

KIC 007765585

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})
007765585-01	OBS	No	0.666519	131.640847	41.3	3.814	11.6	8.0	1.35	6835	0.94	12845.47
007765585-02	OBS	No	1.280003	132.366005	139.4	5.379	10.2	12.5	1.35	6835	1.88	5381.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007765585-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
007765585-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

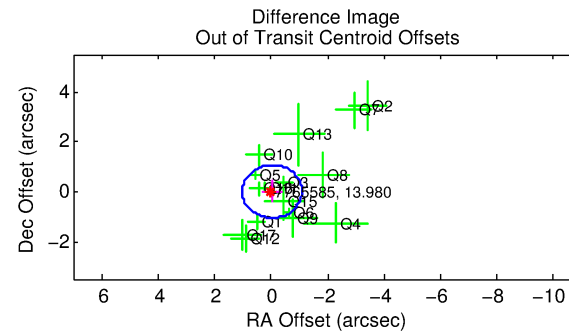
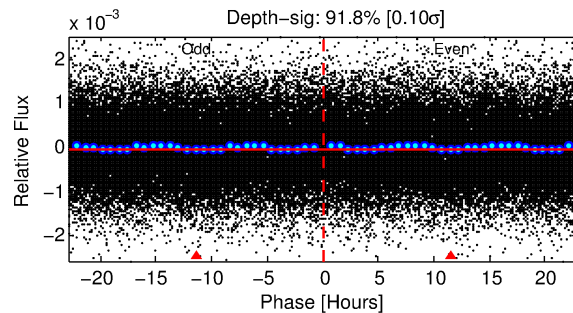
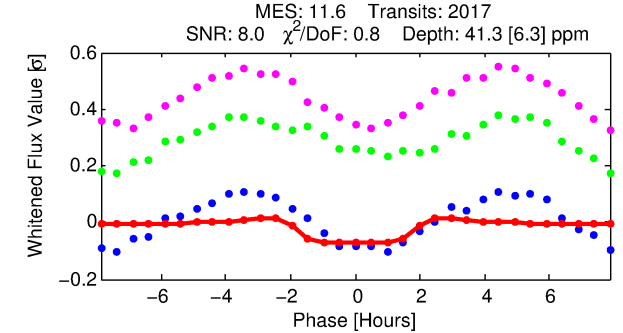
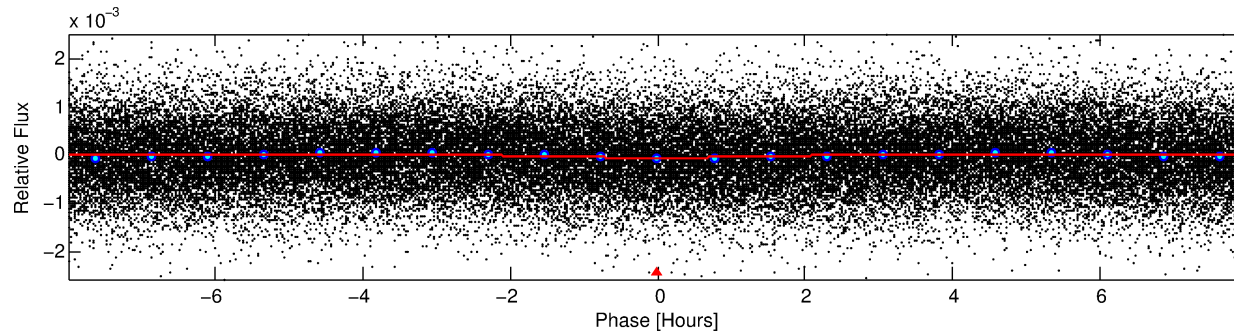
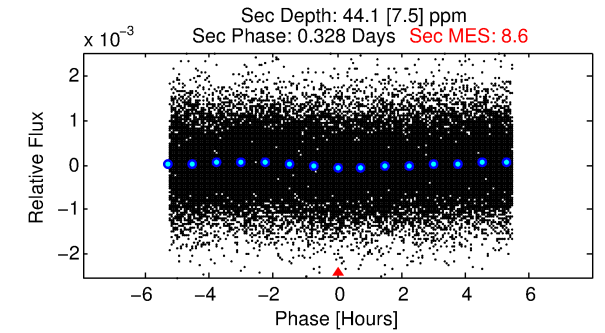
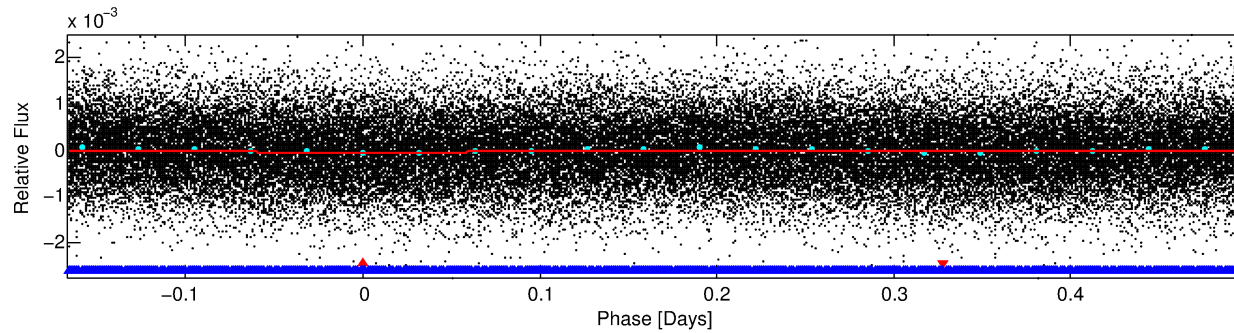
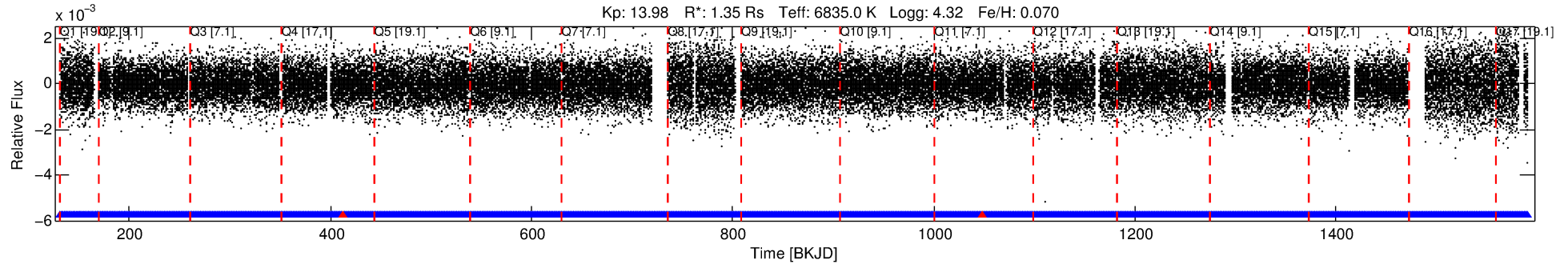
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007765585-01

No Significant Match Found

DV One-Page Summary

KIC: 7765585 Candidate: 1 of 2 Period: 0.667 d



DV Fit Results:

Period = 0.66652 [0.00001] d
Epoch = 131.6408 [0.0052] BKJD
Rp/R* = 0.0064 [0.0070]
a/R* = 1.25 [2.79]
b = 0.74 [3.91]
Seff = 12845.47 [4683.67]
Teq = 2715 [247] K
Rp = 0.94 [1.07] Re
a = 0.0167 [0.0039] AU
Ag = 7.63 [17.07] [0.39σ]
Teffp = 6976 [3865] K [1.10σ]

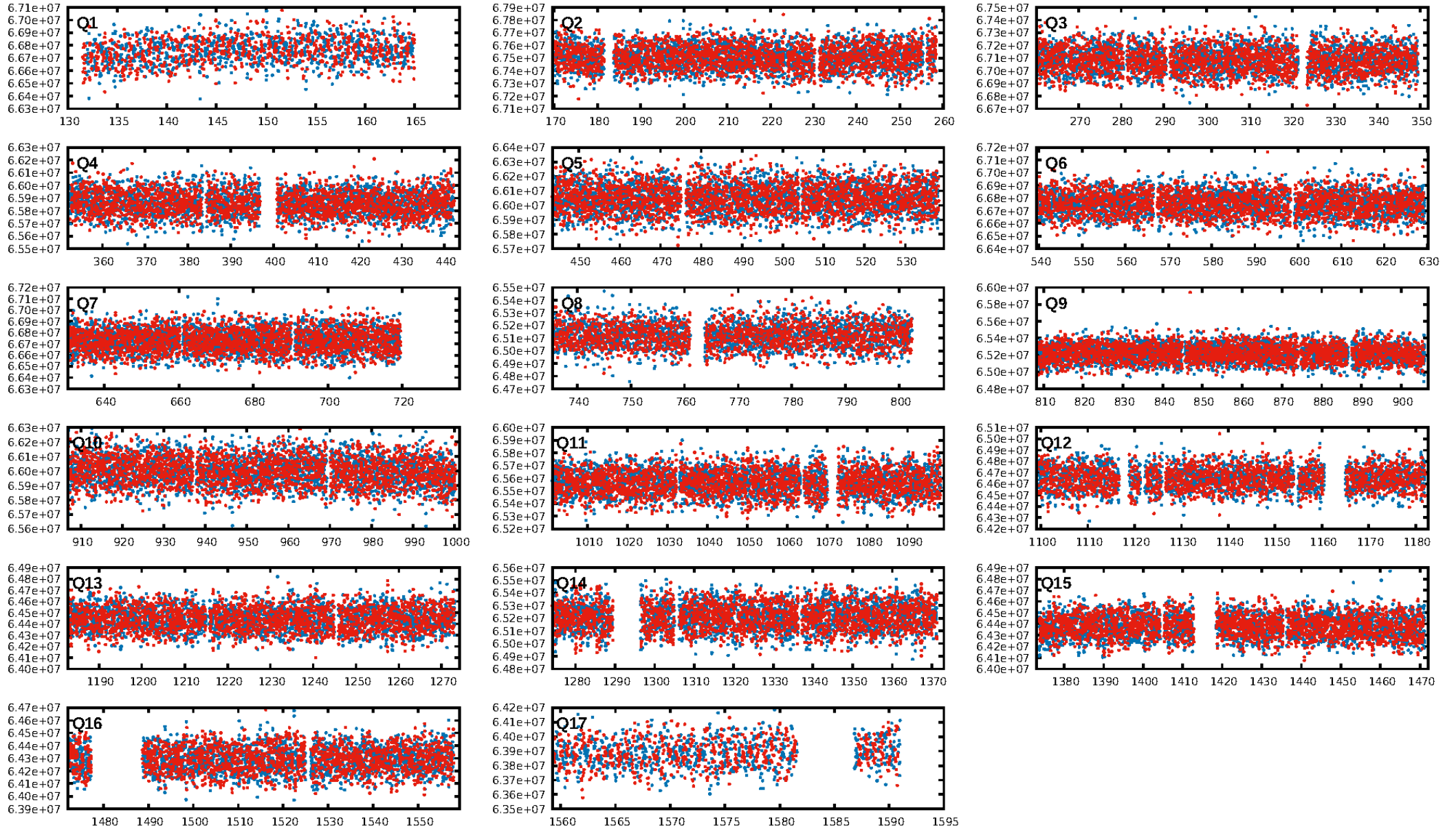
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 97.4% [2.23σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.37e-18
RollingBand-fgt: 1.00 [1924/1926]
GhostDiagnostic-chr: -45.66
Centroid-sig: 1.6%
Centroid-so: 0.729 arcsec [1.61σ]
OotOffset-rm: 0.035 arcsec [0.10σ]
KicOffset-rm: 0.131 arcsec [0.30σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 1.00 [17/17]

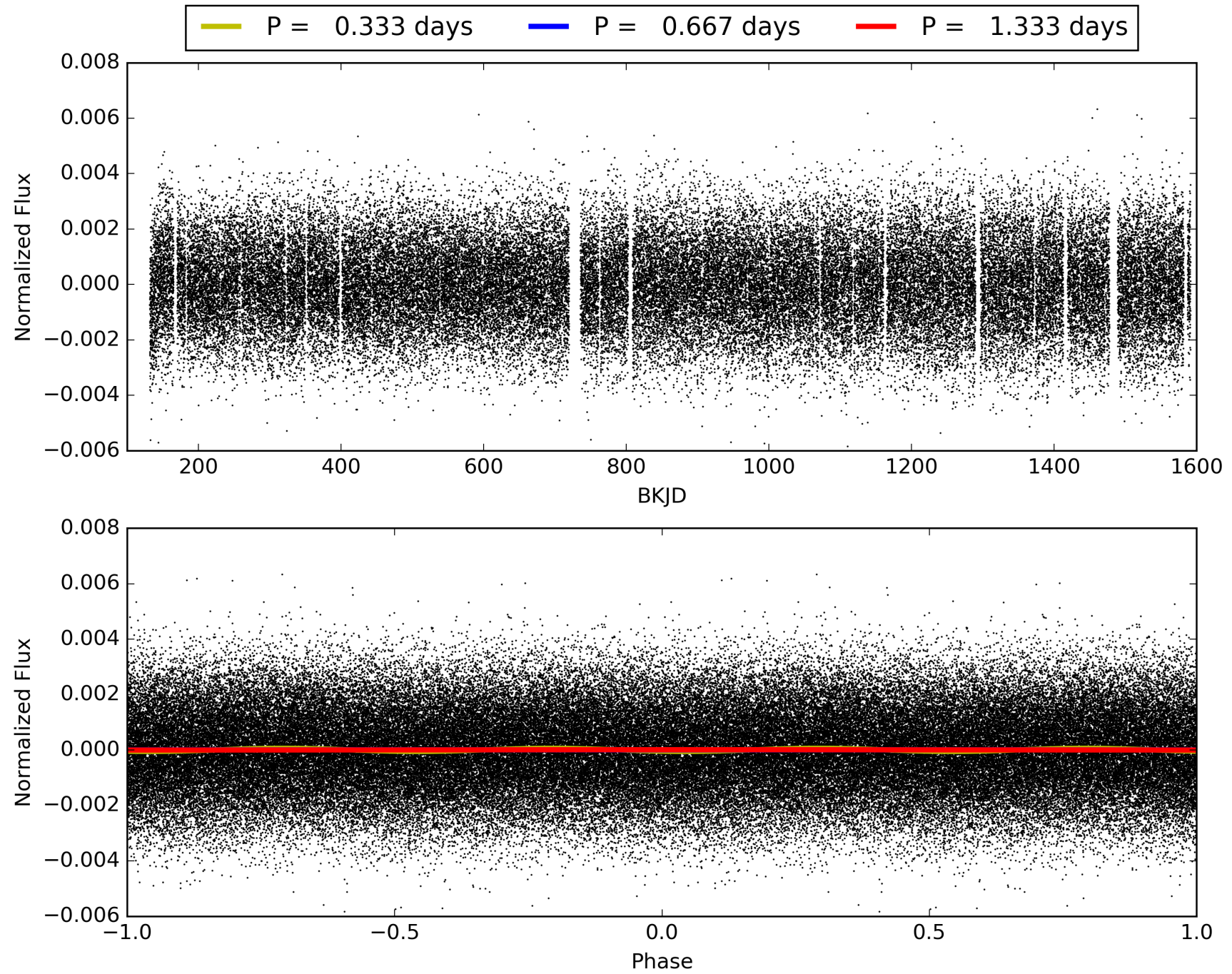
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:45:05 Z

