

KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
003453026-03	OBS	No	59.130860	148.388405	145.9	11.182	7.7	7.4	3.56	6234	4.71	145.60
003453026-04	OBS	No	133.907744	251.464107	389.9	2.763	7.7	9.0	3.56	6234	13.81	48.96
003453026-06	OBS	No	28.307259	139.792248	149.6	2.450	7.5	7.5	3.56	6234	5.03	388.80
003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

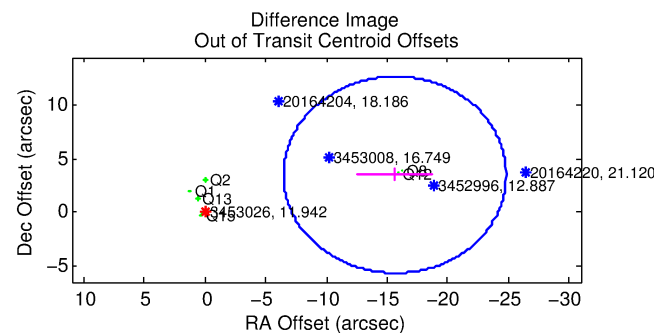
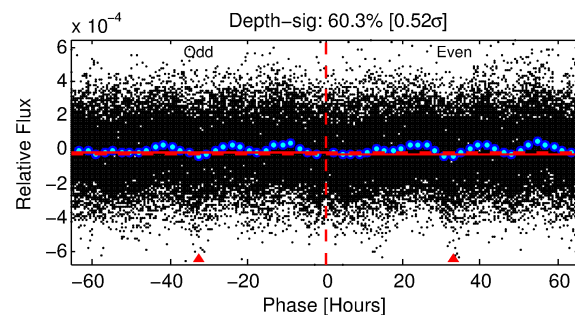
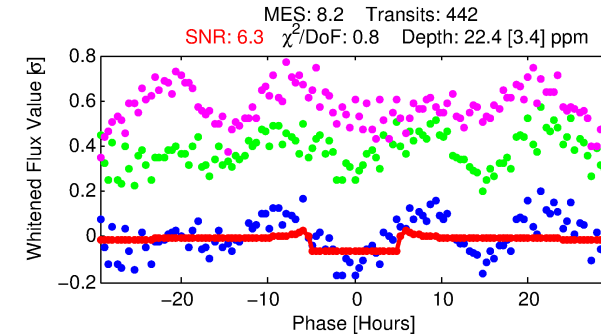
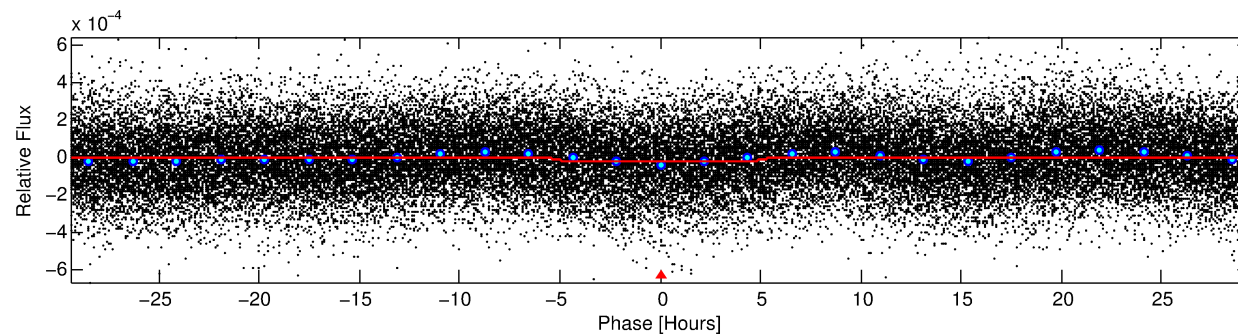
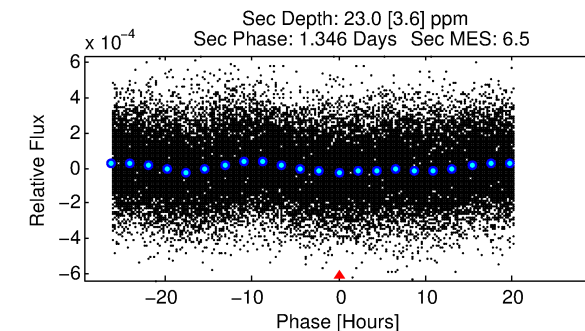
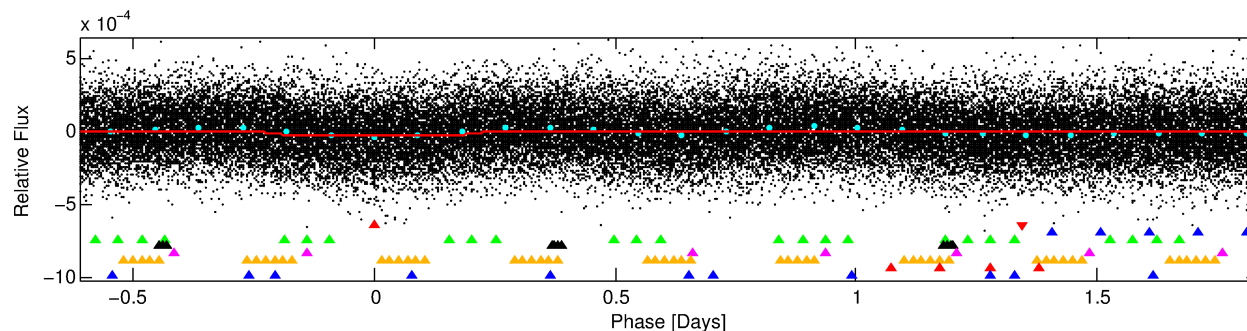
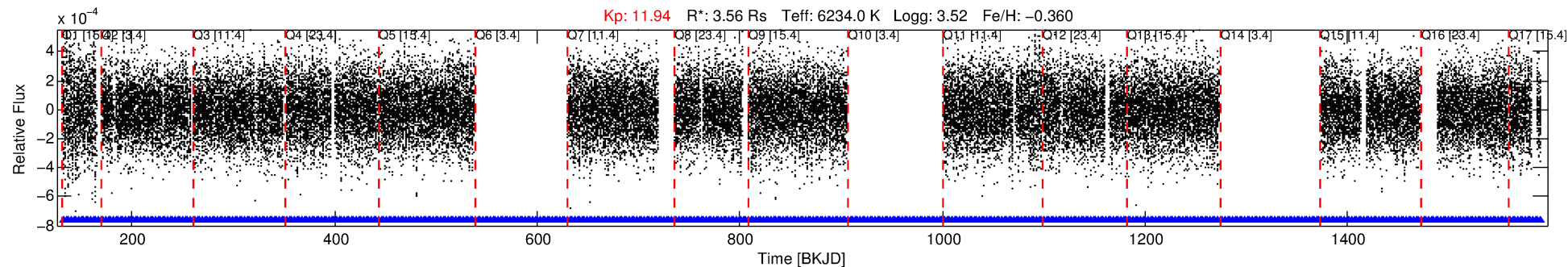
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-01

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 1 of 8 Period: 2.449 d



DV Fit Results:

Period = 2.44949 [0.00004] d
Epoch = 132.7064 [0.0077] BKJD
 $R_p/R^* = 0.0051$ [0.0011]
 $a/R^* = 1.21$ [0.45]
 $b = 0.90$ [0.25]
 $\text{Seff} = 10158.44$ [6279.13]
 $T_{\text{eq}} = 2560$ [396] K
 $R_p = 1.97$ [0.93] R_e
 $a = 0.0411$ [0.0160] AU
 $A_g = 5.49$ [4.20] [1.07σ]
 $T_{\text{eff}} = 6059$ [722] K [4.25σ]

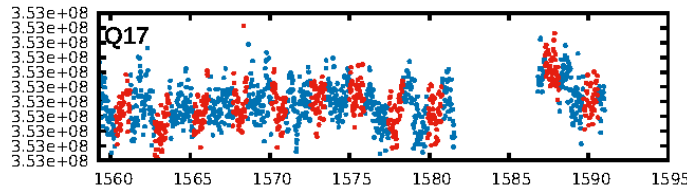
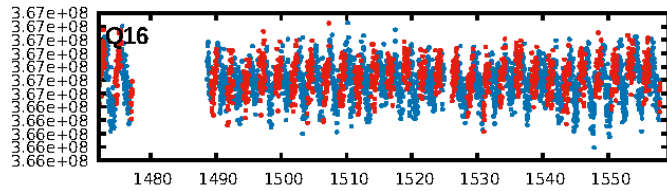
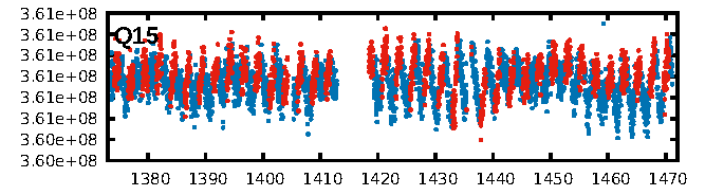
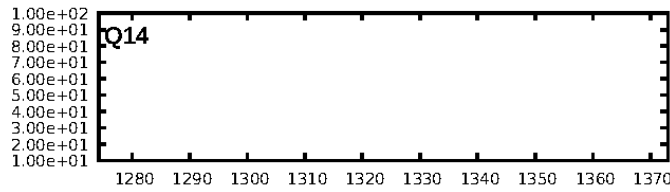
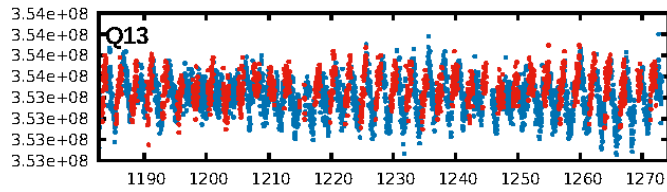
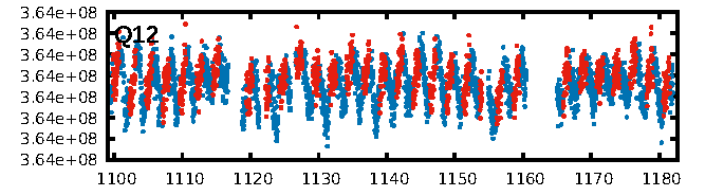
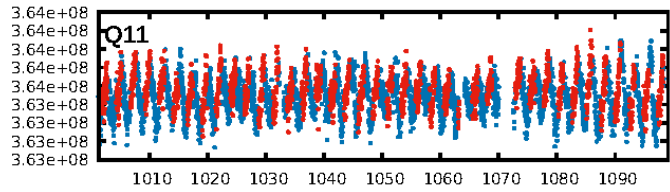
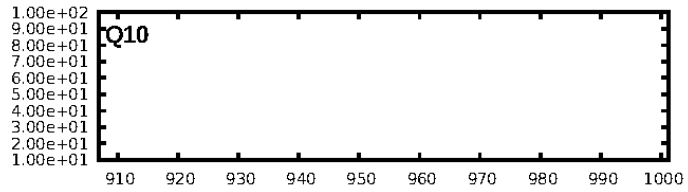
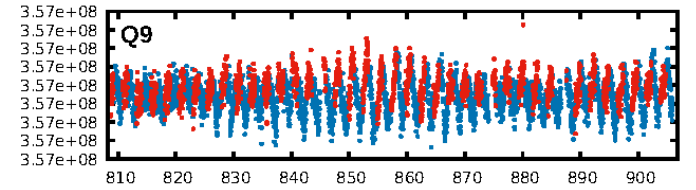
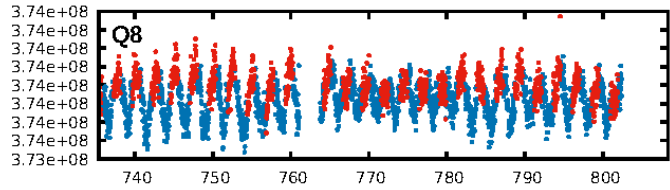
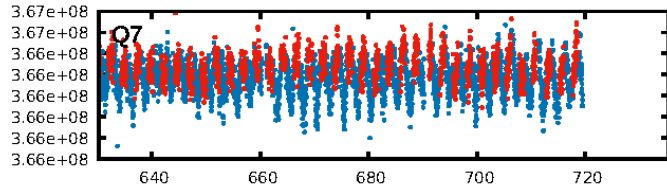
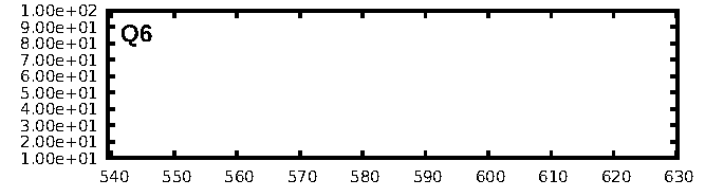
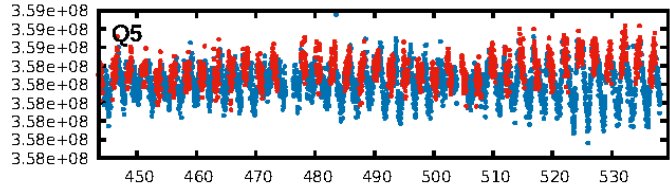
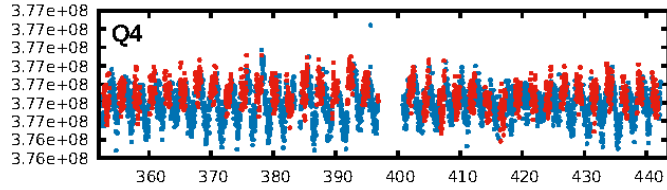
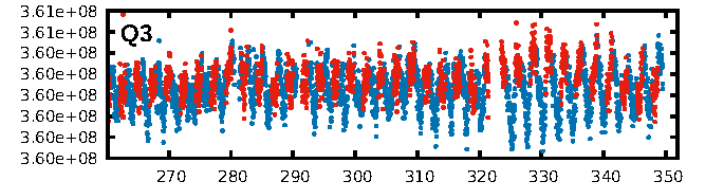
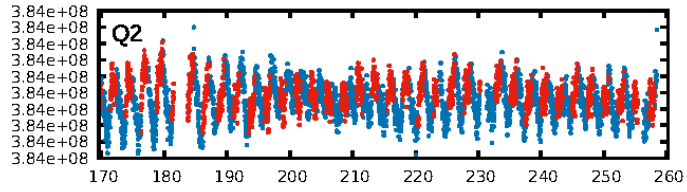
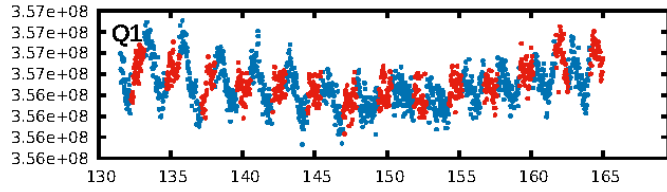
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [55.24σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.19e-11
RollingBand-fgt: 1.00 [417/417]
GhostDiagnostic-chr: -8.725
Centroid-sig: N/A
Centroid-so: 1.562 arcsec [1.74σ]
OotOffset-rm: 16.040 arcsec [5.23σ]
KicOffset-rm: 16.006 arcsec [4.60σ]
OotOffset-st: 1/1/2/2 [6]
KicOffset-st: 1/1/2/2 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 1.00 [14/14]

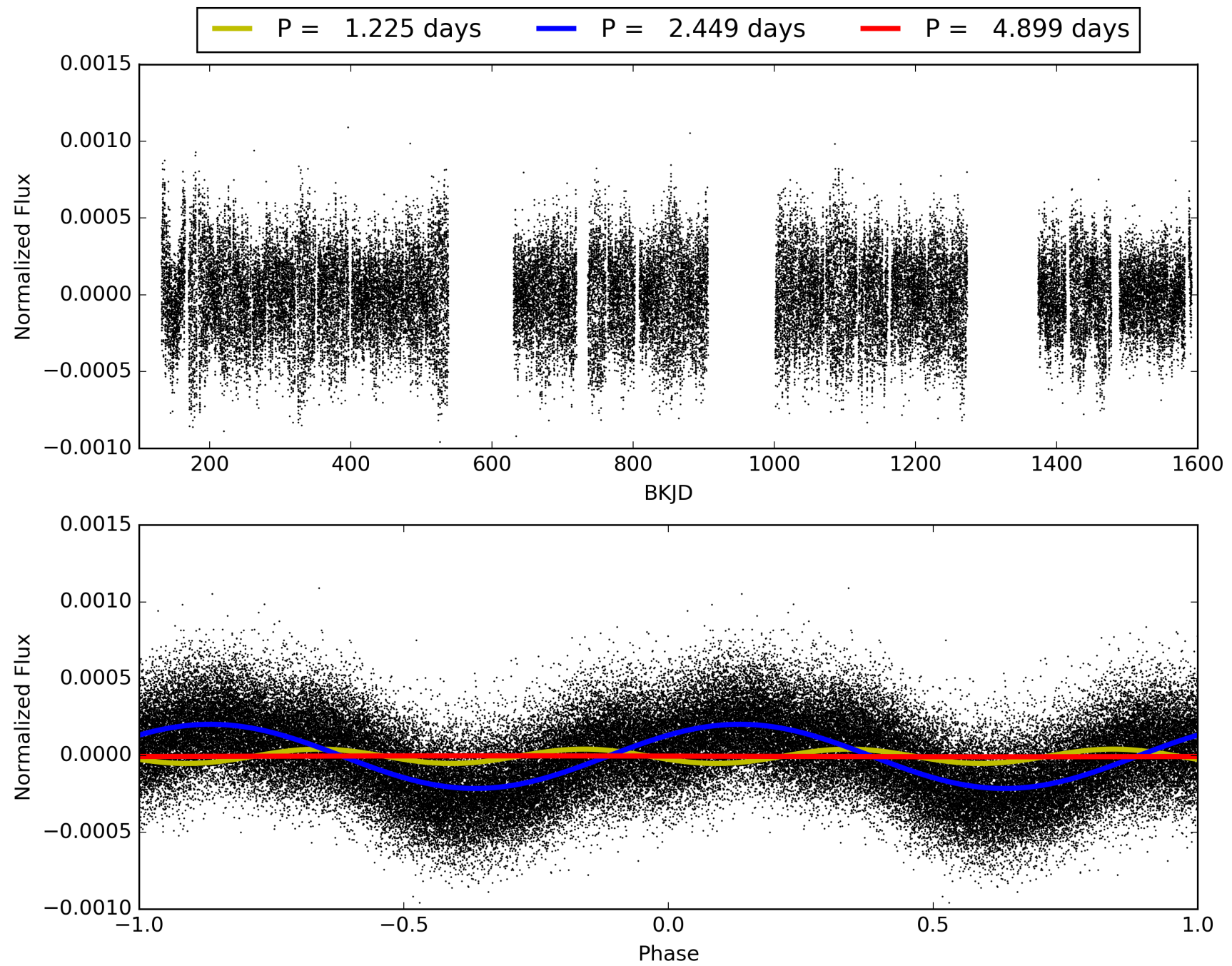
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003453026-01, PDC Light Curves

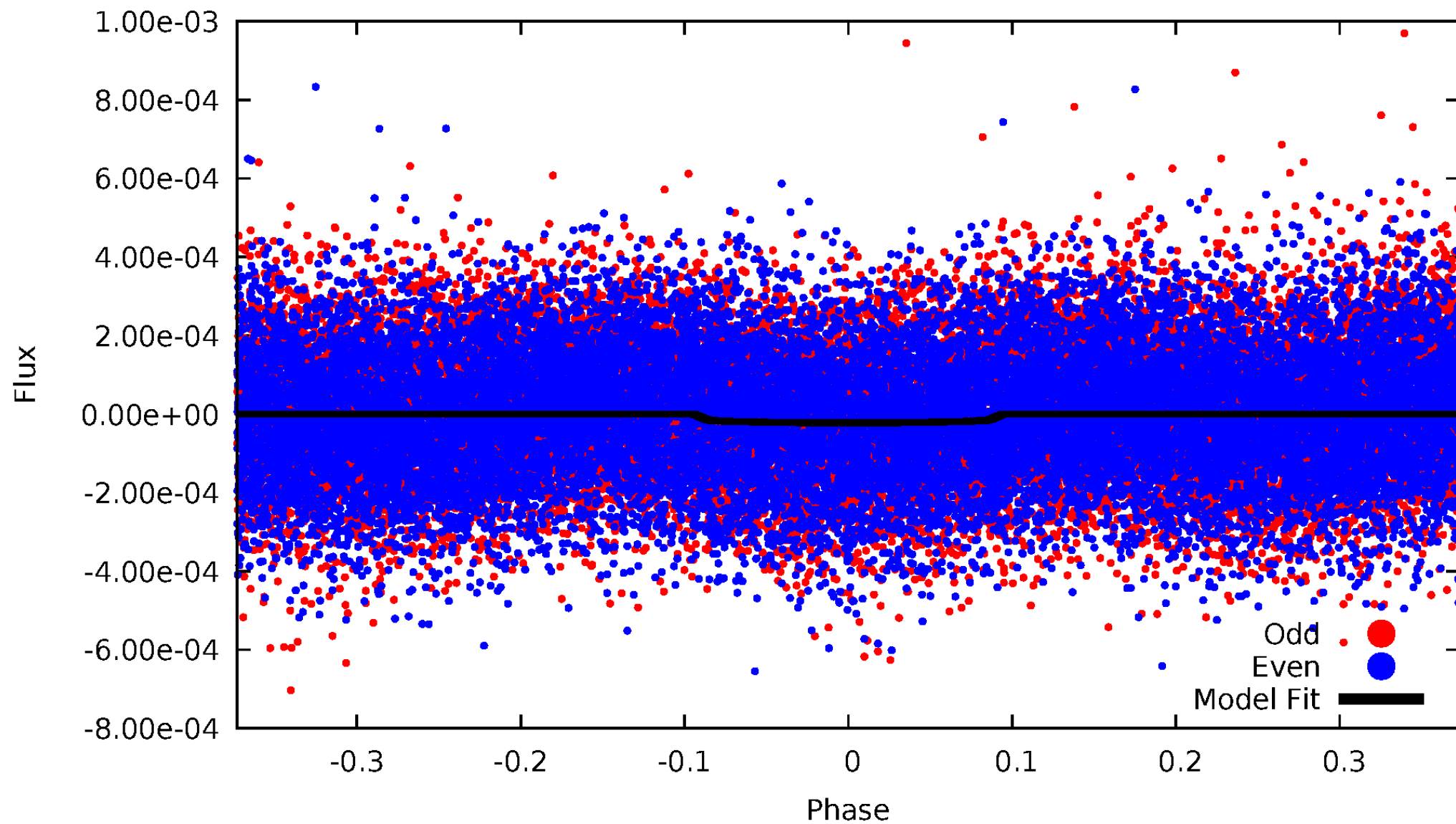


TCE 003453026-01



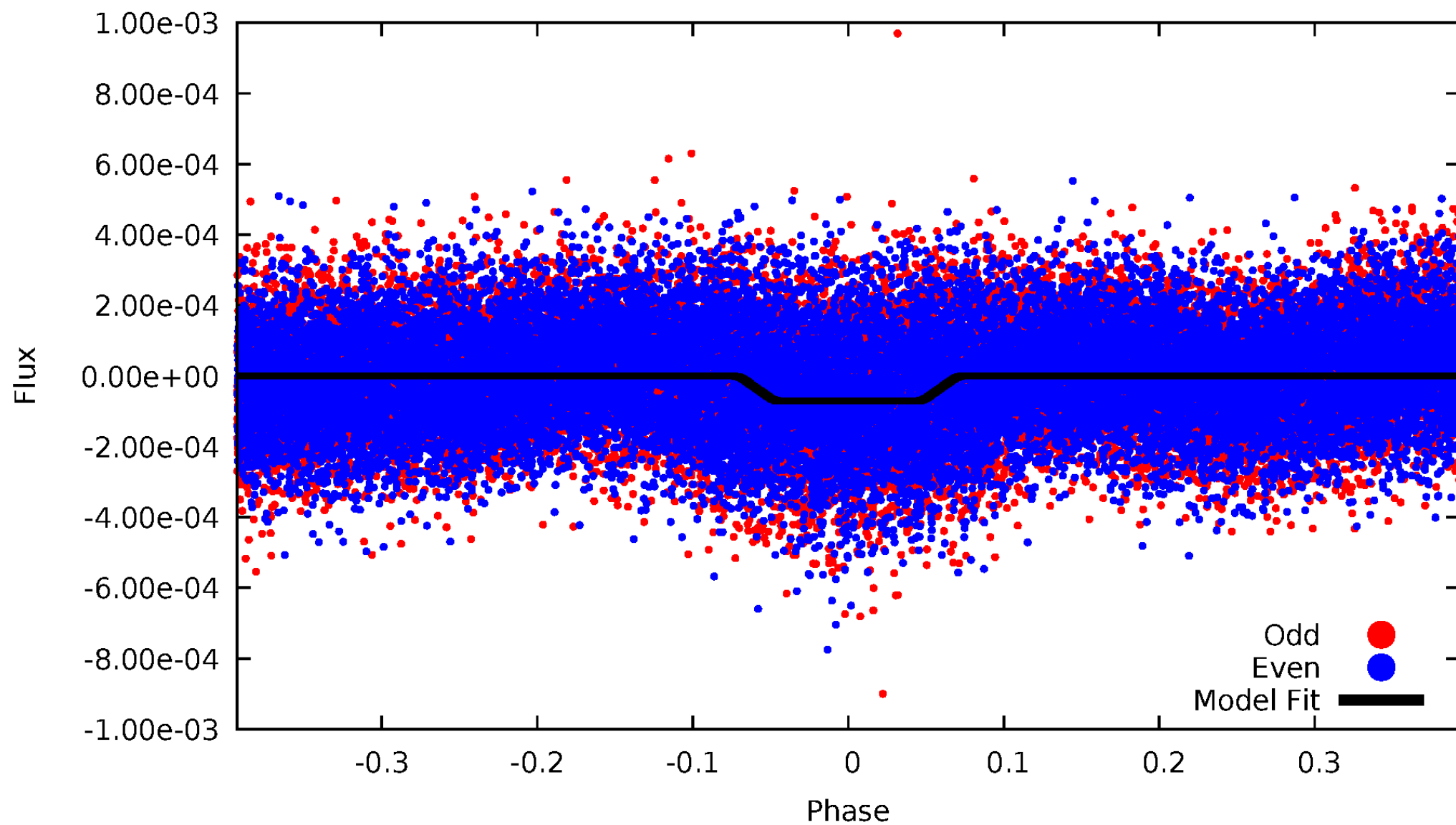
DV Odd/Even

TCE 003453026-01

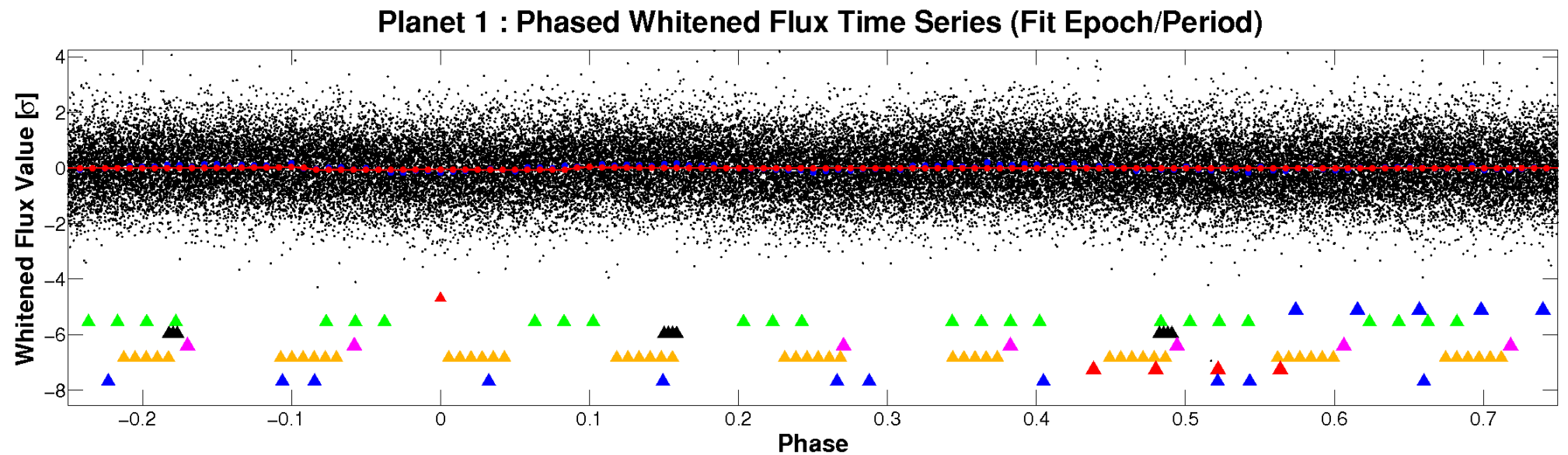
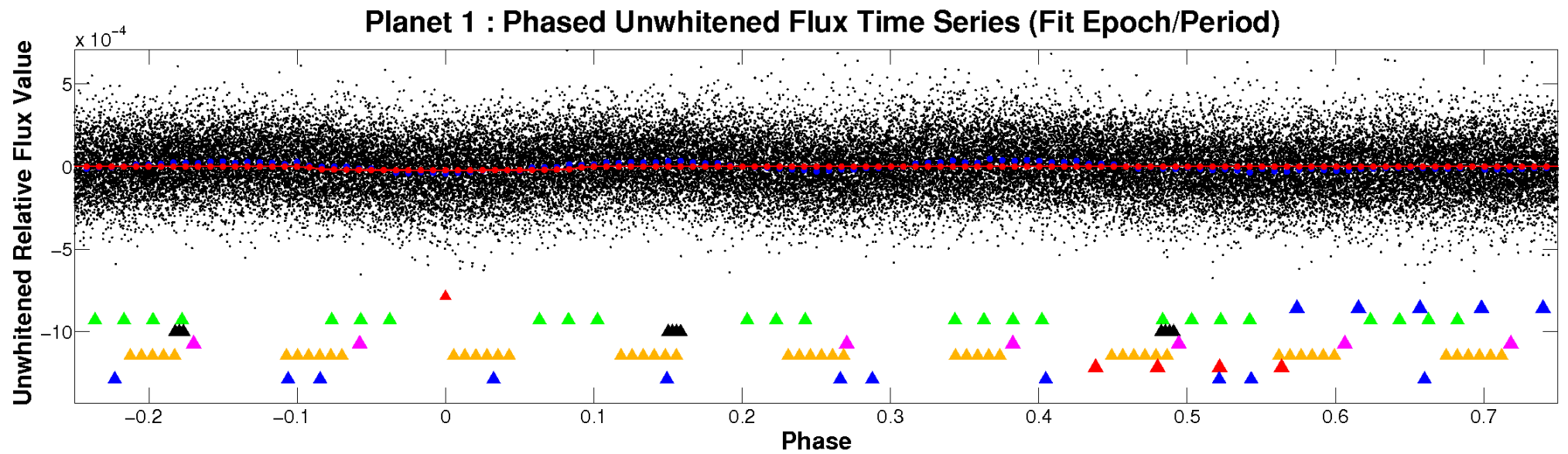


ALT Odd/Even

TCE 003453026-01

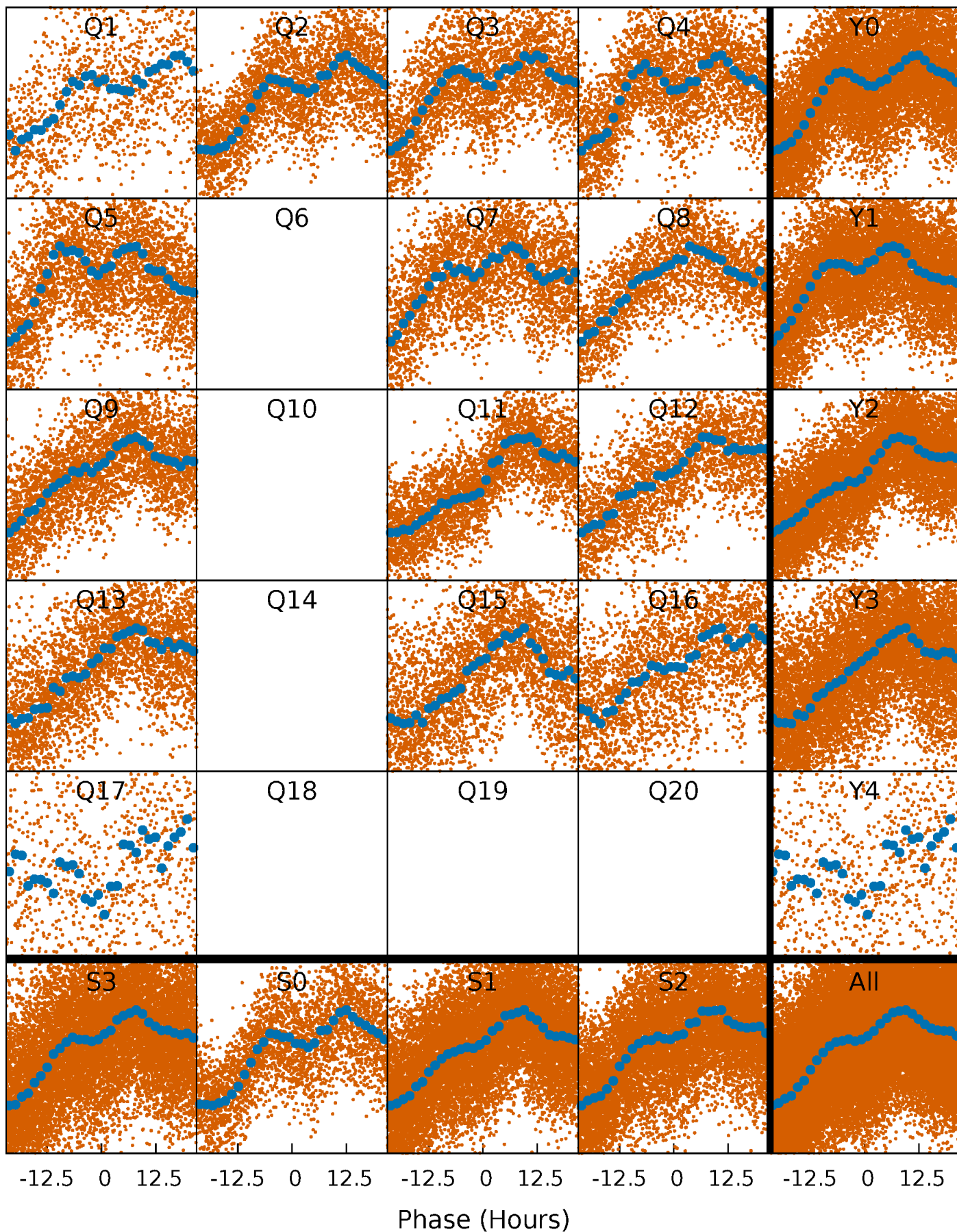


Non-Whitened Vs. Whitened Light Curve



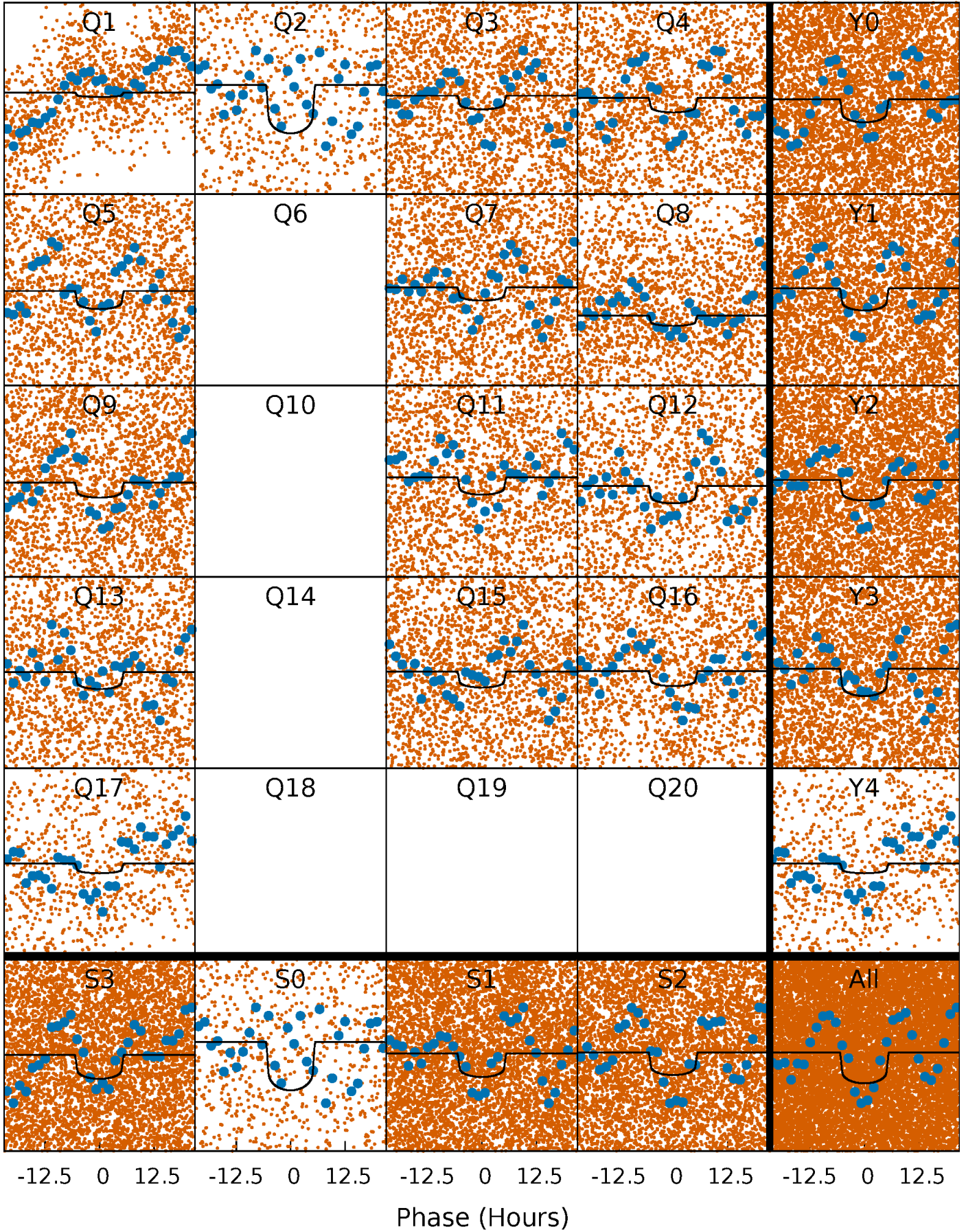
PDC Quarter-Phased Transit Curves

TCE 003453026-01 P= 2.449491 Days $T_0=132.706381$ (BKJD)



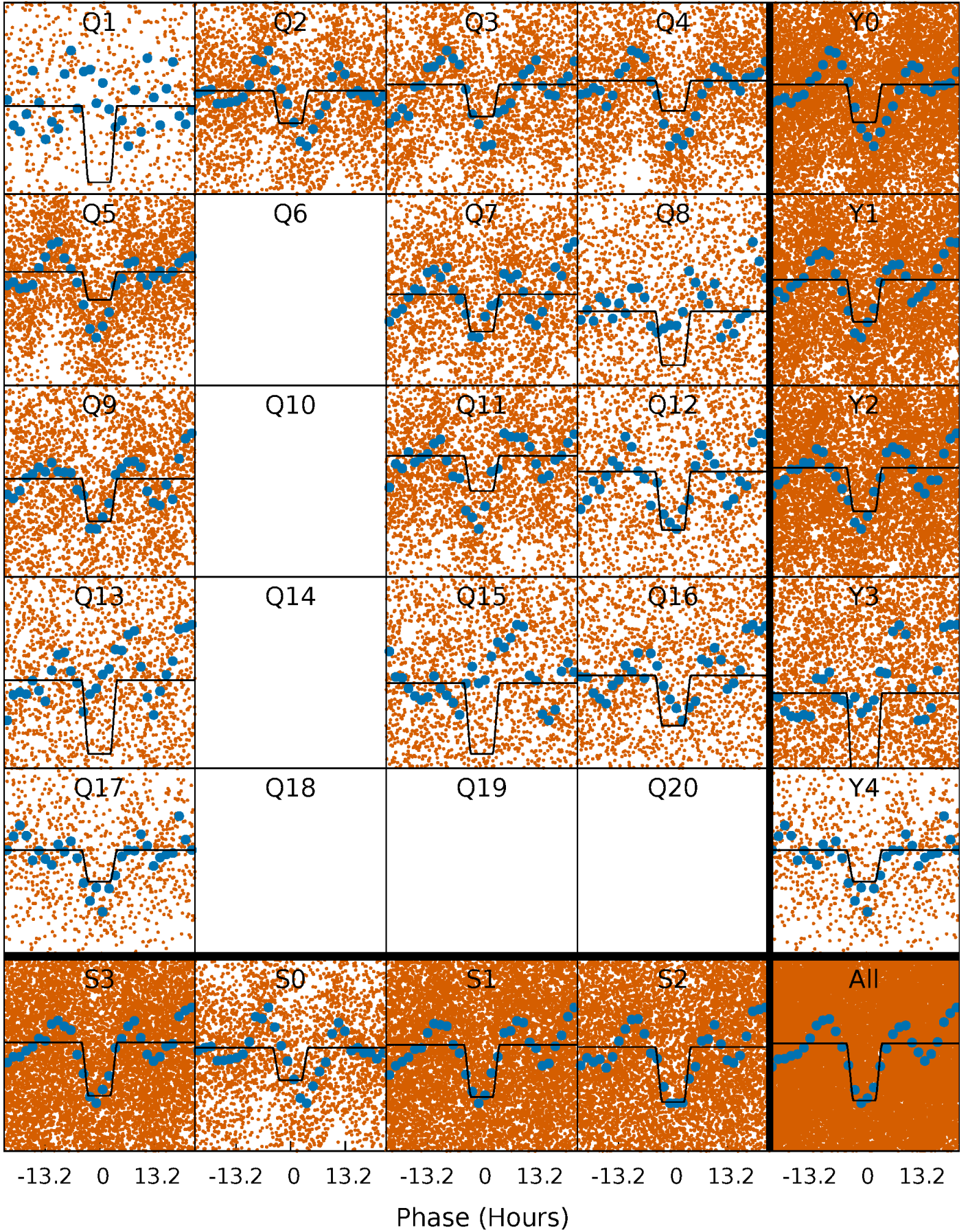
DV Quarter-Phased Transit Curves

TCE 003453026-01 P= 2.449491 Days $T_0=132.706381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

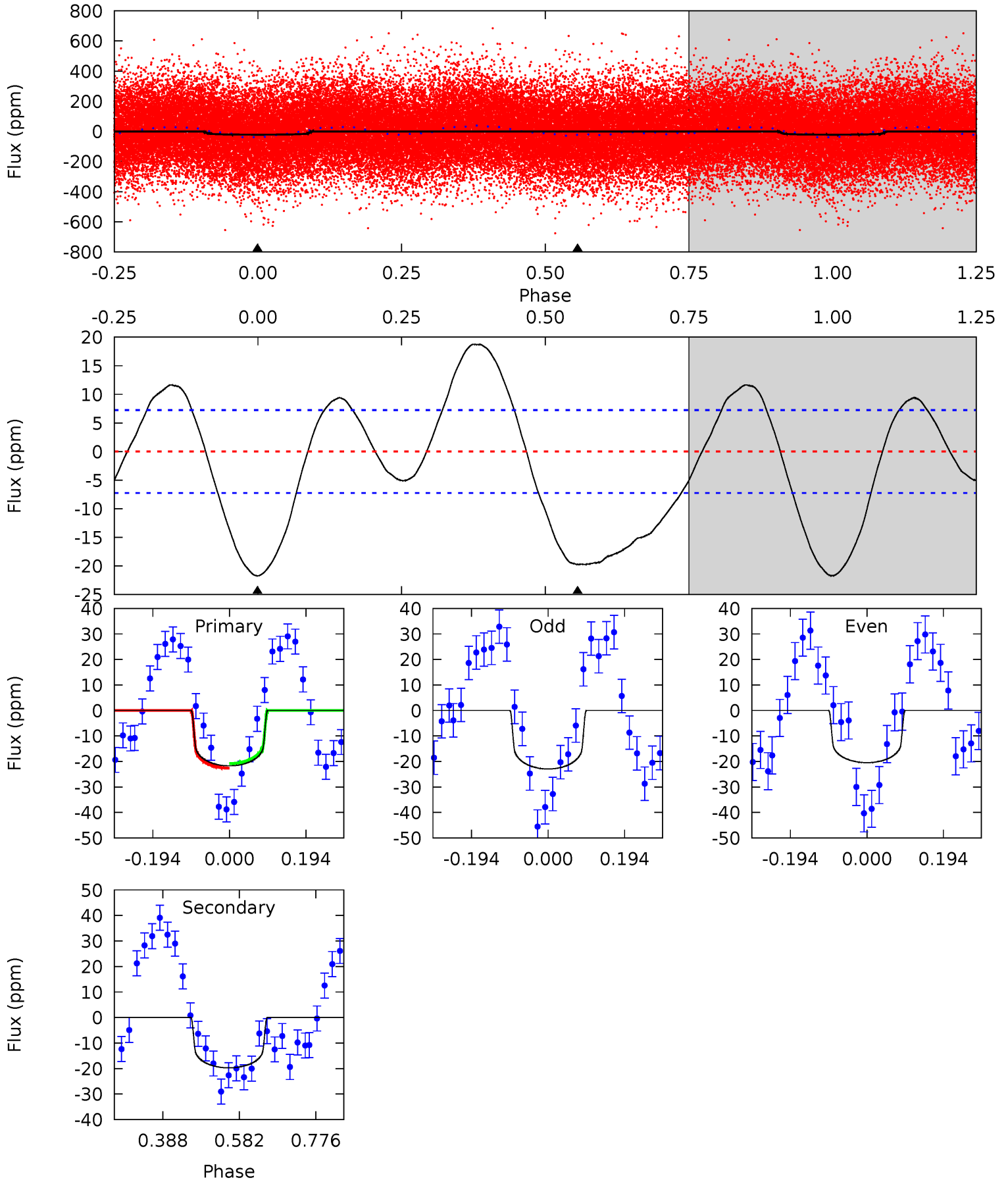
TCE 003453026-01 P= 2.449474 Days $T_0=132.716132$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-01, P = 2.449491 Days, E = 130.256890 Days

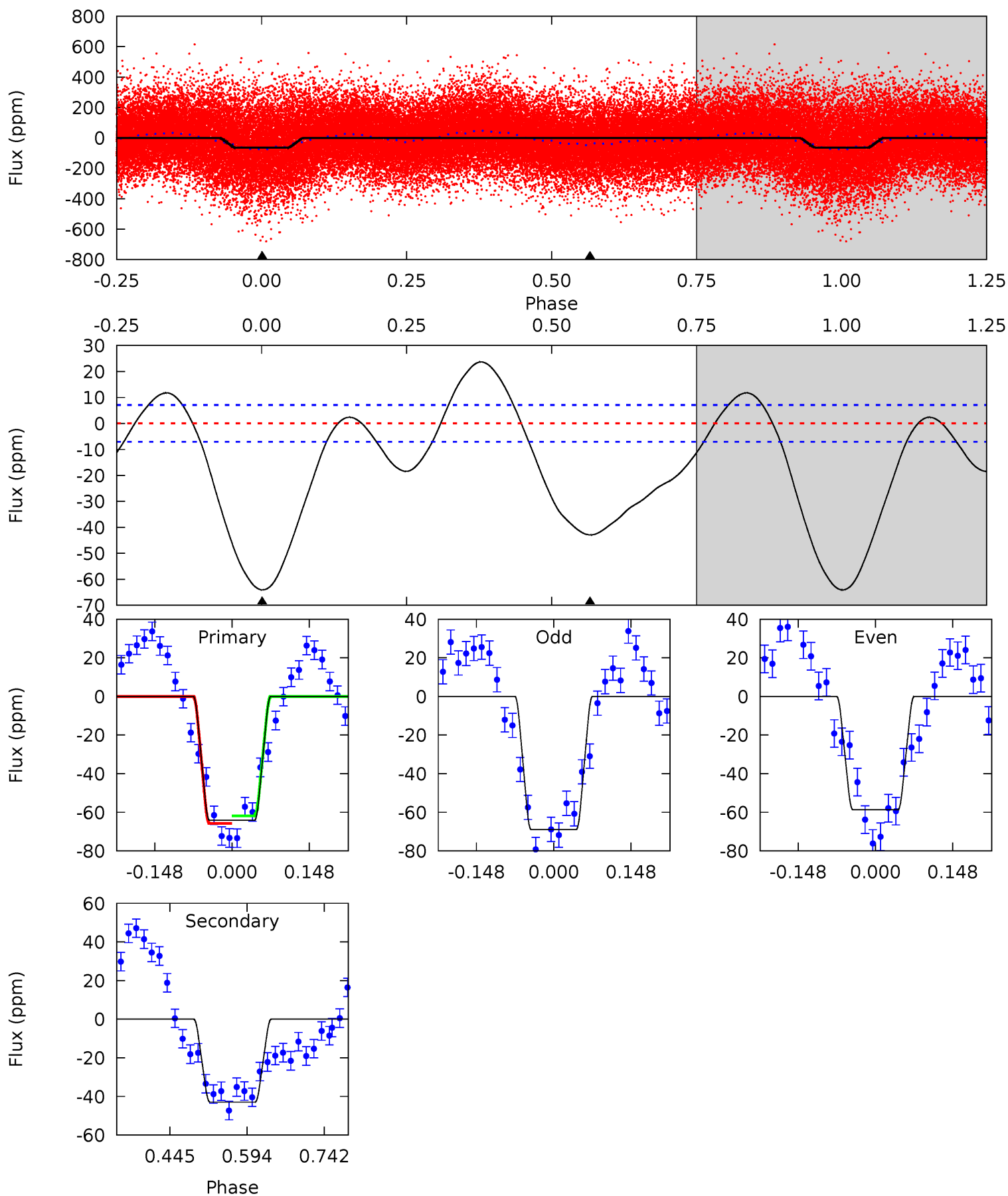
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	12.0	0	0	4.42	1.30	3.88	13.3	13.3	12.0	12.0	0.76	0.98	0.46	0.55



Alt Model-Shift Uniqueness Test

003453026-01, P = 2.449474 Days, E = 130.266658 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	27.2	0	0	4.48	1.44	8.53	40.6	40.6	27.2	27.2	3.25	1.00	0.27	1.24



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 2	$1.85^{+0.54}_{-0.53}$	3524^{+214}_{-336}	5777^{+791}_{-607}	$5.384^{+4.692}_{-2.253}$
Alt.	-43 ± 2	$3.13^{+0.65}_{-0.71}$	3528^{+229}_{-352}	5425^{+410}_{-325}	$4.022^{+2.550}_{-1.177}$

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 $A_{obs} \gg 1.0$

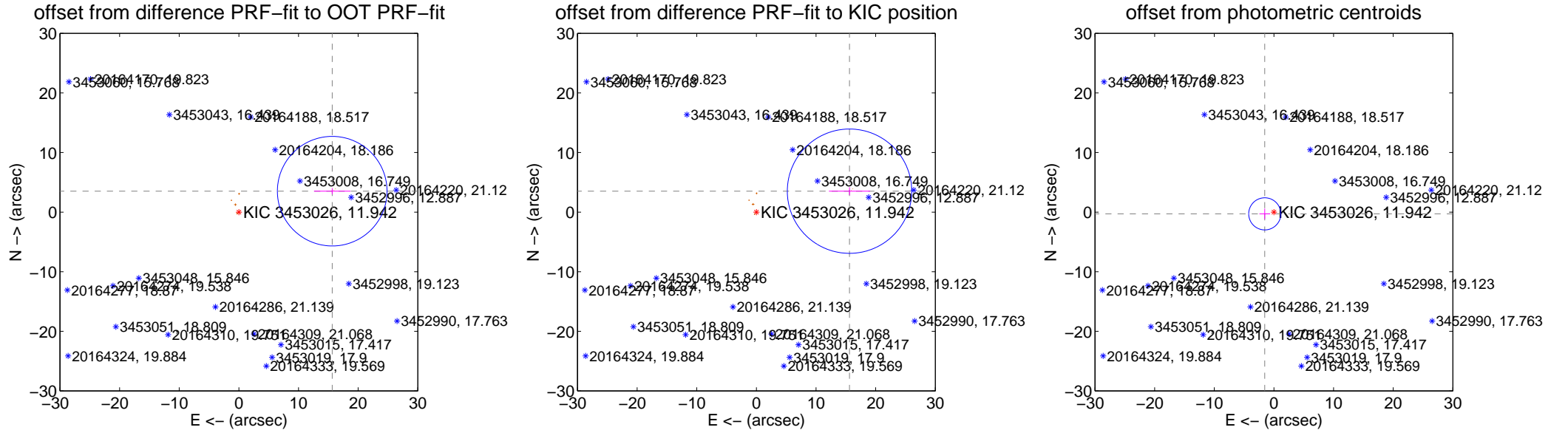
DV Centroid Data

Supplemental centroid analysis for 003453026-01. **Kepler magnitude: 11.94.** Transit SNR 6.30

There are 0 quarters with good PRF difference image offsets

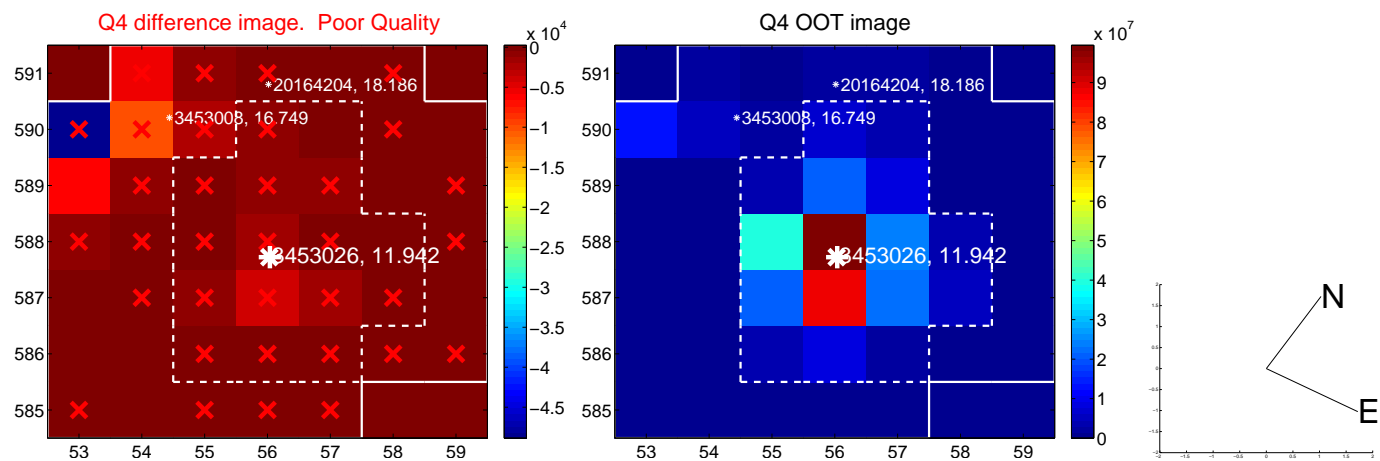
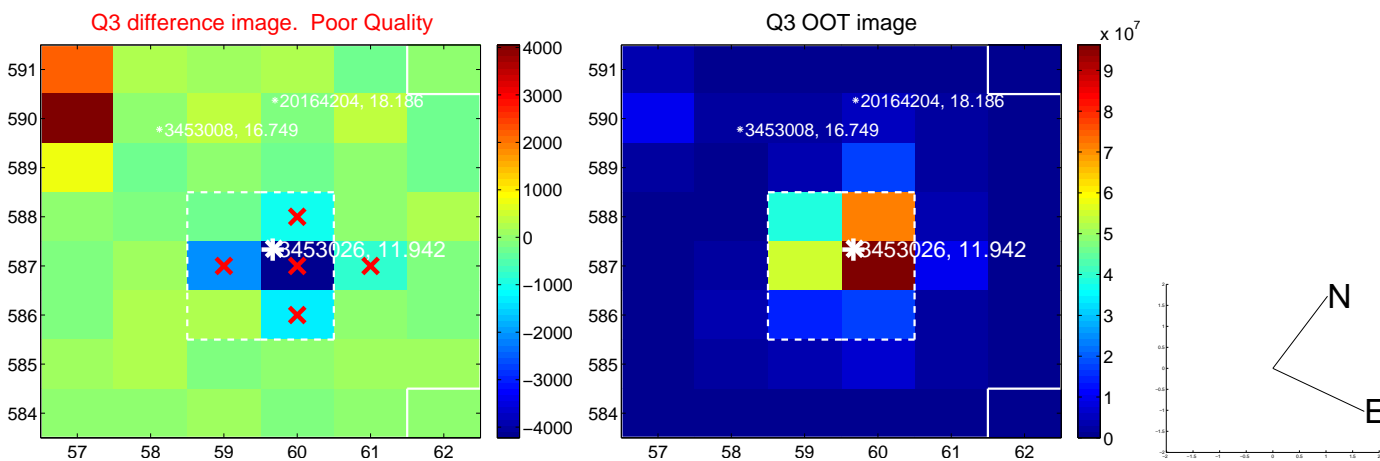
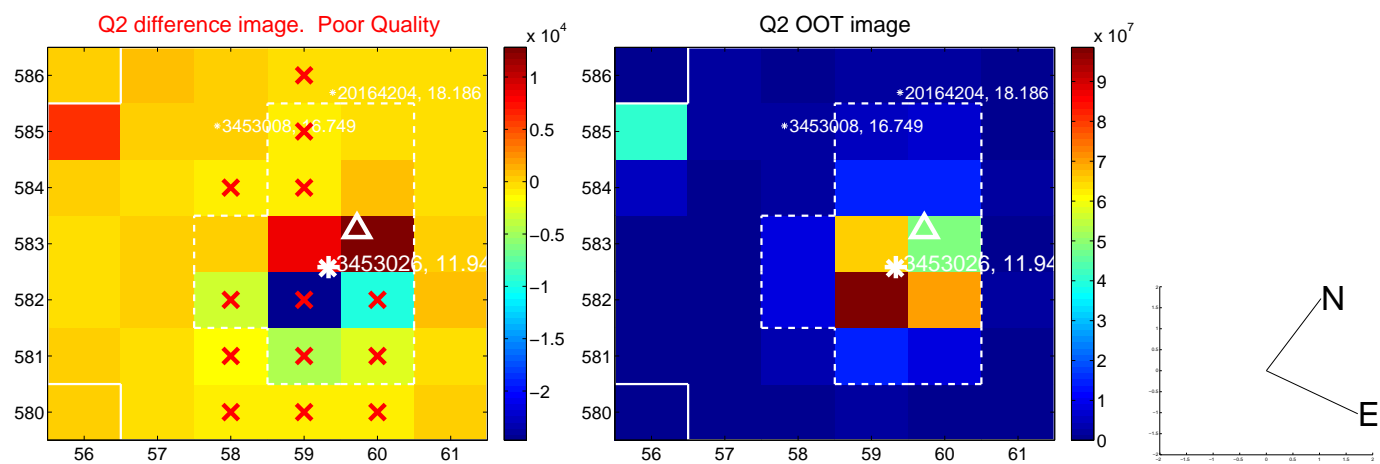
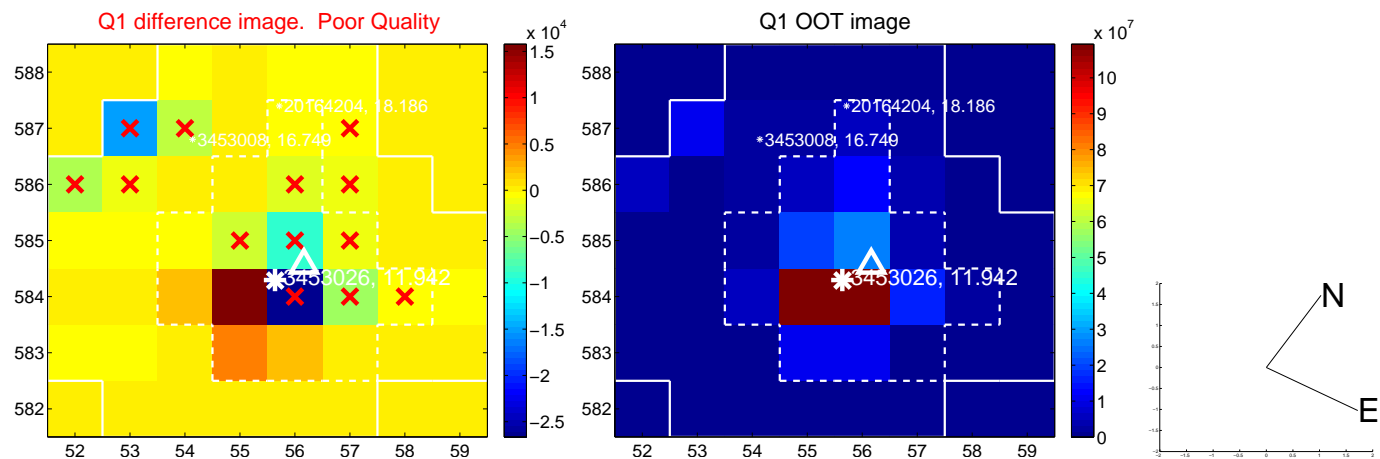
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	16.040 ± 3.064	5.23	-15.651 ± 3.057	3.514 ± 0.516
PRF-fit source offset from KIC position	16.006 ± 3.477	4.60	-15.615 ± 3.452	3.513 ± 0.653
photometric centroid source offset	1.56 ± 0.90	1.74	1.54 ± 0.90	-0.29 ± 0.88

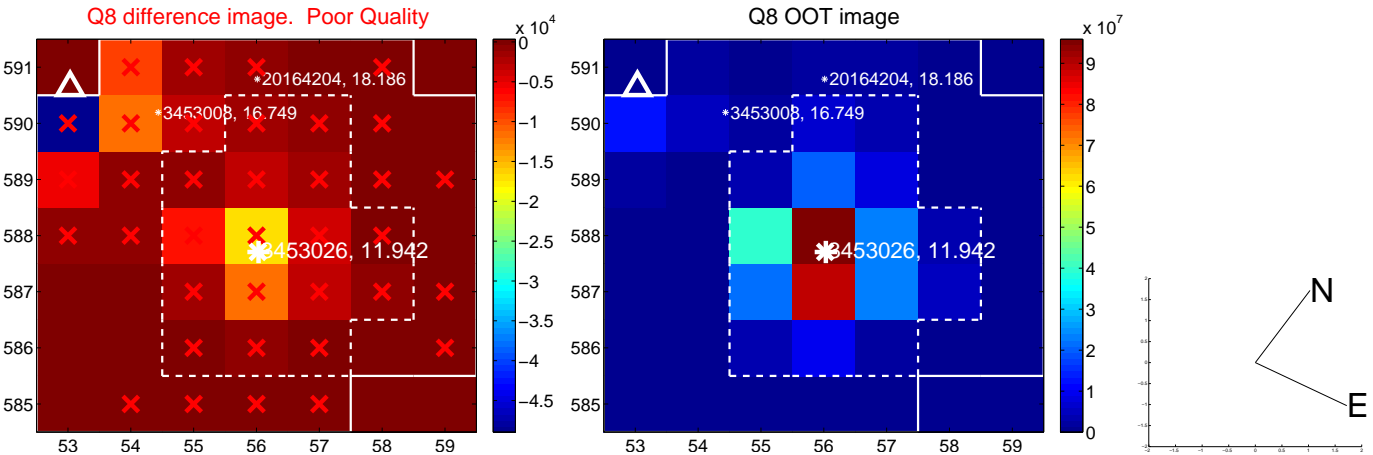
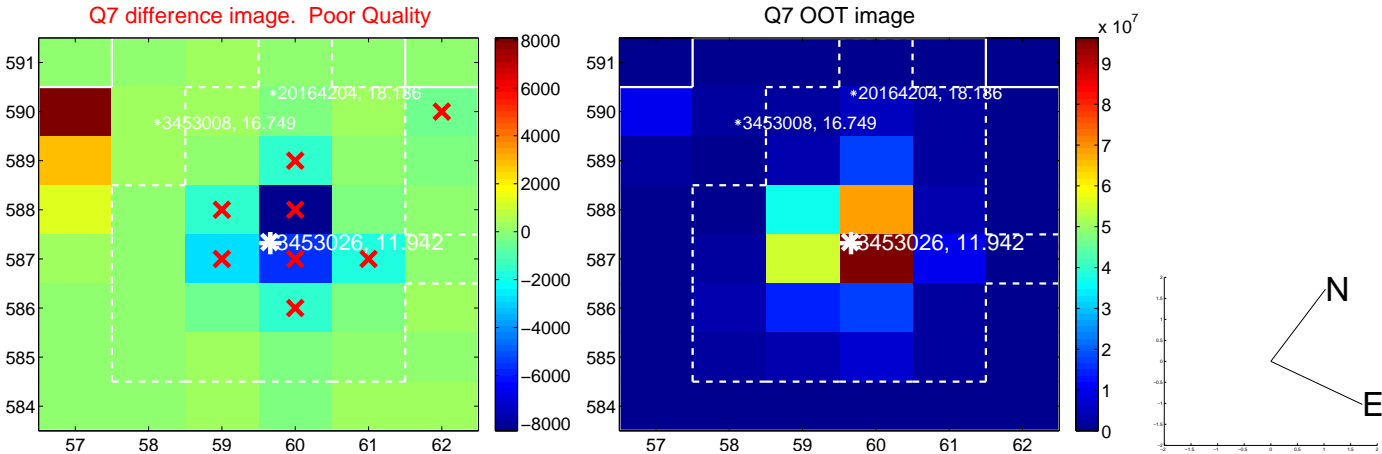
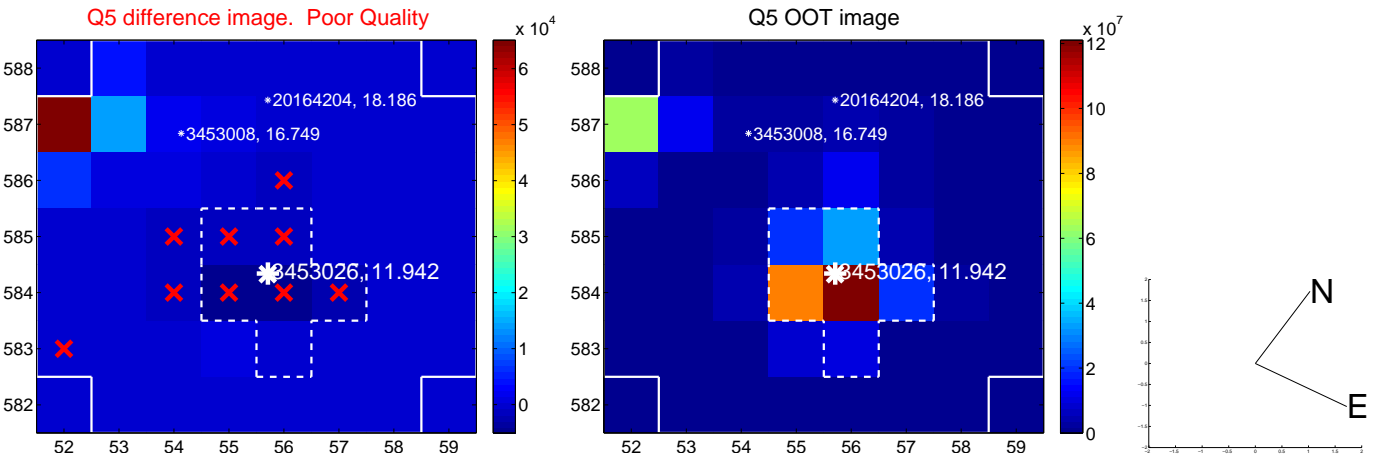


