1047-30-482 **Alexander Yu. Solynin*** (alex.solynin@ttu.edu), Texas Tech University, Department of Mathematics and Statistics, Lubbock, TX 79409. *A variant of Schwarz lemma for meromorphic functions and estimates for the hyperbolic metric.*

I will discuss a generalization of the Schwarz lemma for the class of meromorphic functions $f(z)$ mapping the unit disk $\mathbb{D}$ onto Riemann surfaces $\mathcal{R}$ with bounded in mean radial distances from $f(0)$ to the boundary of $\mathcal{R}$. Our variant of the Schwarz lemma implies a stronger form of the Landau-Toeplitz theorem, which extends the classical Schwarz lemma for the class of analytic functions $f(z)$ such that the diameter of $f(\mathbb{D})$ does not exceed 2. A new variant of the Schwarz lemma will be also given for the Carathèodory class of analytic functions having positive real part in $\mathbb{D}$. Our results lead to several improved estimates for the hyperbolic metric. (Received February 03, 2009)