

# Monthly L2 Status Report -

WBS: 02.06 - Machine-Detector Interface

9 July 2014  
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<p><b><u>Milestone Status (Progress)</u></b></p> <ul style="list-style-type: none"><li>• Design of high-performance systems to suppress radiation load on the Higgs Factory (HF) SC magnets and detector.</li><li>• Background studies with developing background rejection techniques.</li></ul>	<p><b><u>Resource Conflicts, Plan Changes and Issues</u></b></p> <p>None.</p> <hr/> <p><b><u>Late Items</u></b></p> <p>Starting a real work on 3-TeV MC MDI and ring model.</p>
<p><b><u>Summary of Previous Month</u></b></p> <ul style="list-style-type: none"><li>• The optimized design of the HF MDI and magnet protection system frozen with simulation results on radiation loads and detector backgrounds summarized and presented in two IPAC14 papers.</li><li>• Background rejection techniques applied to the HF detector.</li><li>• MARS model of the 1.5-TeV muon collider (MC) revived and updated.</li><li>• Developments for MARS installation on NERSC completed.</li></ul>	<p><b><u>Quarterly Plans</u></b></p> <p>Q4: Build a consistent MARS model of a 3-TeV MC IR and matching section, their magnets, detector and MDI; launch simulations on radiation loads and backgrounds.</p>
<p><b><u>Upcoming Work (Next Month)</u></b></p> <ul style="list-style-type: none"><li>• Perform MARS simulations with the updated model of the 1.5-TeV MC.</li><li>• Install and test MARS15 on the NERSC computers.</li><li>• Start work on MARS model of a 3-TeV MC.</li></ul>	