

# KIC 008282730

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008282730-01	OBS	No	0.994069	132.410070	407.9	3.500	12.8	-1.0	1.60	6924	3.27	12528.62

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008282730-01	OBS	FP	0.00	1	0	0	0	<del>SWEET_NTL</del> <del>—LPP_DV</del> <del>—CENT_NOFITS</del>

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

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

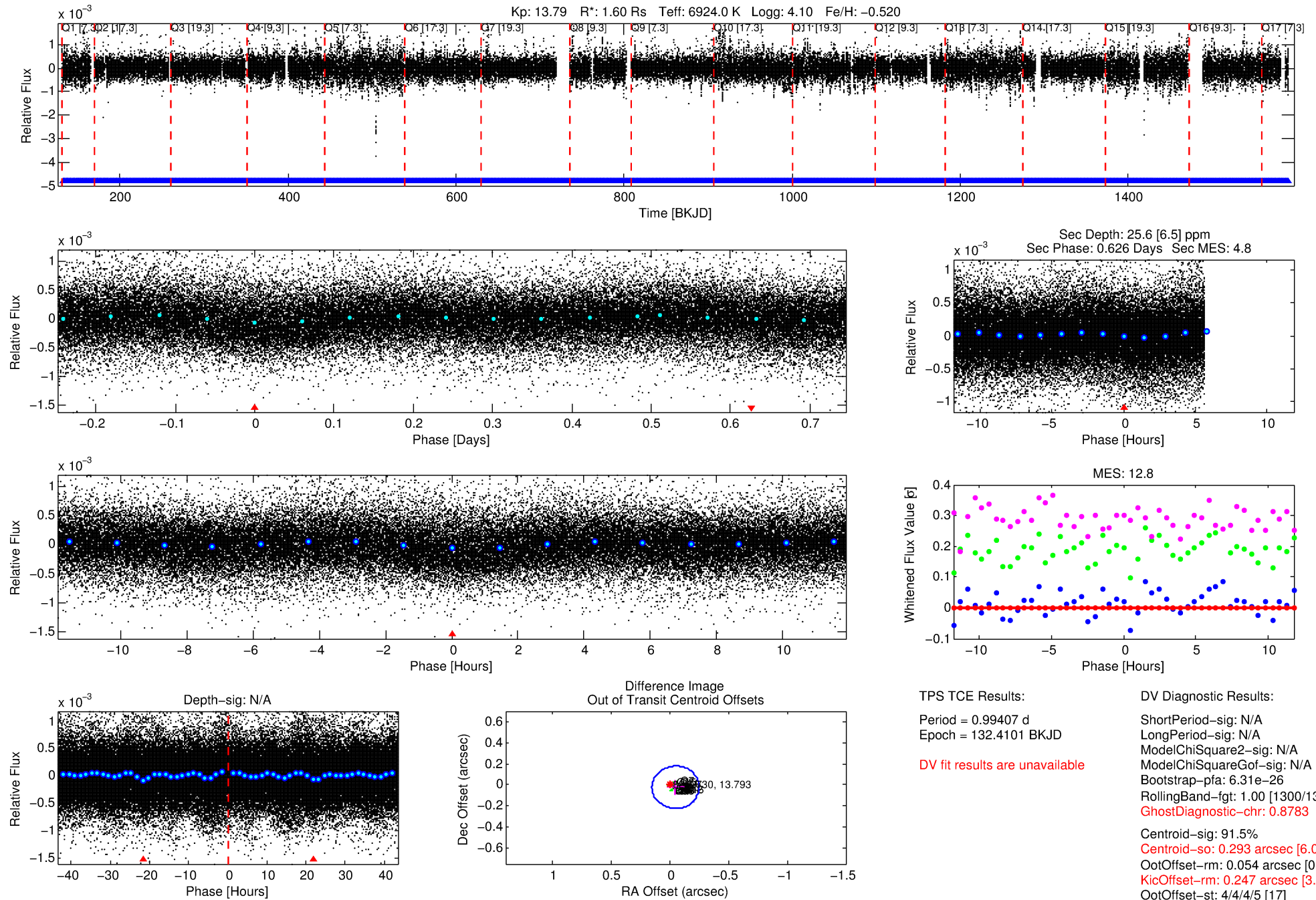
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 008282730-01

No Significant Match Found

# DV One-Page Summary

KIC: 8282730 Candidate: 1 of 1 Period: 0.994 d



## TPS TCE Results:

Period = 0.99407 d  
Epoch = 132.4101 BKJD

DV fit results are unavailable

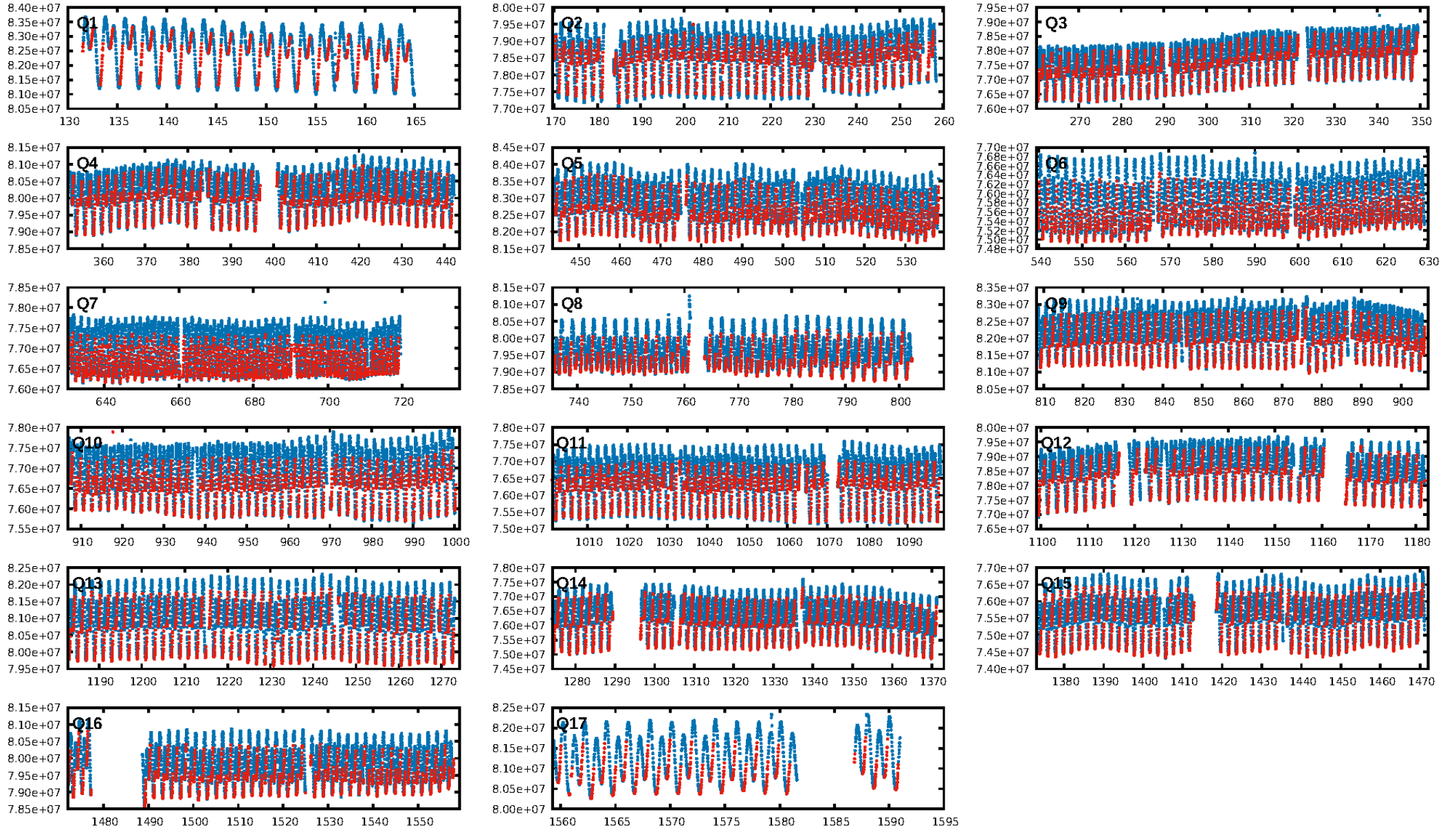
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 6.31e-26  
RollingBand-fgt: 1.00 [1300/1300]  
GhostDiagnostic-chr: 0.8783  
Centroid-sig: 91.5%  
Centroid-so: 0.293 arcsec [6.02σ]  
OotOffset-rm: 0.054 arcsec [0.80σ]  
KicOffset-rm: 0.247 arcsec [3.59σ]  
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]

