

KIC 012004834

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})
012004834-01	OBS	No	0.524645	131.513541	42613.6	1.535	251.3	126.7	0.27	3332	5.51	120.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012004834-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

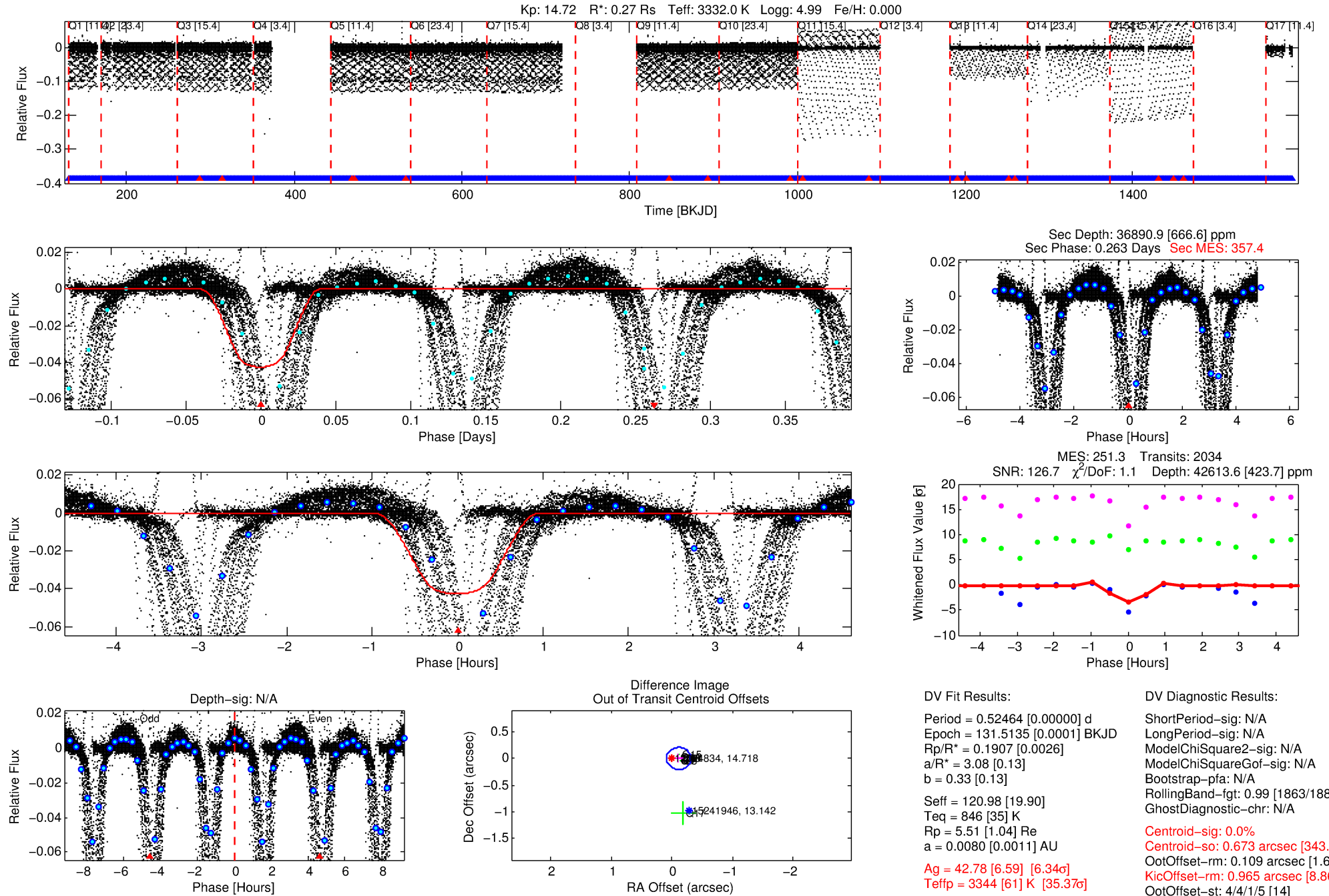
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012004834-01

No Significant Match Found

DV One-Page Summary

KIC: 12004834 Candidate: 1 of 1 Period: 0.525 d



DV Fit Results:

Period = 0.52464 [0.00000] d
Epoch = 131.5135 [0.0001] BKJD
Rp/R* = 0.1907 [0.0026]
a/R* = 3.08 [0.13]
b = 0.33 [0.13]
Seff = 120.98 [19.90]
Teff = 846 [35] K
Rp = 5.51 [1.04] Re
a = 0.0080 [0.0011] AU
Ag = 42.78 [6.59] [6.34σ]
Teffp = 3344 [61] K [35.37σ]

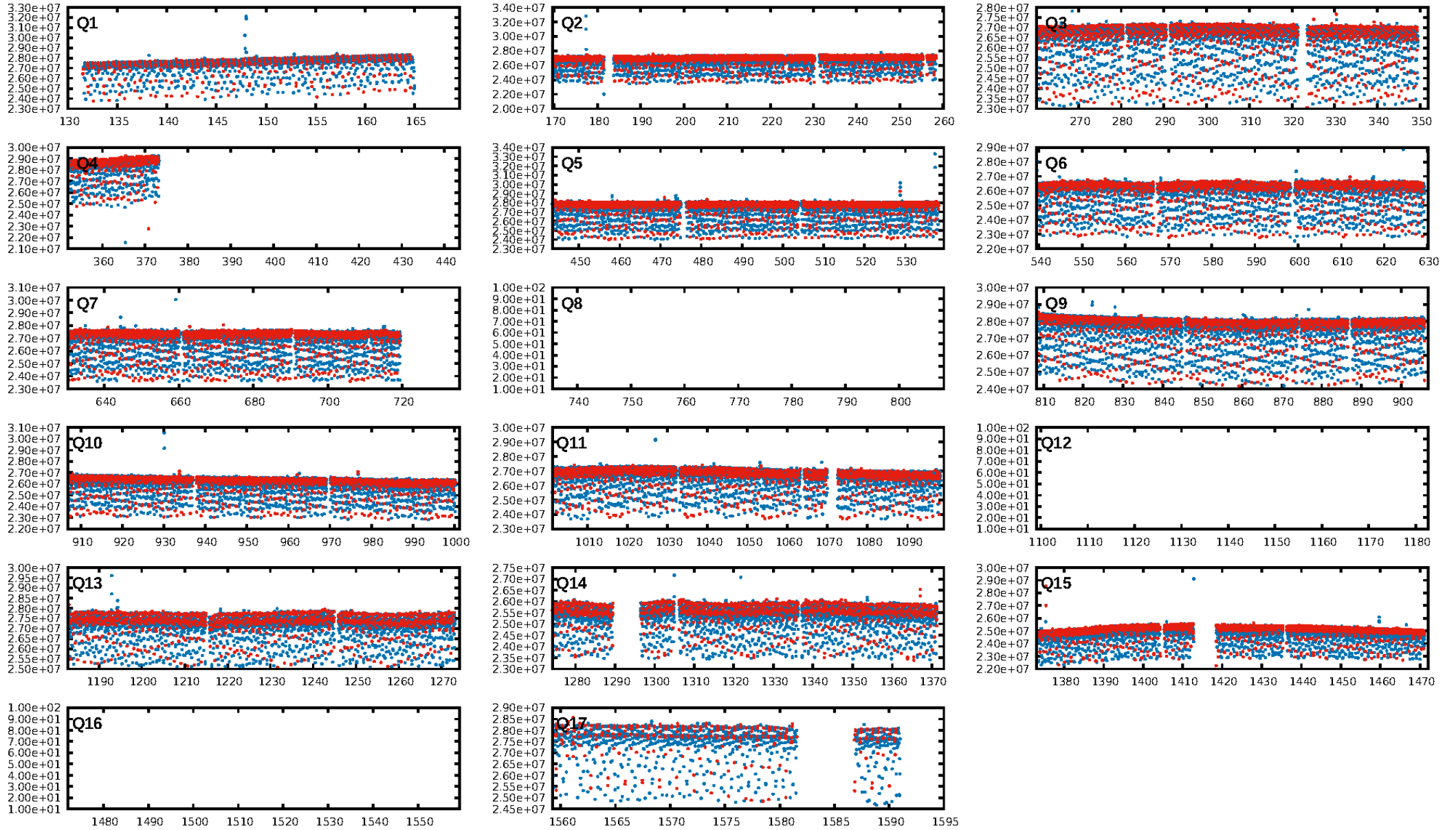
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1863/1881]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.673 arcsec [343.03σ]
OotOffset-rm: 0.109 arcsec [1.60σ]
KicOffset-rm: 0.965 arcsec [8.86σ]
OotOffset-st: 4/4/1/5 [14]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

