

KIC 003859890

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})
003859890-01	OBS	5020.01	4.345635	134.423383	60.9	2.535	7.8	7.9	0.98	5967	0.90	416.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003859890-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_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 for comment definitions.

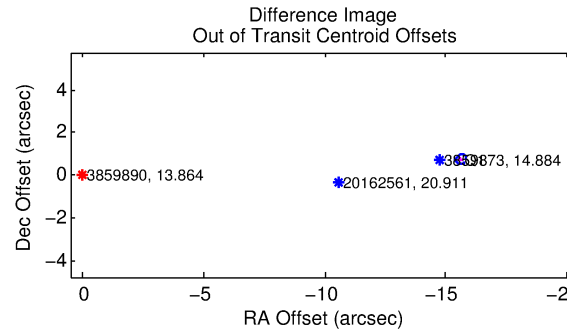
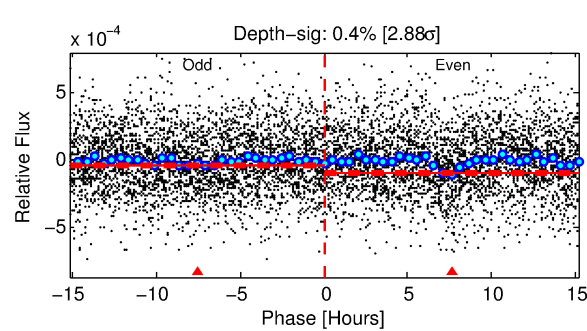
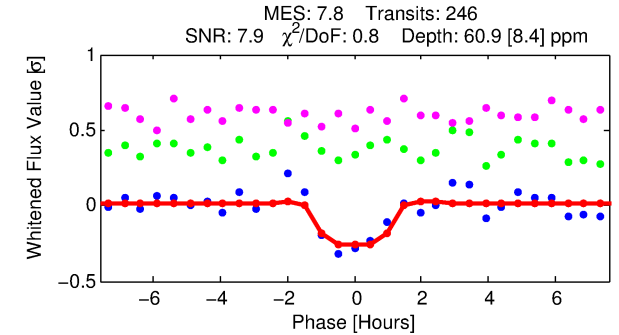
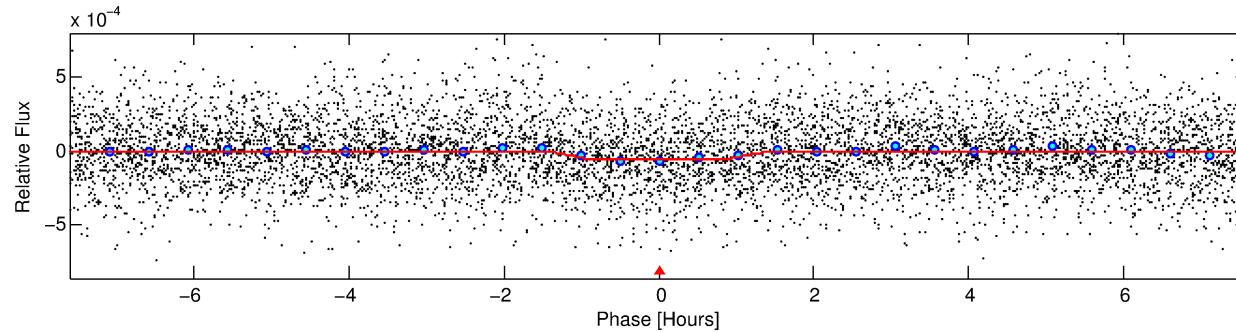
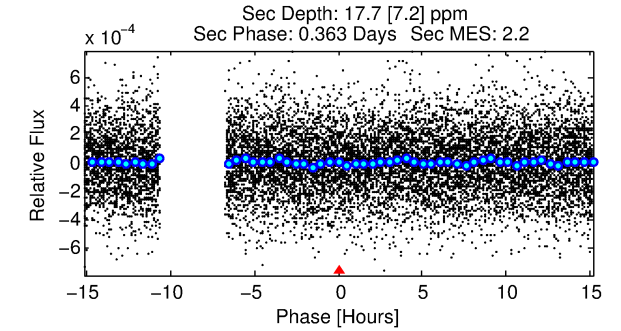
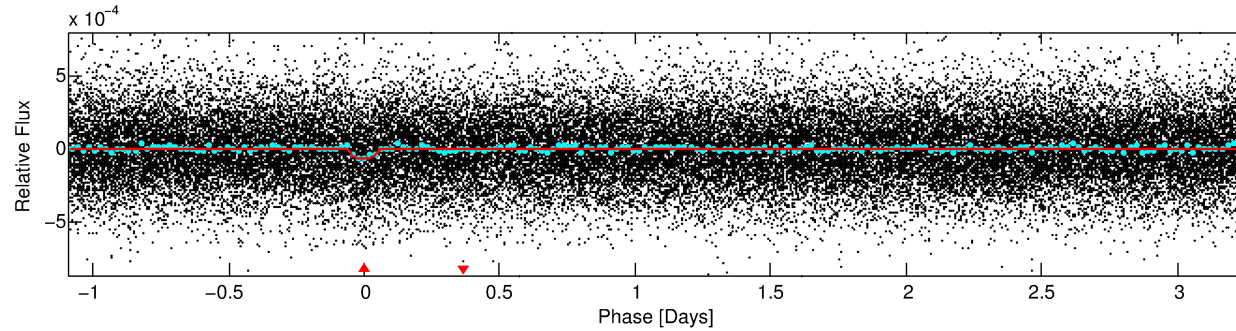
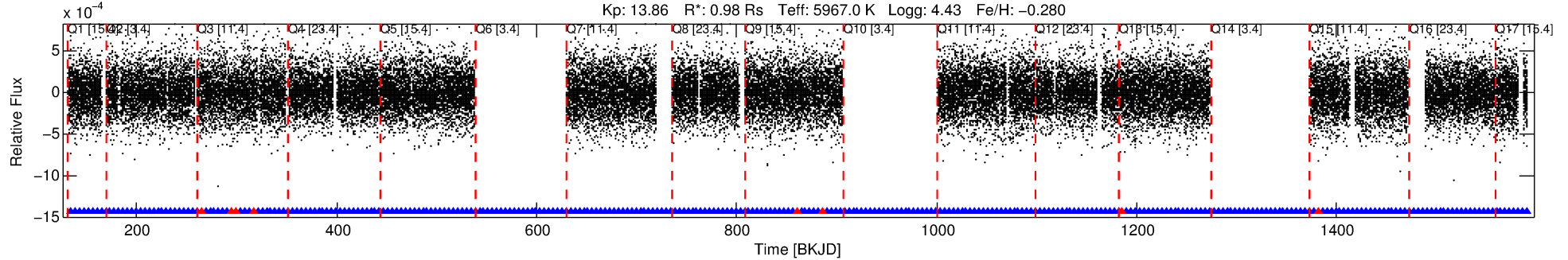
Ephemeris Match Information For 003859890-01

No Significant Match Found

DV One-Page Summary

KIC: 3859890 Candidate: 1 of 1 Period: 4.346 d
KOI: K05020 Corr: No Ephemeris Match

Kp: 13.86 R*: 0.98 Rs Teff: 5967.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 4.34563 [0.00004] d
Epoch = 134.4234 [0.0054] BKJD
Rp/R* = 0.0084 [0.0064]
a/R* = 6.07 [23.50]
b = 0.90 [0.87]
Seff = 416.37 [154.22]
Teq = 1152 [107] K
Rp = 0.90 [0.73] Re
a = 0.0510 [0.0125] AU
Ag = 31.43 [50.70] [0.60σ]
Teff = 4217 [1665] K [1.84σ]

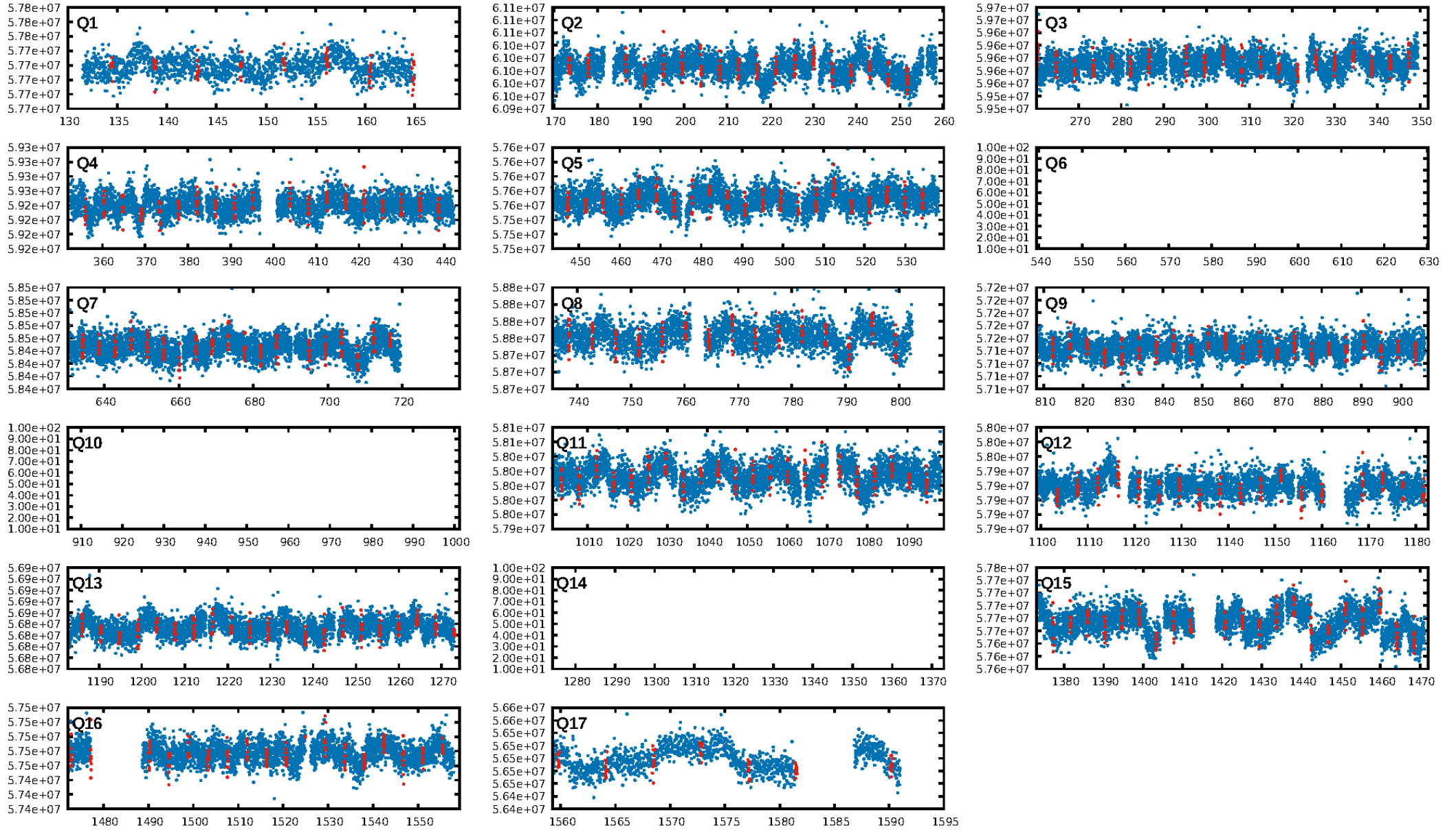
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.07e-15
RollingBand-fgt: 0.97 [223/231]
GhostDiagnostic-chr: -0.5021
Centroid-sig: 0.0%
Centroid-so: 88.929 arcsec [45.59σ]
OotOffset-rm: 15.641 arcsec [210.13σ]
KicOffset-rm: 15.614 arcsec [209.80σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [14/14]

