

KIC 006612589

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})
006612589-01	OBS	No	3.777961	133.185020	16.9	27.498	8.9	6.3	3.98	6431	1.65	7454.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006612589-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_SATURATED

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

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

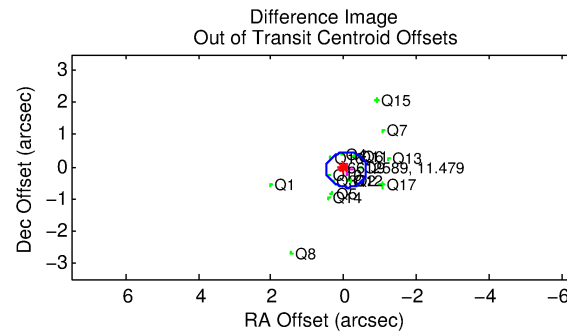
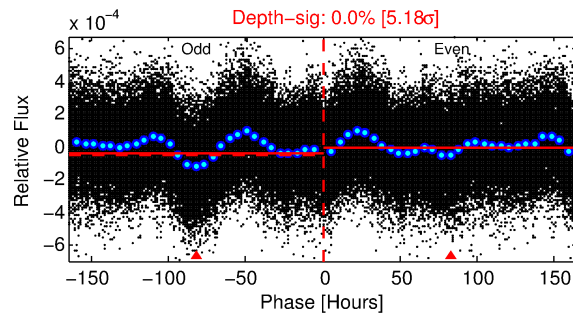
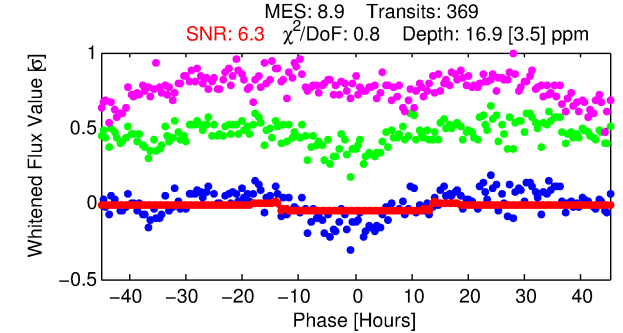
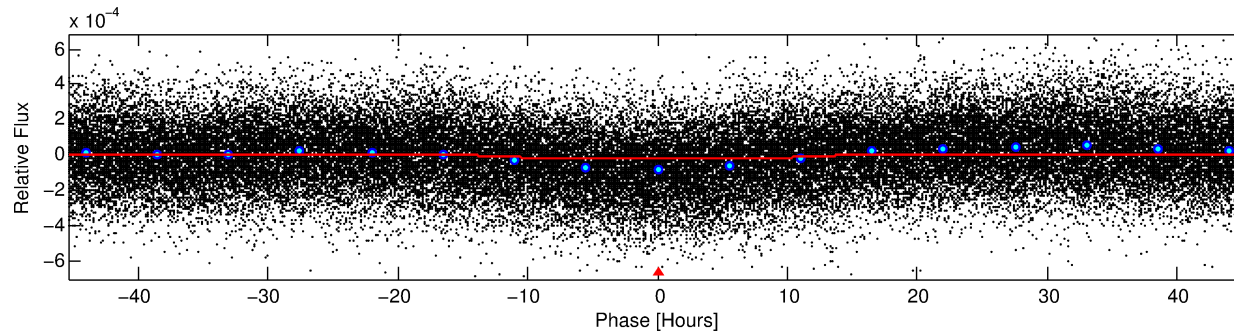
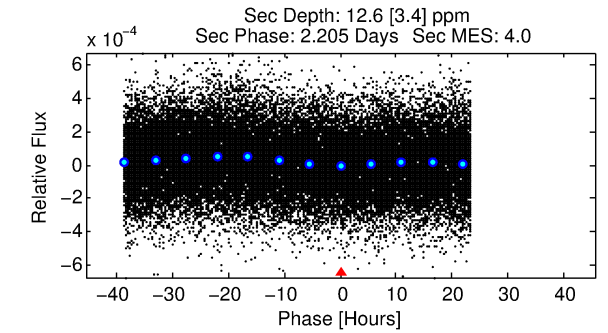
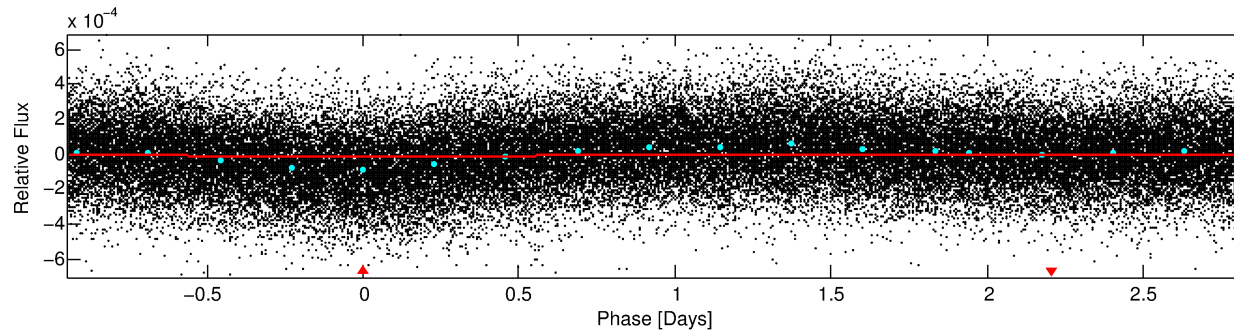
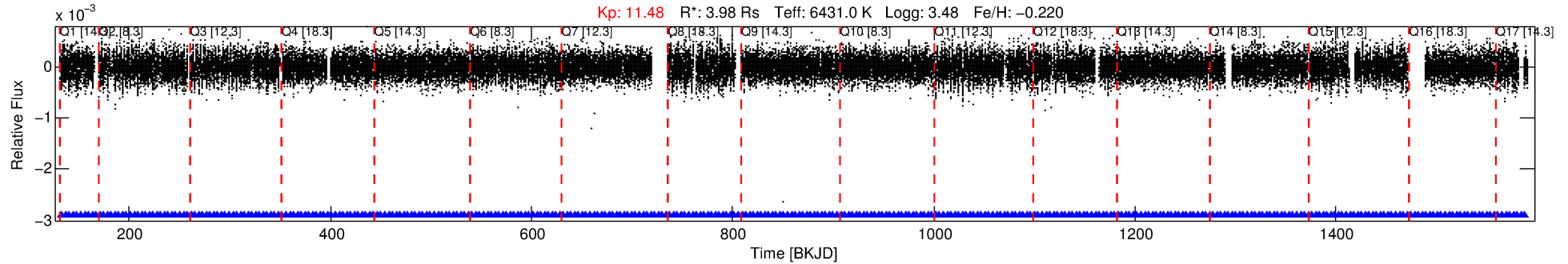
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006612589-01

No Significant Match Found

DV One-Page Summary

KIC: 6612589 Candidate: 1 of 1 Period: 3.778 d



DV Fit Results:

Period = 3.77796 [0.00009] d
Epoch = 133.1850 [0.0148] BKJD
 $R_p/R^* = 0.0038$ [0.0043]
 $a/R^* = 1.22$ [2.44]
 $b = 0.21$ [27.56]
 $S_{\text{eff}} = 7454.17$ [4632.54]
 $T_{\text{eq}} = 2369$ [368] K
 $R_p = 1.65$ [1.97] R_{e}
 $a = 0.0571$ [0.0217] AU
 $A_g = 8.33$ [19.58] [0.37 σ]
 $T_{\text{eff}} = 6223$ [3537] K [1.08 σ]

