

KIC 005793552

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})
005793552-01	OBS	No	1.320924	131.819675	85.6	5.778	7.8	8.5	0.64	4589	0.59	379.86
005793552-03	OBS	No	100.497323	221.993826	422.7	22.234	7.9	3.4	0.64	4589	1.35	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005793552-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
005793552-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS

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

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

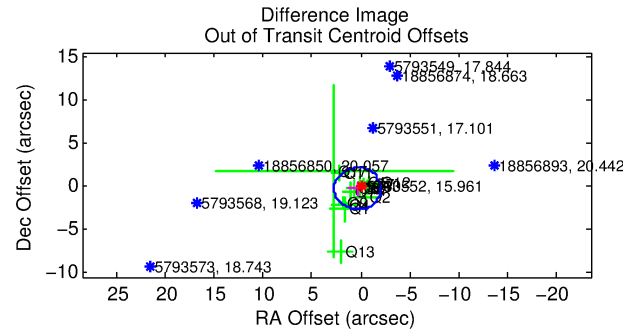
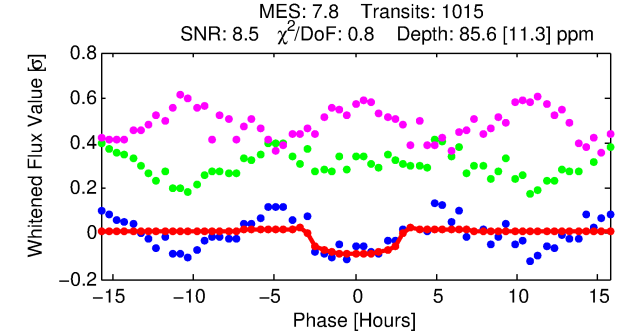
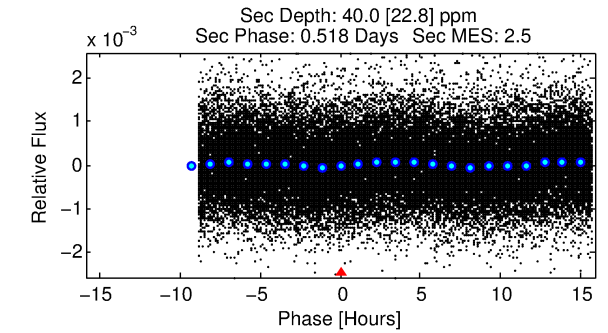
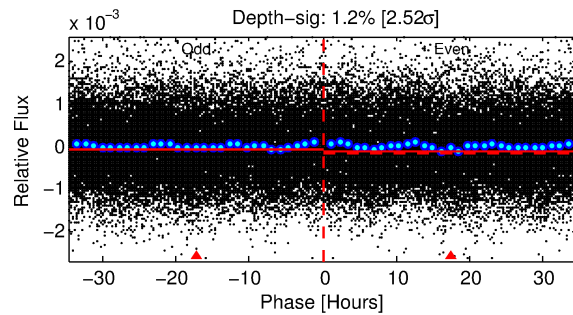
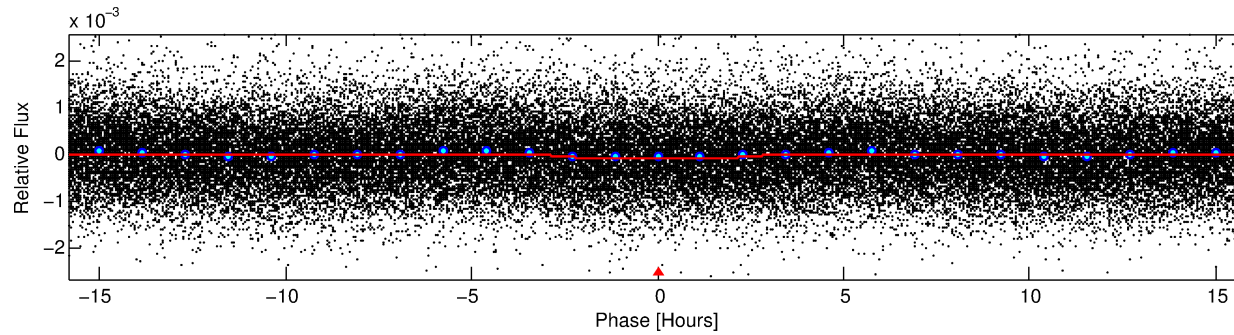
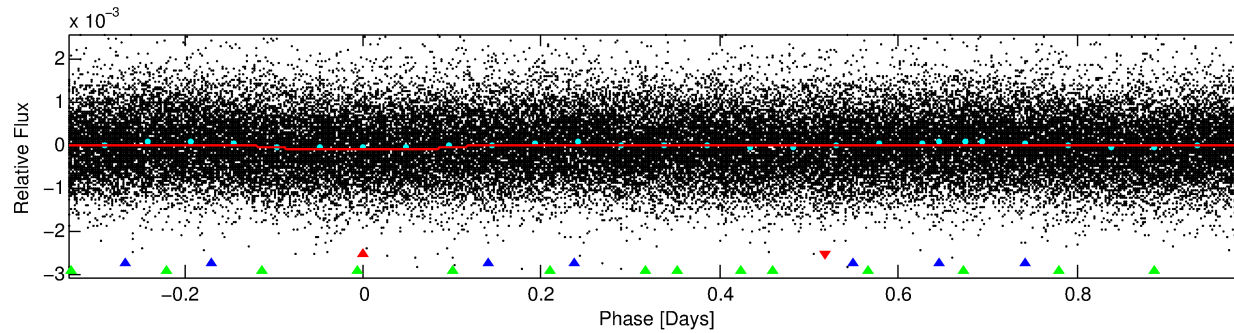
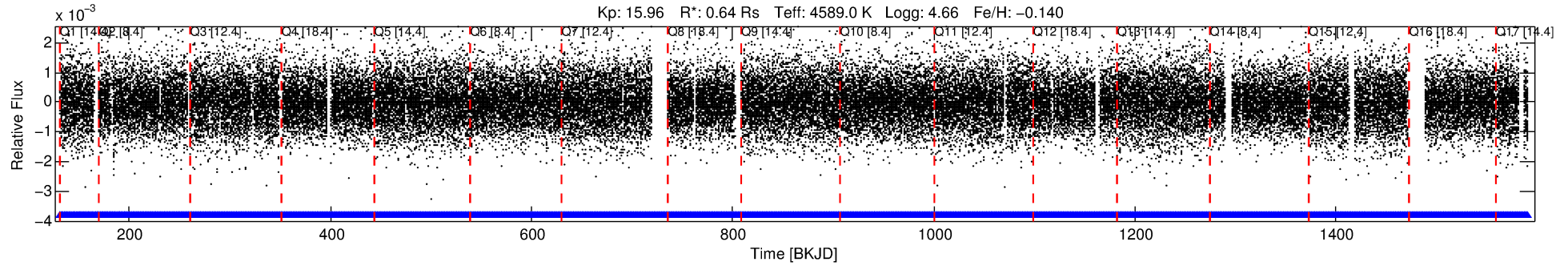
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005793552-01

No Significant Match Found

DV One-Page Summary

KIC: 5793552 Candidate: 1 of 3 Period: 1.321 d



DV Fit Results:

Period = 1.32092 [0.00002] d
Epoch = 131.8197 [0.0068] BKJD
Rp/R* = 0.0084 [0.0082]
a/R* = 1.74 [3.47]
b = 0.42 [5.95]
Seff = 379.86 [61.15]
Teq = 1126 [45] K
Rp = 0.59 [0.58] Re
a = 0.0208 [0.0017] AU
Ag = 27.53 [56.27] [0.47 σ]
Teffp = 3987 [2038] K [1.40 σ]

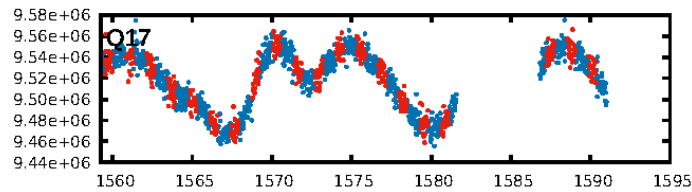
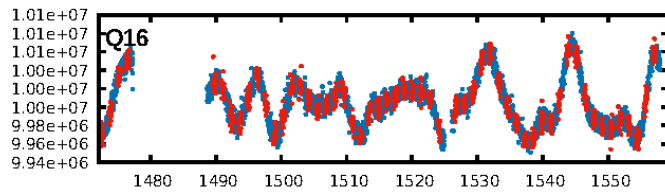
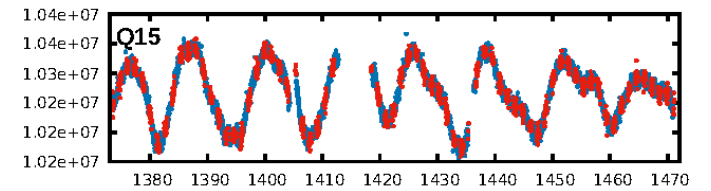
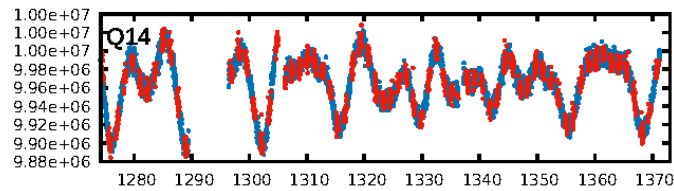
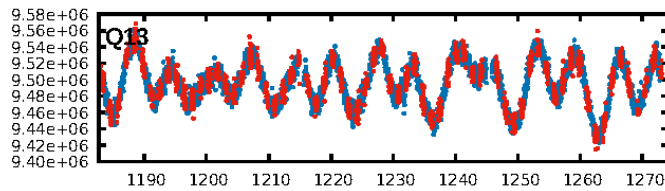
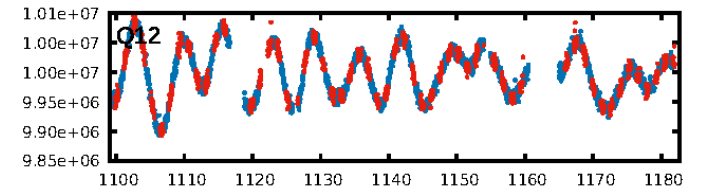
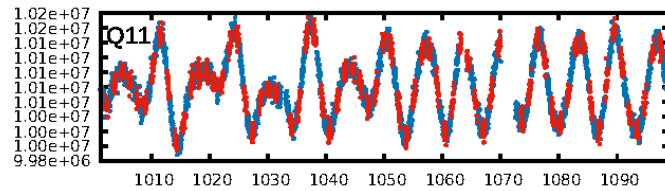
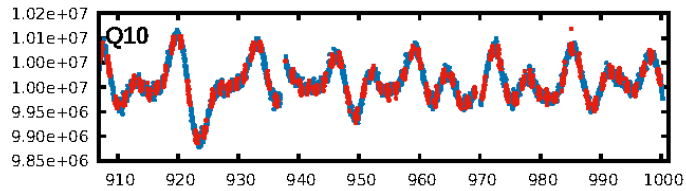
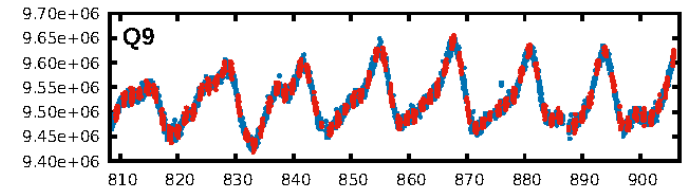
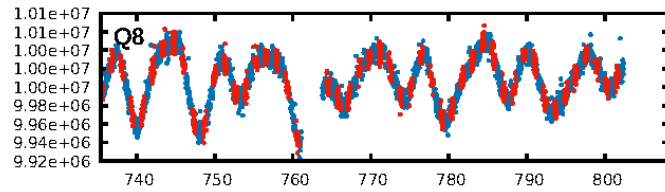
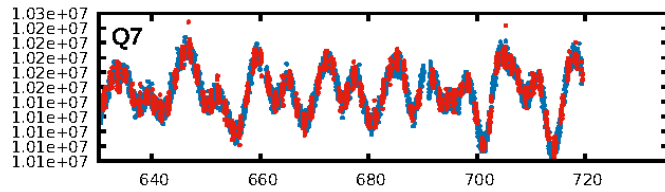
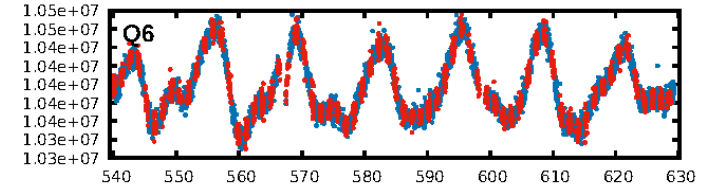
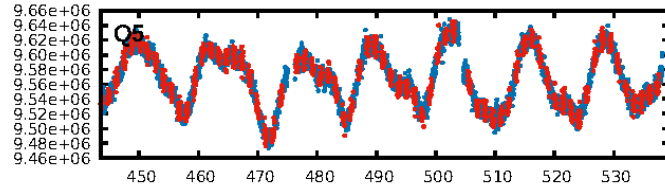
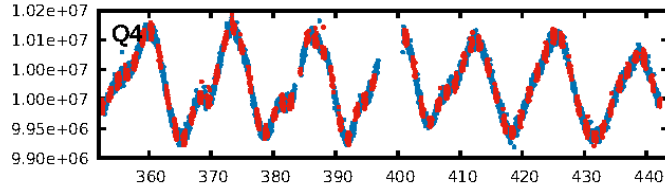
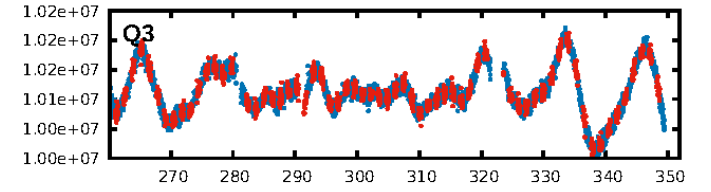
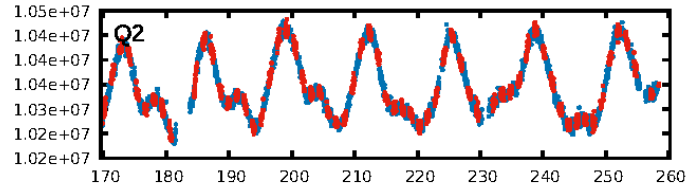
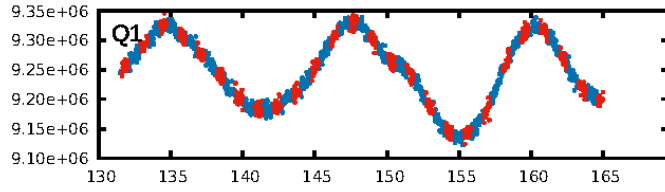
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [103.61 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-14
RollingBand-fgt: 1.00 [969/969]
GhostDiagnostic-chr: 3.108
Centroid-sig: 0.0%
Centroid-so: 2.516 arcsec [2.36 σ]
OotOffset-rm: 0.454 arcsec [0.57 σ]
KicOffset-rm: 0.572 arcsec [0.81 σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [17/17]

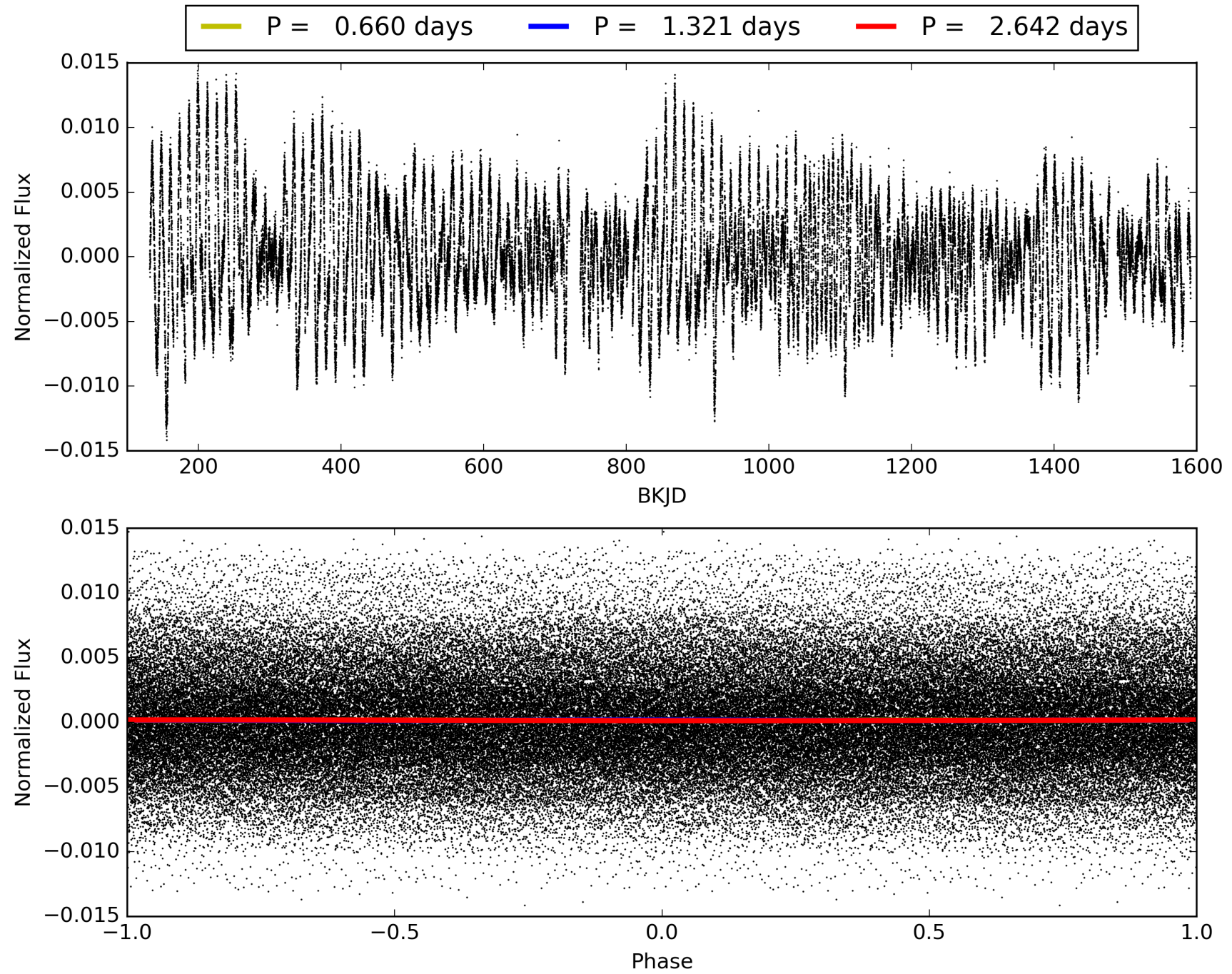
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005793552-01, PDC Light Curves

