

KIC 007429287

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})
007429287-01	OBS	4260.03	358.666817	296.966877	177.4	15.982	7.7	8.3	1.41	5619	2.05	2.02
007429287-02	OBS	No	373.011416	295.811866	116.0	7.831	10.1	4.8	1.41	5619	1.77	1.92
007429287-03	OBS	No	361.531452	287.204270	186.8	11.074	7.9	8.7	1.41	5619	2.10	2.00
007429287-04	OBS	4260.04	84.793598	180.533124	42.9	17.591	8.0	7.6	1.41	5619	0.99	13.82
007429287-05	OBS	No	385.689189	308.737848	141.9	7.391	8.1	8.6	1.41	5619	1.92	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007429287-01	OBS	FP	0.05	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-04	OBS	PC	0.97	0	0	0	0	CENT_SATURATED
007429287-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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.

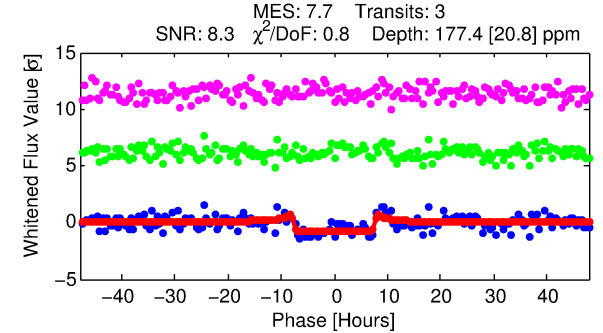
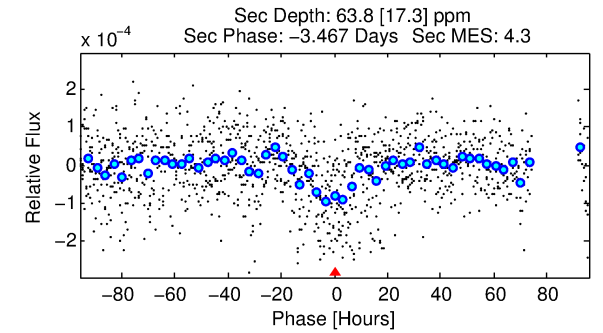
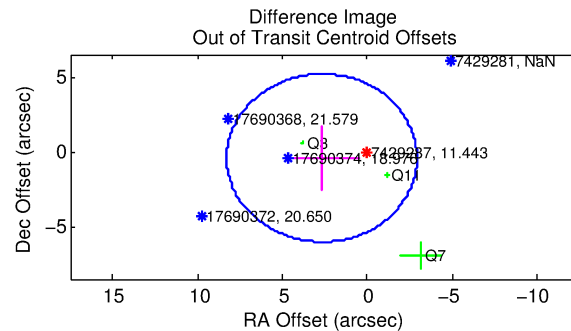
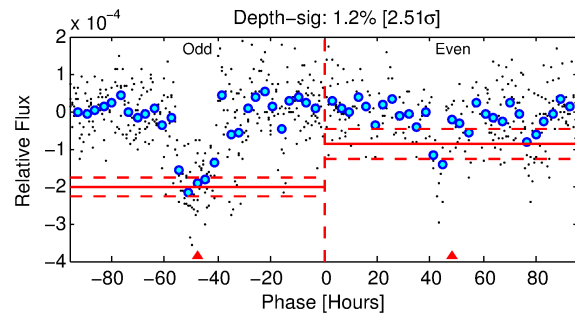
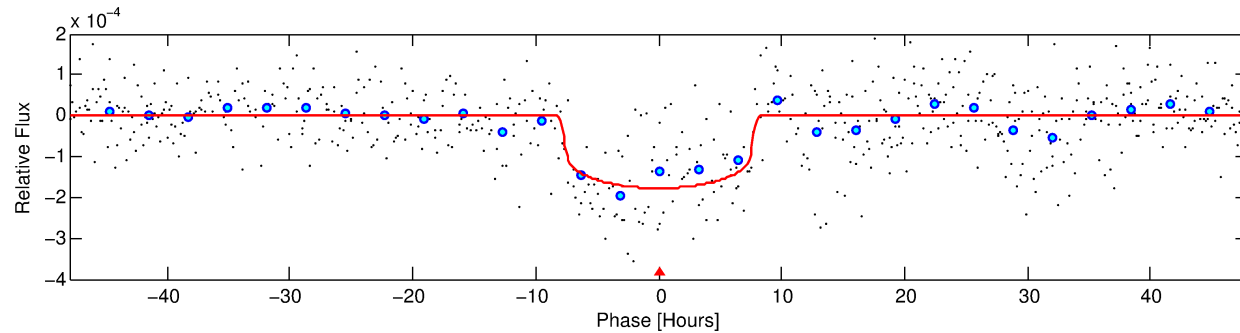
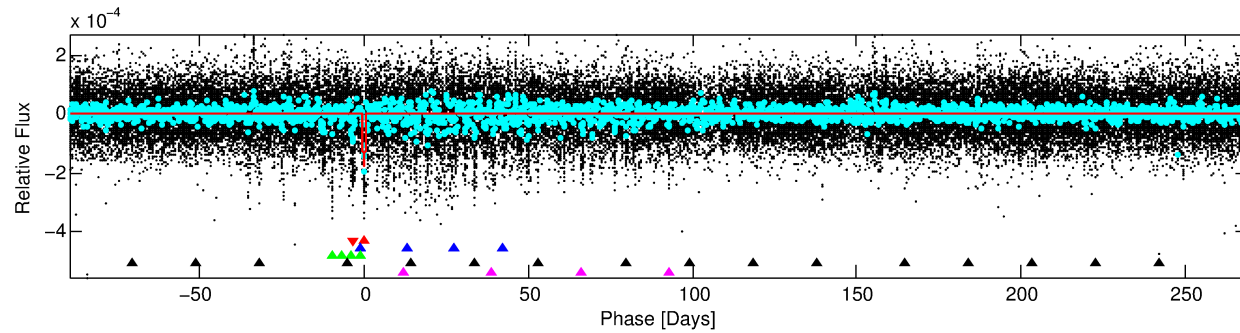
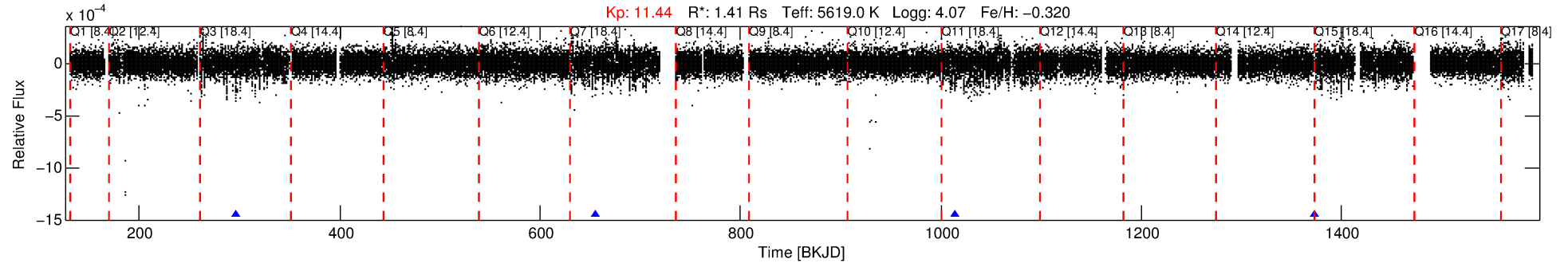
Ephemeris Match Information For 007429287-01

No Significant Match Found

DV One-Page Summary

KIC: 7429287 Candidate: 1 of 5 Period: 358.667 d

KOI: K04260 Corr: No Ephemeris Match



DV Fit Results:

Period = 358.66682 [0.00847] d
Epoch = 296.9669 [0.0111] BKJD
 $R_p/R^* = 0.0134$ [0.0027]
 $a/R^* = 112.02$ [95.90]
 $b = 0.77$ [0.45]
 $S_{\text{eff}} = 2.02$ [0.15]
 $T_{\text{eq}} = 304$ [6] K
 $R_p = 2.05$ [0.42] R_e
 $a = 0.9350$ [0.0241] AU
 $A_g = 7281.97$ [3550.82] [2.05 σ]
 $T_{\text{eff}} = 4342$ [533] K [7.57 σ]

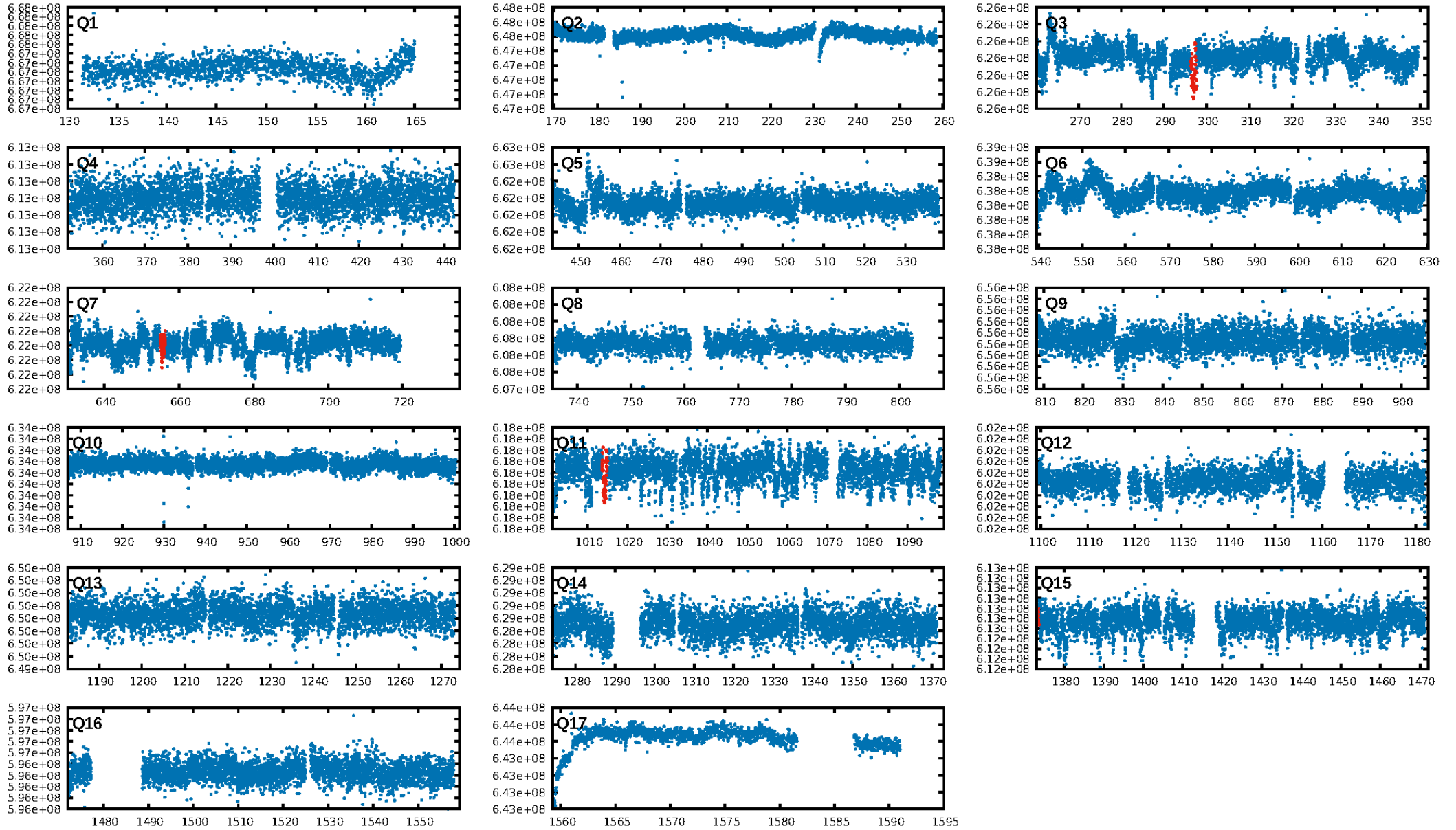
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [276.56 σ]
LongPeriod-sig: 100.0% [3.54 σ]
ModelChiSquare2-sig: 12.8%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.43e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.715
Centroid-sig: 0.1%
Centroid-so: 2.062 arcsec [2.52 σ]
OotOffset-rm: 2.700 arcsec [1.45 σ]
KicOffset-rm: 2.885 arcsec [1.86 σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.67 [2/3]

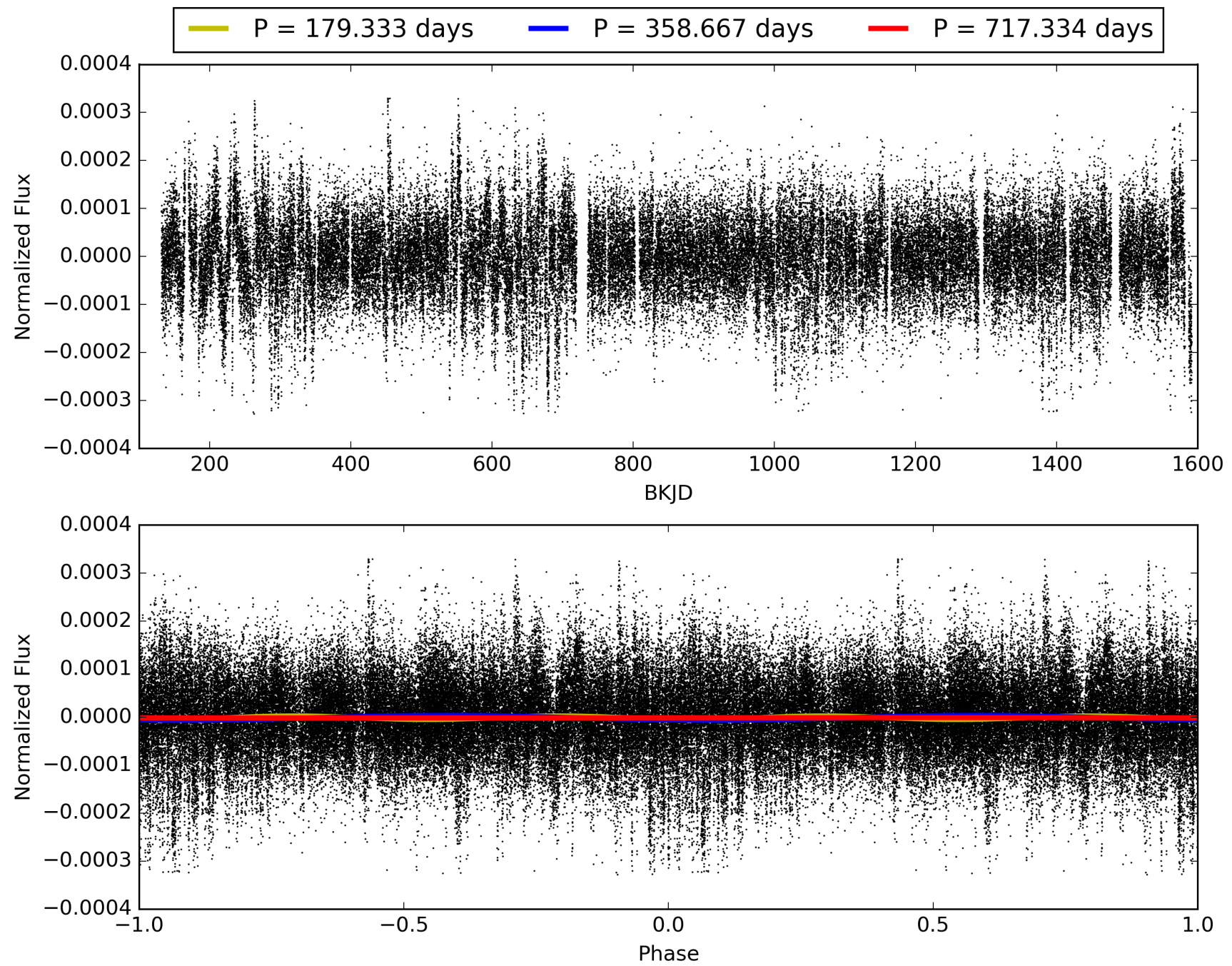
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:43:24 Z

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

TCE 007429287-01, PDC Light Curves

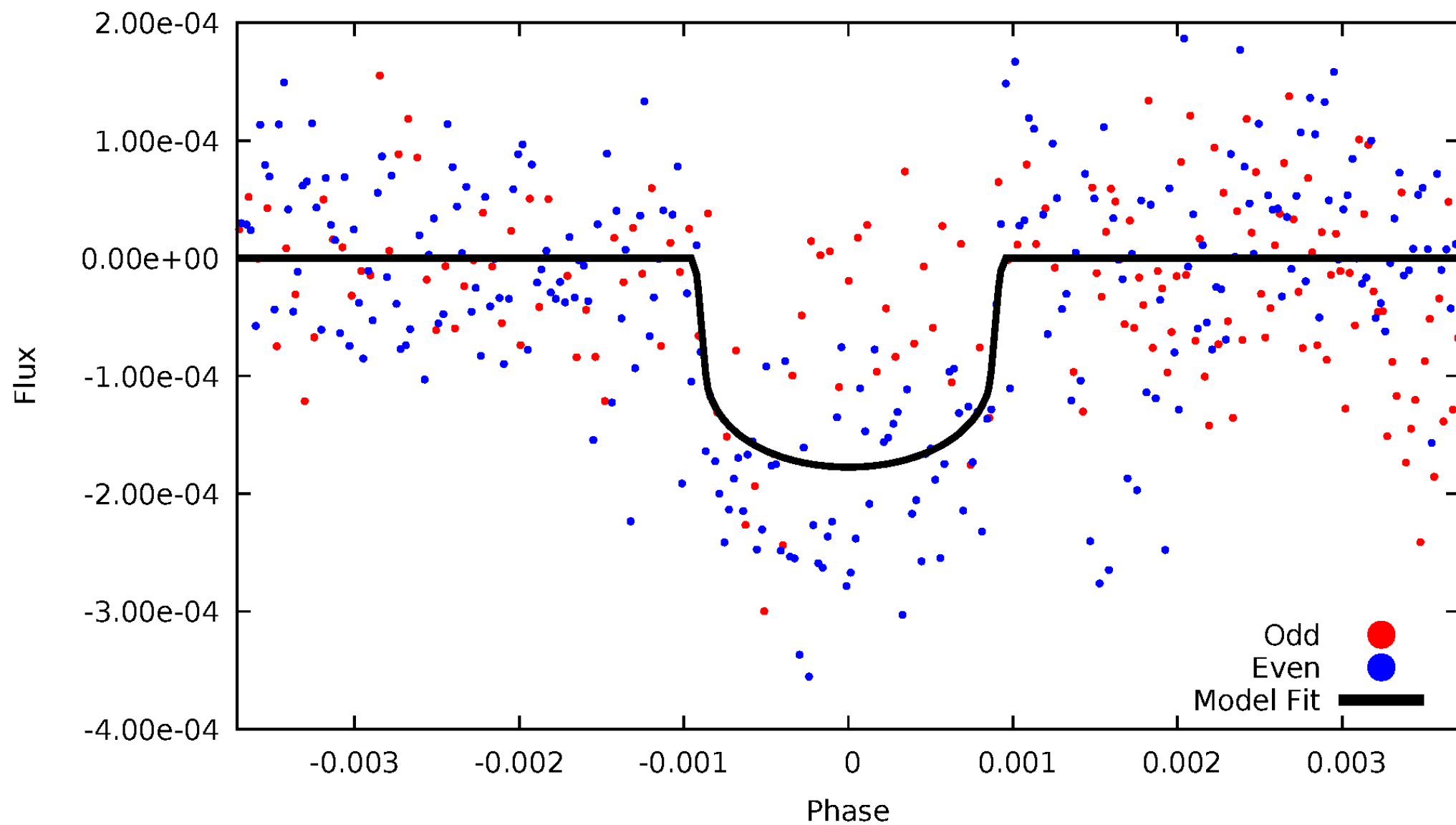


TCE 007429287-01



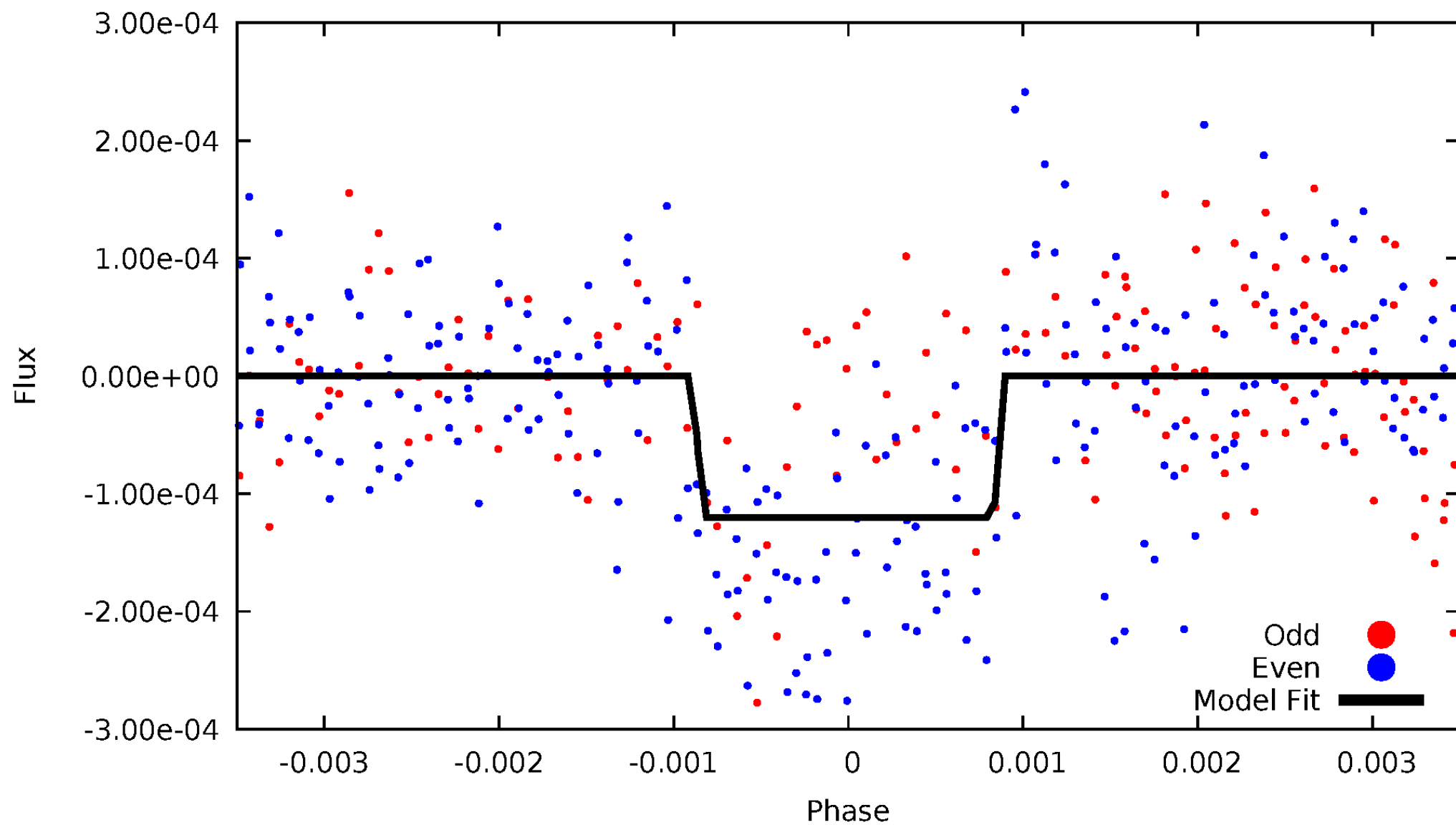
DV Odd/Even

TCE 007429287-01



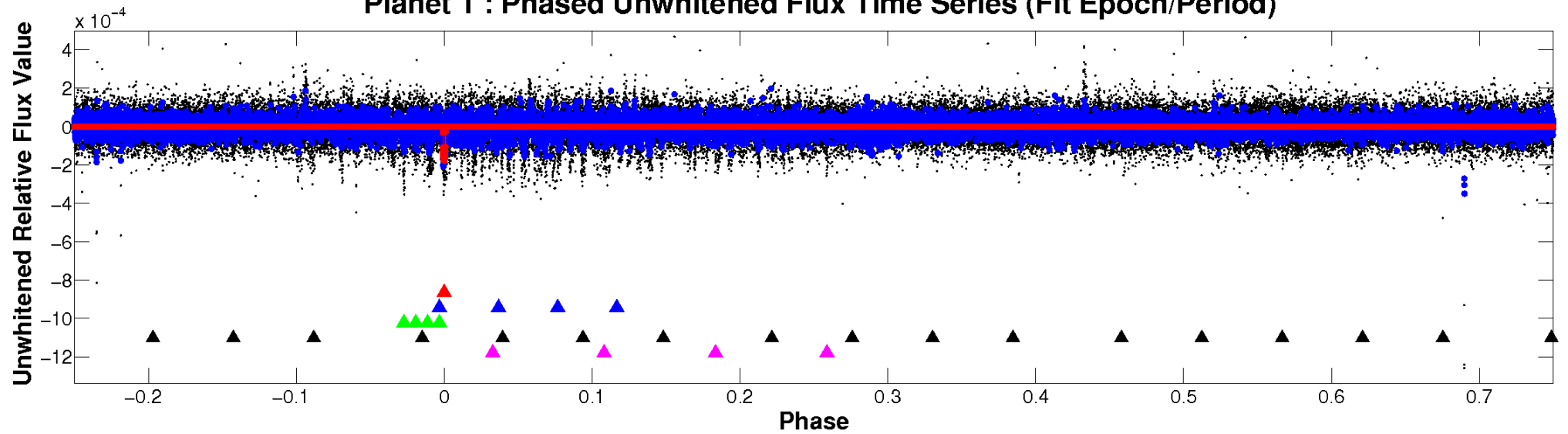
ALT Odd/Even

TCE 007429287-01

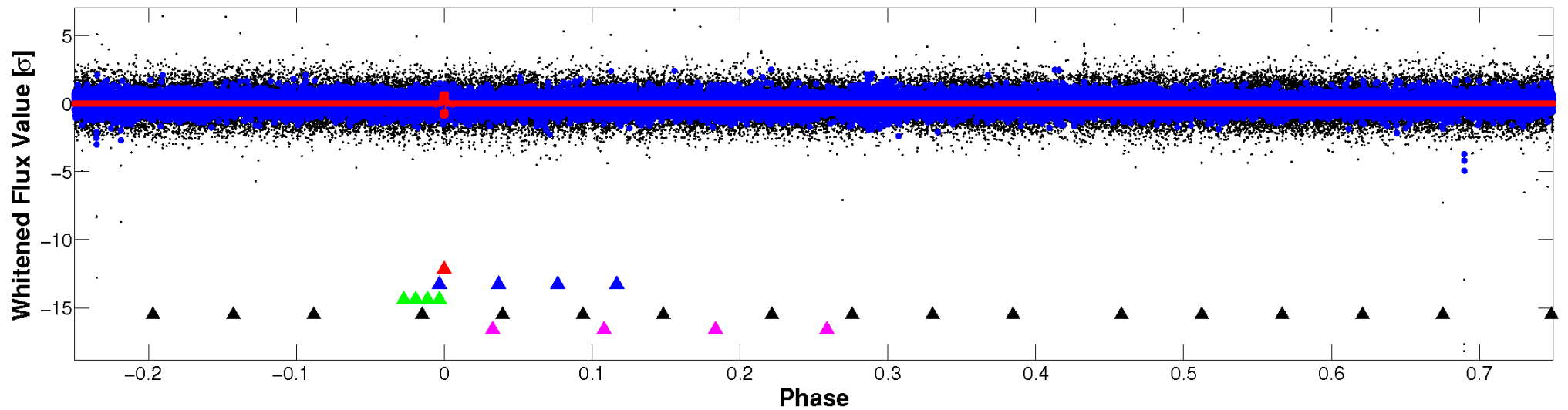


Non-Whitened Vs. Whitened Light Curve

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

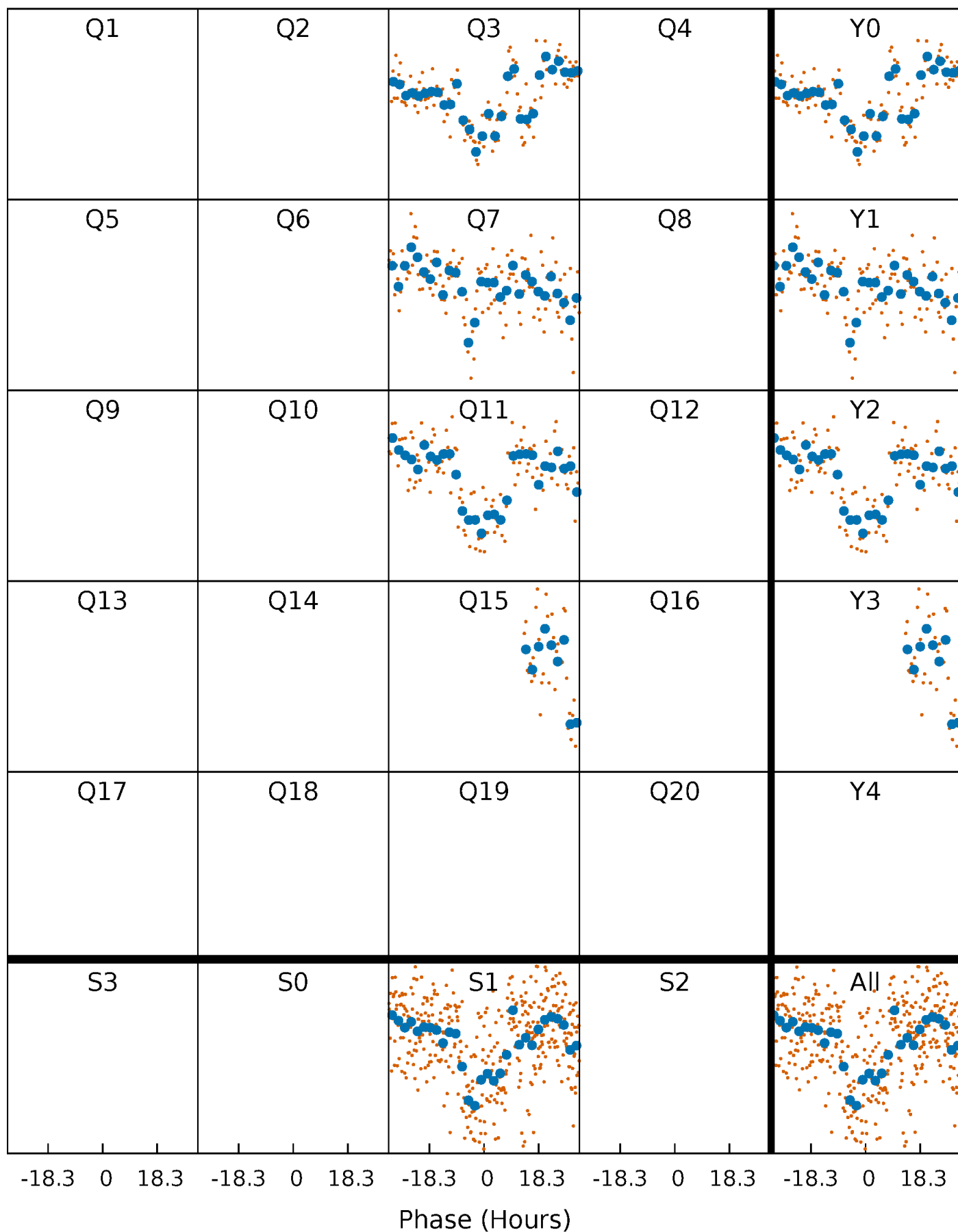


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



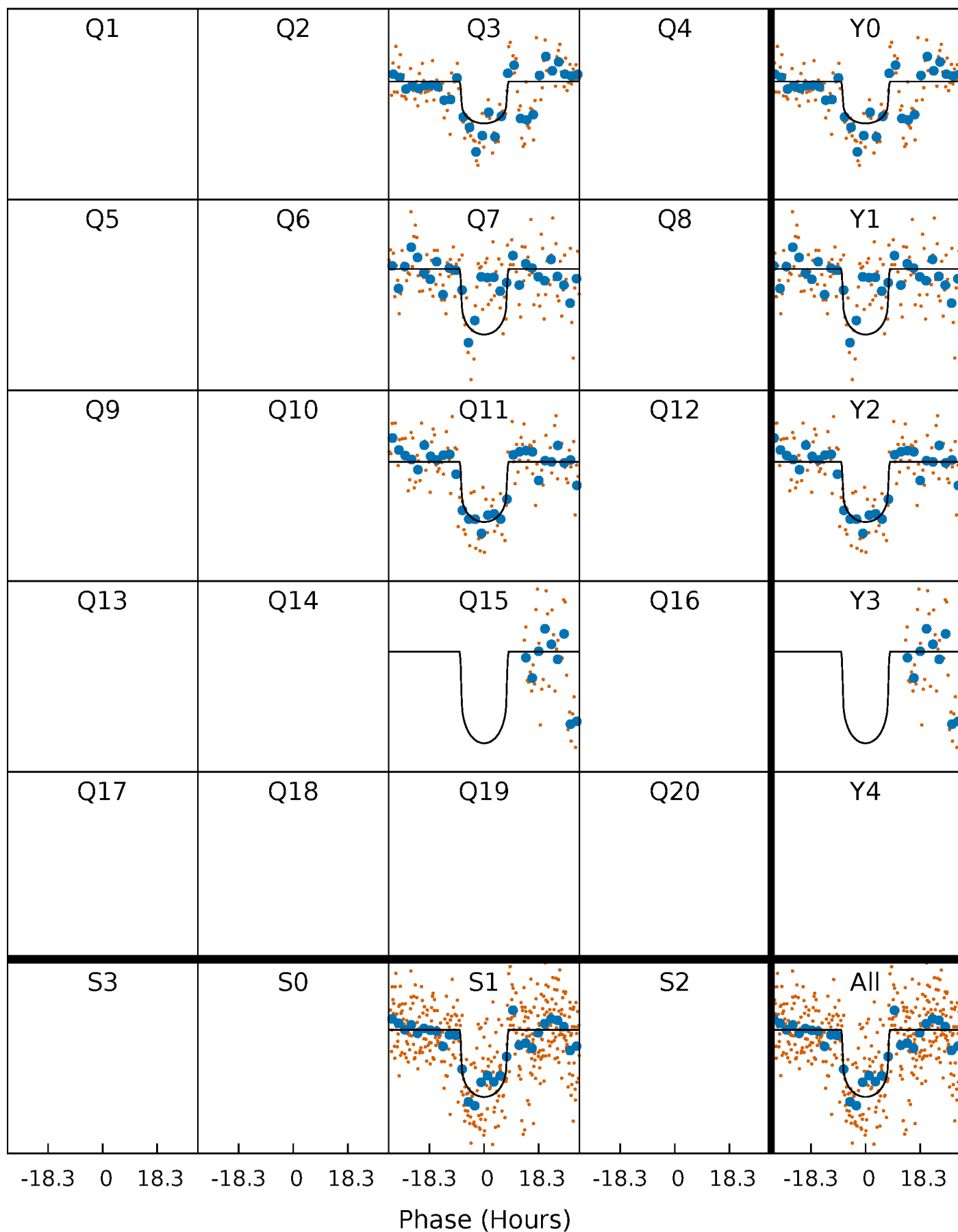
PDC Quarter-Phased Transit Curves

TCE 007429287-01 $P=358.666817$ Days $T_0=296.966877$ (BKJD)



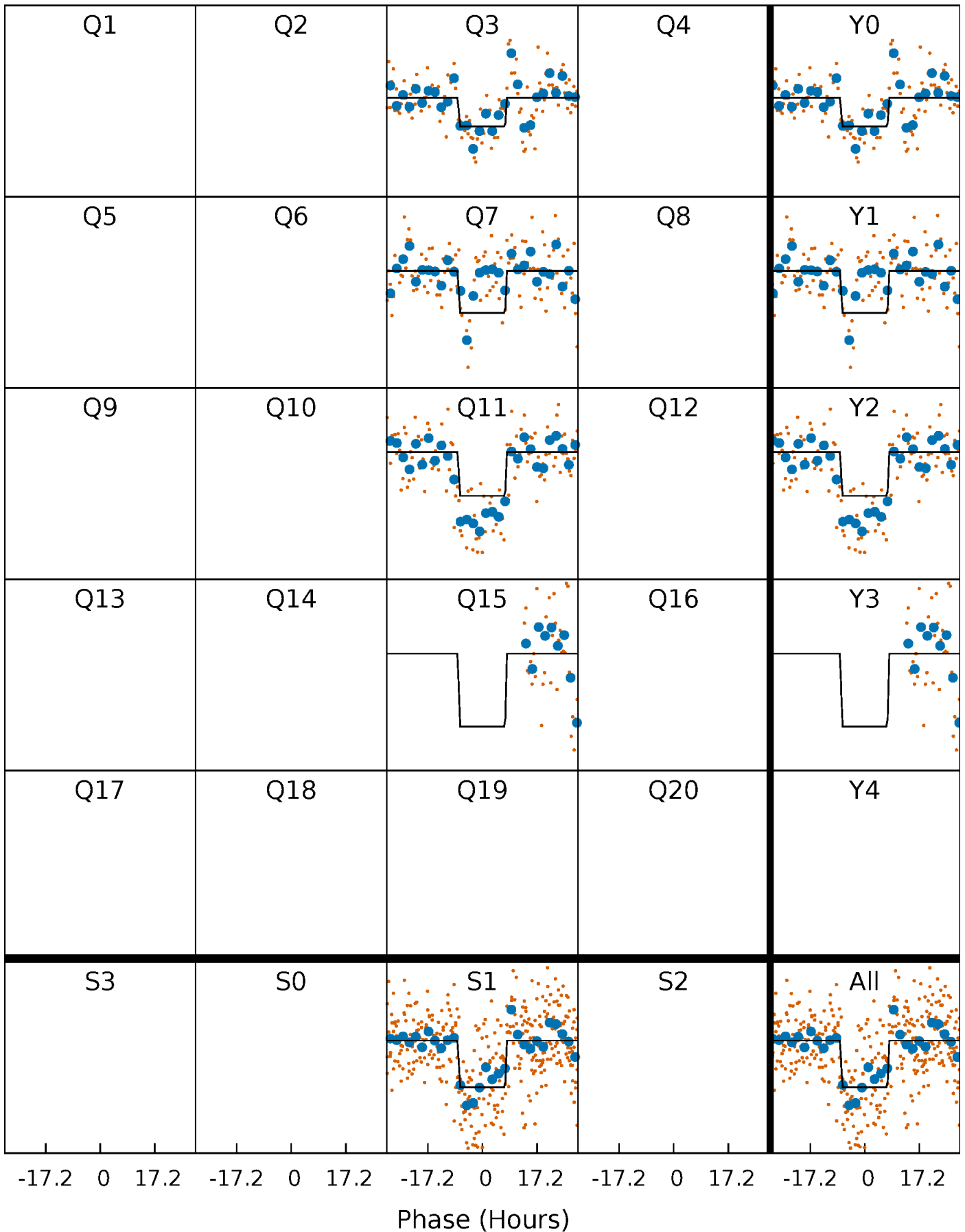
DV Quarter-Phased Transit Curves

TCE 007429287-01 P=358.666817 Days $T_0=296.966877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

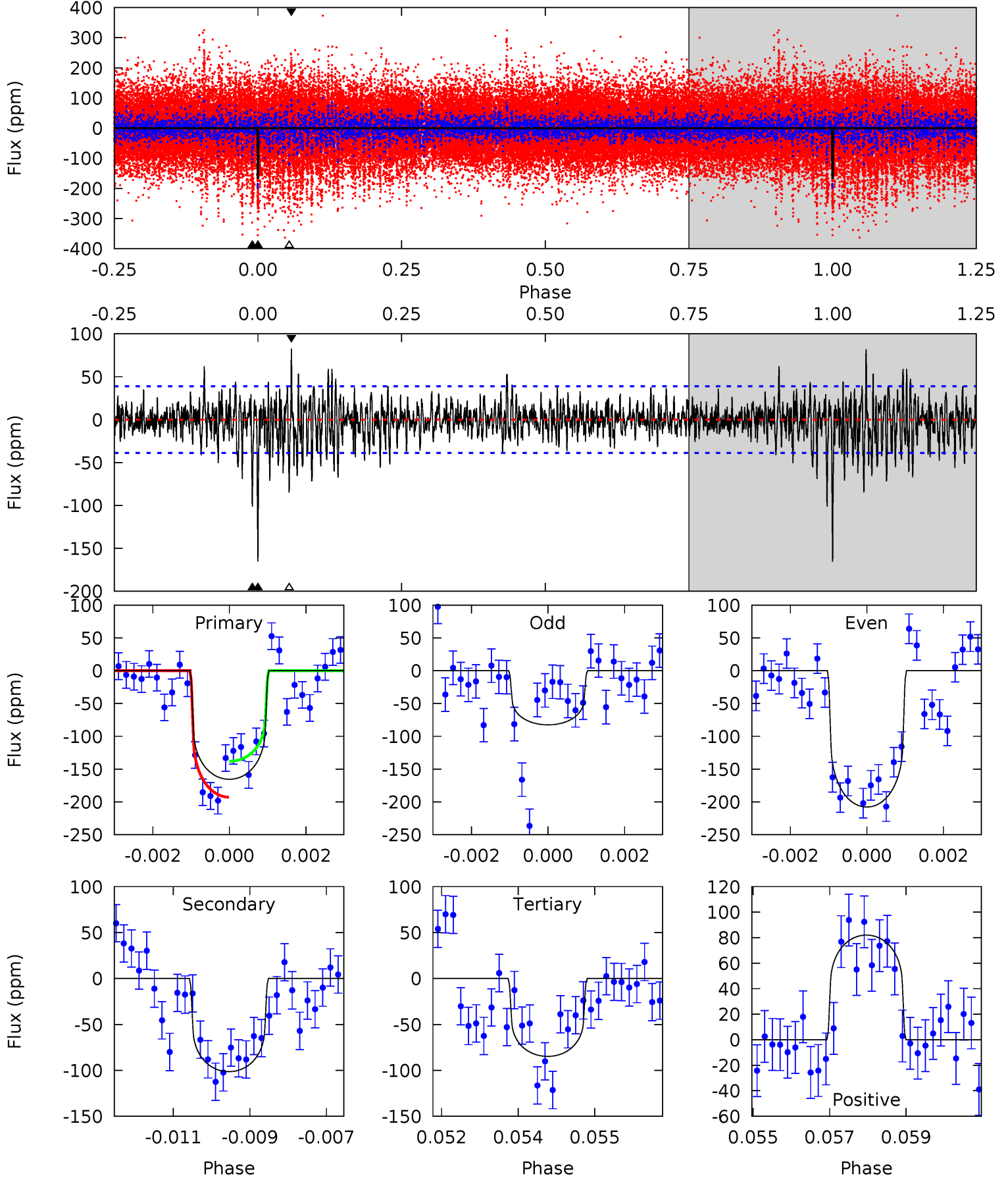
TCE 007429287-01 $P=358.670279$ Days $T_0=296.967589$ (BKJD)



