

KIC 010257903

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})
010257903-01	OBS	No	0.858533	132.040195	1248.5	4.573	692.0	19.2	1.10	6054	7.39	4776.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010257903-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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.

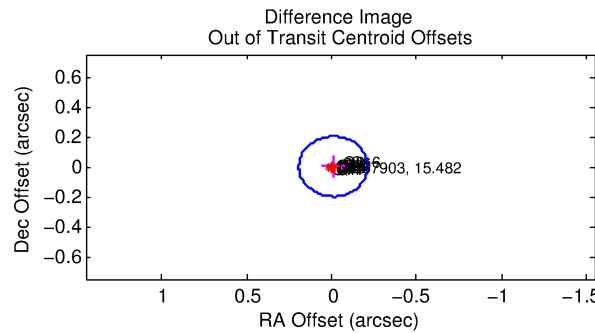
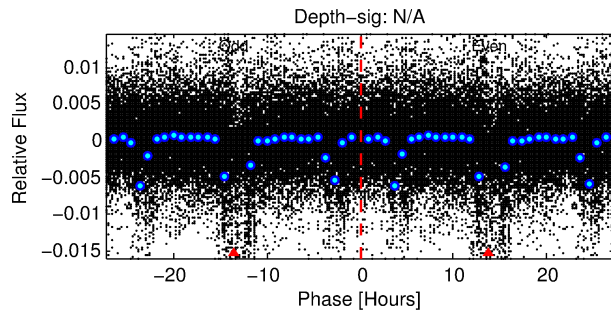
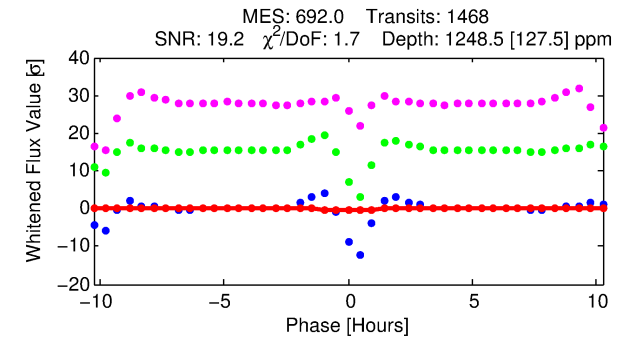
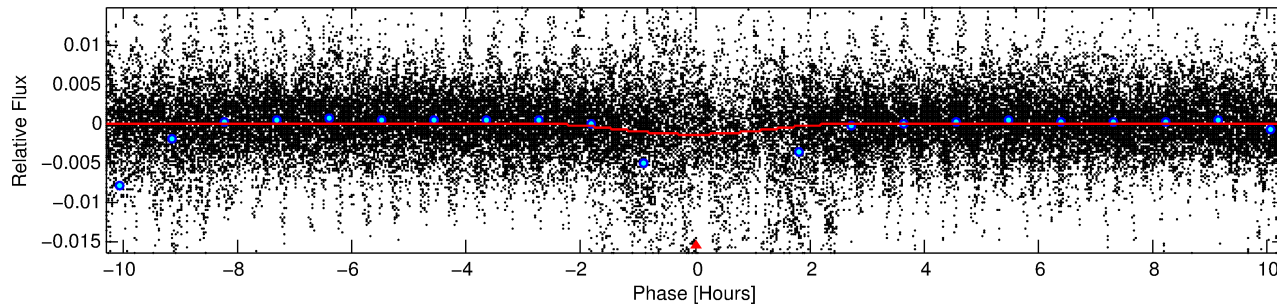
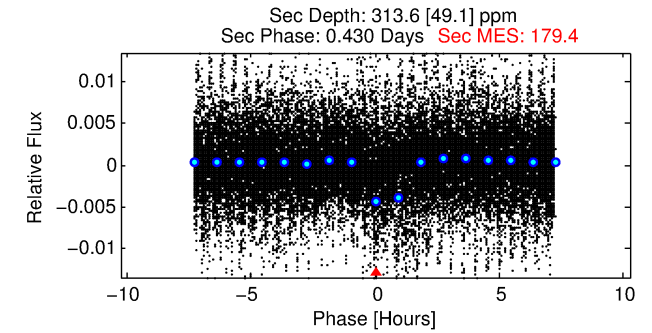
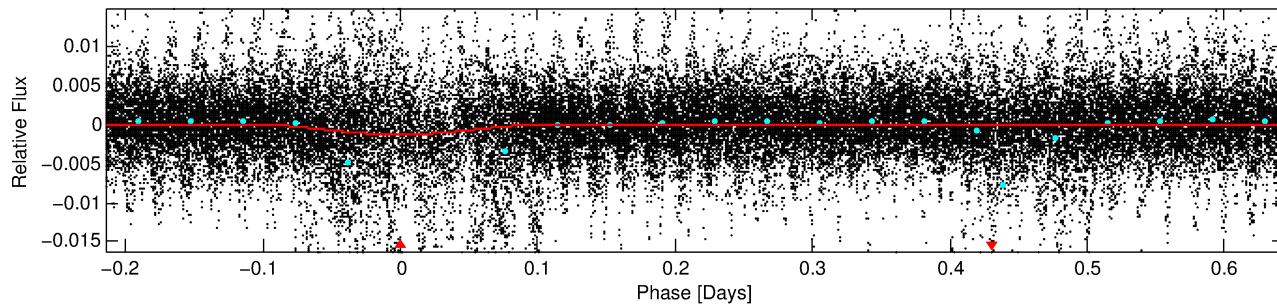
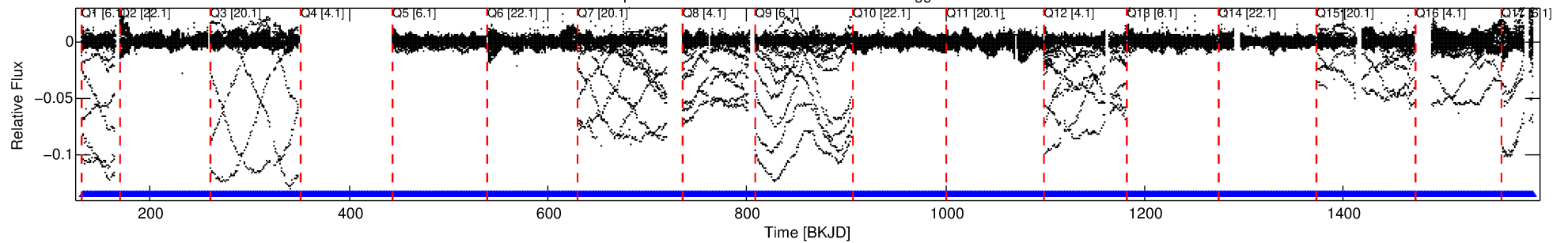
Ephemeris Match Information For 010257903-01

No Significant Match Found

DV One-Page Summary

KIC: 10257903 Candidate: 1 of 1 Period: 0.859 d
KOI: K07298 Corr: No Ephemeris Match

Kp: 15.48 R*: 1.10 Rs Teff: 6054.0 K Logg: 4.34 Fe/H: -0.240



DV Fit Results:

Period = 0.85853 [0.00001] d
Epoch = 132.0402 [0.0020] BKJD
Rp/R* = 0.0614 [0.0469]
a/R* = 1.14 [0.01]
b = 1.00 [0.07]
Seff = 4776.45 [1752.18]
Teq = 2120 [194] K
Rp = 7.39 [6.01] Re
a = 0.0175 [0.0041] AU
Ag = 0.97 [1.53] [-0.02σ]
Teffp = 3252 [1254] K [0.89σ]

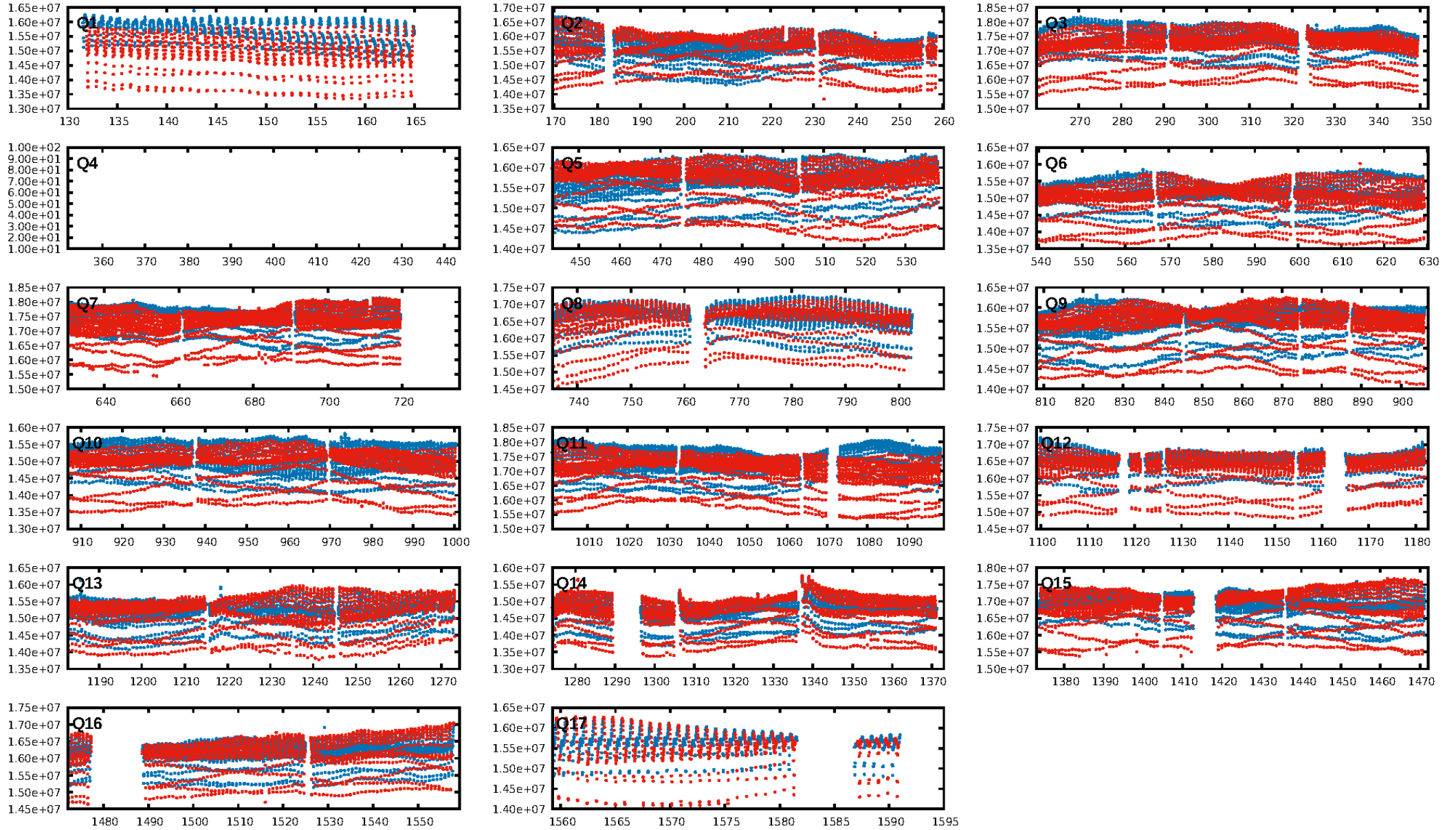
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1398/1398]
GhostDiagnostic-chr: 1.481
Centroid-sig: 0.0%
Centroid-so: 0.347 arcsec [4.76σ]
OotOffset-rm: 0.008 arcsec [0.12σ]
KicOffset-rm: 0.157 arcsec [2.25σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