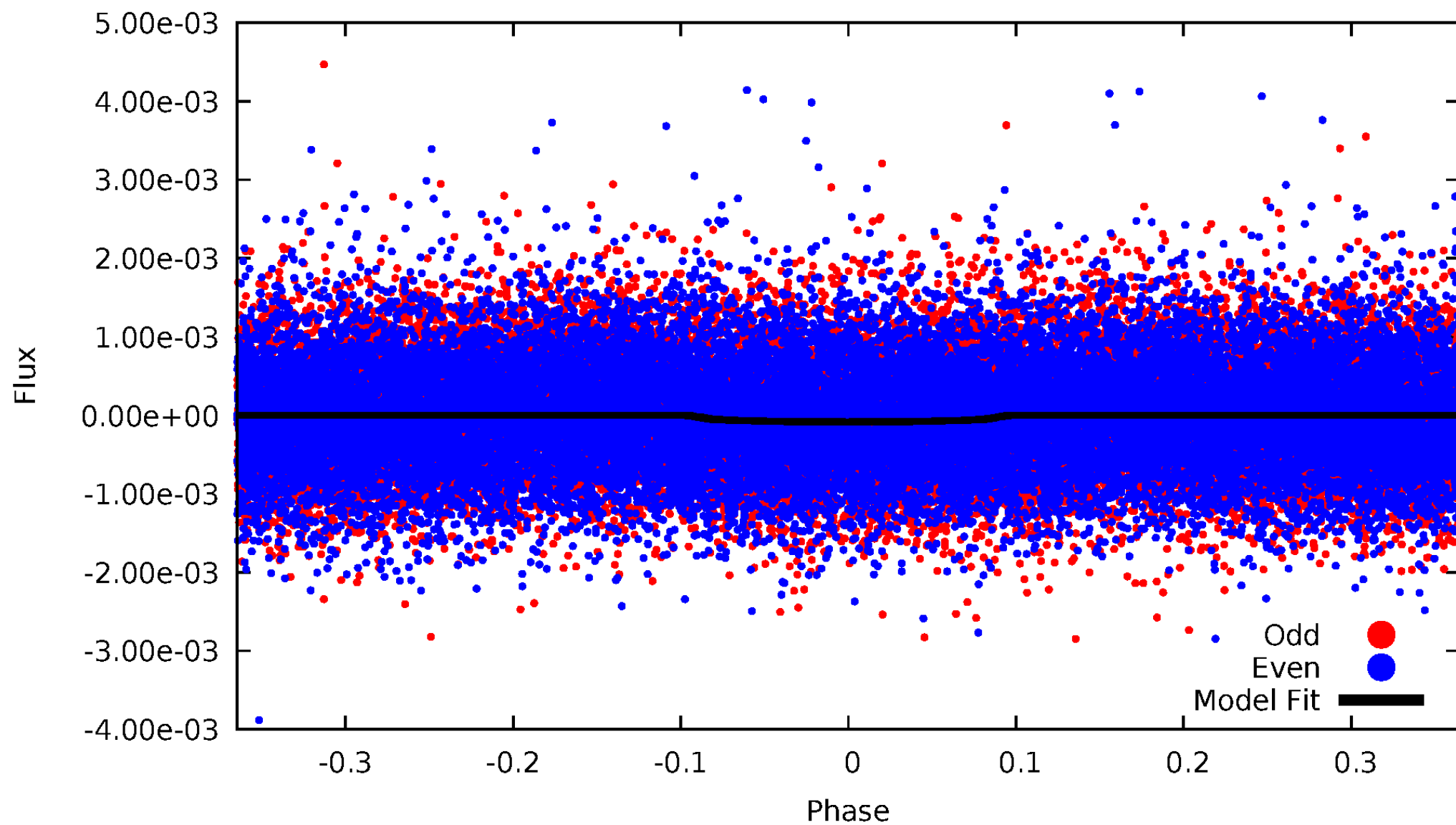


TCE 005793552-01



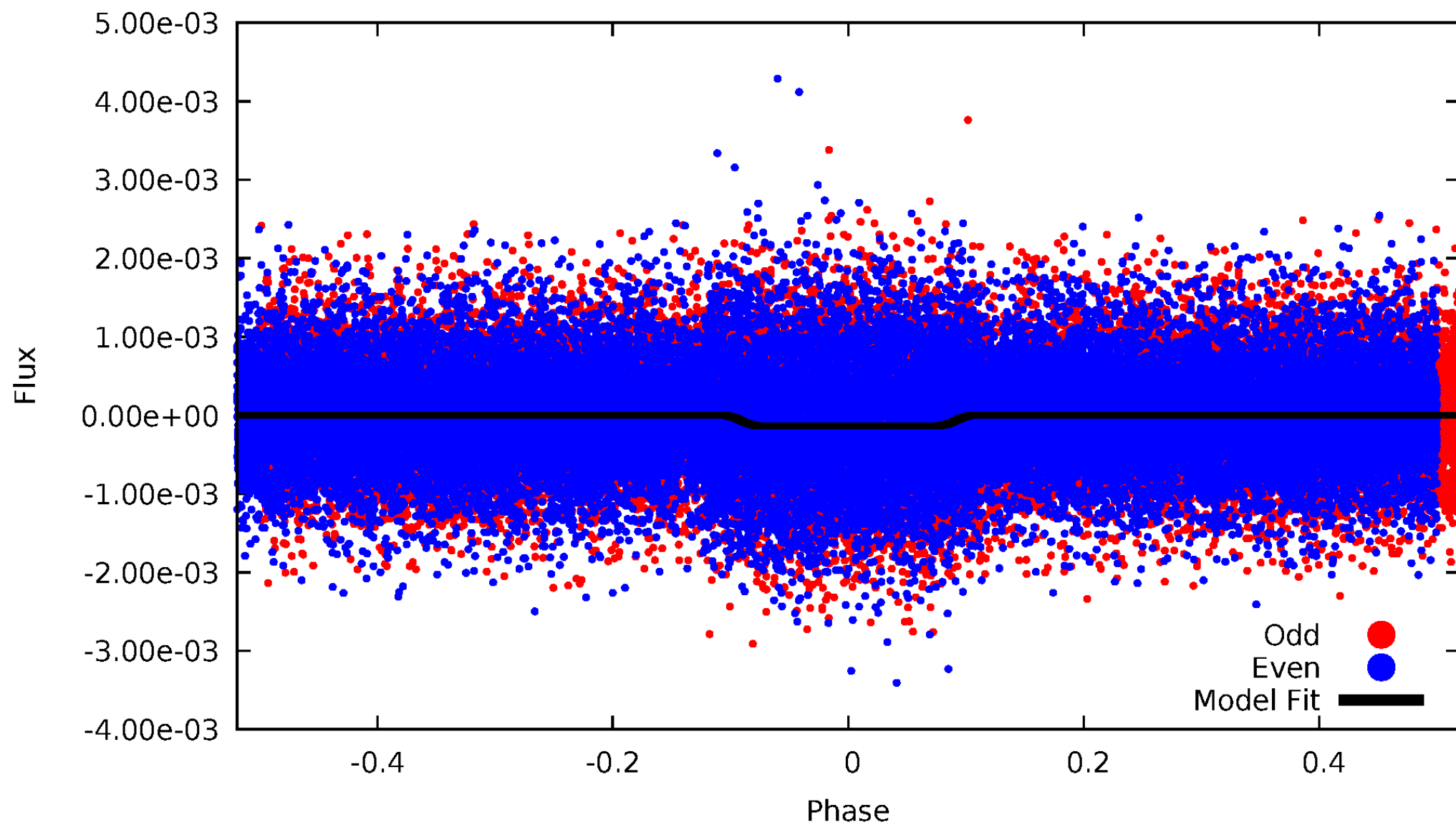
DV Odd/Even

TCE 005793552-01

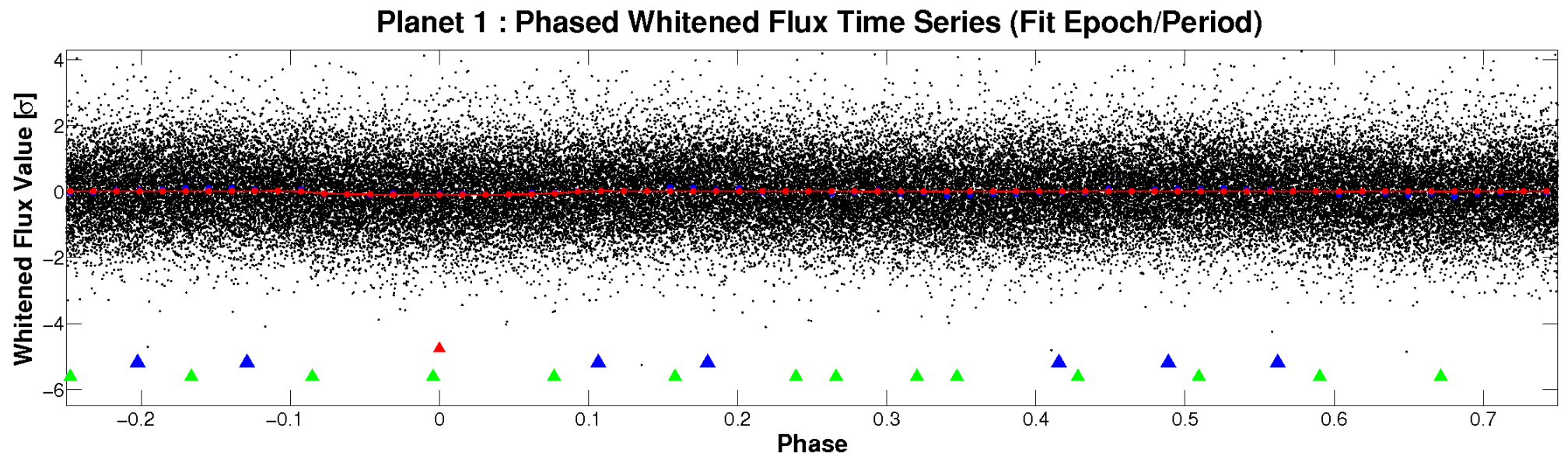
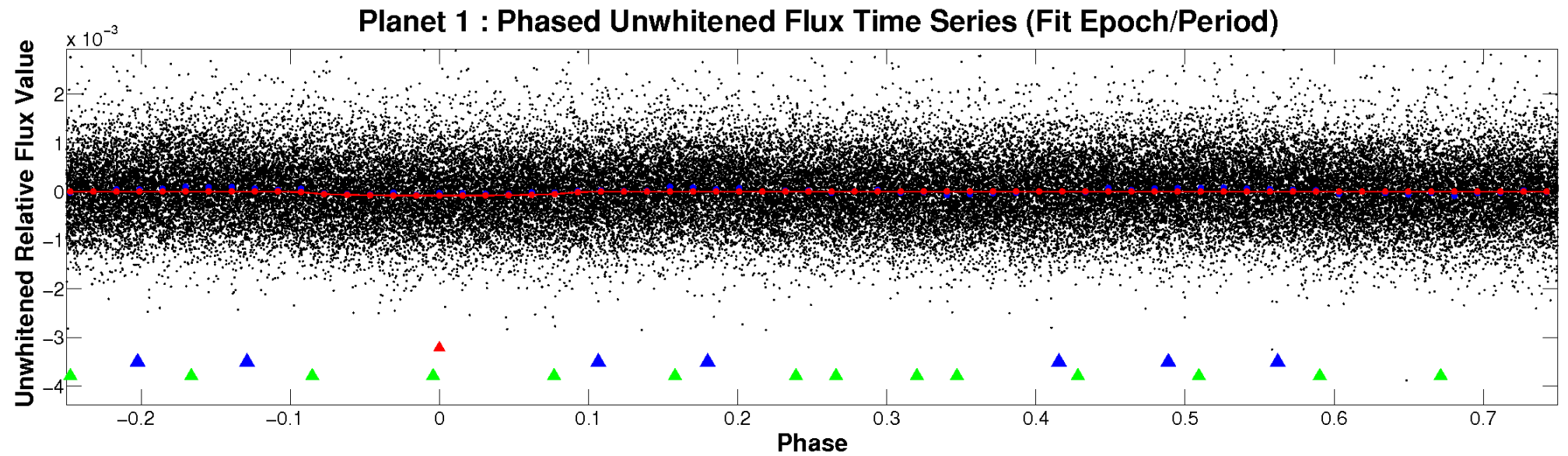


ALT Odd/Even

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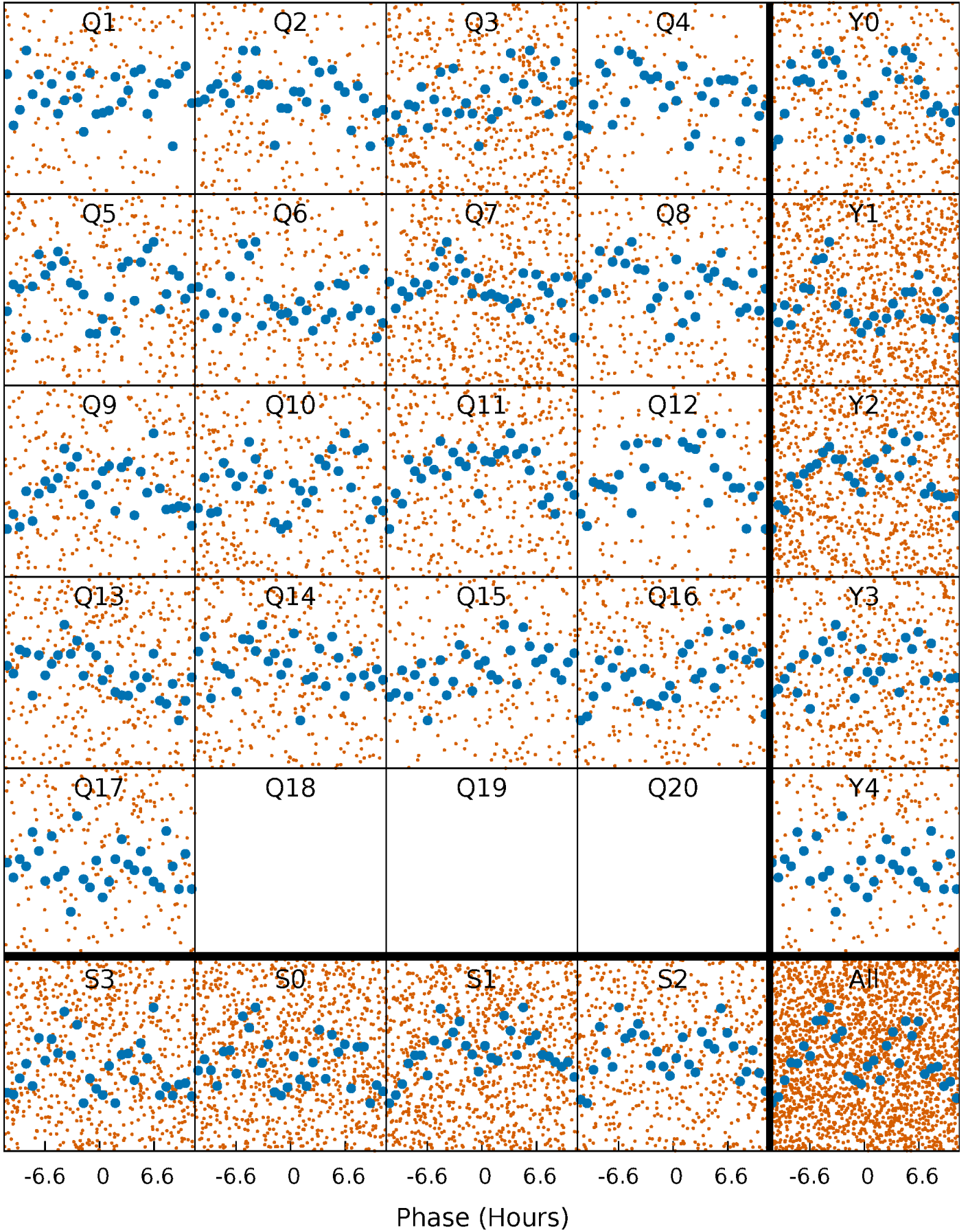


Non-Whitened Vs. Whitened Light Curve



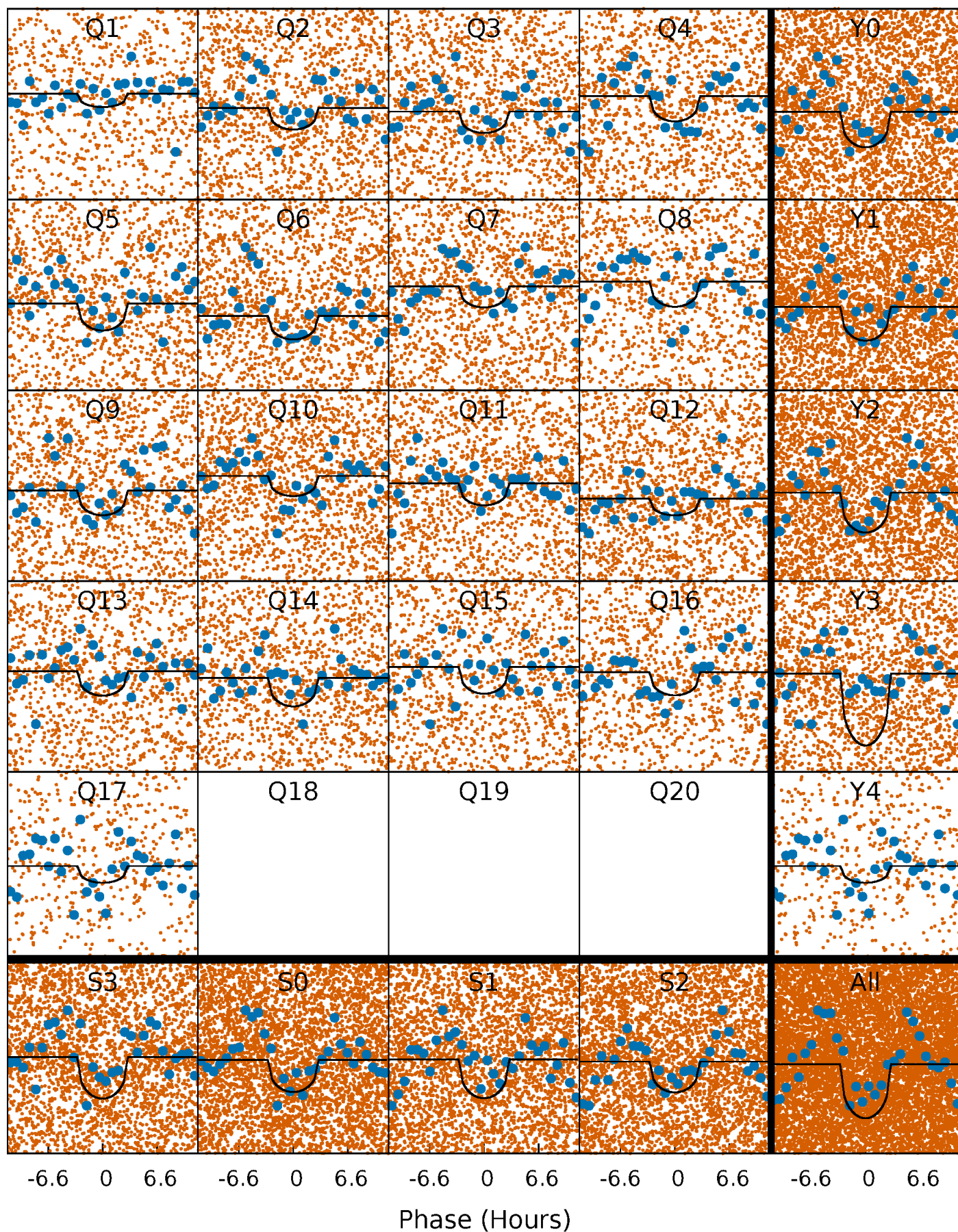
PDC Quarter-Phased Transit Curves

TCE 005793552-01 P= 1.320924 Days $T_0=131.819675$ (BKJD)



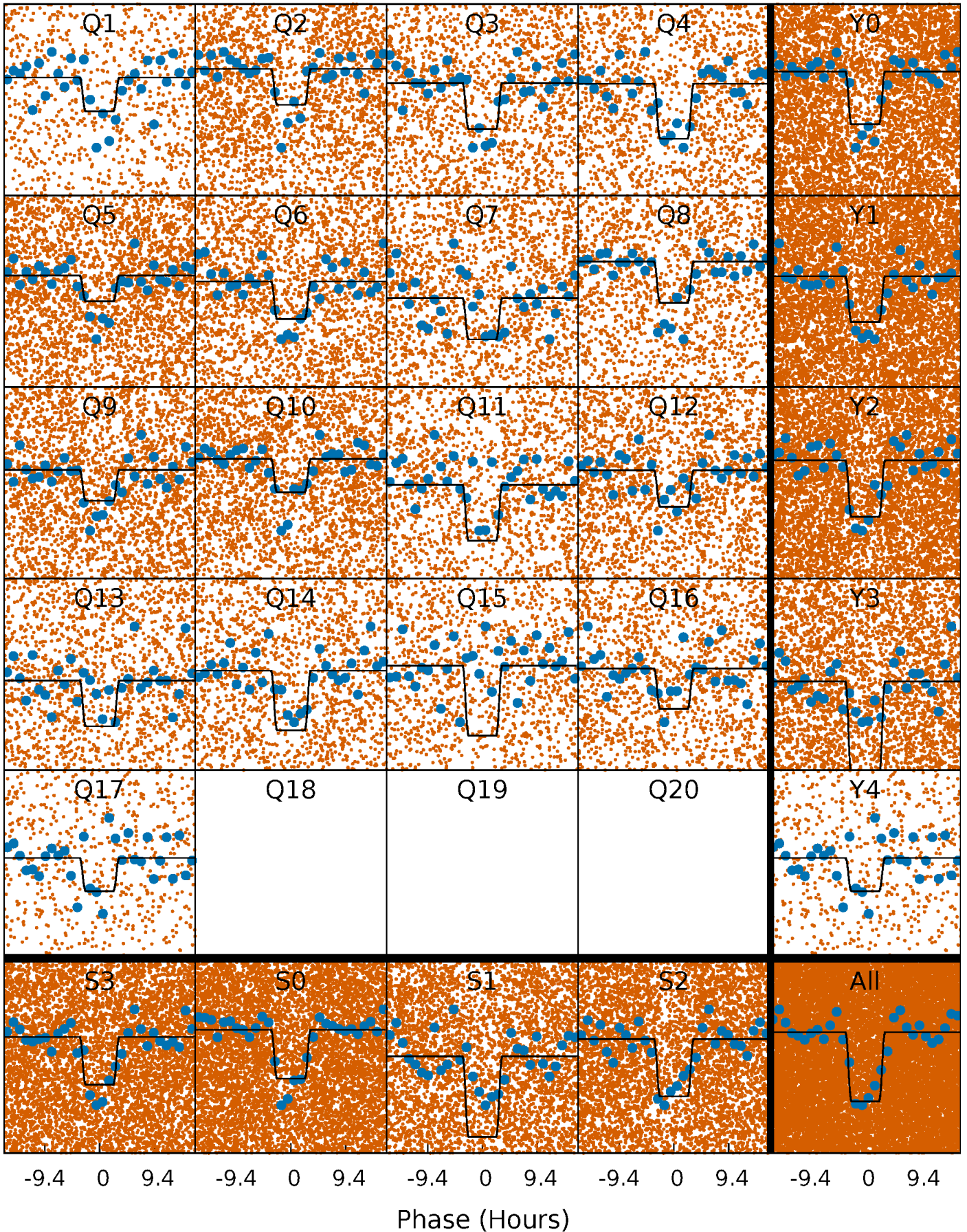
DV Quarter-Phased Transit Curves

TCE 005793552-01 P= 1.320924 Days $T_0=131.819675$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

