

# KIC 006949550

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006949550-01	OBS	6795.01	2.613691	133.974398	339925.1	5.520	17013.7	15685.1	0.83	5973	55.59	603.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006949550-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

**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.

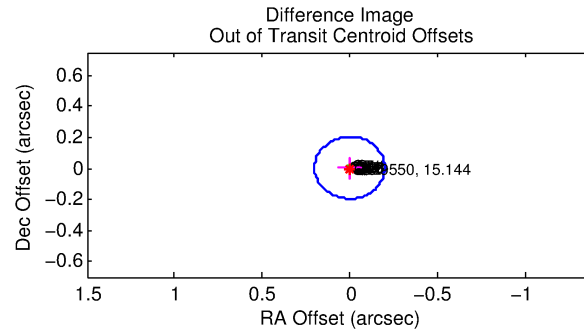
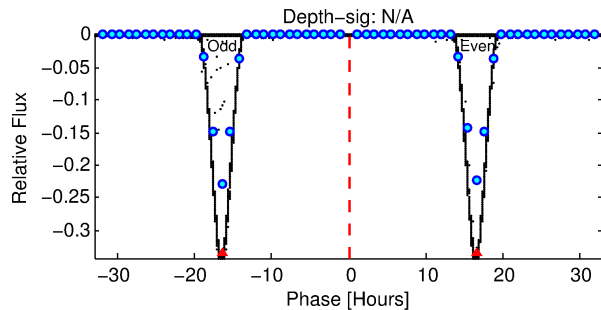
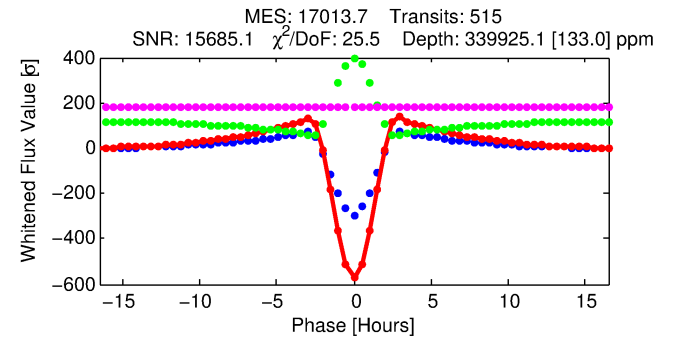
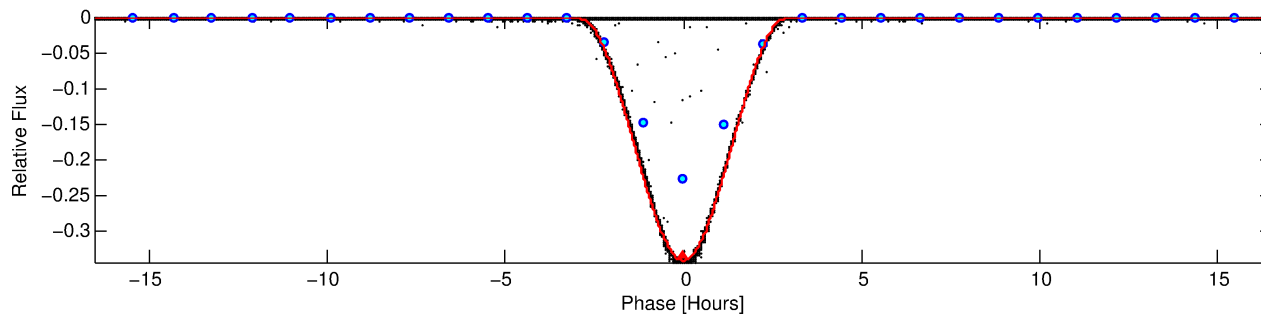
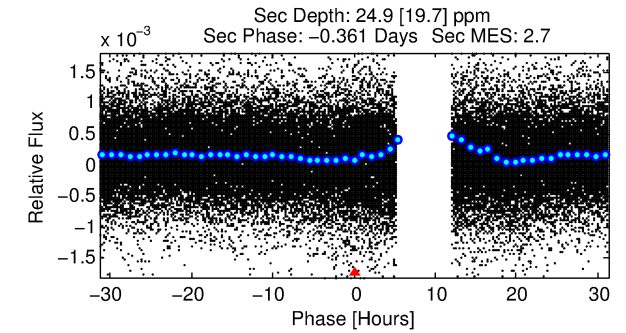
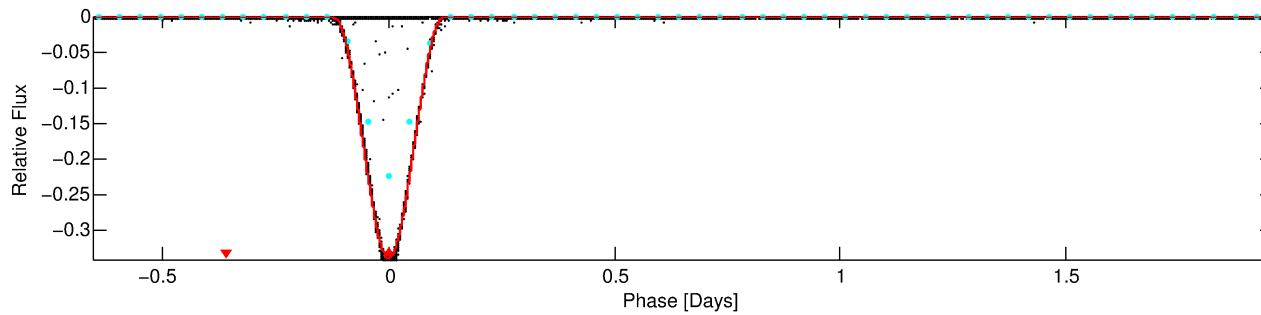
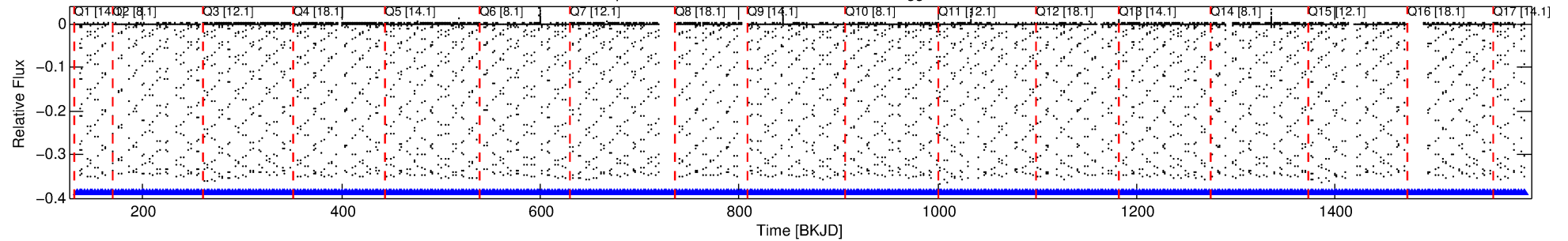
## Ephemeris Match Information For 006949550-01

No Significant Match Found

# DV One-Page Summary

KIC: 6949550 Candidate: 1 of 1 Period: 2.614 d  
KOI: K06795 Corr: No Ephemeris Match

Kp: 15.14 R\*: 0.83 Rs Teff: 5973.0 K Logg: 4.56 Fe/H: -0.440



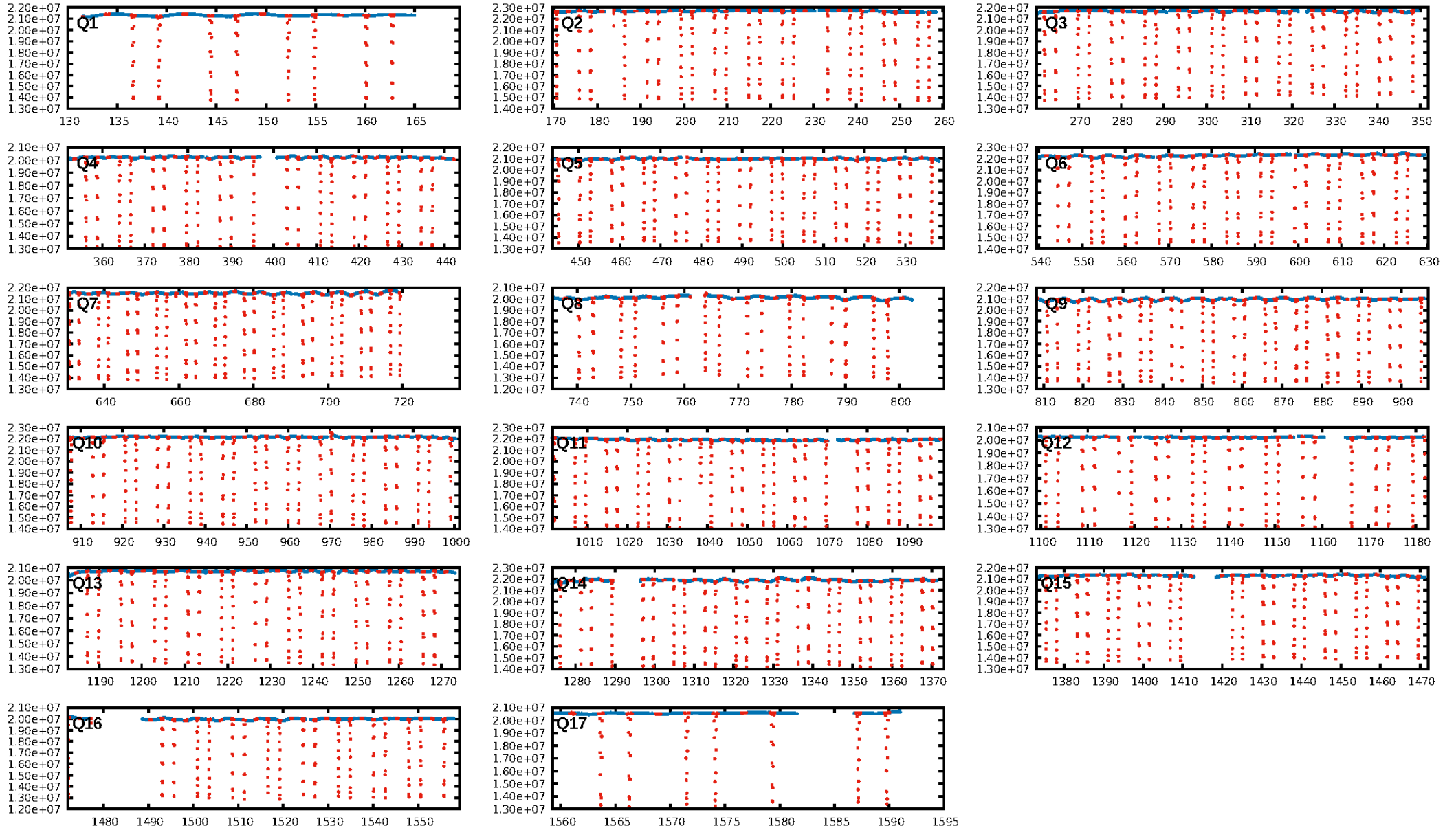
## DV Fit Results:

