

KIC 007035179

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})
007035179-01	OBS	No	1.528832	131.962738	42.8	7.411	8.1	7.3	2.29	7732	1.60	17382.16
007035179-02	OBS	No	2.088549	132.192690	164.9	19.659	13.4	16.7	2.29	7732	4.93	11467.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035179-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007035179-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS

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

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

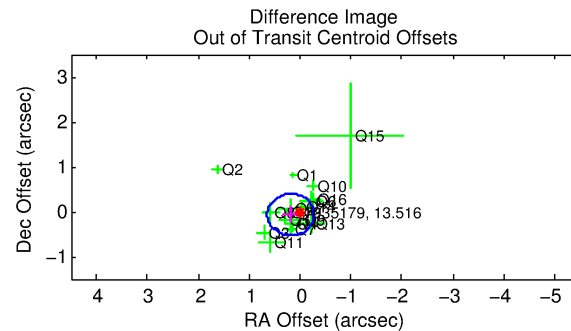
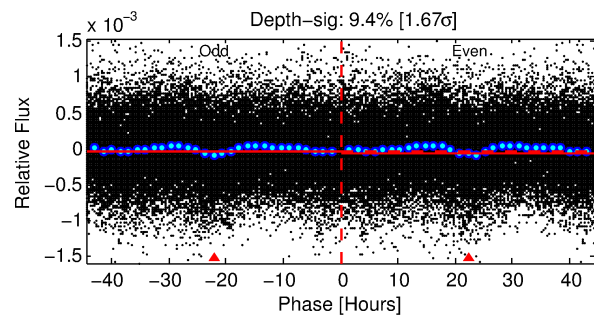
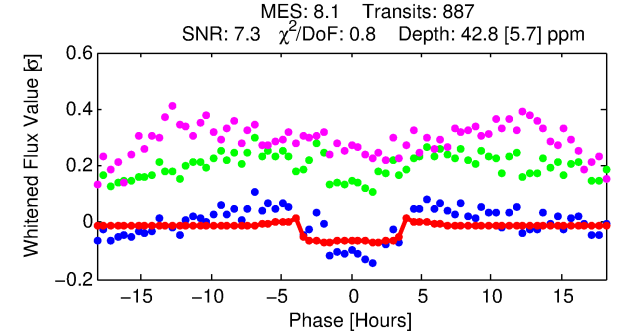
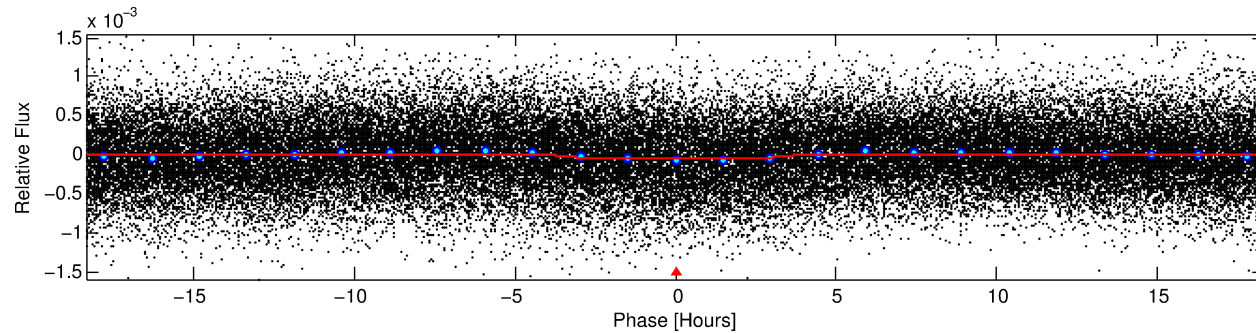
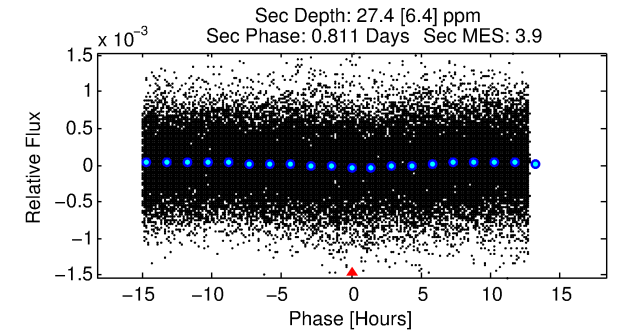
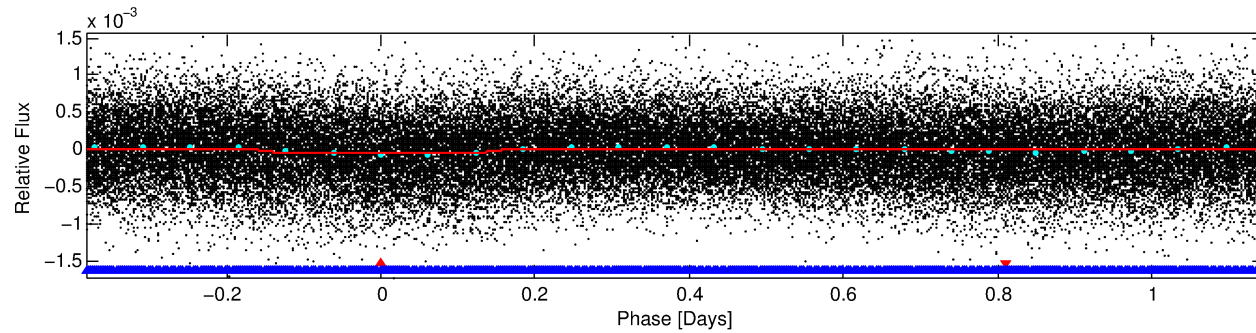
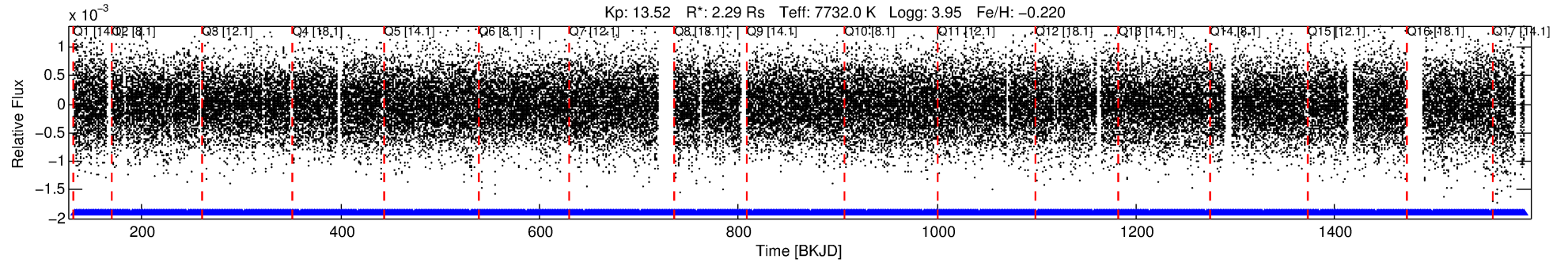
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007035179-01

No Significant Match Found

DV One-Page Summary

KIC: 7035179 Candidate: 1 of 2 Period: 1.529 d



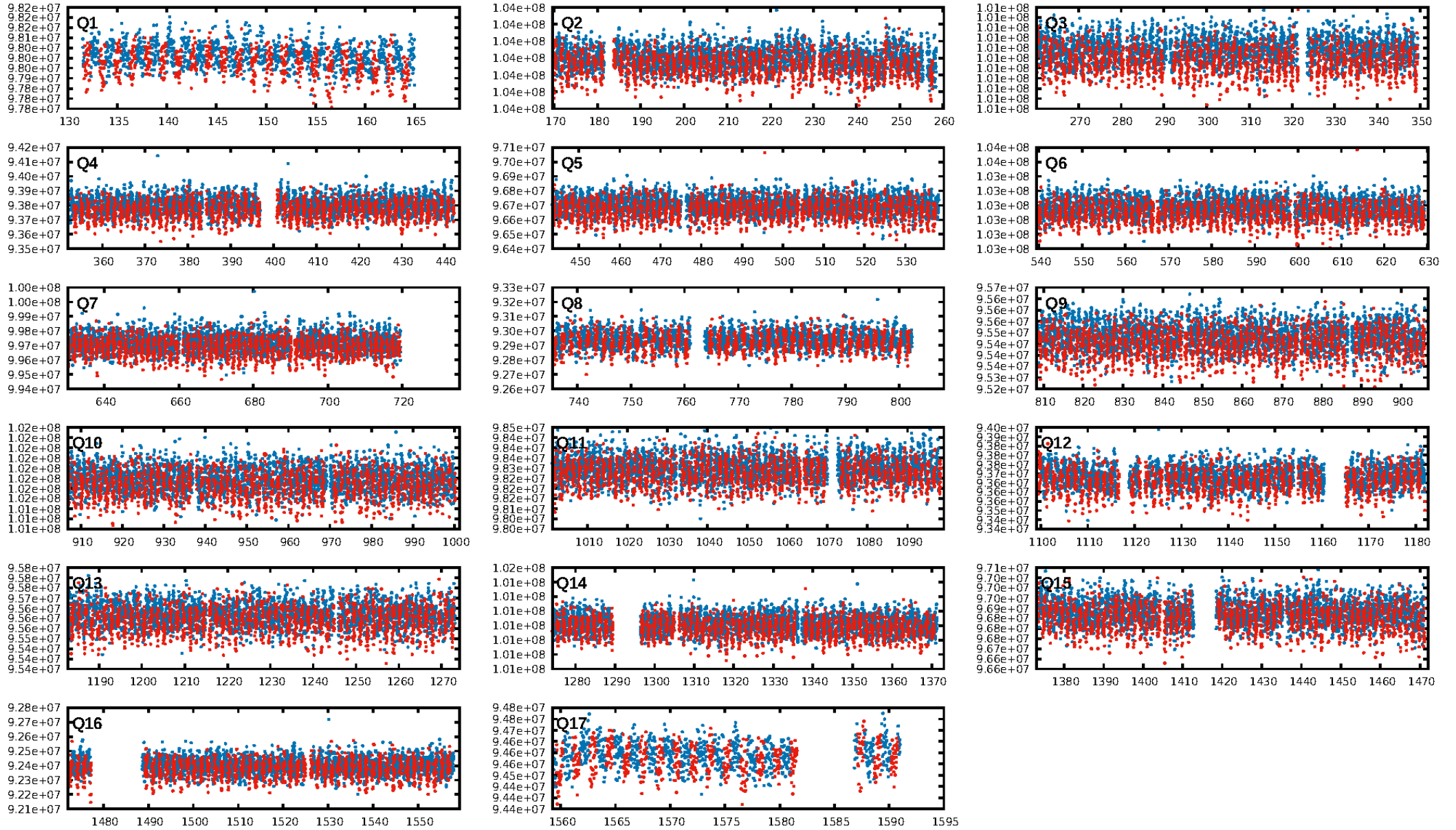
DV Fit Results:

Period = 1.52883 [0.00002] d
Epoch = 131.9627 [0.0055] BKJD
Rp/R* = 0.0064 [0.0031]
a/R* = 1.42 [1.84]
b = 0.69 [2.01]
Seff = 17382.16 [8903.86]
Teff = 2928 [375] K
Rp = 1.60 [0.95] Re
a = 0.0312 [0.0097] AU
Ag = 5.72 [6.38] [0.74σ]
Teffp = 7002 [1780] K [2.24σ]

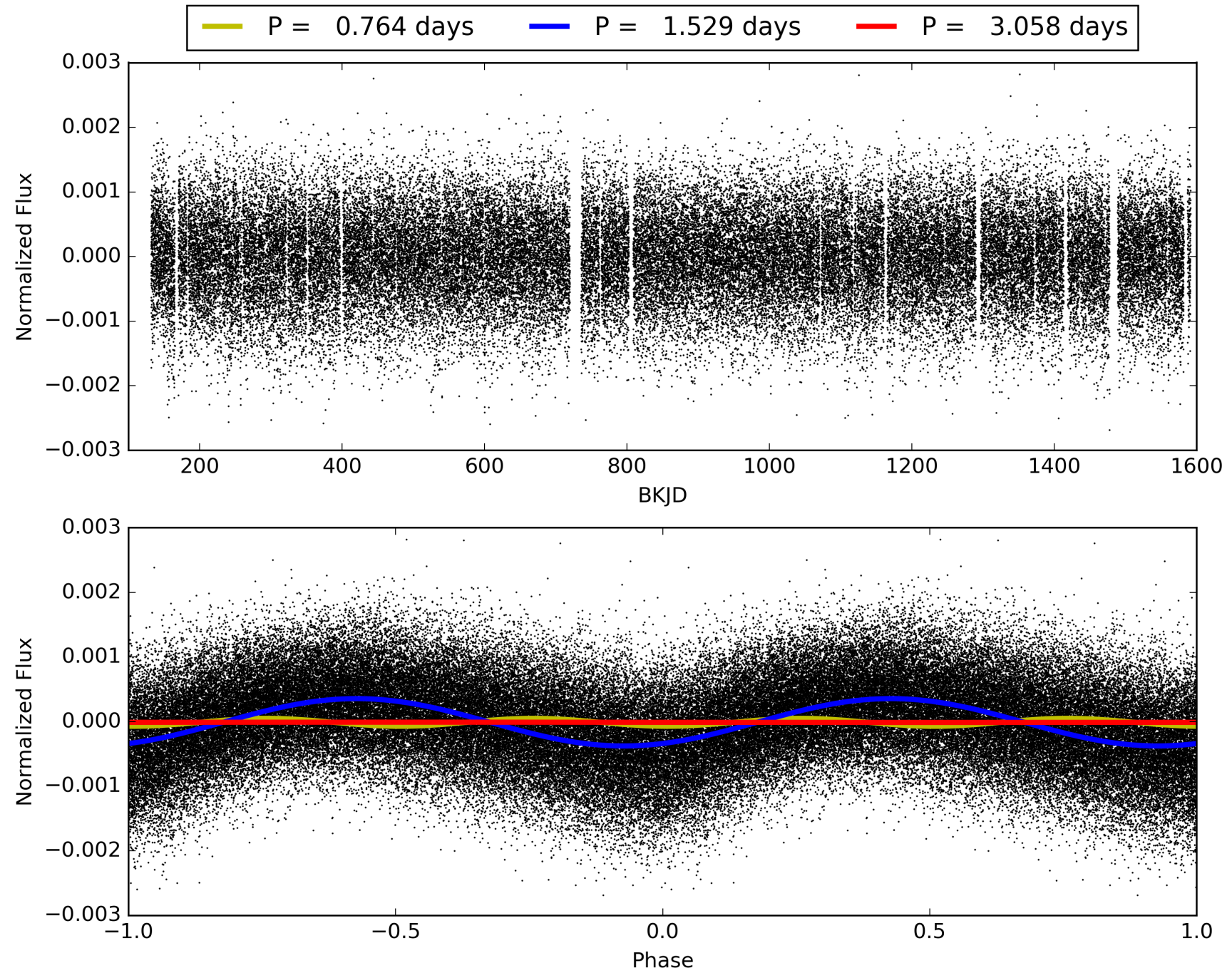
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 47.7% [0.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [847/847]
GhostDiagnostic-chr: 1.499
Centroid-sig: 0.0%
Centroid-so: 1.456 arcsec [3.28σ]
OotOffset-rm: 0.198 arcsec [1.29σ]
KicOffset-rm: 0.060 arcsec [0.48σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.88 [15/17]

