

KIC 010350769

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})
010350769-01	OBS	No	0.649791	132.118250	34.4	2.330	9.8	8.0	2.25	7693	1.52	49080.07
010350769-02	OBS	No	0.649812	131.789443	47.2	2.421	8.5	9.3	2.25	7693	1.79	49078.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010350769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010350769-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

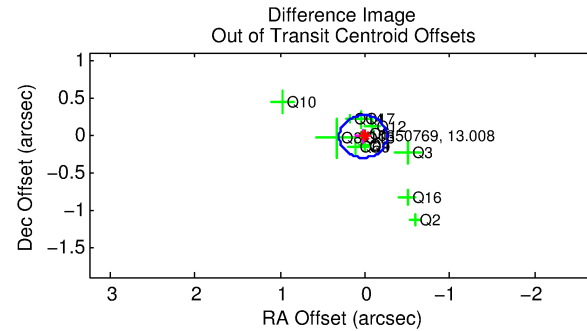
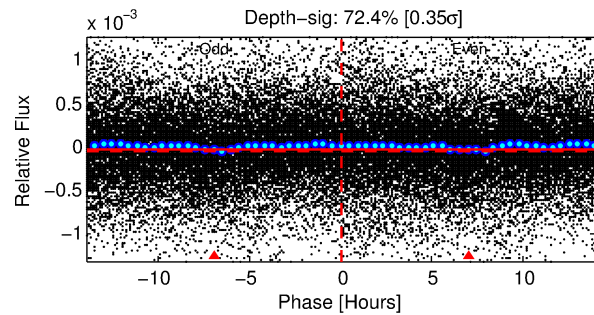
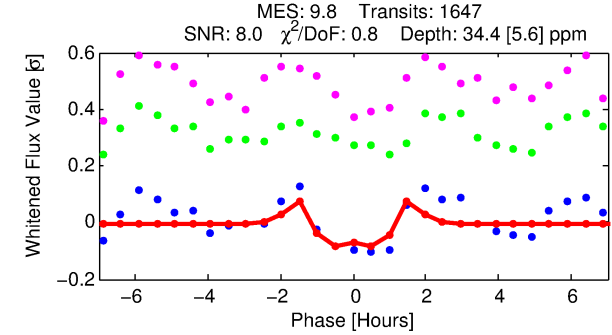
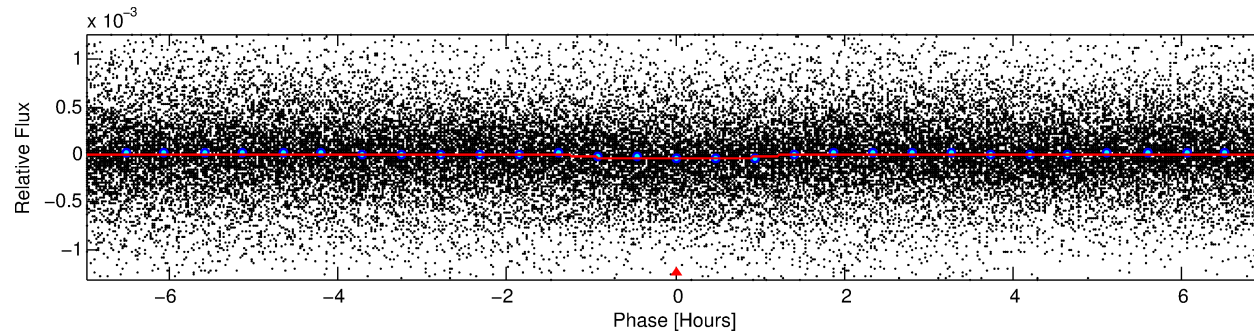
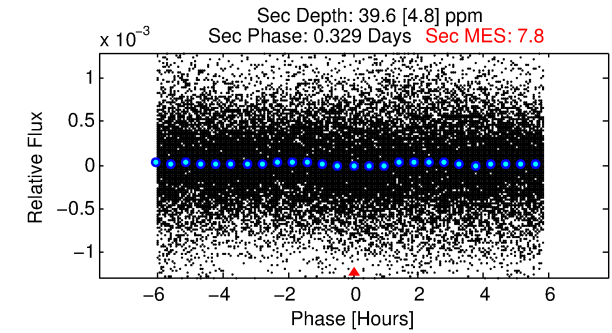
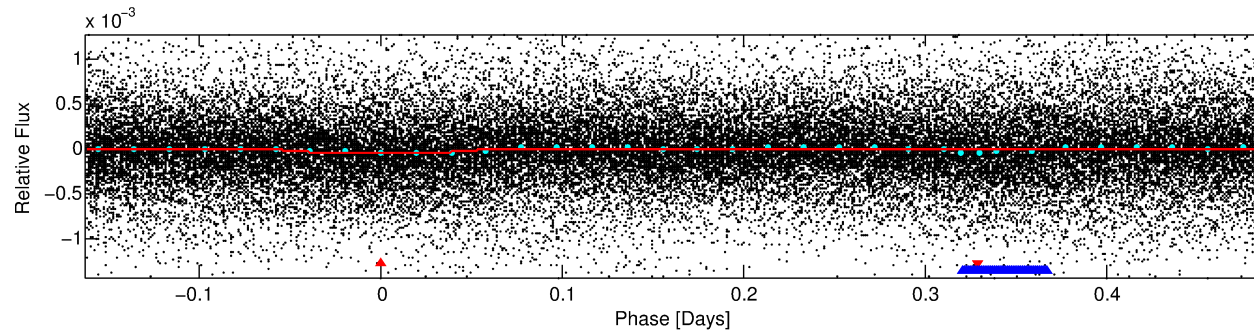
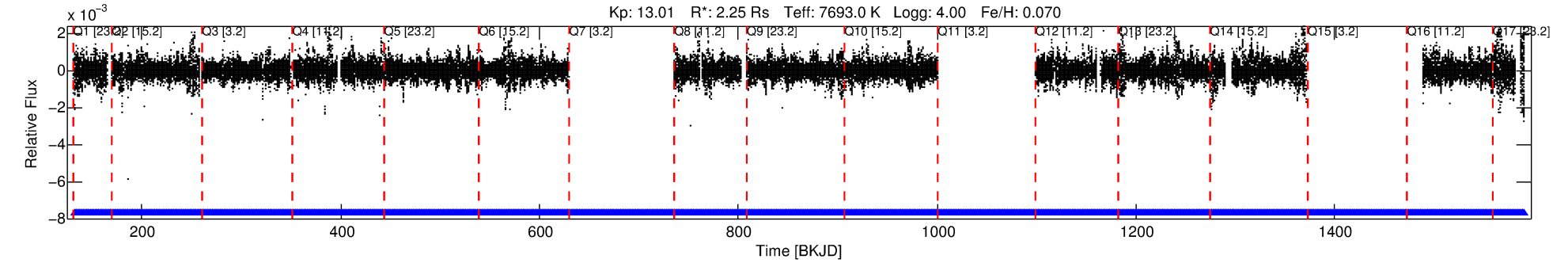
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010350769-01

No Significant Match Found

DV One-Page Summary

KIC: 10350769 Candidate: 1 of 2 Period: 0.650 d



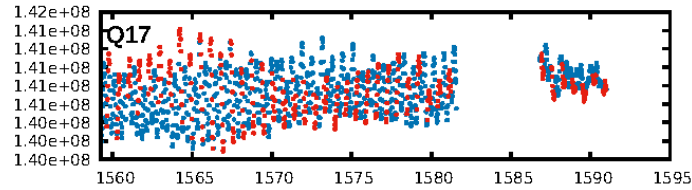
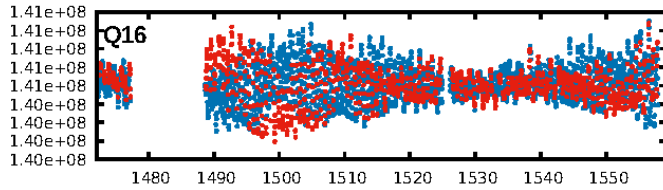
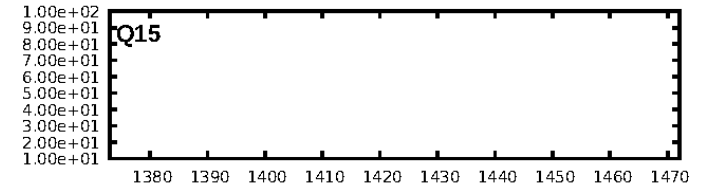
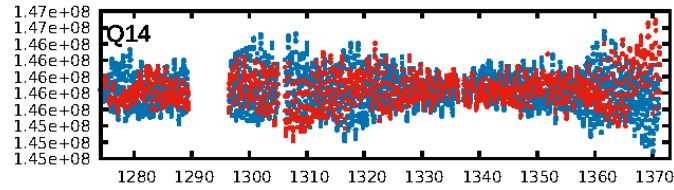
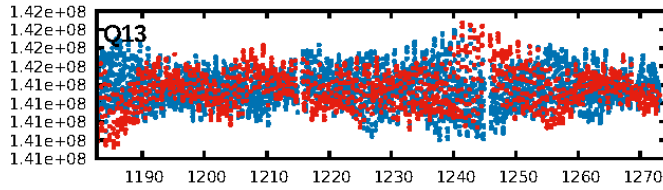
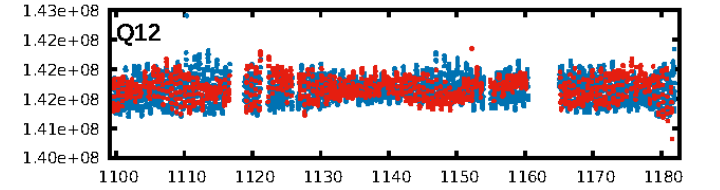
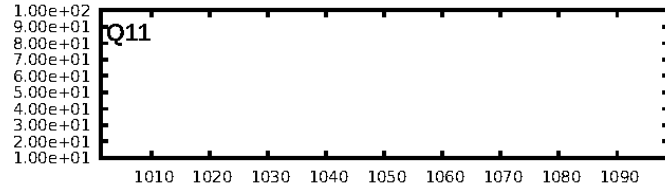
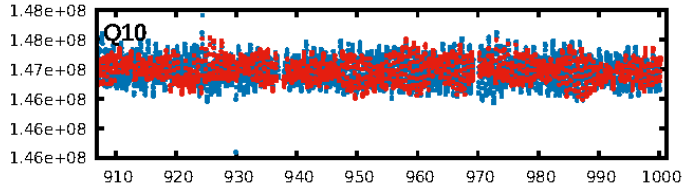
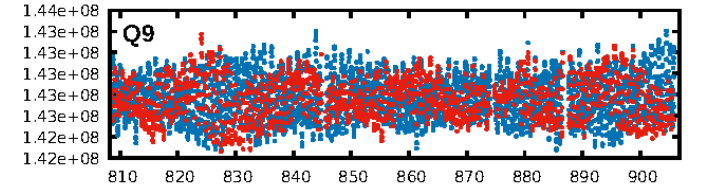
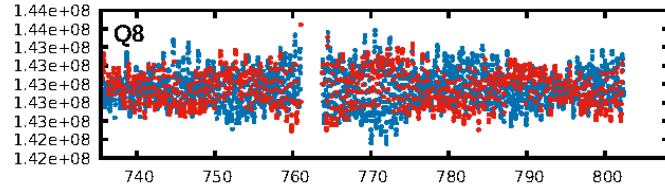
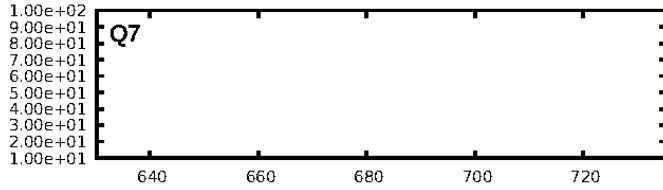
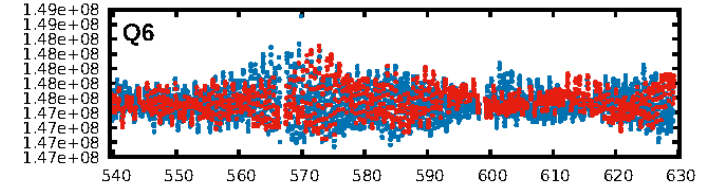
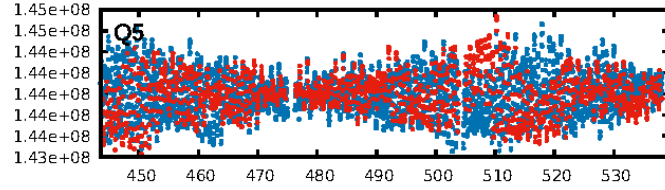
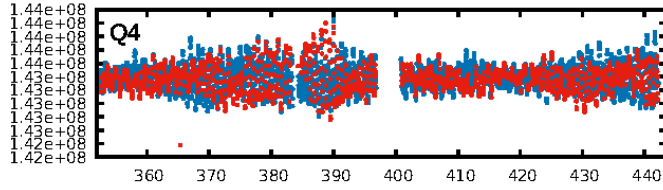
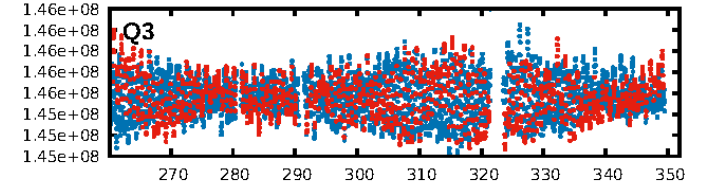
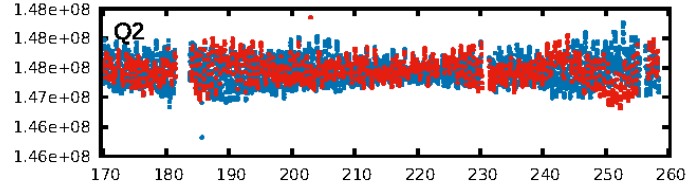
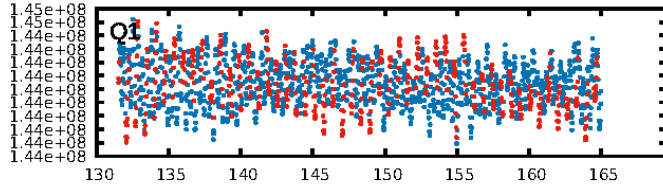
DV Fit Results:

Period = 0.64979 [0.00001] d
Epoch = 132.1183 [0.0018] BKJD
Rp/R* = 0.0062 [0.0015]
a/R* = 1.36 [0.93]
b = 0.89 [0.34]
Seff = 49080.07 [19197.81]
Teq = 3795 [371] K
Rp = 1.52 [0.55] Re
a = 0.0180 [0.0042] AU
Ag = 3.05 [1.87] [1.10σ]
Teffp = 7757 [1024] K [3.64σ]

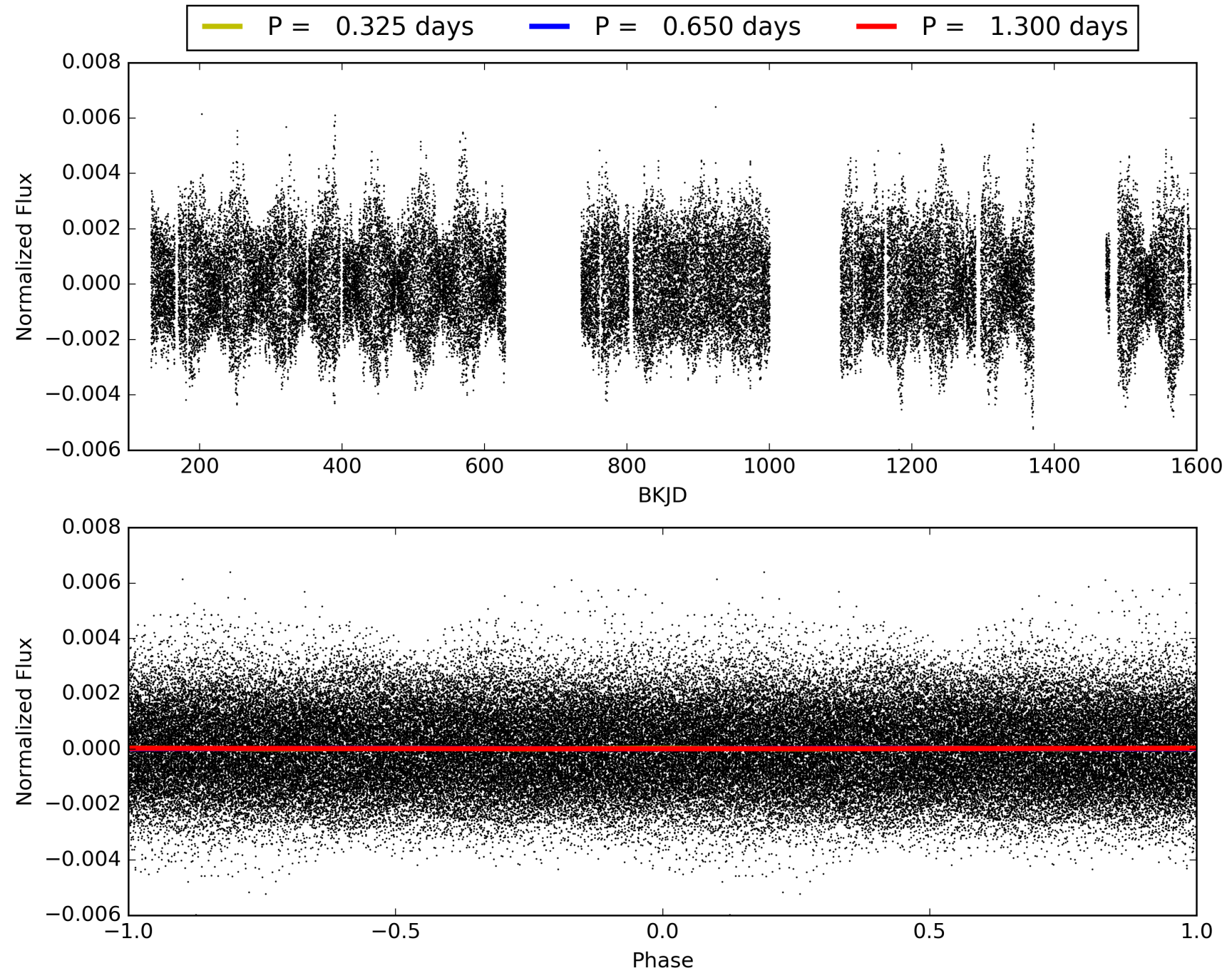
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.58e-36
RollingBand-fgt: 1.00 [1554/1554]
GhostDiagnostic-chr: 1.459
Centroid-sig: N/A
Centroid-so: 0.265 arcsec [0.52σ]
OotOffset-rm: 0.030 arcsec [0.32σ]
KicOffset-rm: 0.072 arcsec [0.46σ]
OotOffset-st: 4/1/4/4 [13]
KicOffset-st: 4/1/4/4 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 010350769-01, PDC Light Curves

