

KIC 005881307

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})
005881307-01	OBS	7746.01	393.966718	388.332753	476.7	15.029	7.4	8.0	0.99	6217	2.20	1.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005881307-01	OBS	PC	0.71	0	0	0	0	CENT_FEW_DIFFS

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

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

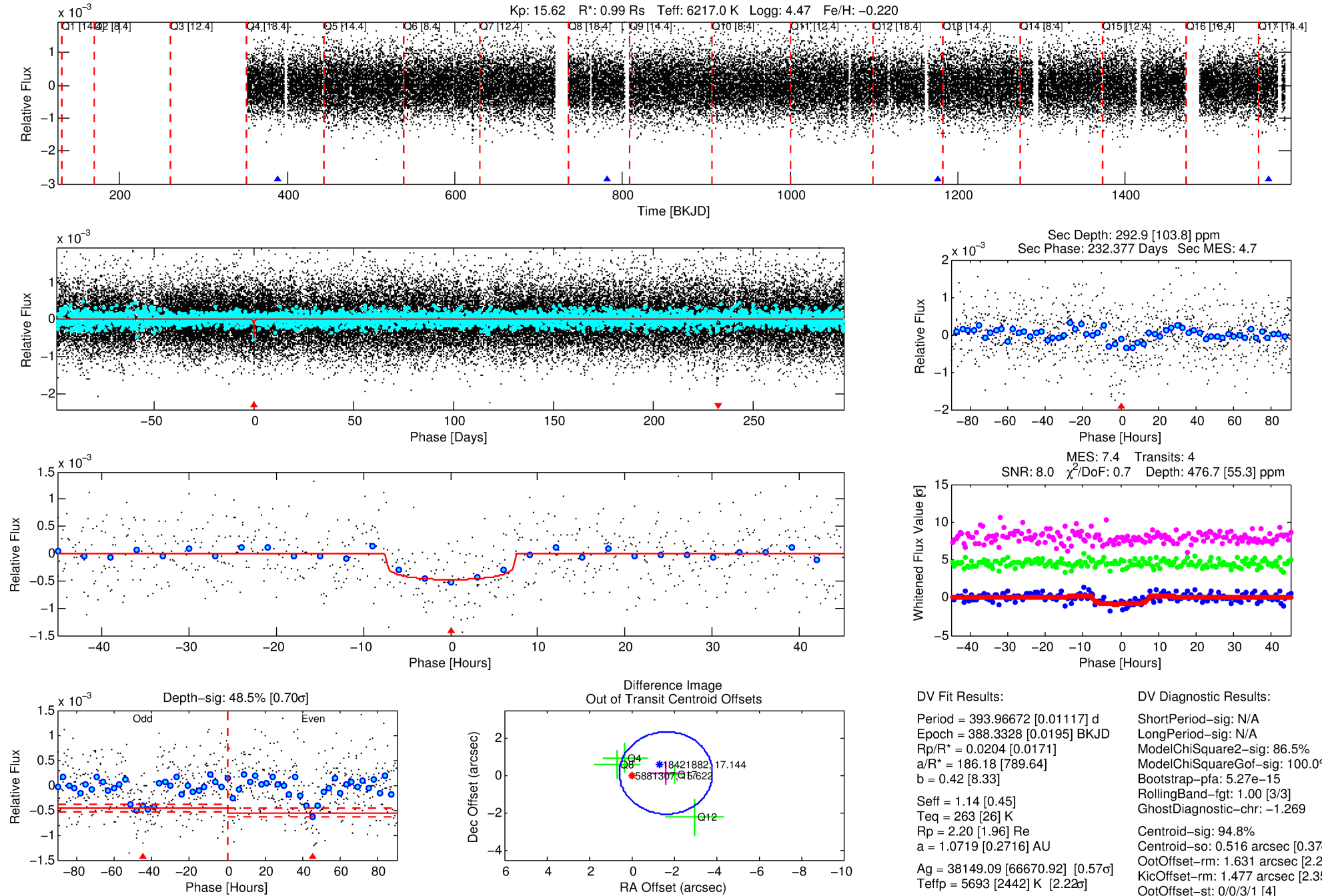
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005881307-01

No Significant Match Found

DV One-Page Summary

KIC: 5881307 Candidate: 1 of 1 Period: 393.967 d



DV Fit Results:

Period = 393.96672 [0.01117] d
Epoch = 388.3328 [0.0195] BKJD
Rp/R* = 0.0204 [0.0171]
a/R* = 186.18 [789.64]
b = 0.42 [8.33]
Seff = 1.14 [0.45]
Teq = 263 [26] K
Rp = 2.20 [1.96] Re
a = 1.0719 [0.2716] AU
Ag = 38149.09 [66670.92] [0.57σ]
Teffp = 5693 [2442] K [2.22σ]

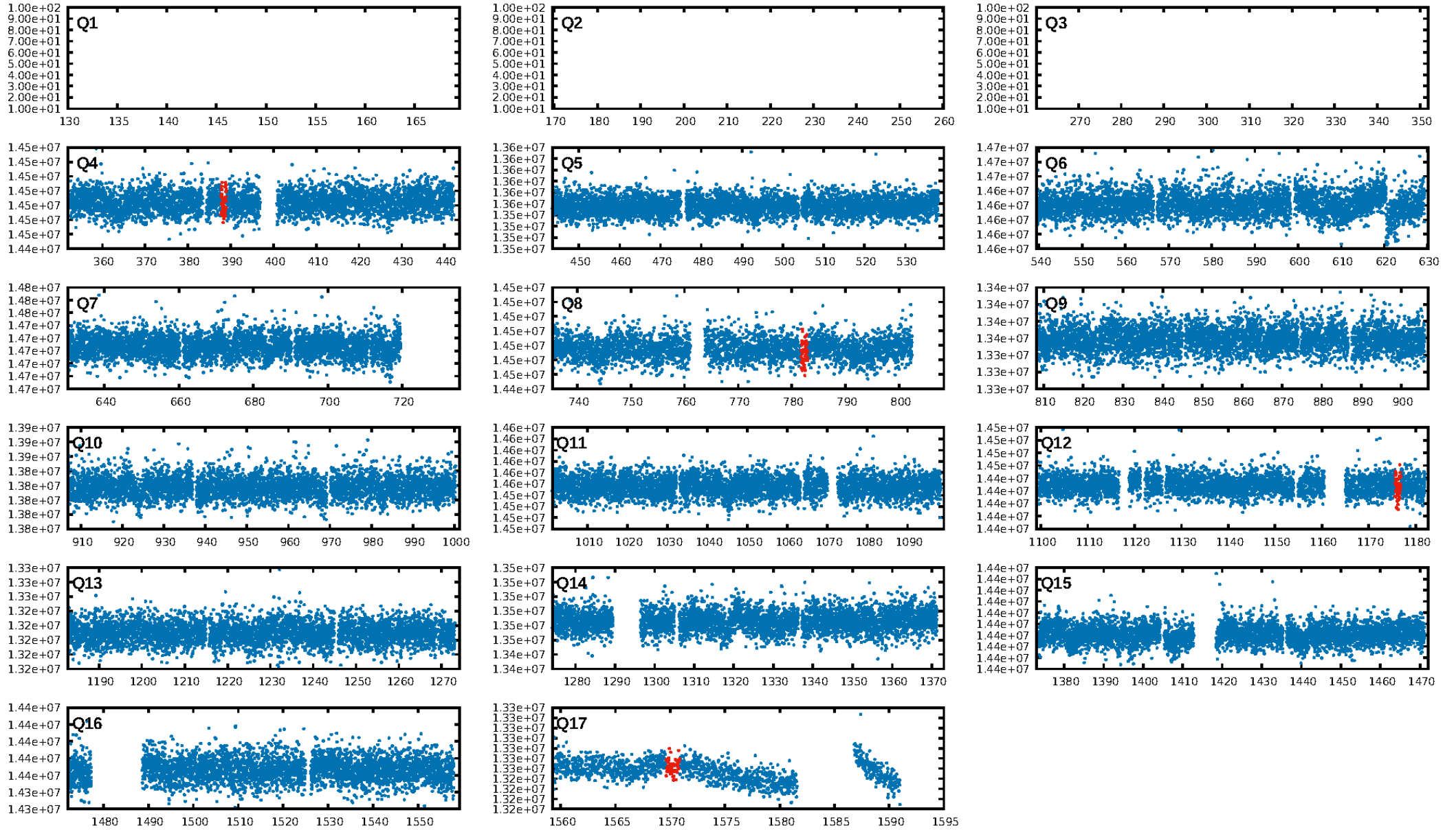
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.27e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.269
Centroid-sig: 94.8%
Centroid-so: 0.516 arcsec [0.37σ]
OotOffset-rm: 1.631 arcsec [2.23σ]
KicOffset-rm: 1.477 arcsec [2.35σ]
OotOffset-st: 0/0/3/1 [4c]
KicOffset-st: 0/0/3/1 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