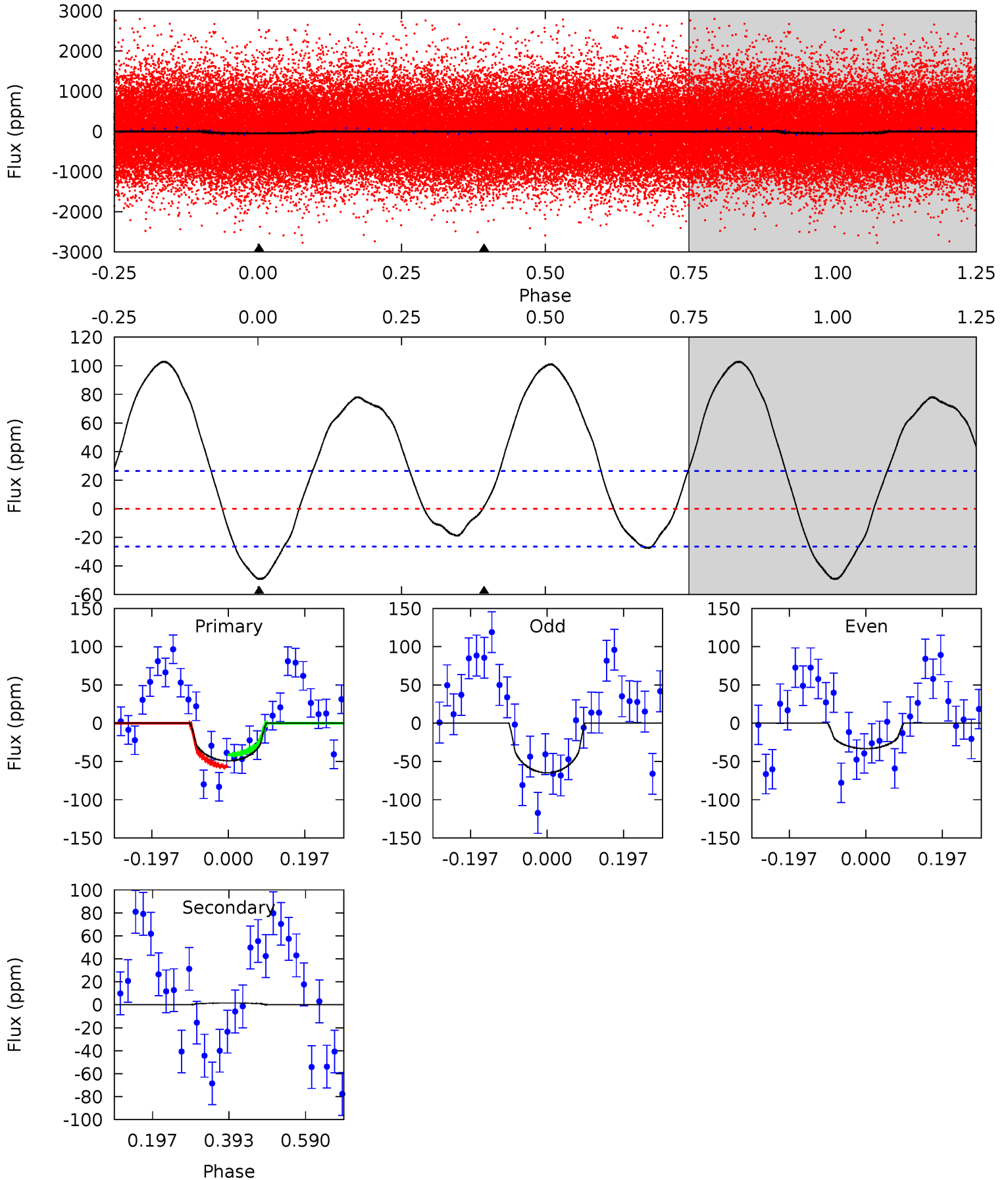
TCE 005793552-01 P= 1.320945 Days $T_0=131.803994$ (BKJD)



DV Model-Shift Uniqueness Test

005793552-01, P = 1.320924 Days, E = 130.498751 Days

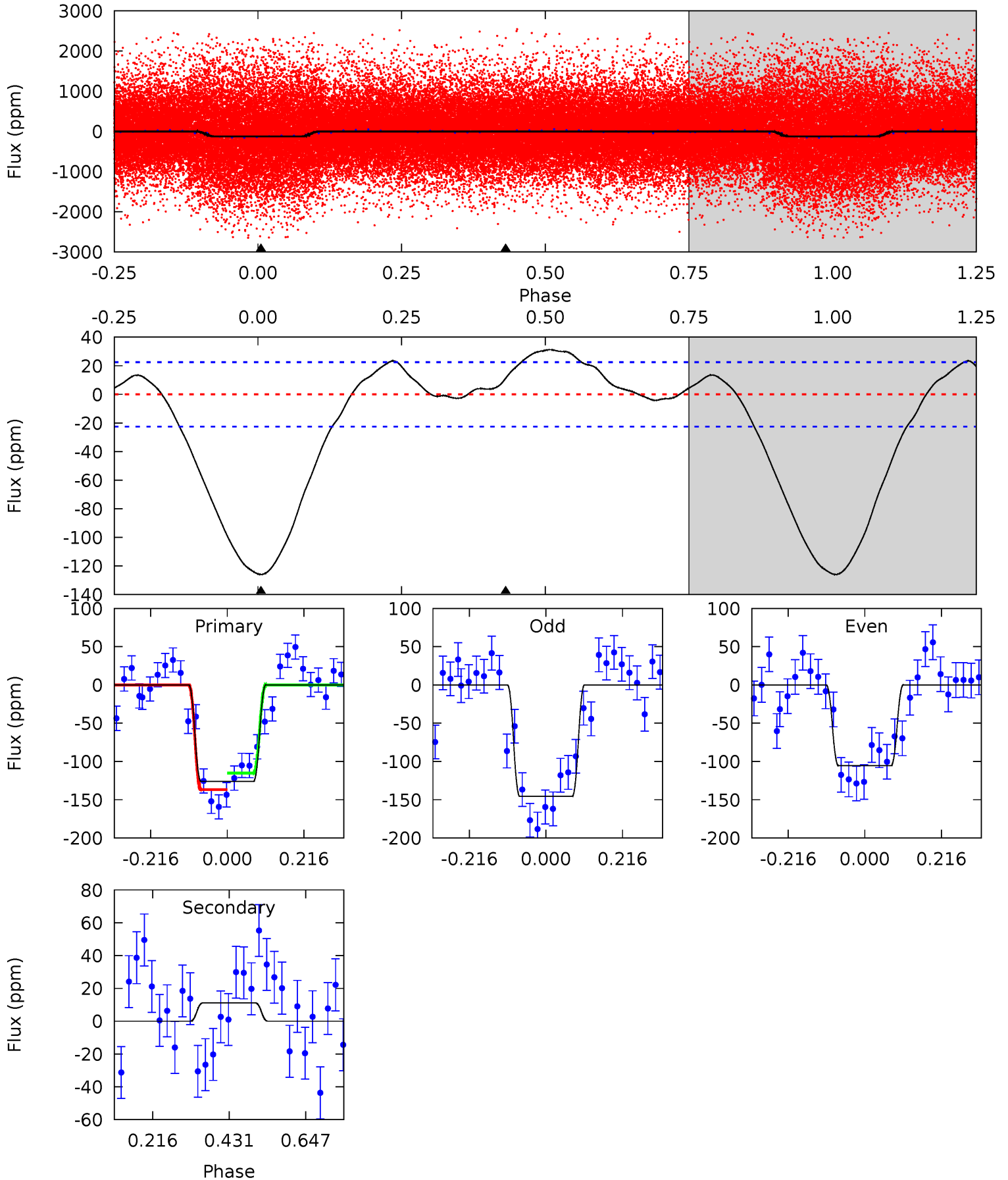
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.20	-0.25	0	0	4.42	1.29	5.94	8.20	8.20	-0.25	-0.25	2.64	0.76	0.68	1.30



Alt Model-Shift Uniqueness Test

005793552-01, P = 1.320945 Days, E = 130.483049 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	-2.18	0	0	4.40	1.24	1.04	24.6	24.6	-2.18	-2.18	3.91	1.03	0.20	2.14



Stellar Parameters For KIC 005793552

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4589^{+124}_{-137}	$4.658^{+0.024}_{-0.052}$	$-0.140^{+0.300}_{-0.300}$	$0.642^{+0.070}_{-0.043}$	$0.708^{+0.055}_{-0.073}$	$3.766^{+0.441}_{-0.804}$
	+3%/-3%	+1%/-1%	+214%/-214%	+11%/-7%	+8%/-10%	+12%/-21%
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 005793552-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	2 ± 6	$0.72^{+0.54}_{-0.43}$	1584^{+50}_{-52}	-2425^{+5243}_{-838}	$-0.417^{+2.801}_{-5.196}$
Alt.	11 ± 5	$0.83^{+0.57}_{-0.51}$	1584^{+50}_{-54}	-3029^{+404}_{-1080}	$-3.571^{+2.488}_{-22.013}$

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

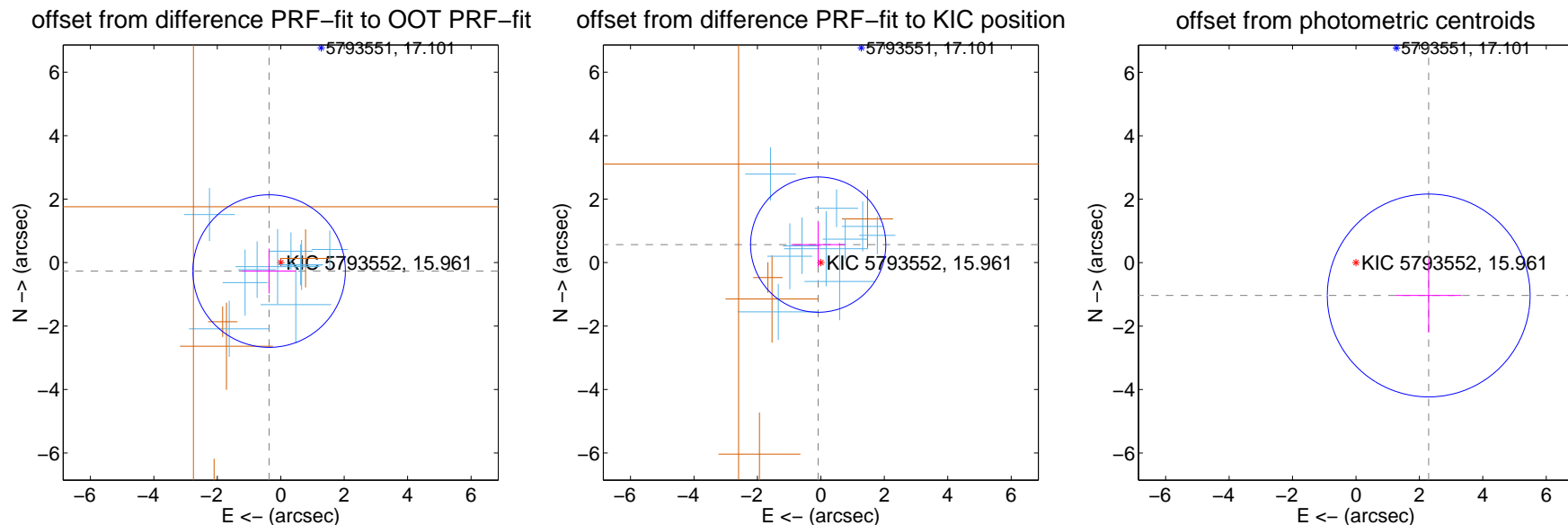
DV Centroid Data

Supplemental centroid analysis for 005793552-01. Kepler magnitude: 15.96. Transit SNR 8.46

There are 10 quarters with good PRF difference image offsets

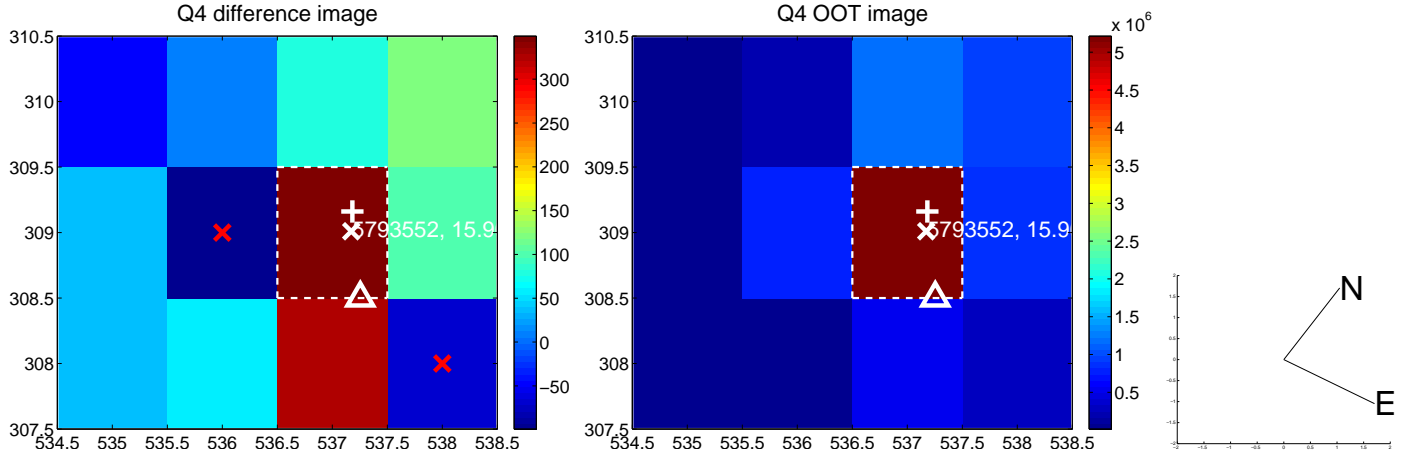
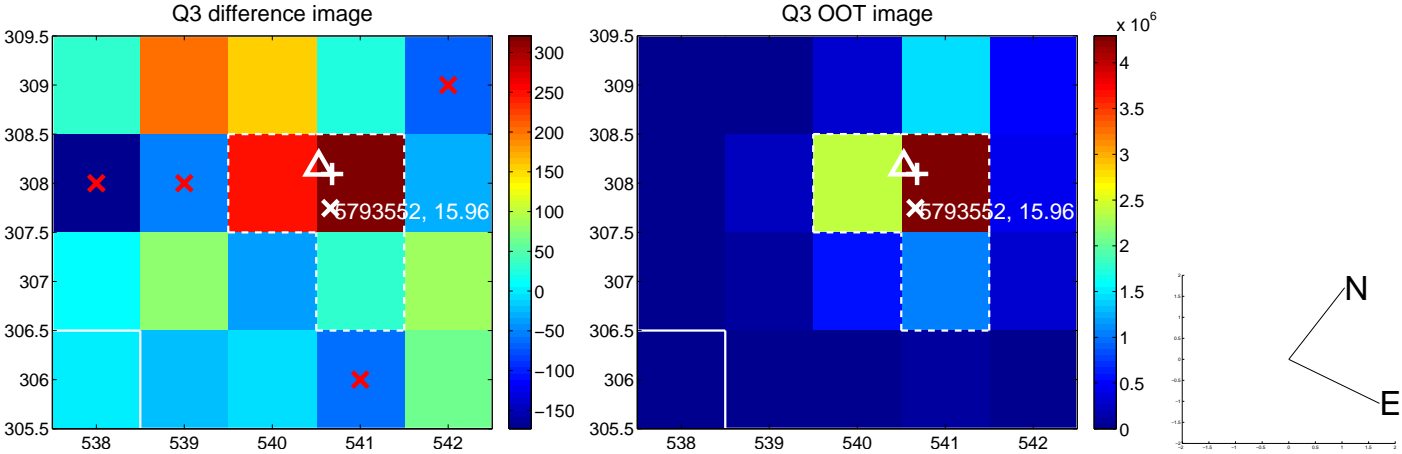
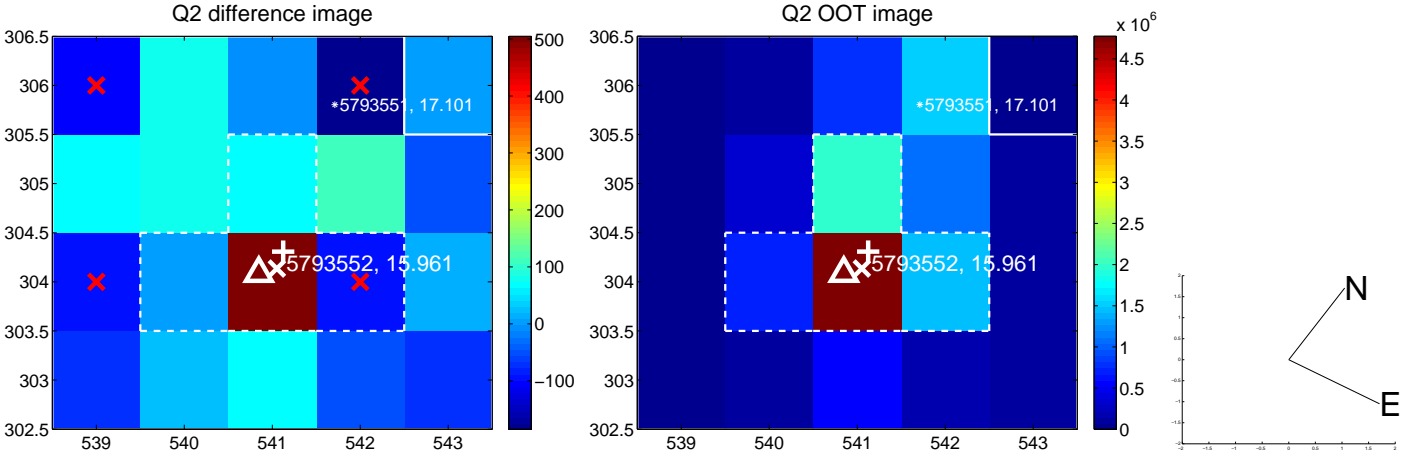
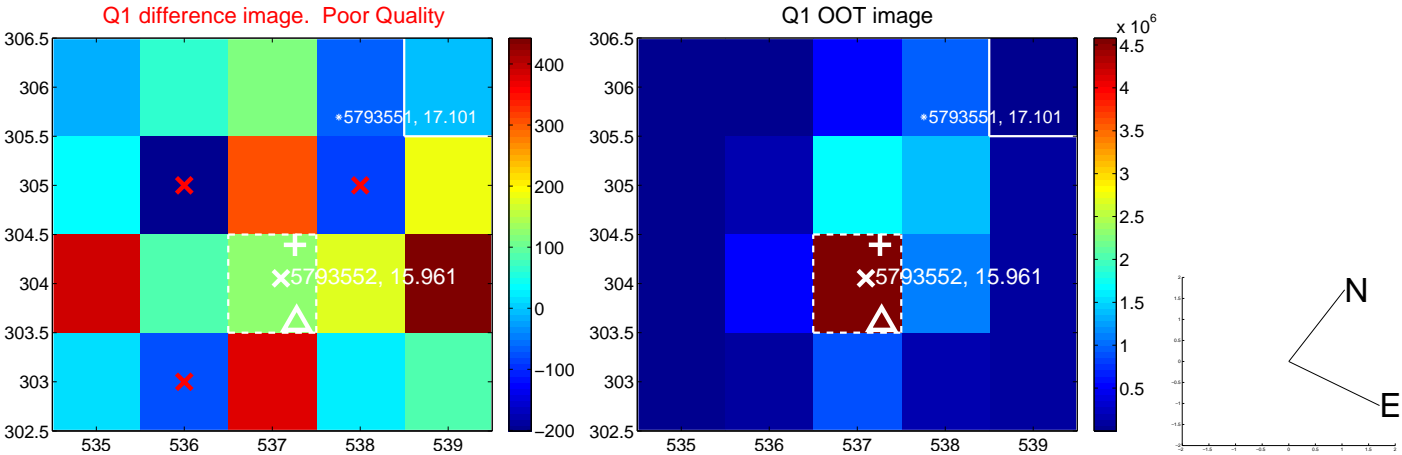
The direct PRF centroid is offset from the target star catalog position by about 1.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.454 ± 0.801	0.57	0.367 ± 0.847	-0.267 ± 0.707
PRF-fit source offset from KIC position	0.572 ± 0.710	0.81	0.085 ± 0.847	0.566 ± 0.707
photometric centroid source offset	2.52 ± 1.07	2.36	-2.29 ± 1.04	-1.03 ± 1.17

