

KIC 004951877

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})
004951877-01	OBS	0501.01	24.796294	145.528798	575.3	8.483	33.1	35.4	1.14	5770	2.93	45.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004951877-01	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.

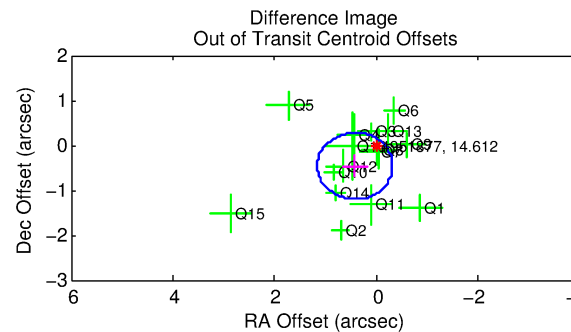
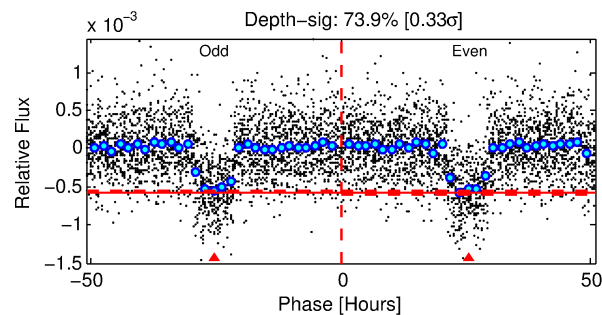
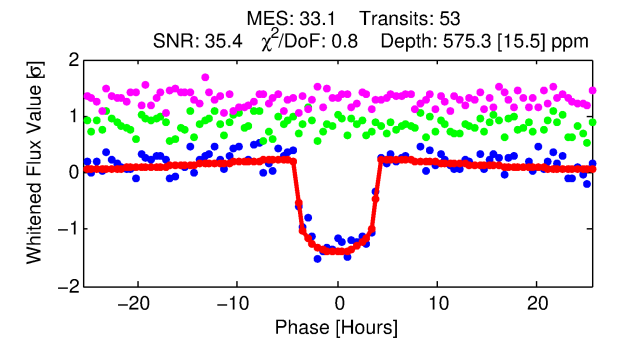
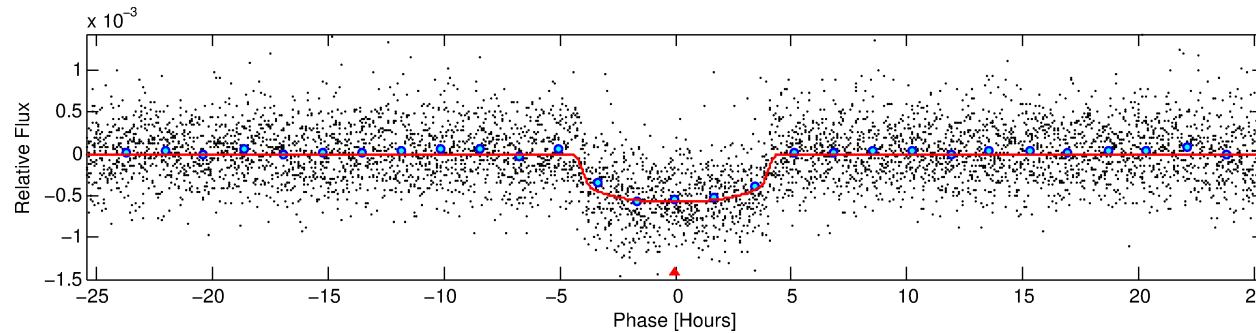
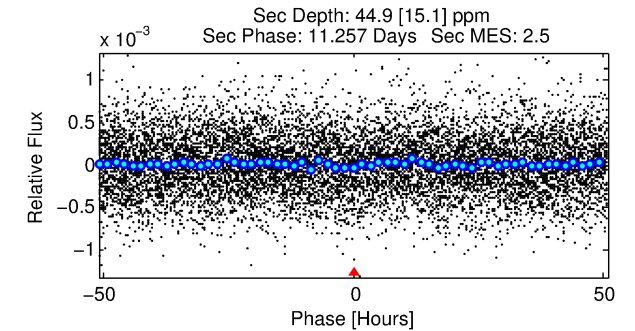
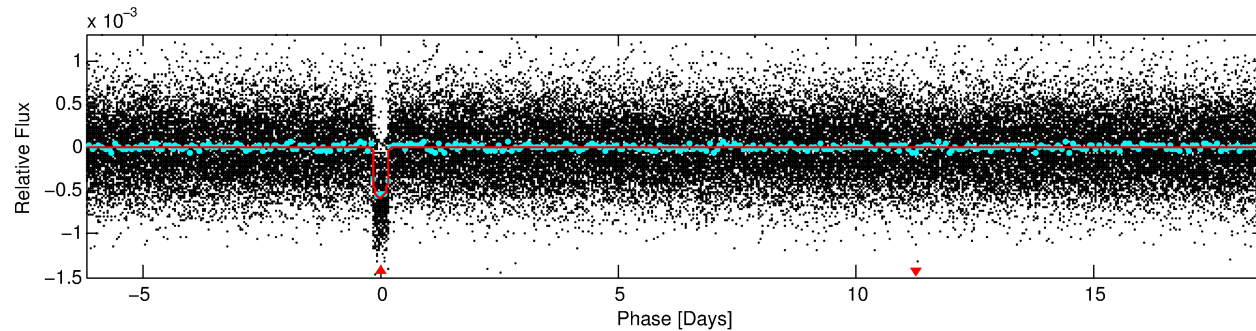
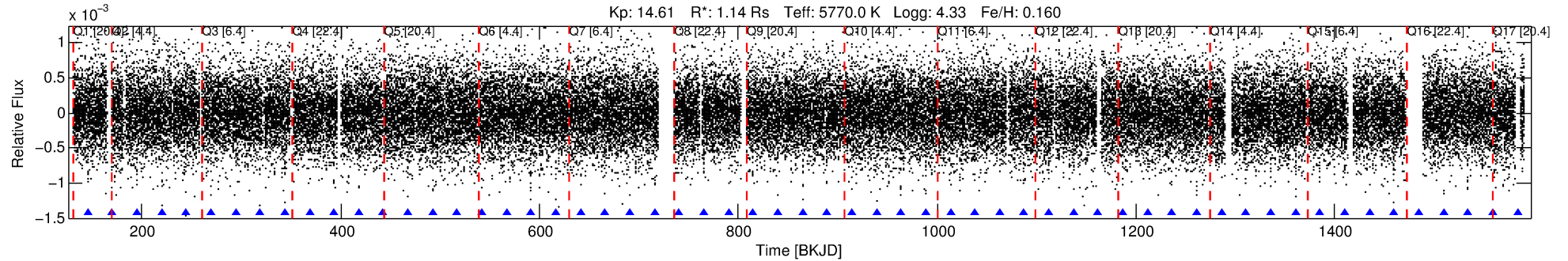
Ephemeris Match Information For 004951877-01

No Significant Match Found

DV One-Page Summary

KIC: 4951877 Candidate: 1 of 1 Period: 24.796 d

KOI: K00501.01 Corr: 0.997



DV Fit Results:

Period = 24.79629 [0.00012] d
Epoch = 145.5288 [0.0038] BKJD
Rp/R* = 0.0235 [0.0032]
a/R* = 16.53 [9.74]
b = 0.71 [0.42]
Seff = 45.98 [9.61]
Teff = 664 [35] K
Rp = 2.93 [0.63] Re
a = 0.1677 [0.0233] AU
Ag = 80.99 [38.83] [2.06σ]
Teffp = 3080 [337] K [7.12σ]

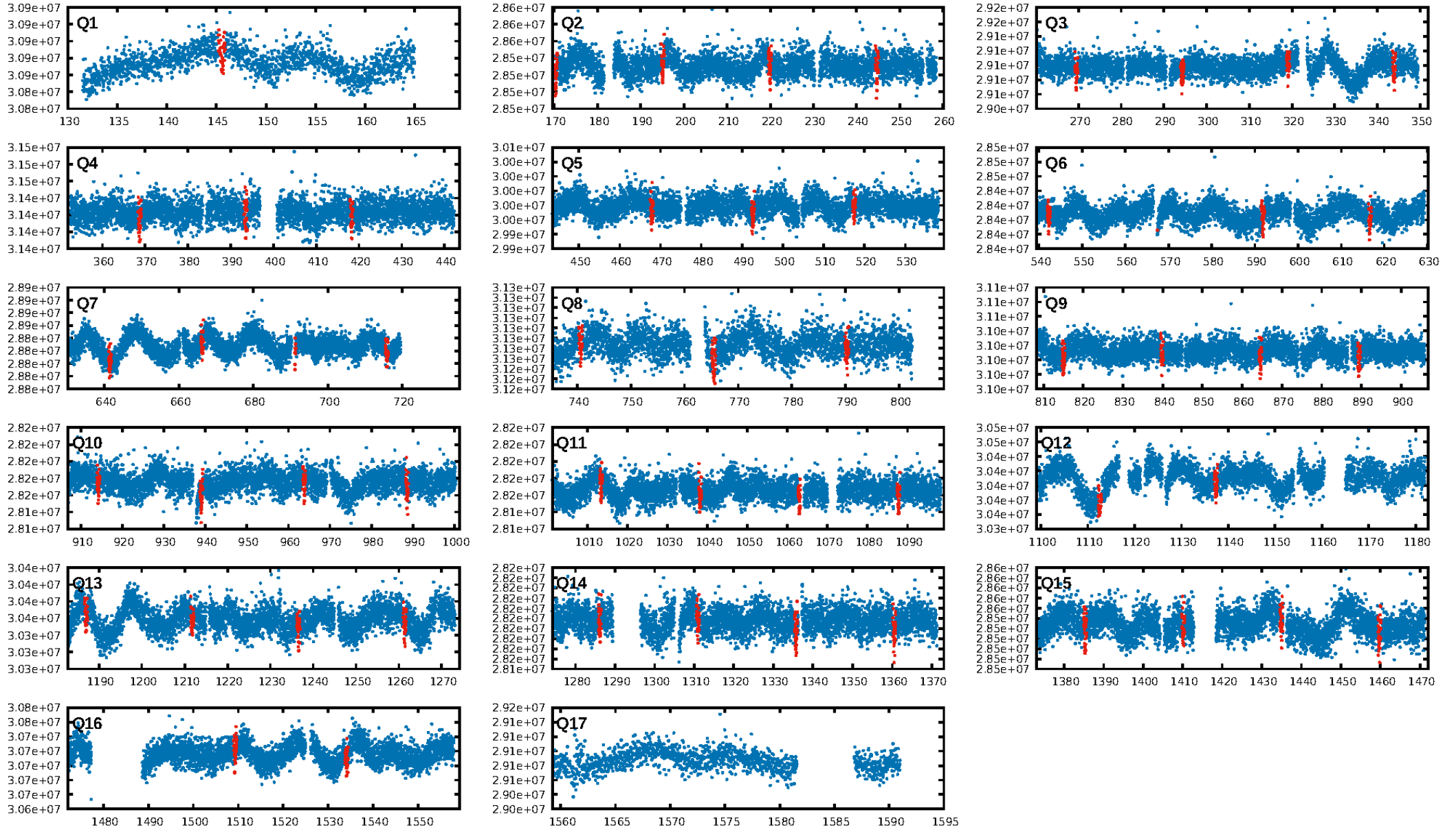
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.40e-238
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 2.881
Centroid-sig: 0.1%
Centroid-so: 1.037 arcsec [3.05σ]
OotOffset-rm: 0.627 arcsec [2.53σ]
KicOffset-rm: 0.675 arcsec [2.65σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