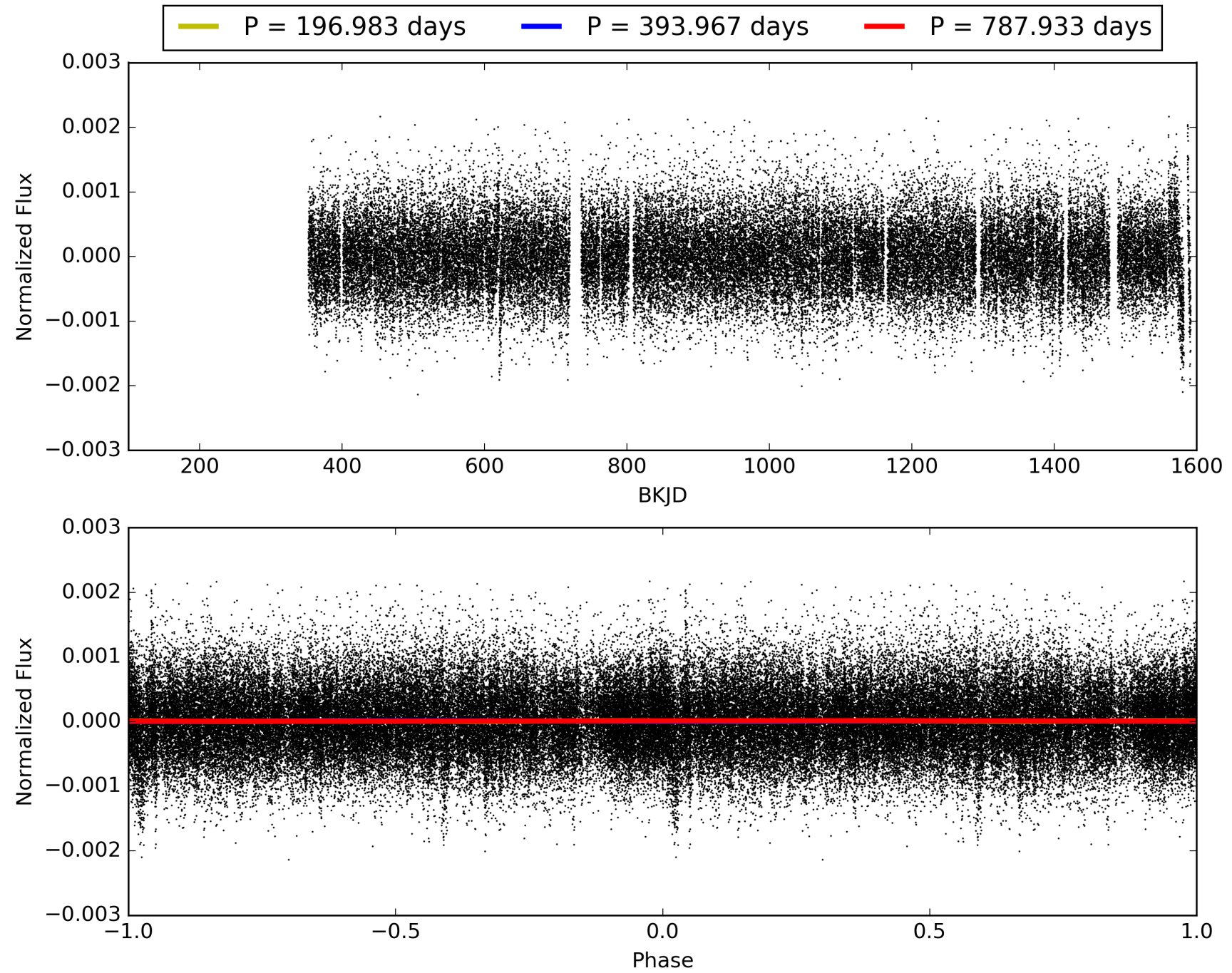
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:12:44 Z

