

KIC 008631160

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})
008631160-01	OBS	1271.01	162.054328	278.866799	4811.7	9.738	205.1	224.3	1.57	6309	11.22	8.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008631160-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

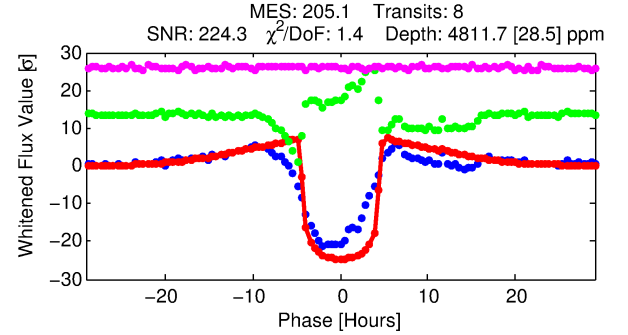
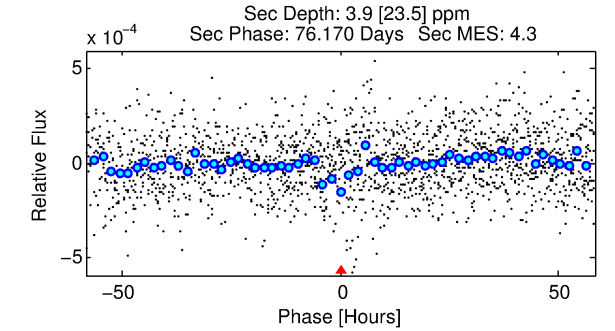
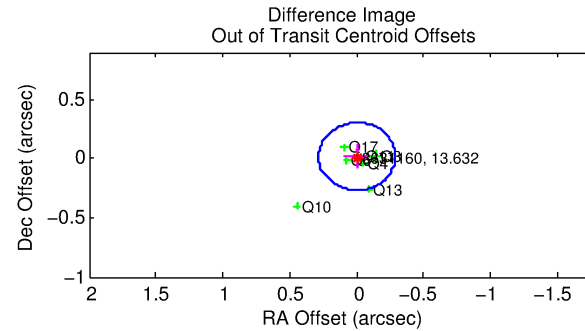
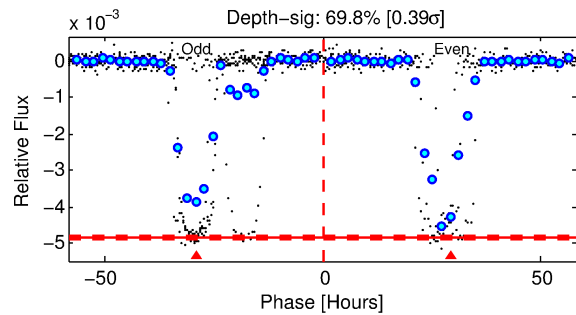
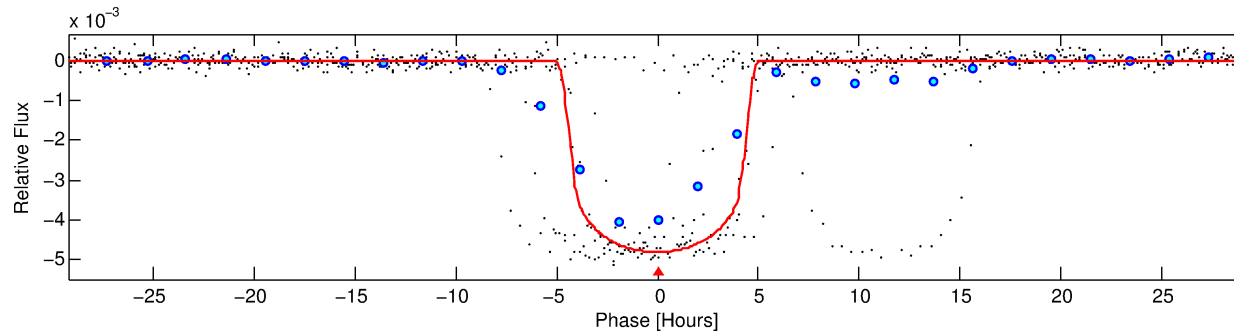
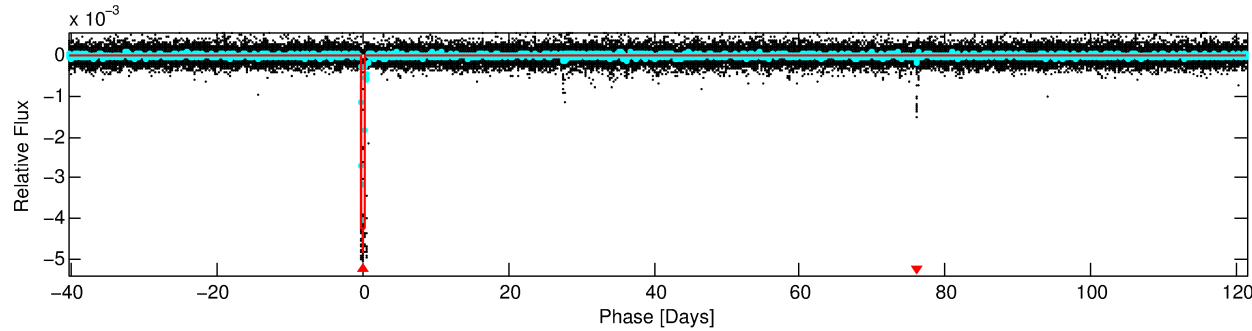
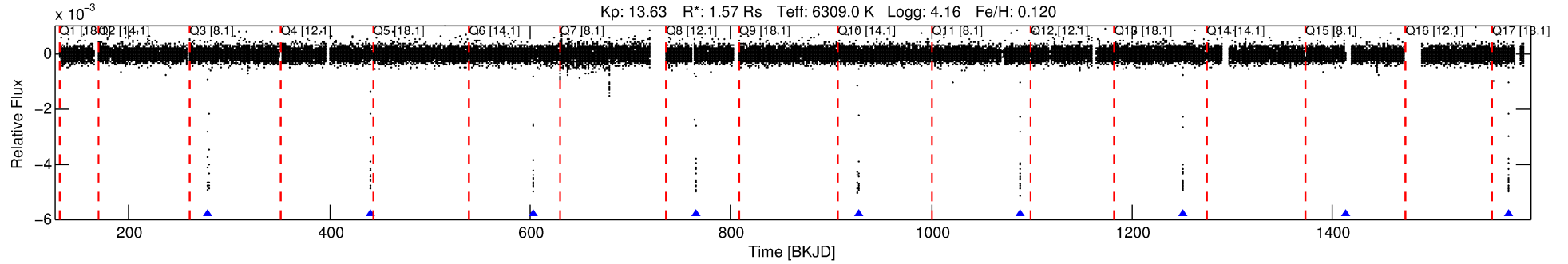
Ephemeris Match Information For 008631160-01

No Significant Match Found

DV One-Page Summary

KIC: 8631160 Candidate: 1 of 1 Period: 162.054 d

KOI: K01271.01 Corr: 0.956



DV Fit Results:

Period = 162.05433 [0.00019] d
Epoch = 278.8668 [0.0008] BKJD
Rp/R* = 0.0656 [0.0006]
a/R* = 118.20 [5.26]
b = 0.52 [0.06]
Seff = 8.67 [2.27]
Teq = 438 [29] K
Rp = 11.22 [2.02] Re
a = 0.6341 [0.1046] AU
Ag = 6.88 [41.40] [0.14 σ]
Teff = 1095 [1648] K [0.40 σ]

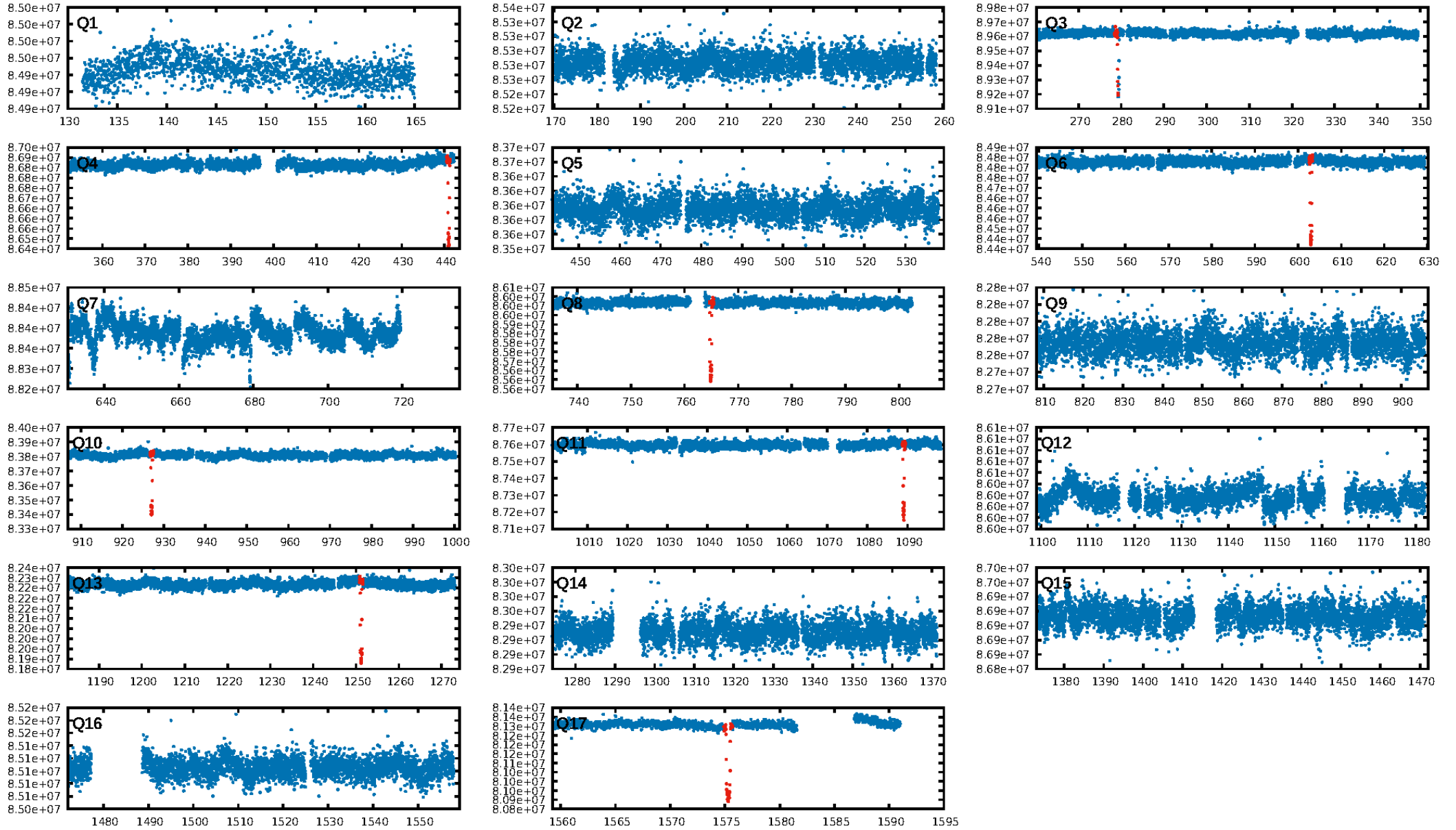
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.2%
ModelChiSquareGof-sig: 93.1%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 3.459
Centroid-sig: 28.4%
Centroid-so: 0.128 arcsec [3.46 σ]
OotOffset-rm: 0.019 arcsec [0.20 σ]
KicOffset-rm: 0.123 arcsec [1.32 σ]
OotOffset-st: 2/2/1/2 [7]
KicOffset-st: 2/2/1/2 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [7/7]

