

KIC 005544903

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})
005544903-01	OBS	2499.01	7.575748	138.212699	405.7	2.805	11.6	12.4	1.17	6418	2.85	316.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005544903-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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.

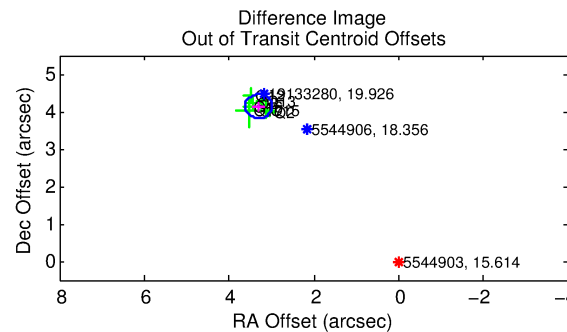
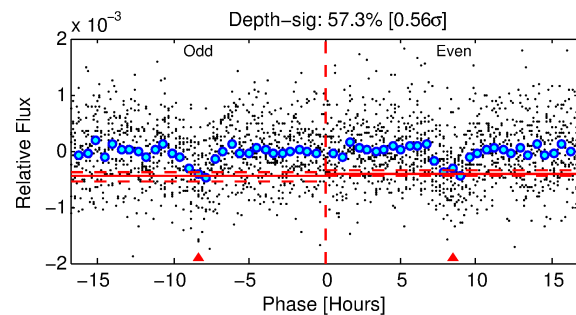
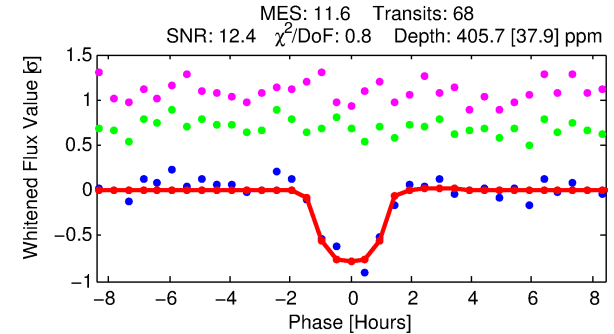
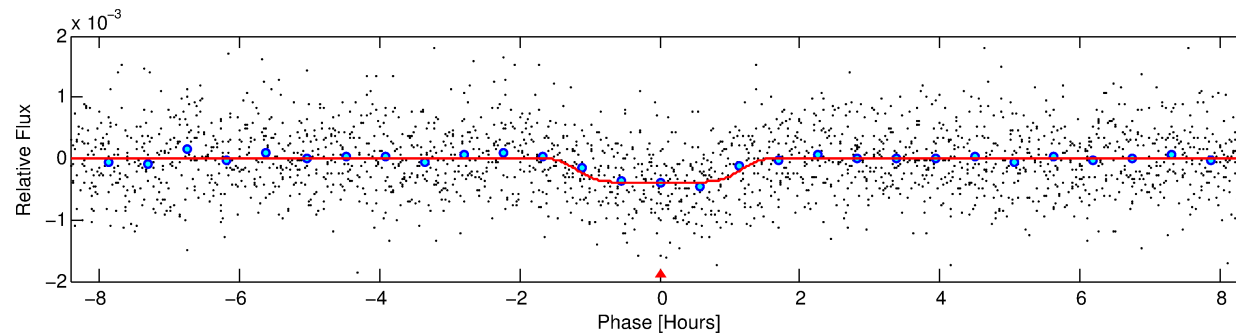
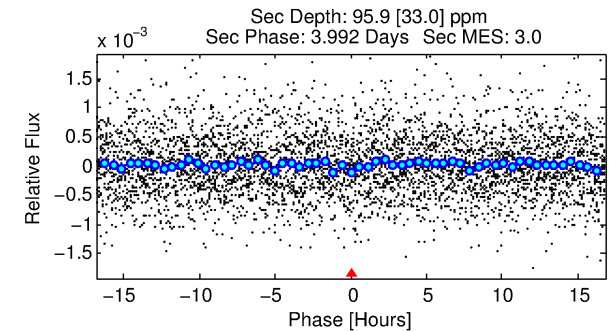
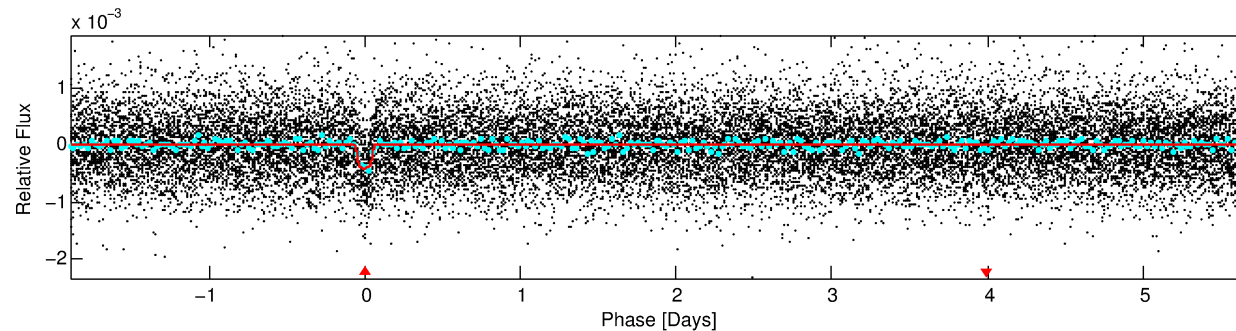
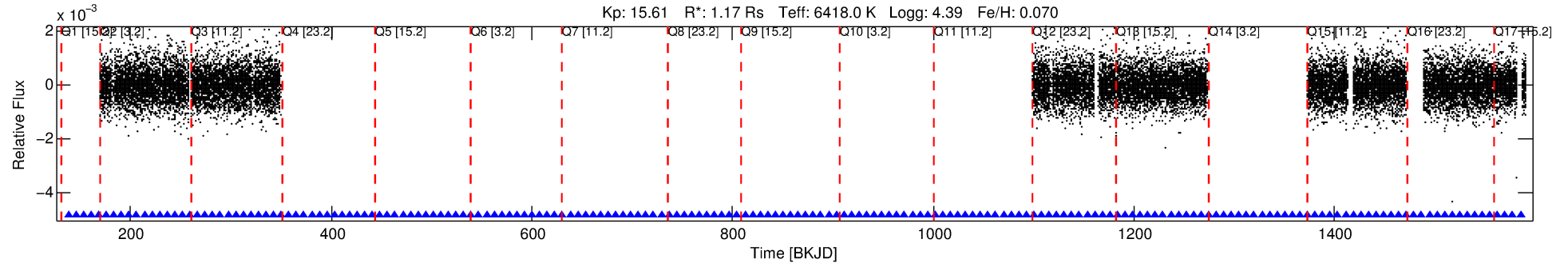
Ephemeris Match Information For 005544903-01

No Significant Match Found

DV One-Page Summary

KIC: 5544903 Candidate: 1 of 1 Period: 7.576 d
KOI: K02499.01 Corr: 0.911

Kp: 15.61 R*: 1.17 Rs Teff: 6418.0 K Logg: 4.39 Fe/H: 0.070



DV Fit Results:

Period = 7.57575 [0.00004] d
Epoch = 138.2127 [0.0046] BKJD
Rp/R* = 0.0223 [0.0040]
a/R* = 8.79 [8.01]
b = 0.93 [0.14]
Seff = 316.44 [135.24]
Teq = 1075 [115] K
Rp = 2.85 [1.09] Re
a = 0.0812 [0.0225] AU
Ag = 42.66 [27.03] [1.54σ]
Teff = 4250 [557] K [5.59σ]