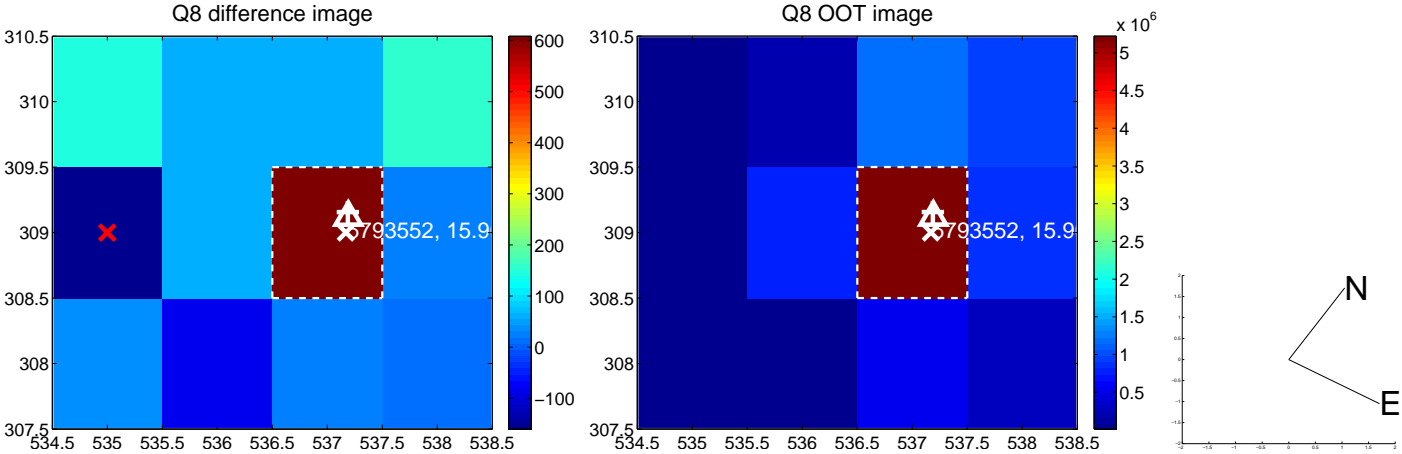
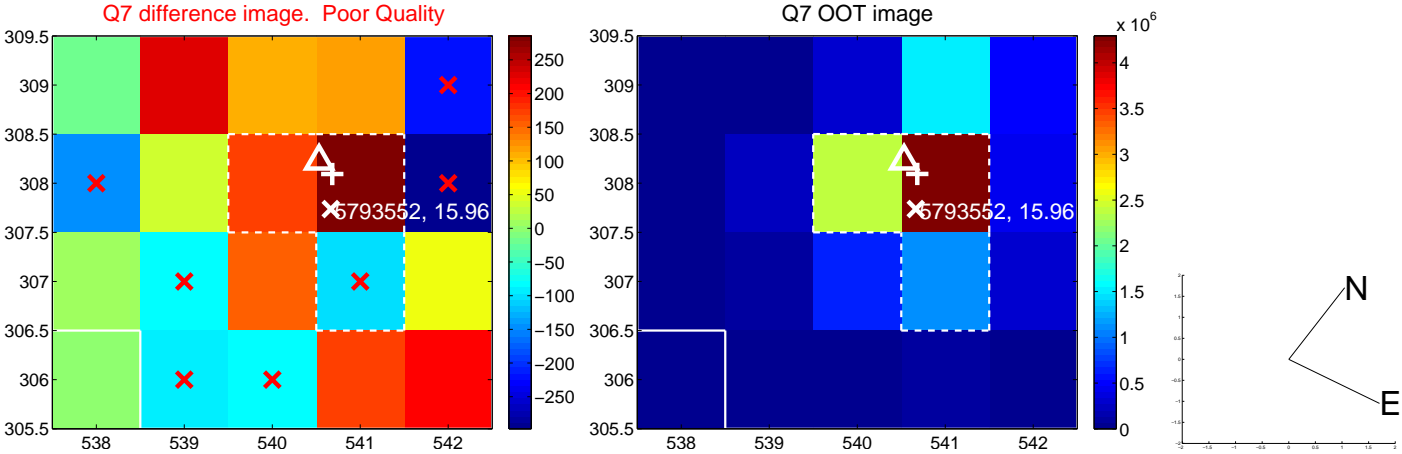
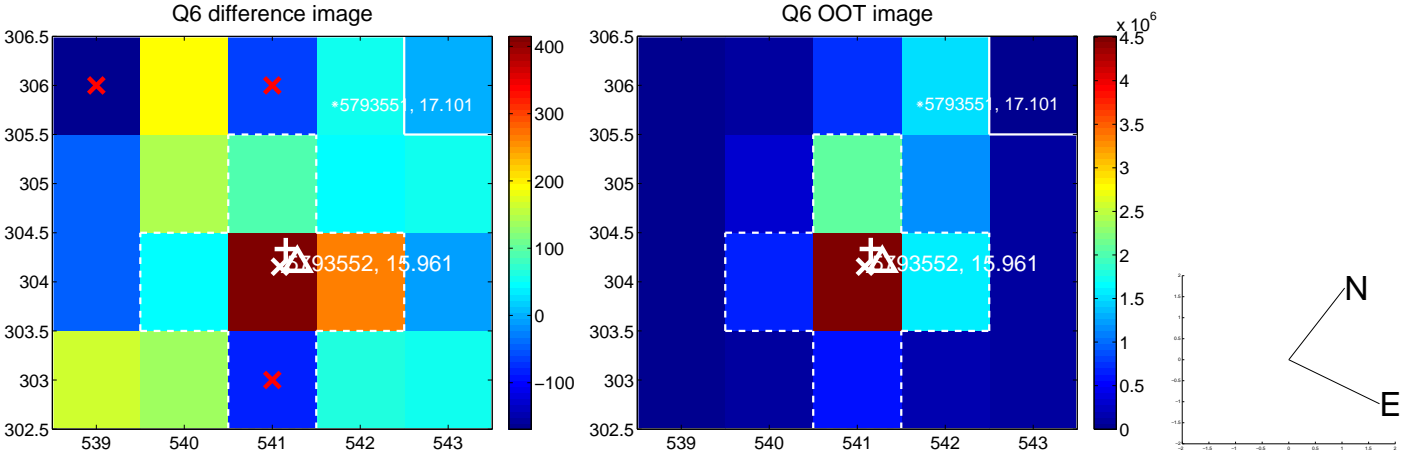
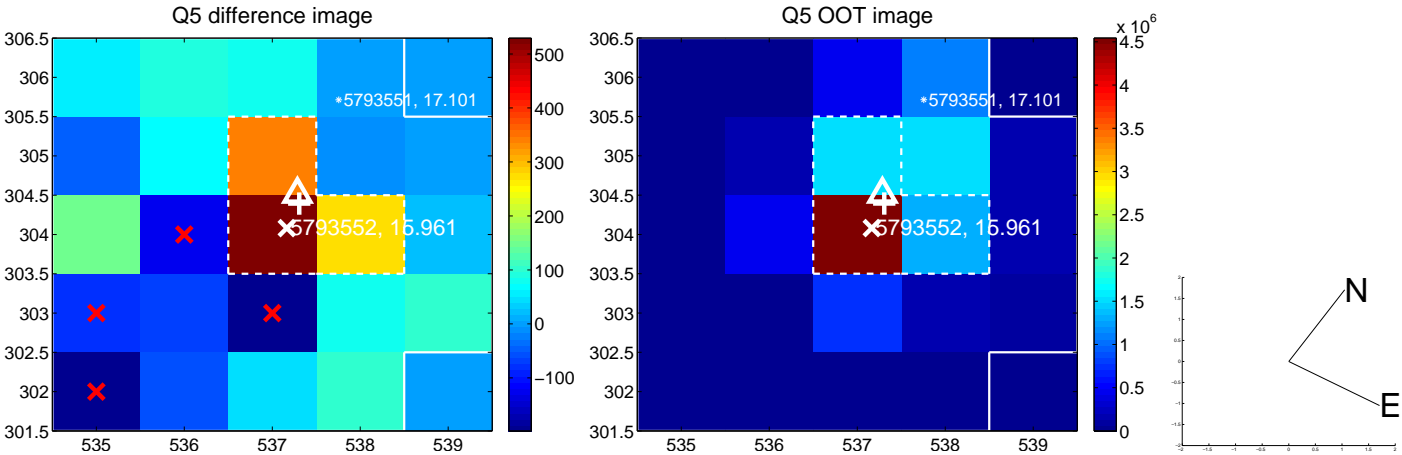


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

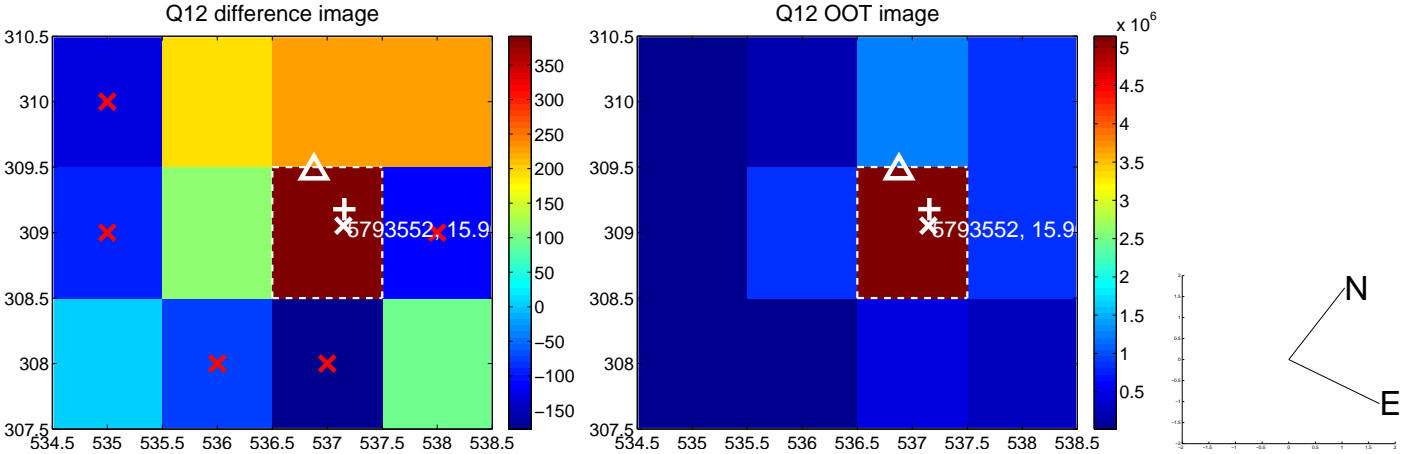
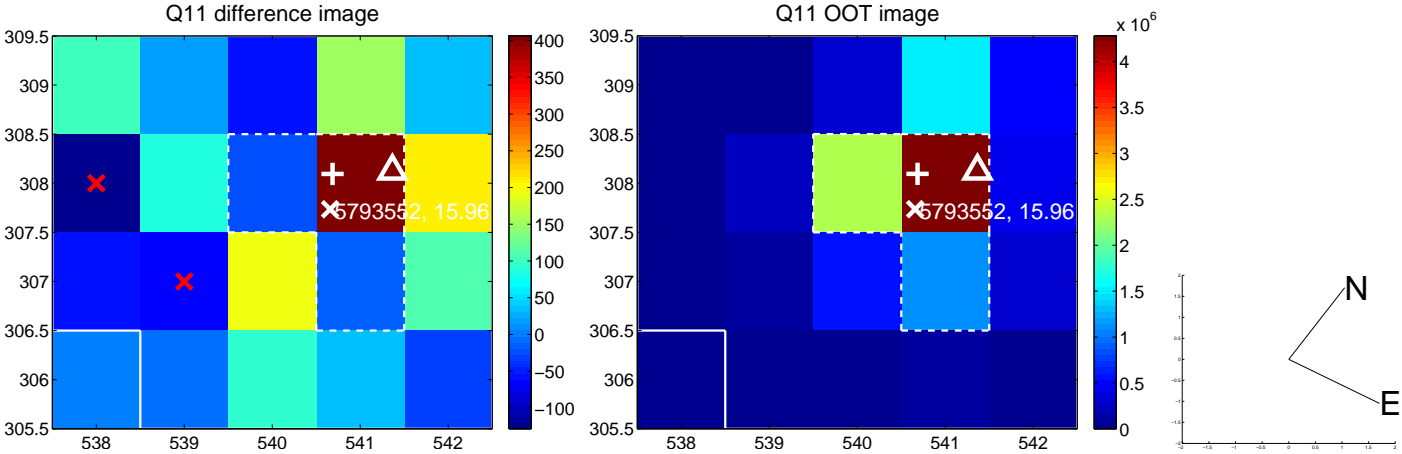
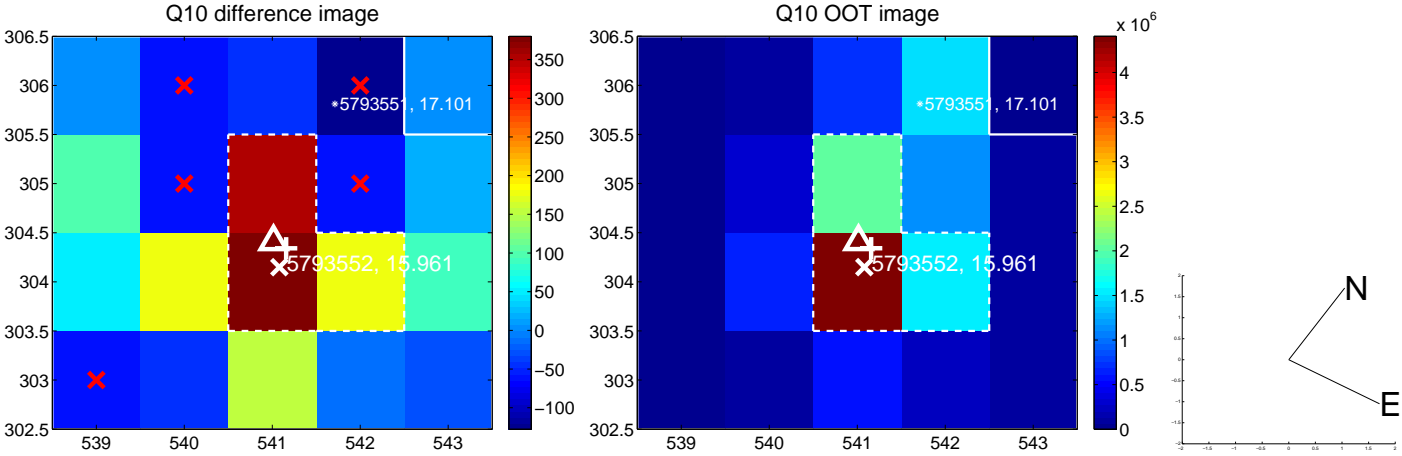
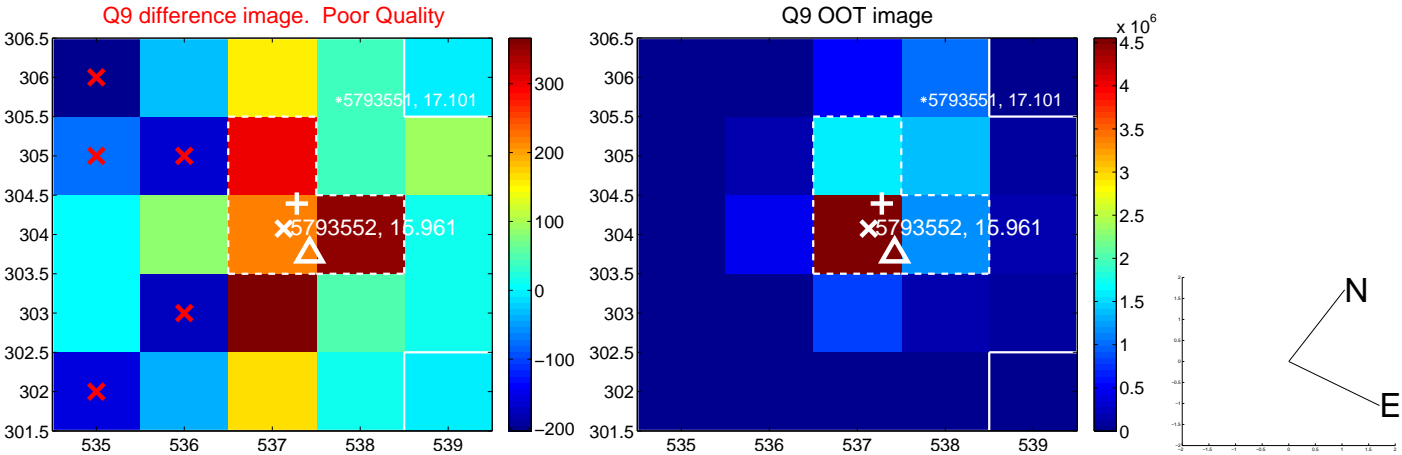
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



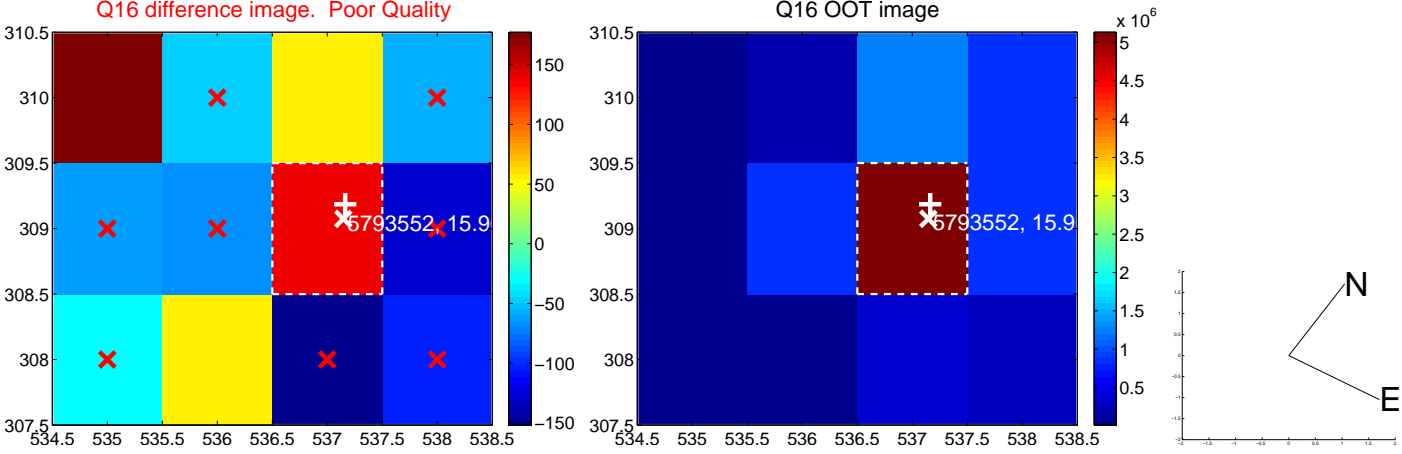
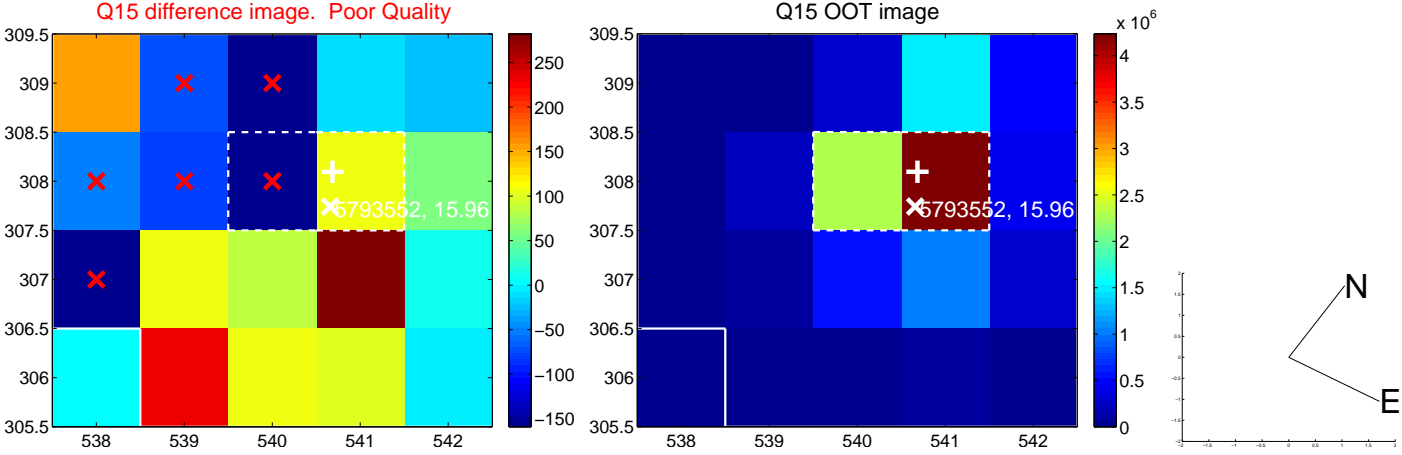
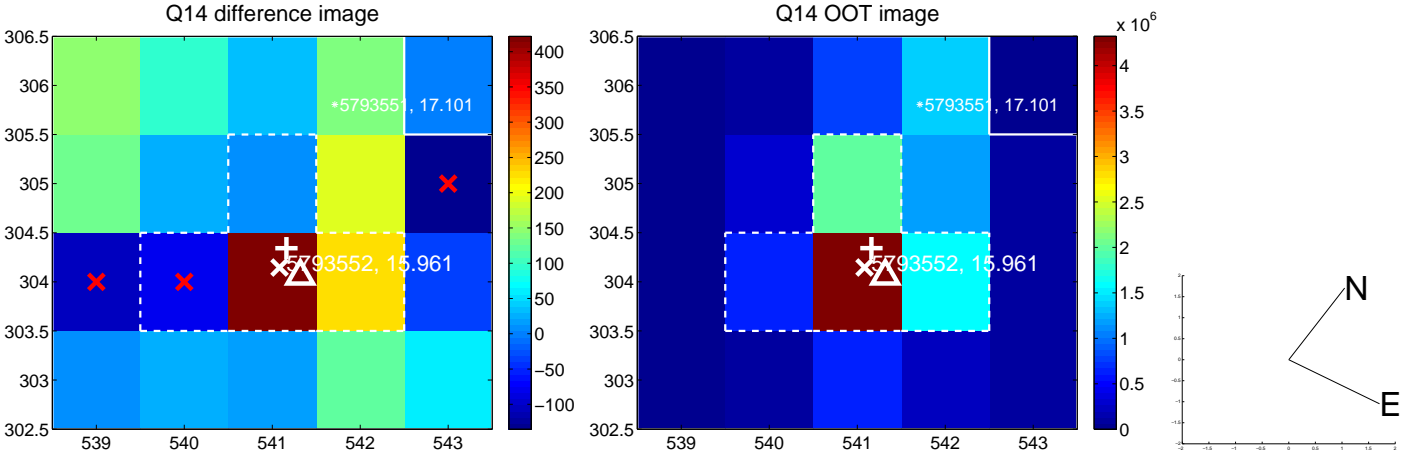
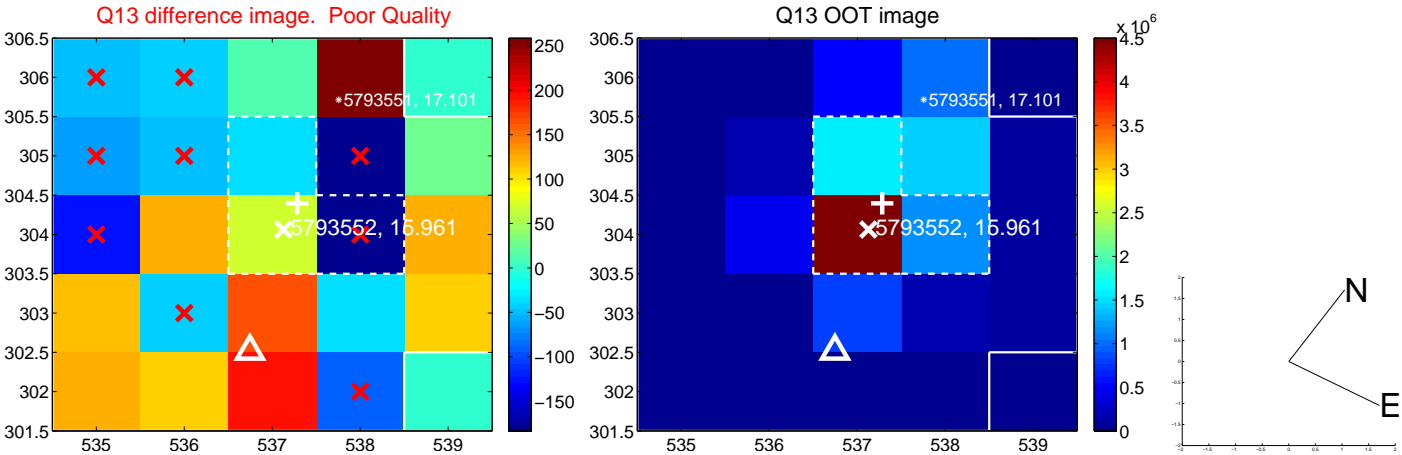
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