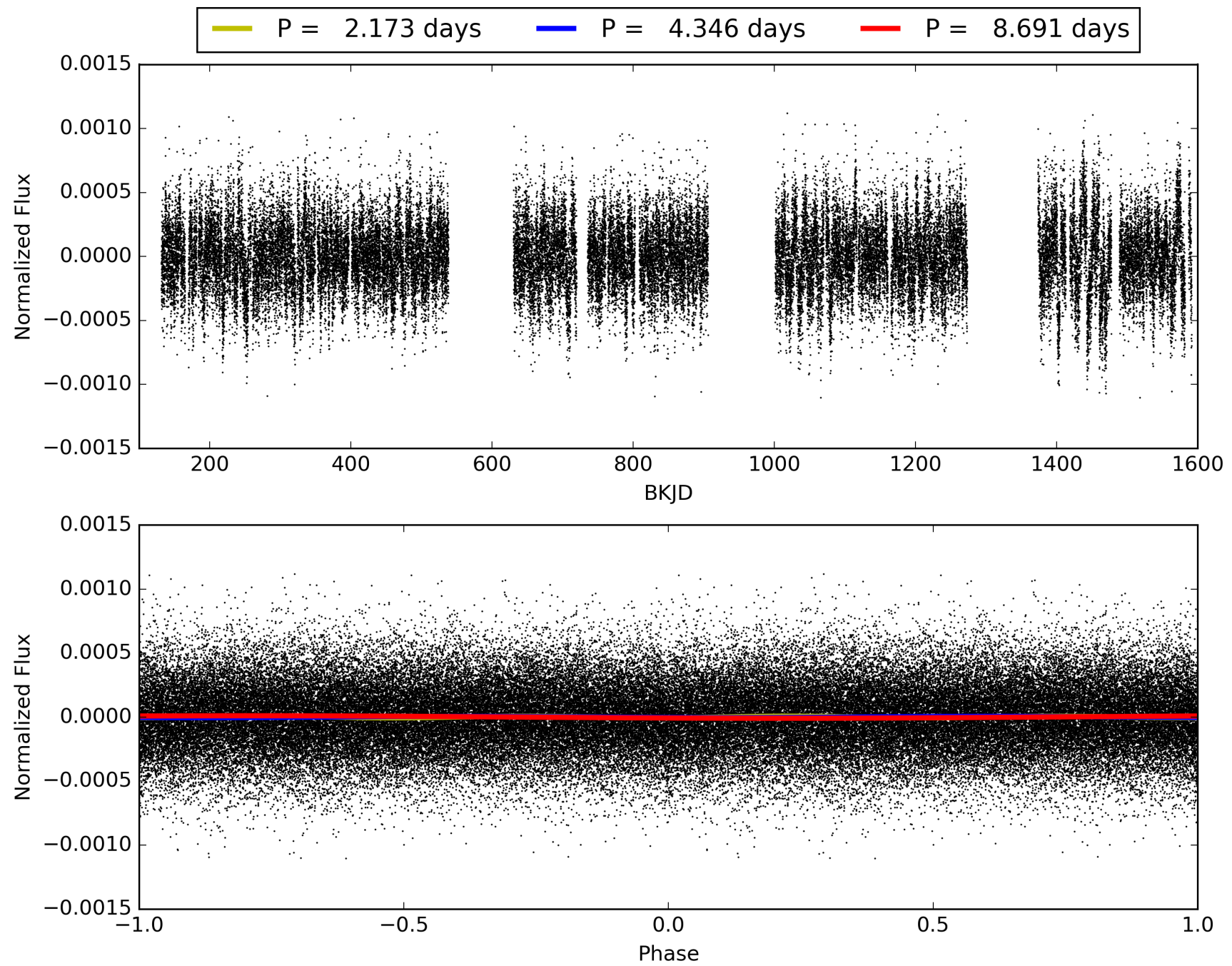
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:12:15 Z