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

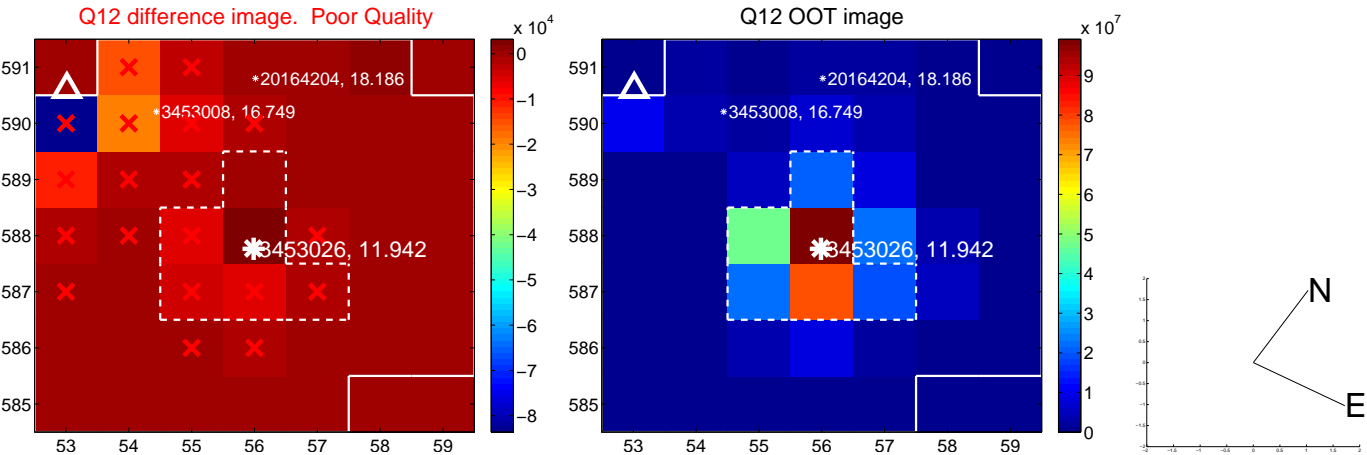
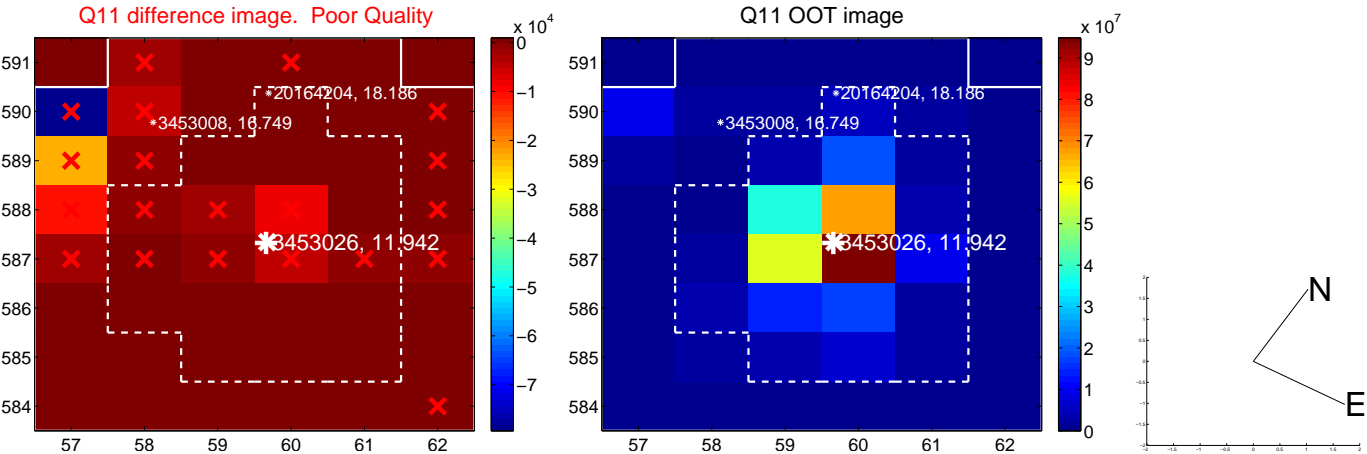
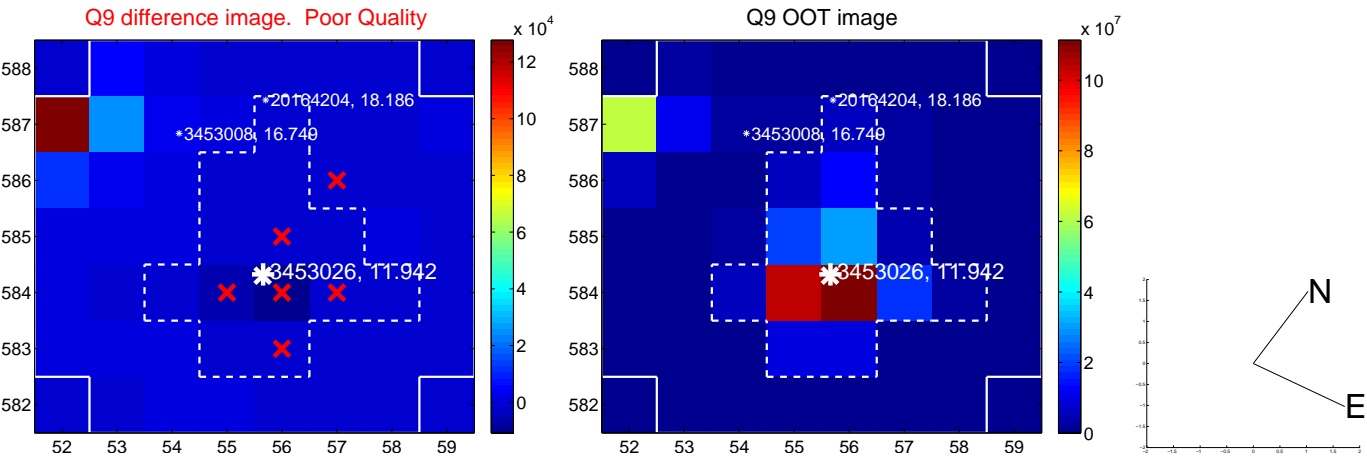
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



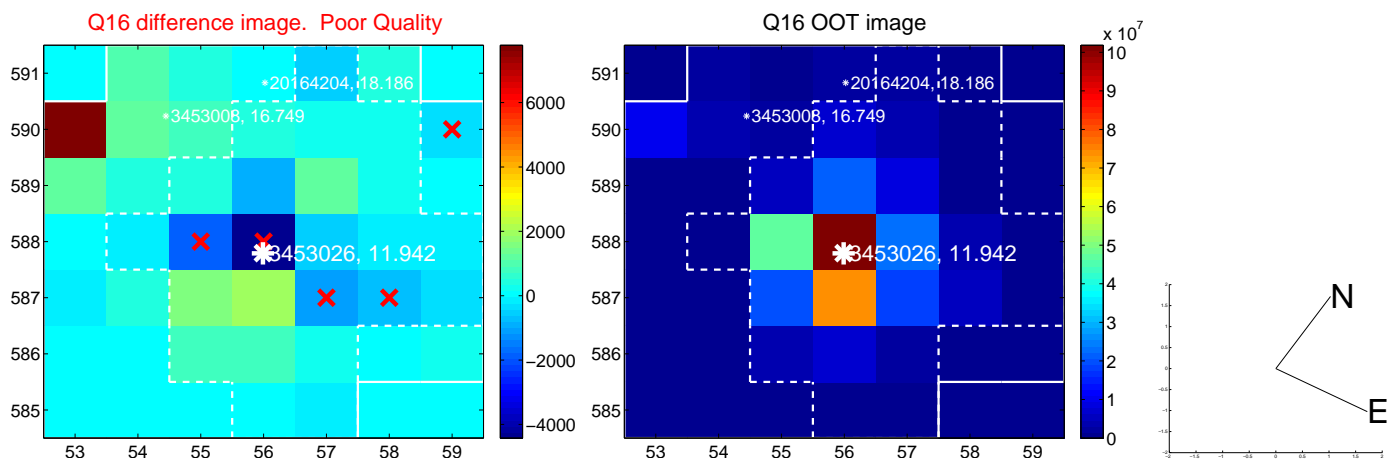
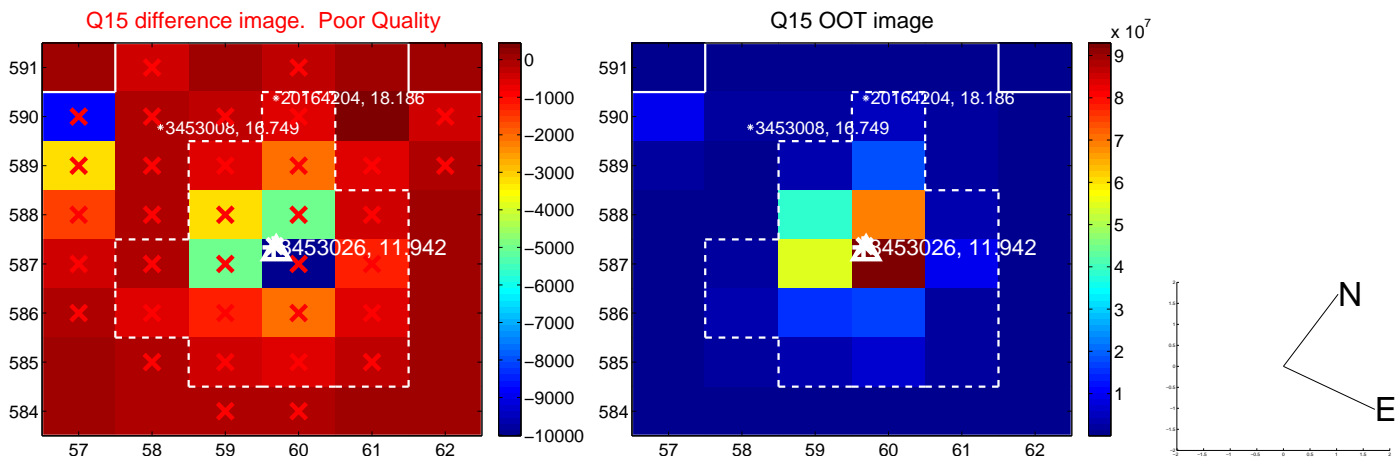
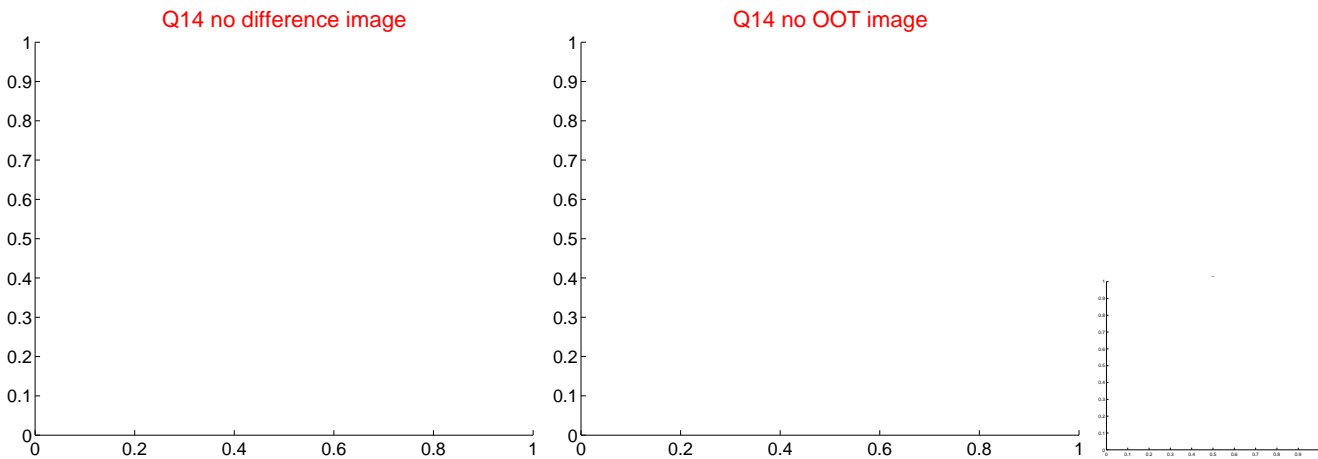
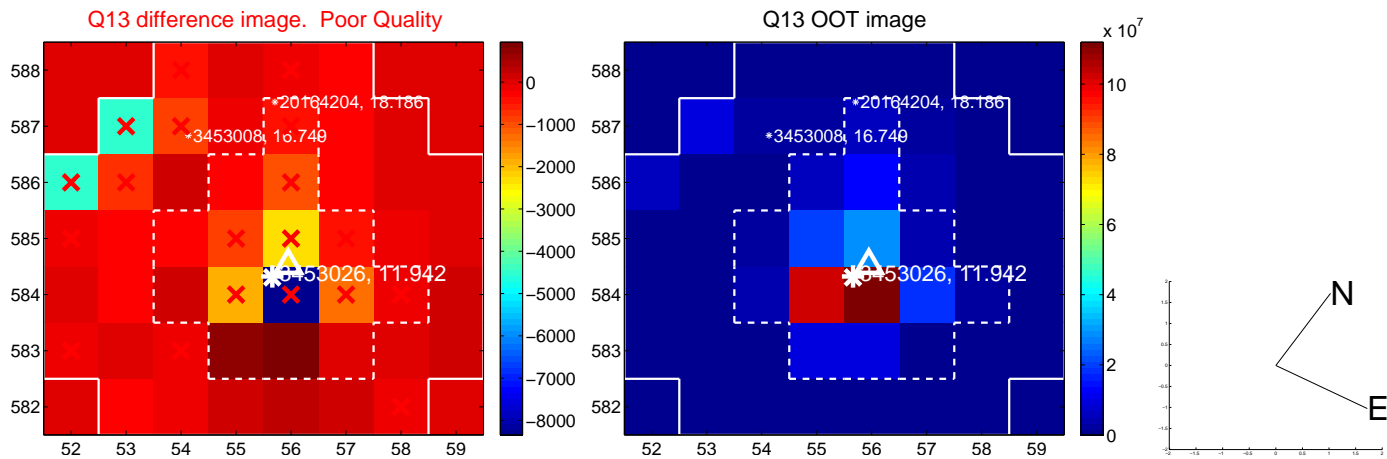
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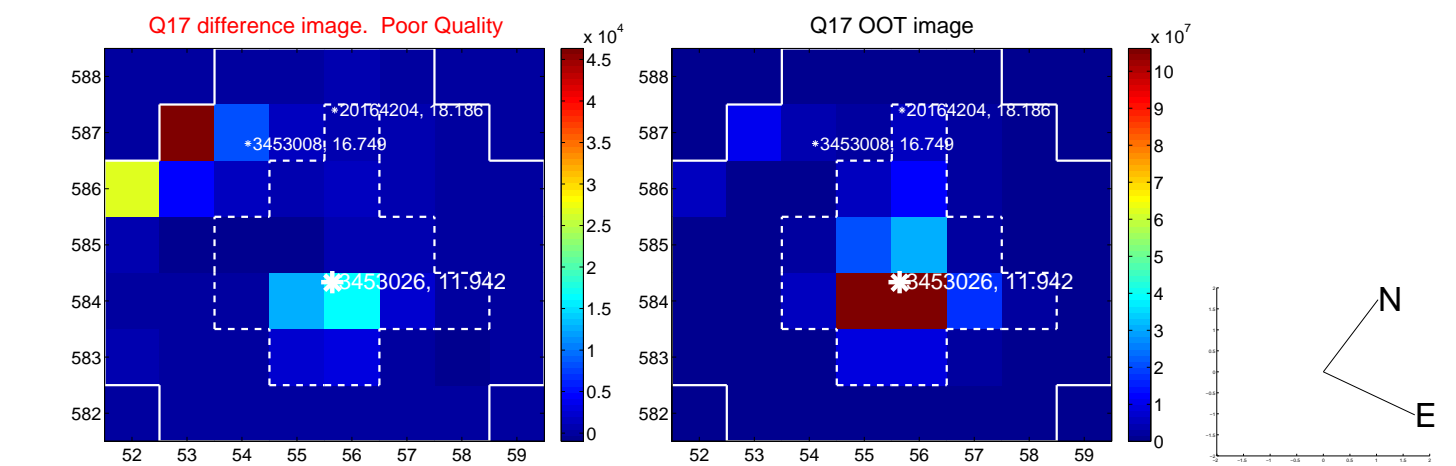
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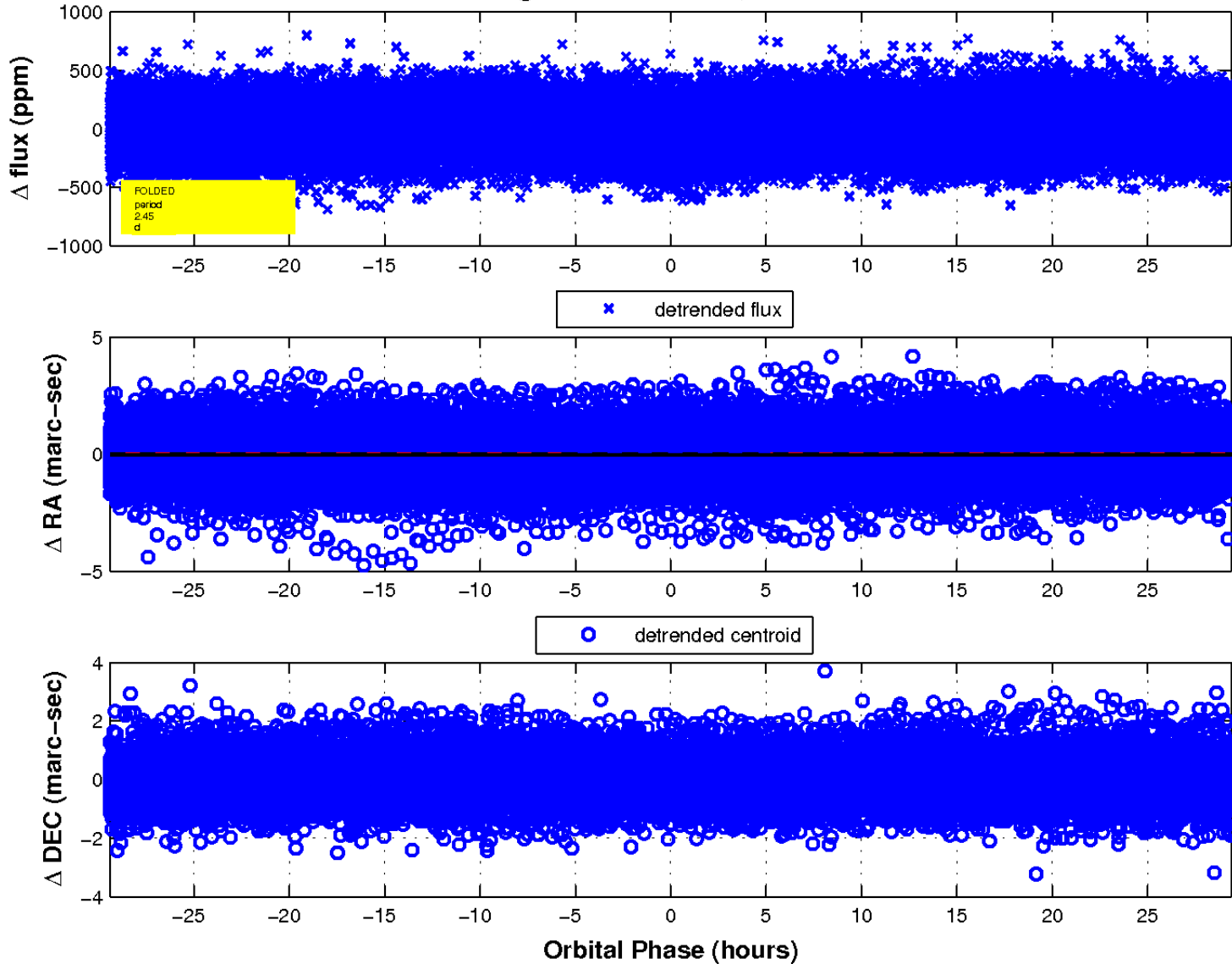
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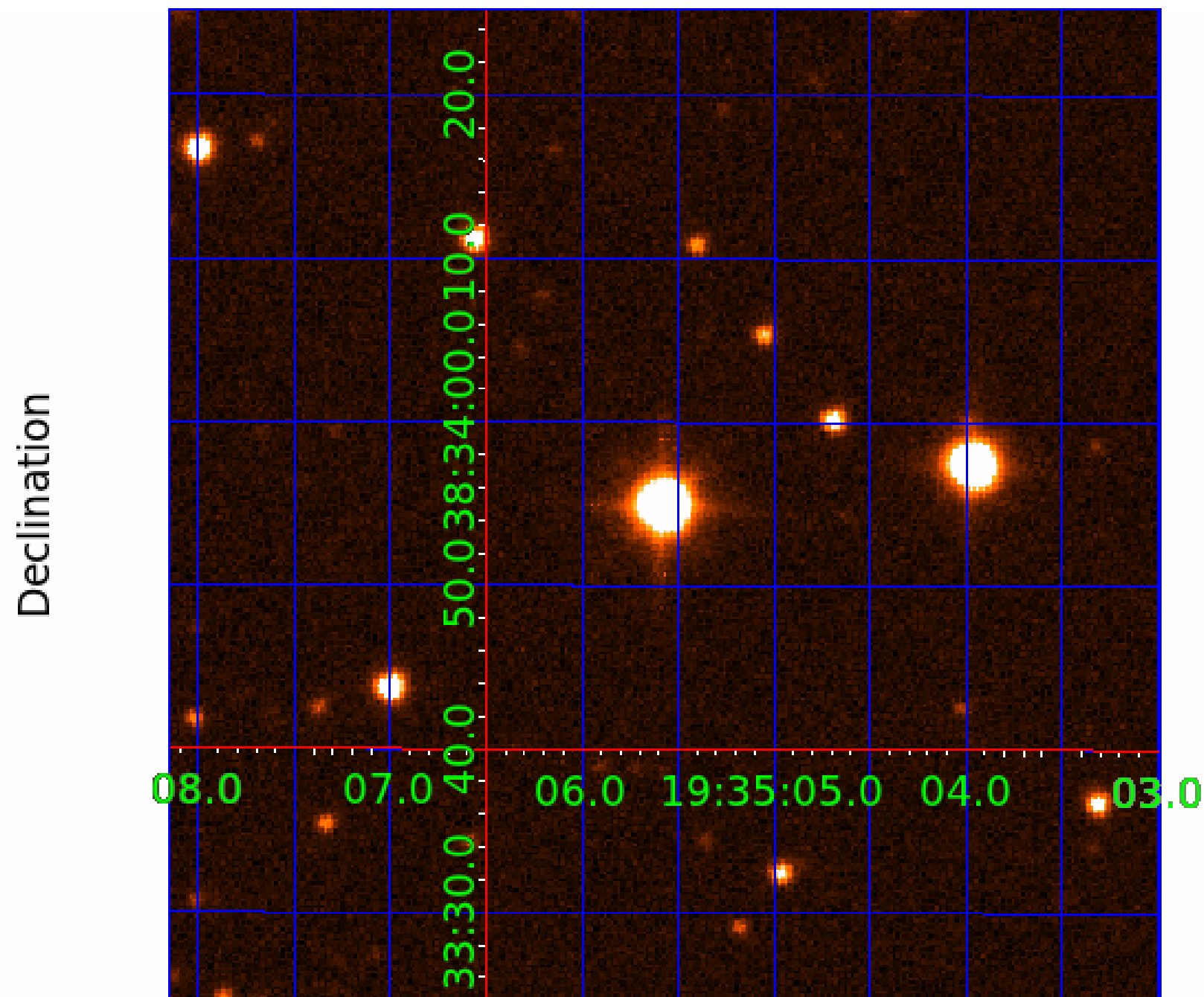
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 8



UKIRT Image



KIC 003453026

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})
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Robovetter Results

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003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

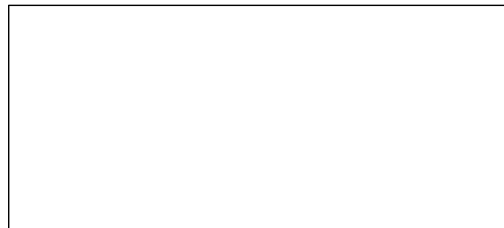
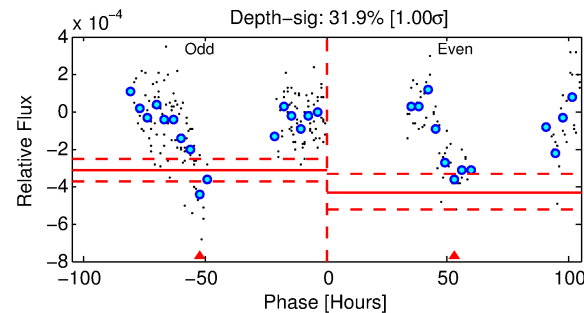
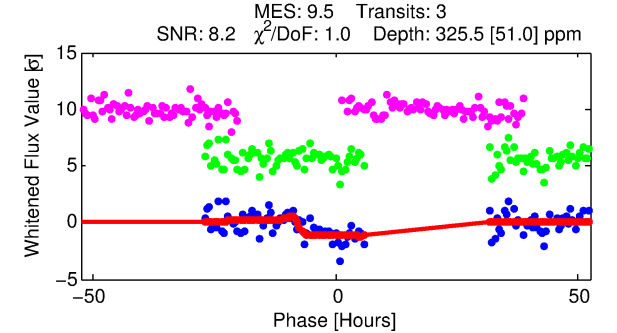
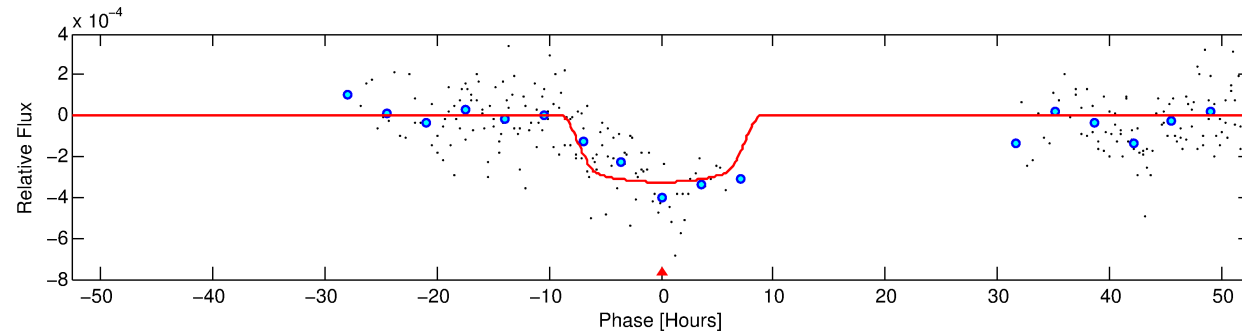
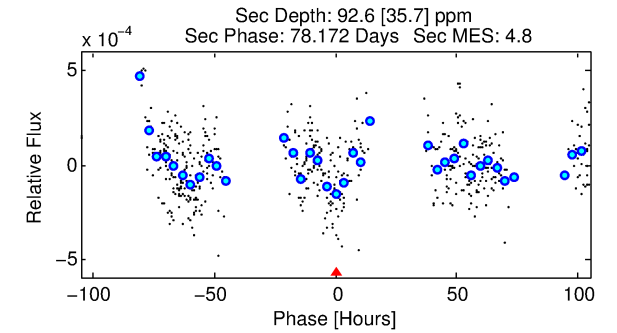
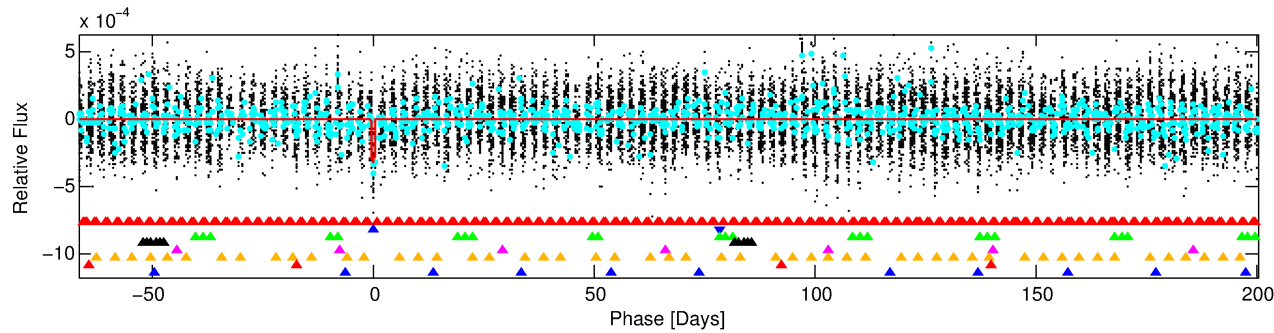
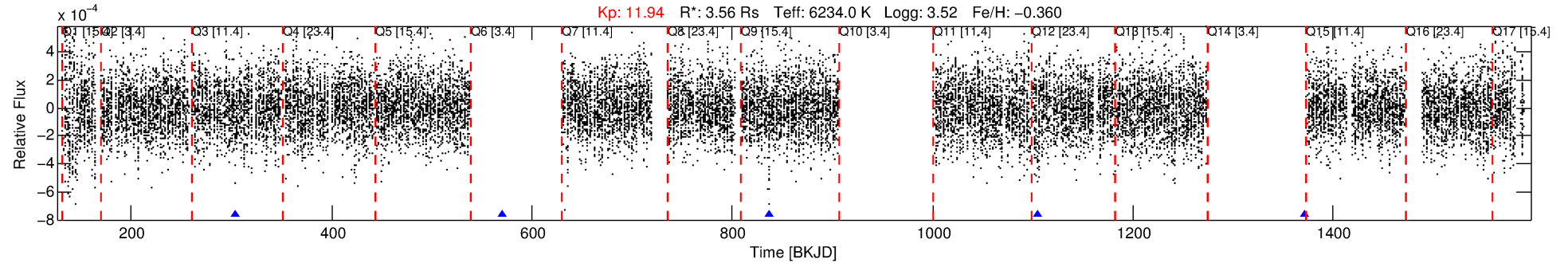
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-02

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 2 of 8 Period: 266.893 d



DV Fit Results:

Period = 266.89288 [0.01393] d
Epoch = 303.5339 [0.1106] BKJD
Rp/R* = 0.0202 [0.0019]
a/R* = 45.73 [15.23]
b = 0.94 [0.05]
Seff = 19.52 [12.07]
Teq = 536 [83] K
Rp = 7.86 [3.38] Re
a = 0.9373 [0.3648] AU
Ag = 724.23 [538.60] [1.34 σ]
Teffp = 4299 [474] K [7.83 σ]

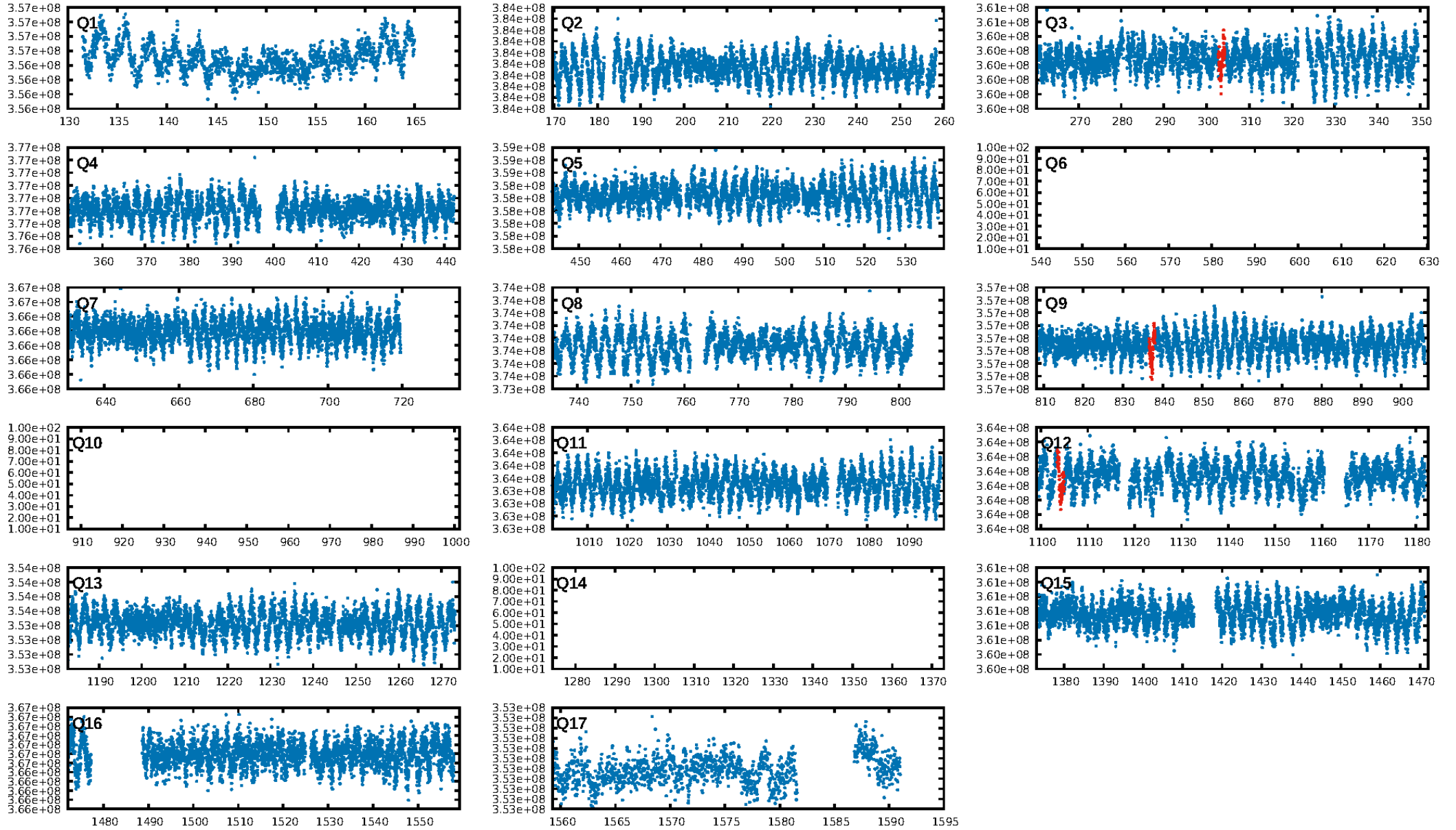
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.43 σ]
LongPeriod-sig: 100.0% [213.00 σ]
ModelChiSquare2-sig: 90.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.06e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.081
Centroid-sig: N/A
Centroid-so: 1.021 arcsec [1.50 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.00 [0/2]

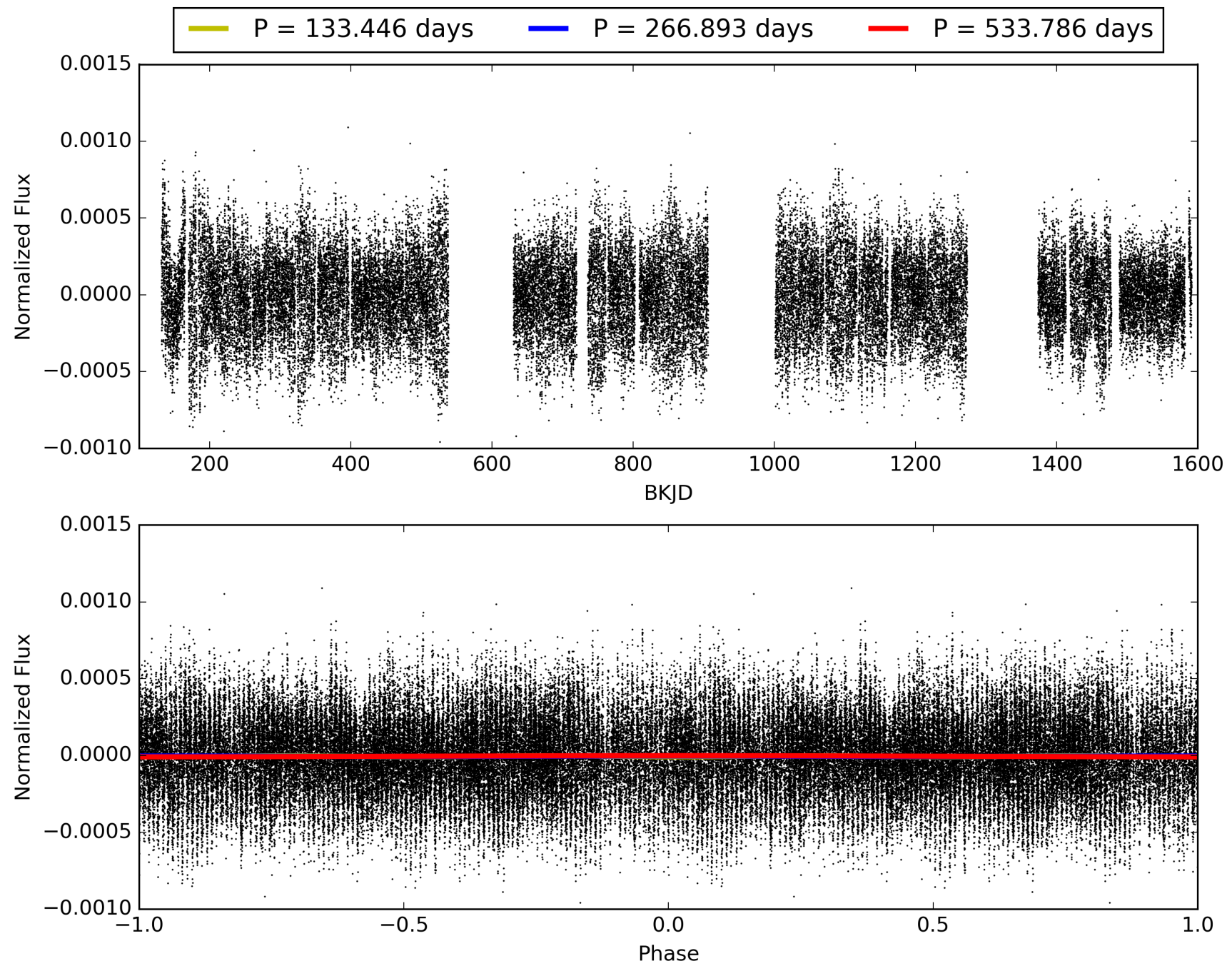
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:53:44 Z

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

TCE 003453026-02, PDC Light Curves

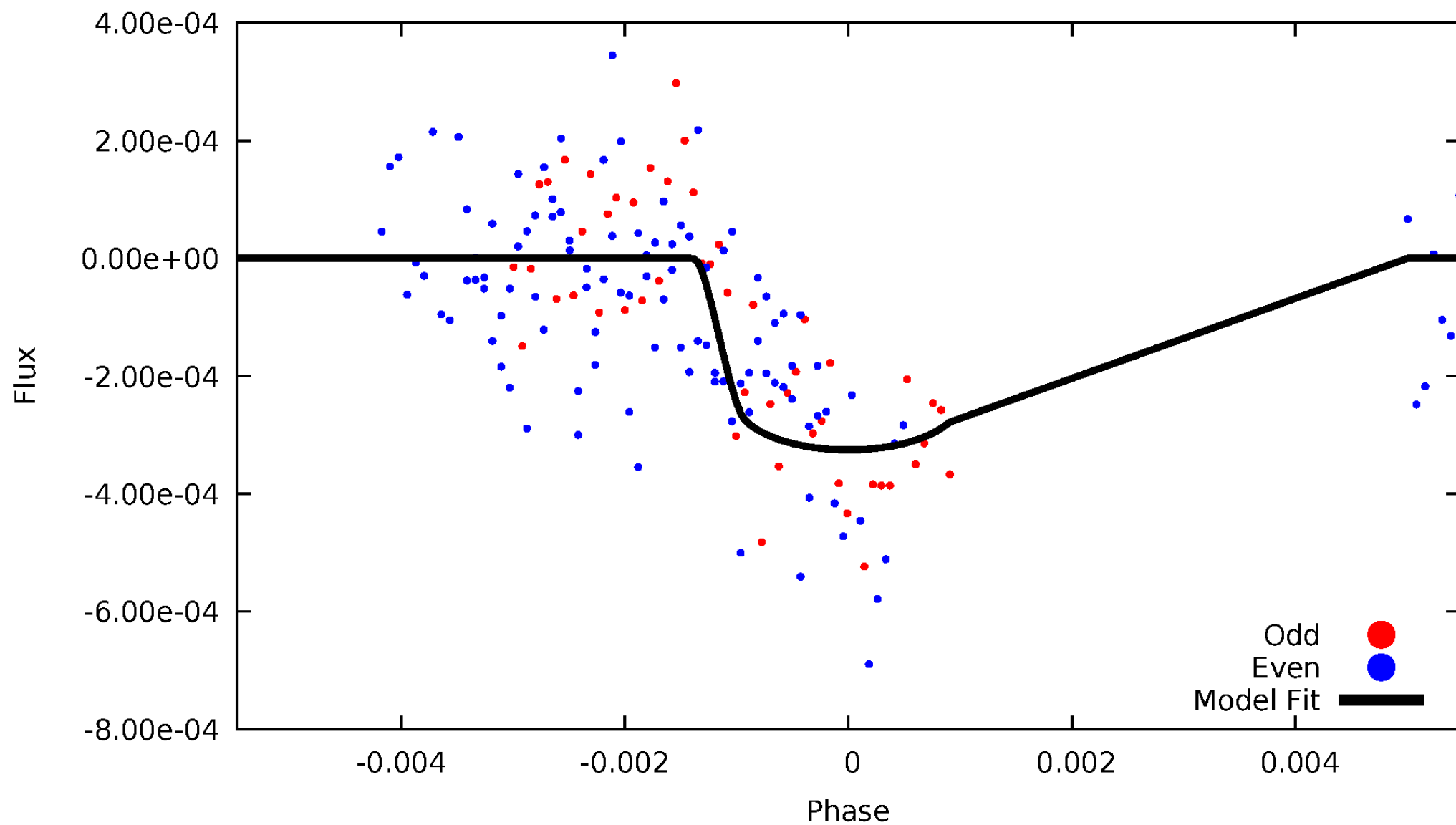


TCE 003453026-02



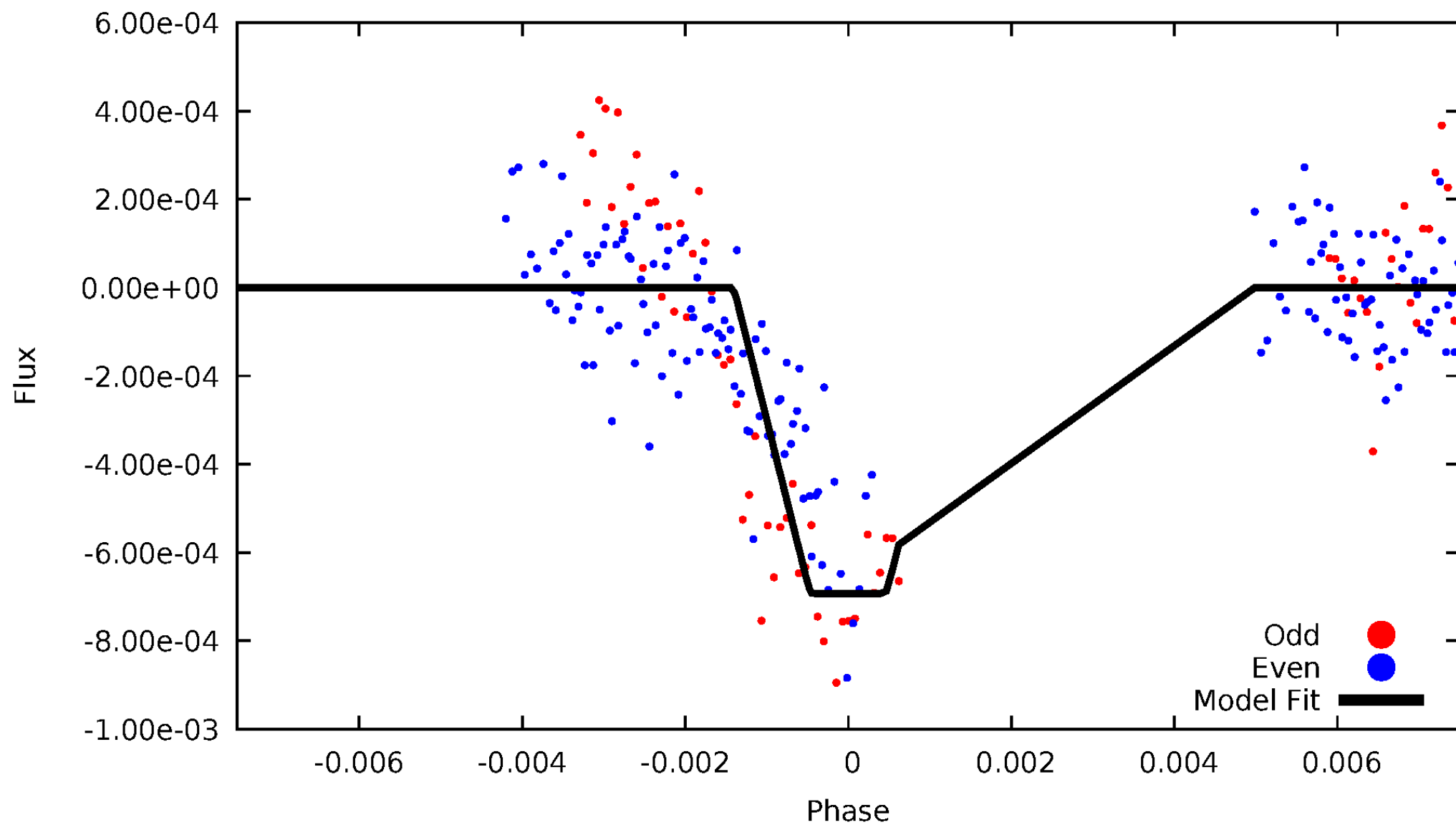
DV Odd/Even

TCE 003453026-02



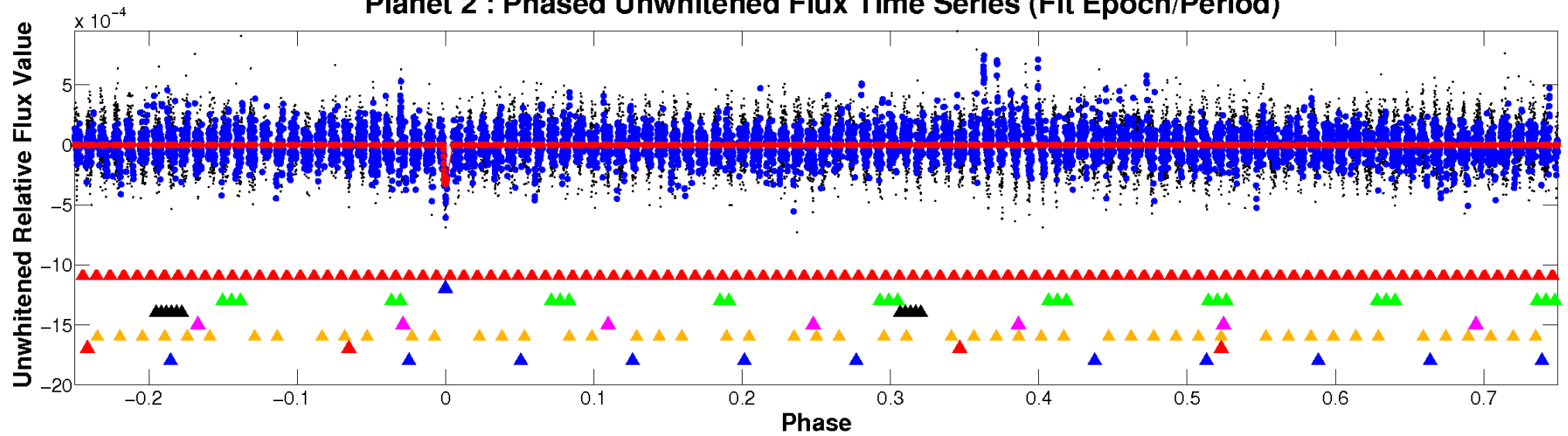
ALT Odd/Even

TCE 003453026-02

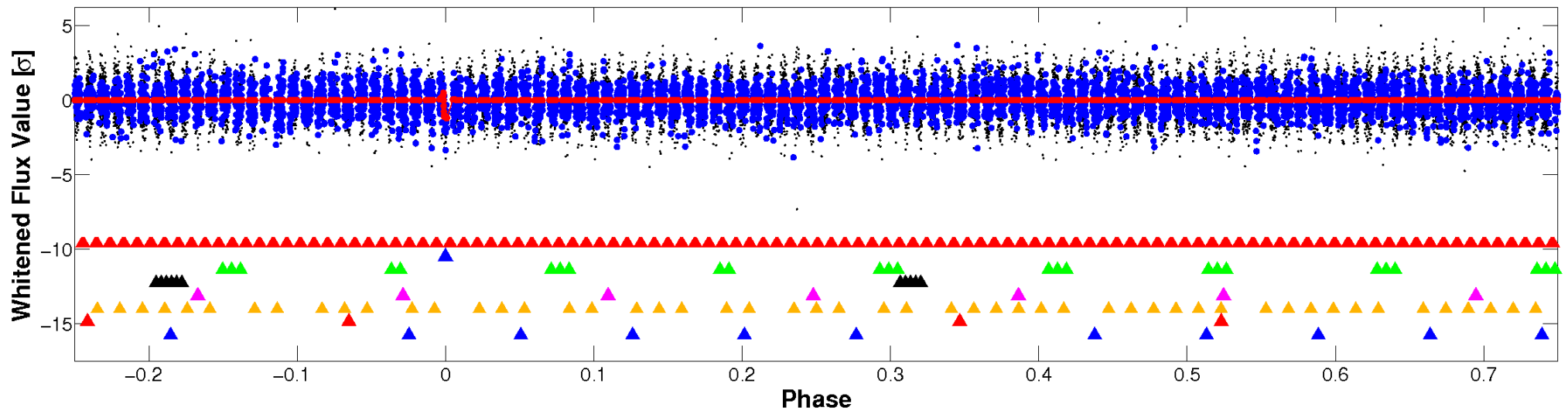


Non-Whitened Vs. Whitened Light Curve

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

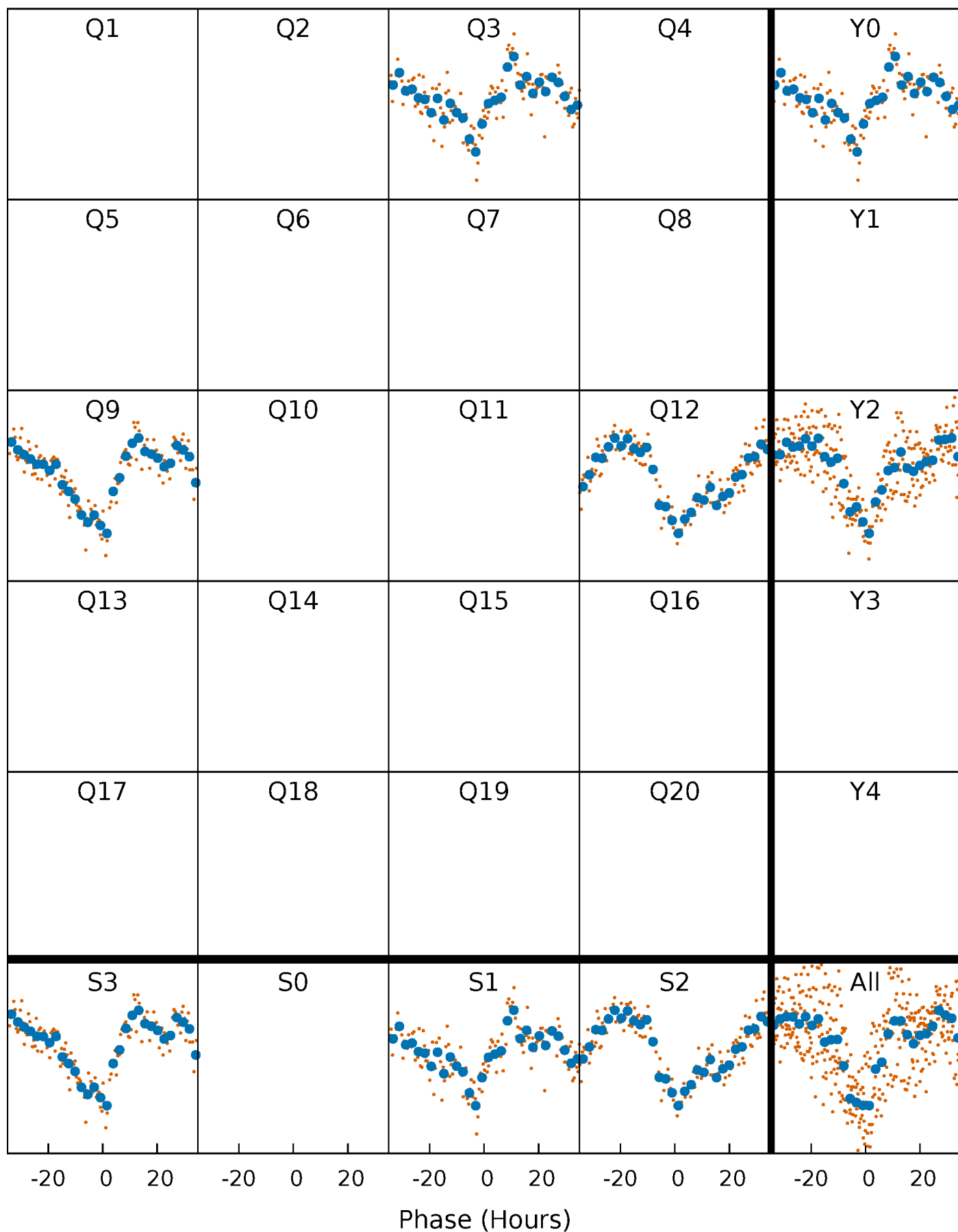


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



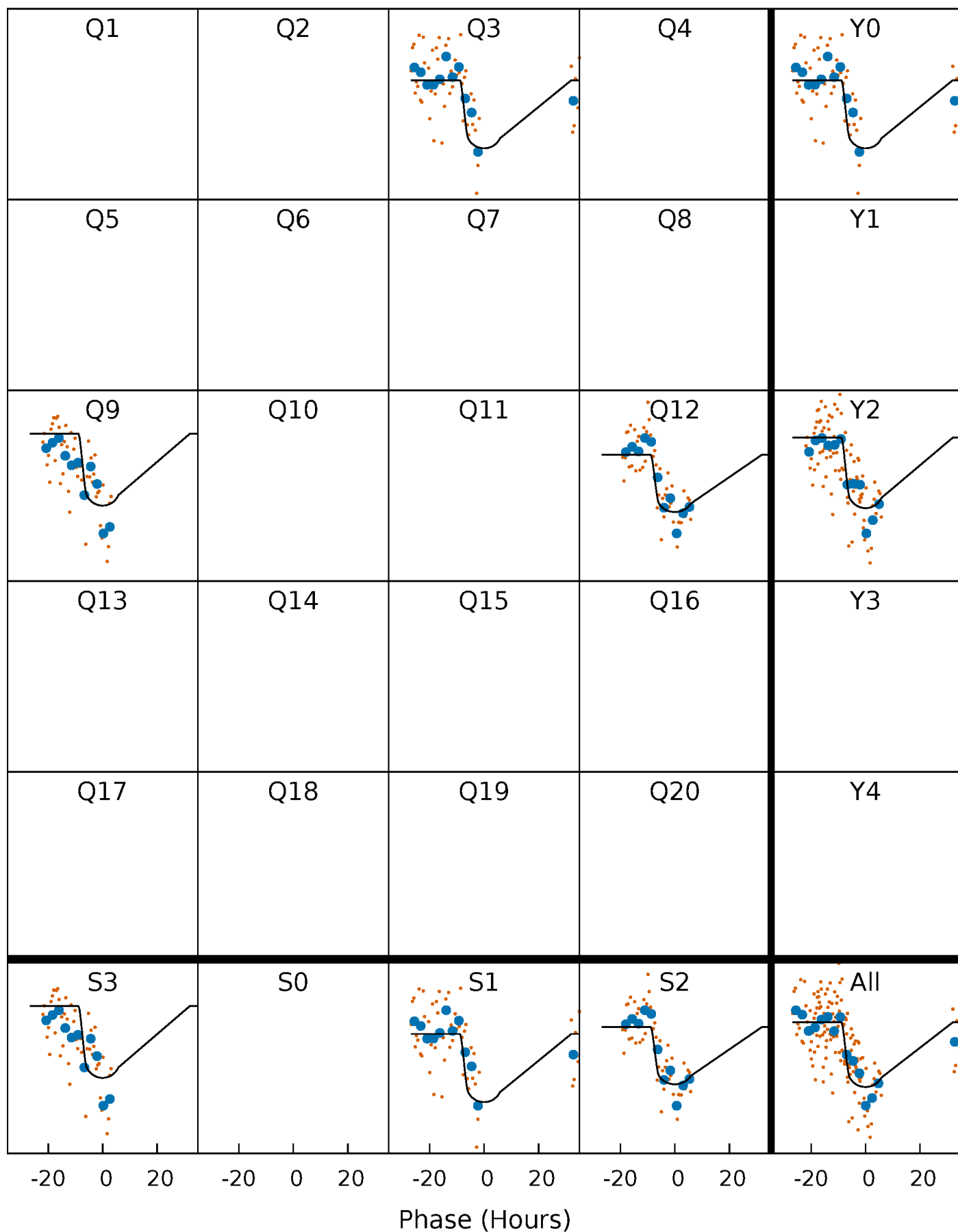
PDC Quarter-Phased Transit Curves

TCE 003453026-02 $P=266.892878$ Days $T_0=303.533852$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003453026-02 $P=266.892878$ Days $T_0=303.533852$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

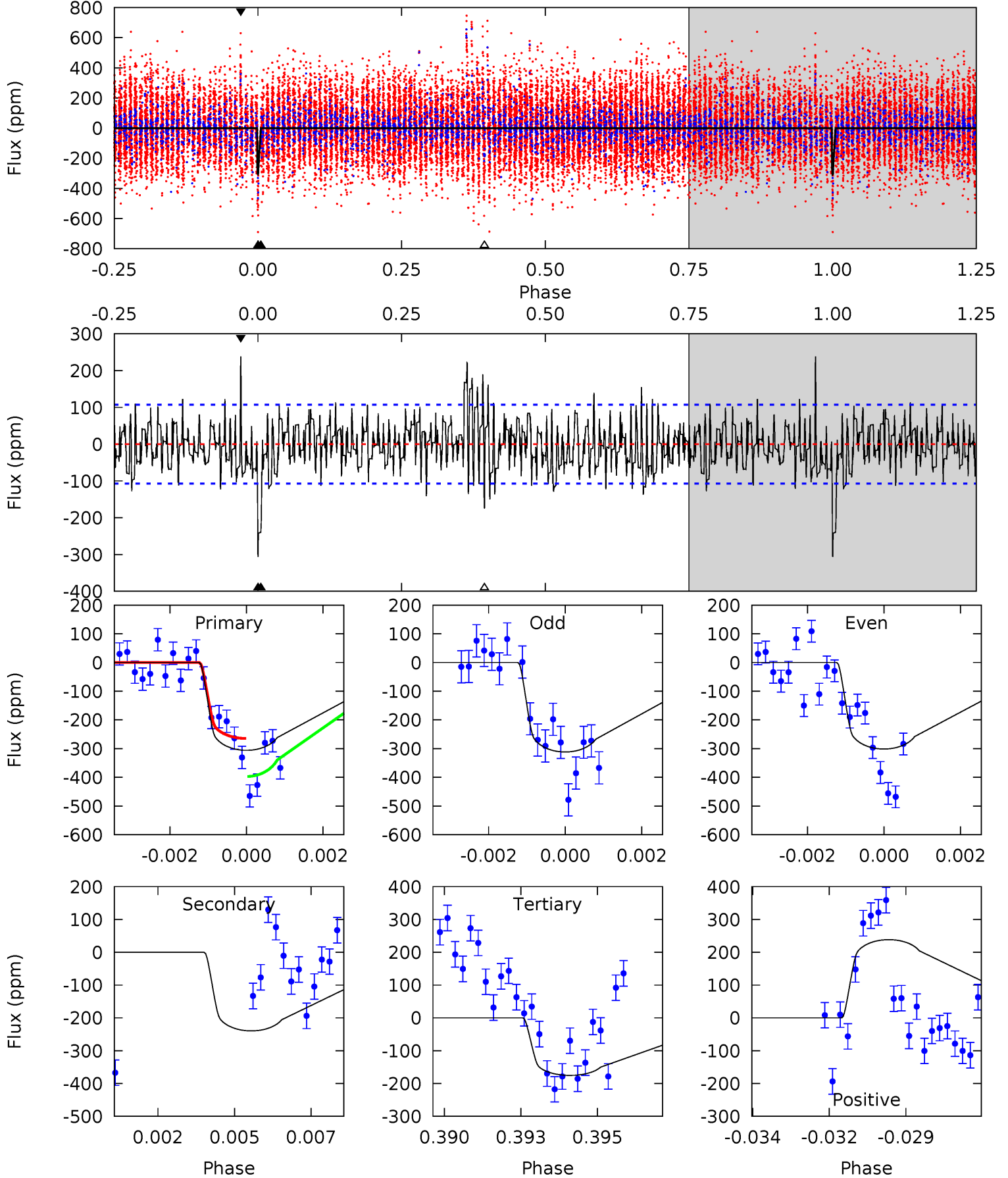
TCE 003453026-02 P=266.916783 Days $T_0=303.539633$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-02, P = 266.892878 Days, E = 36.640974 Days

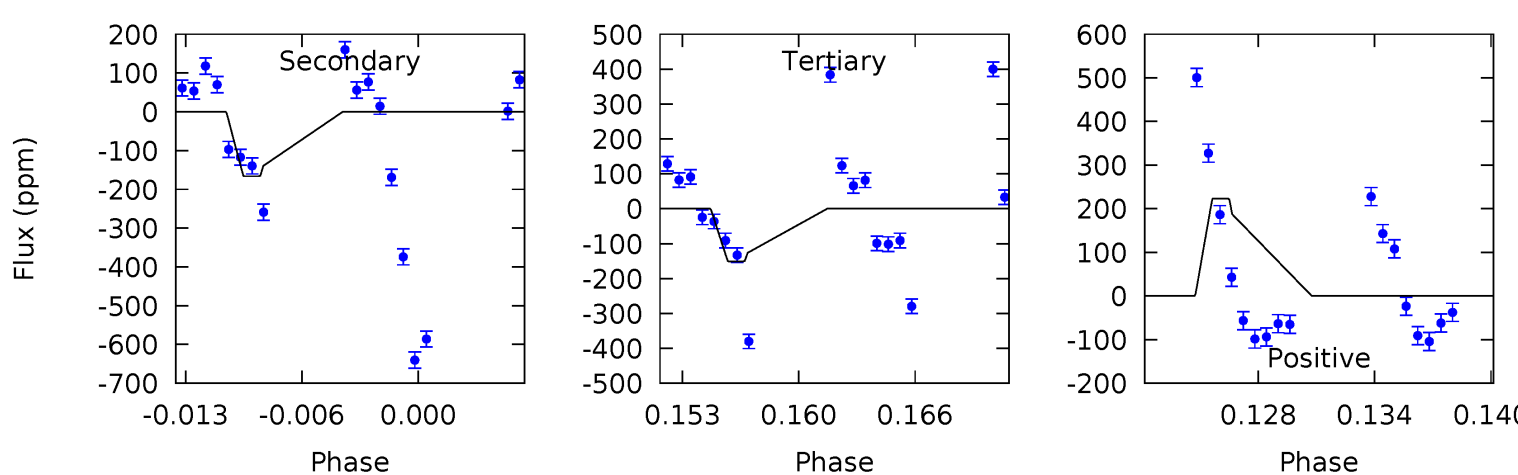
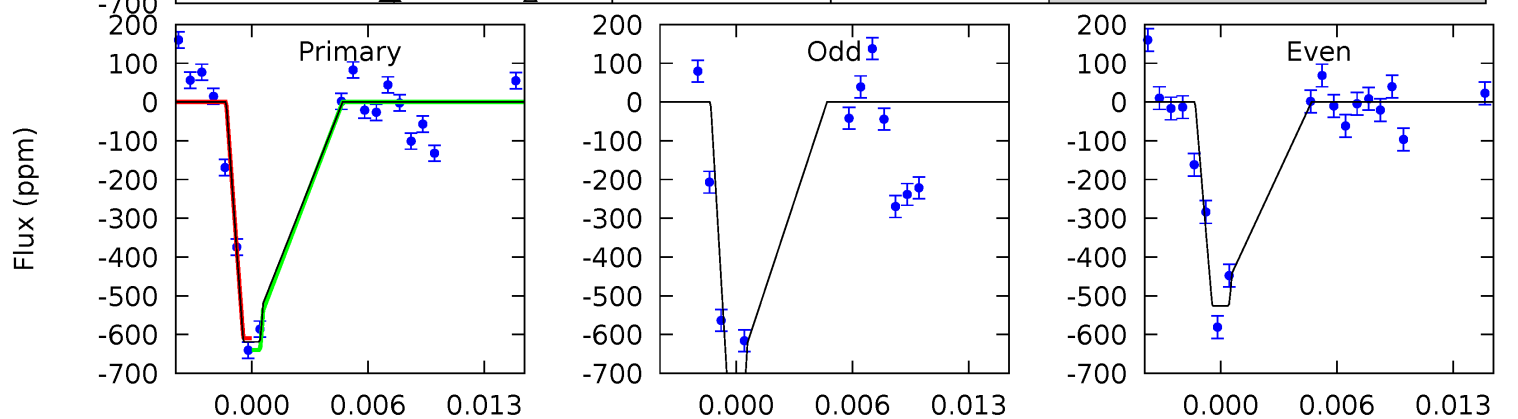
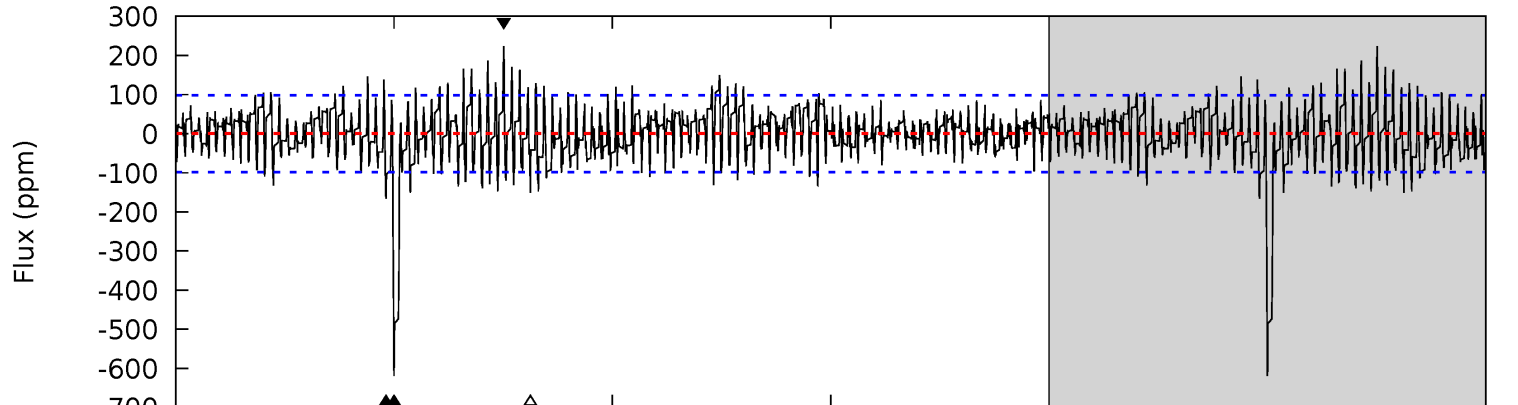
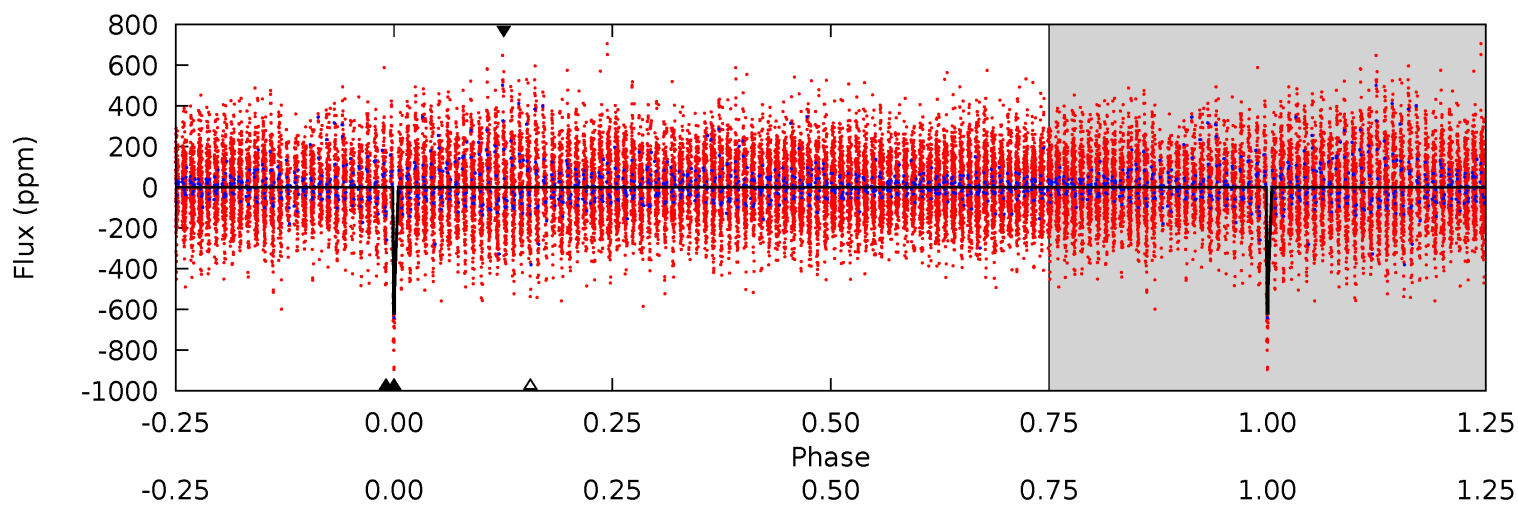
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	11.9	8.68	11.8	5.30	3.05	2.62	6.47	3.35	3.18	0.06	0.25	0.94	0.44	2.78



Alt Model-Shift Uniqueness Test

003453026-02, P = 266.916783 Days, E = 36.622850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.1	8.63	7.83	11.6	5.11	2.73	2.73	24.3	20.5	0.81	-2.97	5.44	0.99	0.27	0.60



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-240 ± 20	$7.57^{+1.36}_{-1.56}$	738^{+47}_{-73}	5485^{+298}_{-261}	2065^{+1062}_{-578}
Alt.	-166 ± 19	$10.17^{+1.47}_{-2.14}$	741^{+46}_{-70}	4534^{+184}_{-189}	793^{+423}_{-193}

