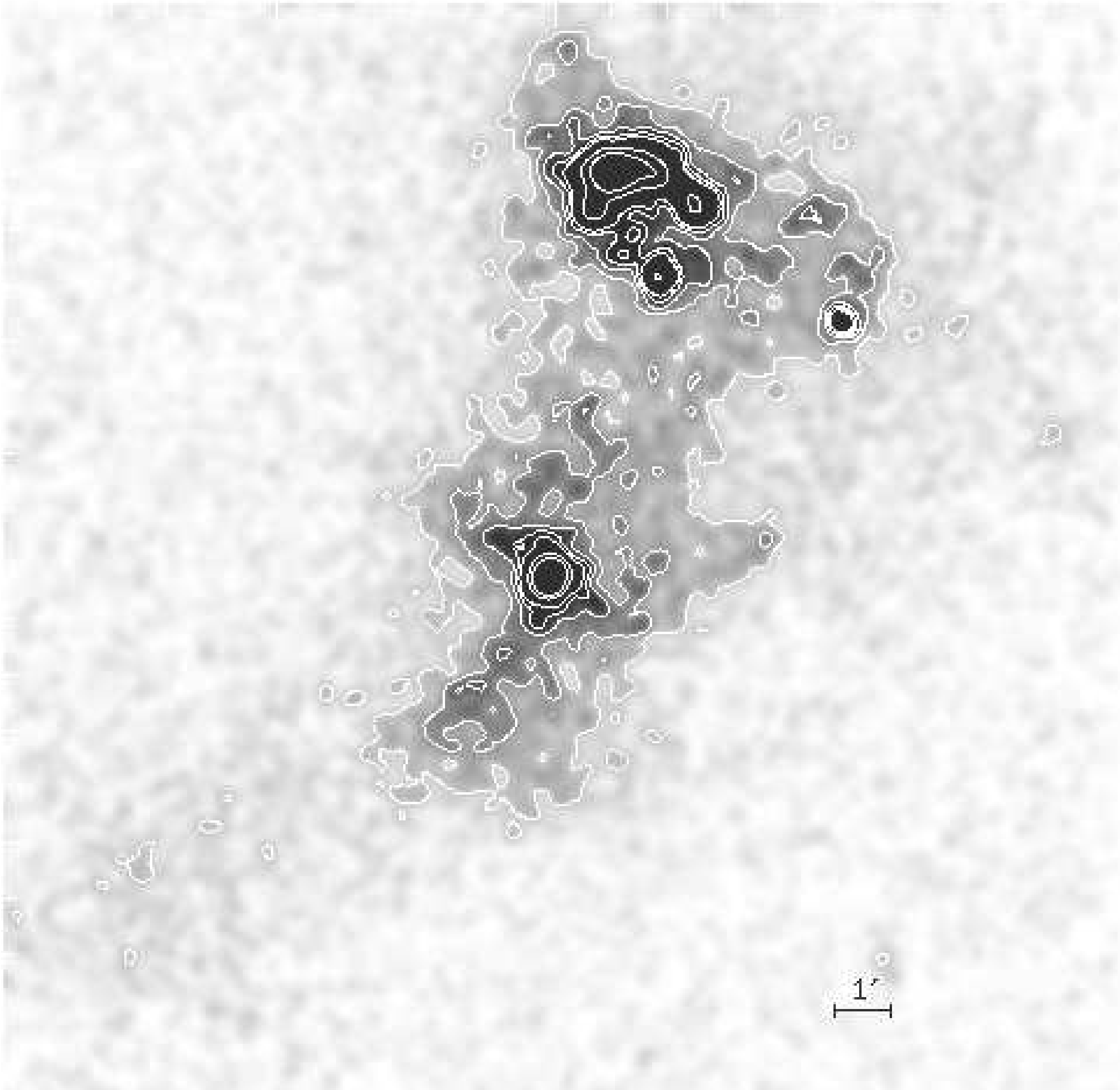

Fig. 1.— ROSAT X-ray contours of MSH 15-52 plotted over a grayscale image of the same data. The image was smoothed with a Gaussian of 2.5″ radius, and the contour levels are at 0.2, 0.4, 0.6, 0.8, 1.0, 2.0, and 3.0 counts per 2.5″ square pixel. The pulsar is located at the center of the image, and the upper compact source is referred to as the northern source in the text. The line in the lower right corner of the image is one arcminute long. North is to the top of the figure, and west is to the right.