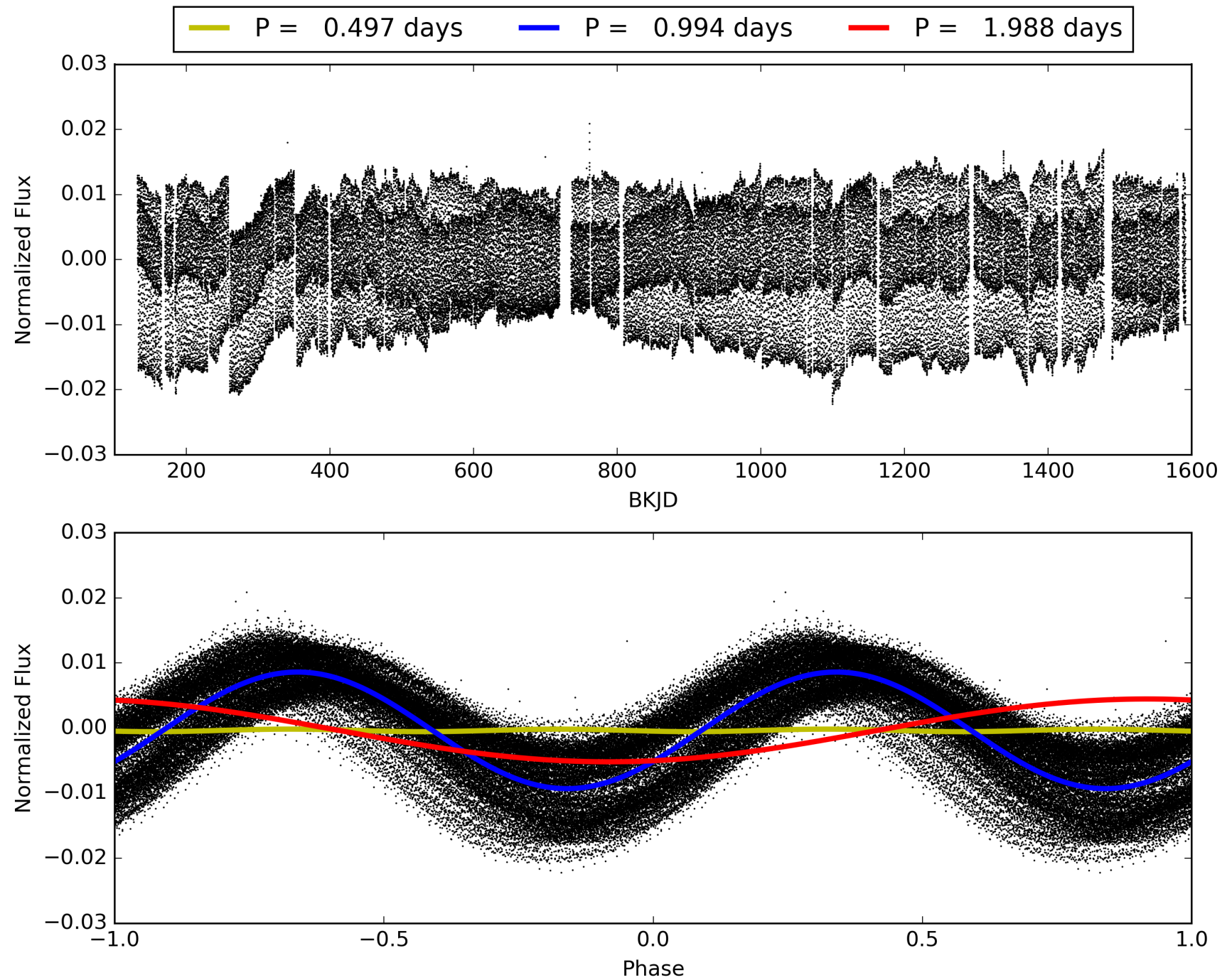
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:07:03 Z