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

TCE 007765585-01, PDC Light Curves

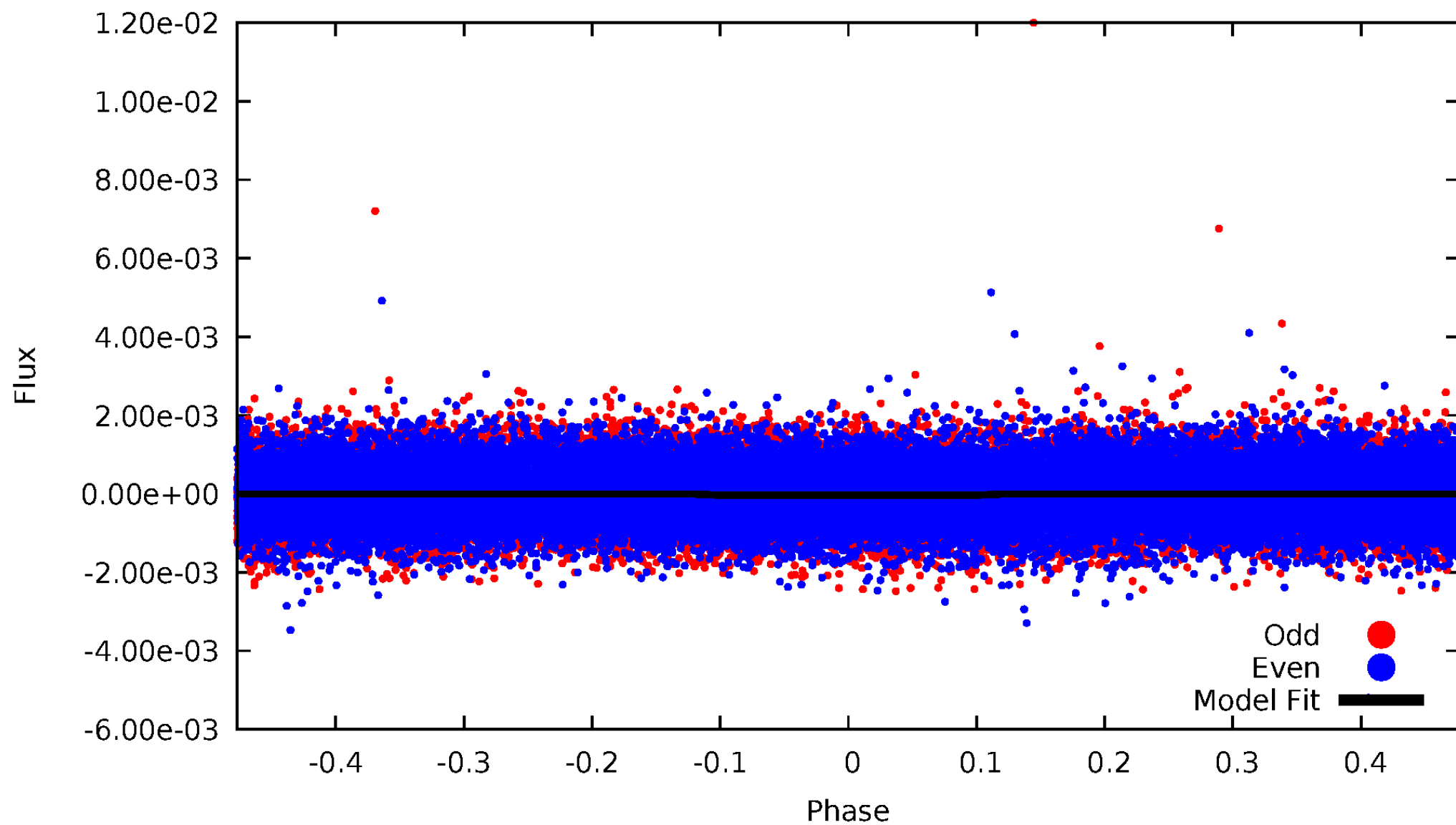


TCE 007765585-01



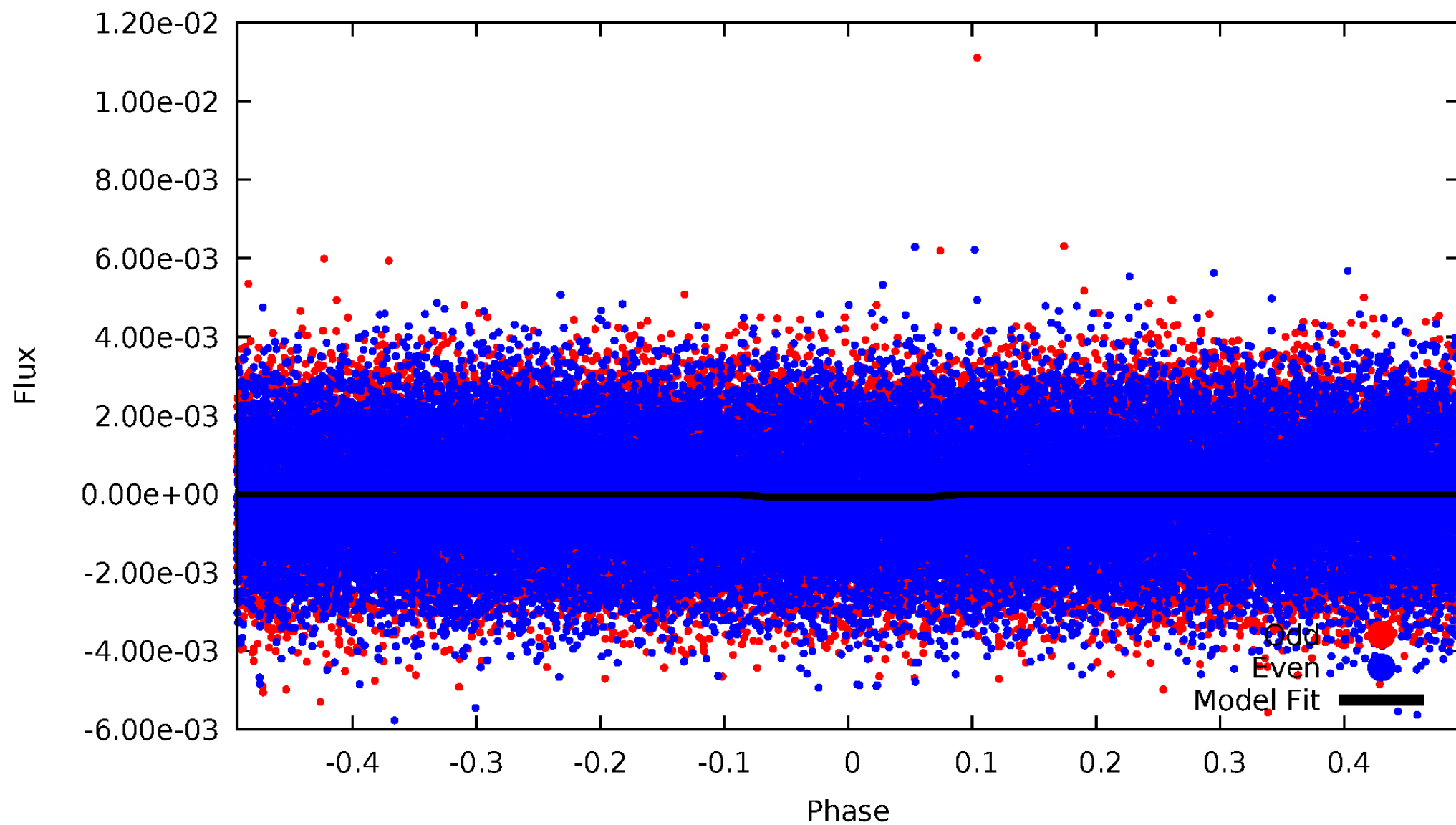
DV Odd/Even

TCE 007765585-01



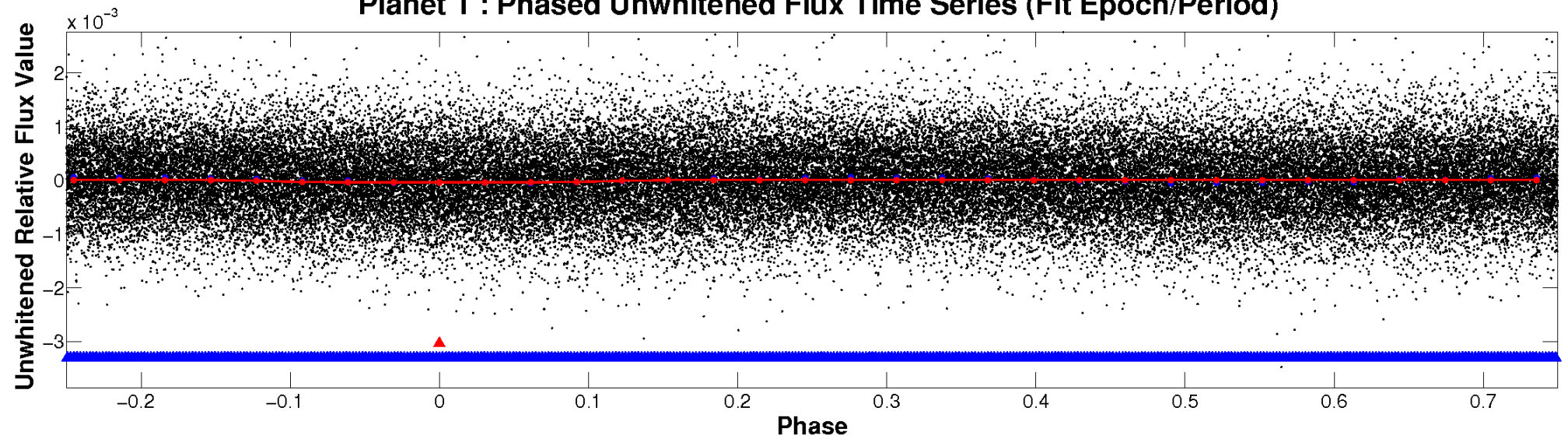
ALT Odd/Even

TCE 007765585-01

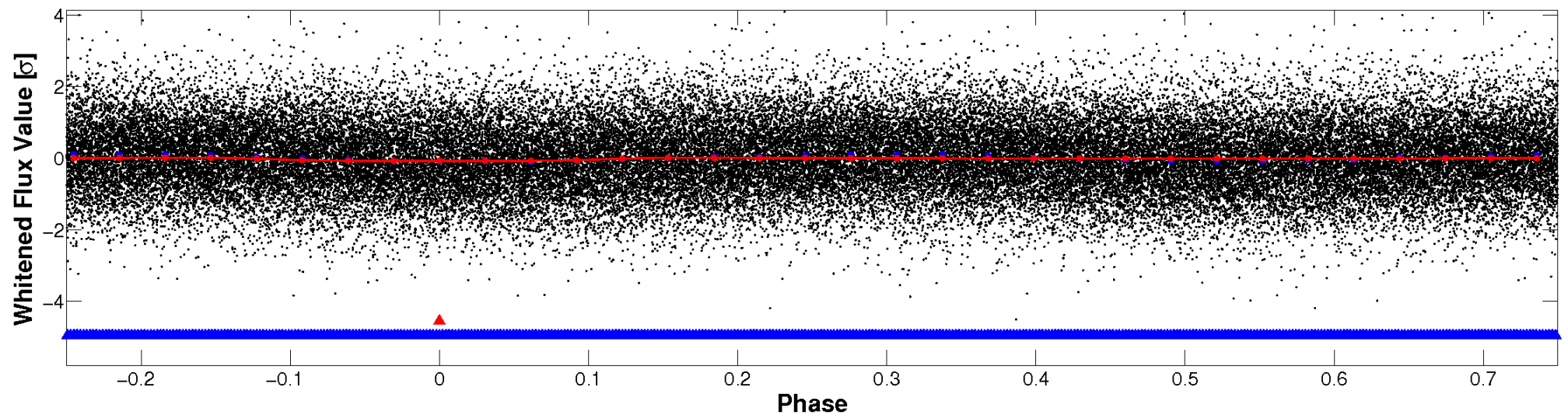


Non-Whitened Vs. Whitened Light Curve

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

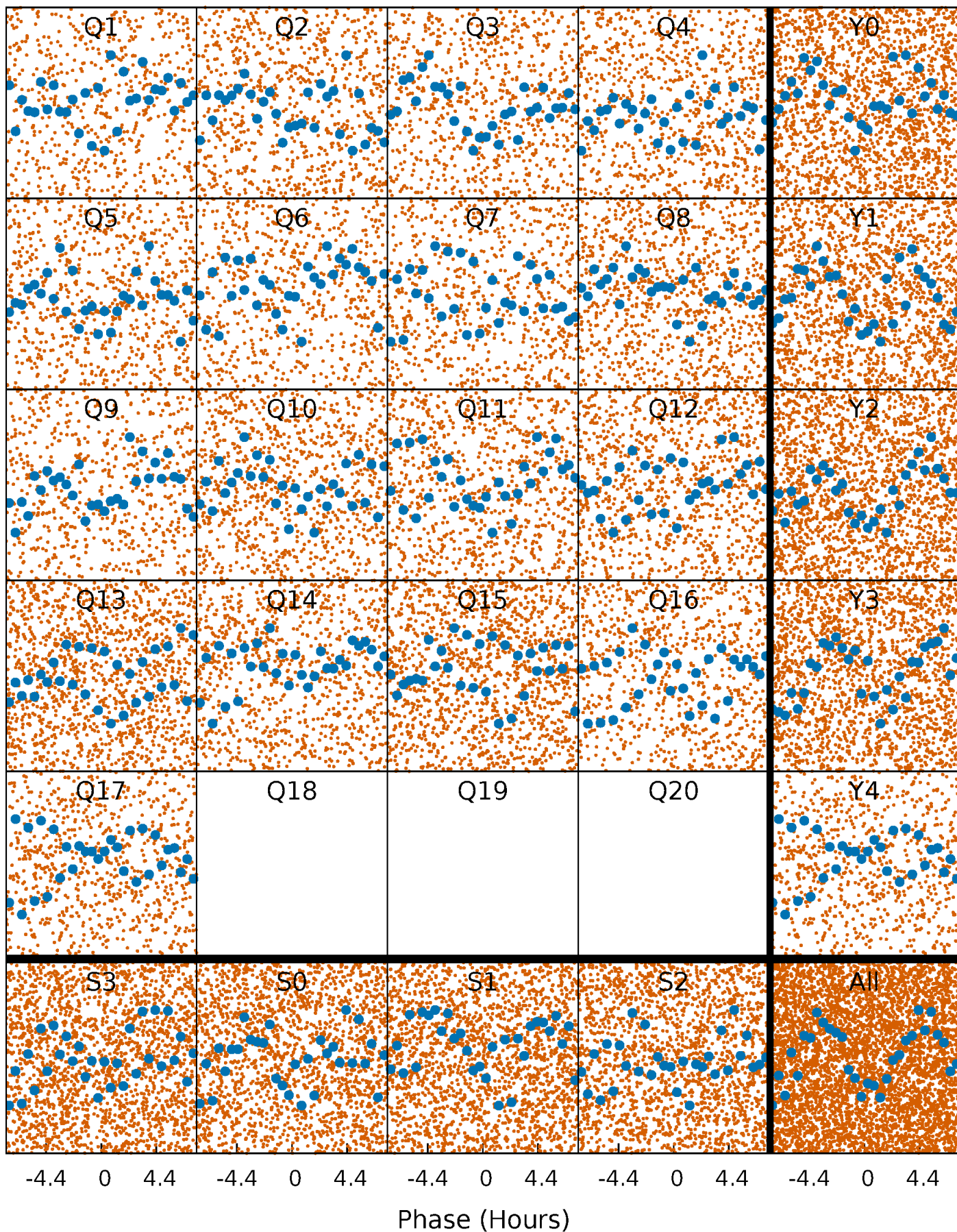


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



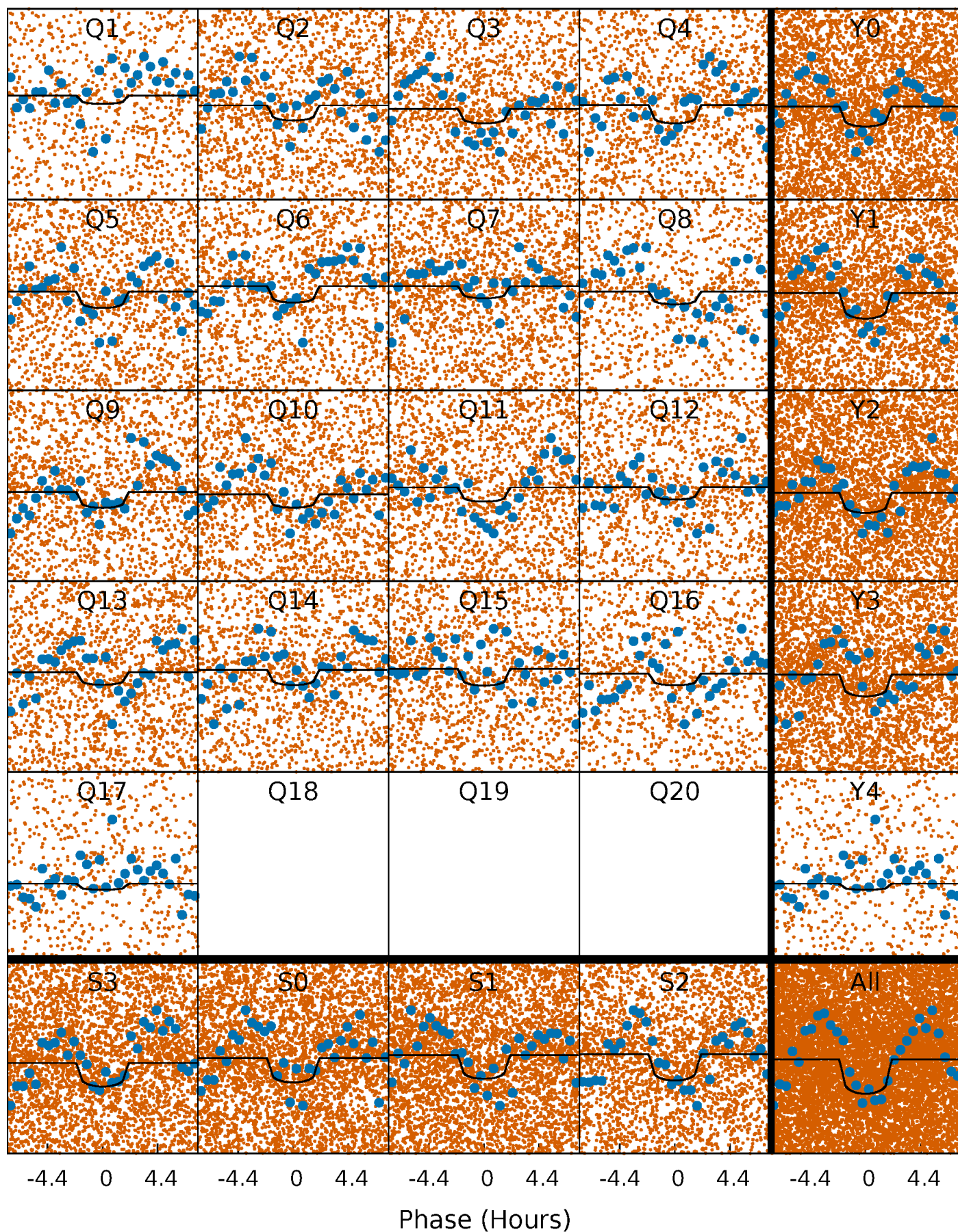
PDC Quarter-Phased Transit Curves

TCE 007765585-01 P= 0.666519 Days $T_0=131.640847$ (BKJD)



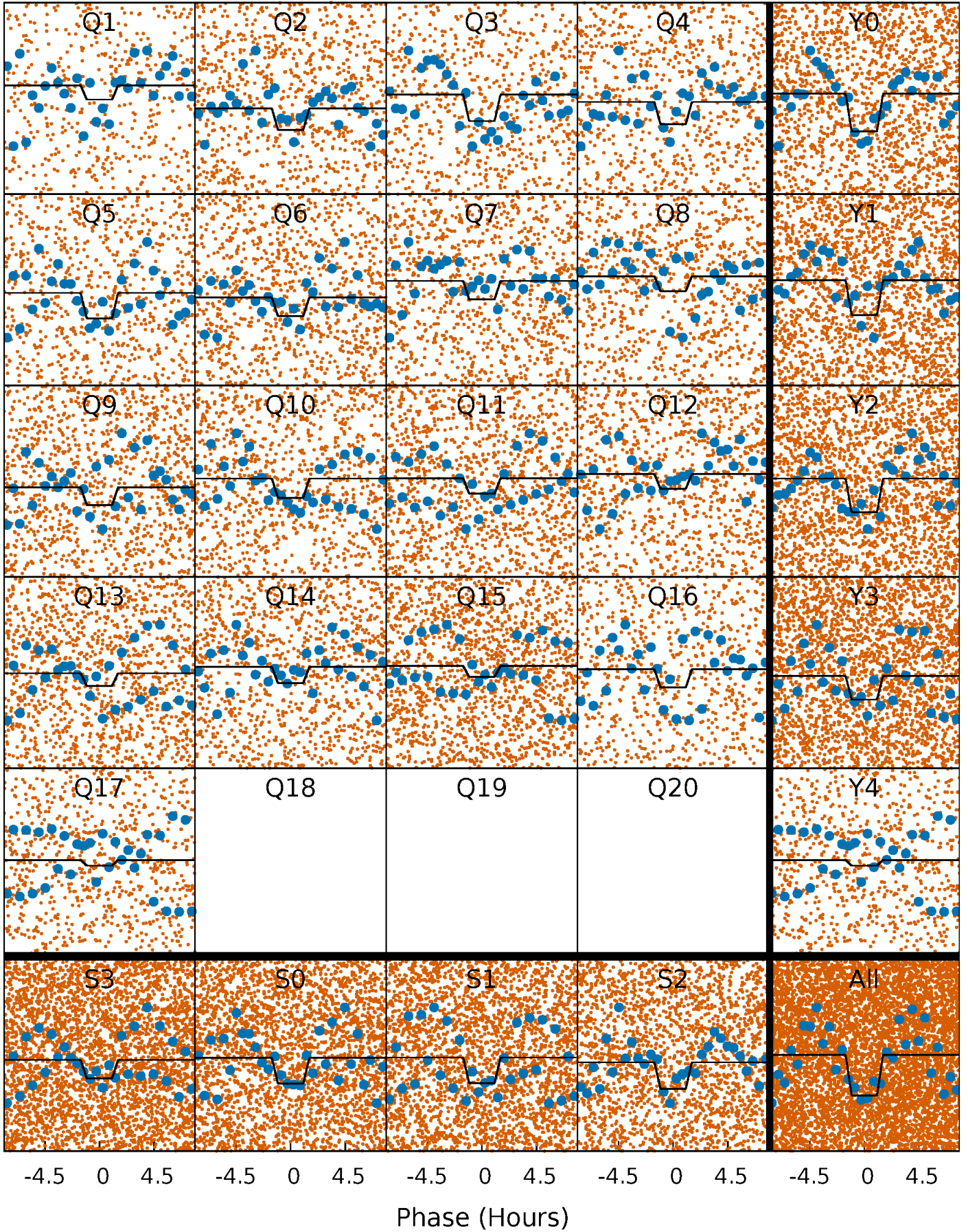
DV Quarter-Phased Transit Curves

TCE 007765585-01 P= 0.666519 Days $T_0=131.640847$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

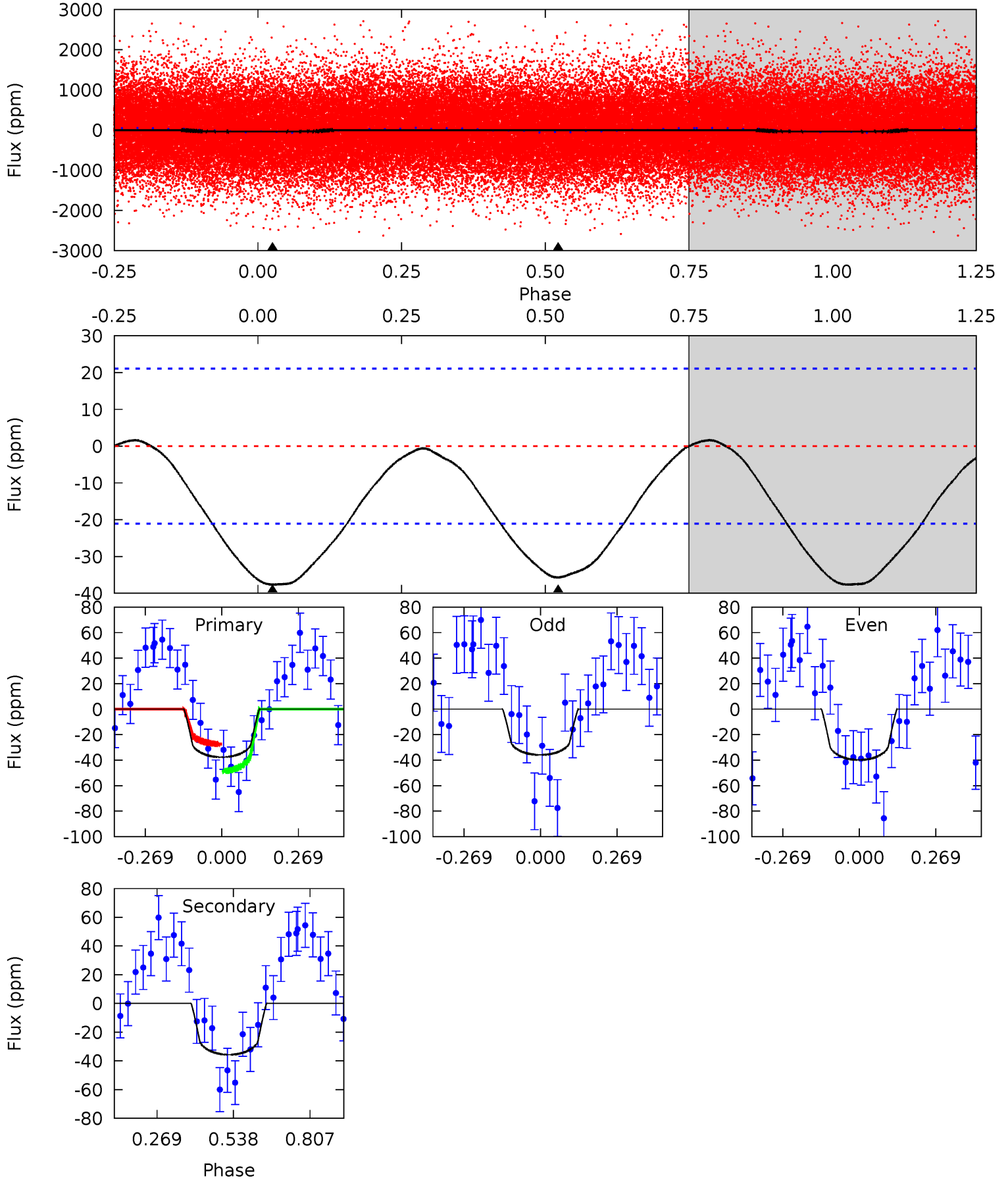
TCE 007765585-01 P= 0.666573 Days $T_0=131.609736$ (BKJD)