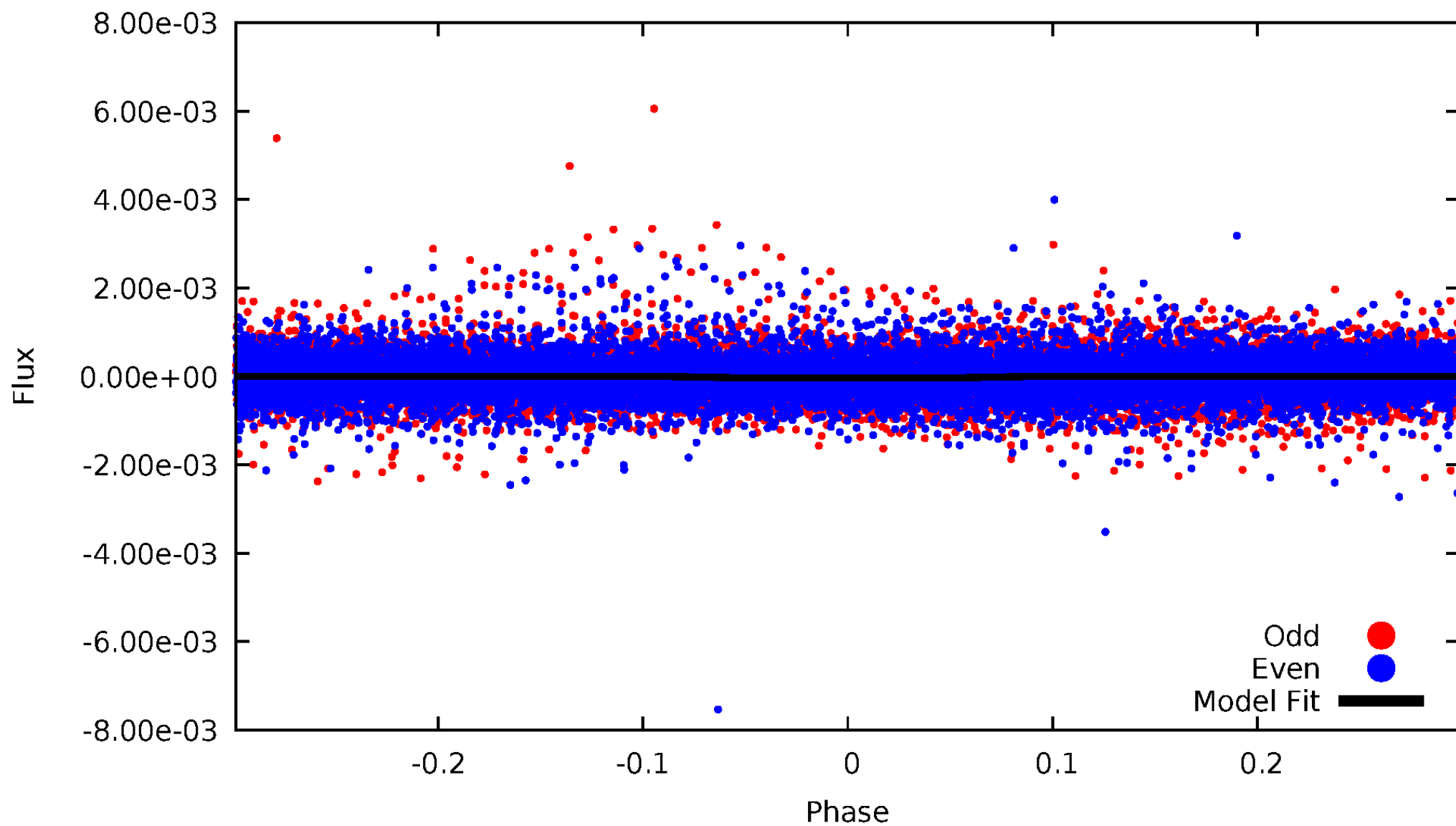


TCE 010350769-01



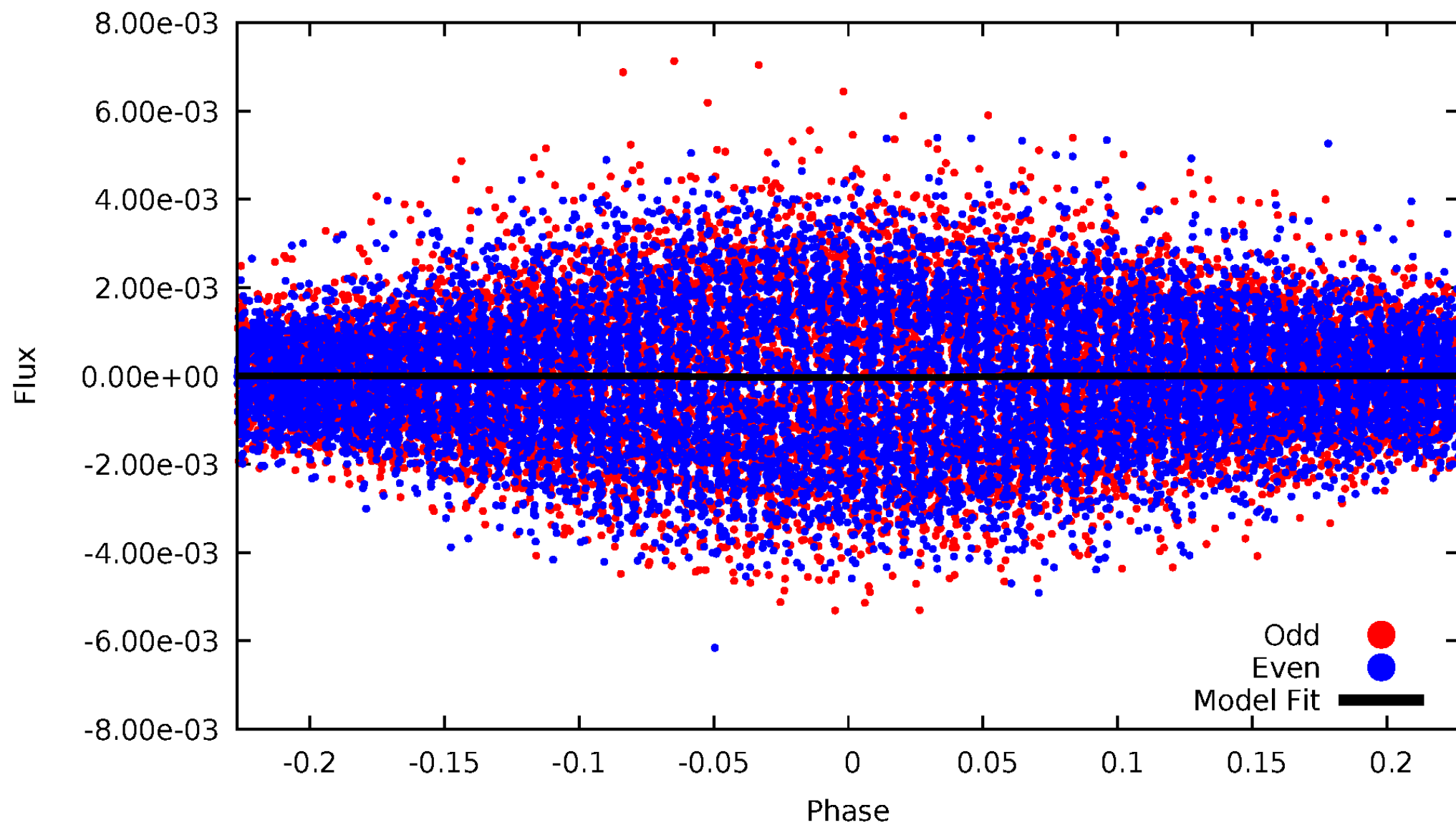
DV Odd/Even

TCE 010350769-01



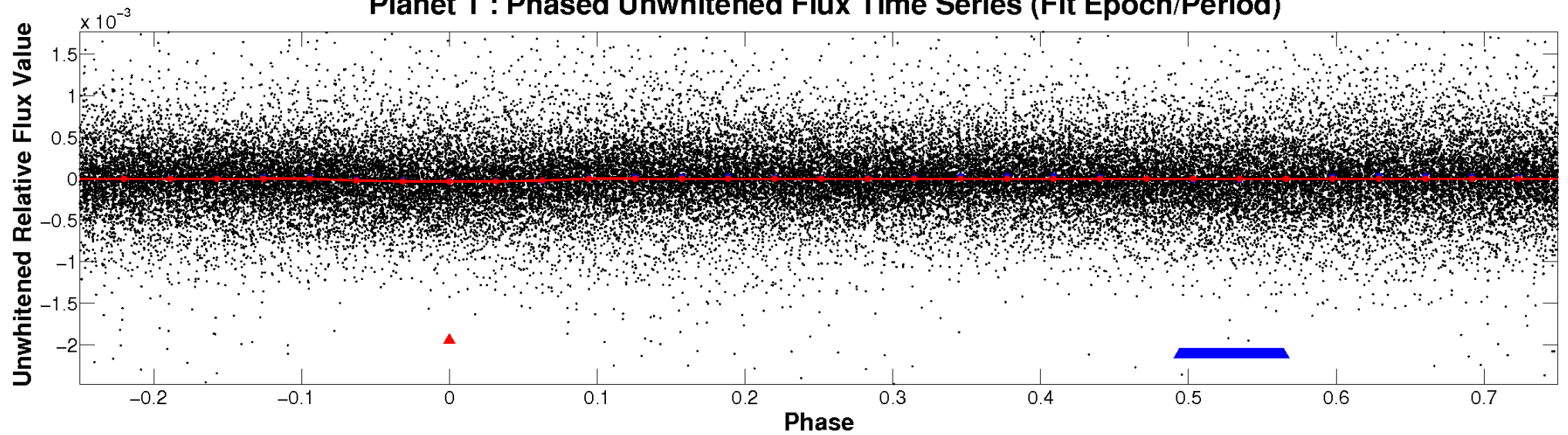
ALT Odd/Even

TCE 010350769-01

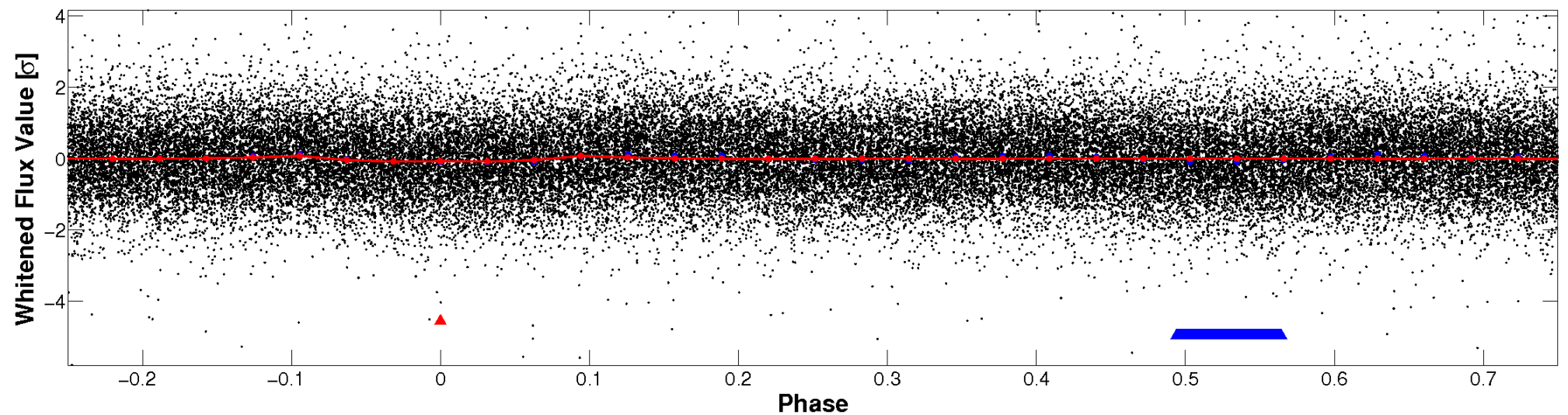


Non-Whitened Vs. Whitened Light Curve

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

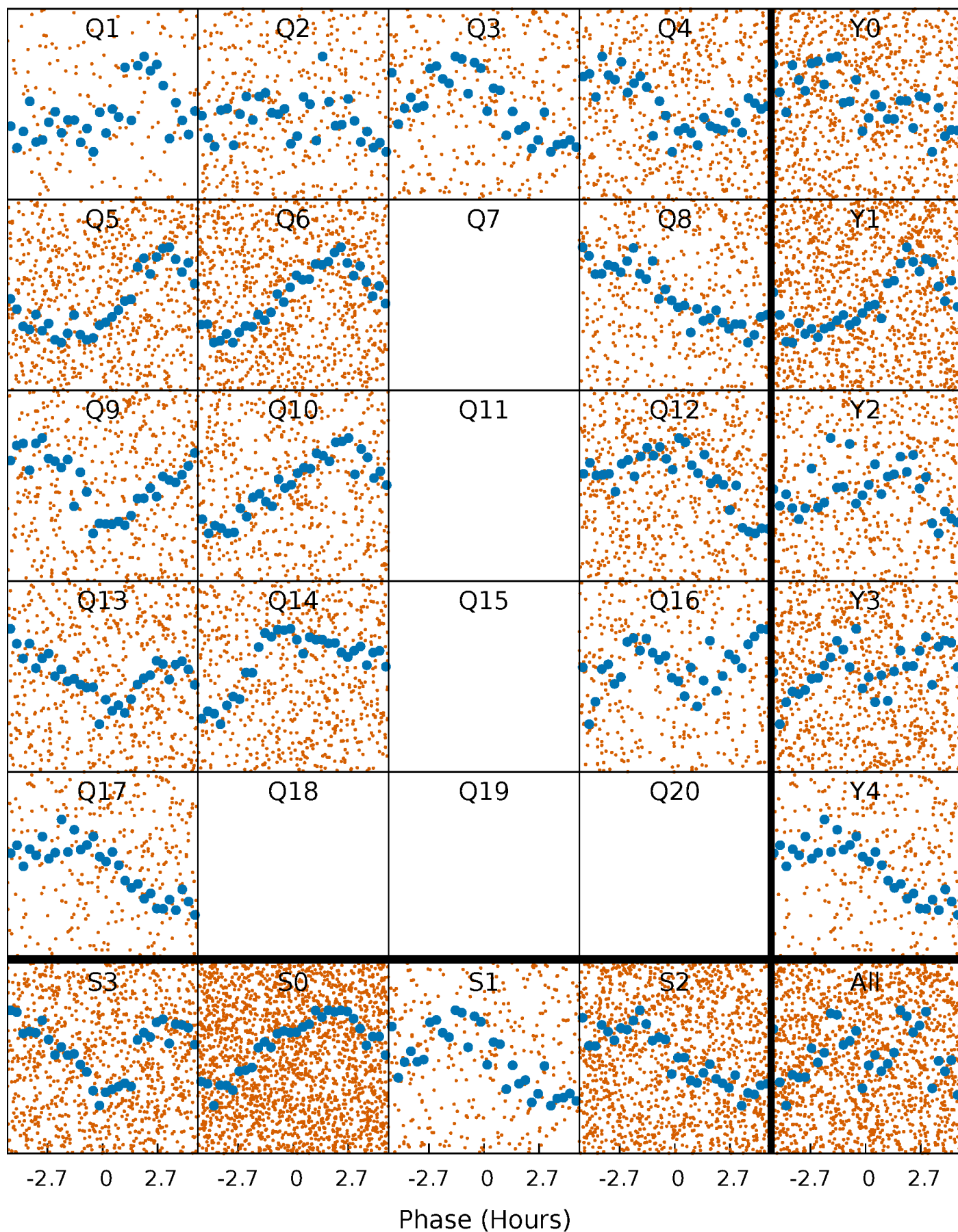


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



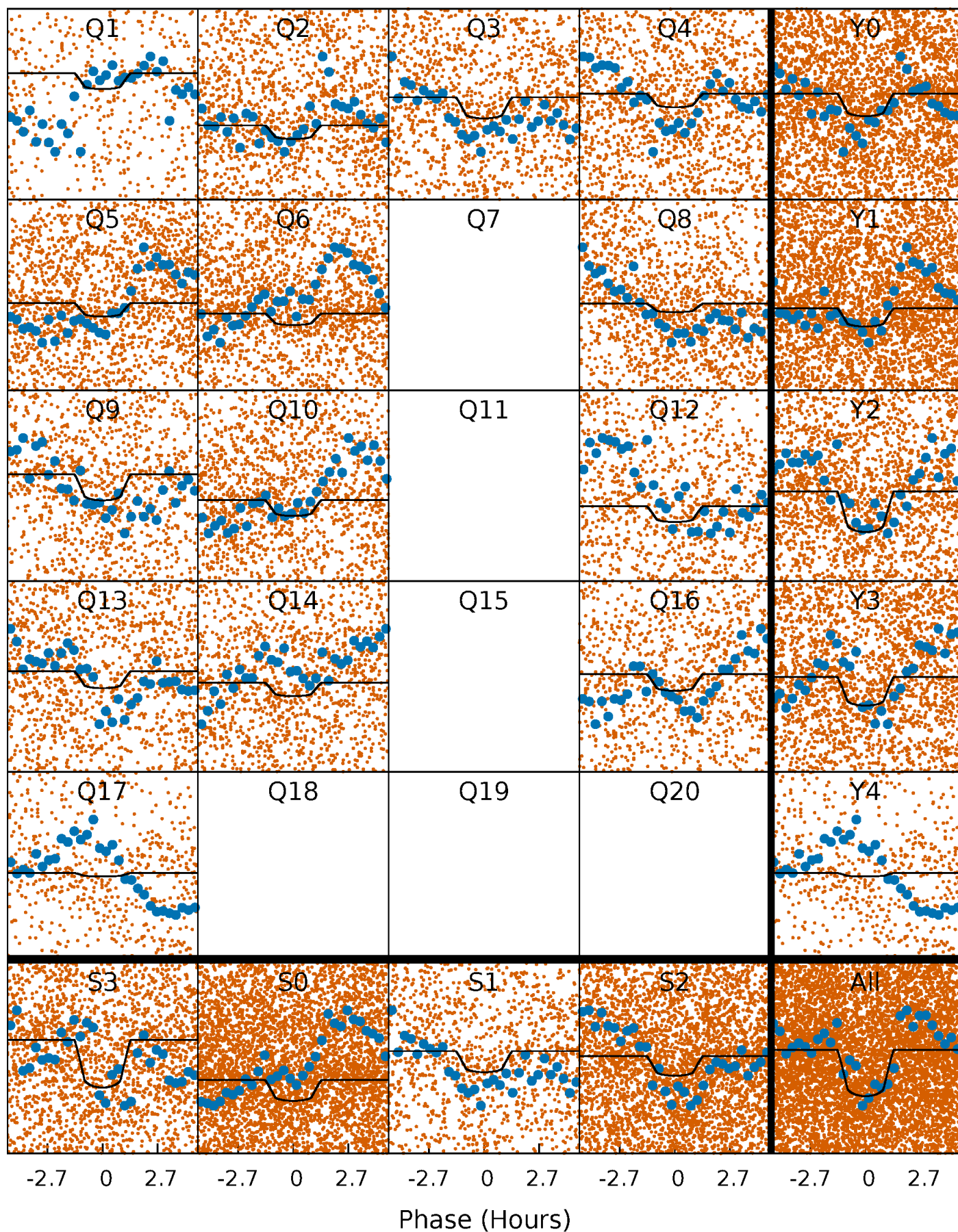
PDC Quarter-Phased Transit Curves

TCE 010350769-01 P= 0.649791 Days $T_0=132.118250$ (BKJD)



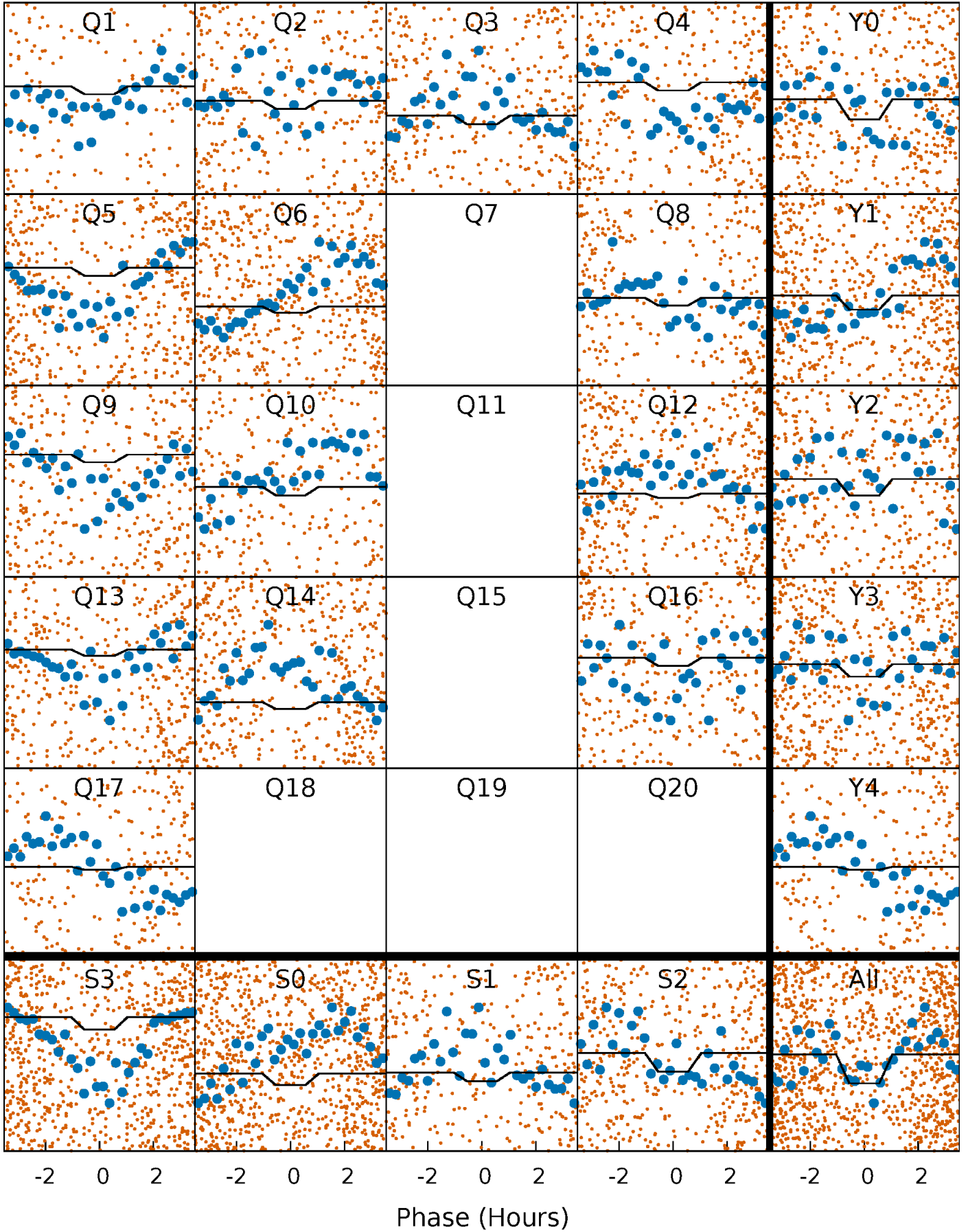
DV Quarter-Phased Transit Curves

TCE 010350769-01 P= 0.649791 Days $T_0=132.118250$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

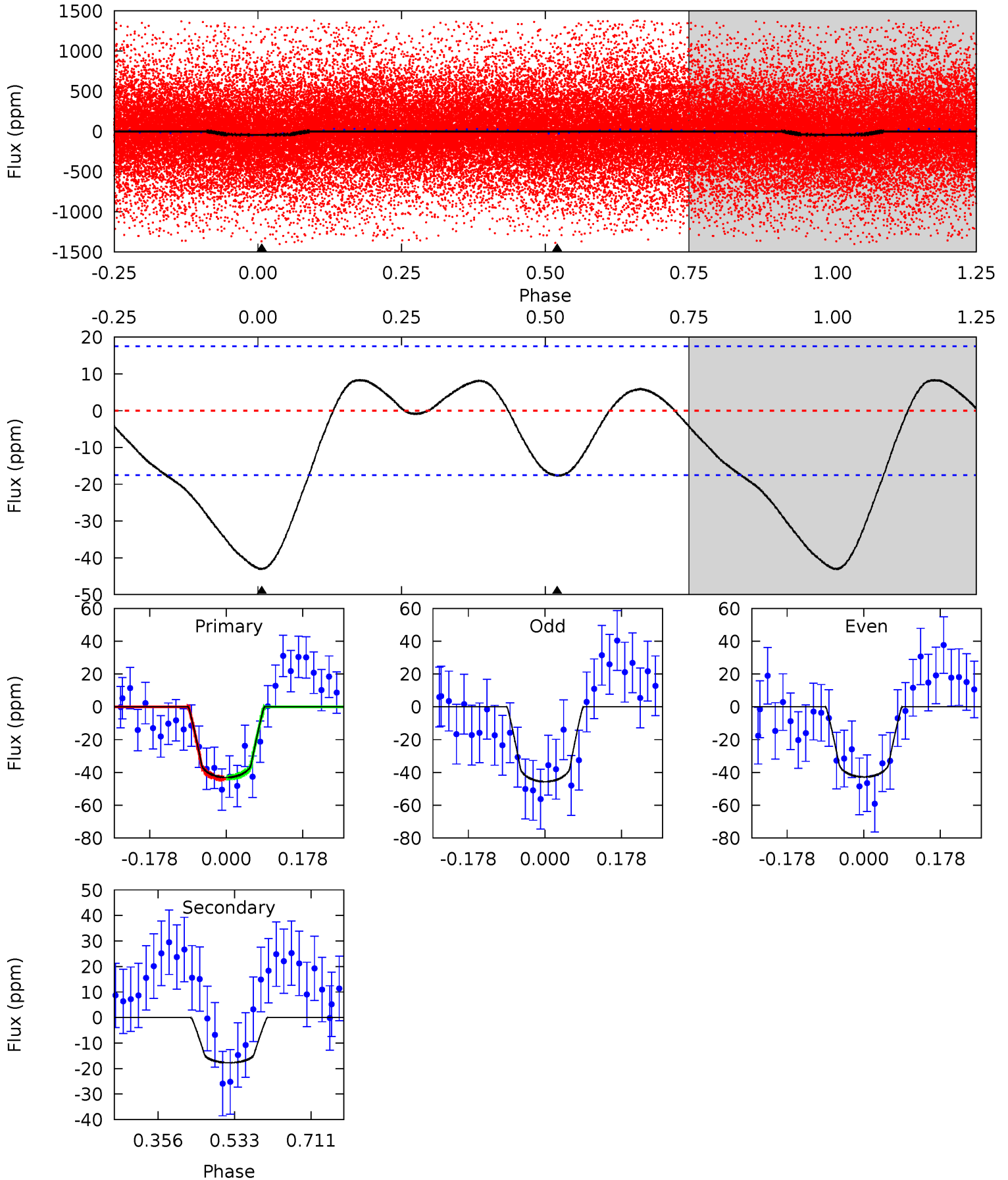
TCE 010350769-01 P= 0.649810 Days $T_0=132.102366$ (BKJD)



