

KIC 004639868

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})
004639868-01	OBS	1326.01	53.100942	135.971756	19756.0	2.284	1147.6	1103.5	0.97	5465	20.81	10.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004639868-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—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.

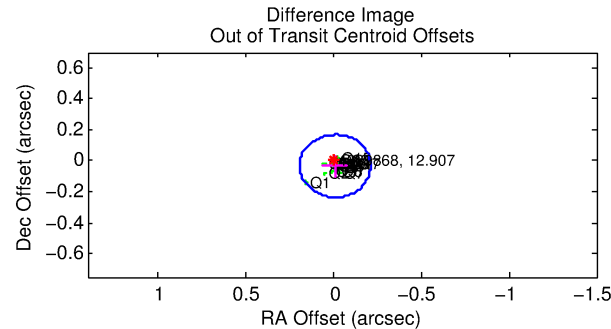
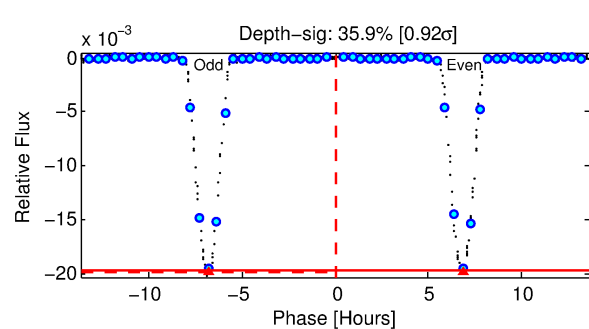
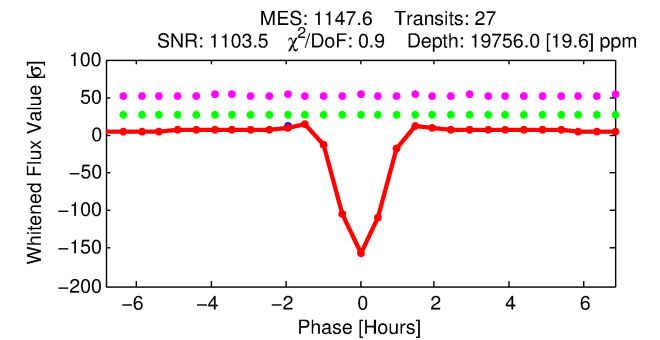
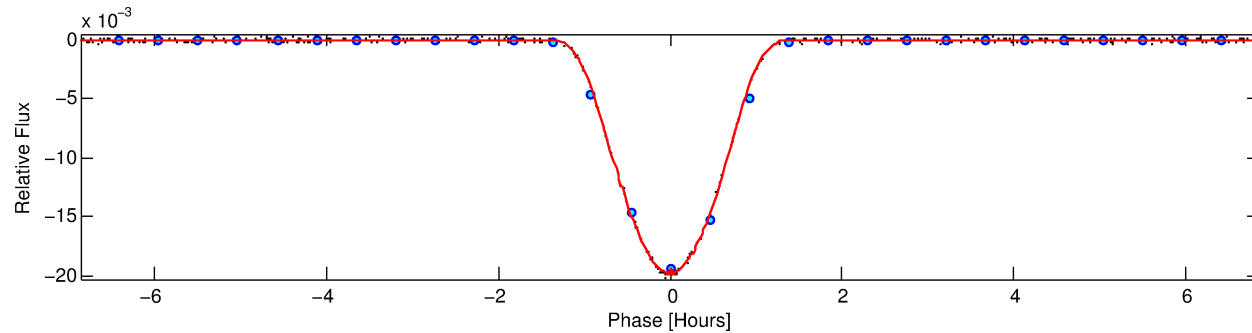
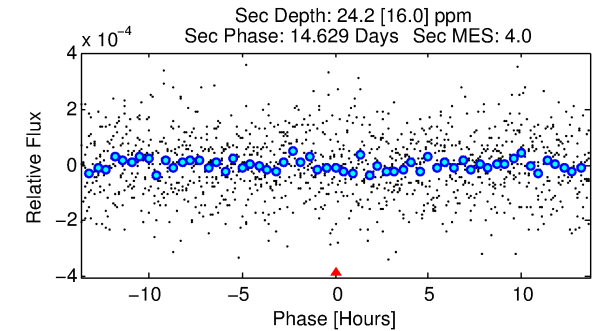
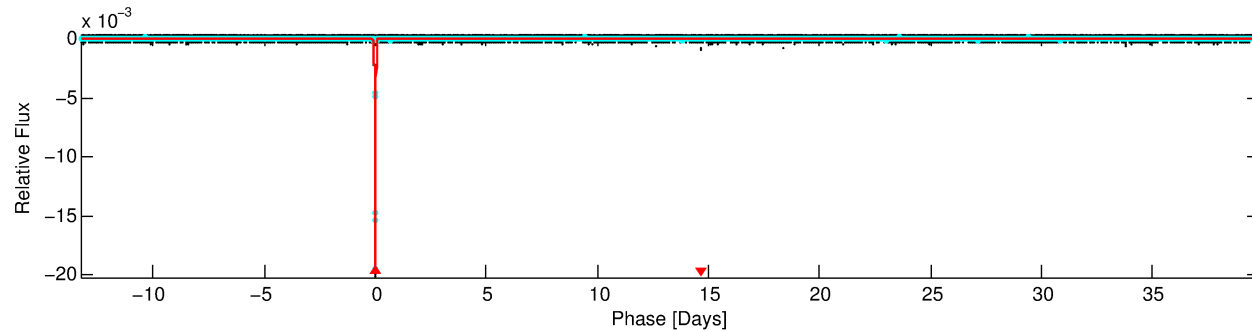
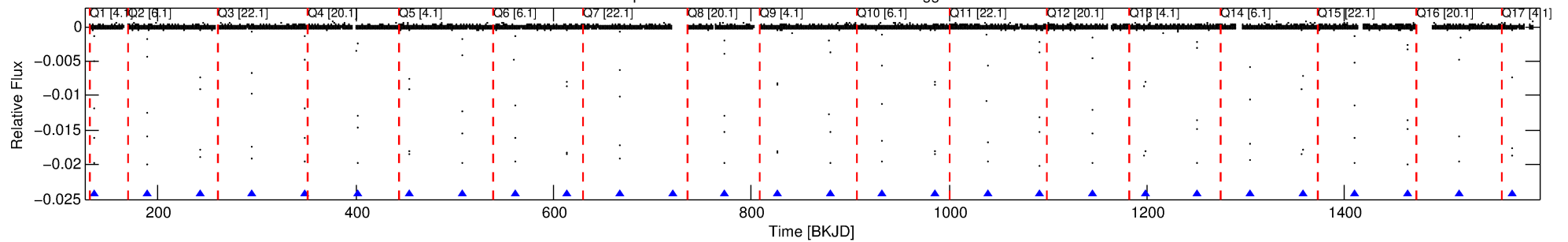
Ephemeris Match Information For 004639868-01

No Significant Match Found

DV One-Page Summary

KIC: 4639868 Candidate: 1 of 1 Period: 53.101 d
KOI: K01326.01 Corr: 0.996

Kp: 12.91 R*: 0.97 Rs Teff: 5465.0 K Logg: 4.40 Fe/H: 0.000



DV Fit Results:

Period = 53.10094 [0.00000] d
Epoch = 135.9718 [0.0000] BKJD
Rp/R* = 0.1960 [0.0080]
a/R* = 130.00 [0.91]
b = 0.95 [0.01]
Seff = 10.94 [2.45]
Teq = 464 [26] K
Rp = 20.81 [2.64] Re
a = 0.2629 [0.0330] AU
Ag = 2.13 [1.48] [0.76σ]
Teff = 866 [145] K [2.73σ]

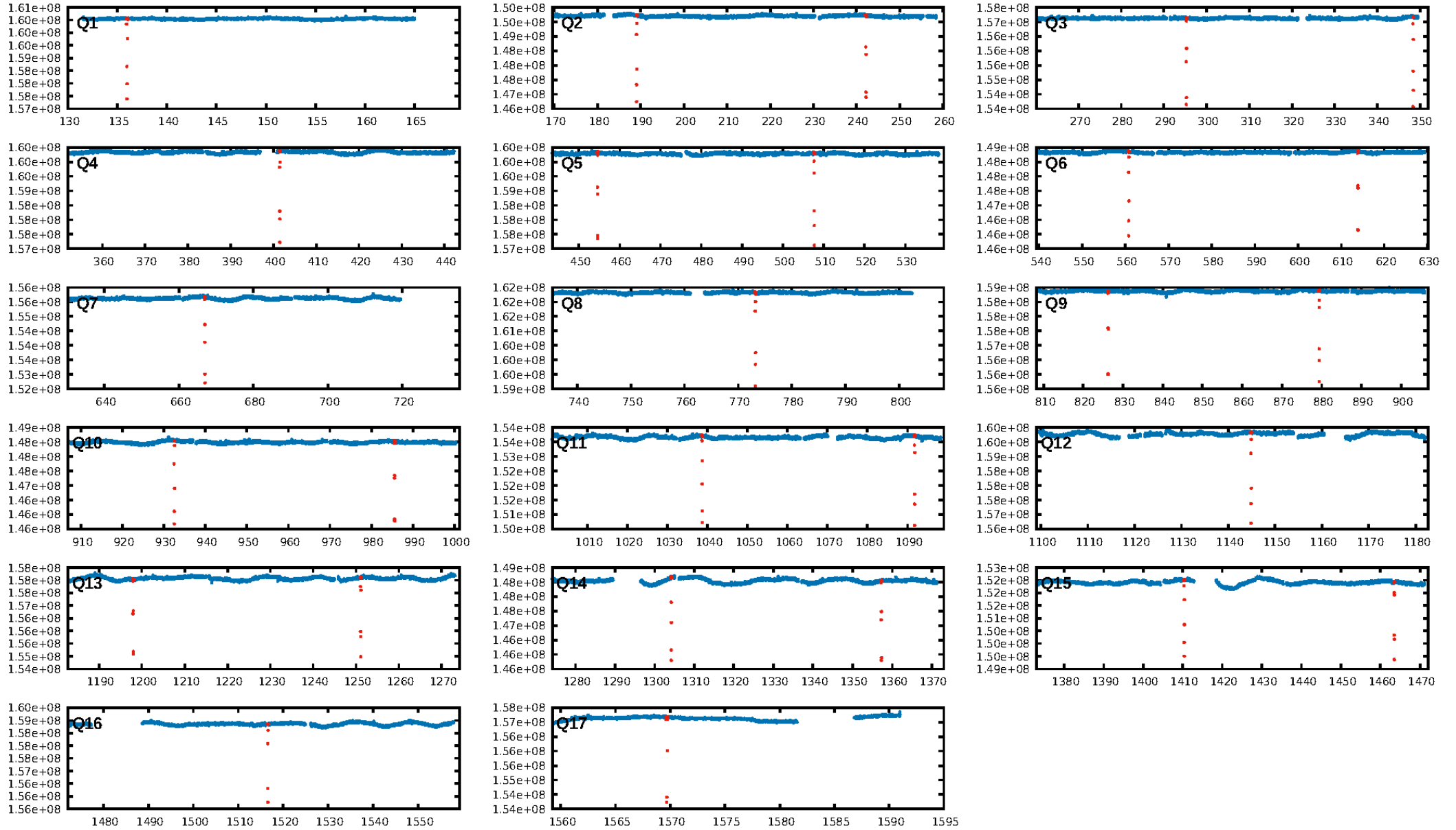
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 7.249
Centroid-sig: 0.0%
Centroid-so: 0.374 arcsec [34.58σ]
OotOffset-rm: 0.035 arcsec [0.52σ]
KicOffset-rm: 0.403 arcsec [5.71σ]
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]

