

KIC 005812701

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})
005812701-01	OBS	0012.01	17.855233	146.596131	9196.2	7.440	417.9	628.5	1.37	6823	13.31	163.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005812701-01	OBS	PC	0.64	0	0	0	0	CENT_SATURATED

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

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

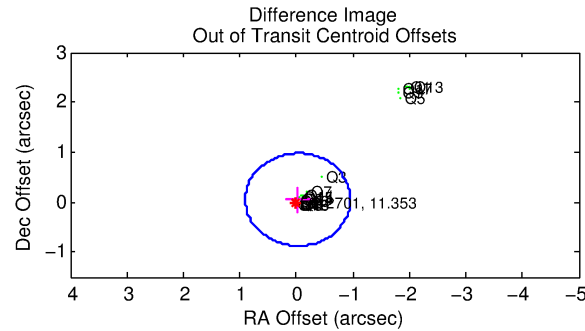
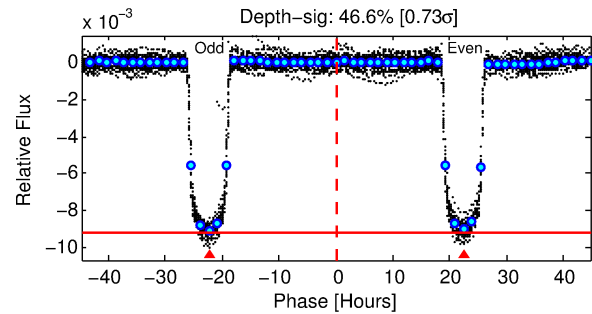
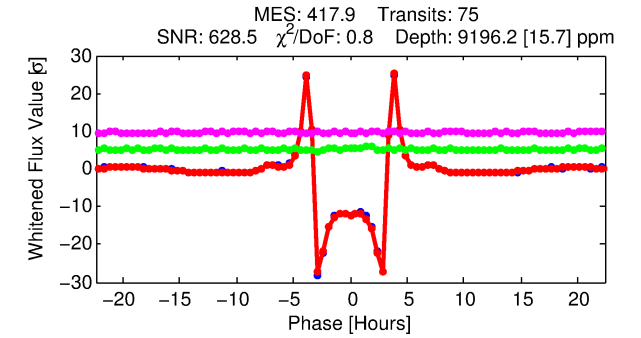
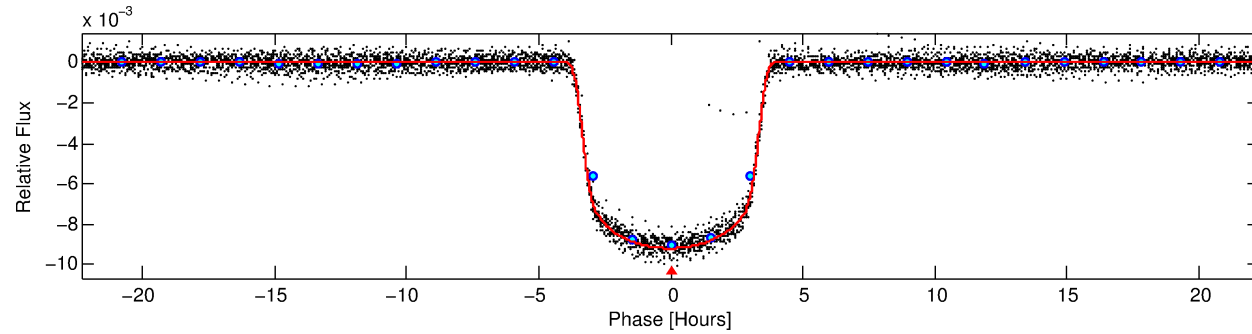
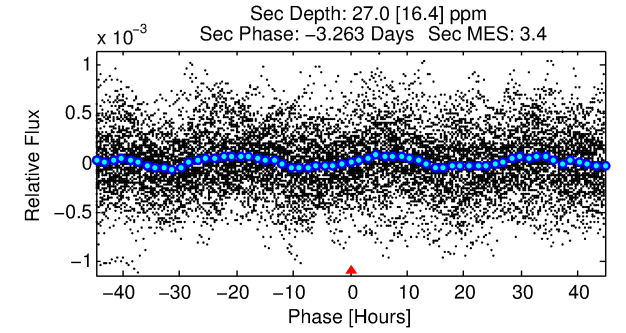
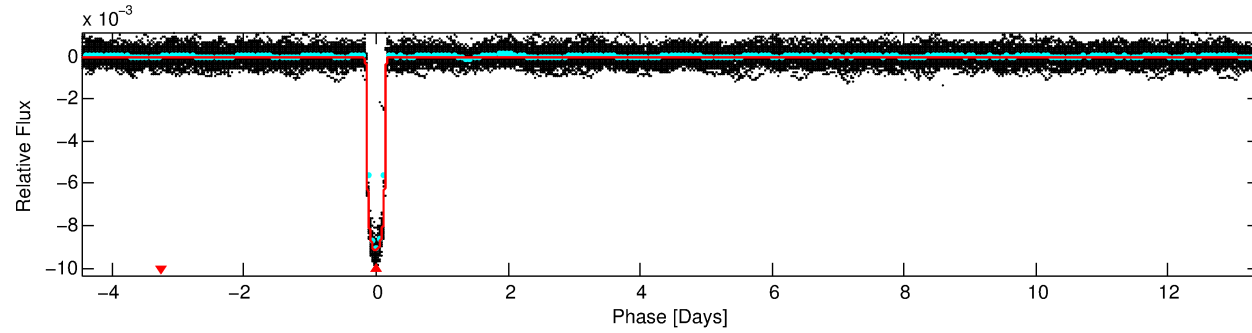
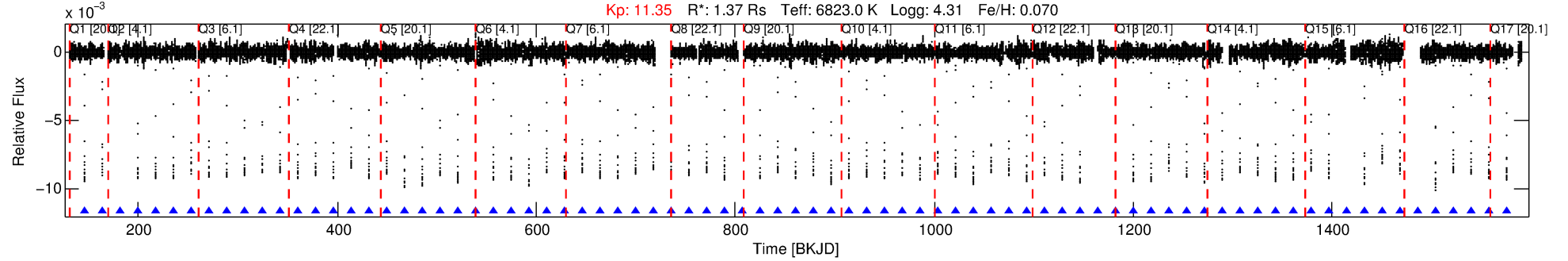
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005812701-01

No Significant Match Found

DV One-Page Summary

KIC: 5812701 Candidate: 1 of 1 Period: 17.855 d
KOI: K00012.01 Name: Kepler-448b Corr: 0.999



DV Fit Results:

Period = 17.85523 [0.00000] d
Epoch = 146.5961 [0.0001] BKJD
Rp/R* = 0.0892 [0.0001]
a/R* = 19.32 [0.06]
b = 0.28 [0.01]
Seff = 163.29 [39.48]
Teq = 912 [55] K
Rp = 13.31 [2.60] Re
a = 0.1491 [0.0243] AU
Ag = 1.86 [1.21] [0.71σ]
Teffp = 1647 [251] K [2.86σ]

