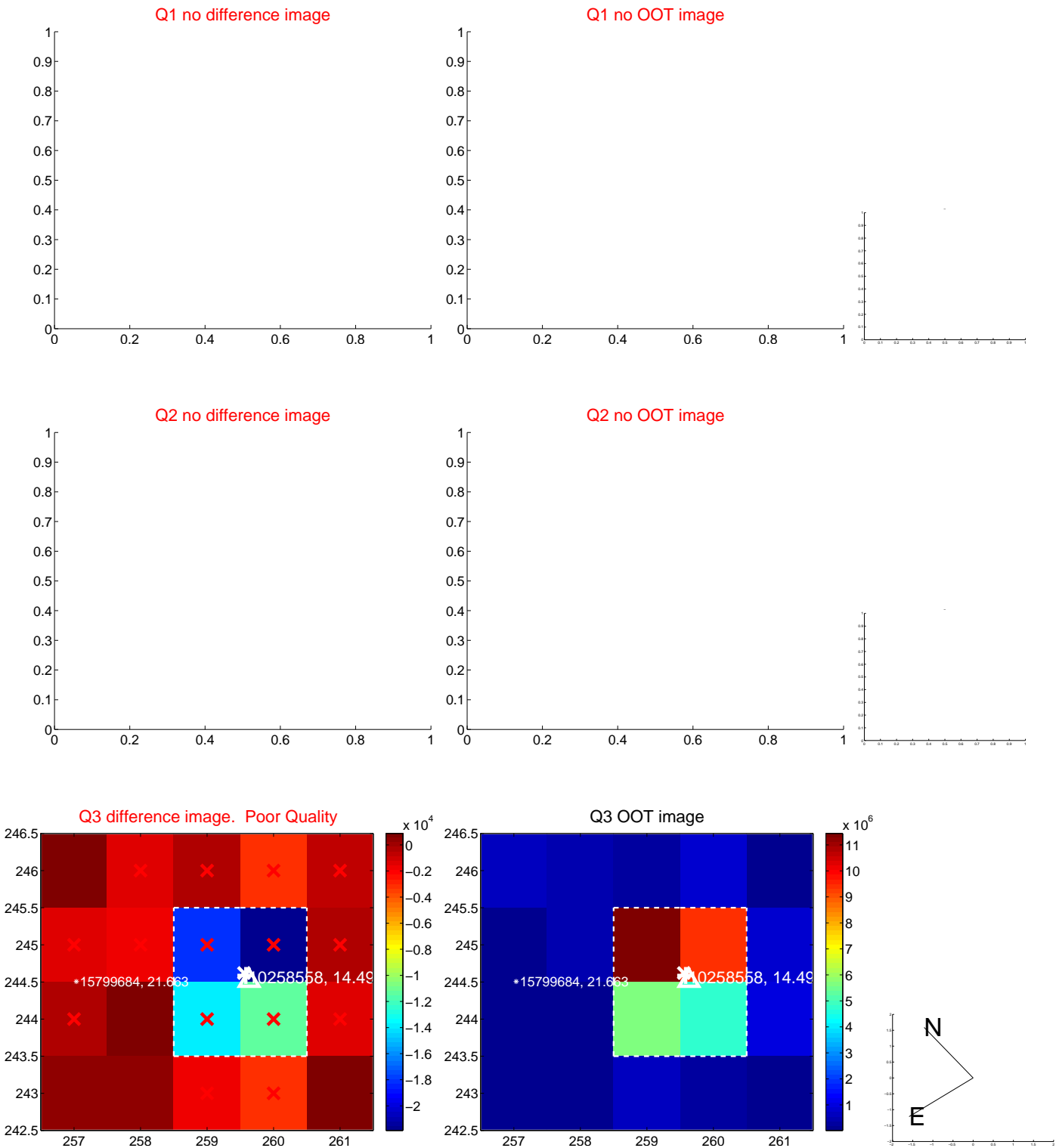
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.345 ± 0.117	2.95	0.014 ± 0.117	-0.345 ± 0.117