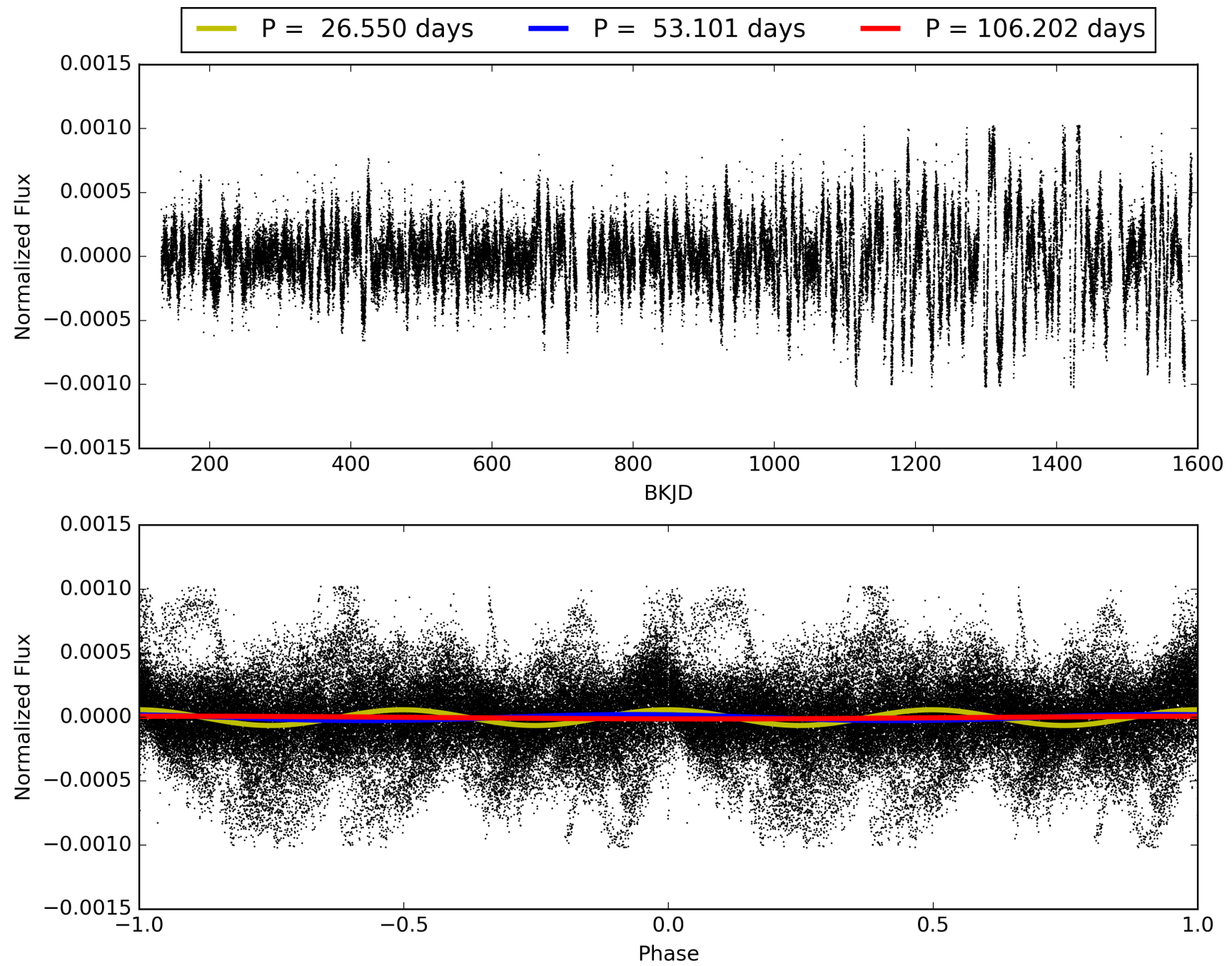
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 03:18:47 Z

