

KIC 007547925

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})
007547925-01	OBS	No	3.284072	134.676276	29.7	15.624	7.5	7.7	0.96	5447	0.53	437.31
007547925-02	OBS	No	289.546900	410.495343	329.4	25.731	9.2	6.5	0.96	5447	2.01	1.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007547925-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST
007547925-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

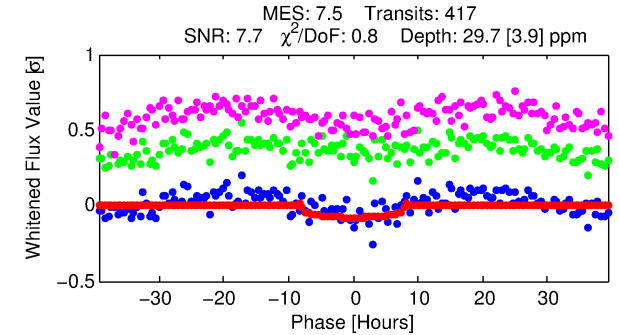
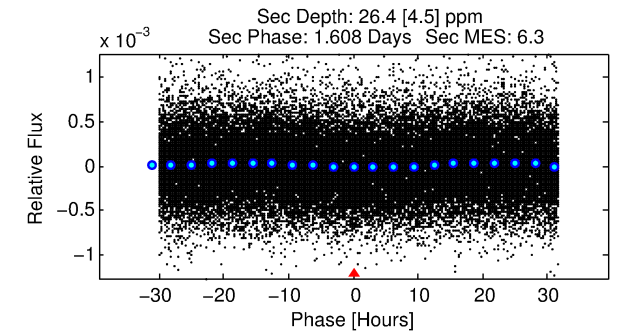
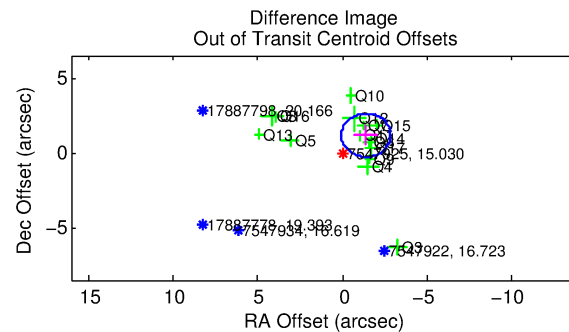
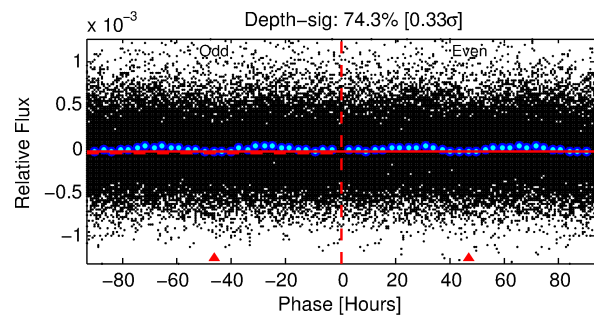
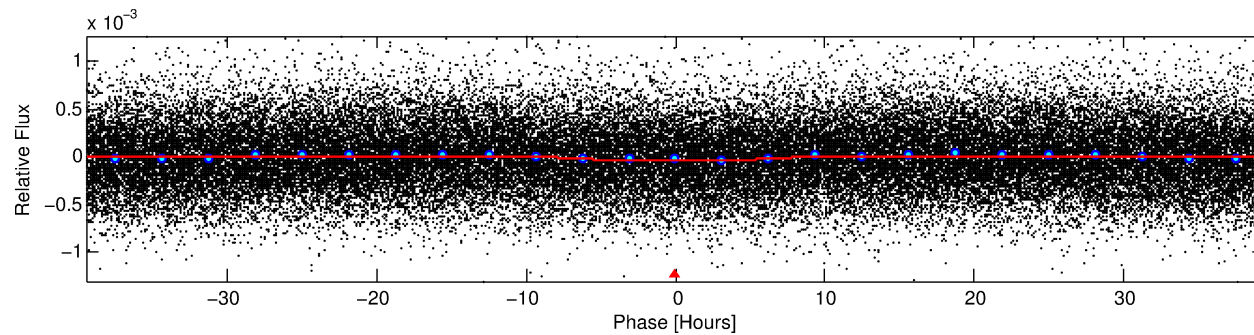
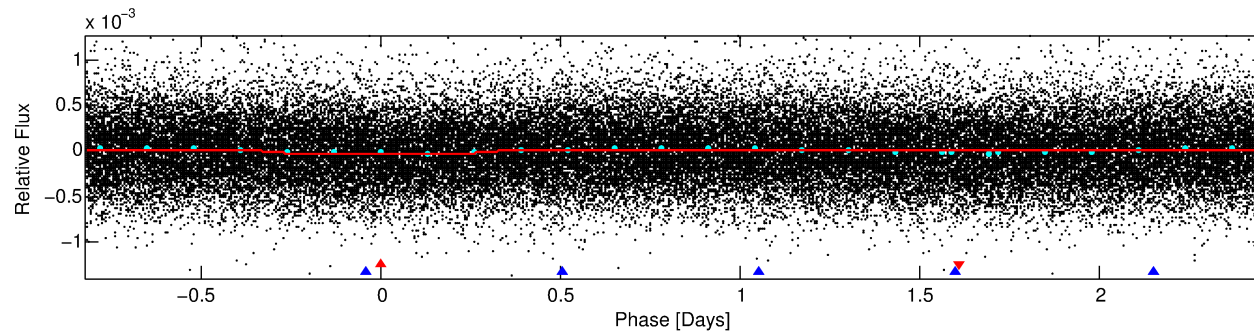
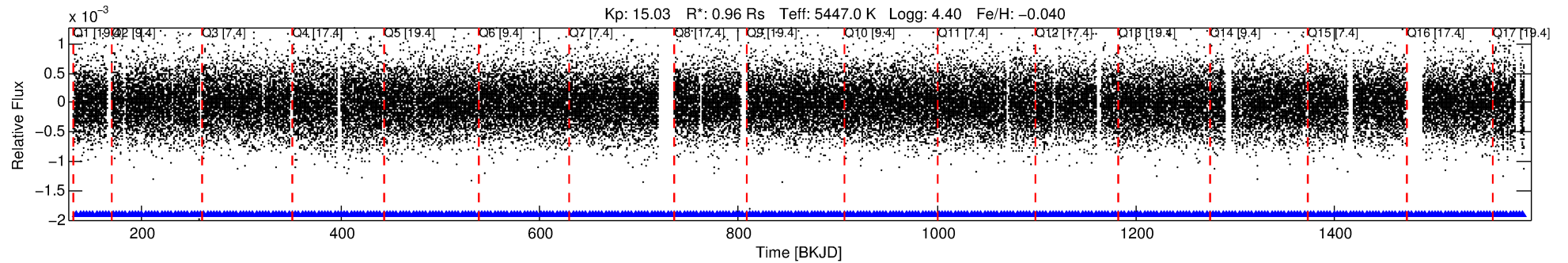
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007547925-01

No Significant Match Found

DV One-Page Summary

KIC: 7547925 Candidate: 1 of 2 Period: 3.284 d



DV Fit Results:

Period = 3.28407 [0.00010] d
Epoch = 134.6763 [0.0200] BKJD
Rp/R* = 0.0051 [0.0054]
b = 0.48 [6.84]
Seff = 437.31 [159.13]
Teq = 1166 [106] K
Rp = 0.53 [0.59] Re
a = 0.0408 [0.0094] AU
Ag = 85.94 [186.78] [0.45 σ]
Teffp = 5489 [2952] K [1.46 σ]

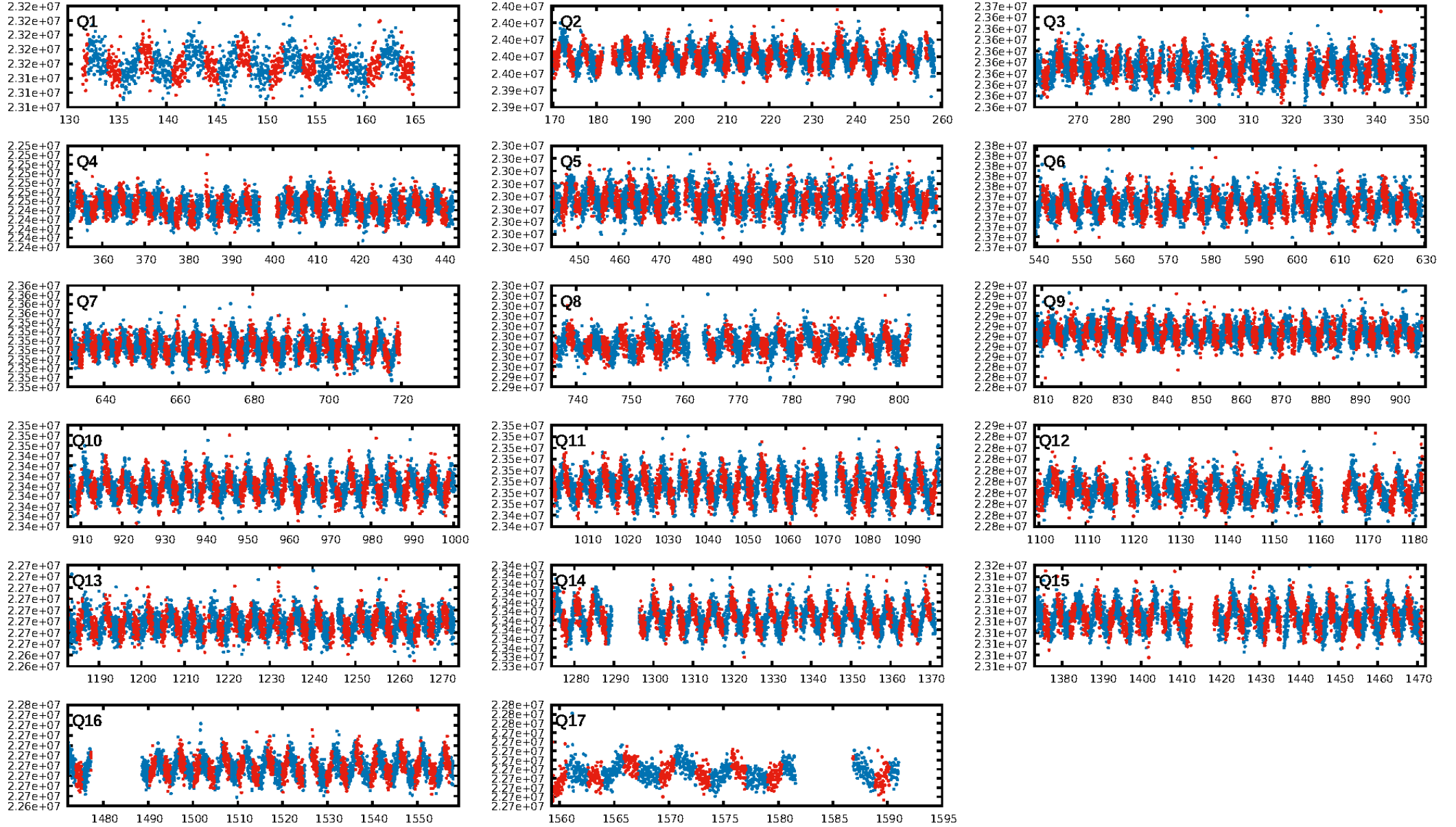
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [228.22 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.15e-11
RollingBand-fgt: 1.00 [398/398]
GhostDiagnostic-chr: 0.125
Centroid-sig: 0.1%
Centroid-so: 3.216 arcsec [1.64 σ]
OotOffset-rm: 1.806 arcsec [3.74 σ]
KicOffset-rm: 1.505 arcsec [2.77 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 1.00 [17/17]

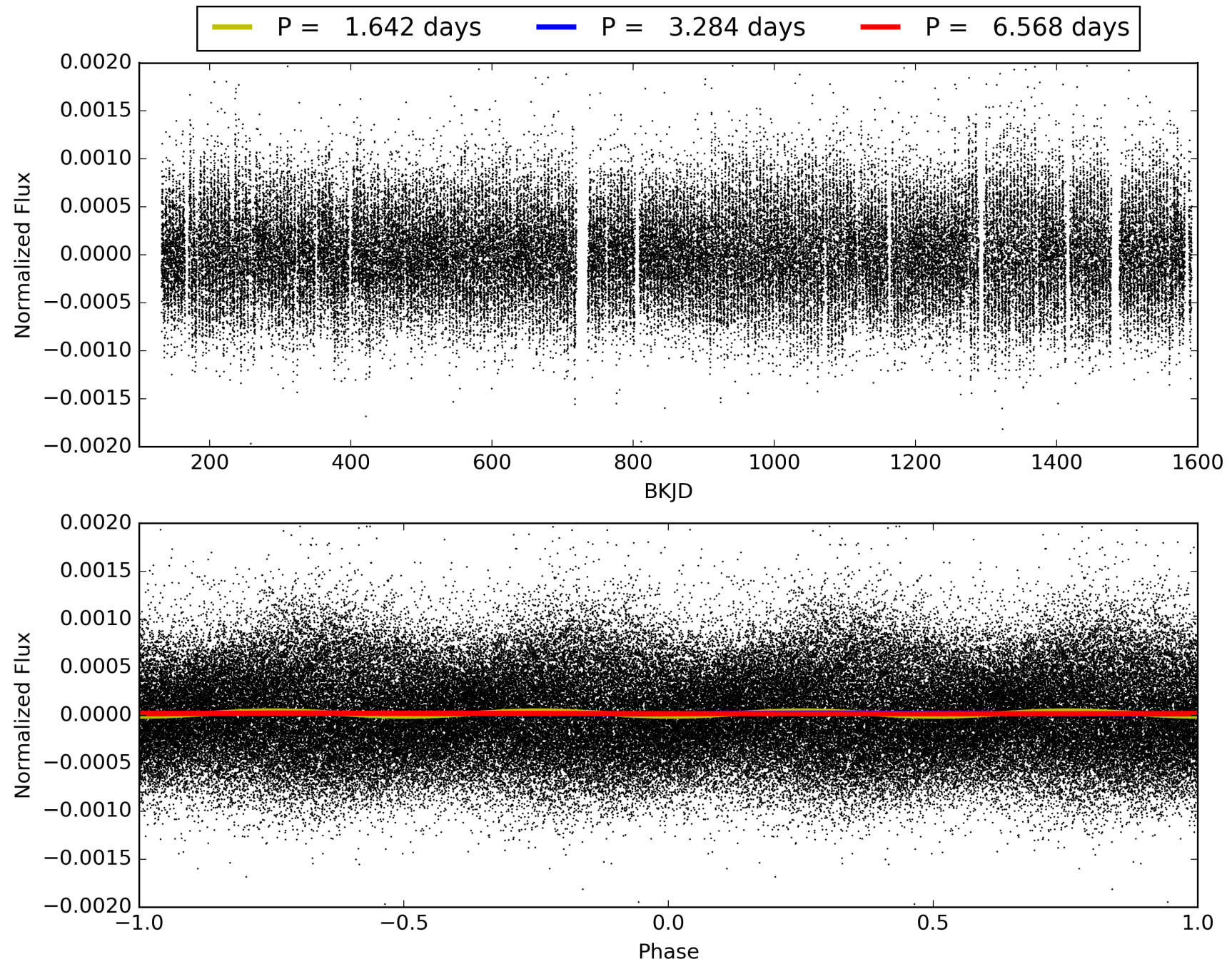
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:53:17 Z