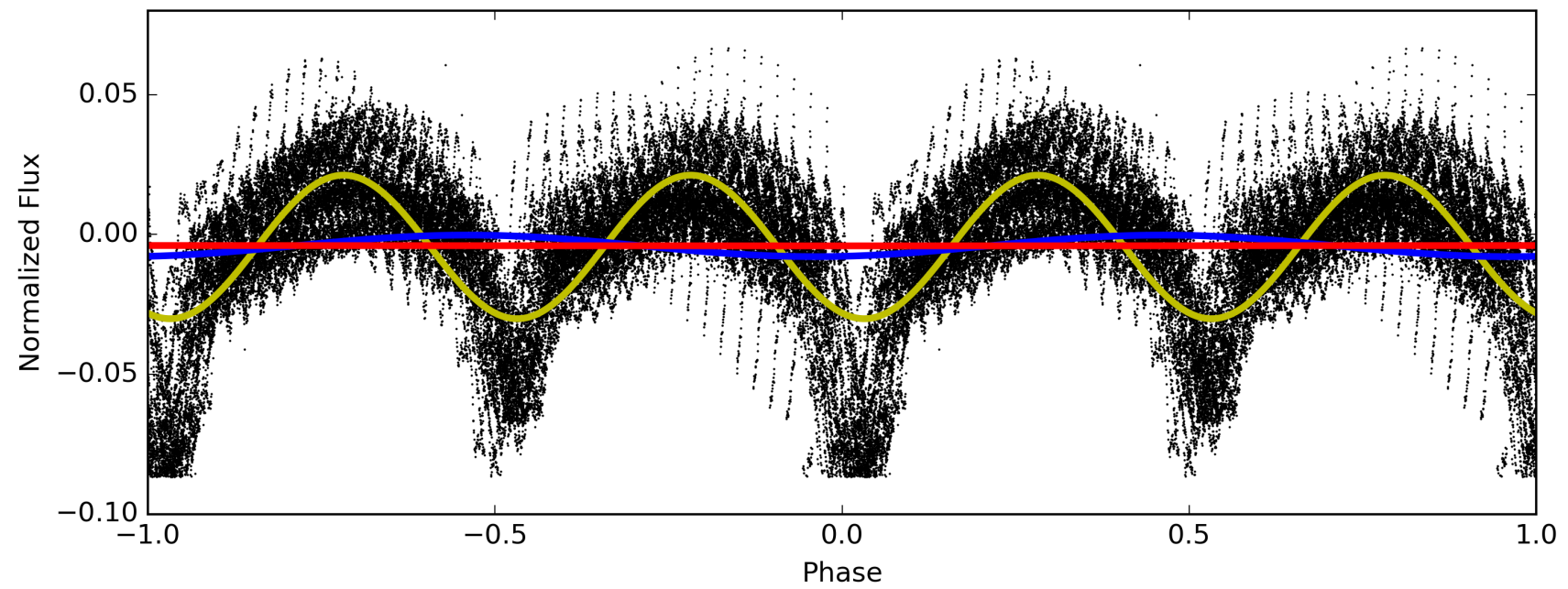
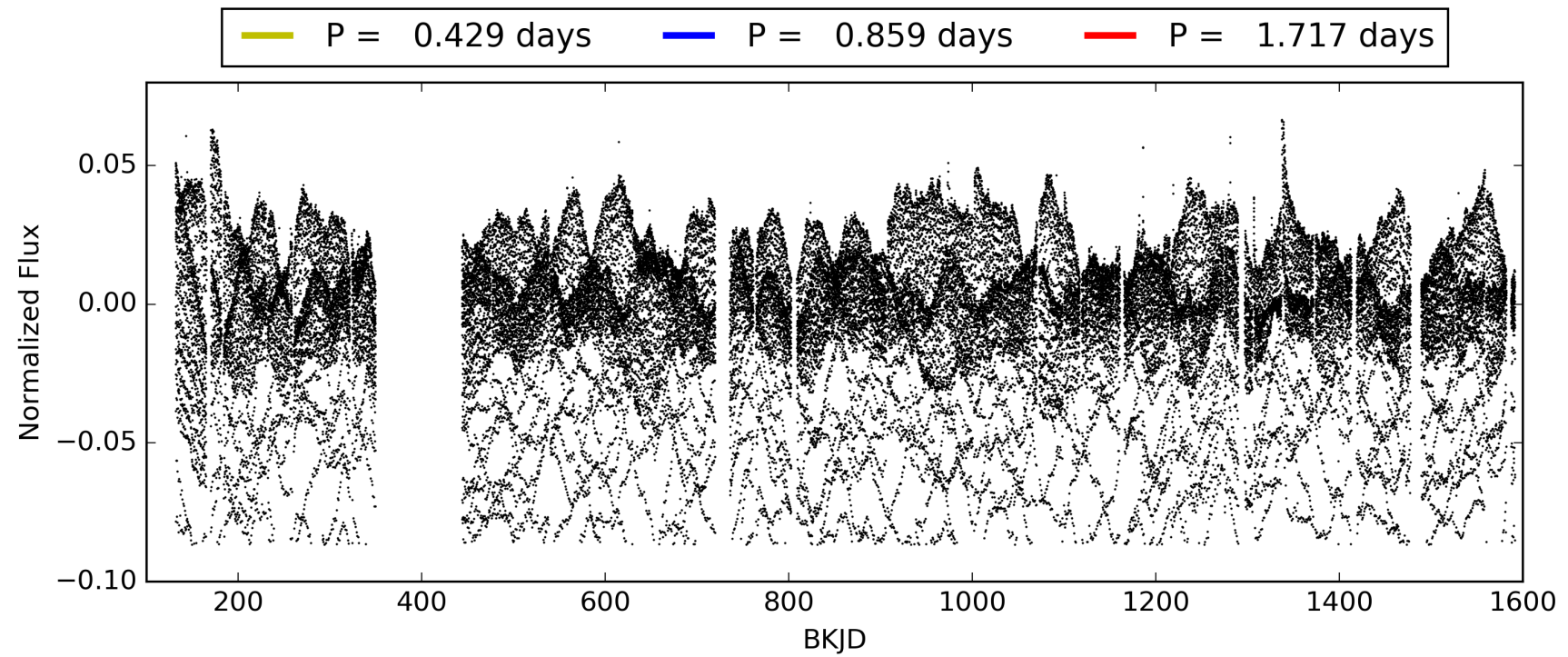
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:24:40 Z