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

TCE 004639868-01, PDC Light Curves

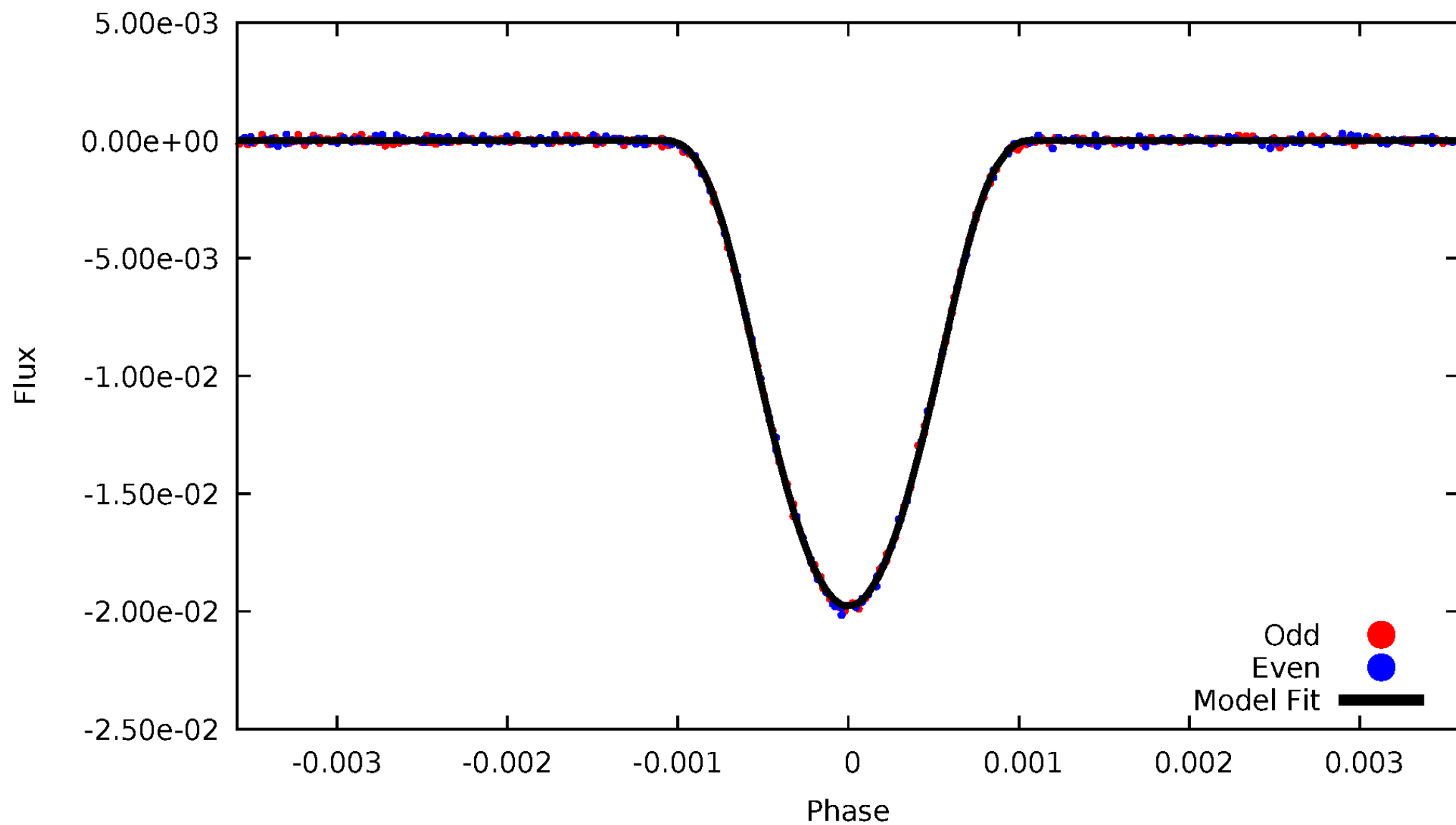


TCE 004639868-01



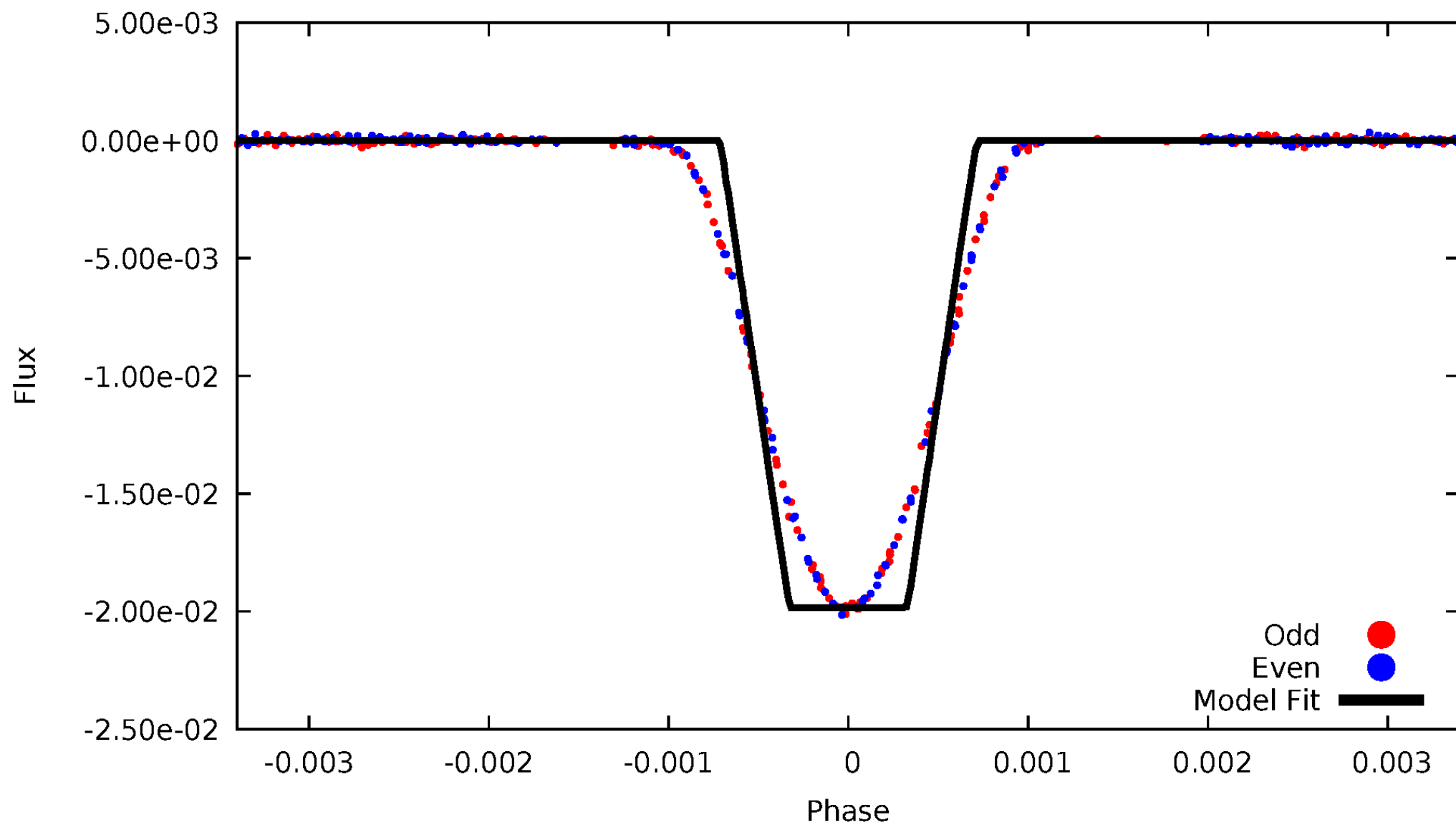
DV Odd/Even

TCE 004639868-01



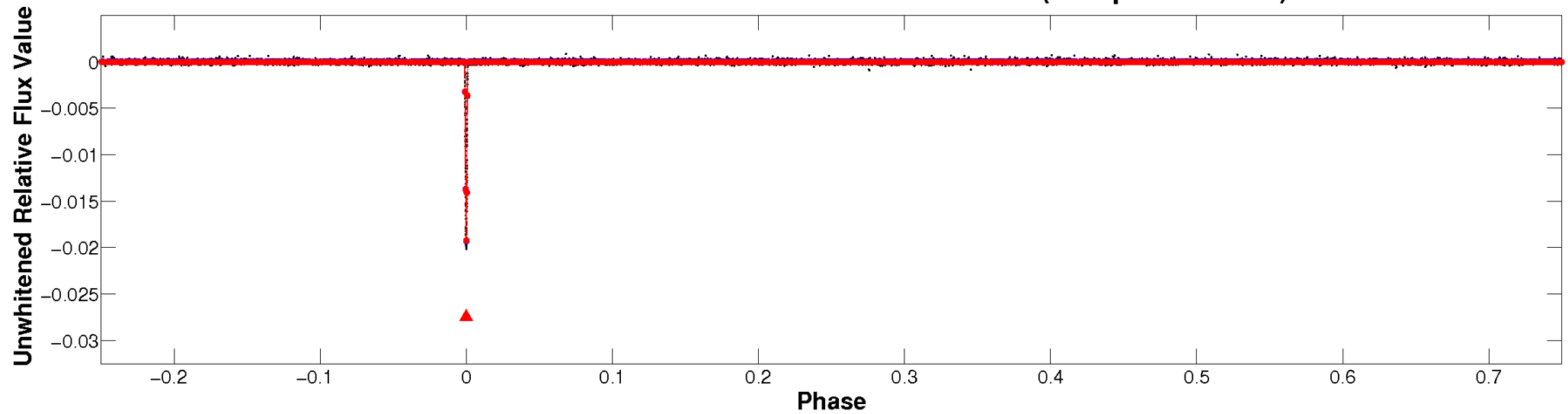
ALT Odd/Even

TCE 004639868-01

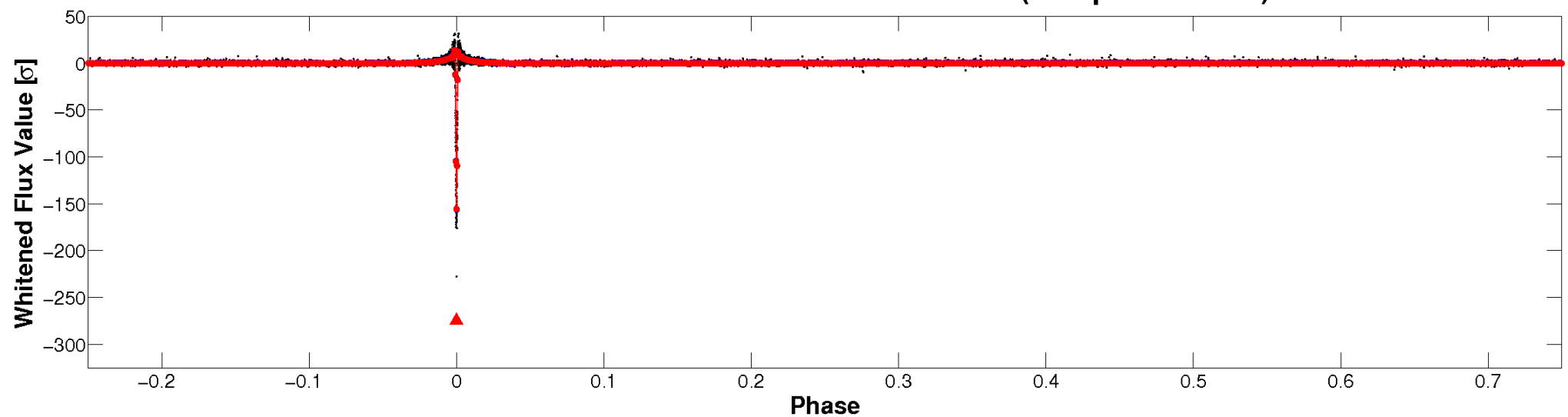


Non-Whitened Vs. Whitened Light Curve

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

