

KIC 004075067

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})
004075067-01	OBS	3777.01	17.747721	139.346104	831.0	4.685	128.5	131.5	4.83	8992	25.50	3774.68
004075067-02	OBS	No	17.747605	134.613190	417.2	11.412	52.1	60.8	4.83	8992	18.32	3774.72
004075067-03	OBS	No	2.754487	133.580150	17.7	28.192	14.1	7.5	4.83	8992	2.08	45256.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004075067-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_SATURATED
004075067-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
004075067-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED

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

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

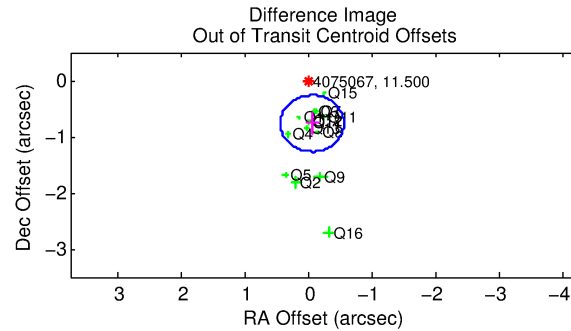
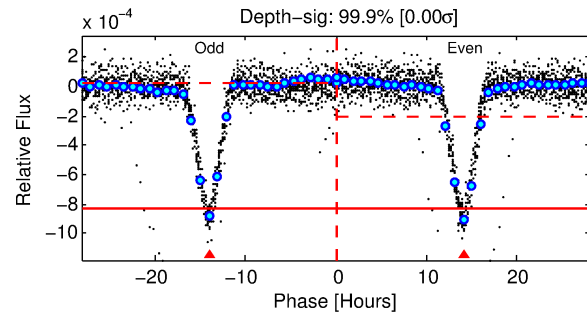
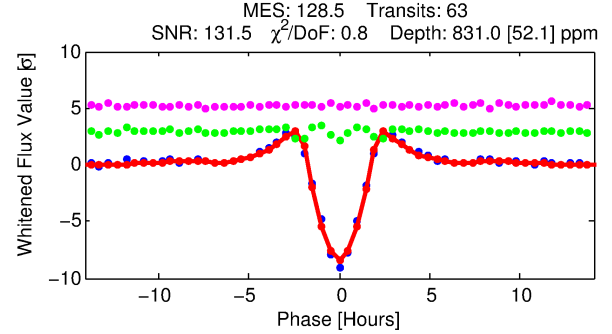
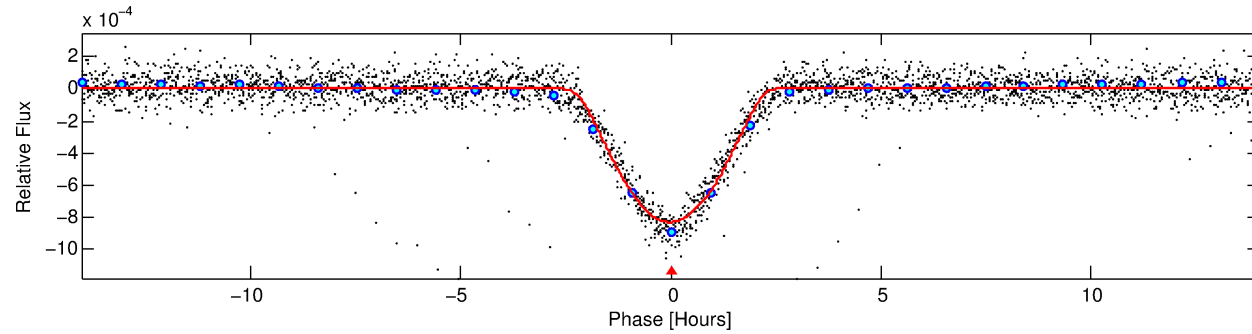
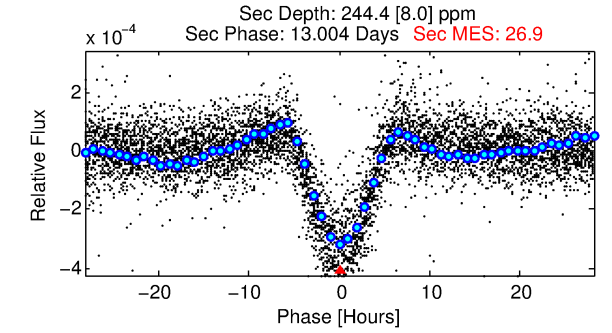
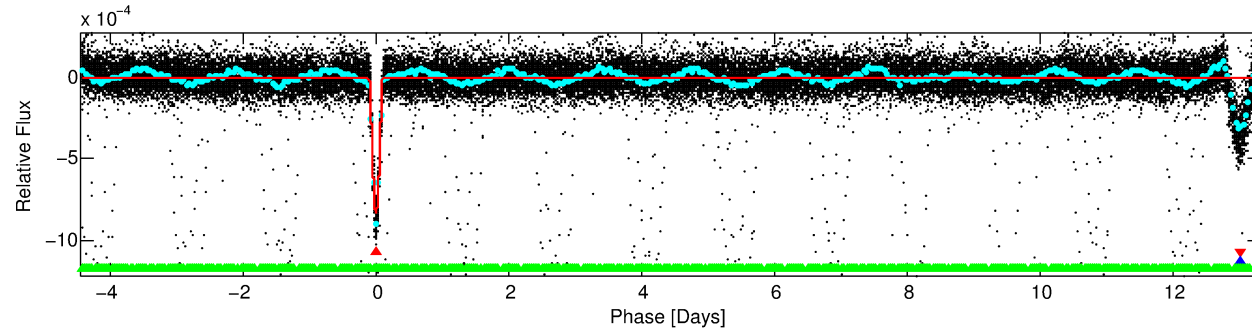
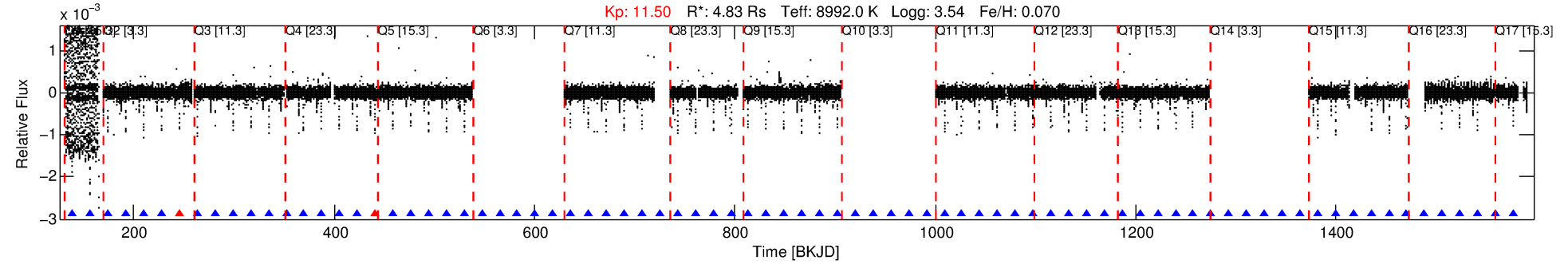
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004075067-01

No Significant Match Found

DV One-Page Summary

KIC: 4075067 Candidate: 1 of 3 Period: 17.748 d
KOI: K03777.01 Corr: 0.953



DV Fit Results:

Period = 17.74772 [0.00001] d
Epoch = 139.3461 [0.0006] BKJD
Rp/R* = 0.0484 [0.0089]
a/R* = 9.17 [0.43]
b = 1.00 [0.02]
Seff = 3774.68 [3634.25]
Teq = 1999 [481] K
Rp = 25.50 [15.57] Re
a = 0.1903 [0.1102] AU
Ag = 7.49 [7.59] [0.86 σ]
Teffp = 5113 [533] K [4.34 σ]

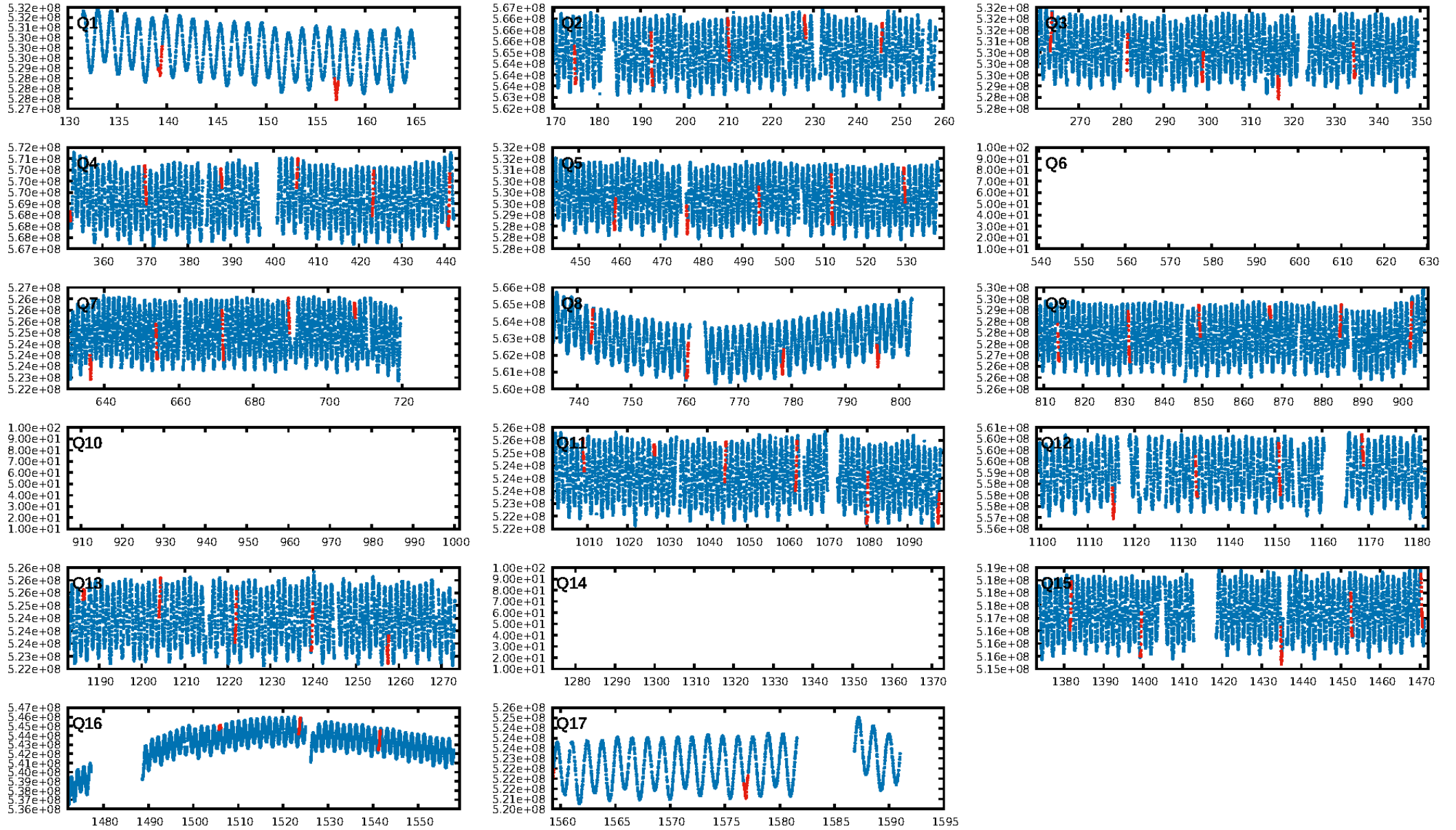
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 77.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [57/59]
GhostDiagnostic-chr: 2.896
Centroid-sig: 0.0%
Centroid-so: 1.678 arcsec [22.55 σ]
OotOffset-rm: 0.767 arcsec [4.58 σ]
KicOffset-rm: 0.765 arcsec [4.14 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.86 [12/14]

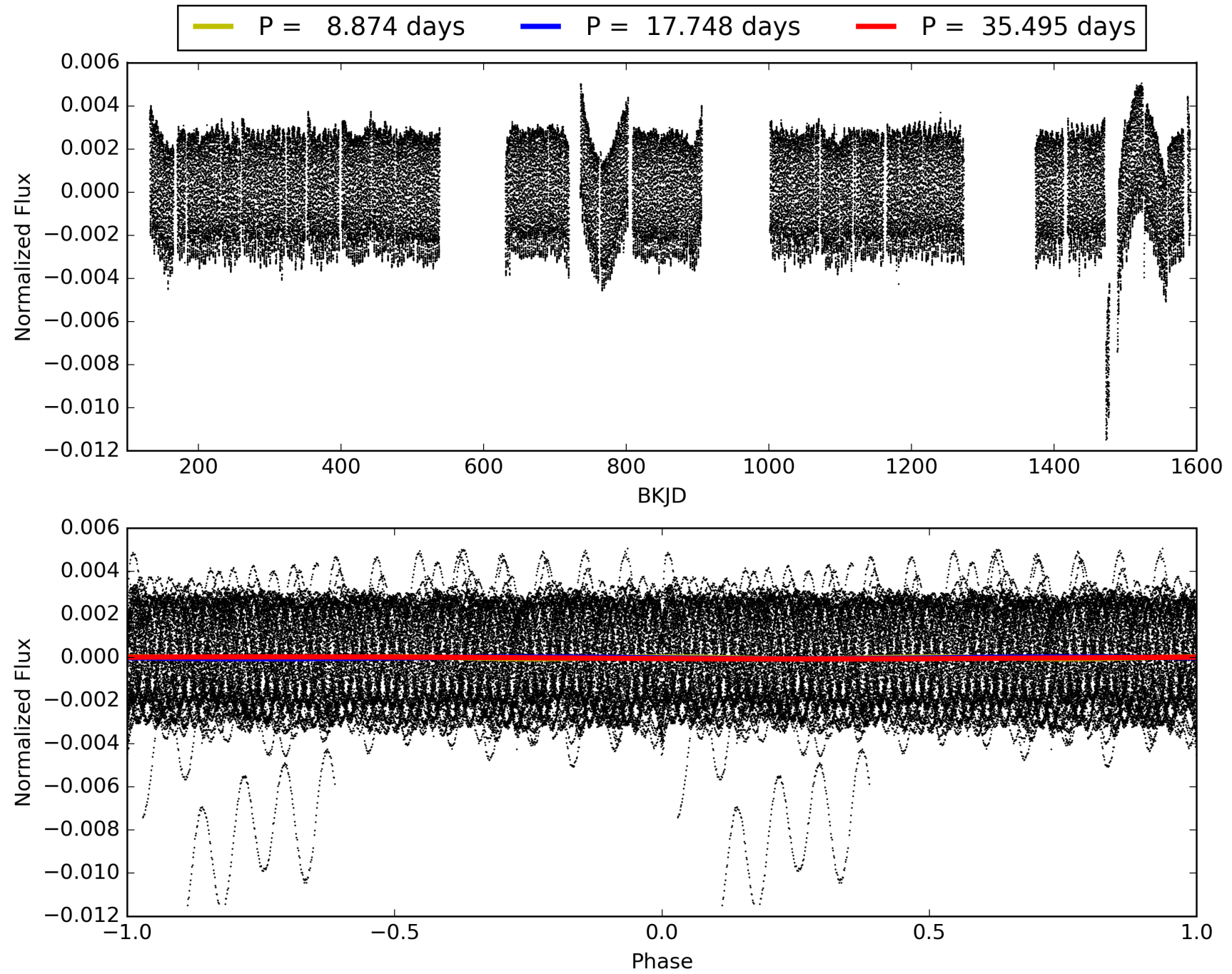
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:27 Z

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

TCE 004075067-01, PDC Light Curves

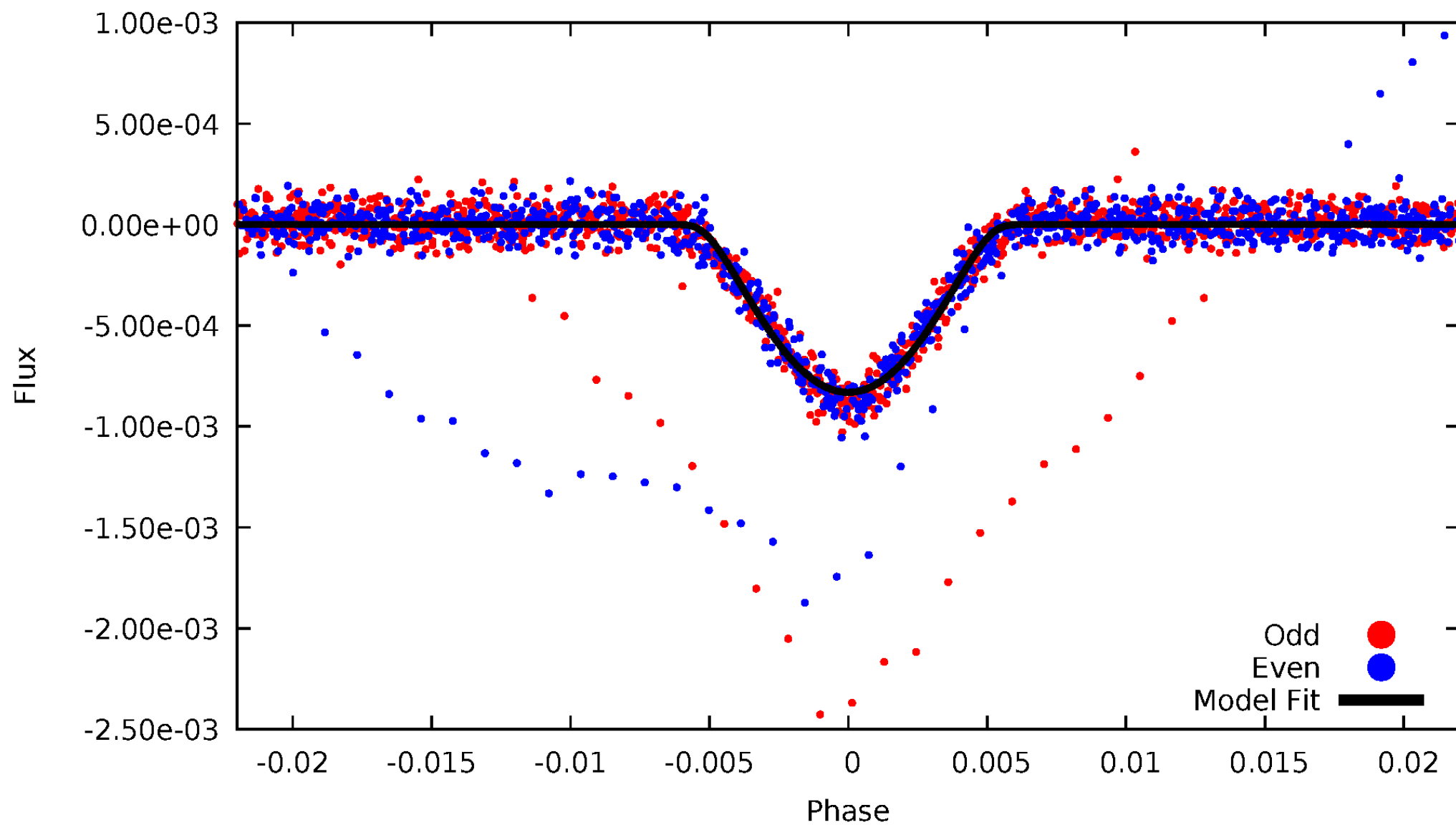


TCE 004075067-01



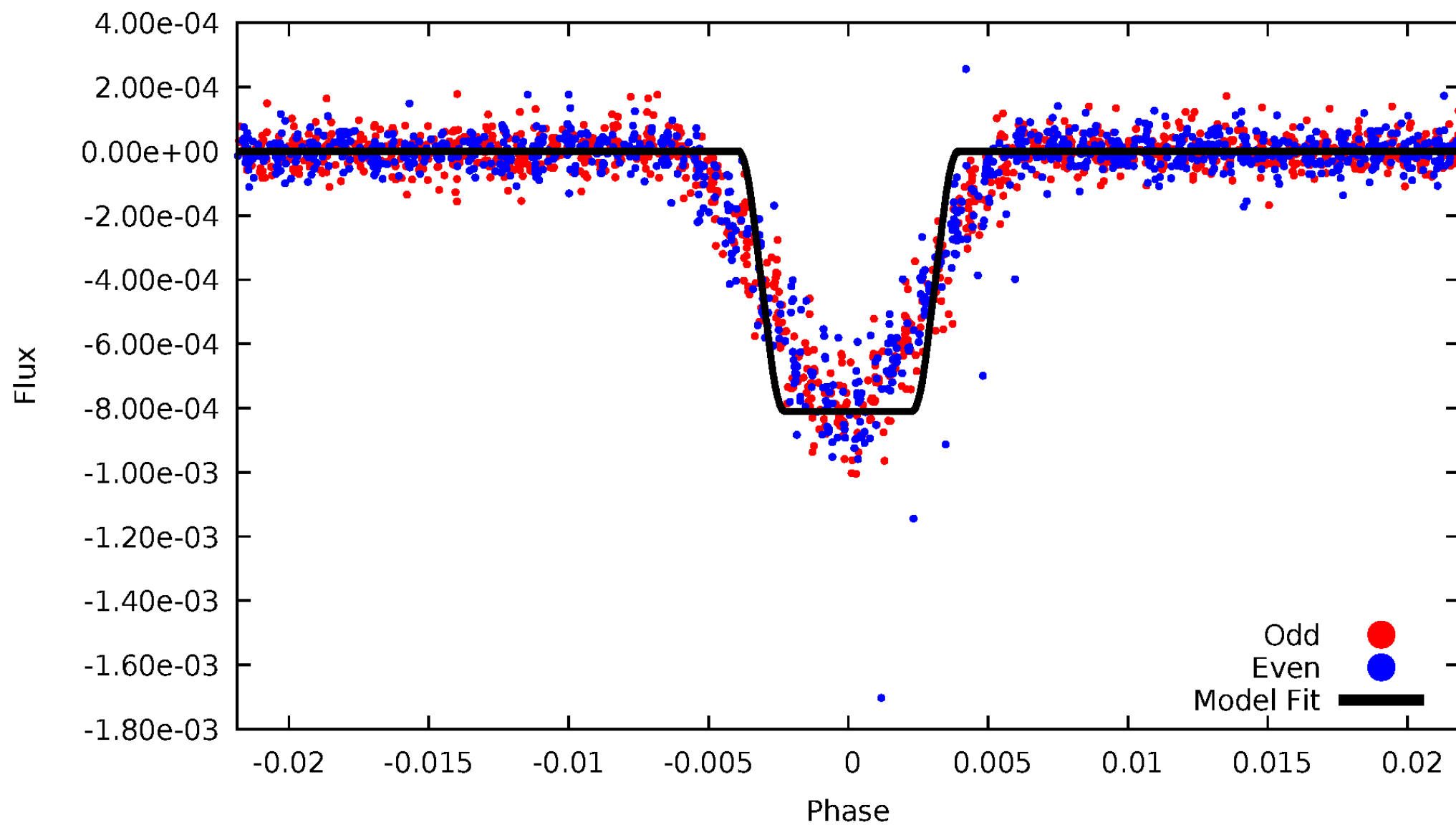
DV Odd/Even

TCE 004075067-01

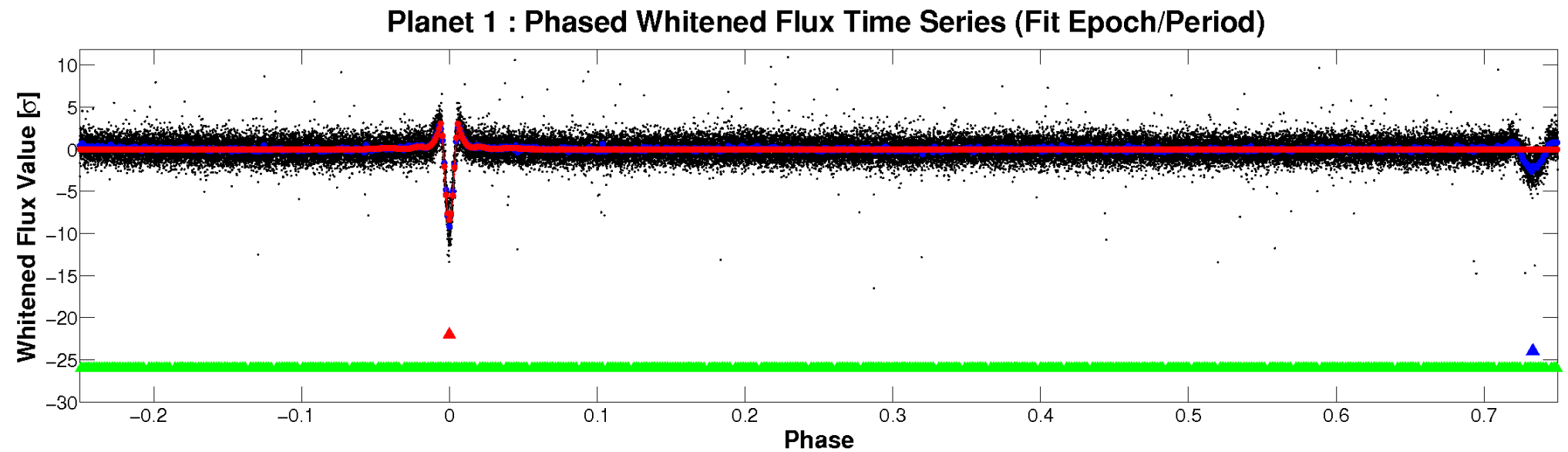
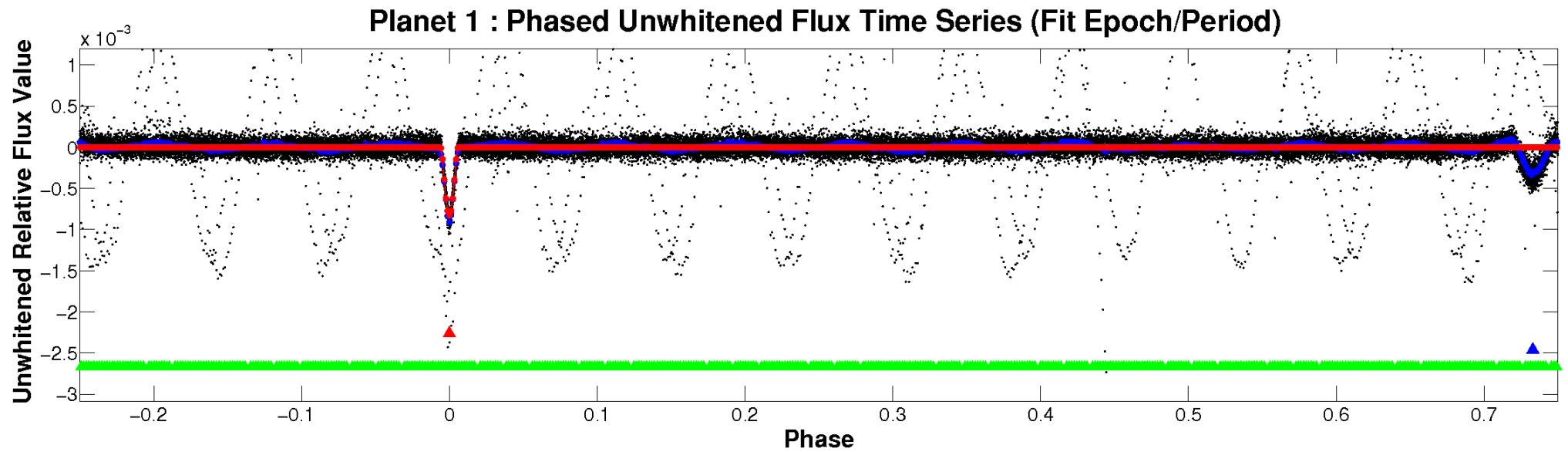


ALT Odd/Even

TCE 004075067-01

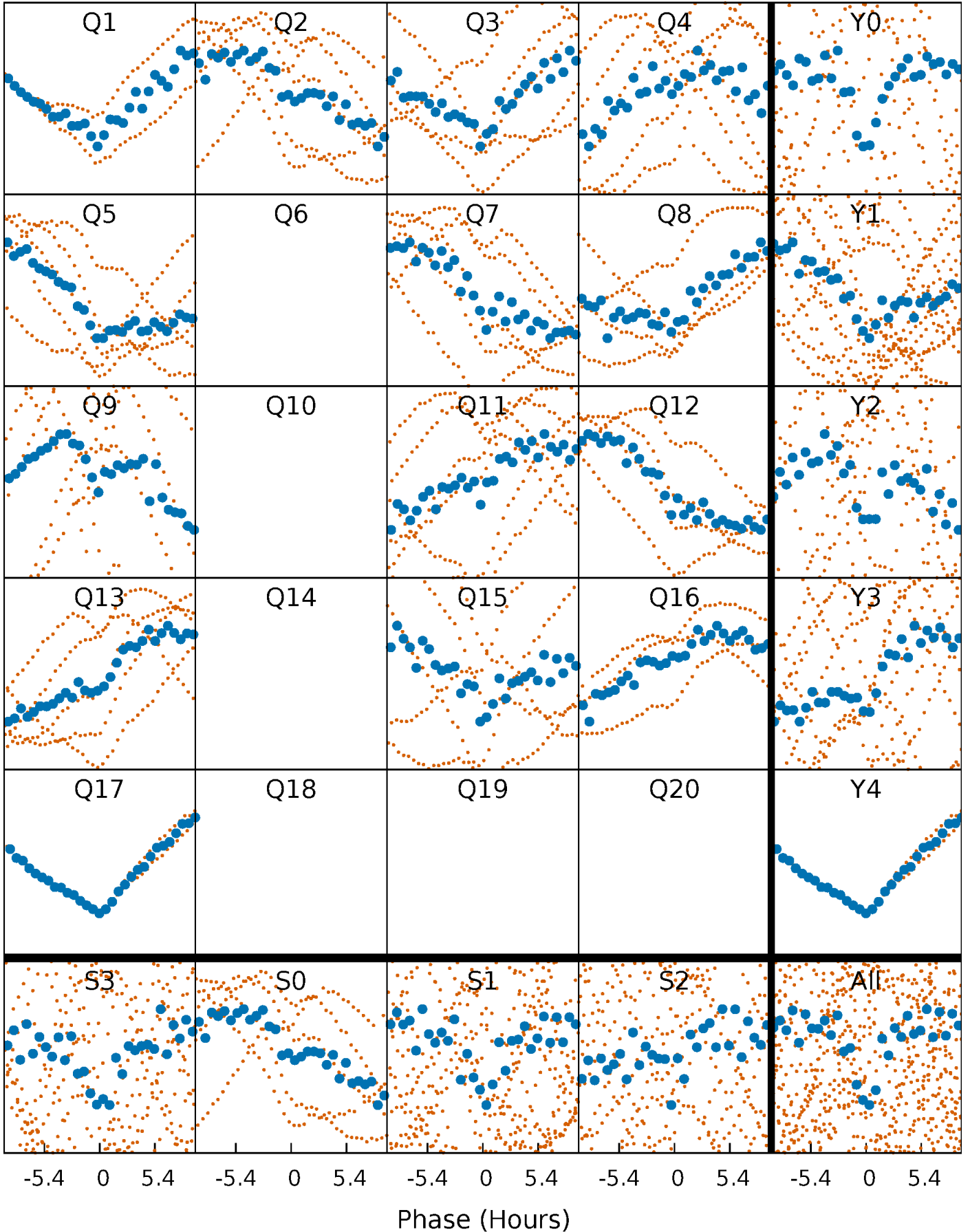


Non-Whitened Vs. Whitened Light Curve



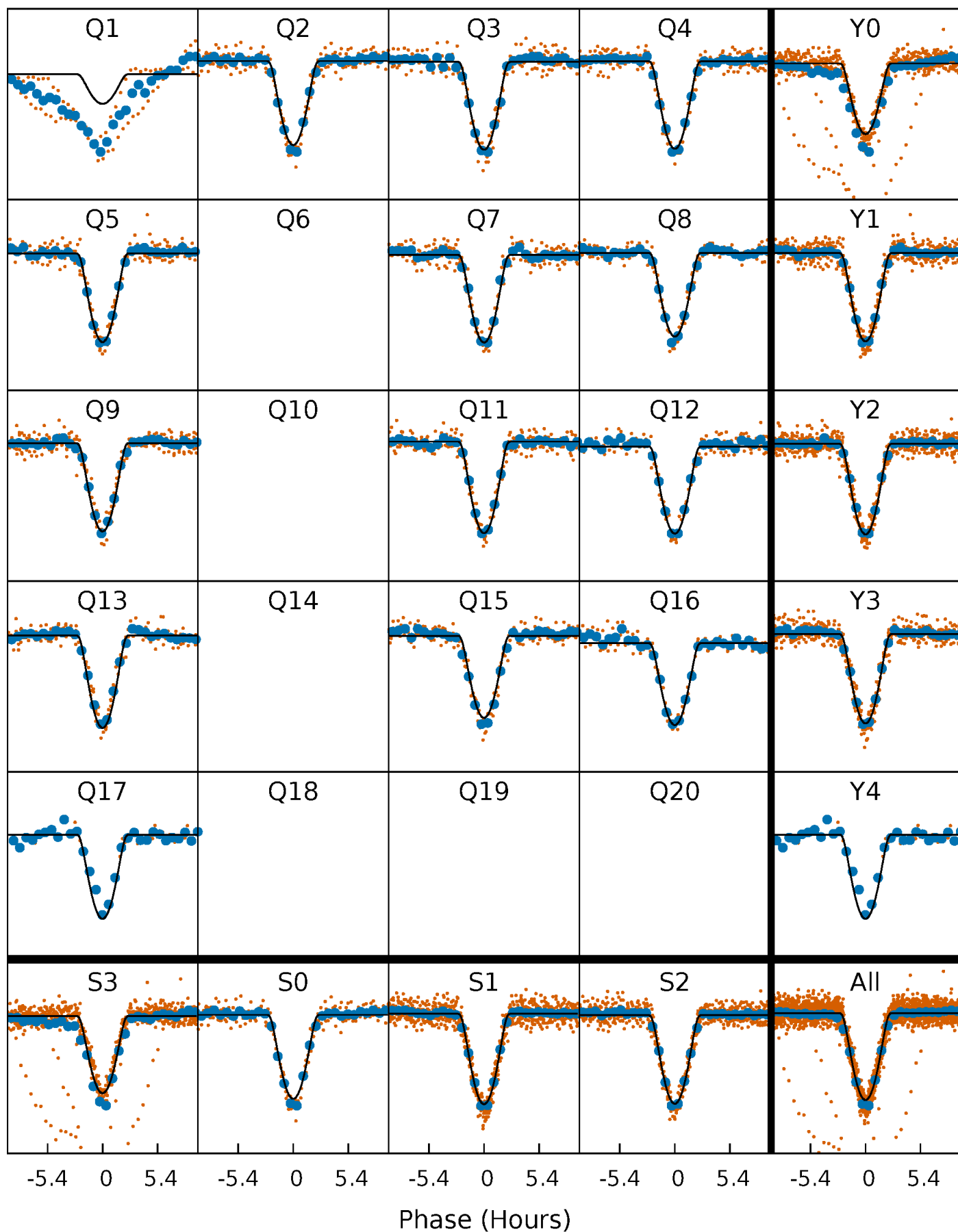
PDC Quarter-Phased Transit Curves

TCE 004075067-01 P= 17.747721 Days $T_0=139.346104$ (BKJD)



