

Cluster Algebras of type affine A2

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We will give an example of a cluster algebra A , called of type affine A2. We will describe the "positive" elements of A as defined by Sherman and Zelevinsky. We will find a linear basis of A whose non-negative linear combinations coincide with the set of positive elements (like simple roots with positive roots). This basis is called atomic basis. I will discuss the existence of such a basis in other types of cluster algebras and the connection with total positivity.