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

TCE 005881307-01, PDC Light Curves

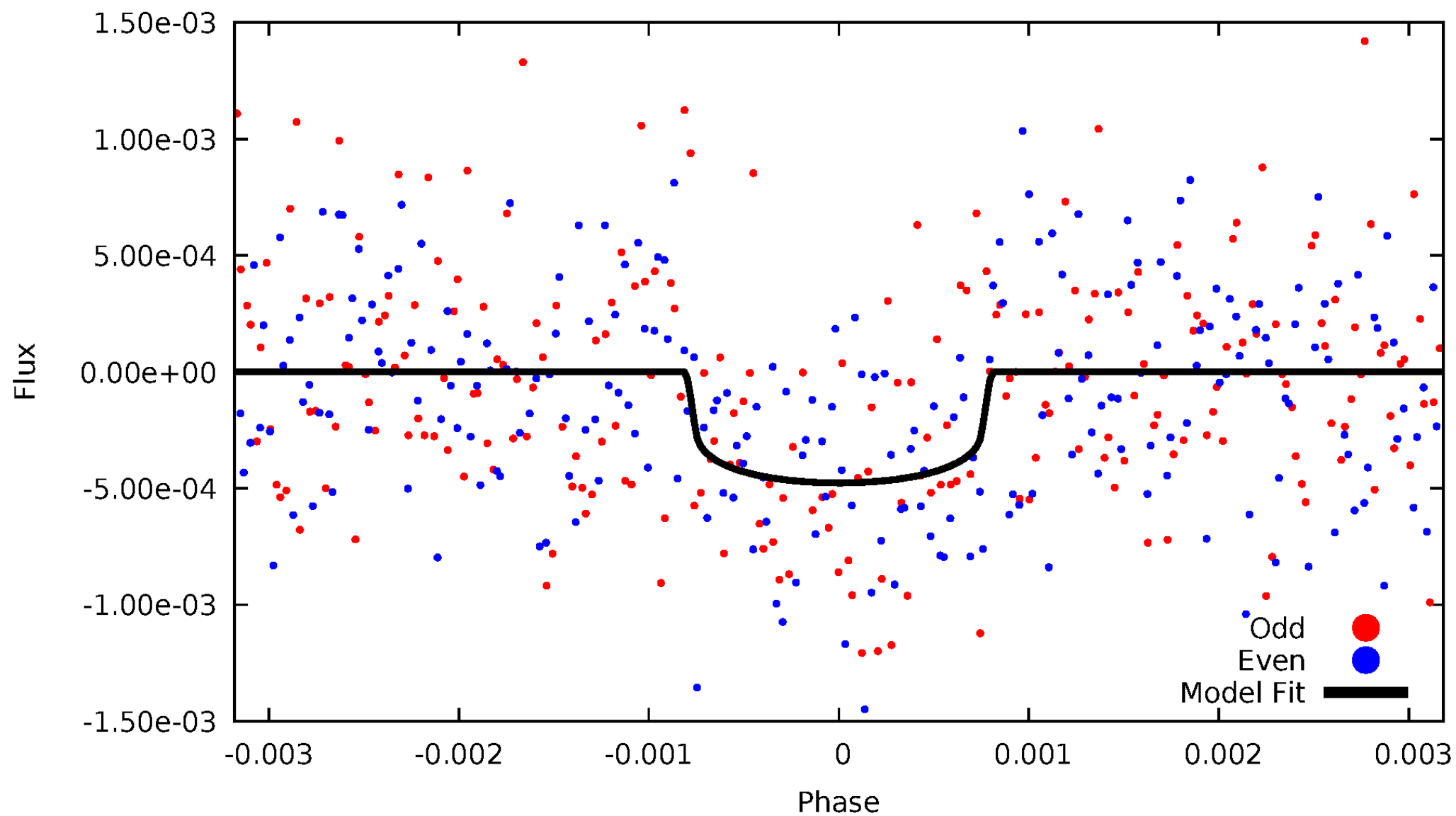


TCE 005881307-01



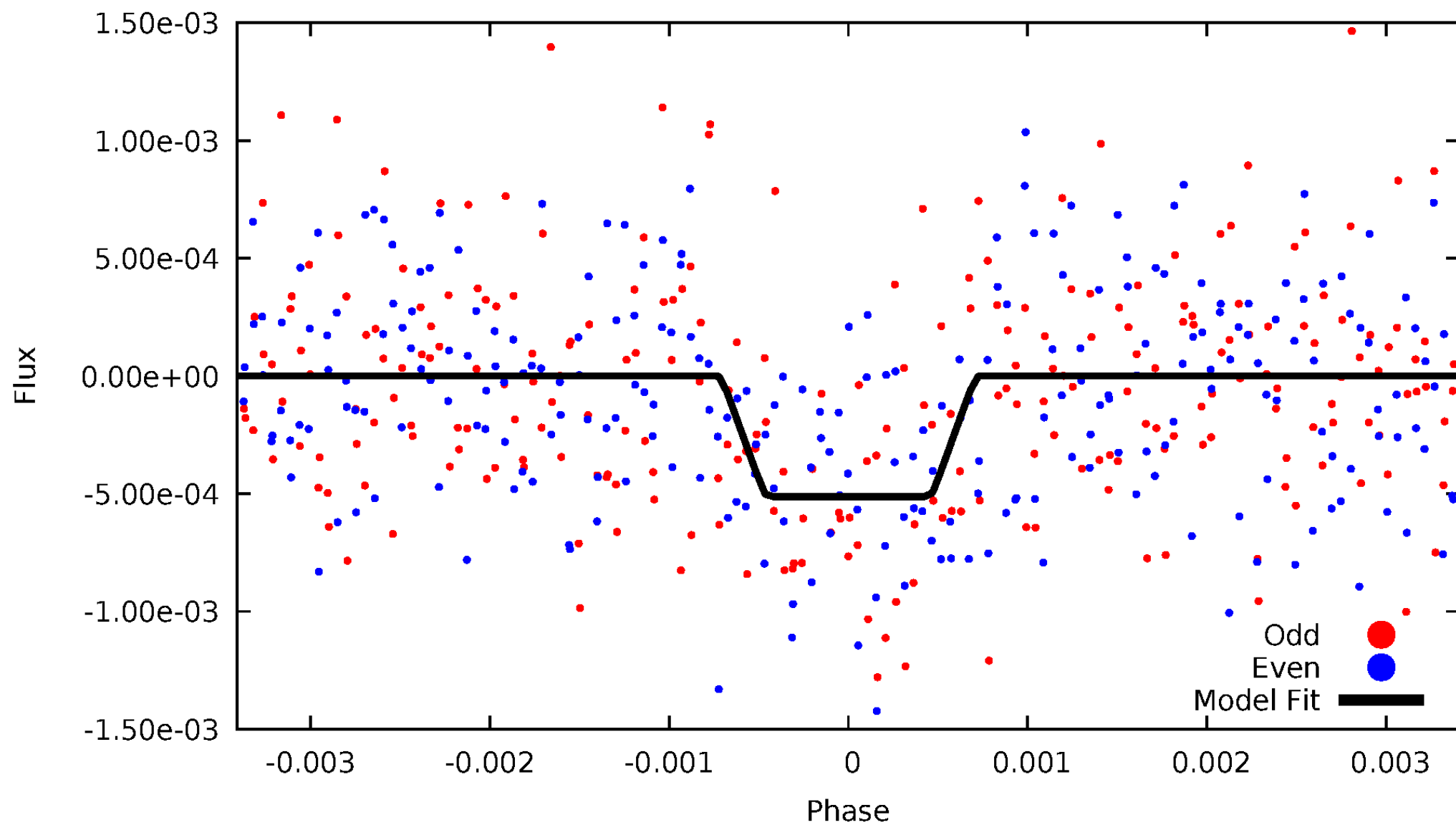
DV Odd/Even

TCE 005881307-01

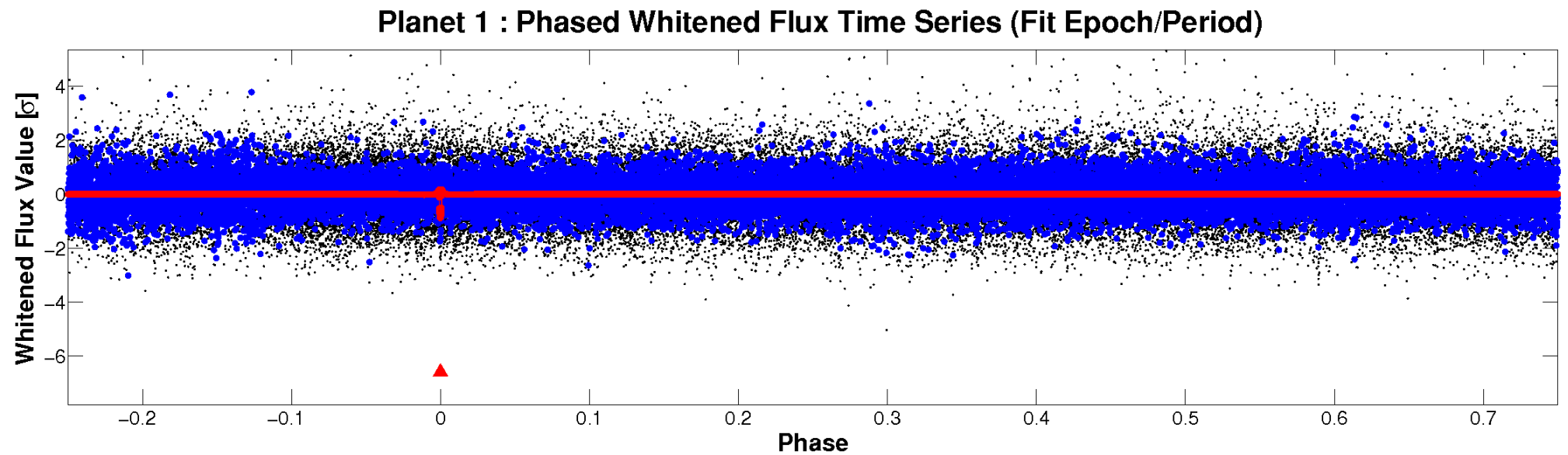
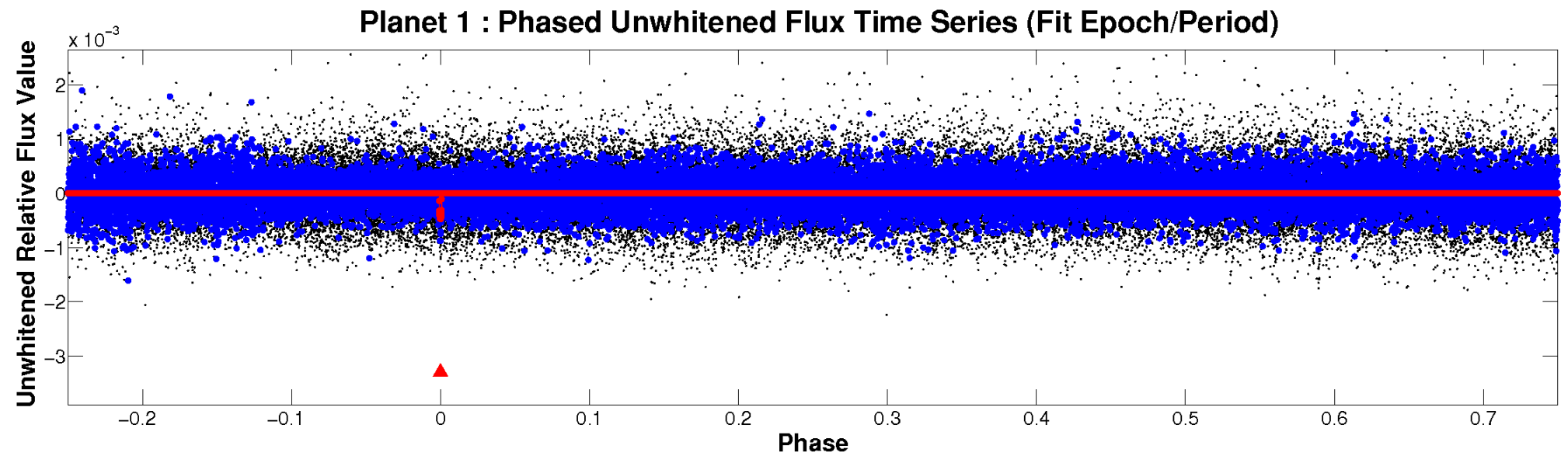


ALT Odd/Even