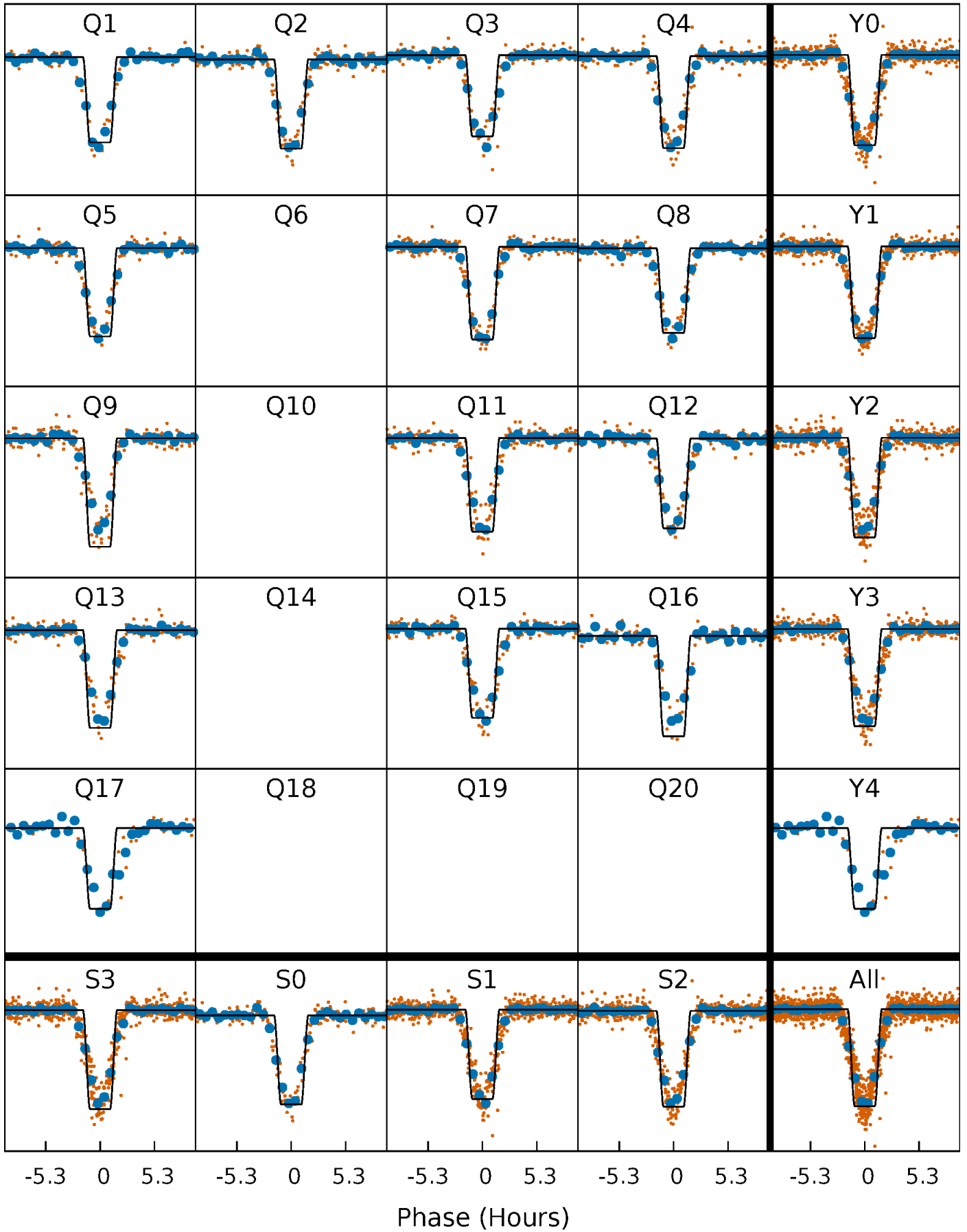
DV Quarter-Phased Transit Curves

TCE 004075067-01 P= 17.747721 Days $T_0=139.346104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

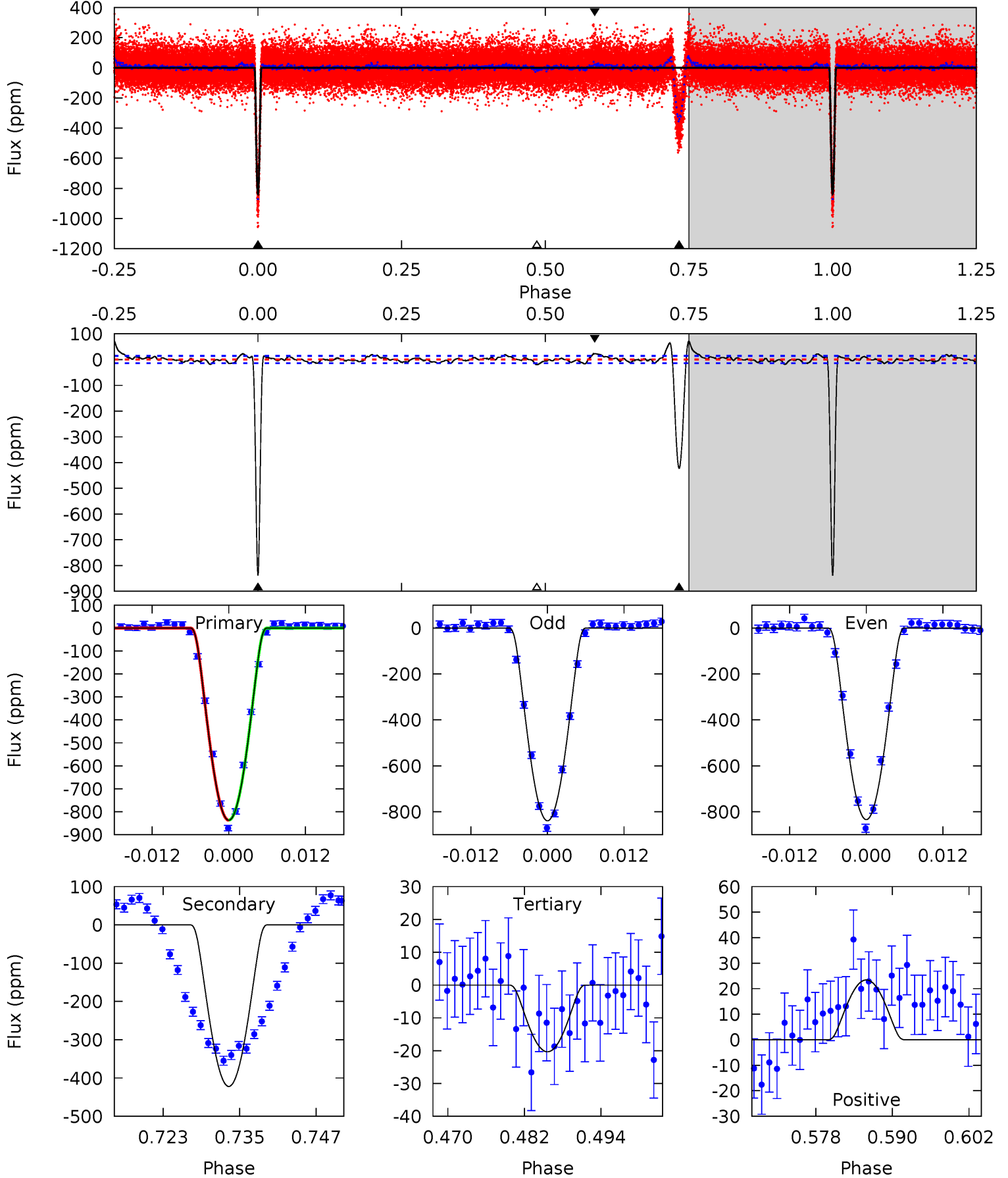
TCE 004075067-01 P= 17.747620 Days $T_0=139.350914$ (BKJD)



DV Model-Shift Uniqueness Test

004075067-01, P = 17.747721 Days, E = 121.598383 Days

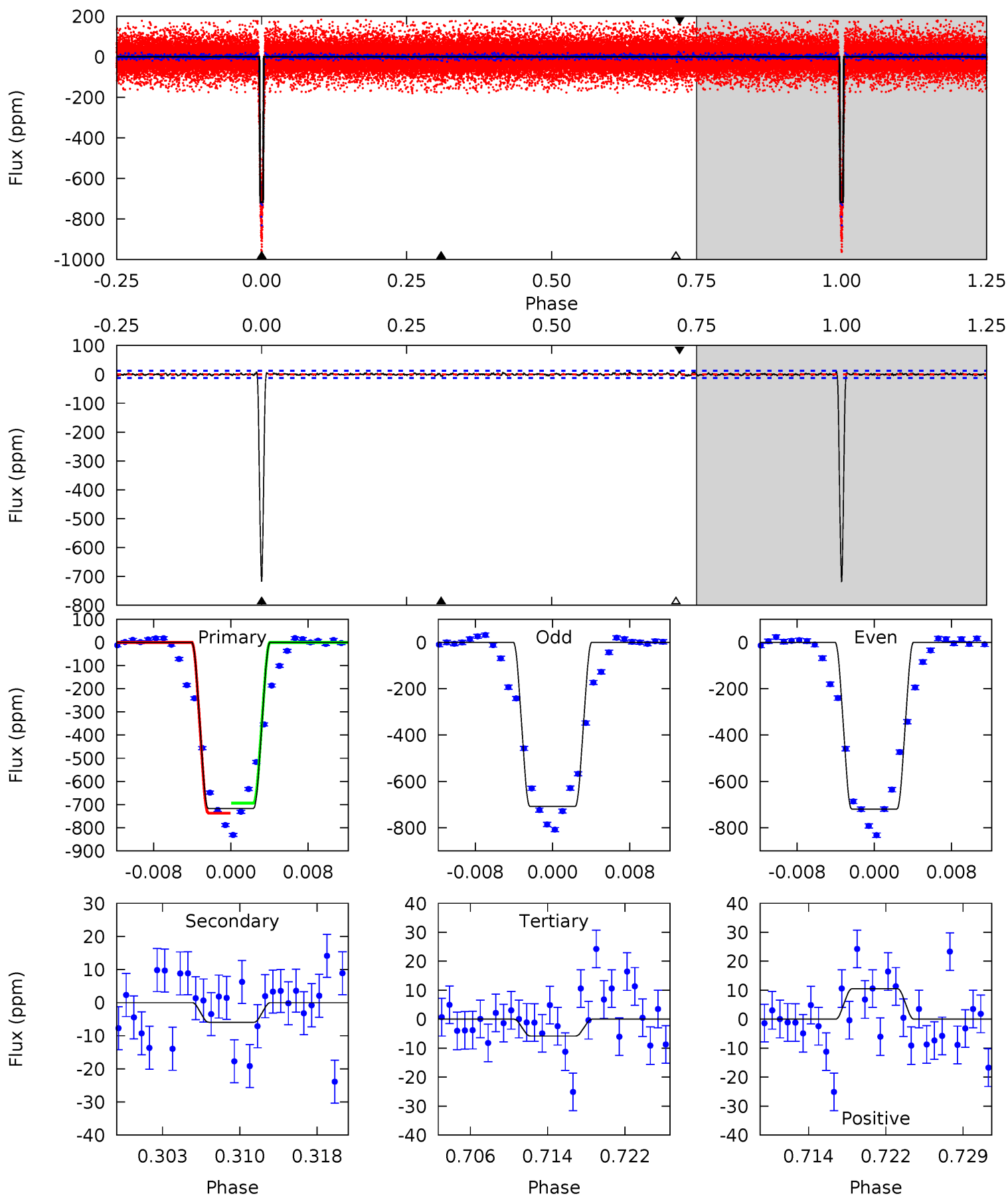
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
294.5	148.5	7.16	8.25	4.99	2.51	4.13	287.4	286.3	141.3	140.2	0.91	1.04	0.08	0.18



Alt Model-Shift Uniqueness Test

004075067-01, P = 17.747620 Days, E = 121.603294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
289.2	2.39	2.35	4.24	5.07	2.66	0.81	286.9	285.0	0.04	-1.85	2.30	1.00	0.01	8.68



Stellar Parameters For KIC 004075067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8992^{+289}_{-434}	$3.535^{+0.560}_{-0.029}$	$0.070^{+0.250}_{-0.600}$	$4.832^{+0.469}_{-2.814}$	$2.922^{+0.242}_{-0.968}$	$0.036^{+0.261}_{-0.004}$
	+3%/-5%	+16%/-1%	+357%/-857%	+10%/-58%	+8%/-33%	+716%/-10%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004075067-01 / KOI 3777.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-422 ± 3	$22.25^{+6.06}_{-6.58}$	2643^{+198}_{-362}	5553^{+528}_{-450}	17^{+14}_{-6}
Alt.	-6 ± 2	$12.52^{+5.13}_{-4.58}$	2622^{+204}_{-383}	2861^{+520}_{-961}	$0.734^{+0.922}_{-0.423}$

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

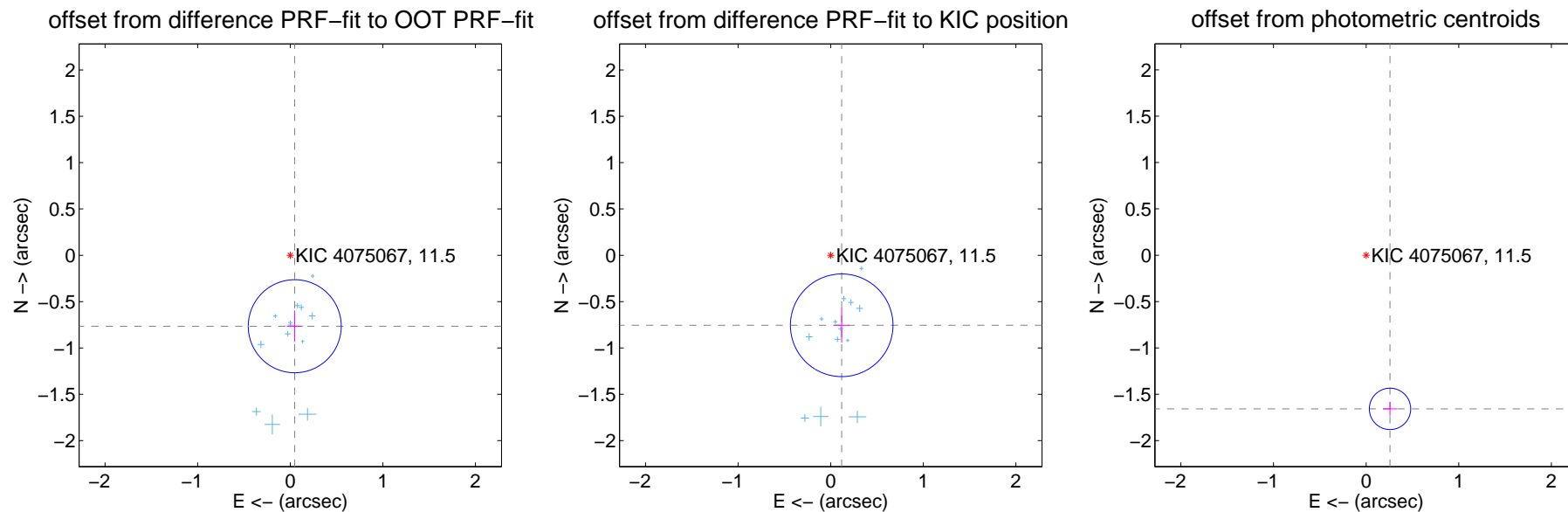
DV Centroid Data

Supplemental centroid analysis for 004075067-01. **Kepler magnitude: 11.50.** Transit SNR 131.47

There are 14 quarters with good PRF difference image offsets

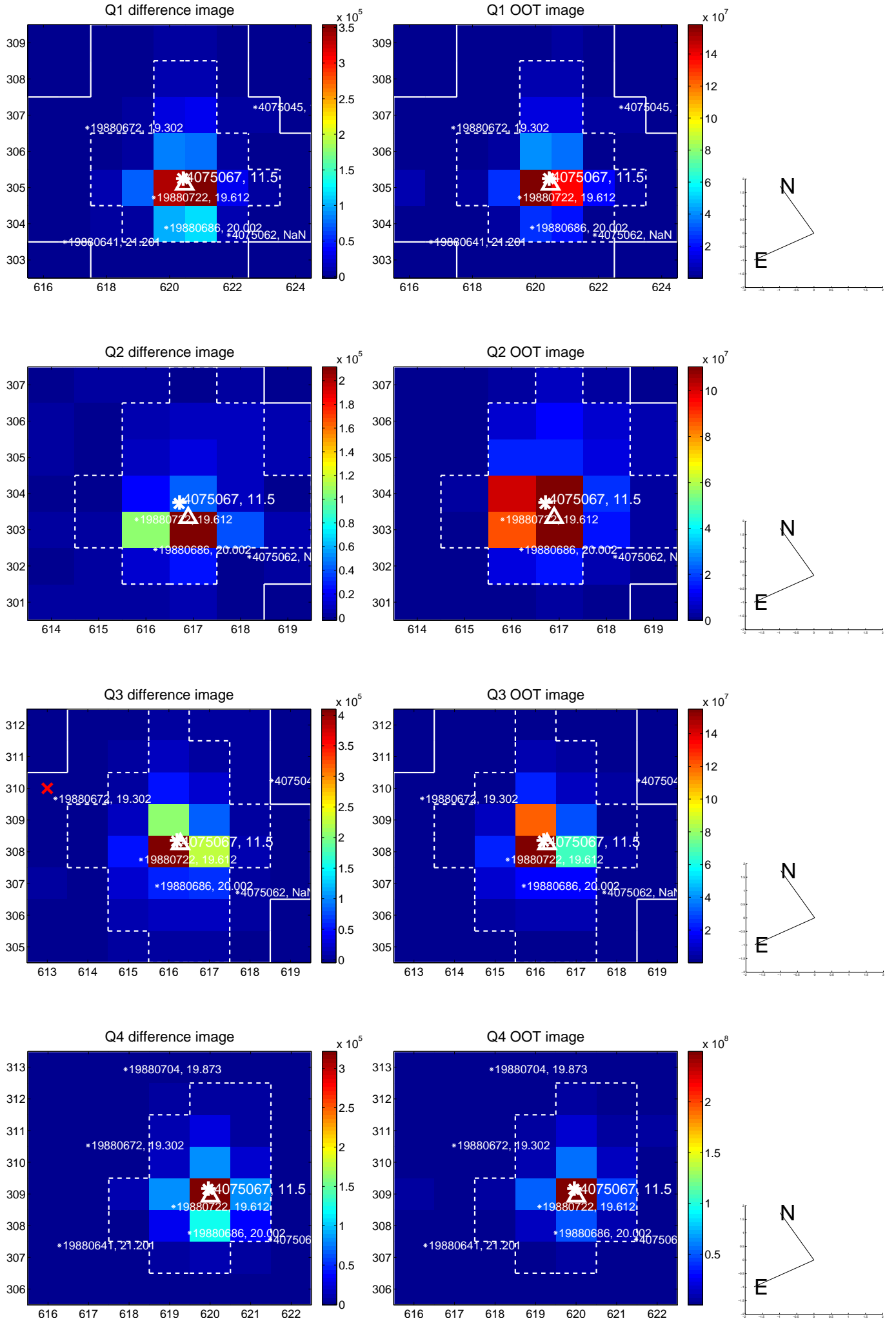
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.767 ± 0.167	4.58	-0.048 ± 0.086	-0.766 ± 0.168
PRF-fit source offset from KIC position	0.765 ± 0.185	4.14	-0.119 ± 0.083	-0.755 ± 0.187
photometric centroid source offset	1.68 ± 0.07	22.55	-0.26 ± 0.08	-1.66 ± 0.07

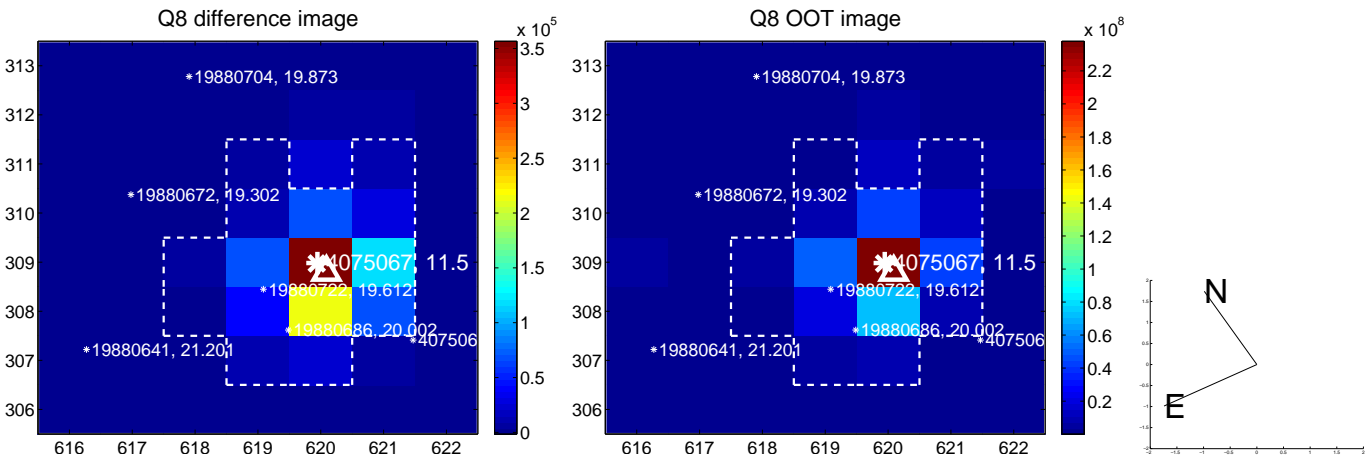
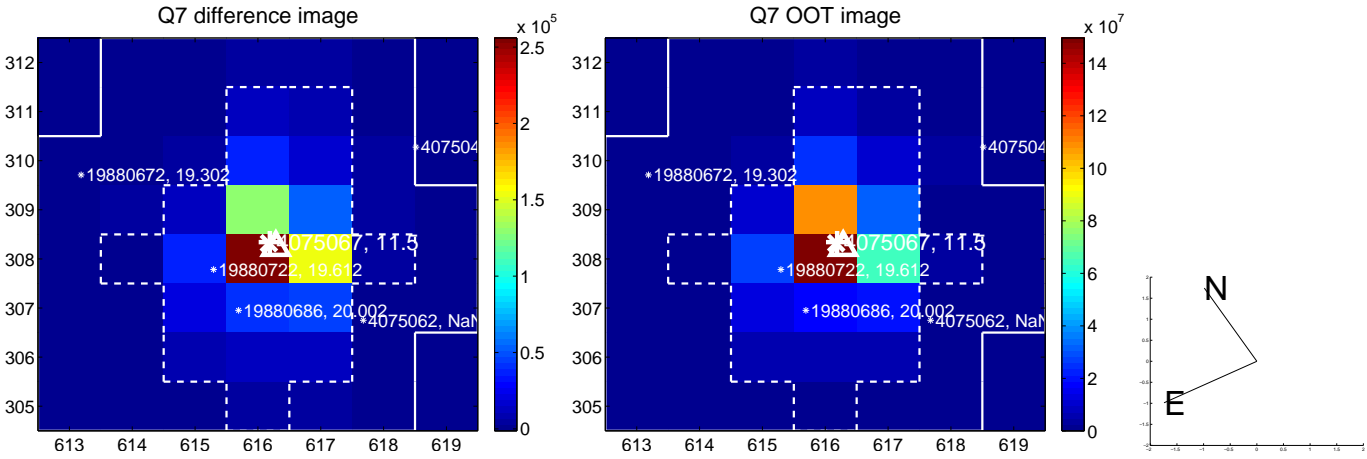
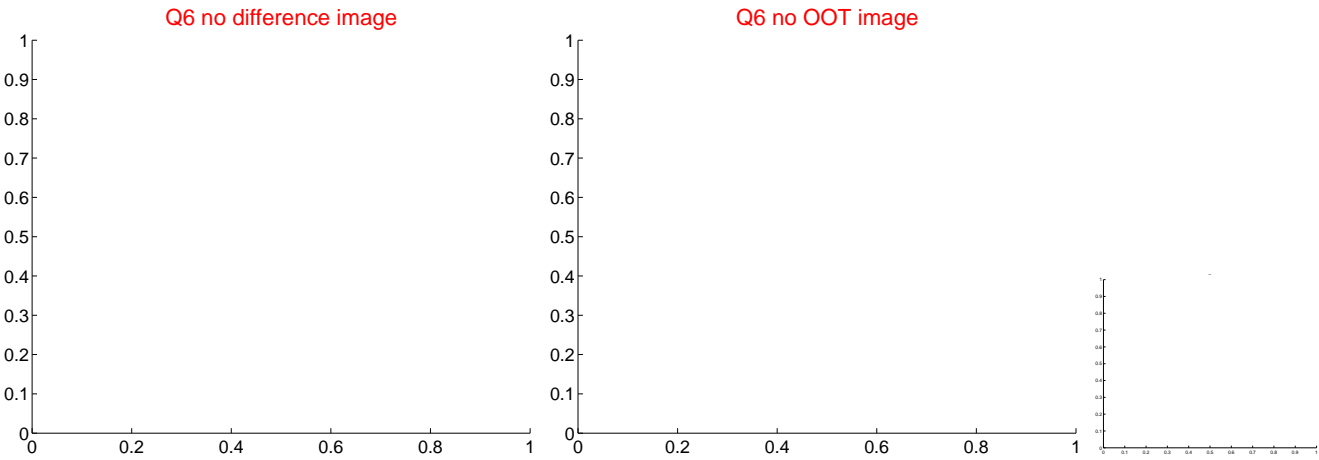
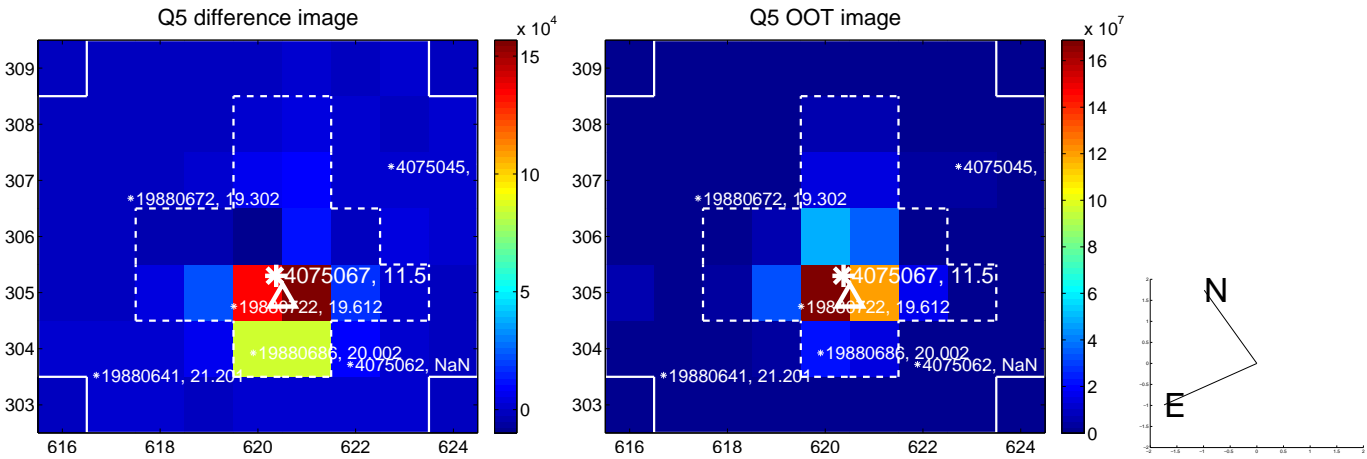


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

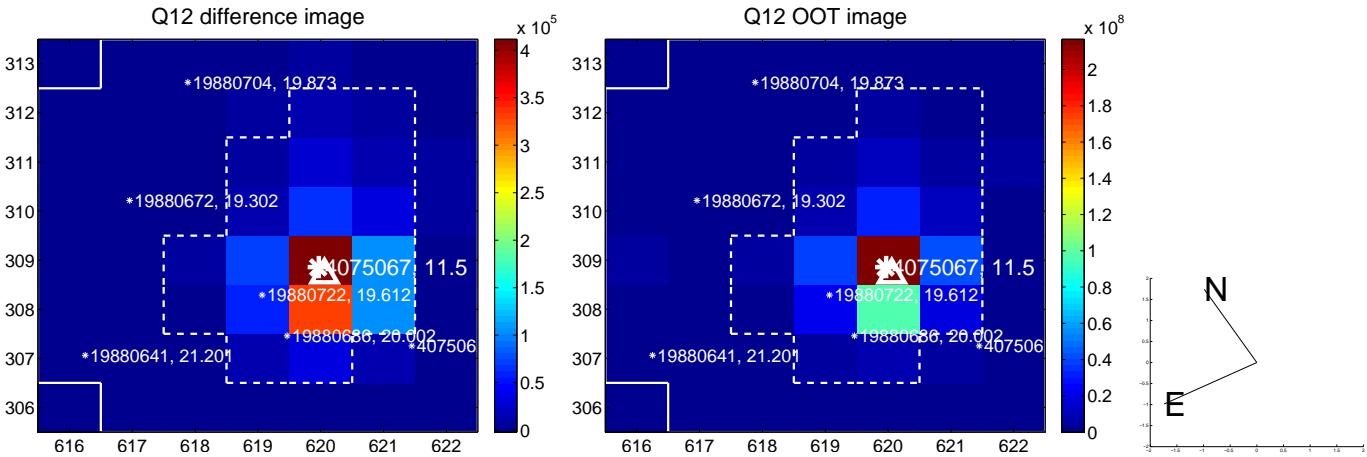
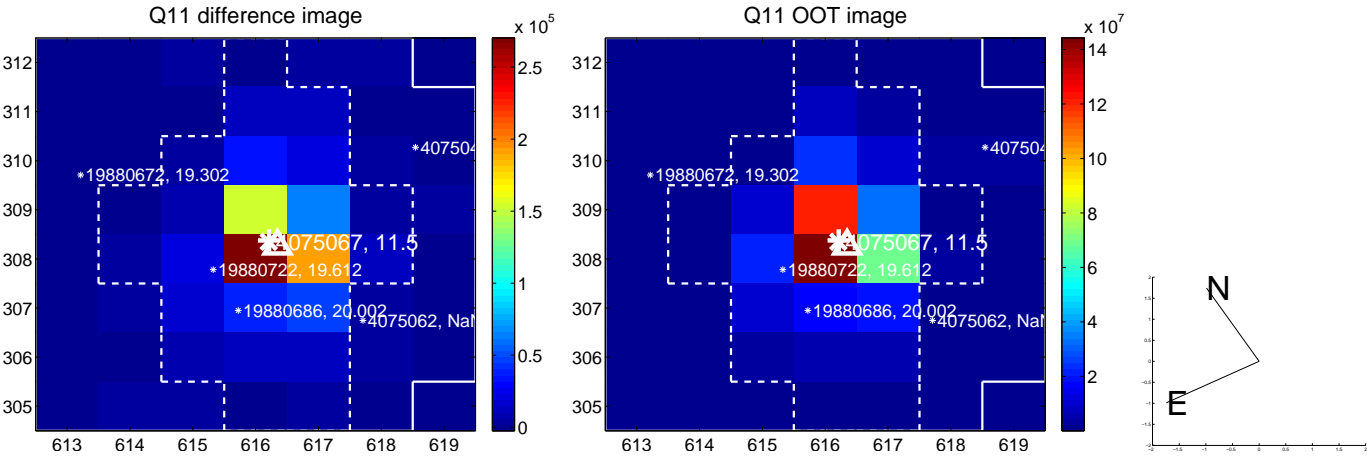
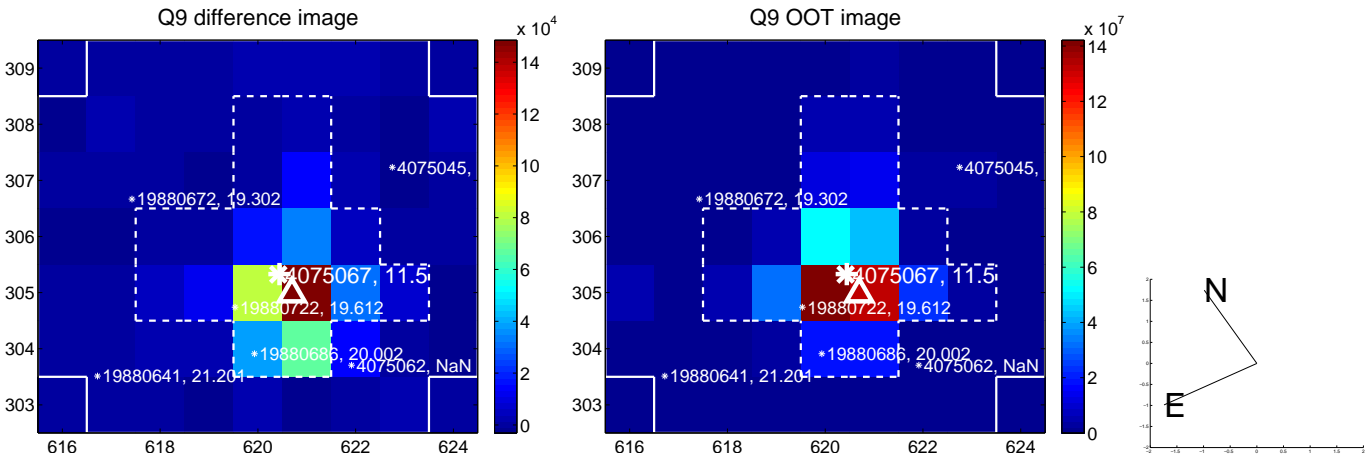
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