DV Model-Shift Uniqueness Test

007429287-01, P = 358.666817 Days, E = 296.966877 Days

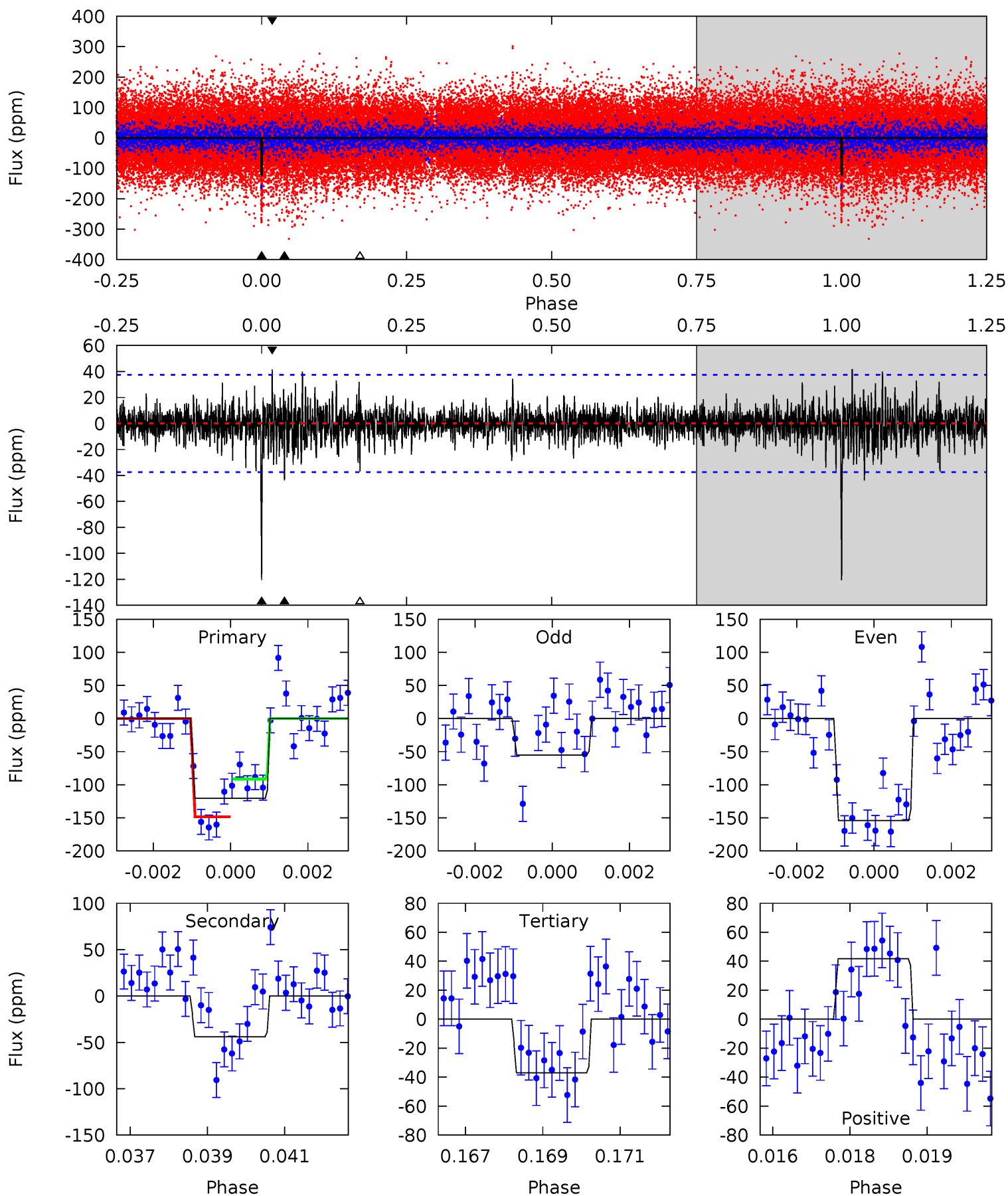
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	13.9	11.7	11.3	5.34	3.11	2.35	11.1	11.5	2.28	2.67	8.18	0.86	0.33	3.76



Alt Model-Shift Uniqueness Test

007429287-01, P = 358.670279 Days, E = 296.967589 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	6.27	5.27	5.95	5.35	3.13	1.22	12.0	11.3	0.99	0.32	6.67	1.02	0.26	4.05



Stellar Parameters For KIC 007429287

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5619^{+93}_{-42}	$4.070^{+0.013}_{-0.011}$	$-0.320^{+0.150}_{-0.100}$	$1.406^{+0.050}_{-0.021}$	$0.848^{+0.058}_{-0.017}$	$0.430^{+0.018}_{-0.022}$
	+2%/-1%	+0%/-0%	+47%/-31%	+4%/-1%	+7%/-2%	+4%/-5%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007429287-01 / KOI 4260.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-101 ± 7	$2.08^{+0.38}_{-0.42}$	425^{+7}_{-4}	4957^{+512}_{-328}	11508^{+6339}_{-3413}
Alt.	-44 ± 7	$1.71^{+0.41}_{-0.42}$	425^{+7}_{-5}	4527^{+560}_{-376}	7211^{+5686}_{-2568}

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

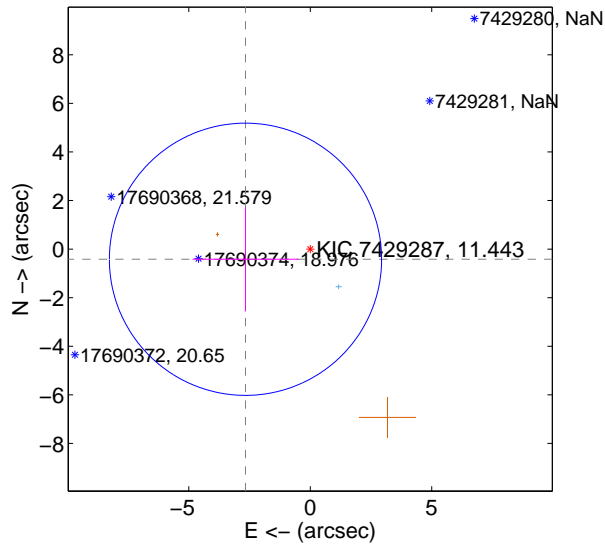
Supplemental centroid analysis for 007429287-01. **Kepler magnitude: 11.44.** Transit SNR 8.35

There are 1 quarters with good PRF difference image offsets

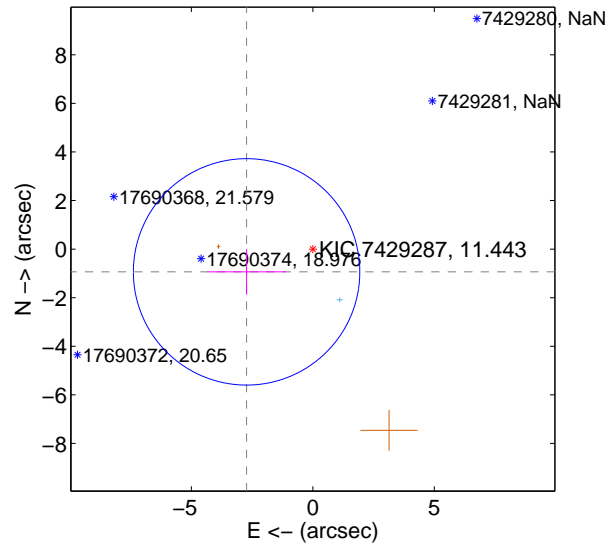
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.700 ± 1.868	1.45	2.667 ± 2.180	-0.419 ± 2.148
PRF-fit source offset from KIC position	2.885 ± 1.554	1.86	2.728 ± 1.611	-0.938 ± 0.935
photometric centroid source offset	2.06 ± 0.82	2.52	0.44 ± 1.13	-2.01 ± 0.80

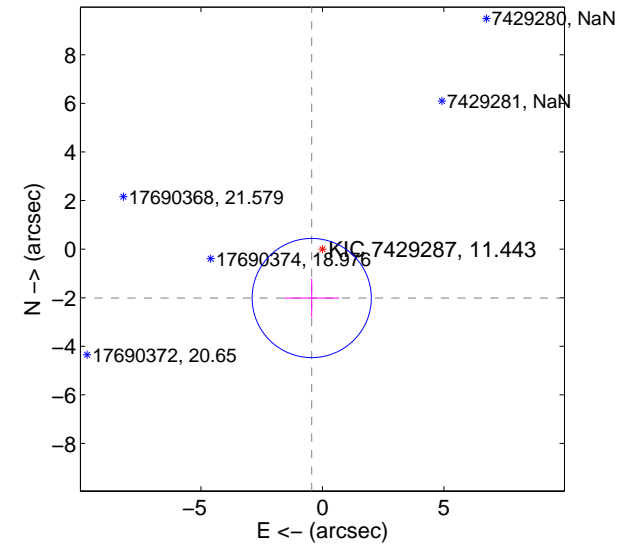
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

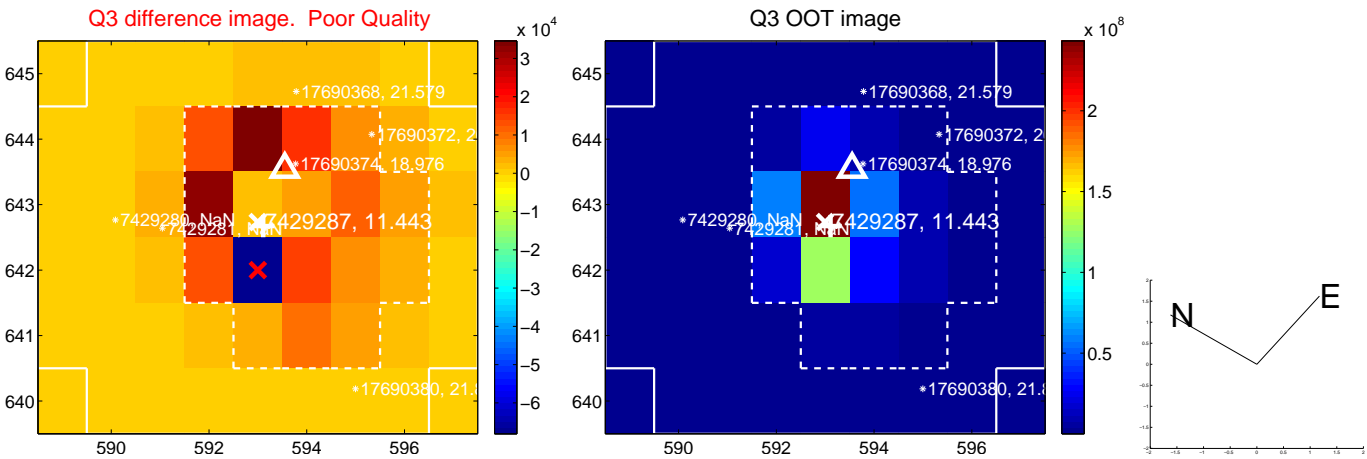


offset from photometric centroids

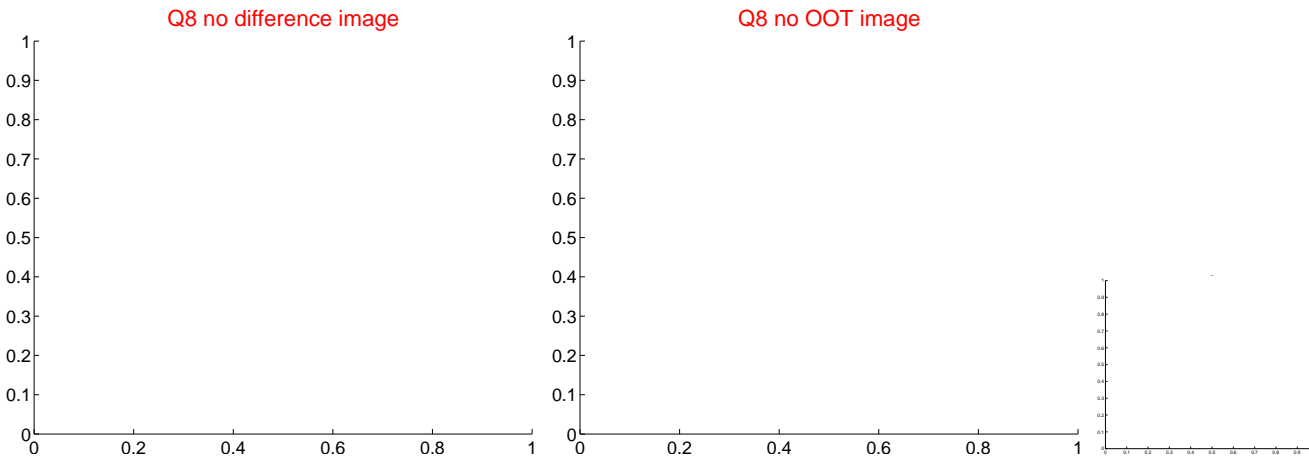
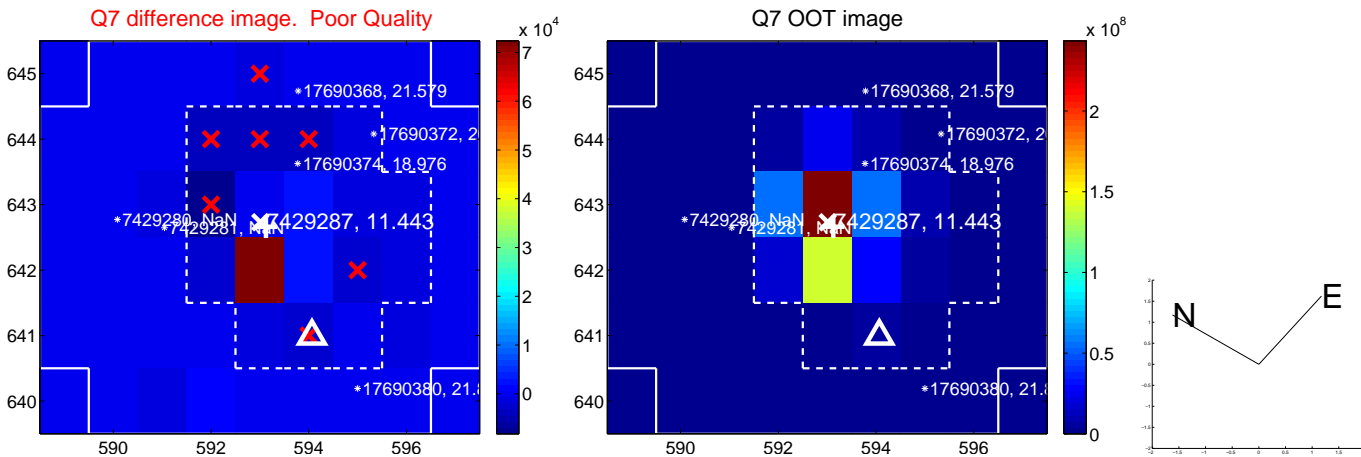
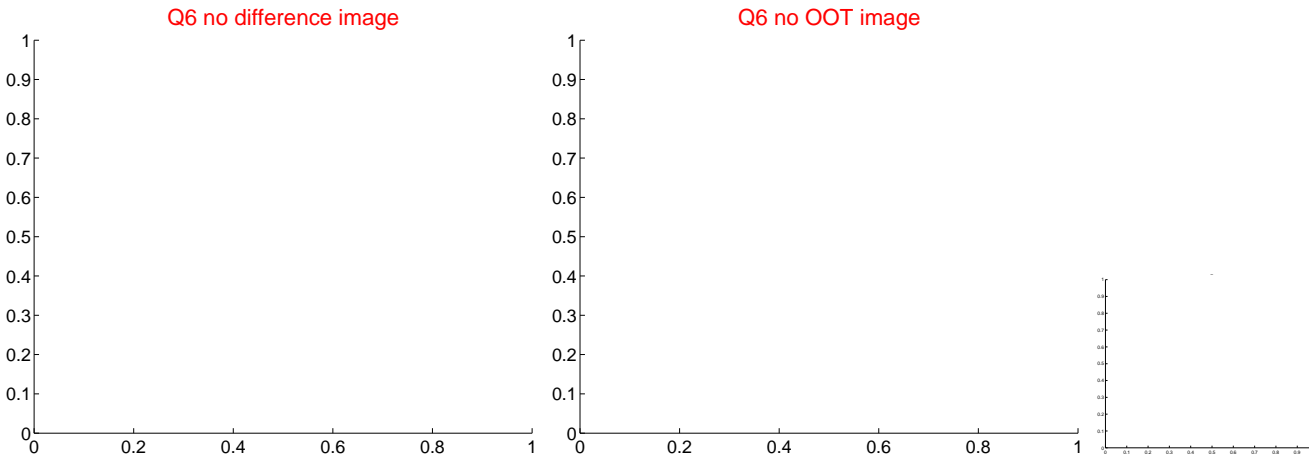
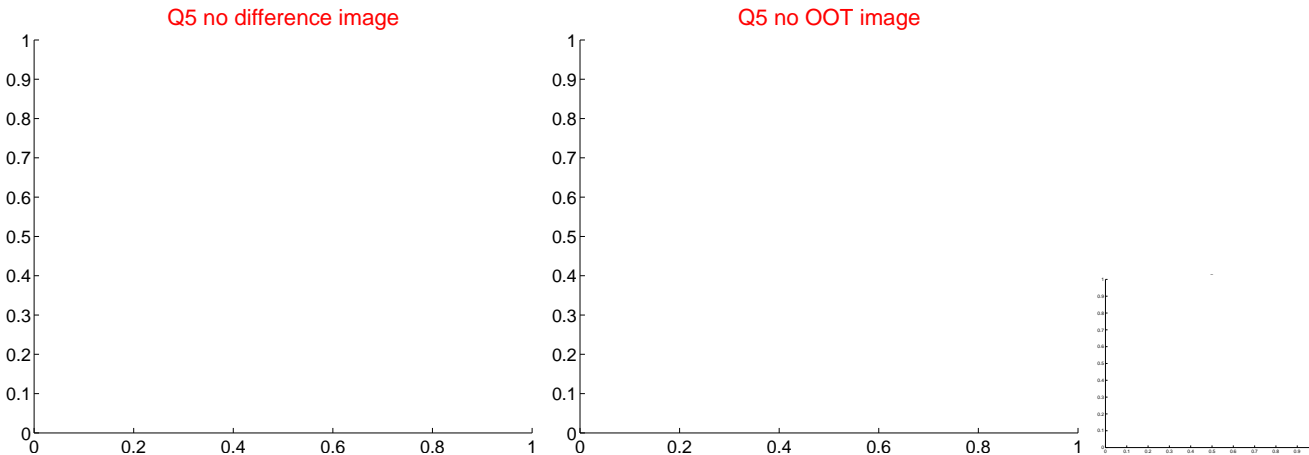


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

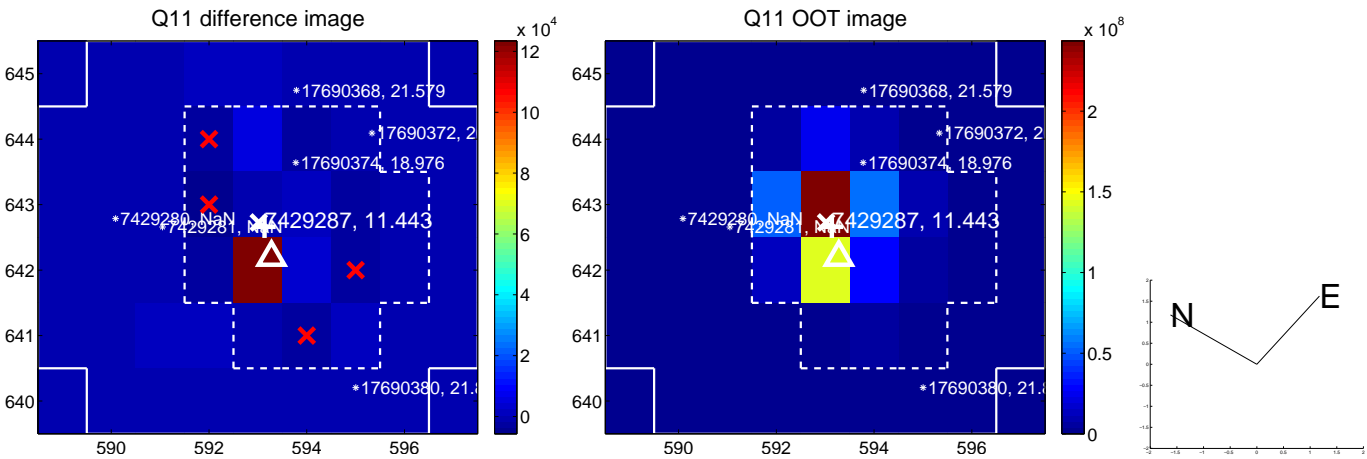
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



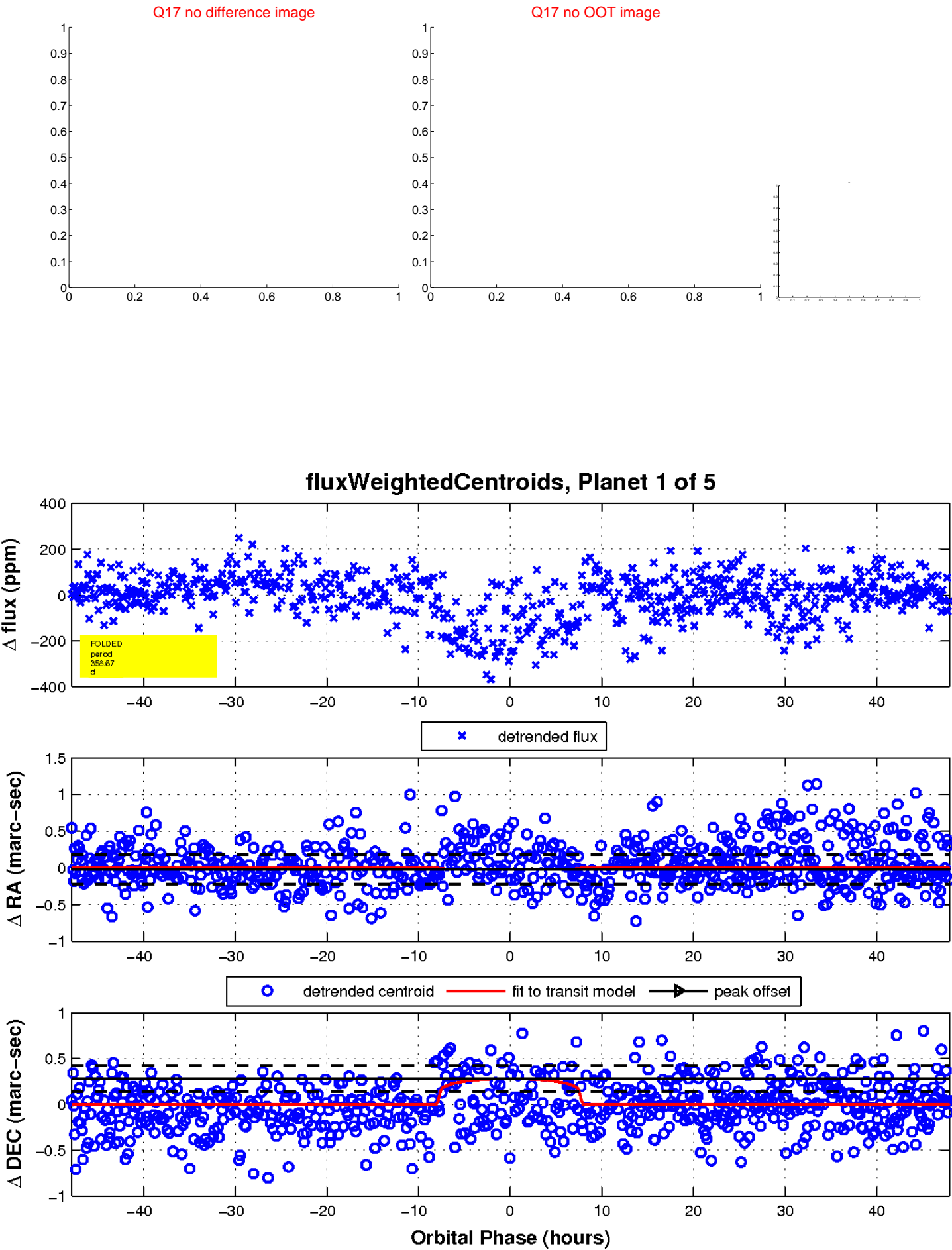
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

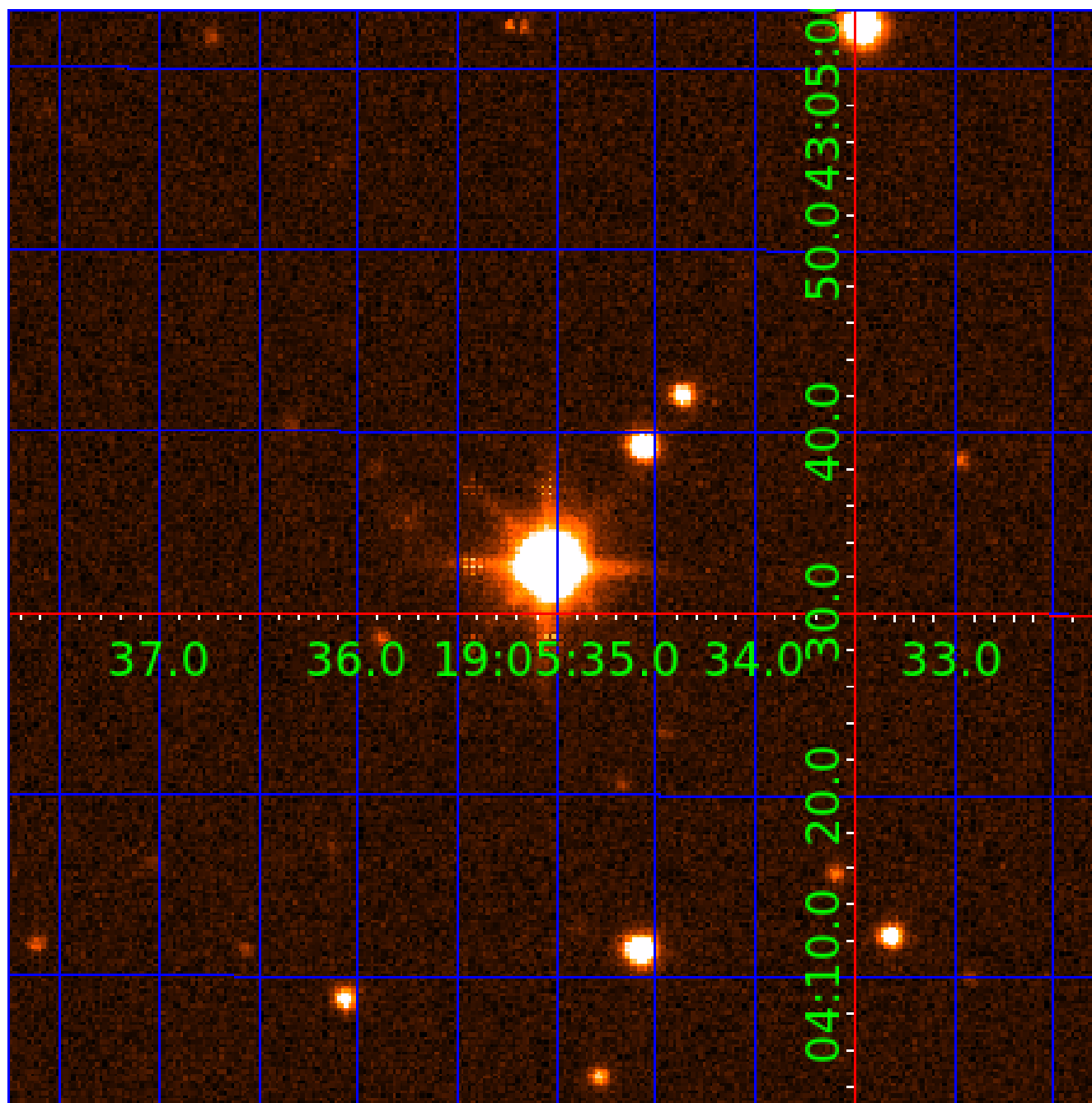


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007429287

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})
007429287-01	OBS	4260.03	358.666817	296.966877	177.4	15.982	7.7	8.3	1.41	5619	2.05	2.02
007429287-02	OBS	No	373.011416	295.811866	116.0	7.831	10.1	4.8	1.41	5619	1.77	1.92
007429287-03	OBS	No	361.531452	287.204270	186.8	11.074	7.9	8.7	1.41	5619	2.10	2.00
007429287-04	OBS	4260.04	84.793598	180.533124	42.9	17.591	8.0	7.6	1.41	5619	0.99	13.82
007429287-05	OBS	No	385.689189	308.737848	141.9	7.391	8.1	8.6	1.41	5619	1.92	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007429287-01	OBS	FP	0.05	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-04	OBS	PC	0.97	0	0	0	0	CENT_SATURATED
007429287-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

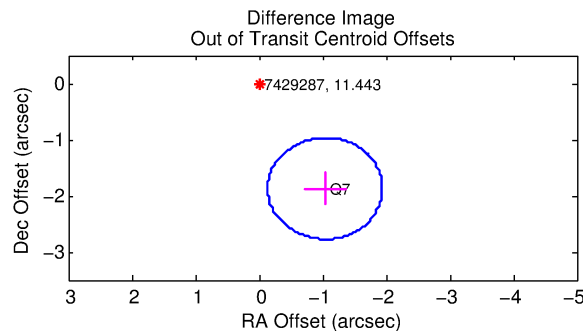
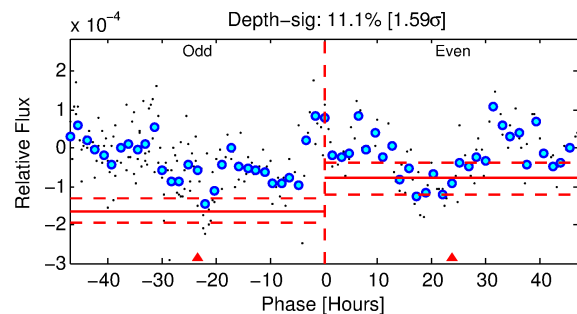
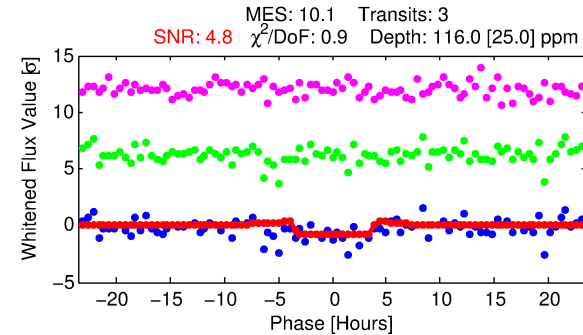
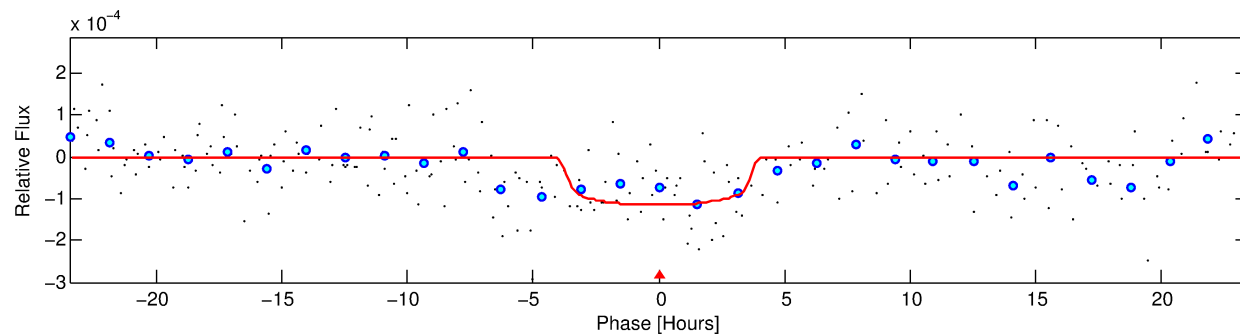
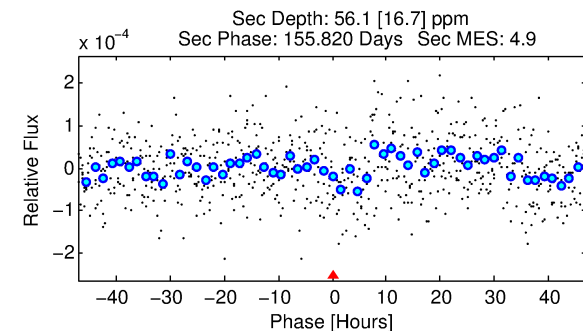
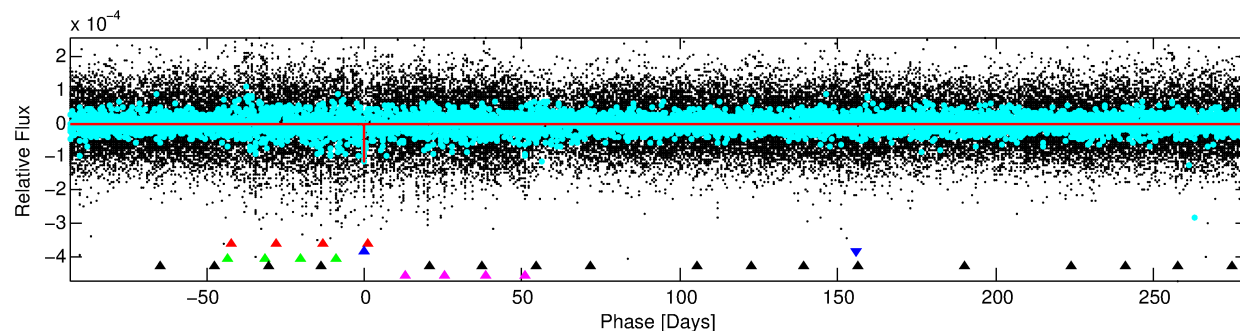
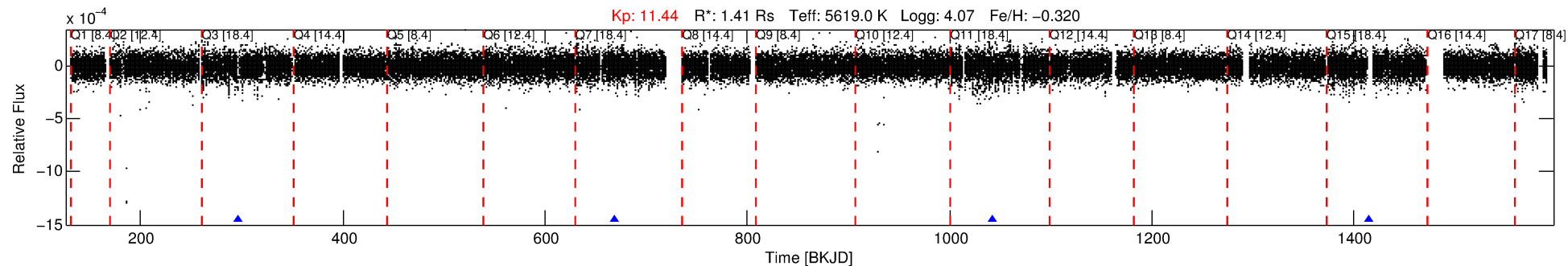
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007429287-02

No Significant Match Found

DV One-Page Summary

KIC: 7429287 Candidate: 2 of 5 Period: 373.011 d
KOI: K04260 Corr: No Ephemeris Match



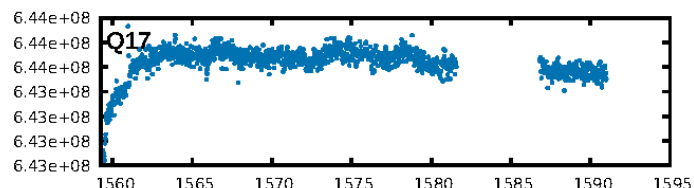
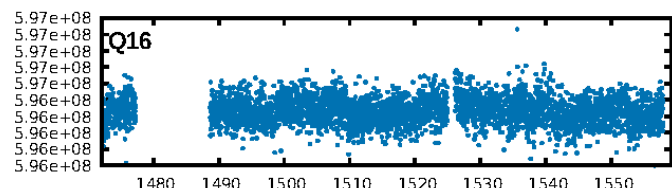
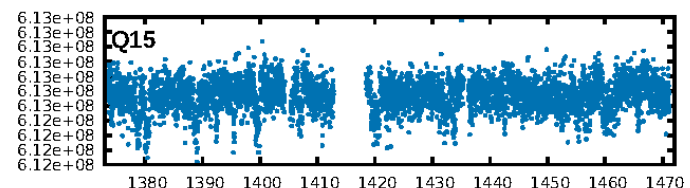
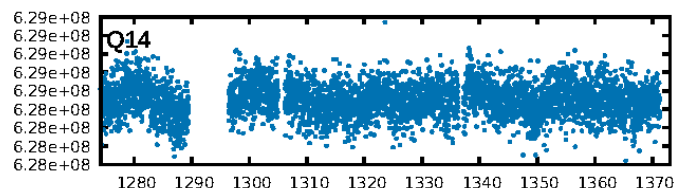
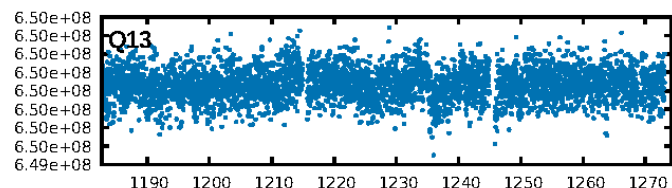
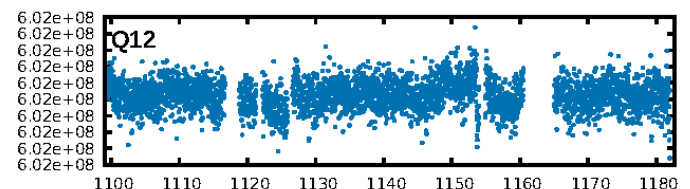
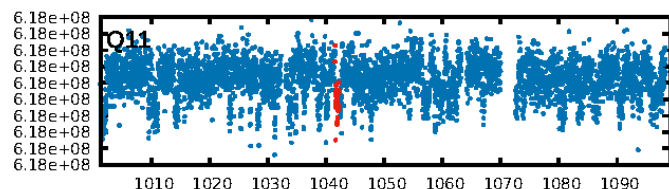
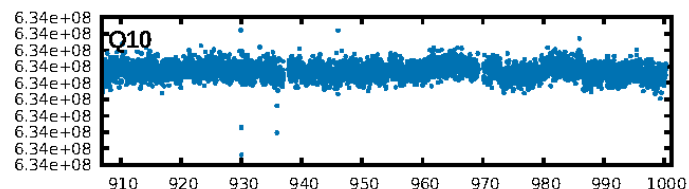
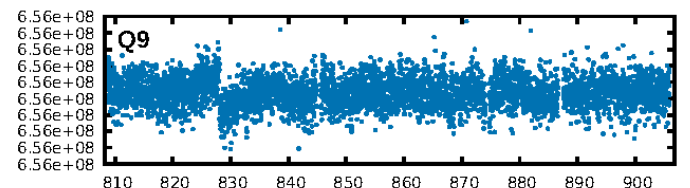
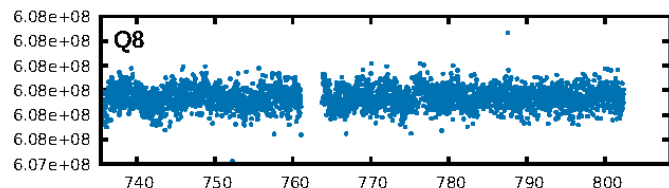
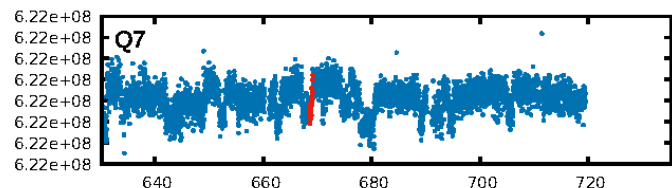
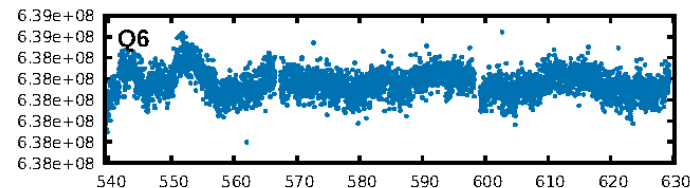
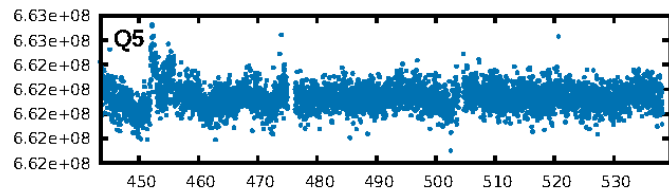
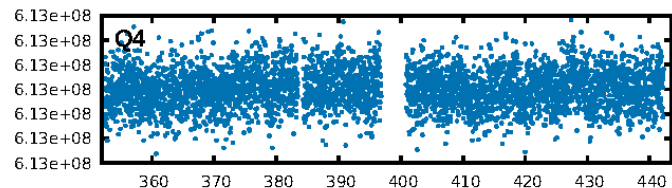
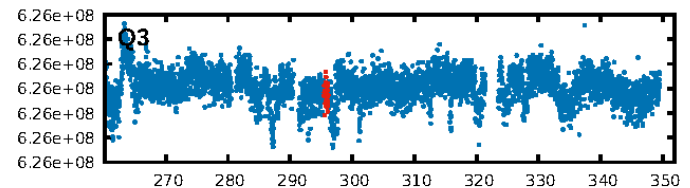
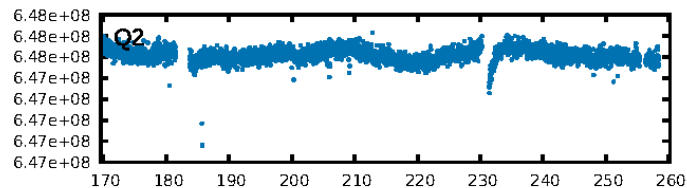
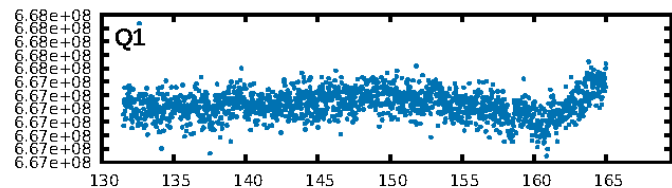
DV Fit Results:

Period = 373.01142 [0.01536] d
Epoch = 295.8119 [0.0192] BKJD
 R_p/R^* = 0.0116 [0.0105]
 a/R^* = 177.96 [774.46]
 b = 0.89 [1.08]
 S_{eff} = 1.92 [0.14]
 T_{eq} = 300 [5] K
 R_p = 1.77 [1.61] R_e
 a = 0.9598 [0.0247] AU
 A_g = 9031.51 [16575.79] [0.54σ]
 T_{effp} = 4522 [2076] K [2.03σ]