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

TCE 007547925-01, PDC Light Curves

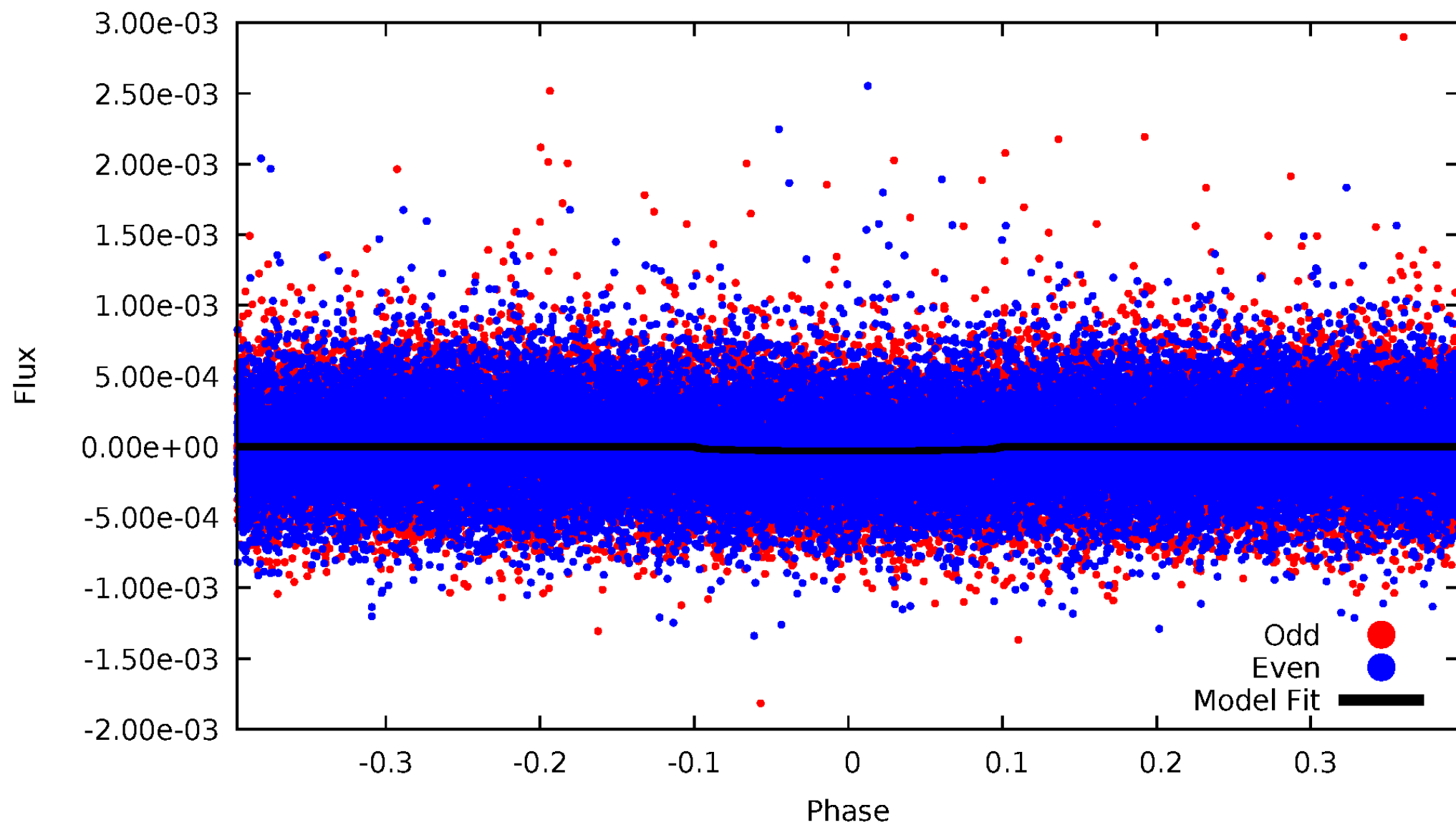


TCE 007547925-01



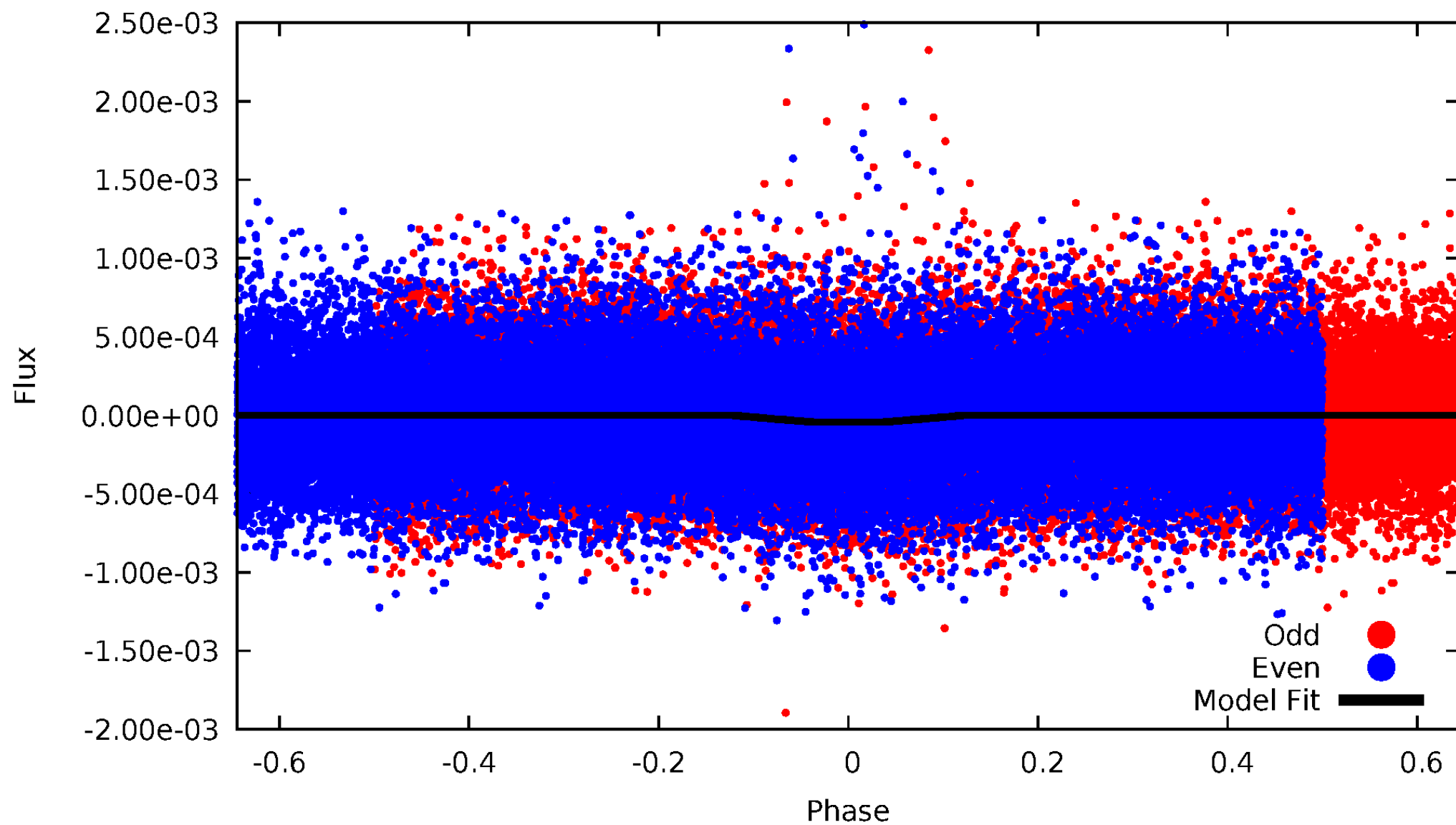
DV Odd/Even

TCE 007547925-01



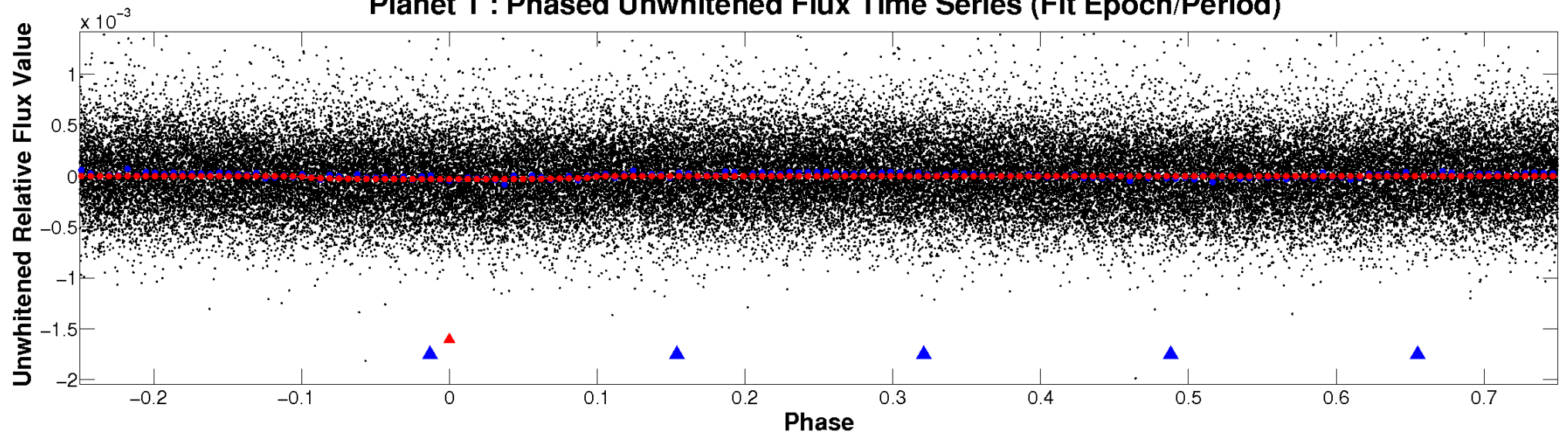
ALT Odd/Even

TCE 007547925-01

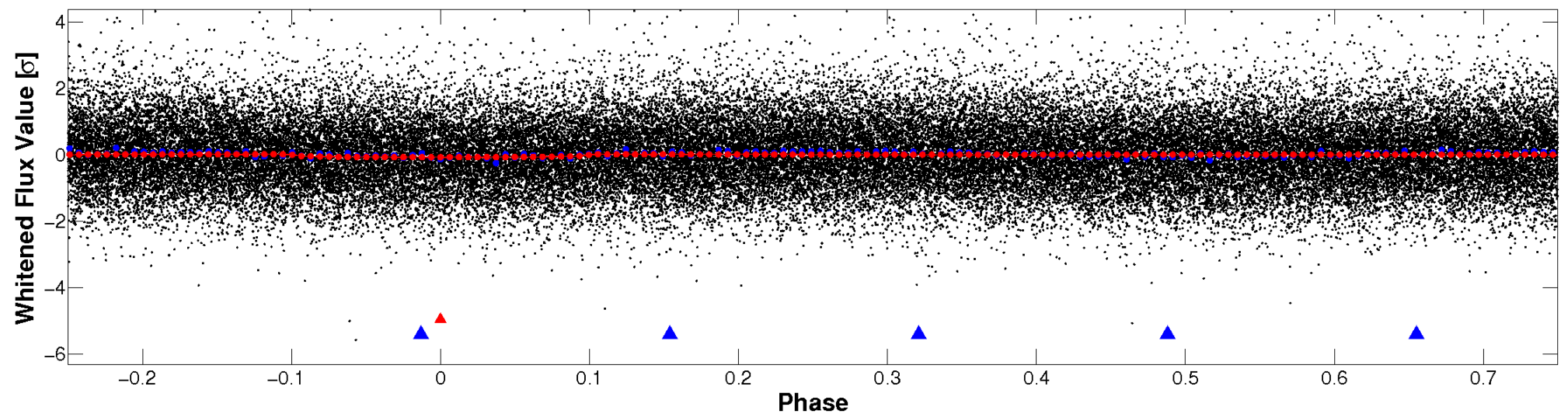


Non-Whitened Vs. Whitened Light Curve

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

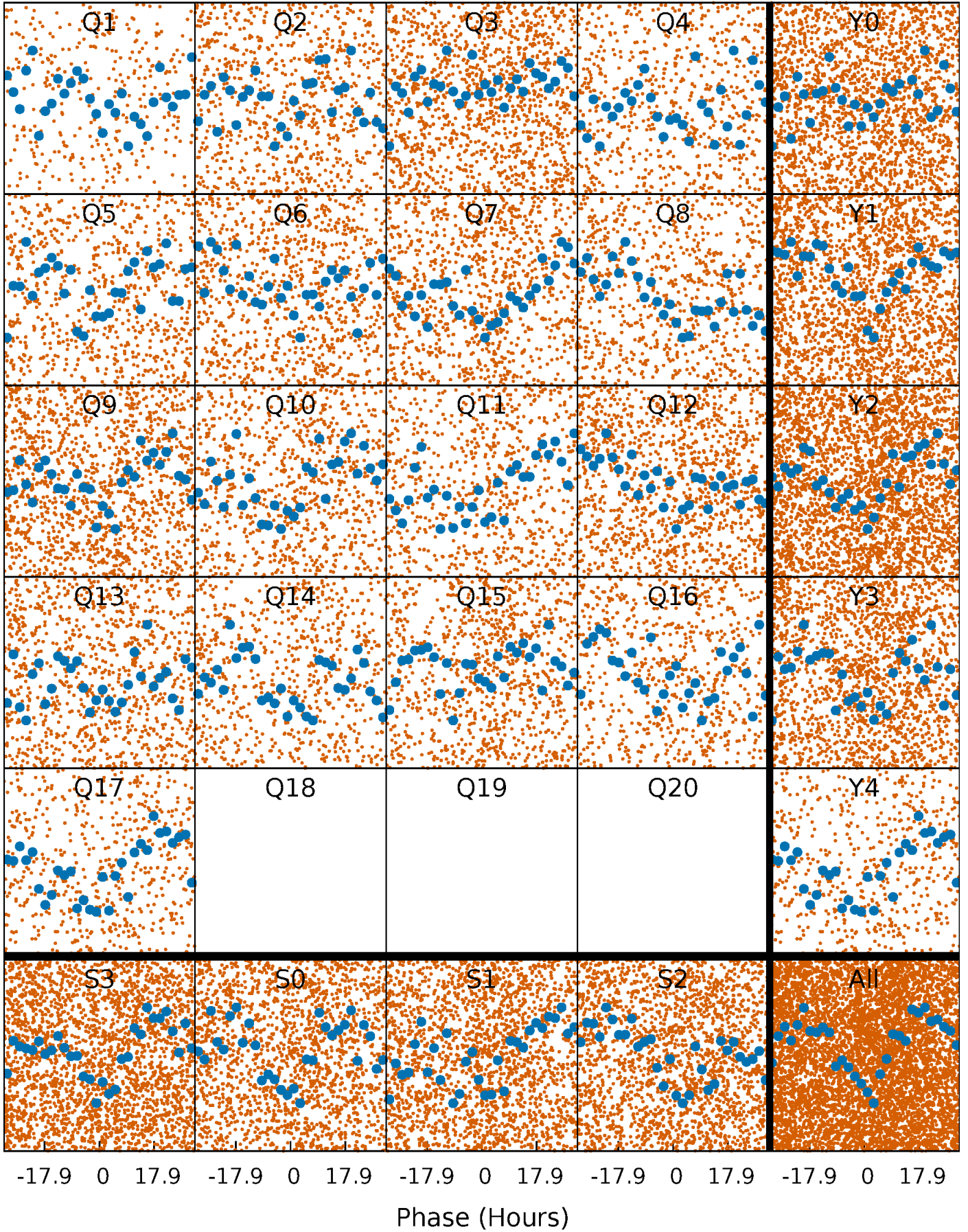


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



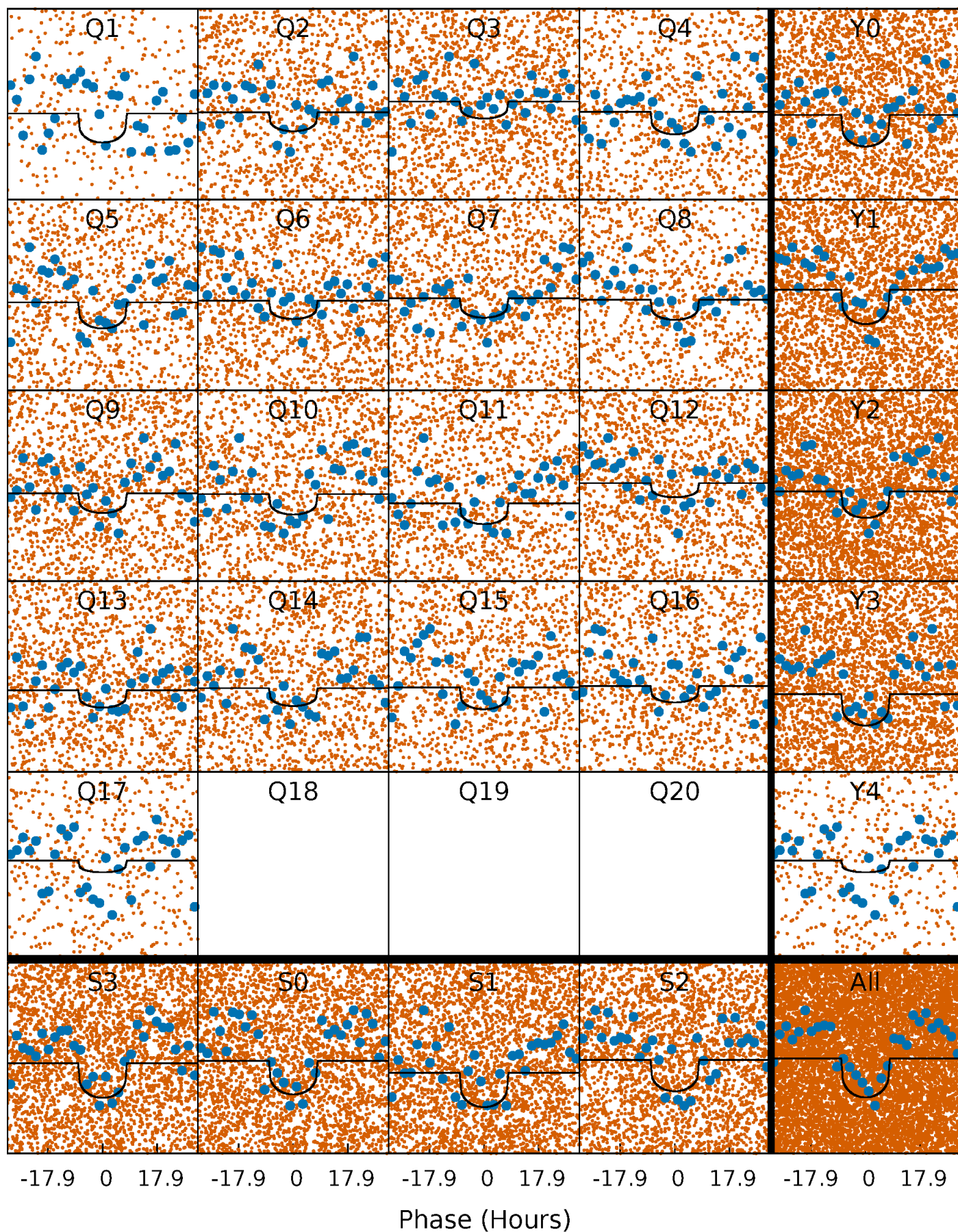
PDC Quarter-Phased Transit Curves

TCE 007547925-01 P= 3.284072 Days $T_0=134.676276$ (BKJD)



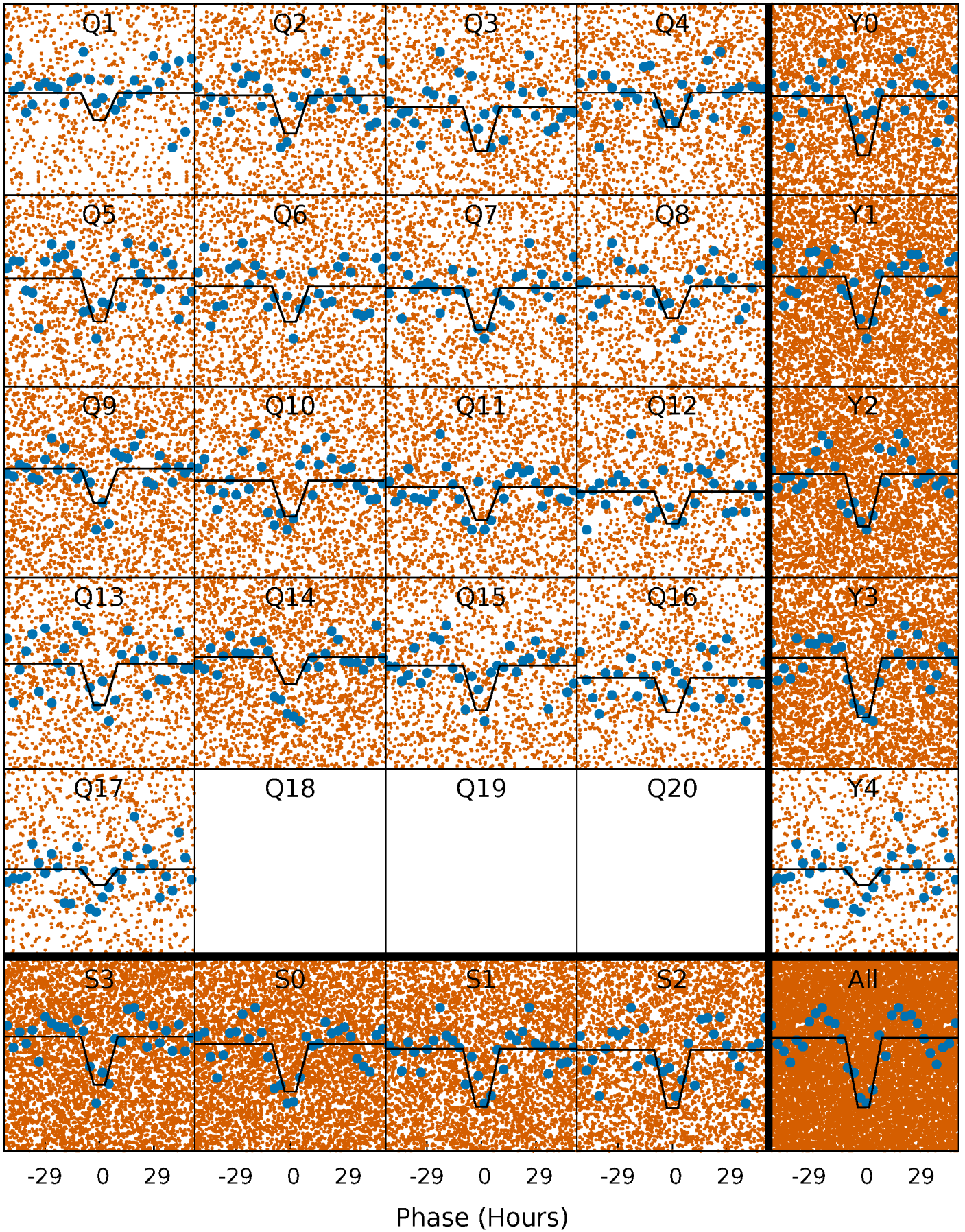
DV Quarter-Phased Transit Curves

TCE 007547925-01 P= 3.284072 Days $T_0=134.676276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