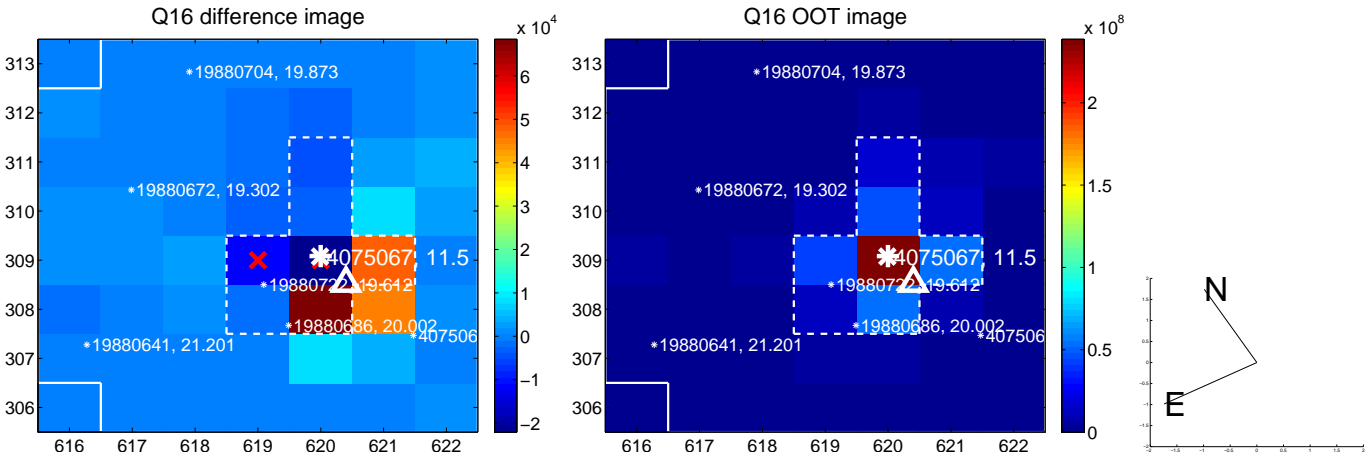
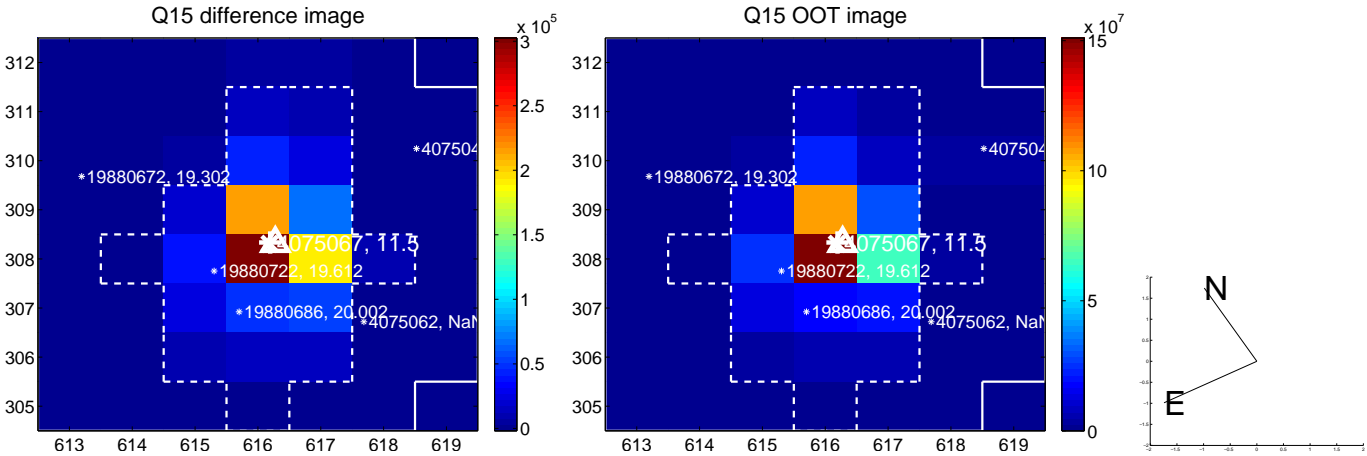
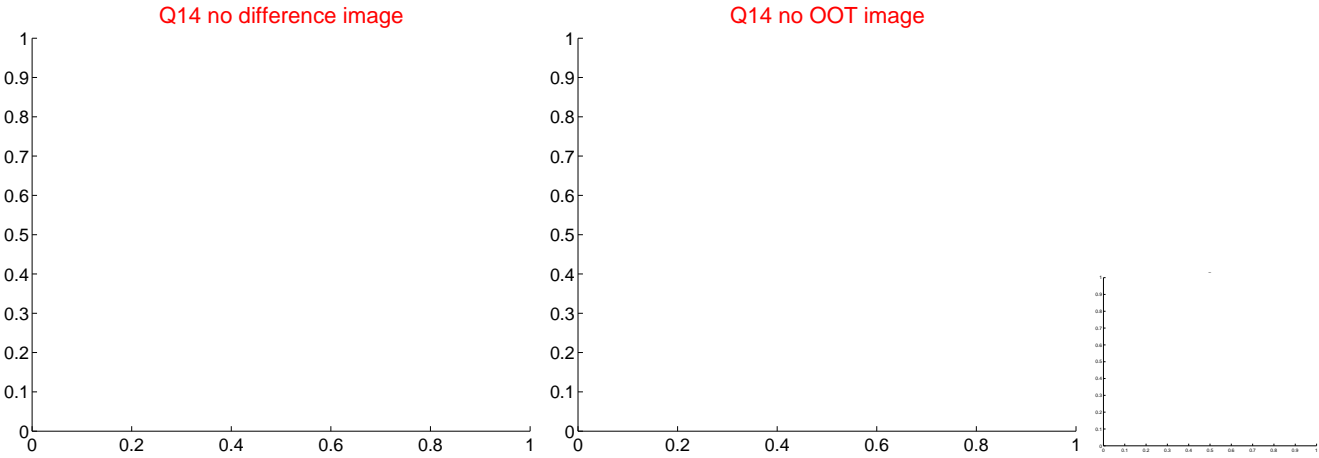
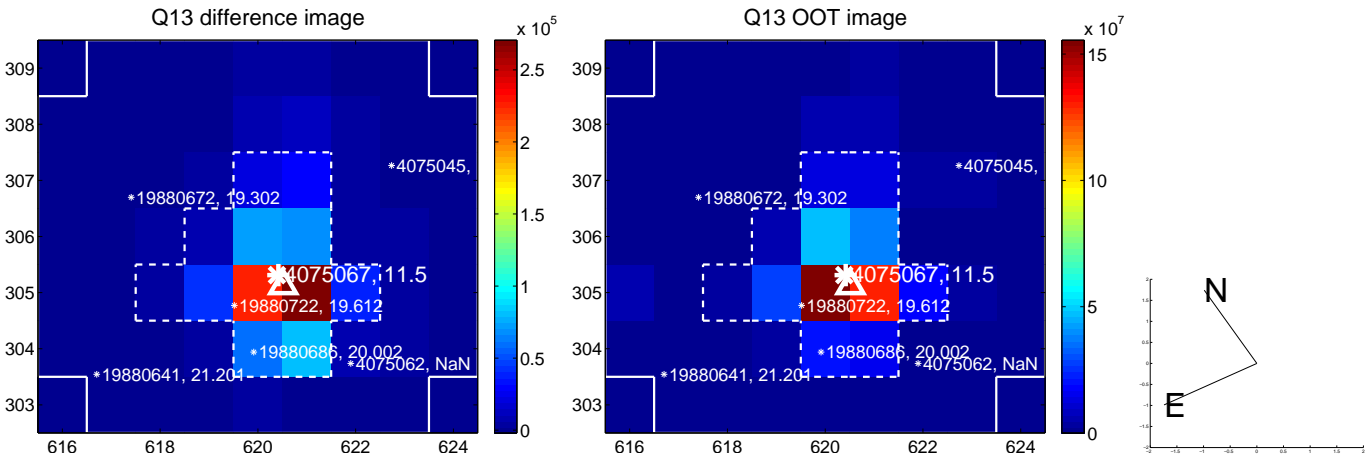
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



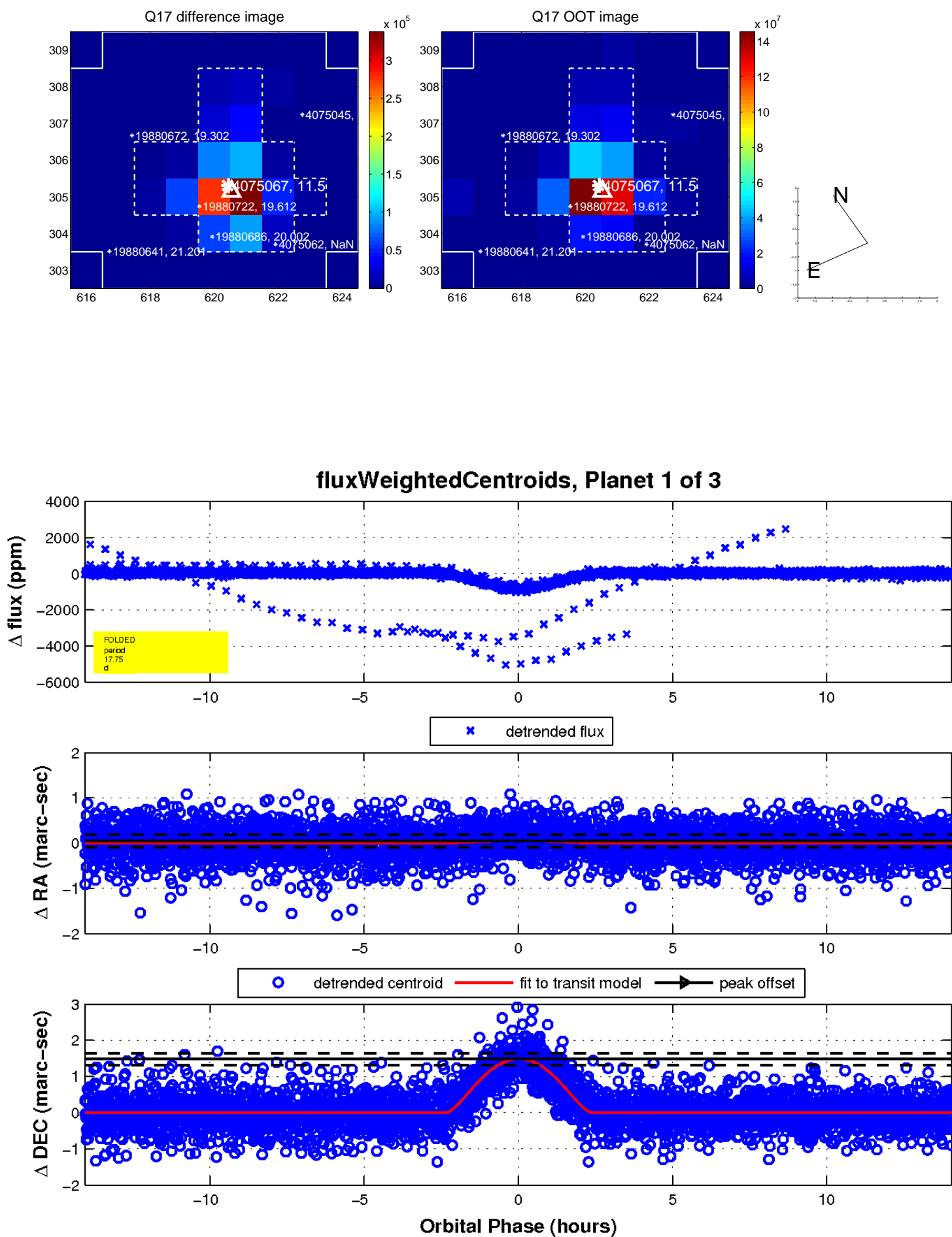
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

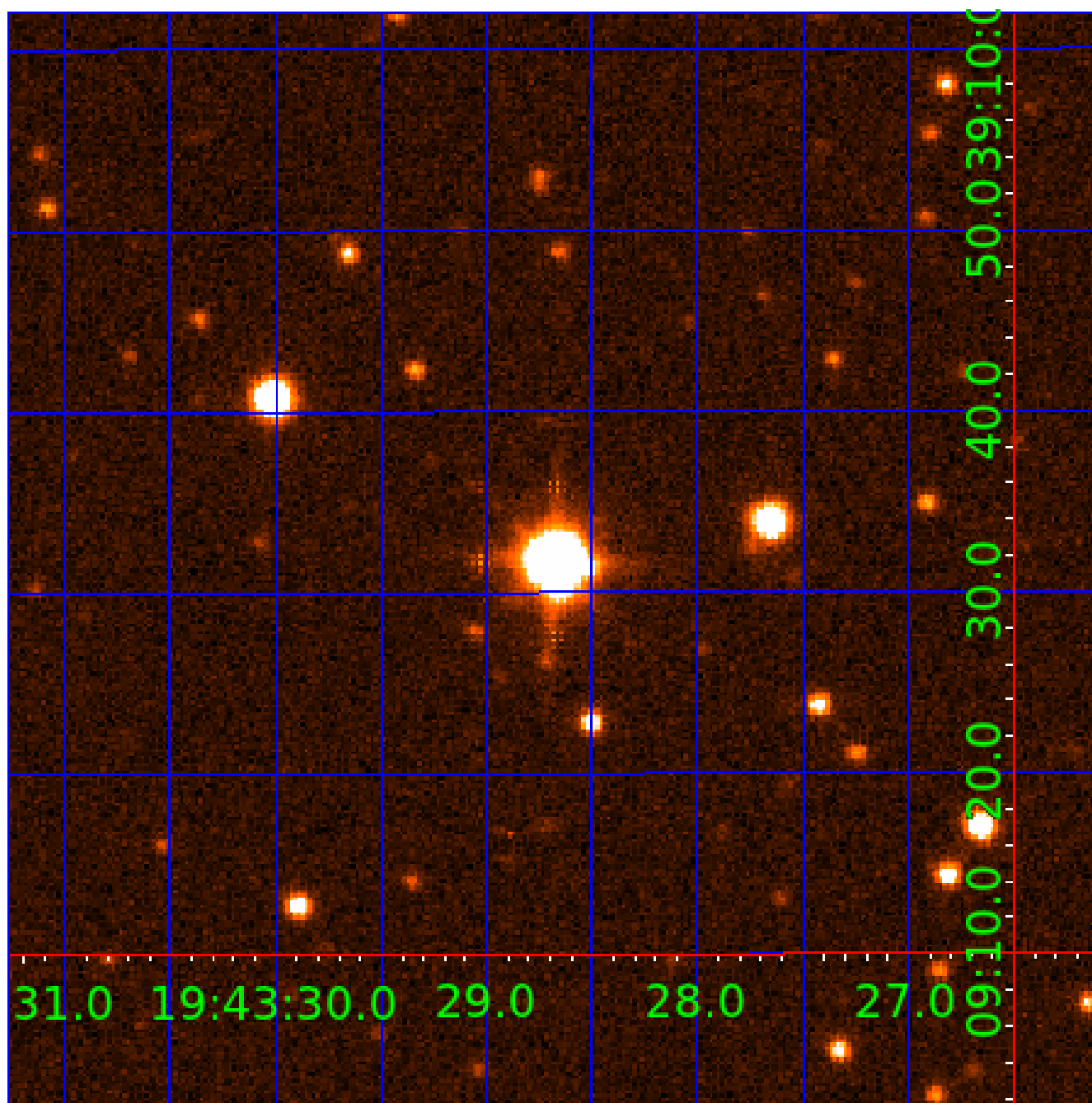


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004075067

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})
004075067-01	OBS	3777.01	17.747721	139.346104	831.0	4.685	128.5	131.5	4.83	8992	25.50	3774.68
004075067-02	OBS	No	17.747605	134.613190	417.2	11.412	52.1	60.8	4.83	8992	18.32	3774.72
004075067-03	OBS	No	2.754487	133.580150	17.7	28.192	14.1	7.5	4.83	8992	2.08	45256.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004075067-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_SATURATED
004075067-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
004075067-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED

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 004075067-02

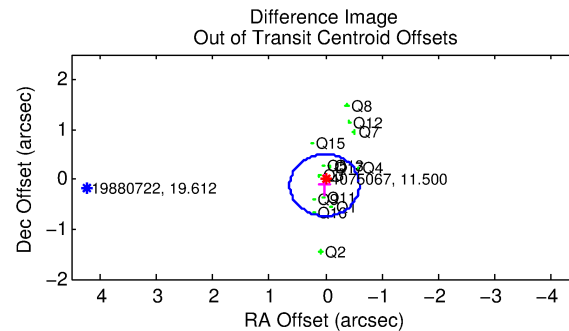
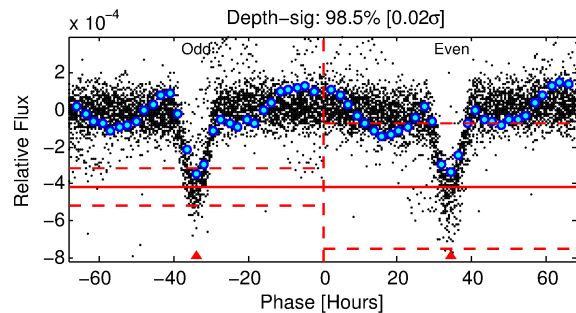
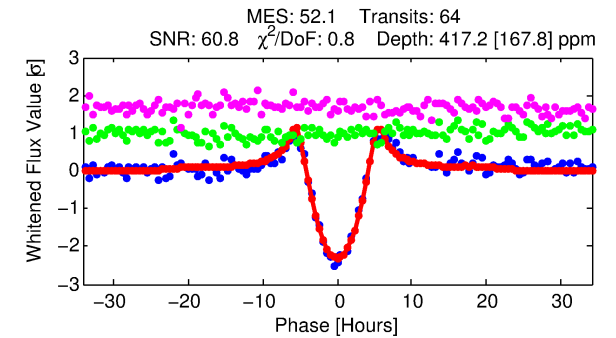
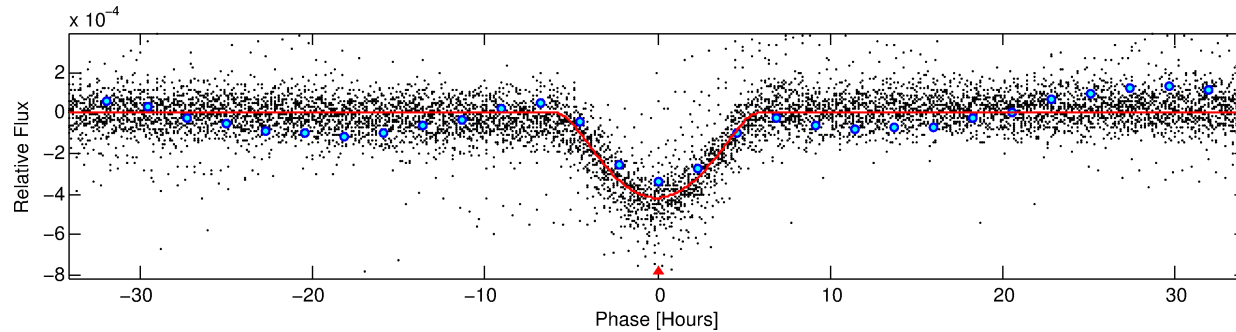
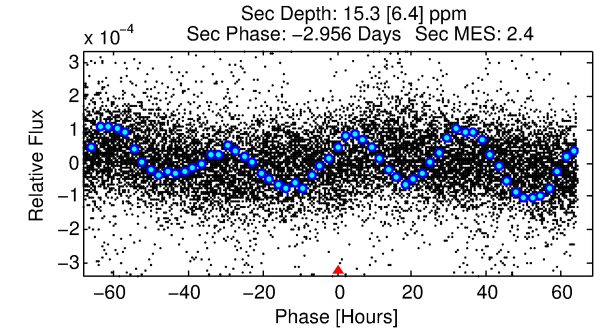
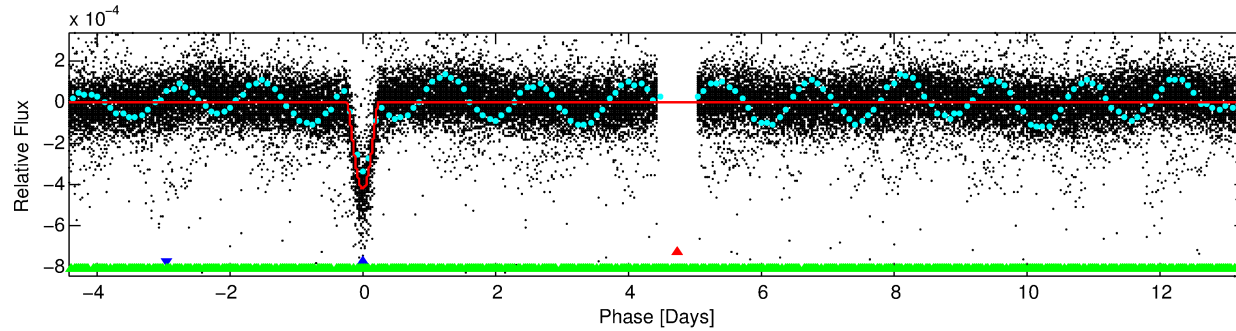
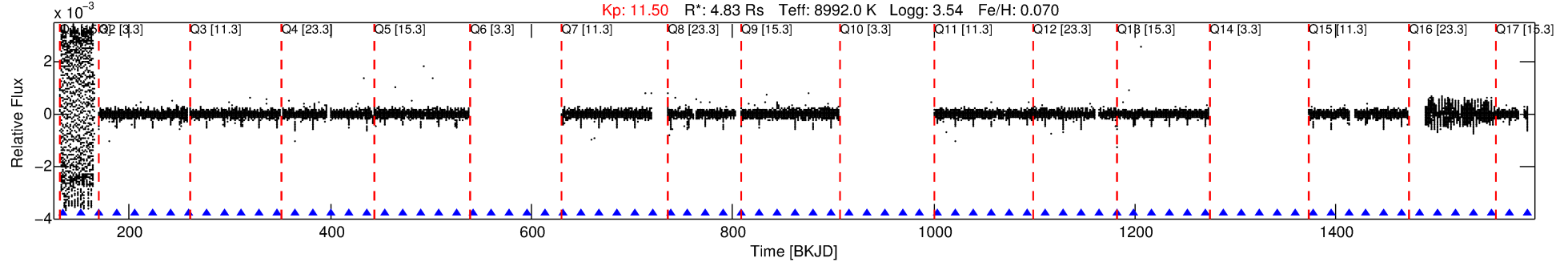
No Significant Match Found

DV One-Page Summary

KIC: 4075067 Candidate: 2 of 3 Period: 17.748 d

KOI: K03777 Corr: No Ephemeris Match

Kp: 11.50 R*: 4.83 Rs Teff: 8992.0 K Logg: 3.54 Fe/H: 0.070



DV Fit Results:

Period = 17.74760 [0.00006] d
Epoch = 134.6132 [0.0029] BKJD
Rp/R* = 0.0347 [0.0078]
a/R* = 3.32 [0.18]
b = 1.00 [0.02]
Seff = 3774.72 [3634.28]
Teq = 1999 [481] K
Rp = 18.32 [11.44] Re
a = 0.1903 [0.1102] AU
Ag = 0.91 [1.02] [-0.09σ]
Teff = 3016 [484] K [1.49σ]

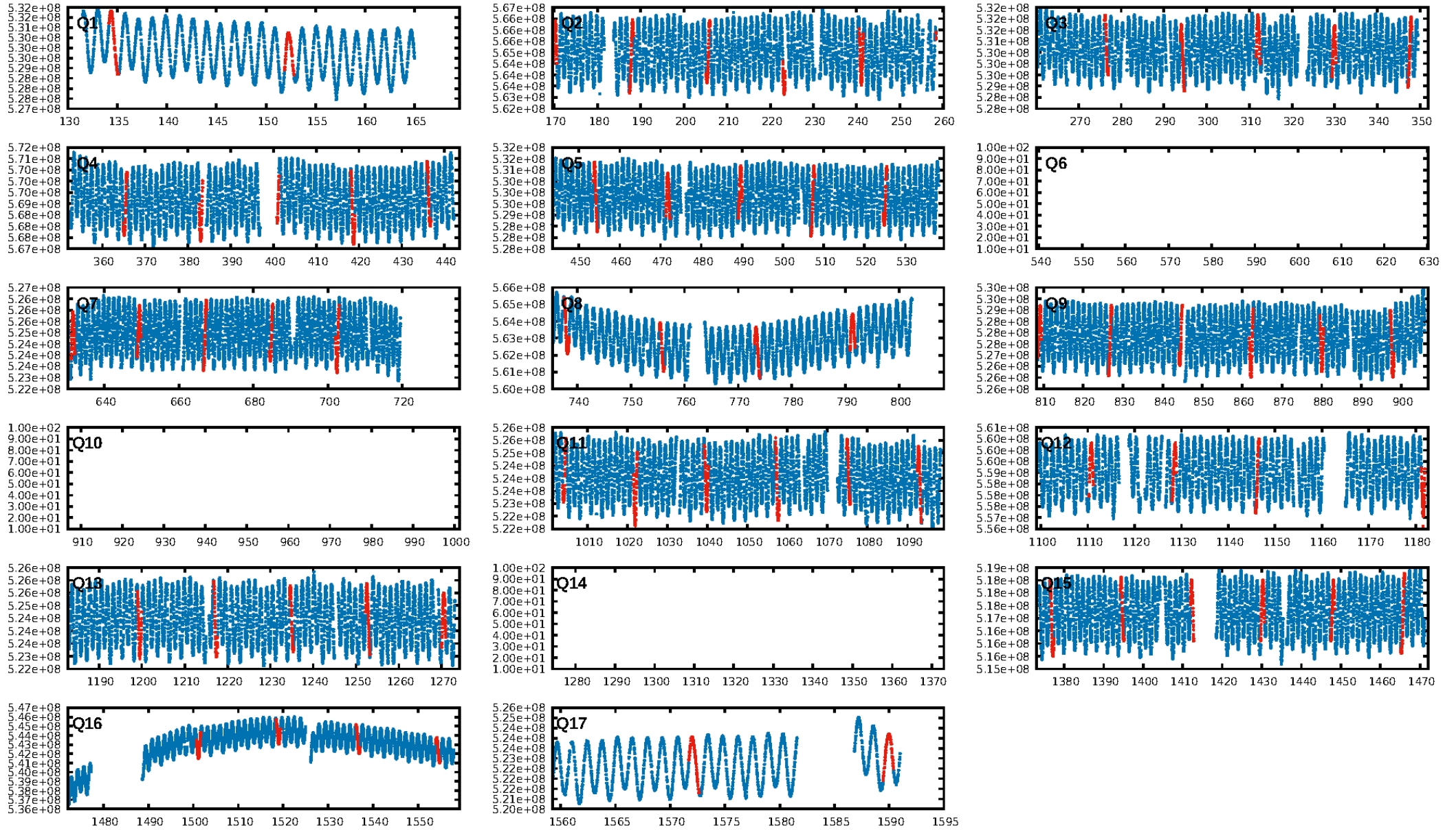
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.83σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 66.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [60/60]
GhostDiagnostic-chr: 1.556
Centroid-sig: 0.0%
Centroid-so: 1.424 arcsec [11.69σ]
OotOffset-rm: 0.125 arcsec [0.61σ]
KicOffset-rm: 0.153 arcsec [0.83σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 0.00 [0/14]

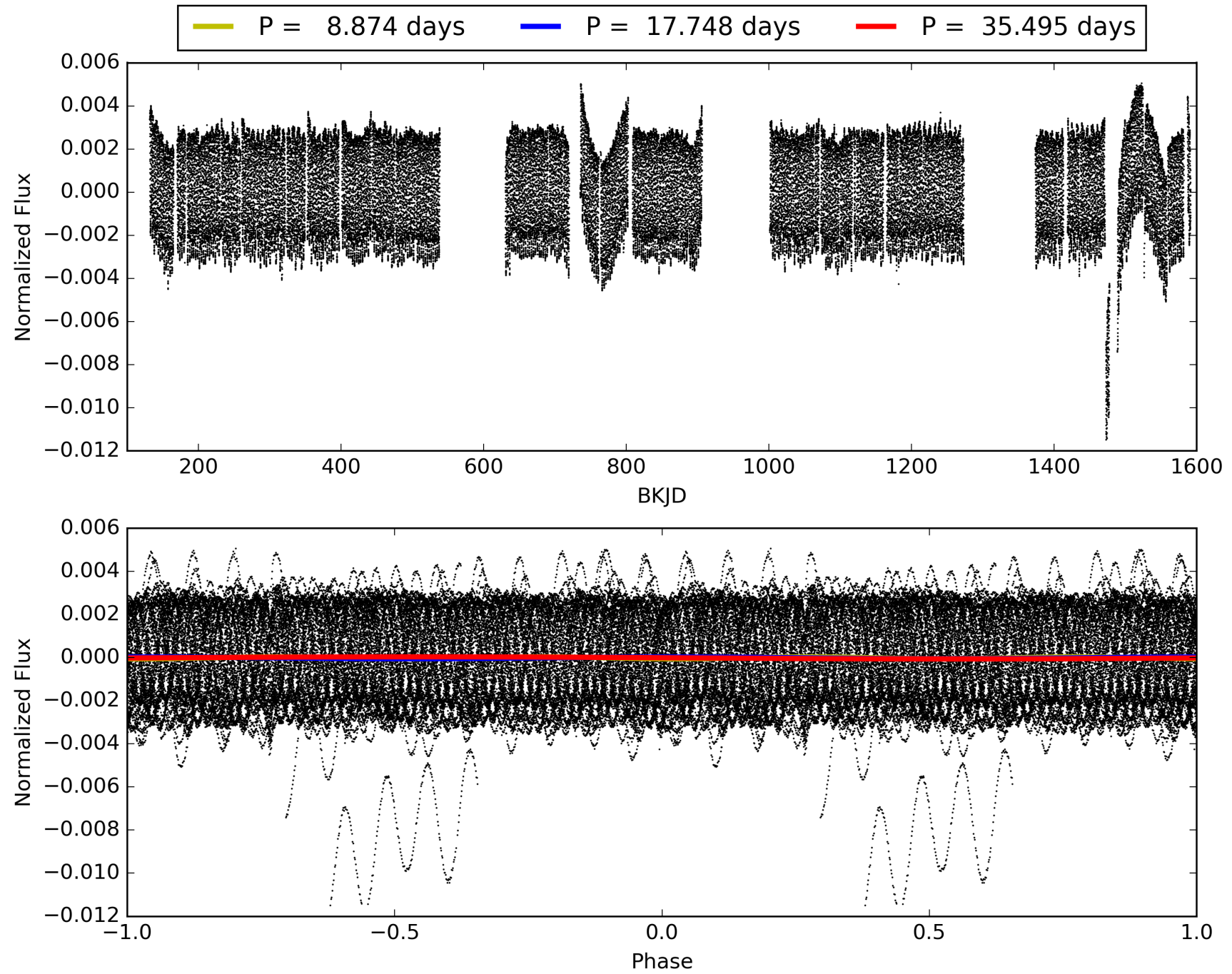
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:23:33 Z