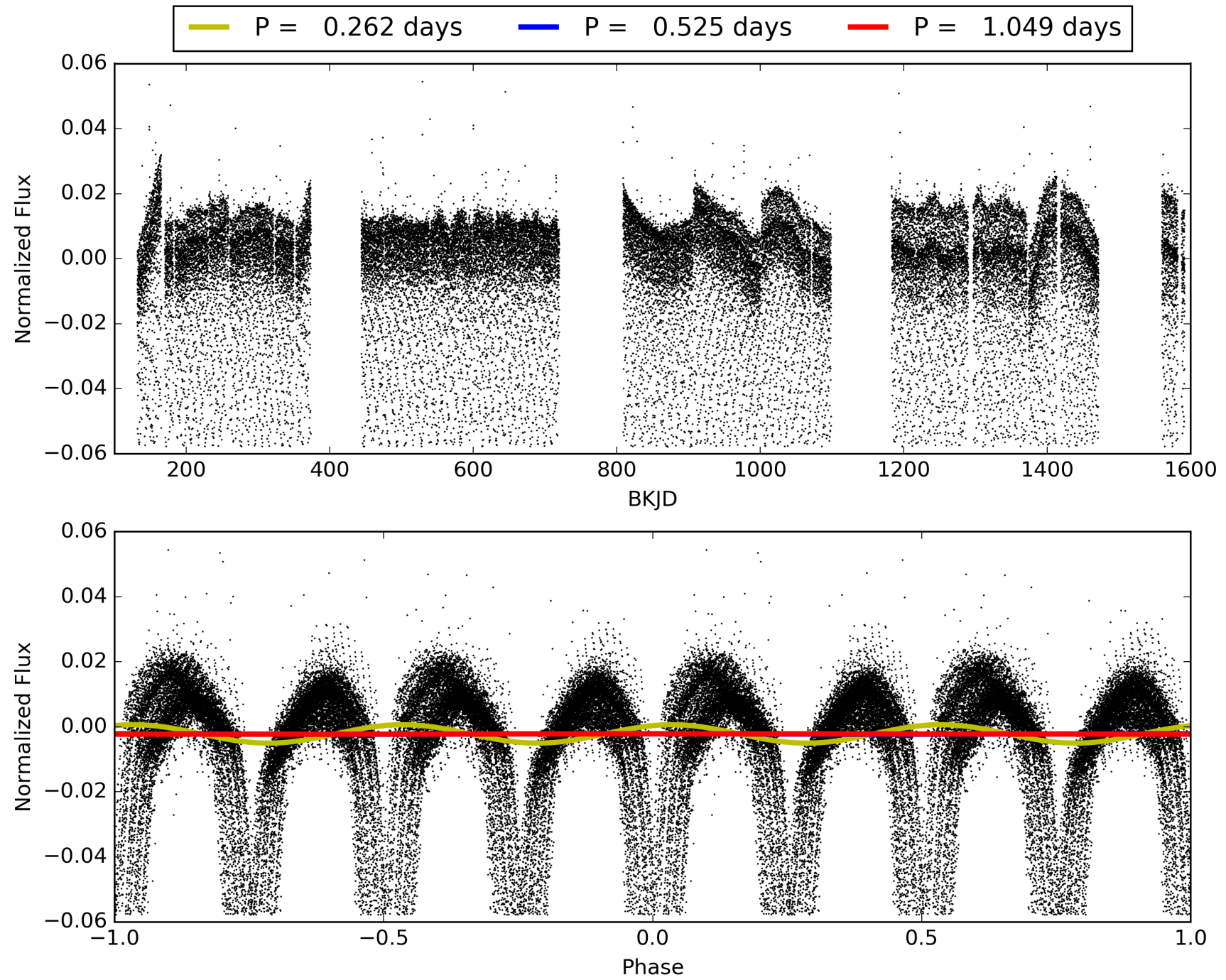
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 12:33:05 Z