DV Model-Shift Uniqueness Test

007765585-01, P = 0.666519 Days, E = 130.974328 Days

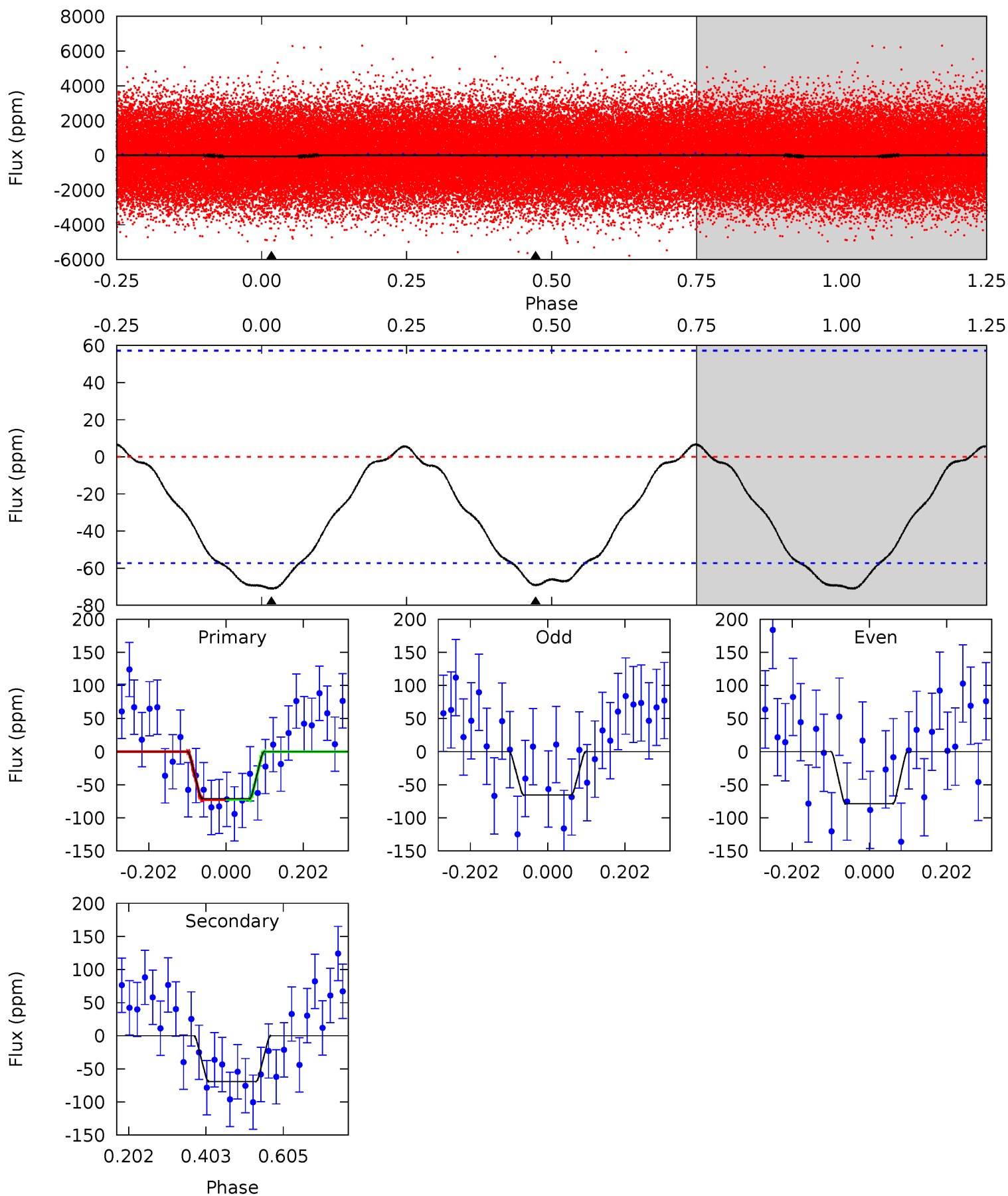
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.78	7.37	0	0	4.35	1.11	0.30	7.78	7.78	7.37	7.37	0.40	1.13	0.04	2.13



Alt Model-Shift Uniqueness Test

007765585-01, P = 0.666573 Days, E = 130.943163 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.48	5.34	0	0	4.42	1.28	0.32	5.48	5.48	5.34	5.34	0.50	1.01	0.09	0.01



Stellar Parameters For KIC 007765585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6835^{+163}_{-245}	$4.320^{+0.060}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.352^{+0.385}_{-0.165}$	$1.392^{+0.166}_{-0.185}$	$0.794^{+0.253}_{-0.396}$
	+2%/-4%	+1%/-4%	+286%/-500%	+28%/-12%	+12%/-13%	+32%/-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 007765585-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-36 ± 5	$1.20^{+0.97}_{-0.70}$	3837^{+241}_{-176}	5726^{+4376}_{-1431}	$3.632^{+19.686}_{-2.516}$
Alt.	-69 ± 13	$1.49^{+0.98}_{-0.85}$	3841^{+254}_{-186}	6087^{+4463}_{-1378}	$4.488^{+20.384}_{-2.817}$

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 $A_{obs} \gg 1.0$

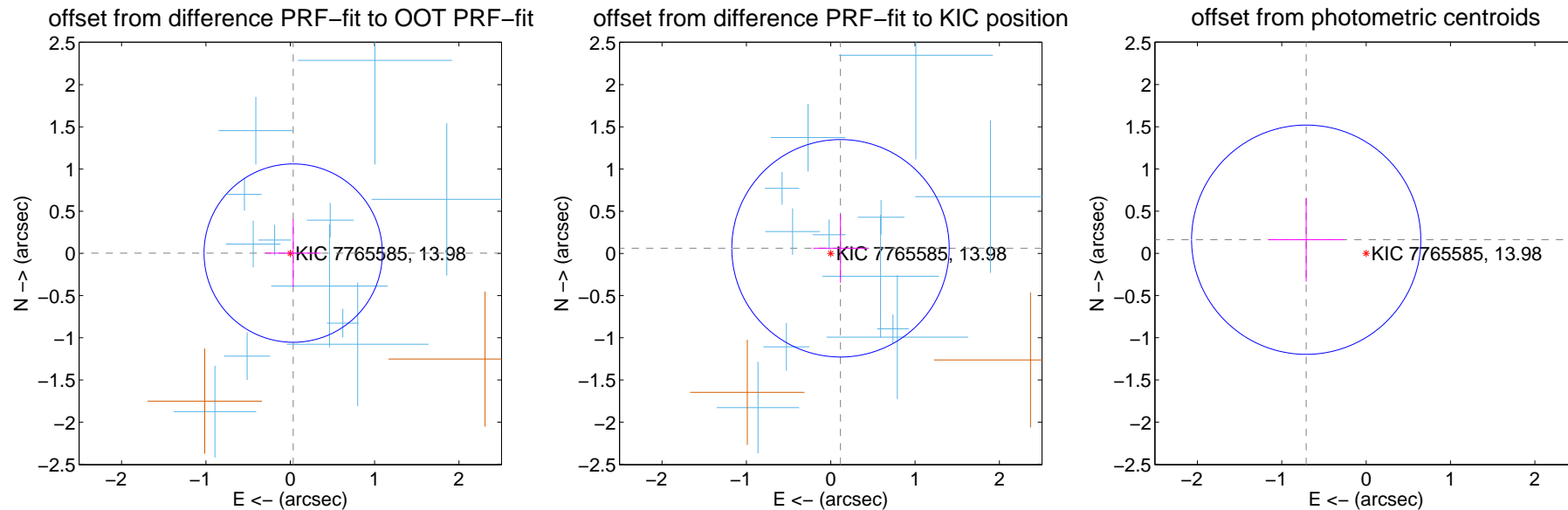
DV Centroid Data

Supplemental centroid analysis for 007765585-01. Kepler magnitude: 13.98. Transit SNR 7.99

There are 12 quarters with good PRF difference image offsets

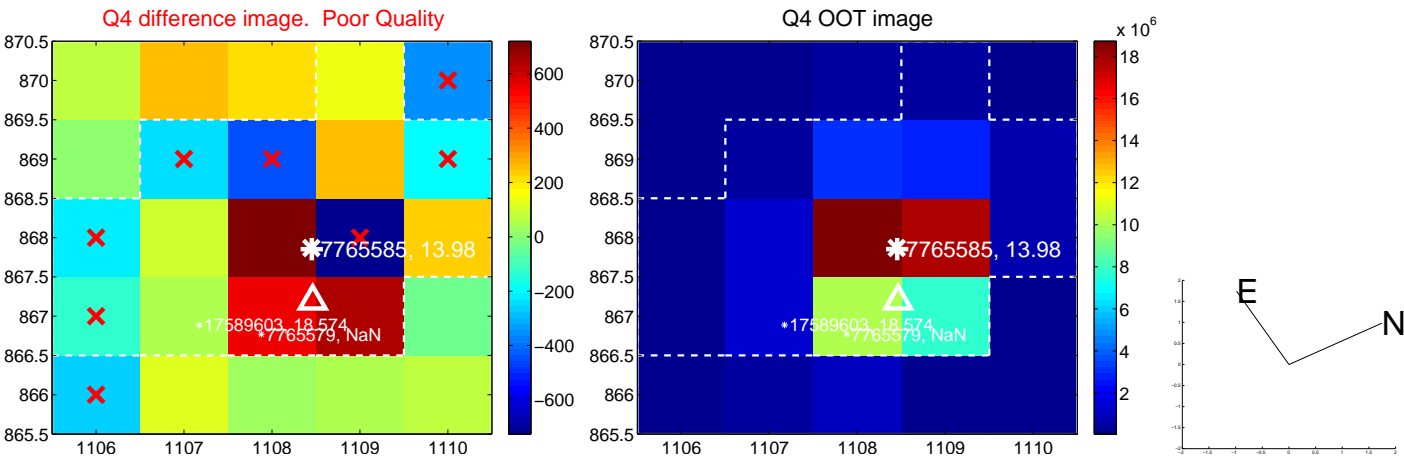
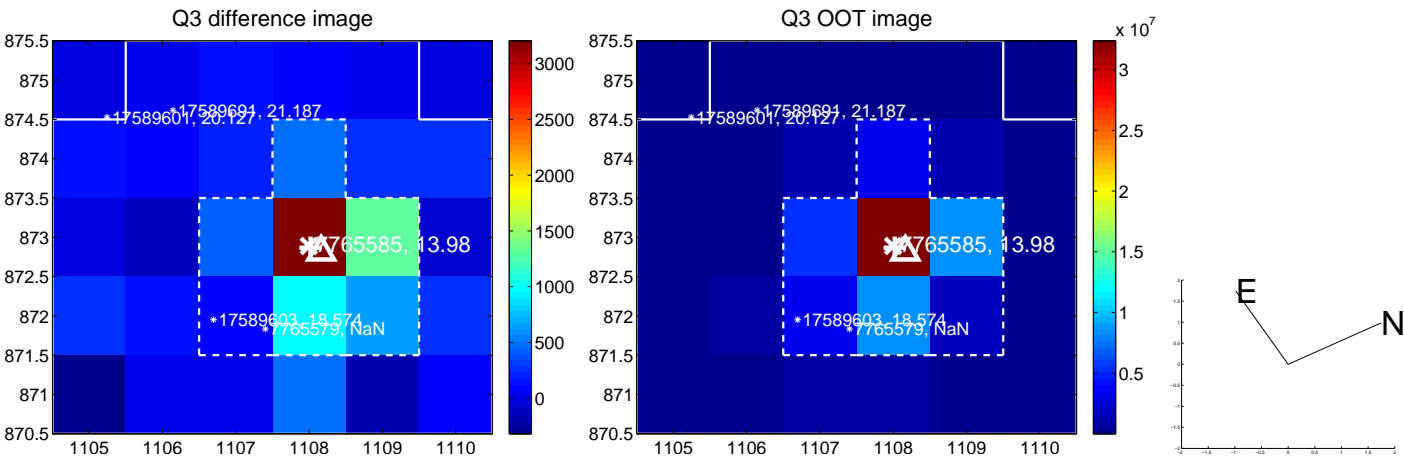
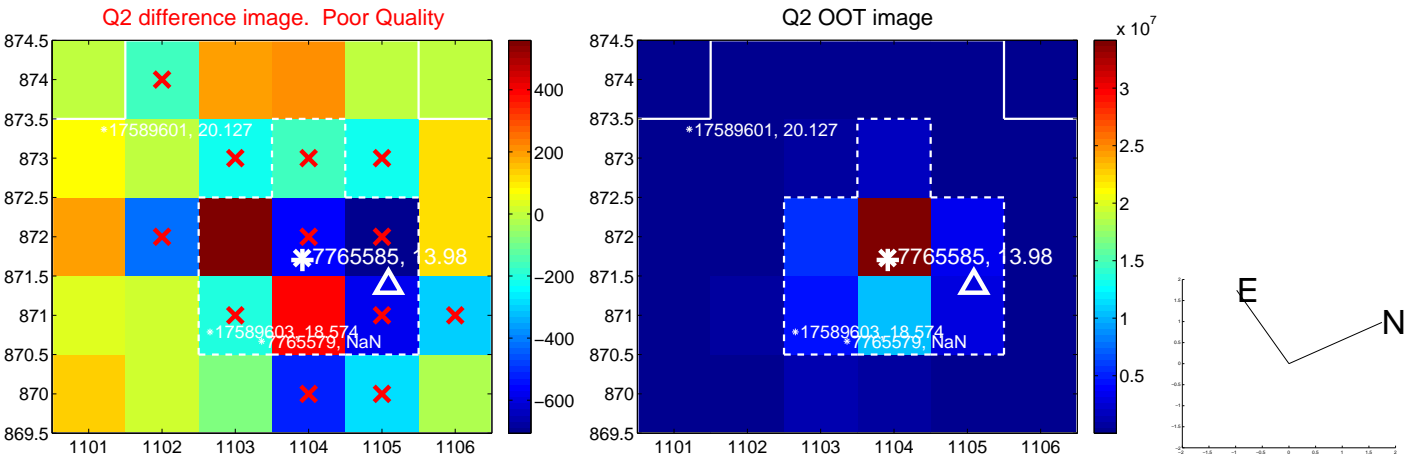
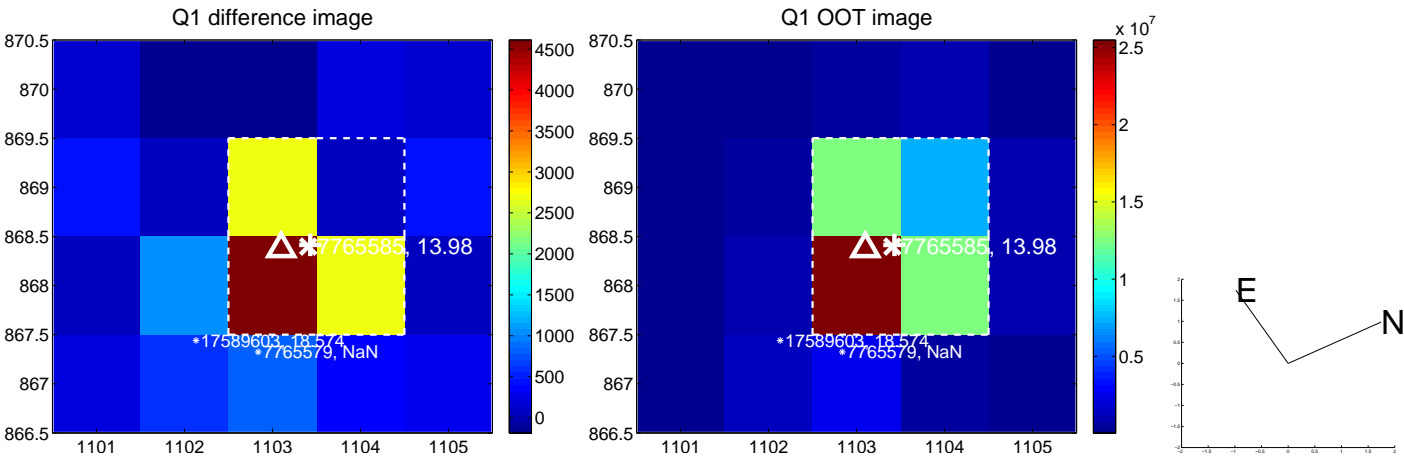
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.352	0.10	-0.035 ± 0.328	0.004 ± 0.400
PRF-fit source offset from KIC position	0.131 ± 0.430	0.30	-0.116 ± 0.322	0.061 ± 0.408
photometric centroid source offset	0.73 ± 0.45	1.61	0.71 ± 0.45	0.16 ± 0.50

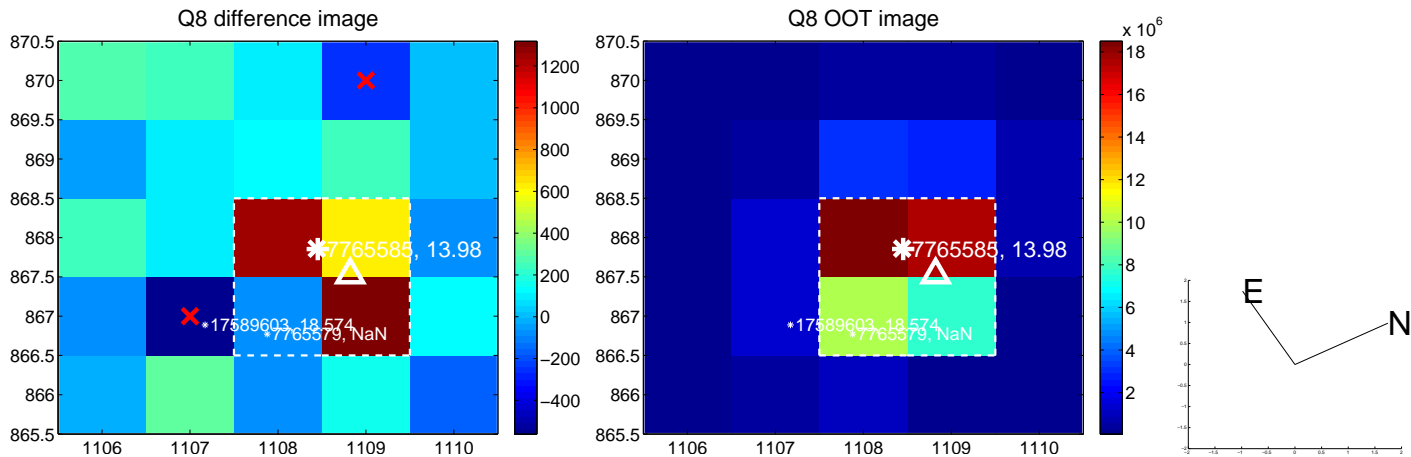
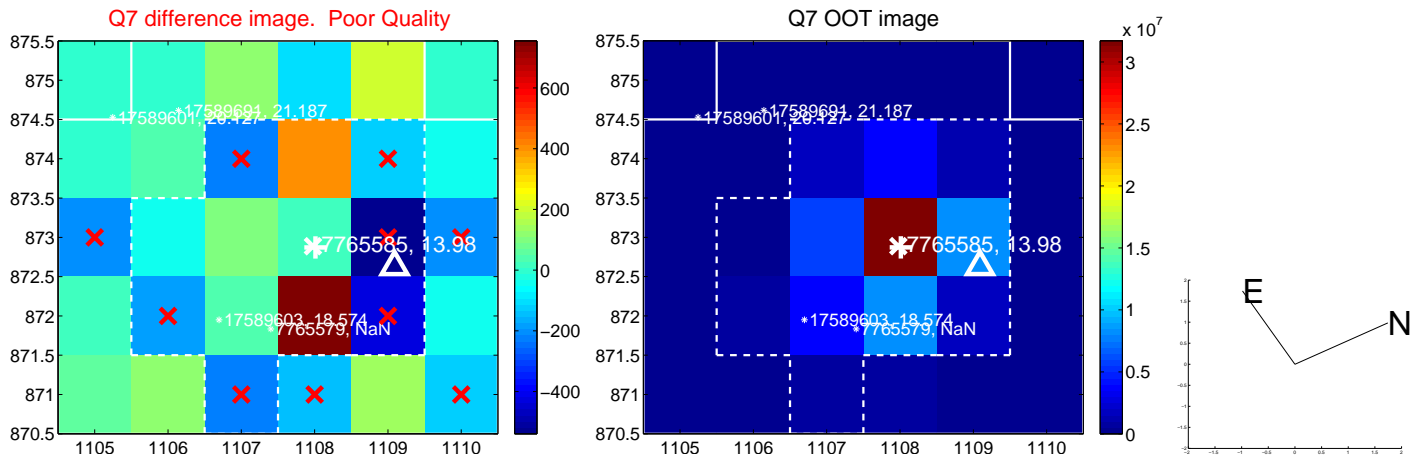
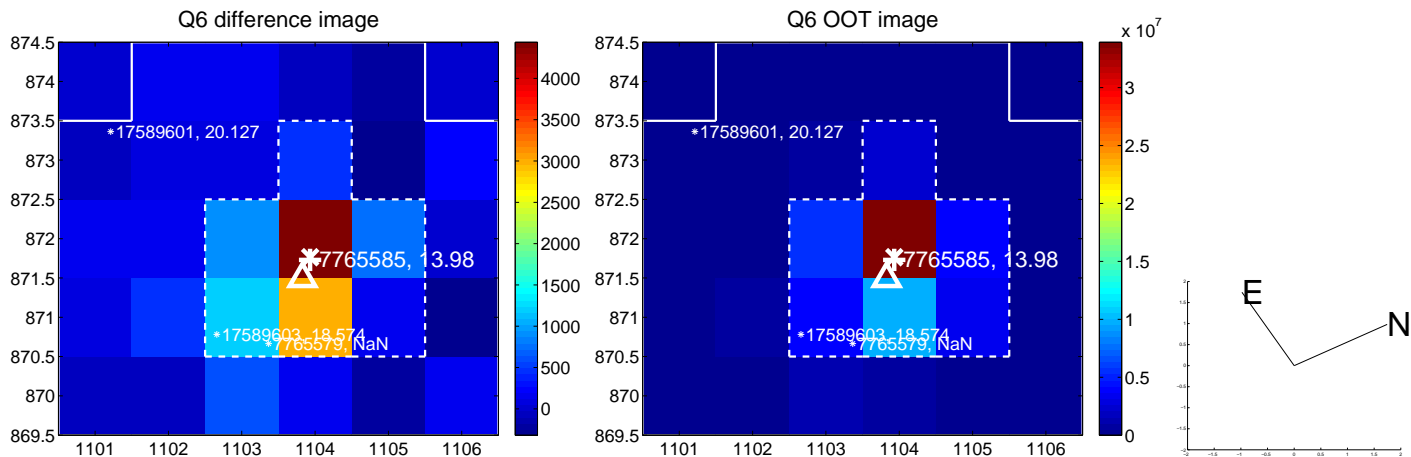
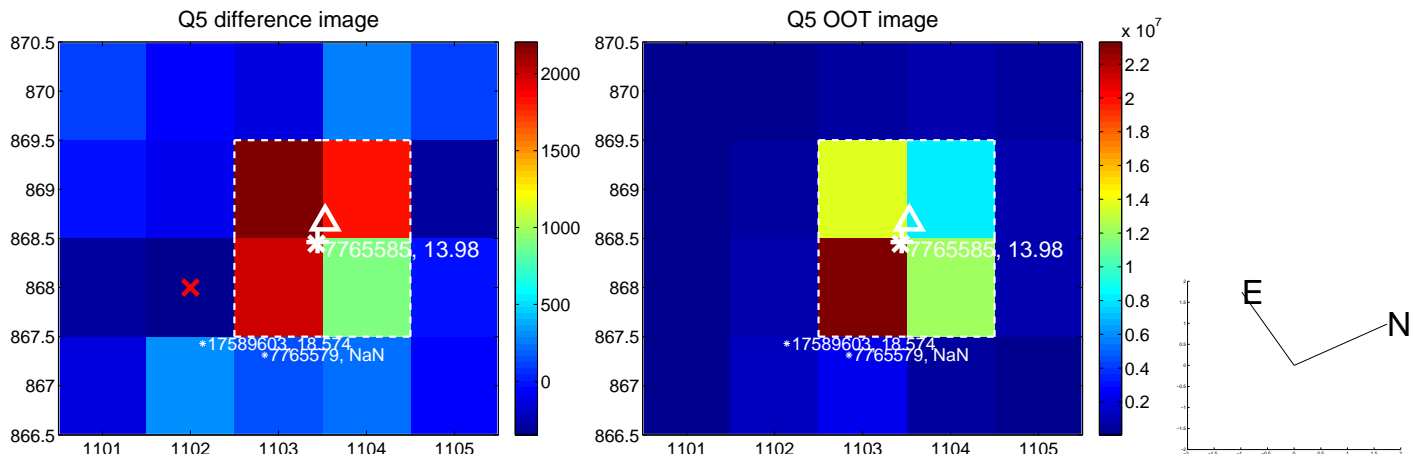