TCE 007035179-01, PDC Light Curves

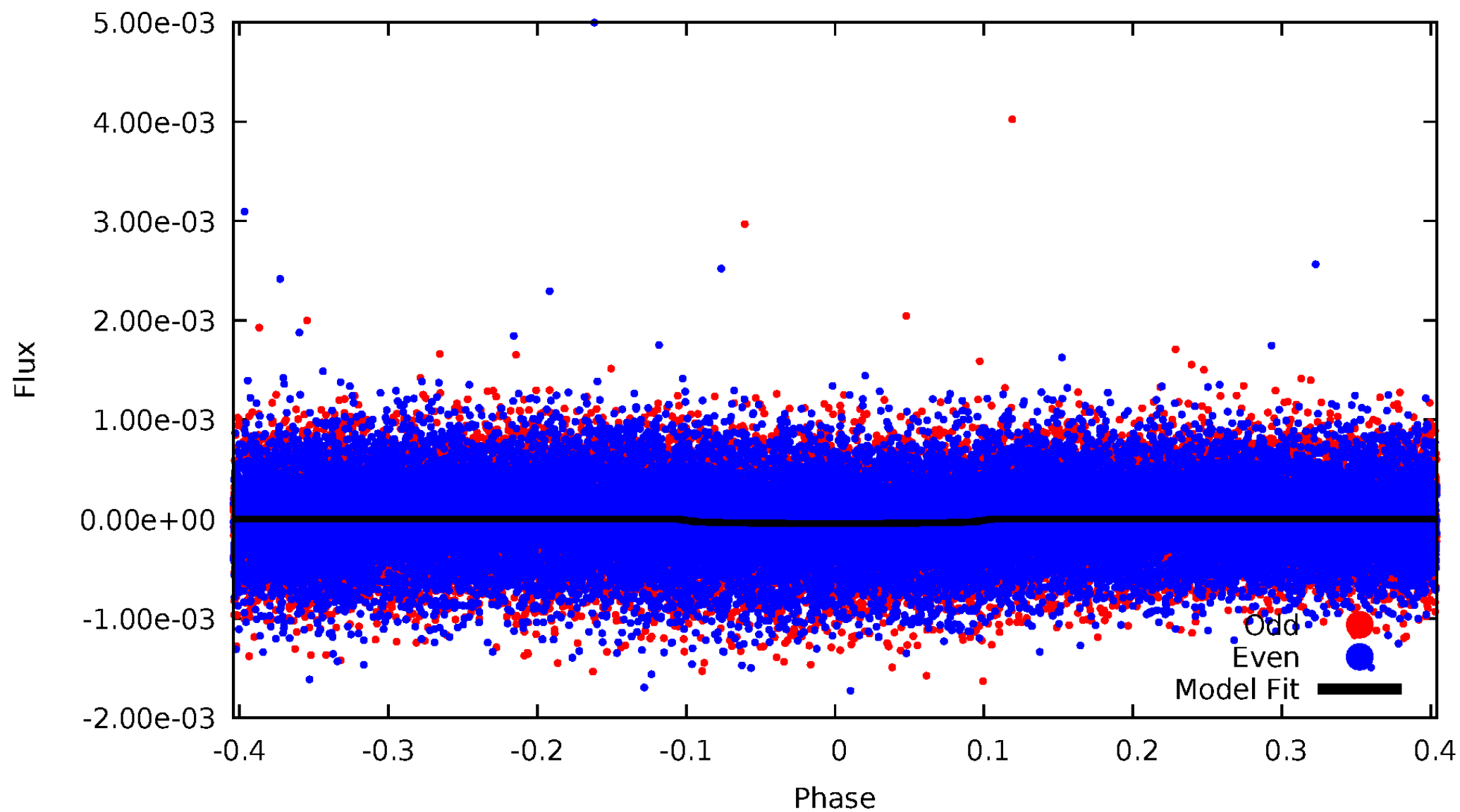


TCE 007035179-01



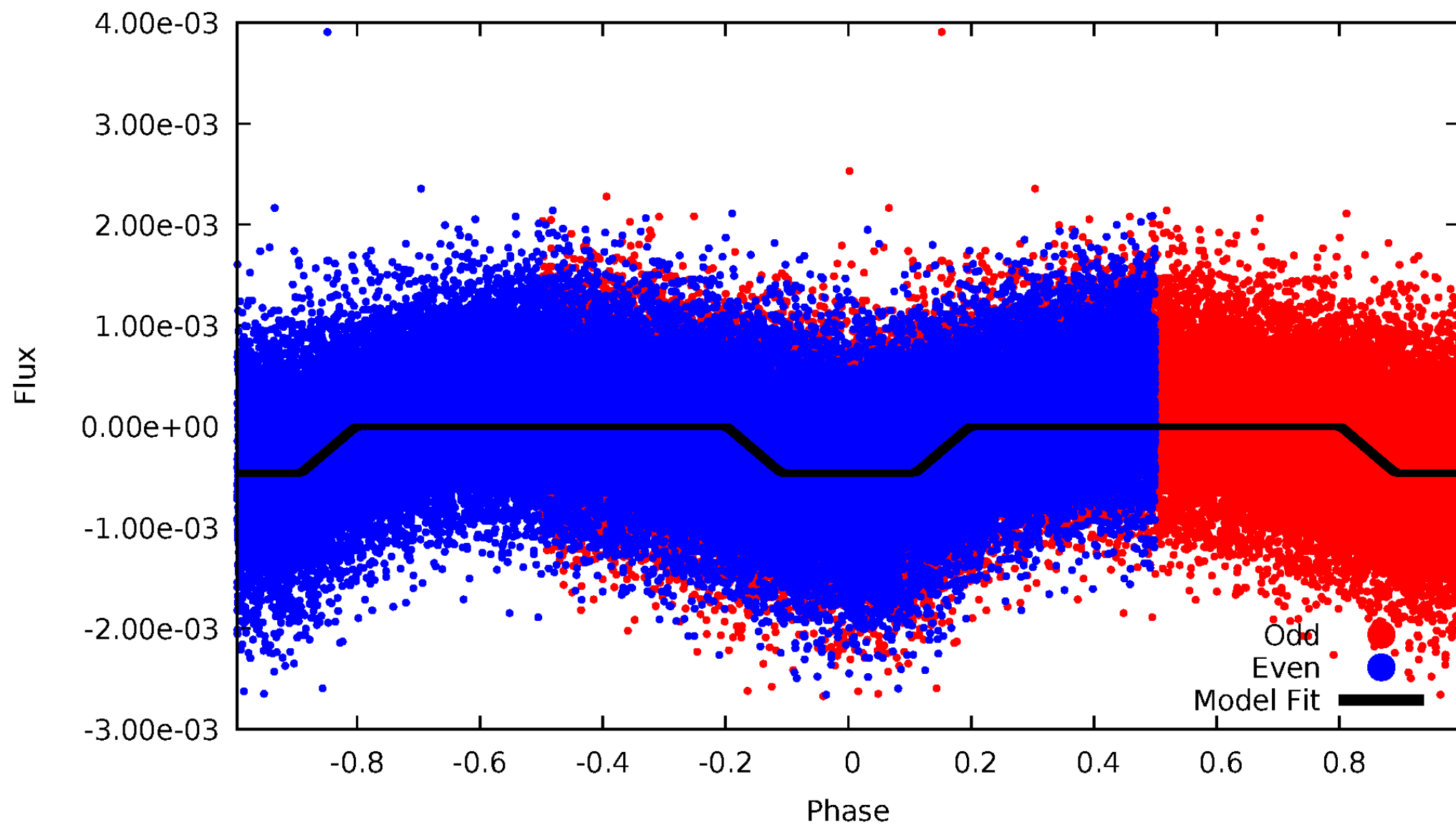
DV Odd/Even

TCE 007035179-01

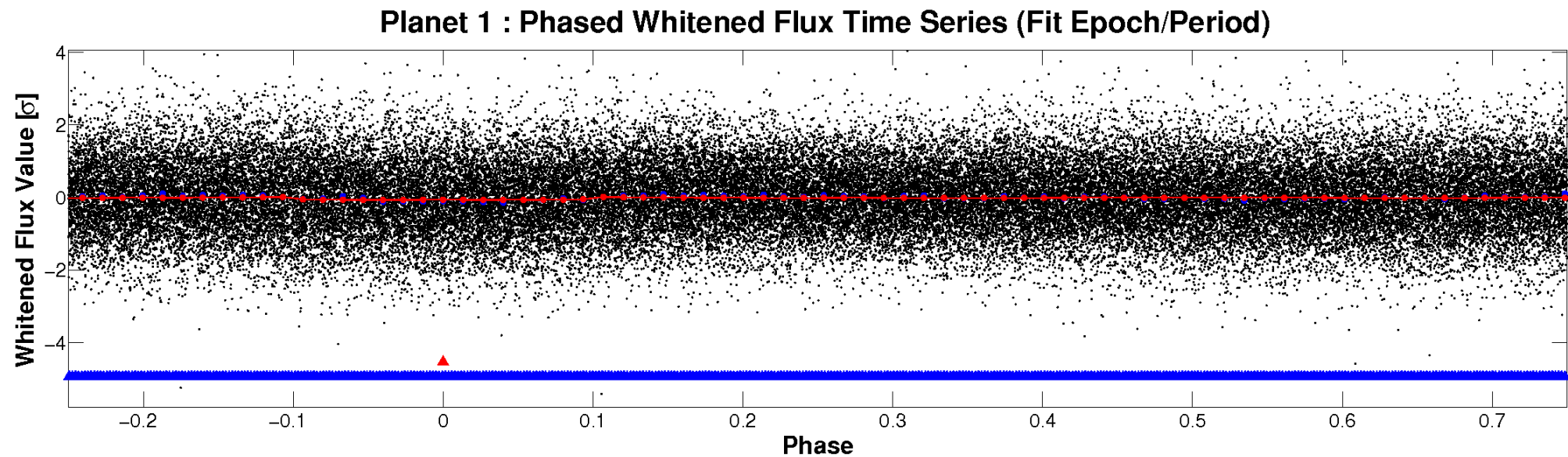
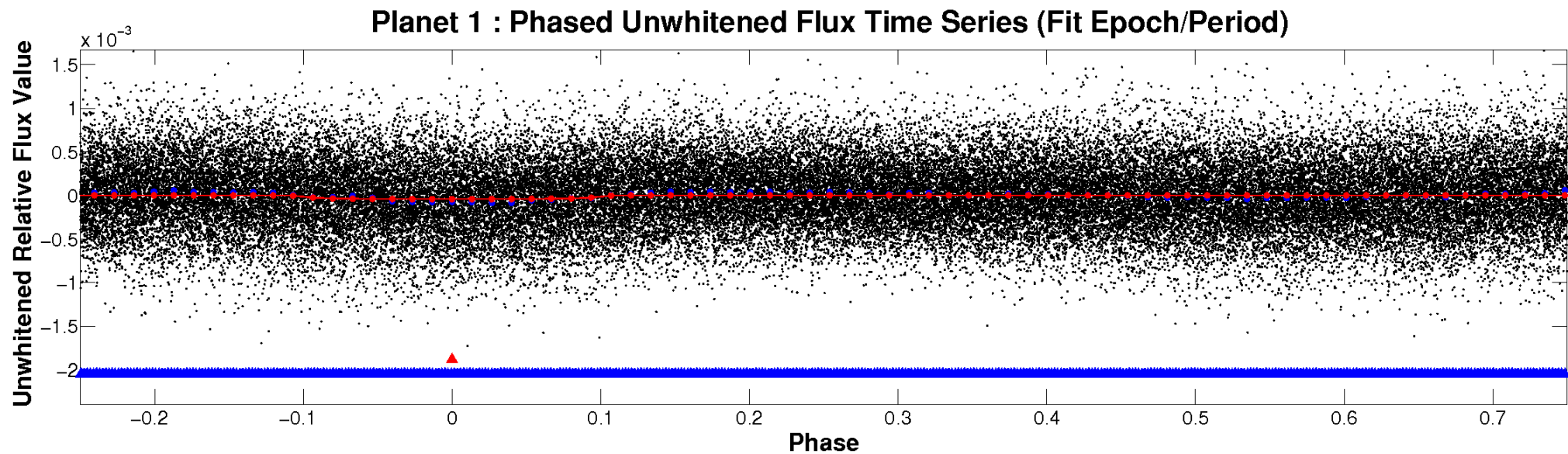


ALT Odd/Even

TCE 007035179-01

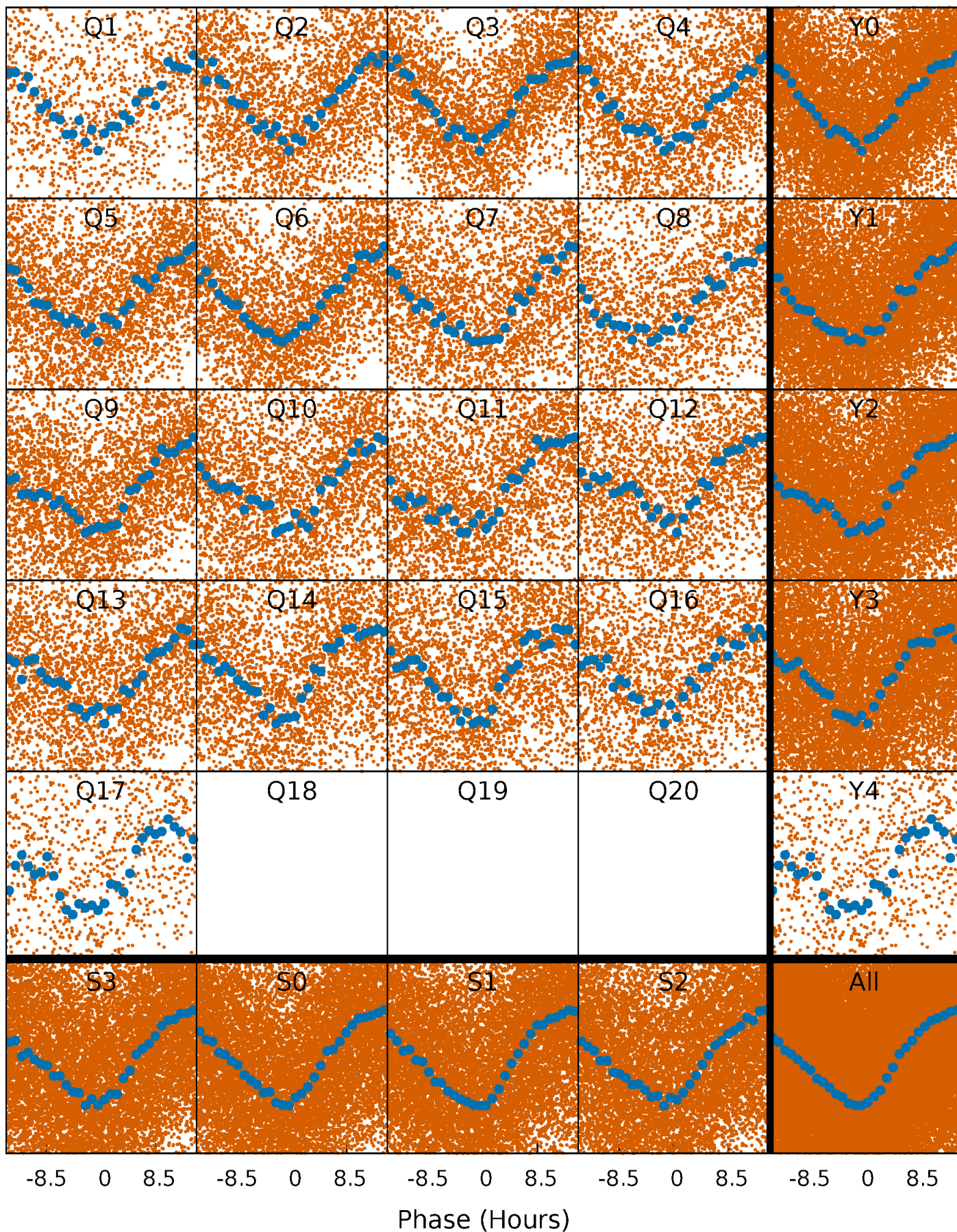


Non-Whitened Vs. Whitened Light Curve



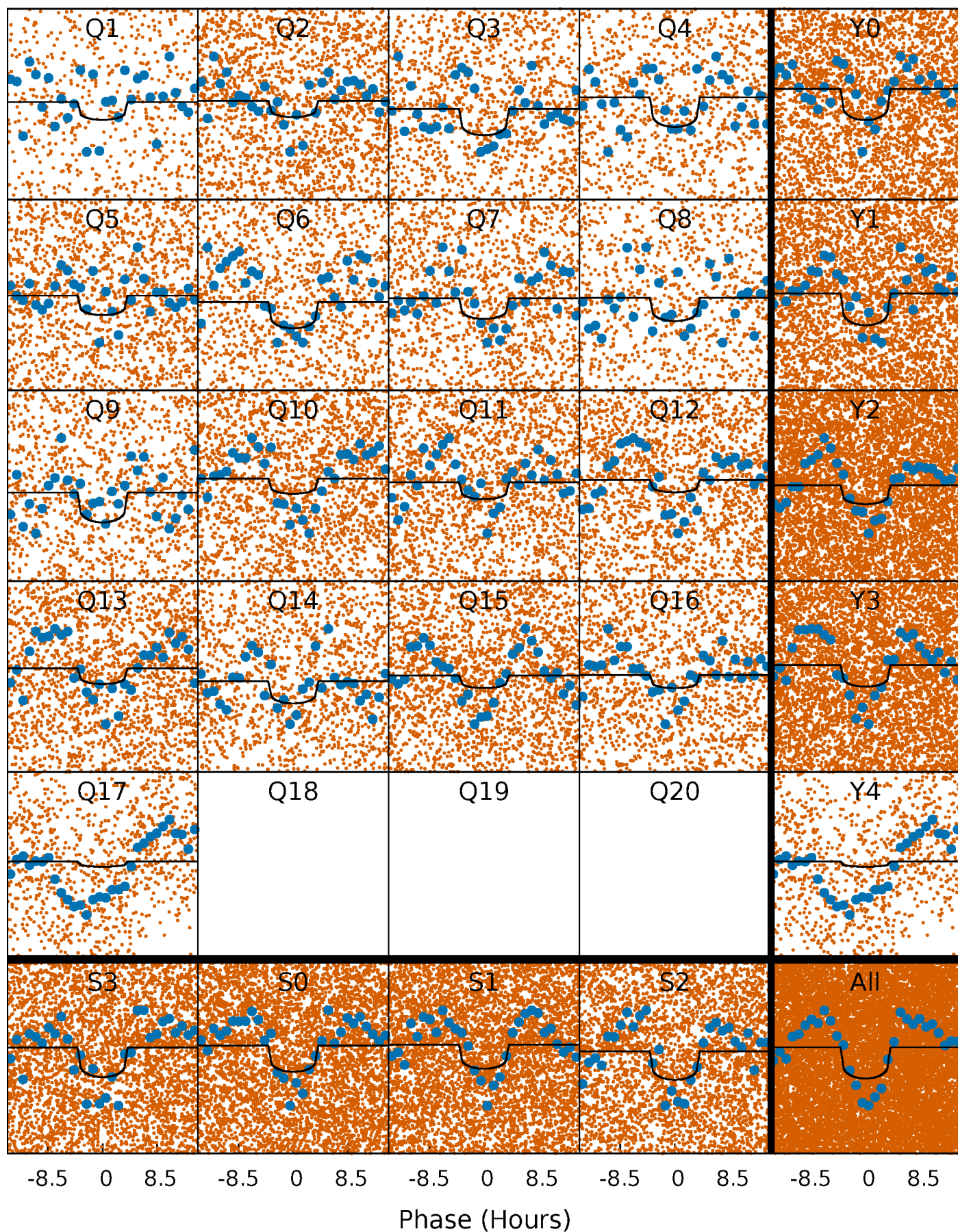
PDC Quarter-Phased Transit Curves

TCE 007035179-01 P= 1.528832 Days $T_0=131.962738$ (BKJD)



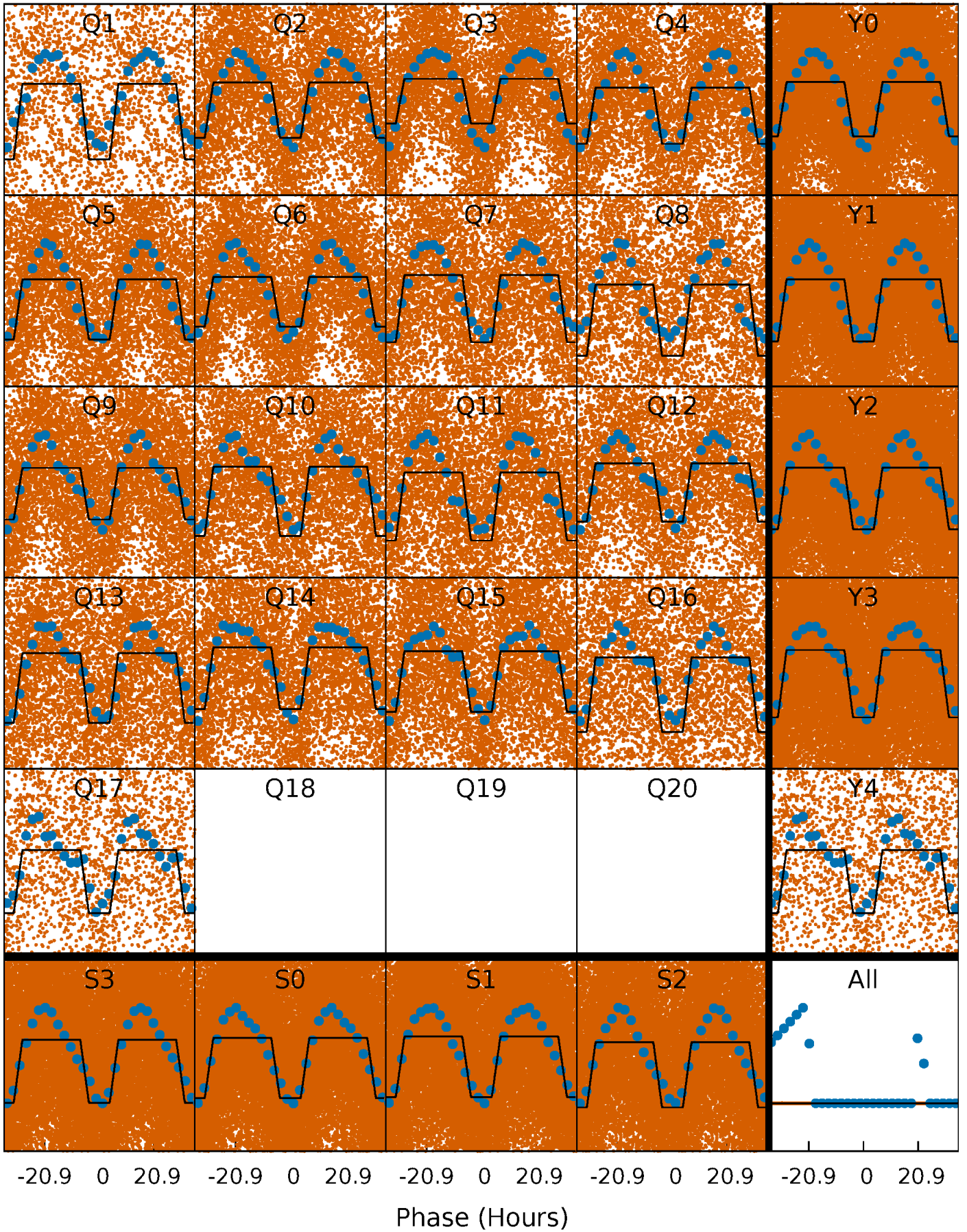
DV Quarter-Phased Transit Curves

TCE 007035179-01 P= 1.528832 Days $T_0=131.962738$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

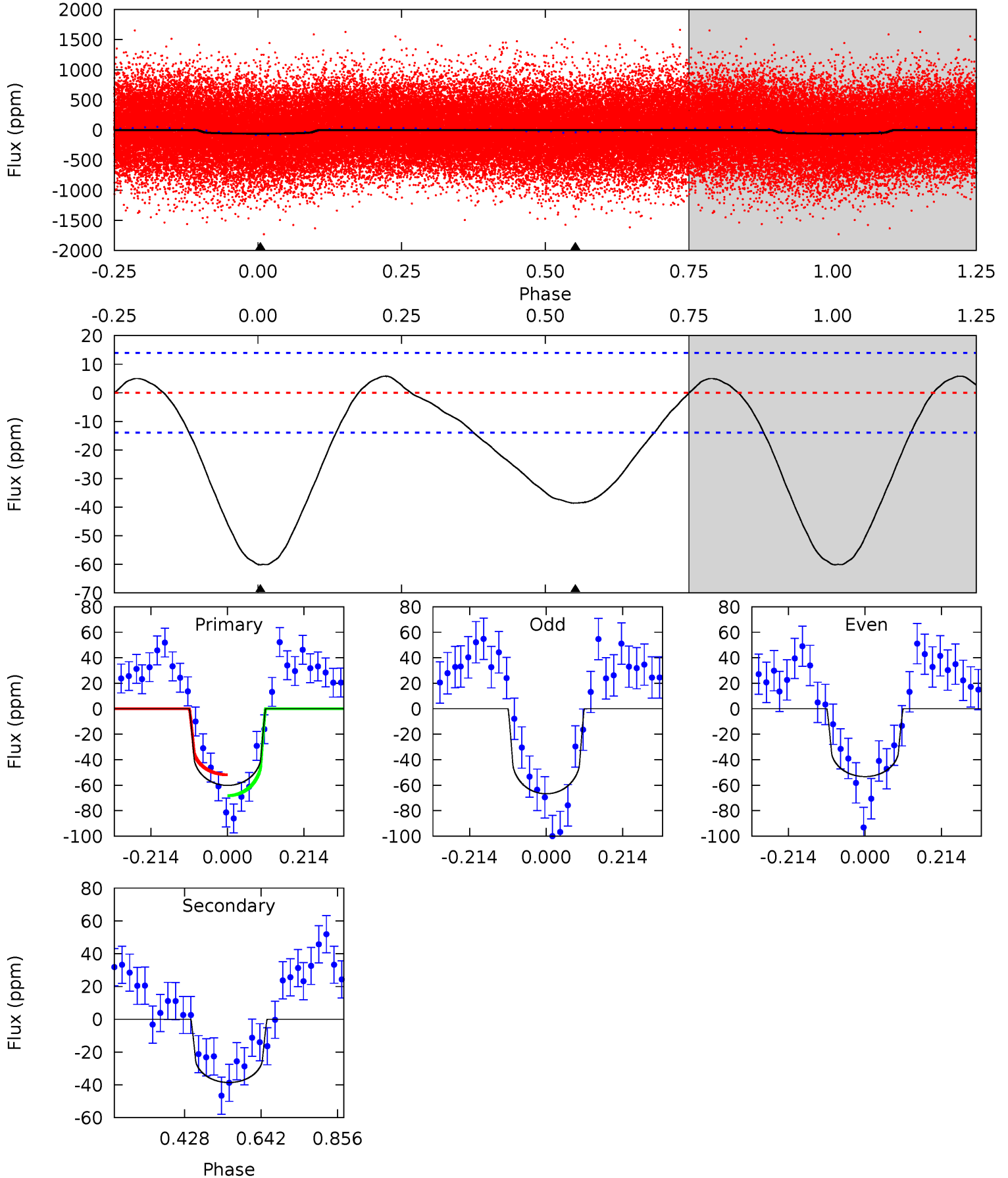
TCE 007035179-01 P= 1.528737 Days $T_0=131.942174$ (BKJD)