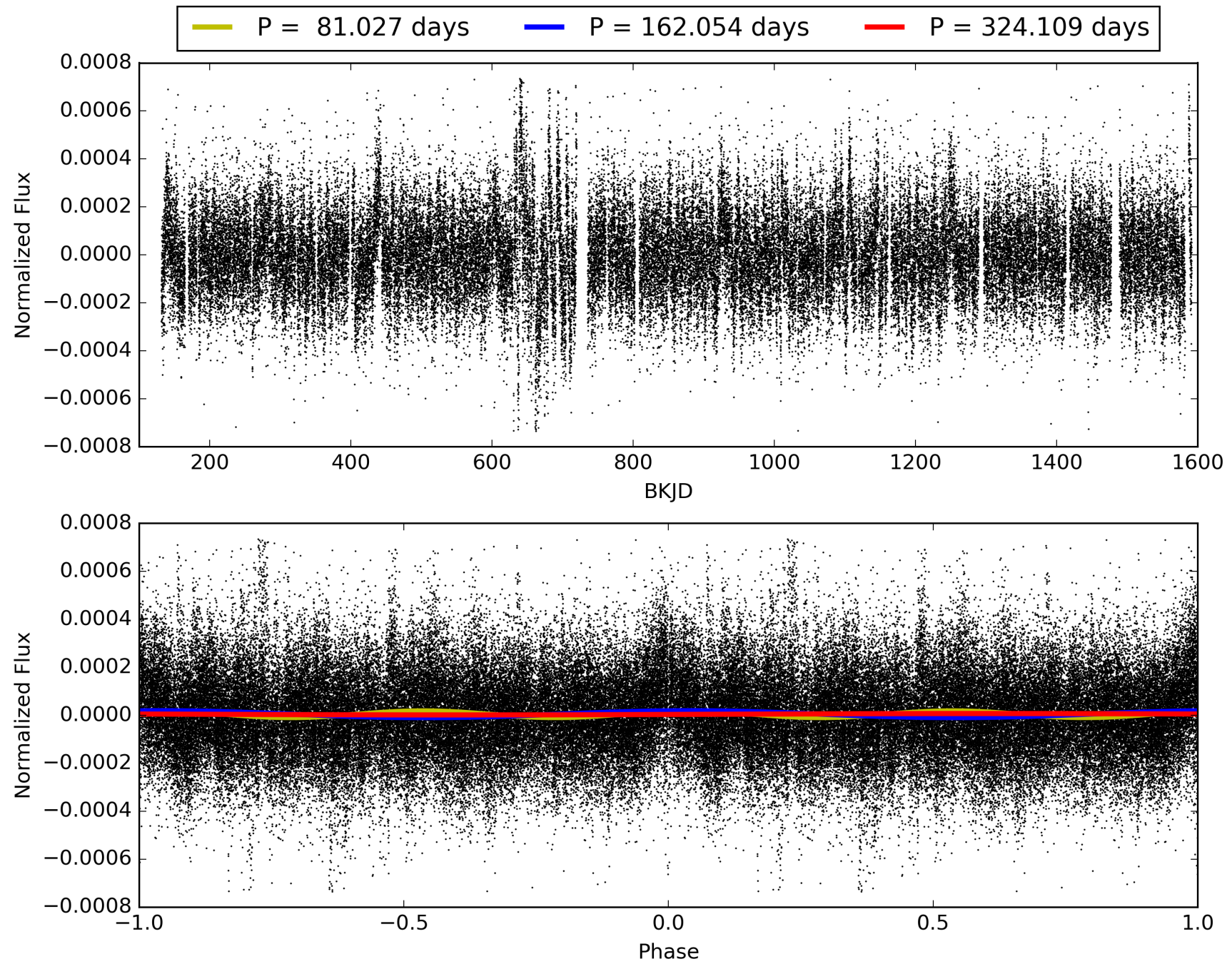
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:23:14 Z