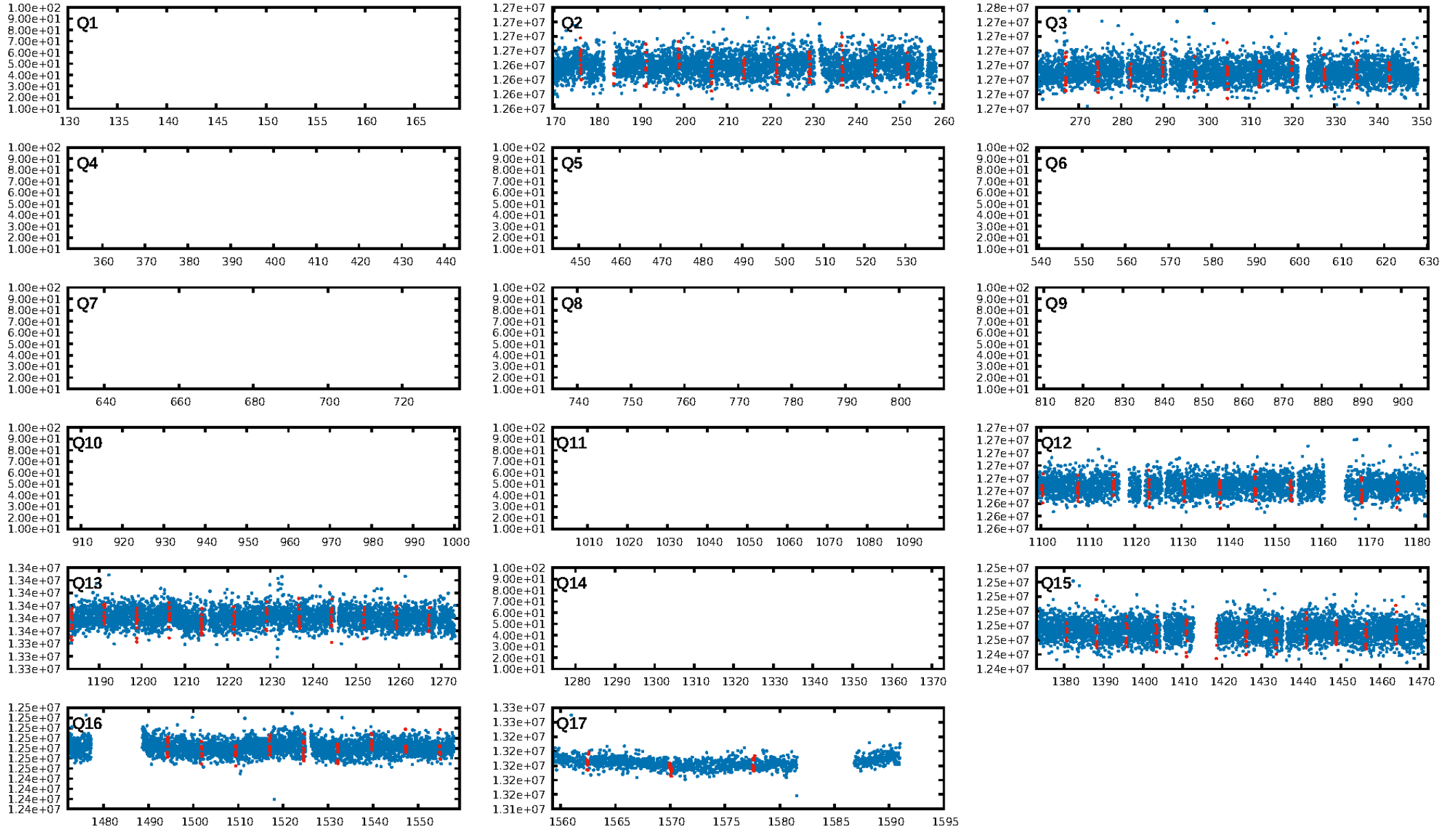
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.53e-31
RollingBand-fgt: 1.00 [65/65]
GhostDiagnostic-chr: 0.2119
Centroid-sig: 0.0%
Centroid-so: 13.490 arcsec [11.81σ]
OotOffset-rm: 5.300 arcsec [49.69σ]
KicOffset-rm: 5.266 arcsec [49.43σ]
OotOffset-st: 1/2/2/2 [7]
KicOffset-st: 1/2/2/2 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [7/7]

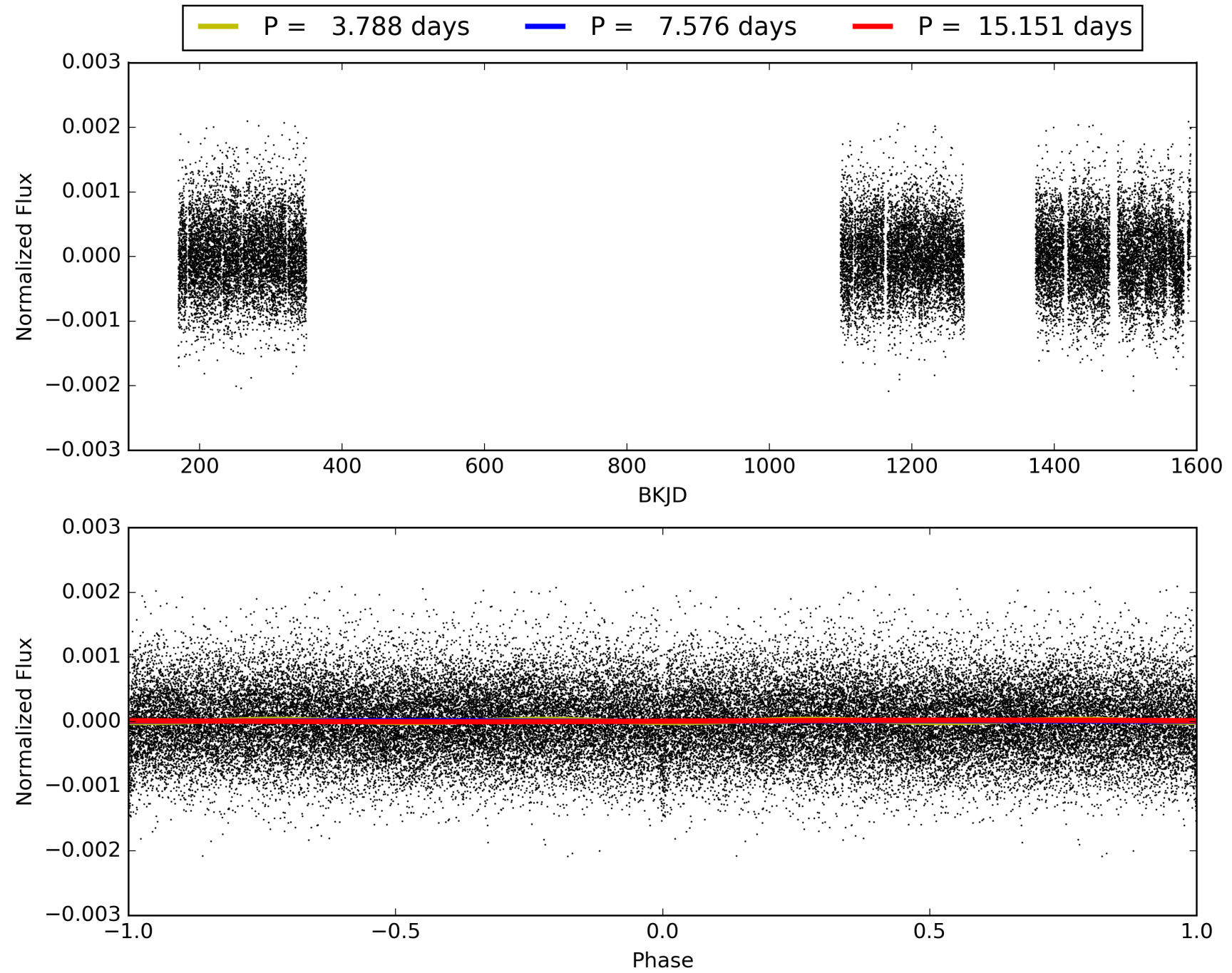
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:52:04 Z