DV Model-Shift Uniqueness Test

007035179-01, P = 1.528832 Days, E = 130.433906 Days

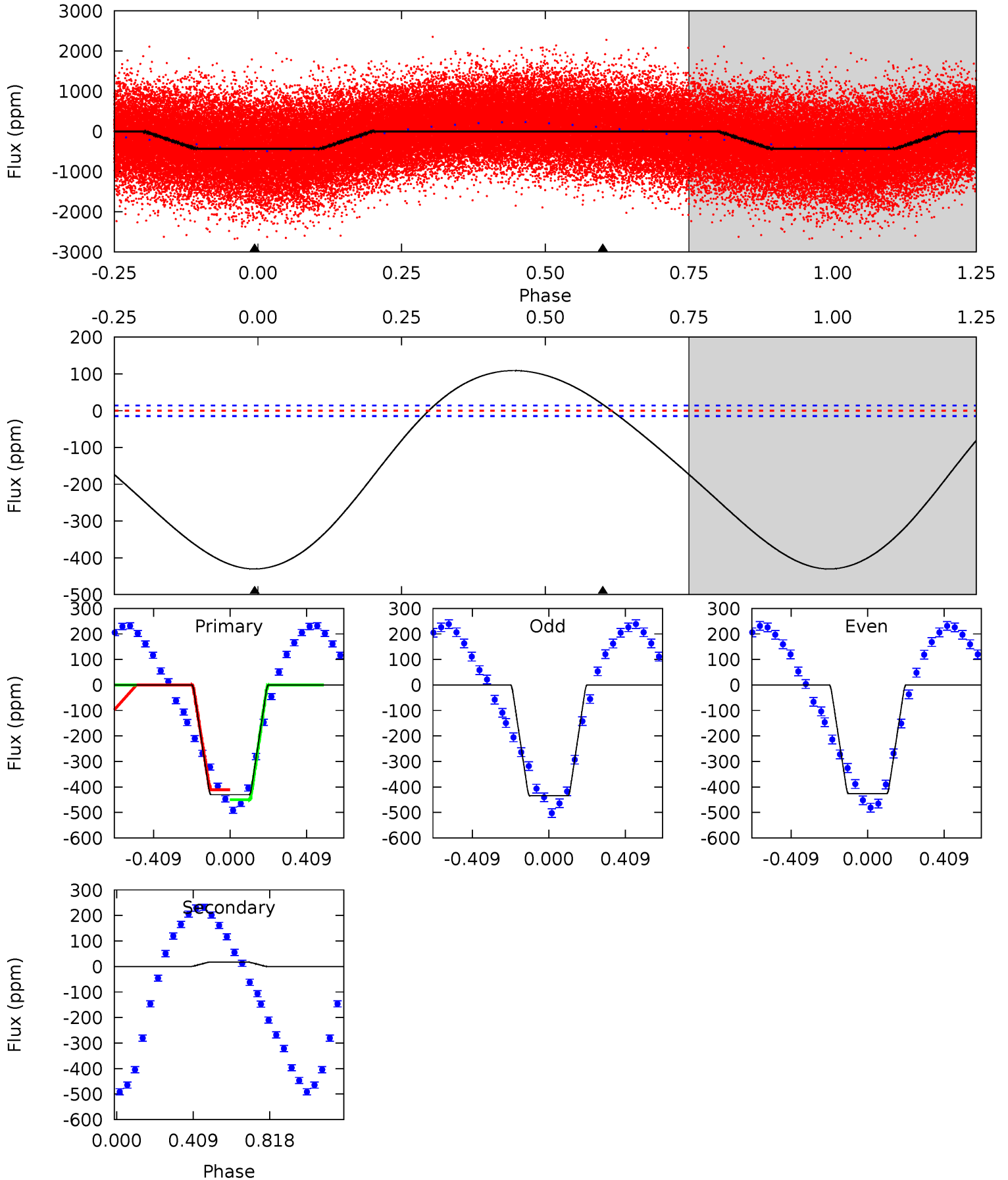
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.0	12.2	0	0	4.40	1.24	1.41	19.0	19.0	12.2	12.2	2.12	1.01	0.09	2.50



Alt Model-Shift Uniqueness Test

007035179-01, P = 1.528737 Days, E = 130.413437 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
127.3	-5.01	0	0	4.26	0.83	13.1	127.3	127.3	-5.01	-5.01	1.23	1.00	0.20	5.31



Stellar Parameters For KIC 007035179

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7732^{+215}_{-322}	$3.953^{+0.280}_{-0.120}$	$-0.220^{+0.200}_{-0.350}$	$2.295^{+0.449}_{-0.769}$	$1.724^{+0.189}_{-0.352}$	$0.201^{+0.379}_{-0.073}$
	+3%/-4%	+7%/-3%	+91%/-159%	+20%/-34%	+11%/-20%	+189%/-36%
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 007035179-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-39 ± 3	$1.54^{+0.77}_{-0.71}$	4023^{+269}_{-359}	7347^{+3968}_{-1436}	$8.384^{+21.415}_{-4.647}$
Alt.	17 ± 3	$5.17^{+1.16}_{-1.03}$	4023^{+278}_{-350}	-4163^{+187}_{-212}	$-0.329^{+0.114}_{-0.218}$

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

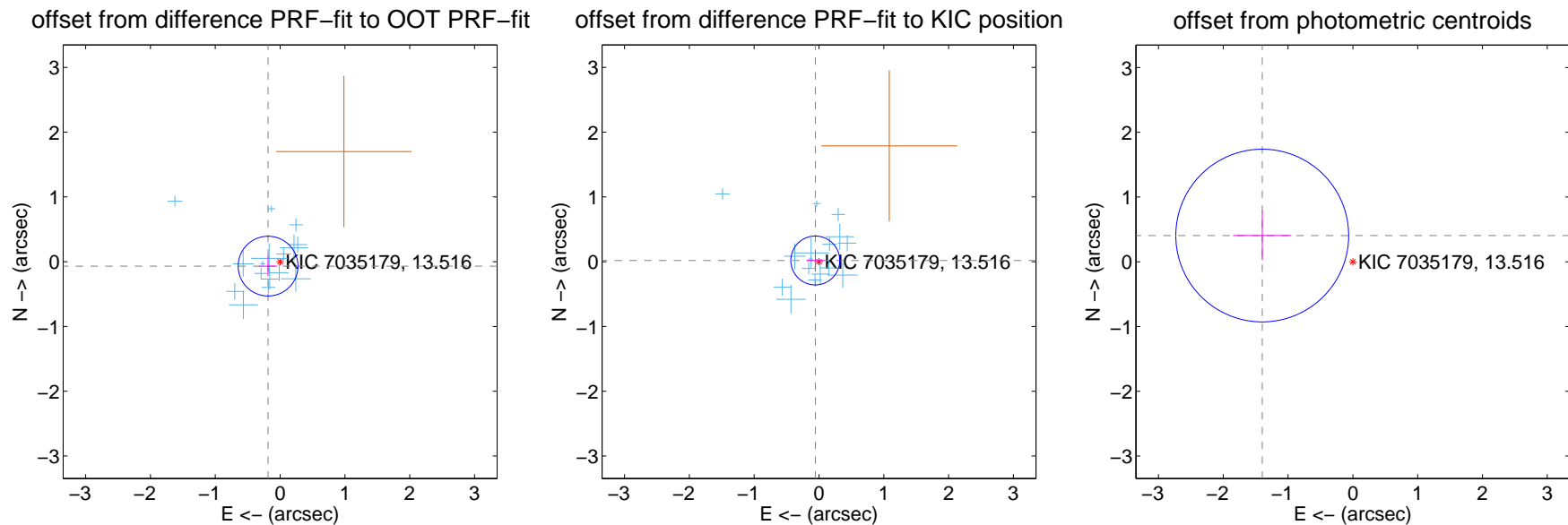
DV Centroid Data

Supplemental centroid analysis for 007035179-01. Kepler magnitude: 13.52. Transit SNR 7.28

There are 16 quarters with good PRF difference image offsets

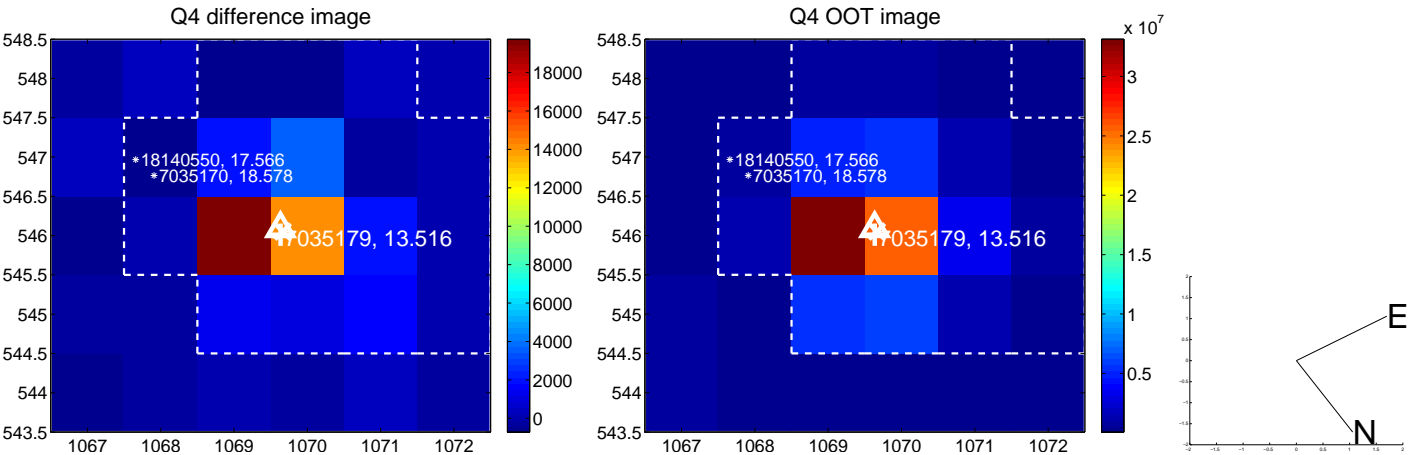
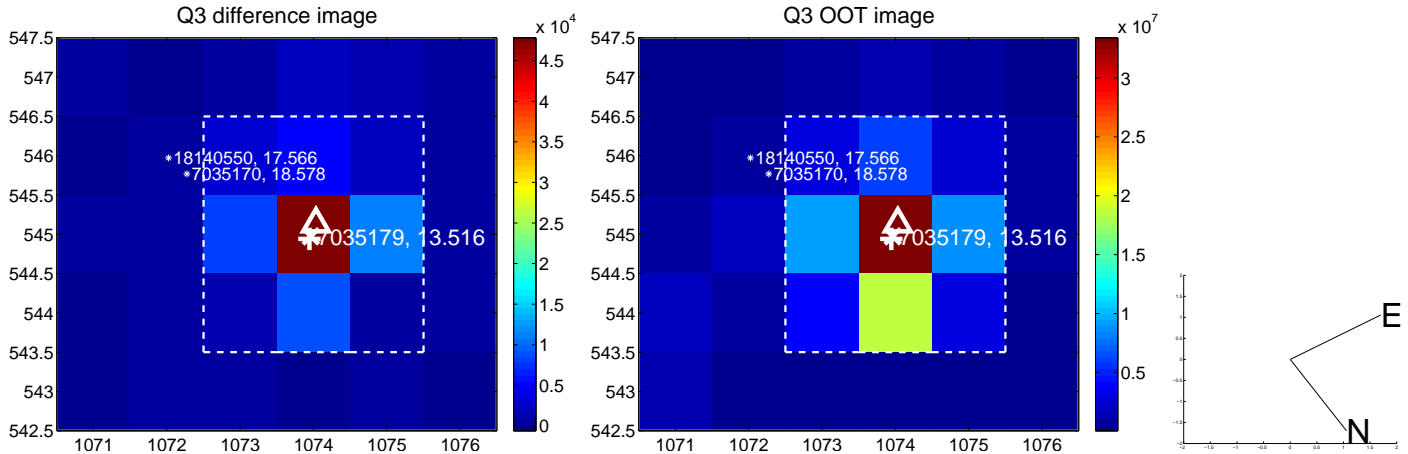
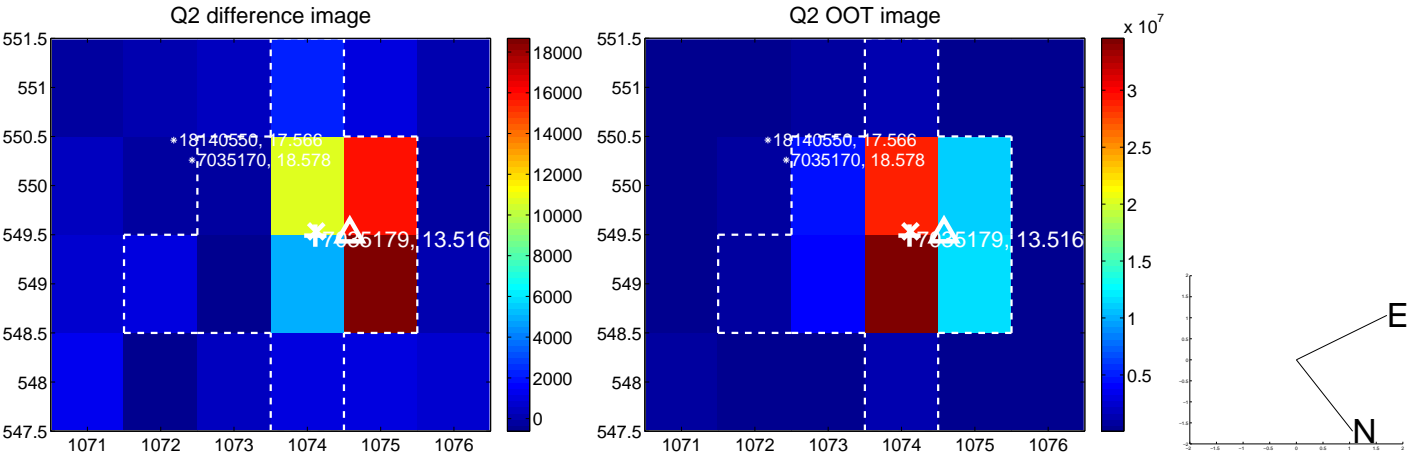
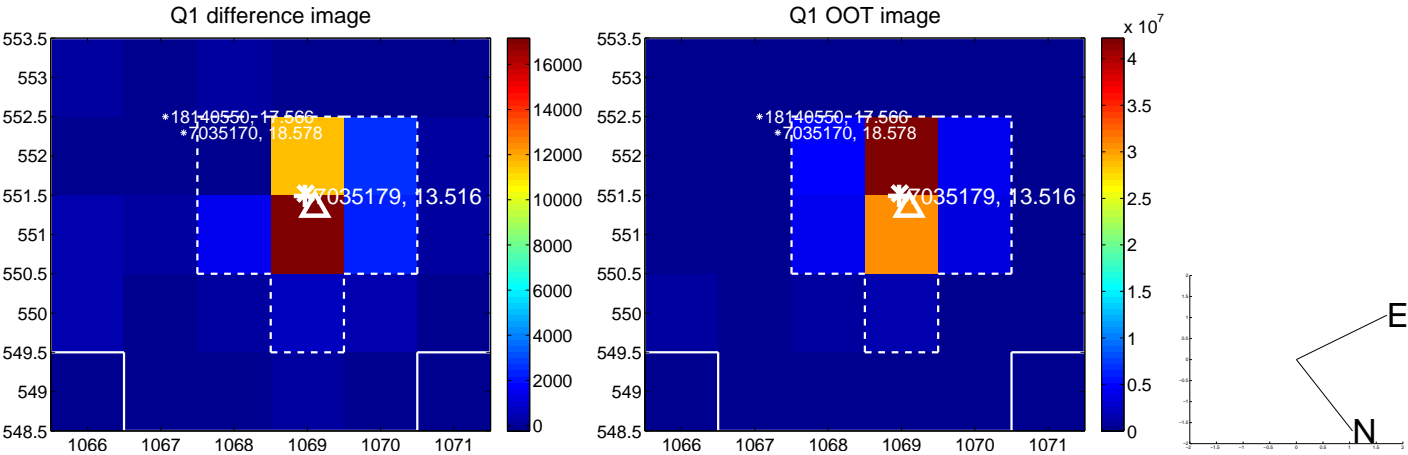
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.198 ± 0.154	1.29	0.186 ± 0.142	-0.068 ± 0.156
PRF-fit source offset from KIC position	0.060 ± 0.126	0.48	0.057 ± 0.136	0.019 ± 0.161
photometric centroid source offset	1.46 ± 0.44	3.28	1.40 ± 0.45	0.40 ± 0.38

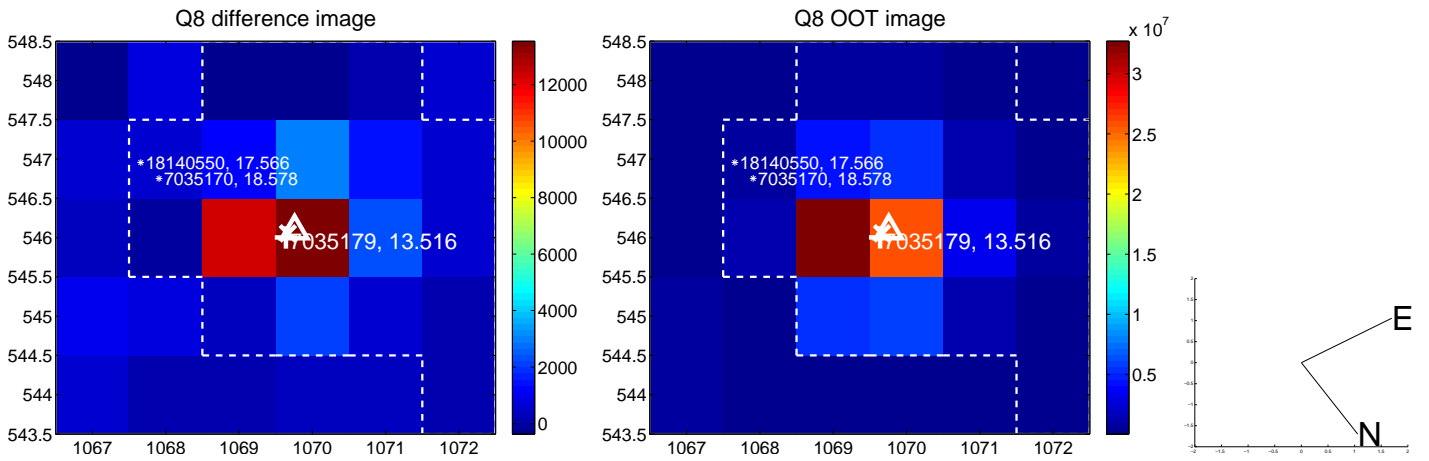
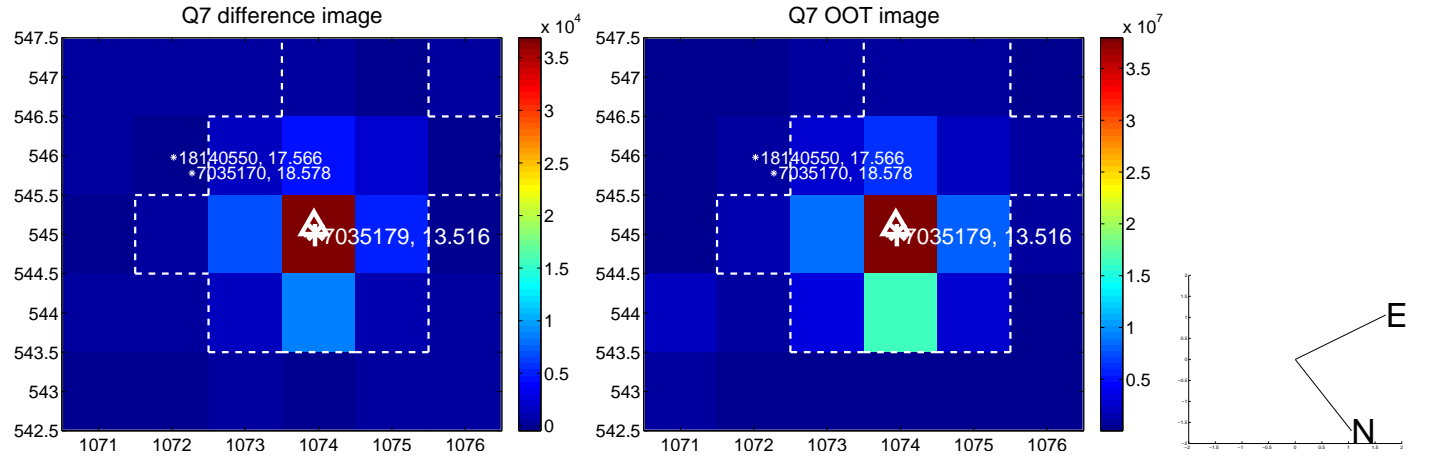
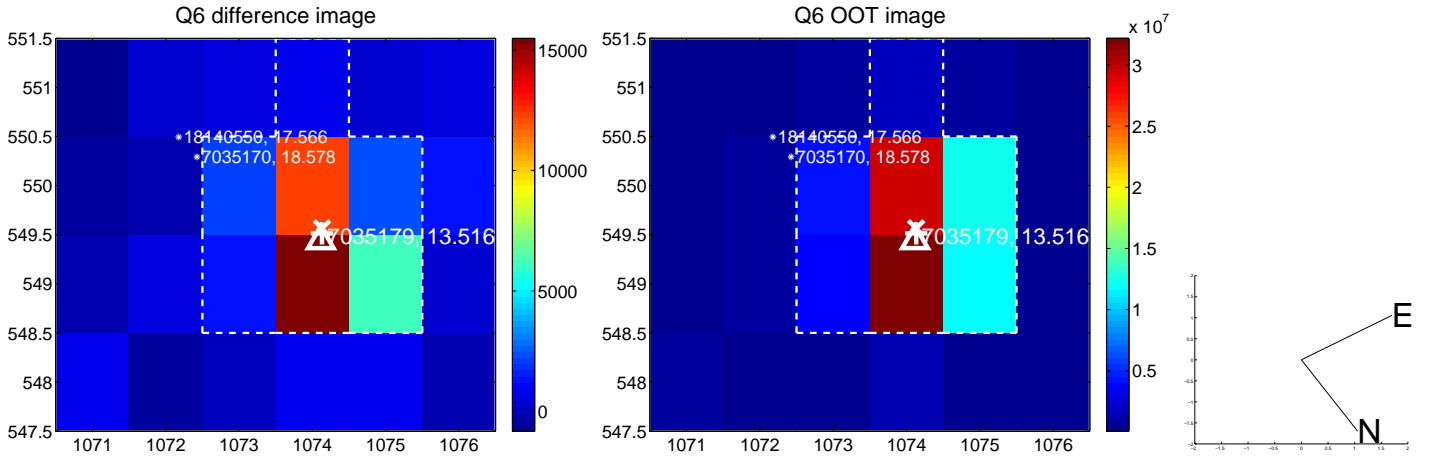
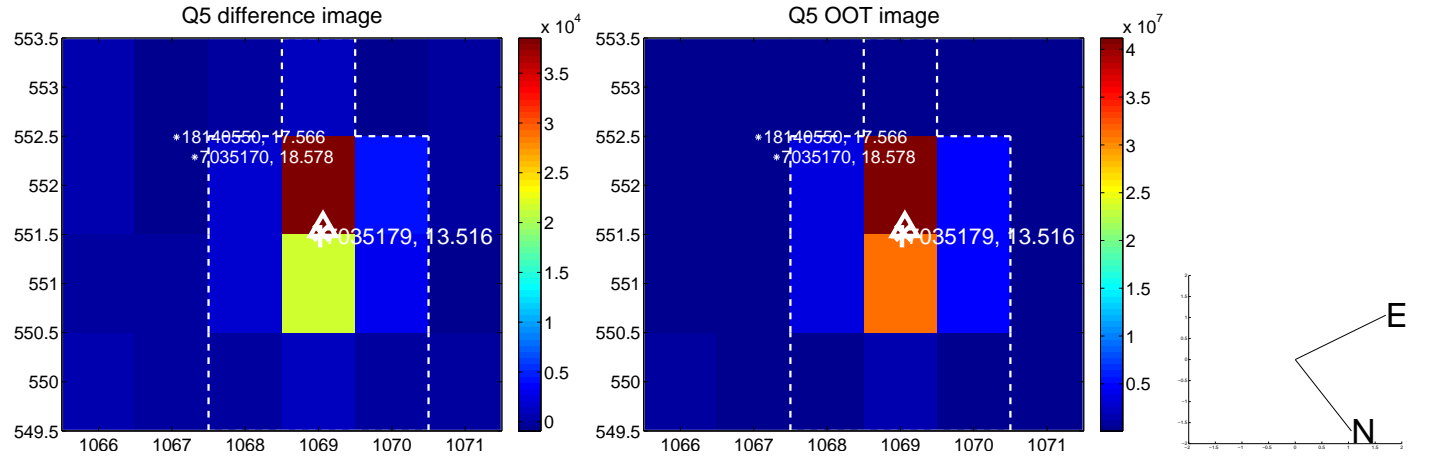