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

TCE 010257903-01, PDC Light Curves

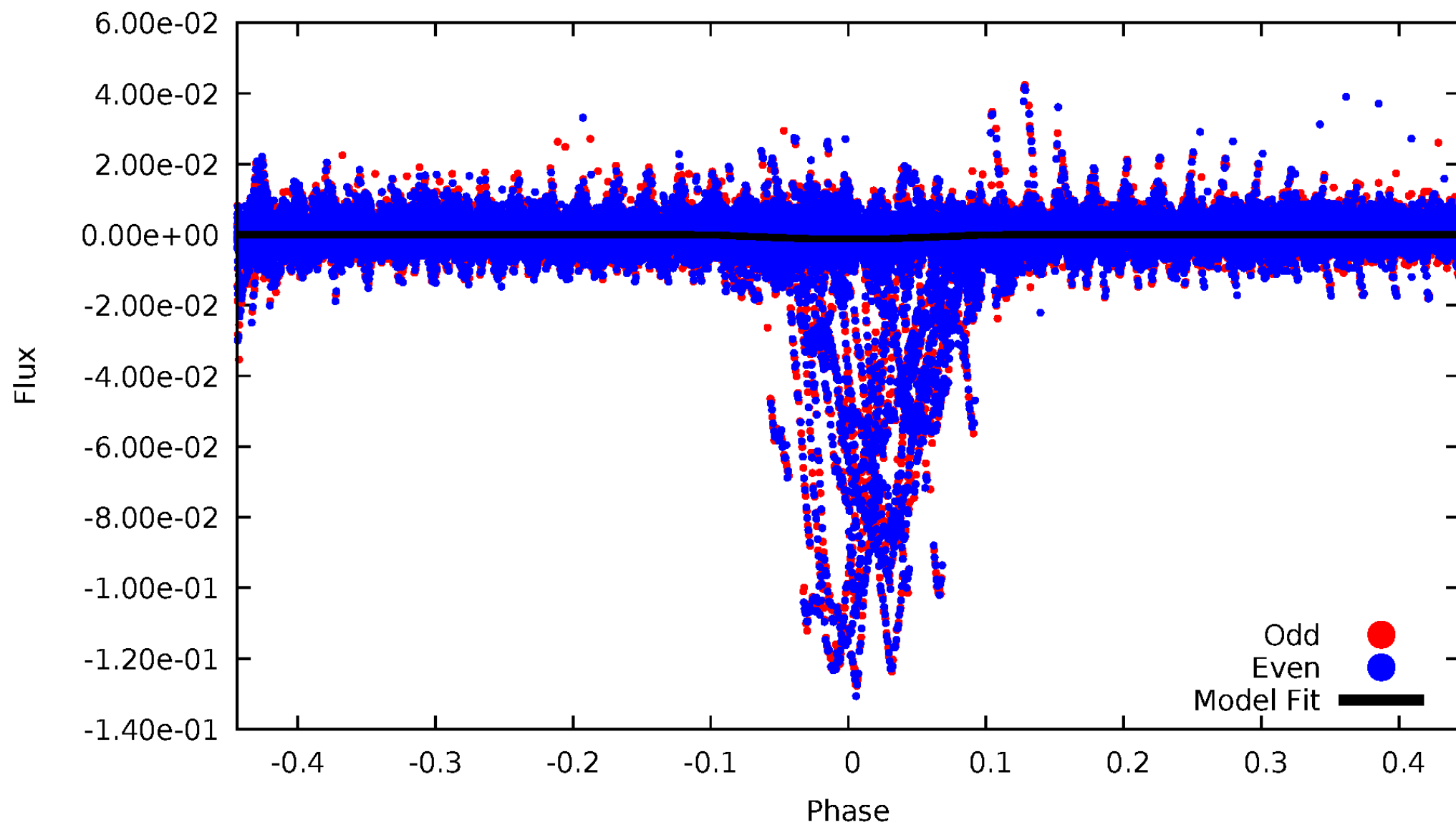


TCE 010257903-01



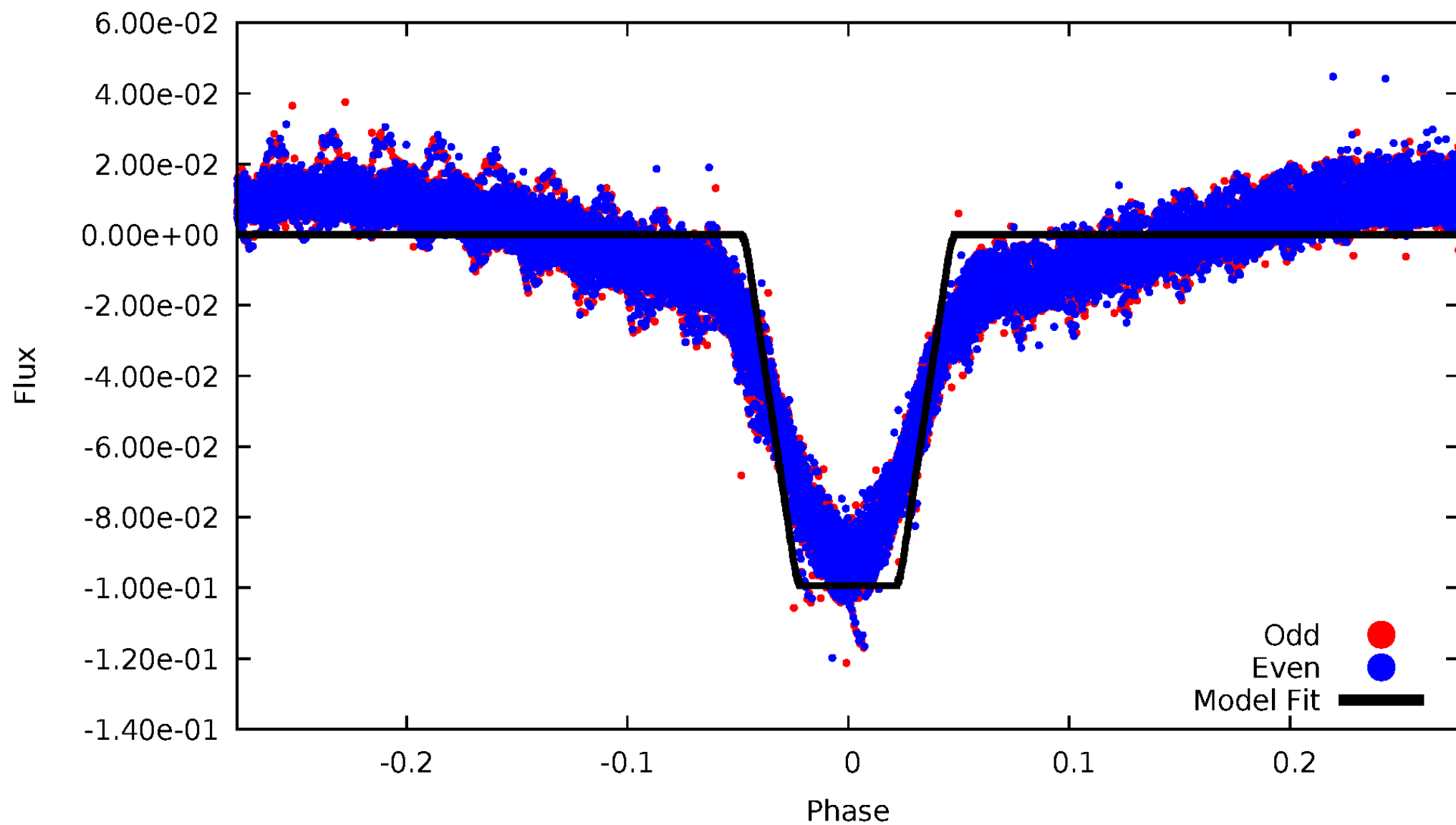
DV Odd/Even

TCE 010257903-01



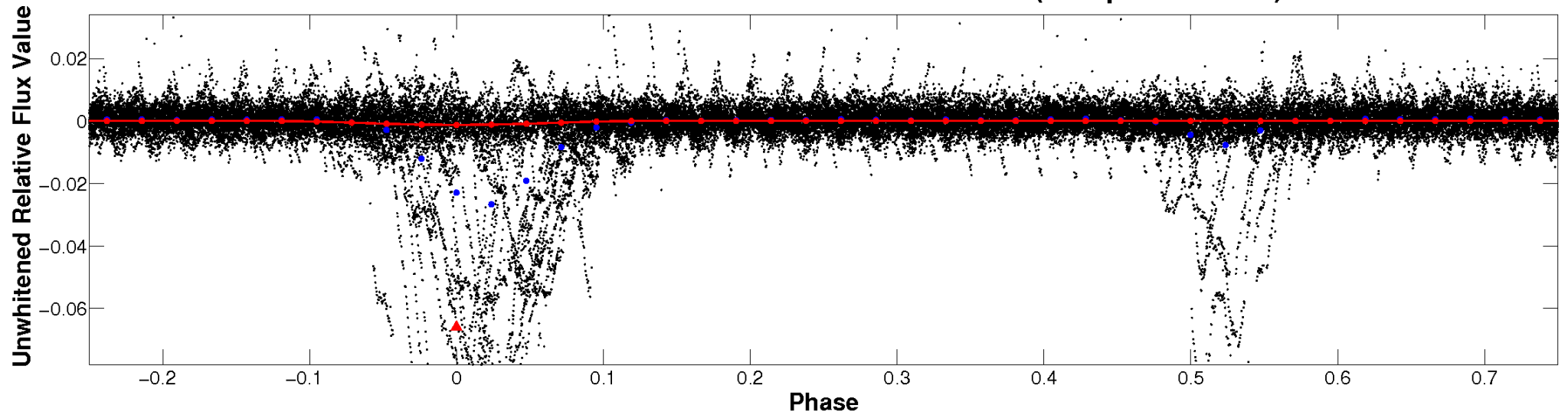
ALT Odd/Even

TCE 010257903-01

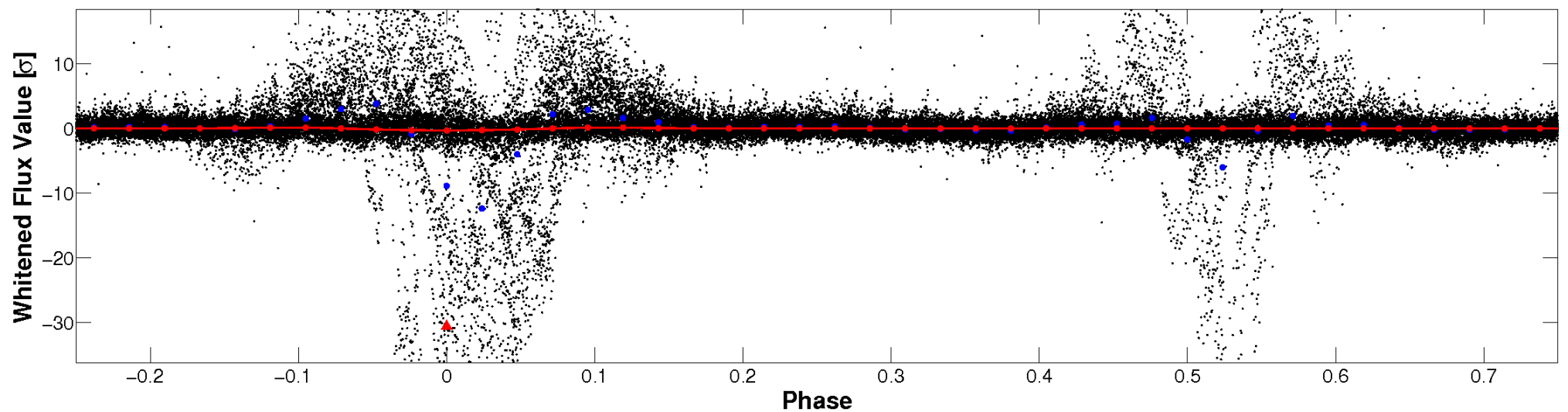


Non-Whitened Vs. Whitened Light Curve

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