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

TCE 004075067-02, PDC Light Curves

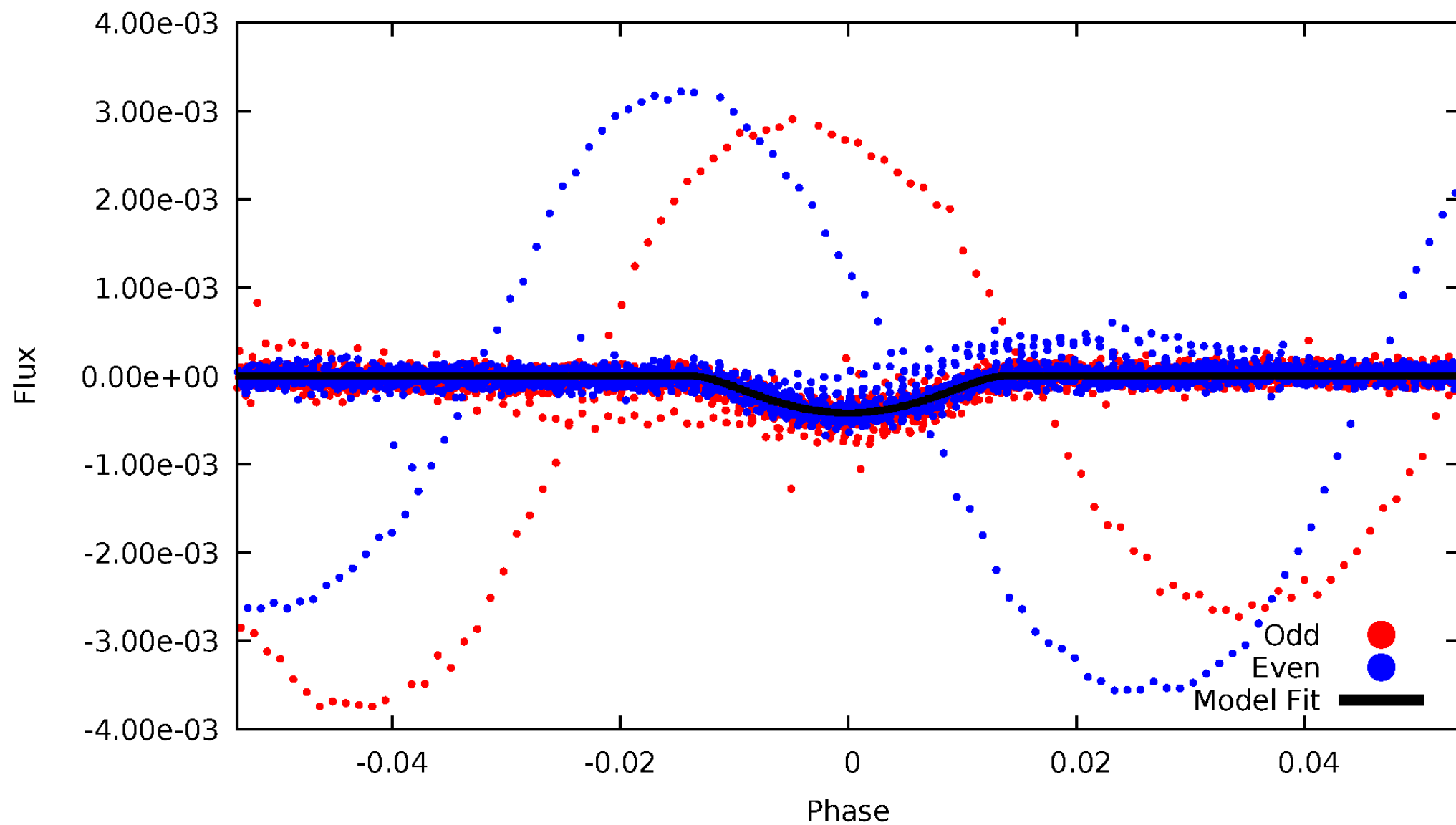


TCE 004075067-02



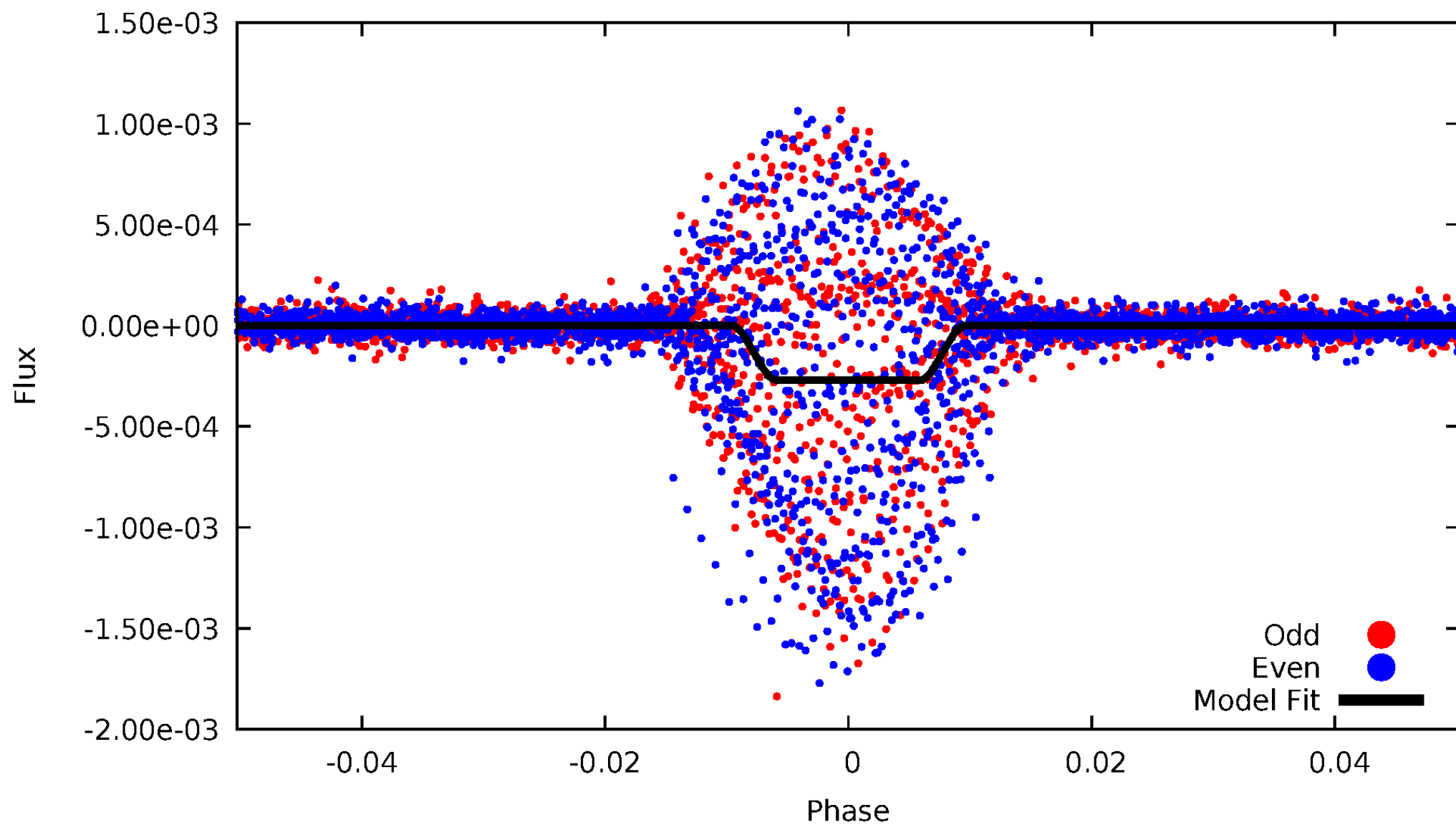
DV Odd/Even

TCE 004075067-02



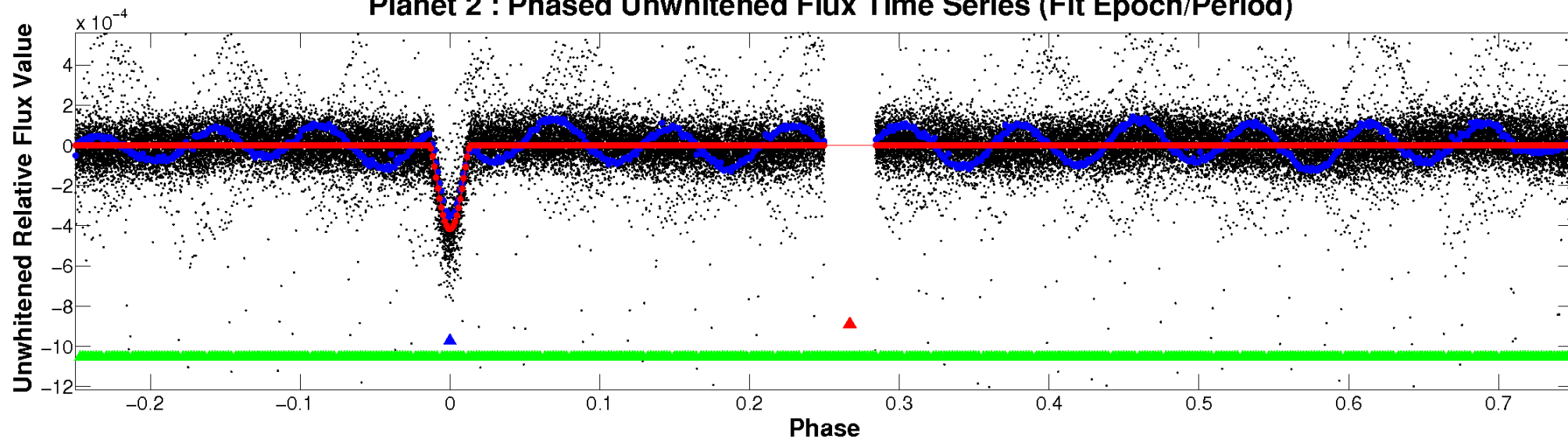
ALT Odd/Even

TCE 004075067-02

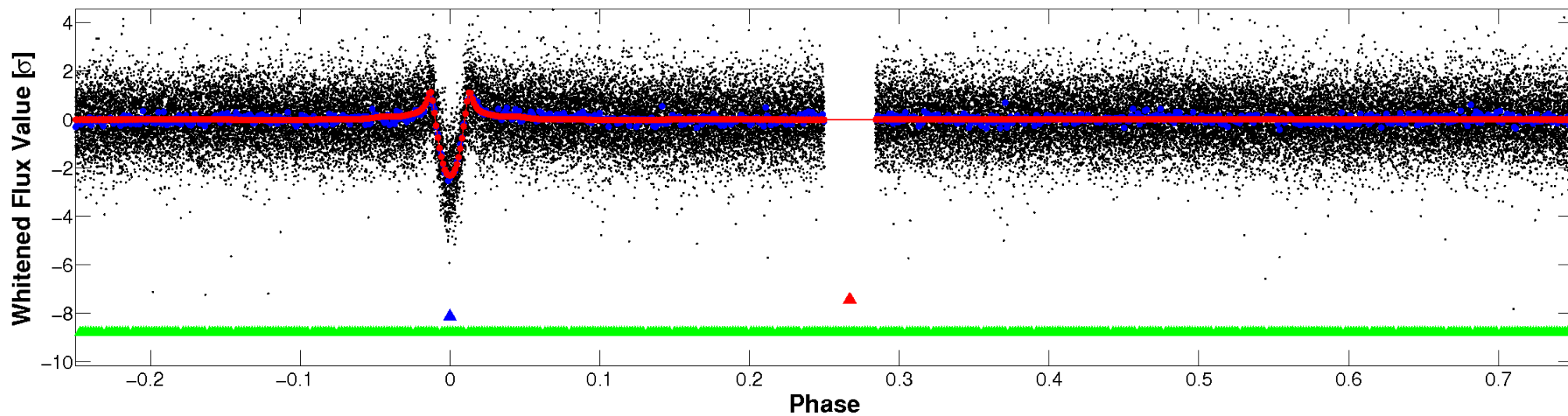


Non-Whitened Vs. Whitened Light Curve

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

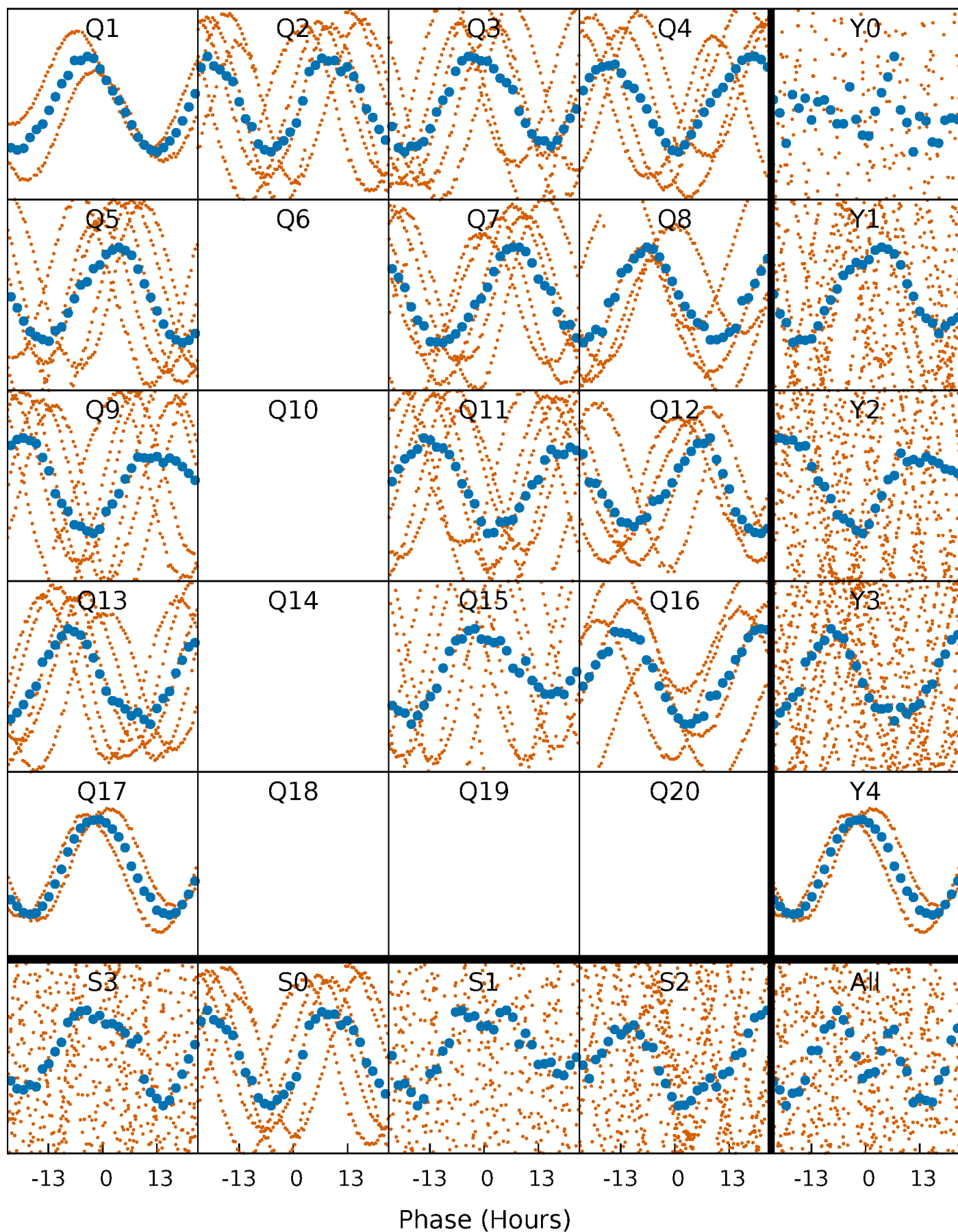


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



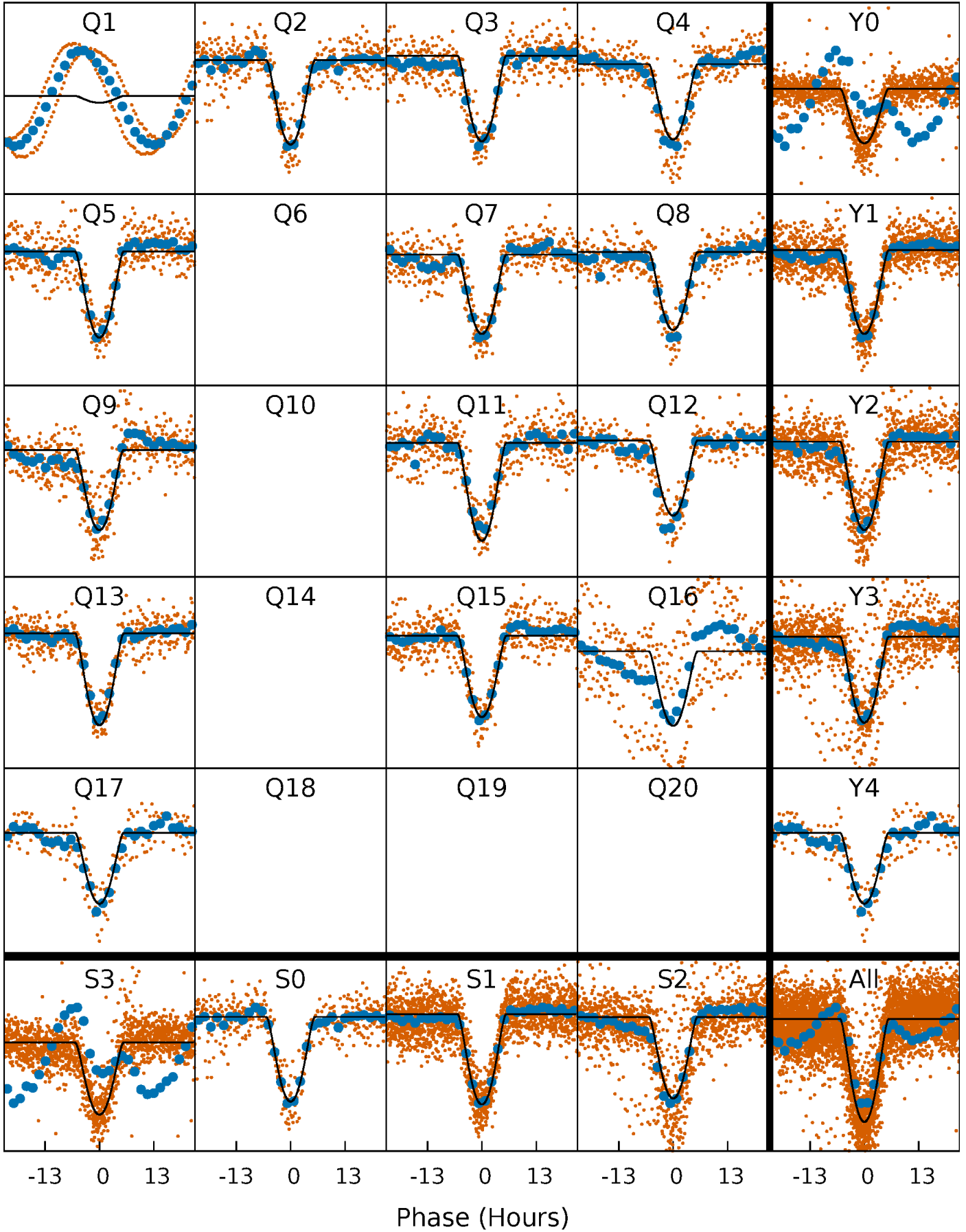
PDC Quarter-Phased Transit Curves

TCE 004075067-02 P= 17.747605 Days $T_0=134.613190$ (BKJD)



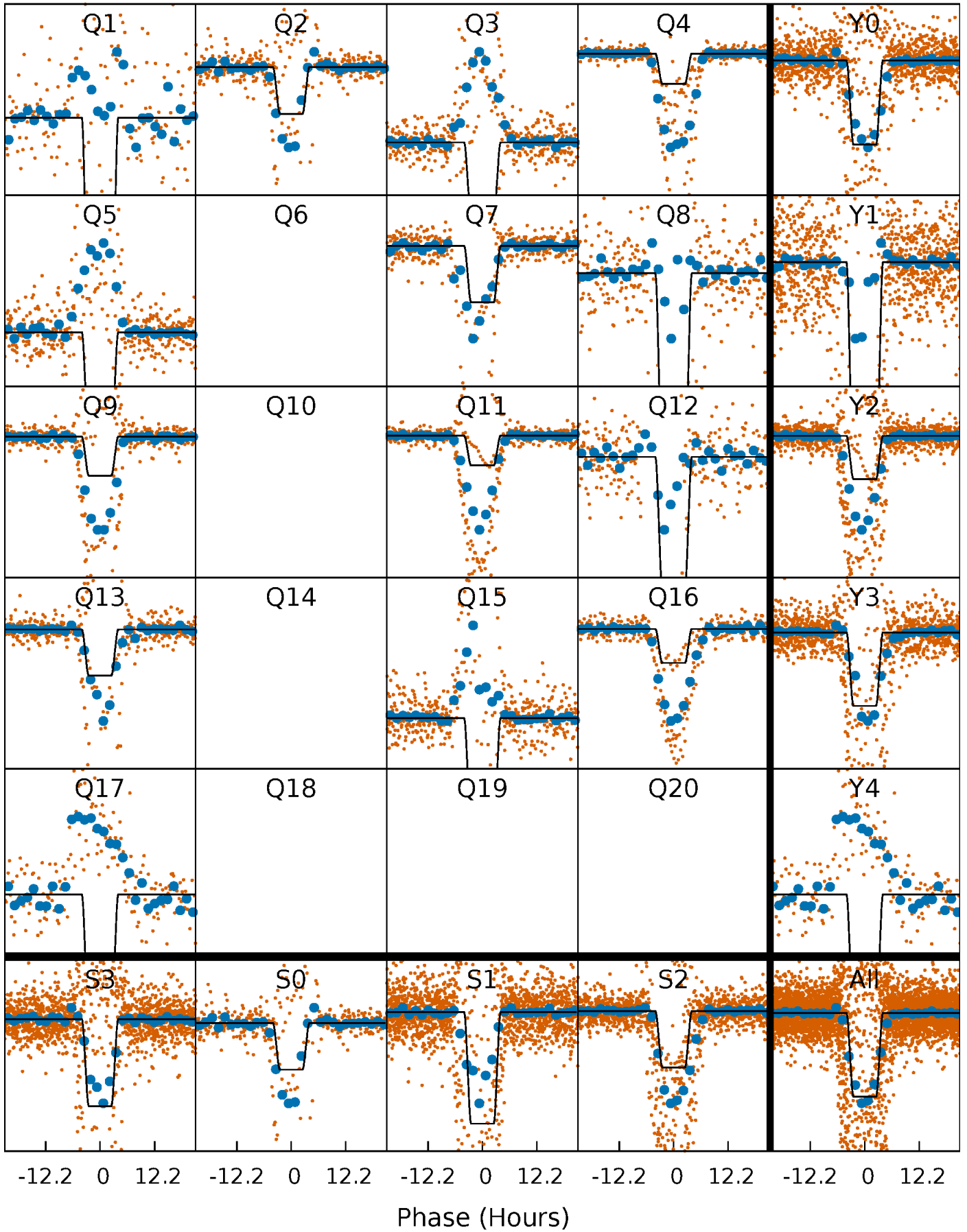
DV Quarter-Phased Transit Curves

TCE 004075067-02 P= 17.747605 Days $T_0=134.613190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

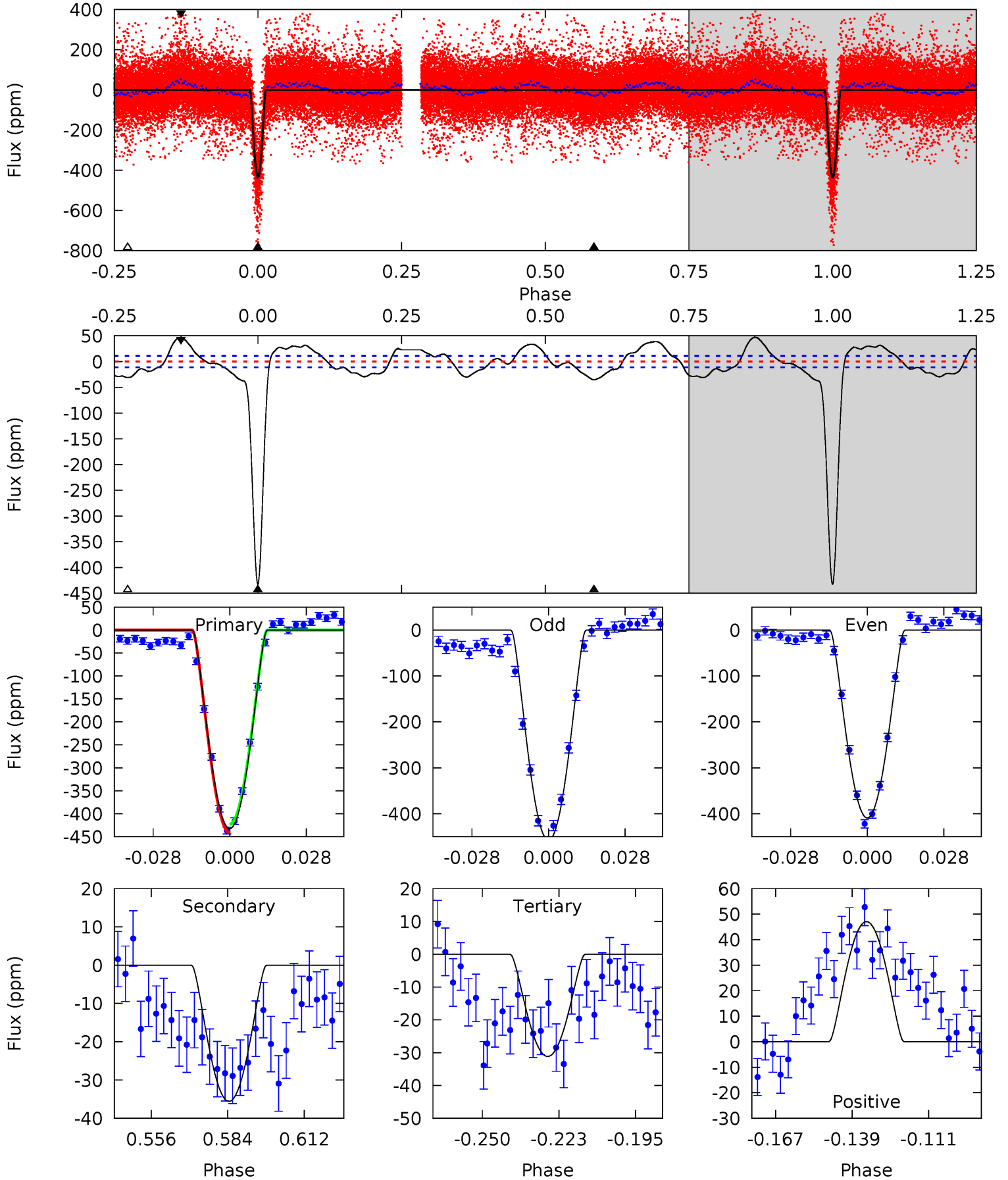
TCE 004075067-02 P= 17.747366 Days $T_0=134.642509$ (BKJD)



DV Model-Shift Uniqueness Test

004075067-02, $P = 17.747605$ Days, $E = 116.865585$ Days

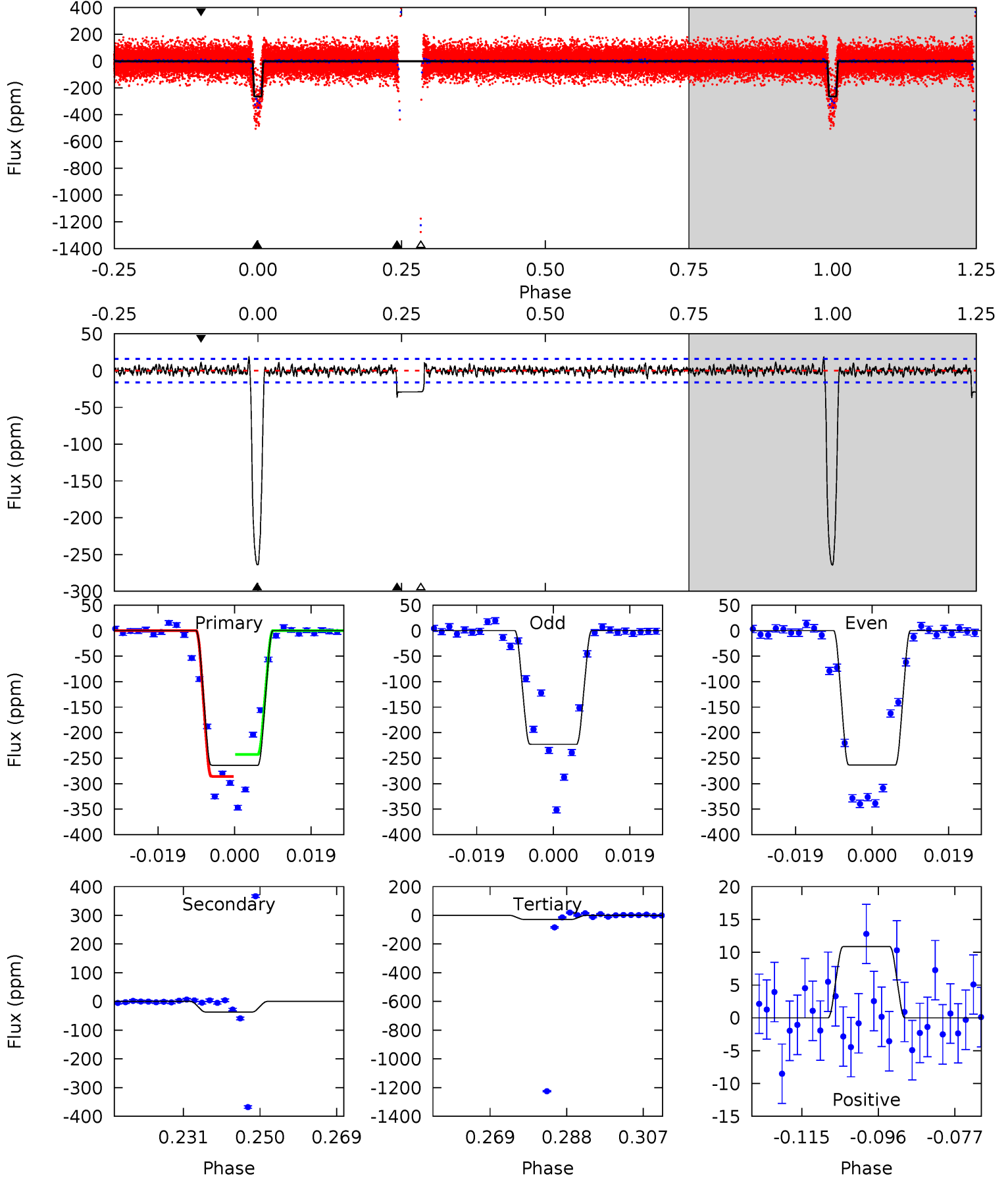
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
186.1	15.3	13.4	20.2	4.83	2.20	9.09	172.7	165.8	1.91	-4.93	10.5	0.79	0.10	4.06



Alt Model-Shift Uniqueness Test

004075067-02, P = 17.747366 Days, E = 116.895143 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
80.5	11.2	8.82	3.31	4.90	2.34	1.03	71.7	77.2	2.36	7.86	6.00	0.96	0.07	0



Stellar Parameters For KIC 004075067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8992^{+289}_{-434}	$3.535^{+0.560}_{-0.029}$	$0.070^{+0.250}_{-0.600}$	$4.832^{+0.469}_{-2.814}$	$2.922^{+0.242}_{-0.968}$	$0.036^{+0.261}_{-0.004}$
	+3%/-5%	+16%/-1%	+357%/-857%	+10%/-58%	+8%/-33%	+716%/-10%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004075067-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 2	$15.57^{+5.31}_{-5.31}$	2613^{+224}_{-360}	3790^{+429}_{-292}	$2.901^{+3.372}_{-1.251}$
Alt.	-37 ± 3	$7.02^{+4.43}_{-3.46}$	2622^{+201}_{-378}	5204^{+1681}_{-841}	15^{+41}_{-9}