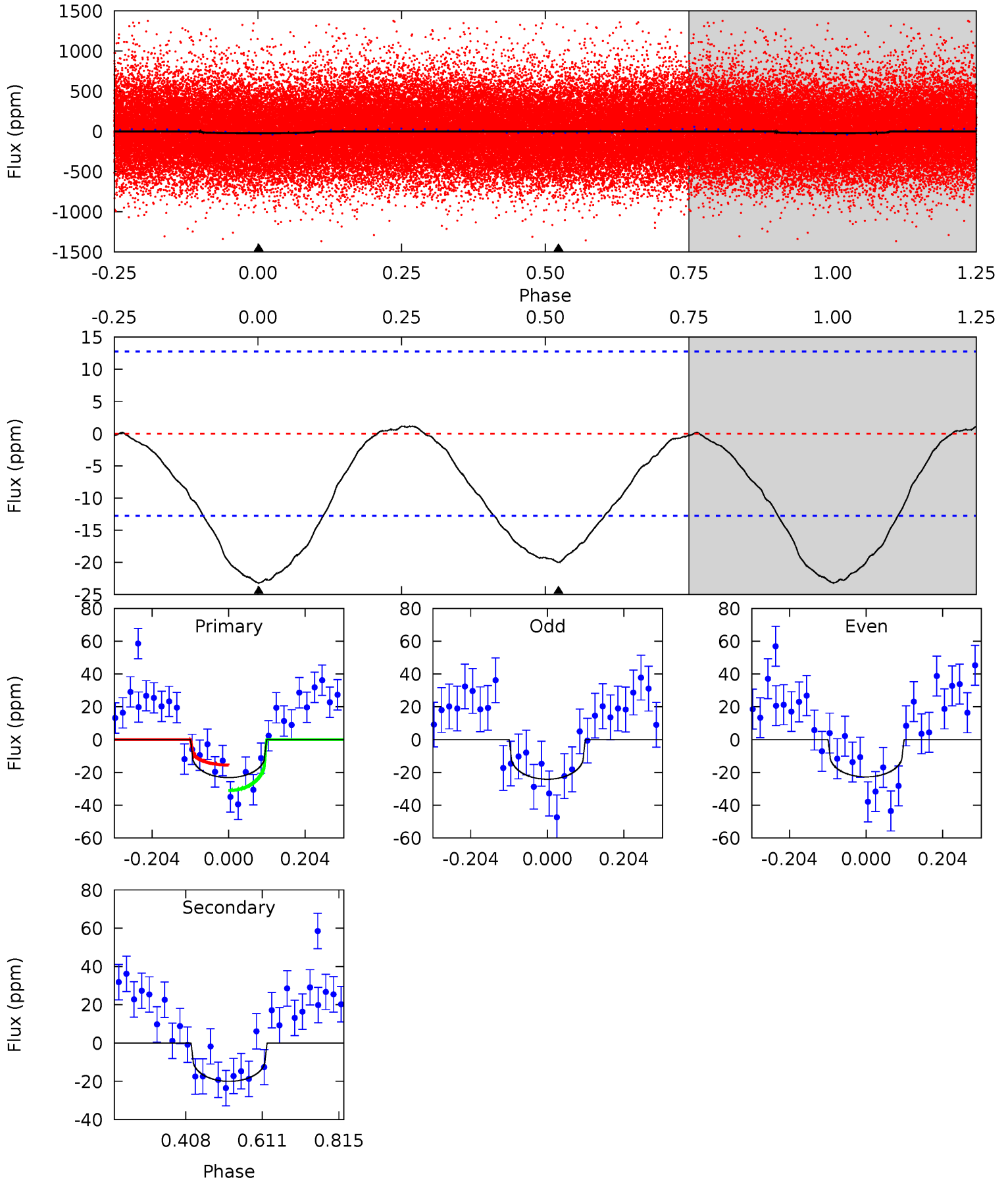
TCE 007547925-01 P= 3.283877 Days $T_0=134.747012$ (BKJD)



DV Model-Shift Uniqueness Test

007547925-01, P = 3.284072 Days, E = 131.392204 Days

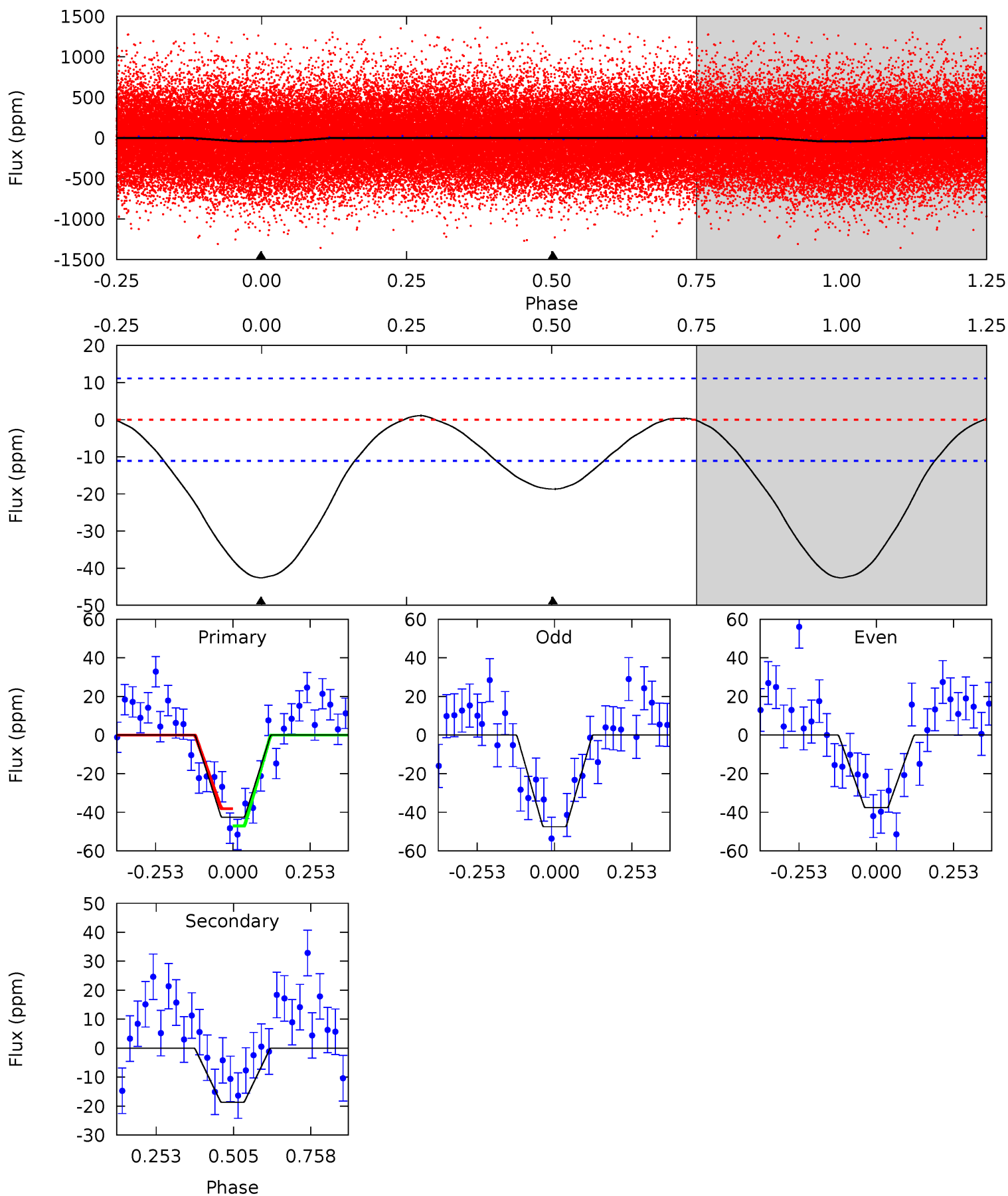
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.02	6.92	0	0	4.41	1.27	0.27	8.02	8.02	6.92	6.92	0.25	0.85	0.05	2.73



Alt Model-Shift Uniqueness Test

007547925-01, P = 3.283877 Days, E = 131.463135 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	7.34	0	0	4.37	1.14	0.34	16.7	16.7	7.34	7.34	1.95	1.02	0.03	1.75



Stellar Parameters For KIC 007547925

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5447^{+180}_{-164}	$4.397^{+0.136}_{-0.187}$	$-0.040^{+0.300}_{-0.300}$	$0.961^{+0.260}_{-0.160}$	$0.840^{+0.119}_{-0.064}$	$1.333^{+0.817}_{-0.648}$
	+3%/-3%	+3%/-4%	+750%/-750%	+27%/-17%	+14%/-8%	+61%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007547925-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 3	$0.65^{+0.56}_{-0.40}$	1646^{+119}_{-101}	4766^{+2857}_{-972}	43^{+273}_{-30}
Alt.	-19 ± 3	$0.77^{+0.53}_{-0.45}$	1641^{+117}_{-97}	4403^{+2233}_{-764}	30^{+152}_{-20}

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

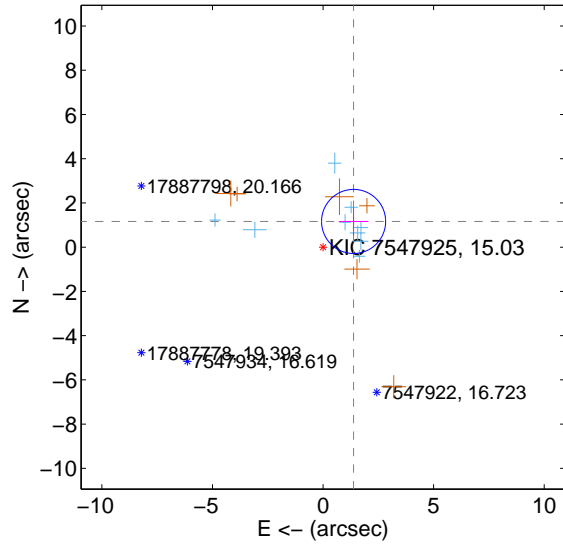
Supplemental centroid analysis for 007547925-01. Kepler magnitude: 15.03. Transit SNR 7.67

There are 9 quarters with good PRF difference image offsets

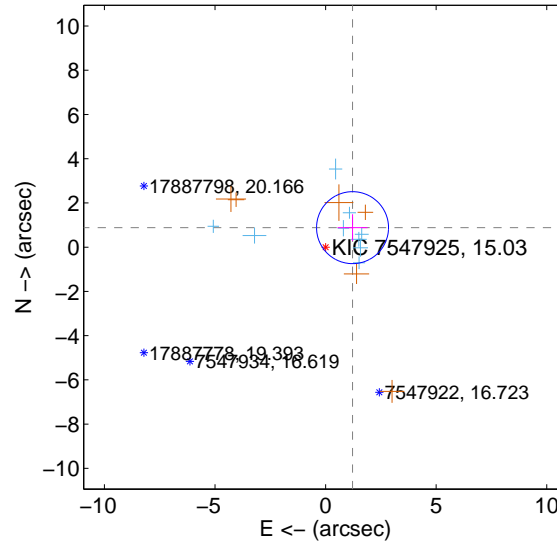
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.806 ± 0.483	3.74	-1.381 ± 0.671	1.163 ± 0.630
PRF-fit source offset from KIC position	1.505 ± 0.542	2.77	-1.219 ± 0.679	0.882 ± 0.605
photometric centroid source offset	3.22 ± 1.97	1.64	-0.94 ± 2.01	3.08 ± 1.96

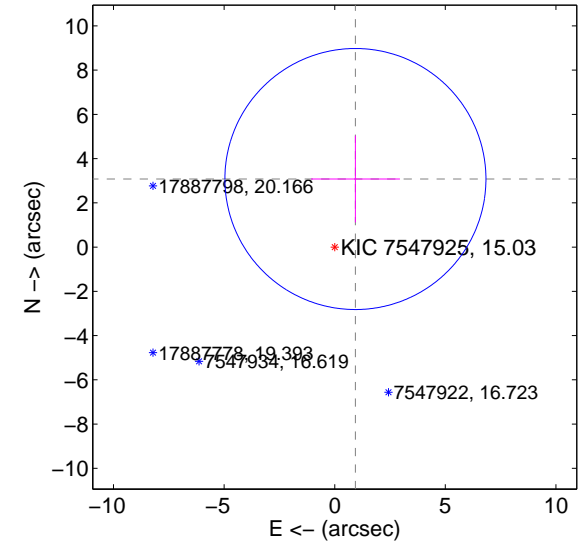
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

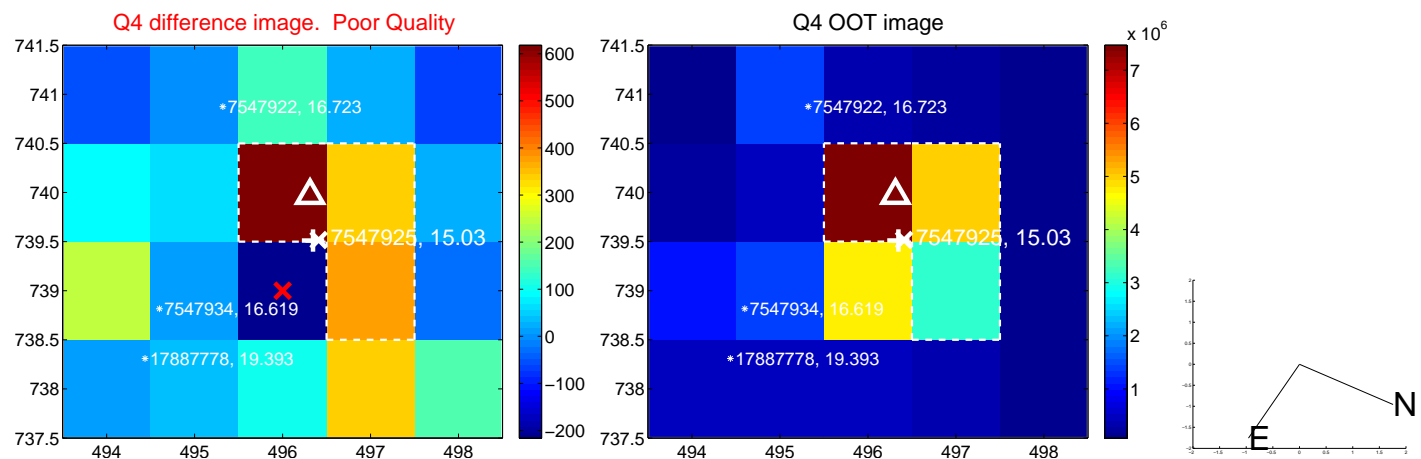
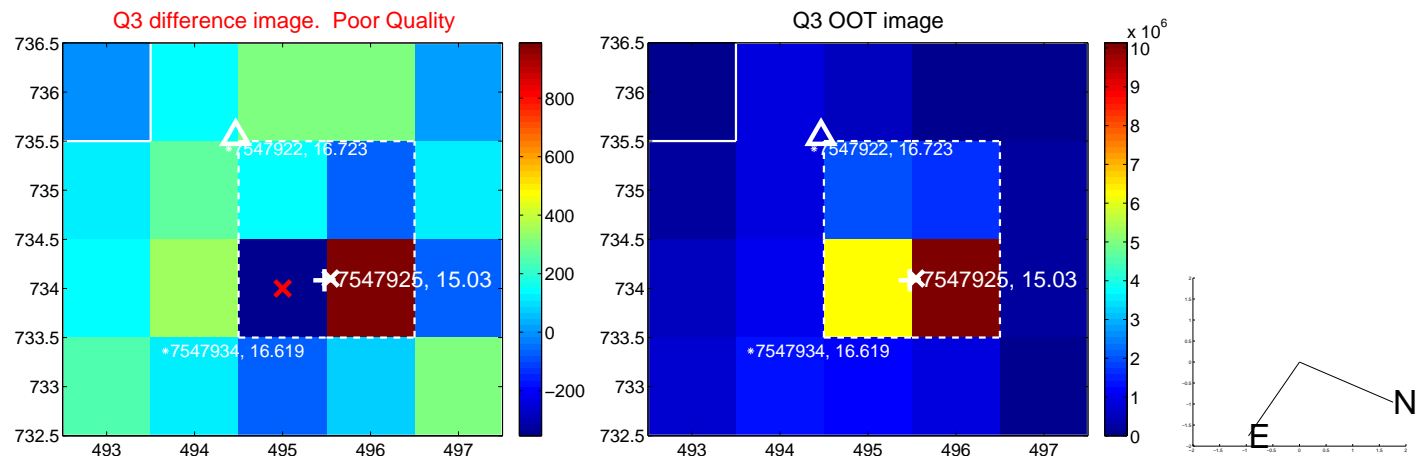
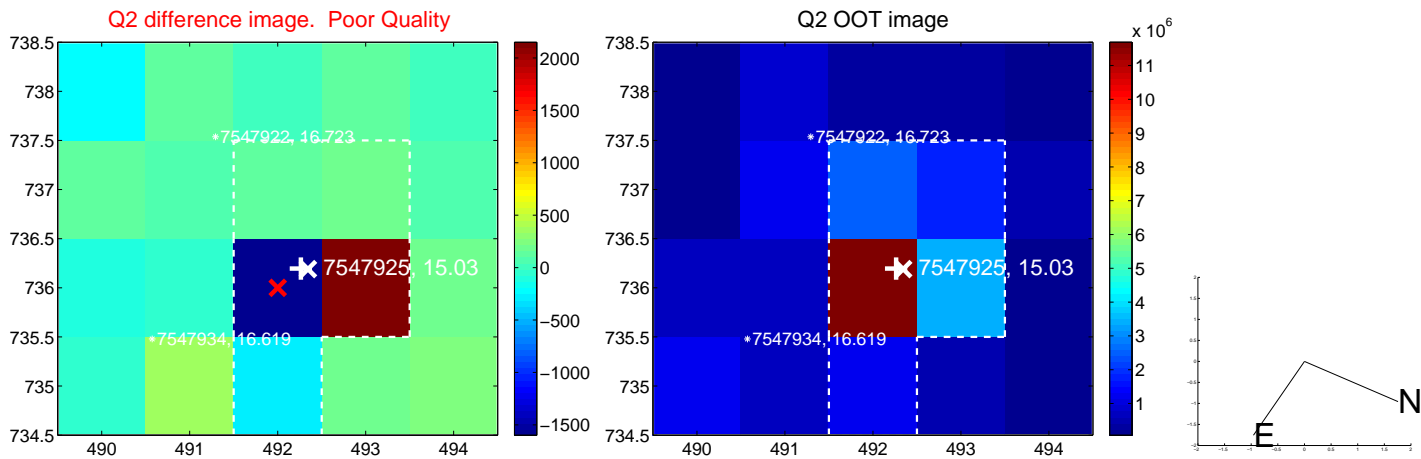
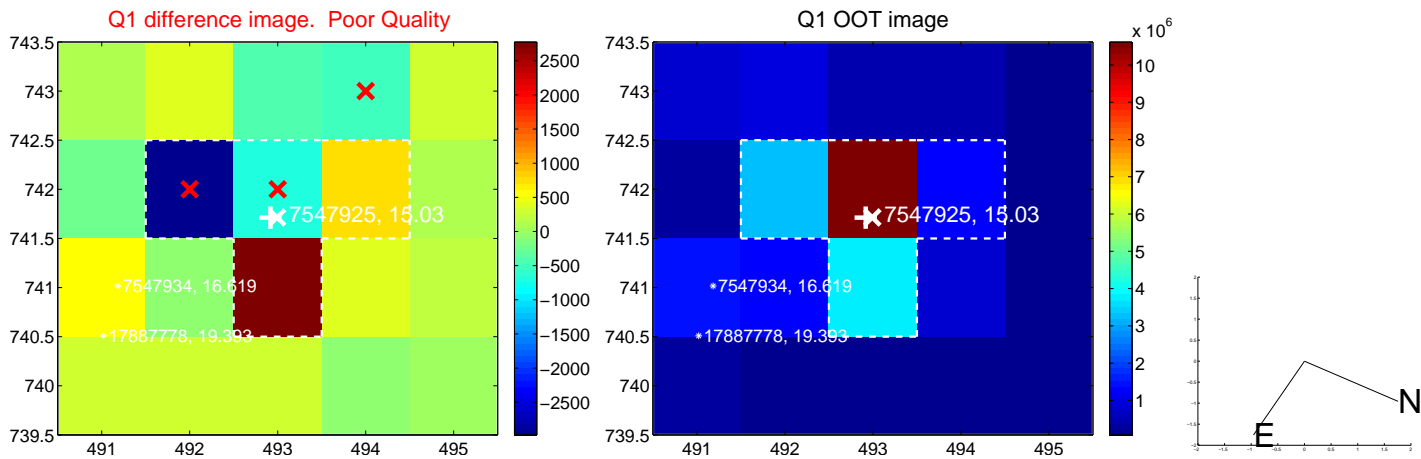