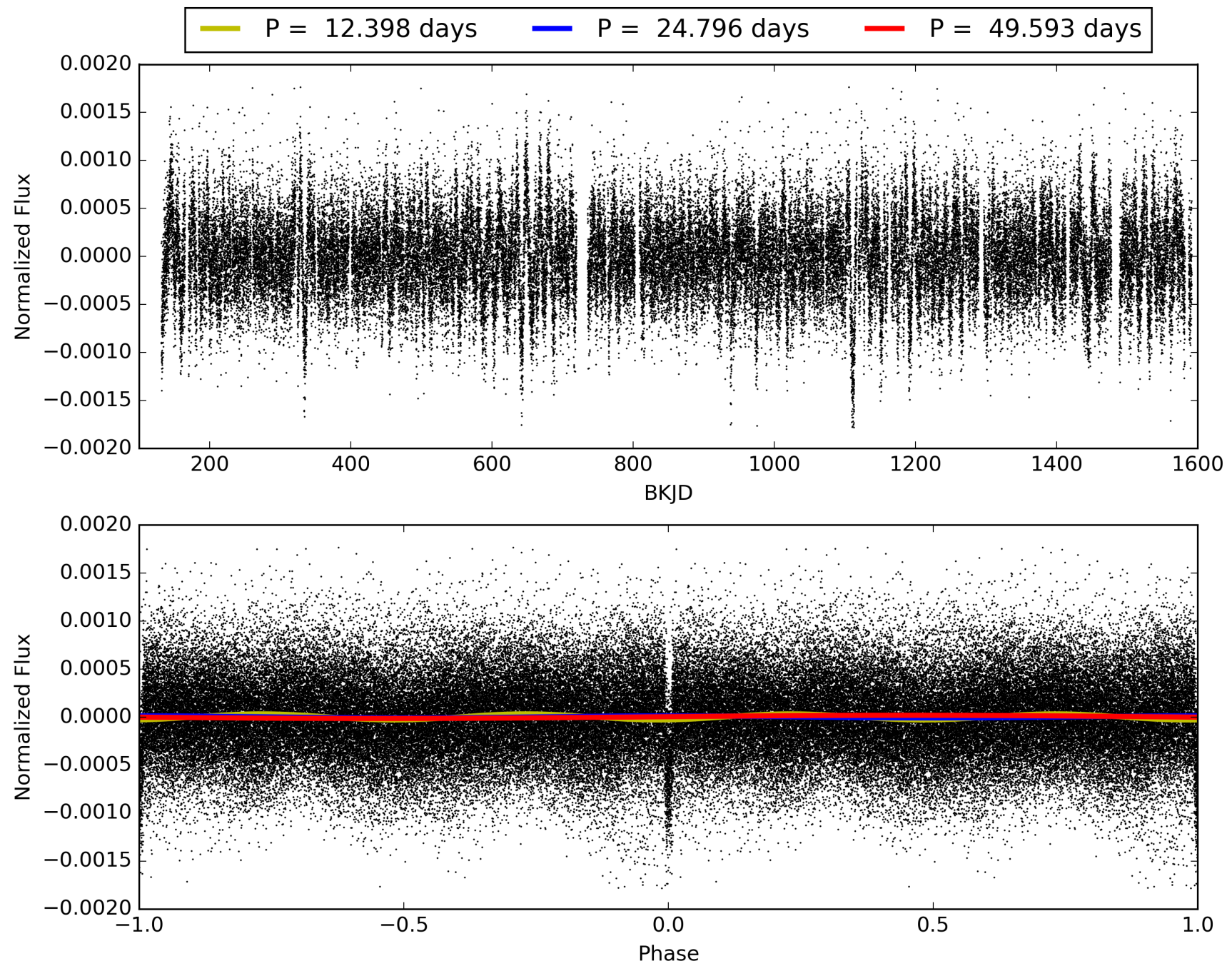
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:15:48 Z