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

TCE 008631160-01, PDC Light Curves

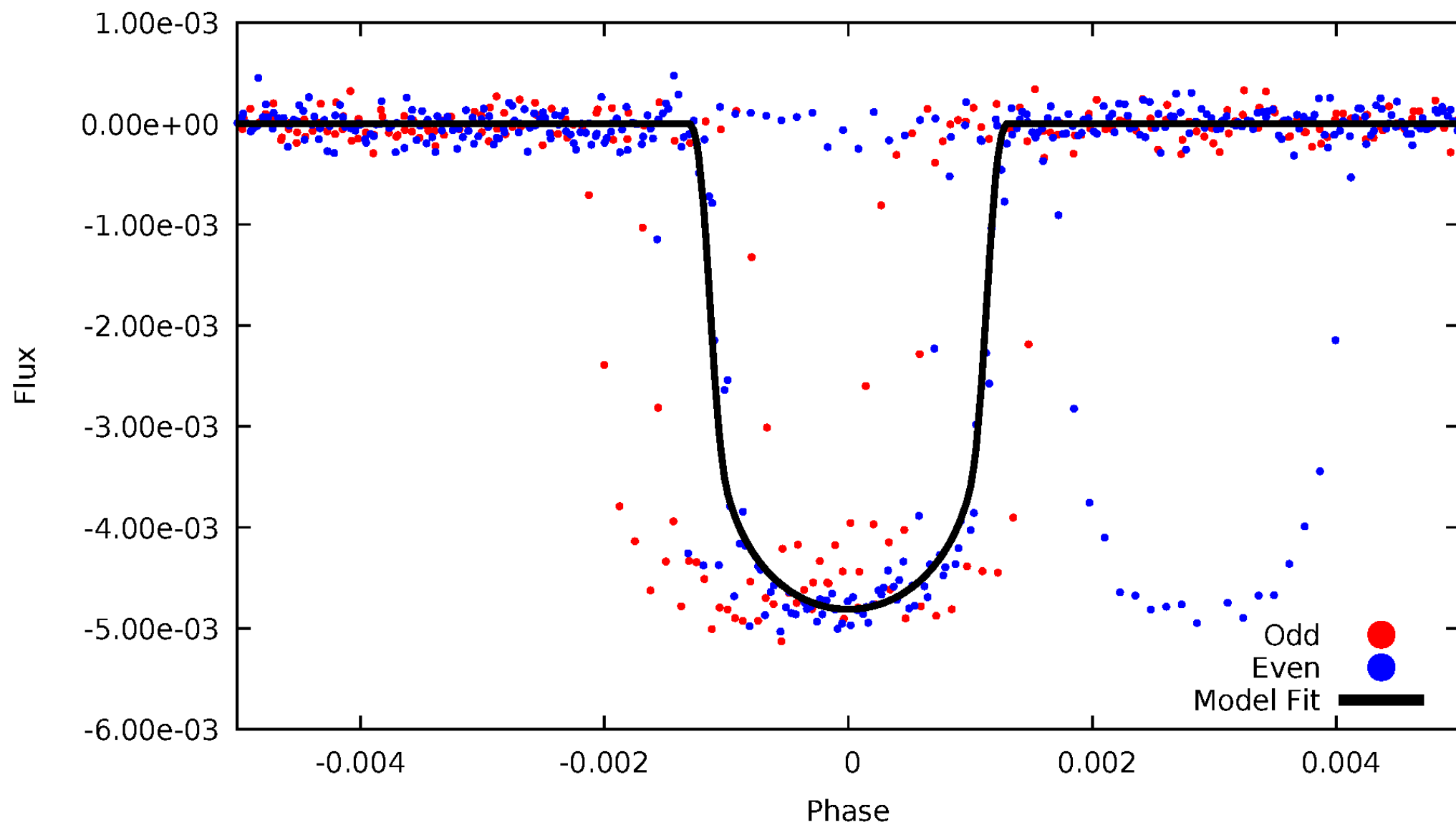


TCE 008631160-01



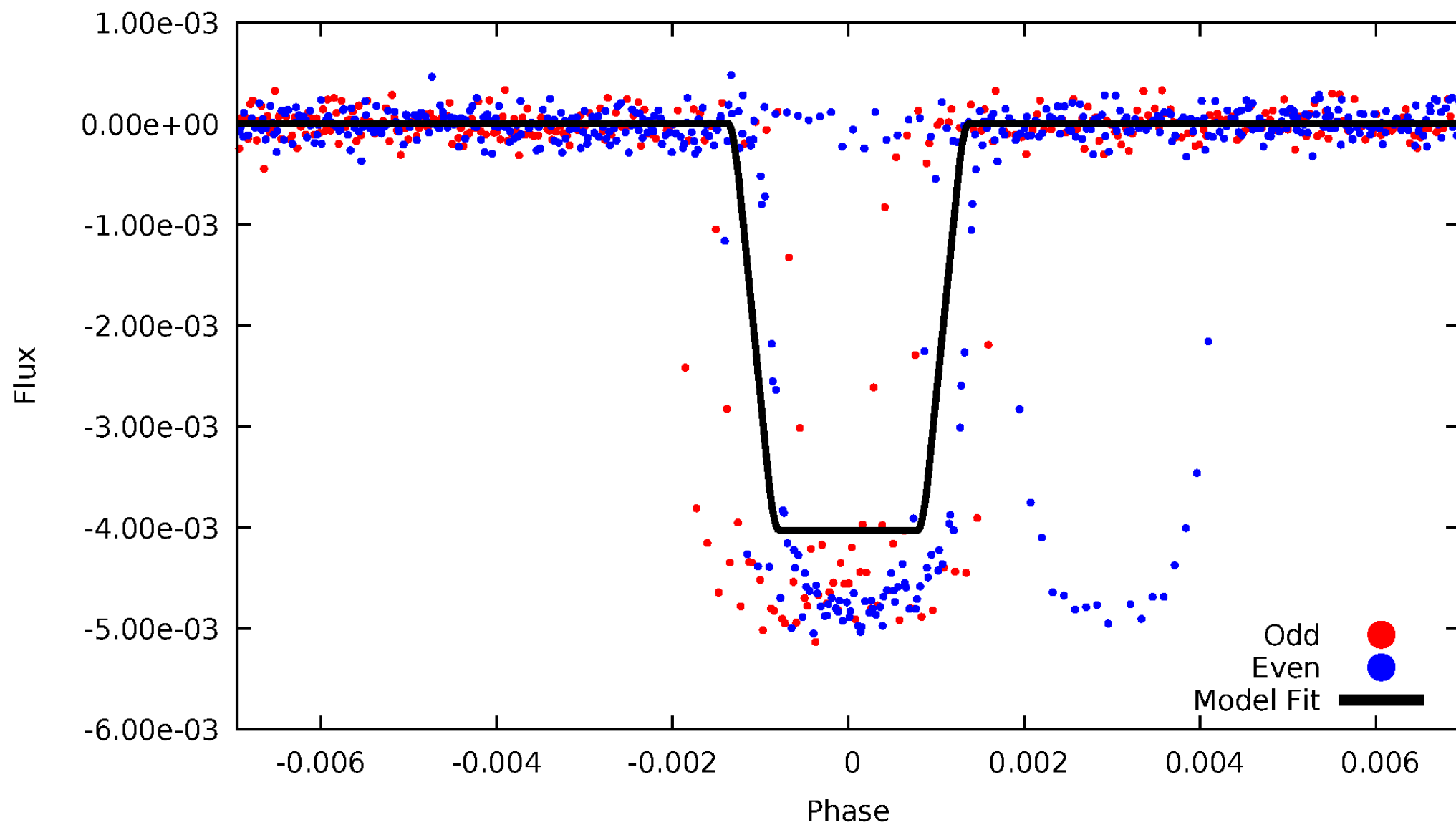
DV Odd/Even

TCE 008631160-01



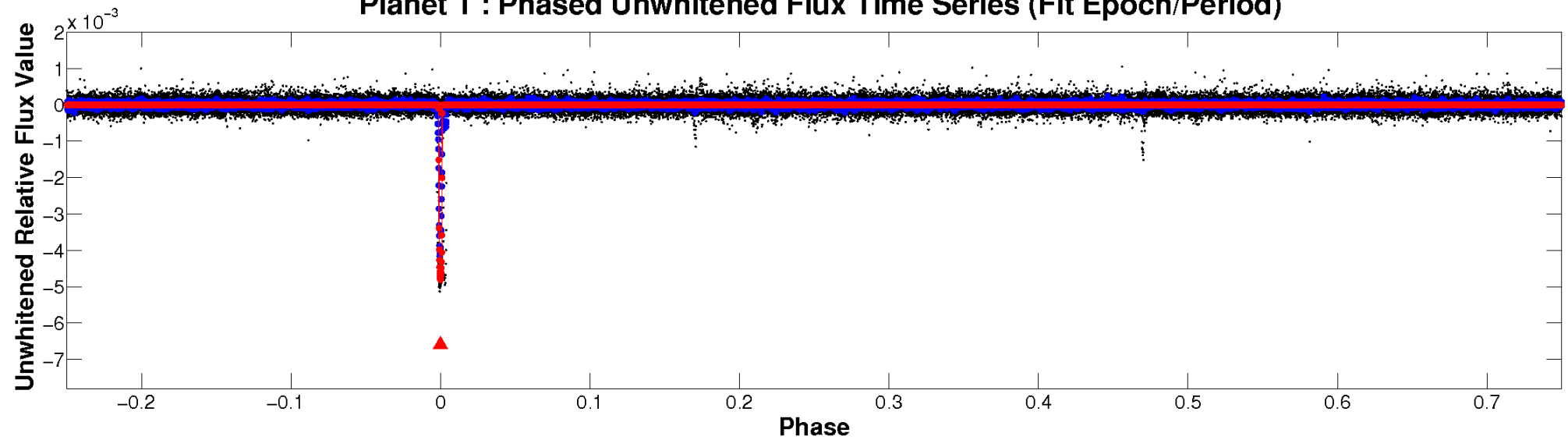
ALT Odd/Even

TCE 008631160-01

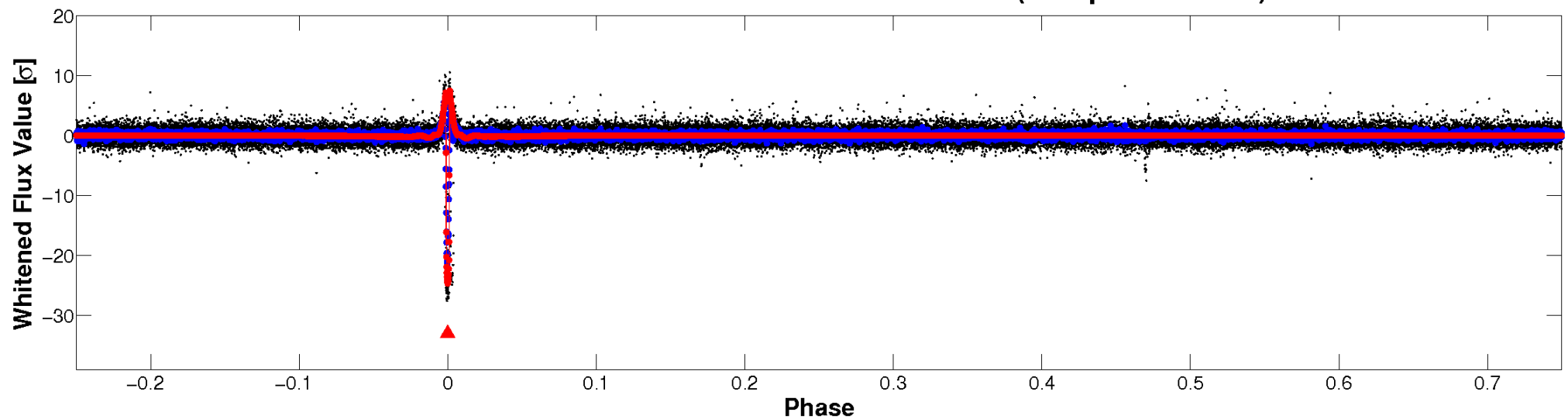


Non-Whitened Vs. Whitened Light Curve

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