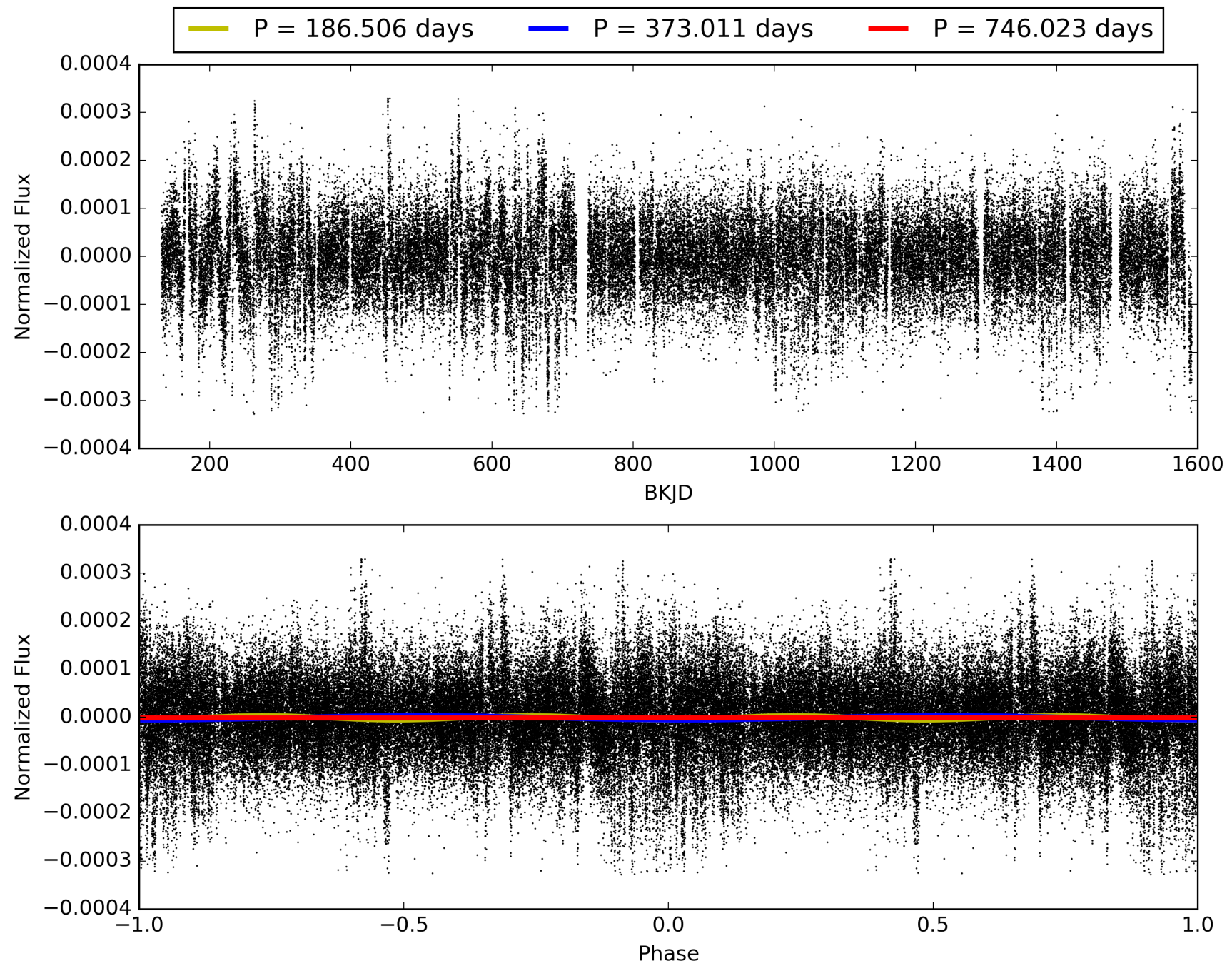
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.31σ]
LongPeriod-sig: 100.0% [28.26σ]
ModelChiSquare2-sig: 2.2%
ModelChiSquareGof-sig: 93.5%
Bootstrap-pfa: 4.02e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.093
Centroid-sig: 27.4%
Centroid-so: 1.495 arcsec [1.01σ]
OotOffset-rm: 2.139 arcsec [7.11σ]
KicOffset-rm: 2.603 arcsec [8.72σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007429287-02, PDC Light Curves

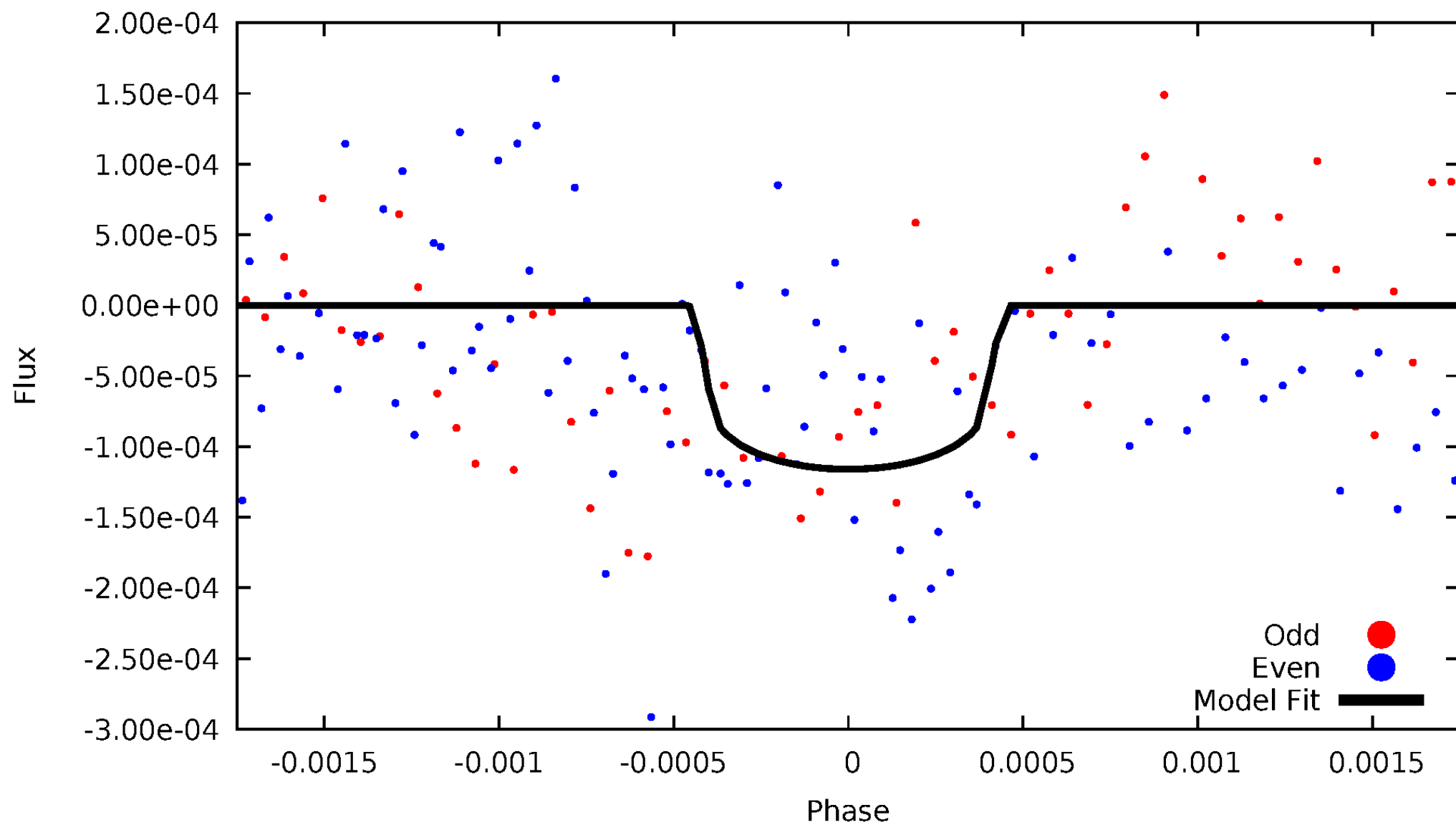


TCE 007429287-02



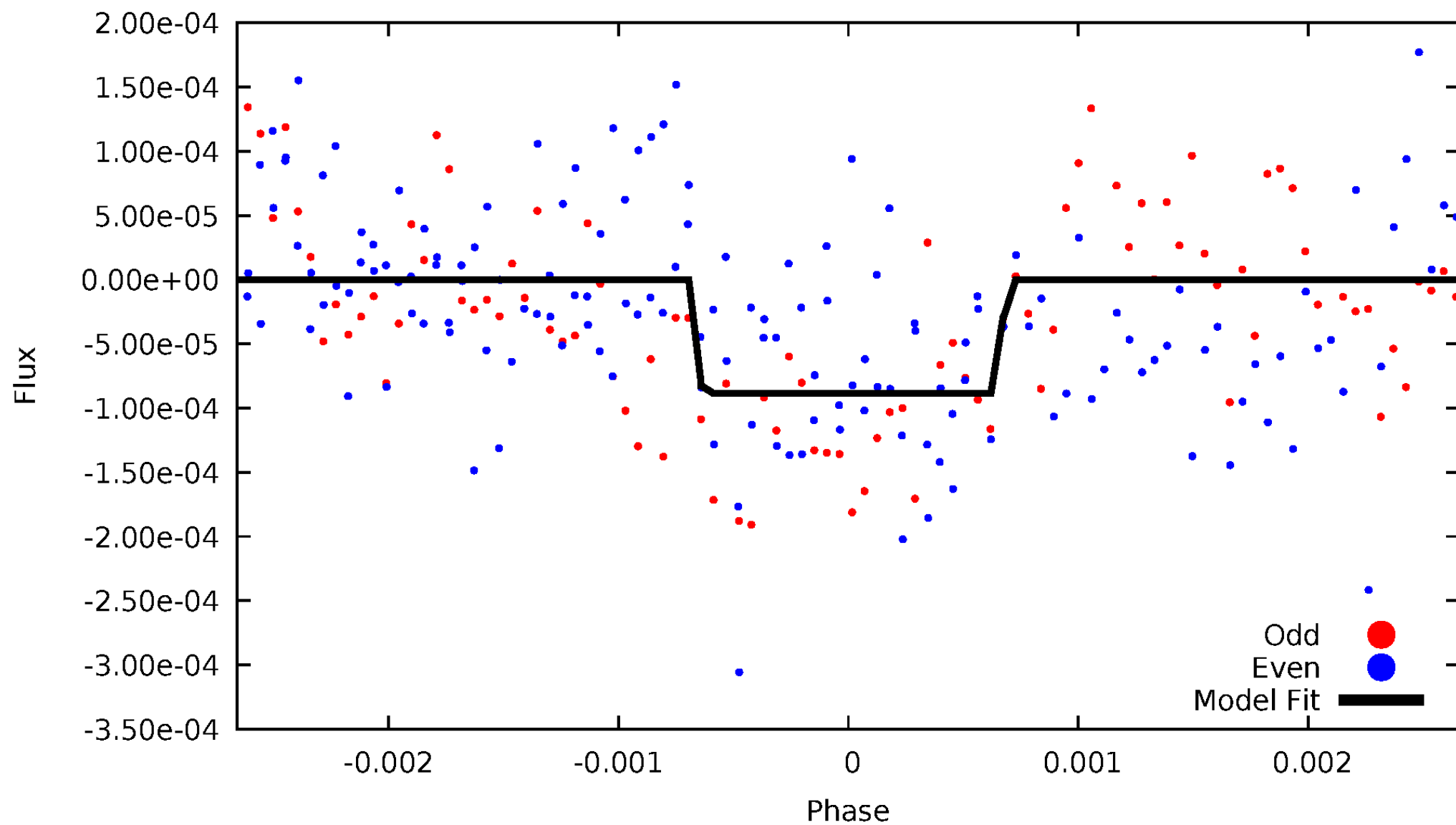
DV Odd/Even

TCE 007429287-02



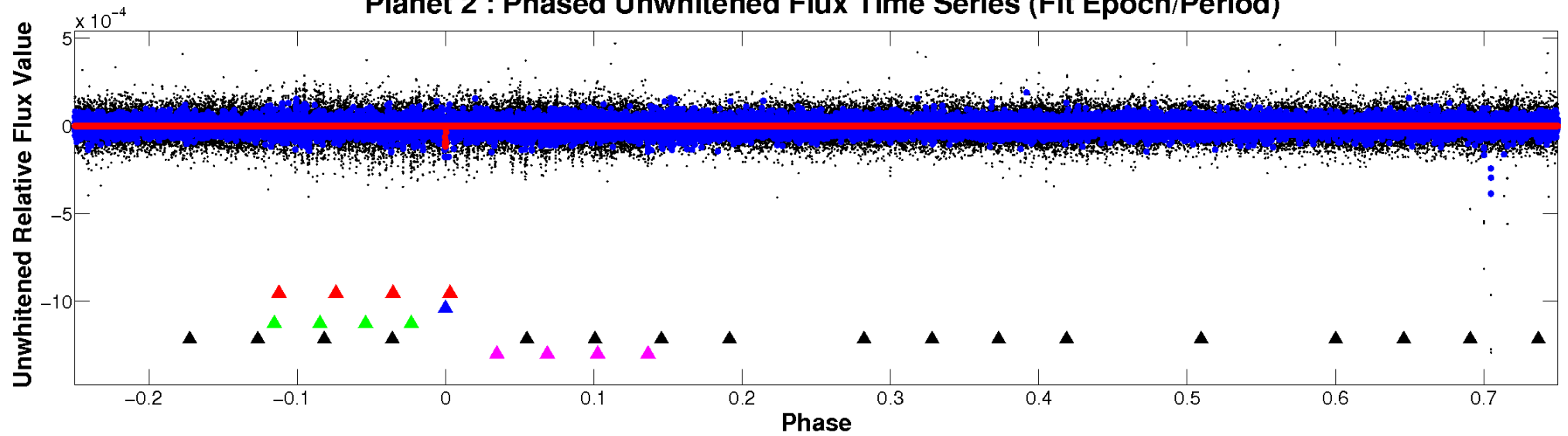
ALT Odd/Even

TCE 007429287-02

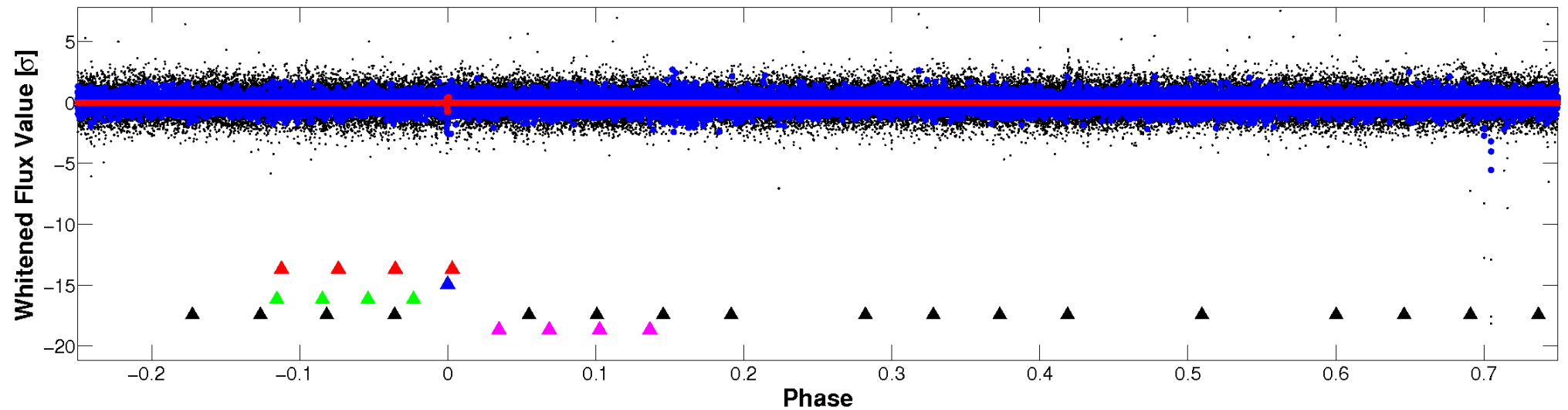


Non-Whitened Vs. Whitened Light Curve

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

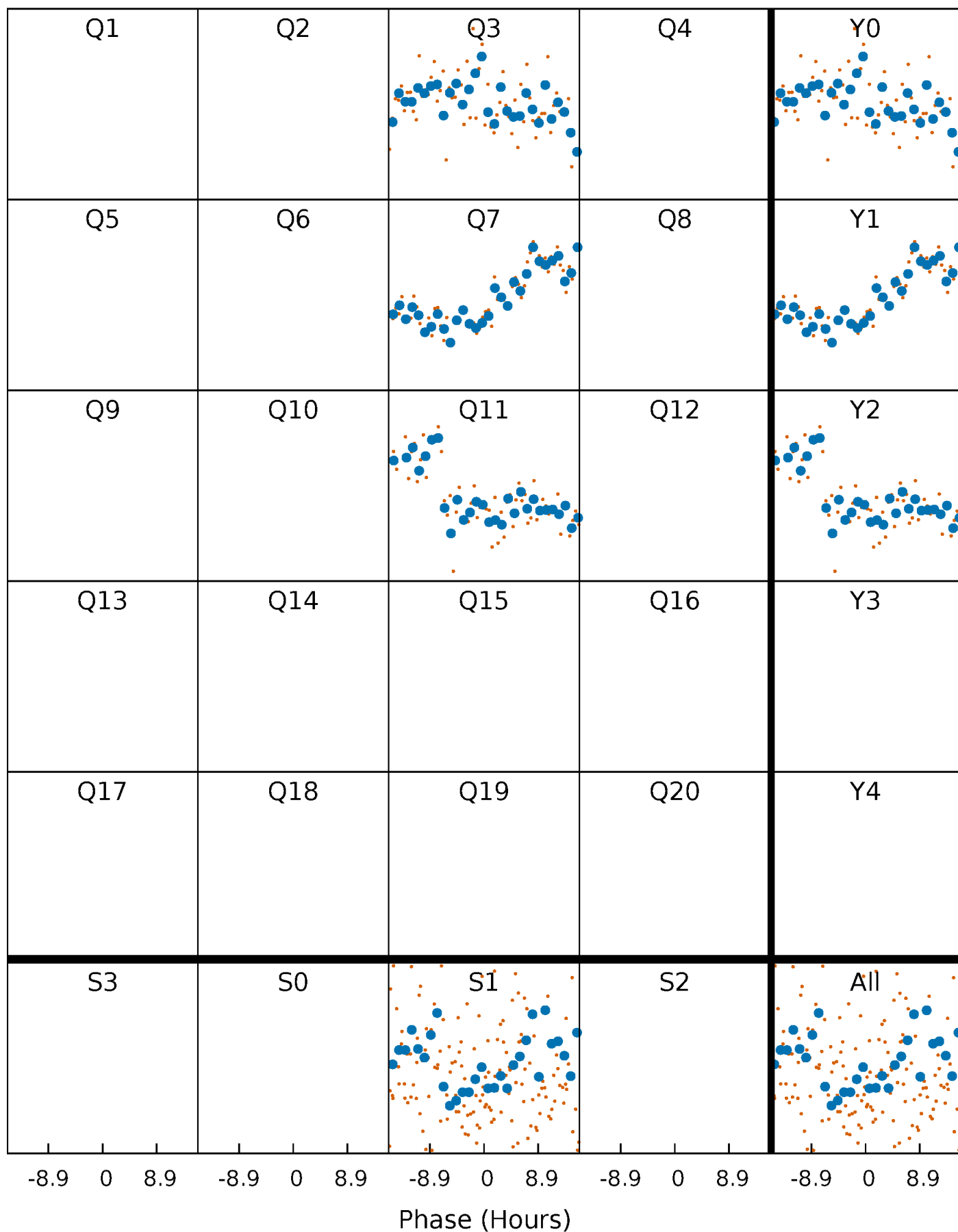


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



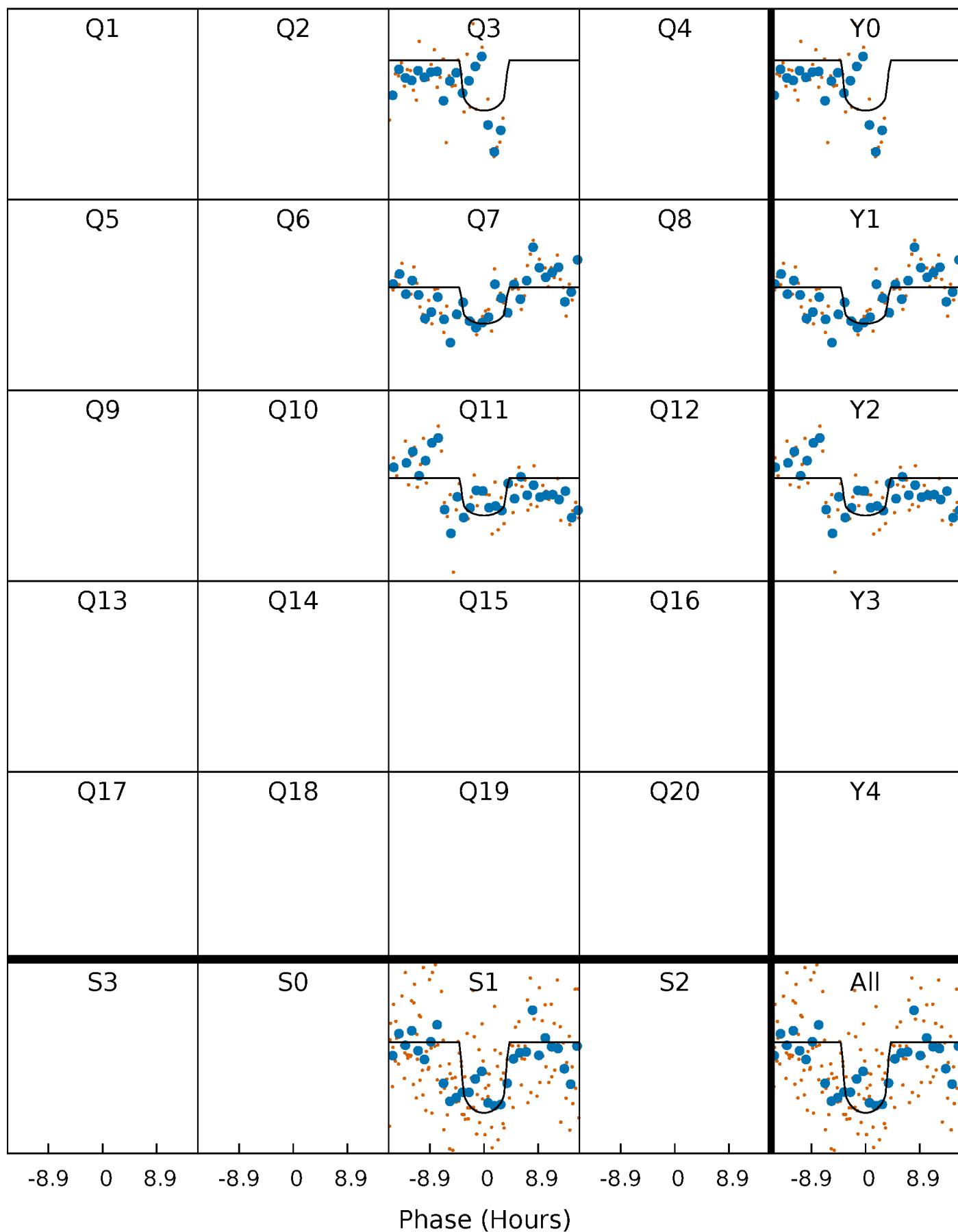
PDC Quarter-Phased Transit Curves

TCE 007429287-02 $P=373.011416$ Days $T_0=295.811866$ (BKJD)



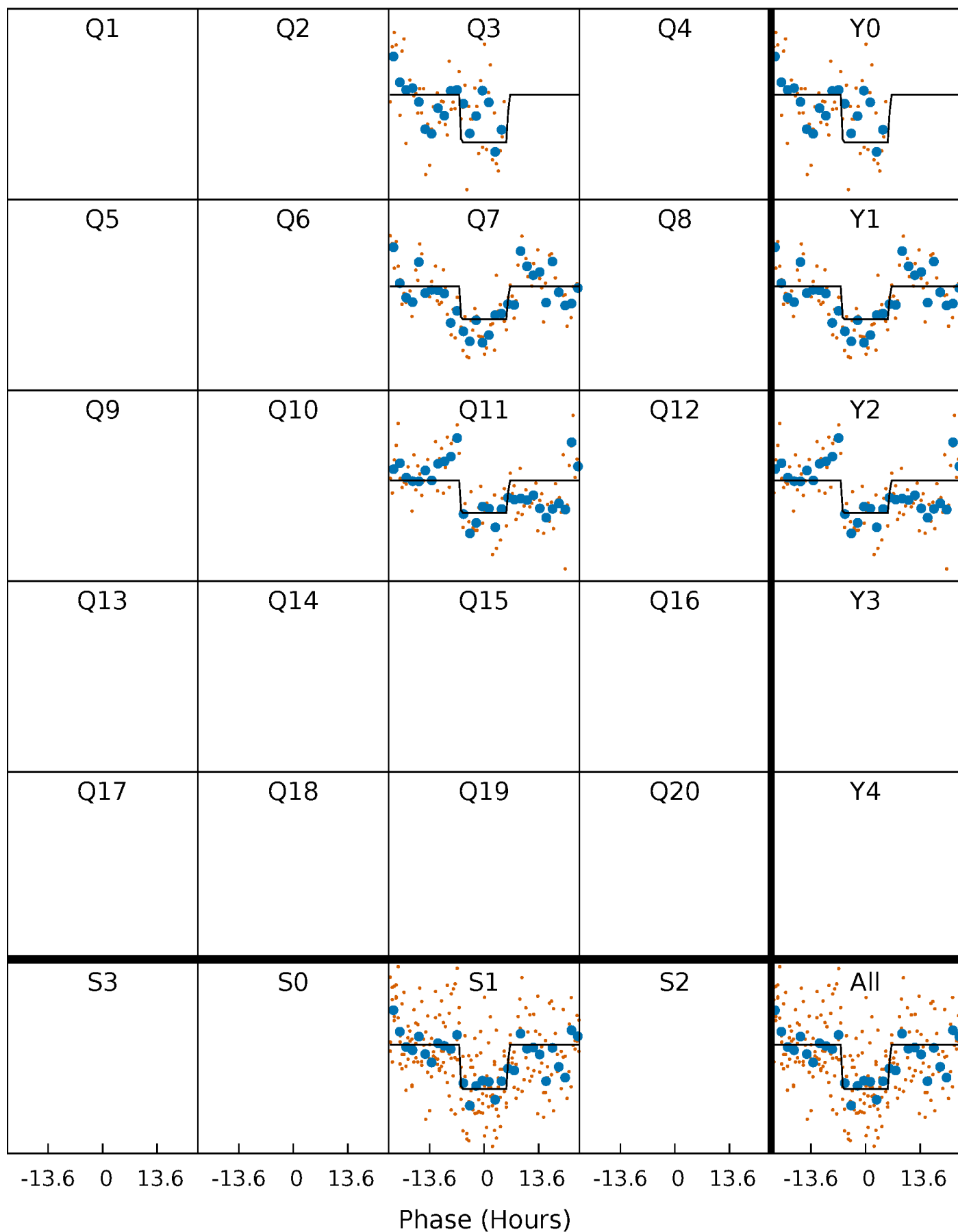
DV Quarter-Phased Transit Curves

TCE 007429287-02 $P=373.011416$ Days $T_0=295.811866$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

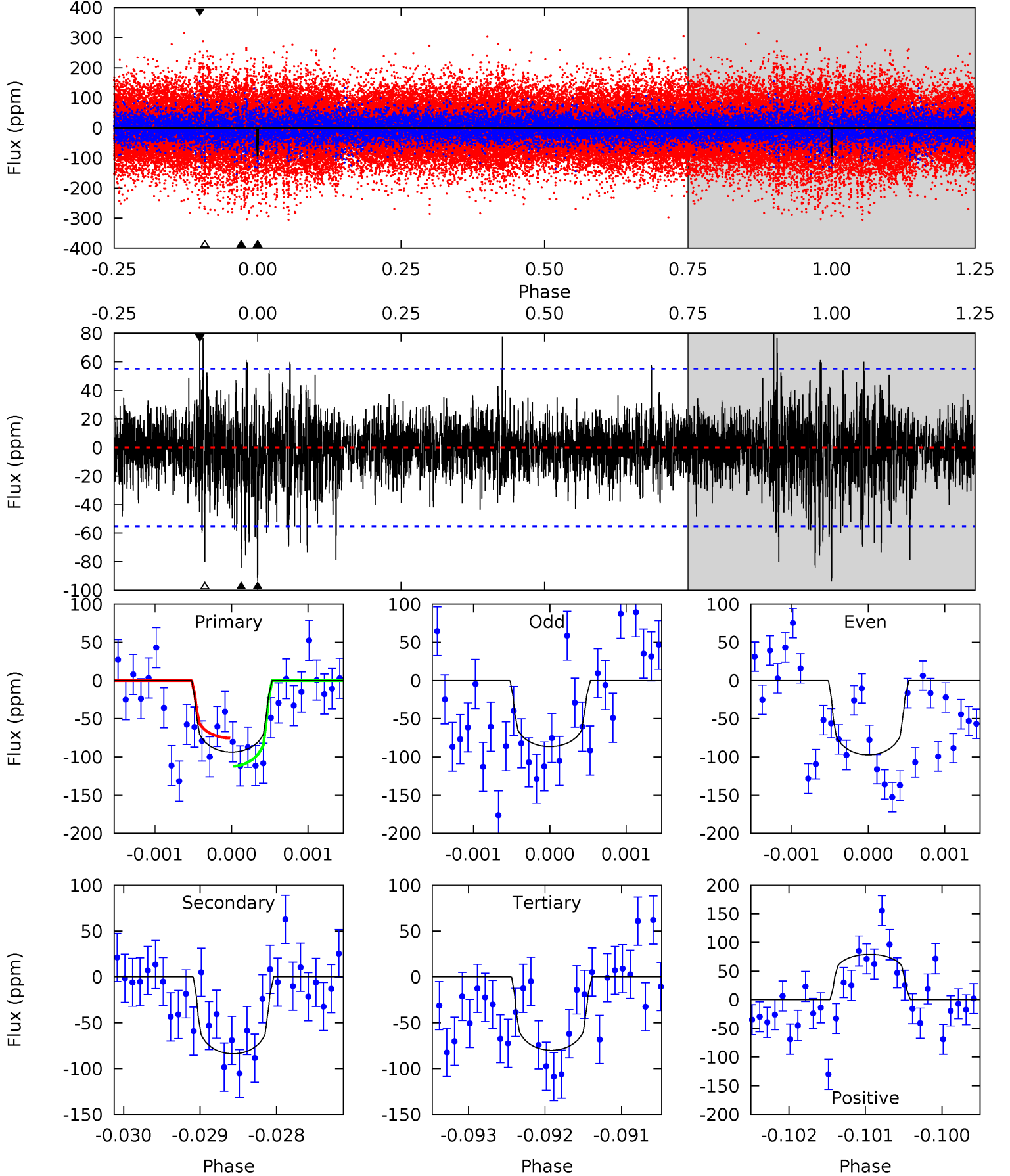
TCE 007429287-02 P=373.035071 Days $T_0=295.731368$ (BKJD)



DV Model-Shift Uniqueness Test

007429287-02, P = 373.011416 Days, E = 295.811866 Days

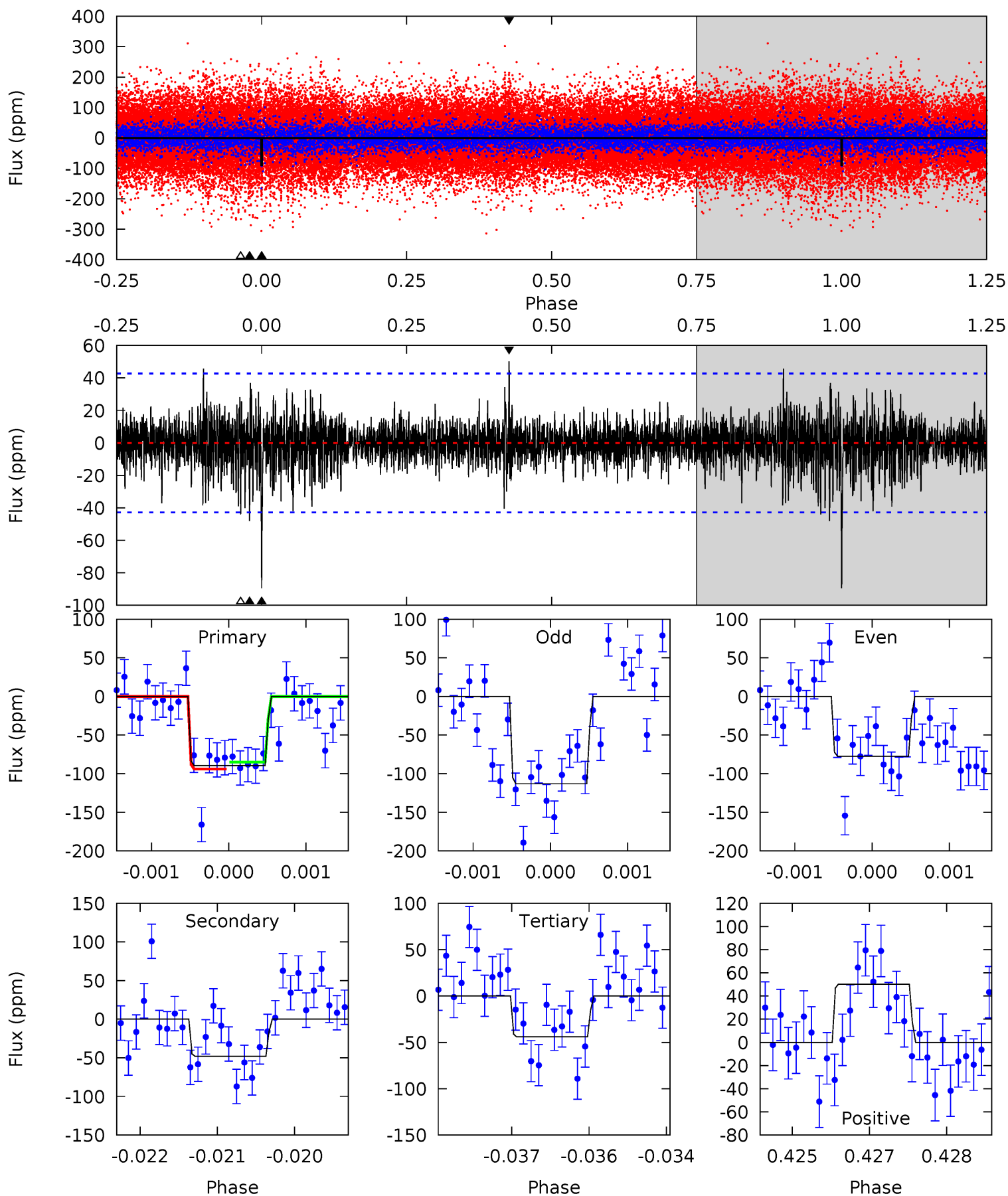
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.31	8.34	7.95	7.87	5.47	3.33	1.62	1.36	1.44	0.38	0.46	0.51	1.08	0.46	1.84



Alt Model-Shift Uniqueness Test

007429287-02, P = 373.035071 Days, E = 295.731368 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.06	5.56	6.34	5.40	3.21	1.20	5.73	4.96	0.50	-0.28	2.13	0.84	0.36	0.57



Stellar Parameters For KIC 007429287

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5619^{+93}_{-42}	$4.070^{+0.013}_{-0.011}$	$-0.320^{+0.150}_{-0.100}$	$1.406^{+0.050}_{-0.021}$	$0.848^{+0.058}_{-0.017}$	$0.430^{+0.018}_{-0.022}$
	+2%/-1%	+0%/-0%	+47%/-31%	+4%/-1%	+7%/-2%	+4%/-5%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007429287-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-84 ± 10	$2.01^{+1.47}_{-1.18}$	420^{+6}_{-4}	4838^{+2606}_{-946}	10605^{+52634}_{-7186}
Alt.	-48 ± 8	$1.84^{+1.41}_{-1.18}$	420^{+6}_{-5}	4490^{+2708}_{-847}	7217^{+48395}_{-4975}

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 $A_{obs} \gg 1.0$

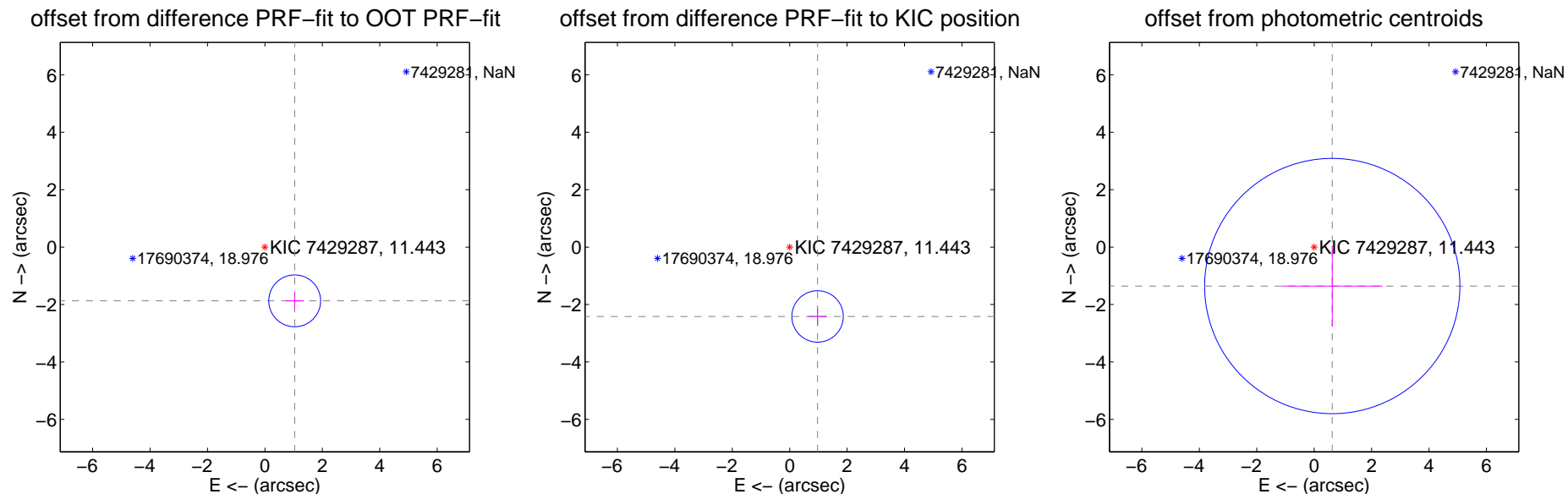
DV Centroid Data

Supplemental centroid analysis for 007429287-02. **Kepler magnitude: 11.44.** Transit SNR 4.78

There are 1 quarters with good PRF difference image offsets

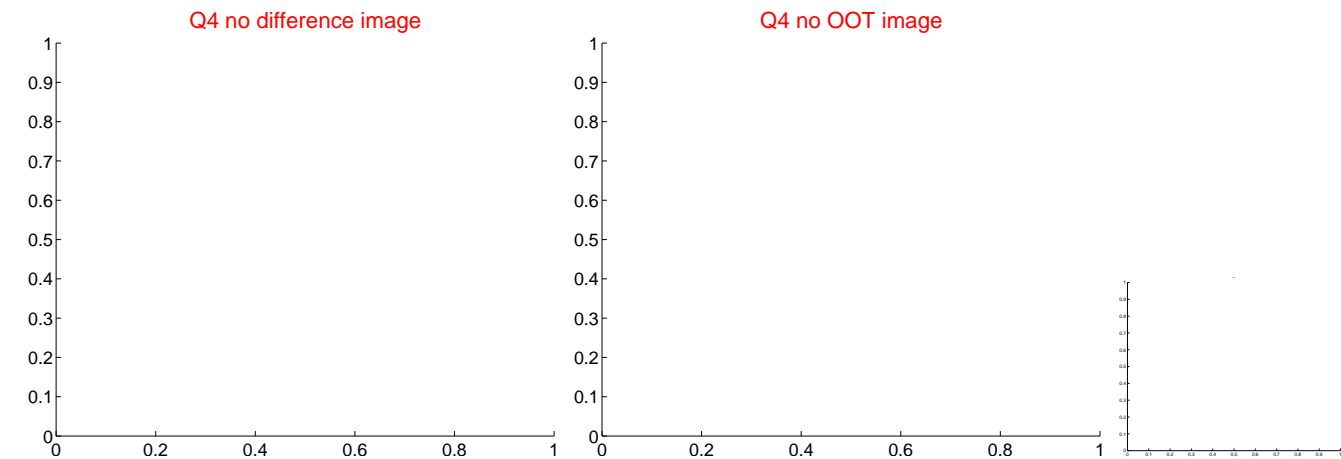
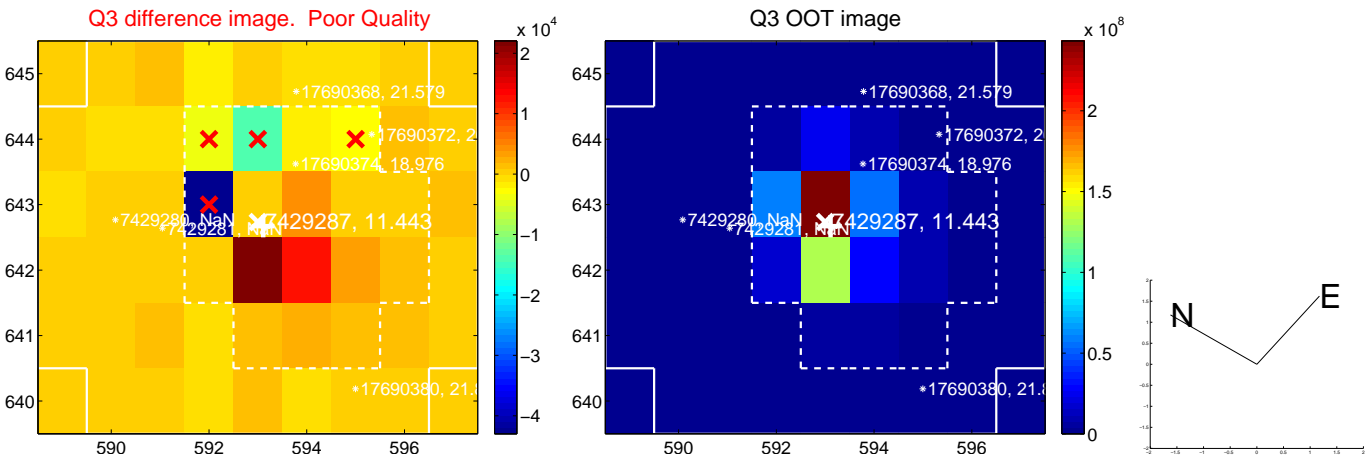
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.139 ± 0.301	7.11	-1.037 ± 0.319	-1.871 ± 0.295
PRF-fit source offset from KIC position	2.603 ± 0.298	8.72	-0.971 ± 0.319	-2.415 ± 0.295
photometric centroid source offset	1.50 ± 1.48	1.01	-0.63 ± 1.75	-1.36 ± 1.42