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

TCE 012004834-01, PDC Light Curves

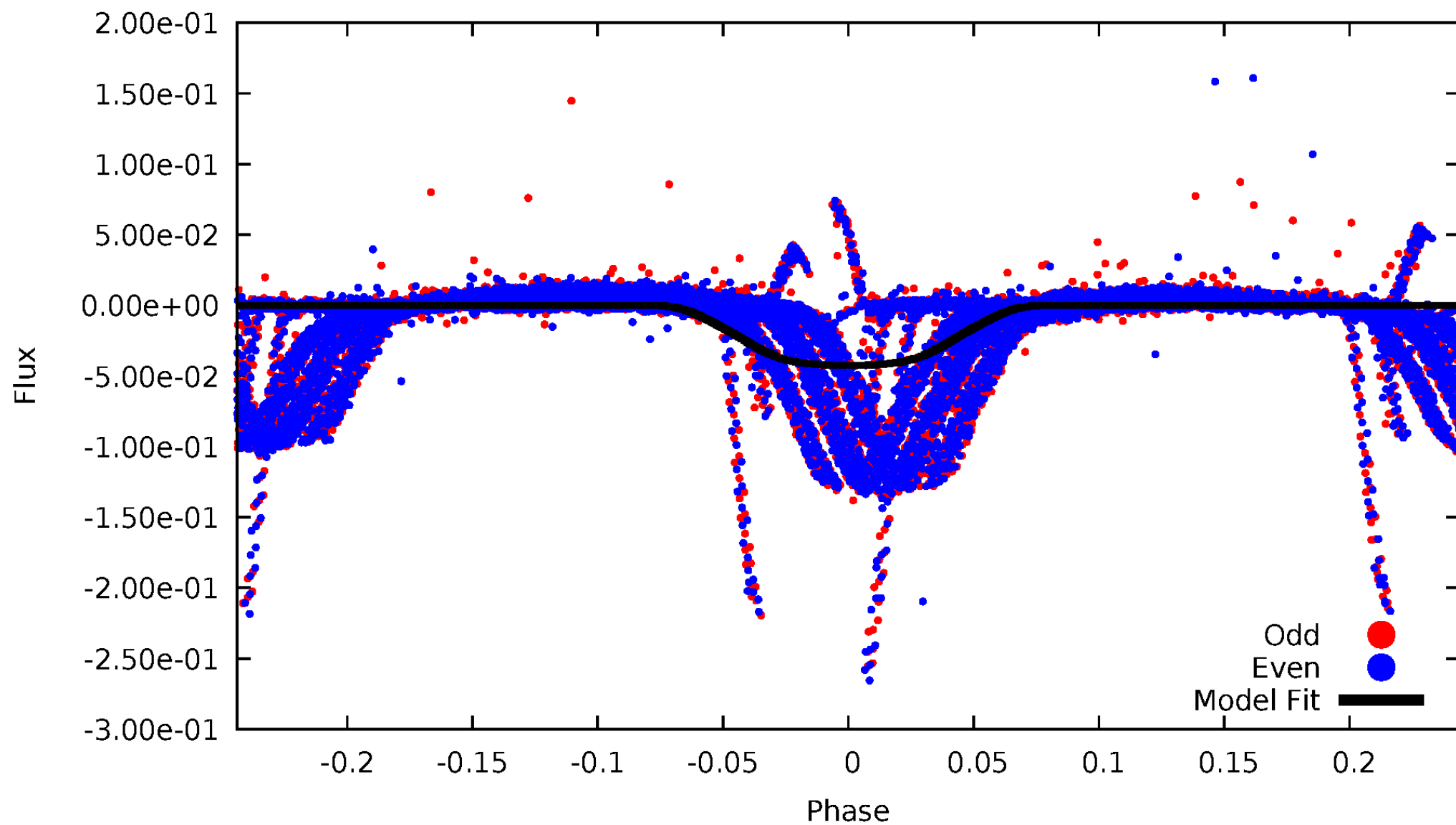


TCE 012004834-01



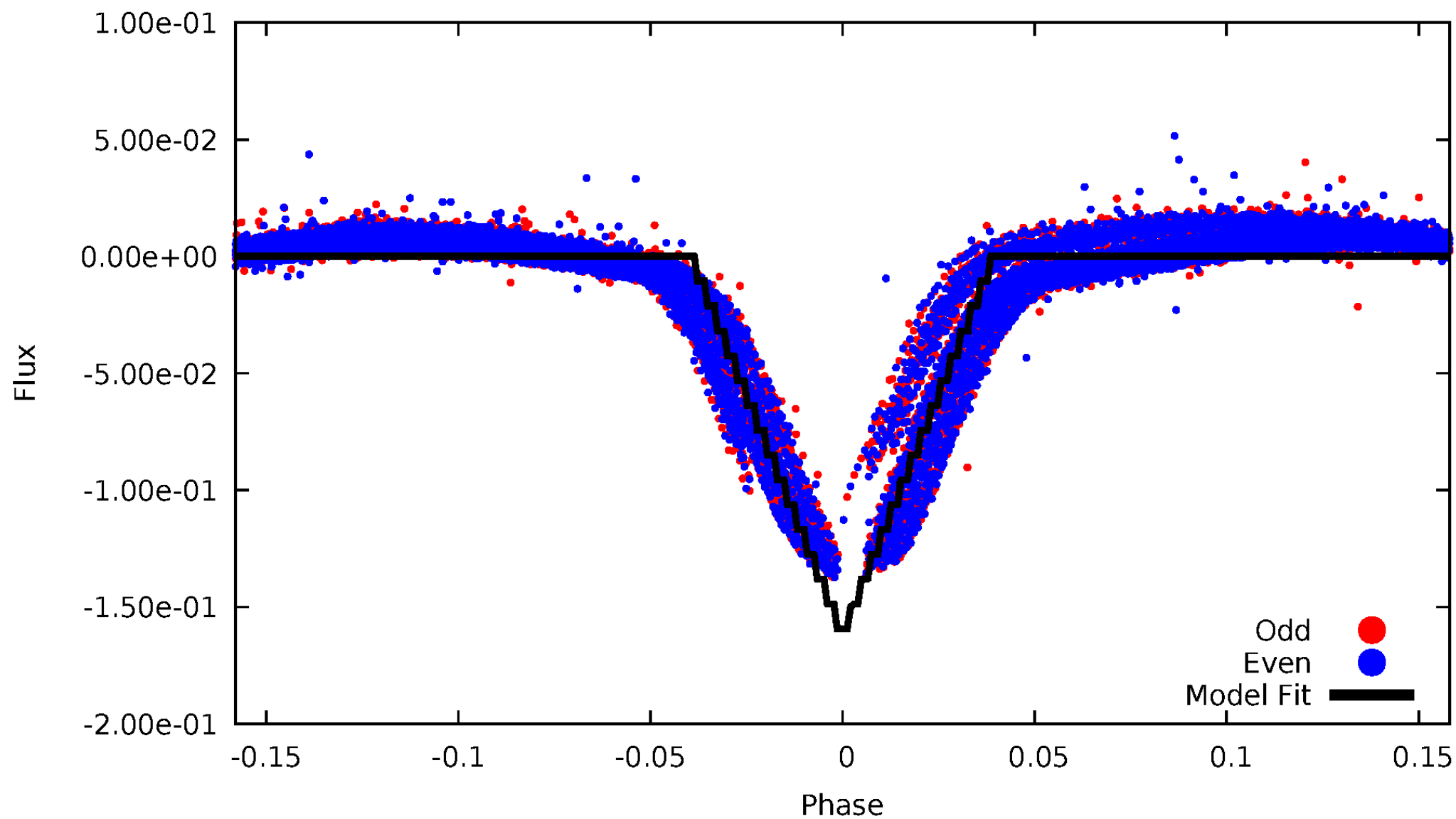
DV Odd/Even

TCE 012004834-01



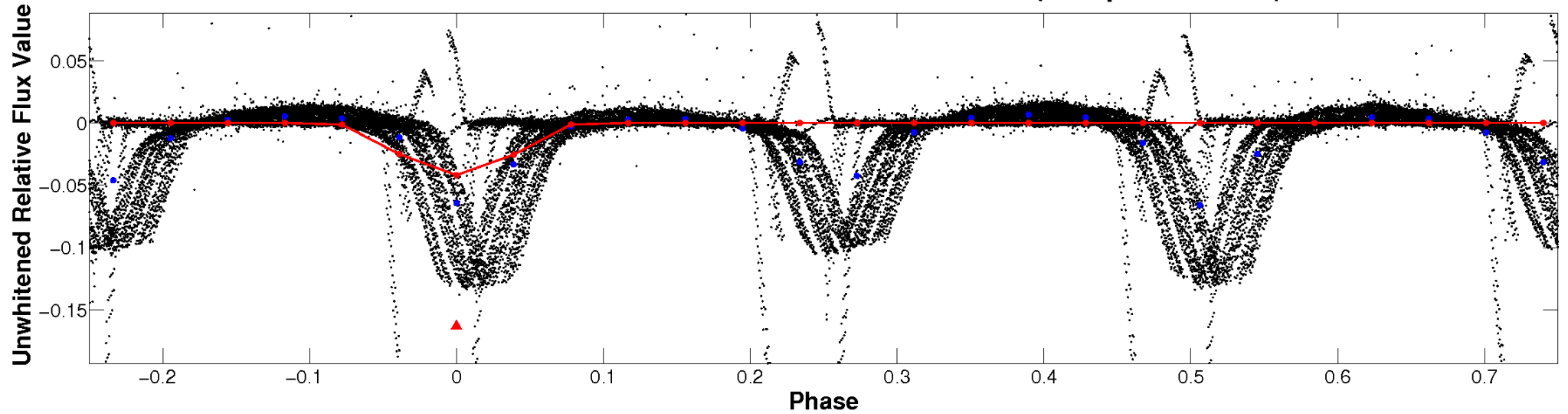
ALT Odd/Even

TCE 012004834-01

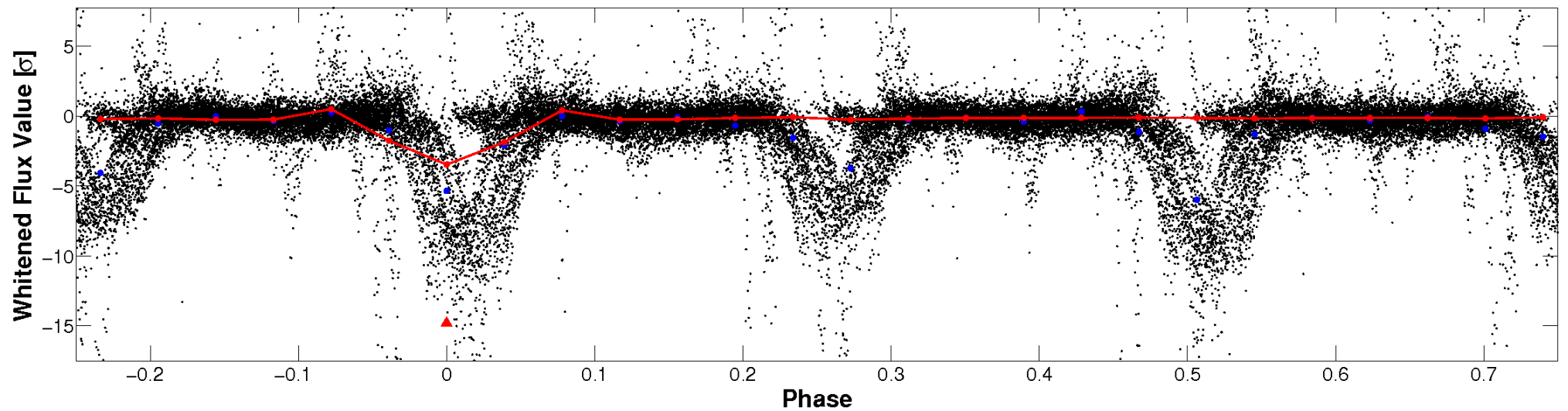


Non-Whitened Vs. Whitened Light Curve

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

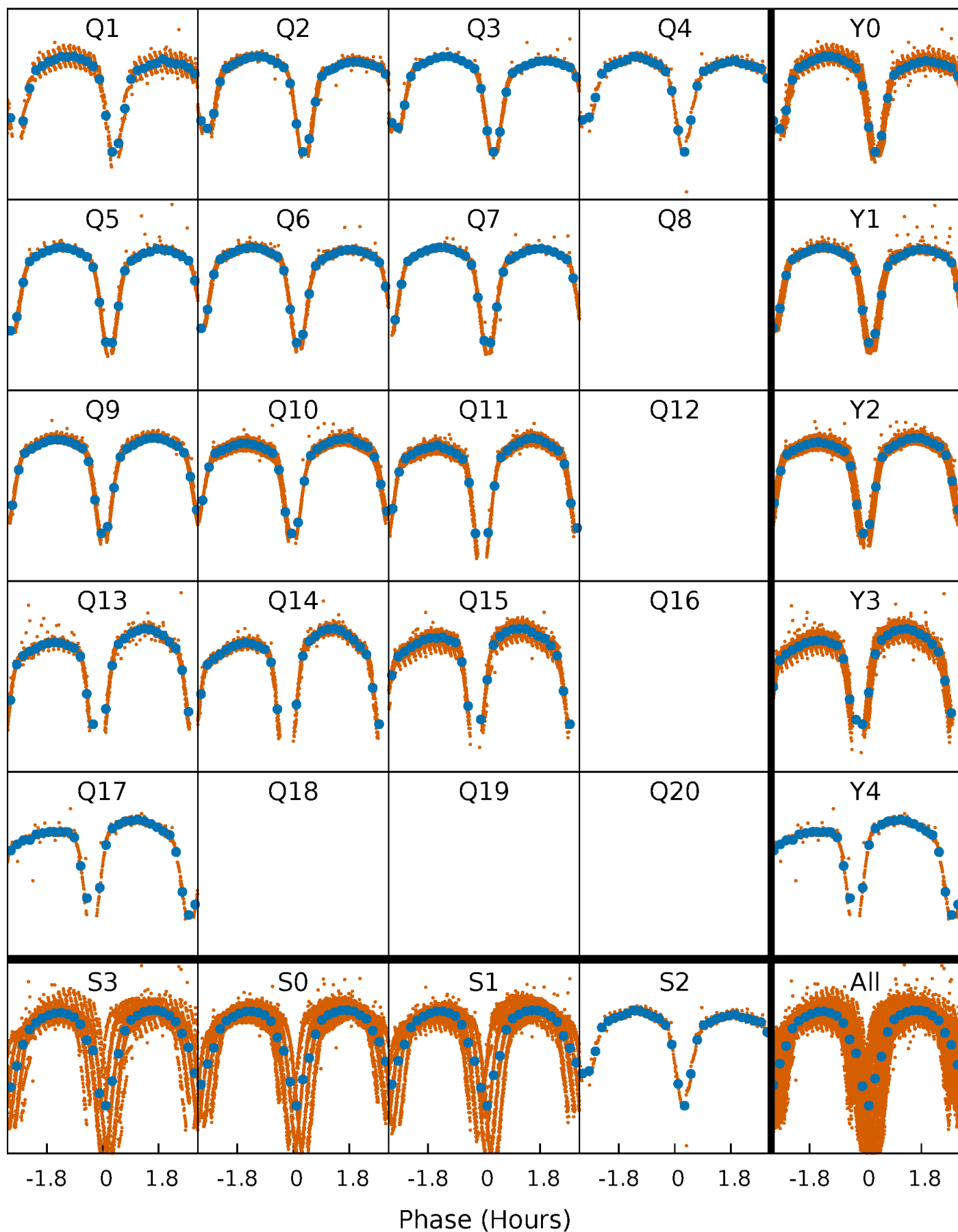