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

TCE 003859890-01, PDC Light Curves

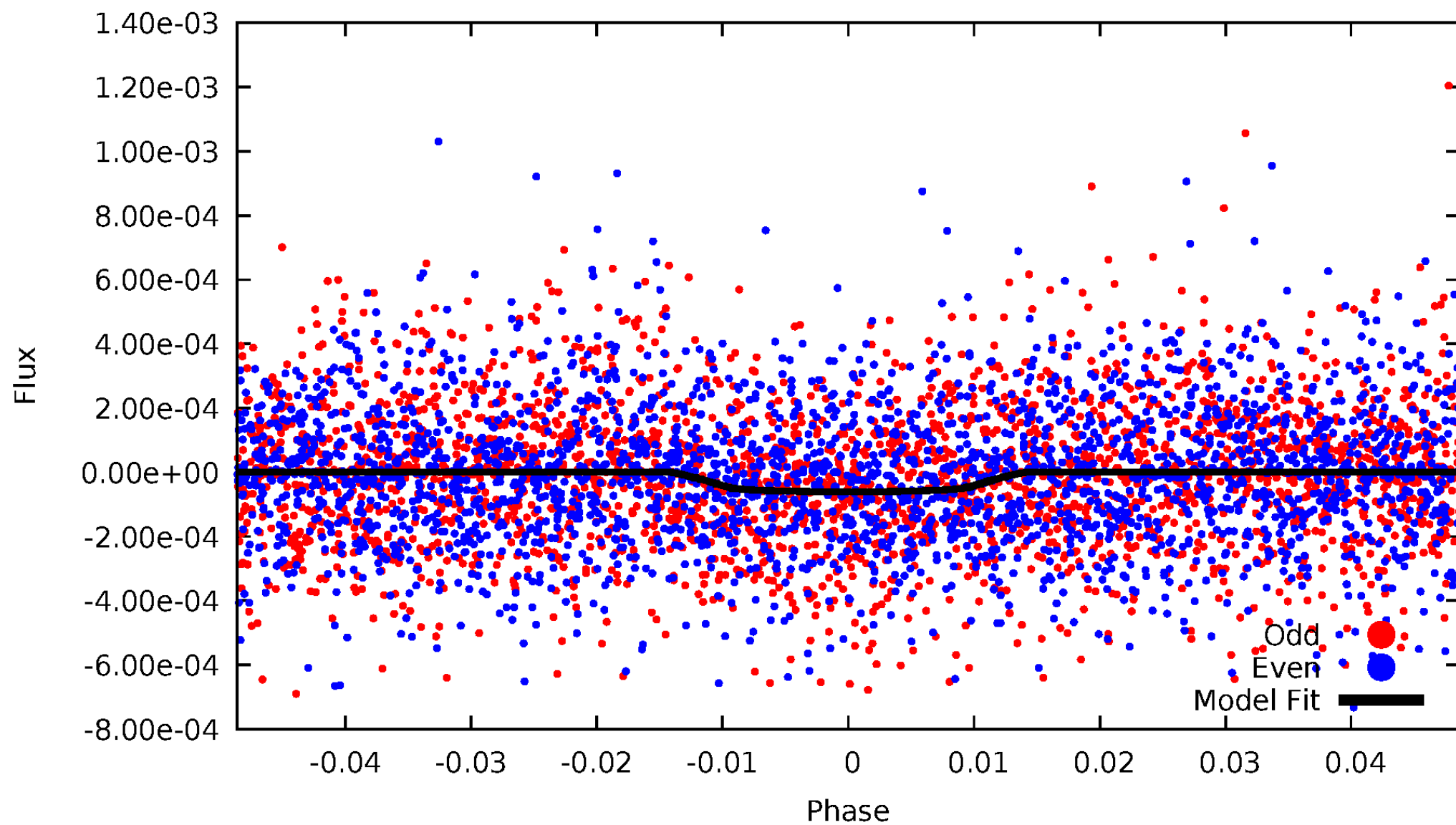


TCE 003859890-01



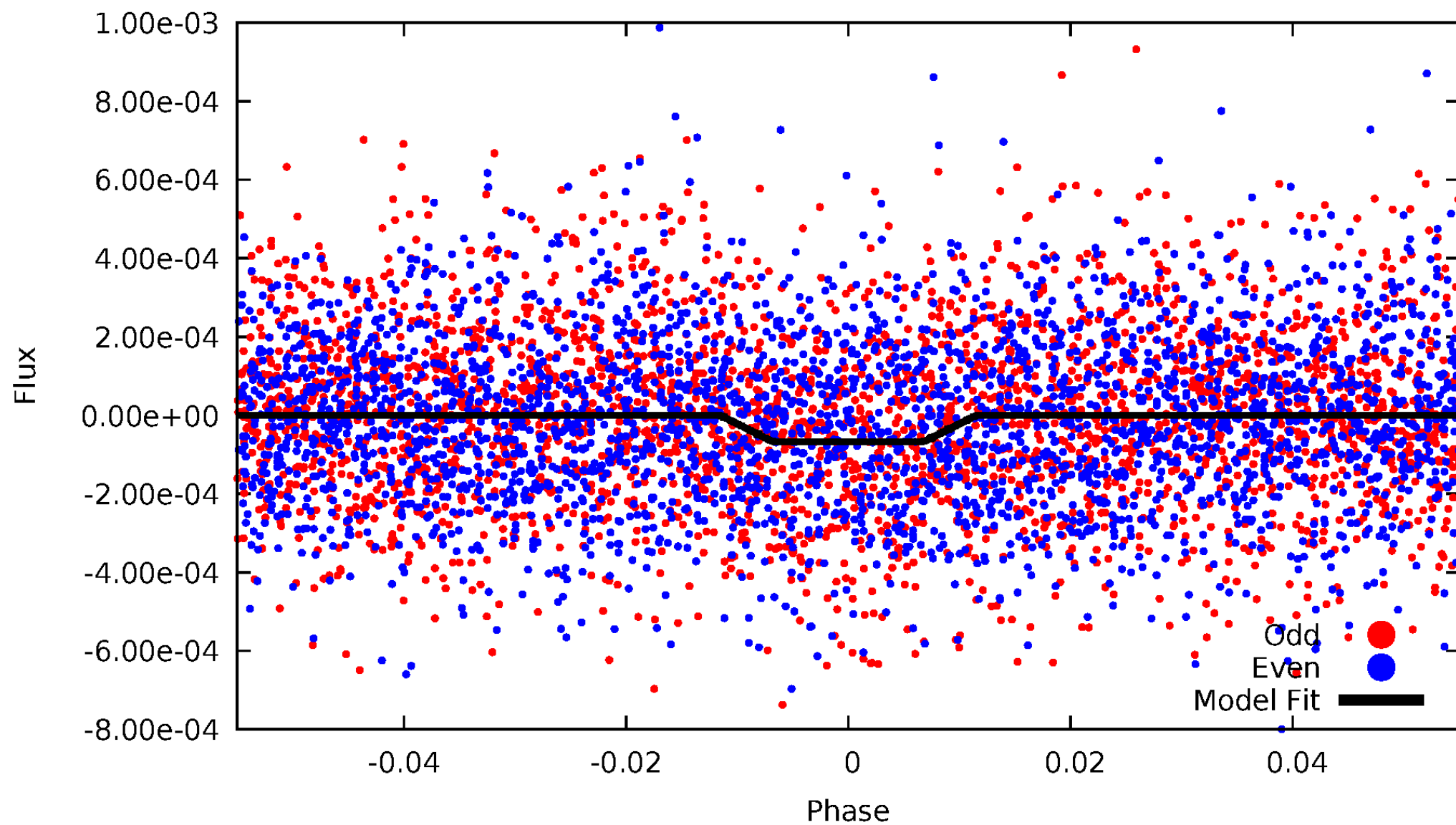
DV Odd/Even

TCE 003859890-01

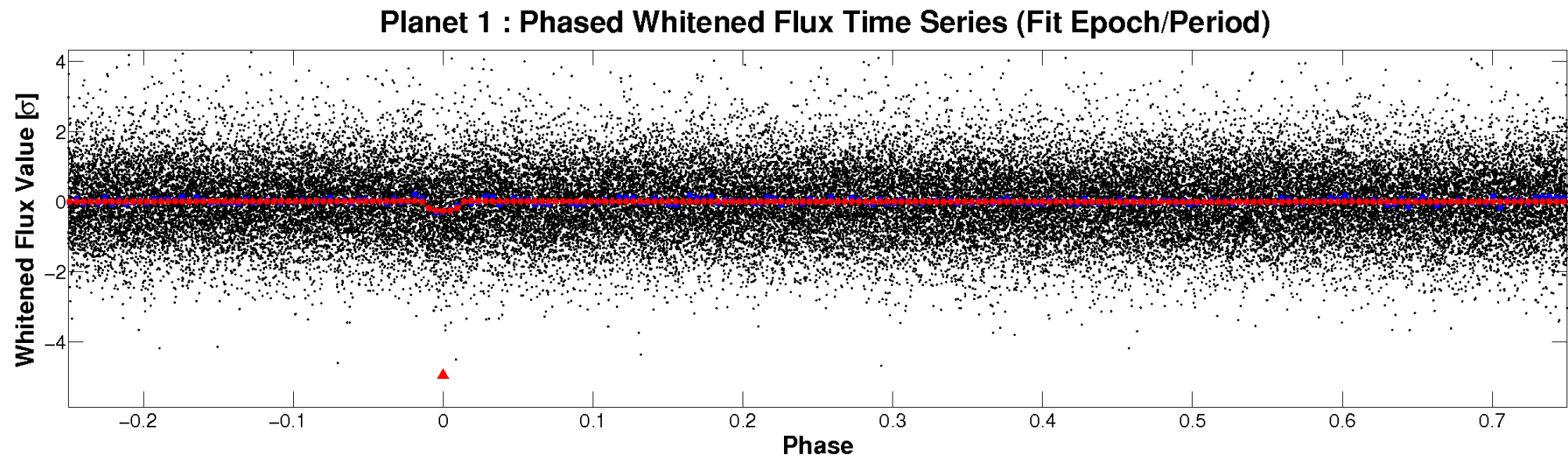
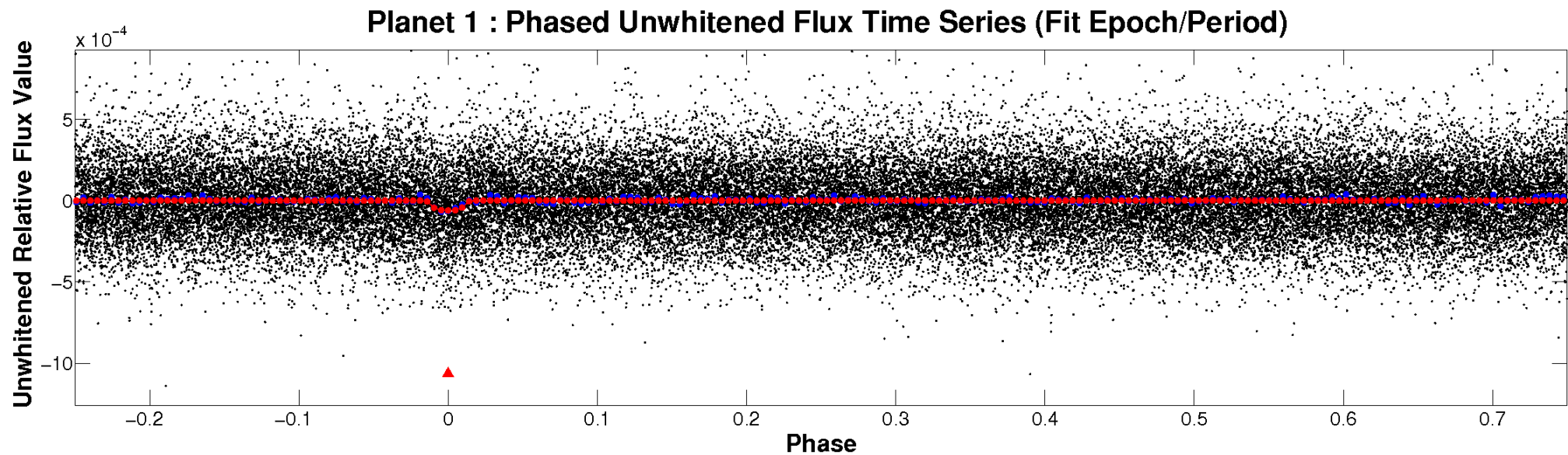