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

# TCE 008282730-01, PDC Light Curves

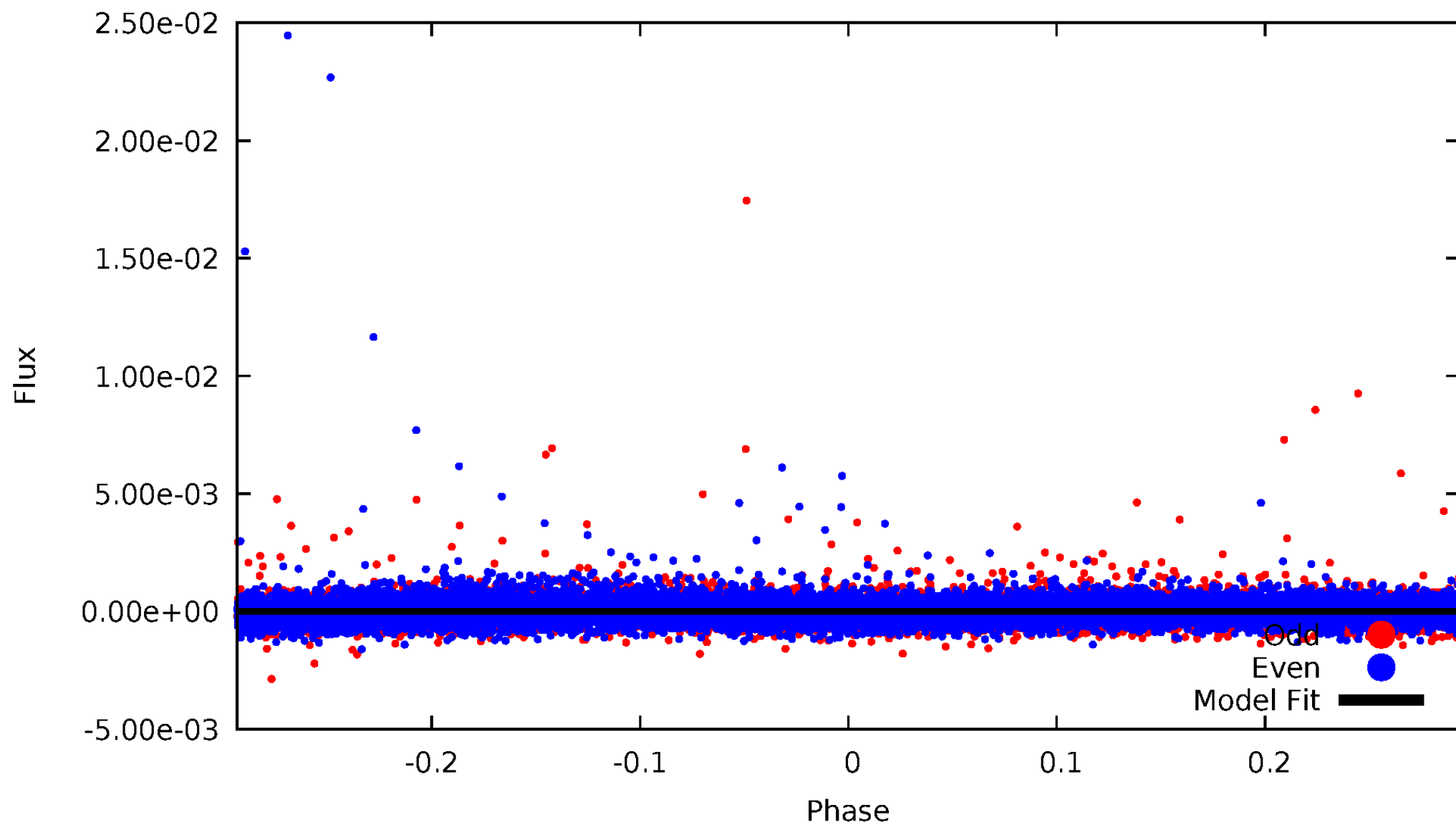


TCE 008282730-01



# DV Odd/Even

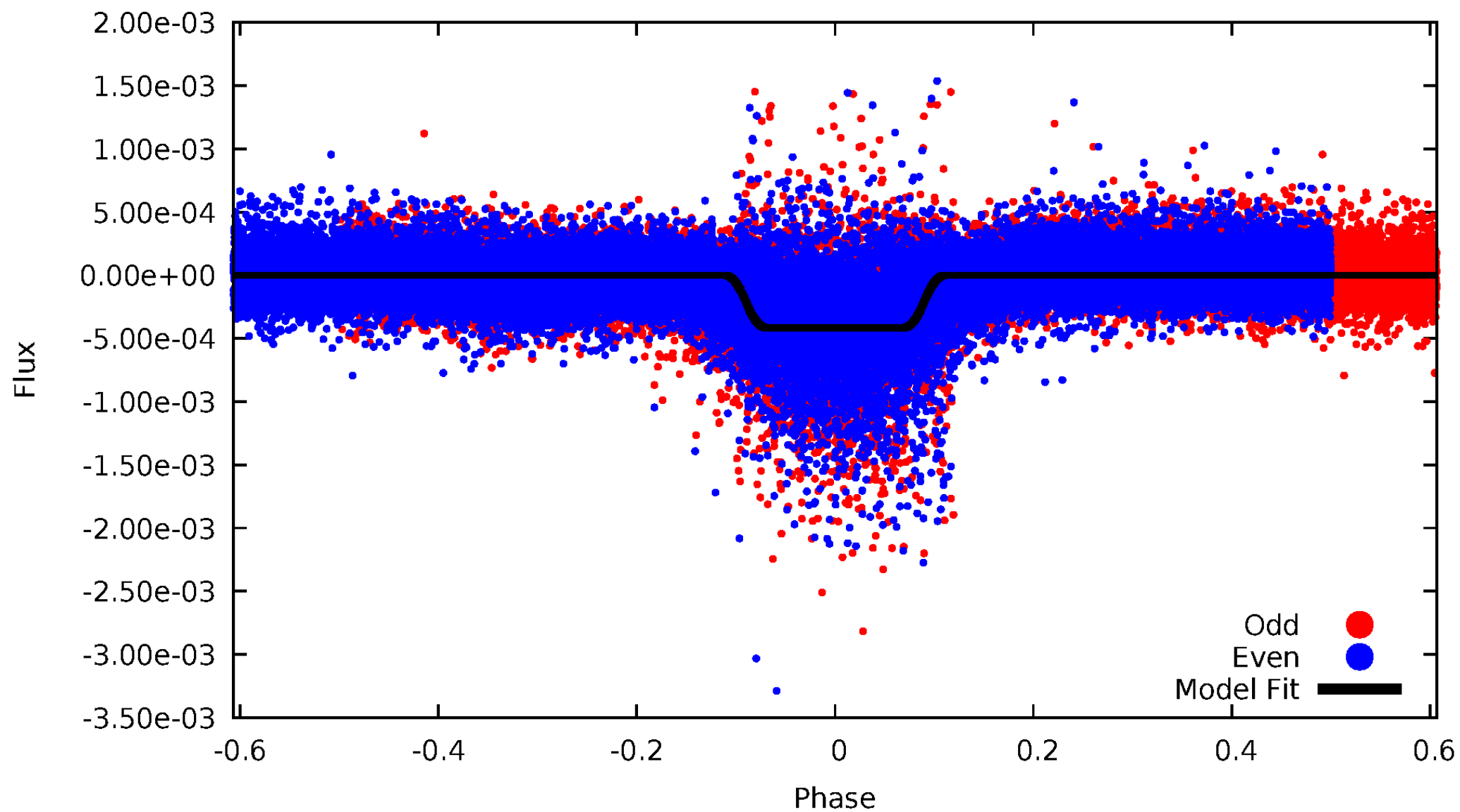
TCE 008282730-01



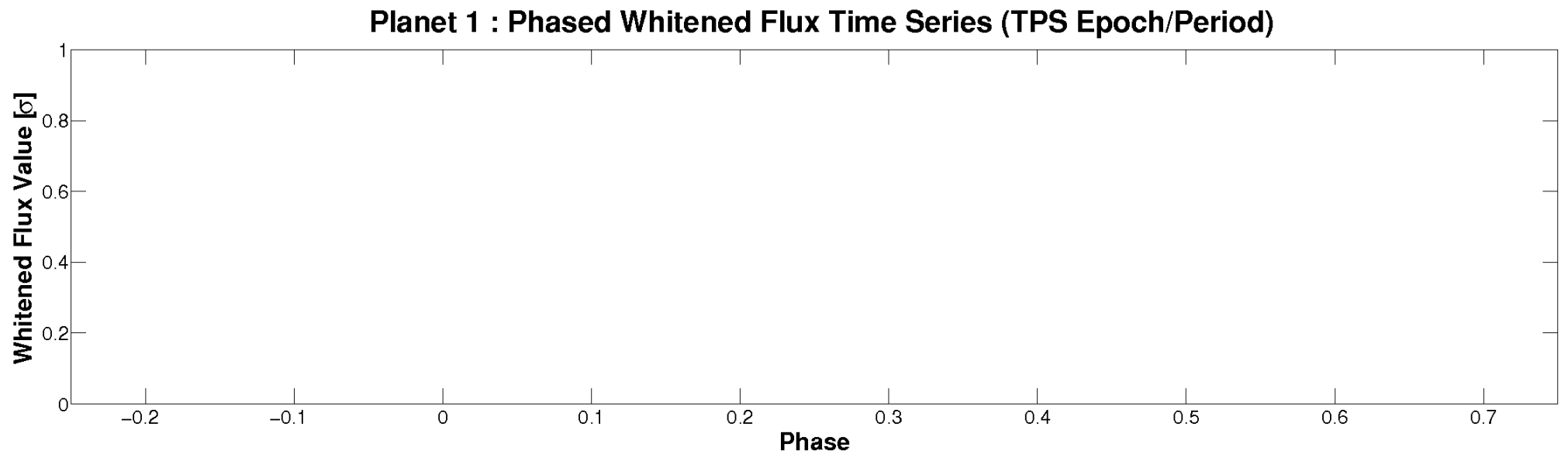
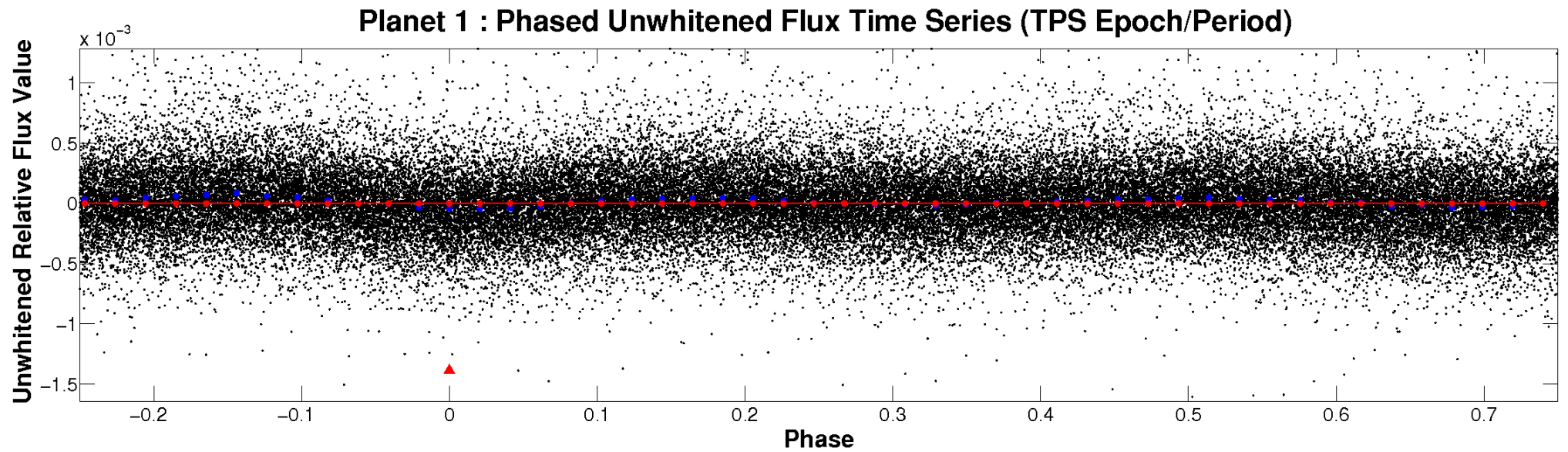