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

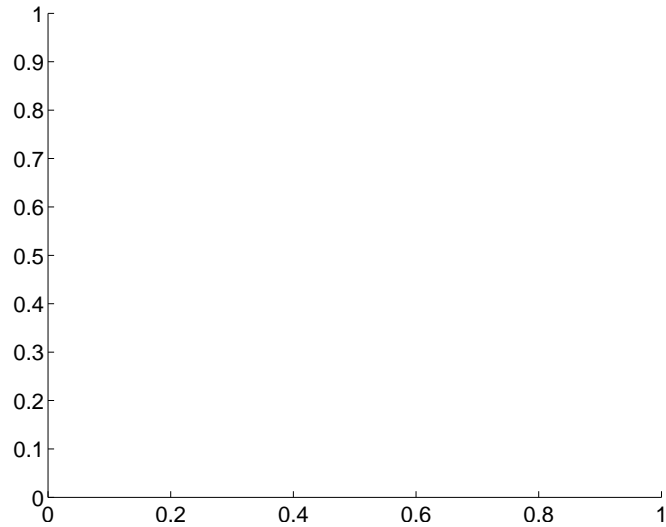
Supplemental centroid analysis for 003453026-02. **Kepler magnitude: 11.94.** Transit SNR 8.15

There are 0 quarters with good PRF difference image offsets

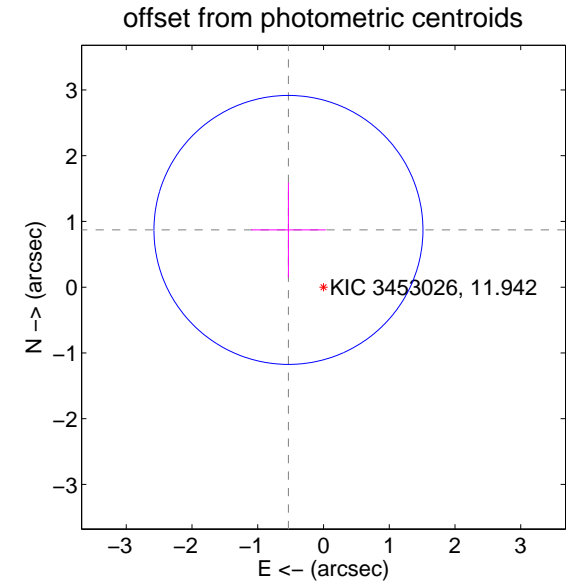
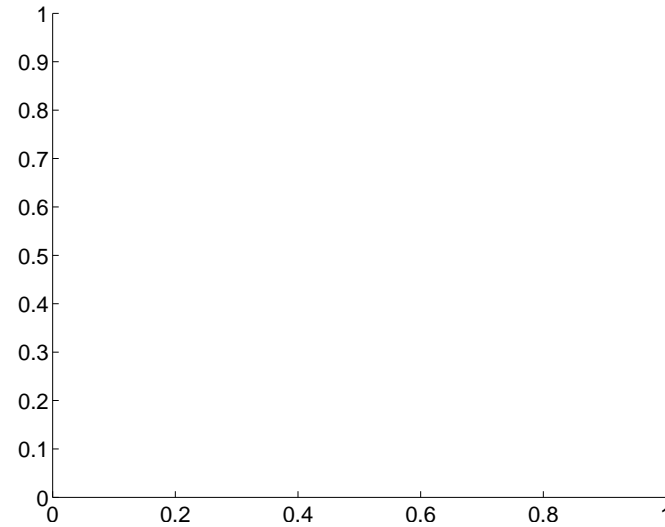
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.02 ± 0.68	1.50	0.53 ± 0.57	0.87 ± 0.72

There is no PRF-fit offset from OOT-fit

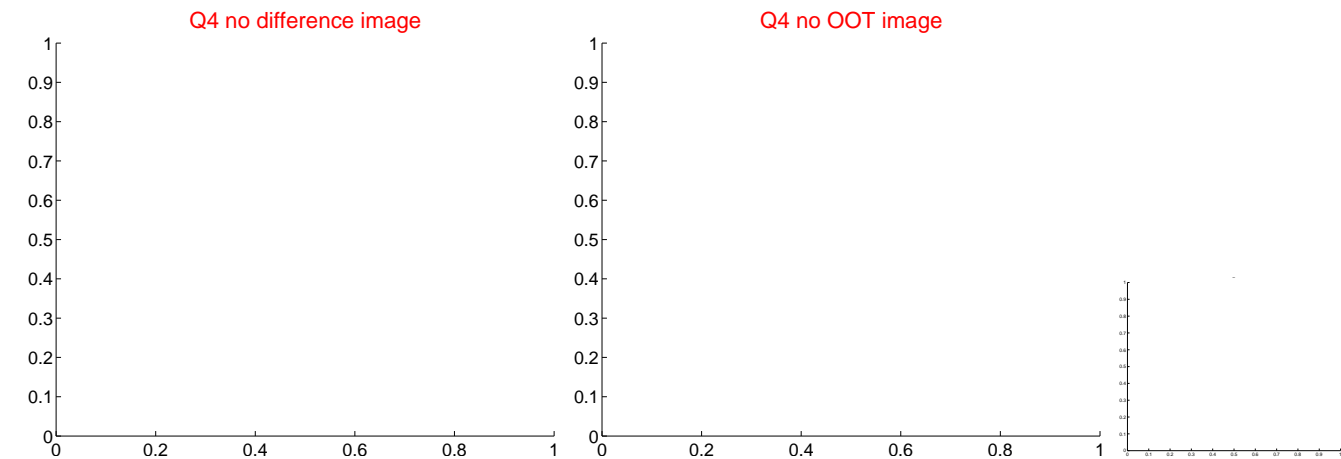
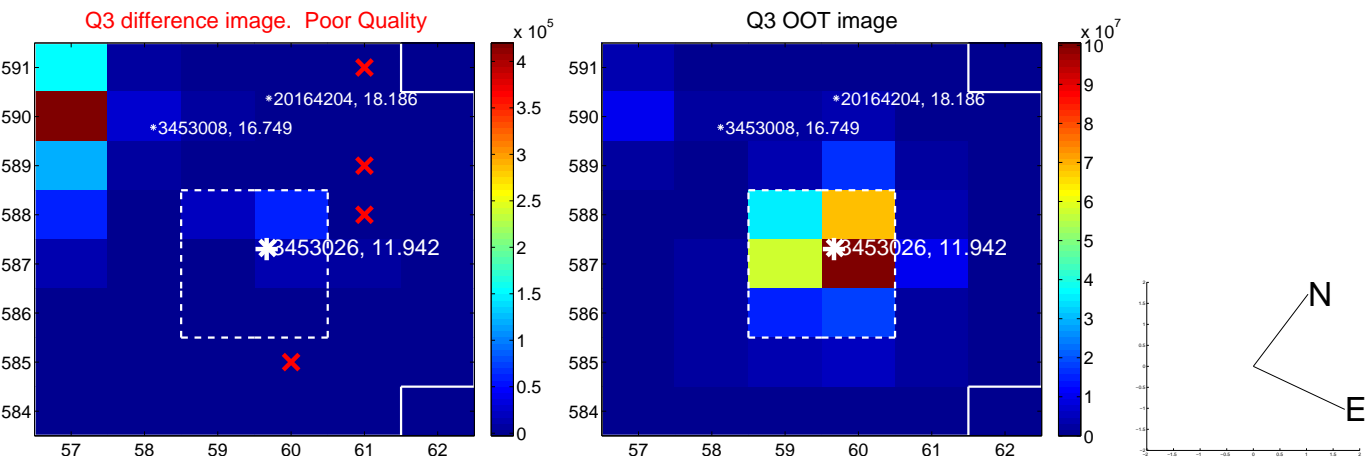
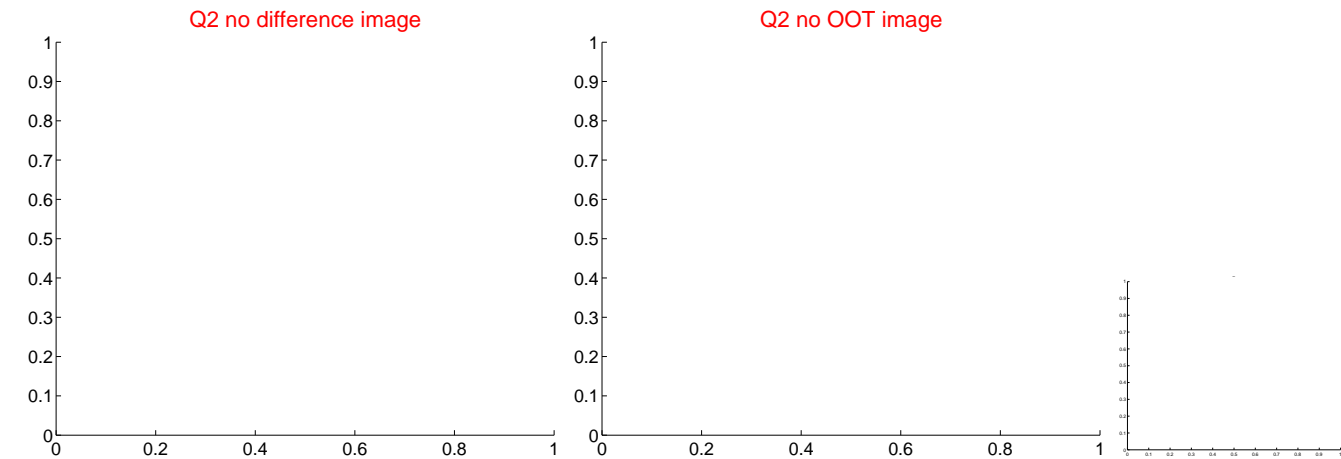
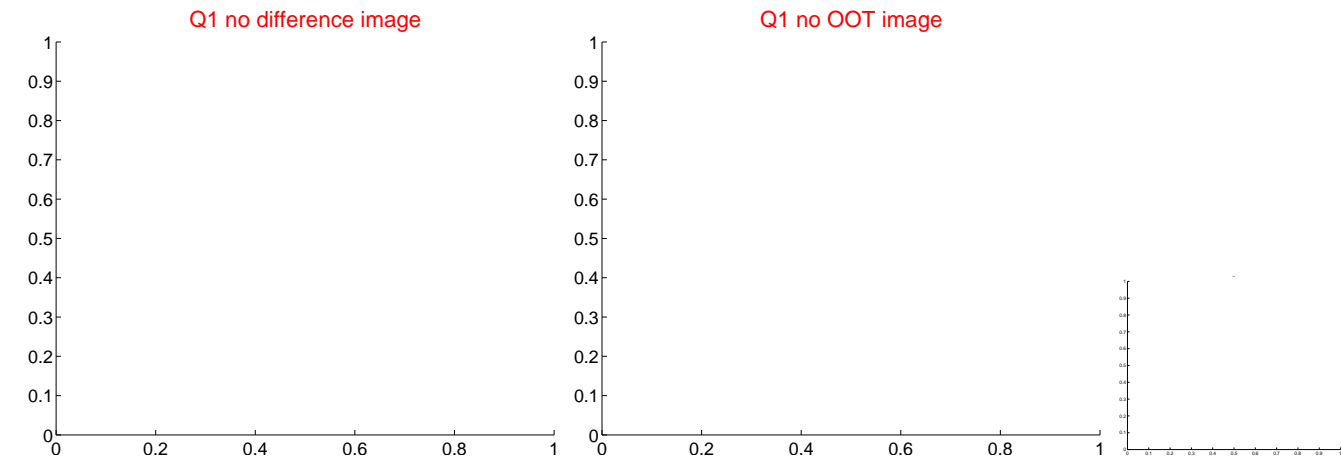


There is no PRF-fit offset from KIC

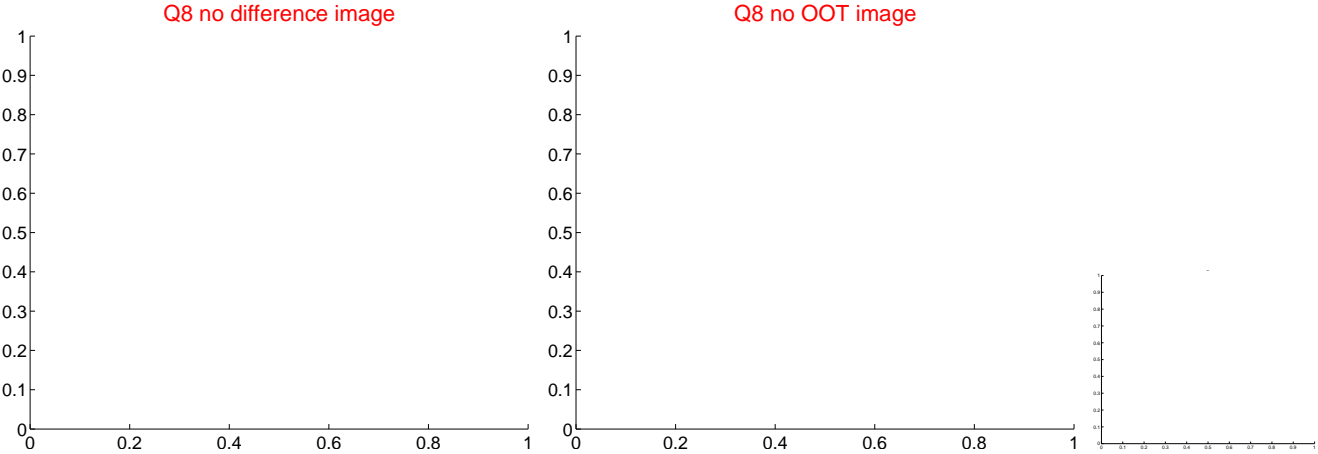


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

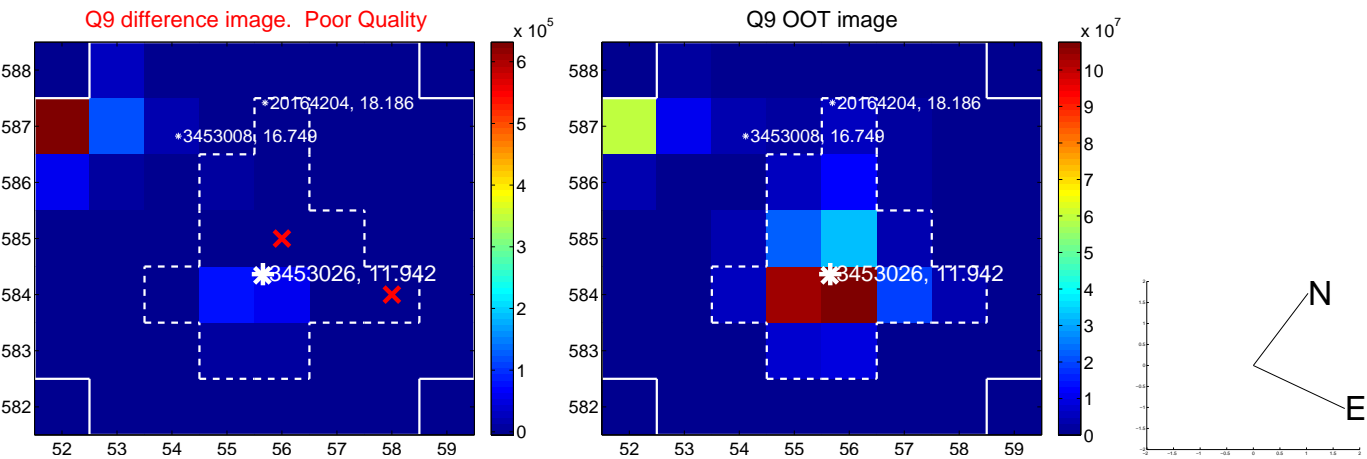
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



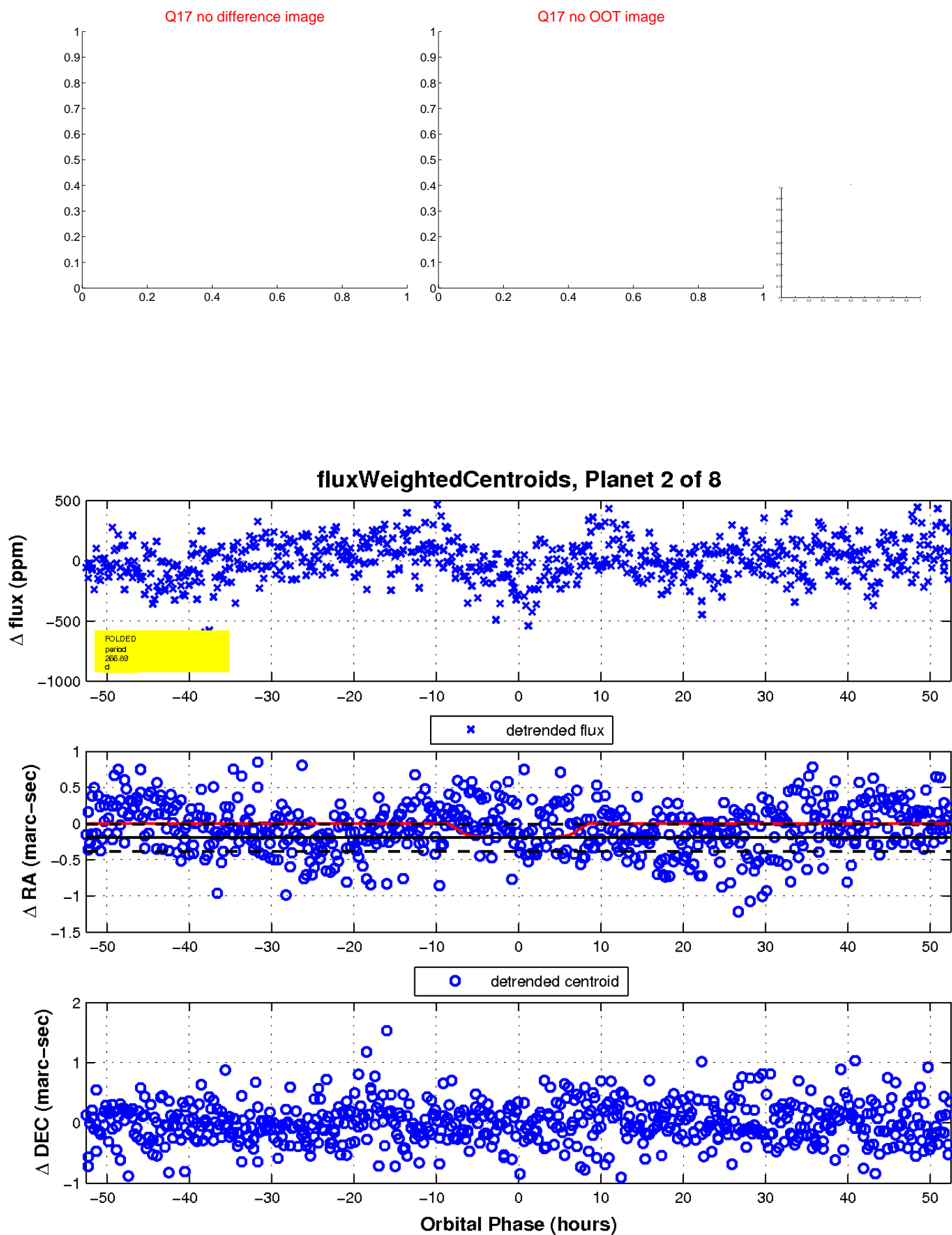
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



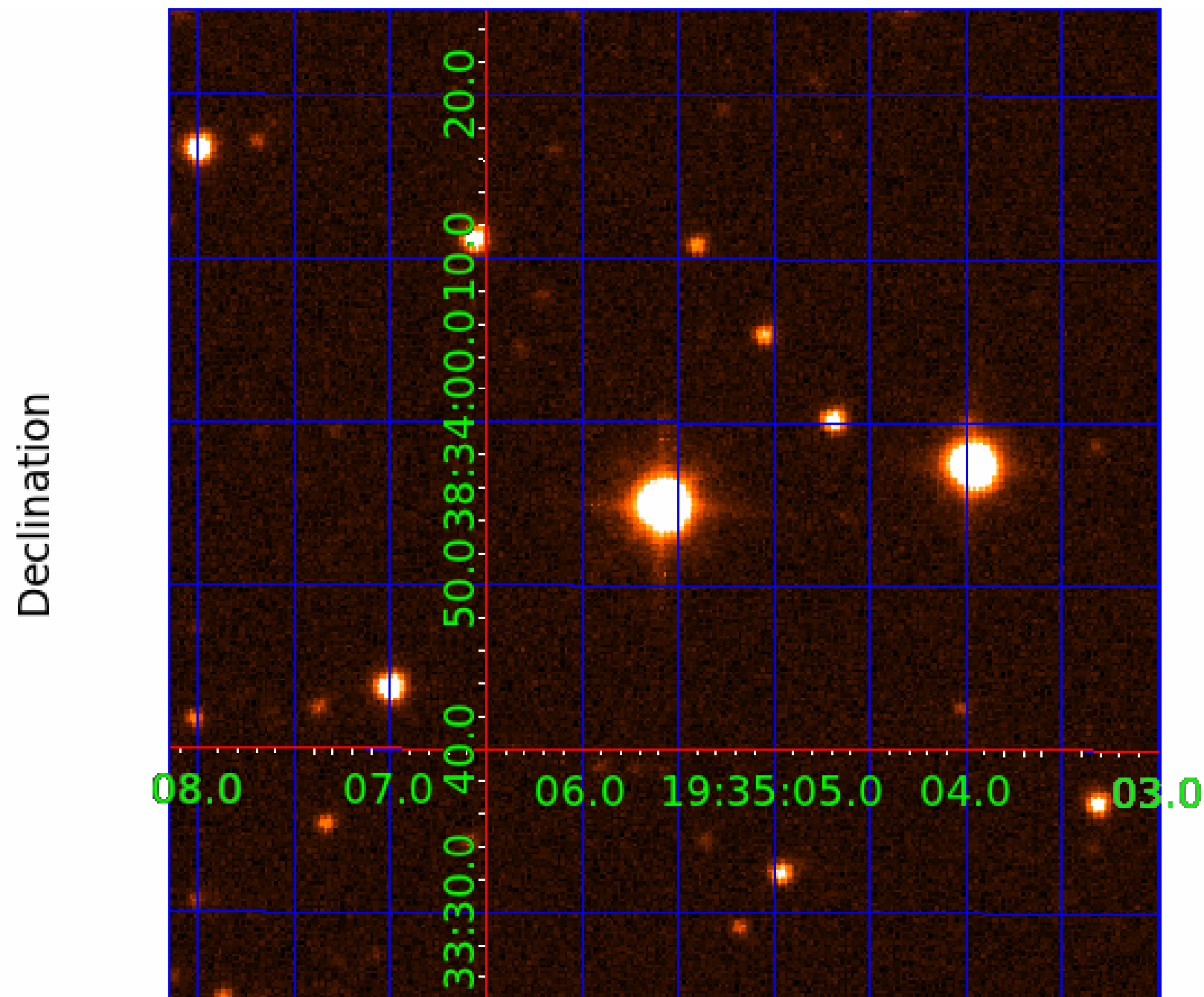
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
003453026-03	OBS	No	59.130860	148.388405	145.9	11.182	7.7	7.4	3.56	6234	4.71	145.60
003453026-04	OBS	No	133.907744	251.464107	389.9	2.763	7.7	9.0	3.56	6234	13.81	48.96
003453026-06	OBS	No	28.307259	139.792248	149.6	2.450	7.5	7.5	3.56	6234	5.03	388.80
003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

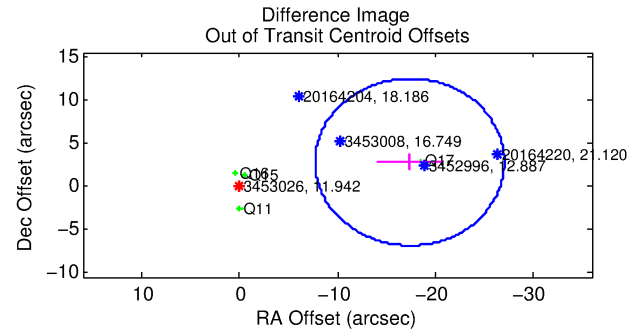
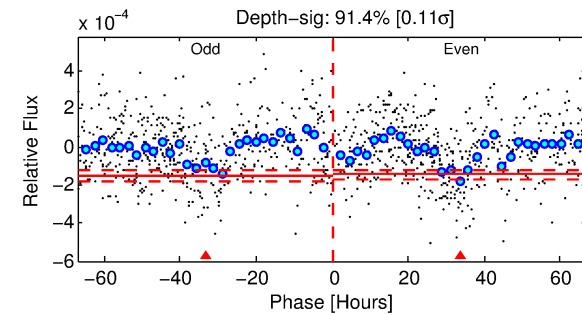
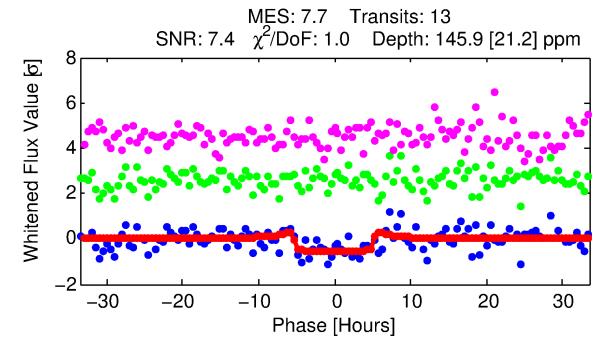
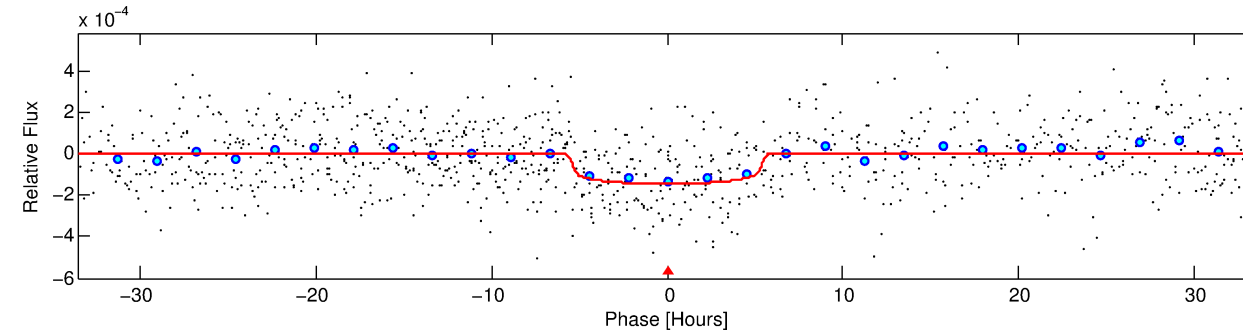
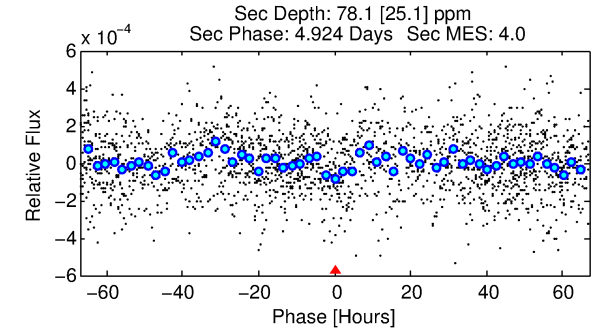
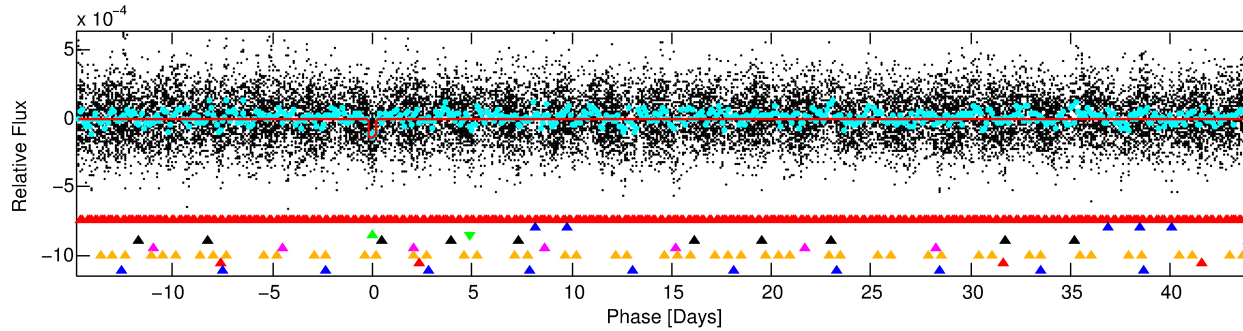
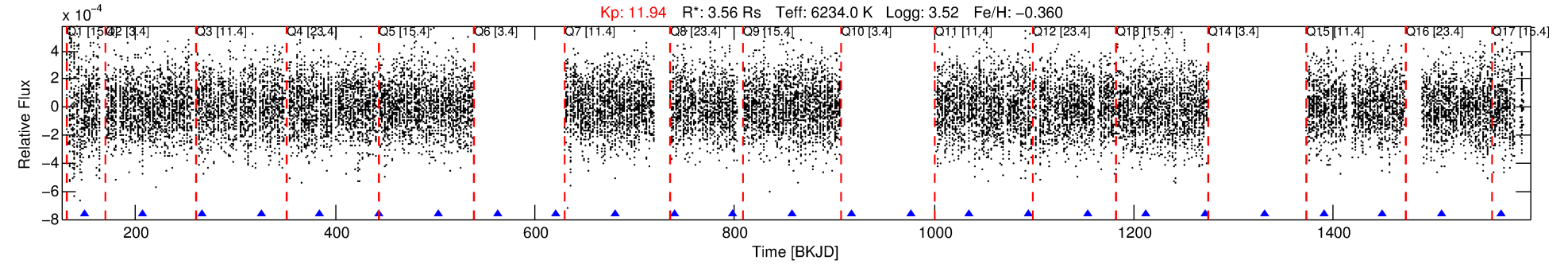
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-03

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 3 of 8 Period: 59.131 d



DV Fit Results:

Period = 59.13086 [0.00087] d
Epoch = 148.3884 [0.0130] BKJD
 $R_p/R^* = 0.0121$ [0.0047]
 $a/R^* = 26.33$ [53.12]
 $b = 0.77$ [1.05]
 $\text{Seff} = 145.60$ [90.00]
 $T_{\text{eq}} = 886$ [137] K
 $R_p = 4.71$ [2.68] R_e
 $a = 0.3432$ [0.1336] AU
 $A_g = 228.33$ [235.92] [0.96σ]
 $T_{\text{eff}} = 5324$ [1120] K [3.93σ]

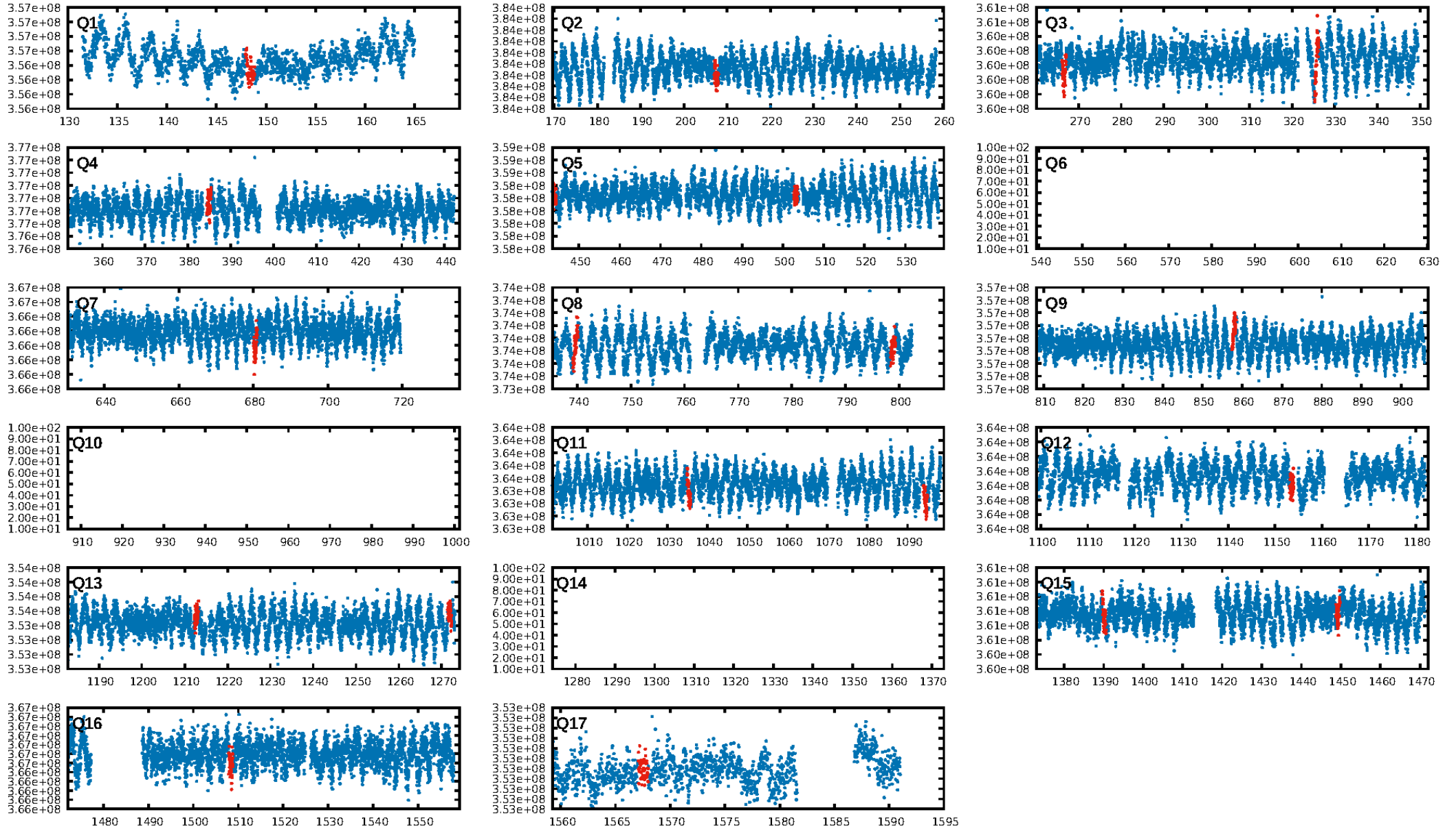
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [64.62σ]
LongPeriod-sig: 100.0% [128.58σ]
ModelChiSquare2-sig: 39.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.52e-09
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: -1.764
Centroid-sig: N/A
Centroid-so: 2.102 arcsec [3.03σ]
OotOffset-rm: 17.611 arcsec [5.47σ]
KicOffset-rm: 17.645 arcsec [3.94σ]
OotOffset-st: 0/2/1/1 [4]
KicOffset-st: 0/2/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.27 [3/11]

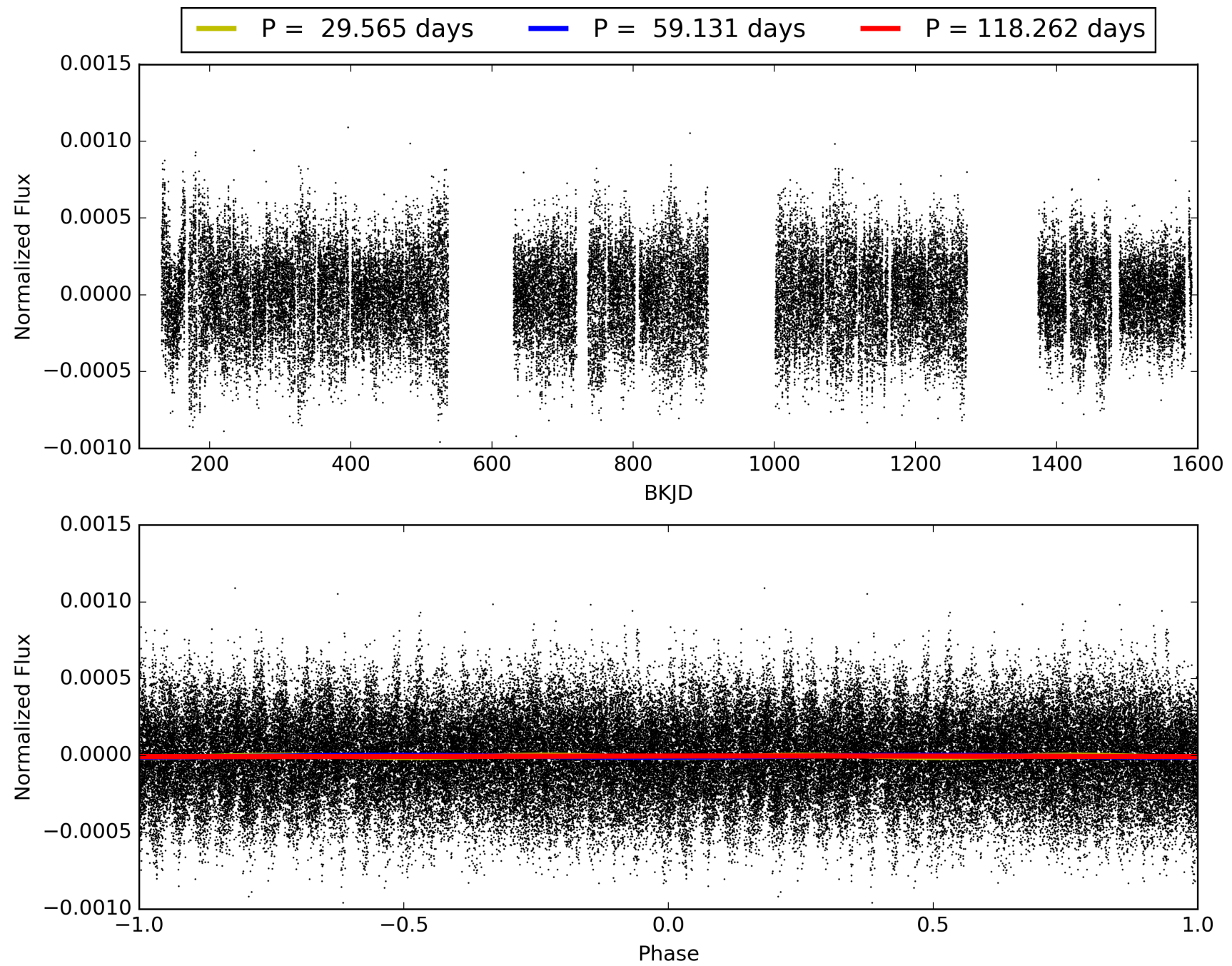
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:53:48 Z

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

TCE 003453026-03, PDC Light Curves

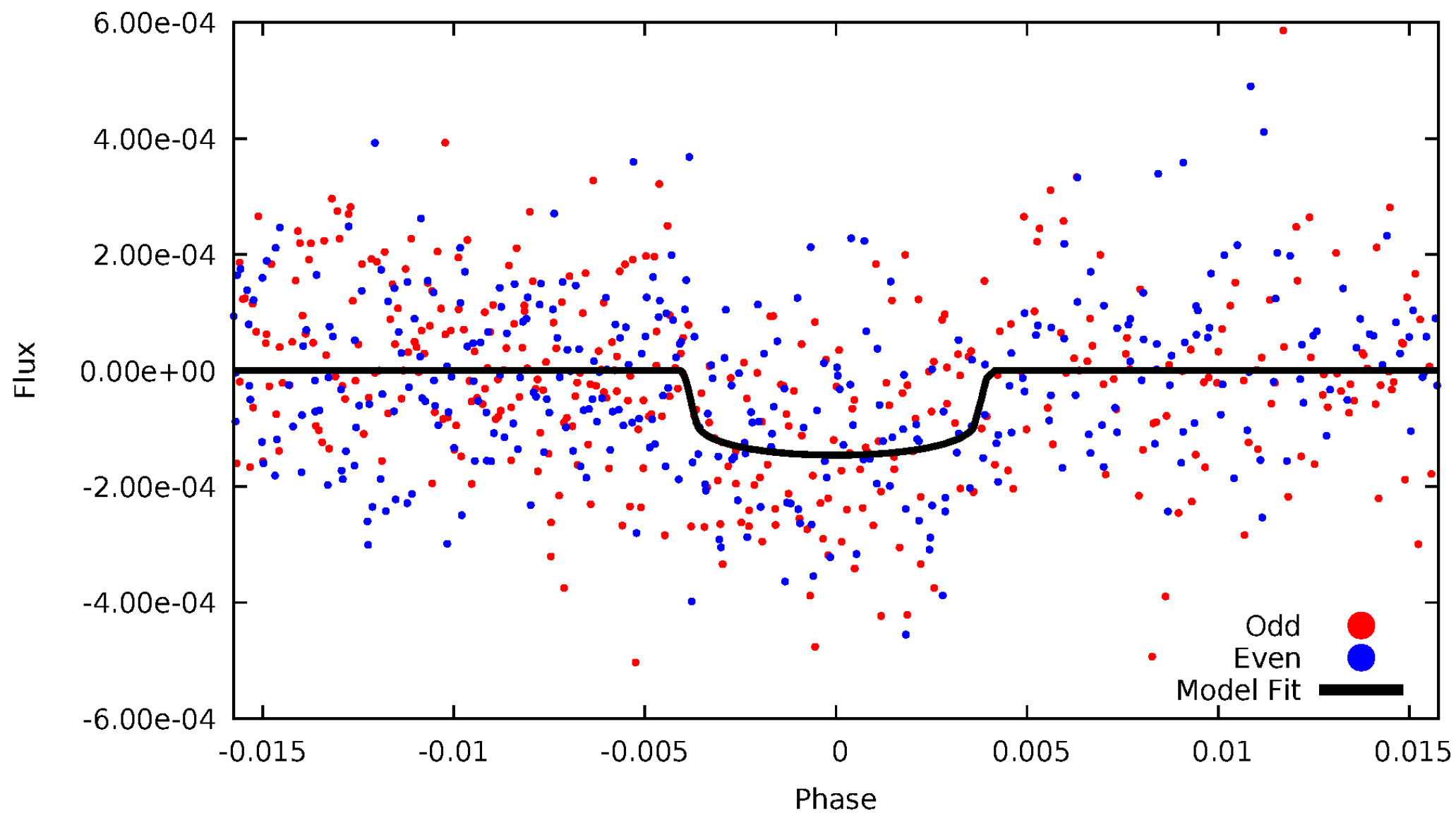


TCE 003453026-03



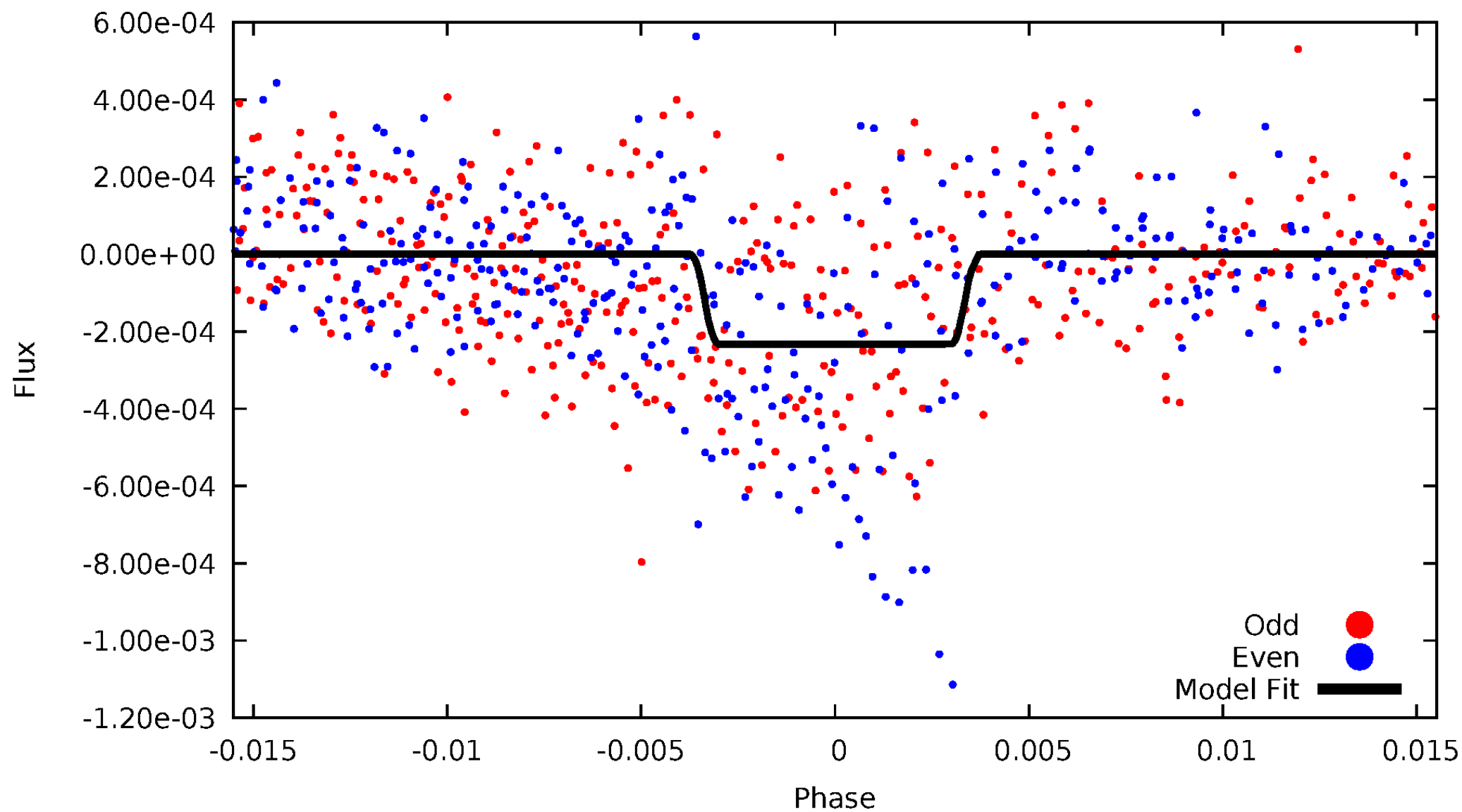
DV Odd/Even

TCE 003453026-03



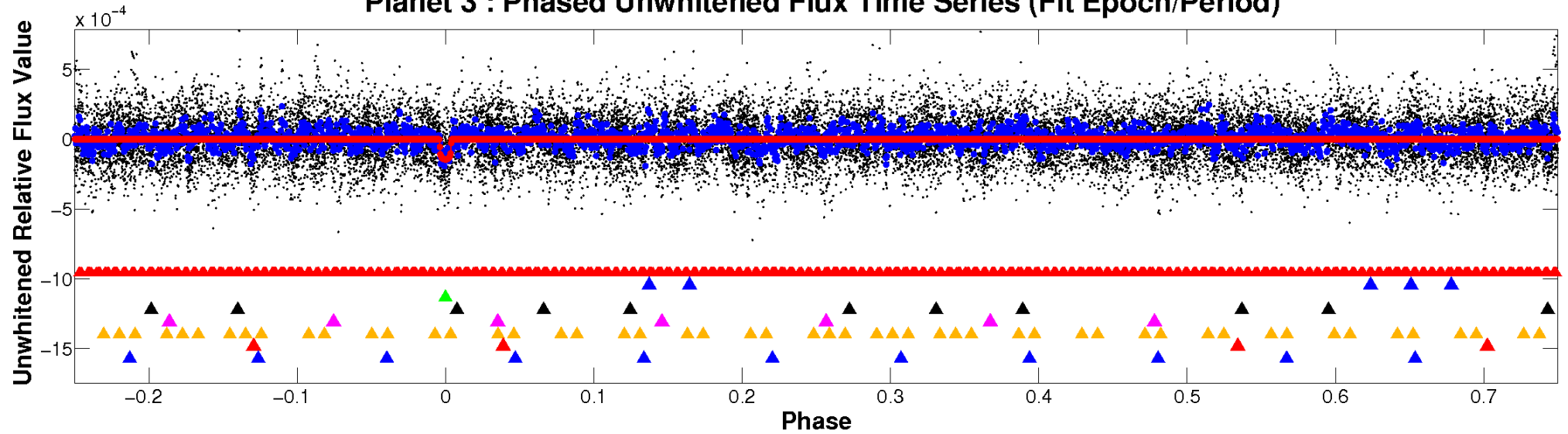
ALT Odd/Even

TCE 003453026-03

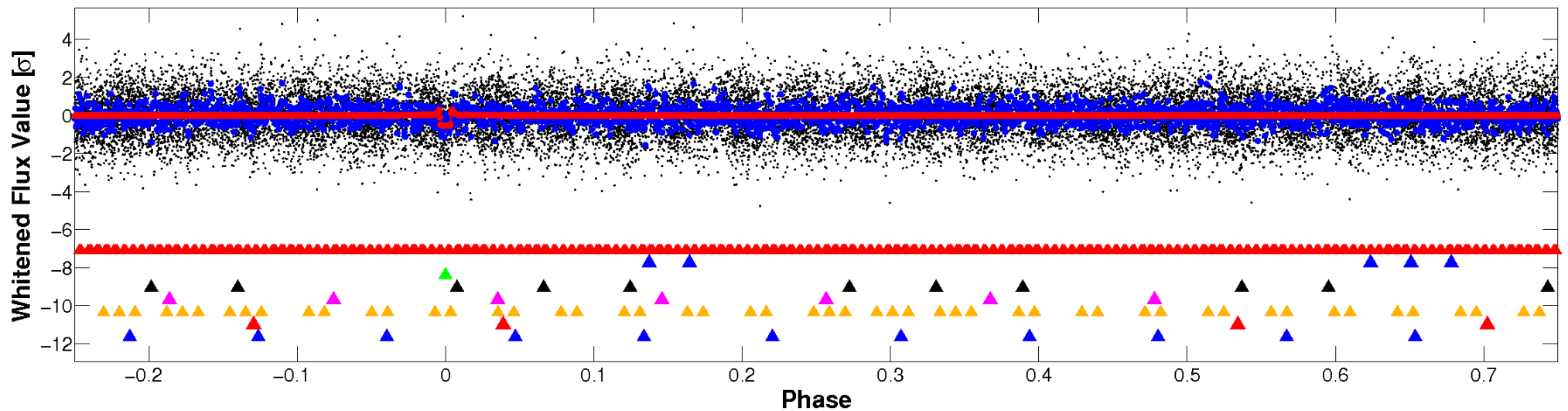


Non-Whitened Vs. Whitened Light Curve

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

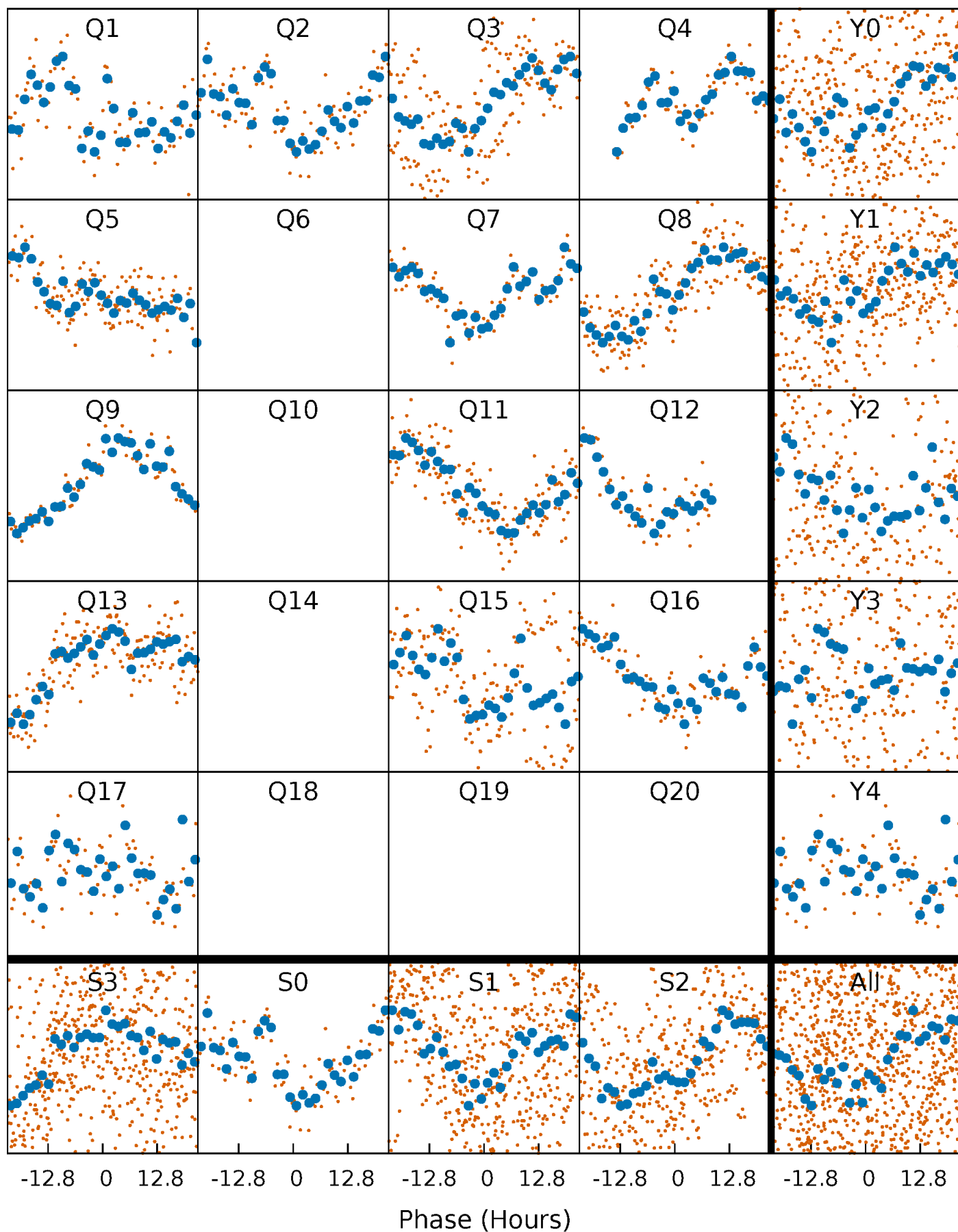


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



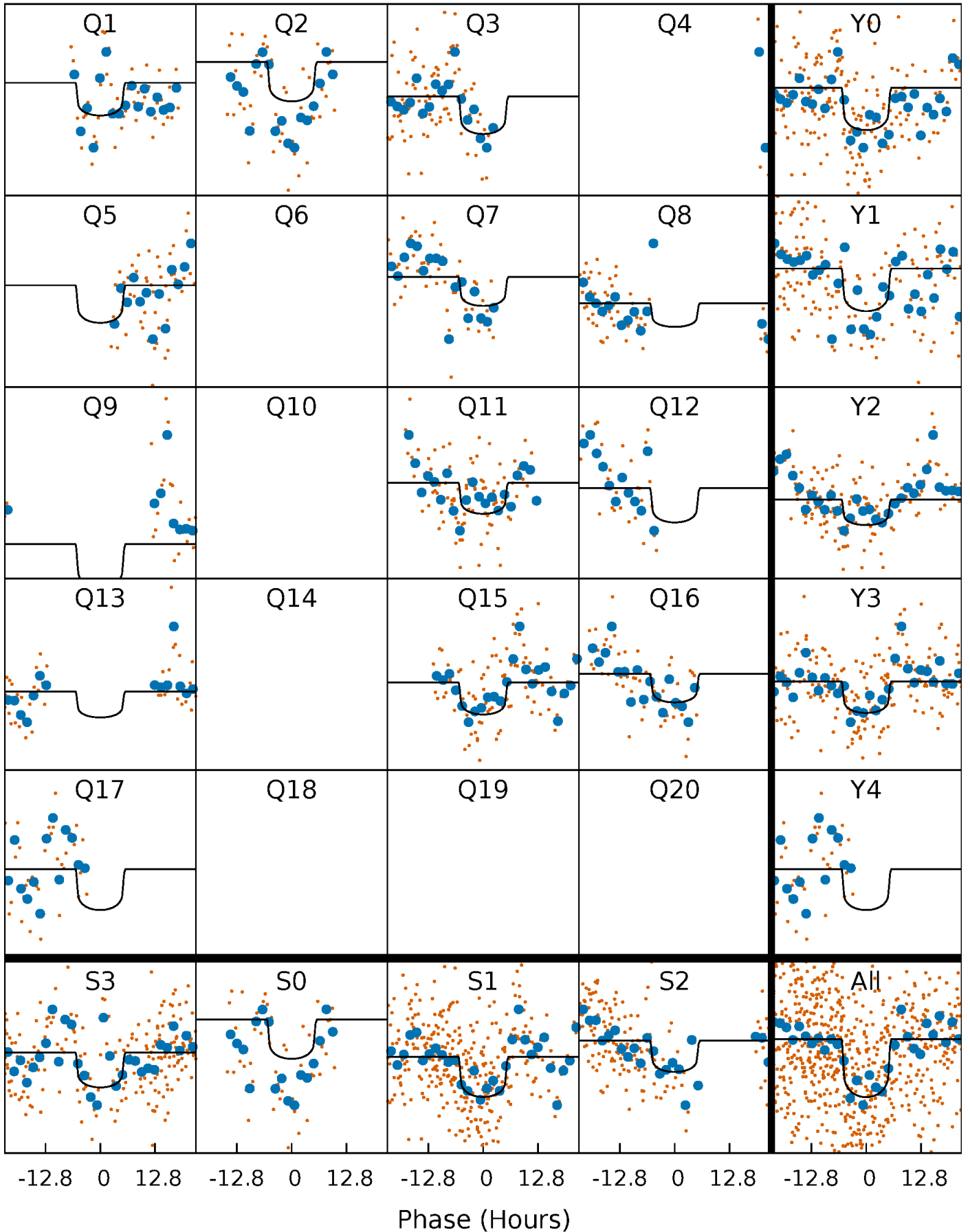
PDC Quarter-Phased Transit Curves

TCE 003453026-03 $P = 59.130860$ Days $T_0 = 148.388405$ (BKJD)



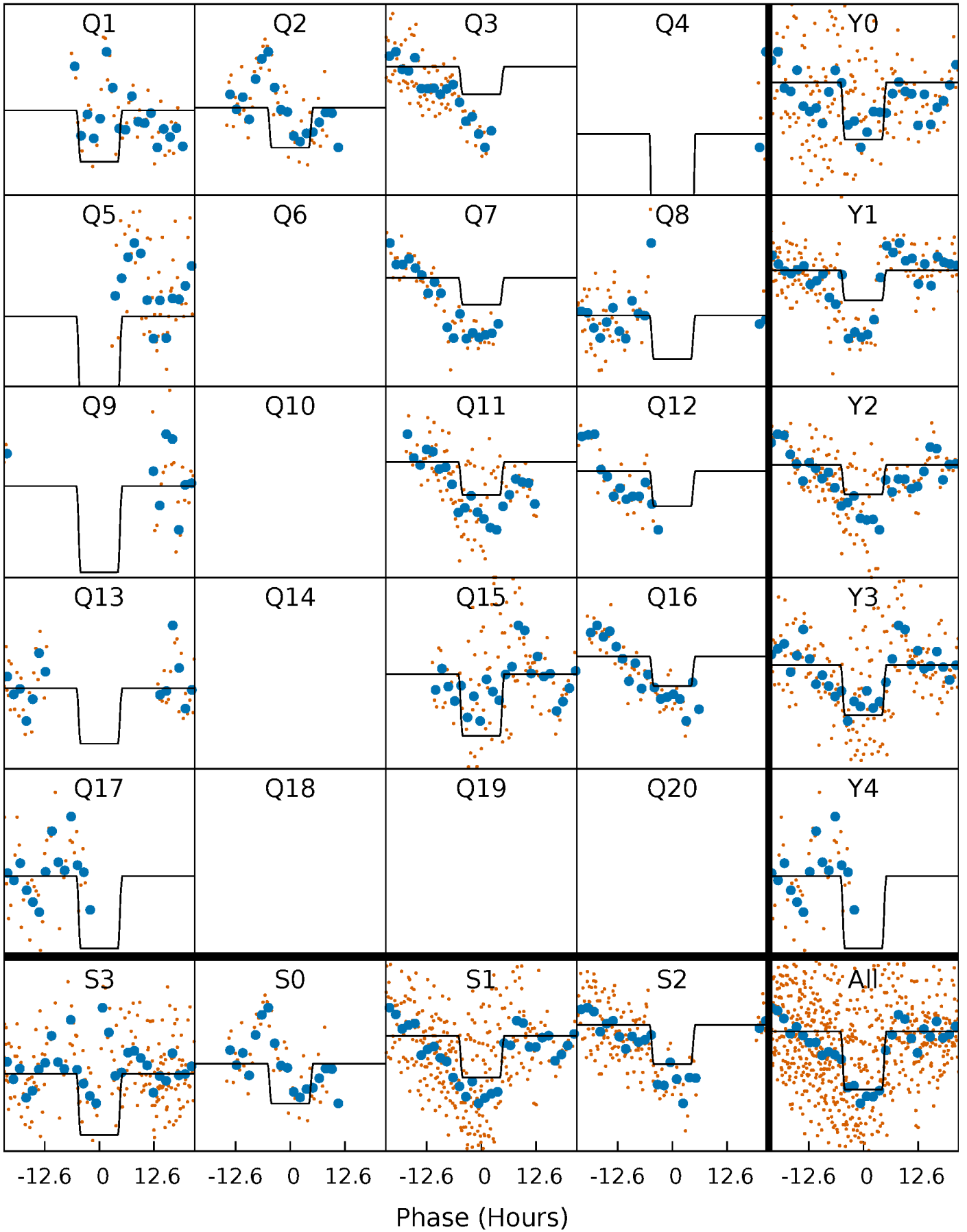
DV Quarter-Phased Transit Curves

TCE 003453026-03 P= 59.130860 Days $T_0=148.388405$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

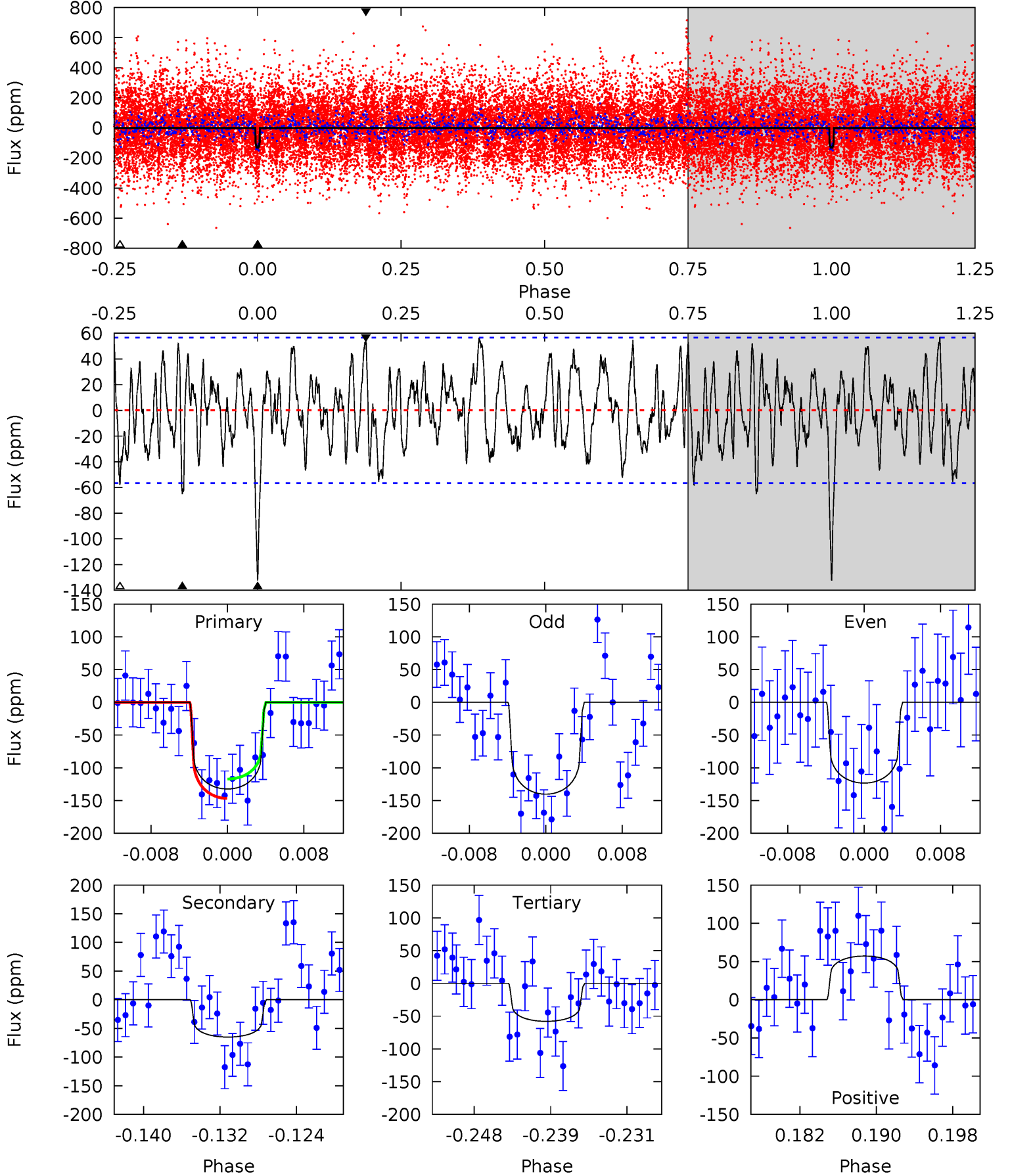
TCE 003453026-03 P= 59.130934 Days $T_0=148.372805$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-03, P = 59.130860 Days, E = 89.257545 Days

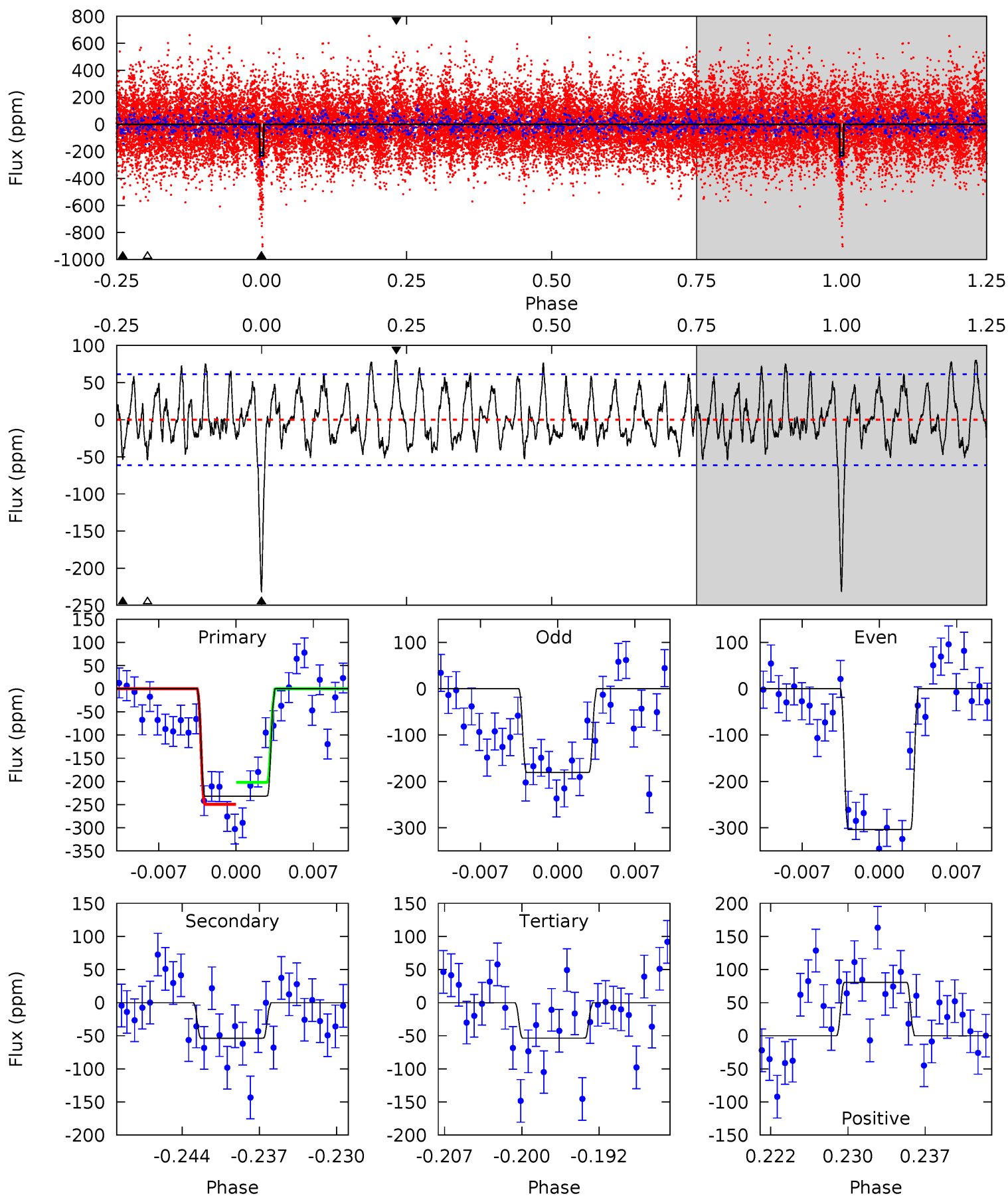
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	5.82	5.18	5.11	5.06	2.64	2.05	6.65	6.72	0.64	0.71	0.75	1.06	0.30	1.32



Alt Model-Shift Uniqueness Test

003453026-03, P = 59.130934 Days, E = 89.241871 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	4.46	4.45	6.69	5.08	2.68	2.41	14.8	12.6	0.01	-2.23	5.13	1.19	0.26	1.95



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-65 ± 11	$4.26^{+1.98}_{-1.60}$	1220^{+83}_{-114}	5189^{+1288}_{-679}	226^{+371}_{-125}
Alt.	-54 ± 12	$5.56^{+2.02}_{-1.94}$	1214^{+80}_{-120}	4474^{+723}_{-480}	108^{+144}_{-52}