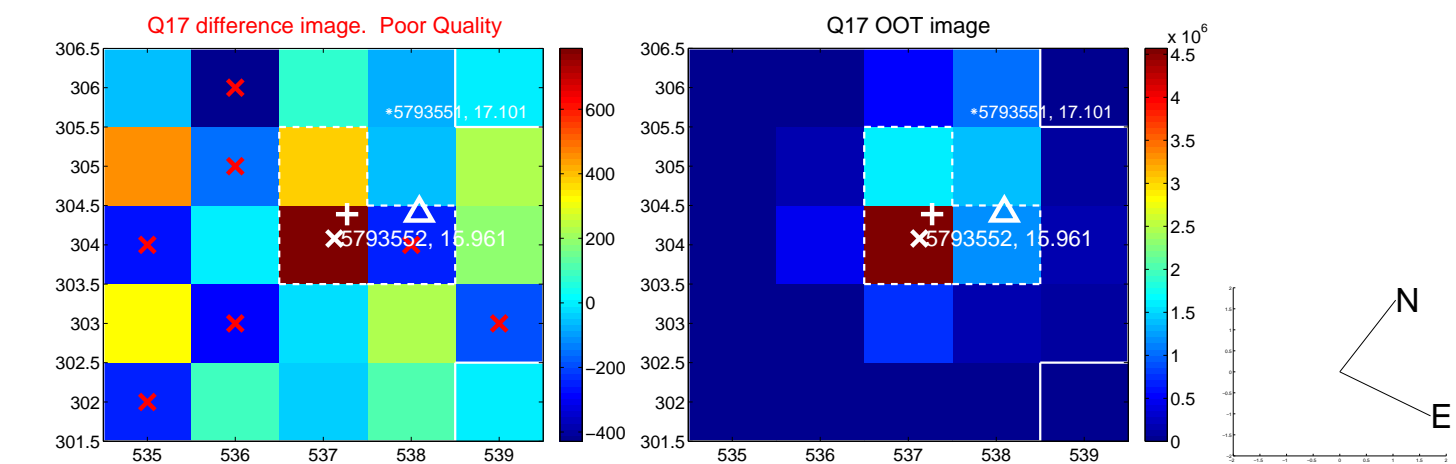
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



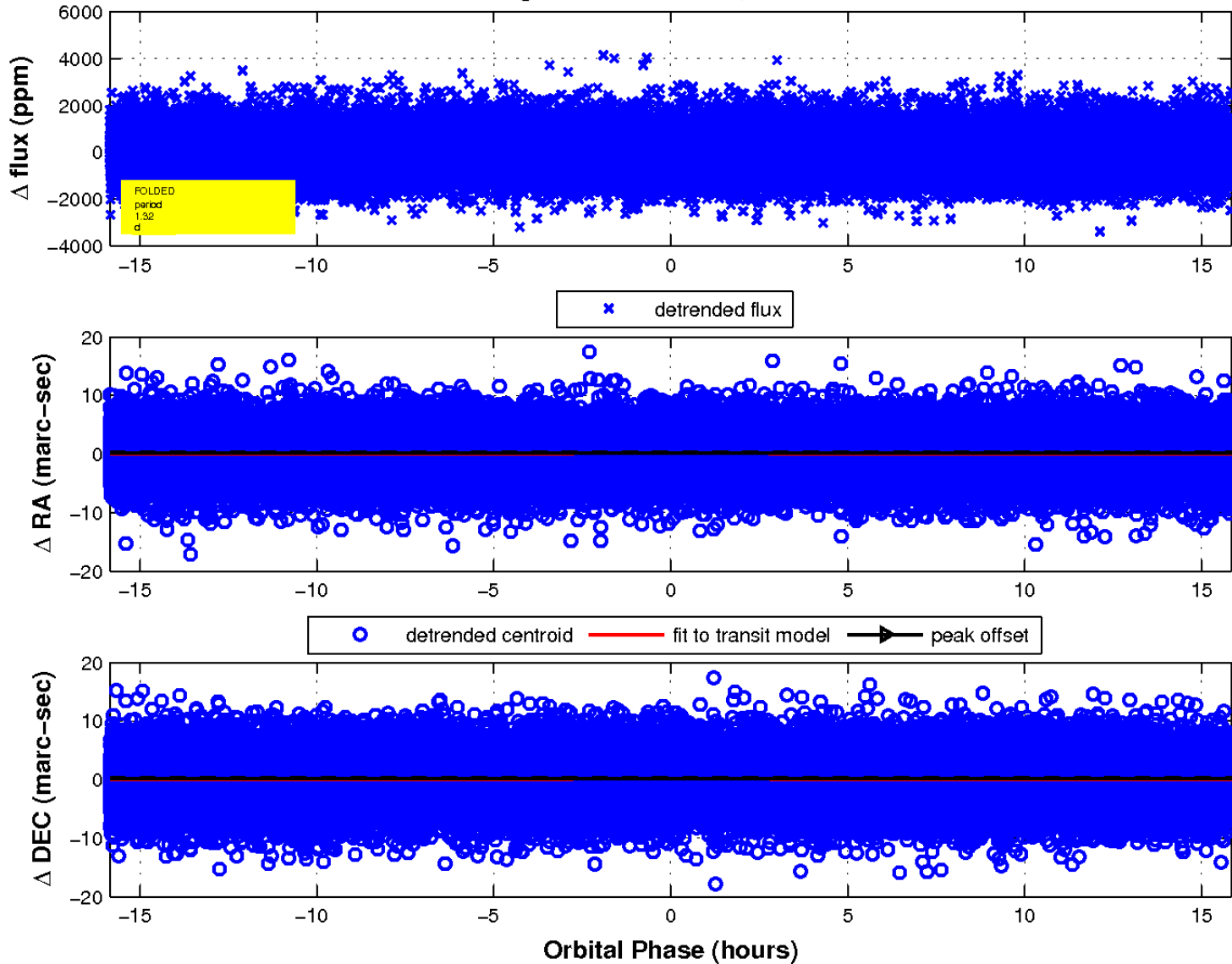
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

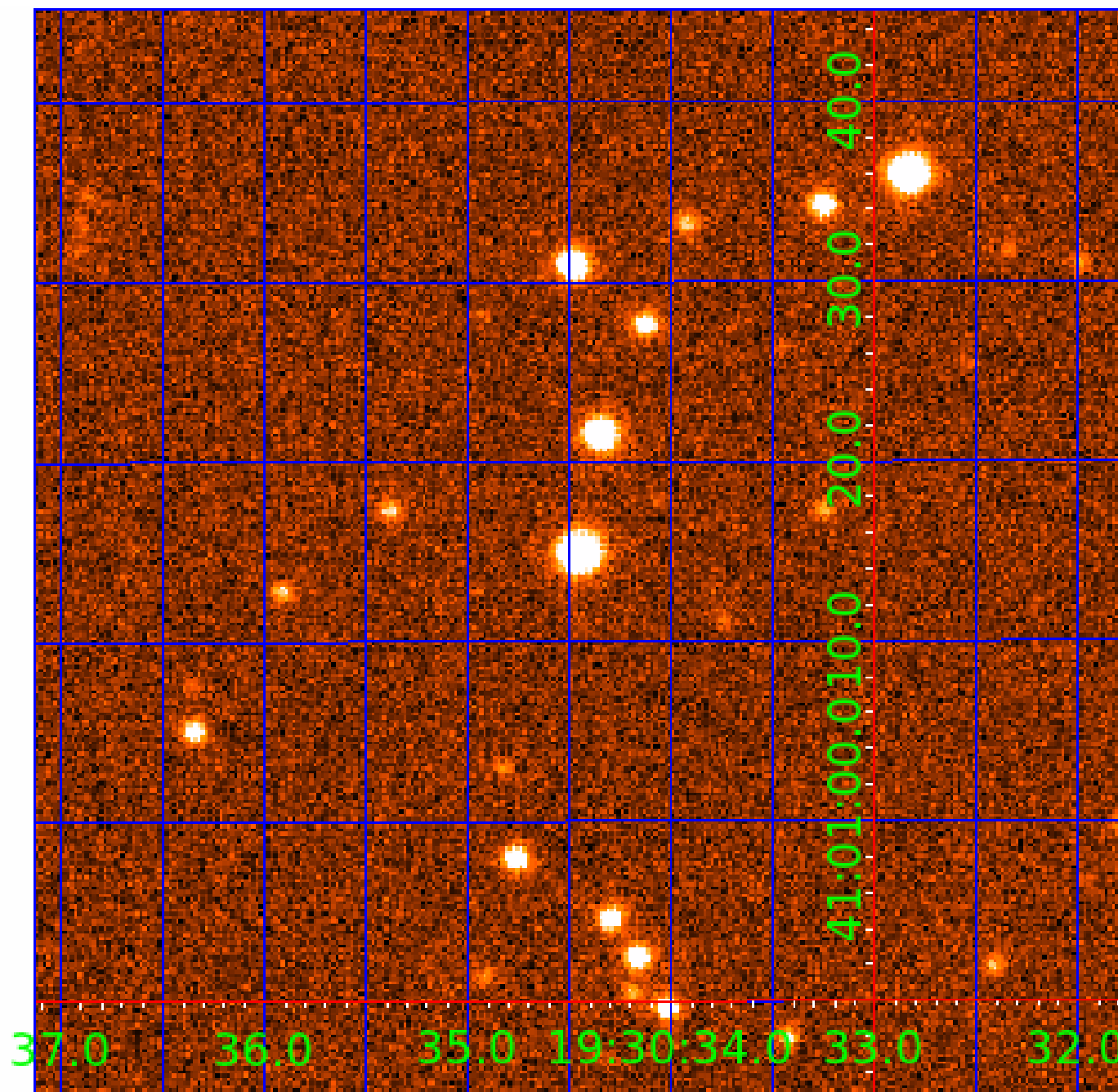


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 005793552

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})
005793552-01	OBS	No	1.320924	131.819675	85.6	5.778	7.8	8.5	0.64	4589	0.59	379.86
005793552-03	OBS	No	100.497323	221.993826	422.7	22.234	7.9	3.4	0.64	4589	1.35	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005793552-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS
005793552-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_MEAS

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

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

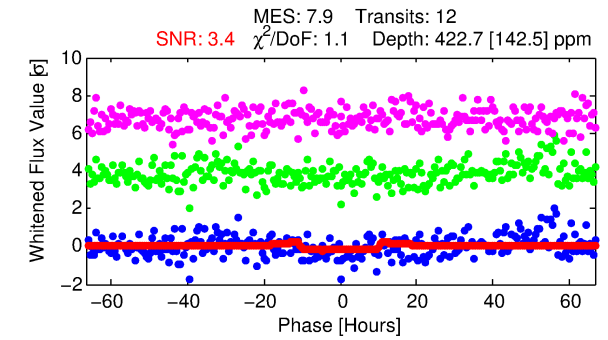
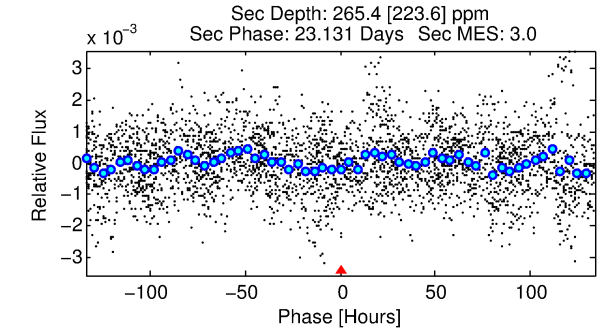
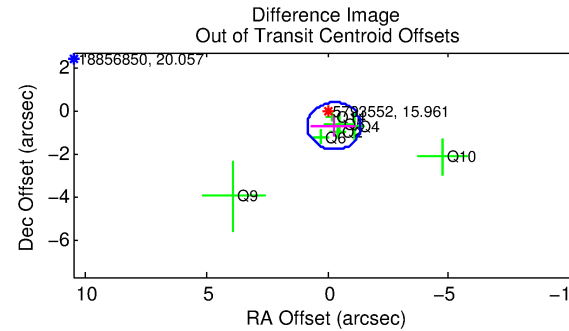
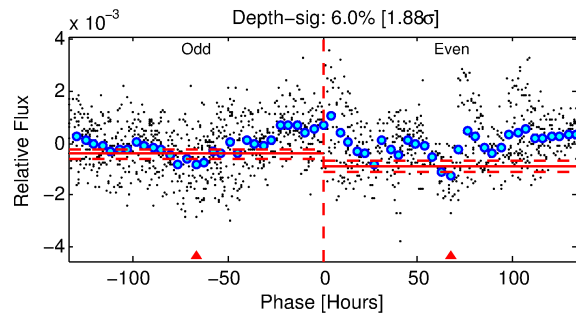
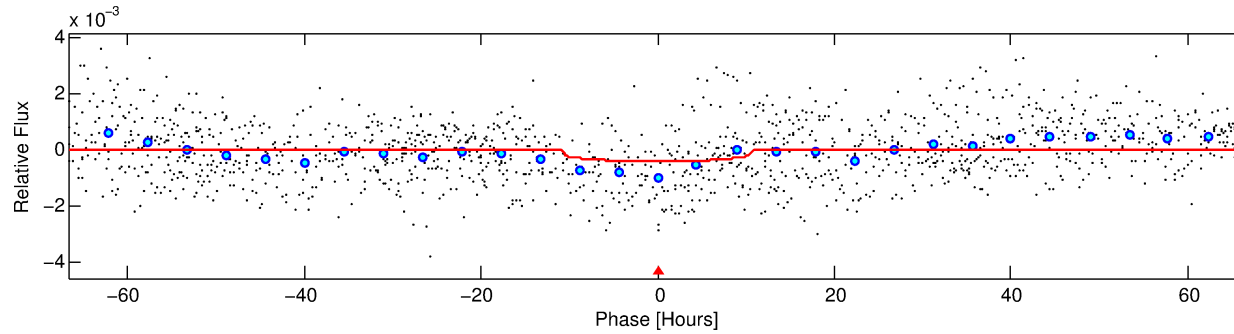
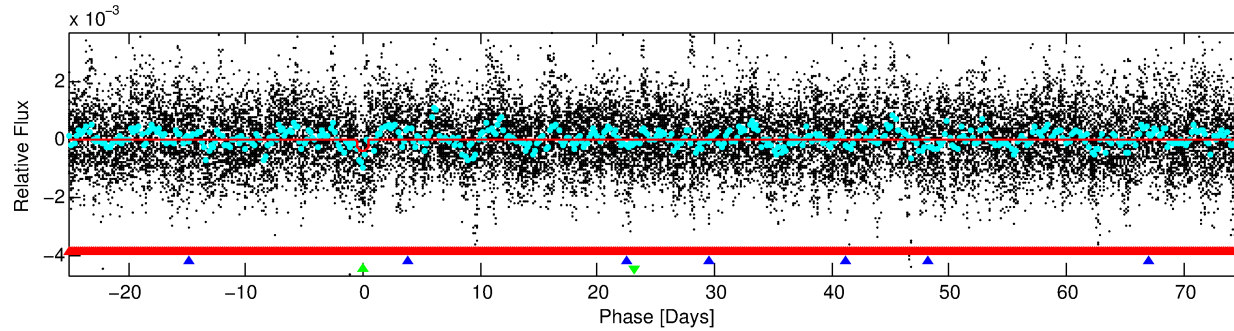
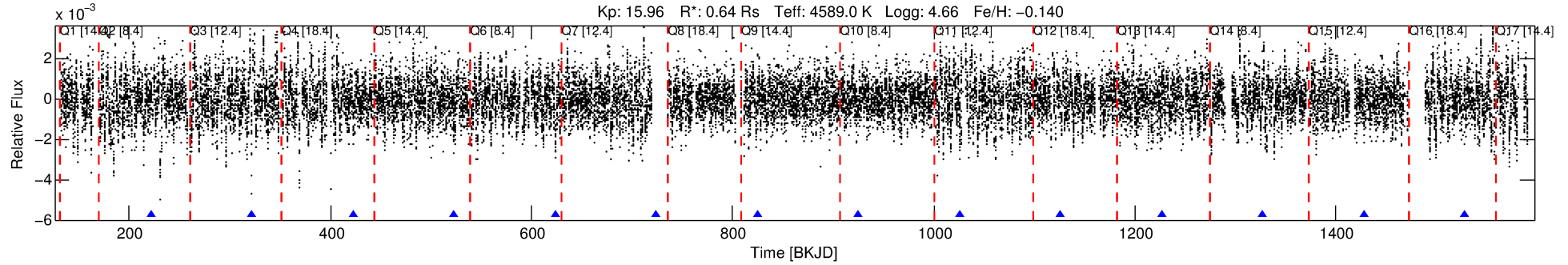
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005793552-03

No Significant Match Found

DV One-Page Summary

KIC: 5793552 Candidate: 3 of 3 Period: 100.497 d



DV Fit Results:

Period = 100.49732 [0.00715] d
Epoch = 221.9938 [0.0631] BKJD
Rp/R* = 0.0193 [0.0168]
a/R* = 29.00 [78.32]
b = 0.58 [3.15]
Seff = 1.18 [0.19]
Teff = 266 [11] K
Rp = 1.35 [1.19] Re
a = 0.3728 [0.0309] AU
Ag = 11156.37 [21698.18] [0.51 σ]
Teffp = 4221 [2053] K [1.93 σ]

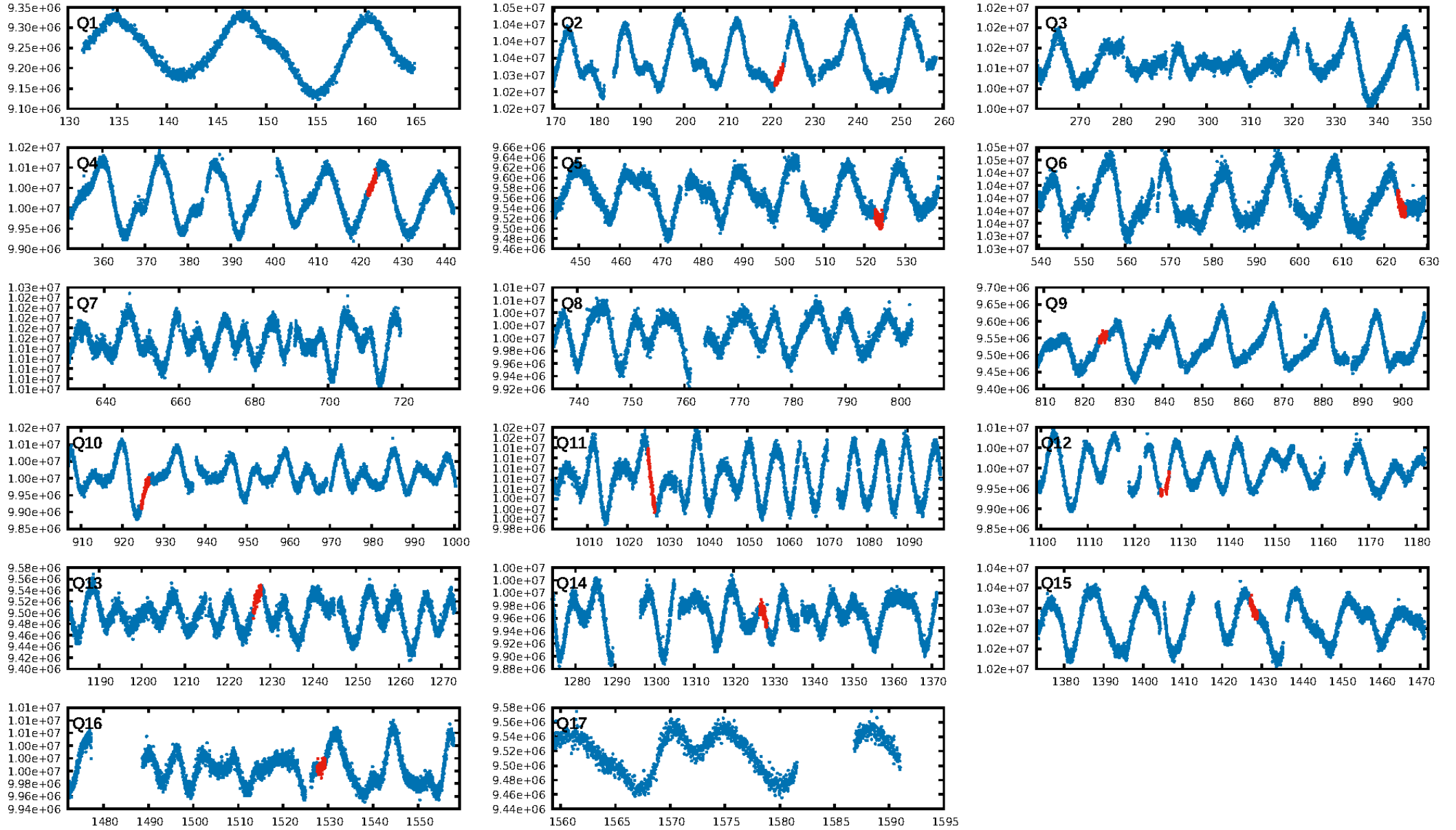
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [103.61 σ]
LongPeriod-sig: 100.0% [94.98 σ]
ModelChiSquare2-sig: 2.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.73e-10
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 2.673
Centroid-sig: 0.0%
Centroid-so: 5.729 arcsec [3.26 σ]
OotOffset-rm: 0.740 arcsec [2.01 σ]
KicOffset-rm: 0.457 arcsec [0.57 σ]
OotOffset-st: 4/0/1/2 [7]
KicOffset-st: 4/0/1/2 [7]
DiffImageQuality-fgm: 0.57 [4/7]
DiffImageOverlap-fno: 0.00 [0/8]