# ALT Odd/Even

TCE 008282730-01

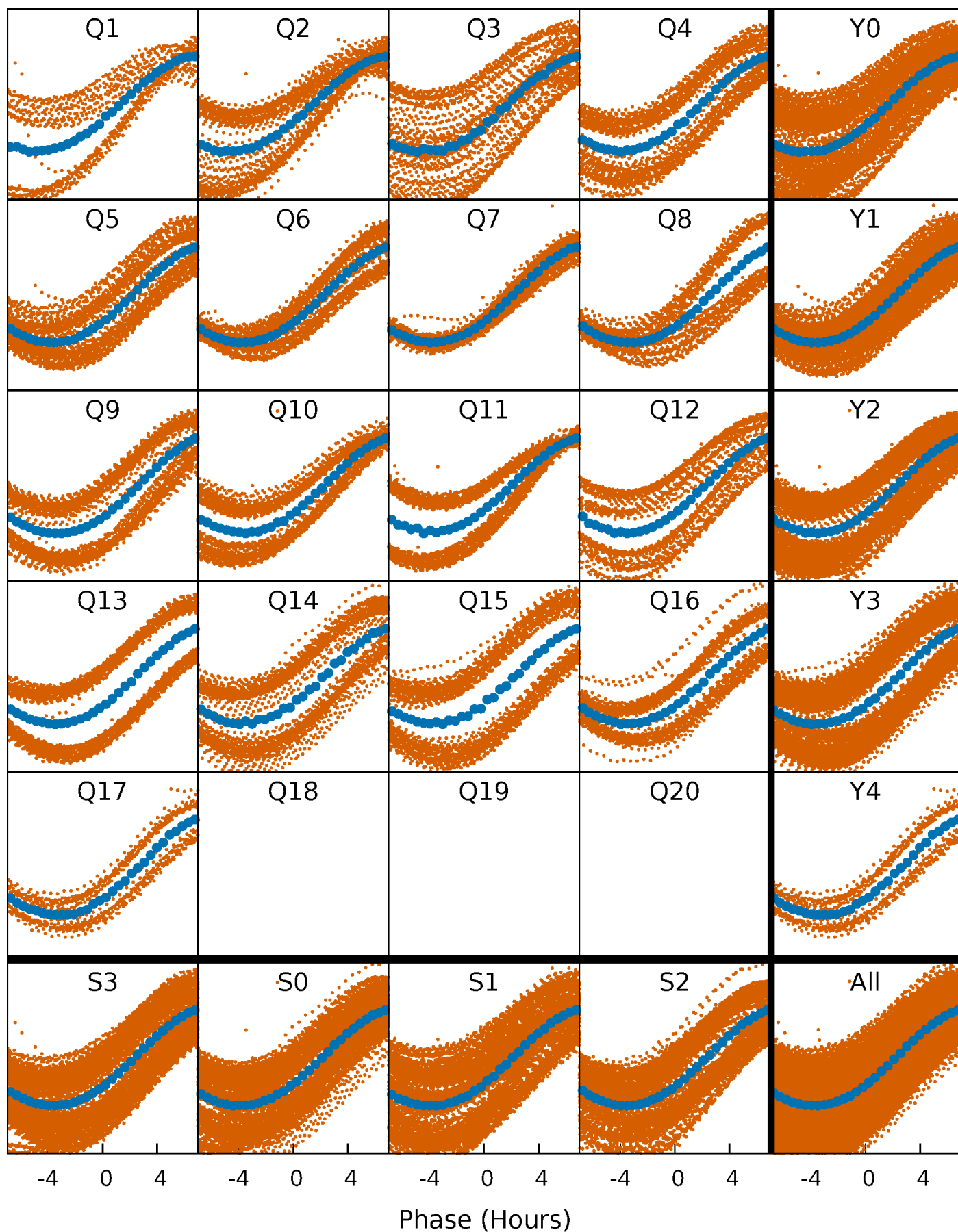


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

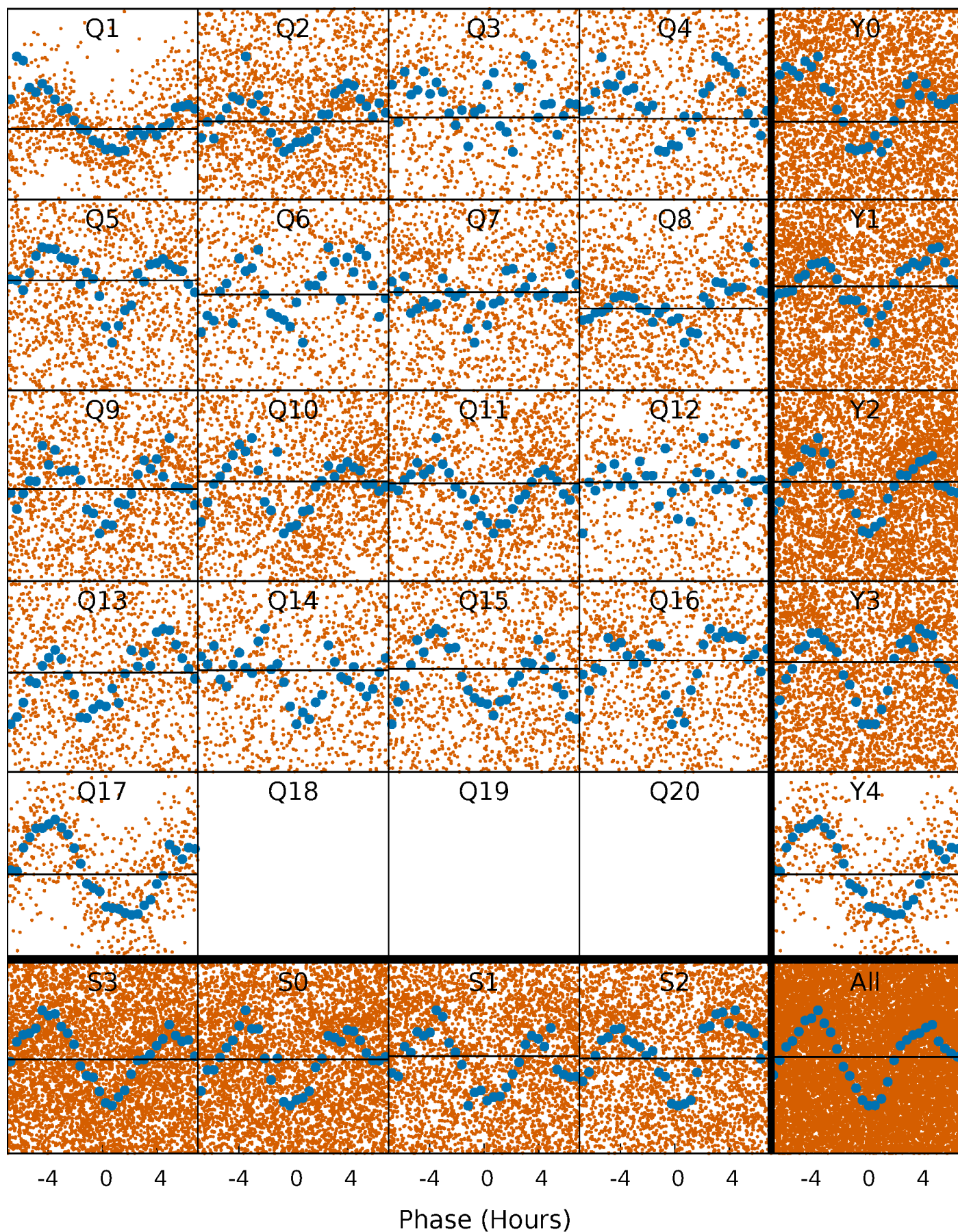
TCE 008282730-01   P= 0.994069 Days    $T_0=132.410070$  (BKJD)





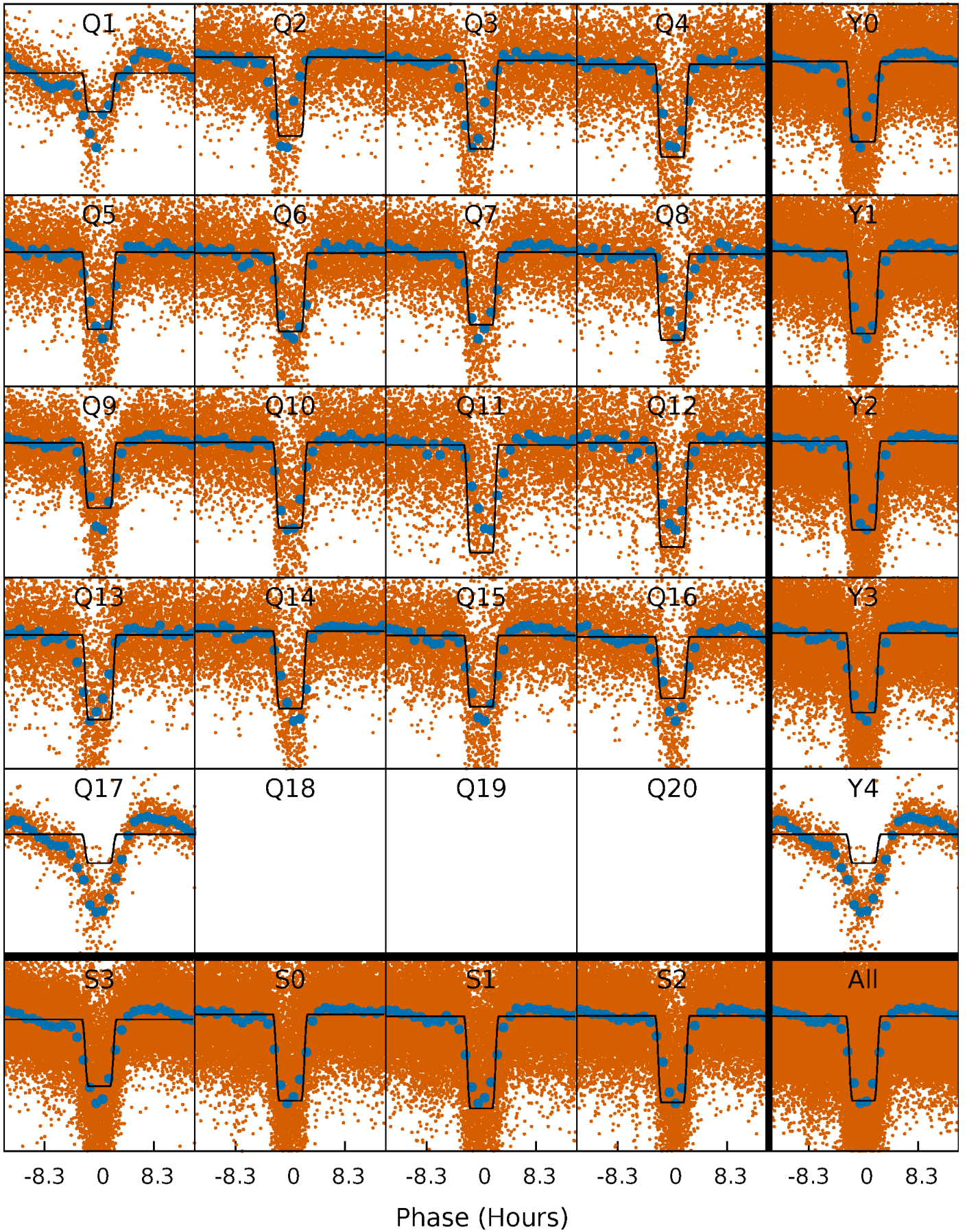
# DV Quarter-Phased Transit Curves

TCE 008282730-01 P= 0.994069 Days  $T_0=132.410070$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