offset from photometric centroids

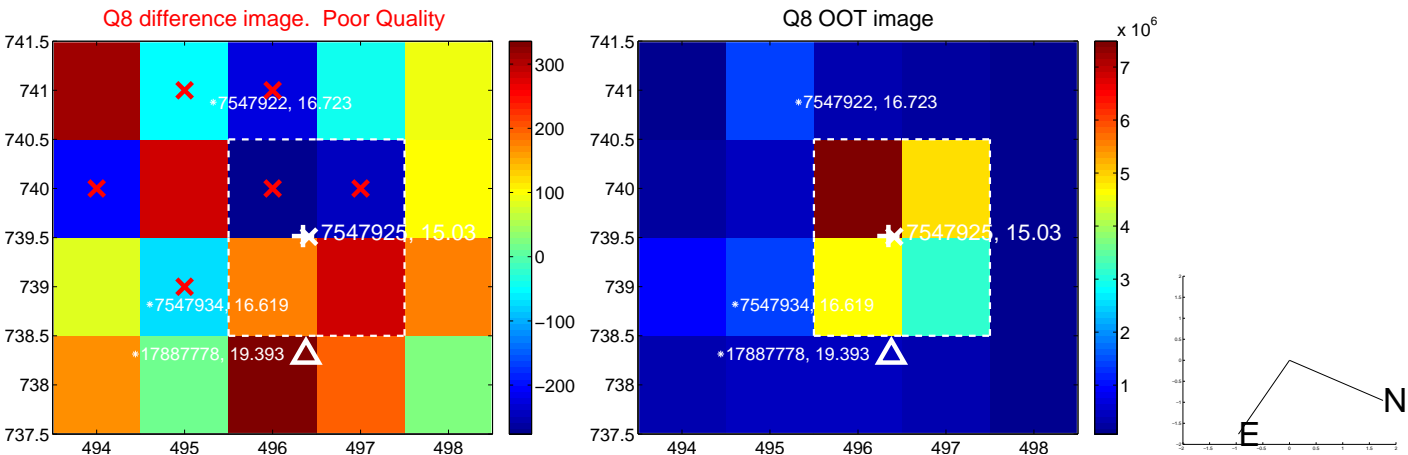
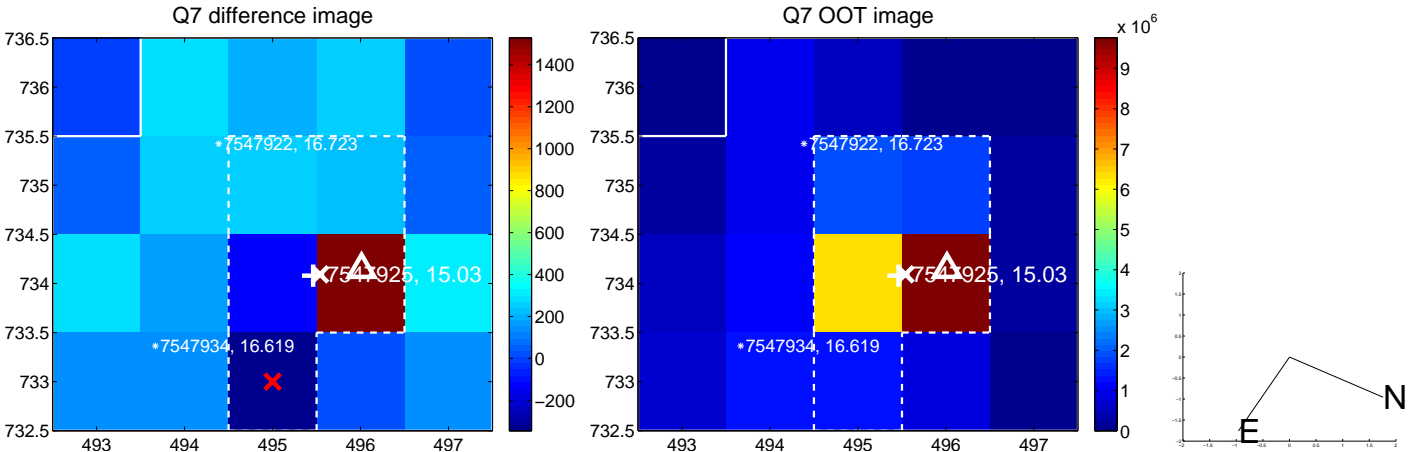
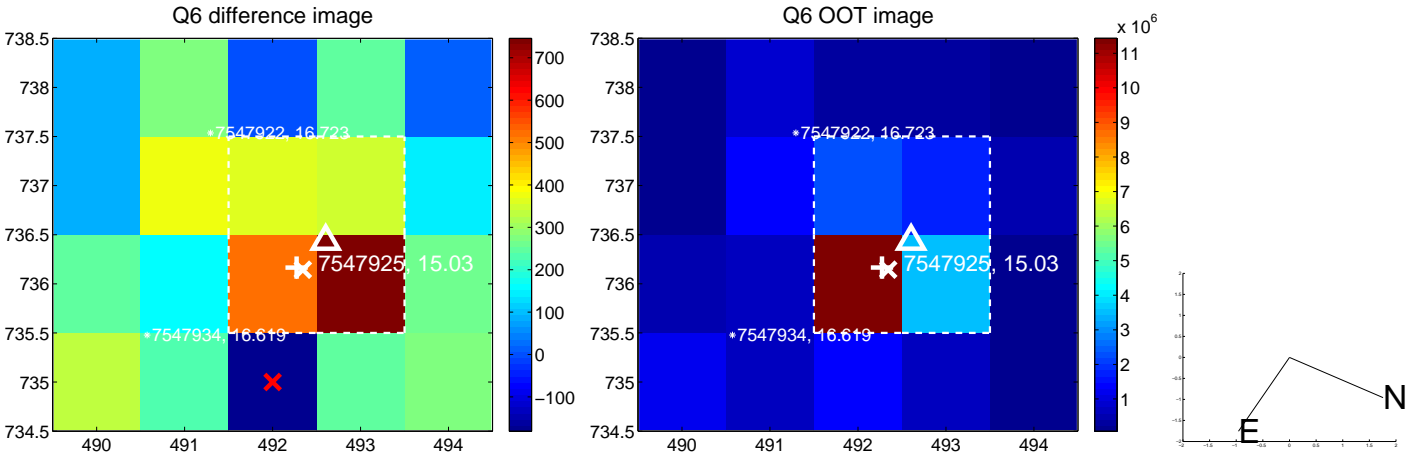
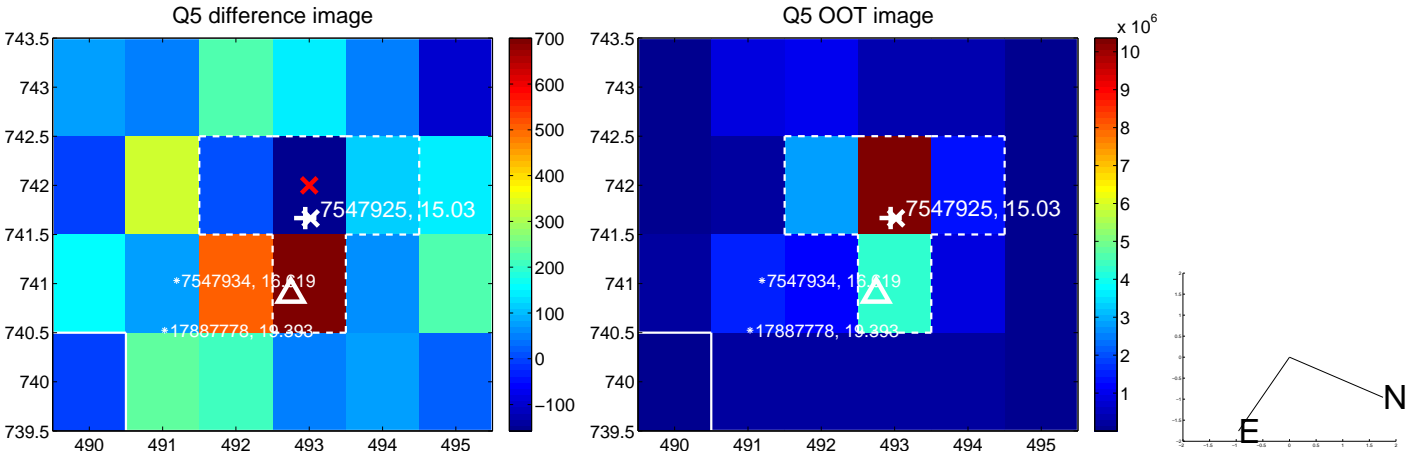


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

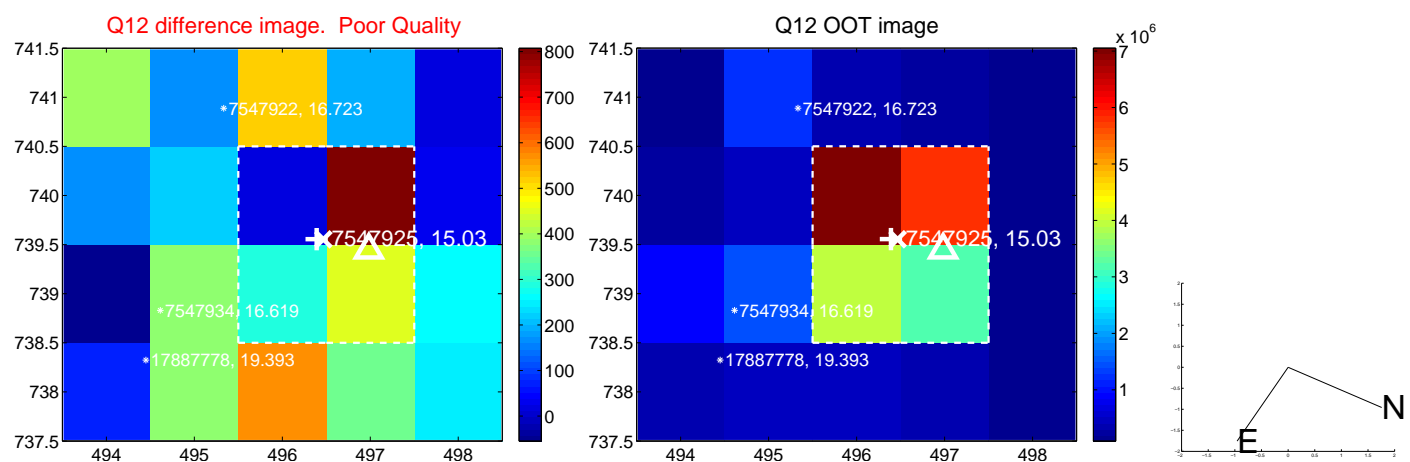
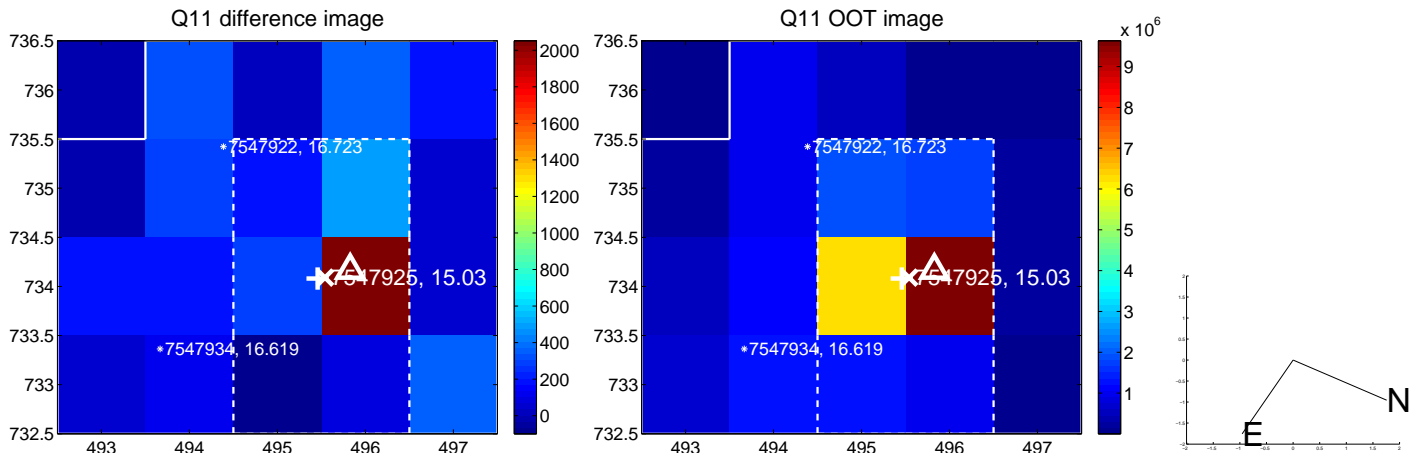
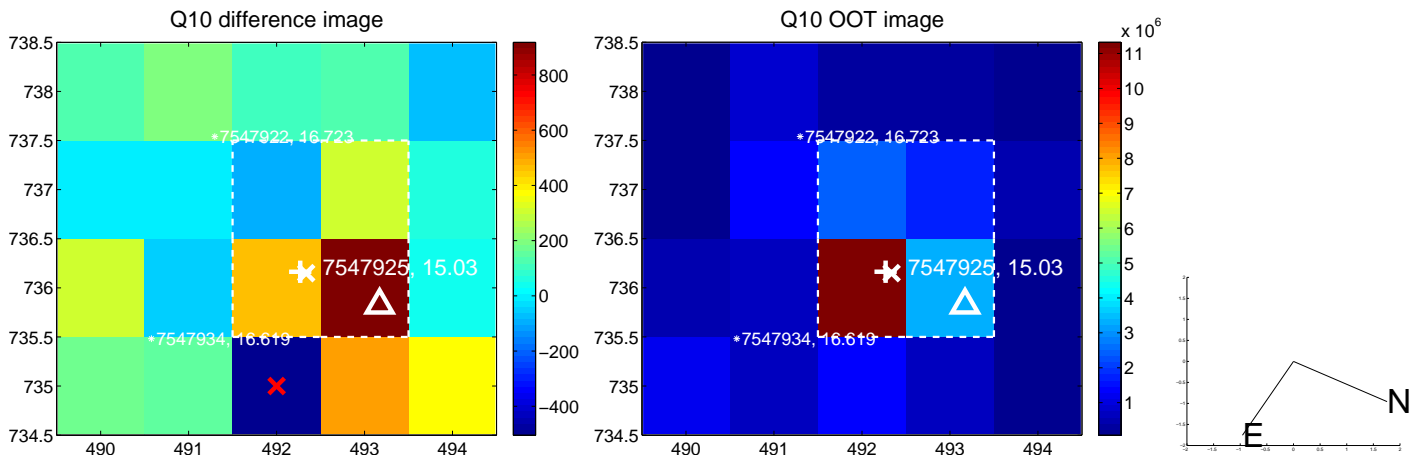
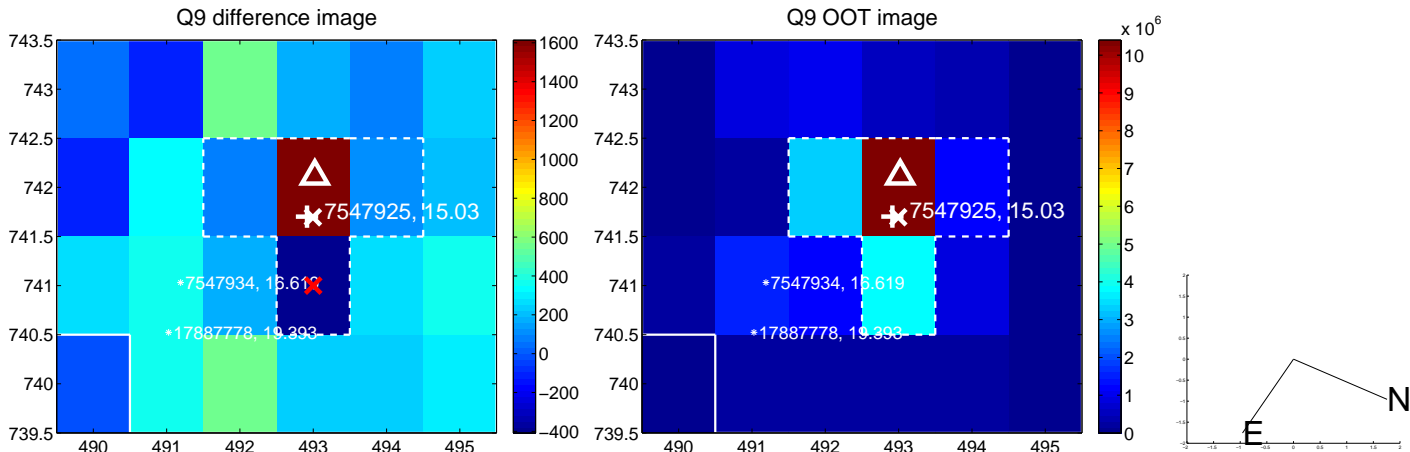
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



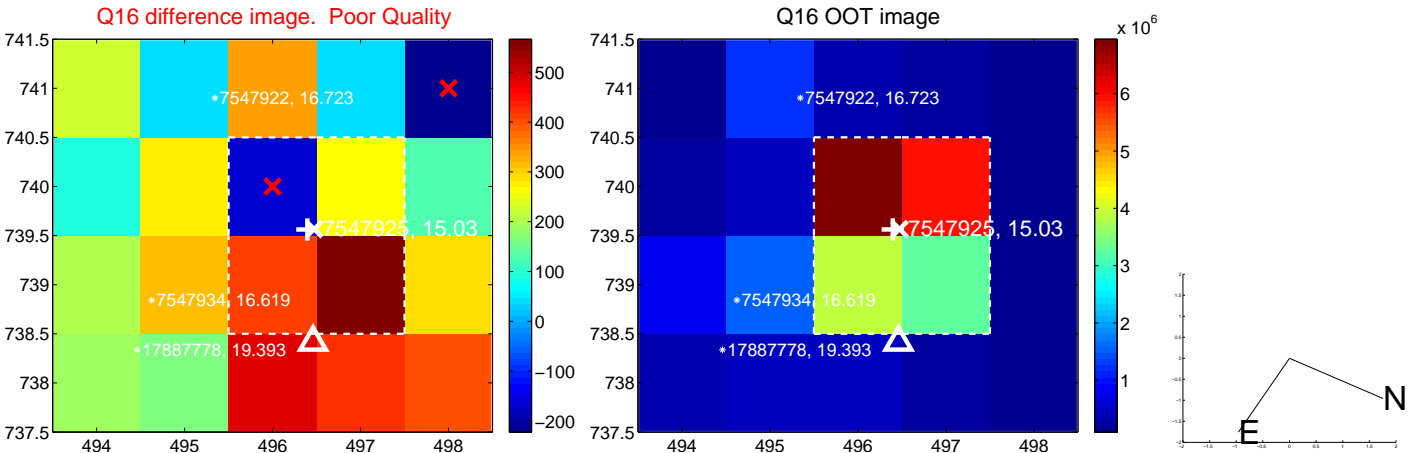
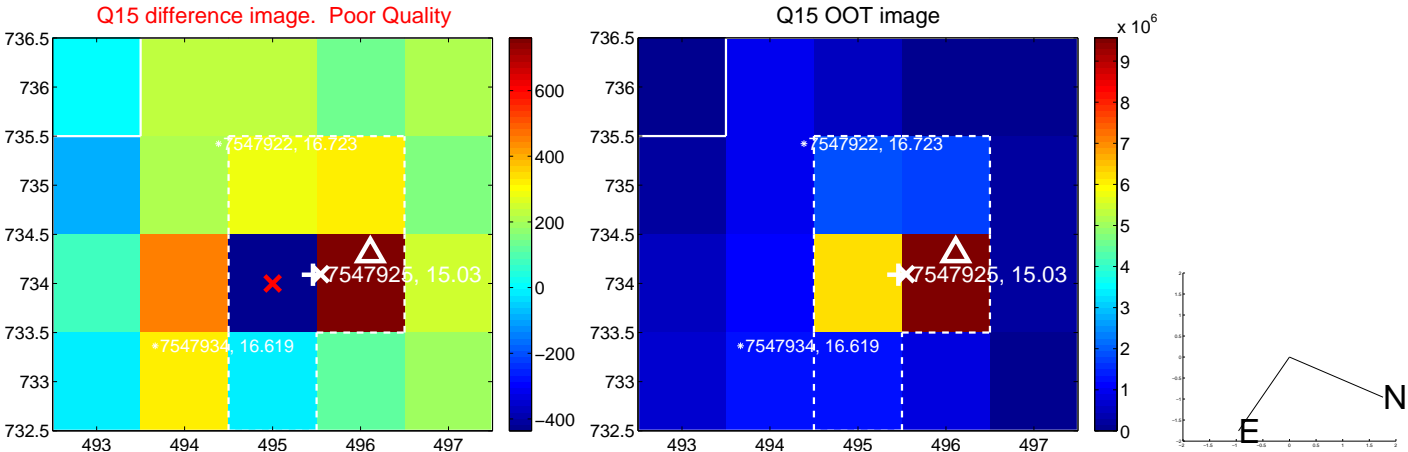
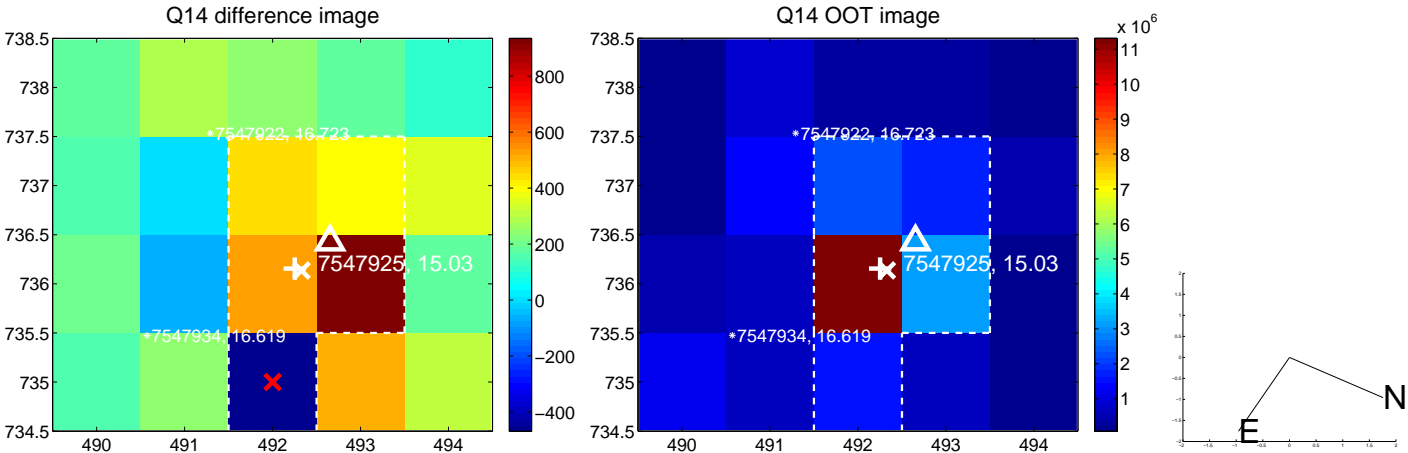
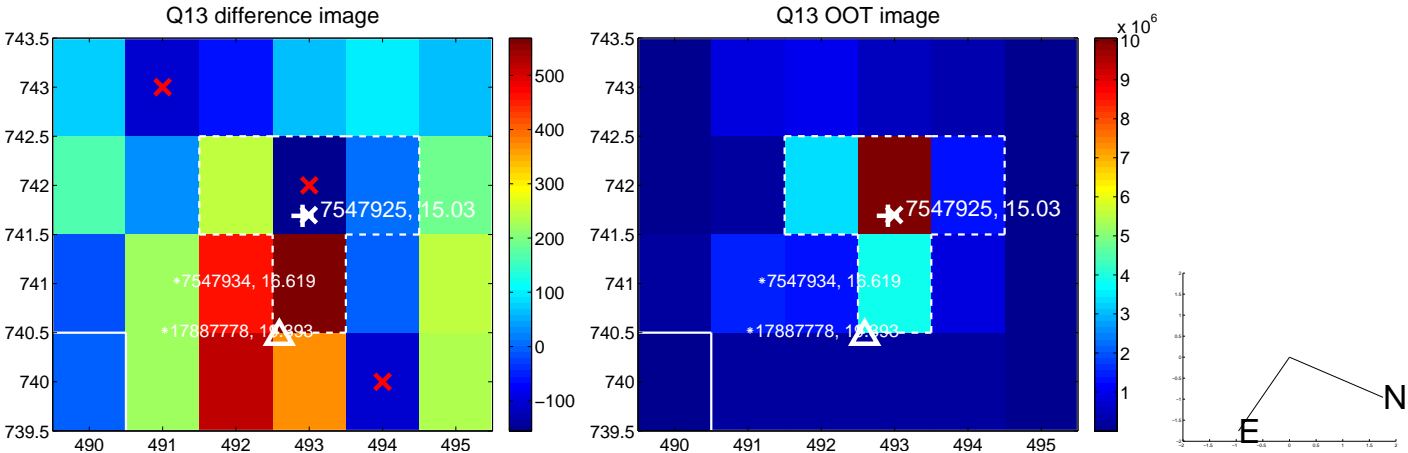
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



