

# KIC 007630658

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007630658-01	OBS	6895.01	1.075566	131.564131	138743.5	4.184	16096.4	6718.4	1.27	6011	59.67	4553.54

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007630658-01	OBS	FP	0.00	0	1	1	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_UNRESOLVED_OFFSET

**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.

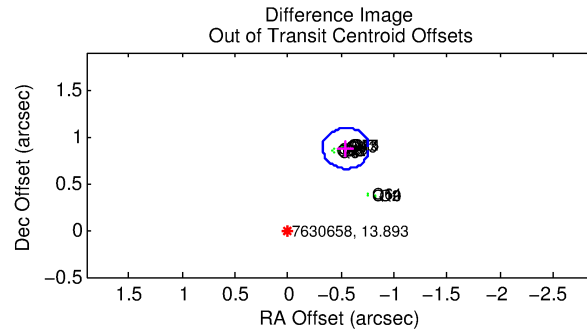
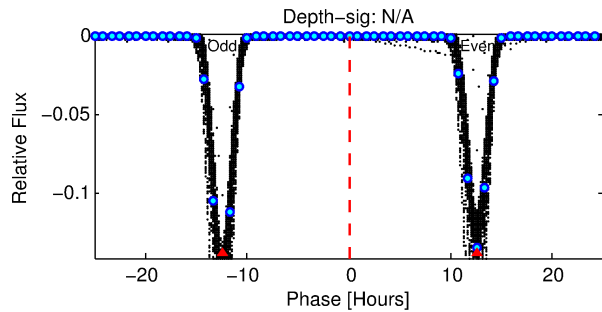
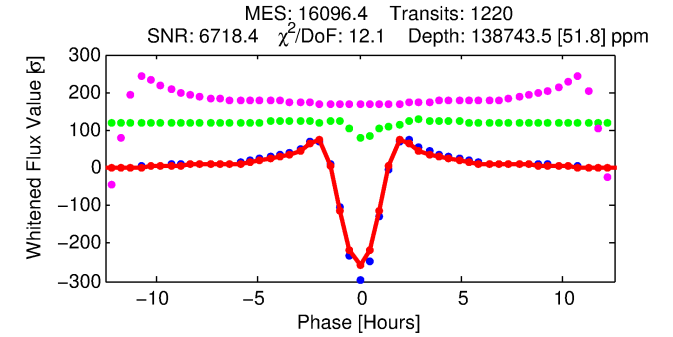
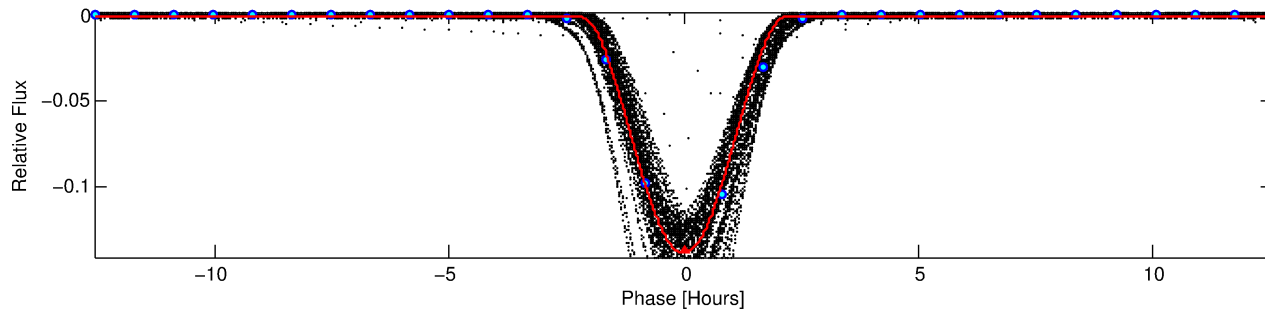
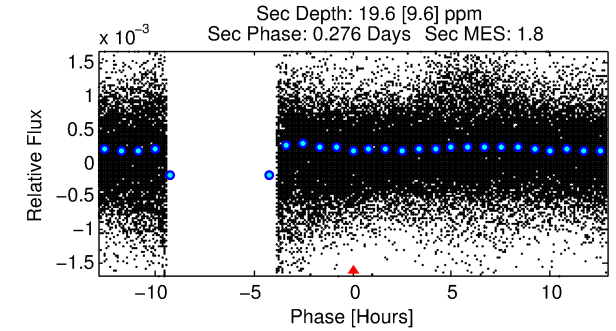
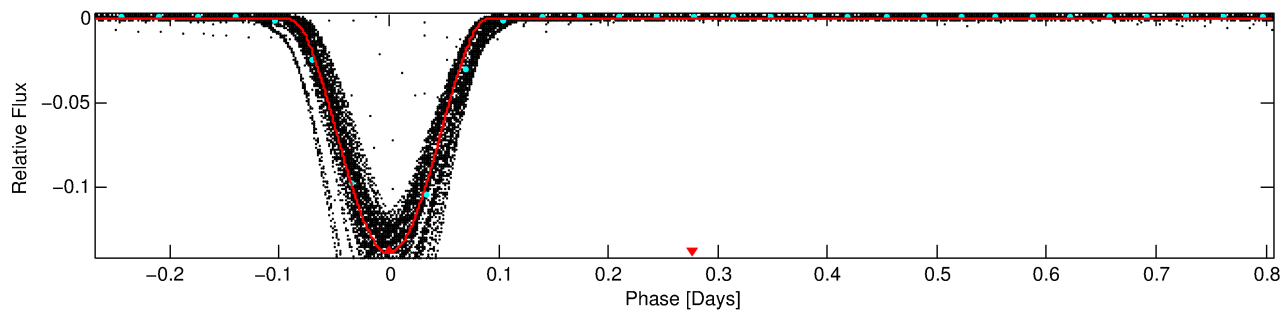
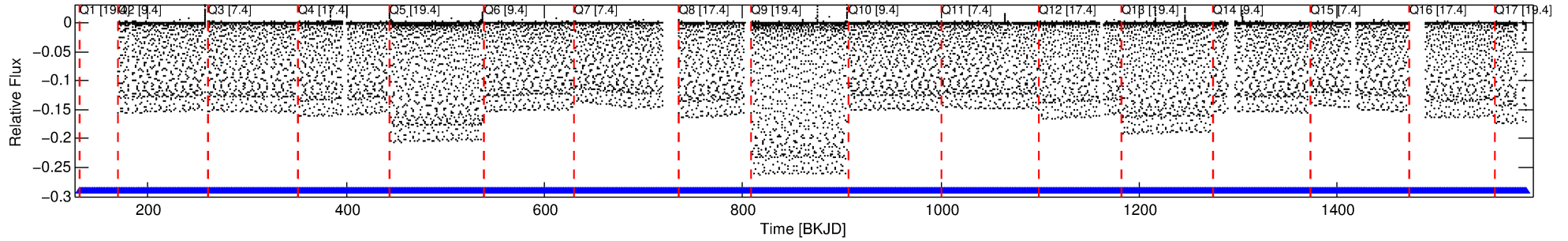
## Ephemeris Match Information For 007630658-01

No Significant Match Found

# DV One-Page Summary

KIC: 7630658 Candidate: 1 of 1 Period: 1.076 d  
KOI: K06895.01 Corr: 0.977

Kp: 13.89 R\*: 1.27 Rs Teff: 6011.0 K Logg: 4.22 Fe/H: -0.240



## DV Fit Results:

Period = 1.07557 [0.00000] d  
Epoch = 131.5641 [0.0000] BKJD  
Rp/R\* = 0.4316 [0.0028]  
a/R\* = 2.58 [0.00]  
b = 0.78 [0.00]  
Seff = 4553.54 [2008.27]  
Teff = 2095 [231] K  
Rp = 59.67 [16.11] Re  
a = 0.0203 [0.0053] AU  
Ag = 0.00 [0.00] [-1245.30σ]  
Teffp = 609 [77] K [-6.10σ]

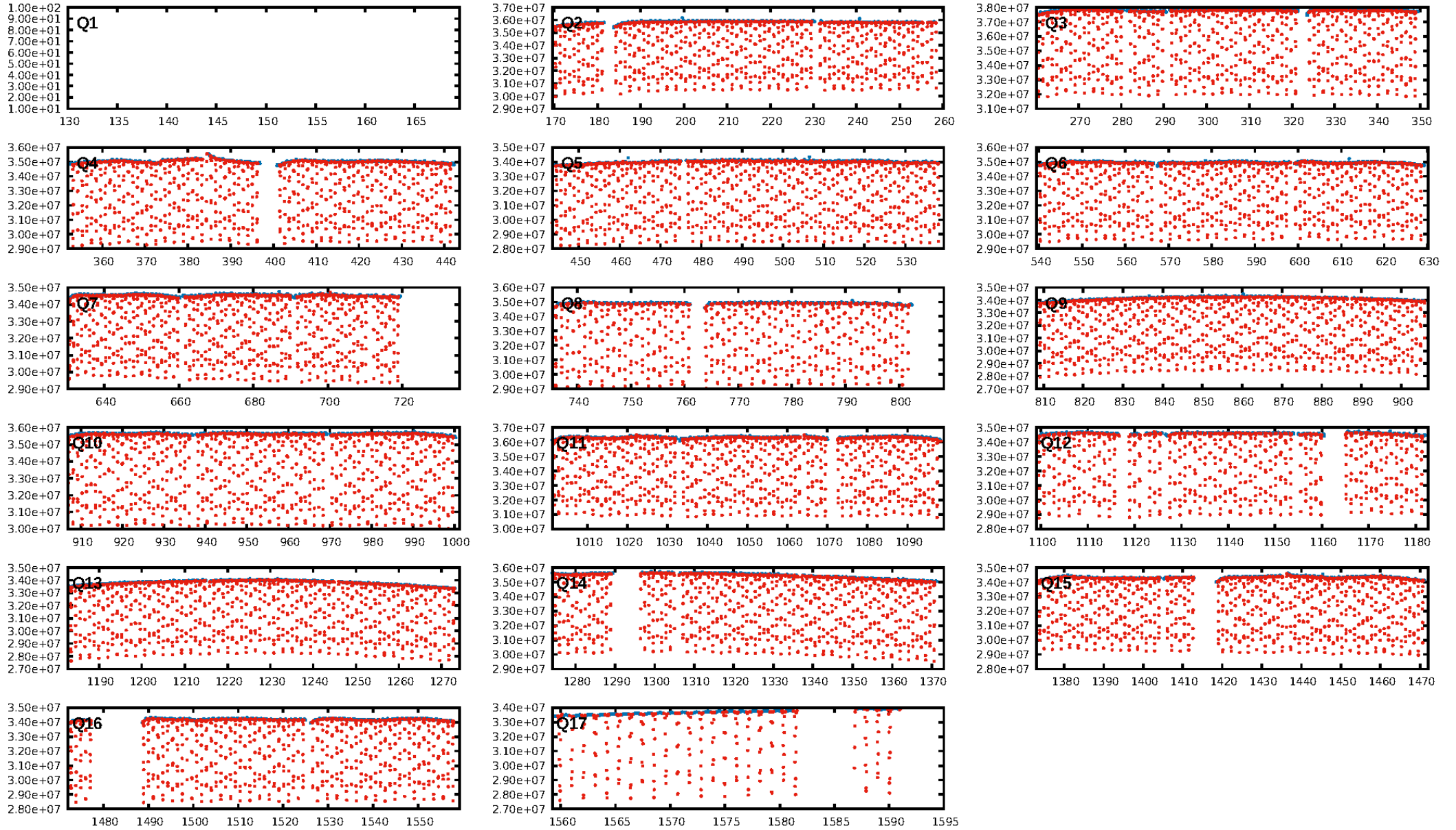
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [1195/1195]  
GhostDiagnostic-chr: 2.768  
Centroid-sig: 0.0%  
Centroid-so: 0.741 arcsec [1156.37σ]  
OotOffset-rm: 1.032 arcsec [14.17σ]  
KicOffset-rm: 0.850 arcsec [12.53σ]  
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]