ALT Odd/Even

TCE 003859890-01

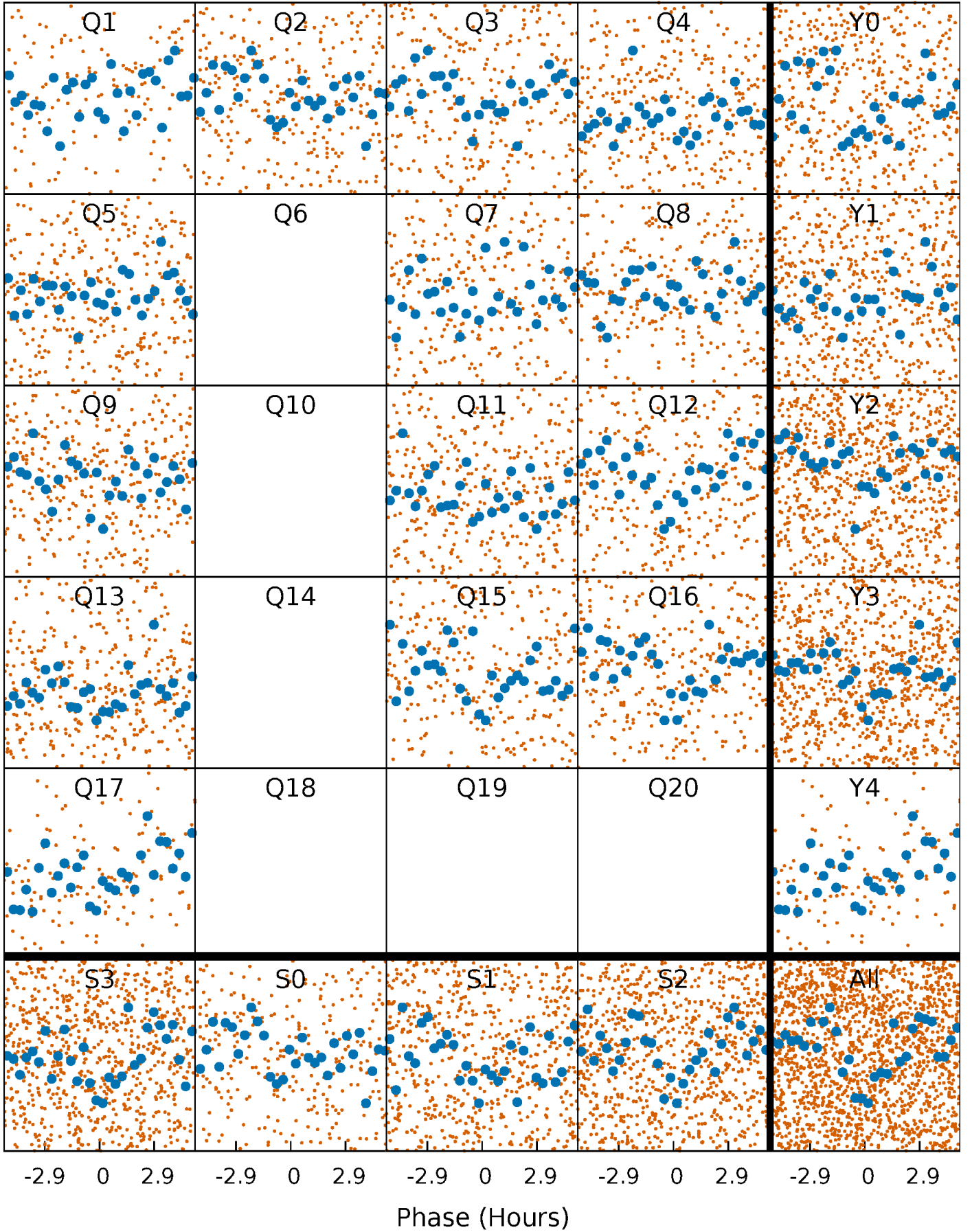


Non-Whitened Vs. Whitened Light Curve



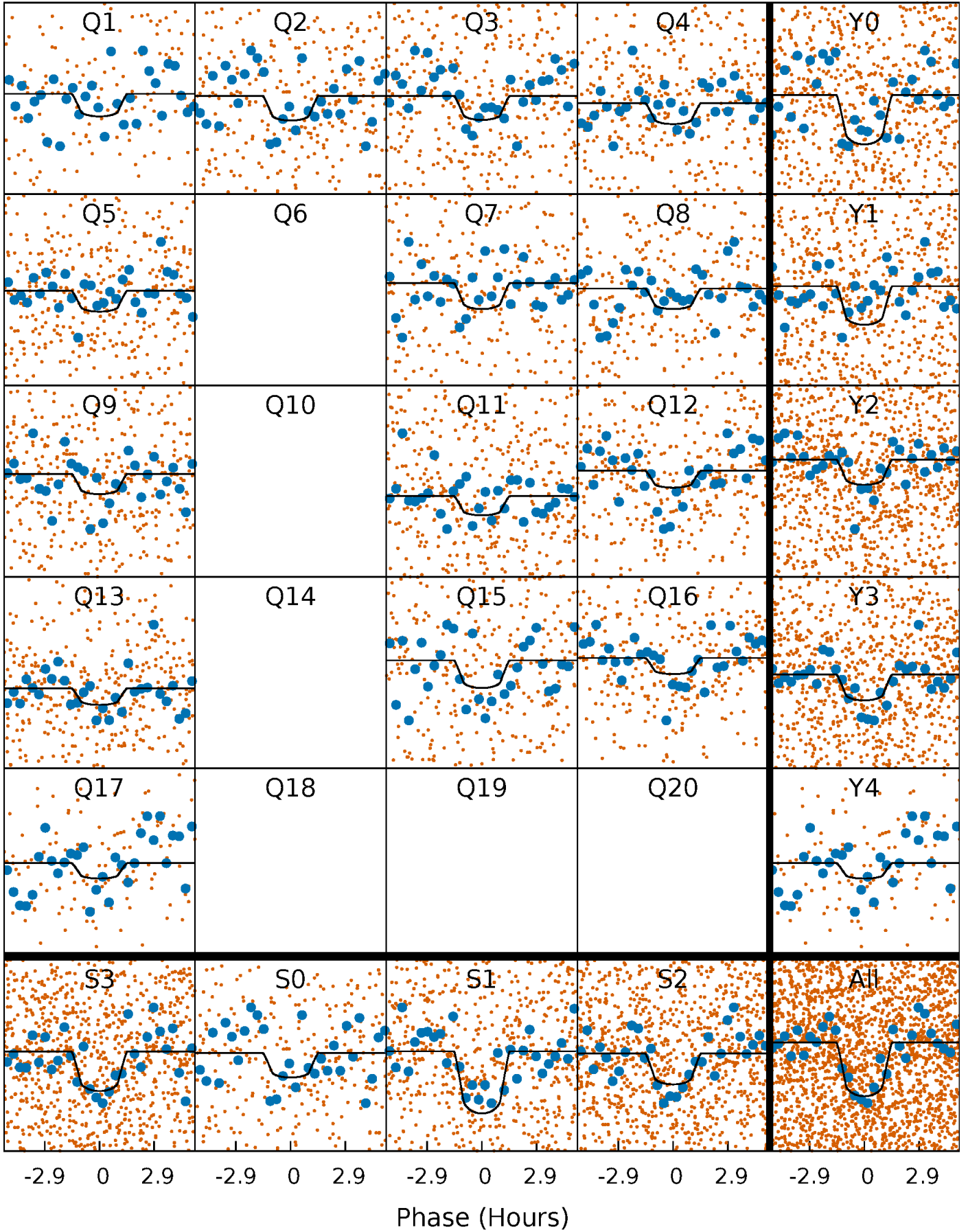
PDC Quarter-Phased Transit Curves

TCE 003859890-01 P= 4.345635 Days $T_0=134.423383$ (BKJD)



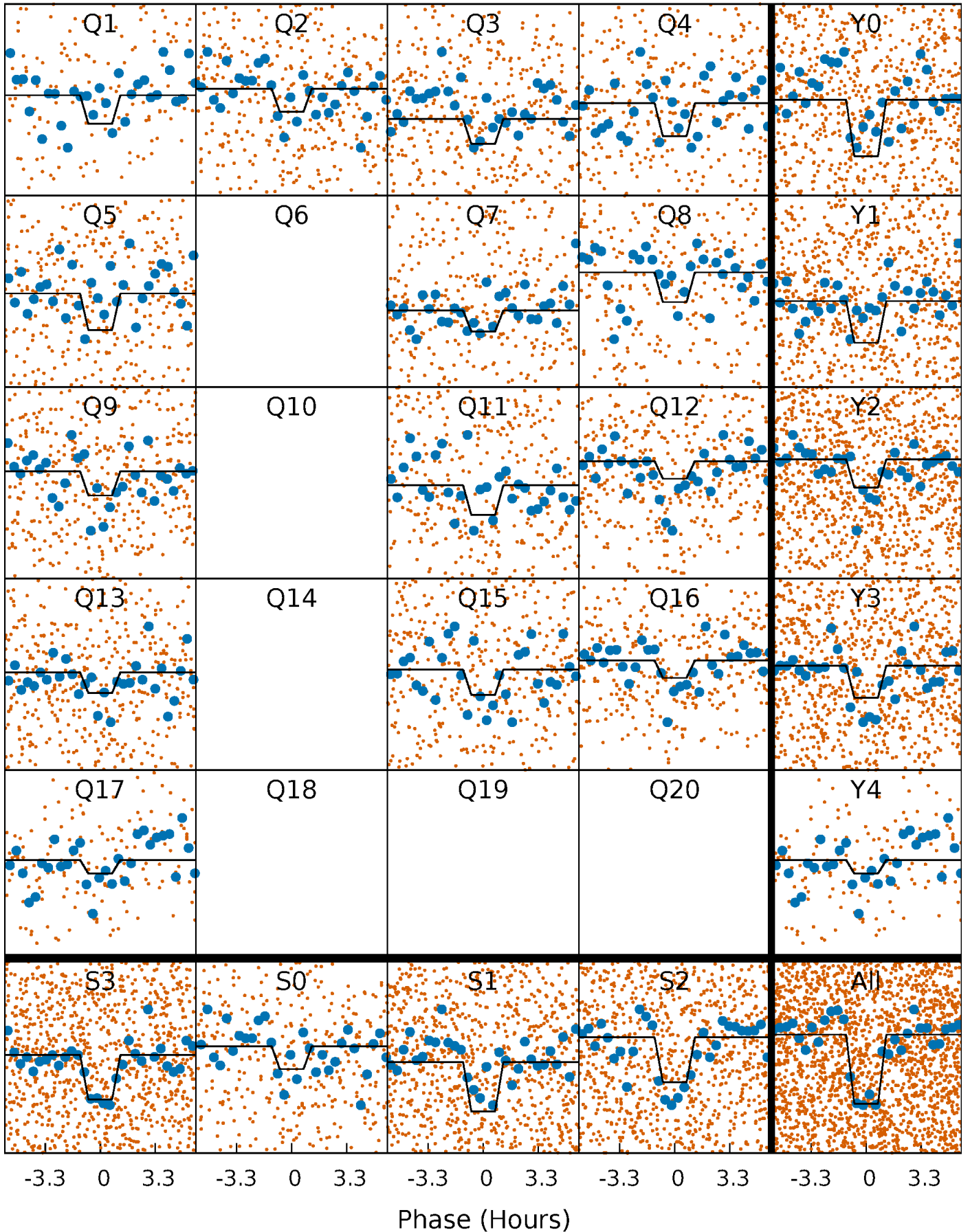
DV Quarter-Phased Transit Curves

TCE 003859890-01 P= 4.345635 Days $T_0=134.423383$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

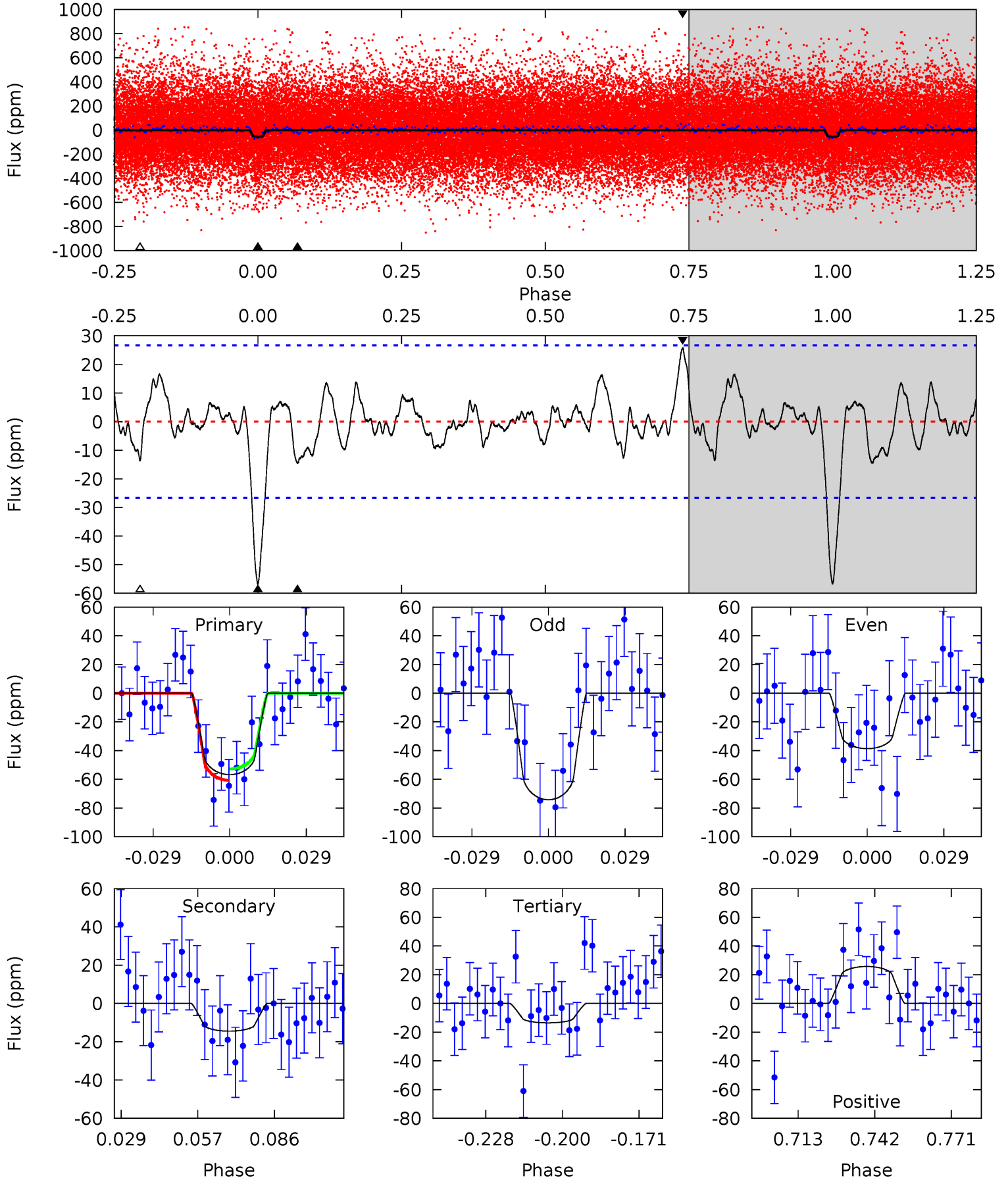
TCE 003859890-01 P= 4.345663 Days $T_0=134.415292$ (BKJD)



