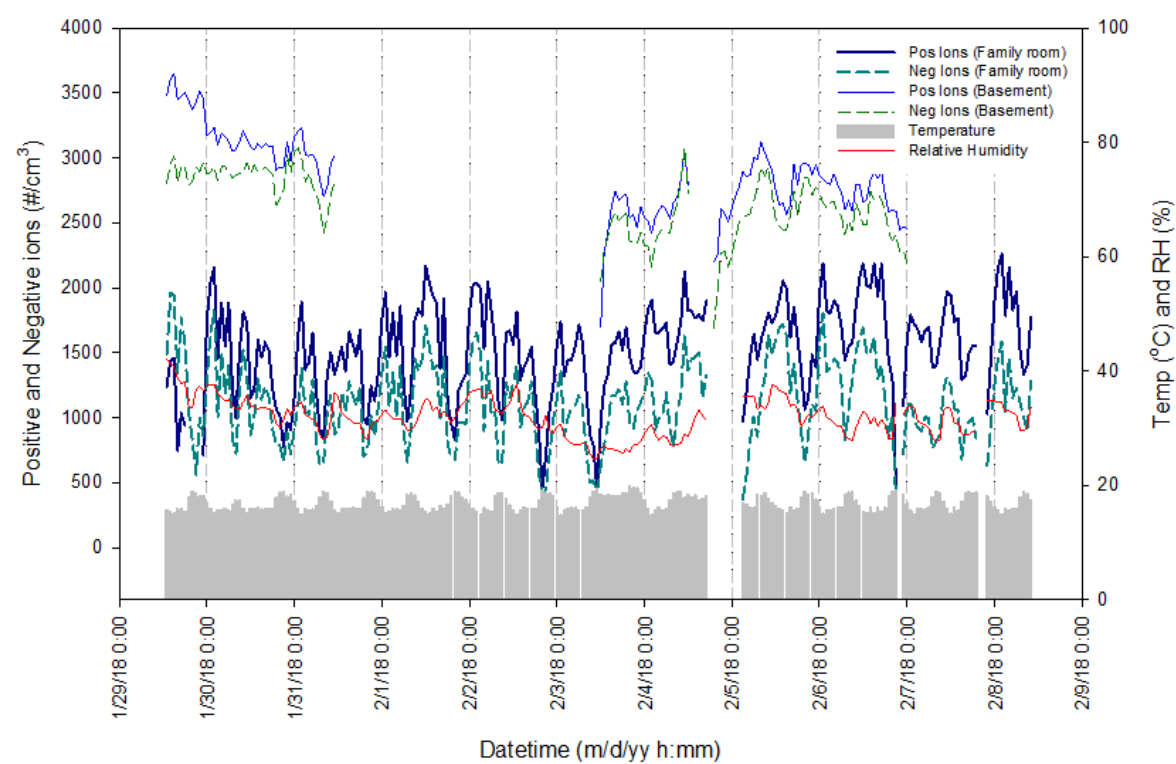


Supplementary

**Table S1.** Radon and particle radioactivity for non-heating and heating seasons.

Species	Non-heating					Heating				
	Mean	SD	Min	Max	N	Mean	SD	Min	Max	N
Radon (Bq/m <sup>3</sup> )	48.0	67.3	3.7	288.6	30	62.8	49.6	5.6	199.8	26
Positive Ions (ions/cm <sup>3</sup> )	1,595	1,447	490	5,160	10	2,213	1,807	552	6,240	8
Negative ions (ions/cm <sup>3</sup> )	1,484	1,420	132	4,720	10	1,817	1,621	271	5,403	8
SLA (Bq/m <sup>3</sup> )	57.3	53.0	7.7	164.4	11	40.2	15.3	5.3	56.4	15
LLA (mBq/m <sup>3</sup> )	1.22	0.57	0.14	2.72	25	1.01	0.64	0.09	3.50	28
F factor	0.63	0.18	0.44	0.89	7	0.56	0.23	0.23	0.92	11
PM <sub>2.5</sub> (µg/m <sup>3</sup> )	7.1	3.6	1.0	15.1	26	5.0	3.6	1.6	16.8	28
Sulfur (µg/m <sup>3</sup> )	0.231	0.120	0.025	0.436	26	0.137	0.076	0.018	0.369	28
CO <sub>2</sub> (ppm)	560	114	432	839	25	625	246	399	1410	24
Temp (°C)	23.7	2.2	19.3	27.1	25	19.4	3.4	12.7	25.0	25
RH (%)	58	8	45	87	25	37	13	14	60	25



**Fig. S1.** Concurrent measurements of positive and negative ions in the family room and basement of a home during the winter; Temperature and relative humidity were measured in the family room; due to instrumental malfunction of auto calibration mode the data recording was not succes under a higher level measurement; We found a high correlation between relative humidity and radon levels at this home, but note that all home measurements did not represent this relationship.

\*Corresponding author.  
 Tel.: 1 617 384 8754; Fax: 1 617 384 8859  
 E-mail address: cmkang@hsph.harvard.edu