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



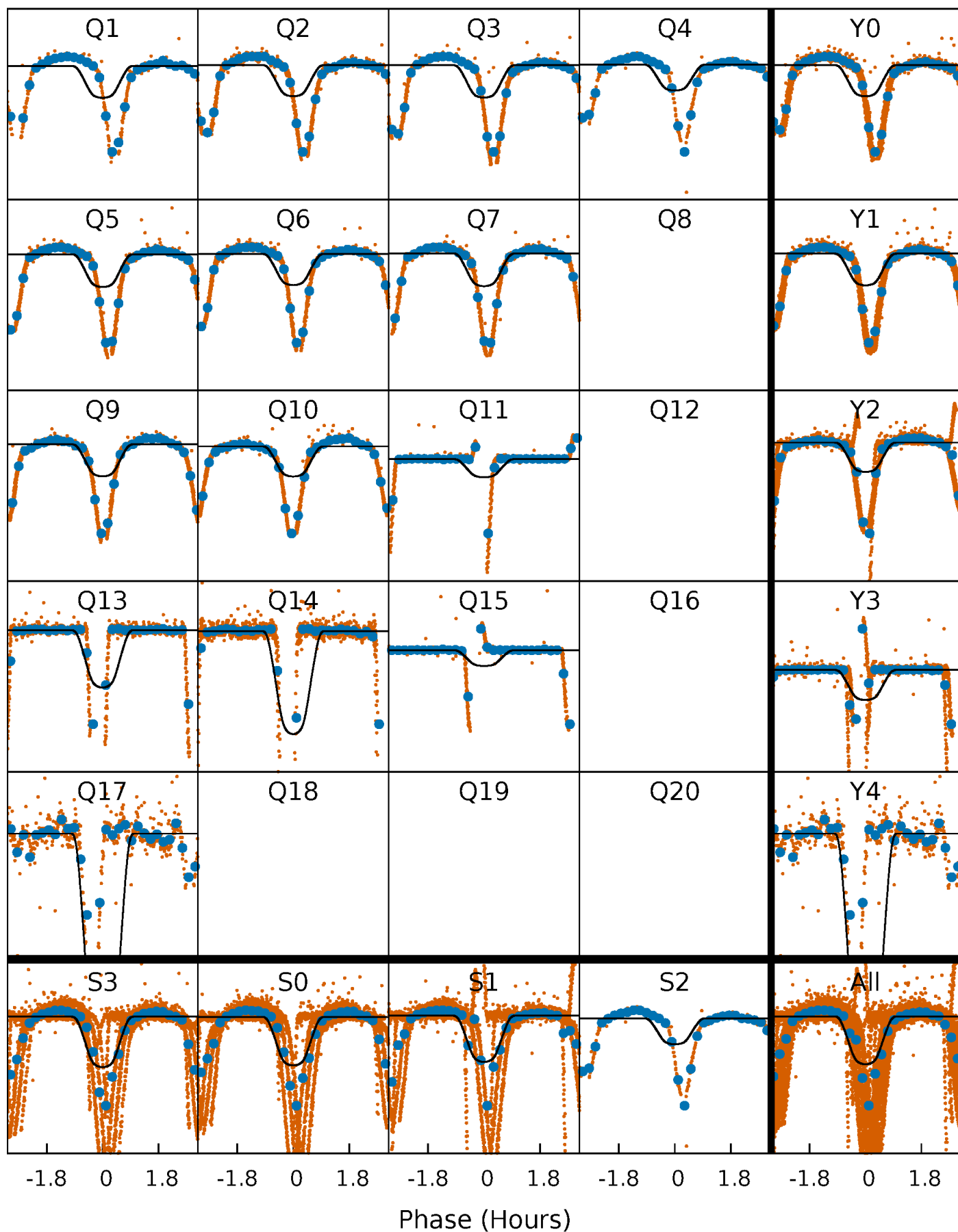
PDC Quarter-Phased Transit Curves

TCE 012004834-01 P= 0.524645 Days $T_0=131.513541$ (BKJD)



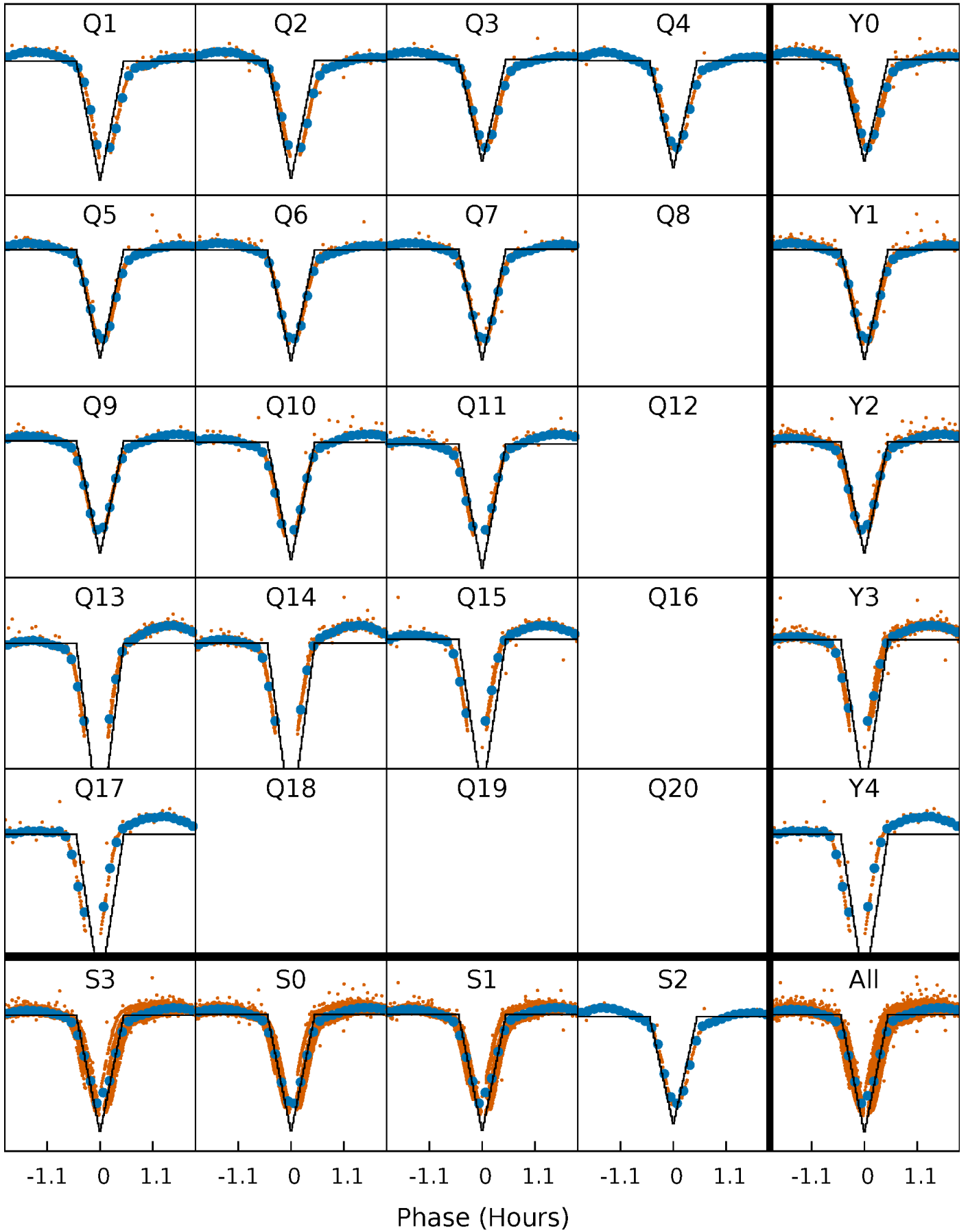
DV Quarter-Phased Transit Curves

TCE 012004834-01 P= 0.524645 Days $T_0=131.513541$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

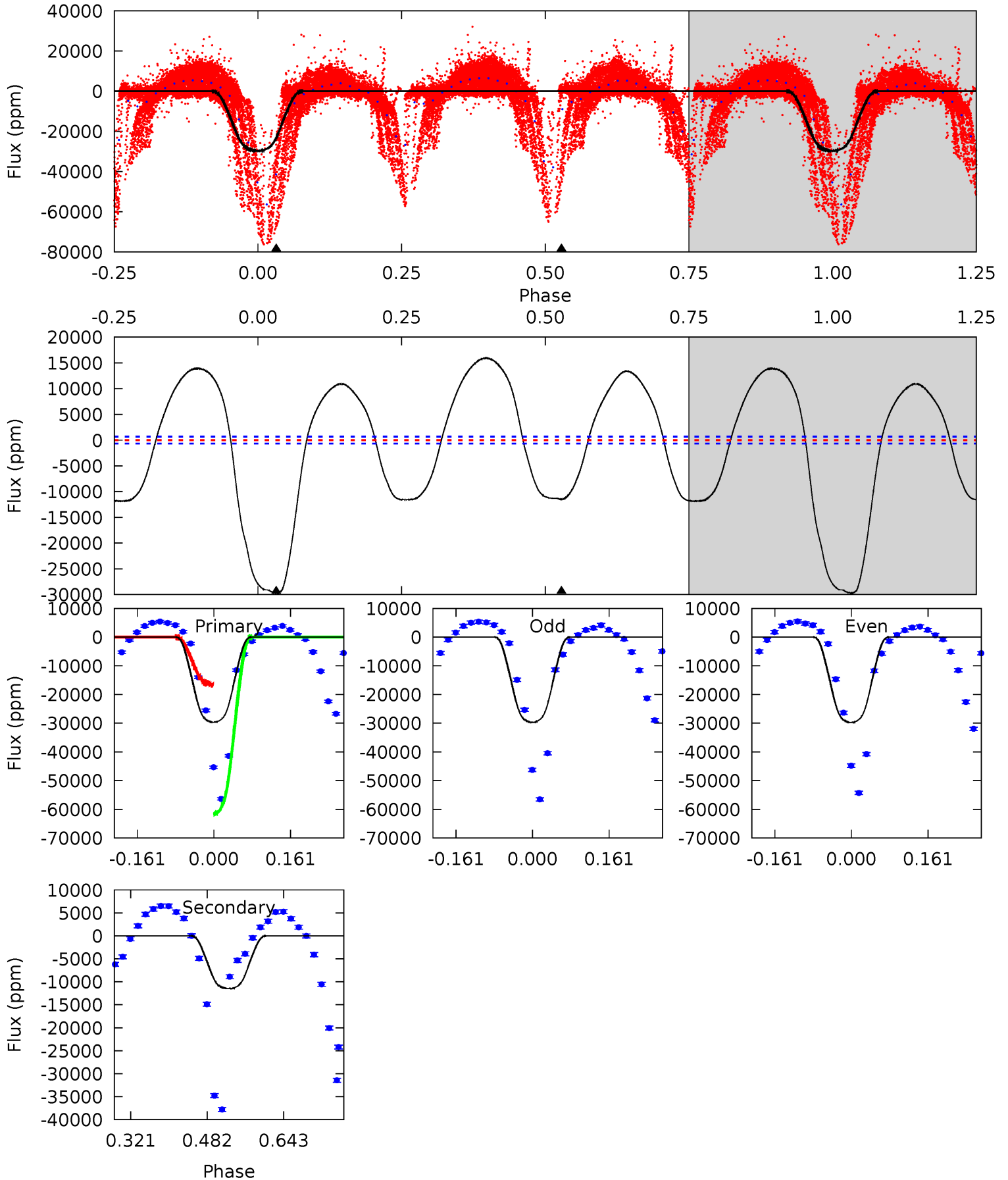
TCE 012004834-01 P= 0.524637 Days $T_0=131.526191$ (BKJD)