DV Model-Shift Uniqueness Test

010350769-01, P = 0.649791 Days, E = 131.468459 Days

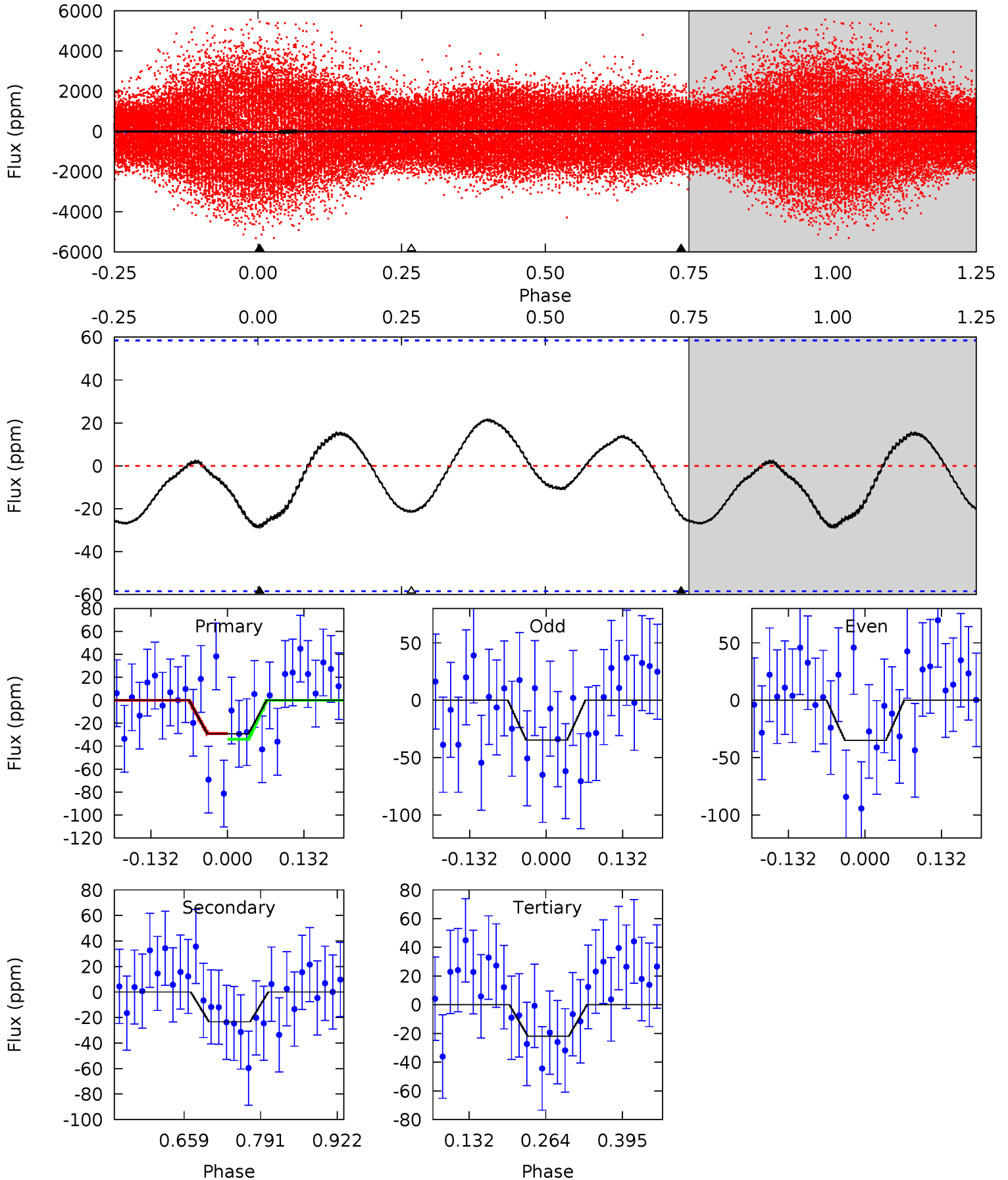
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	4.49	0	0	4.44	1.35	1.64	10.9	10.9	4.49	4.49	0.36	0.70	0.16	0.09



Alt Model-Shift Uniqueness Test

010350769-01, P = 0.649810 Days, E = 131.452556 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.25	1.80	1.68	0	4.51	1.51	0.98	0.57	2.25	0.12	1.80	0.01	1.48	0.43	0.14



Stellar Parameters For KIC 010350769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+214}_{-322}	$3.998^{+0.198}_{-0.149}$	$0.070^{+0.200}_{-0.350}$	$2.249^{+0.498}_{-0.609}$	$1.837^{+0.145}_{-0.339}$	$0.227^{+0.251}_{-0.088}$
	+3%/-4%	+5%/-4%	+286%/-500%	+22%/-27%	+8%/-18%	+111%/-39%
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 010350769-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 4	$1.48^{+0.45}_{-0.40}$	5264^{+358}_{-384}	5817^{+1198}_{-831}	$1.384^{+1.425}_{-0.563}$
Alt.	-23 ± 13	$1.32^{+0.42}_{-0.42}$	5244^{+383}_{-384}	6696^{+2251}_{-1934}	$2.191^{+3.391}_{-1.472}$

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 $A_{obs} \gg 1.0$

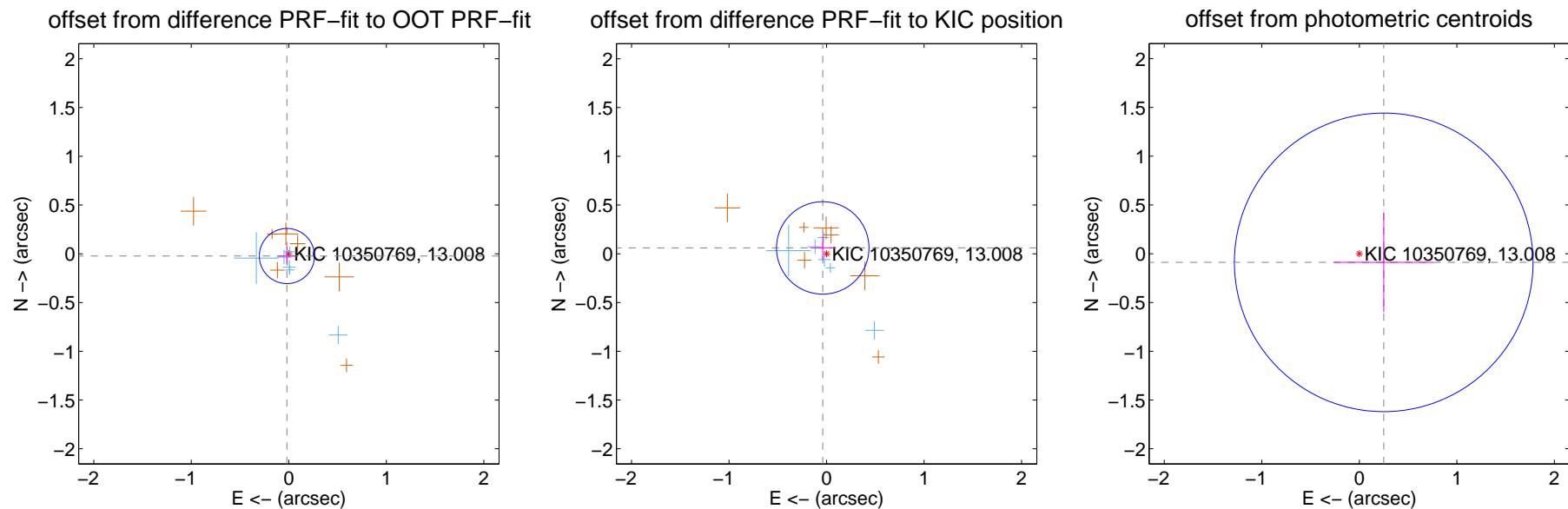
DV Centroid Data

Supplemental centroid analysis for 010350769-01. Kepler magnitude: 13.01. Transit SNR 7.99

There are 6 quarters with good PRF difference image offsets

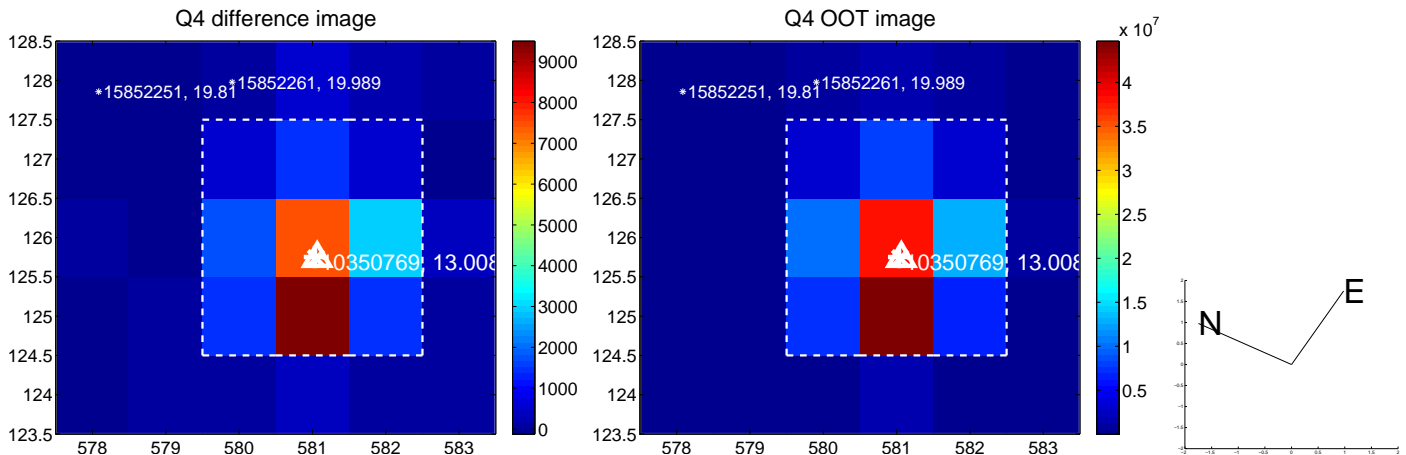
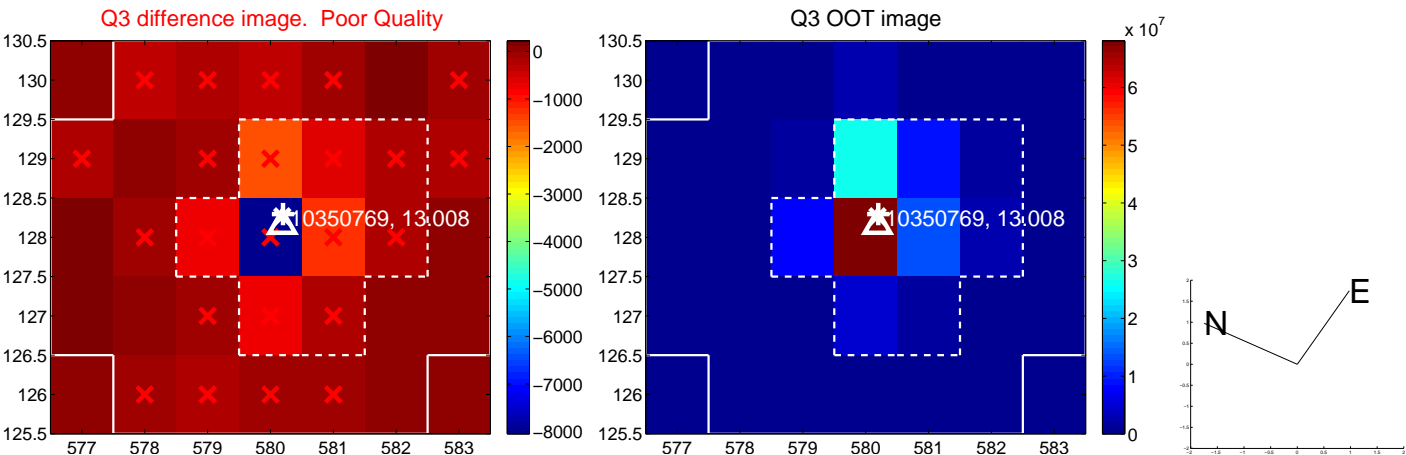
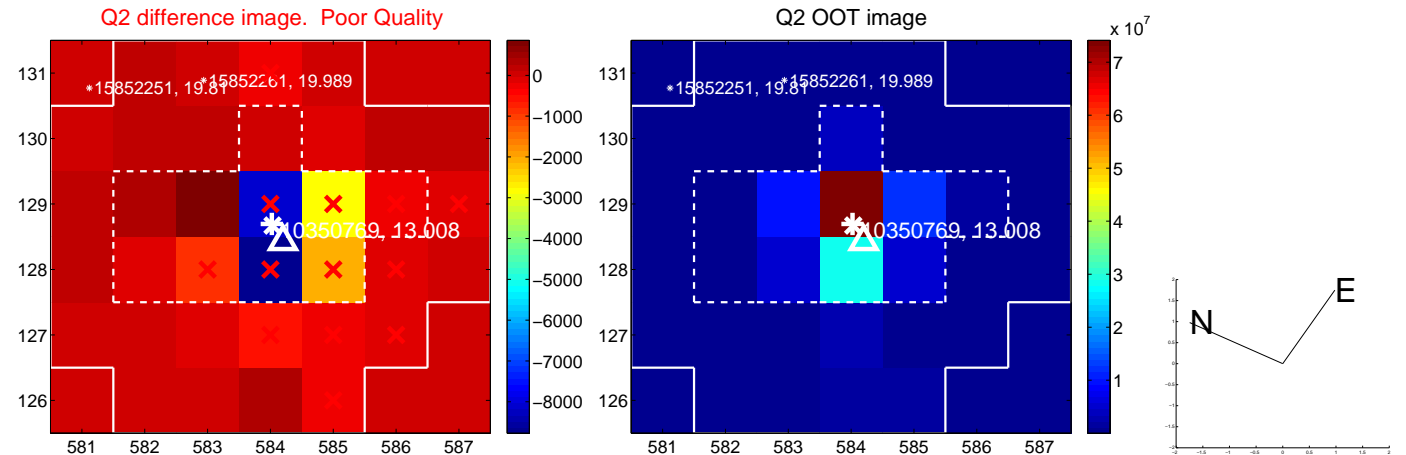
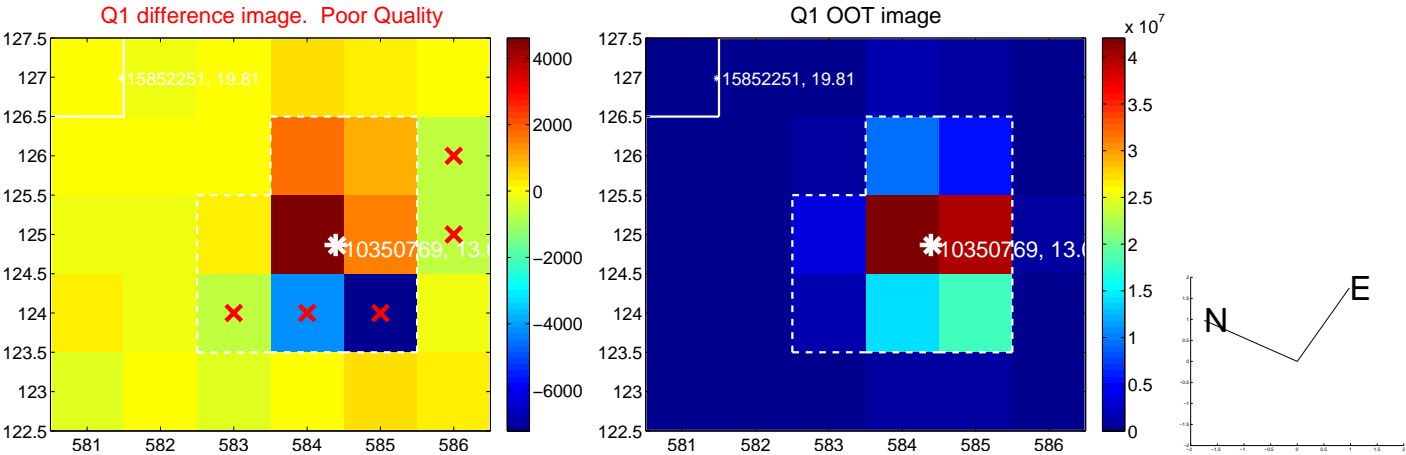
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.094	0.32	0.019 ± 0.091	-0.023 ± 0.096
PRF-fit source offset from KIC position	0.072 ± 0.158	0.46	0.039 ± 0.126	0.060 ± 0.128
photometric centroid source offset	0.27 ± 0.51	0.52	-0.25 ± 0.51	-0.09 ± 0.51

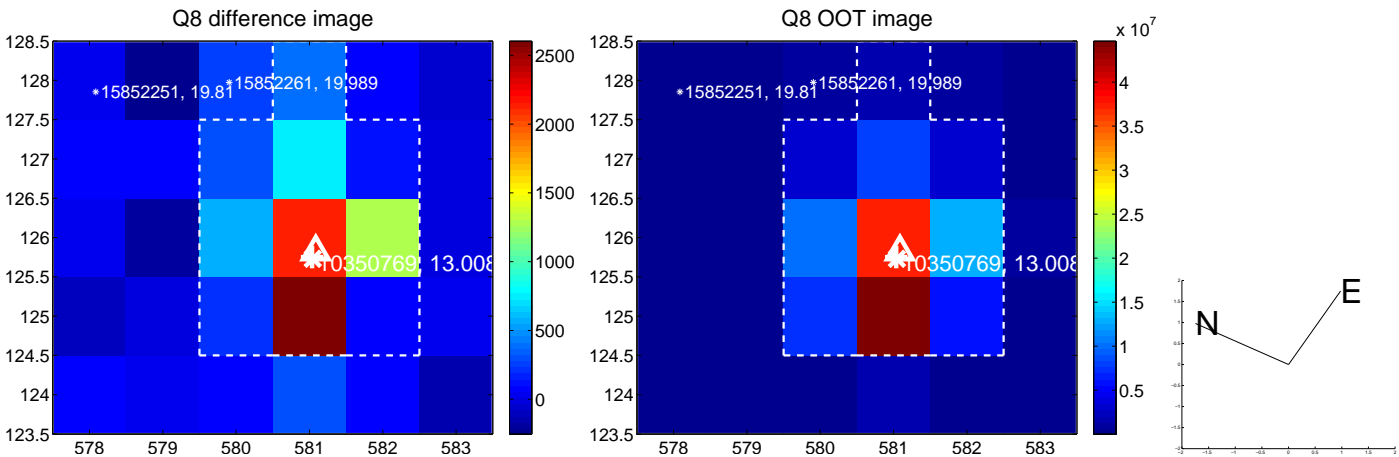
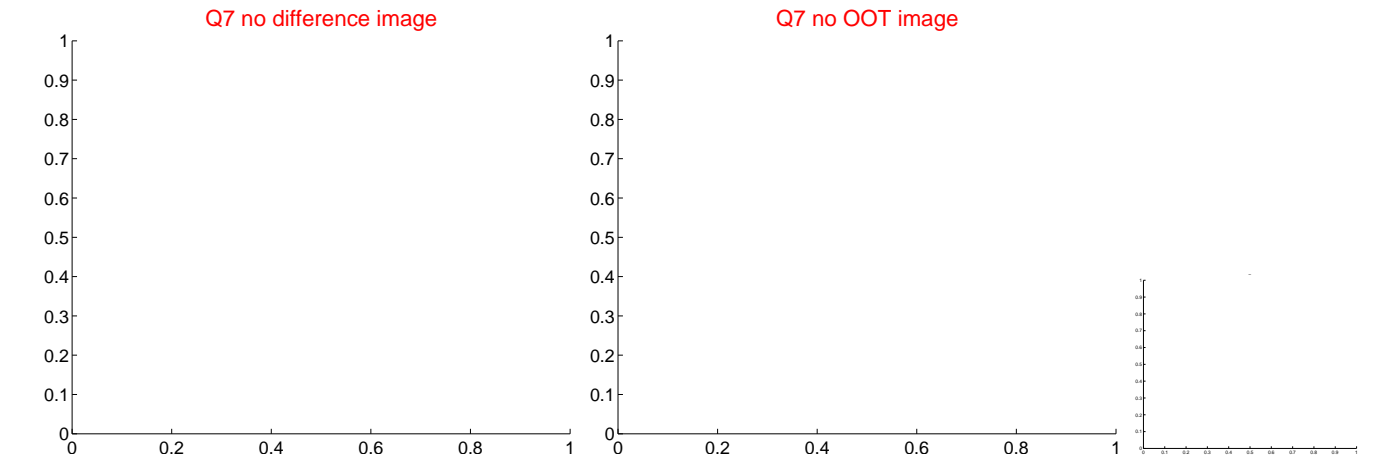
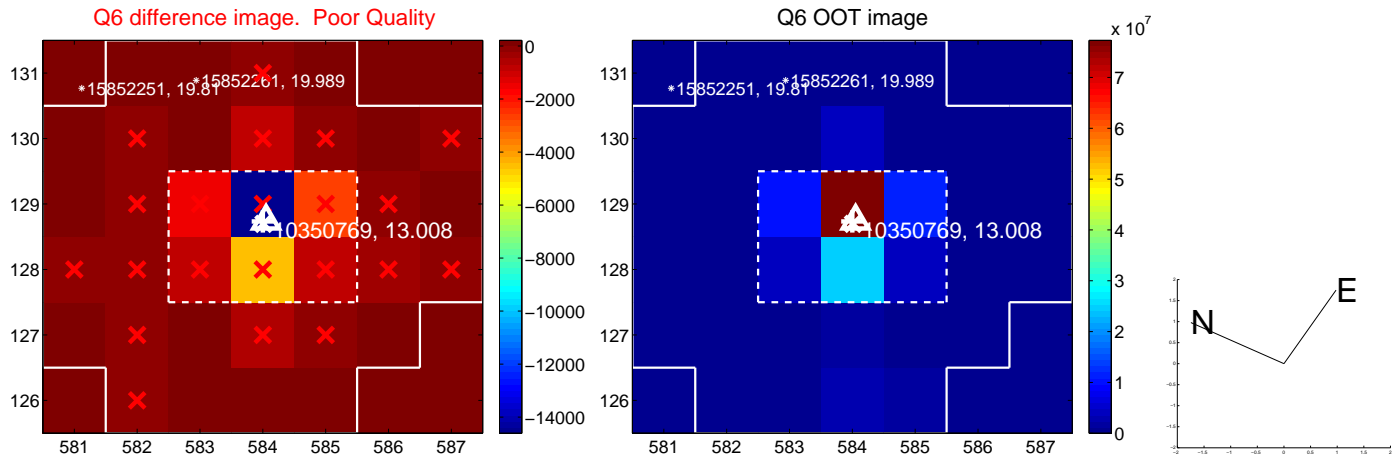
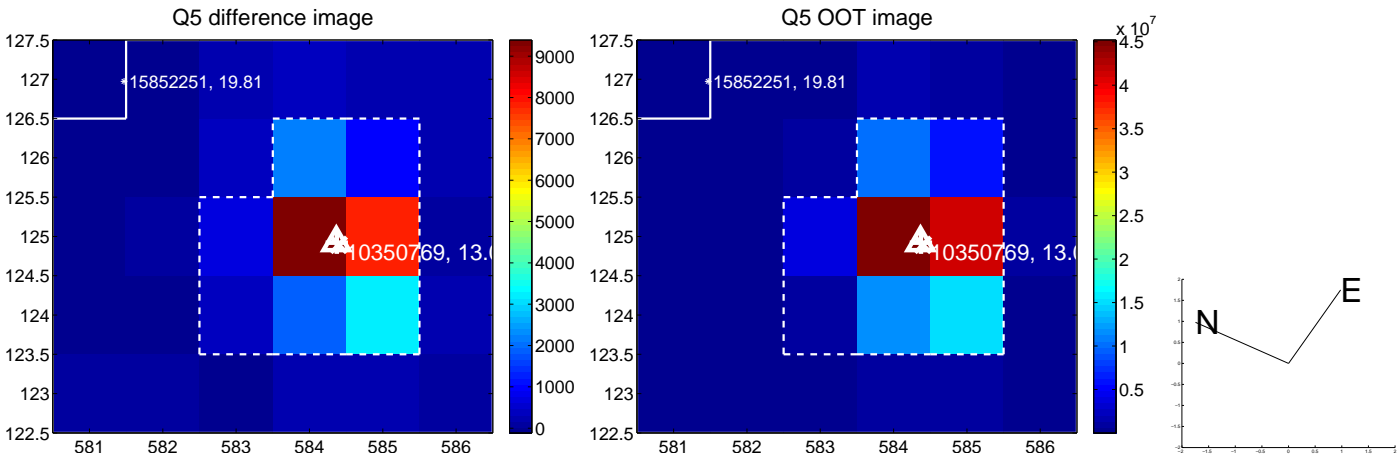


