

List of Changes for the 10th release of SOFA as of 2013 November 19.

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 FORTRAN Files  
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Date e-mailed	File	Short Reason
2012 Sep 5	epv00.for	Comment - minor.
2013 Aug 31	egeq94.for	Comment - minor.
2012 Sep 5	fk5hz.for	Comment - minor.
2012 Sep 5	hfk5z.for	Comment - minor.
2012 Sep 5	nutm80.for	Comment - minor.
2012 Sep 5	plan94.for	Comment - minor.
2012 Sep 5	pnm80.for	Comment - minor.
2013 Apr 16	utlutc.for	Comment - minor.
2013 May 14	xys06a.for	Comment - corrected to IAU 2006/2000A.
2013 May 29	dat.for	Minor.
2013 Jul 26	dtf2d.for	Corrected due to bug with TAI->UTC 1960-1972.
2013 Jul 26	d2dtf.for	Corrected due to bug with TAI->UTC 1960-1972.
2013 Jul 26	utctai.for	Corrected due to bug with TAI->UTC 1960-1972
2013 Aug 07	epb.for	Comment - minor.
2013 Aug 12	utcut1.for	Comment - correction.
2013 Aug 21	bp00.for	Minor - support argument re-use.
2013 Aug 21	bp06.for	Minor - support argument re-use.
2013 Aug 24	c2tcio.for	Comment - '(radians)' inserted.
2013 Aug 24	c2teqx.for	Comment - '(radians)' inserted.
2013 Sep 01	gc2gd.for	Minor - if error, ELONG now set to -1D9.
2013 Sep 02	fw2xy.for	Comment - minor.
2013 Sep 12	taiutc.for	Corrected due to bug with TAI->UTC 1960-1972
2013 Oct 04	t_sofa_f.for	Updated.
2013 Nov 14	pn06.for	Comment - correction.
2013 Nov 19	prec76.for	Minor - consistency.

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 ANSI C Files  
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Date e-mailed	File	Short Reason
2013 Jun 18	*.c	Inclusion of sofam.h was replaced with sofa.h which now includes sofam.h (all except ee00.c, ee00a.c, ee00b.c, ee06a.c & gst94.c).
2013 Jun 18	gmst82.c	Comment - typographical.
2013 Jun 18	starp.m.c	Comment - typographical.
2013 Jun 18	utlutc.c	Comment - correction.
2013 Jun 18	xys06a.c	Comment - corrected to IAU 2006/2000A.
2013 Jun 18	c2i06a.c	Comment - typographical.
2013 Jun 18	eo06a.c	Comment - typographical.
2013 Jun 18	s00a.c	Comment - typographical.
2013 Jun 18	s00b.c	Comment - typographical.
2013 Jun 18	c2i06a.c	Comment - typographical.
2013 Jul 26	dtf2d.c	Corrected due to bug with TAI->UTC 1960-1972.
2013 Jul 26	d2dtf.c	Corrected due to bug with TAI->UTC 1960-1972.
2013 Jul 31	a2tf.c	Comment - typographical.
2013 Aug 07	cal2jd.c	Trivial.
2013 Aug 13	epb2jd.c	Trivial.
2013 Aug 07	epj2jd.c	Trivial.
2013 Aug 07	epj.c	Comment - typographical.
2013 Aug 07	jd2cal.c	Trivial.
2013 Aug 07	pm.c	Trivial.
2013 Aug 07	sxp.v.c	Comment - correction.
2013 Aug 12	utcut1.c	Comment - corrections.
2013 Aug 21	dat.c	Minor.
2013 Aug 21	bp00.c	Trivial - white space.
2013 Aug 21	bp06.c	Minor - support argument re-use.
2013 Aug 21	epb.c	Trivial.
2013 Aug 24	c2tcio.c	Comment - '(radians)' inserted.
2013 Aug 24	c2teqx.c	Comment - '(radians)' inserted.
2013 Aug 31	egeq94.c	Comment - routine missing from 'Called' list.
2013 Aug 21	xy06.c	Trivial.
2013 Aug 22	sofa.h	Updated and also now #includes sofam.h.