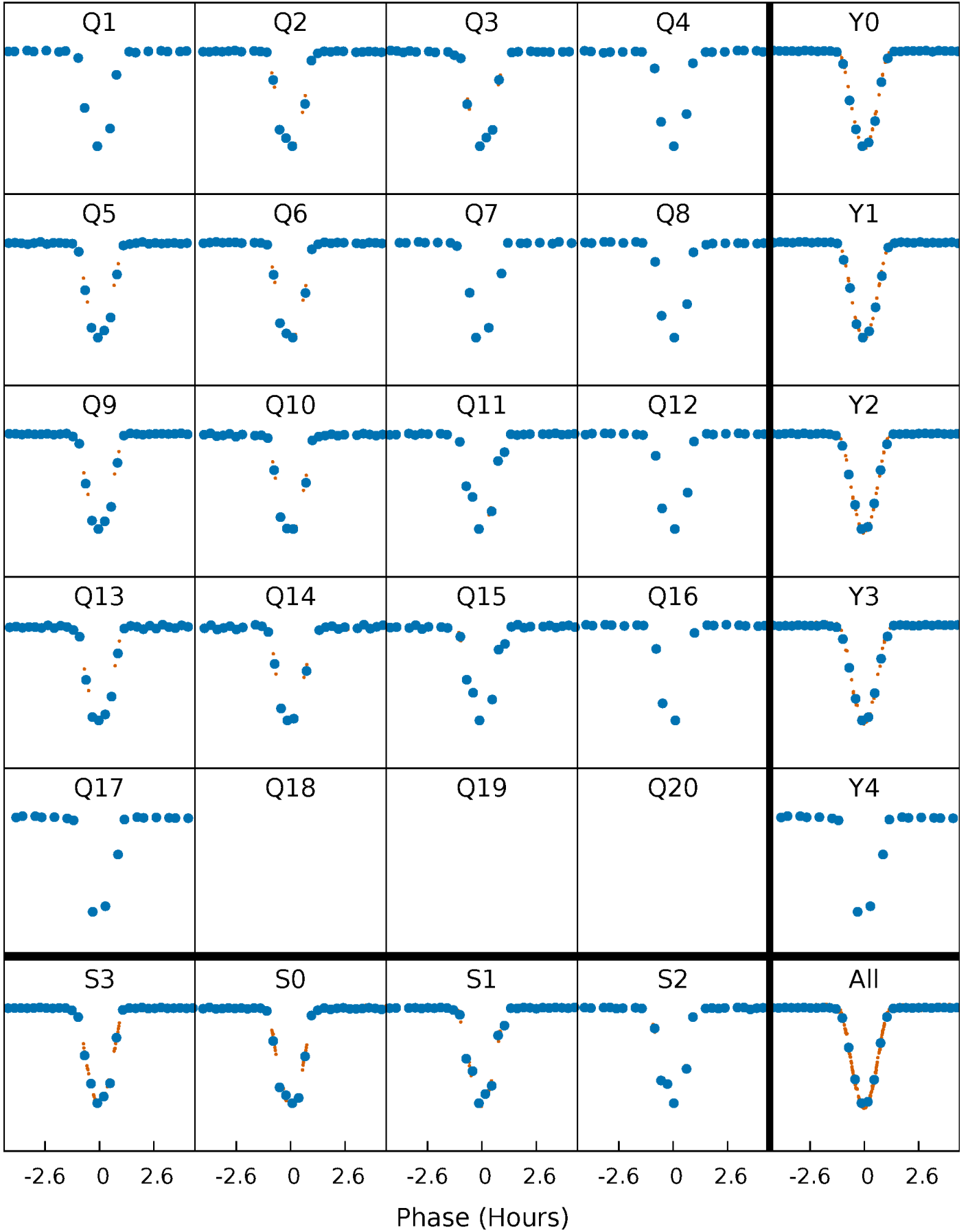


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



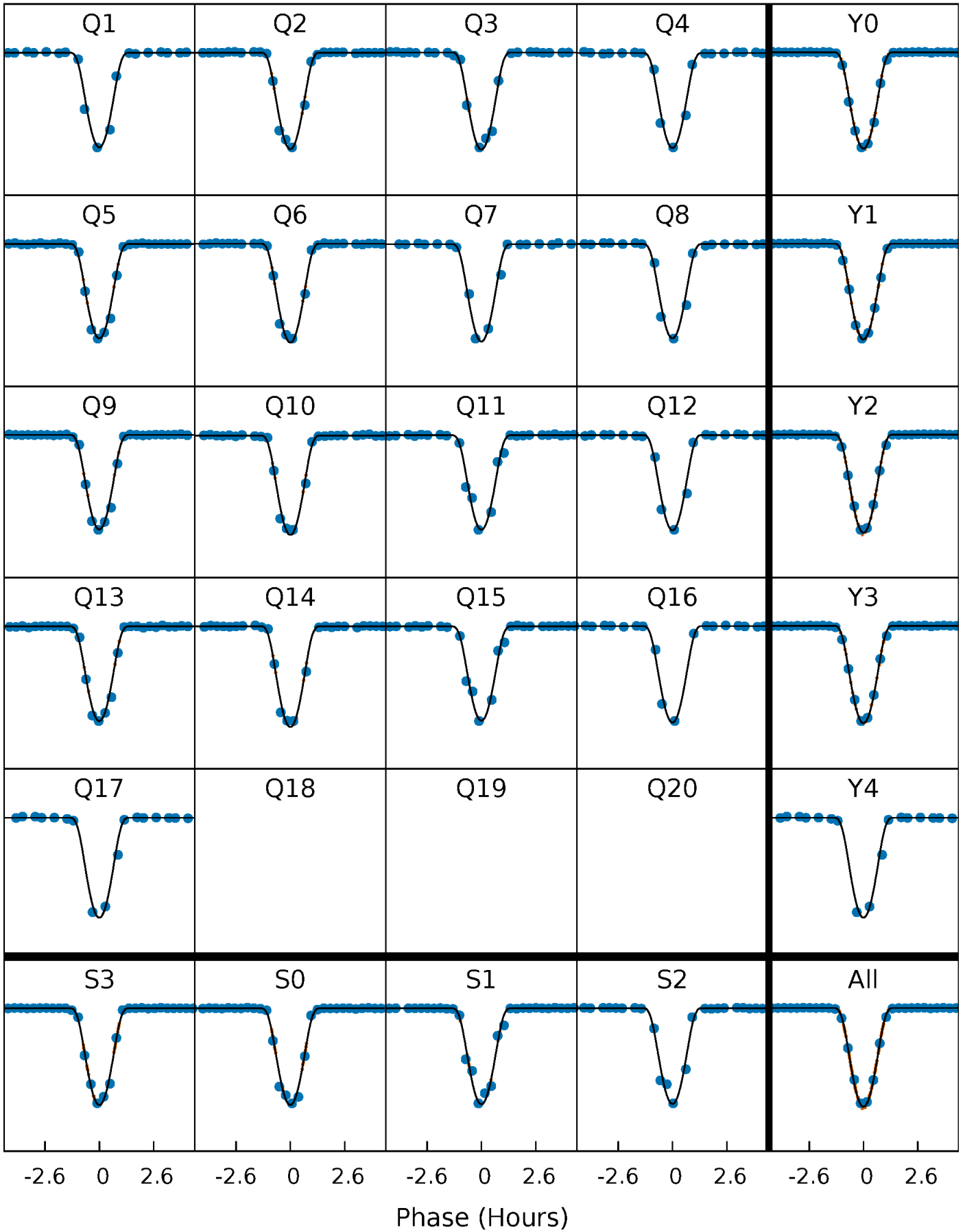
PDC Quarter-Phased Transit Curves

TCE 004639868-01 P= 53.100942 Days $T_0=135.971756$ (BKJD)



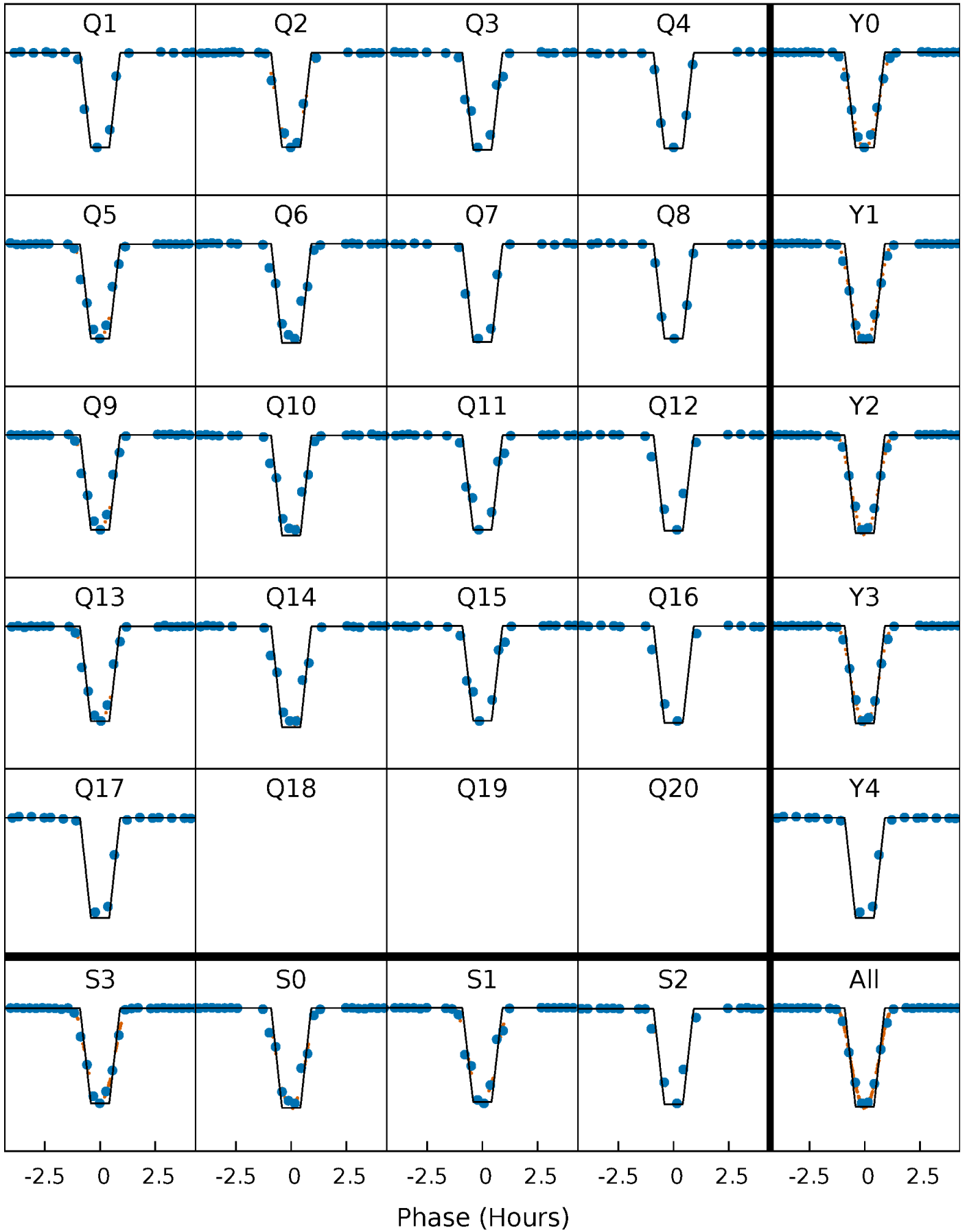
DV Quarter-Phased Transit Curves

TCE 004639868-01 P= 53.100942 Days $T_0=135.971756$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