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 $A_{obs} \gg 1.0$

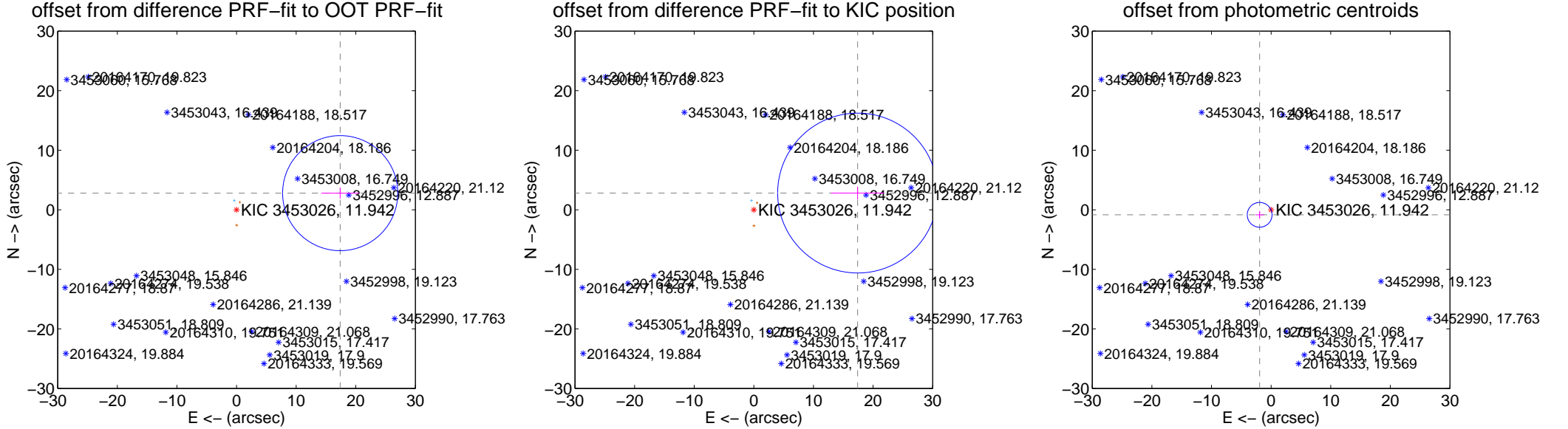
DV Centroid Data

Supplemental centroid analysis for 003453026-03. **Kepler magnitude: 11.94.** Transit SNR 7.42

There are 2 quarters with good PRF difference image offsets

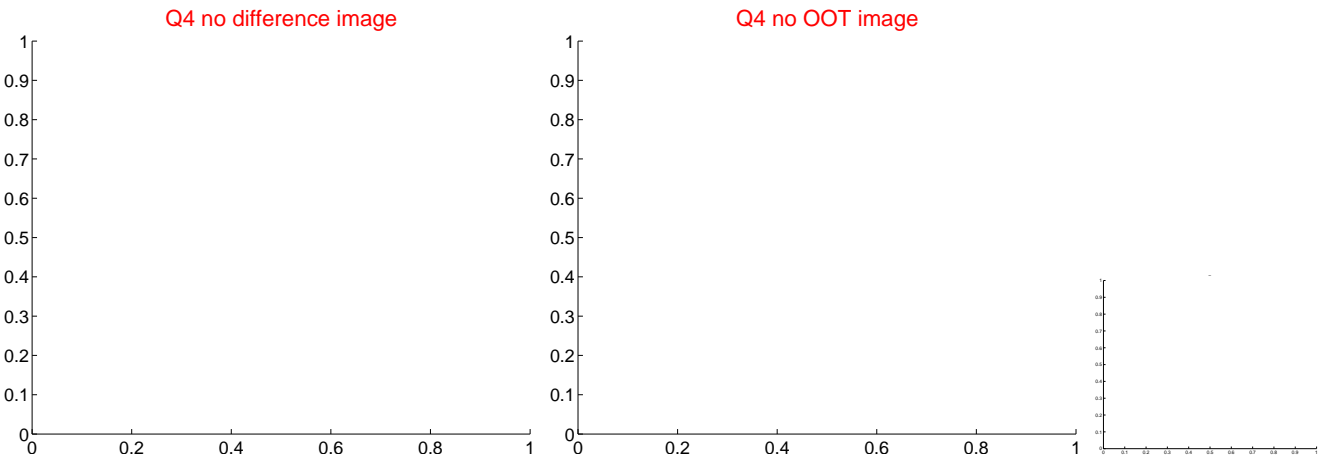
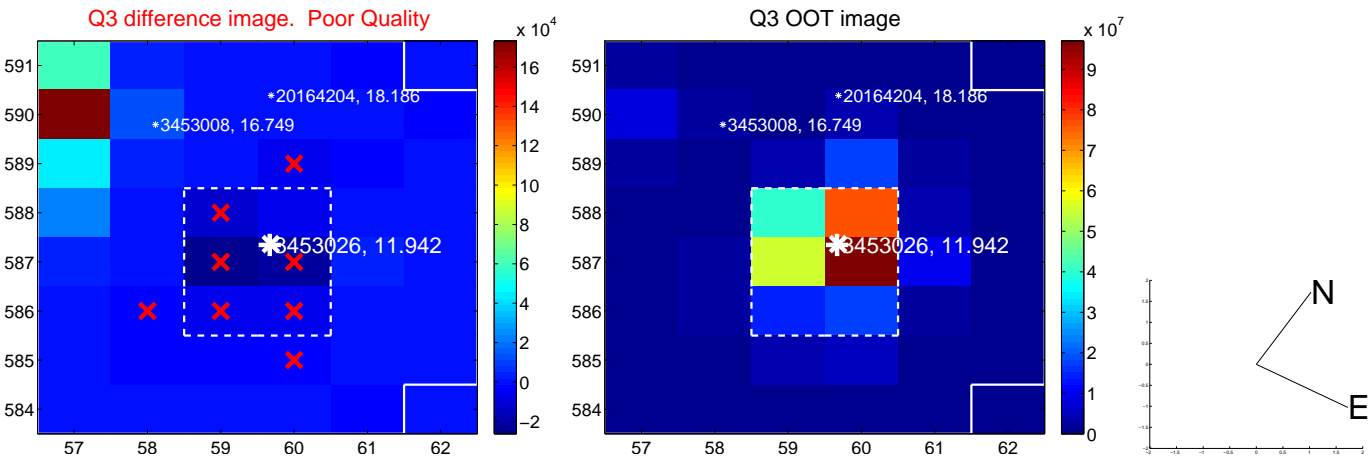
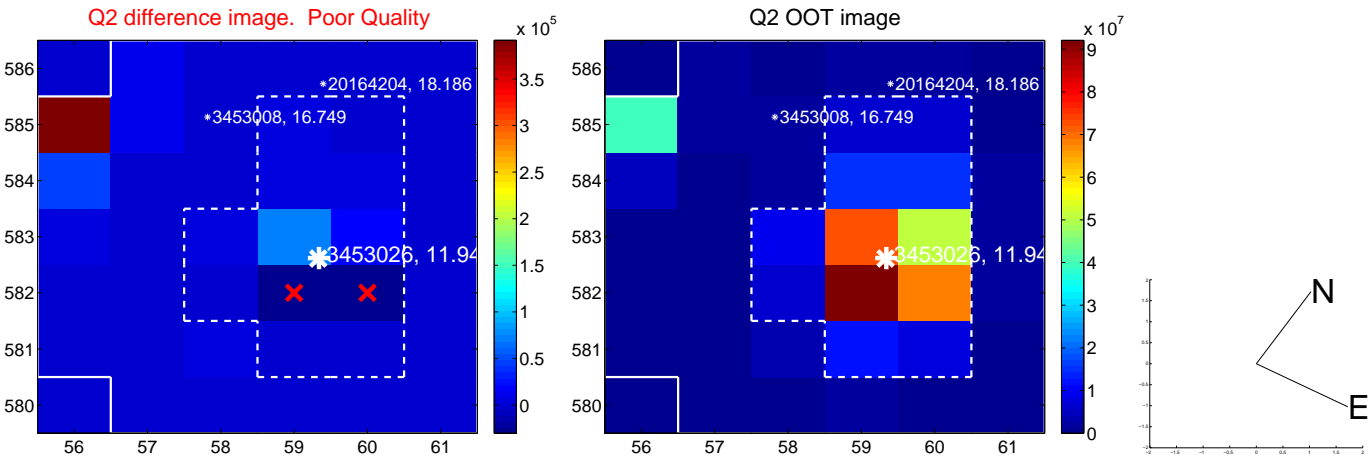
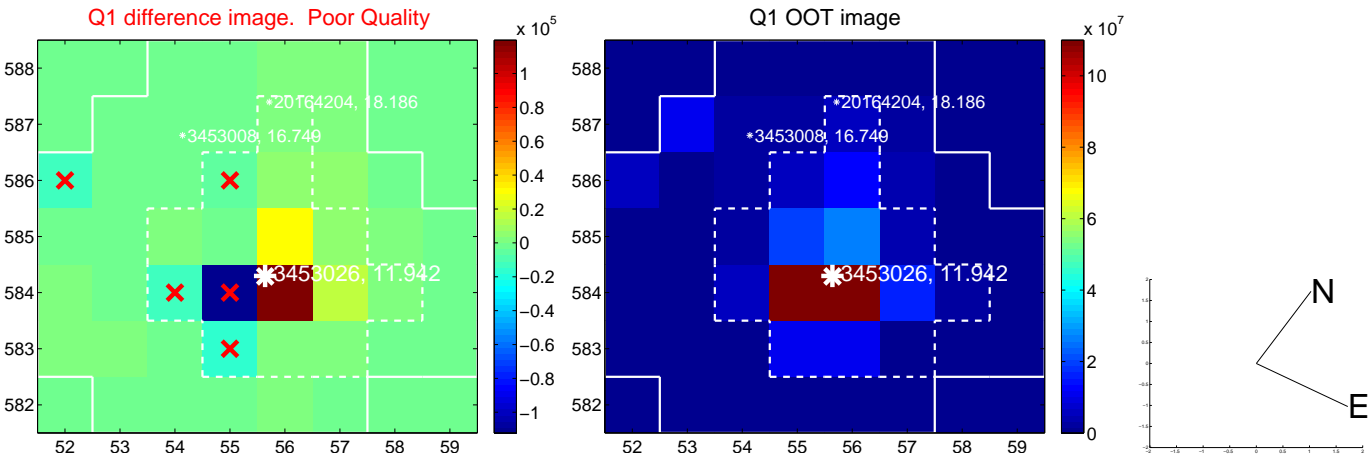
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	17.611 ± 3.220	5.47	-17.388 ± 3.184	2.792 ± 0.922
PRF-fit source offset from KIC position	17.645 ± 4.473	3.94	-17.420 ± 4.432	2.807 ± 1.089
photometric centroid source offset	2.10 ± 0.69	3.03	1.92 ± 0.70	-0.85 ± 0.66

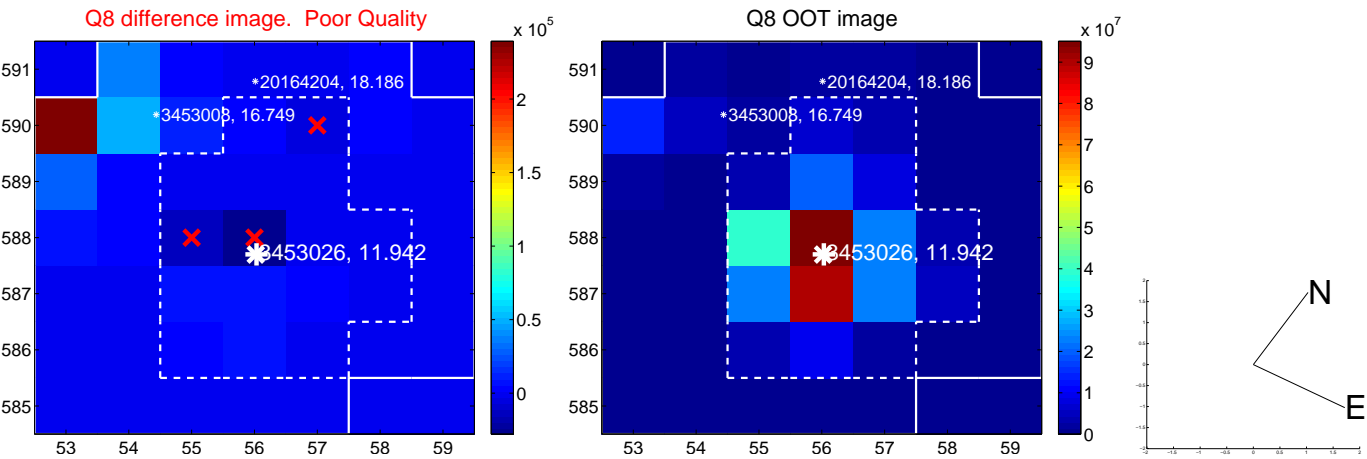
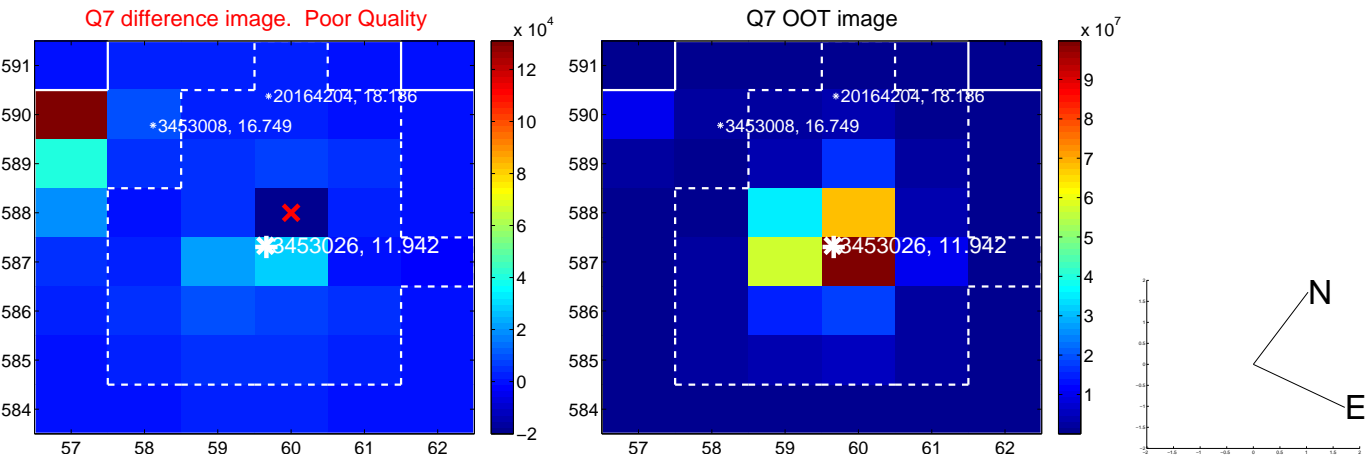
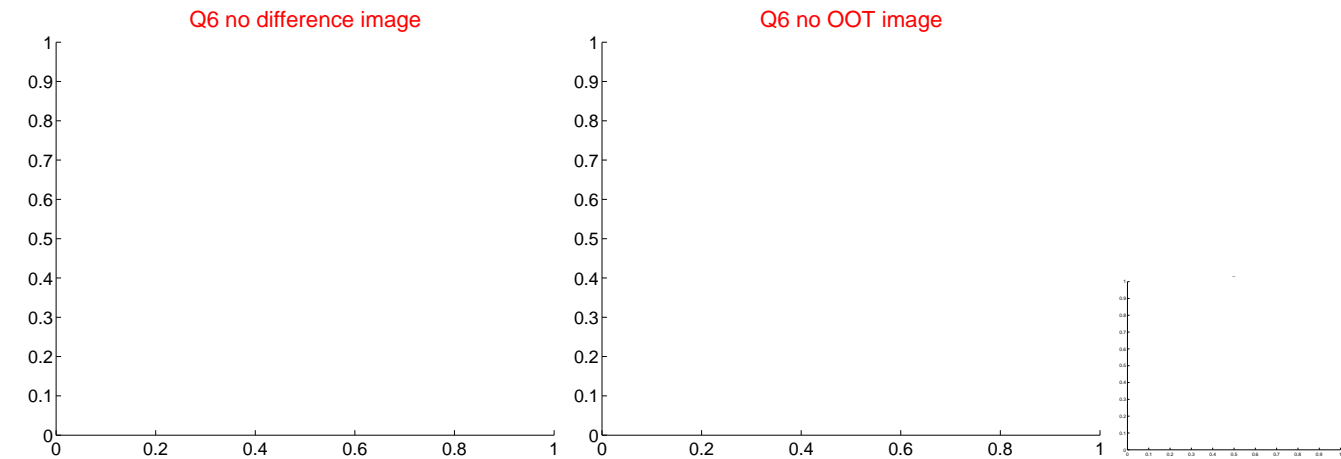


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

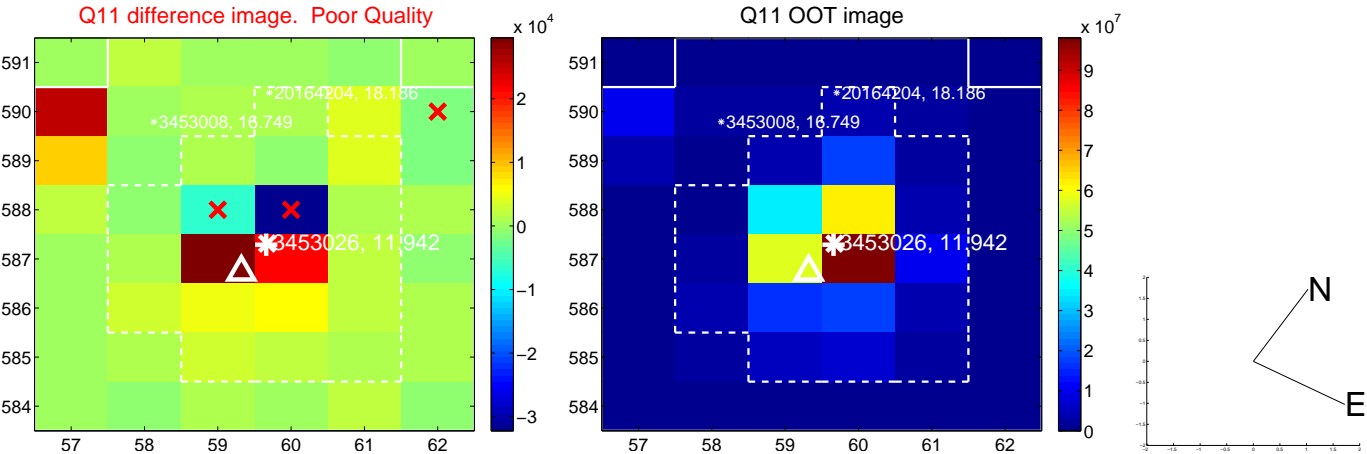
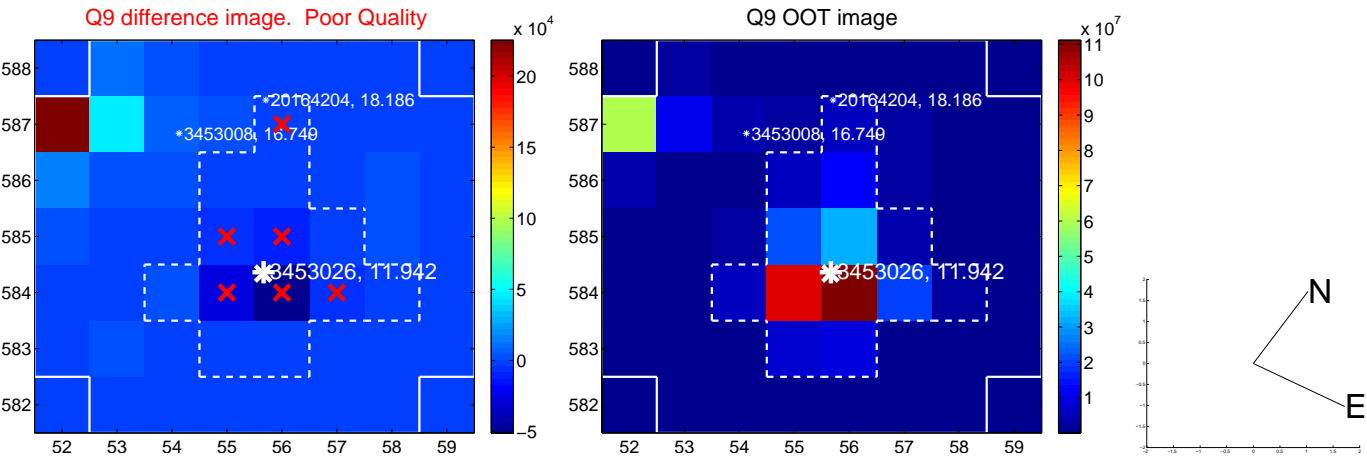
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



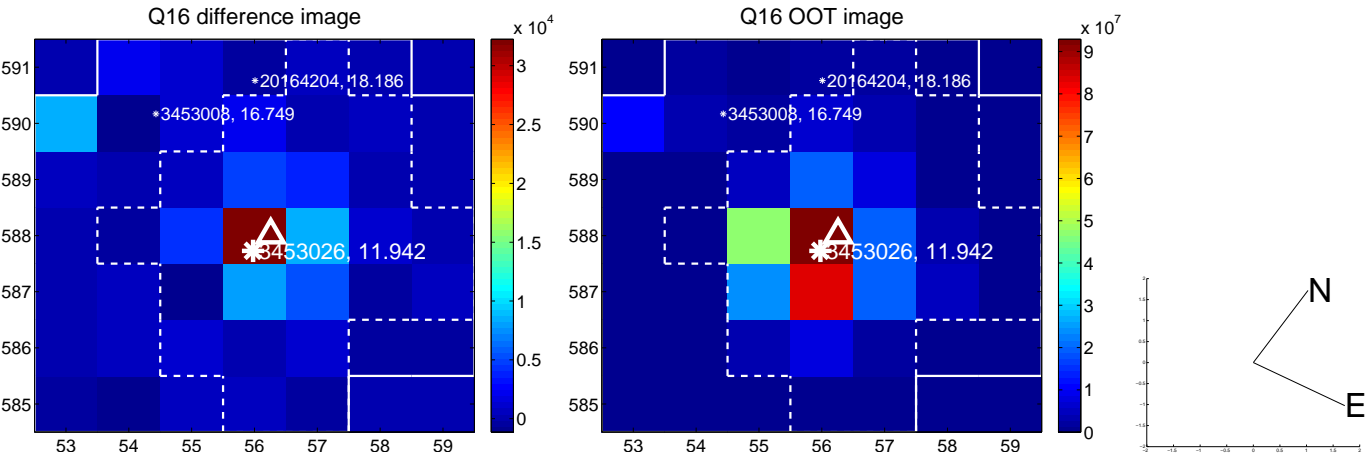
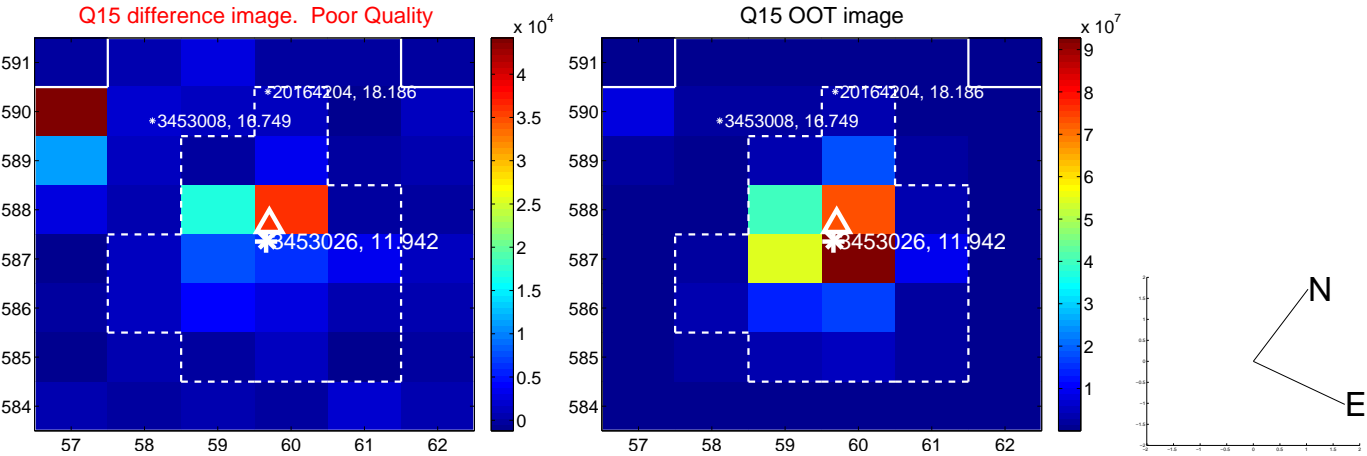
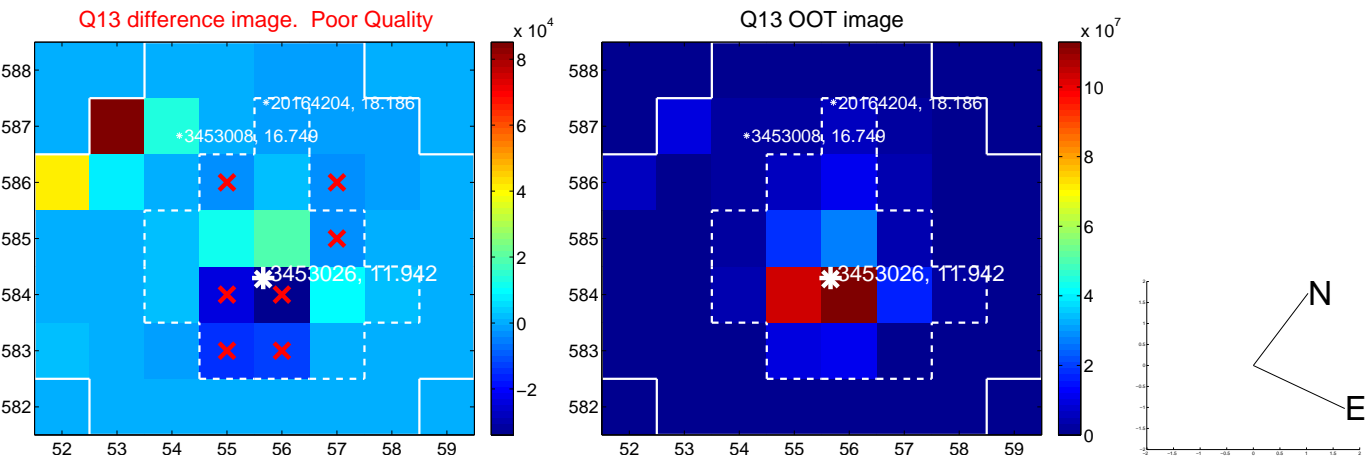
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



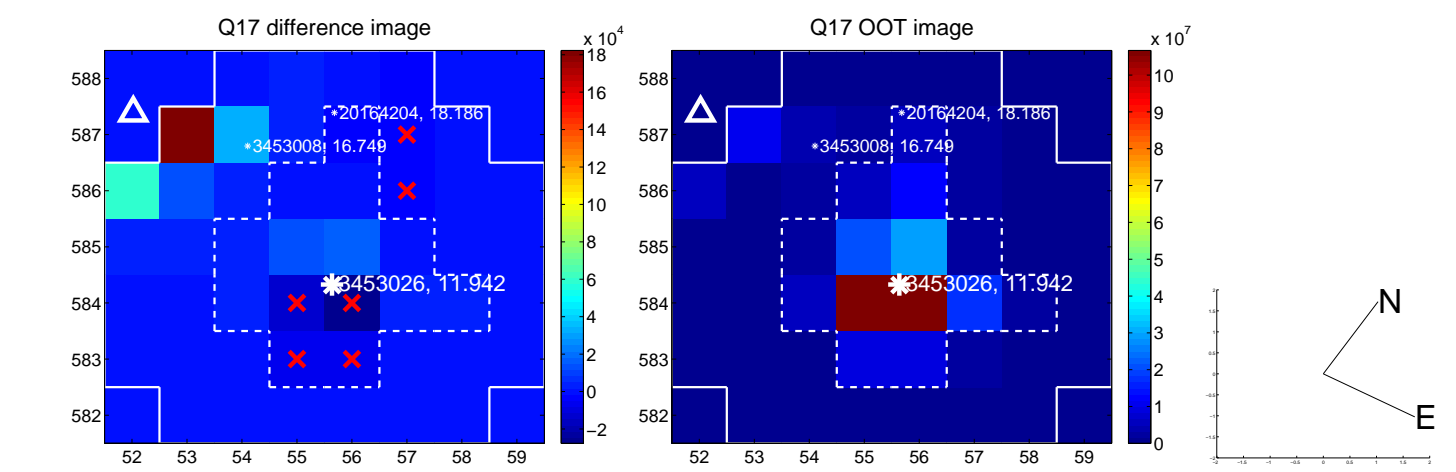
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



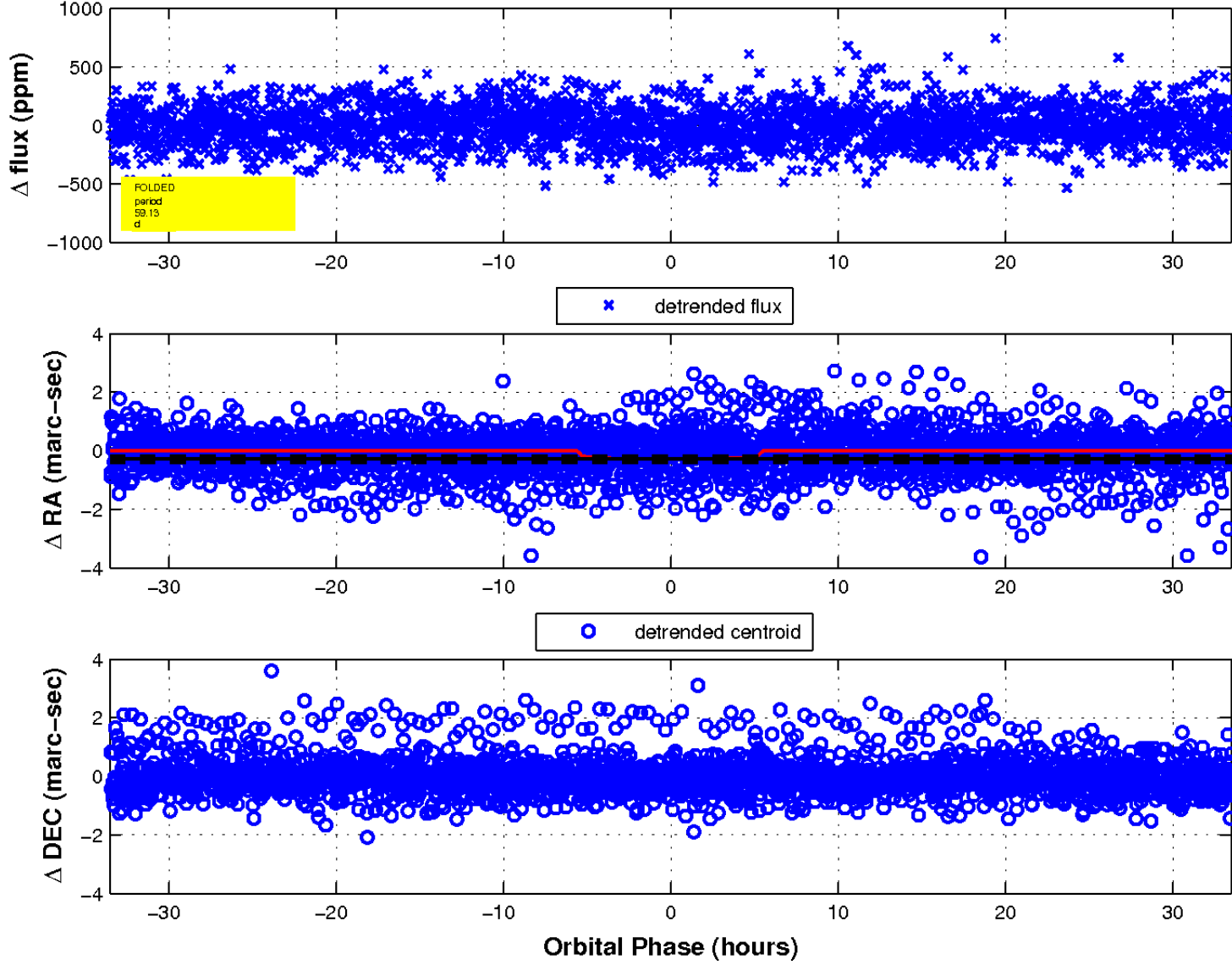
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



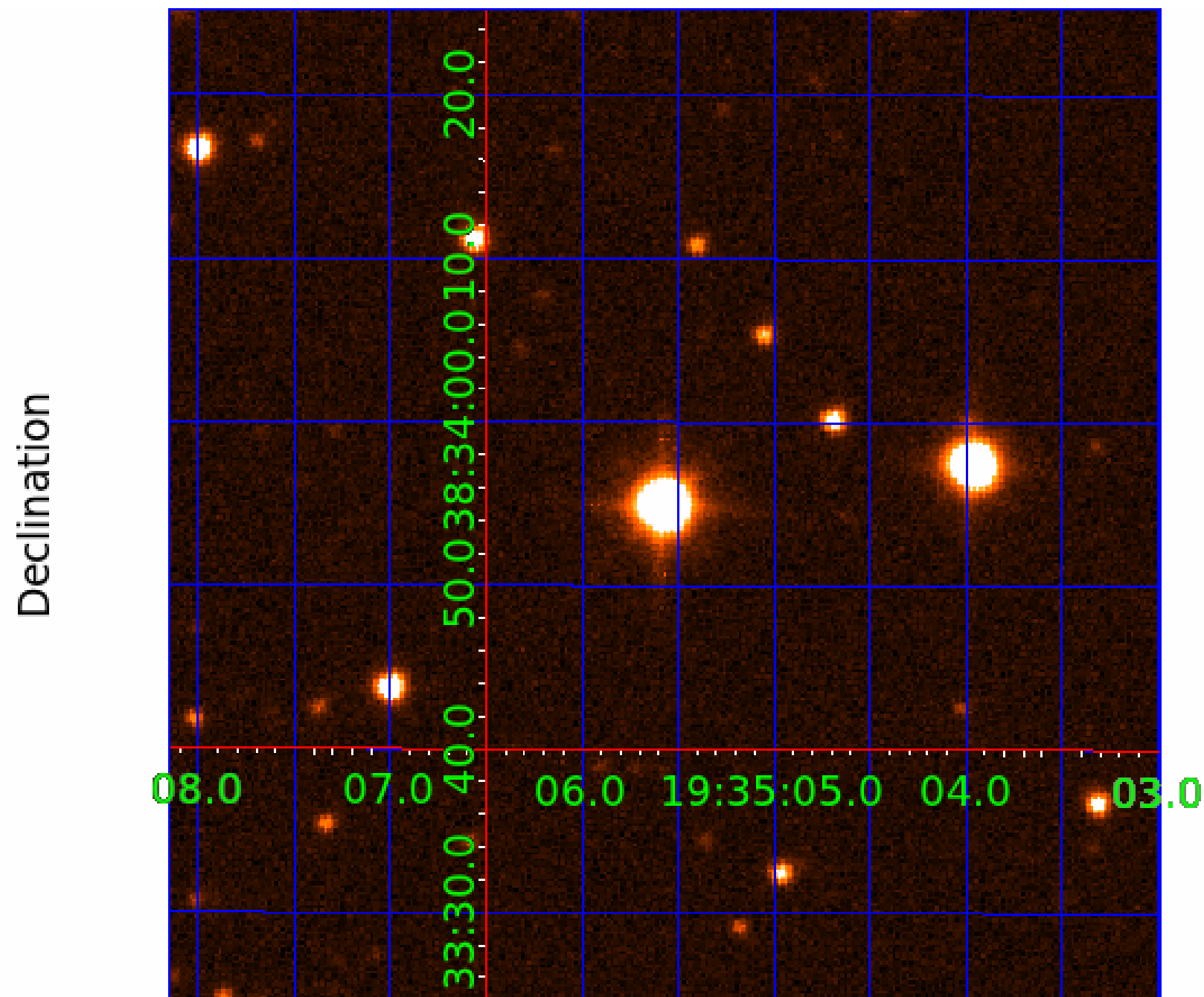
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 8



UKIRT Image



KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
003453026-03	OBS	No	59.130860	148.388405	145.9	11.182	7.7	7.4	3.56	6234	4.71	145.60
003453026-04	OBS	No	133.907744	251.464107	389.9	2.763	7.7	9.0	3.56	6234	13.81	48.96
003453026-06	OBS	No	28.307259	139.792248	149.6	2.450	7.5	7.5	3.56	6234	5.03	388.80
003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

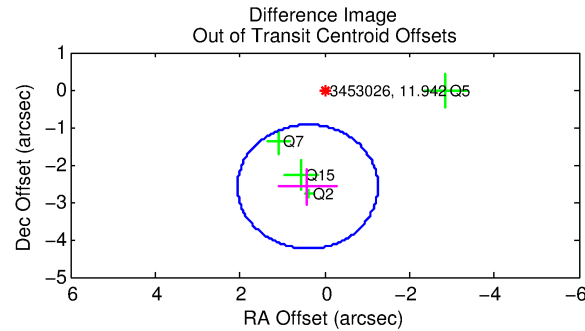
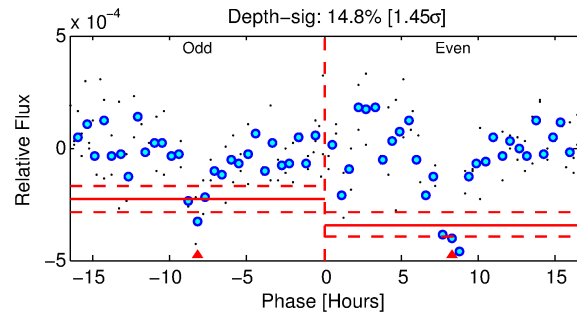
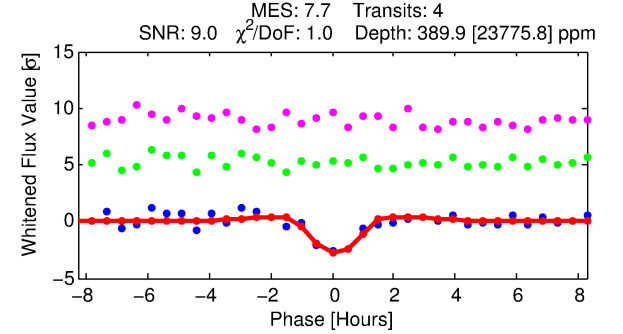
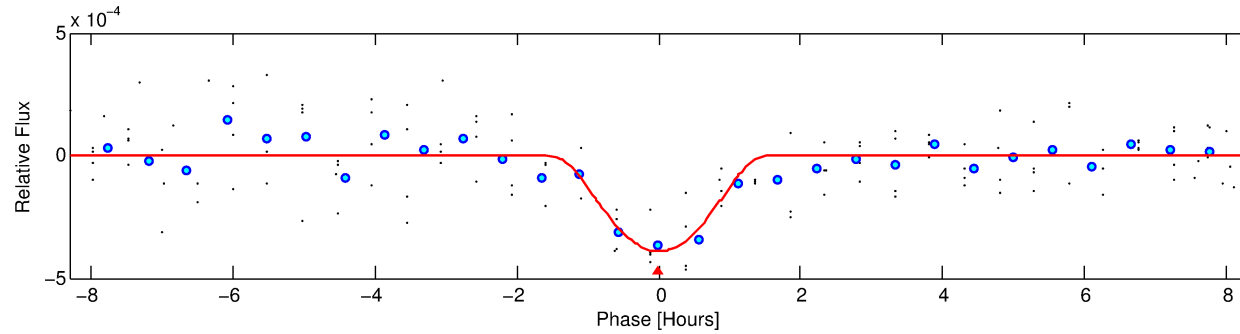
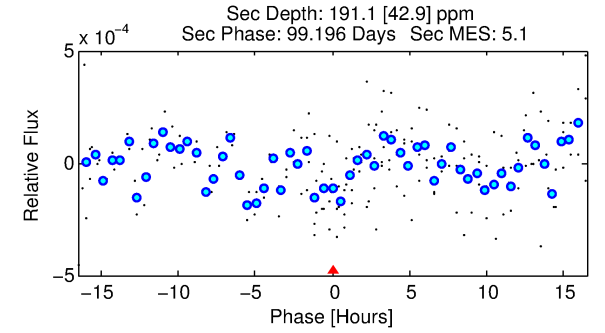
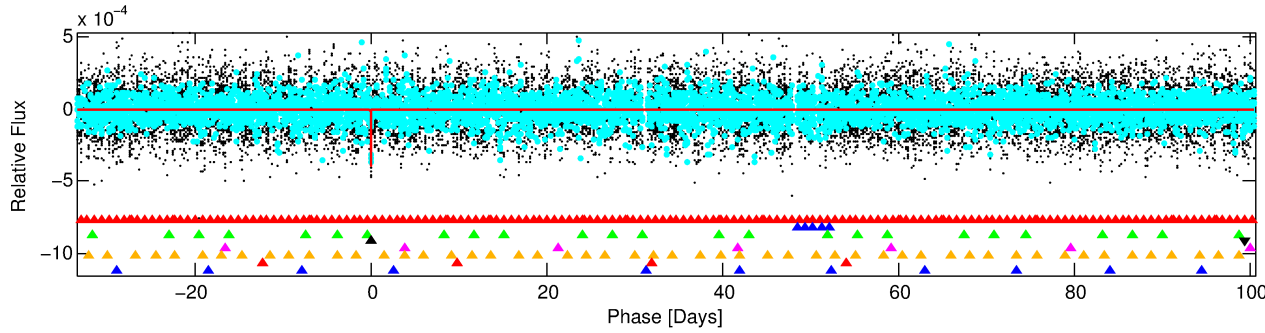
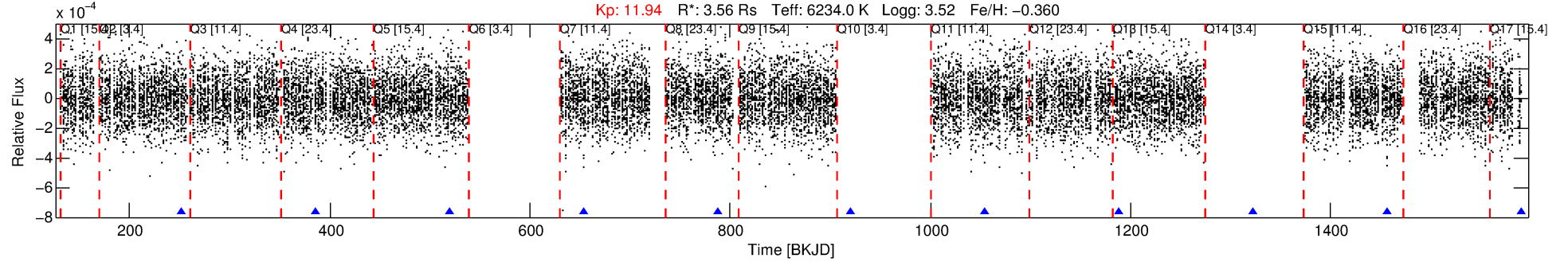
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-04

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 4 of 8 Period: 133.908 d



DV Fit Results:

Period = 133.90774 [0.00118] d
Epoch = 251.4641 [0.0067] BKJD
Rp/R* = 0.0356 [0.1993]
a/R* = 99.60 [145.83]
b = 1.00 [1.18]
Seff = 48.96 [30.26]
Teq = 675 [104] K
Rp = 13.81 [77.64] Re
a = 0.5918 [0.2303] AU
Ag = 192.97 [2166.82] [0.09σ]
Teffp = 3887 [10896] K [0.29σ]

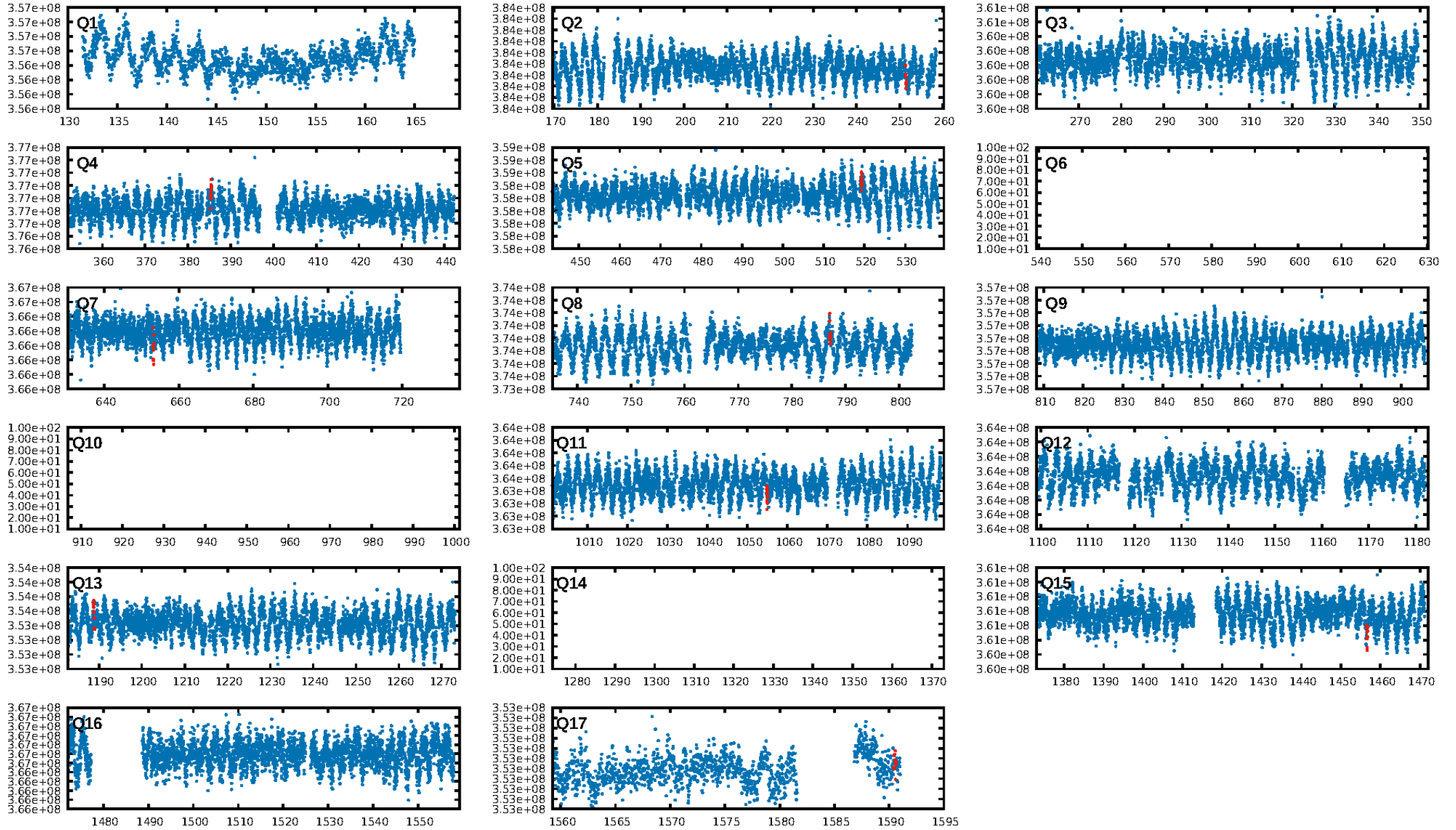
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [49.10σ]
LongPeriod-sig: 100.0% [142.65σ]
ModelChiSquare2-sig: 40.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.80e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.916
Centroid-sig: N/A
Centroid-so: 0.286 arcsec [0.41σ]
OotOffset-rm: 2.620 arcsec [4.75σ]
KicOffset-rm: 2.592 arcsec [5.32σ]
OotOffset-st: 1/2/0/1 [4]
KicOffset-st: 1/2/0/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.50 [4/8]

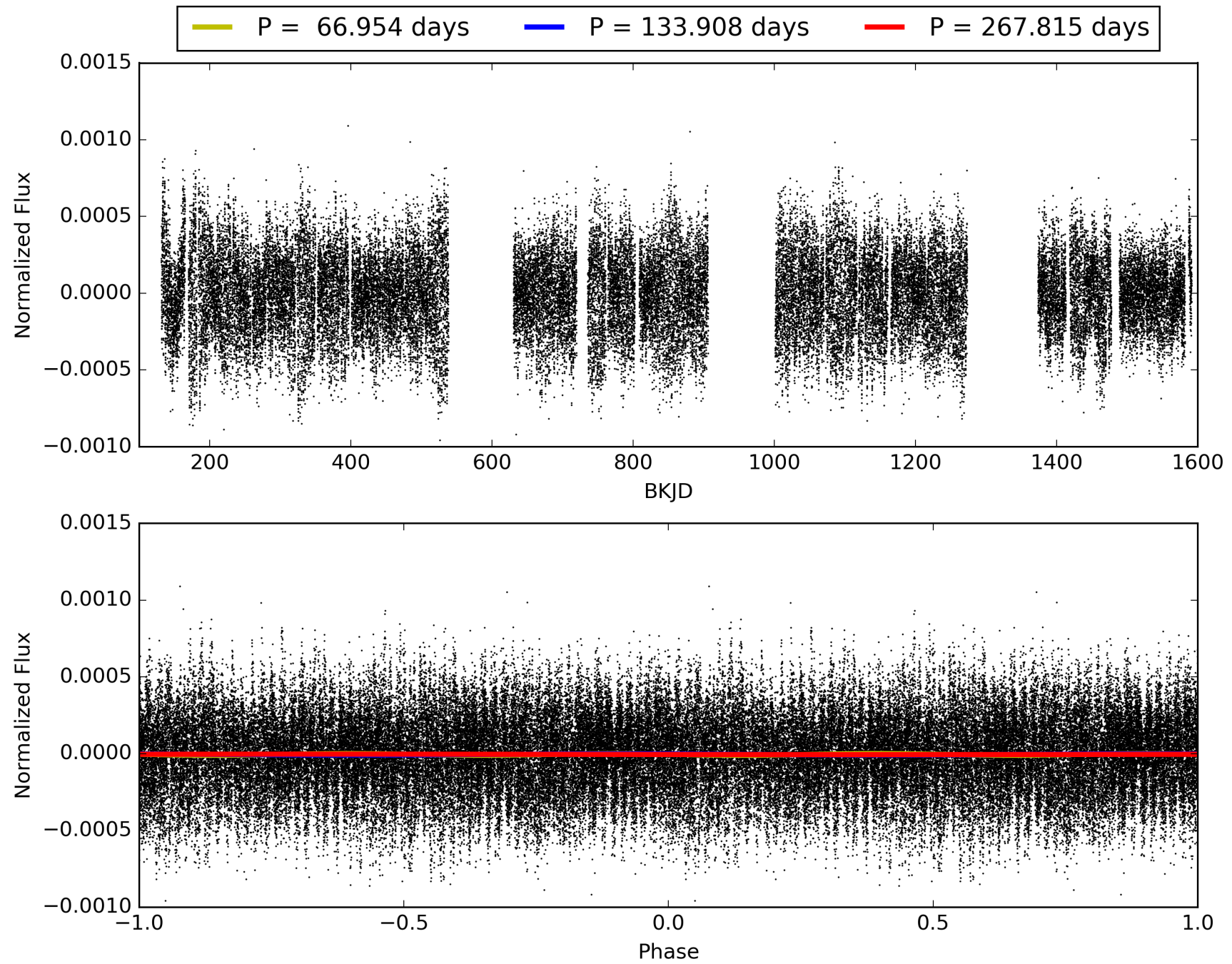
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:53:54 Z

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

TCE 003453026-04, PDC Light Curves

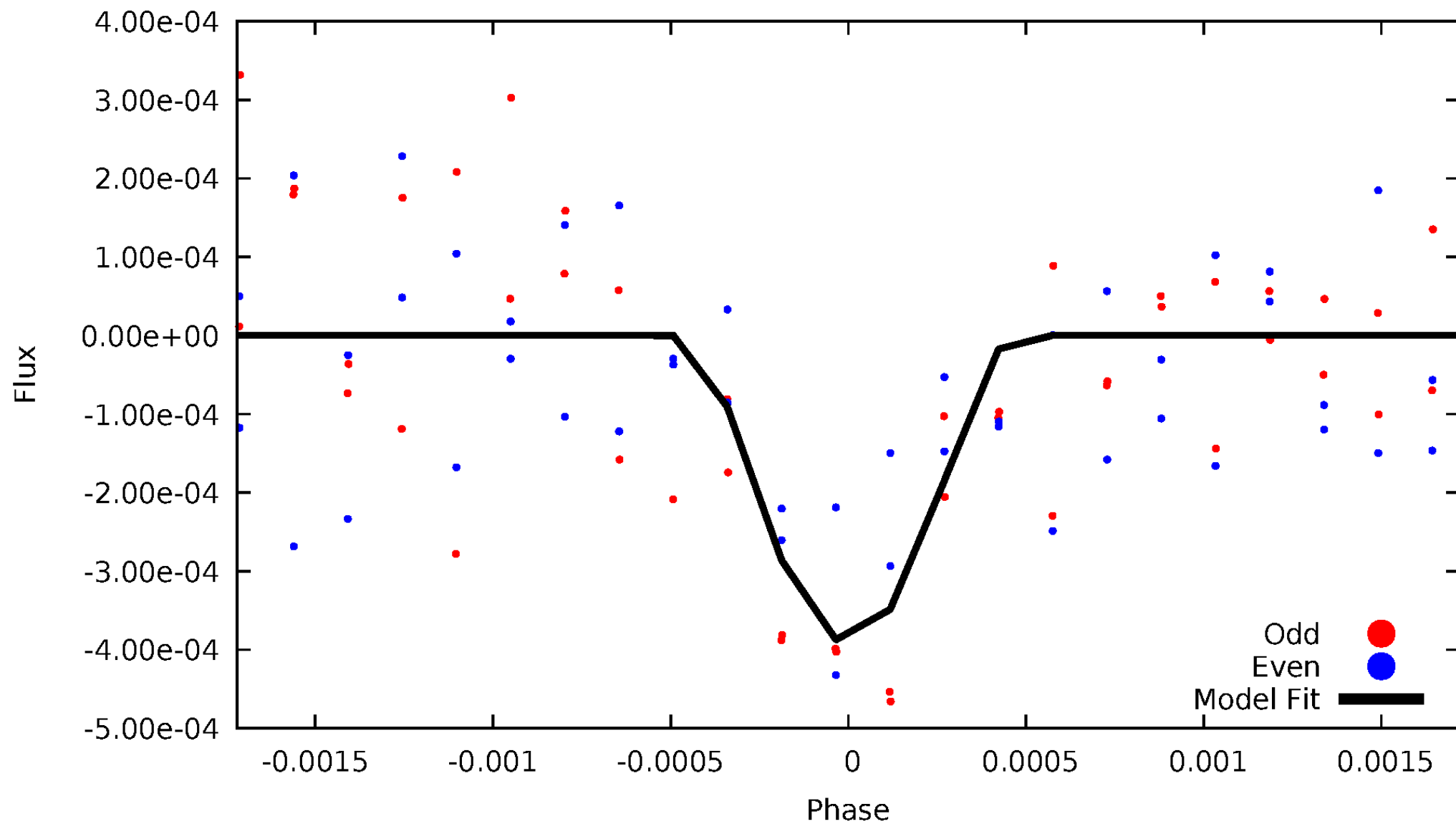


TCE 003453026-04



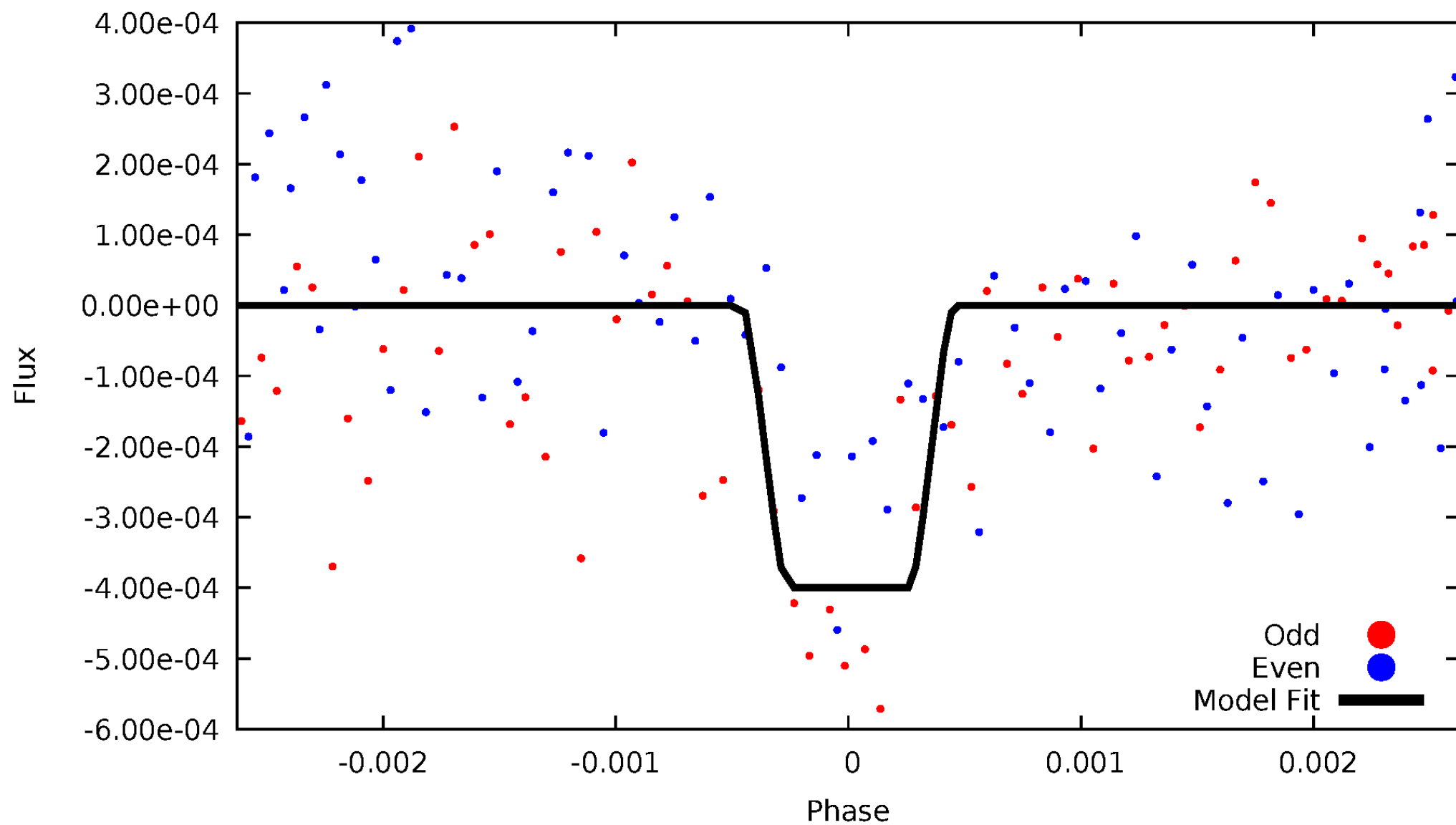
DV Odd/Even

TCE 003453026-04



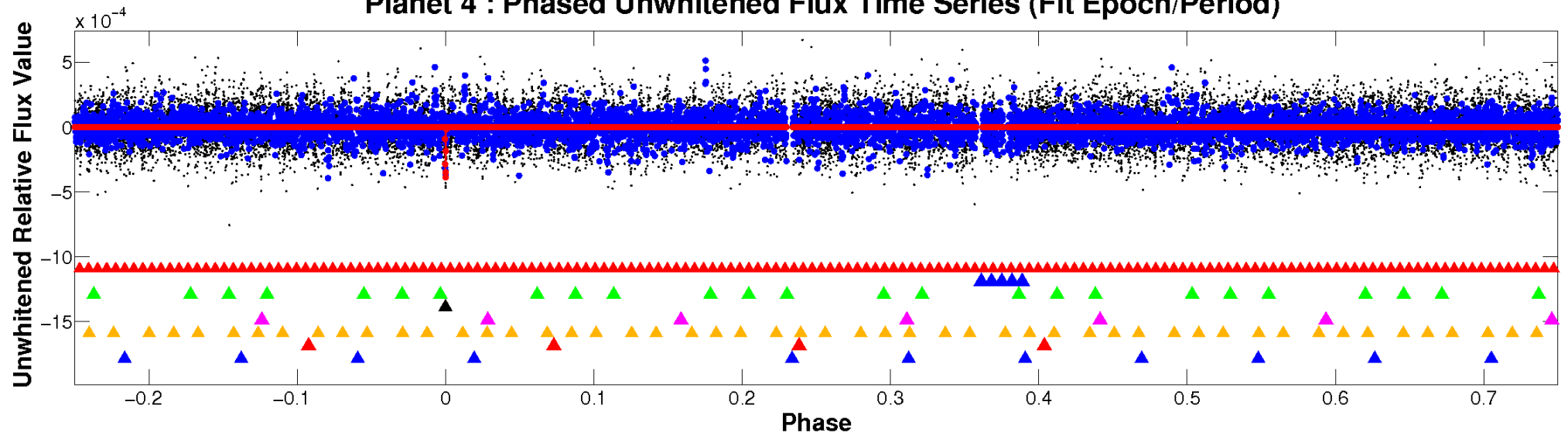
ALT Odd/Even

TCE 003453026-04

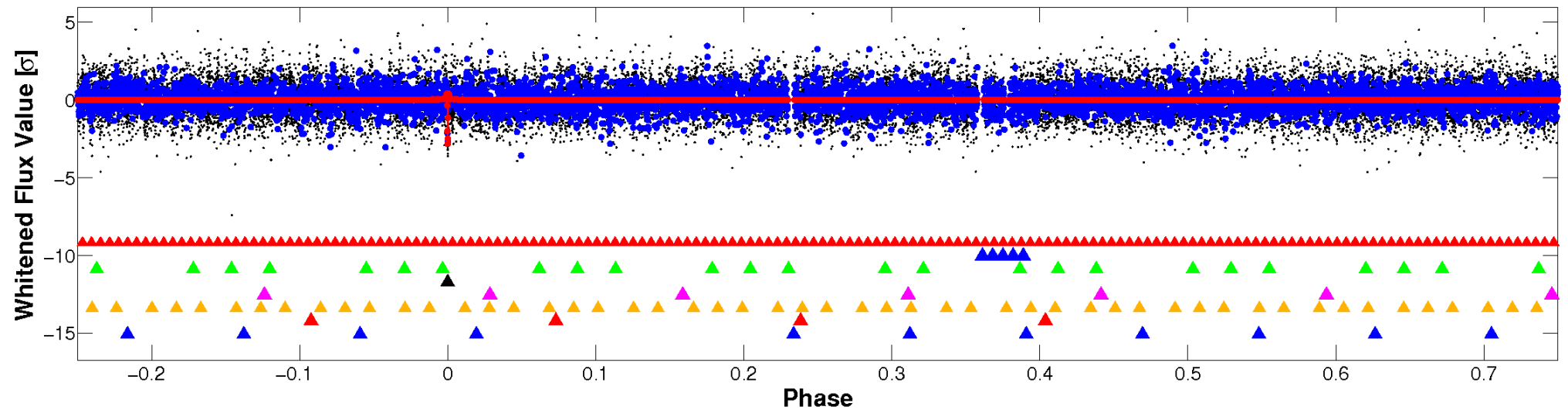


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

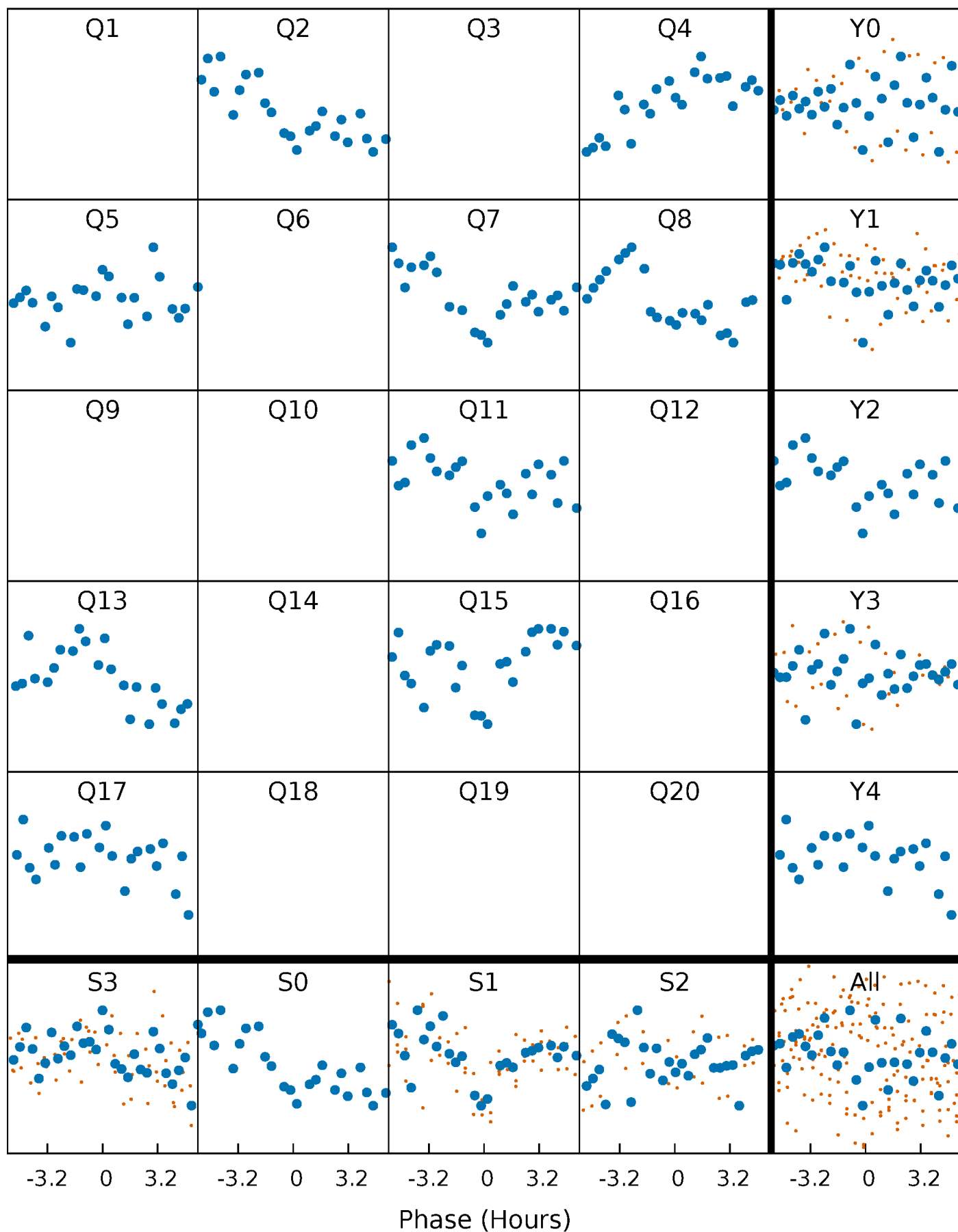


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



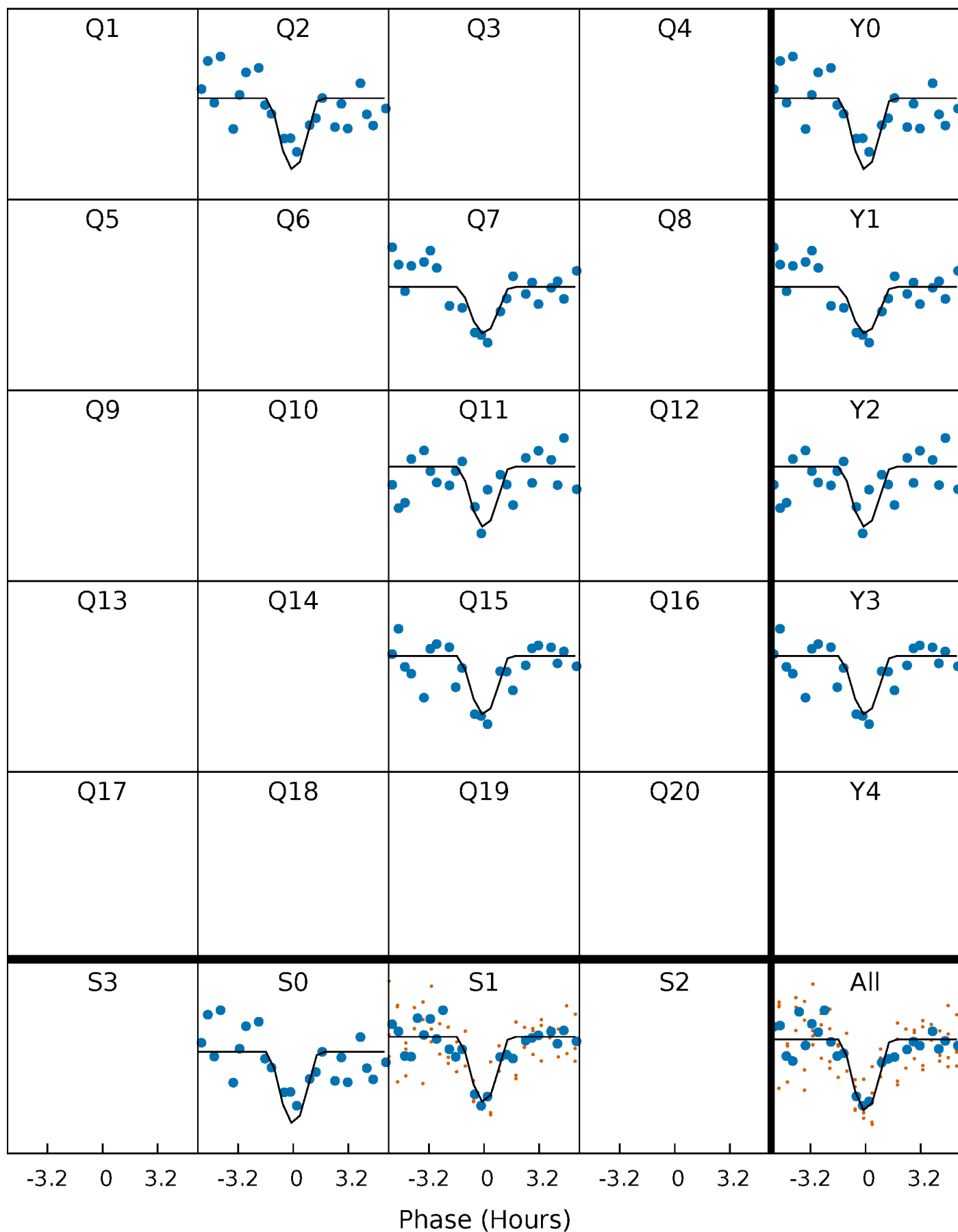
PDC Quarter-Phased Transit Curves

TCE 003453026-04 $P=133.907744$ Days $T_0=251.464107$ (BKJD)