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

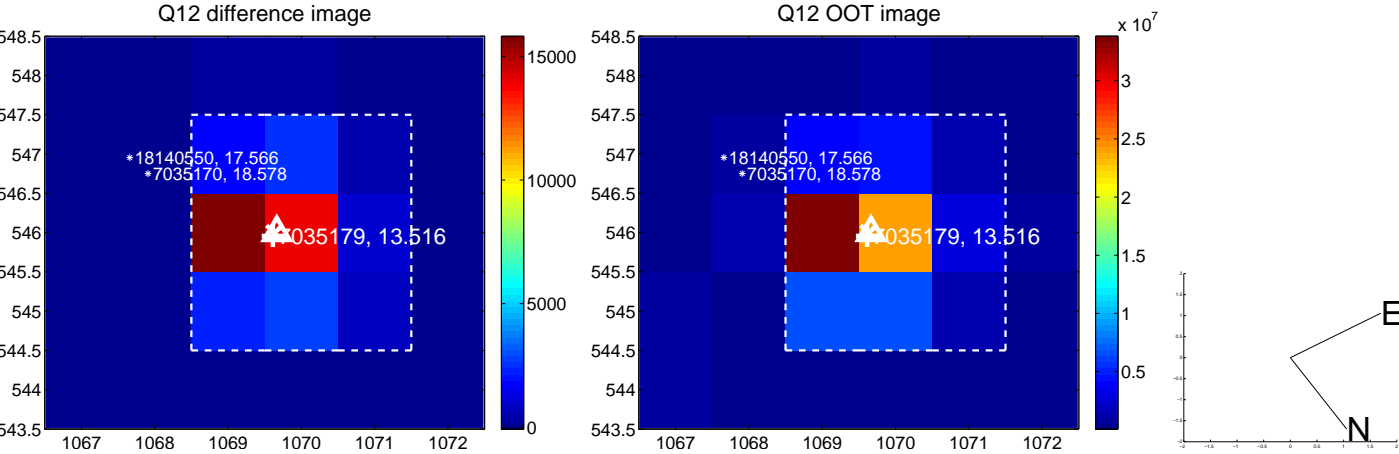
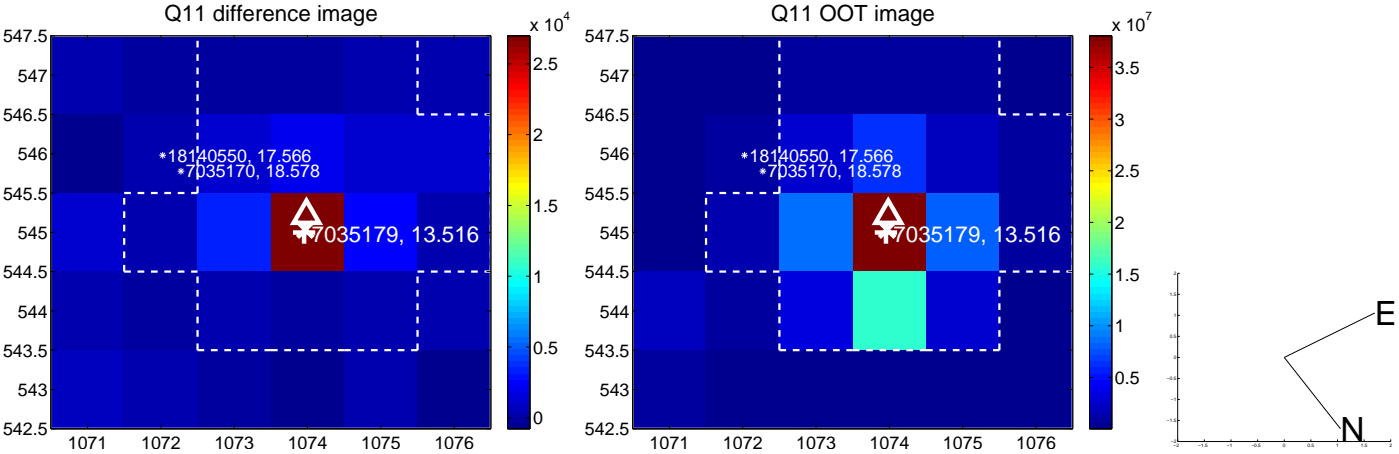
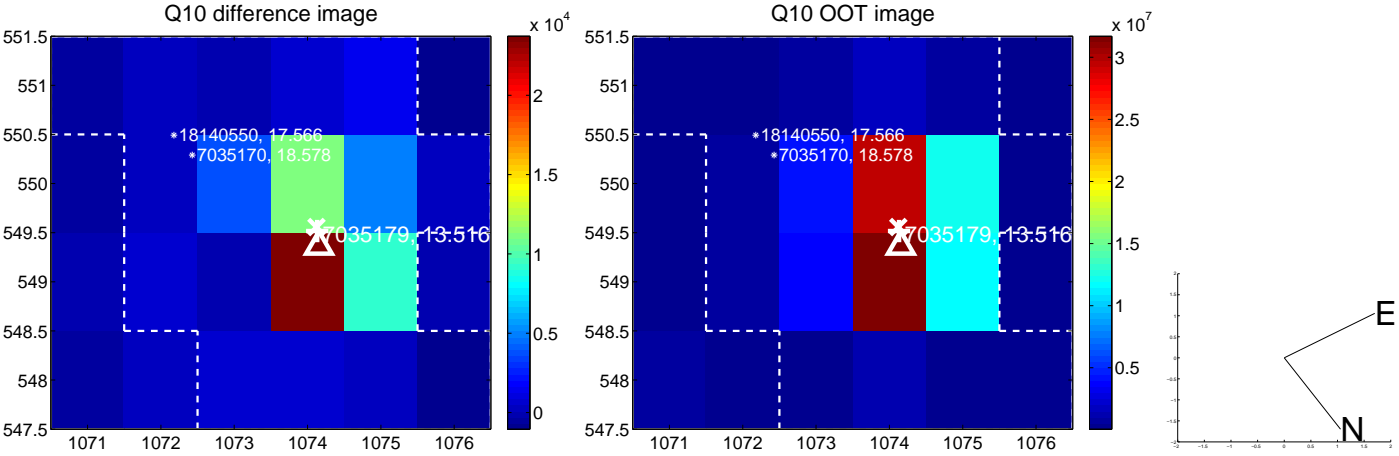
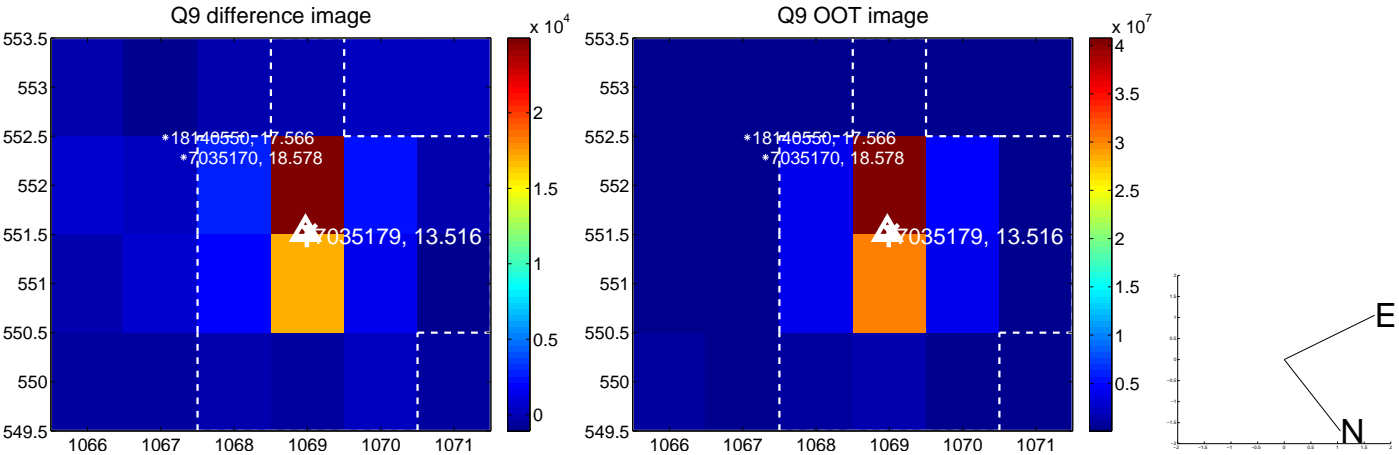
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



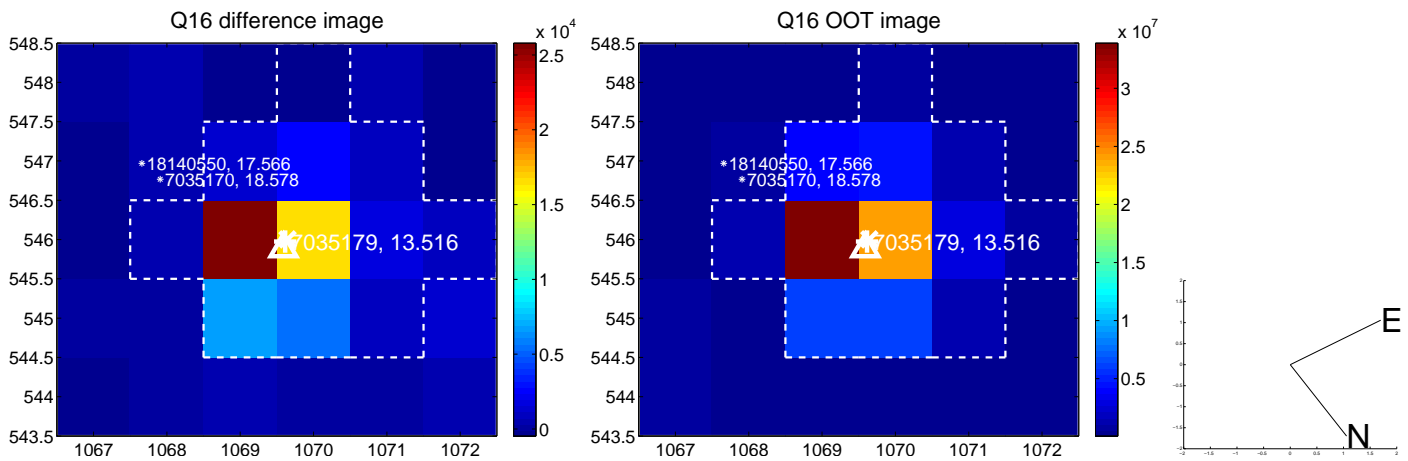
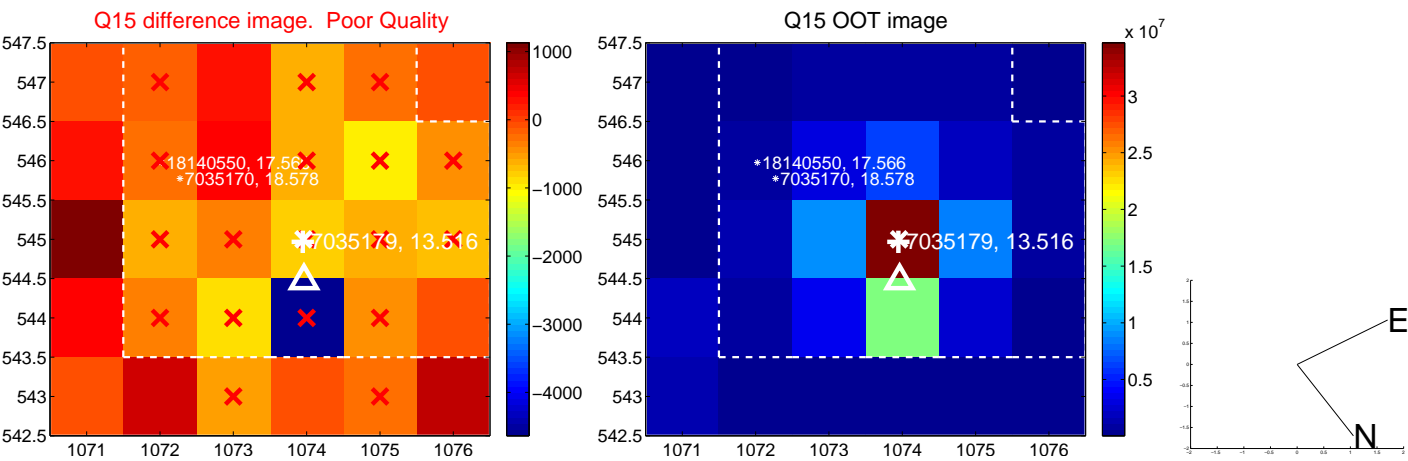
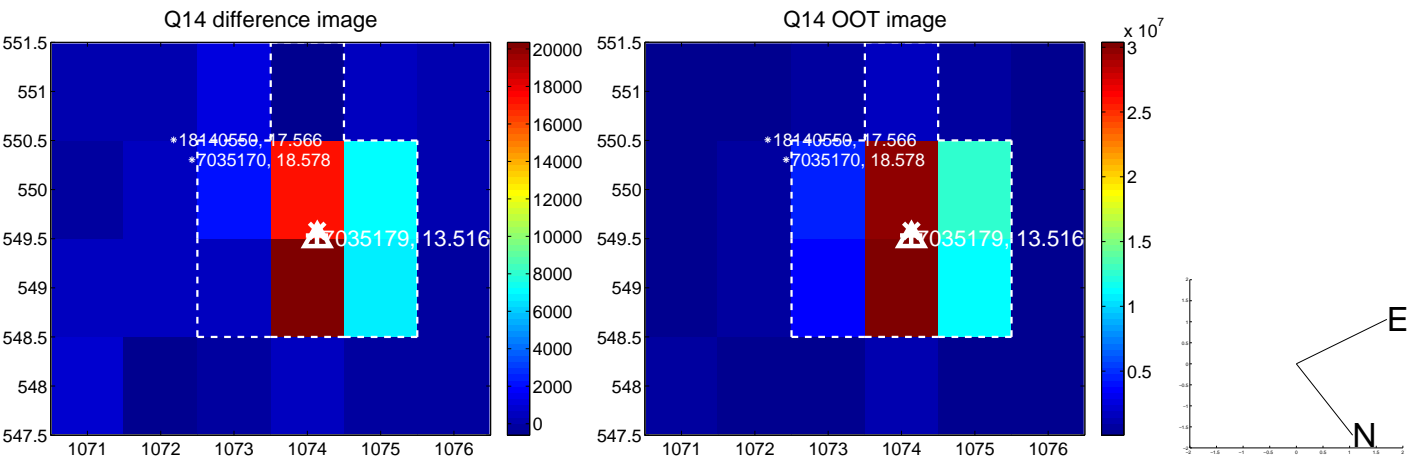
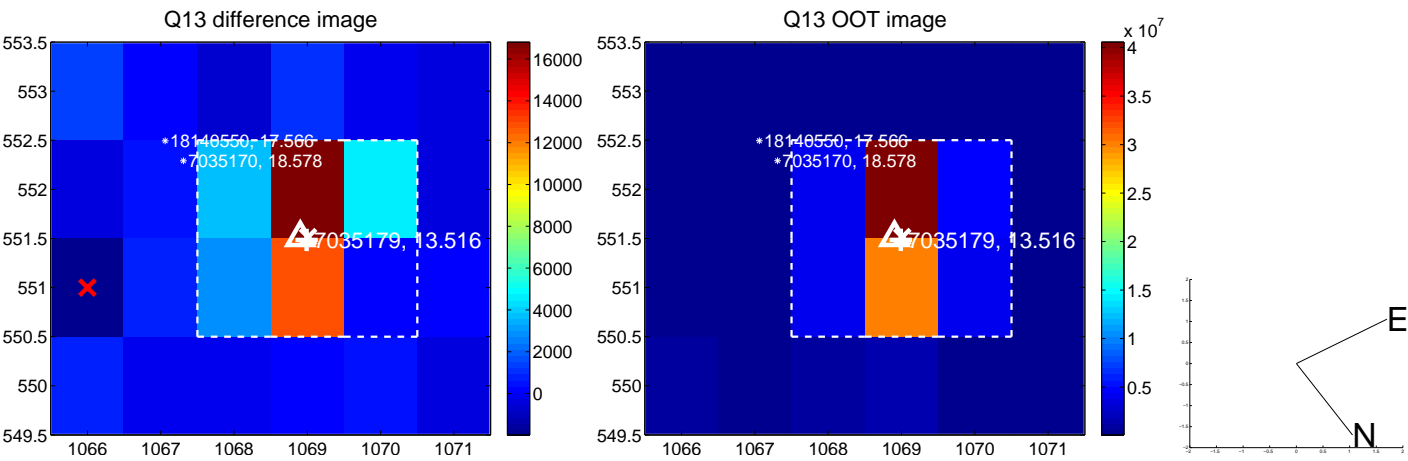
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

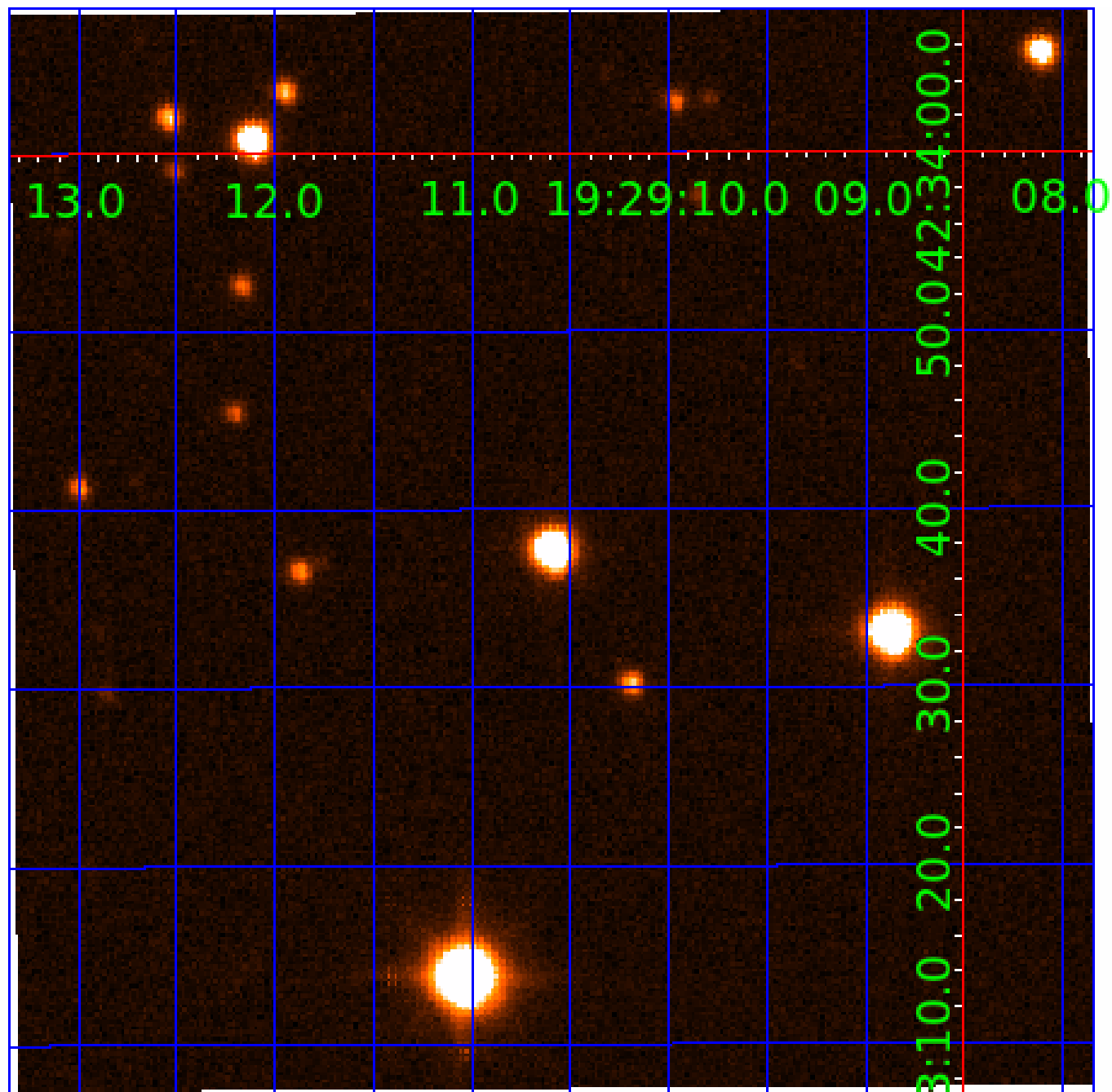


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007035179

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})
007035179-01	OBS	No	1.528832	131.962738	42.8	7.411	8.1	7.3	2.29	7732	1.60	17382.16
007035179-02	OBS	No	2.088549	132.192690	164.9	19.659	13.4	16.7	2.29	7732	4.93	11467.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035179-01	OBS	FP	0.00	1	0	0	0	LPP_DV
007035179-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS

