1127-20-369   **Peter Patzt*** (`peter.patzt@gmail.com`). *Representation stability for filtrations of Torelli groups.*

We show, finitely generated rational $\mathsf{VIC}_\mathbb{Q}$–modules and $\mathsf{SI}_\mathbb{Q}$–modules are uniformly representation stable and all their submodules are finitely generated. We use this to prove two conjectures of Church and Farb, which state that the quotients of the lower central series of the Torelli subgroups of $\mathrm{Aut}(F_n)$ and $\mathrm{Mod}(\Sigma_{g,1})$ are uniformly representation stable as sequences of representations of the general linear groups and the symplectic groups, respectively. Furthermore we prove an analogous statement for their Johnson filtrations. (Received February 07, 2017)