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

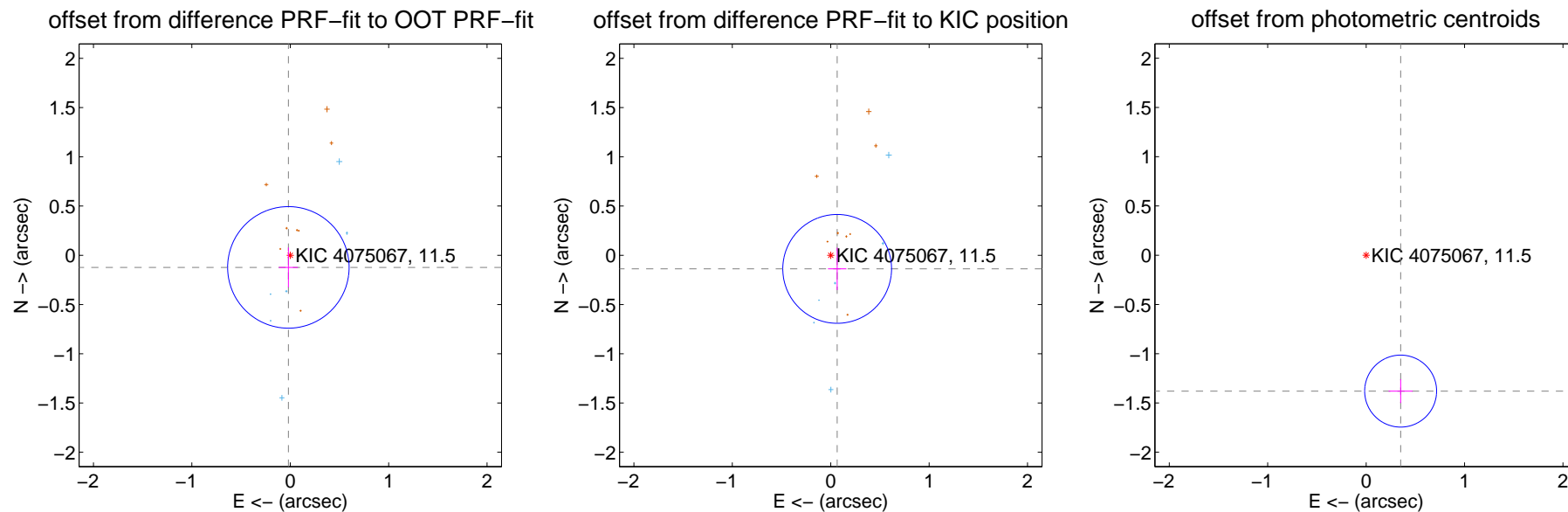
DV Centroid Data

Supplemental centroid analysis for 004075067-02. **Kepler magnitude: 11.50**. Transit SNR 60.80

There are 6 quarters with good PRF difference image offsets

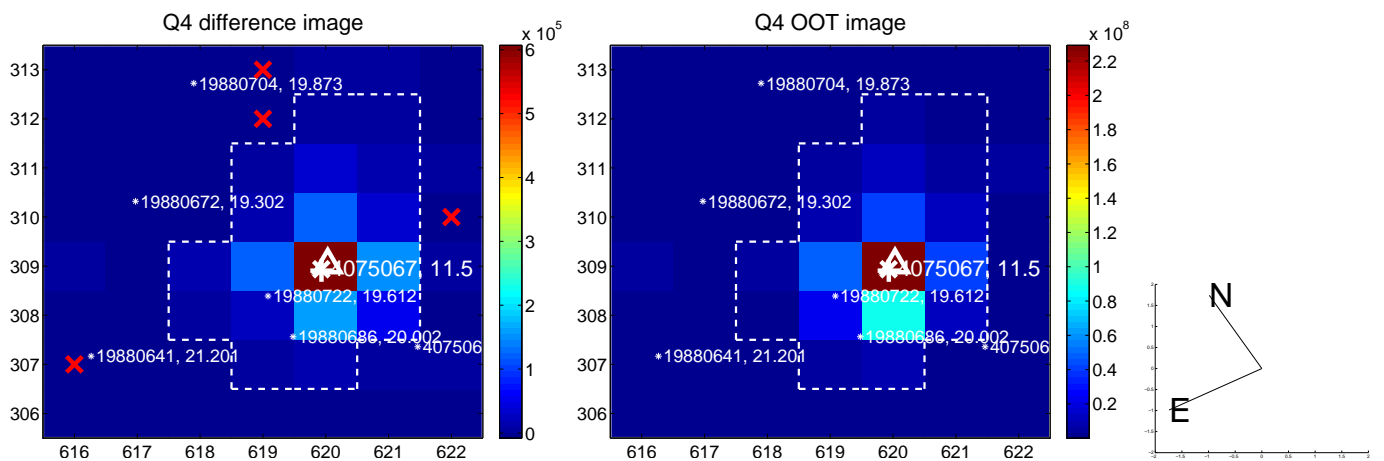
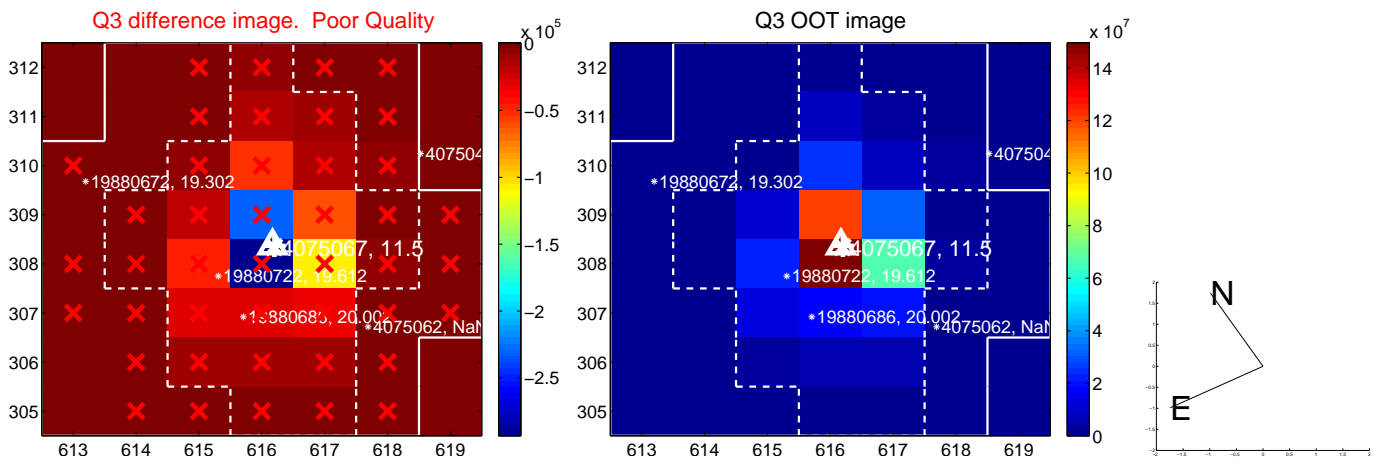
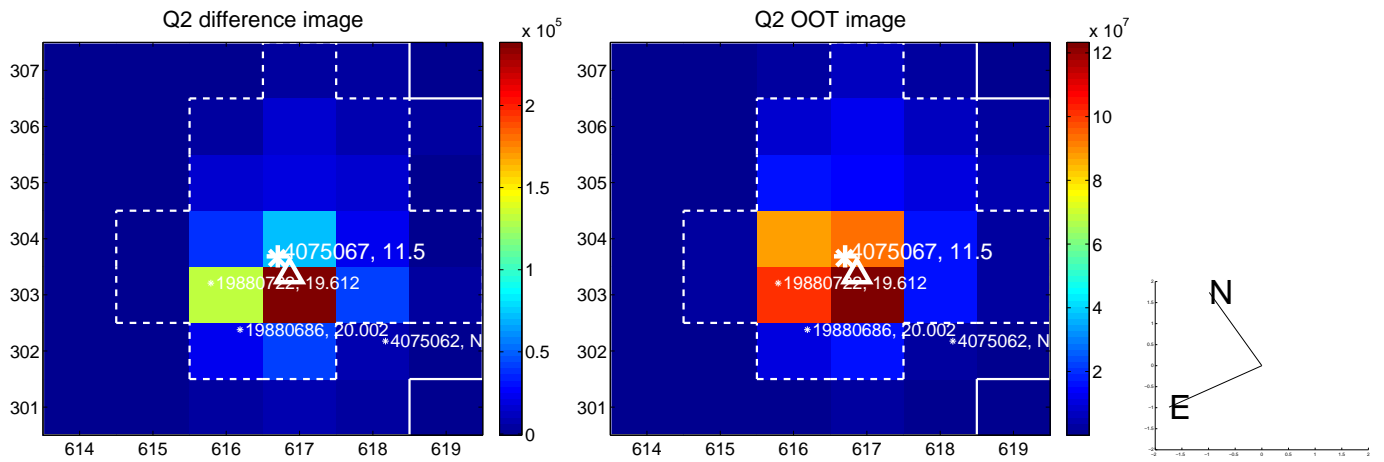
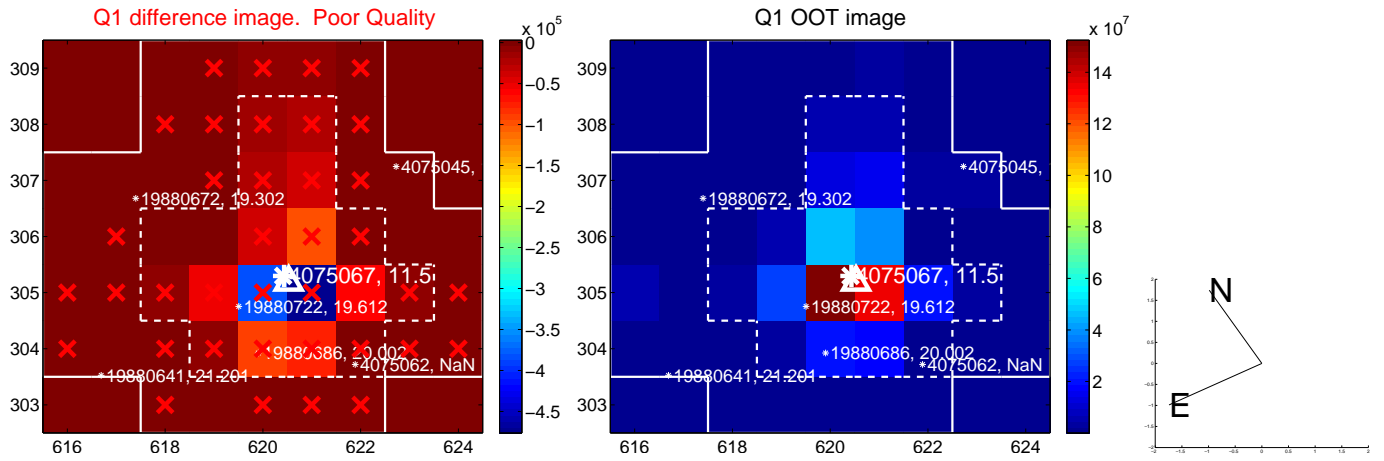
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.125 ± 0.206	0.61	0.019 ± 0.097	-0.123 ± 0.202
PRF-fit source offset from KIC position	0.153 ± 0.184	0.83	-0.066 ± 0.093	-0.138 ± 0.215
photometric centroid source offset	1.42 ± 0.12	11.69	-0.35 ± 0.12	-1.38 ± 0.12

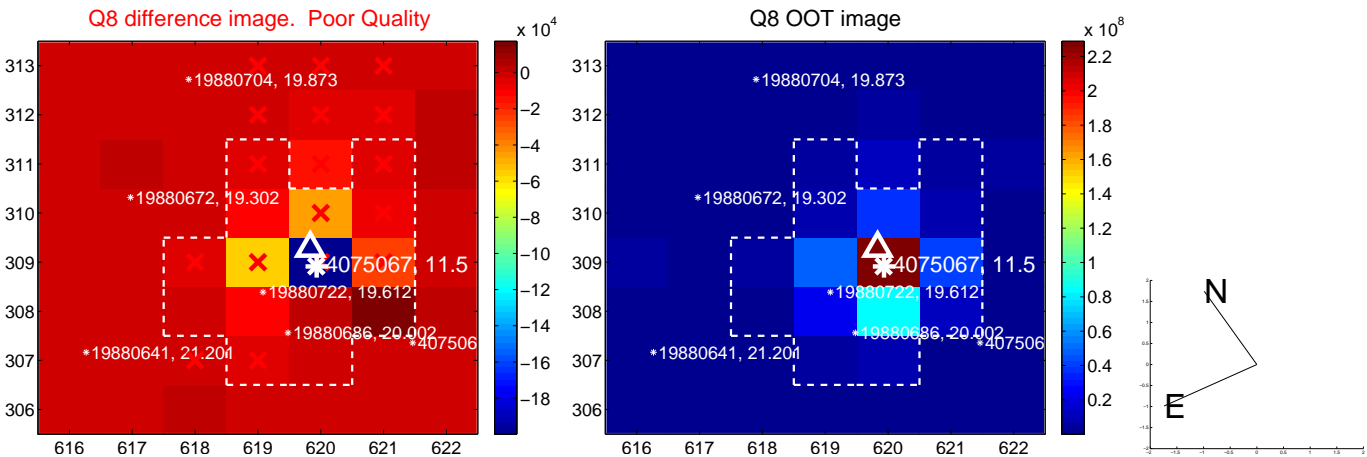
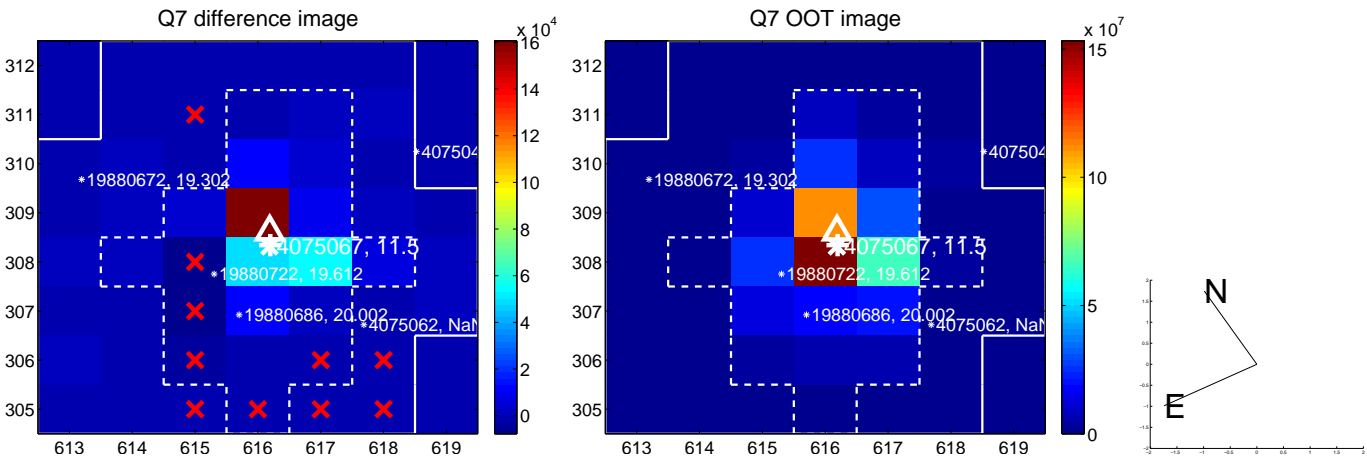
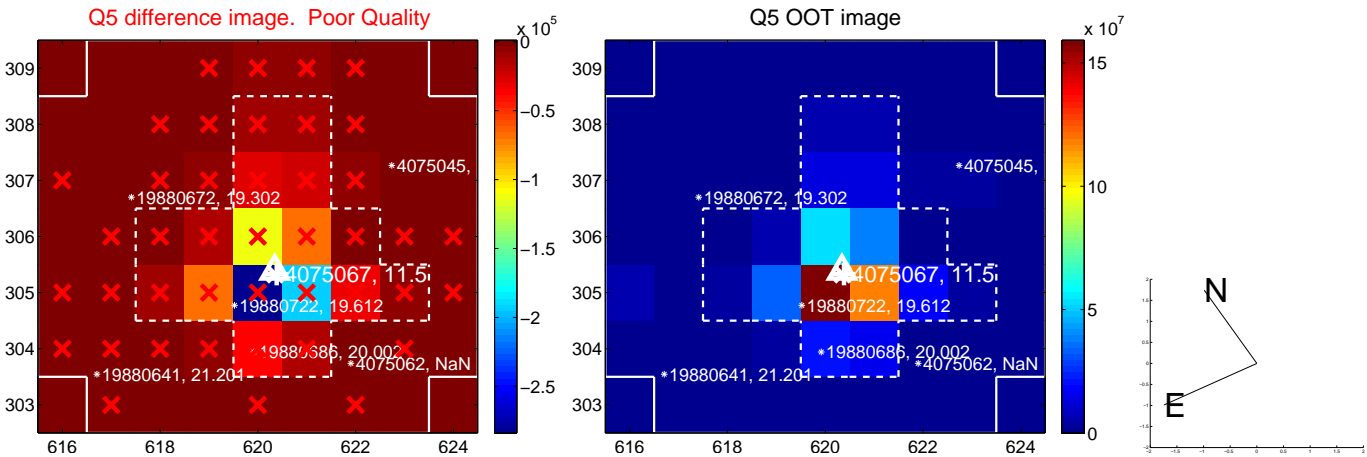


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

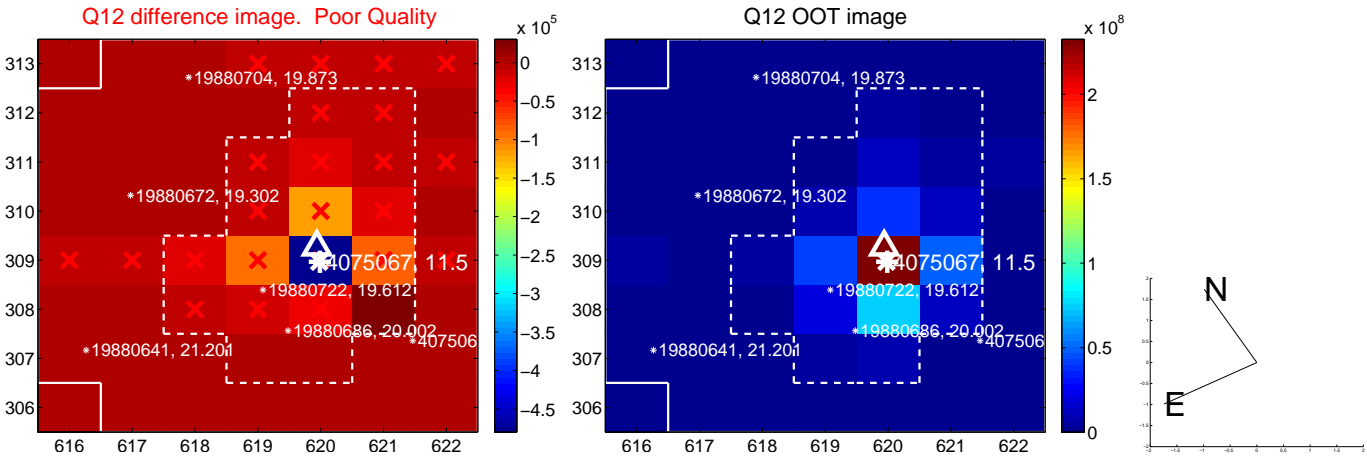
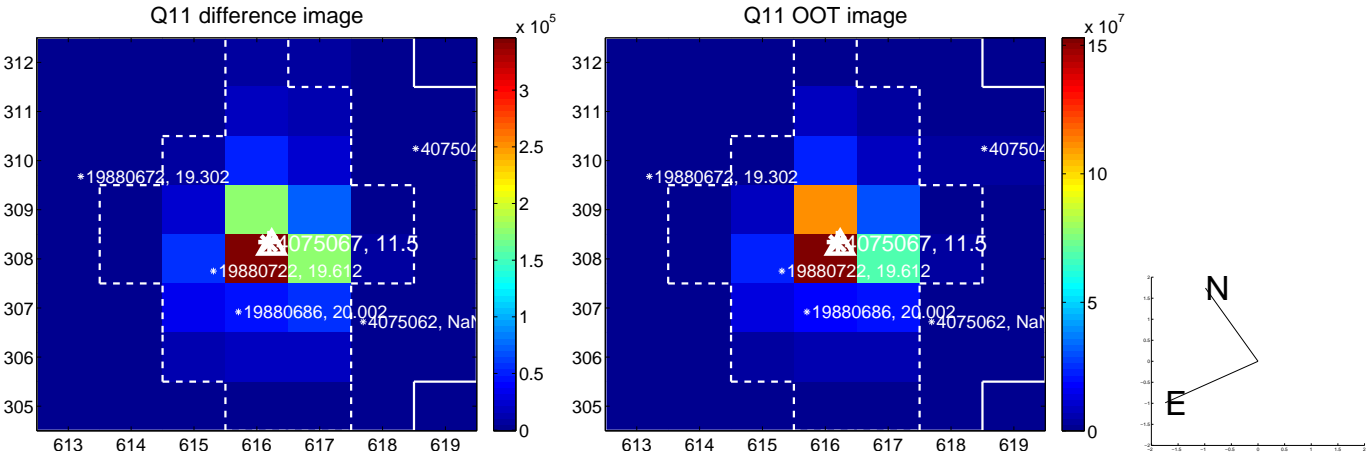
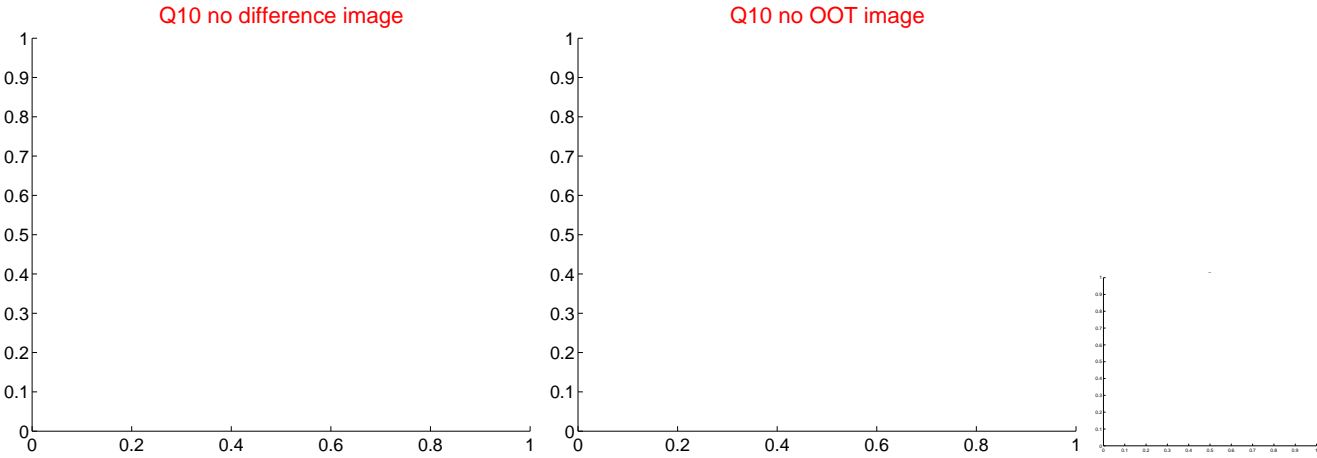
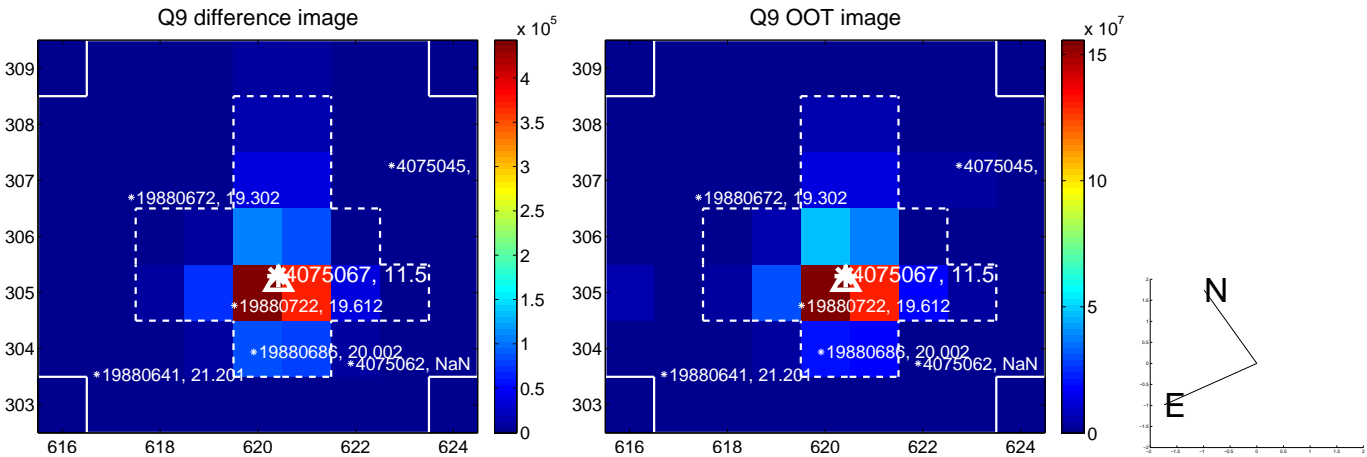
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



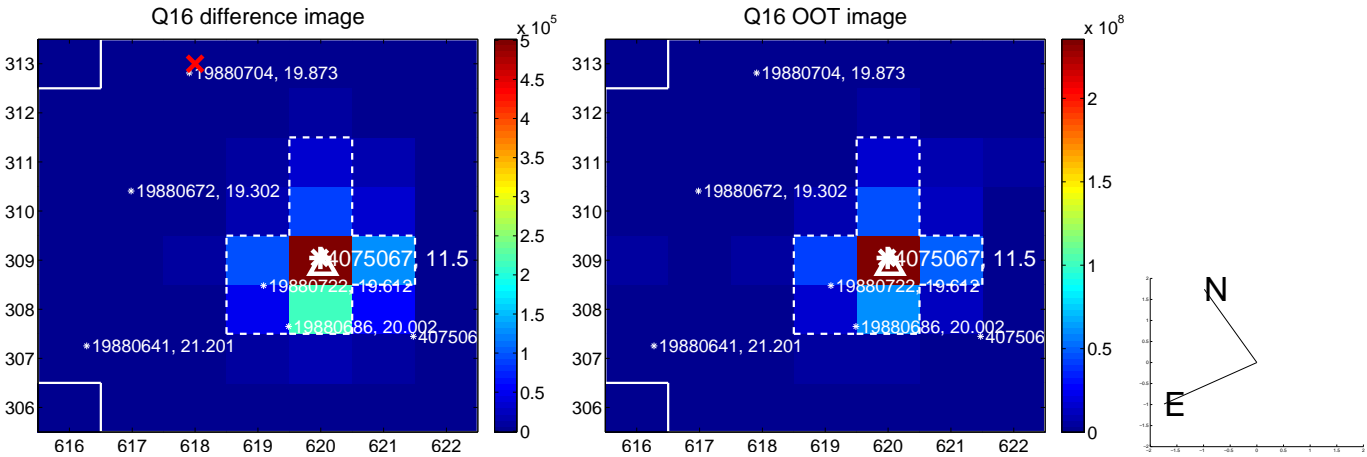
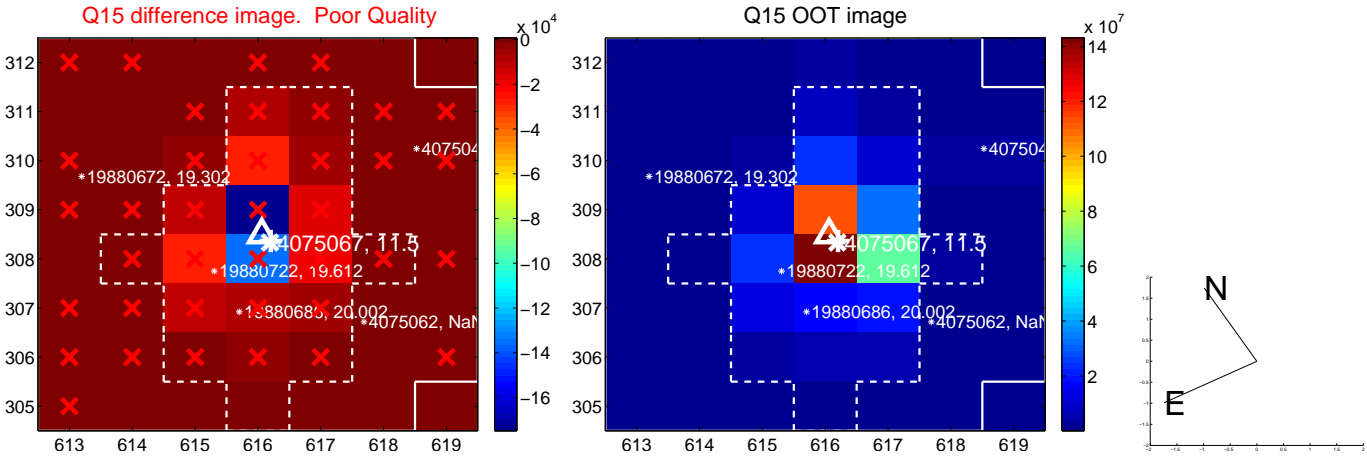
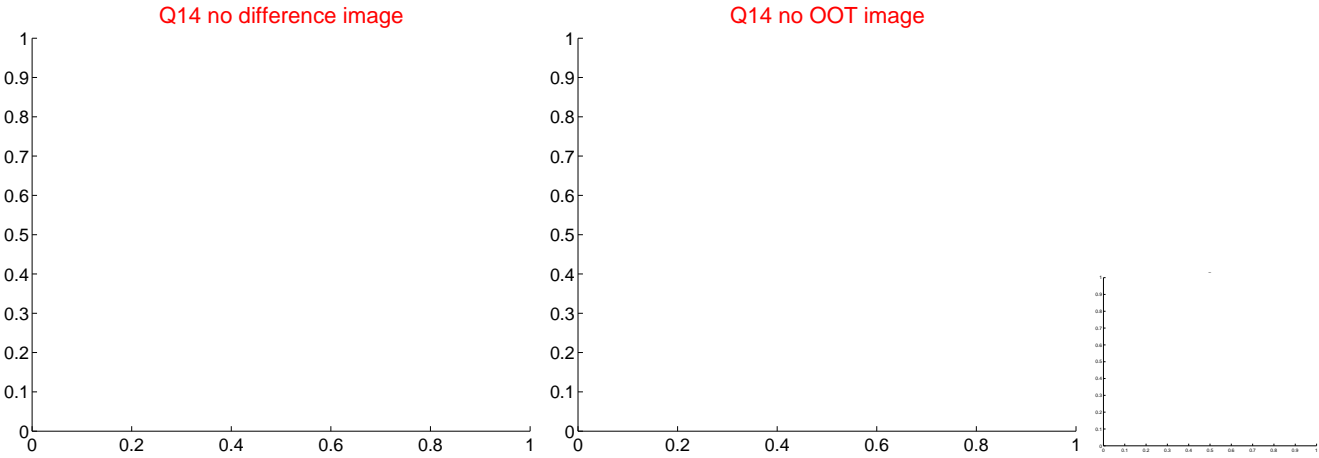
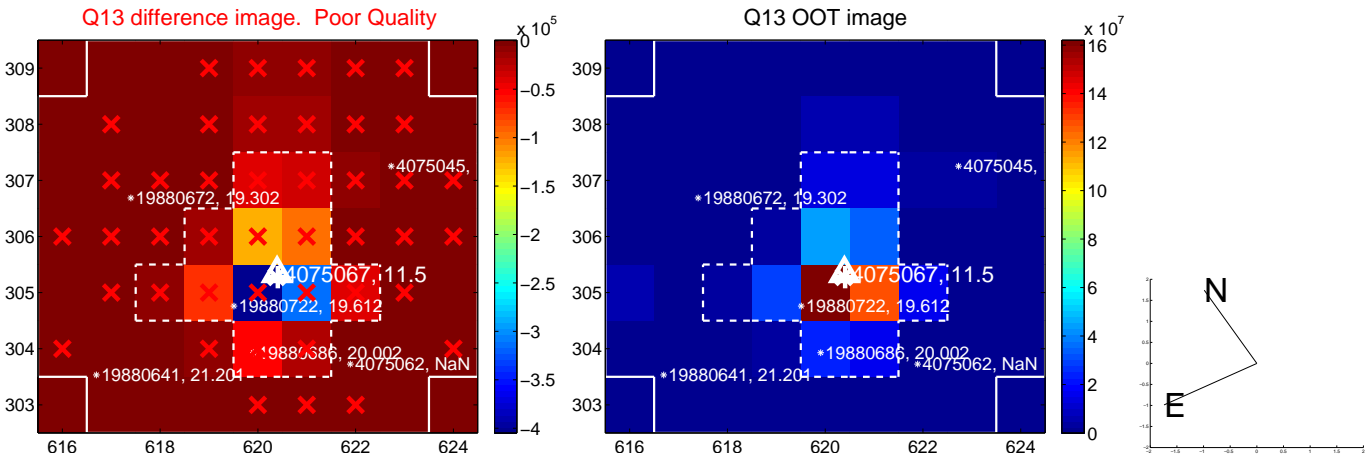
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