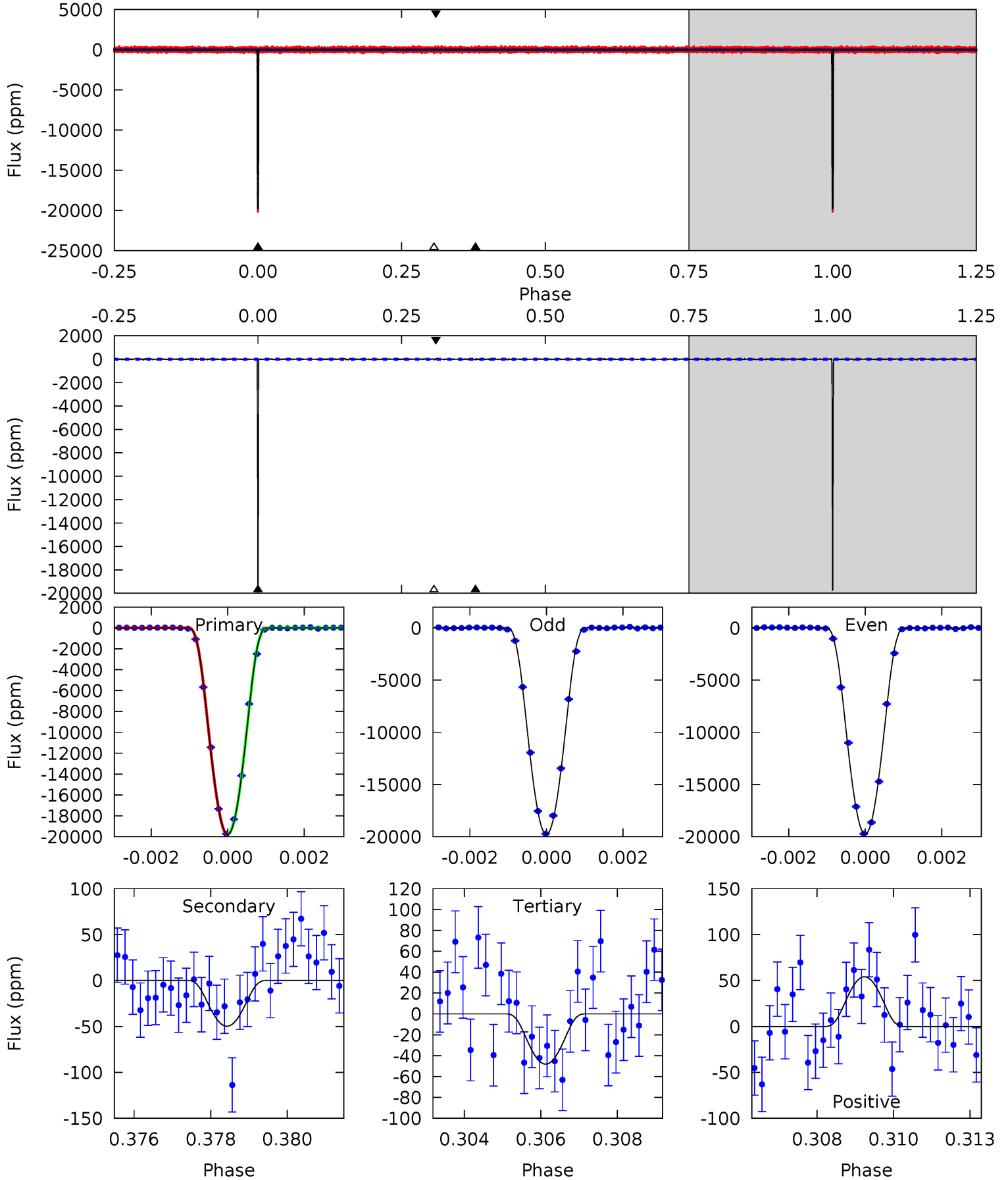
TCE 004639868-01 P= 53.100913 Days $T_0=135.972105$ (BKJD)



DV Model-Shift Uniqueness Test

004639868-01, P = 53.100942 Days, E = 82.870814 Days

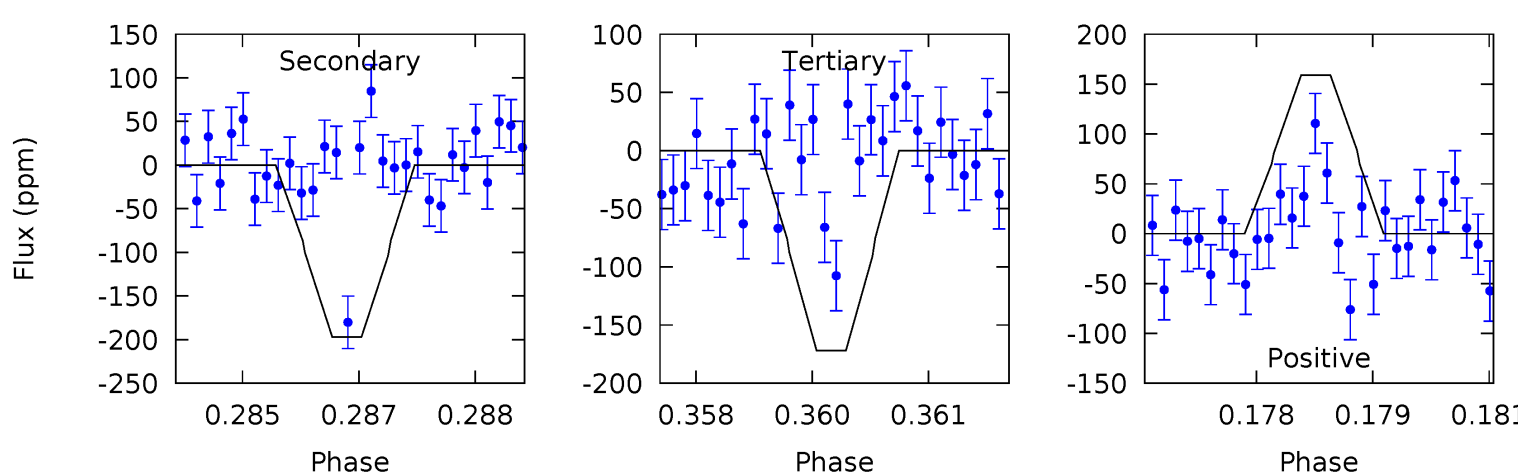
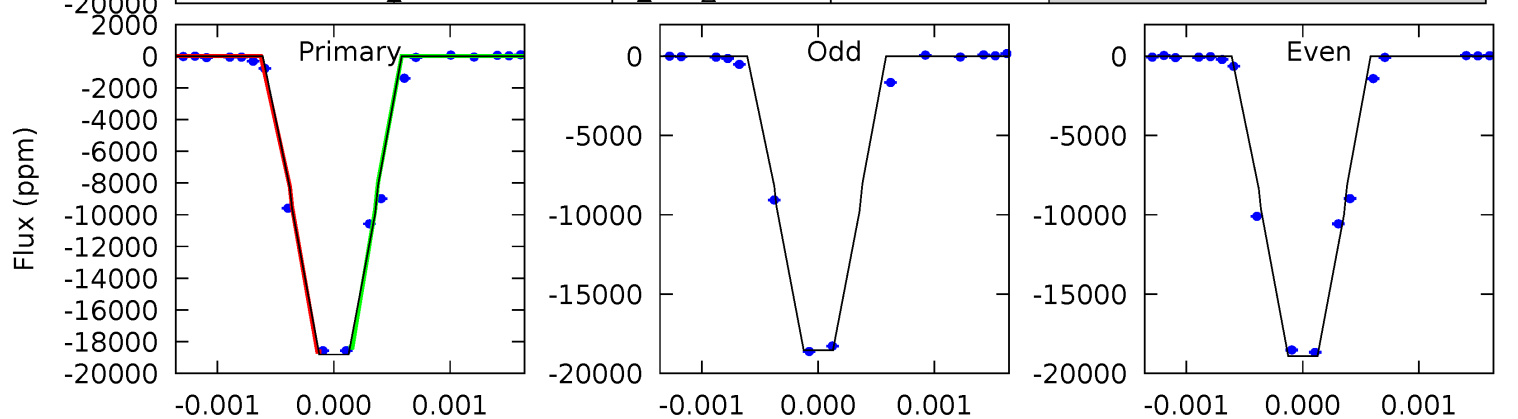
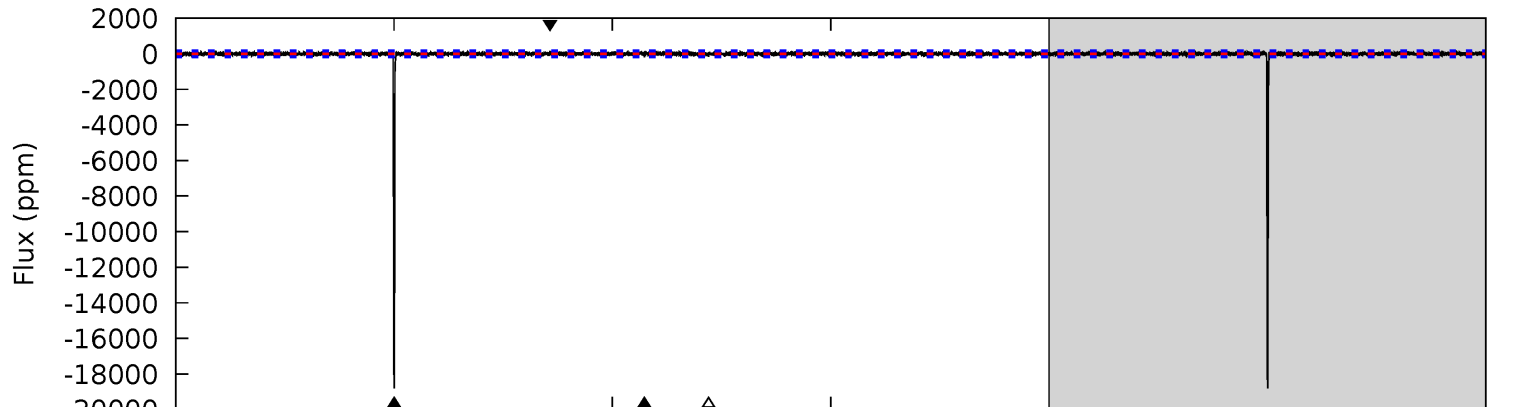
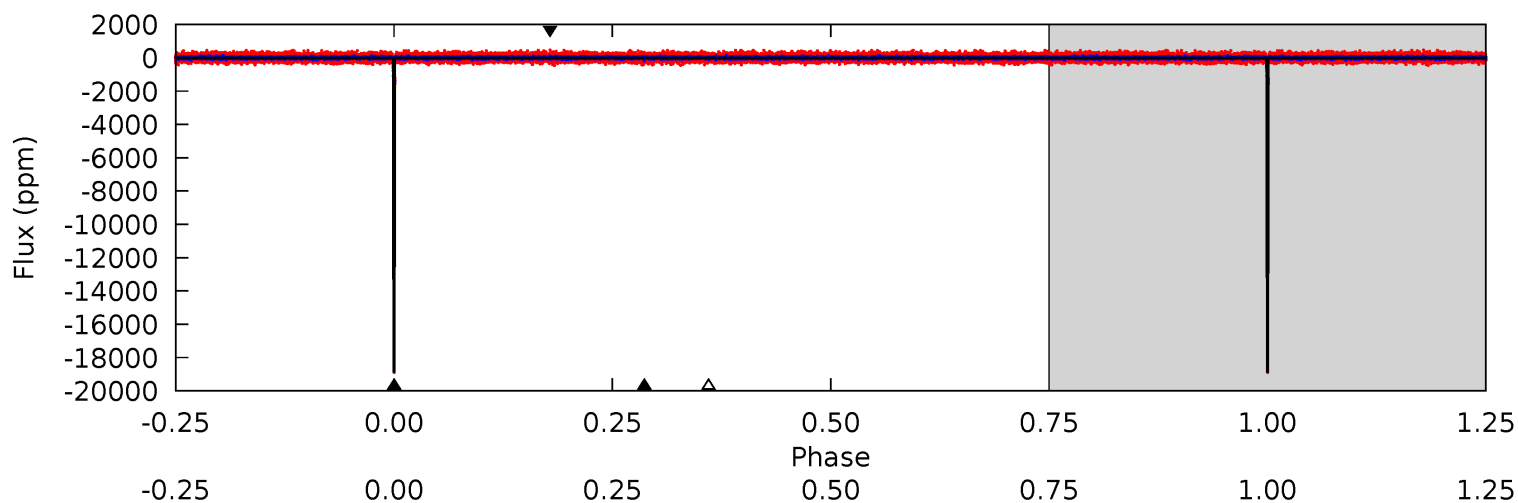
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2184	5.49	5.31	5.96	5.32	3.07	1.71	2178	2178	0.18	-0.47	1.35	1.00	0.00	2.70