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

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

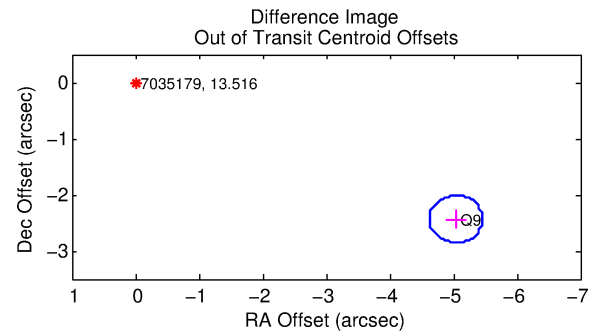
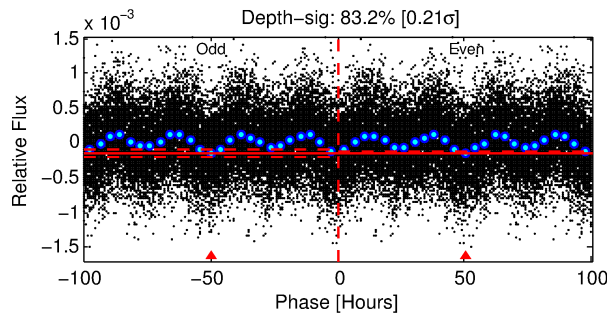
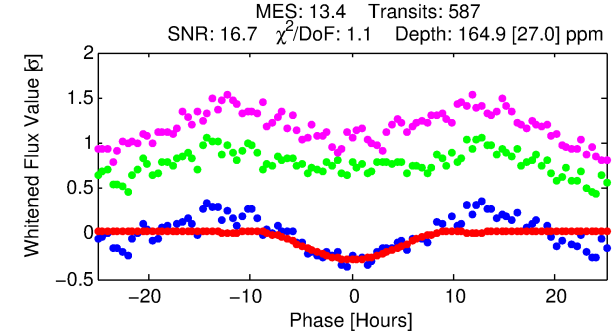
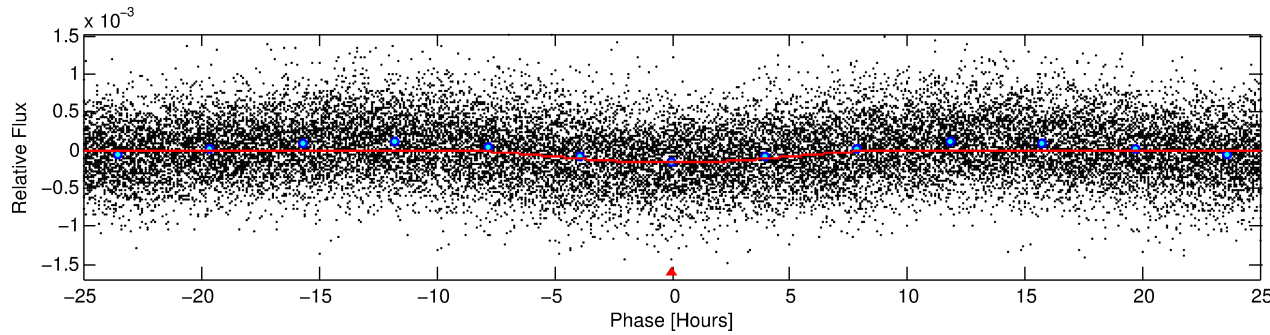
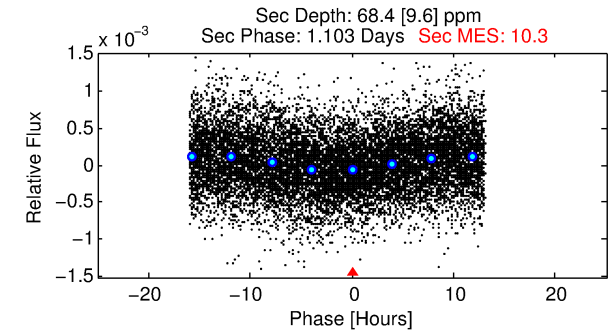
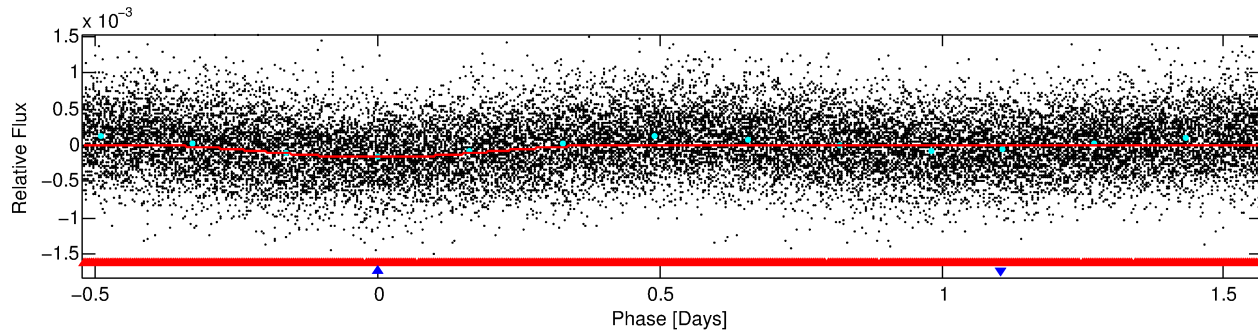
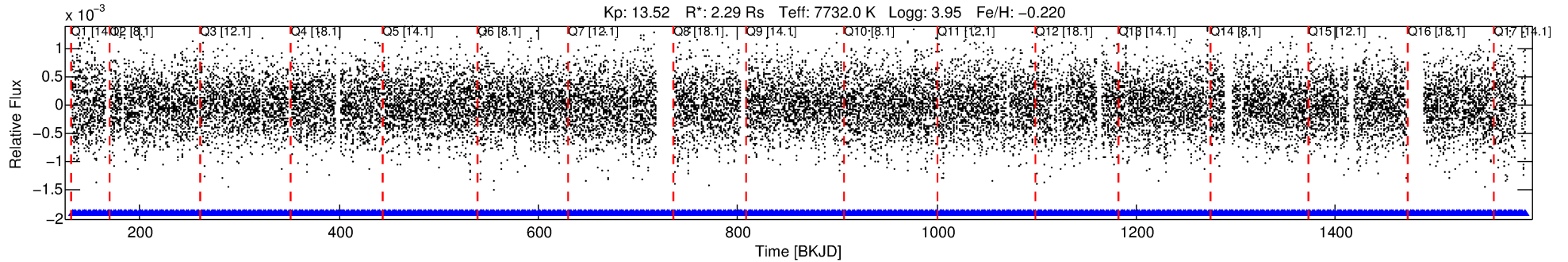
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007035179-02

No Significant Match Found

DV One-Page Summary

KIC: 7035179 Candidate: 2 of 2 Period: 2.089 d



DV Fit Results:

Period = 2.08855 [0.00007] d
Epoch = 132.1927 [0.0271] BKJD
Rp/R* = 0.0197 [0.0150]
a/R* = 1.02 [0.01]
b = 0.99 [0.03]
Seff = 11467.19 [5873.97]
Teq = 2639 [338] K
Rp = 4.93 [4.11] Re
a = 0.0384 [0.0119] AU
Ag = 2.28 [3.68] [0.35σ]
Teffp = 5014 [1937] K [1.21σ]

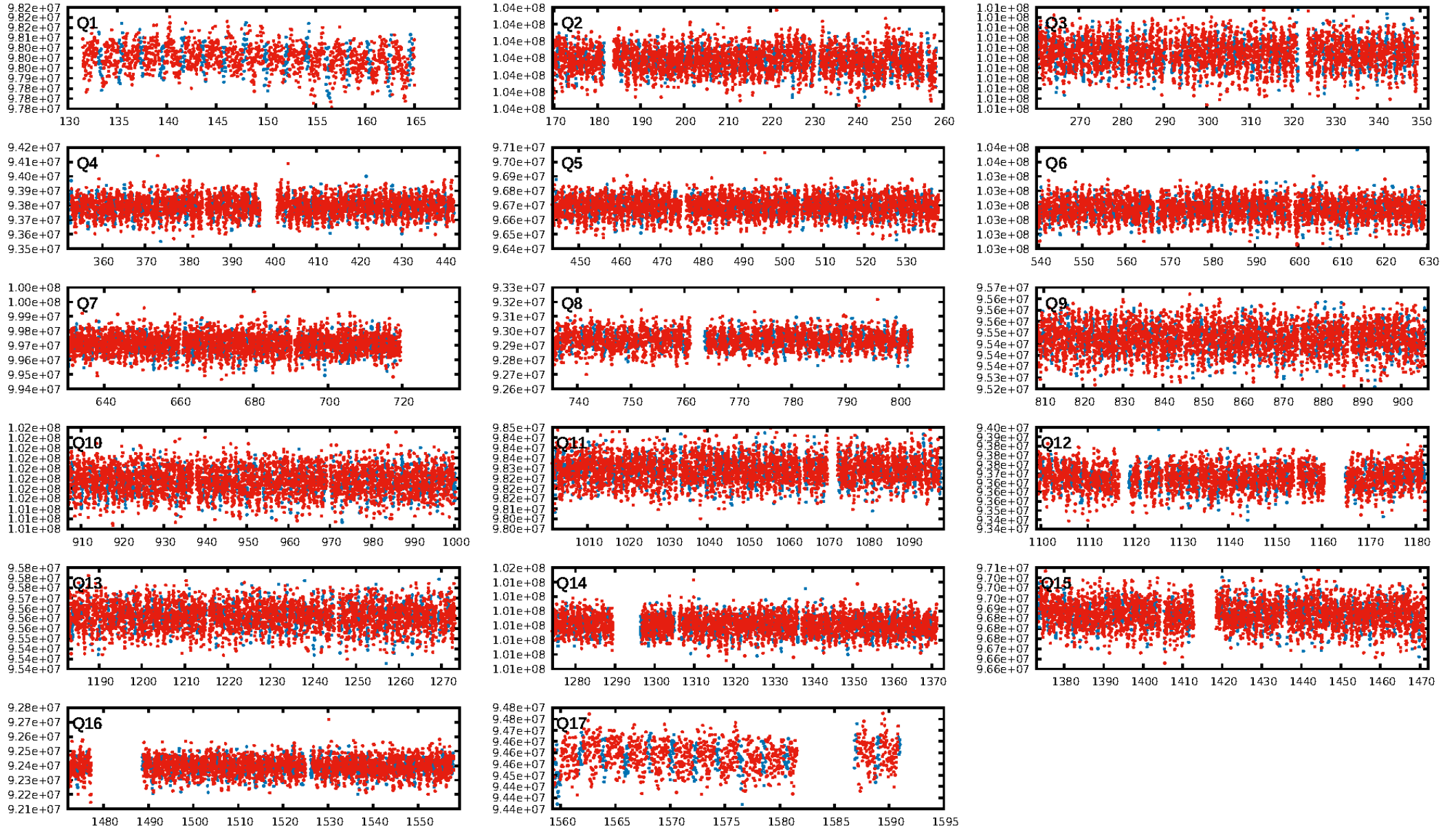
DV Diagnostic Results:

ShortPeriod-sig: 47.7% [0.64σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [561/561]
GhostDiagnostic-chr: 2.265
Centroid-sig: 21.6%
Centroid-so: 0.403 arcsec [3.28σ]
OotOffset-rm: 5.597 arcsec [40.02σ]
KicOffset-rm: 5.716 arcsec [40.85σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/17]

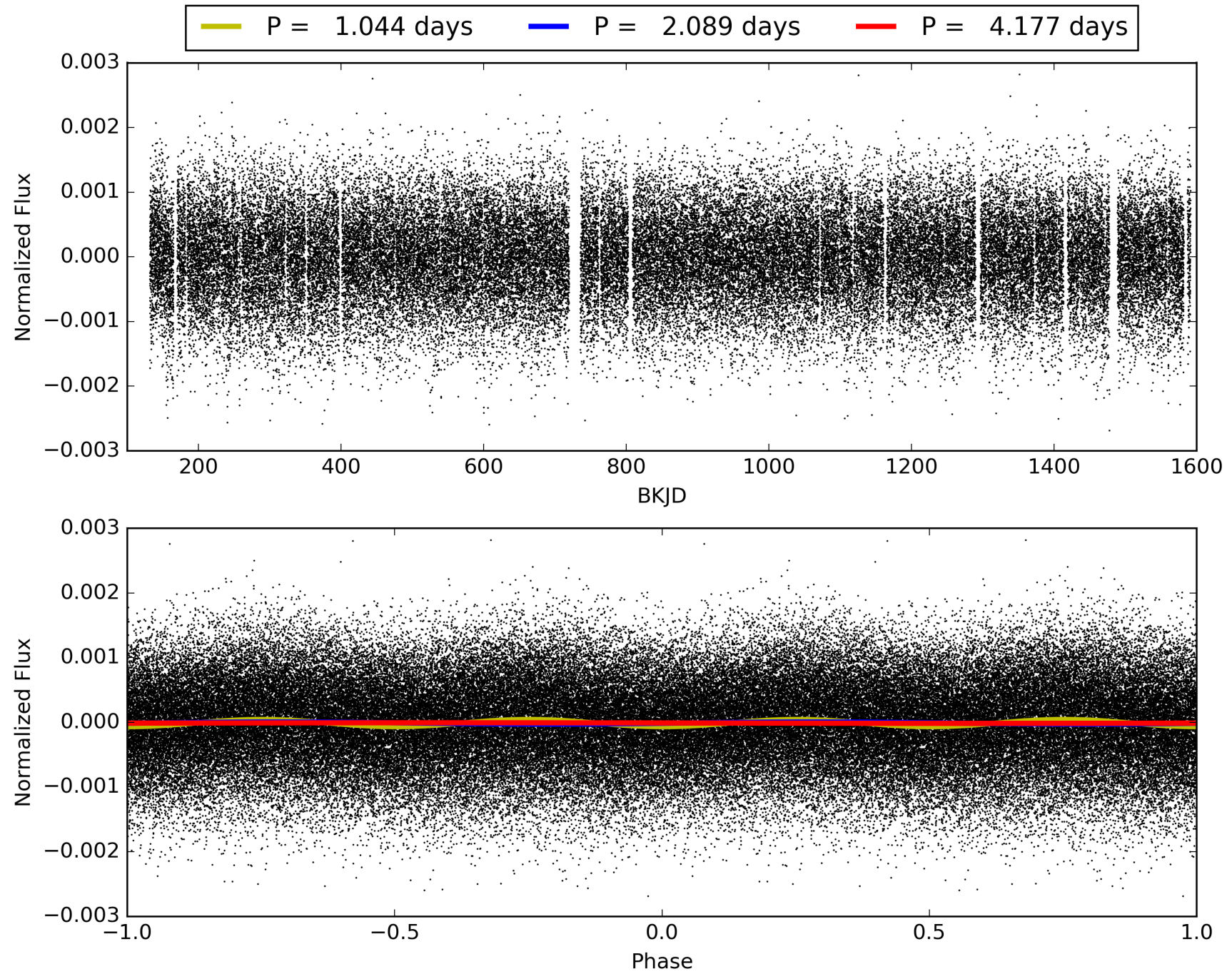
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:37:33 Z