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

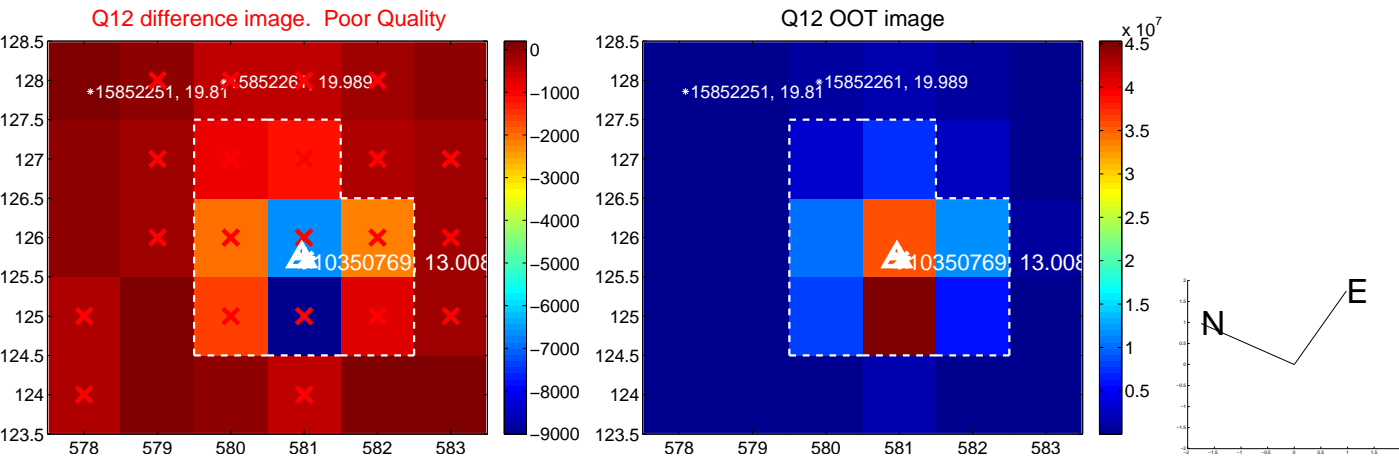
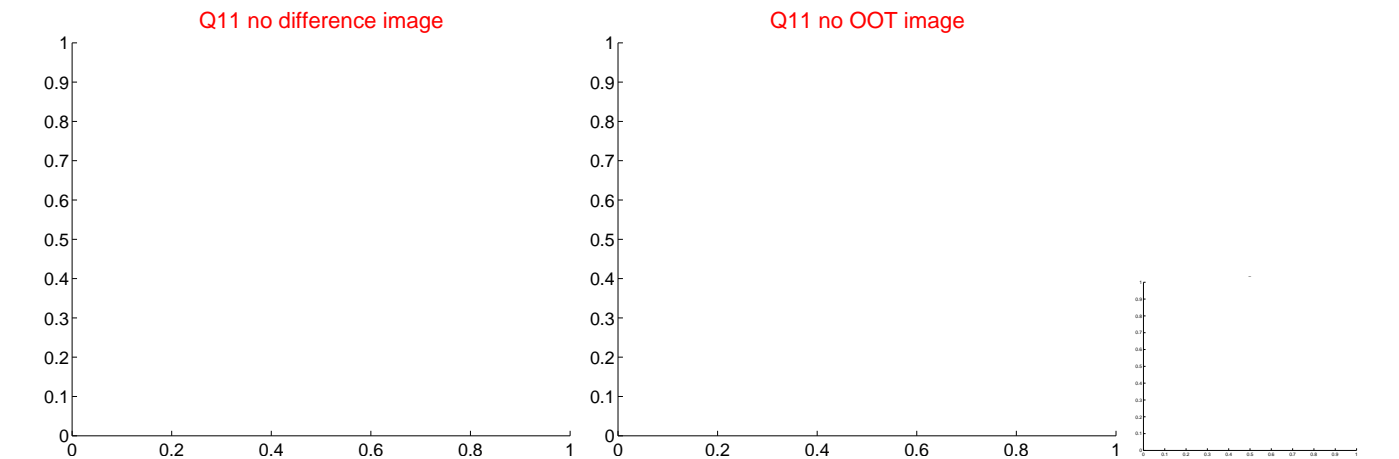
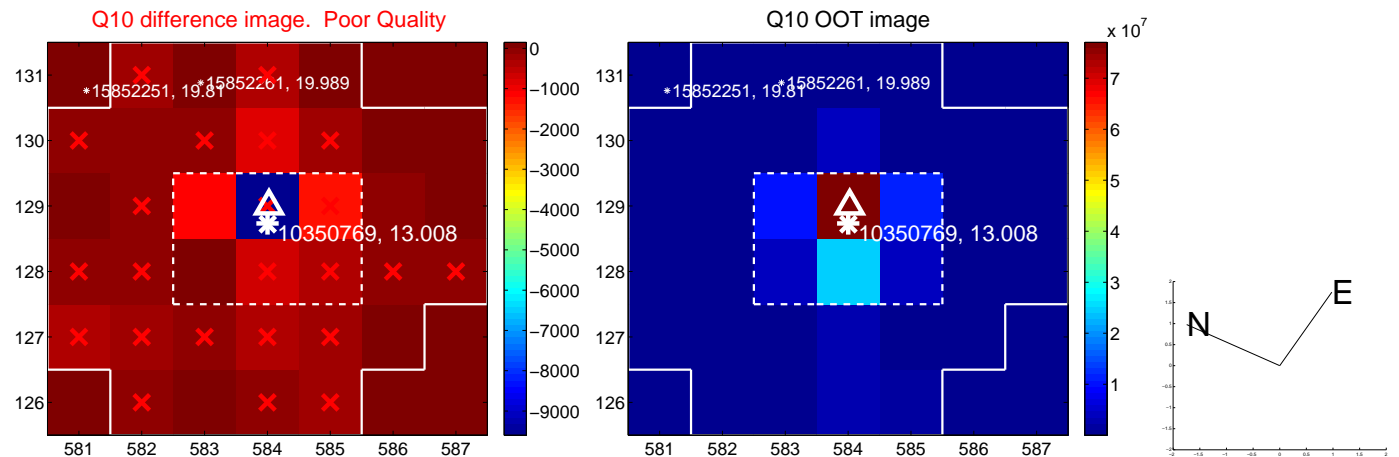
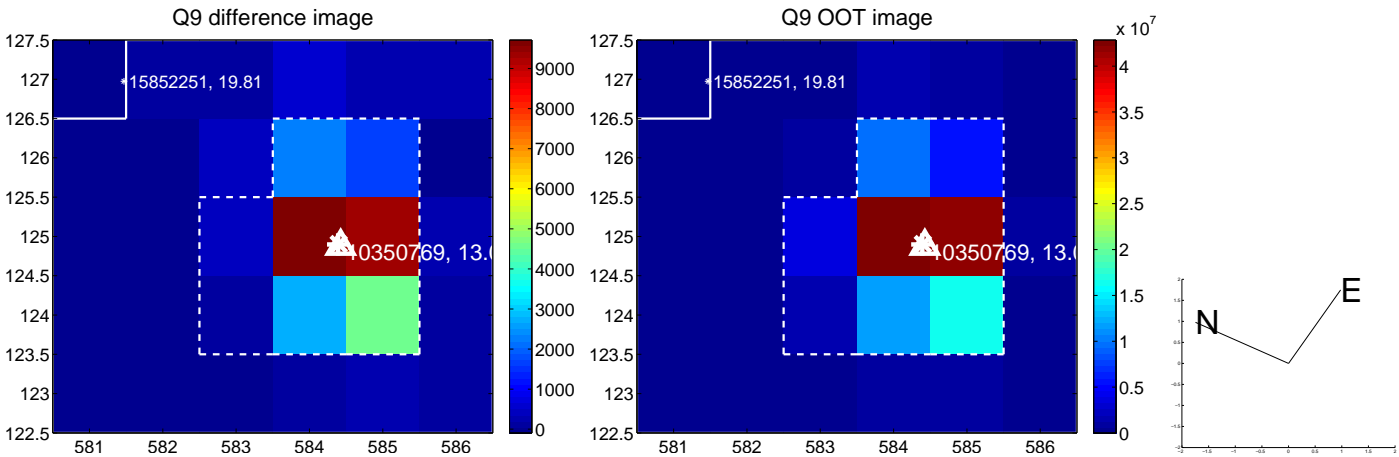
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



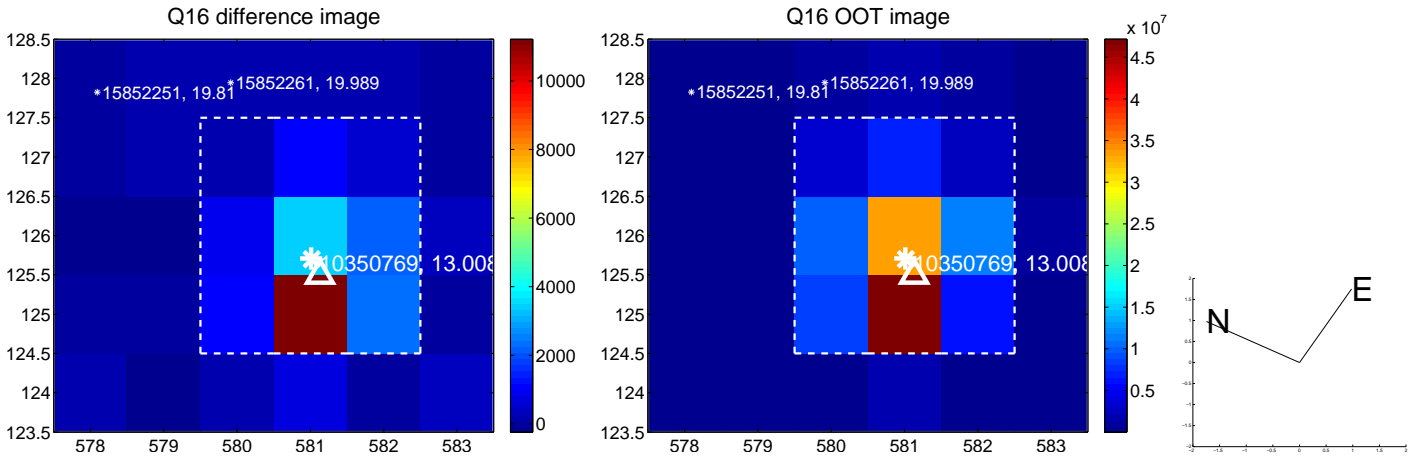
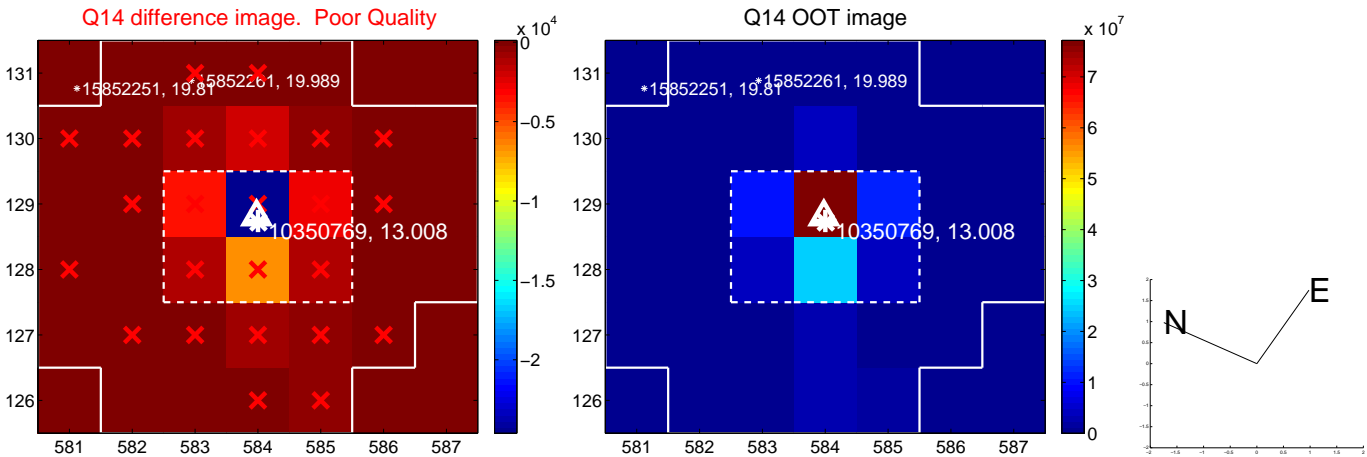
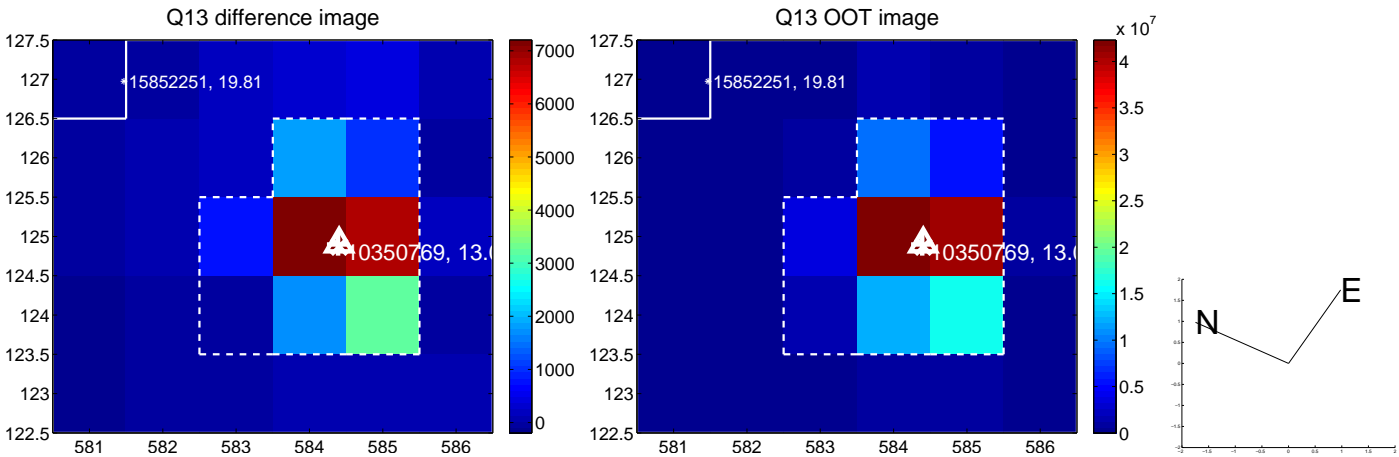
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



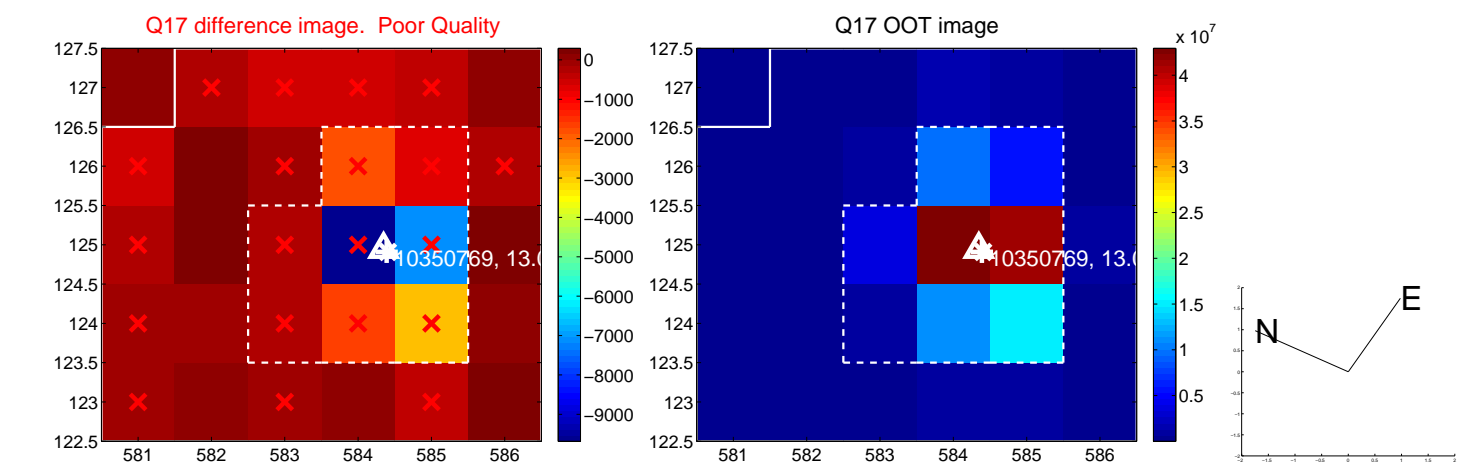
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



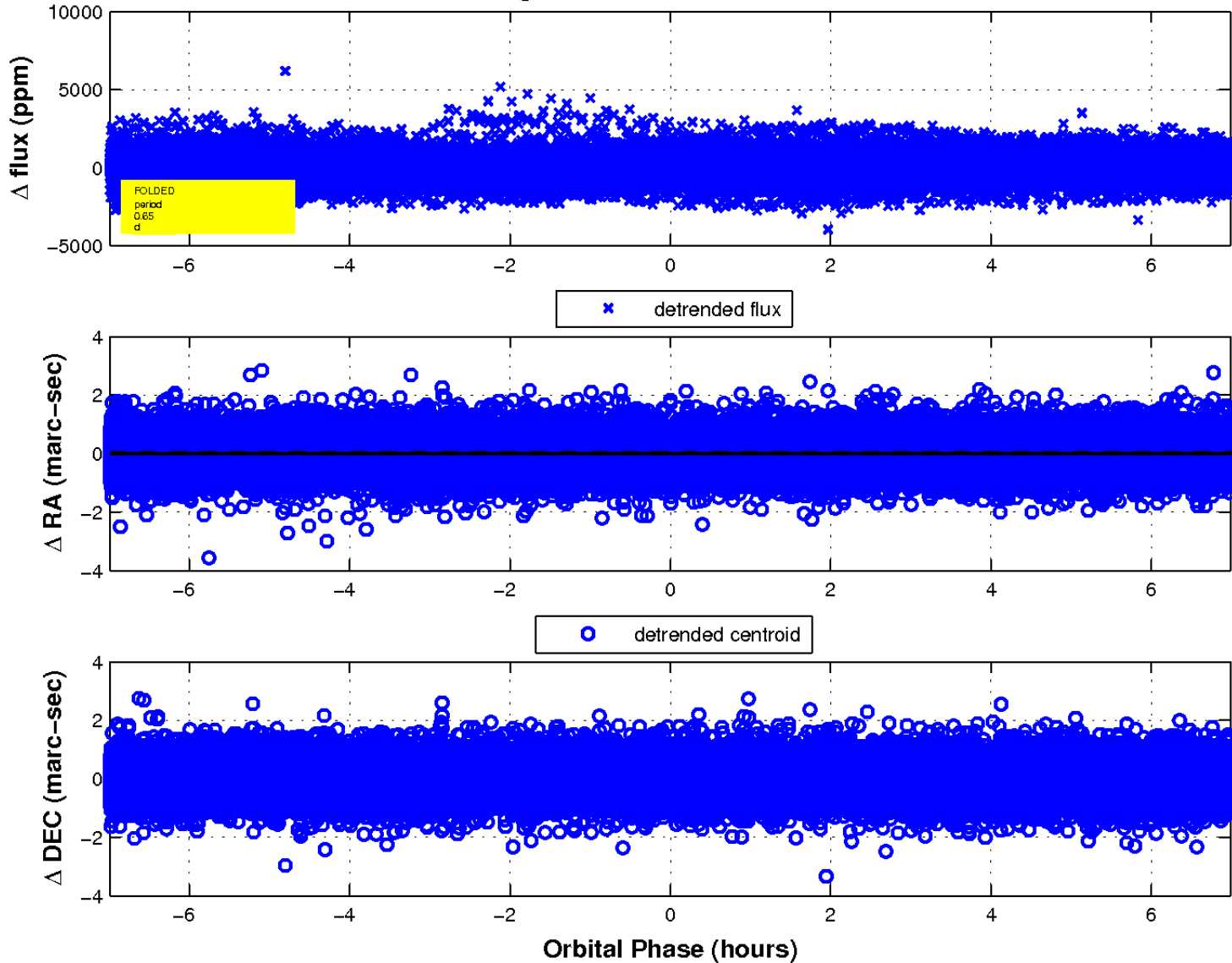
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