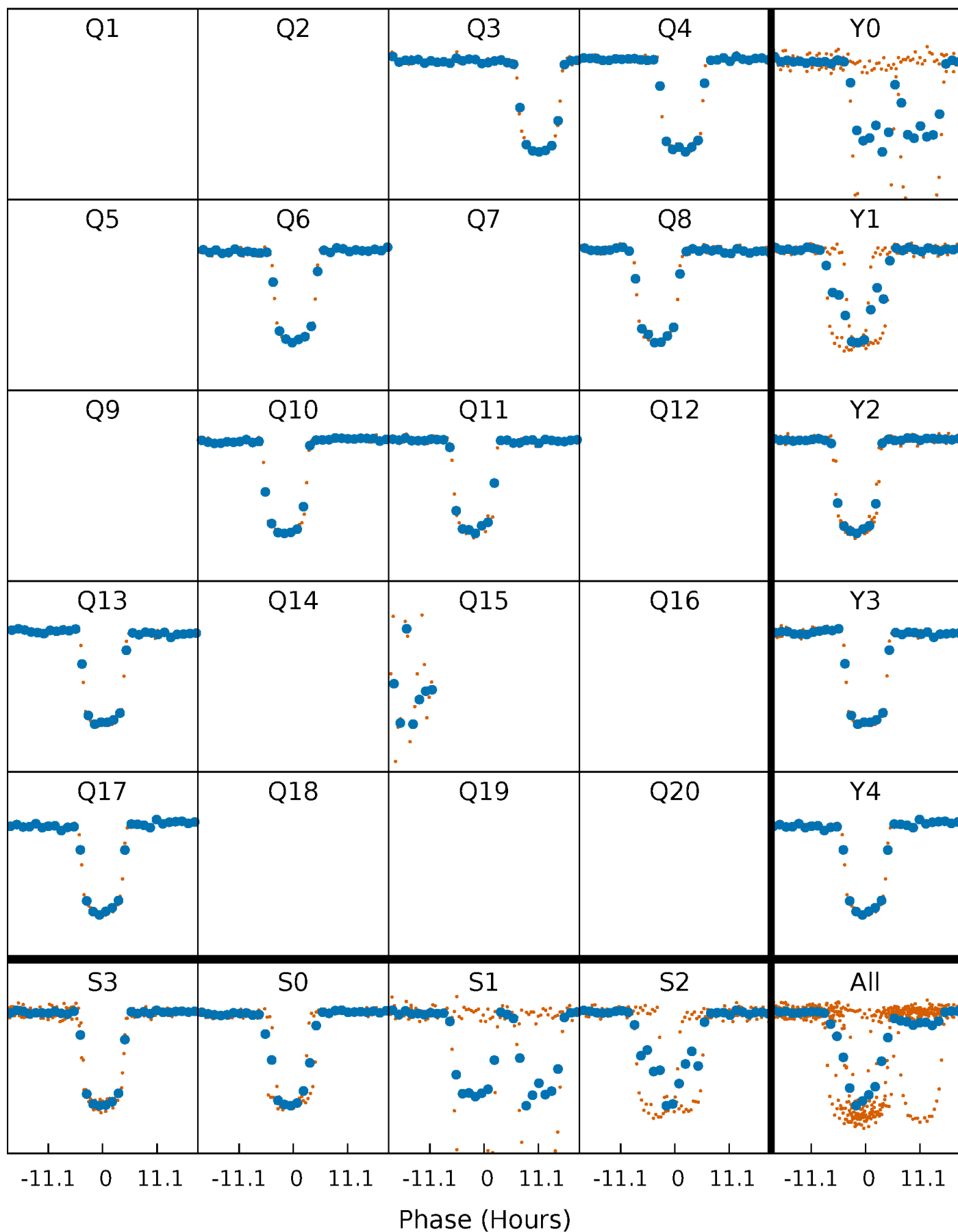


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



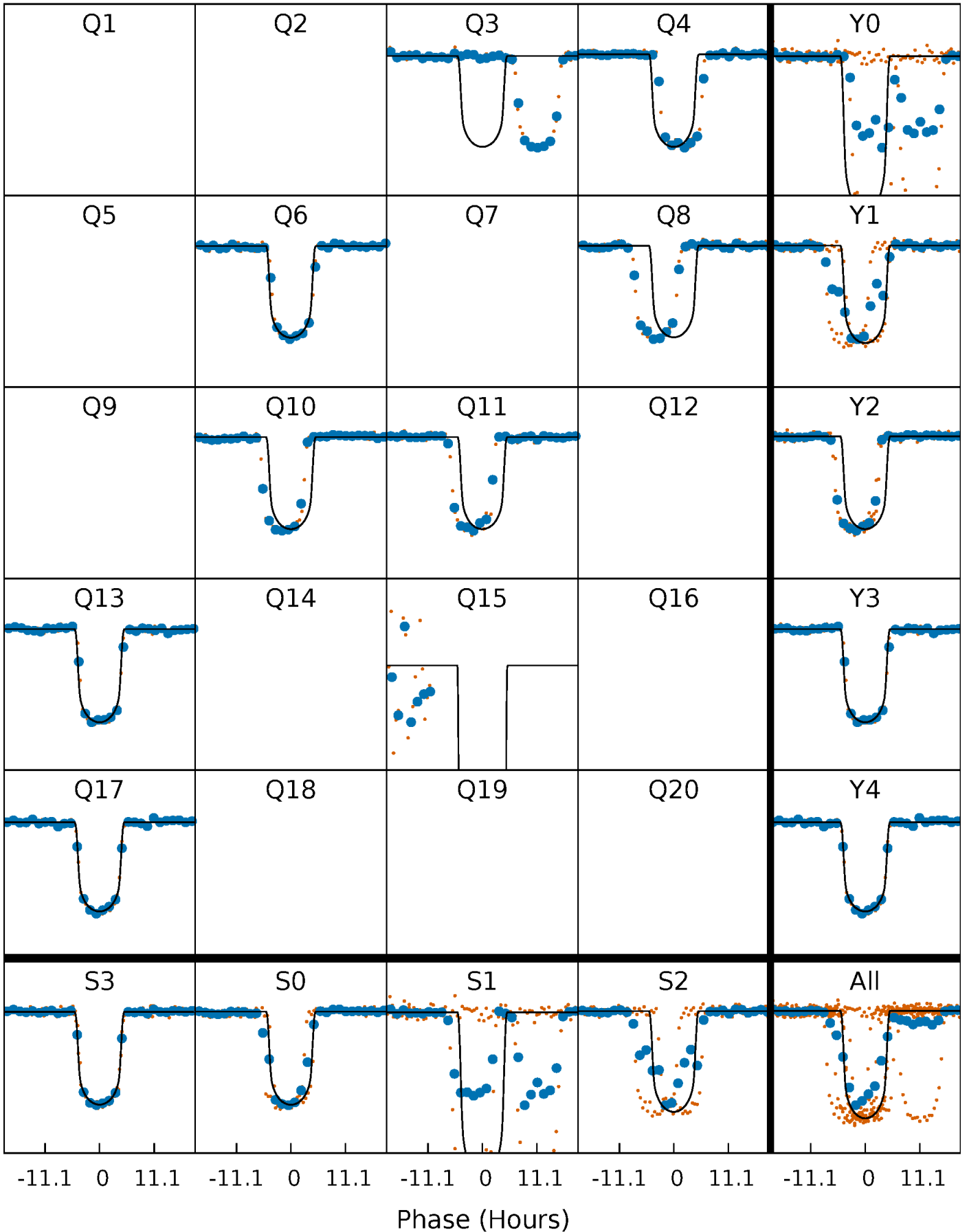
PDC Quarter-Phased Transit Curves

TCE 008631160-01 P=162.054328 Days $T_0=278.866799$ (BKJD)



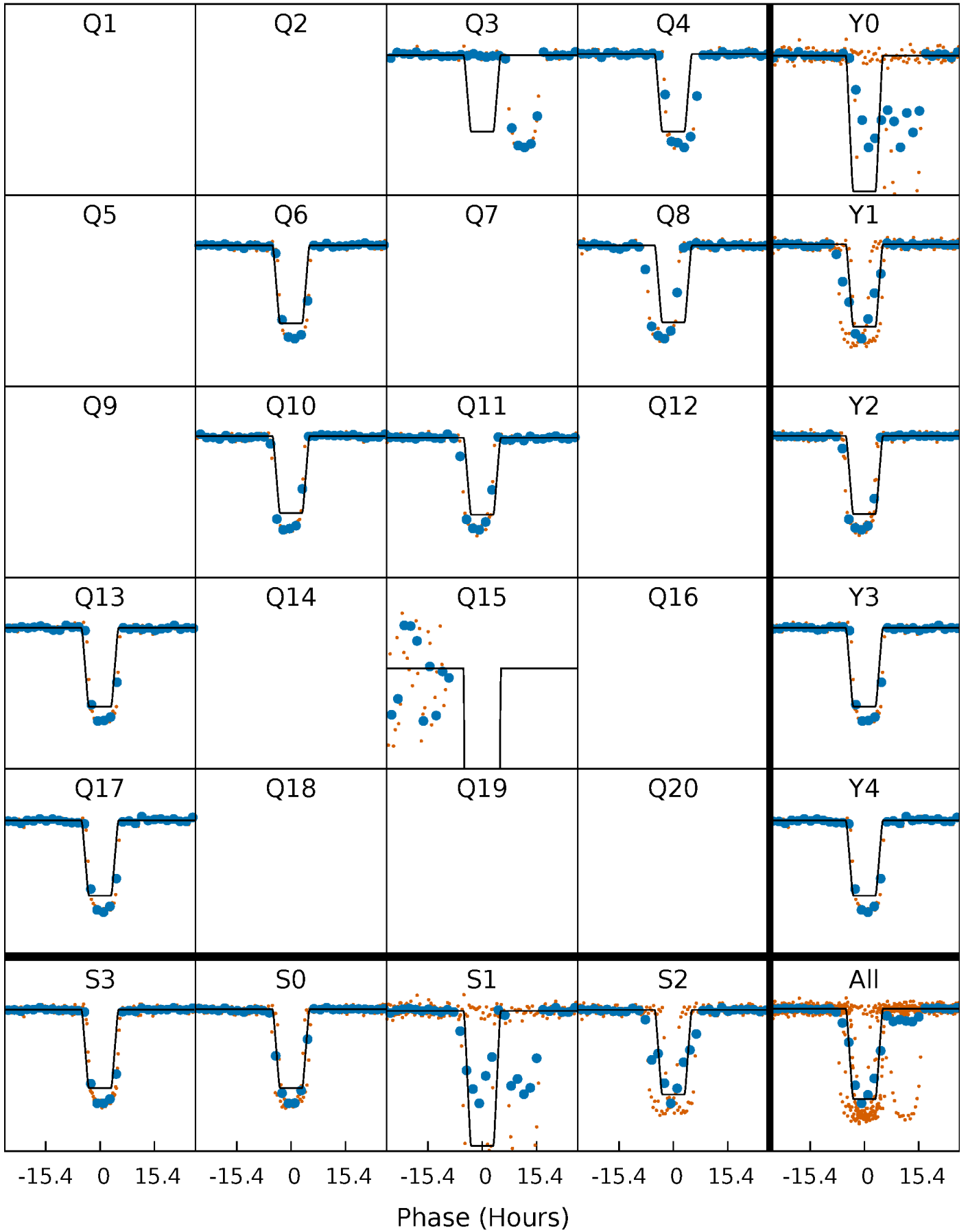
DV Quarter-Phased Transit Curves

TCE 008631160-01 P=162.054328 Days $T_0=278.866799$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