DV Model-Shift Uniqueness Test

003859890-01, P = 4.345635 Days, E = 130.077748 Days

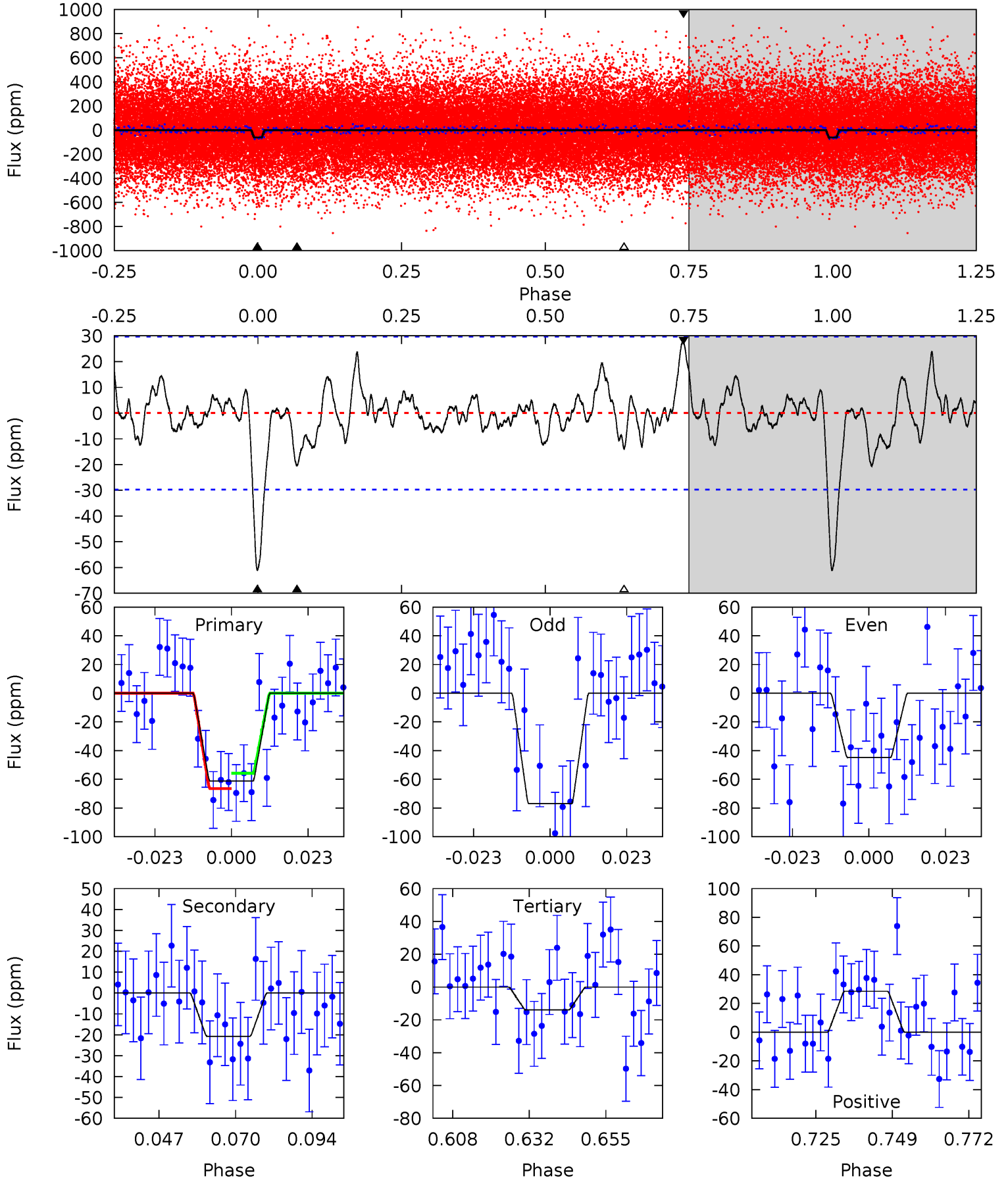
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.62	2.45	4.66	4.82	2.19	1.16	7.82	5.61	0.17	-2.04	3.22	0.63	0.31	0.72



Alt Model-Shift Uniqueness Test

003859890-01, P = 4.345663 Days, E = 130.069629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	3.39	2.28	4.65	4.86	2.27	1.16	7.72	5.35	1.10	-1.27	2.63	1.10	0.32	0.87



Stellar Parameters For KIC 003859890

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5967^{+161}_{-179}	$4.430^{+0.087}_{-0.188}$	$-0.280^{+0.300}_{-0.300}$	$0.976^{+0.291}_{-0.125}$	$0.936^{+0.130}_{-0.106}$	$1.419^{+0.627}_{-0.695}$
	+3%/-3%	+2%/-4%	+107%/-107%	+30%/-13%	+14%/-11%	+44%/-49%
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 003859890-01 / KOI 5020.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-14 ± 6	$1.01^{+0.72}_{-0.61}$	1625^{+123}_{-79}	4080^{+1978}_{-728}	19^{+111}_{-13}
Alt.	-21 ± 6	$1.01^{+0.65}_{-0.60}$	1629^{+103}_{-84}	4332^{+2303}_{-731}	29^{+146}_{-20}

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

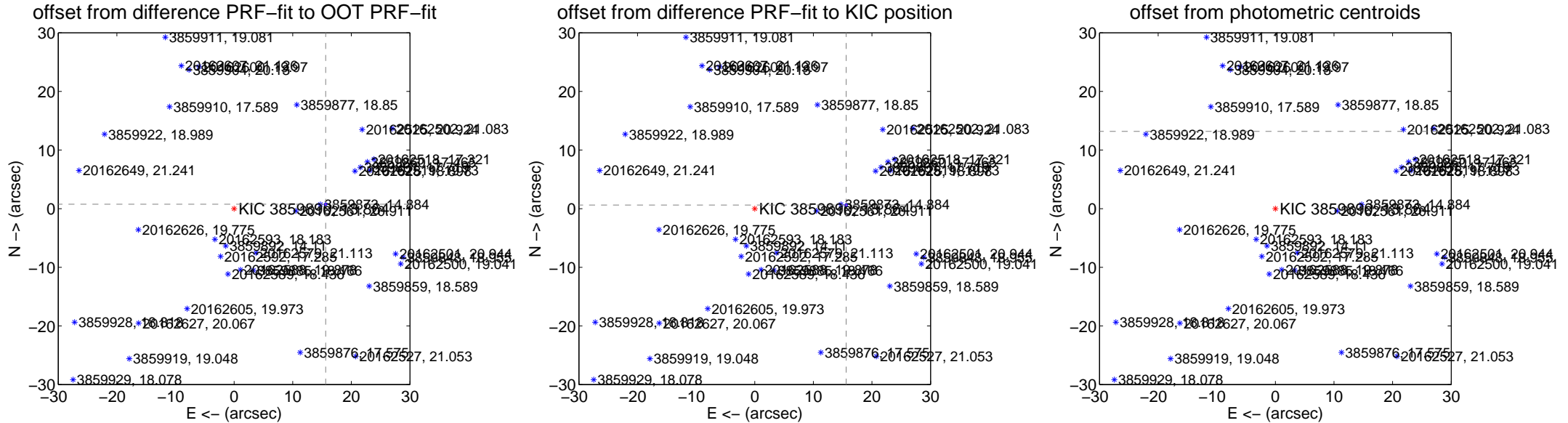
DV Centroid Data

Supplemental centroid analysis for 003859890-01. Kepler magnitude: 13.86. Transit SNR 7.89

There are 1 quarters with good PRF difference image offsets

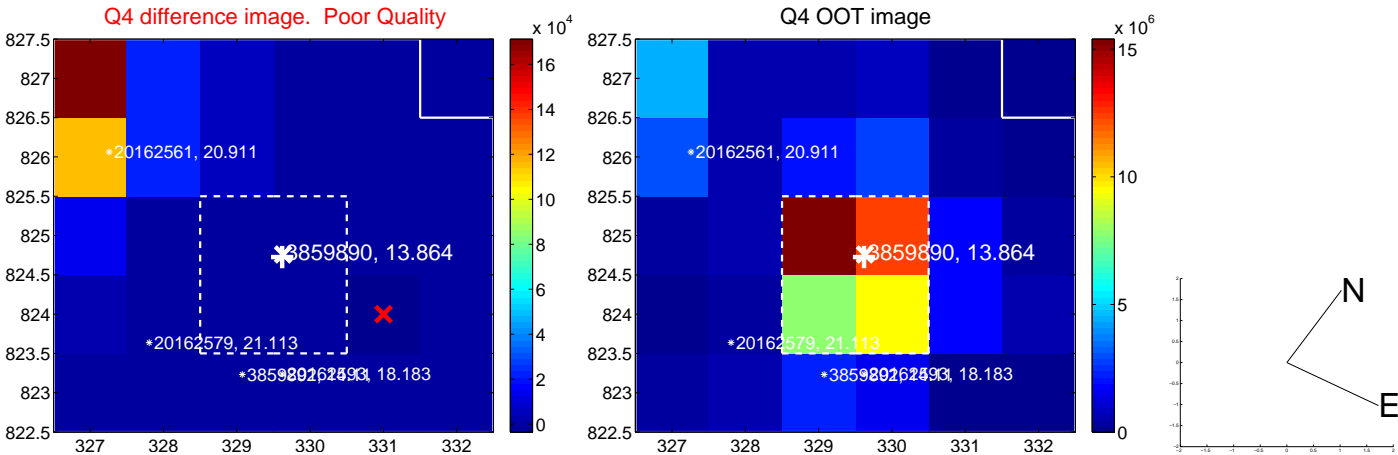
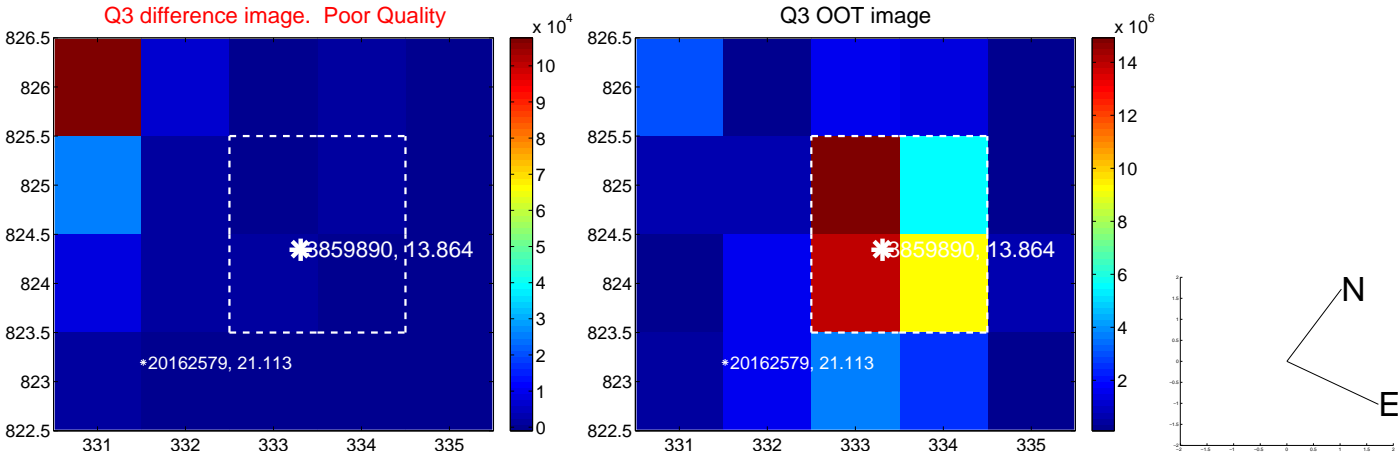
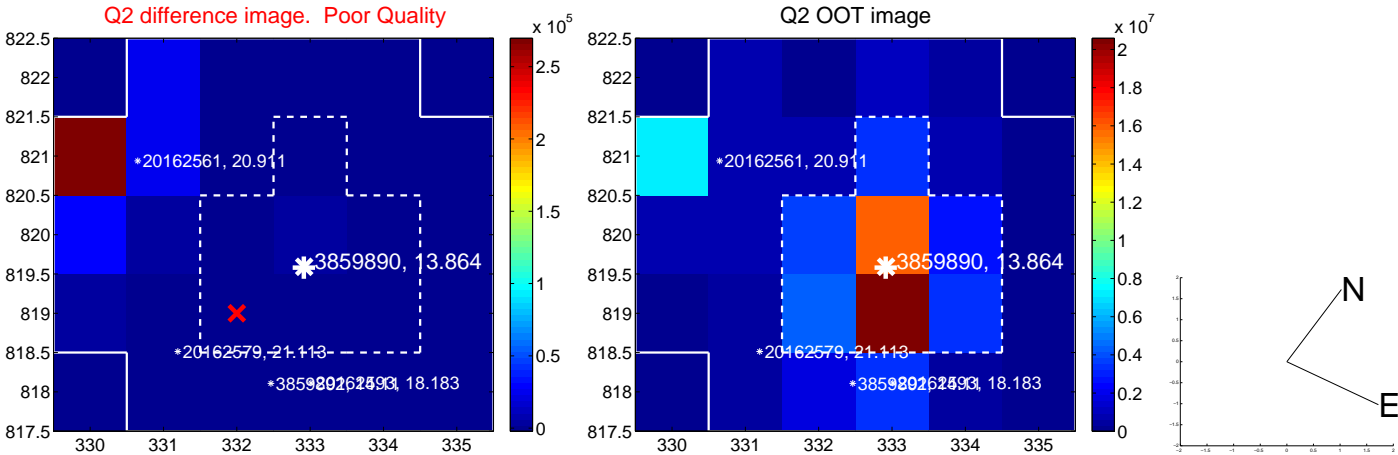
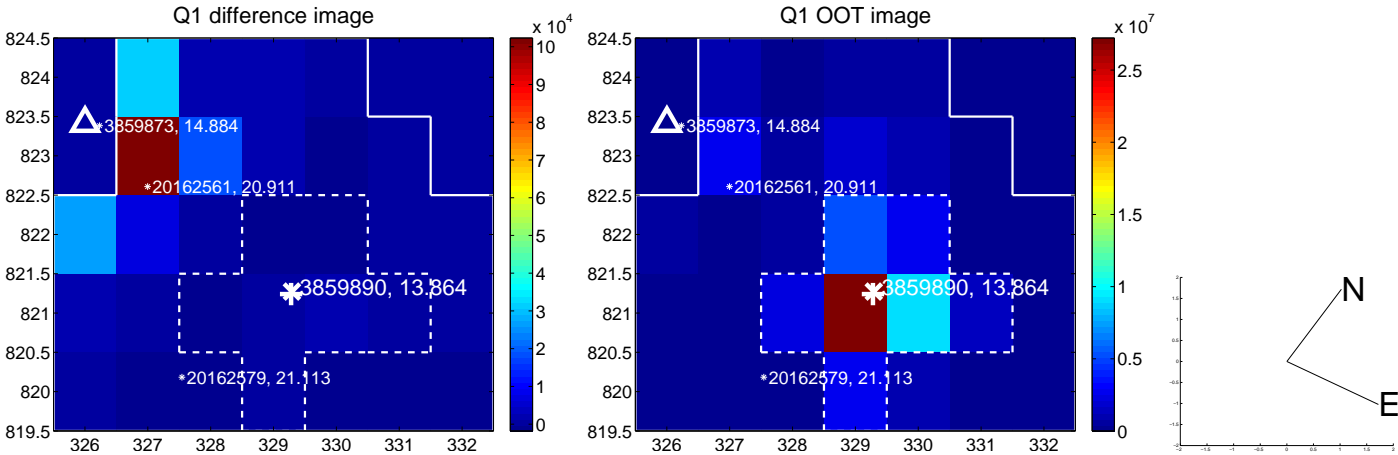
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	15.641 ± 0.074	210.13	-15.623 ± 0.074	0.756 ± 0.077
PRF-fit source offset from KIC position	15.614 ± 0.074	209.80	-15.602 ± 0.074	0.617 ± 0.077
photometric centroid source offset	88.92 ± 1.95	45.59	-87.94 ± 1.96	13.18 ± 1.56