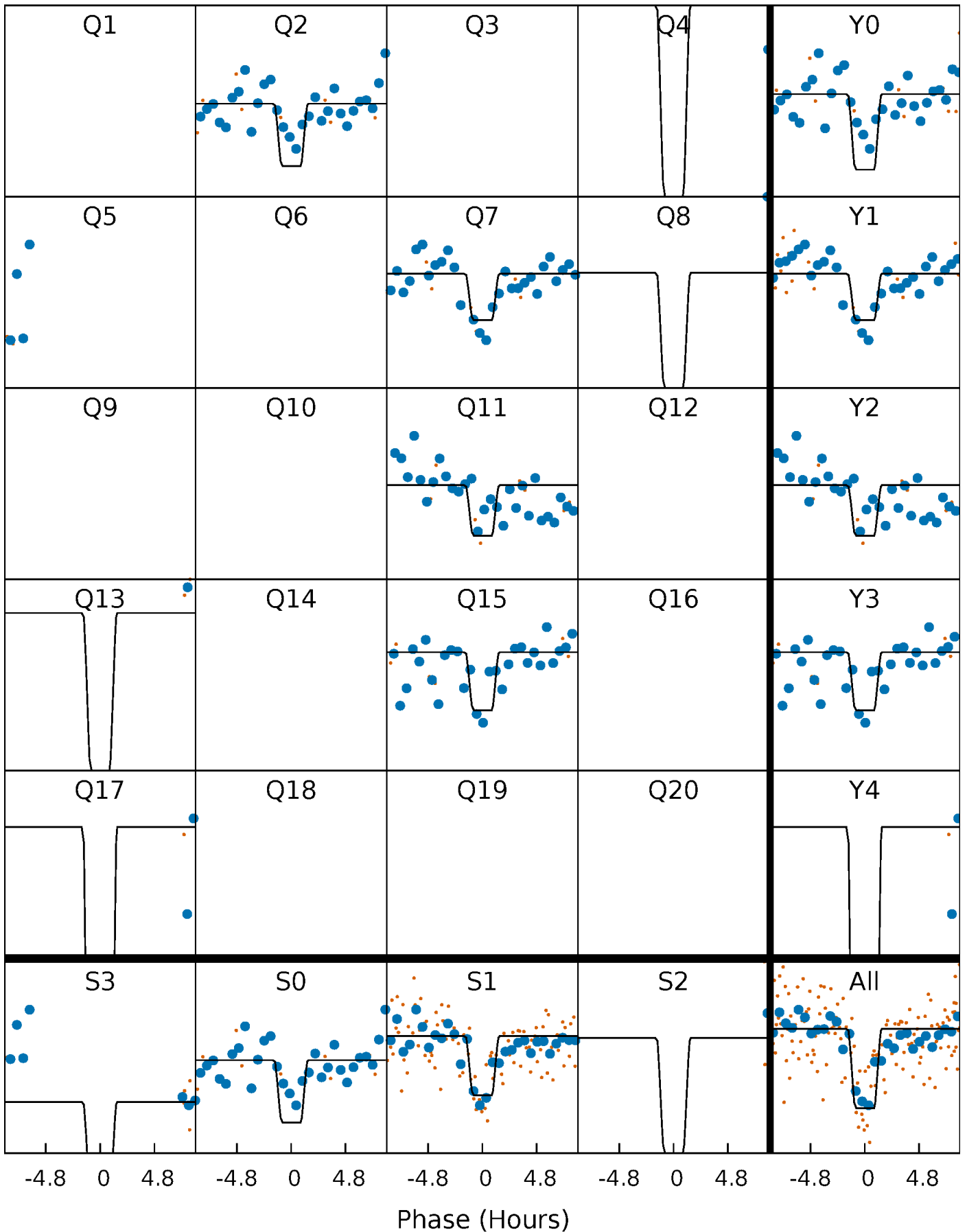
DV Quarter-Phased Transit Curves

TCE 003453026-04 $P=133.907744$ Days $T_0=251.464107$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

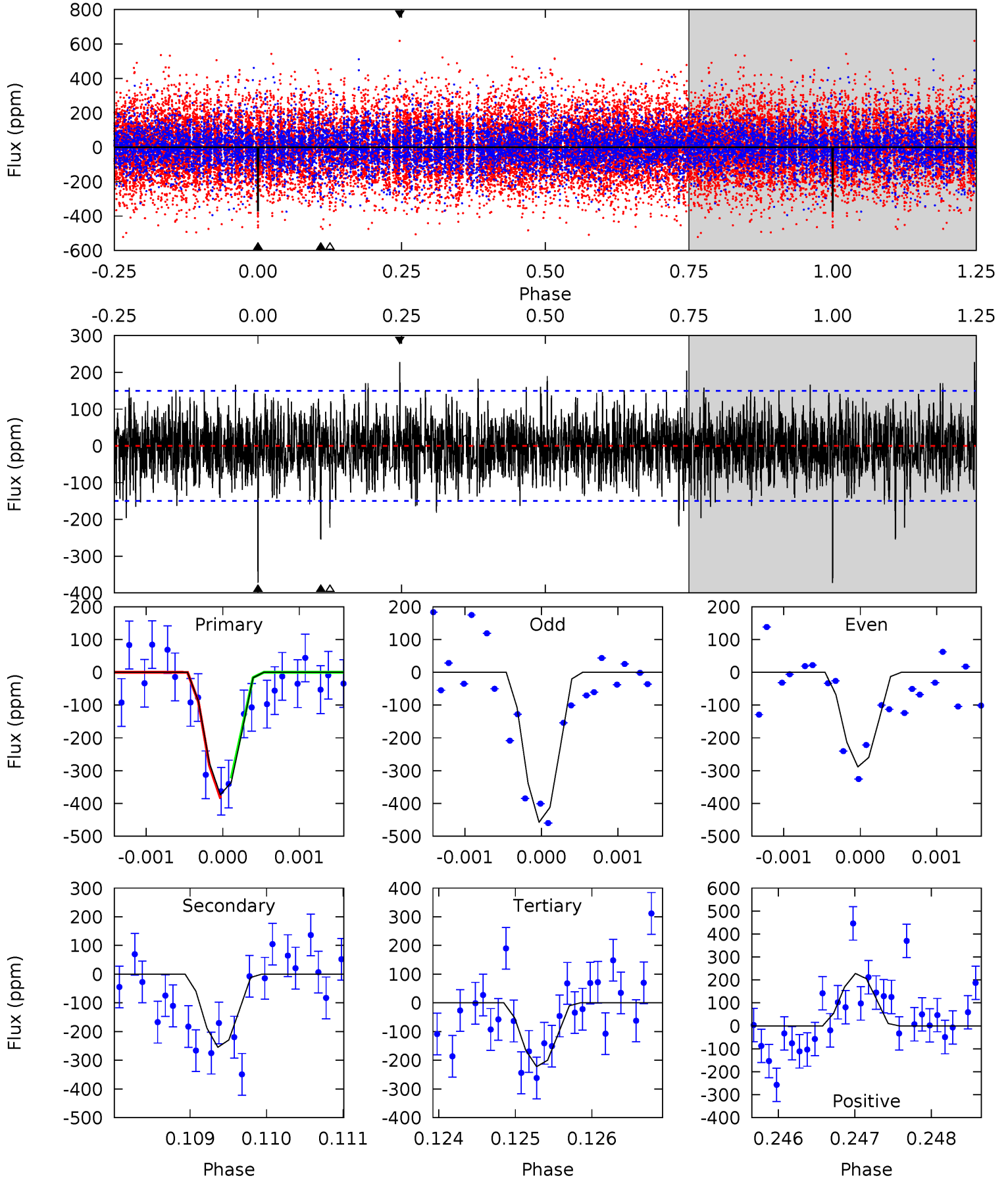
TCE 003453026-04 P=133.909163 Days $T_0=251.457347$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-04, P = 133.907744 Days, E = 117.556363 Days

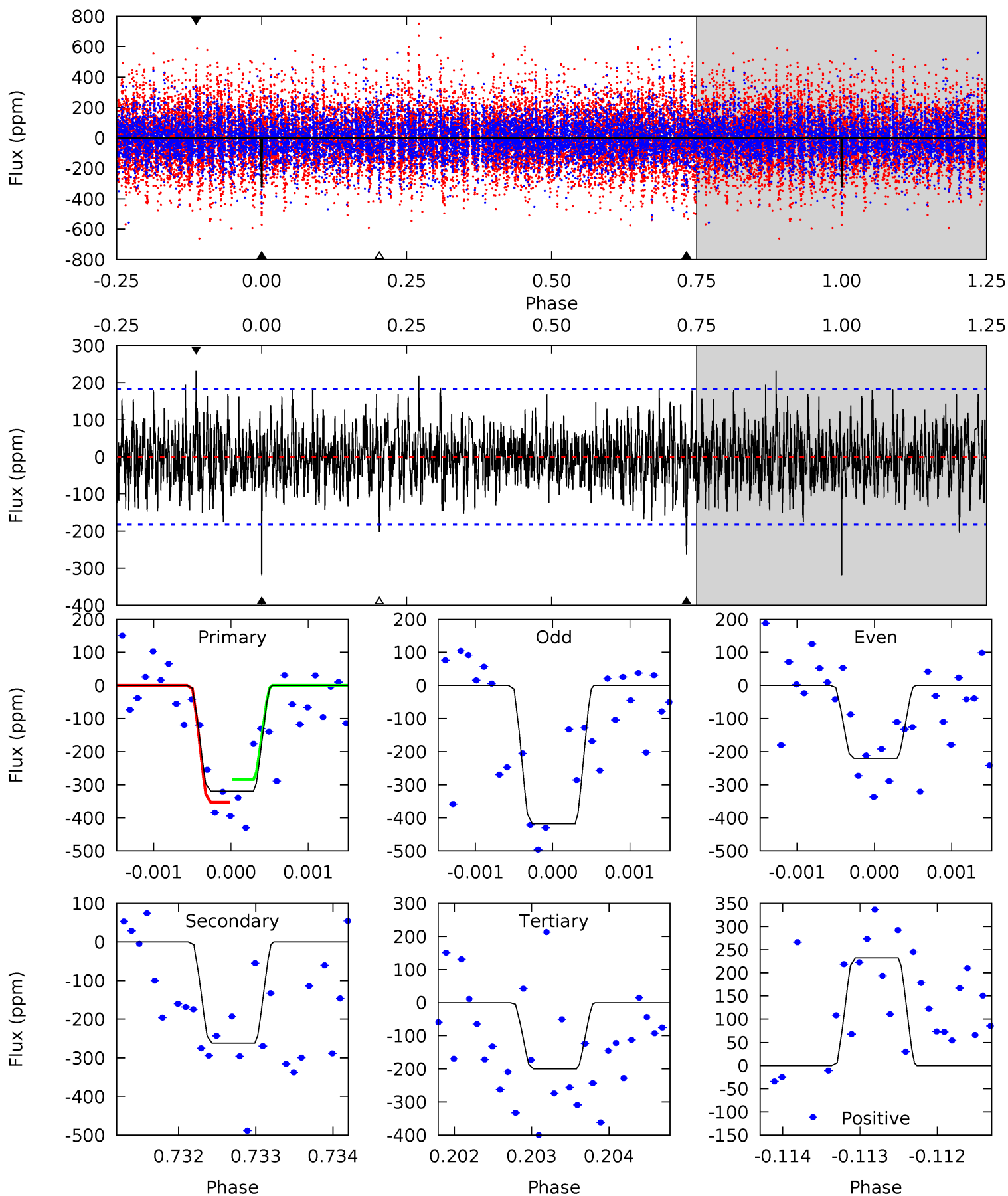
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	9.25	8.08	8.28	5.44	3.27	2.00	5.48	5.28	1.17	0.97	3.06	1.01	0.38	1.08



Alt Model-Shift Uniqueness Test

003453026-04, P = 133.909163 Days, E = 117.548184 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	7.87	6.02	6.98	5.47	3.32	1.83	3.56	2.60	1.85	0.89	3.03	1.05	0.42	1.03



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-254 ± 27	$52.36^{+60.95}_{-37.50}$	929^{+55}_{-98}	2808^{+1312}_{-478}	18^{+202}_{-14}
Alt.	-262 ± 33	$49.32^{+56.44}_{-32.82}$	932^{+59}_{-91}	2875^{+1152}_{-502}	21^{+164}_{-16}

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

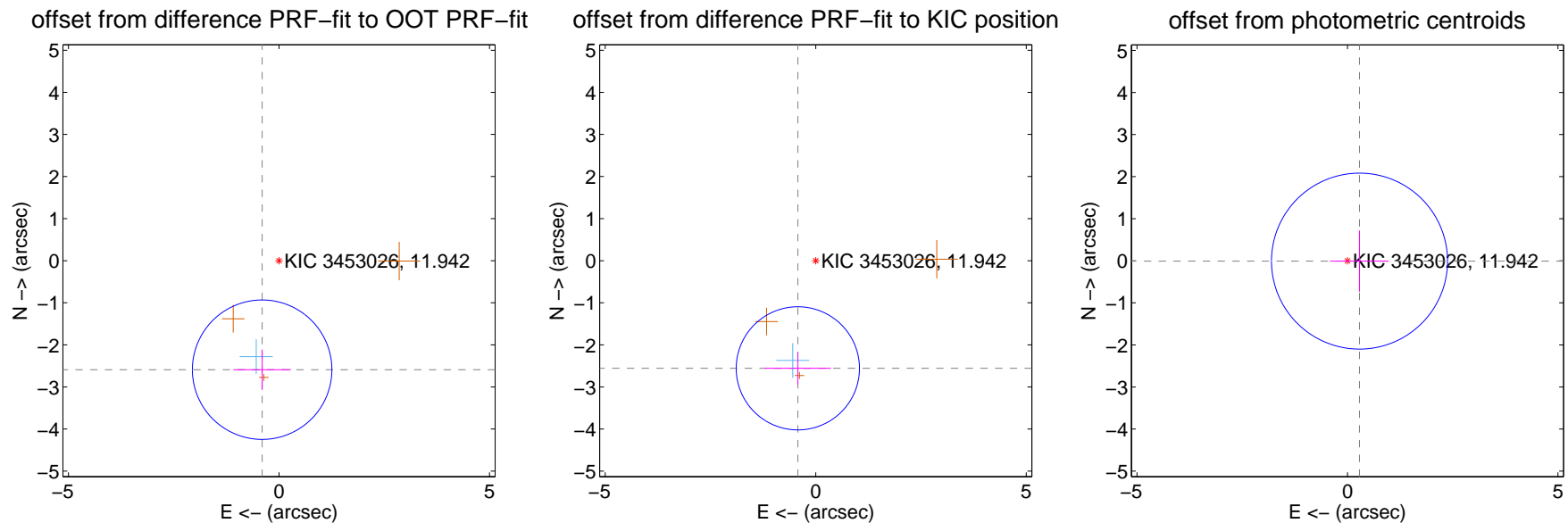
DV Centroid Data

Supplemental centroid analysis for 003453026-04. **Kepler magnitude: 11.94.** Transit SNR 8.99

There are 1 quarters with good PRF difference image offsets

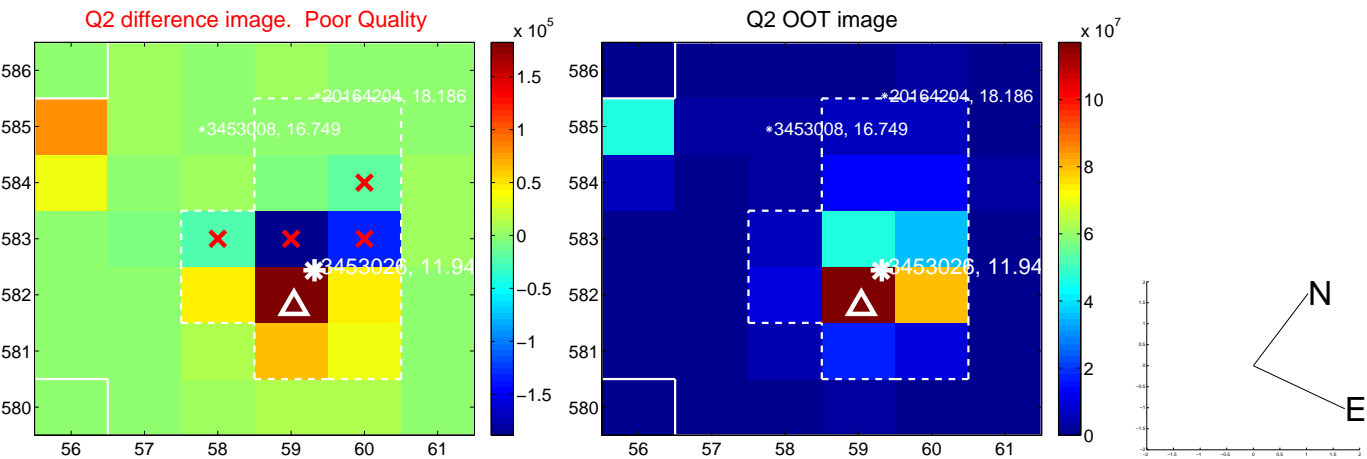
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.620 ± 0.552	4.75	0.400 ± 0.684	-2.589 ± 0.481
PRF-fit source offset from KIC position	2.592 ± 0.488	5.32	0.425 ± 0.787	-2.557 ± 0.386
photometric centroid source offset	0.29 ± 0.70	0.41	-0.29 ± 0.70	-0.01 ± 0.73

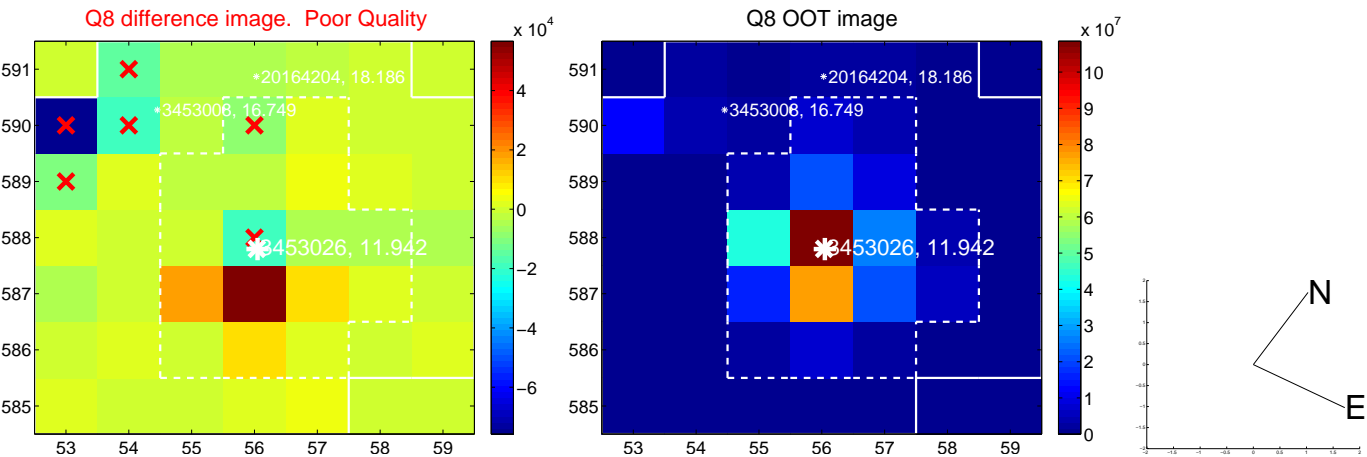
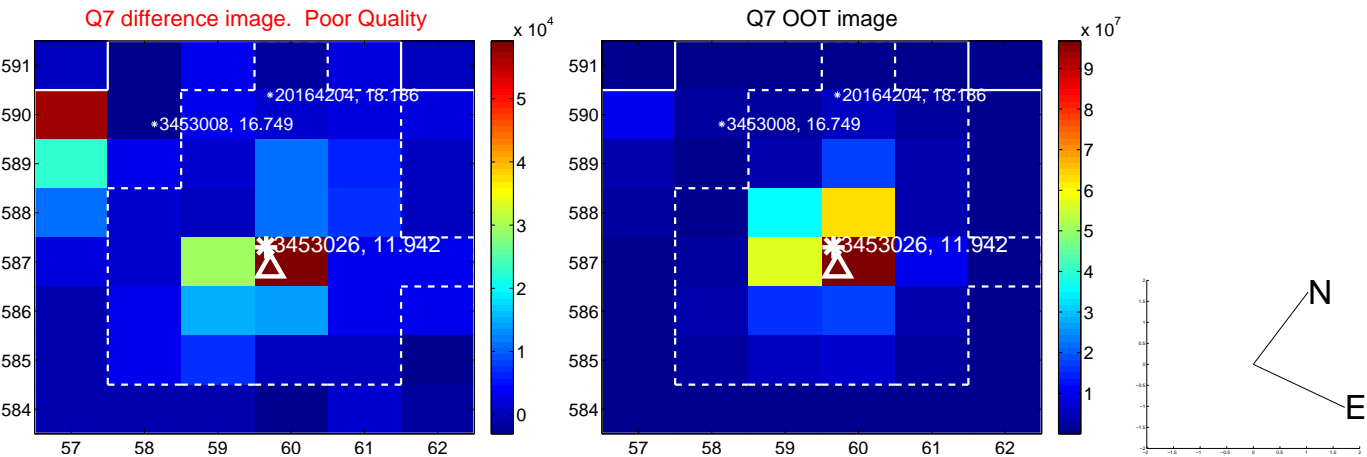
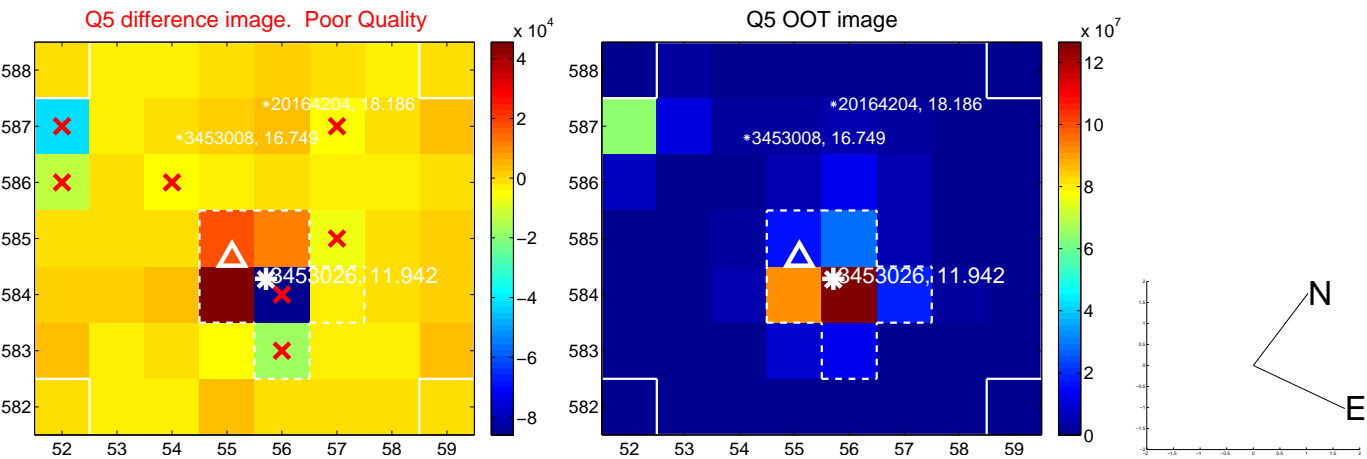


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

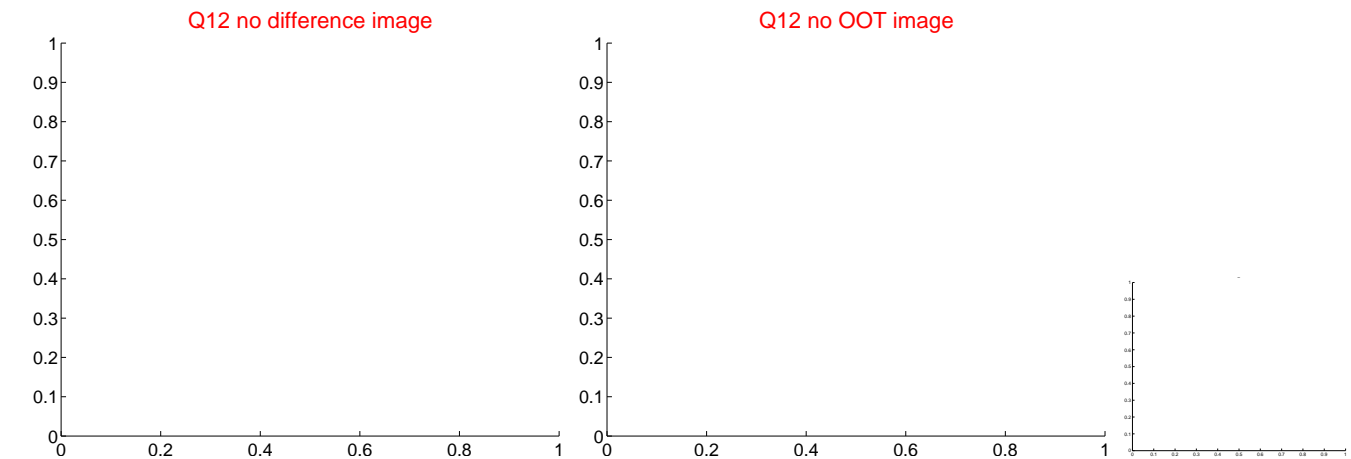
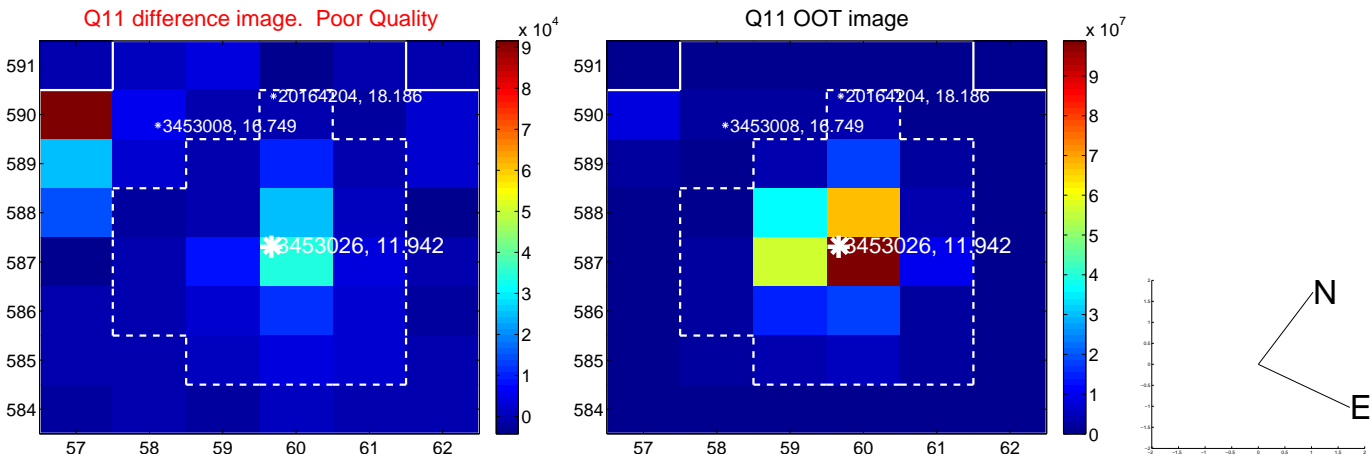
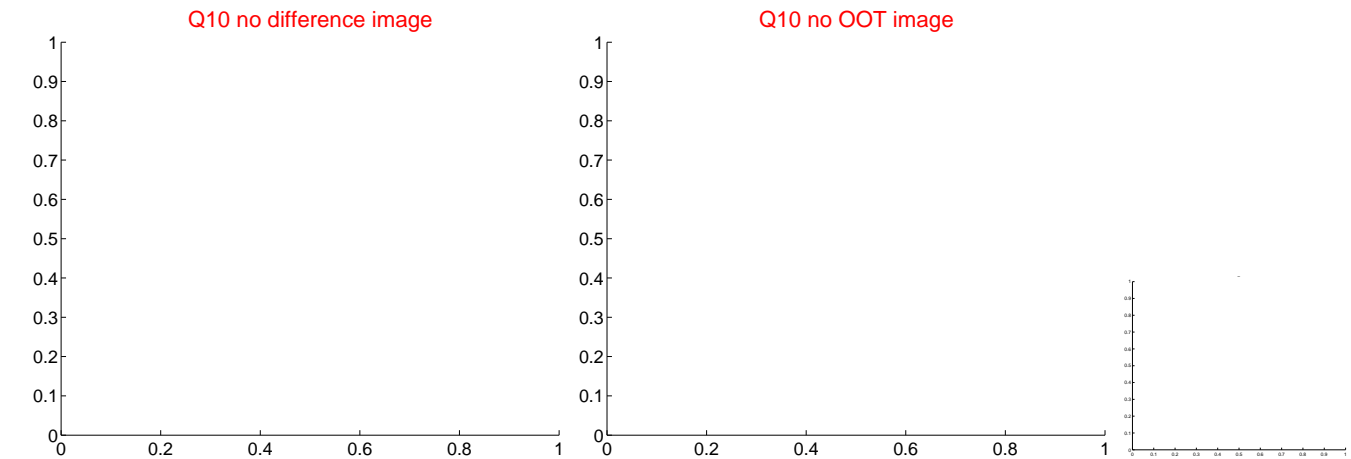
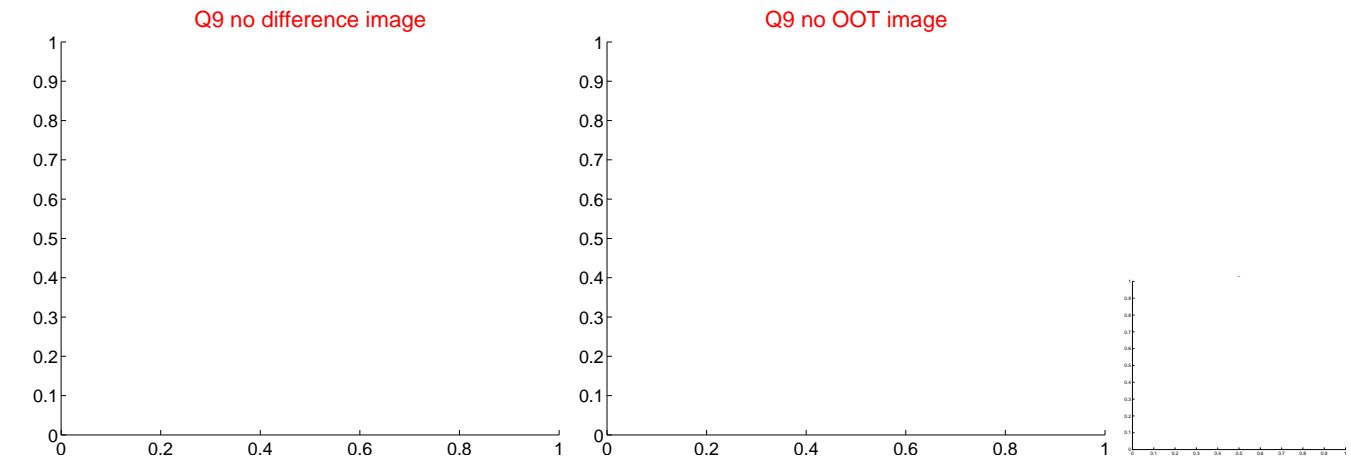
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



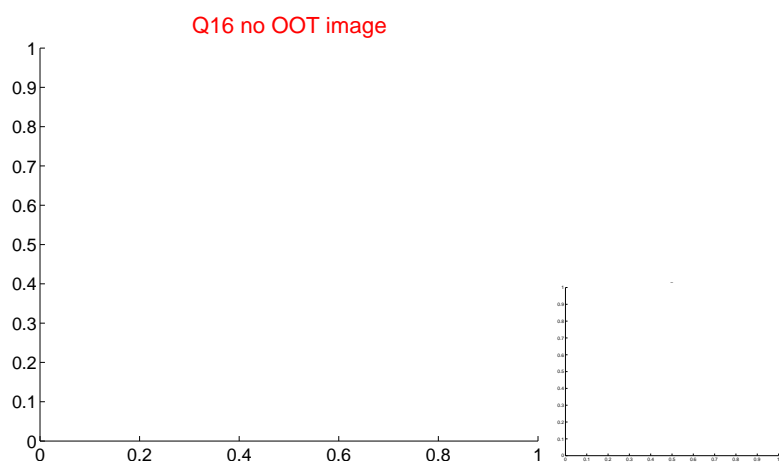
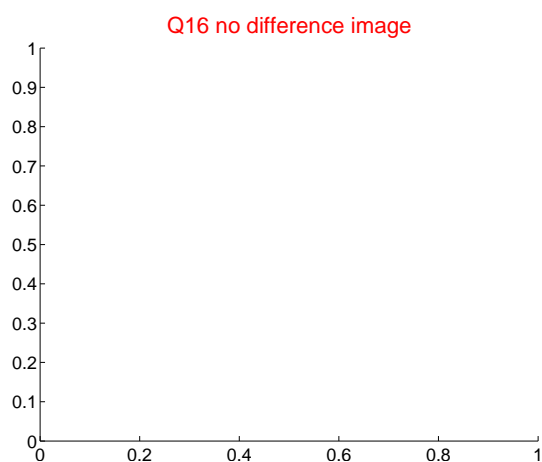
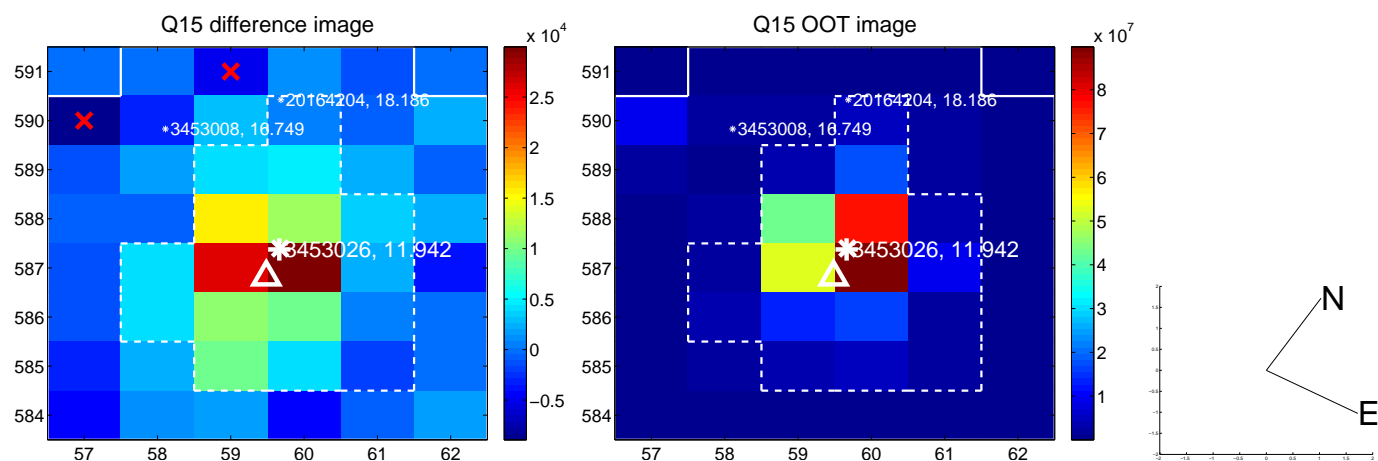
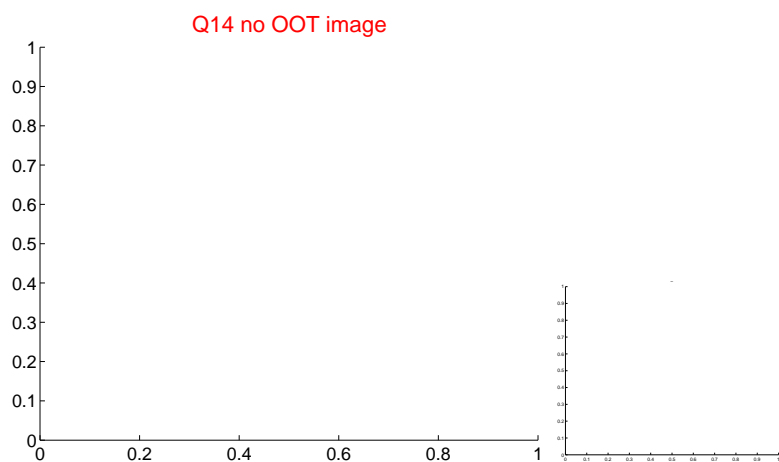
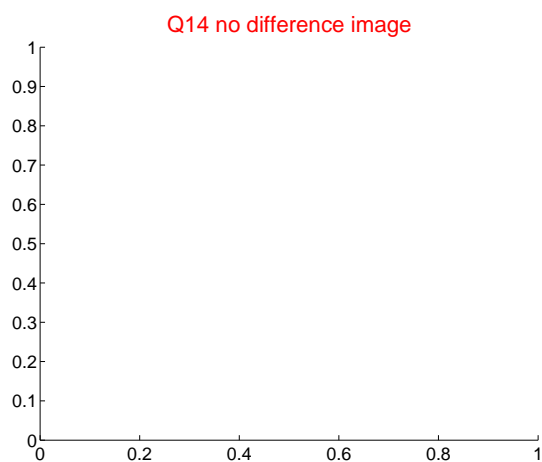
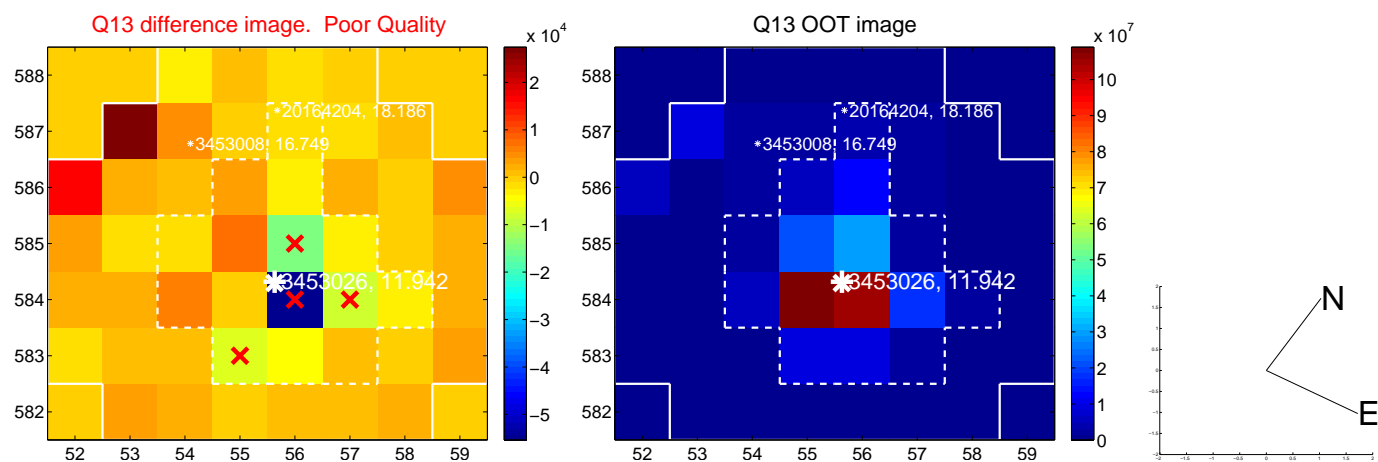
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



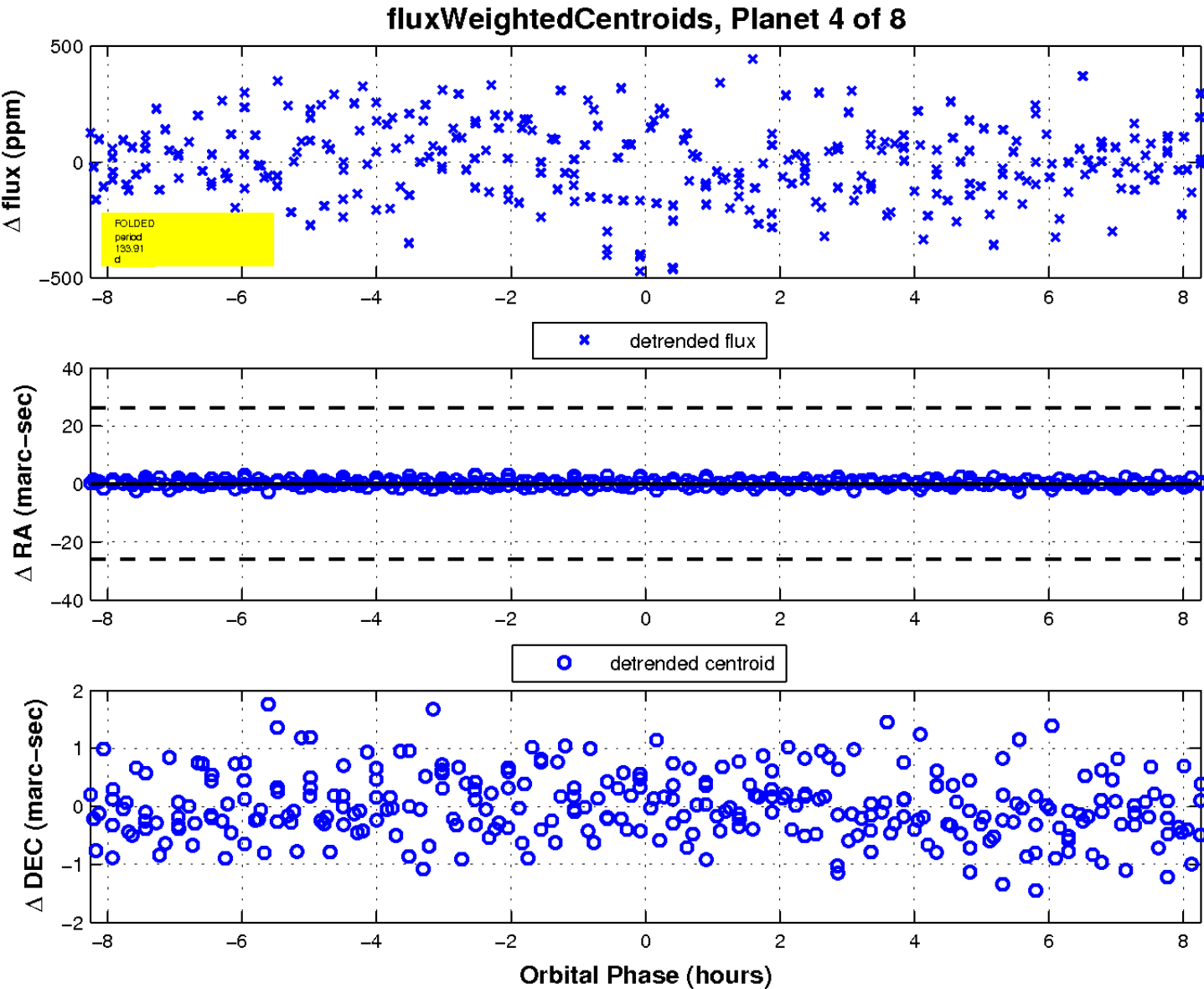
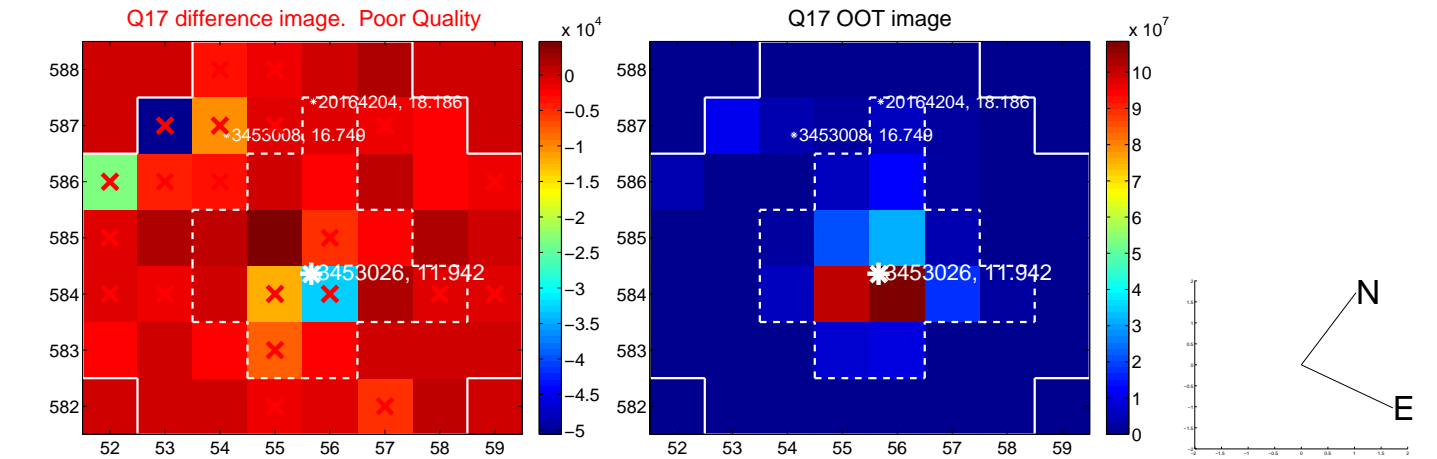
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



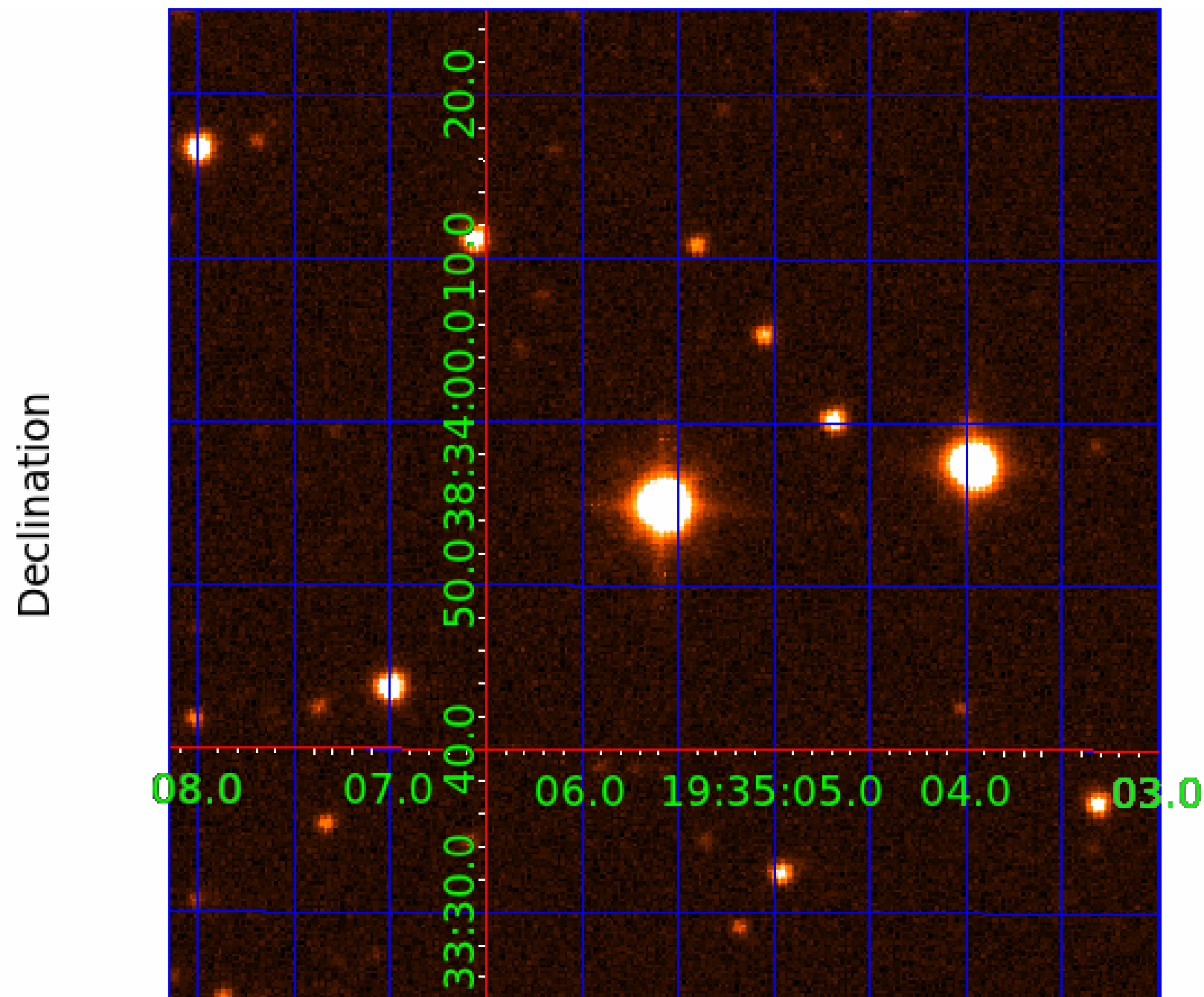
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
003453026-03	OBS	No	59.130860	148.388405	145.9	11.182	7.7	7.4	3.56	6234	4.71	145.60
003453026-04	OBS	No	133.907744	251.464107	389.9	2.763	7.7	9.0	3.56	6234	13.81	48.96
003453026-06	OBS	No	28.307259	139.792248	149.6	2.450	7.5	7.5	3.56	6234	5.03	388.80
003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

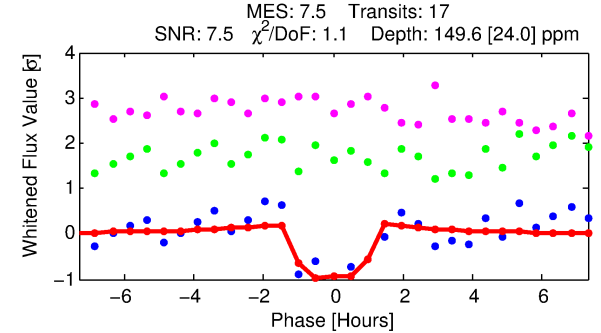
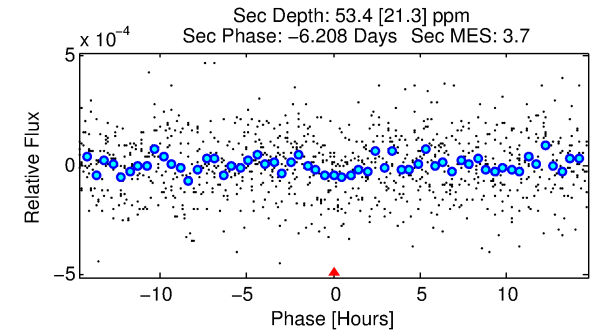
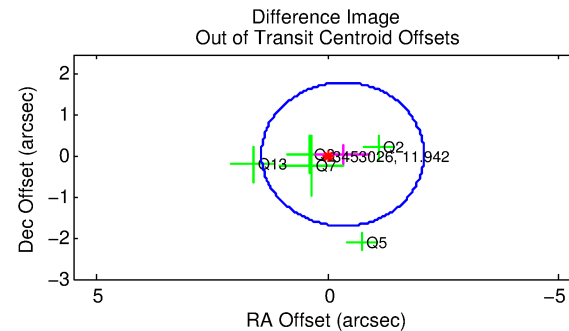
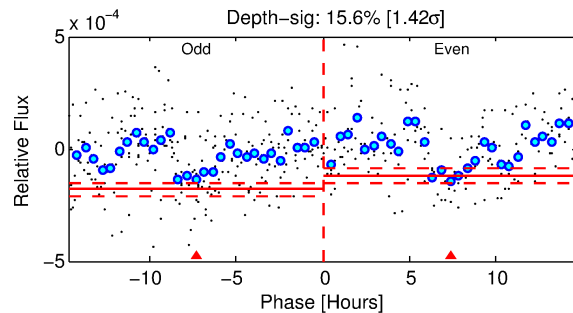
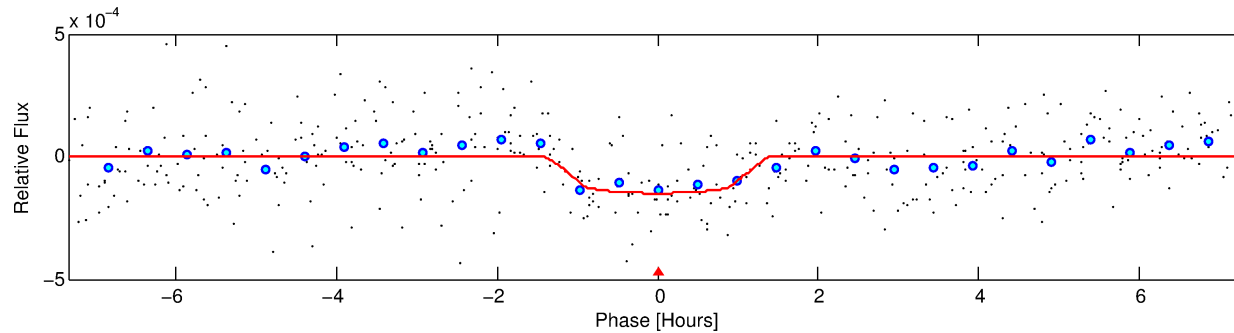
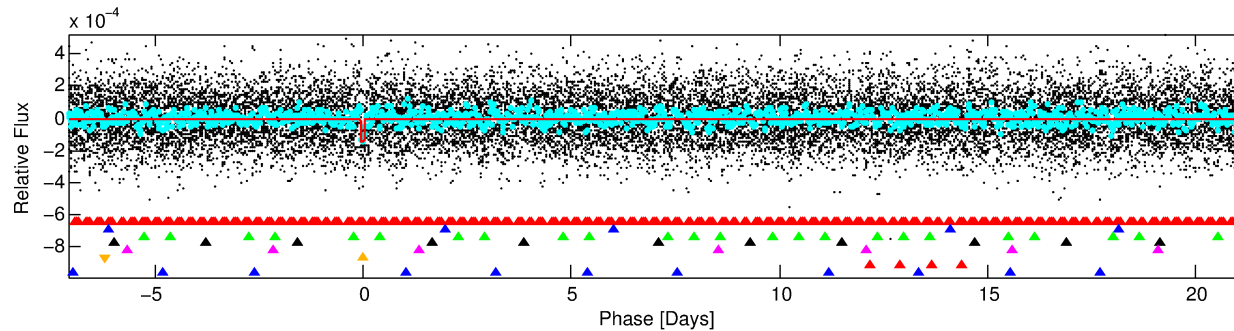
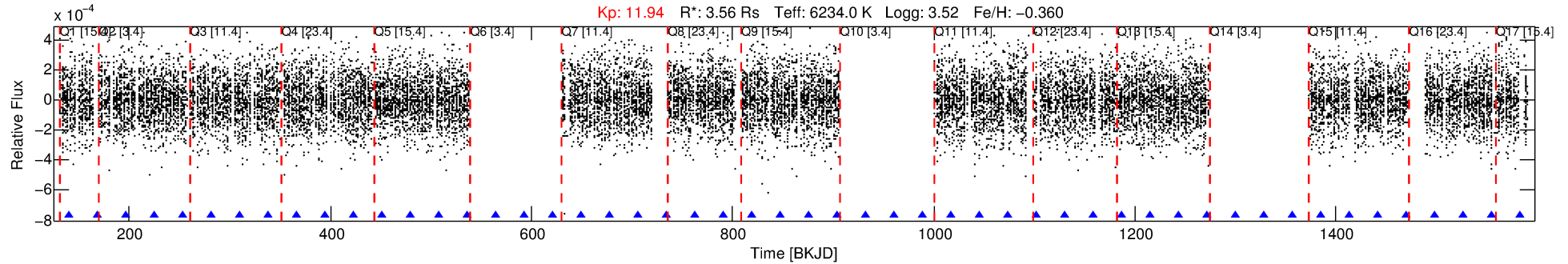
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-06

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 6 of 8 Period: 28.307 d



DV Fit Results:

Period = 28.30726 [0.00027] d
Epoch = 139.7922 [0.0079] BKJD
Rp/R* = 0.0130 [0.0106]
a/R* = 43.93 [196.15]
b = 0.88 [1.14]
Seff = 388.80 [240.33]
Teq = 1132 [175] K
Rp = 5.03 [4.61] Re
a = 0.2100 [0.0817] AU
Ag = 51.10 [91.17] [0.55 σ]
Teffp = 4681 [1967] K [1.80 σ]

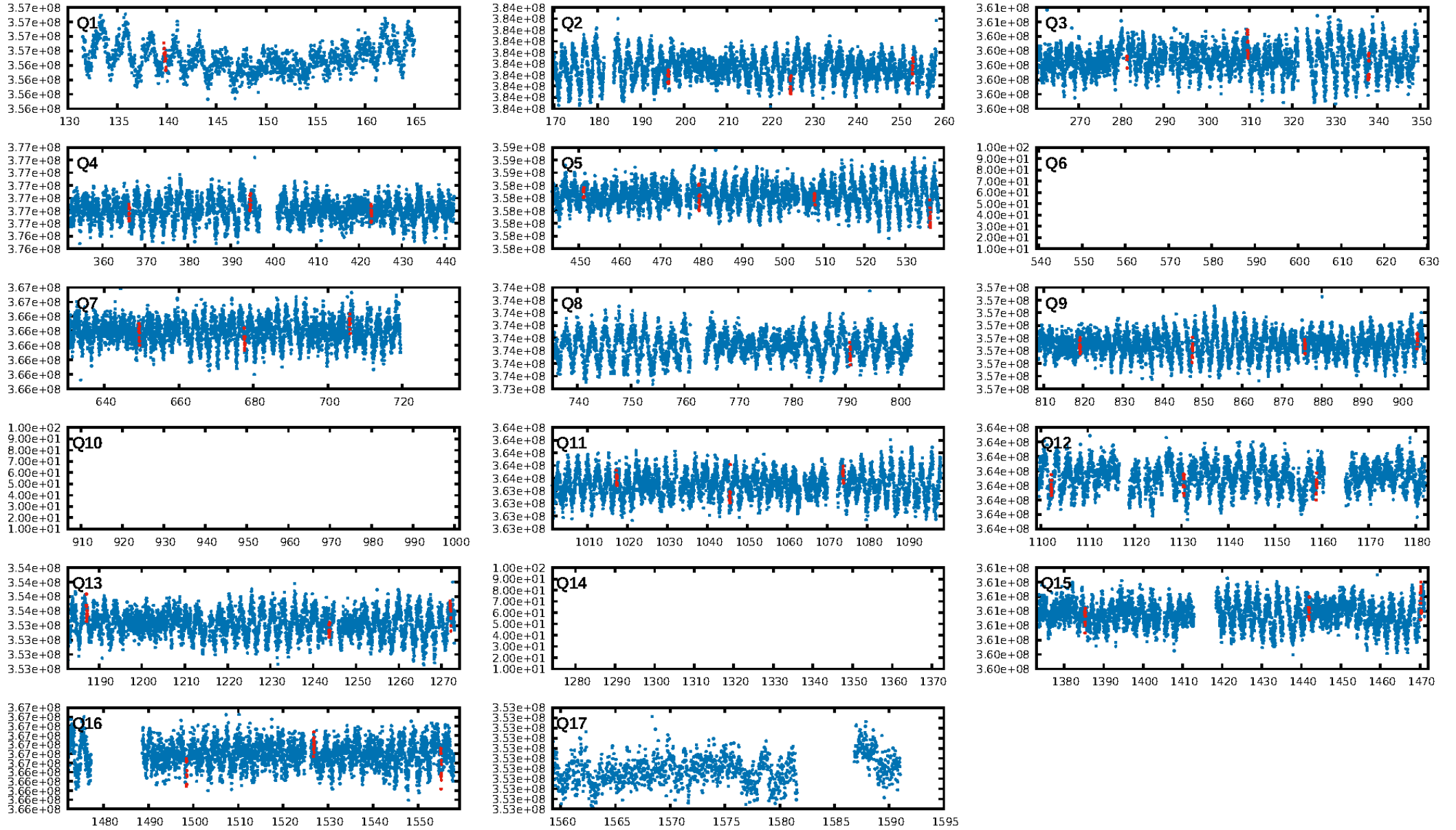
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [55.24 σ]
LongPeriod-sig: 100.0% [64.62 σ]
ModelChiSquare2-sig: 58.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.94e-09
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: -15.5
Centroid-sig: N/A
Centroid-so: 1.306 arcsec [1.90 σ]
OotOffset-rm: 0.332 arcsec [0.57 σ]
KicOffset-rm: 0.319 arcsec [0.56 σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 0.92 [12/13]

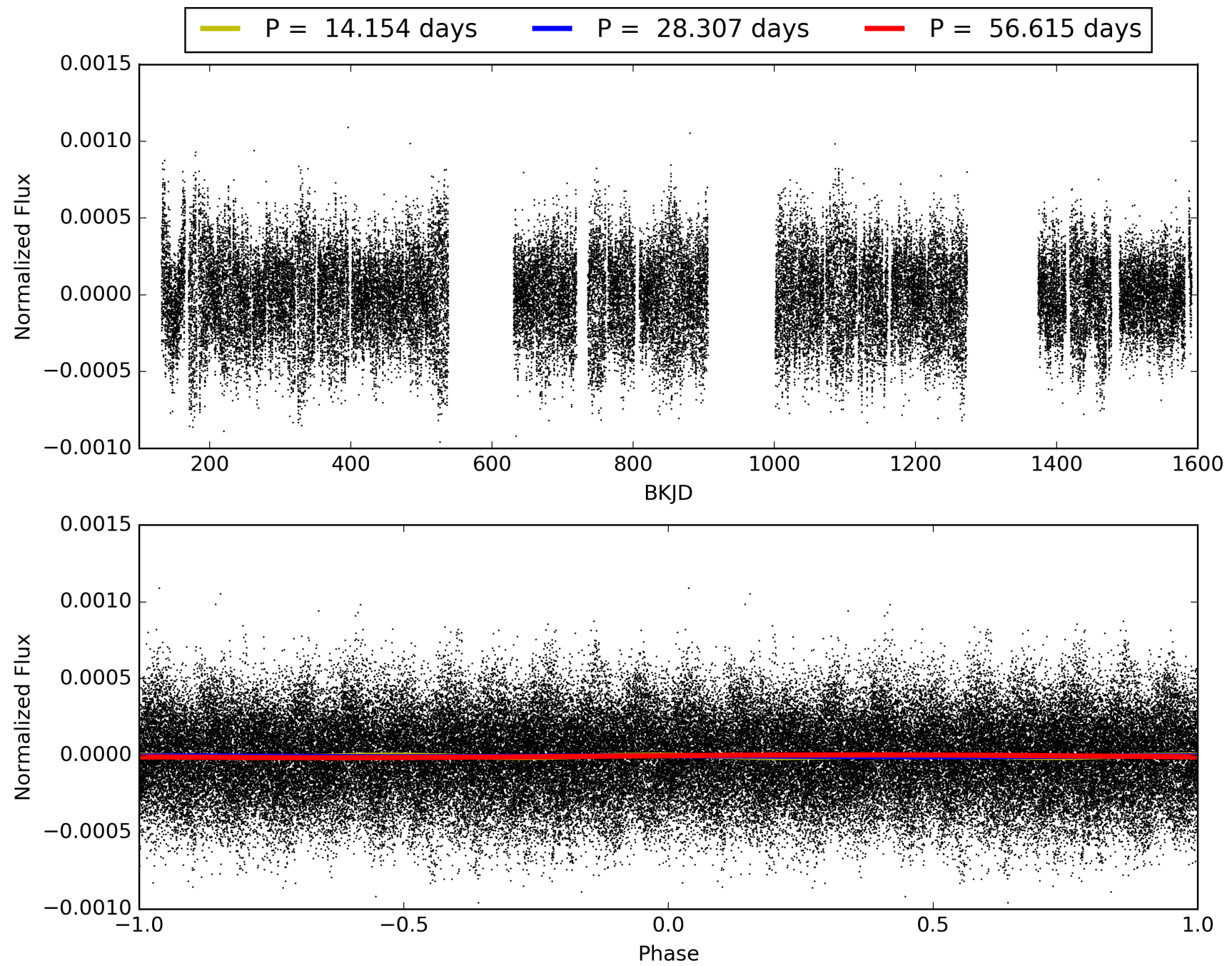
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:54:03 Z