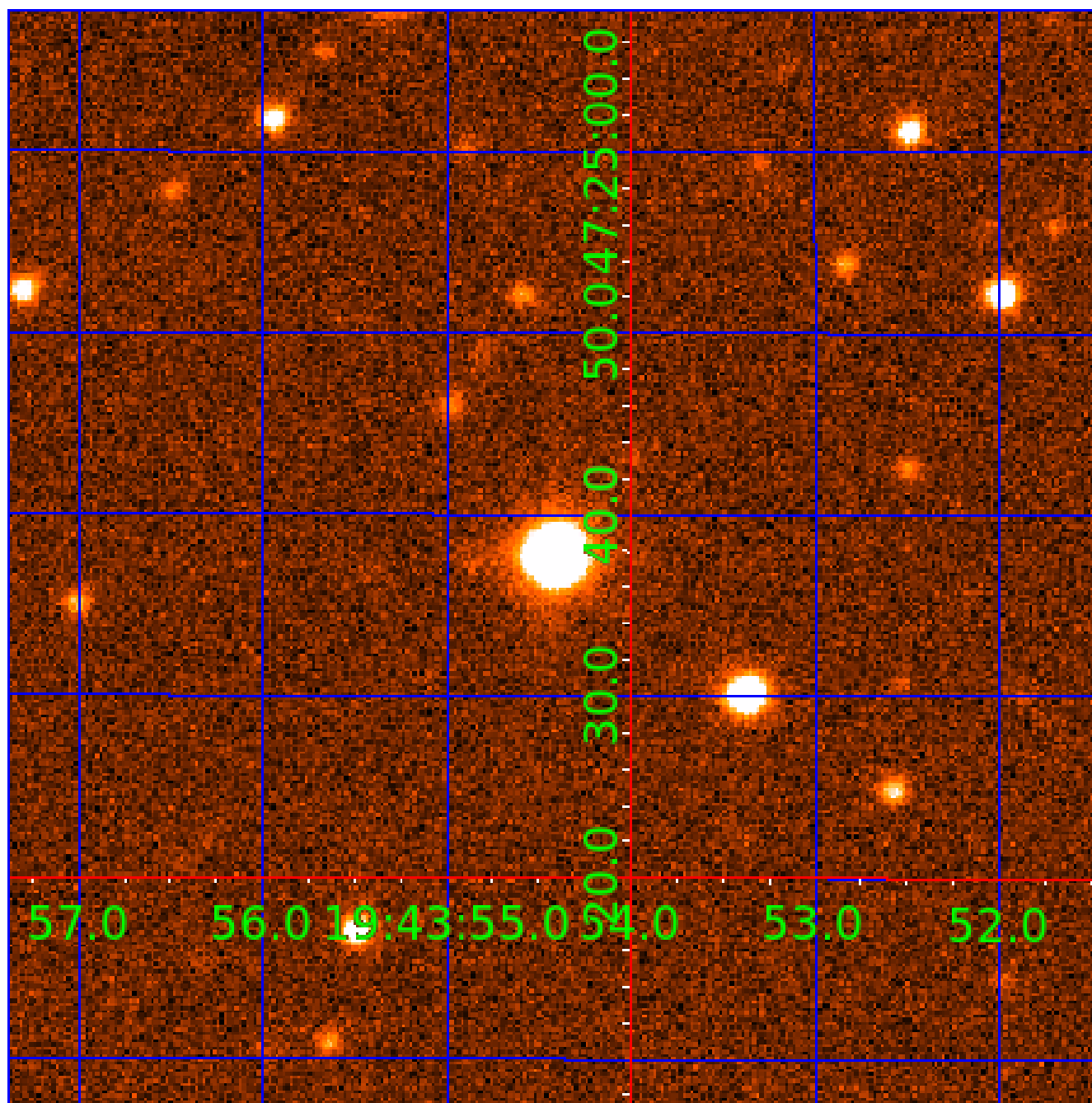


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 010350769

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})
010350769-01	OBS	No	0.649791	132.118250	34.4	2.330	9.8	8.0	2.25	7693	1.52	49080.07
010350769-02	OBS	No	0.649812	131.789443	47.2	2.421	8.5	9.3	2.25	7693	1.79	49078.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010350769-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010350769-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD

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

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

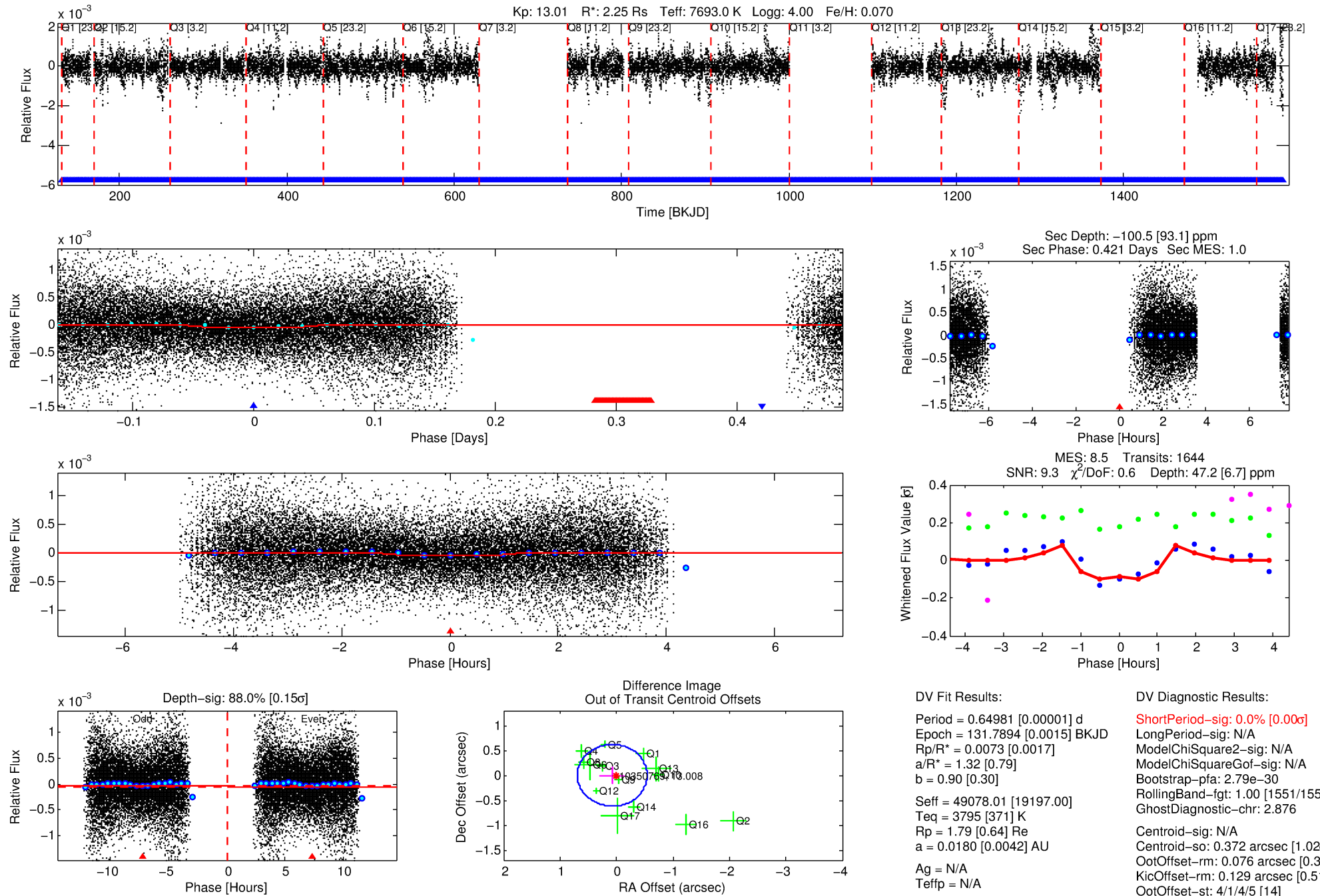
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010350769-02

No Significant Match Found

DV One-Page Summary

KIC: 10350769 Candidate: 2 of 2 Period: 0.650 d



DV Fit Results:

Period = 0.64981 [0.00001] d
Epoch = 131.7894 [0.0015] BKJD
Rp/R* = 0.0073 [0.0017]
a/R* = 1.32 [0.79]
b = 0.90 [0.30]
Seff = 49078.01 [19197.00]
Teff = 3795 [371] K
Rp = 1.79 [0.64] Re
a = 0.0180 [0.0042] AU
Ag = N/A
Teffp = N/A

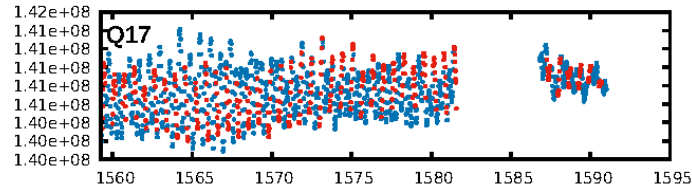
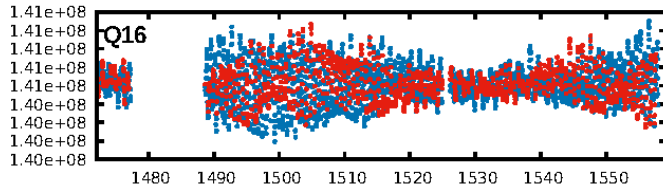
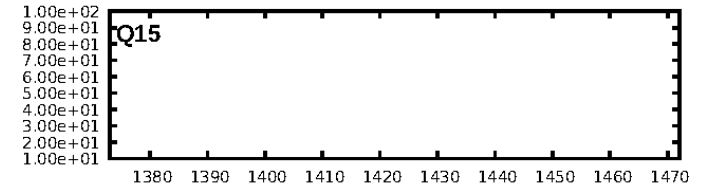
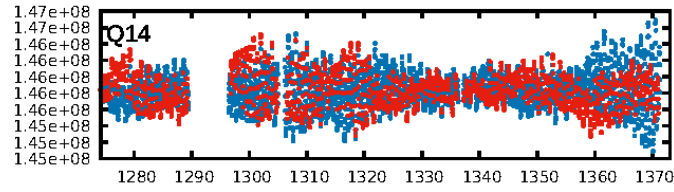
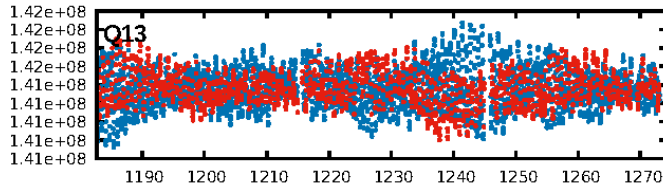
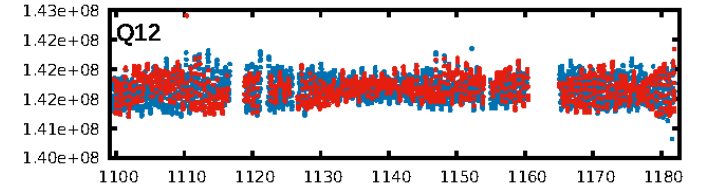
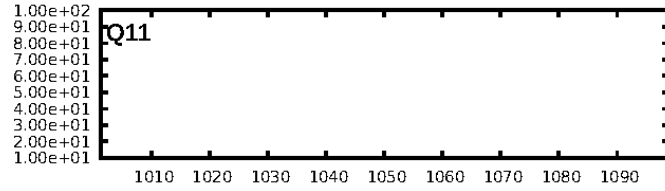
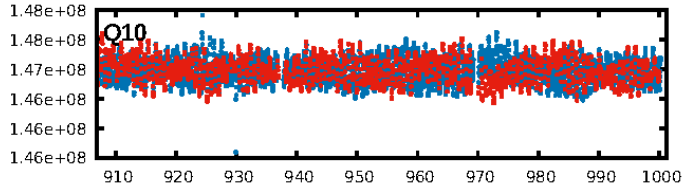
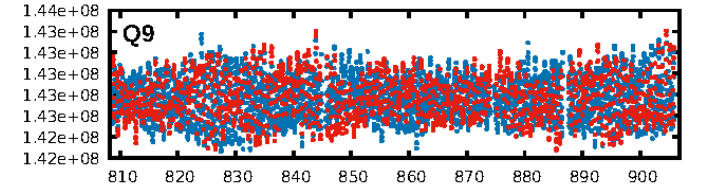
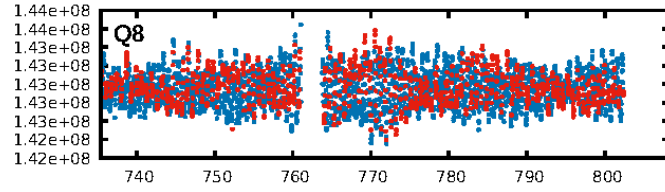
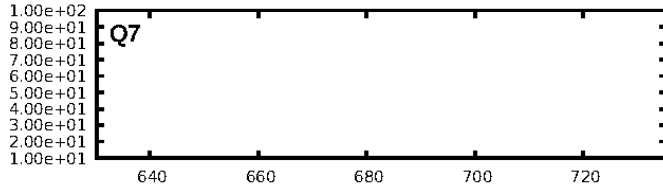
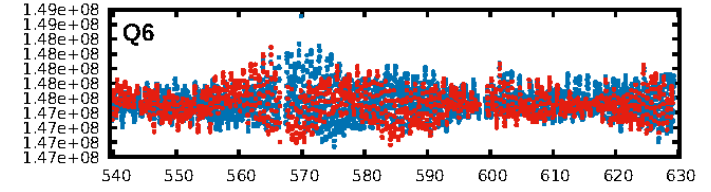
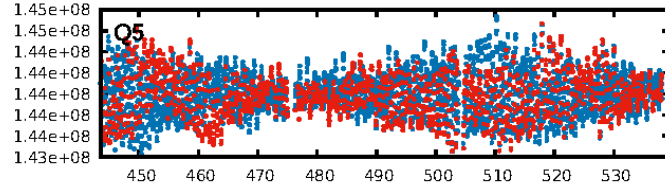
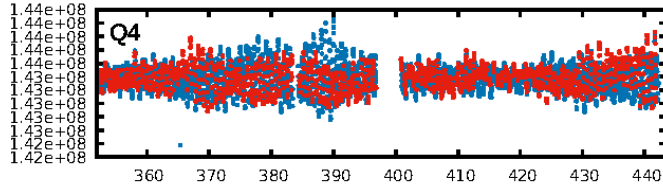
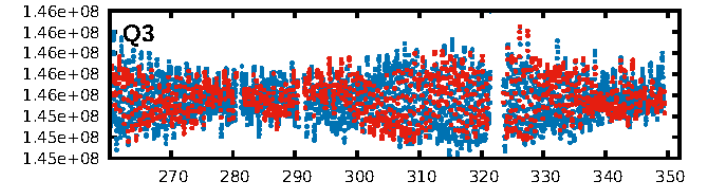
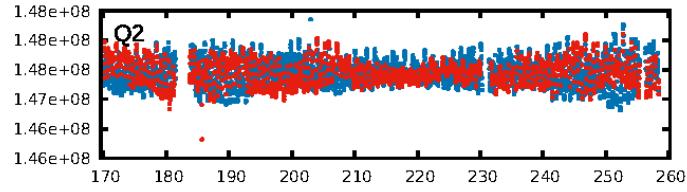
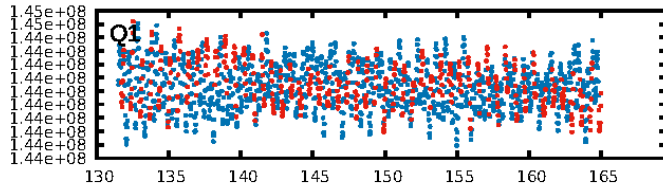
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.79e-30
RollingBand-fgt: 1.00 [1551/1551]
GhostDiagnostic-chr: 2.876
Centroid-sig: N/A
Centroid-so: 0.372 arcsec [1.02 σ]
OotOffset-rm: 0.076 arcsec [0.37 σ]
KicOffset-rm: 0.129 arcsec [0.51 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.07 [1/14]

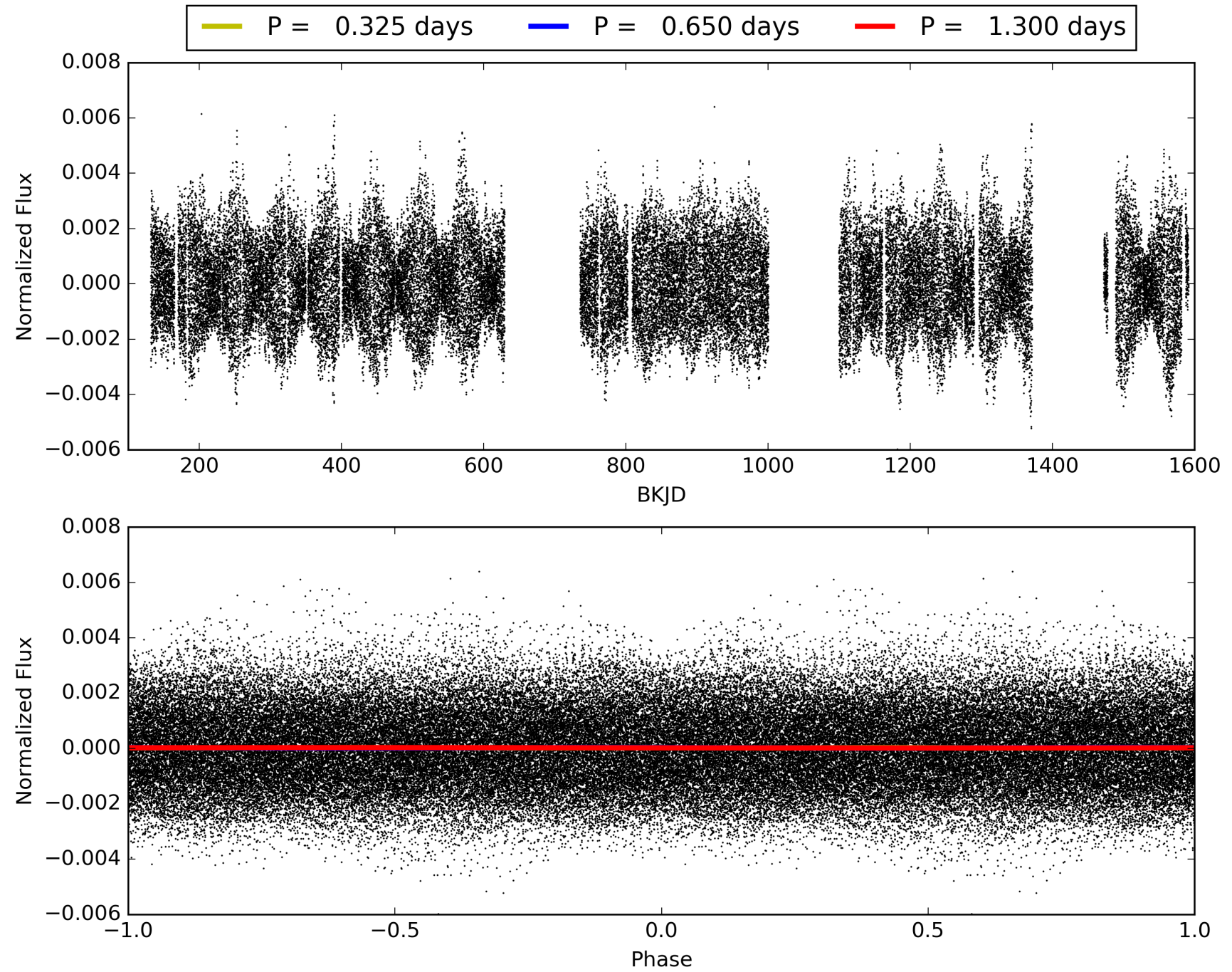
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:35:09 Z