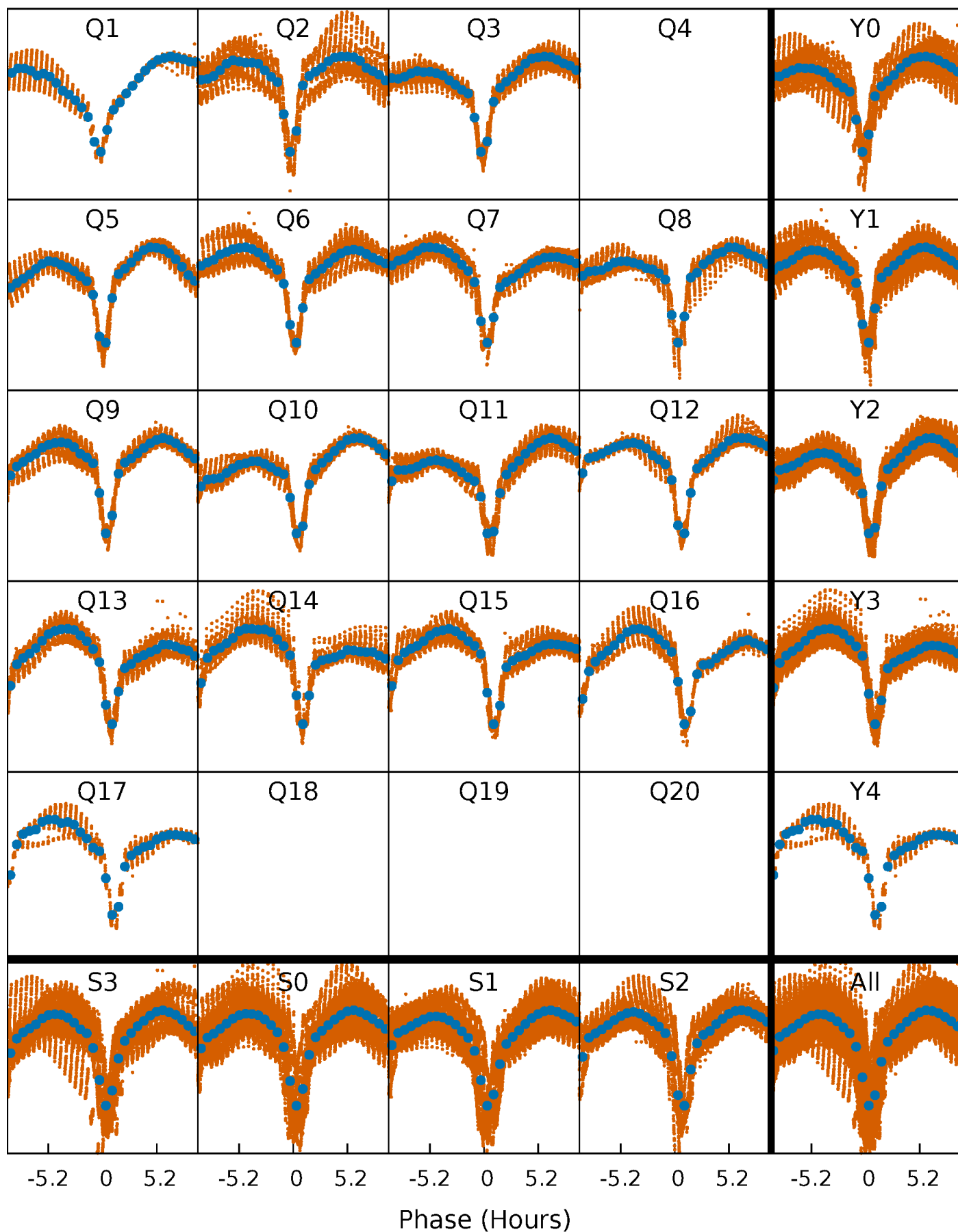


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



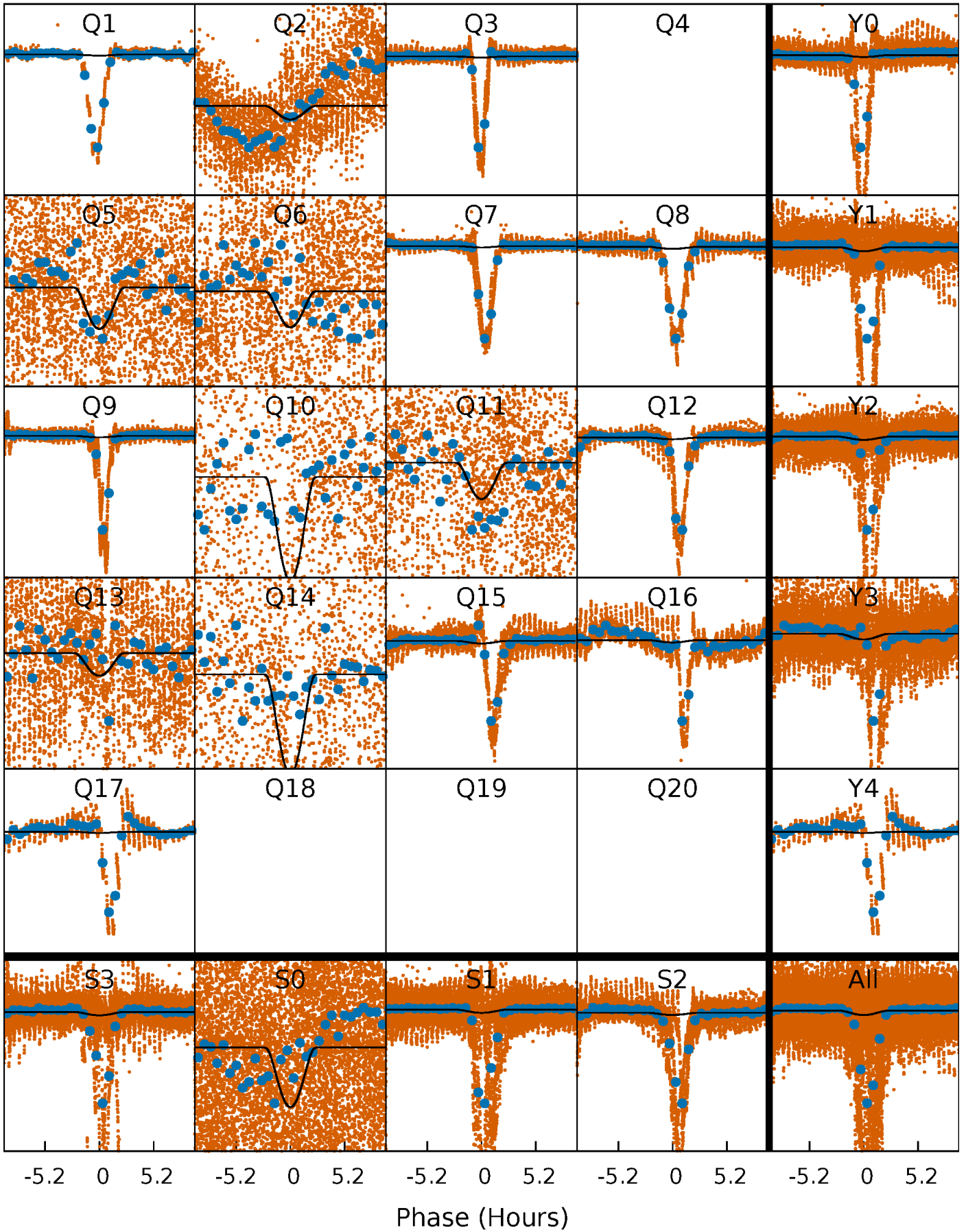
PDC Quarter-Phased Transit Curves

TCE 010257903-01 P= 0.858533 Days $T_0=132.040195$ (BKJD)



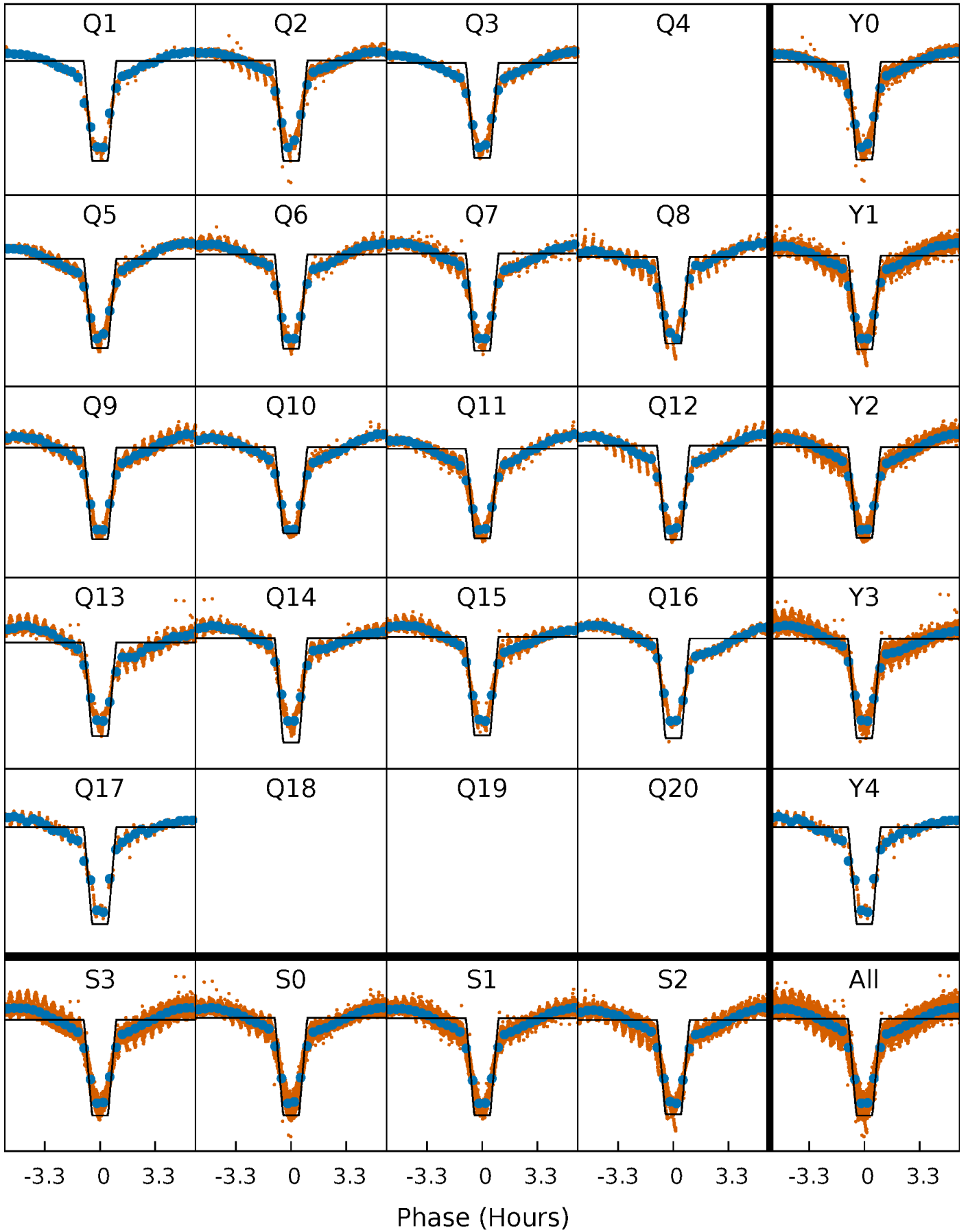
DV Quarter-Phased Transit Curves

TCE 010257903-01 P= 0.858533 Days $T_0=132.040195$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