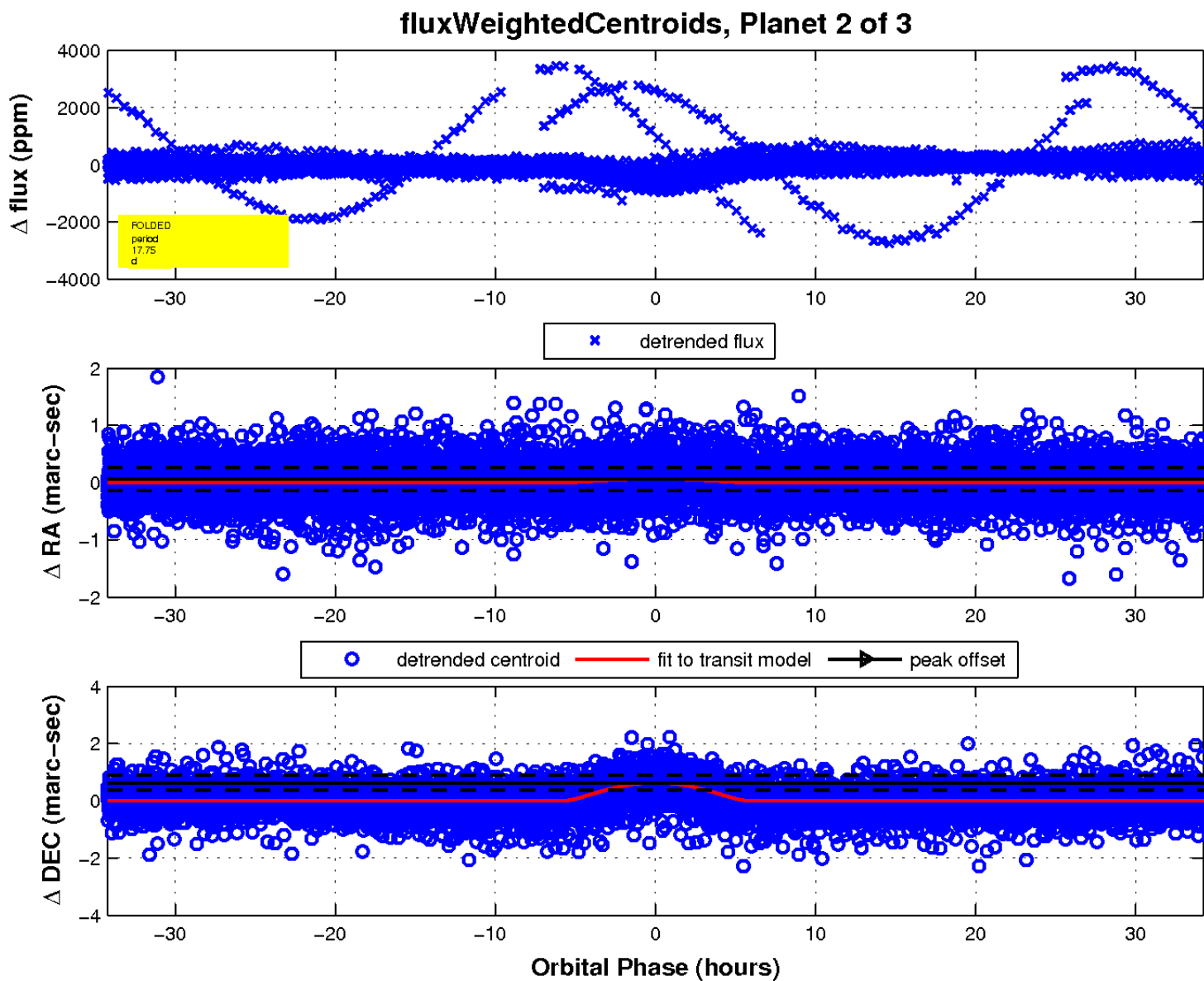
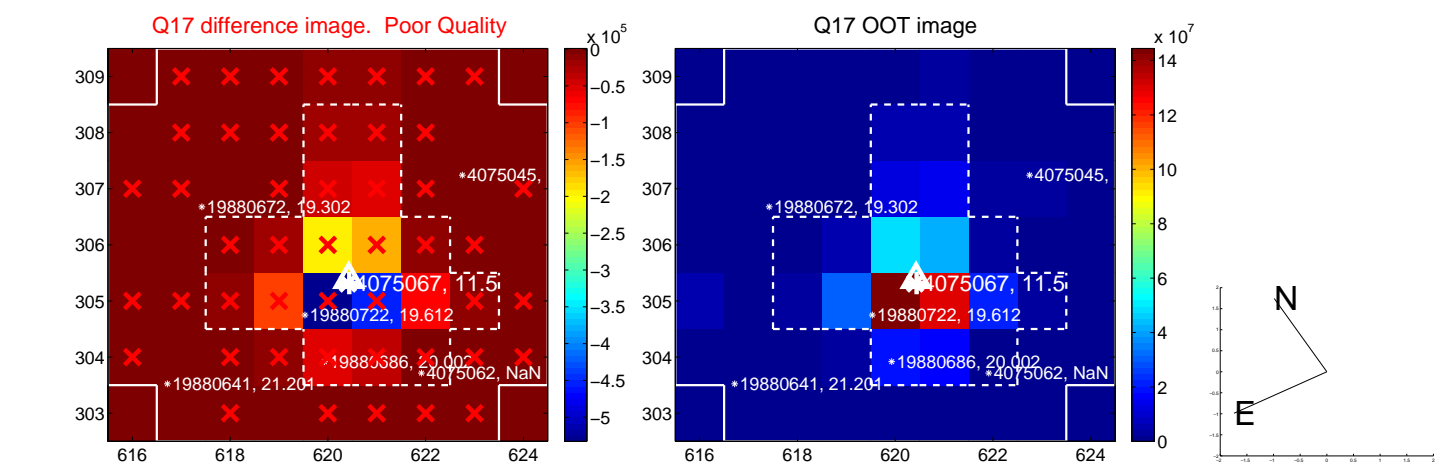
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

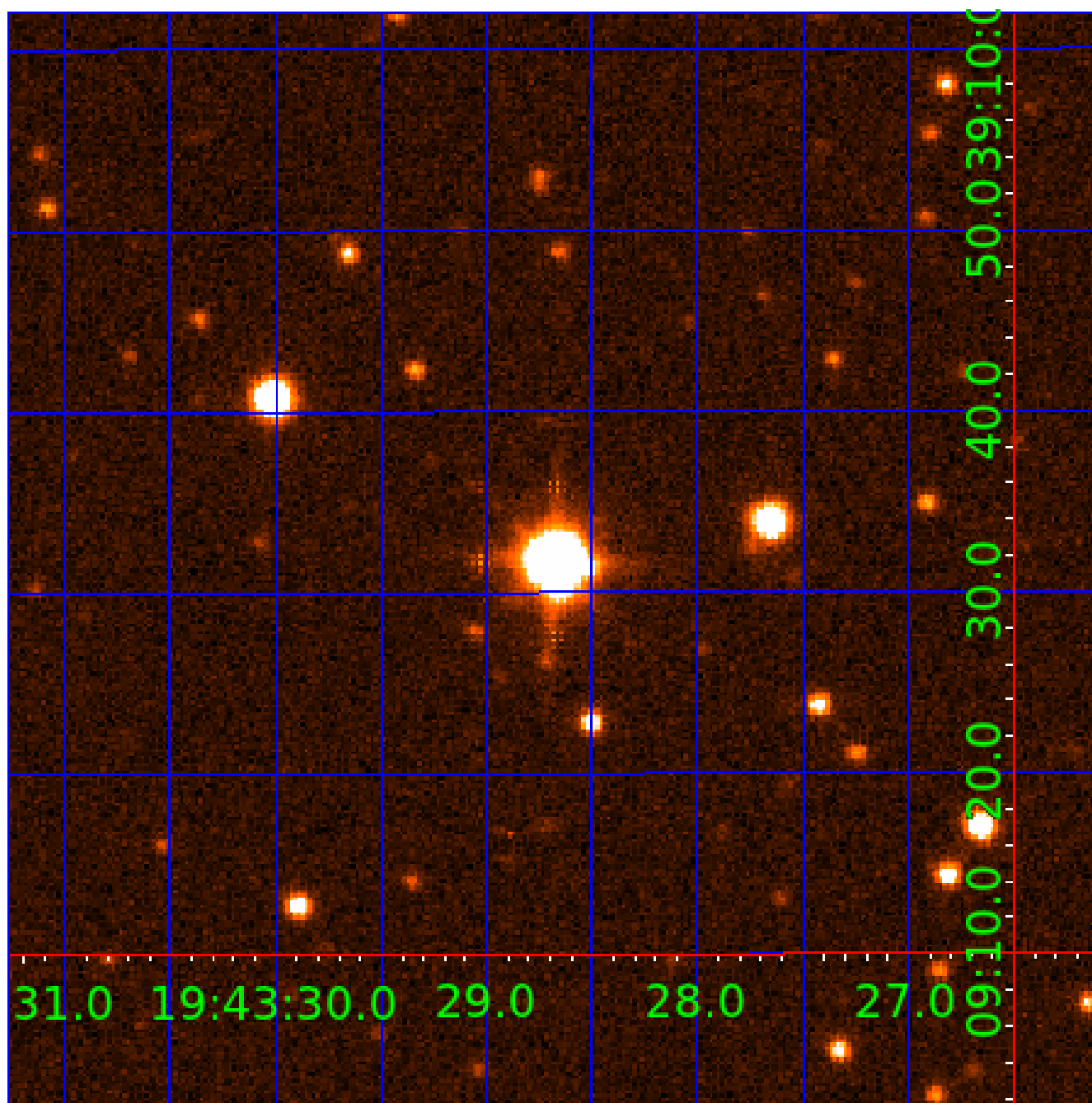


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004075067

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})
004075067-01	OBS	3777.01	17.747721	139.346104	831.0	4.685	128.5	131.5	4.83	8992	25.50	3774.68
004075067-02	OBS	No	17.747605	134.613190	417.2	11.412	52.1	60.8	4.83	8992	18.32	3774.72
004075067-03	OBS	No	2.754487	133.580150	17.7	28.192	14.1	7.5	4.83	8992	2.08	45256.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004075067-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—DEEP_V_SHAPED—HAS_SEC_TCE—CENT_SATURATED
004075067-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_SATURATED
004075067-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_SATURATED

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

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

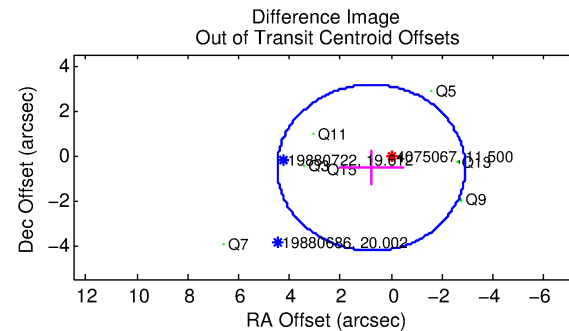
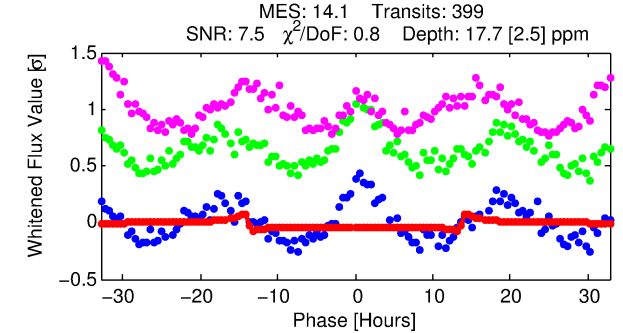
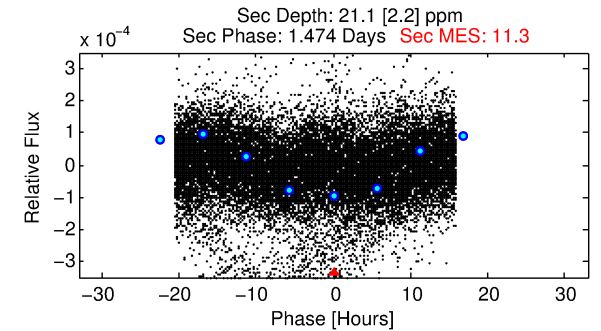
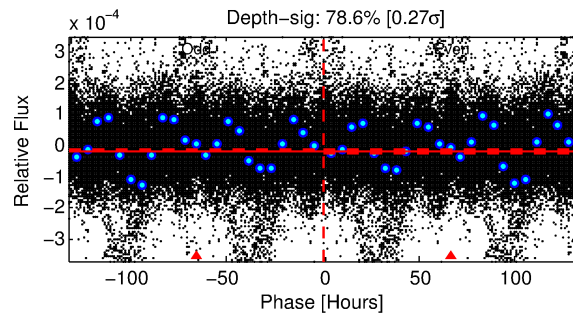
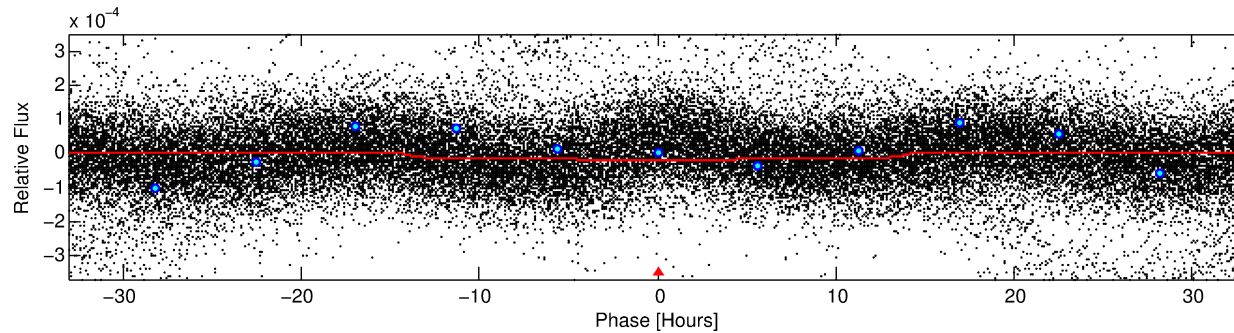
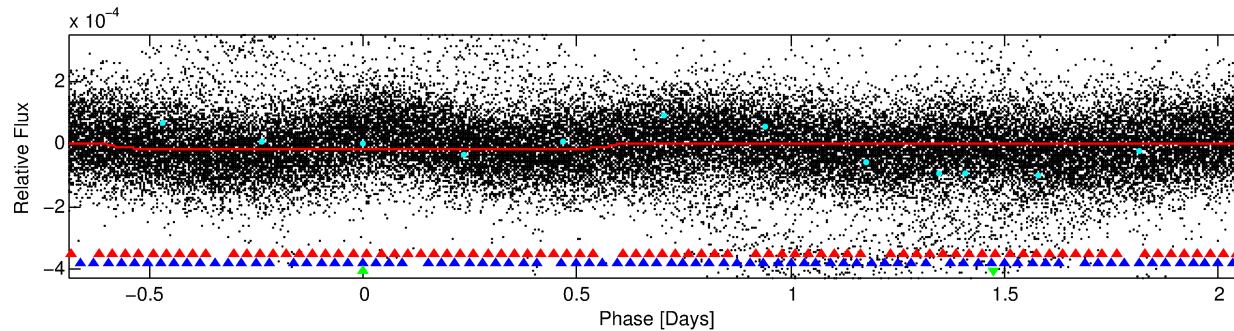
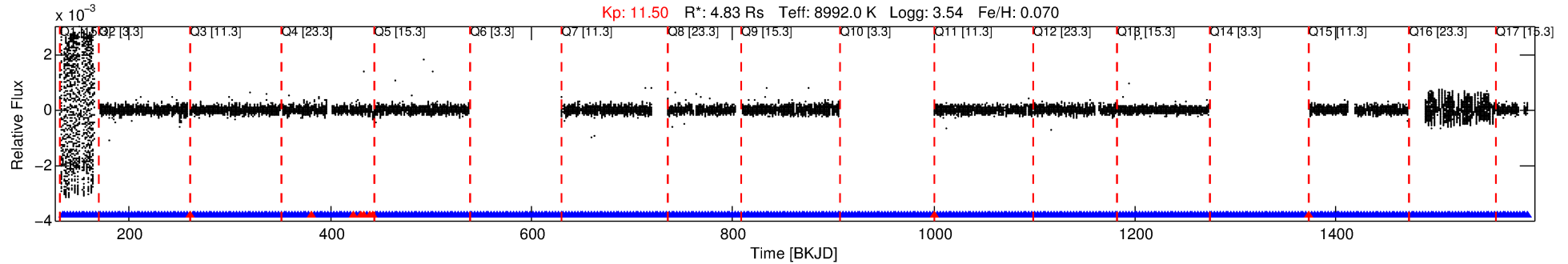
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004075067-03

No Significant Match Found

DV One-Page Summary

KIC: 4075067 Candidate: 3 of 3 Period: 2.754 d
KOI: K03777 Corr: No Ephemeris Match



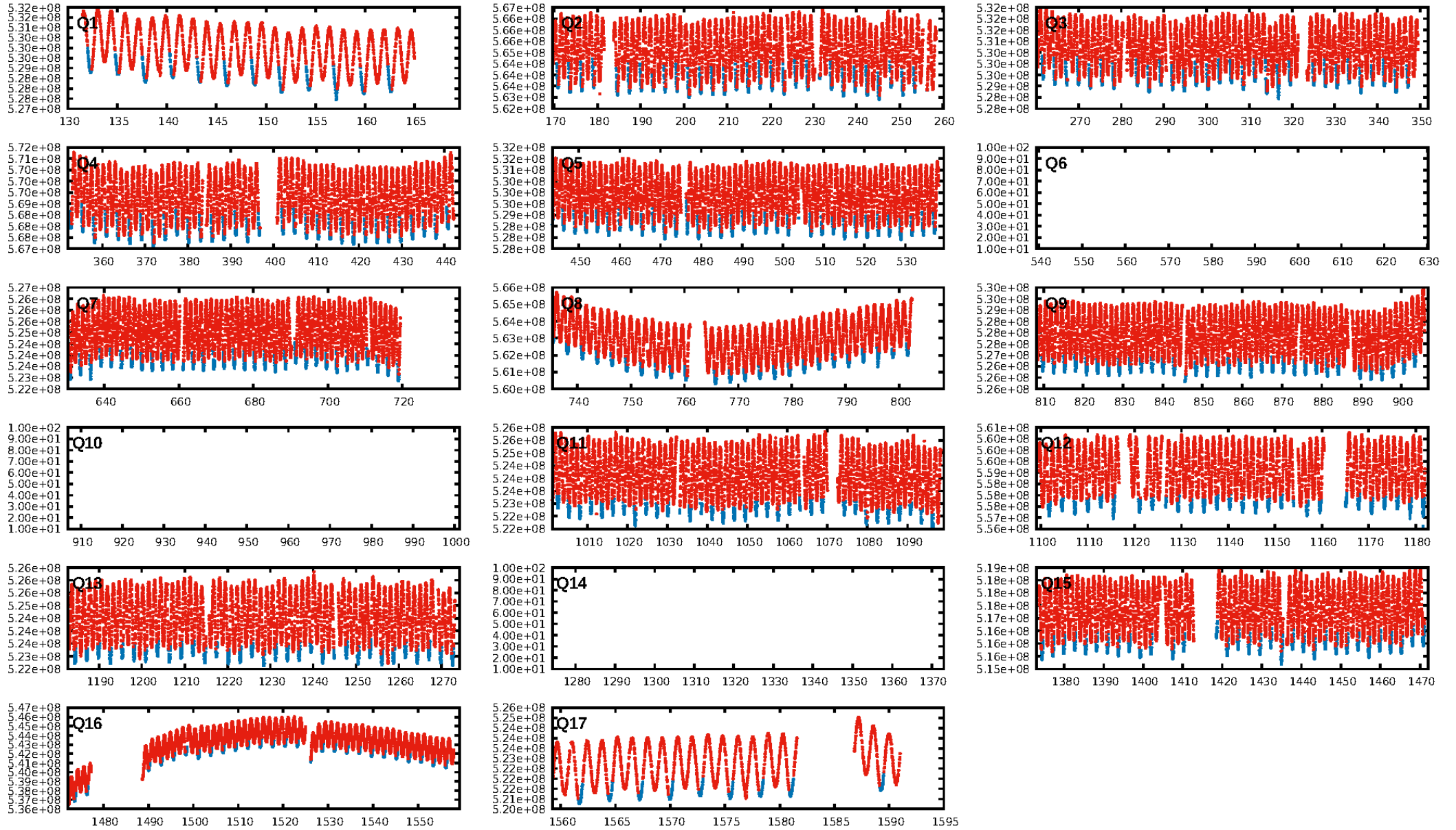
DV Fit Results:

Period = 2.75449 [0.00003] d
Epoch = 133.5801 [0.0063] BKJD
Rp/R* = 0.0040 [0.0010]
a/R* = 1.03 [0.10]
b = 0.30 [5.29]
Seff = 45256.73 [43572.93]
Teq = 3719 [895] K
Rp = 2.08 [1.33] Re
a = 0.0550 [0.0318] AU
Ag = 8.08 [8.74] [0.81 σ]
Teffp = 9694 [1365] K [3.66 σ]

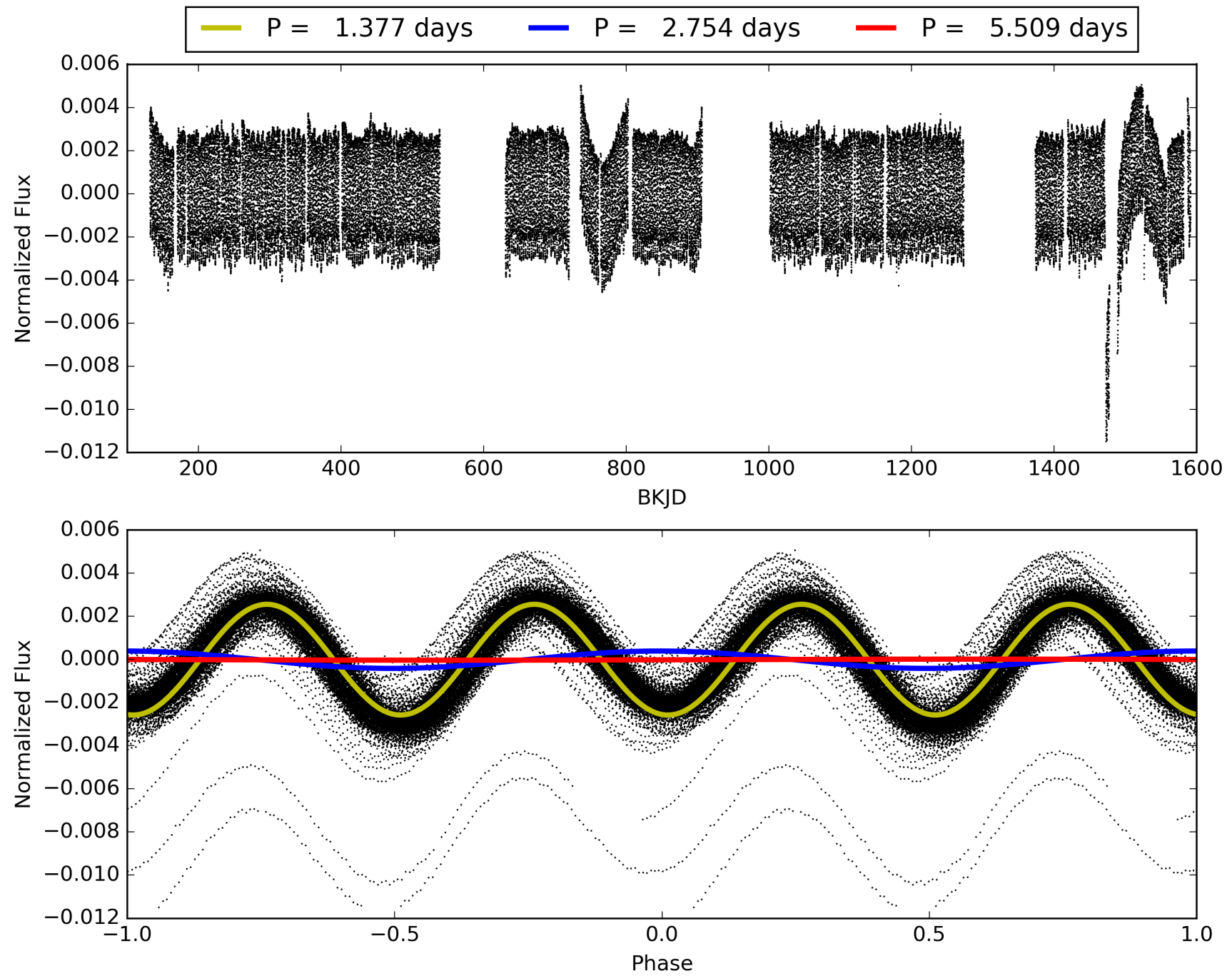
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.83 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [368/377]
GhostDiagnostic-chr: 0.622
Centroid-sig: 0.0%
Centroid-so: 1.718 arcsec [3.08 σ]
OotOffset-rm: 0.955 arcsec [0.78 σ]
KicOffset-rm: 0.875 arcsec [0.74 σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004075067-03, PDC Light Curves