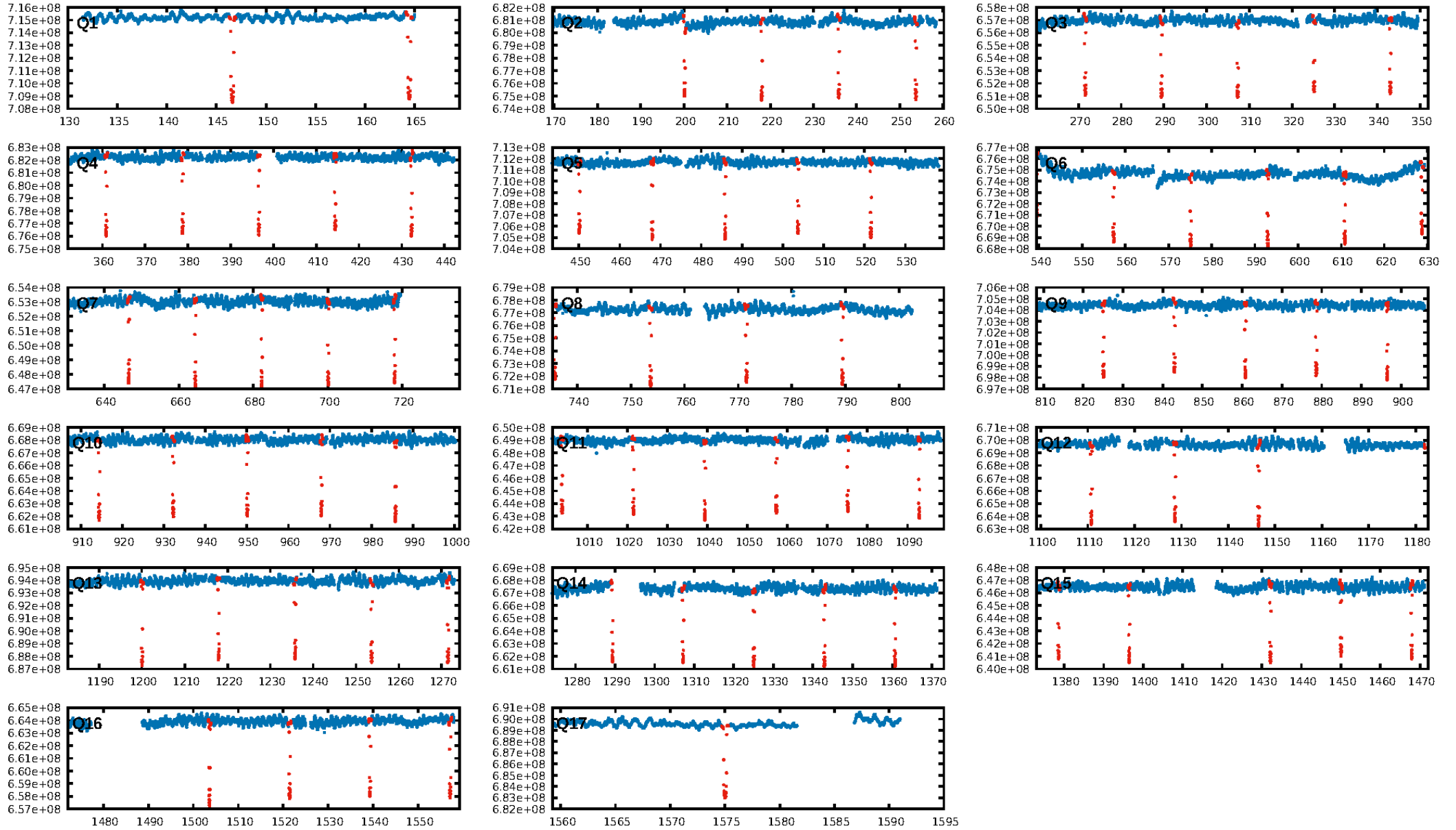
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 60.8%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [72/72]
GhostDiagnostic-chr: 3.274
Centroid-sig: 0.0%
Centroid-so: 0.253 arcsec [56.55σ]
OotOffset-rm: 0.057 arcsec [0.18σ]
KicOffset-rm: 0.190 arcsec [0.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

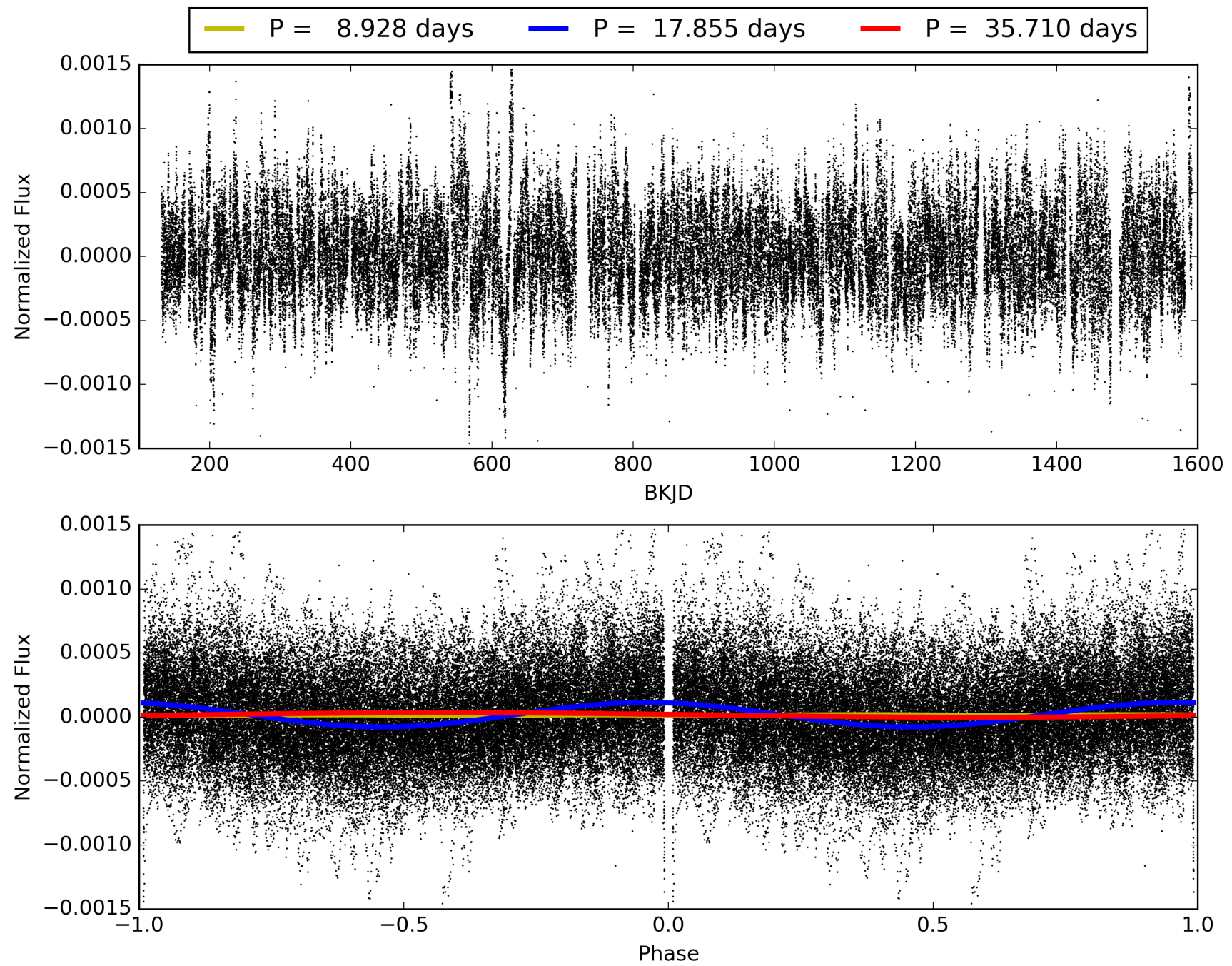
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:13:14 Z