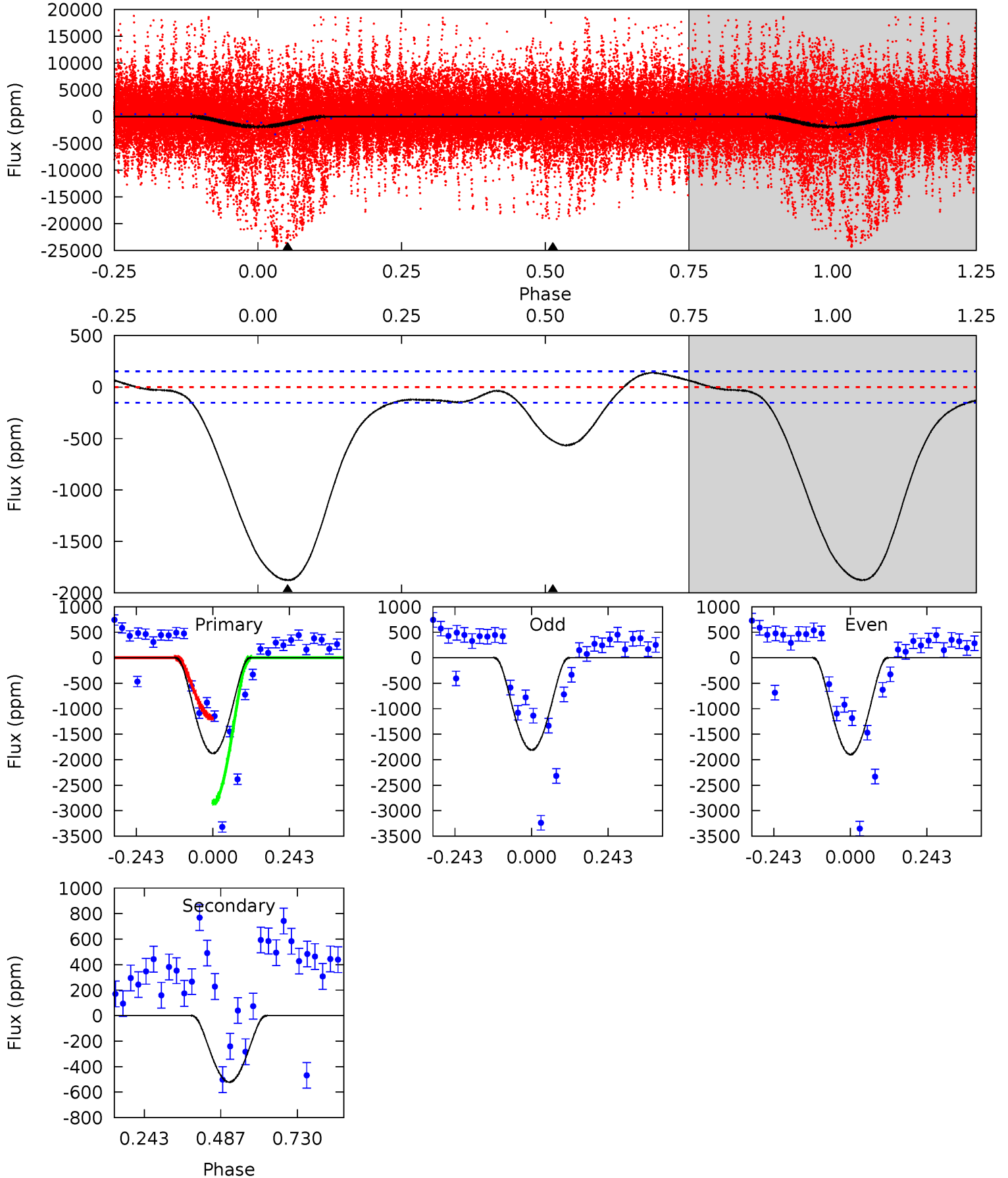
TCE 010257903-01 P= 0.858567 Days $T_0=132.029864$ (BKJD)



DV Model-Shift Uniqueness Test

010257903-01, P = 0.858533 Days, E = 131.181662 Days

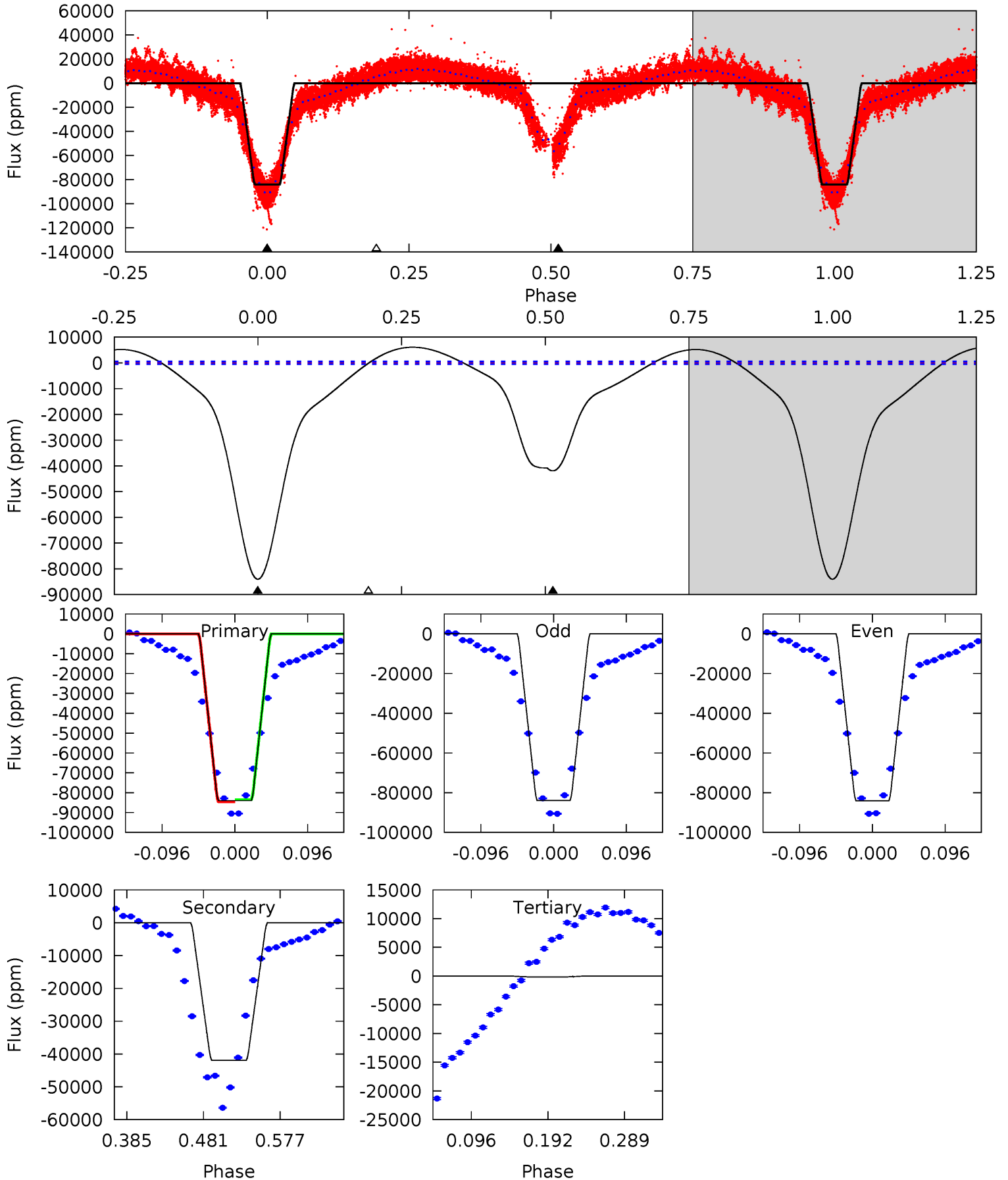
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.9	15.0	0	0	4.37	1.17	1.59	53.9	53.9	15.0	15.0	1.27	2.81	0.07	0



Alt Model-Shift Uniqueness Test

010257903-01, P = 0.858567 Days, E = 131.171297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
748.1	373.4	1.38	0	4.57	1.66	51.9	746.8	748.1	372.0	373.4	0.33	1.00	0.07	4.14



Stellar Parameters For KIC 010257903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6054^{+181}_{-199}	$4.340^{+0.153}_{-0.187}$	$-0.240^{+0.300}_{-0.300}$	$1.103^{+0.309}_{-0.206}$	$0.970^{+0.144}_{-0.108}$	$1.020^{+0.727}_{-0.486}$
	+3%/-3%	+4%/-4%	+125%/-125%	+28%/-19%	+15%/-11%	+71%/-48%
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 010257903-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-521 ± 35	$8.44^{+5.40}_{-4.83}$	2983^{+216}_{-190}	3643^{+1688}_{-827}	$1.232^{+5.453}_{-0.769}$
Alt.	-41937 ± 112	$38.27^{+8.43}_{-7.41}$	2978^{+221}_{-186}	4961^{+437}_{-313}	$5.156^{+2.500}_{-1.690}$

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 $A_{obs} \gg 1.0$

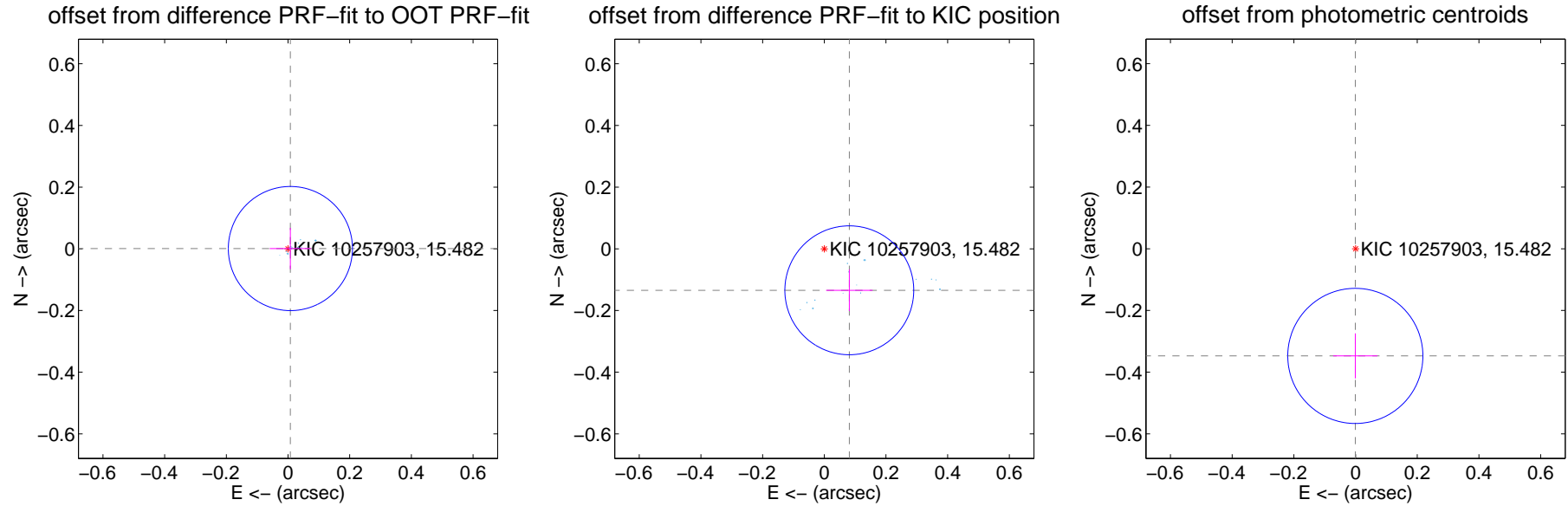
DV Centroid Data

Supplemental centroid analysis for 010257903-01. Kepler magnitude: 15.48. Transit SNR 19.22