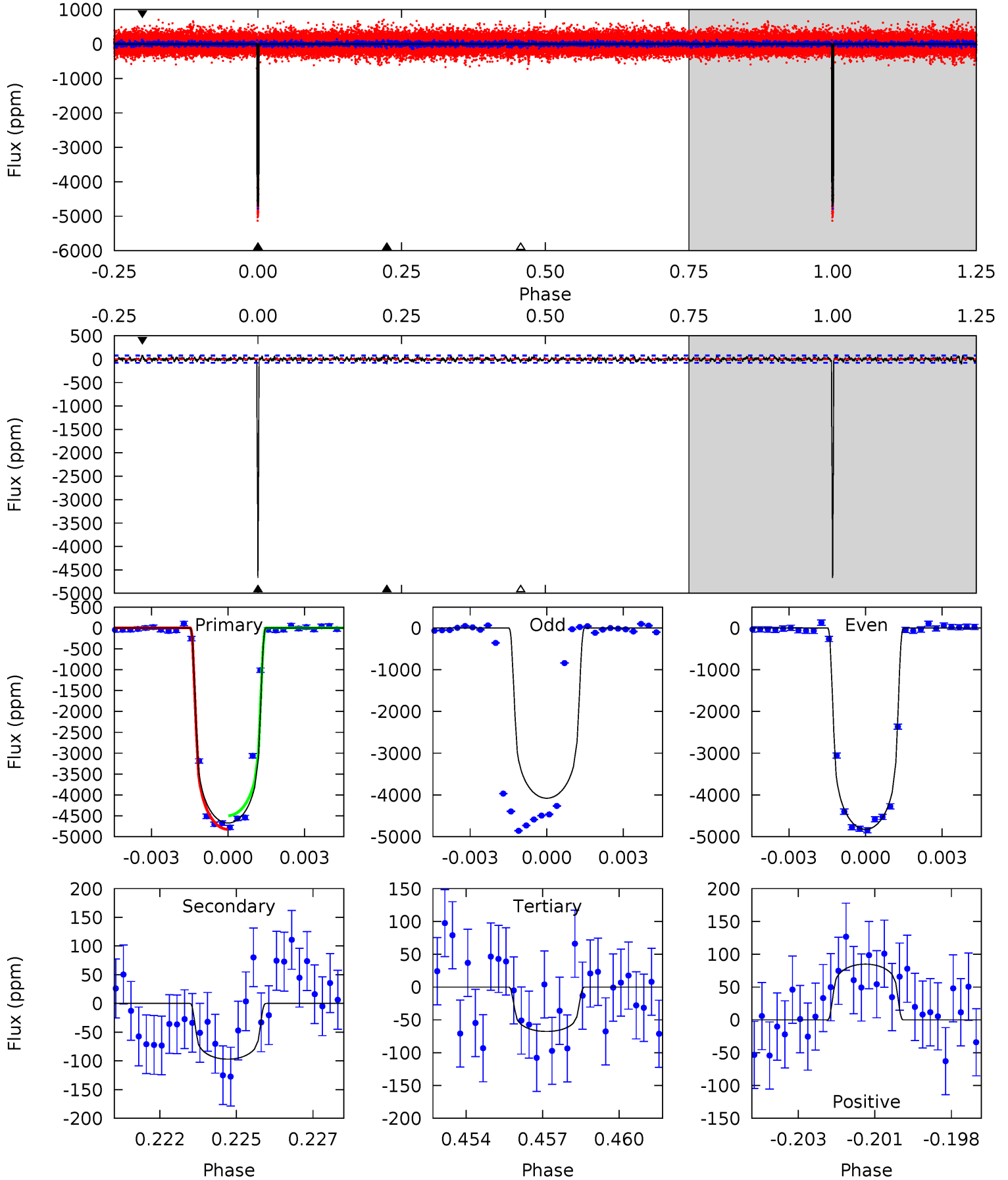
TCE 008631160-01 P=162.051753 Days $T_0=278.850771$ (BKJD)



DV Model-Shift Uniqueness Test

008631160-01, P = 162.054328 Days, E = 116.812471 Days

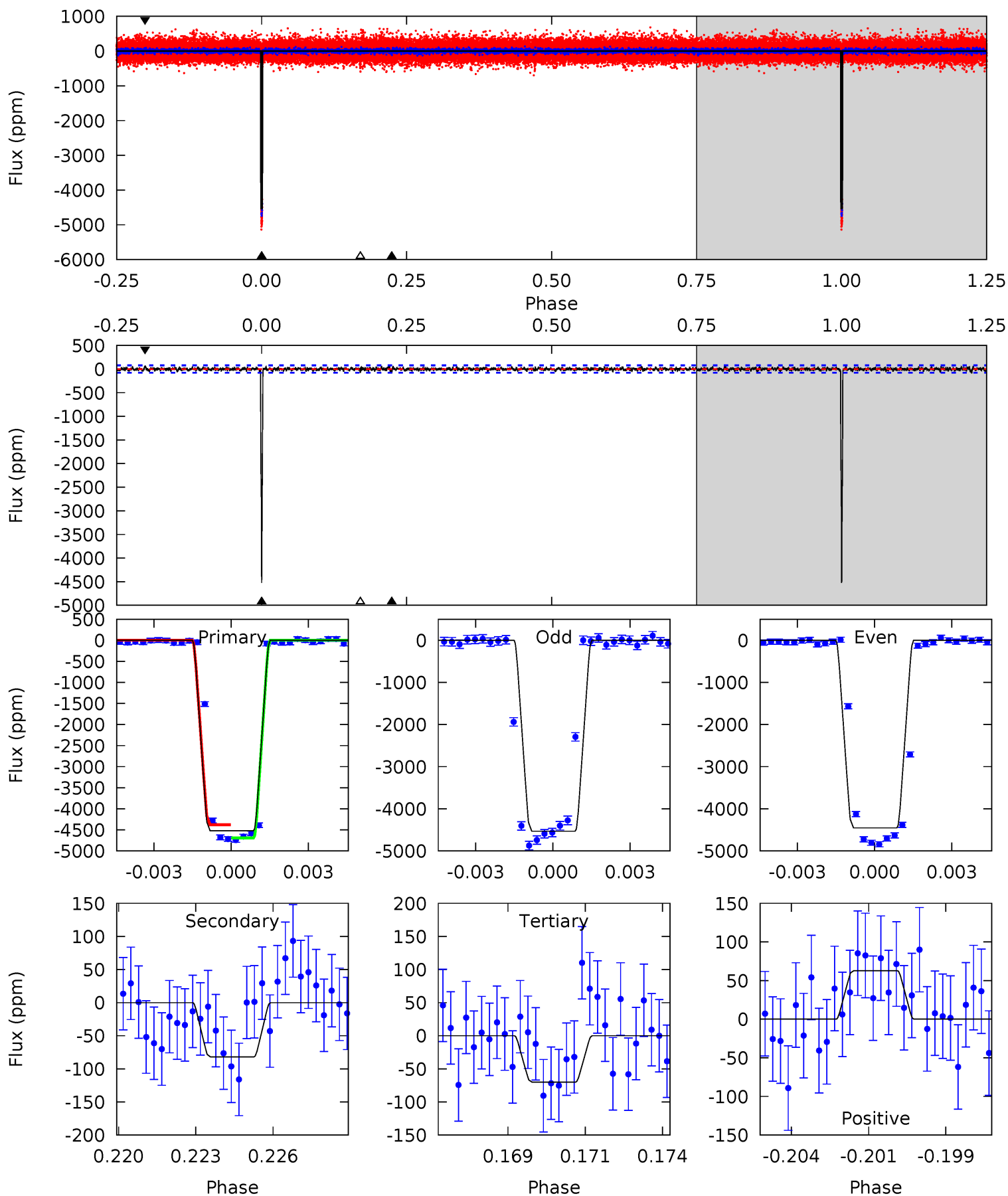
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
317.5	6.59	4.60	5.77	5.28	3.01	1.38	312.9	311.7	1.99	0.82	25.9	0.87	0.02	11.0



Alt Model-Shift Uniqueness Test

008631160-01, P = 162.051753 Days, E = 116.799018 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
307.9	5.58	4.77	4.27	5.27	3.00	1.12	303.1	303.6	0.81	1.31	2.67	0.85	0.01	10.6



Stellar Parameters For KIC 008631160

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6309^{+75}_{-82}	$4.160^{+0.148}_{-0.121}$	$0.120^{+0.150}_{-0.150}$	$1.567^{+0.281}_{-0.281}$	$1.294^{+0.091}_{-0.136}$	$0.474^{+0.365}_{-0.164}$
	+1%/-1%	+4%/-3%	+125%/-125%	+18%/-18%	+7%/-11%	+77%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008631160-01 / KOI 1271.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-97 ± 15	$11.19^{+1.18}_{-1.16}$	611^{+28}_{-32}	3084^{+70}_{-75}	170^{+50}_{-37}
Alt.	-82 ± 15	$10.80^{+1.03}_{-1.08}$	610^{+30}_{-30}	3037^{+75}_{-94}	153^{+48}_{-36}