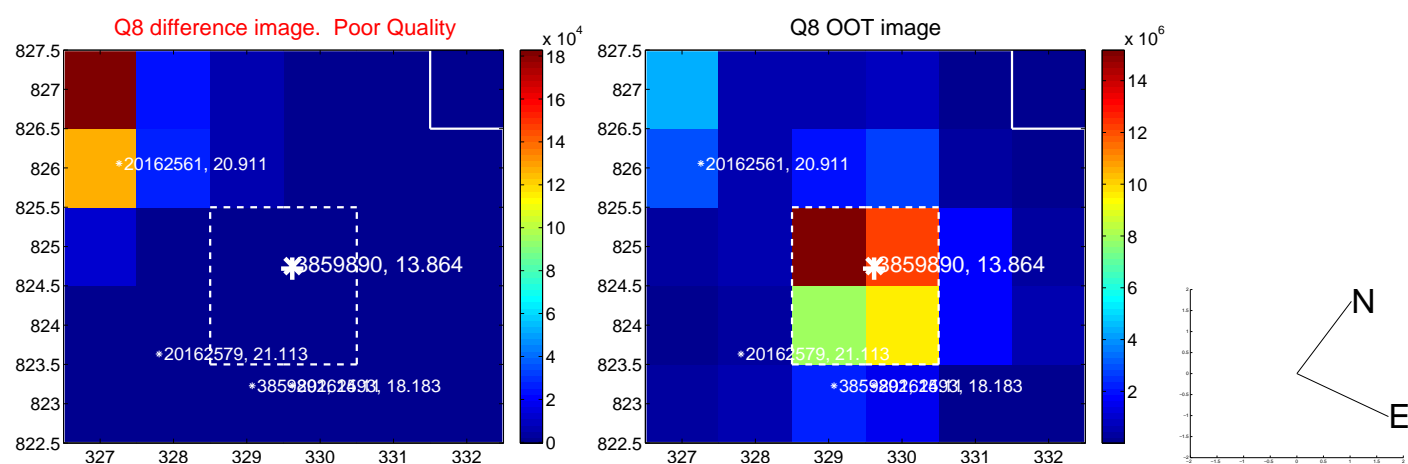
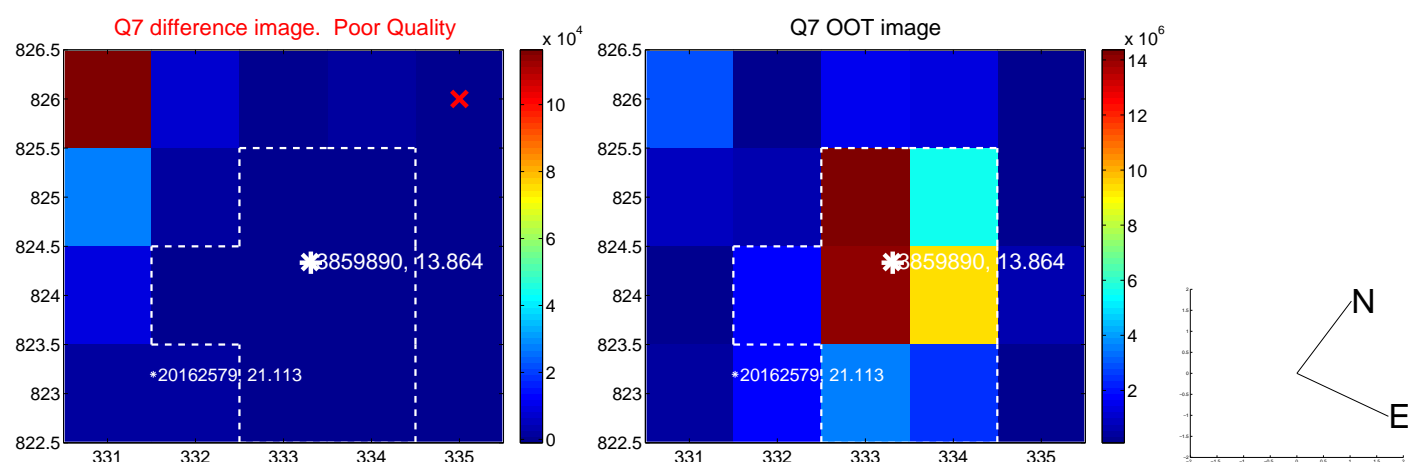
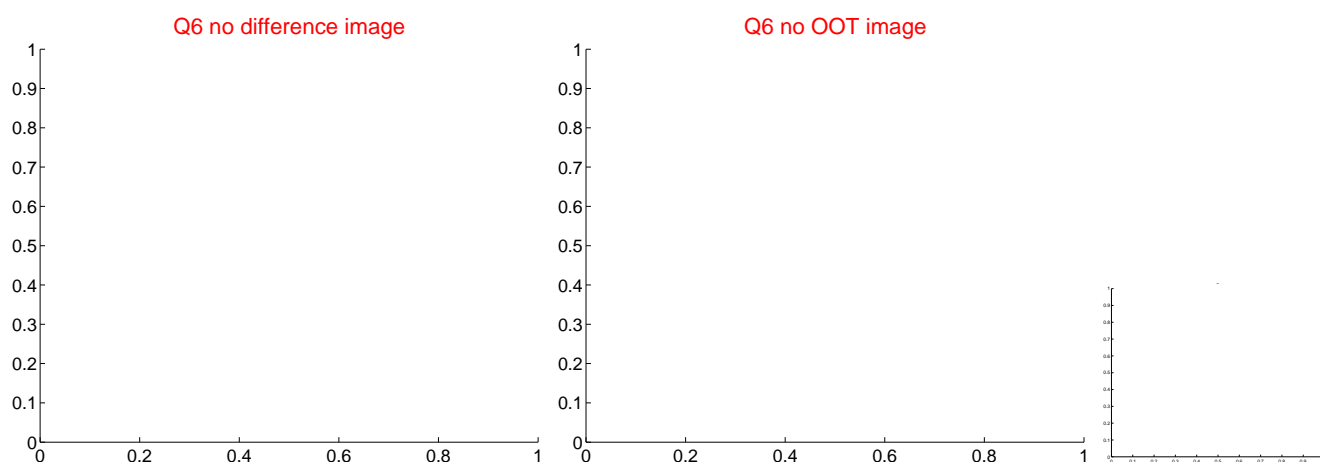
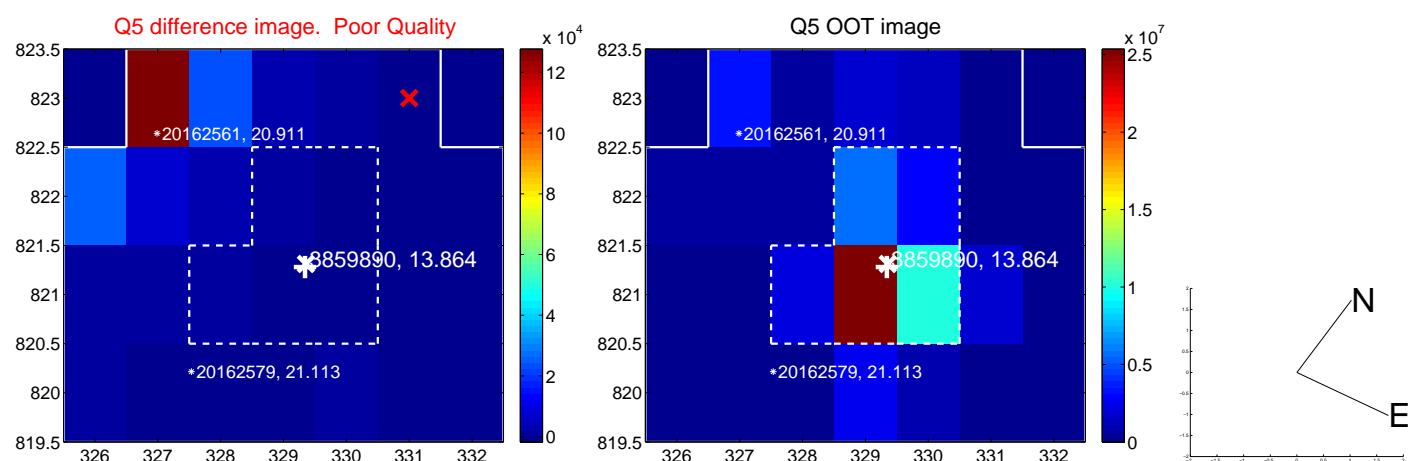