DV Model-Shift Uniqueness Test

012004834-01, P = 0.524645 Days, E = 130.988896 Days

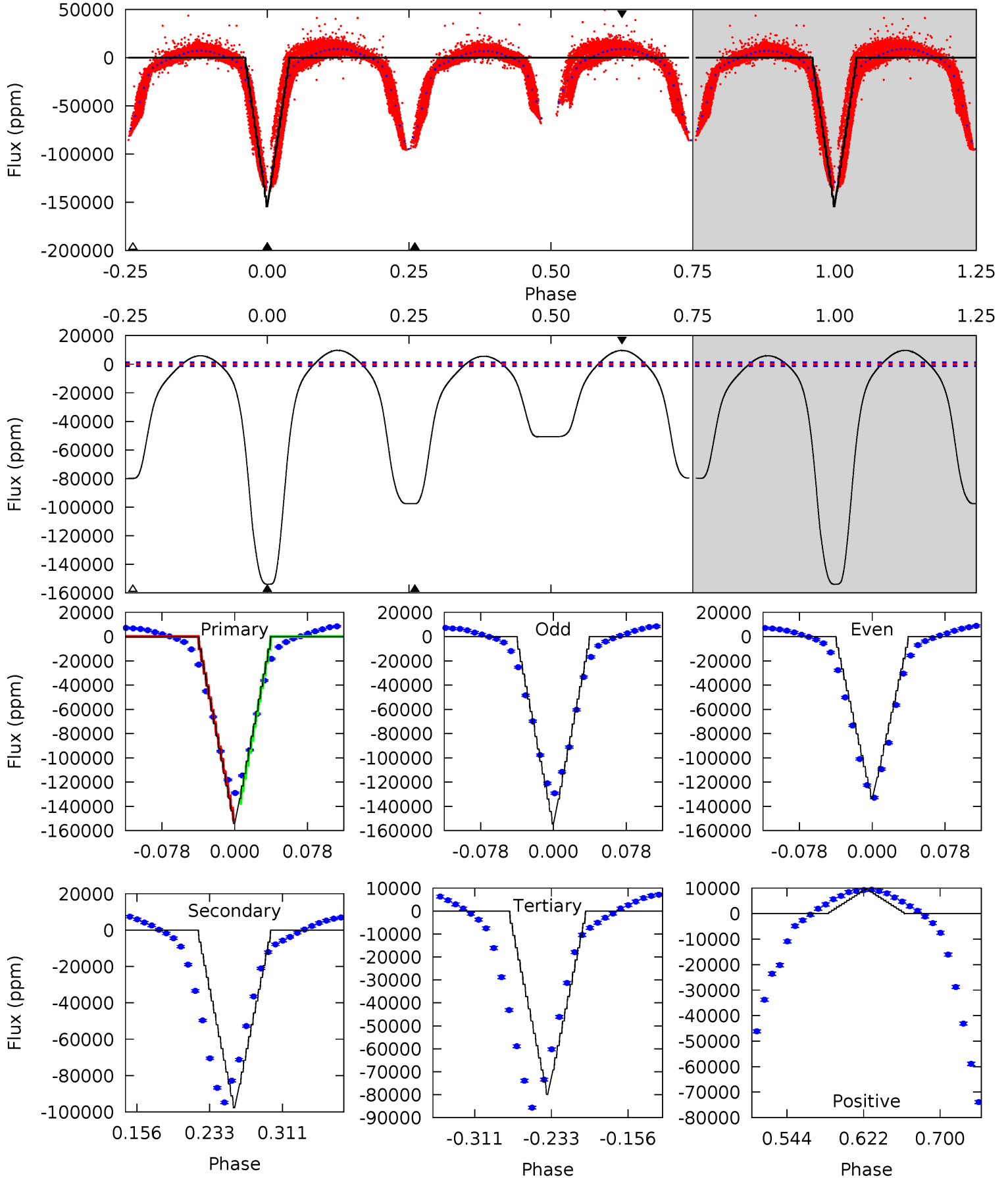
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
200.1	77.5	0	0	4.46	1.40	52.6	200.1	200.1	77.5	77.5	0.22	1.23	0.35	0



Alt Model-Shift Uniqueness Test

012004834-01, P = 0.524637 Days, E = 131.001554 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
546.6	346.3	283.5	34.2	4.62	1.76	75.6	263.1	512.4	62.9	312.1	37.9	0.98	0.06	19.5



Stellar Parameters For KIC 012004834

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3332^{+55}_{-50}	$4.987^{+0.054}_{-0.054}$	$0.000^{+0.100}_{-0.100}$	$0.265^{+0.050}_{-0.041}$	$0.248^{+0.059}_{-0.044}$	$18.820^{+6.290}_{-4.717}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+19%/-15%	+24%/-18%	+33%/-25%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 012004834-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11498 ± 148	$5.52^{+0.57}_{-0.48}$	1180^{+39}_{-32}	2824^{+39}_{-39}	14^{+1}_{-1}
Alt.	-97600 ± 282	$11.53^{+1.20}_{-0.92}$	1183^{+33}_{-34}	3140^{+48}_{-45}	29^{+3}_{-3}

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 $A_{\text{obs}} \gg 1.0$

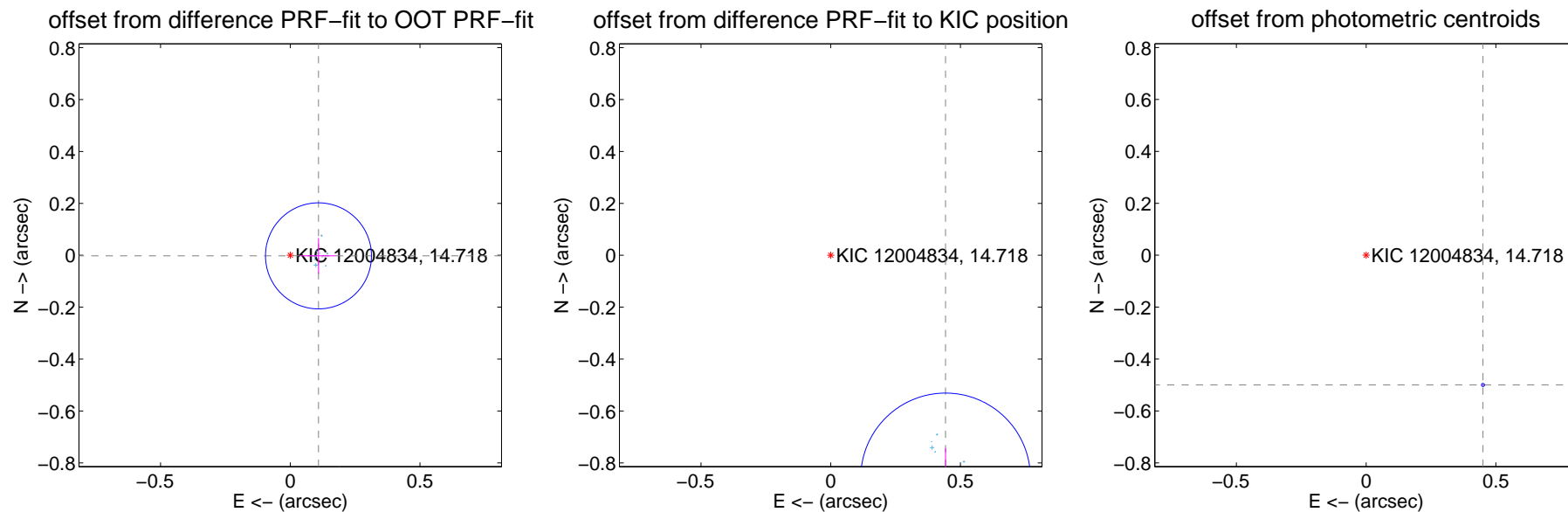
DV Centroid Data

Supplemental centroid analysis for 012004834-01. Kepler magnitude: 14.72. Transit SNR 126.70

There are 13 quarters with good PRF difference image offsets

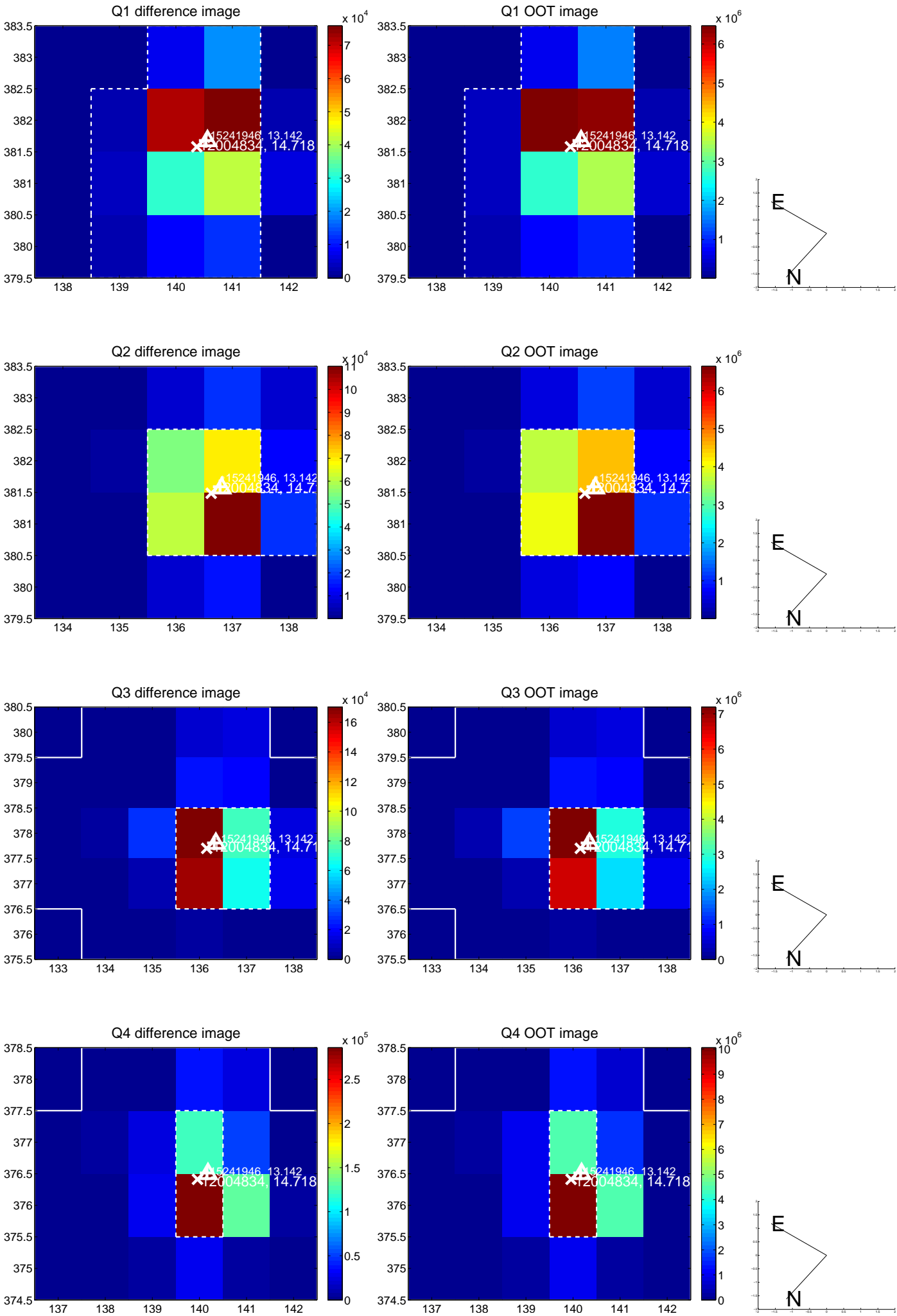
The direct PRF centroid is offset from the target star catalog position by about 1.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.109 ± 0.068	1.60	-0.109 ± 0.068	-0.002 ± 0.068
PRF-fit source offset from KIC position	0.965 ± 0.109	8.86	-0.443 ± 0.068	-0.858 ± 0.115
photometric centroid source offset	0.67 ± 0.00	343.03	-0.45 ± 0.00	-0.50 ± 0.00