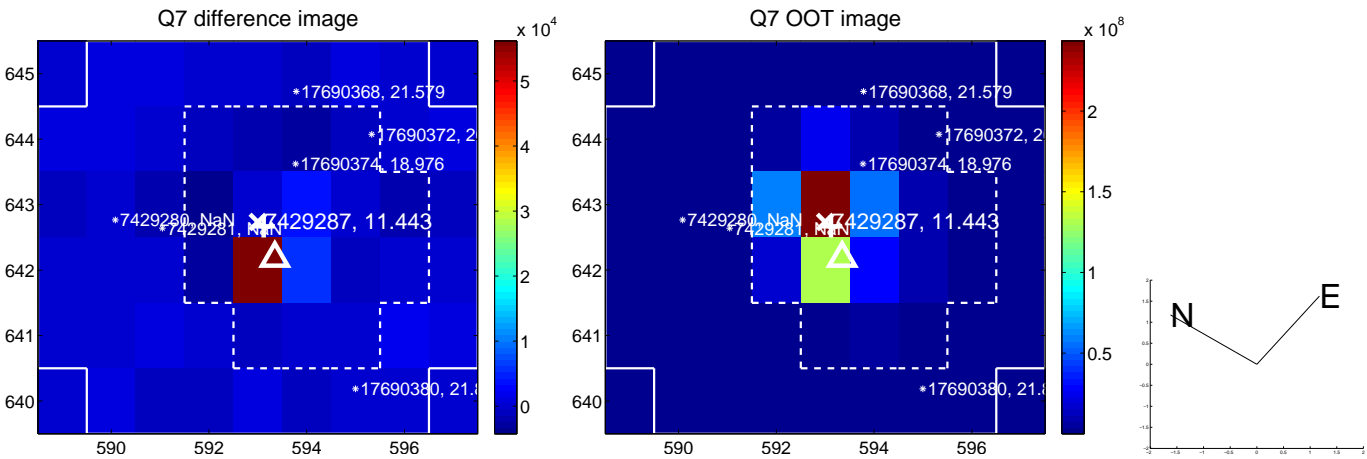


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



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



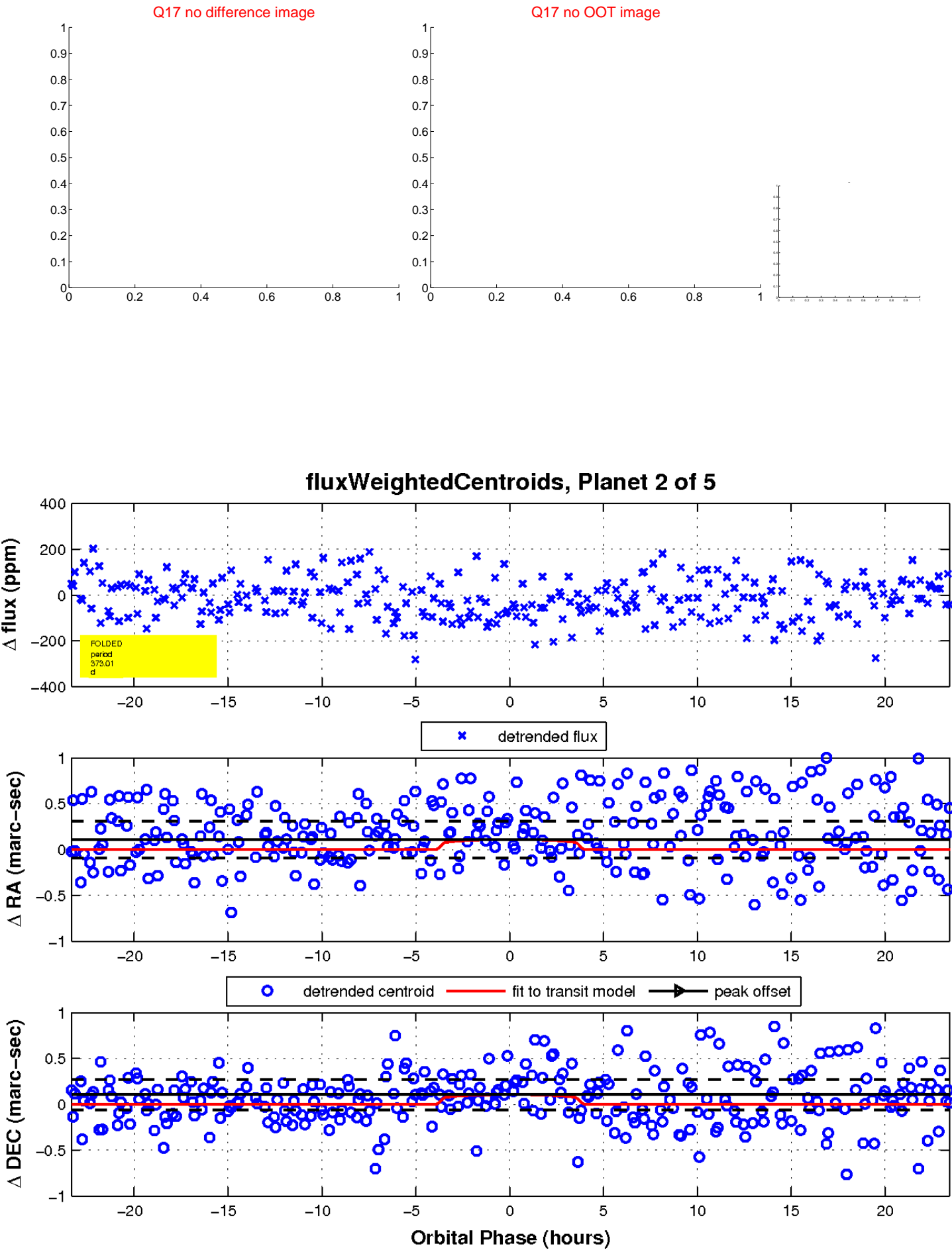
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

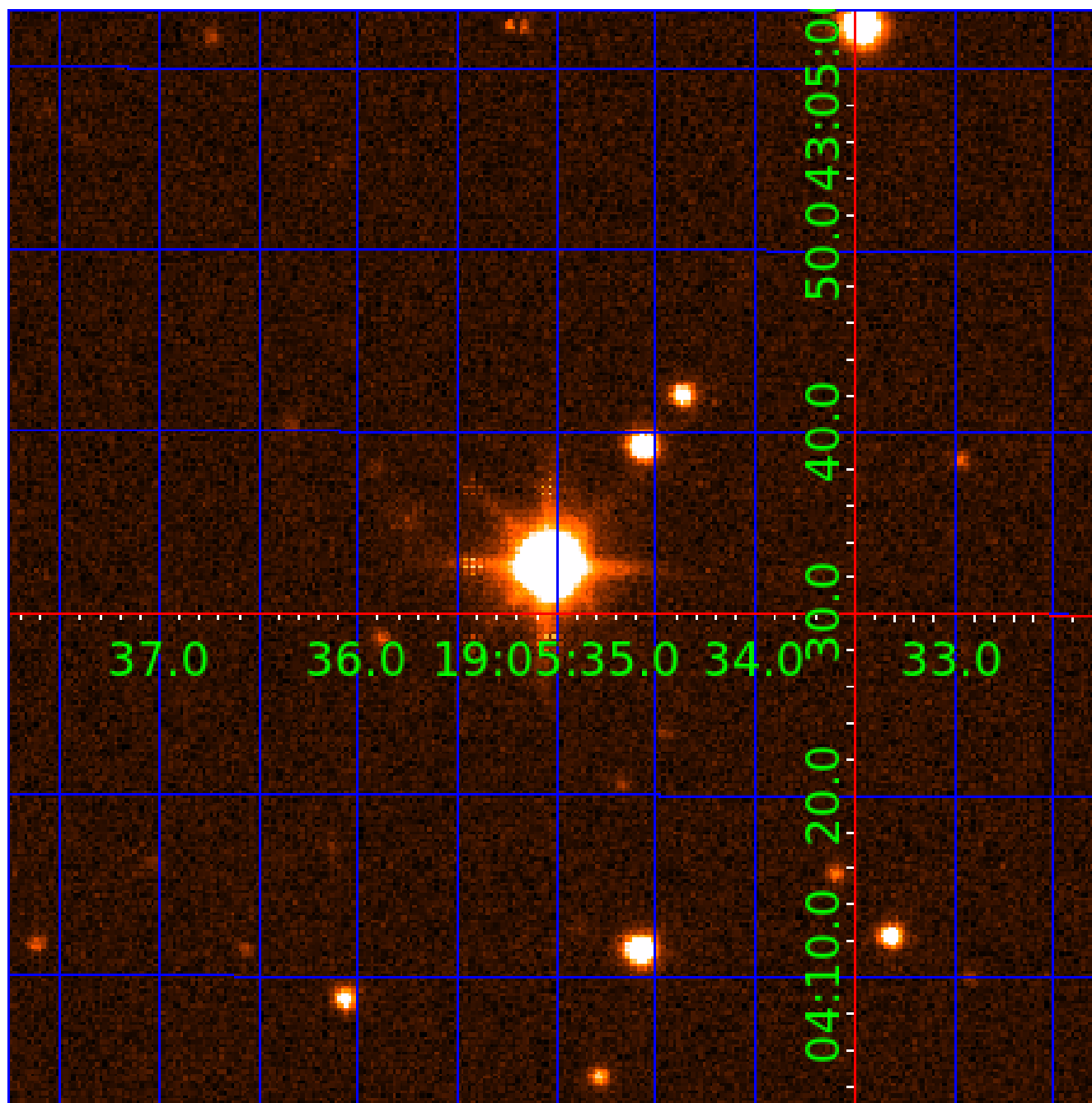


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007429287

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})
007429287-01	OBS	4260.03	358.666817	296.966877	177.4	15.982	7.7	8.3	1.41	5619	2.05	2.02
007429287-02	OBS	No	373.011416	295.811866	116.0	7.831	10.1	4.8	1.41	5619	1.77	1.92
007429287-03	OBS	No	361.531452	287.204270	186.8	11.074	7.9	8.7	1.41	5619	2.10	2.00
007429287-04	OBS	4260.04	84.793598	180.533124	42.9	17.591	8.0	7.6	1.41	5619	0.99	13.82
007429287-05	OBS	No	385.689189	308.737848	141.9	7.391	8.1	8.6	1.41	5619	1.92	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007429287-01	OBS	FP	0.05	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-04	OBS	PC	0.97	0	0	0	0	CENT_SATURATED
007429287-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

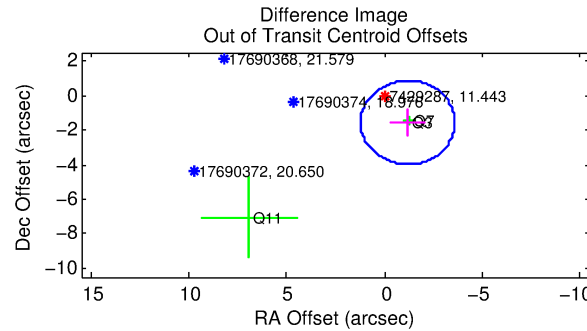
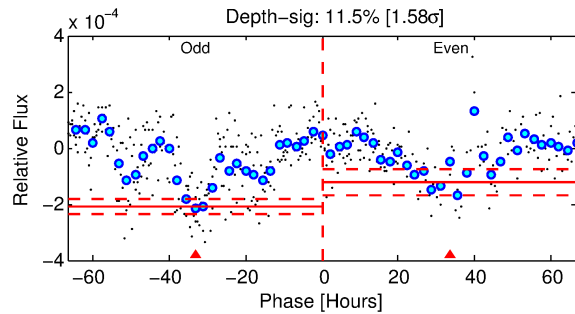
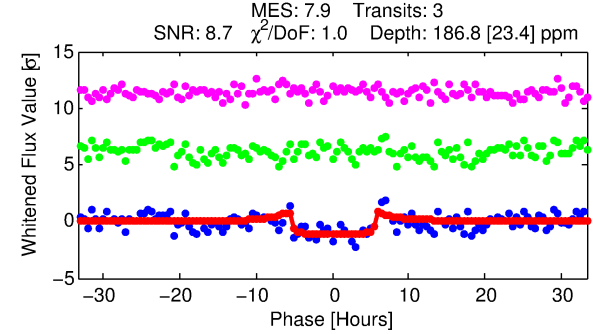
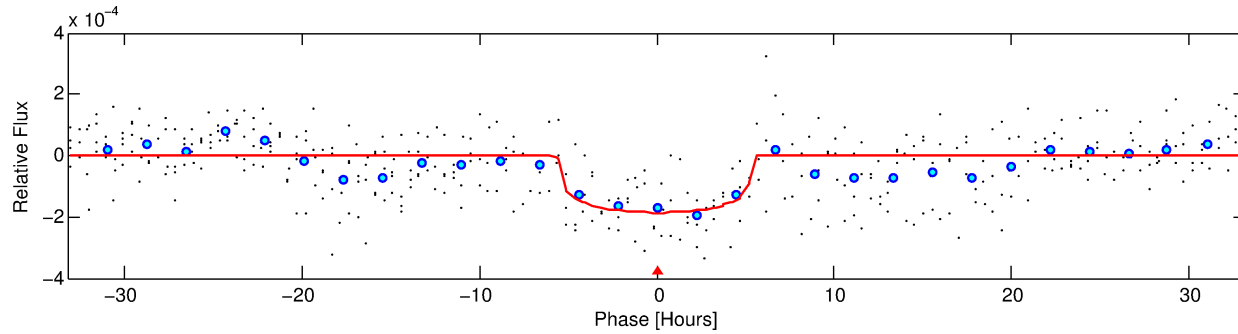
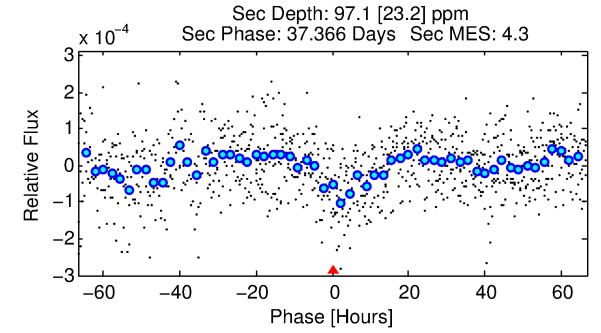
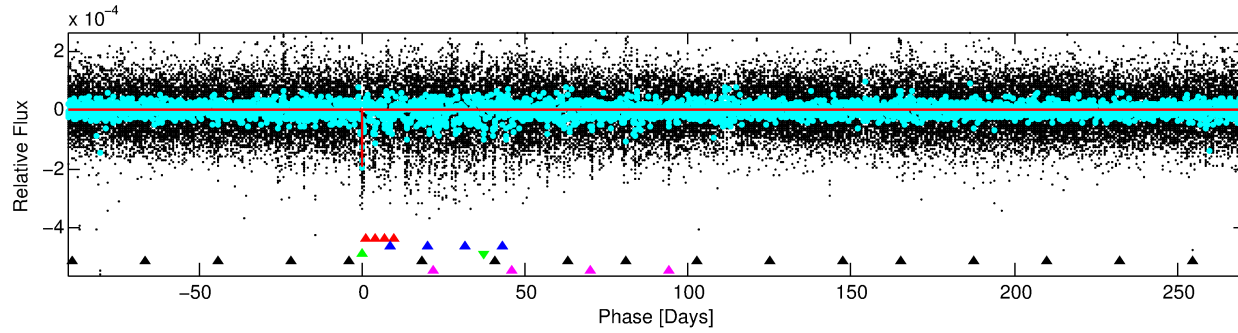
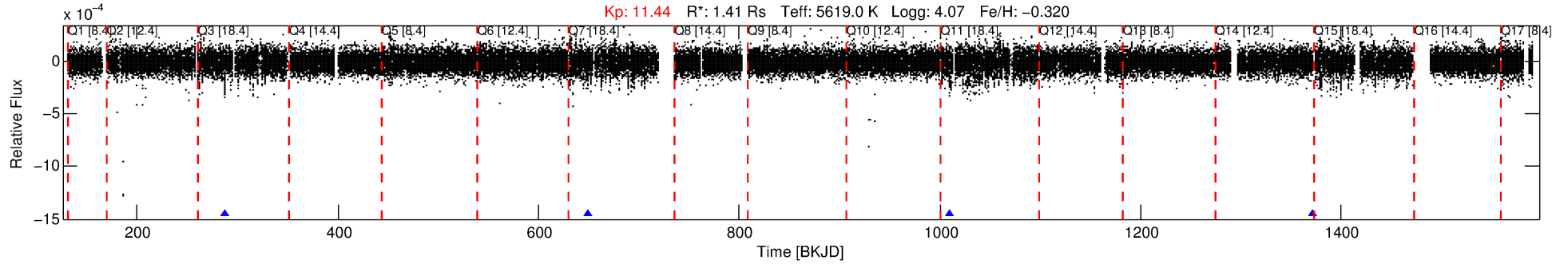
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007429287-03

No Significant Match Found

DV One-Page Summary

KIC: 7429287 Candidate: 3 of 5 Period: 361.531 d
KOI: K04260 Corr: No Ephemeris Match



DV Fit Results:

Period = 361.53145 [0.00824] d
Epoch = 287.2043 [0.0108] BKJD
Rp/R* = 0.0137 [0.0035]
a/R* = 165.56 [182.69]
b = 0.77 [0.60]
Seff = 2.00 [0.15]
Teq = 303 [6] K
Rp = 2.10 [0.55] Re
a = 0.9400 [0.0242] AU
Ag = 10704.29 [6077.71] [1.76σ]
Teffp = 4768 [680] K [6.56σ]

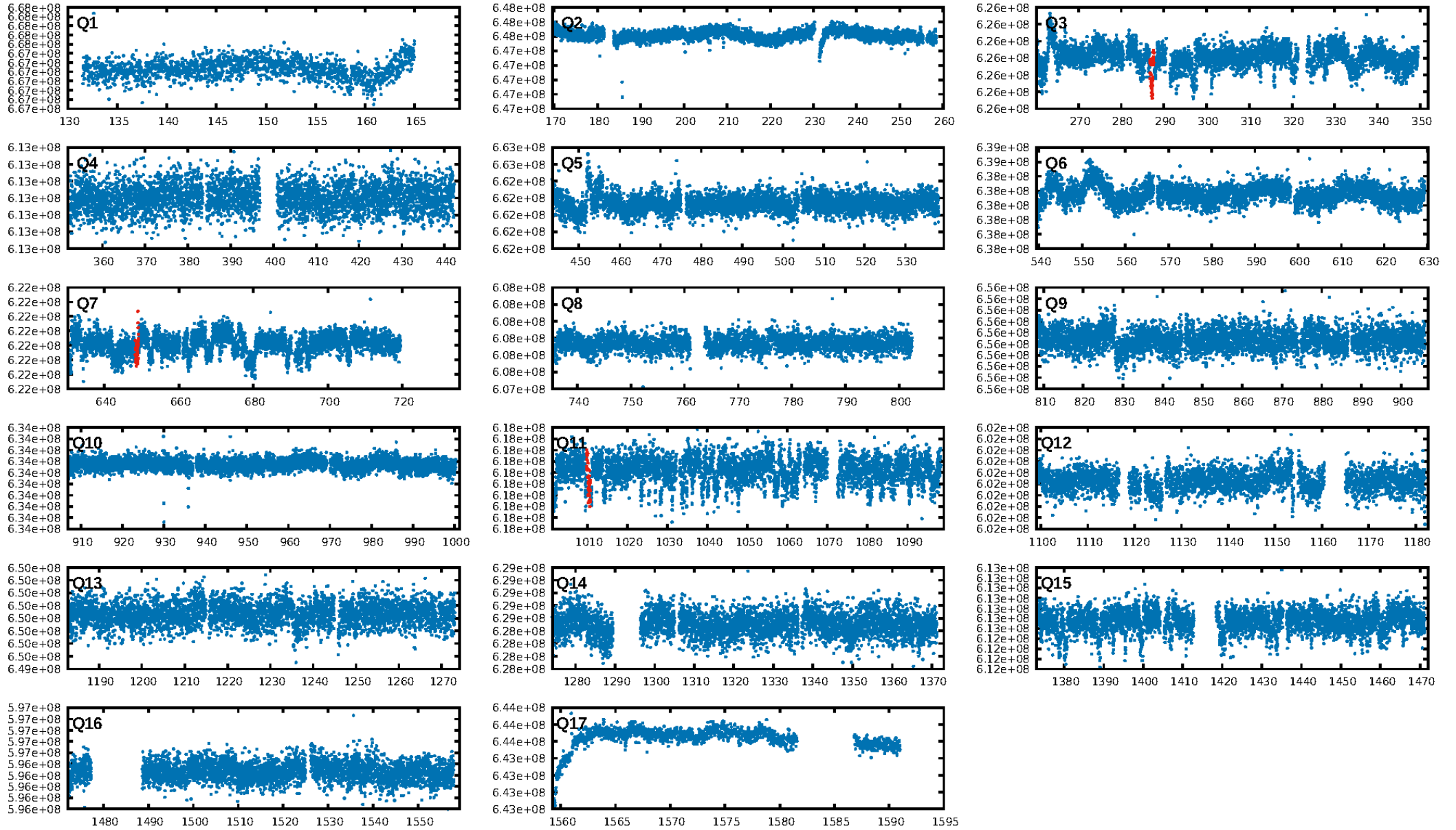
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.54σ]
LongPeriod-sig: 100.0% [20.31σ]
ModelChiSquare2-sig: 3.0%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 1.08e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.863
Centroid-sig: 0.0%
Centroid-so: 2.628 arcsec [2.78σ]
OotOffset-rm: 1.960 arcsec [2.43σ]
KicOffset-rm: 2.359 arcsec [2.95σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

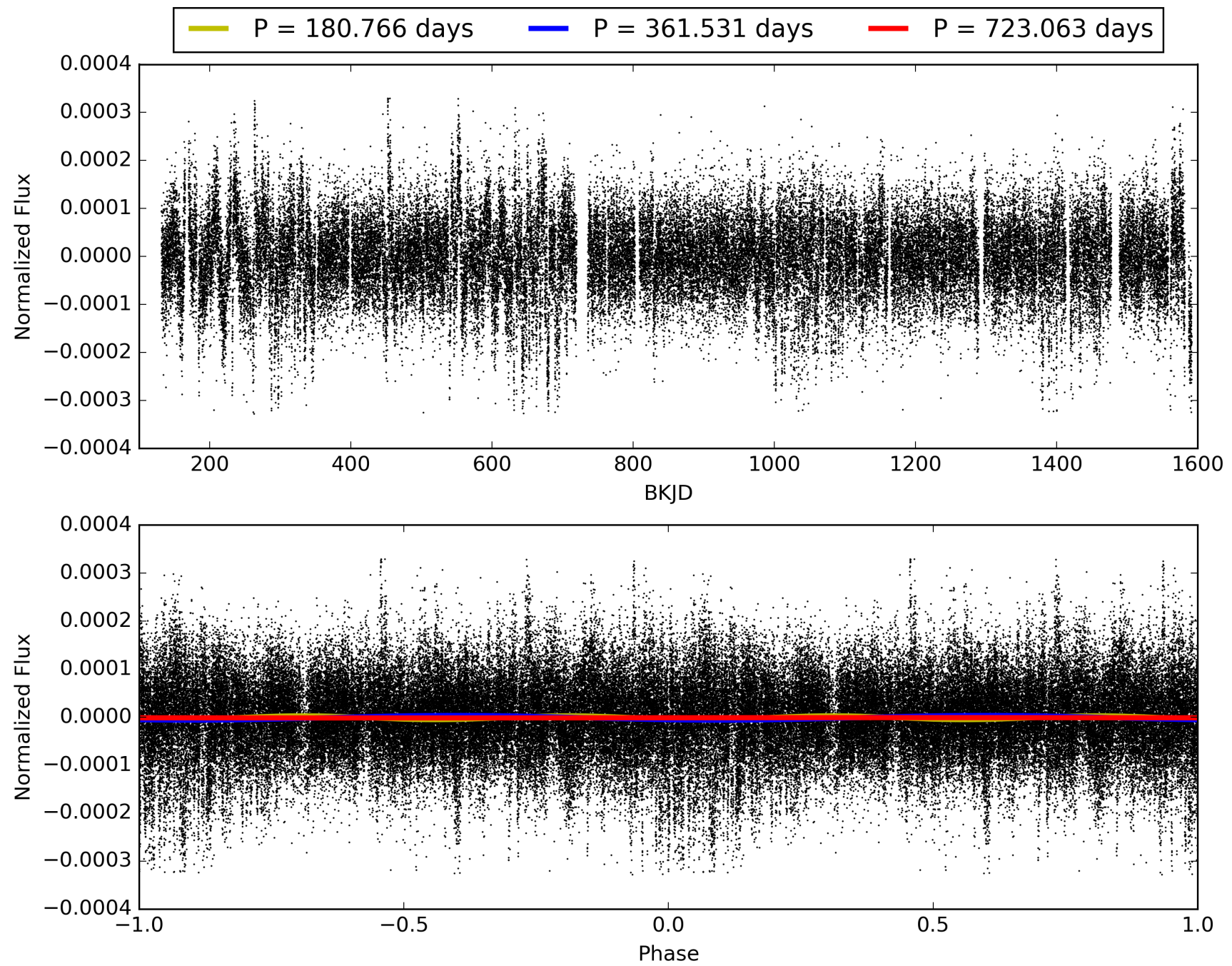
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:43:43 Z

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

TCE 007429287-03, PDC Light Curves

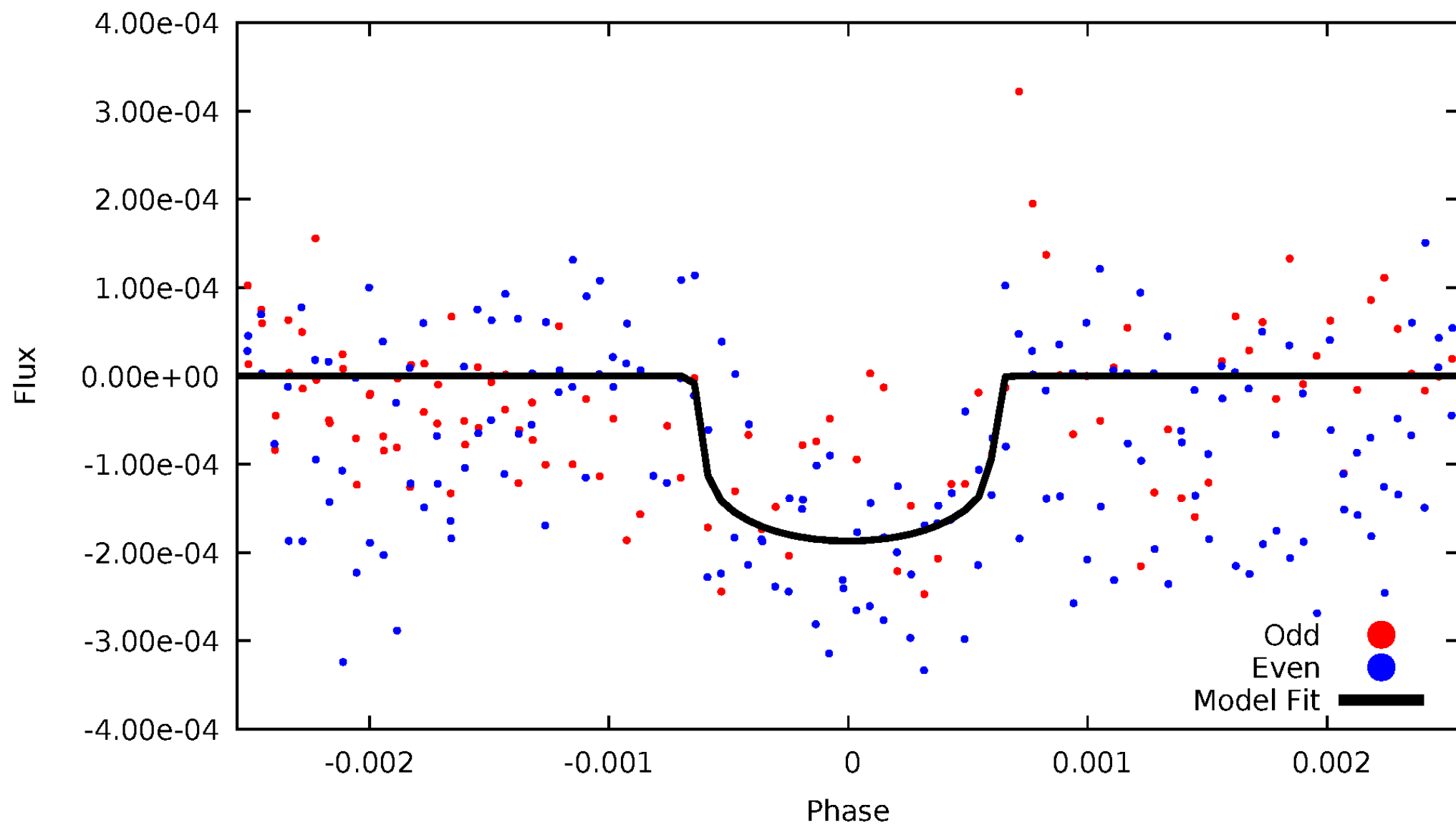


TCE 007429287-03



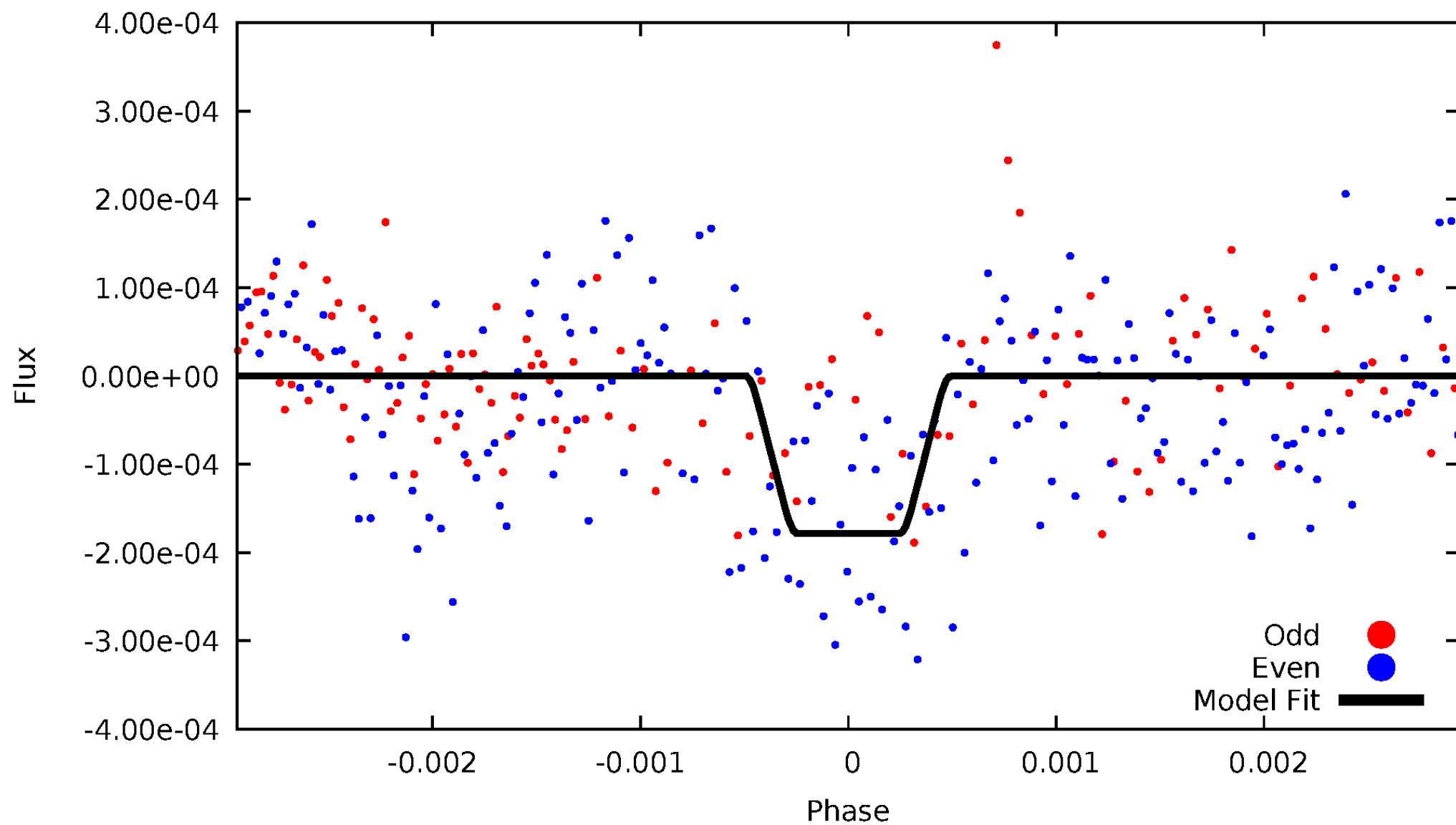
DV Odd/Even

TCE 007429287-03



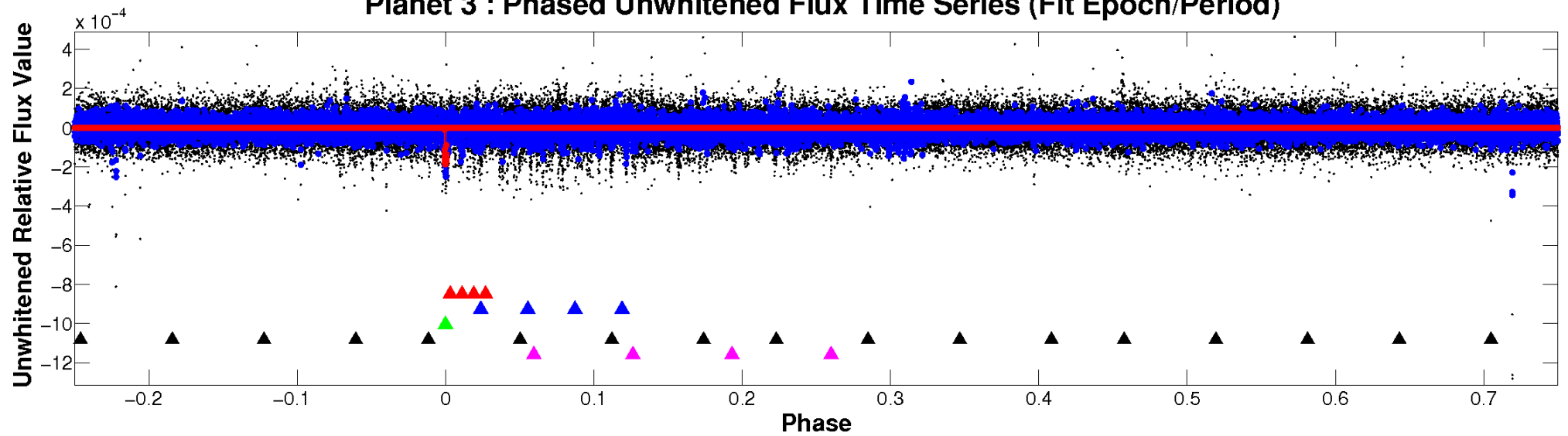
ALT Odd/Even

TCE 007429287-03

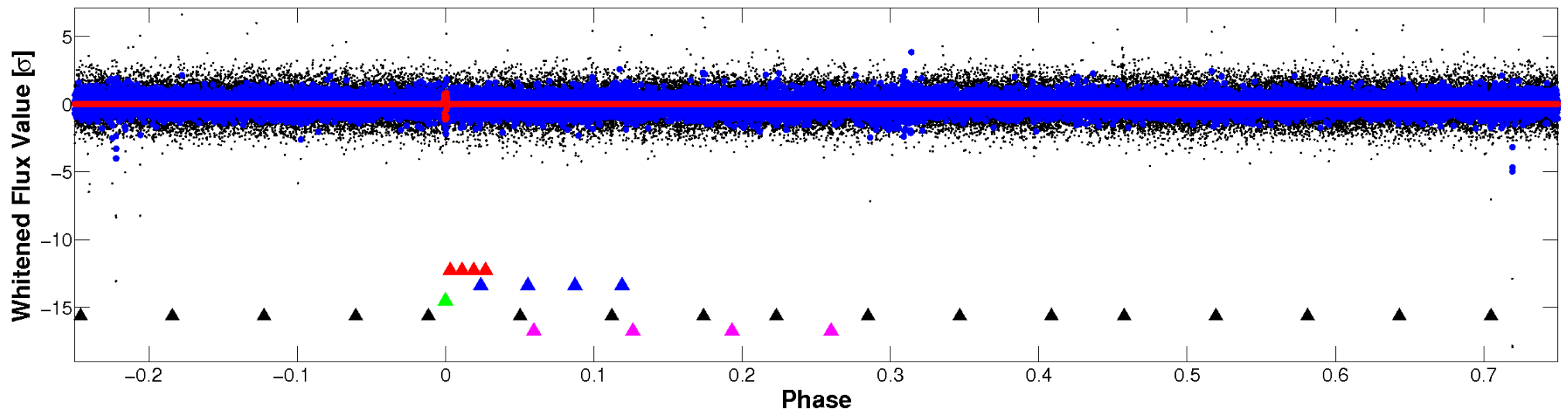


Non-Whitened Vs. Whitened Light Curve

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

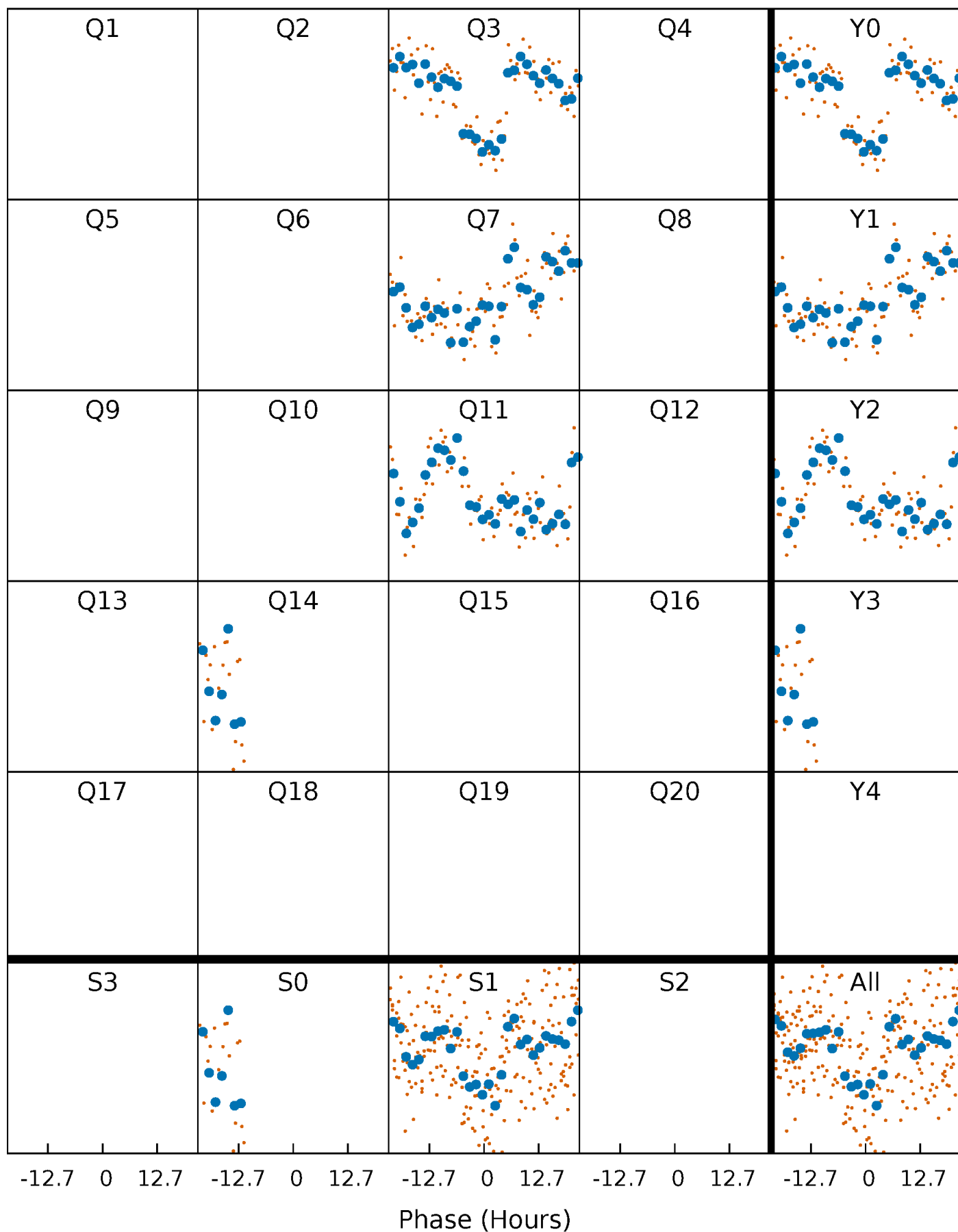


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



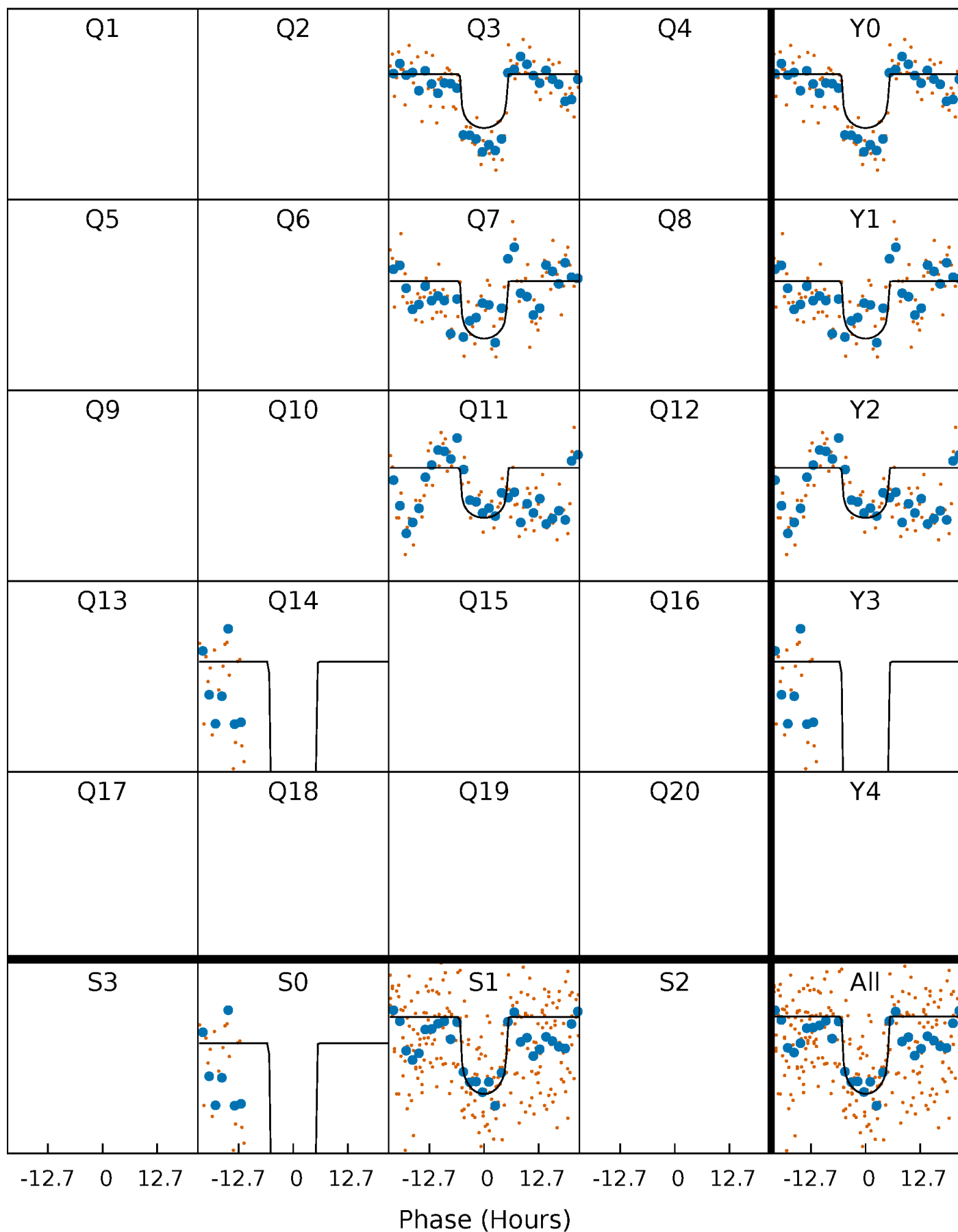
PDC Quarter-Phased Transit Curves

TCE 007429287-03 $P=361.531452$ Days $T_0=287.204270$ (BKJD)