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

TCE 005544903-01, PDC Light Curves

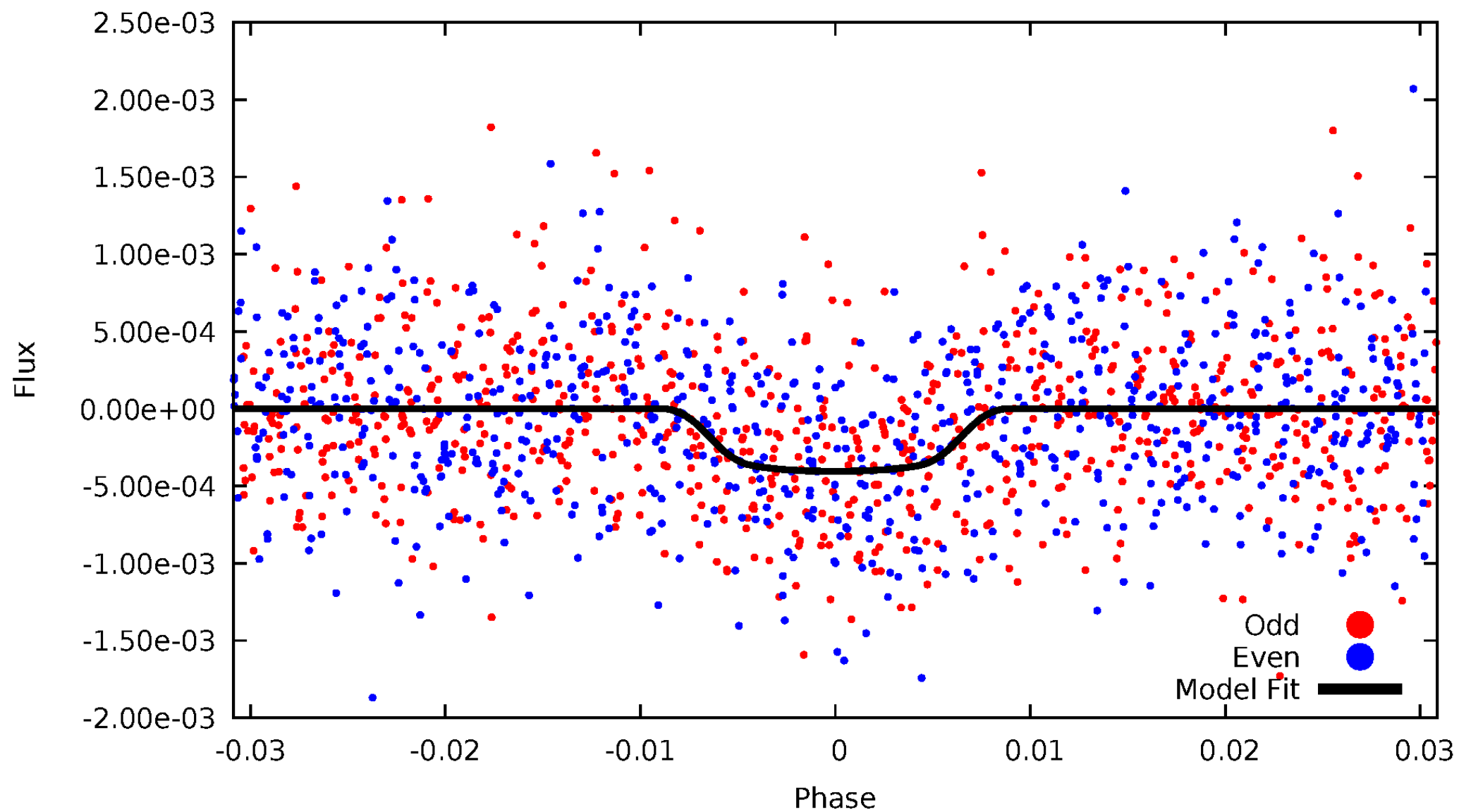


TCE 005544903-01



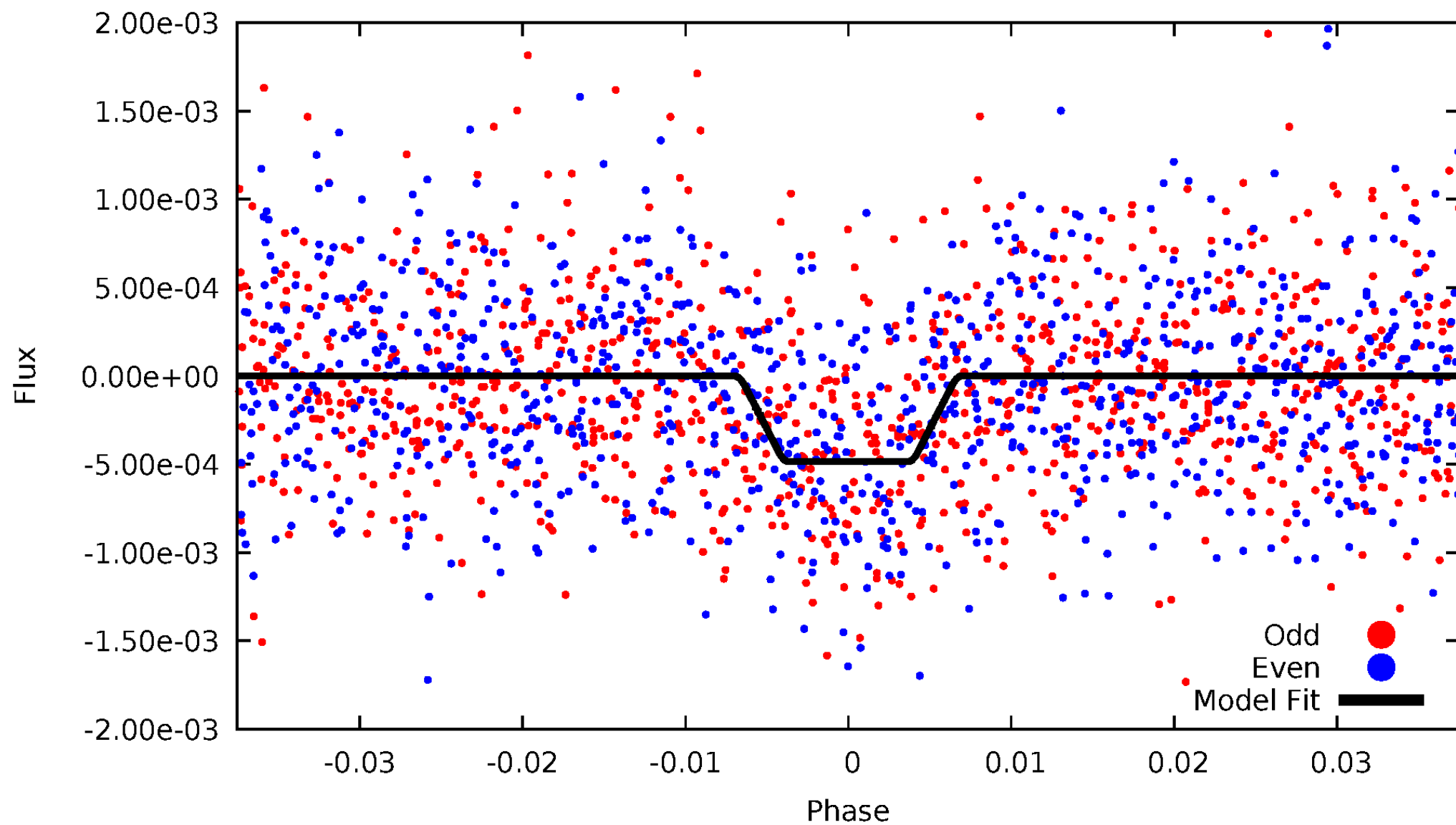
DV Odd/Even

TCE 005544903-01

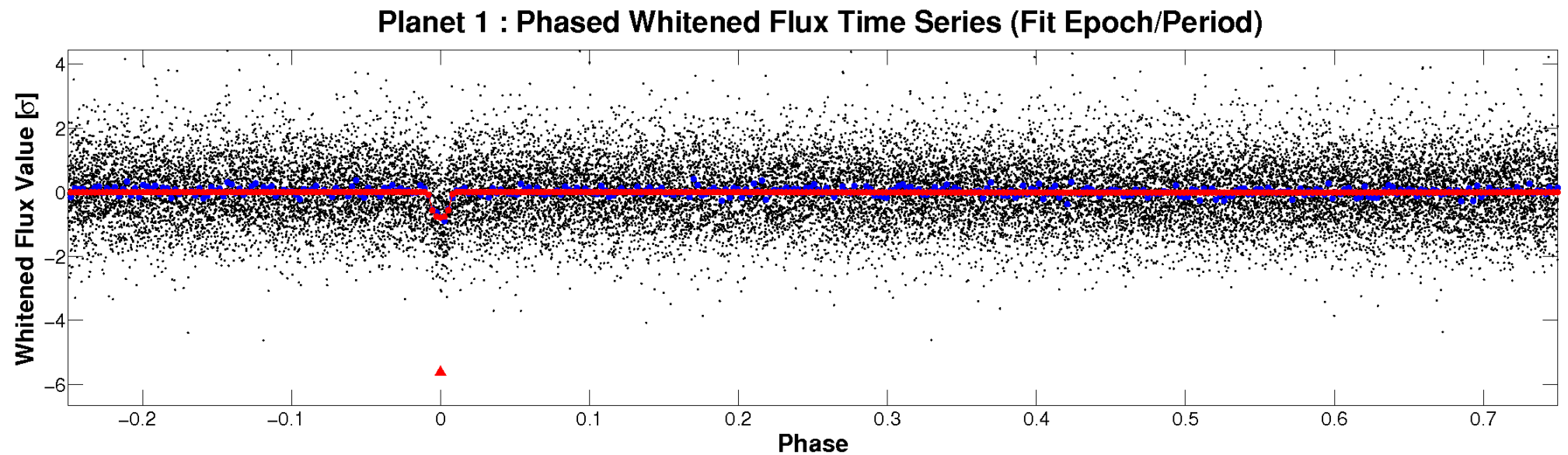
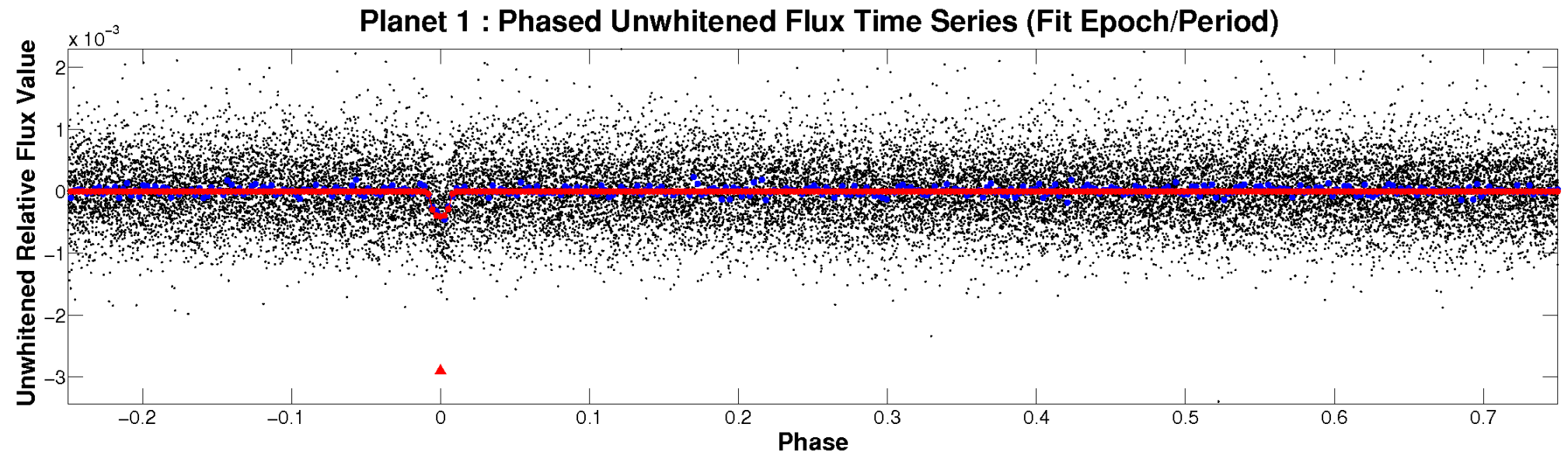