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

TCE 004951877-01, PDC Light Curves

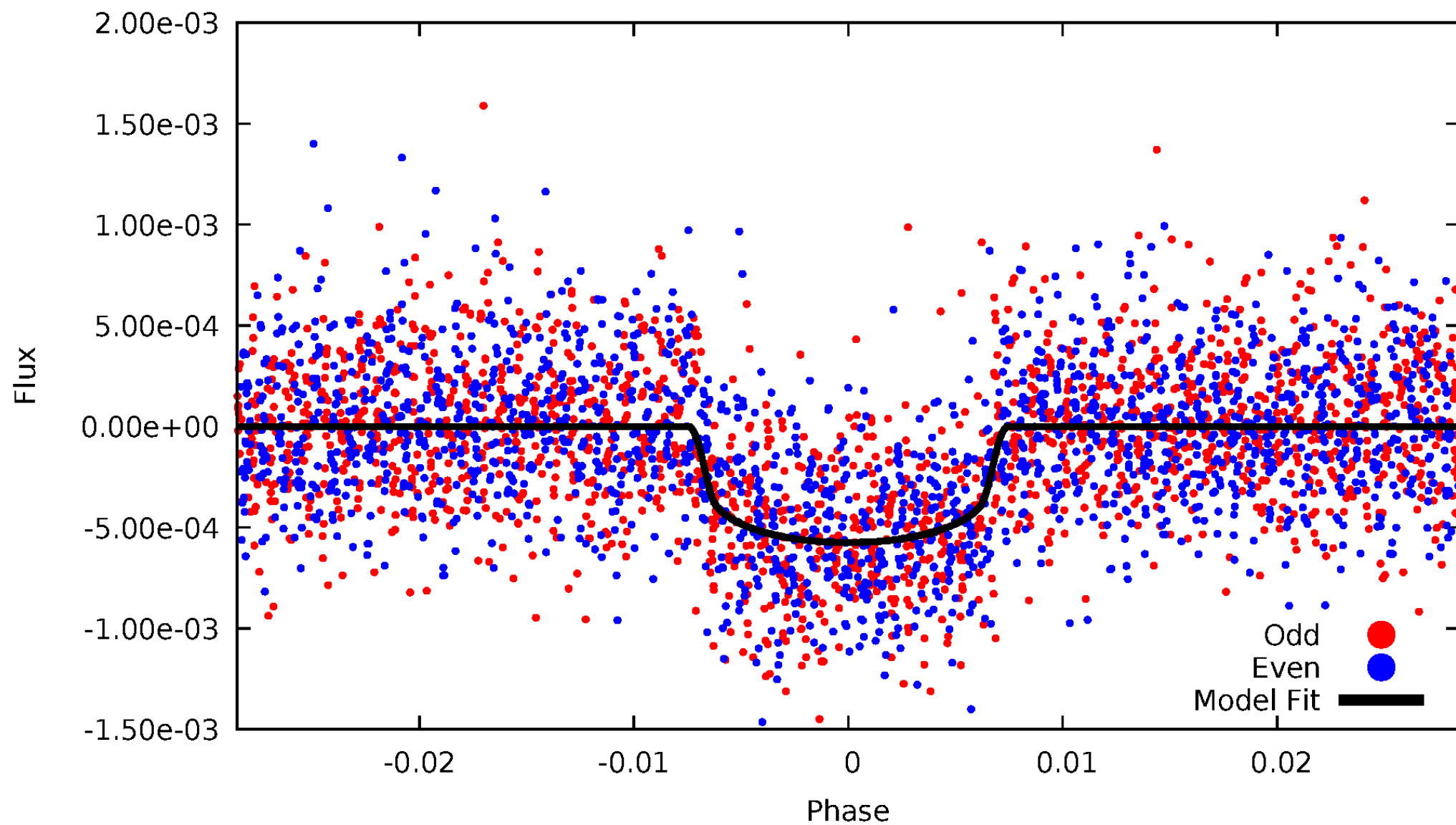


TCE 004951877-01



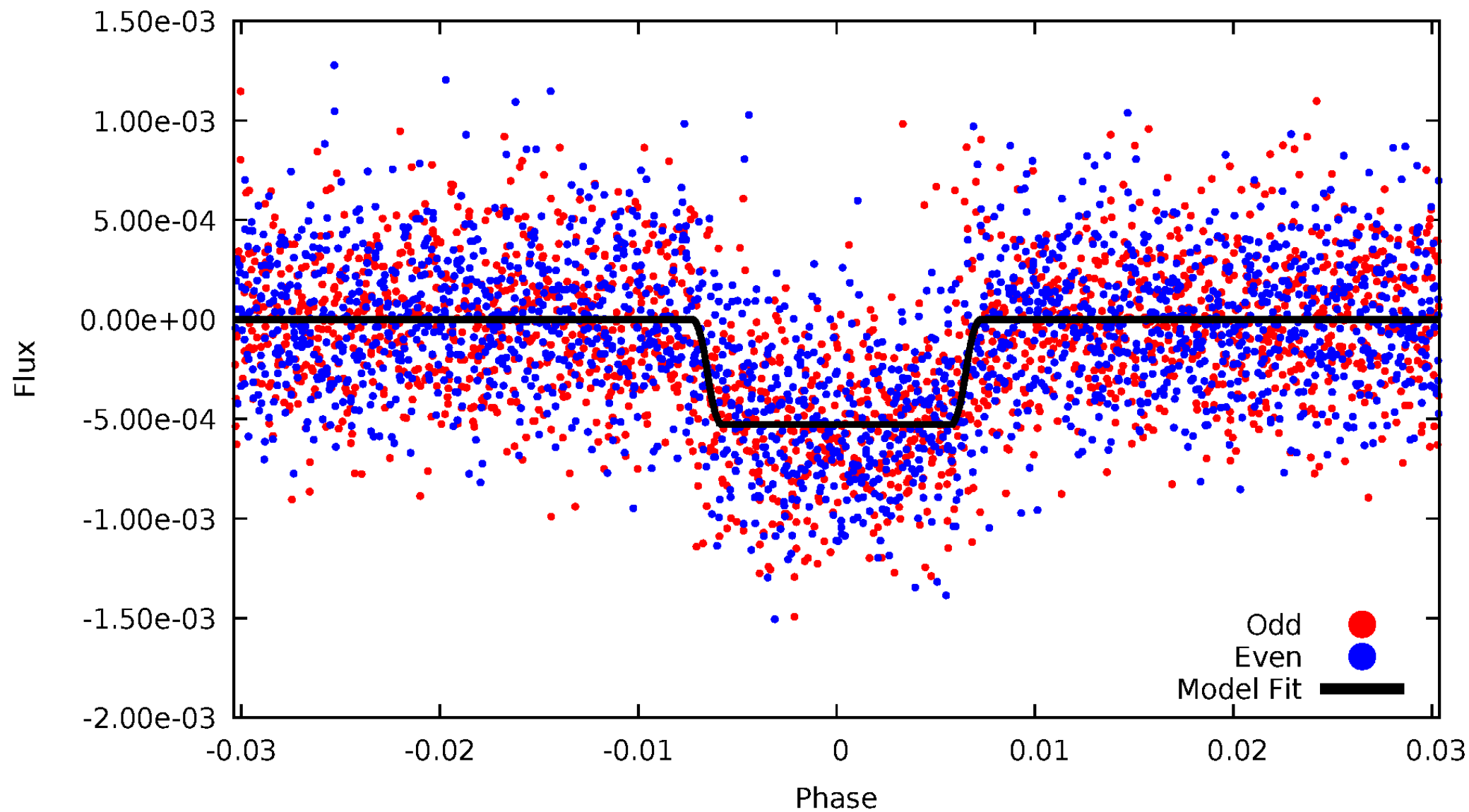
DV Odd/Even

TCE 004951877-01



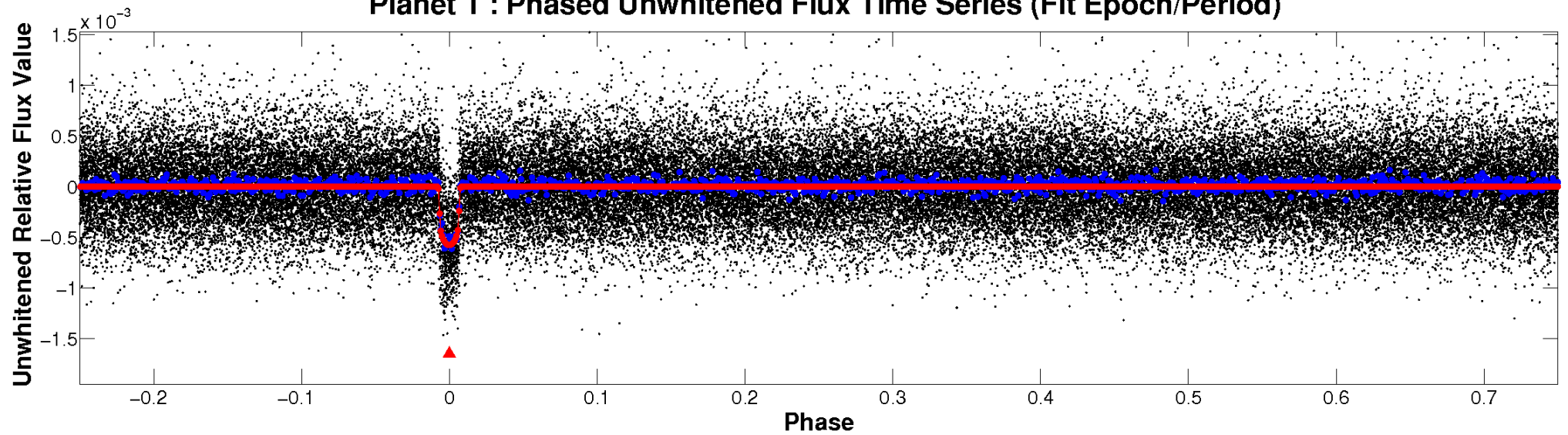
ALT Odd/Even

TCE 004951877-01

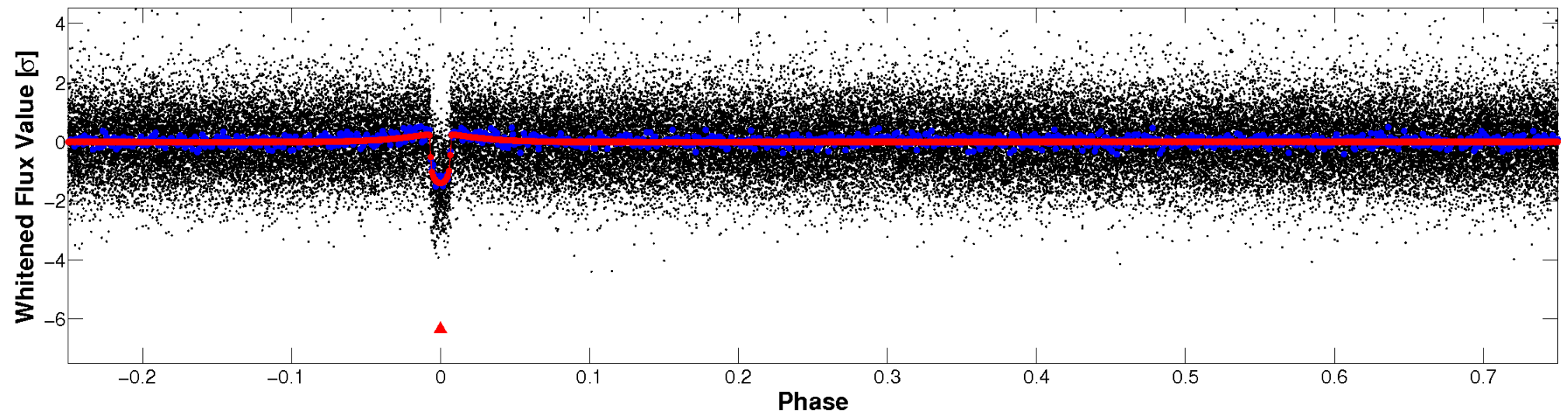


Non-Whitened Vs. Whitened Light Curve

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