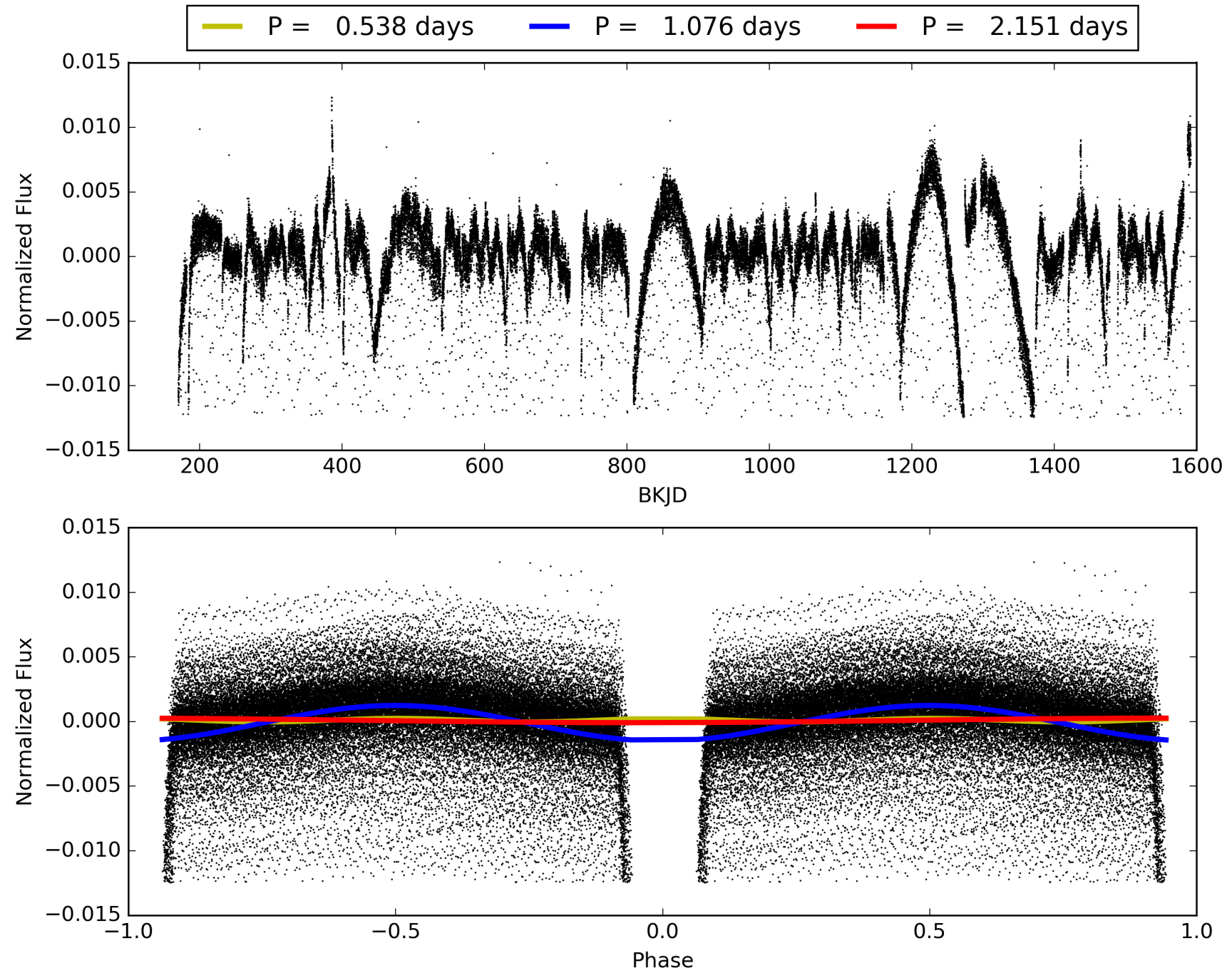
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:55:06 Z

