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Title: SDAV Viz July Progress Update: LANL

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## Abstract

### July SDAV Progress at LANL

#### VPIC (Vector Particle in Cell) Kinetic Plasma Simulation Code:

Implemented first version of an in-situ adapter based on Paraview CoProcessing Library

Three pipelines: vtkDataSetMapper, vtkContourFilter,  
vtkPistonContour

Next: resolve issue at boundaries of processor domains; add more advanced viz/analysis pipelines

#### Halo finding / merger trees

Summer student Wathsala W. from University of Utah is working on data-parallel halo finder algorithm using PISTON

Timo Bremer (LLNL), Valerio Pascucci (Utah), George Zagaris (Kitware), and LANL people are interested in using merger trees for tracking the evolution of halos in cosmo simulations; discussed possible overlap with work by Salman Habib and Katrin Heitmann (Argonne) during their visit to LANL 7/11

#### PISTON integration in ParaView

Now available from ParaView github

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