

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) <sup>†</sup>
	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) <sup>†</sup>
	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) <sup>†</sup>
Astral	235	0.15(07)	0.22(10)	0.20(14)	0.14(07)	0.17(05) <sup>†</sup>
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) <sup>†</sup>
Antoinette	215	0.27(09)	0.44(17)	0.30(19)	0.25(11)	0.28(08) <sup>†</sup>
	235	0.20(09)	0.34(12)	0.36(17)	0.15(09)	0.24(07) <sup>†</sup>
	255	0.55(26)	0.54(16)	0.50(30)	0.56(26)	0.55(13) <sup>†</sup>

**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 <sup>†</sup> indicates combined values computed with all 4 methods.

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

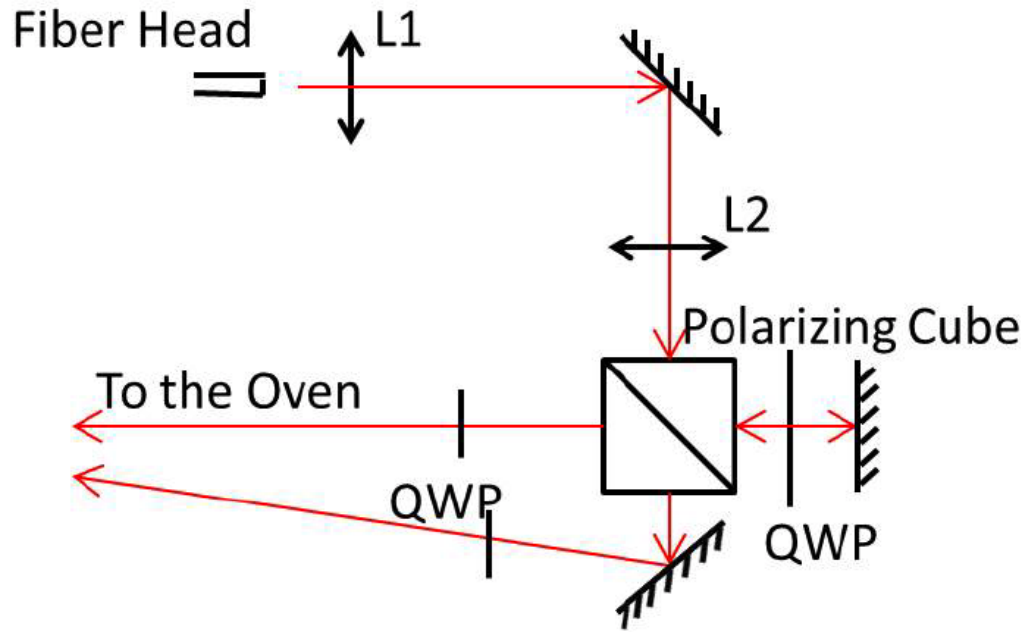
$$P_{tc}(t) = \frac{1}{2} \gamma_{se} P_A d_{tc} t^2 \tag{1b}$$

This is a test:

$$\nabla \boldsymbol{B}(\theta_m,0) = \kappa I \begin{bmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 2 \end{bmatrix} \tag{2}$$

°C

	turns	radius	separation
x	42	33 cm	64 cm
y	100	28 cm	56 cm
z	8	66 cm	66 cm



**Figure 1:** Optics for spin-exchange optical pumping. Adopted from Zheng [?].

See in Fig. ??

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

# Bibliography