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

# TCE 007630658-01, PDC Light Curves

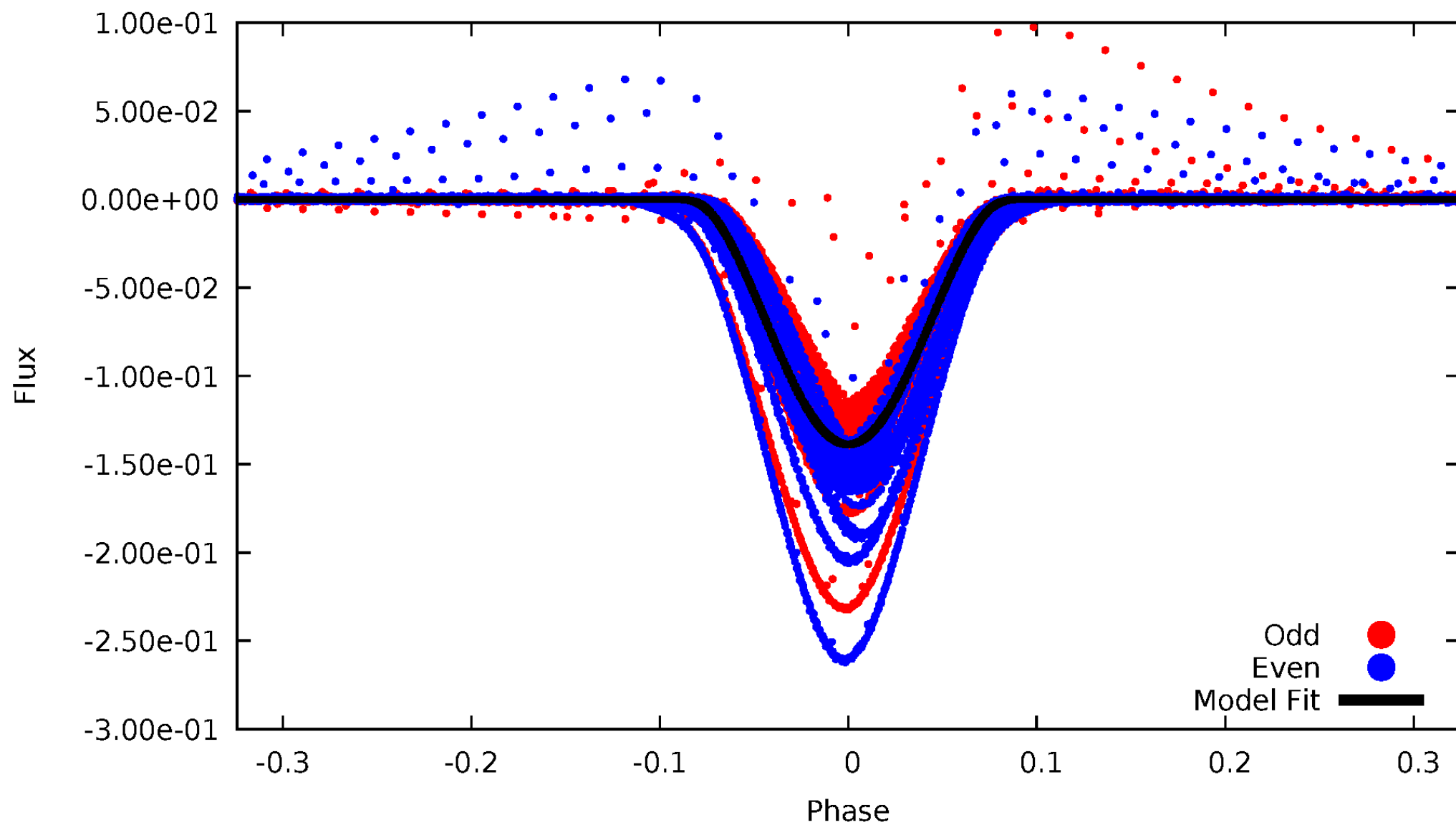


TCE 007630658-01



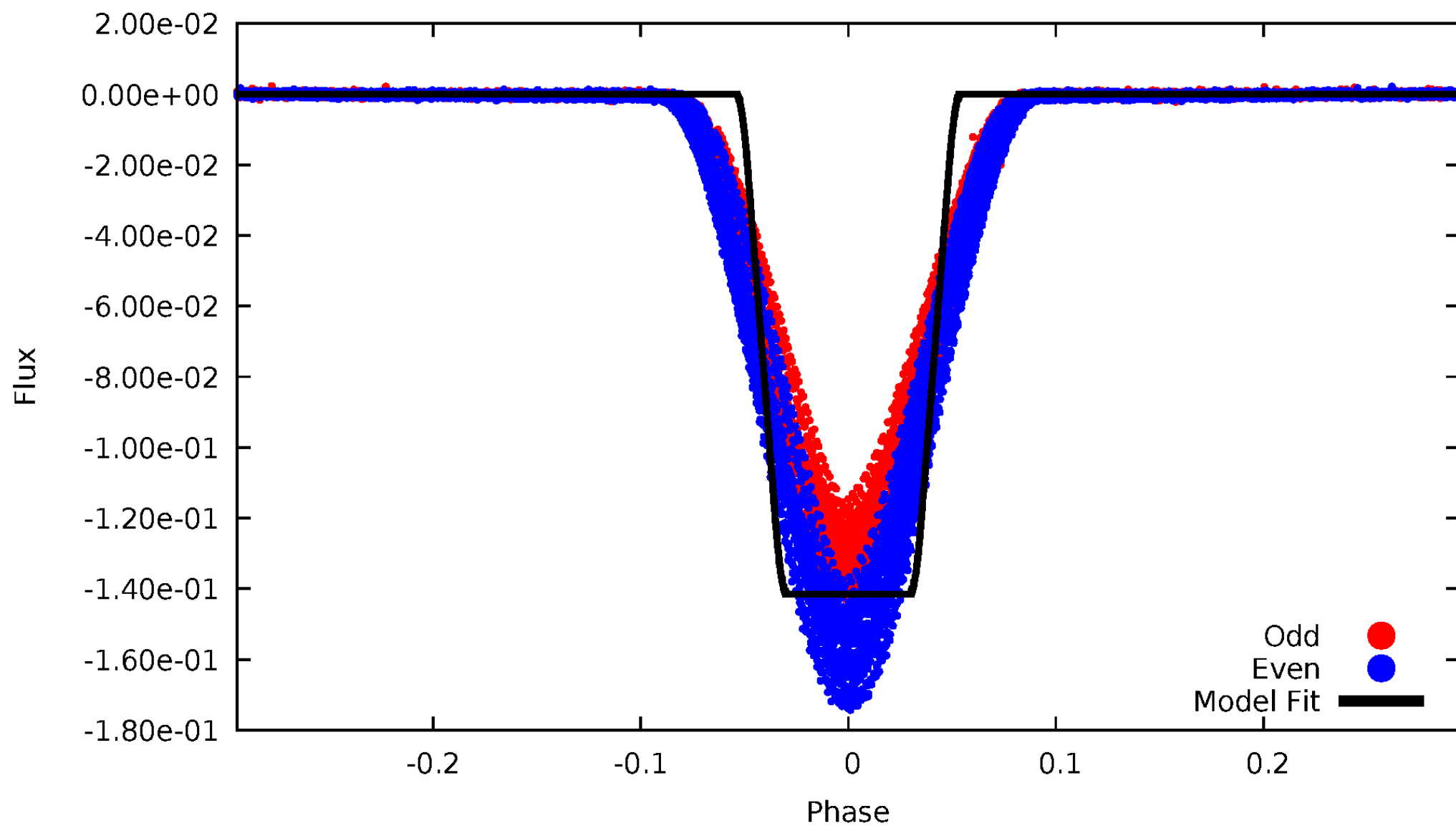
# DV Odd/Even

TCE 007630658-01



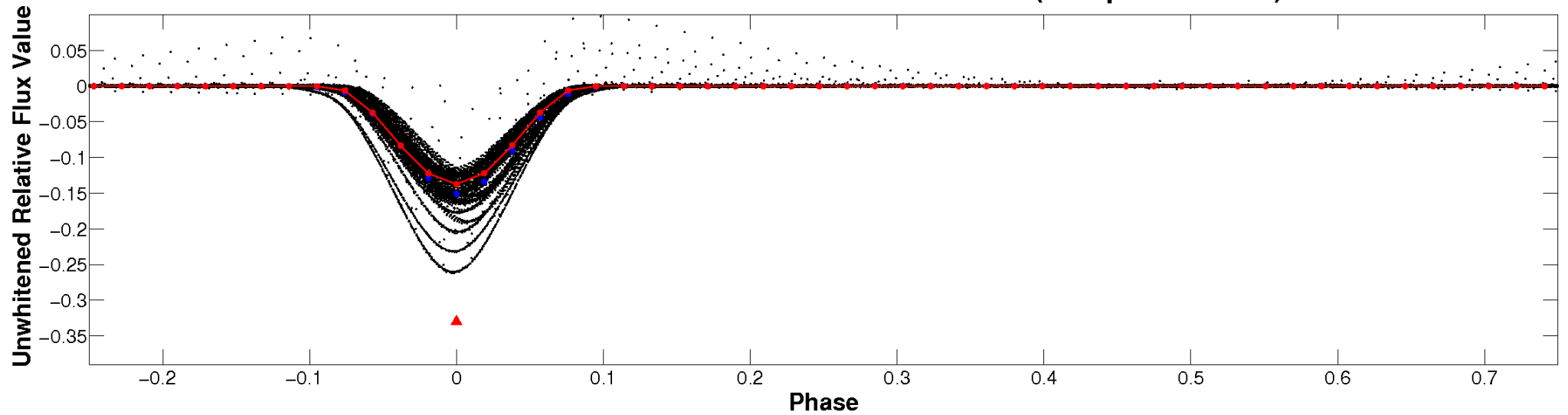
# ALT Odd/Even

TCE 007630658-01

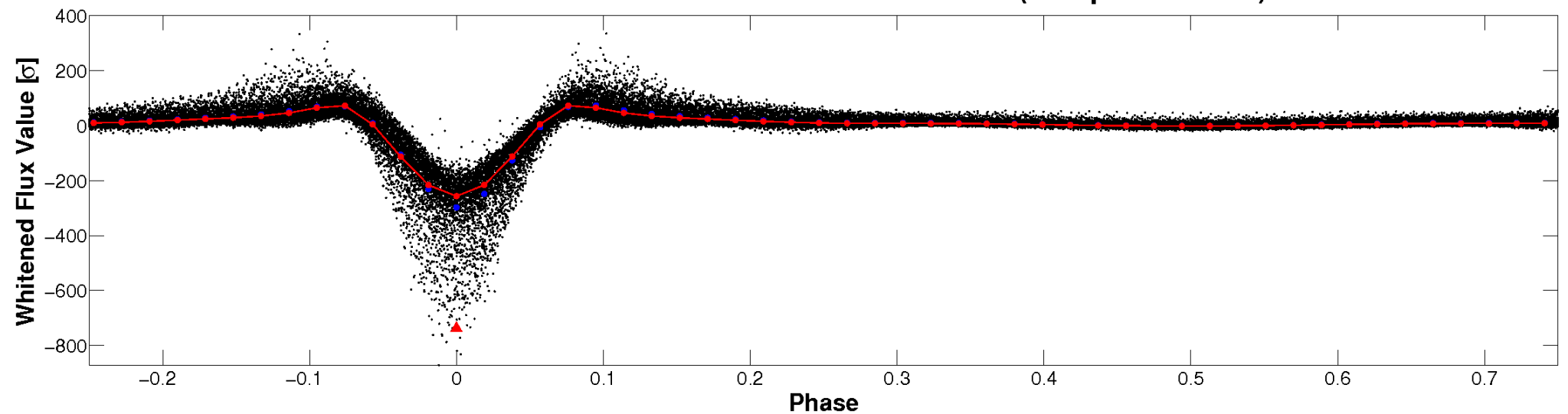


# Non-Whitened Vs. Whitened Light Curve

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



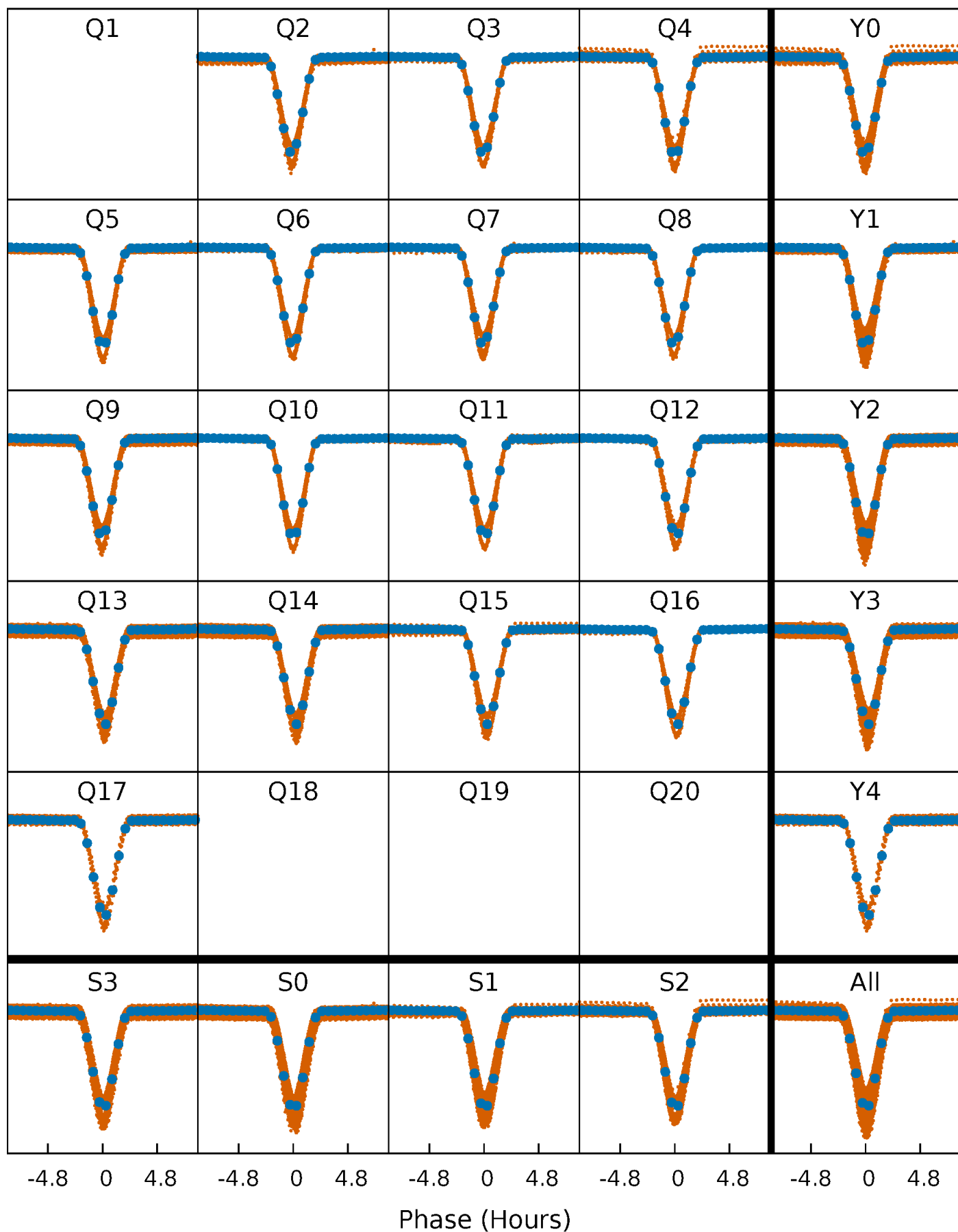
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