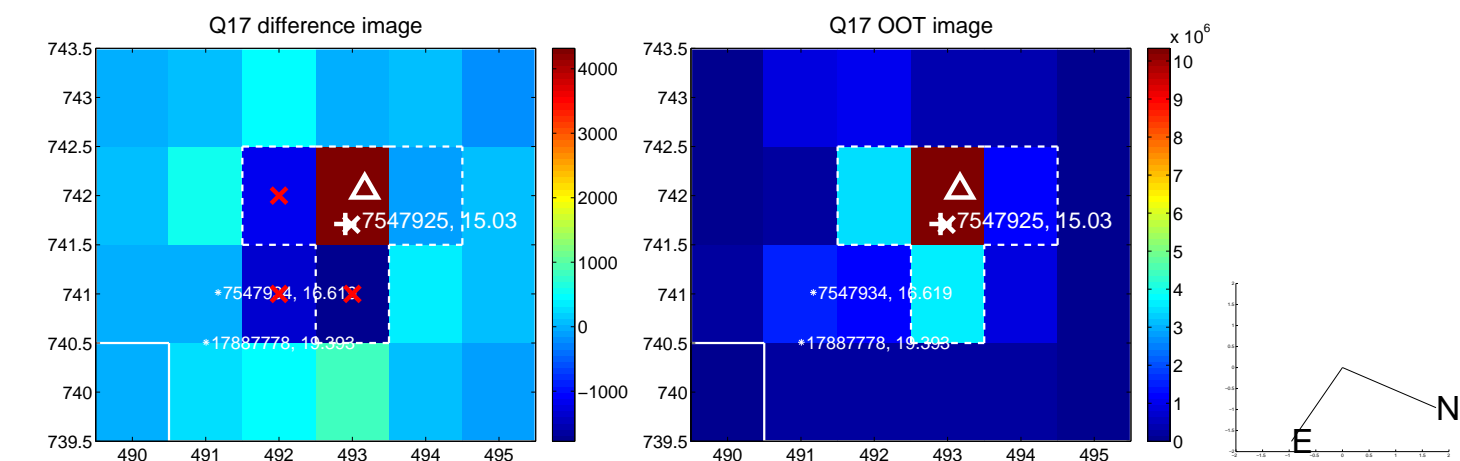
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



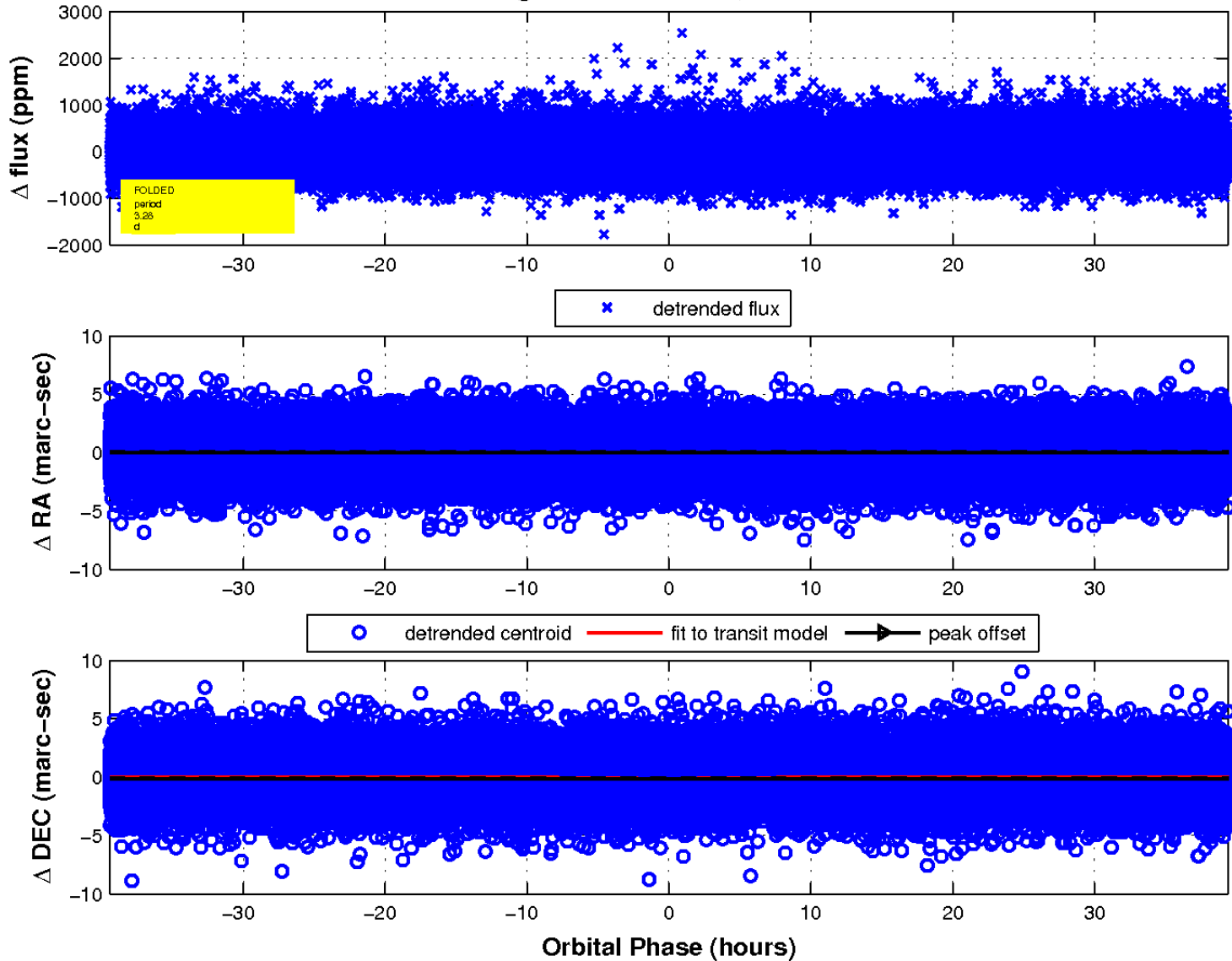
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



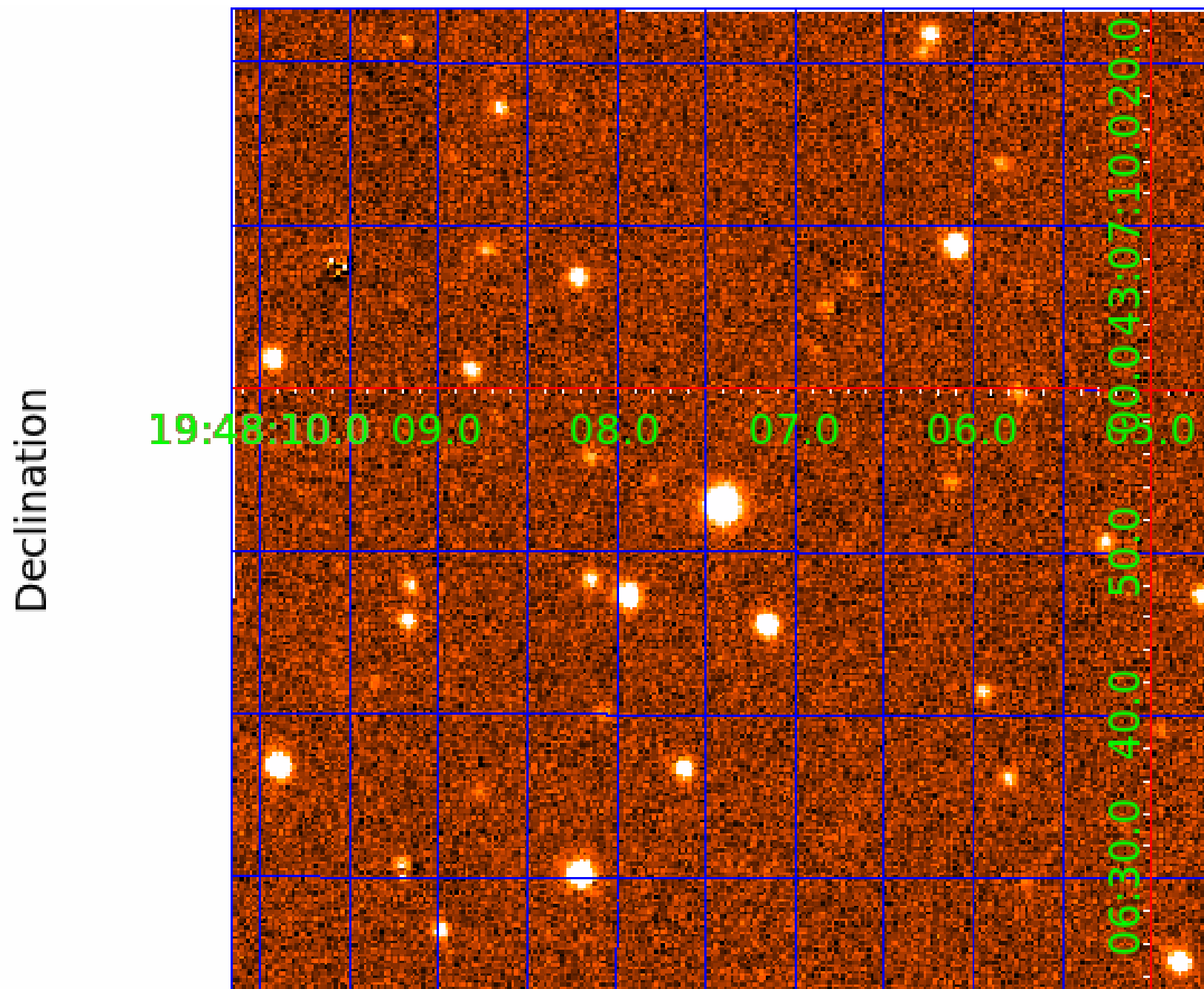
white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 007547925

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})
007547925-01	OBS	No	3.284072	134.676276	29.7	15.624	7.5	7.7	0.96	5447	0.53	437.31
007547925-02	OBS	No	289.546900	410.495343	329.4	25.731	9.2	6.5	0.96	5447	2.01	1.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007547925-01	OBS	FP	0.00	1	0	1	0	LPP_DV—HALO_GHOST
007547925-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

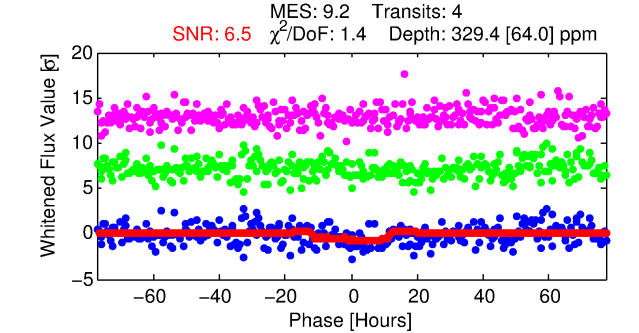
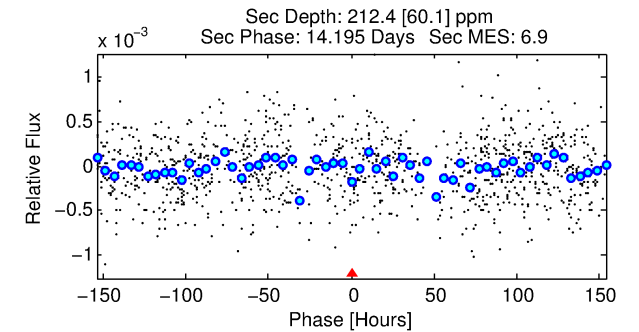
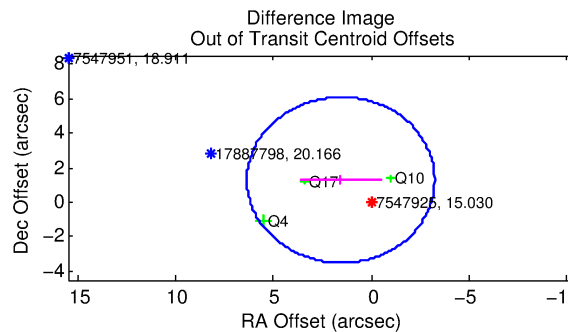
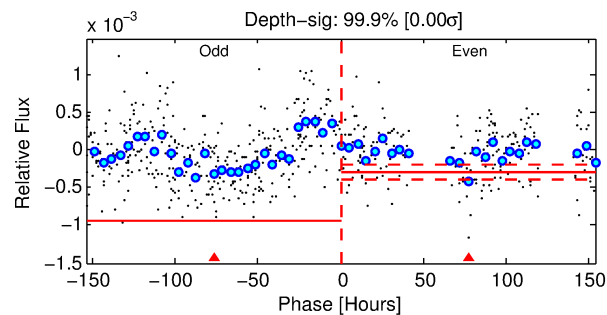
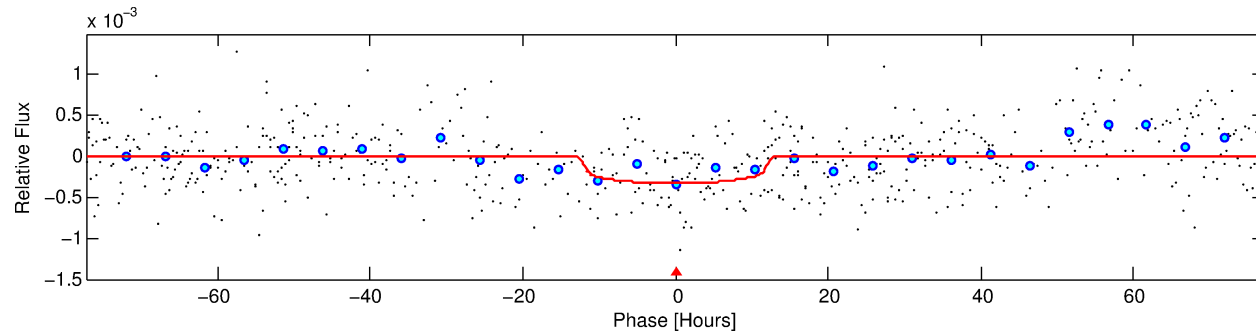
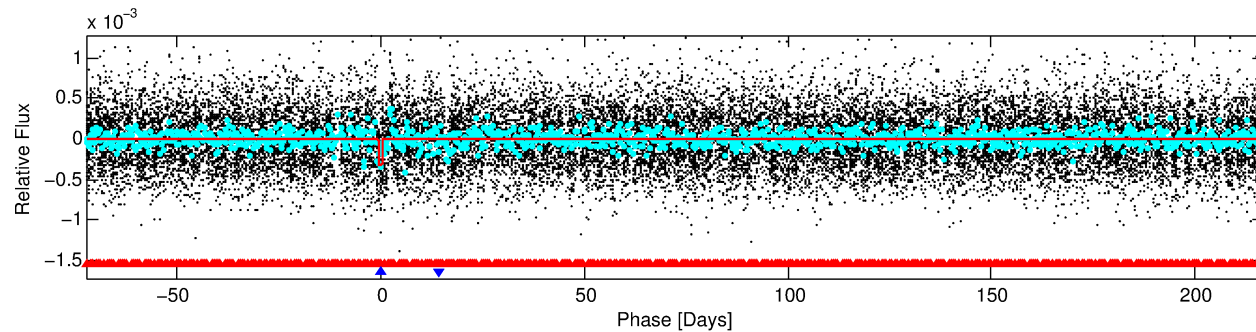
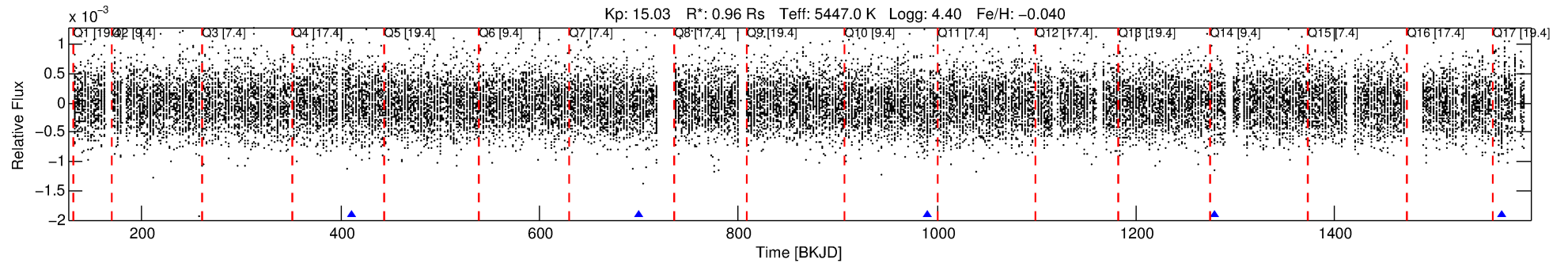
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007547925-02