PRF-fit source offset from KIC position	0.513 ± 0.117	4.39	0.003 ± 0.117	-0.513 ± 0.117
photometric centroid source offset	0.14 ± 0.91	0.16	0.09 ± 0.95	-0.11 ± 0.88

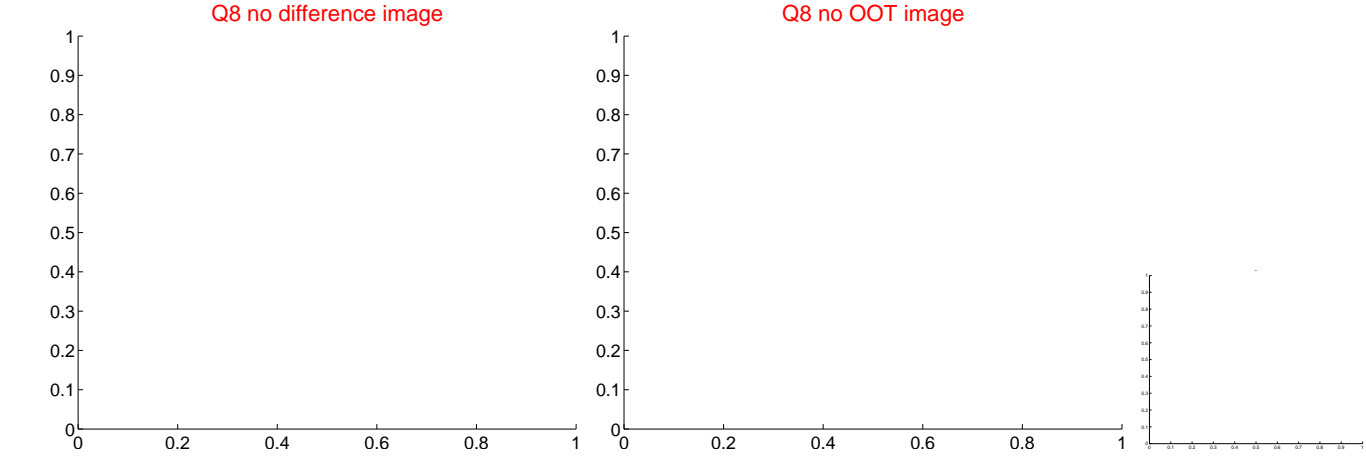
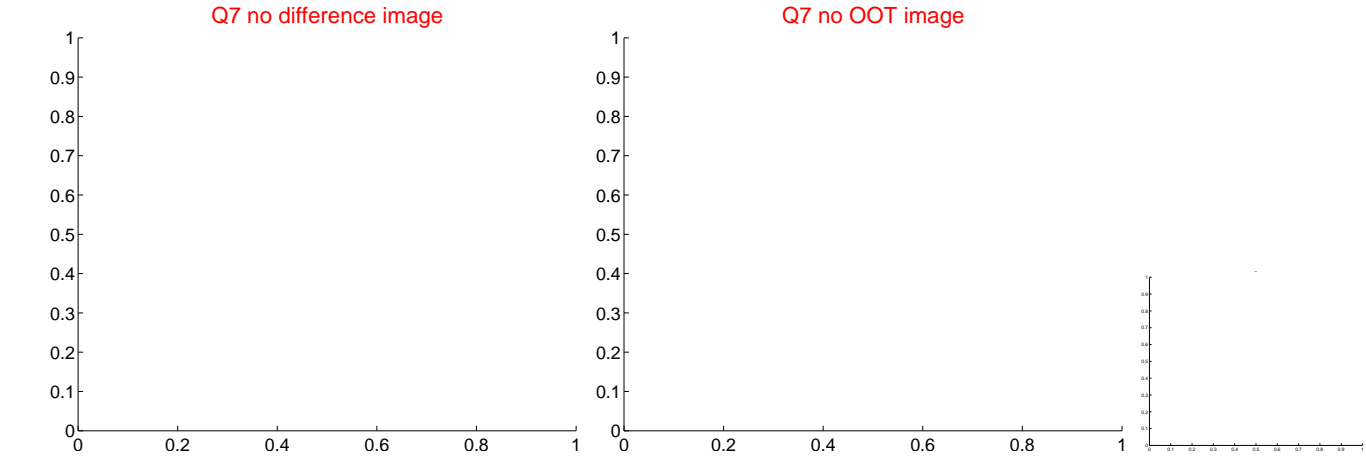
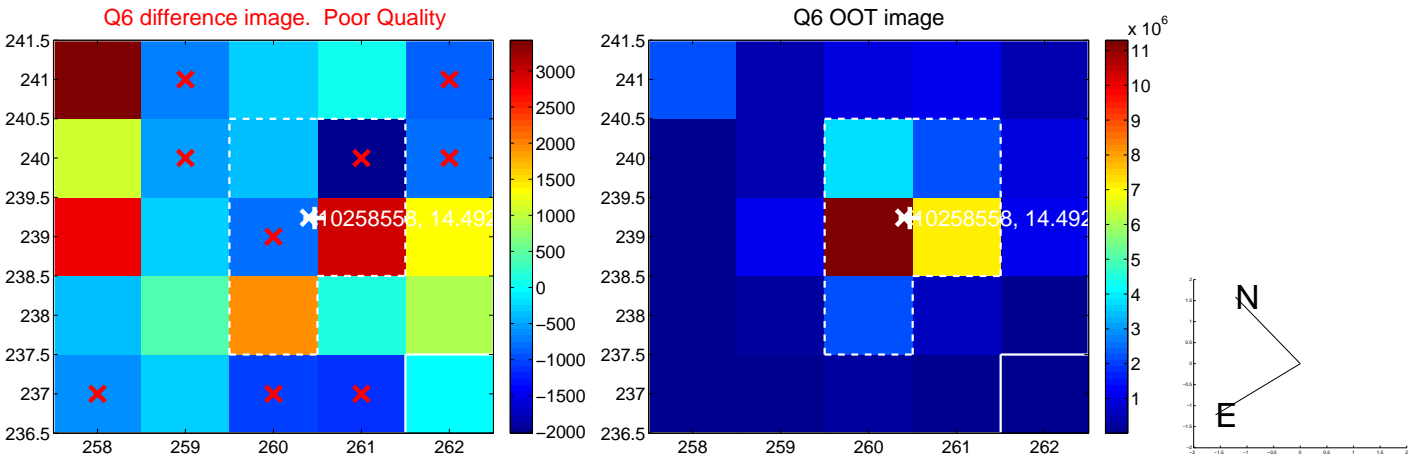