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

TCE 007035179-02, PDC Light Curves

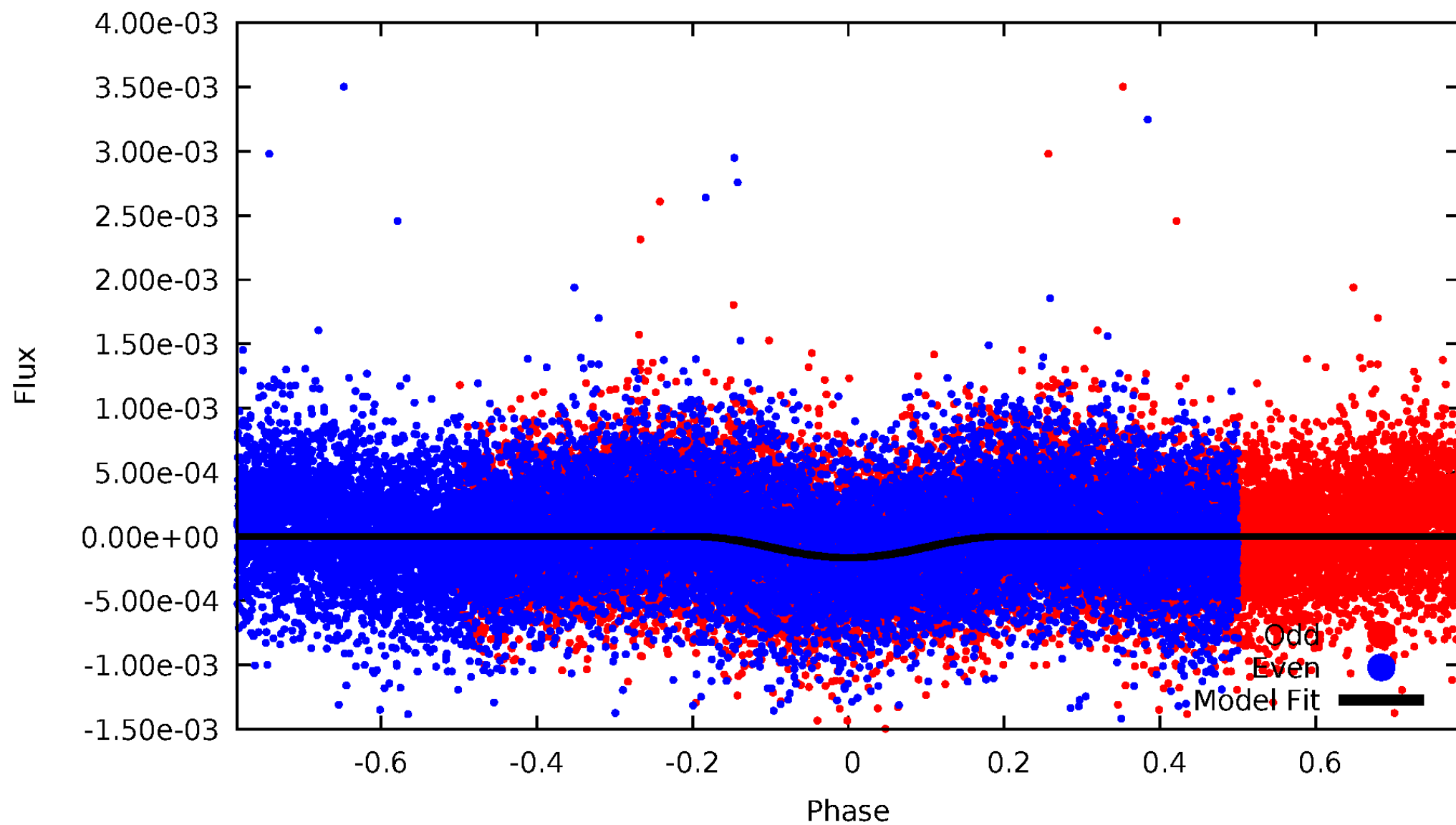


TCE 007035179-02



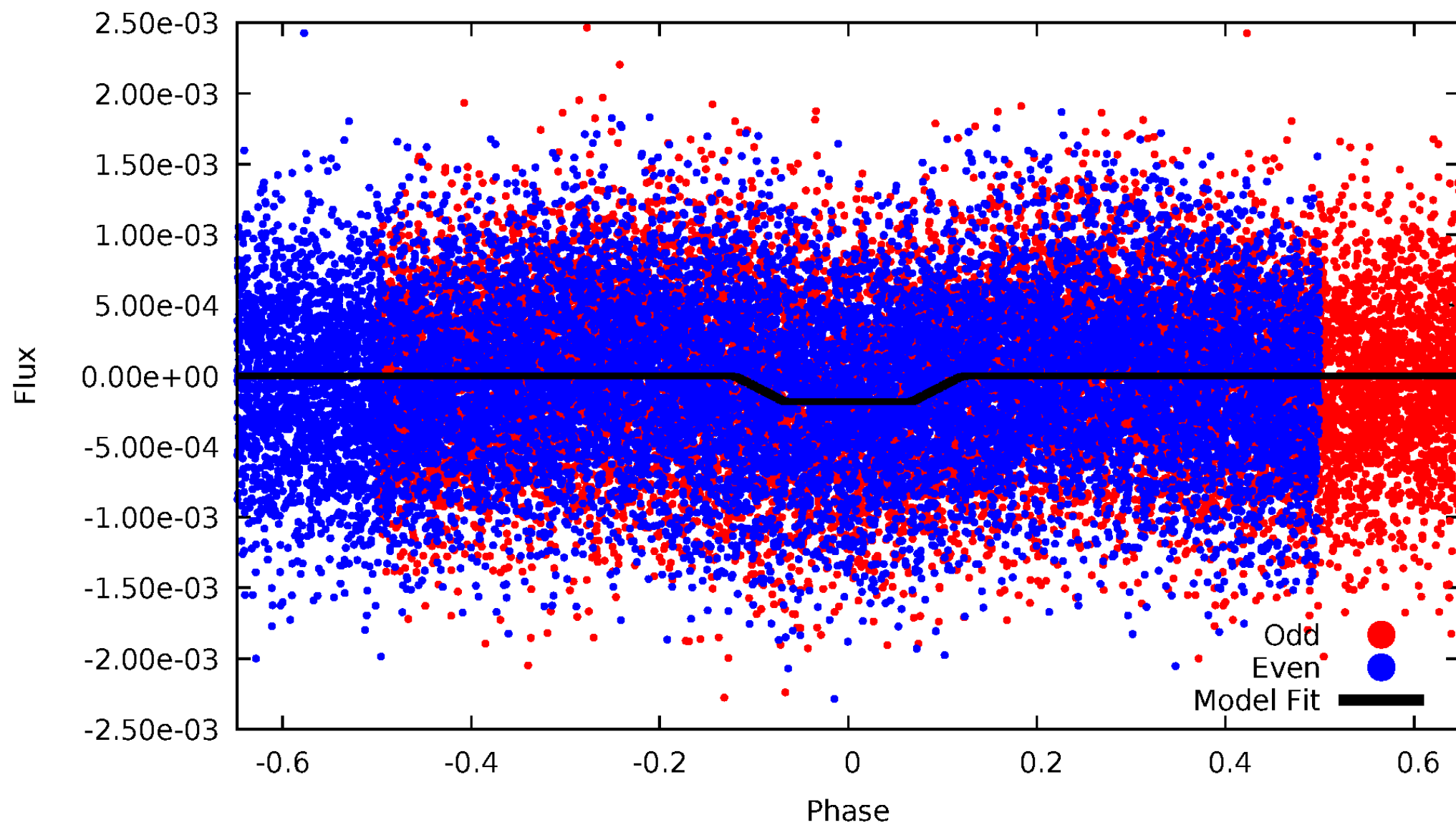
DV Odd/Even

TCE 007035179-02



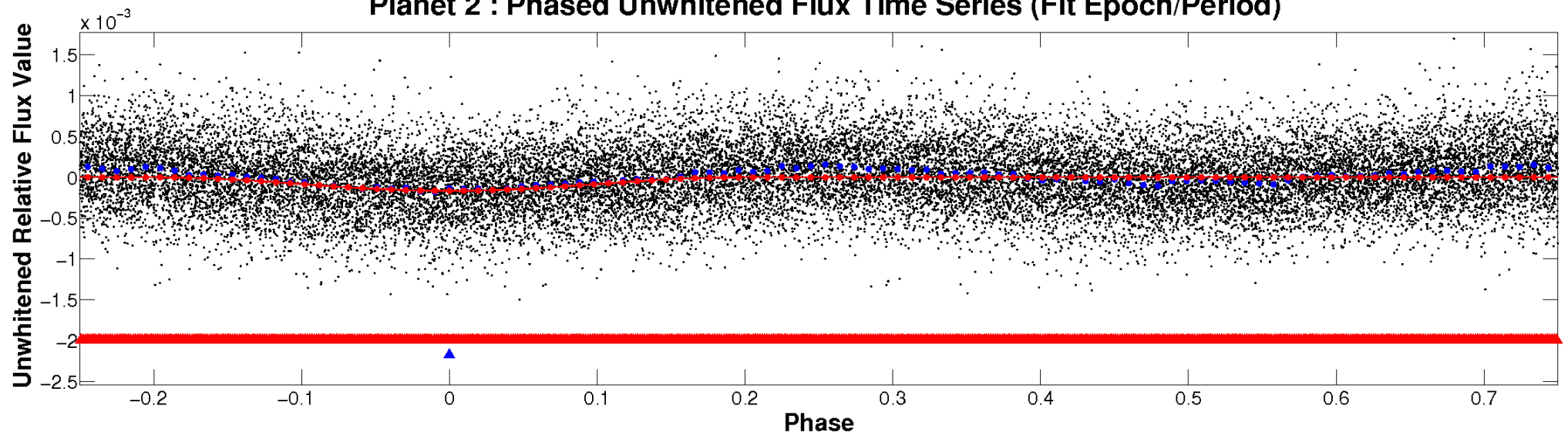
ALT Odd/Even

TCE 007035179-02

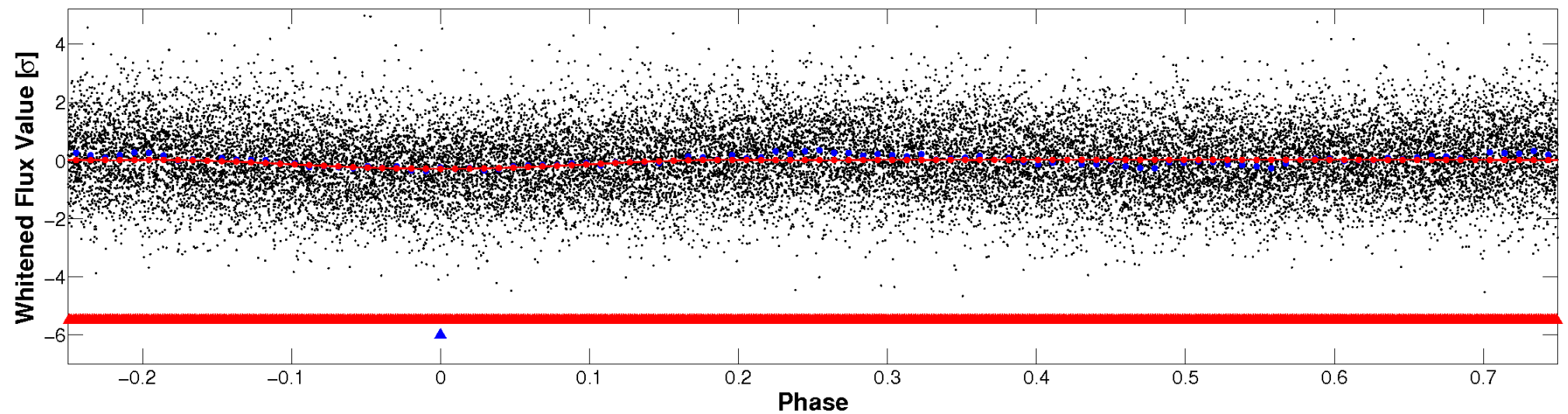


Non-Whitened Vs. Whitened Light Curve

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

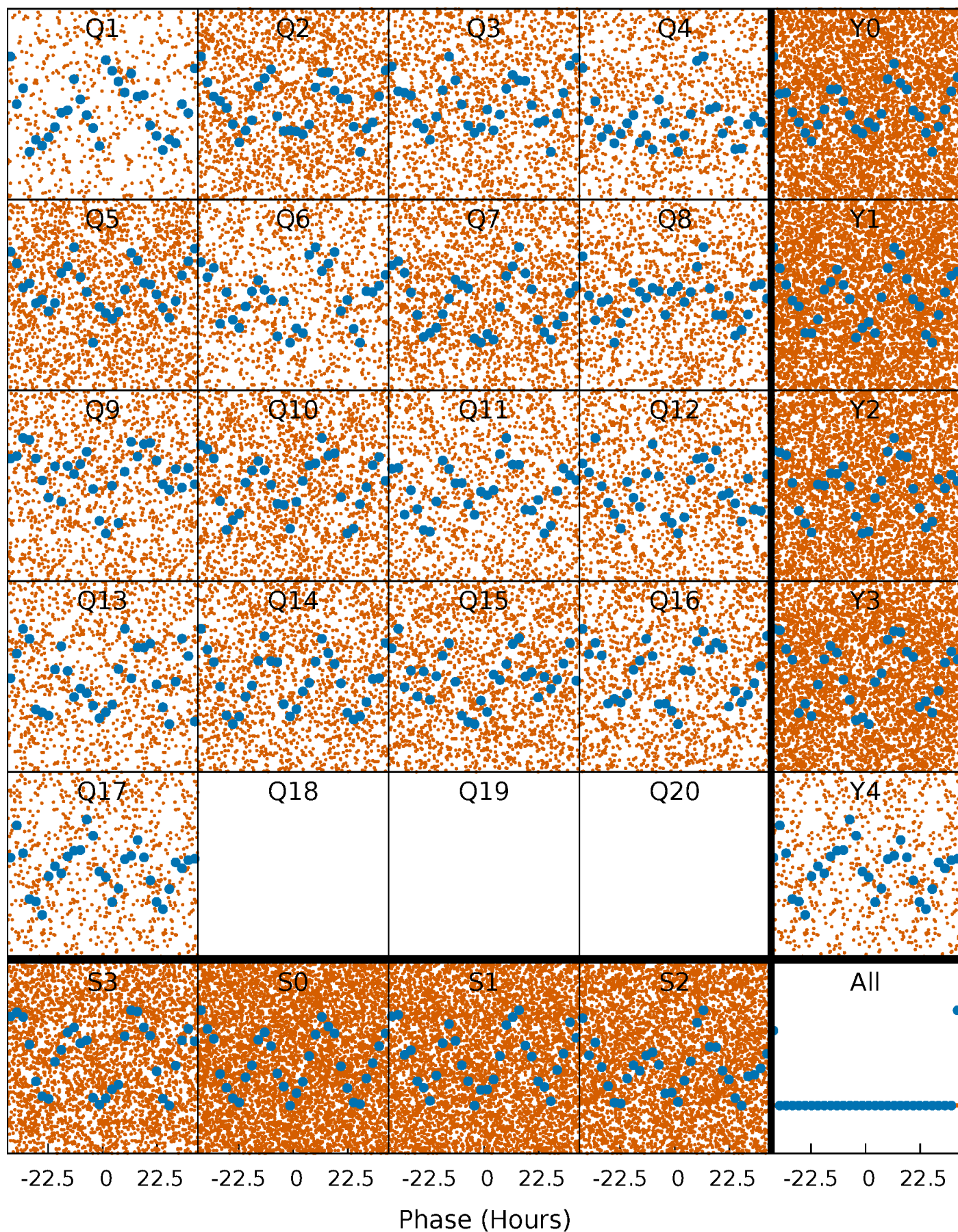


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



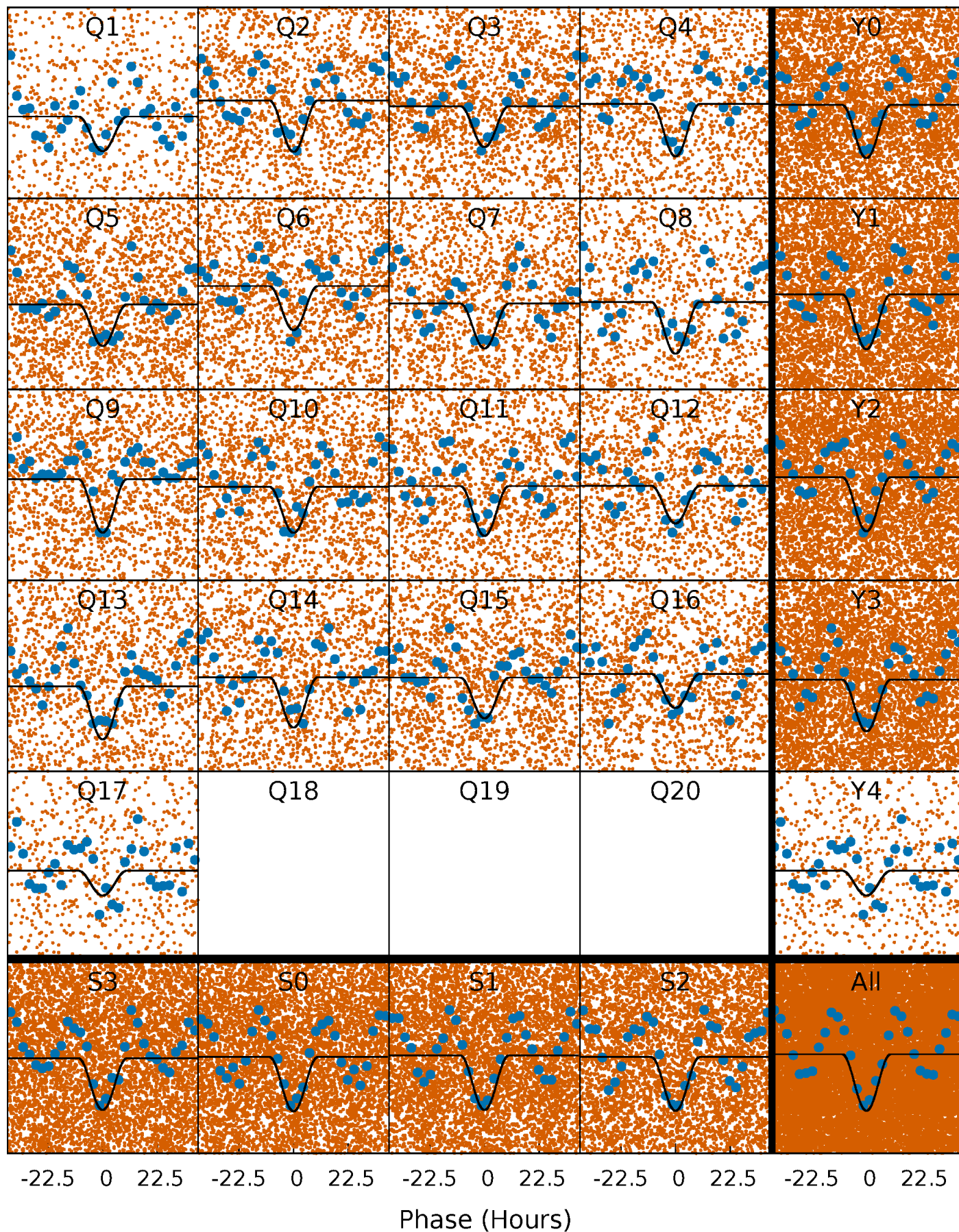
PDC Quarter-Phased Transit Curves

TCE 007035179-02 P= 2.088549 Days $T_0=132.192690$ (BKJD)



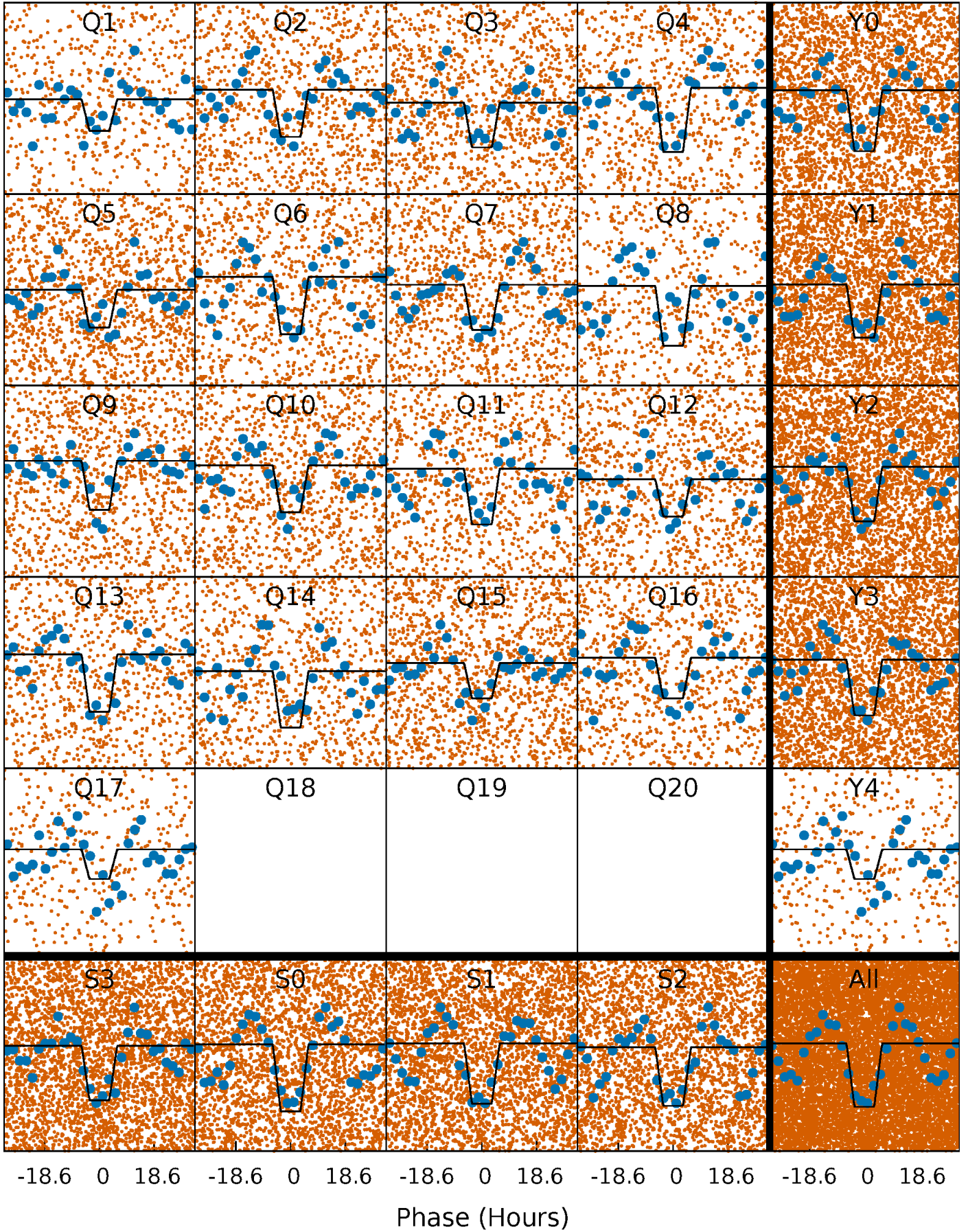
DV Quarter-Phased Transit Curves

TCE 007035179-02 P= 2.088549 Days $T_0=132.192690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

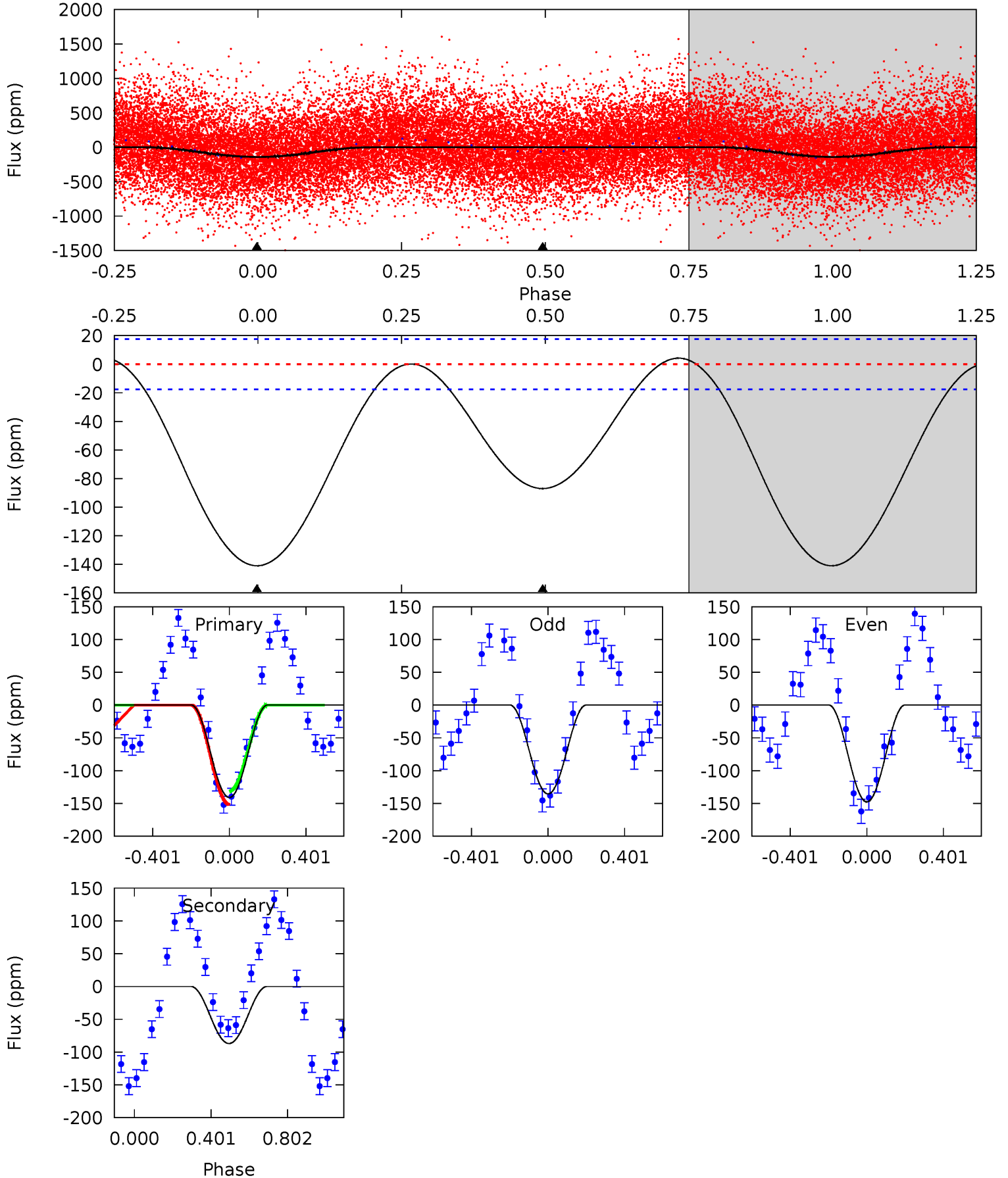
TCE 007035179-02 P= 2.088494 Days $T_0=132.216638$ (BKJD)



DV Model-Shift Uniqueness Test

007035179-02, P = 2.088549 Days, E = 132.192690 Days

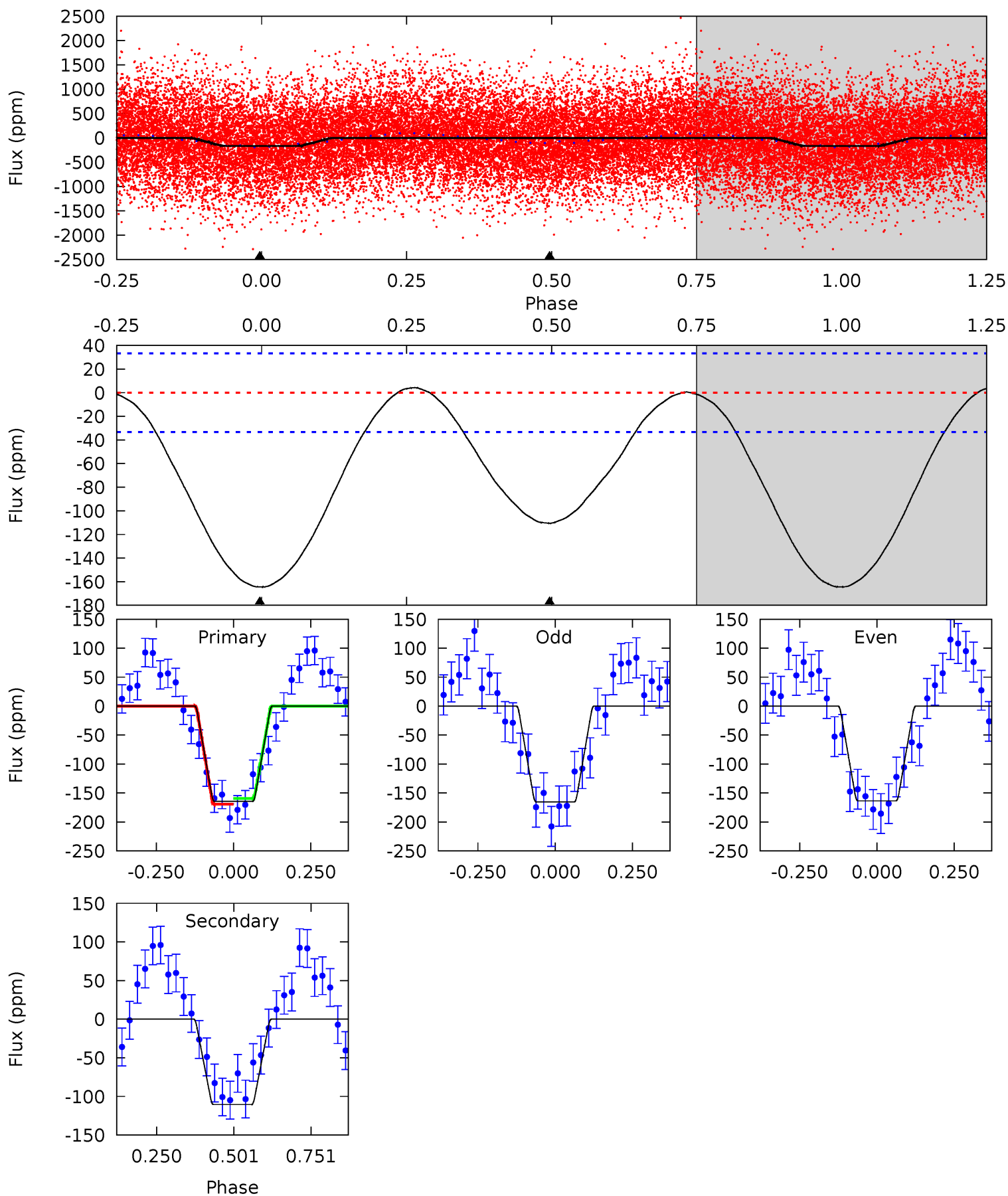
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.3	21.1	0	0	4.26	0.84	0.82	34.3	34.3	21.1	21.1	1.49	-0.81	0.03	2.66