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

TCE 003453026-06, PDC Light Curves

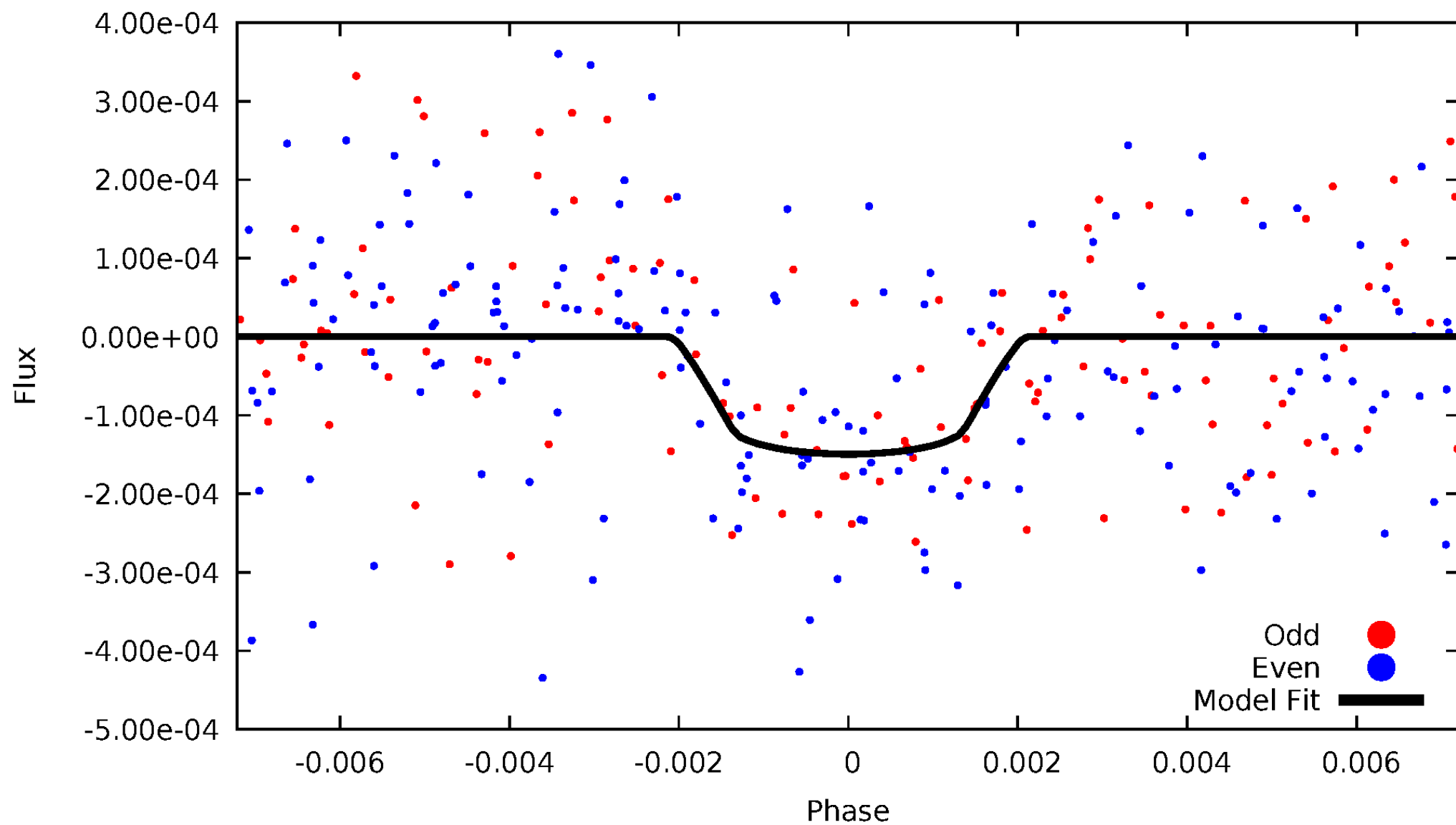


TCE 003453026-06



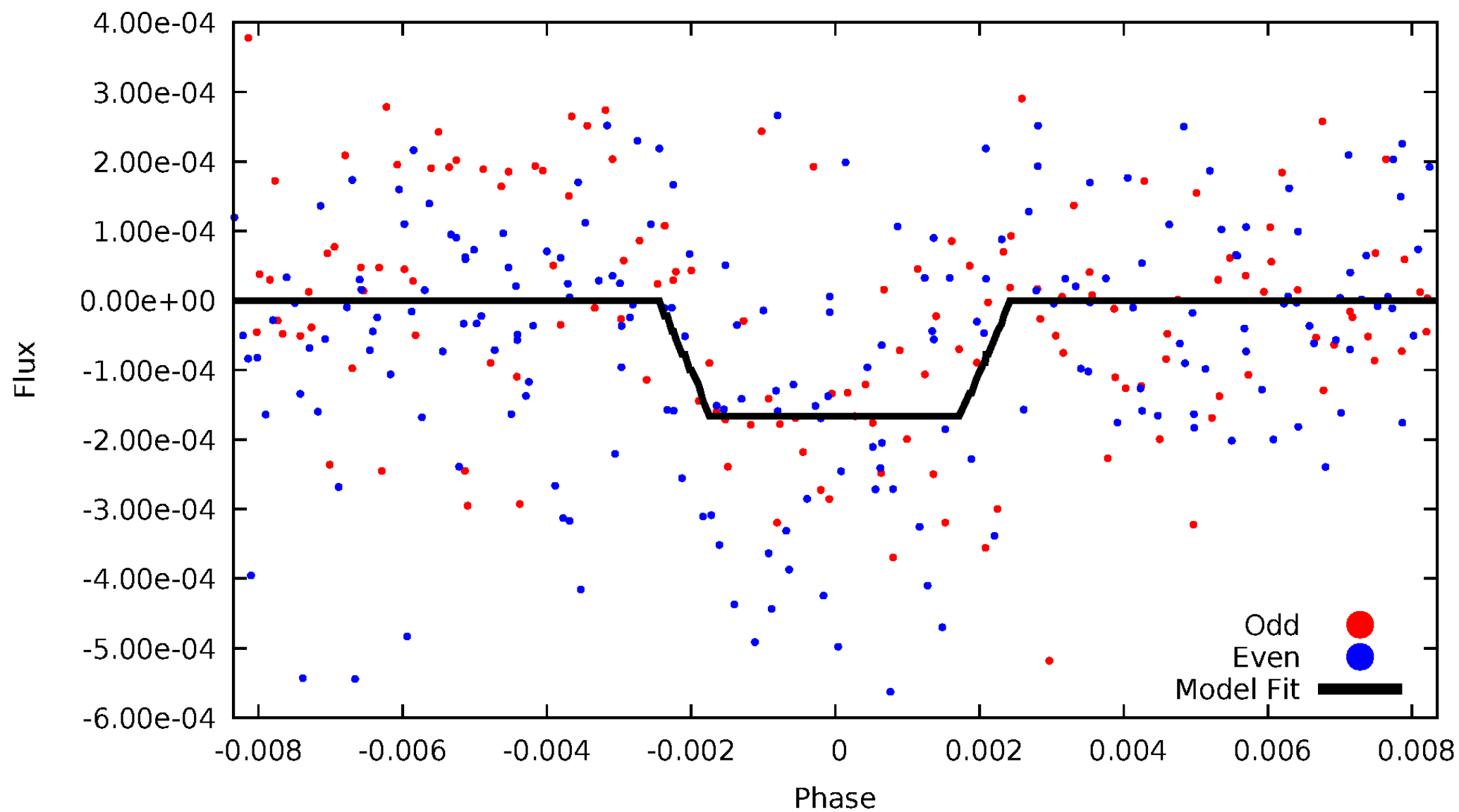
DV Odd/Even

TCE 003453026-06



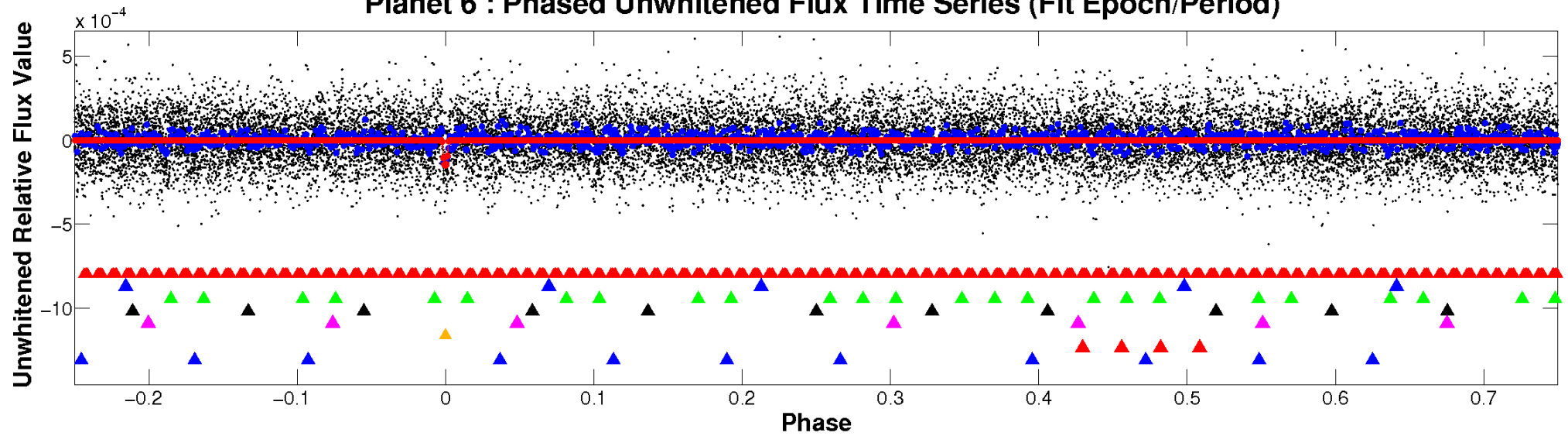
ALT Odd/Even

TCE 003453026-06

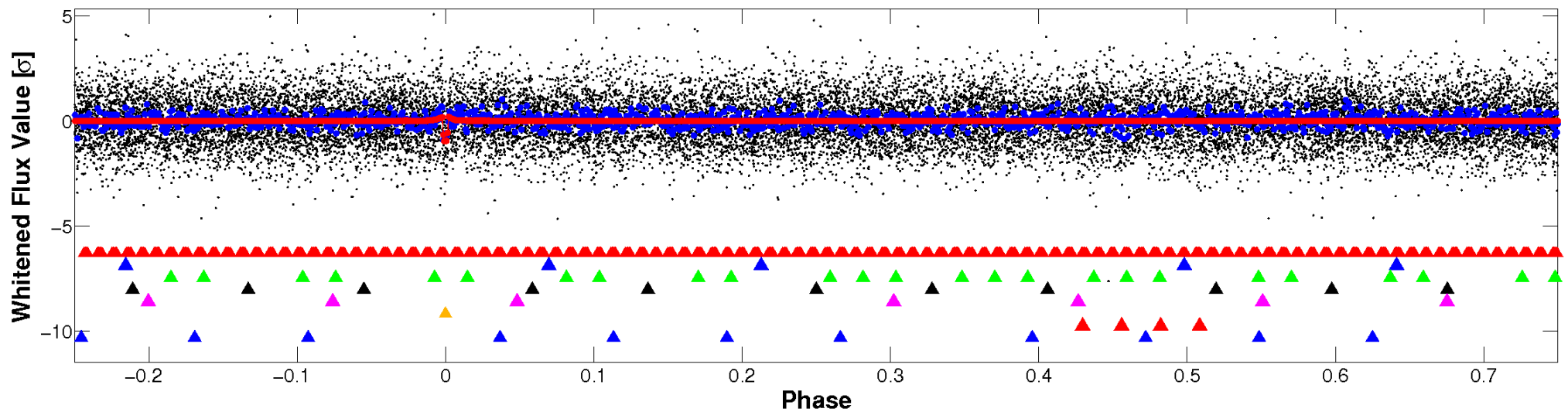


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

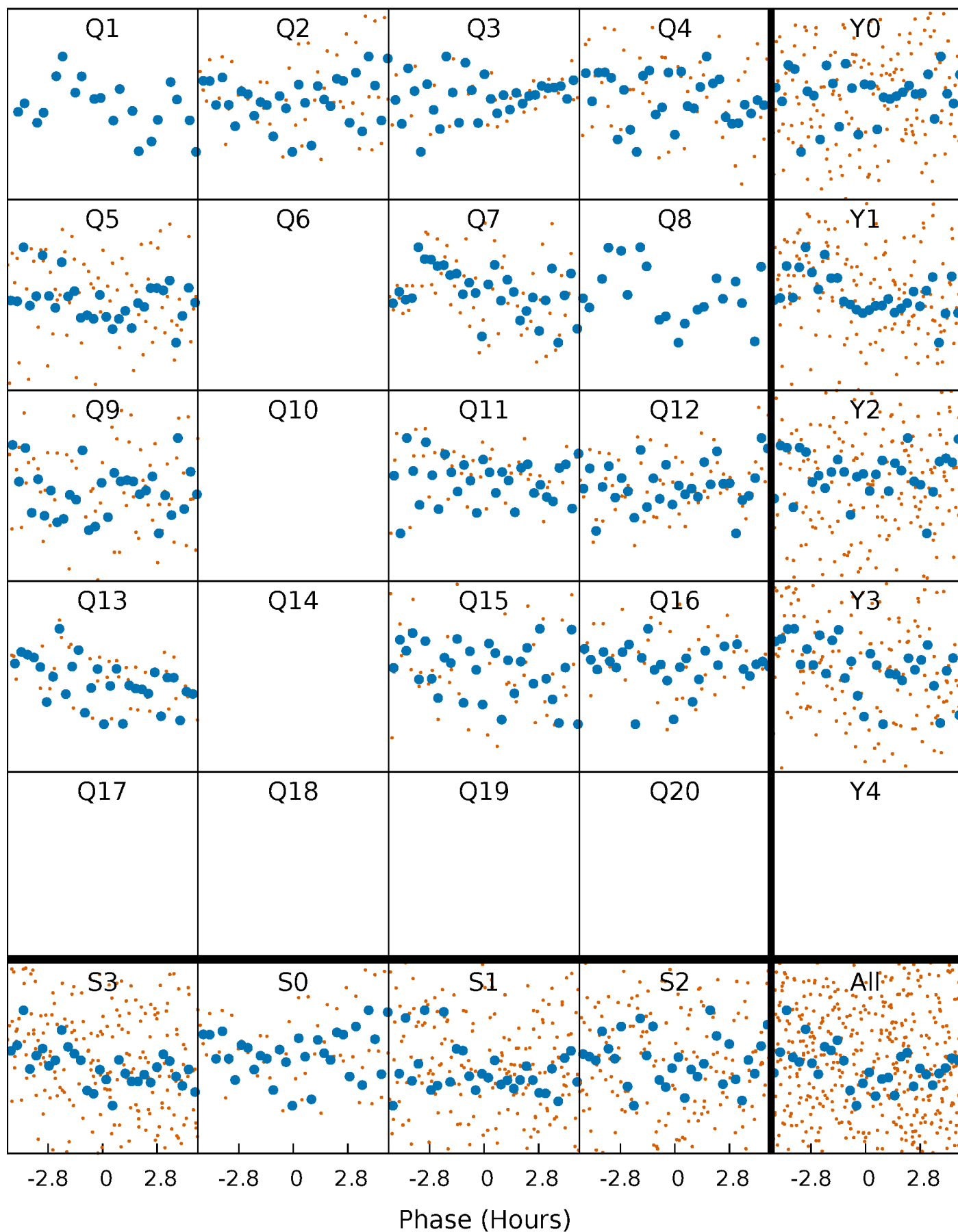


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



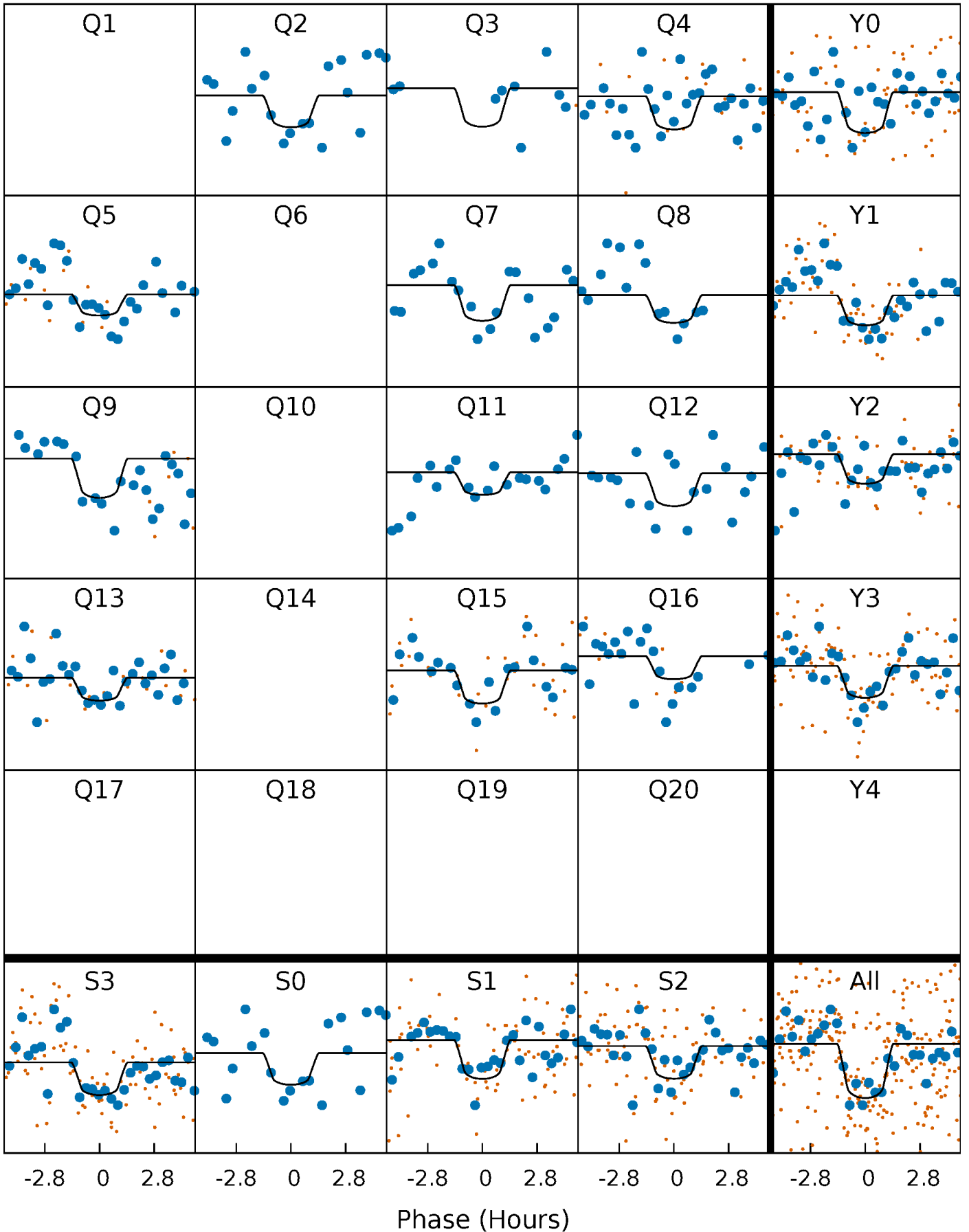
PDC Quarter-Phased Transit Curves

TCE 003453026-06 P= 28.307259 Days $T_0=139.792248$ (BKJD)



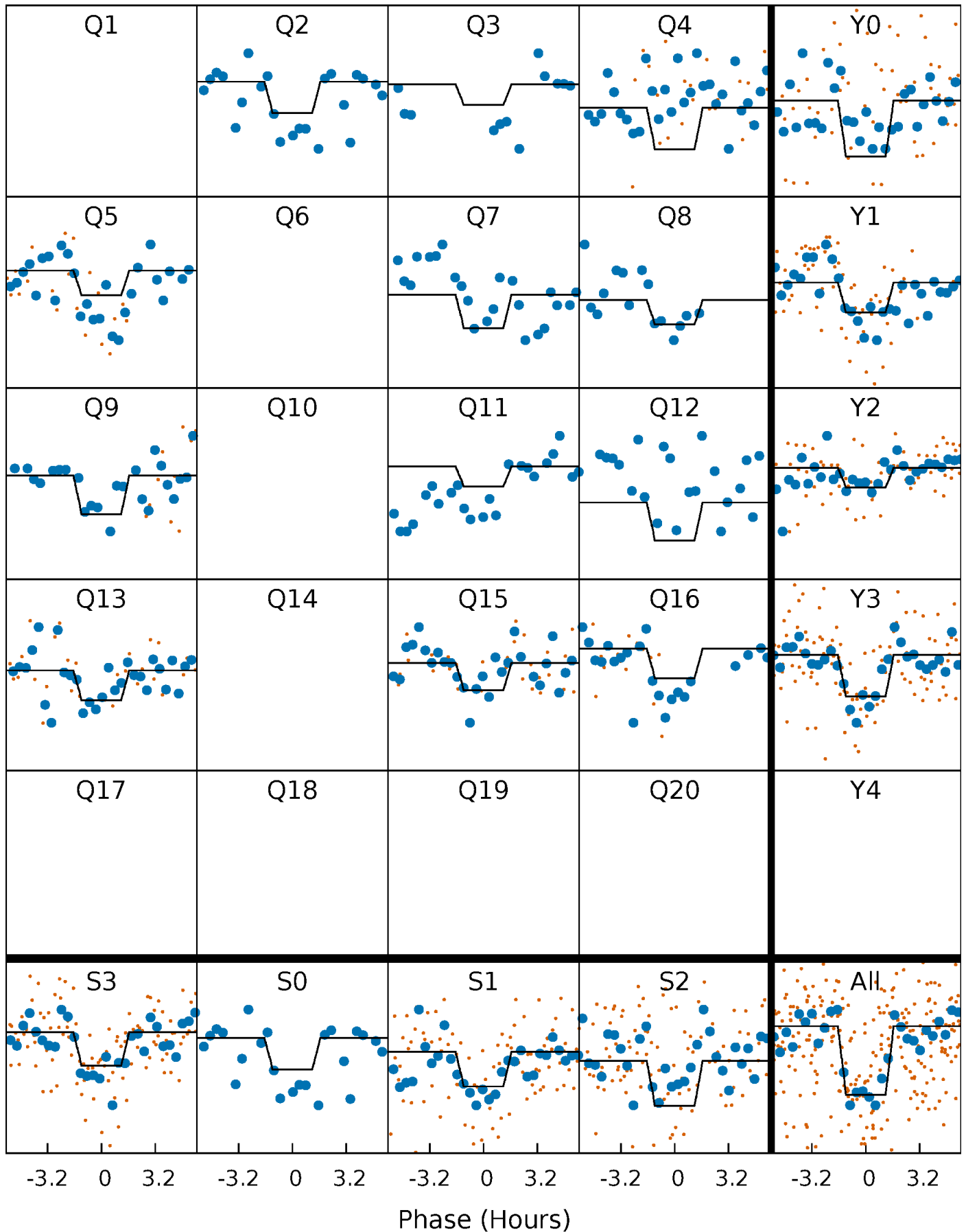
DV Quarter-Phased Transit Curves

TCE 003453026-06 P= 28.307259 Days $T_0=139.792248$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

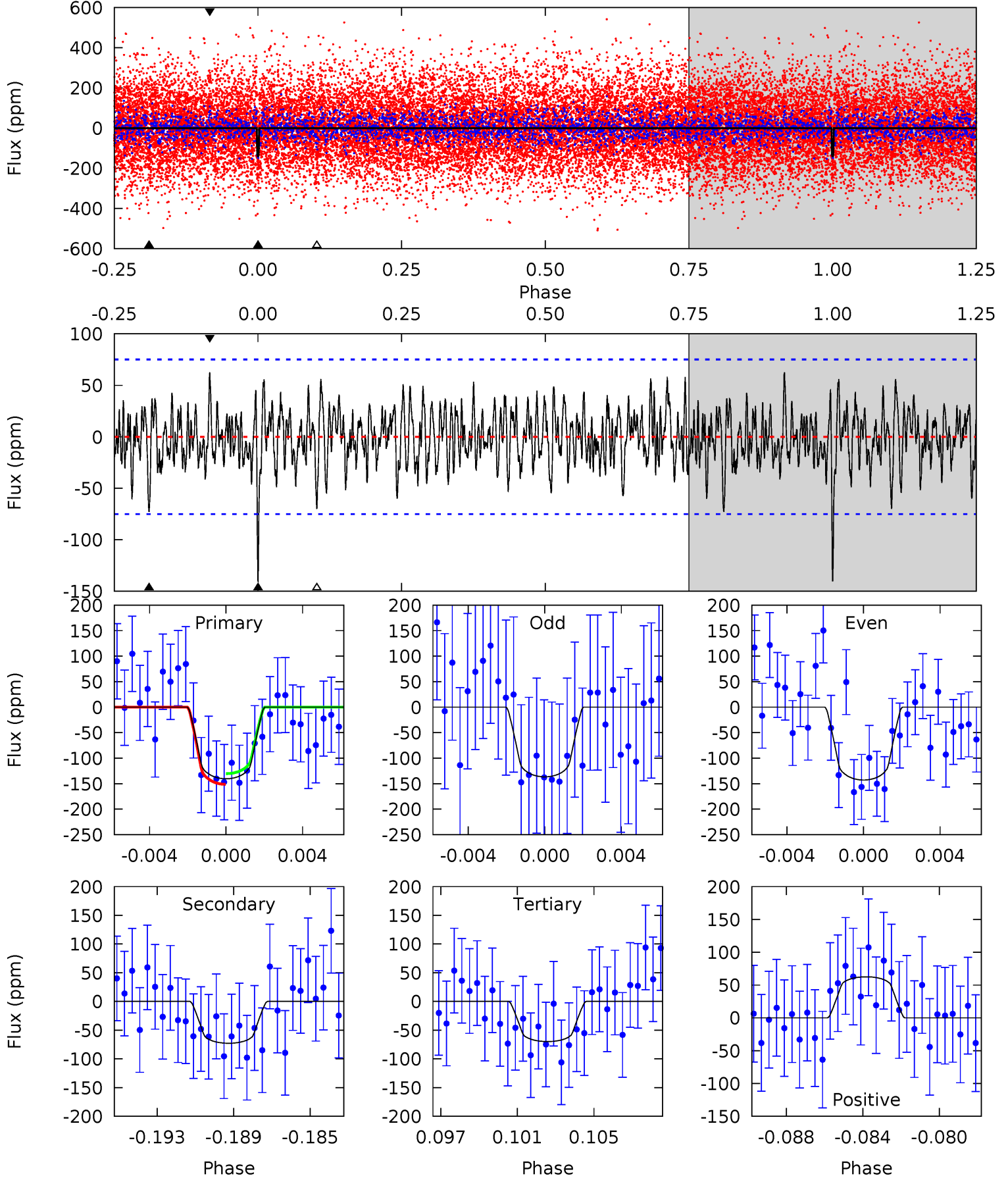
TCE 003453026-06 P= 28.307565 Days $T_0=139.792075$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-06, P = 28.307259 Days, E = 111.484989 Days

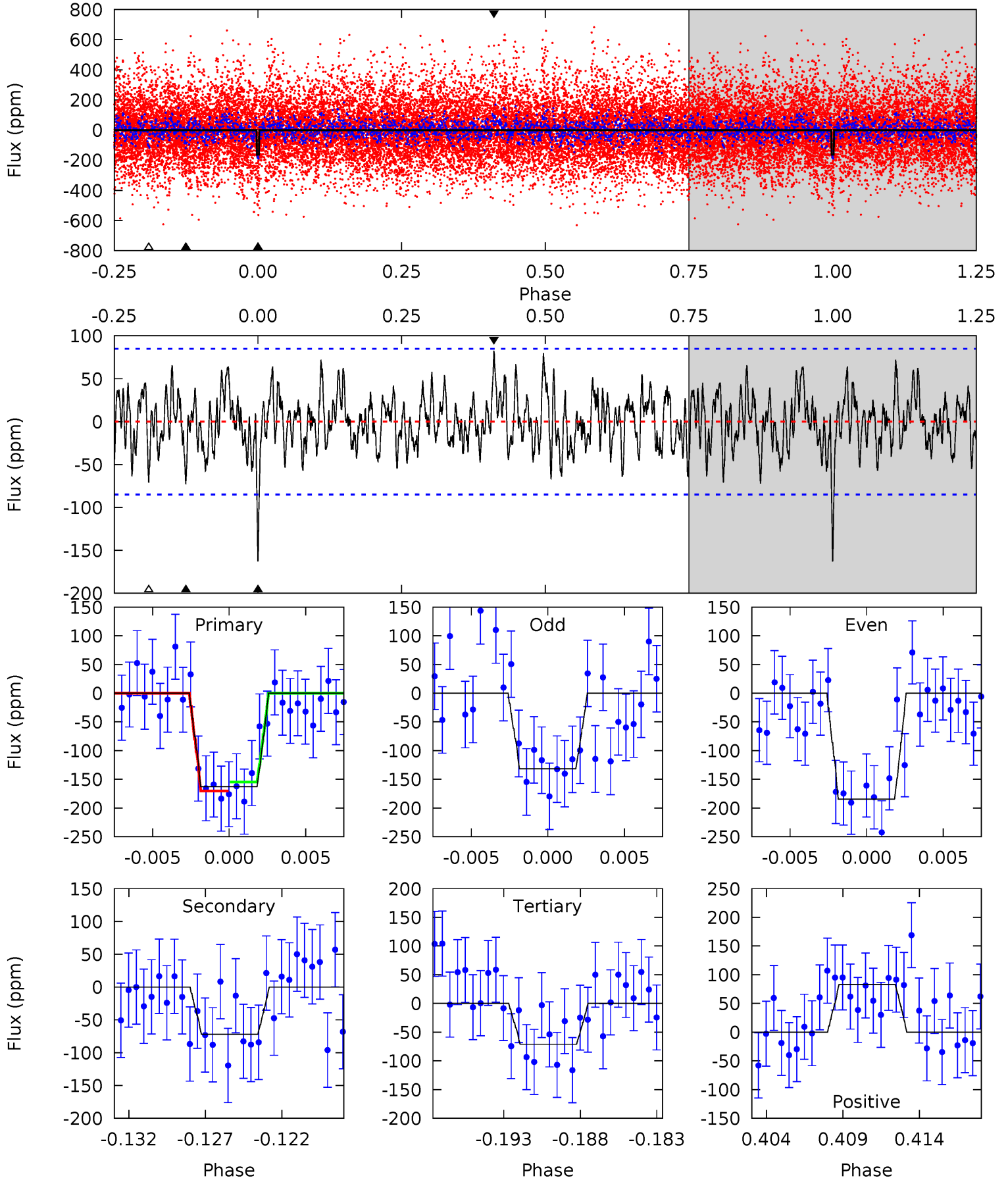
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.70	5.03	4.83	4.33	5.19	2.86	1.55	4.87	5.38	0.20	0.71	0.21	0.90	0.31	0.73



Alt Model-Shift Uniqueness Test

003453026-06, $P = 28.307565$ Days, $E = 111.484510$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.91	4.39	4.33	5.03	5.17	2.83	1.65	5.58	4.88	0.06	-0.65	1.59	1.08	0.34	0.47



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-73 ± 14	$5.01^{+4.11}_{-3.03}$	1566^{+95}_{-155}	4984^{+3180}_{-971}	69^{+401}_{-48}
Alt.	-72 ± 16	$5.16^{+3.95}_{-3.26}$	1546^{+108}_{-156}	4932^{+2924}_{-958}	67^{+417}_{-46}

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 $A_{obs} \gg 1.0$

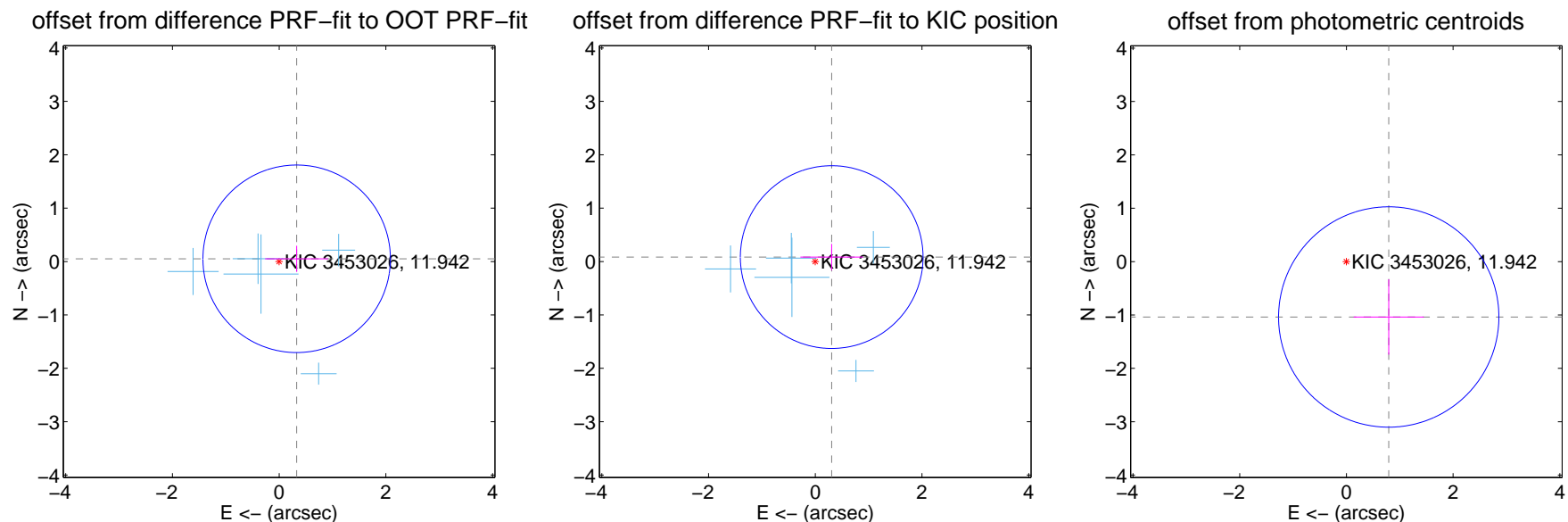
DV Centroid Data

Supplemental centroid analysis for 003453026-06. **Kepler magnitude: 11.94.** Transit SNR 7.53

There are 5 quarters with good PRF difference image offsets

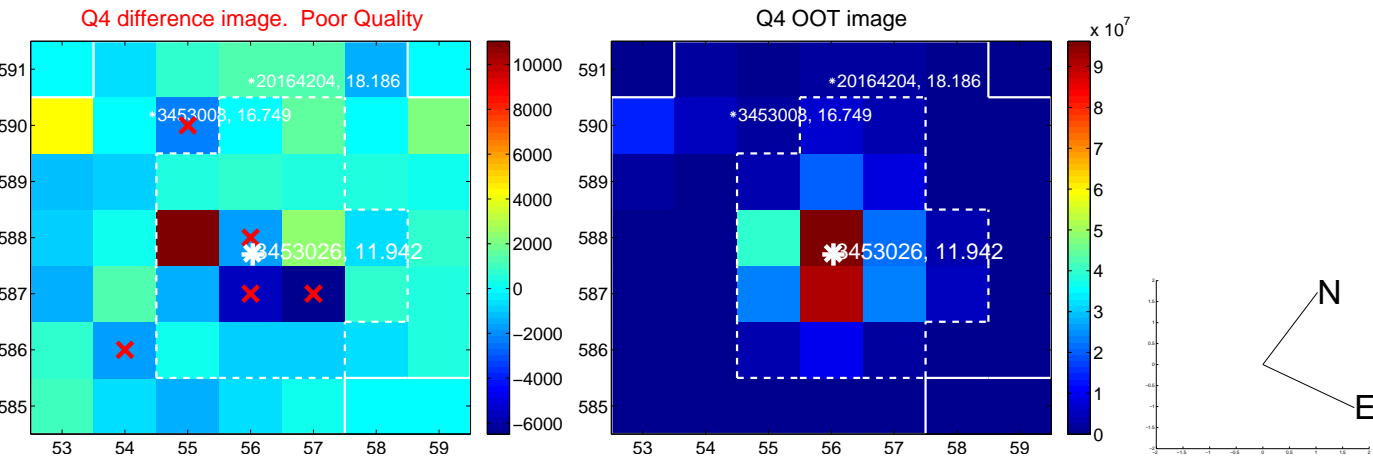
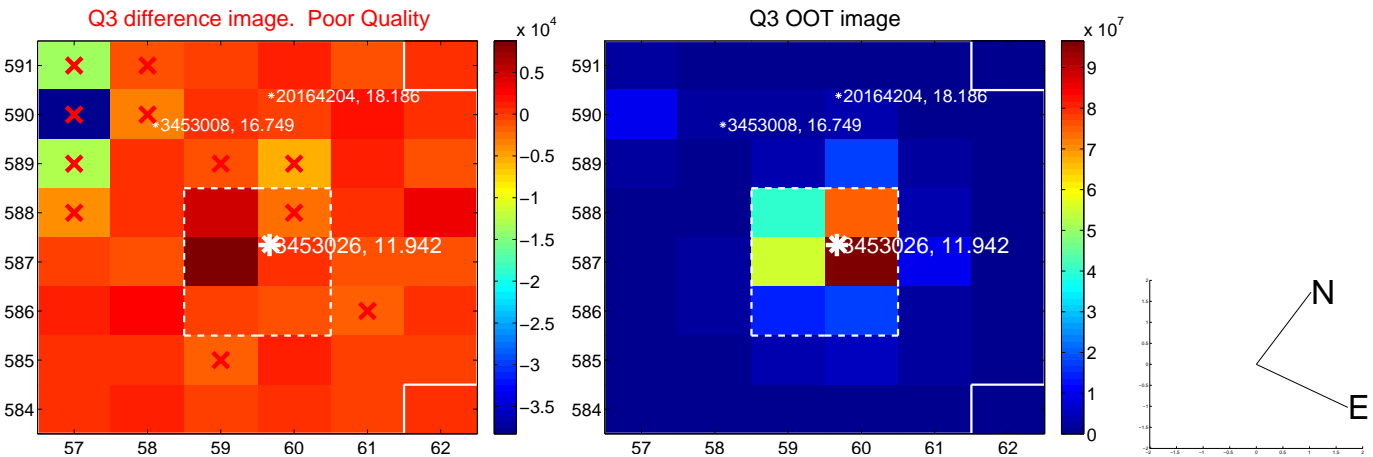
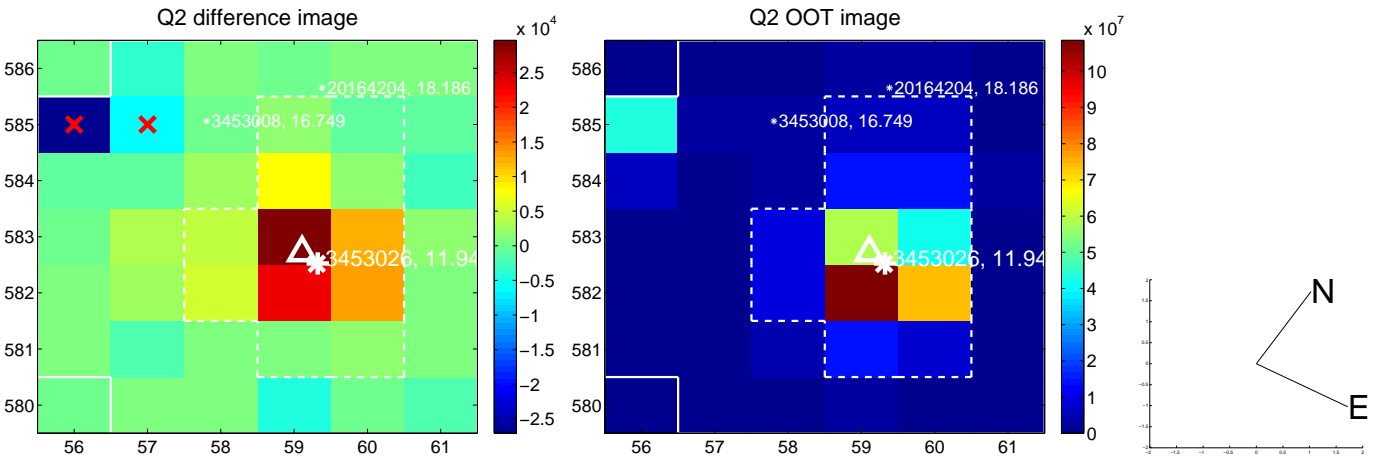
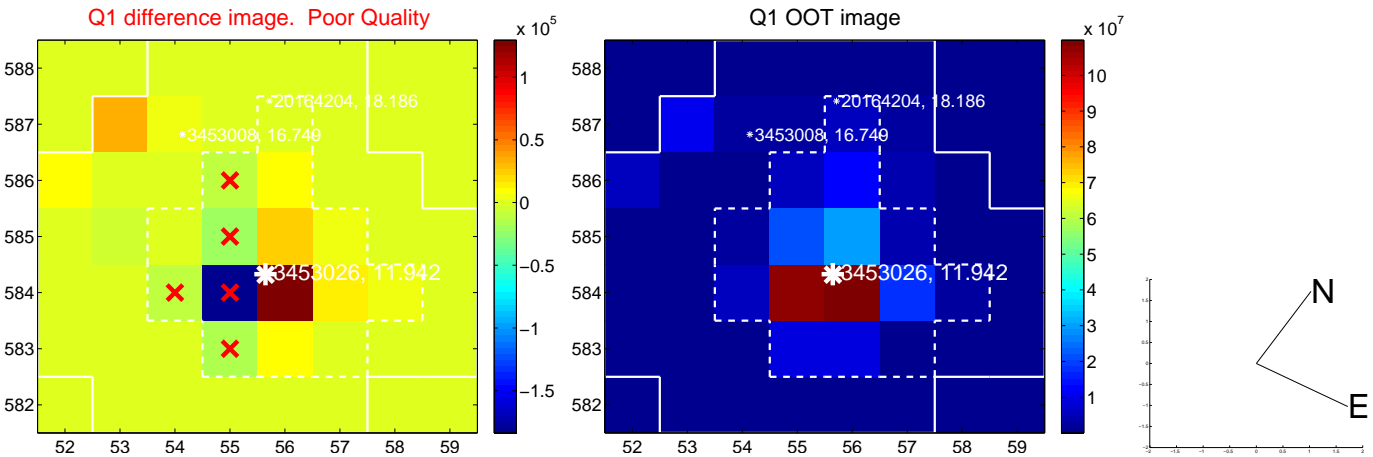
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.332 ± 0.586	0.57	-0.328 ± 0.591	0.051 ± 0.245
PRF-fit source offset from KIC position	0.319 ± 0.571	0.56	-0.308 ± 0.587	0.083 ± 0.247
photometric centroid source offset	1.31 ± 0.69	1.90	-0.79 ± 0.66	-1.04 ± 0.71

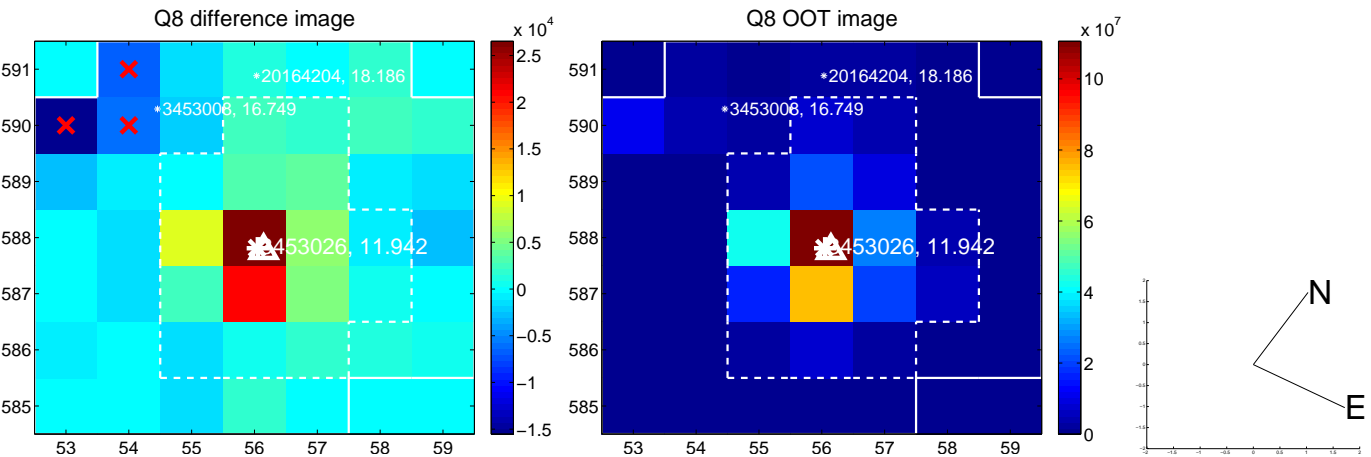
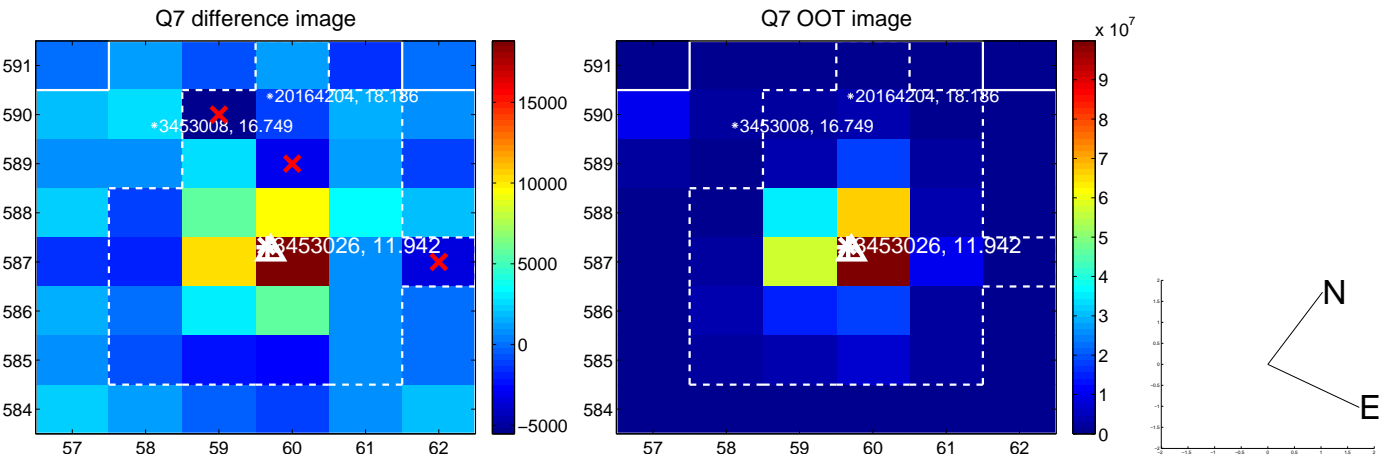
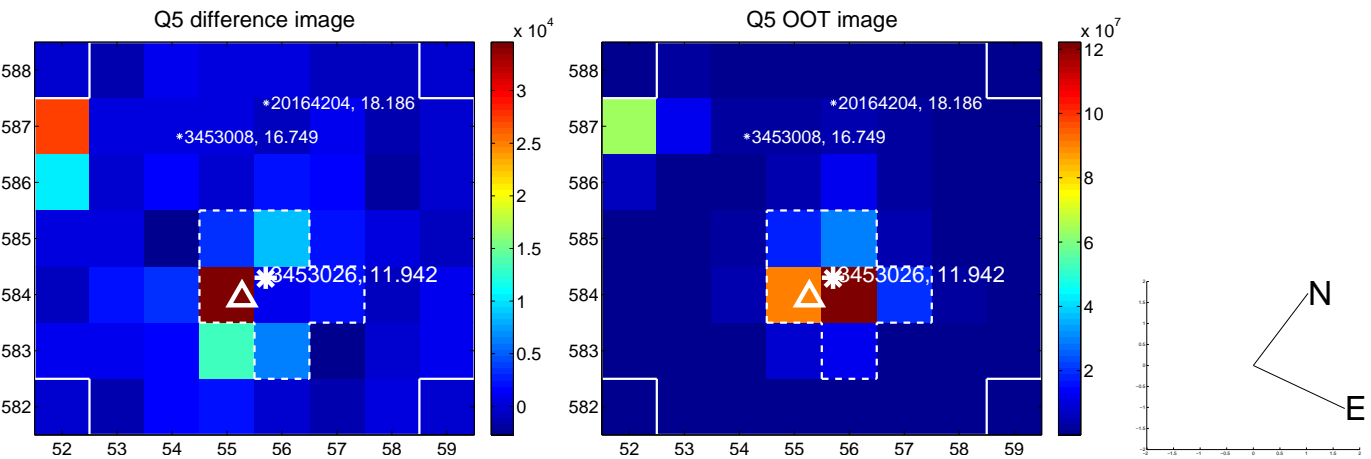


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

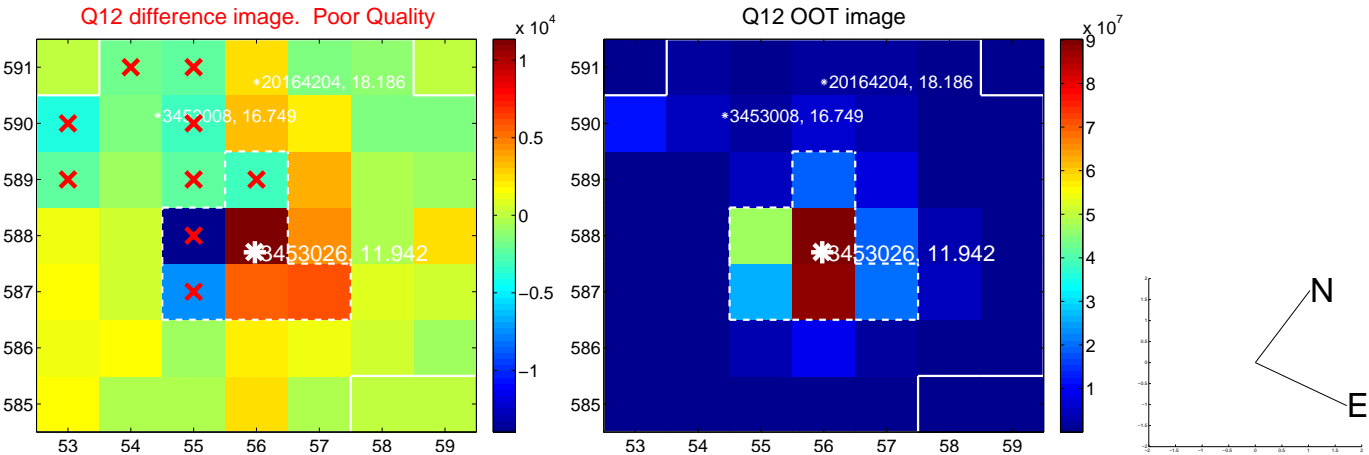
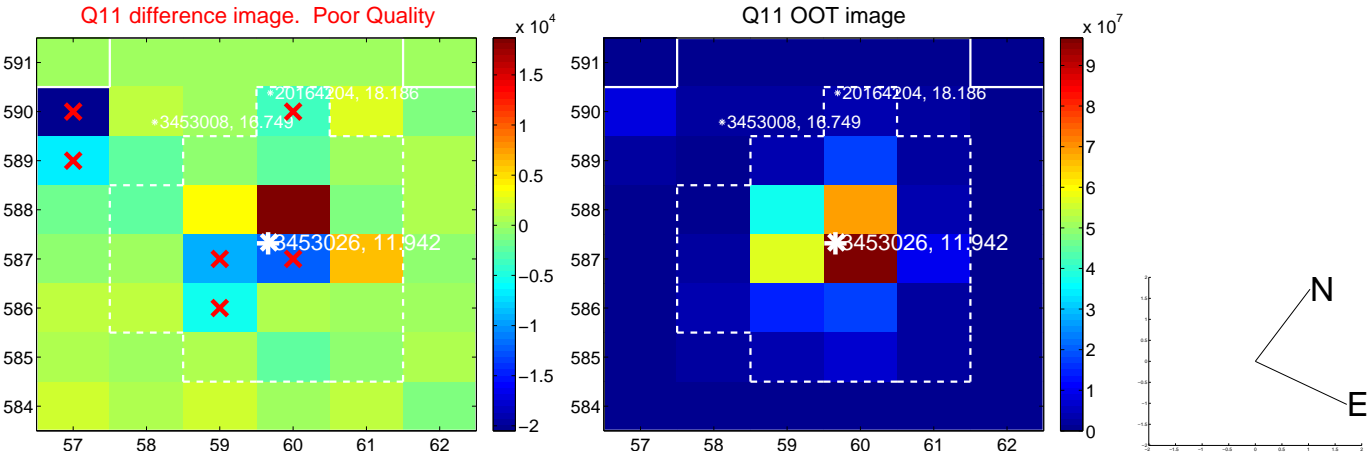
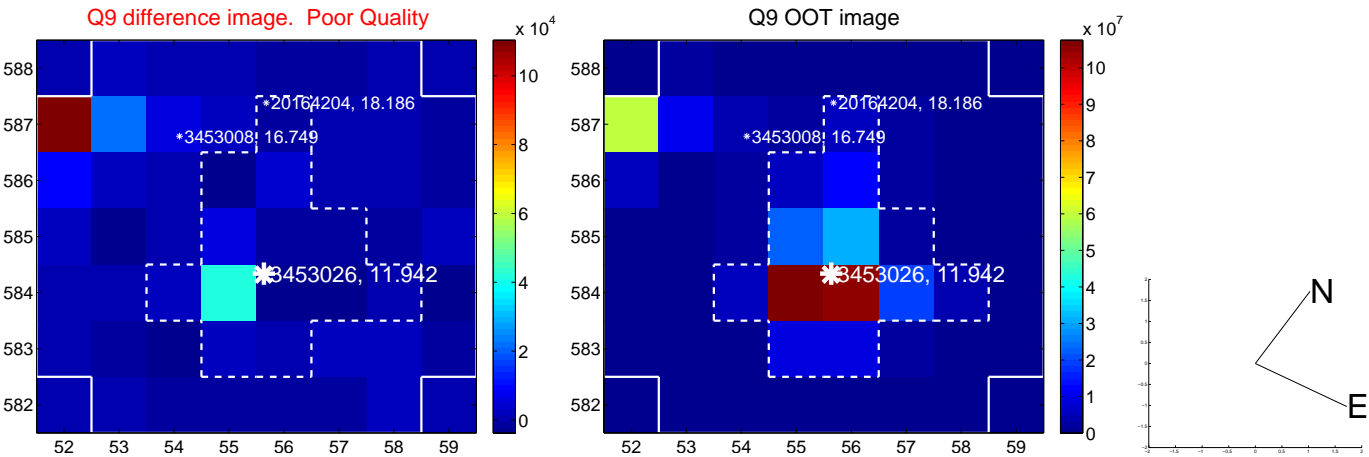
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



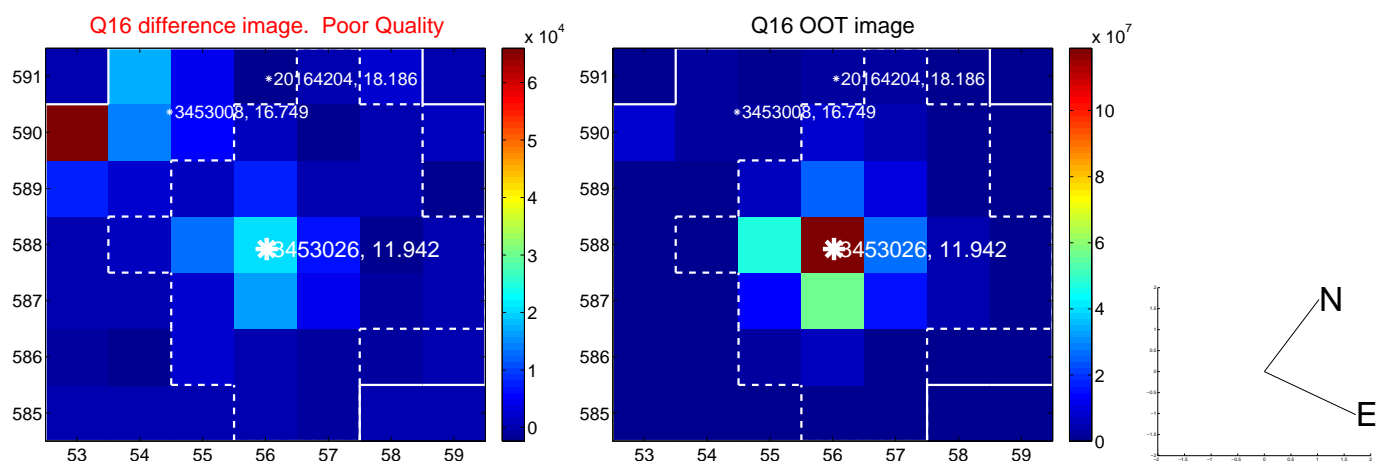
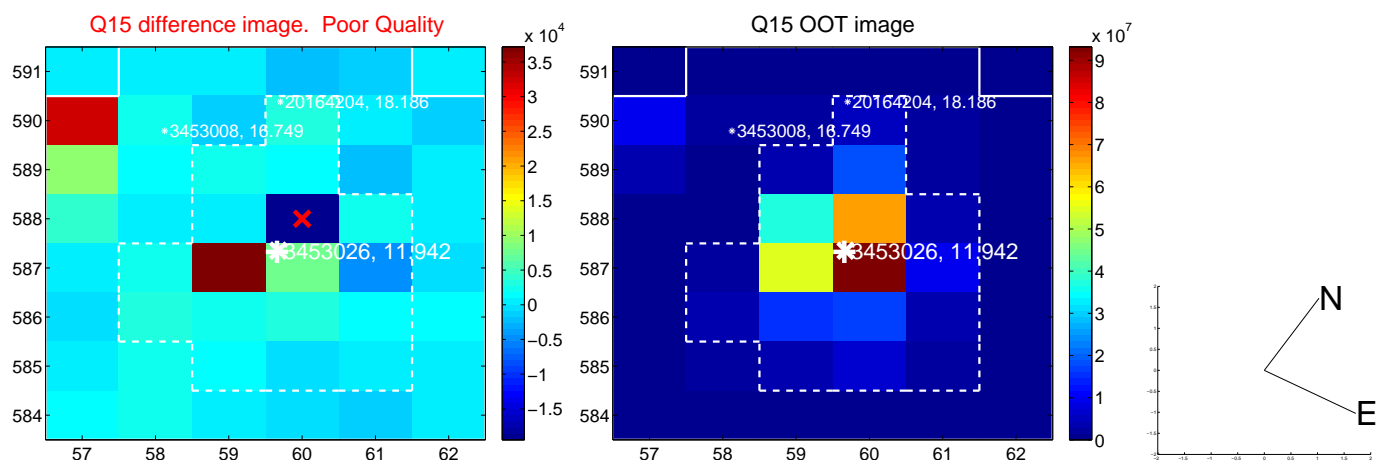
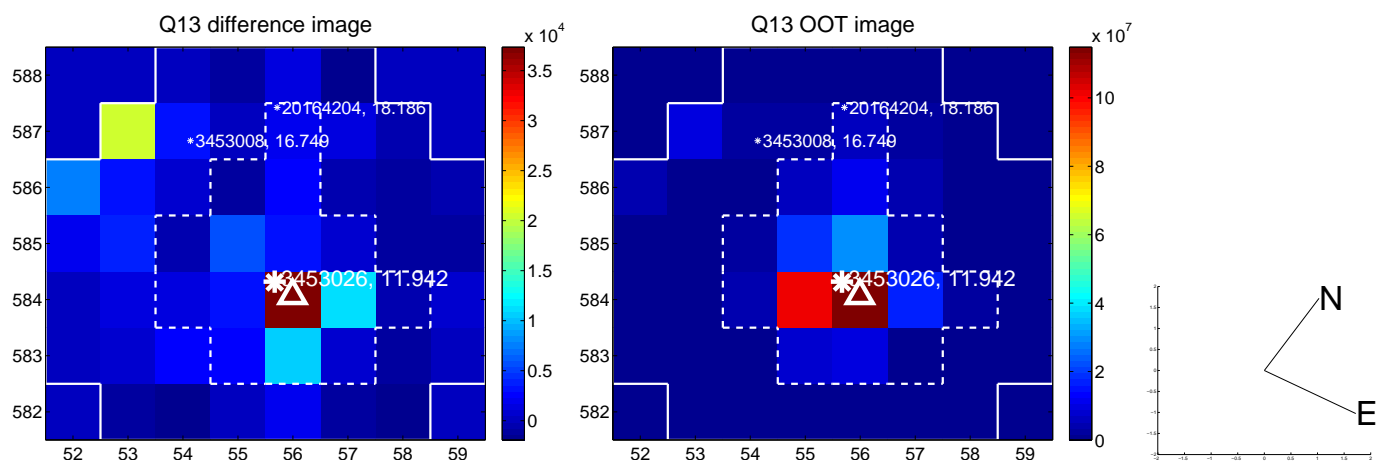
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



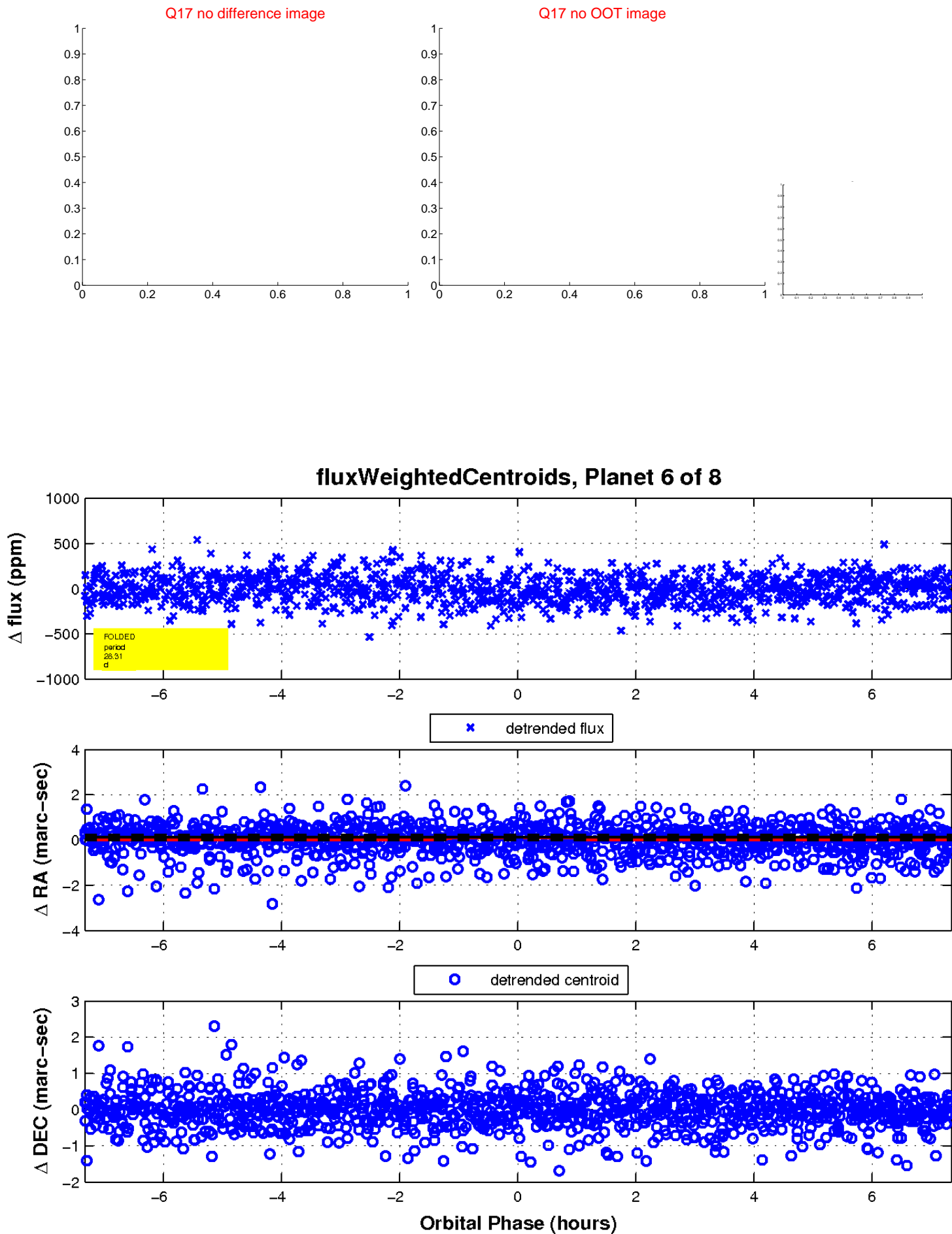
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



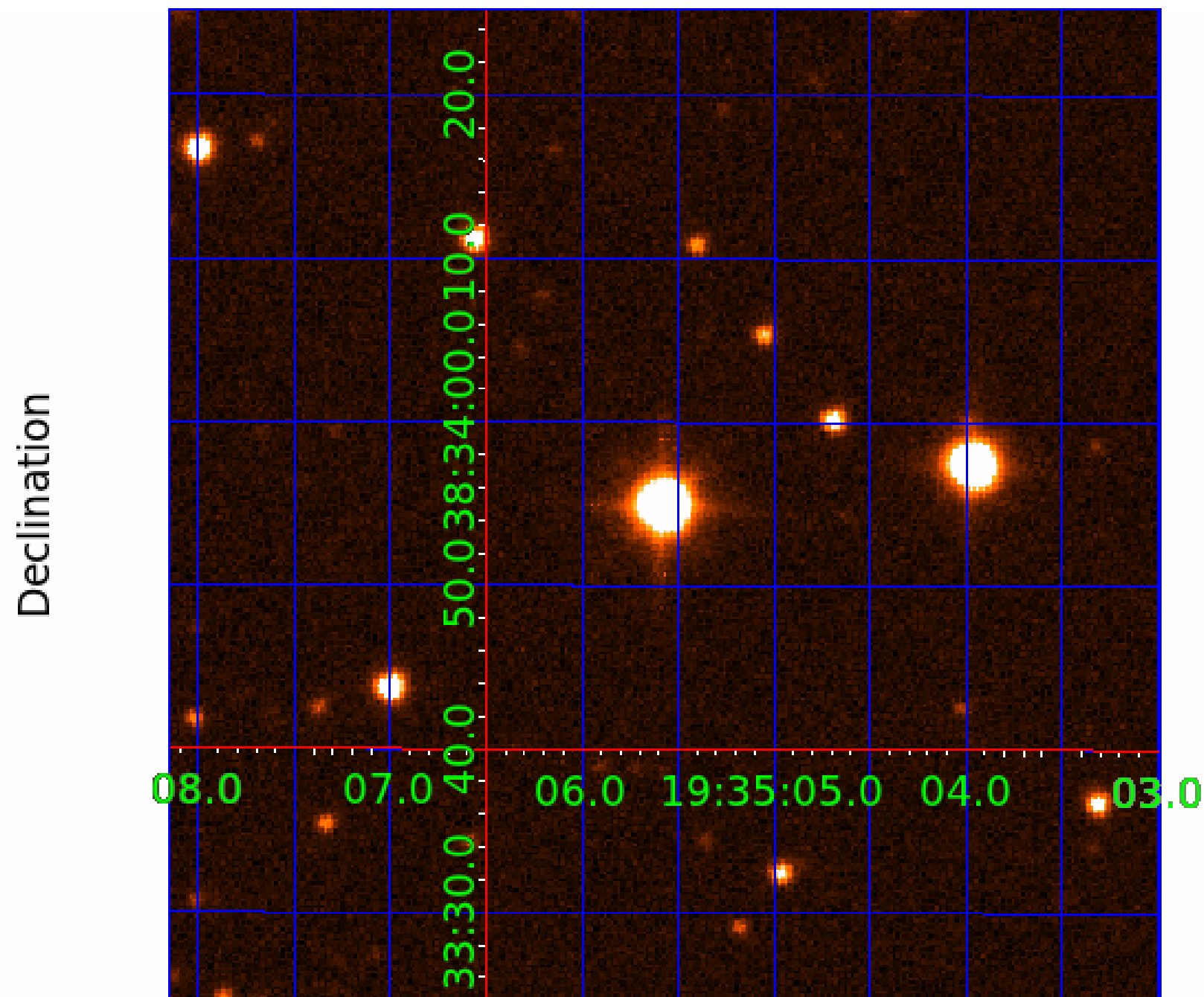
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
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003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

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003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

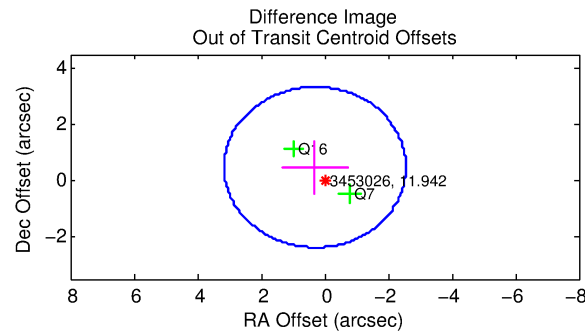
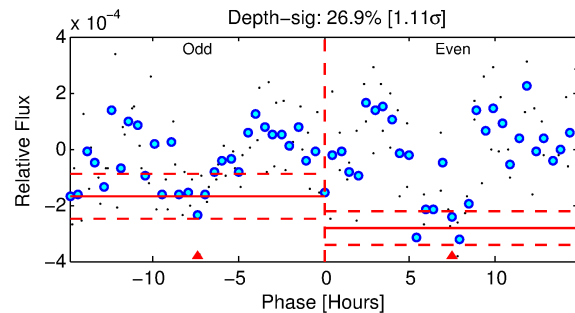
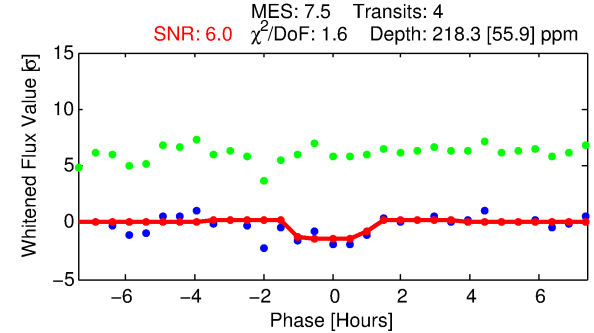
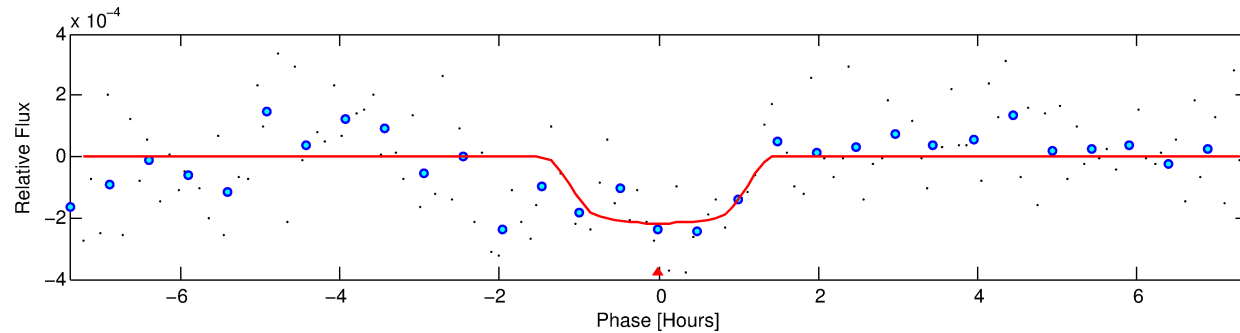
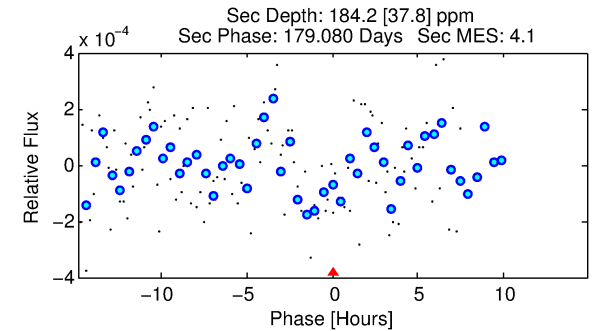
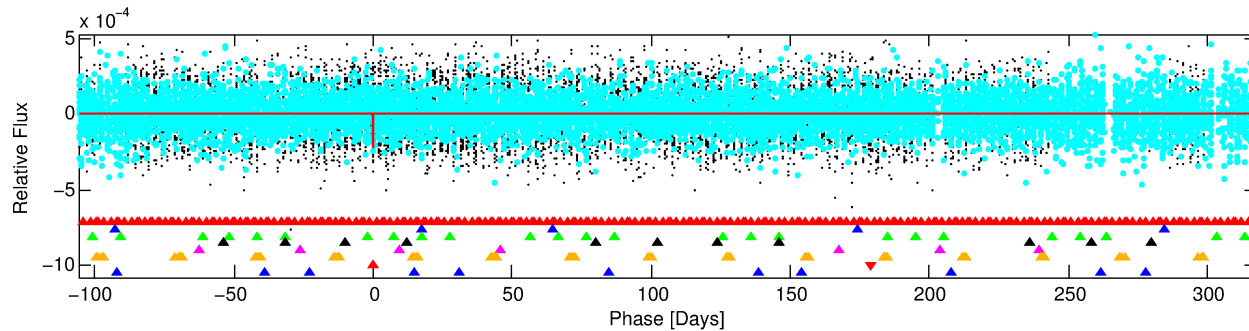
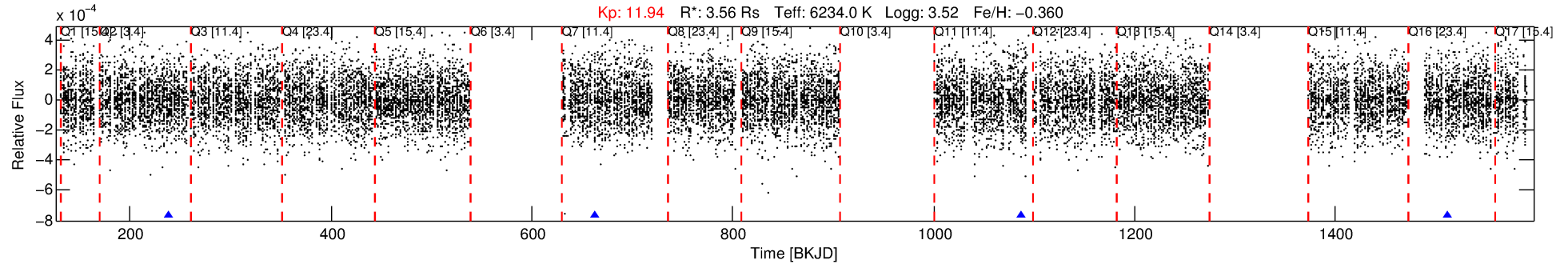
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-07