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

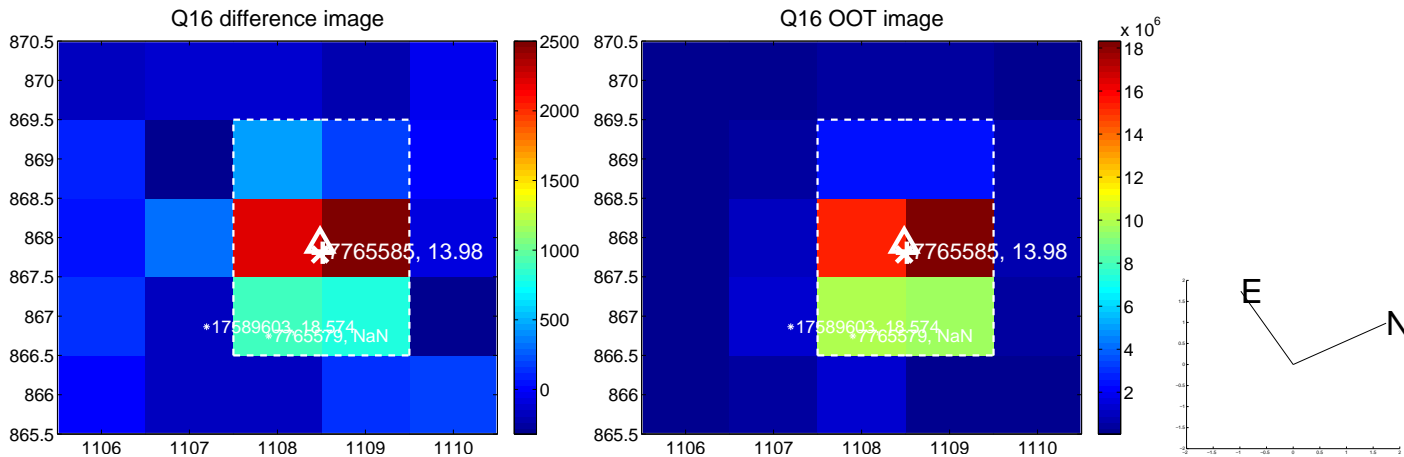
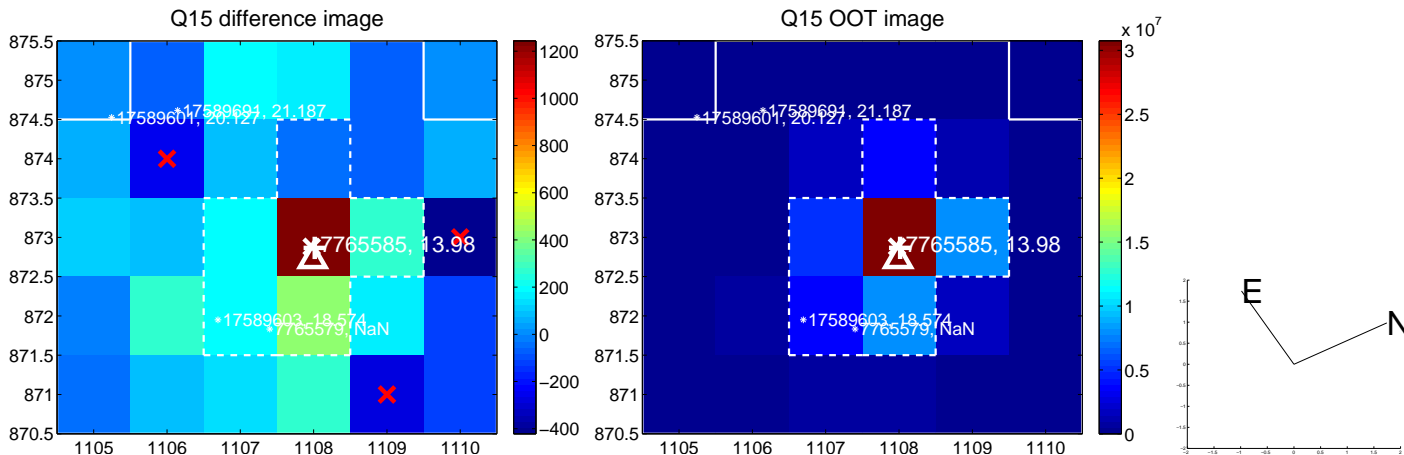
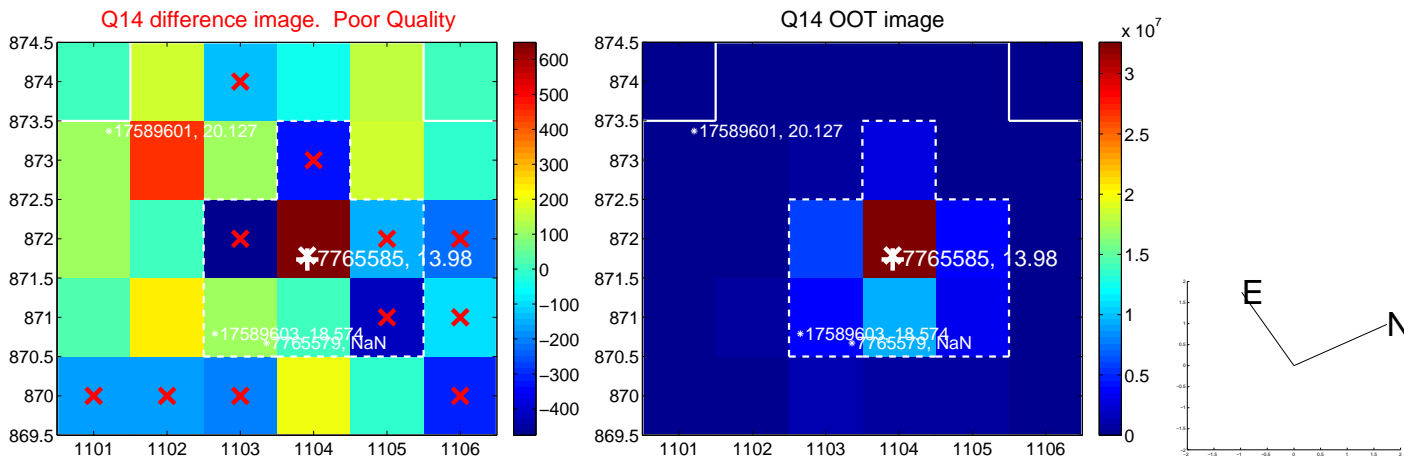
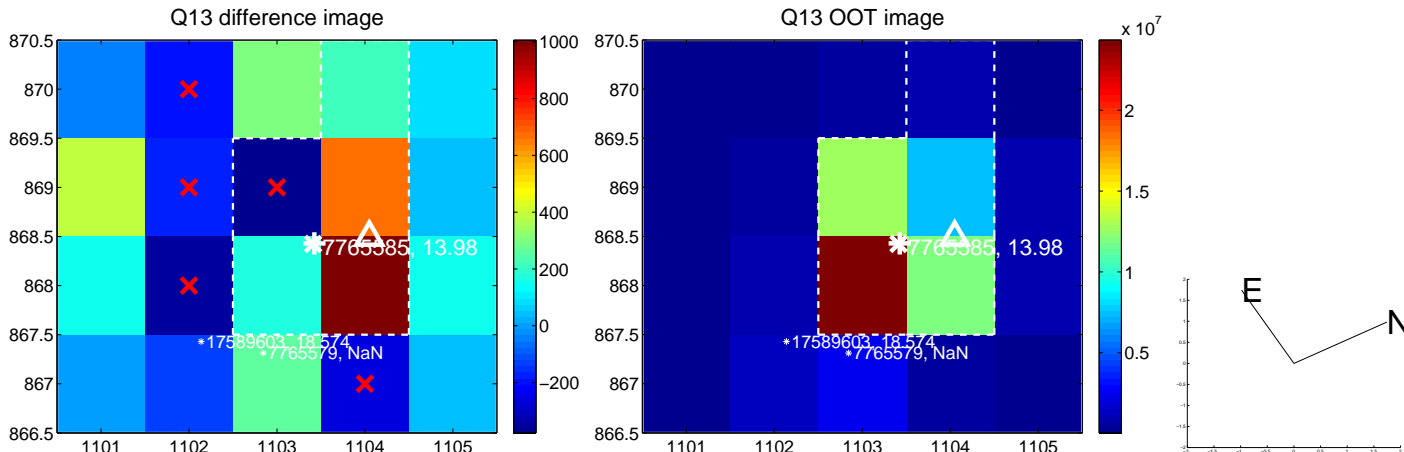
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



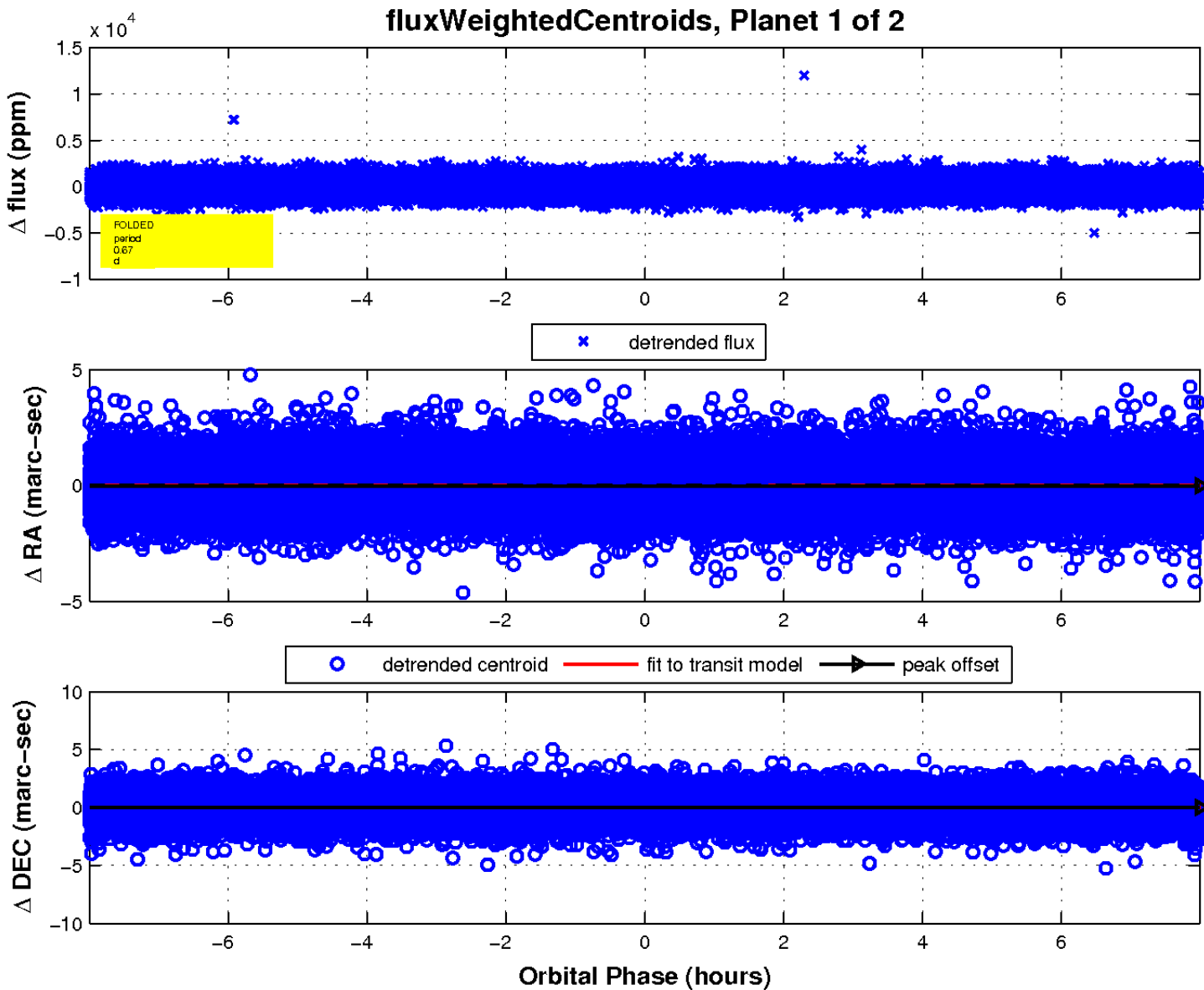
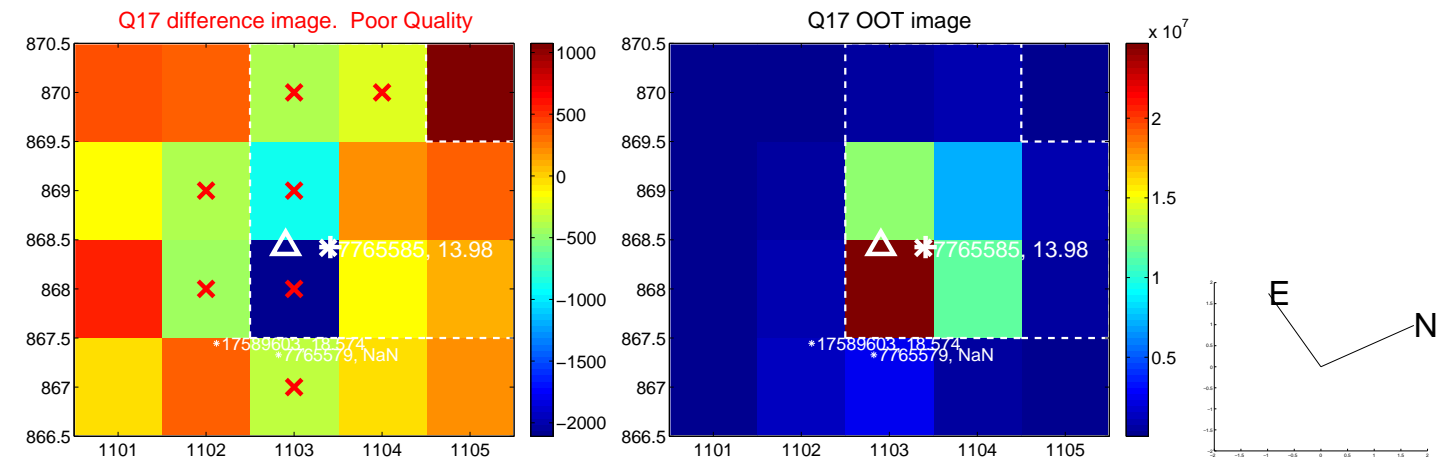
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

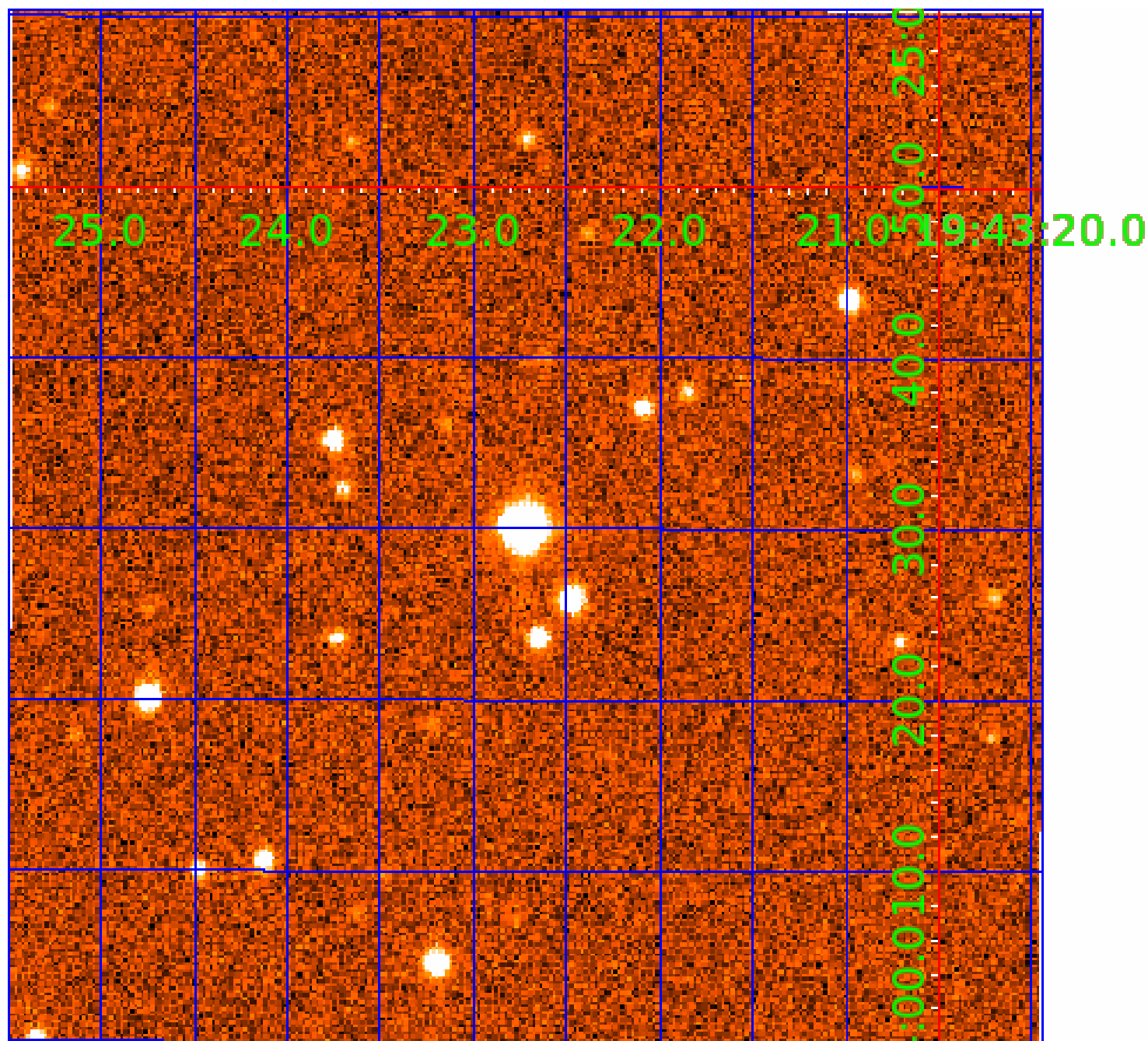


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007765585

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})
007765585-01	OBS	No	0.666519	131.640847	41.3	3.814	11.6	8.0	1.35	6835	0.94	12845.47
007765585-02	OBS	No	1.280003	132.366005	139.4	5.379	10.2	12.5	1.35	6835	1.88	5381.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007765585-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
007765585-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