TCE 005881307-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 005881307-01 P=393.966718 Days $T_0=388.332753$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005881307-01 P=393.966718 Days $T_0=388.332753$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

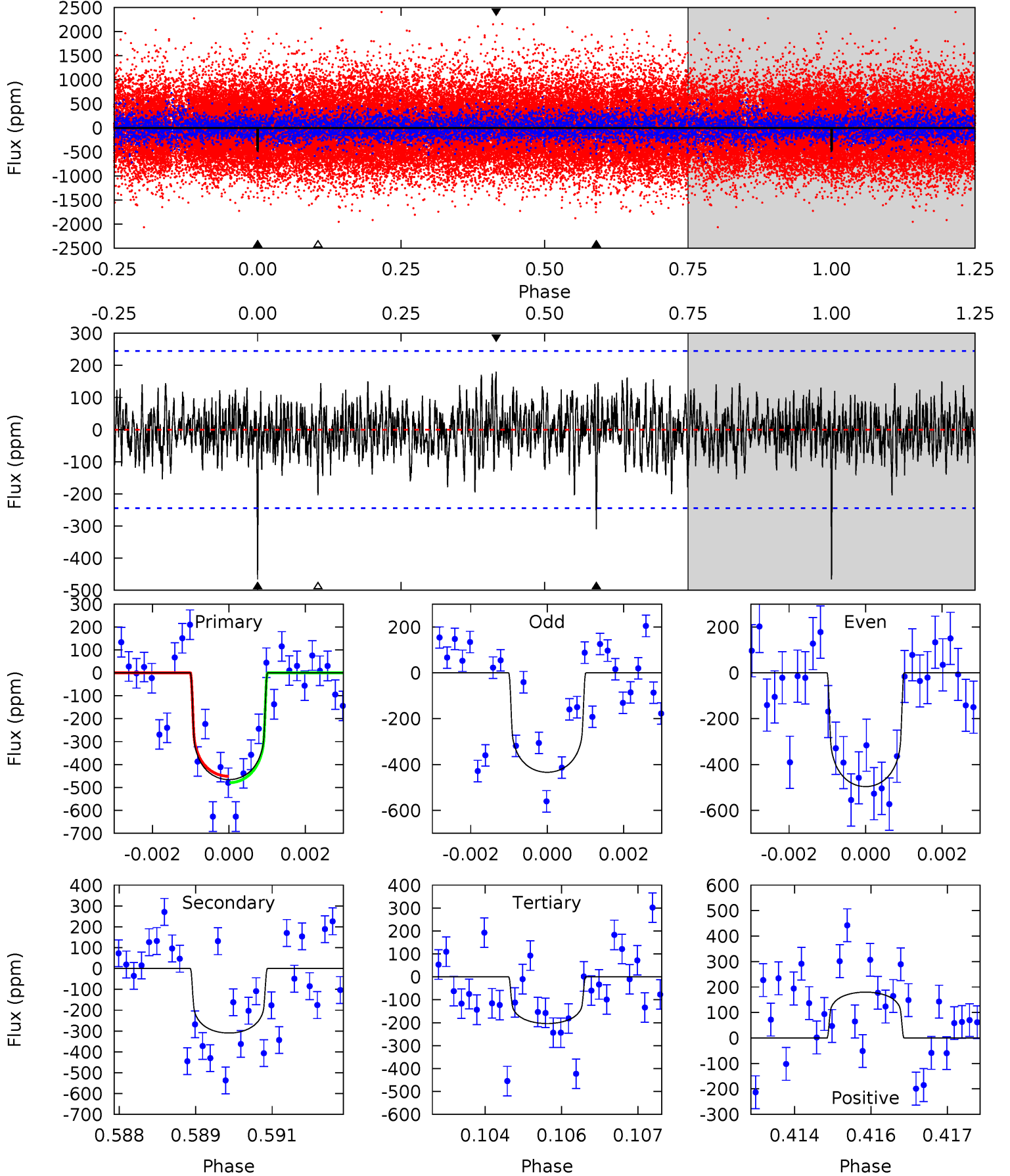
TCE 005881307-01 P=393.959037 Days $T_0=388.339624$ (BKJD)