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

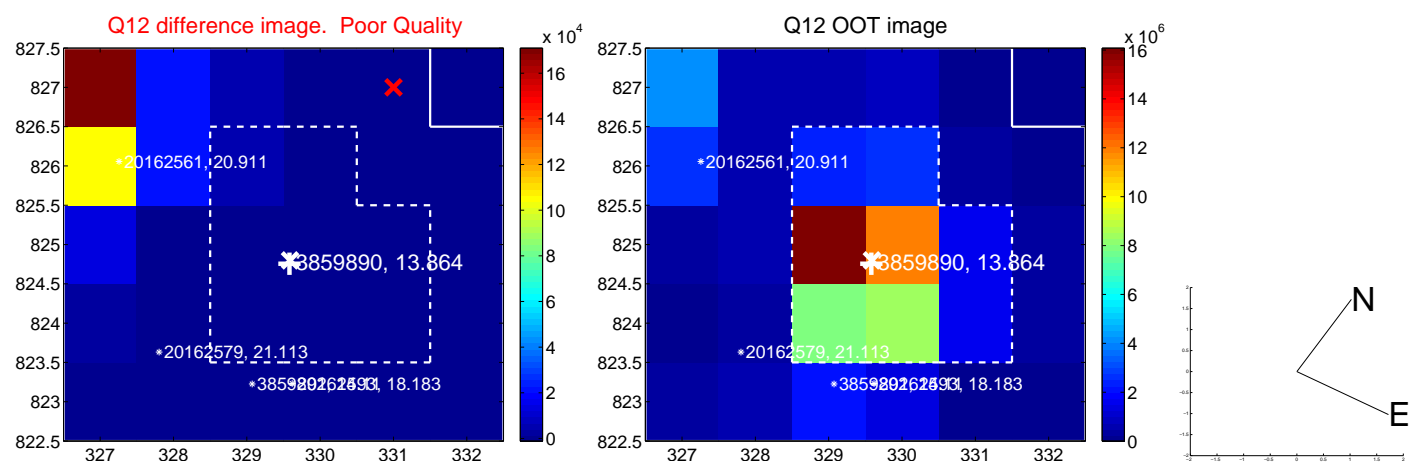
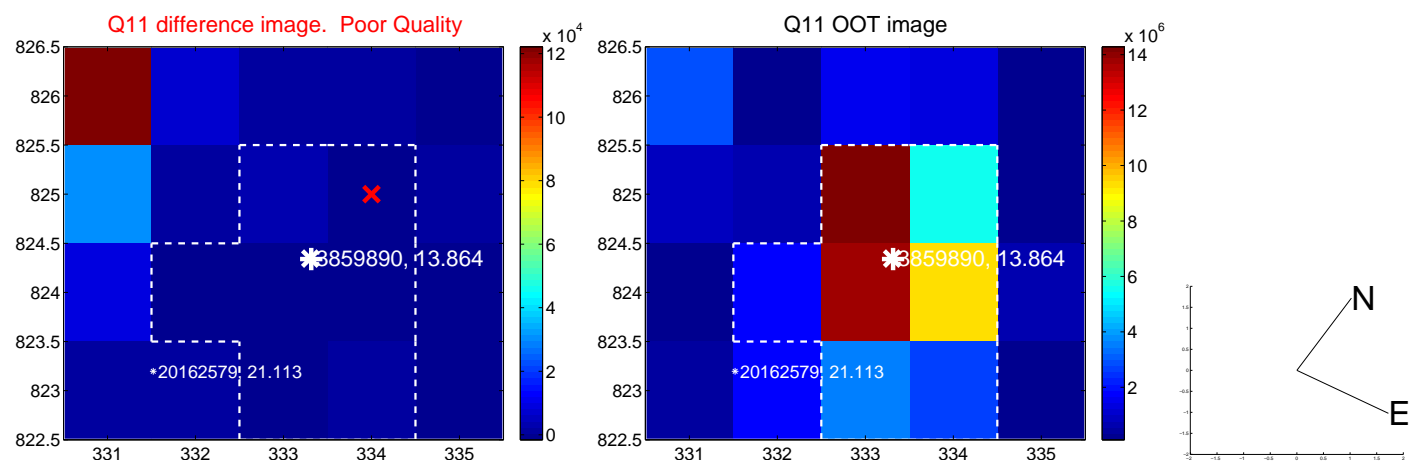
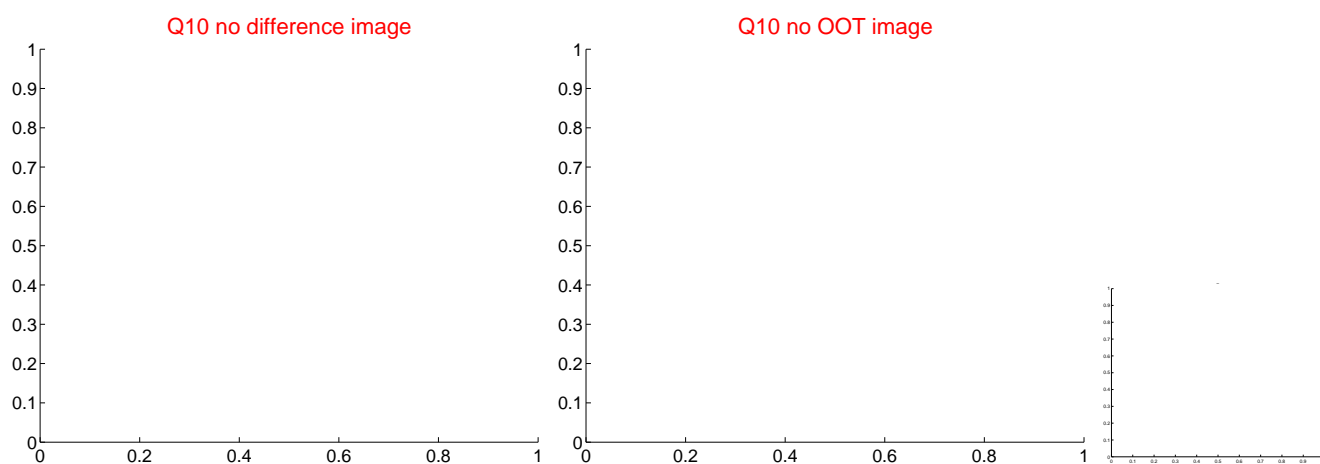
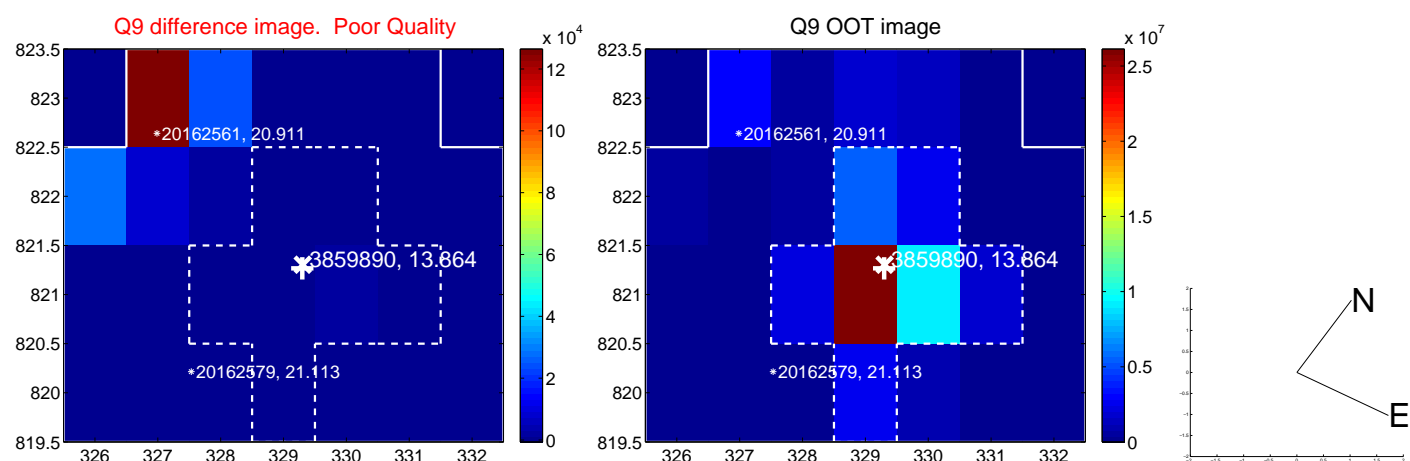
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