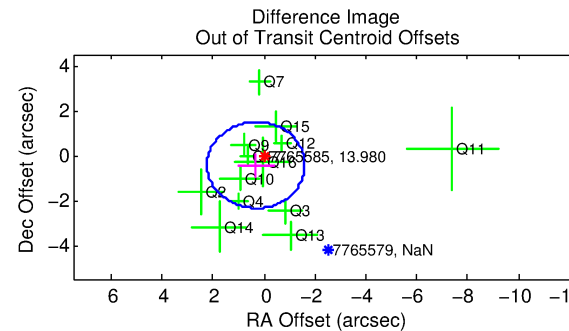
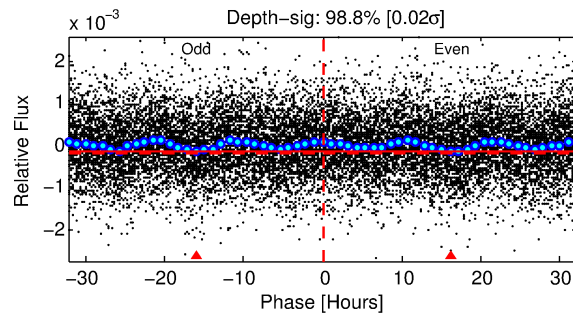
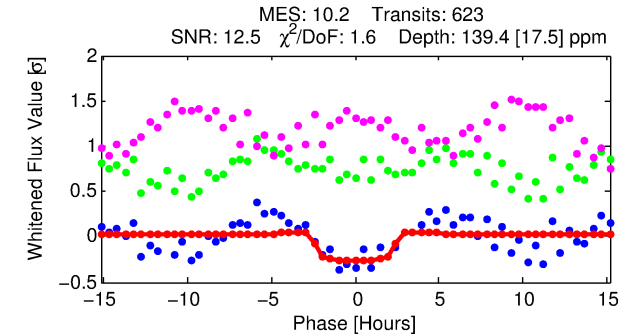
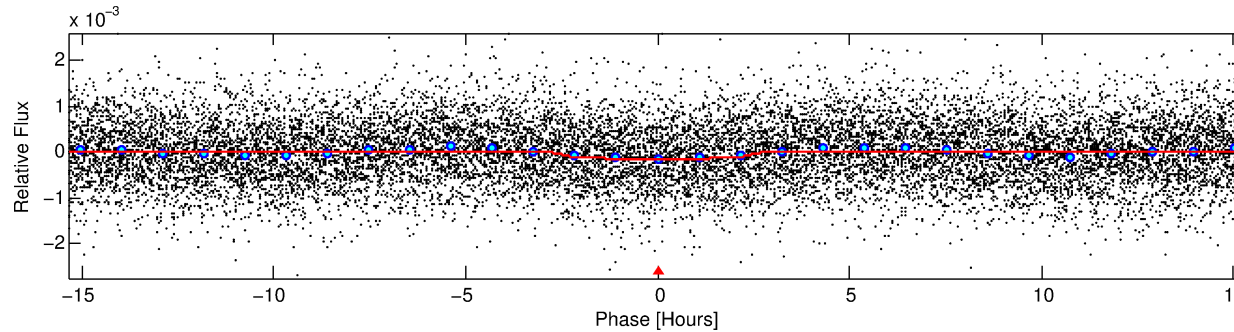
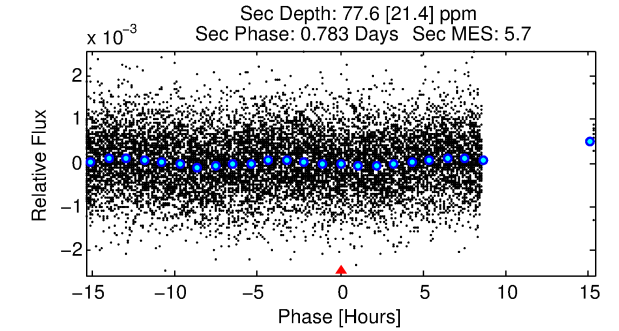
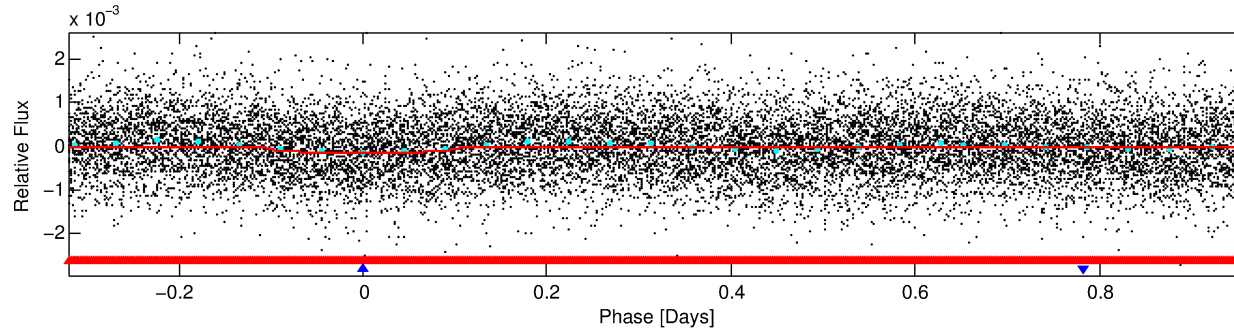
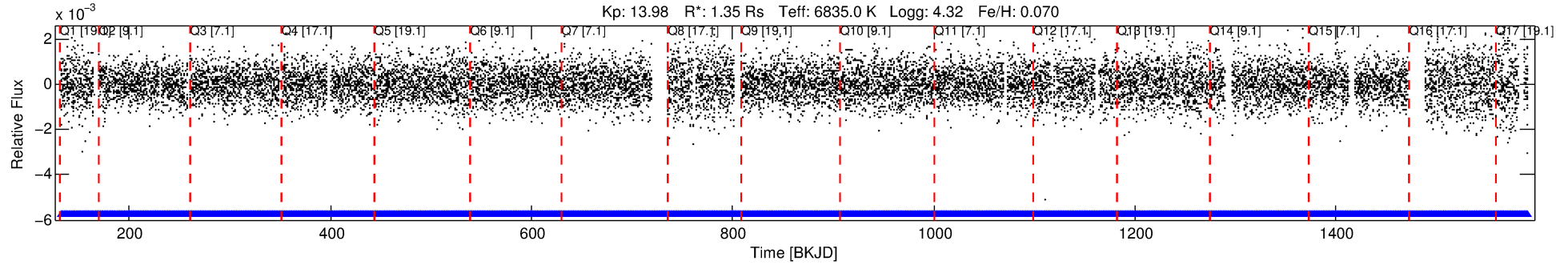
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007765585-02

No Significant Match Found

DV One-Page Summary

KIC: 7765585 Candidate: 2 of 2 Period: 1.280 d



DV Fit Results:

Period = 1.28000 [0.00002] d
Epoch = 132.3660 [0.0062] BKJD
Rp/R* = 0.0128 [0.0033]
a/R* = 1.24 [0.62]
b = 0.92 [0.26]
Seff = 5381.27 [1962.10]
Teq = 2184 [199] K
Rp = 1.88 [0.72] Re
a = 0.0258 [0.0061] AU
Ag = 8.00 [5.35] [1.31σ]
Teffp = 5678 [847] K [4.02σ]

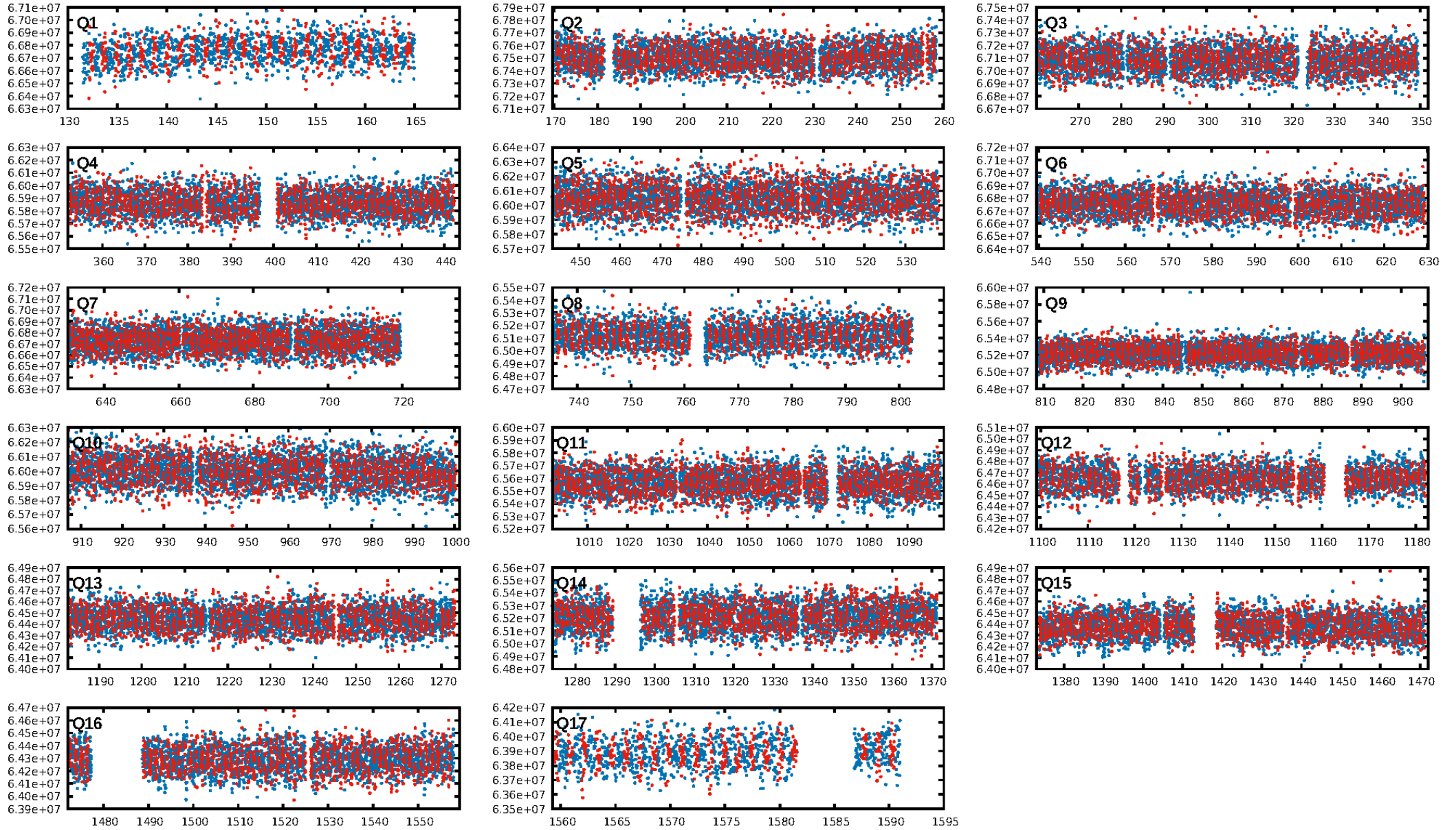
DV Diagnostic Results:

ShortPeriod-sig: 97.4% [2.23σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.13e-18
RollingBand-fgt: 1.00 [597/597]
GhostDiagnostic-chr: 2.754
Centroid-sig: 28.0%
Centroid-so: 0.363 arcsec [2.05σ]
OotOffset-rm: 0.534 arcsec [0.83σ]
KicOffset-rm: 0.462 arcsec [0.77σ]
OotOffset-st: 3/4/3/3 [13]
KicOffset-st: 3/4/3/3 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.00 [0/17]

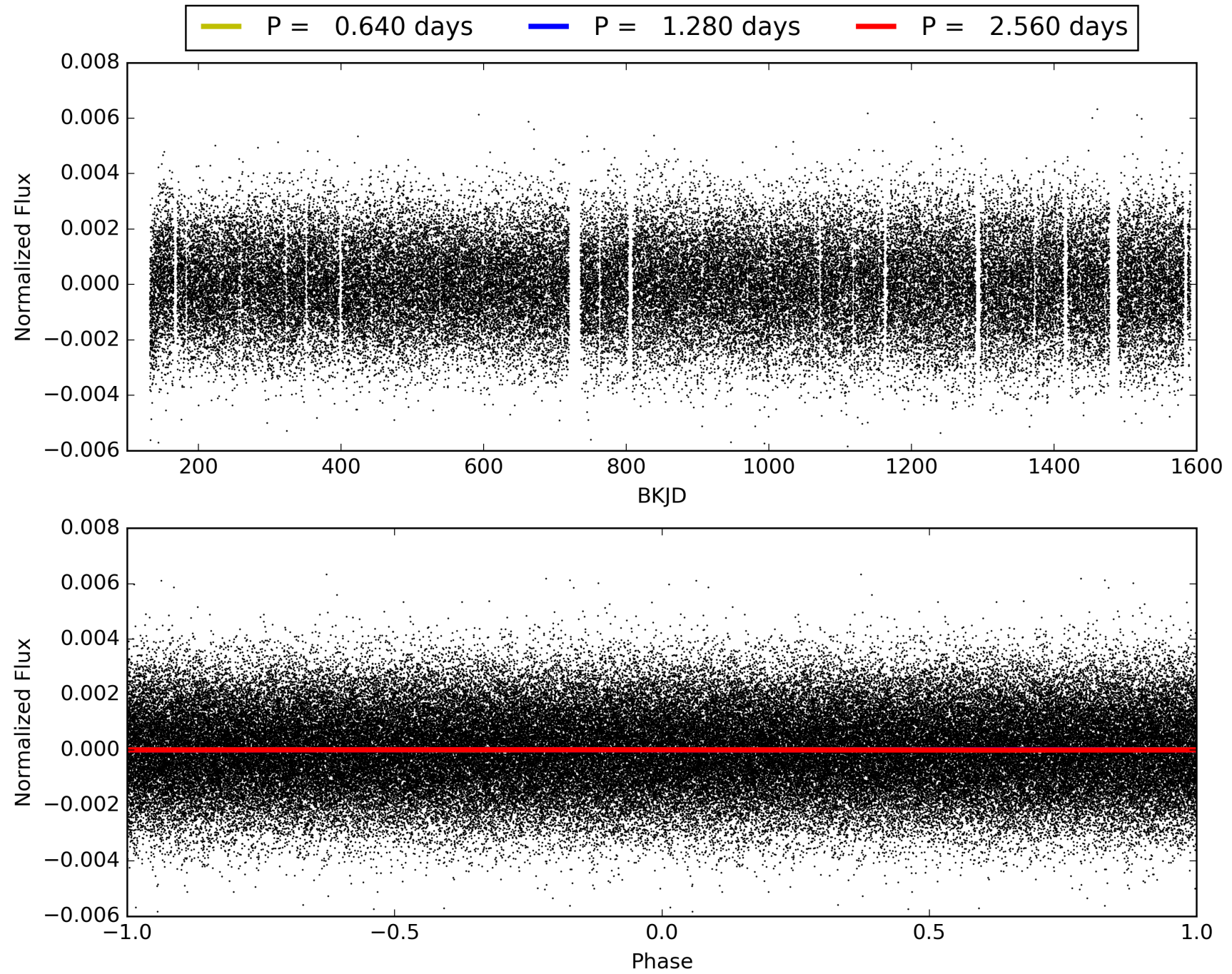
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:45:18 Z