DV Model-Shift Uniqueness Test

005881307-01, $P = 393.966718$ Days, $E = 388.332753$ Days

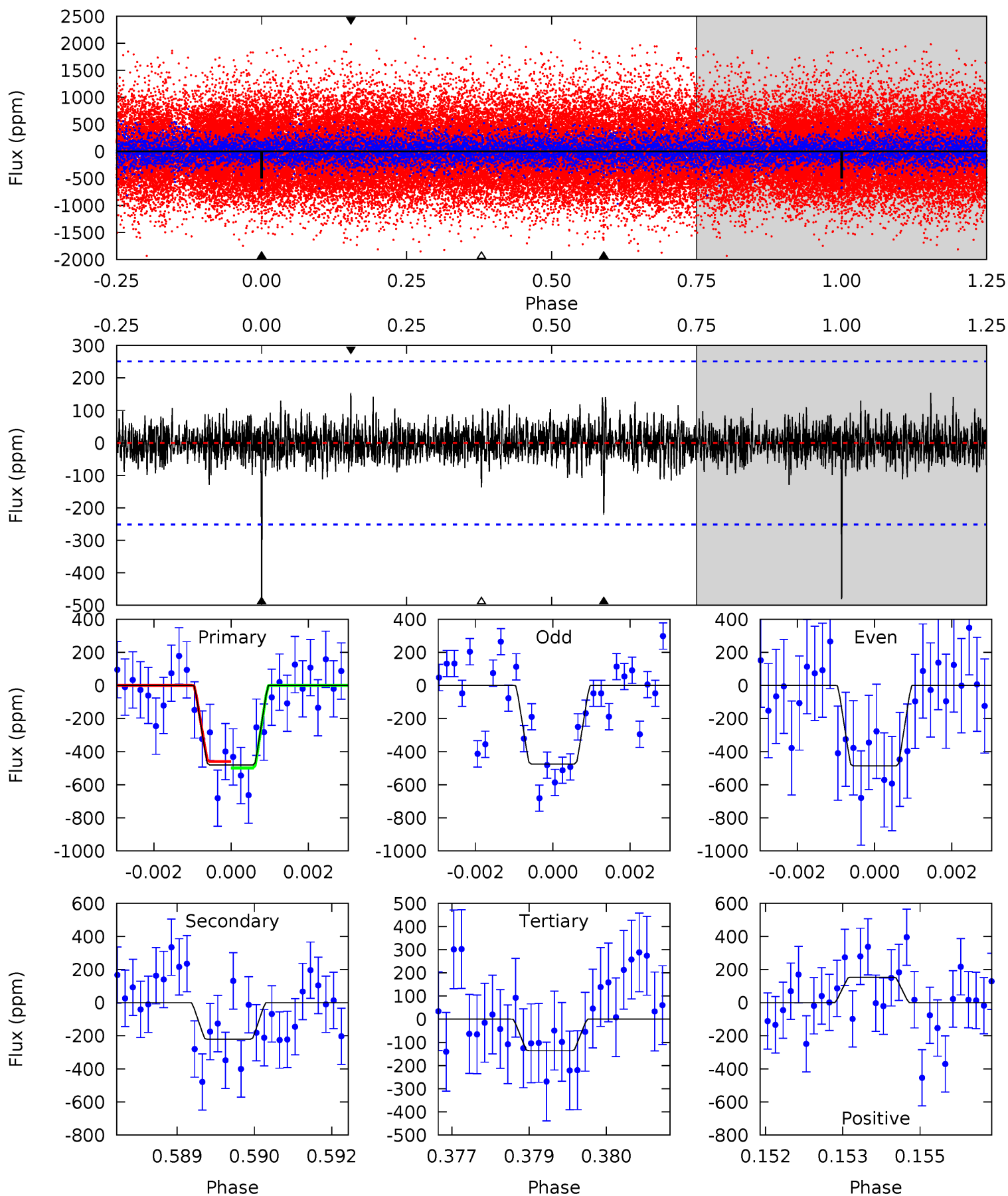
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.79	4.46	3.94	5.36	3.15	1.29	5.75	6.27	2.32	2.84	0.69	0.95	0.28	0.31



Alt Model-Shift Uniqueness Test

005881307-01, P = 393.959037 Days, E = 388.339624 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	4.73	2.91	3.28	5.38	3.17	0.83	7.36	7.00	1.82	1.45	0.13	0.98	0.24	0.42



Stellar Parameters For KIC 005881307

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6217^{+197}_{-241}	$4.472^{+0.062}_{-0.200}$	$-0.220^{+0.300}_{-0.300}$	$0.989^{+0.299}_{-0.107}$	$1.056^{+0.144}_{-0.144}$	$1.540^{+0.429}_{-0.809}$
	+3%/-4%	+1%/-4%	+136%/-136%	+30%/-11%	+14%/-14%	+28%/-53%
Source	KIC0	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 005881307-01 / KOI 7746.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-310 ± 46	$2.67^{+1.83}_{-1.65}$	376^{+26}_{-20}	5408^{+3739}_{-1068}	$27401^{+148959}_{-18154}$
Alt.	-221 ± 47	$2.90^{+1.84}_{-1.69}$	375^{+28}_{-20}	4843^{+2606}_{-828}	16296^{+73978}_{-10170}

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

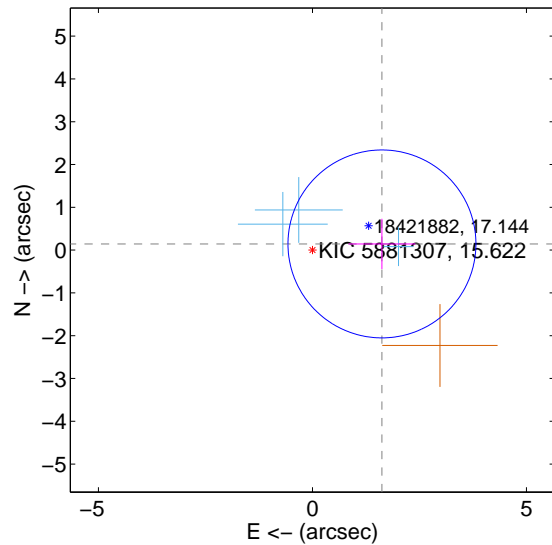
Supplemental centroid analysis for 005881307-01. Kepler magnitude: 15.62. Transit SNR 8.04