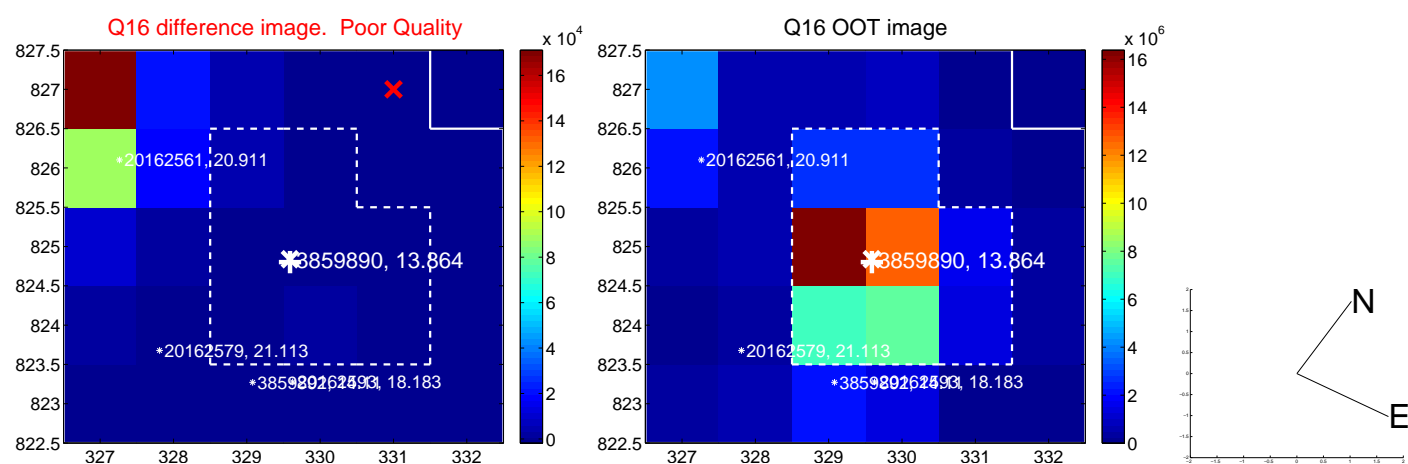
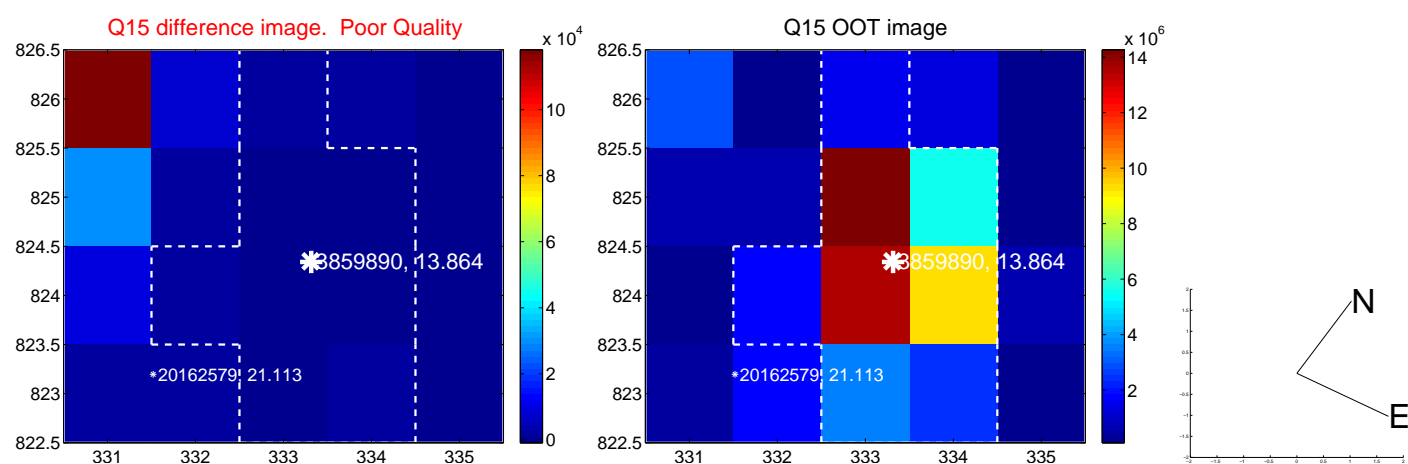
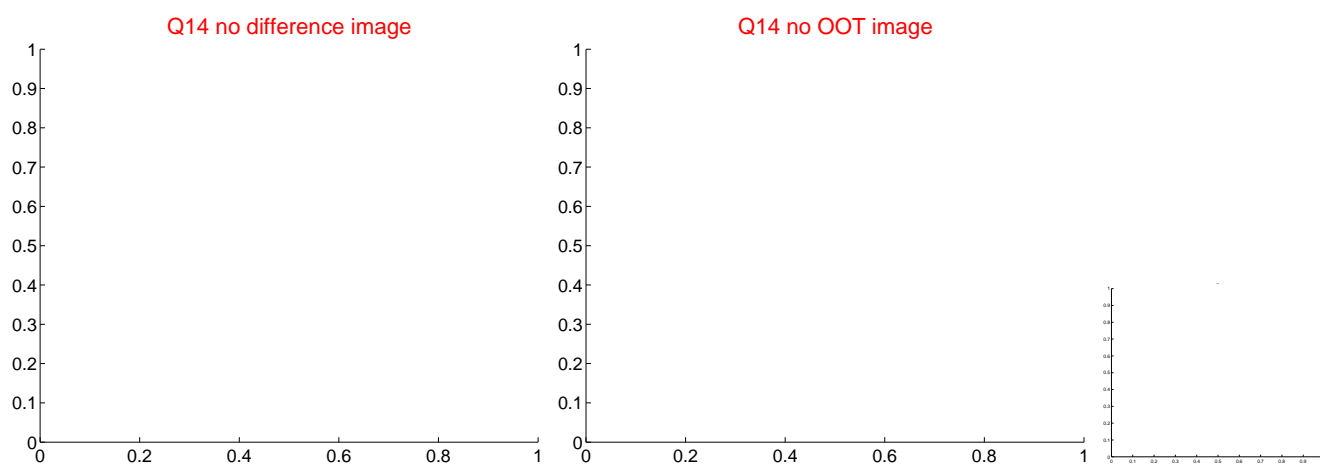
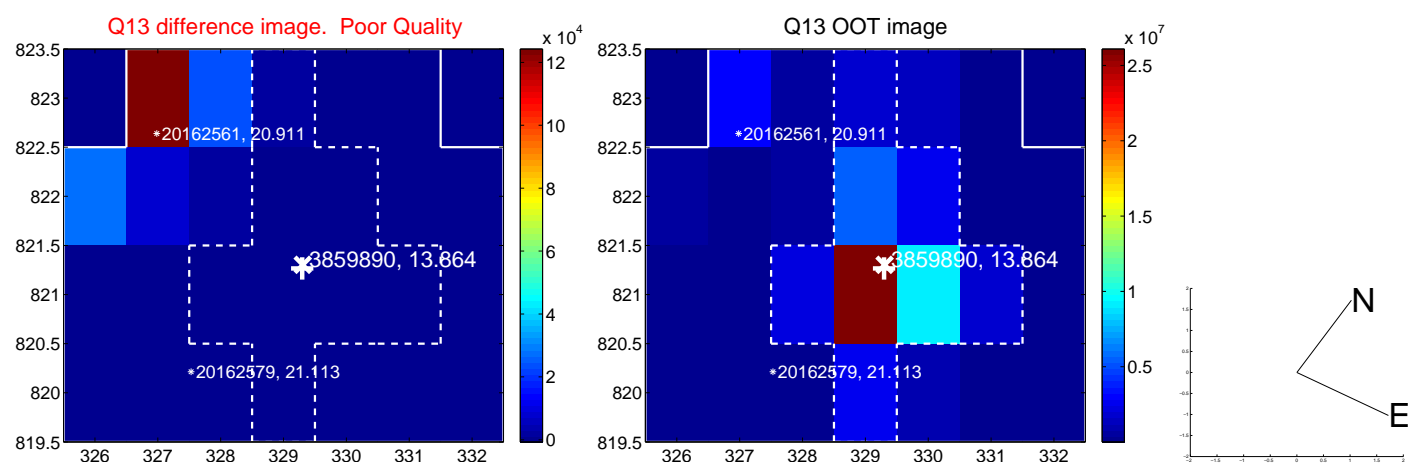
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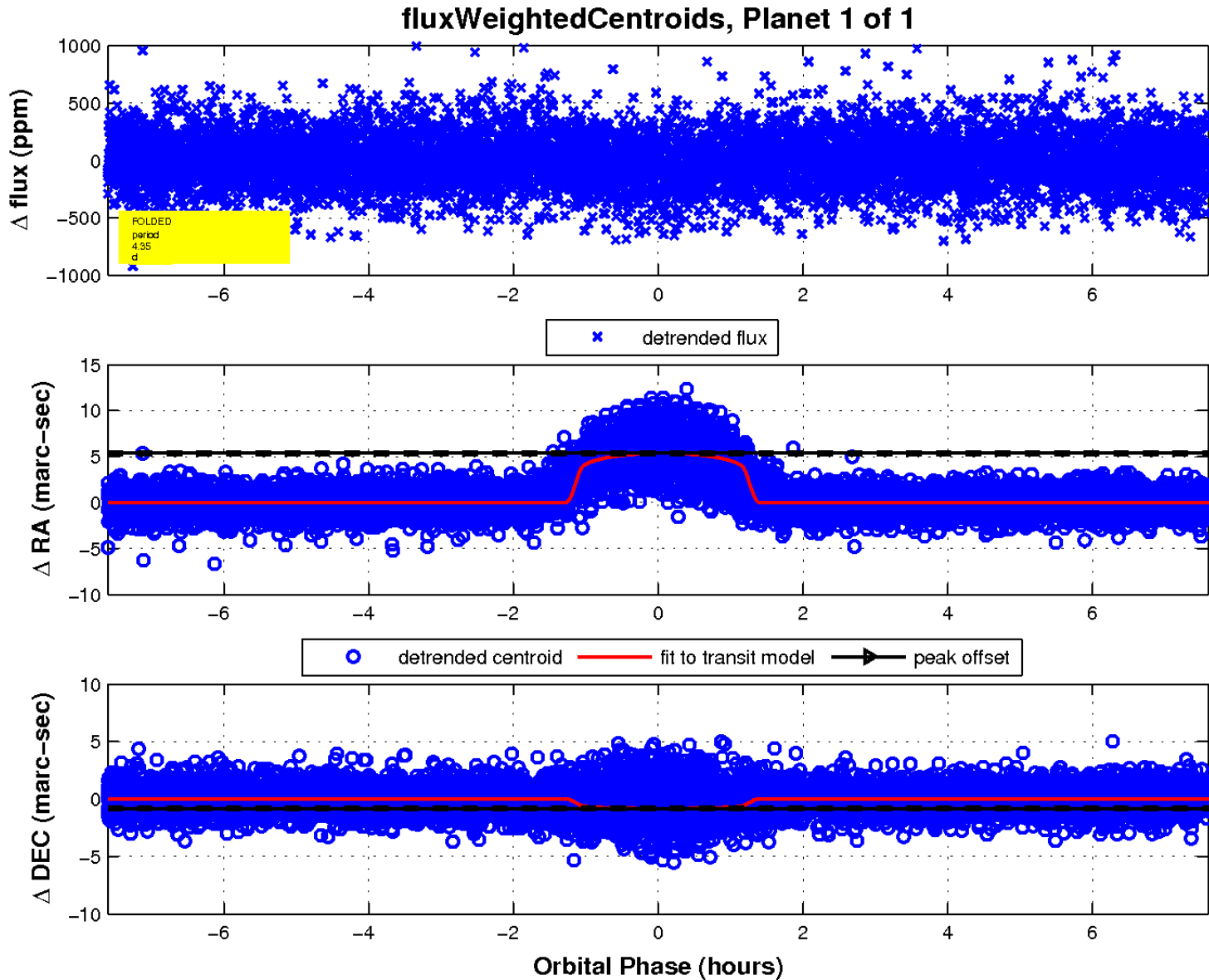
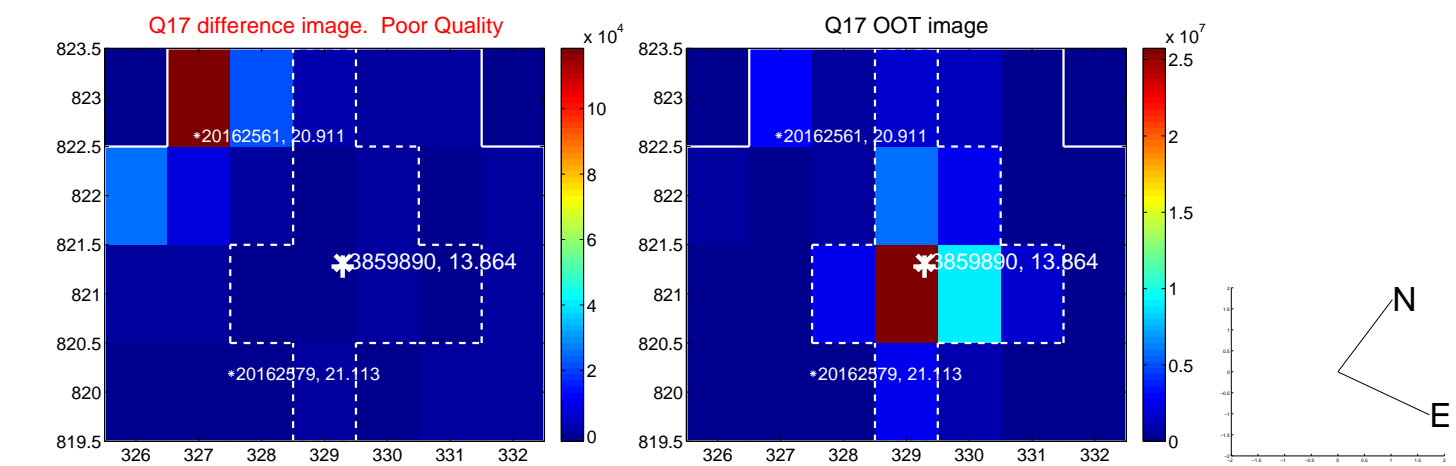
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UKIRT Image

Declination

