

ERR # /When?	Need	Requirements/Outcome	What to do
<p><b>N. 1:</b> Before construction phase starts or existing equipment with high risk</p>	<ul style="list-style-type: none"> <li>If the experiment includes one-of-a-kind equipment with potential novel safety implications (examples: SC magnets, tritium or high-power cryogenic targets).</li> </ul>	<ul style="list-style-type: none"> <li>Fabrication of the equipment can start or it is deemed to be acceptable for use at the lab.</li> </ul>	<ul style="list-style-type: none"> <li>Provide the complete conceptual design of the full equipment. Decommissioning plans for target and activated components must also be developed as appropriate.</li> <li>Carry out a safety analysis of the proposed equipment design, identify safety issues and incorporate mitigating measures necessary to be operated in planned experiment.</li> <li>Provide manpower and resource requirements for equipment fabrication</li> </ul>
<p><b>N. 2:</b> Before a scheduling request can be submitted</p>	<ul style="list-style-type: none"> <li>If the experiment requires items in the category above and/or equipment beyond the declared base equipment.</li> </ul>	<ul style="list-style-type: none"> <li>At this stage: <ul style="list-style-type: none"> <li>Fabrication of the equipment is completed or near-completed,</li> </ul> <b>or</b> <ul style="list-style-type: none"> <li>Design of the equipment is finalized and manpower and resource requirements for equipment fabrication and installation are identified.</li> </ul> </li> <li>After this review, the experiment layout and components are considered frozen, and any design modifications will require approval by the Division Management.</li> <li>This review will generate the list of recommendations to be answered prior to issuance of the Experiment Readiness Clearance.</li> </ul>	<ul style="list-style-type: none"> <li>This review includes an experiment installation plan, timeline and resource requirements. Things that must be presented or available for this ERR include: <ul style="list-style-type: none"> <li><b>Experiment</b> <ul style="list-style-type: none"> <li>Who is assigned as Physics Division Liaison for the experiment</li> <li>Installation schedule</li> <li>Preliminary commissioning and run plans</li> <li>System ownership and responsibility</li> <li>Preliminary data analysis plan</li> </ul> </li> <li><b>Equipment</b> <ul style="list-style-type: none"> <li>Existing equipment requirements finalized</li> <li>New equipment design and requirements including cost finalized (if applicable)</li> <li>Timeline for equipment fabrication &amp; installation (if applicable)</li> <li>Manuals for new equipment available</li> <li>UL or equivalent certification for new equipment available</li> </ul> </li> <li><b>Manpower</b> <ul style="list-style-type: none"> <li>Manpower and resource requirements for equipment fabrication (if applicable) and installation</li> </ul> </li> <li><b>Documentation</b> <ul style="list-style-type: none"> <li>Preliminary OSPs for new systems</li> <li>Flammable gas analysis if applicable</li> <li>Preliminary: RSAD, ESAD, COO, ERG, Operations Manual</li> </ul> </li> </ul> </li> </ul>
<p><b>N. 3:</b> Before running the experiment</p>	<ul style="list-style-type: none"> <li>Every experiment needs this review.</li> <li>If the experiment only includes base equipment <b>and</b> only in operation modes already executed, or only additional equipment that is a direct clone of base equipment,</li> </ul>	<ul style="list-style-type: none"> <li>The experiment is ready to be safely and effectively executed.</li> <li>The experiment is ready for expedient data analysis towards publication.</li> <li>The experiment is ready for the issuance of the Experiment Readiness Clearance.</li> </ul>	<ul style="list-style-type: none"> <li>Provide: <ul style="list-style-type: none"> <li>Final documentation: ESAD, RSAD, COO, ERG, Operational Manual</li> <li>Safety Check lists</li> <li>Experimental procedures both for shift leaders and shift takers and for experts</li> <li>Proof of readiness for expedient data analysis towards publication.</li> </ul> </li> </ul>