ALT Odd/Even

TCE 005544903-01

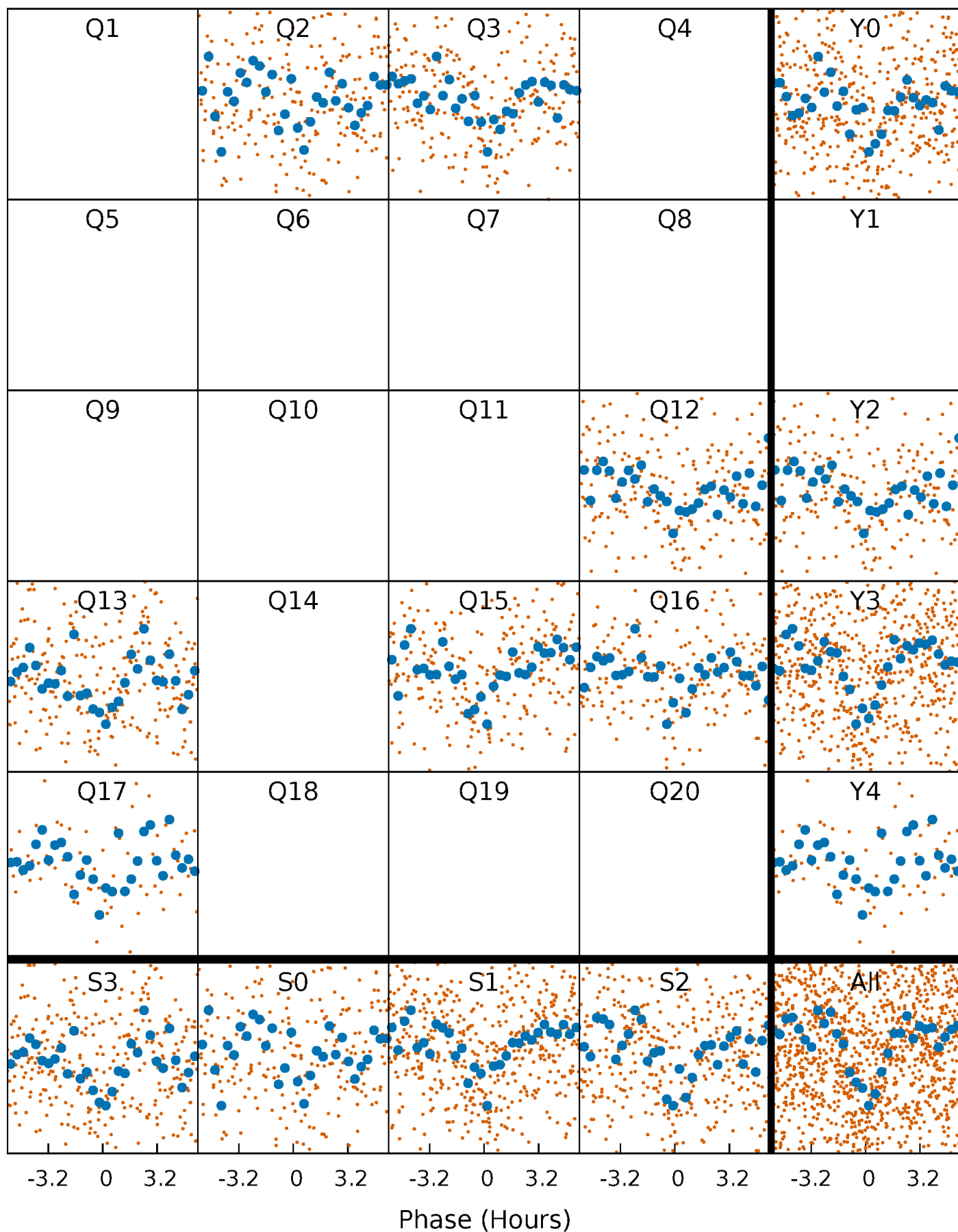


Non-Whitened Vs. Whitened Light Curve



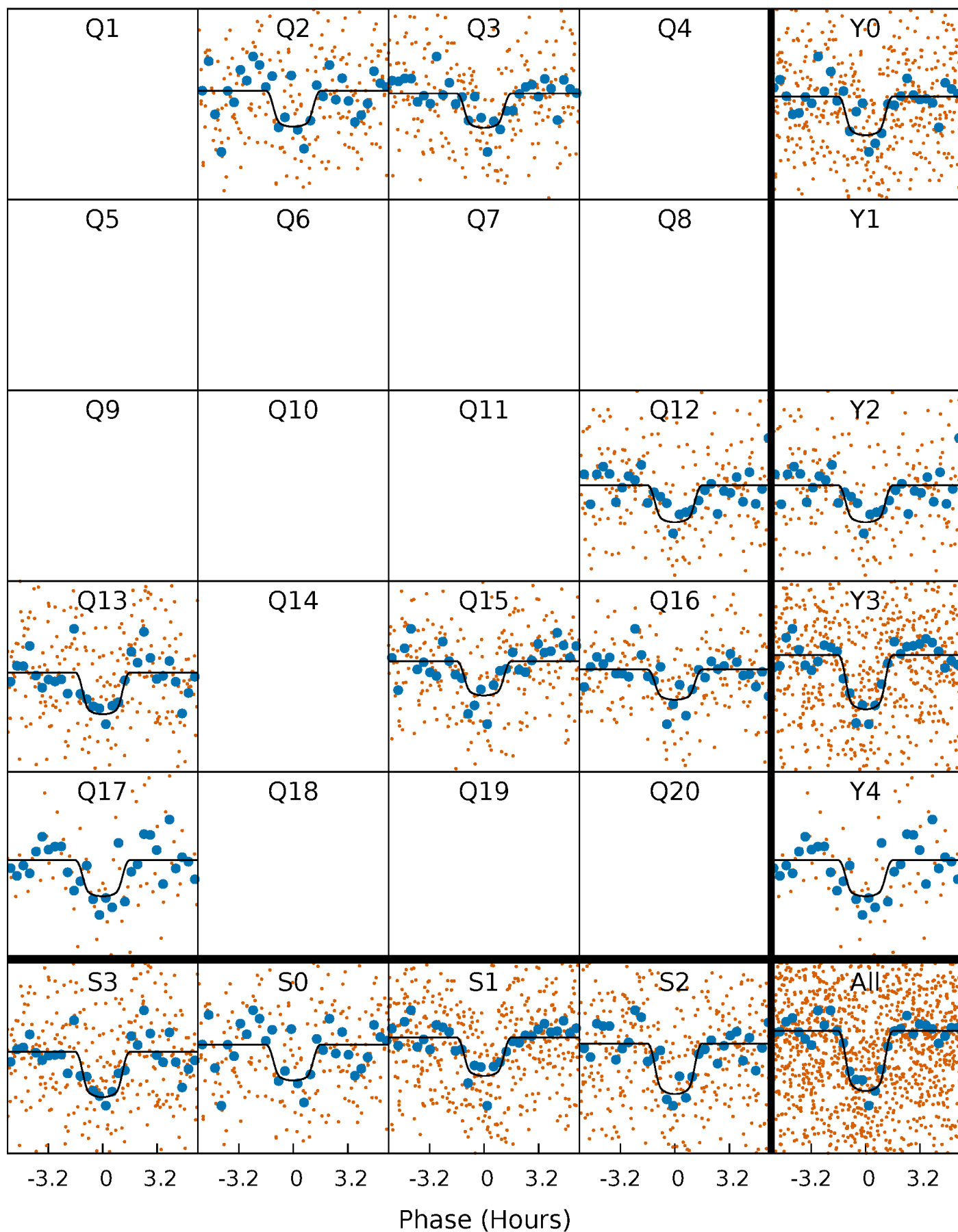
PDC Quarter-Phased Transit Curves

TCE 005544903-01 P= 7.575748 Days $T_0=138.212699$ (BKJD)