Period = 2.61369 [0.00000] d  
Epoch = 133.9744 [0.0000] BKJD  
Rp/R\* = 0.6146 [0.0098]  
a/R\* = 5.56 [0.02]  
b = 0.57 [0.02]  
Seff = 603.06 [229.12]  
Teq = 1264 [120] K  
Rp = 55.59 [15.78] Re  
a = 0.0360 [0.0088] AU  
Ag = 0.01 [0.01] [-198.76σ]  
Teffp = 538 [108] K [-4.50σ]

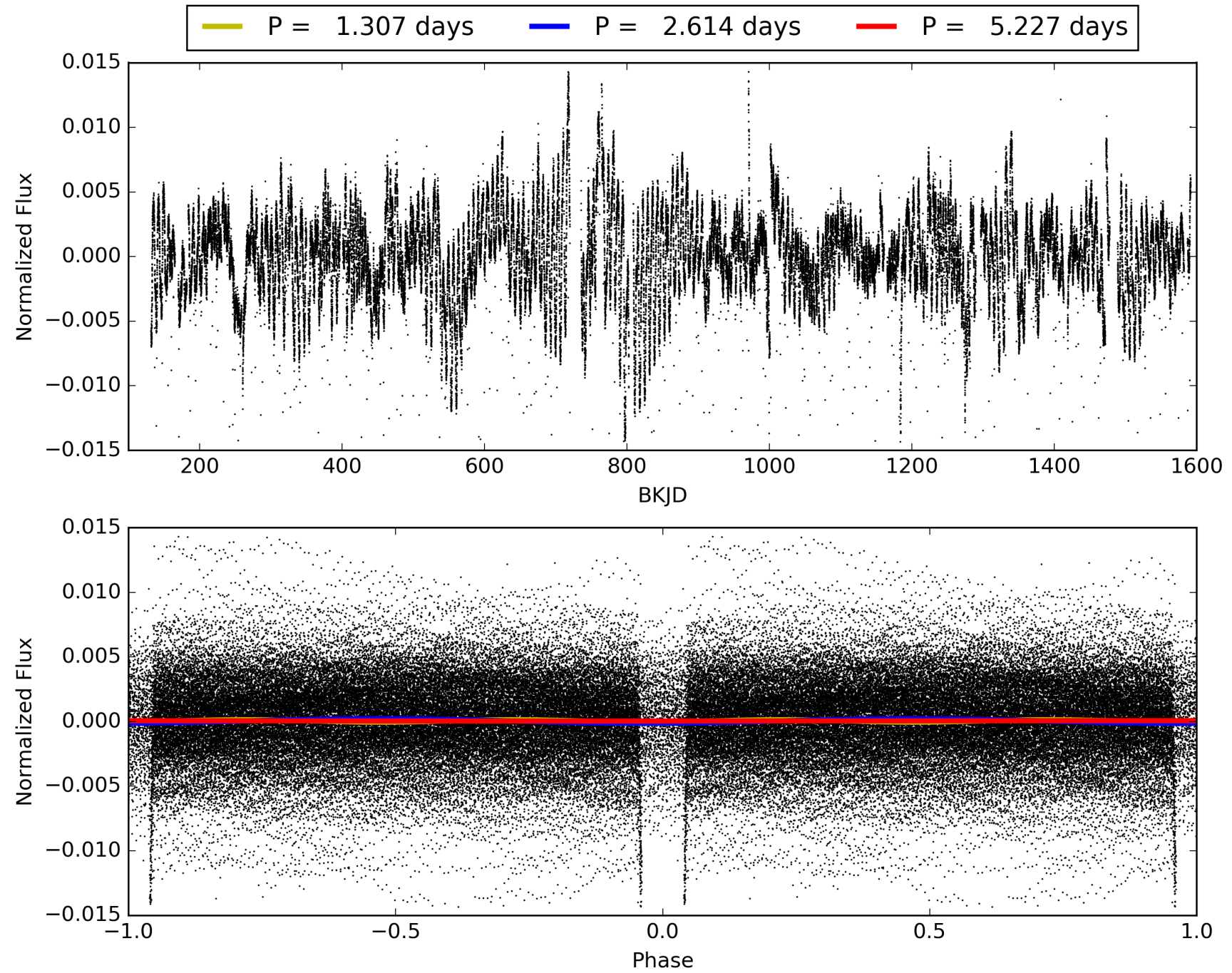
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 1.00 [493/493]  
GhostDiagnostic-chr: 2.488  
Centroid-sig: 0.0%  
Centroid-so: 0.249 arcsec [489.57σ]  
OotOffset-rm: 0.006 arcsec [0.09σ]  
KicOffset-rm: 0.091 arcsec [1.34σ]  
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]