There are 16 quarters with good PRF difference image offsets

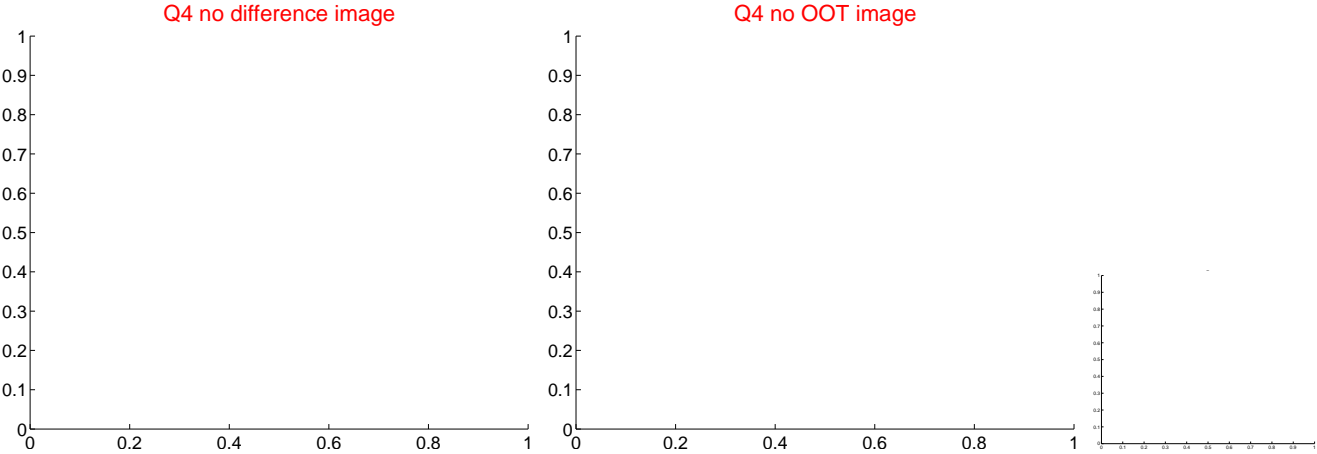
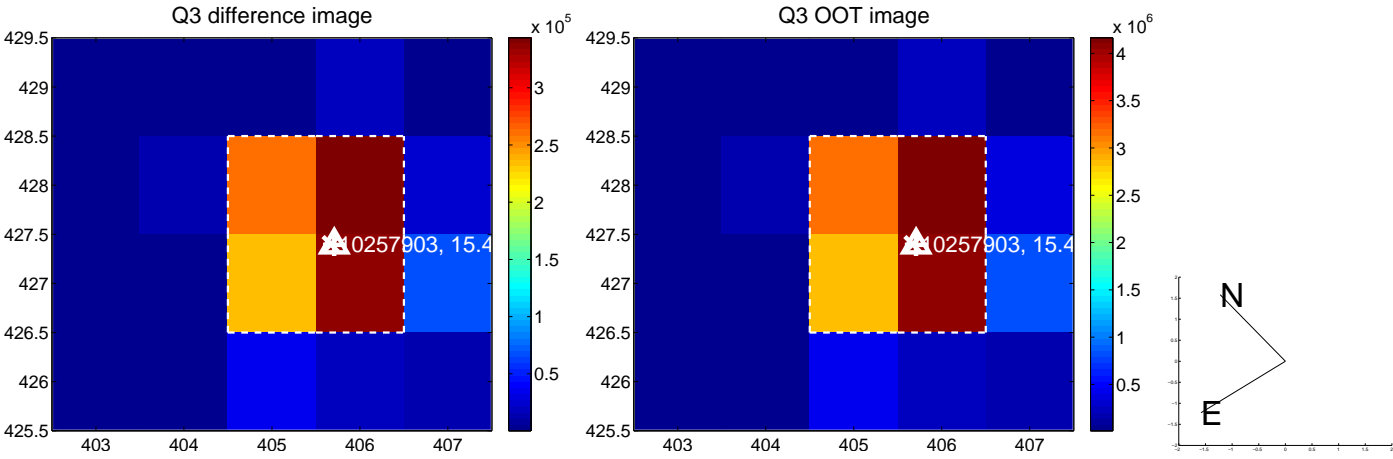
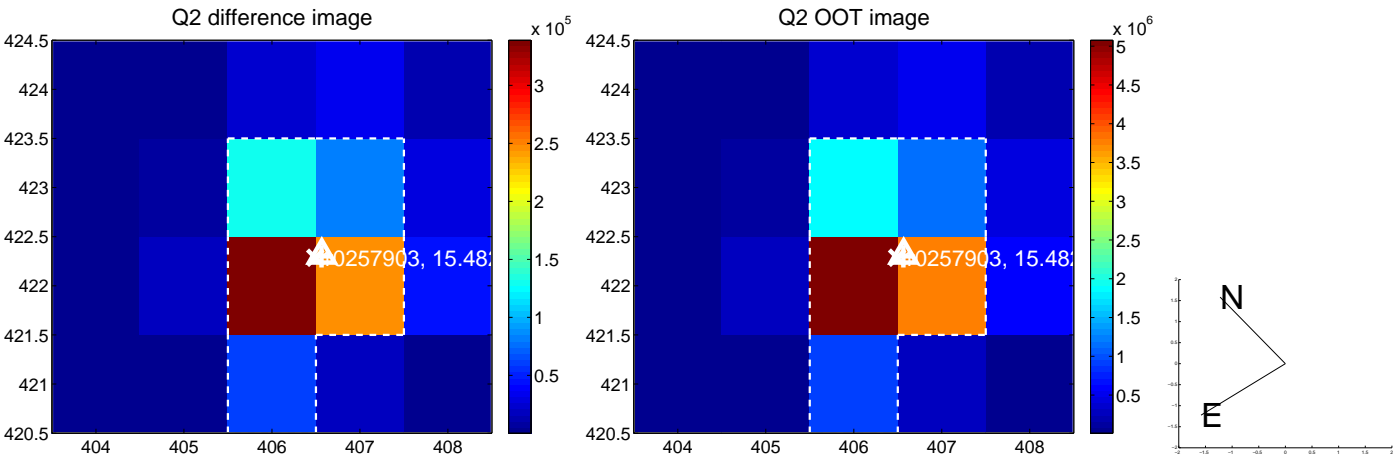
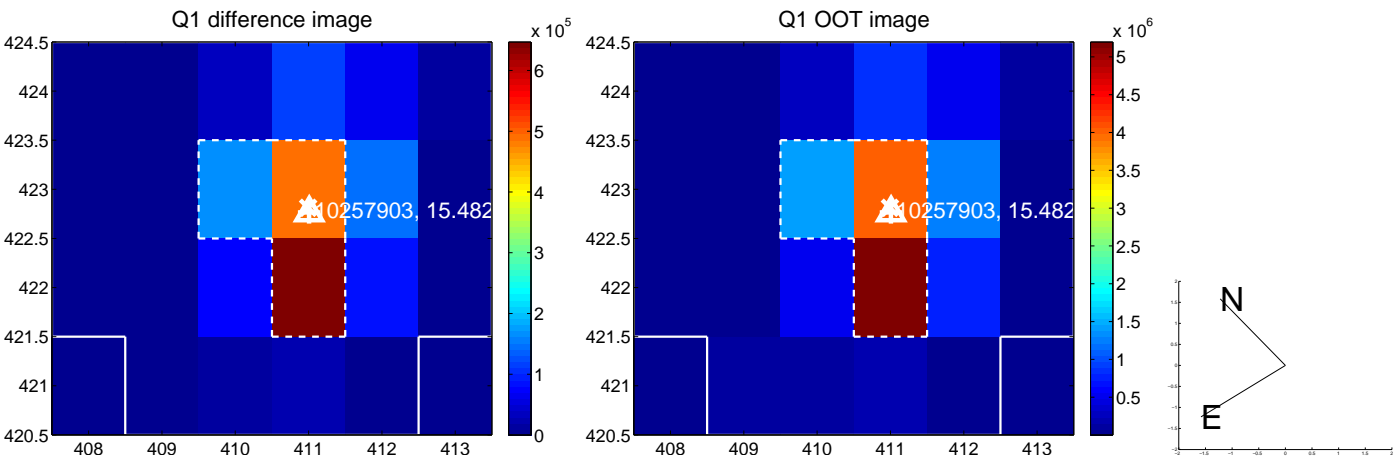
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.12	-0.008 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.157 ± 0.070	2.25	-0.081 ± 0.075	-0.134 ± 0.067
photometric centroid source offset	0.35 ± 0.07	4.76	0.00 ± 0.07	-0.35 ± 0.07