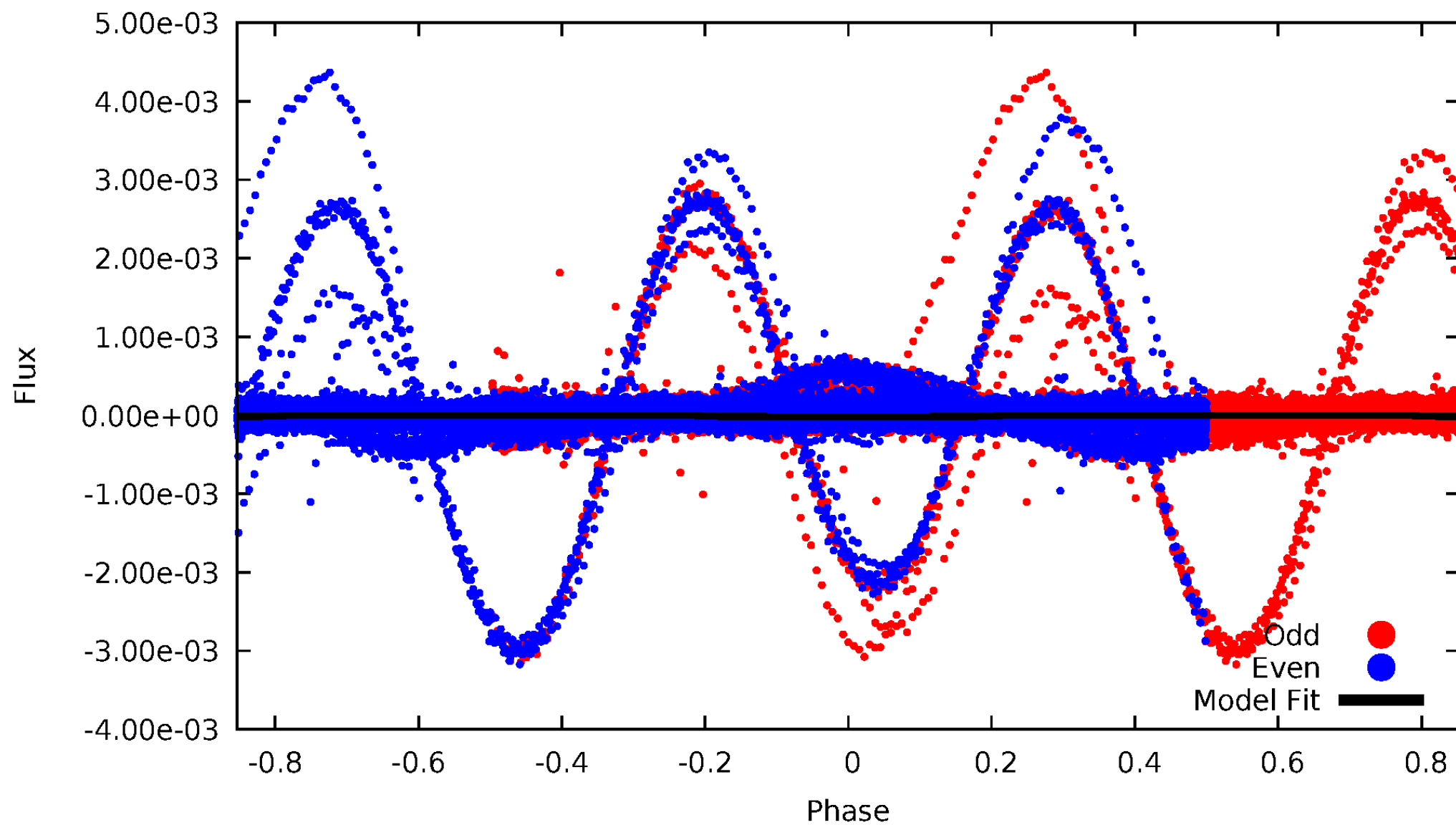


TCE 004075067-03



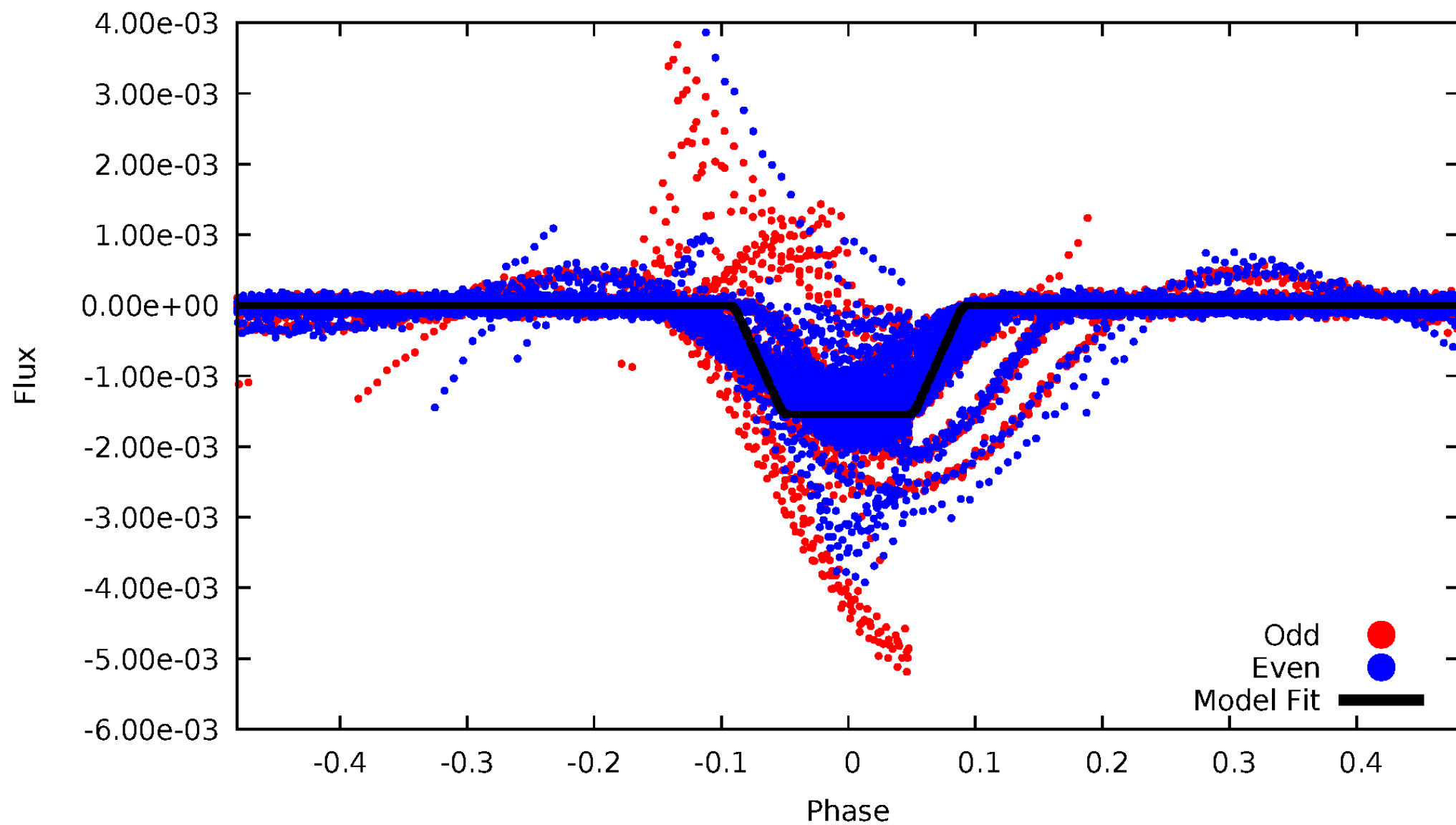
DV Odd/Even

TCE 004075067-03



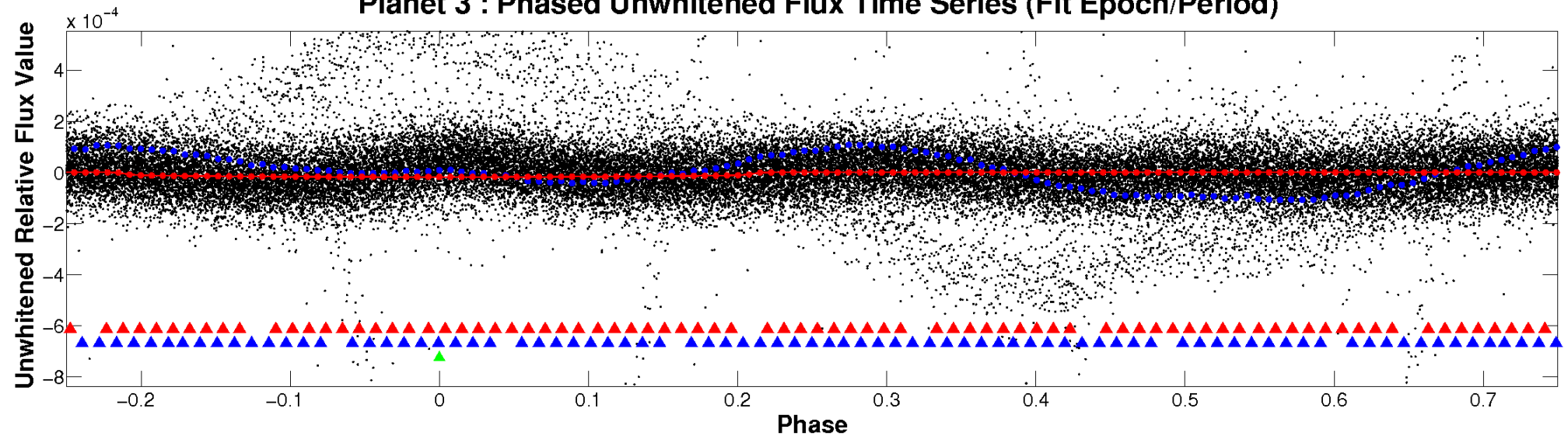
ALT Odd/Even

TCE 004075067-03

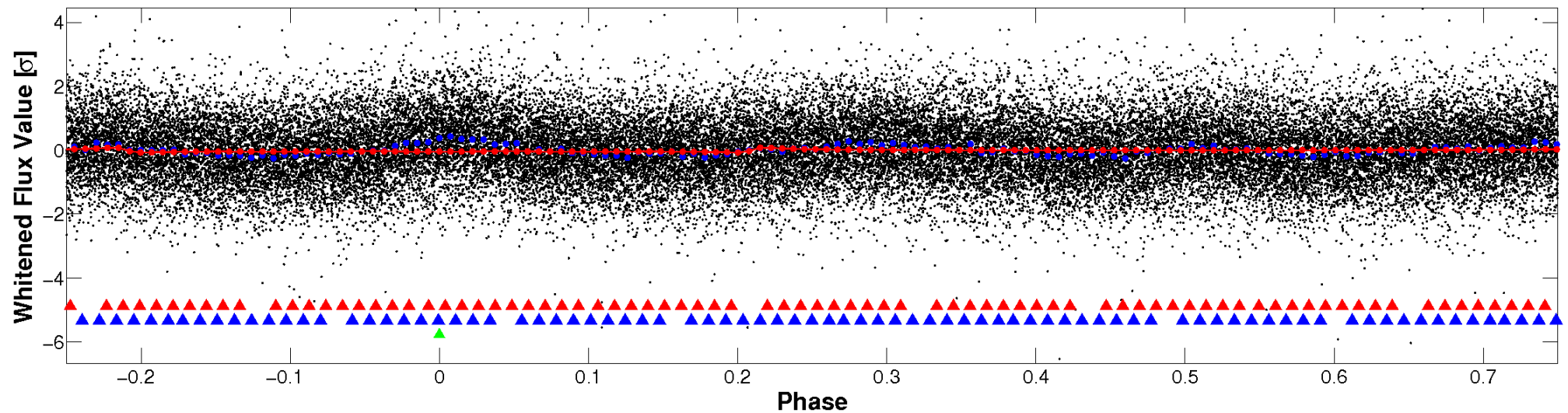


Non-Whitened Vs. Whitened Light Curve

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

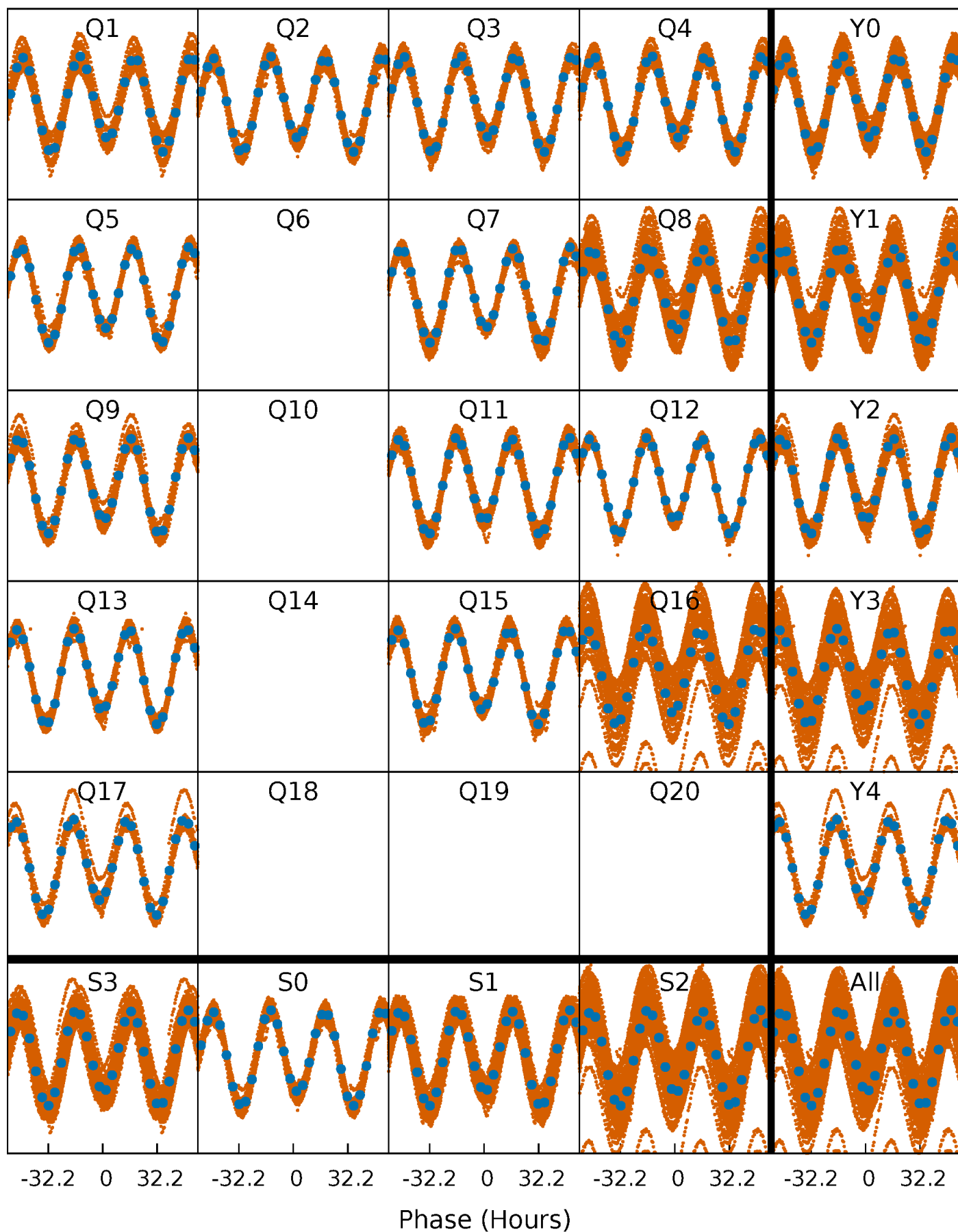


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



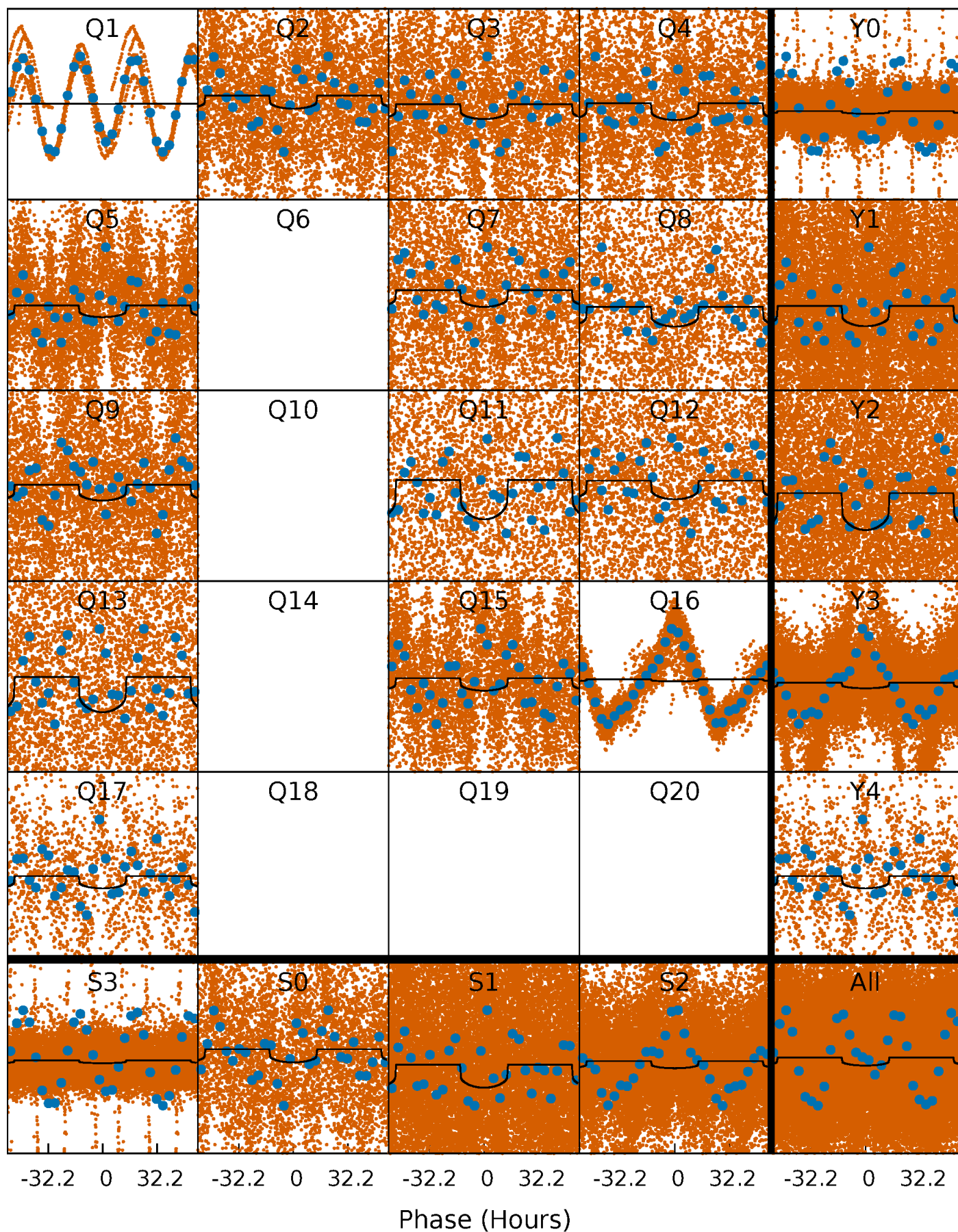
PDC Quarter-Phased Transit Curves

TCE 004075067-03 P= 2.754487 Days $T_0=133.580150$ (BKJD)



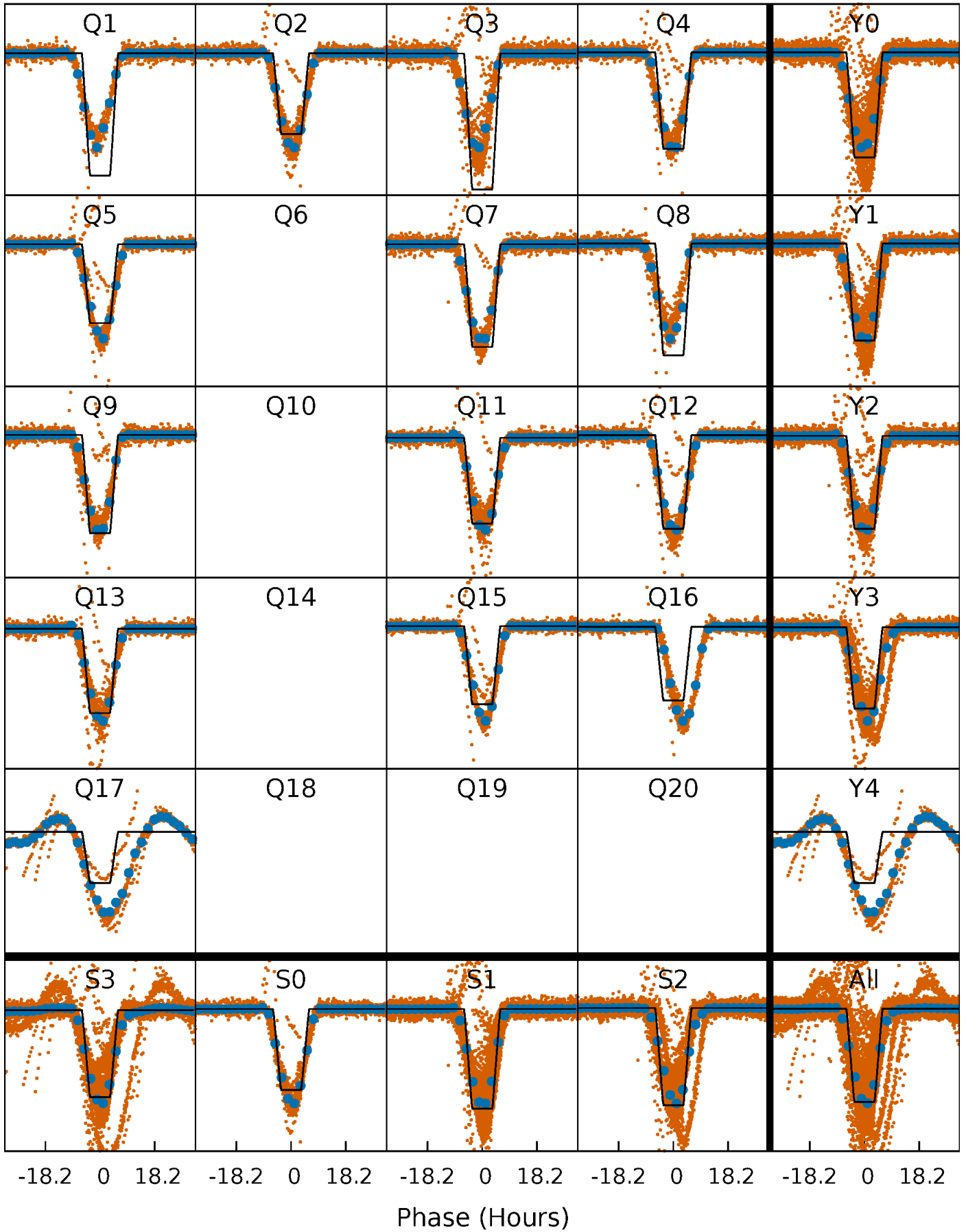
DV Quarter-Phased Transit Curves

TCE 004075067-03 P= 2.754487 Days $T_0=133.580150$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

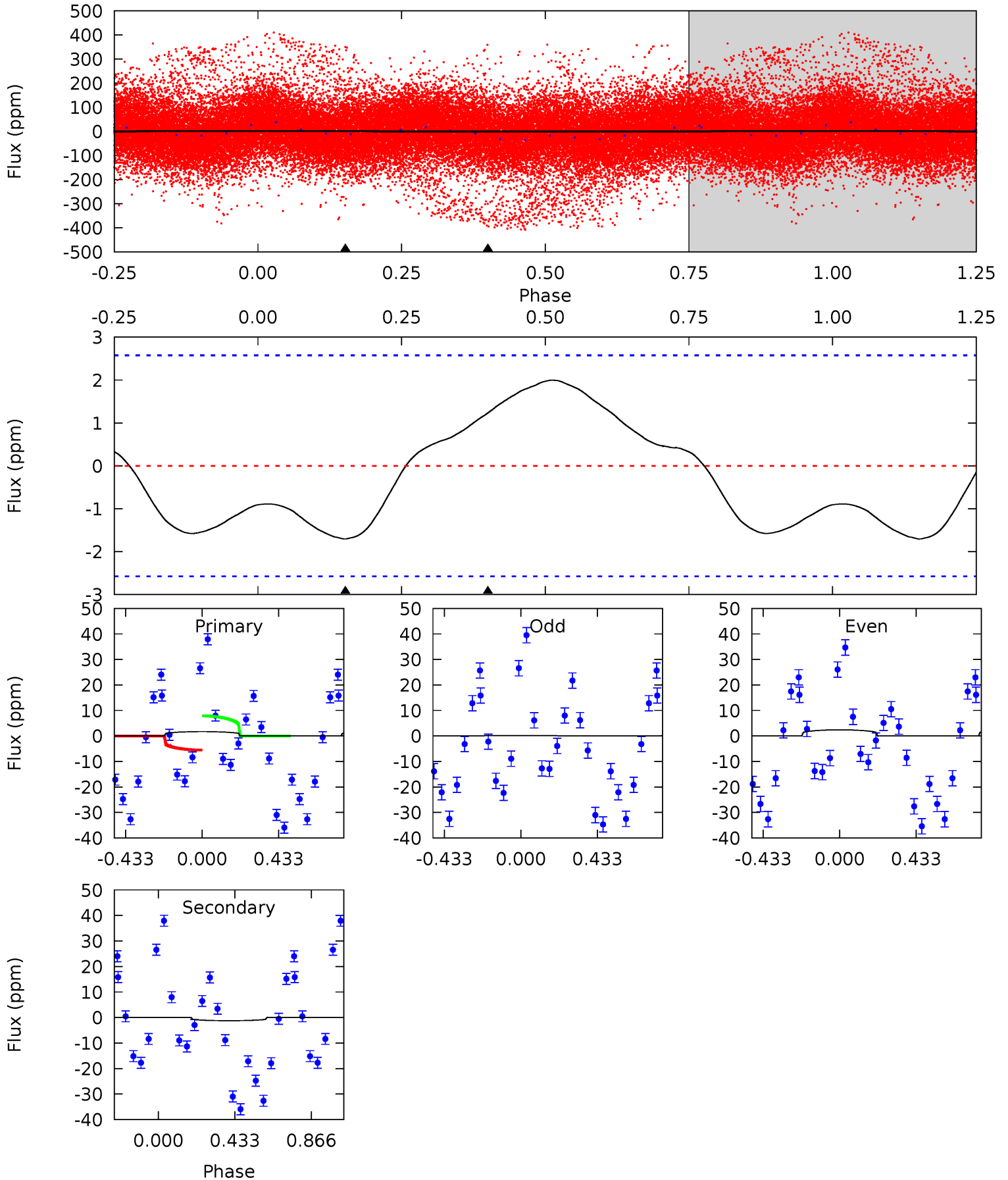
TCE 004075067-03 P= 2.754098 Days $T_0=133.564852$ (BKJD)



DV Model-Shift Uniqueness Test

004075067-03, P = 2.754487 Days, E = 130.825663 Days

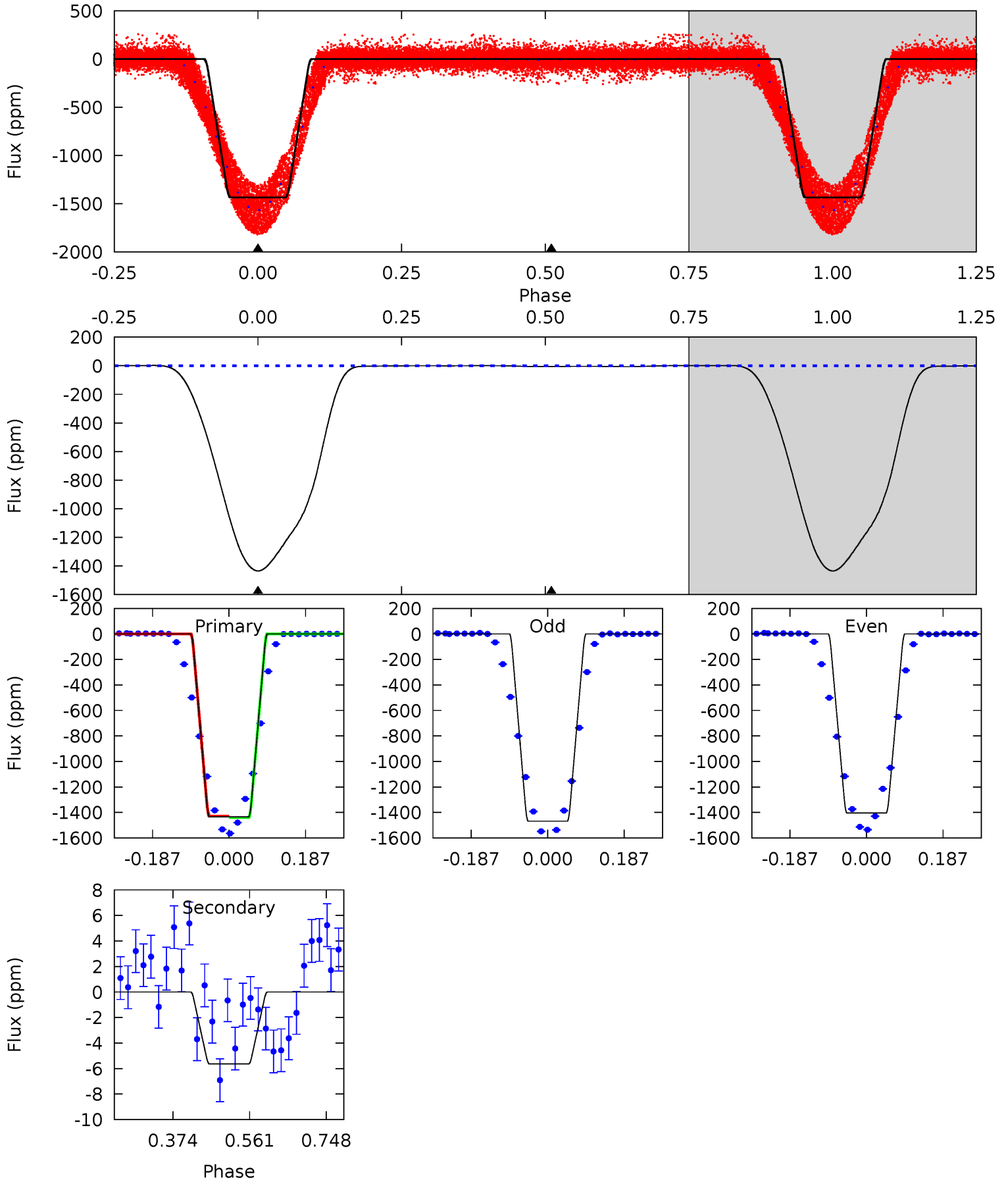
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.81	-2.03	0	0	4.25	0.78	0.75	2.81	2.81	-2.03	-2.03	1.69	-5.97	0.54	1.73



Alt Model-Shift Uniqueness Test

004075067-03, P = 2.754098 Days, E = 130.810754 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2013	7.92	0	0	4.43	1.32	2.03	2013	2013	7.92	7.92	44.7	1.01	0.00	0



Stellar Parameters For KIC 004075067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8992^{+289}_{-434}	$3.535^{+0.560}_{-0.029}$	$0.070^{+0.250}_{-0.600}$	$4.832^{+0.469}_{-2.814}$	$2.922^{+0.242}_{-0.968}$	$0.036^{+0.261}_{-0.004}$
	+3%/-5%	+16%/-1%	+357%/-857%	+10%/-58%	+8%/-33%	+716%/-10%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004075067-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 1	$1.78^{+0.65}_{-0.63}$	4890^{+388}_{-686}	-5037^{+513}_{-670}	$-0.603^{+0.354}_{-0.982}$
Alt.	-6 ± 1	$18.48^{+3.04}_{-5.49}$	4863^{+383}_{-682}	-4028^{+448}_{-218}	$0.027^{+0.023}_{-0.007}$

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 $A_{obs} \gg 1.0$

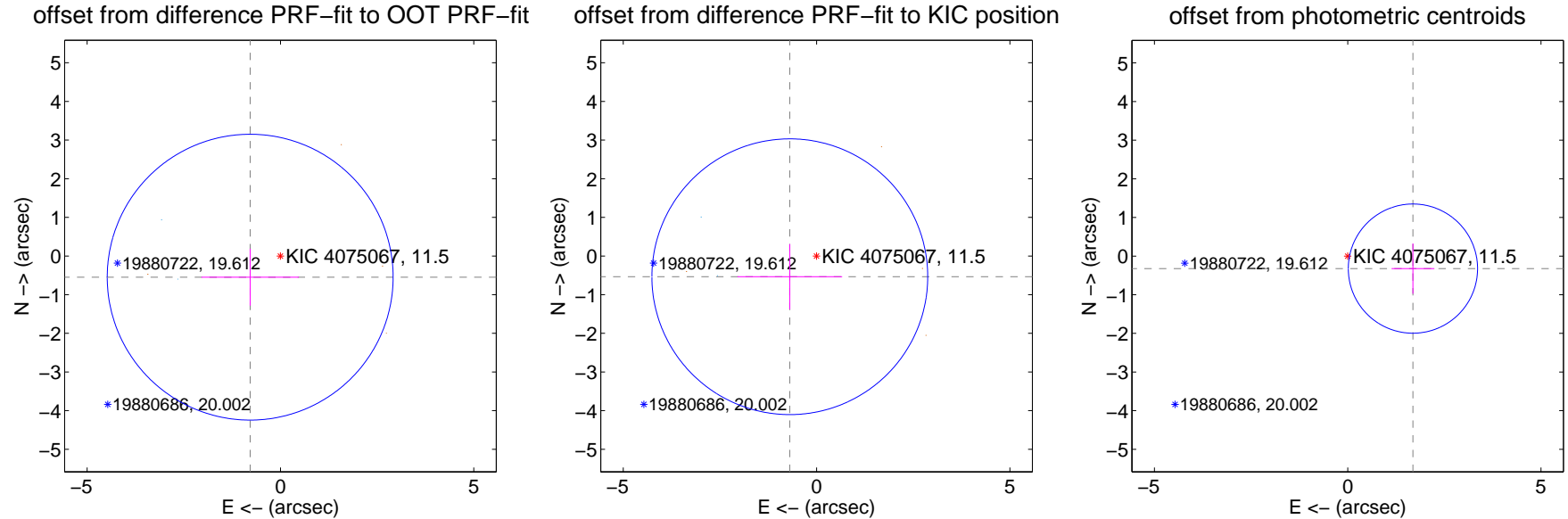
DV Centroid Data

Supplemental centroid analysis for 004075067-03. **Kepler magnitude: 11.50.** Transit SNR 7.54

There are 2 quarters with good PRF difference image offsets

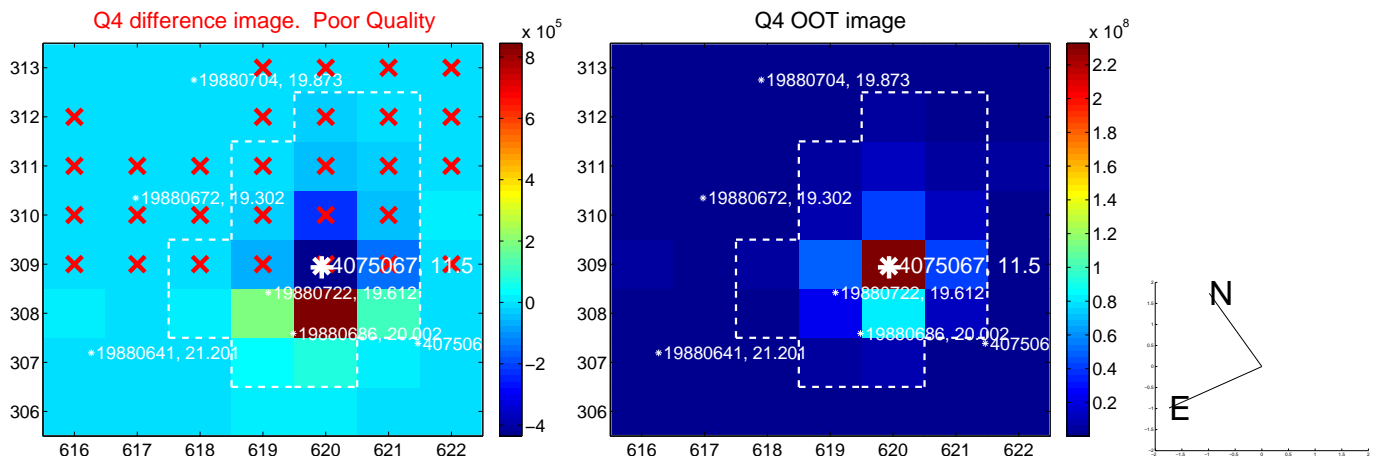
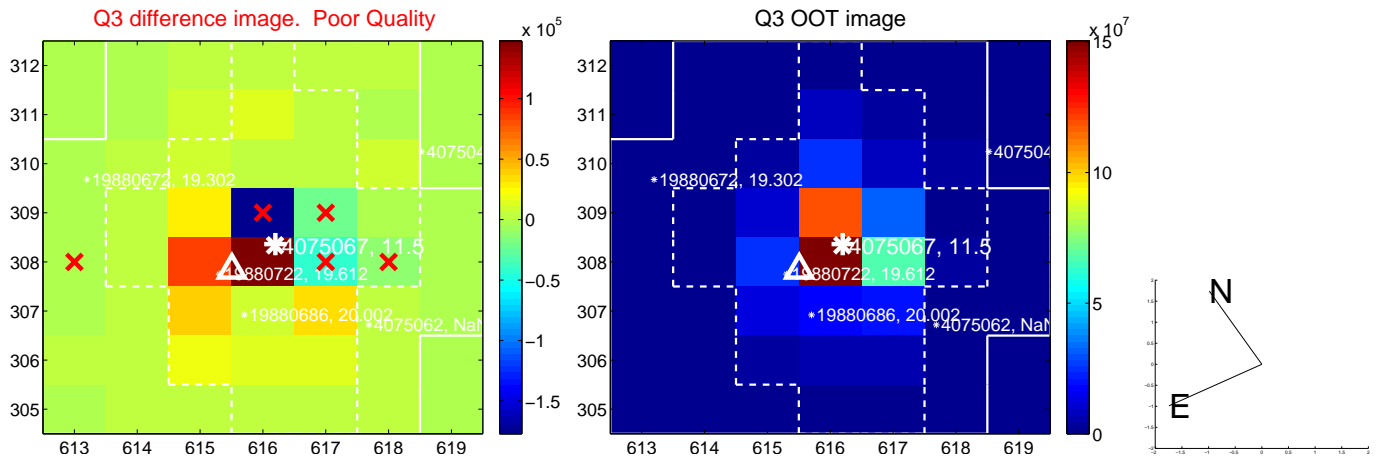
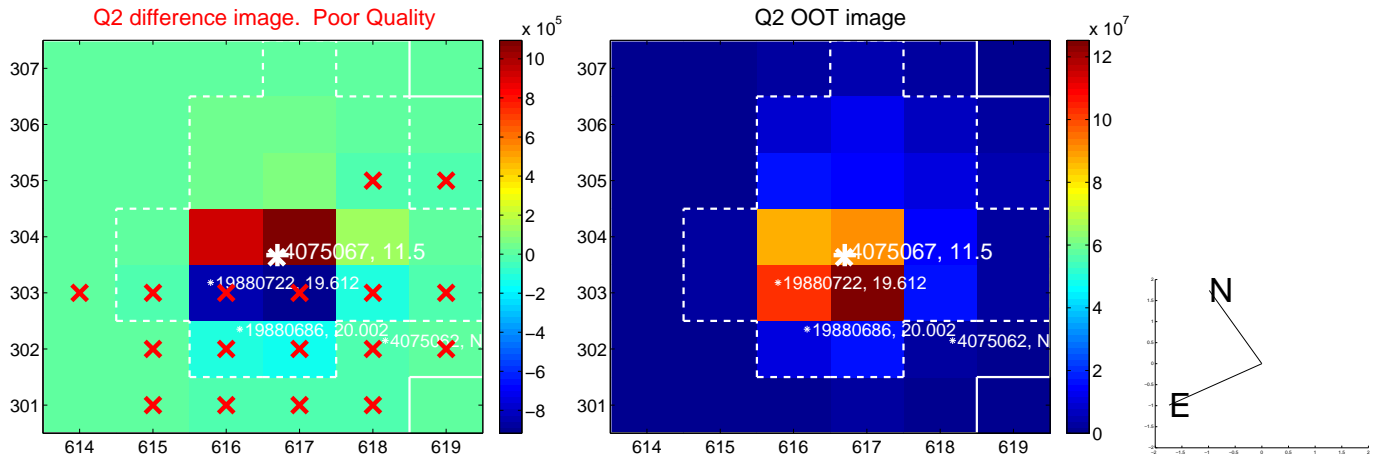
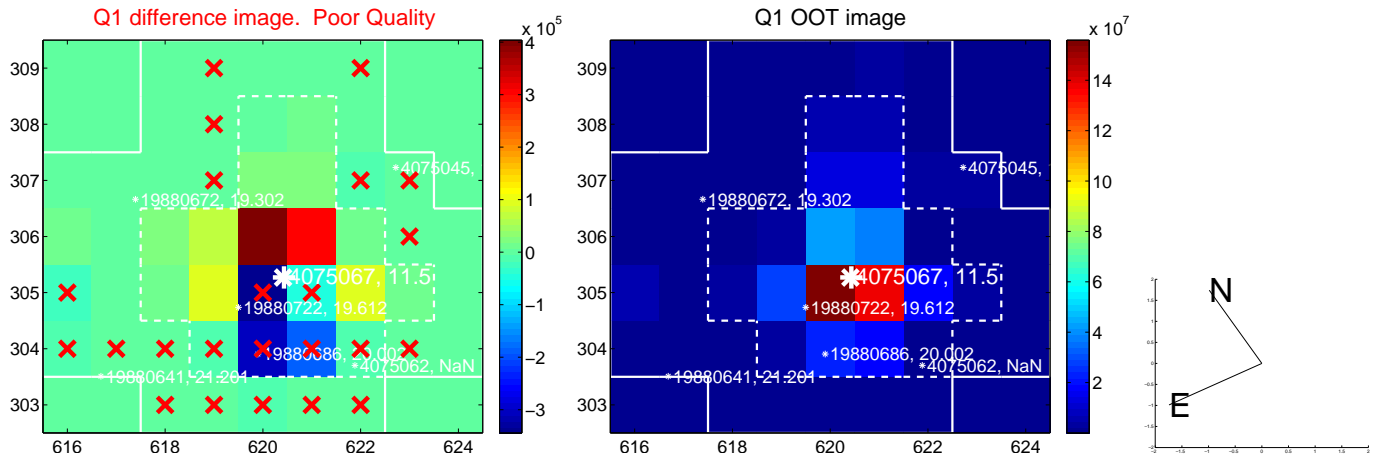
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.955 ± 1.232	0.78	0.783 ± 1.261	-0.547 ± 0.736
PRF-fit source offset from KIC position	0.875 ± 1.189	0.74	0.692 ± 1.355	-0.536 ± 0.843
photometric centroid source offset	1.72 ± 0.56	3.08	-1.69 ± 0.55	-0.32 ± 0.65