# TCE 006949550-01, PDC Light Curves

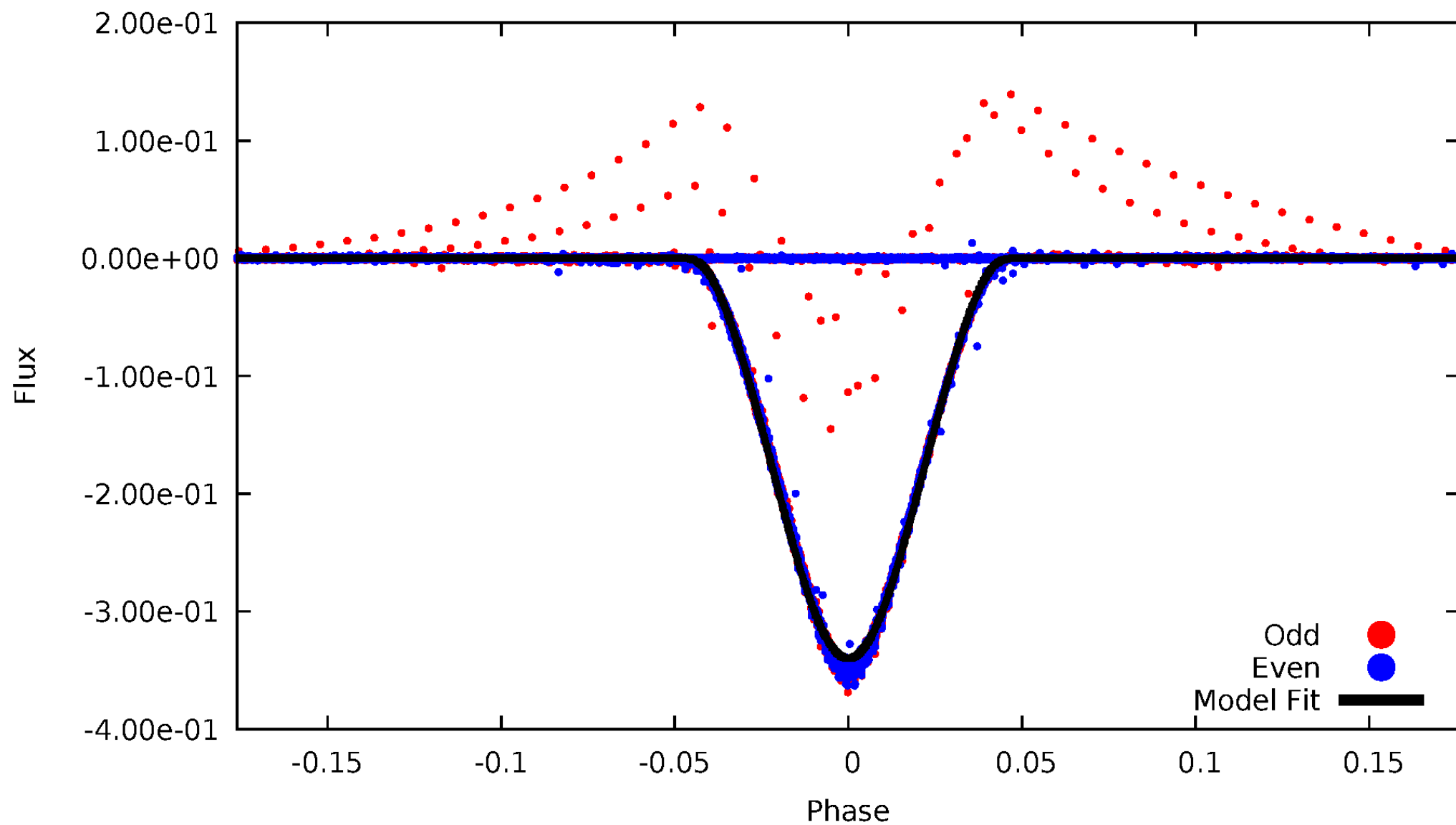


TCE 006949550-01



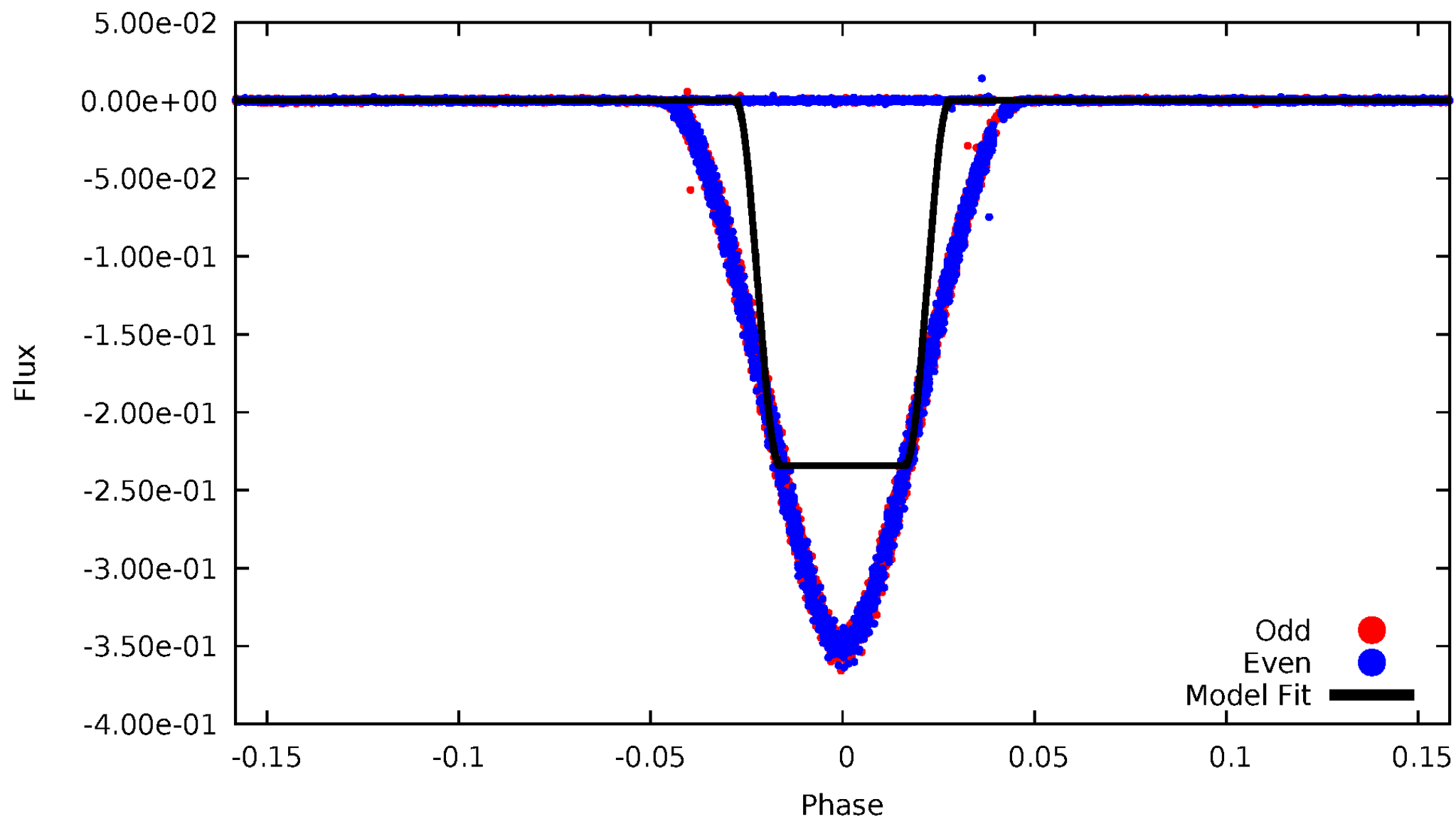
# DV Odd/Even

TCE 006949550-01



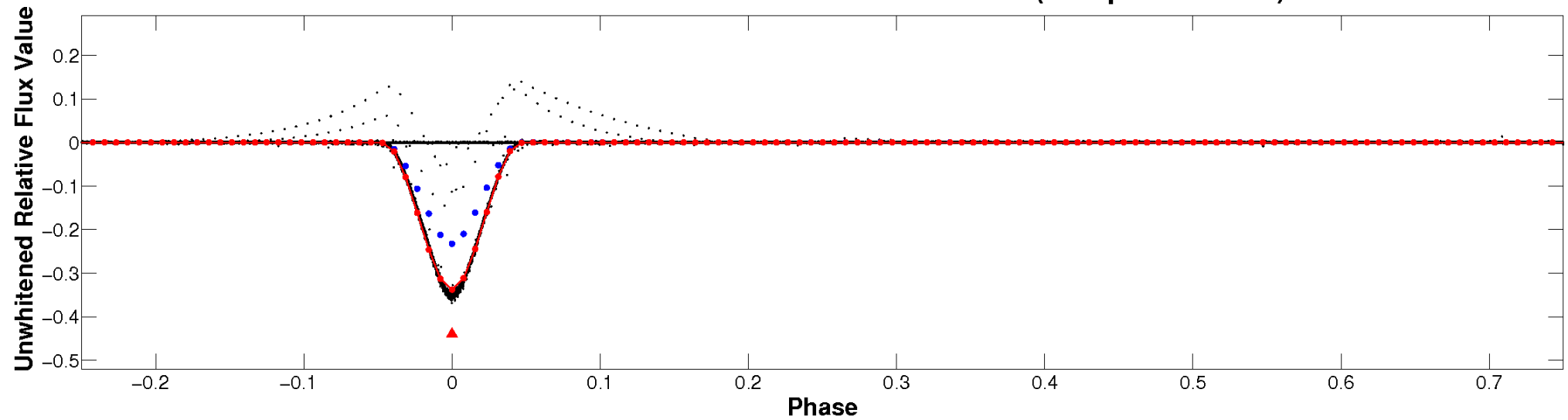
# ALT Odd/Even

TCE 006949550-01

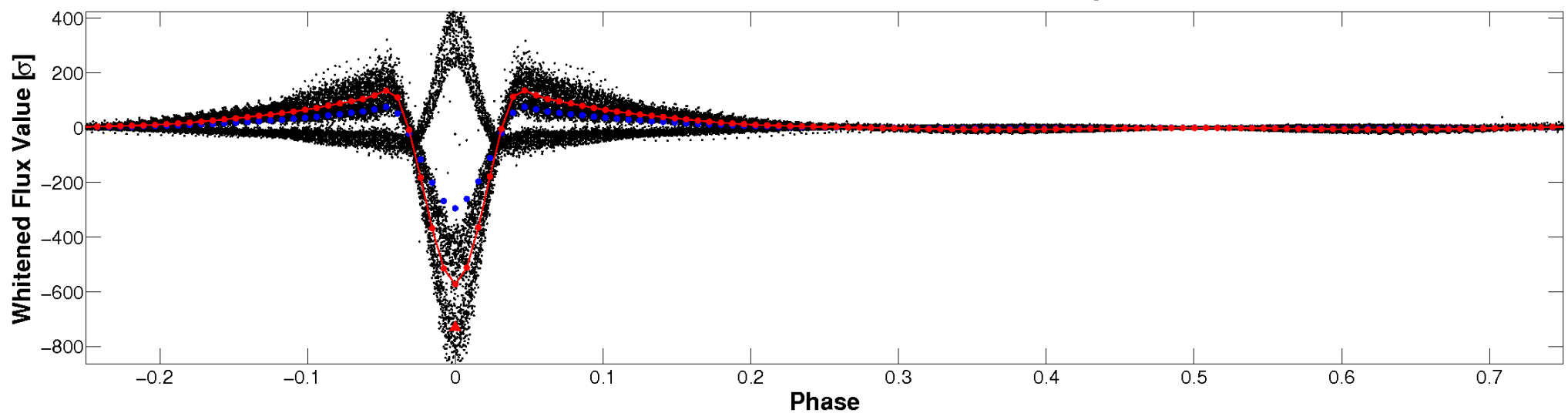


# Non-Whitened Vs. Whitened Light Curve

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

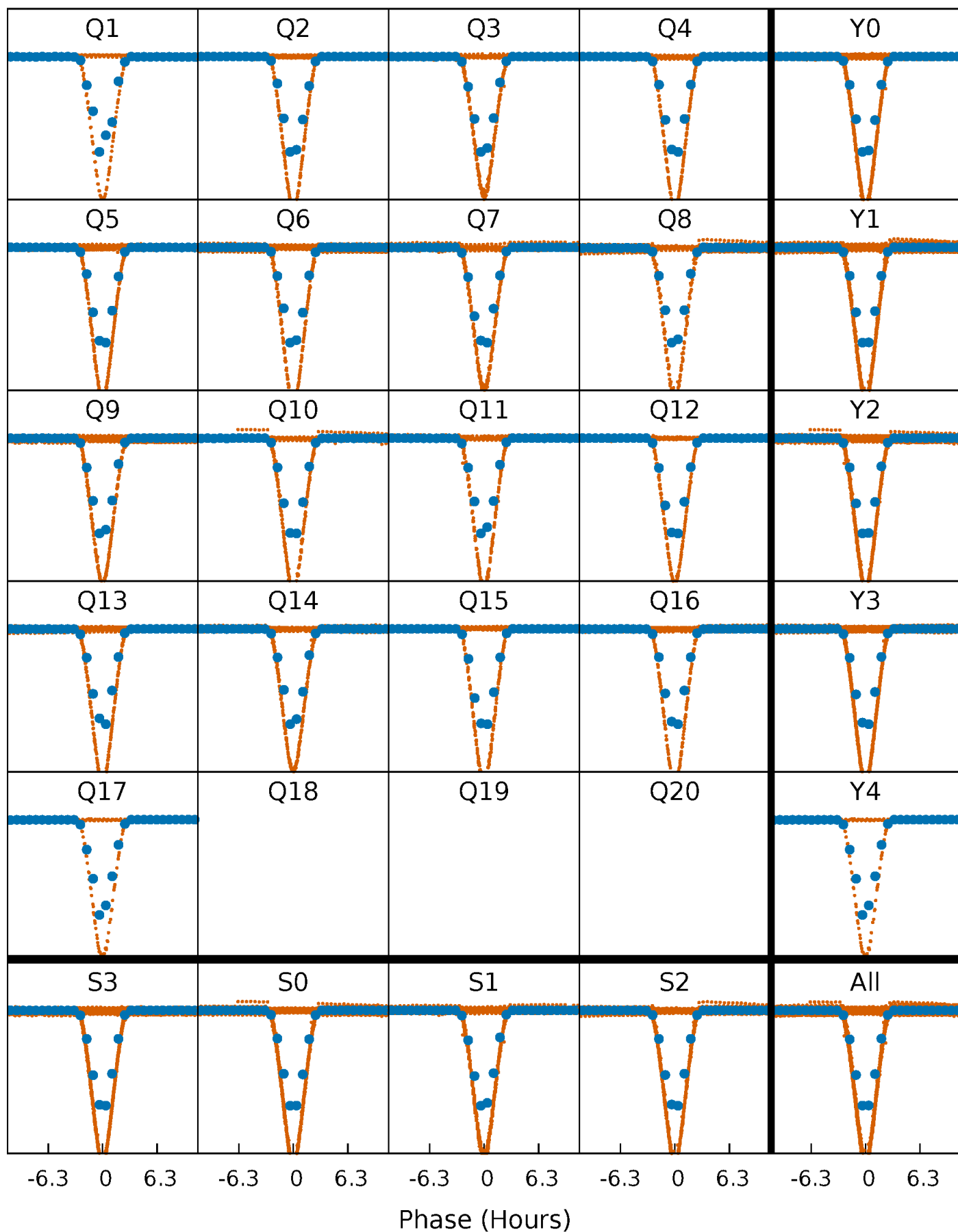