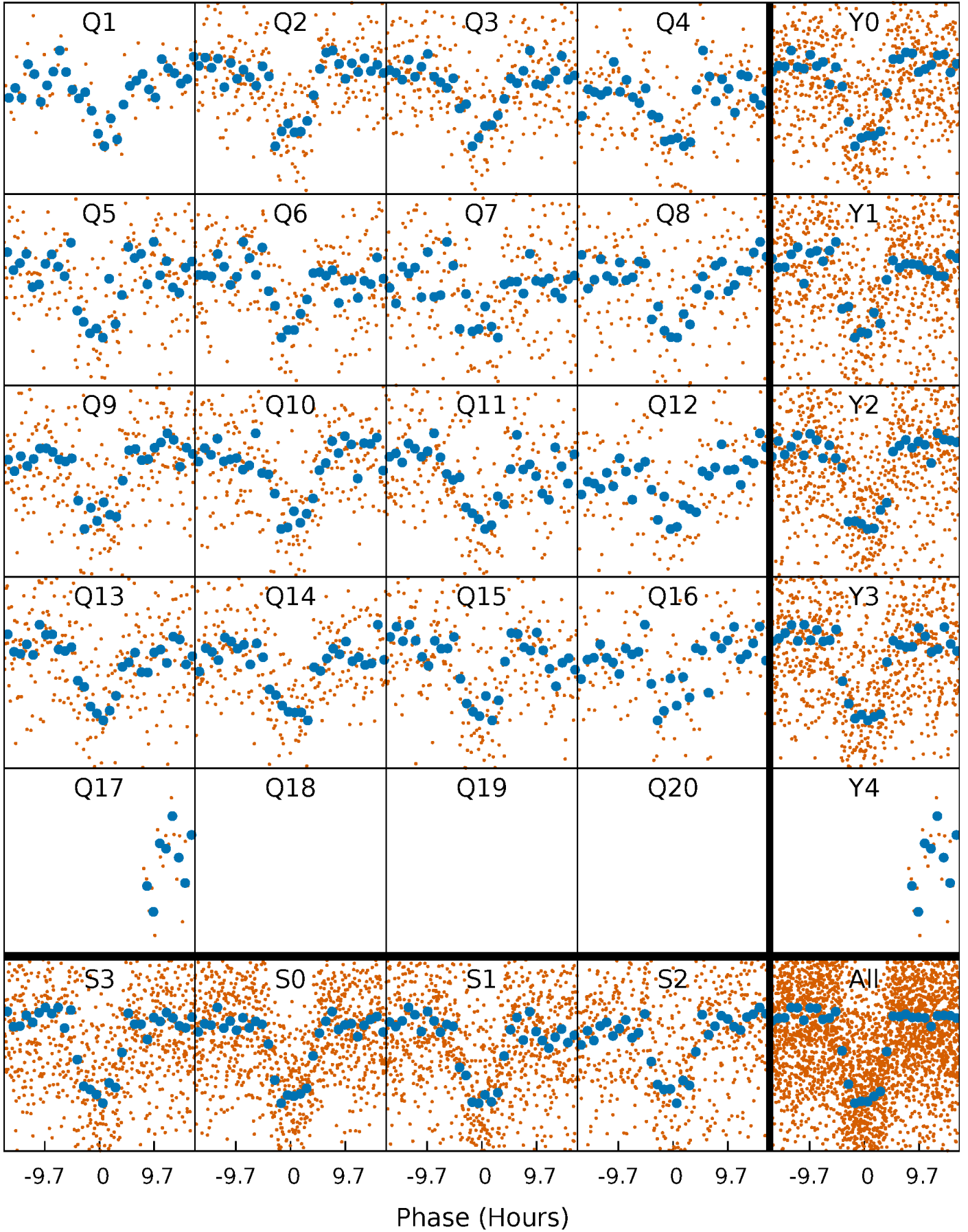


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



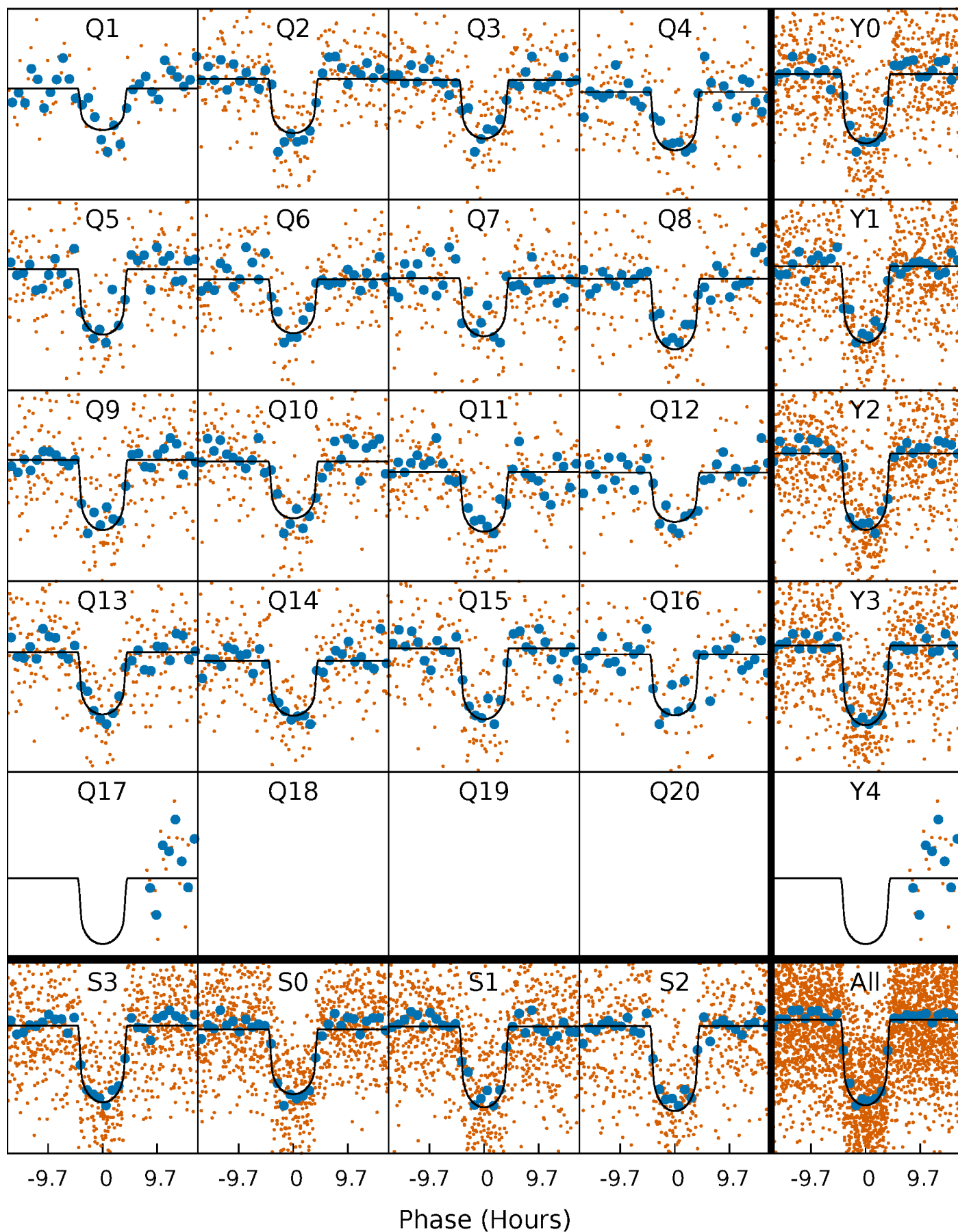
PDC Quarter-Phased Transit Curves

TCE 004951877-01 P= 24.796294 Days $T_0=145.528798$ (BKJD)



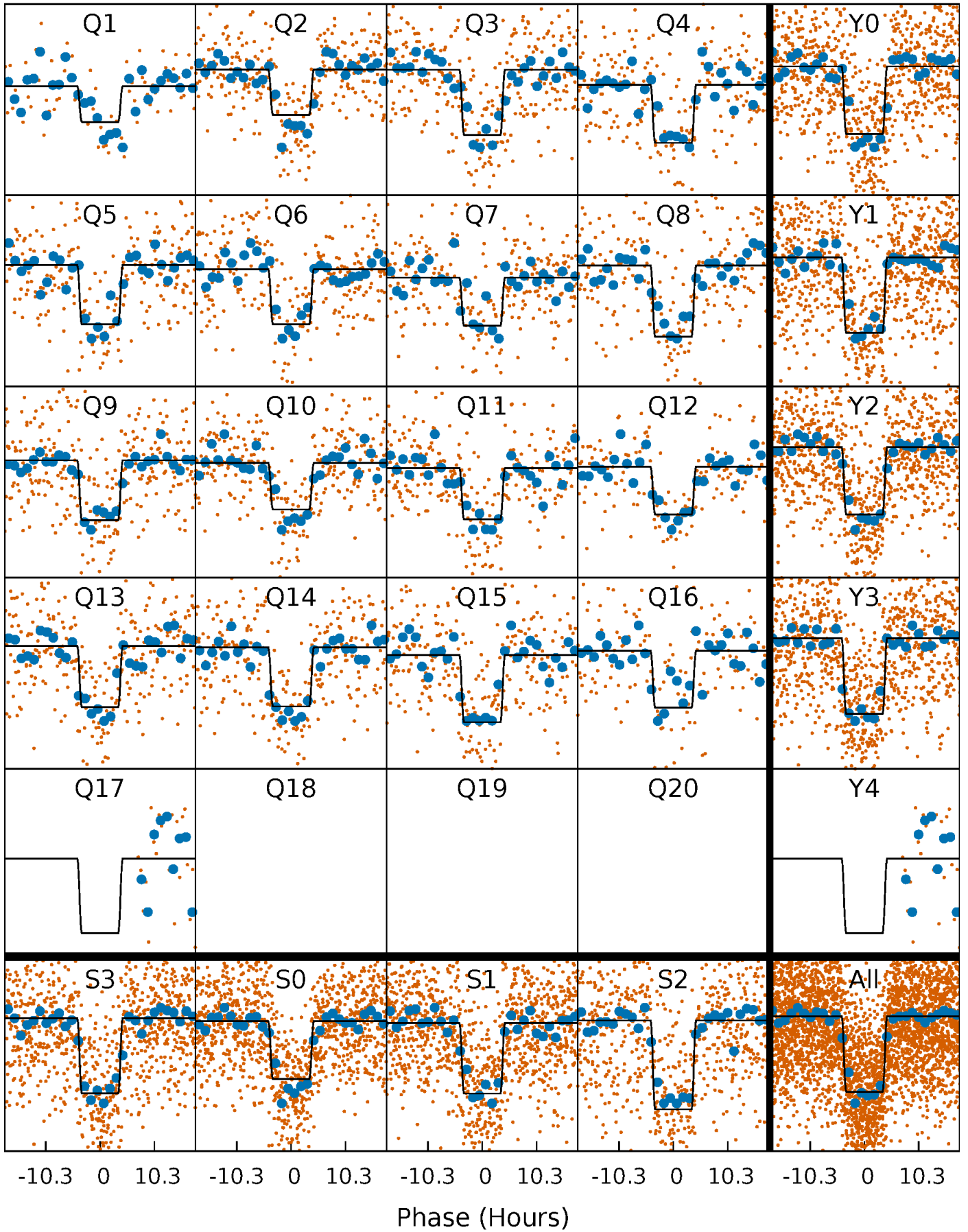
DV Quarter-Phased Transit Curves

TCE 004951877-01 P= 24.796294 Days $T_0=145.528798$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