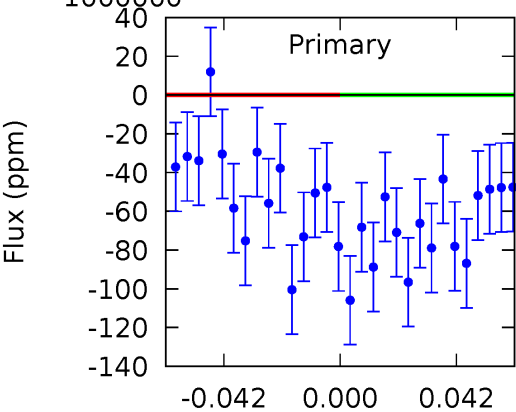
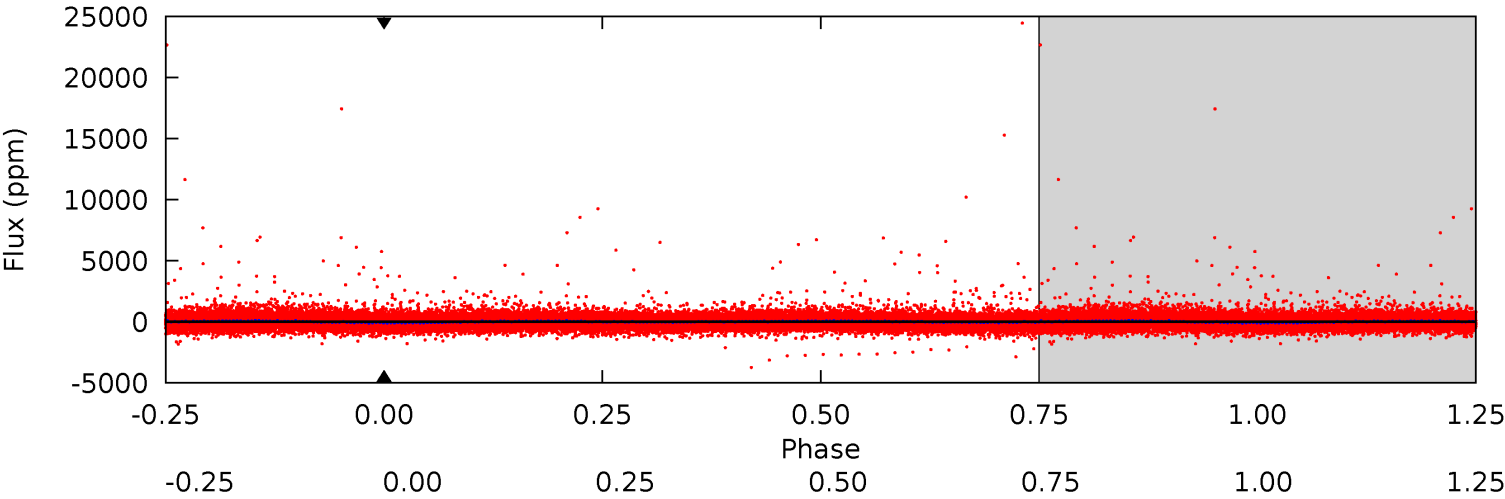
TCE 008282730-01   P= 0.994069 Days    $T_0=132.401527$  (BKJD)



DV Model-Shift Uniqueness Test

008282730-01, P = 0.994069 Days, E = 131.416001 Days

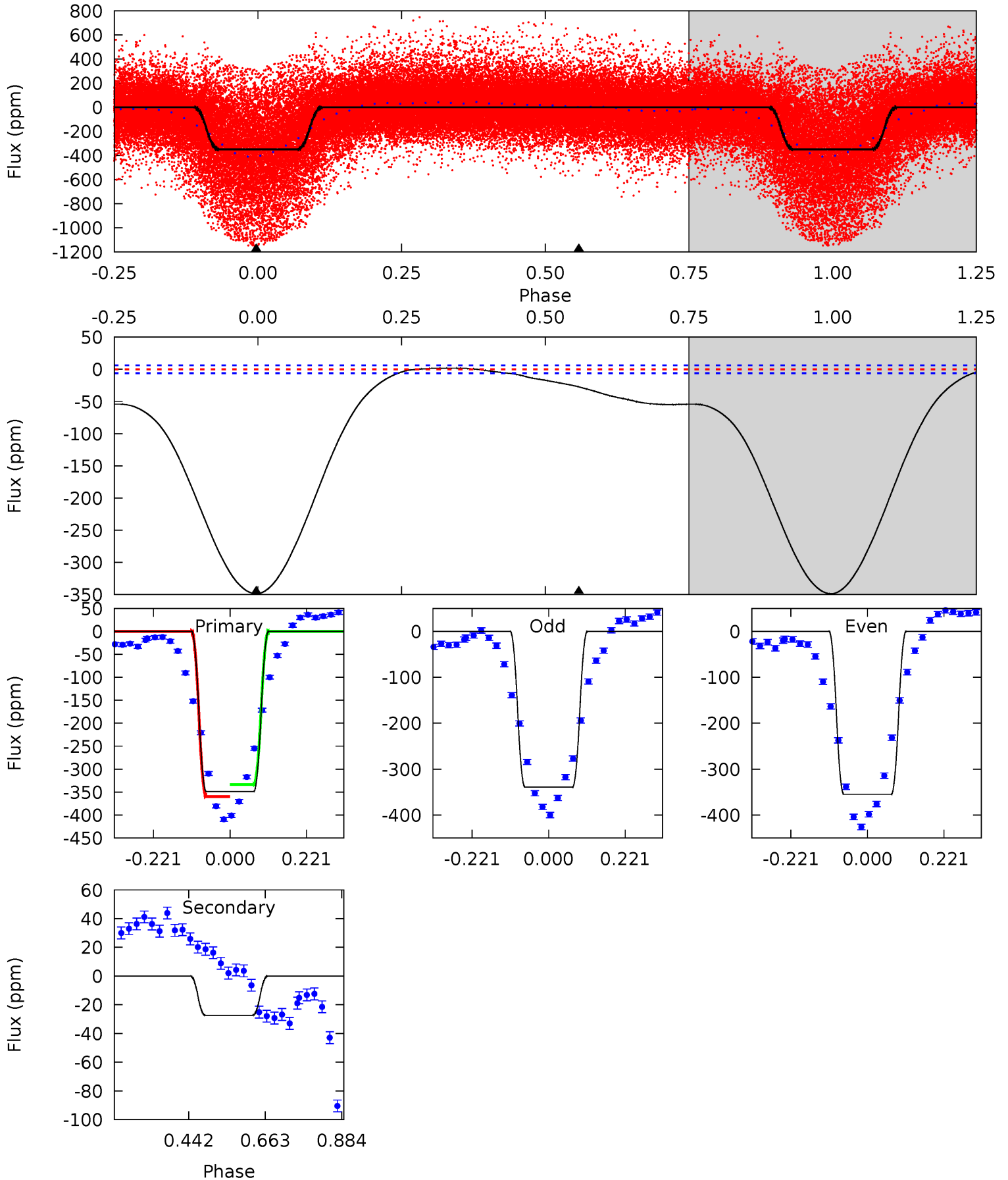
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



# Alt Model-Shift Uniqueness Test

008282730-01, P = 0.994069 Days, E = 131.407458 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
249.5	19.5	0	0	4.40	1.22	3.74	249.5	249.5	19.5	19.5	5.60	1.10	0.01	9.44





### Stellar Parameters For KIC 008282730

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6924^{+216}_{-288}$	$4.097^{+0.246}_{-0.164}$	$-0.520^{+0.250}_{-0.300}$	$1.604^{+0.443}_{-0.443}$	$1.173^{+0.189}_{-0.154}$	$0.400^{+0.613}_{-0.188}$
	+3%/-4%	+6%/-4%	+48%/-58%	+28%/-28%	+16%/-13%	+153%/-47%
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 008282730-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$0 \pm 1000000$	$12.39^{+14.19}_{-8.51}$	$3697^{+308}_{-278}$	$-5682^{+37732}_{-34143}$	$-3.544^{+269.601}_{-307.031}$
Alt.	$-27 \pm 1$	$12.33^{+13.58}_{-8.53}$	$3736^{+294}_{-296}$	$-3364^{+6387}_{-236}$	$0.042^{+0.390}_{-0.033}$

$T_{max}$  = 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  $A_{obs} \gg 1.0$



