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Radwan M Alomary* (radwan959@yahoo.com), Aligarh,muslim, University, departement of mathematic, Aligarh, IN 0091. **-Lie ideals and generalized derivations on prime rings*. Preliminary report.

Let $(R, *)$ be a 2-torsion free $*$ -prime ring with involution $*$ and center $Z(R)$. An additive mapping $*$: $R \rightarrow R$ defined by $x \mapsto *(x)$ is called an involution if $*(*(x)) = x$ and $*(xy) = *(y)* (x)$ hold for all $x, y \in R$. A ring R with an involution $*$ is said to $*$ -prime if $xRy = xR*(y) = 0$ implies that either $x = 0$ or $y = 0$. The set of symmetric and skew-symmetric elements of a $*$ - ring will be denoted by $S_*(R)$ i.e., $S_*(R) = \{x \in R \mid *(x) = \pm x\}$. An additive subgroup L of R is said to be a Lie ideal of R if $[L, R] \subseteq L$. A Lie ideal is said to be a $*$ -Lie ideal if $*(L) = L$. If L is a Lie (resp. $*$ -Lie) ideal of R , then L is called a square closed Lie (resp. $*$ - Lie) ideal of R if $x^2 \in L$ for all $x \in L$. An additive mapping $F: R \rightarrow R$ is called a generalized derivation on R if there exists a derivation d such that $F(xy) = F(x)y + xd(y)$ holds for all $x, y \in R$. In the present paper, we shall show that a $*$ -Lie ideal L is central if R is a $*$ -prime ring admits a generalized derivation F with associated derivation d commuting with $*$ satisfying certain differential identities in rings. (Received December 29, 2010)