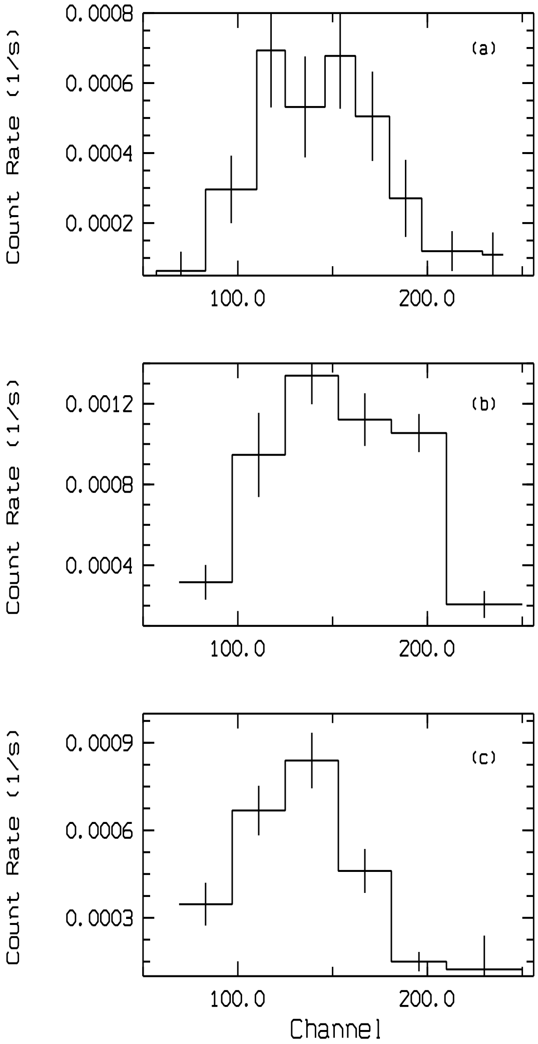

Fig. 2.— ROSAT count rate spectra of PSR 1509-58. The high column density along the line of sight to the pulsar absorbs the photons below channel 70. The spectra displayed are: (a) the pulsed spectrum, (b) the point source spectrum, and (c) the compact nebula spectrum. For (b) and (c) the spectra were only determined for channels greater than 70 (see text for details).

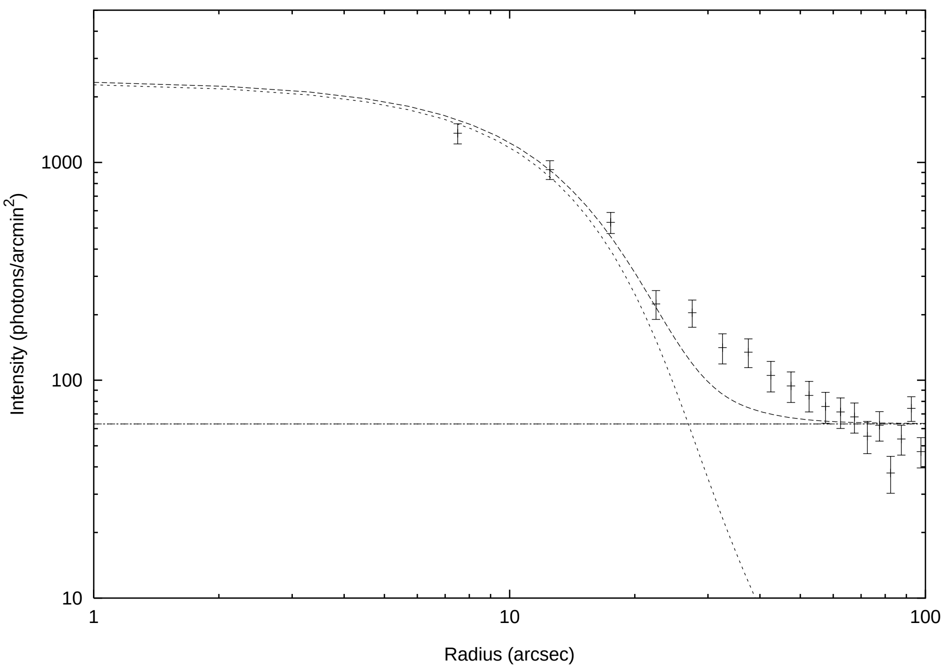

Fig. 3.— Radial count density profile of the 100″ region centered on the pulsar for photons with energies between 1.3 and 1.5 keV. The large dashes represent the best fit using a point source (short dashes) and a flat background emission (dash-dot). Note that the model underestimates the number of photons at distances of ∼40″ from the pulsar. The presence of a compact nebula can account for this excess.