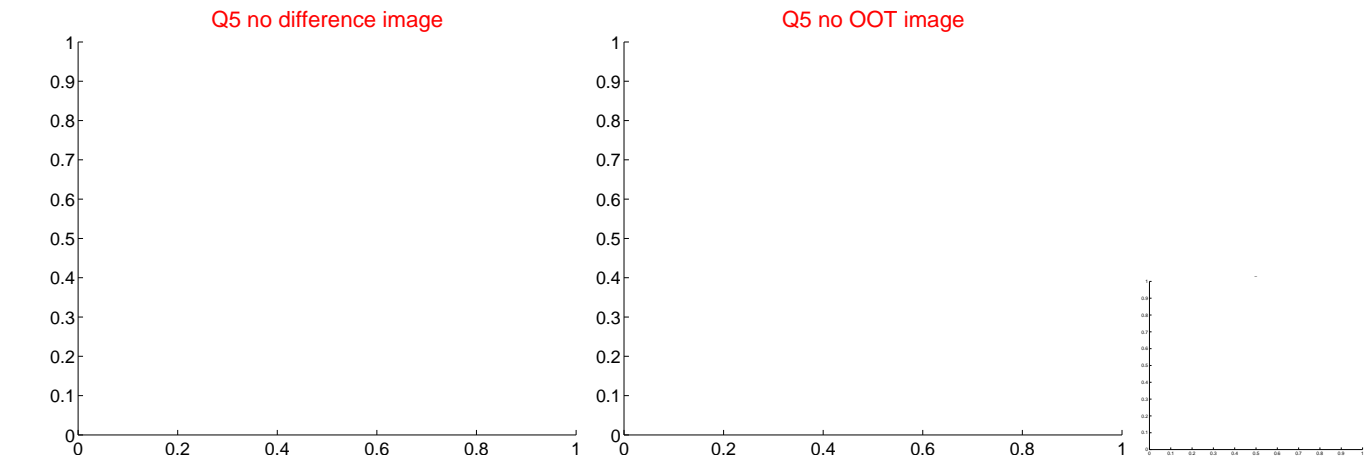


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