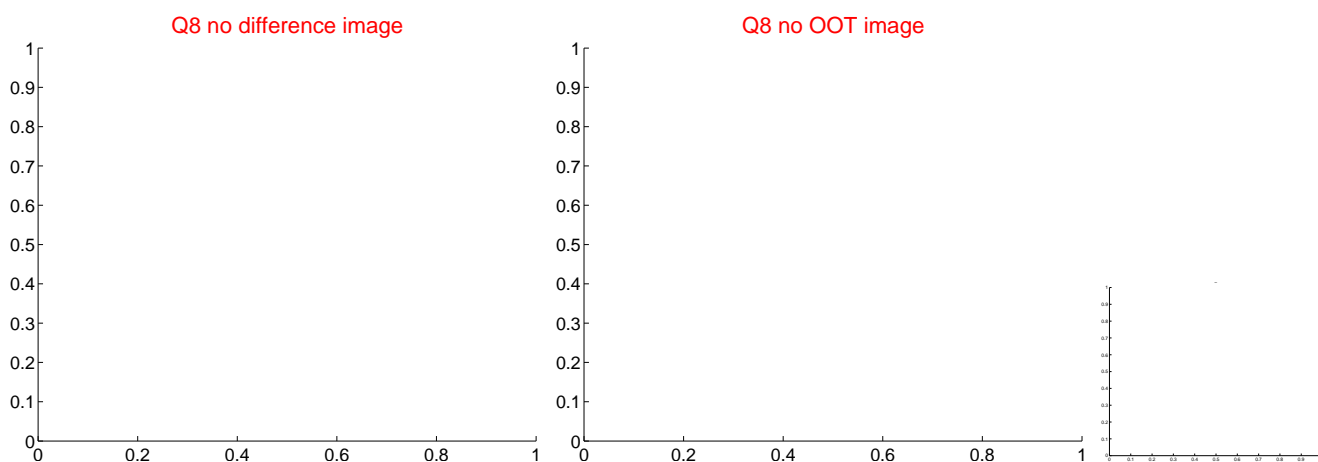
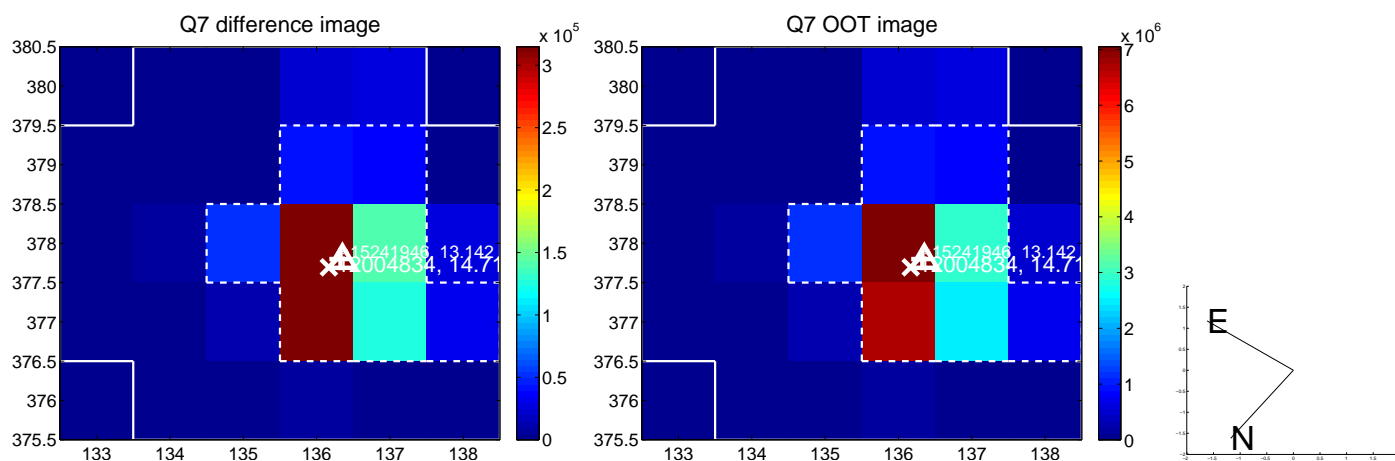
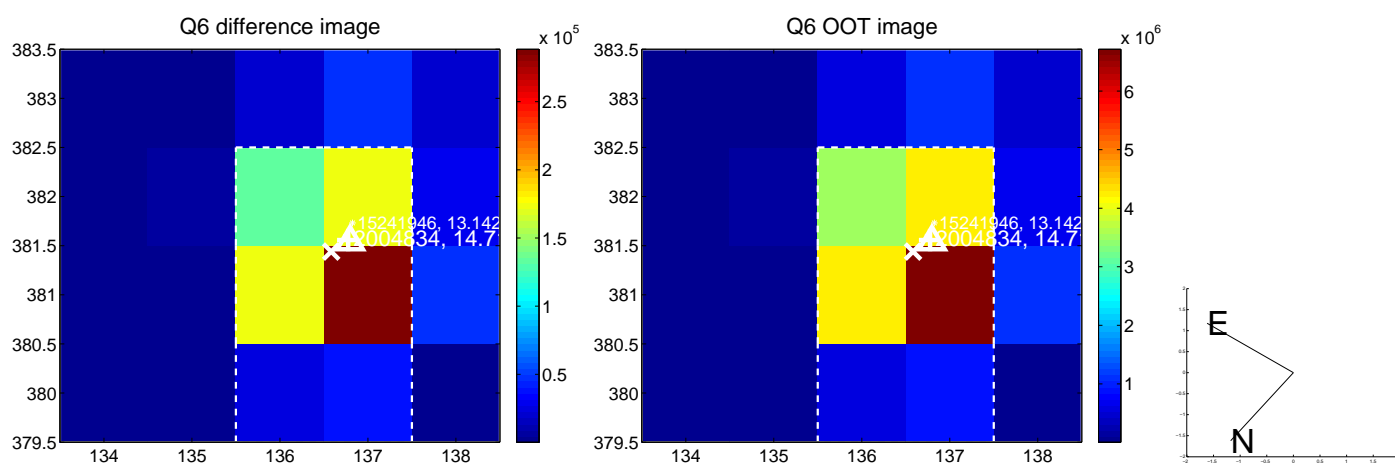
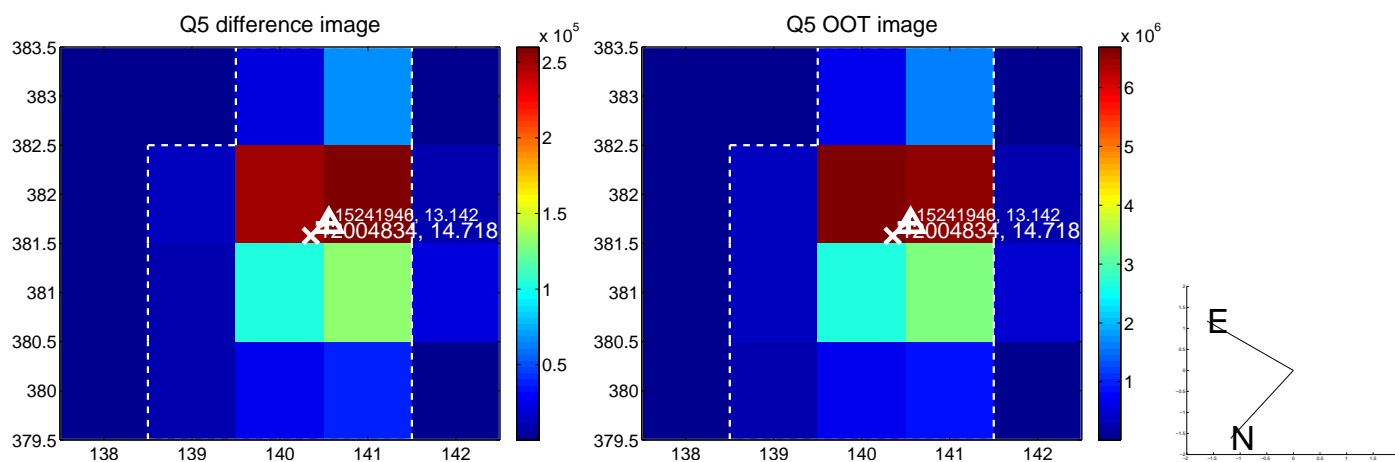