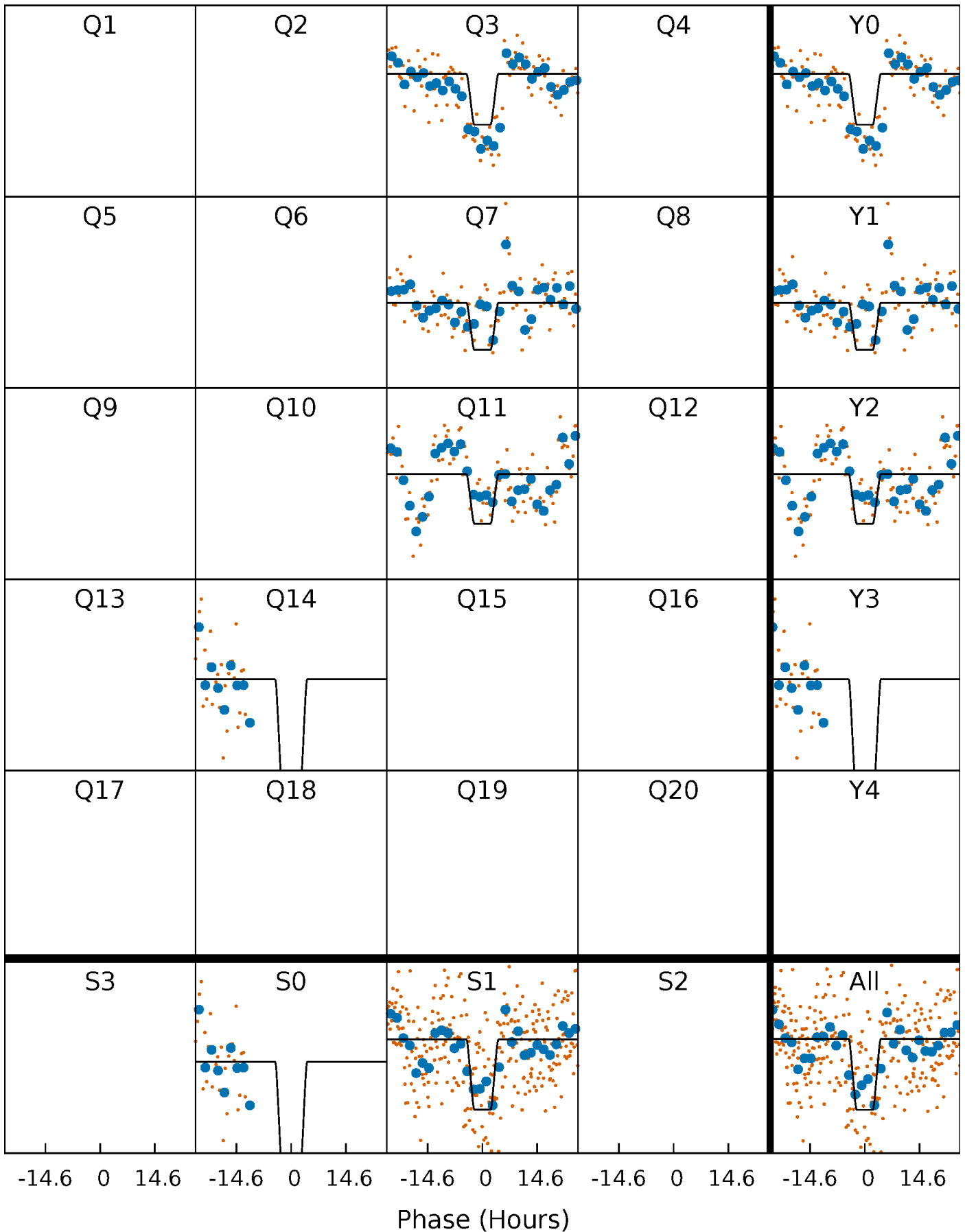
DV Quarter-Phased Transit Curves

TCE 007429287-03 $P=361.531452$ Days $T_0=287.204270$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

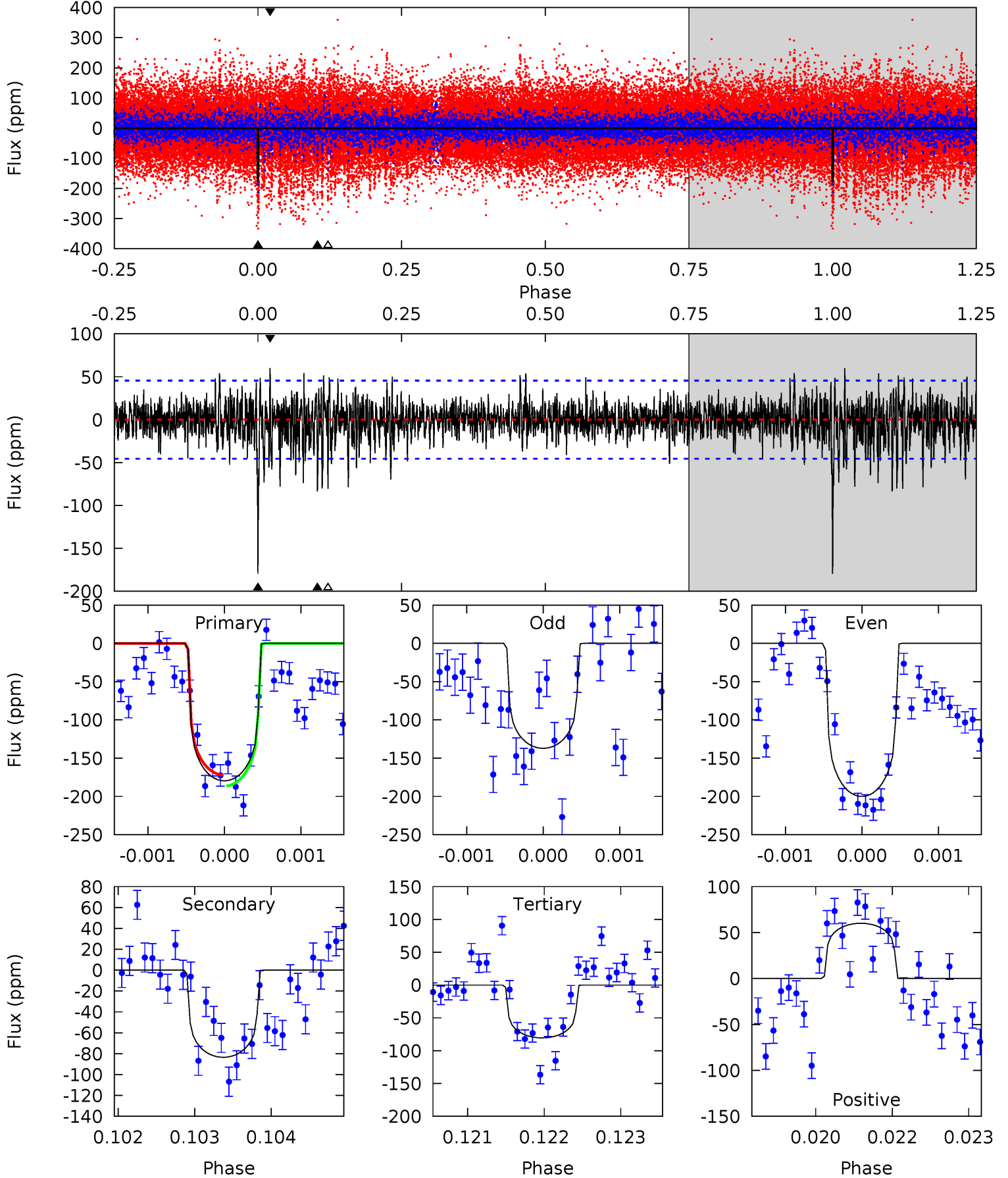
TCE 007429287-03 P=361.537788 Days $T_0=287.198085$ (BKJD)



DV Model-Shift Uniqueness Test

007429287-03, P = 361.531452 Days, E = 287.204270 Days

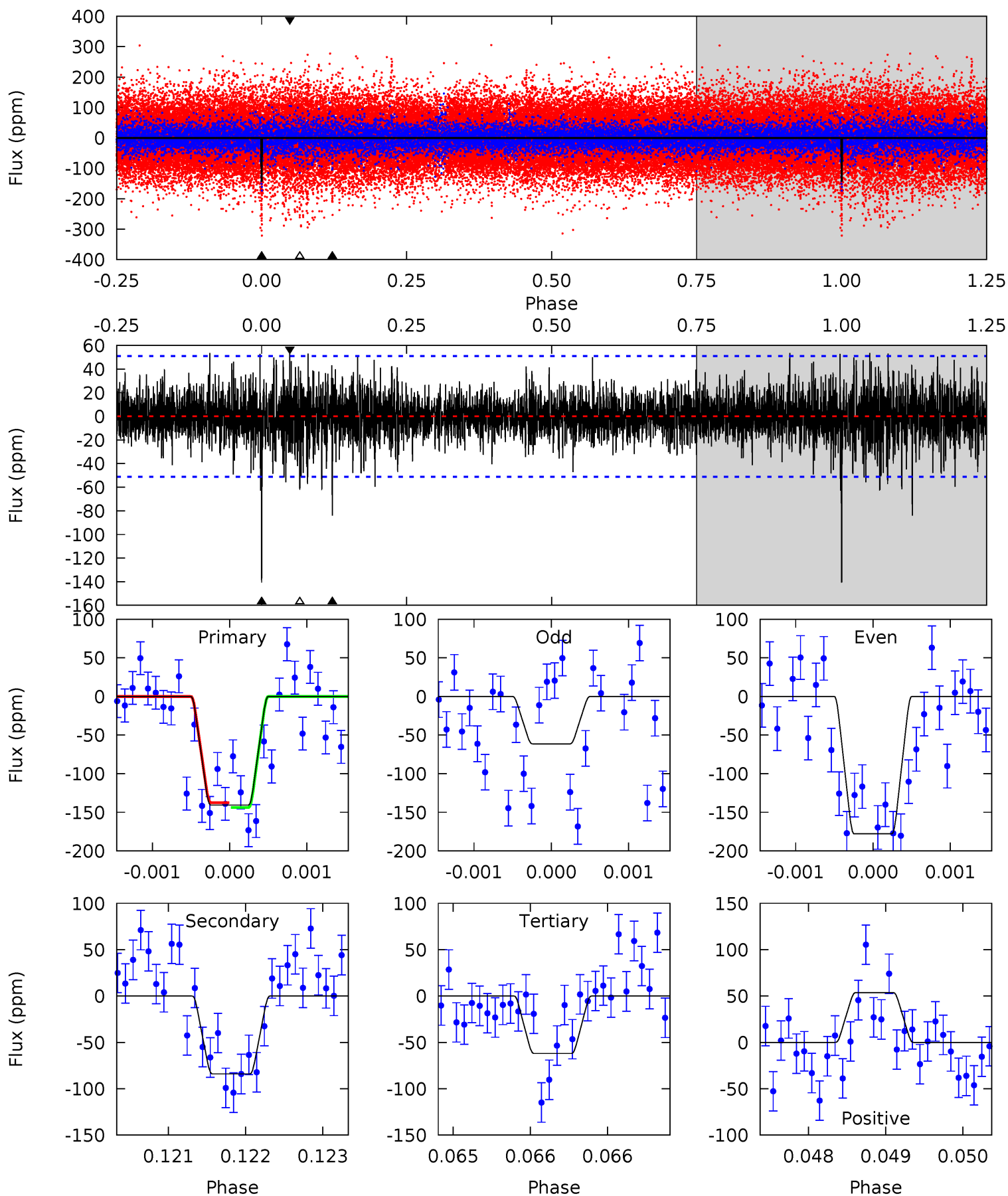
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	9.88	9.53	7.11	5.40	3.20	1.92	11.7	14.1	0.35	2.77	3.48	1.30	0.25	0.85



Alt Model-Shift Uniqueness Test

007429287-03, $P = 361.537788$ Days, $E = 287.198085$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	8.96	6.61	5.73	5.45	3.29	1.54	8.39	9.27	2.35	3.23	5.88	1.52	0.28	0.33



Stellar Parameters For KIC 007429287

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5619^{+93}_{-42}	$4.070^{+0.013}_{-0.011}$	$-0.320^{+0.150}_{-0.100}$	$1.406^{+0.050}_{-0.021}$	$0.848^{+0.058}_{-0.017}$	$0.430^{+0.018}_{-0.022}$
	+2%/-1%	+0%/-0%	+47%/-31%	+4%/-1%	+7%/-2%	+4%/-5%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007429287-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-83 ± 8	$2.08^{+0.58}_{-0.52}$	424^{+7}_{-4}	4736^{+613}_{-436}	9270^{+7117}_{-3646}
Alt.	-84 ± 9	$2.03^{+0.53}_{-0.53}$	424^{+6}_{-4}	4799^{+689}_{-433}	9918^{+8273}_{-3866}

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

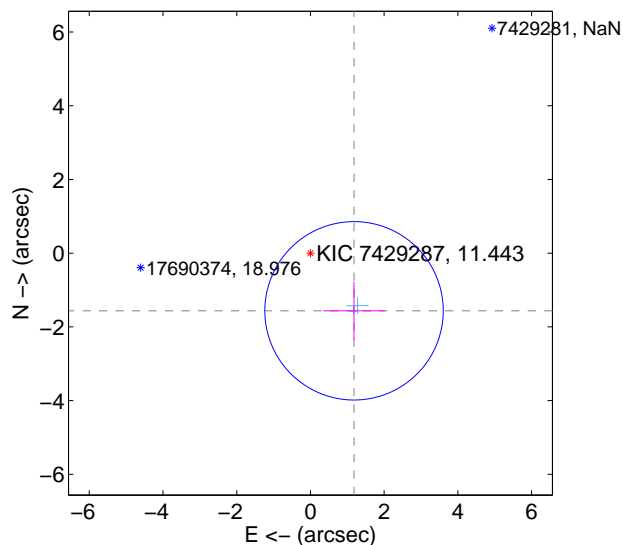
Supplemental centroid analysis for 007429287-03. **Kepler magnitude: 11.44.** Transit SNR 8.69

There are 2 quarters with good PRF difference image offsets

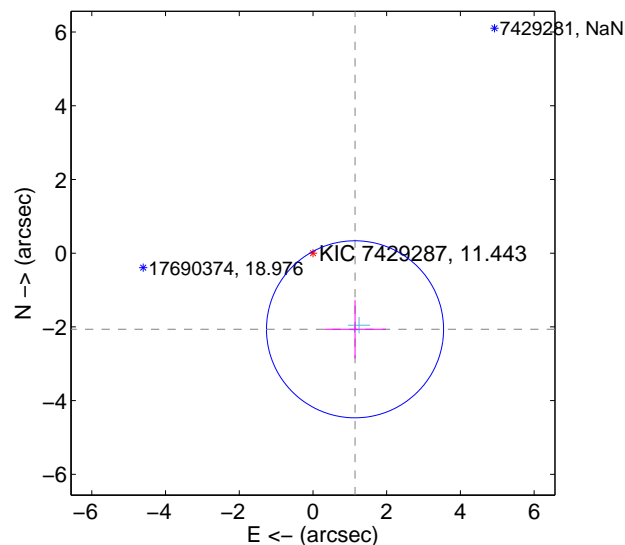
The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.960 ± 0.806	2.43	-1.183 ± 0.835	-1.563 ± 0.789
PRF-fit source offset from KIC position	2.359 ± 0.800	2.95	-1.141 ± 0.835	-2.065 ± 0.789
photometric centroid source offset	2.63 ± 0.95	2.78	-1.71 ± 1.09	-1.99 ± 0.83

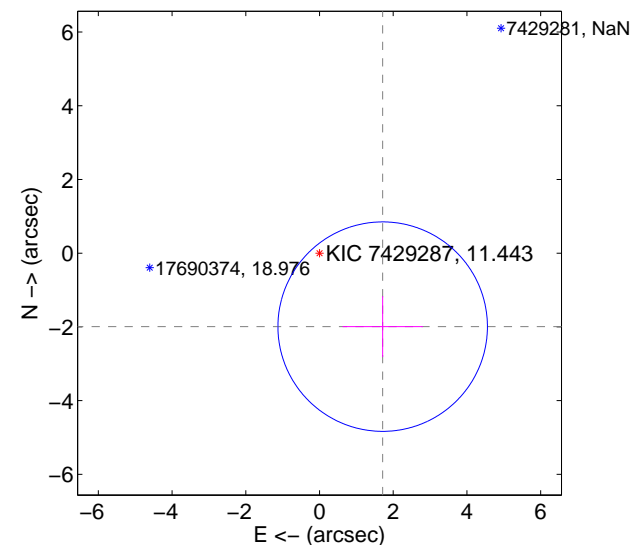
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

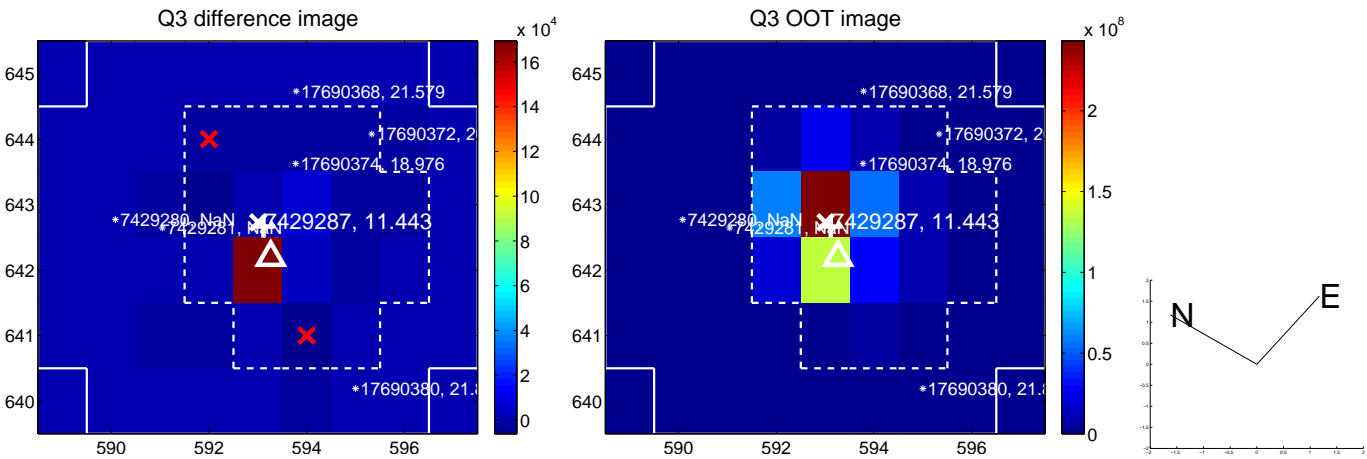


offset from photometric centroids

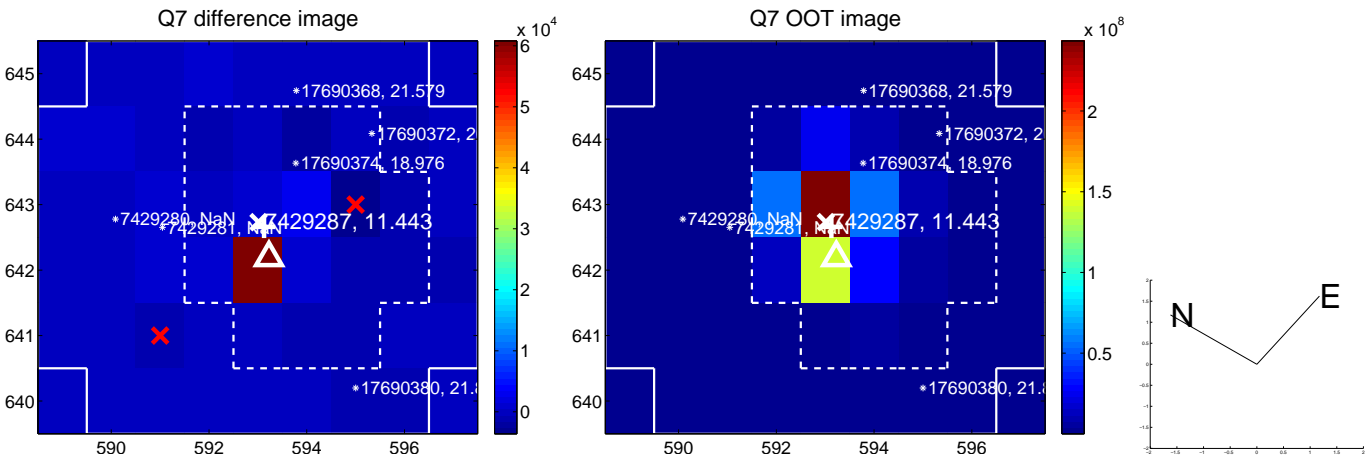


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

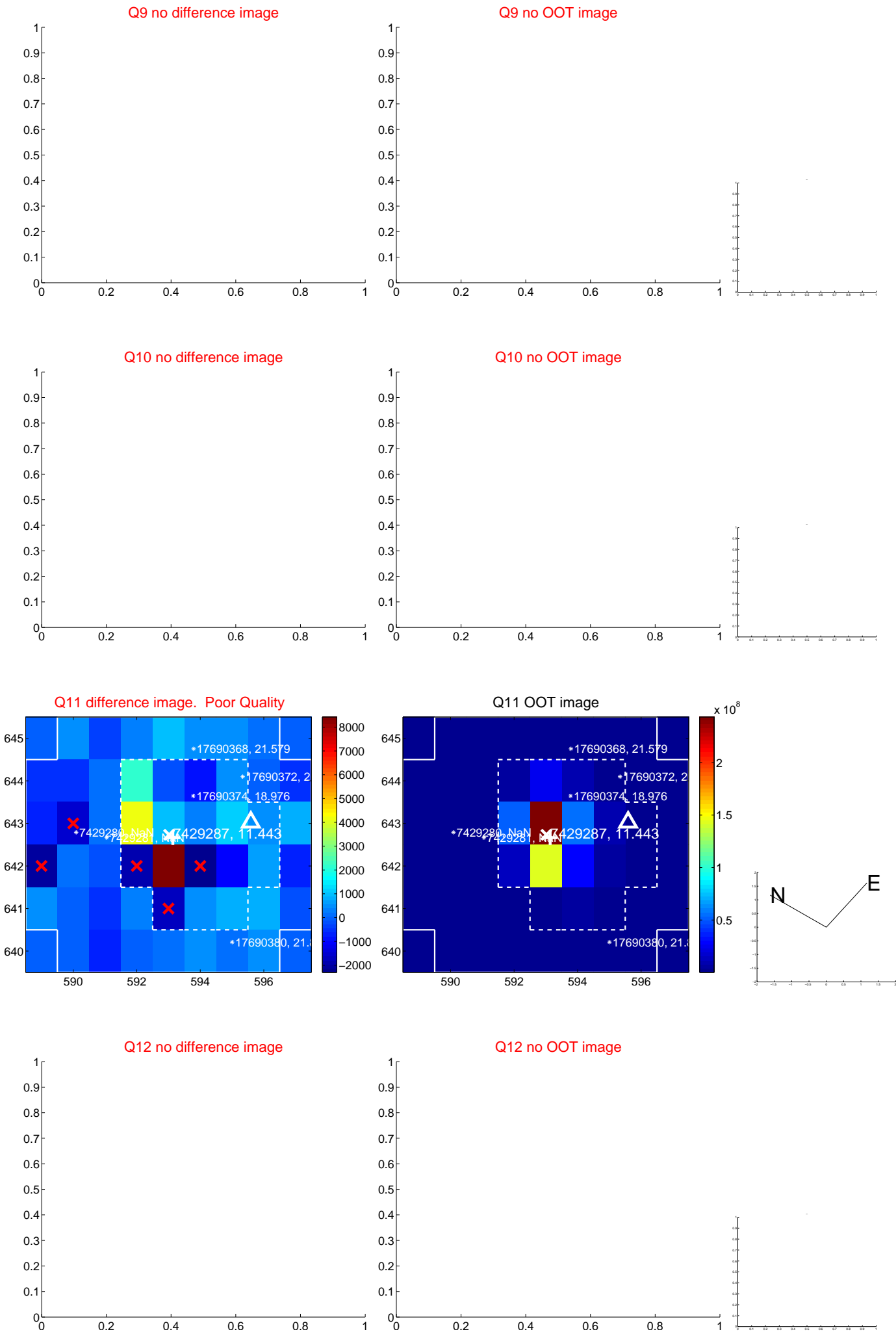
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



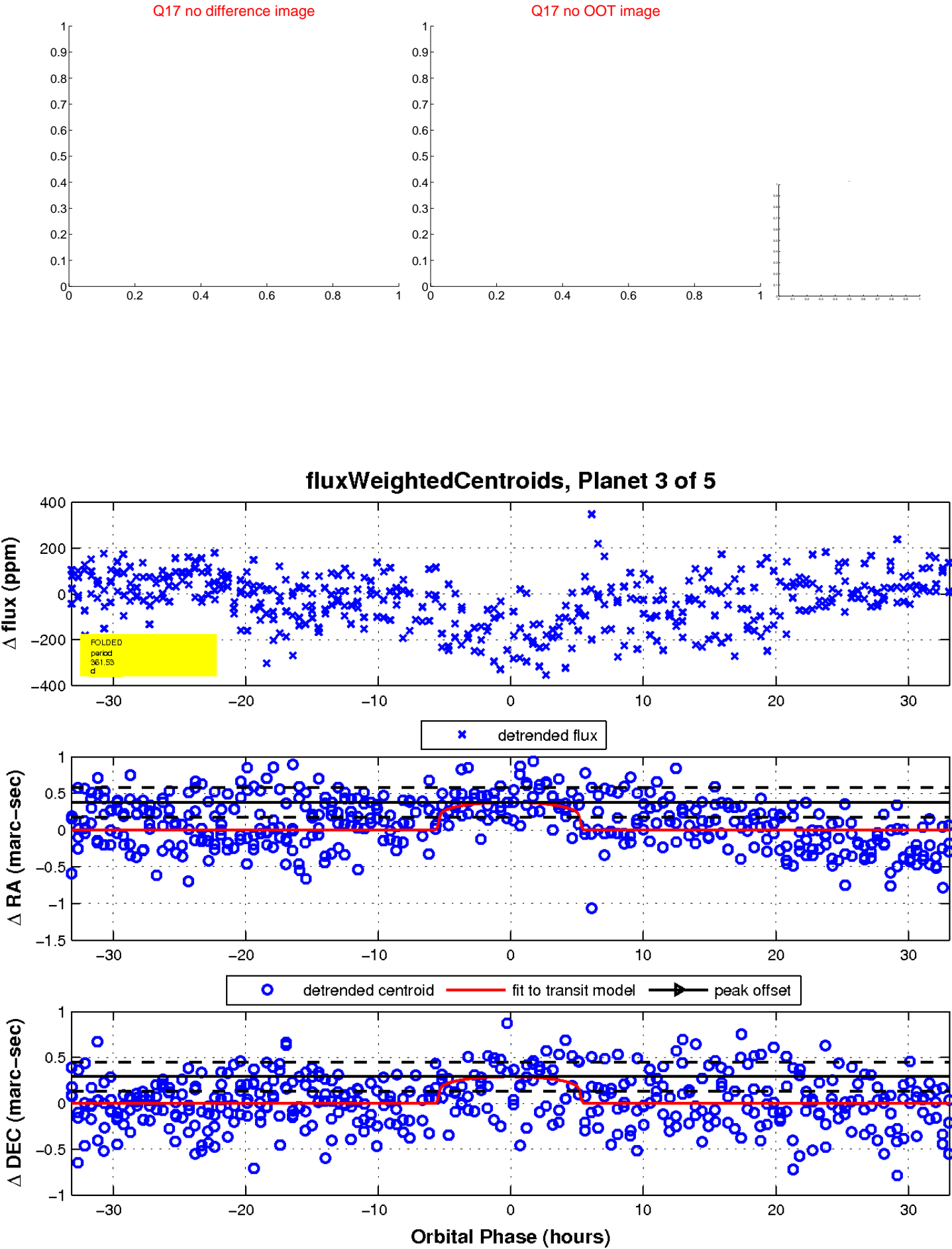
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

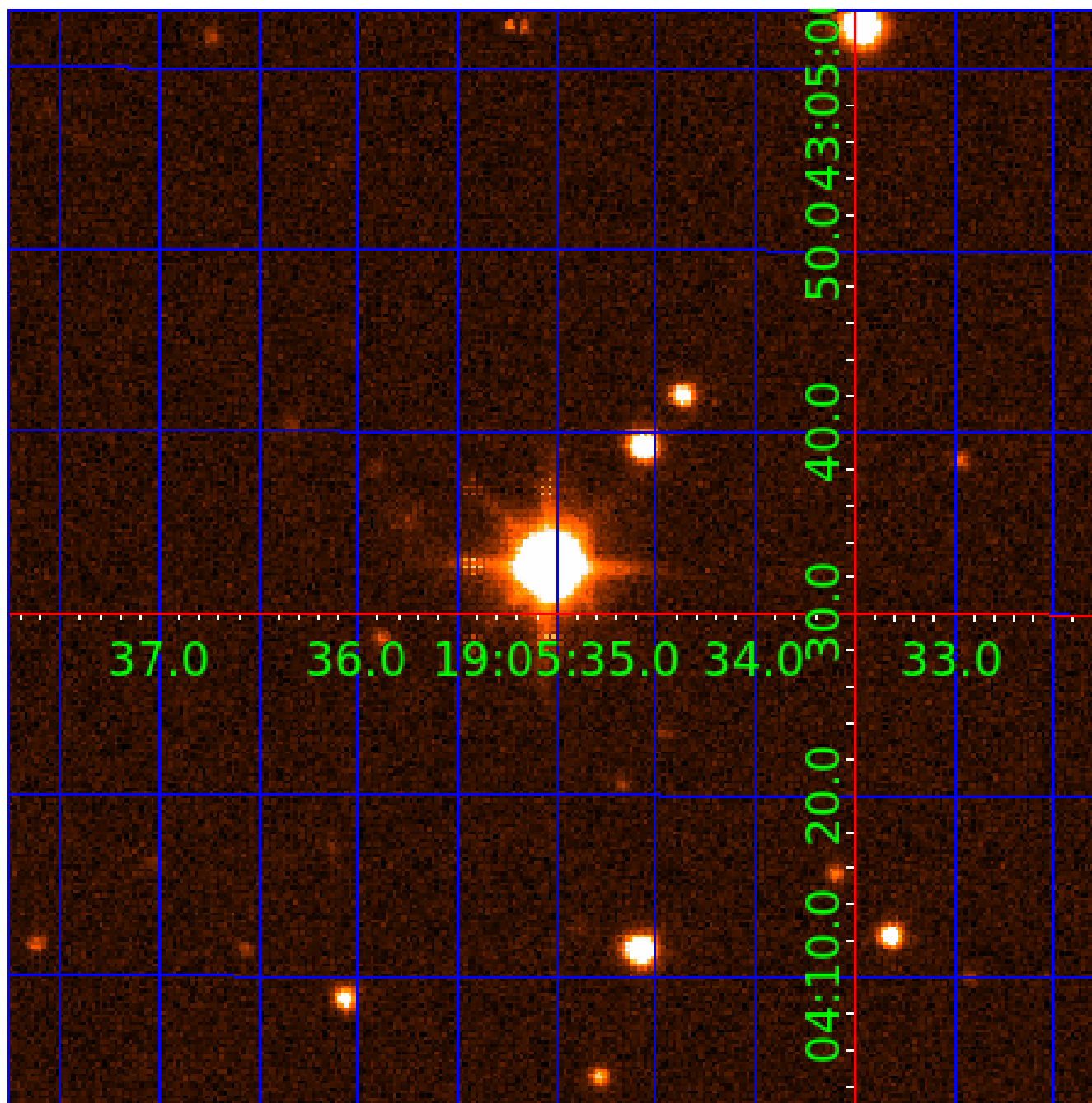


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007429287

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})
007429287-01	OBS	4260.03	358.666817	296.966877	177.4	15.982	7.7	8.3	1.41	5619	2.05	2.02
007429287-02	OBS	No	373.011416	295.811866	116.0	7.831	10.1	4.8	1.41	5619	1.77	1.92
007429287-03	OBS	No	361.531452	287.204270	186.8	11.074	7.9	8.7	1.41	5619	2.10	2.00
007429287-04	OBS	4260.04	84.793598	180.533124	42.9	17.591	8.0	7.6	1.41	5619	0.99	13.82
007429287-05	OBS	No	385.689189	308.737848	141.9	7.391	8.1	8.6	1.41	5619	1.92	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007429287-01	OBS	FP	0.05	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-04	OBS	PC	0.97	0	0	0	0	CENT_SATURATED
007429287-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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 007429287-04

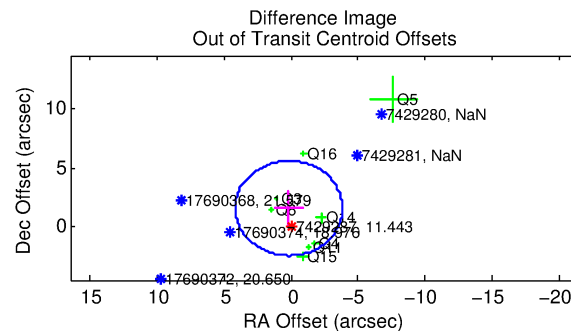
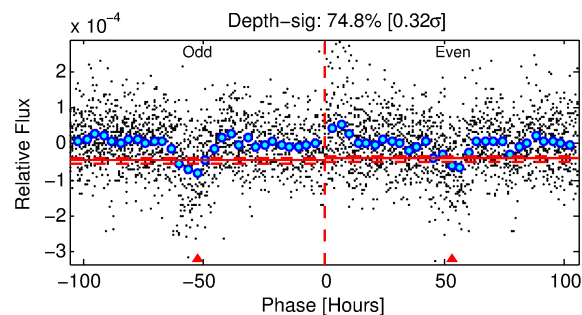
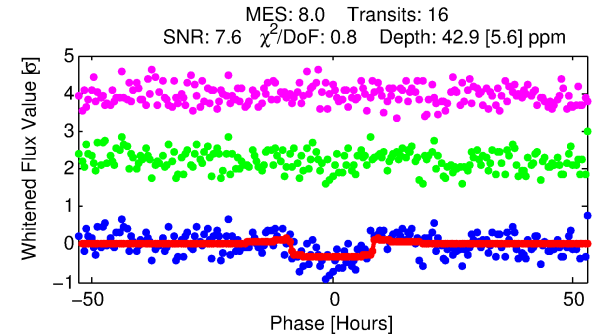
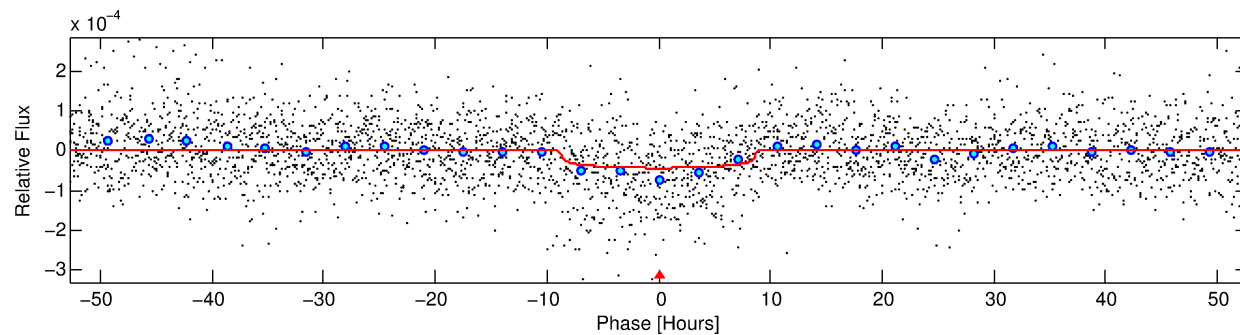
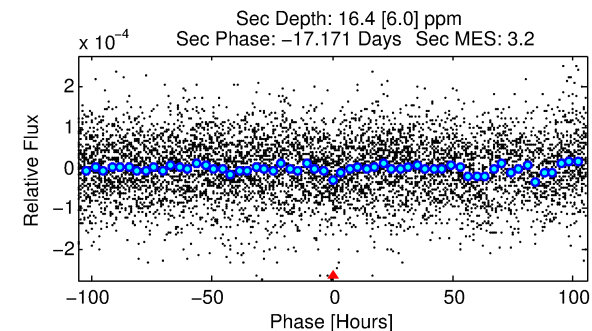
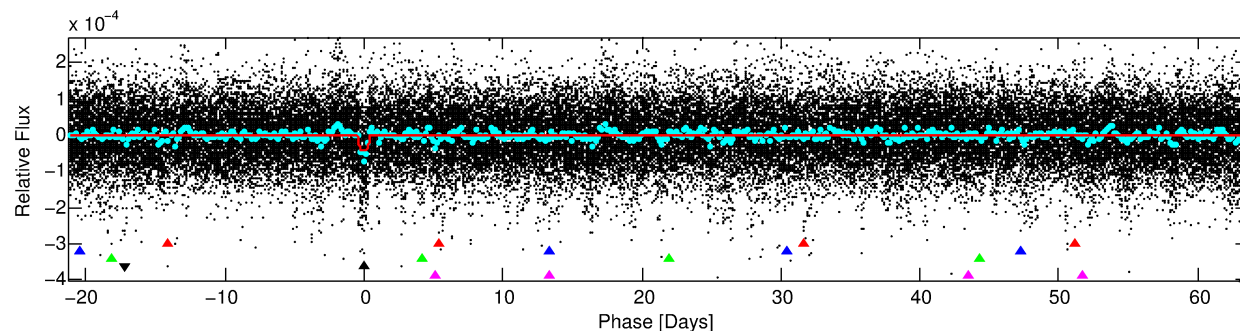
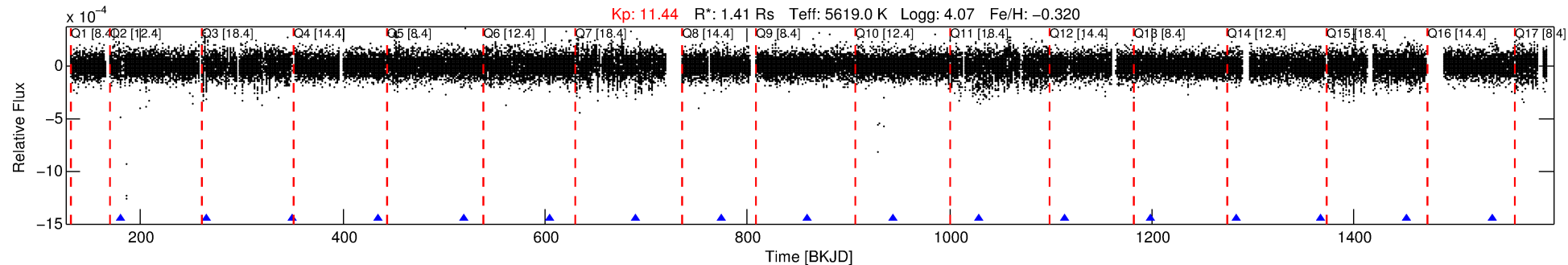
No Significant Match Found

DV One-Page Summary

KIC: 7429287 Candidate: 4 of 5 Period: 84.794 d

KOI: K04260 Corr: No Ephemeris Match

Kp: 11.44 R*: 1.41 Rs Teff: 5619.0 K Logg: 4.07 Fe/H: -0.320



DV Fit Results:

Period = 84.79360 [0.00215] d
Epoch = 180.5331 [0.0210] BKJD
Rp/R* = 0.0065 [0.0020]
a/R* = 25.29 [34.07]
b = 0.74 [0.84]
Seff = 13.82 [1.01]
Teq = 492 [9] K
Rp = 1.00 [0.31] Re
a = 0.3575 [0.0092] AU
Ag = 1162.49 [825.81] [1.41σ]
Teffp = 4438 [791] K [4.99σ]