Alt Model-Shift Uniqueness Test

004639868-01, P = 53.100913 Days, E = 82.871192 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
601.8	6.30	5.50	5.08	5.39	3.19	1.23	596.3	596.7	0.79	1.22	5.98	1.00	0.01	0



Stellar Parameters For KIC 004639868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5465^{+109}_{-98}	$4.396^{+0.126}_{-0.084}$	$0.000^{+0.150}_{-0.150}$	$0.973^{+0.117}_{-0.117}$	$0.859^{+0.071}_{-0.038}$	$1.316^{+0.694}_{-0.357}$
	+2%/-2%	+3%/-2%	+inf%/-inf%	+12%/-12%	+8%/-4%	+53%/-27%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 004639868-01 / KOI 1326.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-50 ± 9	$20.75^{+1.84}_{-1.60}$	647^{+25}_{-25}	2015^{+48}_{-49}	$4.442^{+1.175}_{-1.001}$
Alt.	-197 ± 31	$14.85^{+1.52}_{-1.41}$	645^{+25}_{-28}	2552^{+68}_{-63}	34^{+10}_{-8}

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 $A_{obs} \gg 1.0$

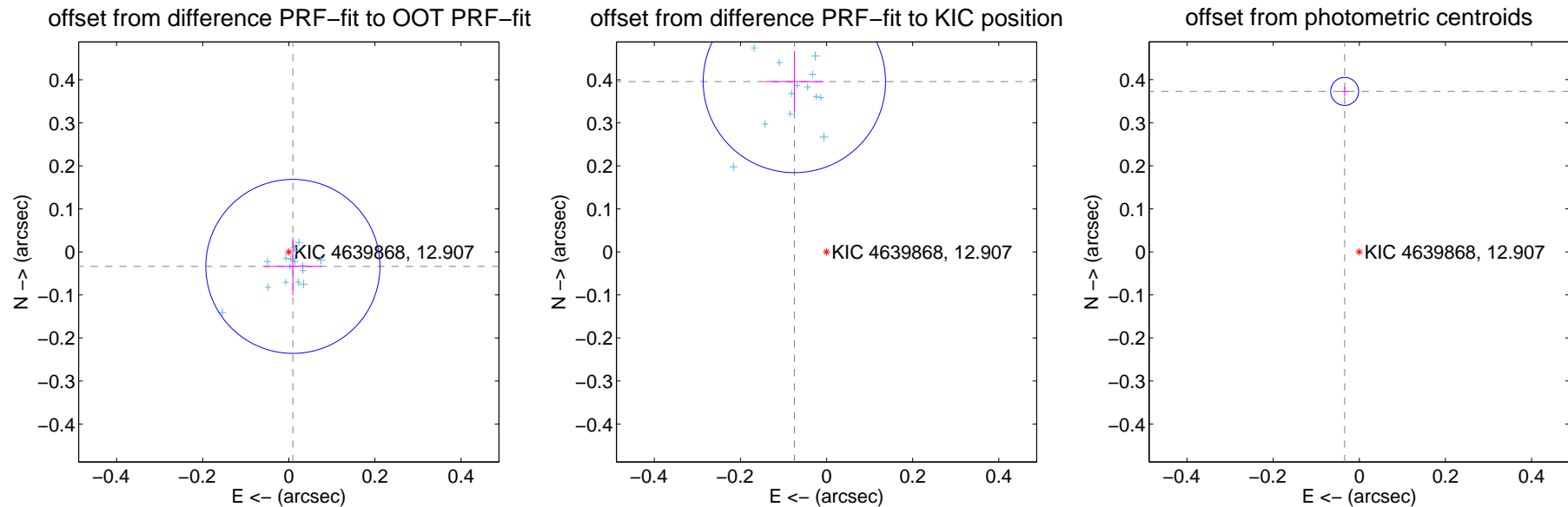
DV Centroid Data

Supplemental centroid analysis for 004639868-01. Kepler magnitude: 12.91. Transit SNR 1103.53

There are 16 quarters with good PRF difference image offsets

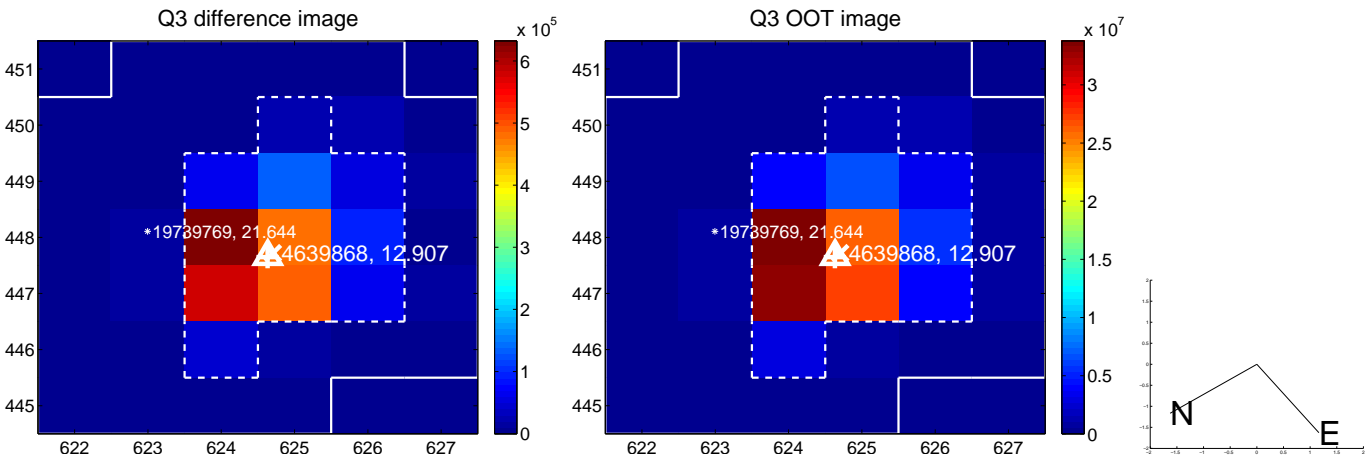
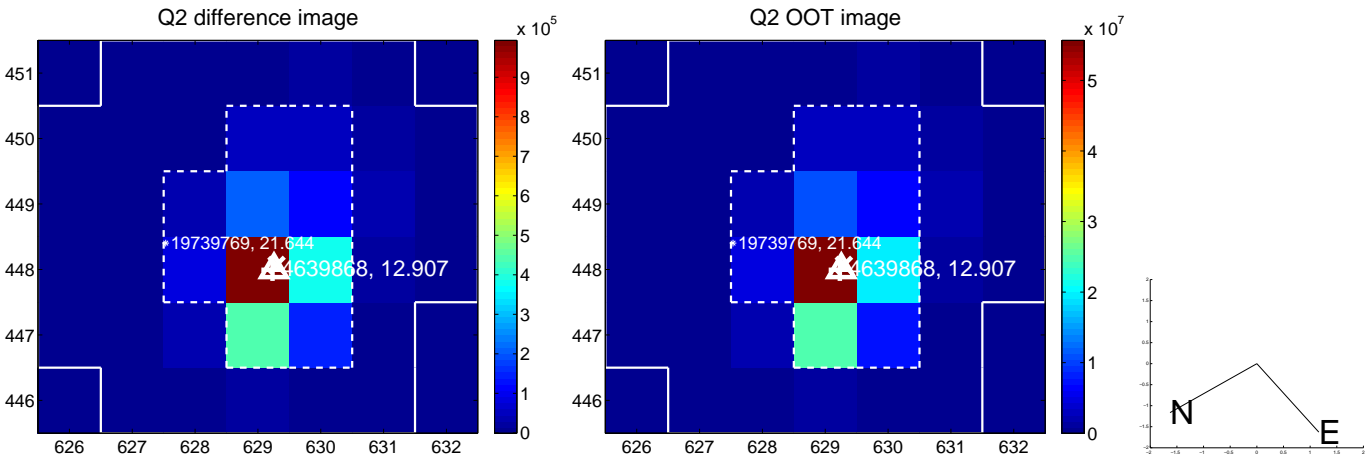
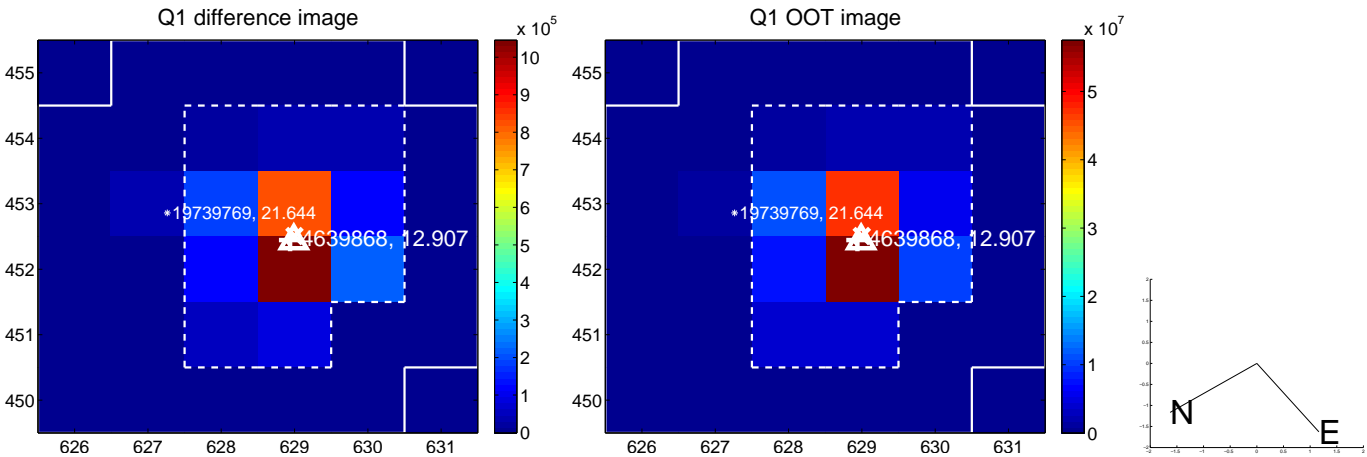
The direct PRF centroid is offset from the target star catalog position by about 0.48 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.035 ± 0.067	0.52	-0.009 ± 0.067	-0.034 ± 0.067
PRF-fit source offset from KIC position	0.403 ± 0.071	5.71	0.075 ± 0.068	0.396 ± 0.071
photometric centroid source offset	0.37 ± 0.01	34.58	0.03 ± 0.01	0.37 ± 0.01