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 $A_{obs} \gg 1.0$

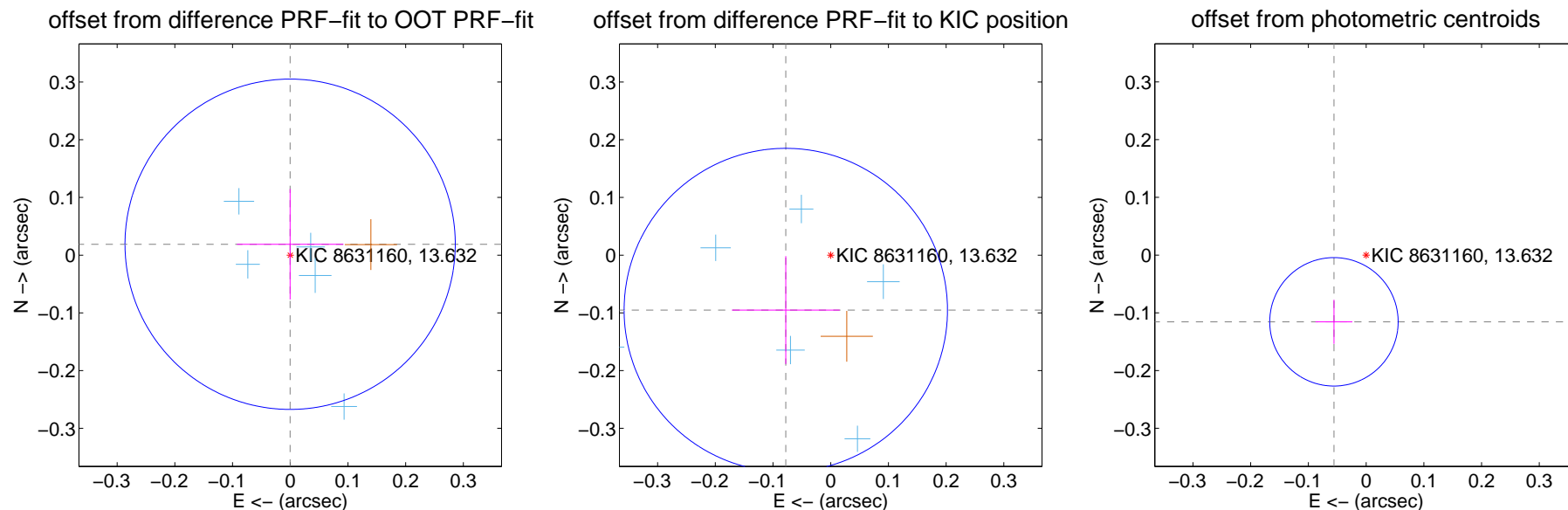
DV Centroid Data

Supplemental centroid analysis for 008631160-01. Kepler magnitude: 13.63. Transit SNR 224.31

There are 6 quarters with good PRF difference image offsets

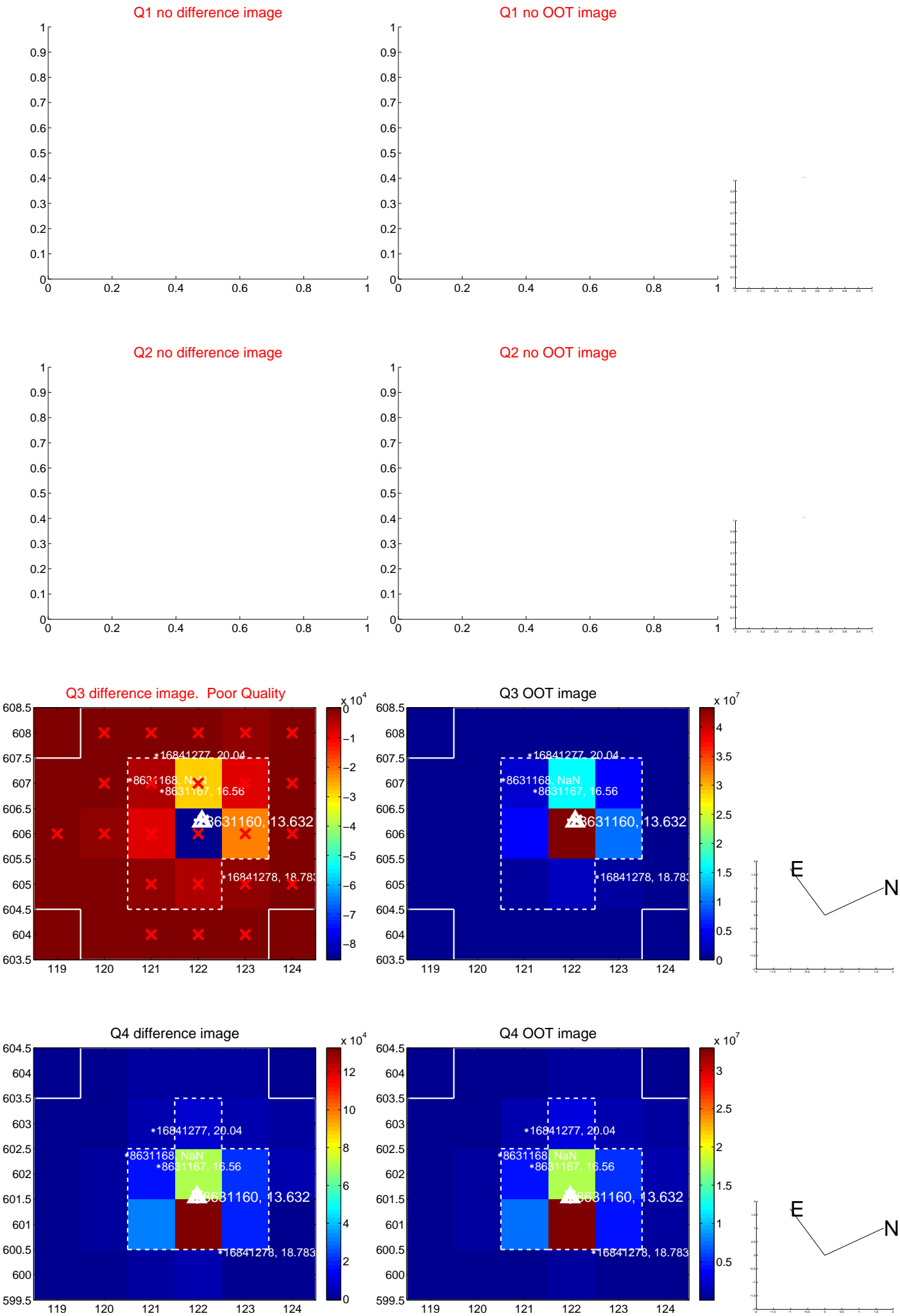
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.019 ± 0.095	0.20	0.000 ± 0.092	0.019 ± 0.096
PRF-fit source offset from KIC position	0.123 ± 0.093	1.32	0.078 ± 0.093	-0.095 ± 0.093
photometric centroid source offset	0.13 ± 0.04	3.46	0.06 ± 0.03	-0.12 ± 0.04



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

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

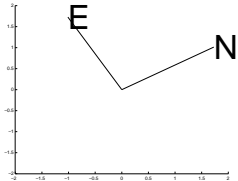
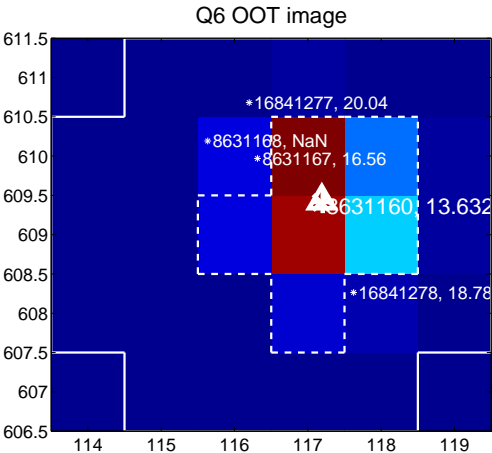
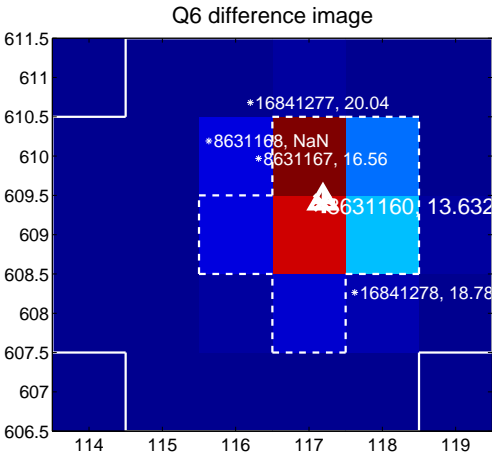


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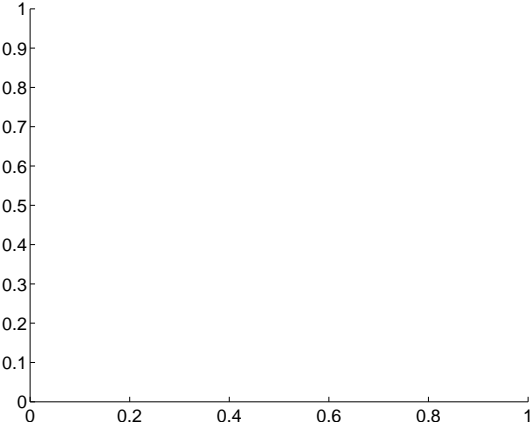
Q5 no difference image