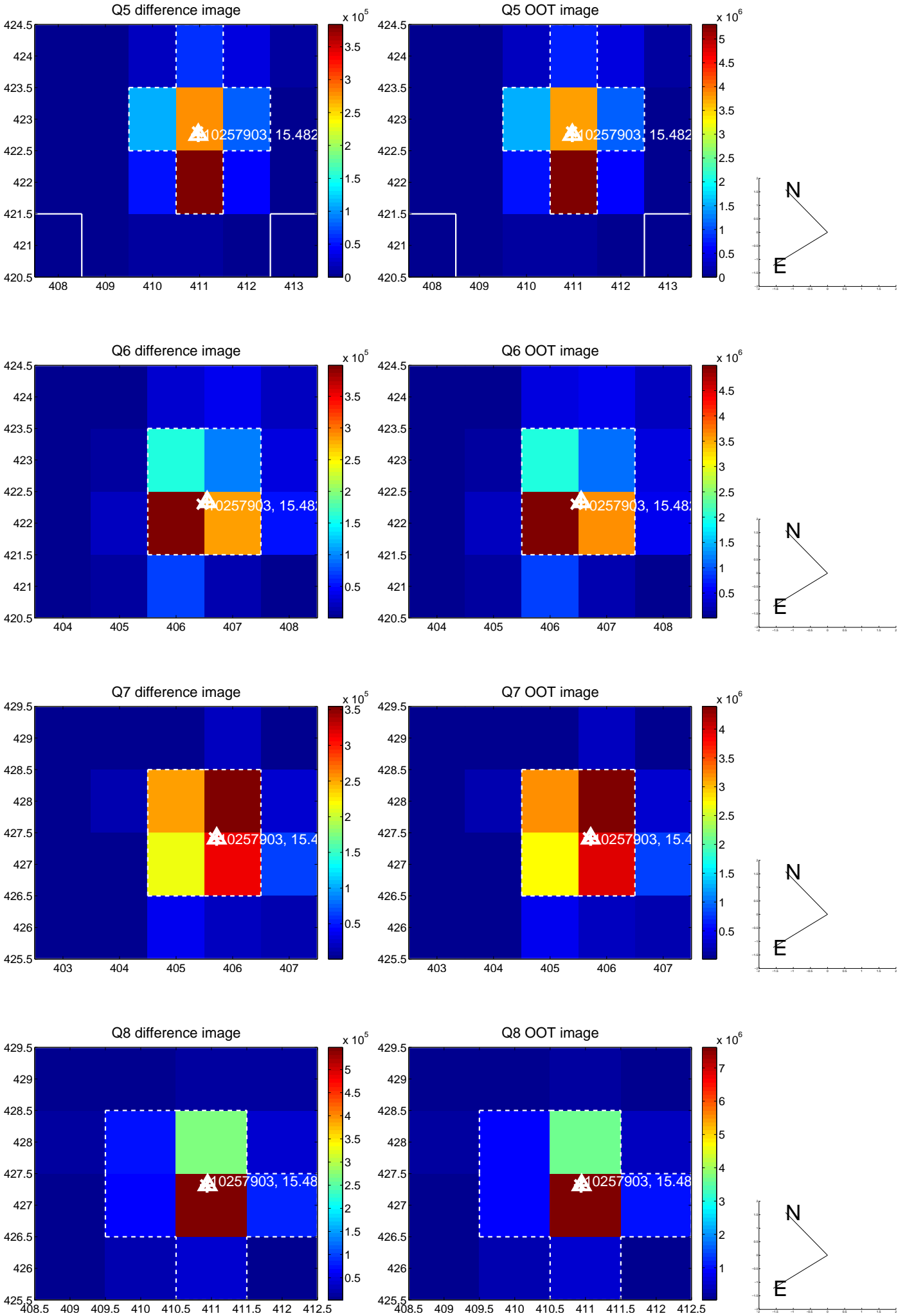


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

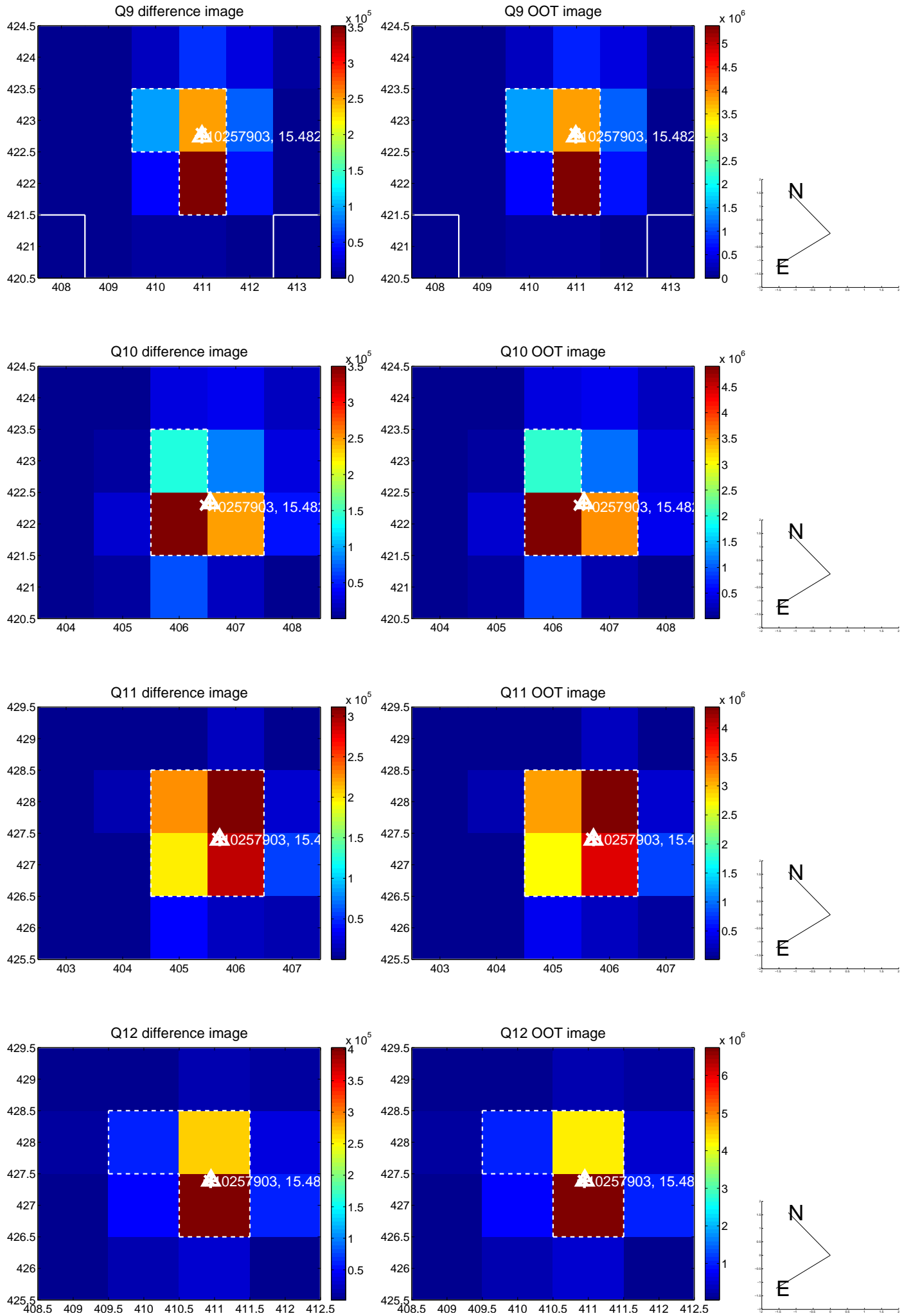
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