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

TCE 005812701-01, PDC Light Curves

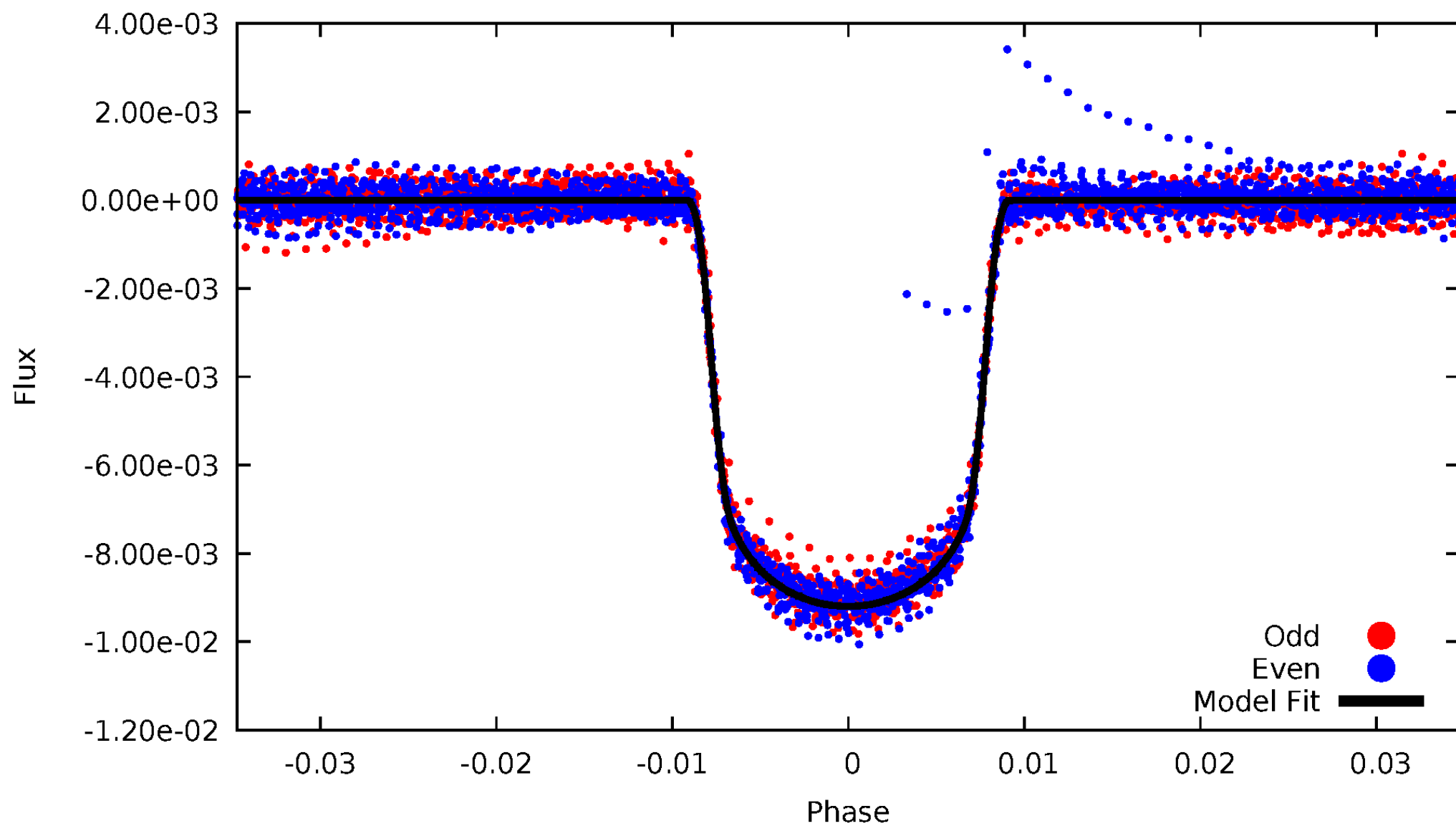


TCE 005812701-01



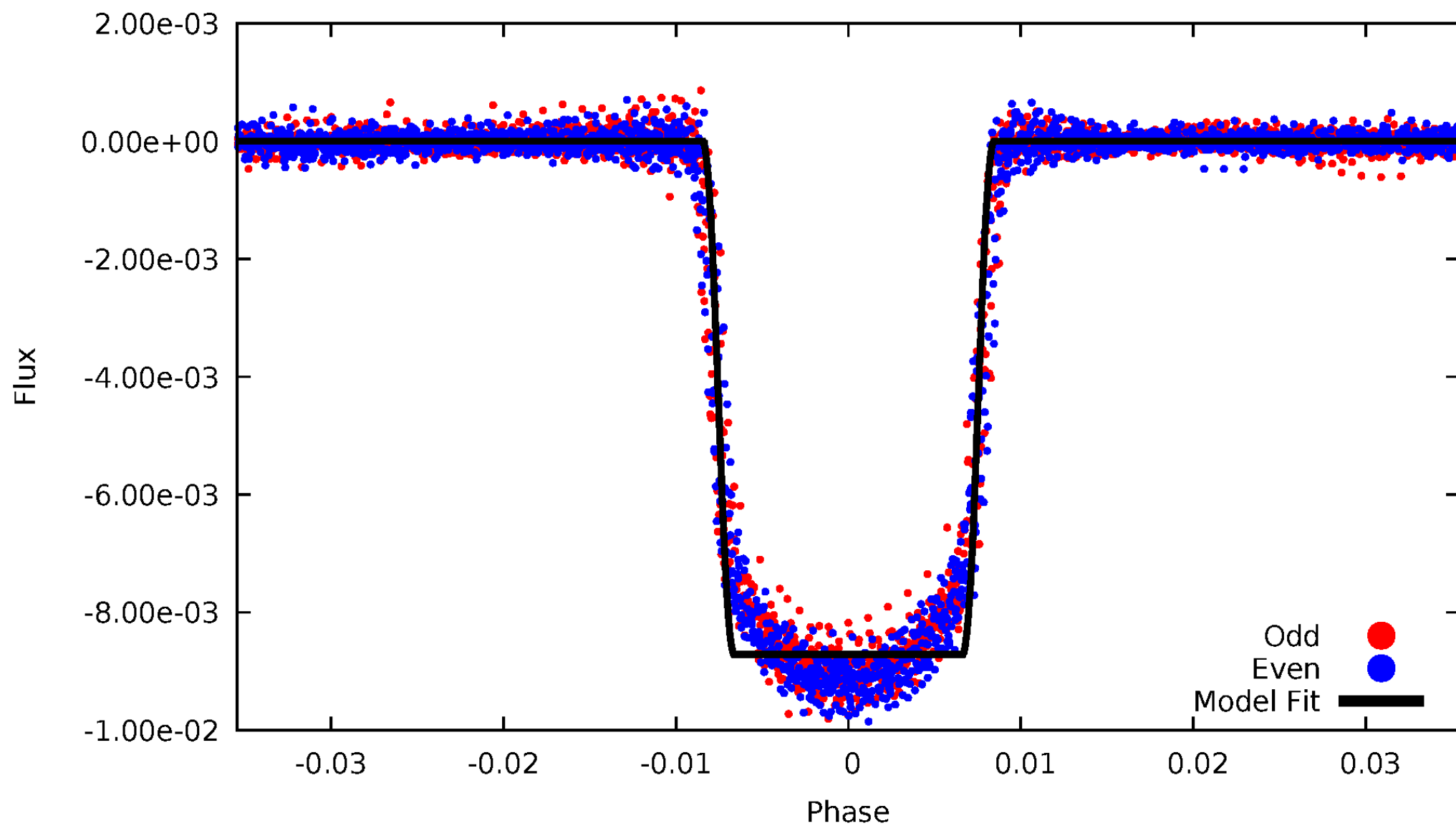
DV Odd/Even

TCE 005812701-01



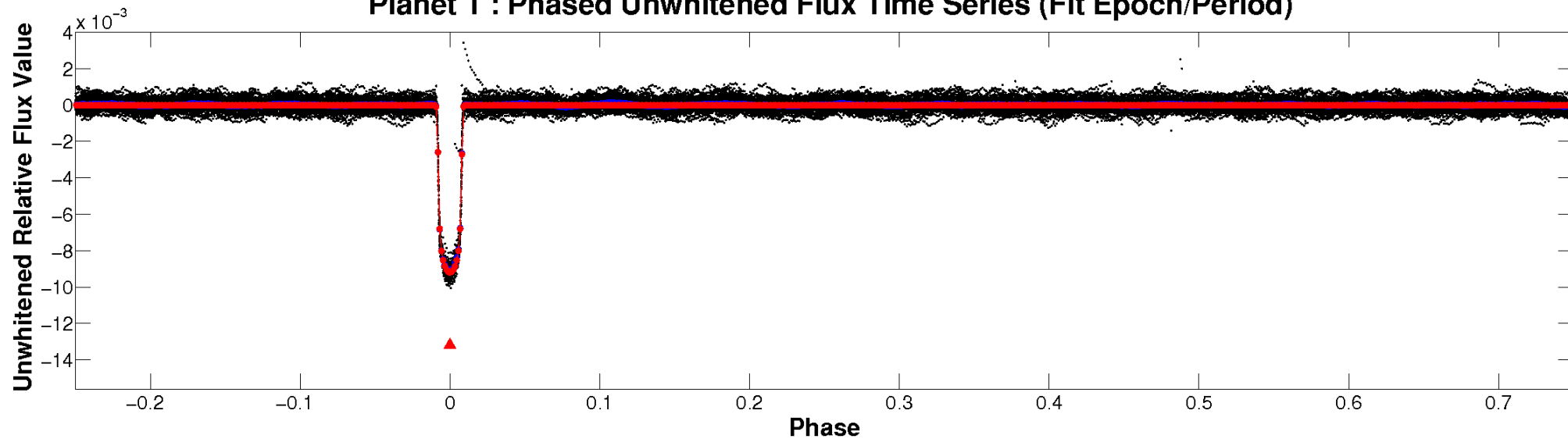
ALT Odd/Even

TCE 005812701-01

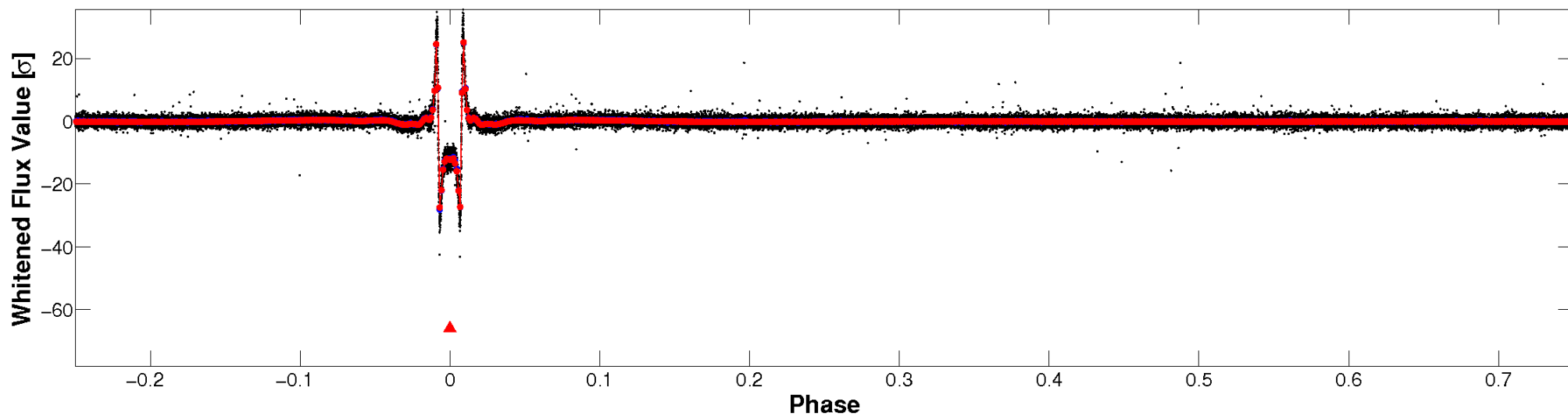