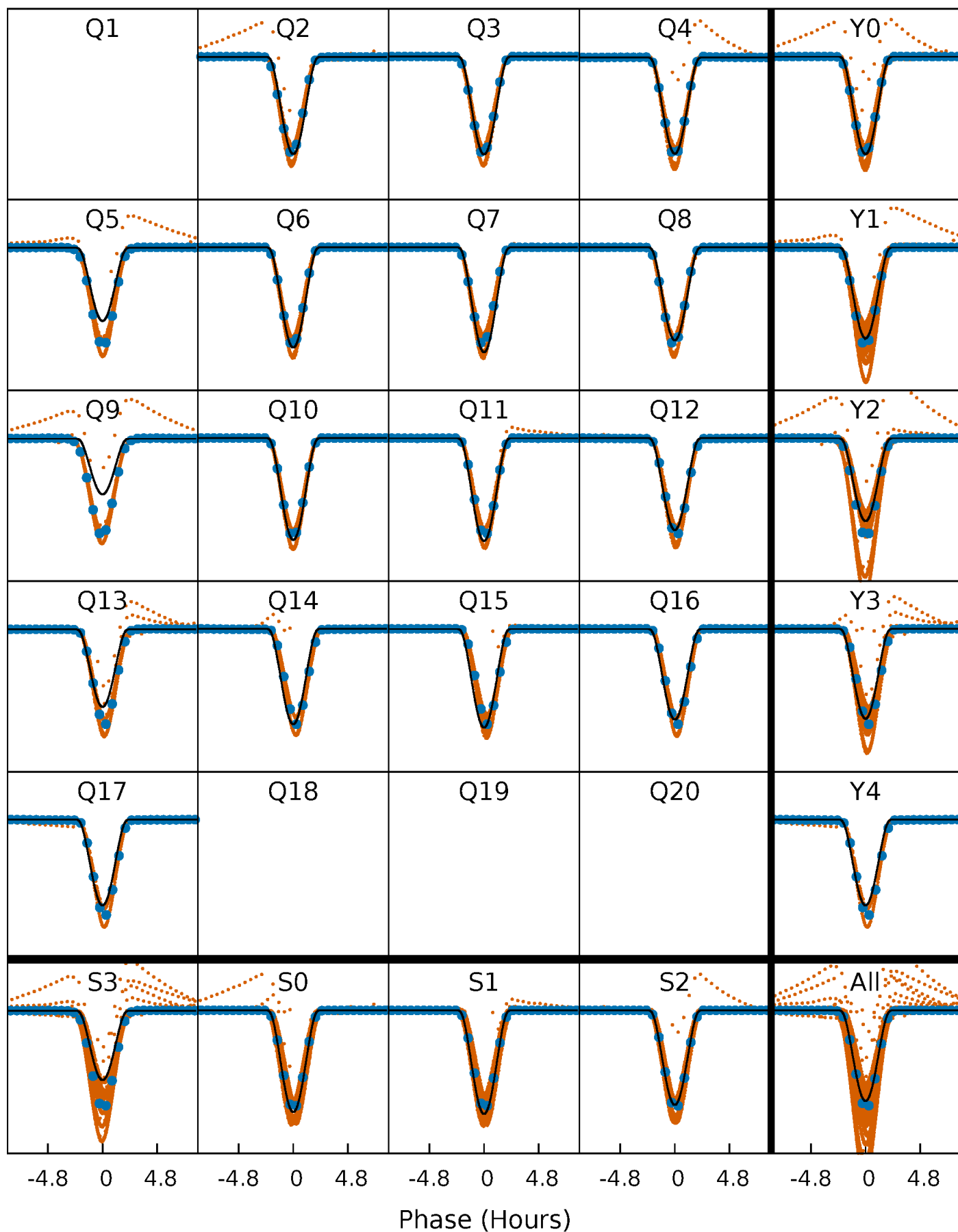
TCE 007630658-01 P= 1.075566 Days  $T_0=131.564131$  (BKJD)





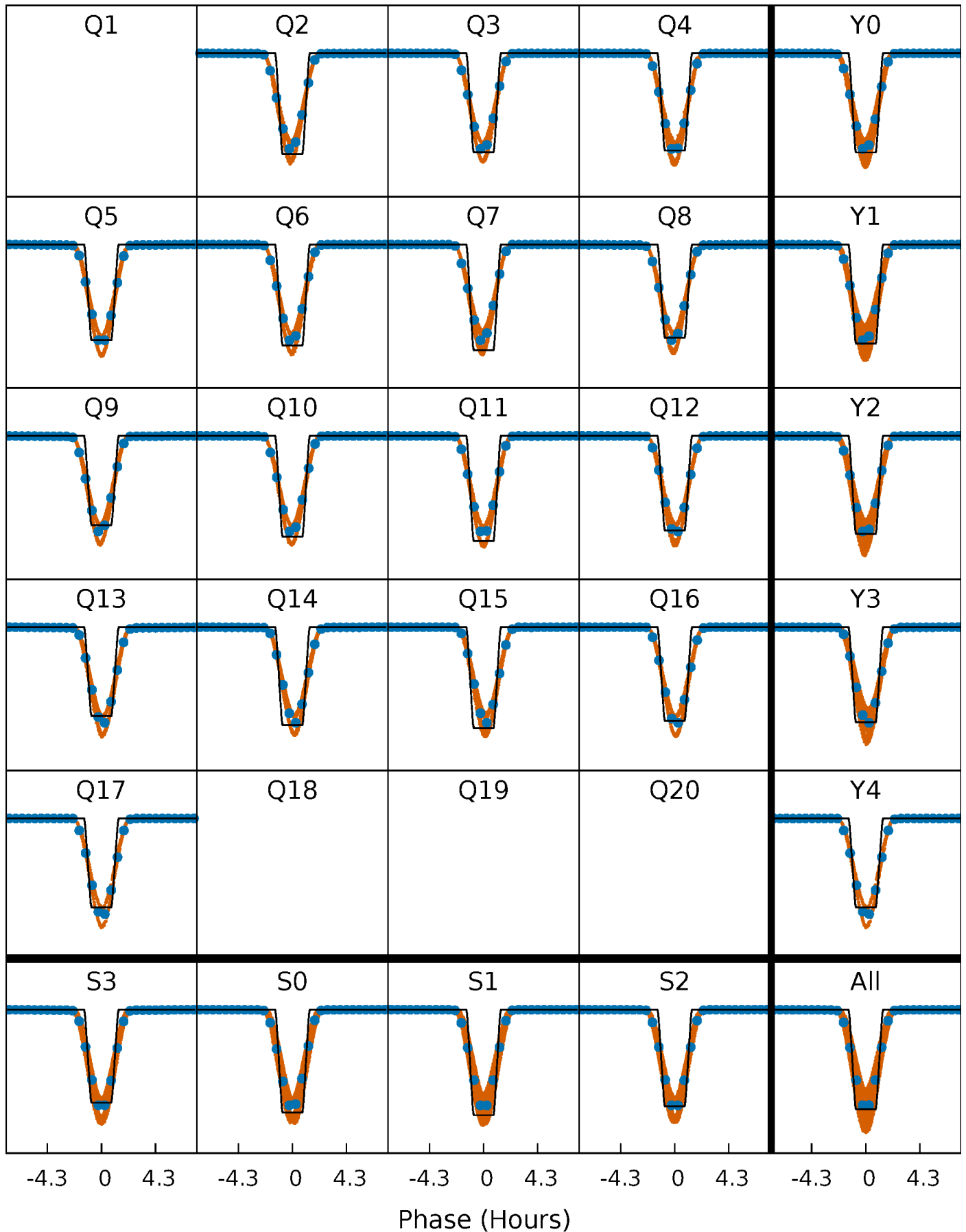
# DV Quarter-Phased Transit Curves

TCE 007630658-01 P= 1.075566 Days  $T_0=131.564131$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