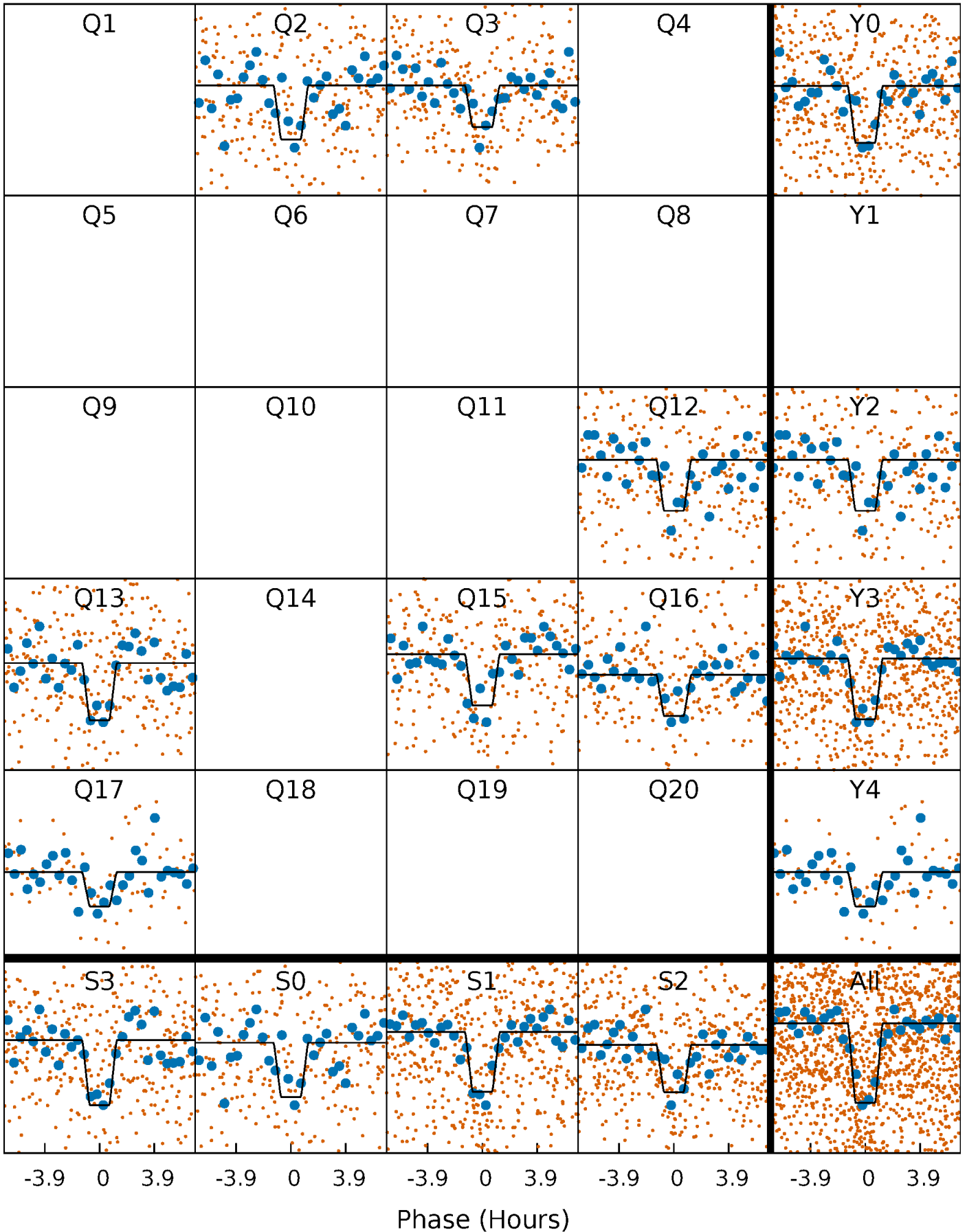
DV Quarter-Phased Transit Curves

TCE 005544903-01 P= 7.575748 Days $T_0=138.212699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

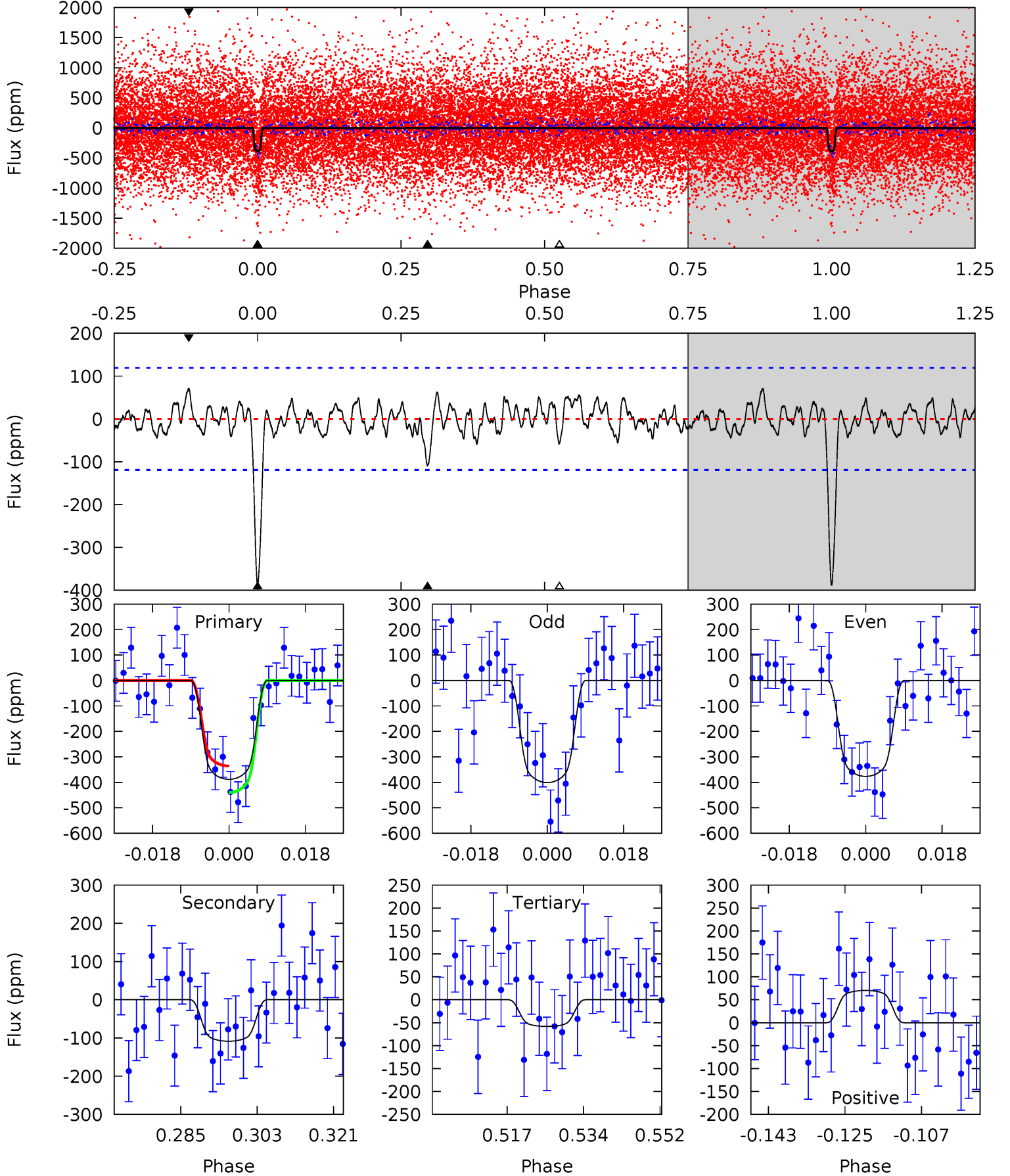
TCE 005544903-01 P= 7.575635 Days $T_0=138.229425$ (BKJD)



DV Model-Shift Uniqueness Test

005544903-01, P = 7.575748 Days, E = 138.212699 Days

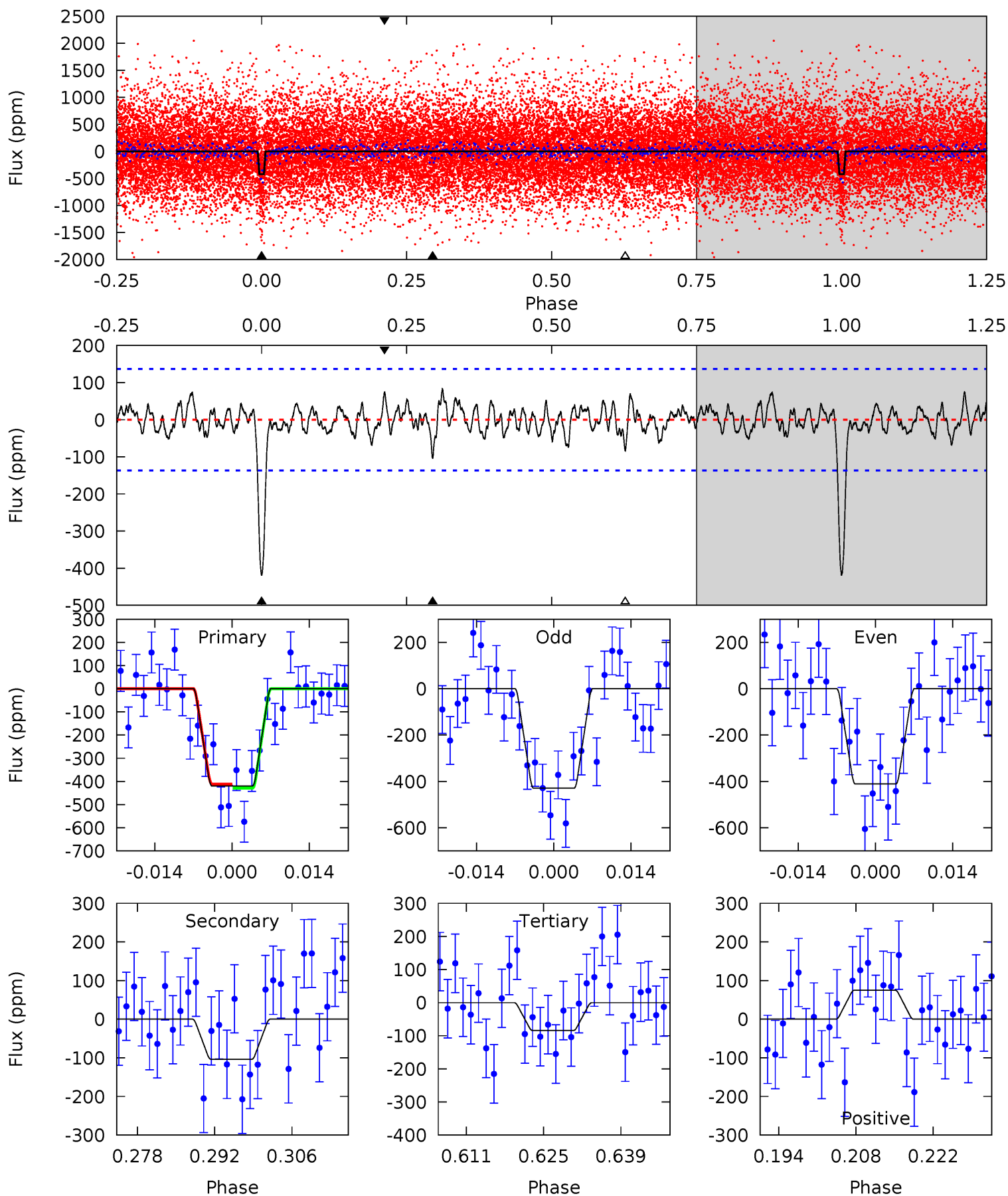
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	4.48	2.41	2.91	4.91	2.37	1.05	13.6	13.1	2.08	1.58	0.50	0.96	0.15	2.16