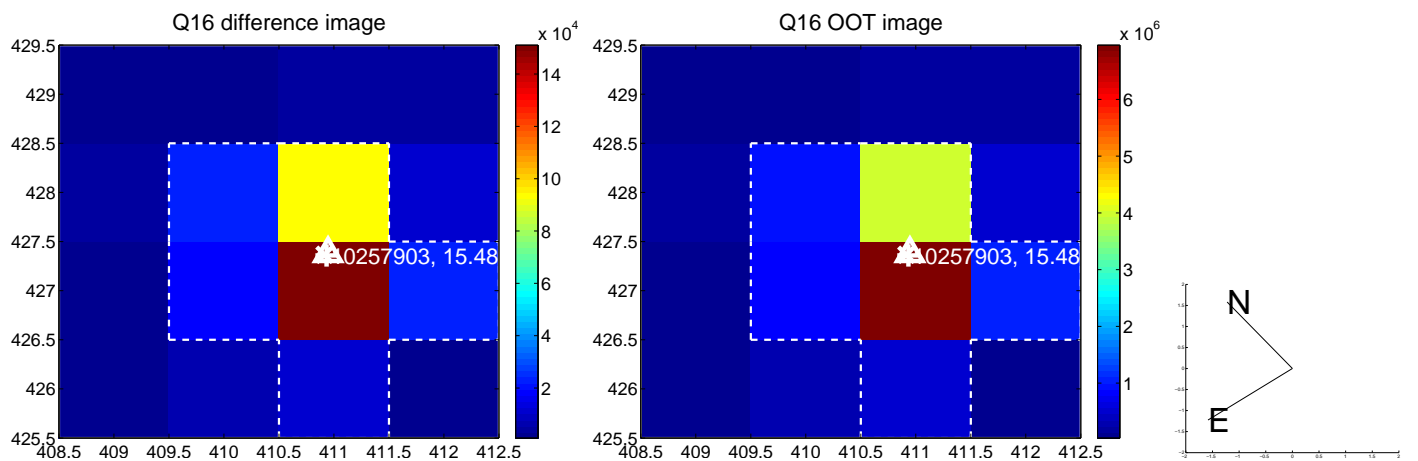
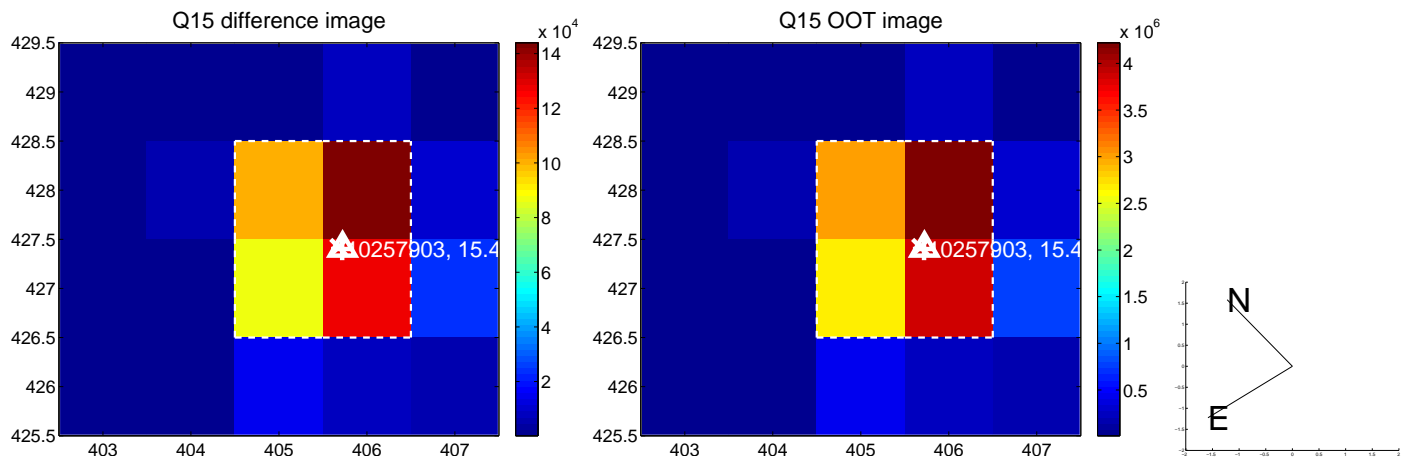
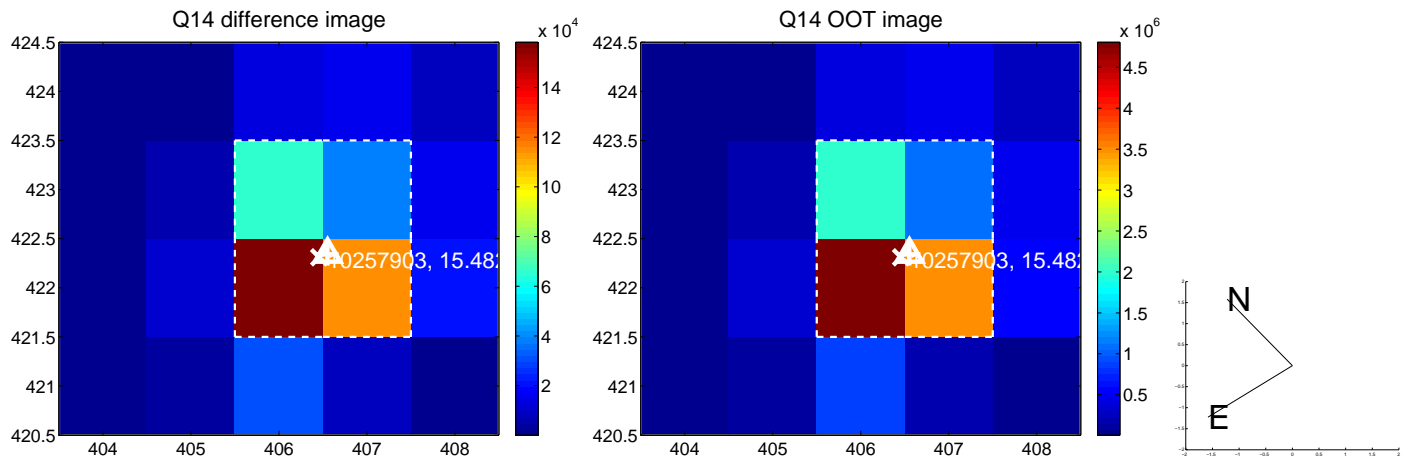
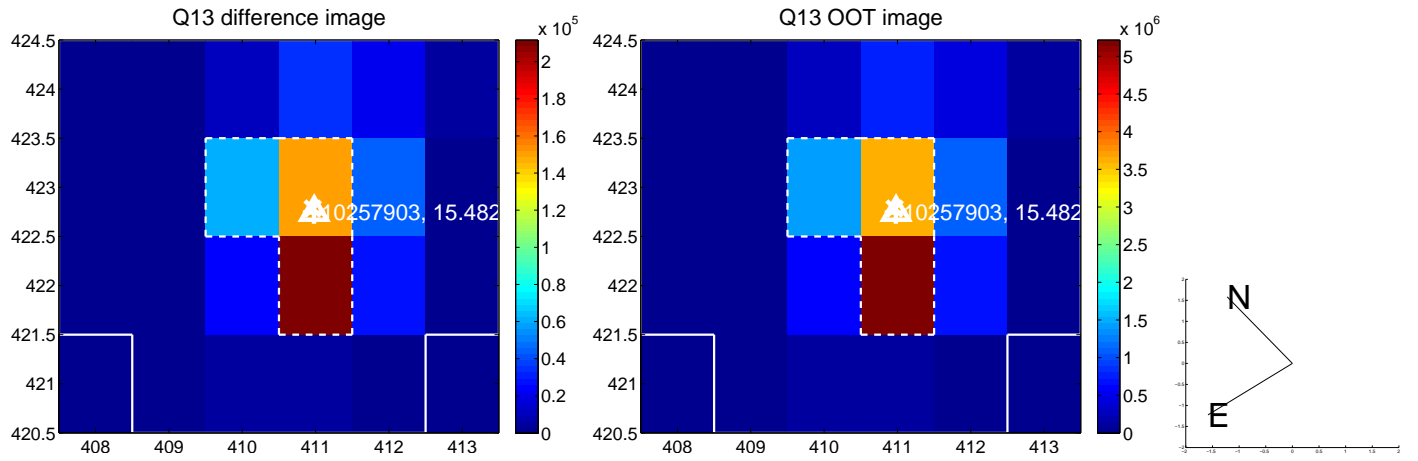
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



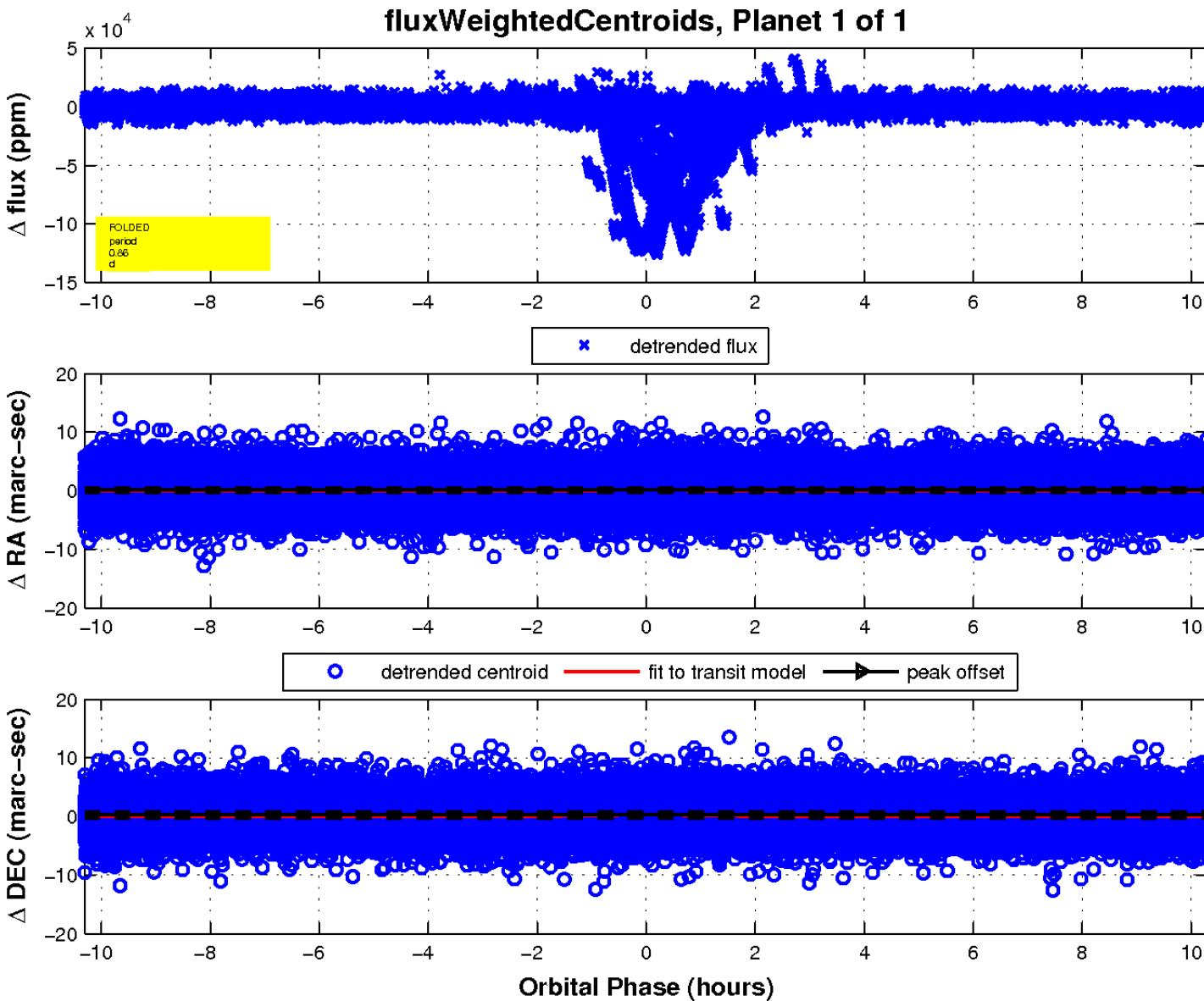
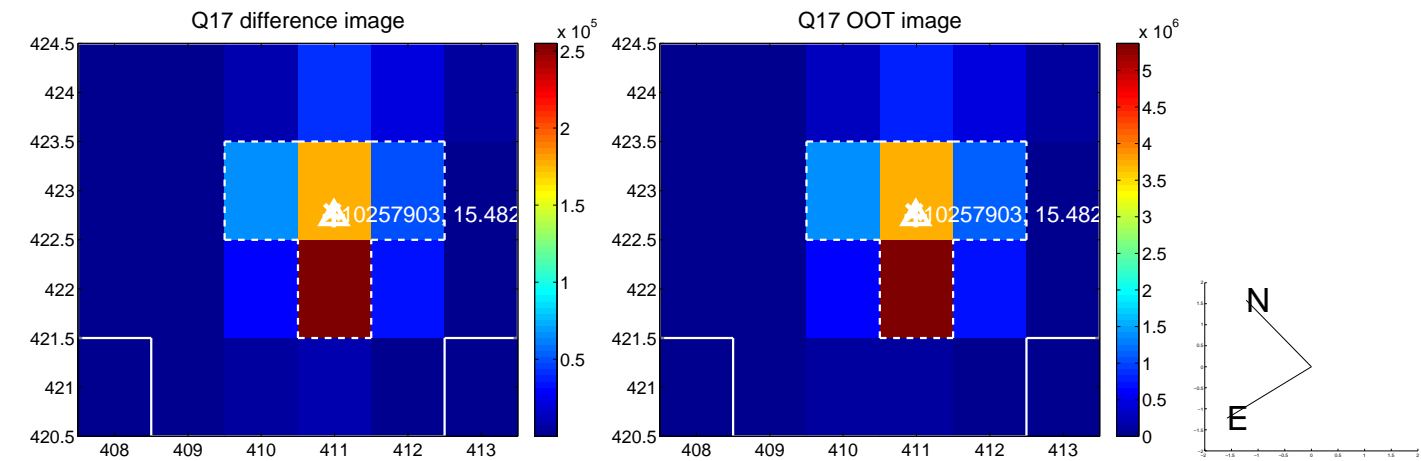
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UKIRT Image

Declination