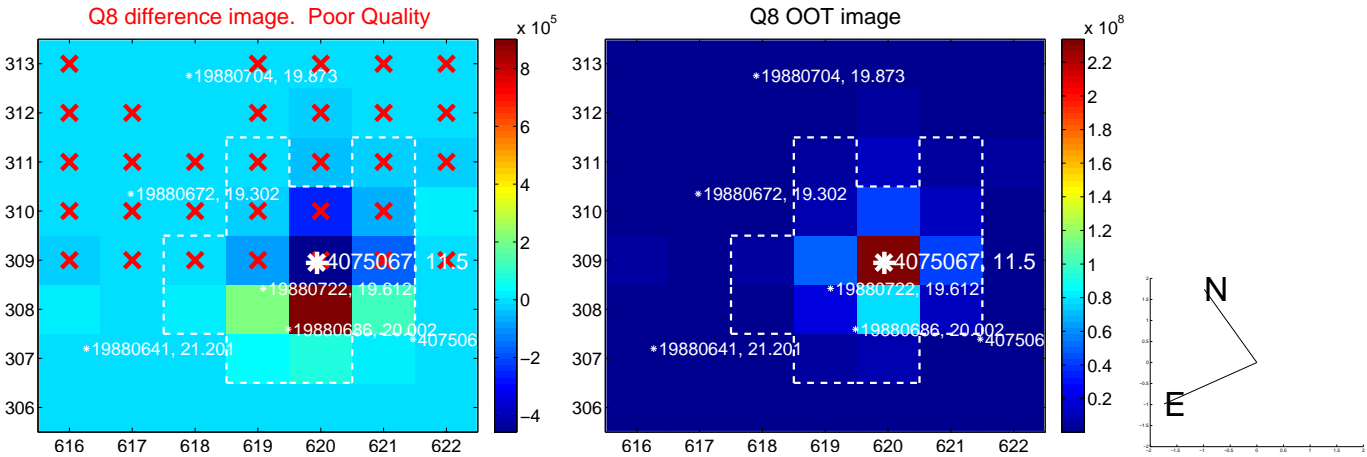
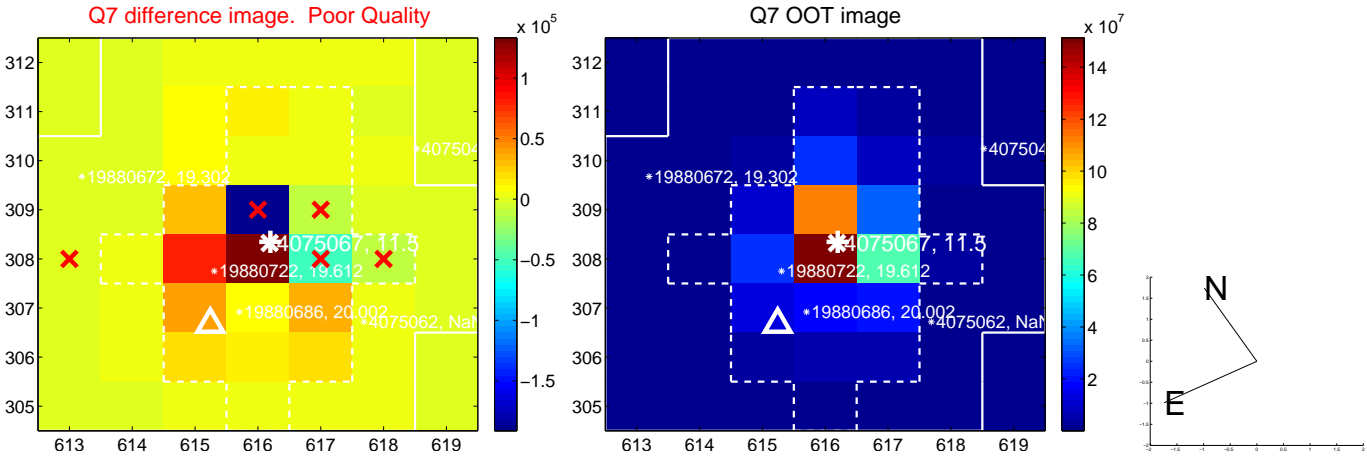
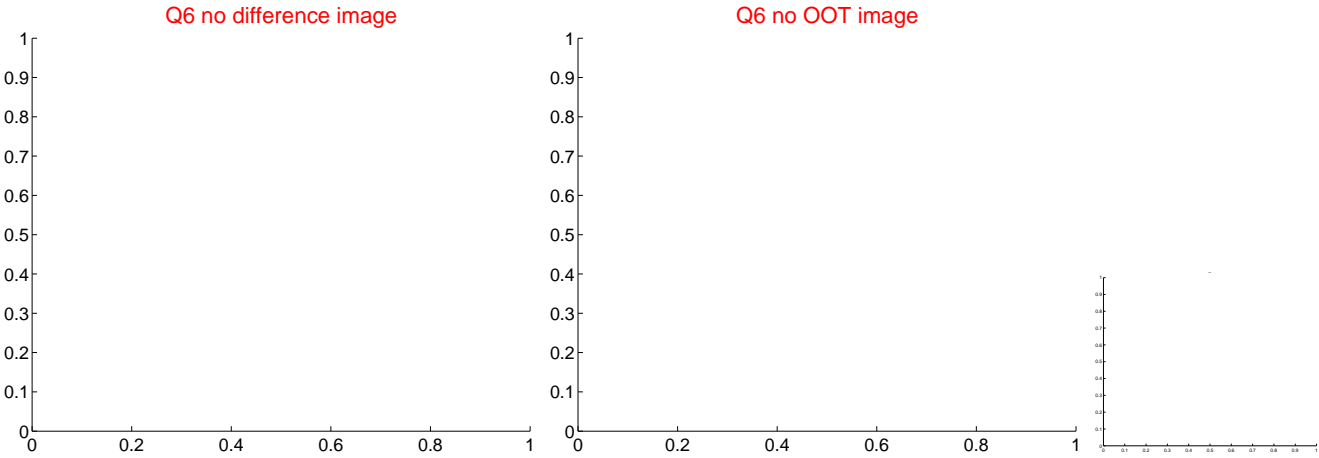
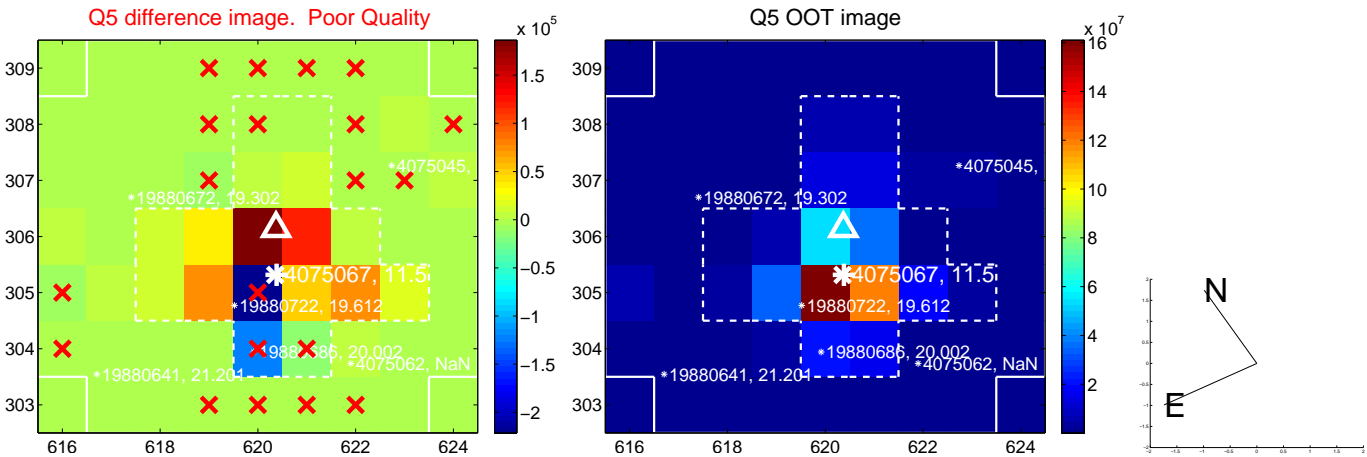


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

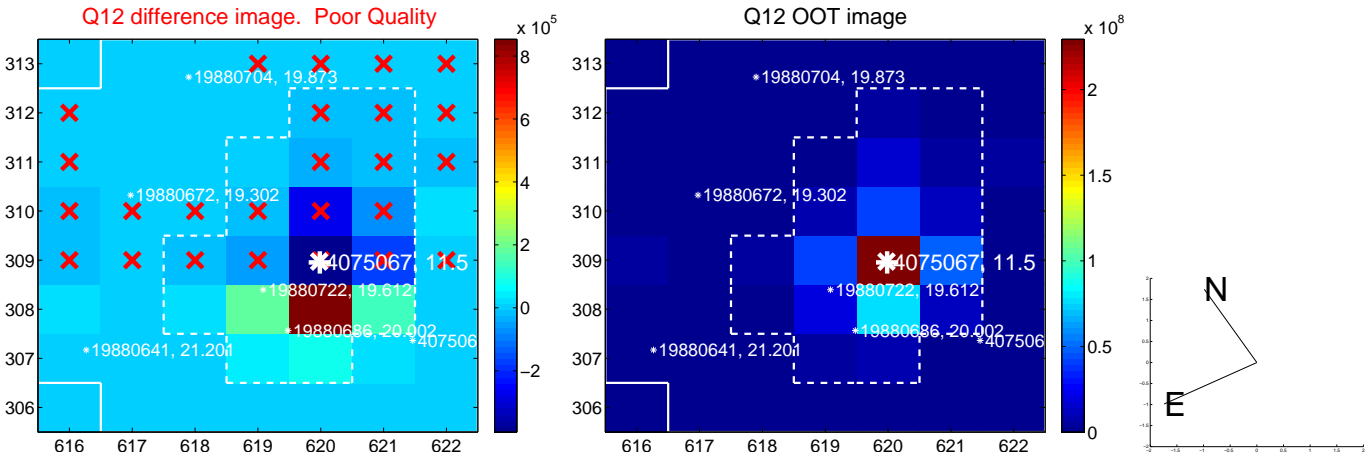
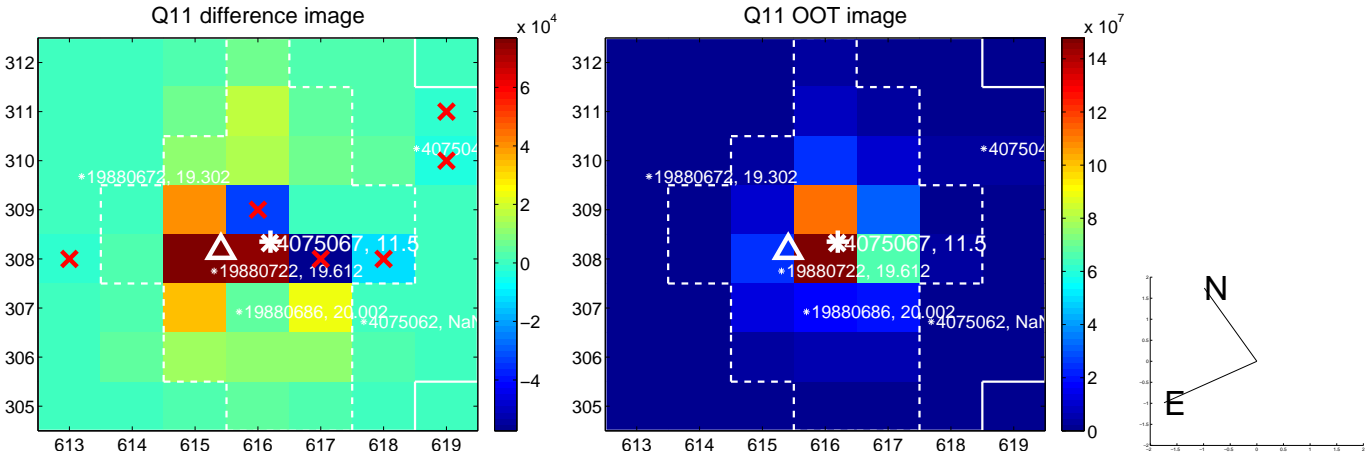
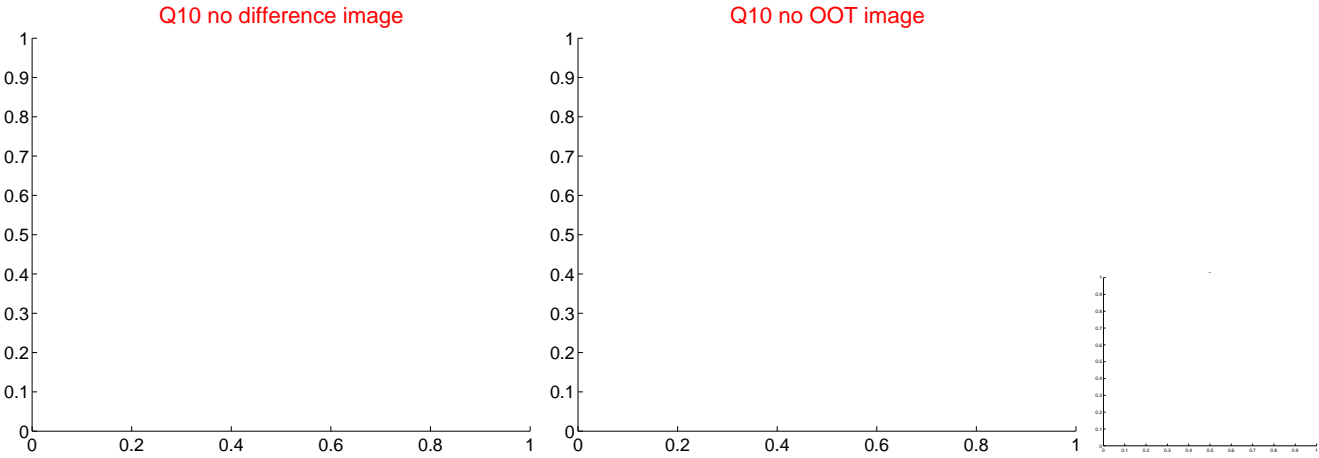
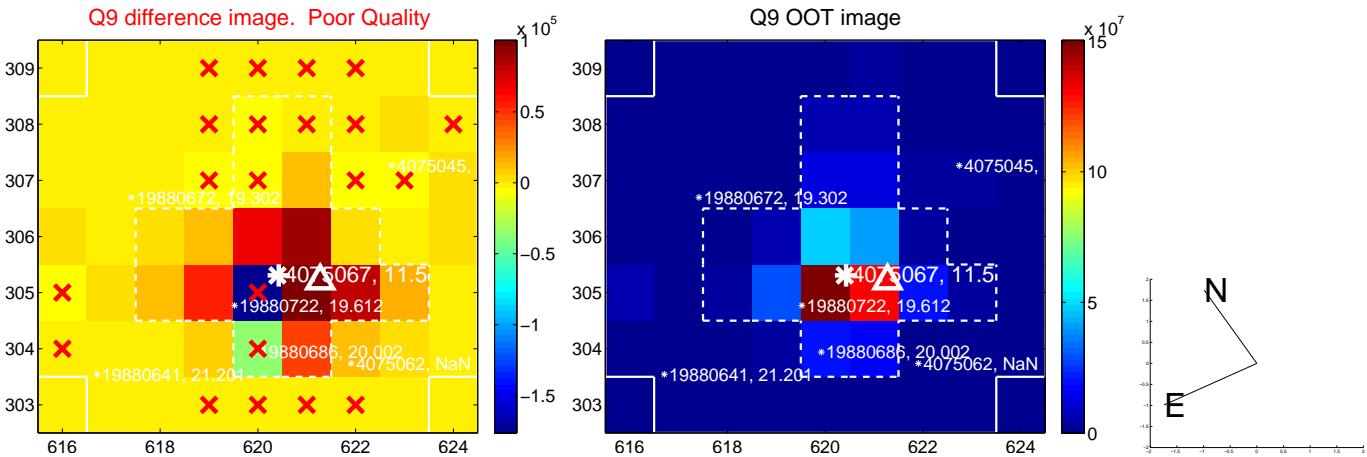
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



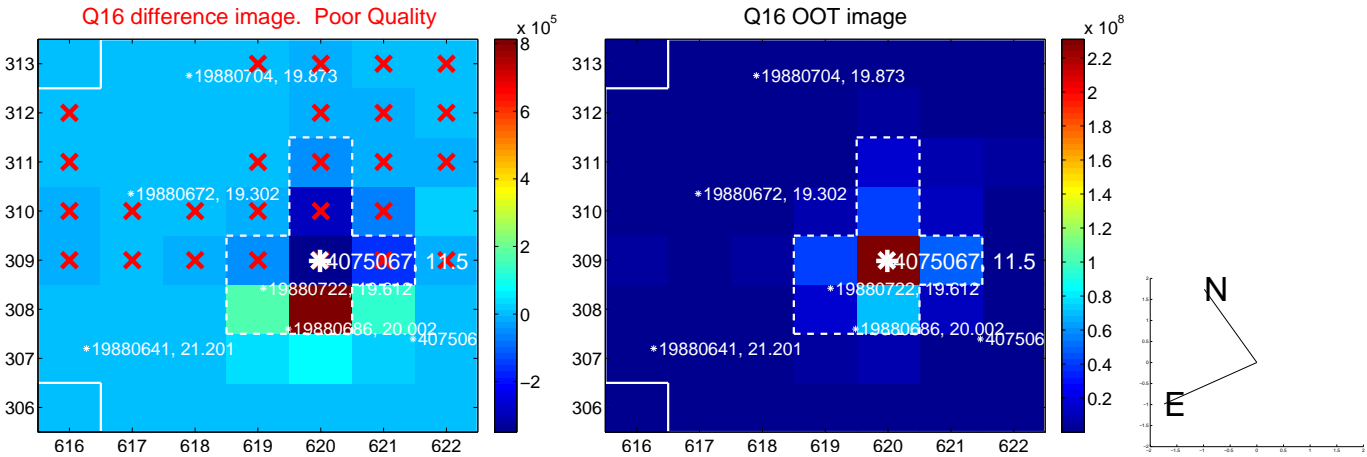
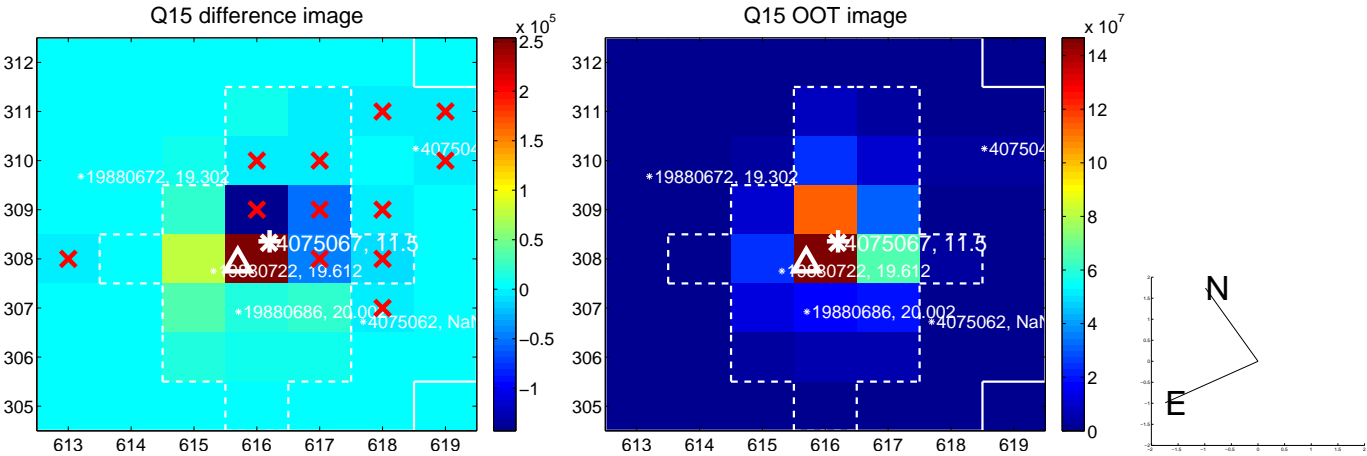
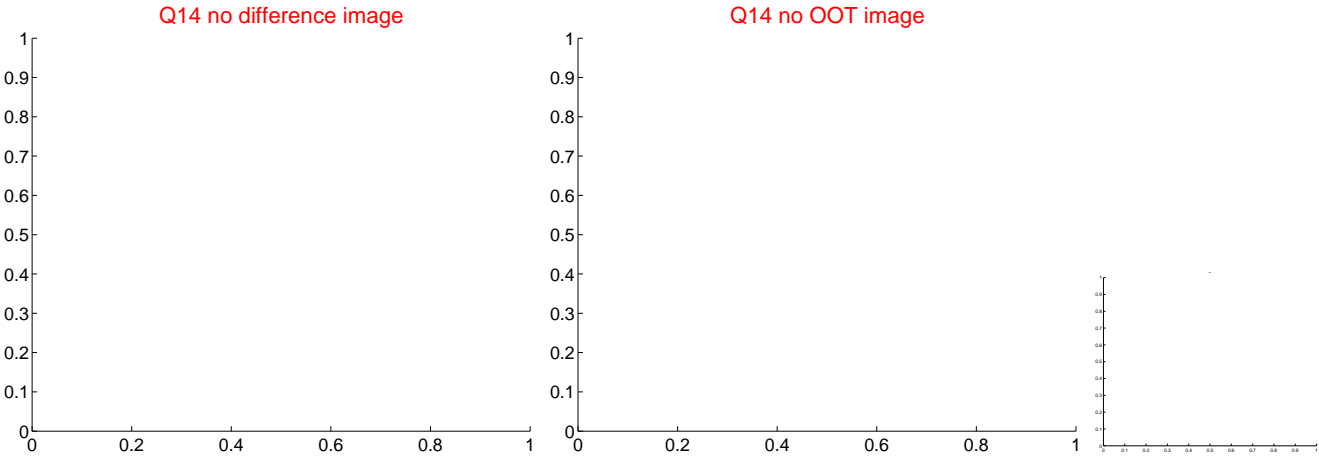
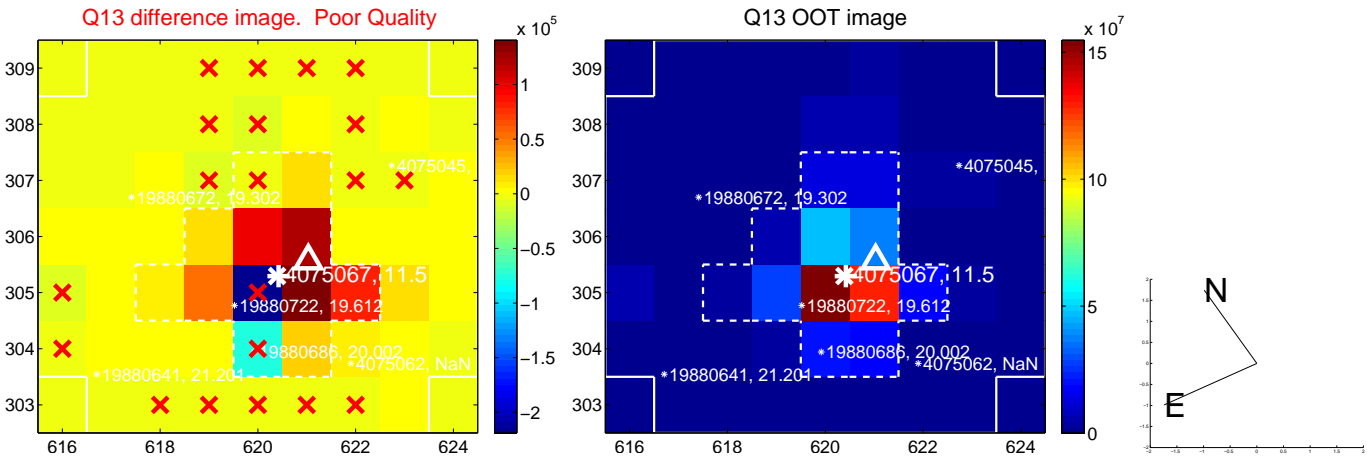
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



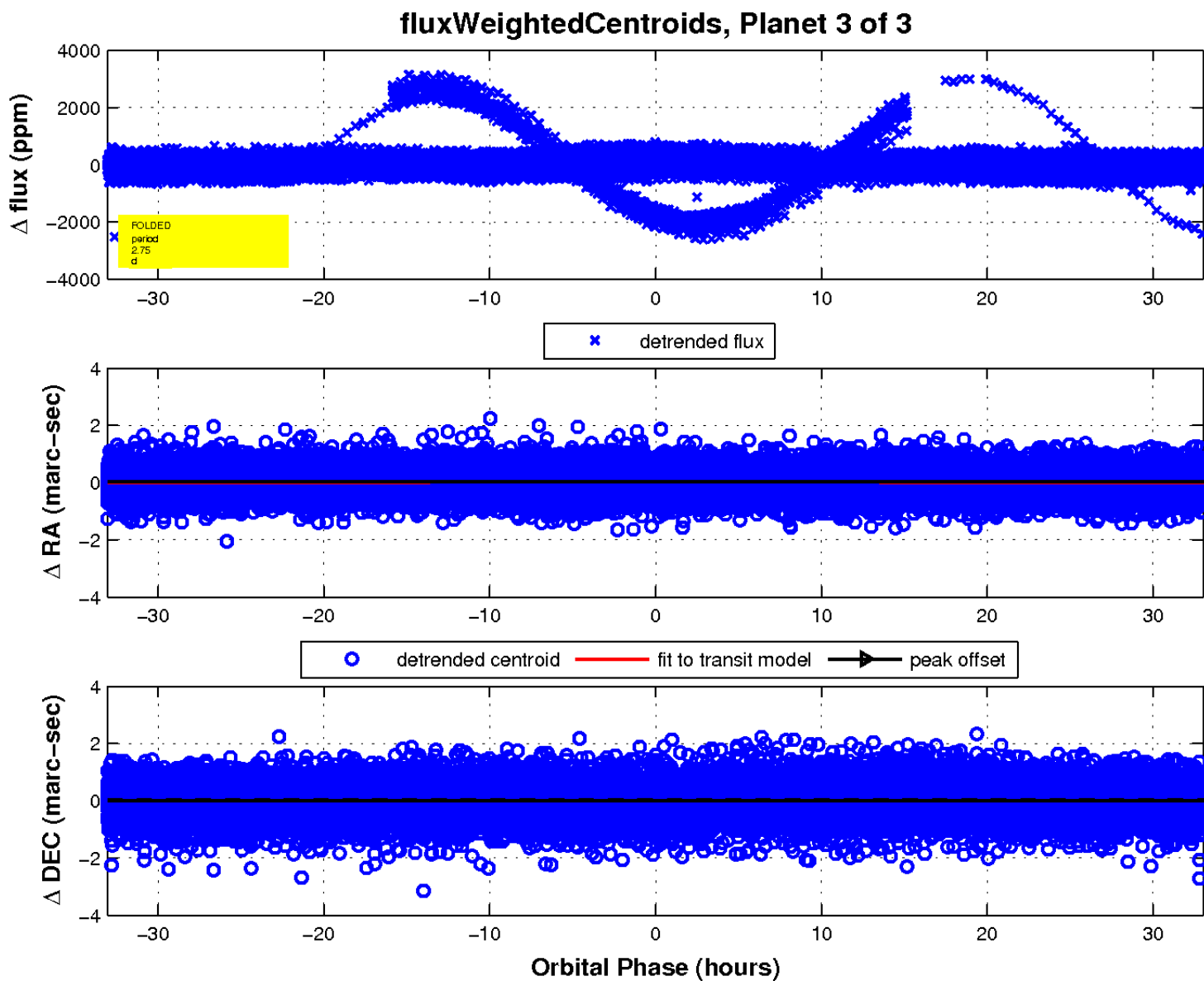
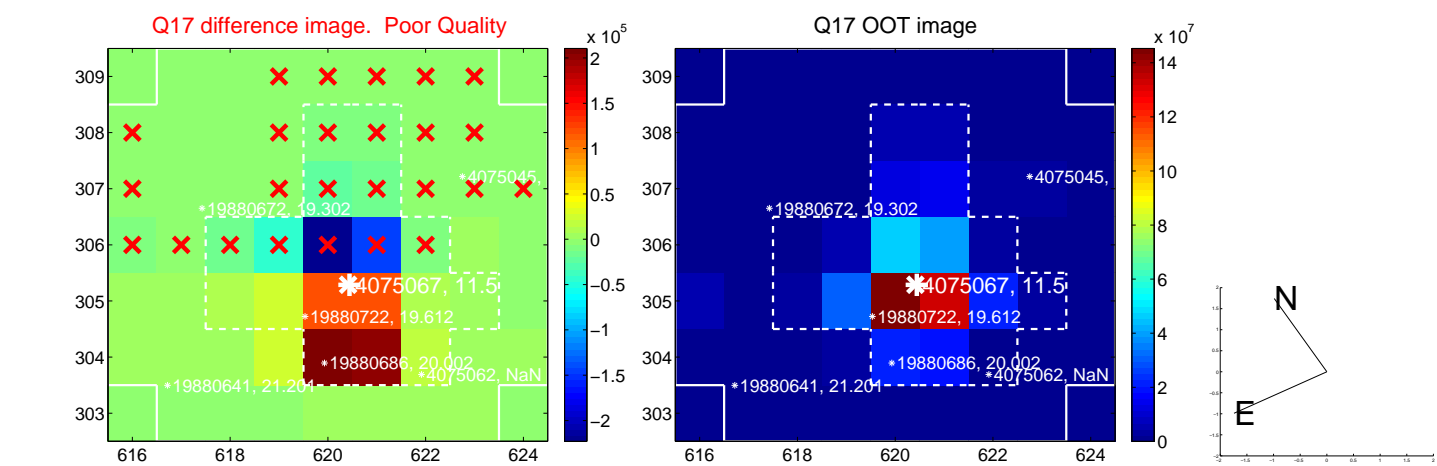
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