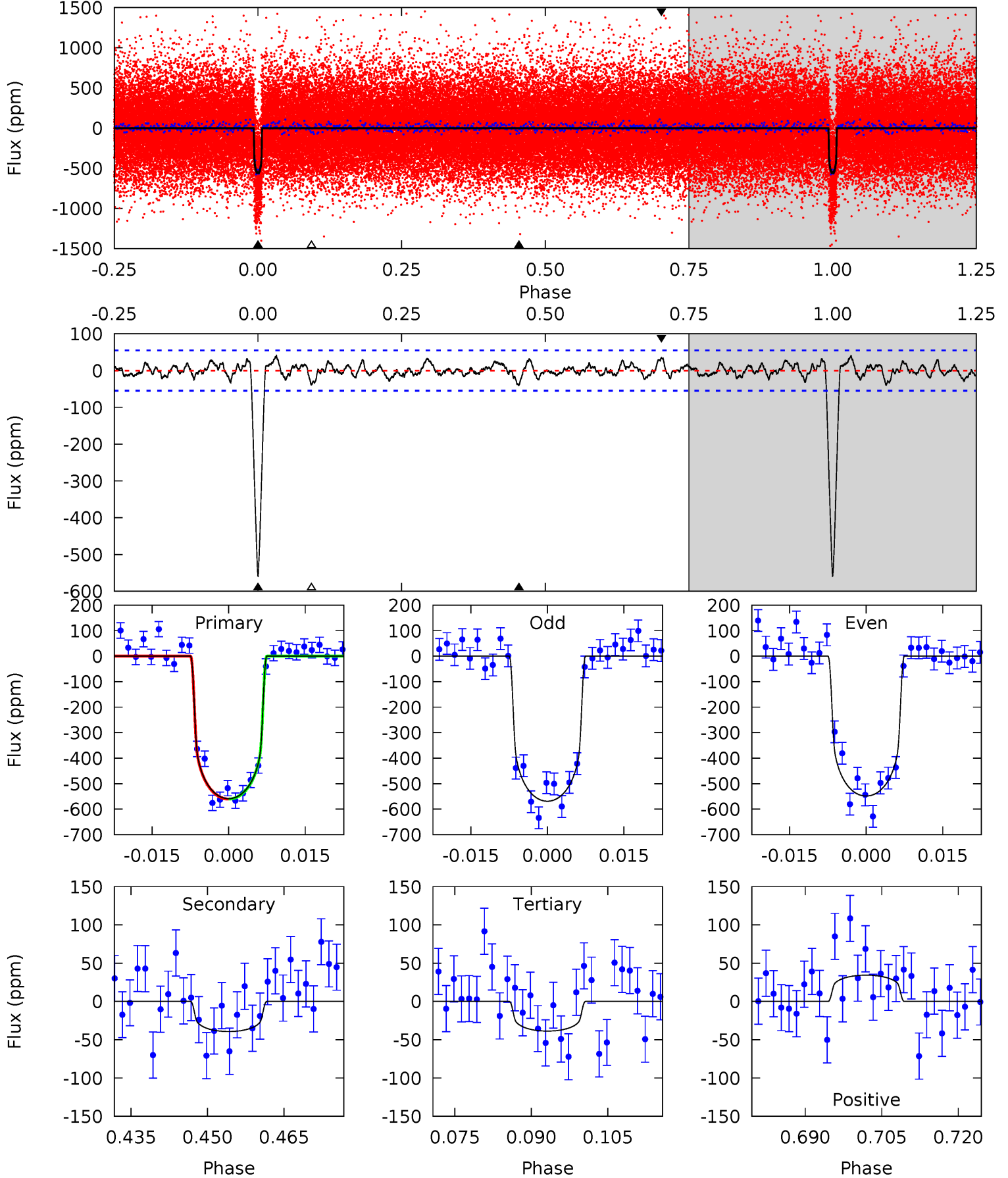
TCE 004951877-01 P= 24.797215 Days $T_0=145.502888$ (BKJD)



DV Model-Shift Uniqueness Test

004951877-01, $P = 24.796294$ Days, $E = 120.732504$ Days

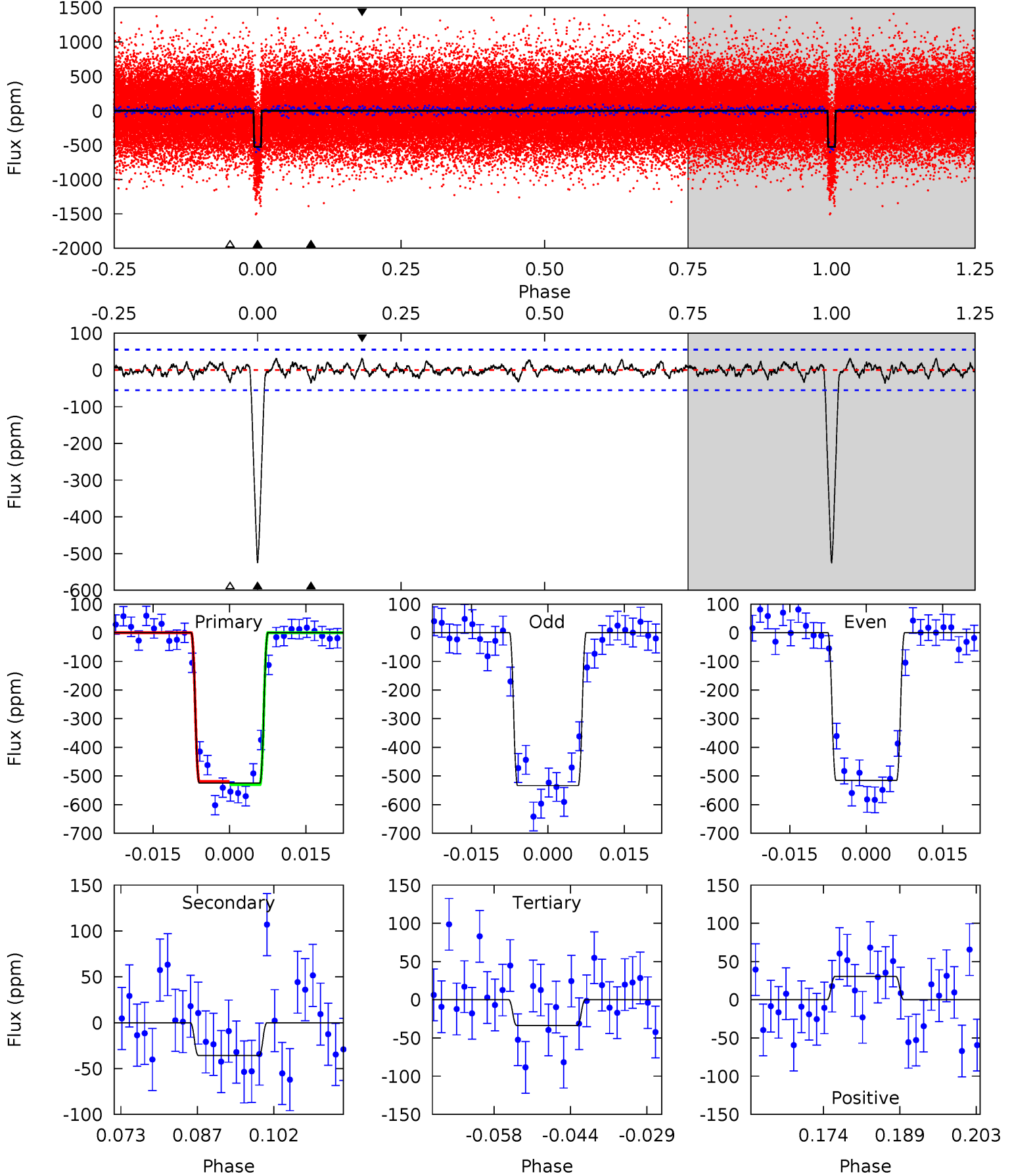
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	3.54	3.49	3.09	4.95	2.43	1.19	46.8	47.2	0.05	0.45	0.92	1.00	0.07	0.02



Alt Model-Shift Uniqueness Test

004951877-01, $P = 24.797215$ Days, $E = 120.705673$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.1	3.21	3.02	2.75	4.95	2.44	0.91	44.1	44.3	0.19	0.46	0.83	1.03	0.06	0.48



Stellar Parameters For KIC 004951877

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5770^{+78}_{-78}	$4.333^{+0.110}_{-0.110}$	$0.160^{+0.150}_{-0.150}$	$1.141^{+0.189}_{-0.138}$	$1.020^{+0.074}_{-0.062}$	$0.969^{+0.481}_{-0.322}$
	+1%/-1%	+3%/-3%	+94%/-94%	+17%/-12%	+7%/-6%	+50%/-33%
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 004951877-01 / KOI 0501.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-39 ± 11	$2.92^{+0.50}_{-0.46}$	928^{+39}_{-38}	3458^{+234}_{-205}	69^{+39}_{-24}
Alt.	-36 ± 11	$2.85^{+0.49}_{-0.46}$	928^{+41}_{-35}	3439^{+240}_{-230}	68^{+35}_{-26}

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 $A_{obs} \gg 1.0$

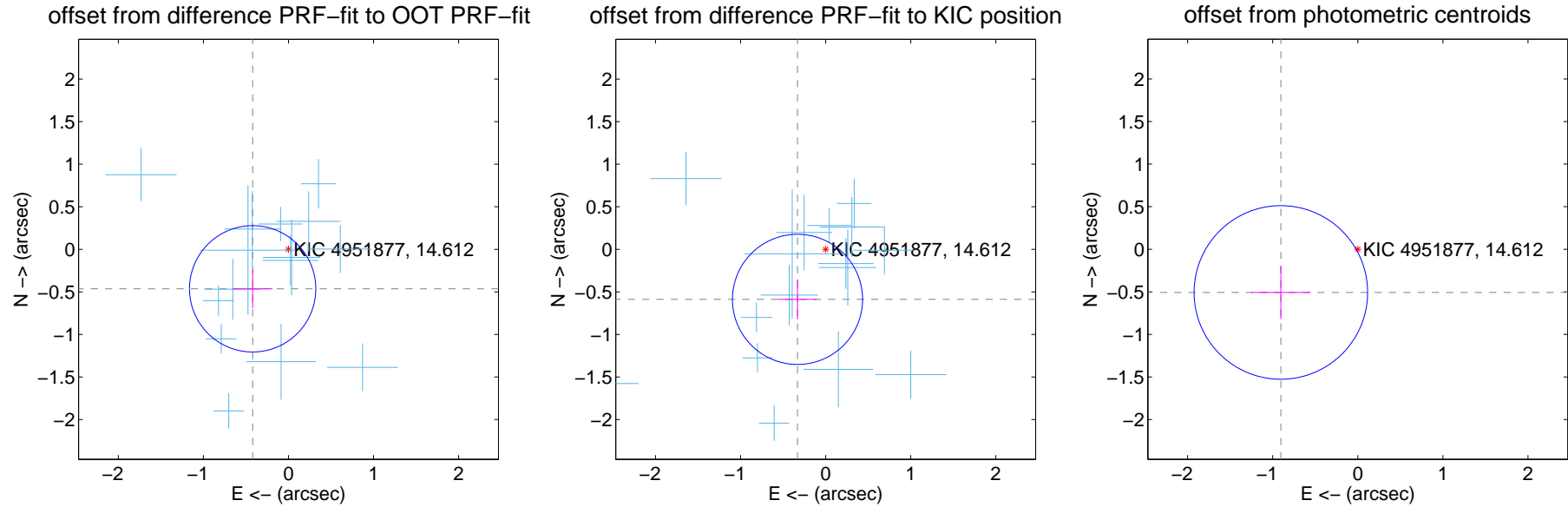
DV Centroid Data

Supplemental centroid analysis for 004951877-01. Kepler magnitude: 14.61. Transit SNR 35.41