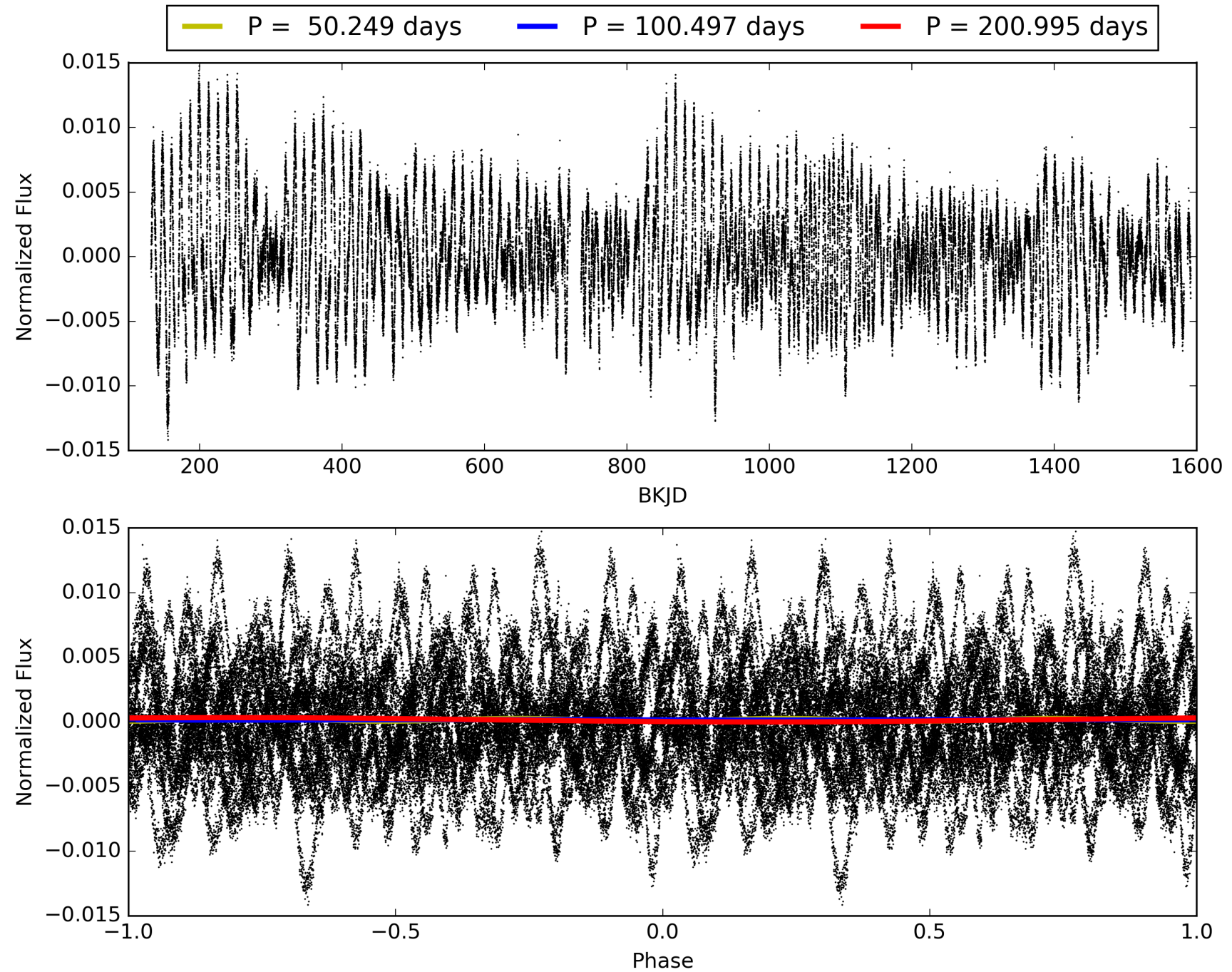
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:47:37 Z

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

TCE 005793552-03, PDC Light Curves

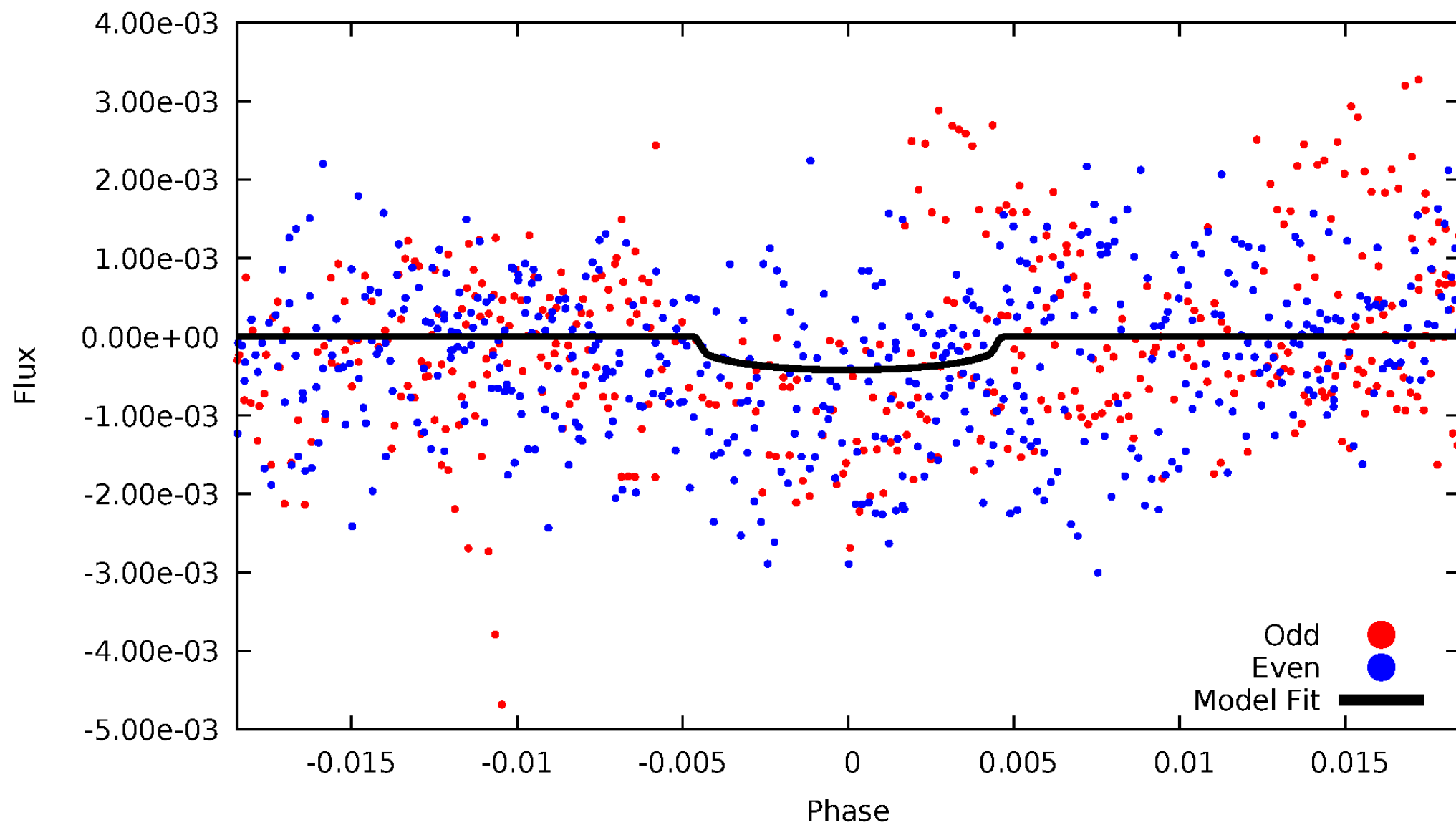


TCE 005793552-03



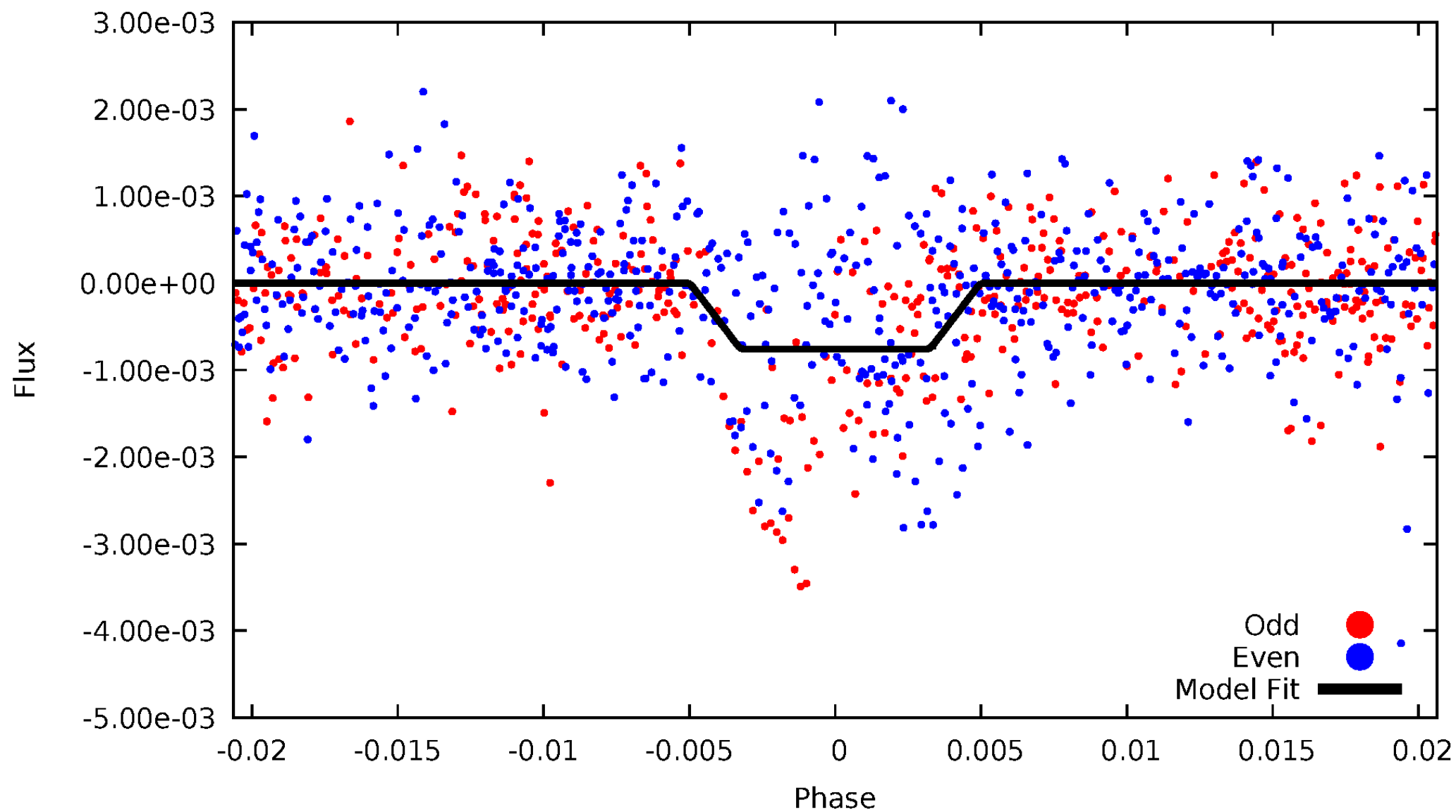
DV Odd/Even

TCE 005793552-03



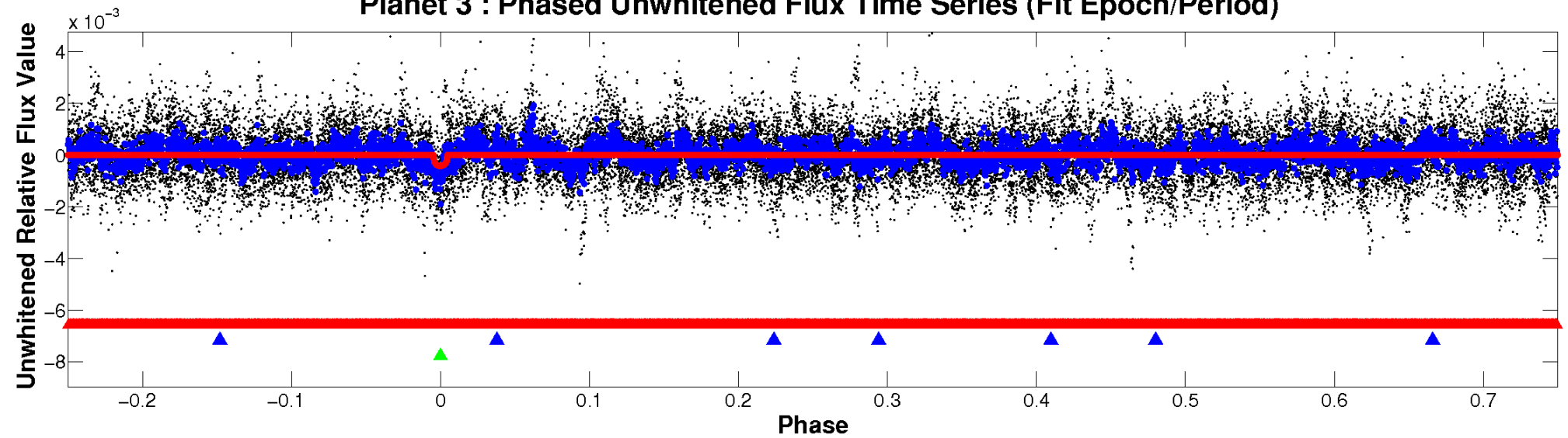
ALT Odd/Even

TCE 005793552-03

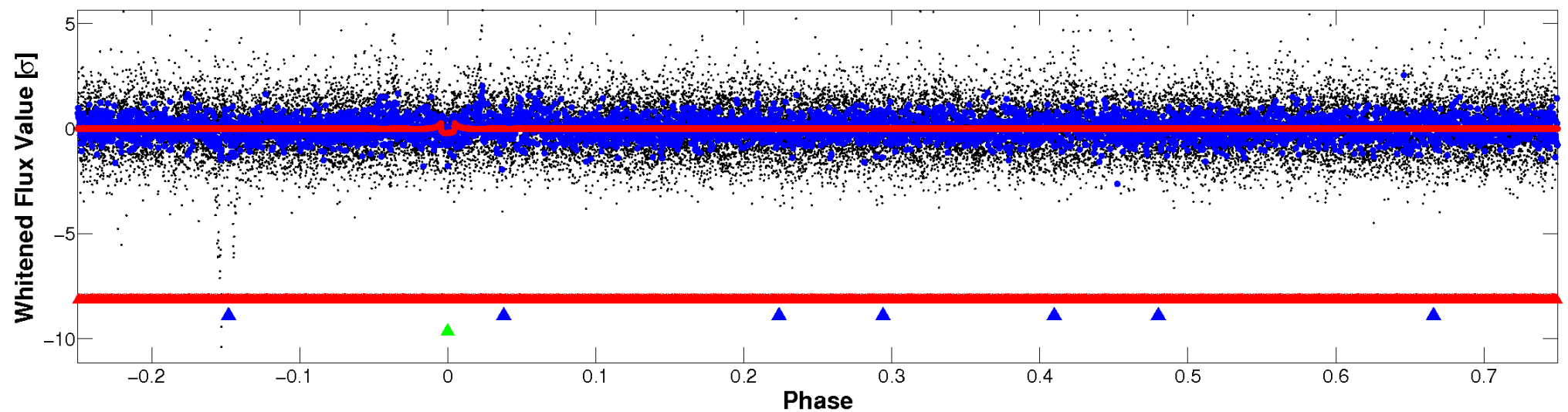


Non-Whitened Vs. Whitened Light Curve

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

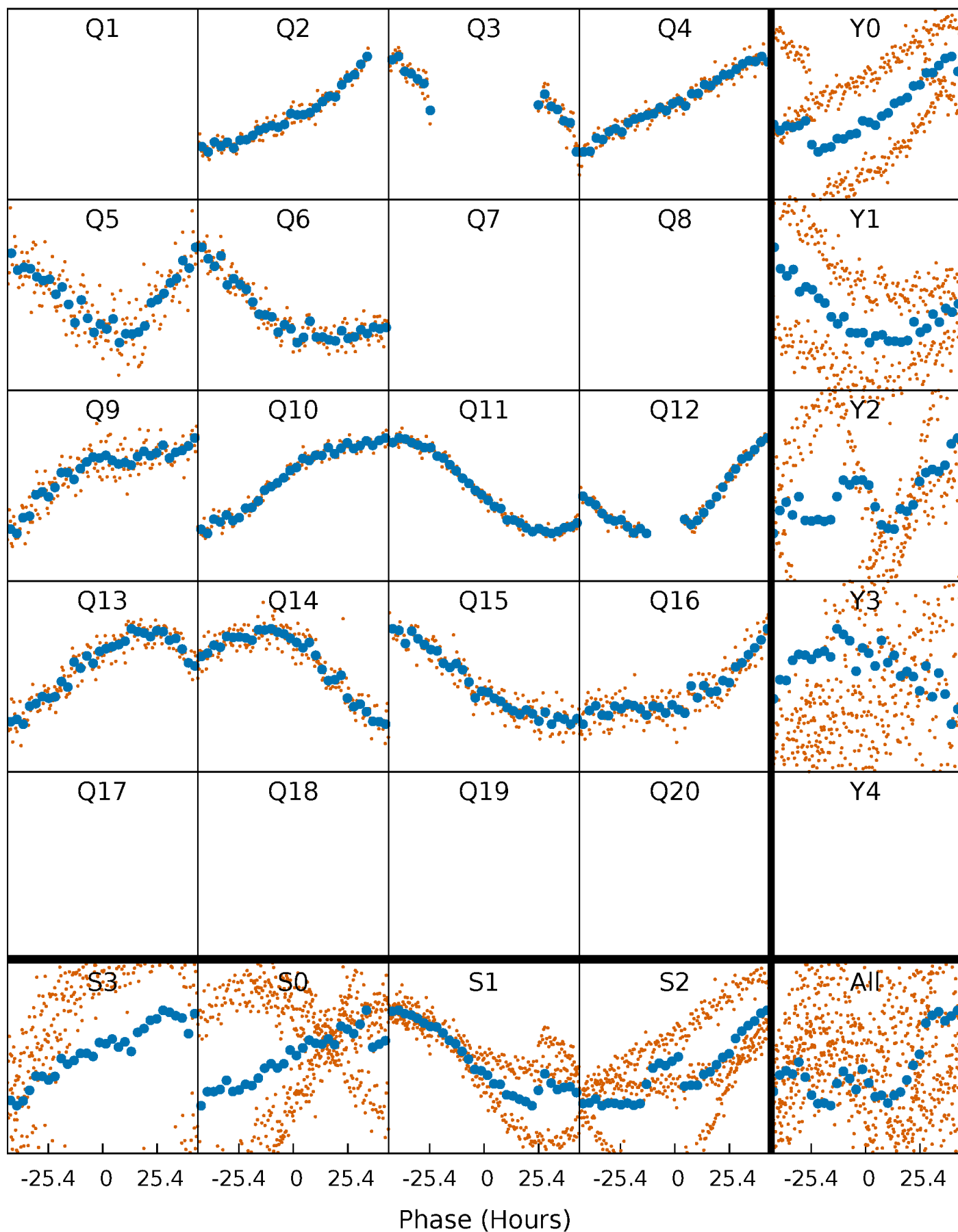


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



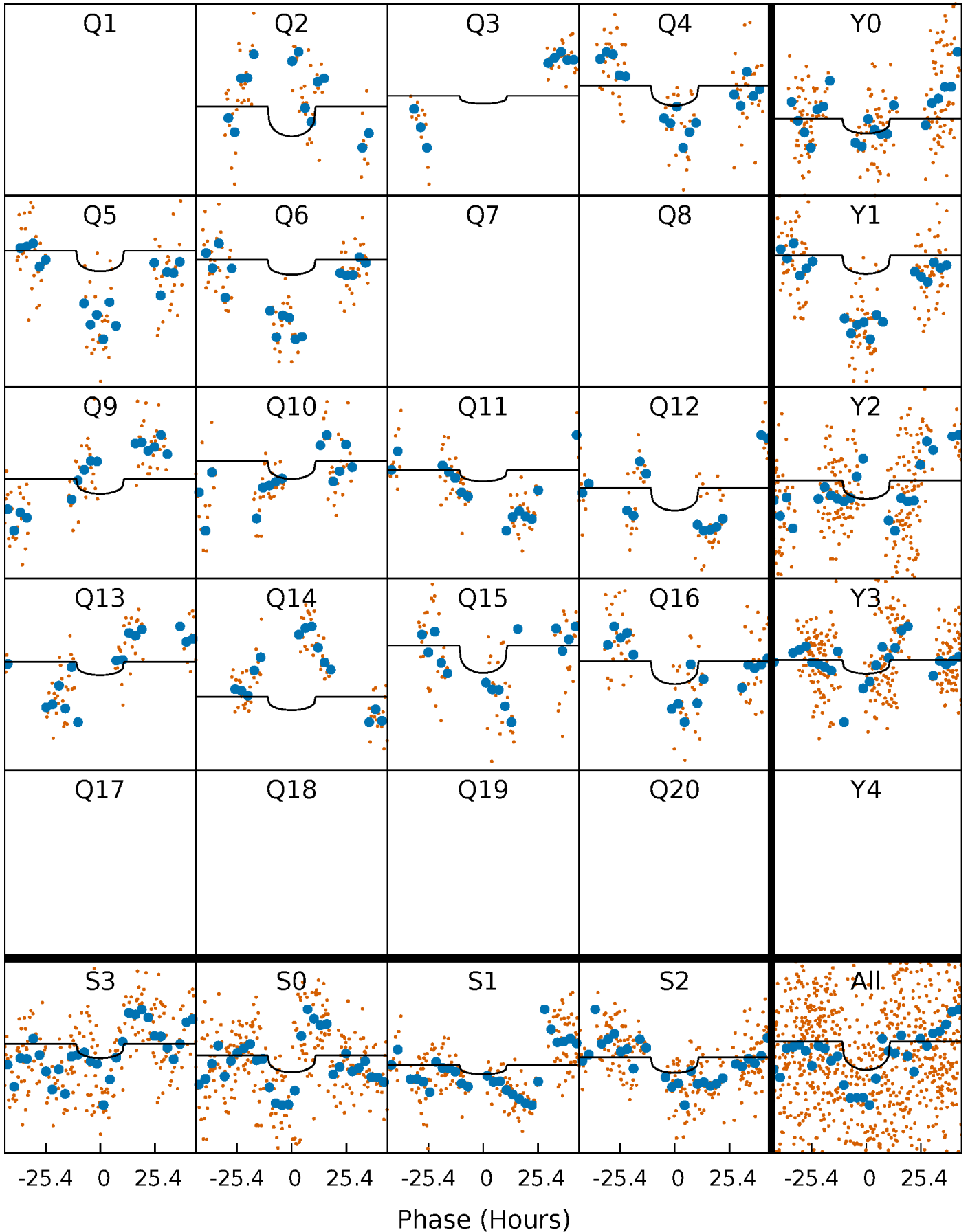
PDC Quarter-Phased Transit Curves

TCE 005793552-03 P=100.497323 Days $T_0=221.993826$ (BKJD)



