Figure S1 Inner part of the GEMINGA EPIC/MOS1 and MOS2 images summed together. North is up, East is left. Events in the energy range 0.3- 5.0 keV are displayed. After background correction, the point source flux is 1.2 x 10^{-12} erg cm^{-2} sec^{-1} while the tails account for 2.2 x 10^{-14} erg cm^{-2} sec^{-1} . Thus, the diffuse emission flux is ~2% of the point source.

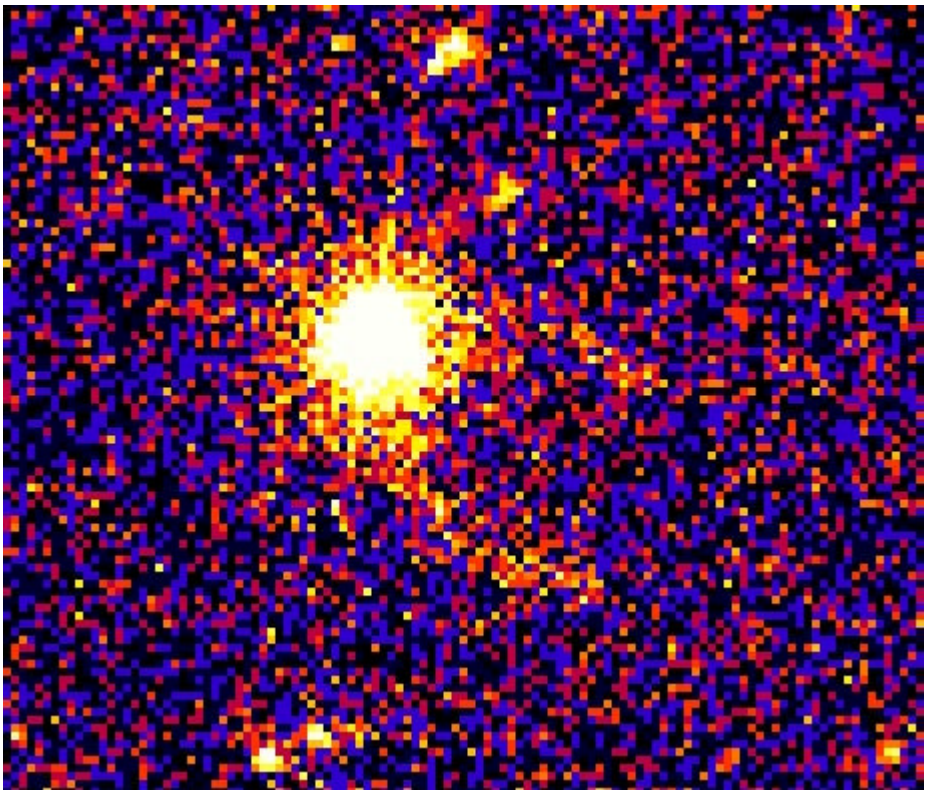

Figure S2. Spectral shape of Gemina (upper curve, including all photons within 40 arcsec from the source) and its tails (lower curve, including the 450 photons in the two tails).

The total Geminga spectrum (red data points) is seen to be well described by the sum of a pure black-body (green curve) and a hard power-law(blue curve) components.

The tails spectrum (red data points) is also well fit by a similar hard power-law component (blue curve, see text).

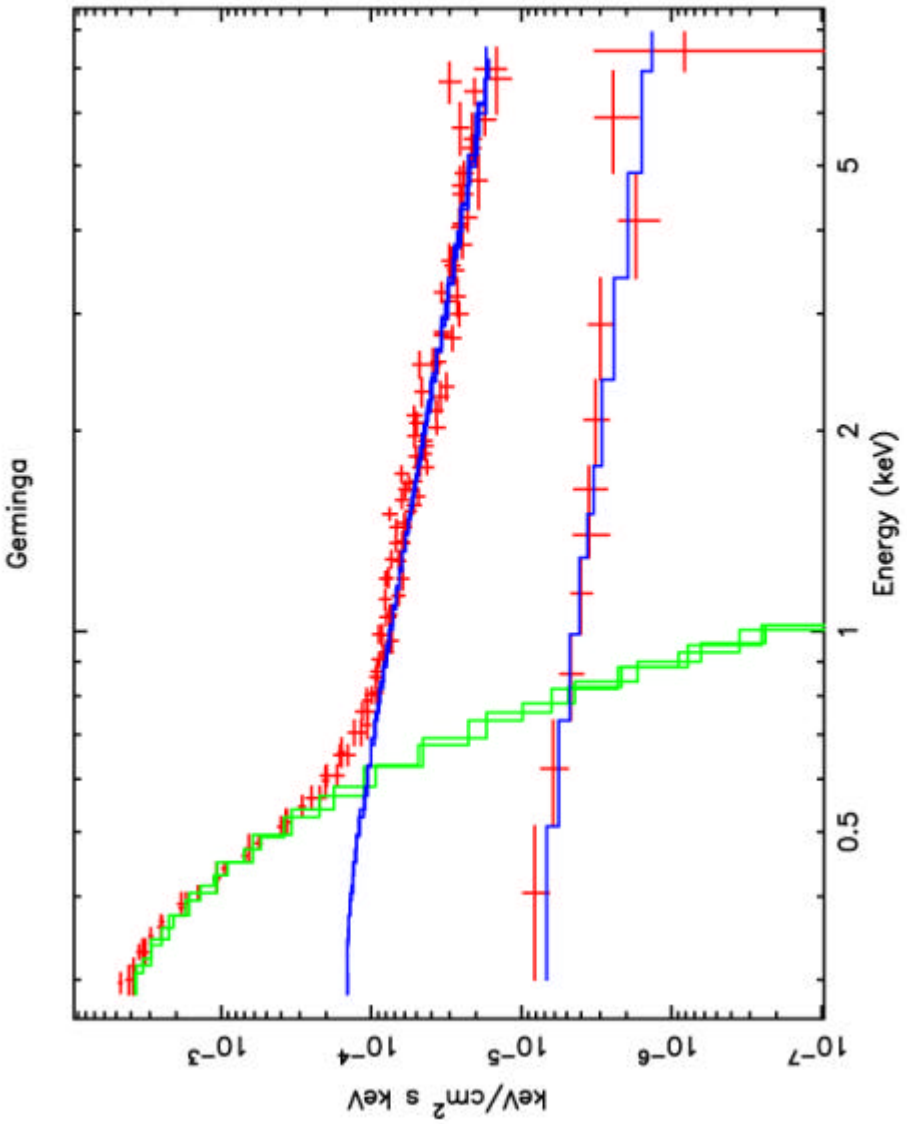

Figure S3. Expected stand-off angle shown as a function of ISM density and of the inclination angle of the pulsar proper motion with respect to the plane of sky (i=0°).

The XMM images set an upper limit of ~40" to the stand-off angle, excluding the region marked in red. The range of the stand-off angles compatible with the geometrical fits to the three-dimensional bow-shock model is shown in green (see fig. 3).