Temperature-dependent phase matching of parametric down-conversion below threshold. (a) The signal photons are recorded during the hold phase of the laser (see Fig. **??**) with the laser frequency being locked to the pump mode resonance frequency ($\delta_\mathrm{p} = 0$).

(a) We continuously increasing the resonator temperature on the time scale of seconds while measuring the detuning of the pump laser. An increase in the resonator temperature corresponds to a decreasing the resonance frequencies $\nu(\ell_{\mathrm{p,s,i}}, \mathrm{q}_{\mathrm{p,s,i}}, \mathrm{p}_{\mathrm{p,s,i}})$, i.

e. a decrease in the frequency mismatch of parametric down-conversion ($\Delta = 2 \cdot \big(\nu(\ell_\mathrm{p}, \mathrm{q}_\mathrm{p}, \mathrm{p}_\mathrm{p}) - \nu(\ell_\mathrm{s}, \mathrm{q}_\mathrm{s}, \mathrm{p}_\mathrm{s}) - \nu(\ell_\mathrm{i}, \mathrm{q}_\mathrm{i}, \mathrm{p}_\mathrm{i})\big) / \gamma_\mathrm{si}$; see Eq. **??**). (b)

The pump mode bandwidth was $\gamma_\mathrm{p} =$. The single photon rates on the time scale of nanoseconds are shown in Fig. **??** for the respective frequency mismatches.