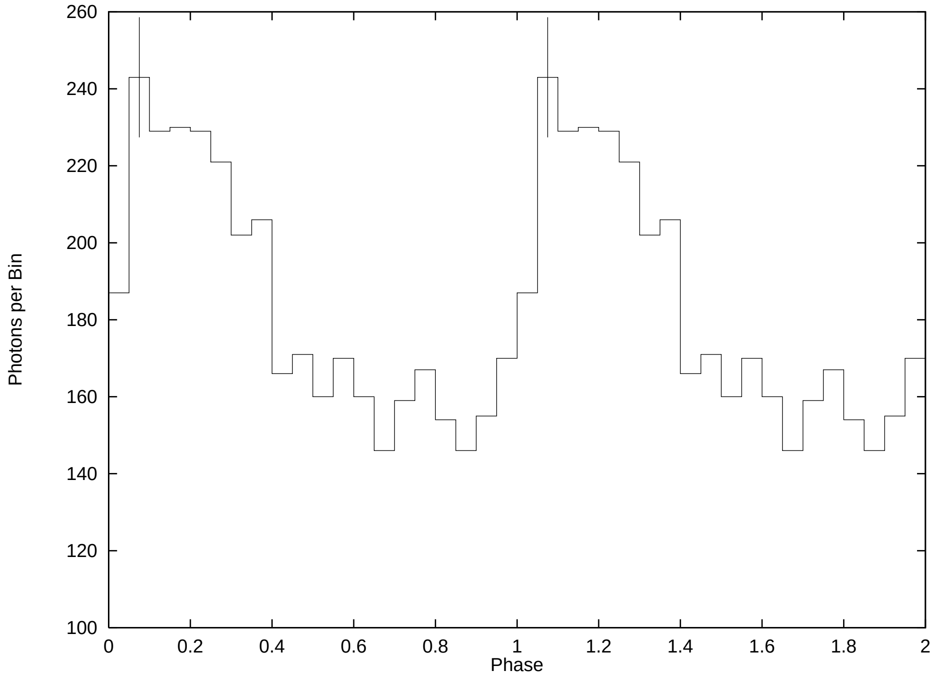

Fig. 4.— ROSAT X-ray pulse shape with zero phase corresponding to the radio peak. A representative error bar is plotted at the peak of the X-ray pulse.

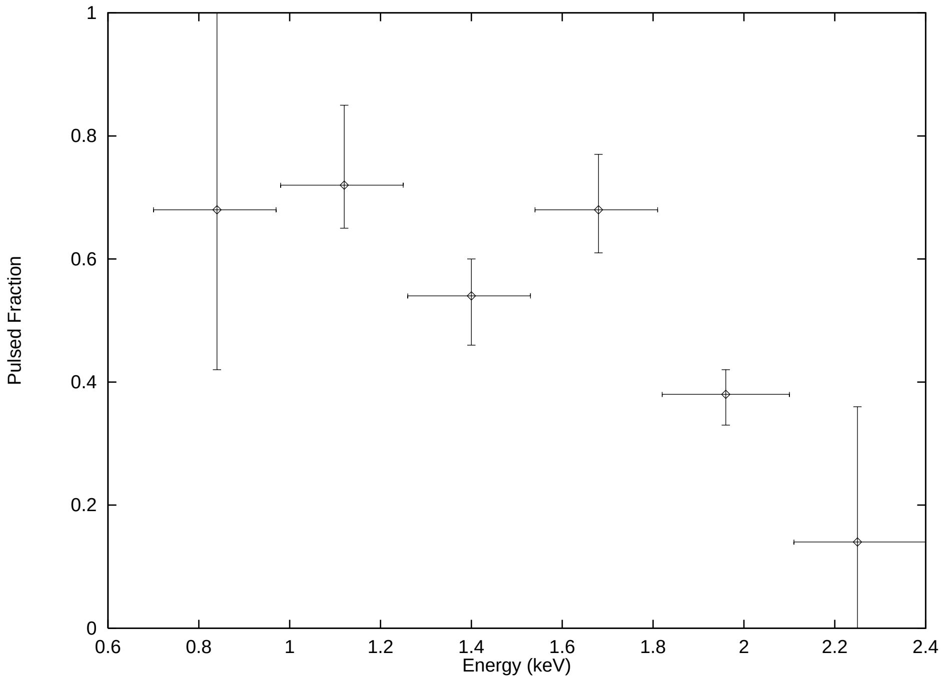

Fig. 5.— Pulsed fraction across the ROSAT energy range as determined by the Z_1^2 test.