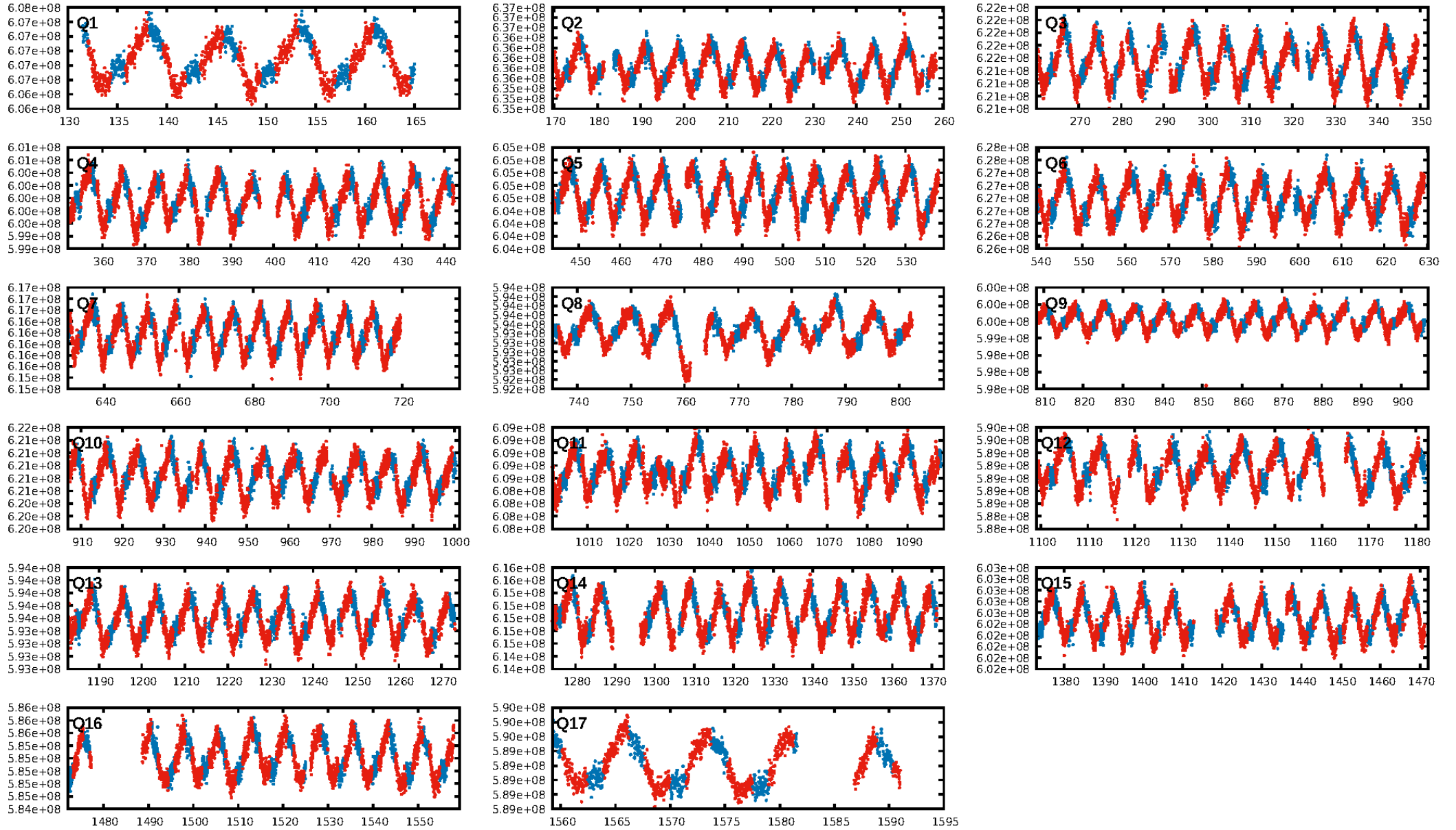
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [352/352]
GhostDiagnostic-chr: 1.896
Centroid-sig: 0.0%
Centroid-so: 6.513 arcsec [5.88 σ]
OotOffset-rm: 0.120 arcsec [0.66 σ]
KicOffset-rm: 0.148 arcsec [0.73 σ]
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]

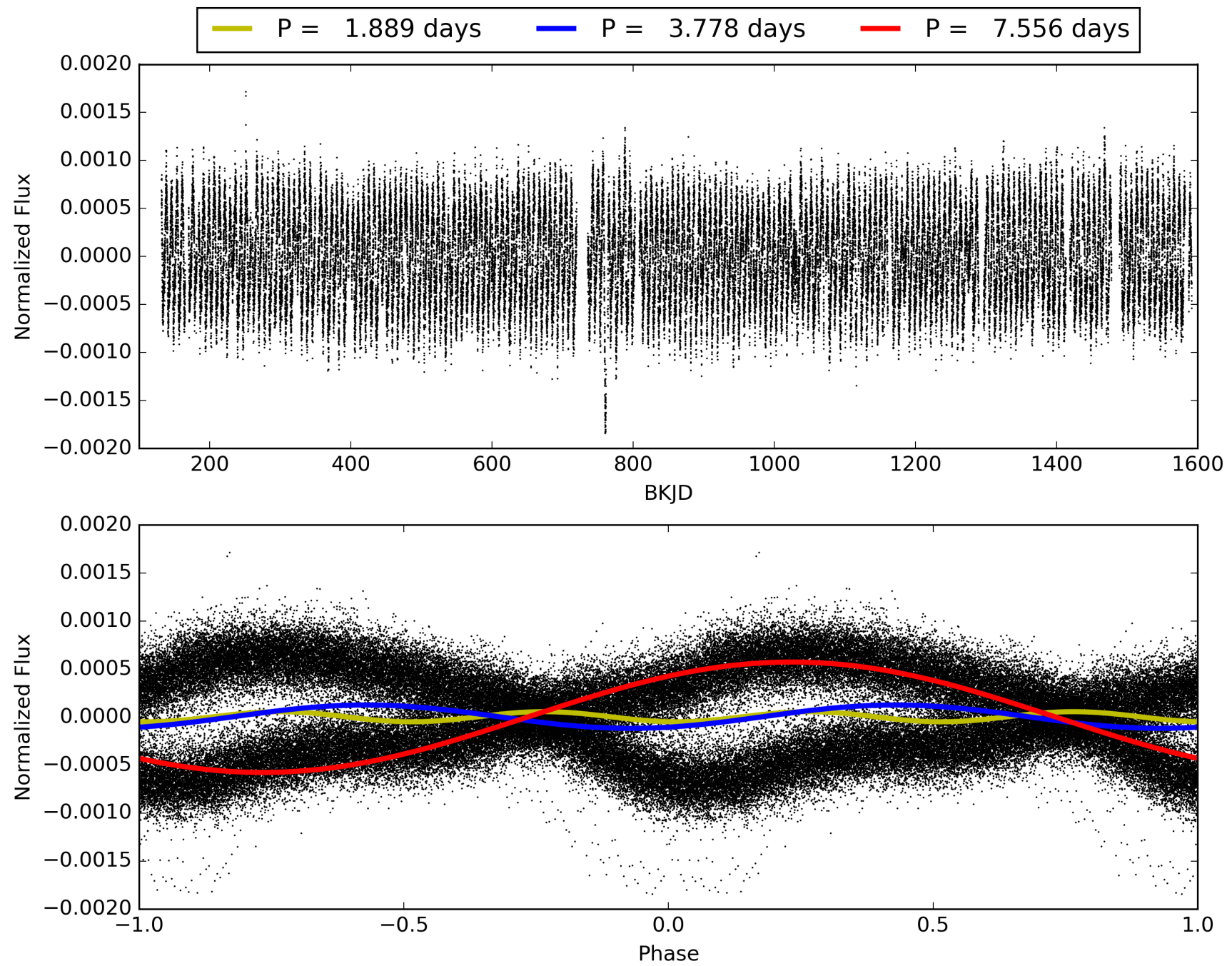
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:32:37 Z