Non-Whitened Vs. Whitened Light Curve

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

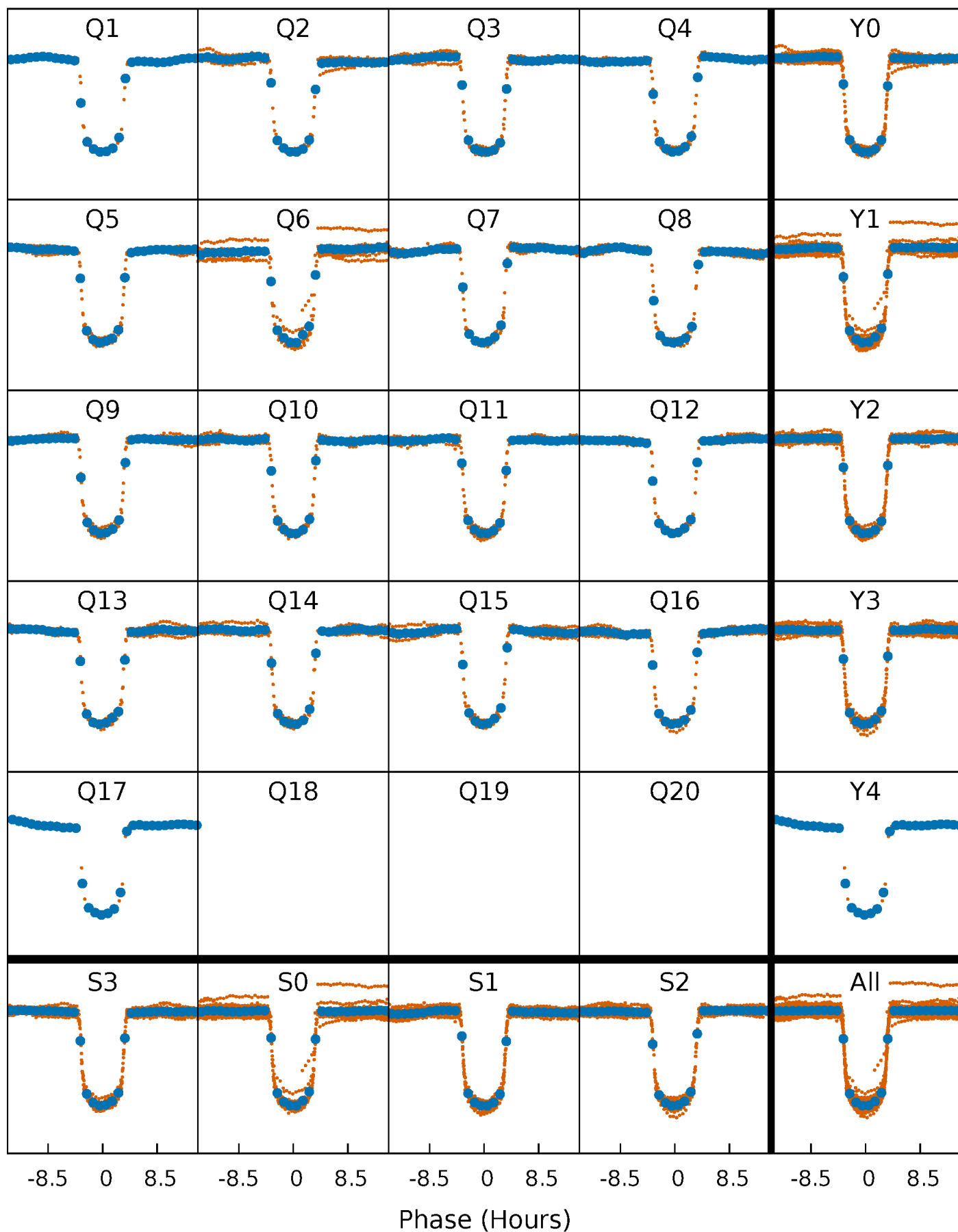


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



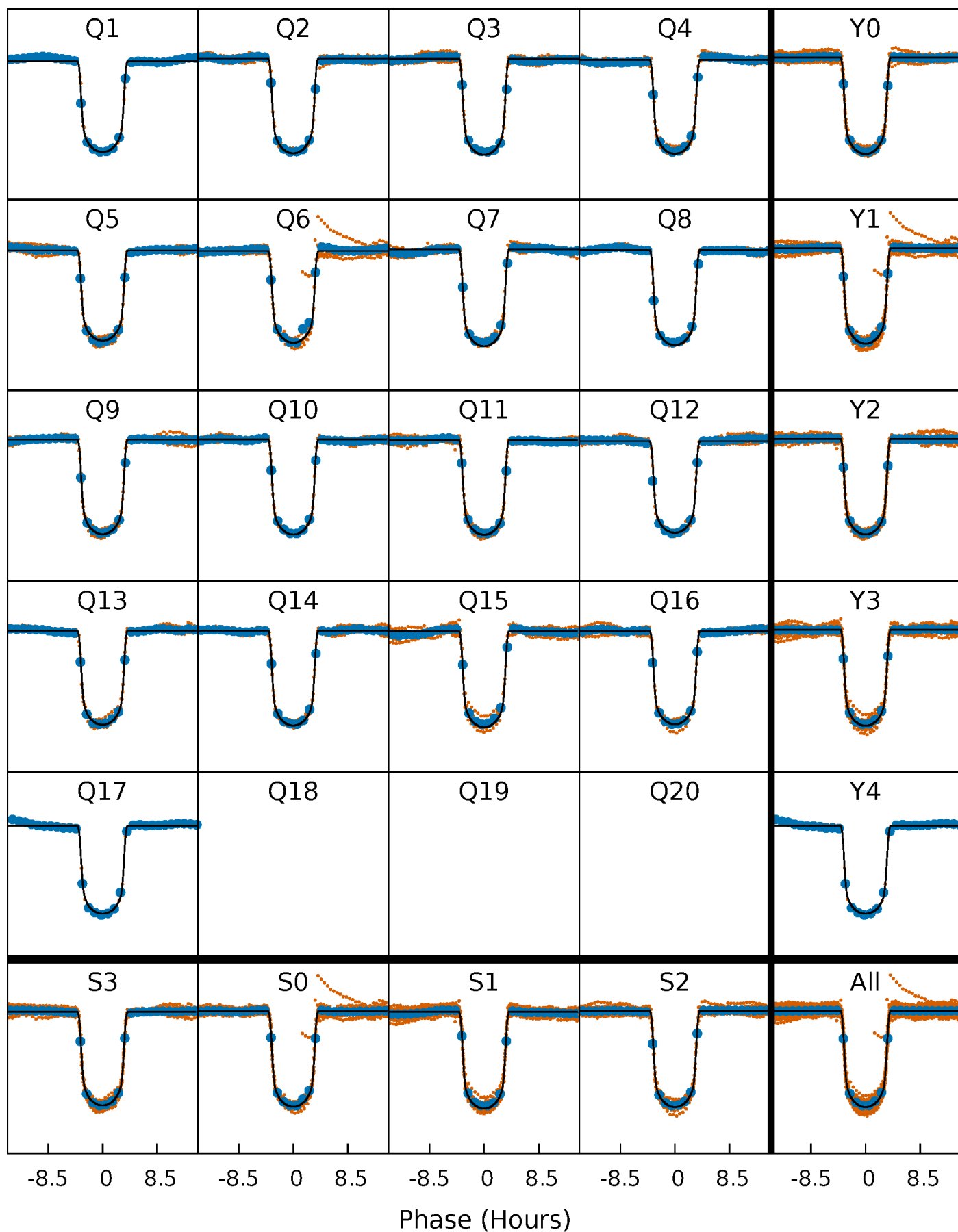
PDC Quarter-Phased Transit Curves

TCE 005812701-01 P= 17.855233 Days $T_0=146.596130$ (BKJD)



