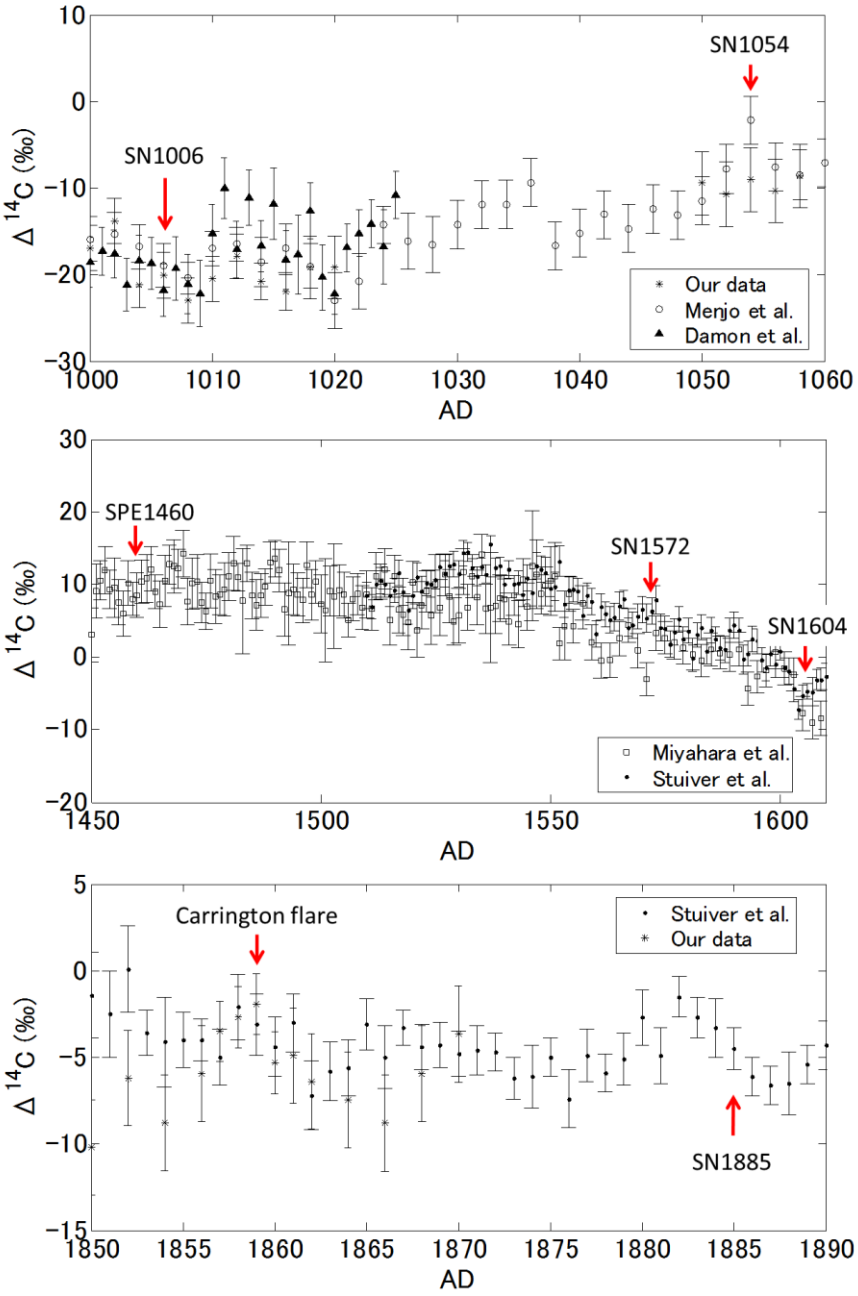
Supplementary information

Supplementary figures

Supplementary Figure S1 Photos of Tree-A (left) and Tree-C (right).



Supplementary Figure S2 Annual or biennual ^{14}C records around recorded years of supernovae and large SPEs. (upper) $\Delta^{14}C$ records from AD 1000 to 1060. The open circles are data of Menjo et al. (2005)[11], and the filled triangles are data of Damon et al. (1995)[12]. The two arrows indicate SN1006 and SN1054. (middle) From AD 1450 to 1610. The open squares are data of Miyahara et al. (2006, 2007)[16,29], and the dots are data of Stuiver et al. (1998)[13]. The three arrows indicate SPE1460, SN1572, and SN1604. (bottom) From AD 1850 to 1890. The two arrows indicate the Carrington flare (SPE1859) and SN1885.

Supplementary tables

Supplementary Table S1. Information of two Japanese cedar trees.

	Tree-A	Tree-C
Measured period	AD 600-1020, 1050-1058	AD 1850-1870
Growing age	AD 97-1956	AD 1280-1991
Utilize age	AD 97-1551	AD 1280-1991
Method of age determination	dendro-chronology	Bomb effect peak and dendro-chronology
Location	30.3°N, 130.5°E	30.2°N, 130.3°E

Supplementary Table S2. Resultant values of $\Delta^{14}C$.

AD 775 event			AD 994 event		
AD	$\Delta^{14}C$ [‰]	Error [‰]	AD	$\Delta^{14}C$ [‰]	Error [‰]
770	-18.5	1.2	989	-20.2	1.9
771	-20.9	1.9	990	-25.3	2.9
772	-17.7	1.2	991	-21.5	1.5
773	-22.4	1.9	992	-22.8	2.0
774	-17.7	1.5	993	-20.7	1.6
775	-5.8	1.8	994	-11.5	2.0
776	-2.5	1.5	995	-12.9	1.5
777	-5.3	1.8	996	-11.3	2.0
778	-4.7	1.5	997	-14.2	2.0
779	-7.2	1.8	998	-15.3	2.0
780	-6.0	1.8	999	-13.3	1.6
782	-7.2	2.0	1001	-15.0	2.9
784	-9.5	2.0	1003	-17.0	2.6
786	-10.0	2.0	1005	-13.8	2.6
788	-12.0	2.0	1007	-21.1	2.6
790	-13.3	1.9	1009	-20.1	2.6
792	-13.8	2.0	1011	-23.0	2.6
794	-12.1	2.0	1013	-20.5	2.6
796	-11.5	2.0	1015	-17.9	2.6
798	-14.7	2.2	1017	-20.8	2.1

800	-13.3	2.0	1019	-22.0	2.1
			1021	-19.2	3.6

Supplementary References

29. Miyahara, H. *et al.*, Variation of solar activity from the Spoerer to the Maunder minima indicated by radiocarbon content in tree-rings. *Adv. Space Res.* **40**, 1060-1063 (2007).