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

TCE 010350769-02, PDC Light Curves

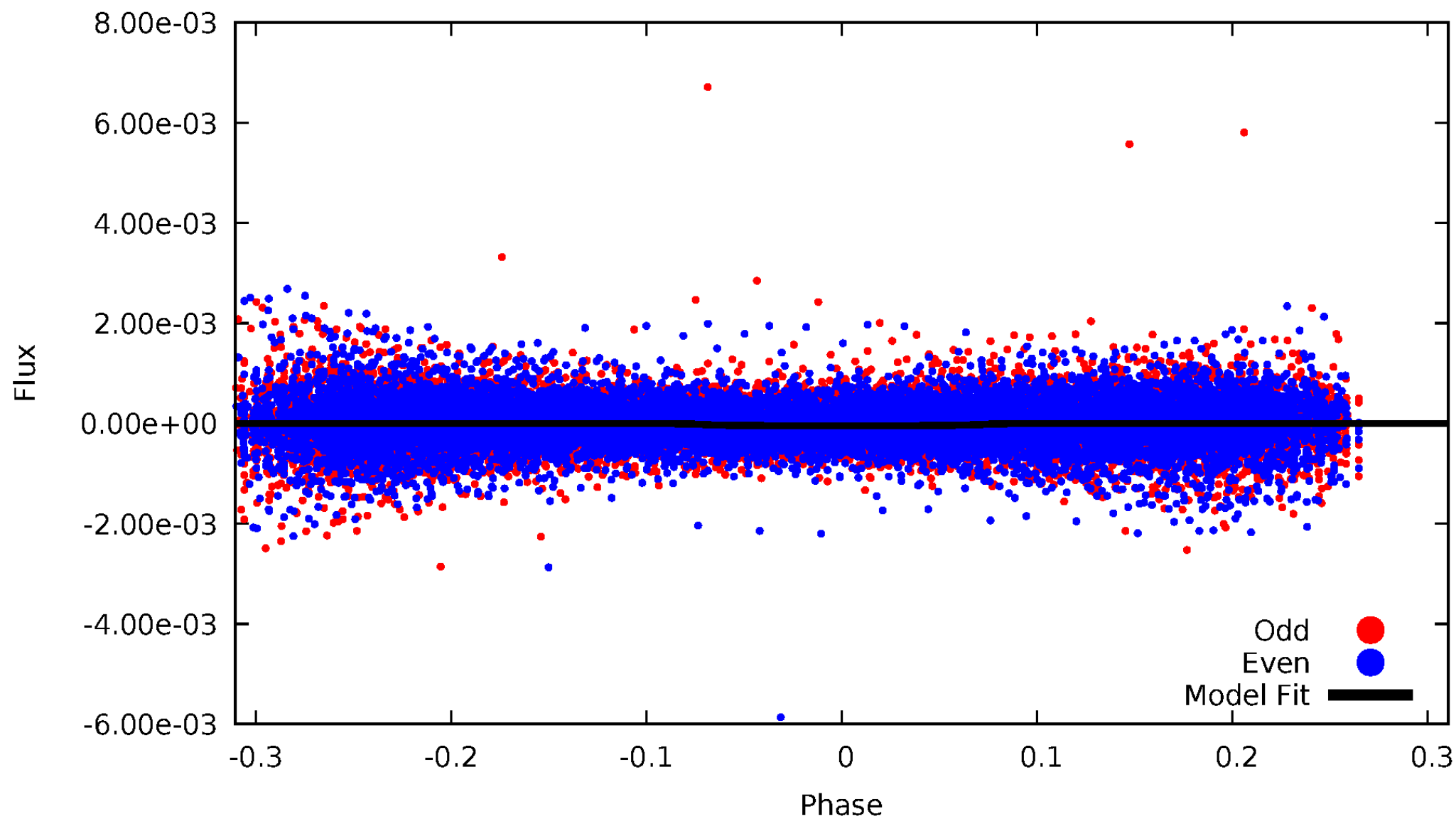


TCE 010350769-02



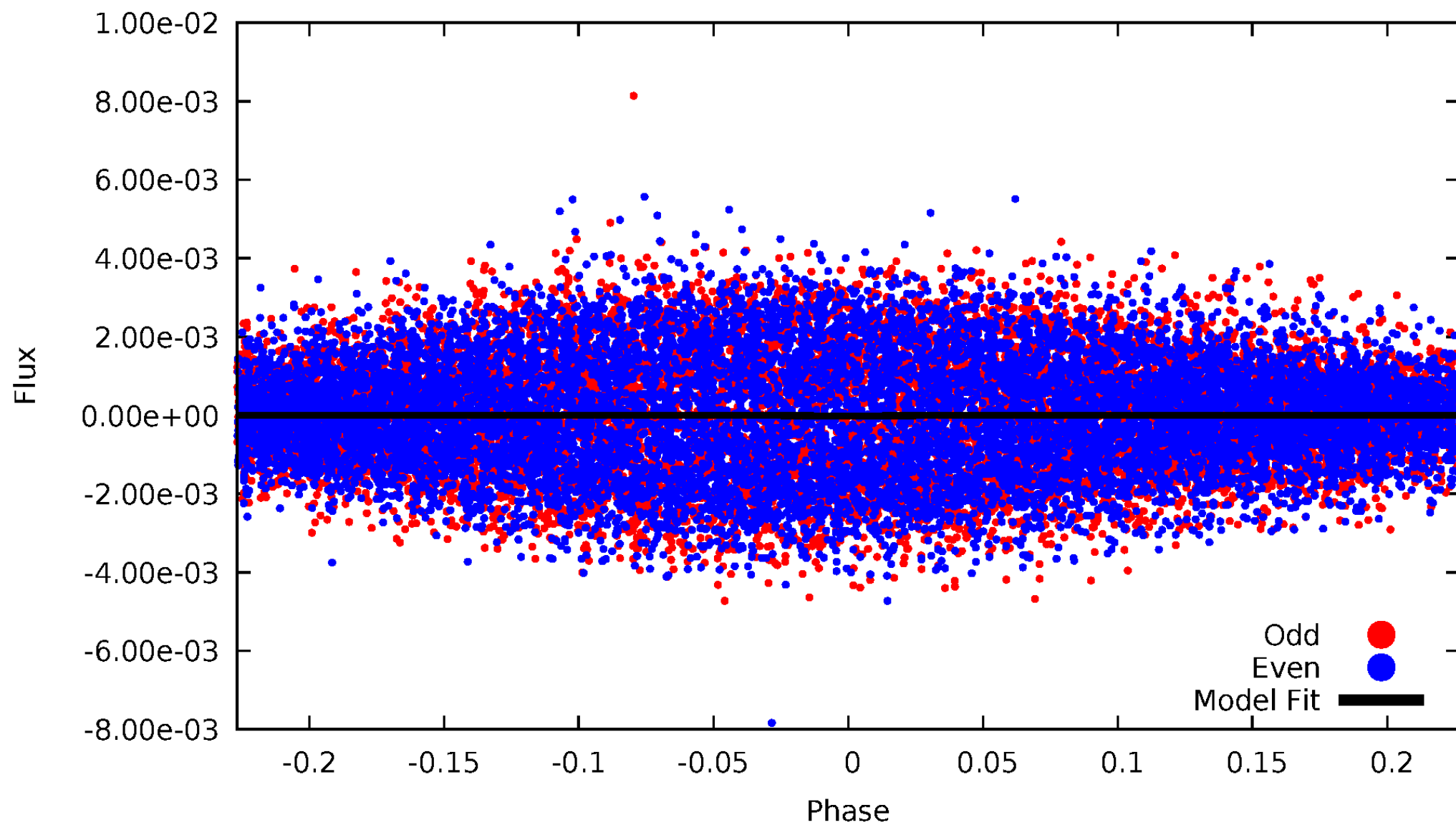
DV Odd/Even

TCE 010350769-02



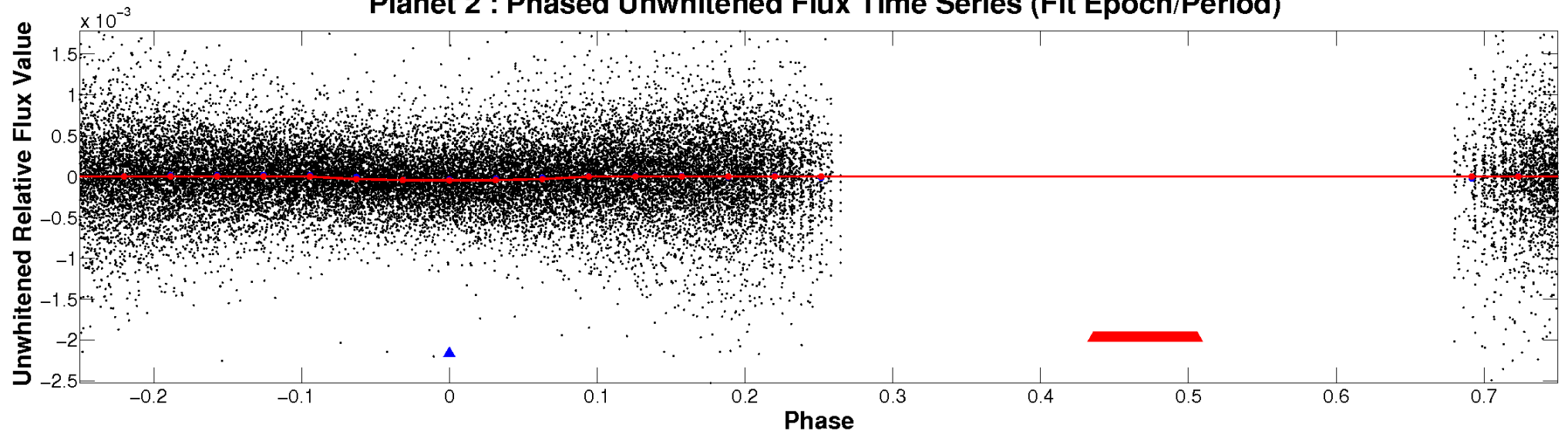
ALT Odd/Even

TCE 010350769-02

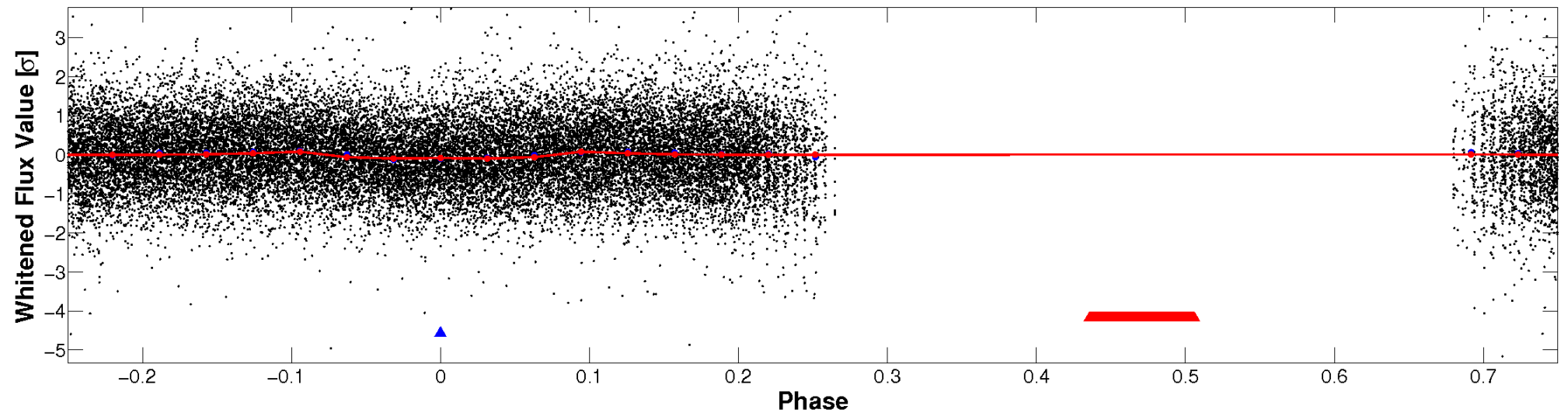


Non-Whitened Vs. Whitened Light Curve

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

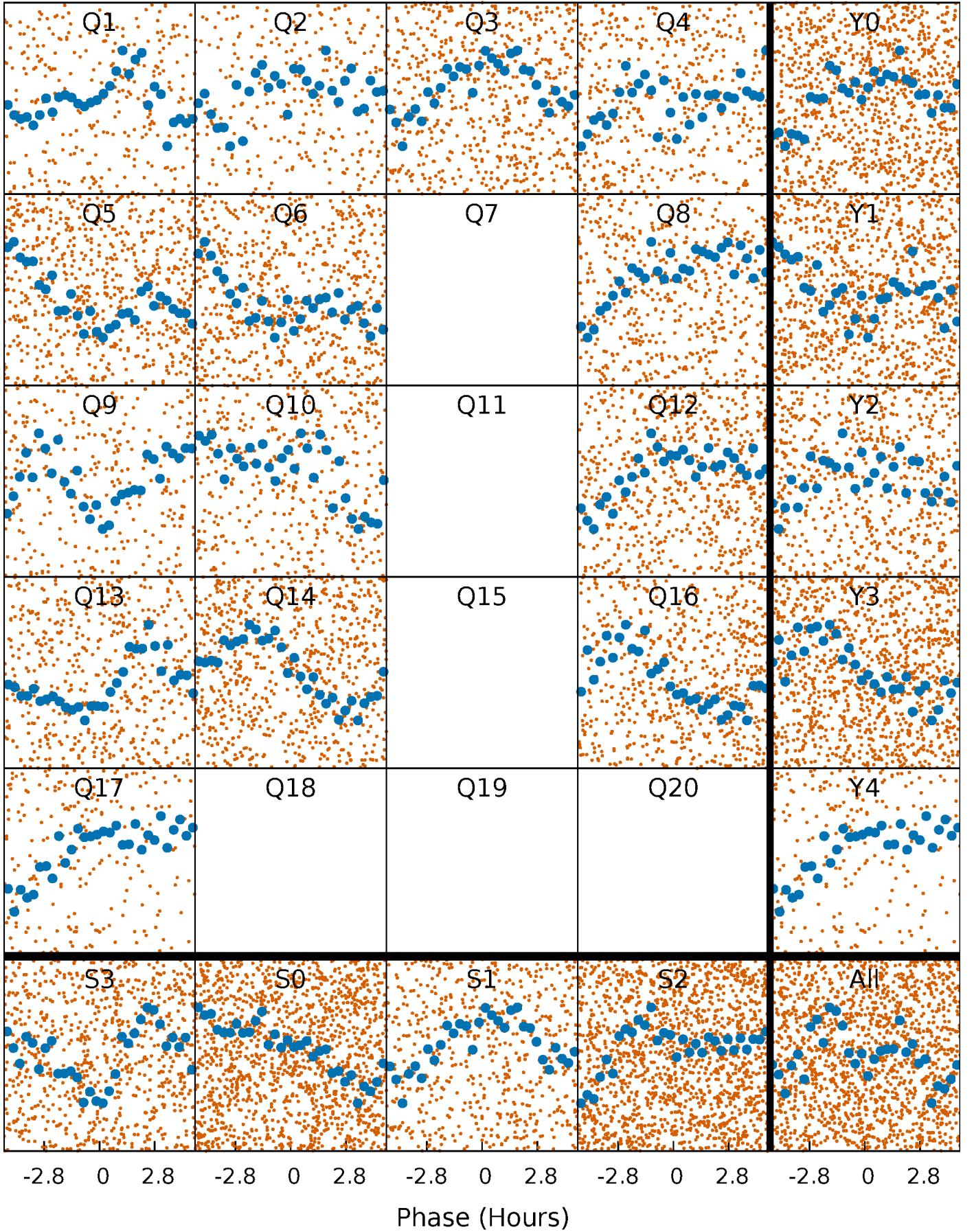


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



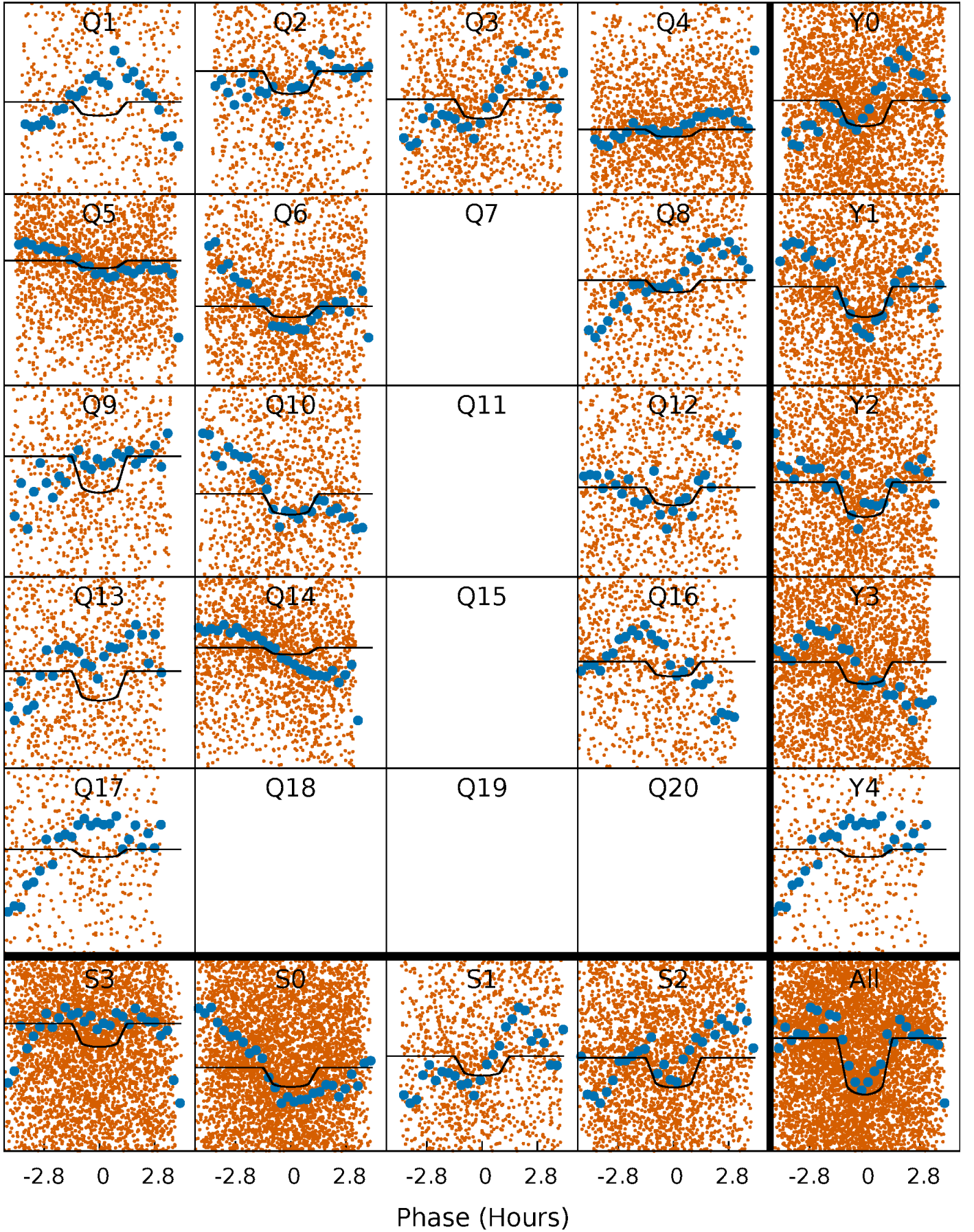
PDC Quarter-Phased Transit Curves

TCE 010350769-02 P= 0.649812 Days $T_0=131.789443$ (BKJD)



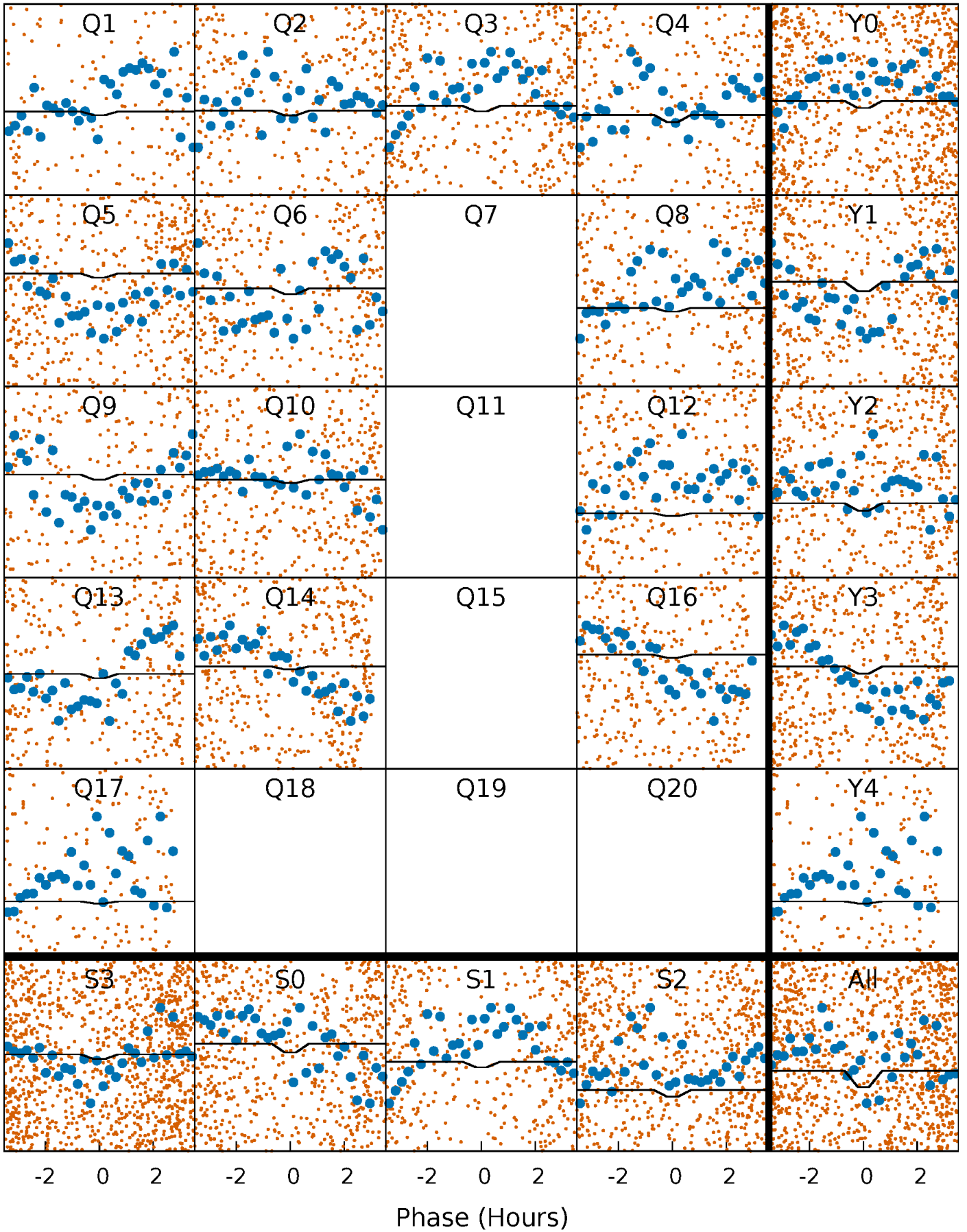
DV Quarter-Phased Transit Curves

TCE 010350769-02 P= 0.649812 Days $T_0=131.789443$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