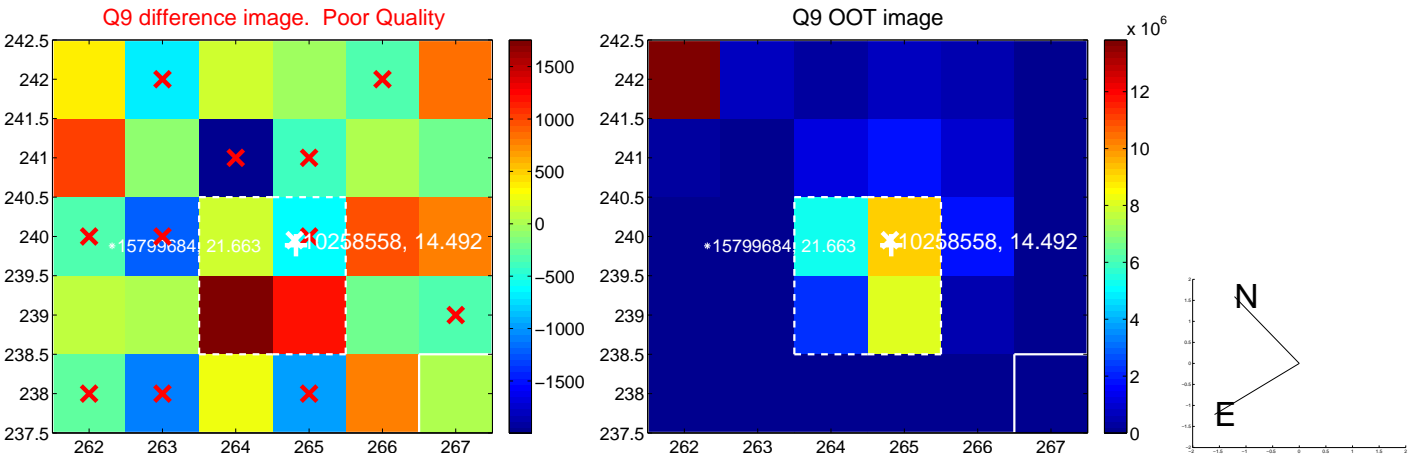
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



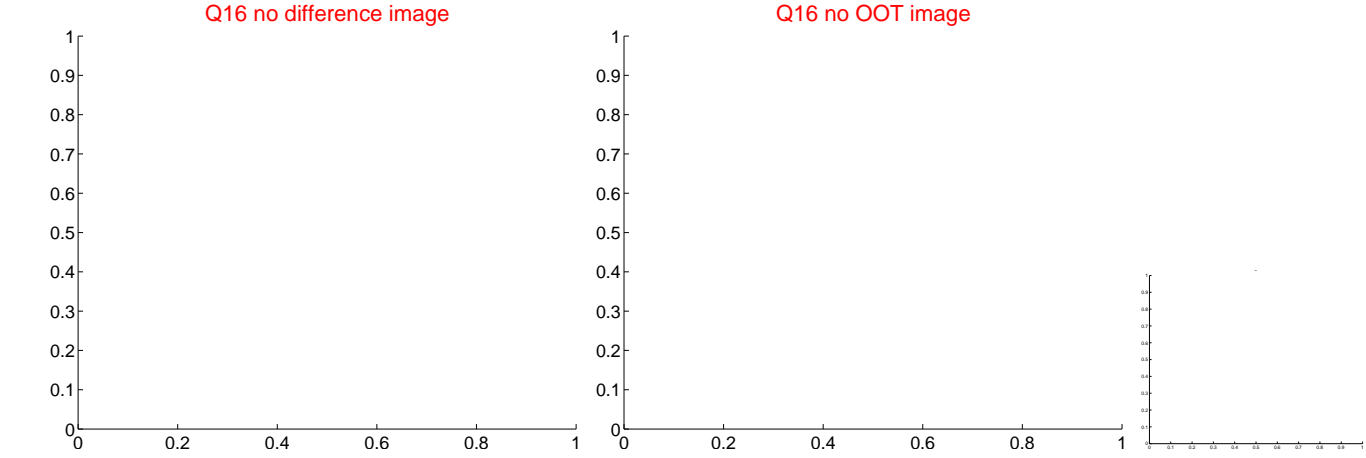