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

TCE 007765585-02, PDC Light Curves

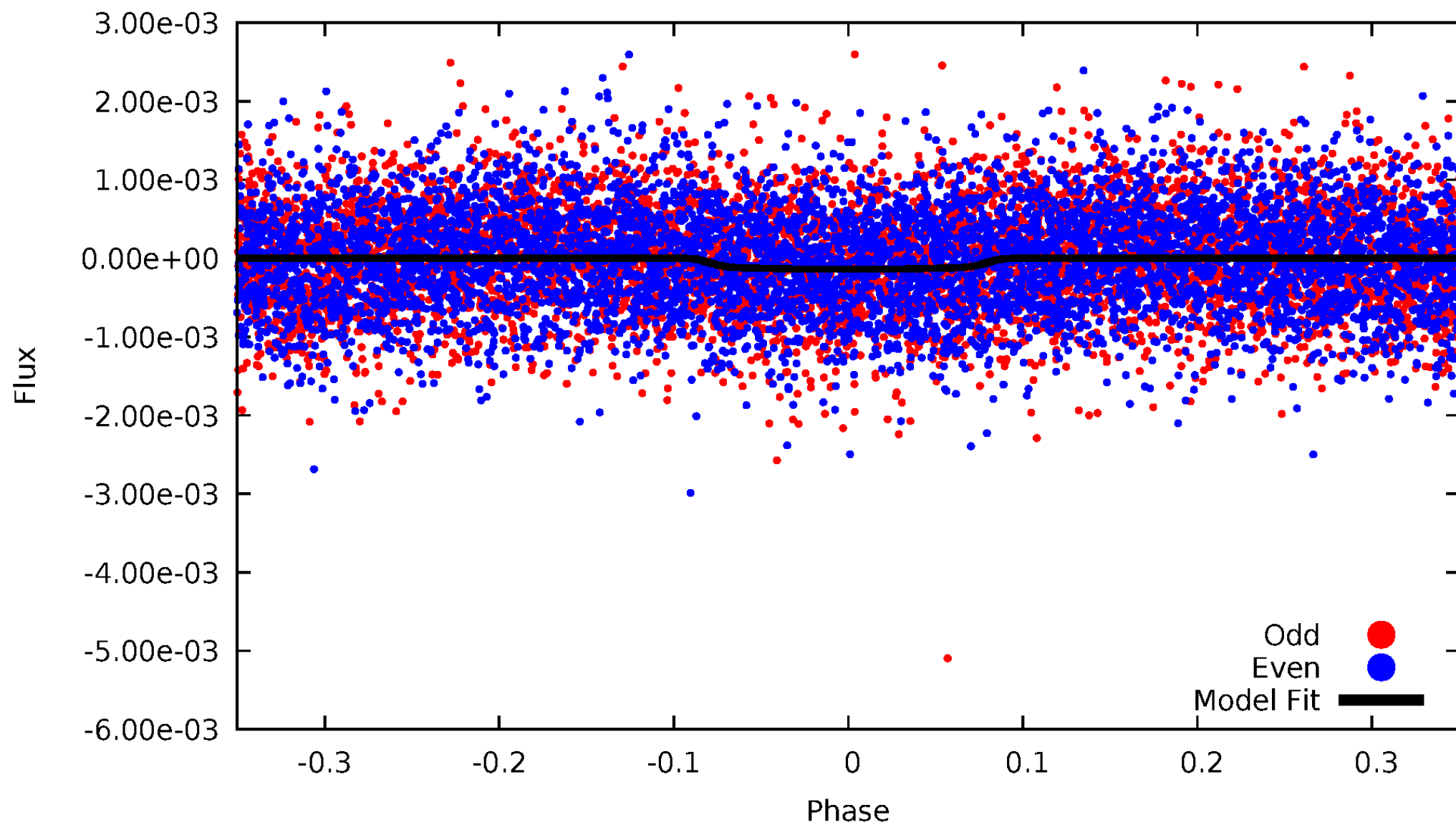


TCE 007765585-02



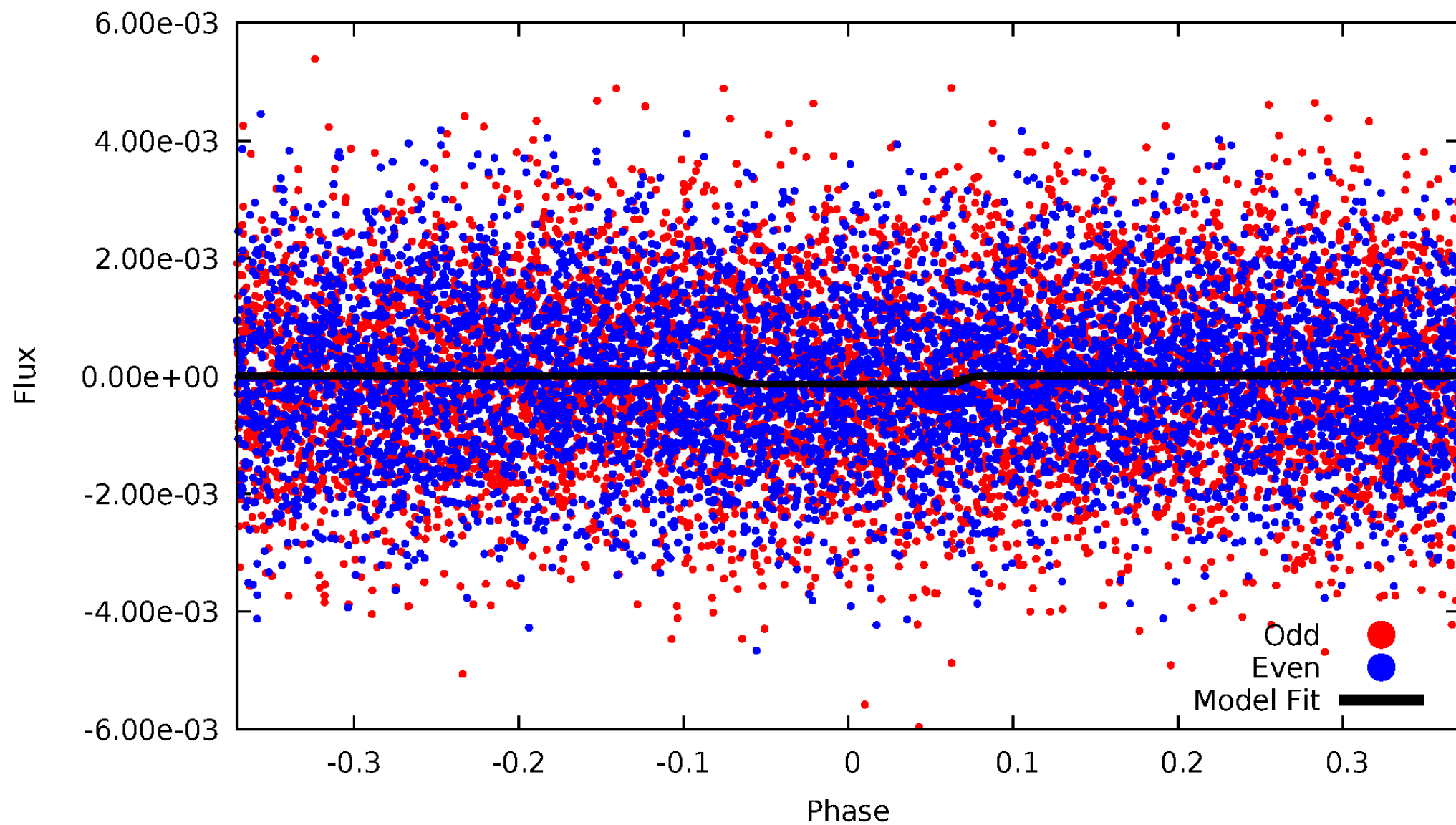
DV Odd/Even

TCE 007765585-02



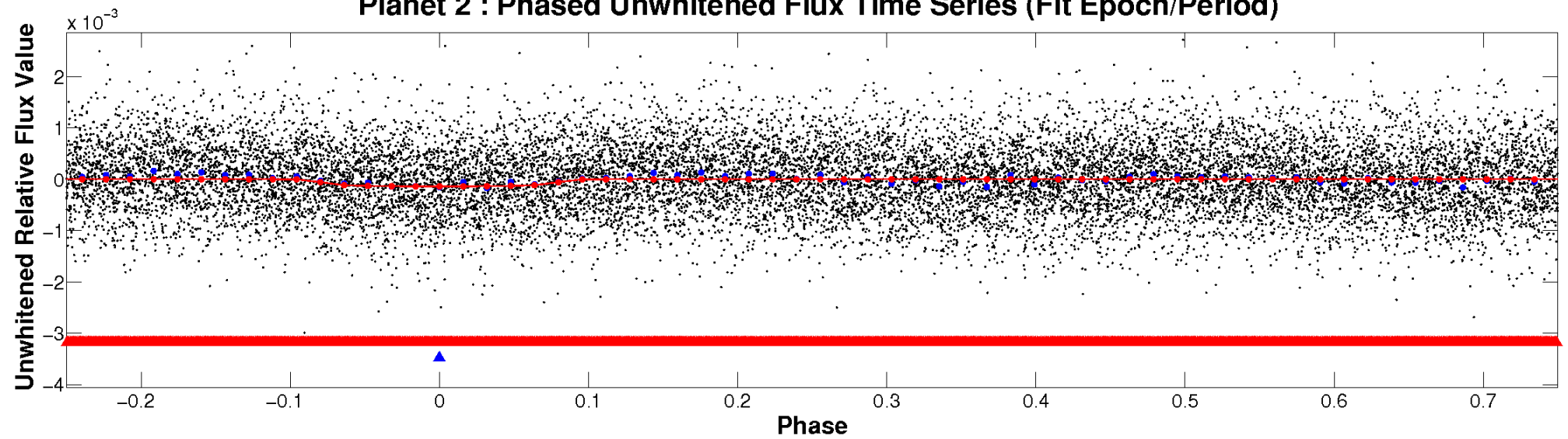
ALT Odd/Even

TCE 007765585-02

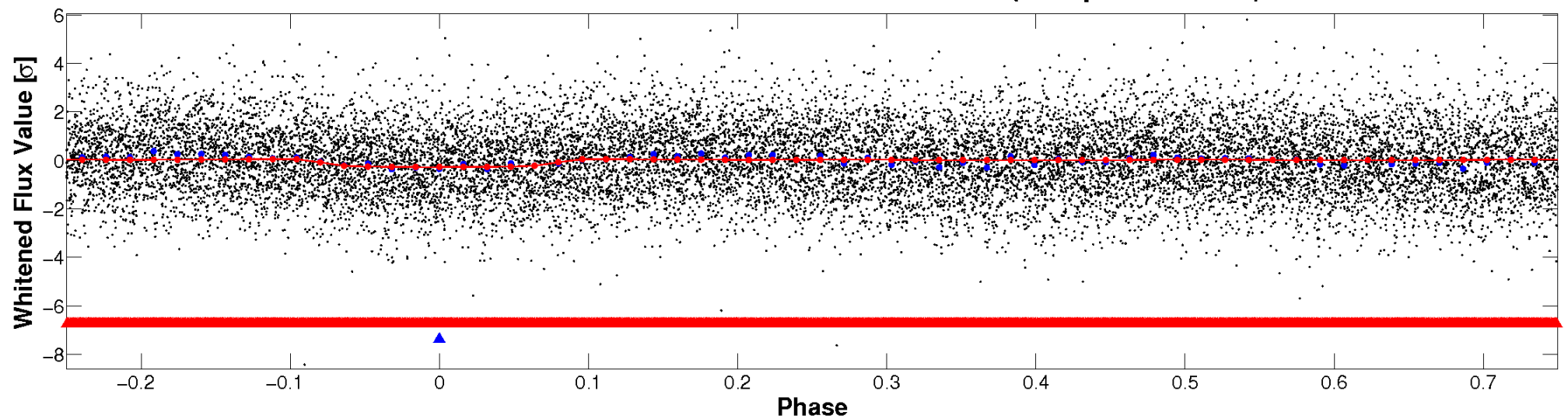


Non-Whitened Vs. Whitened Light Curve

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

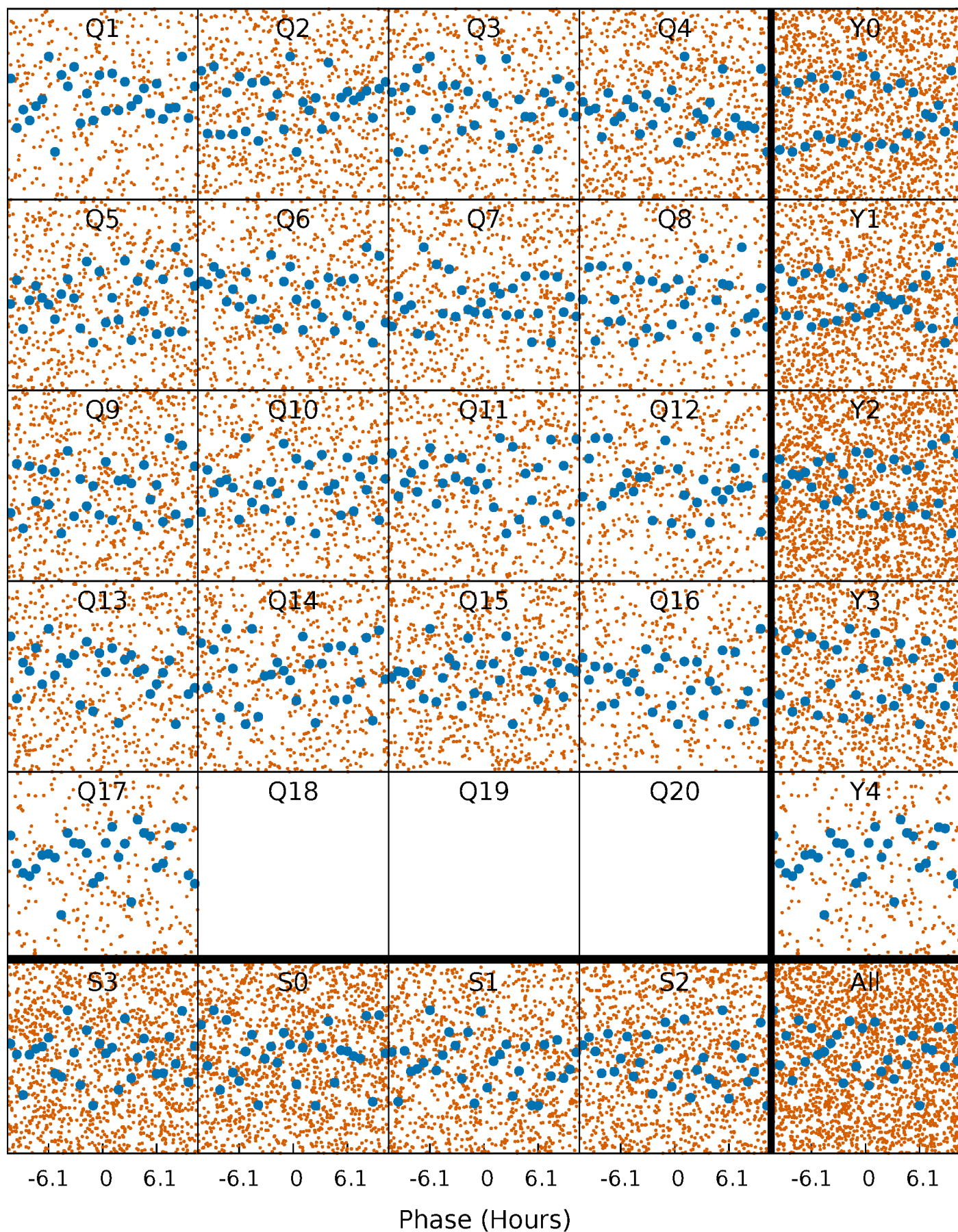


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



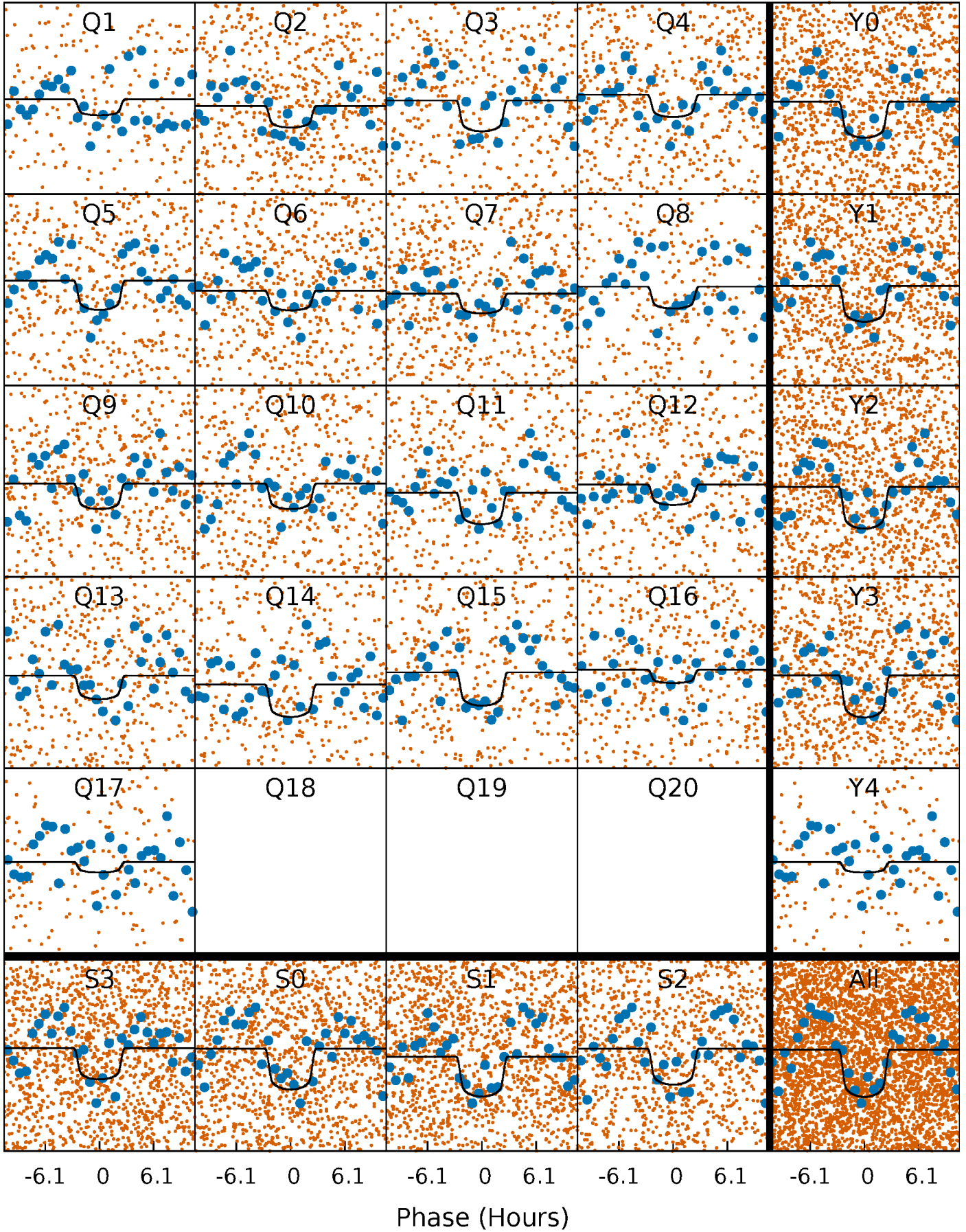
PDC Quarter-Phased Transit Curves

TCE 007765585-02 P= 1.280003 Days $T_0=132.366005$ (BKJD)



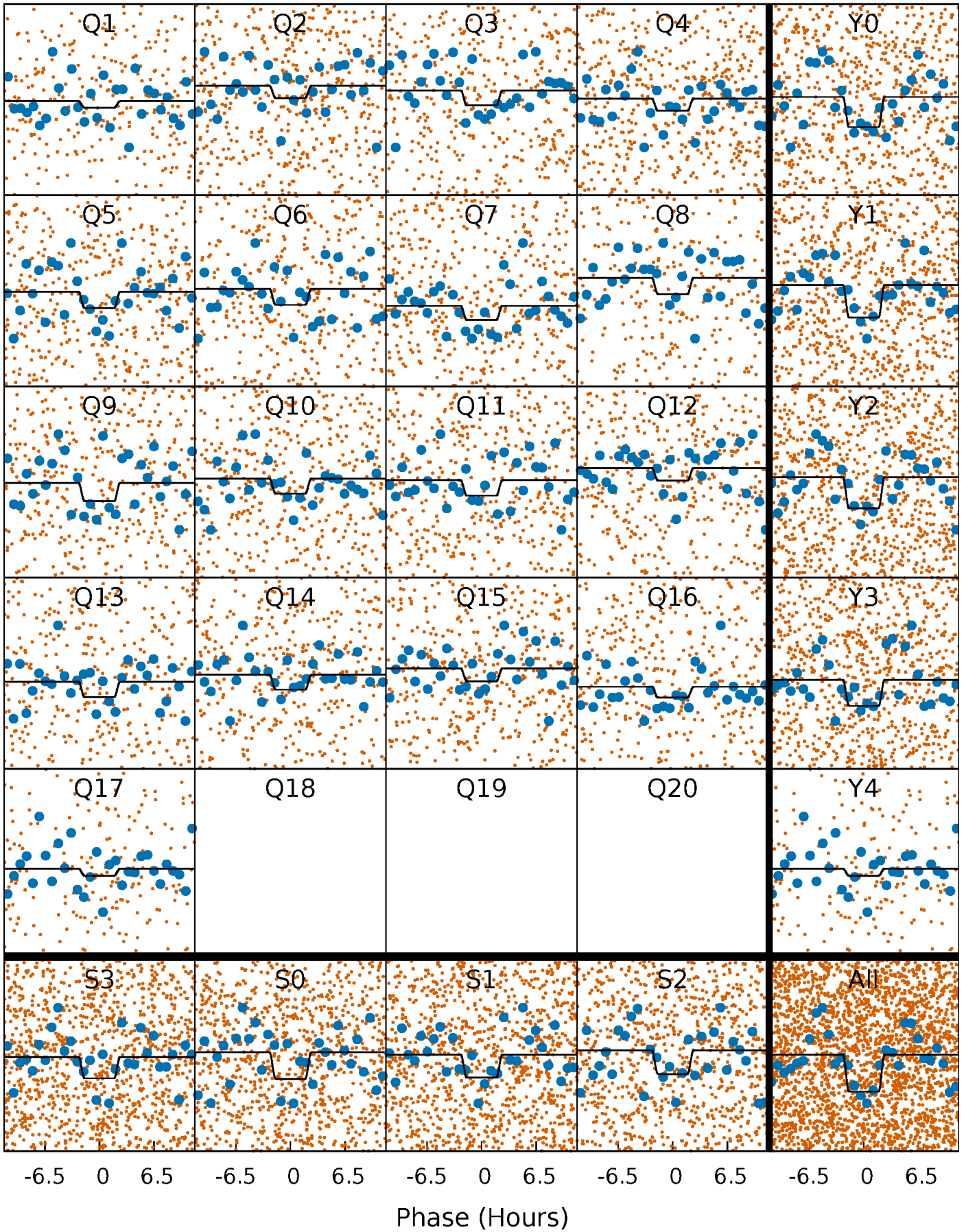
DV Quarter-Phased Transit Curves

TCE 007765585-02 P= 1.280003 Days $T_0=132.366005$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

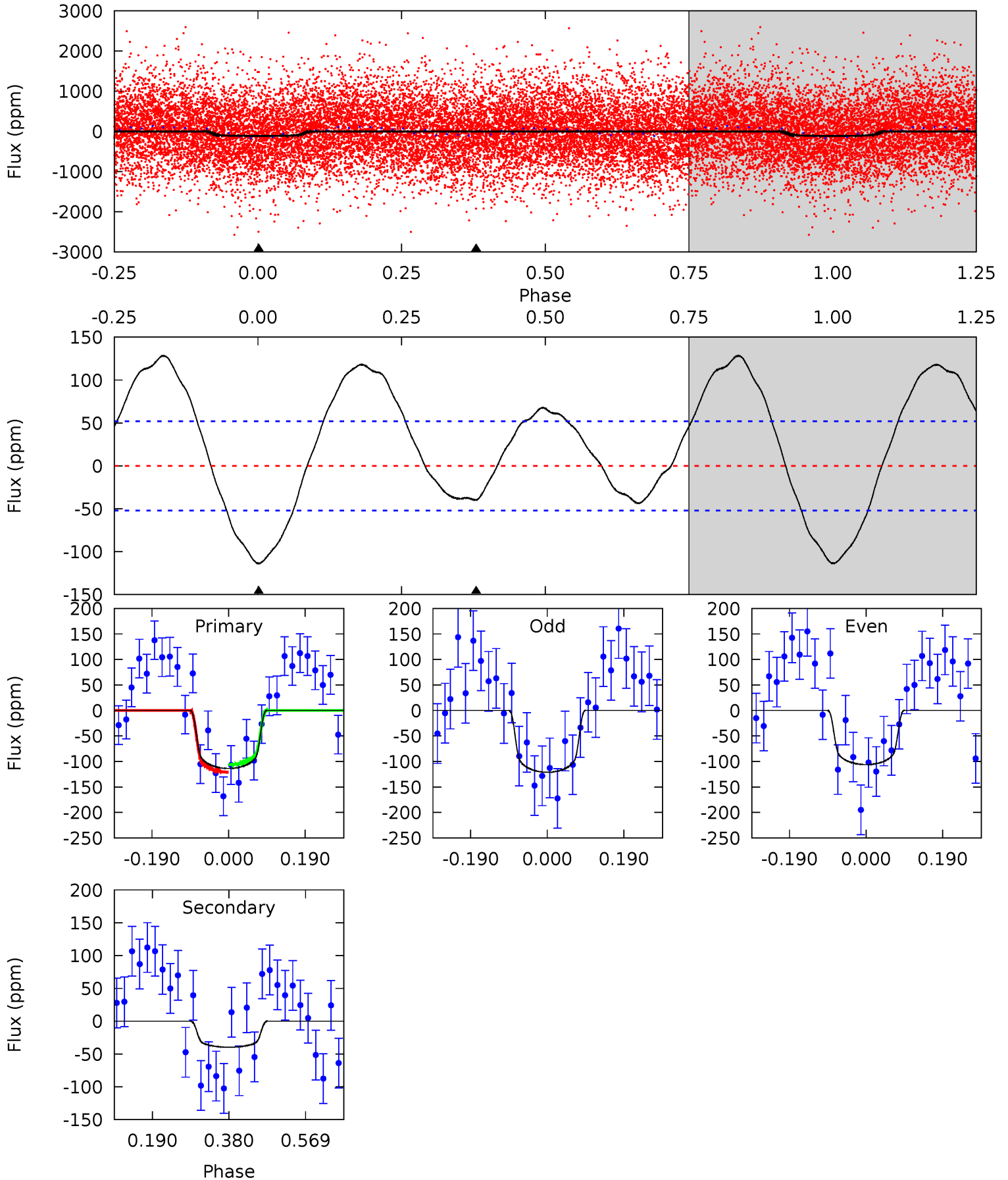
TCE 007765585-02 P= 1.280086 Days $T_0=132.320142$ (BKJD)



DV Model-Shift Uniqueness Test

007765585-02, P = 1.280003 Days, E = 131.086002 Days

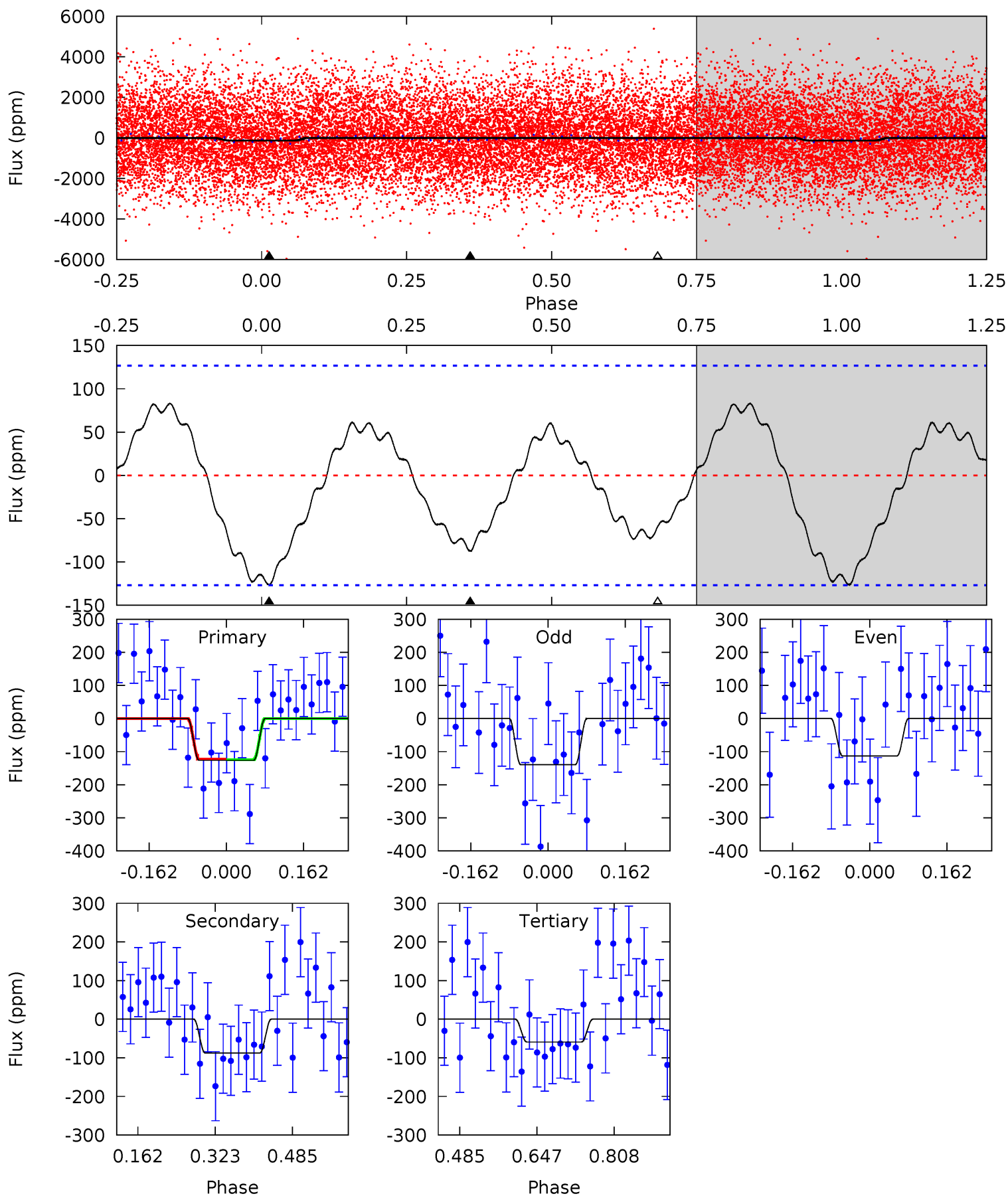
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.67	3.38	0	0	4.43	1.31	4.19	9.67	9.67	3.38	3.38	0.64	0.73	0.53	0.63