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

TCE 006612589-01, PDC Light Curves

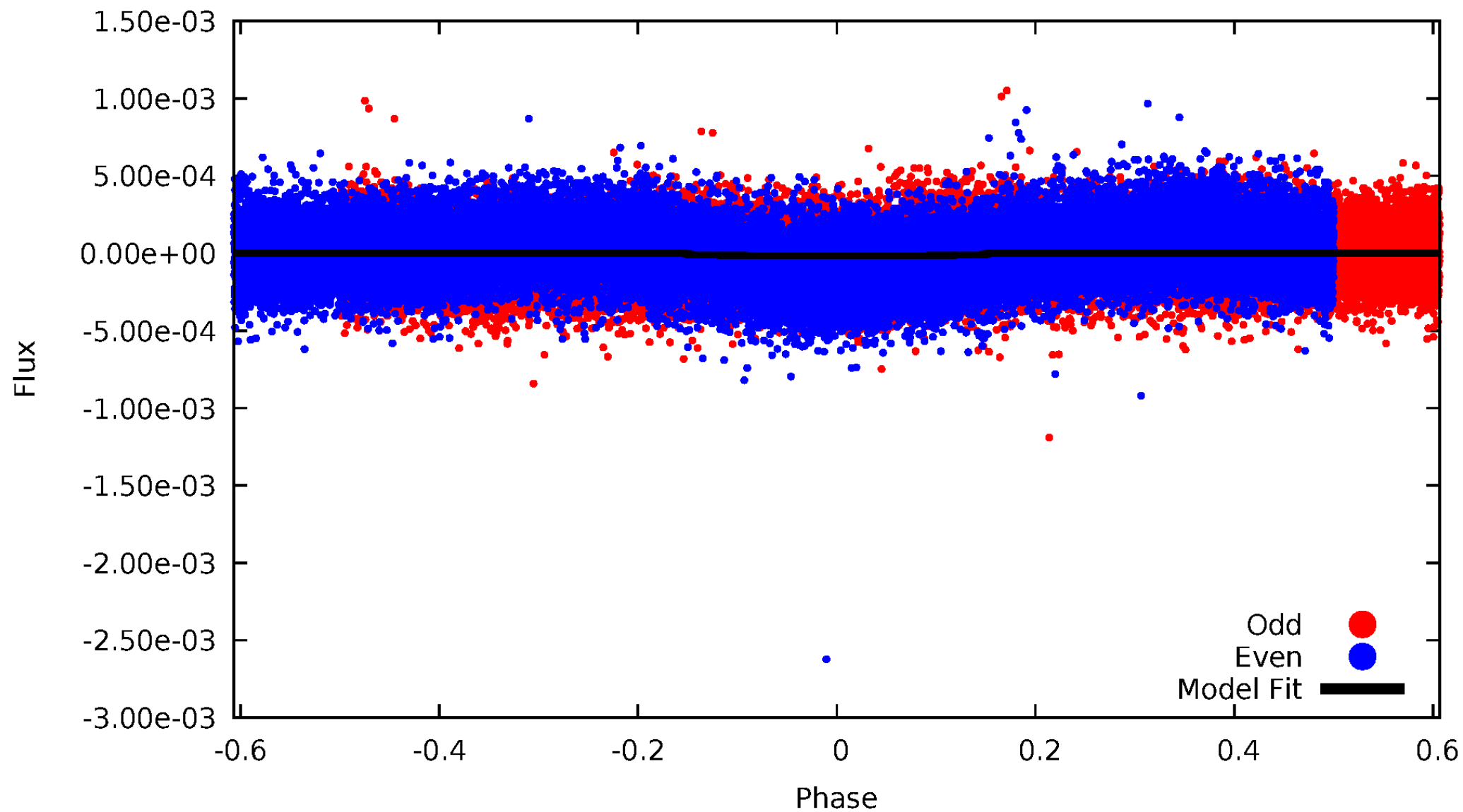


TCE 006612589-01



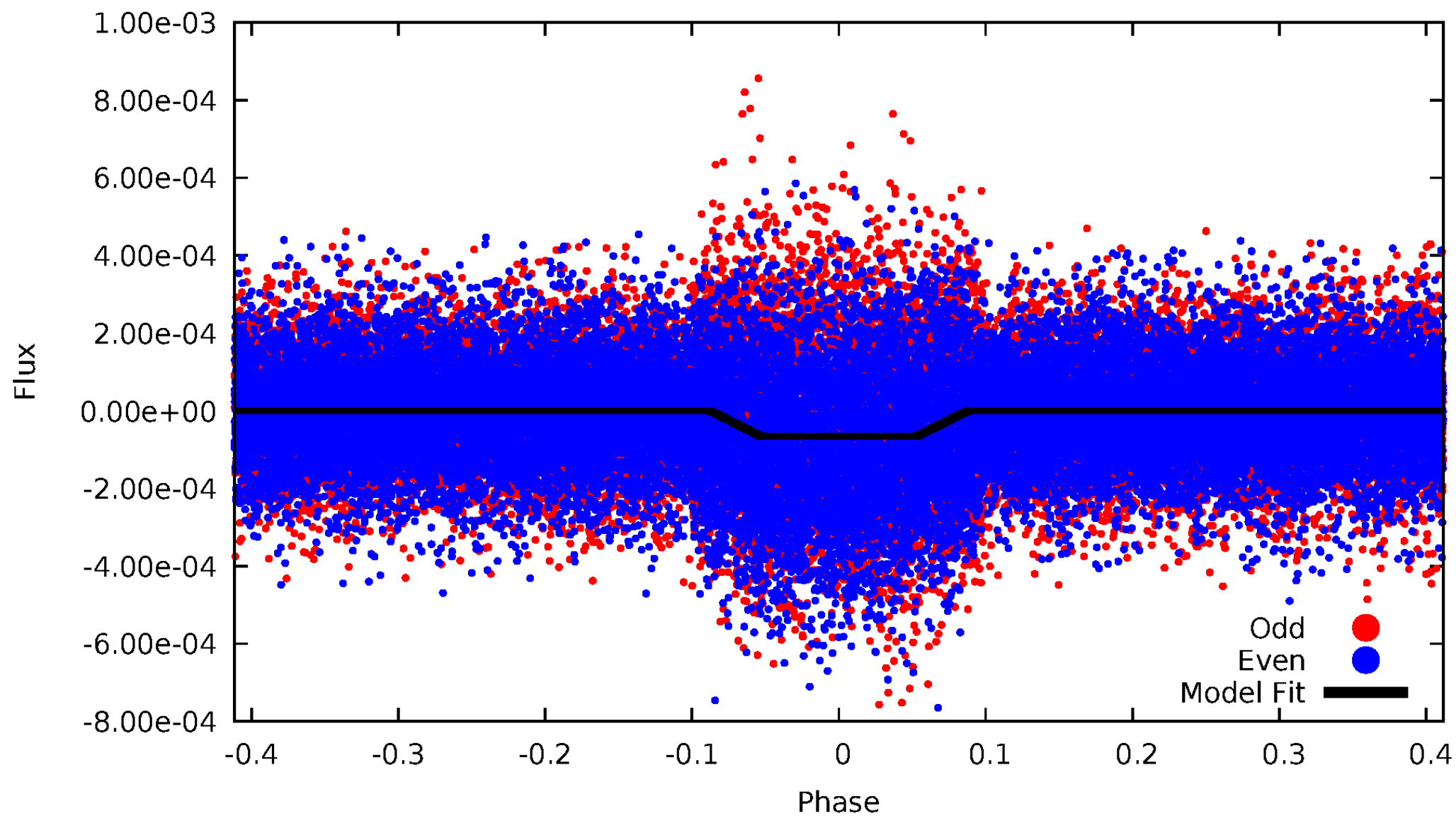
DV Odd/Even

TCE 006612589-01



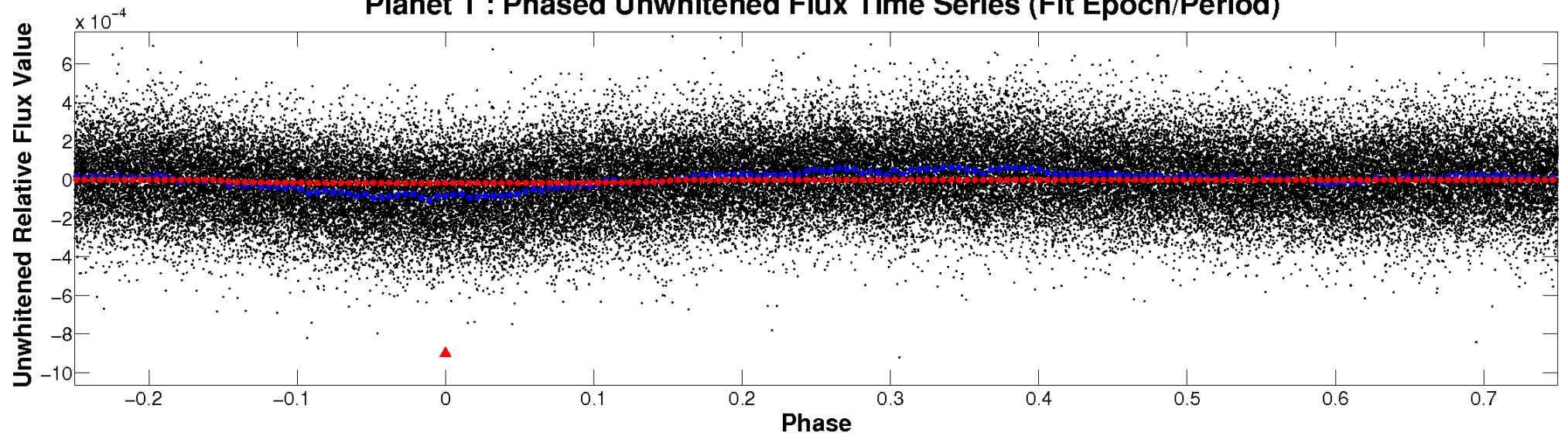
ALT Odd/Even

TCE 006612589-01

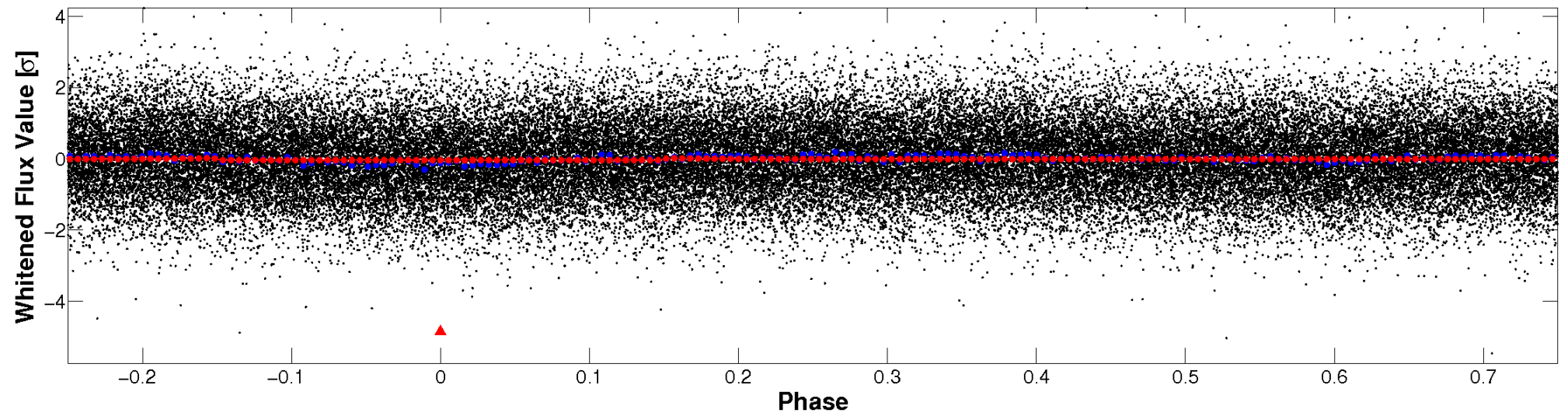


Non-Whitened Vs. Whitened Light Curve

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