There are 3 quarters with good PRF difference image offsets

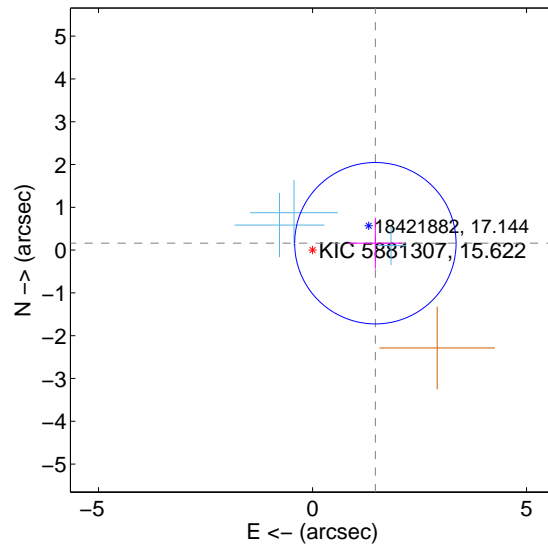
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.631 ± 0.732	2.23	-1.624 ± 0.780	0.144 ± 0.587
PRF-fit source offset from KIC position	1.477 ± 0.629	2.35	-1.469 ± 0.629	0.161 ± 0.596
photometric centroid source offset	0.52 ± 1.40	0.37	0.49 ± 1.40	-0.16 ± 1.42

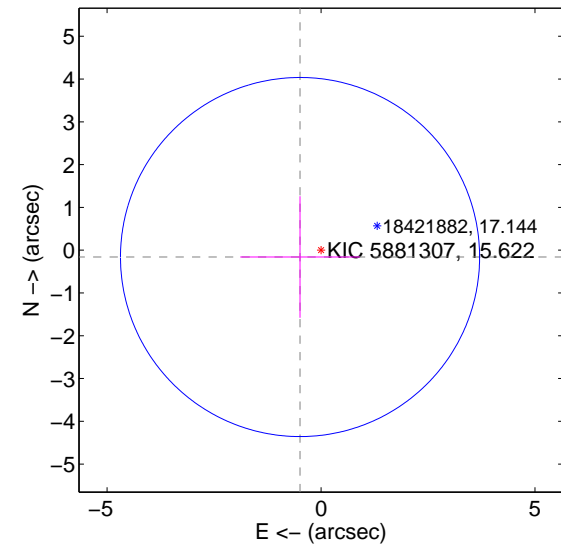
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