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

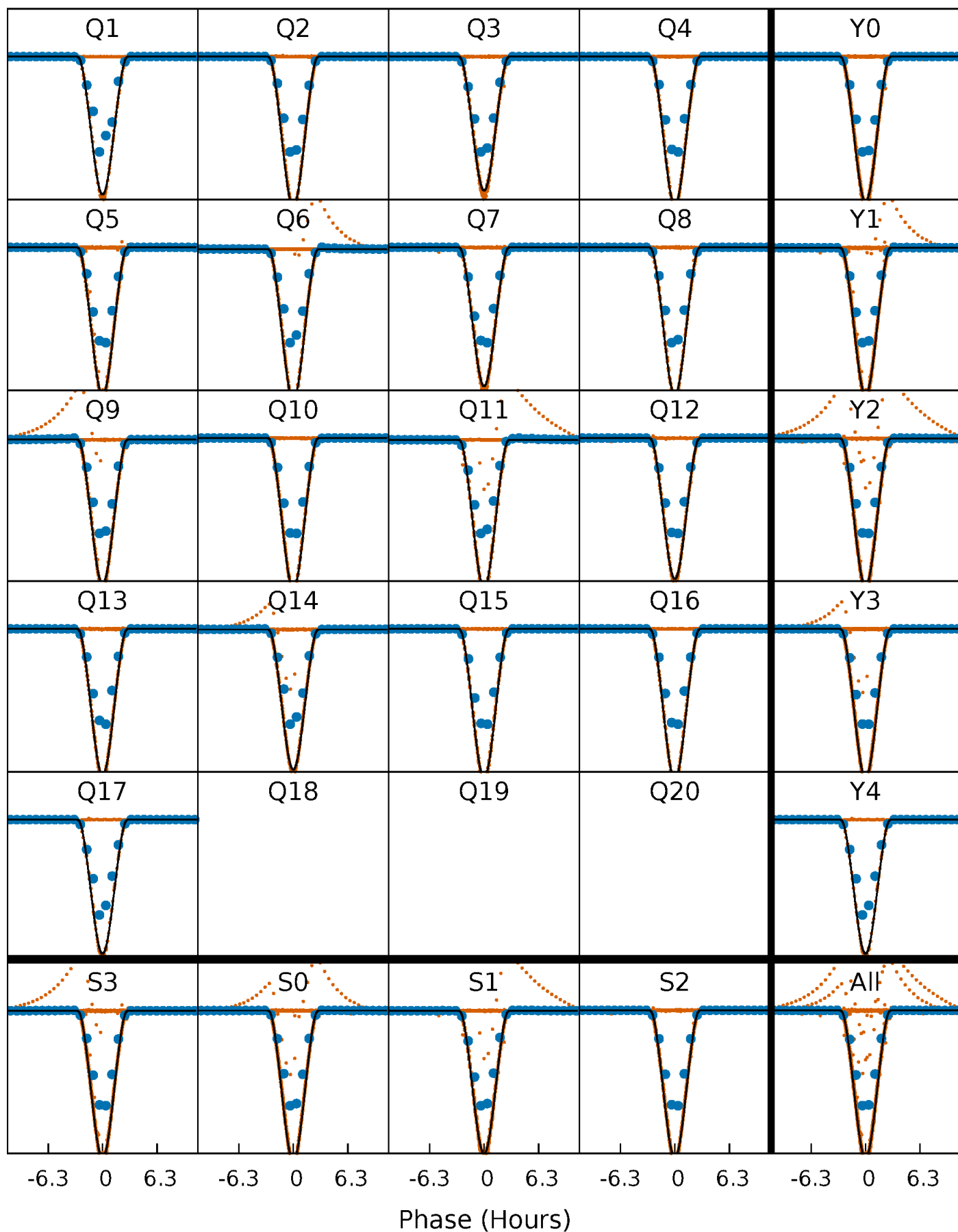
TCE 006949550-01 P= 2.613691 Days  $T_0=133.974398$  (BKJD)





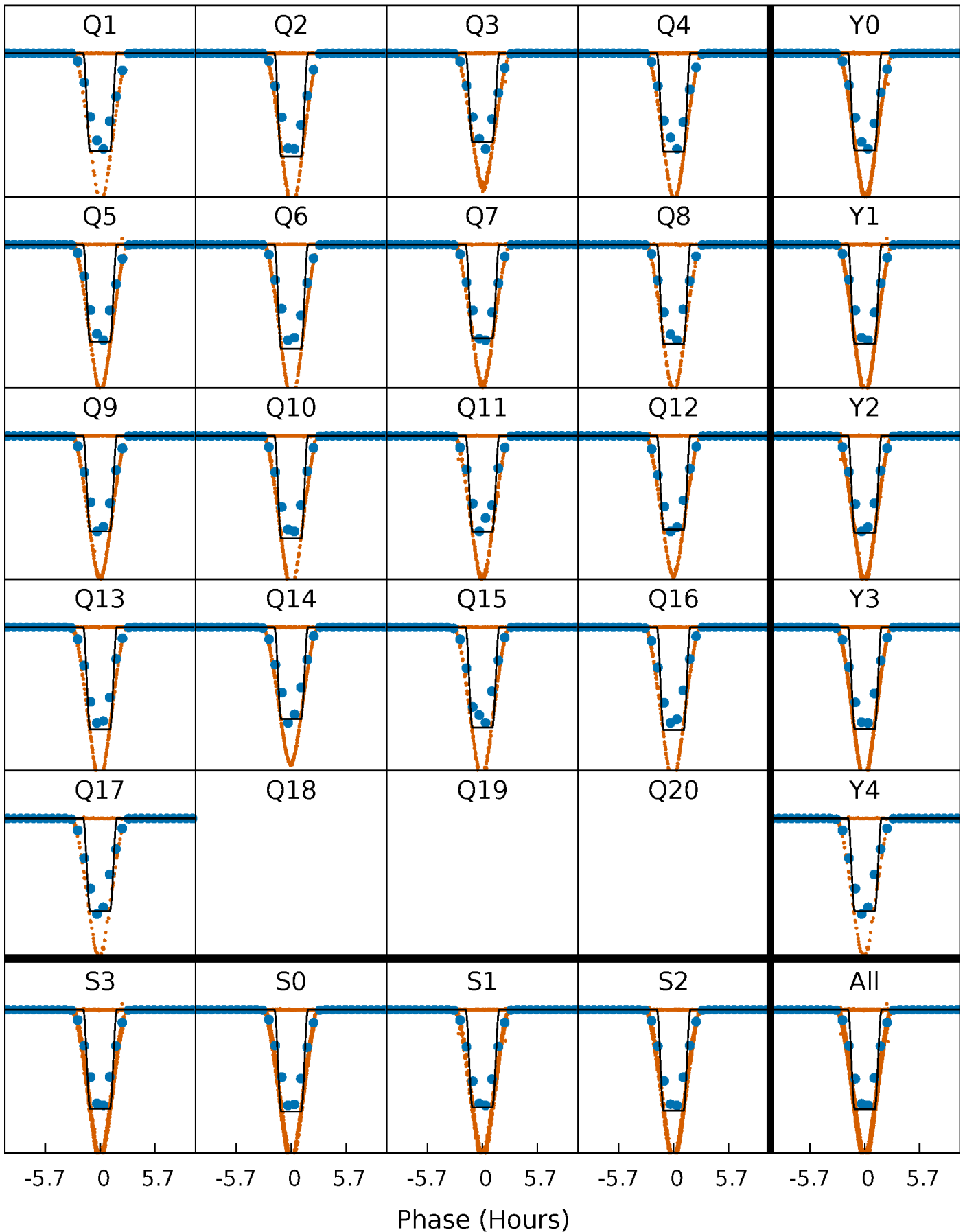
# DV Quarter-Phased Transit Curves

TCE 006949550-01 P= 2.613691 Days  $T_0=133.974398$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

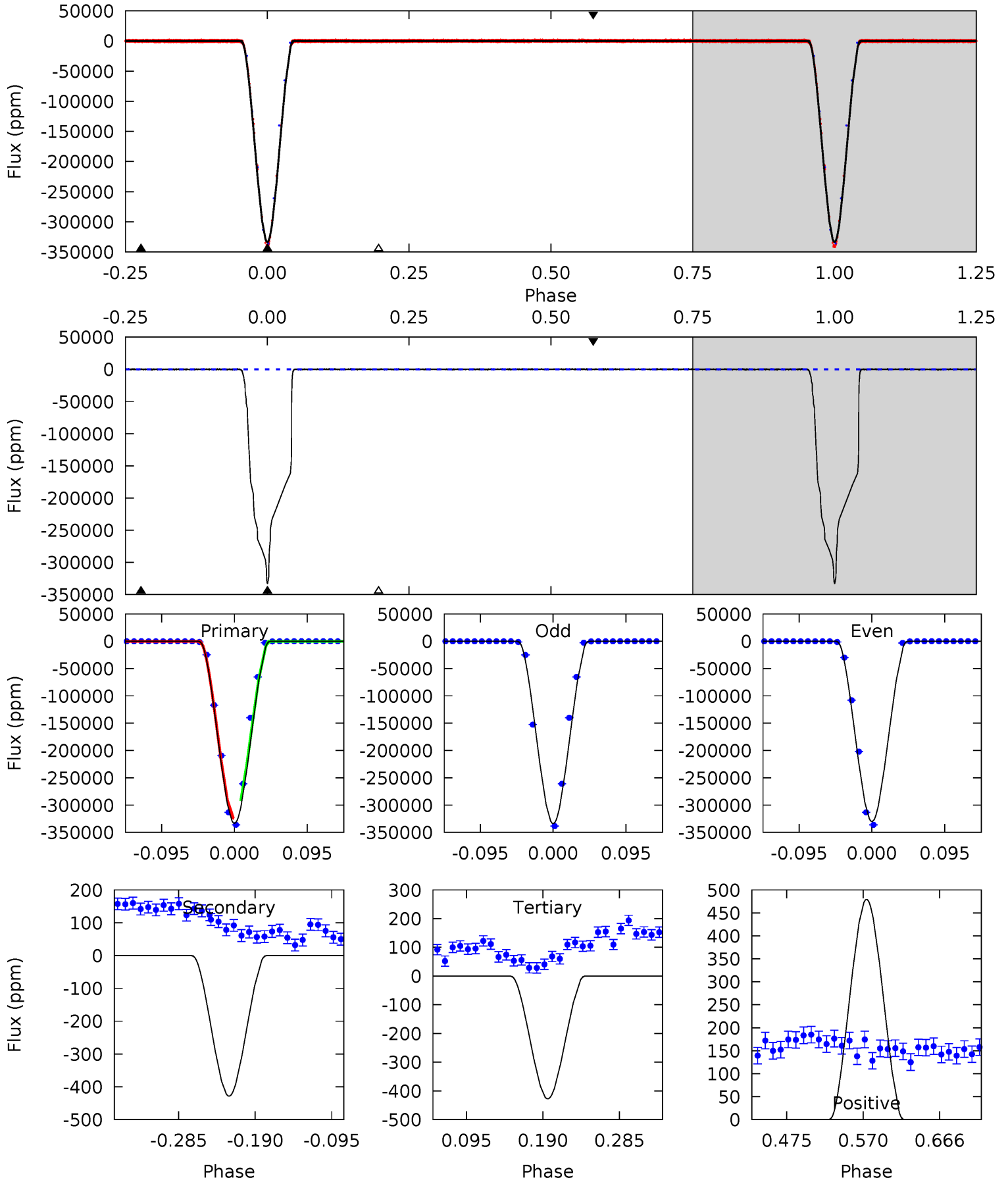
TCE 006949550-01 P= 2.613704 Days  $T_0=133.970836$  (BKJD)