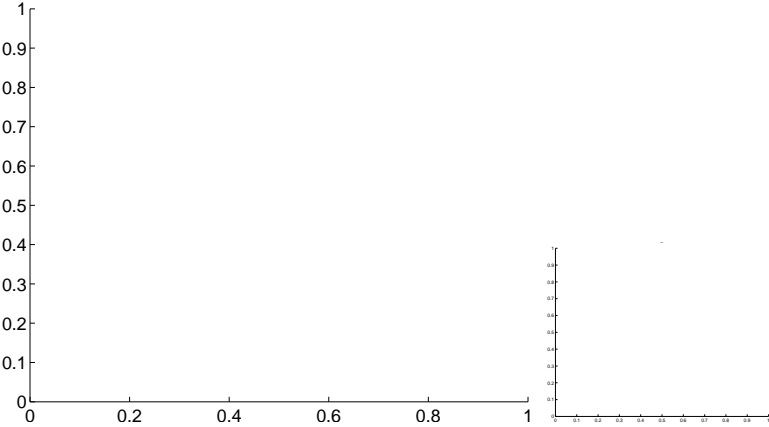
Q5 no OOT image



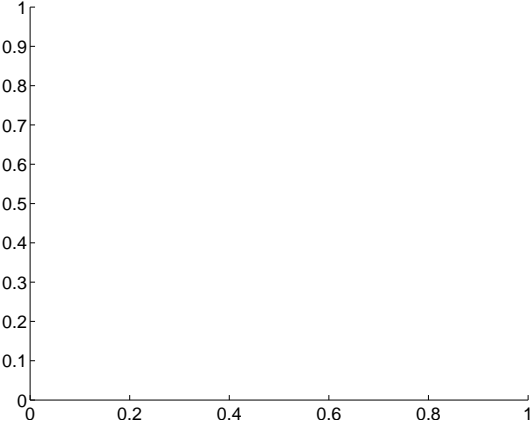
Q7 no difference image



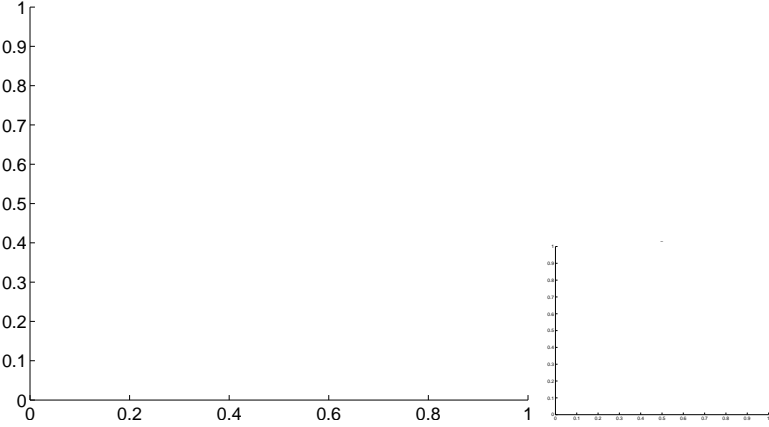
Q7 no OOT image



Q8 no difference image



Q8 no OOT image

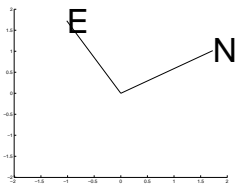
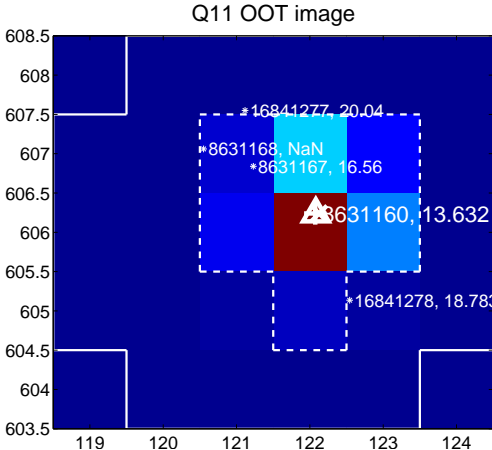
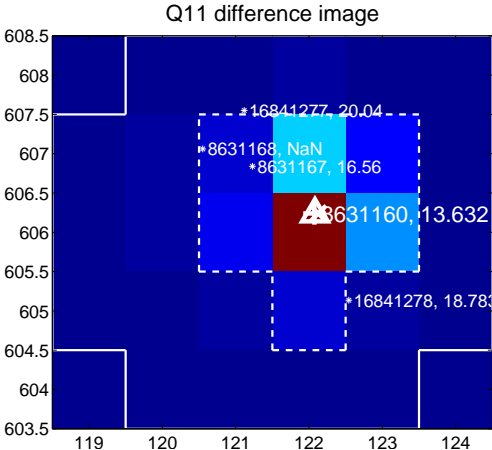
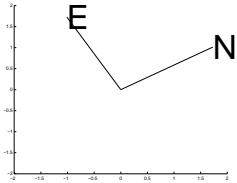
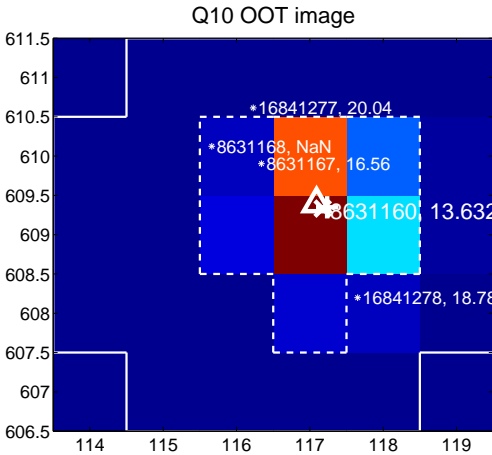
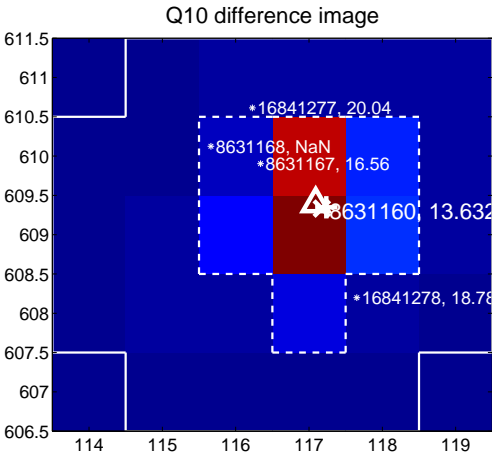