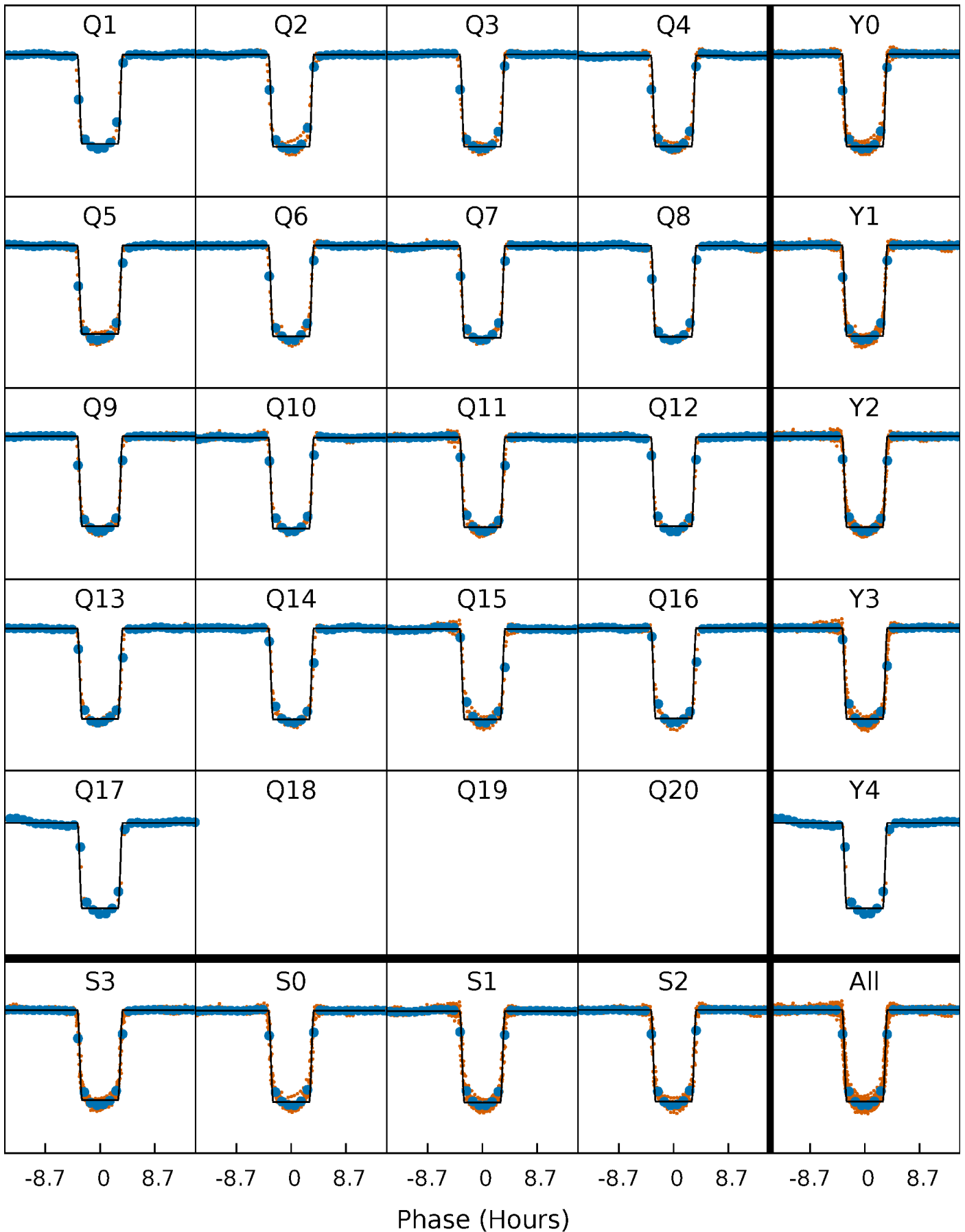
DV Quarter-Phased Transit Curves

TCE 005812701-01 P= 17.855233 Days $T_0=146.596130$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

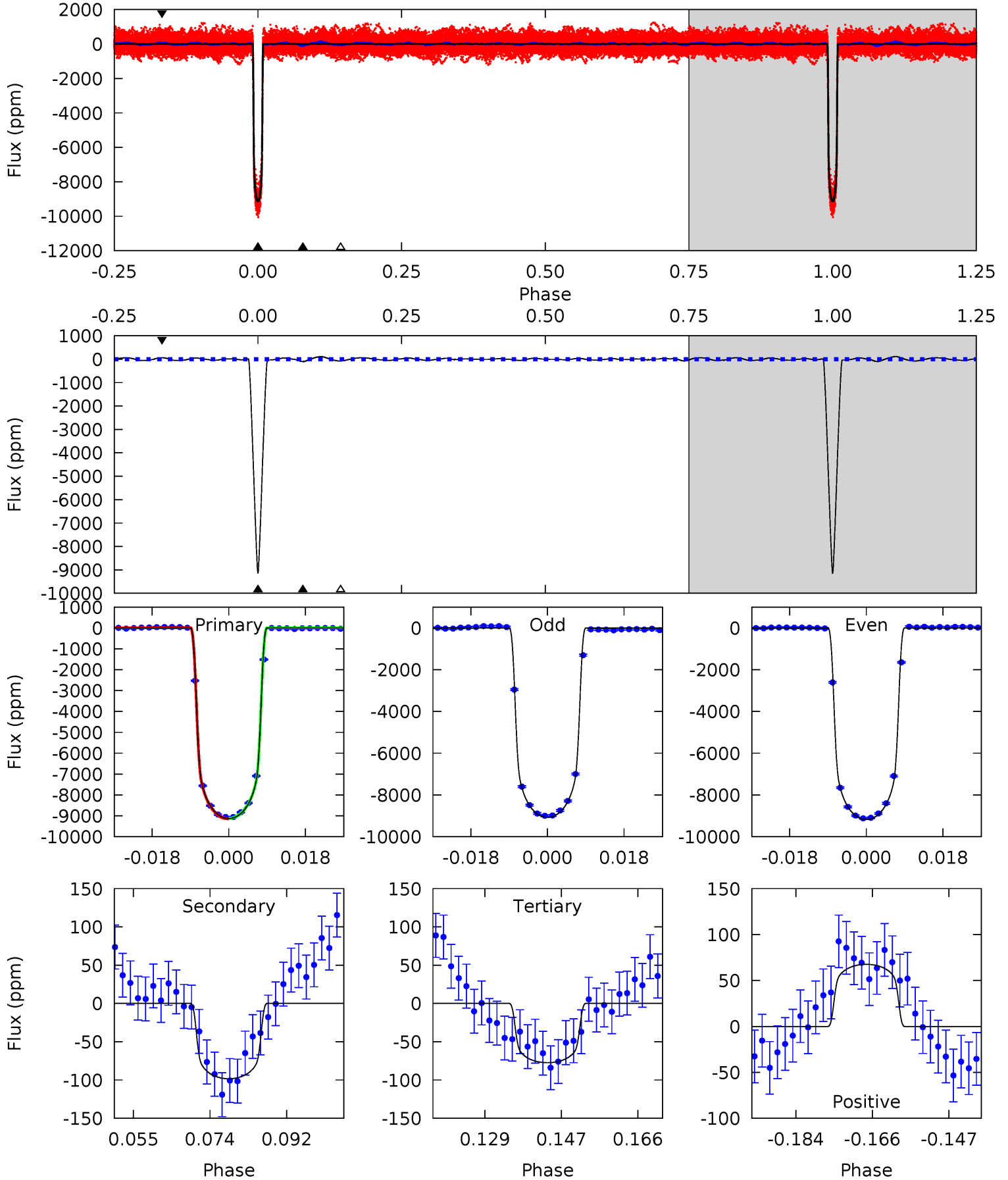
TCE 005812701-01 P= 17.854964 Days $T_0=146.606426$ (BKJD)



DV Model-Shift Uniqueness Test

005812701-01, P = 17.855233 Days, E = 128.740897 Days

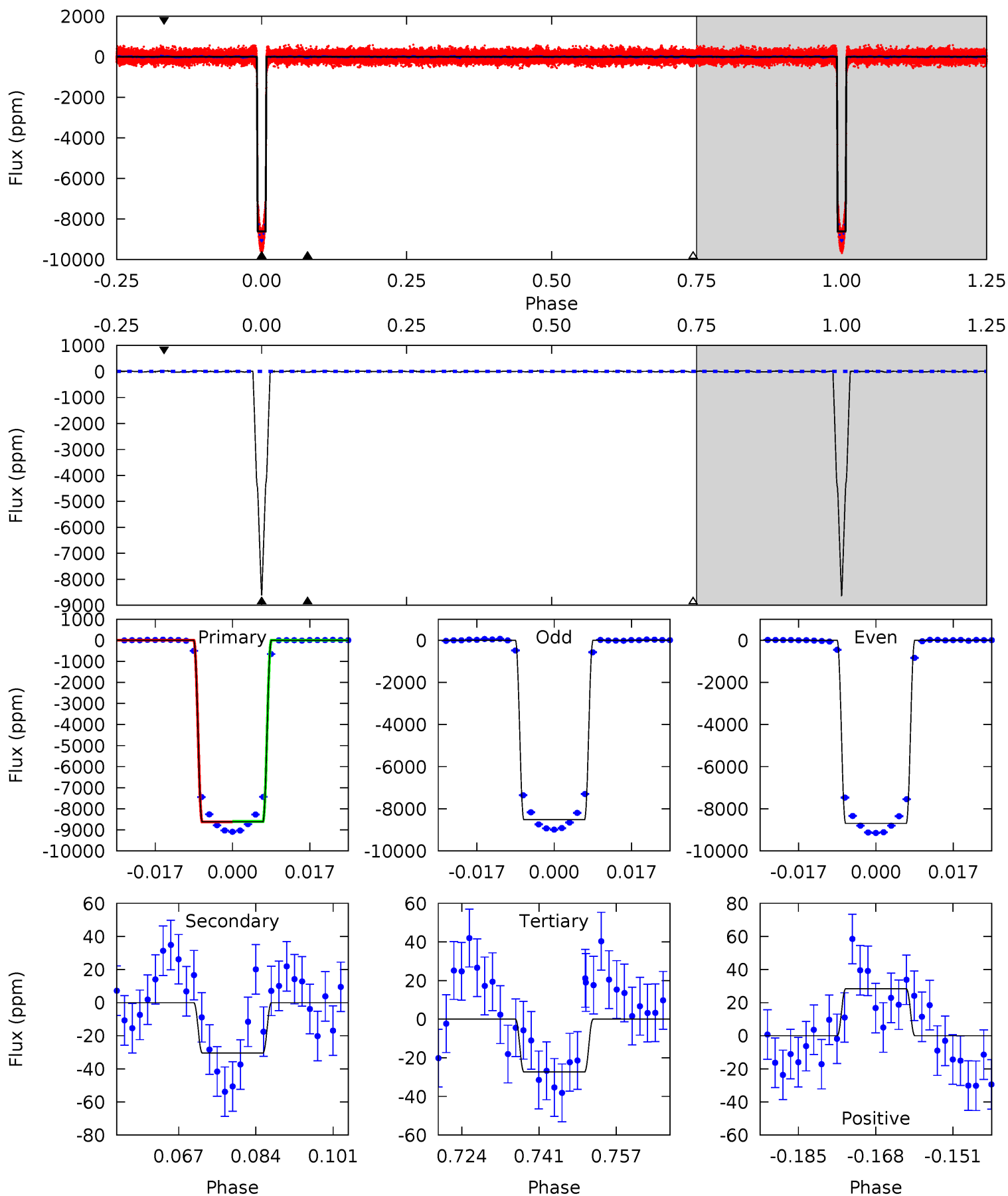
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1018	11.0	8.63	7.54	4.91	2.36	3.78	1010	1011	2.34	3.43	5.71	0.99	0.01	1.66