Alt Model-Shift Uniqueness Test

005544903-01, P = 7.575635 Days, E = 138.229425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	3.77	3.06	2.72	4.96	2.46	1.03	12.2	12.5	0.71	1.05	0.33	0.95	0.17	0.32



Stellar Parameters For KIC 005544903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6418^{+179}_{-268}	$4.395^{+0.056}_{-0.210}$	$0.070^{+0.250}_{-0.300}$	$1.171^{+0.396}_{-0.132}$	$1.241^{+0.162}_{-0.180}$	$1.090^{+0.321}_{-0.586}$
	+3%/-4%	+1%/-5%	+357%/-429%	+34%/-11%	+13%/-15%	+29%/-54%
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 005544903-01 / KOI 2499.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-109±24	$2.99^{+0.72}_{-0.63}$	1530^{+108}_{-89}	4538^{+414}_{-382}	43^{+26}_{-17}
Alt.	-104±28	$2.96^{+0.70}_{-0.63}$	1534^{+112}_{-83}	4515^{+467}_{-394}	42^{+30}_{-16}

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 $A_{obs} \gg 1.0$

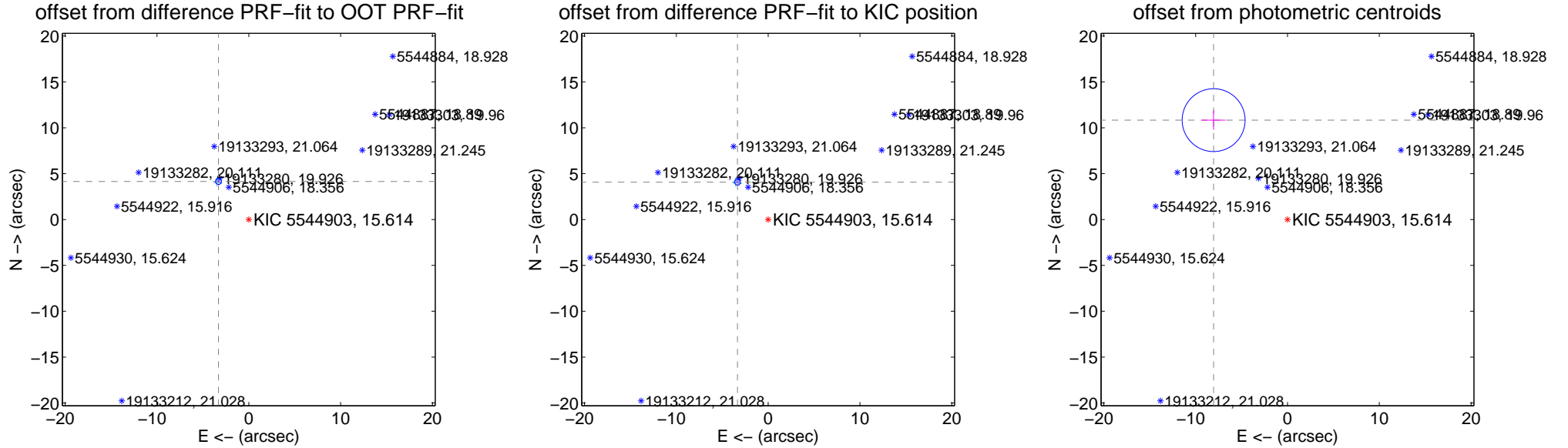
DV Centroid Data

Supplemental centroid analysis for 005544903-01. Kepler magnitude: 15.61. Transit SNR 12.41

There are 7 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.300 \pm 0.107	49.69	3.301 \pm 0.116	4.147 \pm 0.100
PRF-fit source offset from KIC position	5.266 \pm 0.107	49.43	3.338 \pm 0.125	4.073 \pm 0.092
photometric centroid source offset	13.49 \pm 1.14	11.81	8.04 \pm 1.28	10.83 \pm 1.06



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.

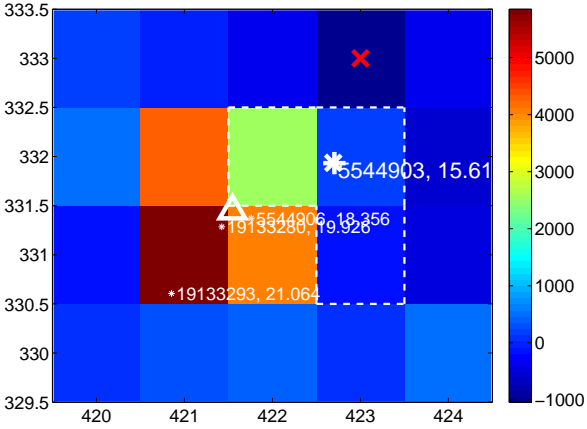
Q1 no difference image



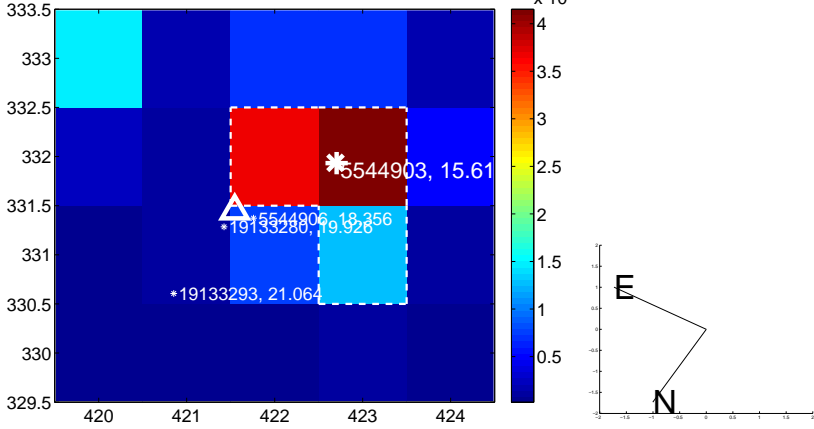
Q1 no OOT image



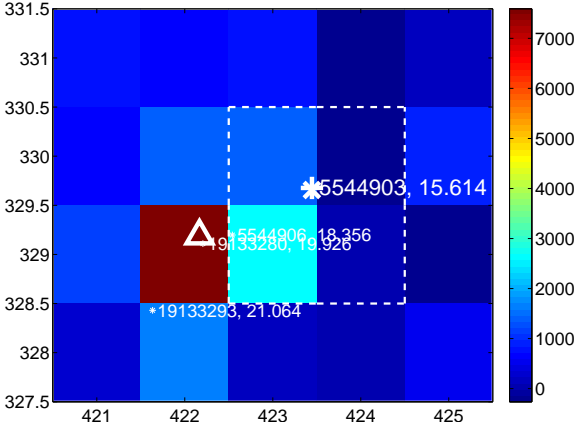
Q2 difference image



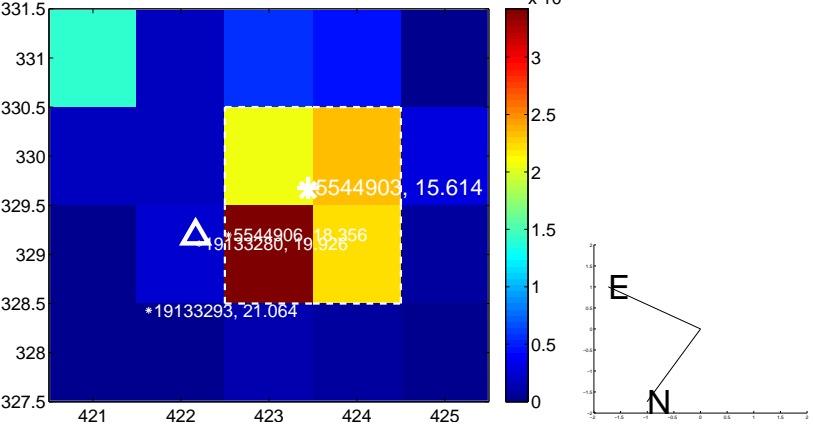
Q2 OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