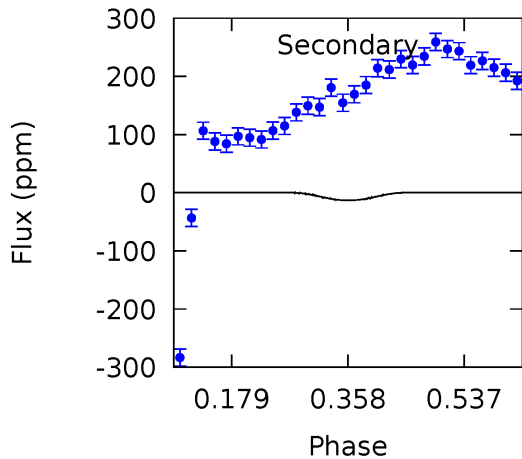
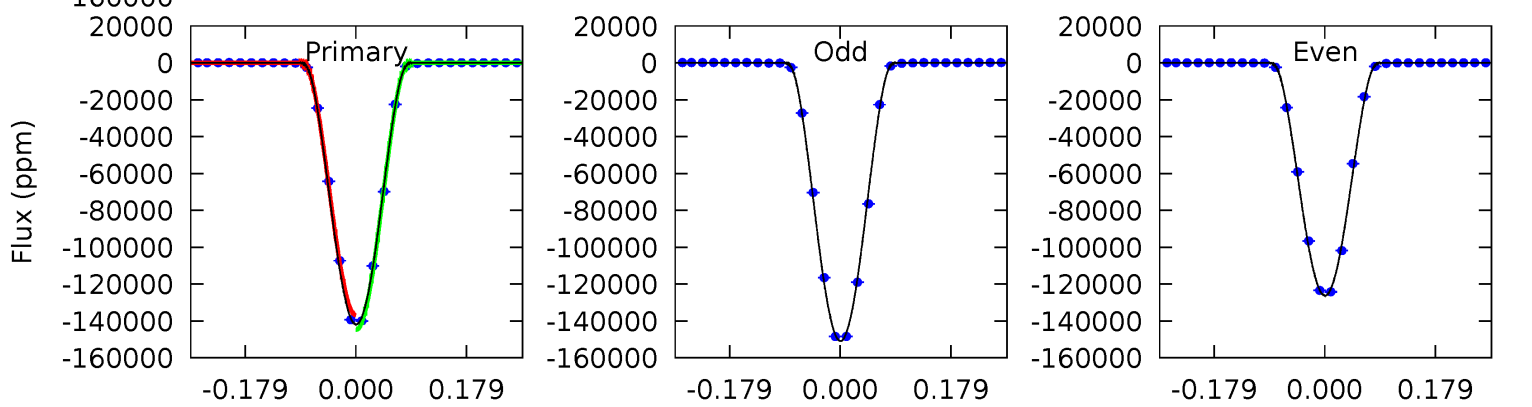
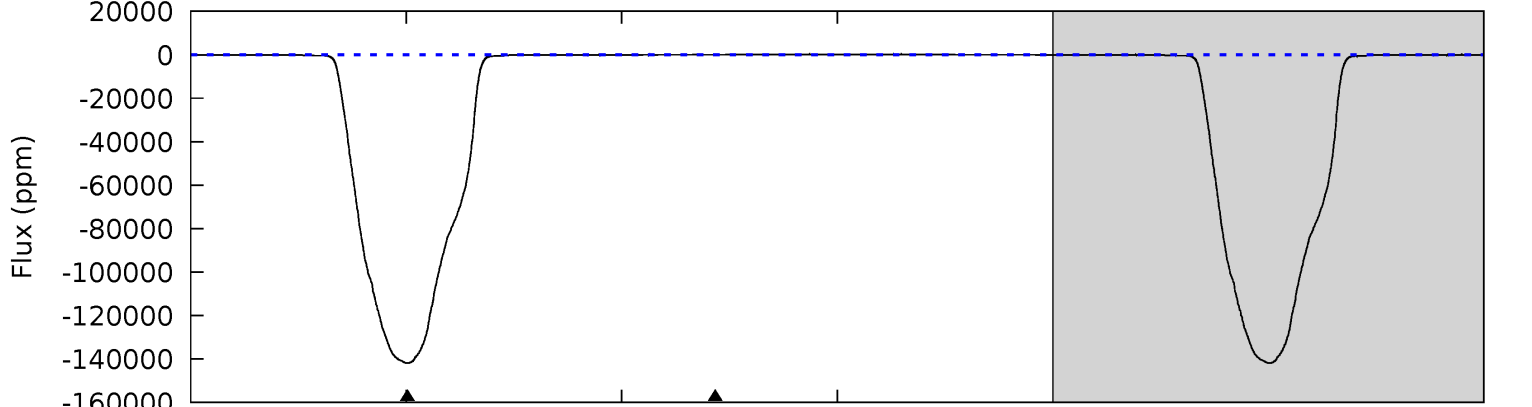
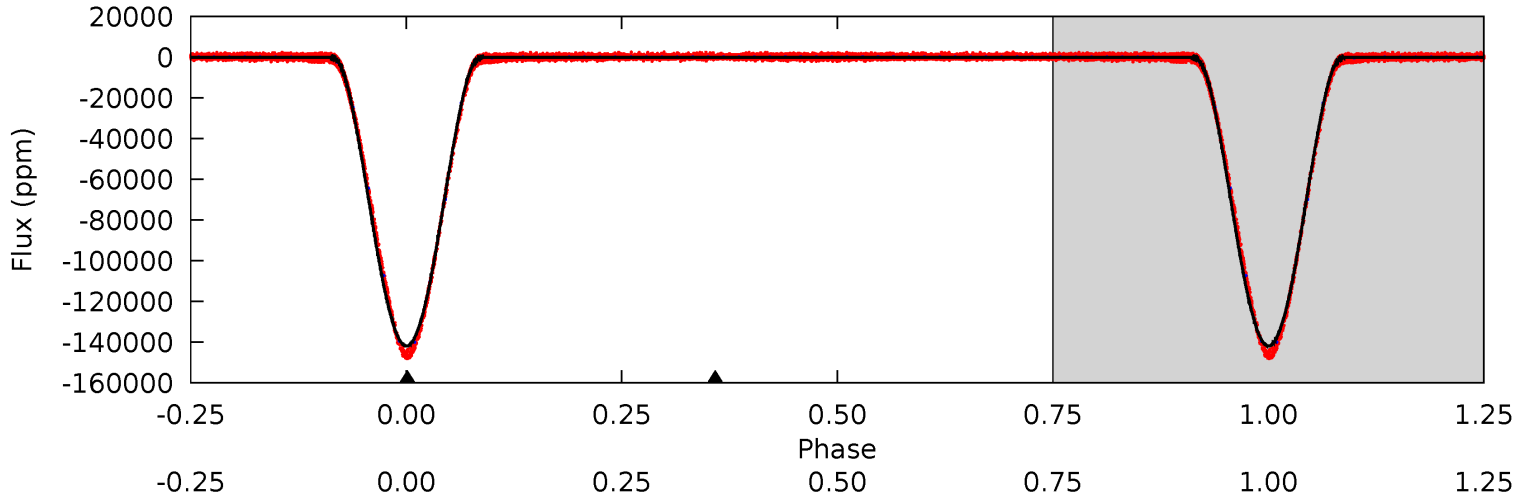
TCE 007630658-01   P= 1.075570 Days    $T_0=131.563452$  (BKJD)



# DV Model-Shift Uniqueness Test

007630658-01, P = 1.075566 Days, E = 131.564131 Days

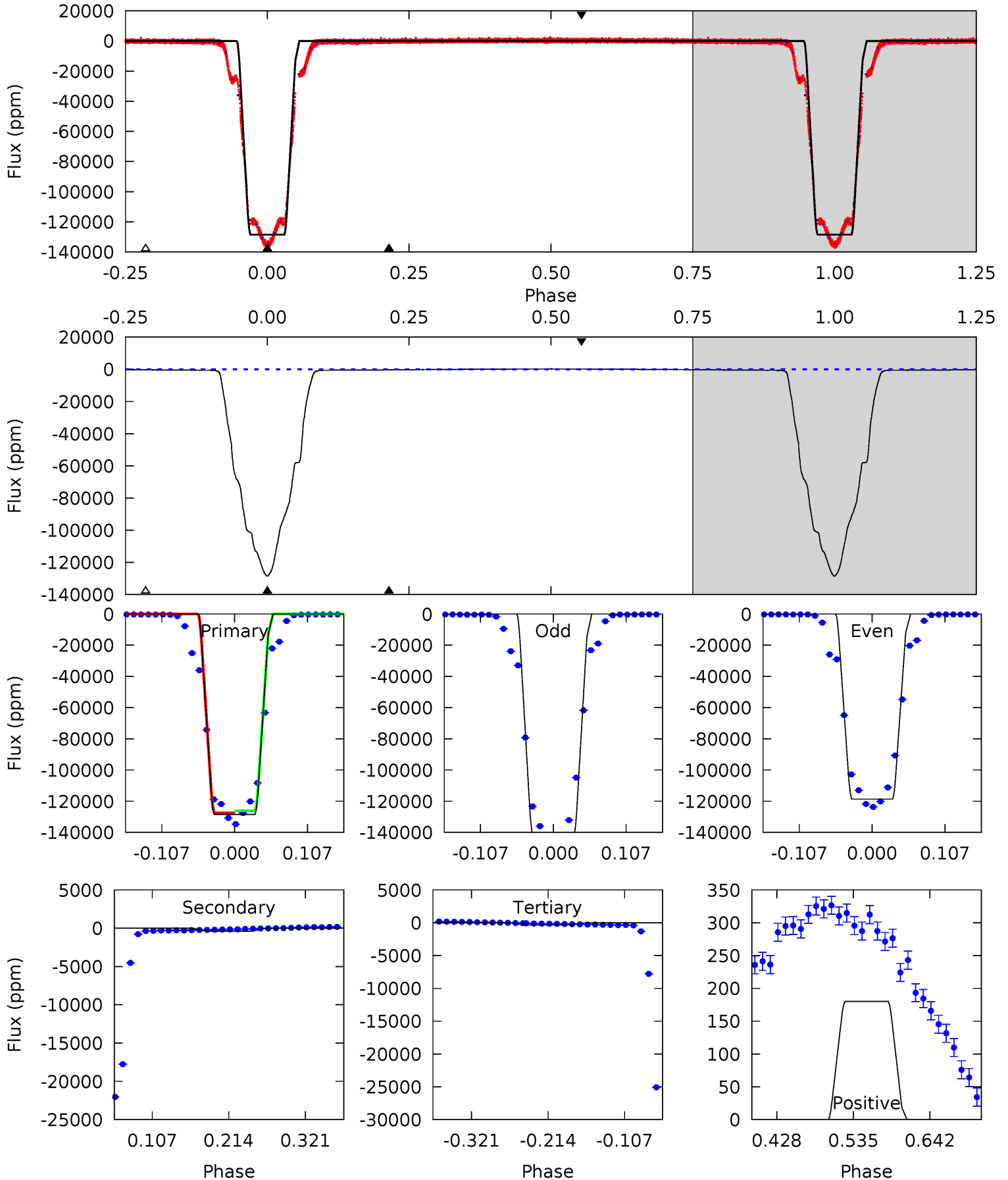
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13751	1.28	0	0	4.44	1.34	5.23	13751	13751	1.28	1.28	1235	1.04	0.00	0



# Alt Model-Shift Uniqueness Test

007630658-01, P = 1.075570 Days, E = 131.563452 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
7290	21.0	20.1	10.2	4.55	1.61	13.1	7270	7280	0.90	10.7	809.9	1.00	0.00	38.0



### Stellar Parameters For KIC 007630658

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6011^{+189}_{-210}$	$4.217^{+0.246}_{-0.184}$	$-0.240^{+0.300}_{-0.300}$	$1.267^{+0.342}_{-0.342}$	$0.966^{+0.154}_{-0.112}$	$0.669^{+0.958}_{-0.323}$
	+3%/-3%	+6%/-4%	+125%/-125%	+27%/-27%	+16%/-12%	+143%/-48%
Source	PHO54	PHO54	PHO54	DSEP		

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

### Secondary Eclipse Parameters for KIC 007630658-01 / KOI 6895.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-13 \pm 10$	$60.07^{+9.82}_{-8.54}$	$2927^{+235}_{-239}$	$-3047^{+145}_{-144}$	$0.001^{+0.001}_{-0.001}$
Alt.	$-370 \pm 18$	$51.67^{+7.96}_{-7.37}$	$2906^{+234}_{-232}$	$-2990^{+150}_{-148}$	$0.032^{+0.011}_{-0.008}$

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

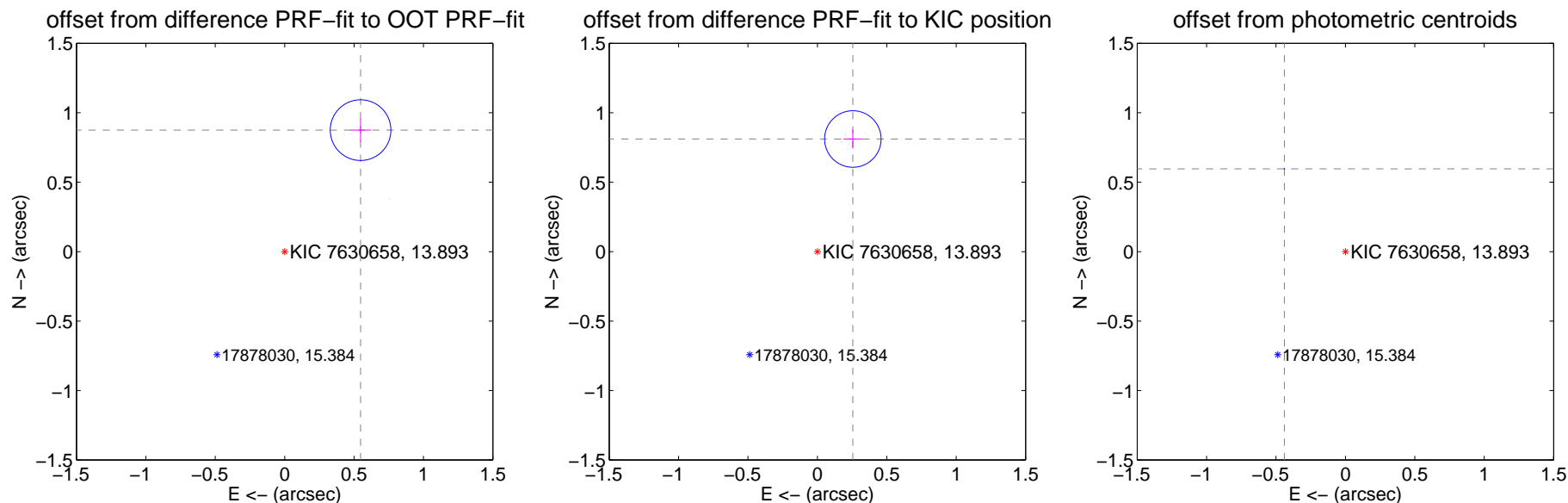
## DV Centroid Data

Supplemental centroid analysis for 007630658-01. Kepler magnitude: 13.89. Transit SNR 6718.37