# DV Model-Shift Uniqueness Test

006949550-01, P = 2.613691 Days, E = 131.360707 Days

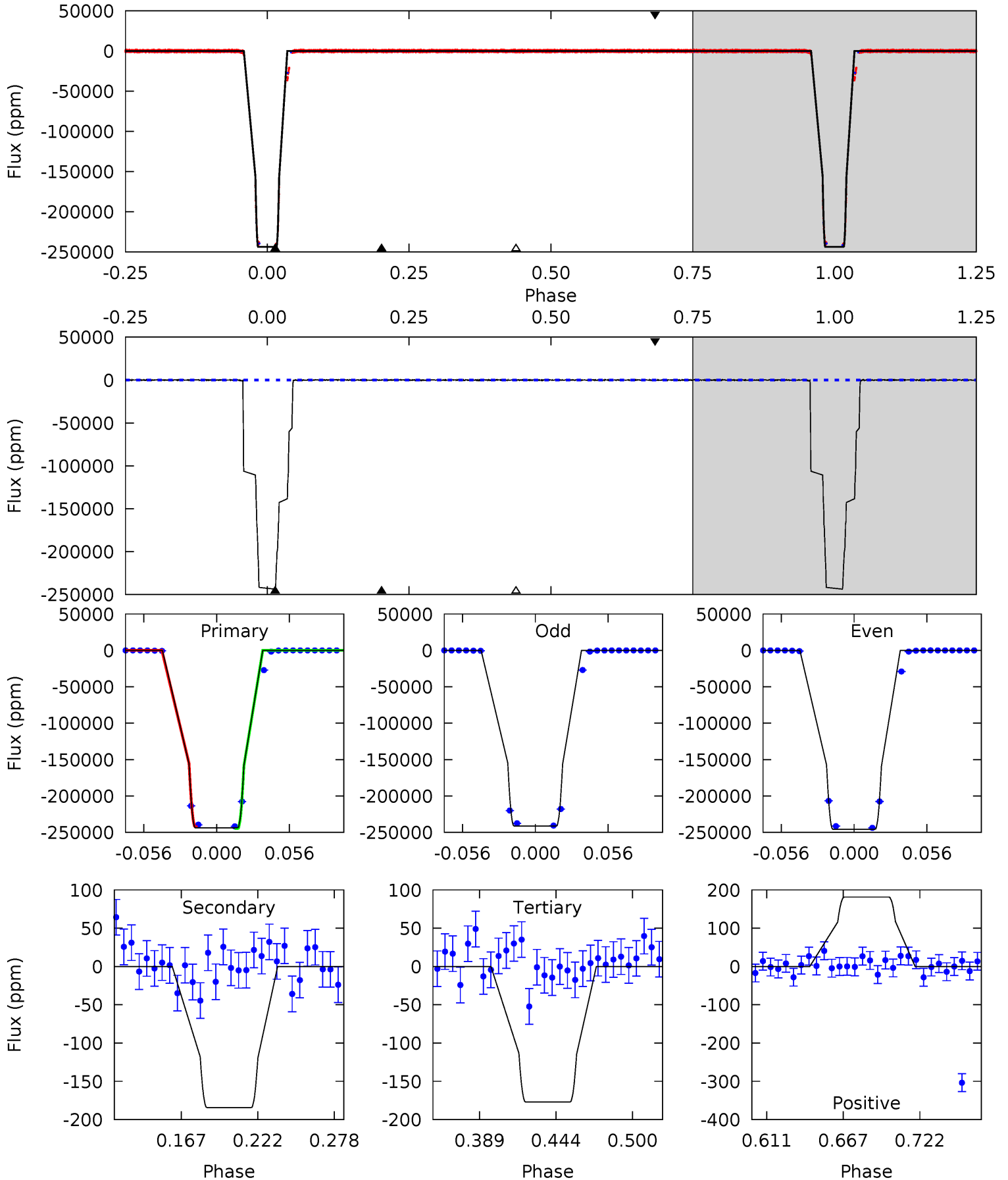
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15759	20.2	20.2	22.7	4.58	1.67	6.23	15739	15736	0.04	-2.42	88.9	0.67	0.00	0



# Alt Model-Shift Uniqueness Test

006949550-01, P = 2.613704 Days, E = 131.357132 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
4624	3.50	3.36	3.44	4.69	1.91	25.4	4620	4620	0.14	0.05	41.9	0.68	0.00	0



### Stellar Parameters For KIC 006949550

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5973^{+161}_{-179}$	$4.562^{+0.037}_{-0.200}$	$-0.440^{+0.300}_{-0.300}$	$0.829^{+0.235}_{-0.078}$	$0.915^{+0.098}_{-0.109}$	$2.265^{+0.455}_{-1.184}$
	+3%/-3%	+1%/-4%	+68%/-68%	+28%/-9%	+11%/-12%	+20%/-52%
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 006949550-01 / KOI 6795.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-428 \pm 21$	$57.87^{+7.88}_{-4.30}$	$1813^{+115}_{-85}$	$-2284^{+62}_{-88}$	$0.090^{+0.014}_{-0.019}$
Alt.	$-184 \pm 53$	$45.34^{+6.68}_{-3.70}$	$1803^{+126}_{-72}$	$-2311^{+60}_{-85}$	$0.062^{+0.023}_{-0.022}$

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

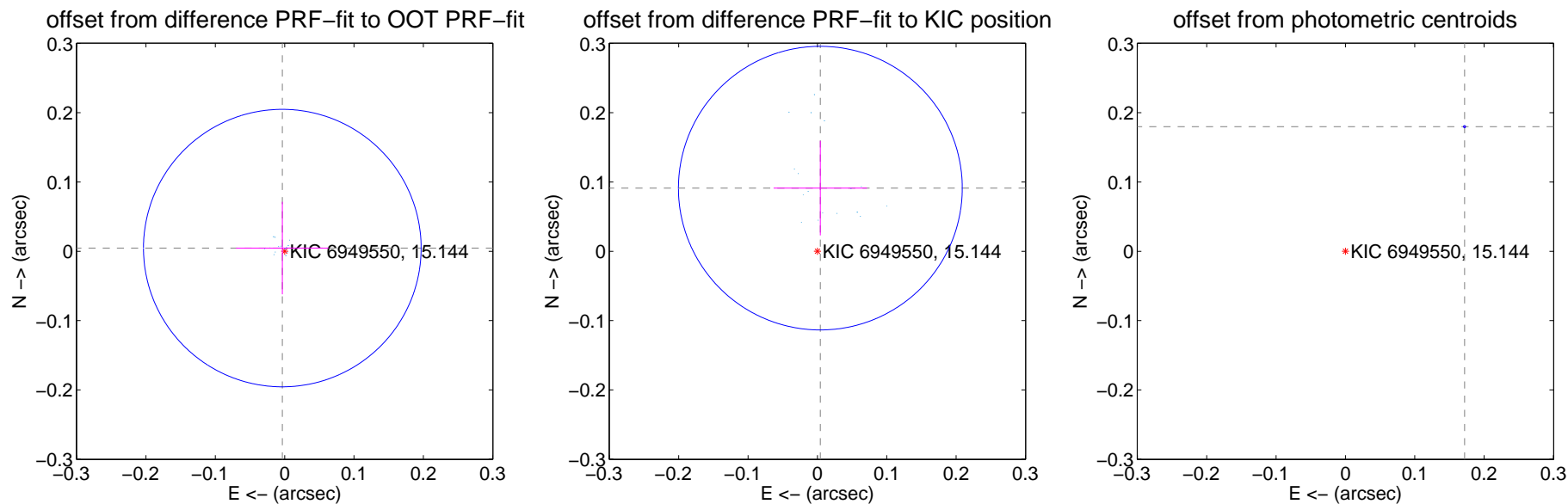
## DV Centroid Data

Supplemental centroid analysis for 006949550-01. Kepler magnitude: 15.14. Transit SNR 15685.15