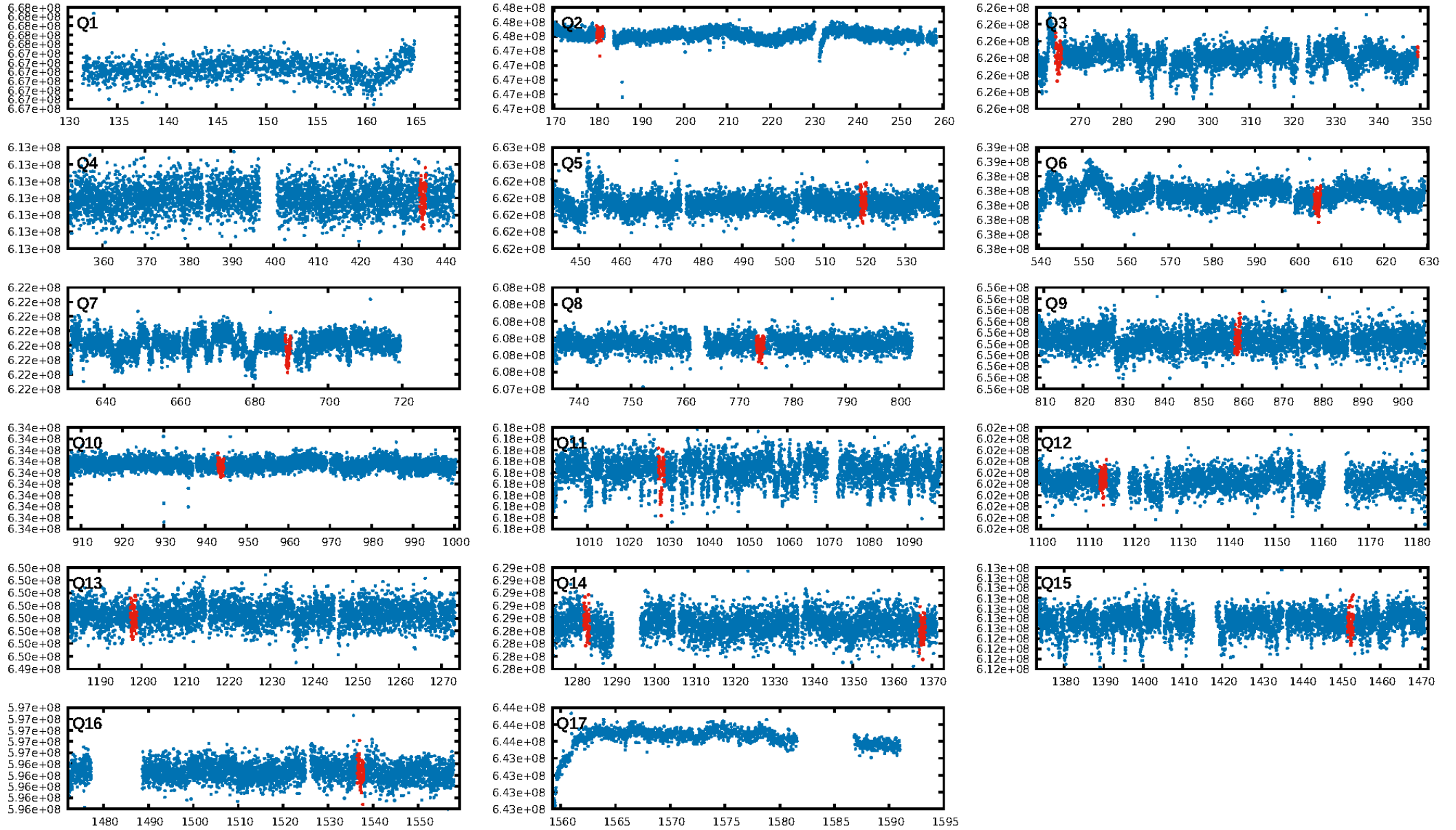
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [276.56σ]
ModelChiSquare2-sig: 22.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.90e-11
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 1.615
Centroid-sig: 0.0%
Centroid-so: 4.090 arcsec [2.52σ]
OotOffset-rm: 1.570 arcsec [1.18σ]
KicOffset-rm: 1.131 arcsec [0.96σ]
OotOffset-st: 2/3/2/1 [8]
KicOffset-st: 2/3/2/1 [8]
DiffImageQuality-fgm: 0.50 [4/8]
DiffImageOverlap-fno: 1.00 [11/11]

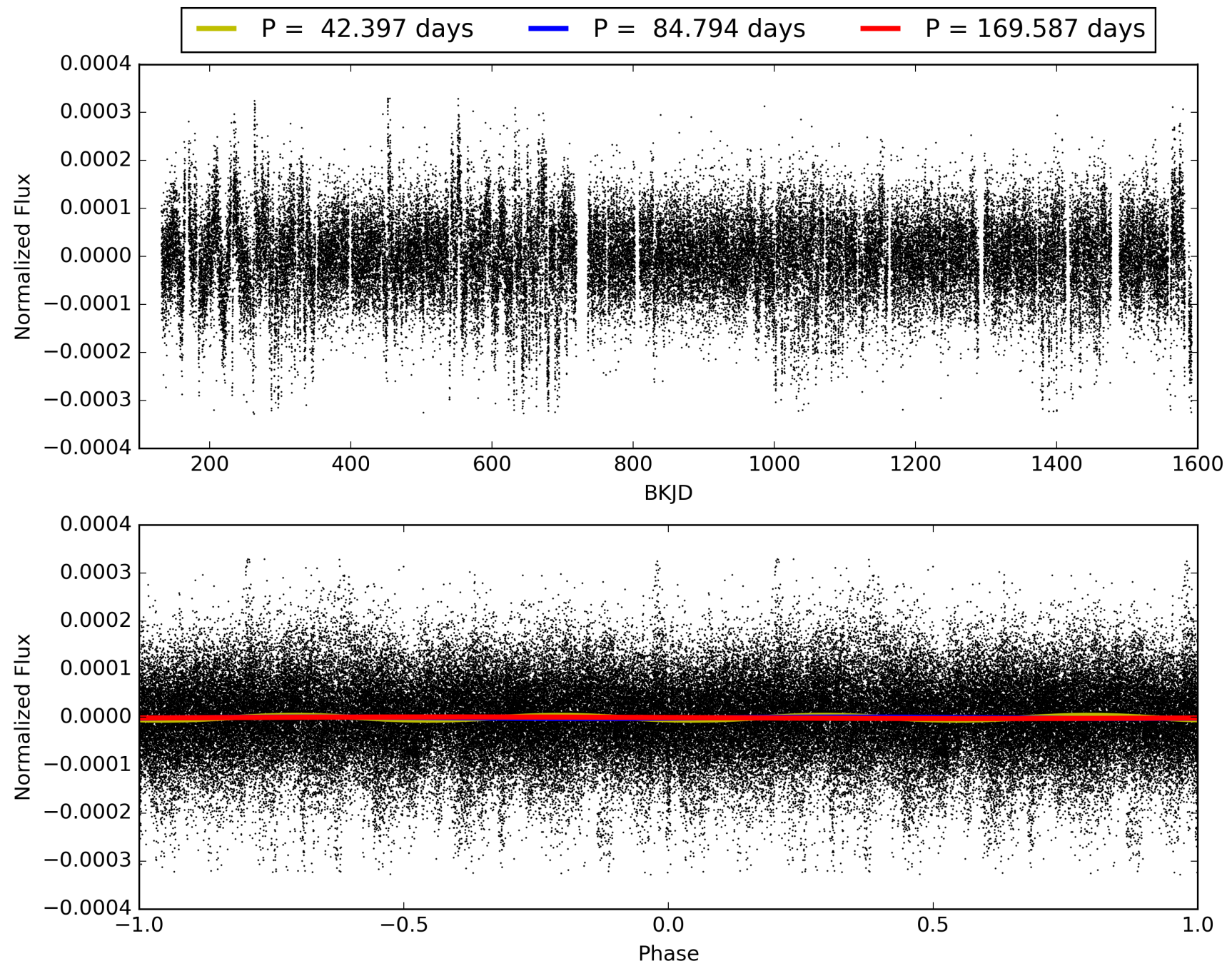
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:43:50 Z

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

TCE 007429287-04, PDC Light Curves

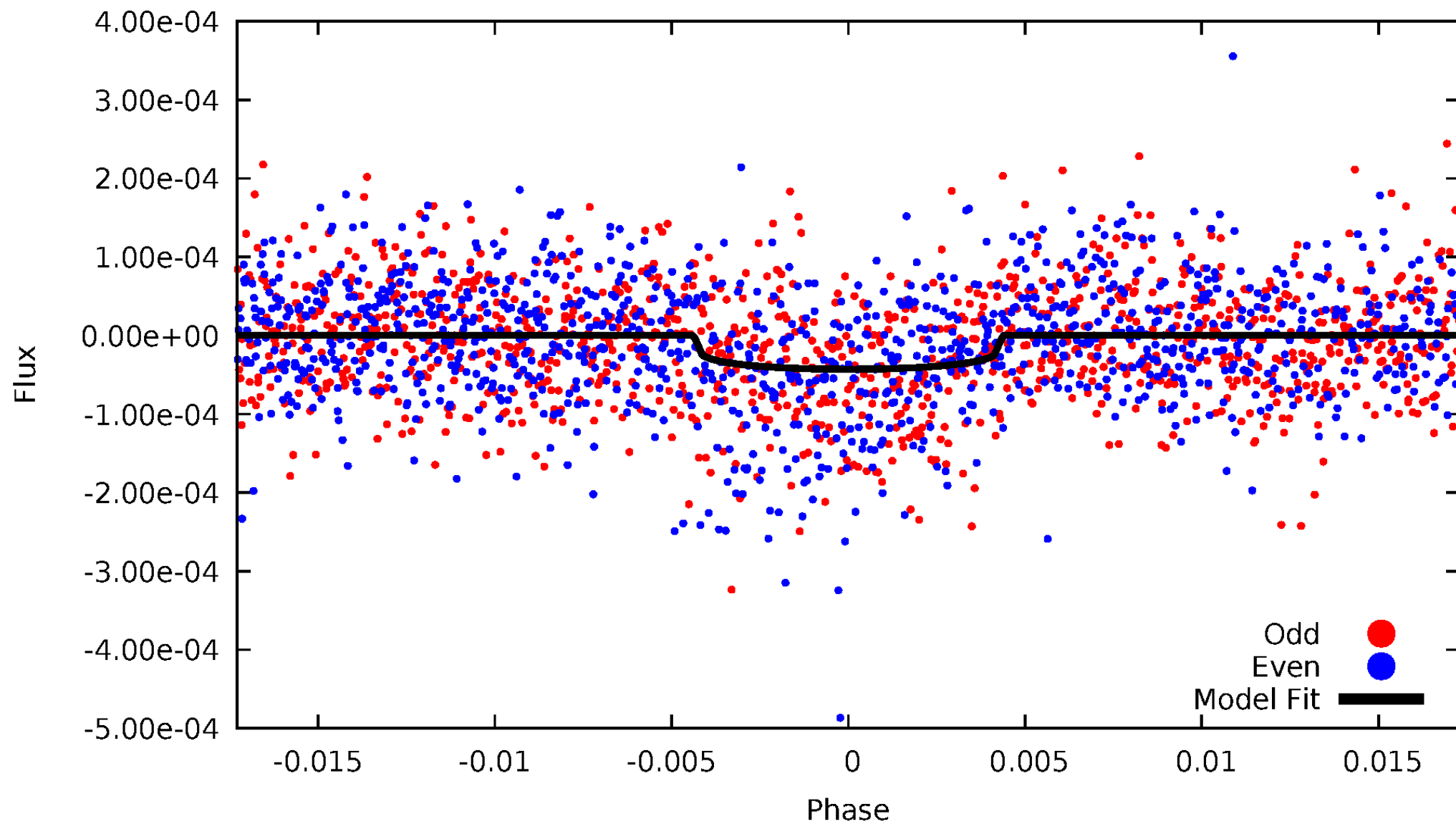


TCE 007429287-04



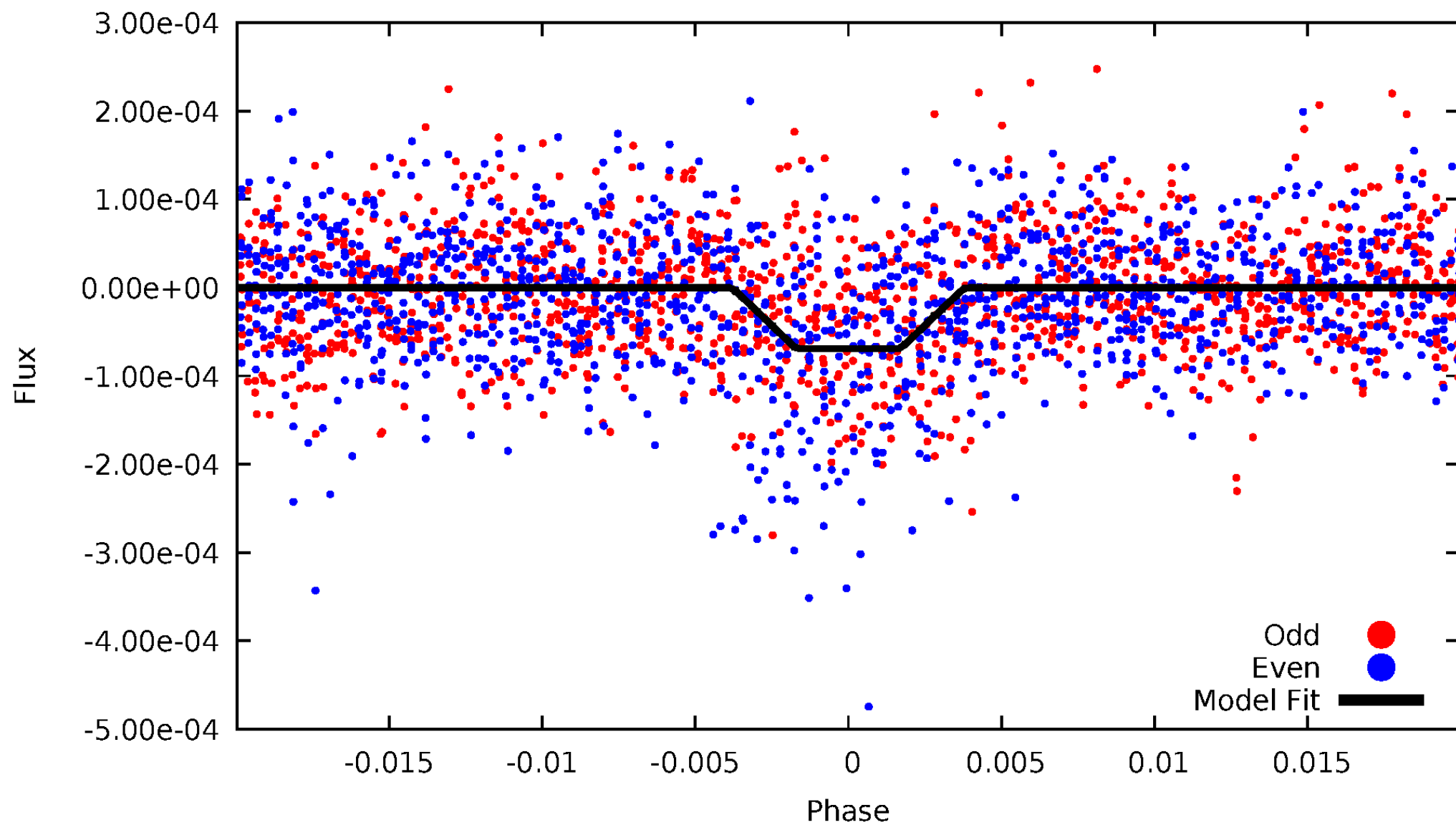
DV Odd/Even

TCE 007429287-04



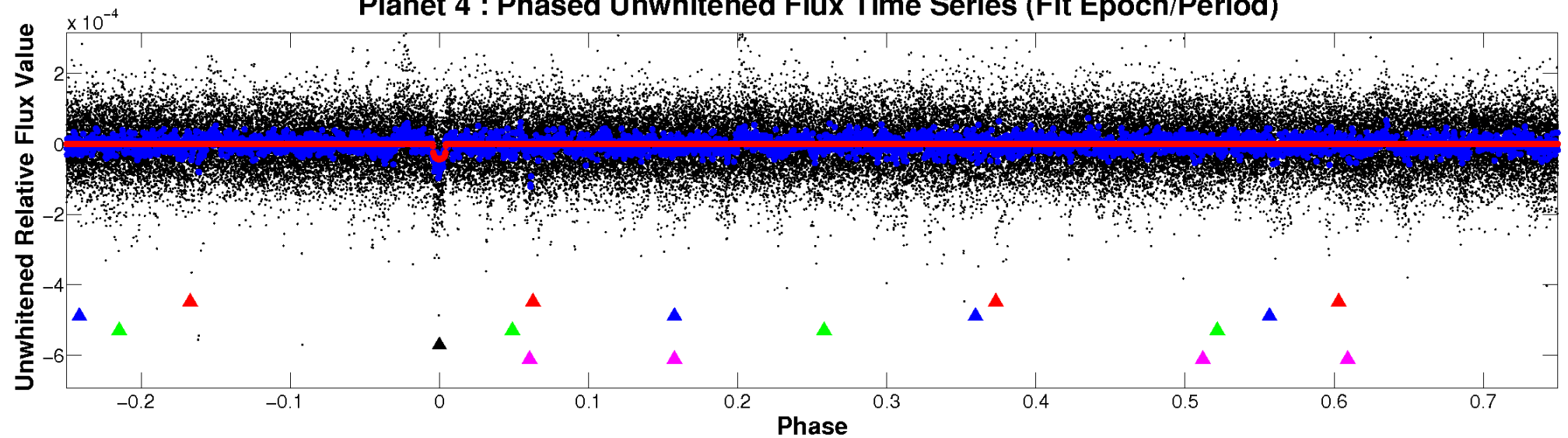
ALT Odd/Even

TCE 007429287-04

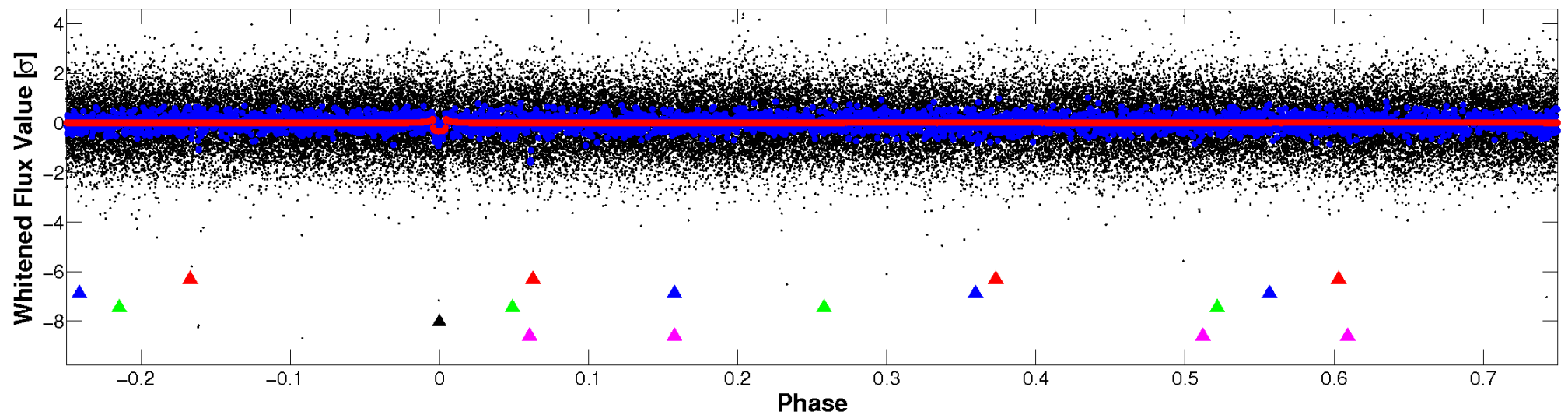


Non-Whitened Vs. Whitened Light Curve

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

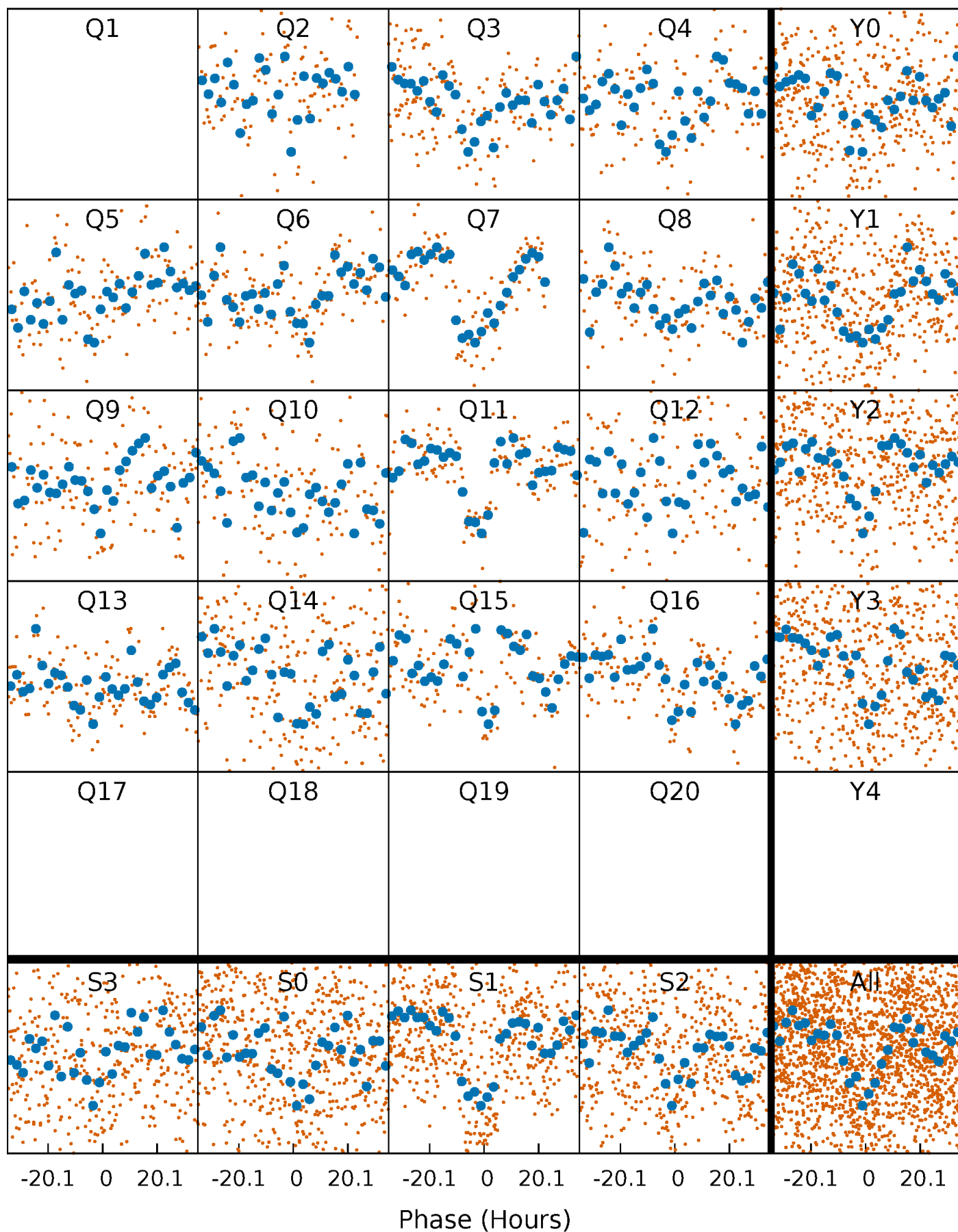


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



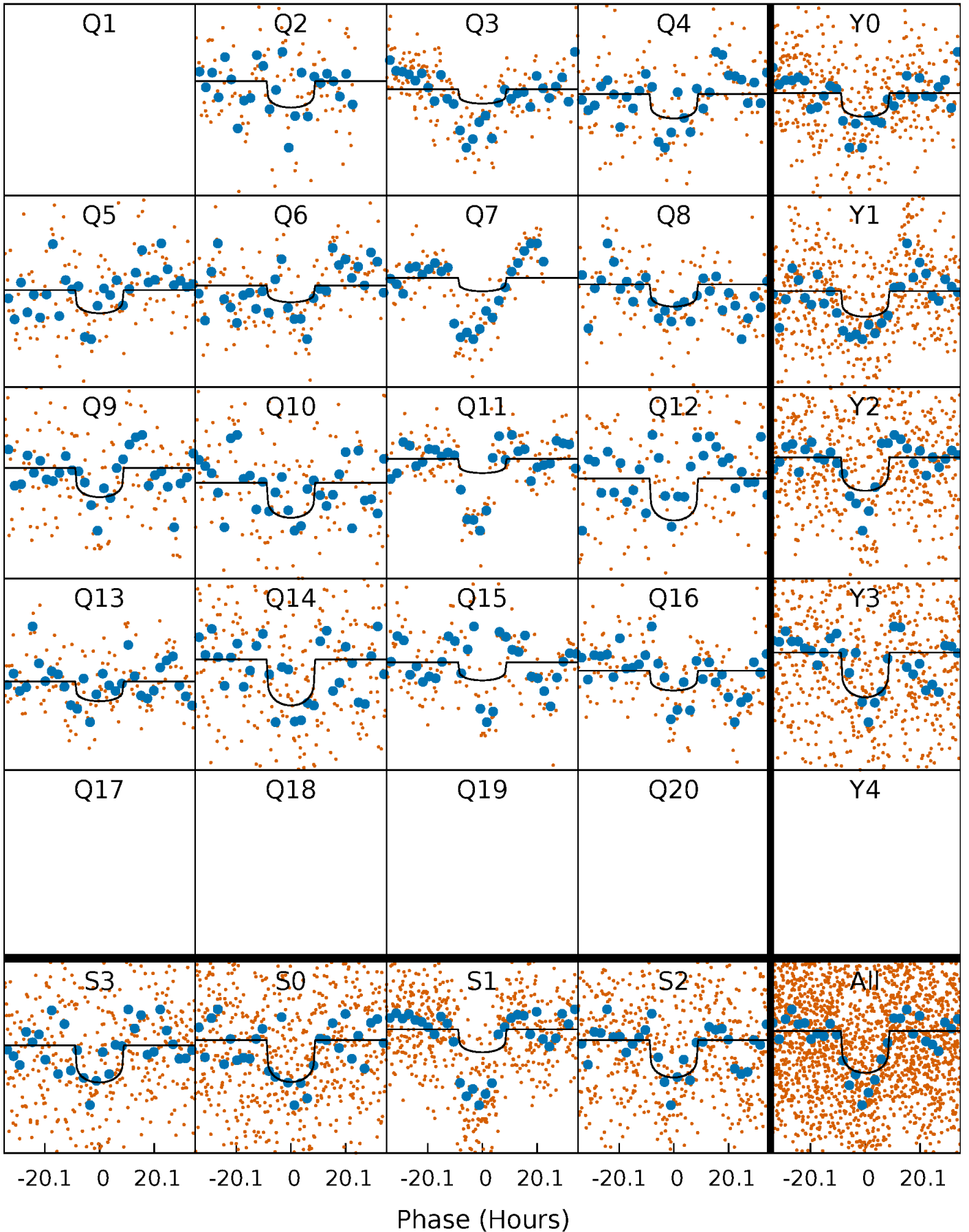
PDC Quarter-Phased Transit Curves

TCE 007429287-04 P= 84.793598 Days $T_0=180.533124$ (BKJD)



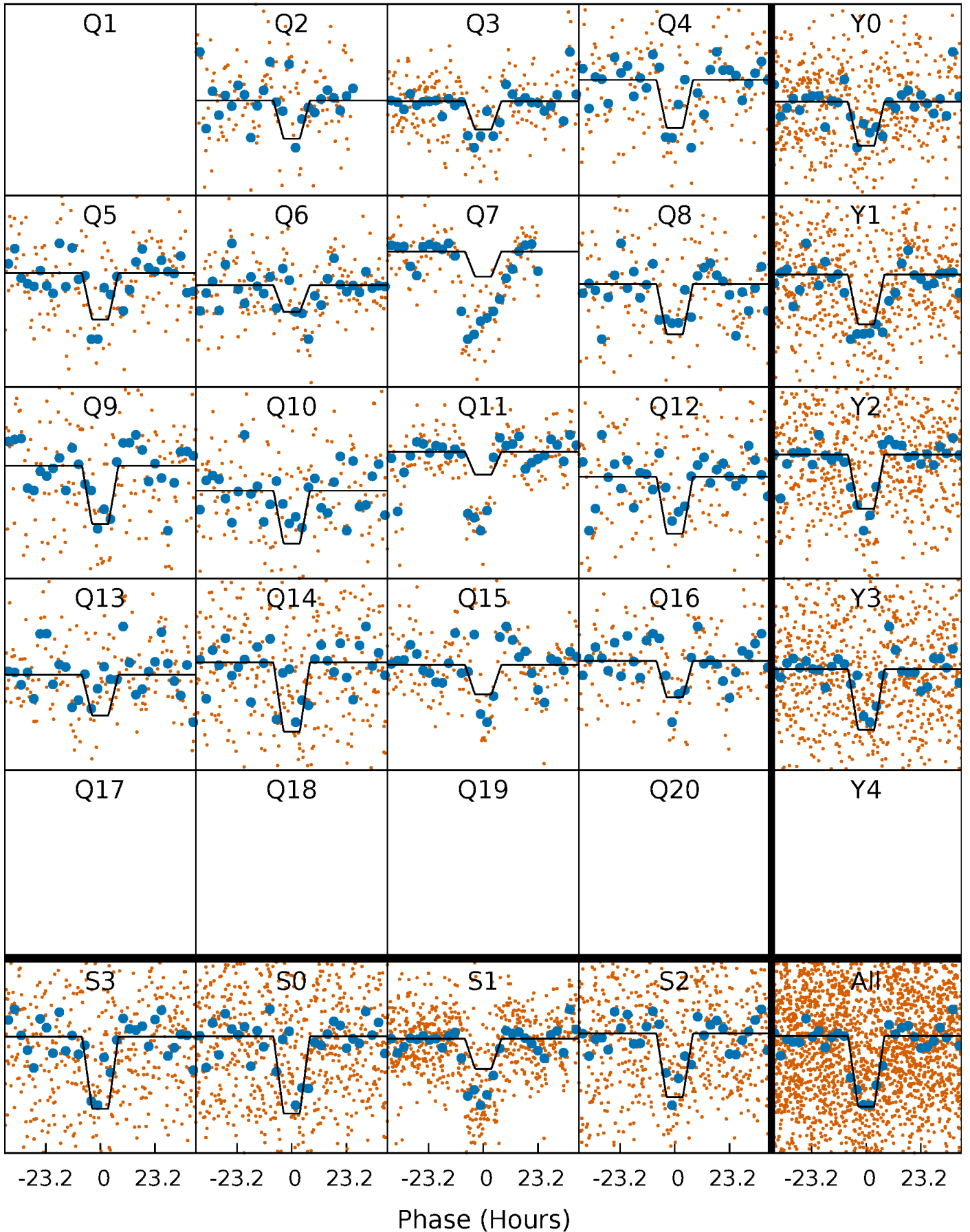
DV Quarter-Phased Transit Curves

TCE 007429287-04 P= 84.793598 Days $T_0=180.533124$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

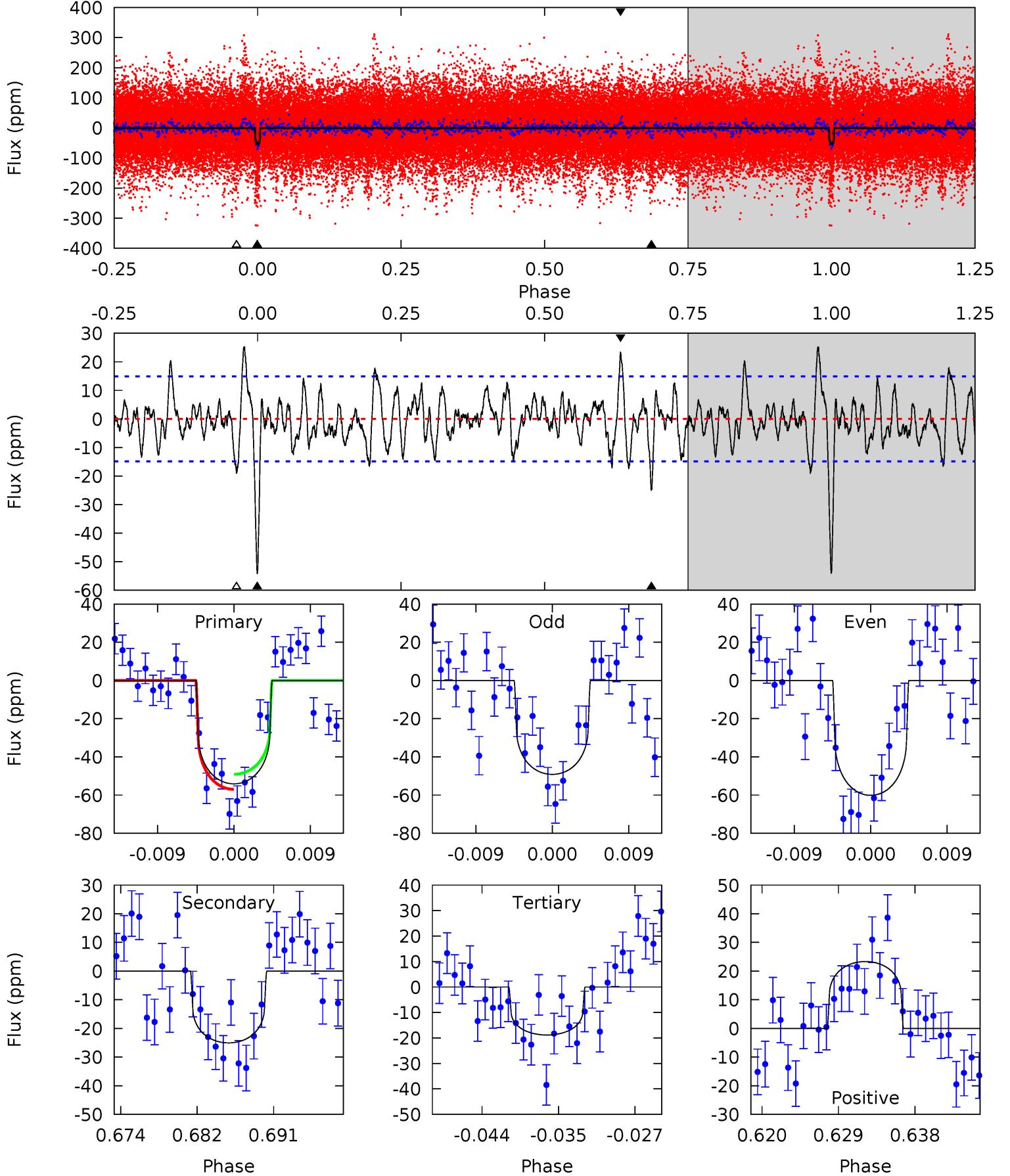
TCE 007429287-04 P= 84.799274 Days $T_0=180.457420$ (BKJD)



DV Model-Shift Uniqueness Test

007429287-04, P = 84.793598 Days, E = 95.739526 Days

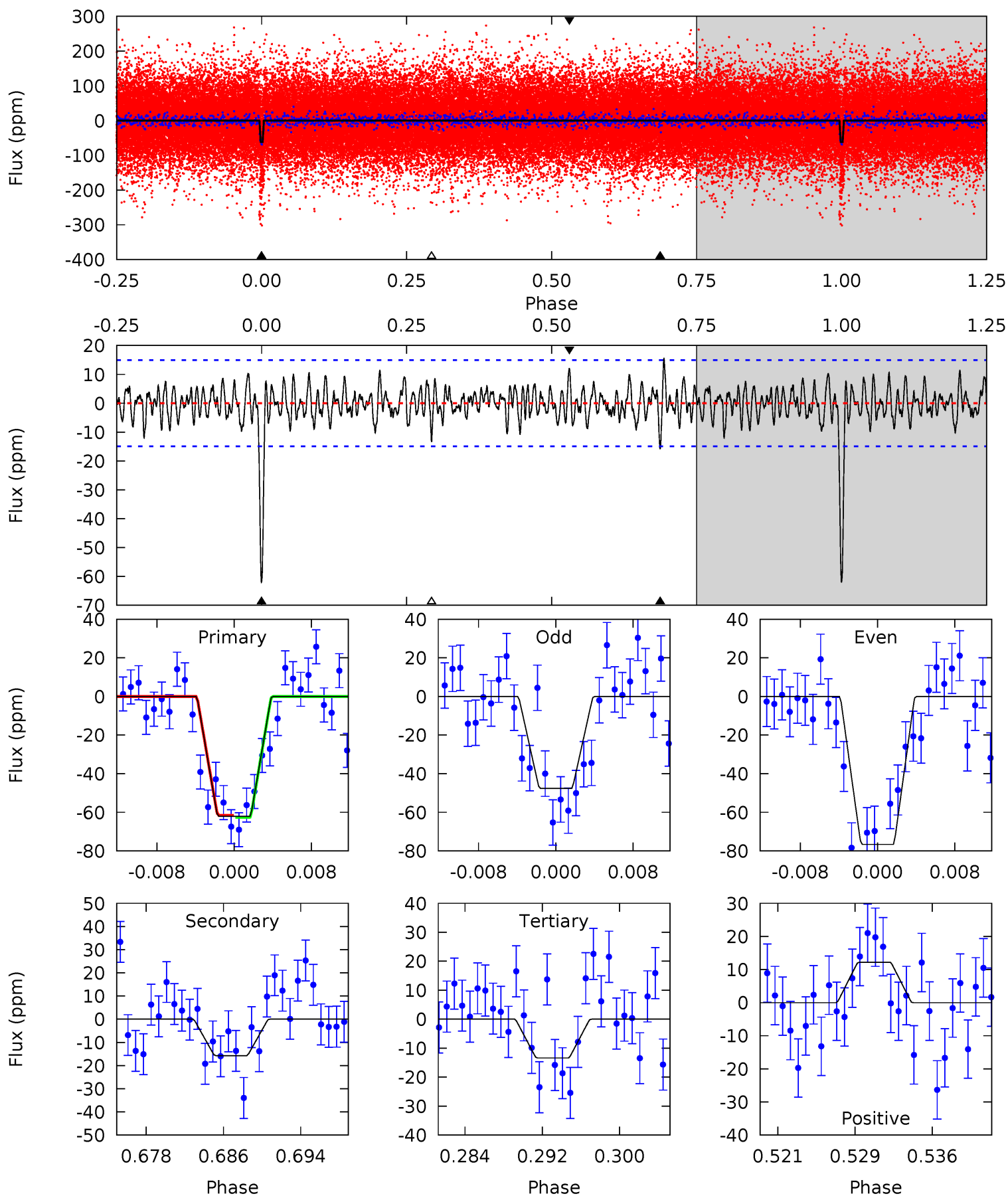
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	8.50	6.39	7.91	5.05	2.62	2.35	12.0	10.4	2.11	0.59	1.86	1.32	0.32	1.34



Alt Model-Shift Uniqueness Test

007429287-04, P = 84.799274 Days, E = 95.658146 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	5.34	4.55	4.15	5.07	2.66	1.47	16.6	17.0	0.79	1.19	4.92	1.23	0.20	0.15



Stellar Parameters For KIC 007429287

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5619^{+93}_{-42}	$4.070^{+0.013}_{-0.011}$	$-0.320^{+0.150}_{-0.100}$	$1.406^{+0.050}_{-0.021}$	$0.848^{+0.058}_{-0.017}$	$0.430^{+0.018}_{-0.022}$
	+2%/-1%	+0%/-0%	+47%/-31%	+4%/-1%	+7%/-2%	+4%/-5%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007429287-04 / KOI 4260.04

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 3	$1.01^{+0.29}_{-0.31}$	688^{+11}_{-8}	4988^{+890}_{-483}	1708^{+1882}_{-674}
Alt.	-16 ± 3	$1.31^{+0.29}_{-0.33}$	687^{+11}_{-7}	4115^{+521}_{-302}	646^{+551}_{-228}

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 $A_{obs} \gg 1.0$

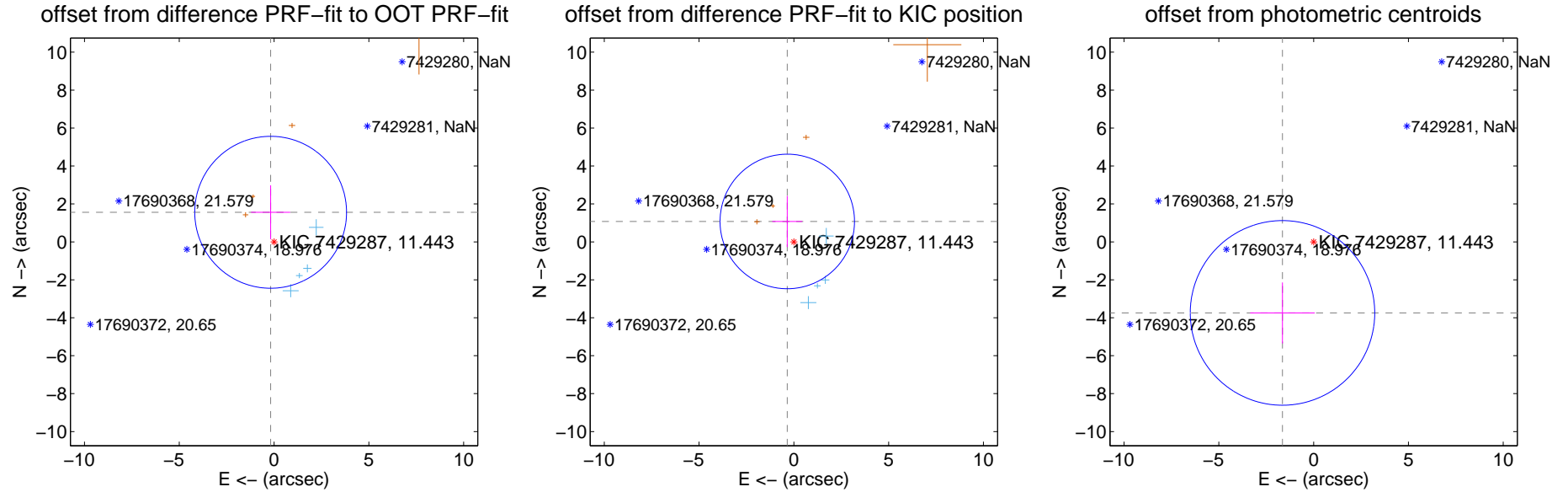
DV Centroid Data

Supplemental centroid analysis for 007429287-04. **Kepler magnitude: 11.44.** Transit SNR 7.57