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

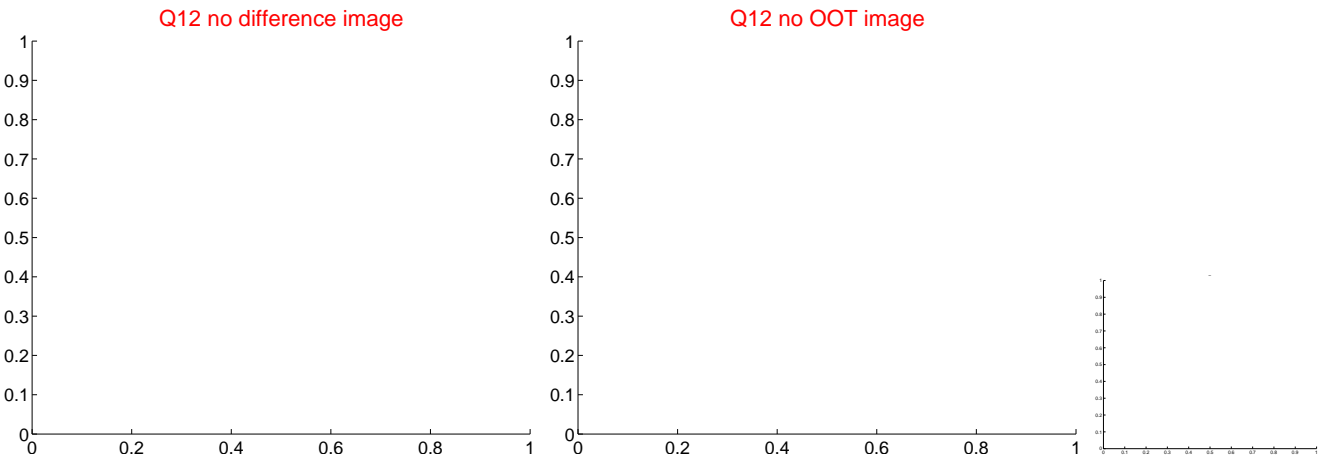
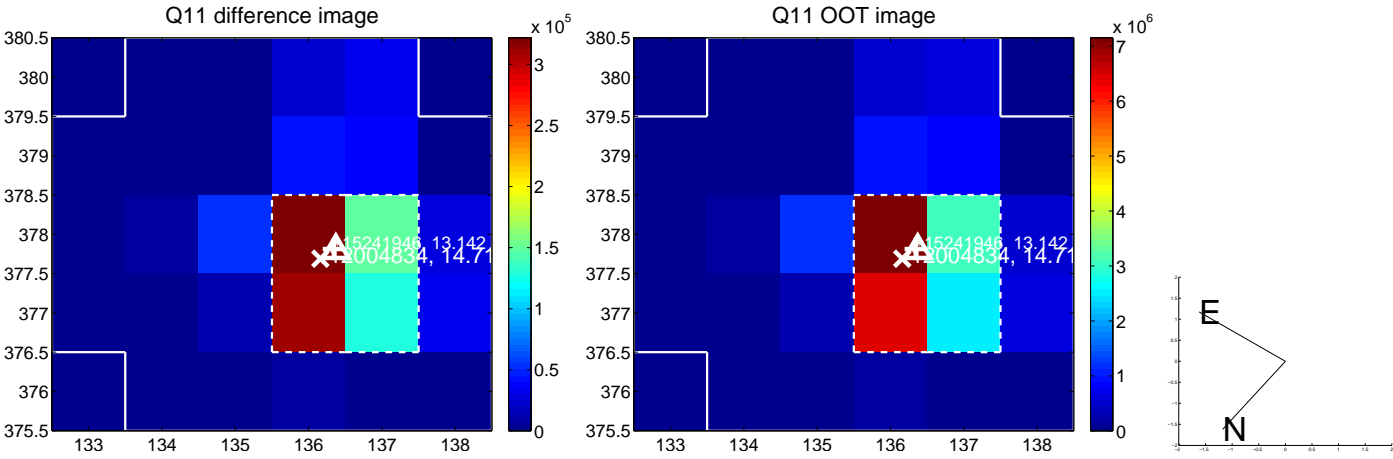
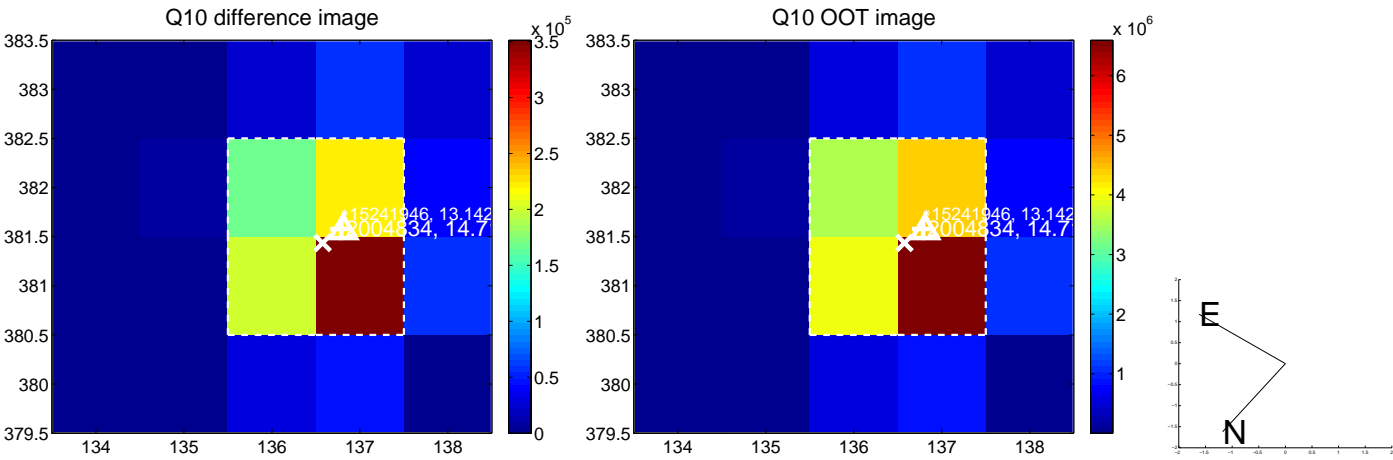
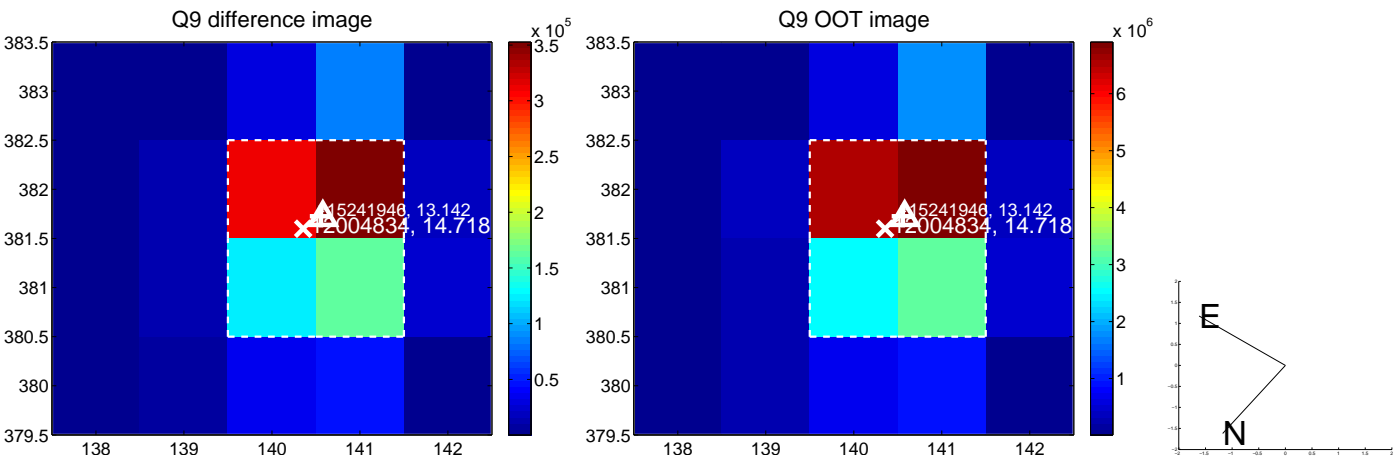
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