Alt Model-Shift Uniqueness Test

005812701-01, P = 17.854964 Days, E = 128.751462 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1819	6.42	5.76	5.98	4.93	2.39	2.06	1813	1813	0.65	0.44	18.6	1.00	0.00	2.52



Stellar Parameters For KIC 005812701

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6823^{+61}_{-92}	$4.308^{+0.024}_{-0.128}$	$0.070^{+0.150}_{-0.150}$	$1.367^{+0.267}_{-0.067}$	$1.386^{+0.093}_{-0.076}$	$0.765^{+0.096}_{-0.287}$
	+1%/-1%	+1%/-3%	+214%/-214%	+20%/-5%	+7%/-5%	+13%/-38%
Source	SPE88	SPE88	SPE88	DSEP		

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

Secondary Eclipse Parameters for KIC 005812701-01 / KOI 0012.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-98 ± 9	$13.52^{+1.30}_{-0.51}$	1287^{+54}_{-29}	2932^{+42}_{-44}	$6.312^{+0.946}_{-0.917}$
Alt.	-30 ± 5	$14.21^{+1.40}_{-0.59}$	1287^{+61}_{-28}	2449^{+53}_{-63}	$1.789^{+0.358}_{-0.368}$

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 $A_{obs} \gg 1.0$

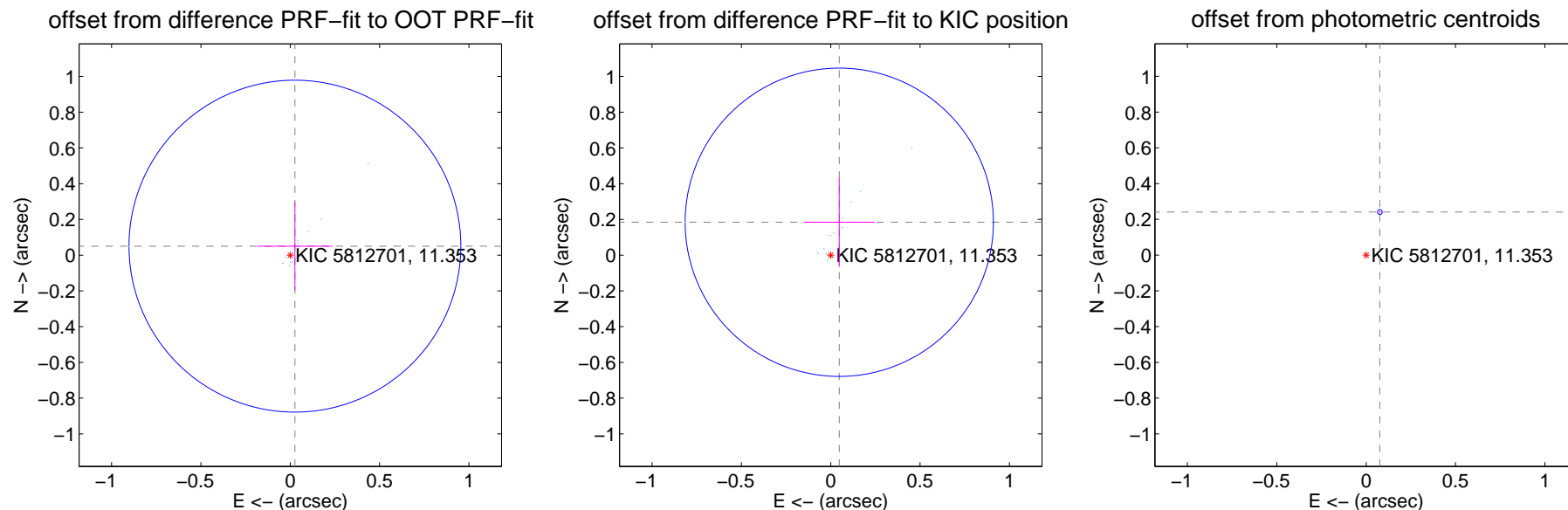
DV Centroid Data

Supplemental centroid analysis for 005812701-01. **Kepler magnitude: 11.35.** Transit SNR 628.52

There are 17 quarters with good PRF difference image offsets

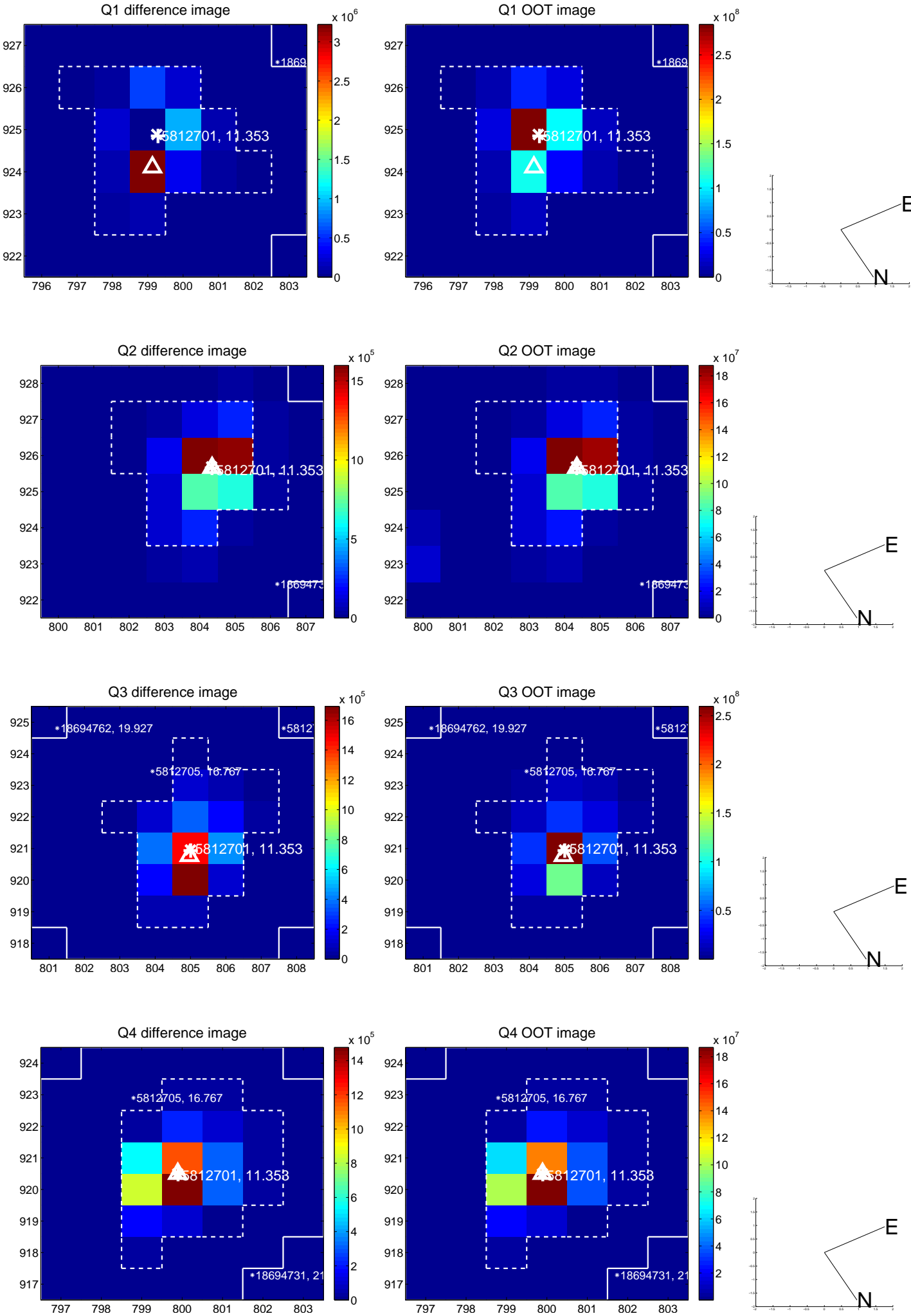
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.057 ± 0.310	0.18	-0.026 ± 0.211	0.050 ± 0.246
PRF-fit source offset from KIC position	0.190 ± 0.288	0.66	-0.048 ± 0.199	0.184 ± 0.249
photometric centroid source offset	0.25 ± 0.00	56.55	-0.08 ± 0.00	0.24 ± 0.00