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

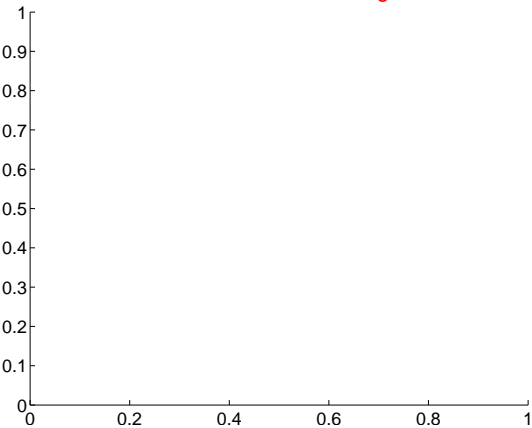
Q9 no difference image



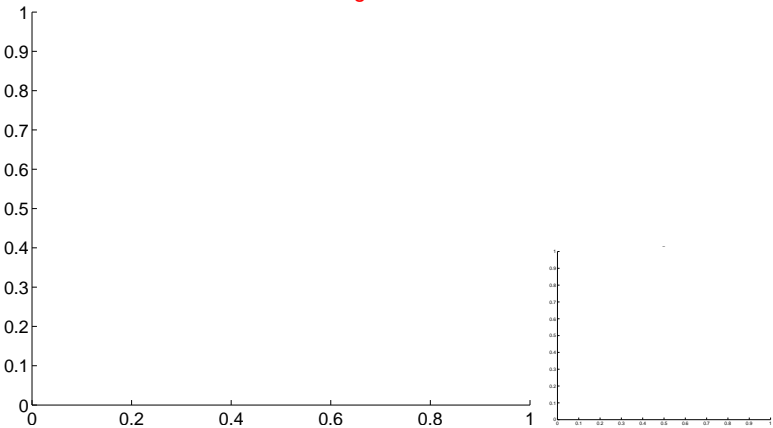
Q9 no OOT image



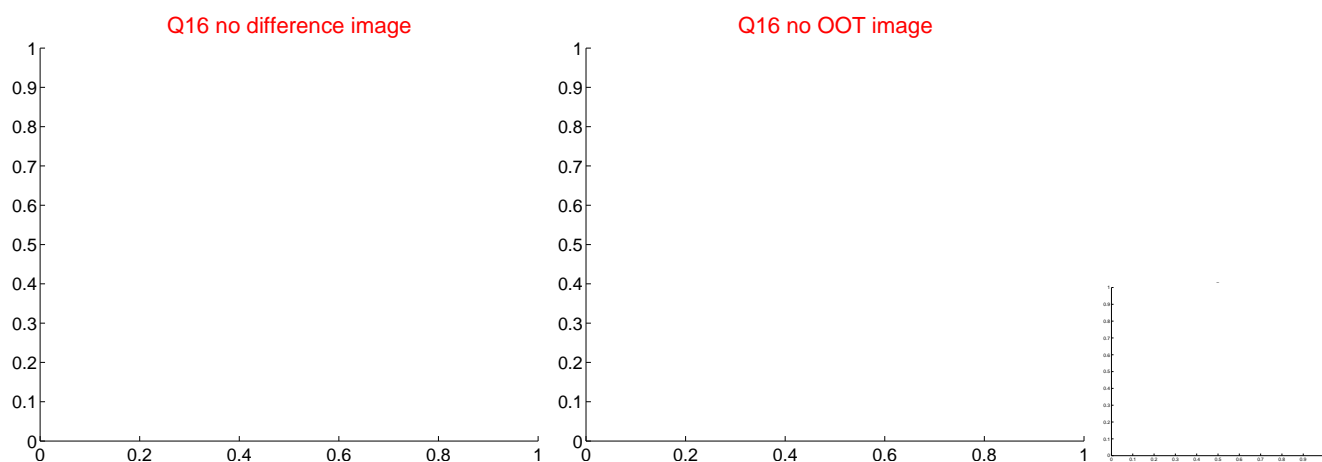
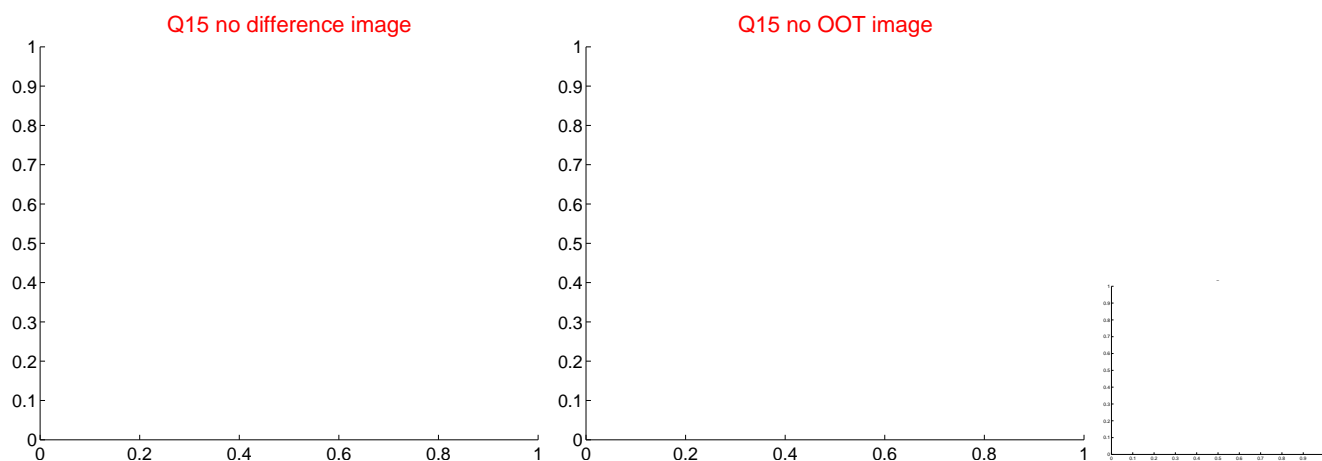
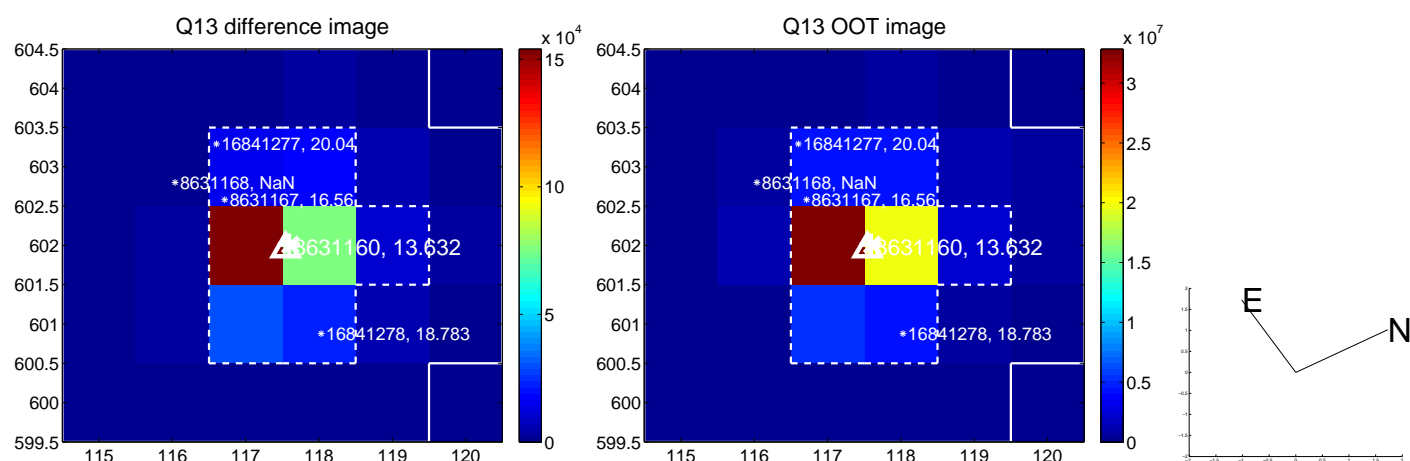
Q12 no difference image



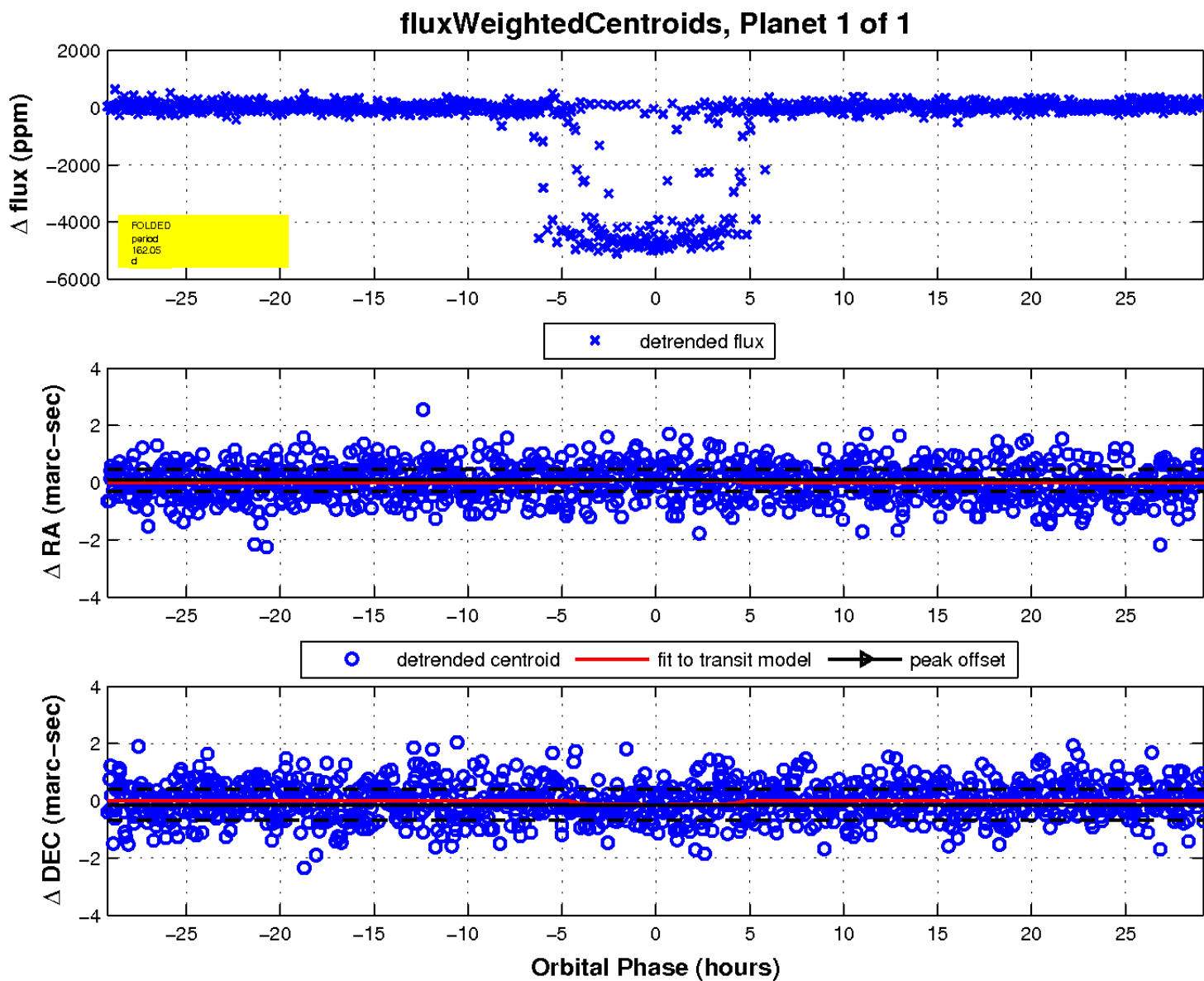
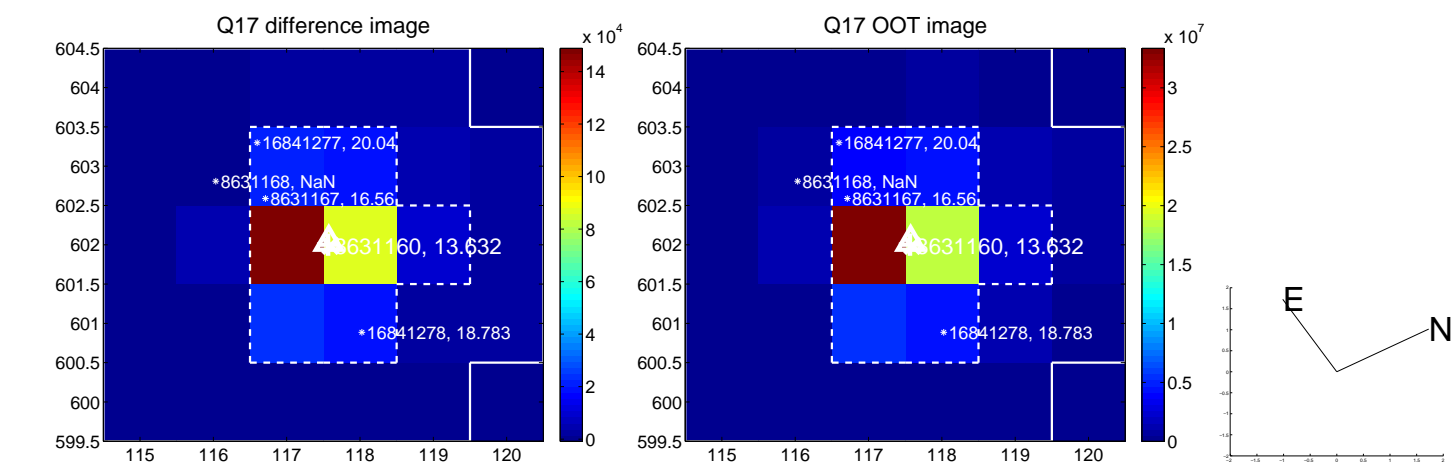
Q12 no OOT image



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



UKIRT Image

Declination

