1070-55-21　　　　　**Kristopher J. Williams*** (`kristopher-williams@uiowa.edu`), University of Iowa, Department of Mathematics, 14 MacLean Hall, Iowa City, IA 52242. *Parallel connections of line arrangements and the associated Milnor Fiber.*

In 2005, a paper by Choudary, Dimca and Papadima explored higher dimensional analogs of affine nodal line arrangements. In particular, the authors were able to compute the homology of the associated Milnor fiber and showed that the monodromy action on the homology of the fiber was trivial except possibly in the top dimension. We extend their work to the more general class of parallel connections of central line arrangements and give an algorithm for computing the homology of the associated Milnor fiber F. In contrast to the work of Choudary, Dimca and Papadima, we give an example of a central arrangement in $\mathbb{C}^5$ such that the monodromy action on $H_3(F)$ and $H_4(F)$ is non-trivial. (Received December 10, 2010)