

INFORMATION REPORT INFORMATION REPORT
CENTRAL INTELLIGENCE AGENCY

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SUBJECT	VEB Carl Zeiss Jena Production of Electron Multipliers	DATE DISTR.	3 August 1955	25X1
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- Laboratories at VEB Carl Zeiss Jena are working on electron multipliers for measuring the intensity of light of "dark body" resistance ($10^9 - 10^8$). They are developing a new type of cell in which the anode comes out of the side of the tube. This technique now being pursued is claimed to give a better overall performance - namely ($10^{10} - 10^9$). Yet another version under design has a cooling jacket which is calculated to give a "dark body" resistance of $10^{12} - 10^{10} \Omega$. Cathodes of cesium antimony and cesium oxide are being developed with windows of quartz.
- Scintillation measurements can be made with these devices, but Zeiss is developing a special tube for this work. With this new tube, direct light must not exceed $10^{-7} A$, as above this intensity a reverse current is produced. If a higher intensity of light is essential for any particular purpose, the beam must be chopped; Zeiss is now working on the necessary interrupter. Zeiss scientists are also designing a special tube for spectral intensity in astronomical work.
- Electron multipliers seen in development have stabilized power pact - amplifier units, whose specifications are as follows:
 1800 - 2800 volts regulated; flow 0.05 mA; surge 10mA;
 step voltage 100 - 150 volts stab. 0.001%.
 The amplifier does not indicate or record.

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