There are 17 quarters with good PRF difference image offsets

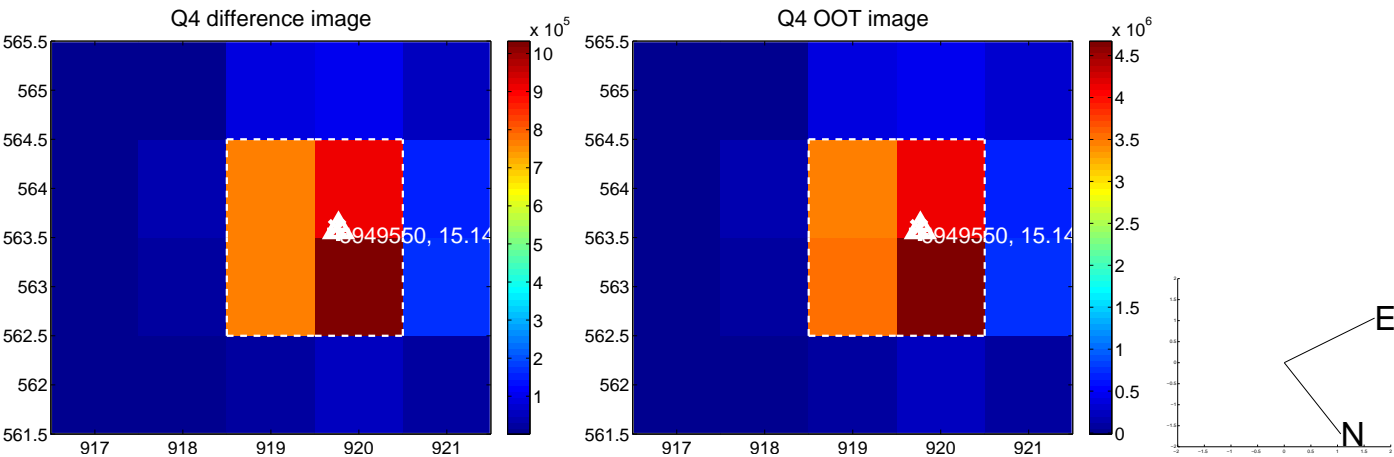
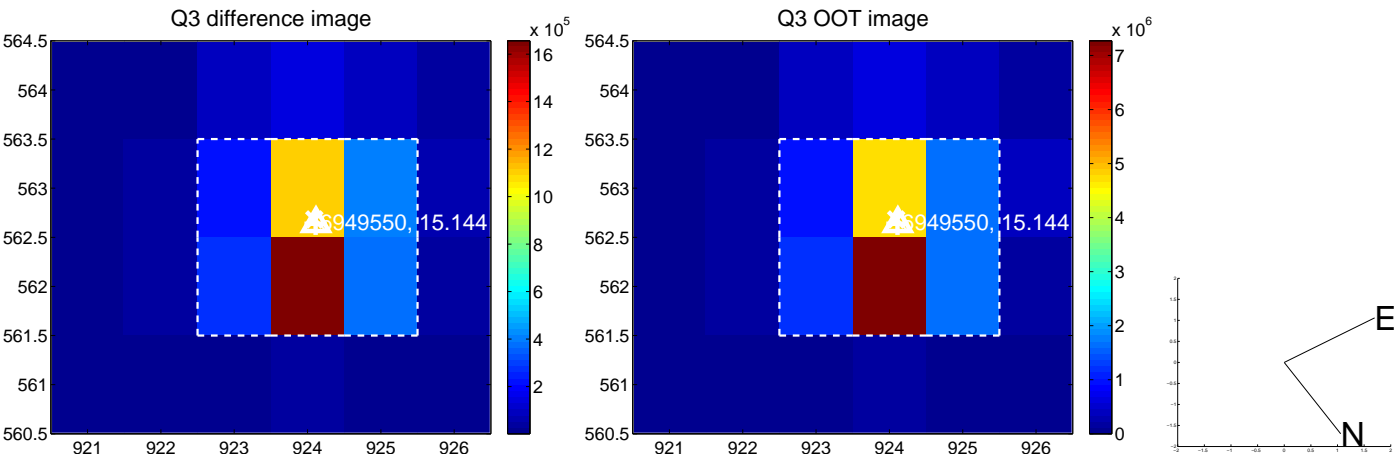
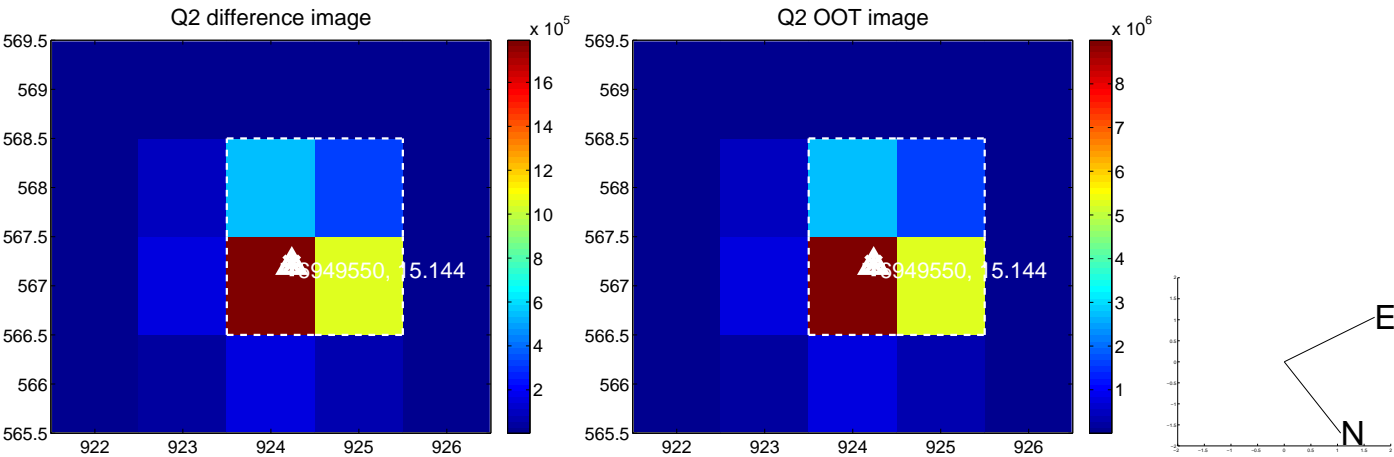
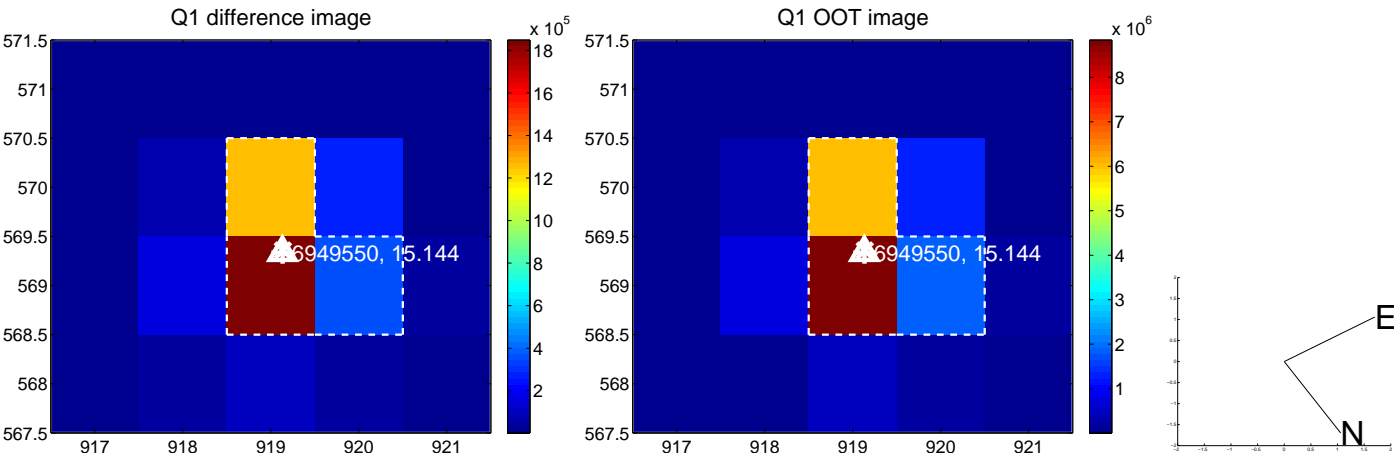
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.006 \pm 0.067$	0.09	$0.003 \pm 0.067$	$0.005 \pm 0.067$
PRF-fit source offset from KIC position	$0.091 \pm 0.068$	1.34	$-0.004 \pm 0.067$	$0.091 \pm 0.068$
photometric centroid source offset	$0.25 \pm 0.00$	489.57	$-0.17 \pm 0.00$	$0.18 \pm 0.00$