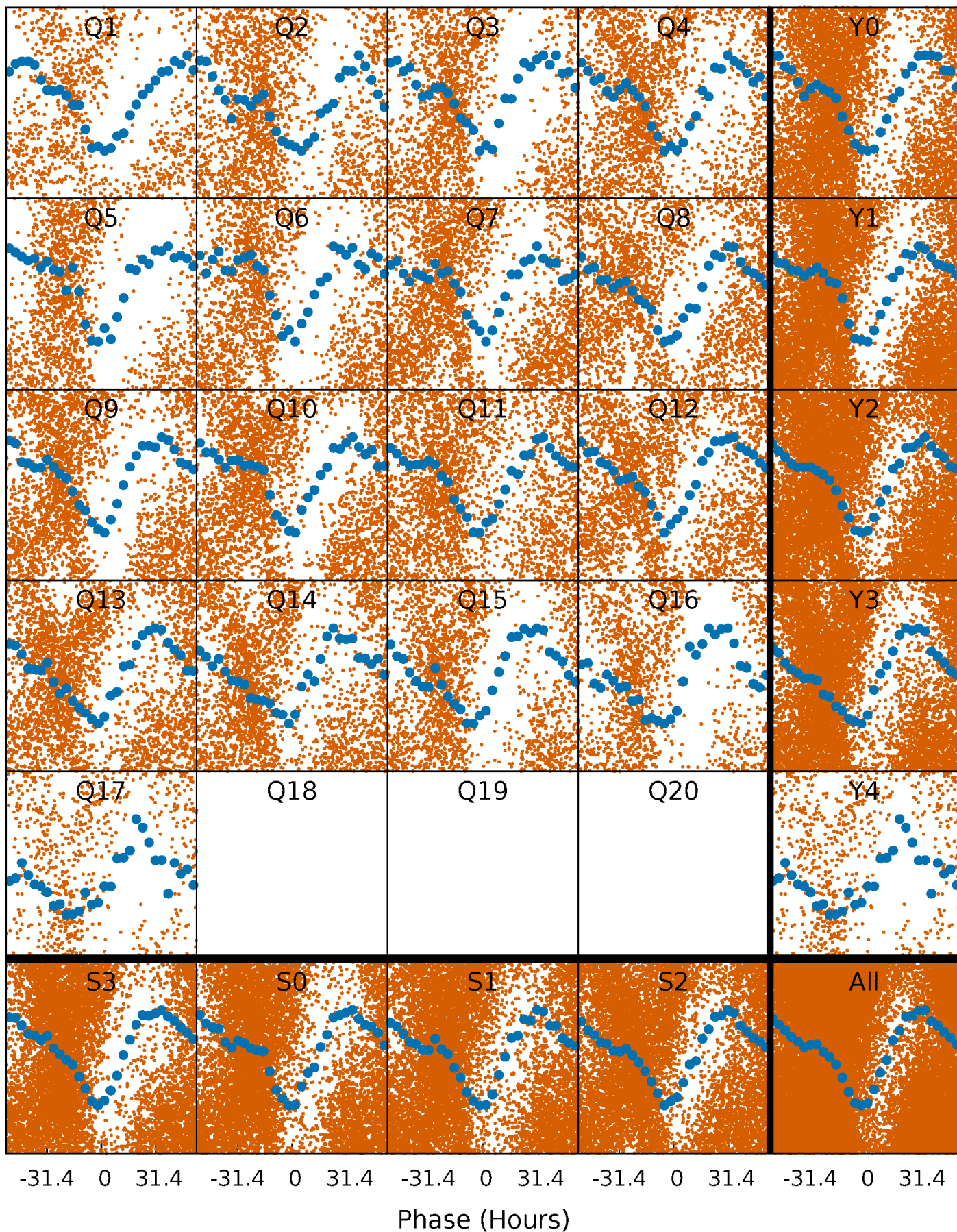


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



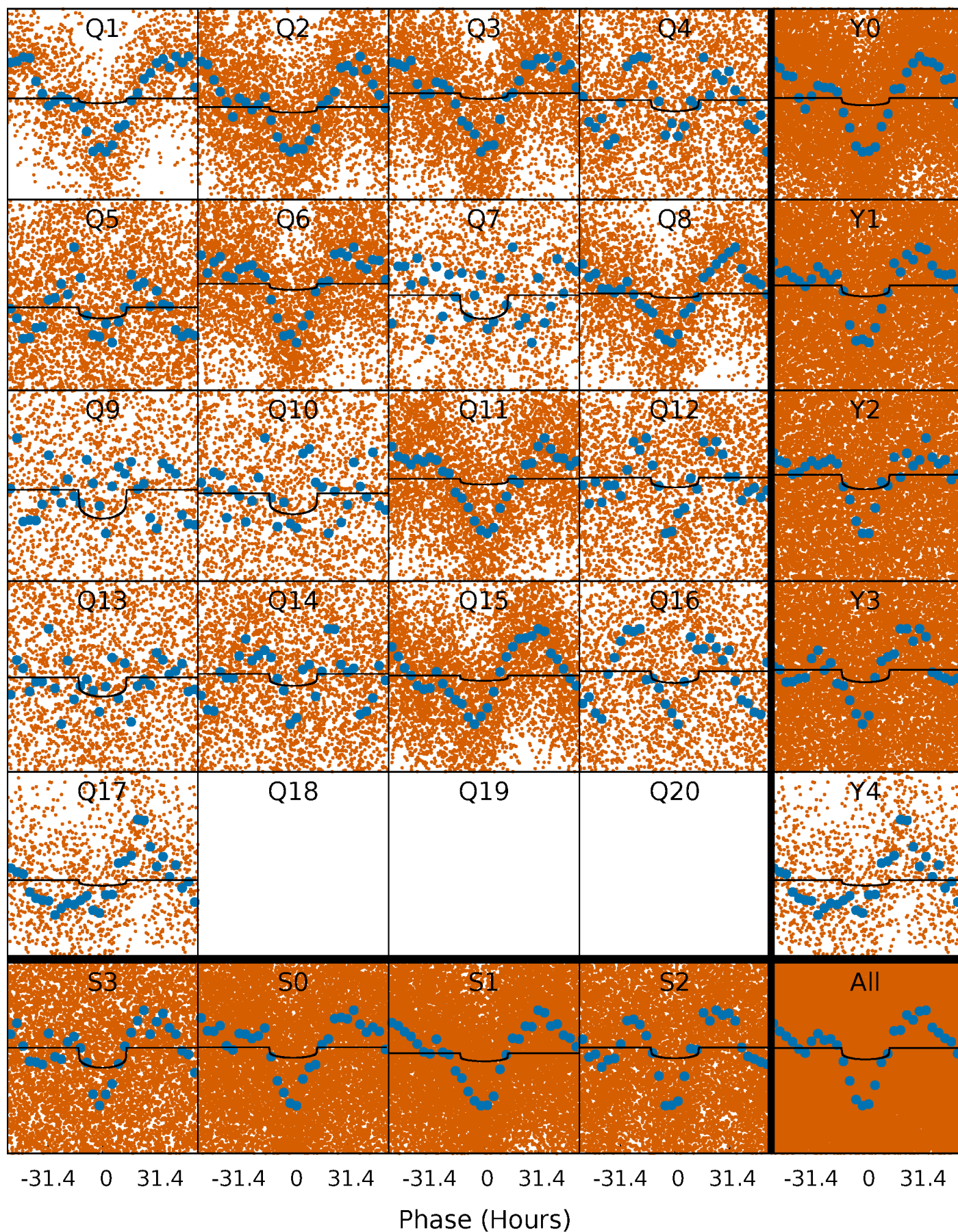
PDC Quarter-Phased Transit Curves

TCE 006612589-01 P= 3.777961 Days $T_0=133.185020$ (BKJD)



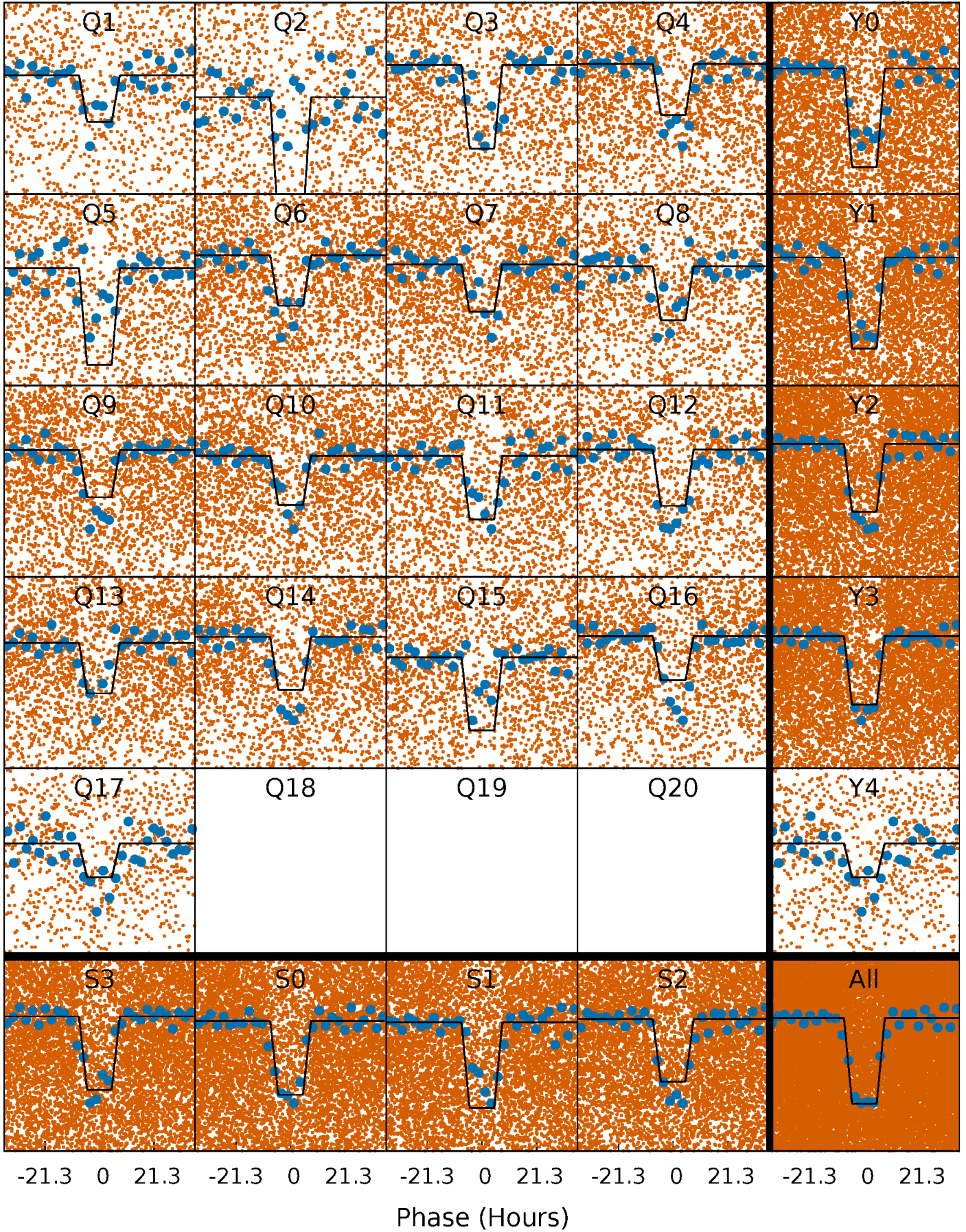
DV Quarter-Phased Transit Curves

TCE 006612589-01 P= 3.777961 Days $T_0=133.185020$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