Alt Model-Shift Uniqueness Test

007765585-02, P = 1.280086 Days, E = 131.040056 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.45	3.09	2.08	0	4.46	1.40	1.78	2.37	4.45	1.00	3.09	0.46	0.75	0.40	0.02



Stellar Parameters For KIC 007765585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6835^{+163}_{-245}	$4.320^{+0.060}_{-0.180}$	$0.070^{+0.200}_{-0.350}$	$1.352^{+0.385}_{-0.165}$	$1.392^{+0.166}_{-0.185}$	$0.794^{+0.253}_{-0.396}$
	+2%/-4%	+1%/-4%	+286%/-500%	+28%/-12%	+12%/-13%	+32%/-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 007765585-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-40 ± 12	$1.92^{+0.63}_{-0.54}$	3100^{+189}_{-158}	4776^{+831}_{-580}	$3.697^{+4.025}_{-1.765}$
Alt.	-88 ± 28	$1.85^{+0.56}_{-0.53}$	3090^{+197}_{-151}	5836^{+1243}_{-812}	$8.619^{+9.821}_{-3.973}$

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 $A_{obs} \gg 1.0$

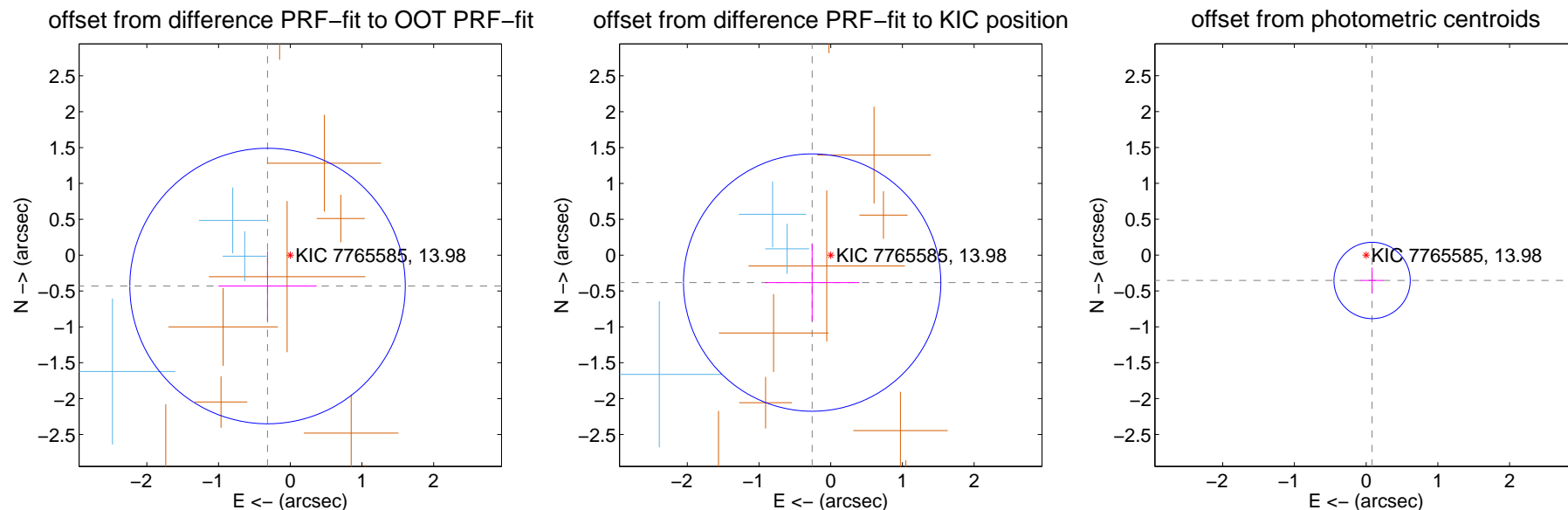
DV Centroid Data

Supplemental centroid analysis for 007765585-02. Kepler magnitude: 13.98. Transit SNR 12.49

There are 3 quarters with good PRF difference image offsets

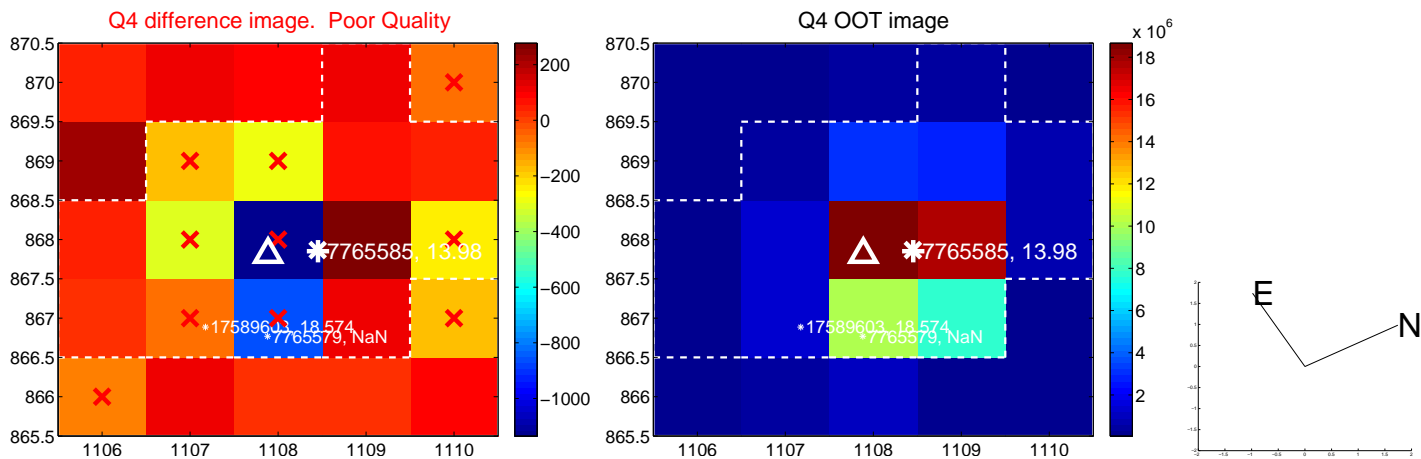
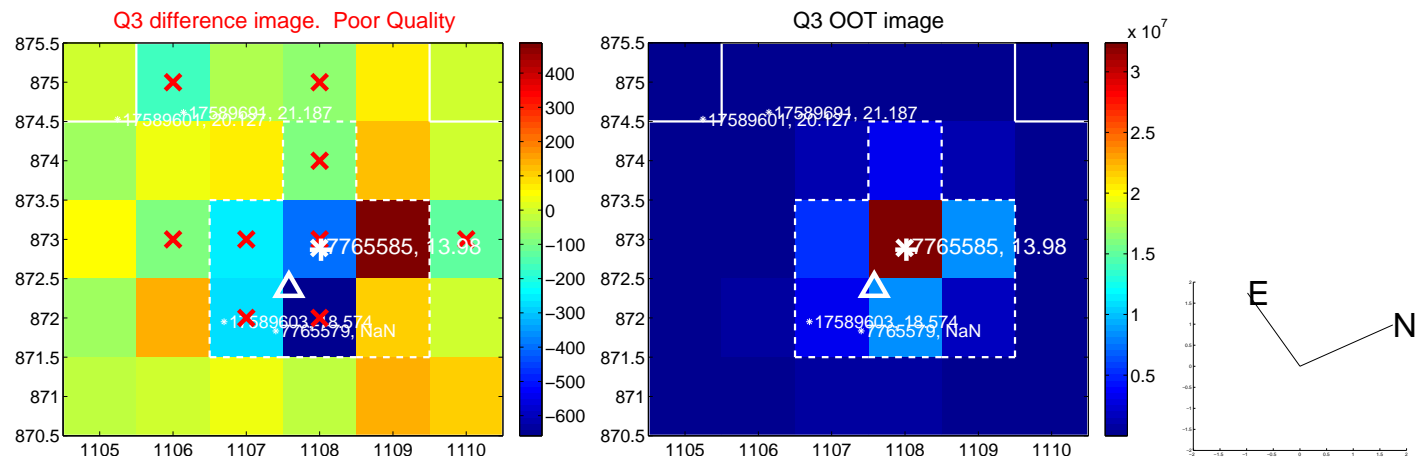
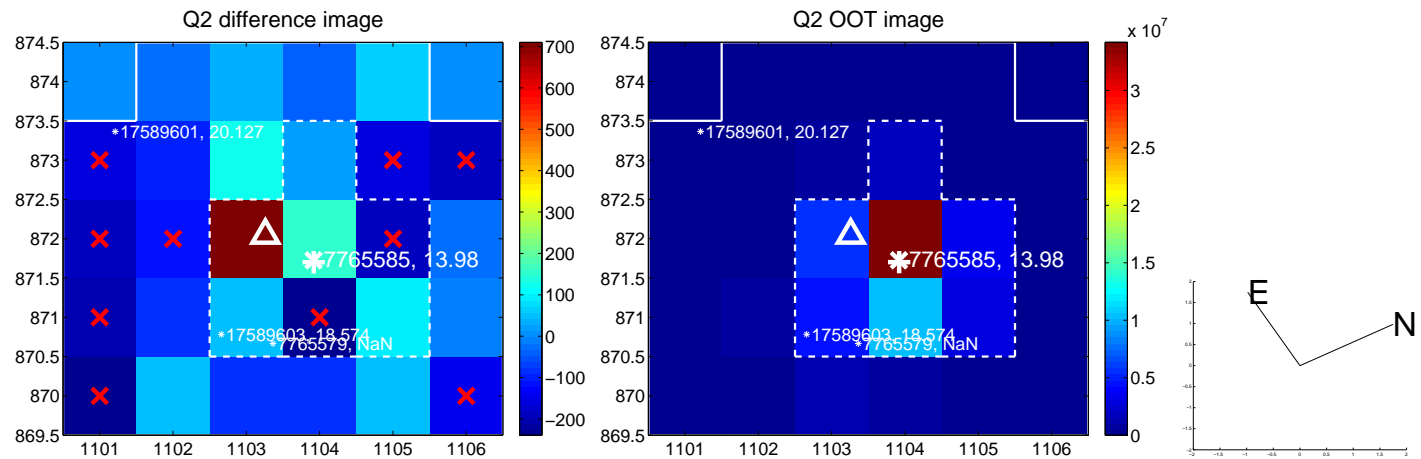
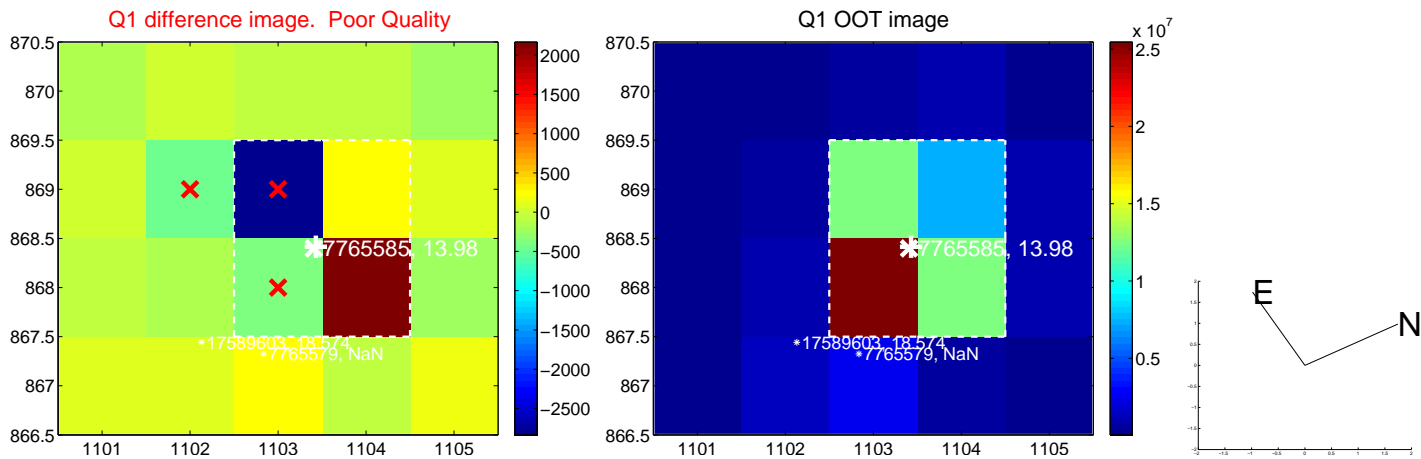
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.534 ± 0.640	0.83	0.317 ± 0.685	-0.430 ± 0.487
PRF-fit source offset from KIC position	0.462 ± 0.598	0.77	0.259 ± 0.660	-0.382 ± 0.539
photometric centroid source offset	0.36 ± 0.18	2.05	-0.08 ± 0.16	-0.35 ± 0.18

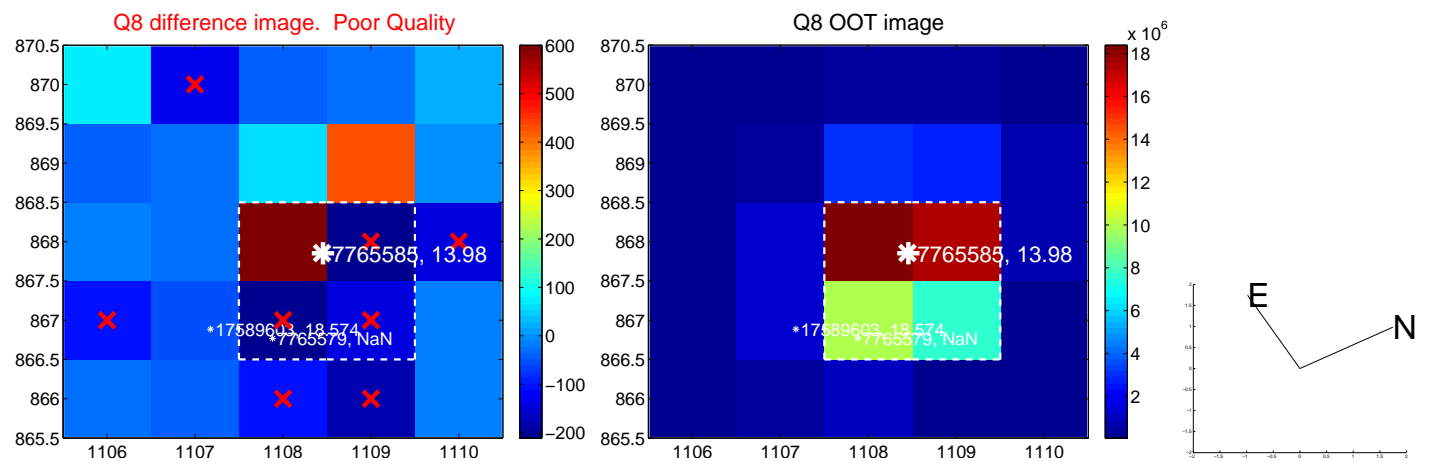
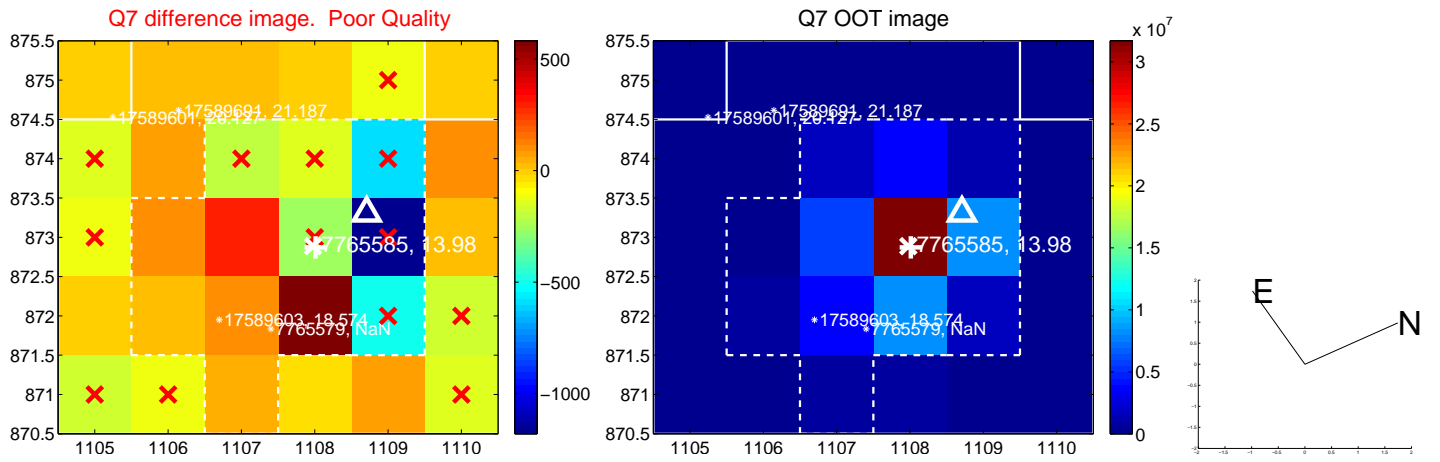
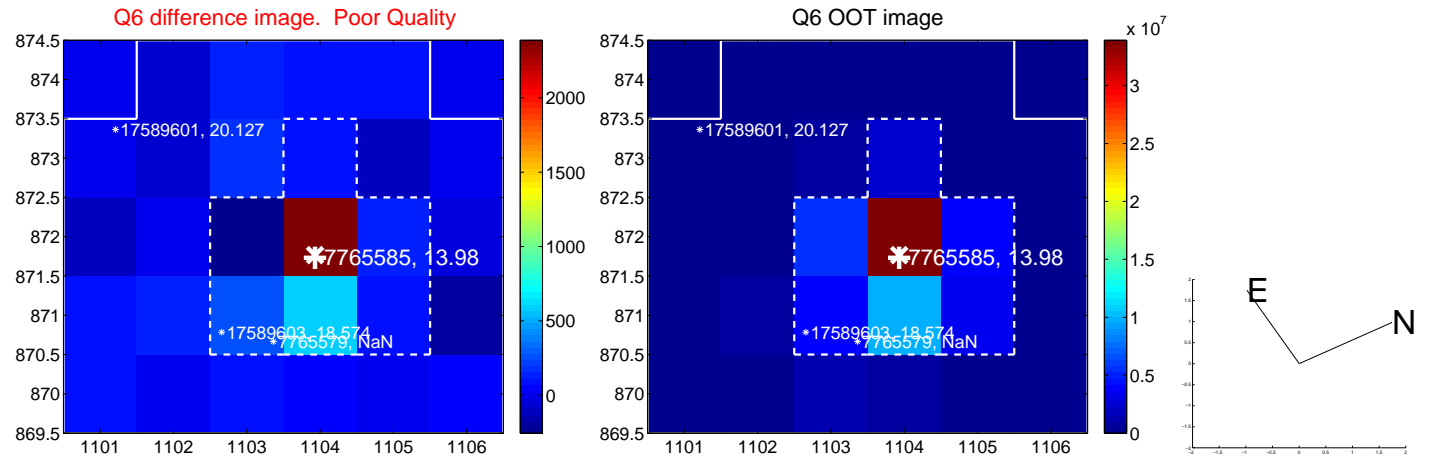
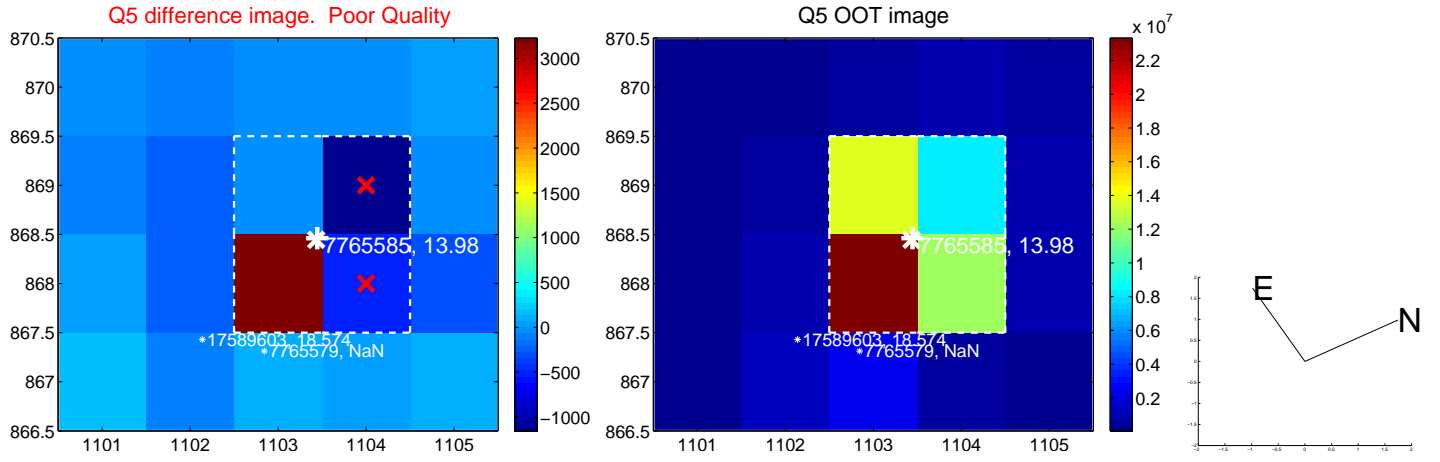