There are 16 quarters with good PRF difference image offsets

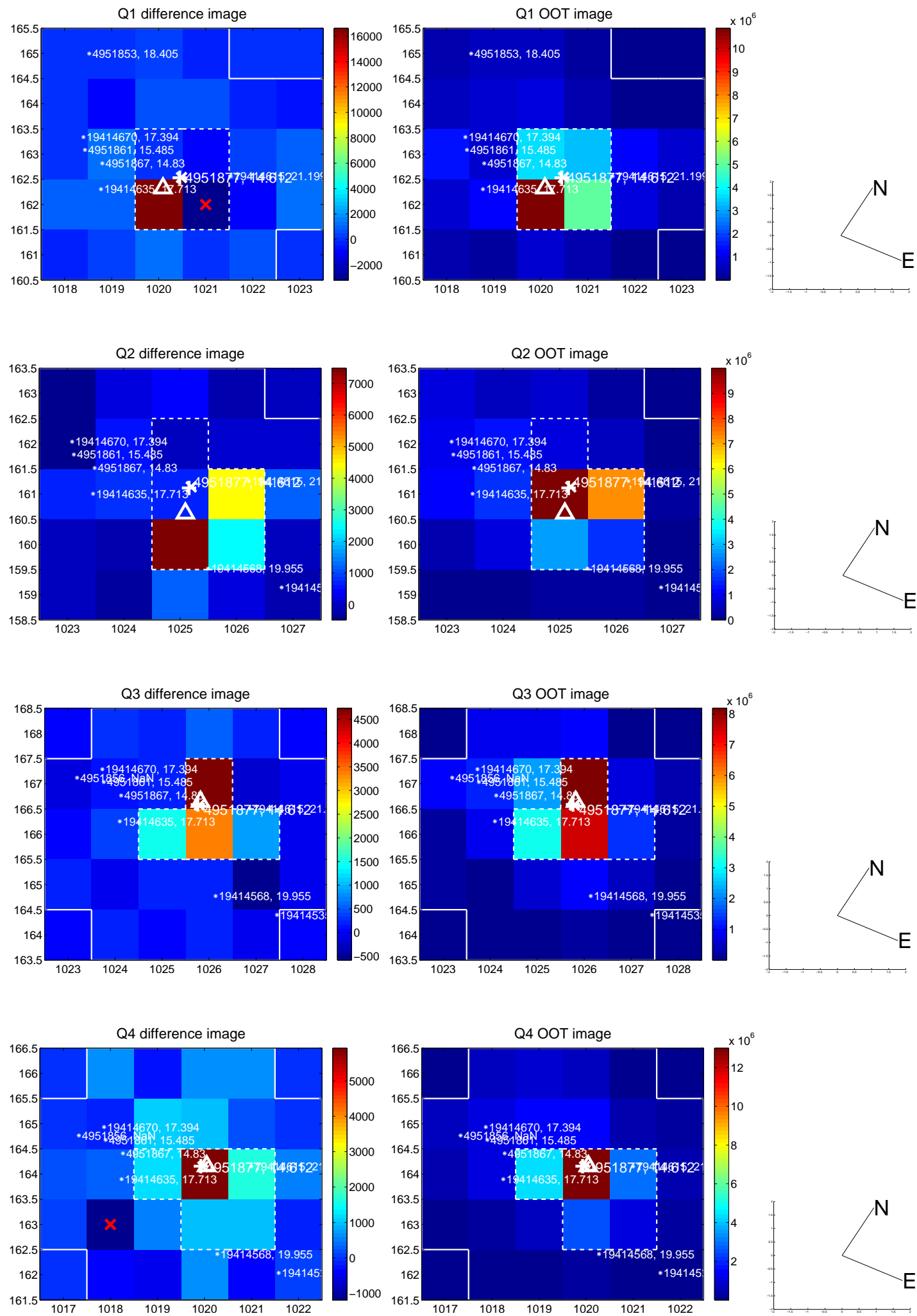
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.627 ± 0.247	2.53	0.421 ± 0.234	-0.464 ± 0.227
PRF-fit source offset from KIC position	0.675 ± 0.255	2.65	0.331 ± 0.225	-0.588 ± 0.235
photometric centroid source offset	1.04 ± 0.34	3.05	0.90 ± 0.35	-0.51 ± 0.31