No Significant Match Found

DV One-Page Summary

KIC: 7547925 Candidate: 2 of 2 Period: 289.547 d



DV Fit Results:

Period = 289.54690 [0.04120] d
Epoch = 410.4953 [0.1280] BKJD
Rp/R* = 0.0191 [0.0051]
a/R* = 48.07 [49.66]
b = 0.85 [0.33]
Seff = 1.11 [0.41]
Teq = 262 [24] K
Rp = 2.01 [0.76] Re
a = 0.8085 [0.1864] AU
Ag = 18982.35 [13067.43] [1.45 σ]
Teffp = 4755 [729] K [6.16 σ]

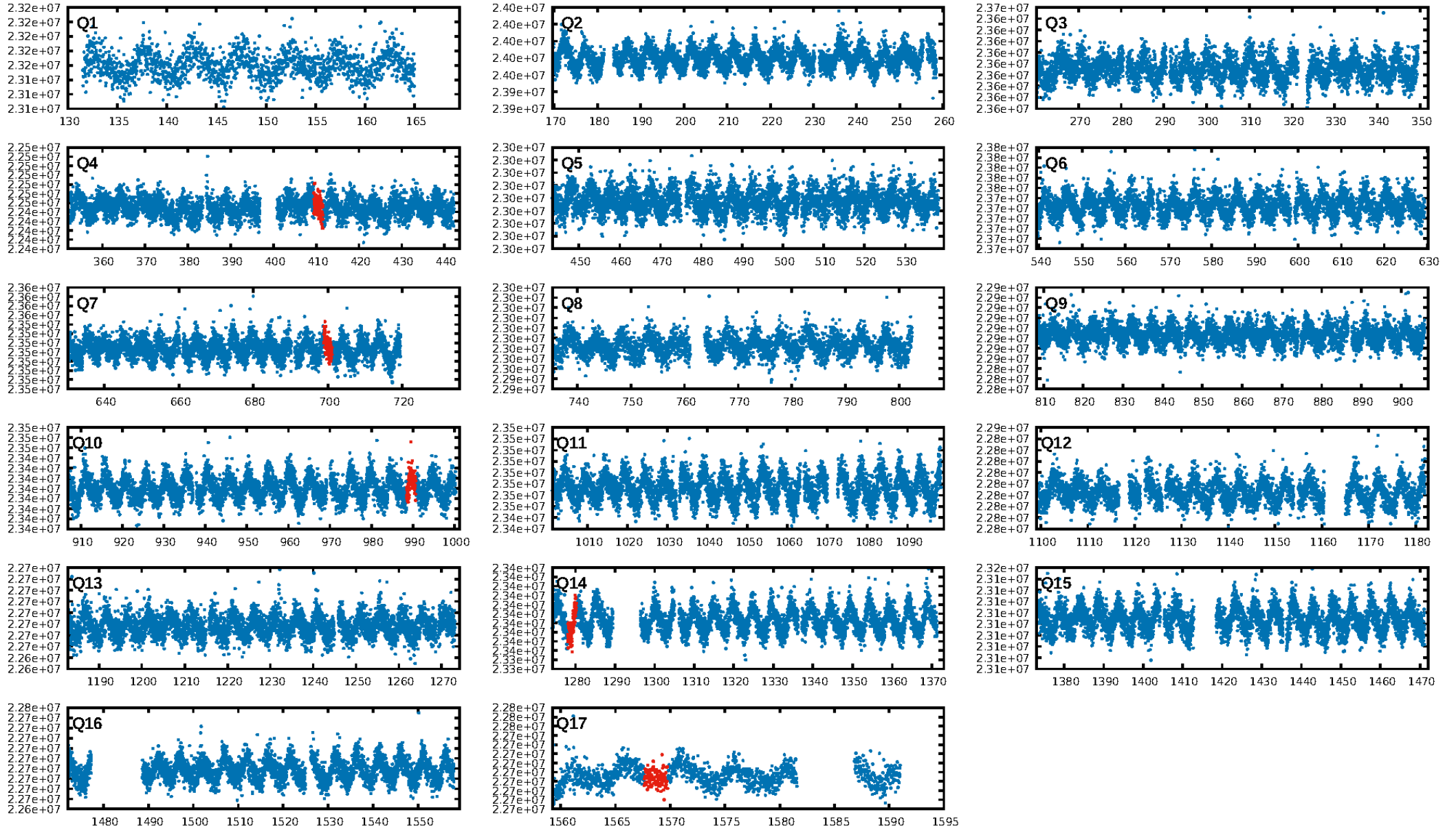
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [228.22 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.34e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.599
Centroid-sig: 1.1%
Centroid-so: 3.524 arcsec [2.22 σ]
OotOffset-rm: 2.019 arcsec [1.26 σ]
KicOffset-rm: 1.920 arcsec [1.06 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/4]

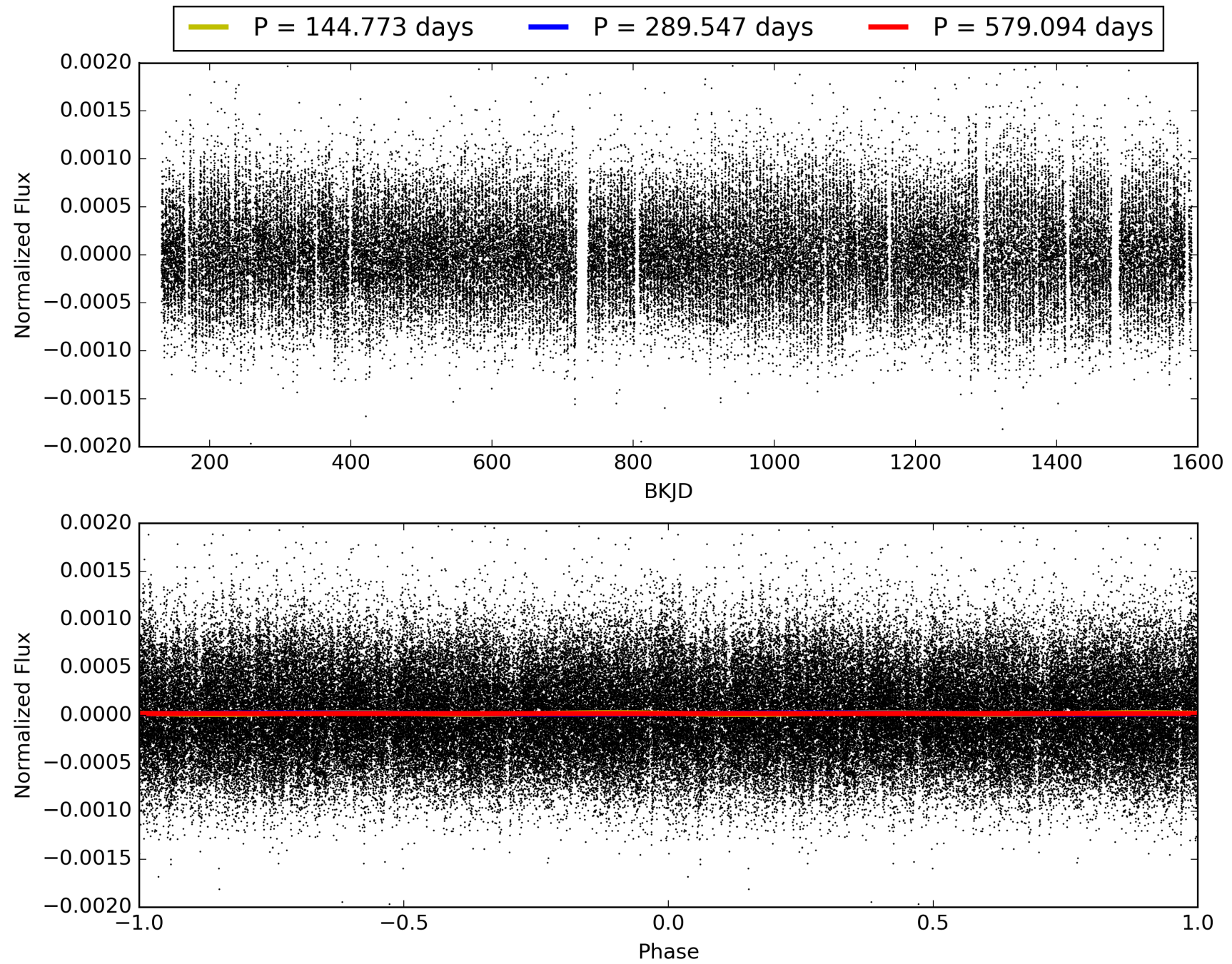
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:53:28 Z