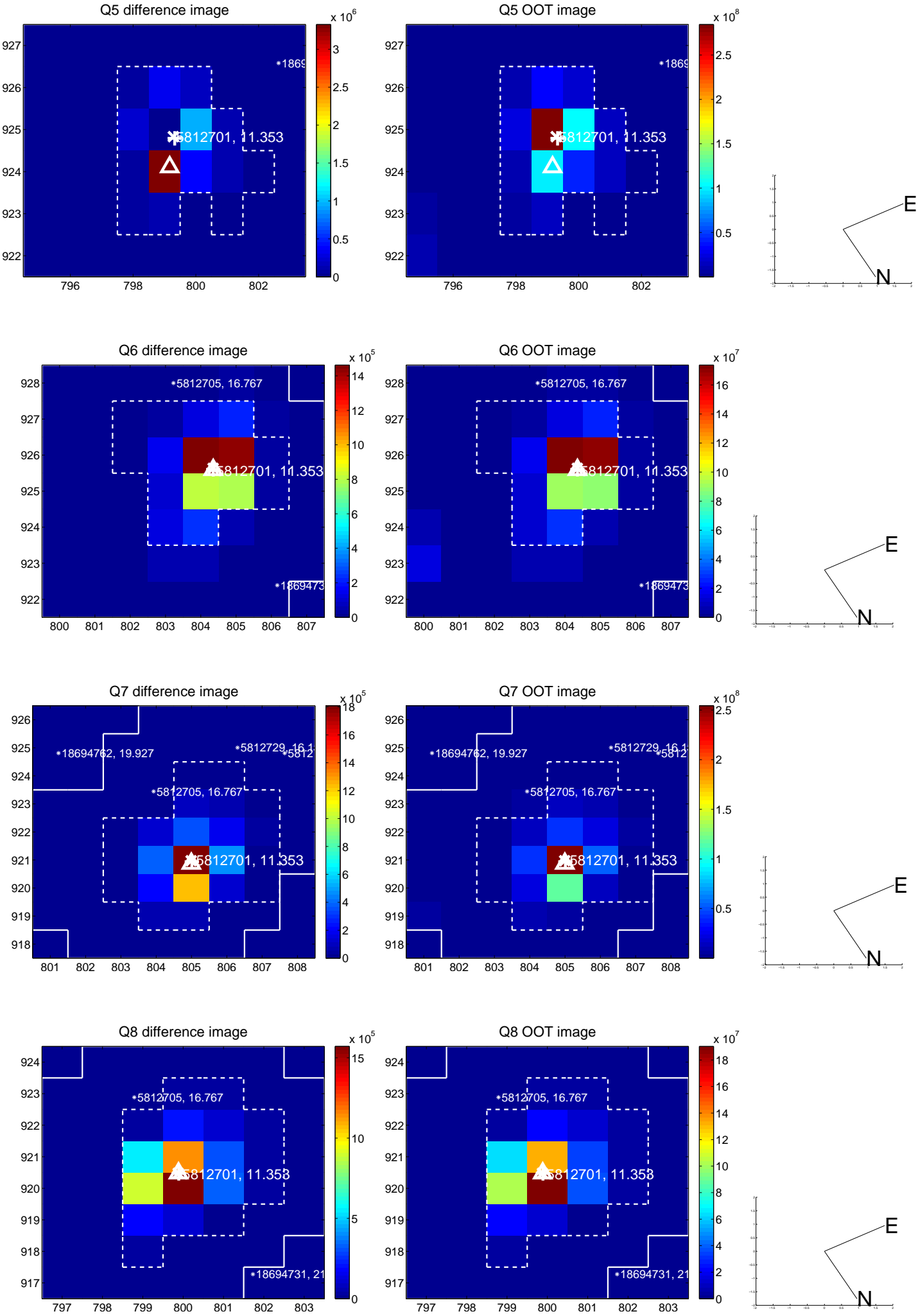


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

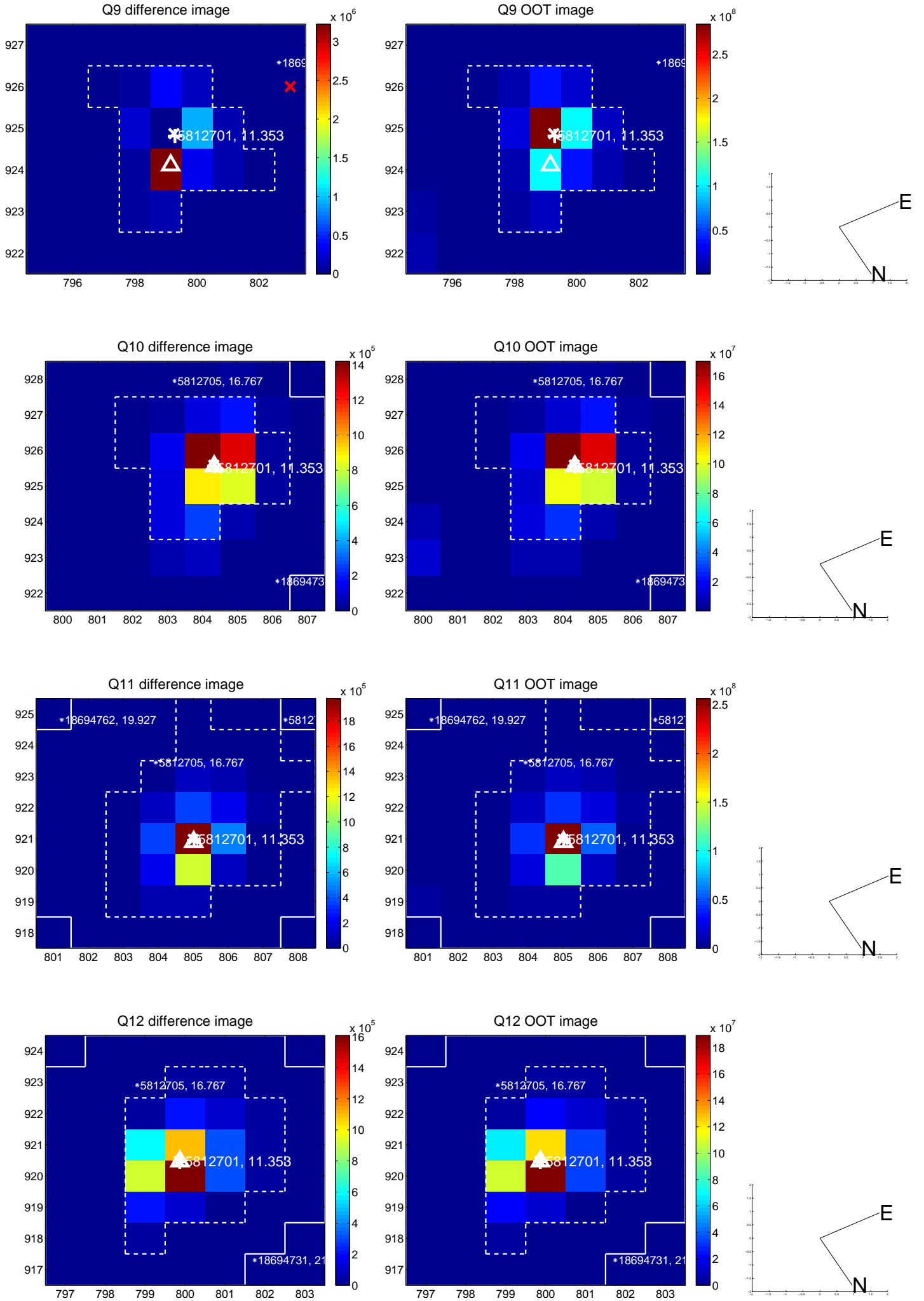
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