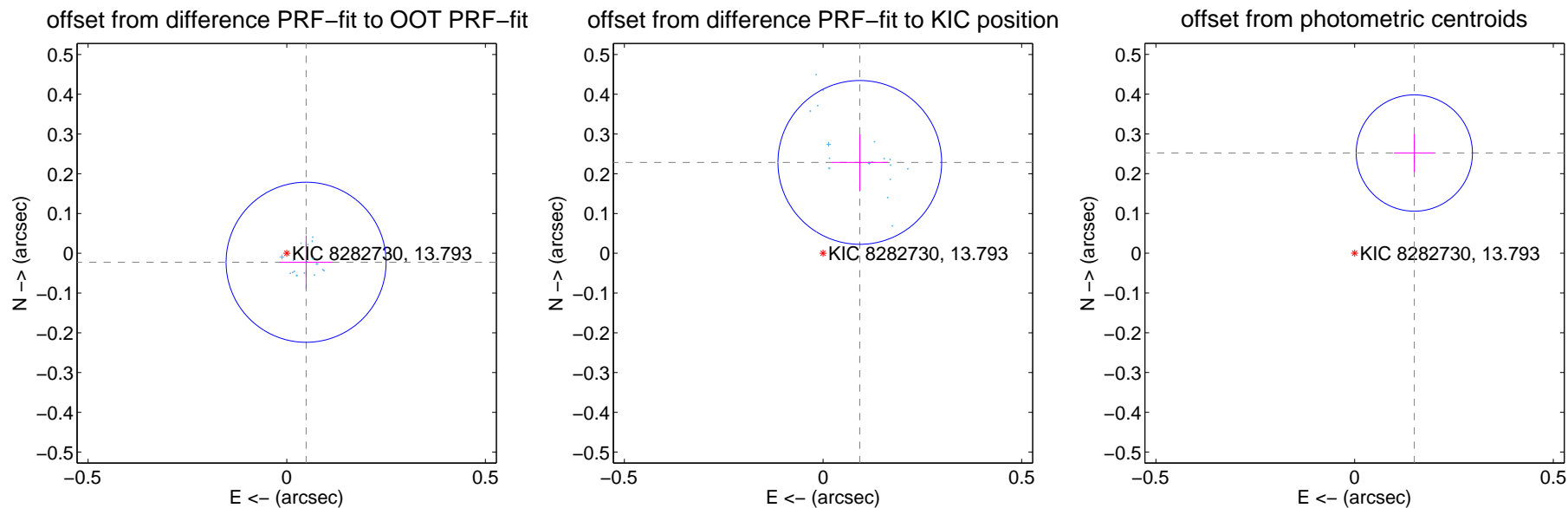
## DV Centroid Data

Supplemental centroid analysis for 008282730-01. Kepler magnitude: 13.79. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

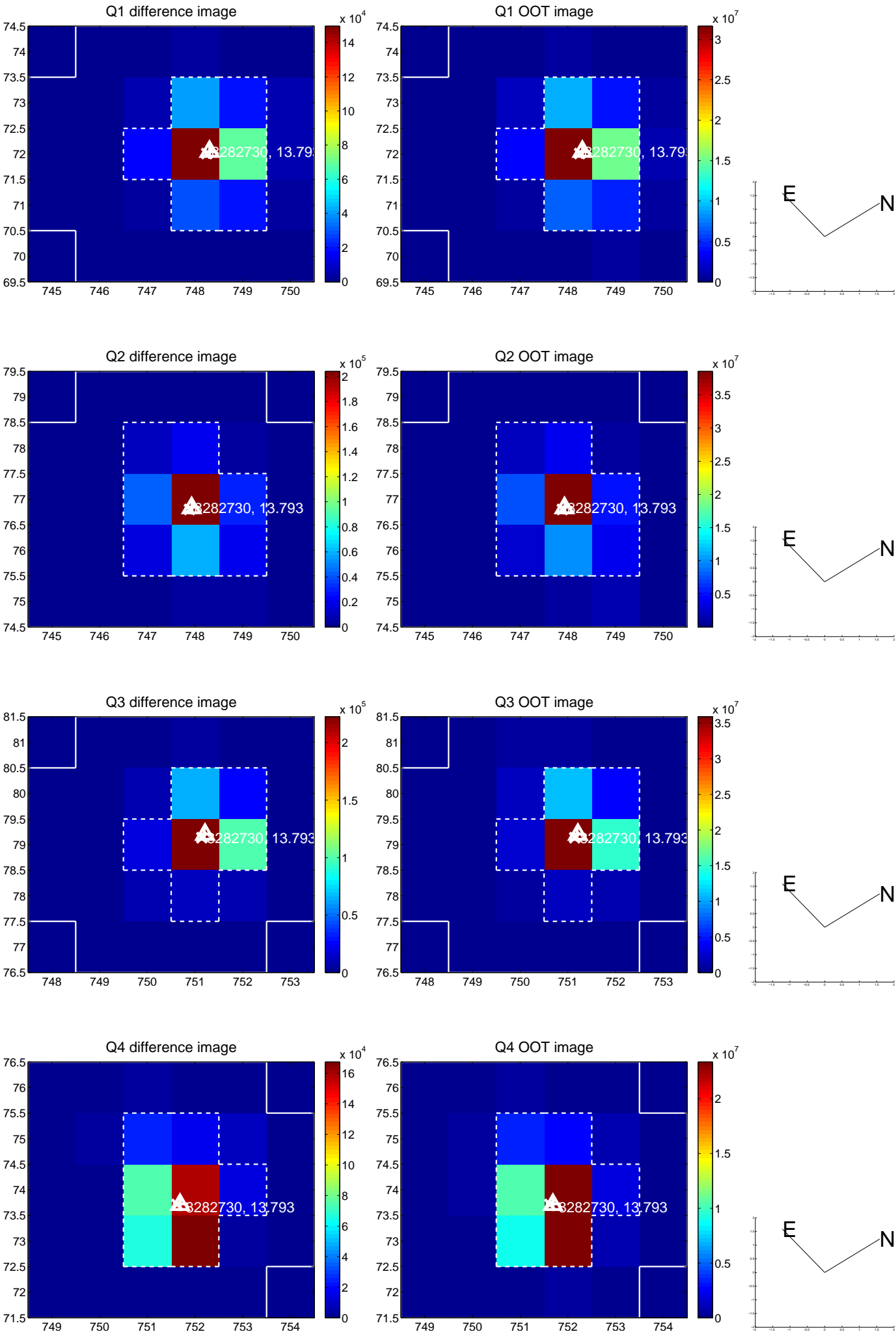
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.054 \pm 0.067$	0.80	$-0.049 \pm 0.067$	$-0.023 \pm 0.067$
PRF-fit source offset from KIC position	$0.247 \pm 0.069$	3.59	$-0.093 \pm 0.070$	$0.229 \pm 0.071$
photometric centroid source offset	$0.29 \pm 0.05$	6.02	$-0.15 \pm 0.05$	$0.25 \pm 0.05$