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 7 of 8 Period: 423.864 d



DV Fit Results:

Period = 423.86424 [0.00780] d
Epoch = 239.1082 [0.0096] BKJD
Rp/R* = 0.0159 [0.0176]
a/R* = 619.26 [3784.64]
b = 0.90 [1.31]
Seff = 10.53 [6.51]
Teq = 459 [71] K
Rp = 6.16 [7.31] Re
a = 1.2759 [0.4966] AU
Ag = 4341.07 [10029.16] [0.43σ]
Teffp = 5765 [3216] K [1.65σ]

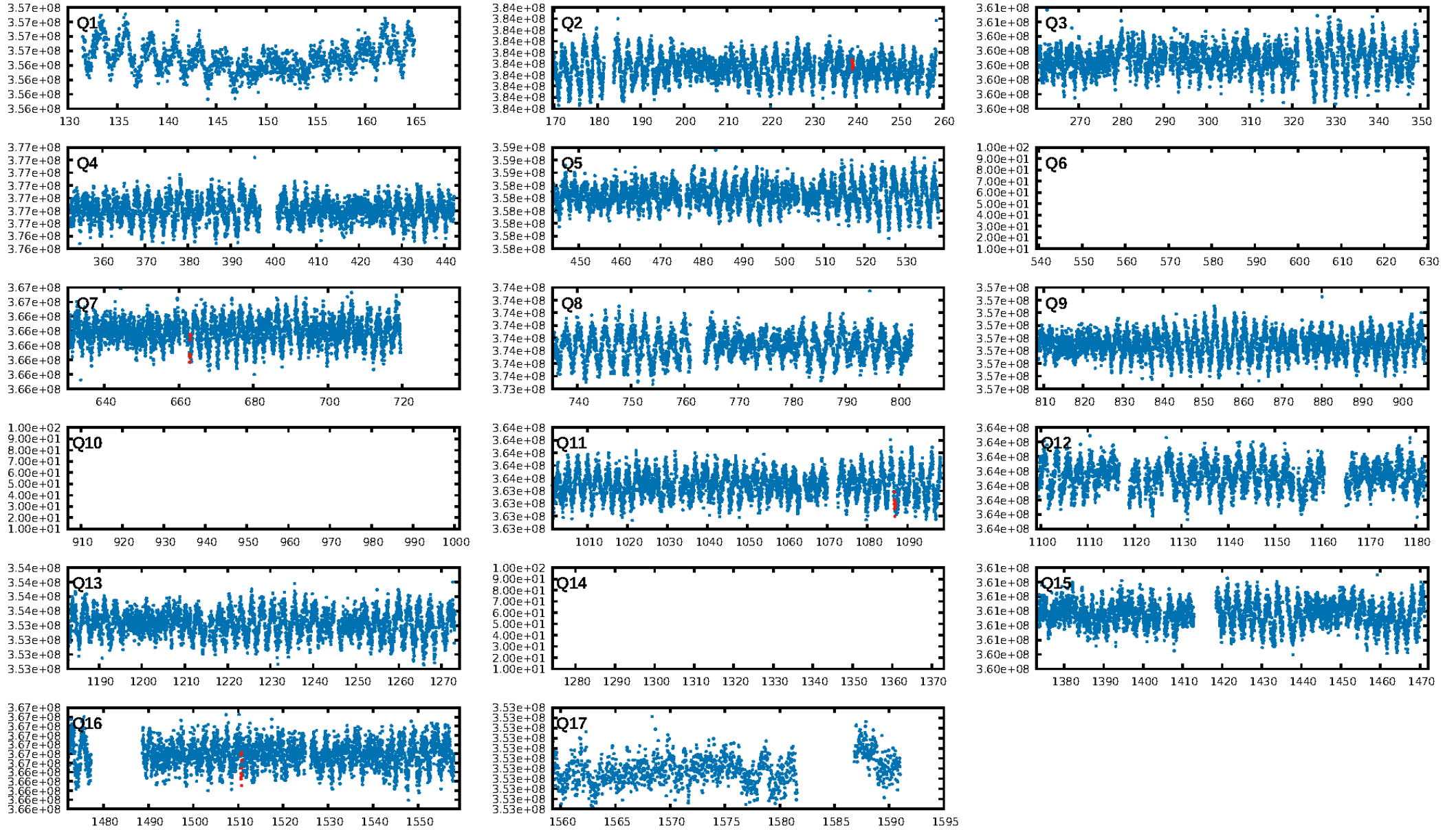
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [213.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.8%
ModelChiSquareGof-sig: 90.4%
Bootstrap-pfa: 1.21e-07
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.458
Centroid-sig: N/A
Centroid-so: 1.708 arcsec [0.95σ]
OotOffset-rm: 0.568 arcsec [0.60σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.570 arcsec [0.59σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

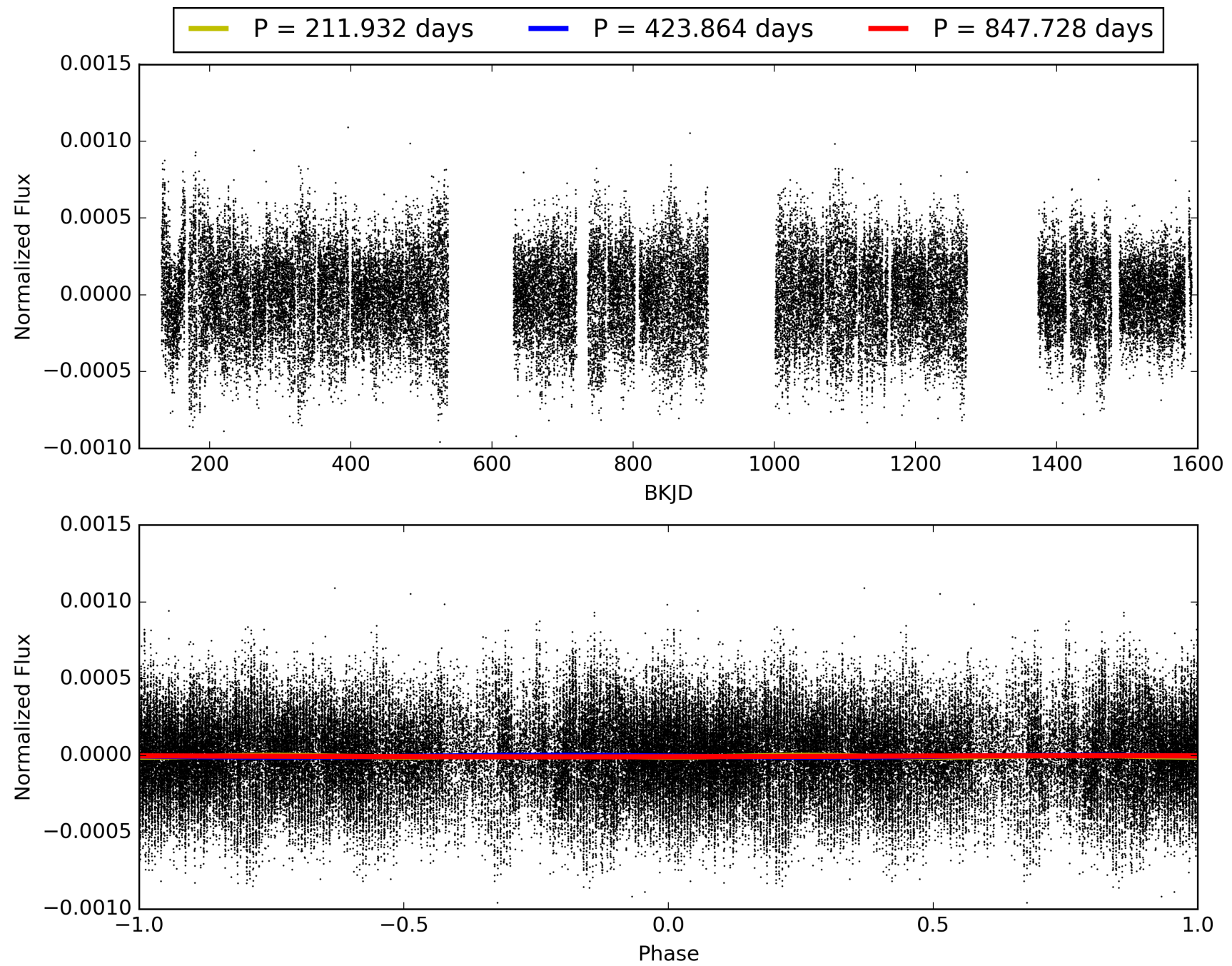
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:54:13 Z

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

TCE 003453026-07, PDC Light Curves

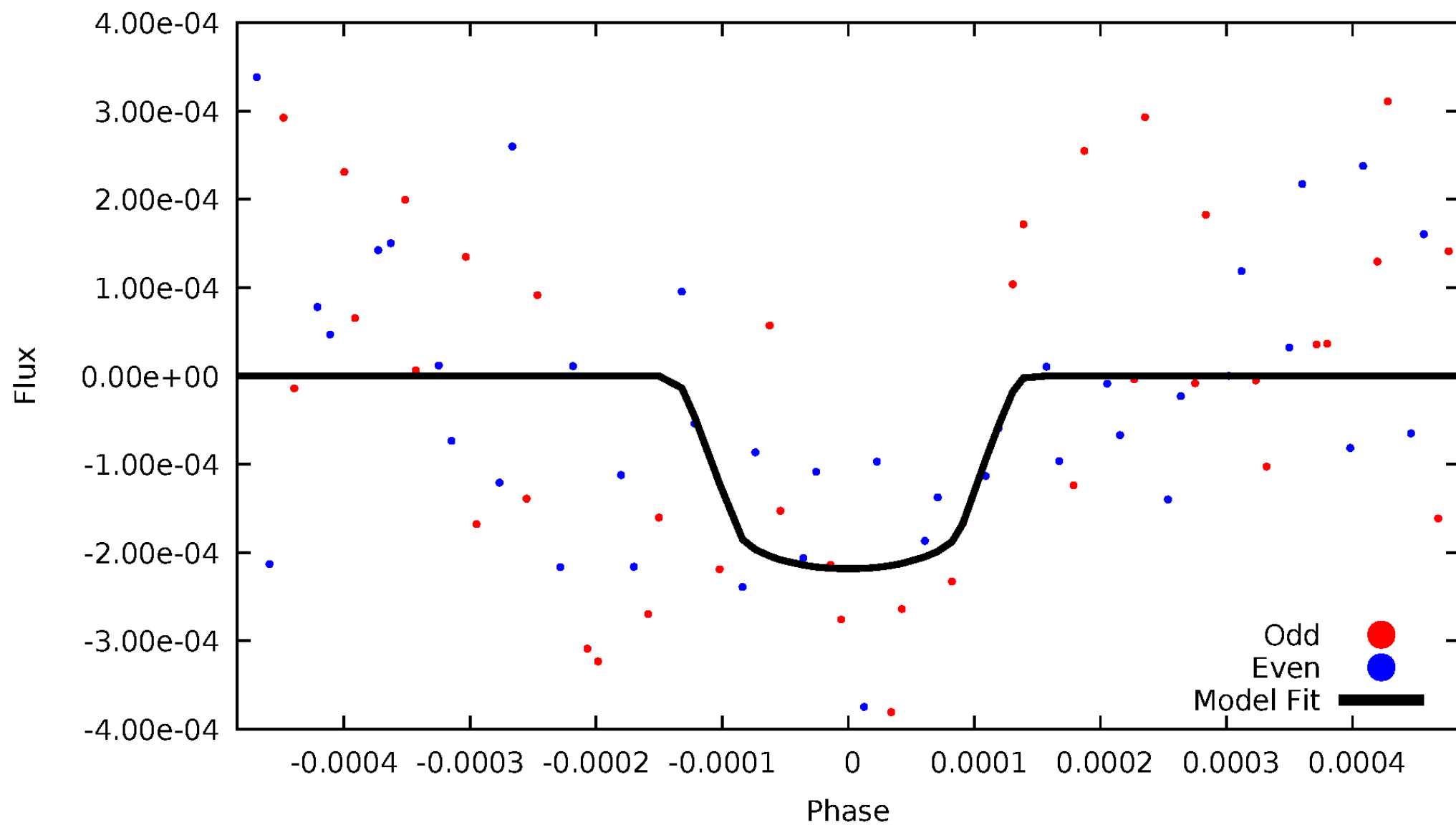


TCE 003453026-07



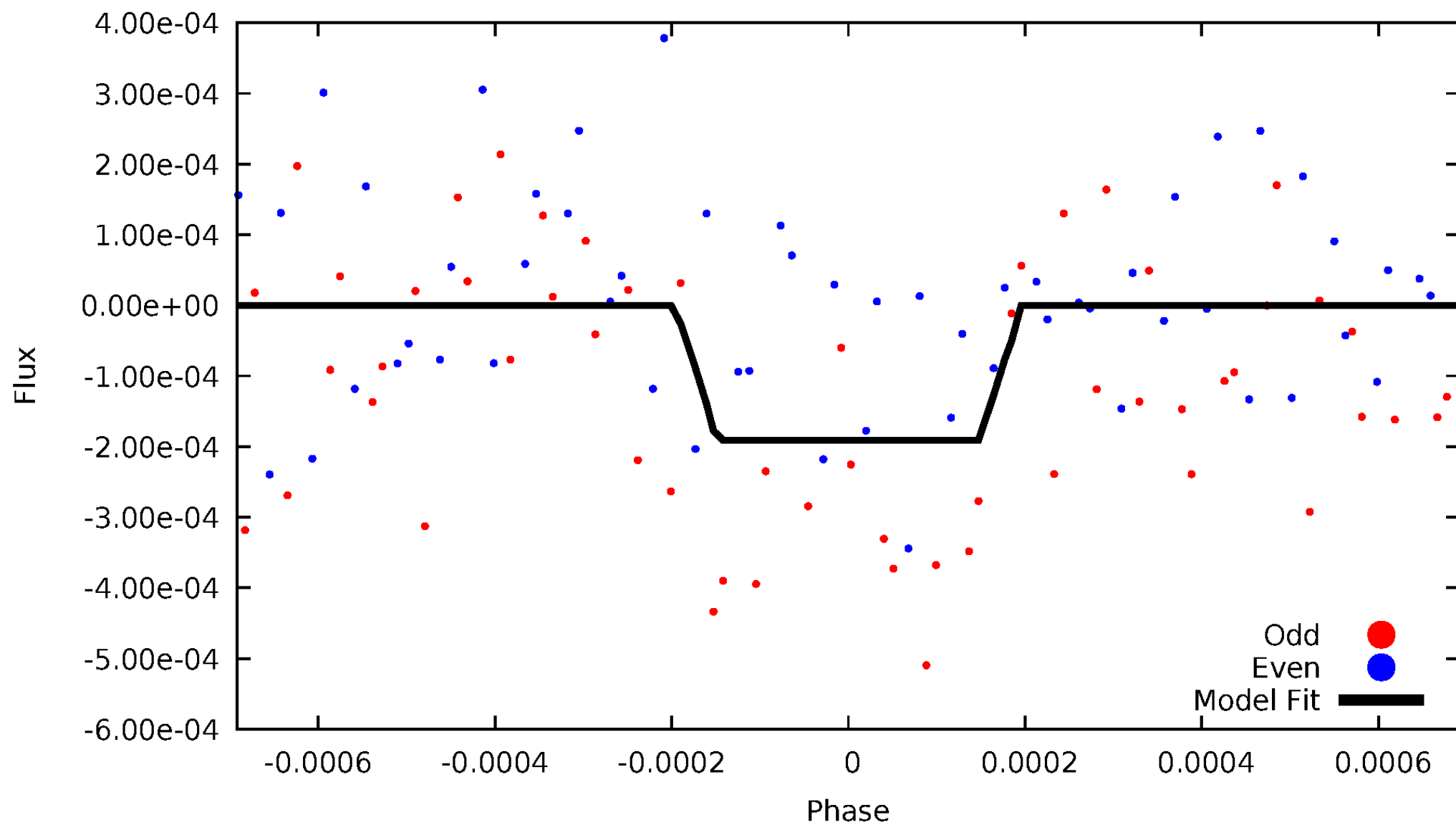
DV Odd/Even

TCE 003453026-07



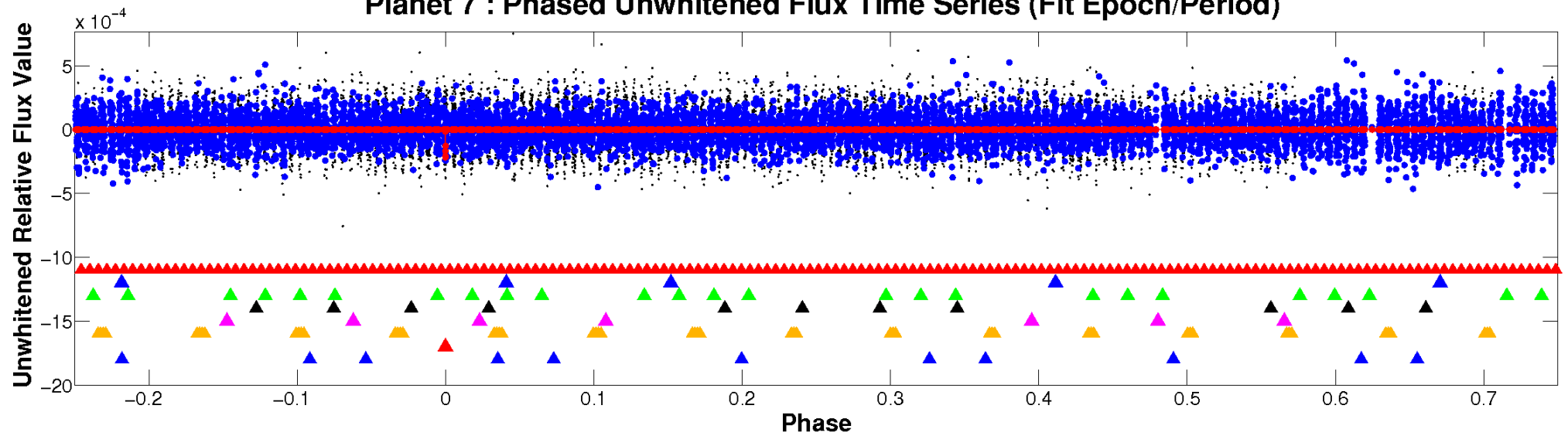
ALT Odd/Even

TCE 003453026-07

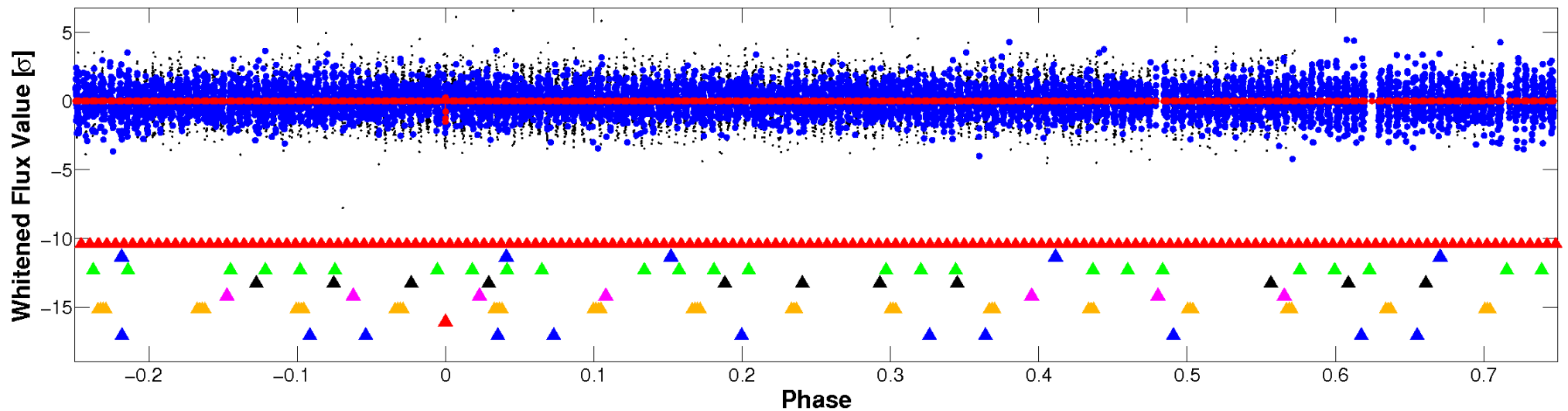


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

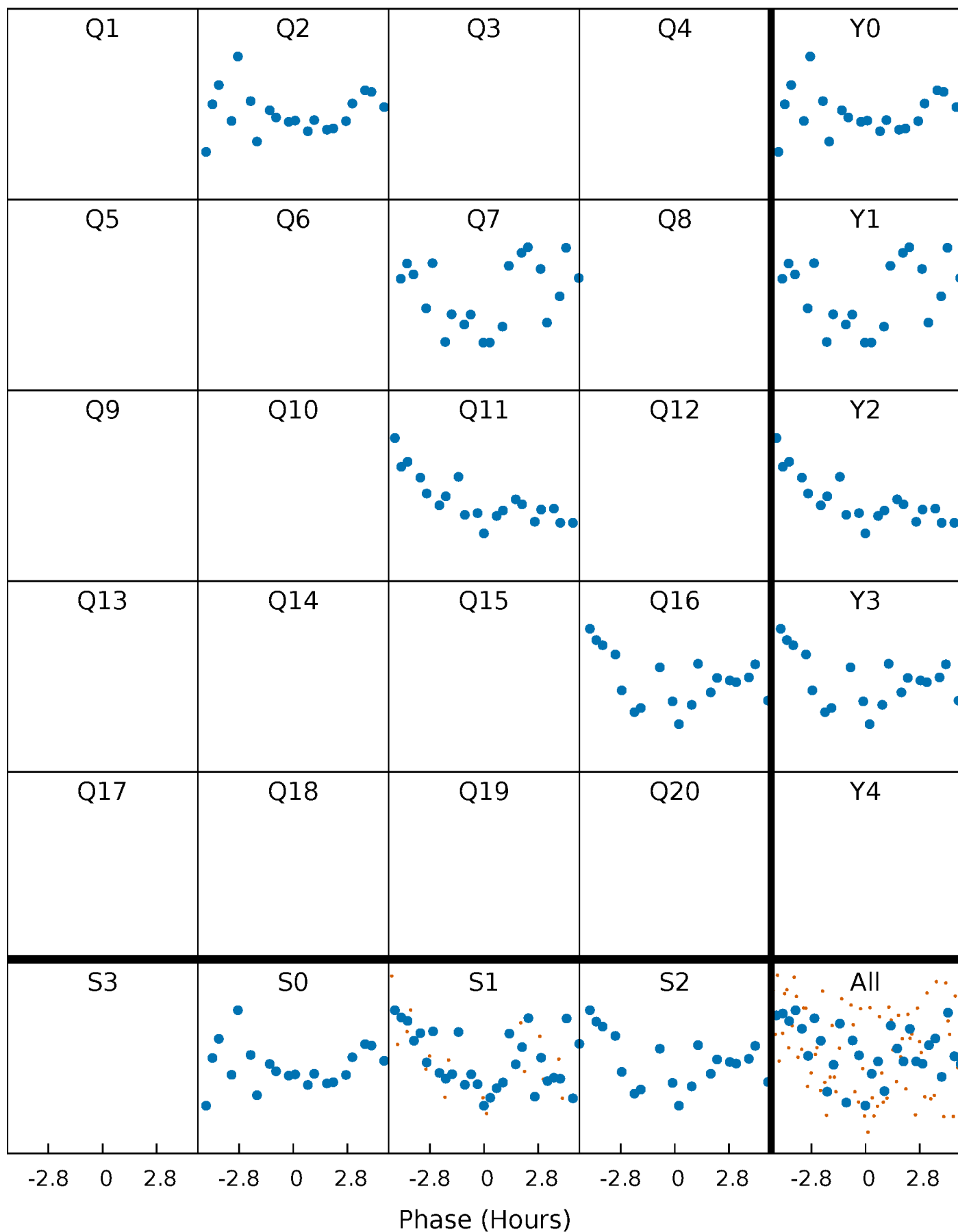


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



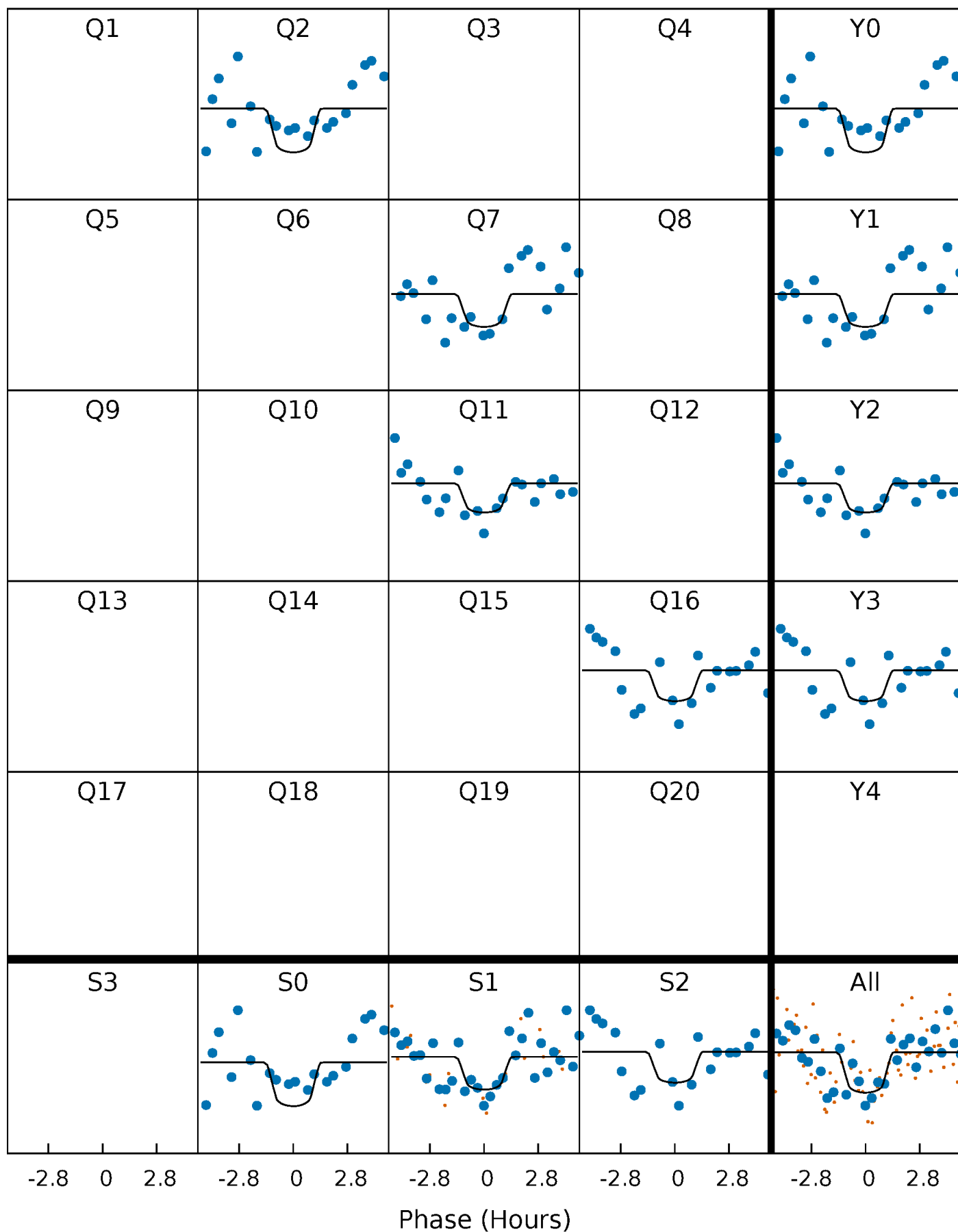
PDC Quarter-Phased Transit Curves

TCE 003453026-07 $P=423.864238$ Days $T_0=239.108240$ (BKJD)



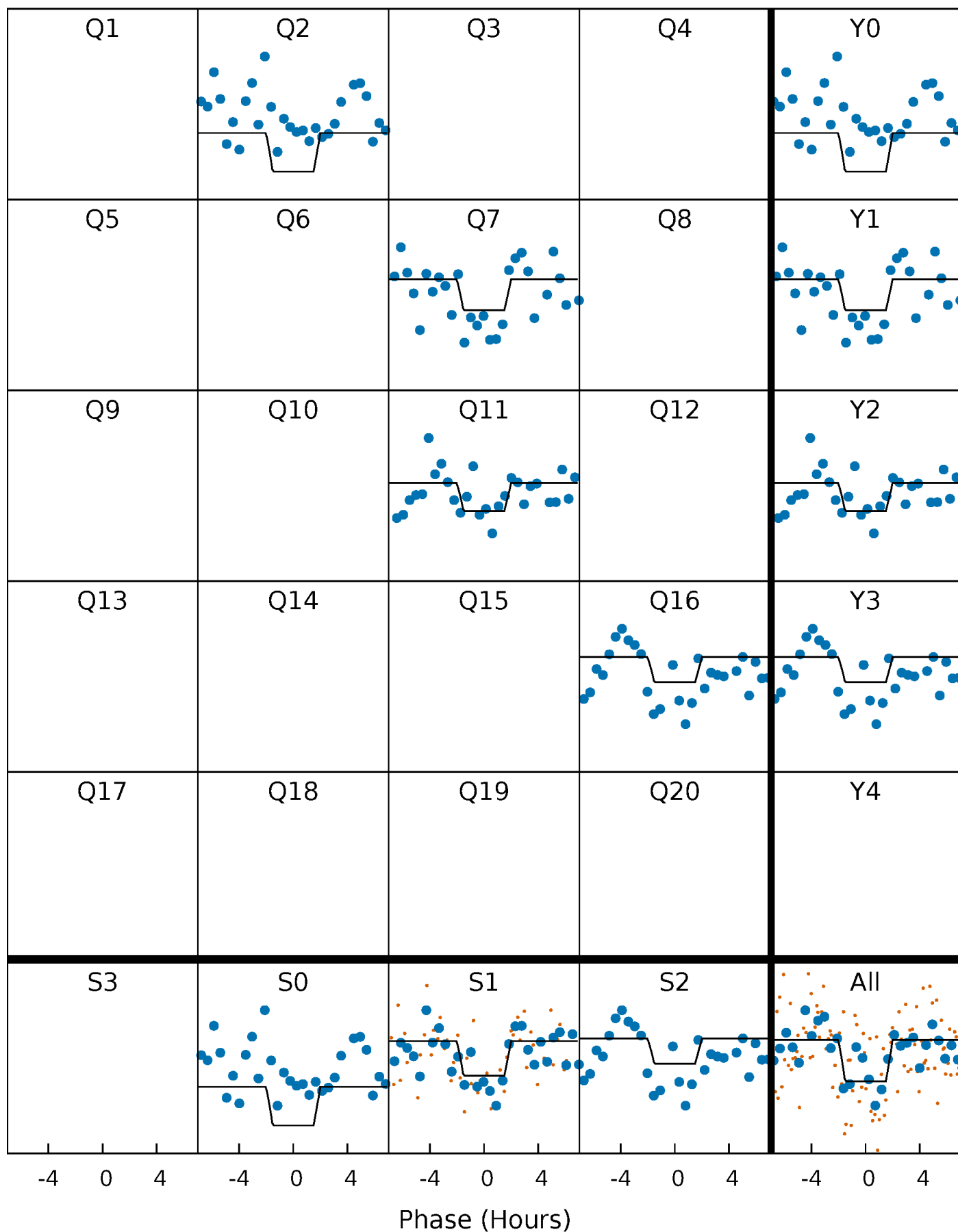
DV Quarter-Phased Transit Curves

TCE 003453026-07 $P=423.864238$ Days $T_0=239.108240$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

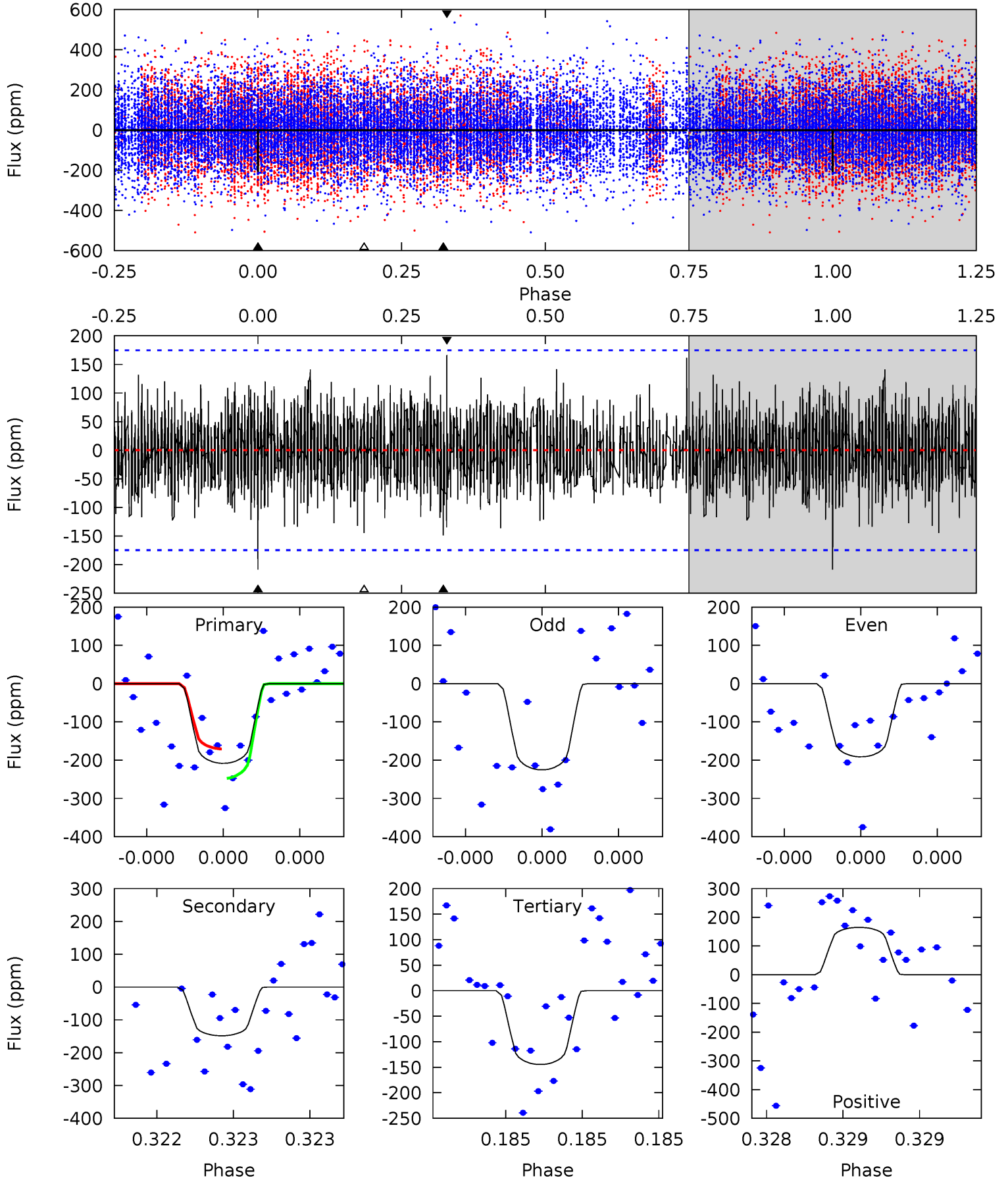
TCE 003453026-07 $P=423.864754$ Days $T_0=239.083670$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-07, P = 423.864238 Days, E = 239.108240 Days

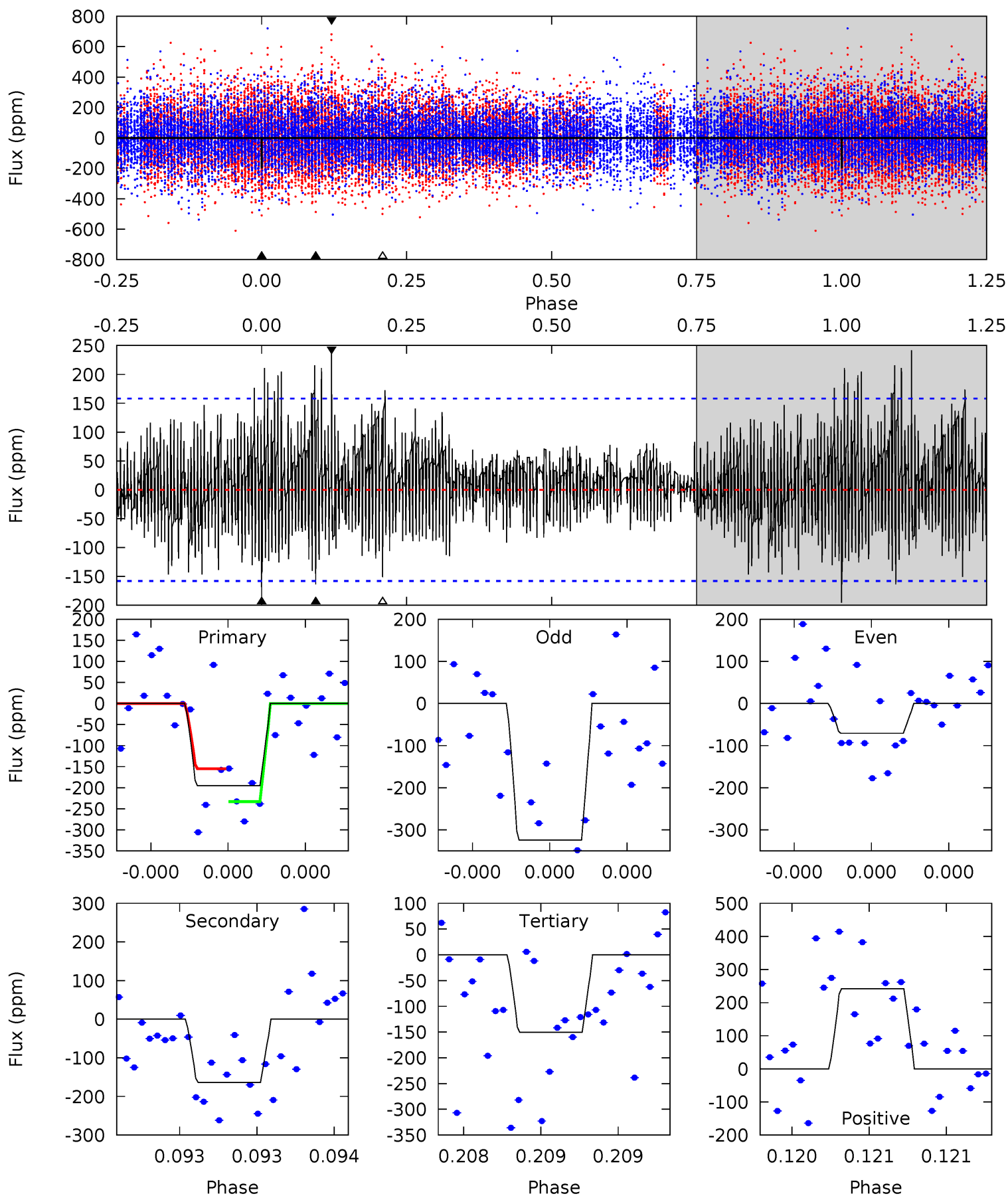
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.78	4.83	4.71	5.37	5.69	3.65	1.40	2.07	1.41	0.12	-0.54	0.55	0.93	0.44	1.25



Alt Model-Shift Uniqueness Test

003453026-07, P = 423.864754 Days, E = 239.083670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.96	5.82	5.35	8.61	5.63	3.57	1.91	1.60	-1.65	0.47	-2.79	4.49	0.86	0.55	1.40



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-148 ± 31	$7.00^{+6.85}_{-4.09}$	637^{+40}_{-62}	4989^{+3002}_{-996}	2524^{+13914}_{-1828}
Alt.	-163 ± 28	$6.87^{+6.00}_{-4.40}$	634^{+38}_{-67}	5168^{+3757}_{-1106}	3050^{+19856}_{-2175}

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

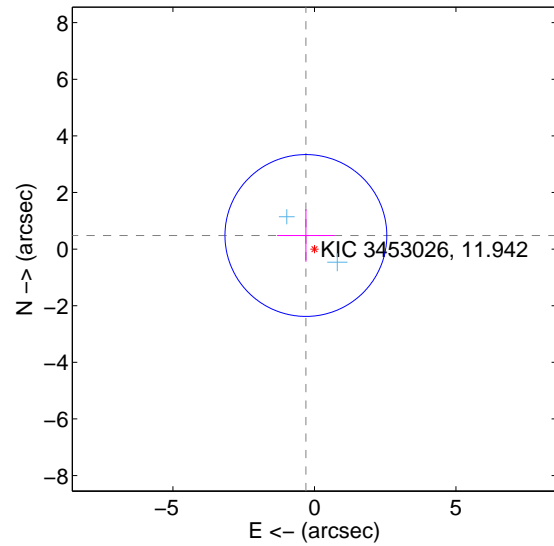
Supplemental centroid analysis for 003453026-07. **Kepler magnitude: 11.94.** Transit SNR 5.98

There are 2 quarters with good PRF difference image offsets

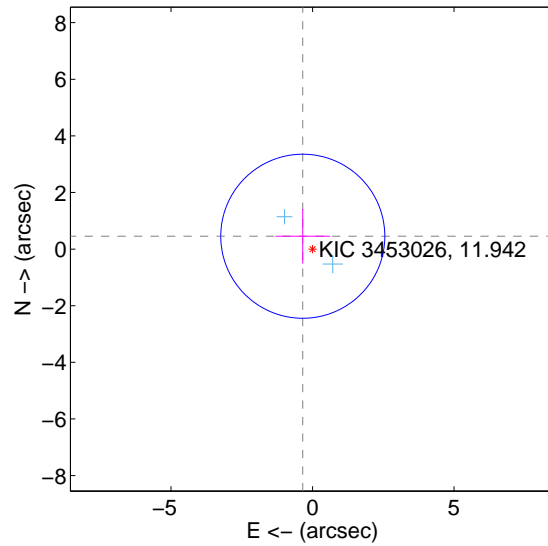
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.568 ± 0.953	0.60	0.302 ± 1.015	0.481 ± 0.927
PRF-fit source offset from KIC position	0.570 ± 0.966	0.59	0.344 ± 0.969	0.454 ± 0.964
photometric centroid source offset	1.71 ± 1.81	0.95	-1.71 ± 1.81	-0.08 ± 1.87

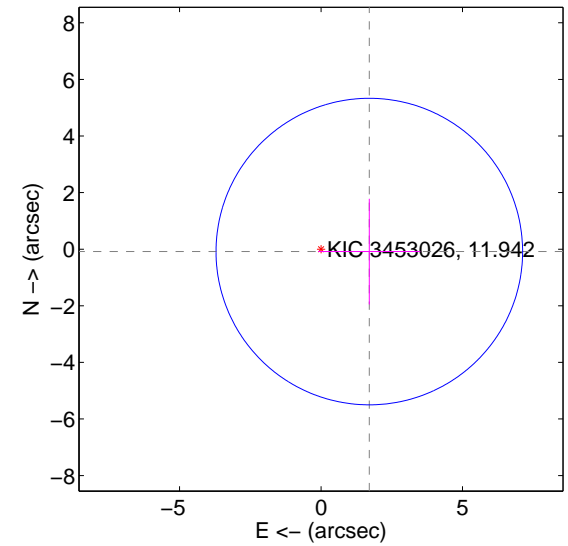
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

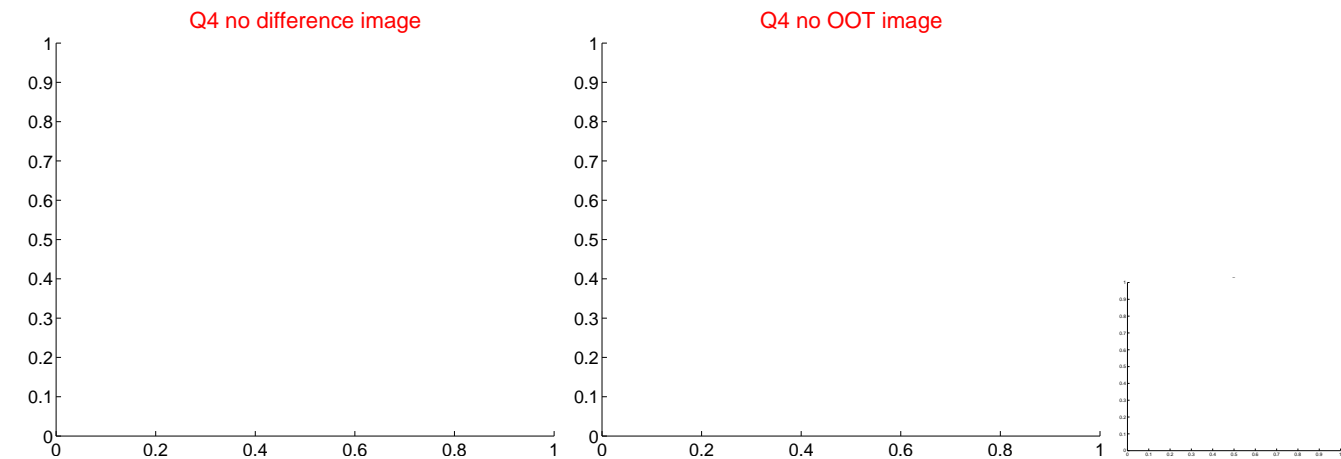
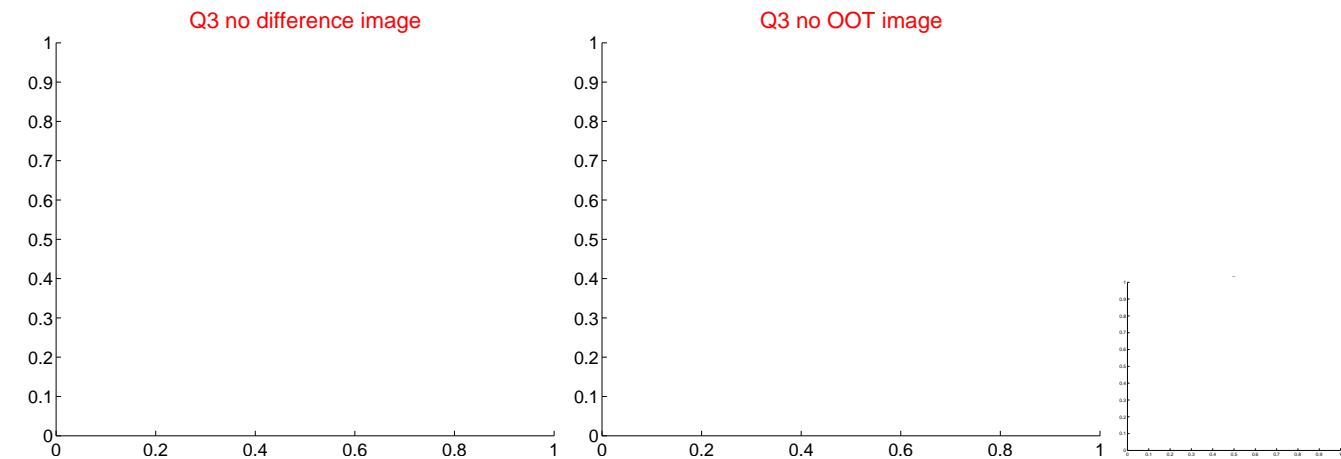
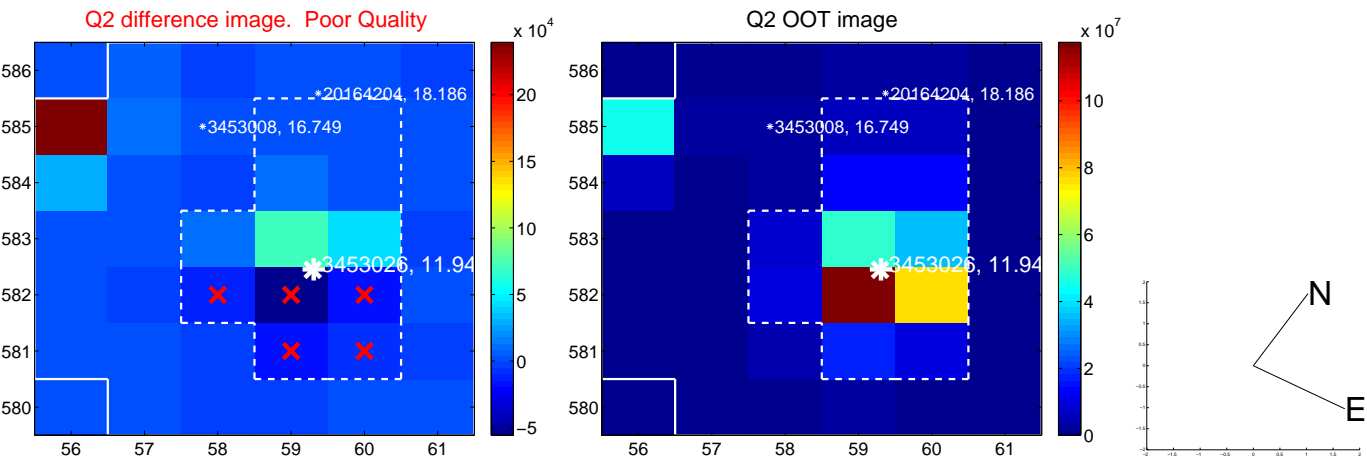


offset from photometric centroids

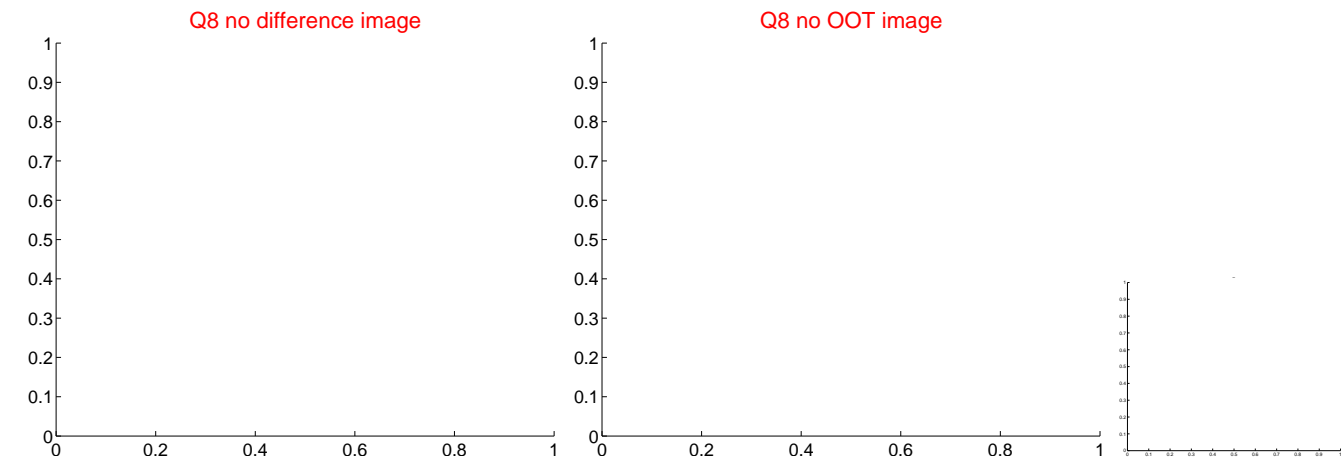
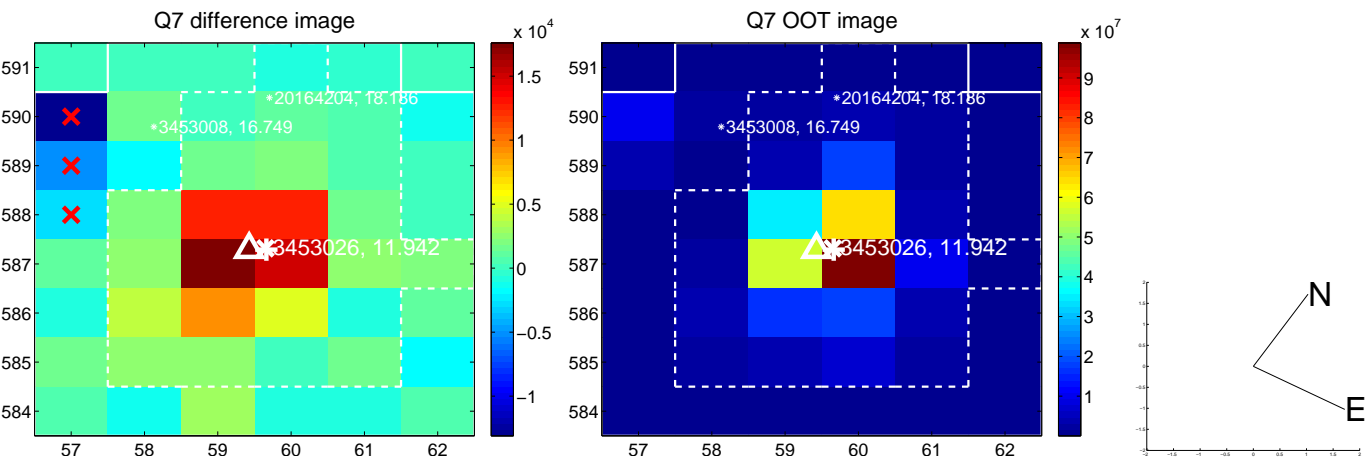
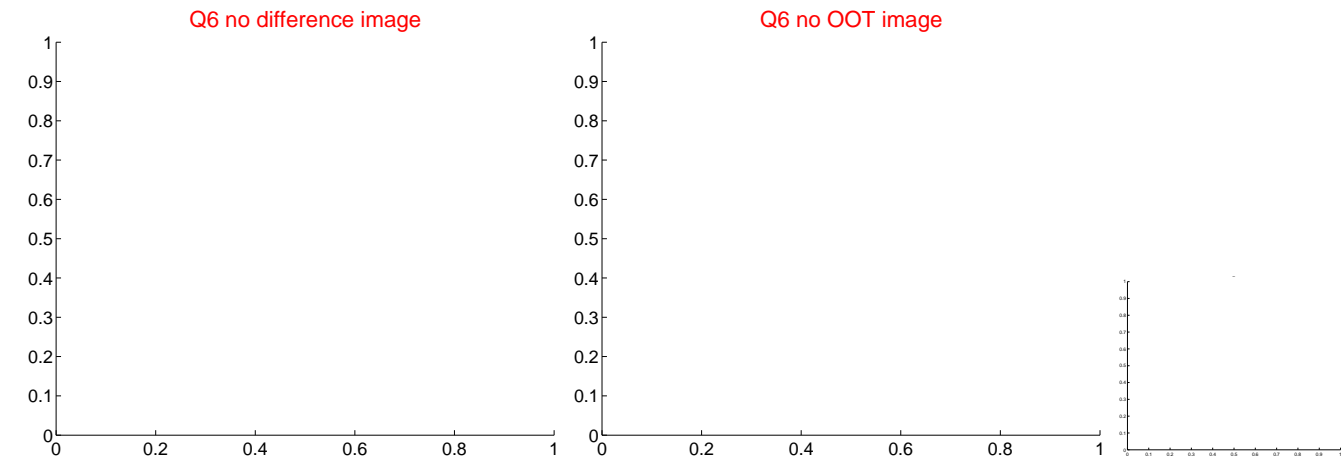


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

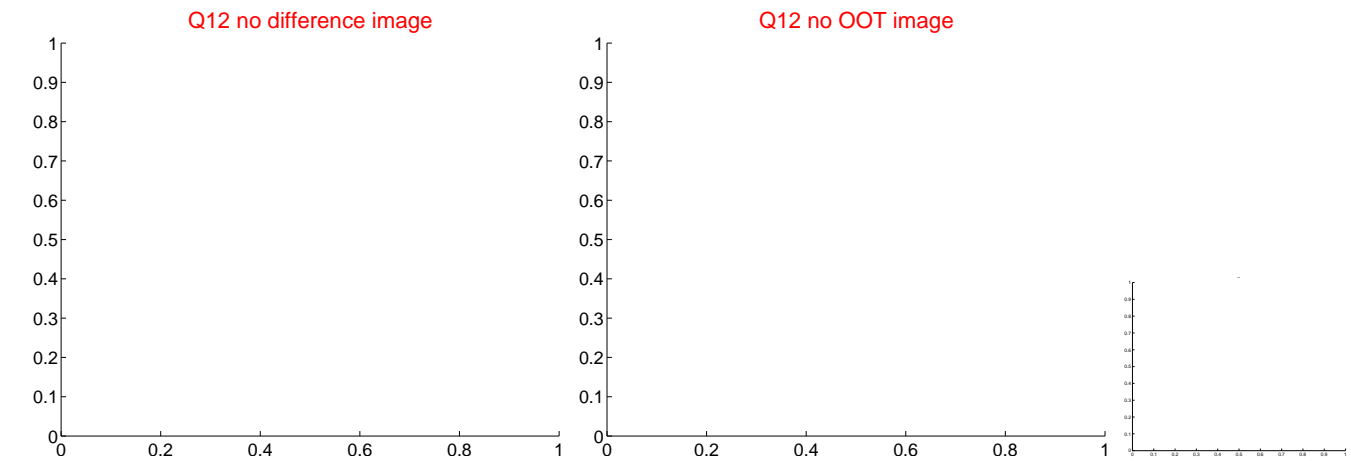
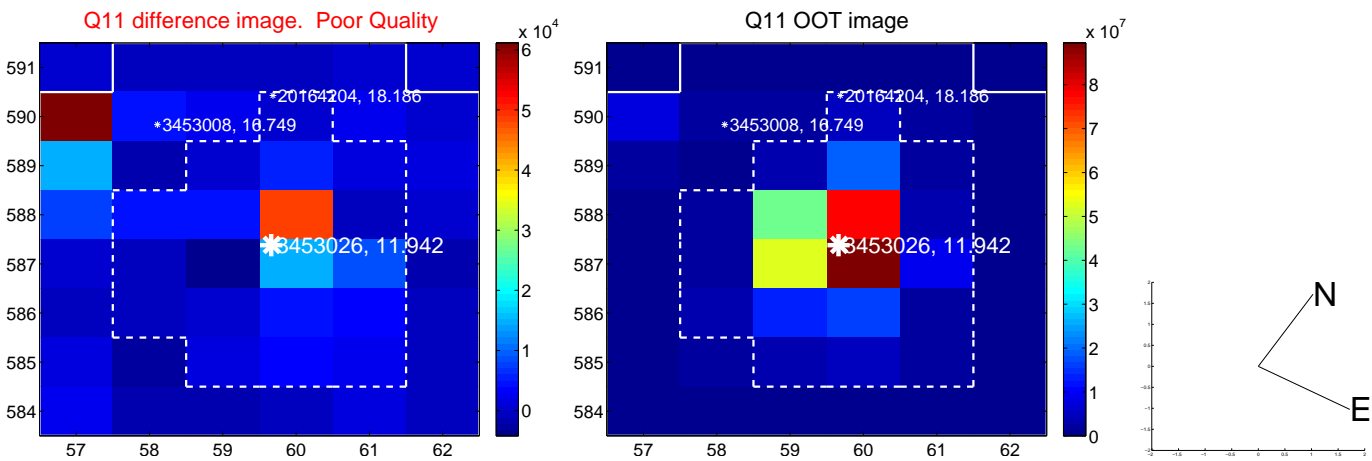
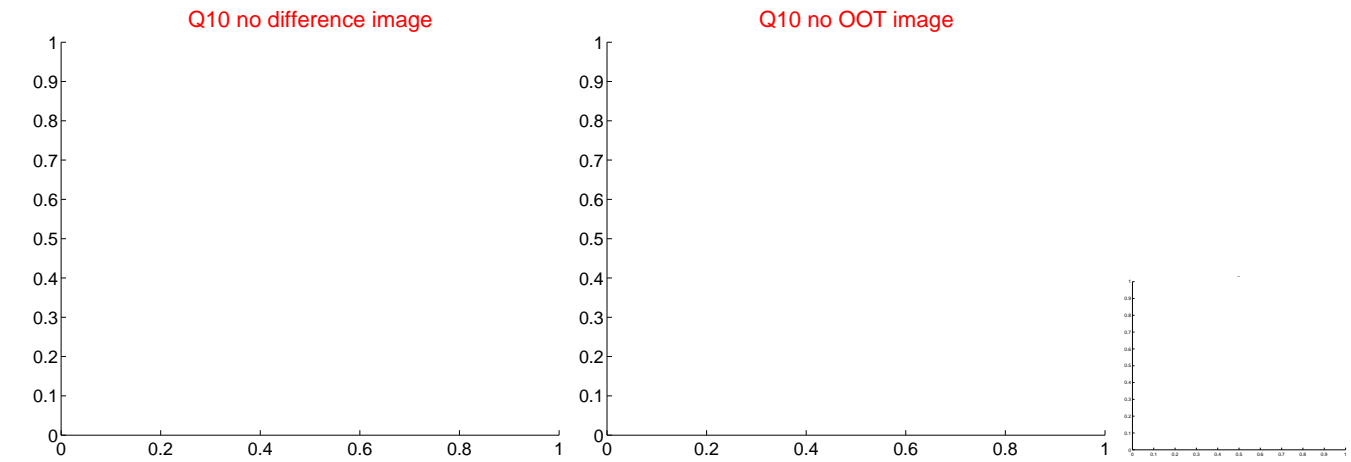
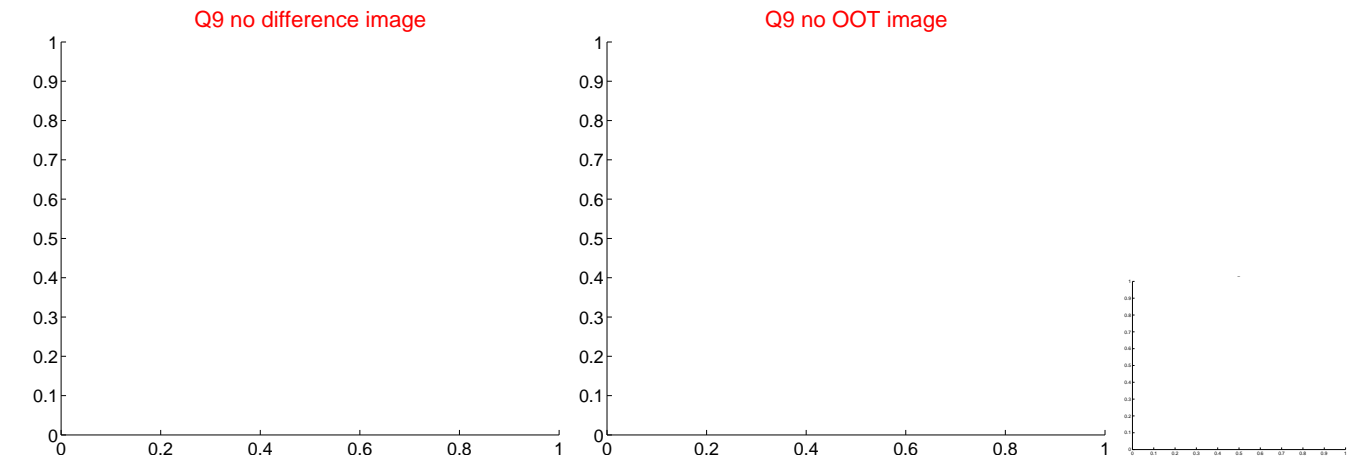
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



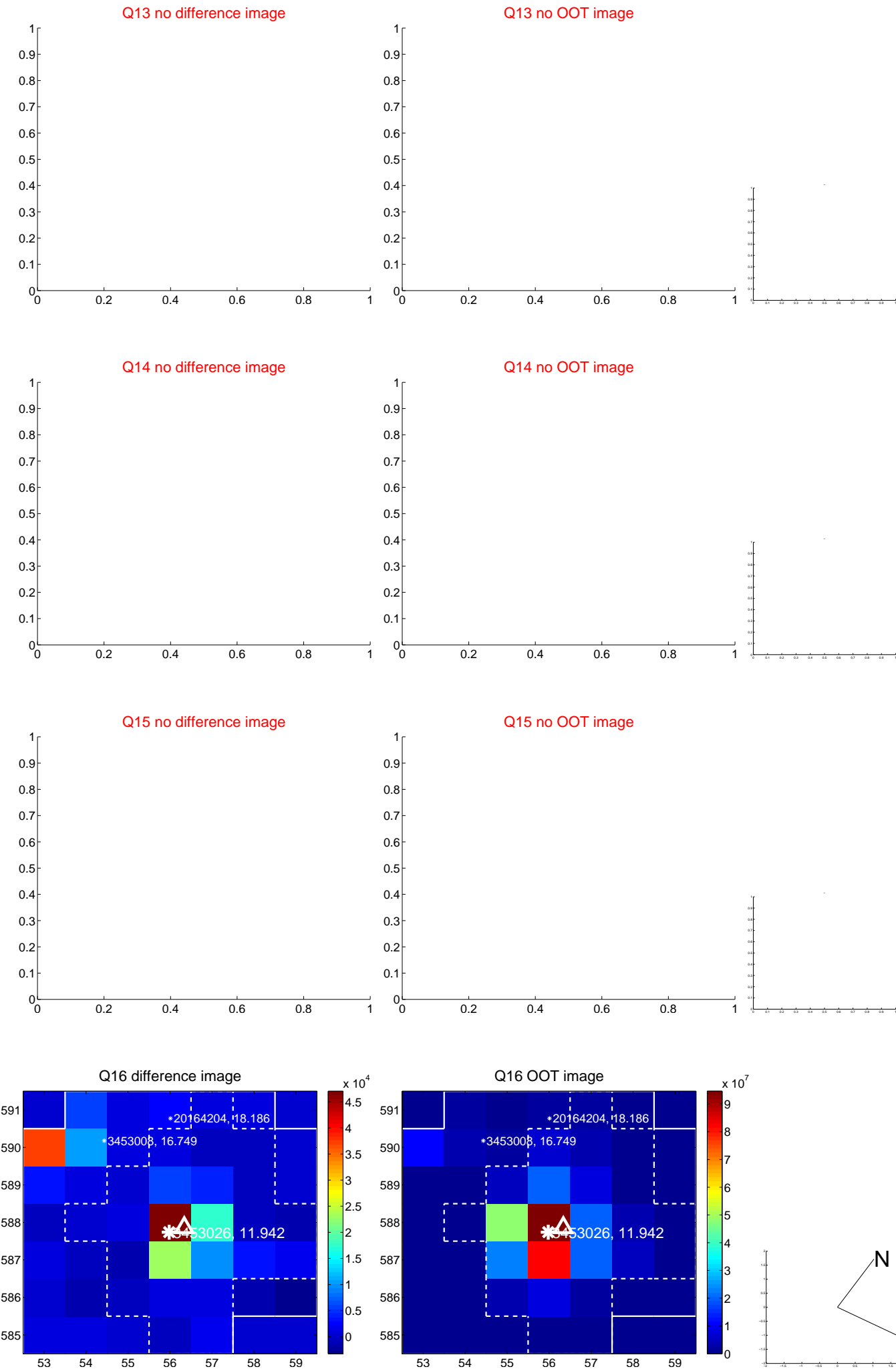
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



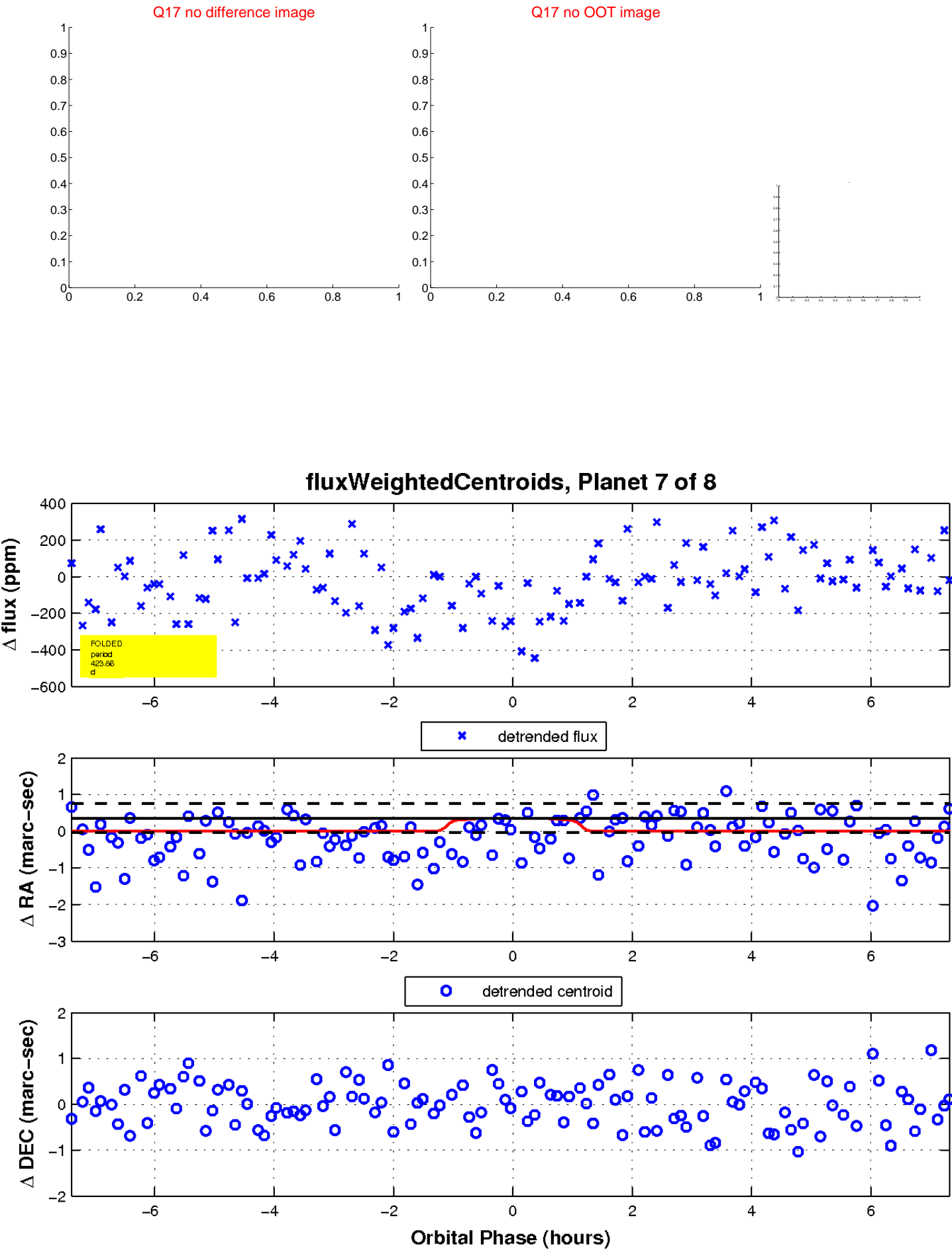
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



