

## Beppo SAX X-Ray Observations of PKS 1934–63 and S5 1946+708

L. Woltjer, G. Risaliti and M. Salvati

INAF — Osservatorio Astrofisico di Arcetri, Largo Enrico Fermi 5, I-50125 Firenze, Italy

**Abstract:** X-ray observations of PKS 1934–63 and S5 1946+708 have been made with Beppo SAX lasting 100 and 40 ksec, respectively. Both sources were detected, and in both there is evidence (at 90% confidence) of a strong iron  $K\alpha$  line which would indicate that the nuclei are surrounded by Compton thick material ( $\sim 1 \text{ g cm}^{-2}$ ).

For 1946+708 VLBI H I absorption data are available from the literature. With the condition that free-free absorption should be modest for the source to be observable a minimum radius of around 20 pc is derived for the absorbing torus. The torus is predominantly molecular with a density of  $10^8 \text{ cm}^{-3}$ . The corresponding pressure is rather high. Observations with XMM have been requested to verify the large equivalent width of  $K\alpha$  with a better confidence level.

In 1934–63 no important H I absorption was previously detected and no nucleus has been seen in radio data at 8 GHz. If this is due to free-free absorption a molecular torus with a radius less than 5 pc could be responsible. The density would be  $10^8 \text{ cm}^{-3}$  or more.

The relatively low S/N ratio of our observations does not allow a fully convincing conclusion to be reached. But our discussion shows that the combination of X-ray and high resolution 21-cm absorption data can provide important information on the physical parameters in the absorbing ‘torus’.

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