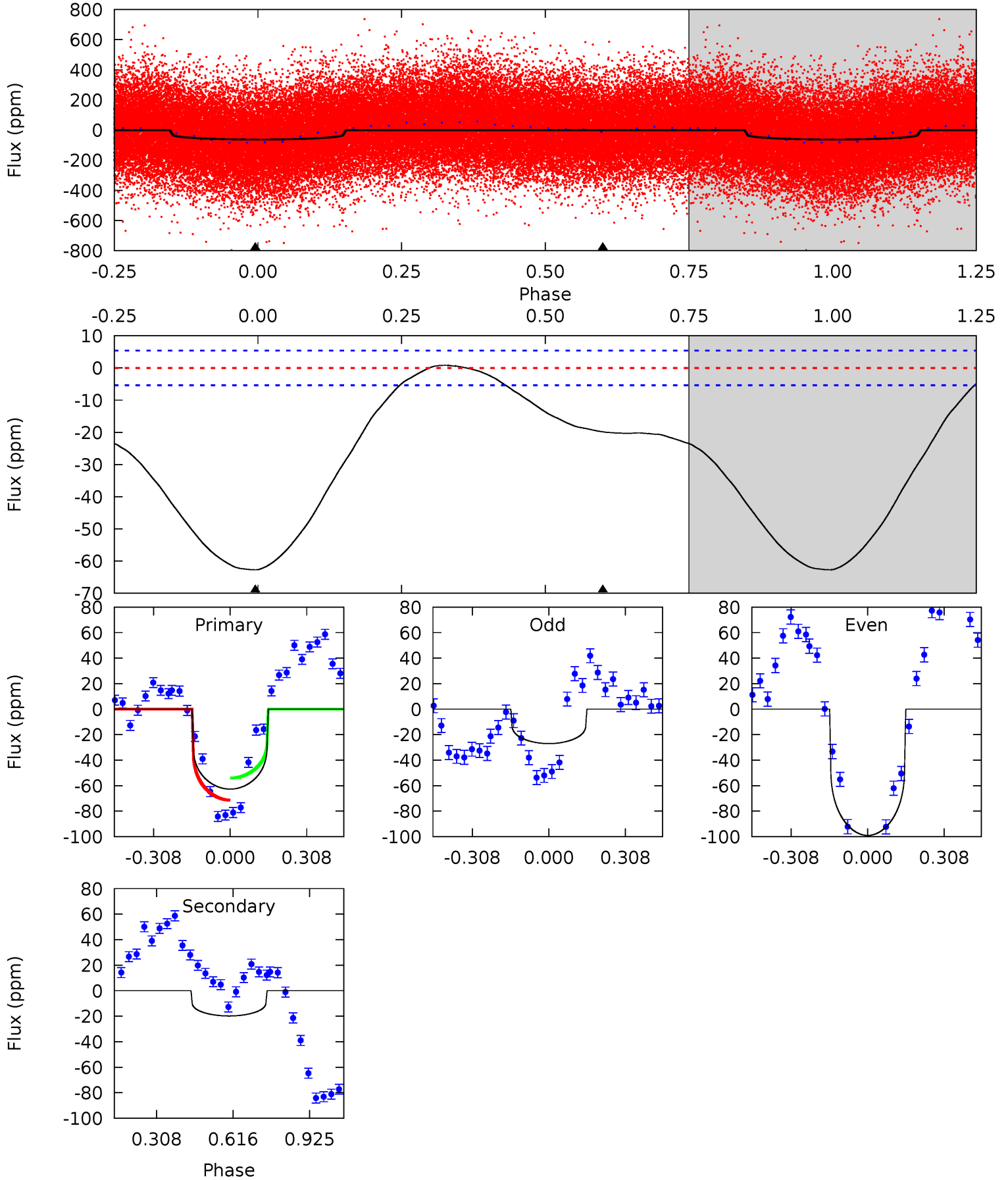
TCE 006612589-01 P= 3.778019 Days $T_0=133.150646$ (BKJD)



DV Model-Shift Uniqueness Test

006612589-01, P = 3.777961 Days, E = 129.407059 Days

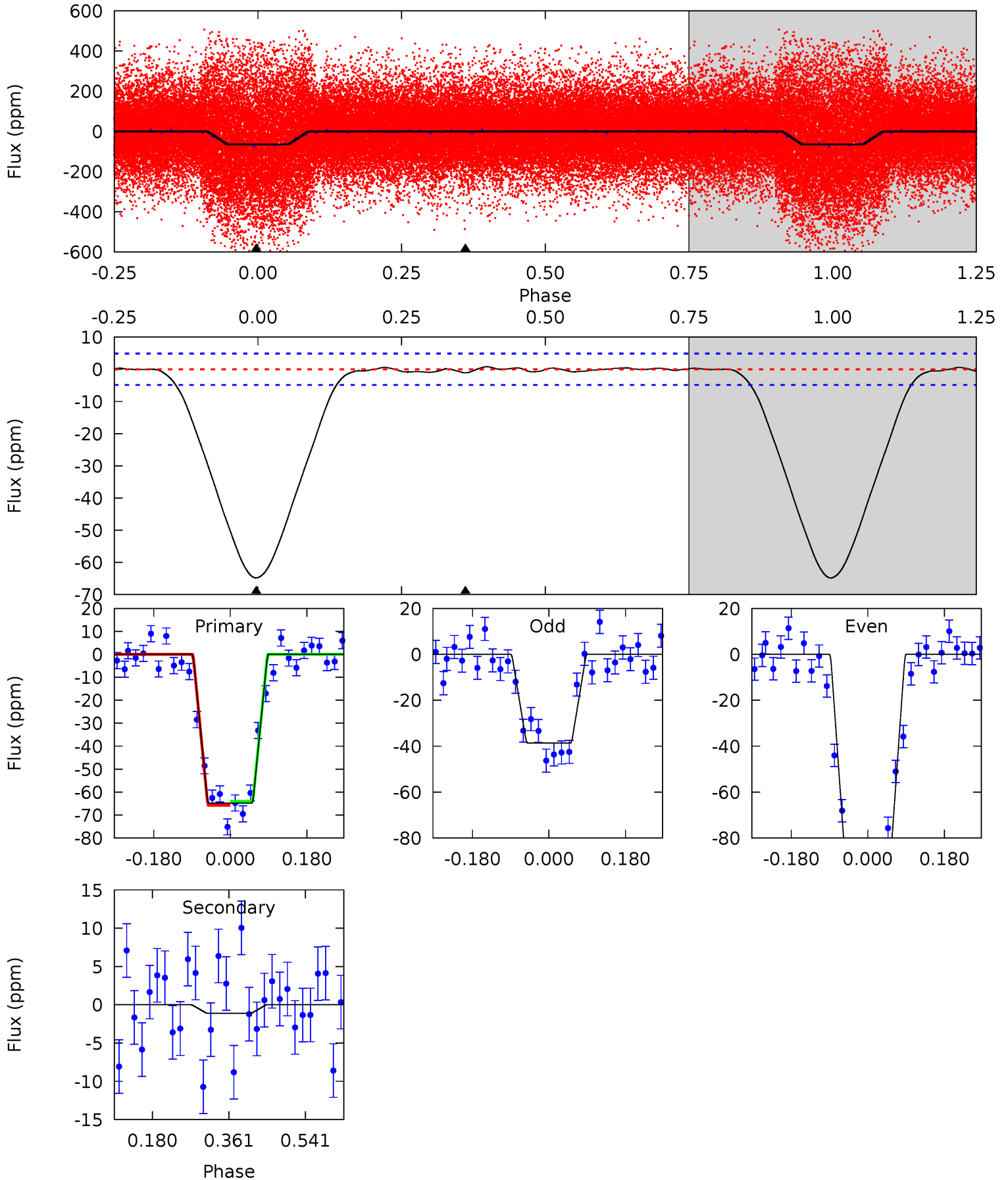
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	15.9	0	0	4.32	1.02	1.51	50.3	50.3	15.9	15.9	29.3	1.41	0.01	7.28



Alt Model-Shift Uniqueness Test

006612589-01, P = 3.778019 Days, E = 129.372627 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.9	1.00	0	0	4.44	1.34	0.28	58.9	58.9	1.00	1.00	23.4	1.09	0.01	0.76



Stellar Parameters For KIC 006612589

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6431^{+180}_{-147}	$3.478^{+0.360}_{-0.090}$	$-0.220^{+0.350}_{-0.300}$	$3.982^{+0.520}_{-1.561}$	$1.738^{+0.204}_{-0.379}$	$0.039^{+0.111}_{-0.011}$
	+3%/-2%	+10%/-3%	+159%/-136%	+13%/-39%	+12%/-22%	+285%/-28%
Source	PHO1	FLK73	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 006612589-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 1	$1.84^{+1.59}_{-1.15}$	3255^{+181}_{-316}	6242^{+5724}_{-1501}	11^{+61}_{-8}
Alt.	-1 ± 1	$3.30^{+1.96}_{-1.58}$	3256^{+185}_{-340}	-2909^{+6121}_{-376}	$0.144^{+0.522}_{-0.138}$