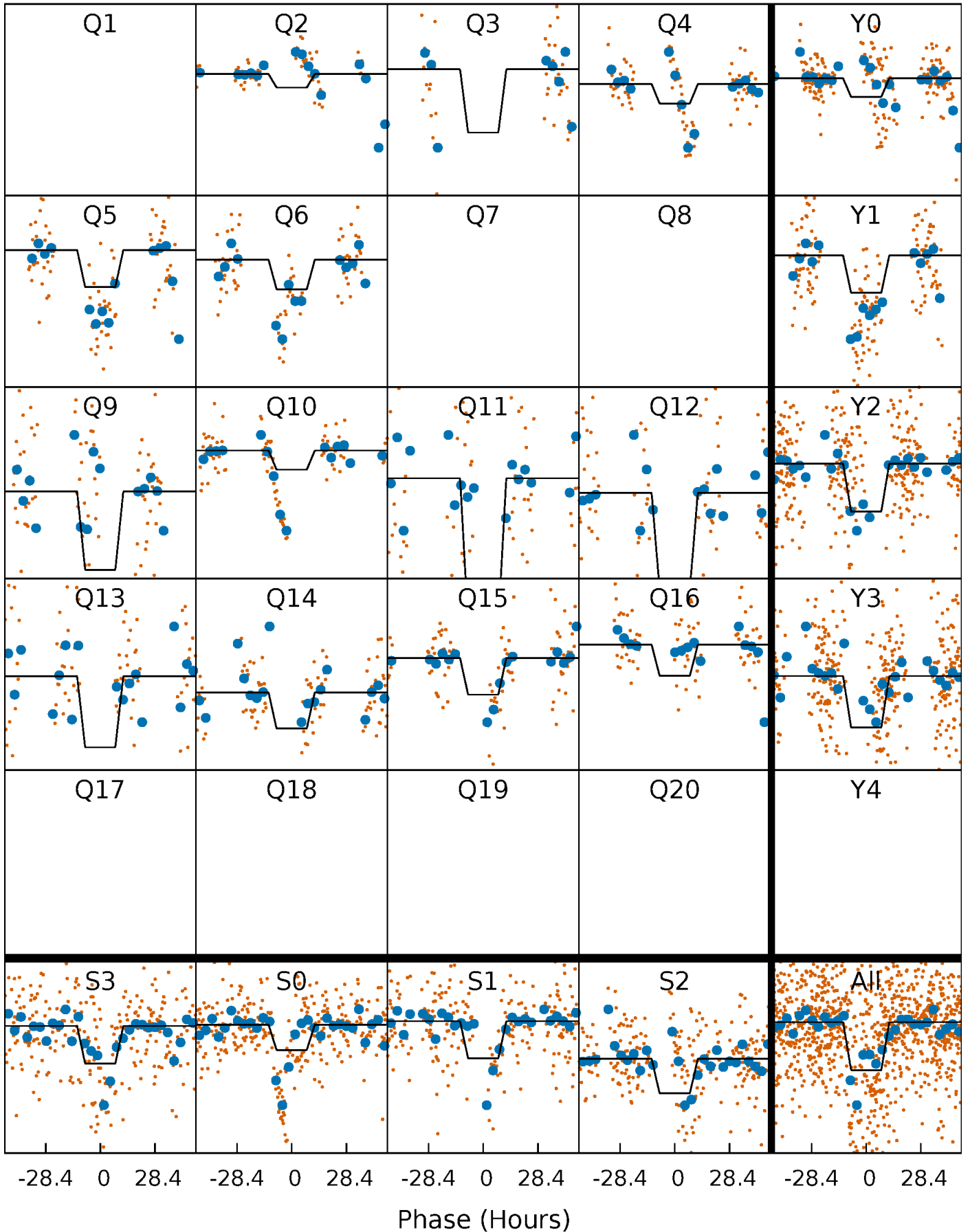
DV Quarter-Phased Transit Curves

TCE 005793552-03 P=100.497323 Days $T_0=221.993826$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

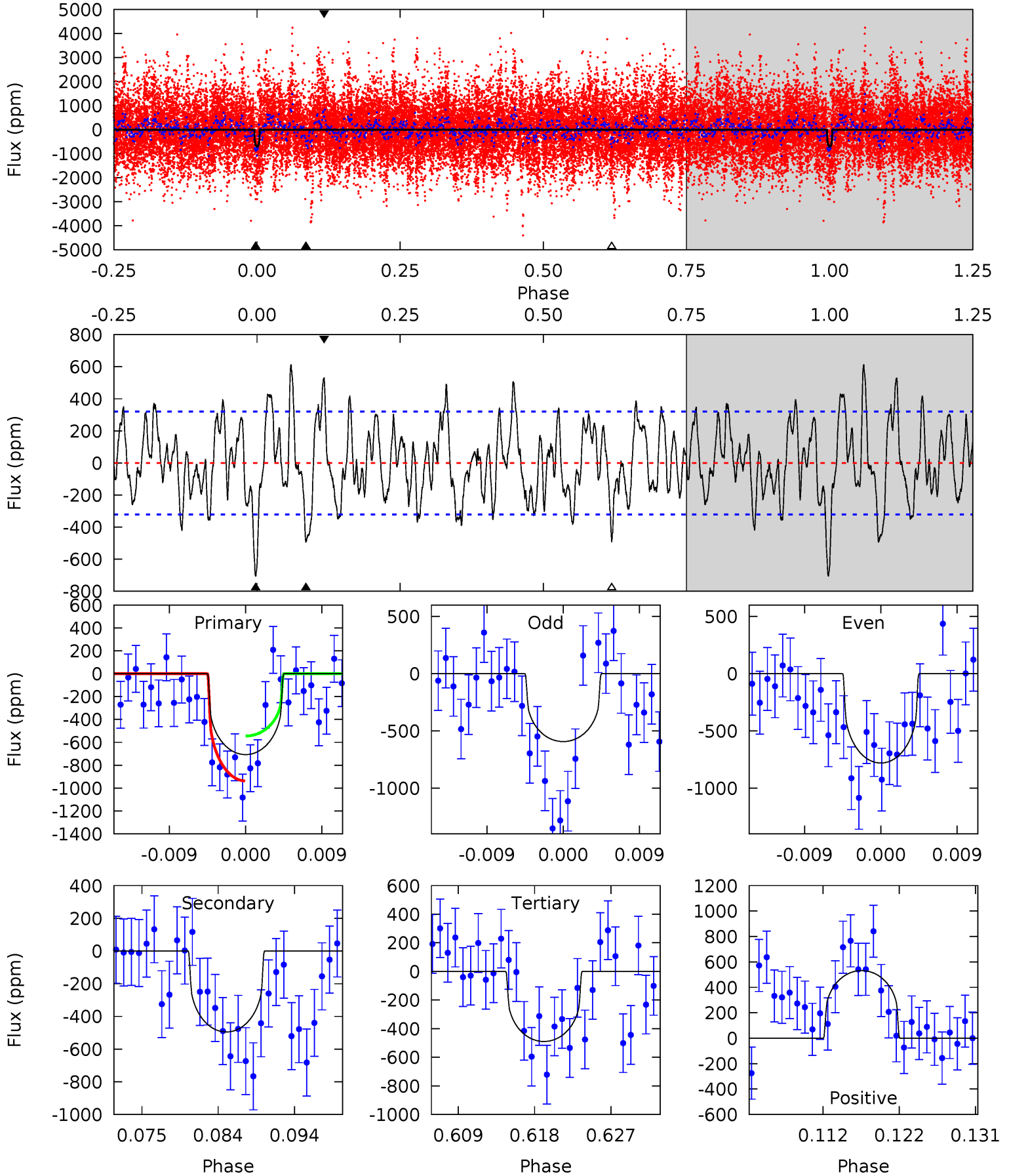
TCE 005793552-03 P=100.499059 Days $T_0=221.924470$ (BKJD)



DV Model-Shift Uniqueness Test

005793552-03, P = 100.497323 Days, E = 121.496503 Days

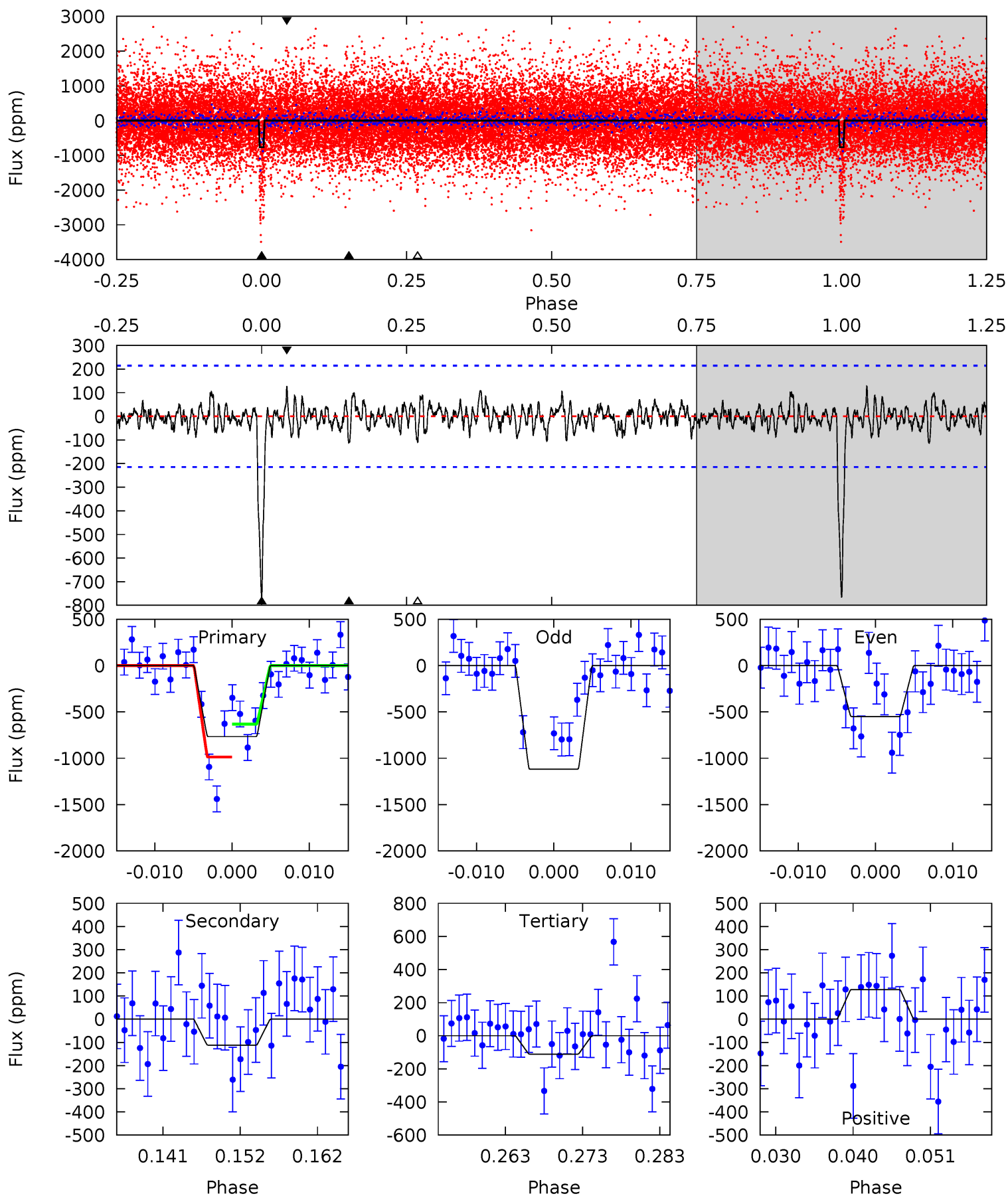
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	7.77	7.68	8.34	5.04	2.60	3.17	3.42	2.76	0.09	-0.57	1.43	0.64	0.46	3.01



Alt Model-Shift Uniqueness Test

005793552-03, P = 100.499059 Days, E = 121.425411 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	2.62	2.60	2.99	5.02	2.57	0.88	15.3	15.0	0.02	-0.36	6.53	1.21	0.14	4.06



Stellar Parameters For KIC 005793552

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4589^{+124}_{-137}	$4.658^{+0.024}_{-0.052}$	$-0.140^{+0.300}_{-0.300}$	$0.642^{+0.070}_{-0.043}$	$0.708^{+0.055}_{-0.073}$	$3.766^{+0.441}_{-0.804}$
	+3%/-3%	+1%/-1%	+214%/-214%	+11%/-7%	+8%/-10%	+12%/-21%
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 005793552-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-495 ± 64	$1.60^{+1.19}_{-0.97}$	374^{+12}_{-12}	4566^{+2464}_{-822}	14602^{+78726}_{-9560}
Alt.	-112 ± 43	$2.06^{+1.24}_{-1.16}$	374^{+12}_{-13}	3232^{+1033}_{-457}	1911^{+8786}_{-1247}

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

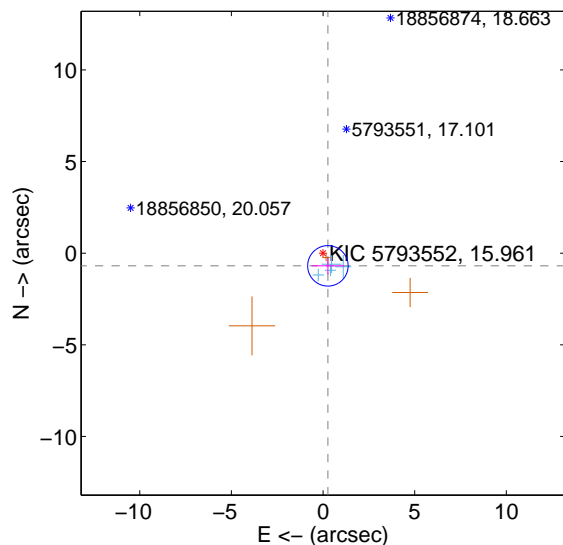
Supplemental centroid analysis for 005793552-03. Kepler magnitude: 15.96. Transit SNR 3.37

There are 4 quarters with good PRF difference image offsets

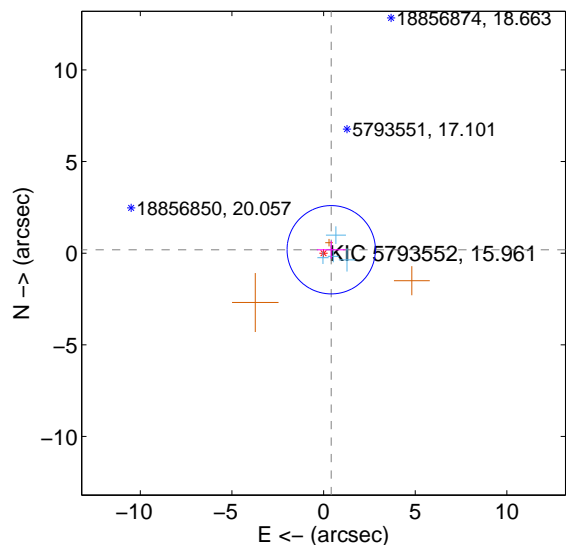
The direct PRF centroid is offset from the target star catalog position by about 0.82 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.740 ± 0.368	2.01	-0.265 ± 0.885	-0.691 ± 0.453
PRF-fit source offset from KIC position	0.457 ± 0.803	0.57	-0.417 ± 0.780	0.187 ± 0.482
photometric centroid source offset	5.73 ± 1.76	3.26	-2.40 ± 1.10	5.20 ± 1.87

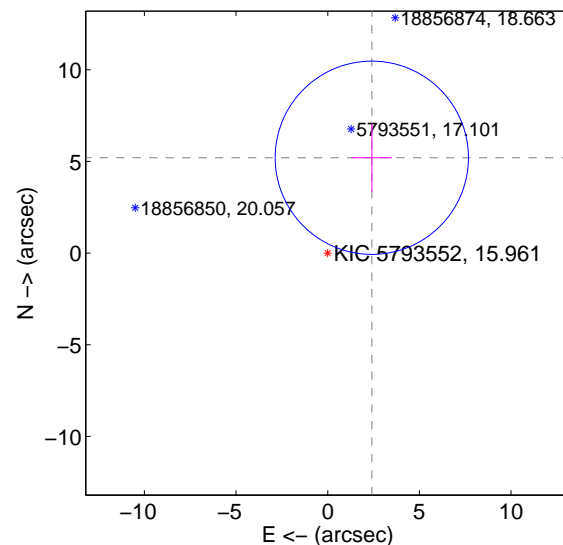
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