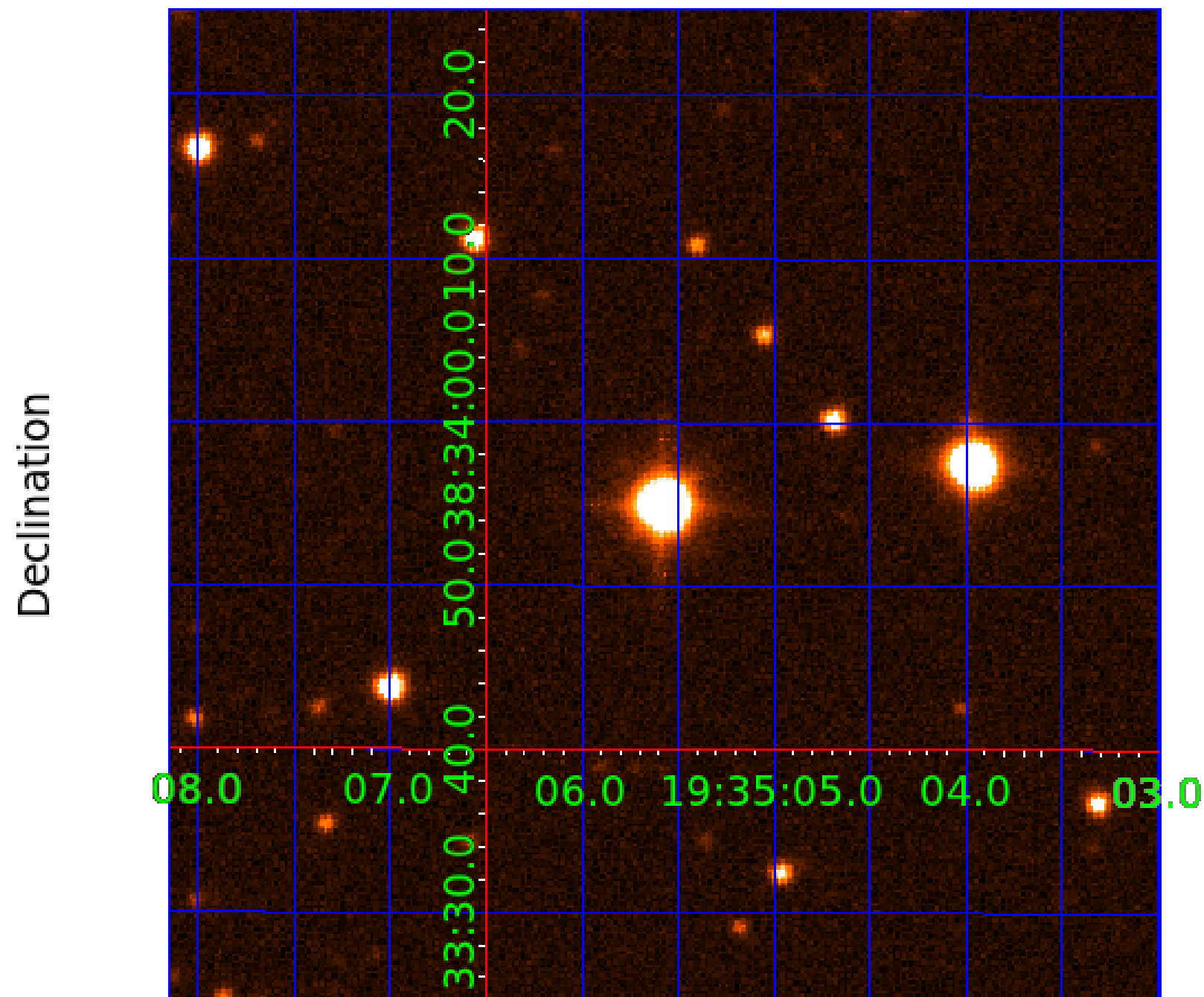
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 003453026

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})
003453026-01	OBS	No	2.449491	132.706381	22.4	10.963	8.2	6.3	3.56	6234	1.97	10158.44
003453026-02	OBS	No	266.892878	303.533852	325.5	17.514	9.5	8.2	3.56	6234	7.86	19.52
003453026-03	OBS	No	59.130860	148.388405	145.9	11.182	7.7	7.4	3.56	6234	4.71	145.60
003453026-04	OBS	No	133.907744	251.464107	389.9	2.763	7.7	9.0	3.56	6234	13.81	48.96
003453026-06	OBS	No	28.307259	139.792248	149.6	2.450	7.5	7.5	3.56	6234	5.03	388.80
003453026-07	OBS	No	423.864238	239.108240	218.3	2.466	7.5	6.0	3.56	6234	6.17	10.54
003453026-08	OBS	No	123.386480	254.062007	237.4	4.337	7.2	7.6	3.56	6234	5.98	54.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003453026-01	OBS	FP	0.00	1	0	1	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
003453026-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
003453026-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT
003453026-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
003453026-08	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

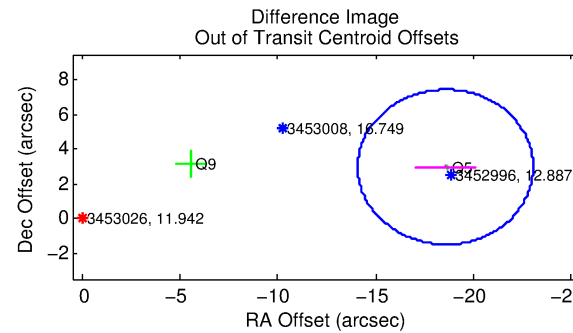
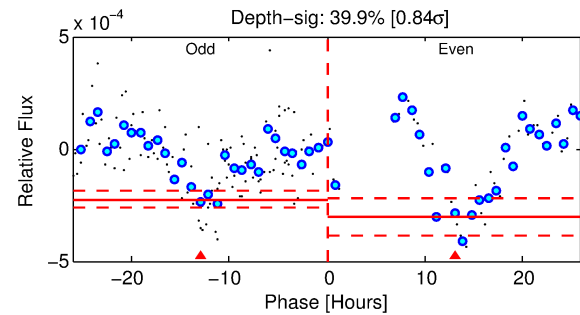
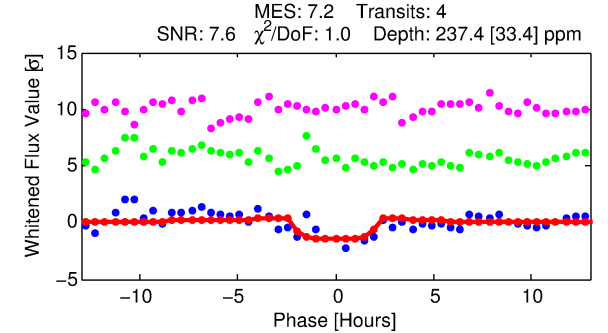
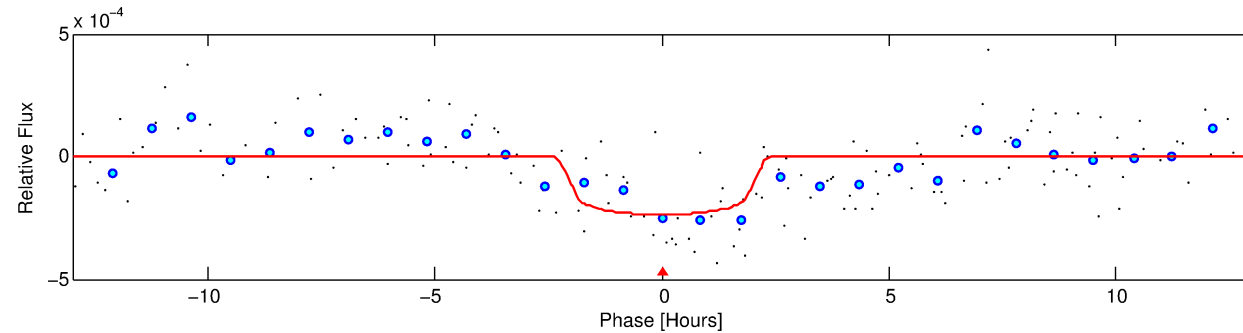
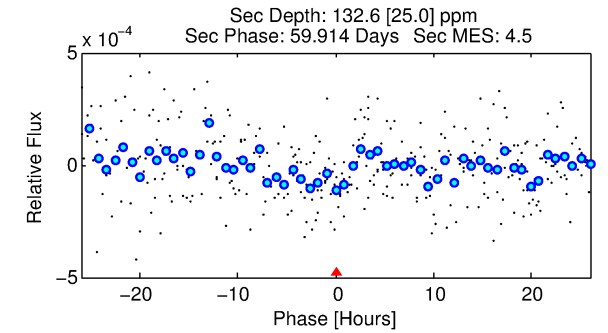
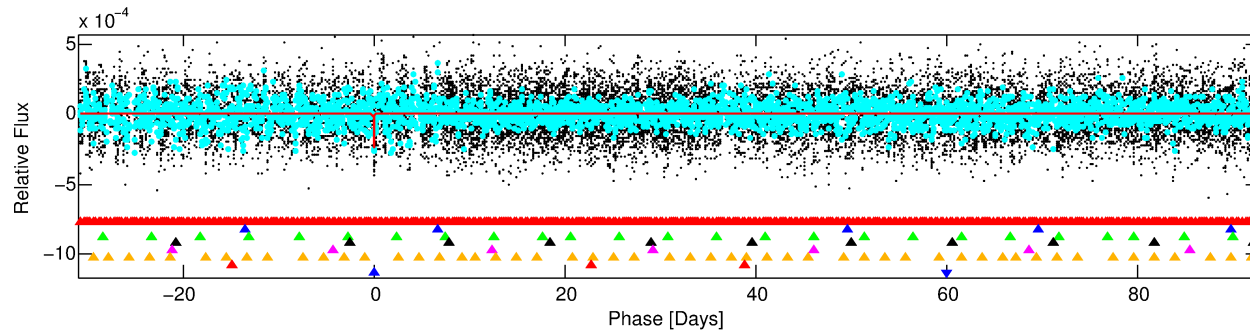
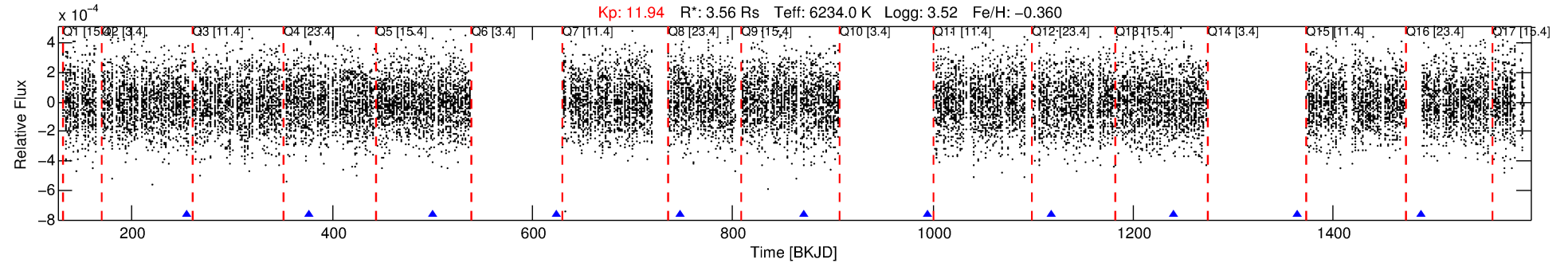
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003453026-08

No Significant Match Found

DV One-Page Summary

KIC: 3453026 Candidate: 8 of 8 Period: 123.386 d



DV Fit Results:

Period = 123.38648 [0.00158] d
Epoch = 254.0620 [0.0081] BKJD
 $R_p/R^* = 0.0154$ [0.0115]
 $a/R^* = 145.37$ [578.44]
 $b = 0.76$ [2.18]
 $\text{Seff} = 54.61$ [33.75]
 $T_{\text{eq}} = 693$ [107] K
 $R_p = 5.98$ [5.13] R_{e}
 $a = 0.5604$ [0.2181] AU
 $\text{Ag} = 640.07$ [1039.01] [0.62σ]
 $T_{\text{eff}} = 5391$ [2033] K [2.31σ]

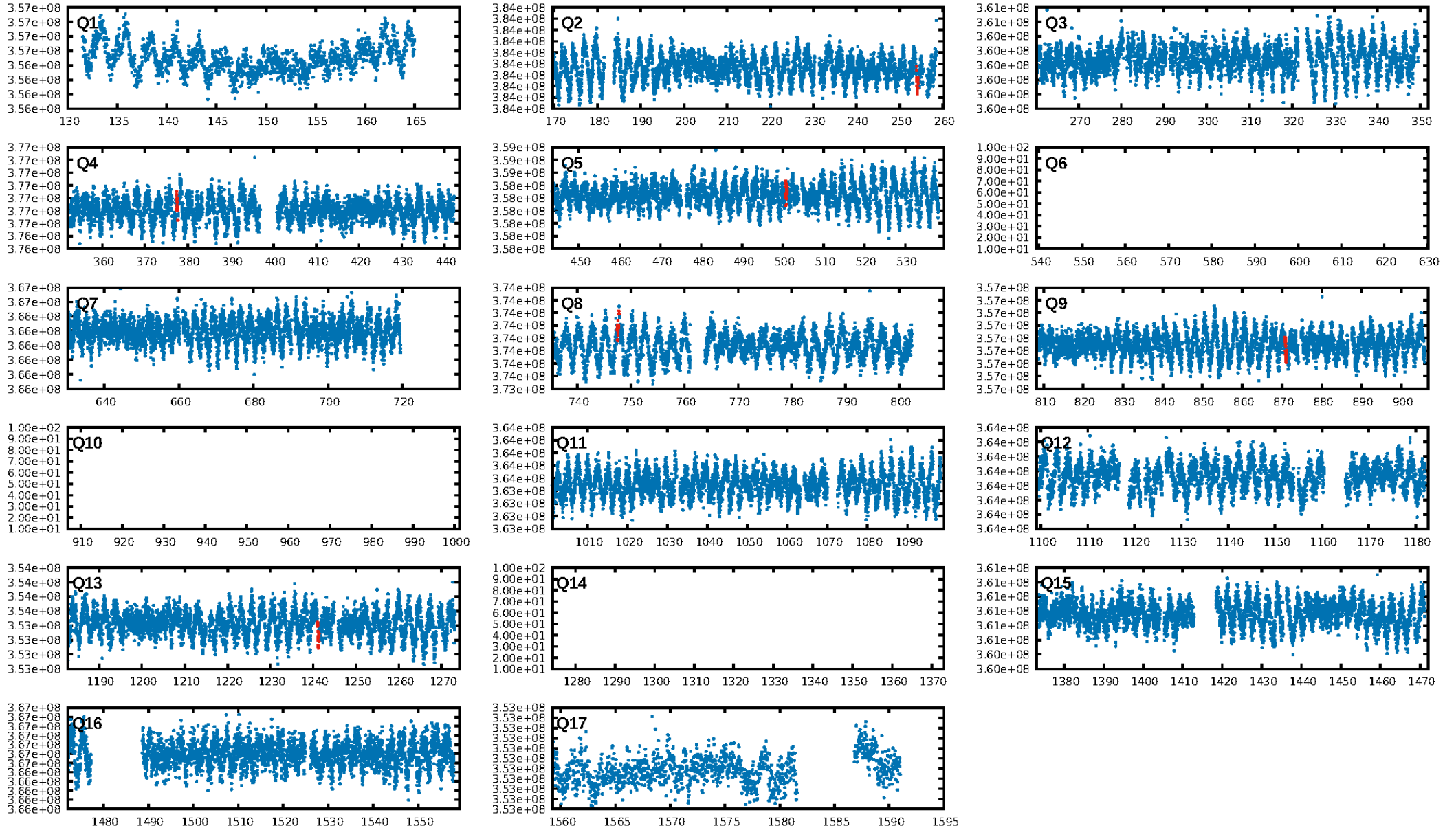
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [128.58σ]
LongPeriod-sig: 100.0% [49.10σ]
ModelChiSquare2-sig: 68.3%
ModelChiSquareGoF-sig: 97.9%
Bootstrap-pfa: 3.50e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -7.639
Centroid-sig: N/A
Centroid-so: 0.893 arcsec [0.96σ]
OotOffset-rm: 18.800 arcsec [12.59σ]
KicOffset-rm: 18.818 arcsec [5.06σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.60 [3/5]

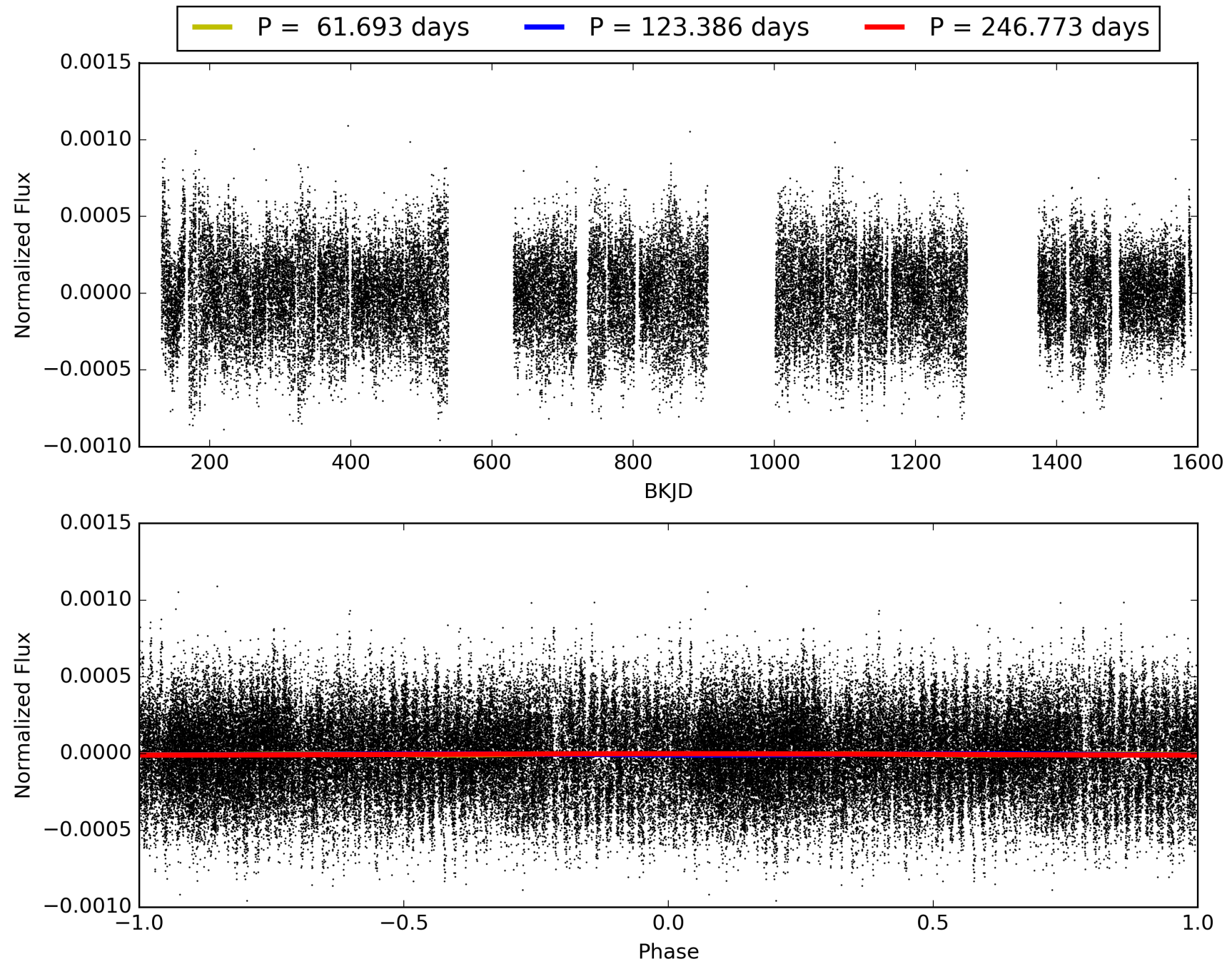
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:54:18 Z

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

TCE 003453026-08, PDC Light Curves

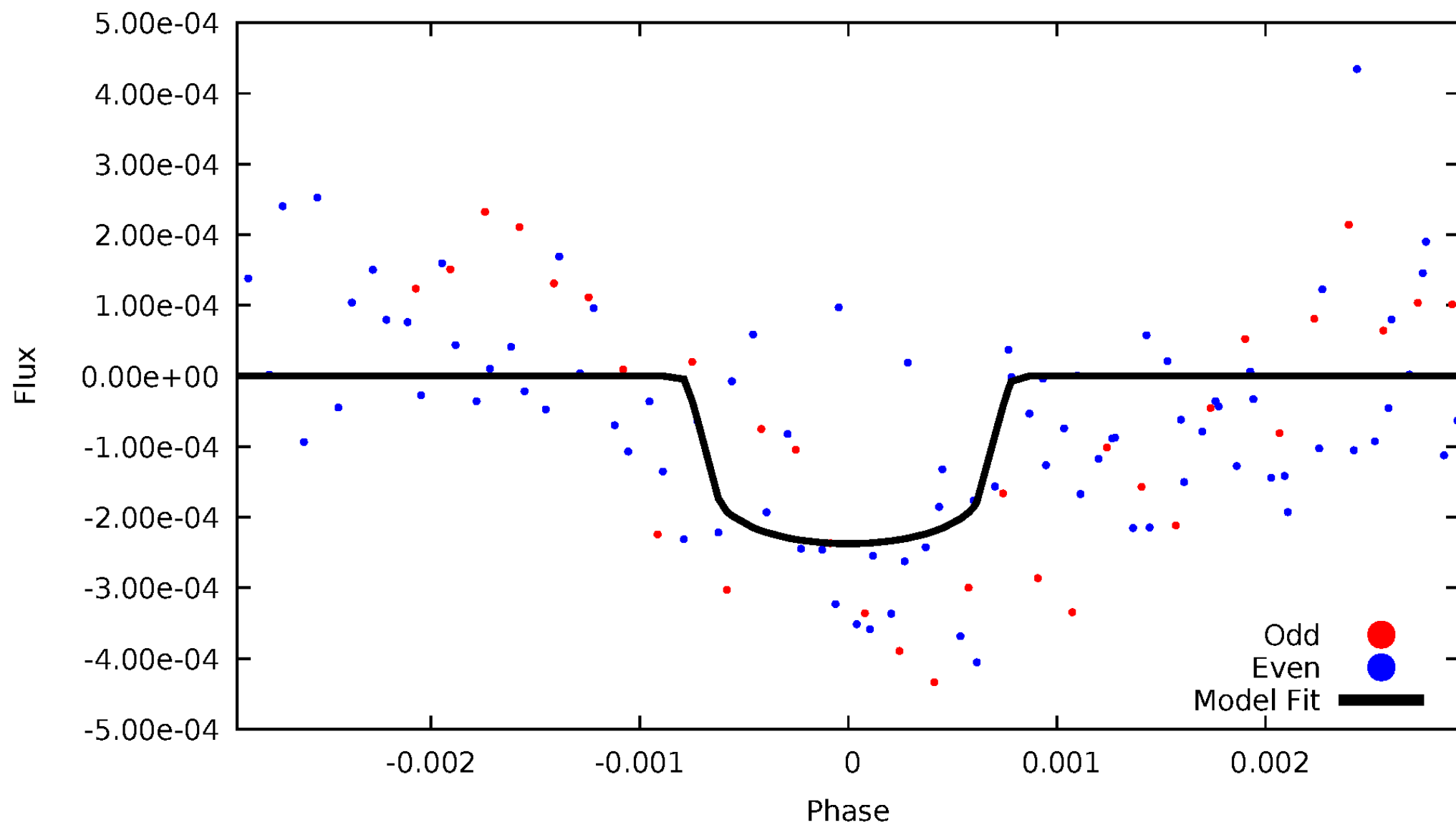


TCE 003453026-08



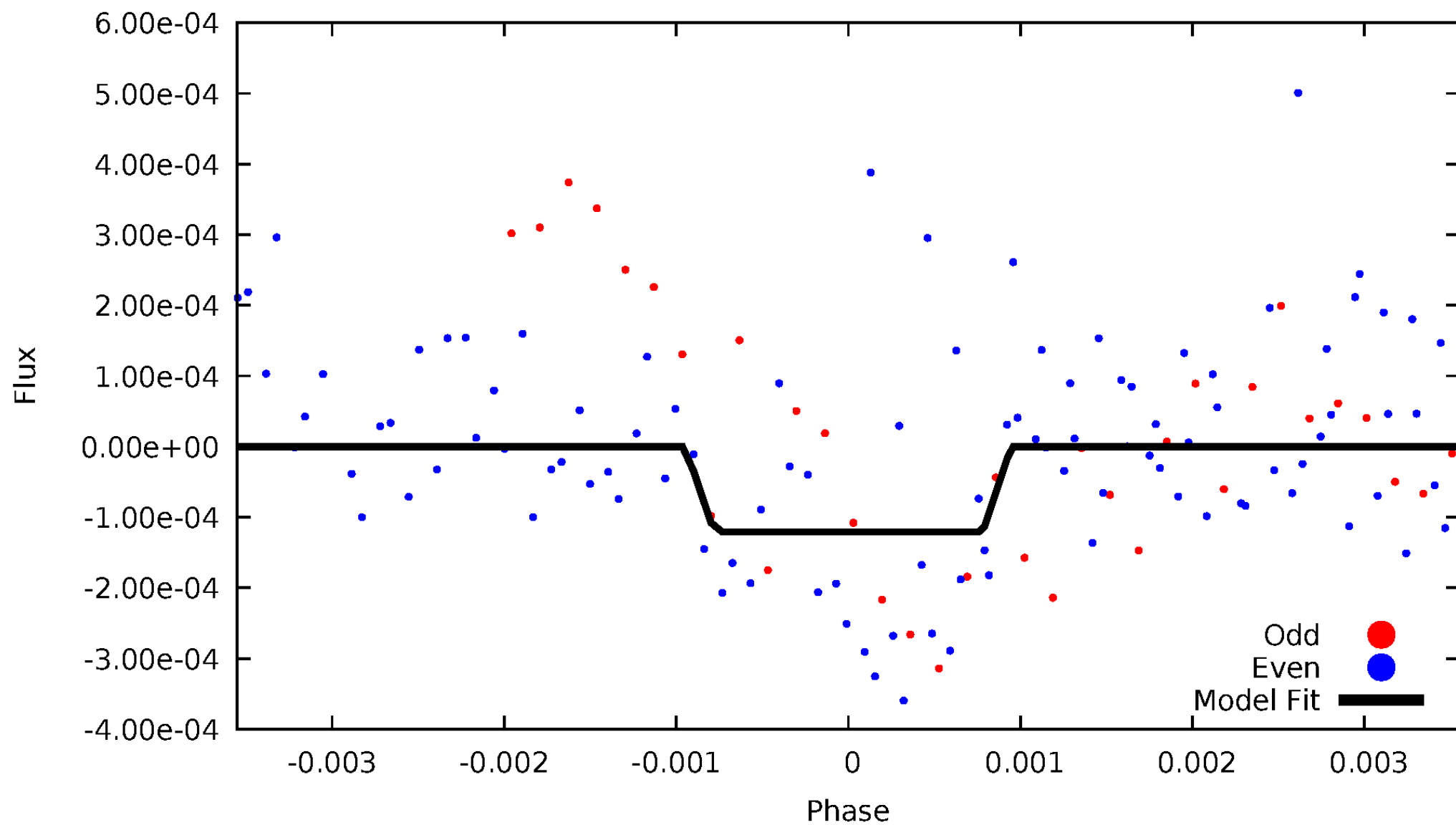
DV Odd/Even

TCE 003453026-08



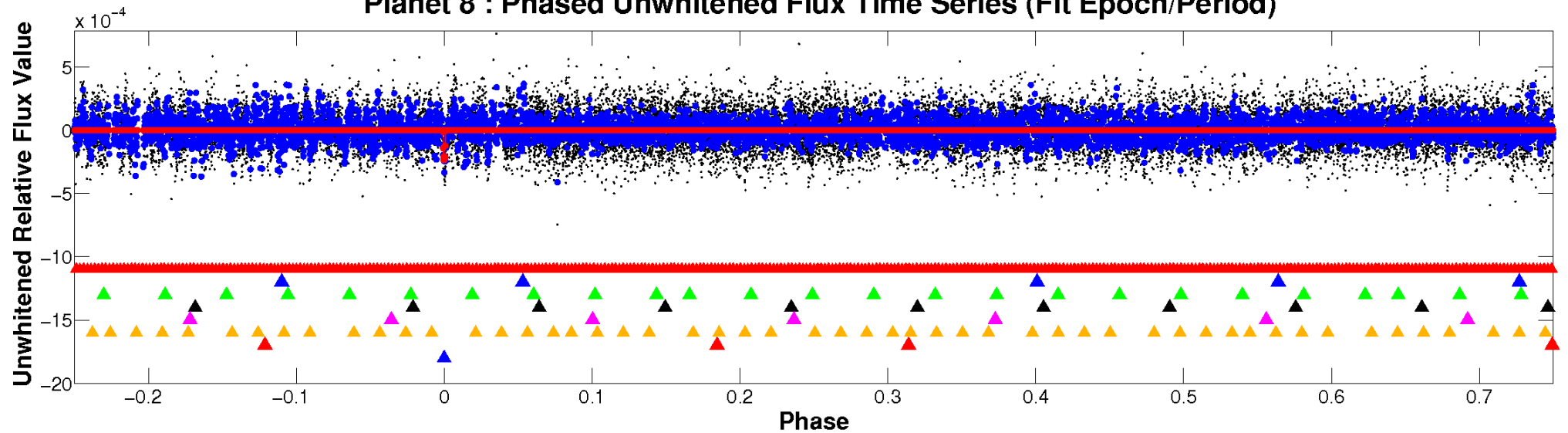
ALT Odd/Even

TCE 003453026-08

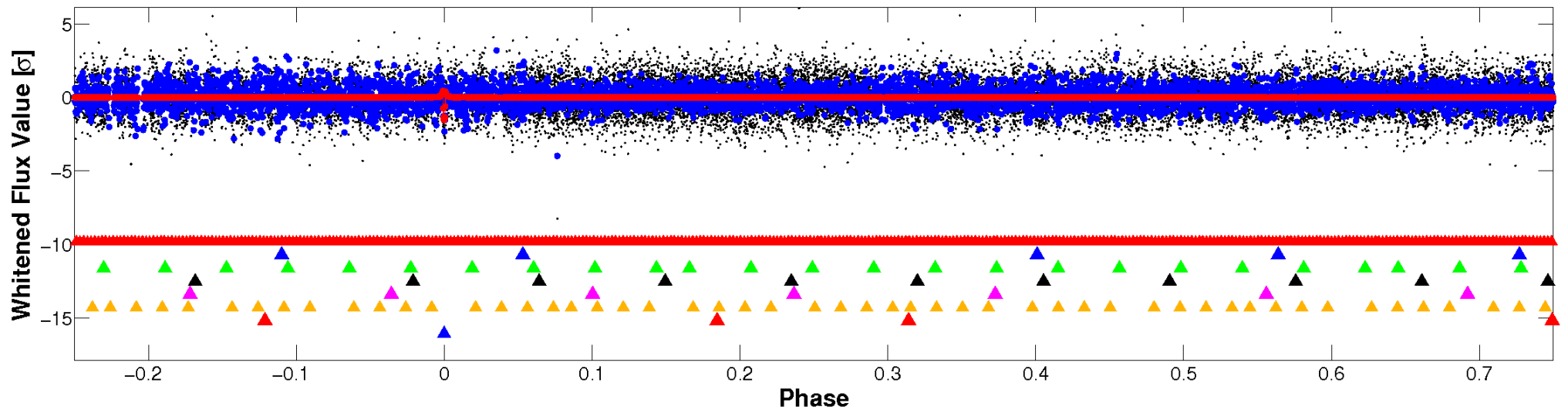


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



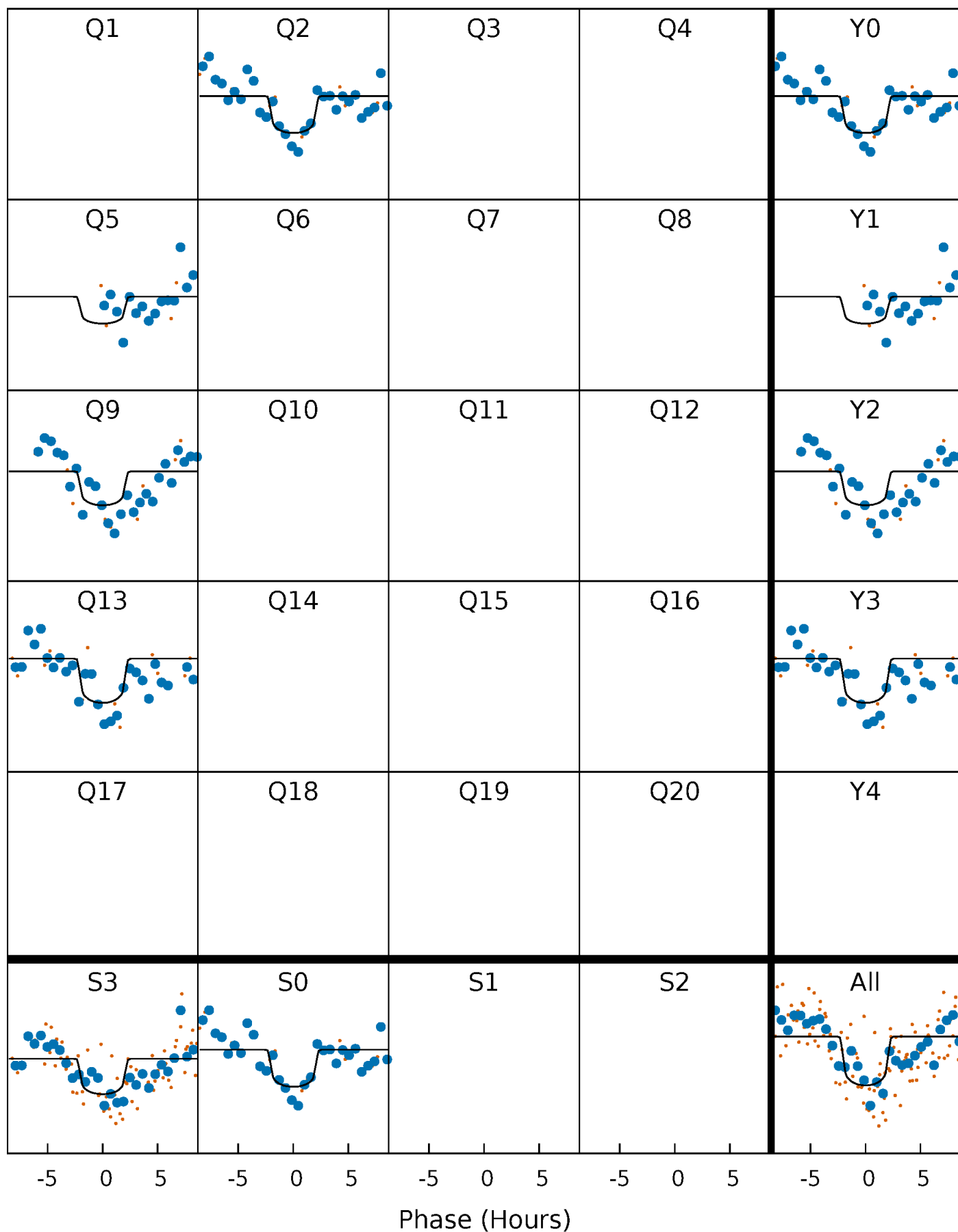
PDC Quarter-Phased Transit Curves

TCE 003453026-08 $P=123.386480$ Days $T_0=254.062007$ (BKJD)



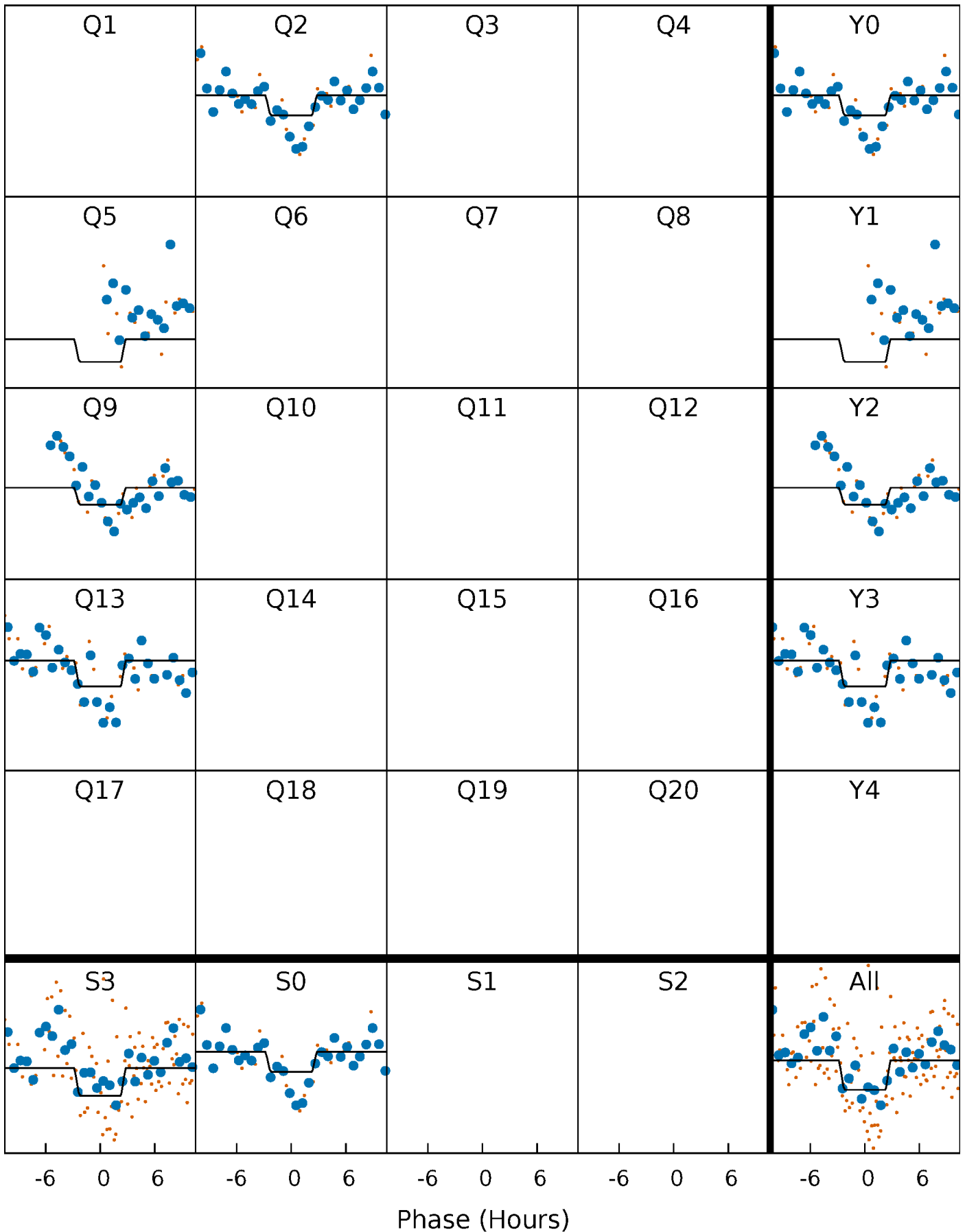
DV Quarter-Phased Transit Curves

TCE 003453026-08 $P=123.386480$ Days $T_0=254.062007$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

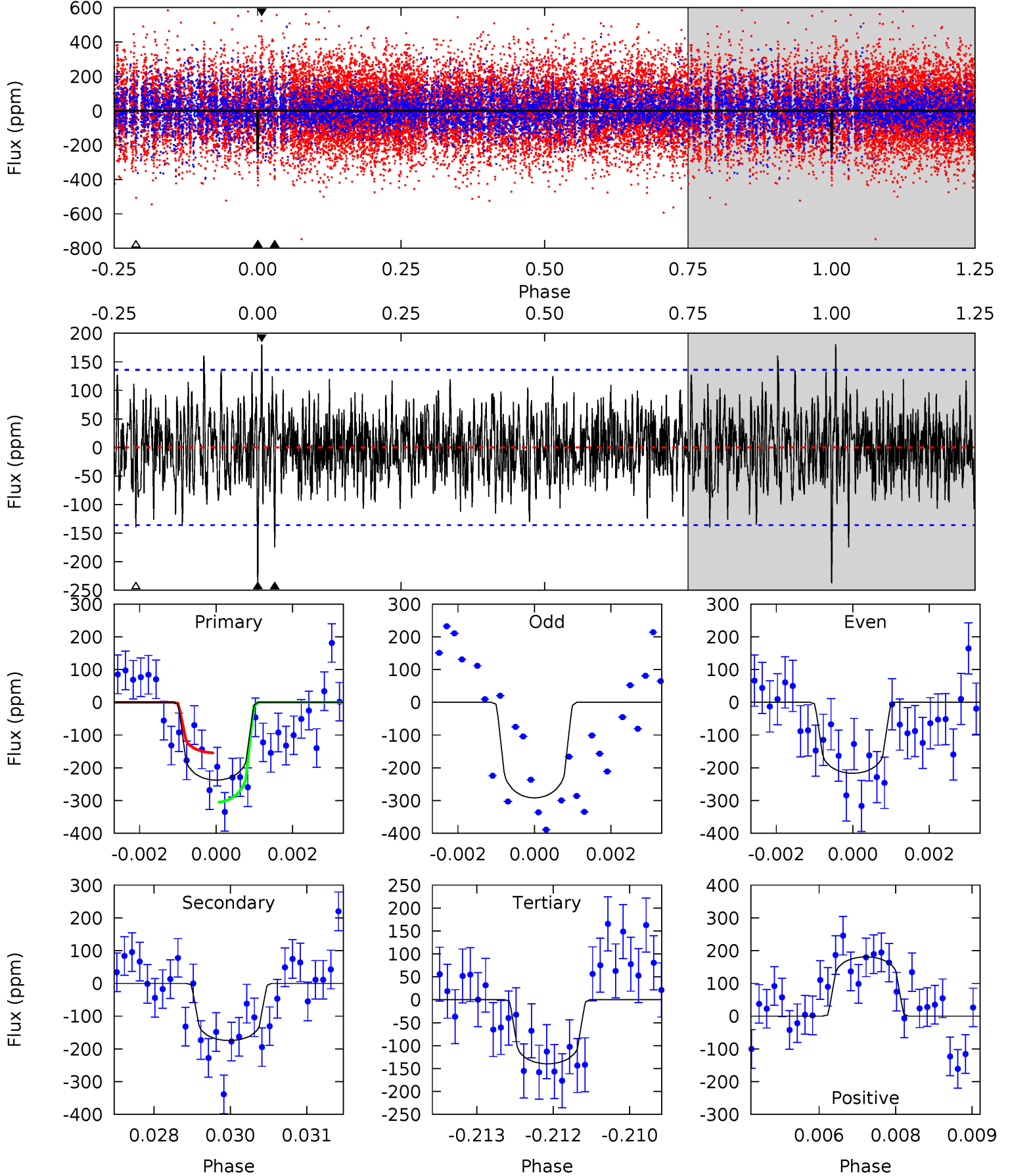
TCE 003453026-08 $P=123.388975$ Days $T_0=254.035276$ (BKJD)



DV Model-Shift Uniqueness Test

003453026-08, P = 123.386480 Days, E = 130.675527 Days

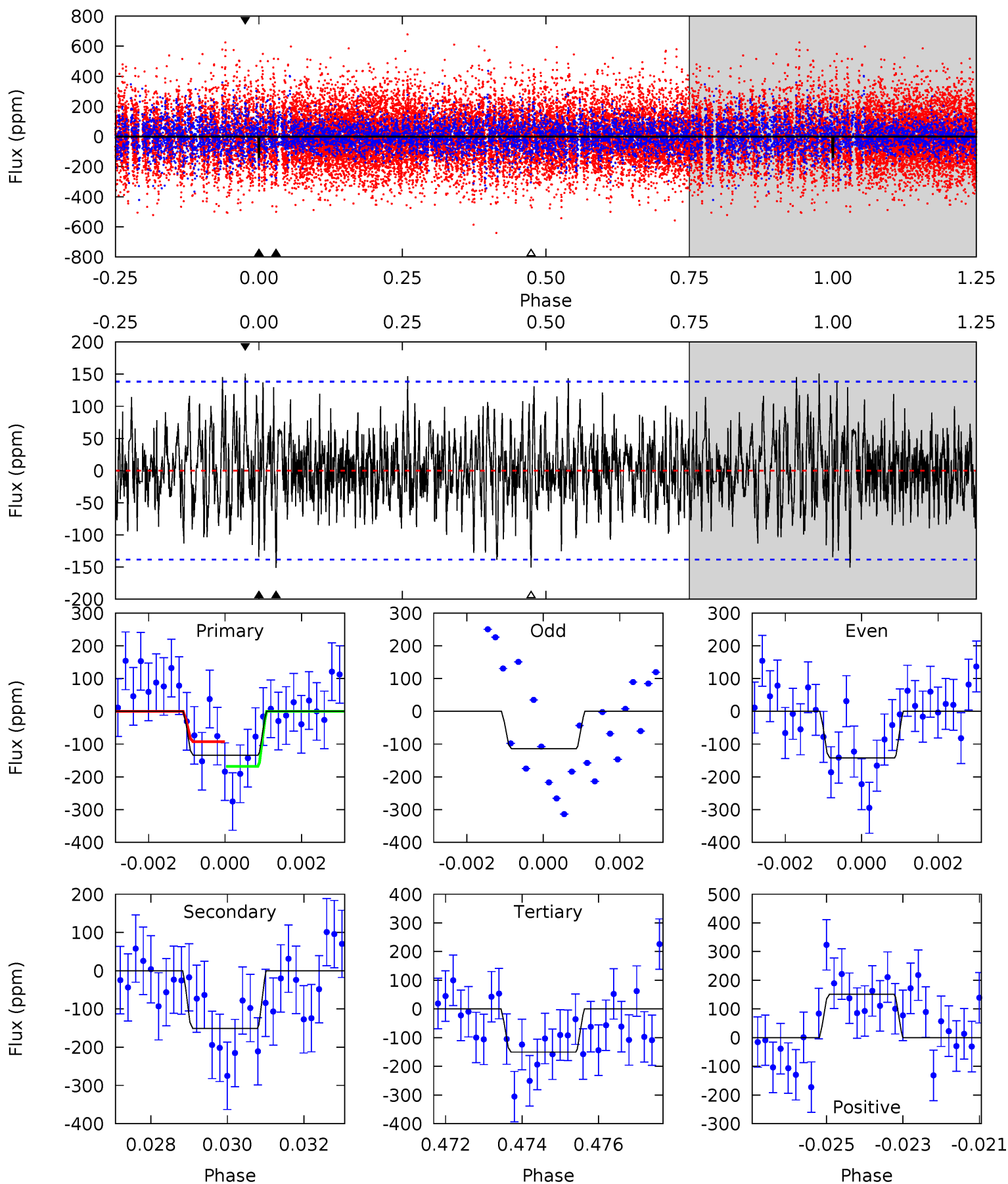
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.39	6.89	5.52	7.15	5.37	3.16	1.75	3.87	2.24	1.37	-0.26	1.34	0.93	0.43	2.95



Alt Model-Shift Uniqueness Test

003453026-08, P = 123.388975 Days, E = 130.646301 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.19	5.83	5.82	5.84	5.35	3.13	1.66	-0.63	-0.65	0.02	-0.00	0.51	0.62	0.50	1.43



Stellar Parameters For KIC 003453026

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6234^{+168}_{-168}	$3.523^{+0.352}_{-0.117}$	$-0.360^{+0.400}_{-0.300}$	$3.560^{+0.641}_{-1.496}$	$1.541^{+0.209}_{-0.389}$	$0.048^{+0.137}_{-0.017}$
	+3%/-3%	+10%/-3%	+111%/-83%	+18%/-42%	+14%/-25%	+285%/-36%
Source	PHO1	FLK73	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 003453026-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-174 ± 25	$6.10^{+4.25}_{-3.58}$	957^{+63}_{-90}	5541^{+3365}_{-1062}	802^{+3909}_{-517}
Alt.	-151 ± 26	$4.87^{+4.30}_{-3.05}$	952^{+60}_{-98}	5830^{+4803}_{-1271}	1061^{+6838}_{-741}

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 $A_{obs} \gg 1.0$

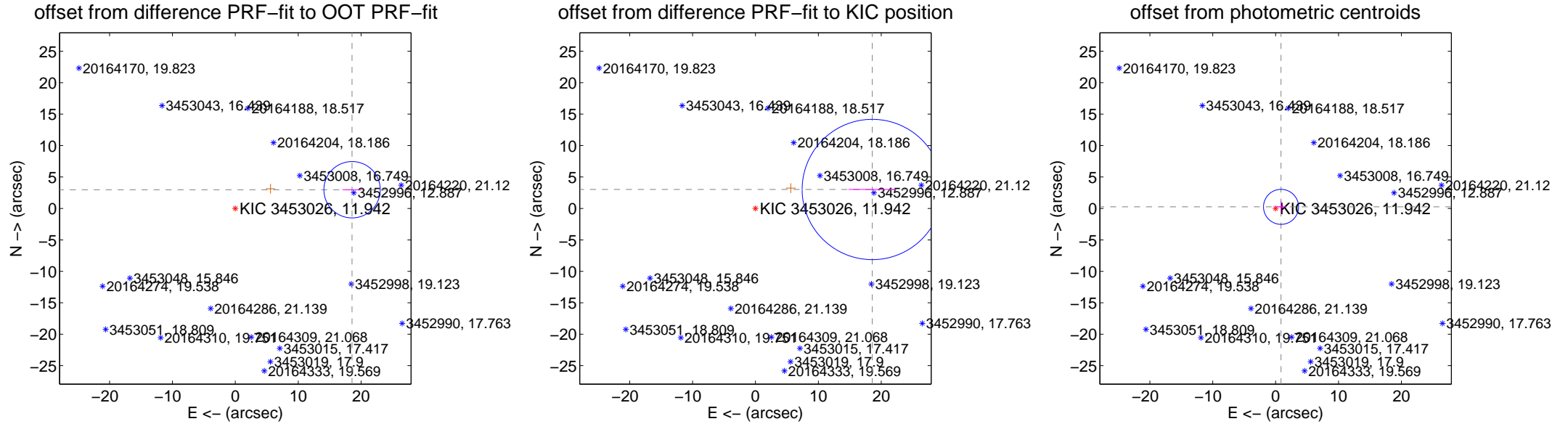
DV Centroid Data

Supplemental centroid analysis for 003453026-08. **Kepler magnitude: 11.94.** Transit SNR 7.59

There are 1 quarters with good PRF difference image offsets

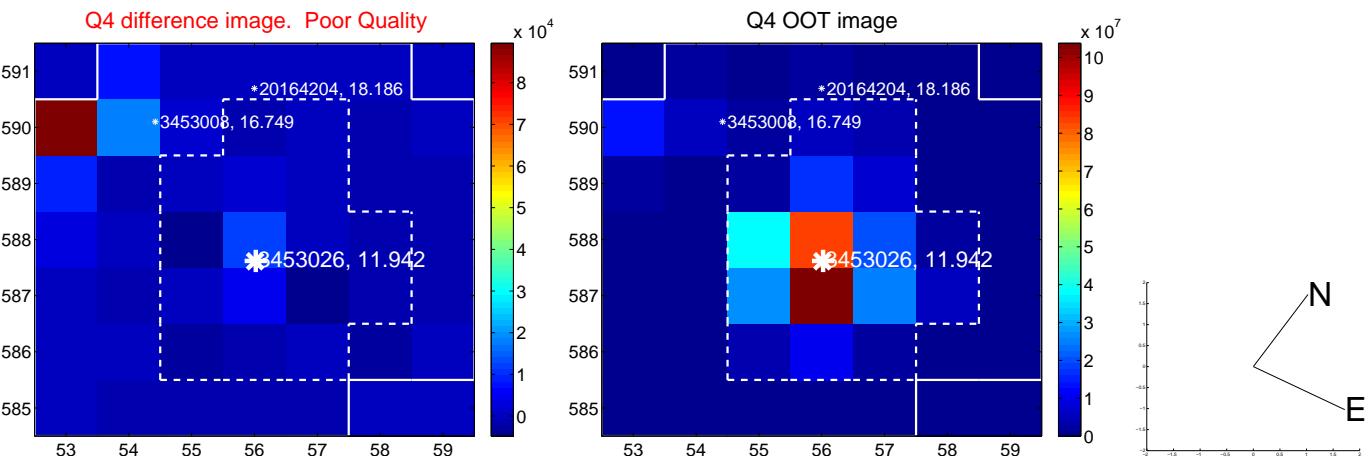
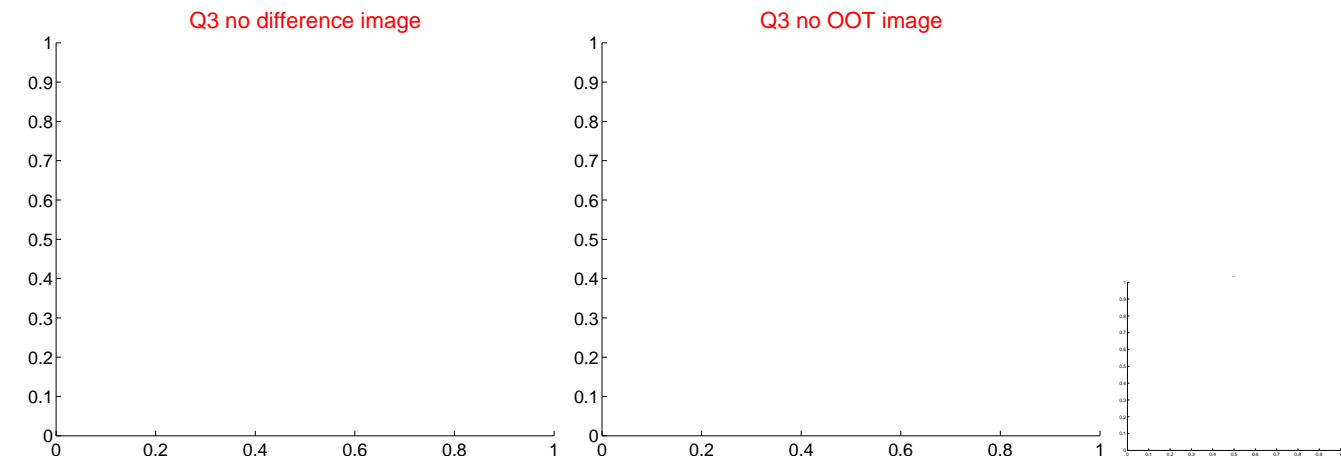
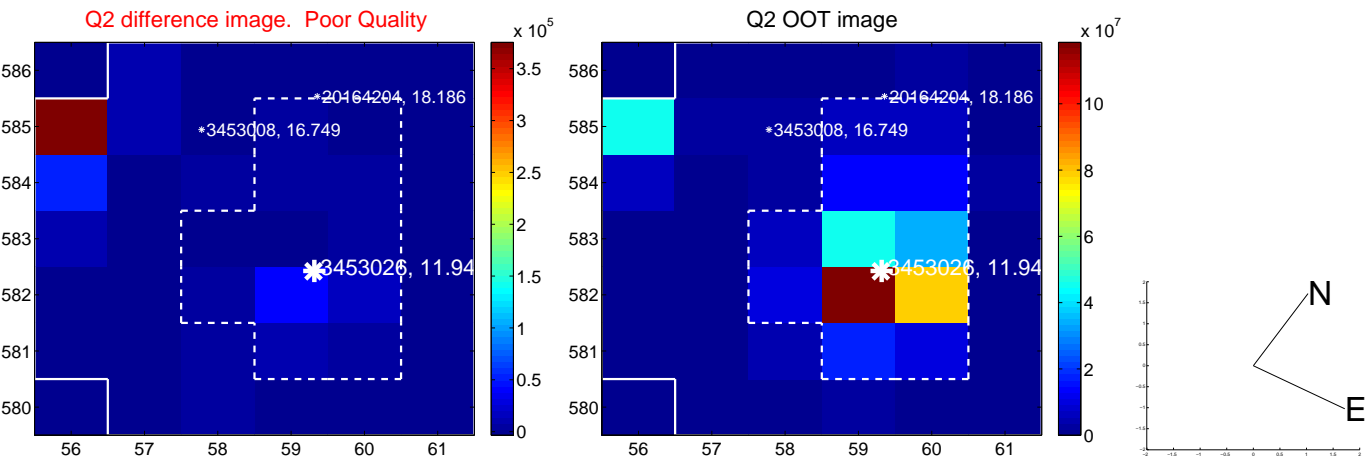
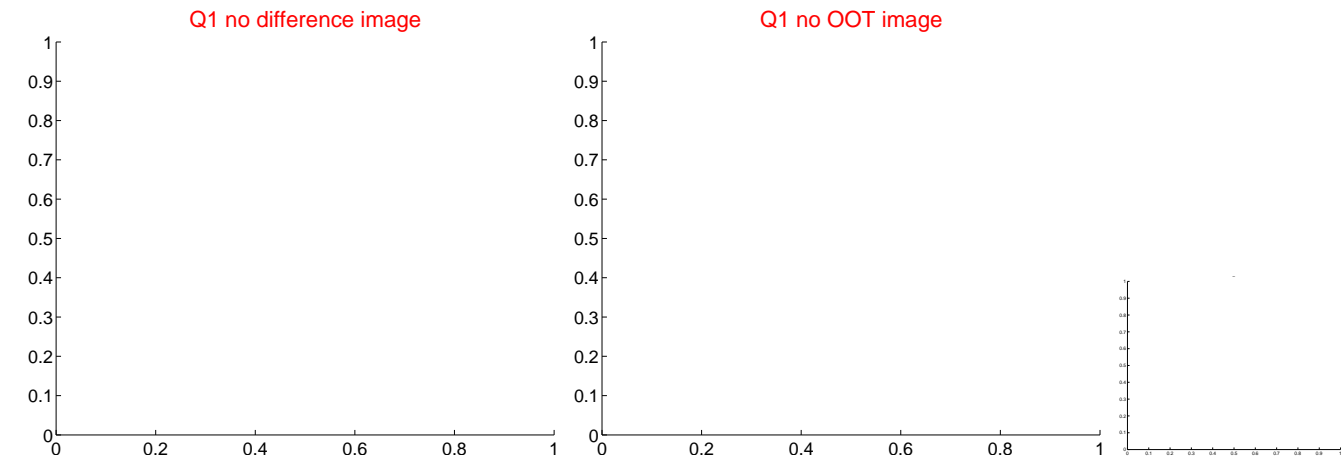
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	18.800 ± 1.494	12.59	-18.563 ± 1.513	2.974 ± 0.072
PRF-fit source offset from KIC position	18.818 ± 3.719	5.06	-18.575 ± 3.778	3.015 ± 0.092
photometric centroid source offset	0.89 ± 0.93	0.96	-0.86 ± 0.93	0.25 ± 0.93

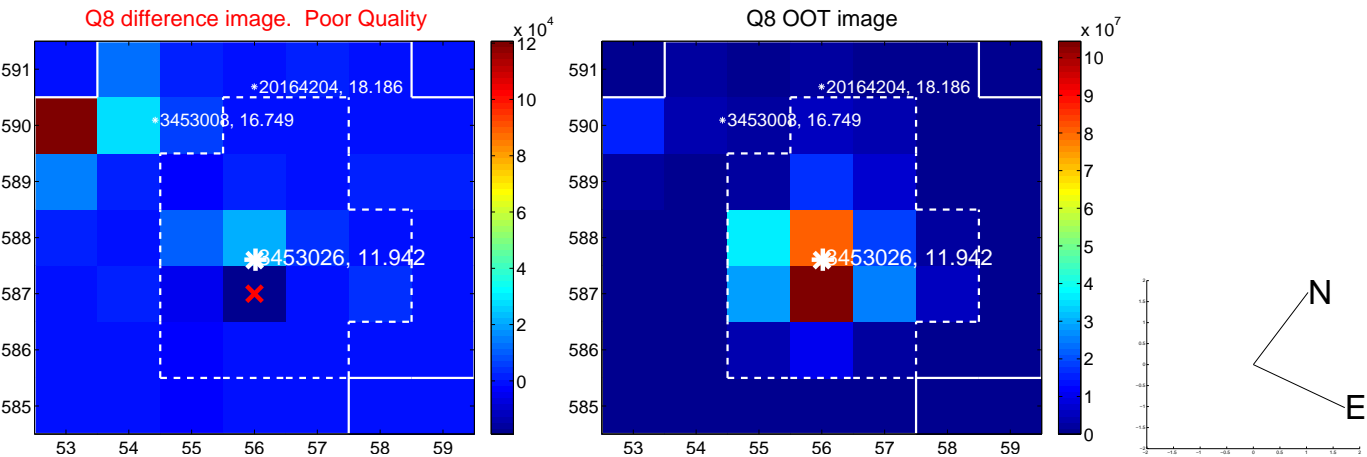
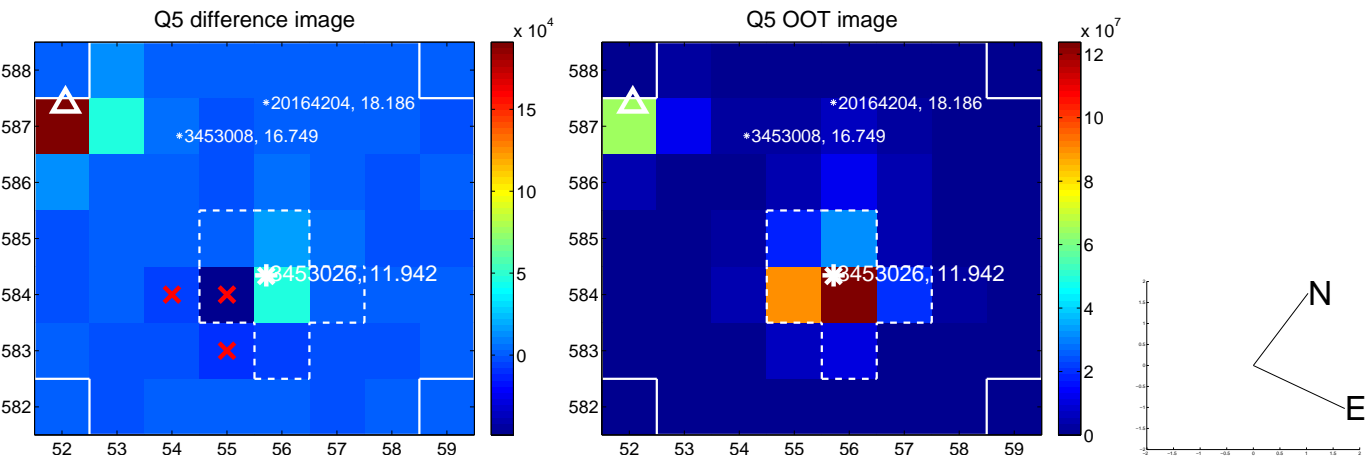


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

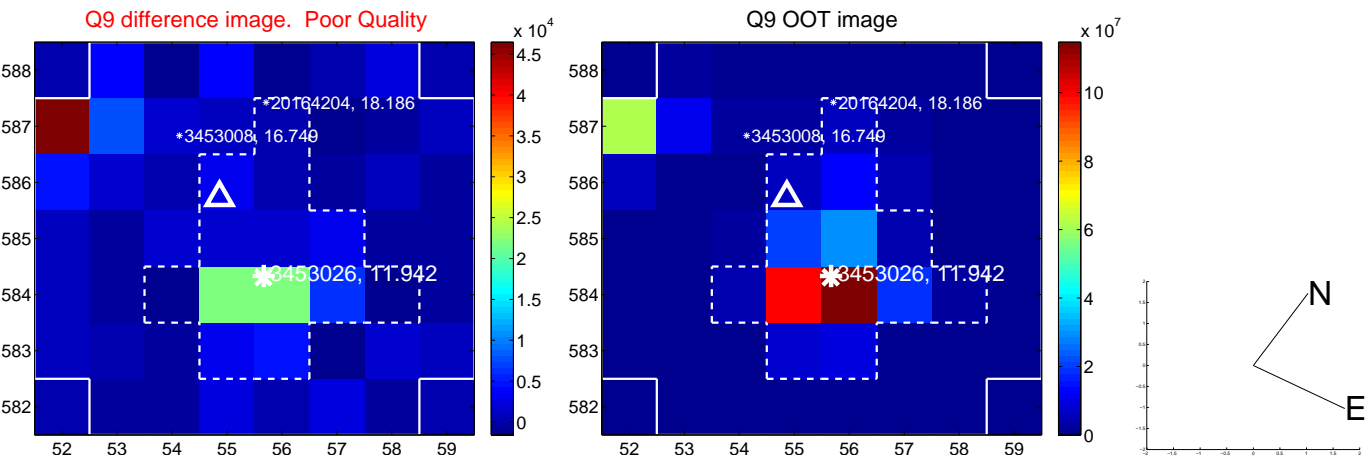
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



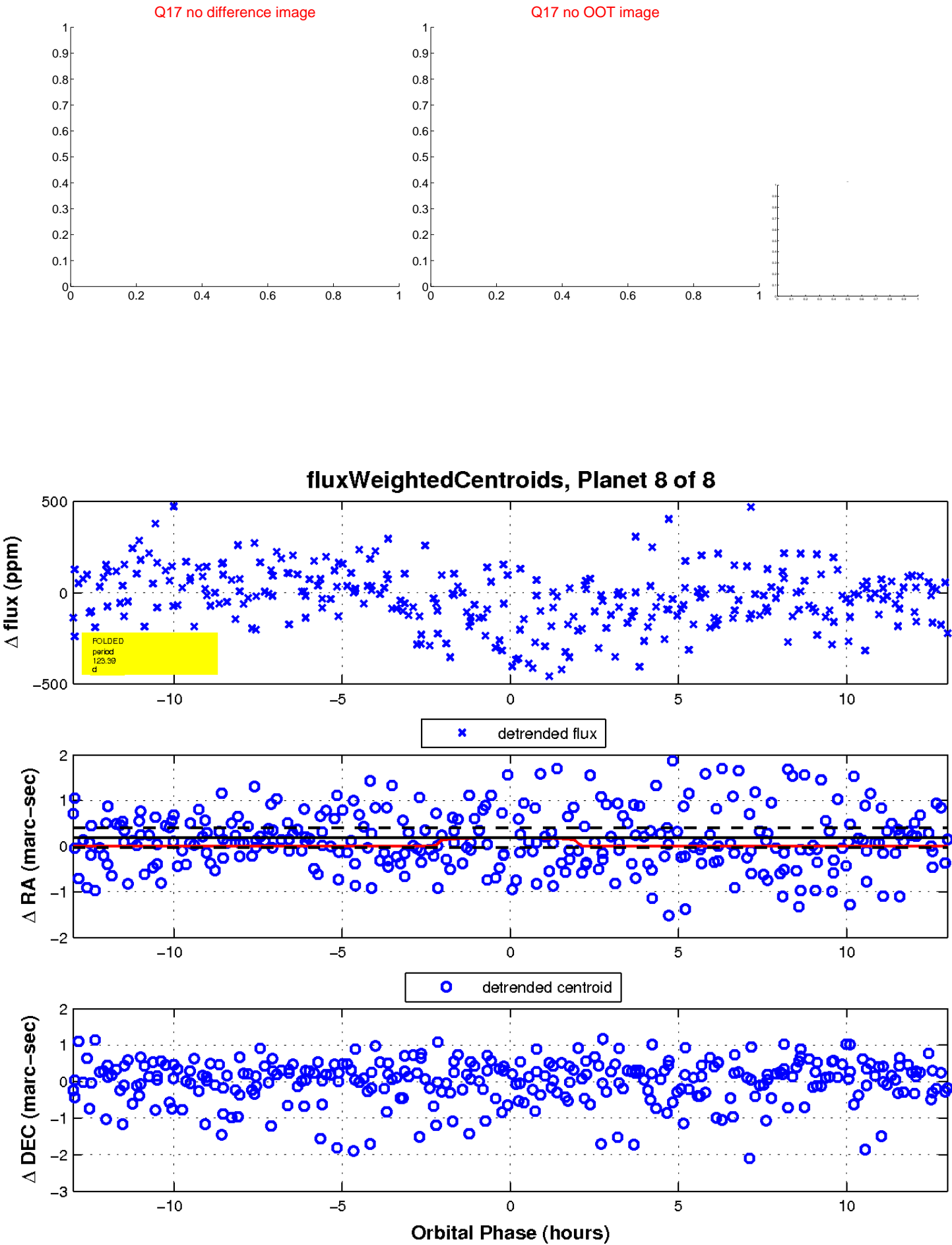
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