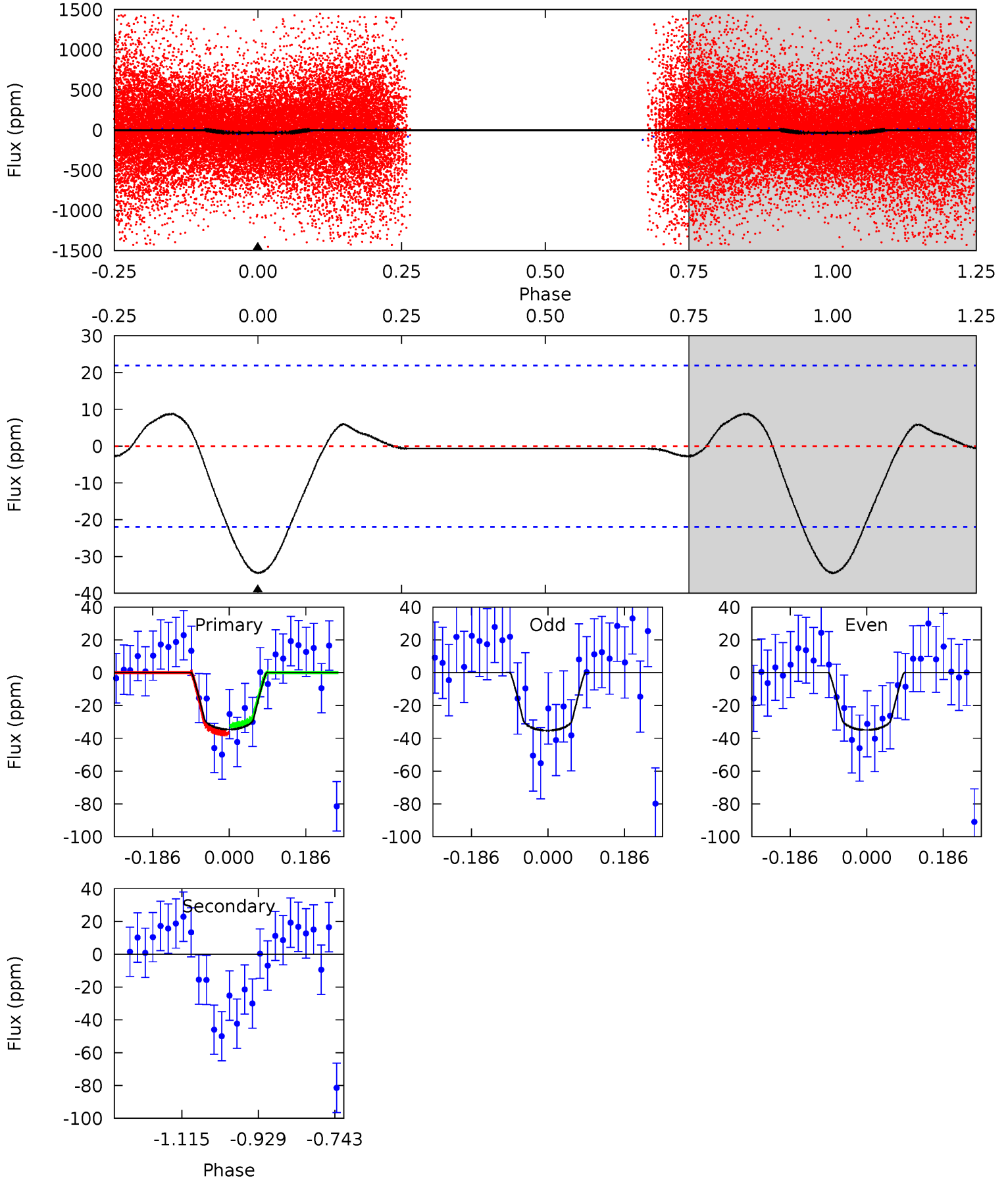
TCE 010350769-02 P= 0.649818 Days $T_0=131.787077$ (BKJD)



DV Model-Shift Uniqueness Test

010350769-02, P = 0.649812 Days, E = 131.139631 Days

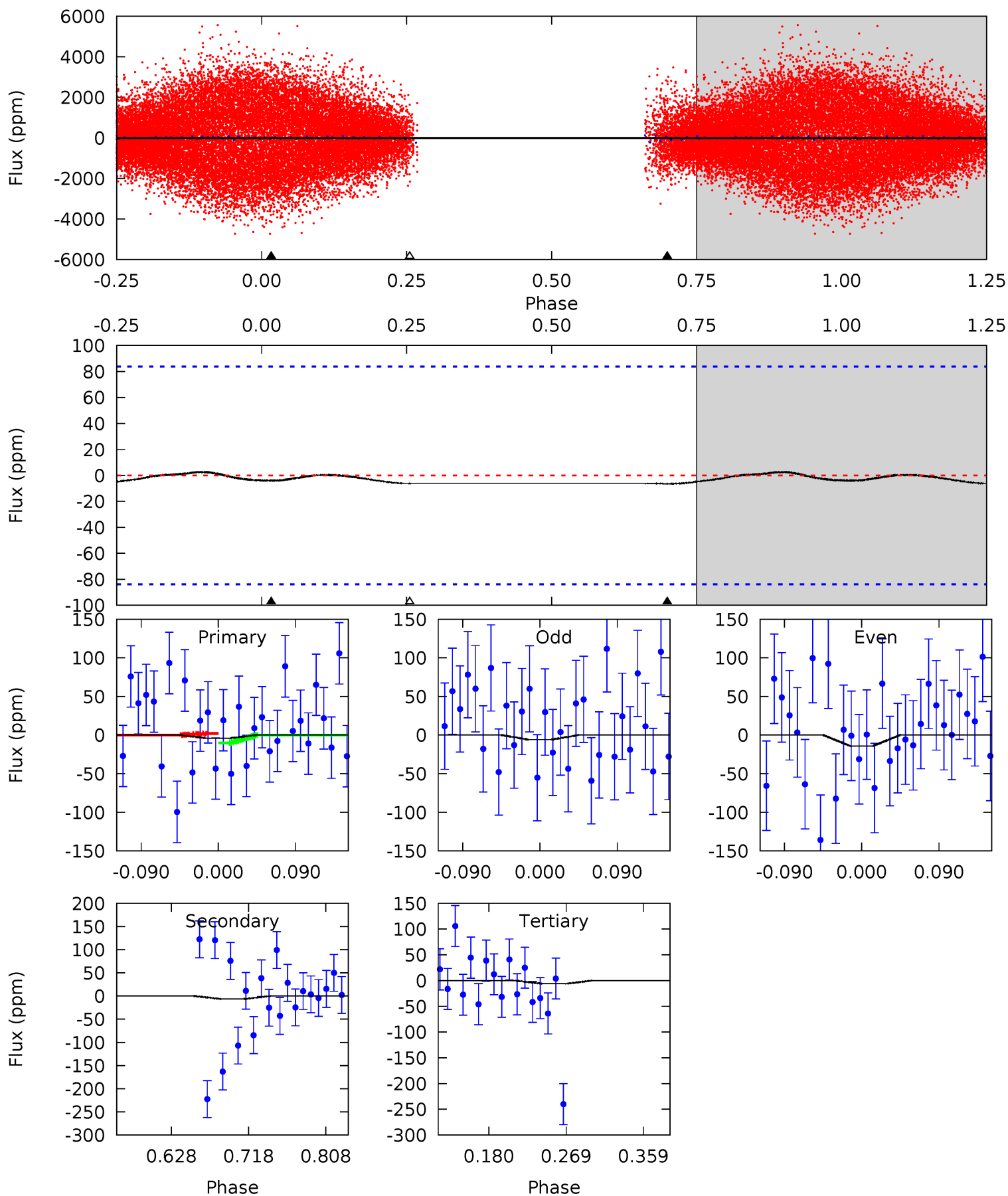
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.99	0	0	0	4.43	1.32	0.52	6.99	6.99	0	0	0.04	0.77	0.20	0.70



Alt Model-Shift Uniqueness Test

010350769-02, P = 0.649818 Days, E = 131.137259 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.22	0.35	0.34	0	4.59	1.70	0.13	-0.12	0.22	0.01	0.35	0.22	0.12	0.29	0.25



Stellar Parameters For KIC 010350769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7693^{+214}_{-322}	$3.998^{+0.198}_{-0.149}$	$0.070^{+0.200}_{-0.350}$	$2.249^{+0.498}_{-0.609}$	$1.837^{+0.145}_{-0.339}$	$0.227^{+0.251}_{-0.088}$
	+3%/-4%	+5%/-4%	+286%/-500%	+22%/-27%	+8%/-18%	+111%/-39%
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 010350769-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 5	$1.74^{+0.47}_{-0.43}$	5256^{+380}_{-374}	-4475^{+1759}_{-666}	$-0.003^{+0.291}_{-0.307}$
Alt.	-6 ± 18	$0.98^{+0.39}_{-0.40}$	5263^{+396}_{-391}	4603^{+4394}_{-12001}	$0.663^{+4.938}_{-3.019}$

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 $A_{obs} \gg 1.0$

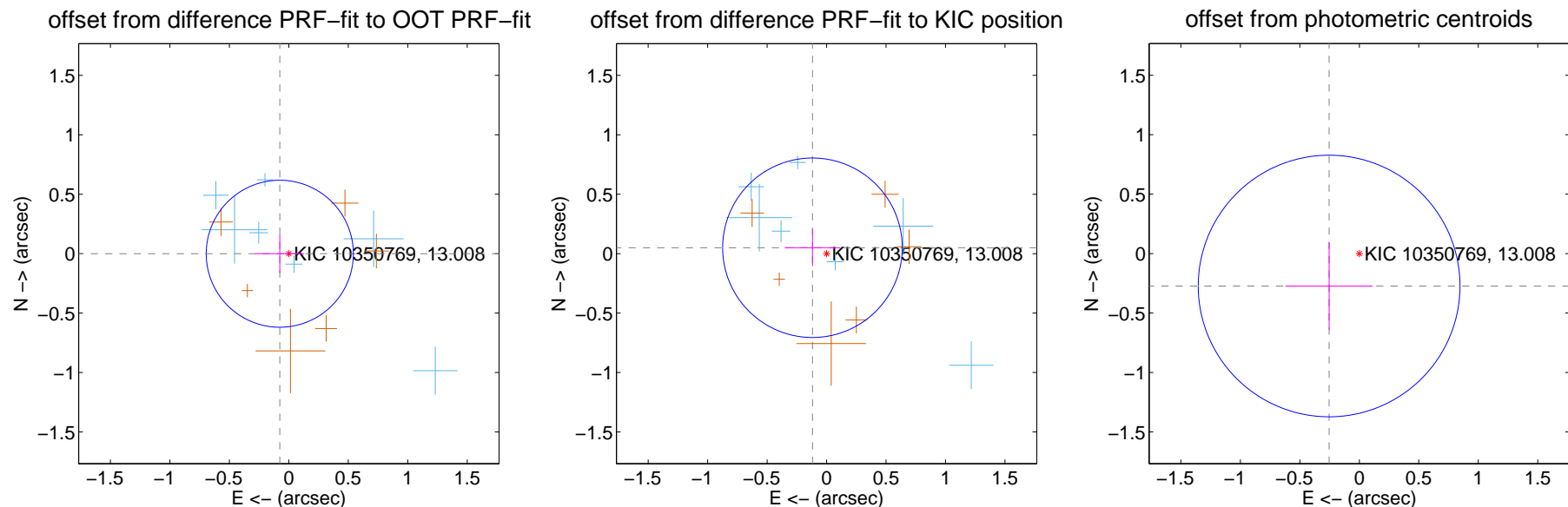
DV Centroid Data

Supplemental centroid analysis for 010350769-02. Kepler magnitude: 13.01. Transit SNR 9.27

There are 7 quarters with good PRF difference image offsets

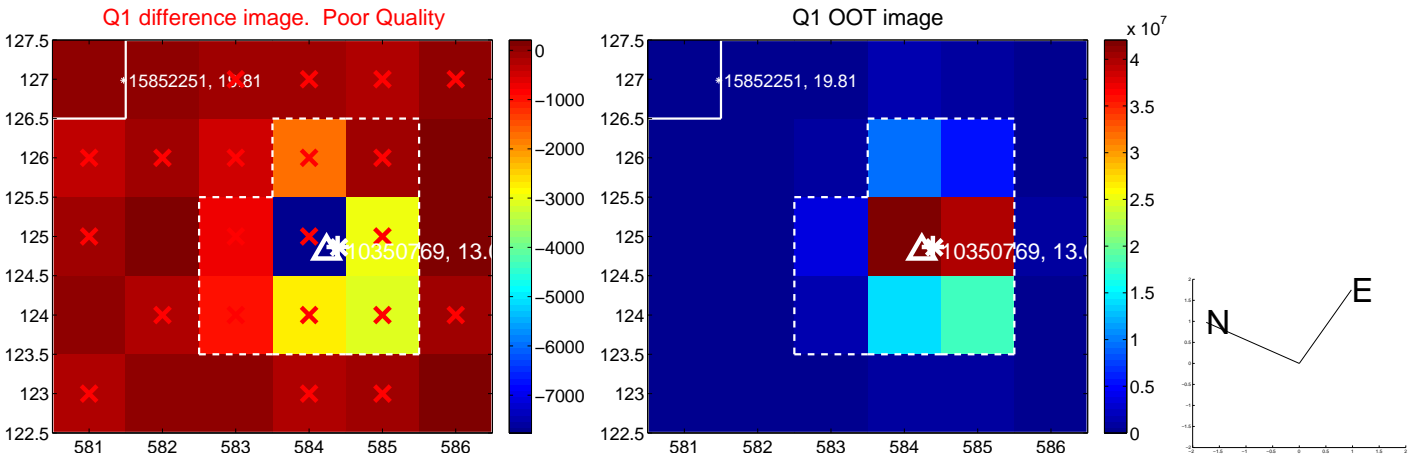
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.076 ± 0.206	0.37	0.076 ± 0.207	-0.001 ± 0.162
PRF-fit source offset from KIC position	0.129 ± 0.252	0.51	0.119 ± 0.234	0.050 ± 0.155
photometric centroid source offset	0.37 ± 0.37	1.02	0.25 ± 0.37	-0.27 ± 0.37

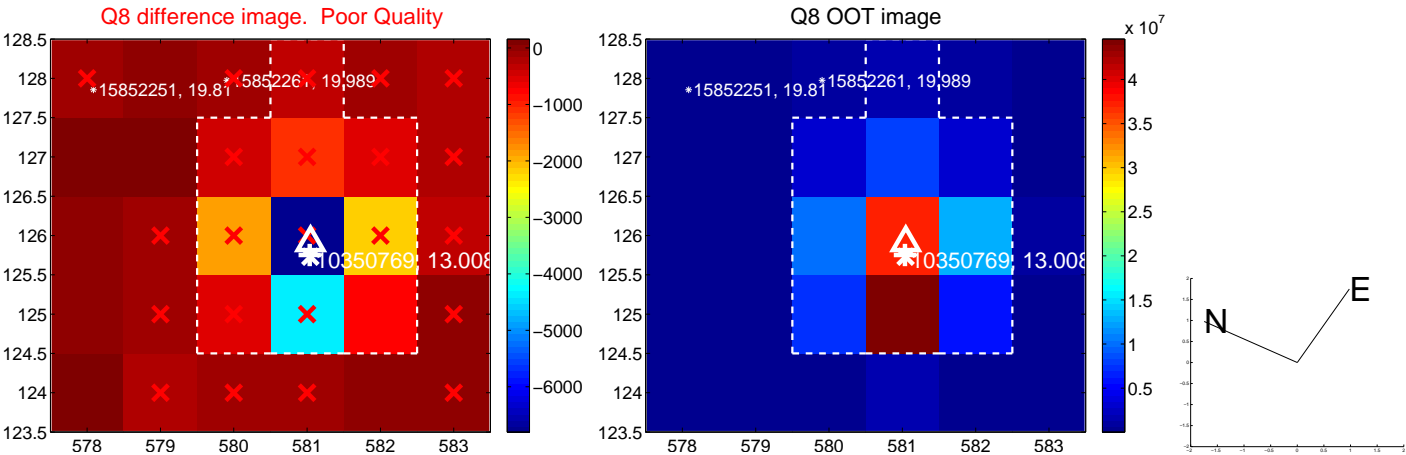
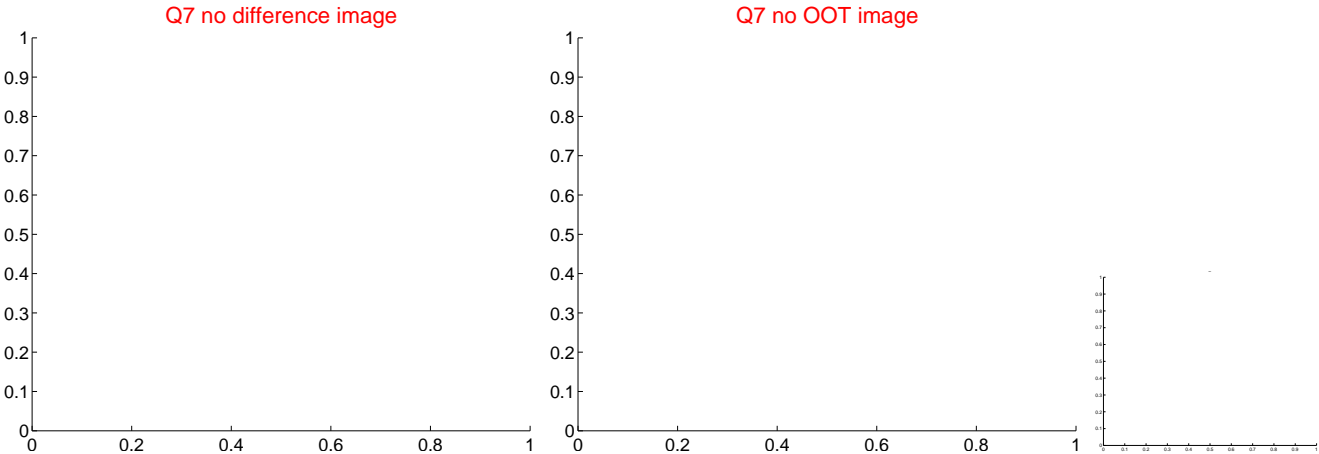
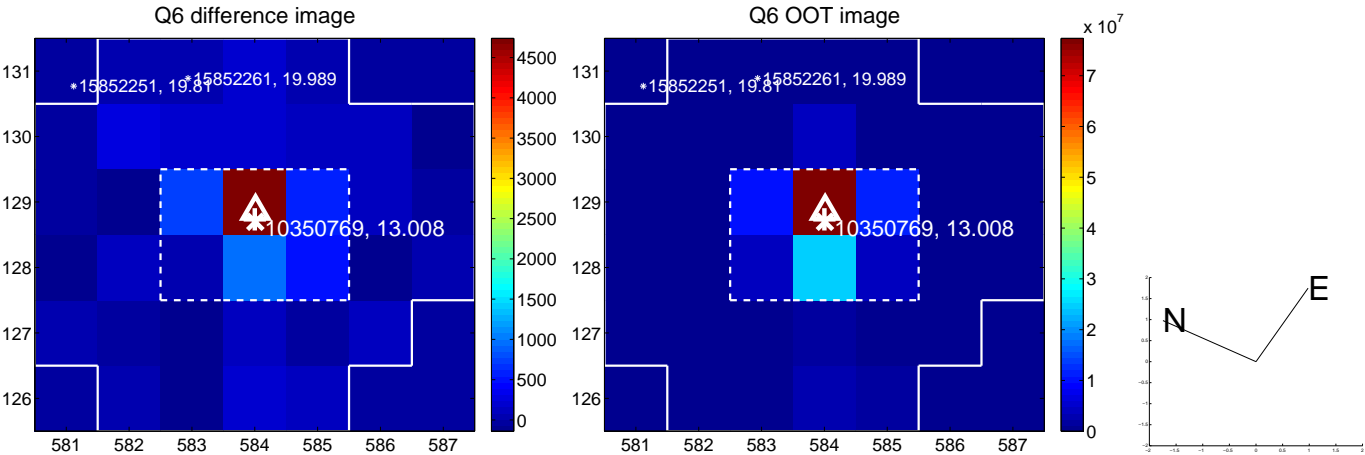
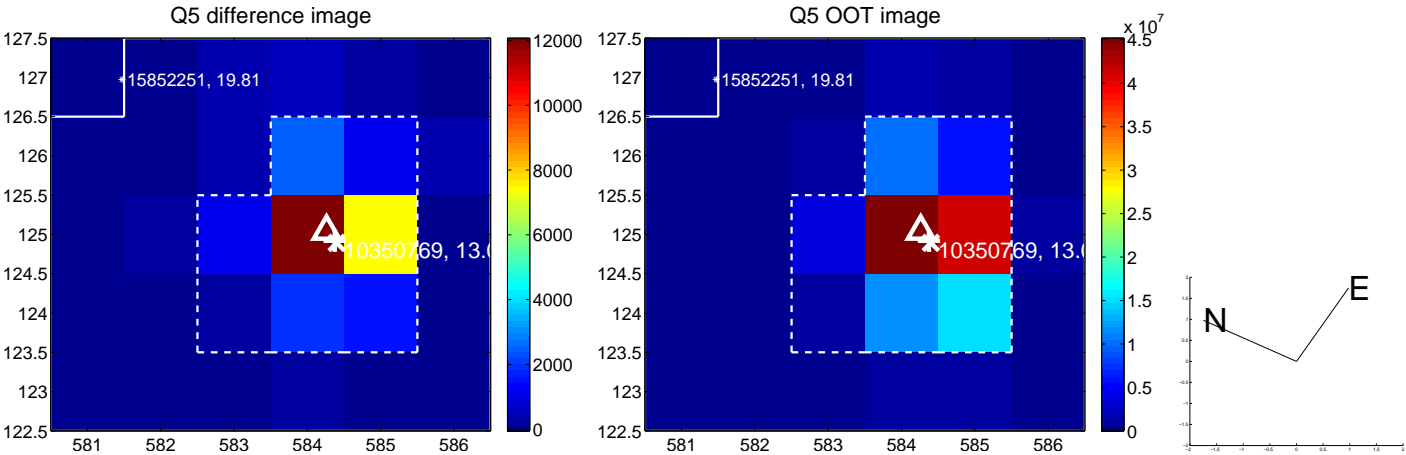