There are 16 quarters with good PRF difference image offsets

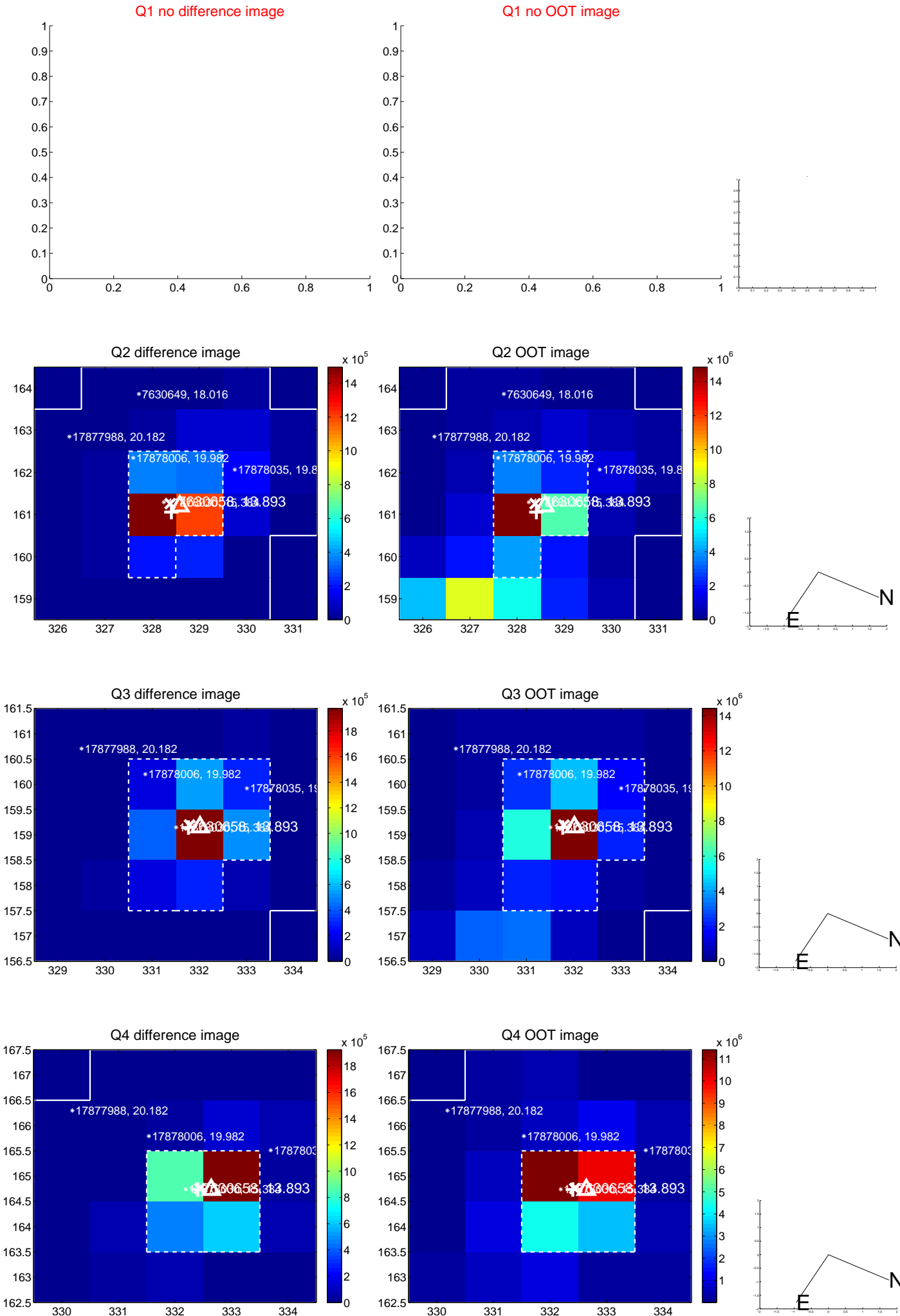
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.032 \pm 0.073$	14.17	$-0.547 \pm 0.074$	$0.875 \pm 0.084$
PRF-fit source offset from KIC position	$0.850 \pm 0.068$	12.53	$-0.255 \pm 0.069$	$0.811 \pm 0.068$
photometric centroid source offset	$0.74 \pm 0.00$	1156.37	$0.44 \pm 0.00$	$0.60 \pm 0.00$



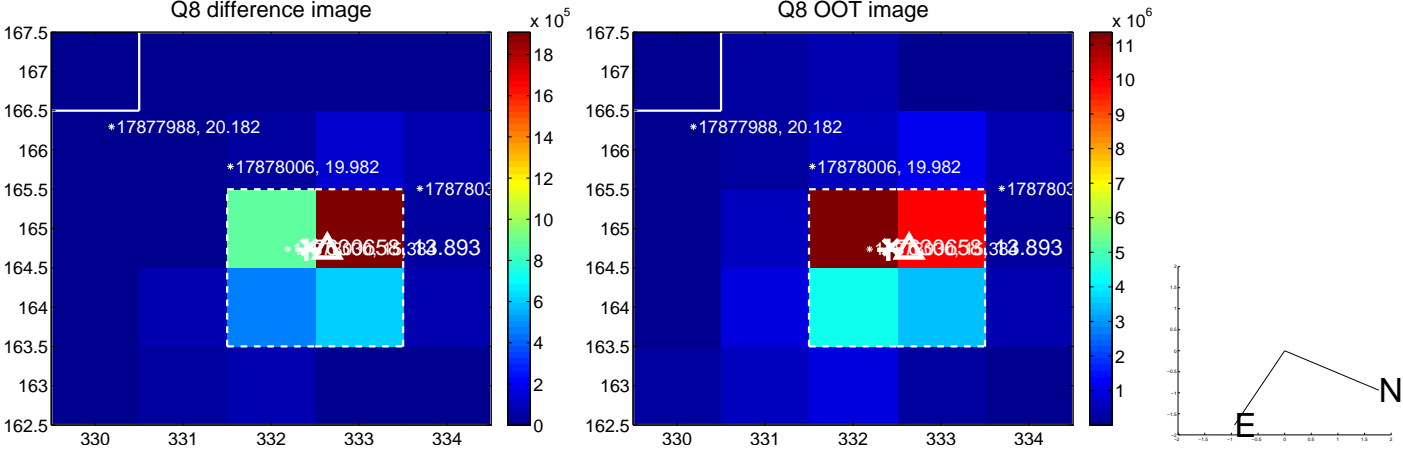
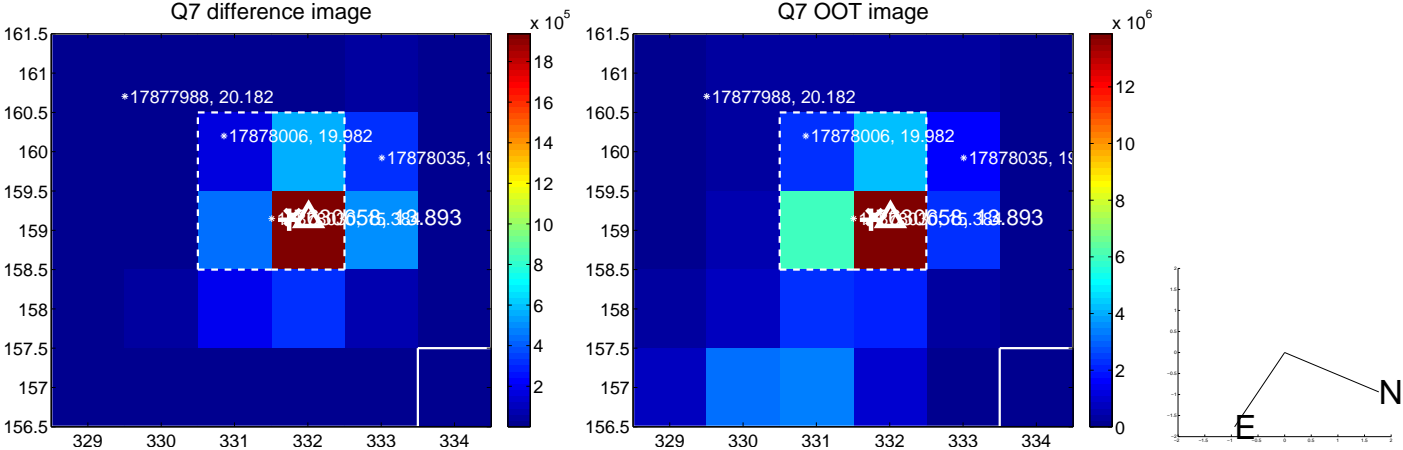
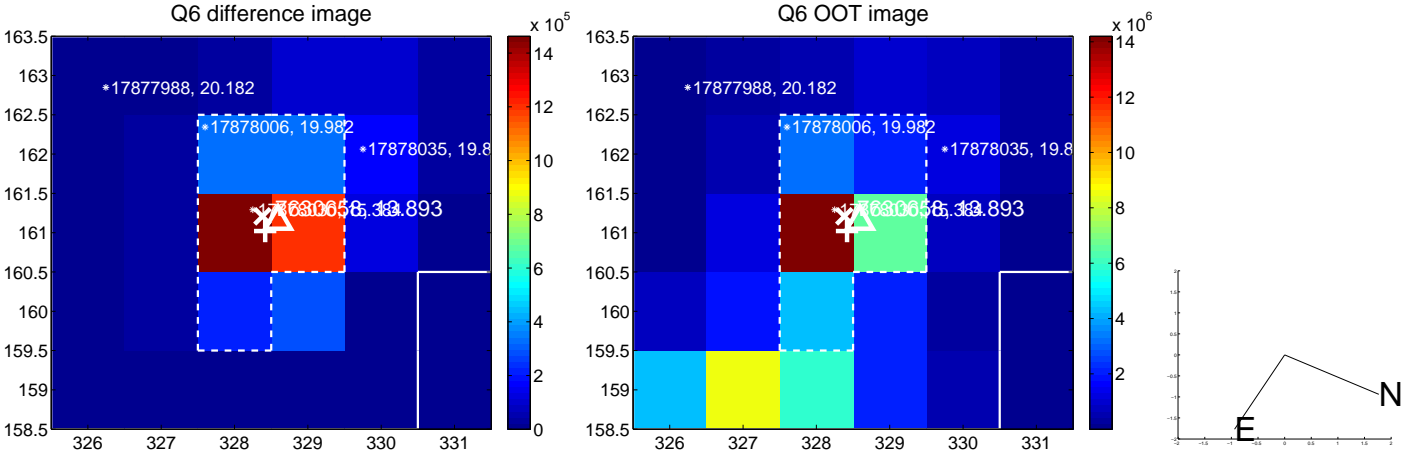
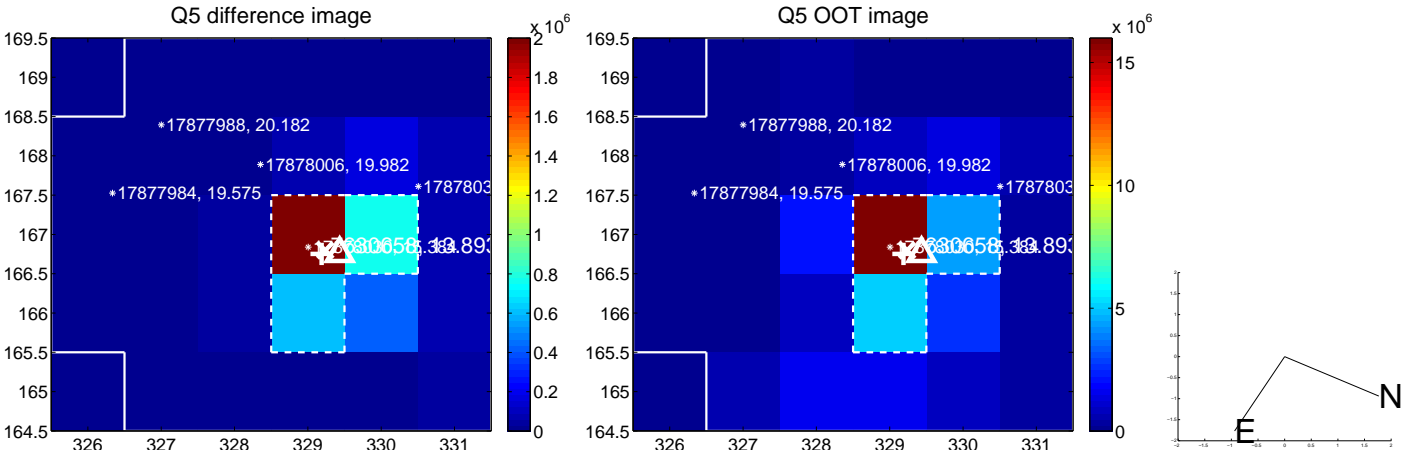
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