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

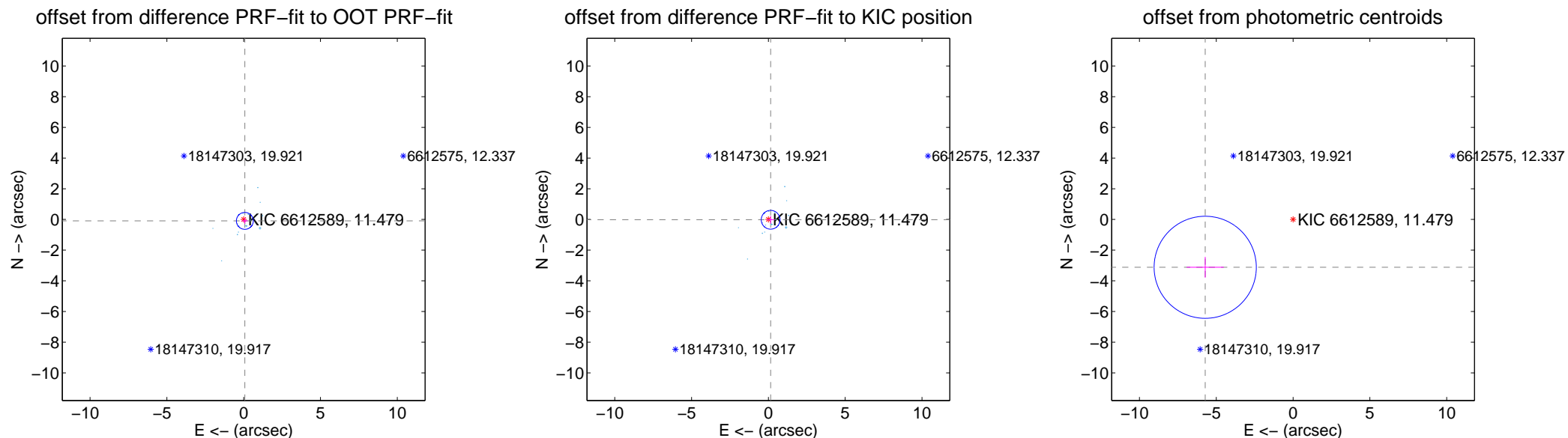
DV Centroid Data

Supplemental centroid analysis for 006612589-01. **Kepler magnitude: 11.48.** Transit SNR 6.33

There are 17 quarters with good PRF difference image offsets

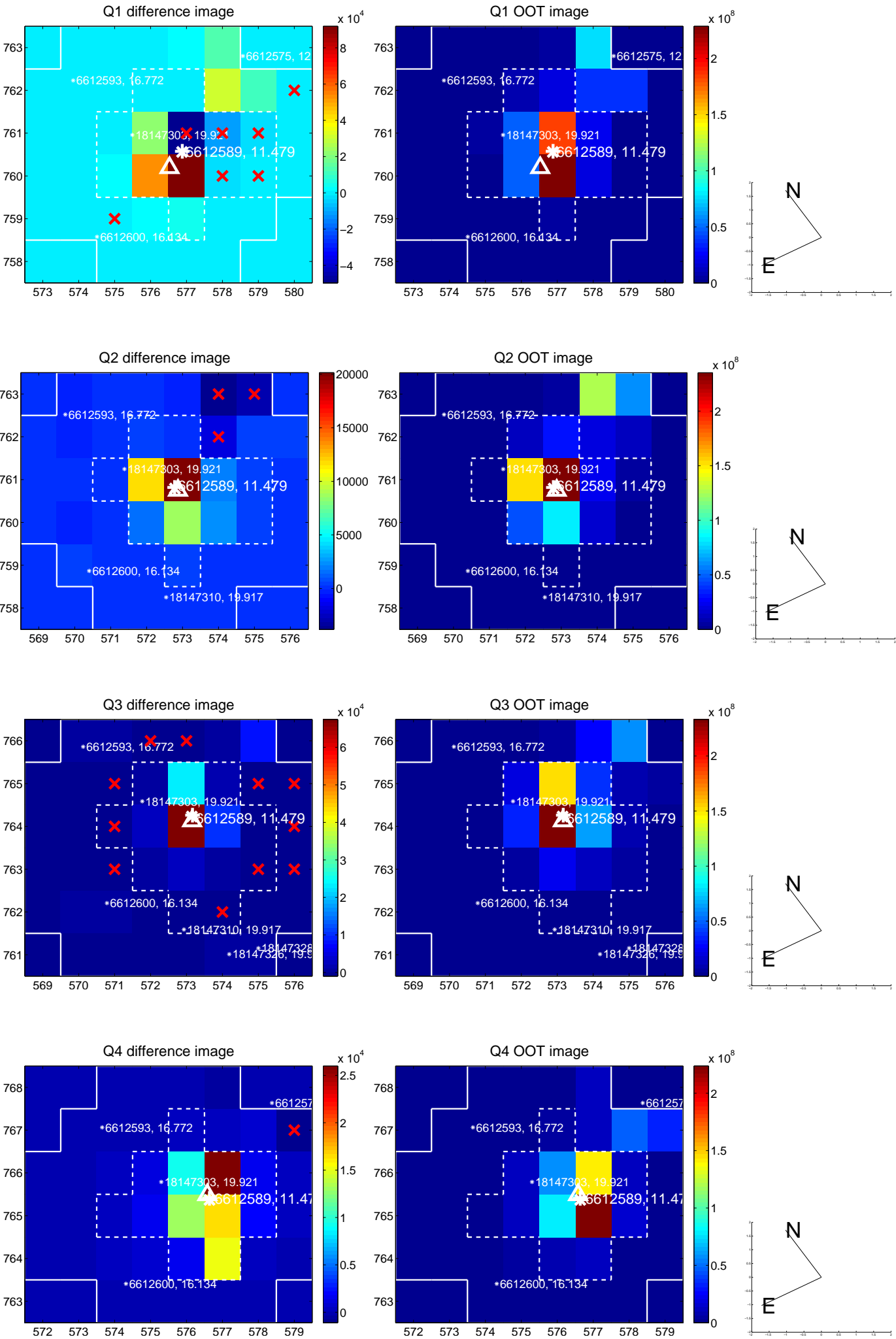
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.120 ± 0.184	0.66	-0.076 ± 0.183	-0.093 ± 0.184
PRF-fit source offset from KIC position	0.148 ± 0.204	0.73	-0.147 ± 0.226	-0.021 ± 0.255
photometric centroid source offset	6.51 ± 1.11	5.88	5.72 ± 1.21	-3.12 ± 0.68