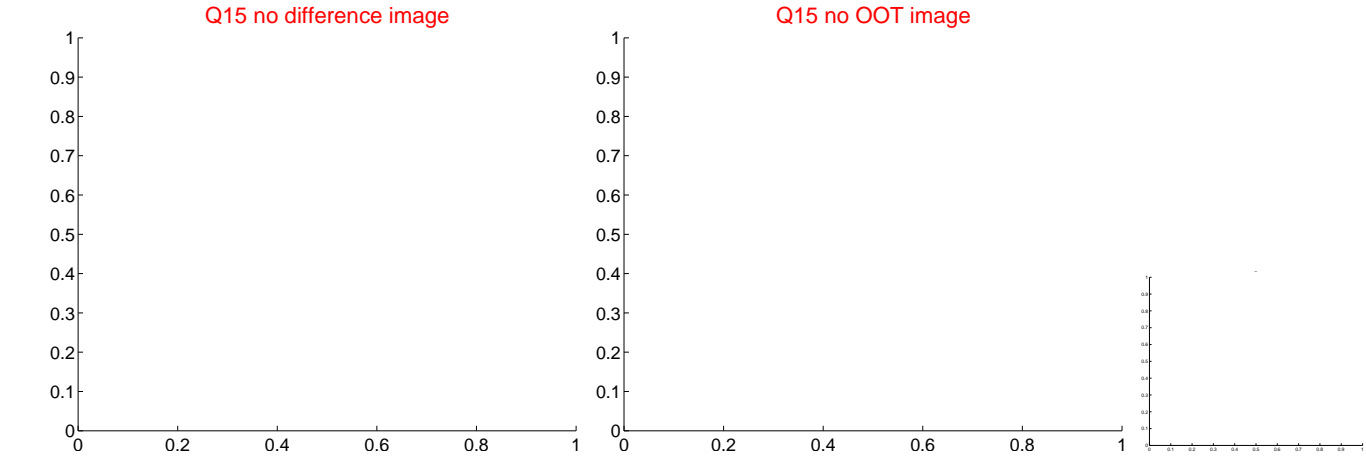
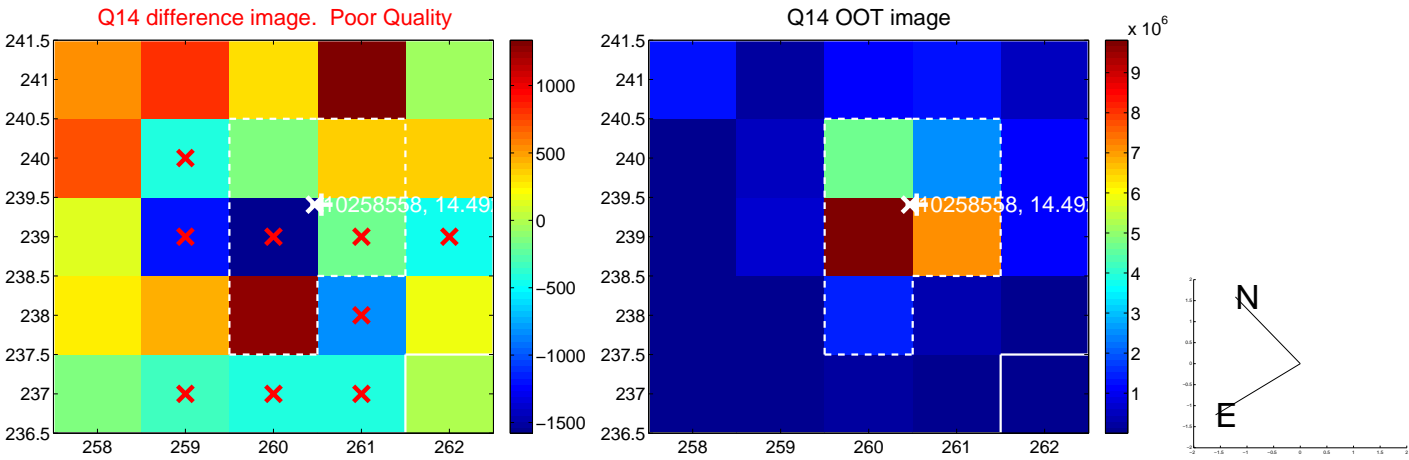
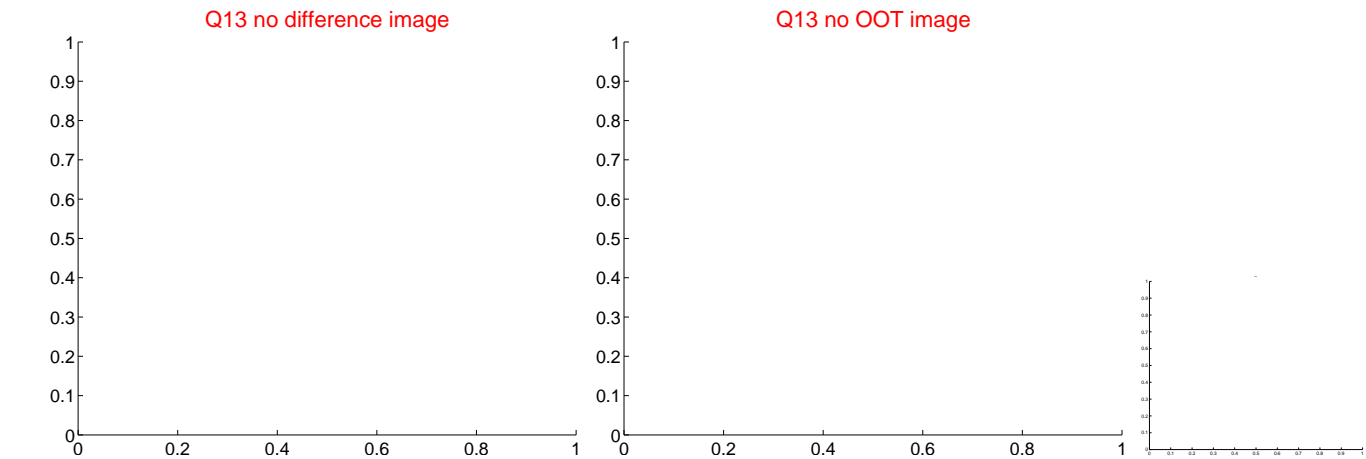
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