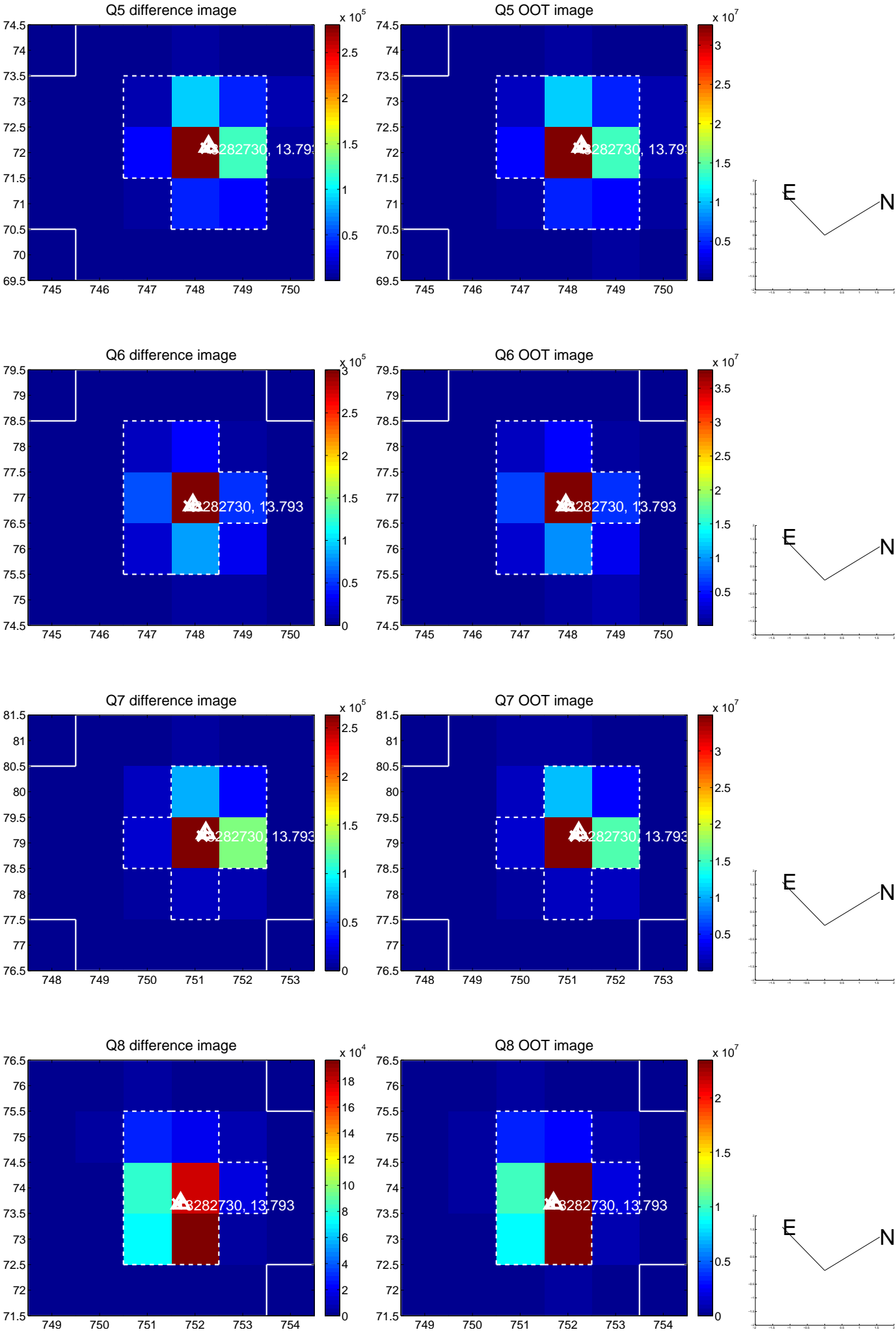


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

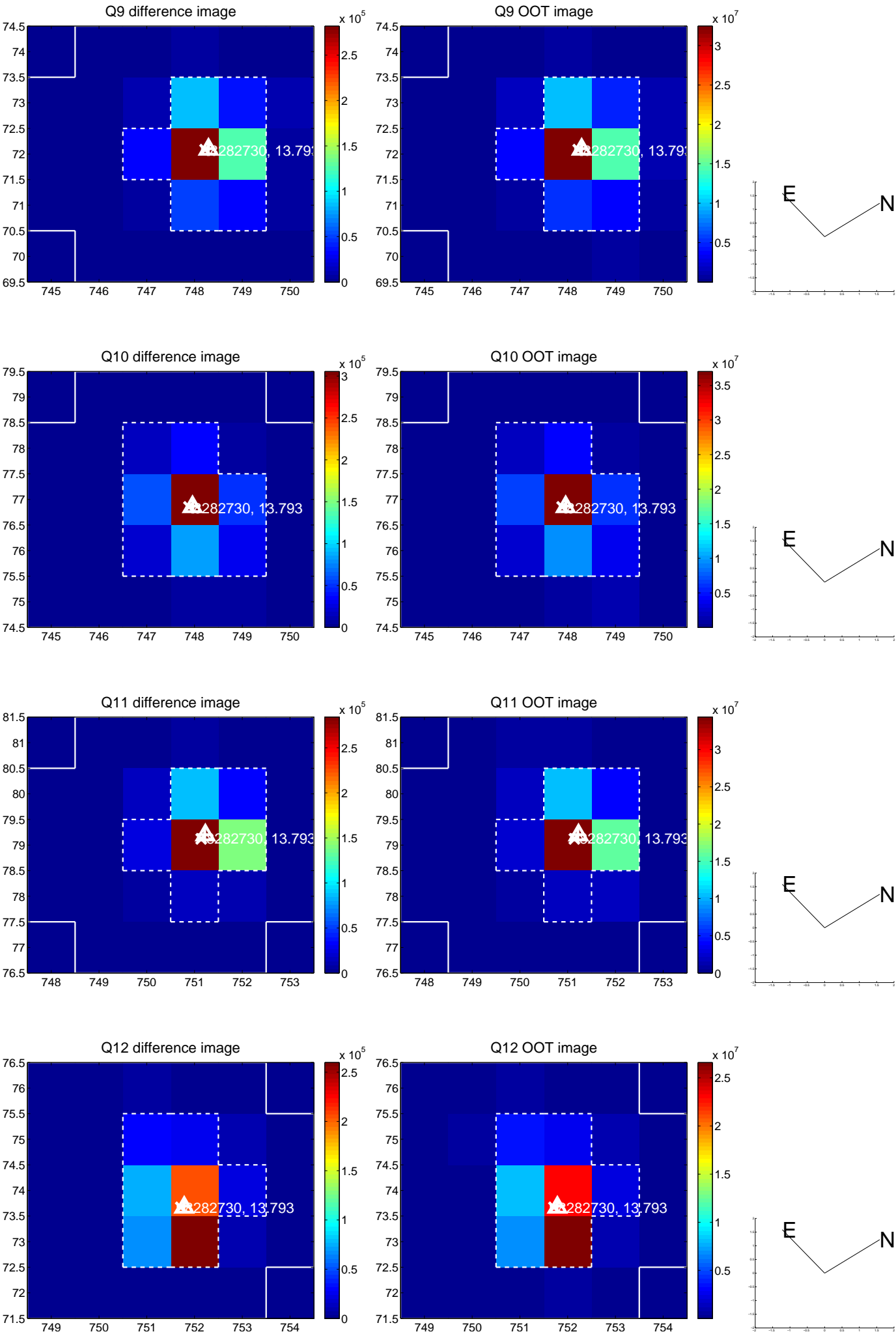
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