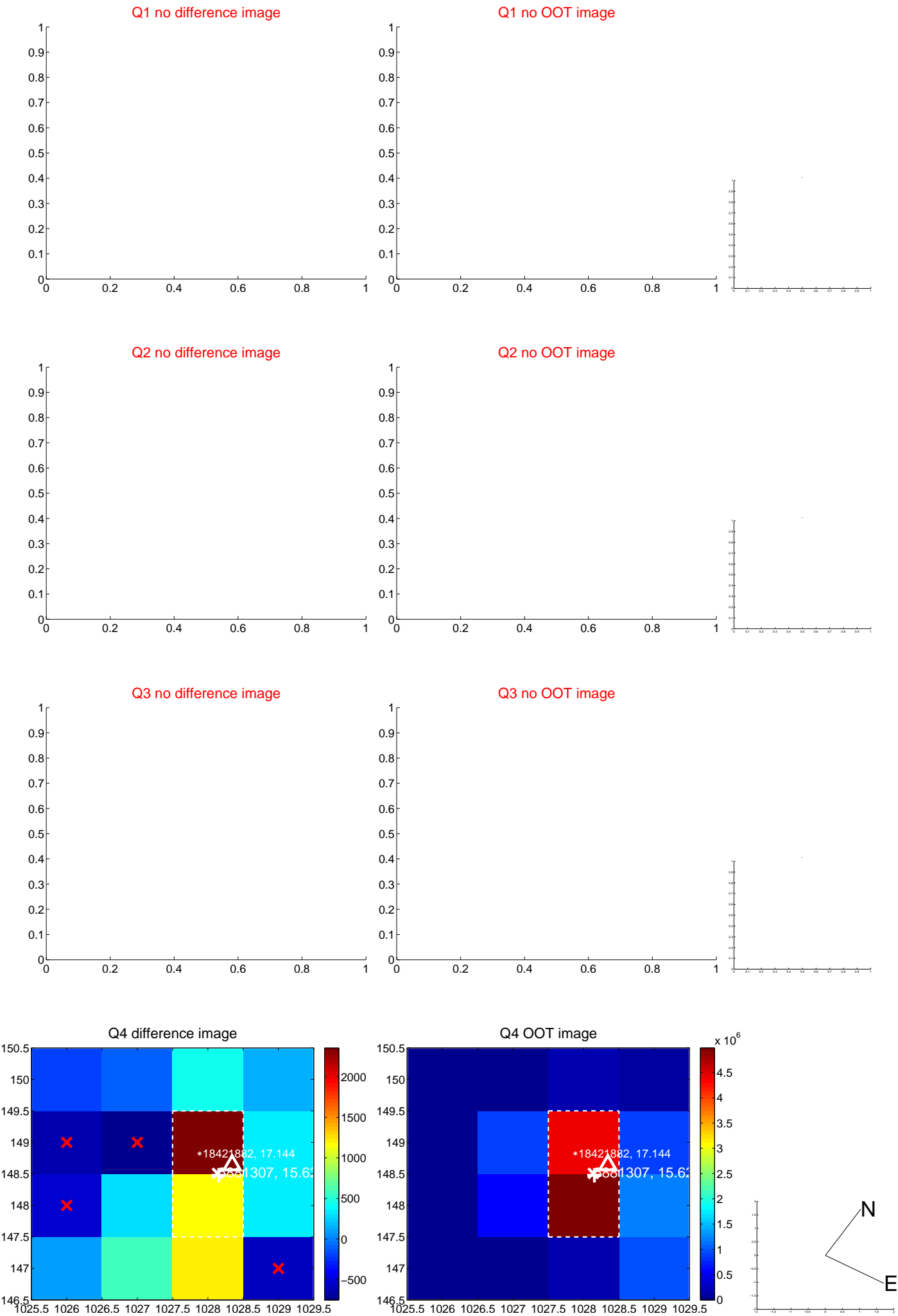


offset from photometric centroids

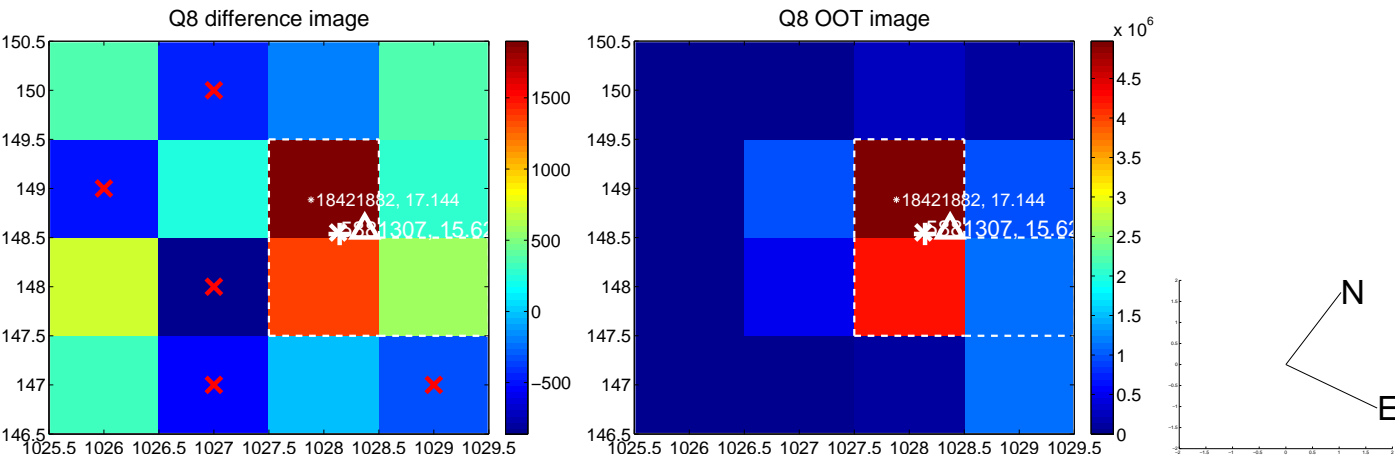
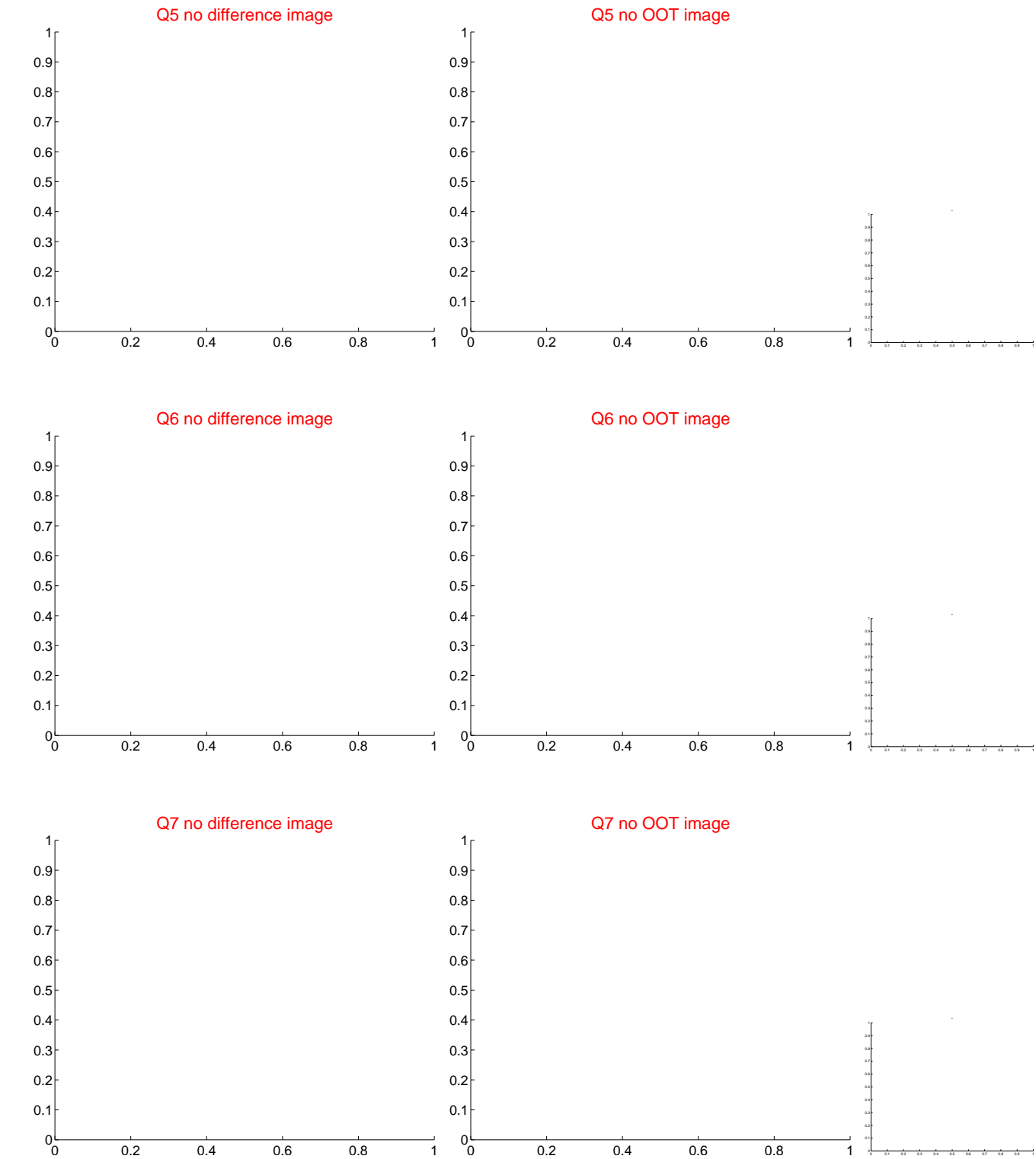


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

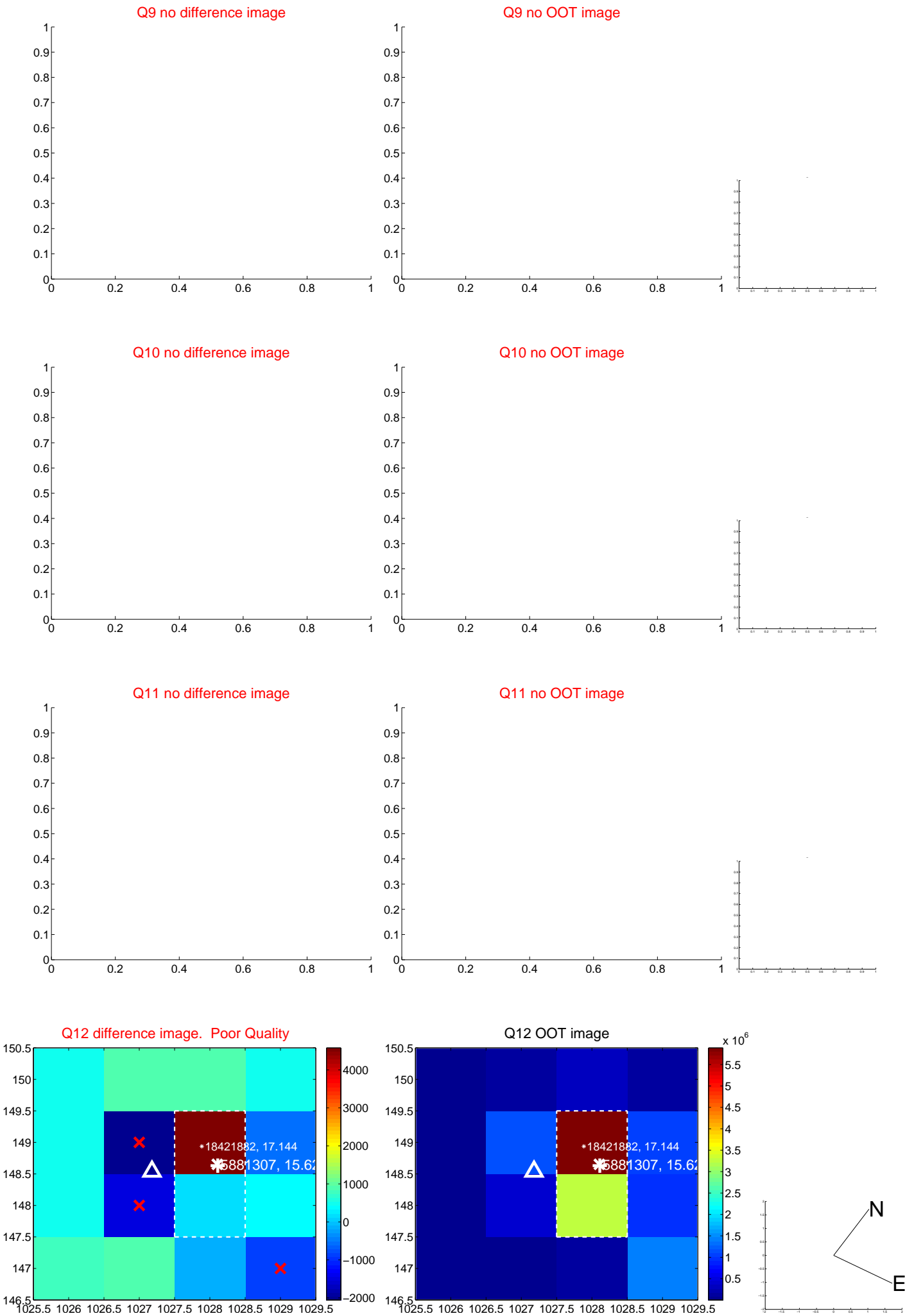
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