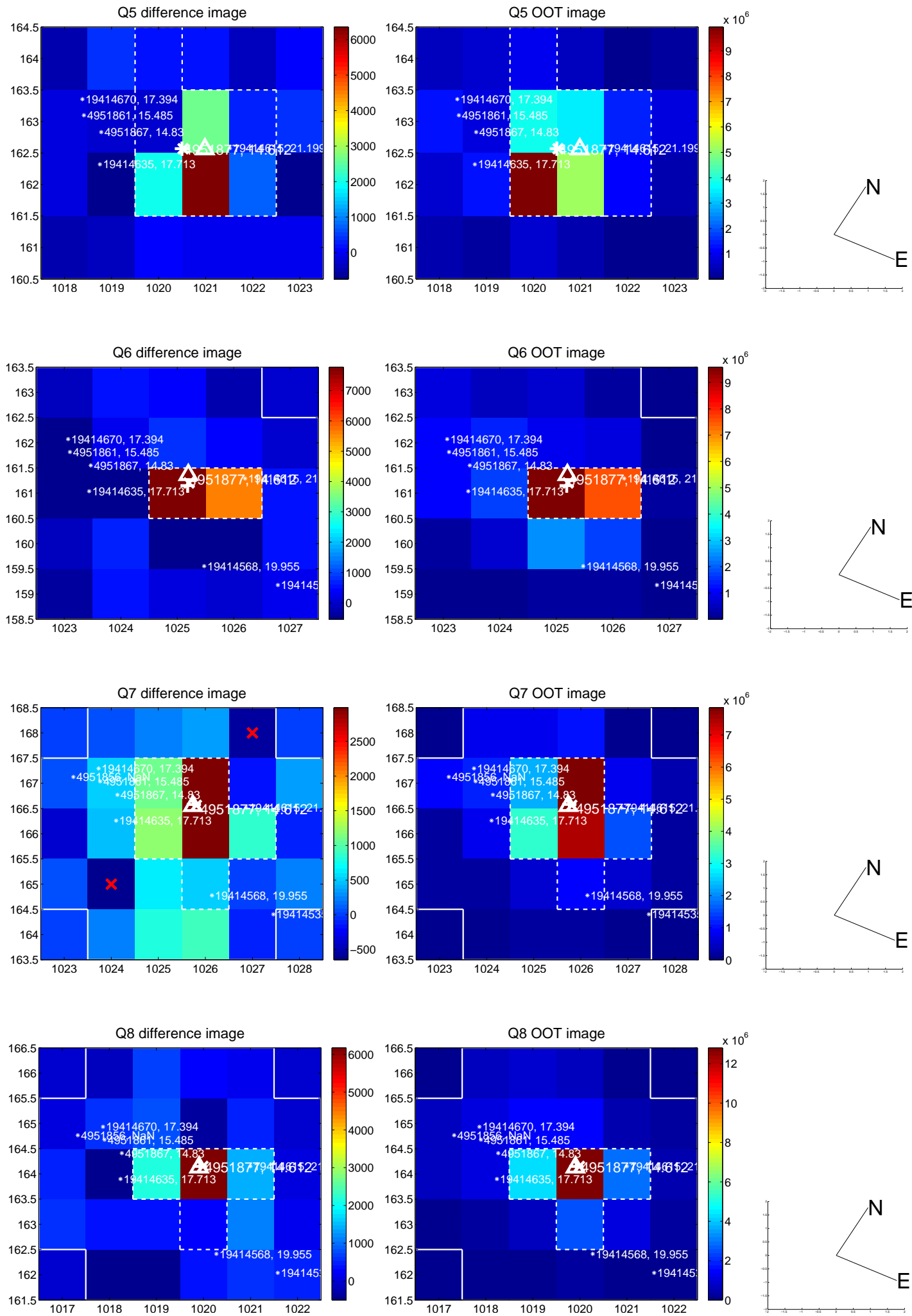


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

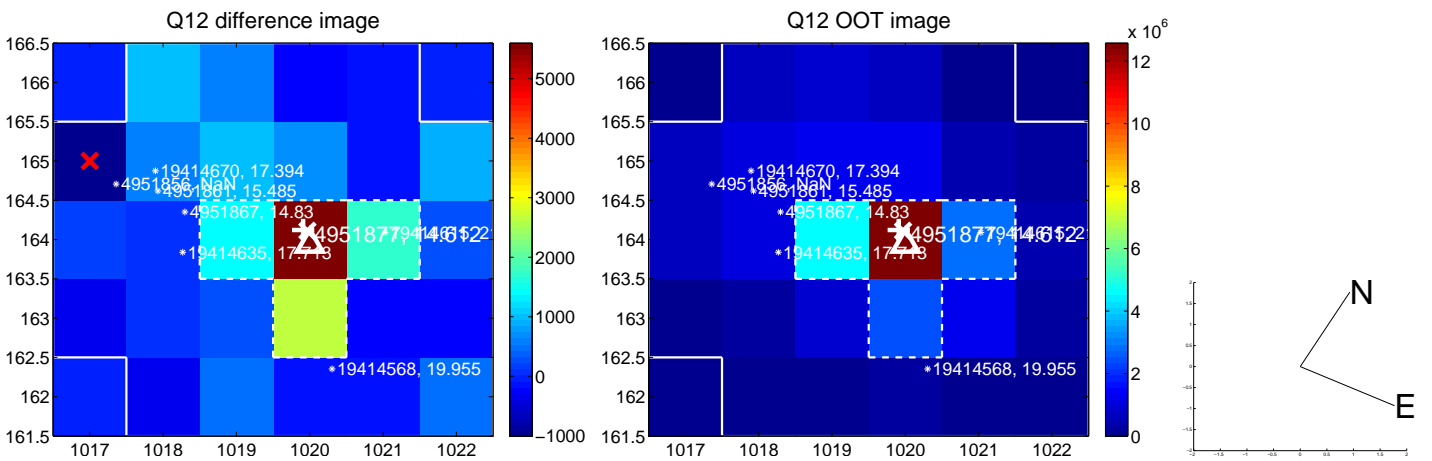
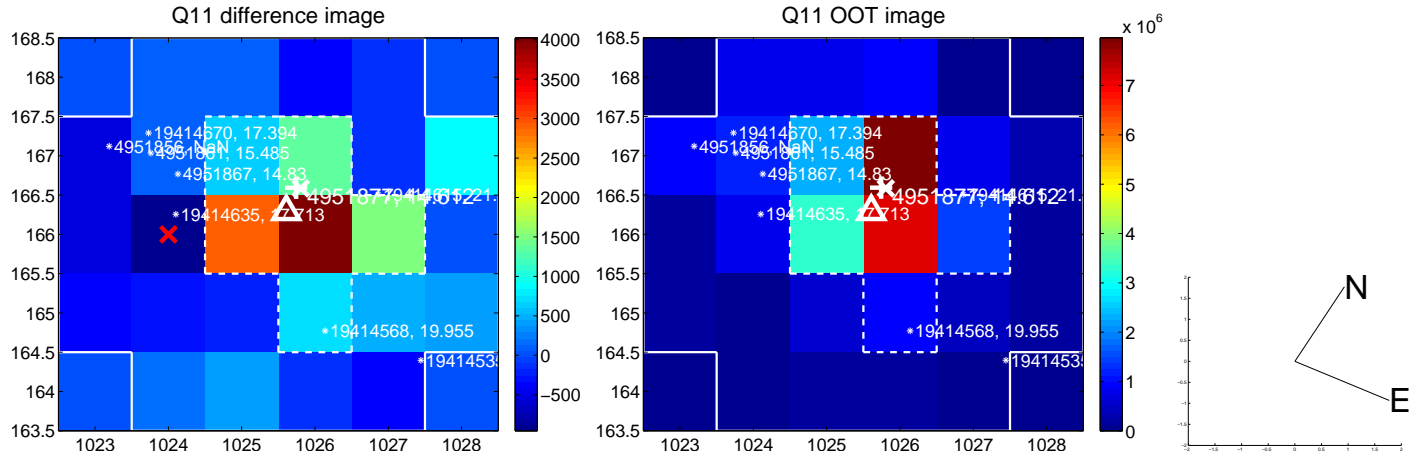
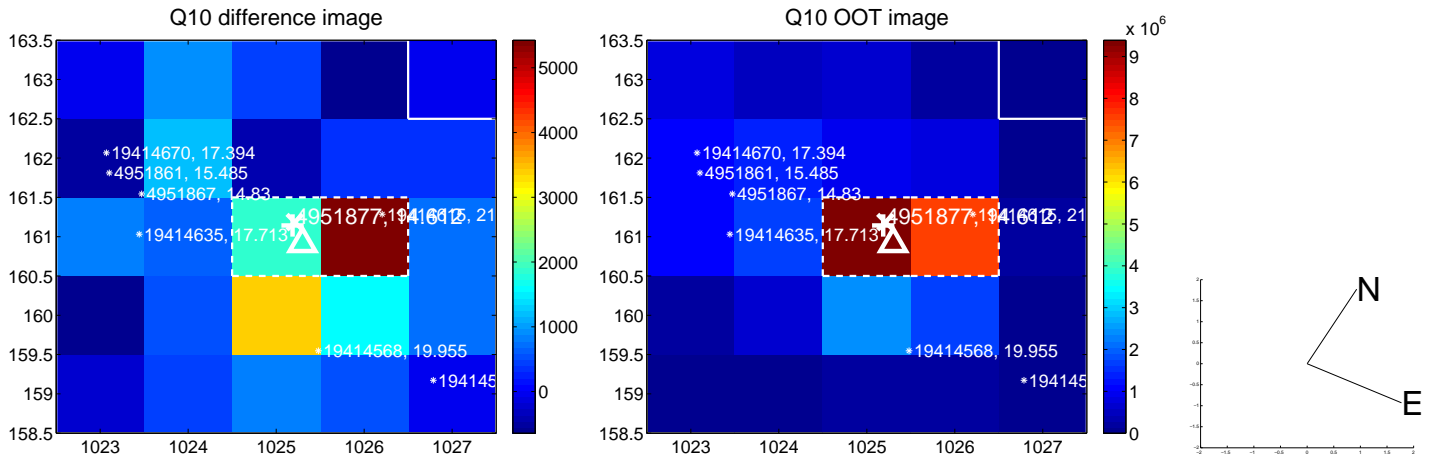
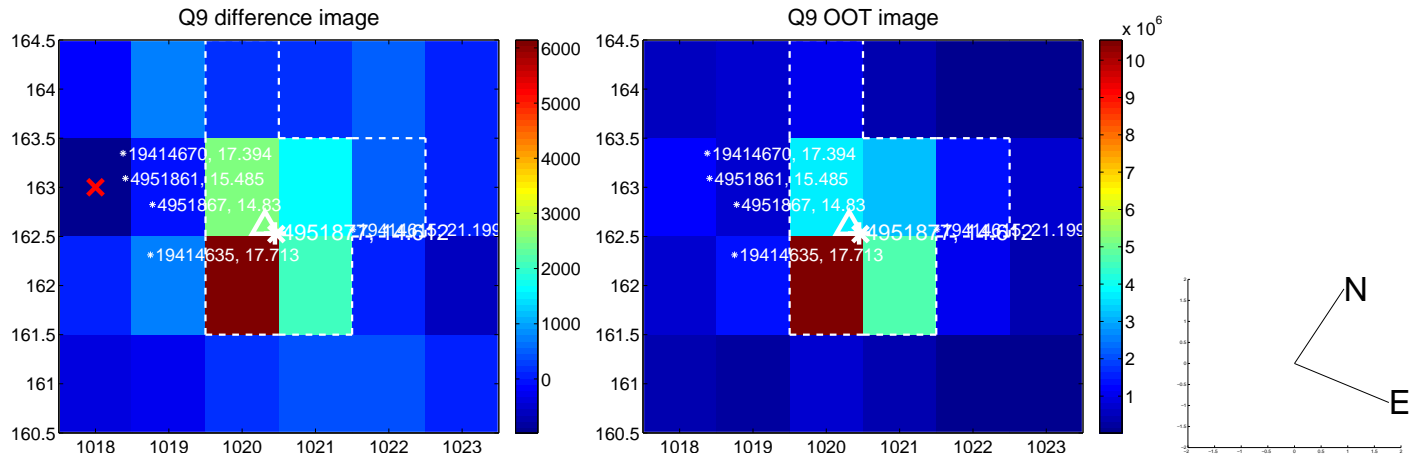
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