There are 4 quarters with good PRF difference image offsets

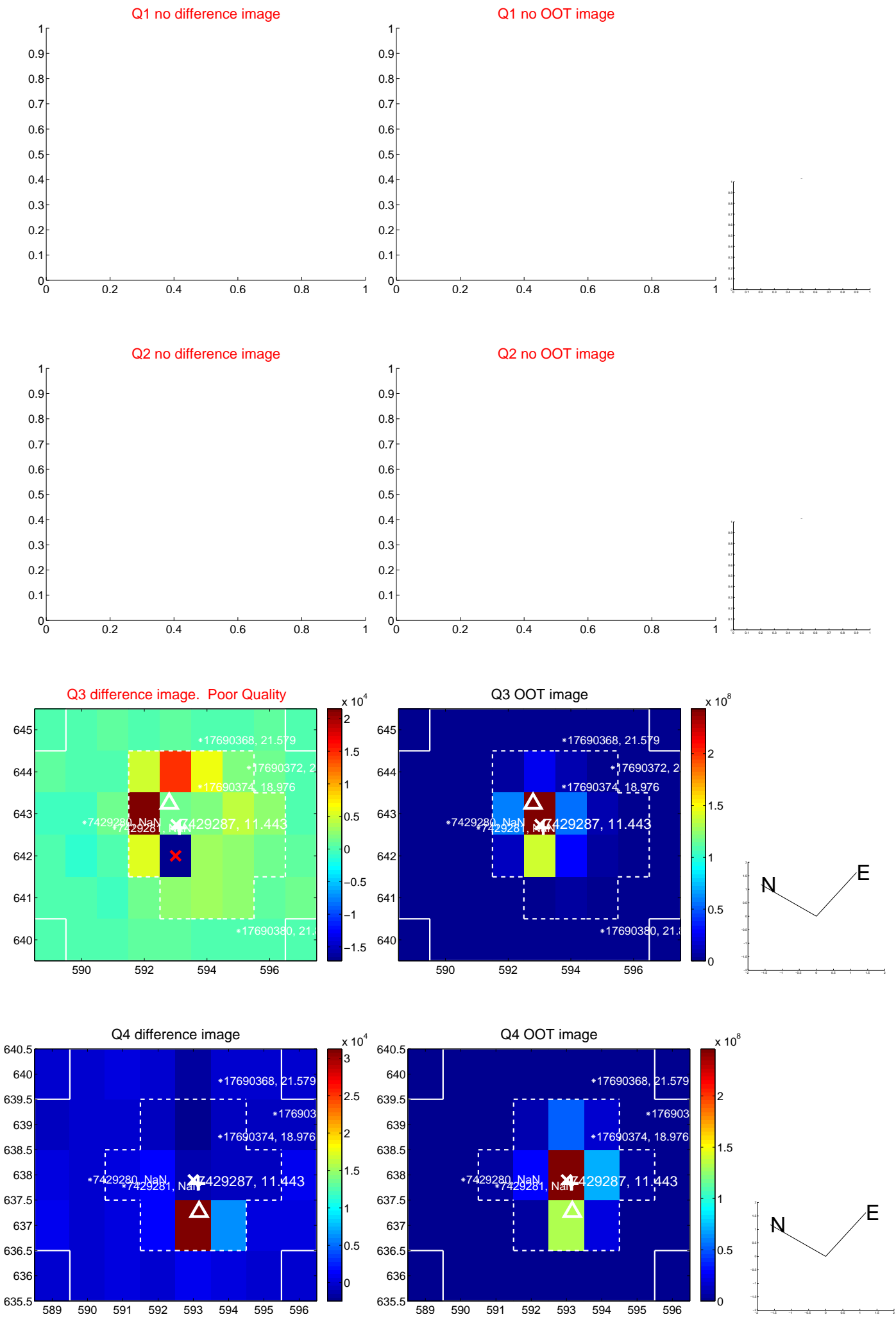
The direct PRF centroid is offset from the target star catalog position by about 0.69 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.570 ± 1.335	1.18	0.180 ± 1.032	1.560 ± 1.426
PRF-fit source offset from KIC position	1.131 ± 1.182	0.96	0.347 ± 0.794	1.076 ± 1.349
photometric centroid source offset	4.09 ± 1.62	2.52	1.64 ± 1.70	-3.75 ± 1.61

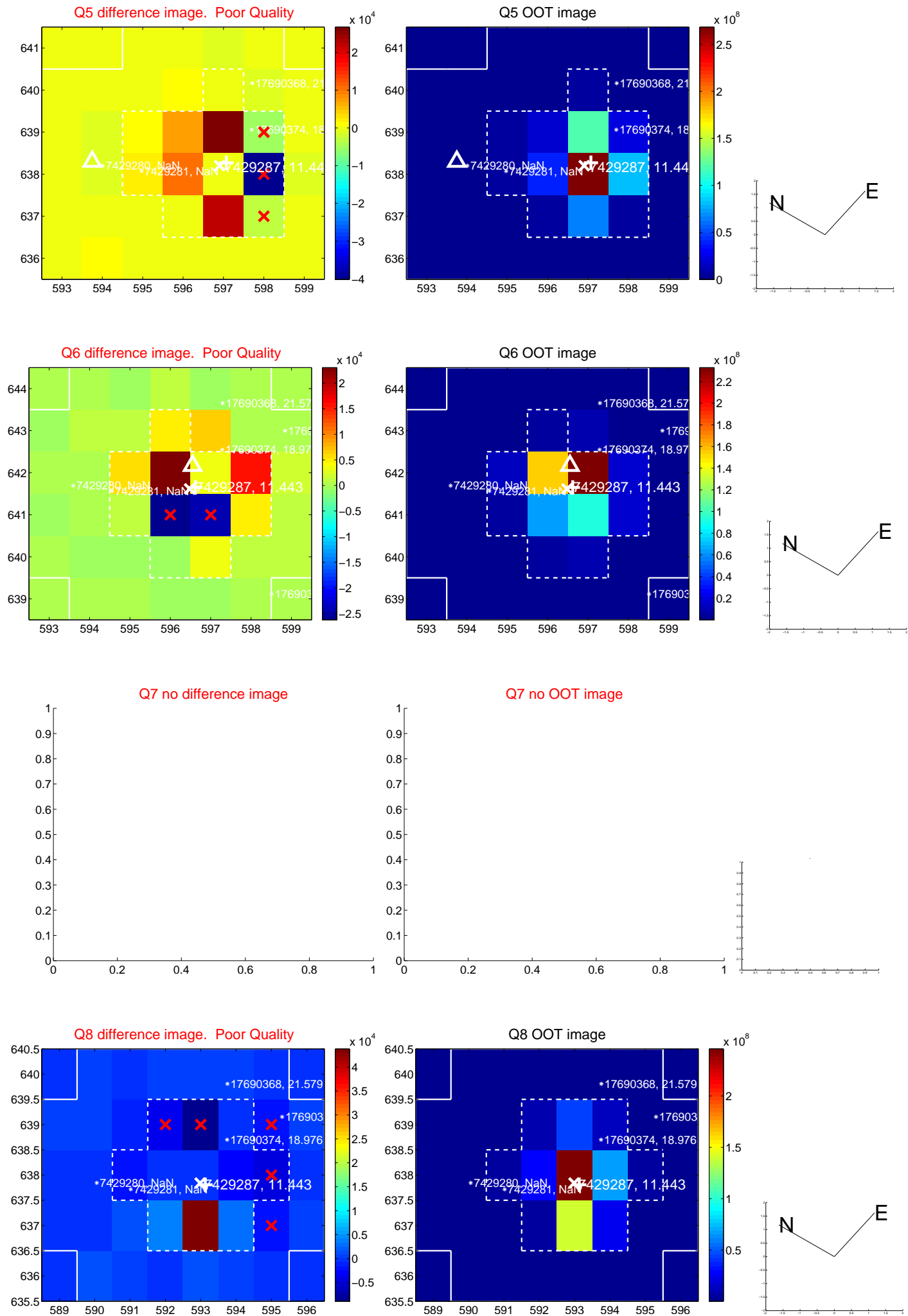


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

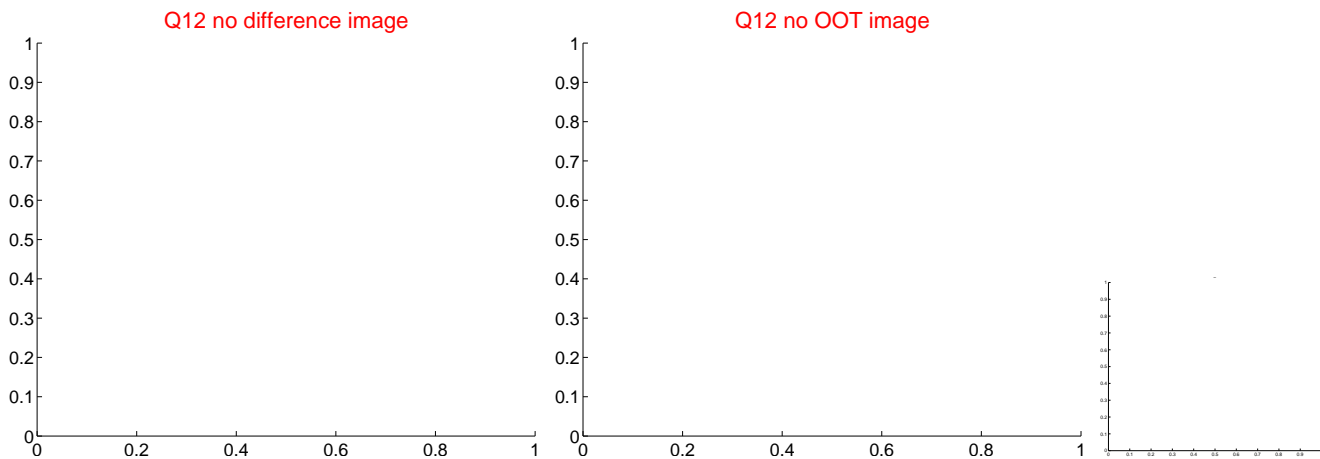
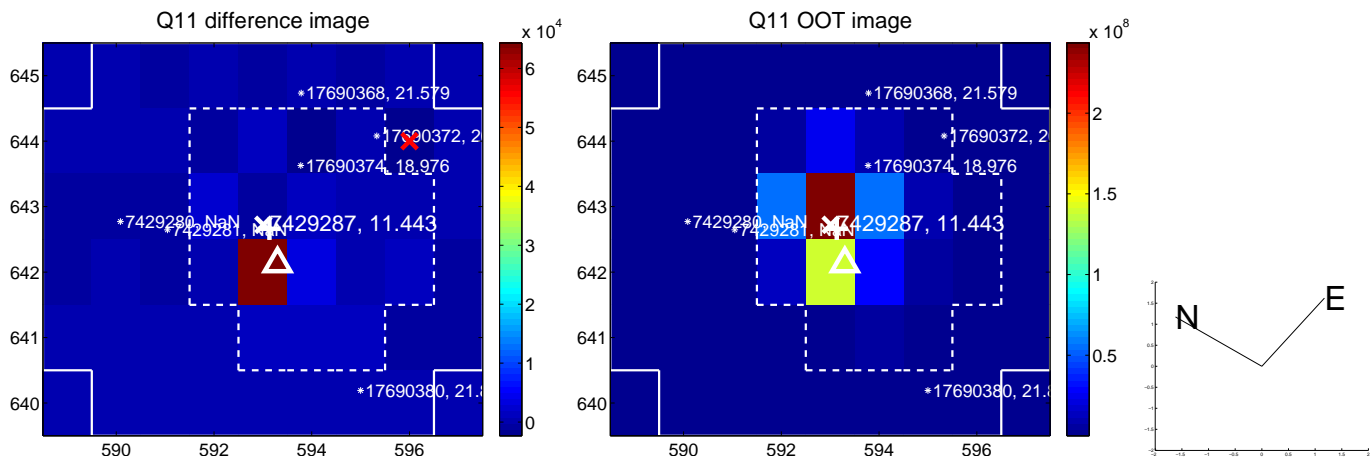
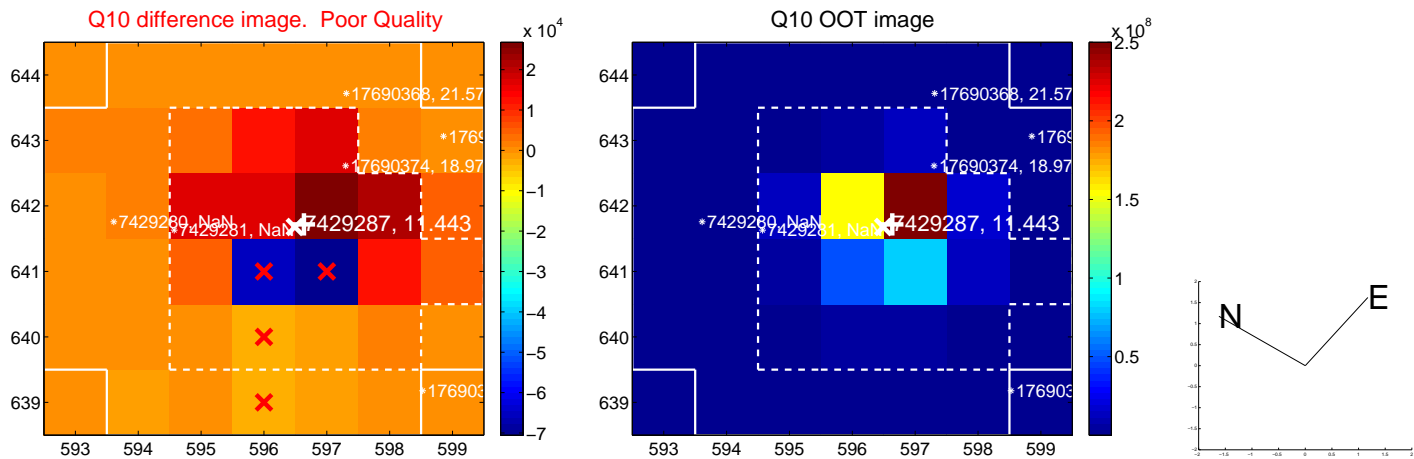
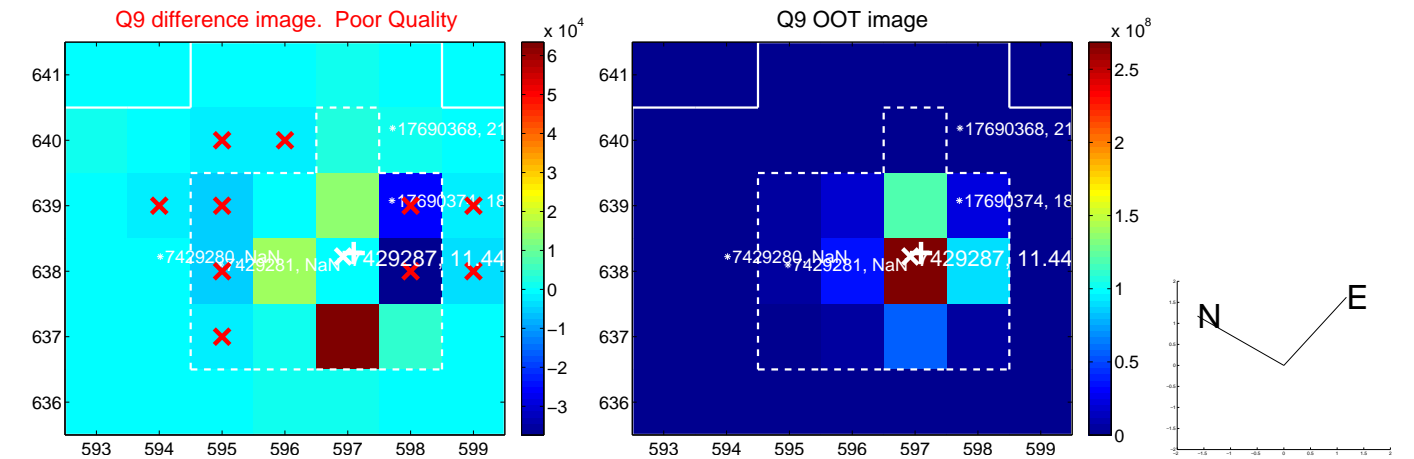
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



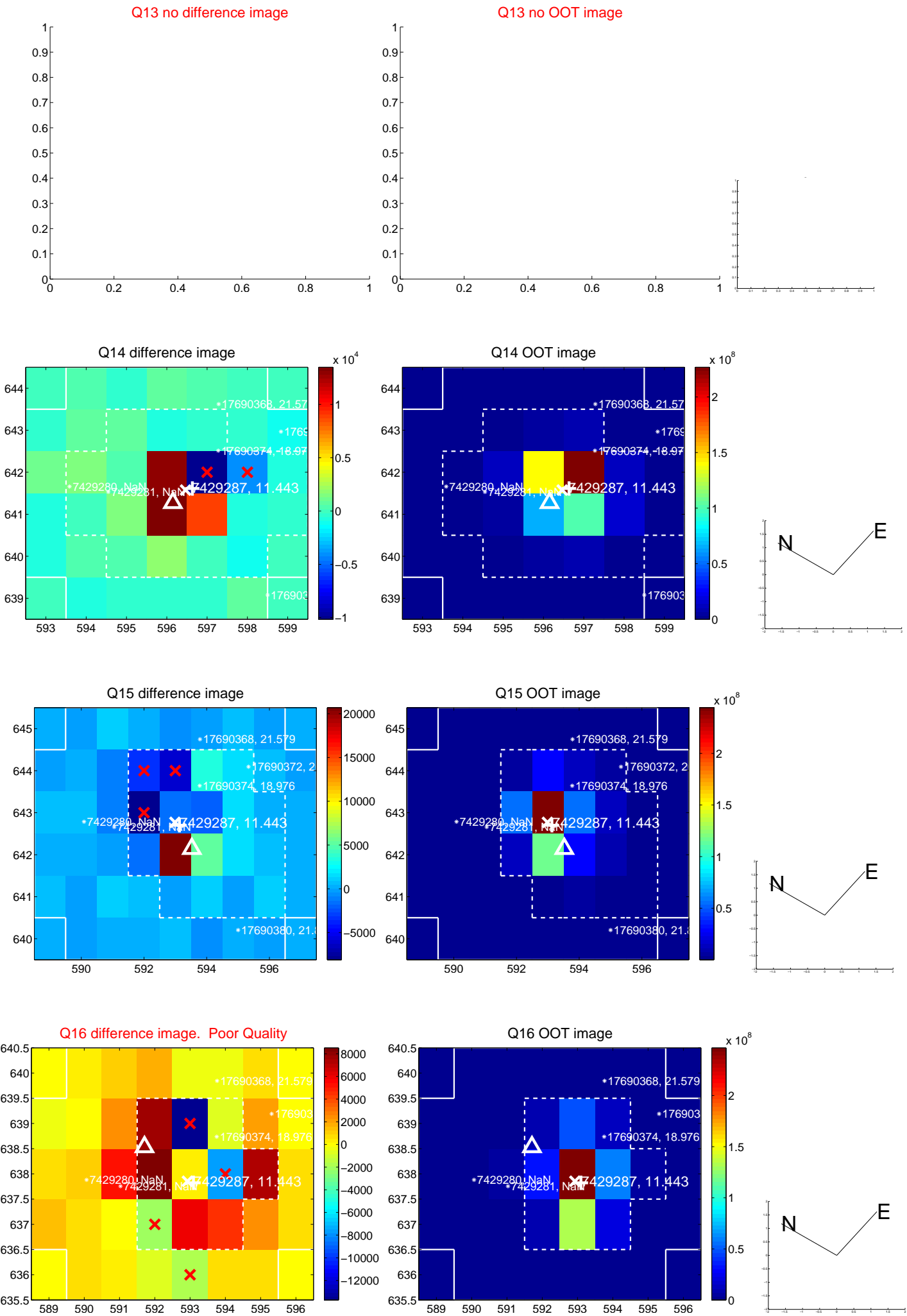
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



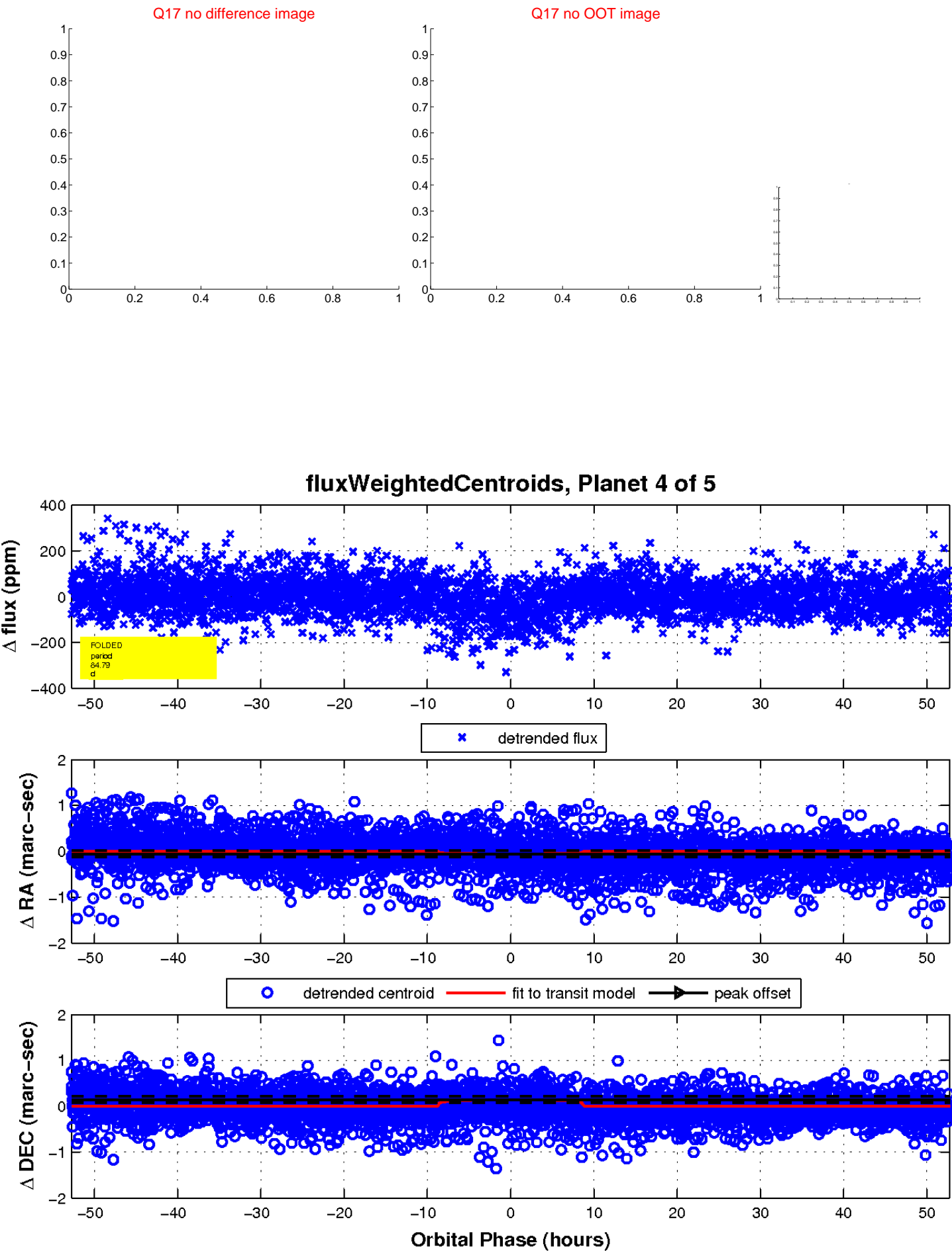
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

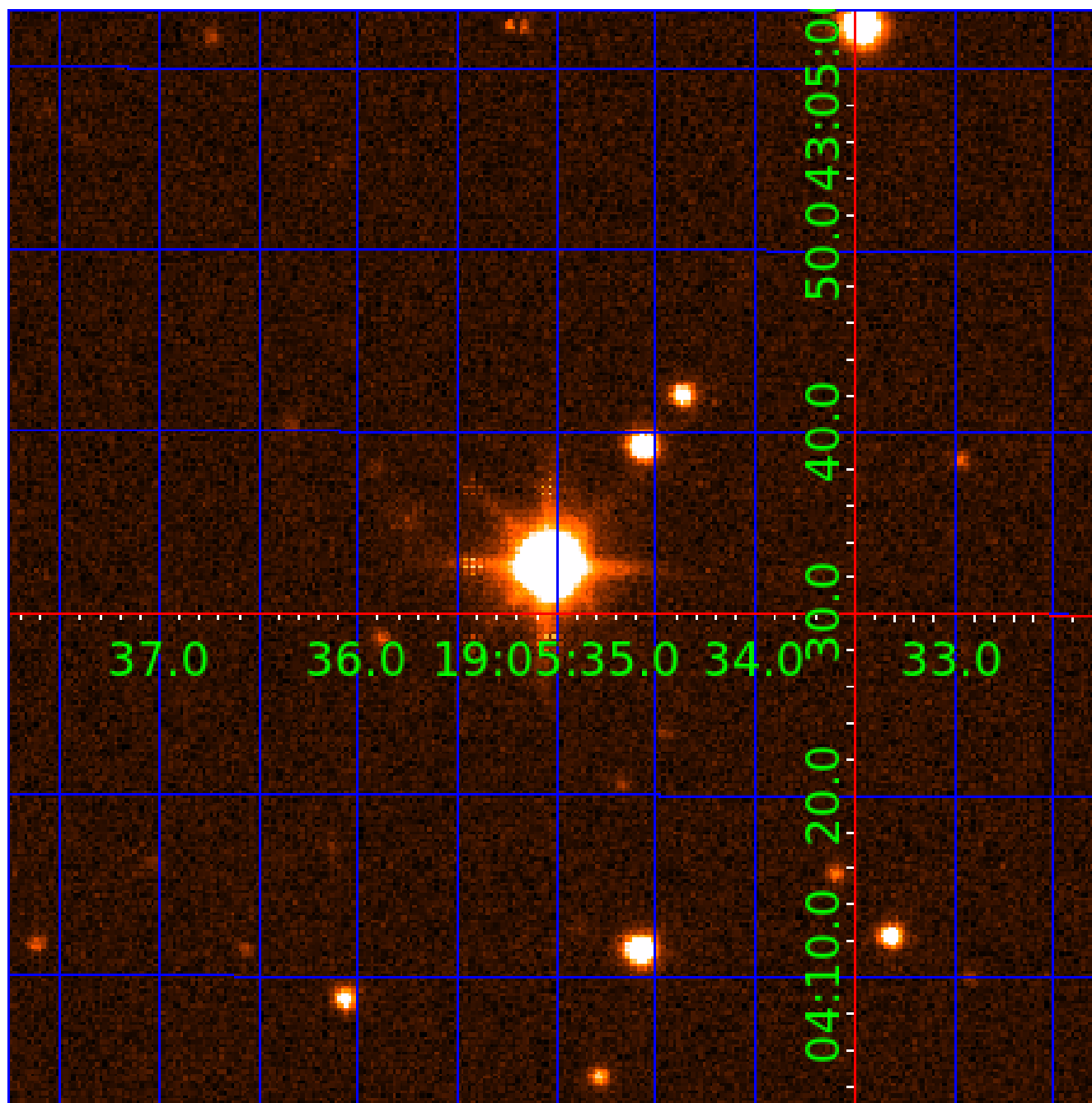


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007429287

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})
007429287-01	OBS	4260.03	358.666817	296.966877	177.4	15.982	7.7	8.3	1.41	5619	2.05	2.02
007429287-02	OBS	No	373.011416	295.811866	116.0	7.831	10.1	4.8	1.41	5619	1.77	1.92
007429287-03	OBS	No	361.531452	287.204270	186.8	11.074	7.9	8.7	1.41	5619	2.10	2.00
007429287-04	OBS	4260.04	84.793598	180.533124	42.9	17.591	8.0	7.6	1.41	5619	0.99	13.82
007429287-05	OBS	No	385.689189	308.737848	141.9	7.391	8.1	8.6	1.41	5619	1.92	1.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007429287-01	OBS	FP	0.05	1	0	0	0	ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007429287-04	OBS	PC	0.97	0	0	0	0	CENT_SATURATED
007429287-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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 007429287-05

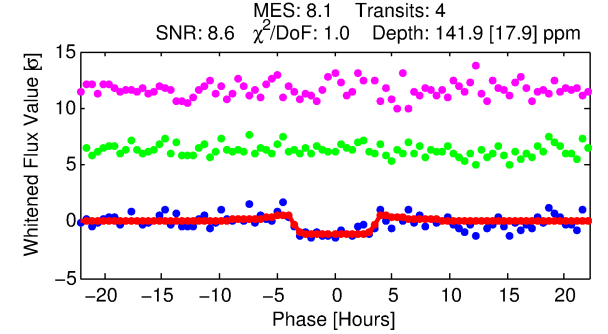
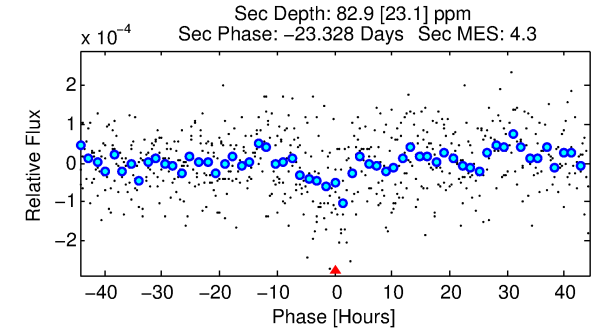
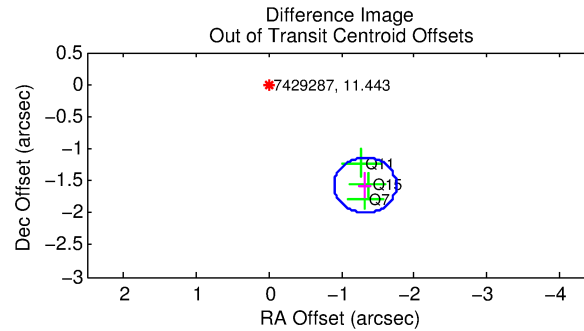
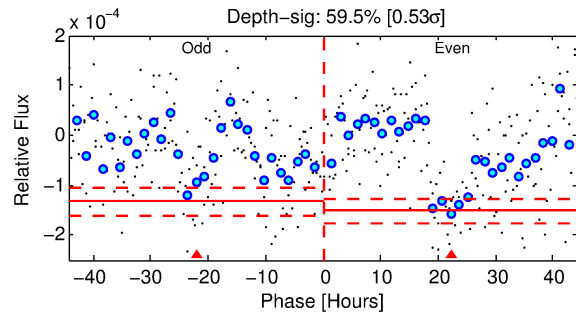
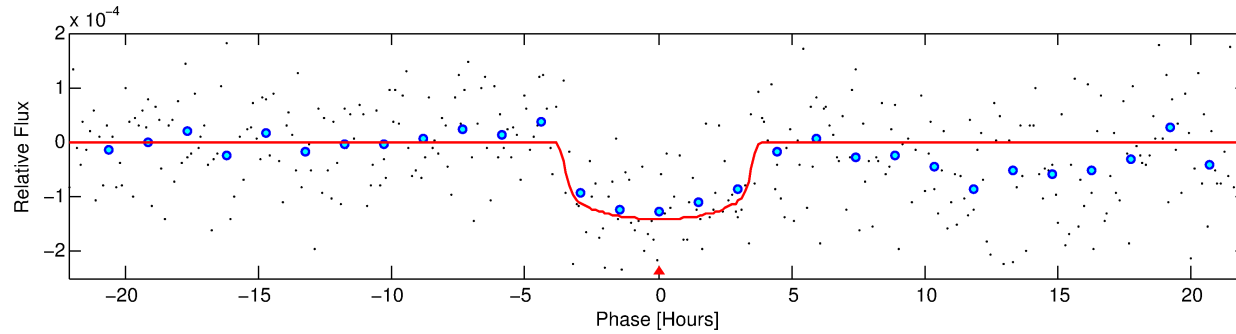
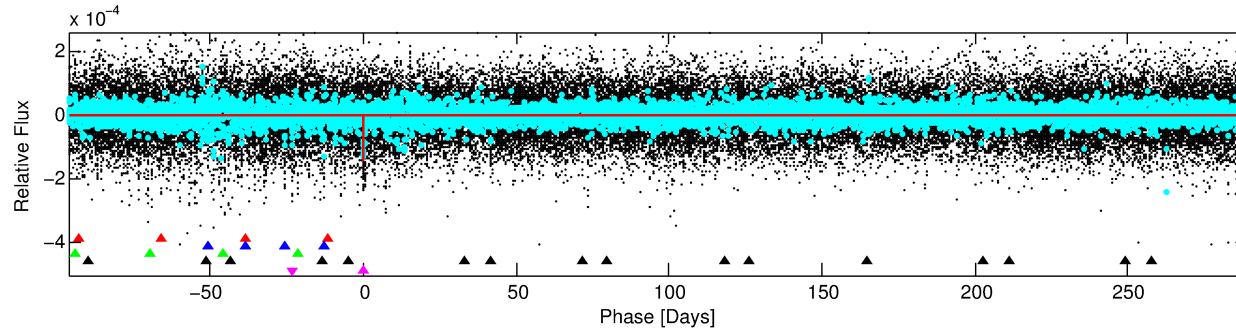
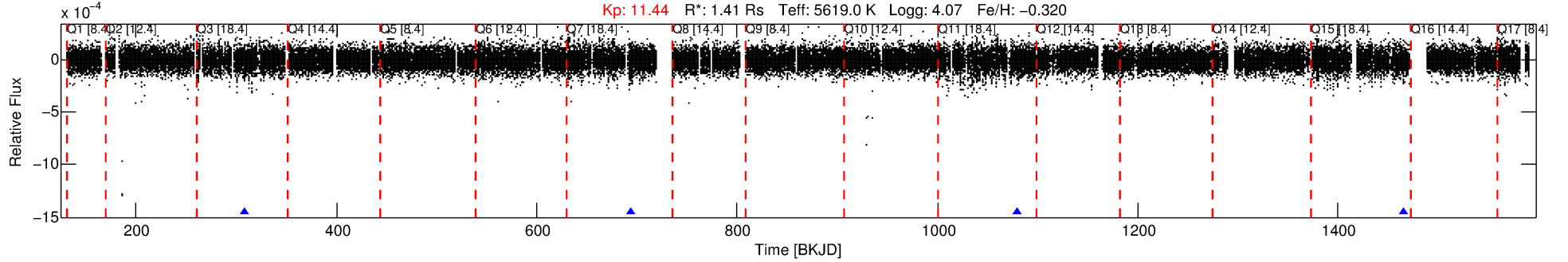
No Significant Match Found

DV One-Page Summary

KIC: 7429287 Candidate: 5 of 5 Period: 385.689 d

KOI: K04260 Corr: No Ephemeris Match

Kp: 11.44 R*: 1.41 Rs Teff: 5619.0 K Logg: 4.07 Fe/H: -0.320



DV Fit Results:

Period = 385.68919 [0.00547] d
Epoch = 308.7378 [0.0114] BKJD
Rp/R* = 0.0125 [0.0053]
a/R* = 217.42 [419.38]
b = 0.85 [0.62]
Seff = 1.83 [0.13]
Teq = 297 [5] K
Rp = 1.92 [0.81] Re
a = 0.9814 [0.0252] AU
Ag = 11978.97 [10639.46] [1.13σ]
Teffp = 4799 [1068] K [4.22σ]

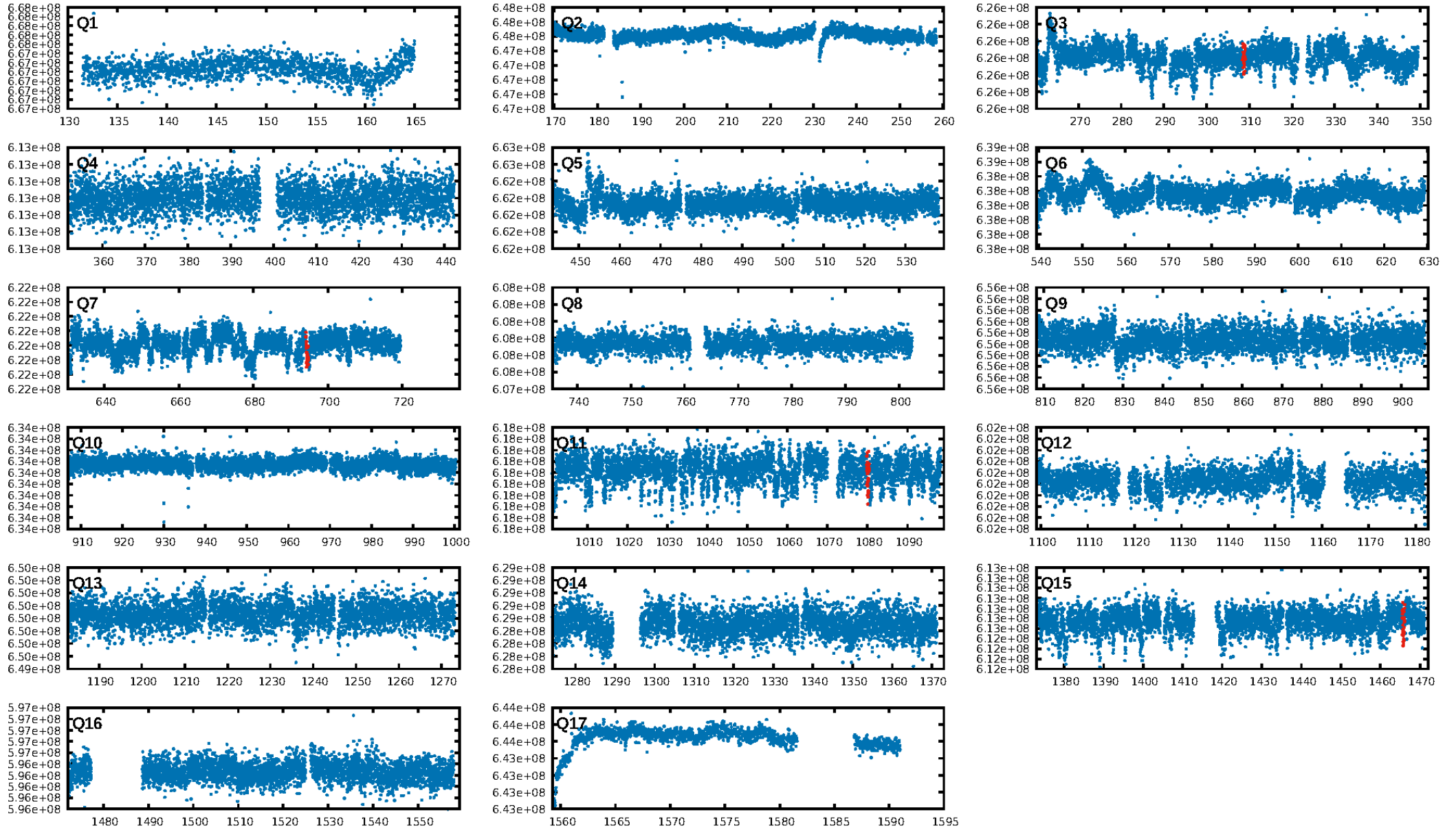
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [28.26σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 33.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.44e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.156
Centroid-sig: 0.0%
Centroid-so: 3.581 arcsec [3.25σ]
OotOffset-rm: 2.057 arcsec [14.34σ]
KicOffset-rm: 2.510 arcsec [16.12σ]
OotOffset-st: 0/3/0/0 [3]
KicOffset-st: 0/3/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [4/4]

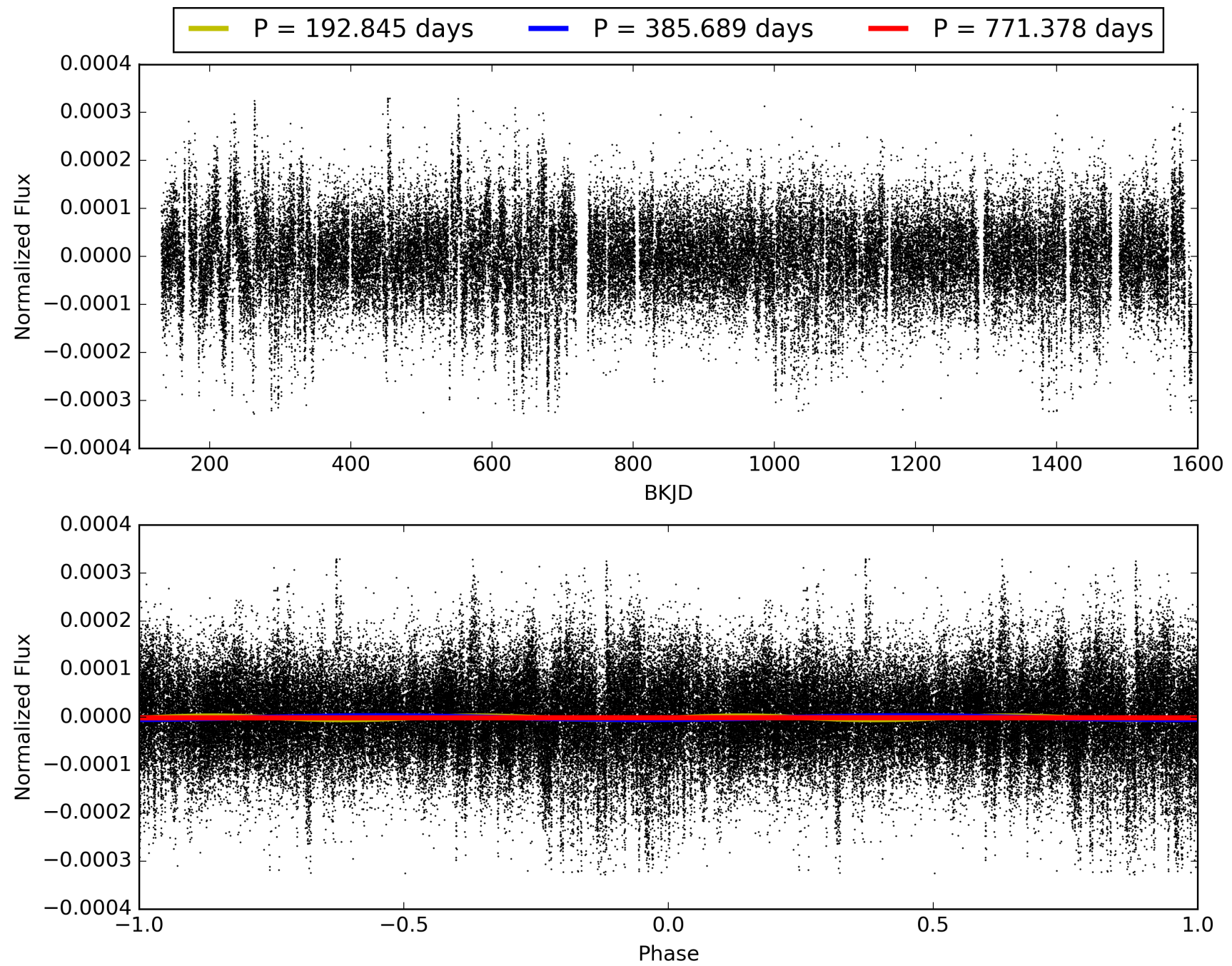
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:44:01 Z