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

TCE 007547925-02, PDC Light Curves

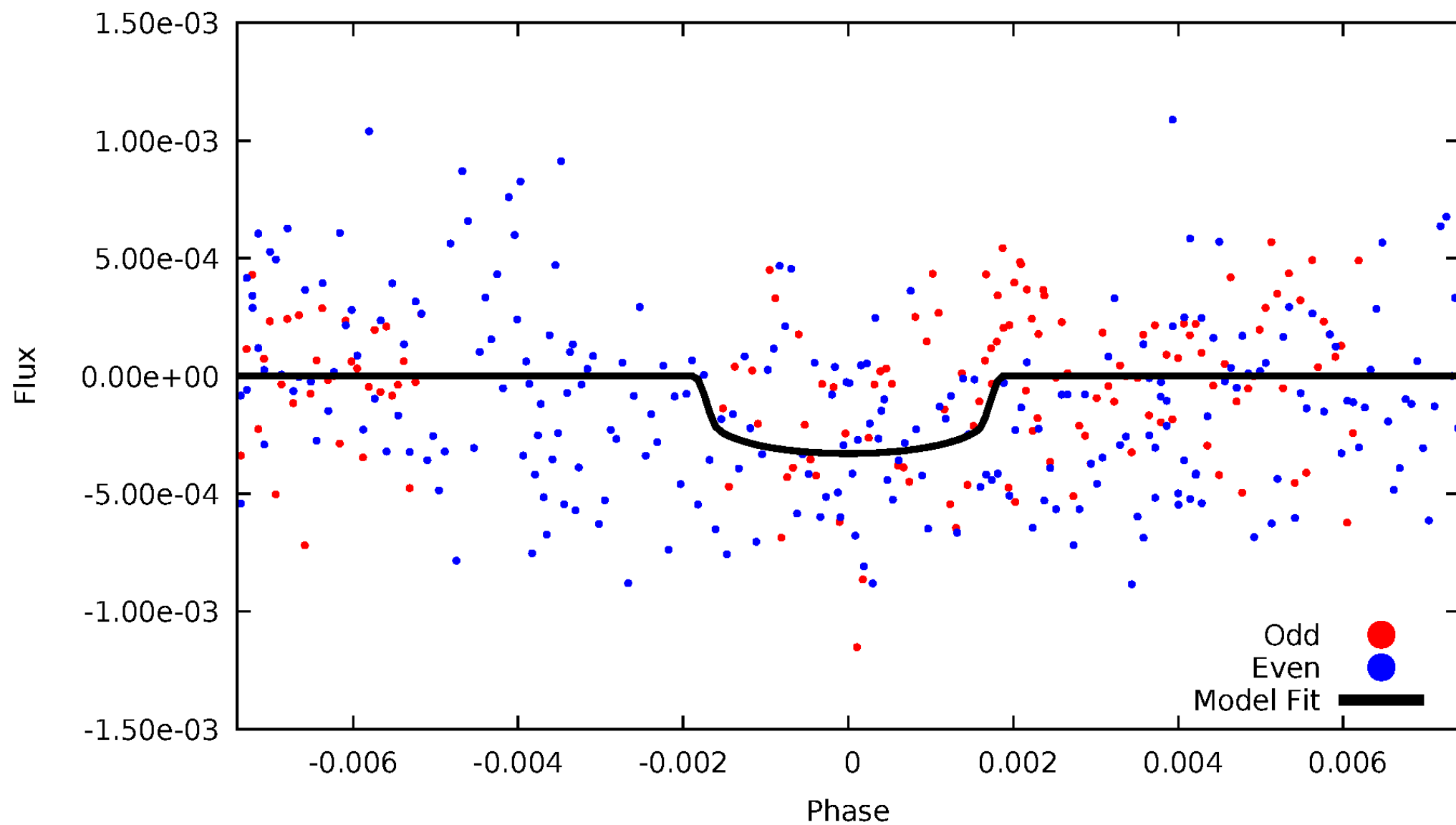


TCE 007547925-02



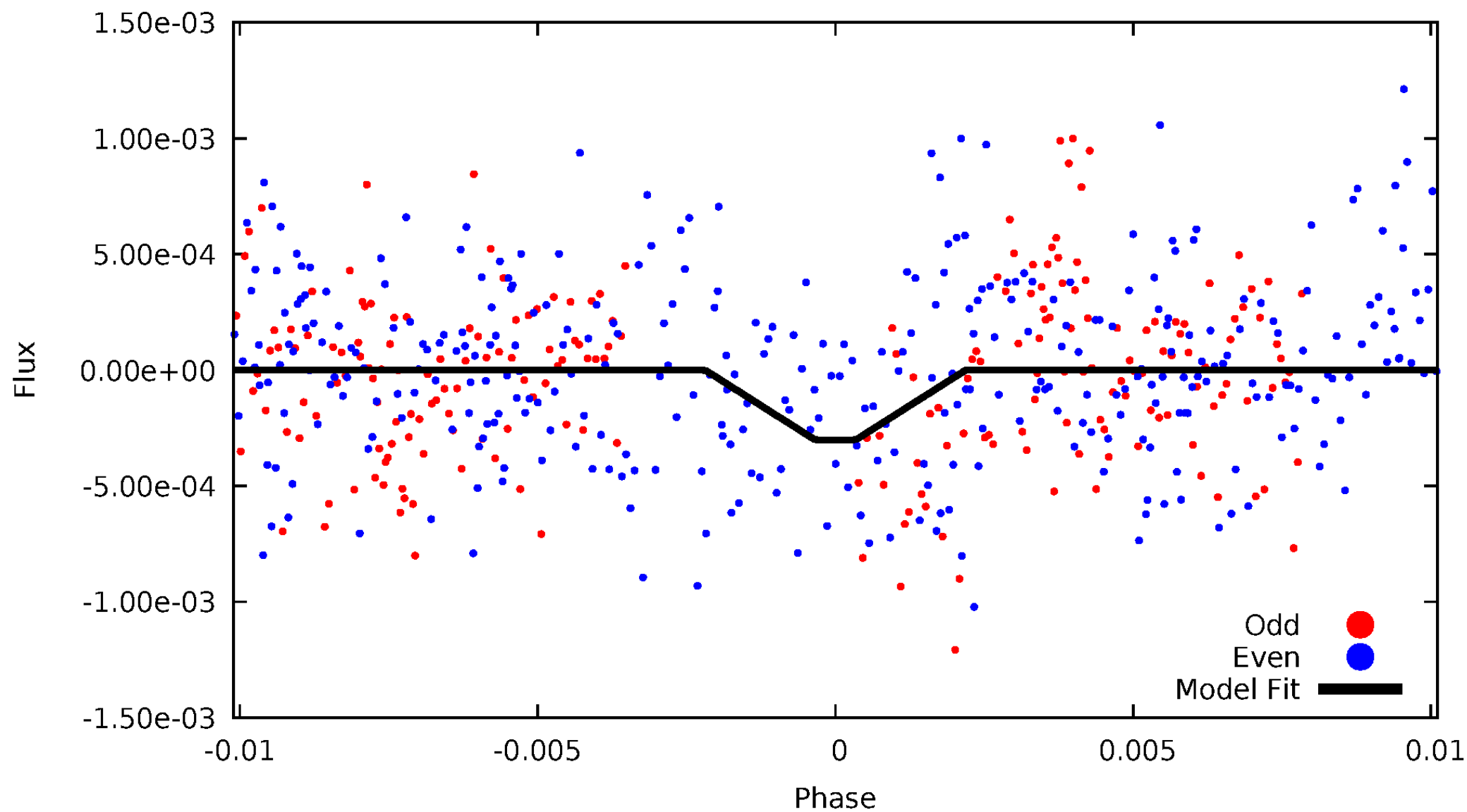
DV Odd/Even

TCE 007547925-02



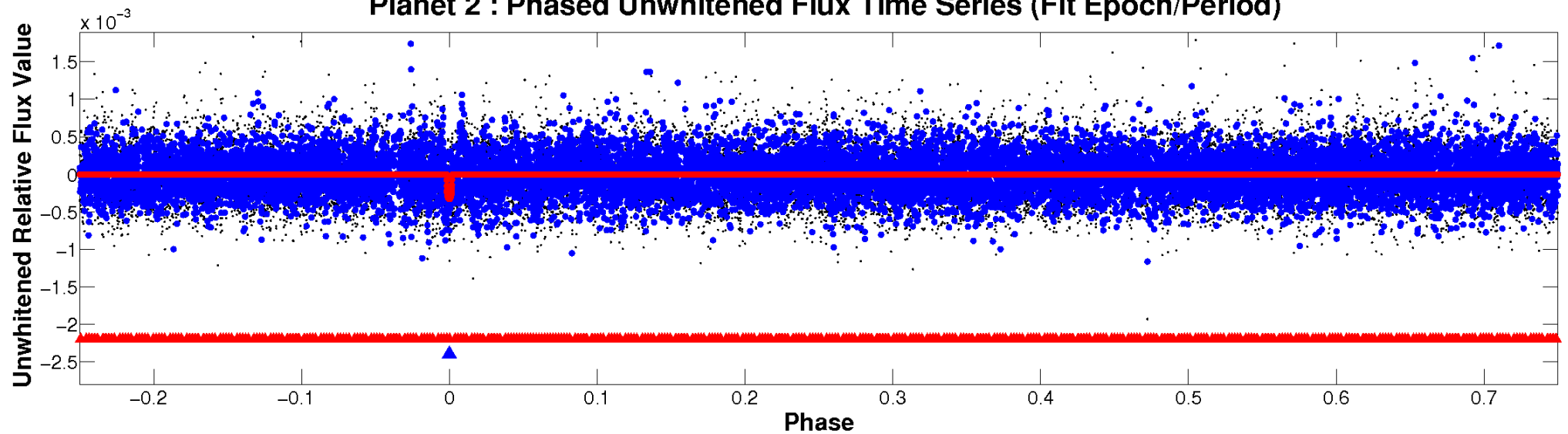
ALT Odd/Even

TCE 007547925-02

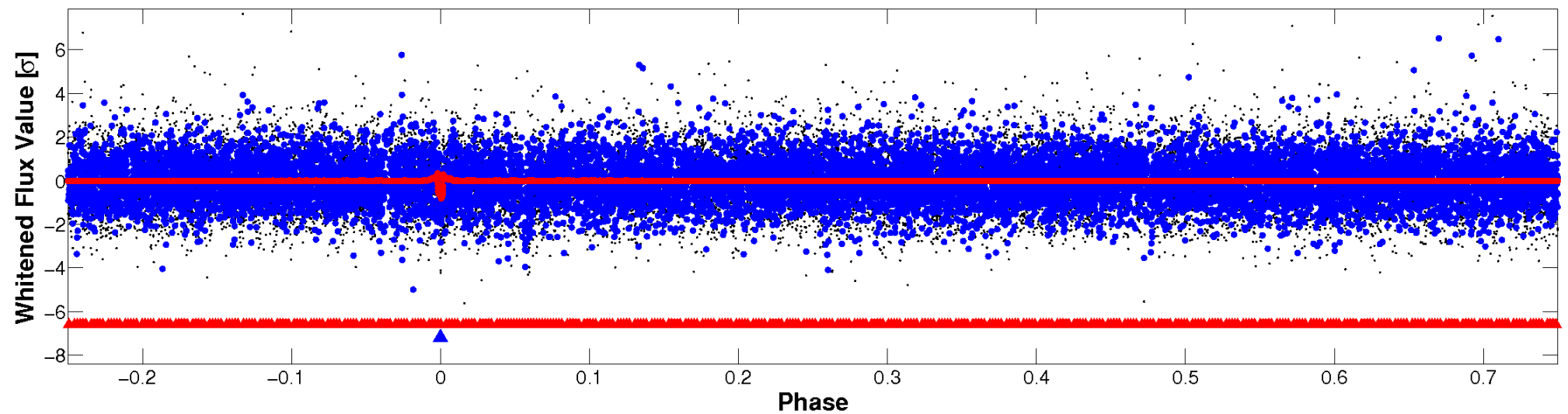


Non-Whitened Vs. Whitened Light Curve

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

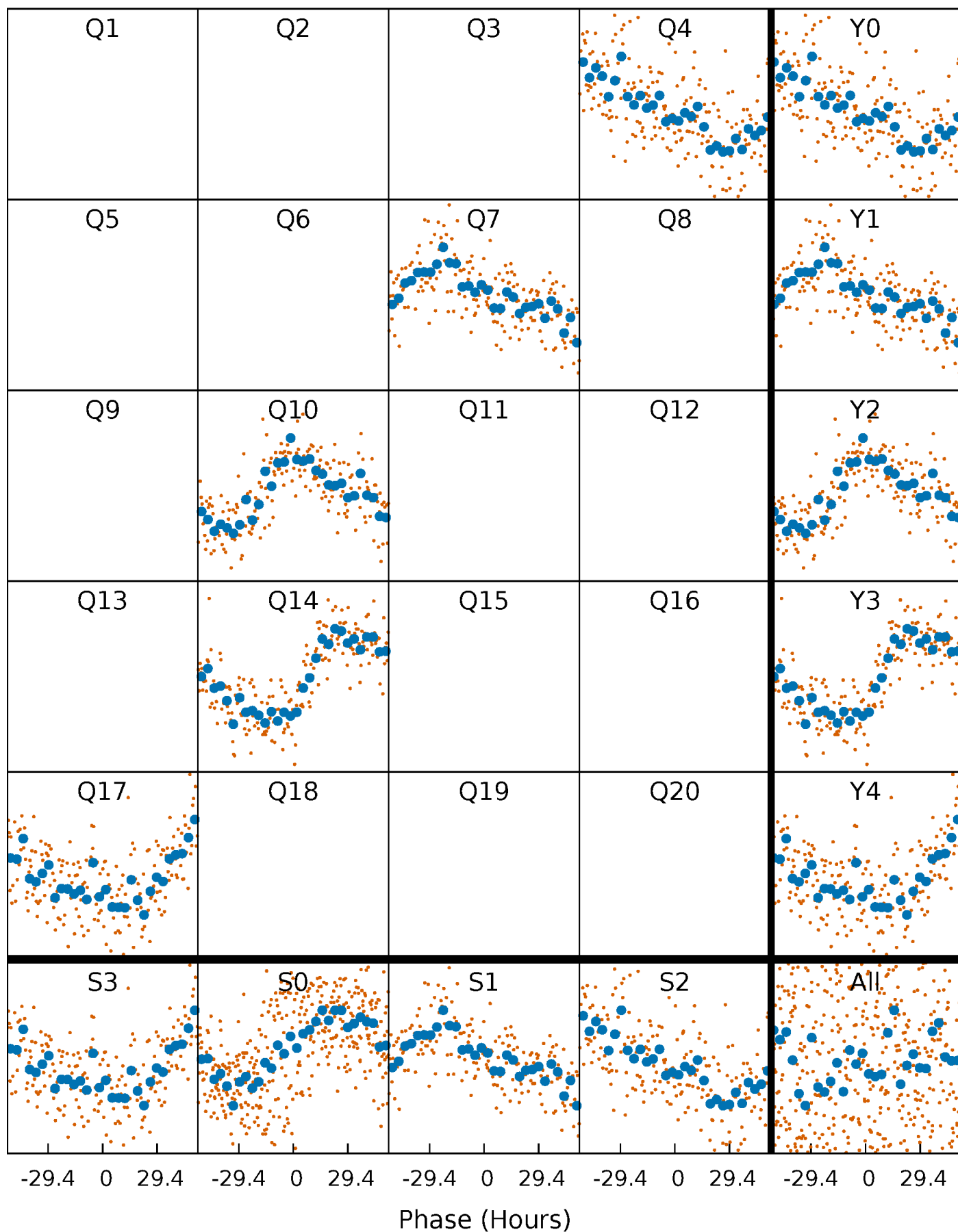


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



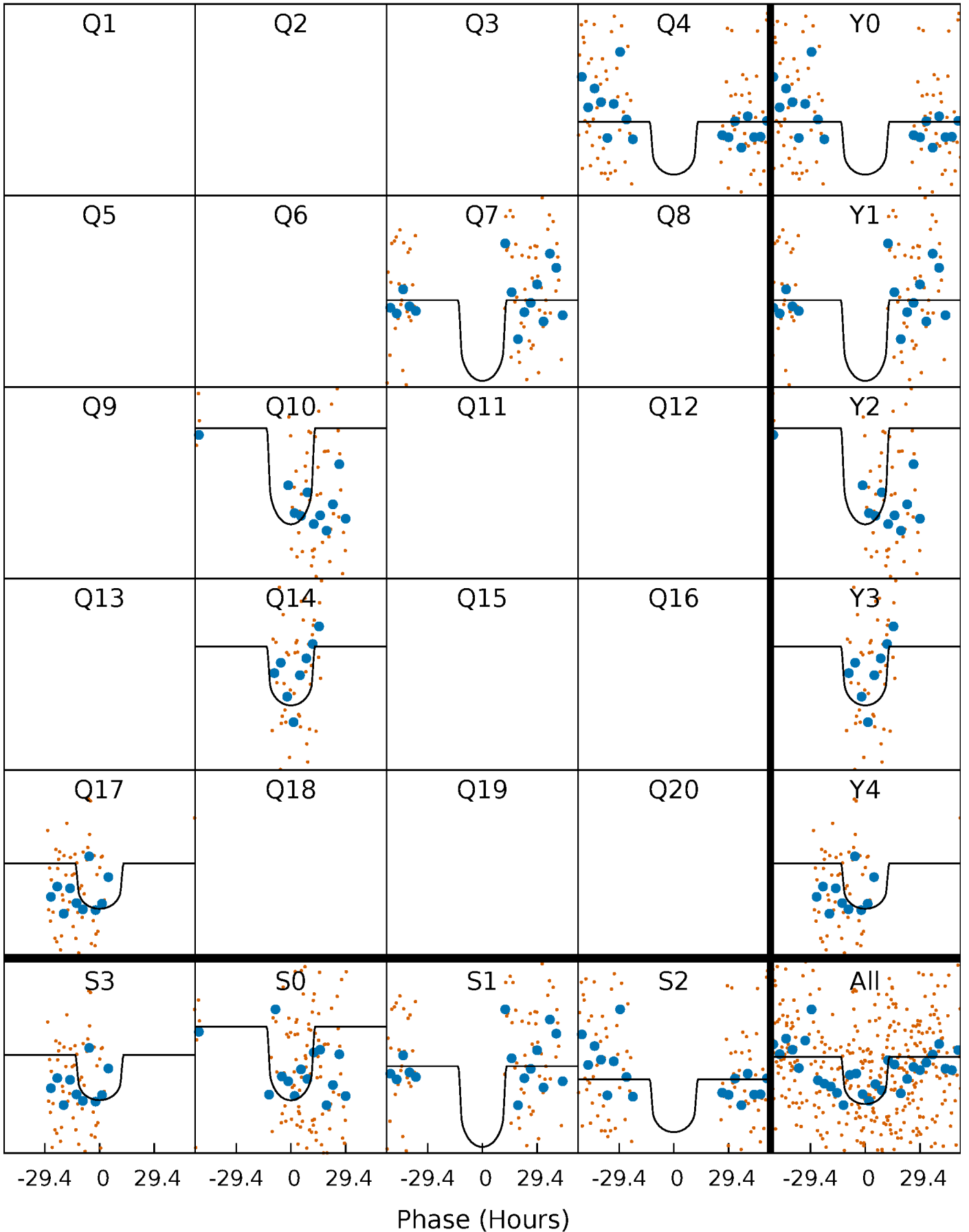
PDC Quarter-Phased Transit Curves

TCE 007547925-02 $P=289.546900$ Days $T_0=410.495343$ (BKJD)



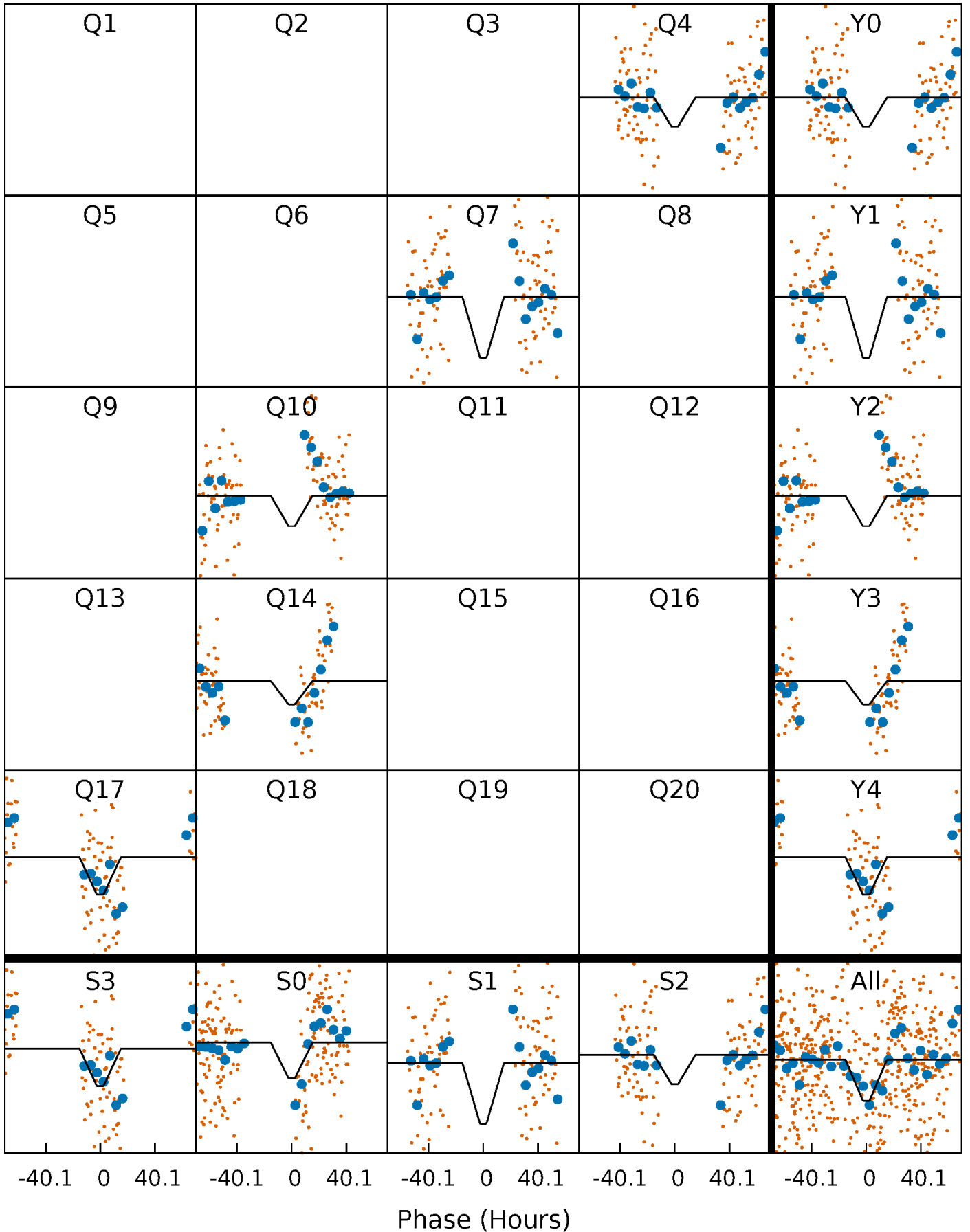
DV Quarter-Phased Transit Curves

TCE 007547925-02 $P=289.546900$ Days $T_0=410.495343$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

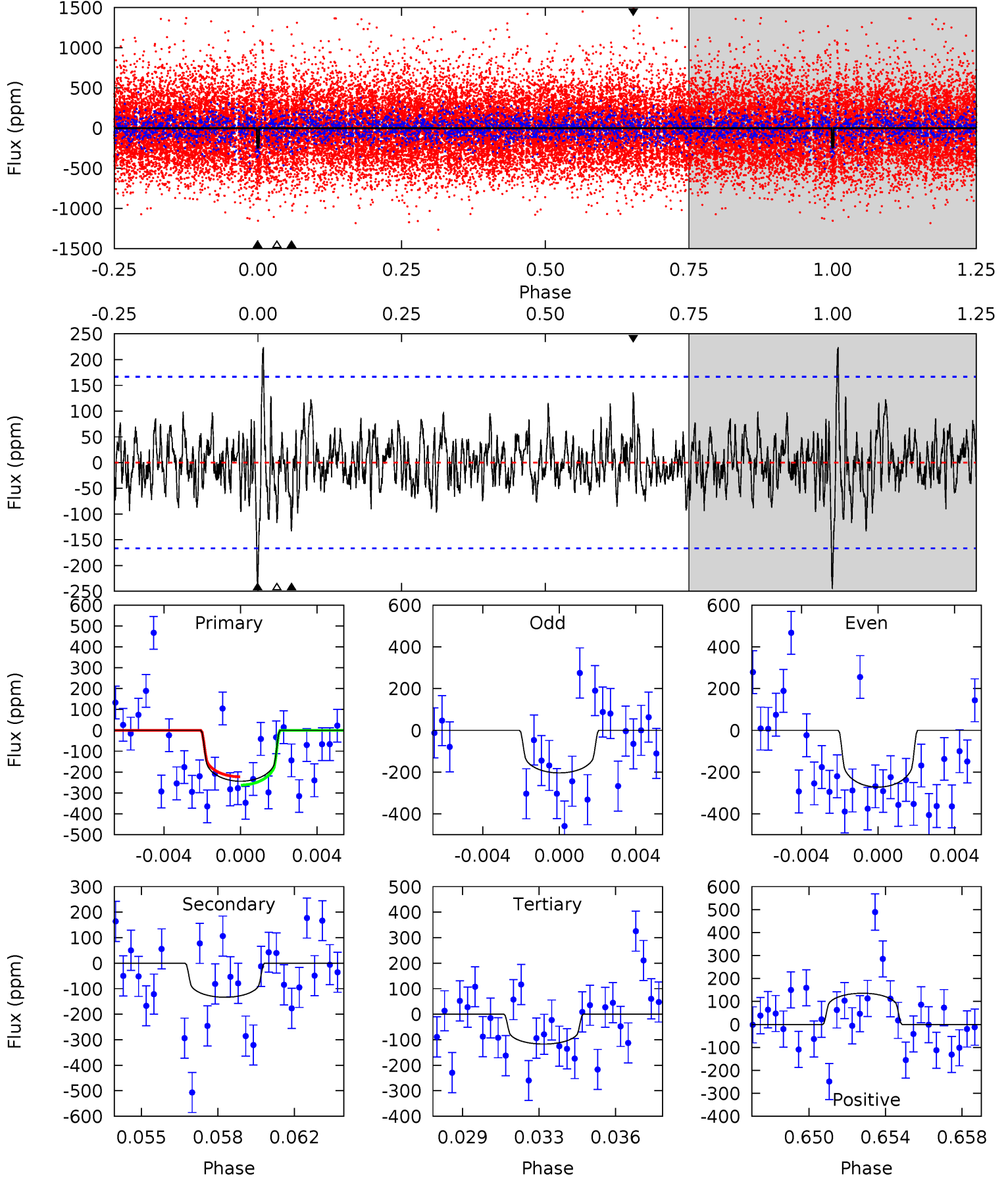
TCE 007547925-02 P=289.509489 Days $T_0=410.055554$ (BKJD)



DV Model-Shift Uniqueness Test

007547925-02, P = 289.546900 Days, E = 120.948443 Days

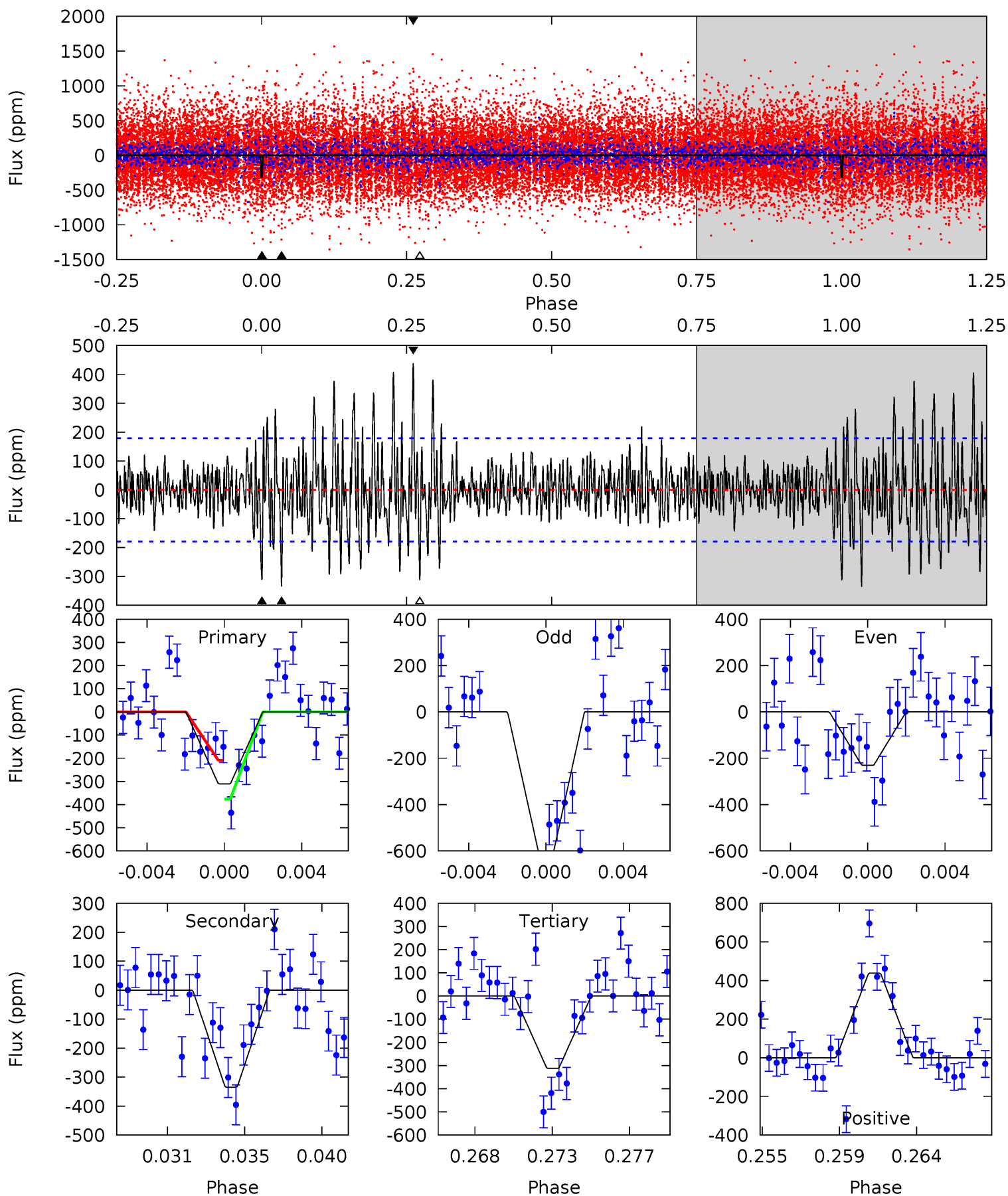
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.63	4.18	3.66	4.25	5.22	2.91	1.28	3.97	3.38	0.52	-0.07	1.06	0.06	0.48	0.61