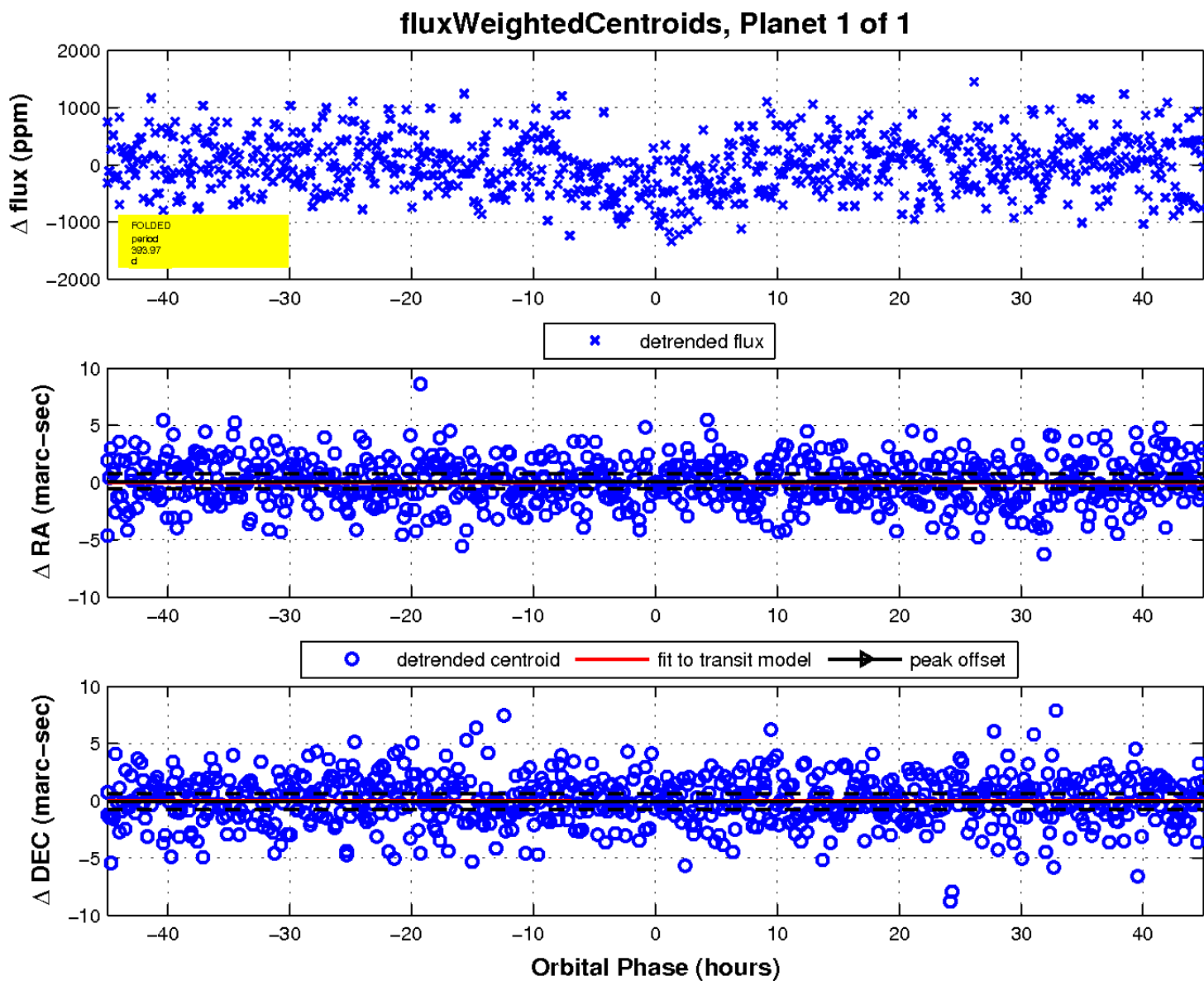
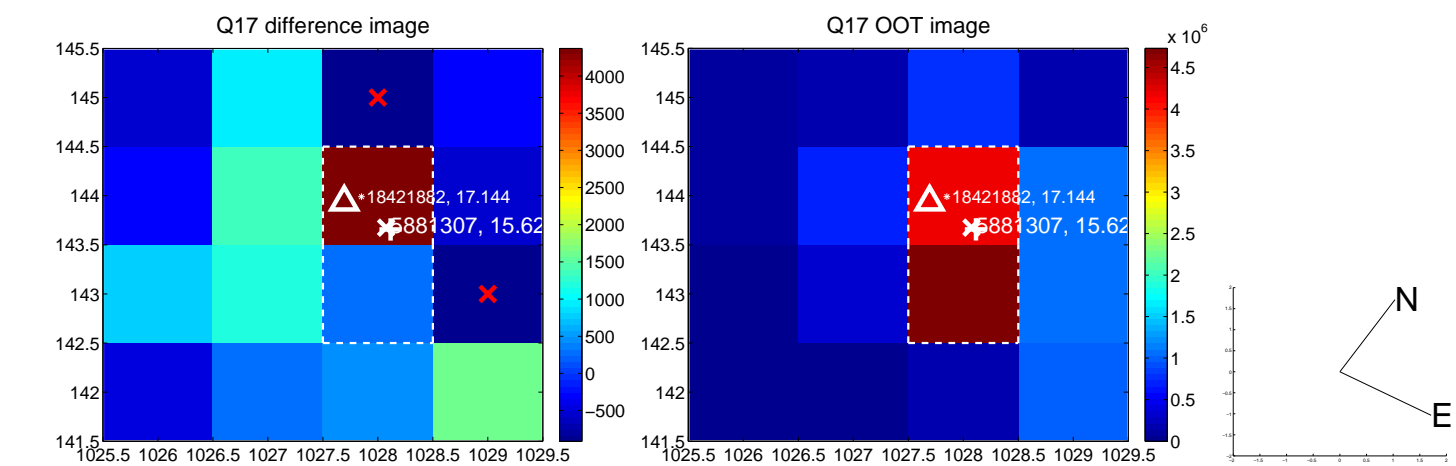
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UKIRT Image