2013 Aug 27	sofam.h	Updated.
2013 Sep 1	gc2gd.c	Minor - elong now set to -1e9 on error.
2013 Sep 2	fw2xy.c	Comment - correction.
2013 Jul 26	utctai.c	Corrected due to bug with TAI->UTC 1960-1972.
2013 Sep 12	taiutc.c	Corrected due to bug with TAI->UTC 1960-1972.
2013 Oct 04	t_sofa_c.c	Updated.
2013 Nov 14	pn00a.c	Comment - correction.
2014 Nov 14	pn00b.c	Comment - correction.
2014 Nov 14	pn06a.c	Comment - correction.
2014 Nov 14	pn06.c	Comment - correction.
2013 Nov 19	prec76.c	Minor - consistency.

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Documentation Files  
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2012 Jul 20	sofa_pn.tex	Add note that in the example numerical values for
2012 Jul 20	sofa_pn.pdf	polar motion and UT1-UTC are for illustration
		only.
2013 Feb 12	sofa_ts.tex	Units information added since:
		1) In the equation for TCG in terms of TT in Sect.
		3.6.4, TCG and TT are in JD or MJD form, though
		that is not stated.
		2) In the equation for TDB in terms of TCB in
		Sect. 3.6.5 (which is taken straight from the
		IAU resolution) TDB and TCB are in seconds, and
		that also is not stated.
2013 Aug 23	sofa_ts.tex	Page 23 of the c version; the xyz array should be
	sofa_ts_c.pdf	dimensioned to 3.
	sofa_ts_f.pdf	
2013 Apr 30	board.lis	George Hobbs, retired and Scott Ransom joined.
	copyr.lis	Cosmetic change.
	intro.lis	Changes to deal with adding new section.
	sofa_lib.lis	Changes to deal with adding new section.

n.b. Tex source files are not distributed.

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NEW FILES  
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33 x 2 .c & .f files + 3 pdf files

Astrometry

AB	apply stellar aberration
APCG	prepare for ICRS <-> GCRS, geocentric, special
APCG13	prepare for ICRS <-> GCRS, geocentric
APCI	prepare for ICRS <-> CIRS, terrestrial, special
APCI13	prepare for ICRS <-> CIRS, terrestrial
APCO	prepare for ICRS <-> observed, terrestrial, special
APCO13	prepare for ICRS <-> observed, terrestrial
APCS	prepare for ICRS <-> CIRS, space, special
APCS13	prepare for ICRS <-> CIRS, space
APER	insert ERA into context
APER13	update context for Earth rotation
APIO	prepare for CIRS <-> observed, terrestrial, special
APIO13	prepare for CIRS <-> observed, terrestrial
ATCI13	catalog -> CIRS
ATCIQ	quick ICRS -> CIRS
ATCIQN	quick ICRS -> CIRS, multiple deflections
ATCIQZ	quick astrometric ICRS -> CIRS
ATCO13	ICRS -> observed
ATIC13	CIRS -> ICRS
ATICQ	quick CIRS -> ICRS
ATICQN	quick CIRS -> ICRS, multiple deflections
ATIO13	CIRS -> observed
ATIOQ	quick CIRS -> observed
ATOC13	observed -> astrometric ICRS
ATOI13	observed -> CIRS
ATOIQ	quick observed -> CIRS
LD	light deflection by a single solar-system body

LDN light deflection by multiple solar-system bodies  
LDSUN light deflection by the Sun  
PMPX apply proper motion and parallax  
PVTOB observatory position and velocity  
REFCO refraction constants

Star catalog conversions

PMSAFE apply proper motion, with zero-parallax precautions

CookBooks/Documentation

sofa\_ast\_f.pdf SOFA Astrometry Tools, Fortran  
sofa\_ast\_c.pdf SOFA Astrometry Tools, ANSI C  
sofa\_ast\_summary.pdf 2-page summary of Astrometry Tools

CYH/SAB - 2013 November 20th.