

Cell	T(°C)	X_1	X_2	X_3	X_4	X_{12}/X_{1234}
Simone	215	-0.02(12)	-0.10(14)	-	-	-0.04(12)
	255	0.13(08)	0.08(09)	-	-	0.11(06)
Sosa	160	0.22(07)	0.28(09)	0.32(15)	0.18(09)	0.24(06) [†]
	170	0.24(07)	0.37(15)	-	-	0.27(06)
	180	0.45(08)	0.40(09)	0.50(17)	0.45(09)	0.43(06) [†]
	190	0.59(16)	0.57(17)	-	-	0.58(12)
Boris	235	0.21(14)	0.31(14)	-	-	0.26(10)
Sam.	235	0.08(06)	0.22(09)	-	-	0.12(05)
Alex	235	0.34(09)	0.35(09)	0.63(20)	0.29(10)	0.34(06) [†]
Astral	235	0.15(07)	0.22(10)	0.20(14)	0.14(07)	0.17(05) [†]
Steph.	235	0.31(17)	0.31(10)	-	-	0.31(08)
Brady	235	0.13(07)	0.15(09)	0.23(14)	0.11(07)	0.14(05) [†]
Antoinette	215	0.27(09)	0.44(17)	0.30(19)	0.25(11)	0.28(08) [†]
	235	0.20(09)	0.34(12)	0.36(17)	0.15(09)	0.24(07) [†]
	255	0.55(26)	0.54(16)	0.50(30)	0.56(26)	0.55(13) [†]

Table 1: Shown are the values of the X factor at the indicated over set temperatures. The last column is a weighted average of results from either the first two methods or all four methods. A [†] indicates combined values computed with all 4 methods.

$$P_{pc}(t) = \gamma_{se} P_A t - \frac{1}{2} \gamma_{se} P_A (\gamma_{se} + \Gamma_{pc} + d_{pc}) t^2 \quad (1a)$$

$$P_{tc}(t) = \frac{1}{2} \gamma_{se} P_A d_{tc} t^2 \quad (1b)$$

$$X_4 = \frac{P_A}{P_{pc}^\infty} - \frac{\langle P_A \rangle (\langle \Gamma \rangle - \delta \Gamma')}{f_{pc} m_{pc}^s} - 1 \quad (2)$$

$$(\Gamma_s - \langle \Gamma \rangle)$$

See in Table 1.

The energy levels of ^{87}Rb are shown in Fig. ??, where Γ_A is the pressure dependent FWHM, $\Gamma_A \approx 0.04 nm / amg \cdot [^3He]$.

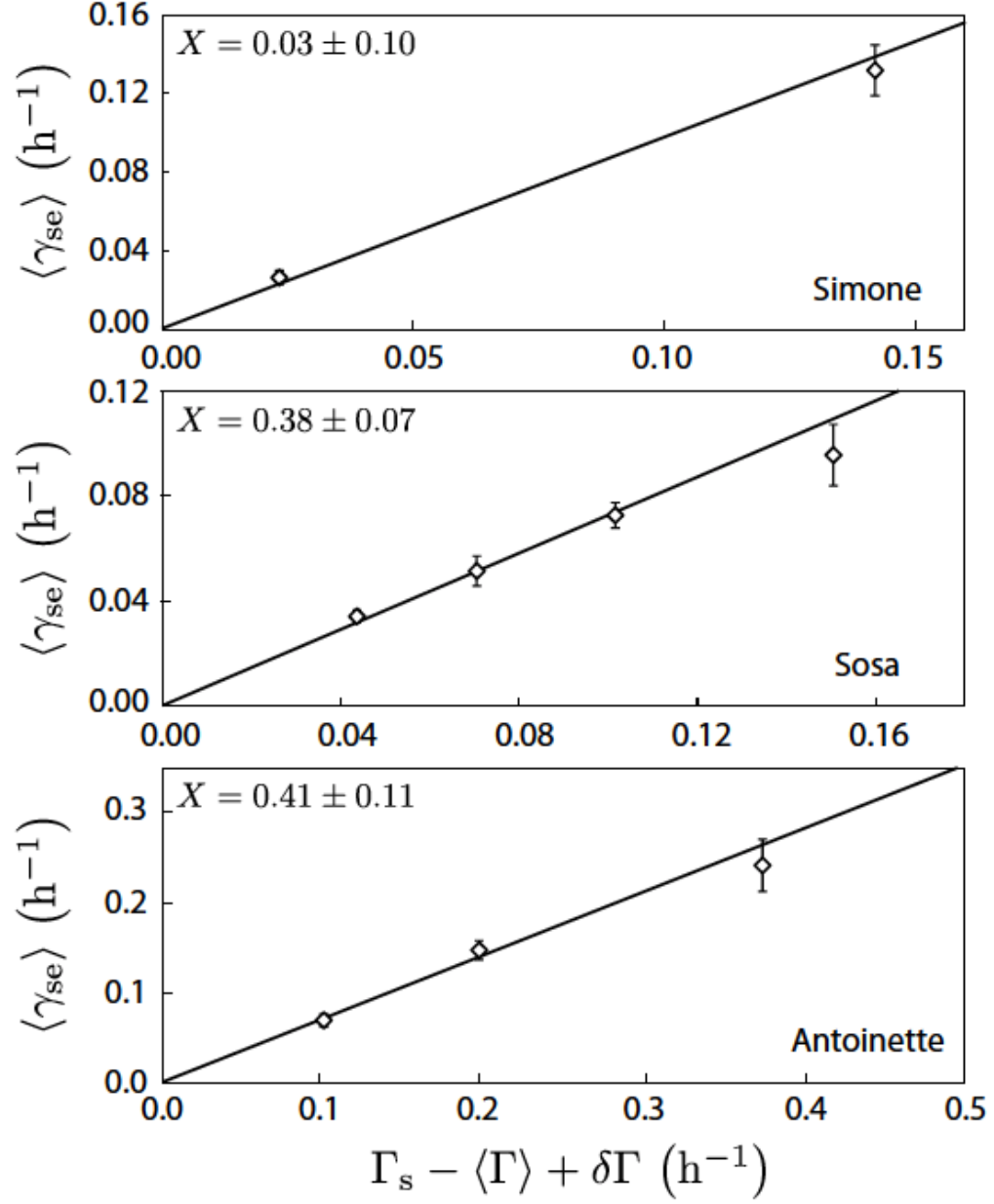


Figure 1: The cell-averaged spin-exchange rate $\langle \gamma_{se} \rangle$ is calculated using data from Faraday rotation and the spin-exchange constants k_{se}^{Rb} and k_{se}^K . The three linear fits shown here are constrained to go through zero. The errors quoted in values of X factor include the uncertainty in our determination of k_{se}^K .

Bibliography