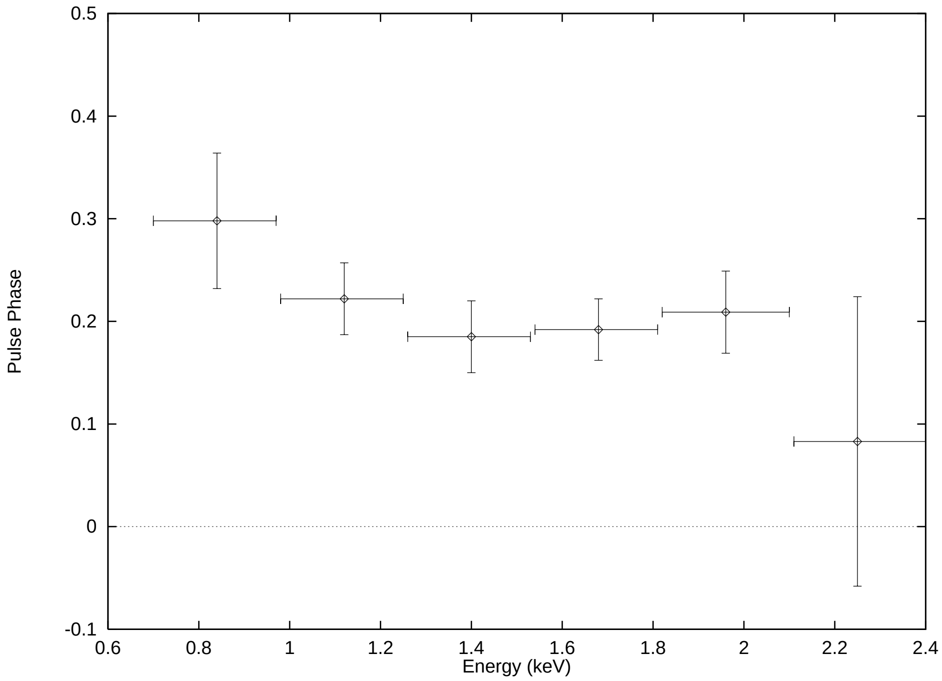

Fig. 6.— X-ray pulse phase across the ROSAT energy range as determined by the Z_1^2 test. Zero phase corresponds to the arrival of the peak of the radio pulse.

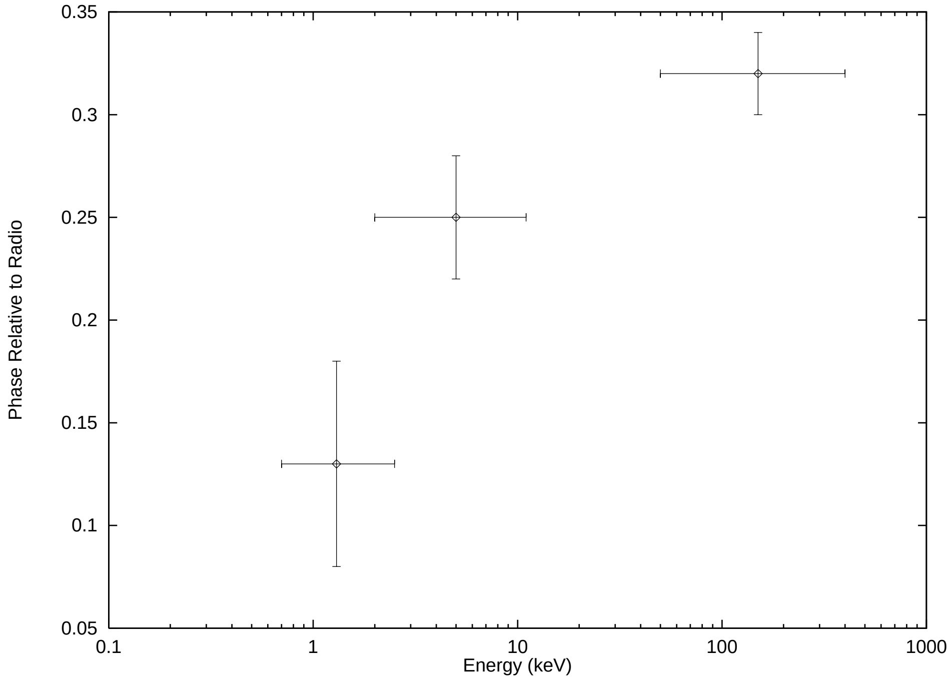

Fig. 7.— Difference in phase between the radio pulse and higher energy pulses. The lowest energies plotted are from ROSAT, while the other two are from GINGA (Kawai et al. 1991) and GRO (Ulmer et al. 1993). Zero phase corresponds to the arrival of the peak of the radio pulse.