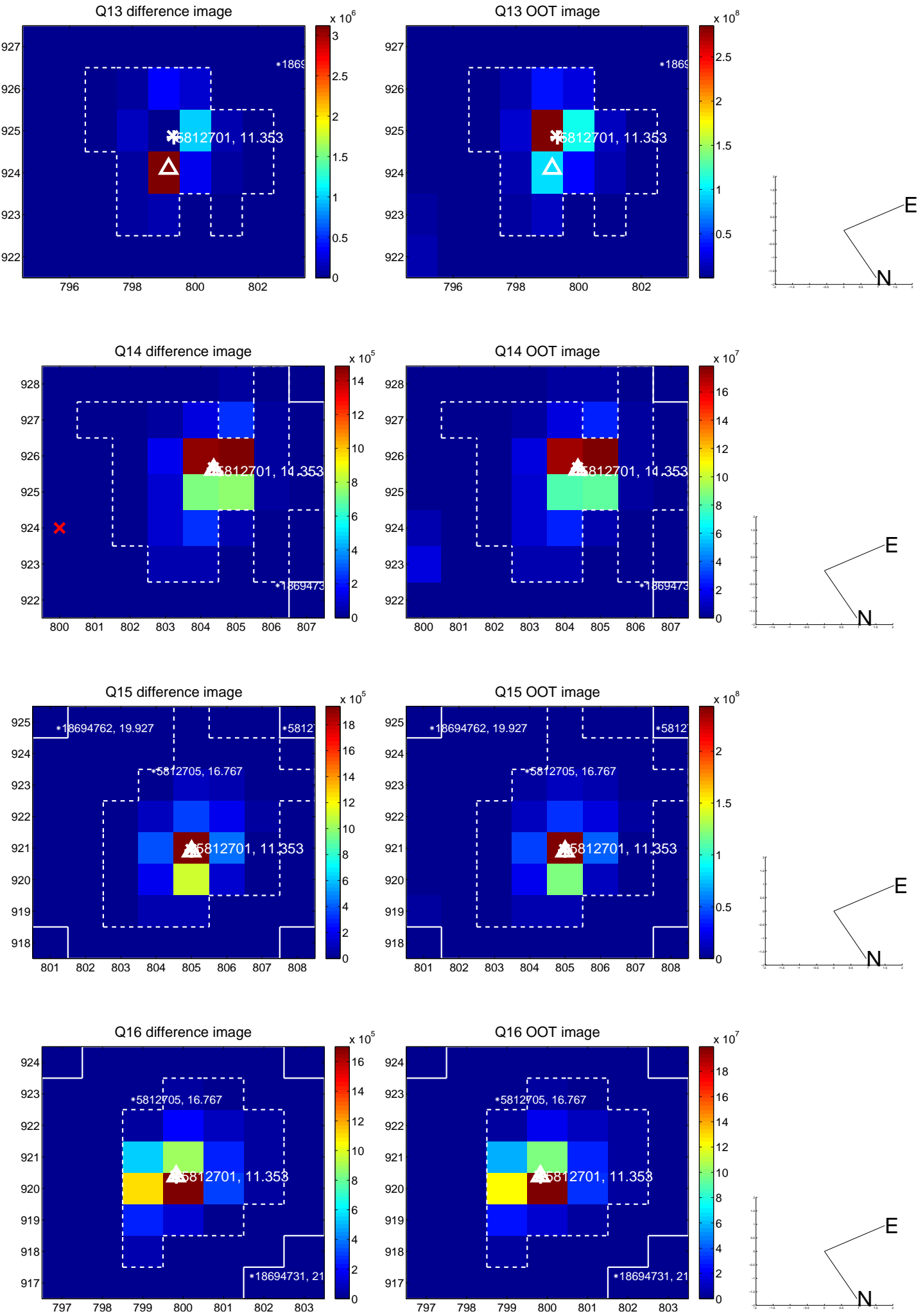
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



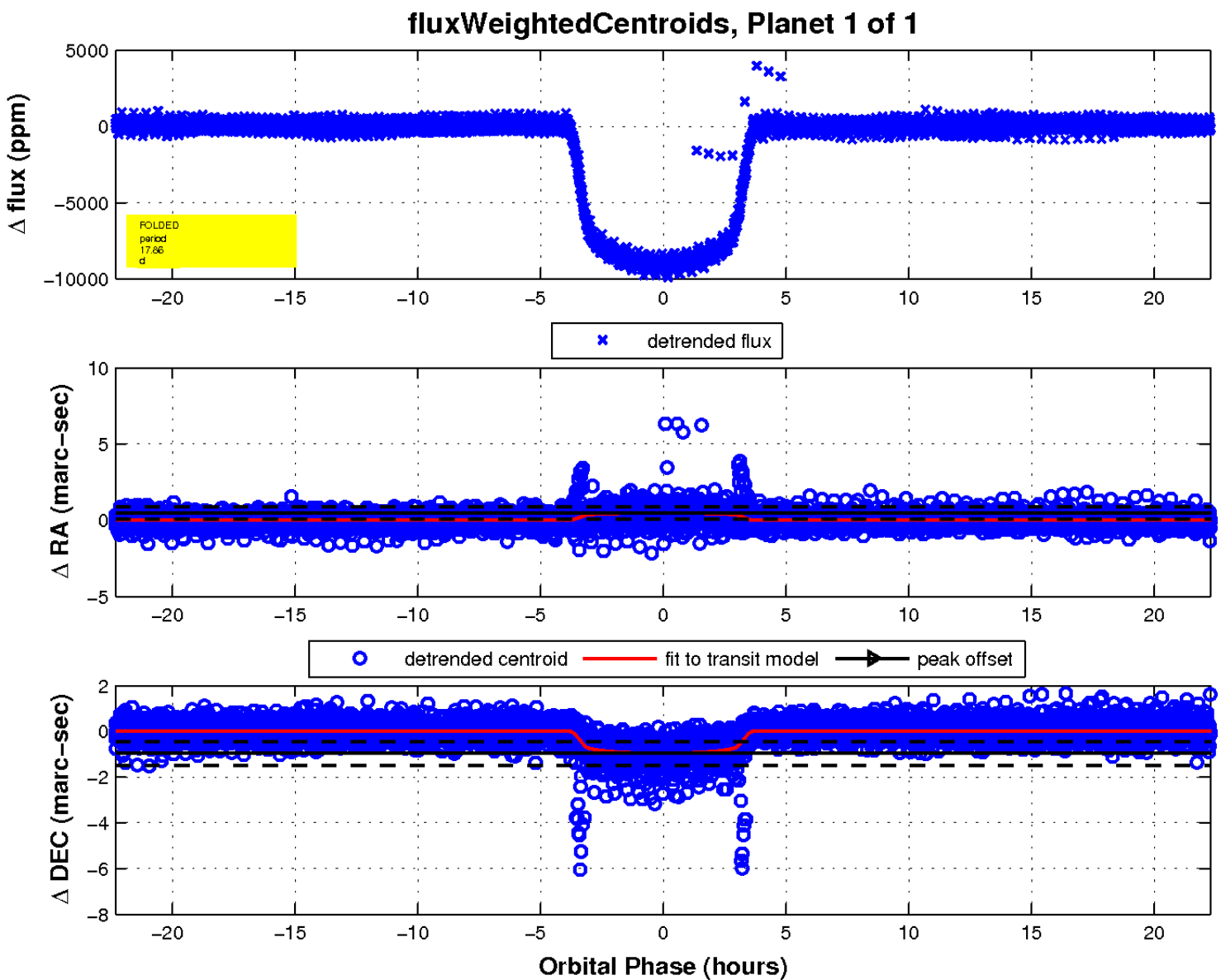
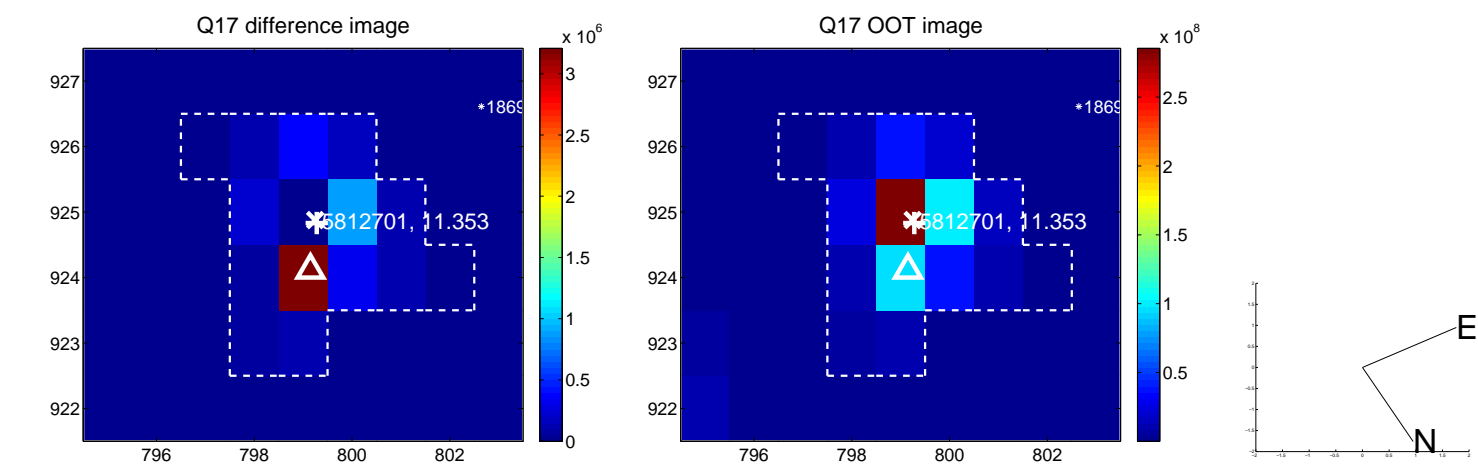
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UKIRT Image

Declination

