



## LRS BIANCHI TYPE – I COSMOLOGICAL MODEL WITH POLYTROPIC EQUATION OF STATE

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### Abstract

*We consider a rotationally symmetric Bianchi-I Cosmological model in the presence of perfect fluid with polytropic equation of state  $p=K\rho^v$ , Where  $K$  and  $v$  are constants called as polytropic constant and polytropic index respectively. To solve the Einstein's field equations for LRS Bianchi type I space time has been obtained under the assumption of the scalar expansion  $\theta$  is proportional to the shear scalar  $\sigma^2$ . Some physical and model geometric behaviors of the models are discussed.*

**Keywords:** LRS Bianchi type-I, polytropic equation of state, Perfect fluid.

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