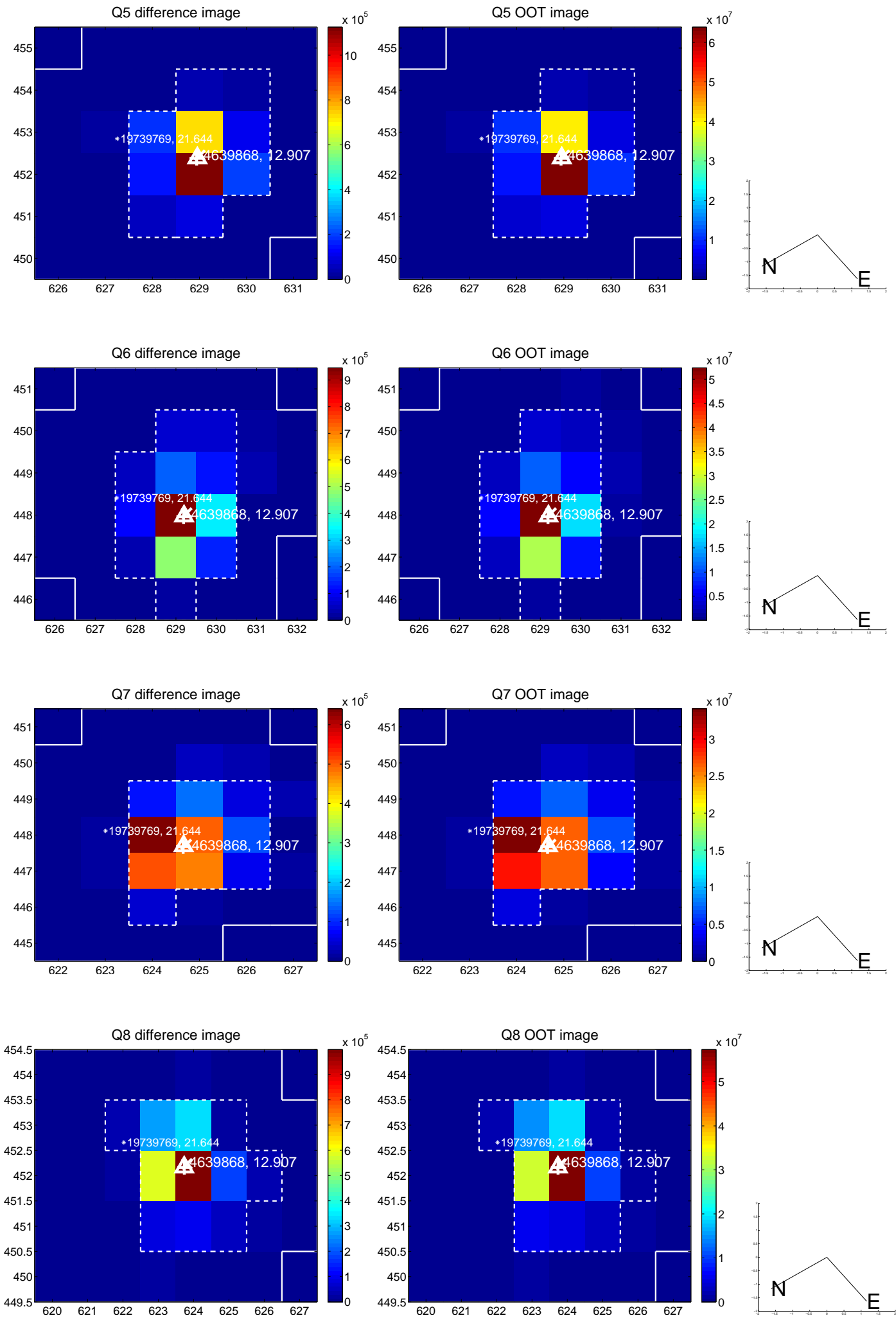


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

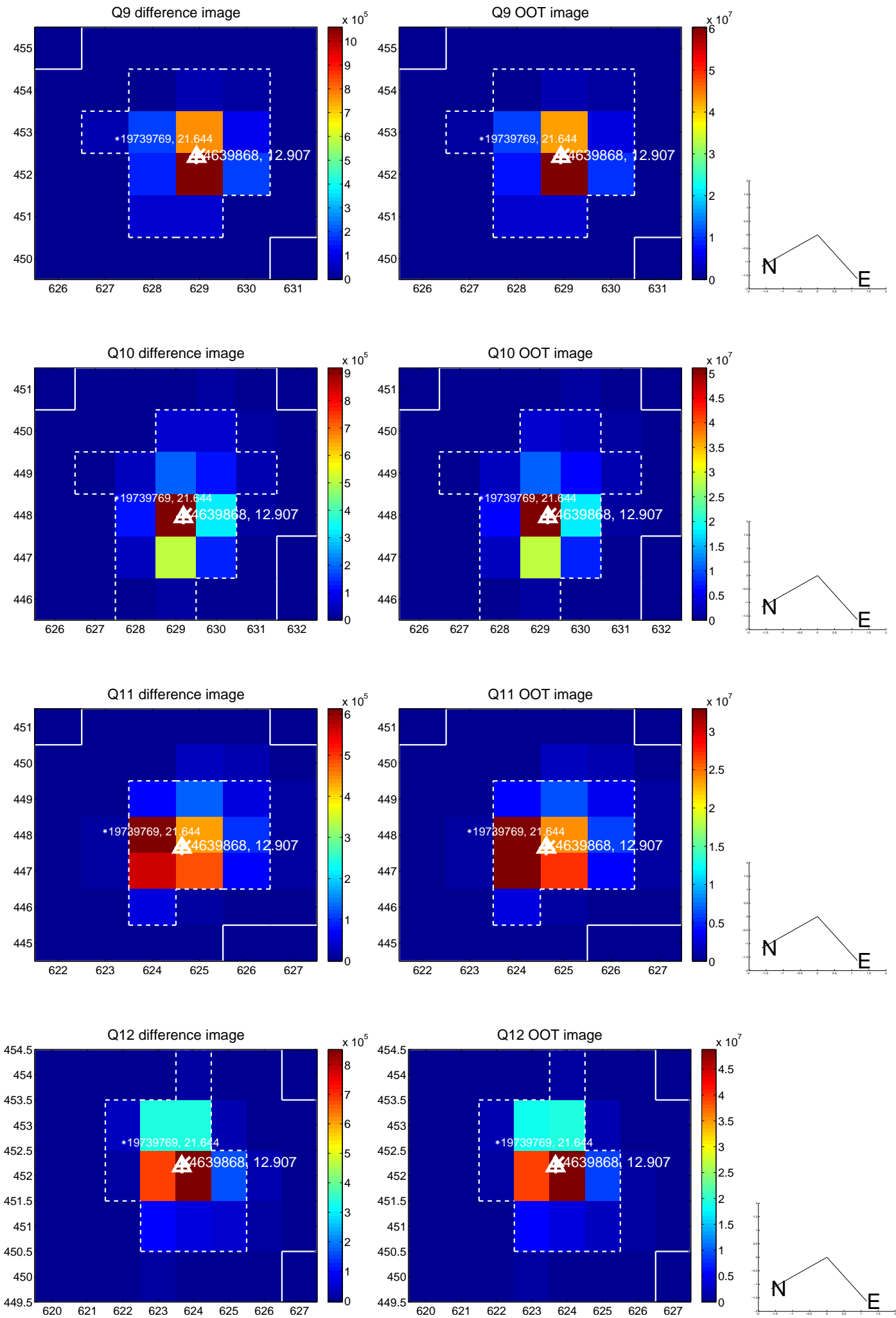
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