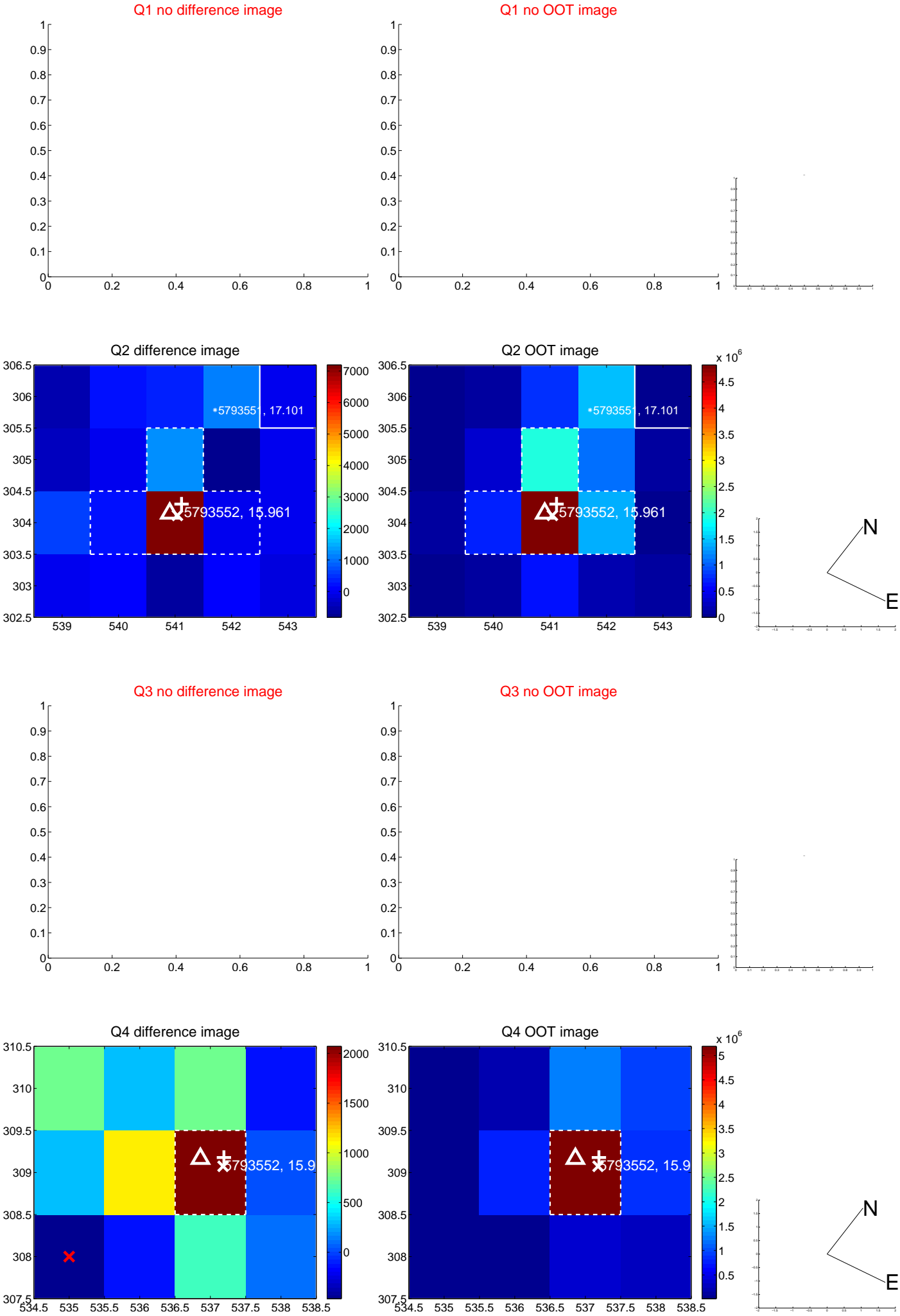


offset from photometric centroids

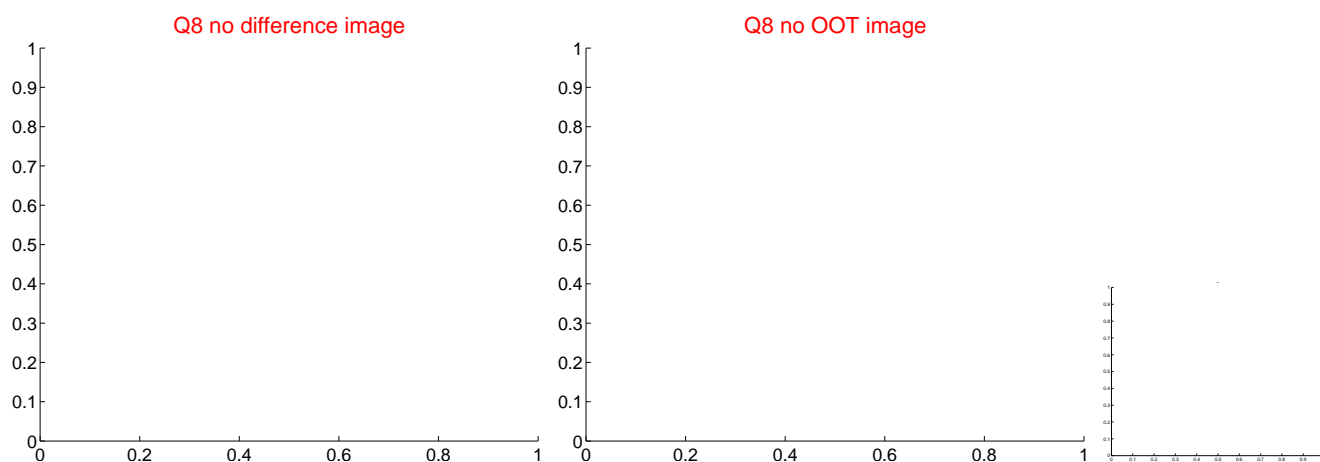
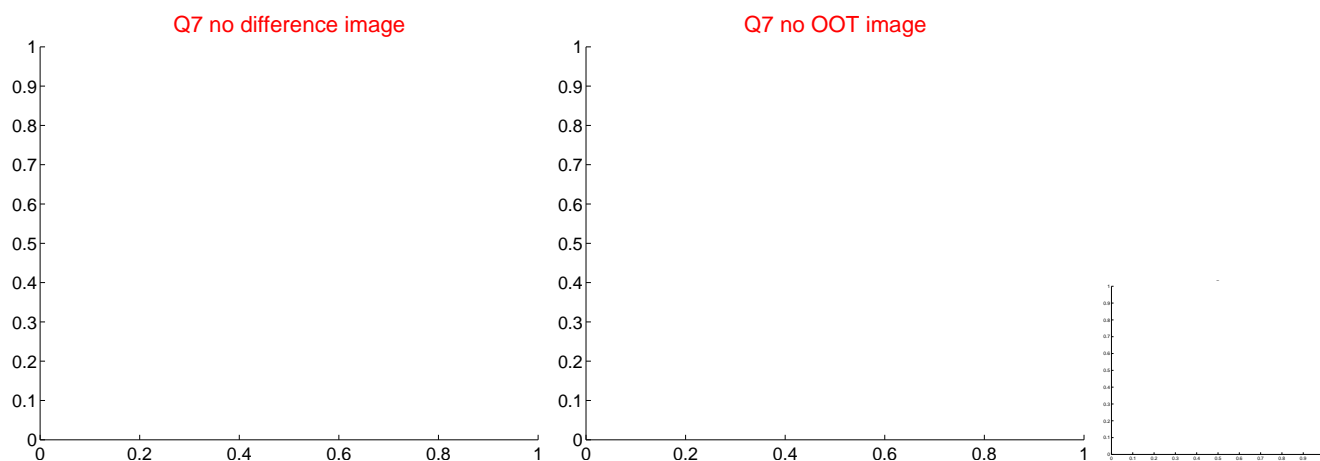
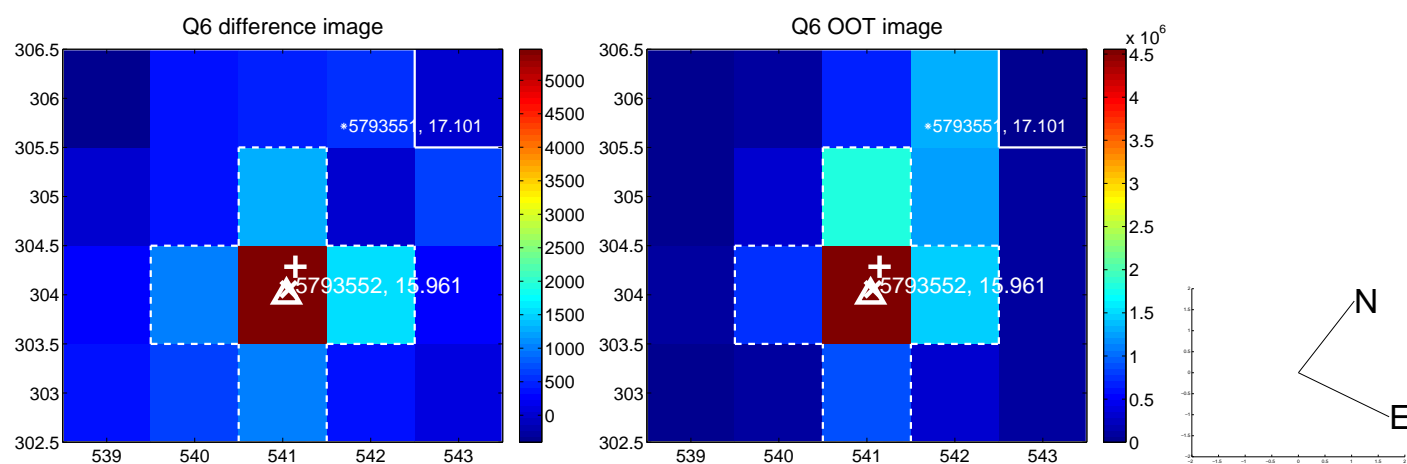
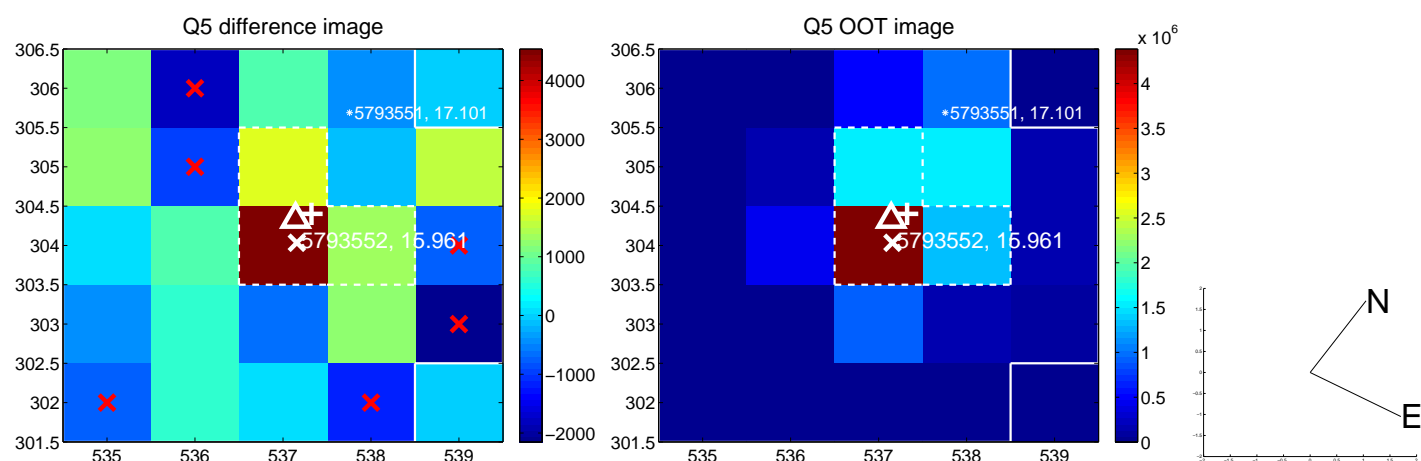


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

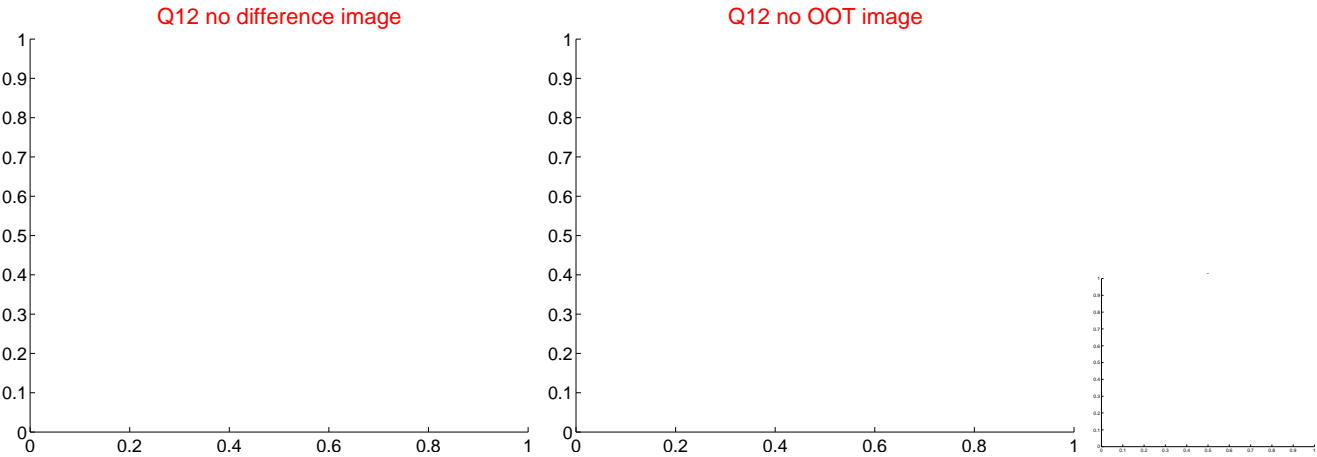
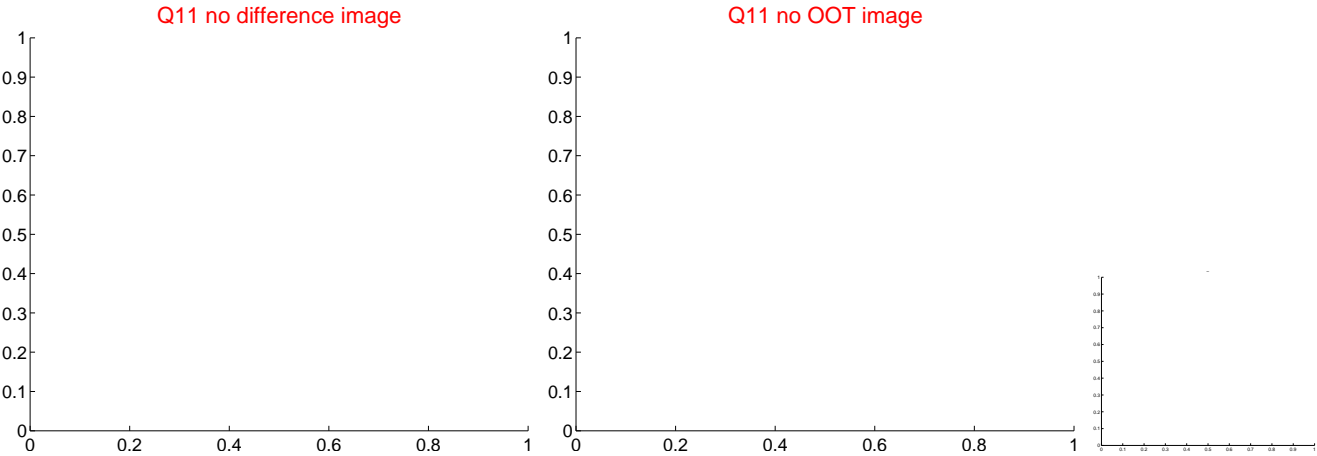
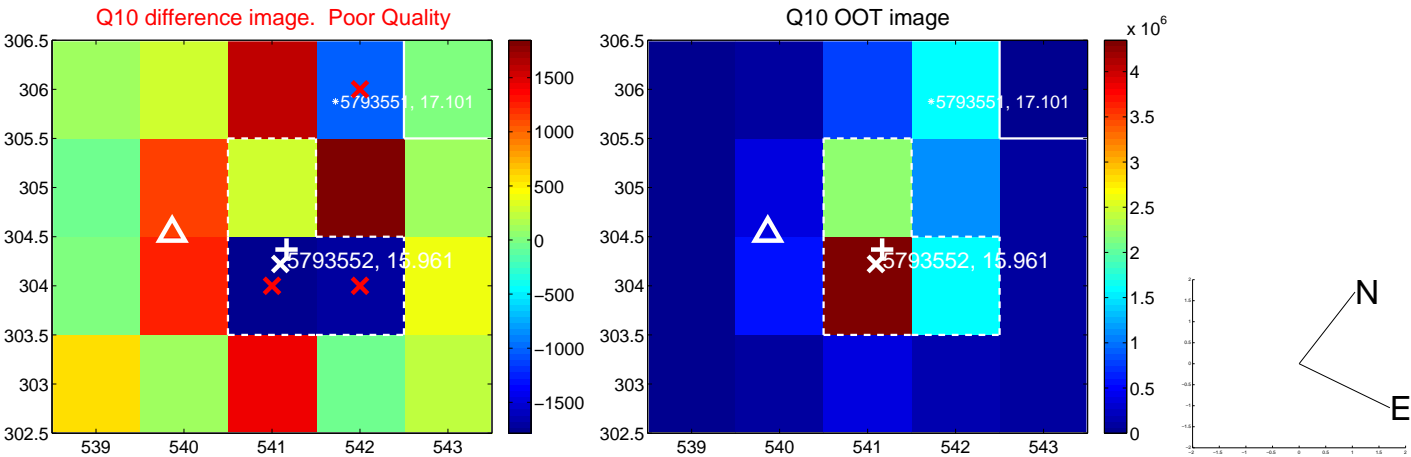
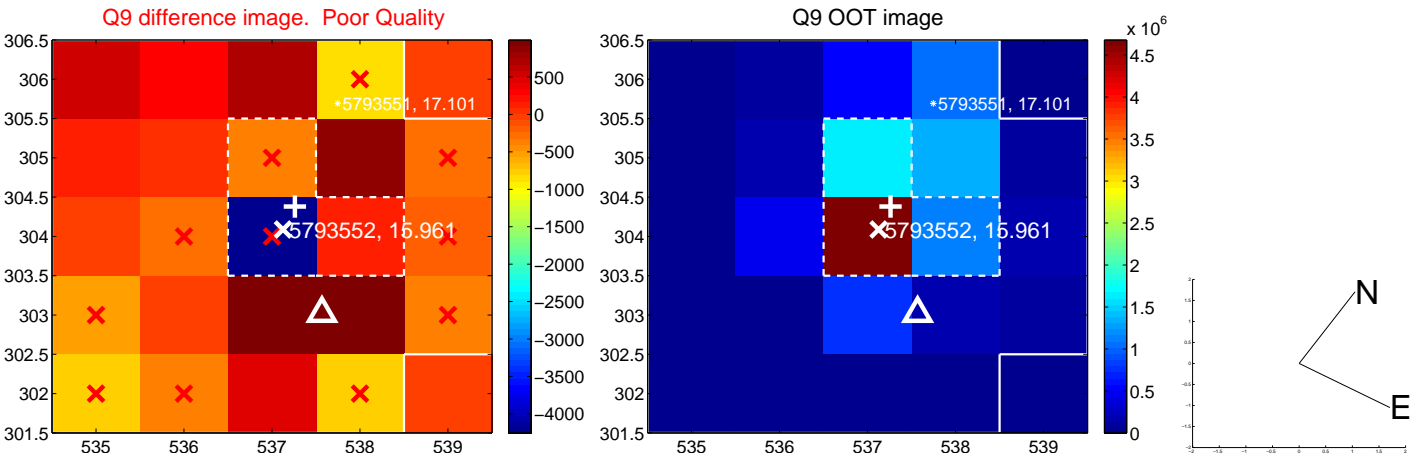
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

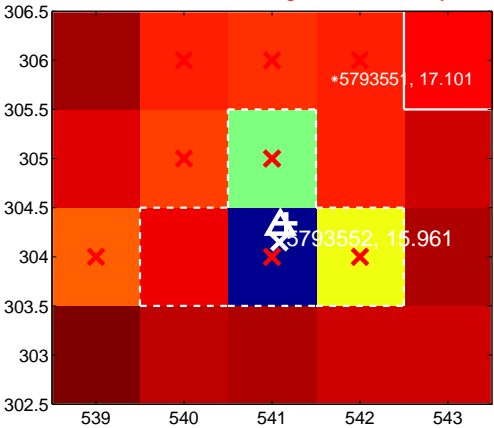
Q13 no difference image



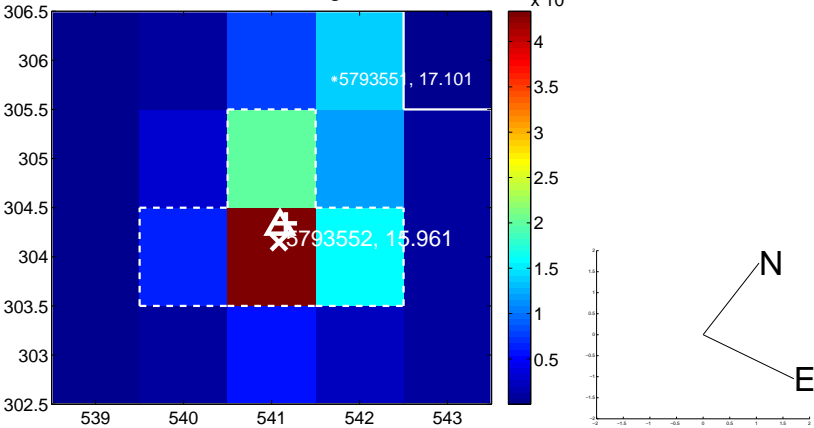
Q13 no OOT image



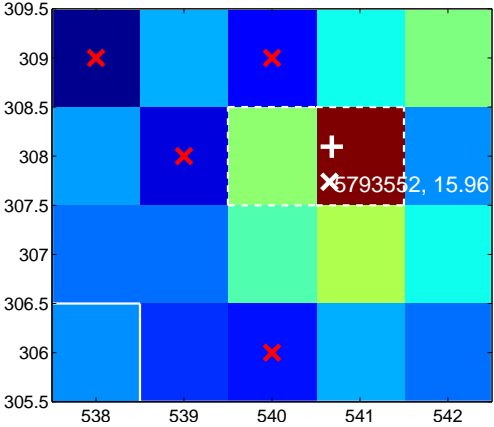
Q14 difference image. Poor Quality



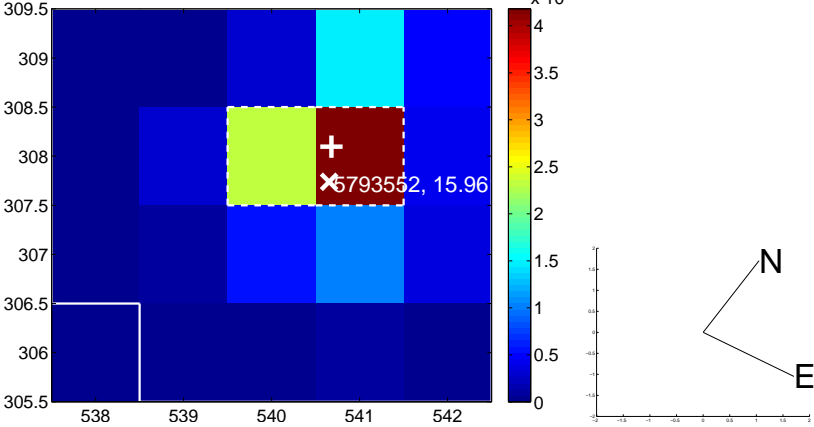
Q14 OOT image



Q15 difference image. Poor Quality



Q15 OOT image



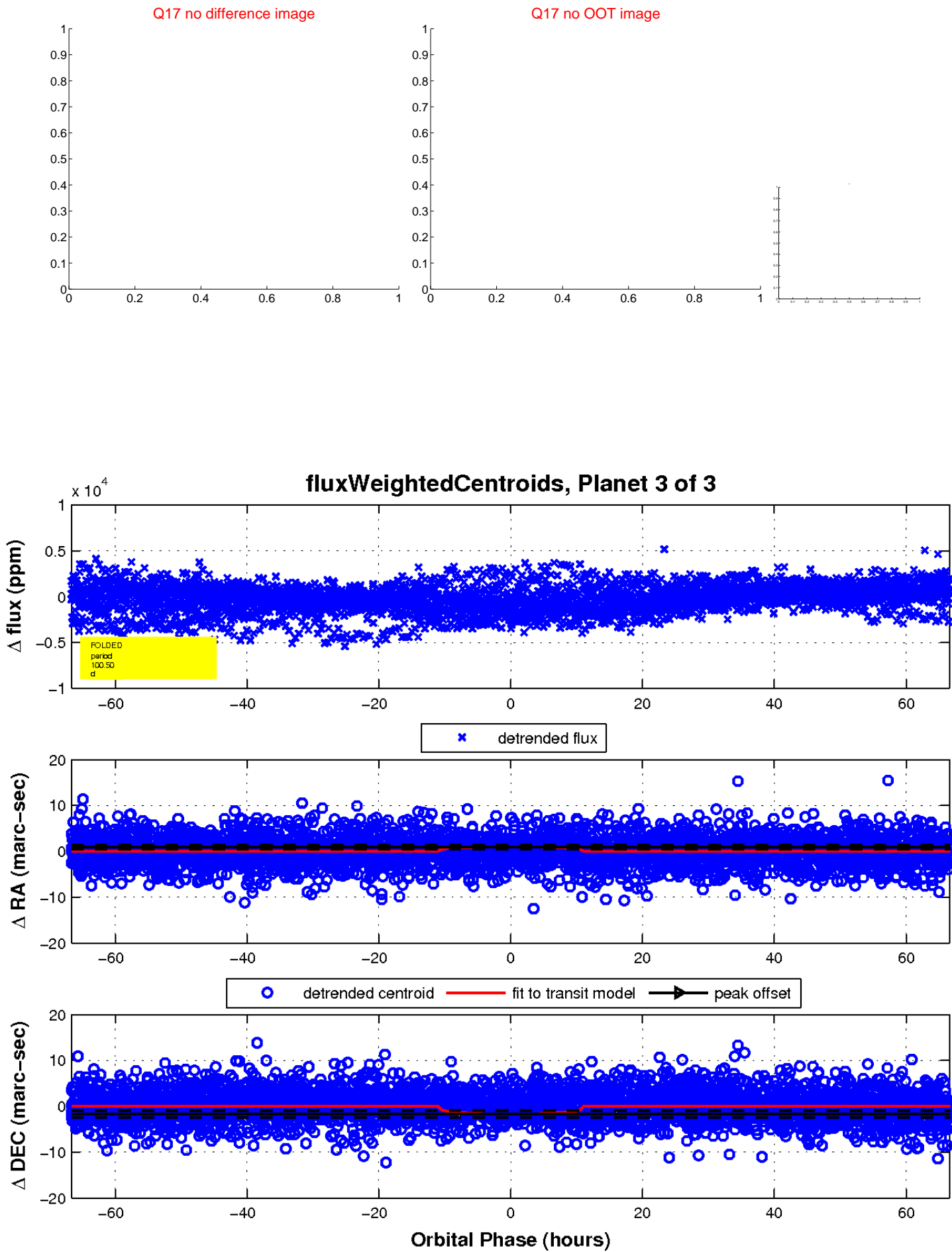
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