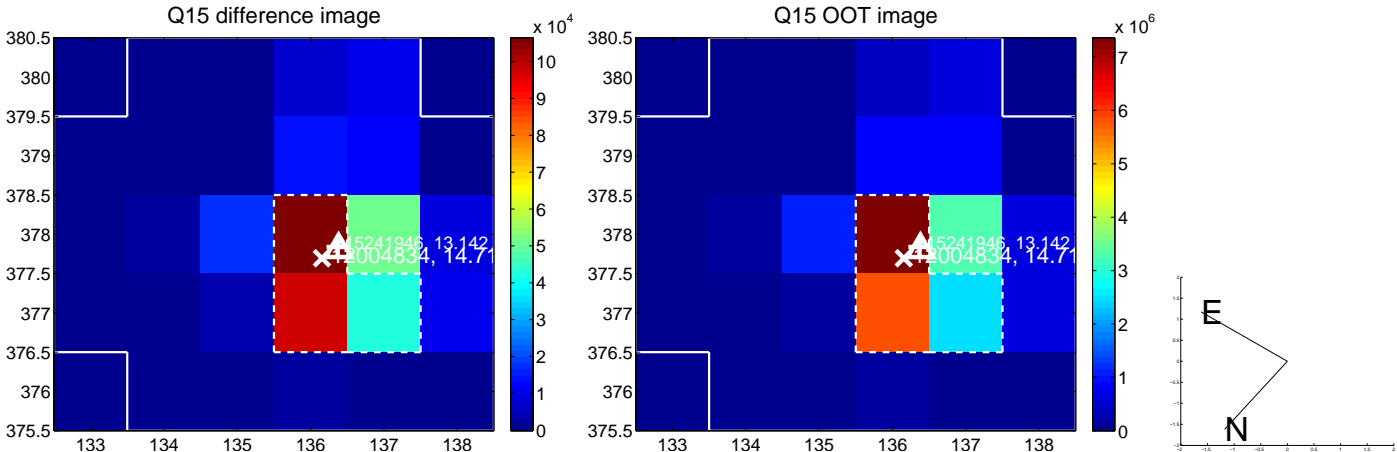
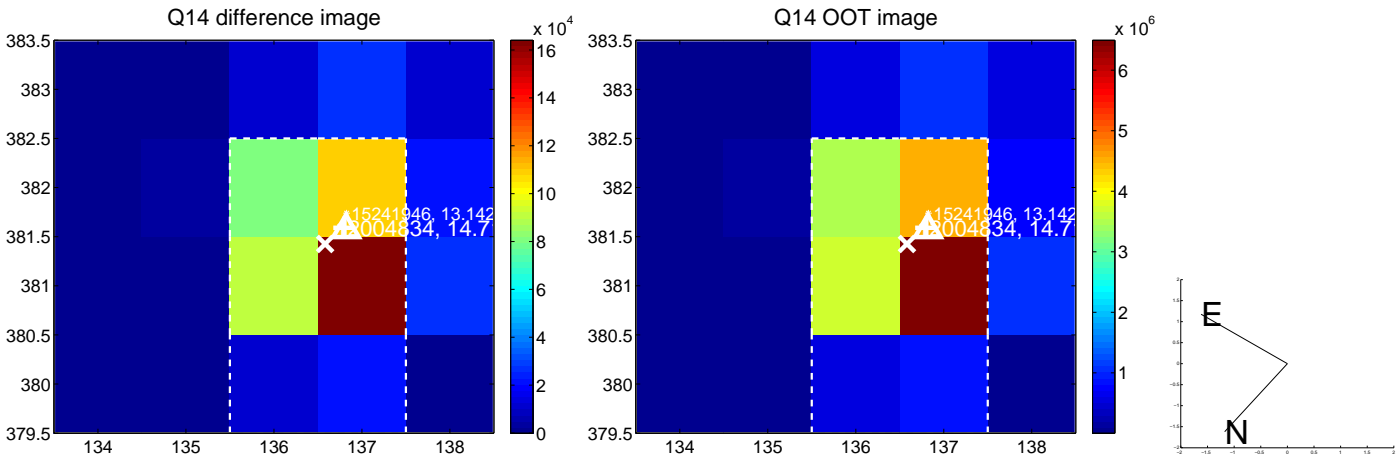
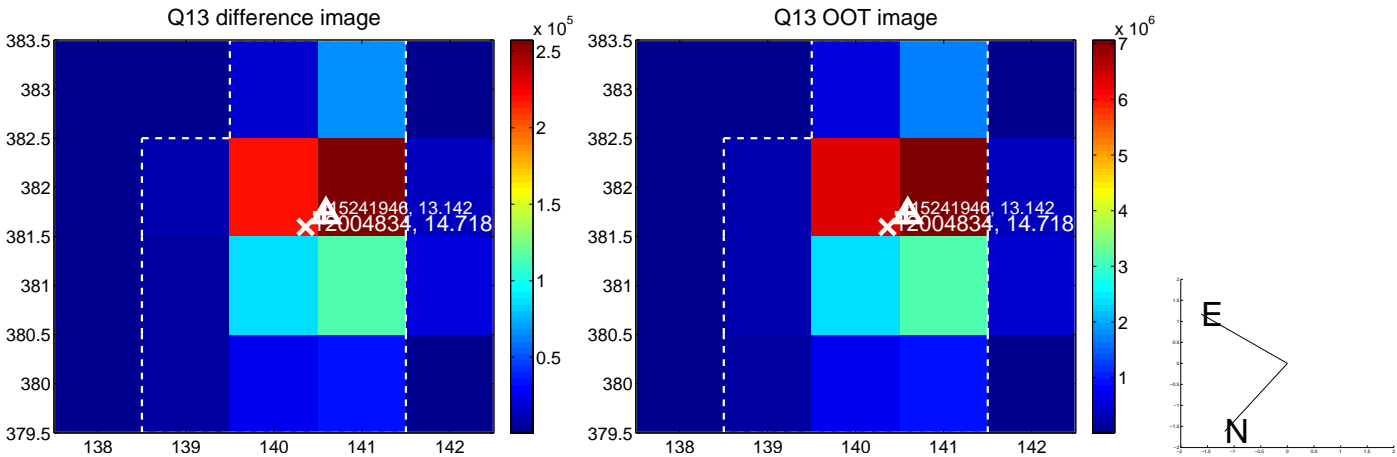
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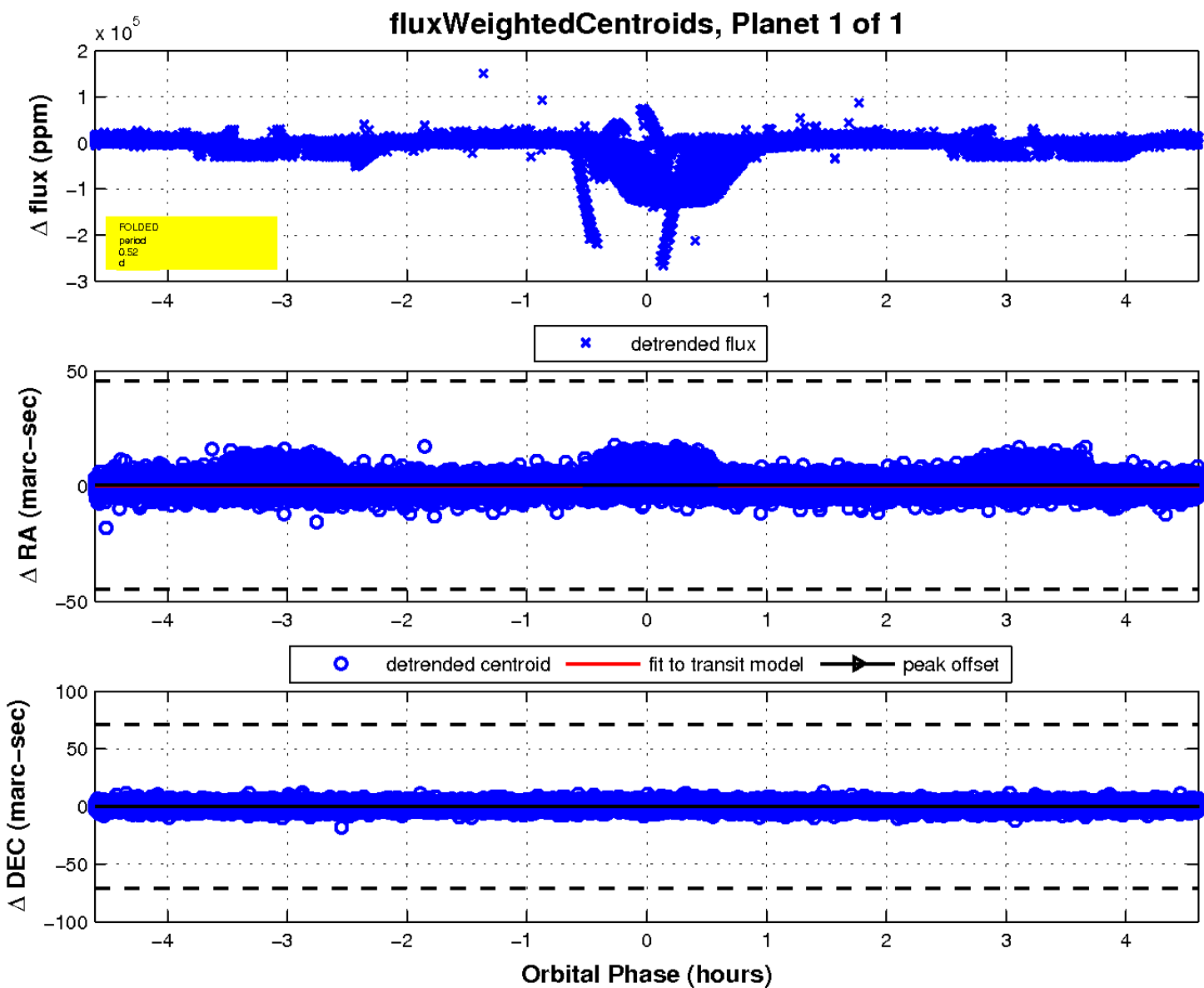
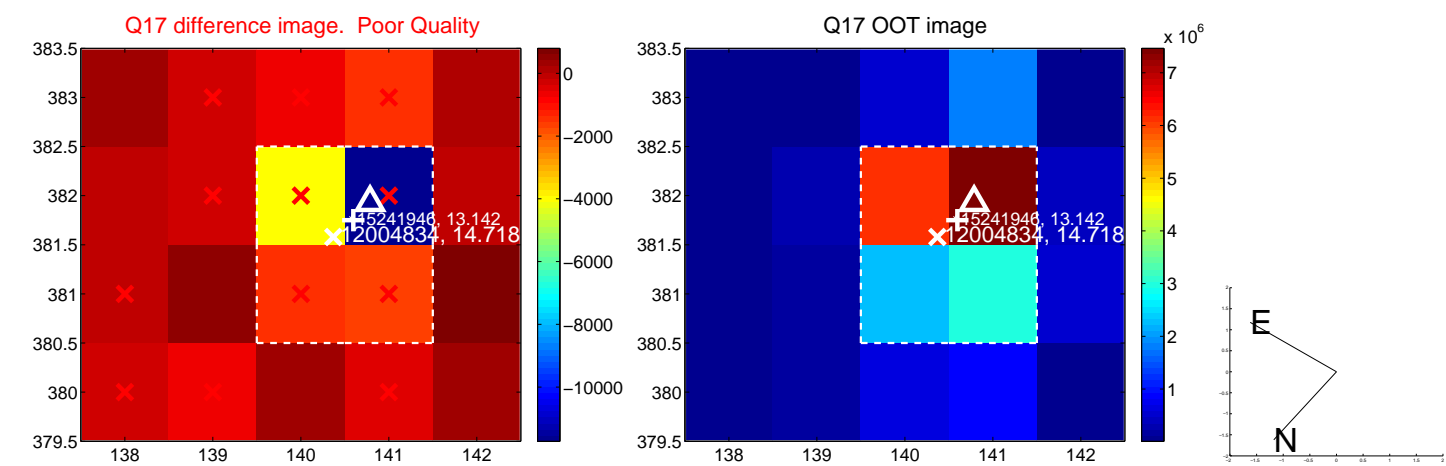
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UKIRT Image

Declination