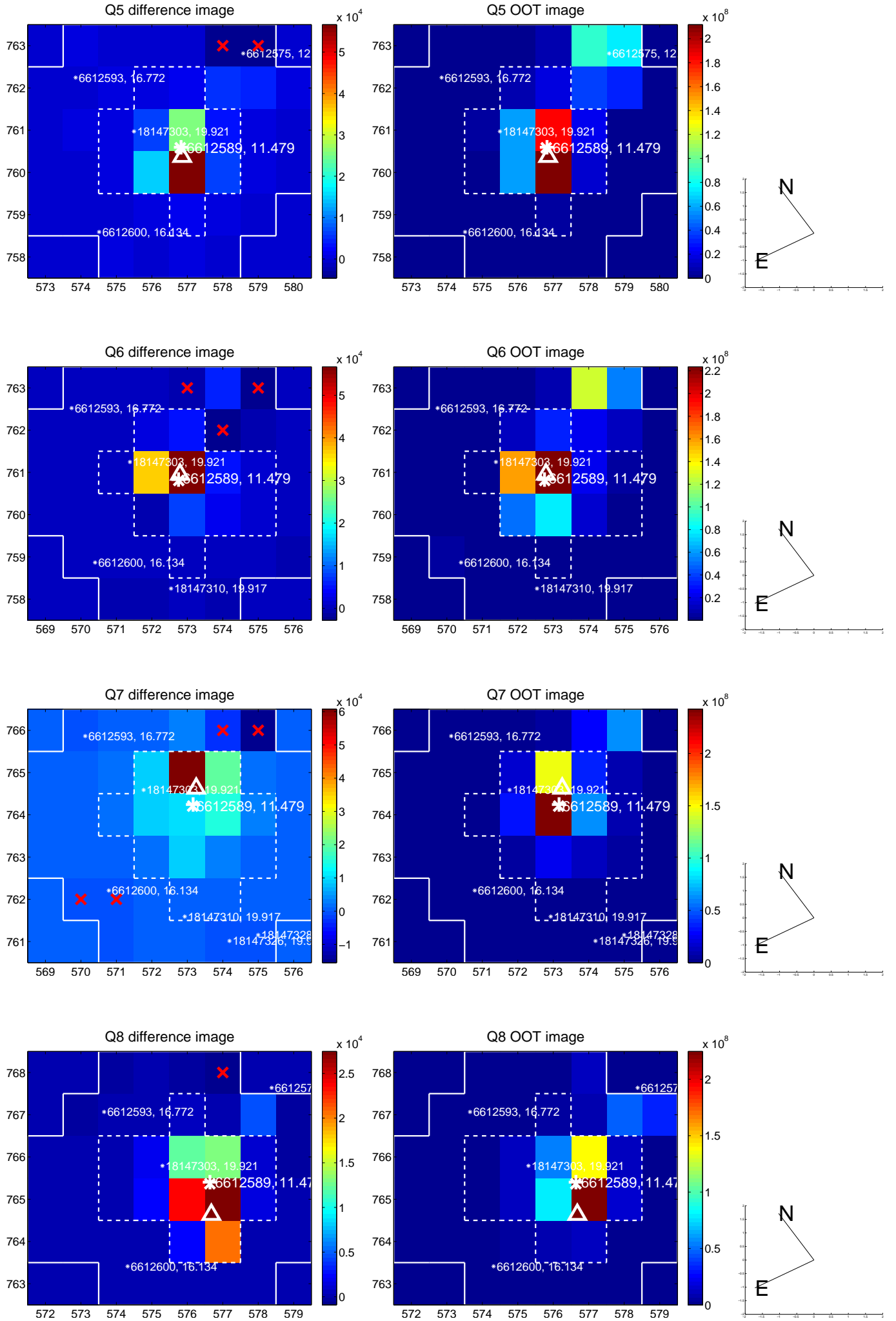


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

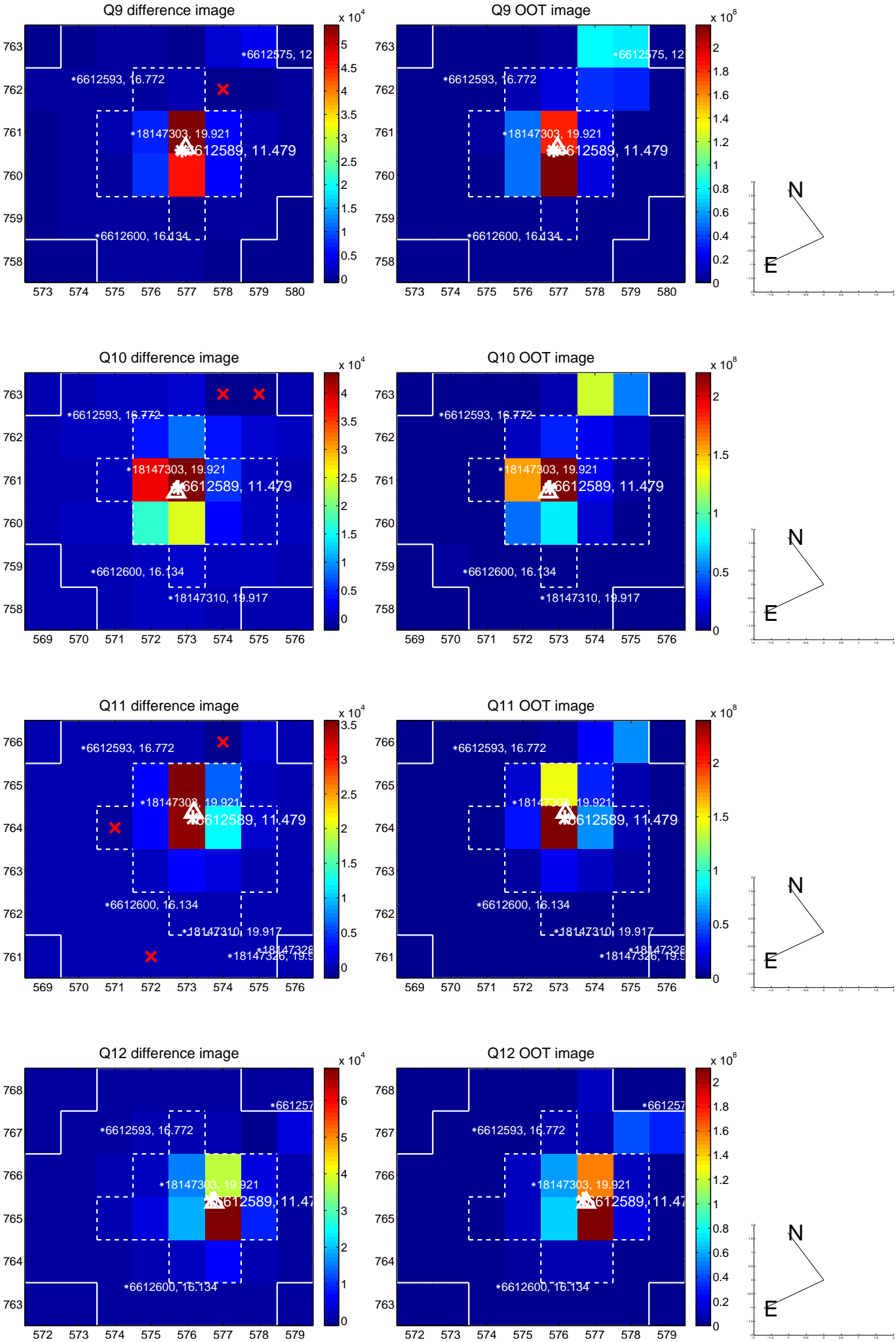
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