Alt Model-Shift Uniqueness Test

007547925-02, P = 289.509489 Days, E = 120.546065 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.02	9.71	9.04	12.7	5.18	2.85	2.42	-0.02	-3.69	0.67	-2.99	4.79	-0.54	0.57	2.33



Stellar Parameters For KIC 007547925

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5447^{+180}_{-164}	$4.397^{+0.136}_{-0.187}$	$-0.040^{+0.300}_{-0.300}$	$0.961^{+0.260}_{-0.160}$	$0.840^{+0.119}_{-0.064}$	$1.333^{+0.817}_{-0.648}$
	+3%/-3%	+3%/-4%	+750%/-750%	+27%/-17%	+14%/-8%	+61%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007547925-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-133 ± 32	$2.07^{+0.57}_{-0.62}$	367^{+27}_{-21}	4420^{+603}_{-433}	11366^{+11658}_{-4826}
Alt.	-335 ± 34	$1.88^{+0.62}_{-0.57}$	370^{+27}_{-21}	5551^{+1092}_{-604}	33951^{+35883}_{-14738}

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

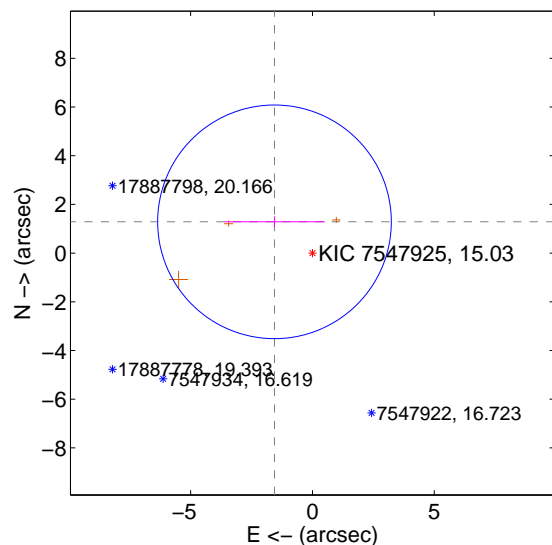
Supplemental centroid analysis for 007547925-02. Kepler magnitude: 15.03. Transit SNR 6.52

There are 0 quarters with good PRF difference image offsets

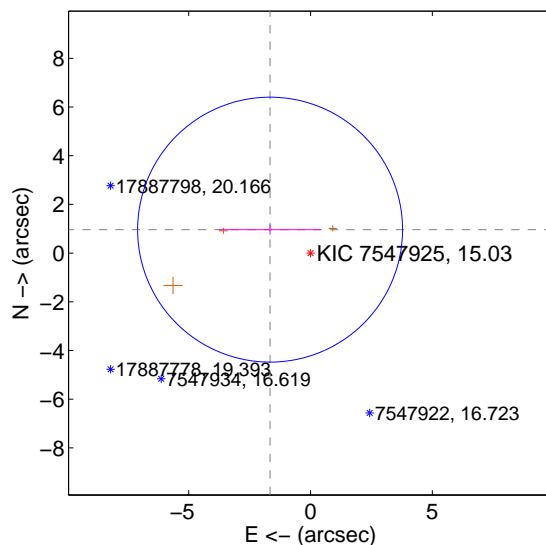
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.019 ± 1.599	1.26	1.558 ± 2.063	1.284 ± 0.229
PRF-fit source offset from KIC position	1.920 ± 1.813	1.06	1.661 ± 2.093	0.963 ± 0.210
photometric centroid source offset	3.52 ± 1.59	2.22	0.66 ± 1.44	-3.46 ± 1.59

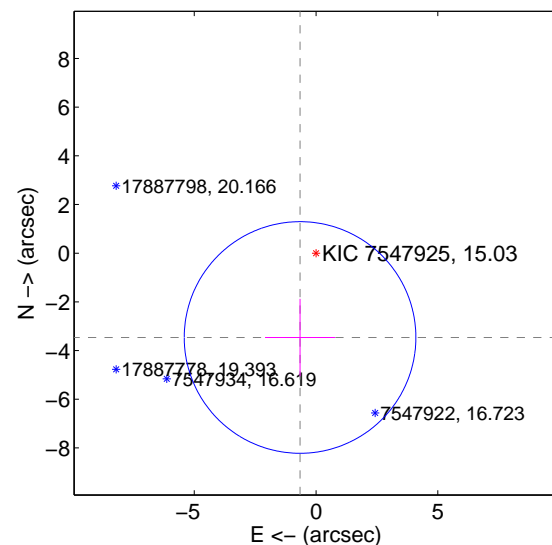
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

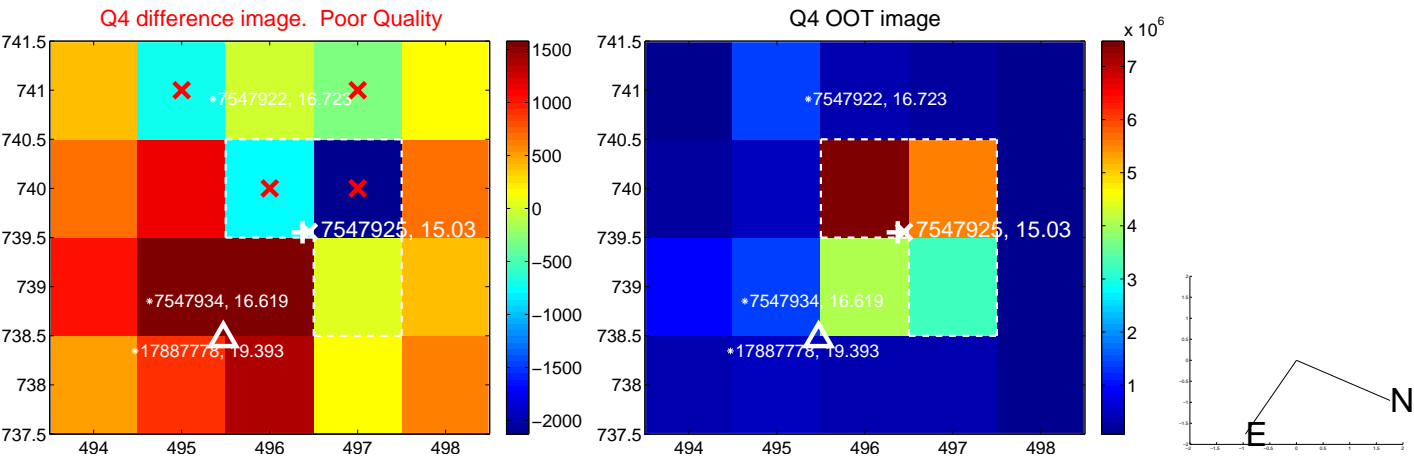


offset from photometric centroids



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.

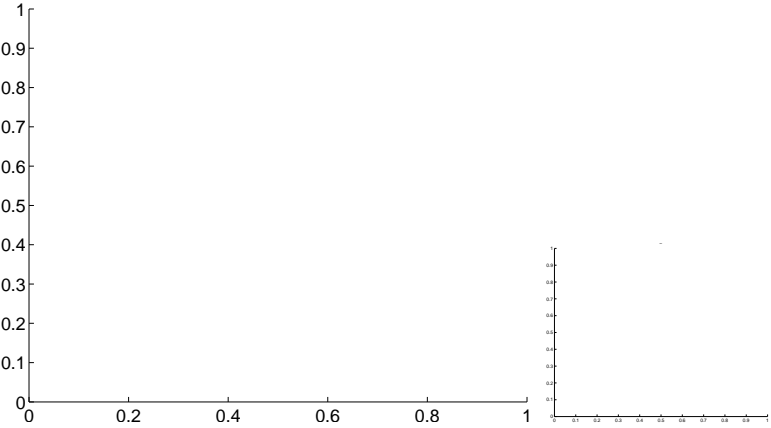


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q5 no difference image



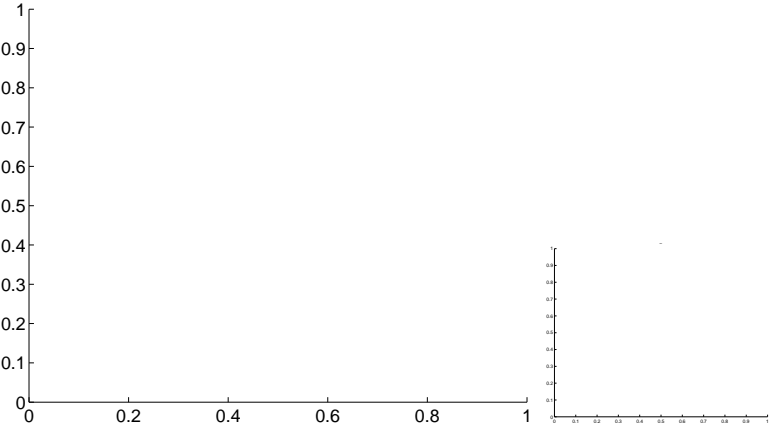
Q5 no OOT image



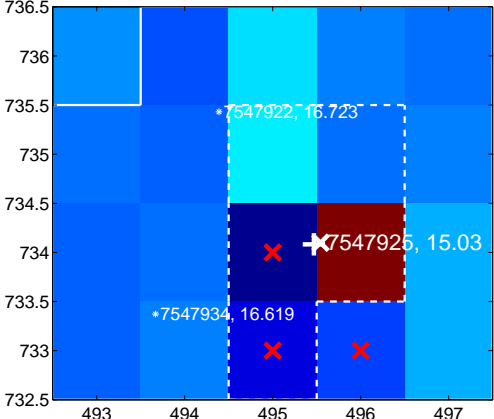
Q6 no difference image



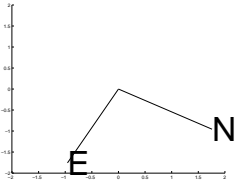
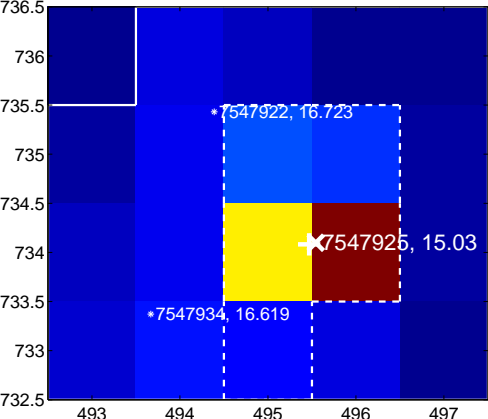
Q6 no OOT image



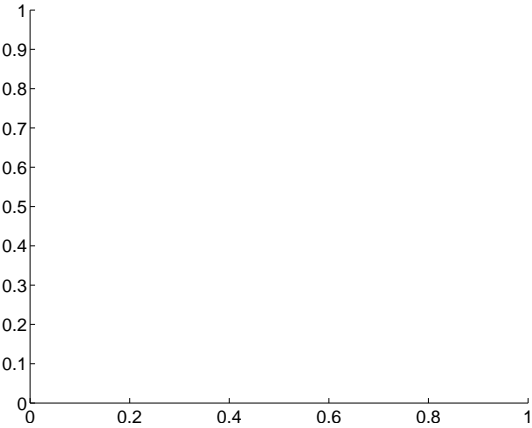
Q7 difference image. Poor Quality



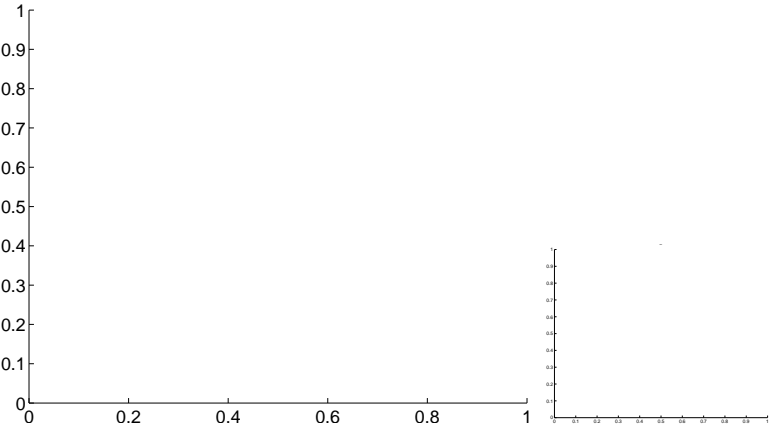
Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

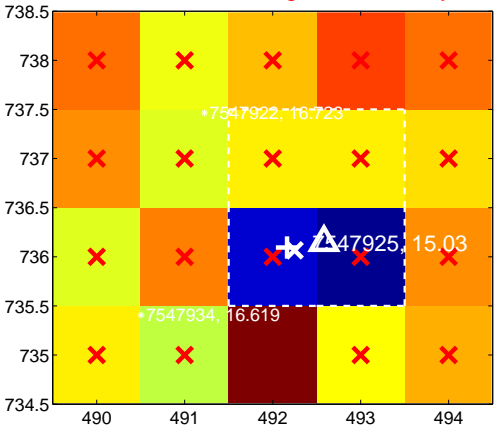
Q9 no difference image



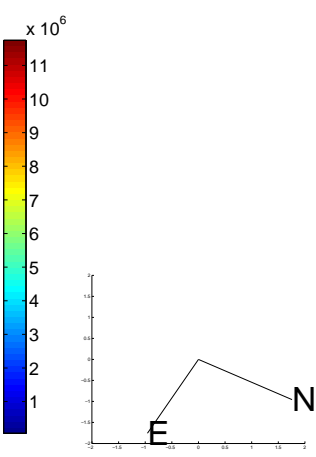
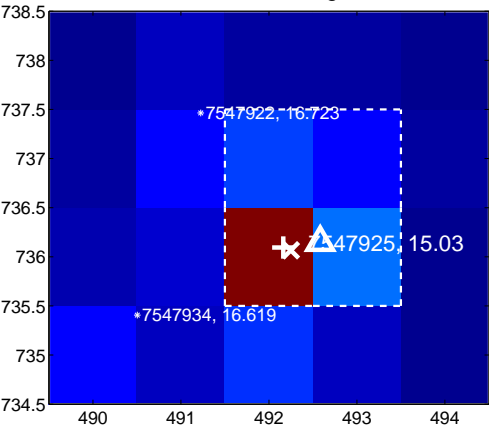
Q9 no OOT image



Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



Q12 no difference image



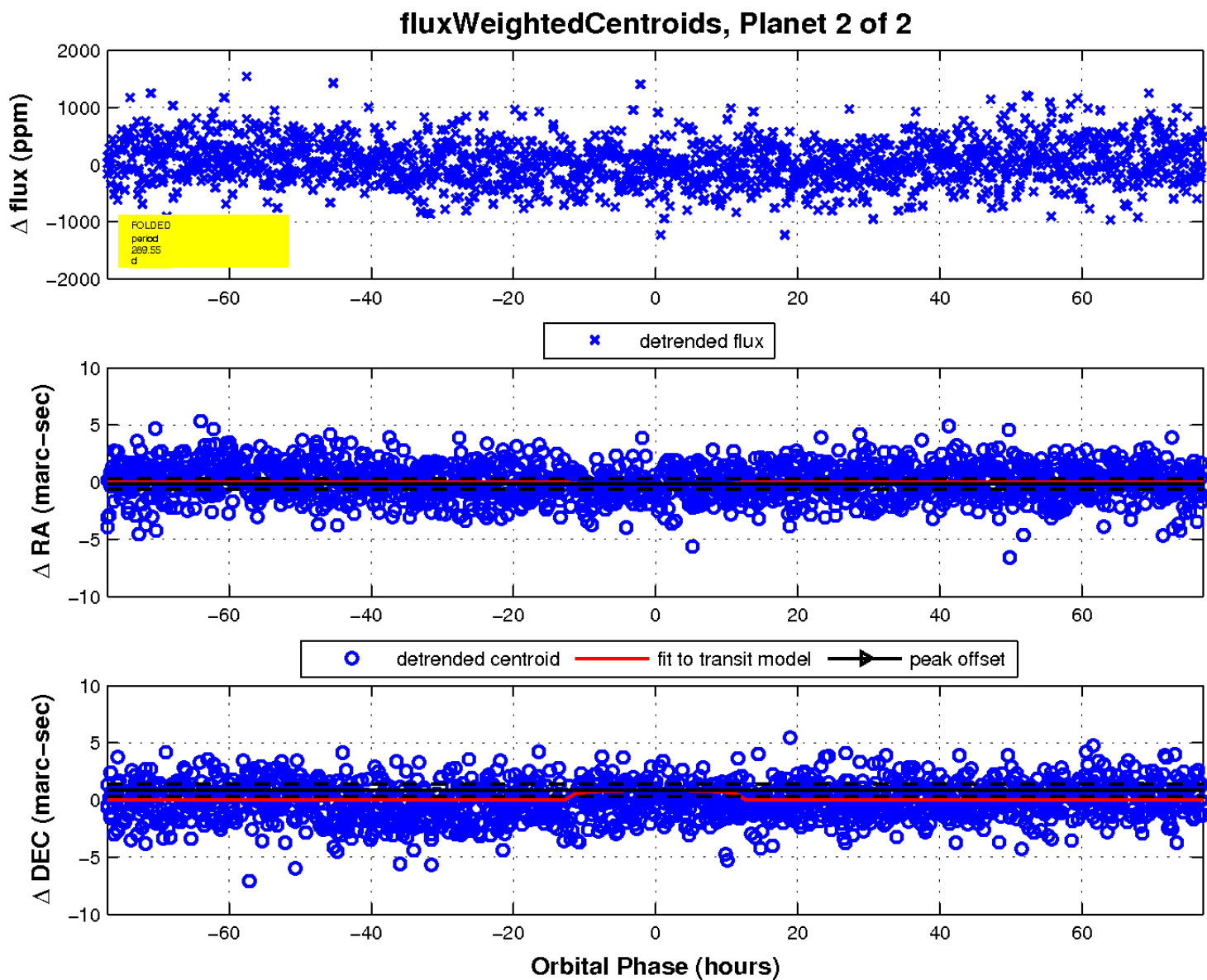
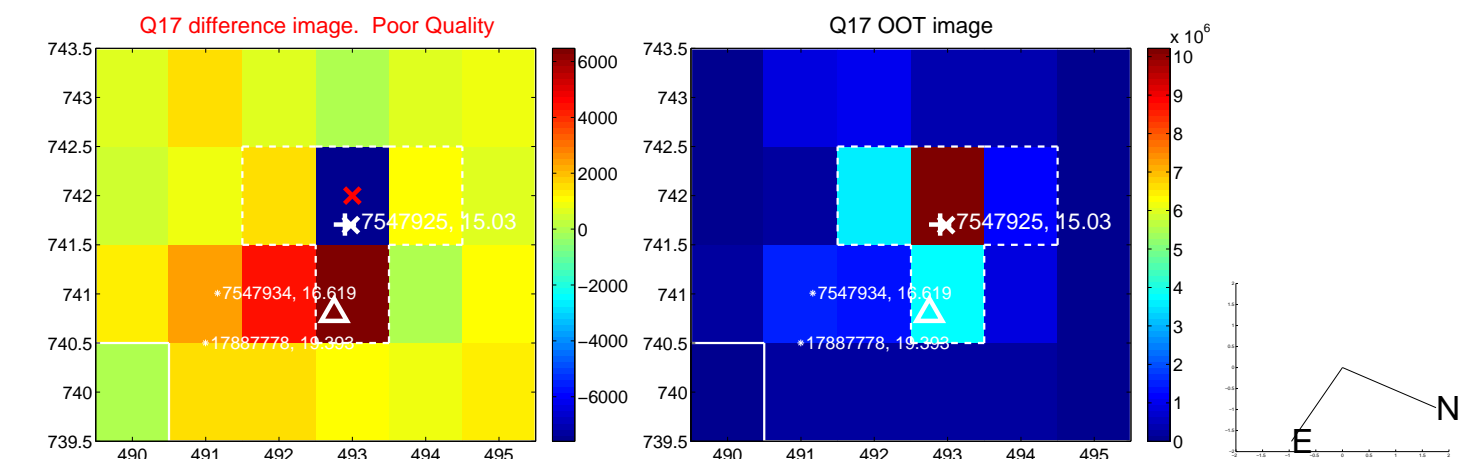
Q12 no OOT image



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