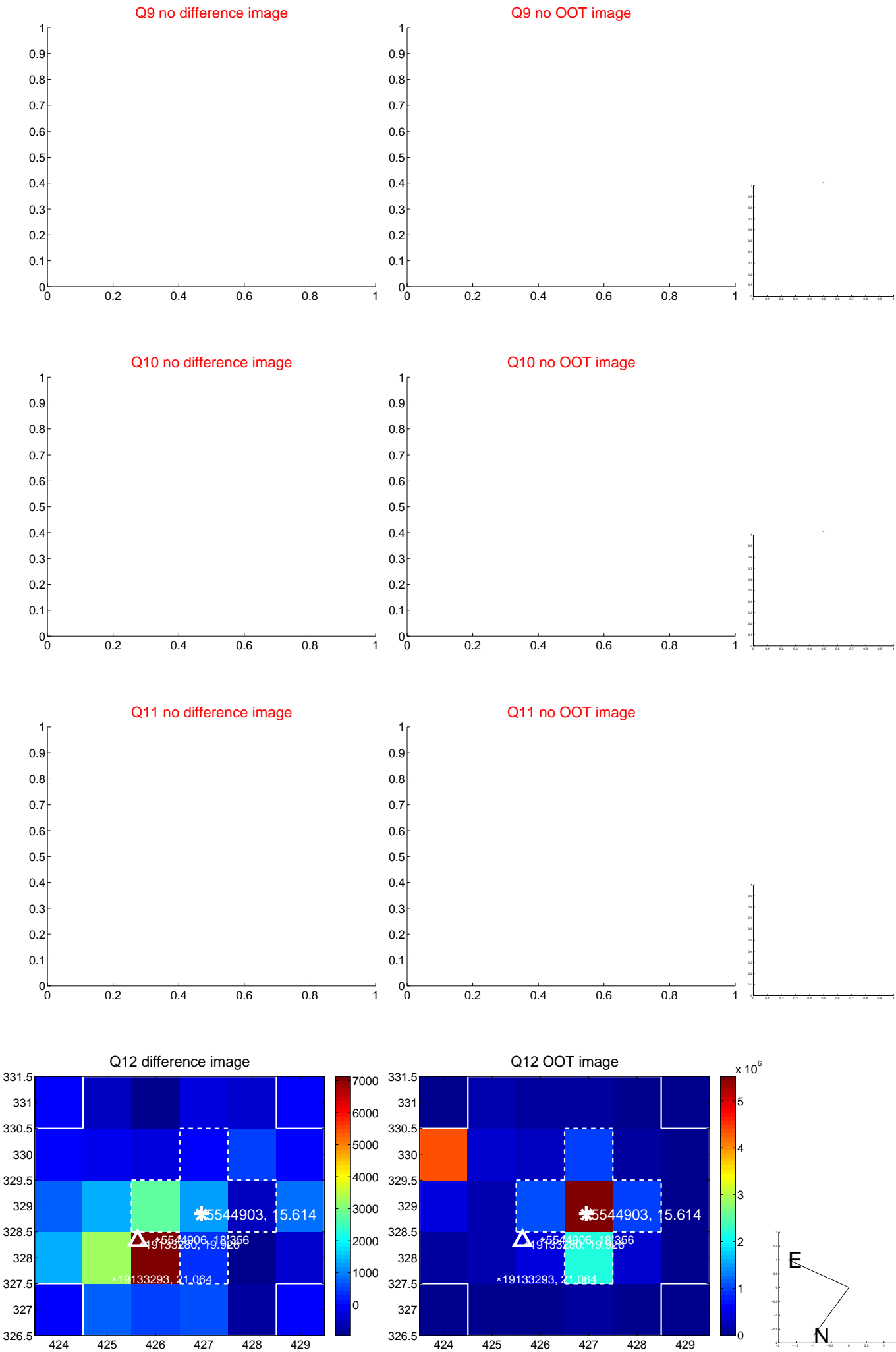
Q4 no OOT image



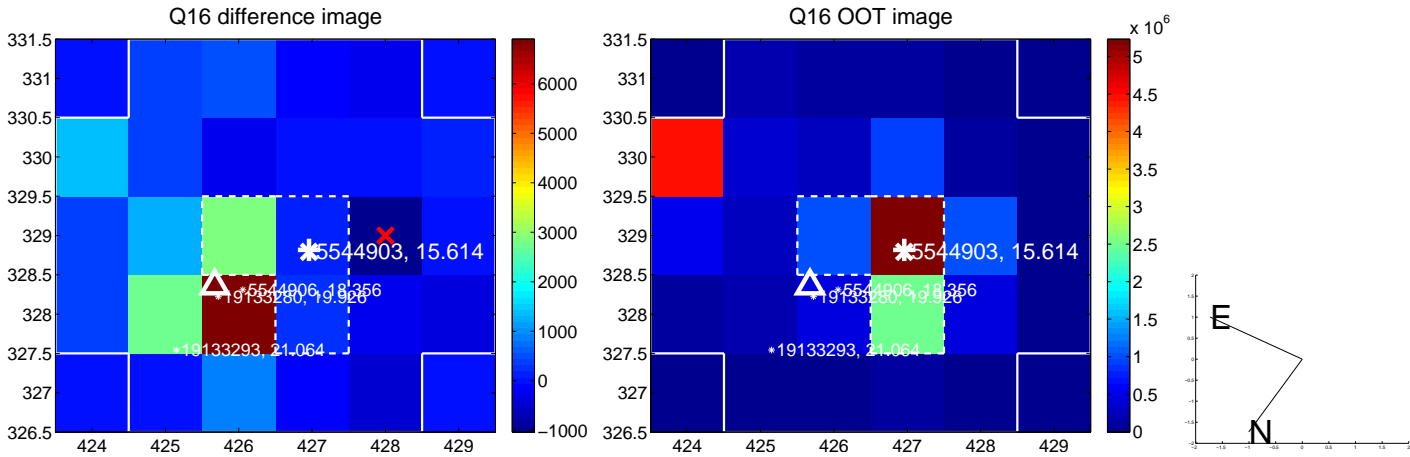
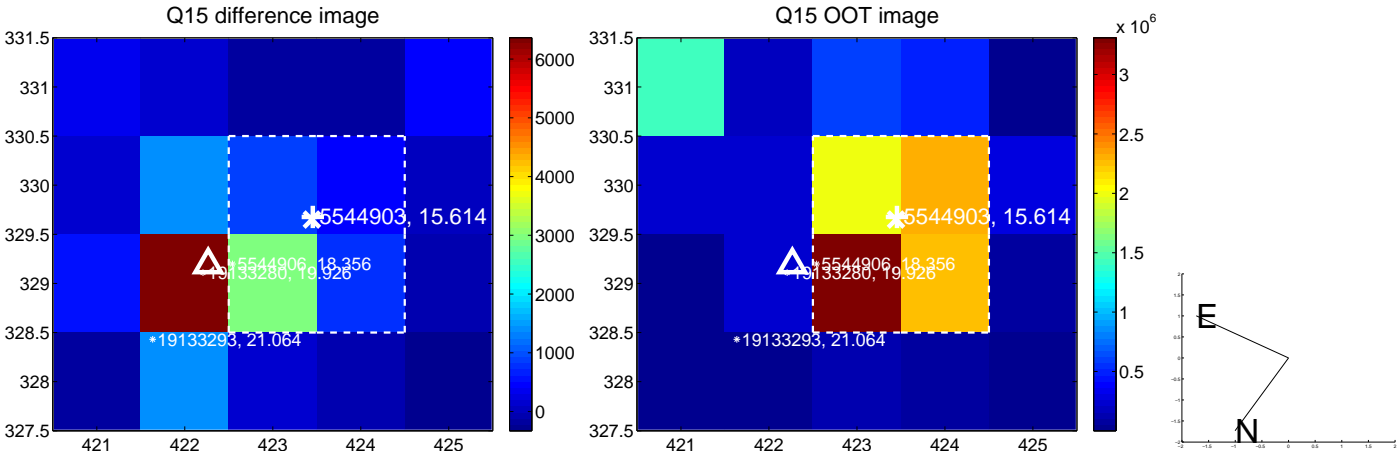
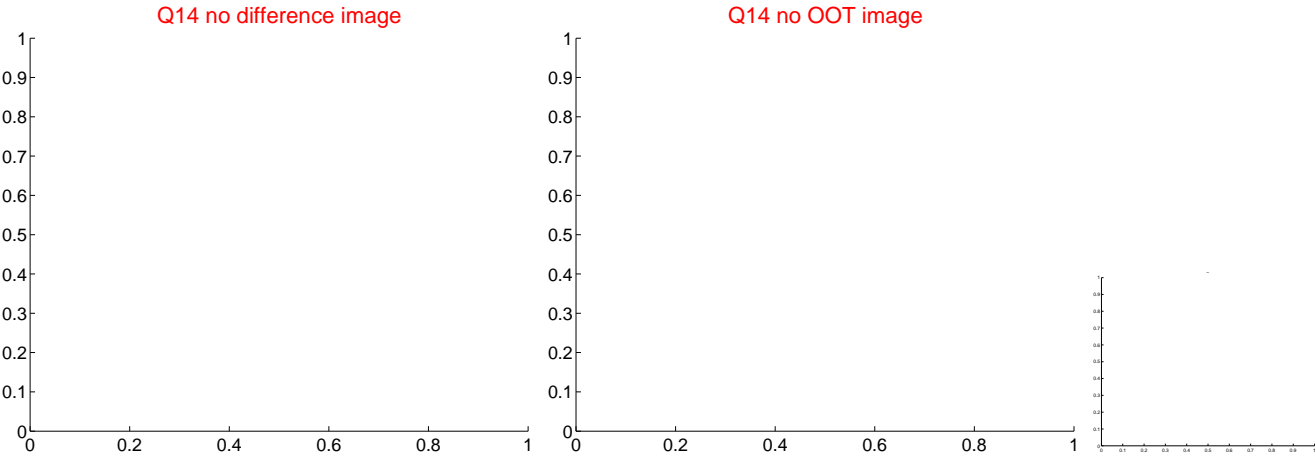
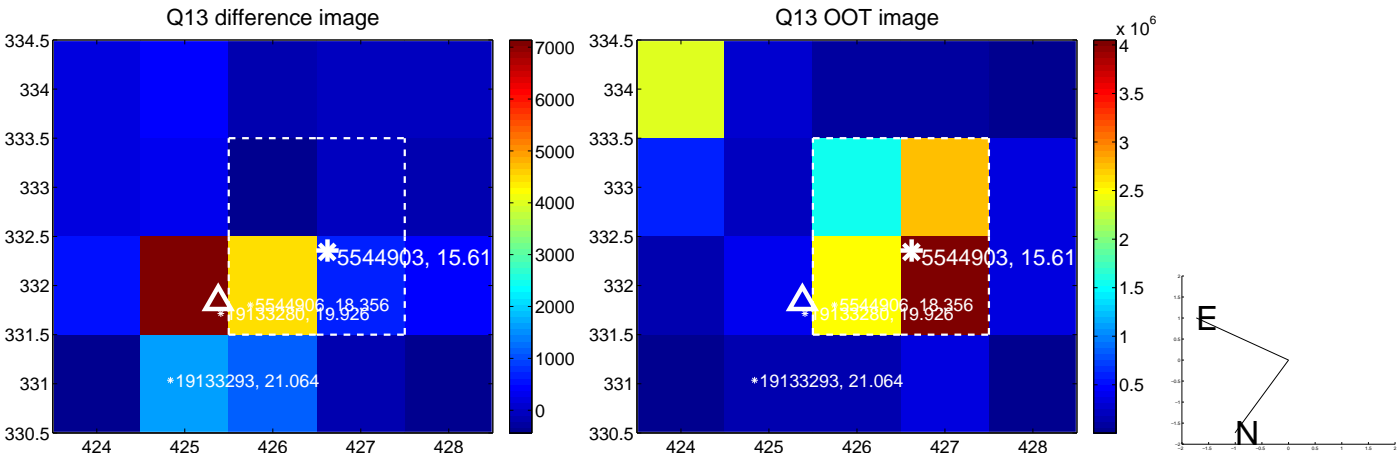