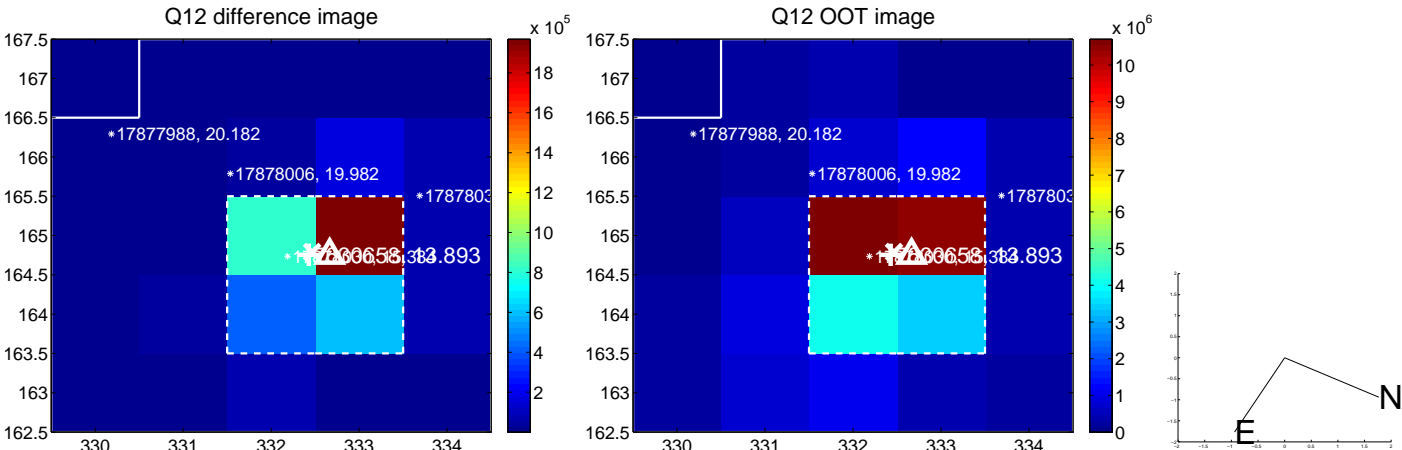
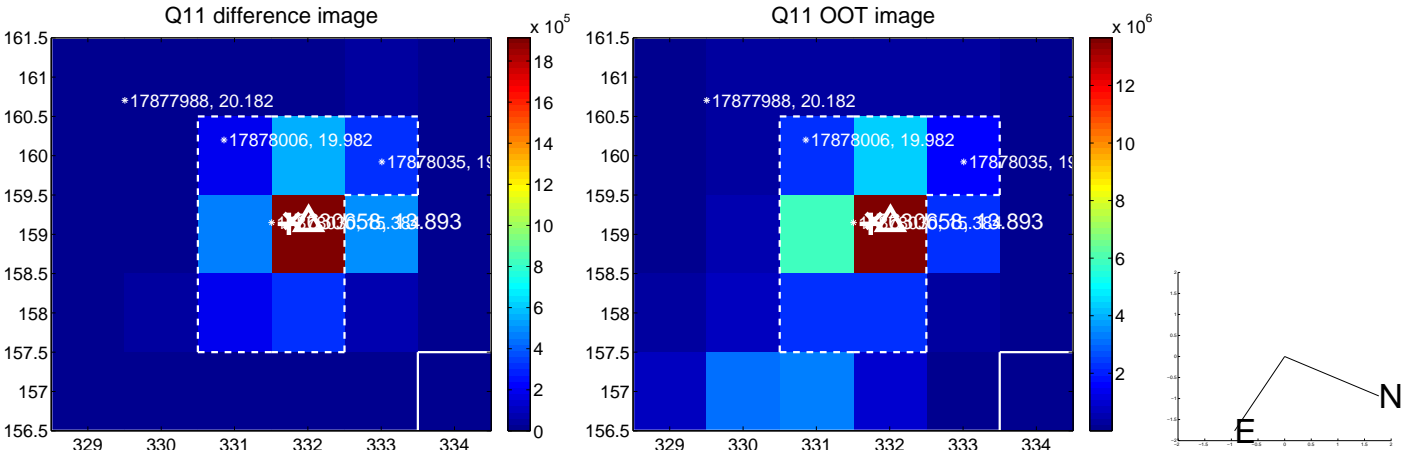
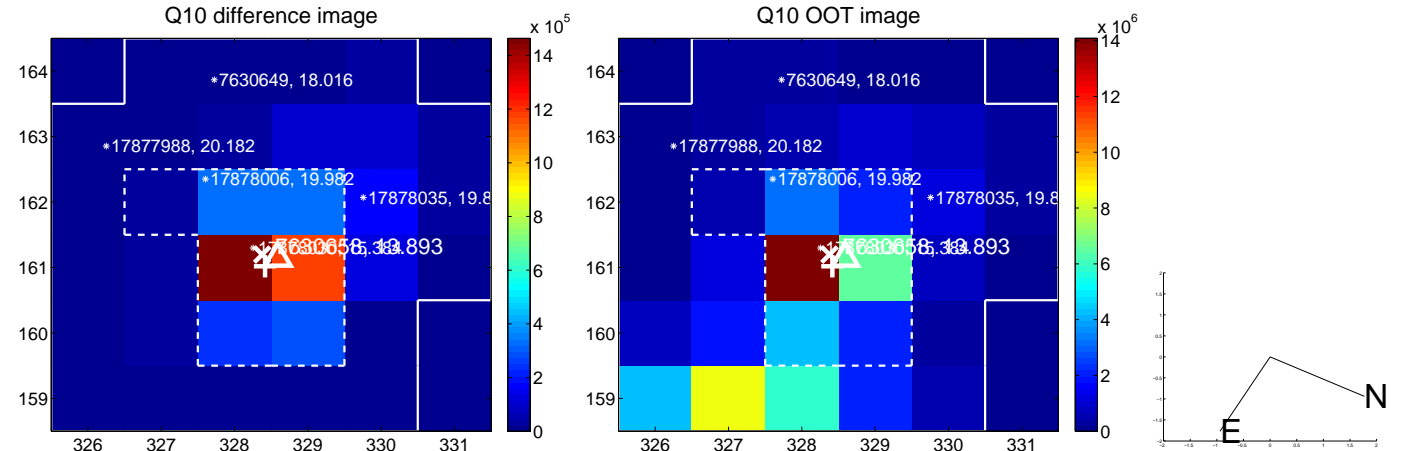
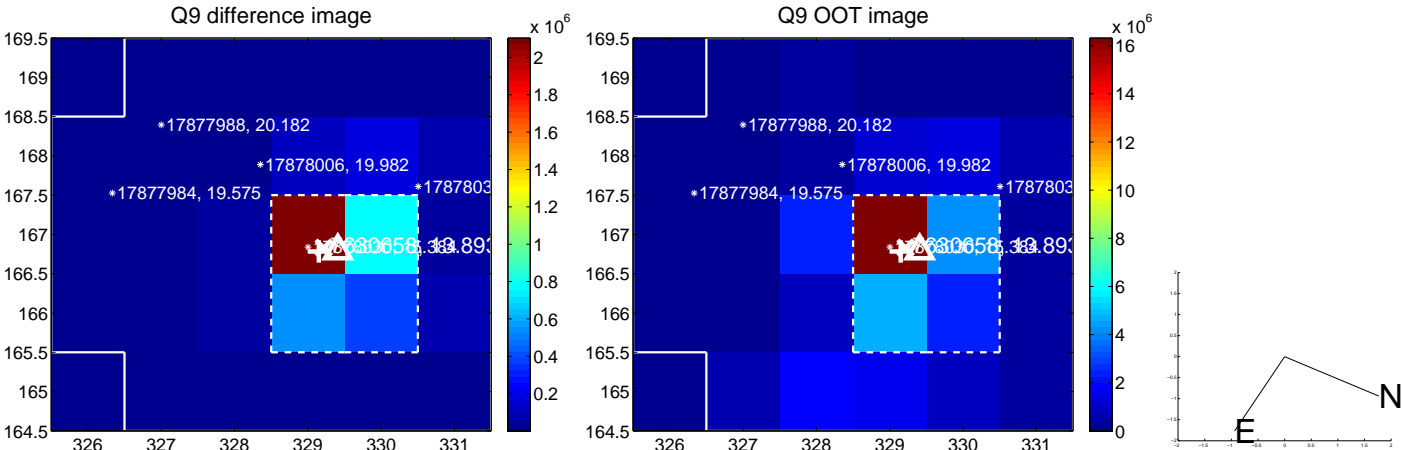




