

**Job Hazard Assessment & Mitigation Title: BaBar Drift Chamber module swapping**

**NON-ROUTINE**

**Instructions:**

Job Hazard Analysis & Mitigation is an important accident prevention tool that works by 1) finding hazards and eliminating or minimizing them *before* the activity is performed; 2) increasing awareness of the importance of safety; 3) serving as a guide for training; 4) providing a refresher for infrequent jobs; 5) serving as an accident investigation tool; and 6) informing employees of job hazards and protective measures. The supervisor and participants conduct the analysis together. Consider the job purposes and activities: What has to be done? How will it be done? When is it done? Where is it done?

Complete instructions and supporting information is available at [www.slac.stanford.edu/esh/hams/rgs](http://www.slac.stanford.edu/esh/hams/rgs). Enter information into boxes which will expand to accommodate whatever length of text is entered. Once this JHA is complete, all participants should sign in the Acknowledgement section. In addition to the job steps, this JHA should address related activities in the area and conditions that would warrant stopping work. Permits and cited procedures should be attached. Add rows by placing cursor in the right box of the last row and entering a tab.

Sequence of Basic Job Steps	Potential Hazards	Controls & Recommended Actions
1. Worker enters space	a.) ODH b.) Electric shock c.) Entrapment	Contact confined space coordinator well before entry and adhere to confined-space entry permit controls, including: <ul style="list-style-type: none"> <li>i.) Change bulkhead cover gas from N2 to air at Gas Shack panel, ventilate space with orange fan for at least 10 minutes before entry, have SHA (x3517) monitor atmosphere inside, have attendant at opening at all times, ensure all involved are CS trained;</li> <li>ii.) Lock and tag out DCh low voltage at counting house panel and rack; Lock out HV at plug to Caen module</li> <li>iii.) Send in shortest, most flexible worker able to perform work.</li> </ul> N.b.: Attach copy of permit to this analysis
2. Worker removes bulkhead panel	Same as a.-c., above	Same as i.-iii., above.
3. Worker removes bad DCh. module	Same as a.-c., above	Same as i.-iii., above.
4. Worker installs new DCh. module	Same as a.-c., above	Same as i.-iii., above.
5. Worker exits space	Same as a.-c., above	Same as i.-iii., above.
CONDITION: Worker	Entrapment of ailing or injured worker	STOP WORK.

