

Super-bialkali PMTs and the Selection of PMTs for the
MAGIC-II Telescope

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Thebialkali photo cathode type was known since about half a century. Their quantum efficiency (QE) values almost did not change since the 1960's.

Some five years ago we started a program with the main photo multiplier manufacturers on improving the QE of the photo cathodes. In recent two years all the PMT manufacturers reported substantial improvements. A new generation of PMTs were produced with peak QE values in the range of 35 \%. These photo cathode type got the name Superbialkali.

The race for the even higher QE is still continueing. The most recent and highest QE PMTs, providing peak QE values in excess of 40 \%, got the name Ultrabialkali.

In my presentation I will go through the photo cathode improvements and also will describe the comparison and the selection of the PMTs for our MAGIC imaging air Cherenkov gamma ray telescope.