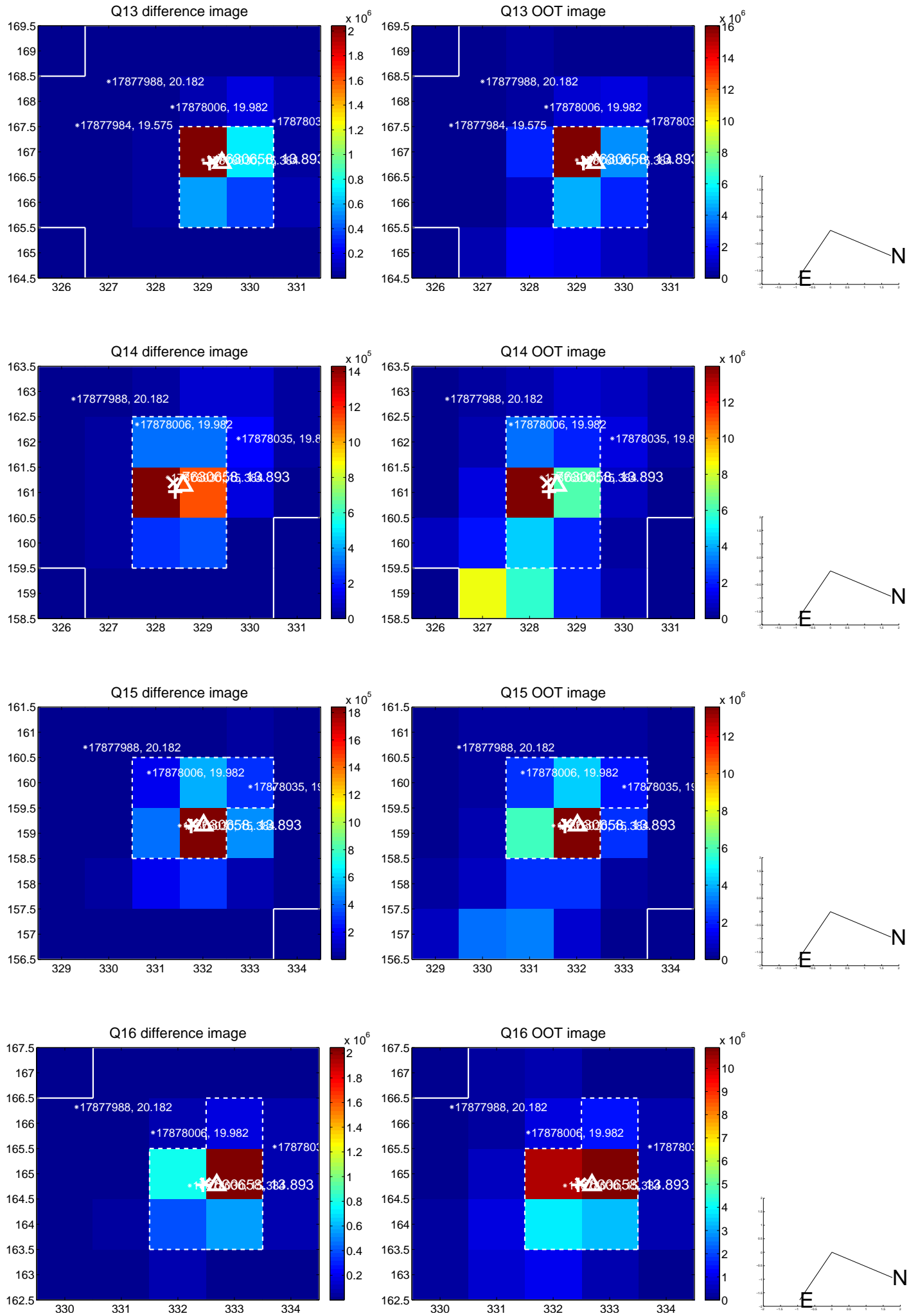
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



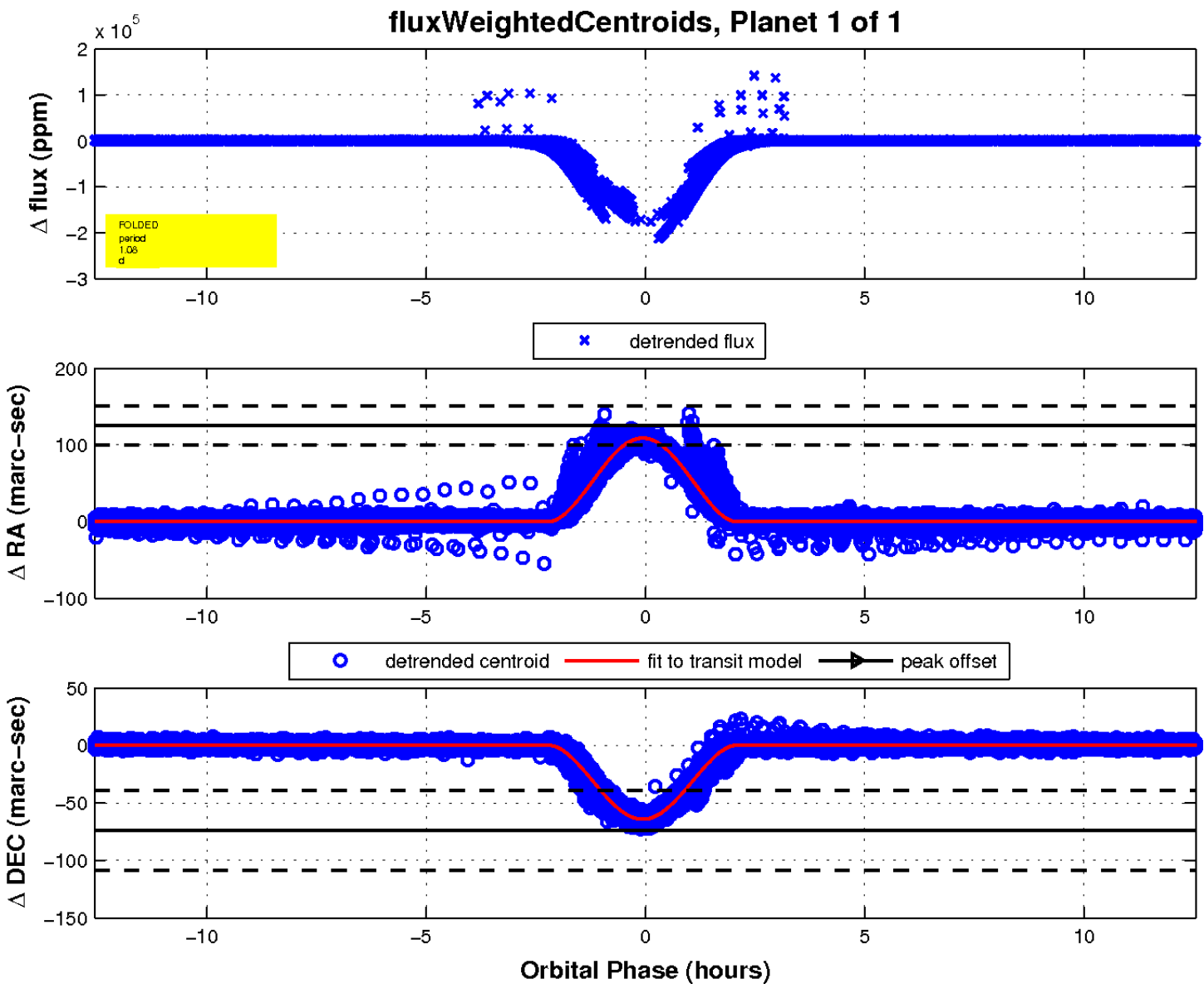
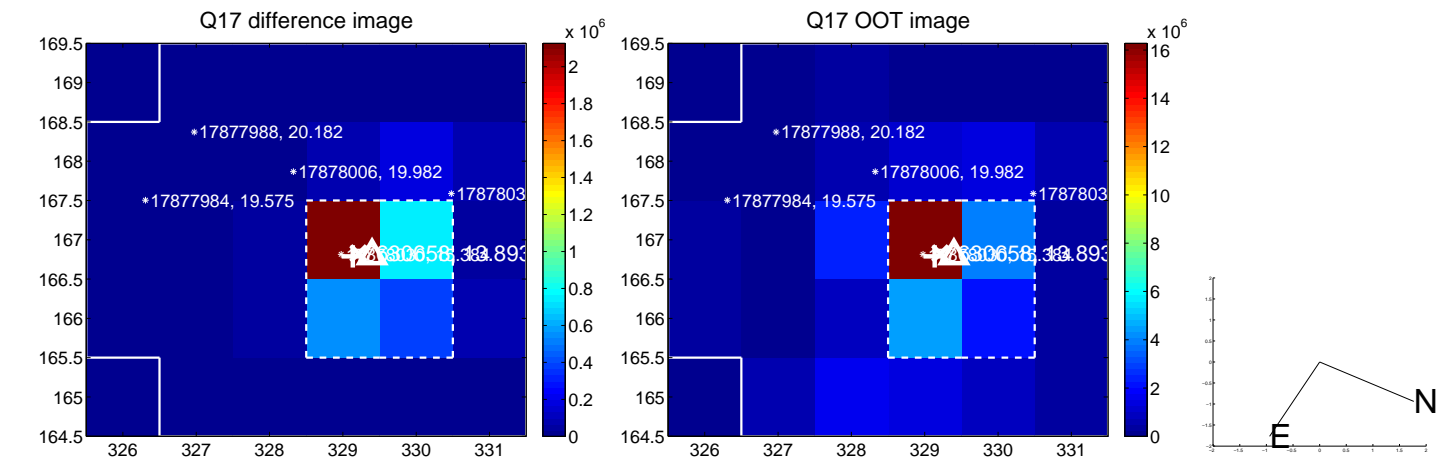
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UKIRT Image

Declination

