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**SESSION 9: Cryocooler Drive & Control  
Electronics**

**Paper No. 9-2 Wednesday Afternoon 3:45 PM**

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***Deep Space Cryocooler Control  
Electronics for the Ricor K508***

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Antonio, TX; and V. Segal, Ricor, En Harod Ihud, Israel***

In this topic Iris Technology in cooperation with Southwest Research Institute (SwRI) will present the design and test of the MASPEX Cryocooler Electronics Board (MCEB) for SwRI's MAss Spectrometer for Planetary EXploration (MASPEX) instrument for NASA's Europa Clipper mission to Jupiter's moon Europa. The challenges of developing deep space electronics will be discussed along with the challenges of driving rotary cryocoolers. An overview of the MCEB development process from conceptual design to deep-space electronics implementation will be given. The MCEB performance data will be presented along with lesson learned along the way. In addition the testing and qualification of Ricor K508 cryocooler performed by SwRI will be discussed.