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

TCE 007429287-05, PDC Light Curves

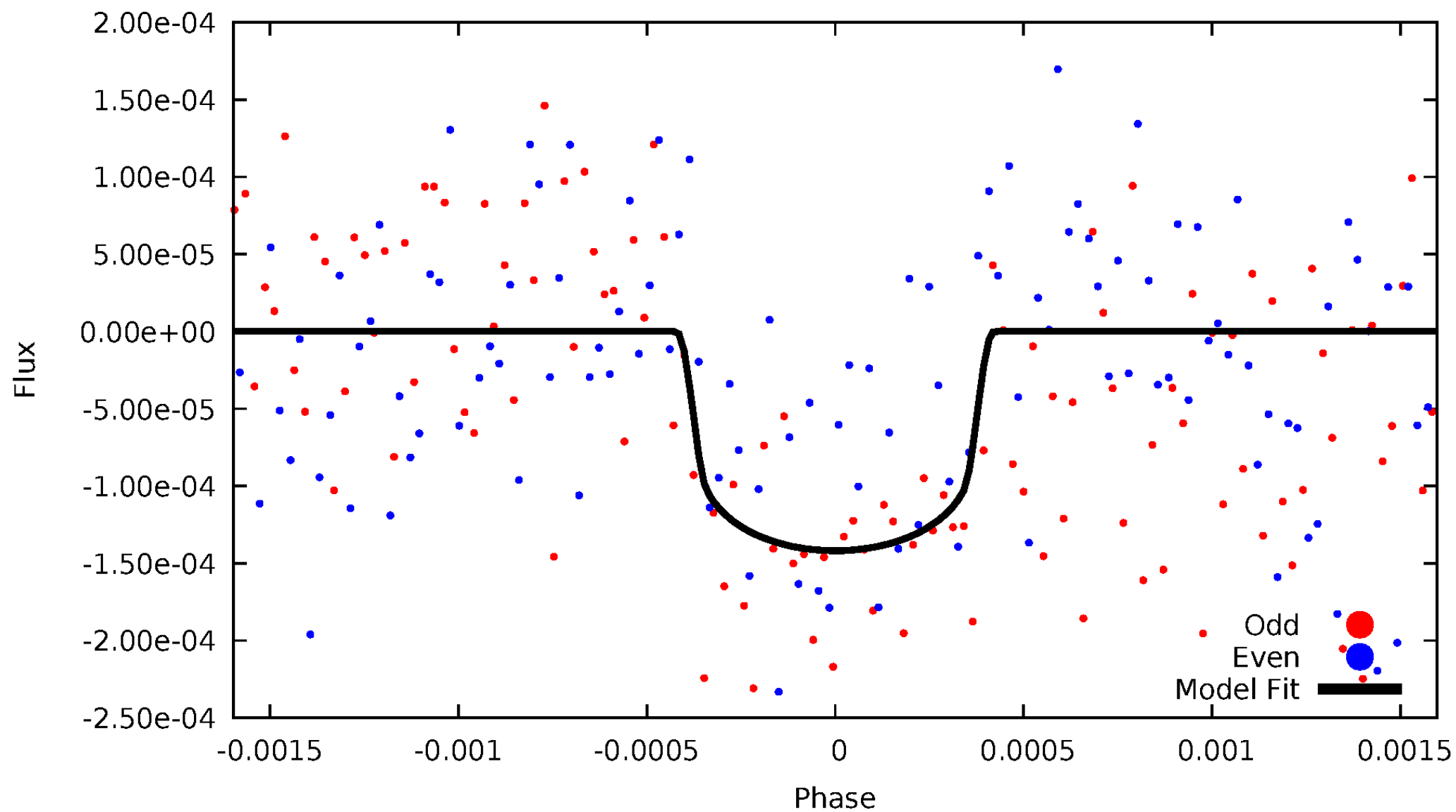


TCE 007429287-05



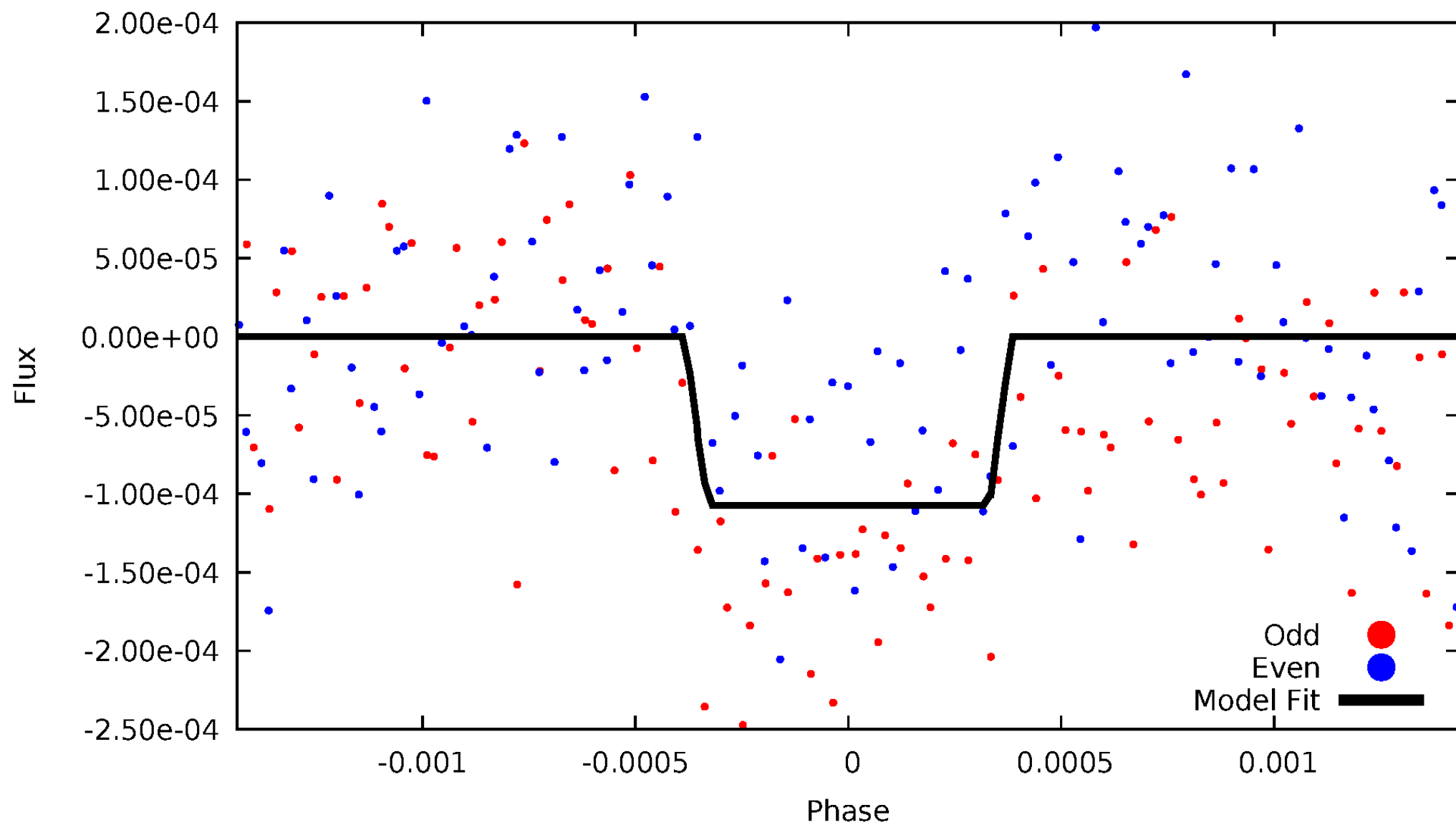
DV Odd/Even

TCE 007429287-05

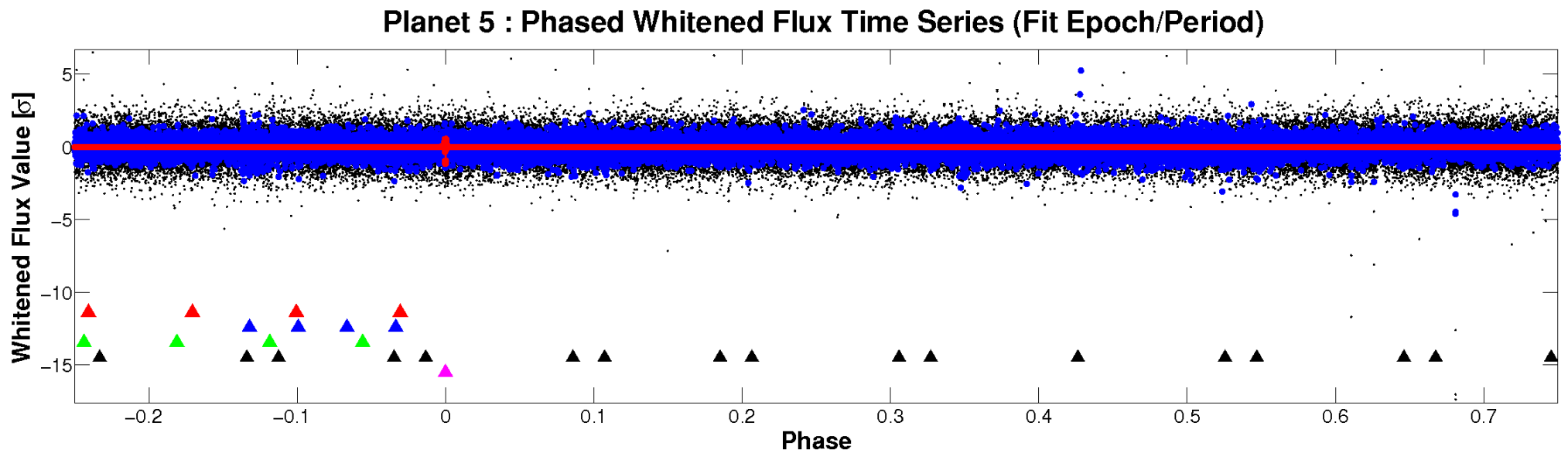
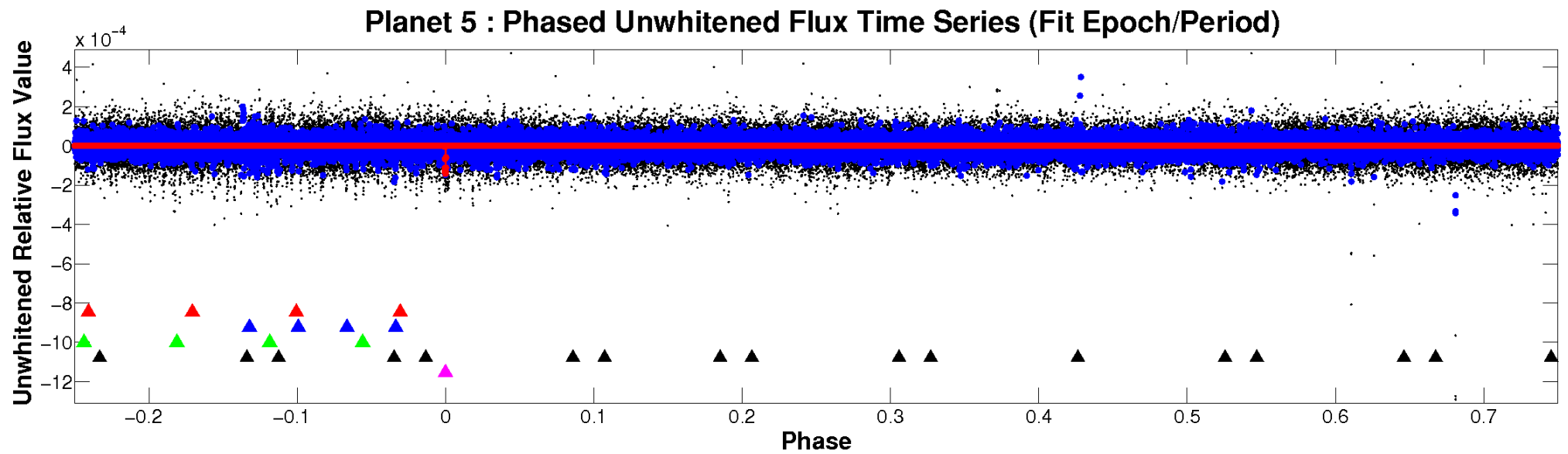


ALT Odd/Even

TCE 007429287-05



Non-Whitened Vs. Whitened Light Curve



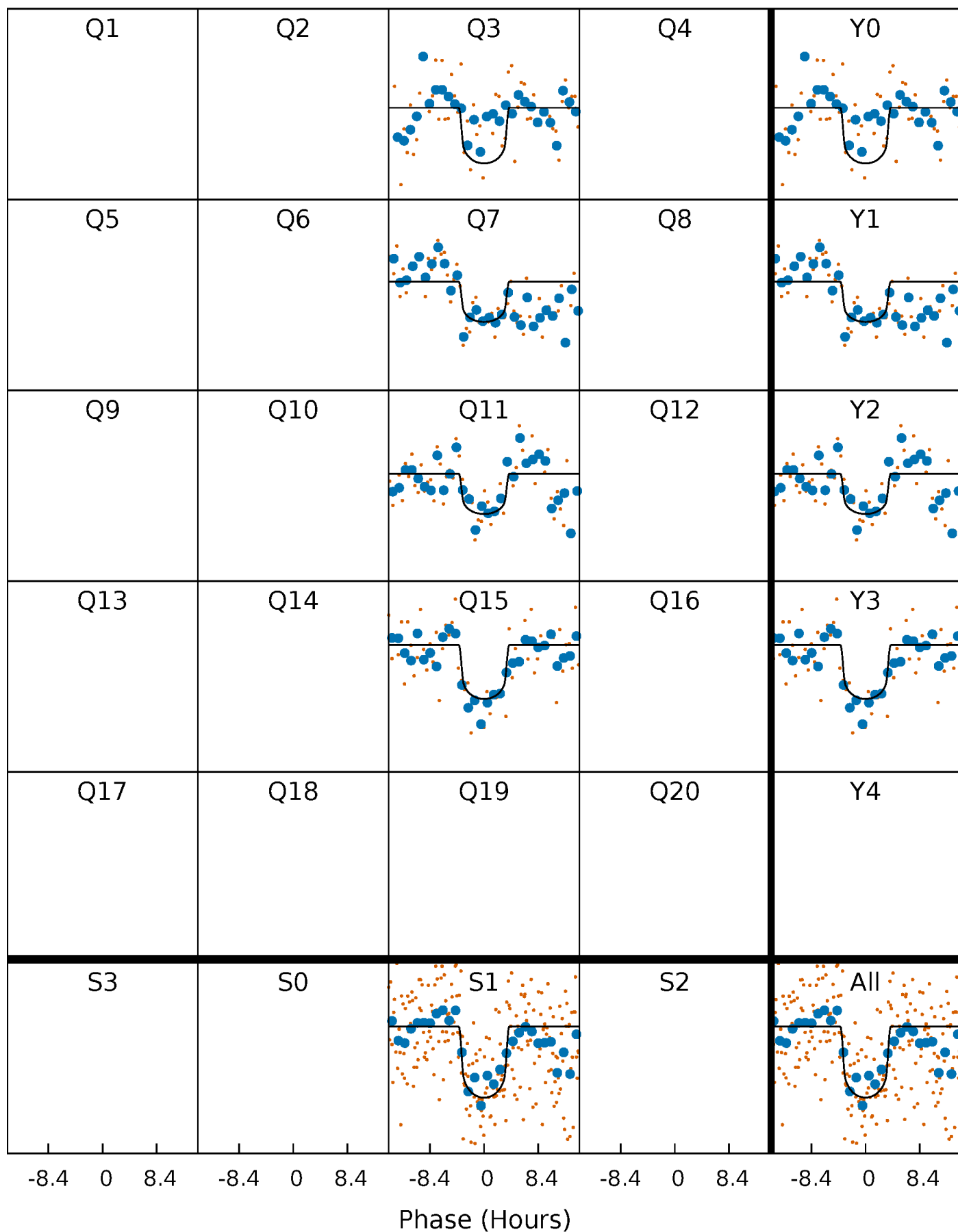
PDC Quarter-Phased Transit Curves

TCE 007429287-05 $P=385.689189$ Days $T_0=308.737848$ (BKJD)



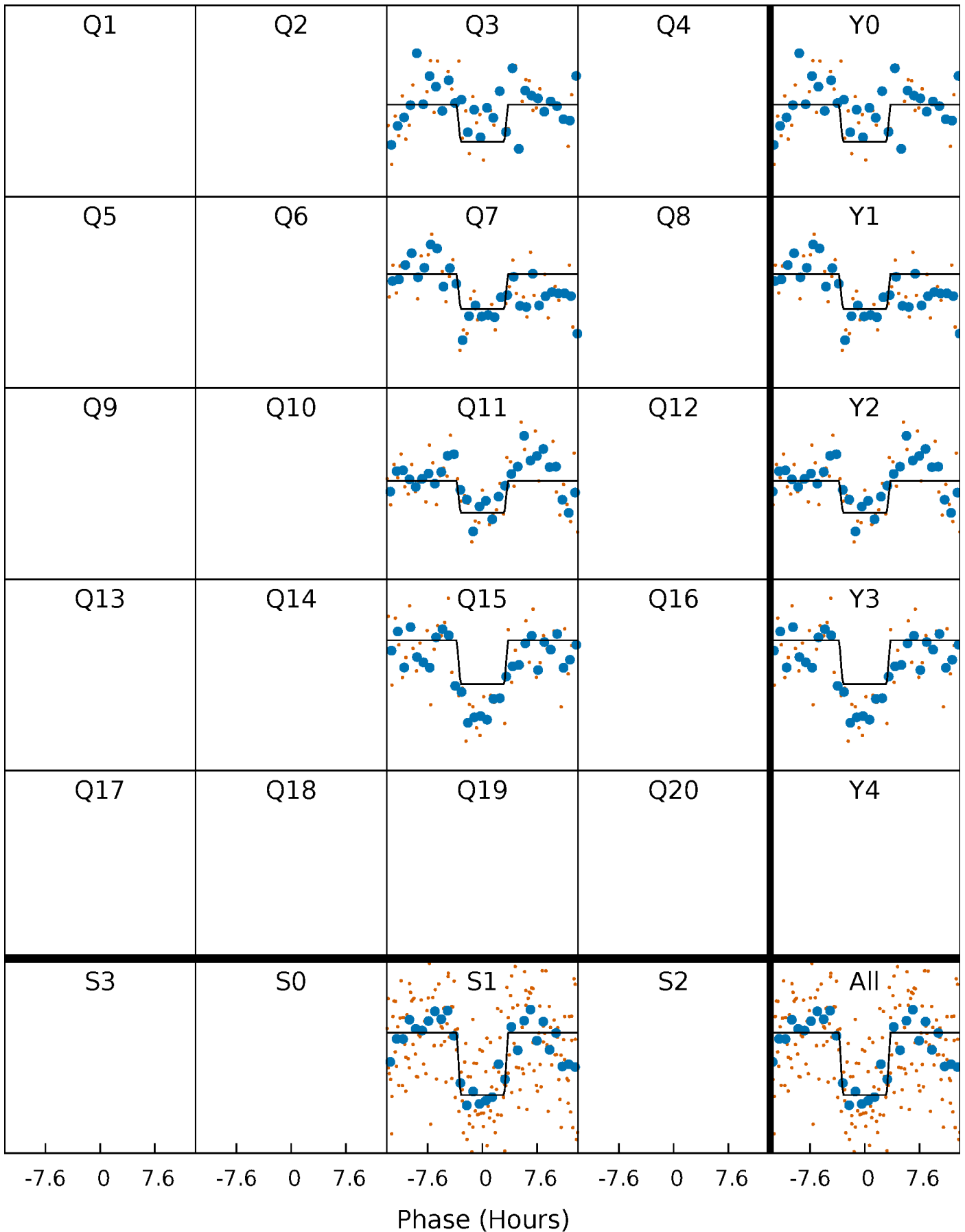
DV Quarter-Phased Transit Curves

TCE 007429287-05 $P=385.689189$ Days $T_0=308.737848$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

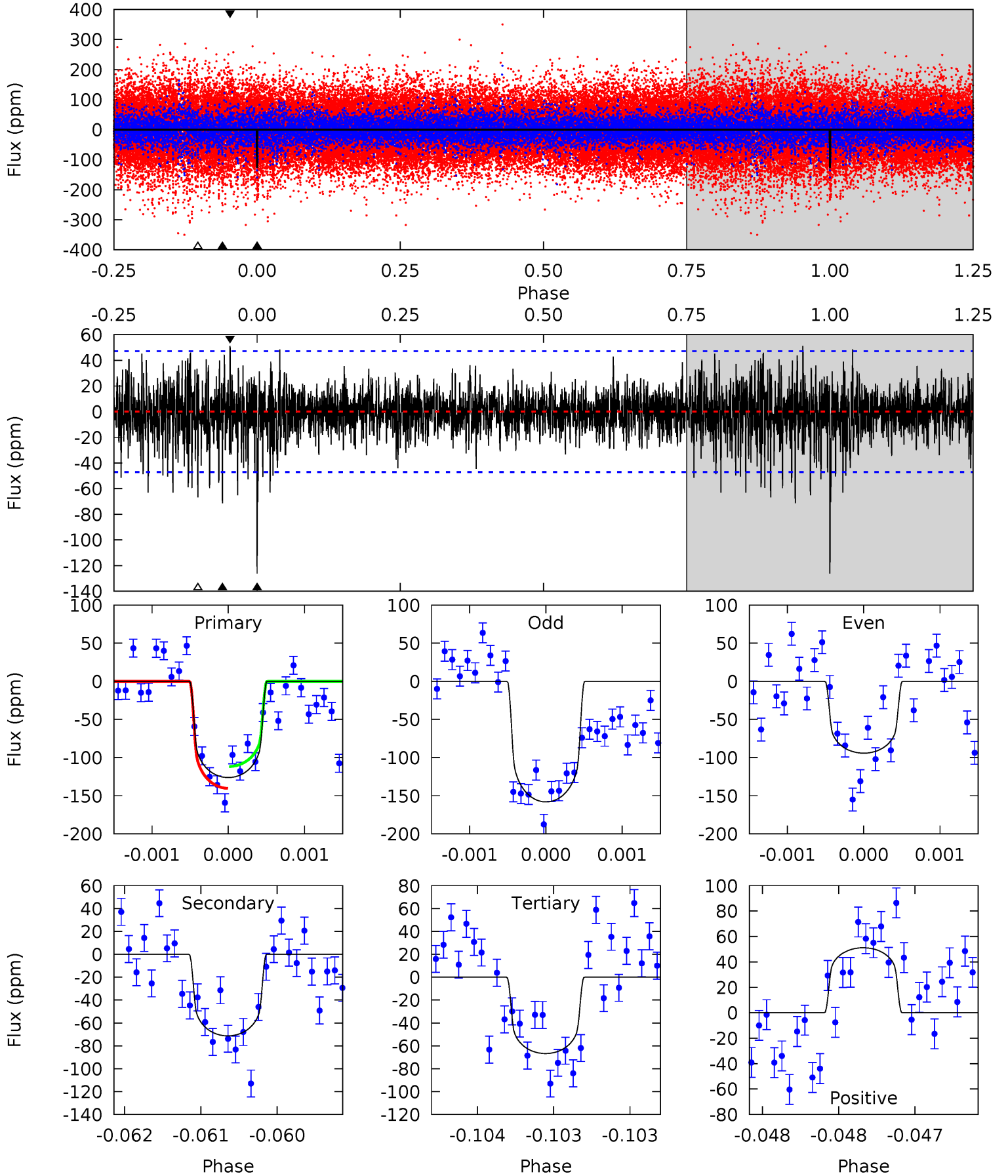
TCE 007429287-05 $P=385.697067$ Days $T_0=308.725953$ (BKJD)



DV Model-Shift Uniqueness Test

007429287-05, $P = 385.689189$ Days, $E = 308.737848$ Days

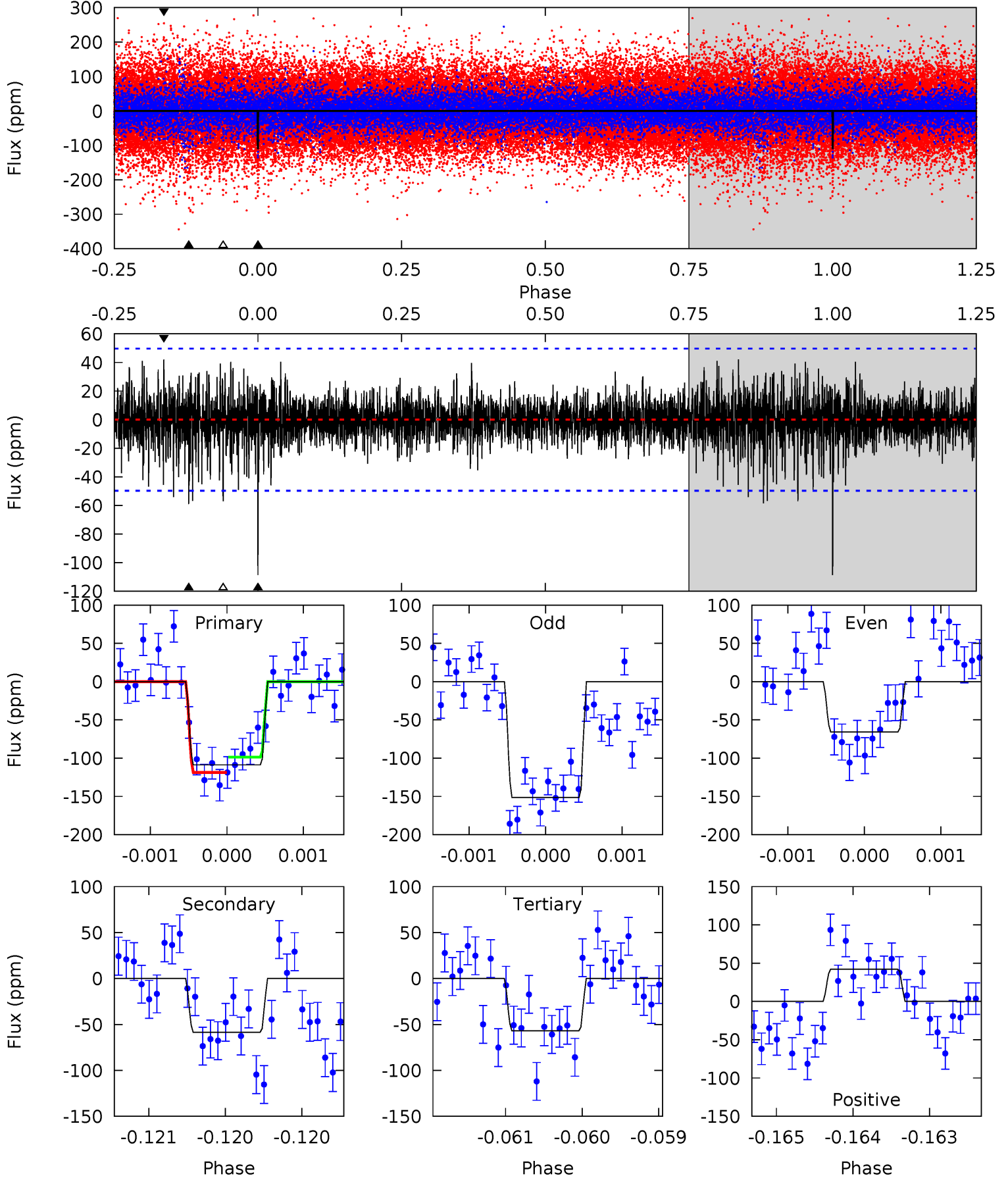
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	8.29	7.76	5.95	5.48	3.34	1.66	6.91	8.73	0.53	2.35	3.73	0.92	0.29	1.66



Alt Model-Shift Uniqueness Test

007429287-05, $P = 385.697067$ Days, $E = 308.725953$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	6.49	6.31	4.67	5.51	3.38	1.25	5.75	7.39	0.17	1.81	4.75	0.98	0.28	1.12



Stellar Parameters For KIC 007429287

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5619^{+93}_{-42}	$4.070^{+0.013}_{-0.011}$	$-0.320^{+0.150}_{-0.100}$	$1.406^{+0.050}_{-0.021}$	$0.848^{+0.058}_{-0.017}$	$0.430^{+0.018}_{-0.022}$
	+2%/-1%	+0%/-0%	+47%/-31%	+4%/-1%	+7%/-2%	+4%/-5%
Source	SPE72	AST10	SPE72	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007429287-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-71 ± 9	$1.93^{+0.82}_{-0.76}$	415^{+6}_{-4}	4751^{+1205}_{-615}	10134^{+18852}_{-5188}
Alt.	-58 ± 9	$1.62^{+0.81}_{-0.76}$	415^{+6}_{-5}	4884^{+1717}_{-725}	11718^{+30166}_{-6533}

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

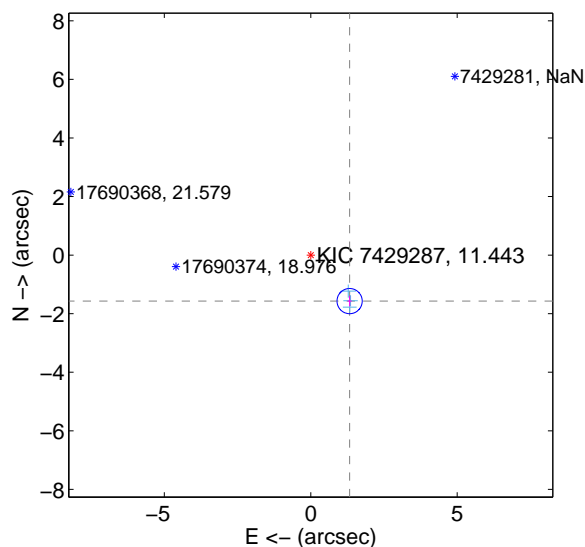
Supplemental centroid analysis for 007429287-05. **Kepler magnitude: 11.44.** Transit SNR 8.63

There are 3 quarters with good PRF difference image offsets

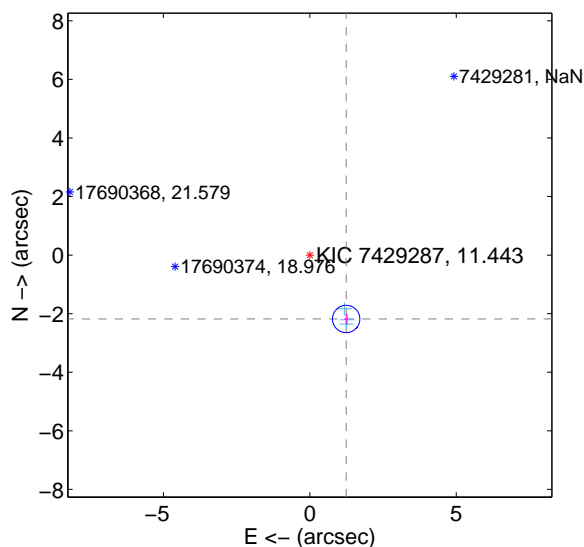
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.057 ± 0.143	14.34	-1.327 ± 0.071	-1.571 ± 0.178
PRF-fit source offset from KIC position	2.510 ± 0.156	16.12	-1.241 ± 0.074	-2.182 ± 0.174
photometric centroid source offset	3.58 ± 1.10	3.25	-2.79 ± 1.18	-2.25 ± 0.98

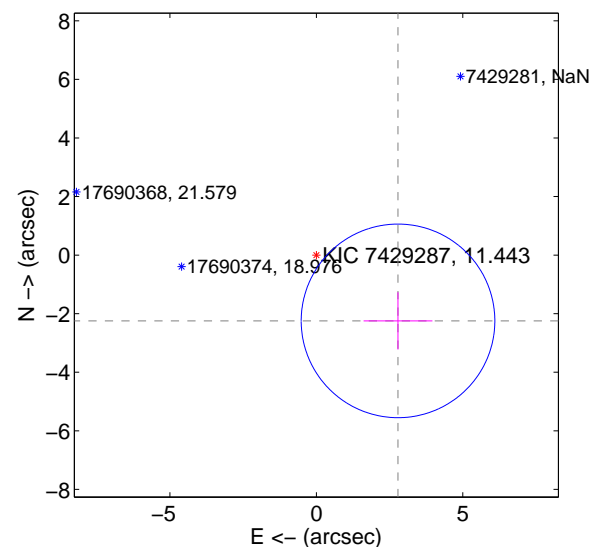
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

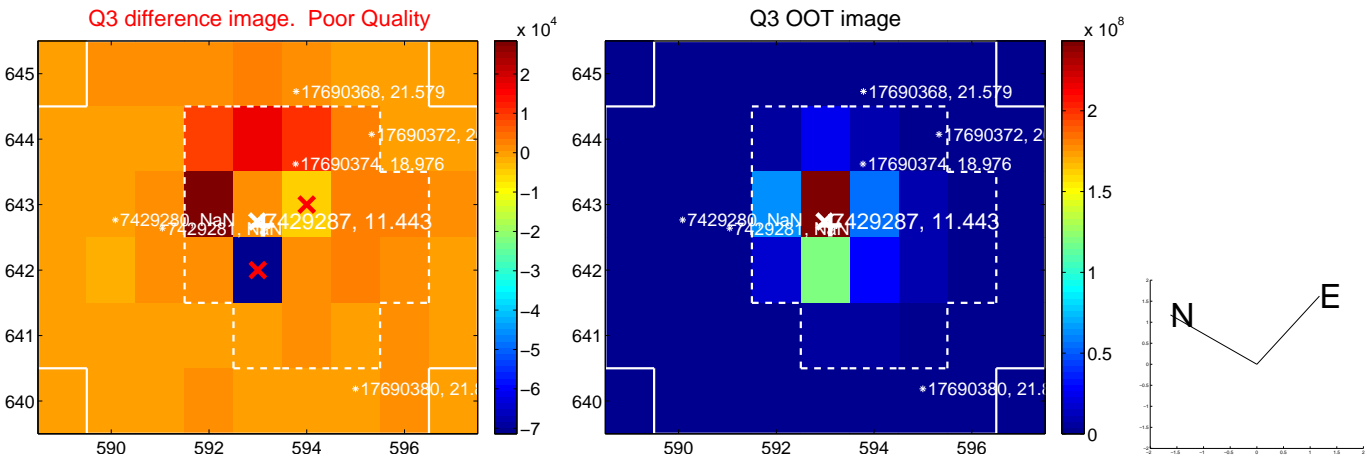


offset from photometric centroids

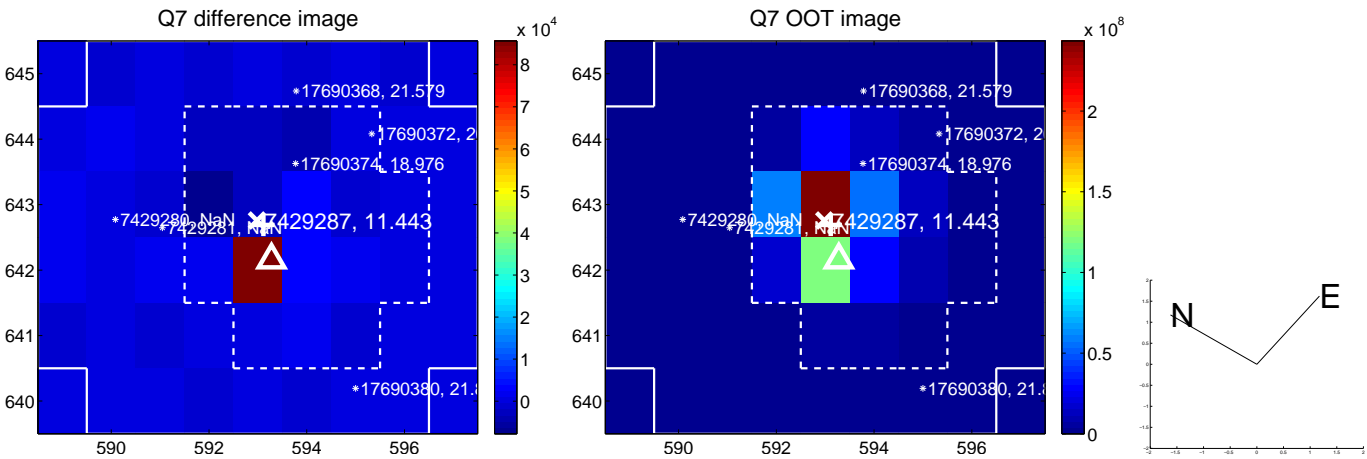


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

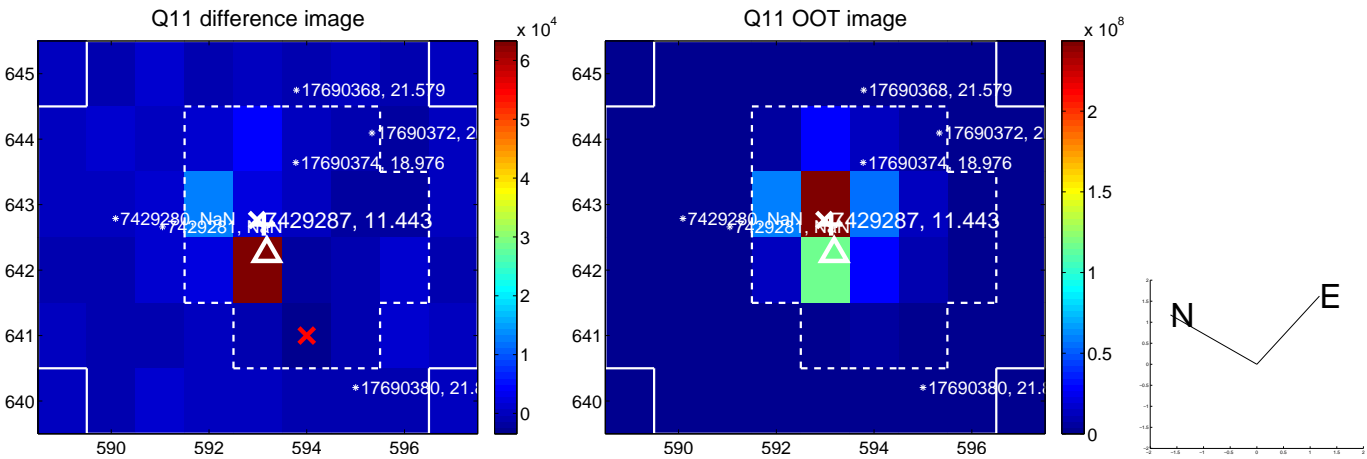
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



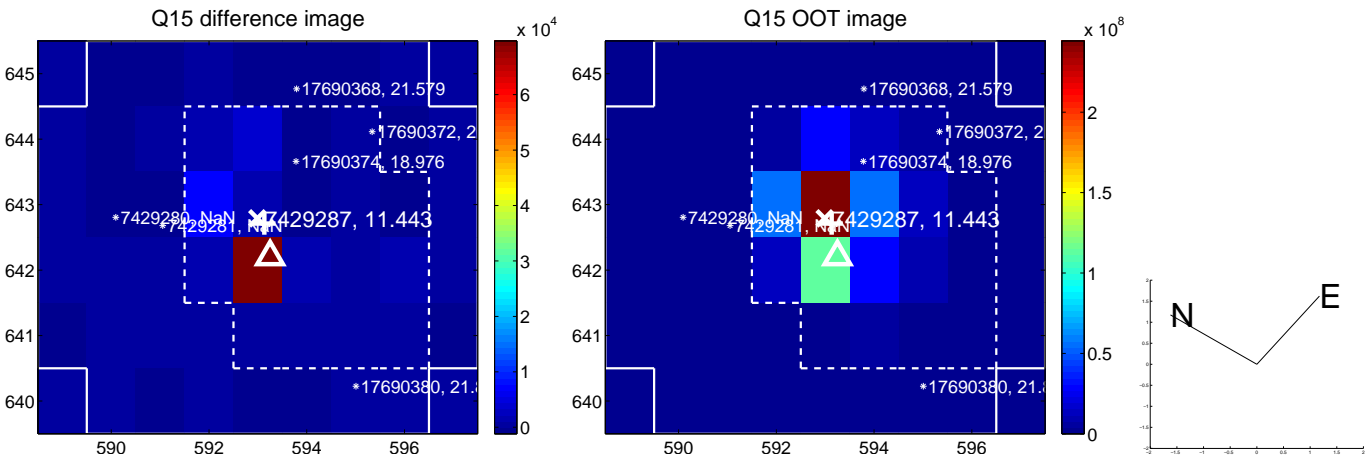
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



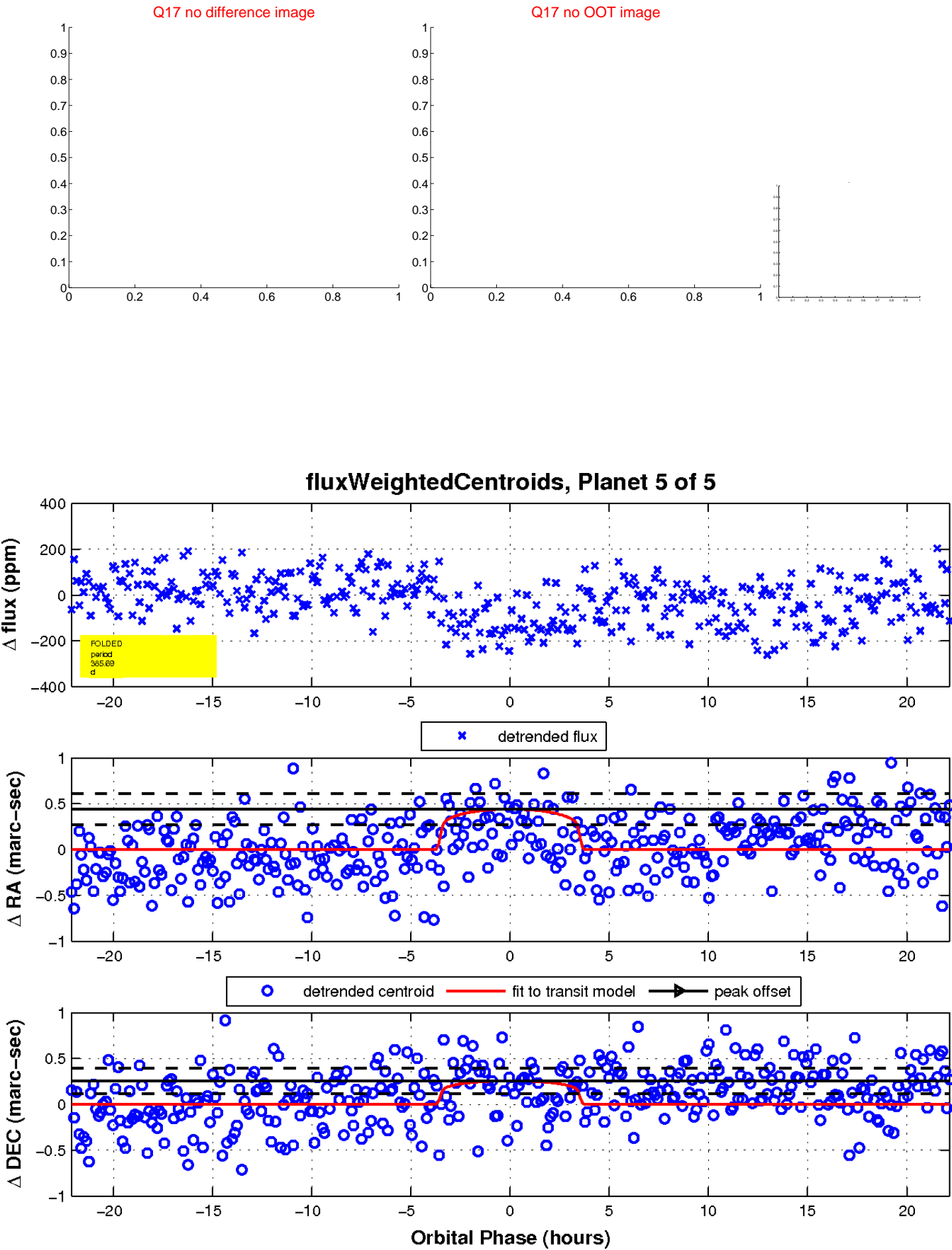
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