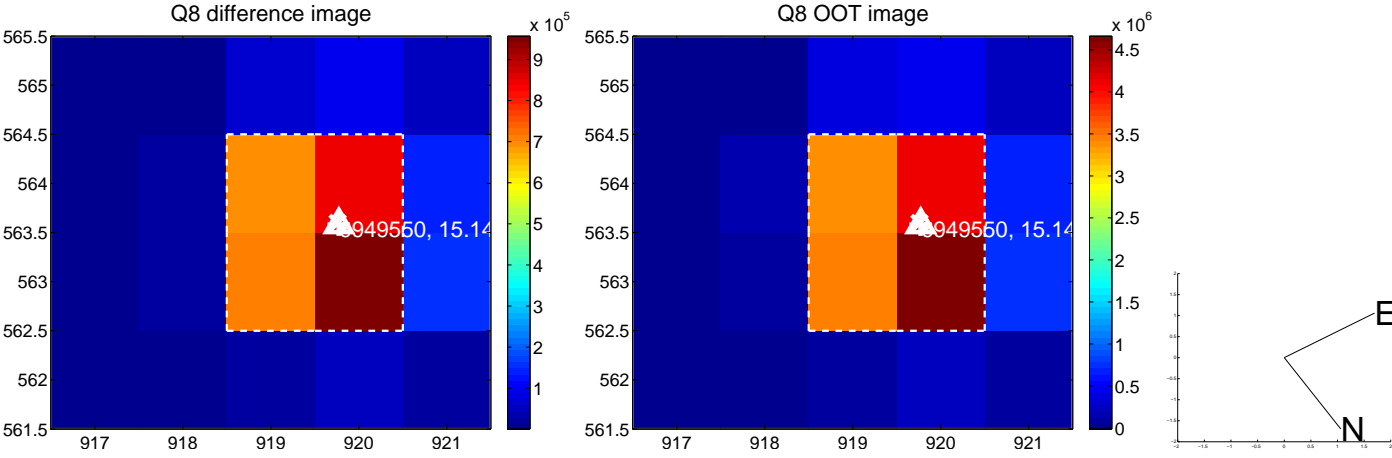
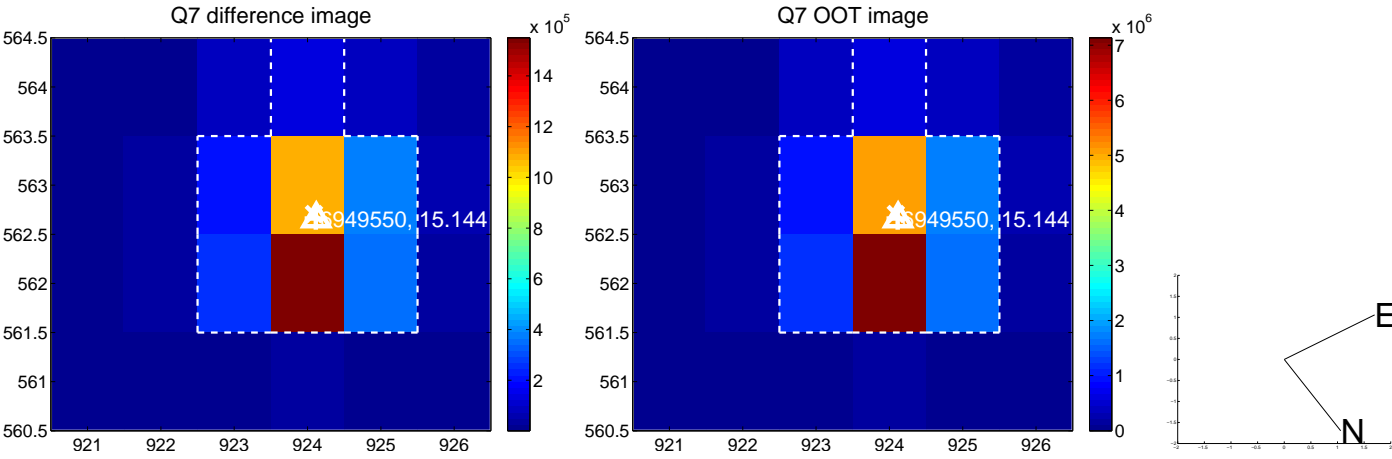
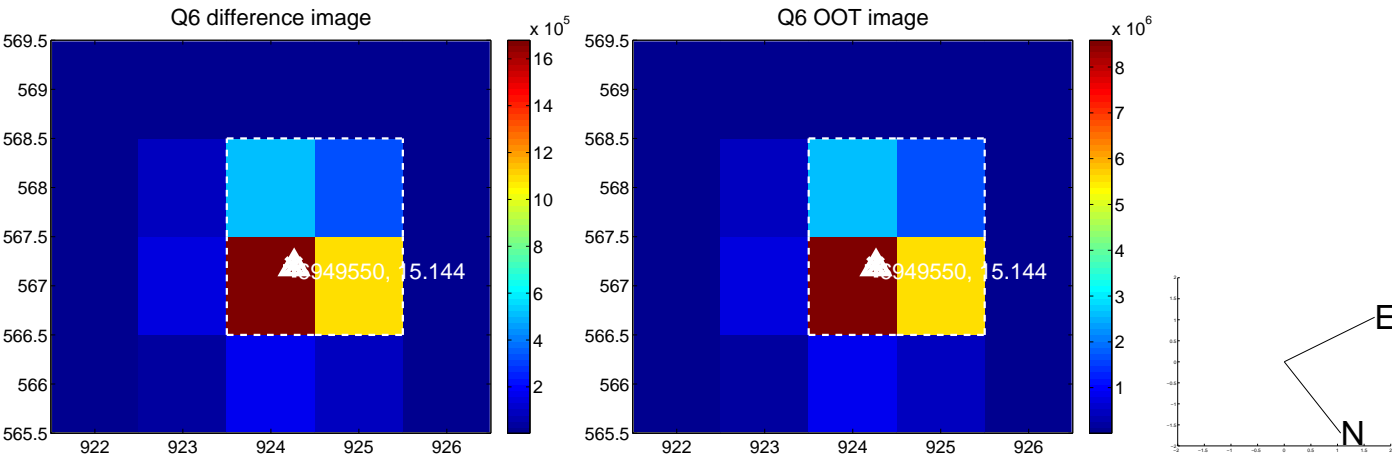
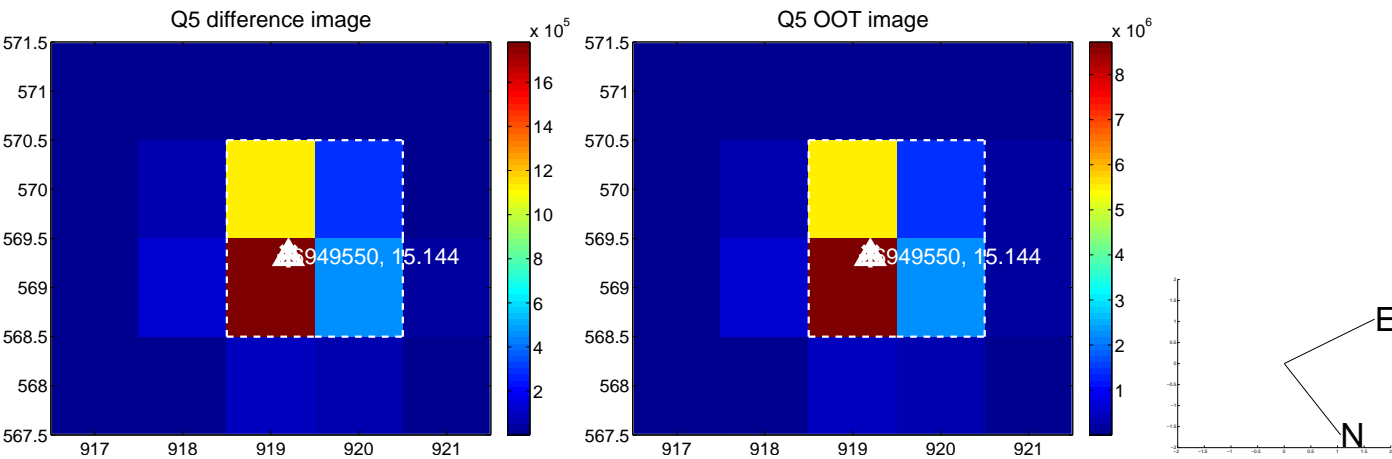