Alt Model-Shift Uniqueness Test

007035179-02, P = 2.088494 Days, E = 132.216638 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	14.5	0	0	4.37	1.15	0.40	21.5	21.5	14.5	14.5	0.12	1.87	0.03	0.65



Stellar Parameters For KIC 007035179

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7732^{+215}_{-322}	$3.953^{+0.280}_{-0.120}$	$-0.220^{+0.200}_{-0.350}$	$2.295^{+0.449}_{-0.769}$	$1.724^{+0.189}_{-0.352}$	$0.201^{+0.379}_{-0.073}$
	+3%/-4%	+7%/-3%	+91%/-159%	+20%/-34%	+11%/-20%	+189%/-36%
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 007035179-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-87 ± 4	$5.42^{+3.57}_{-2.98}$	3619^{+268}_{-319}	4789^{+2398}_{-973}	$2.430^{+9.567}_{-1.547}$
Alt.	-110 ± 8	$3.98^{+3.33}_{-2.47}$	3625^{+246}_{-308}	5886^{+5188}_{-1411}	$5.404^{+34.395}_{-3.704}$

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

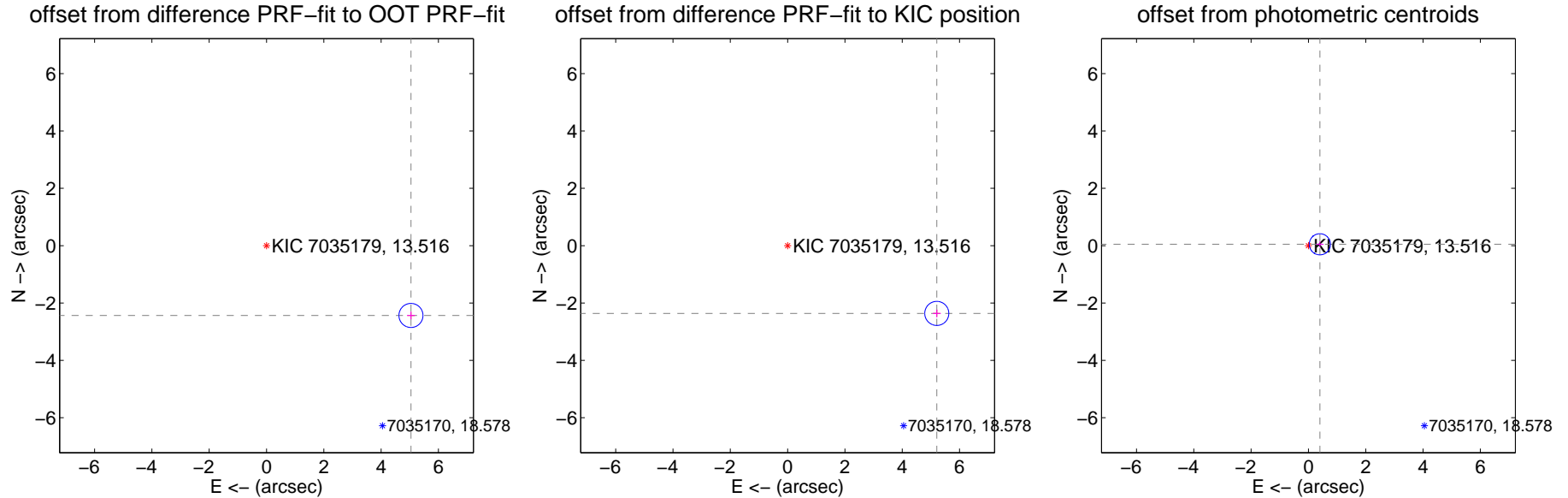
DV Centroid Data

Supplemental centroid analysis for 007035179-02. Kepler magnitude: 13.52. Transit SNR 16.67

There are 0 quarters with good PRF difference image offsets

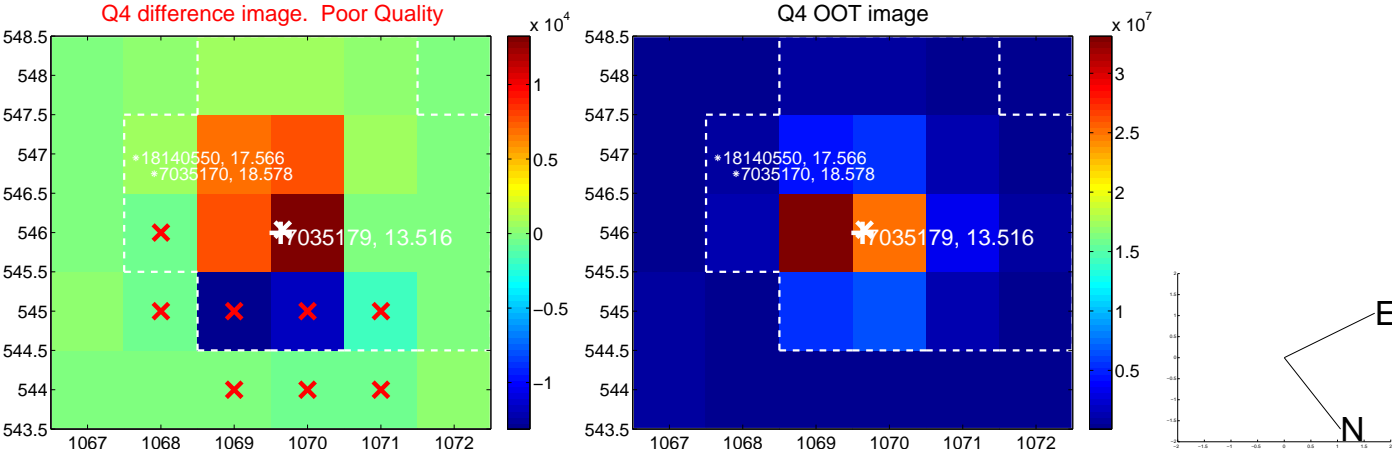
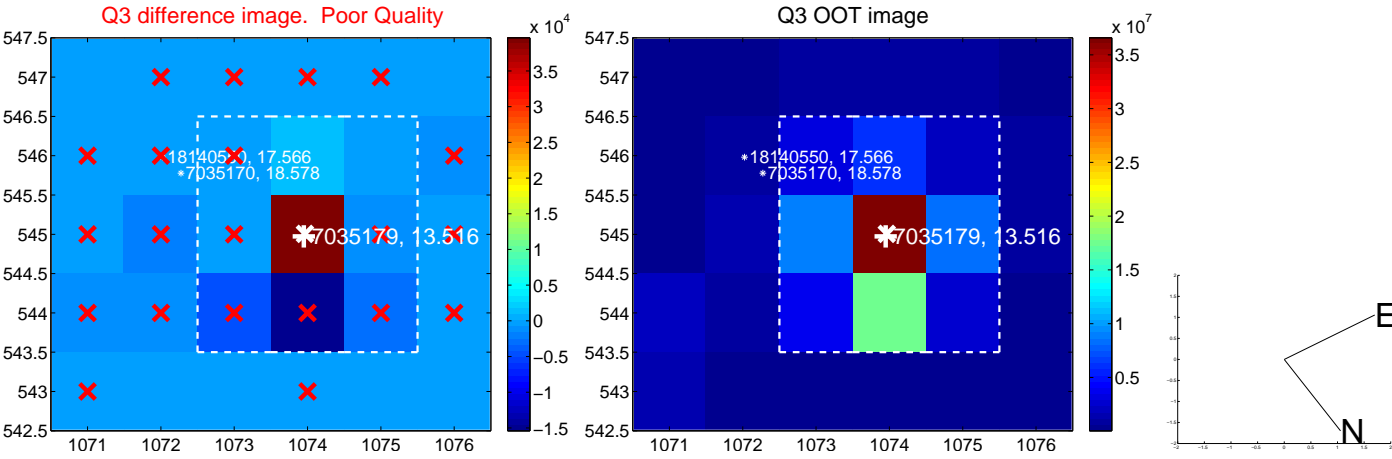
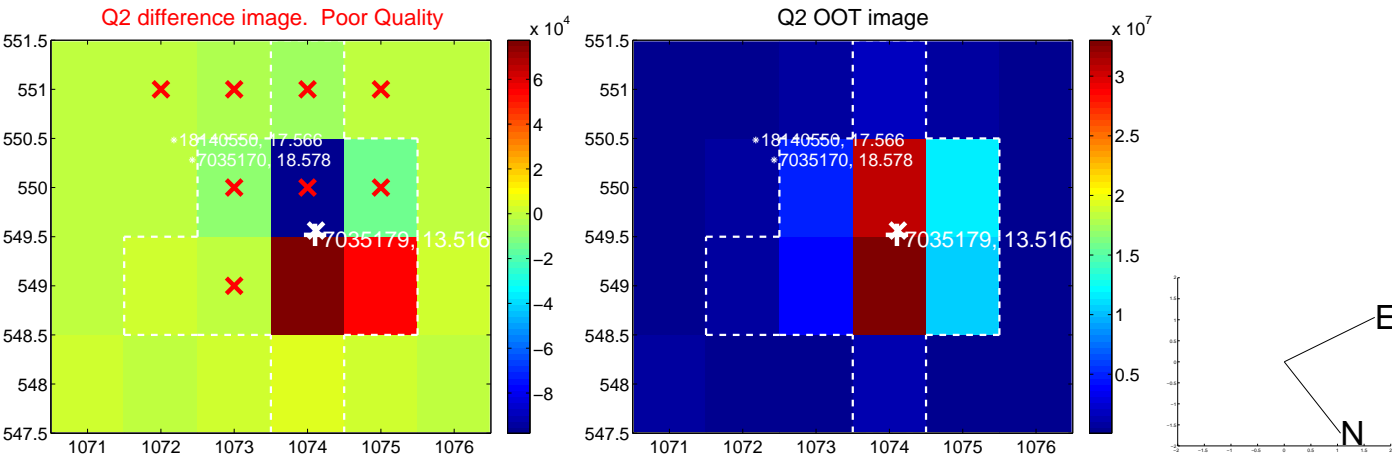
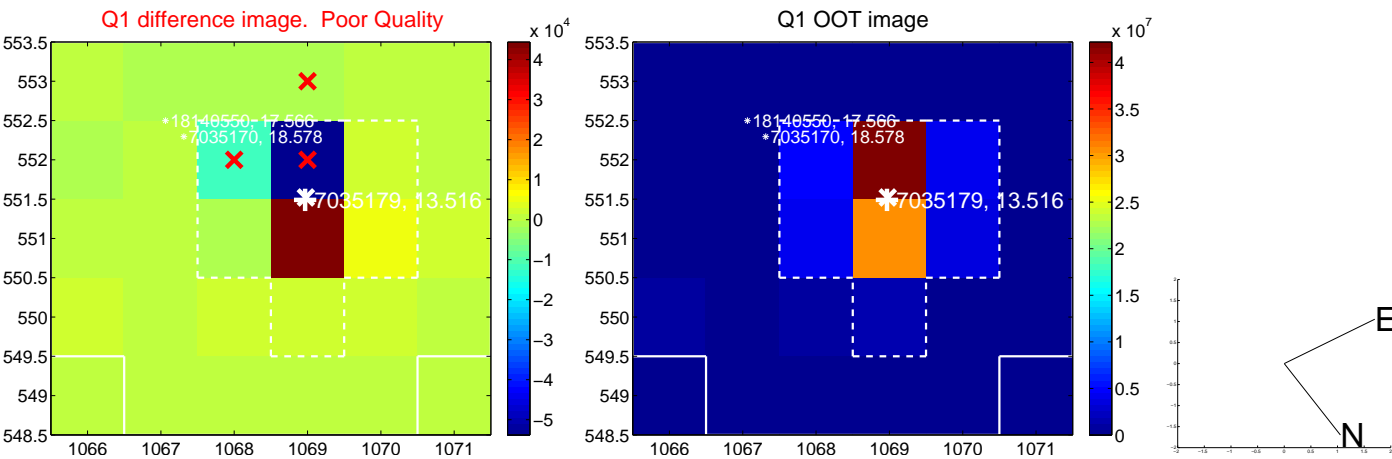
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.597 ± 0.140	40.02	-5.041 ± 0.140	-2.433 ± 0.137
PRF-fit source offset from KIC position	5.716 ± 0.140	40.85	-5.205 ± 0.140	-2.362 ± 0.137
photometric centroid source offset	0.40 ± 0.12	3.28	-0.40 ± 0.12	0.05 ± 0.10

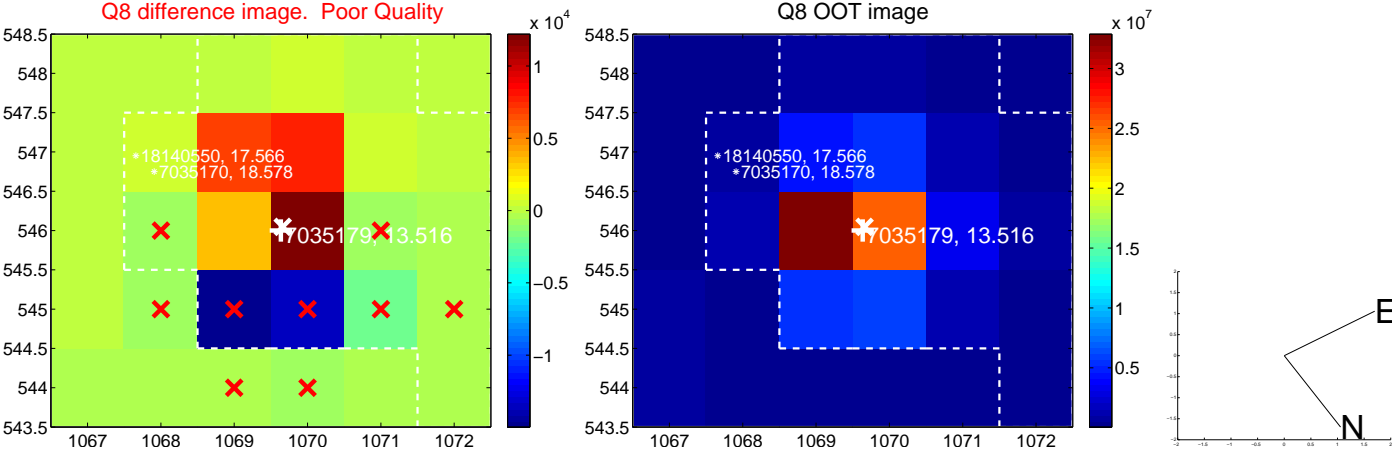
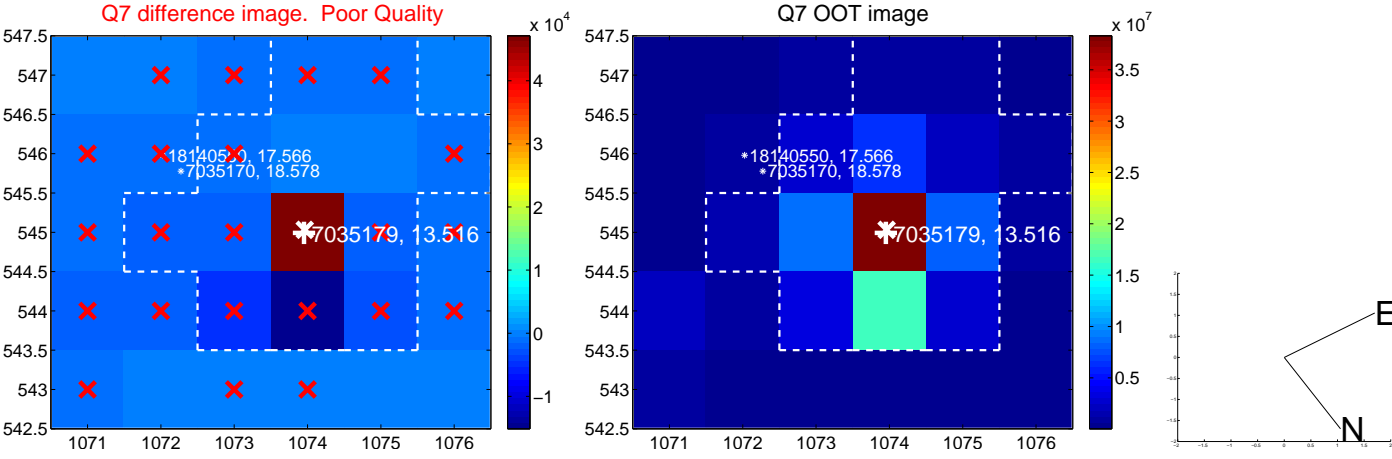
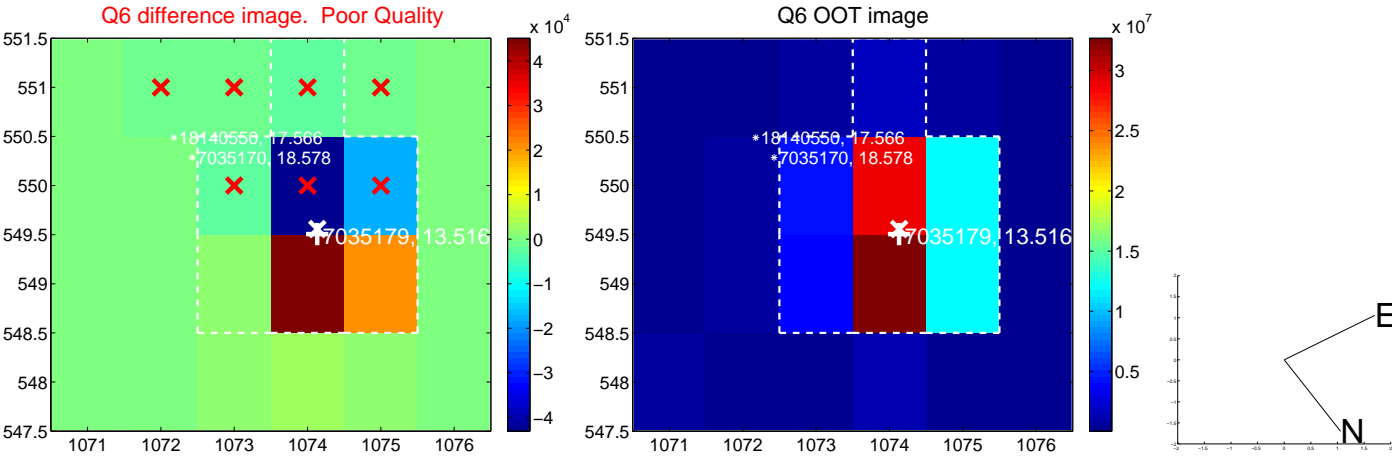
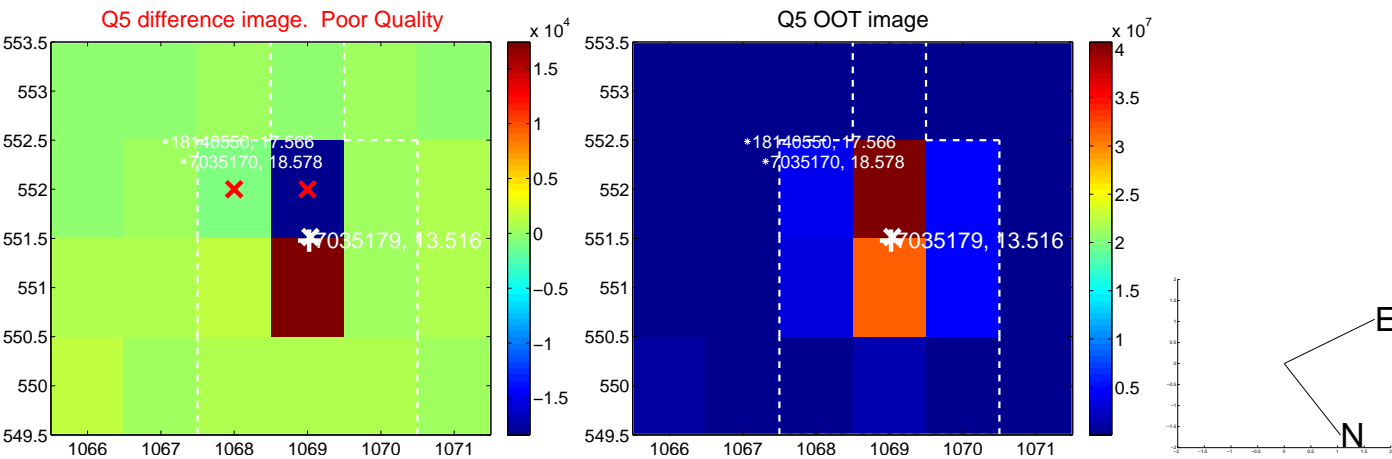