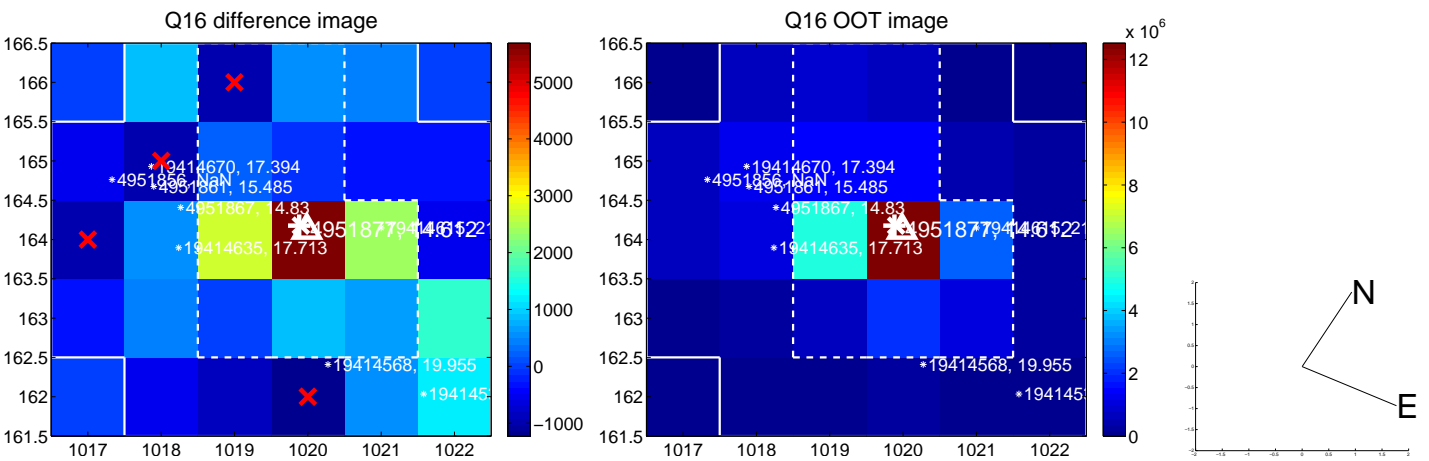
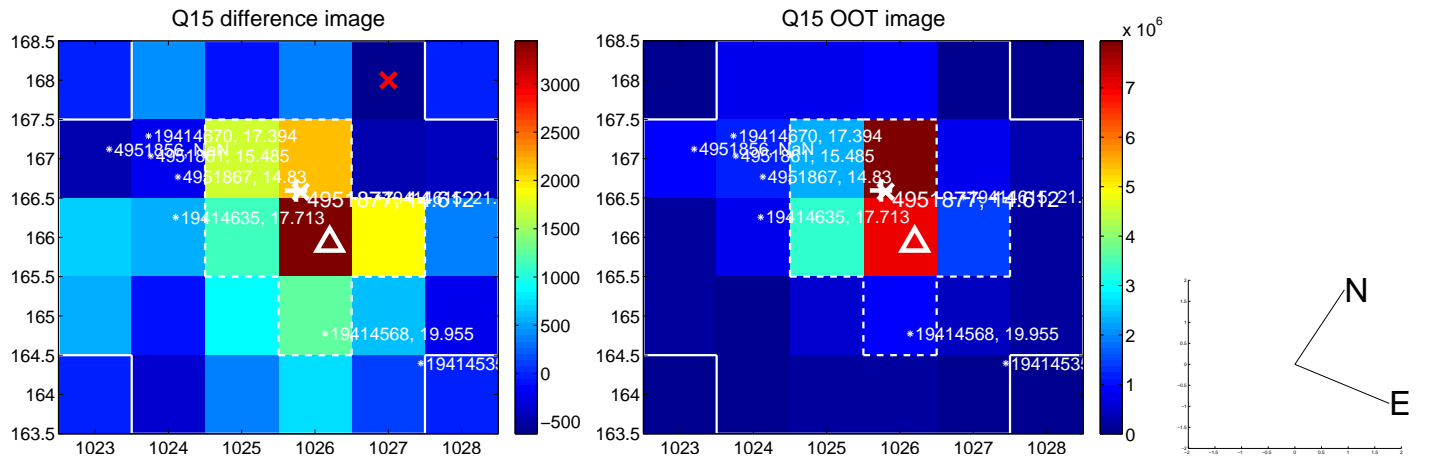
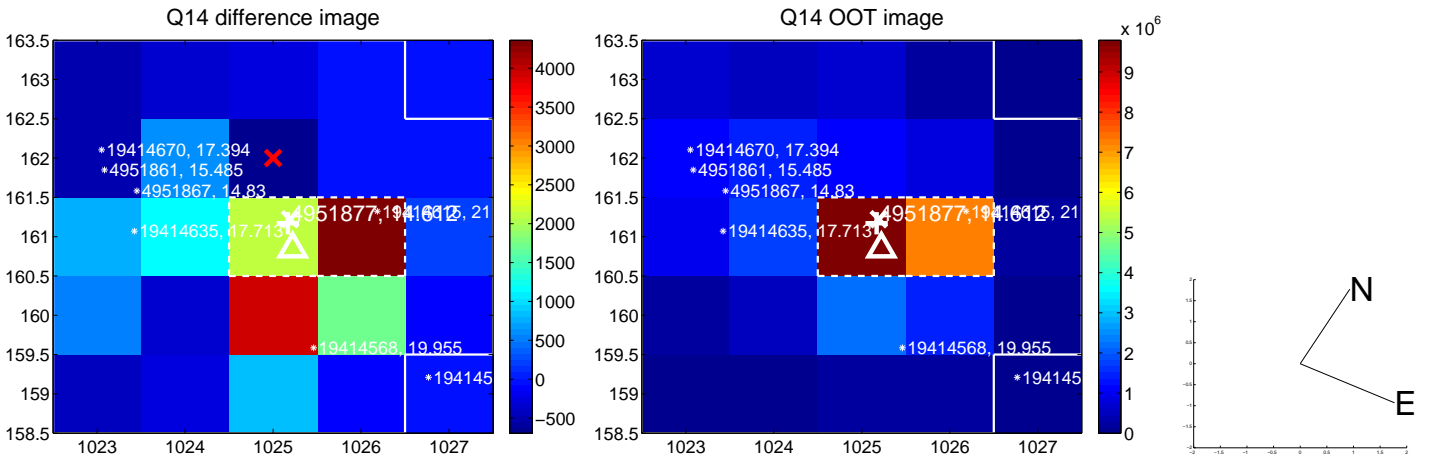
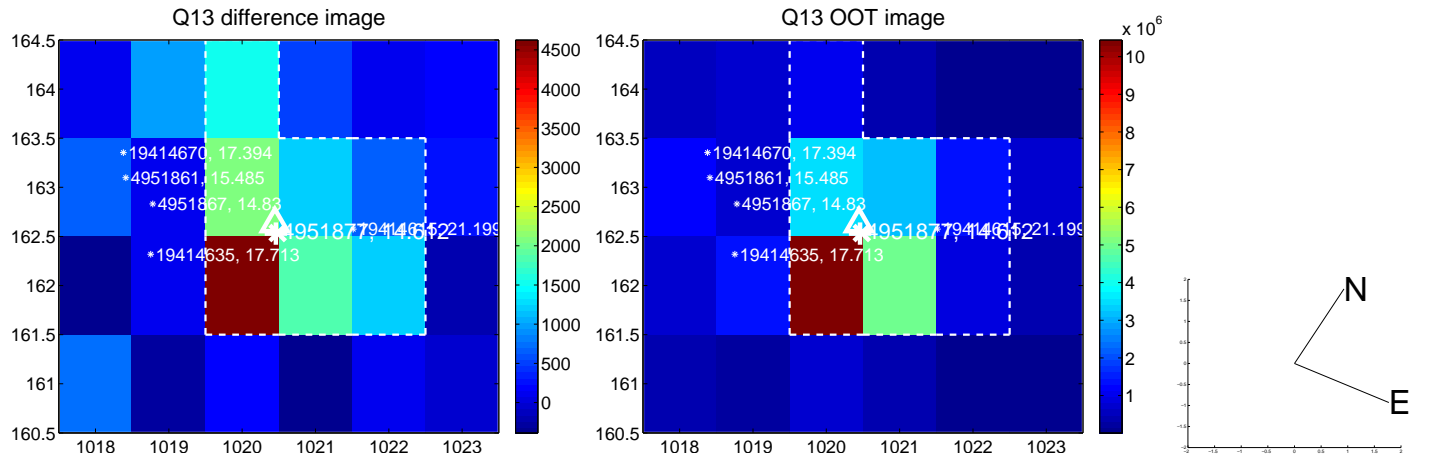
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



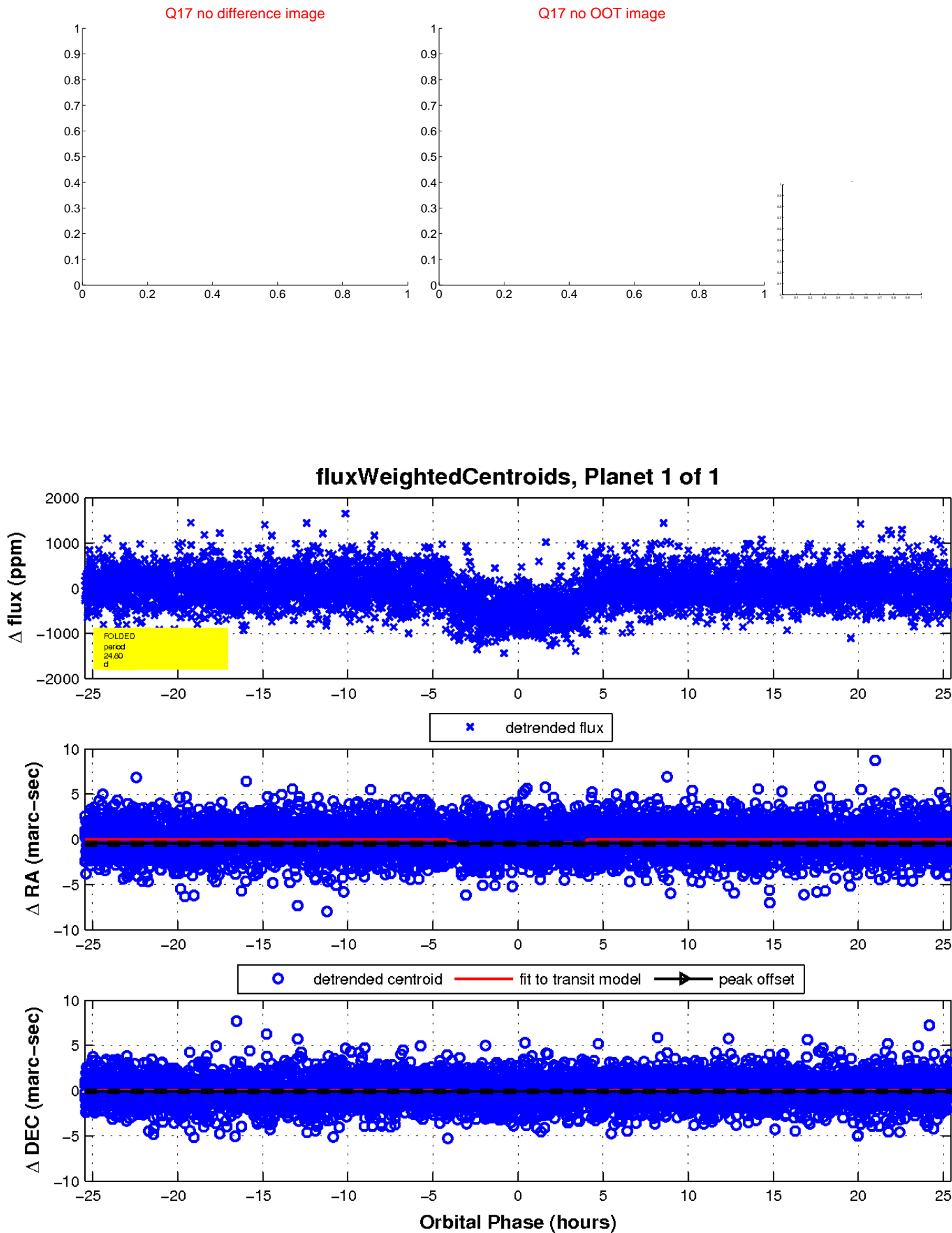
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UKIRT Image

Declination