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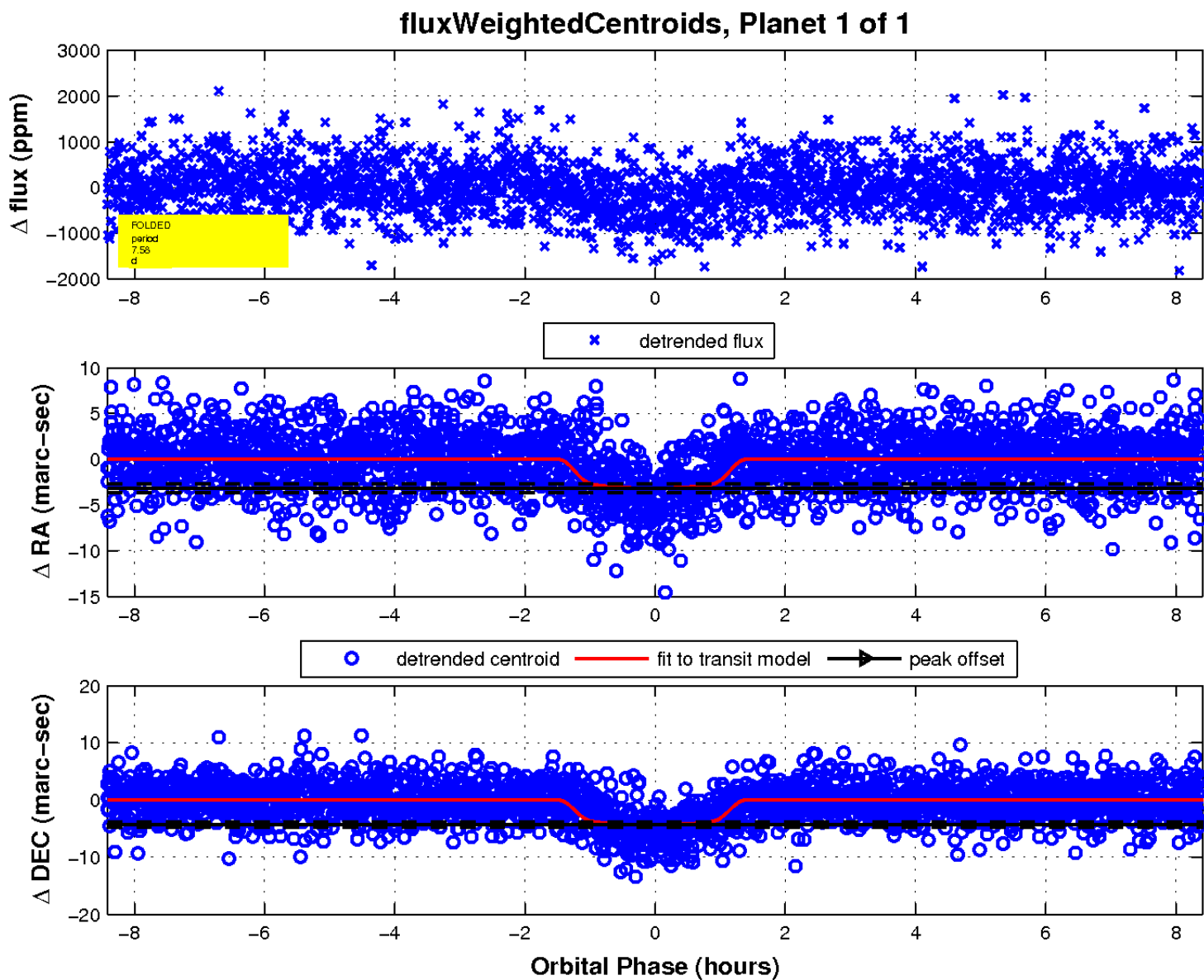
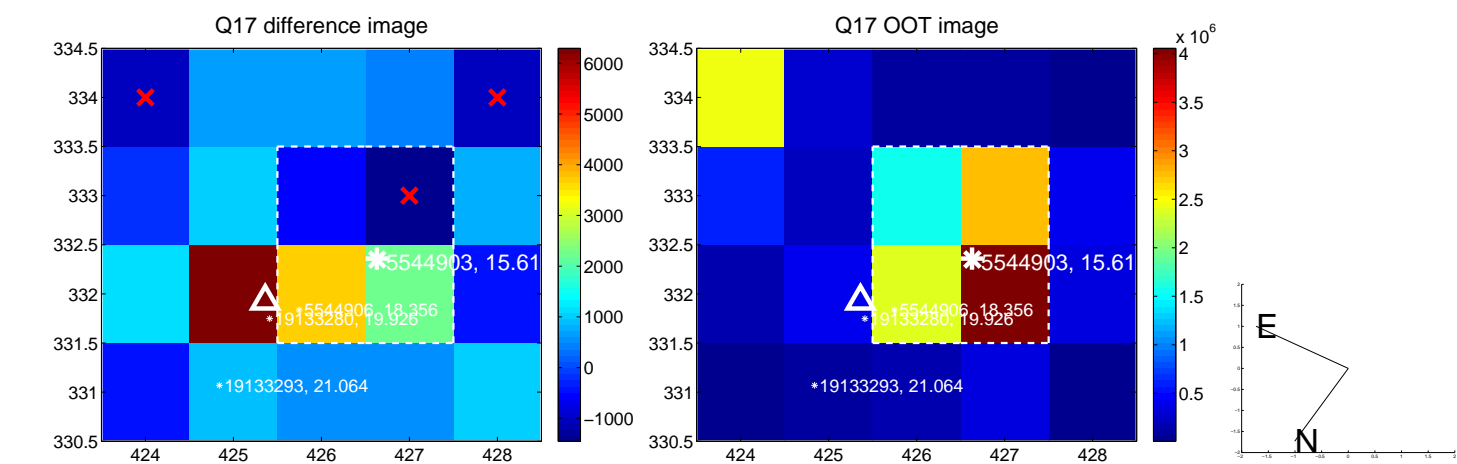
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