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

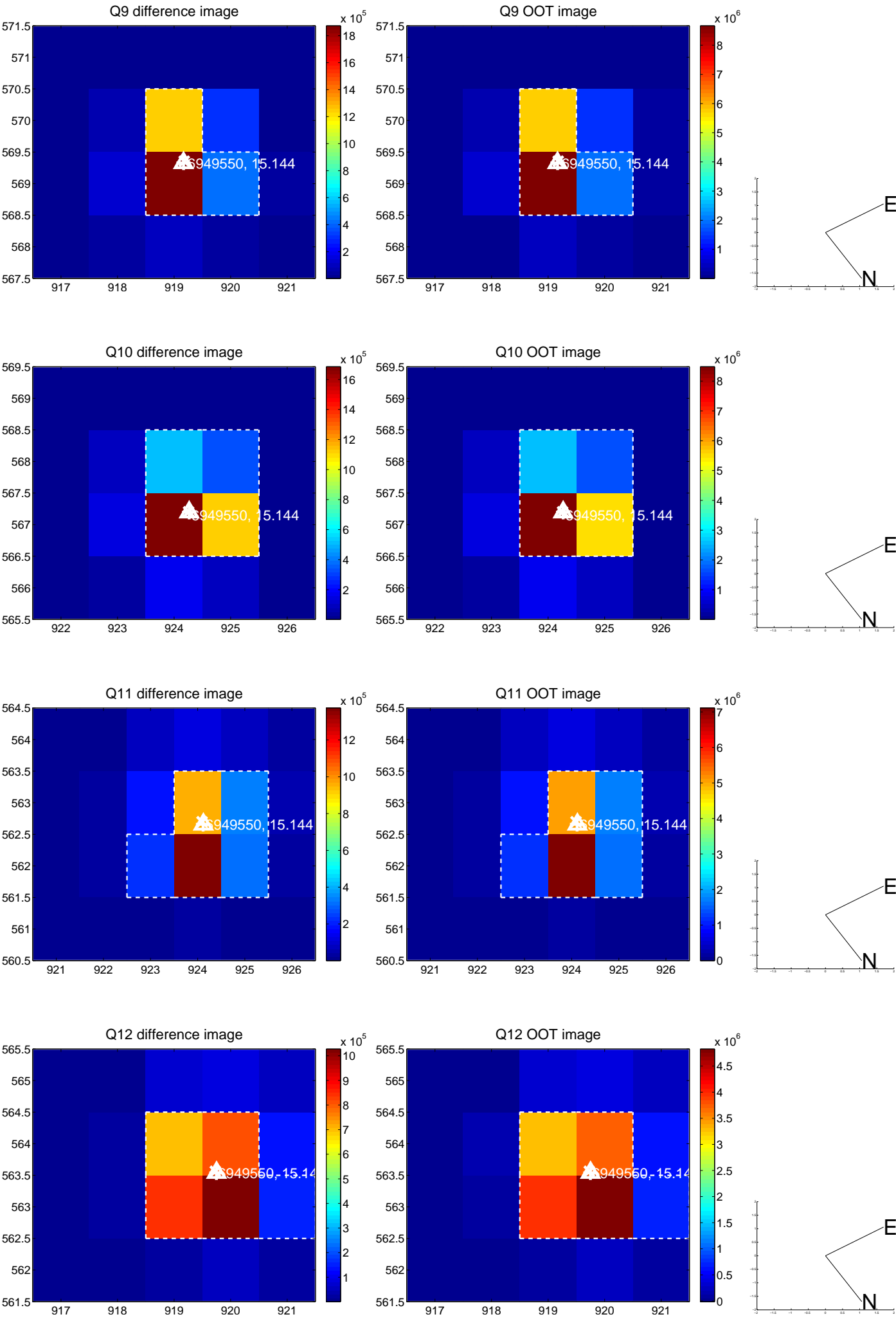


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

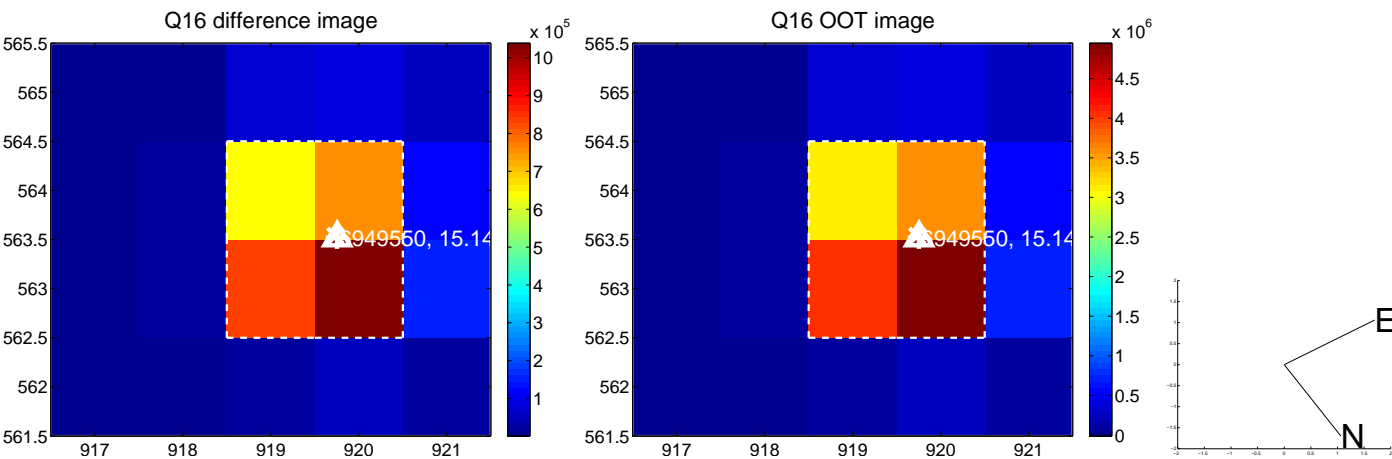
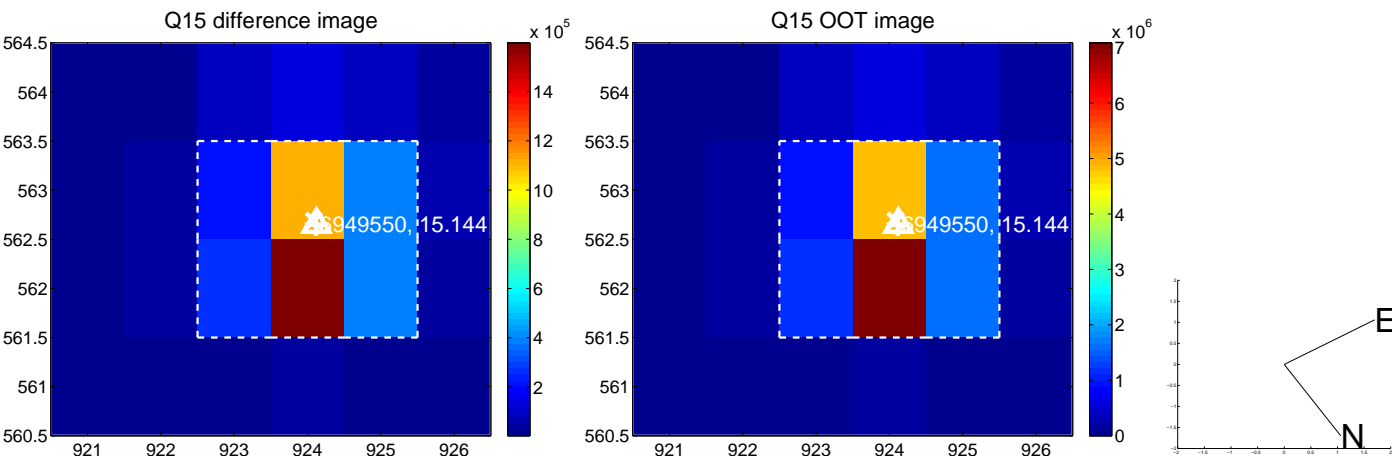
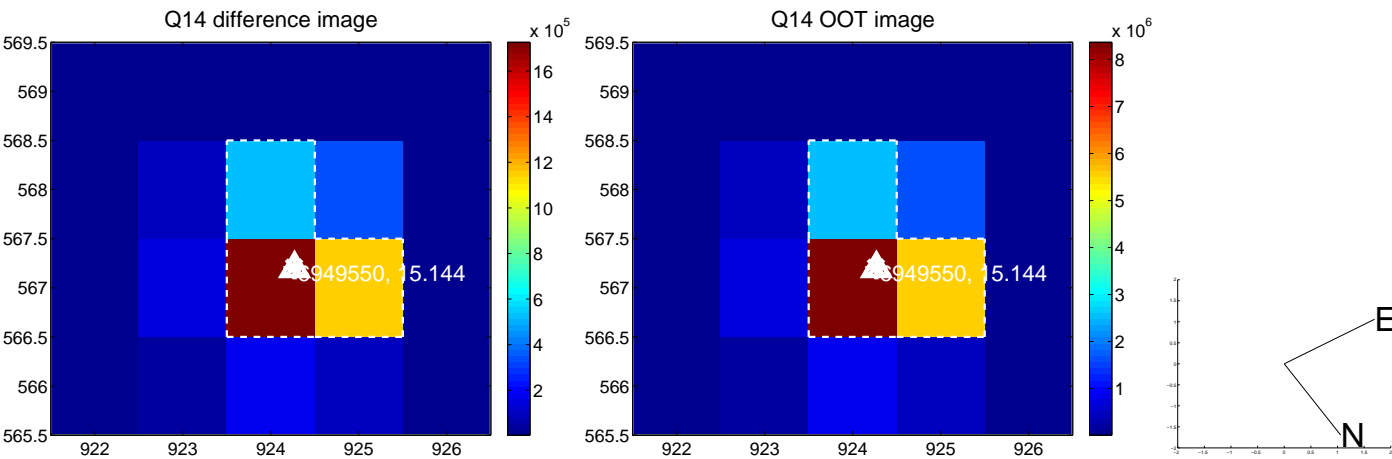
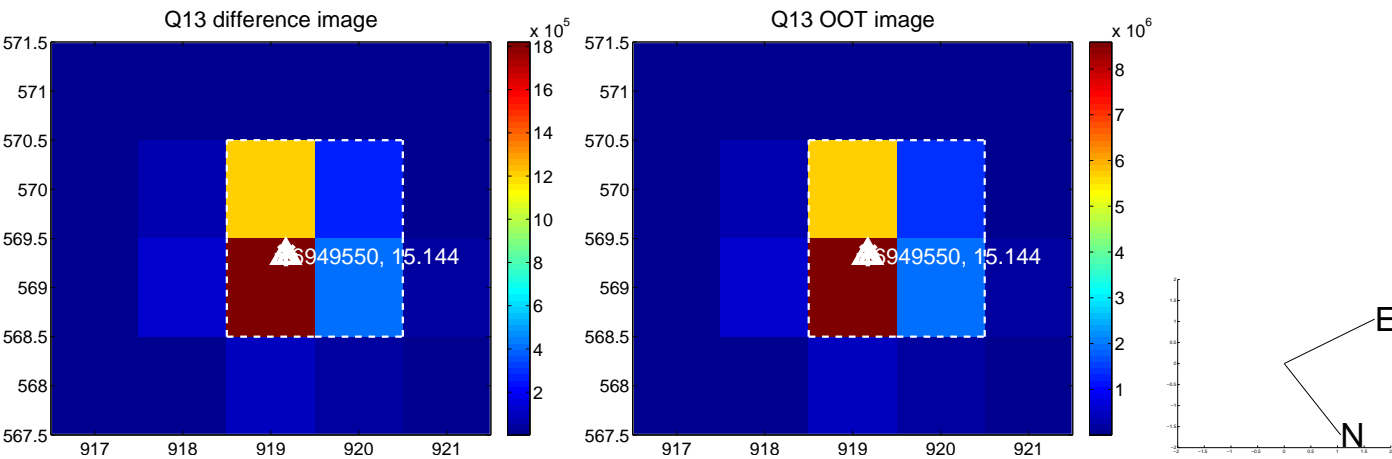




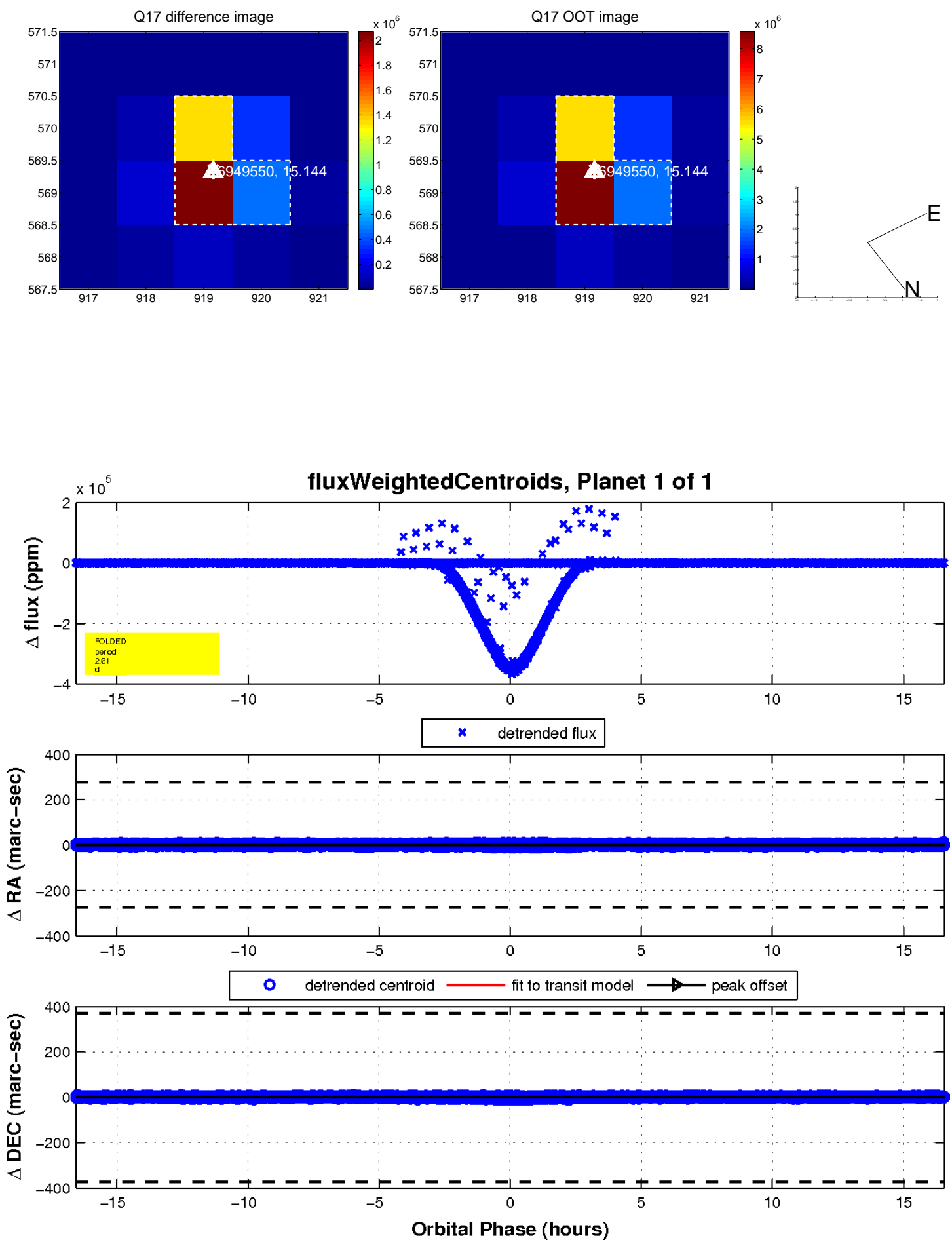
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

