## **Description of Additional Supplementary Files**

File name: Supplementary Movie 1

Description: Measured skyrmionic hopfion in the focal volume. The measured polarization states are coloured following the Poincaré sphere (see Fig. 1). The video complements Fig. 2 and shows the 3D view of the topological structure of the Hopf fibration, where each filament links once with every other filament. Points corresponding to the same ellipticity (68 = -0.775, 0, 0.398) make up toroidal shells arranged between the two C lines (RH in white and LH in black).