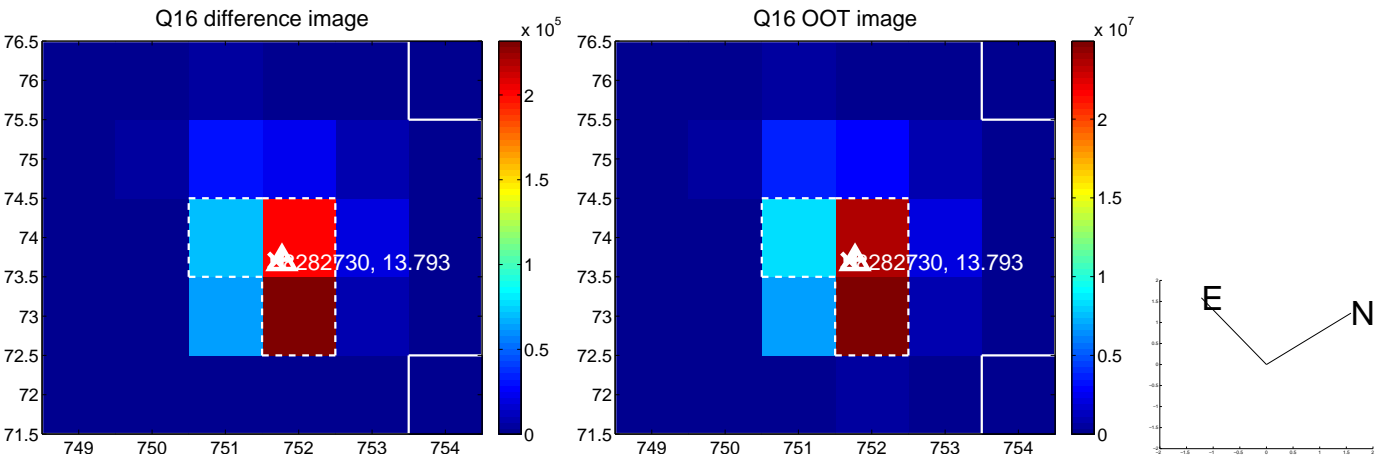
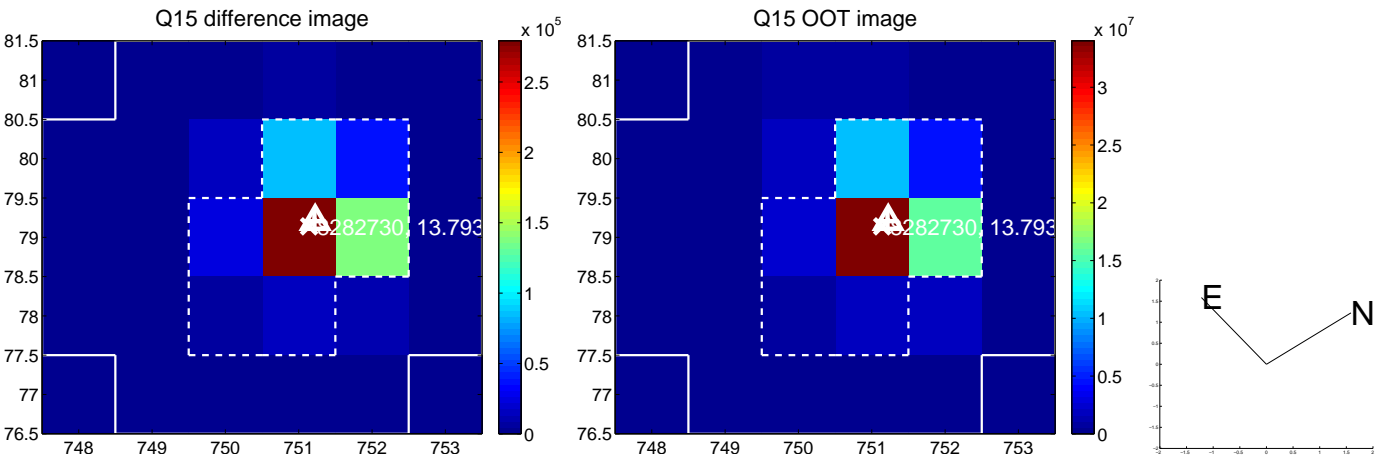
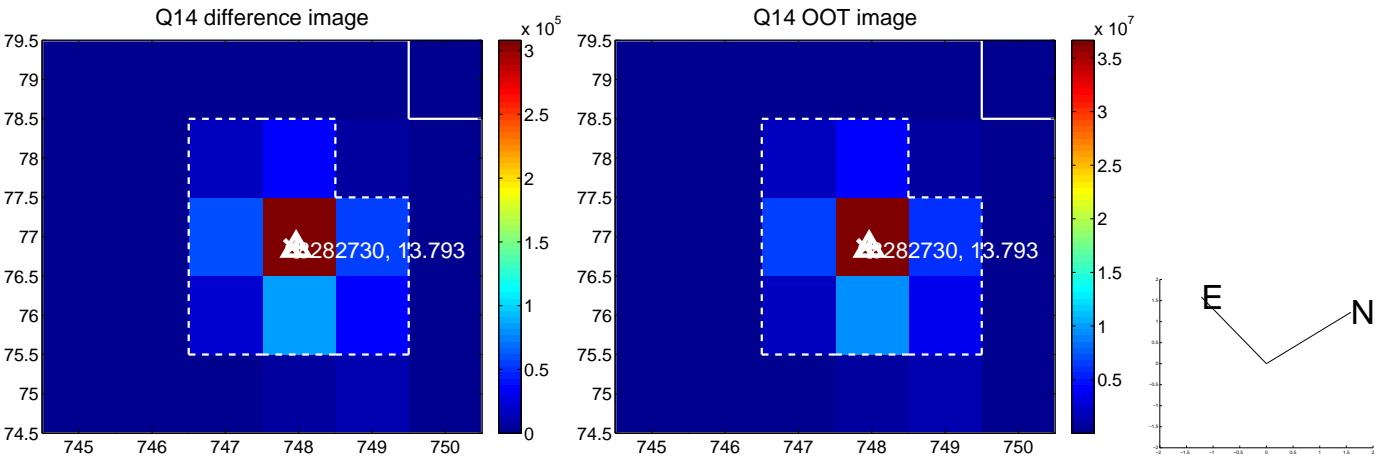
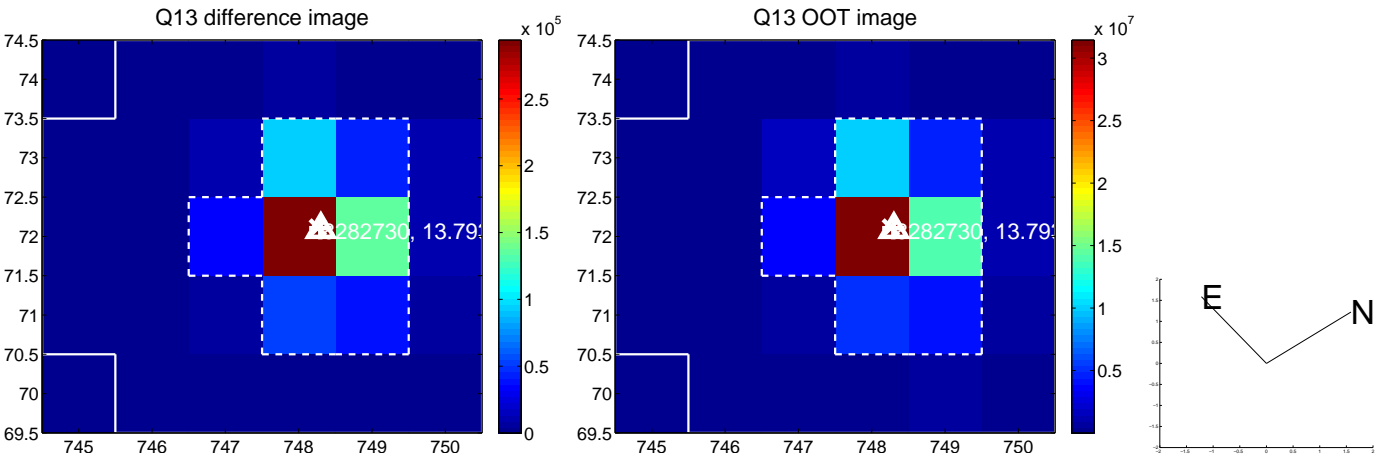
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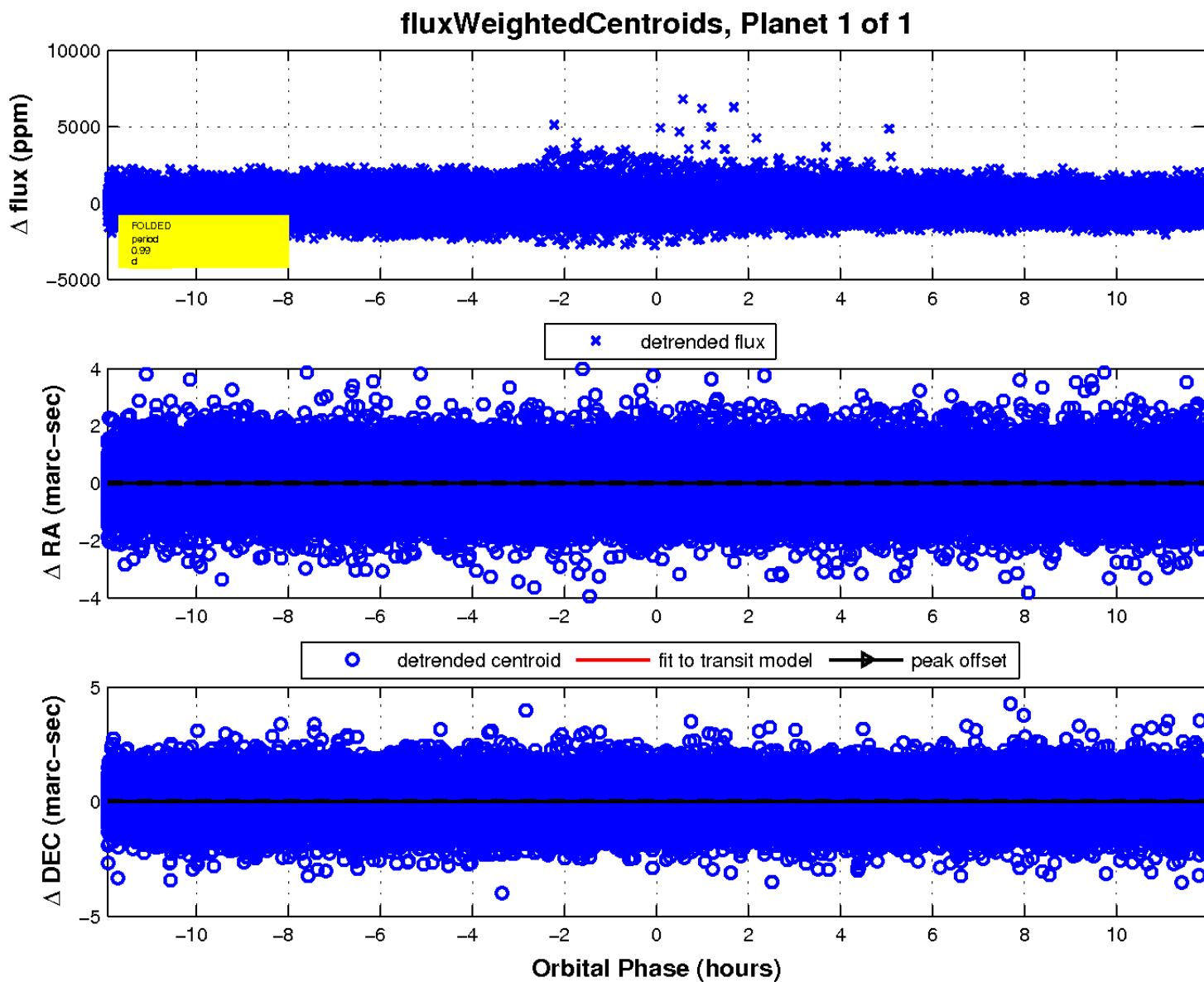
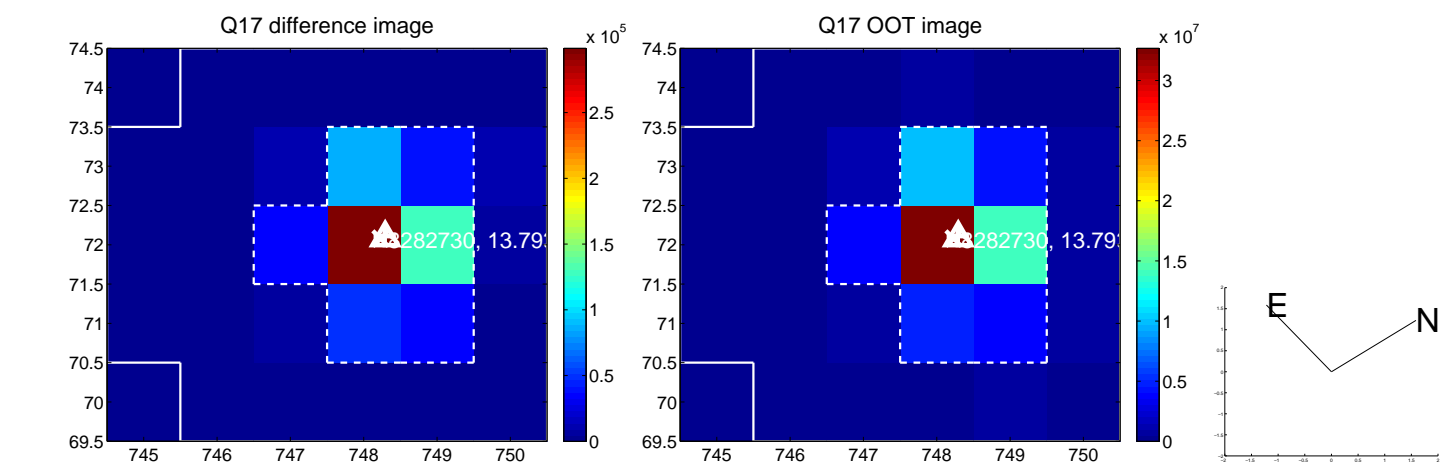


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white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