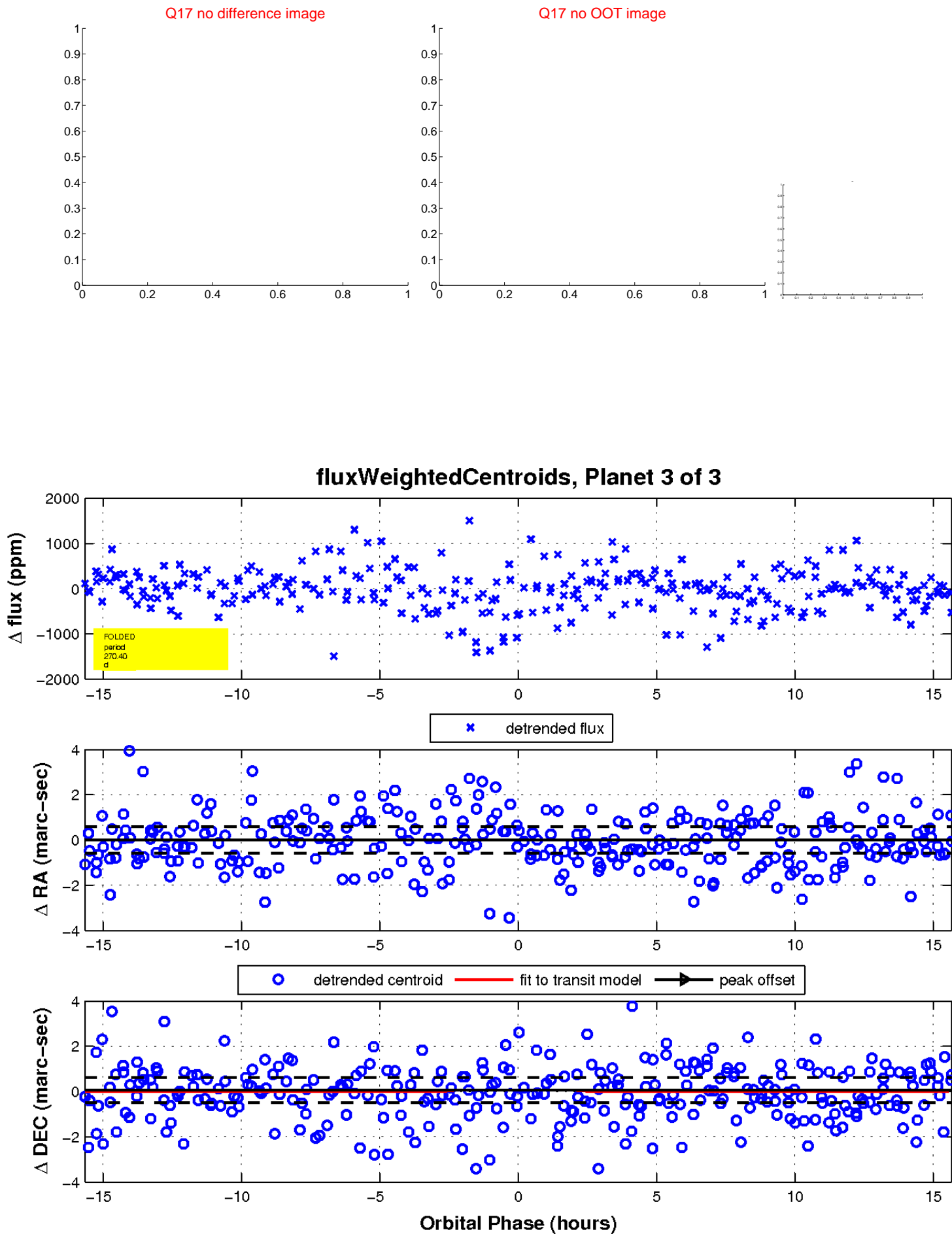
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

Declination