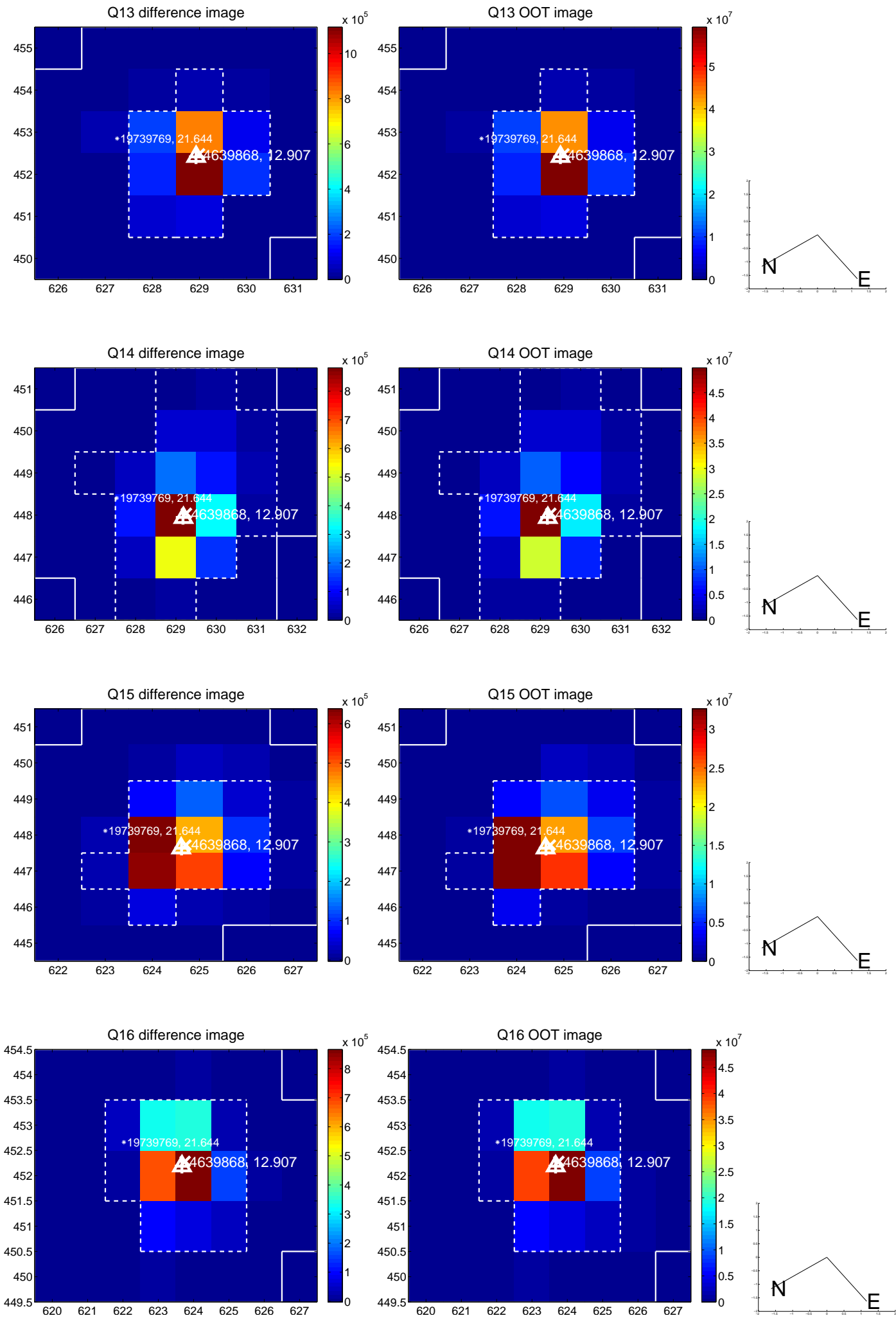
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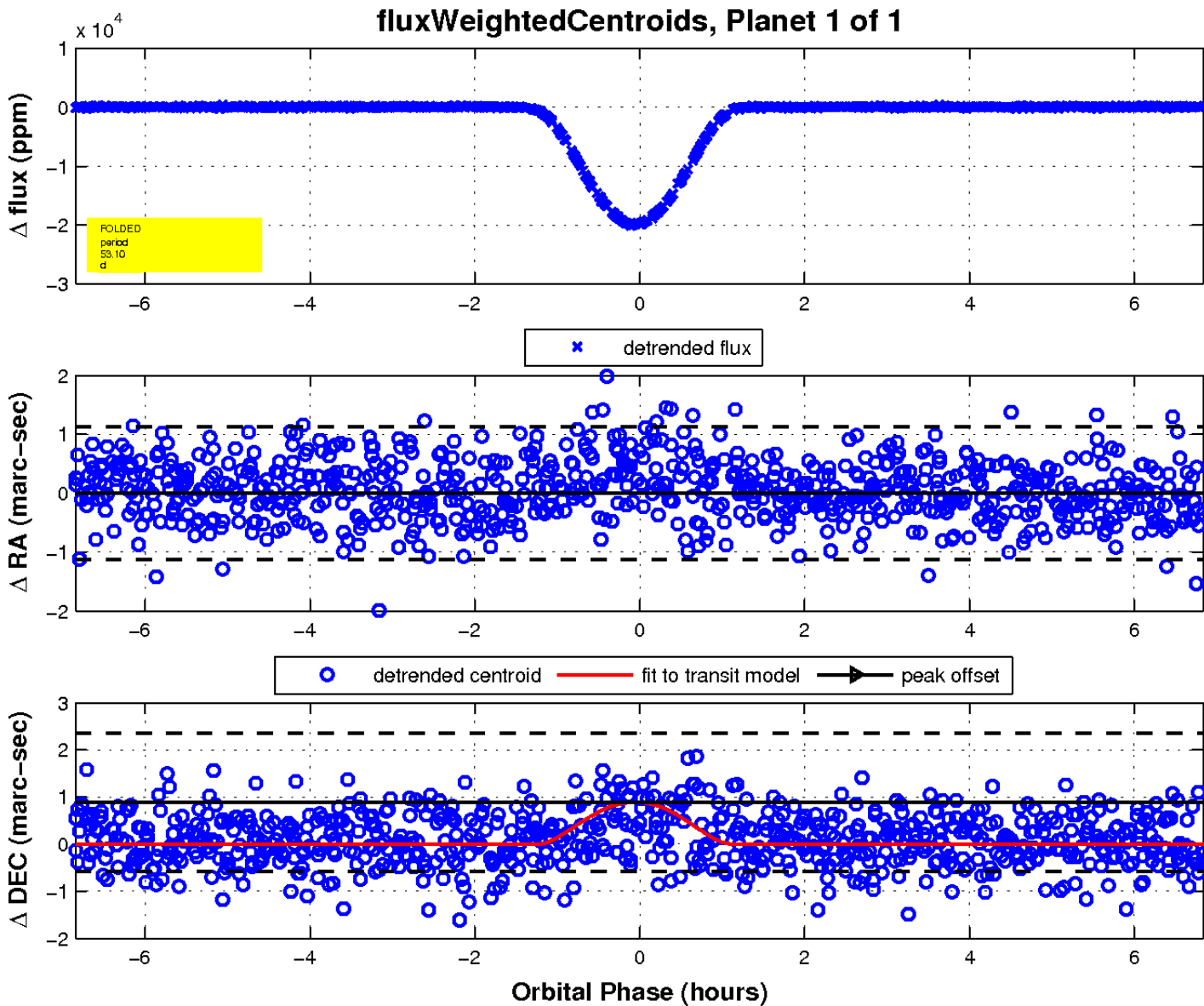
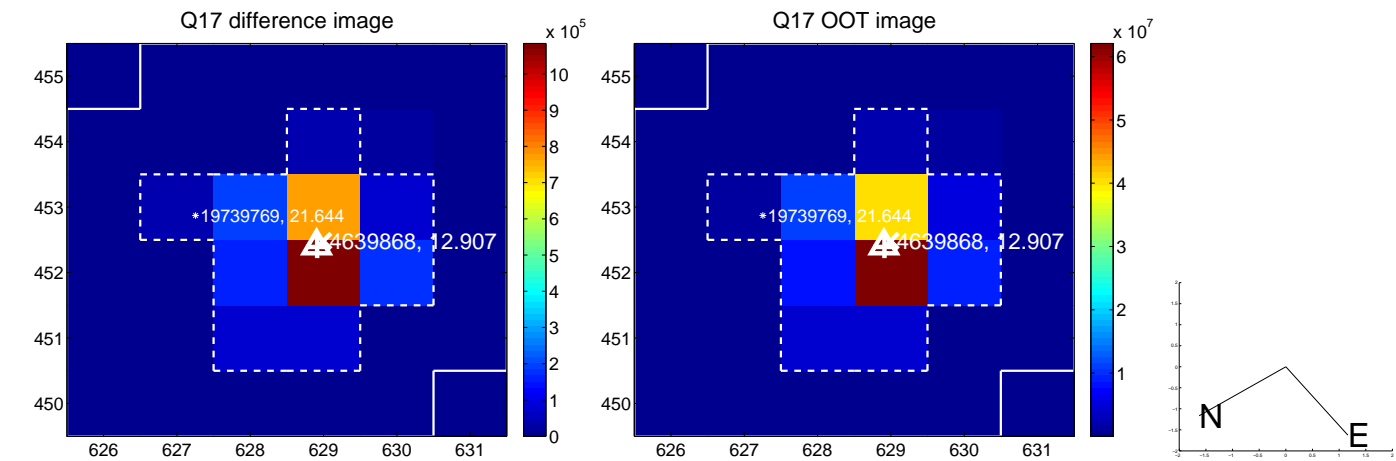
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UKIRT Image