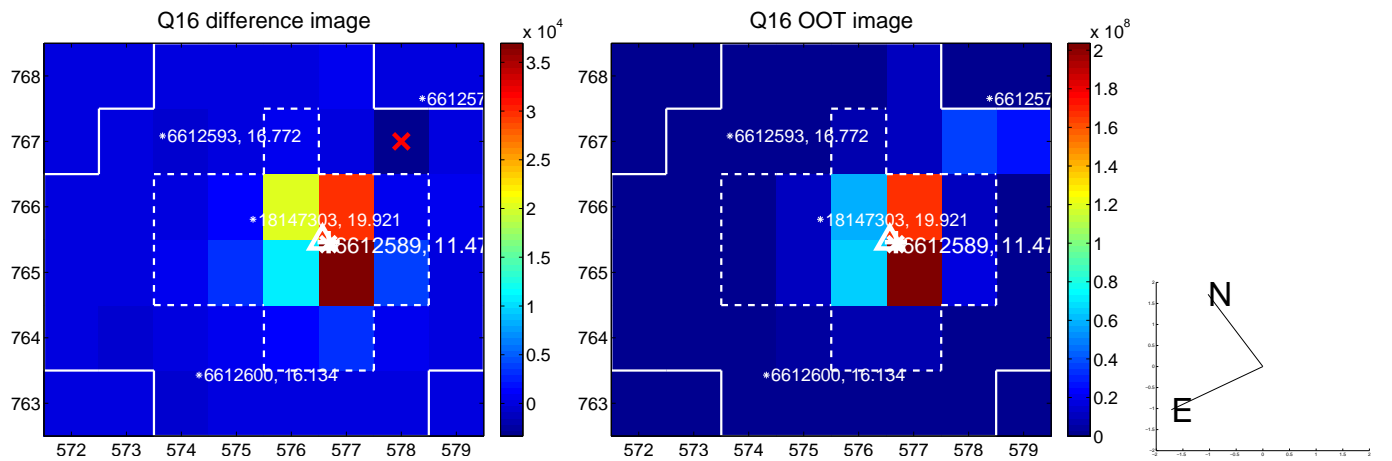
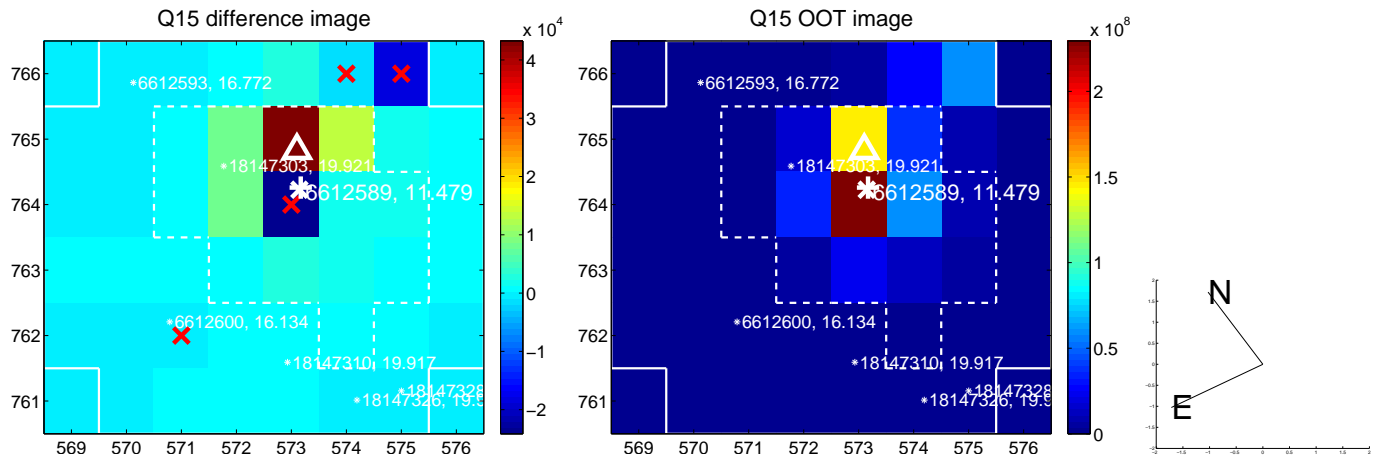
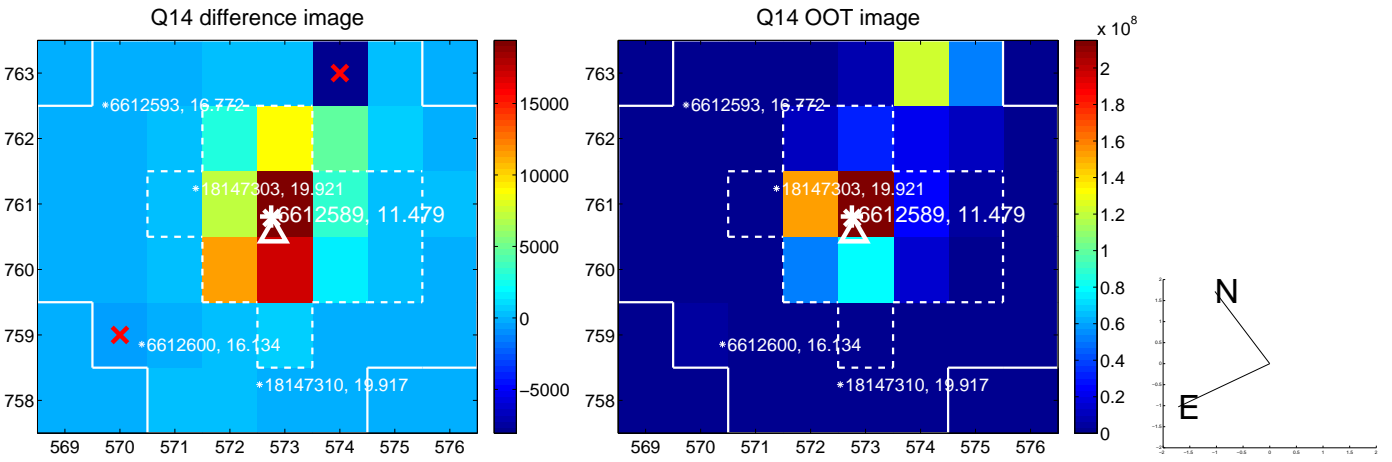
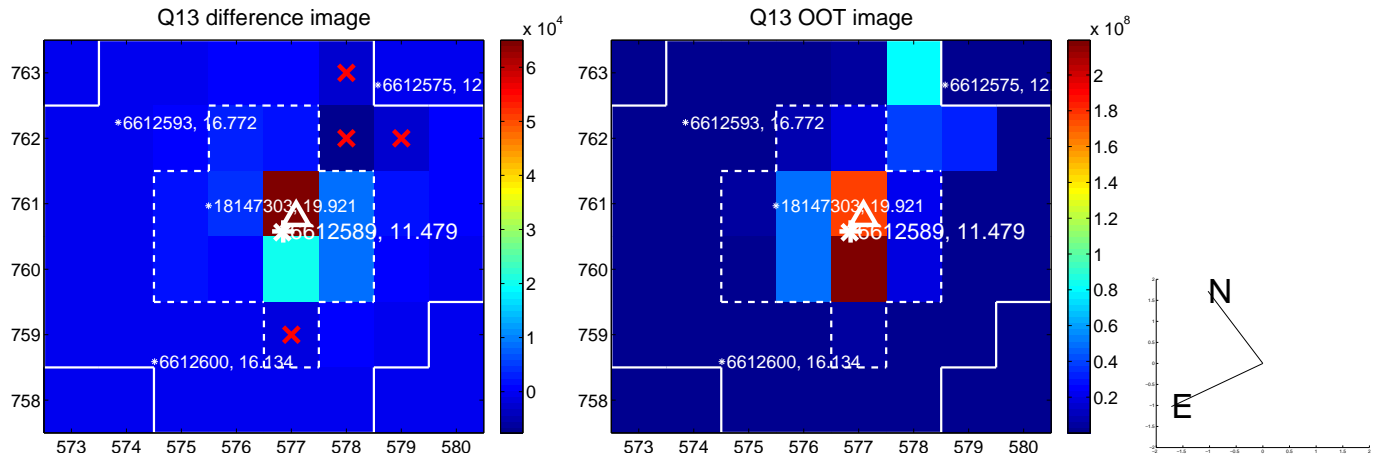
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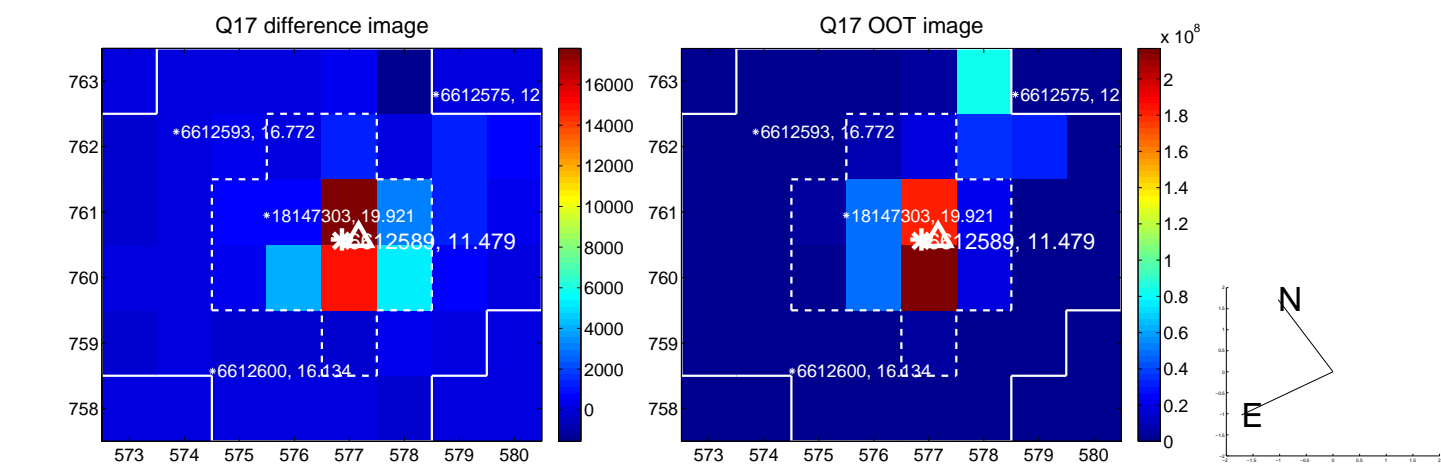
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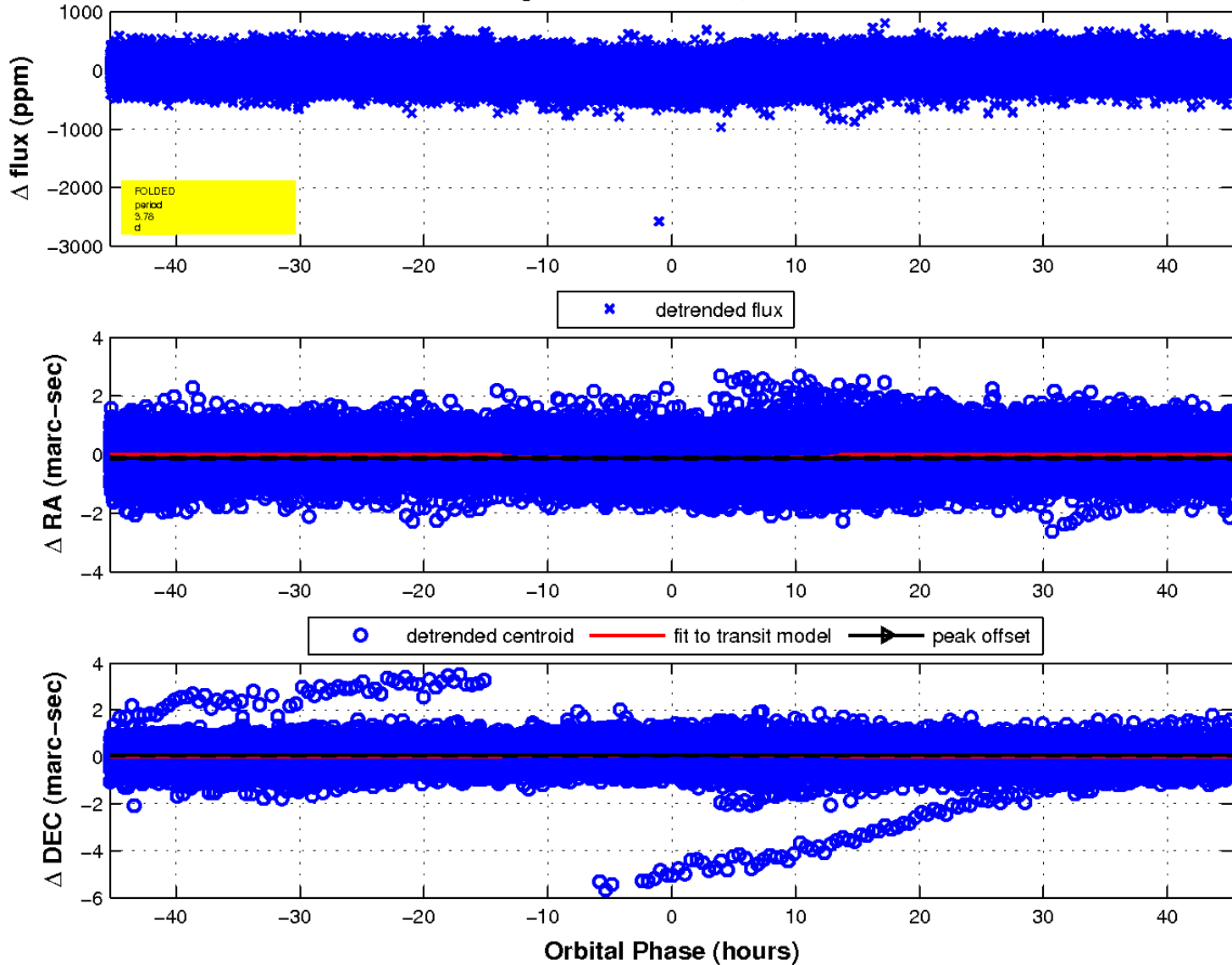
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