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

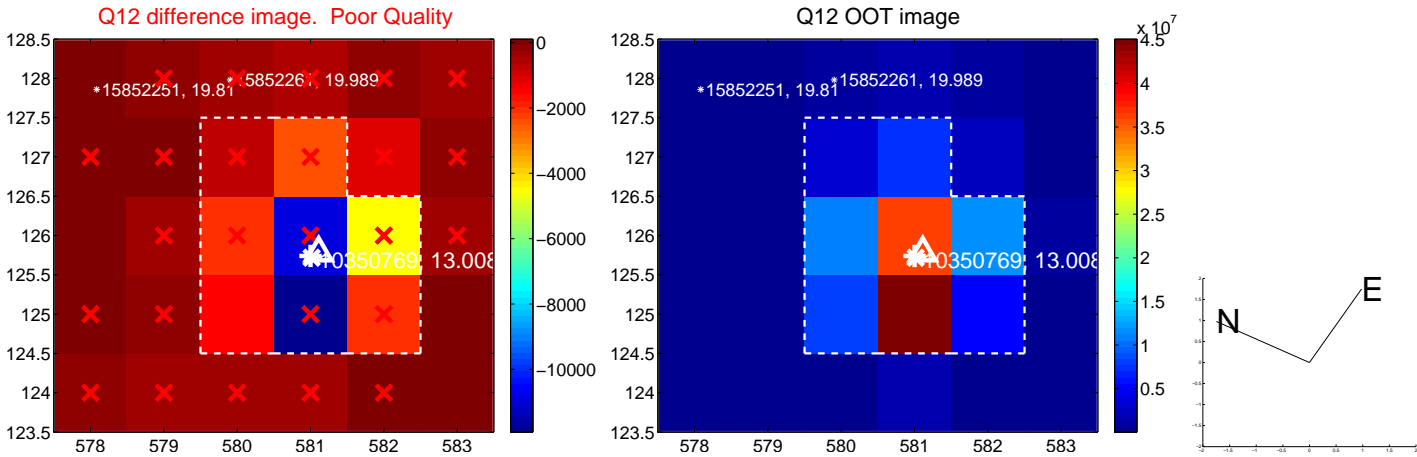
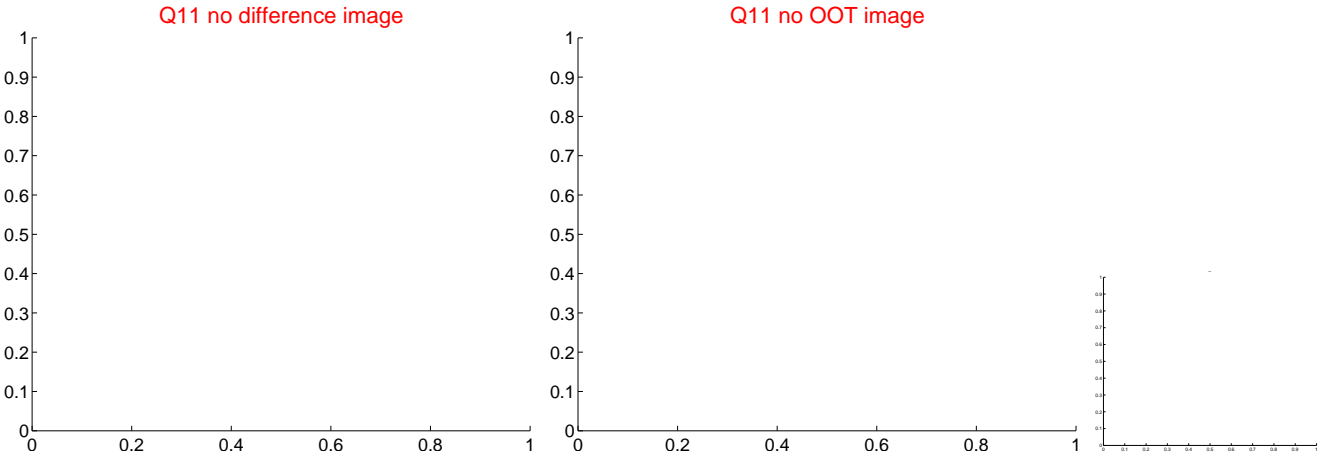
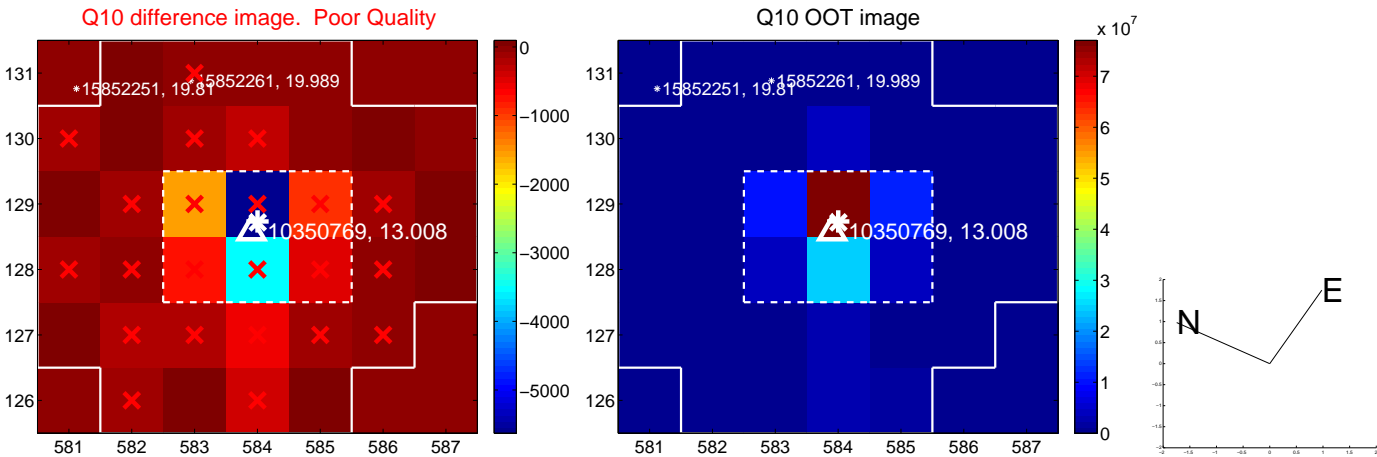
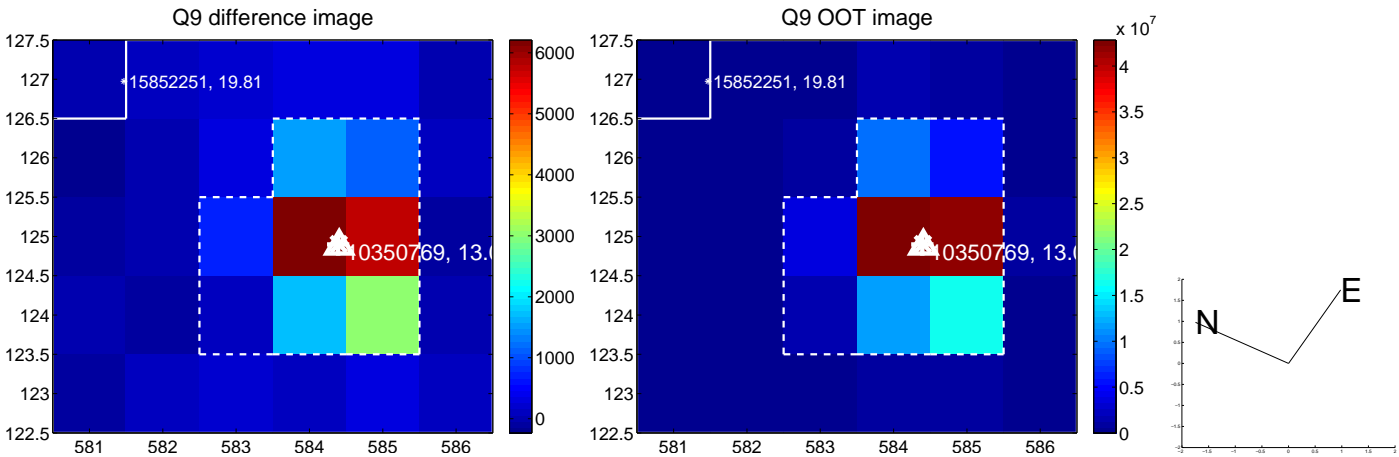
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



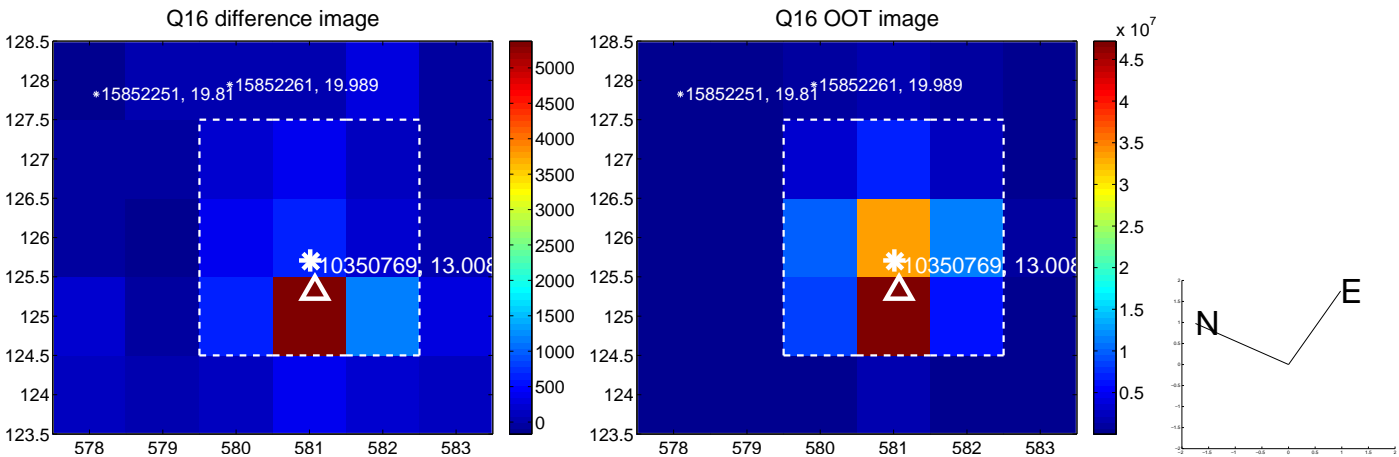
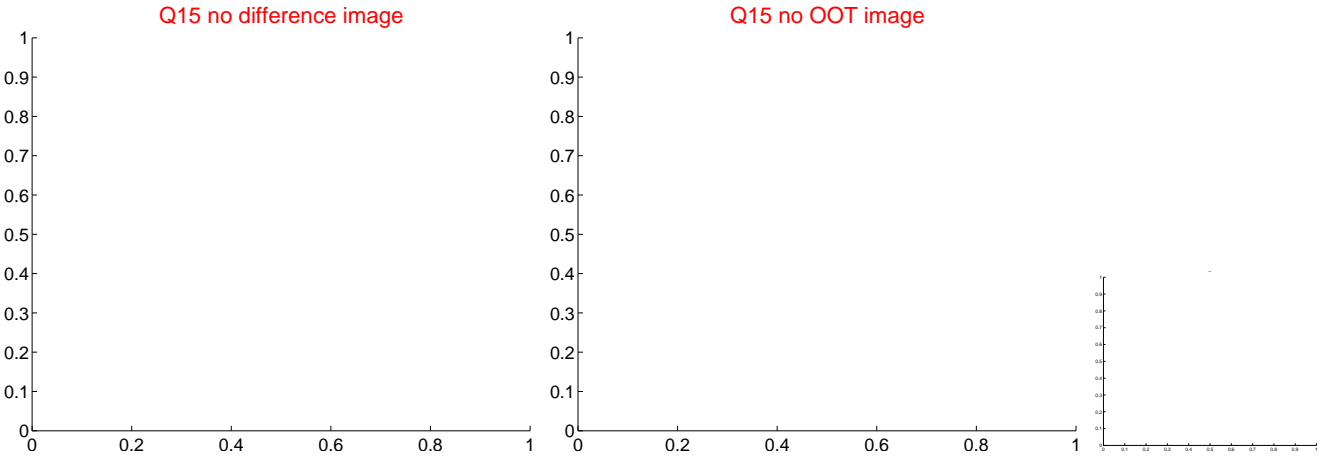
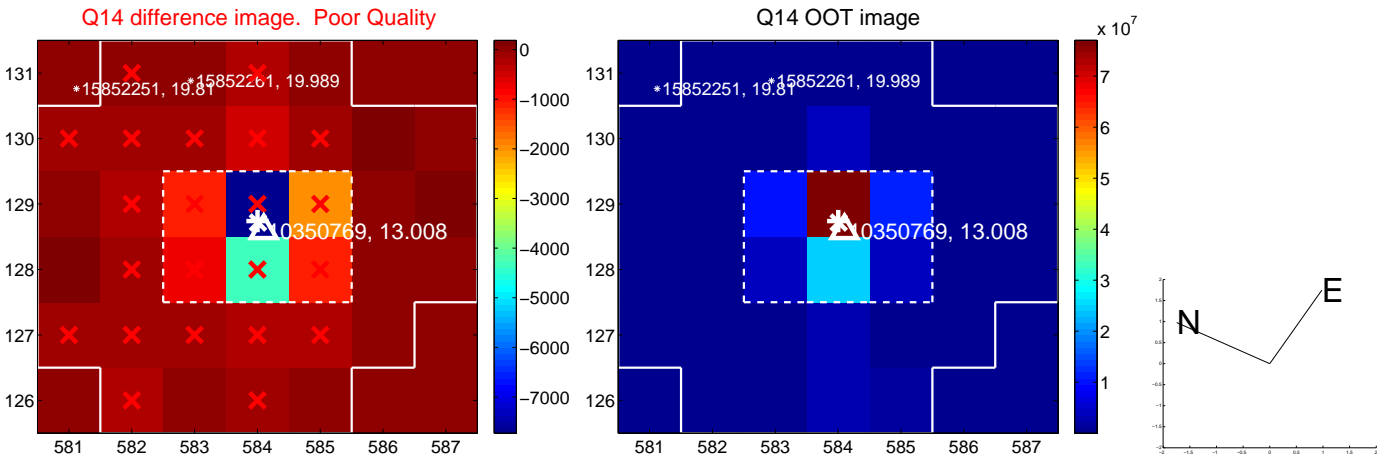
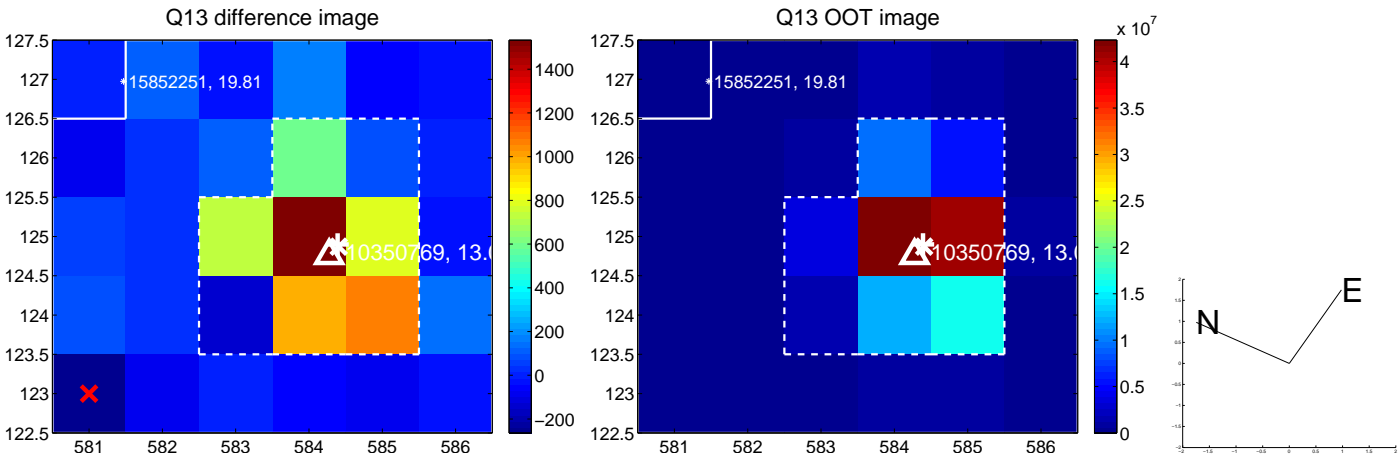
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



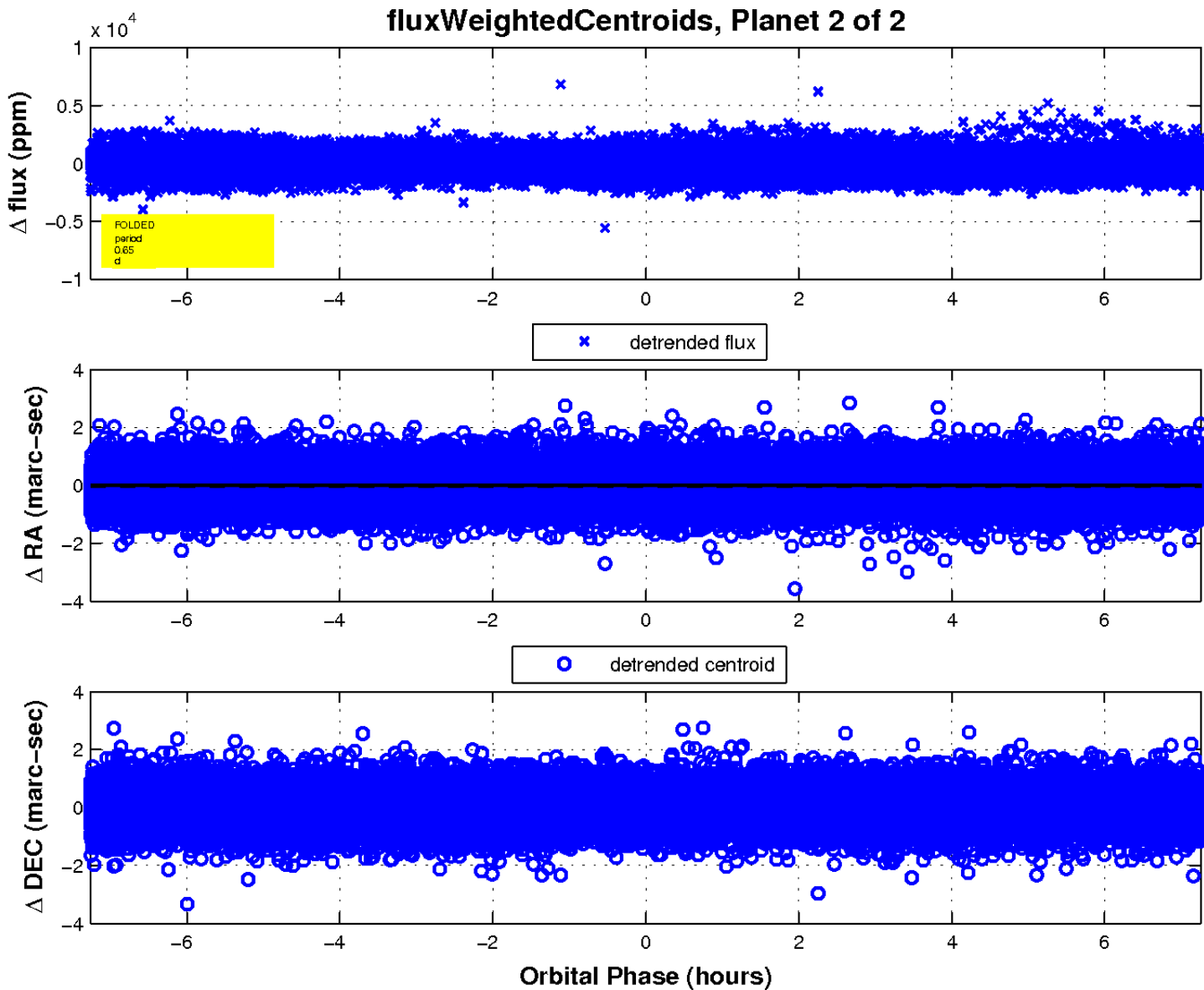
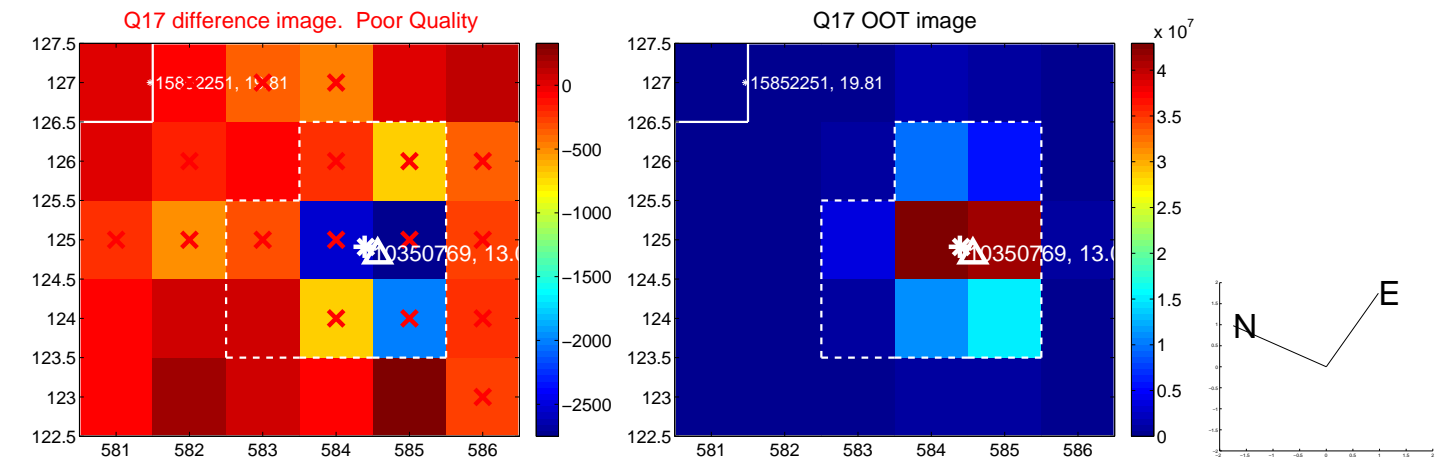
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