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

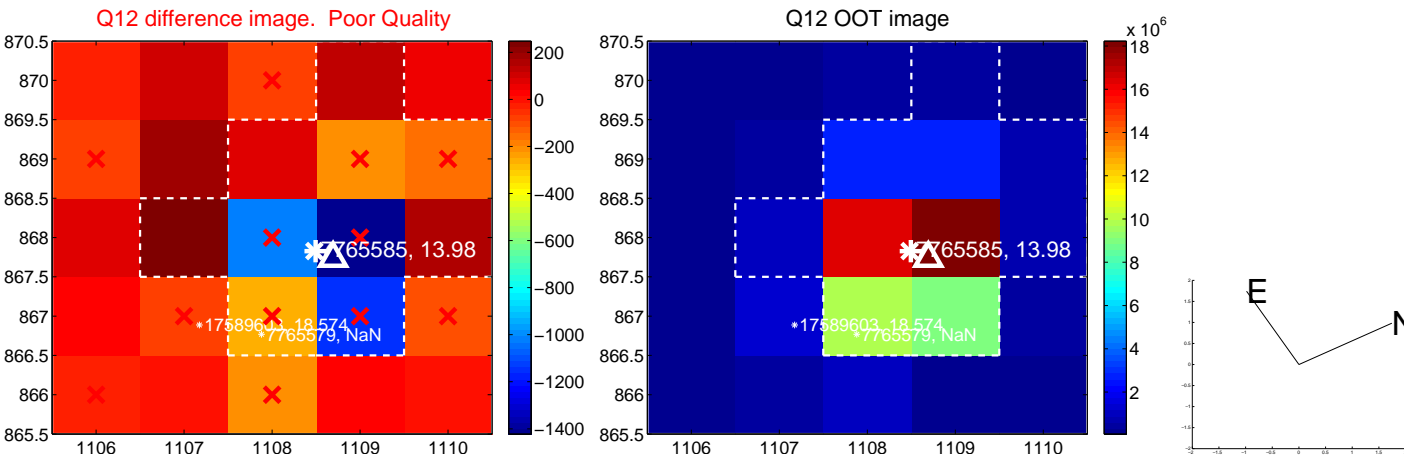
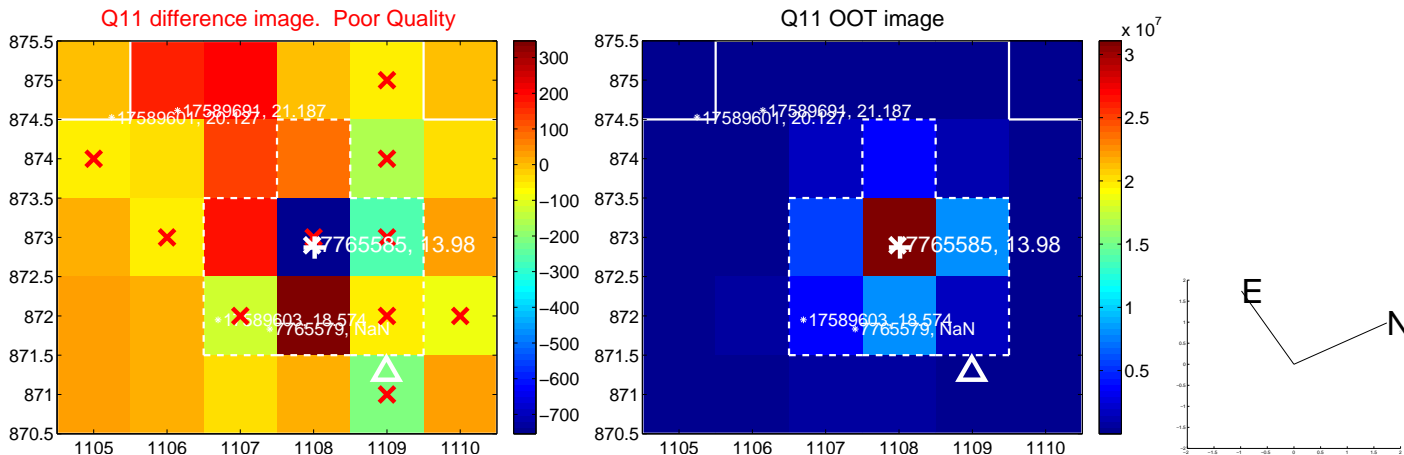
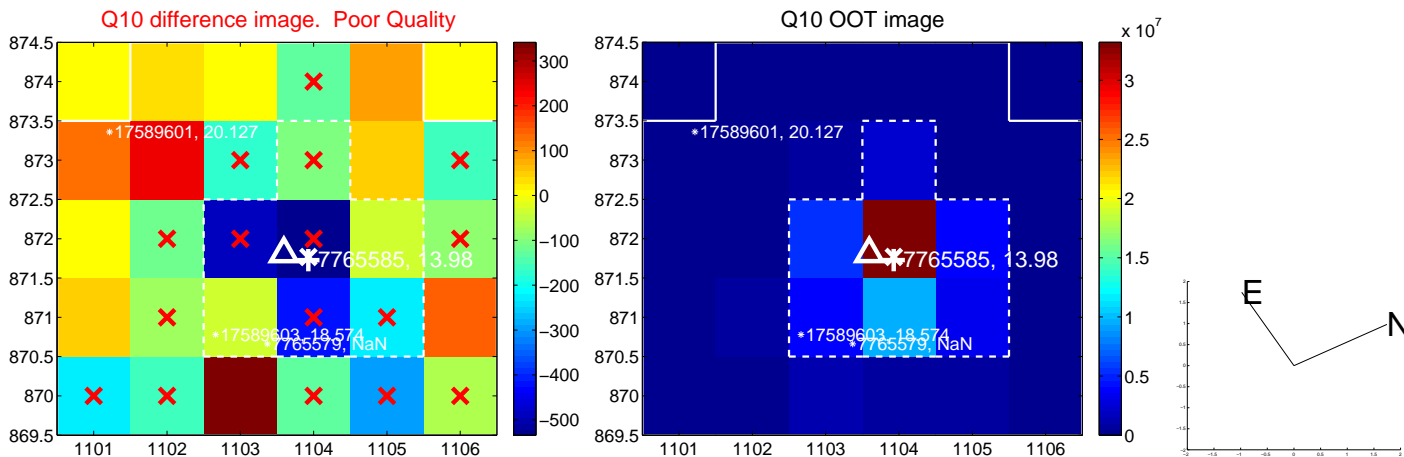
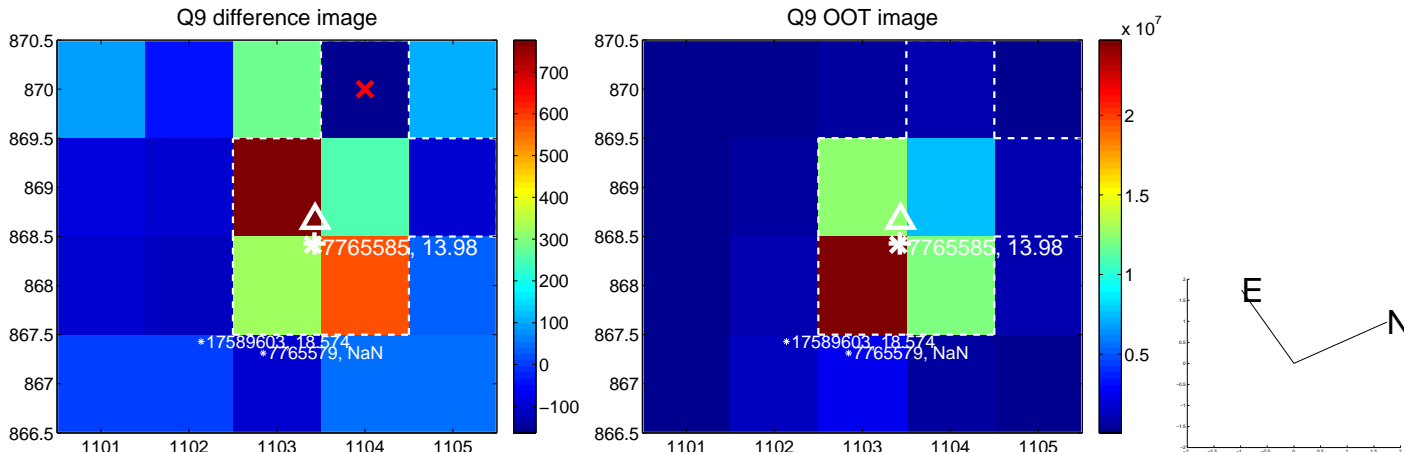
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



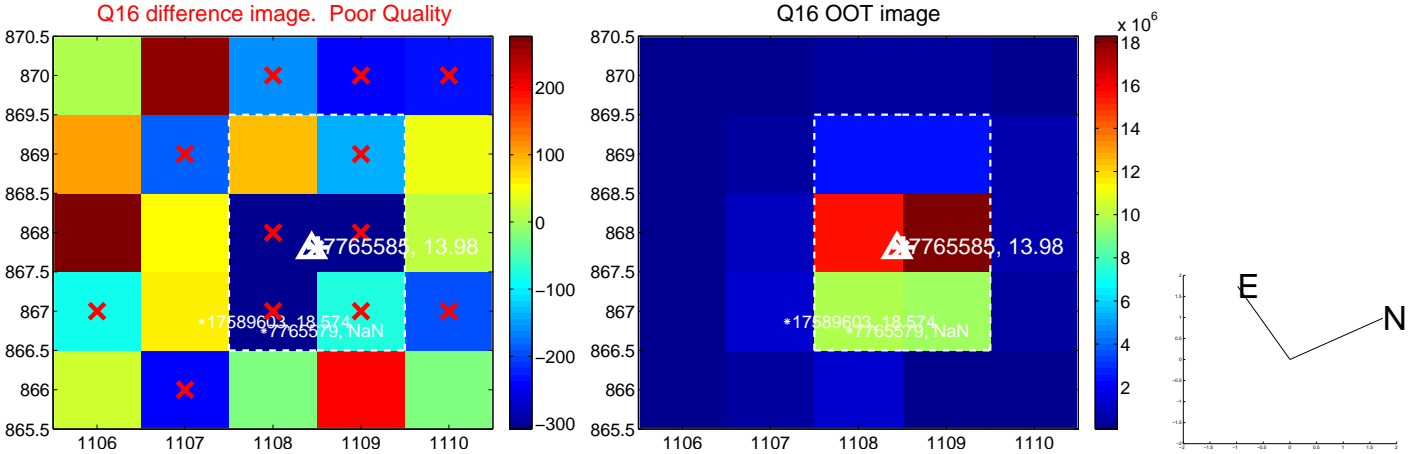
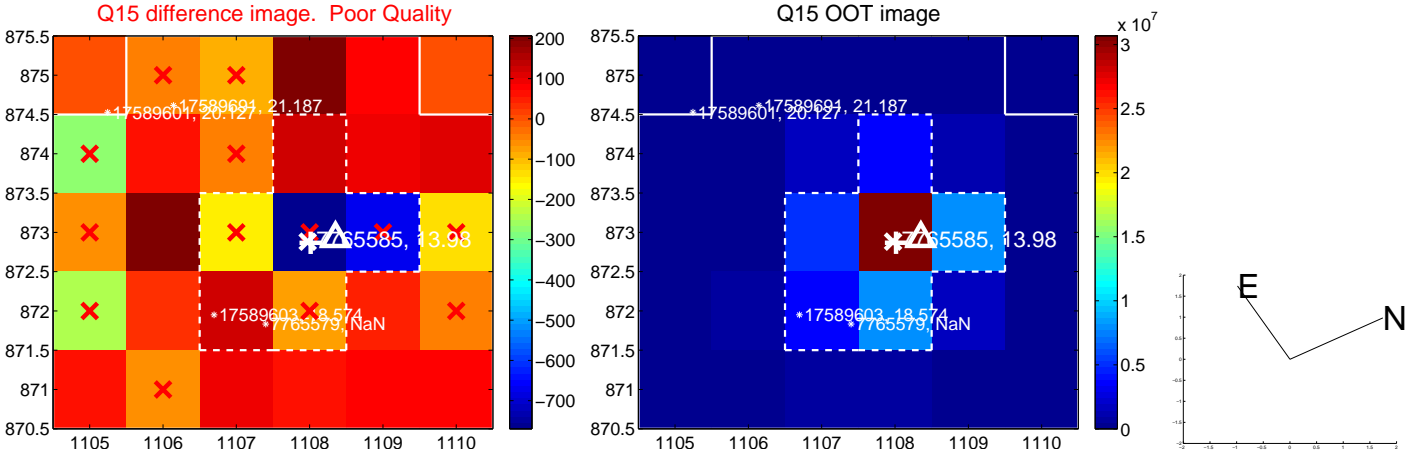
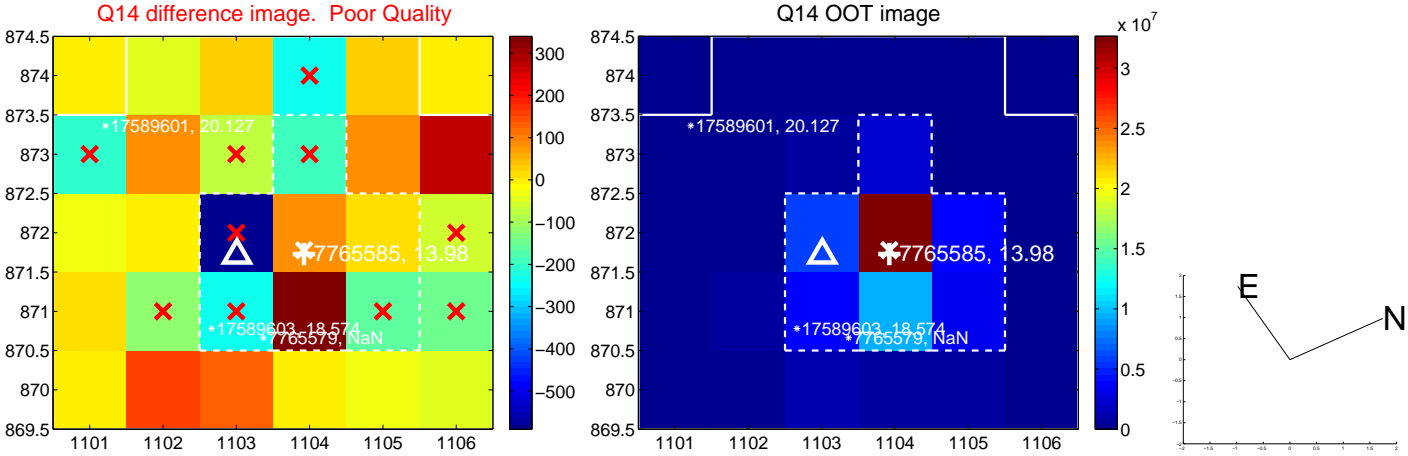
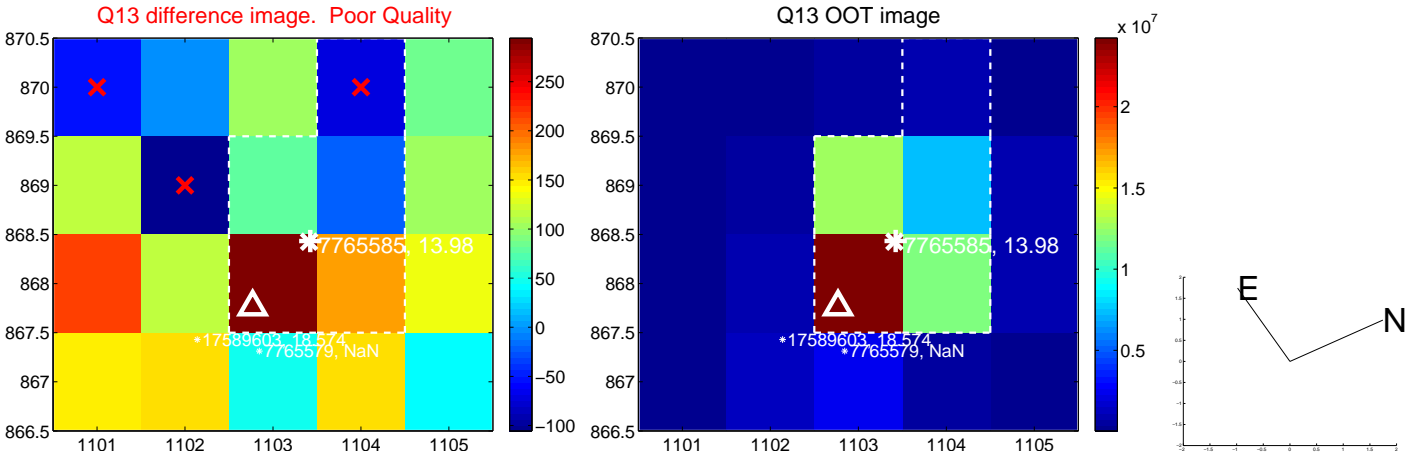
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



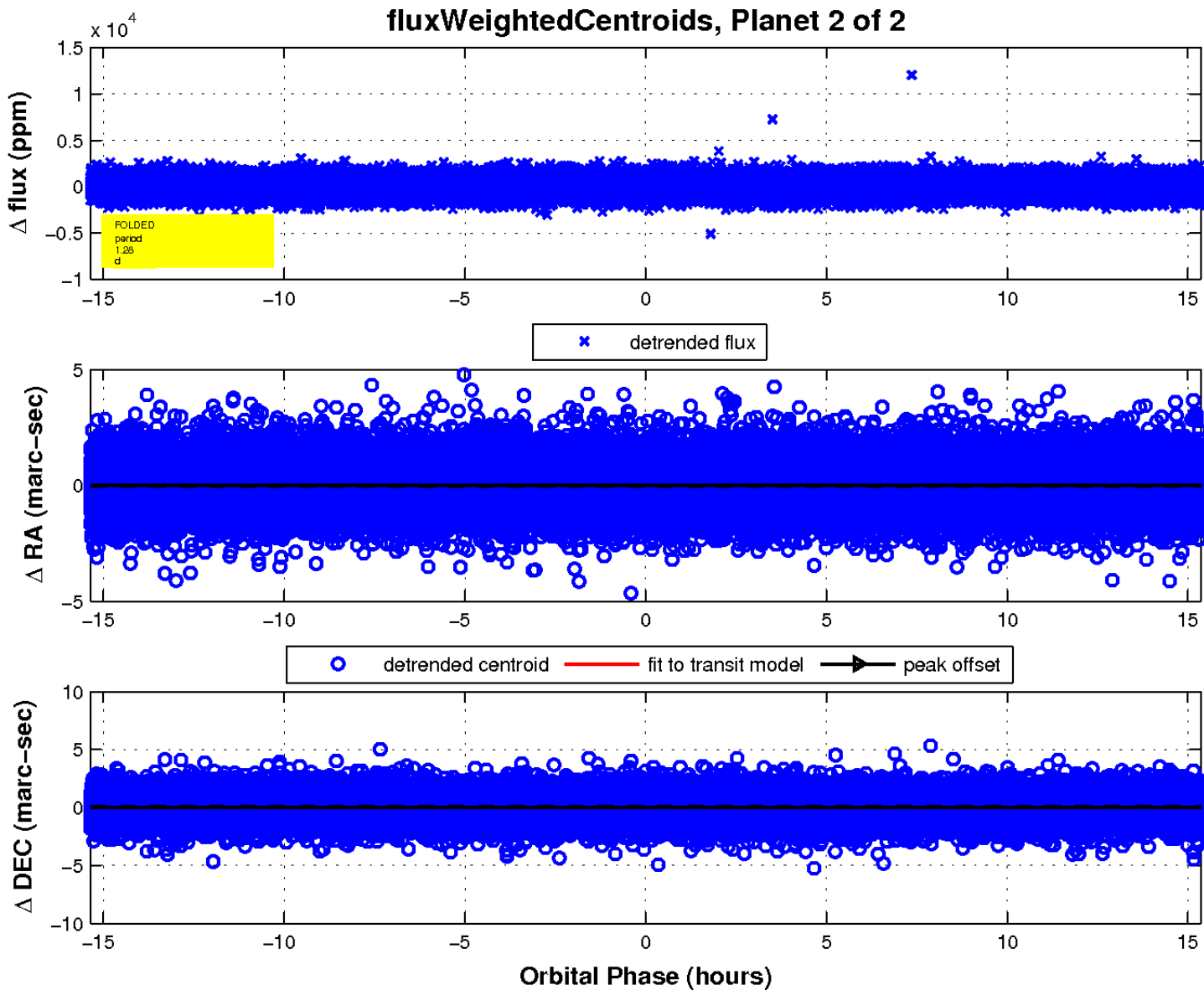
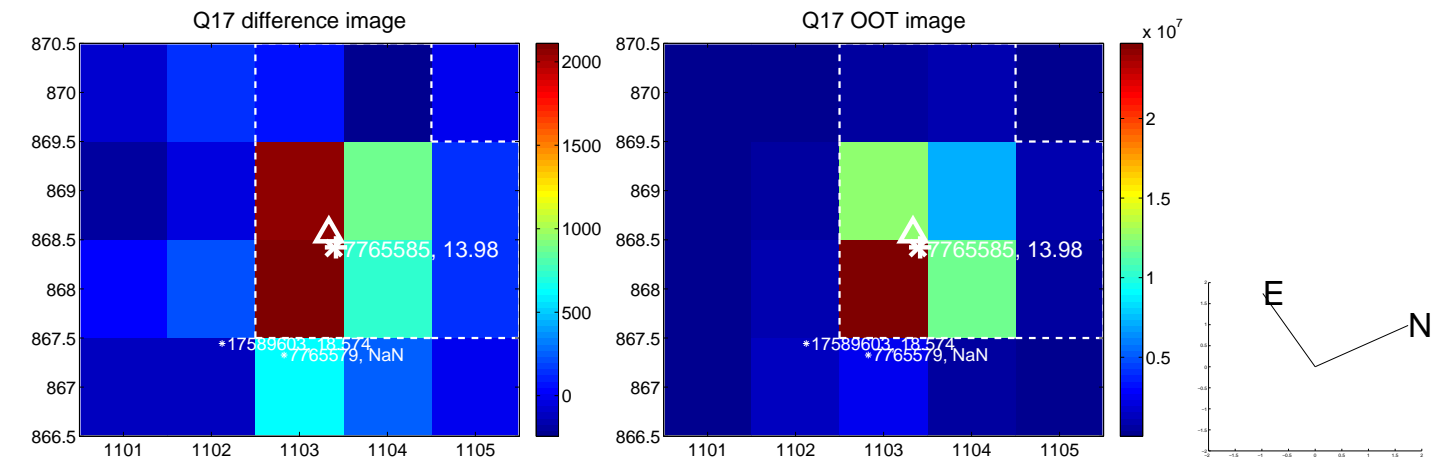
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