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

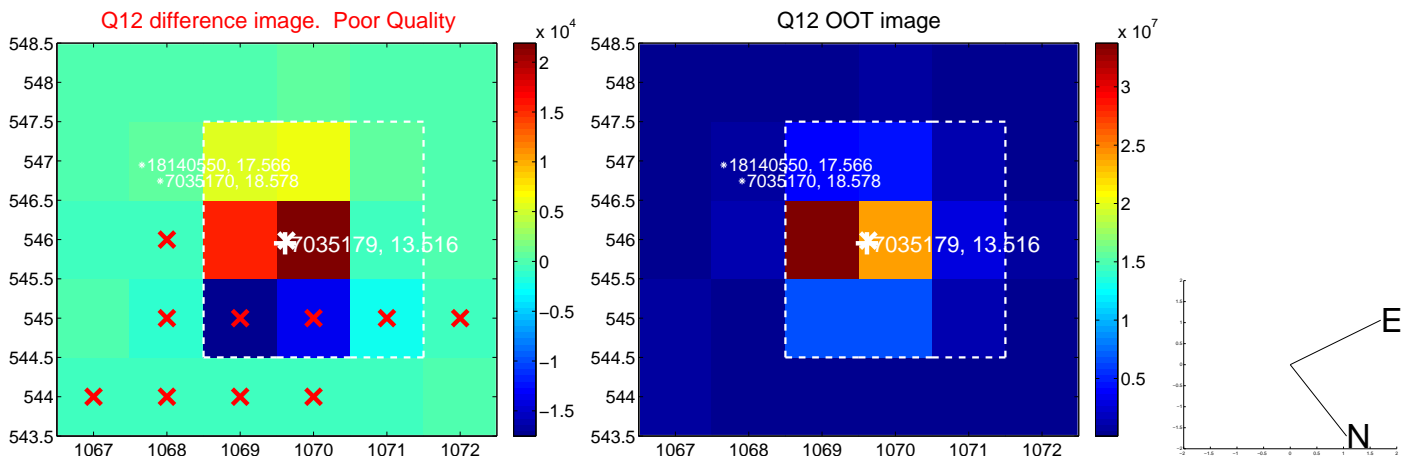
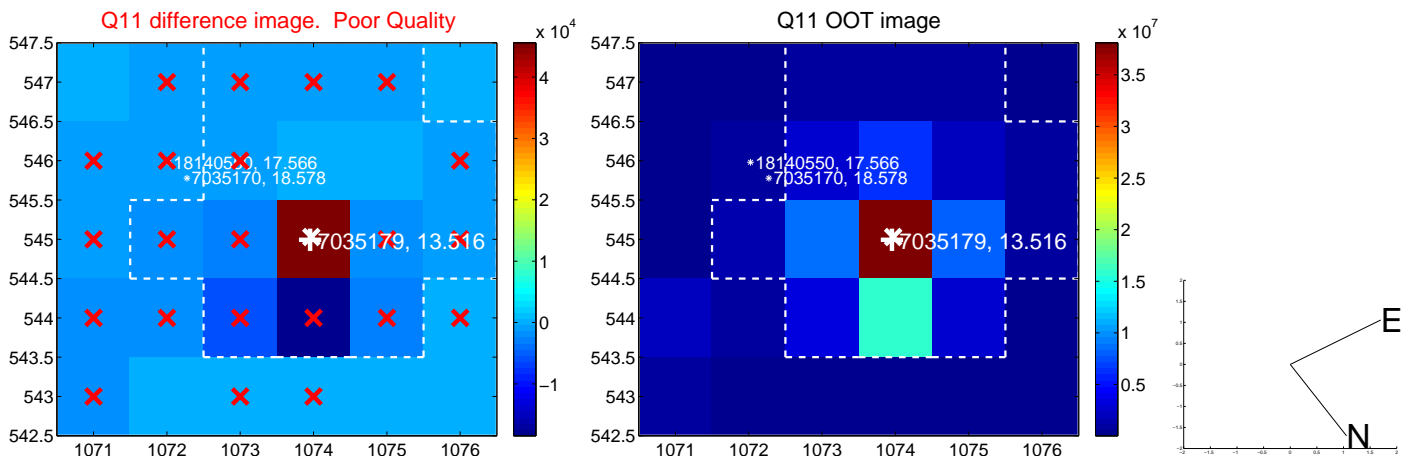
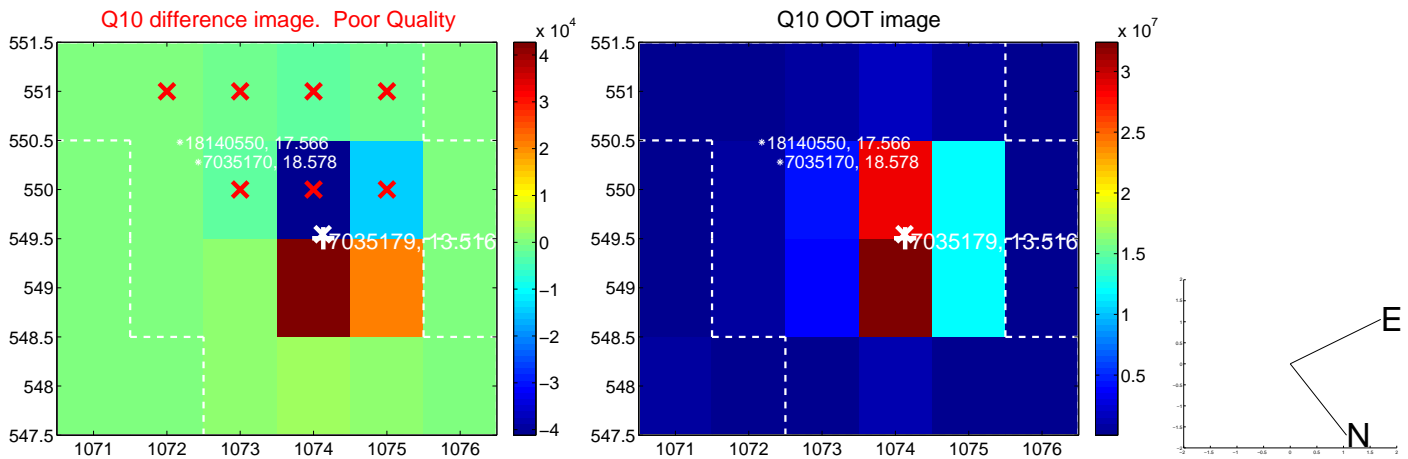
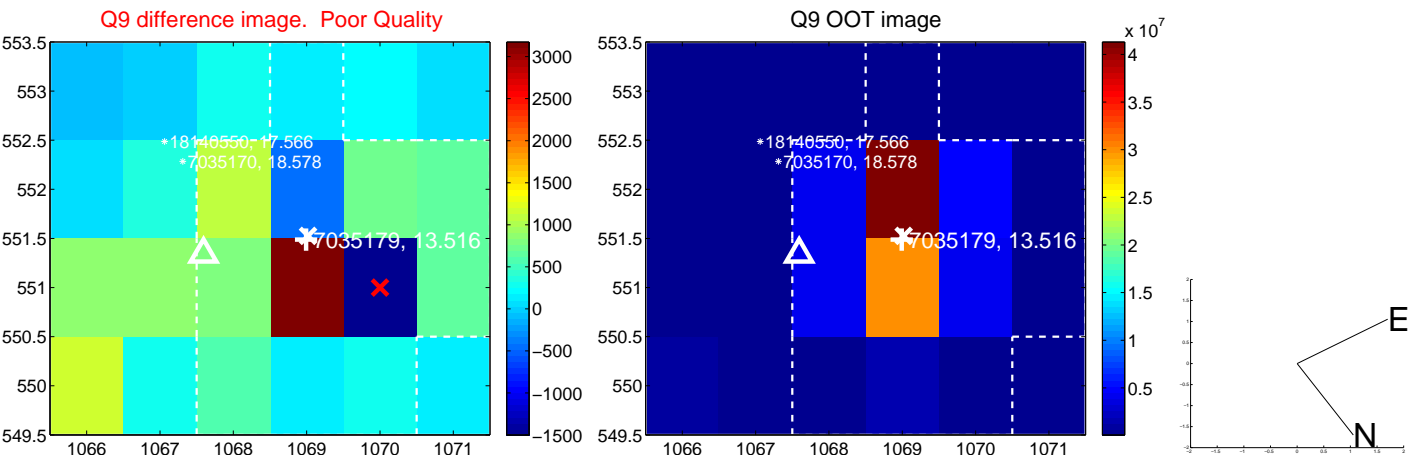
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



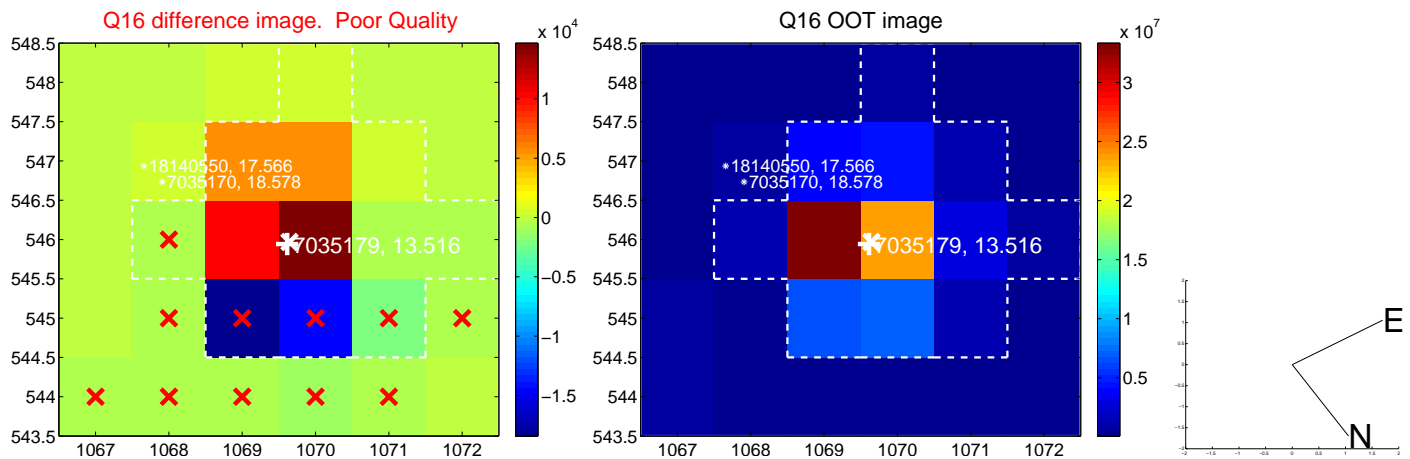
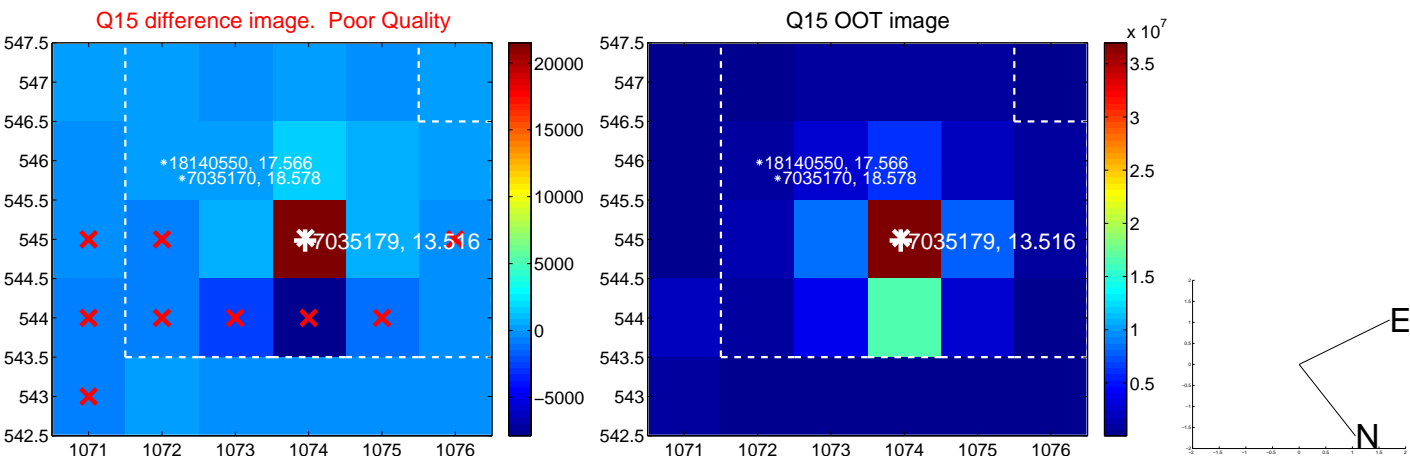
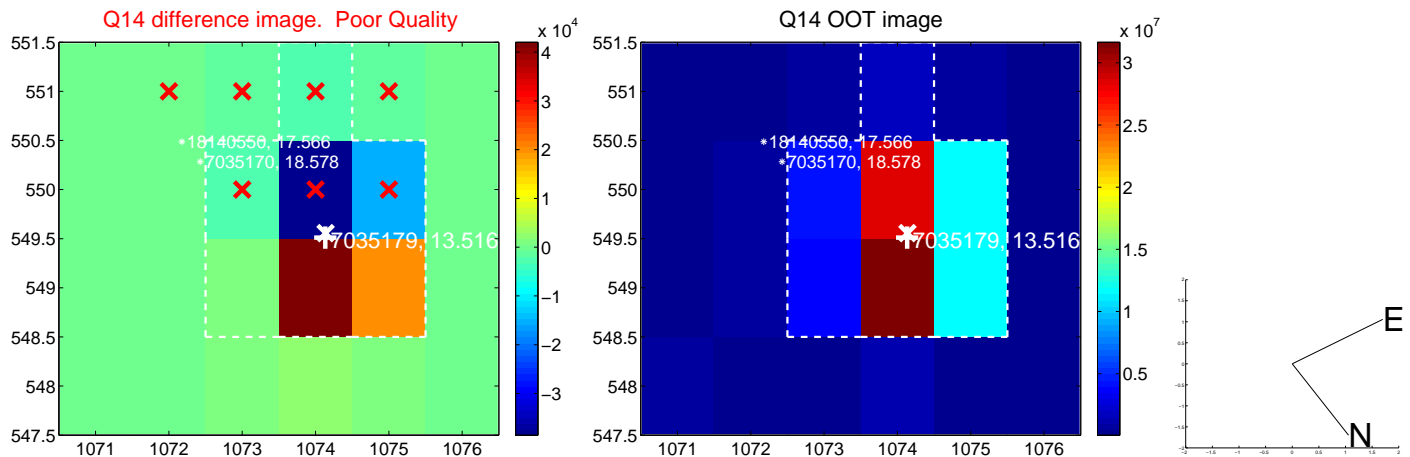
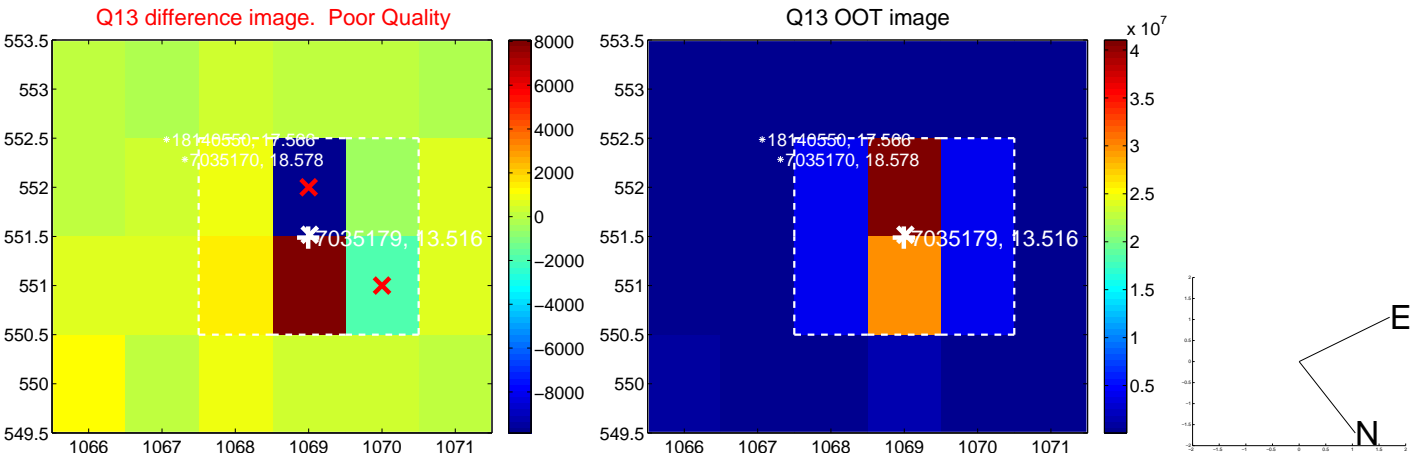
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



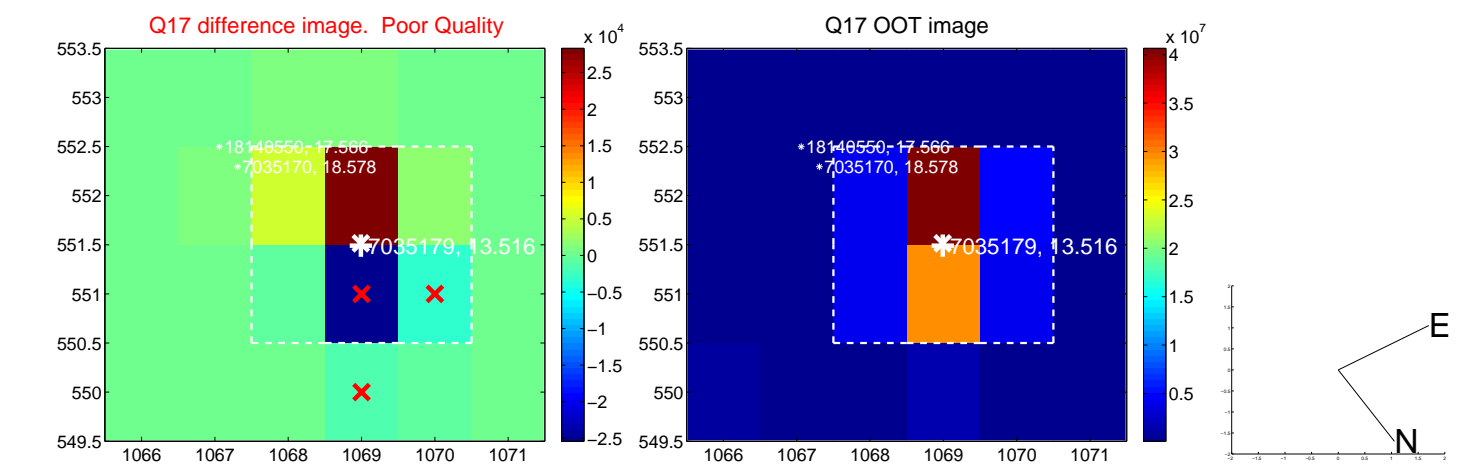
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



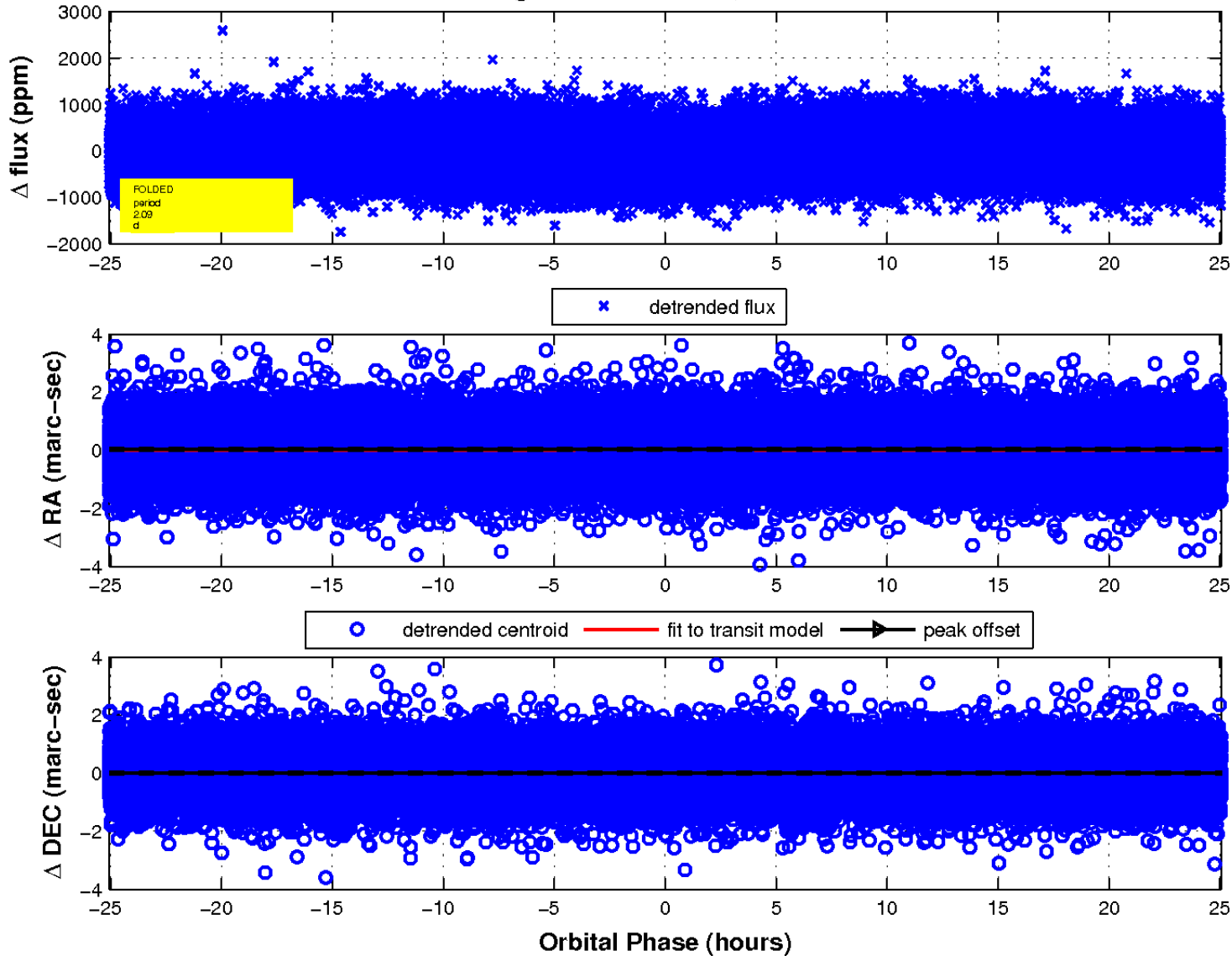
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

